NORTHROP GRUMMAN

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# Joint Polar Satellite System (JPSS)
# Advanced Technology Microwave Sounder (ATMS)

## Calibration Data Book
## JPSS1 ATMS P/N 1362460-1, S/N 303

**Contract No: NNG11XA04C**
**CDRL 040**

**Submitted To:**

**National Aeronautics and Space Administration**
**Goddard Space Flight Center**
**Greenbelt, Maryland 20771**

**Submitted by:**

**Northrop Grumman**
**1100 West Hollyvale Street**
**Azusa, California 91702**
Cage Code: 70143

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# 1 SCOPE

This document is the Calibration Data Book for the Advanced Technology Microwave Sounder (ATMS), SN 303. The calibration data in this report was collected during instrument thermal vacuum testing which occurred on 2/4/2017 to 2/27/2017 UTC. The ATMS is an instrument to be flown on the Joint Polar Satellite System (JPSS). This document is submitted in accordance with CDRL-040.

# 2 REFERENCED DOCUMENTS

## 2.1 Ball Aerospace & Technologies Corp

| | |
|---|---|
| SER-2463159 | JPSS-1 Instrument Interface Alignment Summary |

## 2.2 National Aeronautics and Space Administration (NASA)

| | |
|---|---|
| 429-00121 | Joint Polar Satellite Systems (JPSS) Advanced Technology Microwave Sounder (ATMS) Performance Requirements Document (PRD) |
| 472-00011 | Joint Polar Satellite Systems (JPSS) Statement of Work (SOW), Advanced Technology Microwave Sounder (ATMS) |
| 472-00019 | Joint Polar Satellite System (JPSS) Advance Technology Microwave Sounder to JPSS1 ICD |
| 472-00244 | JPSS Data Format Requirements Document |

## 2.3 Northrop Grumman

| | |
|---|---|
| AE-28300 | Instrument Specification for the Advanced Technology Microwave Sounder (ATMS) |
| AE-32970 | JPSS ATMS System Calibration Test Procedure for JPSS1 Regression |
| RE-12110 | JPSS ATMS Radiometric Math Model |
| RE-14840 | ATMS Instrument Operation and Maintenance Manual for FM-1 (S/N 303) |
| RE-14753 | JPSS ATMS Telemetry Allocation Document (TAD) |
| RE-17254 | JPSS-ATMS K/Ka Band Receiver Shelf Test Report |
| RE-17491 | FM-1 Antenna Subsystem Verification Test Report |
| RE-18910 | Mechanical Alignment Measurement Results for JPSS ATMS S/N 303 |
| RE-14840 | JPSS-ATMS On-Orbit Operation Manual |
| RE-20748- | JPSS-ATMS W Band Receiver Shelf Regression Testing |
| RE-20749 | JPSS-ATMS G Band Receiver Shelf Regression Testing |
| RE-20747 | JPSS-ATMS V Band Receiver Shelf and SAW Assembly Regression Testing |
| RE-20801 | JPSS1 ATMS System Calibration Test Report |

# 3 INTRODUCTION

The ATMS is a 22-channel mm-wave radiometer. The ATMS will measure upwelling radiances in six frequency bands centered at 23 GHz, 31 GHz, 50-58 GHz, 89 GHz, 166 GHz, and 183 GHz. The ATMS is a total-power radiometer, with “through-the-antenna” radiometric calibration. Radiometric data is collected by a pair of antenna apertures, scanned by rotating flat-plate reflectors. Scanning is performed cross-track to the satellite motion from sun to anti-sun, using the "integrate-while-scan" type data collection. The scan period is 8/3 second, synchronized to the Cross-track Infrared Sounder (CrIS) using a spacecraft-provided scan synchronization pulse.

The ATMS is designed by Northrop Grumman, Azusa, California for NASA. The ATMS consists of a single module, with 22 channels. The beamwidth for each channel is as follows: channels 1-2 is 5.2 degrees, channels 3-16 is 2.2 degrees, channels 17-22 is 1.1 degrees. Ninety-six contiguous beam positions are sampled in integrate-while-scan fashion during the earth view sector. Four beam positions are also sampled in the cold calibration sector and four in the hot calibration sector. The integration period for each beam position is 18 msec. The physical layout and further detail of the system are provided in the Instrument Operation and Maintenance Manual, RE-14840.

This document provides the results of the system radiometric calibration, the antenna pattern measurements, receiver spectral parameters, mechanical alignment test results, and the contents of the memory uploads (Calibration Data Packet and Scan Tables) for the JPSS1ATMS instrument. It also provides the parameters required as inputs to the Sensor Data Record (SDR) algorithms for conversion of telemetry counts to engineering units, for radiometric calibration, and for antenna beam geo-location.

A comprehensive description of the in-flight digital science and engineering data available from the ATMS instrument is provided in the ATMS Telemetry Allocation Document, and the JPSS Data Format Requirements Document.

# 4 PRT SENSOR & CIRCUIT CALIBRATION

Platinum resistance temperature sensors (PRTs) are used throughout the instrument to monitor key temperatures. These sensors each have unique coefficients based on the manufacturer's data.

The signal from each PRT is digitized via an A-to-D converter aboard the ATMS instrument, which provides a count from 0 to 65,535 representing the resistance of a given PRT. The count to resistance relationship is given by the following equation:

$$R = \frac{\gamma_R}{\gamma_1 - \gamma_0}[C - \gamma_0] - Rc \qquad (1)$$

Where: C = number of counts measured for the PRT
Rc = resistance of cable to the PRT (applicable only to 2-wire PRTs)
and $\gamma_R$, $\gamma_0$, and $\gamma_1$ are parameters defined in Table 4-1.

**Table 4-1 PRT Counts Conversion Parameters**

| Parameter | 4-Wire PRTs & Shelf PRTs | 2-Wire PRTs |
|---|---|---|
| $\gamma_R$ | PAM resistance, in Ohms (word 1 or 2 of Calibration Data Packet) | Housekeeping reference resistance = MUXREST1_A, MUXREST2_A, MUXREST1_B, MUXREST2_B (words 212 – 215 of Calibration Data Packet) |
| $\gamma_0$ | 4W_GND_A or _B, in counts (word 46 of Hkpg and Engr Data Packet) | 2W_GND_A or _B (word 47 of Hkpg and Engr Data Packet) |
| $\gamma_1$ | KV_WL_4WRES or WG_WL_4WRES (word 9 or 17 of Eng-HotCal Temperatures Data Packet) | [HK_2WREST1_A, HK_2WREST2_A] or, [HK_2WREST1_B, HK_2WREST2_B] (words 44 and 45 of Hkpg and Engr Data Packets) |

After computing the resistance, R, the Callendar-Van Dusen equation is then used to determine the physical temperature of each PRT. The equation is given below:

$$R = R_0\left[1 + \alpha\left(T - \delta\left(\frac{T}{100} - 1\right)\left(\frac{T}{100}\right) - \beta\left(\frac{T}{100} - 1\right)\left(\frac{T}{100}\right)^3\right)\right] \qquad (2)$$

Where:
T = physical temperature of the PRT
R = resistance (ohms) of the PRT (from equation 1)
$R_o$ = resistance at ice point of the PRT (supplied by PRT vendor)
$\alpha$, $\delta$, $\beta$ = constants measured for the PRT (supplied by PRT vendor)

For the 4-wire PRTs, the Newton-Raphson technique is used to perform the inversion, to compute T for a given R.

### 4.1 In-Flight Warm Target 4-Wire PRTs

To support the processing of the 4-wire PRTs as described above, the following coefficients are provided in data words 3-62 in the Calibration Data Packet: $R_0$, $\alpha$, $\delta$, $\beta$. Table 4-2 lists these coefficients and the respective serial numbers for each warm target PRT.

**Table 4-2 Coefficients for In-Flight Warm Target 4-Wire PRTs**

| KAV PRT | SN | $R_0$ | ALPHA | DELTA | BETA |
|---|---|---|---|---|---|
| **1** | 9001 | 2000.173491 | 0.00385473 | 1.69210 | -0.85377 |
| **2** | 9027 | 1999.686958 | 0.00385326 | 1.68451 | -0.72142 |
| **3** | 9015 | 1999.355289 | 0.00385267 | 1.68075 | 0.16670 |
| **4** | 9011 | 2000.030396 | 0.00385405 | 1.69402 | -0.63912 |
| **5** | 9024 | 1999.844866 | 0.00385271 | 1.67789 | 0.16876 |
| **6** | 9021 | 2000.051083 | 0.00385460 | 1.68833 | -0.10803 |
| **7** | 9009 | 1999.670081 | 0.00385413 | 1.68687 | -0.57483 |
| **8** | 9014 | 2000.358152 | 0.00385408 | 1.67431 | 0.39631 |
| **PAM** | 004 | 2488.00 | | | |
| | | | | | |
| **WG PRT** | | | | | |
| **1** | 9023 | 1999.559808 | 0.00385321 | 1.67758 | 0.18178 |
| **2** | 9003 | 2000.311799 | 0.00385424 | 1.68247 | -0.94297 |
| **3** | 9025 | 1999.613723 | 0.00385359 | 1.68619 | -1.16862 |
| **4** | 9022 | 2000.14344 | 0.00385425 | 1.68364 | 0.10884 |
| **5** | 9028 | 1999.676615 | 0.00385478 | 1.67848 | -0.59367 |
| **6** | 9020 | 2000.523119 | 0.00385317 | 1.67734 | -0.50654 |
| **7** | 9007 | 1999.885421 | 0.00385378 | 1.65423 | 0.17809 |
| **PAM** | 003 | 2489.00 | | | |

### 4.2 Calibration Parameters

The parameters unique to each ATMS unit that are needed for processing mission and housekeeping data are provided in the Calibration Data Packet. Table 4-3 indicates the scale factors and equations for converting counts to engineering units for each of these parameters.

**Table 4-3 Conversion of Calibration Parameters**

| Parameter | Units | Equation to Convert from Counts, C |
|---|---|---|
| PAM Resistance ($\gamma_R$ of eqn. 1) | Ohms | $R = 2300 + 0.006\ C$ |
| 4-W & 2-W PRT: $R_0$ | Ohms | $R = 1900 + 0.003\ C$ |
| 4-W & 2-W PRT: $R'_0$ | Ohms | $R = 1900 + 0.003\ C$ |
| 4-W & 2-W PRT: $\alpha$ | $°C^{-1}$ | $\alpha = 0.0020 + 5x10^{-8}\ C$ |
| 4-W & 2-W PRT: $\delta$ | °C | $\delta = 5x10^{-5}\ C$ |
| 4-W PRT: $\beta$ | °C | $\beta = 6.0x10^{-5}\ C – 2.0$ |
| Calibration Target Offset | °C | $T = -7.5x10^{-6}\ C$ |
| Cold Calibration Offset | °C | $T = 1.5x10^{-5}\ C$ |
| Quadratic Coefficient | $K^{-1}$ | $A_2 = 3.05x10^{-9}\ C - 0.0001$ |
| Alignment | Degrees | $\theta = 2.0x10^{-5}\ C – 0.655$ |

| Parameter | Units | Equation to Convert from Counts, C |
|---|---|---|
| 2-W PRT: $A_1$ | Degrees C/Ohm | $A_1 = 3.0x10^{-6}$ C |
| Rc | Ohms | R = 0.0003 C |
| MUXRESTi | Ohms | R = 1900 + 0.003C |

### 4.3 Receiver Shelf 2-Wire PRTs

Processing of the receiver shelf 2-wire PRTs is identical to the 4-wire PRT processing, using the WG 4-wire parameters for $\gamma_R$, $\gamma_0$, and $\gamma_1$; except that $\beta$ is assumed to be 0 and is not transmitted as part of the calibration data packet for those sensors. $R_0$, $\alpha$, and $\delta$ are provided in words 140-155 of the Calibration Data Packet. The cable resistance, Rc, is also provided, for use in the counts-to-resistance conversion. Table 4-4 lists these coefficients and the respective serial numbers for each receiver shelf PRT. These Rc values are determined by the cable designs, and since there has been no design changes affecting these cables, the values are the same as for the EDU and NPP instruments. Furthermore, efforts were done to verify the correct serial number to corresponding location. Verification efforts confirmed PRT locations by referring to archived production orders that maps the PRT serial numbers to designated component. Reported serial numbers for each location have also been verified. As such, this adjudicates the differences in serial number and subsequent values seen from Rev. A to Rev. B. No changes to the PRT values or serial numbers were made from Rev. B to Rev. C, For the Receiver Power Supply (RCVPS) and SPA PRT's, no measurements had been made, so the values are approximations based on conductor lengths.

**Table 4-4 Coefficients for Receiver Shelf and Component 2-Wire PRTs**

| Location | SN | $R_0$ | $\alpha$ | $\delta$ | Rc | $R_0$' | $A_1$ |
|---|---|---|---|---|---|---|---|
| KKA_SHELF | 9084 | 1999.101831 | 3.85192E-03 | 1.72444 | 0.768 | | |
| V_SHELF | 9070 | 1999.394443 | 3.85345E-03 | 1.67776 | 0.849 | | |
| W_SHELF | 9119 | 1999.661126 | 3.85294E-03 | 1.69589 | 0.849 | | |
| G_SHELF | 9098 | 1999.800130 | 3.85120E-03 | 1.77534 | 0.689 | | |
| K_RFE | 9090 | 1999.694843 | 3.85134E-03 | 1.79059 | 0.648 | 2000.343 | 0.127561 |
| KA_RFE | 9089 | 1999.886132 | 3.85115E-03 | 1.75928 | 0.648 | 2000.534 | 0.127594 |
| V_RFE | 9115 | 1999.322146 | 3.85352E-03 | 1.71192 | 0.892 | 2000.214 | 0.127611 |
| V_PRI_PLO | 9120 | 1999.103031 | 3.85228E-03 | 1.71365 | 0.851 | 1999.954 | 0.127664 |
| V_RED_PLO | 9121 | 1999.343425 | 3.85299E-03 | 1.70004 | 0.770 | 2000.113 | 0.127642 |
| V_IF | 9107 | 1999.427425 | 3.85139E-03 | 1.70387 | 0.851 | 2000.278 | 0.127685 |
| W_RFE | 9117 | 1999.403847 | 3.85252E-03 | 1.67298 | 0.851 | 2000.254 | 0.127688 |
| SAW_FILT | 1318 | 1998.410695 | 3.91937E-03 | -1.41320 | 0.932 | 1999.342 | 0.129503 |
| W_IF | 9118 | 1999.588434 | 3.85225E-03 | 1.66091 | 0.810 | 2000.399 | 0.127700 |
| W_PRI_GDO | 9093 | 1999.811433 | 0.00385259 | 1.70454 | 0.689 | 2001.516 | 0.127620 |
| W_RED_GDO | 9095 | 1999.650934 | 3.85179E-03 | 1.71577 | 0.810 | 2000.461 | 0.127642 |
| G_PRI_CSO | 9094 | 1999.872625 | 3.85275E-03 | 1.69184 | 0.770 | 2000.643 | 0.127626 |
| G_RED_CSO | 9092 | 1999.364415 | 3.85241E-03 | 1.69660 | 0.770 | 2000.134 | 0.127664 |
| G1_IF | 9091 | 2000.064027 | 3.85249E-03 | 1.70427 | 0.647 | 2000.711 | 0.127607 |
| G2_IF | 9096 | 1999.36713 | 3.85222E-03 | 1.71546 | 0.851 | 2000.218 | 0.127647 |
| RCVPS_A | 1308 | 1996.671718 | 3.84803E-03 | 0.52862 | 0.600 | 1997.272 | 0.129469 |
| RCVPS_B | 1306 | 1998.594706 | 3.85358E-03 | 0.89355 | 0.600 | 1999.195 | 0.128691 |
| OCXO_PRI | 1364 | 1998.811035 | 3.84512E-03 | 1.72930 | 0.891 | 1999.702 | 0.127899 |
| OCXO_RED | 1333 | 1996.540944 | 3.84339E-03 | 1.45580 | 0.972 | 1997.513 | 0.128449 |
| DSPA_1553 | 9067 | 1999.606341 | 3.85158E-03 | 1.72489 | 0.100 | 1999.706 | 0.127641 |
| DSPB_1553 | 1313 | 1998.264798 | 3.85479E-03 | 0.75797 | 0.100 | 1998.365 | 0.128845 |
| SPA_PS_A | 1315 | 1996.792886 | 3.85153E-03 | 0.82409 | 0.100 | 1,996.893 | 0.128964 |
| SPA_PS_B | 1317 | 1999.307686 | 3.85630E-03 | 0.35156 | 0.100 | 1999.408 | 0.129248 |
| DSPA_PROC | 9080 | 1999.602439 | 3.85152E-03 | 1.72484 | 0.100 | 1999.702 | 0.127643 |
| DSPB_PROC | 1311 | 1995.952969 | 3.55333E-03 | 9.54910 | 0.100 | 1996.053 | 0.128708 |

### 4.4 Component 2-Wire PRTs

Other 2-wire PRTs are used purely as health and status indicators and do not require the same precision as the 4-wire and receiver shelf PRTs. These temperatures, therefore, are processed according to the following linear equation:

$$T = A_1 (R - R_0) = A_1 (R' - R'_0)$$
$$R' = R + Rc = \gamma_R (C - \gamma_0)/ (\gamma_1 - \gamma_0)$$
$$R'_0 = R_0 + Rc$$

Where T is the temperature, in degrees C,
$R_0$' and $A_1$ are parameters transmitted in the Calibration Data Packet, words 156-211

The parameter $A_1$ is related to the Calendar-Van Dusen parameters by the following equation:

$$A_1 = \frac{1}{\alpha(1+\delta/100)R_0}$$

Table 4-4 lists these coefficients and the respective serial numbers for each component PRT.

### 4.5 Passive Analog Temperature (PAT) Telemetry Channels

The ATMS also provides five (5) Passive Analog Temperature (PAT) telemetry channels. These PAT telemetry points are listed in Table 4-5. The ATMS thermistor type is S311P18-01T7R6. Figures 4-1 and 4-2 show the temperature versus resistance curves for the PATs and the PAT circuitry schematic. The PAT measurements are collected and digitized by the spacecraft, and provided in a spacecraft data packet. Details of the conversion of counts to resistance and to temperature are provided in the ATMS-to-JPSS1 ICD.

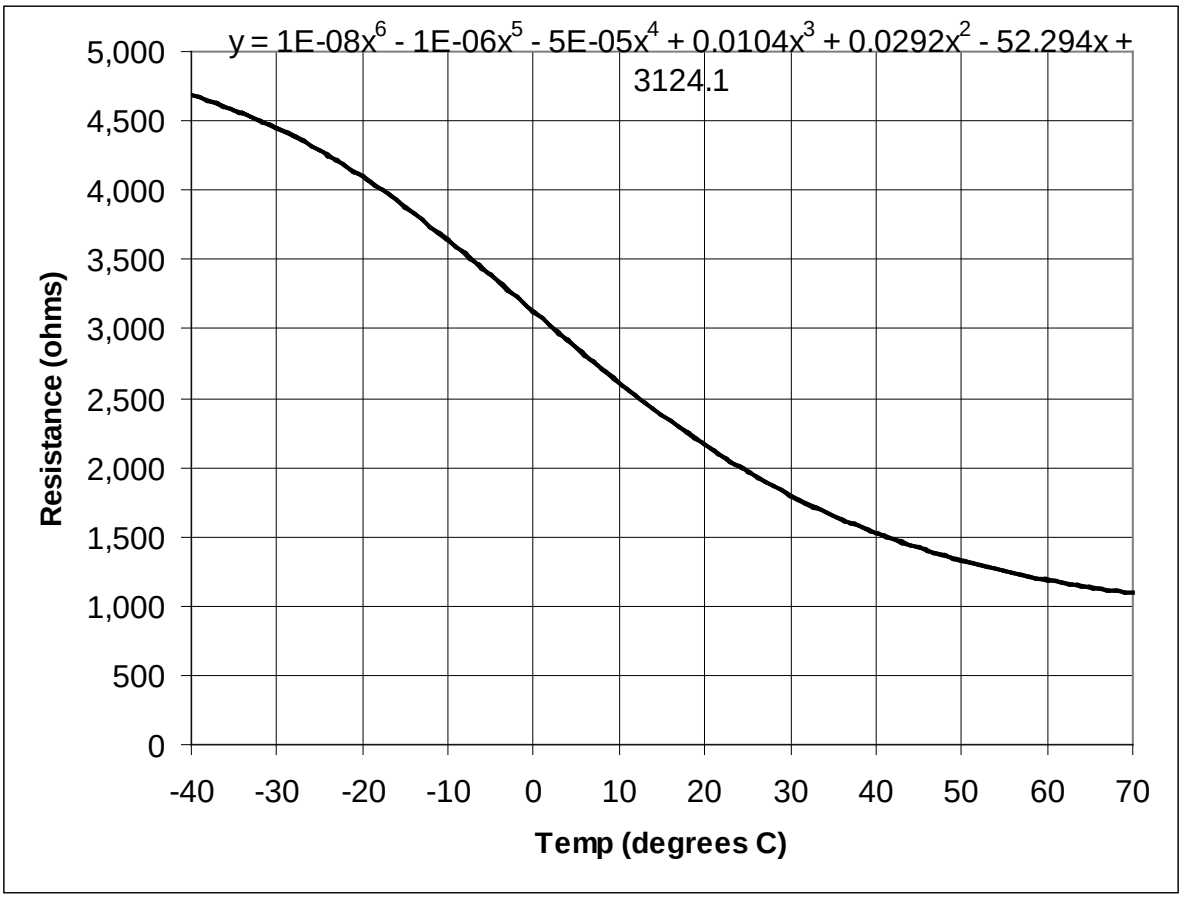



**Figure 4-1 Temperature versus resistance curves for PATs**

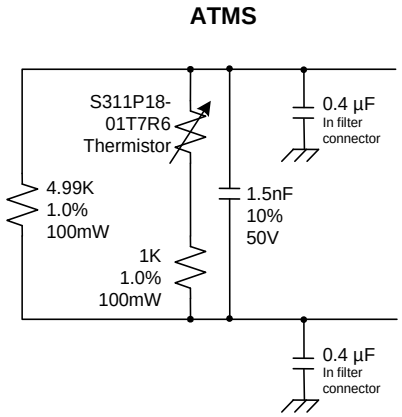



**Figure 4-2 Schematic of Passive Analog Temperature Telemetry Circuits**

**Table 4-5 Passive Analog Telemetry Locations**

| Temperature | Connector | Pin No. | Function |
|---|---|---|---|
| SDM_Temp | J5 (A), J6 (B) | b | SDM_TEMP |
| | J5 (A), J6 (B) | c | SDM_TEMP Return |
| KKAV_Shelf_Temp | J5 (A), J6 (B) | n | KKAV_SHELF_TEMP |
| | J5 (A), J6 (B) | p | KKAV_SHELF_TEMP Return |
| WG_Shelf_Temp | J5 (A), J6 (B) | q | WG_SHELF_TEMP |
| | J5 (A), J6 (B) | r | WG_SHELF_TEMP Return |
| Inst_Baseplate_Temp | J5 (A), J6 (B) | s | INSTR_BASEPLATE_TEMP |
| | J5 (A), J6 (B) | t | INSTR_BASEPLATE_TEMP Return |
| Cal_Target_Loc_Temp | J5 (A), J6 (B) | k | CAL_TARGET_LOC_TEMP |
| | J5 (A), J6 (B) | m | CAL_TARGET_LOC_TEMP Return |

### 4.6 Other Engineering Data

For engineering data, such as voltages and currents, except for the Scan Drive Subsystem, the measured parameter is defined by the linear equation:

$$X = mC + b$$

Where

C is the data count reported for the parameter,
m is the product of the A/D conversion and the scale factor
b is the offset.

Table 4-6 indicates the scale and offset values for these parameters included in the LEO&A, Engineering, and Housekeeping data packets. Telemetry processing equations for the Scan Drive Subsystem are given in Table 4-7.

**Table 4-6 Engineering Data Scale and Offset Parameters**

| Measured Parameter | Units | m | b |
|---|---|---|---|
| VD_REF_A (VD_REF_B) Module 1 | Volts | 6.8666E-05 | 0.00 |
| VD_REF_A (VD_REF_B) Module 2 | Volts | 6.8666E-05 | 0.00 |
| VD_REF_A (VD_REF_B) Module 3 | Volts | 6.8666E-05 | 0.00 |
| VD_REF_A (VD_REF_B) Module 4 | Volts | 6.8666E-05 | 0.00 |
| VD_GND_A (VD_GND_B) Module 1 | Volts | 6.8666E-05 | 0.00 |
| VD_GND_A (VD_GND_B) Module 2 | Volts | 6.8666E-05 | 0.00 |
| VD_GND_A (VD_GND_B) Module 3 | Volts | 6.8666E-05 | 0.00 |
| VD_GND_A (VD_GND_B) Module 4 | Volts | 6.8666E-05 | 0.00 |
| SPA_P5V_A_VMON (SPA_P5V_B_VMON) | Volts | 8.5832E-05 | 0.00 |
| SPA_P15V_A_VMON (SPA_P15V_B_VMON) | Volts | 2.7466E-04 | 0.00 |
| SPA_N15V_A_VMON (SPA_N15V_B_VMON) | Volts | -2.7466E-04 | 0.00 |
| RCV_P6V_RF_VMON | Volts | 1.0717E-04 | 0.00 |
| RCV_P12V_RF2_VMON | Volts | 2.12505E-04 | 0.00 |
| RCV_P15V_RF_VMON | Volts | 2.5628E-04 | 0.70 |
| RCV_N15V_RF_VMON | Volts | -2.5628E-04 | -0.70 |
| RCV_P15V_ANA_VMON | Volts | 2.6560E-04 | 0.00 |
| RCV_N15V_ANA_VMON | Volts | -2.6560E-04 | 0.00 |
| V_PLO_A_LOCK_VMON | Volts | 2.0399E-04 | 0.00 |
| V_PLO_B_LOCK_VMON | Volts | 2.0399E-04 | 0.00 |

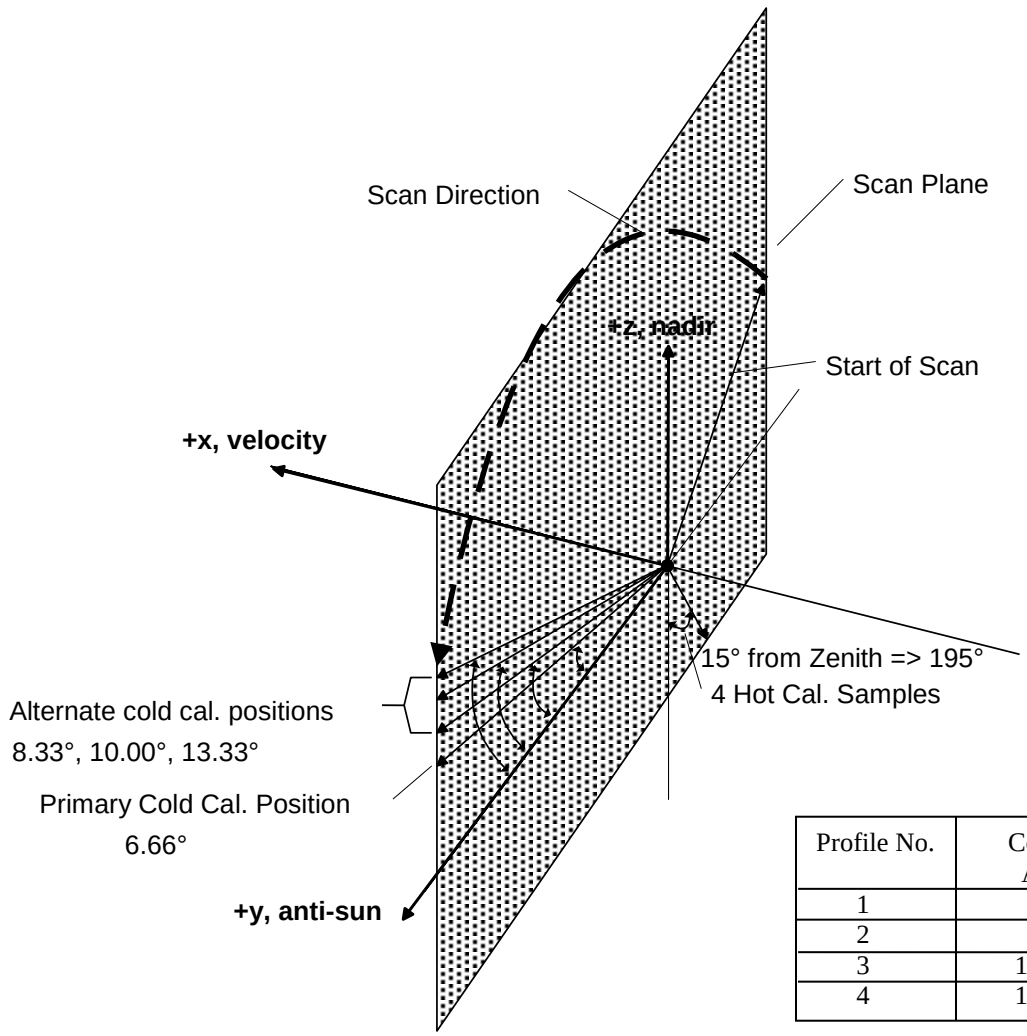
**Table 4-7 Data Conversions for Scan Drive Engineering Telemetry**

| Telemetry Parameter | Measurement Variable | Nominal Value | Conversion Algorithms |
|---|---|---|---|
| +5V | Count1 | 1004 Counts | $V_5 = 5008 / Count1$ |
| -12V | Count1 and Count2 | 773 Counts | $V_{12N} = \left[\frac{63.096 \times Count2}{Count1}\right] - 60.6212$ |
| +12V | Count1, Count2 and Count3 | 803 Counts | $V_{12P} = \left[\frac{(4.284 \times Count3) - (45.08657 * Count2)}{Count1}\right] + 43.30089$ |
| Temperature (°C) SDM and PS | Count | 521 Counts (at 15°C) | $T_{DegC} = \frac{[1{,}000{,}000 \times (Count - 399.3371)]}{8905947 - (1907.3 * Count)}$ |
| Resolver Excitation Voltage (Vrms) | Count* | 7.2 Volts | $\mathrm{Re}\,sExV = 0.008817 \times Count$ |
| Main Motor Velocity | Count* | 60 degr/sec | 0.0625*Count |
| Comp Motor Velocity | Count* | -100 degr/sec | 0.0625*Count |
| Main Loop Position Error | Count* | 0.01 degrees | 0.005493*Count |
| Main Loop Int Error | Count* | 3.6 degrees | 0.005493*Count |
| Main Loop Velocity Error | Count* | 2.0 degr/sec | 0.0625*Count |
| Comp Loop Velocity Error | Count* | -5 degr/sec | 0.0625*Count |
| Comp Motor Position | Count* | 70 degrees | 0.005493164*Count |
| Requested Main Motor Voltage | Count* | 0.3 Volts | 0.0005493164*Count |
| Requested Comp Motor Voltage | Count* | -0.5 Volts | 0.0005493164*Count |
| Feed Forward Voltage | Count* | 28 Volts | 458752/Count |
| Main Motor Current | Count* | 0.0 Amps | MainMotorCur = 0.021777*Count - 0.3888 |
| Comp Motor Current | Count* | 0.1 Amps | CompMotorCur = 0.021777*Count - 0.3888 |

* These words are signed

# 5 REFLECTOR POSITION DATA

The scan angle value for each science data sample is provided in data word number 1 of the Science Data Packet, APID $210_{16}$ (APID $528_{10}$) for operational data and APID $218_{16}$ (APID$536_{10}$) for diagnostic data. The reflector position is reported by a 16-bit word, so resolver counts range from 0, nominally at nadir, to 65,535. The full 16-bit range corresponds to 360 degrees, so the scale factor is $5.493164 \times 10^{-3}$ degrees per count. Figure 5-1depicts the relative beam position geometry for a scan.




| Profile No. | Cold Cal Angle |
|---|---|
| 1 | 6.66° |
| 2 | 8.33° |
| 3 | 10.00° |
| 4 | 13.33° |

**Figure 5-1 Beam Position Geometry**

The ATMS FSW supports 4 independent scan profiles. During ATMS power on, the instrument specific scan tables are loaded from the SPA DSP CCA EEPROM to a specific portion of FSW Data RAM. A single scan profile table is then selected and loaded from FSW Data RAM into the SDE RAM by using the "Scan Profile" (SP) command. While the reflector position (resolver angle) is reported in Science Data as a 16-bit word, the commanded scan angle data is stored in SDE RAM as 24-bit words. To properly fill the SDE RAM, each angle of the scan profile table is stored in SPA EEPROM as two 16-bit words. Each scan consists of 592 positions. These positions define the scan positions for a time interval of ~ 4.5 ms.
The actual interval is:

8/3 seconds/scan / 592 positions/scan = 0.0045045045045045045045045045045045 seconds/position

Therefore, the area of SDE RAM utilized for the scan table consists of 592 24-bit words while the area of SPA EEPROM utilized for each scan profile consists of 1184 16-bit words following Big-Endian convention. The contents of the scan profile tables for JPSS1 ATMS may be found in Table 19-2 (Scan Profile 1), Table 19-3 (Scan Profile 2), Table 19-4 (Scan Profile 3), and Table 19-5 (Scan Profile 4). Reference RE-20657 (JPSS ATMS EEPROM Contents for S/N 303) for additional details.

For each scan position in the SPA EEPROM, only the upper 8 bits of the MSW are used while the LSW contains the lower 16-bits of the scan angle. The MSW is defined in Table 5-1. The 18-bit scan angle as stored in the SDE may be created by the notation in Figure 5-2 following Big-Endian convention.

**Table 5-1 SPA EEPROM Scan Position MSW Definition**

| Bit | Description |
|---|---|
| 0 – 7 | Unused |
| 8 – 9 | Upper 2 bits of the scan angle |
| 10 | Transmit Reflector Positon Flag |
| 11 | Beam Boundary Flag |
| 12 – 15 | Unused |

| **Word** | MSW | | LSW | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Bit** | 9 | 8 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |

**Figure 5-2 SPA EEPROM 18-bit Scan Position Notation**

Measured reflector position data is given in Table 5-2 from TVCalibration runs at the three cold plate temperatures of -3.1°C, +7.7°C, and +18.5°C. The data is for scan profile 1 and redundancy configuration 1 with the CTE scene target temperature at 84K. The variation in counts is typical and represents expected repeatability.

For JPSS1 ATMS S/N 303, there is a resolver offset between the reported reflector position and the actual reflector position of -1.252°, corresponding to 228 counts. Therefore, the expected counts at beam position 49 are 65409. The conversion from 16-bit reflector position counts, in Science Data packets, C, to angular degrees is:

$$\theta = \frac{360}{2^{16}} \times mod(C + 228, 2^{16})$$

To perform the 18-bit conversion for commanded reflector position contained in the scan profile table in the SDE RAM and SPA EEPROM (as contained in Appendix E) the following equation shall be used:

$$\theta = \frac{360}{2^{18}} \times C$$

**Table 5-2 Measured Resolver Counts for Scan Profile 1**

| Beam Position | Expected Resolver Counts | Coldplate -3.1°C | | Coldplate +7.7°C | | Coldplate +18.5°C | |
|---|---|---|---|---|---|---|---|
| | | Measured Resolver Counts | Delta | Measured Resolver Counts | Delta | Measured Resolver Counts | Delta |
| 1 | 55710 | 55710 | 0 | 55710 | 0 | 55712 | -2 |
| 2 | 55912 | 55912 | 0 | 55912 | 0 | 55915 | -3 |
| 3 | 56114 | 56115 | -1 | 56115 | -1 | 56116 | -2 |
| 4 | 56316 | 56318 | -2 | 56318 | -2 | 56317 | -1 |
| 5 | 56518 | 56520 | -2 | 56520 | -2 | 56519 | -1 |
| 6 | 56720 | 56720 | 0 | 56720 | 0 | 56722 | -2 |
| 7 | 56922 | 56922 | 0 | 56922 | 0 | 56925 | -3 |
| 8 | 57124 | 57126 | -2 | 57126 | -2 | 57126 | -2 |
| 9 | 57326 | 57328 | -2 | 57328 | -2 | 57327 | -1 |
| 10 | 57528 | 57529 | -1 | 57530 | -2 | 57529 | -1 |
| 11 | 57730 | 57730 | 0 | 57730 | 0 | 57732 | -2 |
| 12 | 57933 | 57932 | 1 | 57932 | 1 | 57934 | -1 |
| 13 | 58135 | 58136 | -1 | 58135 | 0 | 58135 | 0 |
| 14 | 58336 | 58338 | -2 | 58338 | -2 | 58335 | 1 |
| 15 | 58539 | 58539 | 0 | 58539 | 0 | 58538 | 1 |
| 16 | 58741 | 58739 | 2 | 58739 | 2 | 58741 | 0 |
| 17 | 58943 | 58942 | 1 | 58941 | 2 | 58944 | -1 |
| 18 | 59145 | 59146 | -1 | 59146 | -1 | 59145 | 0 |
| 19 | 59347 | 59348 | -1 | 59348 | -1 | 59345 | 2 |
| 20 | 59549 | 59549 | 0 | 59549 | 0 | 59548 | 1 |
| 21 | 59751 | 59749 | 2 | 59749 | 2 | 59752 | -1 |
| 22 | 59953 | 59953 | 0 | 59952 | 1 | 59954 | -1 |
| 23 | 60155 | 60157 | -2 | 60156 | -1 | 60155 | 0 |
| 24 | 60357 | 60358 | -1 | 60359 | -2 | 60356 | 1 |
| 25 | 60559 | 60559 | 0 | 60559 | 0 | 60559 | 0 |
| 26 | 60761 | 60760 | 1 | 60760 | 1 | 60763 | -2 |
| 27 | 60963 | 60963 | 0 | 60963 | 0 | 60965 | -2 |
| 28 | 61166 | 61167 | -1 | 61167 | -1 | 61165 | 1 |
| 29 | 61368 | 61368 | 0 | 61369 | -1 | 61366 | 2 |
| 30 | 61570 | 61569 | 1 | 61569 | 1 | 61570 | 0 |
| 31 | 61772 | 61770 | 2 | 61770 | 2 | 61773 | -1 |
| 32 | 61974 | 61974 | 0 | 61973 | 1 | 61975 | -1 |
| 33 | 62176 | 62177 | -1 | 62177 | -1 | 62175 | 1 |
| 34 | 62378 | 62378 | 0 | 62379 | -1 | 62376 | 2 |
| 35 | 62580 | 62579 | 1 | 62579 | 1 | 62580 | 0 |
| 36 | 62782 | 62781 | 1 | 62781 | 1 | 62784 | -2 |
| 37 | 62984 | 62984 | 0 | 62984 | 0 | 62985 | -1 |
| 38 | 63186 | 63188 | -2 | 63188 | -2 | 63185 | 1 |
| 39 | 63388 | 63389 | -1 | 63389 | -1 | 63387 | 1 |
| 40 | 63591 | 63589 | 2 | 63590 | 1 | 63591 | 0 |
| 41 | 63792 | 63791 | 1 | 63791 | 1 | 63794 | -2 |
| 42 | 63994 | 63995 | -1 | 63995 | -1 | 63995 | -1 |

| Beam Position | Expected Resolver Counts | Coldplate -3.1°C | | Coldplate +7.7°C | | Coldplate +18.5°C | |
|---|---|---|---|---|---|---|---|
| | | Measured Resolver Counts | Delta | Measured Resolver Counts | Delta | Measured Resolver Counts | Delta |
| 43 | 64196 | 64198 | -2 | 64198 | -2 | 64195 | 1 |
| 44 | 64399 | 64399 | 0 | 64399 | 0 | 64397 | 2 |
| 45 | 64601 | 64599 | 2 | 64599 | 2 | 64601 | 0 |
| 46 | 64803 | 64802 | 1 | 64801 | 2 | 64804 | -1 |
| 47 | 65005 | 65006 | -1 | 65005 | 0 | 65005 | 0 |
| 48 | 65207 | 65209 | -2 | 65209 | -2 | 65206 | 1 |
| 49 | 65409 | 65409 | 0 | 65409 | 0 | 65408 | 1 |
| 50 | 75 | 74 | 1 | 74 | 1 | 76 | -1 |
| 51 | 277 | 277 | 0 | 276 | 1 | 279 | -2 |
| 52 | 479 | 480 | -1 | 480 | -1 | 479 | 0 |
| 53 | 681 | 683 | -2 | 683 | -2 | 680 | 1 |
| 54 | 884 | 883 | 1 | 884 | 0 | 883 | 1 |
| 55 | 1086 | 1084 | 2 | 1084 | 2 | 1087 | -1 |
| 56 | 1288 | 1287 | 1 | 1287 | 1 | 1289 | -1 |
| 57 | 1489 | 1491 | -2 | 1490 | -1 | 1489 | 0 |
| 58 | 1692 | 1693 | -1 | 1693 | -1 | 1690 | 2 |
| 59 | 1894 | 1893 | 1 | 1894 | 0 | 1893 | 1 |
| 60 | 2096 | 2094 | 2 | 2094 | 2 | 2097 | -1 |
| 61 | 2298 | 2298 | 0 | 2297 | 1 | 2299 | -1 |
| 62 | 2500 | 2501 | -1 | 2501 | -1 | 2499 | 1 |
| 63 | 2702 | 2703 | -1 | 2703 | -1 | 2701 | 1 |
| 64 | 2904 | 2903 | 1 | 2904 | 0 | 2904 | 0 |
| 65 | 3106 | 3105 | 1 | 3105 | 1 | 3108 | -2 |
| 66 | 3308 | 3308 | 0 | 3308 | 0 | 3309 | -1 |
| 67 | 3510 | 3512 | -2 | 3512 | -2 | 3509 | 1 |
| 68 | 3712 | 3713 | -1 | 3714 | -2 | 3711 | 1 |
| 69 | 3914 | 3913 | 1 | 3914 | 0 | 3915 | -1 |
| 70 | 4117 | 4115 | 2 | 4115 | 2 | 4118 | -1 |
| 71 | 4319 | 4319 | 0 | 4319 | 0 | 4319 | 0 |
| 72 | 4521 | 4522 | -1 | 4522 | -1 | 4519 | 2 |
| 73 | 4723 | 4723 | 0 | 4724 | -1 | 4721 | 2 |
| 74 | 4925 | 4923 | 2 | 4924 | 1 | 4925 | 0 |
| 75 | 5127 | 5125 | 2 | 5125 | 2 | 5128 | -1 |
| 76 | 5329 | 5330 | -1 | 5329 | 0 | 5330 | -1 |
| 77 | 5531 | 5532 | -1 | 5532 | -1 | 5529 | 2 |
| 78 | 5733 | 5733 | 0 | 5734 | -1 | 5732 | 1 |
| 79 | 5935 | 5933 | 2 | 5934 | 1 | 5936 | -1 |
| 80 | 6137 | 6136 | 1 | 6136 | 1 | 6139 | -2 |
| 81 | 6339 | 6340 | -1 | 6340 | -1 | 6340 | -1 |
| 82 | 6541 | 6543 | -2 | 6543 | -2 | 6540 | 1 |
| 83 | 6744 | 6743 | 1 | 6744 | 0 | 6742 | 2 |
| 84 | 6945 | 6944 | 1 | 6944 | 1 | 6946 | -1 |
| 85 | 7147 | 7147 | 0 | 7146 | 1 | 7149 | -2 |
| 86 | 7350 | 7351 | -1 | 7350 | 0 | 7350 | 0 |

| Beam Position | Expected Resolver Counts | Coldplate -3.1°C | | Coldplate +7.7°C | | Coldplate +18.5°C | |
|---|---|---|---|---|---|---|---|
| | | Measured Resolver Counts | Delta | Measured Resolver Counts | Delta | Measured Resolver Counts | Delta |
| 87 | 7552 | 7553 | -1 | 7553 | -1 | 7550 | 2 |
| 88 | 7754 | 7753 | 1 | 7754 | 0 | 7753 | 1 |
| 89 | 7956 | 7954 | 2 | 7954 | 2 | 7957 | -1 |
| 90 | 8158 | 8157 | 1 | 8157 | 1 | 8159 | -1 |
| 91 | 8360 | 8361 | -1 | 8361 | -1 | 8360 | 0 |
| 92 | 8562 | 8563 | -1 | 8563 | -1 | 8560 | 2 |
| 93 | 8764 | 8763 | 1 | 8764 | 0 | 8763 | 1 |
| 94 | 8966 | 8965 | 1 | 8965 | 1 | 8968 | -2 |
| 95 | 9168 | 9168 | 0 | 9167 | 1 | 9169 | -1 |
| 96 | 9370 | 9372 | -2 | 9372 | -2 | 9370 | 0 |
| 97 | 14640 | 14638 | 2 | 14639 | 1 | 14639 | 1 |
| 98 | 14842 | 14842 | 0 | 14842 | 0 | 14845 | -3 |
| 99 | 15044 | 15046 | -2 | 15046 | -2 | 15048 | -4 |
| 100 | 15247 | 15249 | -2 | 15249 | -2 | 15248 | -1 |
| 101 | 34968 | 34964 | 4 | 34966 | 2 | 34962 | 6 |
| 102 | 35170 | 35169 | 1 | 35170 | 0 | 35170 | 0 |
| 103 | 35372 | 35372 | 0 | 35372 | 0 | 35375 | -3 |
| 104 | 35574 | 35575 | -1 | 35575 | -1 | 35577 | -3 |

The timing of the beam position samples relative to the 8-second synchronization pulse is illustrated in Figure 5-3. The delay between the synchronization pulse and the start of the beam position 1 sample is set by a programmable (uploadable) offset. For S/N 303, the programmable scan offset is set to zero.

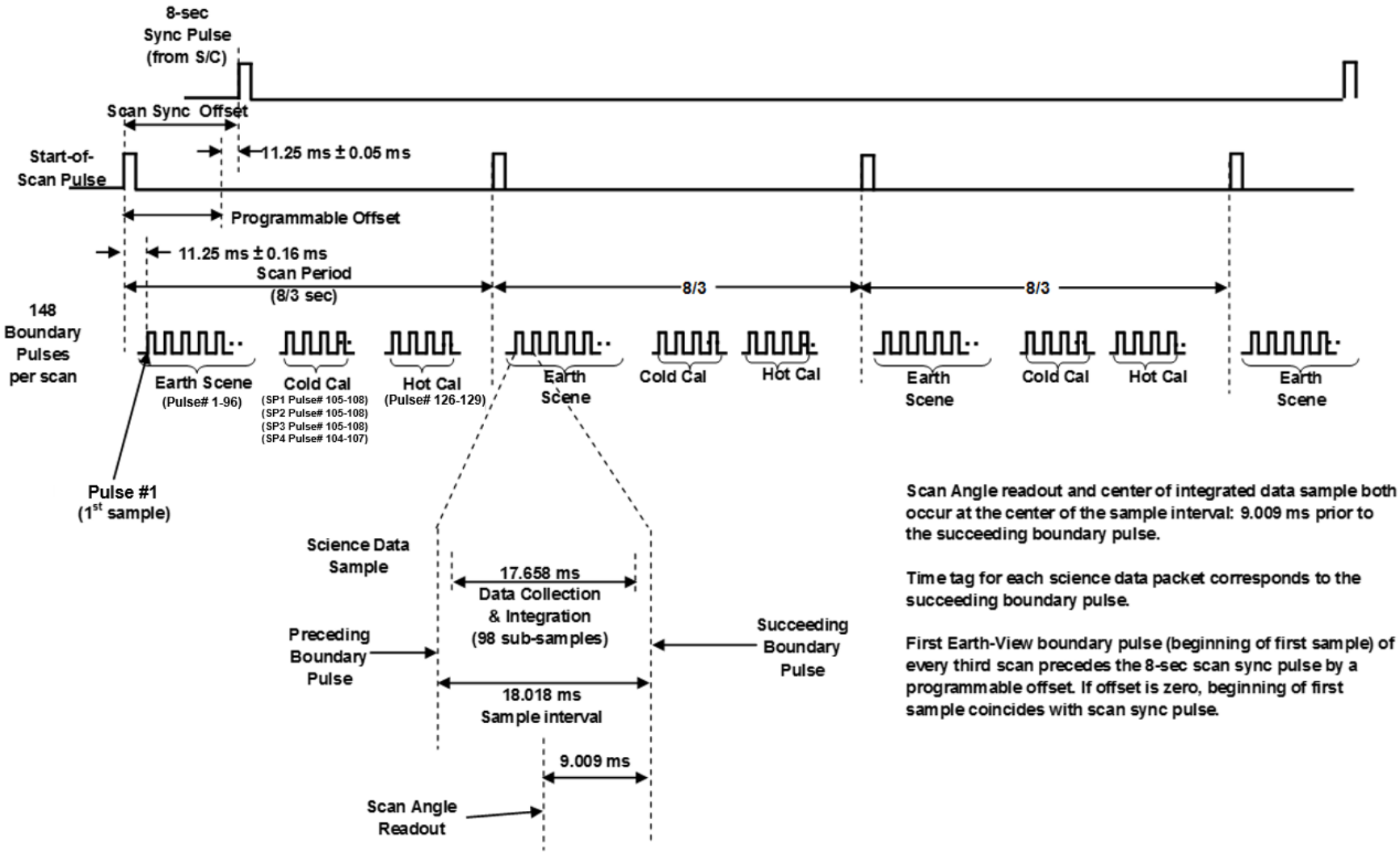



**Figure 5-3 ATMS Beam Position with Respect to 8-Second Synchronization Pulse**

# 6 ANTENNA PATTERN DATA

## 6.1 Boresight Alignment

The JPSS1 ATMS antenna pattern boresight alignment with respect to the instrument alignment cube was measured during the antenna subsystem verification test (RE-17491A, Appendix A). These values were converted to Tait-Bryan yaw, pitch and roll errors, and added to the spacecraft alignment errors, using the equations below.

$$\varepsilon_r = -\varepsilon_{CT} + R_{SC}$$
$$\varepsilon_p = -\varepsilon_{DT} + P_{SC}$$
$$\varepsilon_y = -\frac{1-\cos\gamma}{\sin\gamma}\varepsilon_{DT} + Y_{SC}$$

where $\varepsilon_r$ = roll error
$\varepsilon_p$ = pitch error
$\varepsilon_y$ = yaw error
$\varepsilon_{CT}$ = Cross-Track pointing error
$\varepsilon_{DT}$ = Down-Track pointing error
$\gamma$ = scan angle
$R_{SC}$, $P_{SC}$, $Y_{SC}$: Spacecraft roll, pitch and yaw alignments

The Roll Errors are about the instrument x-axis, with positive angles in the negative scan direction. This corresponds to the $\psi$ shown in Appendix D. The Pitch Errors are about the y-axis, corresponding to $\theta$ in Appendix D. Yaw error is defined as the rotation about the z-axis, with a positive angle from the x-axis to the y-axis, corresponding to $\phi_1$ in Appendix D. The values of these errors, for beam positions 1, 48 and 96, are provided in Tables 6-1, 6-2 and 6-3. These error values include in the corresponding bottom row the spacecraft alignment error data provided by SER-2463159, JPSS-1 Instrument Interface Alignment Summary, which provides the instrument alignments to the ADCS (Attitude Determination and Control Subsystem) control vector. By adding these respective roll, pitch, and yaw values to the errors determined during the antenna subsystem verification test, this completes the calculations of the equation seen above. In Table 19-1, words 95-139, the Roll Errors are identified with a "_X" suffix, the Pitch Errors with a "_Y" suffix, and the Yaw Errors with a "_Z" suffix.

**Table 6-1 Roll Angle Errors**

| Channel | Beam Position 1 Roll Error (degrees) | Beam Position 48 Roll Error (degrees) | Beam Position 96 Roll Error (degrees) |
|---|---|---|---|
| 1 | 0.037 | 0.034 | 0.021 |
| 2 | 0.062 | 0.051 | 0.000 |
| 3 - 15 | 0.082 | 0.061 | 0.011 |
| 16 | 0.088 | 0.026 | -0.036 |
| 17-22 | 0.156 | 0.085 | -0.042 |
| $R_{SC}$ (degrees): -0.03111 | | | |

**Table 6-2 Pitch Angle Errors**

| Channel | Beam Position 1 Pitch Error (degrees) | Beam Position 48 Pitch Error (degrees) | Beam Position 96 Pitch Error (degrees) |
|---|---|---|---|
| 1 | 0.056 | 0.028 | 0.063 |
| 2 | 0.103 | 0.055 | 0.057 |
| 3 - 15 | 0.071 | 0.044 | 0.033 |
| 16 | -0.087 | 0.010 | 0.045 |
| 17-22 | -0.089 | 0.057 | 0.112 |
| $P_{SC}$ (degrees): -0.01159 | | | |

**Table 6-3 Yaw Angle Errors**

| Channel | Beam Position 1 Yaw Error (degrees) | Beam Position 48 Yaw Error (degrees) | Beam Position 96 Yaw Error (degrees) |
|---|---|---|---|
| 1 | -0.028 | 0.00 | 0.031 |
| 2 | -0.051 | 0.00 | 0.028 |
| 3 - 15 | -0.035 | 0.00 | 0.016 |
| 16 | 0.043 | 0.00 | 0.022 |
| 17-22 | 0.044 | 0.00 | 0.056 |
| $Y_{SC}$ (degrees): 0.07405 | | | |

## 6.2 Beamwidths and Efficiency

The antenna patterns may be found in Appendix A – Antenna Patterns & Efficiency Data. Figure 6-1 illustrates the directions of the angles reported in these tables and plots. The arrows indicate the direction of rotation of the test positioner for positive and negative reported angles, for each of the four planar cuts. These reported angles therefore represent the antenna frame orientation relative to the observation vector. The observation vector relative to the antenna frame is then in the opposite polarity.

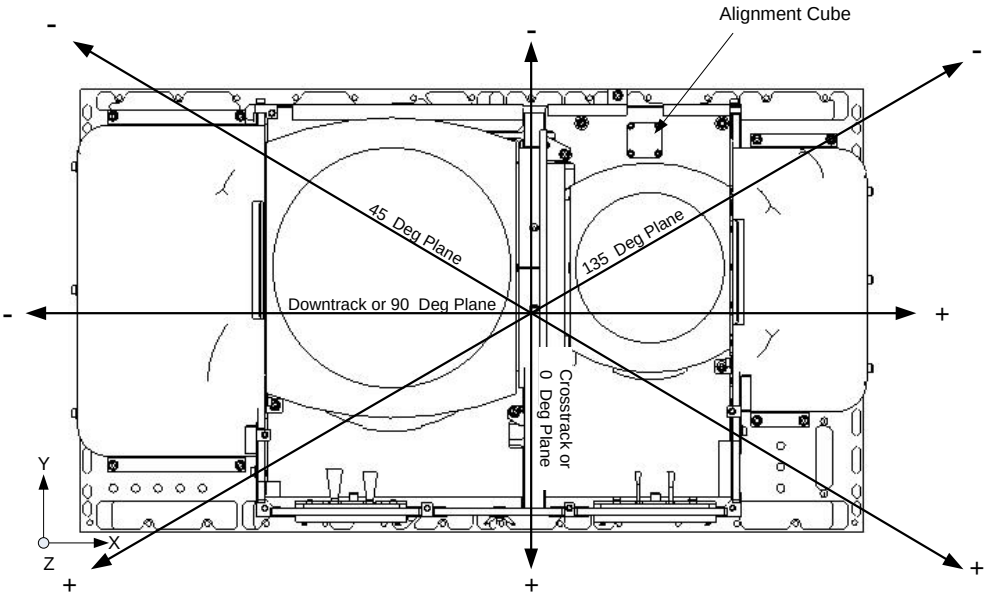



**Figure 6-1 Antenna Test Scan Planes and Angle Polarities**

# 7 THERMAL VACUUM CALIBRATION TEST ERRORS

The error sources that contribute to thermal vacuum calibration test errors are:

- Instrument Hot Target
- Calibration Test Equipment (CTE) Cold Target (at 84 K)
- CTE Variable Scene Target (range of 84 K to 330 K)
- Reflector Emissivity
- System Noise
- Gain and Offset Drifts

The three Calibration Target errors are shown in Table 7-1, based on the analyses in the Radiometric Math Model (RE-12110 Rev F), but using parameters suitable for the test targets and the thermal vacuum test conditions. The emissivity contributions are based on $\varepsilon = 0.9999$, with the instrument target at 275 K (typical measured value), the cold target at 85 K, and the Scene Target at 207 K. Temperature drifts are not included, since the targets were stabilized, not subject to the interface temperature drifts budgeted for the in-flight calibration. The measurement accuracy uses the beginning-of-life values for the PRT measurements. For the coupling loss, the environment temperature is taken to be $T_E = 190$ K, which is an approximation based on the rationale that the environment is dominated by the scene target temperature, but also influenced by the cold target (at 85 K) and the chamber shroud (at 168 K).The coupling loss factors of all three targets are as given in Table 3-4 of the Radiometric Math Model.

**Table 7-1 Target Errors for Calibration Tests**

| | **Instrument Hot Target (275 K)** | | **CTE Cold Target (85 K)** | | **CTE Scene Target (207 K)** | |
|---|---|---|---|---|---|---|
| | **Static** | **Dynamic** | **Static** | **Dynamic** | **Static** | **Dynamic** |
| Uncertainty of Emissivity | -0.0275 | | -0.0084 | | -0.0207 | |
| Temperature Gradient | | 0.050 | | 0.0500 | | 0.0500 |
| Temperature Measurement Accuracy | | 0.0321 | | 0.0321 | | 0.0321 |
| Reflector Coupling Loss | | | | | | |
| Chan 1, 2 | -0.0675 | | 0.0834 | | -0.0135 | |
| Chan 3-15 | -0.0645 | | 0.0796 | | -0.0129 | |
| Chan 16 | -0.0426 | | 0.0526 | | -0.0085 | |
| Chan 17-22 | -0.0309 | | 0.0381 | | -0.0062 | |
| Total (Static and Dynamic) | | | | | | |
| Chan 1, 2 | -0.095 | 0.0594 | 0.0749 | 0.0594 | -0.0342 | 0.0594 |
| Chan 3-15 | -0.092 | 0.0594 | 0.0711 | 0.0594 | -0.0336 | 0.0594 |
| Chan 16 | -0.070 | 0.0594 | 0.0441 | 0.0594 | -0.0292 | 0.0594 |
| Chan 17-22 | -0.058 | 0.05947 | 0.0296 | 0.0594 | -0.0269 | 0.0594 |

The emissivity of the instrument scanning reflector introduces a scan angle dependent bias. The consequence of this is that there is an unknown relative bias offset between the measurements of the scene target, the cold target, and the instrument internal hot target. Because of these unknowns and the uncertainty of the CTE target biases, the absolute offset and the linear slope of the measured transfer functions are not suitable for use in the ground processing algorithms. Only the non-linearity, generally quadratic, is to be used in SDR algorithms and for predicting on-orbit performance.

Gain and offset drifts during the calibration tests are based on a thermal stability of the environment such that temperature drift of the receiver will be no greater than 1 K per hour (0.000278 K/sec). The consequent error contributions, using the analysis approach defined in 3.4.3 of the Radiometric Math Model, are shown in Table 7-2.

**Table 7-2 Predicted Gain-Drift Errors**

| Channel Number | $T_{sys}$ (K) | $\Delta G/\Delta T$ (dB/°C) | $\Delta G/\Delta T$ (/°C) | Worst-Case Random Error (±K) |
|---|---|---|---|---|
| 1,2 | 722 | 0.08 | 0.01859 | 0.0019 |
| 3-11 | 907 | 0.08 | 0.01859 | 0.0024 |
| 12-15 | 928 | 0.10 | 0.02329 | 0.0031 |
| 16 | 1249 | 0.08 | 0.01859 | 0.0033 |
| 17 | 2111 | 0.08 | 0.01859 | 0.0055 |
| 18,19 | 2780 | 0.08 | 0.01859 | 0.0073 |
| 20-22 | 2210 | 0.08 | 0.01859 | 0.0058 |

These random dynamic error sources make a small contribution to the overall uncertainty of the quadratic non-linearity coefficients derived from the calibration test.

# 8 IN-FLIGHT HOT CALIBRATION

The instrument hot calibration target bias (correction term for SDR processing) is derived in accordance with the Radiometric Math Model, except for using a target temperature $T_H$ = 282 K, which is a mid-point on-orbit temperature predicted by the thermal model. The values are listed in Table 8-1. This table also indicates the biases for each channel; the last column provides the offset terms, for five bands, which are included in the Calibration Data Packet (see Table 19-1) for use by the SDR algorithm.

**Table 8-1 Hot Calibration Target Parameters**

| Channel | Target Emissivity Error (K) | Coupling Loss (K) | Computed Hot Target Bias (K) | Hot Target Offset Term for SDR Processing (K) |
|---|---|---|---|---|
| 1 | -0.0282 | -0.1340 | -0.0811 | -0.0811 |
| 2 | -0.0282 | -0.1340 | -0.0811 | -0.0811 |
| 3 | -0.0282 | -0.1280 | -0.0781 | -0.0781 |
| 4 | -0.0282 | -0.1280 | -0.0781 | |
| 5 | -0.0282 | -0.1280 | -0.0781 | |
| 6 | -0.0282 | -0.1280 | -0.0781 | |
| 7 | -0.0282 | -0.1280 | -0.0781 | |
| 8 | -0.0282 | -0.1280 | -0.0781 | |
| 9 | -0.0282 | -0.1280 | -0.0781 | |
| 10 | -0.0282 | -0.1280 | -0.0781 | |
| 11 | -0.0282 | -0.1280 | -0.0781 | |
| 12 | -0.0282 | -0.1280 | -0.0781 | |
| 13 | -0.0282 | -0.1280 | -0.0781 | |
| 14 | -0.0282 | -0.1280 | -0.0781 | |
| 15 | -0.0282 | -0.1280 | -0.0781 | |
| 16 | -0.0282 | -0.0846 | -0.0564 | -0.0564 |
| 17 | -0.0282 | -0.0612 | -0.0447 | -0.0447 |
| 18 | -0.0282 | -0.0612 | -0.0447 | |
| 19 | -0.0282 | -0.0612 | -0.0447 | |
| 20 | -0.0282 | -0.0612 | -0.0447 | |
| 21 | -0.0282 | -0.0612 | -0.0447 | |
| 22 | -0.0282 | -0.0612 | -0.0447 | |

The computed Hot Target Bias (K) is:

$$\text{Hot Target Bias (K)} = (-282K(1-\varepsilon) - \Delta T_B)/2$$

Where:
$\Delta T_B = C_g (T_H - T_E)$ and
$T_H$ = 282K (Hot Calibration target temperature)
$T_E$ = 113.3K (The brightness temperature of the external environment from Report 12110)
$\varepsilon$ = Target emissivity
$C_g$ = Coupling factor from Table 3-4 in Report 12110F

# 9 IN-FLIGHT COLD CALIBRATION

Uncertainties in the brightness temperature of the cold calibration observation are dependent upon:

a. Earth contamination through antenna sidelobes.
b. Spacecraft contamination through antenna sidelobes.
c. Uncertainty of the actual cosmic background temperature.

## 9.1 Earth and Spacecraft Contamination through Antenna Sidelobes

For the JPSS1 ATMS budget, analytically predicted antenna sidelobe levels were used to estimate the error contributions from the Earth and Spacecraft intercepts. The Earth-intercept calculation involves integration of an ATMS theoretical far-field antenna pattern over the angular region subtended by the Earth, for the primary cold calibration beam position, and at a spacecraft altitude of 833 km. Both co- and cross-polarized antenna patterns were employed in the computations, because the rotation of the reflector with respect to the feedhorn causes a rotation of the incident vertical and horizontal polarization. These percentages and the consequent maximum temperature errors are shown in Table 9-1, based on an assumed brightness temperature of 290 K for the Earth and for reflected radiation from the spacecraft. The maximum temperature error is then: $\Delta T = 2.9x[\%\ Energy]$. The SDR algorithm applies a correction bias for half of the predicted maximum contribution, and the residual error will be a dynamic random variable. Making a worst-case assumption of a uniform distribution from zero to the maximum temperature error, the one-sigma error value is derived as the maximum divided by square root of 12.

The spacecraft intercept calculation involved an integration of the near-field energy density of the antenna over regions of the spacecraft structures, to determine the fraction of energy received from spacecraft reflections of Earth radiation, for the case of maximum allowed spacecraft intrusions into the cold-space hemisphere. Table 9-1 shows the results of these analyses, for maximum levels, and the one-sigma residual errors assuming a uniform distribution about the bias correction point.

Using the Earth Intercept and Spacecraft Intercept data in Table 9-1 the total RSS Error (K) was then computed from the derived one-sigma errors. The Computed Cold Bias is the average of the Earth Intercept derived maximum error and the Spacecraft Intercept maximum error. The Offset for SDR Processing was then computed as the average Computed Cold Bias for all channels within the same band.

**Table 9-1 Predicted Cold Calibration Errors**

| | Earth Intercept | | | Spacecraft Intercept | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Chan | Percent Energy | Derived Maximum Error (K) | Derived one-sigma (K) | Percent Energy | Derived Maximum Error (K) | Derived one-sigma (K) | Total RSS Error (K) | Computed Cold Bias (K) | Offset for SDR Processing (K) |
| 1 | 0.02 | 0.0580 | 0.0167 | 0.13 | 0.377 | 0.109 | 0.110 | 0.218 | 0.218 |
| 2 | 0.02 | 0.0580 | 0.0167 | 0.13 | 0.377 | 0.109 | 0.110 | 0.218 | 0.218 |
| 3 | 0.04 | 0.116 | 0.0335 | 0.04 | 0.116 | 0.0335 | 0.0474 | 0.116 | 0.116 |
| 4 | 0.04 | 0.116 | 0.0335 | 0.04 | 0.116 | 0.0335 | 0.0474 | 0.116 | |
| 5 | 0.04 | 0.116 | 0.0335 | 0.04 | 0.116 | 0.0335 | 0.0474 | 0.116 | |
| 6 | 0.04 | 0.116 | 0.0335 | 0.04 | 0.116 | 0.0335 | 0.0474 | 0.116 | |
| 7 | 0.04 | 0.116 | 0.0335 | 0.04 | 0.116 | 0.0335 | 0.0474 | 0.116 | |
| 8 | 0.04 | 0.116 | 0.0335 | 0.04 | 0.116 | 0.0335 | 0.0474 | 0.116 | |
| 9 | 0.04 | 0.116 | 0.0335 | 0.04 | 0.116 | 0.0335 | 0.0474 | 0.116 | |
| 10 | 0.04 | 0.116 | 0.0335 | 0.04 | 0.116 | 0.0335 | 0.0474 | 0.116 | |
| 11 | 0.04 | 0.116 | 0.0335 | 0.04 | 0.116 | 0.0335 | 0.0474 | 0.116 | |
| 12 | 0.04 | 0.116 | 0.0335 | 0.04 | 0.116 | 0.0335 | 0.0474 | 0.116 | |
| 13 | 0.04 | 0.116 | 0.0335 | 0.04 | 0.116 | 0.0335 | 0.0474 | 0.116 | |
| 14 | 0.04 | 0.116 | 0.0335 | 0.04 | 0.116 | 0.0335 | 0.0474 | 0.116 | |
| 15 | 0.04 | 0.116 | 0.0335 | 0.04 | 0.116 | 0.0335 | 0.0474 | 0.116 | |
| 16 | 0.01 | 0.029 | 0.0084 | 0.03 | 0.087 | 0.0251 | 0.0265 | 0.058 | 0.058 |
| 17 | 0.01 | 0.029 | 0.0084 | 0.01 | 0.029 | 0.0084 | 0.0119 | 0.029 | 0.020 |
| 18-22 | 0.007 | 0.020 | 0.0059 | 0.007 | 0.020 | 0.0059 | 0.0083 | 0.020 | |

Where:

- Derived Maximum Error (K) = 2.9* Percent Energy(from Earth or Spacecraft Intercept)
- Derived one-sigma Error(K) = Derived Maximum Error (K)/sqrt(12)
- Total RSS Error (K) =
  sqrt[(Earth Intercept Derived one-sigma Error(K)^2 + Spacecraft Intercept Derived one-sigma Error (K) ^2]
- Computed Cold Bias =
  0.5* (Earth Intercept Derived Maximum Error (K) + Spacecraft Intercept Derived Maximum Error (K))

### 9.2 Uncertainty in the Actual Cosmic Background

Data from the COBE mission have established that the cosmic temperature is 2.728K, with an uncertainty of ± 0.004K.

### 9.3 Total Cold Calibration Random Errors

Table 9-1 also gives the total (RSS) of the JPSS1 cold calibration random one-sigma error values, and the cold calibration bias for each channel. The last column of this table indicates the offset values, for five bands, which are included in the Calibration Data Packet (see Table 19-1) for use by the SDR algorithm.

# 10 RADIOMETRIC PERFORMANCE AND CALIBRATION DATA

The radiometric performance verification and calibration tests of the JPSS ATMS S/N 303 instrument have been performed in accordance with the JPSS1 ATMS Statement of Work. The detailed procedure used for this effort is the System Calibration Test Procedure for the JPSS1 Regression Testing (AE-32970 Rev D), and the results are documented in the JPSS1 ATMS System Calibration Test Report, RE-20801. The main objectives of this procedure are to determine the NEΔT (temperature sensitivity), calibration accuracy, and linearity of the instrument. These parameters are measured in a vacuum chamber at a pressure of $<1 \times 10^{-5}$ Torr at a series of instrument and scene target temperatures. The instrument and scene target temperatures are illustrated in Figure 10-1. The instrument cold plate temperature is stepped through three values: operational low (-3.1°C), midpoint (+7.7°C), and operational high (+18.5°C).

At each of the instrument cold plate temperatures, the scene targets are sequenced in temperature from 84K to 330K, as shown in Figure 10-1 Thermal Vacuum Calibration Profile. At each target and instrument temperature combination, the instrument and loads are stabilized and calibration data is acquired for 13 minutes (278 scans X 8/3 seconds/scan) in each of four instrument redundancy configurations (defined in Table 10-2 and Figure 10-2). Furthermore, certain target PRT's are intentionally masked-out as these PRT's were measuring unexpected values outside of their intended range. This is a known CTE issue with WG Scene Target PRT #7 being an example PRT that was masked. Table 10-3 displays CTE PRT's that were masked (set =0) which were consequentially disregarded in calibration calculations. Additionally, WG Cold Target PRT #9&10, KAV Scene Target PRT #3, and WG Scene Target PRT #7 were omitted from calibration data processing due to noise on these temp sensors.

The targets are controlled within 0.1 K or better during measurement by the radiometer. The time required at any one temperature step is dictated by the number of samples required to achieve an effective sensitivity of less than 0.09K (for all channels).

A data file was created for each calibration point. The data file contains a complete record of the digital and analog data, including all temperatures, voltages, currents, command configuration and radiometric data. A detailed cross-reference matrix of data is provided in Appendix C – Data Directory, Tables 17-1, 17-2, and 17-3.

Much of the radiometric data is processed "off-line" as indicated in Figure 10-3. The data from a given temperature combination (6 scene temperature steps at all 3 instrument cold plate temperatures) is processed. The on-orbit calibration accuracy may then be determined.

## 10.1 Thermal Vacuum Radiometric Performance Results

A summary of the thermal vacuum radiometric performance calibration data is presented in Tables 10-4 through 10-15. The NEΔT, thermal vac calibration accuracy (AC), and linearity are presented over the range of scene target and instrument temperatures.

Tables 10-4, 10-8, and 10-12 present the NEΔTs at each scene temperature and Tables 10-5, 10-9, and 10-13 give the NEΔTs interpolated to a 300 K scene temperature ( the temperature at which NEΔT is specified). All channels meet NEΔT requirements.

Tables 10-6, 10-10, and 10-14 represent the thermal vac calibration accuracies. The thermal vac calibration accuracy is computed as the difference between the brightness temperature inferred from radiometric counts, and the physical temperature of the scene target as derived from PRT measurements. These values include contributions from the CTE targets and are therefore not representative of actual on-orbit accuracies. Back-up data for these computed accuracies are provided in Tables 10-16 through 10-27, and the accuracy data are plotted in Figures 10-4 through 10-91. These figures show the regression curves, used to determine the quadratic non-linearities.

The data presented in Tables 10-7, 10-11, and 10-15 are the coefficients for a quadratic regression curve of the thermal vac calibration accuracies and the differences between the thermal vacuum calibration accuracies and the quadratic regression curve. In the last columns in the Tables, "NL" is half of the non-linearity over the on-orbit dynamic range (3 K to 330 K), and "$Pk_{acc}$" is the "peak non-linearity" which is the maximum difference between the quadratic regression curve and a straight line intercepting the cold and hot calibration points. Measured brightness temperatures from the Hot Cal target PRTs during the TV calibration tests was used to calculate "$PK_{acc}$" term – this is calculated by using a hot target physical temperature equal to the average hot target temperature at each TVAC coldplate temperatures to calculate the equivalent brightness temperature. The average temperatures for the Hot Cal targets, ATMS Coldplate, and Receiver Shelves across all scene target temepratures and RCs are provided in Table 10-1. Actual on-orbit temperatures depend on season (sun Beta angle). The TV Cal test temperatures correspond approximately to the coldest on-orbit conditions, while the hottest on-orbit temperature can be about 20° C higher. However, this derived parameter, $Pk_{Acc}$, is no longer relevant, when using linearity uncertainty in the budget rather than actual non-linearity.

**Table 10-1 Average ATMS Temperatures across All Scene Target Temperatures and RCs**

| Parameter | -3.1°C Cold Plate | +7.7°C Cold Plate | +18.5°C Cold Plate |
|---|---|---|---|
| KAV Hot Temp (K) | 266.35 | 276.11 | 285.69 |
| WG Hot Temp (K) | 268.09 | 277.83 | 287.09 |
| Coldplate (°C) | -3.10 | 7.84 | 18.51 |
| W Shelf (°C) | 4.21 | 14.57 | 24.57 |
| KKA Shelf (°C) | 3.25 | 13.76 | 23.95 |
| G Shelf (°C) | 4.19 | 14.63 | 24.74 |
| V Shelf (°C) | 6.33 | 16.76 | 26.90 |

The Quadratic Coefficients to be used for all operational cold plate temperatures by the SDR algorithm were derived from the median values, over the four redundancy configurations, of the $A_2$ regression coefficients in Table 10-11 (for the +7.7° C cold plate temperature). These values are listed in Table 10-28. The Quadratic Coefficients from the other temperature cases are included in the same table for reference. The values values from the +7.7°C cold plate temperature case are are included in the Calibration Data Packet (see Table 19-1).

As described in the Radiometric Math Model (RE-12110 Rev F), these coefficients will be used in the computation of a radiometric correction term as shown below:

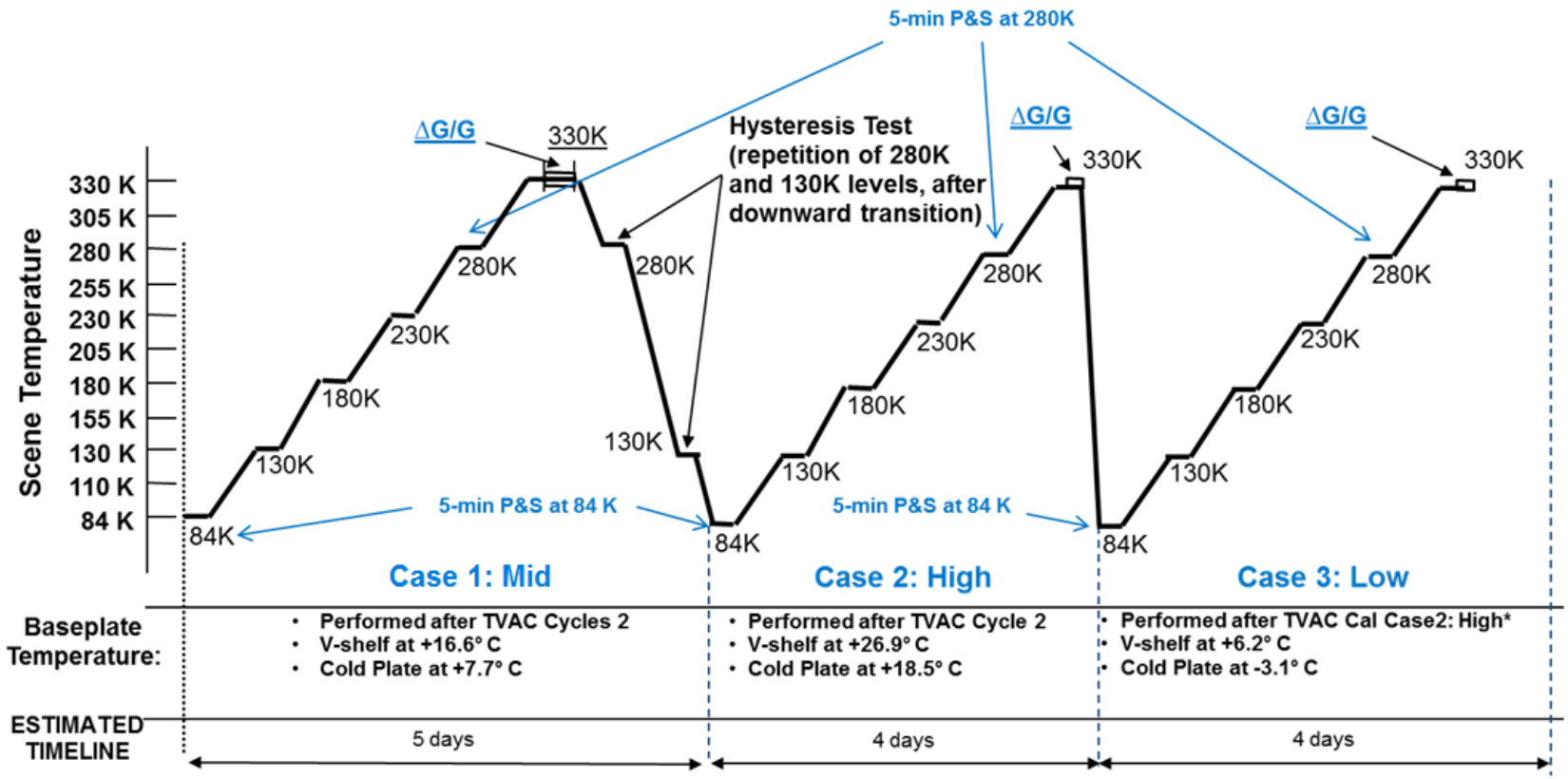
$$\Delta T_L = T_{nl}\left[1 - 4\left(\frac{T_S - T_C}{T_H - T_C} - \frac{1}{2}\right)^2\right]$$

where: $T_{nl} = -0.25 A_2 (T_H - T_C)^2$

and:

$\mathbf{\Delta T_L}$ = the non-linearity error

$\mathbf{T_S}$ = the scene brightness temperature
$\mathbf{T_C}$ = the cold calibration brightness temperature
$\mathbf{T_H}$ = the hot calibration brightness temperature




- Calibration is interleaved with Thermal Vacuum cycles as indicated
- Once data collection is completed for one calibration temperature, NG is authorized to proceed with Thermal Vacuum cycles in parallel with calibration data analysis.
- *NASA/NG team to review data from Nominal and Hot temperatures to determine if Cold calibration is required

**Figure 10-1 Thermal Vacuum Calibration Profile**

**Table 10-2 Instrument Redundancy Configurations**

| Redundancy Number | Instrument Configuration |
|---|---|
| 1 | A-Side of PLO, LO's, RPS, SPA, SDE; and SAW-A |
| 2 | A-Side of PLO, LO's, RPS, SPA, SDE; and SAW-B |
| 5 | B-Side of PLO, LO's, RPS, SPA, SDE; and SAW-B |
| 6 | B-Side of PLO, LO's, RPS, SPA, SDE; and SAW-A |

**Table 10-3 PRT's Masked Out for Processing (Highlighted)**

| Good CTE PRTs | PRT1 | PRT2 | PRT3 | PRT4 | PRT5 | PRT6 | PRT7 | PRT8 | PRT9 | PRT10 | PRT11 | PRT12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GOOD_KAV_FIX_PRTs | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | |
| GOOD_WG_FIX_PRTs | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | | |
| GOOD_KAV_VAR_PRTs | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| GOOD_WG_VAR_PRTs | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | | |
| GOOD_COLD_PLATE_PRTs | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | |

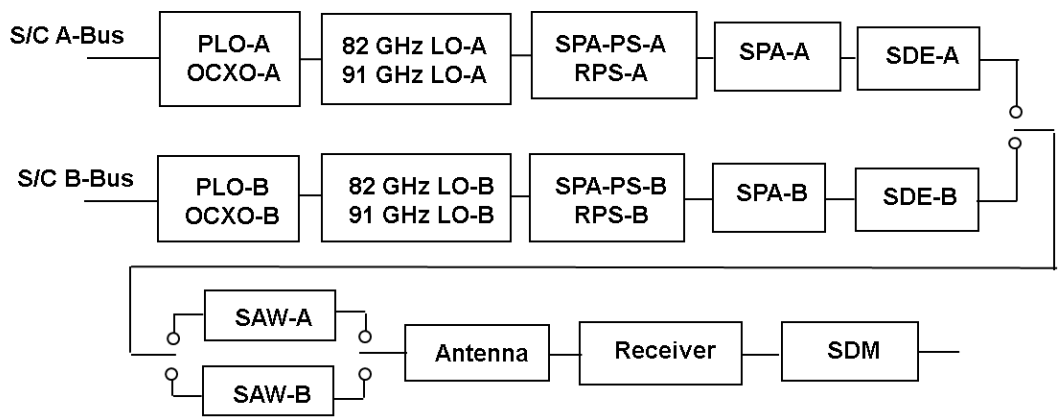



**Figure 10-2 Diagram of Instrument Redundancy Configurations**

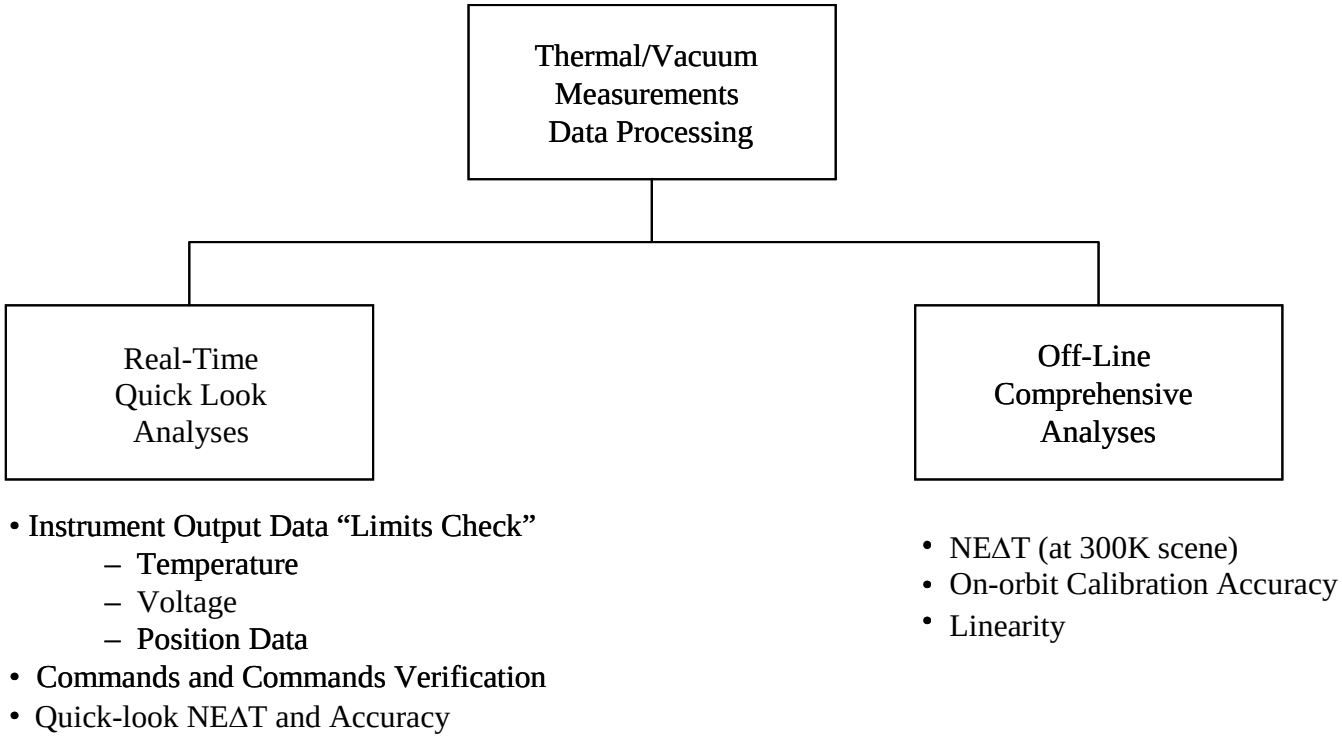



**Figure 10-3 Thermal Vacuum Calibration Data Processing**

**Table 10-4 Cold Plate -3.1°C, NEΔT Data**

| | | Scene Temperature | | | | | |
|---|---|---|---|---|---|---|---|
| | | 84K | 130K | 180K | 230K | 280K | 330K |
| RC1 | Ch 1 | 0.128 | 0.154 | 0.178 | 0.197 | 0.228 | 0.249 |
| | Ch 2 | 0.152 | 0.184 | 0.205 | 0.240 | 0.274 | 0.301 |
| | Ch 3 | 0.193 | 0.225 | 0.251 | 0.275 | 0.317 | 0.340 |
| | Ch 4 | 0.132 | 0.150 | 0.169 | 0.194 | 0.212 | 0.244 |
| | Ch 5 | 0.126 | 0.146 | 0.170 | 0.188 | 0.217 | 0.242 |
| | Ch 6 | 0.140 | 0.157 | 0.180 | 0.205 | 0.231 | 0.266 |
| | Ch 7 | 0.131 | 0.151 | 0.167 | 0.188 | 0.216 | 0.235 |
| | Ch 8 | 0.129 | 0.147 | 0.176 | 0.183 | 0.213 | 0.243 |
| | Ch 9 | 0.143 | 0.158 | 0.190 | 0.207 | 0.228 | 0.258 |
| | Ch 10 | 0.203 | 0.233 | 0.257 | 0.285 | 0.329 | 0.362 |
| | Ch 11 | 0.274 | 0.329 | 0.365 | 0.398 | 0.452 | 0.501 |
| | Ch 12 | 0.300 | 0.335 | 0.370 | 0.418 | 0.461 | 0.522 |
| | Ch 13 | 0.442 | 0.492 | 0.575 | 0.625 | 0.686 | 0.811 |
| | Ch 14 | 0.617 | 0.691 | 0.781 | 0.902 | 0.978 | 1.078 |
| | Ch 15 | 1.014 | 1.163 | 1.300 | 1.463 | 1.564 | 1.739 |
| | Ch 16 | 0.136 | 0.144 | 0.151 | 0.167 | 0.189 | 0.200 |
| | Ch 17 | 0.254 | 0.270 | 0.276 | 0.286 | 0.302 | 0.316 |
| | Ch 18 | 0.296 | 0.296 | 0.311 | 0.325 | 0.339 | 0.361 |
| | Ch 19 | 0.307 | 0.314 | 0.342 | 0.335 | 0.350 | 0.351 |
| | Ch 20 | 0.332 | 0.352 | 0.363 | 0.399 | 0.417 | 0.403 |
| | Ch 21 | 0.363 | 0.363 | 0.379 | 0.402 | 0.410 | 0.426 |
| | Ch 22 | 0.520 | 0.530 | 0.543 | 0.579 | 0.618 | 0.617 |

| | | 84K | 130K | 180K | 230K | 280K | 330K |
|---|---|---|---|---|---|---|---|
| RC2 | Ch 1 | 0.131 | 0.157 | 0.185 | 0.205 | 0.222 | 0.265 |
| | Ch 2 | 0.150 | 0.183 | 0.202 | 0.246 | 0.266 | 0.301 |
| | Ch 3 | 0.196 | 0.220 | 0.254 | 0.282 | 0.318 | 0.348 |
| | Ch 4 | 0.134 | 0.155 | 0.174 | 0.193 | 0.211 | 0.241 |
| | Ch 5 | 0.130 | 0.153 | 0.166 | 0.195 | 0.210 | 0.245 |
| | Ch 6 | 0.142 | 0.164 | 0.184 | 0.204 | 0.232 | 0.254 |
| | Ch 7 | 0.130 | 0.148 | 0.174 | 0.194 | 0.214 | 0.225 |
| | Ch 8 | 0.132 | 0.147 | 0.177 | 0.190 | 0.216 | 0.229 |
| | Ch 9 | 0.144 | 0.166 | 0.189 | 0.203 | 0.229 | 0.257 |
| | Ch 10 | 0.207 | 0.234 | 0.262 | 0.302 | 0.344 | 0.358 |
| | Ch 11 | 0.286 | 0.318 | 0.365 | 0.411 | 0.455 | 0.507 |
| | Ch 12 | 0.293 | 0.326 | 0.374 | 0.420 | 0.475 | 0.525 |
| | Ch 13 | 0.439 | 0.505 | 0.564 | 0.611 | 0.703 | 0.769 |
| | Ch 14 | 0.612 | 0.680 | 0.795 | 0.877 | 0.995 | 1.119 |
| | Ch 15 | 0.991 | 1.136 | 1.283 | 1.439 | 1.571 | 1.793 |
| | Ch 16 | 0.131 | 0.141 | 0.152 | 0.174 | 0.193 | 0.207 |
| | Ch 17 | 0.258 | 0.271 | 0.281 | 0.296 | 0.311 | 0.327 |
| | Ch 18 | 0.301 | 0.306 | 0.311 | 0.320 | 0.320 | 0.351 |
| | Ch 19 | 0.321 | 0.321 | 0.322 | 0.345 | 0.350 | 0.372 |
| | Ch 20 | 0.344 | 0.353 | 0.368 | 0.389 | 0.403 | 0.413 |
| | Ch 21 | 0.368 | 0.376 | 0.384 | 0.394 | 0.425 | 0.422 |
| | Ch 22 | 0.523 | 0.558 | 0.548 | 0.588 | 0.616 | 0.605 |

**Table 10-4 Cold Plate -3.1°C, NEΔT Data (cont.)**

| | | Scene Temperature | | | | | |
|---|---|---|---|---|---|---|---|
| | | 84K | 130K | 180K | 230K | 280K | 330K |
| RC5 | Ch 1 | 0.132 | 0.151 | 0.178 | 0.206 | 0.234 | 0.256 |
| | Ch 2 | 0.151 | 0.173 | 0.203 | 0.234 | 0.264 | 0.295 |
| | Ch 3 | 0.191 | 0.226 | 0.253 | 0.276 | 0.293 | 0.350 |
| | Ch 4 | 0.131 | 0.152 | 0.172 | 0.192 | 0.212 | 0.231 |
| | Ch 5 | 0.131 | 0.147 | 0.168 | 0.192 | 0.218 | 0.234 |
| | Ch 6 | 0.137 | 0.164 | 0.187 | 0.216 | 0.232 | 0.258 |
| | Ch 7 | 0.131 | 0.152 | 0.171 | 0.194 | 0.214 | 0.242 |
| | Ch 8 | 0.133 | 0.152 | 0.168 | 0.194 | 0.214 | 0.237 |
| | Ch 9 | 0.140 | 0.167 | 0.187 | 0.211 | 0.233 | 0.262 |
| | Ch 10 | 0.200 | 0.236 | 0.274 | 0.293 | 0.331 | 0.354 |
| | Ch 11 | 0.284 | 0.325 | 0.373 | 0.395 | 0.451 | 0.505 |
| | Ch 12 | 0.294 | 0.330 | 0.386 | 0.422 | 0.478 | 0.519 |
| | Ch 13 | 0.436 | 0.504 | 0.558 | 0.642 | 0.721 | 0.762 |
| | Ch 14 | 0.621 | 0.707 | 0.781 | 0.881 | 0.999 | 1.055 |
| | Ch 15 | 1.010 | 1.127 | 1.302 | 1.479 | 1.671 | 1.752 |
| | Ch 16 | 0.135 | 0.144 | 0.157 | 0.173 | 0.188 | 0.202 |
| | Ch 17 | 0.259 | 0.271 | 0.285 | 0.301 | 0.302 | 0.327 |
| | Ch 18 | 0.284 | 0.299 | 0.296 | 0.312 | 0.343 | 0.325 |
| | Ch 19 | 0.305 | 0.304 | 0.318 | 0.327 | 0.359 | 0.363 |
| | Ch 20 | 0.344 | 0.334 | 0.379 | 0.384 | 0.393 | 0.428 |
| | Ch 21 | 0.357 | 0.368 | 0.386 | 0.399 | 0.396 | 0.445 |
| | Ch 22 | 0.508 | 0.535 | 0.544 | 0.583 | 0.605 | 0.622 |

| | | 84K | 130K | 180K | 230K | 280K | 330K |
|---|---|---|---|---|---|---|---|
| RC6 | Ch 1 | 0.134 | 0.153 | 0.180 | 0.204 | 0.231 | 0.257 |
| | Ch 2 | 0.150 | 0.178 | 0.207 | 0.234 | 0.266 | 0.294 |
| | Ch 3 | 0.195 | 0.219 | 0.248 | 0.287 | 0.307 | 0.338 |
| | Ch 4 | 0.128 | 0.152 | 0.167 | 0.196 | 0.218 | 0.235 |
| | Ch 5 | 0.129 | 0.150 | 0.168 | 0.196 | 0.216 | 0.239 |
| | Ch 6 | 0.140 | 0.158 | 0.183 | 0.205 | 0.234 | 0.252 |
| | Ch 7 | 0.130 | 0.153 | 0.171 | 0.187 | 0.215 | 0.233 |
| | Ch 8 | 0.129 | 0.149 | 0.169 | 0.191 | 0.214 | 0.241 |
| | Ch 9 | 0.141 | 0.167 | 0.183 | 0.209 | 0.228 | 0.259 |
| | Ch 10 | 0.203 | 0.229 | 0.261 | 0.294 | 0.327 | 0.366 |
| | Ch 11 | 0.276 | 0.320 | 0.362 | 0.398 | 0.470 | 0.494 |
| | Ch 12 | 0.297 | 0.328 | 0.375 | 0.416 | 0.476 | 0.517 |
| | Ch 13 | 0.445 | 0.496 | 0.575 | 0.628 | 0.699 | 0.775 |
| | Ch 14 | 0.612 | 0.711 | 0.807 | 0.869 | 0.958 | 1.103 |
| | Ch 15 | 0.998 | 1.157 | 1.266 | 1.462 | 1.606 | 1.809 |
| | Ch 16 | 0.135 | 0.149 | 0.153 | 0.173 | 0.187 | 0.198 |
| | Ch 17 | 0.266 | 0.268 | 0.278 | 0.299 | 0.308 | 0.327 |
| | Ch 18 | 0.283 | 0.292 | 0.310 | 0.305 | 0.326 | 0.341 |
| | Ch 19 | 0.294 | 0.301 | 0.317 | 0.329 | 0.346 | 0.371 |
| | Ch 20 | 0.345 | 0.346 | 0.363 | 0.377 | 0.383 | 0.407 |
| | Ch 21 | 0.364 | 0.356 | 0.385 | 0.396 | 0.414 | 0.415 |
| | Ch 22 | 0.531 | 0.518 | 0.543 | 0.565 | 0.574 | 0.589 |

**Table 10-5 Cold Plate -3.1°C NE∆T Interpolated to Scene Temperature of 300K**

| | | NE∆T Interpolated for 300K | | | |
|---|---|---|---|---|---|
| | Req't | RC1 | RC2 | RC5 | RC6 |
| Ch 1 | 0.700 | 0.236 | 0.239 | 0.243 | 0.242 |
| Ch 2 | 0.800 | 0.285 | 0.280 | 0.277 | 0.278 |
| Ch 3 | 0.900 | 0.326 | 0.330 | 0.316 | 0.320 |
| Ch 4 | 0.700 | 0.225 | 0.223 | 0.220 | 0.225 |
| Ch 5 | 0.700 | 0.227 | 0.224 | 0.224 | 0.226 |
| Ch 6 | 0.700 | 0.245 | 0.241 | 0.243 | 0.241 |
| Ch 7 | 0.700 | 0.224 | 0.218 | 0.225 | 0.222 |
| Ch 8 | 0.700 | 0.225 | 0.221 | 0.223 | 0.225 |
| Ch 9 | 0.700 | 0.240 | 0.240 | 0.245 | 0.241 |
| Ch 10 | 0.750 | 0.342 | 0.349 | 0.341 | 0.343 |
| Ch 11 | 1.200 | 0.472 | 0.476 | 0.473 | 0.480 |
| Ch 12 | 1.200 | 0.485 | 0.495 | 0.495 | 0.493 |
| Ch 13 | 1.500 | 0.736 | 0.730 | 0.738 | 0.730 |
| Ch 14 | 2.400 | 1.018 | 1.045 | 1.022 | 1.017 |
| Ch 15 | 3.600 | 1.634 | 1.661 | 1.704 | 1.689 |
| Ch 16 | 0.500 | 0.194 | 0.199 | 0.194 | 0.192 |
| Ch 17 | 0.600 | 0.308 | 0.317 | 0.312 | 0.316 |
| Ch 18 | 0.800 | 0.348 | 0.333 | 0.336 | 0.332 |
| Ch 19 | 0.800 | 0.351 | 0.359 | 0.361 | 0.356 |
| Ch 20 | 0.800 | 0.411 | 0.407 | 0.407 | 0.393 |
| Ch 21 | 0.800 | 0.417 | 0.424 | 0.416 | 0.414 |
| Ch 22 | 0.900 | 0.617 | 0.611 | 0.612 | 0.580 |

**Table 10-6 Cold Plate -3.1°C, Accuracy Data**

| | | Scene Temperature | | | | | |
|---|---|---|---|---|---|---|---|
| | | 84K | 130K | 180K | 230K | 280K | 330K |
| RC1 | Ch 1 | -0.303 | -0.041 | 0.079 | 0.033 | -0.123 | -0.413 |
| | Ch 2 | -0.196 | 0.086 | 0.168 | 0.082 | -0.126 | -0.480 |
| | Ch 3 | -0.055 | 0.000 | 0.007 | -0.027 | -0.047 | -0.144 |
| | Ch 4 | -0.055 | -0.080 | -0.101 | -0.099 | -0.037 | 0.044 |
| | Ch 5 | -0.041 | -0.037 | -0.036 | -0.068 | -0.032 | -0.026 |
| | Ch 6 | -0.034 | -0.053 | -0.092 | -0.078 | -0.031 | 0.056 |
| | Ch 7 | -0.032 | 0.048 | 0.052 | 0.004 | -0.080 | -0.190 |
| | Ch 8 | -0.030 | 0.067 | 0.088 | 0.033 | -0.085 | -0.235 |
| | Ch 9 | -0.026 | 0.072 | 0.080 | 0.027 | -0.070 | -0.216 |
| | Ch 10 | -0.032 | 0.197 | 0.248 | 0.117 | -0.108 | -0.501 |
| | Ch 11 | -0.043 | 0.206 | 0.241 | 0.106 | -0.132 | -0.502 |
| | Ch 12 | -0.011 | 0.208 | 0.296 | 0.150 | -0.146 | -0.590 |
| | Ch 13 | -0.010 | 0.305 | 0.342 | 0.213 | -0.135 | -0.651 |
| | Ch 14 | -0.016 | 0.255 | 0.323 | 0.147 | -0.146 | -0.572 |
| | Ch 15 | 0.039 | 0.230 | 0.368 | 0.201 | -0.196 | -0.534 |
| | Ch 16 | -0.464 | -0.283 | -0.102 | -0.019 | -0.009 | -0.102 |
| | Ch 17 | -0.249 | 0.016 | 0.198 | 0.124 | -0.072 | -0.497 |
| | Ch 18 | -0.228 | -0.090 | 0.019 | 0.024 | -0.057 | -0.258 |
| | Ch 19 | -0.239 | -0.077 | 0.062 | 0.021 | -0.040 | -0.324 |
| | Ch 20 | -0.233 | -0.051 | 0.052 | 0.043 | -0.047 | -0.255 |
| | Ch 21 | -0.217 | -0.042 | 0.058 | 0.049 | -0.070 | -0.318 |
| | Ch 22 | -0.227 | 0.032 | 0.133 | 0.102 | -0.065 | -0.430 |

| | | 84K | 130K | 180K | 230K | 280K | 330K |
|---|---|---|---|---|---|---|---|
| RC2 | Ch 1 | -0.303 | -0.043 | 0.084 | 0.029 | -0.135 | -0.406 |
| | Ch 2 | -0.209 | 0.077 | 0.172 | 0.069 | -0.139 | -0.497 |
| | Ch 3 | -0.041 | 0.007 | 0.004 | -0.017 | -0.043 | -0.162 |
| | Ch 4 | -0.050 | -0.072 | -0.089 | -0.094 | -0.032 | 0.035 |
| | Ch 5 | -0.030 | -0.046 | -0.036 | -0.059 | -0.053 | -0.016 |
| | Ch 6 | -0.013 | -0.053 | -0.073 | -0.087 | -0.024 | 0.045 |
| | Ch 7 | -0.016 | 0.048 | 0.070 | -0.010 | -0.083 | -0.191 |
| | Ch 8 | -0.015 | 0.085 | 0.100 | 0.020 | -0.085 | -0.239 |
| | Ch 9 | -0.018 | 0.065 | 0.085 | -0.005 | -0.075 | -0.260 |
| | Ch 10 | -0.023 | 0.209 | 0.249 | 0.106 | -0.134 | -0.487 |
| | Ch 11 | -0.033 | 0.190 | 0.250 | 0.093 | -0.107 | -0.445 |
| | Ch 12 | -0.010 | 0.207 | 0.299 | 0.125 | -0.151 | -0.559 |
| | Ch 13 | -0.012 | 0.306 | 0.406 | 0.209 | -0.166 | -0.661 |
| | Ch 14 | 0.018 | 0.232 | 0.309 | 0.193 | -0.189 | -0.581 |
| | Ch 15 | -0.090 | 0.322 | 0.335 | 0.153 | -0.155 | -0.592 |
| | Ch 16 | -0.460 | -0.285 | -0.113 | -0.029 | -0.023 | -0.096 |
| | Ch 17 | -0.252 | 0.038 | 0.197 | 0.140 | -0.098 | -0.460 |
| | Ch 18 | -0.212 | -0.074 | 0.006 | 0.002 | -0.087 | -0.211 |
| | Ch 19 | -0.213 | -0.087 | 0.051 | 0.015 | -0.051 | -0.287 |
| | Ch 20 | -0.234 | -0.080 | 0.050 | 0.041 | -0.031 | -0.279 |
| | Ch 21 | -0.227 | -0.070 | 0.050 | 0.014 | -0.033 | -0.314 |
| | Ch 22 | -0.245 | 0.015 | 0.154 | 0.067 | -0.061 | -0.450 |

**Table 10-6 Cold Plate -3.1°C, Accuracy Data (cont.)**

| | | Scene Temperature | | | | | |
|---|---|---|---|---|---|---|---|
| | | 84K | 130K | 180K | 230K | 280K | 330K |
| RC5 | Ch 1 | -0.312 | -0.039 | 0.093 | 0.027 | -0.138 | -0.400 |
| | Ch 2 | -0.194 | 0.068 | 0.188 | 0.075 | -0.128 | -0.475 |
| | Ch 3 | -0.059 | -0.013 | 0.033 | -0.033 | -0.062 | -0.154 |
| | Ch 4 | -0.049 | -0.081 | -0.069 | -0.086 | -0.034 | 0.028 |
| | Ch 5 | -0.033 | -0.045 | -0.029 | -0.062 | -0.031 | -0.043 |
| | Ch 6 | -0.032 | -0.057 | -0.073 | -0.101 | -0.026 | 0.025 |
| | Ch 7 | -0.028 | 0.052 | 0.069 | -0.015 | -0.068 | -0.202 |
| | Ch 8 | -0.031 | 0.075 | 0.100 | 0.026 | -0.067 | -0.255 |
| | Ch 9 | -0.031 | 0.077 | 0.091 | -0.004 | -0.067 | -0.221 |
| | Ch 10 | -0.025 | 0.201 | 0.267 | 0.106 | -0.127 | -0.499 |
| | Ch 11 | -0.033 | 0.183 | 0.246 | 0.121 | -0.124 | -0.529 |
| | Ch 12 | -0.030 | 0.218 | 0.307 | 0.168 | -0.116 | -0.626 |
| | Ch 13 | -0.004 | 0.307 | 0.410 | 0.207 | -0.132 | -0.741 |
| | Ch 14 | -0.011 | 0.232 | 0.276 | 0.190 | -0.186 | -0.559 |
| | Ch 15 | 0.014 | 0.235 | 0.287 | 0.218 | -0.073 | -0.667 |
| | Ch 16 | -0.463 | -0.285 | -0.092 | -0.006 | 0.022 | -0.083 |
| | Ch 17 | -0.228 | 0.041 | 0.189 | 0.136 | -0.071 | -0.452 |
| | Ch 18 | -0.225 | -0.085 | 0.031 | 0.027 | -0.032 | -0.236 |
| | Ch 19 | -0.227 | -0.074 | 0.040 | 0.027 | -0.031 | -0.268 |
| | Ch 20 | -0.224 | -0.069 | 0.048 | 0.055 | -0.039 | -0.239 |
| | Ch 21 | -0.217 | -0.082 | 0.092 | 0.057 | -0.063 | -0.278 |
| | Ch 22 | -0.196 | -0.019 | 0.186 | 0.160 | -0.049 | -0.438 |

| | | 84K | 130K | 180K | 230K | 280K | 330K |
|---|---|---|---|---|---|---|---|
| RC6 | Ch 1 | -0.302 | -0.044 | 0.086 | 0.039 | -0.109 | -0.413 |
| | Ch 2 | -0.201 | 0.071 | 0.182 | 0.066 | -0.110 | -0.474 |
| | Ch 3 | -0.063 | -0.003 | 0.026 | -0.025 | -0.030 | -0.128 |
| | Ch 4 | -0.047 | -0.075 | -0.087 | -0.100 | -0.023 | 0.035 |
| | Ch 5 | -0.033 | -0.034 | -0.034 | -0.072 | -0.014 | -0.041 |
| | Ch 6 | -0.018 | -0.057 | -0.074 | -0.106 | -0.015 | 0.043 |
| | Ch 7 | -0.030 | 0.051 | 0.070 | -0.026 | -0.049 | -0.209 |
| | Ch 8 | -0.029 | 0.085 | 0.097 | 0.017 | -0.052 | -0.238 |
| | Ch 9 | -0.027 | 0.073 | 0.091 | -0.008 | -0.040 | -0.237 |
| | Ch 10 | -0.034 | 0.218 | 0.247 | 0.124 | -0.106 | -0.478 |
| | Ch 11 | -0.053 | 0.193 | 0.250 | 0.106 | -0.100 | -0.524 |
| | Ch 12 | -0.028 | 0.225 | 0.270 | 0.133 | -0.079 | -0.593 |
| | Ch 13 | -0.021 | 0.304 | 0.356 | 0.162 | -0.111 | -0.637 |
| | Ch 14 | -0.007 | 0.259 | 0.340 | 0.205 | -0.149 | -0.592 |
| | Ch 15 | -0.024 | 0.241 | 0.304 | 0.082 | -0.089 | -0.705 |
| | Ch 16 | -0.474 | -0.289 | -0.100 | -0.026 | 0.018 | -0.086 |
| | Ch 17 | -0.218 | 0.029 | 0.222 | 0.152 | -0.050 | -0.443 |
| | Ch 18 | -0.210 | -0.118 | 0.005 | 0.052 | -0.029 | -0.198 |
| | Ch 19 | -0.223 | -0.093 | 0.039 | 0.089 | -0.052 | -0.262 |
| | Ch 20 | -0.218 | -0.051 | 0.086 | 0.036 | -0.032 | -0.238 |
| | Ch 21 | -0.213 | -0.059 | 0.096 | 0.048 | -0.067 | -0.258 |
| | Ch 22 | -0.233 | 0.004 | 0.193 | 0.120 | -0.119 | -0.434 |

**Table 10-7 Coldplate -3.1°C, Linearity Data**

| Redundancy Configuration 1 | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Regression Coefficients | | | Deviations from Regression Curve | | | | | | | | |
| Chan | A2 | A1 | A0 | 84K | 130K | 180K | 230K | 280K | 330K | NL | PkAcc | Max Res. Error (K) |
| 1 | -2.832E-05 | 1.117E-02 | -1.025E+00 | -8.836E-03 | 1.113E-02 | 1.089E-02 | -1.379E-02 | -6.122E-03 | 6.731E-03 | 0.379 | 0.492 | 1.38E-02 |
| 2 | -3.170E-05 | 1.182E-02 | -9.401E-01 | -1.702E-02 | 2.632E-02 | 8.940E-03 | -1.949E-02 | -9.239E-03 | 1.049E-02 | 0.424 | 0.551 | 2.63E-02 |
| 3 | -6.315E-06 | 2.243E-03 | -1.932E-01 | -3.857E-03 | 8.302E-03 | 1.006E-03 | -1.534E-02 | 1.357E-02 | -3.680E-03 | 0.084 | 0.110 | 1.53E-02 |
| 4 | 6.343E-06 | -2.253E-03 | 9.511E-02 | -6.621E-03 | 1.081E-02 | 3.685E-03 | -1.162E-02 | 1.614E-03 | 2.136E-03 | -0.085 | -0.110 | 1.16E-02 |
| 5 | 1.112E-06 | -4.247E-04 | -7.659E-03 | -5.833E-03 | 6.781E-03 | 1.253E-02 | -2.183E-02 | 7.672E-03 | 6.795E-04 | -0.015 | -0.019 | 2.18E-02 |
| 6 | 6.420E-06 | -2.339E-03 | 1.251E-01 | -8.967E-03 | 1.729E-02 | -4.136E-03 | -4.087E-03 | -4.301E-03 | 4.203E-03 | -0.086 | -0.112 | 1.73E-02 |
| 7 | -9.476E-06 | 3.195E-03 | -2.216E-01 | -9.724E-03 | 1.438E-02 | 5.381E-03 | -8.053E-03 | -9.678E-03 | 7.692E-03 | 0.127 | 0.165 | 1.44E-02 |
| 8 | -1.308E-05 | 4.500E-03 | -3.057E-01 | -7.578E-03 | 9.357E-03 | 7.247E-03 | -4.407E-03 | -1.310E-02 | 8.481E-03 | 0.175 | 0.227 | 1.31E-02 |
| 9 | -1.194E-05 | 4.091E-03 | -2.733E-01 | -9.688E-03 | 1.547E-02 | 3.656E-03 | -9.728E-03 | -5.654E-03 | 5.941E-03 | 0.160 | 0.207 | 1.55E-02 |
| 10 | -3.071E-05 | 1.069E-02 | -6.936E-01 | -1.370E-02 | 2.048E-02 | 1.155E-02 | -2.461E-02 | 1.648E-04 | 6.114E-03 | 0.411 | 0.534 | 2.46E-02 |
| 11 | -3.050E-05 | 1.057E-02 | -6.868E-01 | -2.259E-02 | 3.456E-02 | 1.247E-02 | -2.547E-02 | -1.340E-02 | 1.443E-02 | 0.408 | 0.530 | 3.46E-02 |
| 12 | -3.540E-05 | 1.221E-02 | -7.762E-01 | -3.233E-03 | -3.652E-03 | 2.093E-02 | -9.897E-03 | -1.268E-02 | 8.538E-03 | 0.473 | 0.615 | 2.09E-02 |
| 13 | -4.153E-05 | 1.441E-02 | -9.001E-01 | -1.864E-02 | 3.460E-02 | -6.843E-03 | -5.740E-03 | -1.440E-02 | 1.102E-02 | 0.555 | 0.722 | 3.46E-02 |
| 14 | -3.590E-05 | 1.238E-02 | -7.731E-01 | -2.249E-02 | 2.622E-02 | 3.021E-02 | -3.000E-02 | -2.490E-02 | 2.097E-02 | 0.480 | 0.624 | 3.02E-02 |
| 15 | -3.491E-05 | 1.189E-02 | -7.007E-01 | -5.328E-03 | -2.387E-02 | 5.992E-02 | 1.384E-02 | -8.675E-02 | 4.218E-02 | 0.467 | 0.606 | 8.68E-02 |
| 16 | -1.489E-05 | 7.675E-03 | -1.003E+00 | 1.437E-02 | -2.557E-02 | 1.516E-03 | 6.889E-03 | 1.249E-02 | -9.686E-03 | 0.199 | 0.262 | 2.56E-02 |
| 17 | -3.583E-05 | 1.380E-02 | -1.145E+00 | 1.222E-02 | -2.764E-02 | 1.880E-02 | -1.100E-02 | 1.549E-02 | -7.882E-03 | 0.479 | 0.630 | 2.76E-02 |
| 18 | -1.776E-05 | 7.263E-03 | -7.124E-01 | 1.243E-02 | -2.121E-02 | -3.922E-04 | 5.500E-03 | 1.314E-02 | -9.470E-03 | 0.237 | 0.312 | 2.12E-02 |
| 19 | -2.191E-05 | 8.791E-03 | -8.224E-01 | 1.449E-02 | -2.630E-02 | 1.160E-02 | -1.991E-02 | 3.825E-02 | -1.813E-02 | 0.293 | 0.385 | 3.83E-02 |
| 20 | -1.966E-05 | 8.006E-03 | -7.549E-01 | 2.135E-03 | -3.875E-03 | 1.961E-03 | -3.690E-03 | 6.392E-03 | -2.923E-03 | 0.263 | 0.345 | 6.39E-03 |
| 21 | -2.163E-05 | 8.537E-03 | -7.746E-01 | 7.068E-03 | -1.071E-02 | -3.246E-03 | 4.046E-03 | 9.280E-03 | -6.438E-03 | 0.289 | 0.380 | 1.07E-02 |
| 22 | -3.027E-05 | 1.166E-02 | -9.749E-01 | 1.228E-03 | 3.511E-03 | -9.747E-03 | -4.168E-03 | 1.733E-02 | -8.151E-03 | 0.405 | 0.532 | 1.73E-02 |

**Table 10-7 Coldplate -3.1°C, Linearity Data (cont.)**

| Redundancy Configuration 2 | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Regression Coefficients | | | Deviations from Regression Curve | | | | | | | | |
| Chan | A2 | A1 | A0 | 84K | 130K | 180K | 230K | 280K | 330K | NL | PkAcc | Max Res. Error (K) |
| 1 | -2.806E-05 | 1.106E-02 | -1.016E+00 | -1.056E-02 | 9.939E-03 | 1.916E-02 | -1.482E-02 | -1.575E-02 | 1.204E-02 | 0.375 | 0.487 | 1.92E-02 |
| 2 | -3.247E-05 | 1.210E-02 | -9.710E-01 | -1.788E-02 | 2.461E-02 | 1.722E-02 | -2.583E-02 | -1.045E-02 | 1.233E-02 | 0.434 | 0.564 | 2.58E-02 |
| 3 | -6.767E-06 | 2.338E-03 | -1.879E-01 | 2.406E-04 | 5.634E-03 | -9.149E-03 | -8.464E-03 | 2.087E-02 | -9.134E-03 | 0.090 | 0.118 | 2.09E-02 |
| 4 | 5.566E-06 | -1.981E-03 | 8.165E-02 | -6.192E-03 | 9.835E-03 | 5.143E-03 | -1.433E-02 | 4.425E-03 | 1.121E-03 | -0.074 | -0.097 | 1.43E-02 |
| 5 | 1.815E-06 | -7.334E-04 | 2.096E-02 | -2.908E-03 | -2.129E-03 | 1.581E-02 | -6.778E-03 | -1.125E-02 | 7.257E-03 | -0.024 | -0.032 | 1.58E-02 |
| 6 | 6.444E-06 | -2.442E-03 | 1.493E-01 | -4.640E-03 | 5.842E-03 | 8.373E-03 | -1.524E-02 | 4.831E-03 | 8.350E-04 | -0.086 | -0.112 | 1.52E-02 |
| 7 | -9.015E-06 | 2.929E-03 | -1.872E-01 | -9.267E-03 | 7.360E-03 | 2.178E-02 | -1.992E-02 | -9.520E-03 | 9.559E-03 | 0.121 | 0.157 | 2.18E-02 |
| 8 | -1.273E-05 | 4.252E-03 | -2.674E-01 | -1.212E-02 | 1.536E-02 | 1.413E-02 | -1.702E-02 | -1.020E-02 | 9.842E-03 | 0.170 | 0.221 | 1.70E-02 |
| 9 | -1.240E-05 | 4.113E-03 | -2.676E-01 | -6.021E-03 | 7.291E-03 | 1.397E-02 | -2.746E-02 | 1.346E-02 | -1.249E-03 | 0.166 | 0.215 | 2.75E-02 |
| 10 | -2.949E-05 | 1.013E-02 | -6.378E-01 | -2.135E-02 | 2.903E-02 | 1.937E-02 | -2.505E-02 | -1.905E-02 | 1.706E-02 | 0.394 | 0.512 | 2.90E-02 |
| 11 | -2.804E-05 | 9.747E-03 | -6.270E-01 | -2.065E-02 | 2.436E-02 | 3.096E-02 | -3.896E-02 | -1.090E-02 | 1.519E-02 | 0.375 | 0.487 | 3.90E-02 |
| 12 | -3.357E-05 | 1.152E-02 | -7.238E-01 | -9.767E-03 | 1.194E-03 | 3.706E-02 | -2.429E-02 | -1.971E-02 | 1.551E-02 | 0.449 | 0.583 | 3.71E-02 |
| 13 | -4.355E-05 | 1.512E-02 | -9.432E-01 | -2.208E-02 | 2.027E-02 | 3.820E-02 | -2.238E-02 | -4.260E-02 | 2.859E-02 | 0.582 | 0.756 | 4.26E-02 |
| 14 | -3.552E-05 | 1.210E-02 | -7.357E-01 | -4.706E-03 | -4.727E-03 | 1.655E-02 | 2.407E-02 | -5.616E-02 | 2.497E-02 | 0.475 | 0.617 | 5.62E-02 |
| 15 | -4.028E-05 | 1.420E-02 | -9.333E-01 | -5.655E-02 | 9.111E-02 | 1.752E-02 | -4.947E-02 | -3.932E-02 | 3.671E-02 | 0.538 | 0.699 | 9.11E-02 |
| 16 | -1.386E-05 | 7.233E-03 | -9.680E-01 | 1.244E-02 | -2.298E-02 | 1.936E-03 | 8.976E-03 | 6.244E-03 | -6.618E-03 | 0.185 | 0.244 | 2.30E-02 |
| 17 | -3.502E-05 | 1.351E-02 | -1.117E+00 | -2.368E-04 | -8.472E-03 | 1.722E-02 | 1.793E-03 | -2.007E-02 | 9.761E-03 | 0.468 | 0.616 | 2.01E-02 |
| 18 | -1.438E-05 | 5.879E-03 | -5.932E-01 | -1.363E-03 | -1.744E-03 | 6.880E-03 | 3.420E-03 | -1.368E-02 | 6.483E-03 | 0.192 | 0.253 | 1.37E-02 |
| 19 | -1.903E-05 | 7.639E-03 | -7.242E-01 | 1.666E-02 | -3.386E-02 | 1.658E-02 | -1.111E-02 | 2.516E-02 | -1.342E-02 | 0.254 | 0.334 | 3.39E-02 |
| 20 | -2.039E-05 | 8.318E-03 | -7.901E-01 | 1.536E-02 | -2.613E-02 | 2.995E-03 | -4.218E-03 | 2.751E-02 | -1.552E-02 | 0.272 | 0.358 | 2.75E-02 |
| 21 | -2.071E-05 | 8.296E-03 | -7.774E-01 | 1.333E-02 | -2.097E-02 | 5.056E-03 | -2.114E-02 | 4.470E-02 | -2.097E-02 | 0.277 | 0.364 | 4.47E-02 |
| 22 | -3.118E-05 | 1.203E-02 | -1.017E+00 | 1.294E-03 | -4.546E-03 | 1.625E-02 | -3.396E-02 | 3.105E-02 | -1.009E-02 | 0.417 | 0.548 | 3.40E-02 |

**Table 10-7 Coldplate -3.1C, Linearity Data (cont.)**

| Redundancy Configuration 5 | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Regression Coefficients | | | Deviations from Regression Curve | | | | | | | | |
| Chan | A2 | A1 | A0 | 84K | 130K | 180K | 230K | 280K | 330K | NL | PkAcc | Max Res. Error (K) |
| 1 | -2.842E-05 | 1.122E-02 | -1.031E+00 | -1.449E-02 | 1.400E-02 | 2.515E-02 | -1.925E-02 | -2.199E-02 | 1.657E-02 | 0.380 | 0.492 | 2.52E-02 |
| 2 | -3.182E-05 | 1.187E-02 | -9.465E-01 | -1.181E-02 | 9.260E-03 | 2.817E-02 | -2.608E-02 | -1.165E-02 | 1.212E-02 | 0.425 | 0.551 | 2.82E-02 |
| 3 | -7.244E-06 | 2.583E-03 | -2.211E-01 | -1.872E-03 | -5.153E-03 | 2.357E-02 | -2.244E-02 | 3.601E-03 | 2.298E-03 | 0.097 | 0.125 | 2.36E-02 |
| 4 | 4.613E-06 | -1.605E-03 | 5.361E-02 | -1.447E-03 | -3.786E-03 | 1.695E-02 | -1.465E-02 | 4.373E-04 | 2.499E-03 | -0.062 | -0.080 | 1.70E-02 |
| 5 | 4.741E-07 | -2.182E-04 | -1.906E-02 | 9.287E-04 | -5.628E-03 | 1.415E-02 | -1.832E-02 | 1.187E-02 | -3.000E-03 | -0.006 | -0.008 | 1.83E-02 |
| 6 | 5.482E-06 | -2.055E-03 | 1.075E-01 | -7.268E-03 | 1.022E-02 | 1.164E-02 | -2.608E-02 | 1.197E-02 | -4.802E-04 | -0.073 | -0.095 | 2.61E-02 |
| 7 | -9.874E-06 | 3.304E-03 | -2.236E-01 | -1.048E-02 | 1.295E-02 | 1.746E-02 | -2.879E-02 | 4.758E-03 | 4.103E-03 | 0.132 | 0.171 | 2.88E-02 |
| 8 | -1.421E-05 | 4.912E-03 | -3.333E-01 | -7.125E-03 | 9.978E-03 | 9.197E-03 | -1.852E-02 | 4.501E-03 | 1.972E-03 | 0.190 | 0.246 | 1.85E-02 |
| 9 | -1.182E-05 | 4.008E-03 | -2.659E-01 | -1.576E-02 | 2.195E-02 | 1.850E-02 | -3.458E-02 | 3.223E-03 | 6.666E-03 | 0.158 | 0.205 | 3.46E-02 |
| 10 | -3.065E-05 | 1.058E-02 | -6.739E-01 | -1.681E-02 | 1.779E-02 | 2.911E-02 | -3.143E-02 | -1.325E-02 | 1.459E-02 | 0.410 | 0.531 | 3.14E-02 |
| 11 | -3.178E-05 | 1.104E-02 | -7.222E-01 | -6.502E-03 | 7.577E-03 | 1.054E-02 | -1.420E-02 | -1.671E-03 | 4.251E-03 | 0.425 | 0.550 | 1.42E-02 |
| 12 | -3.874E-05 | 1.356E-02 | -8.869E-01 | 4.548E-04 | -2.778E-03 | 8.407E-03 | -1.337E-02 | 1.023E-02 | -2.947E-03 | 0.518 | 0.671 | 1.34E-02 |
| 13 | -4.670E-05 | 1.621E-02 | -1.017E+00 | -8.429E-03 | 7.588E-03 | 2.256E-02 | -3.207E-02 | 7.274E-03 | 3.084E-03 | 0.624 | 0.809 | 3.21E-02 |
| 14 | -3.487E-05 | 1.199E-02 | -7.528E-01 | -1.228E-02 | 1.527E-02 | -3.896E-04 | 2.956E-02 | -5.845E-02 | 2.629E-02 | 0.466 | 0.604 | 5.85E-02 |
| 15 | -4.001E-05 | 1.393E-02 | -8.845E-01 | 1.945E-02 | -1.432E-02 | -3.967E-02 | 1.674E-02 | 4.761E-02 | -2.981E-02 | 0.535 | 0.693 | 4.76E-02 |
| 16 | -1.512E-05 | 7.875E-03 | -1.021E+00 | 1.834E-02 | -3.154E-02 | 1.221E-03 | 3.973E-03 | 2.334E-02 | -1.533E-02 | 0.202 | 0.266 | 3.15E-02 |
| 17 | -3.387E-05 | 1.303E-02 | -1.067E+00 | 5.383E-03 | -1.279E-02 | 8.256E-03 | -1.226E-03 | 2.098E-03 | -1.721E-03 | 0.453 | 0.595 | 1.28E-02 |
| 18 | -1.754E-05 | 7.254E-03 | -7.100E-01 | 1.231E-02 | -2.147E-02 | 3.556E-03 | -3.769E-03 | 2.152E-02 | -1.214E-02 | 0.235 | 0.308 | 2.15E-02 |
| 19 | -1.915E-05 | 7.806E-03 | -7.465E-01 | 1.185E-02 | -1.880E-02 | 1.519E-03 | -9.198E-03 | 3.007E-02 | -1.544E-02 | 0.256 | 0.337 | 3.01E-02 |
| 20 | -1.901E-05 | 7.814E-03 | -7.436E-01 | 1.098E-02 | -1.996E-02 | 1.246E-03 | 7.379E-03 | 6.771E-03 | -6.410E-03 | 0.254 | 0.334 | 2.00E-02 |
| 21 | -2.122E-05 | 8.543E-03 | -7.885E-01 | 1.829E-02 | -4.570E-02 | 3.025E-02 | 2.740E-03 | -4.297E-03 | -1.282E-03 | 0.284 | 0.373 | 4.57E-02 |
| 22 | -3.257E-05 | 1.260E-02 | -1.039E+00 | 3.508E-02 | -6.784E-02 | 1.213E-02 | 2.355E-02 | 1.348E-02 | -1.640E-02 | 0.435 | 0.572 | 6.78E-02 |

**Table 10-7 Coldplate -3.1°C, Linearity Data (cont.)**

| Redundancy Configuration 6 | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Regression Coefficients | | | Deviations from Regression Curve | | | | | | | | |
| Chan | A2 | A1 | A0 | 84K | 130K | 180K | 230K | 280K | 330K | NL | PkAcc | Max Res. Error (K) |
| 1 | -2.894E-05 | 1.144E-02 | -1.046E+00 | -4.992E-03 | 4.942E-03 | 1.100E-02 | -1.456E-02 | 7.107E-04 | 2.903E-03 | 0.387 | 0.501 | 1.46E-02 |
| 2 | -3.182E-05 | 1.191E-02 | -9.553E-01 | -1.407E-02 | 1.658E-02 | 2.376E-02 | -3.498E-02 | 1.131E-03 | 7.579E-03 | 0.425 | 0.550 | 3.50E-02 |
| 3 | -6.771E-06 | 2.521E-03 | -2.209E-01 | -4.190E-03 | 4.885E-03 | 1.209E-02 | -2.559E-02 | 1.561E-02 | -2.809E-03 | 0.091 | 0.117 | 2.56E-02 |
| 4 | 5.779E-06 | -2.058E-03 | 8.801E-02 | -4.305E-03 | 6.155E-03 | 8.280E-03 | -2.049E-02 | 1.243E-02 | -2.069E-03 | -0.077 | -0.100 | 2.05E-02 |
| 5 | 7.944E-07 | -3.360E-04 | -8.242E-03 | -2.394E-03 | 4.266E-03 | 8.599E-03 | -2.893E-02 | 2.637E-02 | -7.909E-03 | -0.011 | -0.014 | 2.89E-02 |
| 6 | 6.765E-06 | -2.554E-03 | 1.530E-01 | -5.794E-03 | 7.659E-03 | 1.301E-02 | -2.952E-02 | 1.745E-02 | -2.813E-03 | -0.090 | -0.117 | 2.95E-02 |
| 7 | -1.002E-05 | 3.373E-03 | -2.306E-01 | -9.555E-03 | 1.322E-02 | 1.781E-02 | -4.102E-02 | 2.219E-02 | -2.646E-03 | 0.134 | 0.173 | 4.10E-02 |
| 8 | -1.334E-05 | 4.599E-03 | -3.064E-01 | -1.165E-02 | 1.957E-02 | 7.723E-03 | -2.800E-02 | 1.162E-02 | 7.456E-04 | 0.178 | 0.231 | 2.80E-02 |
| 9 | -1.232E-05 | 4.207E-03 | -2.812E-01 | -9.870E-03 | 1.604E-02 | 1.362E-02 | -4.229E-02 | 2.760E-02 | -5.095E-03 | 0.165 | 0.213 | 4.23E-02 |
| 10 | -3.044E-05 | 1.060E-02 | -6.810E-01 | -2.182E-02 | 3.612E-02 | 5.680E-03 | -2.210E-02 | -1.001E-02 | 1.214E-02 | 0.407 | 0.526 | 3.61E-02 |
| 11 | -3.228E-05 | 1.133E-02 | -7.555E-01 | -1.403E-02 | 2.222E-02 | 1.228E-02 | -3.465E-02 | 1.226E-02 | 1.929E-03 | 0.431 | 0.558 | 3.47E-02 |
| 12 | -3.568E-05 | 1.244E-02 | -8.063E-01 | -6.263E-03 | 1.865E-02 | -6.659E-03 | -3.175E-02 | 3.941E-02 | -1.339E-02 | 0.477 | 0.617 | 3.94E-02 |
| 13 | -4.066E-05 | 1.412E-02 | -8.845E-01 | -2.602E-02 | 4.154E-02 | 1.662E-02 | -4.730E-02 | 6.212E-03 | 8.957E-03 | 0.543 | 0.703 | 4.73E-02 |
| 14 | -3.877E-05 | 1.347E-02 | -8.447E-01 | -1.118E-02 | 9.219E-03 | 1.622E-02 | 4.779E-03 | -4.001E-02 | 2.097E-02 | 0.518 | 0.671 | 4.00E-02 |
| 15 | -3.916E-05 | 1.344E-02 | -8.606E-01 | -7.160E-03 | 1.695E-02 | 1.361E-02 | -7.498E-02 | 7.555E-02 | -2.397E-02 | 0.523 | 0.677 | 7.56E-02 |
| 16 | -1.474E-05 | 7.730E-03 | -1.019E+00 | 1.458E-02 | -2.551E-02 | 4.976E-03 | -6.201E-03 | 2.697E-02 | -1.481E-02 | 0.197 | 0.259 | 2.70E-02 |
| 17 | -3.474E-05 | 1.343E-02 | -1.093E+00 | 1.450E-02 | -3.528E-02 | 2.434E-02 | -4.510E-03 | 5.106E-03 | -4.144E-03 | 0.464 | 0.610 | 3.53E-02 |
| 18 | -1.541E-05 | 6.537E-03 | -6.644E-01 | 2.546E-02 | -4.255E-02 | -8.242E-03 | 2.828E-02 | 1.192E-02 | -1.487E-02 | 0.206 | 0.270 | 4.26E-02 |
| 19 | -2.031E-05 | 8.320E-03 | -7.893E-01 | 2.489E-02 | -4.213E-02 | -1.090E-02 | 3.961E-02 | -1.470E-03 | -9.997E-03 | 0.271 | 0.356 | 4.21E-02 |
| 20 | -1.949E-05 | 7.942E-03 | -7.382E-01 | 3.799E-03 | -1.551E-02 | 2.575E-02 | -2.178E-02 | 9.348E-03 | -1.612E-03 | 0.260 | 0.342 | 2.58E-02 |
| 21 | -2.037E-05 | 8.185E-03 | -7.505E-01 | 7.357E-03 | -2.759E-02 | 3.320E-02 | -6.465E-03 | -1.281E-02 | 6.311E-03 | 0.272 | 0.358 | 3.32E-02 |
| 22 | -3.244E-05 | 1.247E-02 | -1.038E+00 | 7.121E-03 | -3.091E-02 | 3.666E-02 | 5.661E-03 | -3.287E-02 | 1.434E-02 | 0.434 | 0.569 | 3.67E-02 |

**Table 10-8 Cold Plate +7.7°C, NEΔT Data**

| | | Scene Temperature | | | | | |
|---|---|---|---|---|---|---|---|
| | | 84K | 130K | 180K | 230K | 280K | 330K |
| RC1 | Ch 1 | 0.135 | 0.159 | 0.180 | 0.210 | 0.236 | 0.258 |
| | Ch 2 | 0.162 | 0.188 | 0.215 | 0.245 | 0.272 | 0.293 |
| | Ch 3 | 0.204 | 0.227 | 0.259 | 0.295 | 0.319 | 0.353 |
| | Ch 4 | 0.140 | 0.154 | 0.175 | 0.201 | 0.228 | 0.248 |
| | Ch 5 | 0.140 | 0.154 | 0.175 | 0.193 | 0.216 | 0.240 |
| | Ch 6 | 0.145 | 0.166 | 0.188 | 0.216 | 0.237 | 0.258 |
| | Ch 7 | 0.137 | 0.154 | 0.172 | 0.192 | 0.219 | 0.235 |
| | Ch 8 | 0.138 | 0.153 | 0.178 | 0.200 | 0.218 | 0.240 |
| | Ch 9 | 0.149 | 0.166 | 0.189 | 0.214 | 0.239 | 0.258 |
| | Ch 10 | 0.210 | 0.234 | 0.270 | 0.306 | 0.329 | 0.365 |
| | Ch 11 | 0.308 | 0.324 | 0.366 | 0.419 | 0.467 | 0.500 |
| | Ch 12 | 0.303 | 0.349 | 0.381 | 0.442 | 0.474 | 0.530 |
| | Ch 13 | 0.454 | 0.535 | 0.581 | 0.663 | 0.764 | 0.789 |
| | Ch 14 | 0.638 | 0.721 | 0.807 | 0.921 | 0.998 | 1.128 |
| | Ch 15 | 1.017 | 1.200 | 1.310 | 1.501 | 1.690 | 1.855 |
| | Ch 16 | 0.143 | 0.153 | 0.167 | 0.183 | 0.199 | 0.211 |
| | Ch 17 | 0.255 | 0.280 | 0.299 | 0.313 | 0.310 | 0.336 |
| | Ch 18 | 0.311 | 0.319 | 0.329 | 0.351 | 0.344 | 0.375 |
| | Ch 19 | 0.320 | 0.313 | 0.343 | 0.353 | 0.365 | 0.387 |
| | Ch 20 | 0.379 | 0.369 | 0.385 | 0.400 | 0.399 | 0.436 |
| | Ch 21 | 0.395 | 0.392 | 0.397 | 0.422 | 0.440 | 0.444 |
| | Ch 22 | 0.541 | 0.562 | 0.589 | 0.576 | 0.598 | 0.643 |

| | | 84K | 130K | 180K | 230K | 280K | 330K |
|---|---|---|---|---|---|---|---|
| RC2 | Ch 1 | 0.138 | 0.163 | 0.177 | 0.214 | 0.234 | 0.259 |
| | Ch 2 | 0.159 | 0.189 | 0.216 | 0.247 | 0.283 | 0.308 |
| | Ch 3 | 0.200 | 0.230 | 0.258 | 0.292 | 0.321 | 0.347 |
| | Ch 4 | 0.138 | 0.152 | 0.171 | 0.204 | 0.224 | 0.255 |
| | Ch 5 | 0.139 | 0.149 | 0.177 | 0.201 | 0.227 | 0.243 |
| | Ch 6 | 0.146 | 0.165 | 0.188 | 0.215 | 0.240 | 0.259 |
| | Ch 7 | 0.138 | 0.152 | 0.177 | 0.197 | 0.224 | 0.238 |
| | Ch 8 | 0.139 | 0.157 | 0.181 | 0.197 | 0.222 | 0.248 |
| | Ch 9 | 0.150 | 0.171 | 0.190 | 0.219 | 0.238 | 0.265 |
| | Ch 10 | 0.214 | 0.240 | 0.261 | 0.302 | 0.328 | 0.356 |
| | Ch 11 | 0.298 | 0.318 | 0.376 | 0.416 | 0.450 | 0.504 |
| | Ch 12 | 0.302 | 0.338 | 0.384 | 0.442 | 0.486 | 0.538 |
| | Ch 13 | 0.457 | 0.526 | 0.597 | 0.647 | 0.734 | 0.782 |
| | Ch 14 | 0.642 | 0.727 | 0.799 | 0.934 | 0.991 | 1.125 |
| | Ch 15 | 1.050 | 1.195 | 1.394 | 1.487 | 1.619 | 1.845 |
| | Ch 16 | 0.143 | 0.160 | 0.171 | 0.176 | 0.198 | 0.218 |
| | Ch 17 | 0.274 | 0.283 | 0.283 | 0.307 | 0.324 | 0.323 |
| | Ch 18 | 0.308 | 0.322 | 0.341 | 0.335 | 0.363 | 0.381 |
| | Ch 19 | 0.327 | 0.321 | 0.338 | 0.350 | 0.354 | 0.390 |
| | Ch 20 | 0.368 | 0.382 | 0.391 | 0.398 | 0.422 | 0.441 |
| | Ch 21 | 0.390 | 0.382 | 0.419 | 0.410 | 0.443 | 0.457 |
| | Ch 22 | 0.559 | 0.552 | 0.563 | 0.571 | 0.603 | 0.623 |

**Table 10-8 Cold Plate +7.7°C, NEΔT Data (cont.)**

| | | Scene Temperature | | | | | |
|---|---|---|---|---|---|---|---|
| | | 84K | 130K | 180K | 230K | 280K | 330K |
| RC5 | Ch 1 | 0.137 | 0.160 | 0.182 | 0.213 | 0.232 | 0.261 |
| | Ch 2 | 0.162 | 0.181 | 0.212 | 0.244 | 0.275 | 0.293 |
| | Ch 3 | 0.199 | 0.236 | 0.263 | 0.298 | 0.313 | 0.359 |
| | Ch 4 | 0.139 | 0.156 | 0.175 | 0.199 | 0.222 | 0.238 |
| | Ch 5 | 0.141 | 0.156 | 0.169 | 0.200 | 0.224 | 0.248 |
| | Ch 6 | 0.145 | 0.157 | 0.185 | 0.208 | 0.230 | 0.265 |
| | Ch 7 | 0.135 | 0.160 | 0.174 | 0.196 | 0.218 | 0.242 |
| | Ch 8 | 0.136 | 0.156 | 0.177 | 0.193 | 0.219 | 0.244 |
| | Ch 9 | 0.146 | 0.167 | 0.184 | 0.214 | 0.235 | 0.254 |
| | Ch 10 | 0.214 | 0.243 | 0.278 | 0.302 | 0.328 | 0.368 |
| | Ch 11 | 0.295 | 0.334 | 0.378 | 0.412 | 0.471 | 0.504 |
| | Ch 12 | 0.311 | 0.355 | 0.391 | 0.436 | 0.478 | 0.531 |
| | Ch 13 | 0.445 | 0.539 | 0.587 | 0.657 | 0.732 | 0.790 |
| | Ch 14 | 0.636 | 0.755 | 0.821 | 0.913 | 1.021 | 1.110 |
| | Ch 15 | 1.036 | 1.177 | 1.299 | 1.479 | 1.627 | 1.833 |
| | Ch 16 | 0.144 | 0.151 | 0.168 | 0.185 | 0.193 | 0.210 |
| | Ch 17 | 0.278 | 0.280 | 0.295 | 0.305 | 0.319 | 0.332 |
| | Ch 18 | 0.303 | 0.321 | 0.328 | 0.340 | 0.354 | 0.358 |
| | Ch 19 | 0.306 | 0.318 | 0.324 | 0.341 | 0.340 | 0.360 |
| | Ch 20 | 0.374 | 0.372 | 0.382 | 0.386 | 0.411 | 0.441 |
| | Ch 21 | 0.378 | 0.387 | 0.402 | 0.408 | 0.431 | 0.449 |
| | Ch 22 | 0.551 | 0.571 | 0.558 | 0.569 | 0.584 | 0.631 |

| | | 84K | 130K | 180K | 230K | 280K | 330K |
|---|---|---|---|---|---|---|---|
| RC6 | Ch 1 | 0.141 | 0.164 | 0.181 | 0.206 | 0.237 | 0.258 |
| | Ch 2 | 0.158 | 0.181 | 0.211 | 0.245 | 0.271 | 0.298 |
| | Ch 3 | 0.208 | 0.224 | 0.258 | 0.286 | 0.312 | 0.349 |
| | Ch 4 | 0.137 | 0.153 | 0.171 | 0.199 | 0.220 | 0.245 |
| | Ch 5 | 0.133 | 0.155 | 0.175 | 0.201 | 0.223 | 0.244 |
| | Ch 6 | 0.146 | 0.166 | 0.188 | 0.219 | 0.236 | 0.263 |
| | Ch 7 | 0.137 | 0.147 | 0.170 | 0.194 | 0.224 | 0.236 |
| | Ch 8 | 0.131 | 0.151 | 0.173 | 0.191 | 0.223 | 0.248 |
| | Ch 9 | 0.141 | 0.166 | 0.192 | 0.219 | 0.239 | 0.256 |
| | Ch 10 | 0.209 | 0.245 | 0.273 | 0.292 | 0.334 | 0.361 |
| | Ch 11 | 0.299 | 0.323 | 0.380 | 0.414 | 0.459 | 0.511 |
| | Ch 12 | 0.309 | 0.346 | 0.386 | 0.438 | 0.482 | 0.532 |
| | Ch 13 | 0.435 | 0.515 | 0.582 | 0.670 | 0.733 | 0.784 |
| | Ch 14 | 0.647 | 0.716 | 0.790 | 0.901 | 1.010 | 1.126 |
| | Ch 15 | 1.026 | 1.172 | 1.348 | 1.479 | 1.681 | 1.811 |
| | Ch 16 | 0.150 | 0.158 | 0.171 | 0.184 | 0.198 | 0.206 |
| | Ch 17 | 0.269 | 0.289 | 0.297 | 0.298 | 0.318 | 0.336 |
| | Ch 18 | 0.302 | 0.308 | 0.324 | 0.350 | 0.360 | 0.364 |
| | Ch 19 | 0.312 | 0.310 | 0.343 | 0.335 | 0.357 | 0.358 |
| | Ch 20 | 0.361 | 0.371 | 0.388 | 0.390 | 0.409 | 0.421 |
| | Ch 21 | 0.377 | 0.386 | 0.400 | 0.410 | 0.427 | 0.427 |
| | Ch 22 | 0.532 | 0.545 | 0.566 | 0.575 | 0.602 | 0.621 |

**Table 10-9 Cold Plate +7.7°C, NEΔT Interpolated to Scene Temperature of 300K**

| | | NEDT Interpolated for 300K | | | |
|---|---|---|---|---|---|
| | Req't | RC1 | RC2 | RC5 | RC6 |
| Ch 1 | 0.70 | 0.245 | 0.244 | 0.244 | 0.245 |
| Ch 2 | 0.80 | 0.280 | 0.293 | 0.282 | 0.282 |
| Ch 3 | 0.90 | 0.333 | 0.332 | 0.332 | 0.327 |
| Ch 4 | 0.70 | 0.236 | 0.237 | 0.229 | 0.230 |
| Ch 5 | 0.70 | 0.226 | 0.233 | 0.233 | 0.232 |
| Ch 6 | 0.70 | 0.245 | 0.248 | 0.244 | 0.247 |
| Ch 7 | 0.70 | 0.225 | 0.230 | 0.228 | 0.229 |
| Ch 8 | 0.70 | 0.227 | 0.233 | 0.229 | 0.233 |
| Ch 9 | 0.70 | 0.247 | 0.249 | 0.243 | 0.246 |
| Ch 10 | 0.75 | 0.343 | 0.340 | 0.344 | 0.345 |
| Ch 11 | 1.20 | 0.481 | 0.472 | 0.484 | 0.480 |
| Ch 12 | 1.20 | 0.497 | 0.507 | 0.500 | 0.503 |
| Ch 13 | 1.50 | 0.774 | 0.754 | 0.755 | 0.754 |
| Ch 14 | 2.40 | 1.050 | 1.045 | 1.057 | 1.057 |
| Ch 15 | 3.60 | 1.757 | 1.710 | 1.710 | 1.734 |
| Ch 16 | 0.50 | 0.204 | 0.206 | 0.200 | 0.201 |
| Ch 17 | 0.60 | 0.320 | 0.324 | 0.324 | 0.325 |
| Ch 18 | 0.80 | 0.357 | 0.370 | 0.356 | 0.362 |
| Ch 19 | 0.80 | 0.374 | 0.369 | 0.348 | 0.357 |
| Ch 20 | 0.80 | 0.414 | 0.429 | 0.423 | 0.414 |
| Ch 21 | 0.80 | 0.442 | 0.449 | 0.438 | 0.427 |
| Ch 22 | 0.90 | 0.616 | 0.611 | 0.603 | 0.610 |

**Table 10-10 Cold Plate +7.7°C, Accuracy Data**

| | | Scene Temperature | | | | | |
|---|---|---|---|---|---|---|---|
| | | 84K | 130K | 180K | 230K | 280K | 330K |
| RC1 | Ch 1 | -0.277 | -0.039 | 0.089 | 0.052 | -0.075 | -0.405 |
| | Ch 2 | -0.160 | 0.078 | 0.189 | 0.094 | -0.079 | -0.473 |
| | Ch 3 | -0.023 | 0.023 | 0.020 | -0.017 | -0.047 | -0.212 |
| | Ch 4 | -0.021 | -0.064 | -0.101 | -0.109 | -0.052 | -0.039 |
| | Ch 5 | -0.010 | -0.018 | -0.027 | -0.059 | -0.057 | -0.101 |
| | Ch 6 | 0.011 | -0.051 | -0.081 | -0.090 | -0.058 | -0.042 |
| | Ch 7 | 0.009 | 0.064 | 0.076 | 0.015 | -0.052 | -0.242 |
| | Ch 8 | 0.010 | 0.084 | 0.101 | 0.028 | -0.072 | -0.293 |
| | Ch 9 | 0.015 | 0.092 | 0.109 | 0.021 | -0.059 | -0.263 |
| | Ch 10 | 0.015 | 0.223 | 0.276 | 0.186 | -0.082 | -0.496 |
| | Ch 11 | 0.024 | 0.221 | 0.290 | 0.177 | -0.097 | -0.517 |
| | Ch 12 | 0.011 | 0.254 | 0.322 | 0.181 | -0.100 | -0.540 |
| | Ch 13 | 0.048 | 0.315 | 0.375 | 0.242 | -0.091 | -0.592 |
| | Ch 14 | 0.072 | 0.243 | 0.338 | 0.221 | -0.046 | -0.627 |
| | Ch 15 | 0.029 | 0.315 | 0.363 | 0.234 | -0.008 | -0.627 |
| | Ch 16 | -0.397 | -0.279 | -0.128 | -0.055 | -0.006 | -0.158 |
| | Ch 17 | -0.133 | 0.073 | 0.207 | 0.144 | -0.044 | -0.417 |
| | Ch 18 | -0.123 | -0.018 | 0.085 | 0.054 | -0.041 | -0.266 |
| | Ch 19 | -0.113 | -0.006 | 0.104 | 0.084 | -0.024 | -0.272 |
| | Ch 20 | -0.113 | -0.007 | 0.102 | 0.054 | -0.026 | -0.311 |
| | Ch 21 | -0.095 | 0.025 | 0.120 | 0.061 | -0.053 | -0.319 |
| | Ch 22 | -0.106 | 0.082 | 0.176 | 0.136 | -0.057 | -0.446 |

| | | 84K | 130K | 180K | 230K | 280K | 330K |
|---|---|---|---|---|---|---|---|
| RC2 | Ch 1 | -0.279 | -0.037 | 0.092 | 0.060 | -0.084 | -0.401 |
| | Ch 2 | -0.162 | 0.077 | 0.187 | 0.108 | -0.091 | -0.471 |
| | Ch 3 | -0.008 | 0.023 | 0.043 | -0.012 | -0.055 | -0.194 |
| | Ch 4 | -0.015 | -0.057 | -0.102 | -0.114 | -0.053 | -0.020 |
| | Ch 5 | -0.006 | -0.017 | -0.038 | -0.057 | -0.054 | -0.071 |
| | Ch 6 | 0.005 | -0.041 | -0.088 | -0.101 | -0.068 | -0.013 |
| | Ch 7 | 0.004 | 0.064 | 0.068 | 0.012 | -0.041 | -0.210 |
| | Ch 8 | 0.014 | 0.097 | 0.102 | 0.041 | -0.058 | -0.248 |
| | Ch 9 | 0.018 | 0.091 | 0.088 | 0.029 | -0.057 | -0.262 |
| | Ch 10 | 0.002 | 0.217 | 0.290 | 0.175 | -0.082 | -0.483 |
| | Ch 11 | 0.008 | 0.222 | 0.269 | 0.155 | -0.052 | -0.499 |
| | Ch 12 | 0.020 | 0.248 | 0.314 | 0.187 | -0.082 | -0.515 |
| | Ch 13 | 0.046 | 0.318 | 0.432 | 0.229 | -0.069 | -0.704 |
| | Ch 14 | 0.049 | 0.298 | 0.283 | 0.220 | -0.043 | -0.617 |
| | Ch 15 | 0.048 | 0.378 | 0.372 | 0.188 | -0.014 | -0.650 |
| | Ch 16 | -0.405 | -0.289 | -0.120 | -0.050 | -0.043 | -0.161 |
| | Ch 17 | -0.158 | 0.026 | 0.200 | 0.131 | -0.037 | -0.429 |
| | Ch 18 | -0.109 | -0.032 | 0.060 | 0.048 | -0.068 | -0.244 |
| | Ch 19 | -0.084 | -0.030 | 0.076 | 0.093 | -0.084 | -0.264 |
| | Ch 20 | -0.118 | -0.019 | 0.098 | 0.099 | -0.030 | -0.284 |
| | Ch 21 | -0.114 | -0.009 | 0.109 | 0.090 | -0.015 | -0.314 |
| | Ch 22 | -0.083 | 0.049 | 0.208 | 0.140 | -0.010 | -0.435 |

**Table 10-10 Cold Plate +7.7°C, Accuracy Data (cont.)**

| | | Scene Temperature | | | | | |
|---|---|---|---|---|---|---|---|
| | | 84K | 130K | 180K | 230K | 280K | 330K |
| RC5 | Ch 1 | -0.285 | -0.027 | 0.096 | 0.052 | -0.100 | -0.396 |
| | Ch 2 | -0.172 | 0.086 | 0.200 | 0.114 | -0.083 | -0.429 |
| | Ch 3 | -0.015 | 0.033 | 0.038 | -0.011 | -0.044 | -0.198 |
| | Ch 4 | -0.015 | -0.059 | -0.083 | -0.096 | -0.059 | -0.024 |
| | Ch 5 | 0.001 | -0.016 | -0.031 | -0.066 | -0.044 | -0.092 |
| | Ch 6 | 0.005 | -0.039 | -0.060 | -0.102 | -0.054 | -0.014 |
| | Ch 7 | 0.000 | 0.073 | 0.073 | 0.010 | -0.069 | -0.212 |
| | Ch 8 | 0.003 | 0.081 | 0.116 | 0.038 | -0.072 | -0.239 |
| | Ch 9 | 0.017 | 0.106 | 0.096 | 0.020 | -0.059 | -0.244 |
| | Ch 10 | 0.012 | 0.229 | 0.288 | 0.164 | -0.090 | -0.470 |
| | Ch 11 | 0.018 | 0.194 | 0.261 | 0.153 | -0.037 | -0.478 |
| | Ch 12 | 0.024 | 0.239 | 0.318 | 0.211 | -0.092 | -0.537 |
| | Ch 13 | 0.030 | 0.345 | 0.435 | 0.302 | -0.074 | -0.652 |
| | Ch 14 | -0.029 | 0.263 | 0.342 | 0.233 | -0.033 | -0.549 |
| | Ch 15 | -0.020 | 0.272 | 0.395 | 0.270 | -0.117 | -0.591 |
| | Ch 16 | -0.407 | -0.291 | -0.113 | -0.036 | -0.009 | -0.098 |
| | Ch 17 | -0.152 | 0.028 | 0.206 | 0.142 | -0.007 | -0.397 |
| | Ch 18 | -0.141 | -0.074 | 0.064 | 0.071 | 0.001 | -0.228 |
| | Ch 19 | -0.138 | -0.051 | 0.077 | 0.080 | 0.010 | -0.201 |
| | Ch 20 | -0.106 | -0.018 | 0.091 | 0.078 | -0.018 | -0.255 |
| | Ch 21 | -0.089 | -0.003 | 0.145 | 0.069 | -0.027 | -0.229 |
| | Ch 22 | -0.106 | 0.075 | 0.234 | 0.138 | -0.045 | -0.380 |

| | | 84K | 130K | 180K | 230K | 280K | 330K |
|---|---|---|---|---|---|---|---|
| RC6 | Ch 1 | -0.278 | -0.043 | 0.088 | 0.052 | -0.090 | -0.394 |
| | Ch 2 | -0.176 | 0.081 | 0.187 | 0.104 | -0.088 | -0.455 |
| | Ch 3 | -0.024 | 0.024 | 0.025 | -0.013 | -0.050 | -0.178 |
| | Ch 4 | -0.015 | -0.056 | -0.094 | -0.098 | -0.064 | -0.042 |
| | Ch 5 | 0.000 | -0.012 | -0.028 | -0.063 | -0.059 | -0.110 |
| | Ch 6 | 0.010 | -0.033 | -0.070 | -0.091 | -0.046 | -0.017 |
| | Ch 7 | 0.011 | 0.071 | 0.063 | 0.011 | -0.056 | -0.217 |
| | Ch 8 | 0.010 | 0.085 | 0.111 | 0.037 | -0.070 | -0.250 |
| | Ch 9 | 0.025 | 0.097 | 0.088 | 0.038 | -0.066 | -0.228 |
| | Ch 10 | 0.020 | 0.241 | 0.274 | 0.164 | -0.104 | -0.481 |
| | Ch 11 | 0.018 | 0.193 | 0.268 | 0.156 | -0.088 | -0.464 |
| | Ch 12 | -0.009 | 0.236 | 0.302 | 0.197 | -0.079 | -0.534 |
| | Ch 13 | 0.036 | 0.332 | 0.389 | 0.281 | -0.044 | -0.598 |
| | Ch 14 | 0.048 | 0.303 | 0.343 | 0.205 | -0.028 | -0.552 |
| | Ch 15 | 0.018 | 0.245 | 0.248 | 0.268 | -0.090 | -0.575 |
| | Ch 16 | -0.404 | -0.281 | -0.098 | -0.021 | -0.022 | -0.108 |
| | Ch 17 | -0.150 | 0.044 | 0.222 | 0.151 | -0.005 | -0.428 |
| | Ch 18 | -0.121 | -0.054 | 0.070 | 0.041 | -0.057 | -0.217 |
| | Ch 19 | -0.127 | -0.049 | 0.052 | 0.066 | -0.026 | -0.222 |
| | Ch 20 | -0.111 | -0.021 | 0.097 | 0.095 | 0.021 | -0.224 |
| | Ch 21 | -0.079 | -0.003 | 0.116 | 0.067 | -0.013 | -0.247 |
| | Ch 22 | -0.080 | 0.068 | 0.209 | 0.184 | 0.000 | -0.327 |

**Table 10-11 Cold Plate +7.7°C, Linearity Data**

| Redundancy Configuration 1 | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Regression Coefficients | | | Deviations from Regression Curve | | | | | | | | |
| Chan | A2 | A1 | A0 | 84K | 130K | 180K | 230K | 280K | 330K | NL | PkAcc | Max Res. Error (K) |
| 1 | -2.851E-05 | 1.131E-02 | -1.025E+00 | 5.272E-04 | 2.488E-04 | 2.883E-03 | -1.530E-02 | 1.829E-02 | -6.645E-03 | 0.381 | 0.532 | 1.83E-02 |
| 2 | -3.160E-05 | 1.180E-02 | -9.237E-01 | -3.476E-03 | 3.560E-03 | 1.239E-02 | -2.525E-02 | 1.605E-02 | -3.283E-03 | 0.422 | 0.590 | 2.52E-02 |
| 3 | -8.504E-06 | 2.822E-03 | -2.026E-01 | 2.679E-03 | 3.080E-03 | -1.034E-02 | -1.340E-02 | 3.222E-02 | -1.423E-02 | 0.114 | 0.159 | 3.22E-02 |
| 4 | 4.843E-06 | -2.036E-03 | 1.150E-01 | 7.974E-04 | 3.824E-03 | -6.195E-03 | -1.219E-02 | 2.365E-02 | -9.884E-03 | -0.065 | -0.090 | 2.37E-02 |
| 5 | -9.632E-07 | 4.936E-05 | -7.999E-03 | 2.291E-04 | 2.527E-05 | 3.129E-03 | -1.180E-02 | 1.293E-02 | -4.514E-03 | 0.013 | 0.018 | 1.29E-02 |
| 6 | 4.734E-06 | -2.122E-03 | 1.504E-01 | 5.267E-03 | -6.441E-03 | -2.940E-03 | -3.136E-03 | 1.496E-02 | -7.711E-03 | -0.063 | -0.088 | 1.50E-02 |
| 7 | -1.129E-05 | 3.696E-03 | -2.240E-01 | 2.087E-03 | -1.086E-03 | 6.363E-05 | -1.382E-02 | 2.146E-02 | -8.706E-03 | 0.151 | 0.211 | 2.15E-02 |
| 8 | -1.422E-05 | 4.677E-03 | -2.828E-01 | 8.951E-04 | -7.765E-04 | 2.869E-03 | -1.261E-02 | 1.526E-02 | -5.640E-03 | 0.190 | 0.266 | 1.53E-02 |
| 9 | -1.309E-05 | 4.286E-03 | -2.485E-01 | -3.720E-03 | 4.739E-03 | 1.019E-02 | -2.340E-02 | 1.543E-02 | -3.246E-03 | 0.175 | 0.245 | 2.34E-02 |
| 10 | -3.223E-05 | 1.124E-02 | -6.986E-01 | -2.985E-03 | 6.230E-03 | -4.243E-03 | 3.976E-03 | -5.484E-03 | 2.506E-03 | 0.431 | 0.602 | 6.23E-03 |
| 11 | -3.268E-05 | 1.130E-02 | -6.927E-01 | -1.540E-03 | -1.078E-03 | 7.459E-03 | -1.046E-03 | -8.376E-03 | 4.582E-03 | 0.437 | 0.610 | 8.38E-03 |
| 12 | -3.519E-05 | 1.223E-02 | -7.541E-01 | -1.235E-02 | 1.471E-02 | 1.547E-02 | -1.609E-02 | -1.244E-02 | 1.070E-02 | 0.470 | 0.657 | 1.61E-02 |
| 13 | -3.964E-05 | 1.372E-02 | -8.135E-01 | -1.073E-02 | 1.659E-02 | 2.338E-03 | -3.519E-03 | -1.362E-02 | 8.950E-03 | 0.530 | 0.740 | 1.66E-02 |
| 14 | -3.827E-05 | 1.320E-02 | -7.902E-01 | 2.440E-02 | -3.472E-02 | -8.203E-03 | -1.326E-03 | 4.629E-02 | -2.644E-02 | 0.512 | 0.715 | 4.63E-02 |
| 15 | -4.170E-05 | 1.467E-02 | -9.055E-01 | -2.452E-03 | 1.950E-02 | -2.152E-02 | -2.944E-02 | 5.717E-02 | -2.326E-02 | 0.557 | 0.779 | 5.72E-02 |
| 16 | -1.334E-05 | 6.714E-03 | -8.919E-01 | 2.504E-02 | -3.415E-02 | -1.145E-02 | -1.907E-03 | 5.164E-02 | -2.918E-02 | 0.178 | 0.252 | 5.16E-02 |
| 17 | -3.085E-05 | 1.167E-02 | -9.043E-01 | 8.552E-03 | -1.795E-02 | 1.015E-02 | -5.414E-03 | 1.002E-02 | -5.361E-03 | 0.412 | 0.583 | 1.79E-02 |
| 18 | -1.803E-05 | 6.972E-03 | -5.942E-01 | 1.340E-02 | -2.562E-02 | 8.746E-03 | -1.955E-03 | 1.411E-02 | -8.692E-03 | 0.241 | 0.341 | 2.56E-02 |
| 19 | -1.962E-05 | 7.595E-03 | -6.305E-01 | 1.792E-02 | -3.123E-02 | 3.237E-03 | 4.797E-03 | 1.739E-02 | -1.211E-02 | 0.262 | 0.371 | 3.12E-02 |
| 20 | -2.007E-05 | 7.650E-03 | -6.320E-01 | 1.802E-02 | -3.062E-02 | 7.471E-03 | -1.248E-02 | 3.636E-02 | -1.875E-02 | 0.268 | 0.379 | 3.64E-02 |
| 21 | -2.039E-05 | 7.599E-03 | -5.985E-01 | 9.684E-03 | -1.992E-02 | 1.201E-02 | -1.007E-02 | 1.609E-02 | -7.788E-03 | 0.273 | 0.385 | 1.99E-02 |
| 22 | -2.974E-05 | 1.103E-02 | -8.344E-01 | 1.196E-02 | -1.473E-02 | -1.113E-02 | 6.688E-03 | 2.015E-02 | -1.294E-02 | 0.397 | 0.562 | 2.02E-02 |

**Table 10-11 Cold Plate +7.7°C, Linearity Data (cont.)**

| Redundancy Configuration 2 | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Regression Coefficients | | | Deviations from Regression Curve | | | | | | | | |
| Chan | A2 | A1 | A0 | 84K | 130K | 180K | 230K | 280K | 330K | NL | PkAcc | Max Res. Error (K) |
| 1 | -2.876E-05 | 1.141E-02 | -1.033E+00 | -6.332E-04 | 8.070E-04 | 3.694E-03 | -9.911E-03 | 8.569E-03 | -2.525E-03 | 0.384 | 0.536 | 9.91E-03 |
| 2 | -3.194E-05 | 1.194E-02 | -9.361E-01 | -3.136E-03 | 2.812E-03 | 8.600E-03 | -1.262E-02 | 3.529E-03 | 8.114E-04 | 0.427 | 0.596 | 1.26E-02 |
| 3 | -8.073E-06 | 2.628E-03 | -1.755E-01 | 3.426E-03 | -6.519E-03 | 6.793E-03 | -1.421E-02 | 1.724E-02 | -6.725E-03 | 0.108 | 0.151 | 1.72E-02 |
| 4 | 5.942E-06 | -2.469E-03 | 1.540E-01 | -3.280E-03 | 9.620E-03 | -3.933E-03 | -1.465E-02 | 1.859E-02 | -6.355E-03 | -0.079 | -0.111 | 1.86E-02 |
| 5 | 5.357E-07 | -4.866E-04 | 3.320E-02 | -1.653E-03 | 4.179E-03 | -8.959E-04 | -6.598E-03 | 7.236E-03 | -2.268E-03 | -0.007 | -0.010 | 7.24E-03 |
| 6 | 6.169E-06 | -2.651E-03 | 1.892E-01 | -5.400E-03 | 9.850E-03 | -1.425E-04 | -6.931E-03 | 1.348E-03 | 1.275E-03 | -0.082 | -0.115 | 9.85E-03 |
| 7 | -1.004E-05 | 3.309E-03 | -2.014E-01 | -1.545E-03 | 5.805E-03 | -1.233E-03 | -1.650E-02 | 2.094E-02 | -7.468E-03 | 0.134 | 0.187 | 2.09E-02 |
| 8 | -1.303E-05 | 4.316E-03 | -2.522E-01 | -4.202E-03 | 8.522E-03 | -4.025E-04 | -9.711E-03 | 7.100E-03 | -1.306E-03 | 0.174 | 0.243 | 9.71E-03 |
| 9 | -1.257E-05 | 4.083E-03 | -2.341E-01 | -1.573E-03 | 7.060E-03 | -5.323E-03 | -1.149E-02 | 1.832E-02 | -6.995E-03 | 0.168 | 0.234 | 1.83E-02 |
| 10 | -3.224E-05 | 1.131E-02 | -7.132E-01 | -6.634E-03 | 6.279E-03 | 1.143E-02 | -8.265E-03 | -1.032E-02 | 7.509E-03 | 0.431 | 0.601 | 1.14E-02 |
| 11 | -3.168E-05 | 1.106E-02 | -6.920E-01 | -4.786E-03 | 1.308E-02 | -3.874E-03 | -2.118E-02 | 2.501E-02 | -8.244E-03 | 0.423 | 0.591 | 2.50E-02 |
| 12 | -3.404E-05 | 1.185E-02 | -7.263E-01 | -8.700E-03 | 1.101E-02 | 9.637E-03 | -1.153E-02 | -7.243E-03 | 6.820E-03 | 0.455 | 0.635 | 1.15E-02 |
| 13 | -4.539E-05 | 1.577E-02 | -9.575E-01 | 3.687E-04 | -5.118E-03 | 2.182E-02 | -3.844E-02 | 2.992E-02 | -8.549E-03 | 0.607 | 0.846 | 3.84E-02 |
| 14 | -3.746E-05 | 1.290E-02 | -7.703E-01 | 6.899E-04 | 2.576E-02 | -5.547E-02 | 4.660E-03 | 5.046E-02 | -2.610E-02 | 0.501 | 0.698 | 5.55E-02 |
| 15 | -4.107E-05 | 1.414E-02 | -8.239E-01 | -2.513E-02 | 6.044E-02 | -1.861E-02 | -6.661E-02 | 7.010E-02 | -2.019E-02 | 0.549 | 0.766 | 7.01E-02 |
| 16 | -1.379E-05 | 6.861E-03 | -9.077E-01 | 2.422E-02 | -4.096E-02 | 7.172E-04 | 9.124E-03 | 2.407E-02 | -1.717E-02 | 0.184 | 0.260 | 4.10E-02 |
| 17 | -3.147E-05 | 1.205E-02 | -9.682E-01 | 2.033E-02 | -4.082E-02 | 1.878E-02 | -8.722E-03 | 2.403E-02 | -1.360E-02 | 0.421 | 0.594 | 4.08E-02 |
| 18 | -1.557E-05 | 5.961E-03 | -5.145E-01 | 1.486E-02 | -2.951E-02 | 6.112E-03 | 1.459E-02 | -2.865E-03 | -3.186E-03 | 0.208 | 0.294 | 2.95E-02 |
| 19 | -1.711E-05 | 6.454E-03 | -5.314E-01 | 2.607E-02 | -4.938E-02 | -1.262E-04 | 4.402E-02 | -1.886E-02 | -1.723E-03 | 0.229 | 0.323 | 4.94E-02 |
| 20 | -2.044E-05 | 7.933E-03 | -6.640E-01 | 2.445E-02 | -4.110E-02 | -3.041E-03 | 1.903E-02 | 1.493E-02 | -1.427E-02 | 0.273 | 0.386 | 4.11E-02 |
| 21 | -2.159E-05 | 8.309E-03 | -6.842E-01 | 2.526E-02 | -4.020E-02 | -2.598E-03 | 4.641E-03 | 3.492E-02 | -2.202E-02 | 0.289 | 0.408 | 4.02E-02 |
| 22 | -2.979E-05 | 1.113E-02 | -8.397E-01 | 3.239E-02 | -5.603E-02 | 9.234E-03 | -5.222E-03 | 4.723E-02 | -2.761E-02 | 0.398 | 0.562 | 5.60E-02 |

**Table 10-11 Cold Plate +7.7°C, Linearity Data (cont.)**

| Redundancy Configuration 5 | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Regression Coefficients | | | Deviations from Regression Curve | | | | | | | | |
| Chan | A2 | A1 | A0 | 84K | 130K | 180K | 230K | 280K | 330K | NL | PkAcc | Max Res. Error (K) |
| 1 | -2.849E-05 | 1.128E-02 | -1.022E+00 | -8.529E-03 | 1.071E-02 | 1.043E-02 | -1.369E-02 | -4.915E-03 | 5.988E-03 | 0.381 | 0.530 | 1.37E-02 |
| 2 | -3.132E-05 | 1.184E-02 | -9.339E-01 | -1.106E-02 | 1.204E-02 | 1.730E-02 | -1.799E-02 | -9.823E-03 | 9.524E-03 | 0.419 | 0.583 | 1.80E-02 |
| 3 | -8.495E-06 | 2.817E-03 | -1.921E-01 | 6.645E-04 | 2.602E-03 | -1.749E-03 | -1.696E-02 | 2.529E-02 | -9.851E-03 | 0.114 | 0.158 | 2.53E-02 |
| 4 | 4.734E-06 | -1.986E-03 | 1.183E-01 | -1.452E-04 | 1.417E-04 | 2.757E-03 | -7.792E-03 | 7.393E-03 | -2.354E-03 | -0.063 | -0.088 | 7.79E-03 |
| 5 | -1.558E-08 | -3.330E-04 | 2.794E-02 | 1.559E-03 | -6.155E-04 | 1.713E-03 | -1.660E-02 | 2.269E-02 | -8.747E-03 | 0.000 | 0.000 | 2.27E-02 |
| 6 | 5.193E-06 | -2.248E-03 | 1.614E-01 | -4.549E-03 | 3.397E-03 | 1.483E-02 | -2.127E-02 | 6.704E-03 | 8.928E-04 | -0.069 | -0.097 | 2.13E-02 |
| 7 | -1.013E-05 | 3.288E-03 | -1.962E-01 | -8.610E-03 | 1.342E-02 | 5.453E-03 | -1.428E-02 | 7.192E-04 | 3.291E-03 | 0.135 | 0.189 | 1.43E-02 |
| 8 | -1.316E-05 | 4.422E-03 | -2.707E-01 | -4.079E-03 | -2.468E-04 | 1.744E-02 | -1.162E-02 | -8.036E-03 | 6.549E-03 | 0.176 | 0.245 | 1.74E-02 |
| 9 | -1.195E-05 | 3.846E-03 | -2.112E-01 | -1.021E-02 | 1.903E-02 | 1.594E-03 | -2.110E-02 | 1.127E-02 | -5.893E-04 | 0.160 | 0.222 | 2.11E-02 |
| 10 | -3.097E-05 | 1.076E-02 | -6.600E-01 | -1.248E-02 | 1.471E-02 | 1.467E-02 | -1.235E-02 | -1.682E-02 | 1.227E-02 | 0.414 | 0.576 | 1.68E-02 |
| 11 | -3.016E-05 | 1.055E-02 | -6.609E-01 | 6.009E-03 | -6.419E-03 | -7.672E-04 | -1.713E-02 | 3.249E-02 | -1.419E-02 | 0.403 | 0.561 | 3.25E-02 |
| 12 | -3.535E-05 | 1.234E-02 | -7.624E-01 | -1.045E-05 | -3.506E-03 | 4.790E-03 | 6.886E-03 | -1.396E-02 | 5.802E-03 | 0.473 | 0.658 | 1.40E-02 |
| 13 | -4.637E-05 | 1.636E-02 | -1.009E+00 | -7.773E-03 | 1.192E-02 | 8.664E-04 | 5.904E-04 | -1.322E-02 | 7.621E-03 | 0.620 | 0.863 | 1.32E-02 |
| 14 | -3.972E-05 | 1.431E-02 | -9.422E-01 | -7.719E-03 | 1.735E-02 | -5.086E-03 | -1.488E-02 | 1.339E-02 | -3.048E-03 | 0.531 | 0.739 | 1.73E-02 |
| 15 | -4.300E-05 | 1.535E-02 | -9.963E-01 | -8.799E-03 | 1.717E-03 | 2.105E-02 | 1.141E-02 | -4.931E-02 | 2.393E-02 | 0.575 | 0.800 | 4.93E-02 |
| 16 | -1.242E-05 | 6.553E-03 | -8.927E-01 | 2.335E-02 | -4.046E-02 | 3.579E-03 | 6.680E-03 | 2.286E-02 | -1.600E-02 | 0.166 | 0.234 | 4.05E-02 |
| 17 | -3.086E-05 | 1.192E-02 | -9.576E-01 | 2.204E-02 | -4.250E-02 | 1.741E-02 | -1.049E-02 | 3.003E-02 | -1.650E-02 | 0.412 | 0.582 | 4.25E-02 |
| 18 | -1.731E-05 | 7.030E-03 | -6.413E-01 | 3.199E-02 | -5.410E-02 | 1.311E-03 | 1.193E-02 | 3.120E-02 | -2.233E-02 | 0.231 | 0.327 | 5.41E-02 |
| 19 | -1.706E-05 | 6.966E-03 | -6.266E-01 | 2.435E-02 | -4.208E-02 | 3.259E-03 | 7.649E-03 | 2.341E-02 | -1.659E-02 | 0.228 | 0.322 | 4.21E-02 |
| 20 | -1.814E-05 | 7.049E-03 | -5.912E-01 | 2.162E-02 | -3.668E-02 | 1.151E-03 | 7.939E-03 | 2.099E-02 | -1.502E-02 | 0.243 | 0.342 | 3.67E-02 |
| 21 | -1.790E-05 | 6.892E-03 | -5.555E-01 | 1.426E-02 | -4.052E-02 | 3.952E-02 | -1.402E-02 | 9.649E-04 | -2.028E-04 | 0.239 | 0.338 | 4.05E-02 |
| 22 | -2.918E-05 | 1.098E-02 | -8.310E-01 | 8.758E-03 | -2.871E-02 | 3.327E-02 | -1.293E-02 | -2.583E-03 | 2.197E-03 | 0.390 | 0.551 | 3.33E-02 |

**Table 10-11 Cold Plate +7.7°C, Linearity Data (cont.)**

| Redundancy Configuration 6 | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Regression Coefficients | | | Deviations from Regression Curve | | | | | | | | |
| Chan | A2 | A1 | A0 | 84K | 130K | 180K | 230K | 280K | 330K | NL | PkAcc | Max Res. Error (K) |
| 1 | -2.808E-05 | 1.114E-02 | -1.015E+00 | -6.995E-04 | -6.273E-04 | 6.864E-03 | -1.015E-02 | 5.619E-03 | -1.002E-03 | 0.375 | 0.524 | 1.02E-02 |
| 2 | -3.182E-05 | 1.197E-02 | -9.472E-01 | -8.557E-03 | 1.148E-02 | 1.050E-02 | -1.826E-02 | 9.953E-04 | 3.834E-03 | 0.425 | 0.594 | 1.83E-02 |
| 3 | -7.576E-06 | 2.525E-03 | -1.811E-01 | -1.048E-03 | 5.261E-03 | -3.404E-03 | -1.147E-02 | 1.719E-02 | -6.530E-03 | 0.101 | 0.141 | 1.72E-02 |
| 4 | 4.489E-06 | -1.944E-03 | 1.163E-01 | -1.103E-04 | 3.895E-03 | -5.858E-03 | -4.860E-03 | 1.223E-02 | -5.295E-03 | -0.060 | -0.084 | 1.22E-02 |
| 5 | -7.968E-07 | -9.317E-05 | 1.318E-02 | 6.255E-04 | 3.026E-04 | 1.490E-03 | -1.244E-02 | 1.607E-02 | -6.051E-03 | 0.011 | 0.015 | 1.61E-02 |
| 6 | 5.134E-06 | -2.227E-03 | 1.631E-01 | -2.904E-03 | 6.162E-03 | 1.455E-03 | -1.358E-02 | 1.233E-02 | -3.467E-03 | -0.069 | -0.096 | 1.36E-02 |
| 7 | -9.839E-06 | 3.146E-03 | -1.805E-01 | -3.374E-03 | 9.166E-03 | -3.753E-03 | -1.149E-02 | 1.408E-02 | -4.625E-03 | 0.132 | 0.184 | 1.41E-02 |
| 8 | -1.326E-05 | 4.404E-03 | -2.637E-01 | -2.501E-03 | 2.757E-04 | 1.111E-02 | -1.096E-02 | -2.858E-04 | 2.357E-03 | 0.177 | 0.247 | 1.11E-02 |
| 9 | -1.135E-05 | 3.636E-03 | -1.945E-01 | -5.455E-03 | 1.132E-02 | -4.250E-03 | -2.799E-03 | -1.688E-04 | 1.356E-03 | 0.152 | 0.212 | 1.13E-02 |
| 10 | -3.077E-05 | 1.058E-02 | -6.357E-01 | -1.443E-02 | 2.251E-02 | 2.744E-03 | -4.550E-03 | -1.835E-02 | 1.208E-02 | 0.411 | 0.574 | 2.25E-02 |
| 11 | -2.966E-05 | 1.029E-02 | -6.363E-01 | -1.011E-05 | -5.952E-03 | 1.340E-02 | -4.309E-03 | -7.745E-03 | 4.611E-03 | 0.396 | 0.553 | 1.34E-02 |
| 12 | -3.584E-05 | 1.265E-02 | -8.121E-01 | -5.589E-03 | 1.076E-02 | -2.273E-03 | -4.106E-03 | -6.132E-04 | 1.818E-03 | 0.479 | 0.669 | 1.08E-02 |
| 13 | -4.252E-05 | 1.498E-02 | -9.147E-01 | -6.684E-03 | 1.881E-02 | -1.590E-02 | -1.066E-03 | 7.399E-03 | -2.551E-03 | 0.568 | 0.793 | 1.88E-02 |
| 14 | -3.667E-05 | 1.273E-02 | -7.530E-01 | -8.407E-03 | 2.184E-02 | -6.906E-03 | -2.994E-02 | 3.436E-02 | -1.094E-02 | 0.490 | 0.684 | 3.44E-02 |
| 15 | -3.688E-05 | 1.292E-02 | -8.168E-01 | 1.047E-02 | 6.141E-03 | -6.711E-02 | 6.389E-02 | -2.163E-03 | -1.122E-02 | 0.493 | 0.688 | 6.71E-02 |
| 16 | -1.352E-05 | 6.930E-03 | -9.123E-01 | 2.230E-02 | -4.112E-02 | 6.141E-03 | 1.288E-02 | 1.061E-02 | -1.081E-02 | 0.181 | 0.255 | 4.11E-02 |
| 17 | -3.289E-05 | 1.264E-02 | -1.002E+00 | 2.255E-02 | -4.176E-02 | 1.515E-02 | -1.314E-02 | 3.683E-02 | -1.962E-02 | 0.440 | 0.621 | 4.18E-02 |
| 18 | -1.512E-05 | 5.939E-03 | -5.306E-01 | 1.726E-02 | -3.989E-02 | 2.209E-02 | 5.957E-03 | -3.732E-03 | -1.677E-03 | 0.202 | 0.286 | 3.99E-02 |
| 19 | -1.599E-05 | 6.368E-03 | -5.708E-01 | 2.205E-02 | -3.570E-02 | -5.421E-03 | 1.775E-02 | 1.526E-02 | -1.395E-02 | 0.214 | 0.302 | 3.57E-02 |
| 20 | -1.826E-05 | 7.276E-03 | -6.184E-01 | 2.484E-02 | -3.963E-02 | -2.568E-03 | 5.620E-03 | 3.291E-02 | -2.117E-02 | 0.244 | 0.345 | 3.96E-02 |
| 21 | -1.747E-05 | 6.674E-03 | -5.360E-01 | 2.021E-02 | -3.973E-02 | 1.679E-02 | -7.611E-03 | 2.421E-02 | -1.387E-02 | 0.234 | 0.330 | 3.97E-02 |
| 22 | -2.734E-05 | 1.043E-02 | -7.855E-01 | 2.250E-02 | -4.071E-02 | 3.269E-03 | 1.718E-02 | 8.036E-03 | -1.028E-02 | 0.365 | 0.516 | 4.07E-02 |

**Table 10-12 Cold Plate +18.5°C, NEΔT Data**

| | | Scene Temperature | | | | | |
|---|---|---|---|---|---|---|---|
| | | 84K | 130K | 180K | 230K | 280K | 330K |
| RC1 | Ch 1 | 0.141 | 0.166 | 0.189 | 0.210 | 0.237 | 0.262 |
| | Ch 2 | 0.174 | 0.193 | 0.223 | 0.249 | 0.276 | 0.306 |
| | Ch 3 | 0.206 | 0.234 | 0.266 | 0.291 | 0.322 | 0.347 |
| | Ch 4 | 0.139 | 0.163 | 0.185 | 0.206 | 0.225 | 0.247 |
| | Ch 5 | 0.138 | 0.165 | 0.181 | 0.210 | 0.228 | 0.256 |
| | Ch 6 | 0.153 | 0.172 | 0.195 | 0.219 | 0.249 | 0.258 |
| | Ch 7 | 0.142 | 0.160 | 0.178 | 0.201 | 0.222 | 0.250 |
| | Ch 8 | 0.139 | 0.165 | 0.178 | 0.200 | 0.223 | 0.243 |
| | Ch 9 | 0.155 | 0.180 | 0.197 | 0.223 | 0.245 | 0.276 |
| | Ch 10 | 0.223 | 0.248 | 0.275 | 0.321 | 0.349 | 0.385 |
| | Ch 11 | 0.295 | 0.347 | 0.388 | 0.434 | 0.460 | 0.532 |
| | Ch 12 | 0.320 | 0.357 | 0.405 | 0.447 | 0.492 | 0.556 |
| | Ch 13 | 0.472 | 0.526 | 0.598 | 0.664 | 0.756 | 0.823 |
| | Ch 14 | 0.653 | 0.742 | 0.831 | 0.966 | 1.039 | 1.144 |
| | Ch 15 | 1.129 | 1.207 | 1.380 | 1.510 | 1.713 | 1.834 |
| | Ch 16 | 0.151 | 0.165 | 0.178 | 0.186 | 0.201 | 0.220 |
| | Ch 17 | 0.285 | 0.300 | 0.294 | 0.312 | 0.332 | 0.344 |
| | Ch 18 | 0.327 | 0.347 | 0.346 | 0.364 | 0.367 | 0.405 |
| | Ch 19 | 0.327 | 0.344 | 0.352 | 0.355 | 0.370 | 0.383 |
| | Ch 20 | 0.387 | 0.389 | 0.400 | 0.408 | 0.435 | 0.449 |
| | Ch 21 | 0.396 | 0.398 | 0.425 | 0.446 | 0.456 | 0.454 |
| | Ch 22 | 0.564 | 0.565 | 0.574 | 0.621 | 0.633 | 0.666 |

| | | 84K | 130K | 180K | 230K | 280K | 330K |
|---|---|---|---|---|---|---|---|
| RC2 | Ch 1 | 0.145 | 0.163 | 0.196 | 0.214 | 0.237 | 0.262 |
| | Ch 2 | 0.167 | 0.197 | 0.217 | 0.248 | 0.276 | 0.323 |
| | Ch 3 | 0.212 | 0.242 | 0.273 | 0.301 | 0.326 | 0.356 |
| | Ch 4 | 0.146 | 0.158 | 0.184 | 0.206 | 0.228 | 0.249 |
| | Ch 5 | 0.139 | 0.162 | 0.178 | 0.205 | 0.221 | 0.250 |
| | Ch 6 | 0.150 | 0.174 | 0.201 | 0.218 | 0.241 | 0.272 |
| | Ch 7 | 0.141 | 0.157 | 0.178 | 0.197 | 0.226 | 0.251 |
| | Ch 8 | 0.147 | 0.160 | 0.182 | 0.207 | 0.221 | 0.248 |
| | Ch 9 | 0.153 | 0.170 | 0.198 | 0.213 | 0.244 | 0.270 |
| | Ch 10 | 0.220 | 0.241 | 0.274 | 0.310 | 0.354 | 0.377 |
| | Ch 11 | 0.300 | 0.345 | 0.376 | 0.433 | 0.470 | 0.514 |
| | Ch 12 | 0.325 | 0.364 | 0.417 | 0.457 | 0.512 | 0.536 |
| | Ch 13 | 0.465 | 0.541 | 0.602 | 0.691 | 0.752 | 0.818 |
| | Ch 14 | 0.674 | 0.742 | 0.840 | 0.920 | 1.046 | 1.160 |
| | Ch 15 | 1.092 | 1.206 | 1.394 | 1.517 | 1.691 | 1.836 |
| | Ch 16 | 0.152 | 0.159 | 0.182 | 0.190 | 0.209 | 0.215 |
| | Ch 17 | 0.285 | 0.289 | 0.305 | 0.318 | 0.332 | 0.362 |
| | Ch 18 | 0.331 | 0.336 | 0.345 | 0.368 | 0.356 | 0.392 |
| | Ch 19 | 0.332 | 0.334 | 0.345 | 0.358 | 0.361 | 0.393 |
| | Ch 20 | 0.381 | 0.399 | 0.407 | 0.420 | 0.423 | 0.434 |
| | Ch 21 | 0.405 | 0.427 | 0.420 | 0.449 | 0.474 | 0.467 |
| | Ch 22 | 0.557 | 0.554 | 0.570 | 0.610 | 0.615 | 0.642 |

**Table 10-12 Cold Plate +18.5°C, NEΔT Data (cont.)**

| | | Scene Temperature | | | | | |
|---|---|---|---|---|---|---|---|
| | | 84K | 130K | 180K | 230K | 280K | 330K |
| RC5 | Ch 1 | 0.141 | 0.166 | 0.191 | 0.211 | 0.234 | 0.264 |
| | Ch 2 | 0.168 | 0.197 | 0.218 | 0.245 | 0.287 | 0.310 |
| | Ch 3 | 0.216 | 0.242 | 0.271 | 0.297 | 0.330 | 0.360 |
| | Ch 4 | 0.142 | 0.161 | 0.183 | 0.198 | 0.225 | 0.245 |
| | Ch 5 | 0.143 | 0.160 | 0.183 | 0.202 | 0.225 | 0.243 |
| | Ch 6 | 0.160 | 0.168 | 0.197 | 0.225 | 0.239 | 0.264 |
| | Ch 7 | 0.141 | 0.161 | 0.178 | 0.208 | 0.227 | 0.249 |
| | Ch 8 | 0.143 | 0.164 | 0.185 | 0.204 | 0.225 | 0.238 |
| | Ch 9 | 0.155 | 0.172 | 0.191 | 0.222 | 0.250 | 0.259 |
| | Ch 10 | 0.221 | 0.252 | 0.281 | 0.312 | 0.343 | 0.374 |
| | Ch 11 | 0.307 | 0.335 | 0.380 | 0.440 | 0.462 | 0.534 |
| | Ch 12 | 0.311 | 0.351 | 0.404 | 0.456 | 0.500 | 0.541 |
| | Ch 13 | 0.475 | 0.533 | 0.604 | 0.639 | 0.748 | 0.833 |
| | Ch 14 | 0.661 | 0.763 | 0.847 | 0.948 | 1.024 | 1.106 |
| | Ch 15 | 1.096 | 1.221 | 1.360 | 1.541 | 1.703 | 1.793 |
| | Ch 16 | 0.150 | 0.159 | 0.175 | 0.188 | 0.208 | 0.218 |
| | Ch 17 | 0.291 | 0.295 | 0.313 | 0.321 | 0.332 | 0.352 |
| | Ch 18 | 0.323 | 0.329 | 0.349 | 0.357 | 0.375 | 0.380 |
| | Ch 19 | 0.326 | 0.333 | 0.336 | 0.358 | 0.365 | 0.379 |
| | Ch 20 | 0.378 | 0.379 | 0.398 | 0.407 | 0.425 | 0.442 |
| | Ch 21 | 0.387 | 0.420 | 0.423 | 0.420 | 0.445 | 0.466 |
| | Ch 22 | 0.553 | 0.543 | 0.580 | 0.619 | 0.614 | 0.656 |

| | | 84K | 130K | 180K | 230K | 280K | 330K |
|---|---|---|---|---|---|---|---|
| RC6 | Ch 1 | 0.145 | 0.163 | 0.191 | 0.217 | 0.243 | 0.270 |
| | Ch 2 | 0.161 | 0.192 | 0.220 | 0.254 | 0.276 | 0.311 |
| | Ch 3 | 0.203 | 0.237 | 0.264 | 0.296 | 0.325 | 0.366 |
| | Ch 4 | 0.148 | 0.157 | 0.180 | 0.206 | 0.223 | 0.248 |
| | Ch 5 | 0.142 | 0.160 | 0.179 | 0.207 | 0.225 | 0.252 |
| | Ch 6 | 0.154 | 0.170 | 0.194 | 0.219 | 0.243 | 0.262 |
| | Ch 7 | 0.142 | 0.163 | 0.181 | 0.199 | 0.224 | 0.240 |
| | Ch 8 | 0.143 | 0.158 | 0.175 | 0.209 | 0.224 | 0.246 |
| | Ch 9 | 0.154 | 0.171 | 0.196 | 0.219 | 0.247 | 0.255 |
| | Ch 10 | 0.219 | 0.252 | 0.280 | 0.308 | 0.345 | 0.371 |
| | Ch 11 | 0.299 | 0.350 | 0.379 | 0.436 | 0.459 | 0.537 |
| | Ch 12 | 0.314 | 0.369 | 0.414 | 0.452 | 0.499 | 0.547 |
| | Ch 13 | 0.469 | 0.517 | 0.606 | 0.665 | 0.730 | 0.803 |
| | Ch 14 | 0.673 | 0.746 | 0.843 | 0.928 | 1.049 | 1.136 |
| | Ch 15 | 1.094 | 1.236 | 1.340 | 1.634 | 1.700 | 1.909 |
| | Ch 16 | 0.150 | 0.158 | 0.173 | 0.191 | 0.201 | 0.224 |
| | Ch 17 | 0.286 | 0.296 | 0.307 | 0.310 | 0.330 | 0.350 |
| | Ch 18 | 0.321 | 0.331 | 0.337 | 0.346 | 0.377 | 0.393 |
| | Ch 19 | 0.320 | 0.345 | 0.344 | 0.343 | 0.360 | 0.385 |
| | Ch 20 | 0.368 | 0.378 | 0.391 | 0.416 | 0.428 | 0.428 |
| | Ch 21 | 0.402 | 0.410 | 0.427 | 0.422 | 0.437 | 0.453 |
| | Ch 22 | 0.571 | 0.552 | 0.557 | 0.575 | 0.625 | 0.642 |

**Table 10-13 Cold Plate +18.5°C, NEΔT Interpolated to Scene Temperature of 300K**

| | | NEDT Interpolated for 300K | | | |
|---|---|---|---|---|---|
| | Req't | RC1 | RC2 | RC5 | RC6 |
| Ch 1 | 0.70 | 0.247 | 0.247 | 0.246 | 0.254 |
| Ch 2 | 0.80 | 0.288 | 0.295 | 0.296 | 0.290 |
| Ch 3 | 0.90 | 0.332 | 0.338 | 0.342 | 0.341 |
| Ch 4 | 0.70 | 0.234 | 0.236 | 0.233 | 0.233 |
| Ch 5 | 0.70 | 0.239 | 0.232 | 0.232 | 0.236 |
| Ch 6 | 0.70 | 0.253 | 0.253 | 0.249 | 0.251 |
| Ch 7 | 0.70 | 0.233 | 0.236 | 0.236 | 0.231 |
| Ch 8 | 0.70 | 0.231 | 0.232 | 0.230 | 0.233 |
| Ch 9 | 0.70 | 0.257 | 0.254 | 0.254 | 0.250 |
| Ch 10 | 0.75 | 0.363 | 0.363 | 0.356 | 0.356 |
| Ch 11 | 1.20 | 0.489 | 0.488 | 0.490 | 0.490 |
| Ch 12 | 1.20 | 0.518 | 0.522 | 0.517 | 0.518 |
| Ch 13 | 1.50 | 0.783 | 0.778 | 0.782 | 0.760 |
| Ch 14 | 2.40 | 1.081 | 1.092 | 1.057 | 1.084 |
| Ch 15 | 3.60 | 1.762 | 1.749 | 1.739 | 1.784 |
| Ch 16 | 0.50 | 0.209 | 0.211 | 0.212 | 0.210 |
| Ch 17 | 0.60 | 0.337 | 0.344 | 0.340 | 0.338 |
| Ch 18 | 0.80 | 0.382 | 0.370 | 0.377 | 0.384 |
| Ch 19 | 0.80 | 0.375 | 0.374 | 0.371 | 0.370 |
| Ch 20 | 0.80 | 0.441 | 0.427 | 0.431 | 0.428 |
| Ch 21 | 0.80 | 0.455 | 0.471 | 0.454 | 0.444 |
| Ch 22 | 0.90 | 0.646 | 0.626 | 0.631 | 0.632 |

**Table 10-14 Cold Plate +18.5°C, Accuracy Data**

| | | Scene Temperature | | | | | |
|---|---|---|---|---|---|---|---|
| | | 84K | 130K | 180K | 230K | 280K | 330K |
| RC1 | Ch 1 | -0.295 | -0.009 | 0.136 | 0.081 | -0.060 | -0.385 |
| | Ch 2 | -0.175 | 0.091 | 0.220 | 0.135 | -0.027 | -0.410 |
| | Ch 3 | -0.001 | 0.048 | 0.066 | 0.030 | -0.042 | -0.206 |
| | Ch 4 | 0.004 | -0.027 | -0.062 | -0.079 | -0.083 | -0.073 |
| | Ch 5 | 0.029 | 0.003 | 0.003 | -0.049 | -0.077 | -0.111 |
| | Ch 6 | 0.031 | -0.030 | -0.072 | -0.101 | -0.081 | -0.066 |
| | Ch 7 | 0.030 | 0.081 | 0.101 | 0.033 | -0.062 | -0.210 |
| | Ch 8 | 0.028 | 0.108 | 0.135 | 0.041 | -0.042 | -0.242 |
| | Ch 9 | 0.040 | 0.124 | 0.135 | 0.058 | -0.035 | -0.238 |
| | Ch 10 | 0.035 | 0.257 | 0.322 | 0.223 | -0.038 | -0.441 |
| | Ch 11 | 0.039 | 0.257 | 0.321 | 0.193 | -0.043 | -0.424 |
| | Ch 12 | 0.031 | 0.277 | 0.390 | 0.213 | 0.004 | -0.494 |
| | Ch 13 | 0.037 | 0.347 | 0.431 | 0.289 | 0.002 | -0.497 |
| | Ch 14 | 0.064 | 0.316 | 0.448 | 0.323 | 0.017 | -0.443 |
| | Ch 15 | 0.057 | 0.336 | 0.423 | 0.292 | -0.013 | -0.462 |
| | Ch 16 | -0.523 | -0.275 | -0.093 | -0.017 | -0.027 | -0.150 |
| | Ch 17 | -0.309 | 0.031 | 0.217 | 0.196 | 0.030 | -0.310 |
| | Ch 18 | -0.234 | -0.019 | 0.084 | 0.074 | 0.022 | -0.237 |
| | Ch 19 | -0.214 | -0.010 | 0.090 | 0.119 | 0.023 | -0.211 |
| | Ch 20 | -0.220 | 0.002 | 0.105 | 0.141 | -0.005 | -0.184 |
| | Ch 21 | -0.213 | 0.021 | 0.138 | 0.098 | 0.031 | -0.221 |
| | Ch 22 | -0.209 | 0.091 | 0.228 | 0.182 | 0.059 | -0.314 |

| | | 84K | 130K | 180K | 230K | 280K | 330K |
|---|---|---|---|---|---|---|---|
| RC2 | Ch 1 | -0.285 | -0.006 | 0.121 | 0.089 | -0.083 | -0.368 |
| | Ch 2 | -0.163 | 0.095 | 0.222 | 0.176 | -0.036 | -0.420 |
| | Ch 3 | -0.009 | 0.059 | 0.058 | 0.000 | -0.081 | -0.205 |
| | Ch 4 | 0.002 | -0.037 | -0.062 | -0.097 | -0.090 | -0.104 |
| | Ch 5 | 0.005 | -0.003 | -0.004 | -0.069 | -0.065 | -0.124 |
| | Ch 6 | 0.036 | -0.027 | -0.066 | -0.118 | -0.081 | -0.055 |
| | Ch 7 | 0.019 | 0.092 | 0.105 | 0.031 | -0.062 | -0.209 |
| | Ch 8 | 0.023 | 0.103 | 0.134 | 0.043 | -0.061 | -0.252 |
| | Ch 9 | 0.022 | 0.112 | 0.138 | 0.045 | -0.052 | -0.262 |
| | Ch 10 | 0.039 | 0.243 | 0.343 | 0.199 | -0.041 | -0.456 |
| | Ch 11 | 0.026 | 0.265 | 0.350 | 0.211 | -0.045 | -0.432 |
| | Ch 12 | 0.025 | 0.282 | 0.391 | 0.255 | -0.040 | -0.495 |
| | Ch 13 | 0.077 | 0.373 | 0.518 | 0.329 | -0.013 | -0.576 |
| | Ch 14 | 0.028 | 0.309 | 0.389 | 0.317 | -0.017 | -0.519 |
| | Ch 15 | 0.139 | 0.351 | 0.379 | 0.305 | -0.041 | -0.585 |
| | Ch 16 | -0.513 | -0.297 | -0.095 | -0.021 | -0.025 | -0.165 |
| | Ch 17 | -0.304 | 0.015 | 0.224 | 0.177 | 0.024 | -0.336 |
| | Ch 18 | -0.257 | -0.050 | 0.094 | 0.097 | 0.039 | -0.196 |
| | Ch 19 | -0.223 | -0.036 | 0.130 | 0.120 | 0.031 | -0.211 |
| | Ch 20 | -0.211 | -0.016 | 0.124 | 0.151 | 0.046 | -0.214 |
| | Ch 21 | -0.187 | -0.001 | 0.145 | 0.158 | 0.027 | -0.188 |
| | Ch 22 | -0.225 | 0.077 | 0.273 | 0.267 | 0.003 | -0.274 |

**Table 10-14 Cold Plate +18.5°C, Accuracy Data (cont.)**

| | | Scene Temperature | | | | | |
|---|---|---|---|---|---|---|---|
| | | 84K | 130K | 180K | 230K | 280K | 330K |
| RC5 | Ch 1 | -0.296 | -0.006 | 0.134 | 0.087 | -0.072 | -0.359 |
| | Ch 2 | -0.168 | 0.103 | 0.226 | 0.159 | -0.057 | -0.392 |
| | Ch 3 | -0.014 | 0.059 | 0.066 | 0.024 | -0.067 | -0.185 |
| | Ch 4 | 0.006 | -0.031 | -0.056 | -0.089 | -0.091 | -0.070 |
| | Ch 5 | 0.016 | 0.001 | 0.001 | -0.040 | -0.059 | -0.120 |
| | Ch 6 | 0.028 | -0.015 | -0.068 | -0.094 | -0.072 | -0.079 |
| | Ch 7 | 0.017 | 0.096 | 0.096 | 0.037 | -0.067 | -0.202 |
| | Ch 8 | 0.021 | 0.103 | 0.138 | 0.057 | -0.052 | -0.234 |
| | Ch 9 | 0.020 | 0.129 | 0.138 | 0.050 | -0.045 | -0.250 |
| | Ch 10 | 0.026 | 0.261 | 0.332 | 0.199 | -0.049 | -0.446 |
| | Ch 11 | 0.009 | 0.255 | 0.316 | 0.217 | -0.046 | -0.435 |
| | Ch 12 | 0.036 | 0.300 | 0.392 | 0.246 | -0.029 | -0.479 |
| | Ch 13 | 0.019 | 0.390 | 0.476 | 0.346 | 0.017 | -0.487 |
| | Ch 14 | 0.069 | 0.315 | 0.466 | 0.298 | -0.010 | -0.464 |
| | Ch 15 | 0.044 | 0.345 | 0.479 | 0.398 | -0.092 | -0.459 |
| | Ch 16 | -0.544 | -0.270 | -0.086 | -0.011 | -0.015 | -0.135 |
| | Ch 17 | -0.275 | 0.025 | 0.202 | 0.202 | 0.050 | -0.322 |
| | Ch 18 | -0.195 | -0.042 | 0.106 | 0.053 | 0.018 | -0.155 |
| | Ch 19 | -0.188 | 0.000 | 0.120 | 0.087 | 0.011 | -0.191 |
| | Ch 20 | -0.234 | -0.021 | 0.150 | 0.103 | 0.064 | -0.210 |
| | Ch 21 | -0.204 | 0.007 | 0.144 | 0.137 | 0.034 | -0.186 |
| | Ch 22 | -0.209 | 0.070 | 0.252 | 0.226 | 0.037 | -0.343 |

| | | 84K | 130K | 180K | 230K | 280K | 330K |
|---|---|---|---|---|---|---|---|
| RC6 | Ch 1 | -0.284 | -0.007 | 0.124 | 0.079 | -0.062 | -0.356 |
| | Ch 2 | -0.167 | 0.102 | 0.236 | 0.146 | -0.058 | -0.383 |
| | Ch 3 | -0.009 | 0.058 | 0.075 | 0.016 | -0.049 | -0.195 |
| | Ch 4 | 0.005 | -0.036 | -0.052 | -0.083 | -0.079 | -0.069 |
| | Ch 5 | 0.020 | 0.011 | 0.005 | -0.044 | -0.047 | -0.126 |
| | Ch 6 | 0.029 | -0.024 | -0.063 | -0.093 | -0.061 | -0.041 |
| | Ch 7 | 0.027 | 0.098 | 0.105 | 0.030 | -0.049 | -0.212 |
| | Ch 8 | 0.023 | 0.110 | 0.149 | 0.042 | -0.033 | -0.238 |
| | Ch 9 | 0.029 | 0.118 | 0.149 | 0.057 | -0.029 | -0.228 |
| | Ch 10 | 0.009 | 0.264 | 0.337 | 0.220 | -0.038 | -0.440 |
| | Ch 11 | 0.034 | 0.253 | 0.342 | 0.215 | -0.017 | -0.427 |
| | Ch 12 | 0.024 | 0.302 | 0.404 | 0.240 | -0.056 | -0.479 |
| | Ch 13 | 0.071 | 0.357 | 0.463 | 0.310 | 0.036 | -0.496 |
| | Ch 14 | -0.007 | 0.305 | 0.434 | 0.317 | -0.048 | -0.480 |
| | Ch 15 | 0.093 | 0.337 | 0.377 | 0.284 | -0.099 | -0.492 |
| | Ch 16 | -0.522 | -0.275 | -0.095 | -0.018 | 0.006 | -0.114 |
| | Ch 17 | -0.282 | 0.040 | 0.198 | 0.189 | 0.022 | -0.306 |
| | Ch 18 | -0.207 | -0.057 | 0.090 | 0.068 | -0.004 | -0.135 |
| | Ch 19 | -0.208 | 0.008 | 0.118 | 0.084 | 0.034 | -0.164 |
| | Ch 20 | -0.196 | 0.012 | 0.134 | 0.094 | 0.024 | -0.199 |
| | Ch 21 | -0.214 | 0.039 | 0.155 | 0.142 | 0.023 | -0.199 |
| | Ch 22 | -0.229 | 0.094 | 0.278 | 0.211 | 0.022 | -0.254 |

**Table 10-15 Cold Plate +18.5°C, Linearity Data**

| Redundancy Configuration 1 | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Regression Coefficients | | | Deviations from Regression Curve | | | | | | | | |
| Chan | A2 | A1 | A0 | 84K | 130K | 180K | 230K | 280K | 330K | NL | PkAcc | Max Res. Error (K) |
| 1 | -3.081E-05 | 1.231E-02 | -1.095E+00 | -8.236E-03 | 1.009E-02 | 1.466E-02 | -2.512E-02 | 6.332E-03 | 2.271E-03 | 0.412 | 0.616 | 2.51E-02 |
| 2 | -3.232E-05 | 1.238E-02 | -9.742E-01 | -4.447E-03 | 4.922E-03 | 1.366E-02 | -2.772E-02 | 1.665E-02 | -3.062E-03 | 0.432 | 0.646 | 2.77E-02 |
| 3 | -1.042E-05 | 3.523E-03 | -2.269E-01 | 5.560E-03 | -6.451E-03 | -4.349E-03 | -1.990E-03 | 1.559E-02 | -8.365E-03 | 0.139 | 0.208 | 1.56E-02 |
| 4 | 2.434E-06 | -1.330E-03 | 9.967E-02 | -2.387E-03 | 4.570E-03 | -9.393E-04 | -1.541E-03 | -6.455E-04 | 9.416E-04 | -0.033 | -0.049 | 4.57E-03 |
| 5 | -1.059E-06 | -1.338E-04 | 4.585E-02 | 1.288E-03 | -8.138E-03 | 1.486E-02 | -8.286E-03 | -1.873E-03 | 2.152E-03 | 0.014 | 0.021 | 1.49E-02 |
| 6 | 4.650E-06 | -2.297E-03 | 1.889E-01 | 2.996E-04 | -2.741E-05 | 1.486E-03 | -7.233E-03 | 8.681E-03 | -3.206E-03 | -0.062 | -0.093 | 8.68E-03 |
| 7 | -1.061E-05 | 3.389E-03 | -1.769E-01 | -1.130E-03 | -2.435E-03 | 1.116E-02 | -8.027E-03 | -2.205E-03 | 2.636E-03 | 0.142 | 0.212 | 1.12E-02 |
| 8 | -1.341E-05 | 4.429E-03 | -2.430E-01 | -3.848E-03 | 2.805E-03 | 1.512E-02 | -2.519E-02 | 1.269E-02 | -1.583E-03 | 0.179 | 0.268 | 2.52E-02 |
| 9 | -1.350E-05 | 4.442E-03 | -2.317E-01 | -3.962E-03 | 6.820E-03 | 4.822E-03 | -1.720E-02 | 1.217E-02 | -2.650E-03 | 0.180 | 0.270 | 1.72E-02 |
| 10 | -3.234E-05 | 1.138E-02 | -6.813E-01 | -4.772E-03 | 6.930E-03 | 2.385E-03 | -2.630E-03 | -6.195E-03 | 4.282E-03 | 0.432 | 0.646 | 6.93E-03 |
| 11 | -3.060E-05 | 1.067E-02 | -6.242E-01 | -1.090E-02 | 1.292E-02 | 1.551E-02 | -1.885E-02 | -7.033E-03 | 8.356E-03 | 0.409 | 0.612 | 1.89E-02 |
| 12 | -3.659E-05 | 1.298E-02 | -7.890E-01 | -3.904E-03 | 1.040E-04 | 2.810E-02 | -4.752E-02 | 2.953E-02 | -6.304E-03 | 0.489 | 0.731 | 4.75E-02 |
| 13 | -4.039E-05 | 1.441E-02 | -8.649E-01 | -1.509E-02 | 2.328E-02 | 1.016E-02 | -2.448E-02 | -5.103E-04 | 6.638E-03 | 0.540 | 0.807 | 2.45E-02 |
| 14 | -3.886E-05 | 1.395E-02 | -8.261E-01 | 8.384E-04 | -1.165E-02 | 2.204E-02 | -4.416E-03 | -1.501E-02 | 8.198E-03 | 0.519 | 0.777 | 2.20E-02 |
| 15 | -3.800E-05 | 1.347E-02 | -7.853E-01 | -1.261E-02 | 1.490E-02 | 1.451E-02 | -1.110E-02 | -1.907E-02 | 1.338E-02 | 0.508 | 0.760 | 1.91E-02 |
| 16 | -1.851E-05 | 9.102E-03 | -1.133E+00 | 6.492E-03 | -1.172E-02 | 1.250E-03 | 1.299E-03 | 7.984E-03 | -5.307E-03 | 0.247 | 0.373 | 1.17E-02 |
| 17 | -3.407E-05 | 1.392E-02 | -1.196E+00 | 2.927E-04 | -5.131E-03 | 1.147E-02 | -6.628E-03 | -2.155E-03 | 2.149E-03 | 0.455 | 0.687 | 1.15E-02 |
| 18 | -2.123E-05 | 8.742E-03 | -7.958E-01 | 3.240E-03 | 1.348E-04 | -5.595E-03 | -1.700E-02 | 3.369E-02 | -1.447E-02 | 0.284 | 0.428 | 3.37E-02 |
| 19 | -2.111E-05 | 8.718E-03 | -7.790E-01 | 7.660E-03 | -6.609E-03 | -1.577E-02 | 1.002E-02 | 1.536E-02 | -1.067E-02 | 0.282 | 0.426 | 1.58E-02 |
| 20 | -2.125E-05 | 8.807E-03 | -7.832E-01 | -1.068E-04 | 7.154E-04 | -8.570E-03 | 2.291E-02 | -2.210E-02 | 7.157E-03 | 0.284 | 0.429 | 2.29E-02 |
| 21 | -2.244E-05 | 9.151E-03 | -7.926E-01 | -3.235E-03 | 4.534E-03 | 1.060E-02 | -2.696E-02 | 1.982E-02 | -4.764E-03 | 0.300 | 0.453 | 2.70E-02 |
| 22 | -3.126E-05 | 1.241E-02 | -9.950E-01 | 1.497E-04 | 2.346E-03 | 2.258E-03 | -2.281E-02 | 2.836E-02 | -1.030E-02 | 0.418 | 0.631 | 2.84E-02 |

**Table 10-15 Cold Plate +18.5°C, Linearity Data (cont.)**

| Redundancy Configuration 2 | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Regression Coefficients | | | Deviations from Regression Curve | | | | | | | | |
| Chan | A2 | A1 | A0 | 84K | 130K | 180K | 230K | 280K | 330K | NL | PkAcc | Max Res. Error (K) |
| 1 | -2.945E-05 | 1.173E-02 | -1.044E+00 | -1.021E-02 | 1.360E-02 | 8.023E-03 | -7.017E-03 | -1.434E-02 | 9.949E-03 | 0.394 | 0.588 | 1.43E-02 |
| 2 | -3.350E-05 | 1.280E-02 | -9.961E-01 | 2.622E-03 | -4.406E-03 | 4.113E-04 | -1.650E-04 | 3.839E-03 | -2.301E-03 | 0.448 | 0.669 | 4.41E-03 |
| 3 | -9.262E-06 | 2.975E-03 | -1.833E-01 | -8.401E-03 | 1.265E-02 | 5.386E-03 | -1.092E-02 | -3.657E-03 | 4.945E-03 | 0.124 | 0.185 | 1.27E-02 |
| 4 | 1.946E-06 | -1.218E-03 | 8.939E-02 | 5.150E-04 | -1.360E-03 | 4.090E-03 | -9.191E-03 | 9.027E-03 | -3.080E-03 | -0.026 | -0.039 | 9.19E-03 |
| 5 | -1.675E-06 | 1.741E-04 | 3.579E-03 | -1.817E-03 | -6.389E-04 | 1.505E-02 | -2.407E-02 | 1.440E-02 | -2.931E-03 | 0.022 | 0.033 | 2.41E-02 |
| 6 | 5.587E-06 | -2.686E-03 | 2.238E-01 | -3.640E-03 | 3.251E-03 | 1.177E-02 | -1.985E-02 | 9.238E-03 | -7.651E-04 | -0.075 | -0.112 | 1.99E-02 |
| 7 | -1.103E-05 | 3.574E-03 | -1.937E-01 | -7.131E-03 | 7.721E-03 | 1.223E-02 | -1.426E-02 | -4.099E-03 | 5.544E-03 | 0.147 | 0.220 | 1.43E-02 |
| 8 | -1.380E-05 | 4.554E-03 | -2.557E-01 | -3.831E-03 | 8.775E-04 | 1.676E-02 | -1.880E-02 | 2.509E-03 | 2.483E-03 | 0.184 | 0.276 | 1.88E-02 |
| 9 | -1.450E-05 | 4.815E-03 | -2.727E-01 | -4.800E-03 | 4.883E-03 | 1.319E-02 | -2.272E-02 | 9.877E-03 | -4.308E-04 | 0.194 | 0.290 | 2.27E-02 |
| 10 | -3.250E-05 | 1.138E-02 | -6.791E-01 | -1.569E-03 | -6.797E-03 | 2.548E-02 | -2.091E-02 | 5.456E-05 | 3.742E-03 | 0.434 | 0.649 | 2.55E-02 |
| 11 | -3.278E-05 | 1.156E-02 | -6.933E-01 | -1.286E-02 | 1.183E-02 | 2.441E-02 | -2.027E-02 | -1.709E-02 | 1.397E-02 | 0.438 | 0.655 | 2.44E-02 |
| 12 | -3.779E-05 | 1.343E-02 | -8.227E-01 | -5.027E-03 | -3.885E-04 | 2.079E-02 | -1.174E-02 | -1.287E-02 | 9.230E-03 | 0.505 | 0.755 | 2.08E-02 |
| 13 | -4.561E-05 | 1.612E-02 | -9.420E-01 | -3.619E-03 | -7.655E-03 | 3.498E-02 | -2.458E-02 | -7.723E-03 | 8.595E-03 | 0.610 | 0.912 | 3.50E-02 |
| 14 | -4.073E-05 | 1.459E-02 | -9.018E-01 | 3.991E-04 | 4.651E-03 | -1.612E-02 | 1.689E-02 | -5.870E-03 | 4.733E-05 | 0.544 | 0.814 | 1.69E-02 |
| 15 | -3.852E-05 | 1.306E-02 | -6.892E-01 | 1.073E-02 | -4.506E-03 | -3.471E-02 | 2.795E-02 | 1.386E-02 | -1.332E-02 | 0.515 | 0.770 | 3.47E-02 |
| 16 | -1.841E-05 | 9.032E-03 | -1.128E+00 | 1.655E-02 | -3.085E-02 | 4.845E-03 | 4.121E-03 | 1.767E-02 | -1.233E-02 | 0.246 | 0.371 | 3.09E-02 |
| 17 | -3.437E-05 | 1.396E-02 | -1.198E+00 | 5.755E-03 | -1.905E-02 | 2.403E-02 | -1.608E-02 | 7.175E-03 | -1.826E-03 | 0.459 | 0.693 | 2.40E-02 |
| 18 | -2.138E-05 | 9.077E-03 | -8.508E-01 | 9.850E-03 | -1.733E-02 | 4.423E-03 | -8.591E-03 | 2.368E-02 | -1.203E-02 | 0.286 | 0.431 | 2.37E-02 |
| 19 | -2.242E-05 | 9.317E-03 | -8.347E-01 | 1.570E-02 | -3.323E-02 | 1.420E-02 | -1.368E-03 | 1.423E-02 | -9.535E-03 | 0.300 | 0.452 | 3.32E-02 |
| 20 | -2.307E-05 | 9.552E-03 | -8.395E-01 | 1.731E-02 | -2.729E-02 | -8.059E-03 | 1.403E-02 | 1.863E-02 | -1.462E-02 | 0.308 | 0.465 | 2.73E-02 |
| 21 | -2.205E-05 | 9.075E-03 | -7.792E-01 | 1.314E-02 | -2.762E-02 | 5.506E-03 | 1.728E-02 | -6.255E-03 | -2.046E-03 | 0.295 | 0.445 | 2.76E-02 |
| 22 | -3.355E-05 | 1.346E-02 | -1.083E+00 | 4.092E-03 | -2.209E-02 | 2.065E-02 | 2.994E-02 | -5.351E-02 | 2.092E-02 | 0.448 | 0.677 | 5.35E-02 |

**Table 10-15 Cold Plate +18.5°C, Linearity Data (cont.)**

| Redundancy Configuration 5 | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Regression Coefficients | | | Deviations from Regression Curve | | | | | | | | |
| Chan | A2 | A1 | A0 | 84K | 130K | 180K | 230K | 280K | 330K | NL | PkAcc | Max Res. Error (K) |
| 1 | -2.992E-05 | 1.200E-02 | -1.072E+00 | -1.227E-02 | 1.449E-02 | 1.647E-02 | -1.747E-02 | -1.204E-02 | 1.083E-02 | 0.400 | 0.598 | 1.75E-02 |
| 2 | -3.206E-05 | 1.224E-02 | -9.533E-01 | -8.863E-03 | 8.534E-03 | 1.422E-02 | -7.983E-03 | -1.726E-02 | 1.135E-02 | 0.429 | 0.640 | 1.73E-02 |
| 3 | -9.794E-06 | 3.298E-03 | -2.134E-01 | -6.609E-03 | 9.768E-03 | 2.853E-03 | -3.181E-03 | -8.768E-03 | 5.937E-03 | 0.131 | 0.196 | 9.77E-03 |
| 4 | 2.854E-06 | -1.516E-03 | 1.152E-01 | -3.586E-03 | 2.266E-03 | 9.352E-03 | -6.897E-03 | -5.695E-03 | 4.560E-03 | -0.038 | -0.057 | 9.35E-03 |
| 5 | -2.166E-06 | 3.728E-04 | -3.075E-03 | 3.534E-03 | -7.619E-03 | 6.631E-03 | -8.359E-03 | 9.948E-03 | -4.135E-03 | 0.029 | 0.043 | 9.95E-03 |
| 6 | 3.601E-06 | -1.907E-03 | 1.638E-01 | -2.130E-03 | 7.680E-03 | -5.102E-03 | -1.022E-02 | 1.558E-02 | -5.808E-03 | -0.048 | -0.072 | 1.56E-02 |
| 7 | -1.080E-05 | 3.500E-03 | -1.894E-01 | -9.206E-03 | 1.332E-02 | 5.390E-03 | -6.973E-03 | -1.023E-02 | 7.700E-03 | 0.144 | 0.216 | 1.33E-02 |
| 8 | -1.380E-05 | 4.635E-03 | -2.651E-01 | -3.264E-03 | -2.930E-04 | 1.584E-02 | -1.409E-02 | -2.100E-03 | 3.909E-03 | 0.185 | 0.276 | 1.58E-02 |
| 9 | -1.441E-05 | 4.802E-03 | -2.682E-01 | -1.052E-02 | 1.672E-02 | 8.661E-03 | -2.449E-02 | 7.938E-03 | 1.690E-03 | 0.193 | 0.288 | 2.45E-02 |
| 10 | -3.233E-05 | 1.134E-02 | -6.792E-01 | -1.193E-02 | 1.391E-02 | 1.714E-02 | -1.941E-02 | -9.600E-03 | 9.874E-03 | 0.432 | 0.646 | 1.94E-02 |
| 11 | -3.262E-05 | 1.158E-02 | -7.148E-01 | -1.152E-02 | 1.747E-02 | 4.060E-03 | -5.439E-03 | -1.451E-02 | 9.943E-03 | 0.436 | 0.652 | 1.75E-02 |
| 12 | -3.675E-05 | 1.300E-02 | -7.776E-01 | -1.133E-02 | 1.160E-02 | 2.076E-02 | -2.218E-02 | -8.606E-03 | 9.748E-03 | 0.491 | 0.734 | 2.22E-02 |
| 13 | -4.403E-05 | 1.595E-02 | -9.764E-01 | -2.438E-02 | 3.876E-02 | 7.170E-03 | -1.814E-02 | -2.036E-02 | 1.694E-02 | 0.588 | 0.879 | 3.88E-02 |
| 14 | -3.901E-05 | 1.387E-02 | -8.104E-01 | -1.891E-03 | -1.597E-02 | 4.400E-02 | -1.763E-02 | -2.366E-02 | 1.514E-02 | 0.521 | 0.779 | 4.40E-02 |
| 15 | -4.263E-05 | 1.530E-02 | -9.196E-01 | -1.205E-02 | -1.899E-03 | 2.534E-02 | 5.232E-02 | -1.142E-01 | 5.052E-02 | 0.570 | 0.851 | 1.14E-01 |
| 16 | -1.927E-05 | 9.523E-03 | -1.178E+00 | 2.133E-03 | -4.066E-03 | 2.235E-03 | -3.866E-03 | 6.563E-03 | -2.998E-03 | 0.258 | 0.389 | 6.56E-03 |
| 17 | -3.323E-05 | 1.350E-02 | -1.147E+00 | 1.307E-02 | -2.046E-02 | -4.067E-03 | 3.221E-03 | 2.207E-02 | -1.383E-02 | 0.444 | 0.671 | 2.21E-02 |
| 18 | -1.679E-05 | 7.050E-03 | -6.524E-01 | 5.635E-03 | -2.194E-02 | 3.390E-02 | -2.717E-02 | 1.192E-02 | -2.344E-03 | 0.224 | 0.339 | 3.39E-02 |
| 19 | -1.940E-05 | 7.926E-03 | -6.943E-01 | 1.261E-03 | -7.546E-03 | 1.592E-02 | -1.538E-02 | 6.734E-03 | -9.898E-04 | 0.259 | 0.392 | 1.59E-02 |
| 20 | -2.326E-05 | 9.697E-03 | -8.650E-01 | 9.852E-03 | -2.289E-02 | 2.319E-02 | -3.194E-02 | 3.622E-02 | -1.443E-02 | 0.311 | 0.469 | 3.62E-02 |
| 21 | -2.213E-05 | 9.145E-03 | -7.938E-01 | 5.409E-03 | -1.355E-02 | 9.333E-03 | -1.235E-03 | 1.528E-03 | -1.484E-03 | 0.296 | 0.447 | 1.36E-02 |
| 22 | -3.397E-05 | 1.344E-02 | -1.073E+00 | 1.442E-02 | -2.879E-02 | 7.076E-03 | 6.163E-03 | 9.297E-03 | -8.170E-03 | 0.454 | 0.686 | 2.88E-02 |

**Table 10-15 Cold Plate +18.5°C, Linearity Data (cont.)**

| Redundancy Configuration 6 | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Regression Coefficients | | | Deviations from Regression Curve | | | | | | | | |
| Chan | A2 | A1 | A0 | 84K | 130K | 180K | 230K | 280K | 330K | NL | PkAcc | Max Res. Error (K) |
| 1 | -2.893E-05 | 1.158E-02 | -1.035E+00 | -1.025E-02 | 1.375E-02 | 1.194E-02 | -1.909E-02 | -2.176E-03 | 5.830E-03 | 0.387 | 0.578 | 1.91E-02 |
| 2 | -3.163E-05 | 1.207E-02 | -9.388E-01 | -1.151E-02 | 8.231E-03 | 2.685E-02 | -1.838E-02 | -2.004E-02 | 1.486E-02 | 0.423 | 0.632 | 2.69E-02 |
| 3 | -1.013E-05 | 3.413E-03 | -2.182E-01 | -3.560E-03 | 4.511E-03 | 7.397E-03 | -1.484E-02 | 6.946E-03 | -4.579E-04 | 0.135 | 0.202 | 1.48E-02 |
| 4 | 2.513E-06 | -1.341E-03 | 9.900E-02 | 7.447E-05 | -3.261E-03 | 8.534E-03 | -6.714E-03 | 5.027E-04 | 8.637E-04 | -0.034 | -0.050 | 8.53E-03 |
| 5 | -2.434E-06 | 4.528E-04 | -2.759E-03 | 2.357E-03 | -3.845E-03 | 5.499E-03 | -1.630E-02 | 1.987E-02 | -7.573E-03 | 0.033 | 0.049 | 1.99E-02 |
| 6 | 4.798E-06 | -2.260E-03 | 1.850E-01 | -1.682E-03 | 3.152E-03 | 3.083E-03 | -1.194E-02 | 1.029E-02 | -2.901E-03 | -0.064 | -0.096 | 1.19E-02 |
| 7 | -1.101E-05 | 3.551E-03 | -1.857E-01 | -6.139E-03 | 8.620E-03 | 8.571E-03 | -1.808E-02 | 6.153E-03 | 8.697E-04 | 0.147 | 0.220 | 1.81E-02 |
| 8 | -1.392E-05 | 4.671E-03 | -2.630E-01 | -4.893E-03 | 2.023E-03 | 2.267E-02 | -3.280E-02 | 1.356E-02 | -5.583E-04 | 0.186 | 0.278 | 3.28E-02 |
| 9 | -1.388E-05 | 4.669E-03 | -2.577E-01 | -4.956E-03 | 3.954E-03 | 1.630E-02 | -2.469E-02 | 9.030E-03 | 3.616E-04 | 0.186 | 0.277 | 2.47E-02 |
| 10 | -3.365E-05 | 1.197E-02 | -7.388E-01 | -1.303E-02 | 1.743E-02 | 1.183E-02 | -1.396E-02 | -1.317E-02 | 1.090E-02 | 0.450 | 0.672 | 1.74E-02 |
| 11 | -3.232E-05 | 1.144E-02 | -6.872E-01 | -4.224E-03 | 1.097E-03 | 1.761E-02 | -1.848E-02 | 5.254E-04 | 3.470E-03 | 0.432 | 0.645 | 1.85E-02 |
| 12 | -3.715E-05 | 1.313E-02 | -7.910E-01 | -1.795E-02 | 1.544E-02 | 3.519E-02 | -2.433E-02 | -3.032E-02 | 2.197E-02 | 0.497 | 0.742 | 3.52E-02 |
| 13 | -4.093E-05 | 1.457E-02 | -8.496E-01 | -5.707E-03 | 5.893E-03 | 1.581E-02 | -2.760E-02 | 1.226E-02 | -6.571E-04 | 0.547 | 0.817 | 2.76E-02 |
| 14 | -4.162E-05 | 1.509E-02 | -9.588E-01 | -1.322E-02 | 7.970E-03 | 2.484E-02 | 5.885E-03 | -5.306E-02 | 2.758E-02 | 0.556 | 0.831 | 5.31E-02 |
| 15 | -3.549E-05 | 1.212E-02 | -6.544E-01 | -1.312E-02 | 1.680E-02 | -3.657E-04 | 2.747E-02 | -5.641E-02 | 2.563E-02 | 0.474 | 0.709 | 5.64E-02 |
| 16 | -1.741E-05 | 8.806E-03 | -1.115E+00 | 6.375E-03 | -9.505E-03 | -7.979E-05 | -7.040E-03 | 2.029E-02 | -1.004E-02 | 0.233 | 0.351 | 2.03E-02 |
| 17 | -3.235E-05 | 1.312E-02 | -1.117E+00 | 2.580E-04 | -1.058E-03 | 1.295E-03 | -1.236E-04 | -6.955E-04 | 3.243E-04 | 0.432 | 0.653 | 1.29E-03 |
| 18 | -1.621E-05 | 6.910E-03 | -6.575E-01 | 5.553E-03 | -2.287E-02 | 2.931E-02 | -6.399E-03 | -1.143E-02 | 5.846E-03 | 0.217 | 0.327 | 2.93E-02 |
| 19 | -1.925E-05 | 8.021E-03 | -7.156E-01 | -5.498E-03 | 6.751E-03 | 1.354E-02 | -2.609E-02 | 1.188E-02 | -5.831E-04 | 0.257 | 0.388 | 2.61E-02 |
| 20 | -2.080E-05 | 8.493E-03 | -7.368E-01 | -7.444E-04 | -2.939E-03 | 1.556E-02 | -2.178E-02 | 1.217E-02 | -2.271E-03 | 0.278 | 0.420 | 2.18E-02 |
| 21 | -2.357E-05 | 9.642E-03 | -8.231E-01 | -5.562E-03 | 7.369E-03 | 5.791E-03 | -5.627E-03 | -7.745E-03 | 5.774E-03 | 0.315 | 0.476 | 7.74E-03 |
| 22 | -3.197E-05 | 1.284E-02 | -1.034E+00 | -1.006E-02 | 7.671E-04 | 3.752E-02 | -1.573E-02 | -3.374E-02 | 2.124E-02 | 0.427 | 0.645 | 3.75E-02 |

**Table 10-16a Radiometric Temperature Compared to Physical Temperature, CP -3.1°C , RC1**

| | 84K | | | 130K | | | 180K | | |
|---|---|---|---|---|---|---|---|---|---|
| Ch | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) |
| 1 | 82.827 | 82.524 | -0.303 | 129.716 | 129.675 | -0.041 | 179.330 | 179.409 | 0.079 |
| 2 | 82.827 | 82.631 | -0.196 | 129.716 | 129.801 | 0.086 | 179.330 | 179.499 | 0.168 |
| 3 | 82.827 | 82.772 | -0.055 | 129.716 | 129.716 | 0.000 | 179.330 | 179.337 | 0.007 |
| 4 | 82.827 | 82.772 | -0.055 | 129.716 | 129.636 | -0.080 | 179.330 | 179.229 | -0.101 |
| 5 | 82.827 | 82.786 | -0.041 | 129.716 | 129.678 | -0.037 | 179.330 | 179.295 | -0.036 |
| 6 | 82.827 | 82.793 | -0.034 | 129.716 | 129.663 | -0.053 | 179.330 | 179.238 | -0.092 |
| 7 | 82.827 | 82.795 | -0.032 | 129.716 | 129.764 | 0.048 | 179.330 | 179.382 | 0.052 |
| 8 | 82.827 | 82.797 | -0.030 | 129.716 | 129.783 | 0.067 | 179.330 | 179.418 | 0.088 |
| 9 | 82.827 | 82.801 | -0.026 | 129.716 | 129.788 | 0.072 | 179.330 | 179.410 | 0.080 |
| 10 | 82.827 | 82.794 | -0.032 | 129.716 | 129.913 | 0.197 | 179.330 | 179.578 | 0.248 |
| 11 | 82.827 | 82.784 | -0.043 | 129.716 | 129.922 | 0.206 | 179.330 | 179.571 | 0.241 |
| 12 | 82.827 | 82.816 | -0.011 | 129.716 | 129.924 | 0.208 | 179.330 | 179.626 | 0.296 |
| 13 | 82.827 | 82.817 | -0.010 | 129.716 | 130.021 | 0.305 | 179.330 | 179.673 | 0.342 |
| 14 | 82.827 | 82.811 | -0.016 | 129.716 | 129.971 | 0.255 | 179.330 | 179.653 | 0.323 |
| 15 | 82.827 | 82.866 | 0.039 | 129.716 | 129.946 | 0.230 | 179.330 | 179.698 | 0.368 |
| 16 | 81.148 | 80.683 | -0.464 | 129.843 | 129.559 | -0.283 | 180.228 | 180.126 | -0.102 |
| 17 | 81.148 | 80.899 | -0.249 | 129.843 | 129.858 | 0.016 | 180.228 | 180.426 | 0.198 |
| 18 | 81.148 | 80.920 | -0.228 | 129.843 | 129.753 | -0.090 | 180.228 | 180.248 | 0.019 |
| 19 | 81.148 | 80.909 | -0.239 | 129.843 | 129.766 | -0.077 | 180.228 | 180.290 | 0.062 |
| 20 | 81.148 | 80.915 | -0.233 | 129.843 | 129.792 | -0.051 | 180.228 | 180.280 | 0.052 |
| 21 | 81.148 | 80.930 | -0.217 | 129.843 | 129.801 | -0.042 | 180.228 | 180.286 | 0.058 |
| 22 | 81.148 | 80.921 | -0.227 | 129.843 | 129.875 | 0.032 | 180.228 | 180.362 | 0.133 |

**Table 10-16b Radiometric Temperature Compared to Physical Temperature, CP -3.1°C, RC1 (continued)**

| | 230K | | | 280K | | | 330K | | |
|---|---|---|---|---|---|---|---|---|---|
| Ch | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) |
| 1 | 229.793 | 229.826 | 0.033 | 280.066 | 279.943 | -0.123 | 329.675 | 329.262 | -0.413 |
| 2 | 229.793 | 229.875 | 0.082 | 280.066 | 279.940 | -0.126 | 329.675 | 329.195 | -0.480 |
| 3 | 229.793 | 229.766 | -0.027 | 280.066 | 280.020 | -0.047 | 329.675 | 329.531 | -0.144 |
| 4 | 229.793 | 229.694 | -0.099 | 280.066 | 280.030 | -0.037 | 329.675 | 329.719 | 0.044 |
| 5 | 229.793 | 229.725 | -0.068 | 280.066 | 280.035 | -0.032 | 329.675 | 329.649 | -0.026 |
| 6 | 229.793 | 229.716 | -0.078 | 280.066 | 280.036 | -0.031 | 329.675 | 329.731 | 0.056 |
| 7 | 229.793 | 229.797 | 0.004 | 280.066 | 279.987 | -0.080 | 329.675 | 329.484 | -0.190 |
| 8 | 229.793 | 229.826 | 0.033 | 280.066 | 279.982 | -0.085 | 329.675 | 329.439 | -0.235 |
| 9 | 229.793 | 229.820 | 0.027 | 280.066 | 279.997 | -0.070 | 329.675 | 329.458 | -0.216 |
| 10 | 229.793 | 229.910 | 0.117 | 280.066 | 279.958 | -0.108 | 329.675 | 329.174 | -0.501 |
| 11 | 229.793 | 229.899 | 0.106 | 280.066 | 279.935 | -0.132 | 329.675 | 329.172 | -0.502 |
| 12 | 229.793 | 229.943 | 0.150 | 280.066 | 279.920 | -0.146 | 329.675 | 329.085 | -0.590 |
| 13 | 229.793 | 230.007 | 0.213 | 280.066 | 279.931 | -0.135 | 329.675 | 329.024 | -0.651 |
| 14 | 229.793 | 229.940 | 0.147 | 280.066 | 279.920 | -0.146 | 329.675 | 329.103 | -0.572 |
| 15 | 229.793 | 229.994 | 0.201 | 280.066 | 279.870 | -0.196 | 329.675 | 329.141 | -0.534 |
| 16 | 229.700 | 229.681 | -0.019 | 279.698 | 279.689 | -0.009 | 329.739 | 329.637 | -0.102 |
| 17 | 229.700 | 229.825 | 0.124 | 279.698 | 279.626 | -0.072 | 329.739 | 329.241 | -0.497 |
| 18 | 229.700 | 229.725 | 0.024 | 279.698 | 279.641 | -0.057 | 329.739 | 329.481 | -0.258 |
| 19 | 229.700 | 229.721 | 0.021 | 279.698 | 279.658 | -0.040 | 329.739 | 329.414 | -0.324 |
| 20 | 229.700 | 229.744 | 0.043 | 279.698 | 279.651 | -0.047 | 329.739 | 329.484 | -0.255 |
| 21 | 229.700 | 229.749 | 0.049 | 279.698 | 279.628 | -0.070 | 329.739 | 329.420 | -0.318 |
| 22 | 229.700 | 229.802 | 0.102 | 279.698 | 279.633 | -0.065 | 329.739 | 329.309 | -0.430 |

Notes: Tv is taken from the Sensit&N..sheet
Delta is Accuracy from Sensit&NL..sheet
Ts is calculated as (Tv+Delta)

**Table 10-17a Radiometric Temperature Compared to Physical Temperature, CP -3.1°C , RC2**

| | 84K | | | 130K | | | 180K | | |
|---|---|---|---|---|---|---|---|---|---|
| Ch | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) |
| 1 | 82.813 | 82.510 | -0.303 | 129.813 | 129.770 | -0.043 | 179.320 | 179.405 | 0.084 |
| 2 | 82.813 | 82.603 | -0.209 | 129.813 | 129.890 | 0.077 | 179.320 | 179.493 | 0.172 |
| 3 | 82.813 | 82.772 | -0.041 | 129.813 | 129.820 | 0.007 | 179.320 | 179.325 | 0.004 |
| 4 | 82.813 | 82.762 | -0.050 | 129.813 | 129.741 | -0.072 | 179.320 | 179.231 | -0.089 |
| 5 | 82.813 | 82.782 | -0.030 | 129.813 | 129.767 | -0.046 | 179.320 | 179.284 | -0.036 |
| 6 | 82.813 | 82.799 | -0.013 | 129.813 | 129.760 | -0.053 | 179.320 | 179.247 | -0.073 |
| 7 | 82.813 | 82.797 | -0.016 | 129.813 | 129.861 | 0.048 | 179.320 | 179.390 | 0.070 |
| 8 | 82.813 | 82.798 | -0.015 | 129.813 | 129.898 | 0.085 | 179.320 | 179.420 | 0.100 |
| 9 | 82.813 | 82.795 | -0.018 | 129.813 | 129.878 | 0.065 | 179.320 | 179.405 | 0.085 |
| 10 | 82.813 | 82.790 | -0.023 | 129.813 | 130.022 | 0.209 | 179.320 | 179.569 | 0.249 |
| 11 | 82.813 | 82.780 | -0.033 | 129.813 | 130.003 | 0.190 | 179.320 | 179.570 | 0.250 |
| 12 | 82.813 | 82.803 | -0.010 | 129.813 | 130.020 | 0.207 | 179.320 | 179.619 | 0.299 |
| 13 | 82.813 | 82.801 | -0.012 | 129.813 | 130.119 | 0.306 | 179.320 | 179.727 | 0.406 |
| 14 | 82.813 | 82.831 | 0.018 | 129.813 | 130.045 | 0.232 | 179.320 | 179.629 | 0.309 |
| 15 | 82.813 | 82.723 | -0.090 | 129.813 | 130.135 | 0.322 | 179.320 | 179.655 | 0.335 |
| 16 | 81.145 | 80.686 | -0.460 | 129.919 | 129.634 | -0.285 | 180.176 | 180.063 | -0.113 |
| 17 | 81.145 | 80.893 | -0.252 | 129.919 | 129.958 | 0.038 | 180.176 | 180.373 | 0.197 |
| 18 | 81.145 | 80.933 | -0.212 | 129.919 | 129.846 | -0.074 | 180.176 | 180.182 | 0.006 |
| 19 | 81.145 | 80.932 | -0.213 | 129.919 | 129.833 | -0.087 | 180.176 | 180.227 | 0.051 |
| 20 | 81.145 | 80.911 | -0.234 | 129.919 | 129.840 | -0.080 | 180.176 | 180.225 | 0.050 |
| 21 | 81.145 | 80.918 | -0.227 | 129.919 | 129.849 | -0.070 | 180.176 | 180.226 | 0.050 |
| 22 | 81.145 | 80.901 | -0.245 | 129.919 | 129.934 | 0.015 | 180.176 | 180.330 | 0.154 |

Notes: Tv is taken from the Sensit&NL..sheet
Delta is Accuracy from Sensit&NL..sheet
Ts is calculated as (Tv+Delta)

**Table 10-17b Radiometric Temperature Compared to Physical Temperature, CP -3.1°C, RC2 (continued)**

| | 230K | | | 280K | | | 330K | | |
|---|---|---|---|---|---|---|---|---|---|
| Ch | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) |
| 1 | 229.894 | 229.924 | 0.029 | 280.064 | 279.930 | -0.135 | 329.586 | 329.180 | -0.406 |
| 2 | 229.894 | 229.964 | 0.069 | 280.064 | 279.926 | -0.139 | 329.586 | 329.089 | -0.497 |
| 3 | 229.894 | 229.878 | -0.017 | 280.064 | 280.021 | -0.043 | 329.586 | 329.424 | -0.162 |
| 4 | 229.894 | 229.801 | -0.094 | 280.064 | 280.032 | -0.032 | 329.586 | 329.621 | 0.035 |
| 5 | 229.894 | 229.836 | -0.059 | 280.064 | 280.011 | -0.053 | 329.586 | 329.570 | -0.016 |
| 6 | 229.894 | 229.808 | -0.087 | 280.064 | 280.040 | -0.024 | 329.586 | 329.631 | 0.045 |
| 7 | 229.894 | 229.884 | -0.010 | 280.064 | 279.981 | -0.083 | 329.586 | 329.394 | -0.191 |
| 8 | 229.894 | 229.915 | 0.020 | 280.064 | 279.979 | -0.085 | 329.586 | 329.347 | -0.239 |
| 9 | 229.894 | 229.890 | -0.005 | 280.064 | 279.990 | -0.075 | 329.586 | 329.326 | -0.260 |
| 10 | 229.894 | 230.001 | 0.106 | 280.064 | 279.930 | -0.134 | 329.586 | 329.099 | -0.487 |
| 11 | 229.894 | 229.987 | 0.093 | 280.064 | 279.957 | -0.107 | 329.586 | 329.141 | -0.445 |
| 12 | 229.894 | 230.020 | 0.125 | 280.064 | 279.913 | -0.151 | 329.586 | 329.026 | -0.559 |
| 13 | 229.894 | 230.104 | 0.209 | 280.064 | 279.898 | -0.166 | 329.586 | 328.925 | -0.661 |
| 14 | 229.894 | 230.087 | 0.193 | 280.064 | 279.876 | -0.189 | 329.586 | 329.005 | -0.581 |
| 15 | 229.894 | 230.047 | 0.153 | 280.064 | 279.909 | -0.155 | 329.586 | 328.994 | -0.592 |
| 16 | 229.736 | 229.707 | -0.029 | 279.693 | 279.671 | -0.023 | 329.638 | 329.542 | -0.096 |
| 17 | 229.736 | 229.876 | 0.140 | 279.693 | 279.595 | -0.098 | 329.638 | 329.178 | -0.460 |
| 18 | 229.736 | 229.738 | 0.002 | 279.693 | 279.606 | -0.087 | 329.638 | 329.427 | -0.211 |
| 19 | 229.736 | 229.751 | 0.015 | 279.693 | 279.642 | -0.051 | 329.638 | 329.351 | -0.287 |
| 20 | 229.736 | 229.777 | 0.041 | 279.693 | 279.662 | -0.031 | 329.638 | 329.359 | -0.279 |
| 21 | 229.736 | 229.750 | 0.014 | 279.693 | 279.661 | -0.033 | 329.638 | 329.324 | -0.314 |
| 22 | 229.736 | 229.803 | 0.067 | 279.693 | 279.633 | -0.061 | 329.638 | 329.188 | -0.450 |

Notes: Tv is taken from the Sensit&NL..sheet
Delta is Accuracy from Sensit&NL..sheet
Ts is calculated as (Tv+Delta)

**Table 10-18a Radiometric Temperature Compared to Physical Temperature, CP -3.1°C, RC5**

| | 84K | | | 130K | | | 180K | | |
|---|---|---|---|---|---|---|---|---|---|
| Ch | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) |
| 1 | 82.763 | 82.451 | -0.312 | 129.824 | 129.785 | -0.039 | 179.263 | 179.356 | 0.093 |
| 2 | 82.763 | 82.569 | -0.194 | 129.824 | 129.892 | 0.068 | 179.263 | 179.451 | 0.188 |
| 3 | 82.763 | 82.704 | -0.059 | 129.824 | 129.811 | -0.013 | 179.263 | 179.296 | 0.033 |
| 4 | 82.763 | 82.714 | -0.049 | 129.824 | 129.743 | -0.081 | 179.263 | 179.195 | -0.069 |
| 5 | 82.763 | 82.730 | -0.033 | 129.824 | 129.779 | -0.045 | 179.263 | 179.235 | -0.029 |
| 6 | 82.763 | 82.731 | -0.032 | 129.824 | 129.767 | -0.057 | 179.263 | 179.190 | -0.073 |
| 7 | 82.763 | 82.735 | -0.028 | 129.824 | 129.876 | 0.052 | 179.263 | 179.332 | 0.069 |
| 8 | 82.763 | 82.732 | -0.031 | 129.824 | 129.899 | 0.075 | 179.263 | 179.363 | 0.100 |
| 9 | 82.763 | 82.732 | -0.031 | 129.824 | 129.901 | 0.077 | 179.263 | 179.355 | 0.091 |
| 10 | 82.763 | 82.738 | -0.025 | 129.824 | 130.025 | 0.201 | 179.263 | 179.530 | 0.267 |
| 11 | 82.763 | 82.730 | -0.033 | 129.824 | 130.007 | 0.183 | 179.263 | 179.509 | 0.246 |
| 12 | 82.763 | 82.733 | -0.030 | 129.824 | 130.042 | 0.218 | 179.263 | 179.571 | 0.307 |
| 13 | 82.763 | 82.759 | -0.004 | 129.824 | 130.131 | 0.307 | 179.263 | 179.674 | 0.410 |
| 14 | 82.763 | 82.752 | -0.011 | 129.824 | 130.056 | 0.232 | 179.263 | 179.540 | 0.276 |
| 15 | 82.763 | 82.777 | 0.014 | 129.824 | 130.059 | 0.235 | 179.263 | 179.550 | 0.287 |
| 16 | 81.145 | 80.682 | -0.463 | 129.970 | 129.686 | -0.285 | 180.155 | 180.063 | -0.092 |
| 17 | 81.145 | 80.917 | -0.228 | 129.970 | 130.011 | 0.041 | 180.155 | 180.343 | 0.189 |
| 18 | 81.145 | 80.920 | -0.225 | 129.970 | 129.885 | -0.085 | 180.155 | 180.186 | 0.031 |
| 19 | 81.145 | 80.918 | -0.227 | 129.970 | 129.896 | -0.074 | 180.155 | 180.194 | 0.040 |
| 20 | 81.145 | 80.921 | -0.224 | 129.970 | 129.901 | -0.069 | 180.155 | 180.203 | 0.048 |
| 21 | 81.145 | 80.928 | -0.217 | 129.970 | 129.888 | -0.082 | 180.155 | 180.247 | 0.092 |
| 22 | 81.145 | 80.949 | -0.196 | 129.970 | 129.951 | -0.019 | 180.155 | 180.341 | 0.186 |

Notes: Tv is taken from the Sensit&NL..sheet
Delta is Accuracy from Sensit&NL..sheet
Ts is calculated as (Tv+Delta)

**Table 10-18b Radiometric Temperature Compared to Physical Temperature, CP -3.1°C, RC5 (continued)**

| | 230K | | | 280K | | | 330K | | |
|---|---|---|---|---|---|---|---|---|---|
| Ch | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) |
| 1 | 230.175 | 230.202 | 0.027 | 279.875 | 279.737 | -0.138 | 329.333 | 328.932 | -0.400 |
| 2 | 230.175 | 230.250 | 0.075 | 279.875 | 279.747 | -0.128 | 329.333 | 328.857 | -0.475 |
| 3 | 230.175 | 230.142 | -0.033 | 279.875 | 279.813 | -0.062 | 329.333 | 329.179 | -0.154 |
| 4 | 230.175 | 230.089 | -0.086 | 279.875 | 279.841 | -0.034 | 329.333 | 329.361 | 0.028 |
| 5 | 230.175 | 230.113 | -0.062 | 279.875 | 279.844 | -0.031 | 329.333 | 329.290 | -0.043 |
| 6 | 230.175 | 230.074 | -0.101 | 279.875 | 279.849 | -0.026 | 329.333 | 329.358 | 0.025 |
| 7 | 230.175 | 230.160 | -0.015 | 279.875 | 279.807 | -0.068 | 329.333 | 329.130 | -0.202 |
| 8 | 230.175 | 230.201 | 0.026 | 279.875 | 279.808 | -0.067 | 329.333 | 329.078 | -0.255 |
| 9 | 230.175 | 230.171 | -0.004 | 279.875 | 279.808 | -0.067 | 329.333 | 329.112 | -0.221 |
| 10 | 230.175 | 230.281 | 0.106 | 279.875 | 279.748 | -0.127 | 329.333 | 328.834 | -0.499 |
| 11 | 230.175 | 230.296 | 0.121 | 279.875 | 279.751 | -0.124 | 329.333 | 328.803 | -0.529 |
| 12 | 230.175 | 230.344 | 0.168 | 279.875 | 279.759 | -0.116 | 329.333 | 328.707 | -0.626 |
| 13 | 230.175 | 230.382 | 0.207 | 279.875 | 279.743 | -0.132 | 329.333 | 328.591 | -0.741 |
| 14 | 230.175 | 230.365 | 0.190 | 279.875 | 279.689 | -0.186 | 329.333 | 328.774 | -0.559 |
| 15 | 230.175 | 230.393 | 0.218 | 279.875 | 279.802 | -0.073 | 329.333 | 328.666 | -0.667 |
| 16 | 229.956 | 229.950 | -0.006 | 279.632 | 279.654 | 0.022 | 329.317 | 329.234 | -0.083 |
| 17 | 229.956 | 230.092 | 0.136 | 279.632 | 279.561 | -0.071 | 329.317 | 328.865 | -0.452 |
| 18 | 229.956 | 229.982 | 0.027 | 279.632 | 279.600 | -0.032 | 329.317 | 329.082 | -0.236 |
| 19 | 229.956 | 229.982 | 0.027 | 279.632 | 279.601 | -0.031 | 329.317 | 329.049 | -0.268 |
| 20 | 229.956 | 230.011 | 0.055 | 279.632 | 279.593 | -0.039 | 329.317 | 329.079 | -0.239 |
| 21 | 229.956 | 230.012 | 0.057 | 279.632 | 279.569 | -0.063 | 329.317 | 329.040 | -0.278 |
| 22 | 229.956 | 230.115 | 0.160 | 279.632 | 279.583 | -0.049 | 329.317 | 328.879 | -0.438 |

Notes: Tv is taken from the Sensit&NL..sheet
Delta is Accuracy from Sensit&NL..sheet
Ts is calculated as (Tv+Delta)

**Table 10-19a Radiometric Temperature Compared to Physical Temperature, CP -3.1°C, RC6**

| | 84K | | | 130K | | | 180K | | |
|---|---|---|---|---|---|---|---|---|---|
| Ch | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) |
| 1 | 82.756 | 82.454 | -0.302 | 129.664 | 129.620 | -0.044 | 179.450 | 179.536 | 0.086 |
| 2 | 82.756 | 82.555 | -0.201 | 129.664 | 129.735 | 0.071 | 179.450 | 179.632 | 0.182 |
| 3 | 82.756 | 82.693 | -0.063 | 129.664 | 129.661 | -0.003 | 179.450 | 179.476 | 0.026 |
| 4 | 82.756 | 82.709 | -0.047 | 129.664 | 129.588 | -0.075 | 179.450 | 179.363 | -0.087 |
| 5 | 82.756 | 82.723 | -0.033 | 129.664 | 129.630 | -0.034 | 179.450 | 179.416 | -0.034 |
| 6 | 82.756 | 82.738 | -0.018 | 129.664 | 129.607 | -0.057 | 179.450 | 179.376 | -0.074 |
| 7 | 82.756 | 82.726 | -0.030 | 129.664 | 129.715 | 0.051 | 179.450 | 179.520 | 0.070 |
| 8 | 82.756 | 82.727 | -0.029 | 129.664 | 129.749 | 0.085 | 179.450 | 179.547 | 0.097 |
| 9 | 82.756 | 82.729 | -0.027 | 129.664 | 129.737 | 0.073 | 179.450 | 179.541 | 0.091 |
| 10 | 82.756 | 82.722 | -0.034 | 129.664 | 129.882 | 0.218 | 179.450 | 179.697 | 0.247 |
| 11 | 82.756 | 82.703 | -0.053 | 129.664 | 129.857 | 0.193 | 179.450 | 179.700 | 0.250 |
| 12 | 82.756 | 82.728 | -0.028 | 129.664 | 129.889 | 0.225 | 179.450 | 179.720 | 0.270 |
| 13 | 82.756 | 82.735 | -0.021 | 129.664 | 129.968 | 0.304 | 179.450 | 179.806 | 0.356 |
| 14 | 82.756 | 82.749 | -0.007 | 129.664 | 129.923 | 0.259 | 179.450 | 179.790 | 0.340 |
| 15 | 82.756 | 82.732 | -0.024 | 129.664 | 129.905 | 0.241 | 179.450 | 179.754 | 0.304 |
| 16 | 81.144 | 80.670 | -0.474 | 129.897 | 129.608 | -0.289 | 180.081 | 179.981 | -0.100 |
| 17 | 81.144 | 80.926 | -0.218 | 129.897 | 129.926 | 0.029 | 180.081 | 180.303 | 0.222 |
| 18 | 81.144 | 80.934 | -0.210 | 129.897 | 129.779 | -0.118 | 180.081 | 180.085 | 0.005 |
| 19 | 81.144 | 80.921 | -0.223 | 129.897 | 129.803 | -0.093 | 180.081 | 180.120 | 0.039 |
| 20 | 81.144 | 80.926 | -0.218 | 129.897 | 129.846 | -0.051 | 180.081 | 180.166 | 0.086 |
| 21 | 81.144 | 80.931 | -0.213 | 129.897 | 129.838 | -0.059 | 180.081 | 180.177 | 0.096 |
| 22 | 81.144 | 80.911 | -0.233 | 129.897 | 129.900 | 0.004 | 180.081 | 180.273 | 0.193 |

Notes: Tv is taken from the Sensit&NL..sheet
Delta is Accuracy from Sensit&NL..sheet
Ts is calculated as (Tv+Delta)

**Table 10-19b Radiometric Temperature Compared to Physical Temperature, CP -3.1°C, RC6 (continued)**

| | 230K | | | 280K | | | 330K | | |
|---|---|---|---|---|---|---|---|---|---|
| Ch | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) |
| 1 | 230.460 | 230.500 | 0.039 | 279.630 | 279.521 | -0.109 | 329.286 | 328.873 | -0.413 |
| 2 | 230.460 | 230.526 | 0.066 | 279.630 | 279.520 | -0.110 | 329.286 | 328.812 | -0.474 |
| 3 | 230.460 | 230.435 | -0.025 | 279.630 | 279.600 | -0.030 | 329.286 | 329.159 | -0.128 |
| 4 | 230.460 | 230.361 | -0.100 | 279.630 | 279.607 | -0.023 | 329.286 | 329.321 | 0.035 |
| 5 | 230.460 | 230.388 | -0.072 | 279.630 | 279.616 | -0.014 | 329.286 | 329.246 | -0.041 |
| 6 | 230.460 | 230.355 | -0.106 | 279.630 | 279.615 | -0.015 | 329.286 | 329.329 | 0.043 |
| 7 | 230.460 | 230.434 | -0.026 | 279.630 | 279.581 | -0.049 | 329.286 | 329.078 | -0.209 |
| 8 | 230.460 | 230.477 | 0.017 | 279.630 | 279.578 | -0.052 | 329.286 | 329.048 | -0.238 |
| 9 | 230.460 | 230.452 | -0.008 | 279.630 | 279.590 | -0.040 | 329.286 | 329.050 | -0.237 |
| 10 | 230.460 | 230.584 | 0.124 | 279.630 | 279.524 | -0.106 | 329.286 | 328.808 | -0.478 |
| 11 | 230.460 | 230.566 | 0.106 | 279.630 | 279.530 | -0.100 | 329.286 | 328.763 | -0.524 |
| 12 | 230.460 | 230.593 | 0.133 | 279.630 | 279.551 | -0.079 | 329.286 | 328.693 | -0.593 |
| 13 | 230.460 | 230.622 | 0.162 | 279.630 | 279.519 | -0.111 | 329.286 | 328.650 | -0.637 |
| 14 | 230.460 | 230.666 | 0.205 | 279.630 | 279.481 | -0.149 | 329.286 | 328.695 | -0.592 |
| 15 | 230.460 | 230.542 | 0.082 | 279.630 | 279.541 | -0.089 | 329.286 | 328.581 | -0.705 |
| 16 | 230.203 | 230.176 | -0.026 | 279.529 | 279.547 | 0.018 | 329.257 | 329.171 | -0.086 |
| 17 | 230.203 | 230.355 | 0.152 | 279.529 | 279.480 | -0.050 | 329.257 | 328.814 | -0.443 |
| 18 | 230.203 | 230.255 | 0.052 | 279.529 | 279.500 | -0.029 | 329.257 | 329.059 | -0.198 |
| 19 | 230.203 | 230.292 | 0.089 | 279.529 | 279.477 | -0.052 | 329.257 | 328.995 | -0.262 |
| 20 | 230.203 | 230.238 | 0.036 | 279.529 | 279.498 | -0.032 | 329.257 | 329.019 | -0.238 |
| 21 | 230.203 | 230.251 | 0.048 | 279.529 | 279.462 | -0.067 | 329.257 | 328.999 | -0.258 |
| 22 | 230.203 | 230.323 | 0.120 | 279.529 | 279.410 | -0.119 | 329.257 | 328.823 | -0.434 |

Notes: Tv is taken from the Sensit&NL..sheet
Delta is Accuracy from Sensit&NL..sheet
Ts is calculated as (Tv+Delta)

**Table 10-20a Radiometric Temperature Compared to Physical Temperature, CP +7.7°C, RC1**

| | 84K | | | 130K | | | 180K | | |
|---|---|---|---|---|---|---|---|---|---|
| Ch | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) |
| 1 | 83.866 | 83.589 | -0.277 | 129.442 | 129.403 | -0.039 | 179.811 | 179.899 | 0.089 |
| 2 | 83.866 | 83.706 | -0.160 | 129.442 | 129.520 | 0.078 | 179.811 | 180.000 | 0.189 |
| 3 | 83.866 | 83.843 | -0.023 | 129.442 | 129.465 | 0.023 | 179.811 | 179.830 | 0.020 |
| 4 | 83.866 | 83.845 | -0.021 | 129.442 | 129.378 | -0.064 | 179.811 | 179.710 | -0.101 |
| 5 | 83.866 | 83.855 | -0.010 | 129.442 | 129.424 | -0.018 | 179.811 | 179.784 | -0.027 |
| 6 | 83.866 | 83.877 | 0.011 | 129.442 | 129.390 | -0.051 | 179.811 | 179.730 | -0.081 |
| 7 | 83.866 | 83.874 | 0.009 | 129.442 | 129.506 | 0.064 | 179.811 | 179.886 | 0.076 |
| 8 | 83.866 | 83.876 | 0.010 | 129.442 | 129.525 | 0.084 | 179.811 | 179.912 | 0.101 |
| 9 | 83.866 | 83.881 | 0.015 | 129.442 | 129.533 | 0.092 | 179.811 | 179.920 | 0.109 |
| 10 | 83.866 | 83.880 | 0.015 | 129.442 | 129.665 | 0.223 | 179.811 | 180.087 | 0.276 |
| 11 | 83.866 | 83.889 | 0.024 | 129.442 | 129.663 | 0.221 | 179.811 | 180.101 | 0.290 |
| 12 | 83.866 | 83.877 | 0.011 | 129.442 | 129.696 | 0.254 | 179.811 | 180.133 | 0.322 |
| 13 | 83.866 | 83.914 | 0.048 | 129.442 | 129.757 | 0.315 | 179.811 | 180.185 | 0.375 |
| 14 | 83.866 | 83.938 | 0.072 | 129.442 | 129.685 | 0.243 | 179.811 | 180.149 | 0.338 |
| 15 | 83.866 | 83.895 | 0.029 | 129.442 | 129.756 | 0.315 | 179.811 | 180.174 | 0.363 |
| 16 | 83.947 | 83.550 | -0.397 | 129.917 | 129.638 | -0.279 | 179.435 | 179.307 | -0.128 |
| 17 | 83.947 | 83.814 | -0.133 | 129.917 | 129.990 | 0.073 | 179.435 | 179.642 | 0.207 |
| 18 | 83.947 | 83.824 | -0.123 | 129.917 | 129.898 | -0.018 | 179.435 | 179.520 | 0.085 |
| 19 | 83.947 | 83.834 | -0.113 | 129.917 | 129.911 | -0.006 | 179.435 | 179.539 | 0.104 |
| 20 | 83.947 | 83.834 | -0.113 | 129.917 | 129.909 | -0.007 | 179.435 | 179.537 | 0.102 |
| 21 | 83.947 | 83.852 | -0.095 | 129.917 | 129.941 | 0.025 | 179.435 | 179.555 | 0.120 |
| 22 | 83.947 | 83.841 | -0.106 | 129.917 | 129.998 | 0.082 | 179.435 | 179.611 | 0.176 |

Notes: Tv is taken from the Sensit&NL..sheet
Delta is Accuracy from Sensit&NL..sheet
Ts is calculated as (Tv+Delta)

**Table 10-20b Radiometric Temperature Compared to Physical Temperature, CP +7.7°C, RC1 (continued)**

| | 230K | | | 280K | | | 330K | | |
|---|---|---|---|---|---|---|---|---|---|
| Ch | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) |
| 1 | 229.983 | 230.035 | 0.052 | 279.806 | 279.731 | -0.075 | 329.962 | 329.557 | -0.405 |
| 2 | 229.983 | 230.077 | 0.094 | 279.806 | 279.727 | -0.079 | 329.962 | 329.489 | -0.473 |
| 3 | 229.983 | 229.966 | -0.017 | 279.806 | 279.759 | -0.047 | 329.962 | 329.750 | -0.212 |
| 4 | 229.983 | 229.874 | -0.109 | 279.806 | 279.754 | -0.052 | 329.962 | 329.922 | -0.039 |
| 5 | 229.983 | 229.924 | -0.059 | 279.806 | 279.749 | -0.057 | 329.962 | 329.861 | -0.101 |
| 6 | 229.983 | 229.893 | -0.090 | 279.806 | 279.748 | -0.058 | 329.962 | 329.919 | -0.042 |
| 7 | 229.983 | 229.998 | 0.015 | 279.806 | 279.754 | -0.052 | 329.962 | 329.720 | -0.242 |
| 8 | 229.983 | 230.011 | 0.028 | 279.806 | 279.734 | -0.072 | 329.962 | 329.668 | -0.293 |
| 9 | 229.983 | 230.004 | 0.021 | 279.806 | 279.747 | -0.059 | 329.962 | 329.699 | -0.263 |
| 10 | 229.983 | 230.169 | 0.186 | 279.806 | 279.724 | -0.082 | 329.962 | 329.466 | -0.496 |
| 11 | 229.983 | 230.160 | 0.177 | 279.806 | 279.709 | -0.097 | 329.962 | 329.445 | -0.517 |
| 12 | 229.983 | 230.164 | 0.181 | 279.806 | 279.706 | -0.100 | 329.962 | 329.422 | -0.540 |
| 13 | 229.983 | 230.225 | 0.242 | 279.806 | 279.715 | -0.091 | 329.962 | 329.370 | -0.592 |
| 14 | 229.983 | 230.204 | 0.221 | 279.806 | 279.760 | -0.046 | 329.962 | 329.335 | -0.627 |
| 15 | 229.983 | 230.217 | 0.234 | 279.806 | 279.798 | -0.008 | 329.962 | 329.334 | -0.627 |
| 16 | 229.641 | 229.586 | -0.055 | 279.894 | 279.888 | -0.006 | 329.943 | 329.785 | -0.158 |
| 17 | 229.641 | 229.785 | 0.144 | 279.894 | 279.850 | -0.044 | 329.943 | 329.526 | -0.417 |
| 18 | 229.641 | 229.695 | 0.054 | 279.894 | 279.852 | -0.041 | 329.943 | 329.678 | -0.266 |
| 19 | 229.641 | 229.726 | 0.084 | 279.894 | 279.870 | -0.024 | 329.943 | 329.671 | -0.272 |
| 20 | 229.641 | 229.696 | 0.054 | 279.894 | 279.867 | -0.026 | 329.943 | 329.632 | -0.311 |
| 21 | 229.641 | 229.703 | 0.061 | 279.894 | 279.841 | -0.053 | 329.943 | 329.624 | -0.319 |
| 22 | 229.641 | 229.778 | 0.136 | 279.894 | 279.836 | -0.057 | 329.943 | 329.497 | -0.446 |

Notes: Tv is taken from the Sensit&NL..sheet
Delta is Accuracy from Sensit&NL..sheet
Ts is calculated as (Tv+Delta)

**Table 10-21a Radiometric Temperature Compared to Physical Temperature, CP +7.7°C, RC2**

| | 84K | | | 130K | | | 180K | | |
|---|---|---|---|---|---|---|---|---|---|
| Ch | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) |
| 1 | 83.869 | 83.590 | -0.279 | 129.443 | 129.405 | -0.037 | 179.793 | 179.886 | 0.092 |
| 2 | 83.869 | 83.707 | -0.162 | 129.443 | 129.520 | 0.077 | 179.793 | 179.981 | 0.187 |
| 3 | 83.869 | 83.861 | -0.008 | 129.443 | 129.466 | 0.023 | 179.793 | 179.836 | 0.043 |
| 4 | 83.869 | 83.854 | -0.015 | 129.443 | 129.386 | -0.057 | 179.793 | 179.691 | -0.102 |
| 5 | 83.869 | 83.864 | -0.006 | 129.443 | 129.426 | -0.017 | 179.793 | 179.756 | -0.038 |
| 6 | 83.869 | 83.874 | 0.005 | 129.443 | 129.402 | -0.041 | 179.793 | 179.705 | -0.088 |
| 7 | 83.869 | 83.873 | 0.004 | 129.443 | 129.507 | 0.064 | 179.793 | 179.861 | 0.068 |
| 8 | 83.869 | 83.883 | 0.014 | 129.443 | 129.539 | 0.097 | 179.793 | 179.895 | 0.102 |
| 9 | 83.869 | 83.887 | 0.018 | 129.443 | 129.533 | 0.091 | 179.793 | 179.882 | 0.088 |
| 10 | 83.869 | 83.871 | 0.002 | 129.443 | 129.660 | 0.217 | 179.793 | 180.083 | 0.290 |
| 11 | 83.869 | 83.877 | 0.008 | 129.443 | 129.665 | 0.222 | 179.793 | 180.062 | 0.269 |
| 12 | 83.869 | 83.889 | 0.020 | 129.443 | 129.691 | 0.248 | 179.793 | 180.107 | 0.314 |
| 13 | 83.869 | 83.915 | 0.046 | 129.443 | 129.761 | 0.318 | 179.793 | 180.226 | 0.432 |
| 14 | 83.869 | 83.918 | 0.049 | 129.443 | 129.740 | 0.298 | 179.793 | 180.076 | 0.283 |
| 15 | 83.869 | 83.917 | 0.048 | 129.443 | 129.821 | 0.378 | 179.793 | 180.165 | 0.372 |
| 16 | 83.954 | 83.549 | -0.405 | 130.213 | 129.924 | -0.289 | 179.447 | 179.328 | -0.120 |
| 17 | 83.954 | 83.796 | -0.158 | 130.213 | 130.239 | 0.026 | 179.447 | 179.647 | 0.200 |
| 18 | 83.954 | 83.845 | -0.109 | 130.213 | 130.181 | -0.032 | 179.447 | 179.508 | 0.060 |
| 19 | 83.954 | 83.870 | -0.084 | 130.213 | 130.183 | -0.030 | 179.447 | 179.523 | 0.076 |
| 20 | 83.954 | 83.836 | -0.118 | 130.213 | 130.194 | -0.019 | 179.447 | 179.546 | 0.098 |
| 21 | 83.954 | 83.840 | -0.114 | 130.213 | 130.204 | -0.009 | 179.447 | 179.556 | 0.109 |
| 22 | 83.954 | 83.871 | -0.083 | 130.213 | 130.262 | 0.049 | 179.447 | 179.655 | 0.208 |

Notes: Tv is taken from the Sensit&NL..sheet
Delta is Accuracy from Sensit&NL..sheet
Ts is calculated as (Tv+Delta)

**Table 10-21b Radiometric Temperature Compared to Physical Temperature, CP +7.7°C, RC2 (continued)**

| | 230K | | | 280K | | | 330K | | |
|---|---|---|---|---|---|---|---|---|---|
| Ch | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) |
| 1 | 230.041 | 230.101 | 0.060 | 279.804 | 279.720 | -0.084 | 329.907 | 329.506 | -0.401 |
| 2 | 230.041 | 230.150 | 0.108 | 279.804 | 279.712 | -0.091 | 329.907 | 329.436 | -0.471 |
| 3 | 230.041 | 230.029 | -0.012 | 279.804 | 279.749 | -0.055 | 329.907 | 329.714 | -0.194 |
| 4 | 230.041 | 229.927 | -0.114 | 279.804 | 279.751 | -0.053 | 329.907 | 329.887 | -0.020 |
| 5 | 230.041 | 229.984 | -0.057 | 279.804 | 279.750 | -0.054 | 329.907 | 329.836 | -0.071 |
| 6 | 230.041 | 229.940 | -0.101 | 279.804 | 279.736 | -0.068 | 329.907 | 329.895 | -0.013 |
| 7 | 230.041 | 230.053 | 0.012 | 279.804 | 279.763 | -0.041 | 329.907 | 329.697 | -0.210 |
| 8 | 230.041 | 230.082 | 0.041 | 279.804 | 279.746 | -0.058 | 329.907 | 329.659 | -0.248 |
| 9 | 230.041 | 230.070 | 0.029 | 279.804 | 279.747 | -0.057 | 329.907 | 329.646 | -0.262 |
| 10 | 230.041 | 230.216 | 0.175 | 279.804 | 279.721 | -0.082 | 329.907 | 329.425 | -0.483 |
| 11 | 230.041 | 230.196 | 0.155 | 279.804 | 279.752 | -0.052 | 329.907 | 329.408 | -0.499 |
| 12 | 230.041 | 230.228 | 0.187 | 279.804 | 279.721 | -0.082 | 329.907 | 329.393 | -0.515 |
| 13 | 230.041 | 230.271 | 0.229 | 279.804 | 279.735 | -0.069 | 329.907 | 329.203 | -0.704 |
| 14 | 230.041 | 230.261 | 0.220 | 279.804 | 279.761 | -0.043 | 329.907 | 329.290 | -0.617 |
| 15 | 230.041 | 230.229 | 0.188 | 279.804 | 279.790 | -0.014 | 329.907 | 329.257 | -0.650 |
| 16 | 229.667 | 229.617 | -0.050 | 279.871 | 279.828 | -0.043 | 329.637 | 329.476 | -0.161 |
| 17 | 229.667 | 229.798 | 0.131 | 279.871 | 279.834 | -0.037 | 329.637 | 329.208 | -0.429 |
| 18 | 229.667 | 229.715 | 0.048 | 279.871 | 279.803 | -0.068 | 329.637 | 329.393 | -0.244 |
| 19 | 229.667 | 229.760 | 0.093 | 279.871 | 279.787 | -0.084 | 329.637 | 329.373 | -0.264 |
| 20 | 229.667 | 229.766 | 0.099 | 279.871 | 279.841 | -0.030 | 329.637 | 329.353 | -0.284 |
| 21 | 229.667 | 229.757 | 0.090 | 279.871 | 279.856 | -0.015 | 329.637 | 329.324 | -0.314 |
| 22 | 229.667 | 229.807 | 0.140 | 279.871 | 279.861 | -0.010 | 329.637 | 329.203 | -0.435 |

Notes: Tv is taken from the Sensit&NL..sheet
Delta is Accuracy from Sensit&NL..sheet
Ts is calculated as (Tv+Delta)

**Table 10-22a Radiometric Temperature Compared to Physical Temperature, CP +7.7°C, RC5**

| | 84K | | | 130K | | | 180K | | |
|---|---|---|---|---|---|---|---|---|---|
| Ch | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) |
| 1 | 83.867 | 83.583 | -0.285 | 129.569 | 129.542 | -0.027 | 179.835 | 179.931 | 0.096 |
| 2 | 83.867 | 83.695 | -0.172 | 129.569 | 129.656 | 0.086 | 179.835 | 180.035 | 0.200 |
| 3 | 83.867 | 83.852 | -0.015 | 129.569 | 129.602 | 0.033 | 179.835 | 179.873 | 0.038 |
| 4 | 83.867 | 83.852 | -0.015 | 129.569 | 129.510 | -0.059 | 179.835 | 179.752 | -0.083 |
| 5 | 83.867 | 83.869 | 0.001 | 129.569 | 129.553 | -0.016 | 179.835 | 179.804 | -0.031 |
| 6 | 83.867 | 83.872 | 0.005 | 129.569 | 129.530 | -0.039 | 179.835 | 179.775 | -0.060 |
| 7 | 83.867 | 83.867 | 0.000 | 129.569 | 129.642 | 0.073 | 179.835 | 179.908 | 0.073 |
| 8 | 83.867 | 83.871 | 0.003 | 129.569 | 129.650 | 0.081 | 179.835 | 179.951 | 0.116 |
| 9 | 83.867 | 83.884 | 0.017 | 129.569 | 129.675 | 0.106 | 179.835 | 179.931 | 0.096 |
| 10 | 83.867 | 83.879 | 0.012 | 129.569 | 129.798 | 0.229 | 179.835 | 180.123 | 0.288 |
| 11 | 83.867 | 83.885 | 0.018 | 129.569 | 129.763 | 0.194 | 179.835 | 180.096 | 0.261 |
| 12 | 83.867 | 83.891 | 0.024 | 129.569 | 129.808 | 0.239 | 179.835 | 180.153 | 0.318 |
| 13 | 83.867 | 83.897 | 0.030 | 129.569 | 129.914 | 0.345 | 179.835 | 180.270 | 0.435 |
| 14 | 83.867 | 83.838 | -0.029 | 129.569 | 129.832 | 0.263 | 179.835 | 180.177 | 0.342 |
| 15 | 83.867 | 83.847 | -0.020 | 129.569 | 129.842 | 0.272 | 179.835 | 180.230 | 0.395 |
| 16 | 83.948 | 83.541 | -0.407 | 129.992 | 129.700 | -0.291 | 179.488 | 179.375 | -0.113 |
| 17 | 83.948 | 83.796 | -0.152 | 129.992 | 130.020 | 0.028 | 179.488 | 179.694 | 0.206 |
| 18 | 83.948 | 83.807 | -0.141 | 129.992 | 129.917 | -0.074 | 179.488 | 179.552 | 0.064 |
| 19 | 83.948 | 83.811 | -0.138 | 129.992 | 129.940 | -0.051 | 179.488 | 179.565 | 0.077 |
| 20 | 83.948 | 83.843 | -0.106 | 129.992 | 129.973 | -0.018 | 179.488 | 179.579 | 0.091 |
| 21 | 83.948 | 83.859 | -0.089 | 129.992 | 129.989 | -0.003 | 179.488 | 179.633 | 0.145 |
| 22 | 83.948 | 83.842 | -0.106 | 129.992 | 130.067 | 0.075 | 179.488 | 179.722 | 0.234 |

Notes: Tv is taken from the Sensit&NL..sheet
Delta is Accuracy from Sensit&NL..sheet
Ts is calculated as (Tv+Delta)

**Table 10-22b Radiometric Temperature Compared to Physical Temperature, CP +7.7°C, RC5 (continued)**

| | 230K | | | 280K | | | 330K | | |
|---|---|---|---|---|---|---|---|---|---|
| Ch | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) |
| 1 | 230.141 | 230.193 | 0.052 | 279.791 | 279.691 | -0.100 | 330.112 | 329.716 | -0.396 |
| 2 | 230.141 | 230.255 | 0.114 | 279.791 | 279.708 | -0.083 | 330.112 | 329.683 | -0.429 |
| 3 | 230.141 | 230.130 | -0.011 | 279.791 | 279.747 | -0.044 | 330.112 | 329.914 | -0.198 |
| 4 | 230.141 | 230.045 | -0.096 | 279.791 | 279.732 | -0.059 | 330.112 | 330.088 | -0.024 |
| 5 | 230.141 | 230.075 | -0.066 | 279.791 | 279.747 | -0.044 | 330.112 | 330.019 | -0.092 |
| 6 | 230.141 | 230.039 | -0.102 | 279.791 | 279.737 | -0.054 | 330.112 | 330.098 | -0.014 |
| 7 | 230.141 | 230.151 | 0.010 | 279.791 | 279.722 | -0.069 | 330.112 | 329.900 | -0.212 |
| 8 | 230.141 | 230.179 | 0.038 | 279.791 | 279.719 | -0.072 | 330.112 | 329.873 | -0.239 |
| 9 | 230.141 | 230.161 | 0.020 | 279.791 | 279.732 | -0.059 | 330.112 | 329.867 | -0.244 |
| 10 | 230.141 | 230.305 | 0.164 | 279.791 | 279.701 | -0.090 | 330.112 | 329.641 | -0.470 |
| 11 | 230.141 | 230.294 | 0.153 | 279.791 | 279.754 | -0.037 | 330.112 | 329.633 | -0.478 |
| 12 | 230.141 | 230.352 | 0.211 | 279.791 | 279.699 | -0.092 | 330.112 | 329.575 | -0.537 |
| 13 | 230.141 | 230.443 | 0.302 | 279.791 | 279.717 | -0.074 | 330.112 | 329.459 | -0.652 |
| 14 | 230.141 | 230.374 | 0.233 | 279.791 | 279.758 | -0.033 | 330.112 | 329.563 | -0.549 |
| 15 | 230.141 | 230.411 | 0.270 | 279.791 | 279.674 | -0.117 | 330.112 | 329.521 | -0.591 |
| 16 | 230.153 | 230.117 | -0.036 | 279.818 | 279.809 | -0.009 | 329.737 | 329.639 | -0.098 |
| 17 | 230.153 | 230.295 | 0.142 | 279.818 | 279.811 | -0.007 | 329.737 | 329.340 | -0.397 |
| 18 | 230.153 | 230.225 | 0.071 | 279.818 | 279.819 | 0.001 | 329.737 | 329.509 | -0.228 |
| 19 | 230.153 | 230.234 | 0.080 | 279.818 | 279.828 | 0.010 | 329.737 | 329.536 | -0.201 |
| 20 | 230.153 | 230.231 | 0.078 | 279.818 | 279.799 | -0.018 | 329.737 | 329.483 | -0.255 |
| 21 | 230.153 | 230.222 | 0.069 | 279.818 | 279.791 | -0.027 | 329.737 | 329.508 | -0.229 |
| 22 | 230.153 | 230.291 | 0.138 | 279.818 | 279.773 | -0.045 | 329.737 | 329.357 | -0.380 |

Notes: Tv is taken from the Sensit&NL..sheet
Delta is Accuracy from Sensit&NL..sheet
Ts is calculated as (Tv+Delta)

**Table 10-23a Radiometric Temperature Compared to Physical Temperature, CP +7.7°C, RC6**

| | 84K | | | 130K | | | 180K | | |
|---|---|---|---|---|---|---|---|---|---|
| Ch | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) |
| 1 | 83.872 | 83.594 | -0.278 | 129.576 | 129.533 | -0.043 | 179.856 | 179.944 | 0.088 |
| 2 | 83.872 | 83.697 | -0.176 | 129.576 | 129.657 | 0.081 | 179.856 | 180.043 | 0.187 |
| 3 | 83.872 | 83.849 | -0.024 | 129.576 | 129.600 | 0.024 | 179.856 | 179.881 | 0.025 |
| 4 | 83.872 | 83.857 | -0.015 | 129.576 | 129.520 | -0.056 | 179.856 | 179.762 | -0.094 |
| 5 | 83.872 | 83.873 | 0.000 | 129.576 | 129.564 | -0.012 | 179.856 | 179.828 | -0.028 |
| 6 | 83.872 | 83.882 | 0.010 | 129.576 | 129.543 | -0.033 | 179.856 | 179.786 | -0.070 |
| 7 | 83.872 | 83.883 | 0.011 | 129.576 | 129.647 | 0.071 | 179.856 | 179.920 | 0.063 |
| 8 | 83.872 | 83.882 | 0.010 | 129.576 | 129.661 | 0.085 | 179.856 | 179.967 | 0.111 |
| 9 | 83.872 | 83.897 | 0.025 | 129.576 | 129.673 | 0.097 | 179.856 | 179.944 | 0.088 |
| 10 | 83.872 | 83.893 | 0.020 | 129.576 | 129.817 | 0.241 | 179.856 | 180.130 | 0.274 |
| 11 | 83.872 | 83.890 | 0.018 | 129.576 | 129.769 | 0.193 | 179.856 | 180.124 | 0.268 |
| 12 | 83.872 | 83.864 | -0.009 | 129.576 | 129.812 | 0.236 | 179.856 | 180.158 | 0.302 |
| 13 | 83.872 | 83.909 | 0.036 | 129.576 | 129.908 | 0.332 | 179.856 | 180.245 | 0.389 |
| 14 | 83.872 | 83.921 | 0.048 | 129.576 | 129.879 | 0.303 | 179.856 | 180.200 | 0.343 |
| 15 | 83.872 | 83.891 | 0.018 | 129.576 | 129.821 | 0.245 | 179.856 | 180.104 | 0.248 |
| 16 | 83.956 | 83.553 | -0.404 | 130.036 | 129.755 | -0.281 | 179.486 | 179.388 | -0.098 |
| 17 | 83.956 | 83.806 | -0.150 | 130.036 | 130.079 | 0.044 | 179.486 | 179.707 | 0.222 |
| 18 | 83.956 | 83.835 | -0.121 | 130.036 | 129.982 | -0.054 | 179.486 | 179.556 | 0.070 |
| 19 | 83.956 | 83.829 | -0.127 | 130.036 | 129.987 | -0.049 | 179.486 | 179.537 | 0.052 |
| 20 | 83.956 | 83.845 | -0.111 | 130.036 | 130.015 | -0.021 | 179.486 | 179.583 | 0.097 |
| 21 | 83.956 | 83.878 | -0.079 | 130.036 | 130.032 | -0.003 | 179.486 | 179.601 | 0.116 |
| 22 | 83.956 | 83.876 | -0.080 | 130.036 | 130.103 | 0.068 | 179.486 | 179.694 | 0.209 |

Notes: Tv is taken from the Sensit&NL..sheet
Delta is Accuracy from Sensit&NL..sheet
Ts is calculated as (Tv+Delta)

**Table 10-23b Radiometric Temperature Compared to Physical Temperature, CP +7.7°C, RC6 (continued)**

| | 230K | | | 280K | | | 330K | | |
|---|---|---|---|---|---|---|---|---|---|
| Ch | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) |
| 1 | 230.117 | 230.170 | 0.052 | 279.820 | 279.730 | -0.090 | 329.617 | 329.224 | -0.394 |
| 2 | 230.117 | 230.221 | 0.104 | 279.820 | 279.732 | -0.088 | 329.617 | 329.162 | -0.455 |
| 3 | 230.117 | 230.105 | -0.013 | 279.820 | 279.770 | -0.050 | 329.617 | 329.439 | -0.178 |
| 4 | 230.117 | 230.019 | -0.098 | 279.820 | 279.756 | -0.064 | 329.617 | 329.575 | -0.042 |
| 5 | 230.117 | 230.055 | -0.063 | 279.820 | 279.761 | -0.059 | 329.617 | 329.507 | -0.110 |
| 6 | 230.117 | 230.026 | -0.091 | 279.820 | 279.774 | -0.046 | 329.617 | 329.601 | -0.017 |
| 7 | 230.117 | 230.128 | 0.011 | 279.820 | 279.764 | -0.056 | 329.617 | 329.400 | -0.217 |
| 8 | 230.117 | 230.154 | 0.037 | 279.820 | 279.750 | -0.070 | 329.617 | 329.367 | -0.250 |
| 9 | 230.117 | 230.156 | 0.038 | 279.820 | 279.754 | -0.066 | 329.617 | 329.390 | -0.228 |
| 10 | 230.117 | 230.282 | 0.164 | 279.820 | 279.716 | -0.104 | 329.617 | 329.137 | -0.481 |
| 11 | 230.117 | 230.273 | 0.156 | 279.820 | 279.732 | -0.088 | 329.617 | 329.153 | -0.464 |
| 12 | 230.117 | 230.315 | 0.197 | 279.820 | 279.741 | -0.079 | 329.617 | 329.083 | -0.534 |
| 13 | 230.117 | 230.398 | 0.281 | 279.820 | 279.777 | -0.044 | 329.617 | 329.020 | -0.598 |
| 14 | 230.117 | 230.322 | 0.205 | 279.820 | 279.792 | -0.028 | 329.617 | 329.065 | -0.552 |
| 15 | 230.117 | 230.386 | 0.268 | 279.820 | 279.730 | -0.090 | 329.617 | 329.042 | -0.575 |
| 16 | 230.176 | 230.155 | -0.021 | 279.855 | 279.833 | -0.022 | 329.385 | 329.277 | -0.108 |
| 17 | 230.176 | 230.327 | 0.151 | 279.855 | 279.850 | -0.005 | 329.385 | 328.957 | -0.428 |
| 18 | 230.176 | 230.217 | 0.041 | 279.855 | 279.798 | -0.057 | 329.385 | 329.168 | -0.217 |
| 19 | 230.176 | 230.242 | 0.066 | 279.855 | 279.829 | -0.026 | 329.385 | 329.163 | -0.222 |
| 20 | 230.176 | 230.271 | 0.095 | 279.855 | 279.876 | 0.021 | 329.385 | 329.161 | -0.224 |
| 21 | 230.176 | 230.243 | 0.067 | 279.855 | 279.842 | -0.013 | 329.385 | 329.137 | -0.247 |
| 22 | 230.176 | 230.359 | 0.184 | 279.855 | 279.855 | 0.000 | 329.385 | 329.058 | -0.327 |

Notes: Tv is taken from the Sensit&NL..sheet
Delta is Accuracy from Sensit&NL..sheet
Ts is calculated as (Tv+Delta)

**Table 10-24a Radiometric Temperature Compared to Physical Temperature, CP +18.5°C, RC1**

| | 84K | | | 130K | | | 180K | | |
|---|---|---|---|---|---|---|---|---|---|
| Ch | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) |
| 1 | 82.803 | 82.507 | -0.295 | 129.271 | 129.262 | -0.009 | 179.449 | 179.585 | 0.136 |
| 2 | 82.803 | 82.627 | -0.175 | 129.271 | 129.362 | 0.091 | 179.449 | 179.669 | 0.220 |
| 3 | 82.803 | 82.801 | -0.001 | 129.271 | 129.319 | 0.048 | 179.449 | 179.515 | 0.066 |
| 4 | 82.803 | 82.806 | 0.004 | 129.271 | 129.244 | -0.027 | 179.449 | 179.388 | -0.062 |
| 5 | 82.803 | 82.831 | 0.029 | 129.271 | 129.274 | 0.003 | 179.449 | 179.452 | 0.003 |
| 6 | 82.803 | 82.833 | 0.031 | 129.271 | 129.241 | -0.030 | 179.449 | 179.377 | -0.072 |
| 7 | 82.803 | 82.832 | 0.030 | 129.271 | 129.353 | 0.081 | 179.449 | 179.550 | 0.101 |
| 8 | 82.803 | 82.831 | 0.028 | 129.271 | 129.379 | 0.108 | 179.449 | 179.585 | 0.135 |
| 9 | 82.803 | 82.842 | 0.040 | 129.271 | 129.395 | 0.124 | 179.449 | 179.585 | 0.135 |
| 10 | 82.803 | 82.837 | 0.035 | 129.271 | 129.528 | 0.257 | 179.449 | 179.771 | 0.322 |
| 11 | 82.803 | 82.841 | 0.039 | 129.271 | 129.528 | 0.257 | 179.449 | 179.770 | 0.321 |
| 12 | 82.803 | 82.833 | 0.031 | 129.271 | 129.548 | 0.277 | 179.449 | 179.839 | 0.390 |
| 13 | 82.803 | 82.839 | 0.037 | 129.271 | 129.618 | 0.347 | 179.449 | 179.880 | 0.431 |
| 14 | 82.803 | 82.866 | 0.064 | 129.271 | 129.588 | 0.316 | 179.449 | 179.898 | 0.448 |
| 15 | 82.803 | 82.860 | 0.057 | 129.271 | 129.607 | 0.336 | 179.449 | 179.872 | 0.423 |
| 16 | 79.022 | 78.499 | -0.523 | 129.707 | 129.432 | -0.275 | 179.891 | 179.798 | -0.093 |
| 17 | 79.022 | 78.713 | -0.309 | 129.707 | 129.738 | 0.031 | 179.891 | 180.108 | 0.217 |
| 18 | 79.022 | 78.787 | -0.234 | 129.707 | 129.688 | -0.019 | 179.891 | 179.975 | 0.084 |
| 19 | 79.022 | 78.807 | -0.214 | 129.707 | 129.697 | -0.010 | 179.891 | 179.981 | 0.090 |
| 20 | 79.022 | 78.802 | -0.220 | 129.707 | 129.709 | 0.002 | 179.891 | 179.996 | 0.105 |
| 21 | 79.022 | 78.809 | -0.213 | 129.707 | 129.728 | 0.021 | 179.891 | 180.029 | 0.138 |
| 22 | 79.022 | 78.812 | -0.209 | 129.707 | 129.798 | 0.091 | 179.891 | 180.119 | 0.228 |

Notes: Tv is taken from the Sensit&NL..sheet
Delta is Accuracy from Sensit&NL..sheet
Ts is calculated as (Tv+Delta)

**Table 10-24b Radiometric Temperature Compared to Physical Temperature, CP +18.5°C, RC1 (continued)**

| | 230K | | | 280K | | | 330K | | |
|---|---|---|---|---|---|---|---|---|---|
| Ch | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) |
| 1 | 229.957 | 230.038 | 0.081 | 280.215 | 280.155 | -0.060 | 329.746 | 329.361 | -0.385 |
| 2 | 229.957 | 230.092 | 0.135 | 280.215 | 280.188 | -0.027 | 329.746 | 329.336 | -0.410 |
| 3 | 229.957 | 229.988 | 0.030 | 280.215 | 280.173 | -0.042 | 329.746 | 329.540 | -0.206 |
| 4 | 229.957 | 229.878 | -0.079 | 280.215 | 280.132 | -0.083 | 329.746 | 329.673 | -0.073 |
| 5 | 229.957 | 229.908 | -0.049 | 280.215 | 280.138 | -0.077 | 329.746 | 329.635 | -0.111 |
| 6 | 229.957 | 229.857 | -0.101 | 280.215 | 280.134 | -0.081 | 329.746 | 329.680 | -0.066 |
| 7 | 229.957 | 229.991 | 0.033 | 280.215 | 280.153 | -0.062 | 329.746 | 329.536 | -0.210 |
| 8 | 229.957 | 229.999 | 0.041 | 280.215 | 280.173 | -0.042 | 329.746 | 329.505 | -0.242 |
| 9 | 229.957 | 230.016 | 0.058 | 280.215 | 280.180 | -0.035 | 329.746 | 329.508 | -0.238 |
| 10 | 229.957 | 230.181 | 0.223 | 280.215 | 280.177 | -0.038 | 329.746 | 329.306 | -0.441 |
| 11 | 229.957 | 230.150 | 0.193 | 280.215 | 280.172 | -0.043 | 329.746 | 329.323 | -0.424 |
| 12 | 229.957 | 230.170 | 0.213 | 280.215 | 280.219 | 0.004 | 329.746 | 329.252 | -0.494 |
| 13 | 229.957 | 230.247 | 0.289 | 280.215 | 280.217 | 0.002 | 329.746 | 329.249 | -0.497 |
| 14 | 229.957 | 230.280 | 0.323 | 280.215 | 280.232 | 0.017 | 329.746 | 329.304 | -0.443 |
| 15 | 229.957 | 230.249 | 0.292 | 280.215 | 280.202 | -0.013 | 329.746 | 329.285 | -0.462 |
| 16 | 230.477 | 230.460 | -0.017 | 279.779 | 279.752 | -0.027 | 329.964 | 329.815 | -0.150 |
| 17 | 230.477 | 230.673 | 0.196 | 279.779 | 279.809 | 0.030 | 329.964 | 329.655 | -0.310 |
| 18 | 230.477 | 230.551 | 0.074 | 279.779 | 279.801 | 0.022 | 329.964 | 329.727 | -0.237 |
| 19 | 230.477 | 230.596 | 0.119 | 279.779 | 279.802 | 0.023 | 329.964 | 329.753 | -0.211 |
| 20 | 230.477 | 230.617 | 0.141 | 279.779 | 279.774 | -0.005 | 329.964 | 329.780 | -0.184 |
| 21 | 230.477 | 230.574 | 0.098 | 279.779 | 279.810 | 0.031 | 329.964 | 329.743 | -0.221 |
| 22 | 230.477 | 230.659 | 0.182 | 279.779 | 279.837 | 0.059 | 329.964 | 329.650 | -0.314 |

Notes: Tv is taken from the Sensit&NL..sheet
Delta is Accuracy from Sensit&NL..sheet
Ts is calculated as (Tv+Delta)

**Table 10-25a Radiometric Temperature Compared to Physical Temperature, CP +18.5°C, RC2**

| | 84K | | | 130K | | | 180K | | |
|---|---|---|---|---|---|---|---|---|---|
| Ch | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) |
| 1 | 82.812 | 82.527 | -0.285 | 129.343 | 129.337 | -0.006 | 179.299 | 179.420 | 0.121 |
| 2 | 82.812 | 82.648 | -0.163 | 129.343 | 129.437 | 0.095 | 179.299 | 179.522 | 0.222 |
| 3 | 82.812 | 82.803 | -0.009 | 129.343 | 129.402 | 0.059 | 179.299 | 179.357 | 0.058 |
| 4 | 82.812 | 82.814 | 0.002 | 129.343 | 129.306 | -0.037 | 179.299 | 179.237 | -0.062 |
| 5 | 82.812 | 82.816 | 0.005 | 129.343 | 129.340 | -0.003 | 179.299 | 179.295 | -0.004 |
| 6 | 82.812 | 82.848 | 0.036 | 129.343 | 129.316 | -0.027 | 179.299 | 179.233 | -0.066 |
| 7 | 82.812 | 82.831 | 0.019 | 129.343 | 129.434 | 0.092 | 179.299 | 179.404 | 0.105 |
| 8 | 82.812 | 82.835 | 0.023 | 129.343 | 129.446 | 0.103 | 179.299 | 179.433 | 0.134 |
| 9 | 82.812 | 82.833 | 0.022 | 129.343 | 129.455 | 0.112 | 179.299 | 179.437 | 0.138 |
| 10 | 82.812 | 82.851 | 0.039 | 129.343 | 129.585 | 0.243 | 179.299 | 179.642 | 0.343 |
| 11 | 82.812 | 82.838 | 0.026 | 129.343 | 129.608 | 0.265 | 179.299 | 179.649 | 0.350 |
| 12 | 82.812 | 82.837 | 0.025 | 129.343 | 129.624 | 0.282 | 179.299 | 179.690 | 0.391 |
| 13 | 82.812 | 82.889 | 0.077 | 129.343 | 129.716 | 0.373 | 179.299 | 179.817 | 0.518 |
| 14 | 82.812 | 82.839 | 0.028 | 129.343 | 129.651 | 0.309 | 179.299 | 179.688 | 0.389 |
| 15 | 82.812 | 82.950 | 0.139 | 129.343 | 129.694 | 0.351 | 179.299 | 179.678 | 0.379 |
| 16 | 79.019 | 78.506 | -0.513 | 129.758 | 129.461 | -0.297 | 179.709 | 179.614 | -0.095 |
| 17 | 79.019 | 78.715 | -0.304 | 129.758 | 129.774 | 0.015 | 179.709 | 179.933 | 0.224 |
| 18 | 79.019 | 78.762 | -0.257 | 129.758 | 129.708 | -0.050 | 179.709 | 179.803 | 0.094 |
| 19 | 79.019 | 78.796 | -0.223 | 129.758 | 129.722 | -0.036 | 179.709 | 179.839 | 0.130 |
| 20 | 79.019 | 78.807 | -0.211 | 129.758 | 129.743 | -0.016 | 179.709 | 179.833 | 0.124 |
| 21 | 79.019 | 78.832 | -0.187 | 129.758 | 129.758 | -0.001 | 179.709 | 179.854 | 0.145 |
| 22 | 79.019 | 78.794 | -0.225 | 129.758 | 129.835 | 0.077 | 179.709 | 179.982 | 0.273 |

Notes: Tv is taken from the Sensit&NL..sheet
Delta is Accuracy from Sensit&NL..sheet
Ts is calculated as (Tv+Delta)

**Table 10-25b Radiometric Temperature Compared to Physical Temperature, CP +18.5°C, RC2 (continued)**

| | 230K | | | 280K | | | 330K | | |
|---|---|---|---|---|---|---|---|---|---|
| Ch | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) |
| 1 | 229.974 | 230.064 | 0.089 | 280.212 | 280.129 | -0.083 | 329.752 | 329.384 | -0.368 |
| 2 | 229.974 | 230.150 | 0.176 | 280.212 | 280.176 | -0.036 | 329.752 | 329.332 | -0.420 |
| 3 | 229.974 | 229.974 | 0.000 | 280.212 | 280.131 | -0.081 | 329.752 | 329.548 | -0.205 |
| 4 | 229.974 | 229.877 | -0.097 | 280.212 | 280.122 | -0.090 | 329.752 | 329.648 | -0.104 |
| 5 | 229.974 | 229.905 | -0.069 | 280.212 | 280.147 | -0.065 | 329.752 | 329.628 | -0.124 |
| 6 | 229.974 | 229.856 | -0.118 | 280.212 | 280.131 | -0.081 | 329.752 | 329.697 | -0.055 |
| 7 | 229.974 | 230.005 | 0.031 | 280.212 | 280.150 | -0.062 | 329.752 | 329.543 | -0.209 |
| 8 | 229.974 | 230.017 | 0.043 | 280.212 | 280.151 | -0.061 | 329.752 | 329.500 | -0.252 |
| 9 | 229.974 | 230.020 | 0.045 | 280.212 | 280.160 | -0.052 | 329.752 | 329.490 | -0.262 |
| 10 | 229.974 | 230.173 | 0.199 | 280.212 | 280.171 | -0.041 | 329.752 | 329.297 | -0.456 |
| 11 | 229.974 | 230.186 | 0.211 | 280.212 | 280.167 | -0.045 | 329.752 | 329.320 | -0.432 |
| 12 | 229.974 | 230.229 | 0.255 | 280.212 | 280.172 | -0.040 | 329.752 | 329.257 | -0.495 |
| 13 | 229.974 | 230.304 | 0.329 | 280.212 | 280.199 | -0.013 | 329.752 | 329.176 | -0.576 |
| 14 | 229.974 | 230.291 | 0.317 | 280.212 | 280.195 | -0.017 | 329.752 | 329.233 | -0.519 |
| 15 | 229.974 | 230.279 | 0.305 | 280.212 | 280.171 | -0.041 | 329.752 | 329.167 | -0.585 |
| 16 | 230.464 | 230.443 | -0.021 | 279.770 | 279.744 | -0.025 | 329.956 | 329.791 | -0.165 |
| 17 | 230.464 | 230.641 | 0.177 | 279.770 | 279.793 | 0.024 | 329.956 | 329.620 | -0.336 |
| 18 | 230.464 | 230.560 | 0.097 | 279.770 | 279.808 | 0.039 | 329.956 | 329.761 | -0.196 |
| 19 | 230.464 | 230.584 | 0.120 | 279.770 | 279.801 | 0.031 | 329.956 | 329.745 | -0.211 |
| 20 | 230.464 | 230.614 | 0.151 | 279.770 | 279.815 | 0.046 | 329.956 | 329.742 | -0.214 |
| 21 | 230.464 | 230.622 | 0.158 | 279.770 | 279.797 | 0.027 | 329.956 | 329.768 | -0.188 |
| 22 | 230.464 | 230.730 | 0.267 | 279.770 | 279.773 | 0.003 | 329.956 | 329.682 | -0.274 |

Notes: Tv is taken from the Sensit&NL..sheet
Delta is Accuracy from Sensit&NL..sheet
Ts is calculated as (Tv+Delta)

**Table 10-26a Radiometric Temperature Compared to Physical Temperature, CP +18.5°C, RC5**

| | 84K | | | 130K | | | 180K | | |
|---|---|---|---|---|---|---|---|---|---|
| Ch | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) |
| 1 | 82.864 | 82.568 | -0.296 | 129.437 | 129.431 | -0.006 | 179.765 | 179.899 | 0.134 |
| 2 | 82.864 | 82.696 | -0.168 | 129.437 | 129.540 | 0.103 | 179.765 | 179.990 | 0.226 |
| 3 | 82.864 | 82.850 | -0.014 | 129.437 | 129.496 | 0.059 | 179.765 | 179.831 | 0.066 |
| 4 | 82.864 | 82.869 | 0.006 | 129.437 | 129.406 | -0.031 | 179.765 | 179.709 | -0.056 |
| 5 | 82.864 | 82.880 | 0.016 | 129.437 | 129.438 | 0.001 | 179.765 | 179.765 | 0.001 |
| 6 | 82.864 | 82.892 | 0.028 | 129.437 | 129.422 | -0.015 | 179.765 | 179.697 | -0.068 |
| 7 | 82.864 | 82.881 | 0.017 | 129.437 | 129.533 | 0.096 | 179.765 | 179.861 | 0.096 |
| 8 | 82.864 | 82.885 | 0.021 | 129.437 | 129.540 | 0.103 | 179.765 | 179.903 | 0.138 |
| 9 | 82.864 | 82.884 | 0.020 | 129.437 | 129.566 | 0.129 | 179.765 | 179.903 | 0.138 |
| 10 | 82.864 | 82.890 | 0.026 | 129.437 | 129.698 | 0.261 | 179.765 | 180.096 | 0.332 |
| 11 | 82.864 | 82.873 | 0.009 | 129.437 | 129.692 | 0.255 | 179.765 | 180.081 | 0.316 |
| 12 | 82.864 | 82.899 | 0.036 | 129.437 | 129.738 | 0.300 | 179.765 | 180.157 | 0.392 |
| 13 | 82.864 | 82.883 | 0.019 | 129.437 | 129.827 | 0.390 | 179.765 | 180.240 | 0.476 |
| 14 | 82.864 | 82.933 | 0.069 | 129.437 | 129.752 | 0.315 | 179.765 | 180.231 | 0.466 |
| 15 | 82.864 | 82.908 | 0.044 | 129.437 | 129.782 | 0.345 | 179.765 | 180.244 | 0.479 |
| 16 | 79.004 | 78.460 | -0.544 | 129.874 | 129.604 | -0.270 | 179.852 | 179.766 | -0.086 |
| 17 | 79.004 | 78.729 | -0.275 | 129.874 | 129.899 | 0.025 | 179.852 | 180.054 | 0.202 |
| 18 | 79.004 | 78.809 | -0.195 | 129.874 | 129.832 | -0.042 | 179.852 | 179.958 | 0.106 |
| 19 | 79.004 | 78.816 | -0.188 | 129.874 | 129.874 | 0.000 | 179.852 | 179.972 | 0.120 |
| 20 | 79.004 | 78.770 | -0.234 | 129.874 | 129.853 | -0.021 | 179.852 | 180.002 | 0.150 |
| 21 | 79.004 | 78.800 | -0.204 | 129.874 | 129.881 | 0.007 | 179.852 | 179.997 | 0.144 |
| 22 | 79.004 | 78.795 | -0.209 | 129.874 | 129.944 | 0.070 | 179.852 | 180.104 | 0.252 |

Notes: Tv is taken from the Sensit&NL..sheet
Delta is Accuracy from Sensit&NL..sheet
Ts is calculated as (Tv+Delta)

**Table 10-26b Radiometric Temperature Compared to Physical Temperature, CP +18.5°C, RC5 (continued)**

| | 230K | | | 280K | | | 330K | | |
|---|---|---|---|---|---|---|---|---|---|
| Ch | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) |
| 1 | 229.919 | 230.005 | 0.087 | 280.142 | 280.070 | -0.072 | 329.808 | 329.448 | -0.359 |
| 2 | 229.919 | 230.077 | 0.159 | 280.142 | 280.085 | -0.057 | 329.808 | 329.416 | -0.392 |
| 3 | 229.919 | 229.943 | 0.024 | 280.142 | 280.075 | -0.067 | 329.808 | 329.623 | -0.185 |
| 4 | 229.919 | 229.829 | -0.089 | 280.142 | 280.051 | -0.091 | 329.808 | 329.738 | -0.070 |
| 5 | 229.919 | 229.878 | -0.040 | 280.142 | 280.083 | -0.059 | 329.808 | 329.688 | -0.120 |
| 6 | 229.919 | 229.824 | -0.094 | 280.142 | 280.070 | -0.072 | 329.808 | 329.729 | -0.079 |
| 7 | 229.919 | 229.956 | 0.037 | 280.142 | 280.075 | -0.067 | 329.808 | 329.606 | -0.202 |
| 8 | 229.919 | 229.975 | 0.057 | 280.142 | 280.090 | -0.052 | 329.808 | 329.574 | -0.234 |
| 9 | 229.919 | 229.969 | 0.050 | 280.142 | 280.096 | -0.045 | 329.808 | 329.558 | -0.250 |
| 10 | 229.919 | 230.118 | 0.199 | 280.142 | 280.092 | -0.049 | 329.808 | 329.362 | -0.446 |
| 11 | 229.919 | 230.136 | 0.217 | 280.142 | 280.095 | -0.046 | 329.808 | 329.373 | -0.435 |
| 12 | 229.919 | 230.164 | 0.246 | 280.142 | 280.112 | -0.029 | 329.808 | 329.329 | -0.479 |
| 13 | 229.919 | 230.264 | 0.346 | 280.142 | 280.159 | 0.017 | 329.808 | 329.321 | -0.487 |
| 14 | 229.919 | 230.217 | 0.298 | 280.142 | 280.131 | -0.010 | 329.808 | 329.343 | -0.464 |
| 15 | 229.919 | 230.316 | 0.398 | 280.142 | 280.049 | -0.092 | 329.808 | 329.349 | -0.459 |
| 16 | 230.209 | 230.199 | -0.011 | 279.756 | 279.741 | -0.015 | 329.603 | 329.467 | -0.135 |
| 17 | 230.209 | 230.412 | 0.202 | 279.756 | 279.807 | 0.050 | 329.603 | 329.281 | -0.322 |
| 18 | 230.209 | 230.263 | 0.053 | 279.756 | 279.774 | 0.018 | 329.603 | 329.448 | -0.155 |
| 19 | 230.209 | 230.296 | 0.087 | 279.756 | 279.768 | 0.011 | 329.603 | 329.412 | -0.191 |
| 20 | 230.209 | 230.312 | 0.103 | 279.756 | 279.820 | 0.064 | 329.603 | 329.393 | -0.210 |
| 21 | 230.209 | 230.347 | 0.137 | 279.756 | 279.790 | 0.034 | 329.603 | 329.417 | -0.186 |
| 22 | 230.209 | 230.436 | 0.226 | 279.756 | 279.793 | 0.037 | 329.603 | 329.260 | -0.343 |

Notes: Tv is taken from the Sensit&NL..sheet
Delta is Accuracy from Sensit&NL..sheet
Ts is calculated as (Tv+Delta)

**Table 10-27a Radiometric Temperature Compared to Physical Temperature, CP +18.5°C, RC6**

| | 84K | | | 130K | | | 180K | | |
|---|---|---|---|---|---|---|---|---|---|
| Ch | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) |
| 1 | 82.835 | 82.550 | -0.284 | 129.352 | 129.345 | -0.007 | 179.725 | 179.849 | 0.124 |
| 2 | 82.835 | 82.667 | -0.167 | 129.352 | 129.454 | 0.102 | 179.725 | 179.961 | 0.236 |
| 3 | 82.835 | 82.826 | -0.009 | 129.352 | 129.410 | 0.058 | 179.725 | 179.800 | 0.075 |
| 4 | 82.835 | 82.840 | 0.005 | 129.352 | 129.316 | -0.036 | 179.725 | 179.673 | -0.052 |
| 5 | 82.835 | 82.855 | 0.020 | 129.352 | 129.363 | 0.011 | 179.725 | 179.730 | 0.005 |
| 6 | 82.835 | 82.864 | 0.029 | 129.352 | 129.328 | -0.024 | 179.725 | 179.662 | -0.063 |
| 7 | 82.835 | 82.861 | 0.027 | 129.352 | 129.450 | 0.098 | 179.725 | 179.830 | 0.105 |
| 8 | 82.835 | 82.858 | 0.023 | 129.352 | 129.462 | 0.110 | 179.725 | 179.874 | 0.149 |
| 9 | 82.835 | 82.864 | 0.029 | 129.352 | 129.470 | 0.118 | 179.725 | 179.874 | 0.149 |
| 10 | 82.835 | 82.843 | 0.009 | 129.352 | 129.616 | 0.264 | 179.725 | 180.062 | 0.337 |
| 11 | 82.835 | 82.869 | 0.034 | 129.352 | 129.604 | 0.253 | 179.725 | 180.067 | 0.342 |
| 12 | 82.835 | 82.859 | 0.024 | 129.352 | 129.653 | 0.302 | 179.725 | 180.129 | 0.404 |
| 13 | 82.835 | 82.906 | 0.071 | 129.352 | 129.708 | 0.357 | 179.725 | 180.188 | 0.463 |
| 14 | 82.835 | 82.827 | -0.007 | 129.352 | 129.657 | 0.305 | 179.725 | 180.159 | 0.434 |
| 15 | 82.835 | 82.928 | 0.093 | 129.352 | 129.688 | 0.337 | 179.725 | 180.102 | 0.377 |
| 16 | 78.999 | 78.477 | -0.522 | 129.721 | 129.446 | -0.275 | 179.894 | 179.799 | -0.095 |
| 17 | 78.999 | 78.717 | -0.282 | 129.721 | 129.761 | 0.040 | 179.894 | 180.092 | 0.198 |
| 18 | 78.999 | 78.792 | -0.207 | 129.721 | 129.664 | -0.057 | 179.894 | 179.984 | 0.090 |
| 19 | 78.999 | 78.791 | -0.208 | 129.721 | 129.729 | 0.008 | 179.894 | 180.012 | 0.118 |
| 20 | 78.999 | 78.802 | -0.196 | 129.721 | 129.733 | 0.012 | 179.894 | 180.027 | 0.134 |
| 21 | 78.999 | 78.785 | -0.214 | 129.721 | 129.760 | 0.039 | 179.894 | 180.048 | 0.155 |
| 22 | 78.999 | 78.769 | -0.229 | 129.721 | 129.815 | 0.094 | 179.894 | 180.172 | 0.278 |

Notes: Tv is taken from the Sensit&NL..sheet
Delta is Accuracy from Sensit&NL..sheet
Ts is calculated as (Tv+Delta)

**Table 10-27b Radiometric Temperature Compared to Physical Temperature, CP +18.5°C, RC6 (continued)**

| | 230K | | | 280K | | | 330K | | |
|---|---|---|---|---|---|---|---|---|---|
| Ch | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) | Scene Physical Temp (Tv) | Scene Rad. Temp (Ts) | Delta (Ts-Tv) |
| 1 | 229.925 | 230.005 | 0.079 | 279.878 | 279.816 | -0.062 | 329.797 | 329.441 | -0.356 |
| 2 | 229.925 | 230.072 | 0.146 | 279.878 | 279.821 | -0.058 | 329.797 | 329.414 | -0.383 |
| 3 | 229.925 | 229.942 | 0.016 | 279.878 | 279.829 | -0.049 | 329.797 | 329.602 | -0.195 |
| 4 | 229.925 | 229.842 | -0.083 | 279.878 | 279.800 | -0.079 | 329.797 | 329.728 | -0.069 |
| 5 | 229.925 | 229.882 | -0.044 | 279.878 | 279.832 | -0.047 | 329.797 | 329.671 | -0.126 |
| 6 | 229.925 | 229.833 | -0.093 | 279.878 | 279.817 | -0.061 | 329.797 | 329.756 | -0.041 |
| 7 | 229.925 | 229.956 | 0.030 | 279.878 | 279.830 | -0.049 | 329.797 | 329.585 | -0.212 |
| 8 | 229.925 | 229.967 | 0.042 | 279.878 | 279.846 | -0.033 | 329.797 | 329.559 | -0.238 |
| 9 | 229.925 | 229.983 | 0.057 | 279.878 | 279.849 | -0.029 | 329.797 | 329.570 | -0.228 |
| 10 | 229.925 | 230.146 | 0.220 | 279.878 | 279.841 | -0.038 | 329.797 | 329.357 | -0.440 |
| 11 | 229.925 | 230.141 | 0.215 | 279.878 | 279.861 | -0.017 | 329.797 | 329.370 | -0.427 |
| 12 | 229.925 | 230.166 | 0.240 | 279.878 | 279.823 | -0.056 | 329.797 | 329.318 | -0.479 |
| 13 | 229.925 | 230.235 | 0.310 | 279.878 | 279.914 | 0.036 | 329.797 | 329.302 | -0.496 |
| 14 | 229.925 | 230.243 | 0.317 | 279.878 | 279.831 | -0.048 | 329.797 | 329.317 | -0.480 |
| 15 | 229.925 | 230.209 | 0.284 | 279.878 | 279.780 | -0.099 | 329.797 | 329.305 | -0.492 |
| 16 | 230.239 | 230.221 | -0.018 | 279.621 | 279.627 | 0.006 | 329.574 | 329.459 | -0.114 |
| 17 | 230.239 | 230.428 | 0.189 | 279.621 | 279.643 | 0.022 | 329.574 | 329.268 | -0.306 |
| 18 | 230.239 | 230.306 | 0.068 | 279.621 | 279.617 | -0.004 | 329.574 | 329.439 | -0.135 |
| 19 | 230.239 | 230.323 | 0.084 | 279.621 | 279.655 | 0.034 | 329.574 | 329.410 | -0.164 |
| 20 | 230.239 | 230.333 | 0.094 | 279.621 | 279.645 | 0.024 | 329.574 | 329.375 | -0.199 |
| 21 | 230.239 | 230.381 | 0.142 | 279.621 | 279.644 | 0.023 | 329.574 | 329.374 | -0.199 |
| 22 | 230.239 | 230.450 | 0.211 | 279.621 | 279.644 | 0.022 | 329.574 | 329.319 | -0.254 |

Notes: Tv is taken from the Sensit&NL..sheet
Delta is Accuracy from Sensit&NL..sheet
Ts is calculated as (Tv+Delta)

**Table 10-28 Quadratic Coefficients for SDR Processing**

| | Quadratic Coefficient | | |
|---|---|---|---|
| Channel | Cold Plate at -3.1°C | Cold Plate at +7.7°C | Cold Plate at +18.5°C |
| 1 | -2.837E-05 | -2.850E-05 | -2.968E-05 |
| 2 | -3.182E-05 | -3.171E-05 | -3.219E-05 |
| 3 | -6.769E-06 | -8.284E-06 | -9.961E-06 |
| 4 | 5.672E-06 | 4.788E-06 | 2.474E-06 |
| 5 | 9.531E-07 | -4.062E-07 | -1.921E-06 |
| 6 | 6.432E-06 | 5.163E-06 | 4.724E-06 |
| 7 | -9.675E-06 | -1.009E-05 | -1.091E-05 |
| 8 | -1.321E-05 | -1.321E-05 | -1.380E-05 |
| 9 | -1.213E-05 | -1.226E-05 | -1.415E-05 |
| 10 | -3.054E-05 | -3.160E-05 | -3.242E-05 |
| 11 | -3.114E-05 | -3.092E-05 | -3.247E-05 |
| 12 | -3.554E-05 | -3.527E-05 | -3.695E-05 |
| 13 | -4.254E-05 | -4.396E-05 | -4.248E-05 |
| 14 | -3.571E-05 | -3.786E-05 | -3.987E-05 |
| 15 | -3.959E-05 | -4.139E-05 | -3.826E-05 |
| 16 | -1.482E-05 | -1.343E-05 | -1.846E-05 |
| 17 | -3.488E-05 | -3.116E-05 | -3.365E-05 |
| 18 | -1.648E-05 | -1.644E-05 | -1.901E-05 |
| 19 | -1.973E-05 | -1.708E-05 | -2.025E-05 |
| 20 | -1.957E-05 | -1.916E-05 | -2.216E-05 |
| 21 | -2.097E-05 | -1.914E-05 | -2.229E-05 |
| 22 | -3.181E-05 | -2.946E-05 | -3.276E-05 |

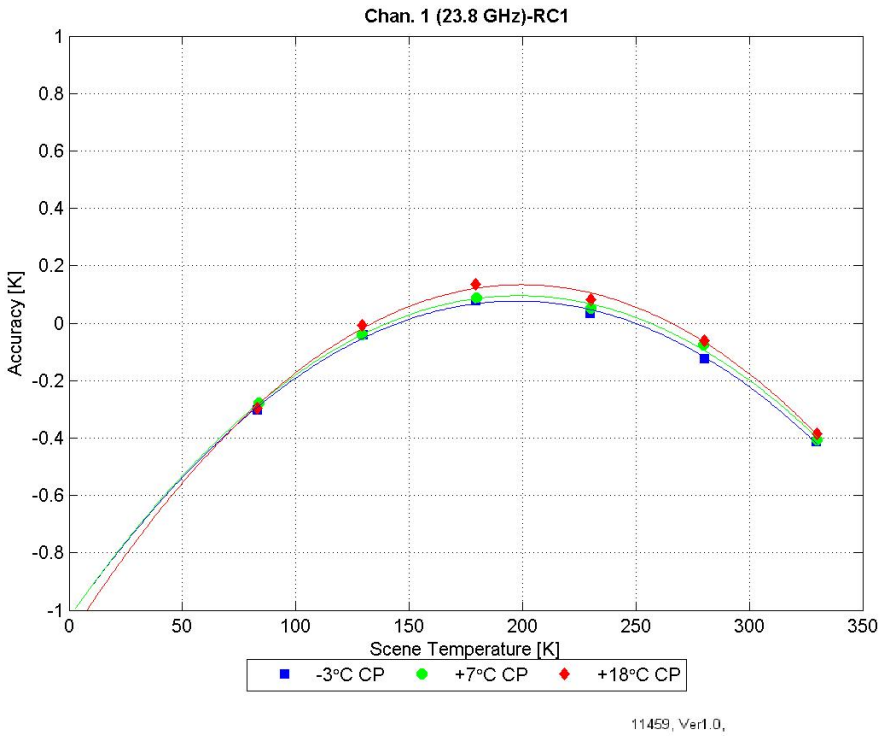



**Figure 10-4 Channel 1 RC1 - Accuracy vs Scene Temperature**

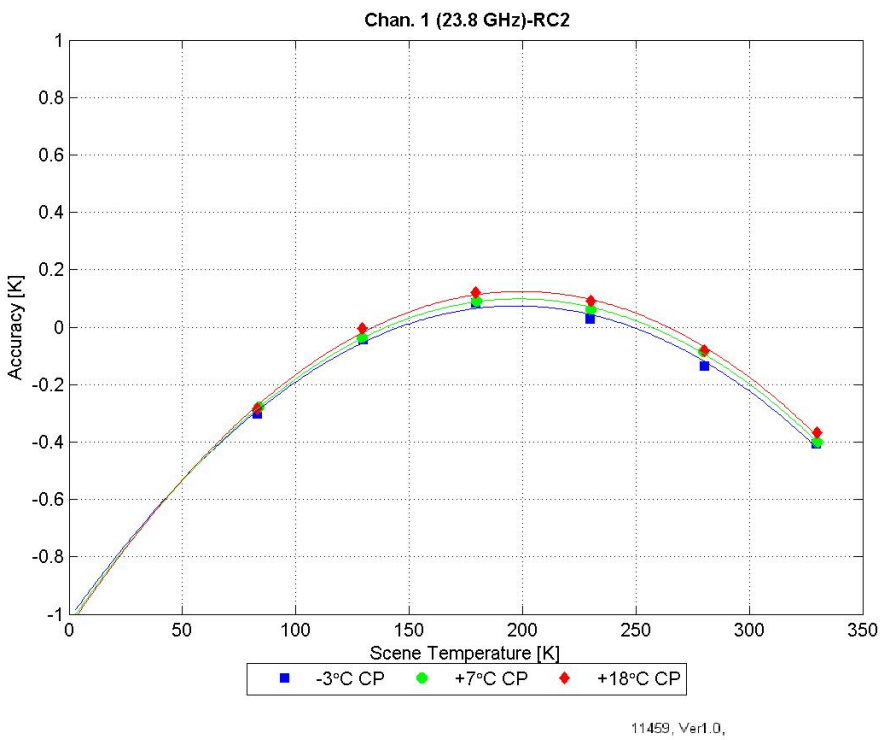



**Figure 10-5 Channel 1 RC2 - Accuracy vs Scene Temperature**

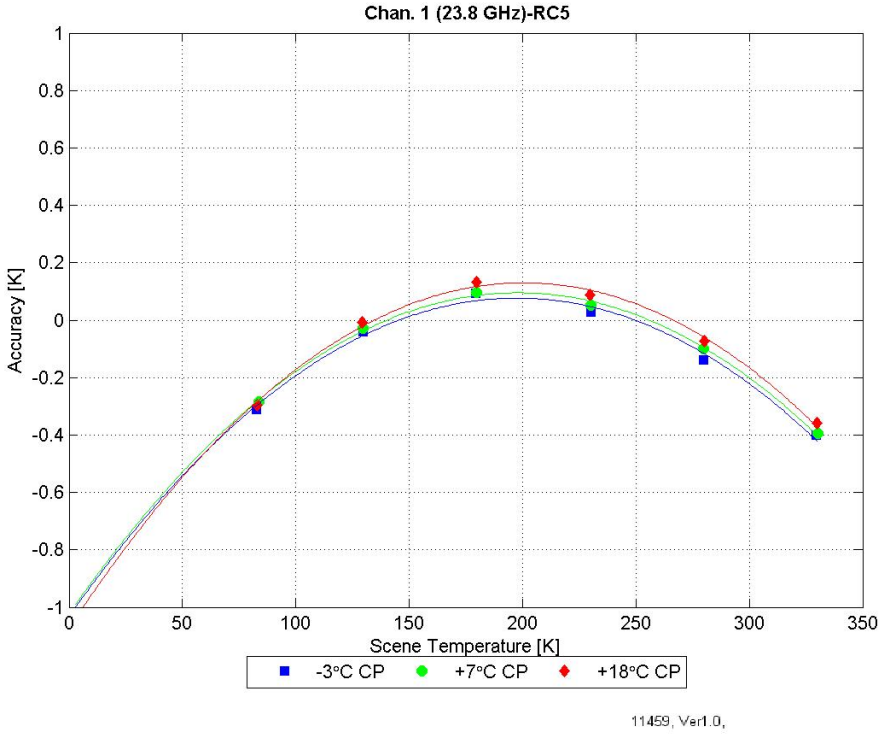



**Figure 10-6 Channel 1 RC5 – Accuracy vs Scene Temperature**

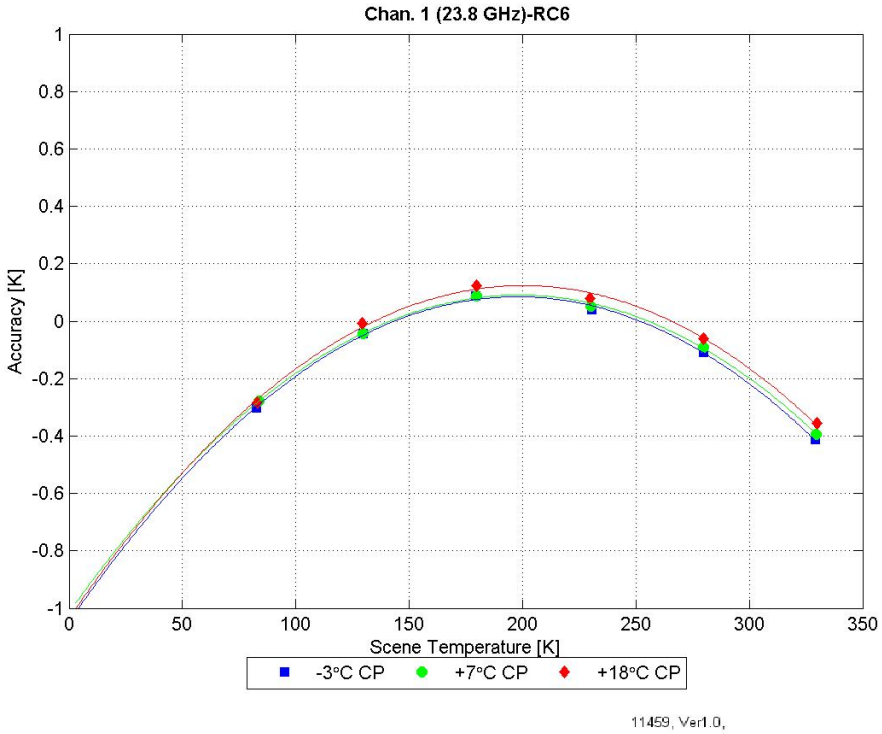



**Figure 10-7 Channel 1 RC6 - Accuracy vs Scene Temperature**

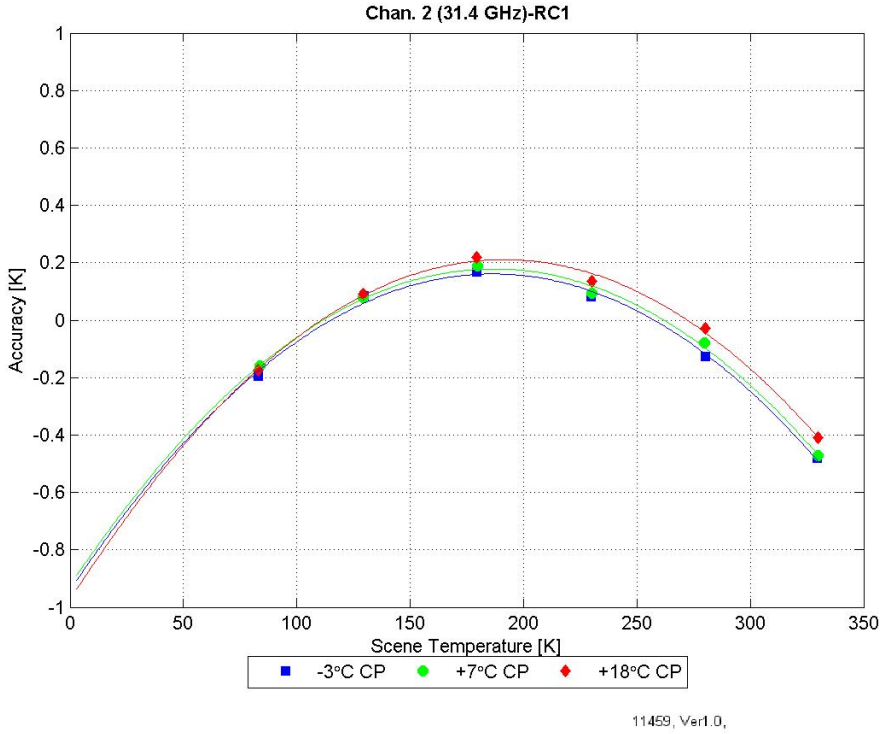



**Figure 10-8 Channel 2 RC1 - Accuracy vs Scene Temperature**

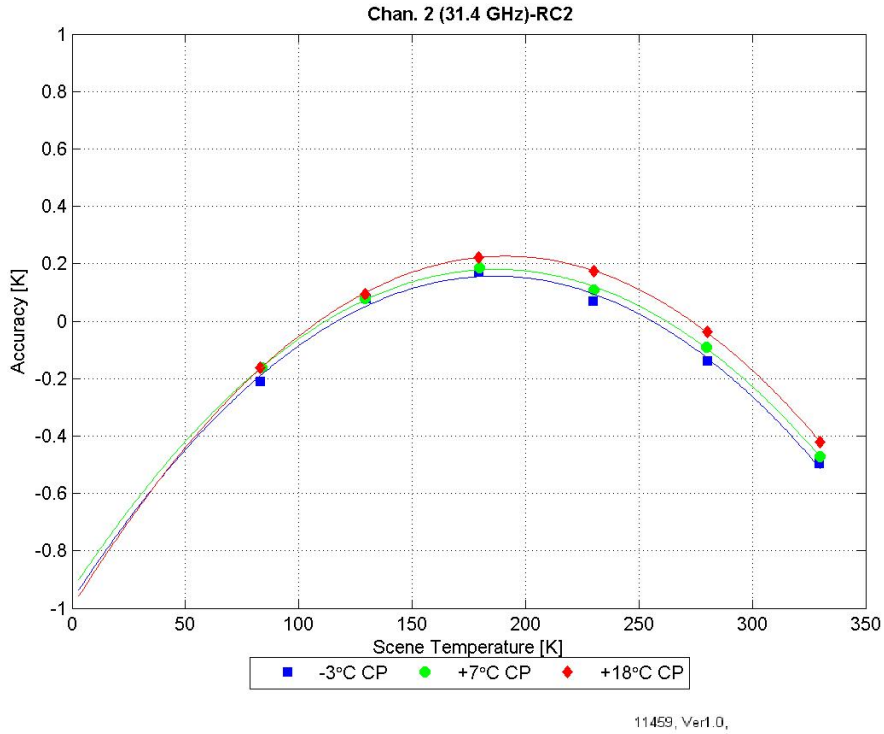



**Figure 10-9 Channel 2 RC2 - Accuracy vs Scene Temperature**

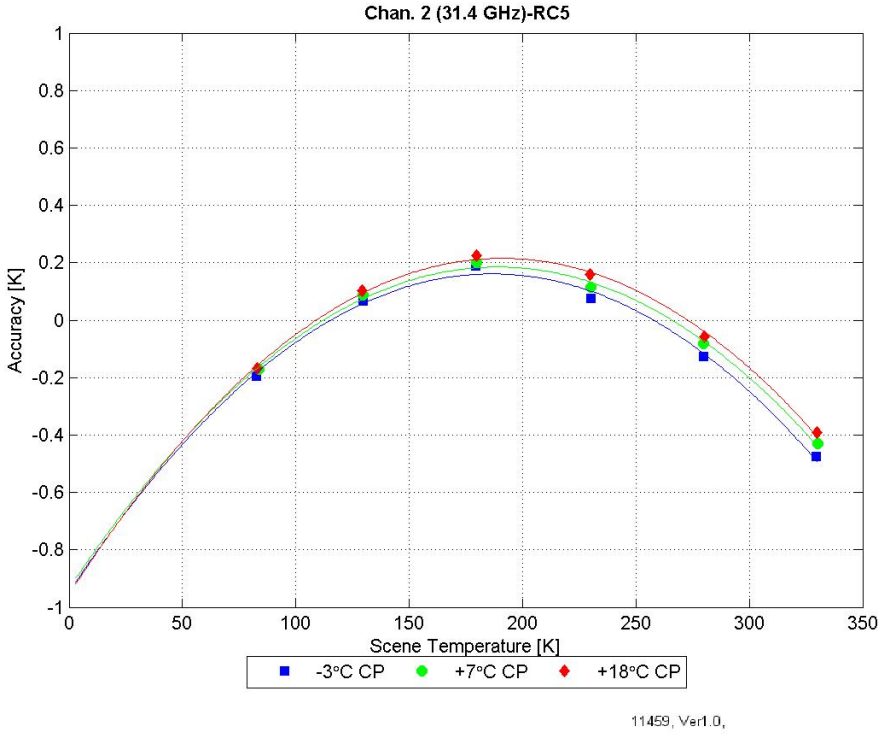



**Figure 10-10 Channel 2 RC5 - Accuracy vs Scene Temperature**

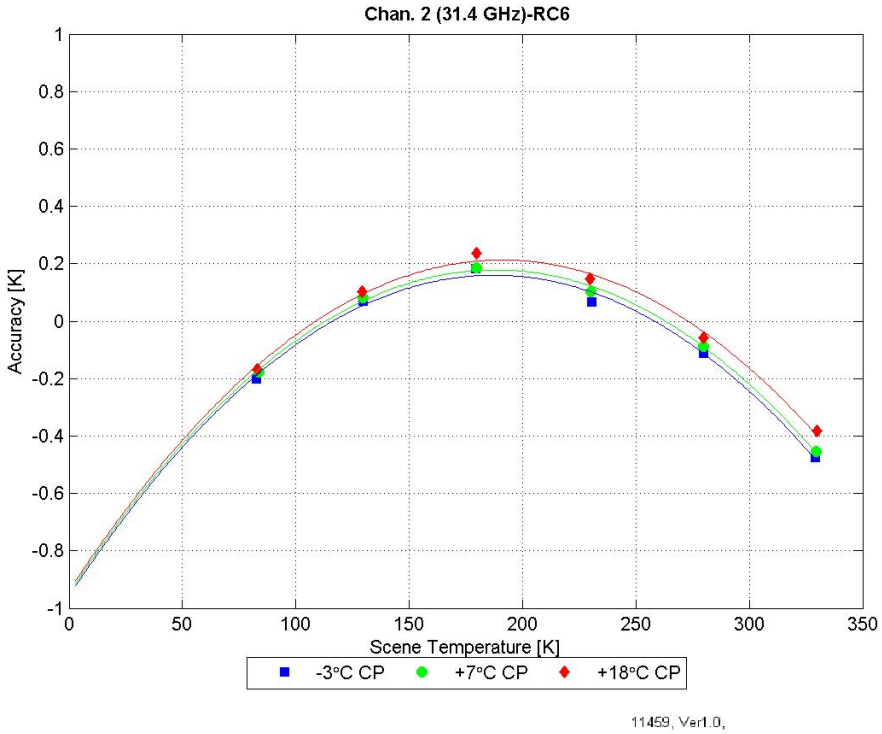



**Figure 10-11 Channel 2 RC6 – Accuracy vs Scene Temperature**

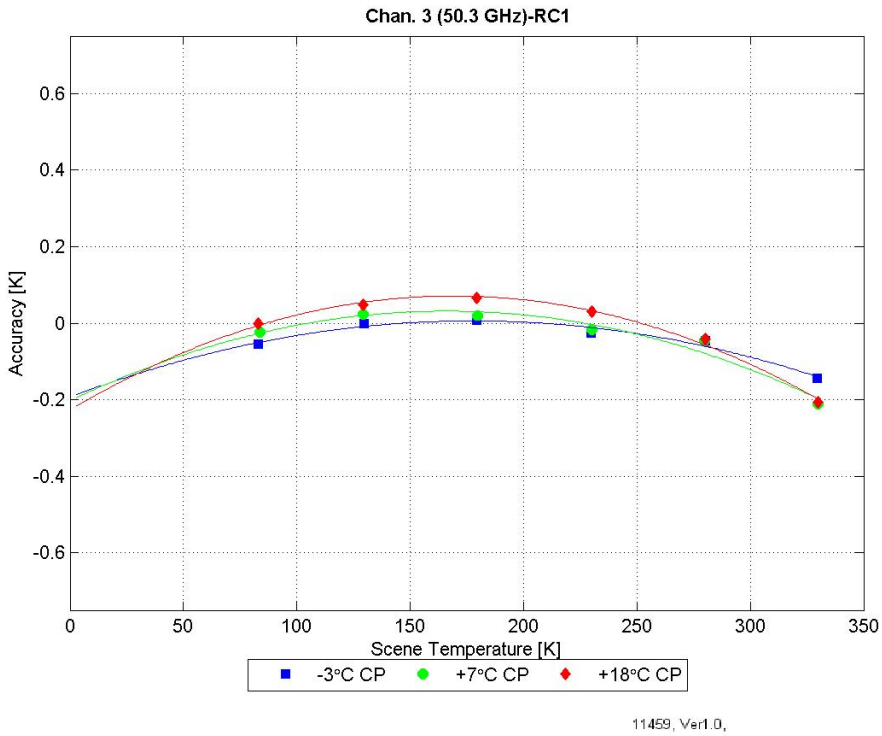



**Figure 10-12 Channel 3 RC1 - Accuracy vs Scene Temperature**

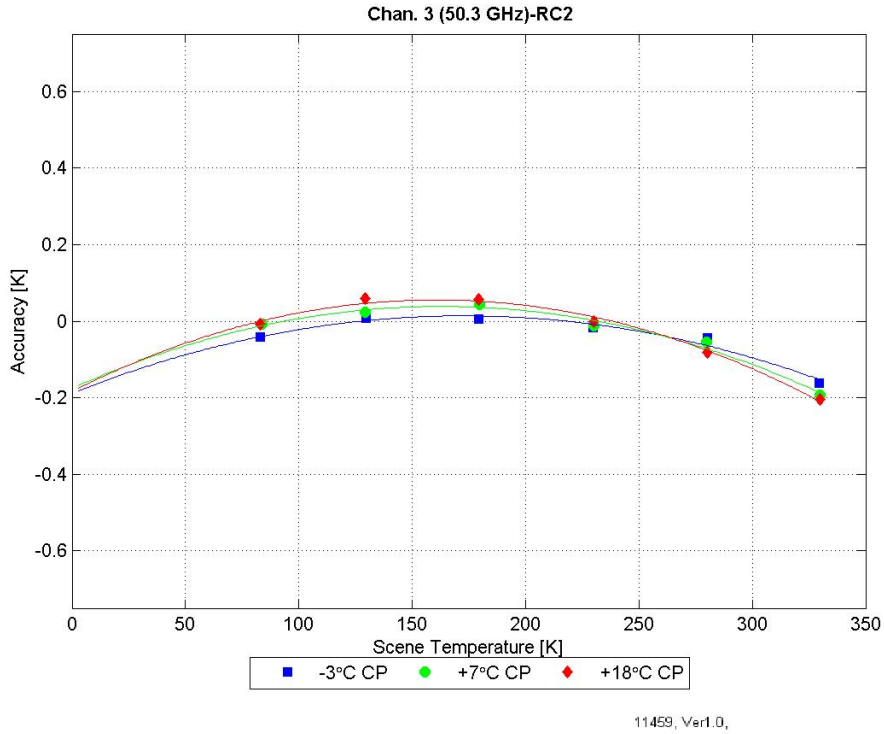



**Figure 10-13 Channel 3 RC2 - Accuracy vs Scene Temperature**

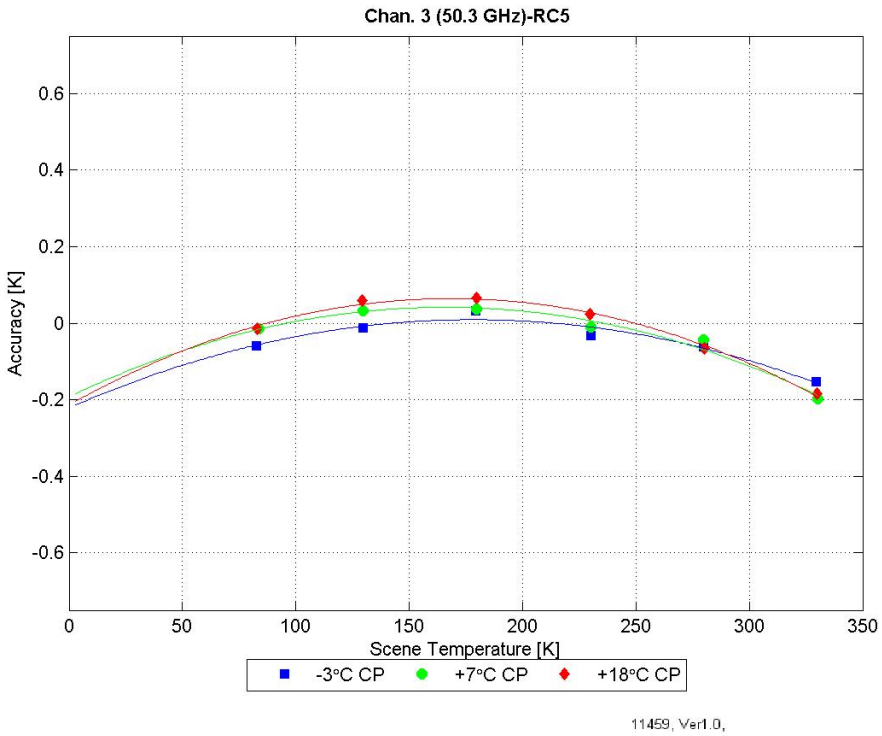



**Figure 10-14 Channel 3 RC5 - Accuracy vs Scene Temperature**

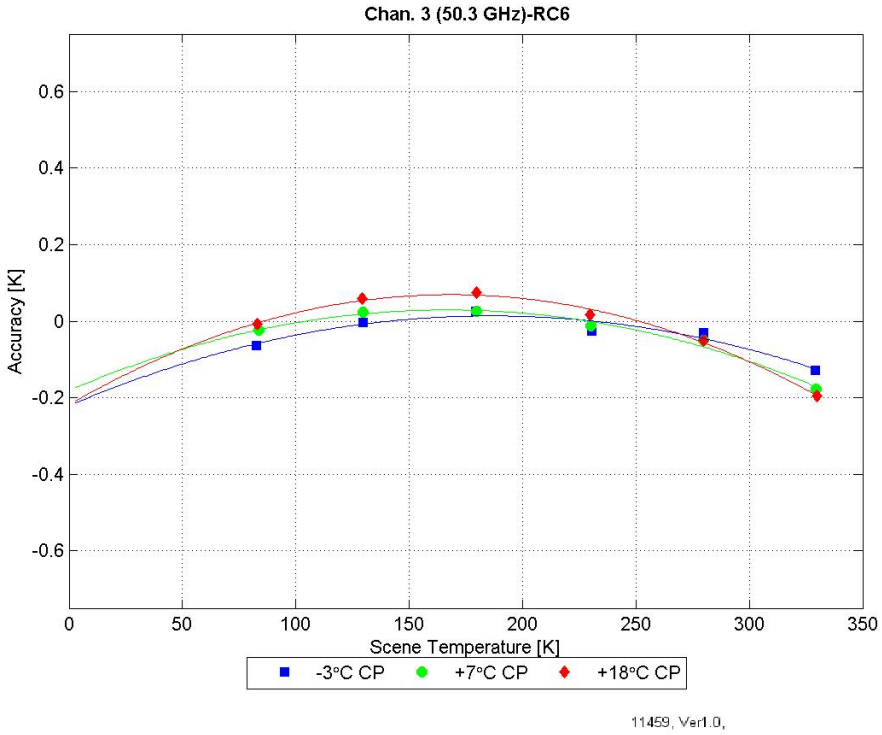



**Figure 10-15 Channel 3 RC6 - Accuracy vs Scene Temperature**

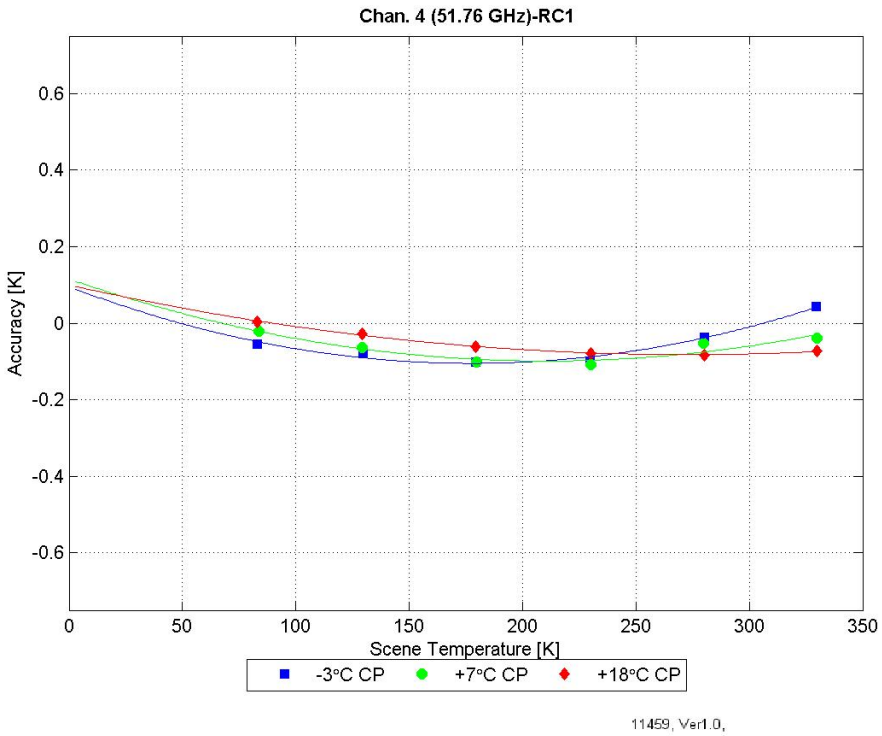



**Figure 10-16 Channel 4 RC1 - Accuracy vs Scene Temperature**

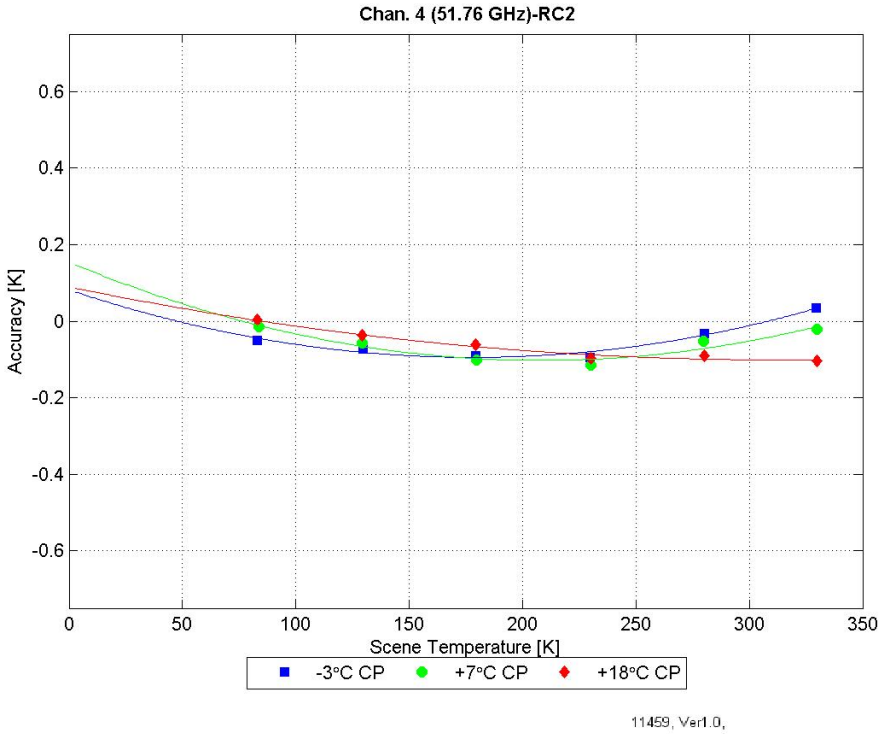



**Figure 10-17 Channel 4 RC2 - Accuracy vs Scene Temperature**

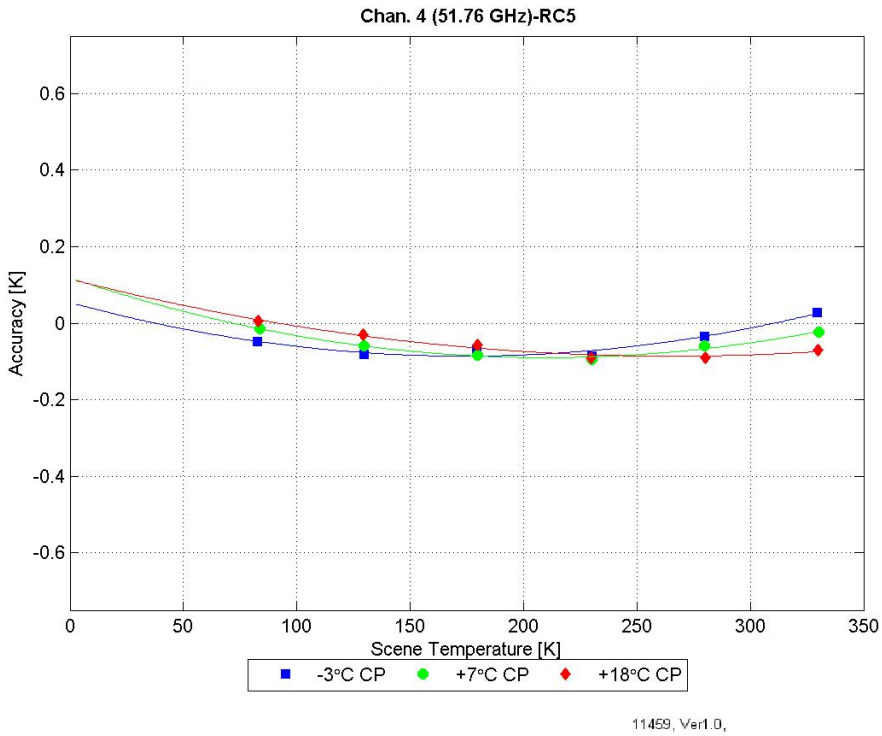



**Figure 10-18 Channel 4 RC5 - Accuracy vs Scene Temperature**

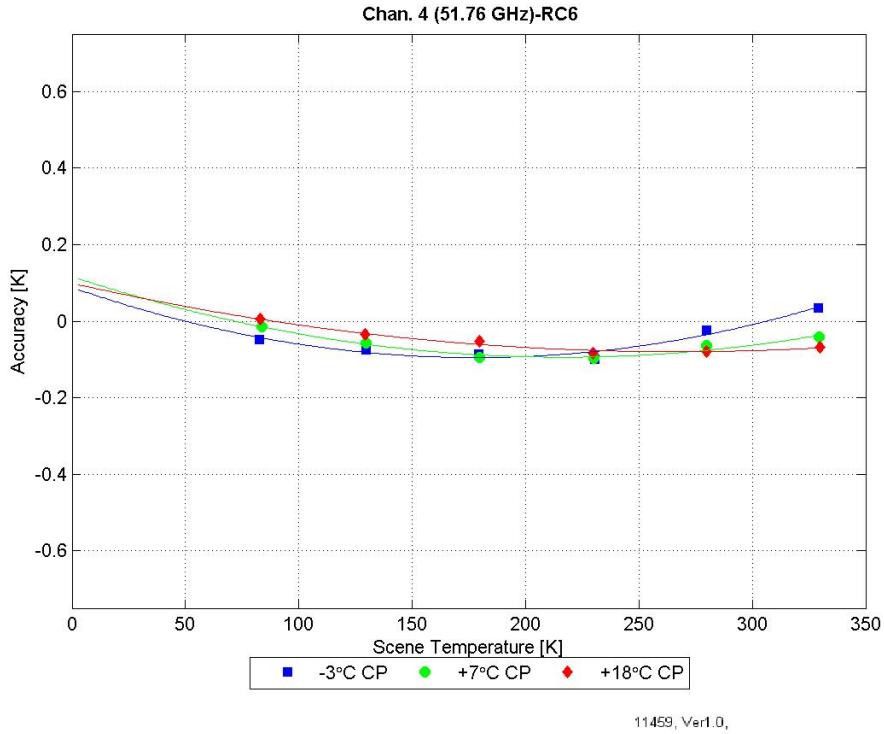



**Figure 10-19 Channel 4 RC6 - Accuracy vs Scene Temperature**

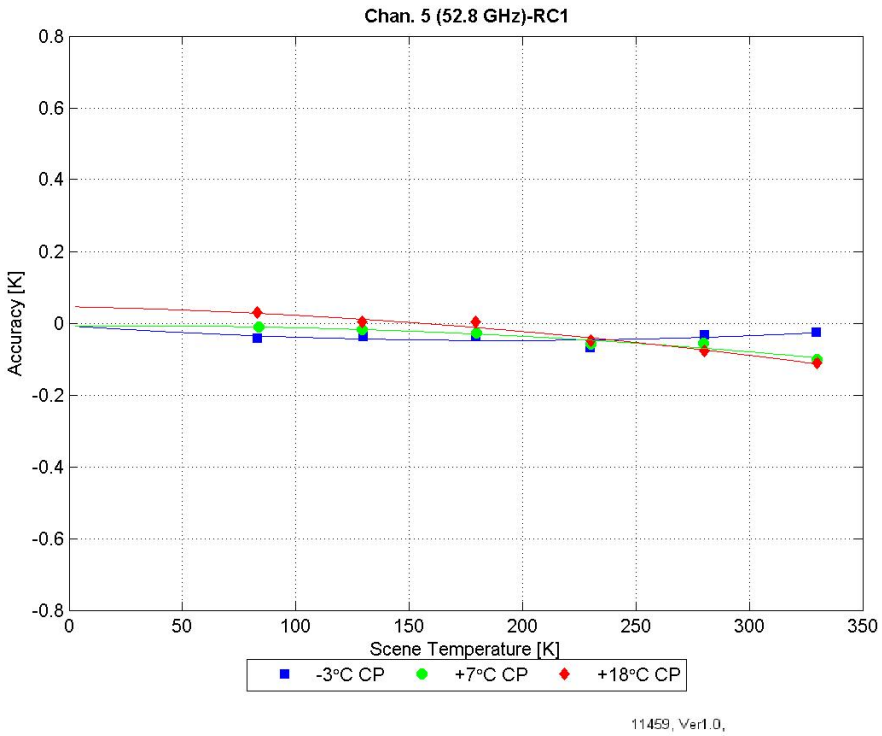



**Figure 10-20 Channel 5 RC1 – Accuracy vs Scene Temperature**

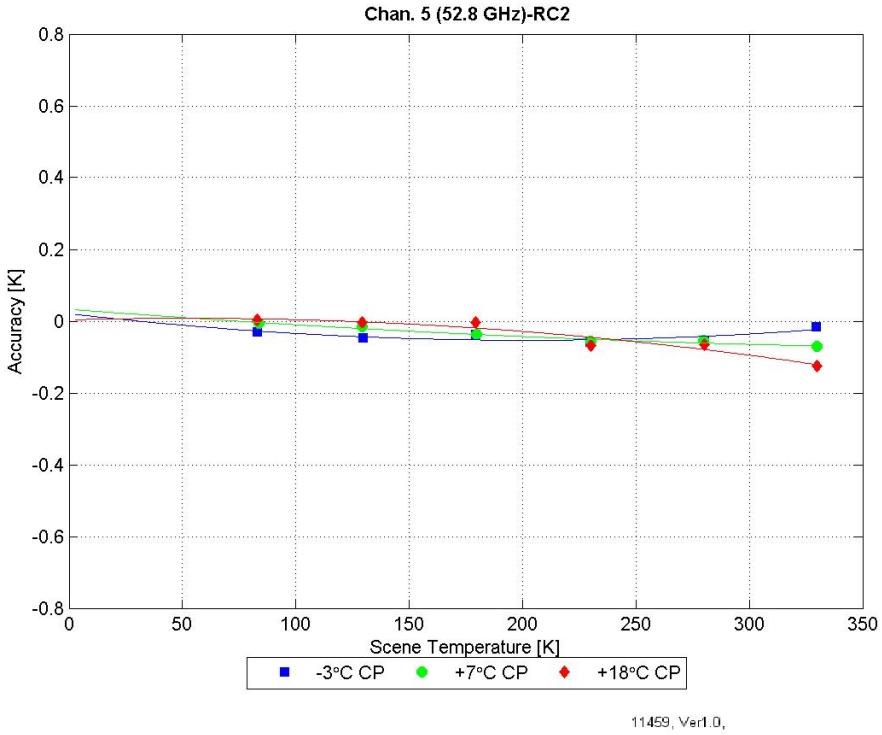



**Figure 10-21 Channel 5 RC2 – Accuracy vs Scene Temperature**

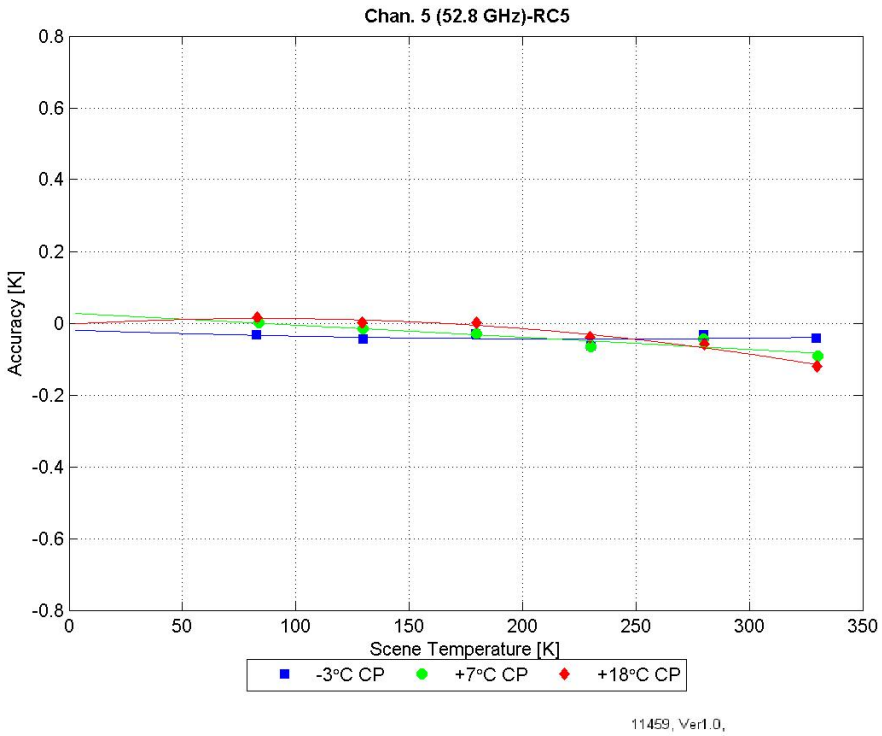



**Figure 10-22 Channel 5 RC5 – Accuracy vs Scene Temperature**

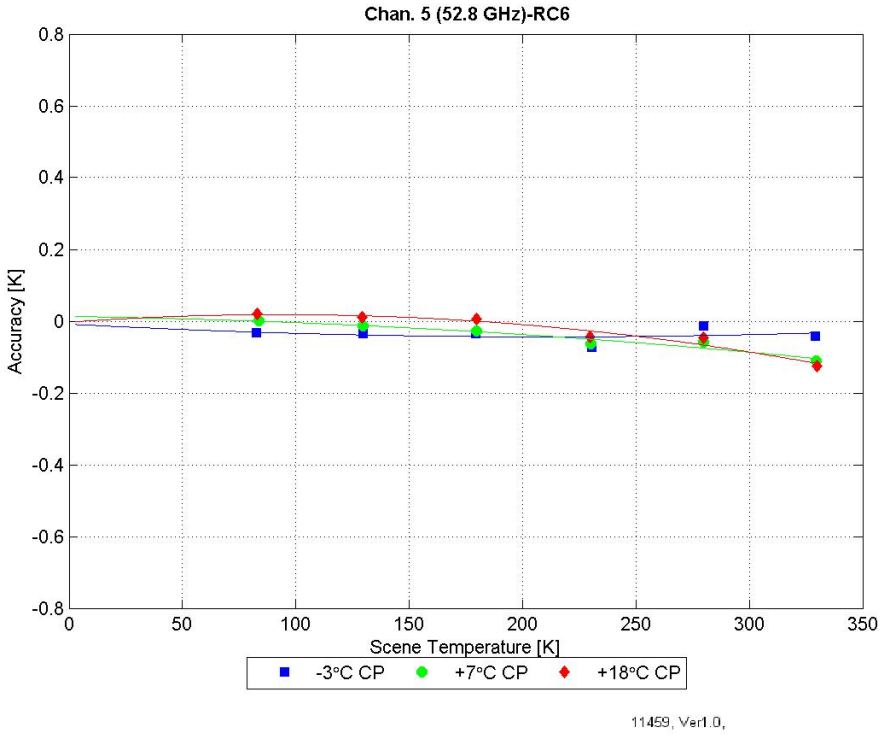



**Figure 10-23 Channel 5 RC6 – Accuracy vs Scene Temperature**

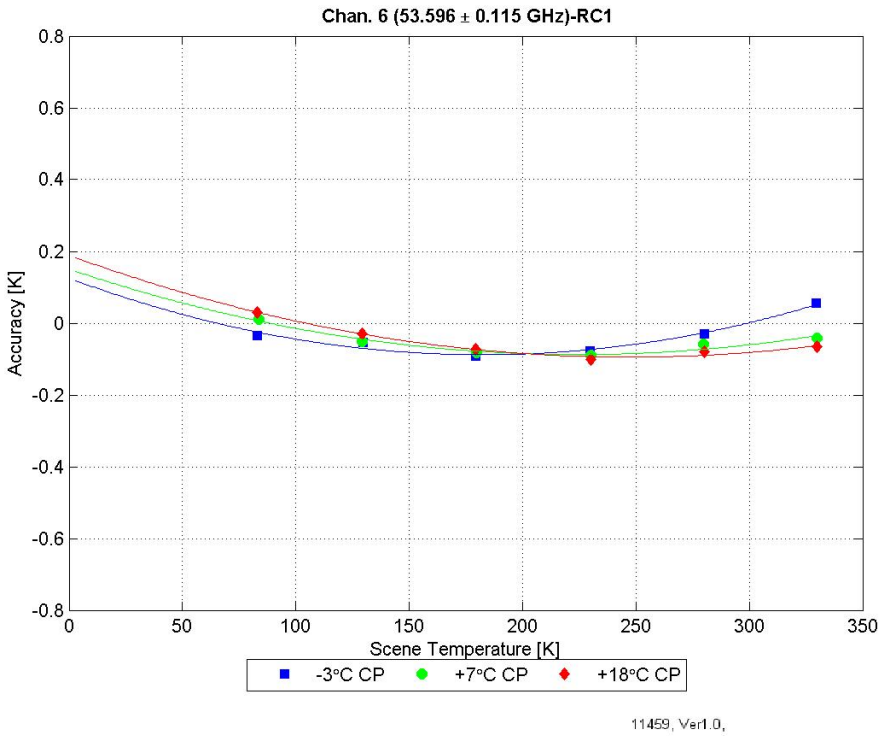



**Figure 10-24 Channel 6 RC1 – Accuracy vs Scene Temperature**

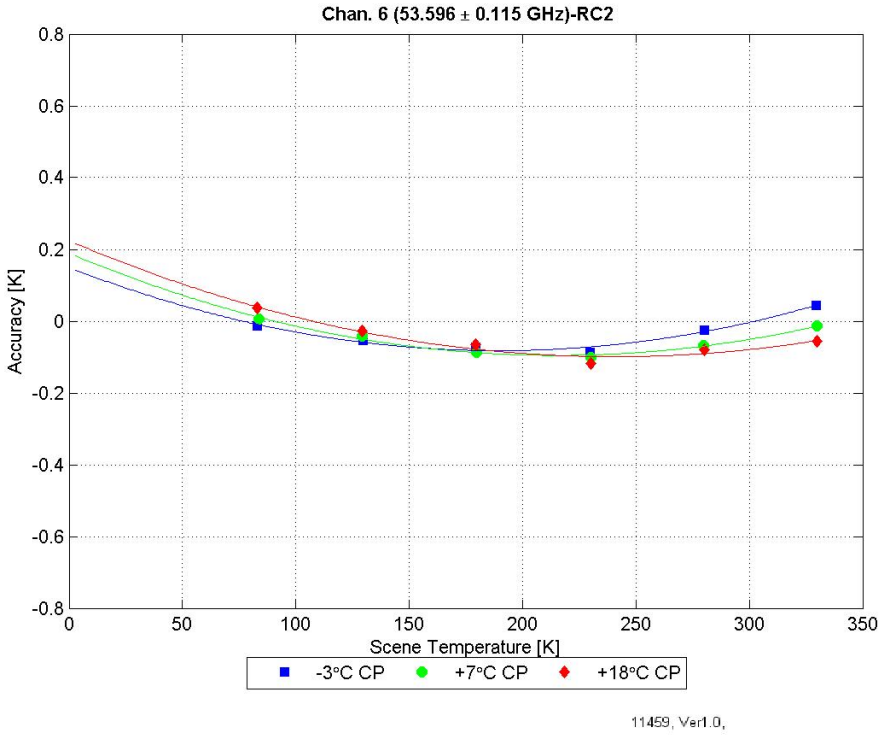



**Figure 10-25 Channel 6 RC2 – Accuracy vs Scene Temperature**

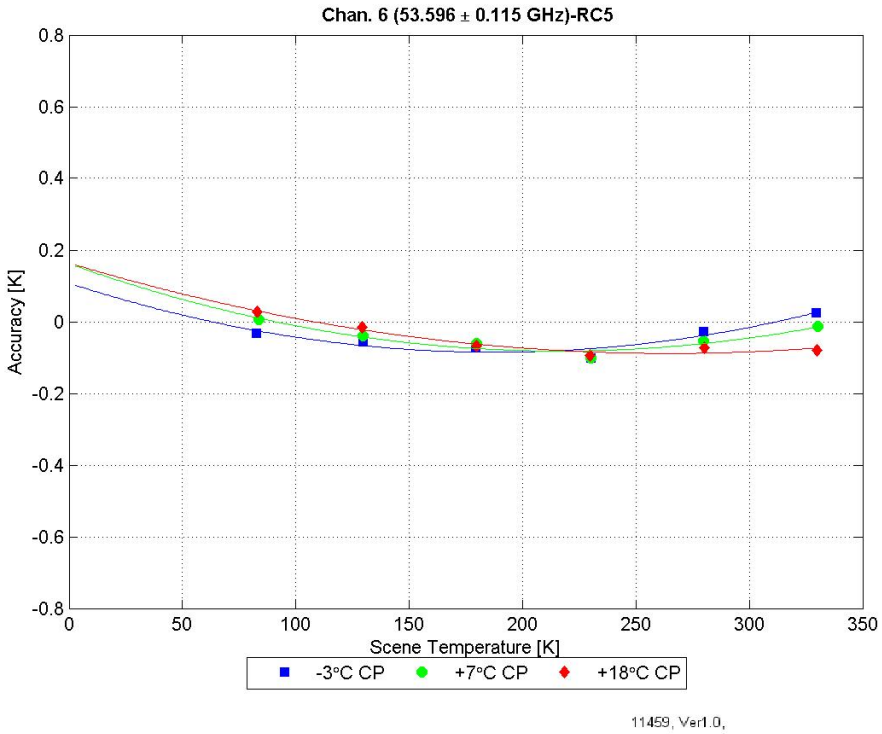



**Figure 10-26 Channel 6 RC5 – Accuracy vs Scene Temperature**

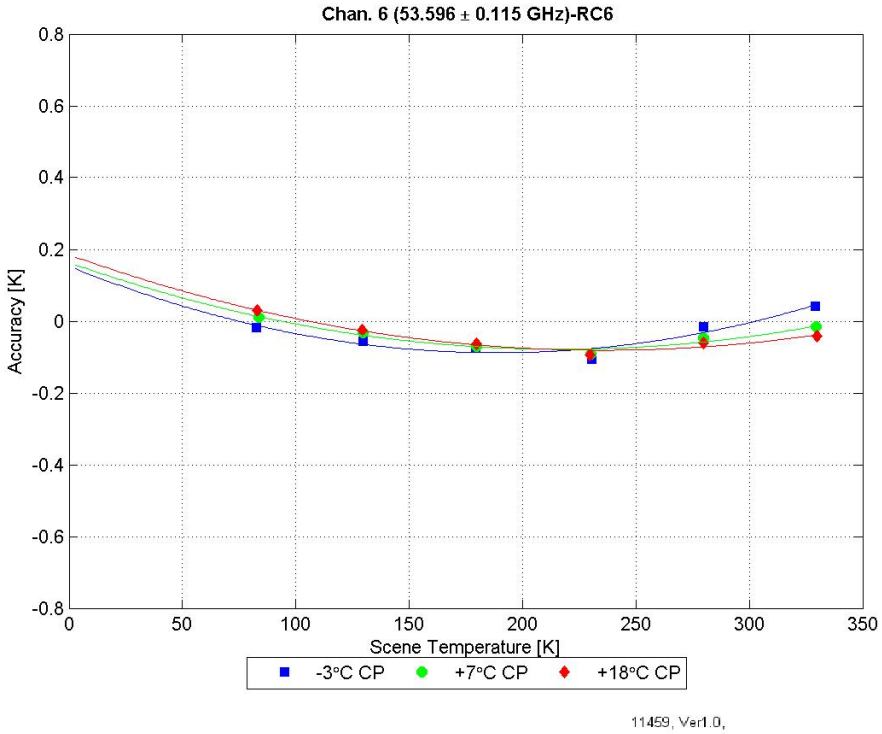



**Figure 10-27 Channel 6 RC6 – Accuracy vs Scene Temperature**

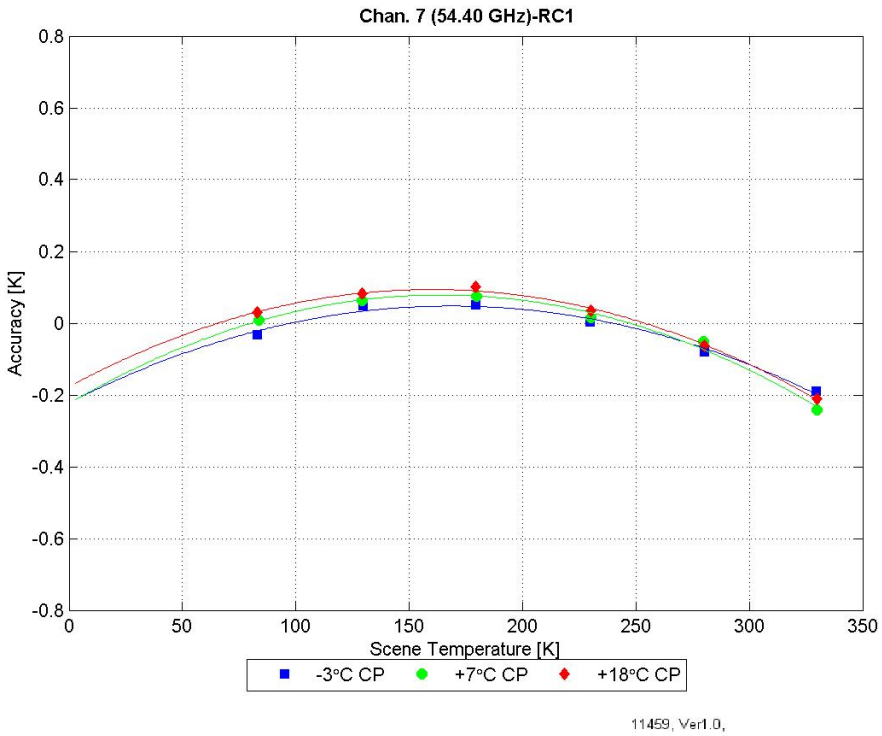



**Figure 10-28 Channel 7 RC1 – Accuracy vs Scene Temperature**

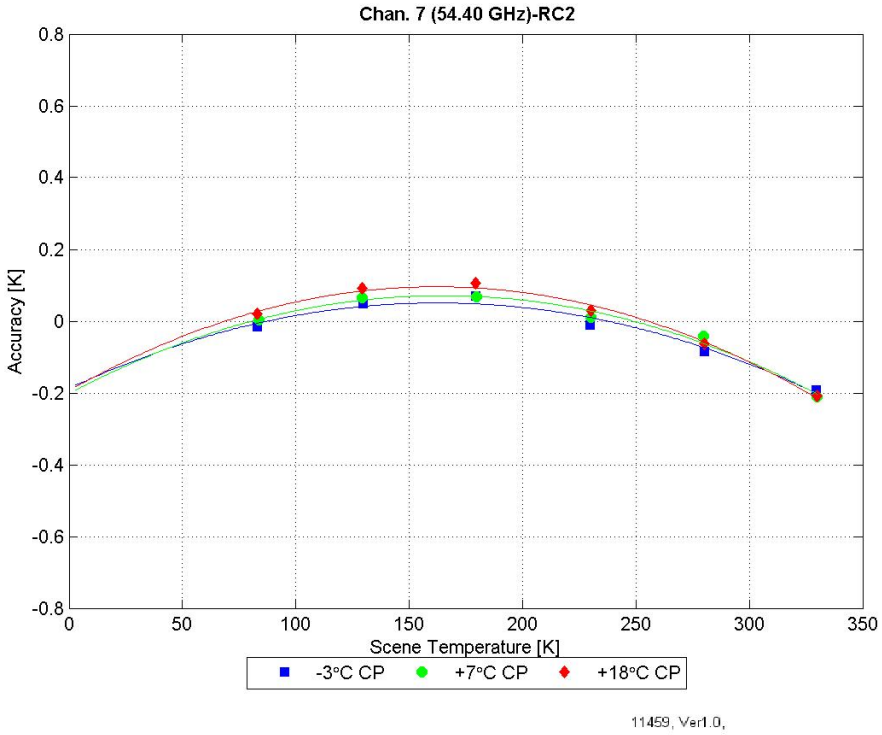



**Figure 10-29 Channel 7 RC2 – Accuracy vs Scene Temperature**

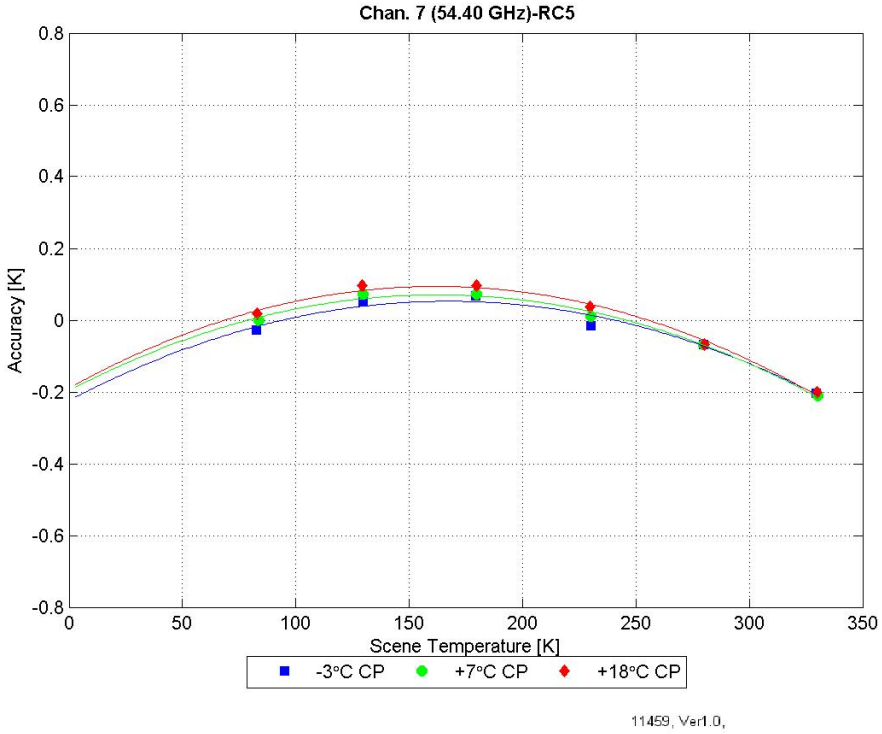



**Figure 10-30 Channel 7 RC5 – Accuracy vs Scene Temperature**

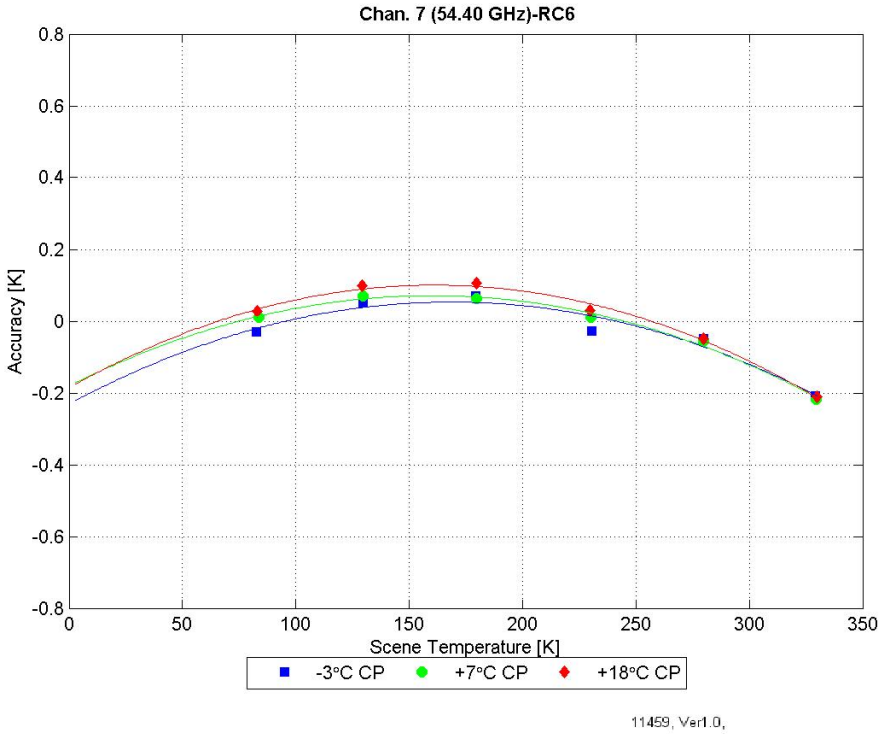



**Figure 10-31 Channel 7 RC6 – Accuracy vs Scene Temperature**

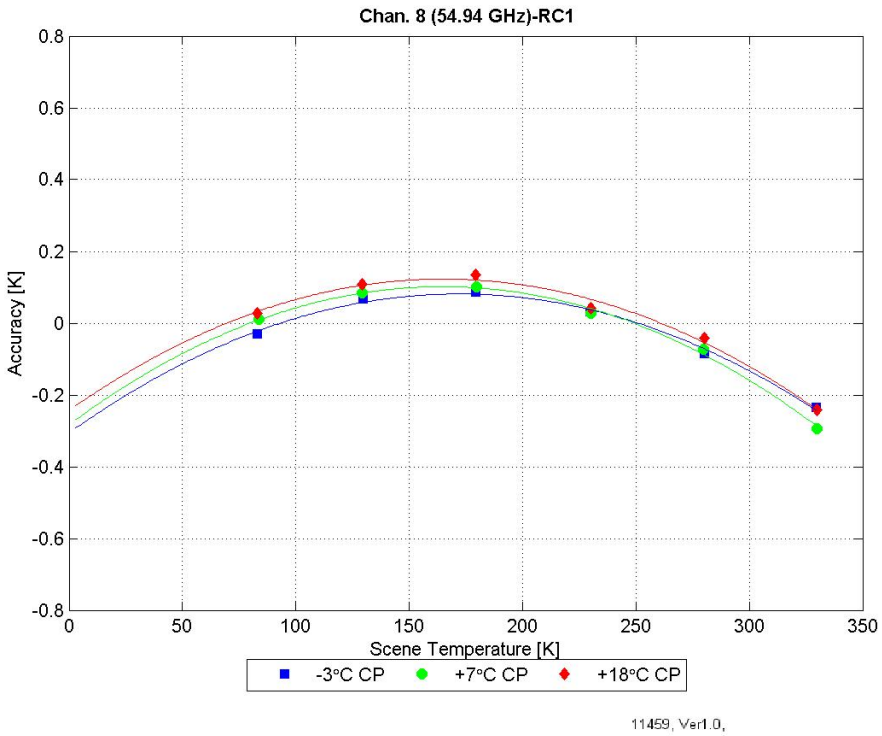



**Figure 10-32 Channel 8 RC1 – Accuracy vs Scene Temperature**

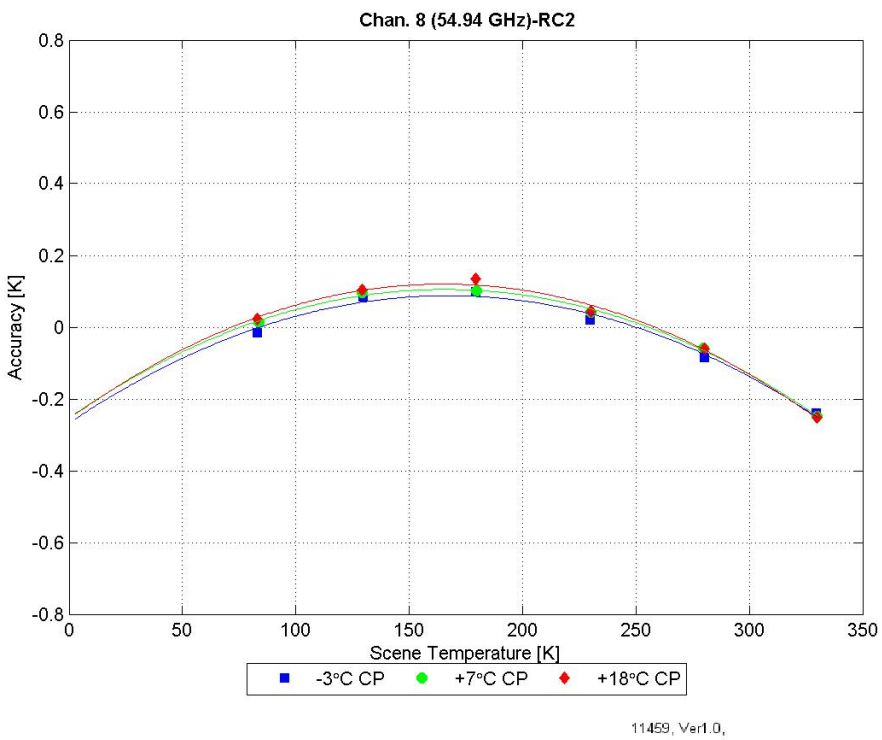



**Figure 10-33 Channel 8 RC2 – Accuracy vs Scene Temperature**

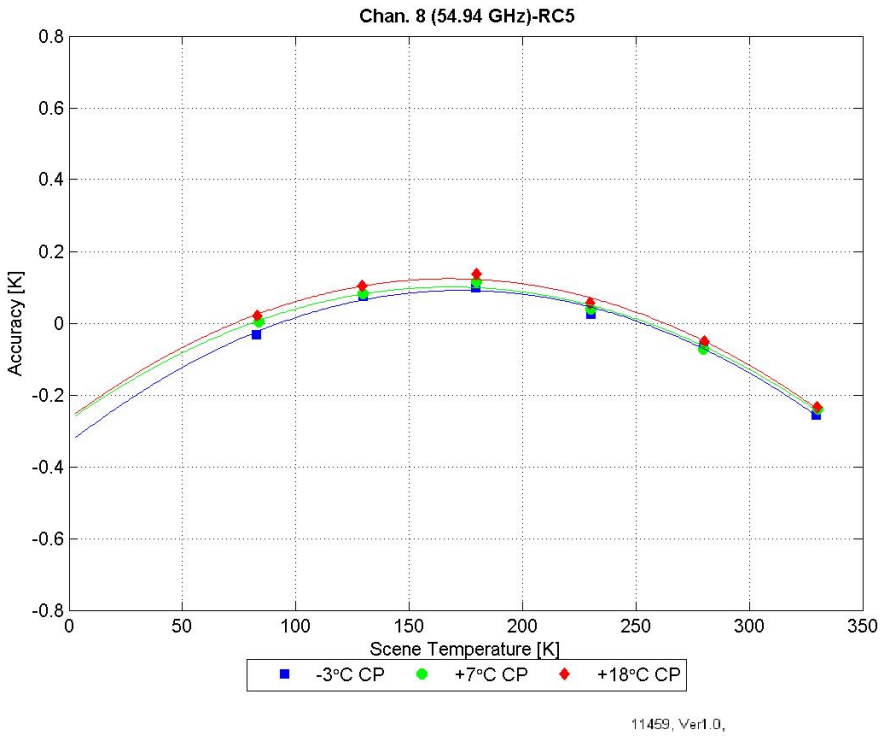



**Figure 10-34 Channel 8 RC5 – Accuracy vs Scene Temperature**

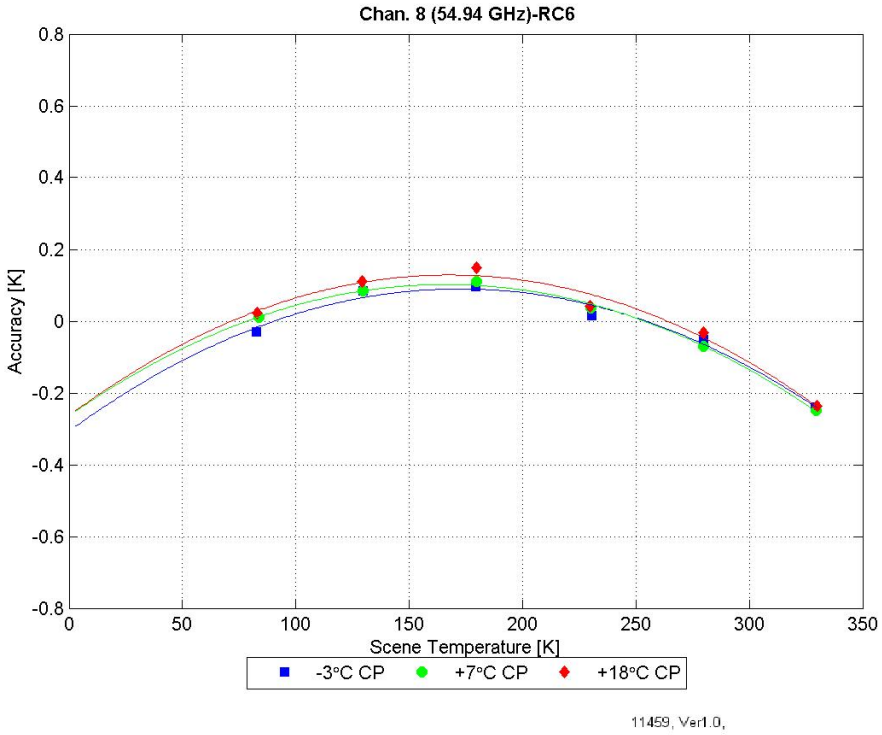



**Figure 10-35 Channel 8 RC6 – Accuracy vs Scene Temperature**

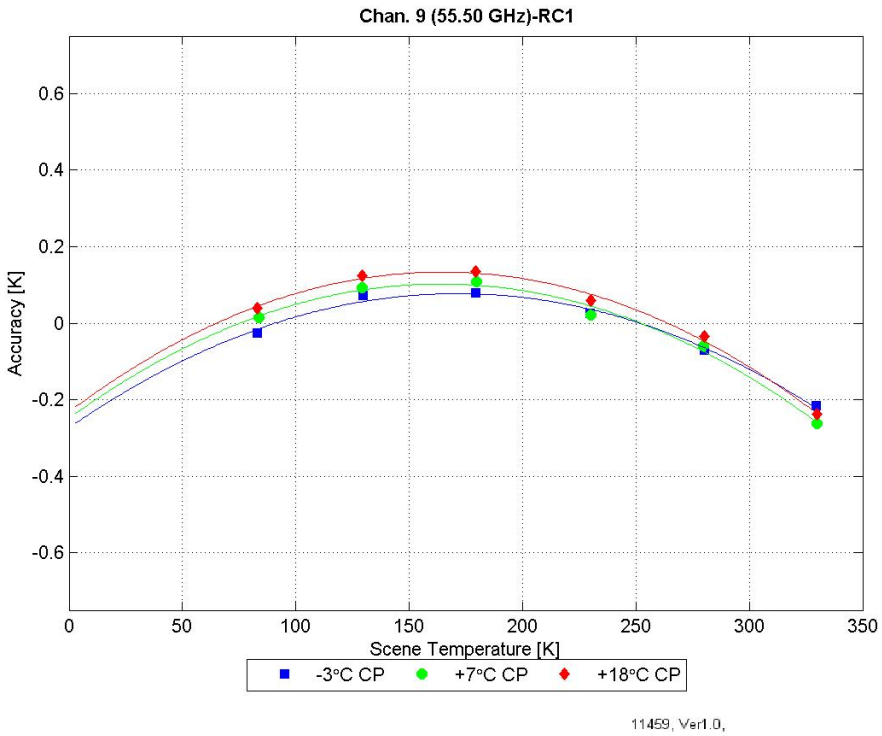



**Figure 10-36 Channel 9 RC1 – Accuracy vs Scene Temperature**

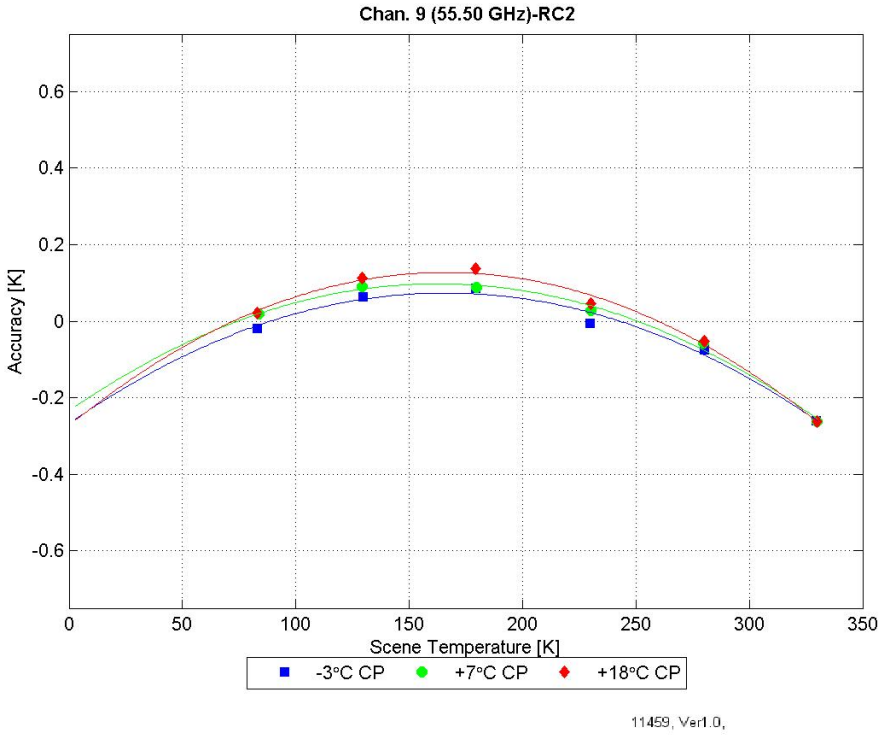



**Figure 10-37 Channel 9 RC2 – Accuracy vs Scene Temperature**

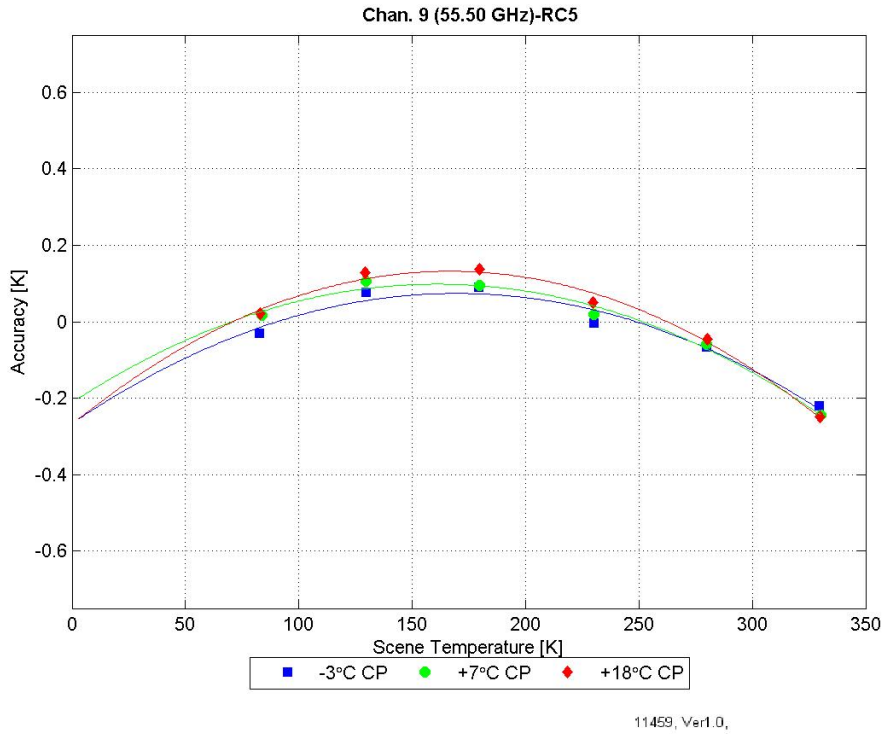



**Figure 10-38 Channel 9 RC5 – Accuracy vs Scene Temperature**

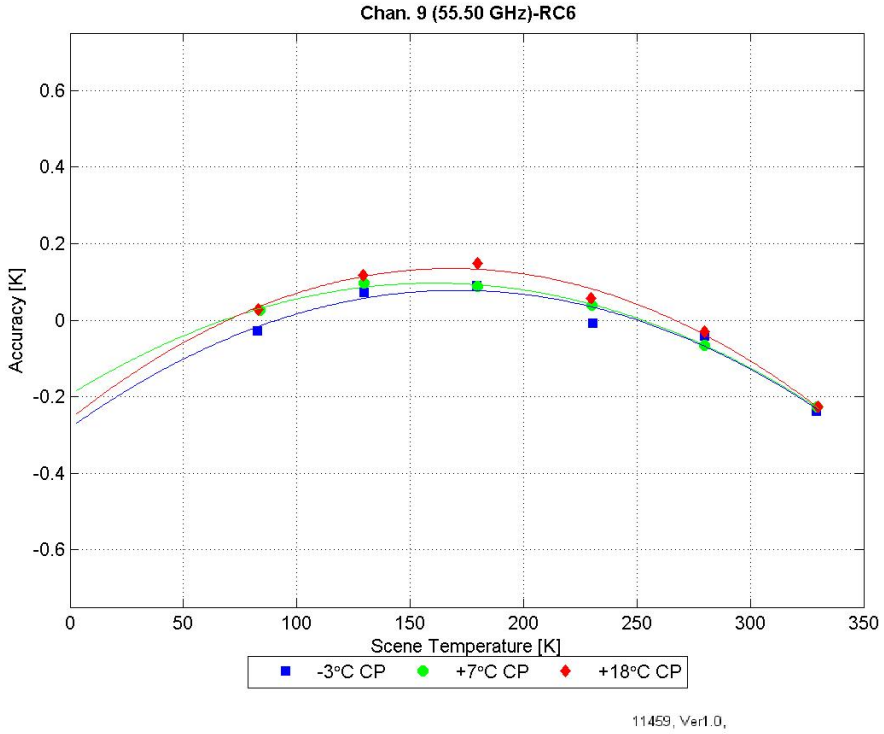



**Figure 10-39 Channel 9 RC6 – Accuracy vs Scene Temperature**

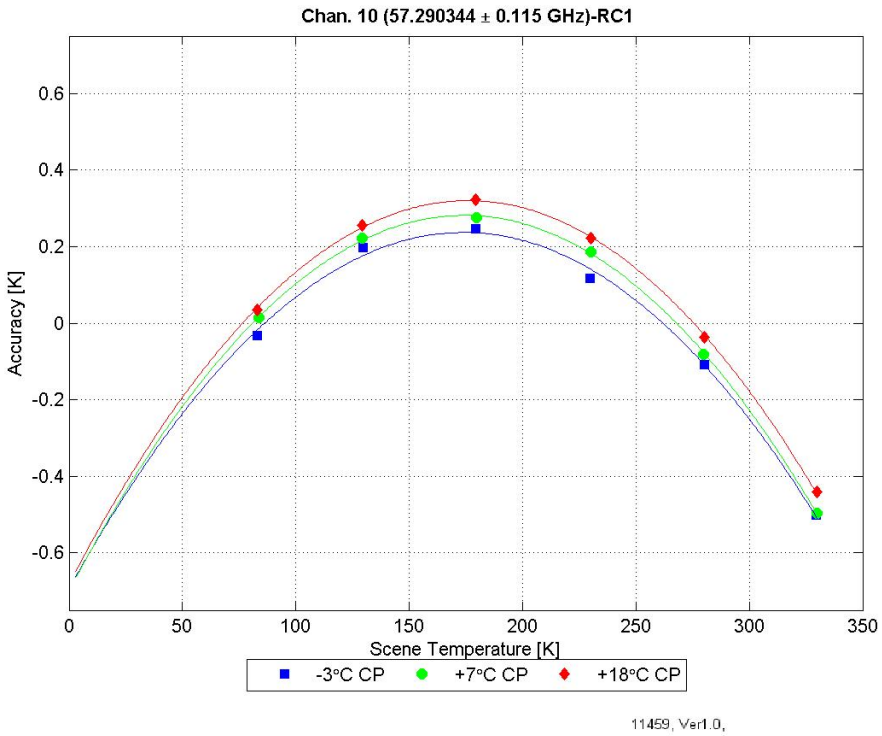



**Figure 10-40 Channel 10 RC1 – Accuracy vs Scene Temperature**

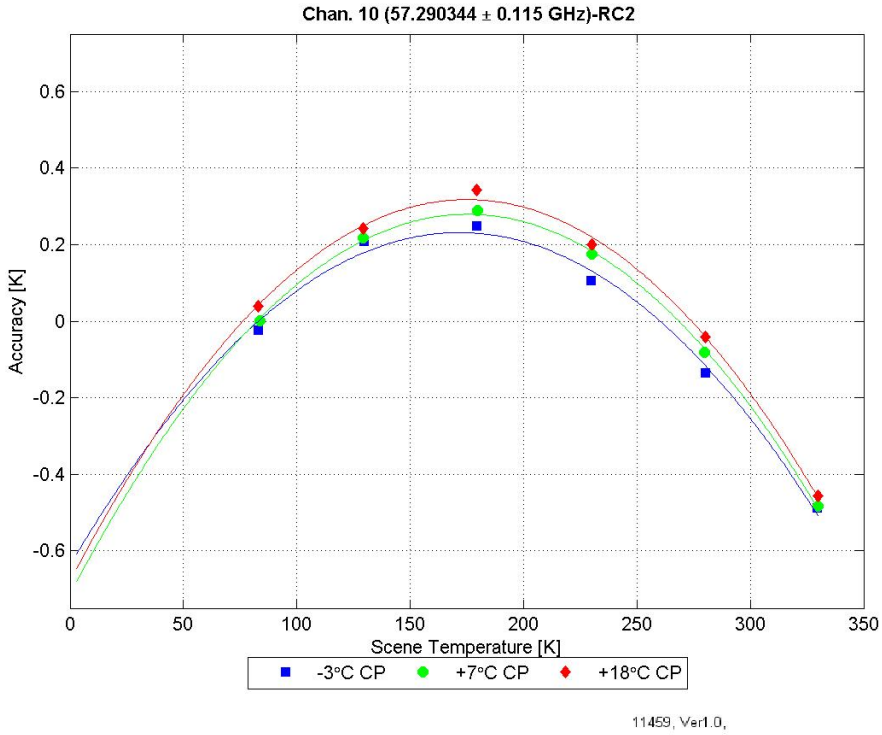



**Figure 10-41 Channel 10 RC2 – Accuracy vs Scene Temperature**

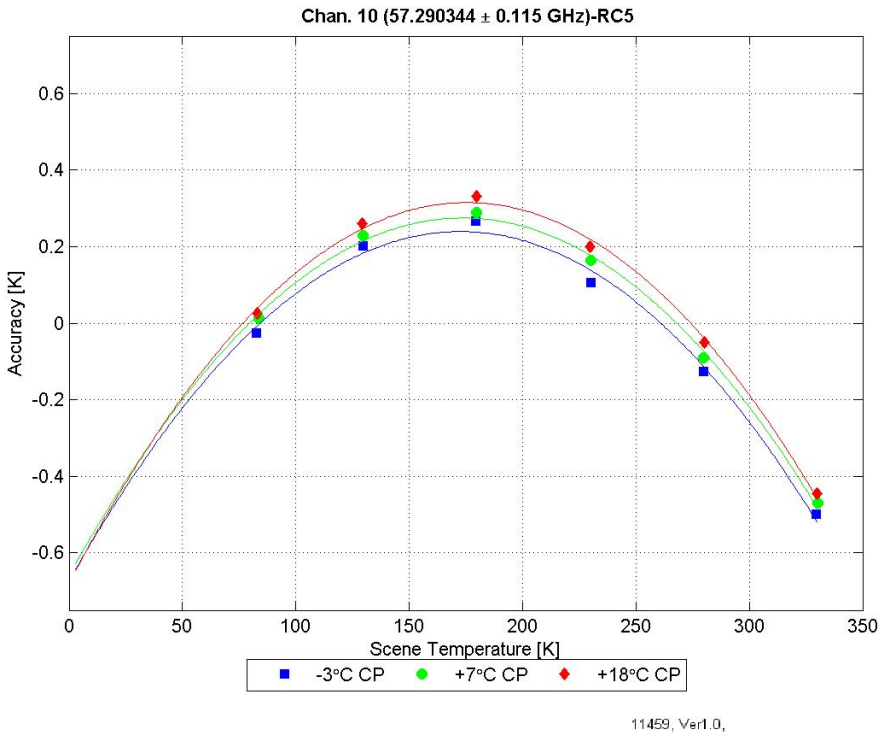



**Figure 10-42 Channel 10 RC5 – Accuracy vs Scene Temperature**

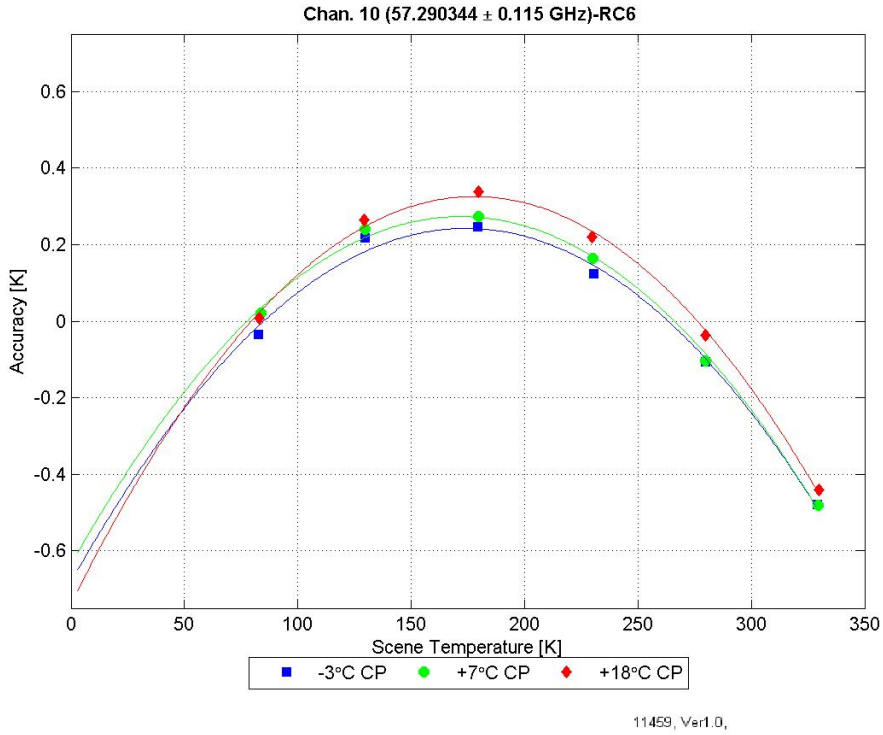



**Figure 10-43 Channel 10 RC6 – Accuracy vs Scene Temperature**

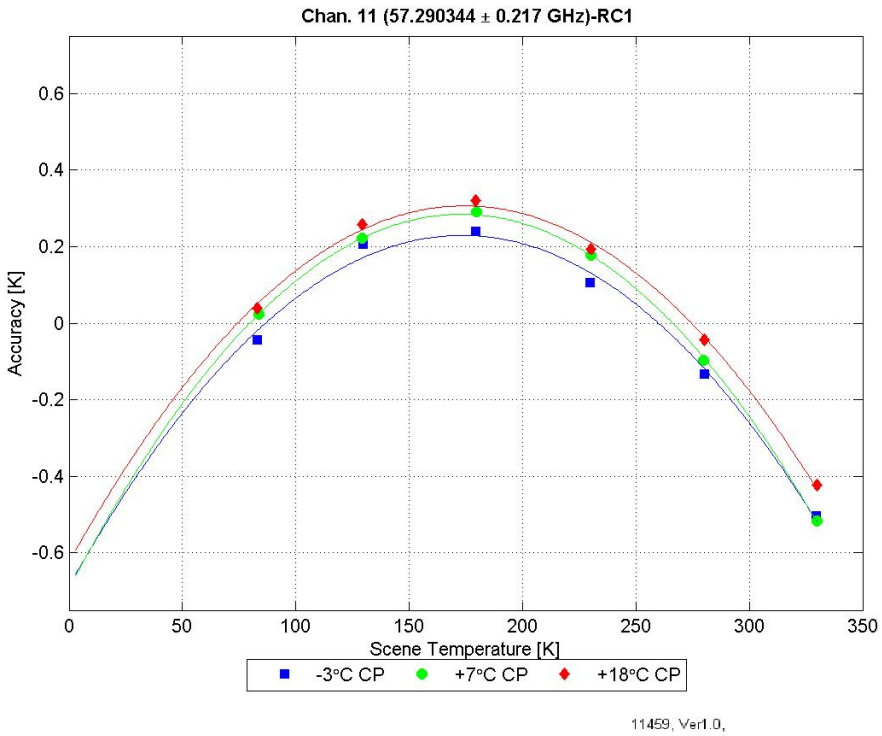



**Figure 10-44 Channel 11 RC1 – Accuracy vs Scene Temperature**

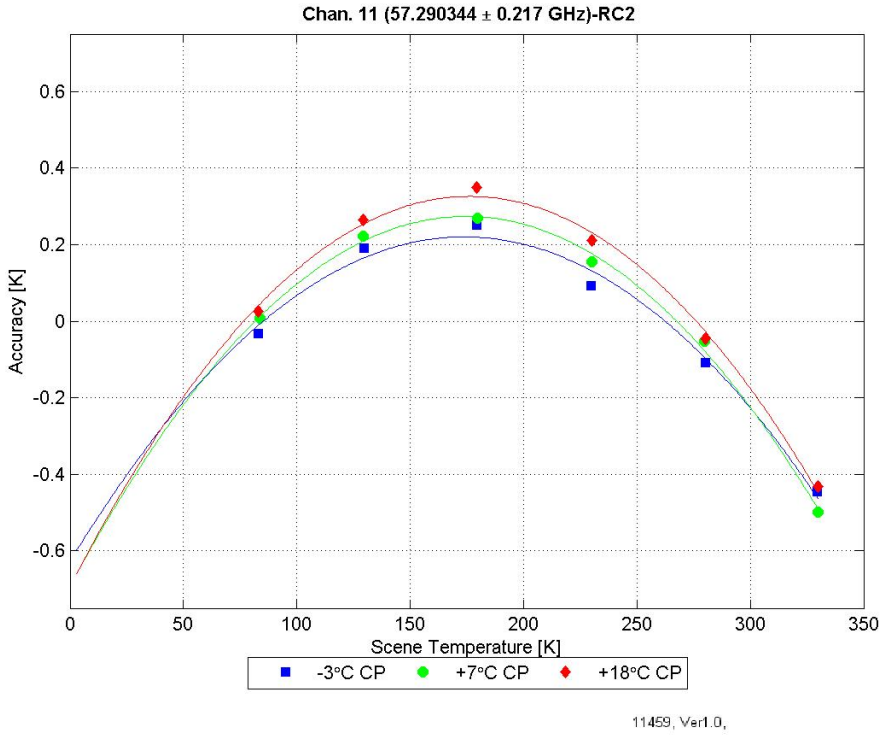



**Figure 10-45 Channel 11 RC2 – Accuracy vs Scene Temperature**

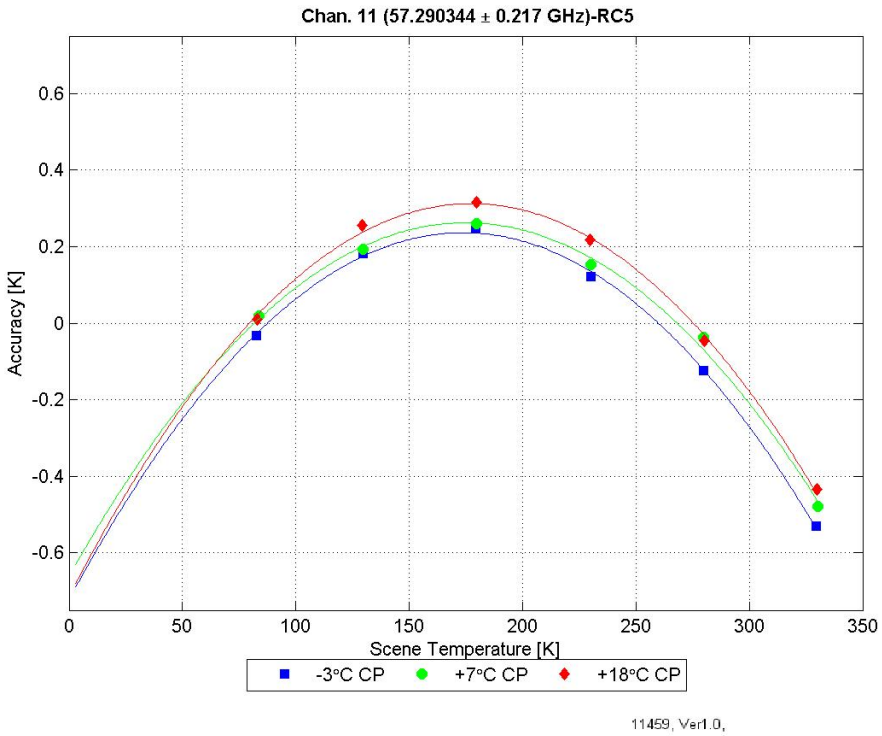



**Figure 10-46 Channel 11 RC5 – Accuracy vs Scene Temperature**

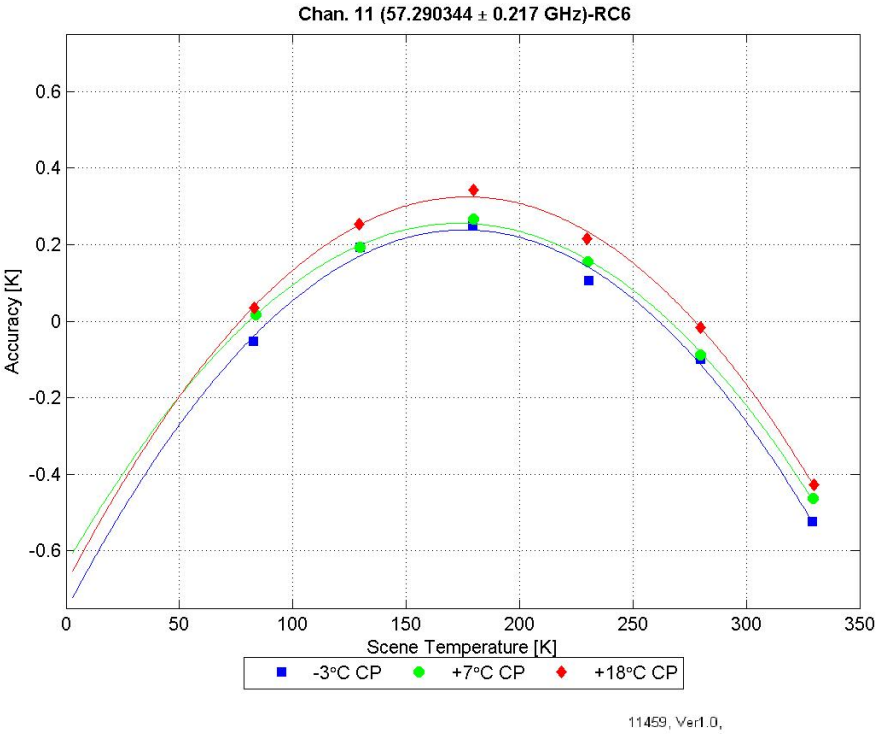



**Figure 10-47 Channel 11 RC6 – Accuracy vs Scene Temperature**

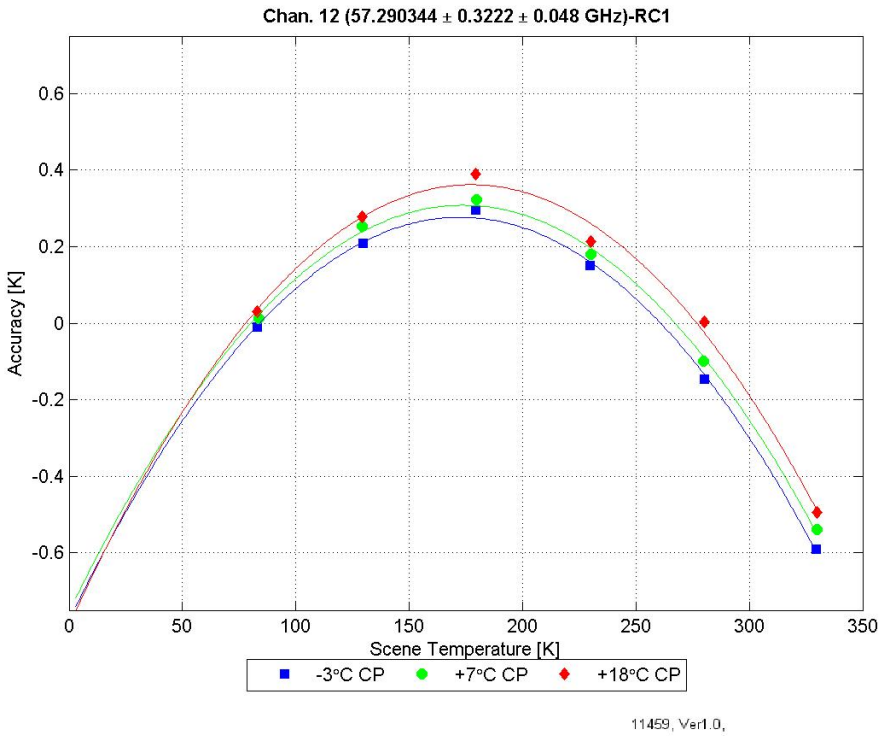



**Figure 10-48 Channel 12 RC1 – Accuracy vs Scene Temperature**

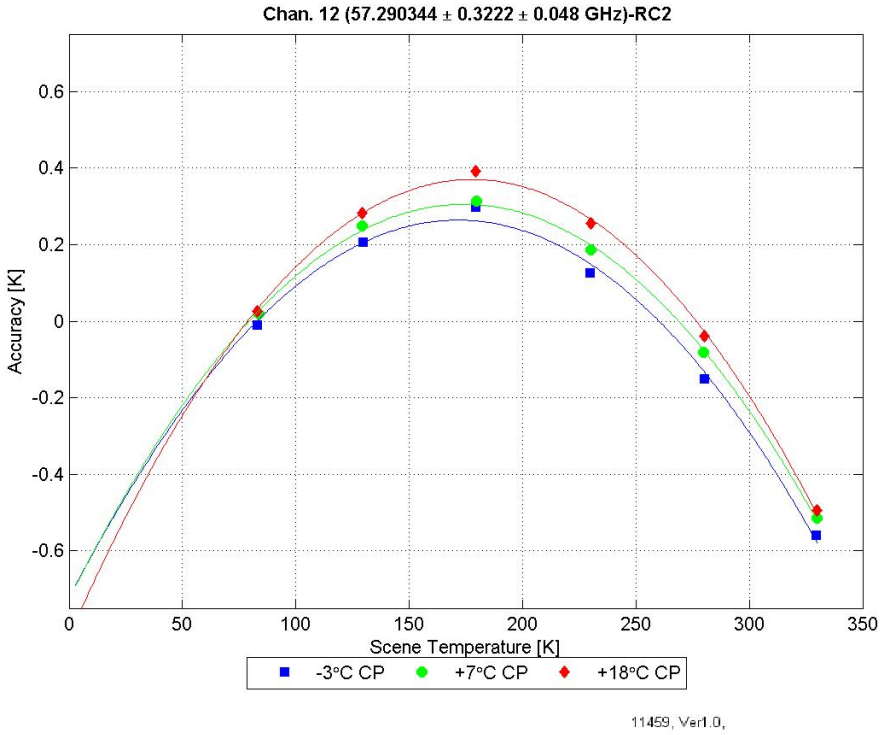



**Figure 10-49 Channel 12 RC2 – Accuracy vs Scene Temperature**

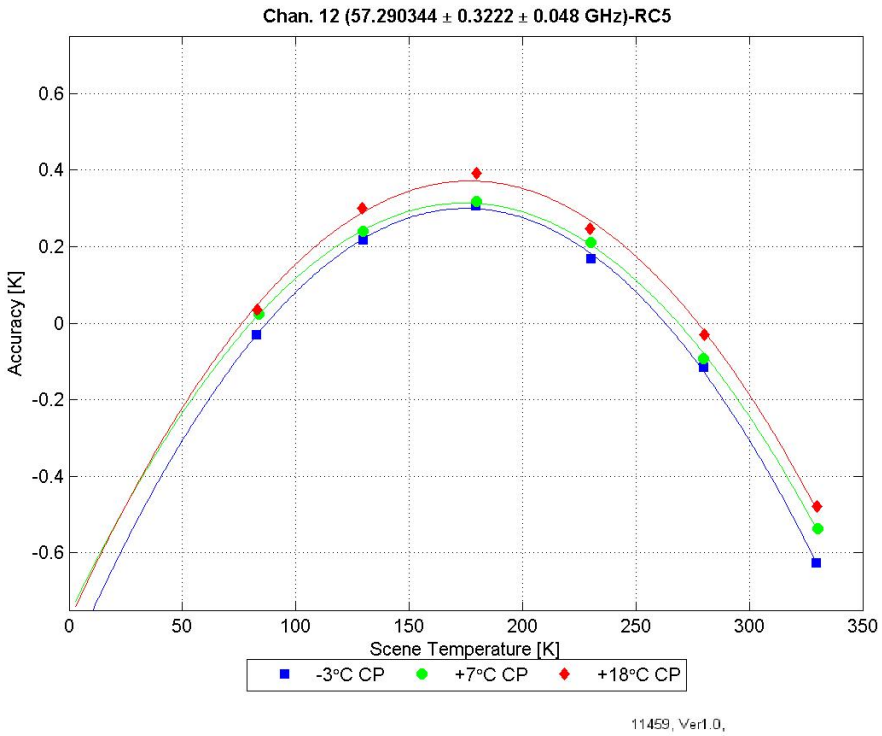



**Figure 10-50 Channel 12 RC5 – Accuracy vs Scene Temperature**

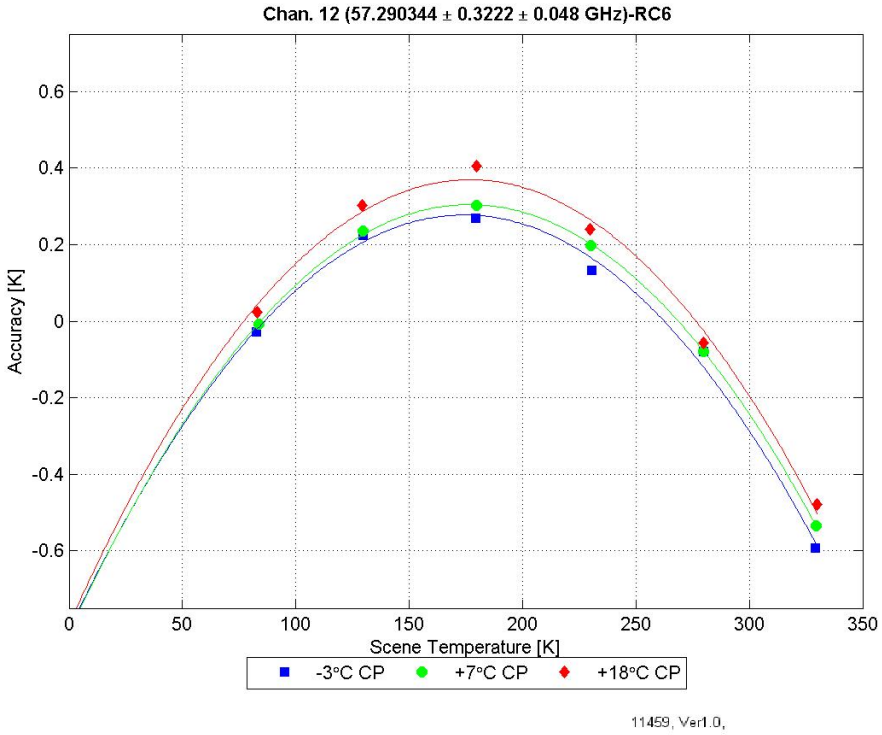



**Figure 10-51 Channel 12 RC6 – Accuracy vs Scene Temperature**

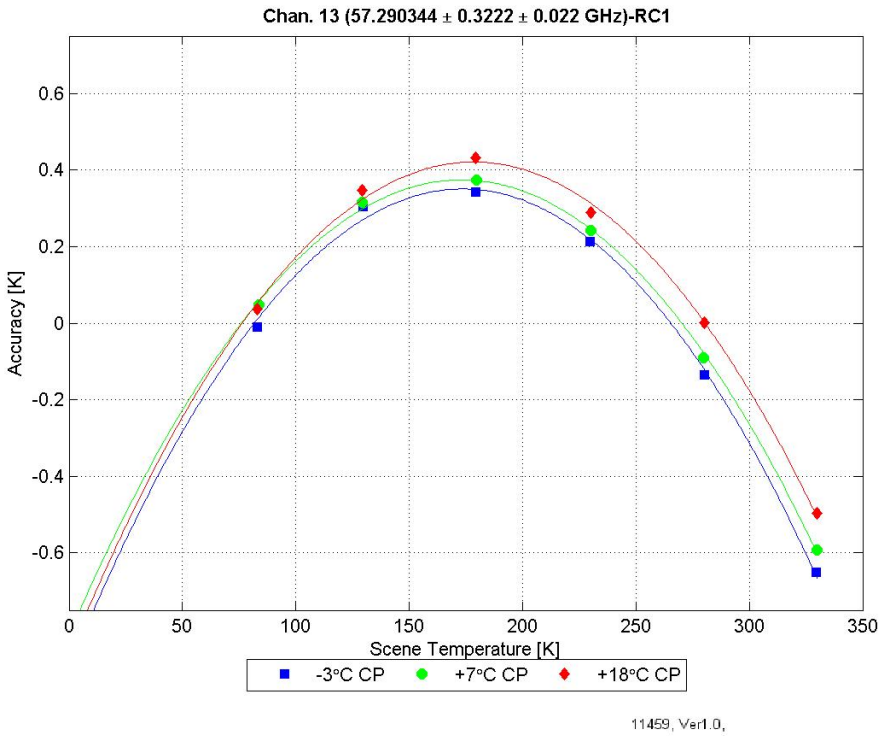



**Figure 10-52 Channel 13 RC1 – Accuracy vs Scene Temperature**

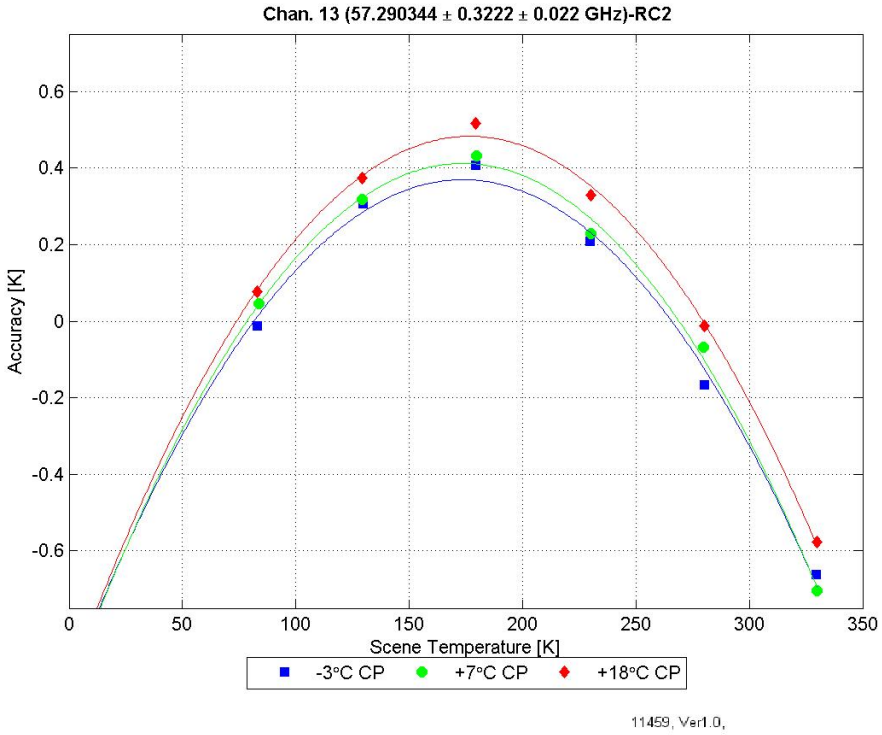



**Figure 10-53 Channel 13 RC2 – Accuracy vs Scene Temperature**

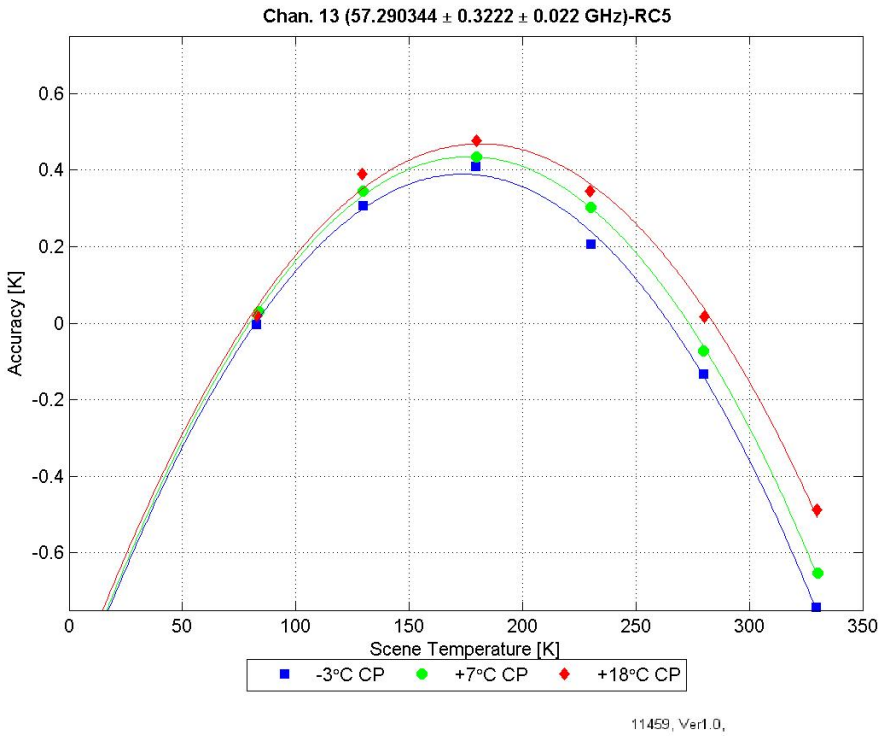



**Figure 10-54 Channel 13 RC5 – Accuracy vs Scene Temperature**

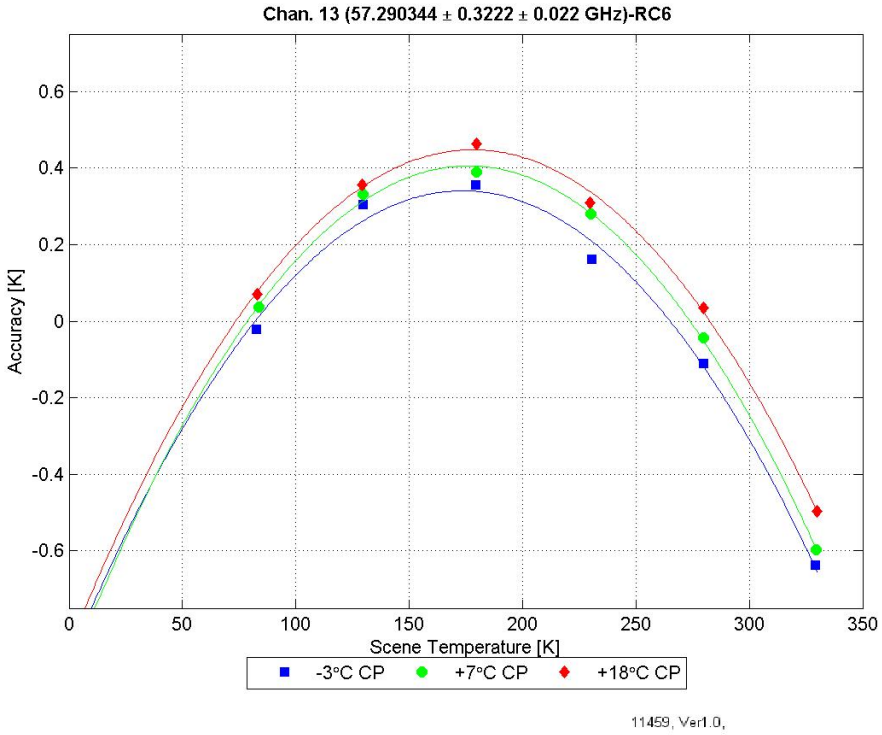



**Figure 10-55 Channel 13 RC6 – Accuracy vs Scene Temperature**

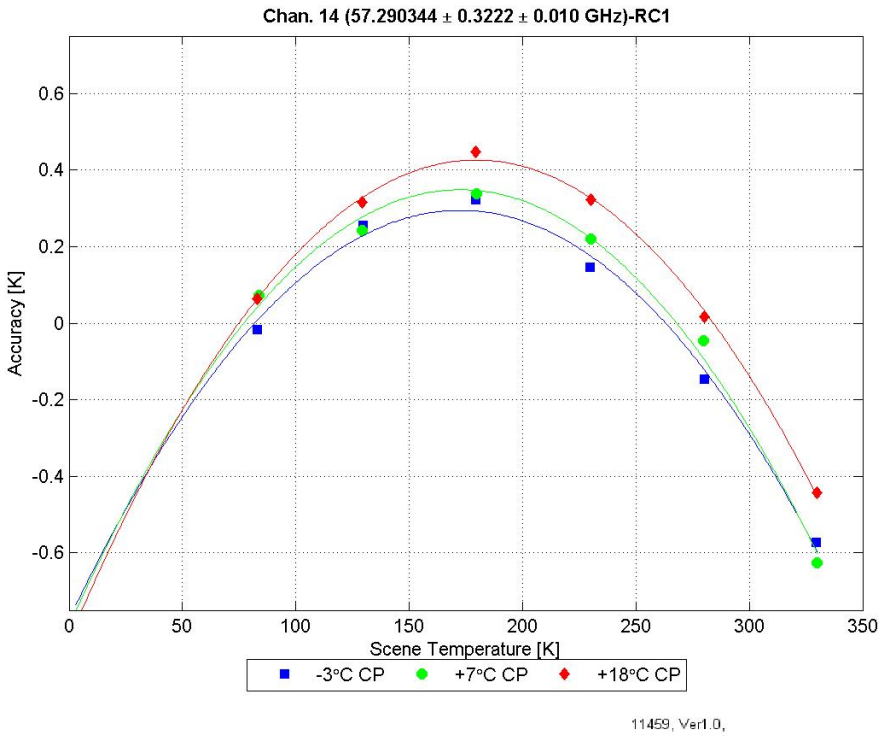



**Figure 10-56 Channel 14 RC1 – Accuracy vs Scene Temperature**

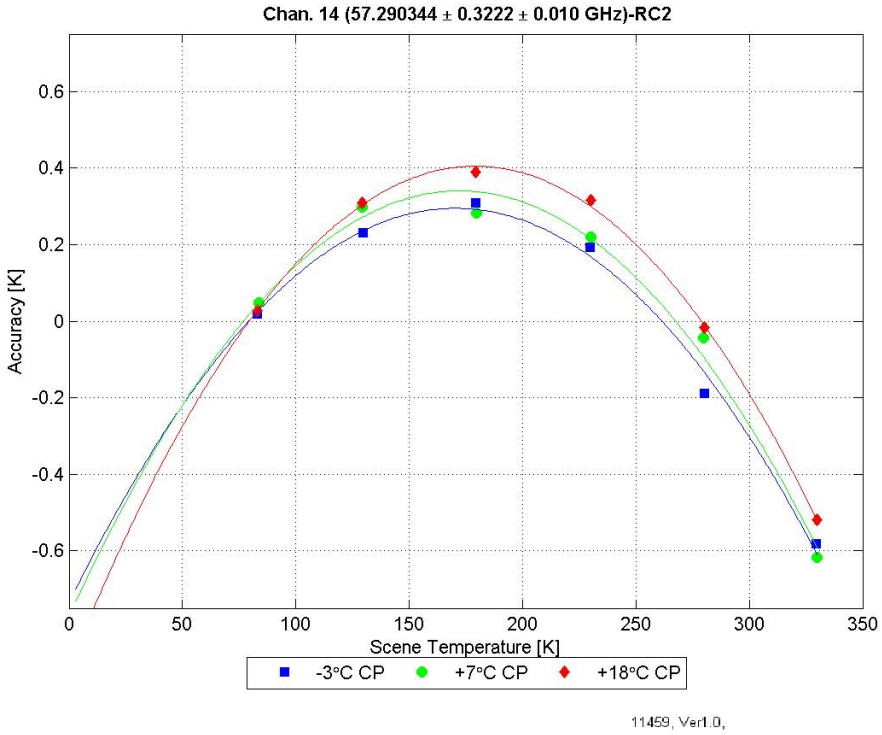



**Figure 10-57 Channel 14 RC2 – Accuracy vs Scene Temperature**

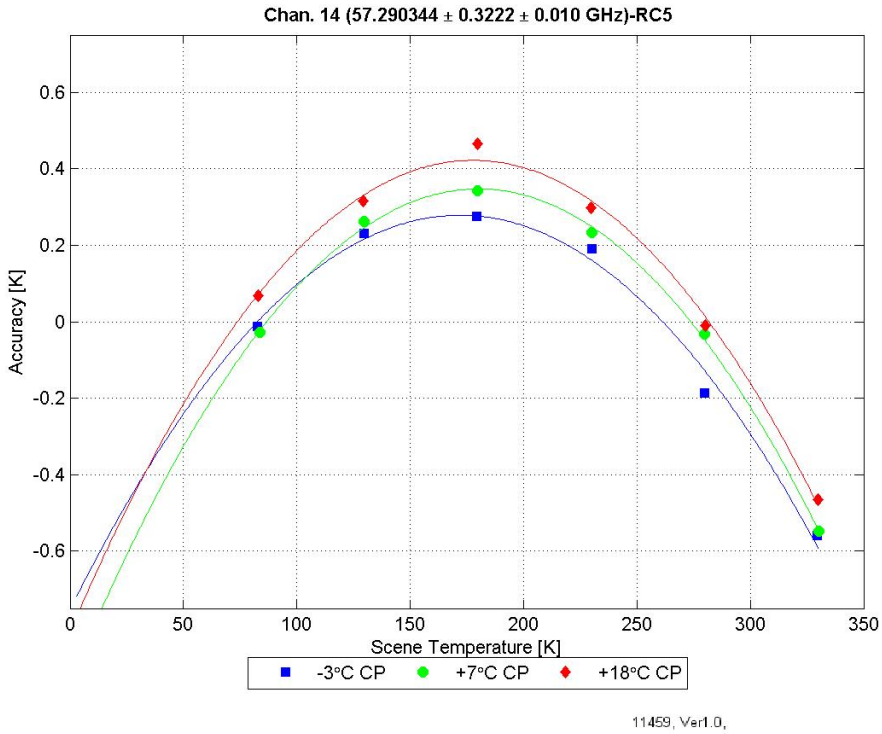



**Figure 10-58 Channel 14 RC5 – Accuracy vs Scene Temperature**

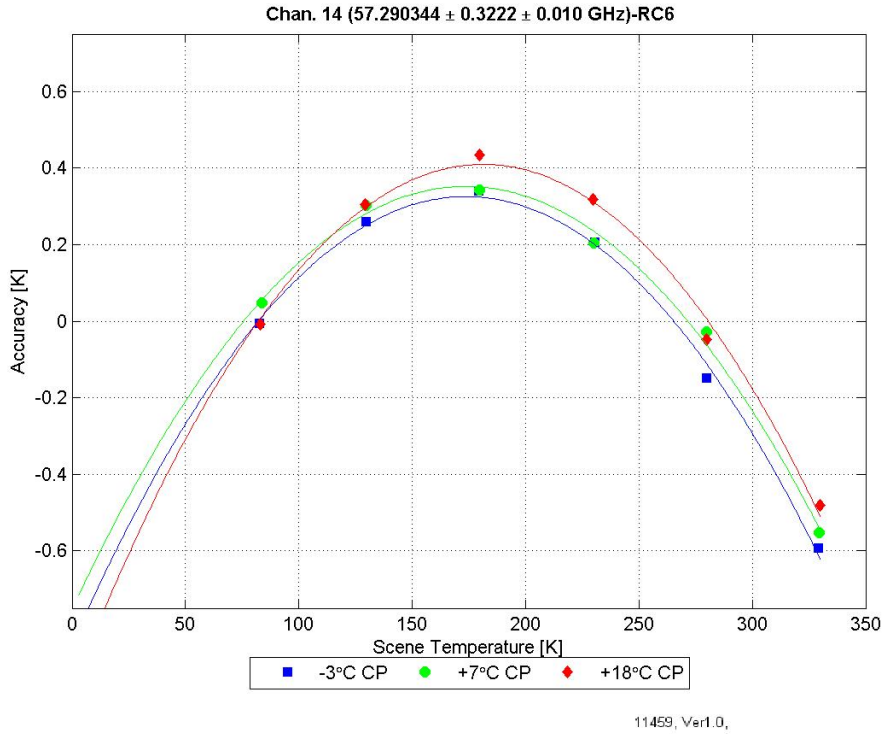



**Figure 10-59 Channel 14 RC6 – Accuracy vs Scene Temperature**

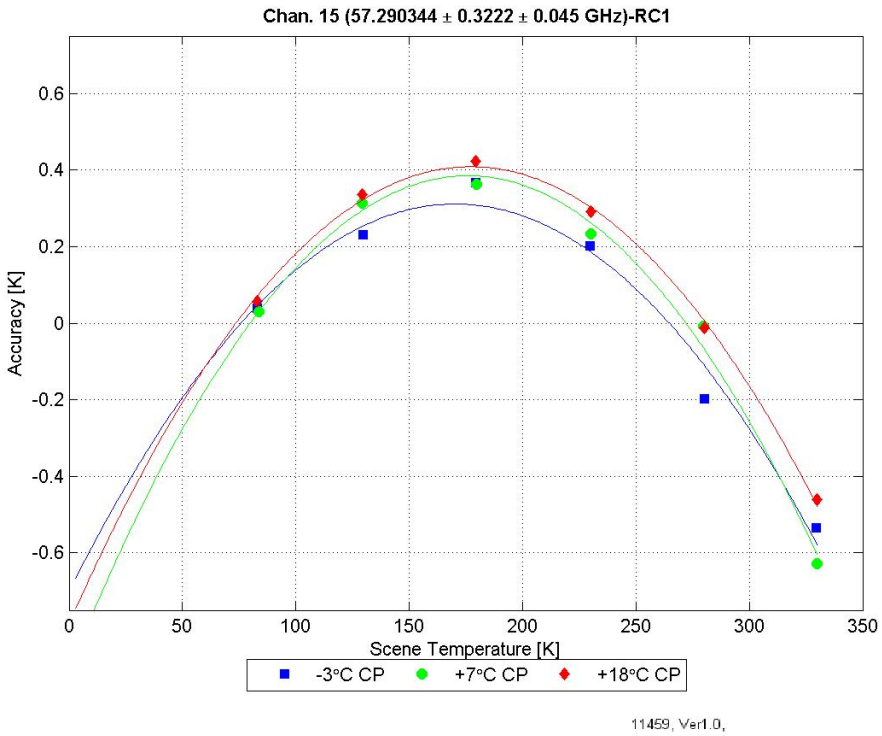



**Figure 10-60 Channel 15 RC1 – Accuracy vs Scene Temperature**

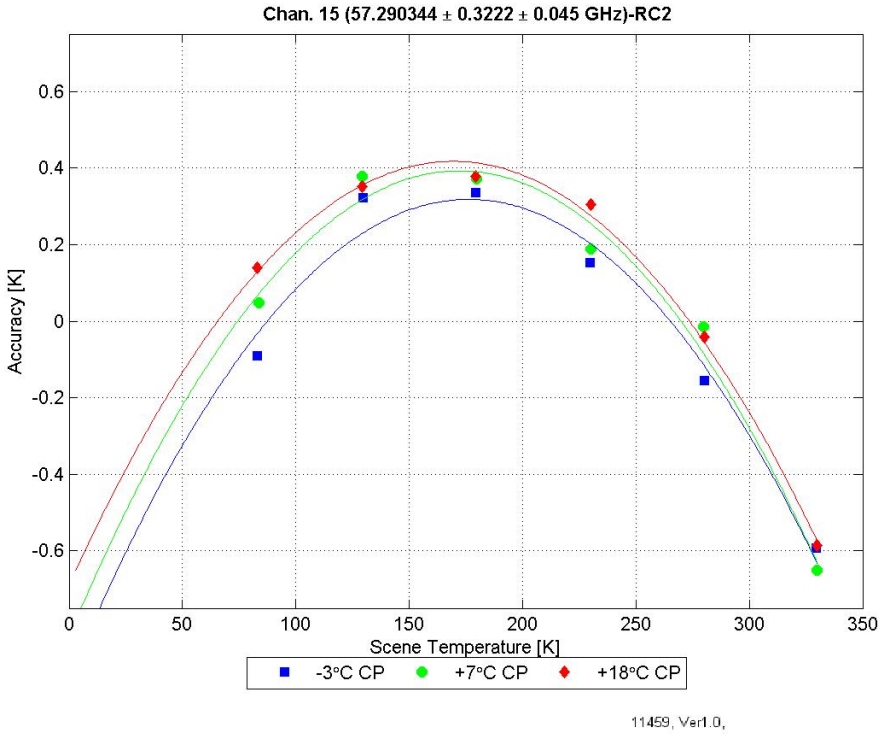



**Figure 10-61 Channel 15 RC2 – Accuracy vs Scene Temperature**

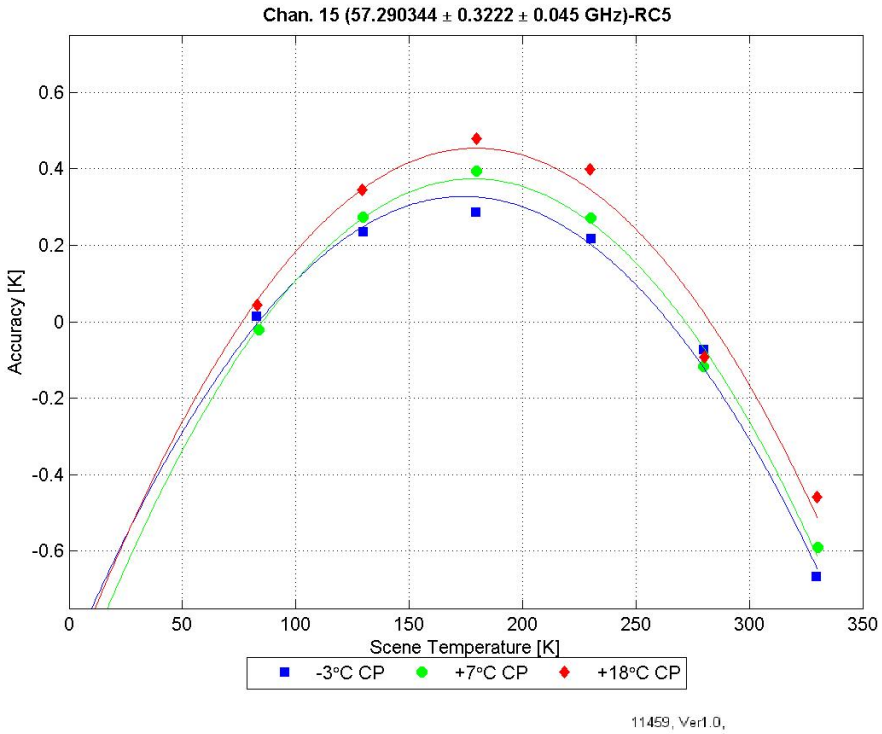



**Figure 10-62 Channel 15 RC5 – Accuracy vs Scene Temperature**

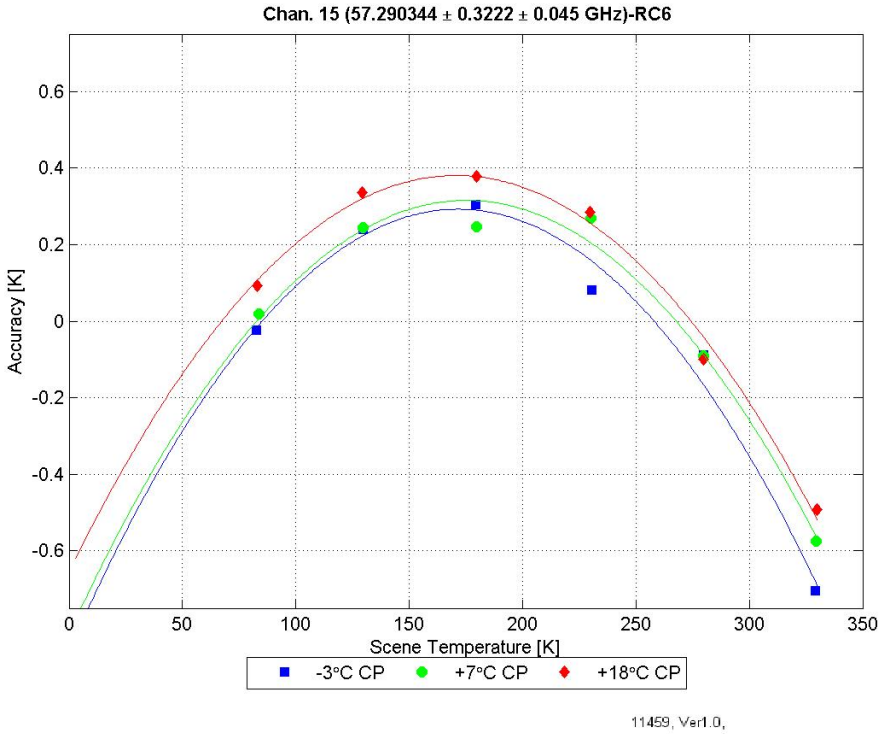



**Figure 10-63 Channel 15 RC6 – Accuracy vs Scene Temperature**

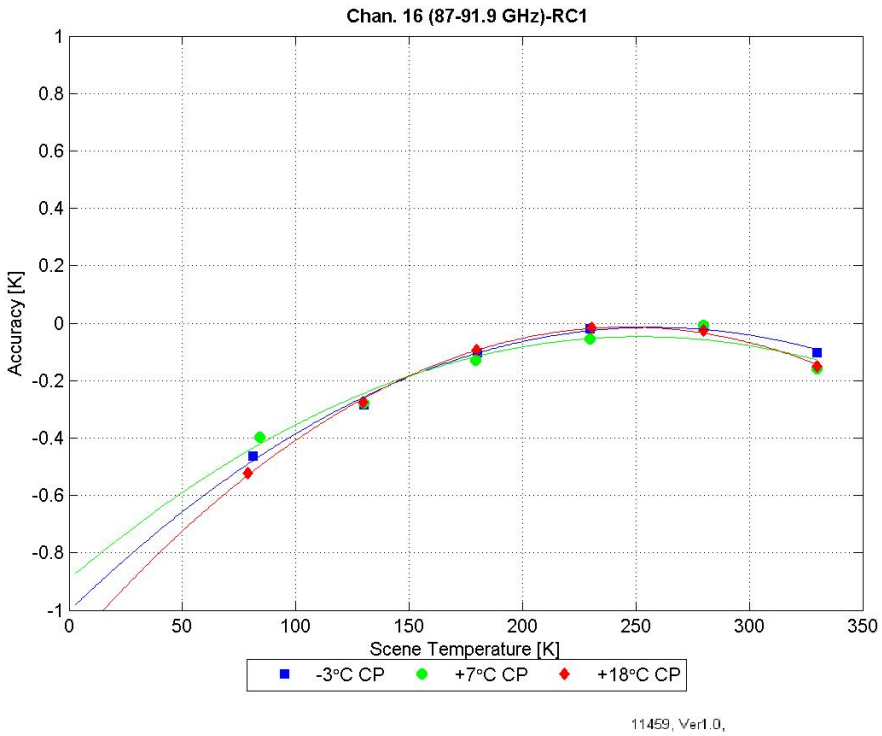



**Figure 10-64 Channel 16 RC1 – Accuracy vs Scene Temperature**

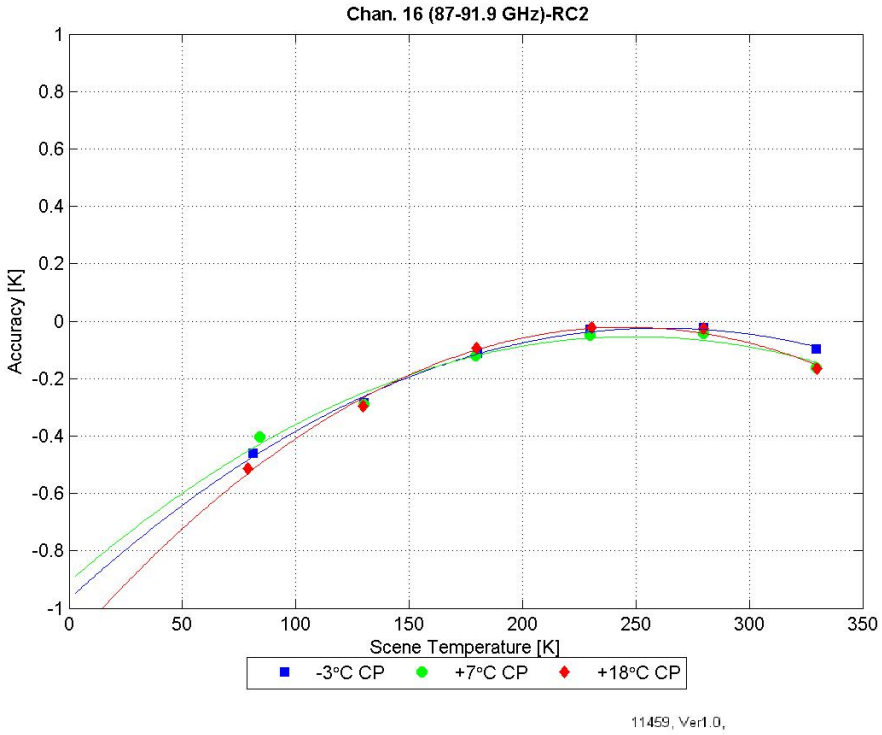



**Figure 10-65 Channel 16 RC2 – Accuracy vs Scene Temperature**

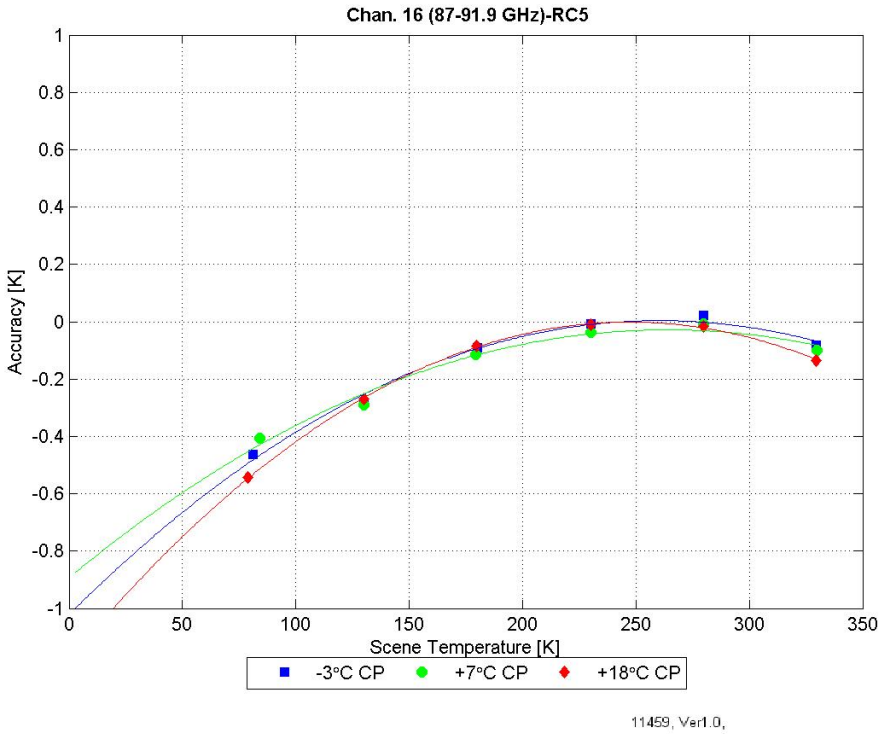



**Figure 10-66 Channel 16 RC5 – Accuracy vs Scene Temperature**

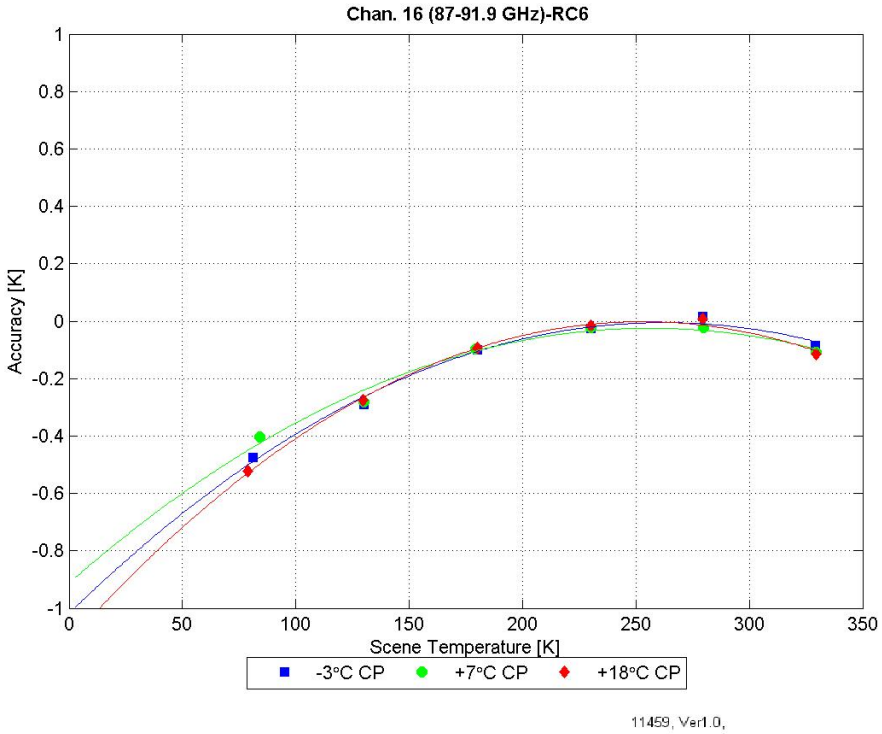



**Figure 10-67 Channel 16 RC6 – Accuracy vs Scene Temperature**

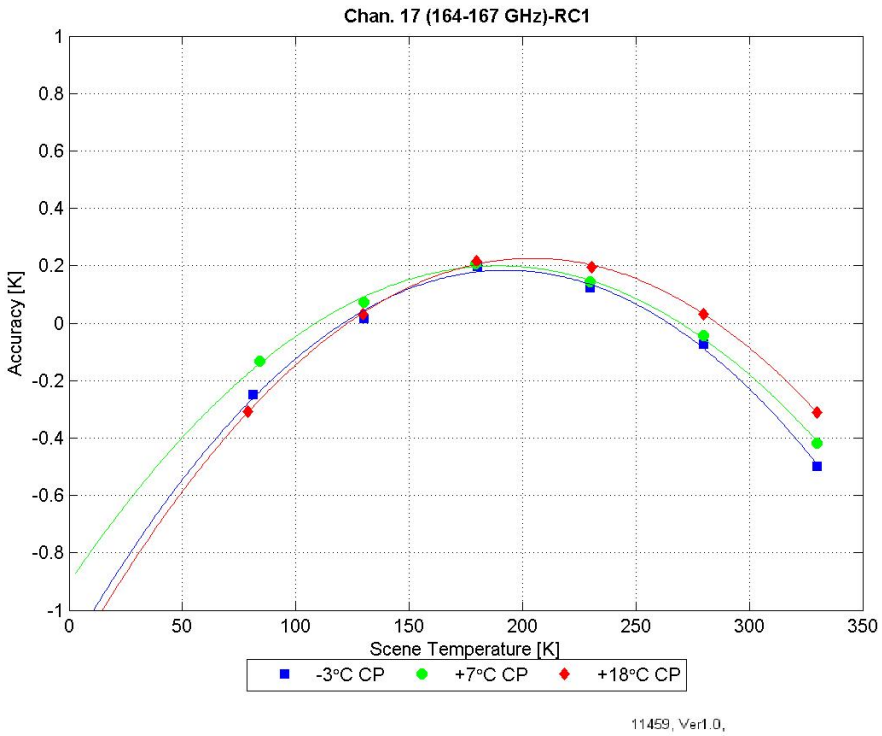



**Figure 10-68 Channel 17 RC1 – Accuracy vs Scene Temperature**

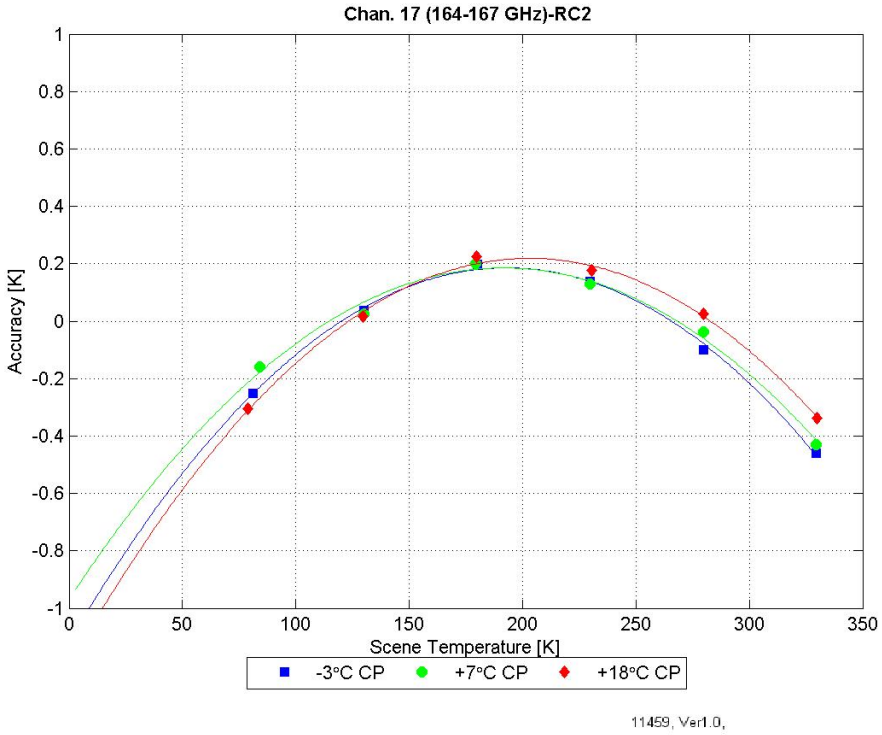



**Figure 10-69 Channel 17 RC2 – Accuracy vs Scene Temperature**

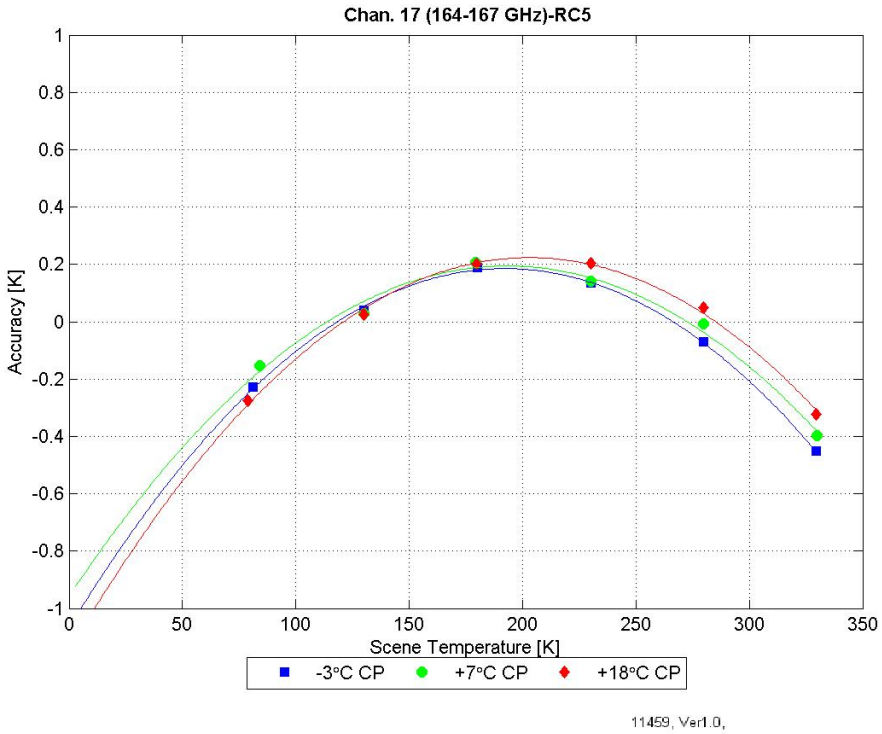



**Figure 10-70 Channel 17 RC5 – Accuracy vs Scene Temperature**

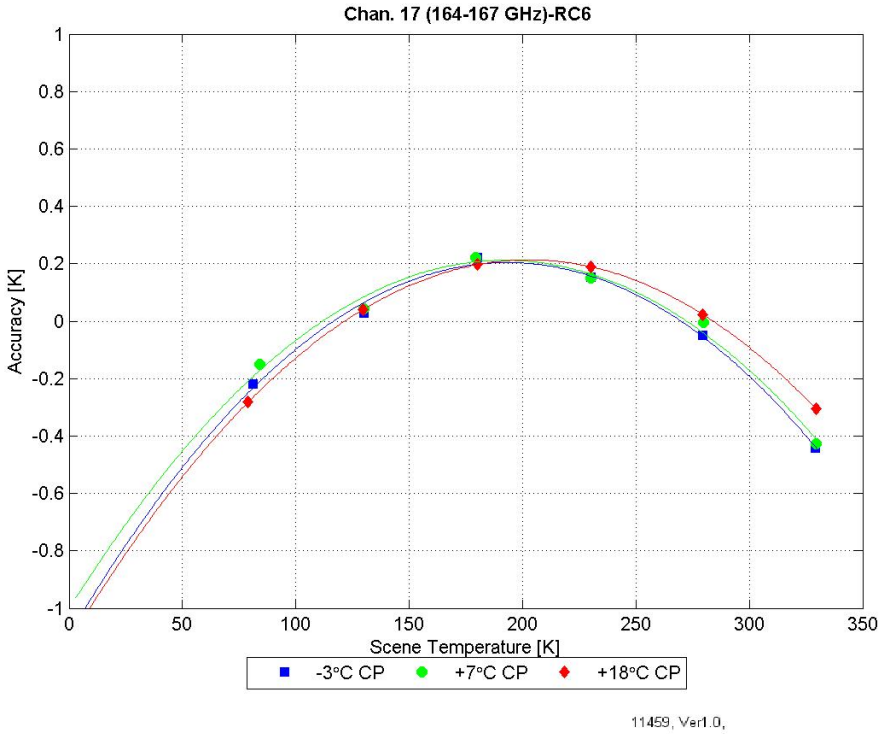



**Figure 10-71 Channel 17 RC6 – Accuracy vs Scene Temperature**

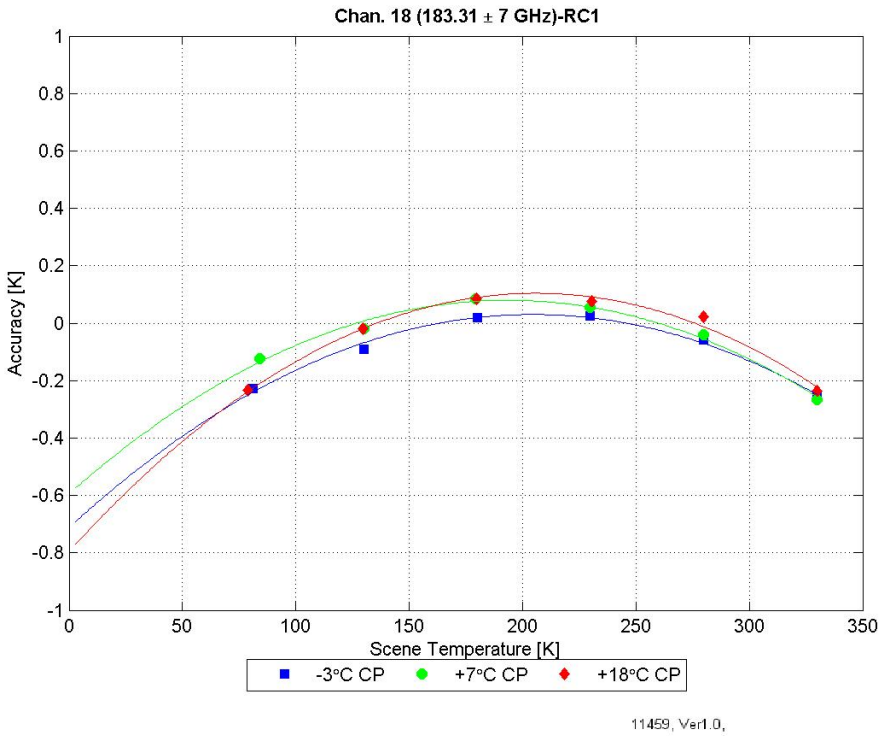



**Figure 10-72 Channel 18 RC1 – Accuracy vs Scene Temperature**

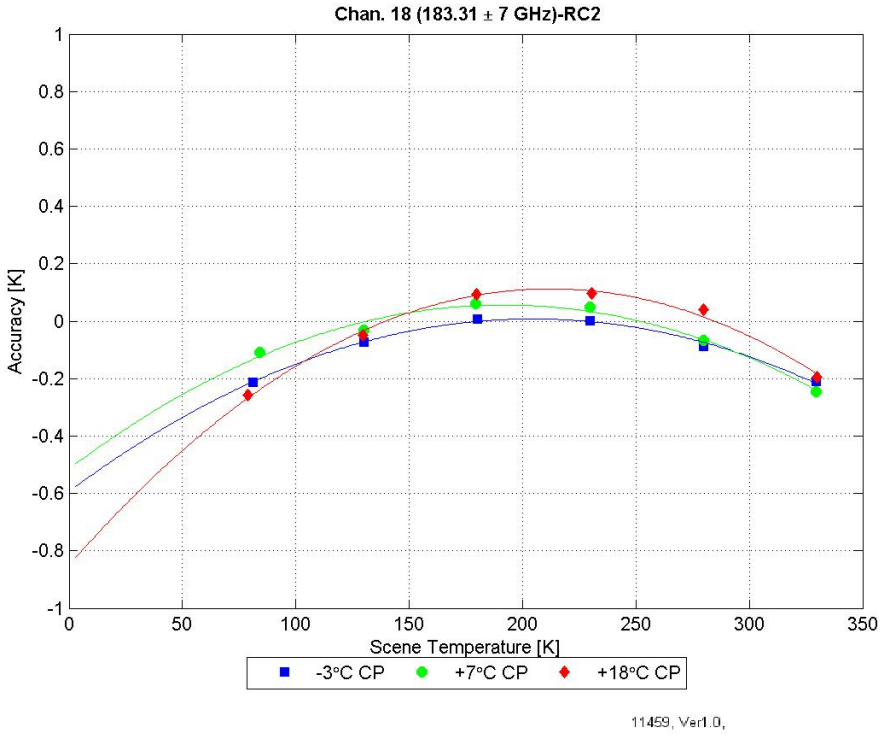



**Figure 10-73 Channel 18 RC2 – Accuracy vs Scene Temperature**

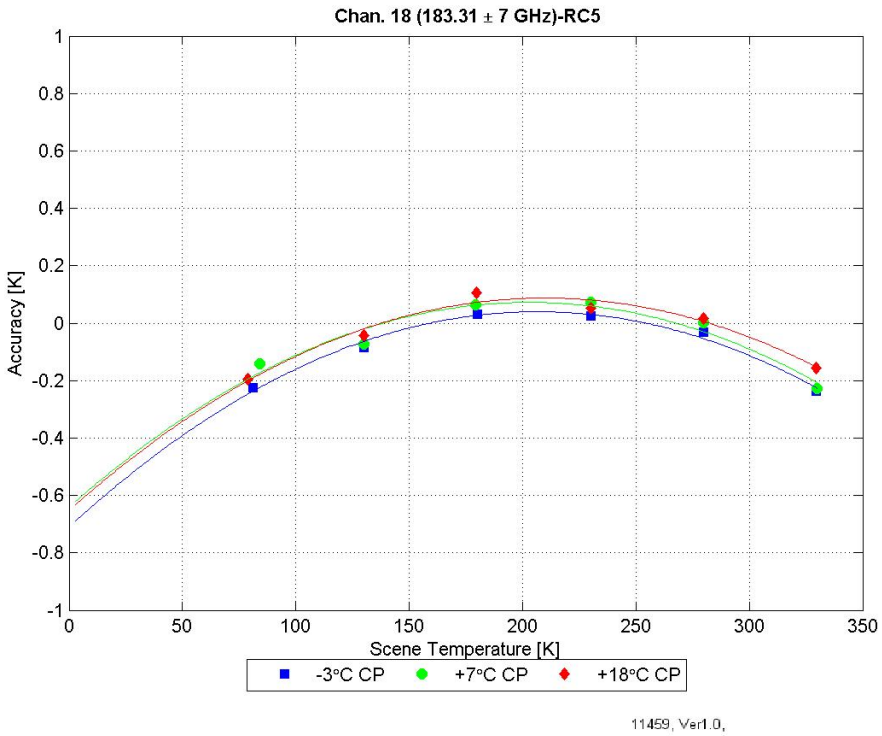



**Figure 10-74 Channel 18 RC5 – Accuracy vs Scene Temperature**

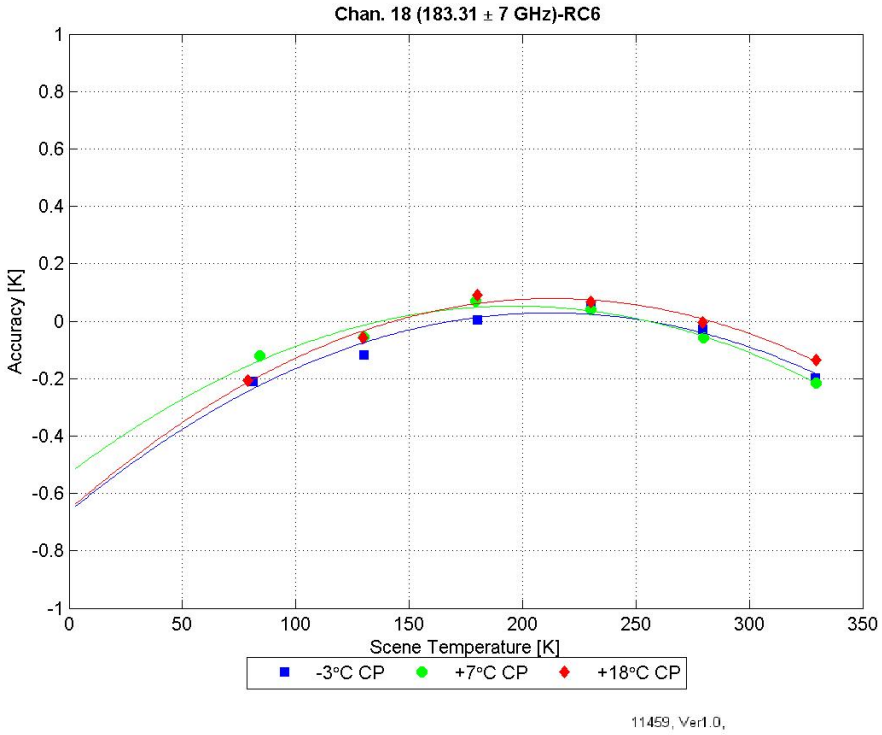



**Figure 10-75 Channel 18 RC6 – Accuracy vs Scene Temperature**

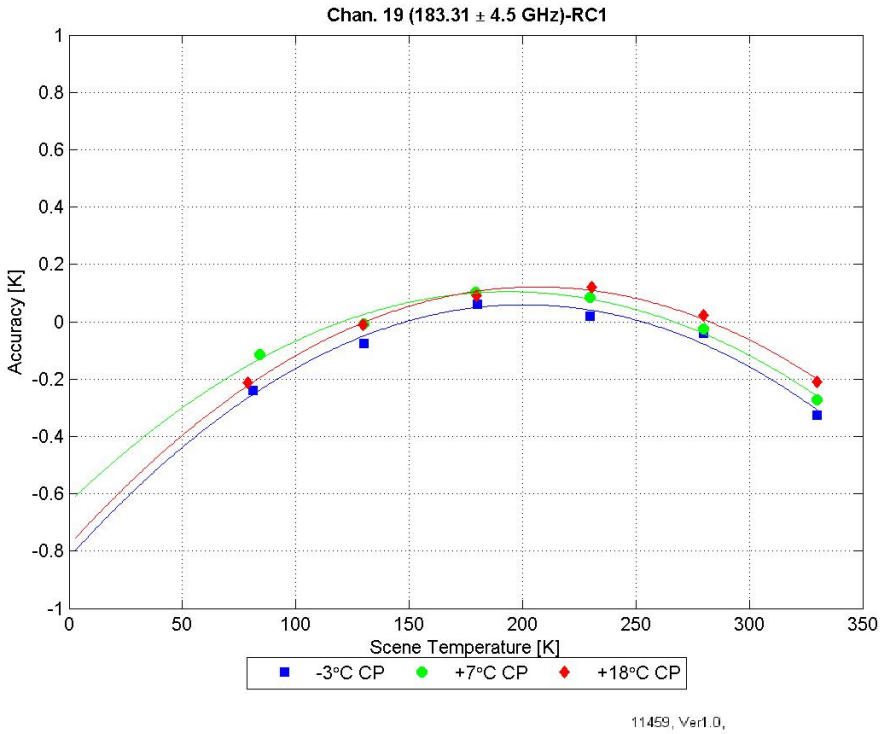



**Figure 10-76 Channel 19 RC1 – Accuracy vs Scene Temperature**

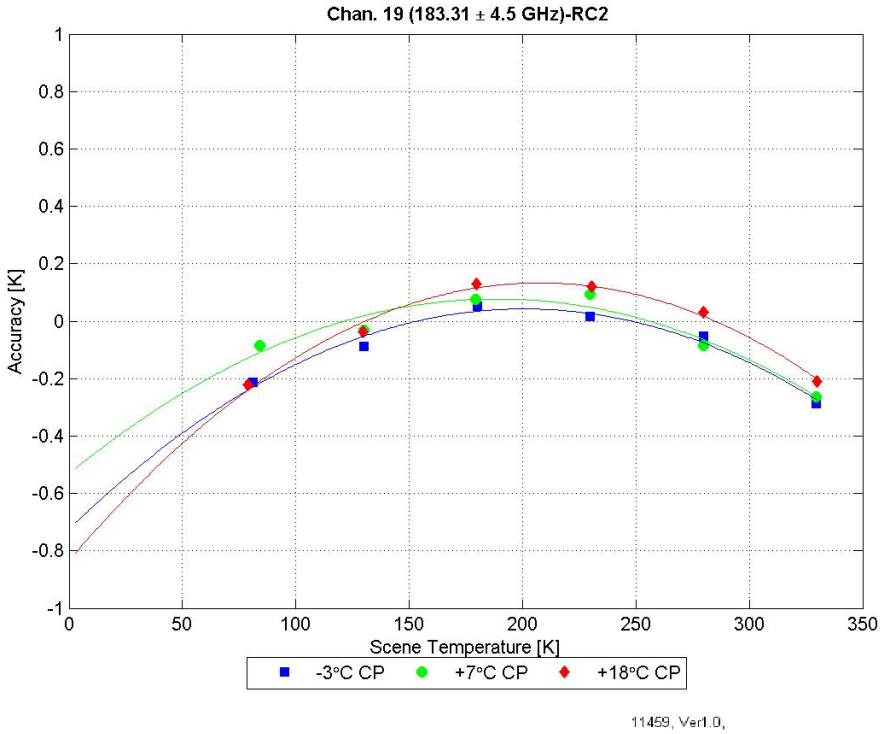



**Figure 10-77 Channel 19 RC2 – Accuracy vs Scene Temperature**

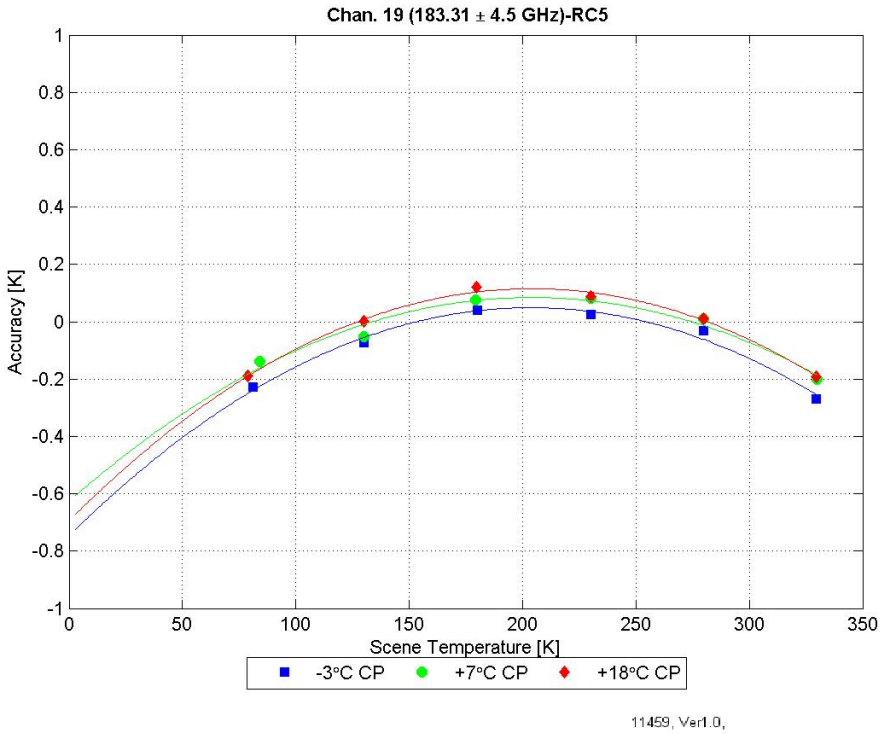



**Figure 10-78 Channel 19 RC5 – Accuracy vs Scene Temperature**

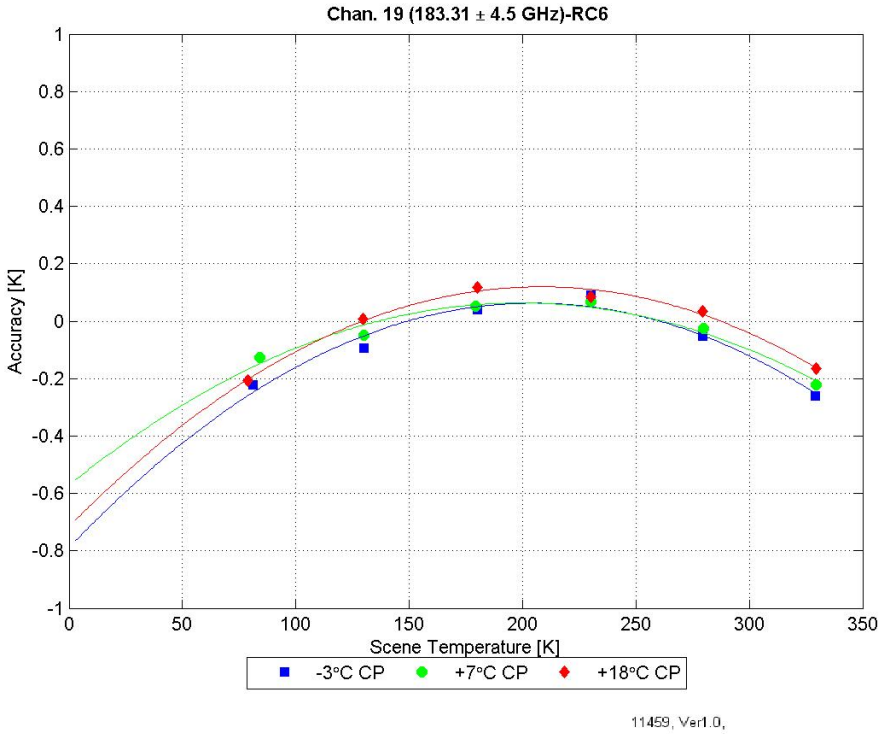



**Figure 10-79 Channel 19 RC6 – Accuracy vs Scene Temperature**

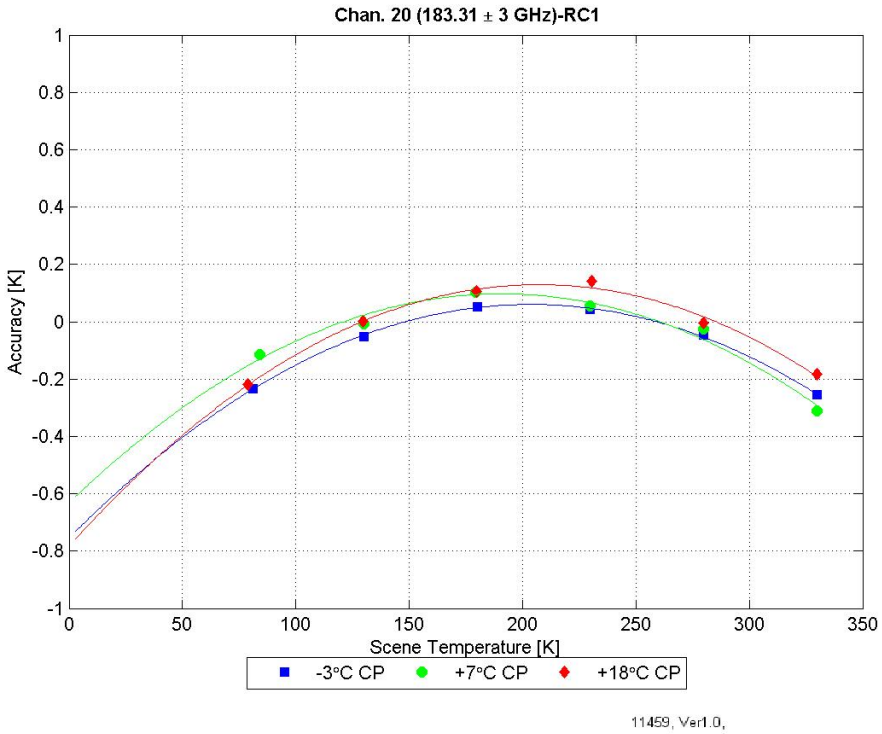



**Figure 10-80 Channel 20 RC1 – Accuracy vs Scene Temperature**

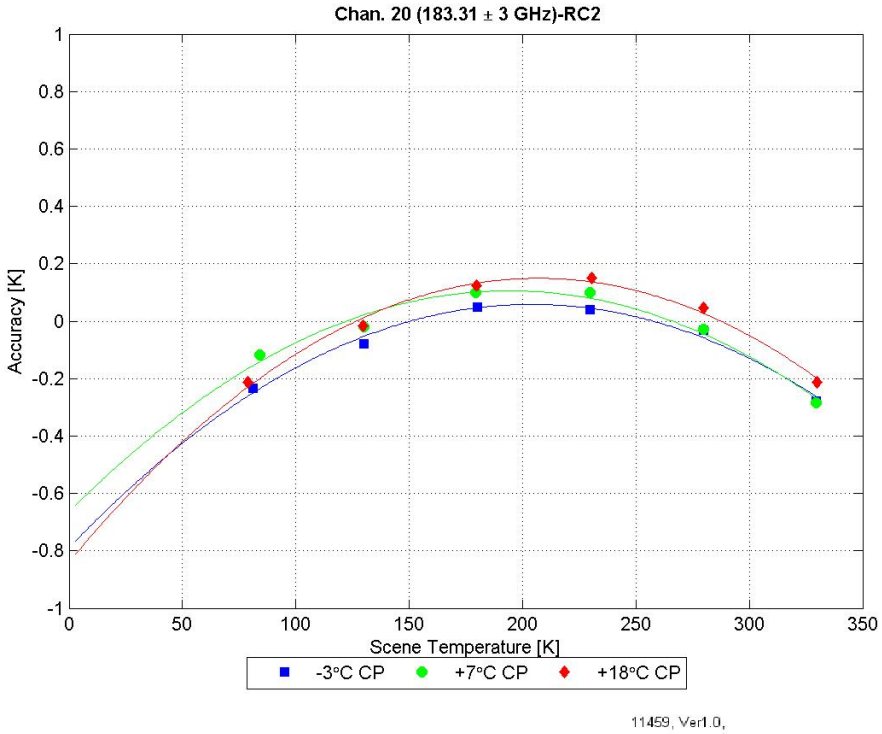



**Figure 10-81 Channel 20 RC2 – Accuracy vs Scene Temperature**

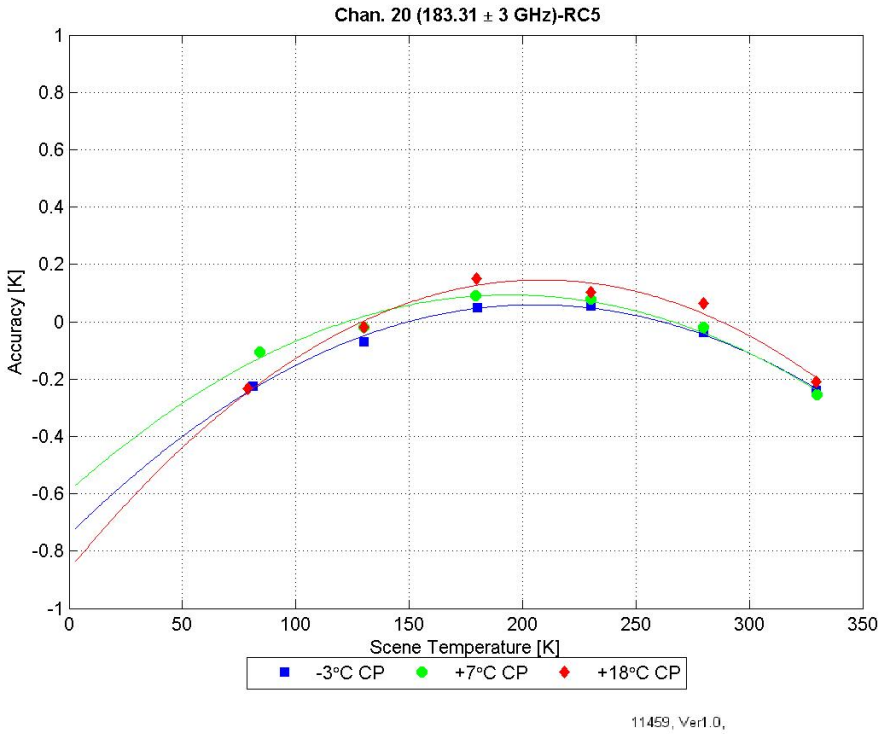



**Figure 10-82 Channel 20 RC5 – Accuracy vs Scene Temperature**

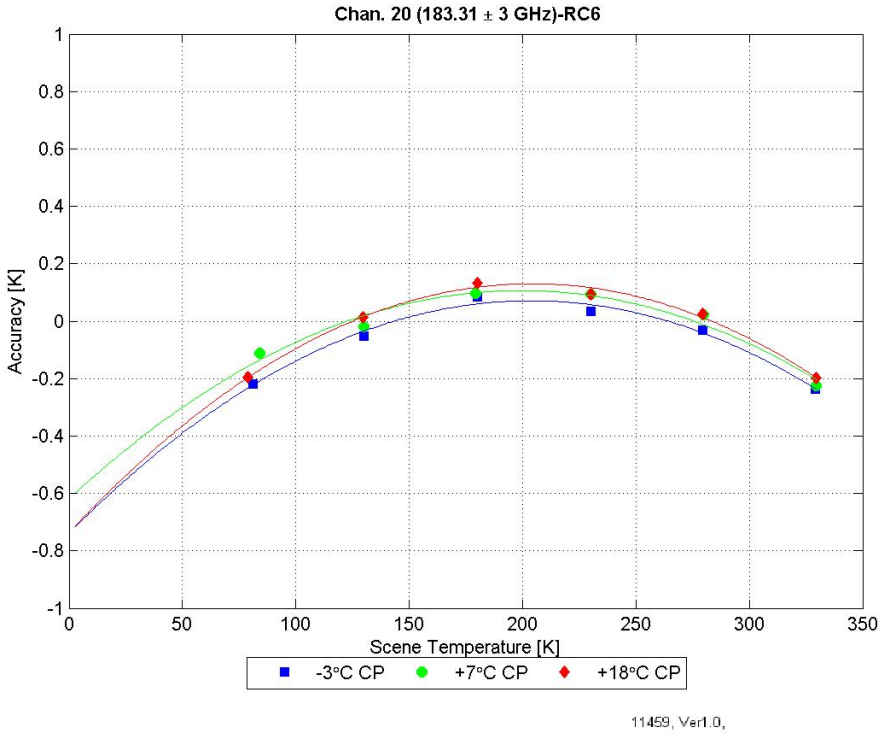



**Figure 10-83 Channel 20 RC6 – Accuracy vs Scene Temperature**

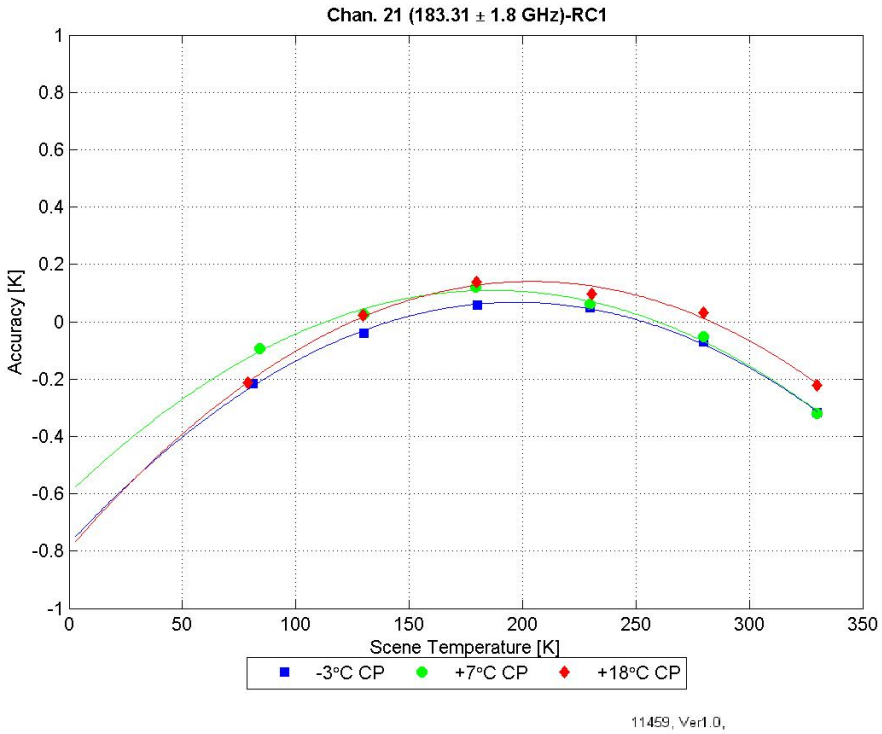



**Figure 10-84 Channel 21 RC1 – Accuracy vs Scene Temperature**

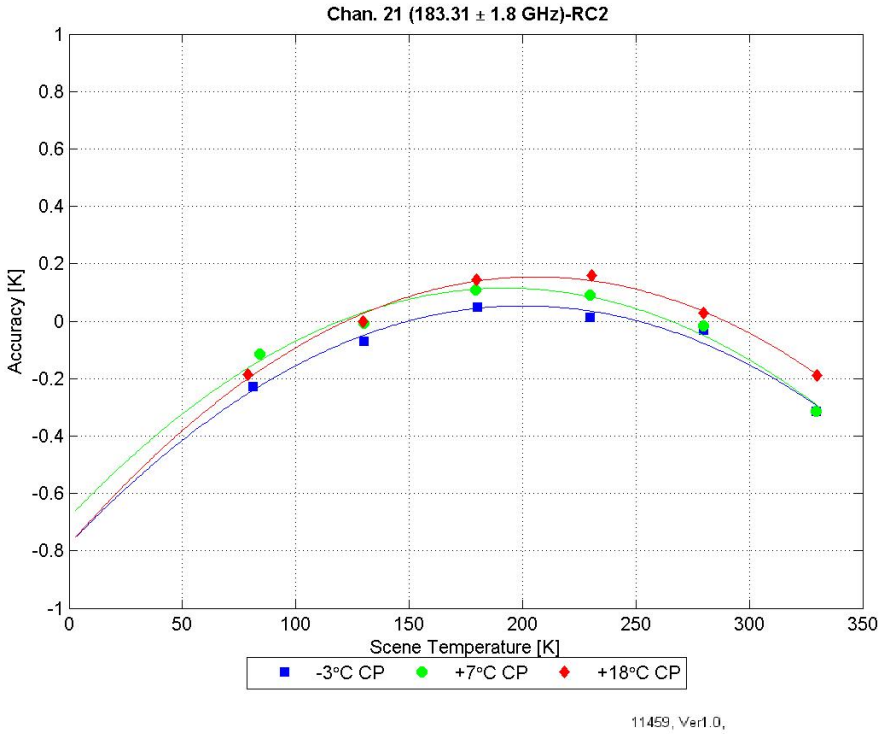



**Figure 10-85 Channel 21 RC2 – Accuracy vs Scene Temperature**

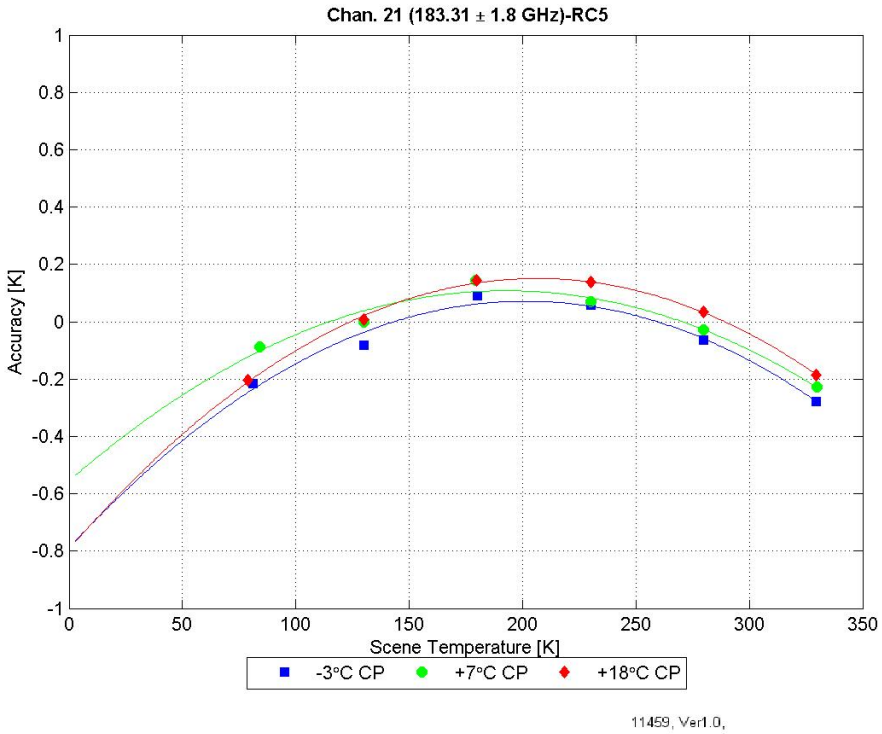



**Figure 10-86 Channel 21 RC5 – Accuracy vs Scene Temperature**

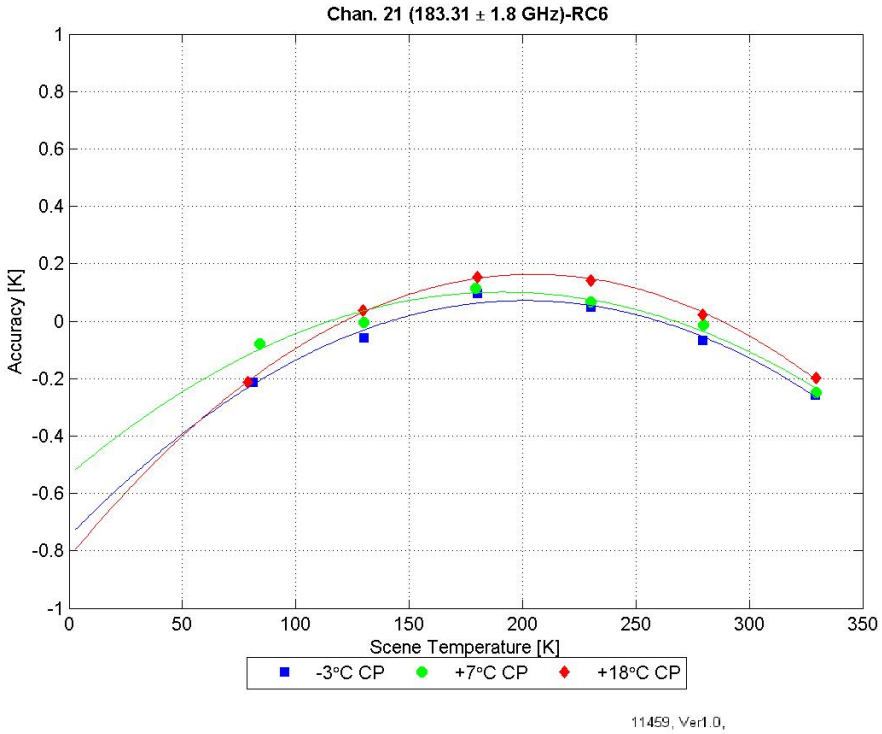



**Figure 10-87 Channel 21 RC6 – Accuracy vs Scene Temperature**

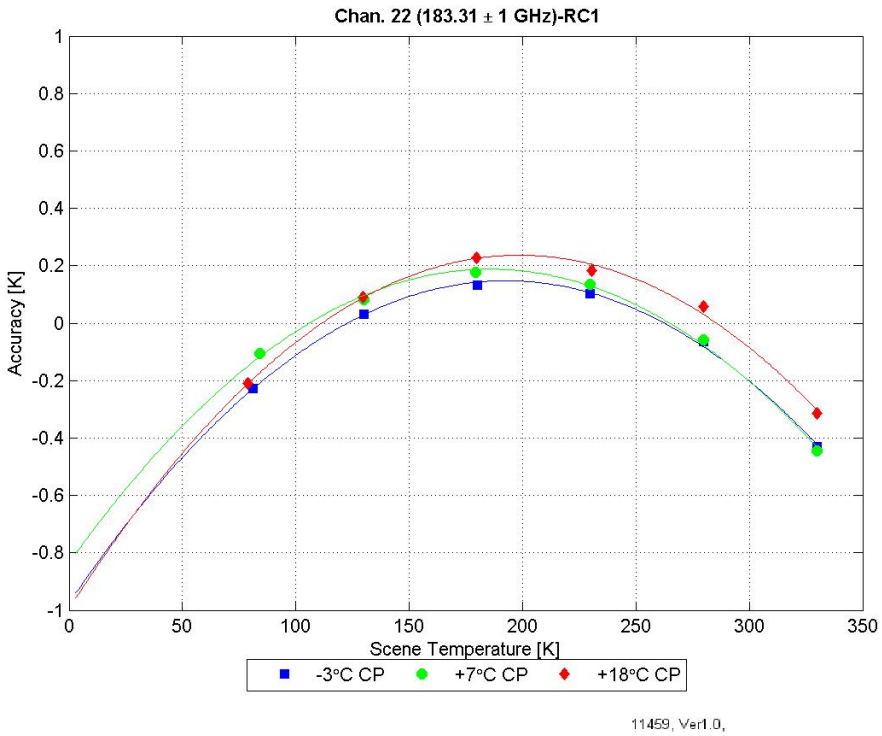



**Figure 10-88 Channel 22 RC1 – Accuracy vs Scene Temperature**

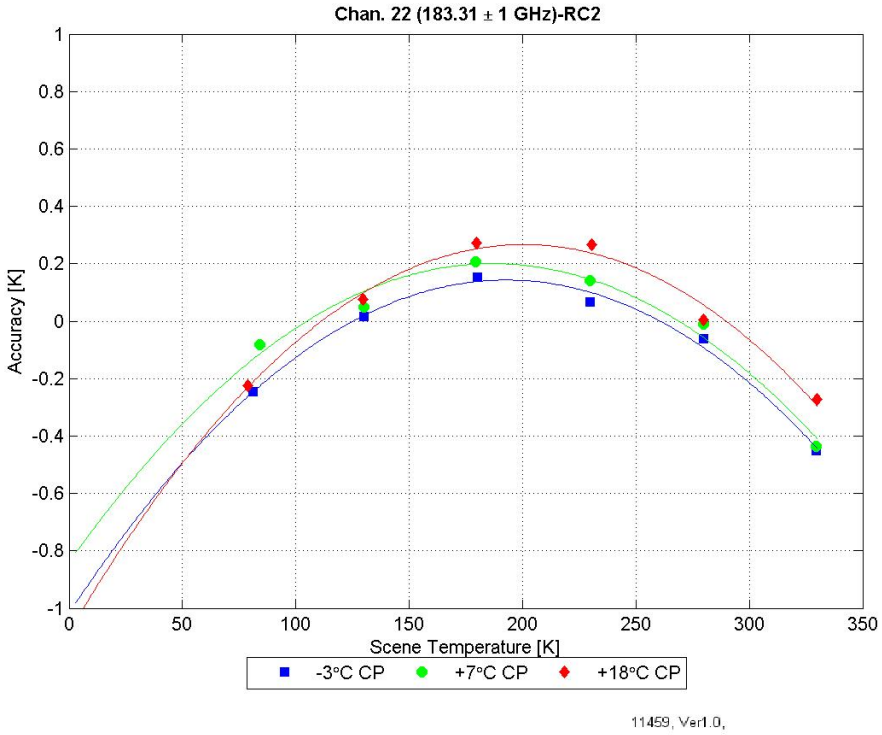



**Figure 10-89 Channel 22 RC2 – Accuracy vs Scene Temperature**

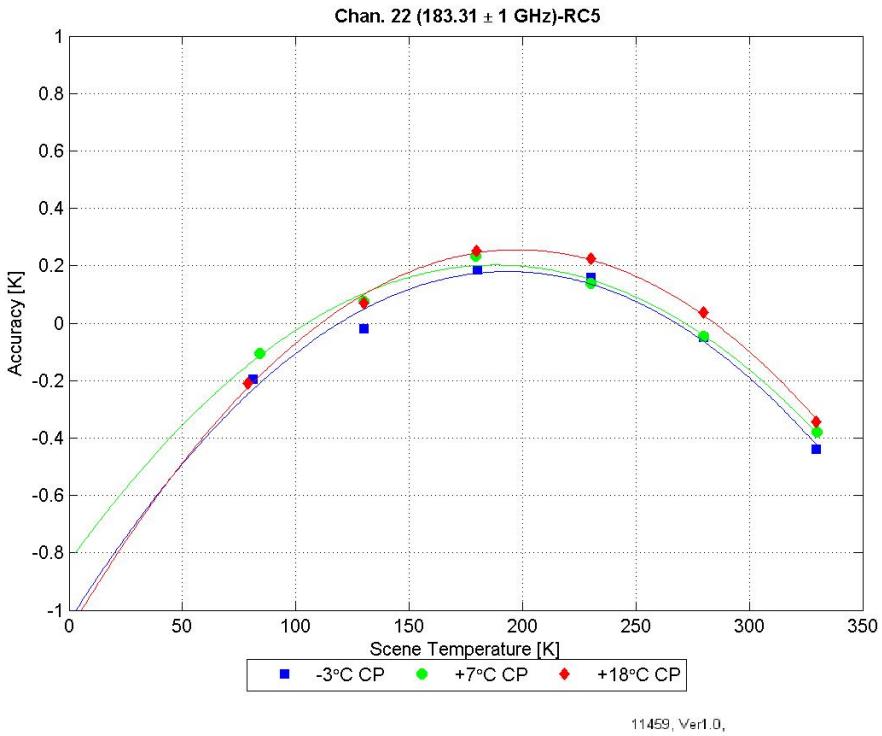



**Figure 10-90 Channel 22 RC5 – Accuracy vs Scene Temperature**

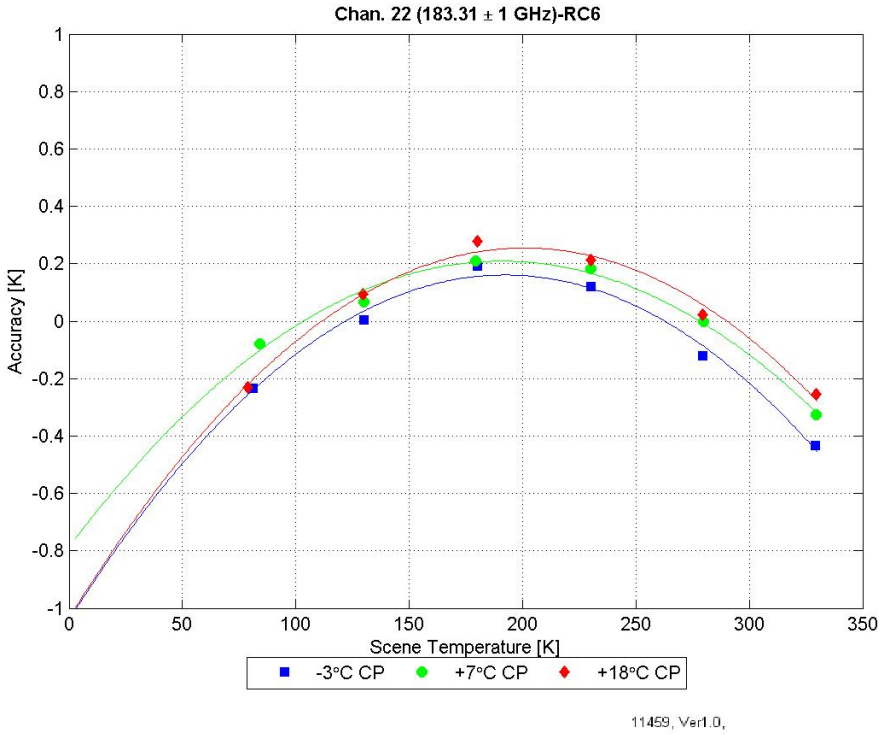



**Figure 10-91 Channel 22 RC6 – Accuracy vs Scene Temperature**

## 10.2 Derived On-Orbit Non-Linearity

Non-linearity values were obtained by fitting quadratic regression curves to the accuracy data, over the calibration scene temperatures, and extrapolating to the specified on-orbit temperature range (3K to 330K). The regression coefficients, and deviations of the data from the curves, are provided Table 10-6, Table 10-10, and Table 10-14. These tables also show the derived non-linearity (the "NL" column), for each temperature and redundancy configuration. The worst-case non-linearity, over the three cold plate temperatures and all redundancy configurations, is shown in Table 10-28.

Since quadratic regression curves are to be used in the operational mission ground processing, the specified maximum values are for the residual uncertainties in the nonlinearity computed from the regression curves. This residual uncertainty is due to calibration test measurement errors. Since the measurements are repeated for the four redundancy configurations, and the components contributing to nonlinearity are common to all redundancy configurations, the repeatability over the four redundancy configurations is a good indicator of the uncertainty of measured nonlinearities. In Table 10-28, the estimated "residual uncertainty" was computed as the standard deviation of nonlinearity values over the four redundancy configurations. The values in Table 10-28 are the worst-case uncertainties over the three instrument temperatures.

**Table 10-29 Worst-Case Non-Linearity (Extrapolated Over On-Orbit Temperature Range)**

| Channels | Requirement (For Residual Uncertainty) | Worst-Case Non-Linearity | Residual Uncertainty |
|---|---|---|---|
| 1 | 0.3 | 0.4119 | 0.0107 |
| 2 | 0.4 | 0.4477 | 0.0107 |
| 3 | 0.4 | 0.1392 | 0.0066 |
| 4 | 0.4 | 0.0848 | 0.0096 |
| 5 | 0.4 | 0.0325 | 0.0093 |
| 6 | 0.4 | 0.0904 | 0.0109 |
| 7 | 0.4 | 0.1509 | 0.0087 |
| 8 | 0.4 | 0.1900 | 0.0084 |
| 9 | 0.4 | 0.1938 | 0.0101 |
| 10 | 0.4 | 0.4497 | 0.0106 |
| 11 | 0.4 | 0.4382 | 0.0253 |
| 12 | 0.4 | 0.5178 | 0.0286 |
| 13 | 0.4 | 0.6242 | 0.0406 |
| 14 | 0.4 | 0.5563 | 0.0230 |
| 15 | 0.4 | 0.5747 | 0.0395 |
| 16 | 0.4 | 0.2576 | 0.0102 |
| 17 | 0.4 | 0.4790 | 0.0129 |
| 18 | 0.4 | 0.2858 | 0.0372 |
| 19 | 0.4 | 0.2997 | 0.0205 |
| 20 | 0.4 | 0.3109 | 0.0167 |
| 21 | 0.4 | 0.3150 | 0.0265 |
| 22 | 0.4 | 0.4541 | 0.0172 |
| Avg of 3-15 | 0.2 | 0.3110 | 0.0178 |
| Avg of 16 - 22 | 0.3 | 0.3431 | 0.0202 |

## 10.3 Derived On-Orbit Radiometric Accuracy

Using the derived worst-case on-orbit non-linearity uncertainties as inputs to the Radiometric Math Model (RE-12110 Rev F), and using the JPSS-1-specific parameters for hot calibration and cold calibration errors (see sections 8 and 9), the resulting predicted on-orbit accuracies are as listed in Table 10-29. These were computed for the two extremes of scene temperature and for the mid-point scene temperature, in order to capture the worst-case condition.

**Table 10-30 Worst-Case On-Orbit Accuracy**

| Channel | Requirement | Cold Scene (80K) | Mid Scene (150K) | Hot Scene (300K) |
|---|---|---|---|---|
| 1 | 1.00 | 0.106 | 0.110 | 0.161 |
| 2 | 1.00 | 0.106 | 0.110 | 0.161 |
| 3 | 0.75 | 0.062 | 0.086 | 0.158 |
| 4 | 0.75 | 0.063 | 0.088 | 0.158 |
| 5 | 0.75 | 0.063 | 0.087 | 0.158 |
| 6 | 0.75 | 0.064 | 0.088 | 0.158 |
| 7 | 0.75 | 0.063 | 0.087 | 0.158 |
| 8 | 0.75 | 0.063 | 0.087 | 0.158 |
| 9 | 0.75 | 0.064 | 0.088 | 0.158 |
| 10 | 0.75 | 0.064 | 0.088 | 0.158 |
| 11 | 0.75 | 0.072 | 0.100 | 0.158 |
| 12 | 0.75 | 0.075 | 0.104 | 0.158 |
| 13 | 0.75 | 0.086 | 0.119 | 0.158 |
| 14 | 0.75 | 0.071 | 0.098 | 0.158 |
| 15 | 0.75 | 0.085 | 0.118 | 0.158 |
| 16 | 1.00 | 0.048 | 0.074 | 0.137 |
| 17 | 1.00 | 0.047 | 0.072 | 0.127 |
| 18 | 1.00 | 0.069 | 0.098 | 0.128 |
| 19 | 1.00 | 0.054 | 0.080 | 0.128 |
| 20 | 1.00 | 0.052 | 0.077 | 0.128 |
| 21 | 1.00 | 0.059 | 0.086 | 0.128 |
| 22 | 1.00 | 0.052 | 0.077 | 0.128 |

## 10.4 Instrument Temperature Data

A comparison of the average cold plate and receiver shelf temperatures at all scene temperature and redundancy configurations over the three cold plate temperatures is given in Tables 10-31, 10-32, and 10-33.

**Table 10-31 Average Receiver Shelf Temperatures, Cold Plate -3.1°C**

| Redundancy | | 84K | | 130K | | 180K | | 230K | | 280K | | 330K | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Average Temp (°C) | Max Dev (°C) | Average Temp (°C) | Max Dev (°C) | Average Temp (°C) | Max Dev (°C) | Average Temp (°C) | Max Dev (°C) | Average Temp (°C) | Max Dev (°C) | Average Temp (°C) | Max Dev (°C) |
| RC1 | Cold Plate | -2.80 | 0.03 | -2.56 | 0.03 | -3.20 | 0.04 | -3.06 | 0.06 | -3.38 | 0.03 | -3.63 | 0.03 |
| | W Shelf | 3.93 | 0.03 | 4.24 | 0.02 | 3.83 | 0.02 | 3.90 | 0.03 | 4.19 | 0.03 | 4.50 | 0.02 |
| | KKa Shelf | 2.98 | 0.03 | 3.30 | 0.02 | 2.88 | 0.02 | 2.94 | 0.03 | 3.21 | 0.02 | 3.48 | 0.02 |
| | G Shelf | 4.04 | 0.03 | 4.35 | 0.02 | 3.90 | 0.03 | 3.96 | 0.03 | 4.14 | 0.04 | 4.32 | 0.02 |
| | V Shelf | 6.11 | 0.03 | 6.44 | 0.02 | 6.00 | 0.02 | 6.06 | 0.03 | 6.26 | 0.03 | 6.41 | 0.02 |
| RC2 | Cold Plate | -2.81 | 0.04 | -2.74 | 0.06 | -3.13 | 0.04 | -2.91 | 0.05 | -3.38 | 0.03 | -3.66 | 0.03 |
| | W Shelf | 3.79 | 0.04 | 4.25 | 0.03 | 3.90 | 0.02 | 4.05 | 0.03 | 4.21 | 0.02 | 4.47 | 0.03 |
| | KKa Shelf | 2.84 | 0.04 | 3.31 | 0.02 | 2.94 | 0.02 | 3.10 | 0.04 | 3.24 | 0.02 | 3.44 | 0.03 |
| | G Shelf | 3.92 | 0.03 | 4.34 | 0.03 | 3.96 | 0.02 | 4.11 | 0.03 | 4.16 | 0.02 | 4.29 | 0.04 |
| | V Shelf | 6.00 | 0.03 | 6.44 | 0.02 | 6.08 | 0.02 | 6.19 | 0.03 | 6.29 | 0.03 | 6.39 | 0.03 |
| RC5 | Cold Plate | -2.98 | 0.04 | -3.07 | 0.04 | -3.15 | 0.03 | -2.82 | 0.05 | -3.19 | 0.05 | -3.59 | 0.03 |
| | W Shelf | 4.06 | 0.03 | 4.11 | 0.03 | 4.02 | 0.02 | 4.35 | 0.03 | 4.55 | 0.02 | 4.71 | 0.02 |
| | KKa Shelf | 3.14 | 0.02 | 3.16 | 0.03 | 3.08 | 0.02 | 3.41 | 0.03 | 3.60 | 0.04 | 3.71 | 0.04 |
| | G Shelf | 4.09 | 0.02 | 4.11 | 0.02 | 4.01 | 0.01 | 4.33 | 0.03 | 4.43 | 0.02 | 4.45 | 0.04 |
| | V Shelf | 6.28 | 0.02 | 6.29 | 0.02 | 6.20 | 0.01 | 6.49 | 0.03 | 6.65 | 0.02 | 6.65 | 0.03 |
| RC6 | Cold Plate | -2.76 | 0.07 | -3.09 | 0.03 | -3.14 | 0.03 | -2.74 | 0.04 | -3.09 | 0.05 | -3.58 | 0.03 |
| | W Shelf | 4.12 | 0.04 | 4.07 | 0.03 | 4.03 | 0.04 | 4.46 | 0.04 | 4.64 | 0.04 | 4.72 | 0.02 |
| | KKa Shelf | 3.24 | 0.03 | 3.12 | 0.02 | 3.09 | 0.02 | 3.51 | 0.04 | 3.70 | 0.04 | 3.71 | 0.03 |
| | G Shelf | 4.18 | 0.04 | 4.07 | 0.01 | 4.03 | 0.02 | 4.42 | 0.03 | 4.53 | 0.05 | 4.46 | 0.03 |
| | V Shelf | 6.37 | 0.04 | 6.25 | 0.01 | 6.22 | 0.02 | 6.58 | 0.03 | 6.75 | 0.04 | 6.64 | 0.02 |

**Table 10-32 Average Receiver Shelf Temperatures, Cold Plate +7.7°C**

| Redundancy | | 84K | | 130K | | 180K | | 230K | | 280K | | 330K | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Average Temp (°C) | Max Dev (°C) | Average Temp (°C) | Max Dev (°C) | Average Temp (°C) | Max Dev (°C) | Average Temp (°C) | Max Dev (°C) | Average Temp (°C) | Max Dev (°C) | Average Temp (°C) | Max Dev (°C) |
| RC1 | Cold Plate | 8.29 | 0.05 | 8.27 | 0.06 | 8.03 | 0.05 | 8.04 | 0.03 | 7.80 | 0.07 | 7.40 | 0.05 |
| | W Shelf | 14.27 | 0.04 | 14.50 | 0.03 | 14.48 | 0.03 | 14.52 | 0.03 | 14.68 | 0.03 | 15.22 | 0.03 |
| | KKa Shelf | 13.48 | 0.04 | 13.72 | 0.03 | 13.69 | 0.02 | 13.73 | 0.03 | 13.86 | 0.02 | 14.30 | 0.03 |
| | G Shelf | 14.48 | 0.06 | 14.69 | 0.03 | 14.64 | 0.02 | 14.66 | 0.04 | 14.73 | 0.03 | 15.10 | 0.04 |
| | V Shelf | 16.53 | 0.04 | 16.78 | 0.03 | 16.73 | 0.02 | 16.76 | 0.03 | 16.81 | 0.04 | 17.10 | 0.04 |
| RC2 | Cold Plate | 8.01 | 0.06 | 8.29 | 0.03 | 8.12 | 0.04 | 8.08 | 0.03 | 7.78 | 0.04 | 7.10 | 0.05 |
| | W Shelf | 13.93 | 0.04 | 14.52 | 0.03 | 14.60 | 0.02 | 14.56 | 0.03 | 14.67 | 0.02 | 14.65 | 0.02 |
| | KKa Shelf | 13.13 | 0.04 | 13.73 | 0.05 | 13.81 | 0.02 | 13.77 | 0.03 | 13.86 | 0.02 | 13.81 | 0.03 |
| | G Shelf | 14.15 | 0.04 | 14.71 | 0.03 | 14.75 | 0.02 | 14.69 | 0.03 | 14.73 | 0.02 | 14.56 | 0.03 |
| | V Shelf | 16.21 | 0.04 | 16.79 | 0.03 | 16.86 | 0.04 | 16.77 | 0.03 | 16.82 | 0.03 | 16.68 | 0.03 |
| RC5 | Cold Plate | 7.57 | 0.10 | 8.11 | 0.06 | 8.11 | 0.07 | 7.99 | 0.04 | 7.72 | 0.03 | 7.16 | 0.03 |
| | W Shelf | 14.47 | 0.05 | 14.64 | 0.02 | 14.27 | 0.06 | 14.64 | 0.02 | 14.76 | 0.02 | 14.84 | 0.02 |
| | KKa Shelf | 13.71 | 0.05 | 13.87 | 0.01 | 13.50 | 0.06 | 13.85 | 0.02 | 13.96 | 0.02 | 14.00 | 0.04 |
| | G Shelf | 14.55 | 0.05 | 14.74 | 0.01 | 14.40 | 0.05 | 14.69 | 0.02 | 14.74 | 0.02 | 14.69 | 0.02 |
| | V Shelf | 16.77 | 0.05 | 16.91 | 0.01 | 16.55 | 0.06 | 16.86 | 0.04 | 16.93 | 0.02 | 16.88 | 0.02 |
| RC6 | Cold Plate | 7.14 | 0.03 | 8.00 | 0.04 | 8.43 | 0.06 | 7.94 | 0.04 | 7.74 | 0.03 | 7.06 | 0.04 |
| | W Shelf | 13.92 | 0.03 | 14.59 | 0.02 | 14.62 | 0.04 | 14.57 | 0.02 | 14.78 | 0.03 | 14.89 | 0.02 |
| | KKa Shelf | 13.12 | 0.05 | 13.80 | 0.02 | 13.86 | 0.04 | 13.79 | 0.02 | 13.98 | 0.04 | 14.02 | 0.02 |
| | G Shelf | 13.98 | 0.04 | 14.68 | 0.02 | 14.74 | 0.04 | 14.63 | 0.02 | 14.76 | 0.03 | 14.72 | 0.03 |
| | V Shelf | 16.18 | 0.03 | 16.85 | 0.03 | 16.89 | 0.04 | 16.79 | 0.03 | 16.94 | 0.03 | 16.85 | 0.04 |

**Table 10-33 Average Receiver Shelf Temperatures, Cold Plate +18.5°C**

| Redundancy | | 84K | | 130K | | 180K | | 230K | | 280K | | 330K | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Average Temp (°C) | Max Dev (°C) | Average Temp (°C) | Max Dev (°C) | Average Temp (°C) | Max Dev (°C) | Average Temp (°C) | Max Dev (°C) | Average Temp (°C) | Max Dev (°C) | Average Temp (°C) | Max Dev (°C) |
| RC1 | Cold Plate | 18.52 | 0.03 | 19.05 | 0.03 | 18.58 | 0.06 | 18.60 | 0.04 | 18.51 | 0.03 | 18.20 | 0.03 |
| | W Shelf | 24.19 | 0.03 | 24.63 | 0.03 | 24.33 | 0.03 | 24.42 | 0.03 | 24.66 | 0.03 | 24.98 | 0.02 |
| | KKa Shelf | 23.57 | 0.03 | 24.02 | 0.03 | 23.72 | 0.03 | 23.81 | 0.03 | 24.04 | 0.03 | 24.33 | 0.03 |
| | G Shelf | 24.47 | 0.03 | 24.92 | 0.04 | 24.59 | 0.03 | 24.66 | 0.04 | 24.82 | 0.04 | 25.02 | 0.03 |
| | V Shelf | 26.58 | 0.03 | 27.03 | 0.03 | 26.71 | 0.03 | 26.79 | 0.03 | 26.94 | 0.05 | 27.15 | 0.04 |
| RC2 | Cold Plate | 18.53 | 0.03 | 19.07 | 0.06 | 18.59 | 0.03 | 18.62 | 0.03 | 18.48 | 0.04 | 18.18 | 0.03 |
| | W Shelf | 24.21 | 0.03 | 24.65 | 0.04 | 24.35 | 0.03 | 24.46 | 0.03 | 24.64 | 0.03 | 24.89 | 0.03 |
| | KKa Shelf | 23.59 | 0.04 | 24.04 | 0.04 | 23.73 | 0.03 | 23.85 | 0.03 | 24.01 | 0.03 | 24.23 | 0.03 |
| | G Shelf | 24.49 | 0.03 | 24.93 | 0.06 | 24.61 | 0.03 | 24.69 | 0.03 | 24.80 | 0.03 | 24.93 | 0.03 |
| | V Shelf | 26.61 | 0.03 | 27.03 | 0.04 | 26.74 | 0.03 | 26.81 | 0.04 | 26.93 | 0.04 | 27.06 | 0.04 |
| RC5 | Cold Plate | 18.54 | 0.04 | 18.81 | 0.05 | 18.60 | 0.03 | 18.67 | 0.03 | 18.52 | 0.03 | 17.58 | 0.03 |
| | W Shelf | 24.38 | 0.03 | 24.66 | 0.03 | 24.50 | 0.02 | 24.68 | 0.02 | 24.80 | 0.02 | 24.67 | 0.04 |
| | KKa Shelf | 23.77 | 0.02 | 24.07 | 0.02 | 23.90 | 0.02 | 24.08 | 0.02 | 24.20 | 0.04 | 24.01 | 0.03 |
| | G Shelf | 24.59 | 0.02 | 24.87 | 0.02 | 24.68 | 0.04 | 24.84 | 0.02 | 24.89 | 0.03 | 24.61 | 0.02 |
| | V Shelf | 26.78 | 0.02 | 27.05 | 0.02 | 26.89 | 0.03 | 27.04 | 0.03 | 27.10 | 0.02 | 26.84 | 0.02 |
| RC6 | Cold Plate | 18.53 | 0.06 | 18.65 | 0.03 | 18.61 | 0.06 | 18.72 | 0.03 | 18.49 | 0.06 | 17.54 | 0.03 |
| | W Shelf | 24.36 | 0.02 | 24.53 | 0.03 | 24.50 | 0.02 | 24.73 | 0.04 | 24.78 | 0.02 | 24.63 | 0.02 |
| | KKa Shelf | 23.75 | 0.02 | 23.92 | 0.02 | 23.89 | 0.04 | 24.13 | 0.04 | 24.18 | 0.02 | 23.97 | 0.02 |
| | G Shelf | 24.56 | 0.02 | 24.72 | 0.03 | 24.69 | 0.02 | 24.89 | 0.02 | 24.88 | 0.01 | 24.56 | 0.04 |
| | V Shelf | 26.75 | 0.02 | 26.91 | 0.03 | 26.90 | 0.02 | 27.09 | 0.02 | 27.11 | 0.02 | 26.79 | 0.02 |

# 11 INSTRUMENT TEMPERATURE, VOLTAGE, AND CURRENT LIMITS

The operating limits of the instrument are driven by the ATMS Cold plate temperature, specified in the ATMS PRD and ICD. The description of ATMS Engineering Telemetry Data is provided in the ATMS Telemetry Allocation Document, RE-14753 Rev B.

## 11.1 Limits for Passive Analog Temperature Telemetry

The passive analog temperature telemetry channels are provided on spacecraft interface connectors J5 (primary) and J6 (Redundant) to sample instrument temperatures. These temperatures are accessible whether the instrument is powered "Off" or "On". These temperatures and their limits are tabulated in Table 11-1.

**Table 11-1 Passive Analog Temperature Telemetry**

| Name | Description | Red Limit (low) Deg C | Yellow Limit (low) Deg C | Performance Limit (low) Deg C | Performance Limit (high) Deg C | Yellow Limit (high) Deg C | Red Limit (high) Deg C |
|---|---|---|---|---|---|---|---|
| SDM_TEMP | Temperature of Scan Drive Mechanism | -25 | -22 | -6 | 46 | 60 | 65 |
| CAL_TARGET_LOC_TEMP | Temperature of bench, near hot calibration targets | -32 | -23 | -15 | 45 | 60 | 70 |
| KKAV_SHELF_TEMP | Temperature on the V-Band Receiver Shelf | -25 | -10 | -1 | 50 | 55 | 65 |
| WG_SHELF_TEMP | Temperature on the G-Band Receiver Shelf | -25 | -10 | -1 | 50 | 55 | 65 |
| INSTR_BASEPLATE_TEMP | Temperature of the instrument baseplate | -25 | -20 | -15 | 25 | 30 | 65 |

## 11.2 Housekeeping Data Packet Telemetry

Housekeeping and Engineering Telemetry data available in the data packets consists of secondary voltages and instrument temperatures. These parameters are multiplexed, digitized, and made available to the spacecraft via the MIL-STD-1553 bus as engineering data in words 1-74 in the housekeeping ($APID_{16}$ 206), LEO&A ($APID_{16}$ 201), and Engineering H&S ($APID_{16}$ 213) packets. The telemetry limits for words 2-71 of these packets are listed in Table 11-2. There are no limits for data word 1 (Instrument Serial No.) and words 72-74 (Mode and Status logical bits).

**Table 11-2 Housekeeping Telemetry Limits**

| Name | Description | Red Limit (low) | Yellow Limit (low) | Performance Limit (low ) | Nominal (low) [1] | Nominal (high) [1] | Performance Limit (high ) | Yellow Limit (high) | Red Limit (high) |
|---|---|---|---|---|---|---|---|---|---|
| SPA_P5V_A_VMON or SPA_P5V_B_VMON | Voltage Monitor (Volts) | < 4.4 | 4.5 | 4.70 | 4.95 | 5.00 | 5.40 | 5.6 | > 5.8 |
| SPA_P15V_A_VMON or SPA_P15V_B_VMON | | < 13.5 | 13.9 | 14.25 | 14.65 | 15.00 | 15.75 | 16.1 | > 16.5 |
| SPA_N15V_A_VMON or SPA_N15V_B_VMON | | < -16.5 | -16.1 | -15.75 | -14.95 | -14.65 | -14.25 | -13.9 | > -13.5 |
| RCV_P6V_RF_VMON | | < 5.2 | 5.5 | 5.75 | 6.05 | 6.10 | 6.50 | 7.0 | > 7.5 |
| RCV_P12V_RF2_VMON | | < 10.5 | 10.9 | 11.25 | 12.20 | 12.30 | 12.75 | 13.1 | > 13.5 |
| RCV_P15V_RF_VMON | | < 13.5 | 13.9 | 14.25 | 14.80 | 14.90 | 15.75 | 16.1 | > 16.5 |
| RCV_N15V_RF_VMON | | < -16.5 | -16.1 | -15.75 | -14.95 | -14.85 | -14.25 | -13.9 | > -13.5 |
| RCV_P15V_ANA_VMON | | < 13.5 | 13.9 | 14.25 | 14.85 | 14.90 | 15.75 | 16.1 | > 16.5 |
| RCV_N15V_ANA_VMON | | < -16.5 | -16.1 | -15.75 | -14.95 | -14.85 | -14.25 | -13.9 | > -13.5 |
| K_RFE_PRT | Temp Monitors (2-wire PRTs) (Degrees C) | -25 | -15 | -10 | 8 | 38 | 50 | 55 | 65 |
| KA_RFE_PRT | | -25 | -15 | -10 | 10 | 39 | 50 | 55 | 65 |
| V_RFE_PRT | | -25 | -15 | -10 | 5 | 35 | 50 | 55 | 65 |
| V_PRI_PLO_PRT | | -25 | -15 | 1 | 4 | 34 | 44 | 50 | 65 |
| V_RED_PLO_PRT | | -25 | -15 | 1 | 4 | 34 | 44 | 50 | 65 |
| V_IF_PRT | | -25 | -15 | -10 | 2 | 33 | 50 | 55 | 65 |
| W_RFE_PRT | | -25 | -15 | -10 | 5 | 34 | 50 | 55 | 65 |
| SAW_FILT_PRT | | -25 | -15 | -10 | 6 | 35 | 50 | 55 | 65 |
| W_IF_PRT | | -25 | -15 | 0 | 6 | 36 | 60 | 63 | 65 |
| W_PRI_LO_PRT | | -25 | -15 | -10 | 3 | 33 | 50 | 55 | 65 |
| W_RED_LO_PRT | | -25 | -15 | -10 | 2 | 32 | 50 | 55 | 65 |
| G_PRI_LO_PRT | | -25 | -15 | -10 | 5 | 34 | 50 | 55 | 65 |
| G_RED_LO_PRT | | -25 | -15 | -10 | 5 | 34 | 50 | 55 | 65 |
| G1_IF_PRT | | -25 | -15 | 0 | 11 | 41 | 60 | 63 | 65 |
| G2_IF_PRT | | -25 | -15 | -10 | 13 | 42 | 50 | 55 | 65 |
| W_SHELF_PRT | | -25 | -15 | -10 | 4 | 34 | 50 | 55 | 65 |
| KKA_SHELF_PRT | | -25 | -15 | -10 | 3 | 32 | 50 | 55 | 65 |
| G_SHELF_PRT | | -25 | -15 | -10 | 2 | 31 | 50 | 55 | 65 |
| V_SHELF_PRT | | -25 | -15 | -10 | 3 | 33 | 50 | 55 | 65 |
| RCVPS_A_PRT | | -25 | -18 | -10 | 9 | 39 | 60 | 63 | 65 |
| RCVPS_B_PRT | | -25 | -18 | -10 | 4 | 34 | 60 | 63 | 65 |
| OCXO_PRI_PRT | | -25 | -18 | -10 | -6 | 24 | 40 | 45 | 65 |
| OCXO_RED_PRT | | -25 | -18 | -10 | -6 | 24 | 40 | 45 | 65 |
| DSPA_1553_PRT | | -25 | -15 | -10 | -2 | 28 | 50 | 55 | 65 |
| DSPB_1553_PRT | | -25 | -15 | -10 | 0 | 30 | 50 | 55 | 65 |
| SPA_PS_A_PRT | | -25 | -18 | -10 | -5 | 26 | 50 | 55 | 65 |
| SPA_PS_B_PRT | | -25 | -18 | -10 | -6 | 25 | 50 | 55 | 65 |
| DSPA_PROC_PRT | | -25 | -15 | -10 | -2 | 28 | 50 | 55 | 65 |
| DSPB_PROC_PRT | | -25 | -15 | -10 | 0 | 30 | 50 | 55 | 65 |
| SD_MECH_TEMP | | -25 | -15 | 1 | 2 | 32 | 58 | 62 | 85 |

| Name | Description | Red Limit (low) | Yellow Limit (low) | Performance Limit (low ) | Nominal (low) [1] | Nominal (high) [1] | Performance Limit (high ) | Yellow Limit (high) | Red Limit (high) |
|---|---|---|---|---|---|---|---|---|---|
| SD_PS_PRT | | -25 | -15 | -10 | 0 | 30 | 49 | 55 | 65 |
| V_PLO_A_LOCK_VMON | Volts | NA | NA | 0.002 | 0.02 | 0.02 | NA | NA | NA |
| V_PLO_B_LOCK_VMON | | NA | NA | 0.002 | 0.02 | 0.02 | NA | NA | NA |
| HK_2WREST1_A or _B | Counts | NA | NA | 45000 | 49890 | 49940 | 55000 | NA | NA |
| HK_2WREST2_A or _B | | NA | NA | 45000 | 50280 | 50330 | 55000 | NA | NA |
| 4W_GND_A or _B | | NA | NA | 0 | 1450 | 1480 | 2000 | NA | NA |
| 2W_GND_A or _B | | NA | NA | 0 | 980 | 1015 | 2000 | NA | NA |
| VD_REF_A or _B, Module 1 | Volts | NA | NA | 1.8 | 2.25 | 2.25 | 2.7 | NA | NA |
| VD_REF_A or _B, Module 2 | | NA | NA | 1.8 | 2.25 | 2.25 | 2.7 | NA | NA |
| VD_REF_A or _B, Module 3 | | NA | NA | 1.8 | 2.25 | 2.25 | 2.7 | NA | NA |
| VD_REF_A or _B, Module 4 | | NA | NA | 1.8 | 2.25 | 2.25 | 2.7 | NA | NA |
| VD_GND_A or _B, Module 1 | | NA | NA | NA | 0.0 | 0.0 | 0.50 | NA | NA |
| VD_GND_A or _B, Module 2 | | NA | NA | NA | 0.0 | 0.0 | 0.50 | NA | NA |
| VD_GND_A or _B, Module 3 | | NA | NA | NA | 0.0 | 0.0 | 0.50 | NA | NA |
| VD_GND_A or _B, Module 4 | | NA | NA | NA | 0.0 | 0.0 | 0.50 | NA | NA |
| SD_P5V_VMON | Volts | < 4.4 | 4.55 | 4.70 | 5.00 | 5.05 | 5.40 | 5.6 | > 5.8 |
| SD_P12V_VMON | | < 9.5 | 9.9 | 10.3 | 11.75 | 11.85 | 13.70 | 14.1 | > 14.5 |
| SD_N12V_VMON | | < -14.5 | -14.1 | -13.7 | -12.10 | -11.90 | -10.3 | -9.9 | > -9.5 |
| MAIN_MOTOR_CUR[2] | Amperes | -6.0 | -5.75 | -5.5 | -0.05 | 0.20 | 5.5 | 5.75 | 6.0 |
| COMP_MOTOR_CUR[2] | | -6.6 | -6.3 | -6.06 | 0.00 | 0.25 | 6.06 | 6.3 | 6.6 |
| RESOLVER_VMON | Volts | 5.6 | 6.0 | 6.3 | 6.9 | 7.20 | 7.7 | 8.0 | 8.4 |
| SD_MAIN_MOTOR_VEL | Degrees/sec | -900 | -850 | -800 | 59.0 | 65.0 | 800 | 850 | 900 |
| SD_COMP_MOTOR_VEL | | -900 | -850 | -800 | -130.0 | -80.0 | 800 | 850 | 900 |
| SD_MAIN_LOOP_ERROR | Degrees | NA | NA | -0.04 | -0.02 | 0.02 | 0.04 | NA | NA |
| SD_MAIN_LOOP_INT_ERROR | | NA | NA | -0.05 | 0.0 | 10.0 | 25 | NA | NA |
| SD_MAIN_LOOP_VEL_ERROR | Degrees/sec | NA | NA | -100 | -10.0 | 10.0 | 200 | NA | NA |
| SD_COMP_LOOP_ERROR | | NA | NA | -300 | -5.0 | 5.0 | 150 | NA | NA |
| SD_MAIN_MOTOR_REQ_ VOLTAGE | Volts | NA | NA | -3.0 | 0.25 | 1.00 | 3.0 | NA | NA |
| SD_COMP_MOTOR_REQ_ VOLTAGE | | NA | NA | -5.0 | -2.5 | 1.0 | 5.0 | NA | NA |
| SD_FEED_FORWARD_ VOLTAGE | | NA | NA | 20.0 | 28.0 | 30.0 | 36.0 | NA | NA |
| COMP_MOTOR_POS | Degrees | NA | NA | -180 | -180 | 180 | 180 | NA | NA |

[1] Nominal low/high temperature limits are based on -10° C/+20° C instrument base plate temperature

[2] The ATMS instrument will transition autonomously to Safe Hold in 8-16 seconds if the Main or Comp Motor currents exceed a threshold of 15Amps.

**Table 11-2 Housekeeping Telemetry Limits (cont.)**

# 12 CHANNEL FREQUENCY AND BANDPASS CHARACTERISTICS

Table 12-1 summarizes the measured center frequencies and bandwidths. For channel 1 and 2, the measured center frequencies and bandwidths in Table 12-1 represent data at the mid temperature of +20°C baseplate temperature, and nominal bias voltage. For channels 3 – 22, the measured IF center frequencies and bandwidths are provided, as obtained from receiver shelf regression testing at 14°C – 17°C, and nominal bias voltage. The IF center frequencies versus temperature are shown in Table 12-2 and also includes measured shelf temperatures during bandpass characterization. Appendix B provides the swept bandpass data for all channels, over the operational temperature range. The complete receiver test results are provided in the following reports:

| | |
|---|---|
| RE-17254A | JPSS-ATMS K/Ka Band Receiver Shelf Test Report |
| RE-20748 | JPSS-ATMS W Band Receiver Shelf Regression Testing |
| RE-20747 | JPSS-ATMS V Band Receiver Shelf |
| RE-20749 | JPSS-ATMS G Band Receiver Shelf Regression Testing |

**Table 12-1 Channel Center Intermediate Frequency and Bandwidth**

| | | Primary | | Redundant | |
|---|---|---|---|---|---|
| **Channel** | **Specified IF Center Freq (MHz)** | **Measured IF Center Freq (MHz)** | **Bandwidth (MHz)** | **Measured IF Center Freq (MHz)** | **Bandwidth (MHz)** |
| 1 | 23800 | 23795 | 266.35 | | |
| 2 | 31400 | 31396 | 171.77 | | |
| 3 | 6990.344 | 6990.6 | 166.95 | 6990.5 | 166.87 |
| 4 | 5530.344 | 5529.5 | 374.25 | 5529.5 | 374.15 |
| 5 | 4490.344 | 4492.8 | 382.16 | 4492.9 | 381.93 |
| 6a | 3579.344 | 3580.3 | 159.01 | 3580.3 | 159.26 |
| 6b | 3809.344 | 3809.9 | 160.76 | 3809.9 | 160.83 |
| 7 | 2890.344 | 2890.6 | 387.06 | 2890.6 | 387.06 |
| 8 | 2350.344 | 2350.6 | 381.09 | 2350.5 | 380.83 |
| 9 | 1790.344 | 1790.7 | 313.57 | 1790.8 | 313.45 |
| 10 | 87.5 | 87.4 | 151.50 | 87.5 | 151.72 |
| 11 | 217 | 217.2 | 75.96 | 217.3 | 76.00 |
| 12a | 274.2 | 274.2 | 35.02 | 274.2 | 35.08 |
| 12b | 370.2 | 370.1 | 34.71 | 370.0 | 34.66 |
| 13a | 300.2 | 300.2 | 15.45 | 300.2 | 15.48 |
| 13b | 344.2 | 344.1 | 15.48 | 344.1 | 15.49 |
| 14a | 312.2 | 312.2 | 7.86 | 312.2 | 7.88 |
| 14b | 332.2 | 332.1 | 7.87 | 332.2 | 7.87 |
| 15a | 317.7 | 317.5 | 2.93 | 317.5 | 2.92 |
| 15b | 326.7 | 326.5 | 2.91 | 326.5 | 2.93 |
| 16 | 5,450 | 5445.6 | 1966.2 | | |
| 17 | 925 | 921.3 | 1119.34 | 921.6 | 1119.65 |
| 18 | 7,000 | 6995.7 | 1972.49 | 6995.3 | 1971.72 |
| 19 | 4,500 | 4500.9 | 1958.23 | 4499.5 | 1960.43 |
| 20 | 3,000 | 2996.6 | 983.53 | 2996.8 | 982.82 |
| 21 | 1,800 | 1800 | 983.35 | 1800 | 984.17 |
| 22 | 1,000 | 1002.8 | 489.34 | 1002.8 | 489.32 |

**Table 12-2 Channel Intermediate Frequency vs. Temperature**

| | Primary | | | Redundant | | |
|---|---|---|---|---|---|---|
| **Channel** | **Low (°C)** | **Mid (°C)** | **High (°C)** | **Low (°C)** | **Mid (°C)** | **High (°C)** |
| 1-2 | -11.1 | 20.3 | 51.8 | | | |
| 3-15 | -11.2 | 19.7 | 50.7 | -11.3 | 19.8 | 50.6 |
| 16 | -11.5 | 19.8 | 52.0 | | | |
| 17-22* | -11.2 | 20.0 | 51.8 | -11.1 | 20.0 | 51.7 |
| | **Channel Frequency (MHz)** | | | **Channel Frequency (MHz)** | | |
| 1 | 23796 | 23795 | 23795 | | | |
| 2 | 31397 | 31396 | 31395 | | | |
| 3 | 6993.0 | 6990.6 | 6988.1 | 6992.7 | 6990.5 | 6998.0 |
| 4 | 5526.2 | 5529.5 | 5532.7 | 5526.2 | 5529.5 | 5532.8 |
| 5 | 4494.4 | 4492.8 | 4491.1 | 4494.5 | 4492.9 | 4491.1 |
| 6a | 3581.4 | 3580.3 | 3578.7 | 3581.5 | 3580.3 | 3578.7 |
| 6b | 3810.9 | 3809.9 | 3808.6 | 3810.8 | 3809.9 | 3808.6 |
| 7 | 2892.0 | 2890.6 | 2889.3 | 2892.0 | 2890.6 | 2889.3 |
| 8 | 2351.2 | 2350.6 | 2349.8 | 2351.2 | 2350.5 | 2349.8 |
| 9 | 1791.6 | 1790.7 | 1790.0 | 1791.4 | 1790.8 | 1790.0 |
| 10 | 87.6 | 87.4 | 87.3 | 87.6 | 87.5 | 87.3 |
| 11 | 217.5 | 217.2 | 216.9 | 217.3 | 217.3 | 217.1 |
| 12a | 274.8 | 274.2 | 273.6 | 274.8 | 274.2 | 273.6 |
| 12b | 371.0 | 370.1 | 369.3 | 370.8 | 370.0 | 369.1 |
| 13a | 300.3 | 300.2 | 300.0 | 300.3 | 300.2 | 300.0 |
| 13b | 344.4 | 344.1 | 344.0 | 344.4 | 344.1 | 343.9 |
| 14a | 312.4 | 312.2 | 312.0 | 312.4 | 312.2 | 312.0 |
| 14b | 332.4 | 332.1 | 332.0 | 332.4 | 332.2 | 332.0 |
| 15a | 317.4 | 317.5 | 317.5 | 317.4 | 317.5 | 317.5 |
| 15b | 326.4 | 326.5 | 326.5 | 326.4 | 326.5 | 326.5 |
| 16 | 5451.6 | 5445.6 | 5440.6 | | | |
| 17 | 921.7 | 921.3 | 920.6 | 922 | 921.6 | 920.5 |
| 18 | 7000.0 | 6995.7 | 6988.8 | 6999.7 | 6995.3 | 6989 |
| 19 | 4505.1 | 4500.9 | 4496.9 | 4505.1 | 4499.5 | 4496.9 |
| 20 | 3000.7 | 2996.6 | 2993.3 | 3000.8 | 2996.8 | 2993.6 |
| 21 | 1804.0 | 1800 | 1795 | 1804.2 | 1800 | 1795.3 |
| 22 | 1003.9 | 1002.8 | 1001.3 | 1003.9 | 1002.8 | 1001.3 |

*G-Band temperature measurements correspond to baseplate temperature

# 13 RADIOMETRIC COUNTS LIMITS

Radiometric count limits for all 22 channels are provided in Table 13-1. These limits are to be used for spacecraft integration testing only during ambient and thermal vacuum testing. The following values are based on the stated limits in the Calibration Test Procedure.

**Table 13-1 Radiometric Count Limits for Spacecraft Level Testing**

| Channel | Maximum Counts | Minimum Counts | Maximum Std. Deviation | Maximum Scan-to-Scan Difference |
|---|---|---|---|---|
| 1 | 40,240 | 9,000 | 51 | 306 |
| 2 | 40,240 | 7,100 | 55 | 330 |
| 3 | 40,240 | 7,190 | 47 | 284 |
| 4 | 40,240 | 12,940 | 37 | 221 |
| 5 | 40,240 | 12,320 | 37 | 221 |
| 6 | 40,240 | 12,450 | 37 | 221 |
| 7 | 40,240 | 12,540 | 37 | 221 |
| 8 | 40,240 | 12,450 | 37 | 221 |
| 9 | 40,240 | 12,600 | 37 | 221 |
| 10 | 40,240 | 12,250 | 42 | 250 |
| 11 | 40,240 | 11,010 | 67 | 404 |
| 12 | 40,240 | 13,440 | 68 | 411 |
| 13 | 40,240 | 11,320 | 85 | 508 |
| 14 | 40,240 | 12,350 | 135 | 811 |
| 15 | 40,240 | 11,100 | 202 | 1213 |
| 16 | 40,240 | 11,960 | 19 | 114 |
| 17 | 40,240 | 14,060 | 17 | 100 |
| 18 | 40,240 | 15,450 | 21 | 125 |
| 19 | 40,240 | 16,350 | 21 | 125 |
| 20 | 40,240 | 15,460 | 21 | 125 |
| 21 | 40,240 | 16,670 | 21 | 125 |
| 22 | 40,240 | 17,070 | 23 | 141 |

# 14 NOTES: ABBREVIATIONS, ACRONYMS, AND SYMBOLS

| | |
|---|---|
| A/D | Analog/Digital |
| ADCS | Attitude Determination and Control Subsystem |
| ATMS | Advanced Technology Microwave Sounder |
| C | Celsius |
| CDRL | Contractual Data Requirements List |
| CTE | Calibration Test Equipment |
| dB | decibel |
| dBm | Decibel (referenced to a milliwatt) |
| EDU | Engineering Development Unit |
| FM-1 | Flight Model 1 |
| GDO | Gunn Diode Oscillator |
| GSFC | Goddard Space Flight Center |
| GHz | Gigahertz |
| IF | Intermediate Frequency |
| JPSS | Joint Polar Satellite Systems |
| K | Kelvin |
| kHz | Kilohertz |
| km | Kilometer |
| NE$\Delta$T | Noise Equivalent Delta Temperature |
| NPOESS | National Polar-orbiting Operational Environmental Satellite System |
| NPP | NPOESS Preparatory Project |
| PAM | Precision Analog Monitor |
| PAT | Passive Analog Telemetry |
| PLO | Phase Locked Oscillator |
| PRT | Platinum Resistance Thermometer |
| RF | Radio Frequency |
| SDE | Scan Drive Electronics |
| SDM | Scan Drive Mechanism |
| SDR | Sensor Data Record |
| T/V | Thermal Vacuum |

# 15 APPENDIX A – ANTENNA PATTERNS & EFFICIENCY DATA

The following data is extracted from RE-17491 Rev A, Antenna Subsystem Verification Report.

Down-Track and Cross-Track angles are defined in the Antenna Reflector reference frame ($x_a$, $y_a$, $z_a$). The Antenna Reflector reference frame coincides with the Instrument x, y, z axes when pointed to the Nadir position (scan angle = 0.0 degrees). The $y_a$ and $z_a$ axes of the antenna reference frame are rotated about the instrument x-axis according to the scan angle. The "Down-Track" angle is the angle about the $y_a$ axis, with positive angle from $x_a$ to $z_a$. The "Cross-Track" angle is the angle about the $x_a$ axis, with positive angle from $z_a$ to $y_a$.

# 16 APPENDIX B – SWEPT BANDPASS RESPONSE

The following data is extracted from Receiver Test Reports:

| | |
|---|---|
| RE-17254A | JPSS-ATMS K/Ka Band Receiver Shelf Test Report |
| RE-20748 | JPSS-ATMS W Band Receiver Shelf Regression Testing |
| RE-20747 | JPSS-ATMS V Band Receiver Shelf and SAW Assembly Regression Testing |
| RE-20749 | JPSS-ATMS G Band Receiver Shelf Regression Testing |

# 17 APPENDIX C – DATA DIRECTORY

The raw calibration data is provided in the acceptance data package, on three CD ROMs. The files in each of these CD's are listed in Table 17-1, Table 17-2, and Table 17-3, each corresponding to one of the three instrument temperatures. Within each CD, there are separate files for each Scene Temperature and each Redundancy Configuration. Table 17-1 lists the files for the cold instrument temperature, Table 17-2 lists the files for the nominal instrument temperature, and Table 17-3 lists the files for the hot instrument temperature.

**Table 17-1 Data Disk File Cross Reference Matrix, Cold Plate -3.1°C**

| Scene Temp (K) | Red. Config | File Name | Sequence Number | | | |
|---|---|---|---|---|---|---|
| | | | First Science | First HK Eng | First HC Eng | First CTE |
| 84 | 1 | 303_2017_02_24_17_48_30_000_12_57_TEST.log | D1E0 | C5D8 | D167 | E04F |
| | 2 | 303_2017_02_24_16_36_47_000_12_58_TEST.log | C0F8 | C3BD | CB16 | DE34 |
| | 5 | 303_2017_02_24_13_26_23_000_13_00_TEST.log | DAB8 | D159 | F3F2 | D8B8 |
| | 6 | 303_2017_02_24_11_53_45_000_15_12_TEST.log | CBB0 | CEA2 | EBCD | D601 |
| 130 | 1 | 303_2017_02_24_23_41_17_000_12_53_TEST.log | E49E | D02D | F065 | EAA5 |
| | 2 | 303_2017_02_25_00_32_39_000_12_49_TEST.log | F9D6 | D1AE | F4E8 | EC26 |
| | 5 | 303_2017_02_25_02_52_11_000_12_49_TEST.log | CF60 | C38E | CA9B | F036 |
| | 6 | 303_2017_02_25_03_40_11_000_13_02_TEST.log | C620 | C4F6 | CED3 | F19E |
| 180 | 1 | 303_2017_02_25_10_02_29_000_12_50_TEST.log | CB30 | C597 | D0B9 | FCCD |
| | 2 | 303_2017_02_25_08_57_45_000_12_44_TEST.log | FC18 | C3B2 | CB0A | FAE7 |
| | 5 | 303_2017_02_25_06_32_27_000_12_58_TEST.log | EE60 | CA03 | DDFA | F6AC |
| | 6 | 303_2017_02_25_05_37_57_000_18_29_TEST.log | EEB0 | C894 | D9AD | F53C |
| 230 | 1 | 303_2017_02_25_14_11_45_000_12_51_TEST.log | F170 | CCE4 | E6A0 | C41B |
| | 2 | 303_2017_02_25_15_32_47_000_12_55_TEST.log | D670 | CF44 | EDC0 | C67B |
| | 5 | 303_2017_02_25_18_48_38_000_13_25_TEST.log | EE08 | C44F | CCC0 | CC25 |
| | 6 | 303_2017_02_25_19_58_02_000_13_07_TEST.log | E830 | C657 | D2D8 | CE2E |
| 280 | 1 | 303_2017_02_26_04_10_00_000_13_09_TEST.log | E4D0 | C4DC | CE81 | DC90 |
| | 2 | 303_2017_02_26_03_25_00_000_13_30_TEST.log | CB50 | C38C | CA91 | DB40 |
| | 5 | 303_2017_02_26_01_05_20_000_12_49_TEST.log | DE90 | CF56 | EDD5 | D72D |
| | 6 | 303_2017_02_26_00_15_04_000_12_57_TEST.log | D450 | CDDE | E96D | D5B5 |
| 330 | 1 | 303_2017_02_26_19_59_38_000_12_49_TEST.log | DCA0 | C618 | D21F | F844 |
| | 2 | 303_2017_02_26_18_35_01_000_12_47_TEST.log | D6B8 | C39D | CAAE | F5C9 |
| | 5 | 303_2017_02_26_14_47_23_000_13_46_TEST.log | F1EC | CE56 | EAF1 | EF3F |
| | 6 | 303_2017_02_26_15_44_49_000_13_09_TEST.log | F77C | CFFE | EFE9 | F0E8 |

**Table 17-2 Data Disk File Cross Reference Matrix, Cold Plate +7.7°C**

| Scene Temp (K) | Red. Config | File Name | Sequence Number | | | |
|---|---|---|---|---|---|---|
| | | | First Science | First HK Eng | First HC Eng | First CTE |
| 84 | 1 | 303_2017_02_10_21_54_33_000_12_57_TEST.log | CF69 | C6AD | D3D6 | D459 |
| | 2 | 303_2017_02_10_20_16_16_000_12_49_TEST.log | CCC9 | C3CC | CB33 | D177 |
| | 5 | 303_2017_02_10_15_38_30_000_13_10_TEST.log | D2FD | EC2E | C47C | C95D |
| | 6 | 303_2017_02_10_17_17_04_000_12_51_TEST.log | D66D | EF10 | CD22 | CC40 |
| 130 | 1 | 303_2017_02_11_02_13_03_000_12_48_TEST.log | C59B | CE40 | EA8D | DBEC |
| | 2 | 303_2017_02_11_03_09_03_000_13_00_TEST.log | C6B3 | CFE5 | EF7C | DD91 |
| | 5 | 303_2017_02_11_05_33_34_000_13_09_TEST.log | D858 | C398 | CAB2 | E1C7 |
| | 6 | 303_2017_02_11_06_27_14_000_14_57_TEST.log | C110 | C529 | CF65 | E358 |
| 180 | 1 | 303_2017_02_11_23_22_14_000_12_52_TEST.log | D858 | C5DD | D177 | D327 |
| | 2 | 303_2017_02_11_22_02_55_000_12_47_TEST.log | C330 | C38A | CA7E | D0D4 |
| | 5 | 303_2017_02_11_17_50_23_000_13_10_TEST.log | ECA1 | D930 | CA45 | C9A7 |
| | 6 | 303_2017_02_11_19_16_45_000_12_53_TEST.log | C261 | DBB8 | D1DD | CC2F |
| 230 | 1 | 303_2017_02_12_03_57_33_000_12_54_TEST.log | ED10 | CDEE | E9AA | DB38 |
| | 2 | 303_2017_02_12_05_24_32_000_13_26_TEST.log | C818 | D07A | F14E | DDC5 |
| | 5 | 303_2017_02_12_10_02_22_000_13_05_TEST.log | CF20 | C6DF | D473 | E5E7 |
| | 6 | 303_2017_02_12_09_06_13_000_13_16_TEST.log | CF40 | C53B | CF87 | E443 |
| 280 | 1 | 303_2017_02_12_22_30_00_000_12_58_TEST.log | D6C8 | C579 | D038 | FBC5 |
| | 2 | 303_2017_02_12_21_27_35_000_13_17_TEST.log | DED8 | C3A7 | CAC2 | F9F3 |
| | 5 | 303_2017_02_12_17_24_00_000_12_50_TEST.log | D130 | D3CD | FB3D | F2D6 |
| | 6 | 303_2017_02_12_18_47_27_000_12_57_TEST.log | CC20 | D63F | C293 | F548 |
| 330 | 1 | 303_2017_02_15_03_49_33_000_14_22_TEST.log | FF50 | D39B | F44D | D1B6 |
| | 2 | 303_2017_02_13_05_49_43_000_12_49_TEST.log | D09C | D259 | F6D7 | C72F |
| | 5 | 303_2017_02_13_09_44_32_000_13_03_TEST.log | E3C4 | C57C | D058 | C552 |
| | 6 | 303_2017_02_15_20_59_55_000_12_59_TEST.log | C7F8 | CA8B | DF76 | EFDC |

**Table 17-3 Data Disk File Cross Reference Matrix, Cold Plate +18.5°C**

| Scene Temp (K) | Red. Config | File Name | Sequence Number | | | |
|---|---|---|---|---|---|---|
| | | | First Science | First HK Eng | First HC Eng | First CTE |
| 84 | 1 | 303_2017_02_17_13_38_27_000_12_56_TEST.log | C876 | C52D | CF76 | E434 |
| | 2 | 303_2017_02_17_12_46_43_000_13_06_TEST.log | F206 | C3AB | CAF0 | E2B2 |
| | 5 | 303_2017_02_17_09_28_38_000_13_22_TEST.log | C350 | DCF6 | D6CC | DCEA |
| | 6 | 303_2017_02_17_10_22_08_000_12_54_TEST.log | EBA0 | DE87 | DB7F | DE7A |
| 130 | 1 | 303_2017_02_17_20_47_34_000_12_50_TEST.log | DFE4 | D1BE | F529 | F0C6 |
| | 2 | 303_2017_02_17_21_55_05_000_12_51_TEST.log | C8FC | D3B8 | FB17 | F2C1 |
| | 5 | 303_2017_02_18_00_36_05_000_13_26_TEST.log | EF11 | C2A6 | C7D5 | F76E |
| | 6 | 303_2017_02_18_03_30_02_000_13_44_TEST.log | E589 | C7BF | D720 | FC87 |
| 180 | 1 | 303_2017_02_18_11_30_27_000_13_29_TEST.log | F750 | C52A | CF4D | CA93 |
| | 2 | 303_2017_02_18_10_38_35_000_13_36_TEST.log | DC00 | C3A4 | CABB | C90D |
| | 5 | 303_2017_02_18_08_14_08_000_15_07_TEST.log | D9B9 | D01E | F03D | C4E7 |
| | 6 | 303_2017_02_18_07_01_19_000_13_08_TEST.log | EED1 | CDEE | E9AD | C2B6 |
| 230 | 1 | 303_2017_02_18_15_19_26_000_12_48_TEST.log | DF08 | CBDB | E360 | D144 |
| | 2 | 303_2017_02_18_16_32_47_000_12_59_TEST.log | FD58 | CE01 | E9D2 | D36A |
| | 5 | 303_2017_02_18_19_57_59_000_12_58_TEST.log | FBD0 | C4BD | CE1D | D969 |
| | 6 | 303_2017_02_18_21_27_18_000_13_34_TEST.log | EC60 | C75B | D5F7 | DC08 |
| 280 | 1 | 303_2017_02_19_06_38_03_000_13_19_TEST.log | E020 | C583 | D04F | EC12 |
| | 2 | 303_2017_02_19_05_34_03_000_13_21_TEST.log | D720 | C3A3 | CAAF | EA32 |
| | 5 | 303_2017_02_19_02_37_03_000_13_26_TEST.log | C068 | D072 | F13C | E51F |
| | 6 | 303_2017_02_19_01_13_01_000_13_39_TEST.log | C1D0 | CDFD | E9DD | E2AA |
| 330 | 1 | 303_2017_02_20_05_44_24_000_14_08_TEST.log | F9E0 | CB8A | E267 | D48D |
| | 2 | 303_2017_02_20_03_50_37_000_13_21_TEST.log | ECB8 | C837 | D86E | D13A |
| | 5 | 303_2017_02_19_19_03_02_000_12_46_TEST.log | E16C | D445 | FCA1 | C1DB |
| | 6 | 303_2017_02_19_22_20_05_000_12_50_TEST.log | E984 | DA0A | CDF0 | C7A1 |

# 18 APPENDIX D – MECHANICAL ALIGNMENT DATA

Measurements were performed to determine the alignment of the optical alignment cube axes, [$X_C$, $Y_C$, $Z_C$], relative to the spacecraft mounting interface reference, [$X_R$, $Y_R$, $Z_R$]. The results of these measurements, reported in RE-18910 Rev. B, are summarized below, as pitch/roll/yaw Euler angles:

(Pitch) $\theta$ = -0.027° [Angle about the y-axis, from $Z_R$ to the projection of $Z_C$ on the X-Z plane]
(Roll) $\psi$ = 0.024° [Angle about the x-axis, from $Z_R$ to the projection of $Z_C$ on the Y-Z plane]
(Yaw) $\phi = \phi_1 + \phi_2$ = -0.029° + 0.026° = -0.003°
[Angle about the z-axis, from $Y_R$ to the projection of $Y_C$ on the X-Y plane]
Where $\phi_1$ = -0.029° = Angle from $Y_O$ to $Y_C$ and $\phi_2$ = 0.026° = Angle from $Y_R$ to $Y_O$

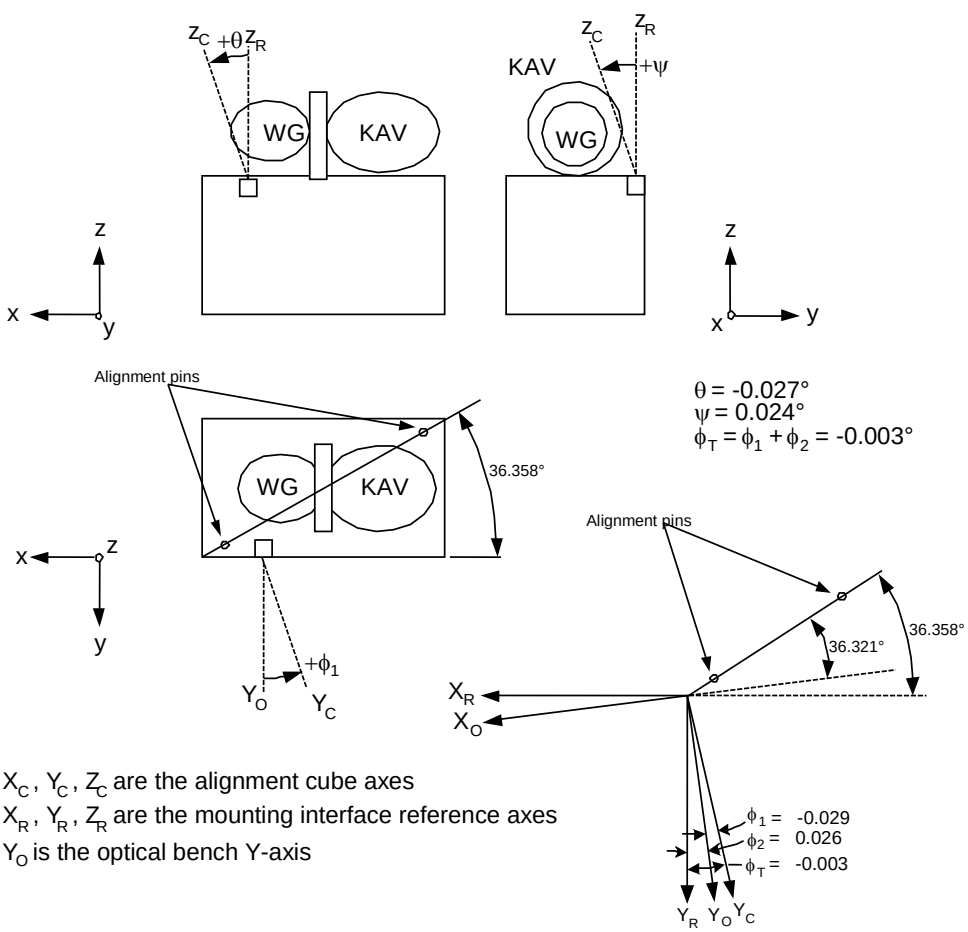
As described in RE-18910, these angles were computed as follows:

$$\theta = \tan^{-1}\left(\frac{z_2 - z_1}{x_2 - x_1}\right),\ \Psi = \tan^{-1}\left(\frac{z_2 - z_1}{y_2 - y_1}\right),\ \Phi = \tan^{-1}\left(\frac{y_2 - y_1}{x_2 - x_1}\right)$$

Where $x_i$, $y_i$, $z_i$ are the alignment measurements reported in Table III of RE-18910.
The angle $\phi_2$ is the "dowel pin angle" reported in Table II of RE-18910.

The orientations of these angles relative to the instrument are illustrated in the drawings below. The coordinate frame axes used are as follows:

[$X_R$, $Y_R$, $Z_R$]: Instrument mounting interface reference frame. This reference frame is defined by the instrument baseplate mounting surface and the drill template
[$X_O$, $Y_O$, $Z_O$]: Instrument optical bench datum (defined by optical bench surfaces)
[$X_C$, $Y_C$, $Z_C$]: Instrument alignment cube faces



# 19 APPENDIX E – CONTENTS OF INSTRUMENT MEMORY LOADS

The ATMS instrument memory loads consist of the Scan Angle Tables, and the Calibration Data Packet contents. The contents of the FM-1 ATMS Calibration Data Packet (APID $203_H$) are listed in Table 19-1. The "Values" in this table are back-converted from the hexadecimal counts. Back-conversion involved by first converting the calibration parameters' true value into counts using the equations found in Table 4-3. Standard rounding is applied (round up for 0.5 case) to the calculated counts values and then fed back to the equations to find the back-converted calibration parameter. Back conversion values were verified by taking the difference between the value and the true value divided by the multiplicative coefficient of conversion from counts to value – as long as this calculated value is no more than 0.5. The contents of the scan tables, for the four scan profiles, are given in Tables 19-2, 3, 4, and 5. This table also includes the equivalent 18-bit conversion in degrees, utilizing the methodology described in section 5, Reflector Position Data.

**Table 19-1 ATMS Calibration Data Packet**

| Word No. | Name | Value | Counts Dec | Counts Hex |
|---|---|---|---|---|
| 1 | PAM Resistance - KAV | 2487.998 | 31333 | 7A65 |
| 2 | PAM Resistance - WG | 2489.000 | 31500 | 7B0C |
| 3 | 4-W PRT_KAV_1_R0 | 2000.173 | 33391 | 826F |
| 4 | 4-W PRT_KAV_1_alpha | 0.00385475 | 37095 | 90E7 |
| 5 | 4-W PRT_KAV_1_delta | 1.69210 | 33842 | 8432 |
| 6 | 4-W PRT_KAV_1_beta | -0.85376 | 19104 | 4AA0 |
| 7 | 4-W PRT_KAV_2_R0 | 1999.687 | 33229 | 81CD |
| 8 | 4-W PRT_KAV_2_ alpha | 0.00385325 | 37065 | 90C9 |
| 9 | 4-W PRT_KAV_2_ delta | 1.68450 | 33690 | 839A |
| 10 | 4-W PRT_KAV_2_ beta | -0.72140 | 21310 | 533E |
| 11 | 4-W PRT_KAV_3_R0 | 1999.354 | 33118 | 815E |
| 12 | 4-W PRT_KAV_3_ alpha | 0.00385265 | 37053 | 90BD |
| 13 | 4-W PRT_KAV_3_ delta | 1.68075 | 33615 | 834F |
| 14 | 4-W PRT_KAV_3_ beta | 0.16672 | 36112 | 8D10 |
| 15 | 4-W PRT_KAV_4_R0 | 2000.029 | 33343 | 823F |
| 16 | 4-W PRT_KAV_4_ alpha | 0.00385405 | 37081 | 90D9 |
| 17 | 4-W PRT_KAV_4_ delta | 1.69400 | 33880 | 8458 |
| 18 | 4-W PRT_KAV_4_ beta | -0.63914 | 22681 | 5899 |
| 19 | 4-W PRT_KAV_5_R0 | 1999.846 | 33282 | 8202 |
| 20 | 4-W PRT_KAV_5_ alpha | 0.00385270 | 37054 | 90BE |
| 21 | 4-W PRT_KAV_5_ delta | 1.67790 | 33558 | 8316 |
| 22 | 4-W PRT_KAV_5_ beta | 0.16876 | 36146 | 8D32 |
| 23 | 4-W PRT_KAV_6_R0 | 2000.050 | 33350 | 8246 |
| 24 | 4-W PRT_KAV_6_ alpha | 0.00385460 | 37092 | 90E4 |
| 25 | 4-W PRT_KAV_6_ delta | 1.68835 | 33767 | 83E7 |
| 26 | 4-W PRT_KAV_6_ beta | -0.10802 | 31533 | 7B2D |
| 27 | 4-W PRT_KAV_7_R0 | 1999.669 | 33223 | 81C7 |
| 28 | 4-W PRT_KAV_7_ alpha | 0.00385415 | 37083 | 90DB |
| 29 | 4-W PRT_KAV_7_ delta | 1.68685 | 33737 | 83C9 |
| 30 | 4-W PRT_KAV_7_ beta | -0.57482 | 23753 | 5CC9 |
| 31 | 4-W PRT_KAV_8_R0 | 2000.359 | 33453 | 82AD |

| Word No. | Name | Value | Counts Dec | Counts Hex |
|---|---|---|---|---|
| 32 | 4-W PRT_KAV_8_ alpha | 0.00385410 | 37082 | 90DA |
| 33 | 4-W PRT_KAV_8_ delta | 1.67430 | 33486 | 82CE |
| 34 | 4-W PRT_KAV_8_ beta | 0.39634 | 39939 | 9C03 |
| 35 | 4-W PRT_WG_1_R0 | 1999.561 | 33187 | 81A3 |
| 36 | 4-W PRT_WG_1_ alpha | 0.00385320 | 37064 | 90C8 |
| 37 | 4-W PRT_WG_1_ delta | 1.67760 | 33552 | 8310 |
| 38 | 4-W PRT_WG_1_ beta | 0.18178 | 36363 | 8E0B |
| 39 | 4-W PRT_WG_2_R0 | 2000.311 | 33437 | 829D |
| 40 | 4-W PRT_WG_2_ alpha | 0.00385425 | 37085 | 90DD |
| 41 | 4-W PRT_WG_2_ delta | 1.68245 | 33649 | 8371 |
| 42 | 4-W PRT_WG_2_ beta | -0.94298 | 17617 | 44D1 |
| 43 | 4-W PRT_WG_3_R0 | 1999.615 | 33205 | 81B5 |
| 44 | 4-W PRT_WG_3_ alpha | 0.00385360 | 37072 | 90D0 |
| 45 | 4-W PRT_WG_3_ delta | 1.68620 | 33724 | 83BC |
| 46 | 4-W PRT_WG_3_ beta | -1.16864 | 13856 | 3620 |
| 47 | 4-W PRT_WG_4_R0 | 2000.143 | 33381 | 8265 |
| 48 | 4-W PRT_WG_4_ alpha | 0.00385425 | 37085 | 90DD |
| 49 | 4-W PRT_WG_4_ delta | 1.68365 | 33673 | 8389 |
| 50 | 4-W PRT_WG_4_ beta | 0.10882 | 35147 | 894B |
| 51 | 4-W PRT_WG_5_R0 | 1999.678 | 33226 | 81CA |
| 52 | 4-W PRT_WG_5_ alpha | 0.00385480 | 37096 | 90E8 |
| 53 | 4-W PRT_WG_5_ delta | 1.67850 | 33570 | 8322 |
| 54 | 4-W PRT_WG_5_ beta | -0.59366 | 23439 | 5B8F |
| 55 | 4-W PRT_WG_6_R0 | 2000.524 | 33508 | 82E4 |
| 56 | 4-W PRT_WG_6_ alpha | 0.00385315 | 37063 | 90C7 |
| 57 | 4-W PRT_WG_6_ delta | 1.67735 | 33547 | 830B |
| 58 | 4-W PRT_WG_6_ beta | -0.50654 | 24891 | 613B |
| 59 | 4-W PRT_WG_7_R0 | 1999.885 | 33295 | 820F |
| 60 | 4-W PRT_WG_7_ alpha | 0.00385380 | 37076 | 90D4 |
| 61 | 4-W PRT_WG_7_ delta | 1.65425 | 33085 | 813D |
| 62 | 4-W PRT_WG_7_ beta | 0.17812 | 36302 | 8DCE |
| 63 | Cal Target Offset_K | -0.081098 | 10813 | 2A3D |
| 64 | Cal Target Offset_A | -0.081098 | 10813 | 2A3D |
| 65 | Cal Target Offset_V | -0.078098 | 10413 | 28AD |
| 66 | Cal Target Offset_W | -0.056400 | 7520 | 1D60 |
| 67 | Cal Target Offset_G | -0.044700 | 5960 | 1748 |
| 68 | Cold Calibration Offset_K | 0.21800 | 14533 | 38C5 |
| 69 | Cold Calibration Offset_A | 0.21800 | 14533 | 38C5 |
| 70 | Cold Calibration Offset_V | 0.11600 | 7733 | 1E35 |
| 71 | Cold Calibration Offset_W | 0.05801 | 3867 | F1B |
| 72 | Cold Calibration Offset_G | 0.02000 | 1333 | 535 |
| 73 | Quadratic Coefficient_Chan 1 | -2.850E-05 | 23443 | 5B93 |
| 74 | Quadratic Coefficient_Chan 2 | -3.171E-05 | 22390 | 5776 |
| 75 | Quadratic Coefficient_Chan 3 | -8.283E-06 | 30071 | 7577 |

| Word No. | Name | Value | Counts Dec | Counts Hex |
|---|---|---|---|---|
| 76 | Quadratic Coefficient_Chan 4 | 4.789E-06 | 34357 | 8635 |
| 77 | Quadratic Coefficient_Chan 5 | -4.053E-07 | 32654 | 7F8E |
| 78 | Quadratic Coefficient_Chan 6 | 5.164E-06 | 34480 | 86B0 |
| 79 | Quadratic Coefficient_Chan 7 | -1.009E-05 | 29479 | 7327 |
| 80 | Quadratic Coefficient_Chan 8 | -1.321E-05 | 28456 | 6F28 |
| 81 | Quadratic Coefficient_Chan 9 | -1.226E-05 | 28767 | 705F |
| 82 | Quadratic Coefficient_Chan 10 | -3.160E-05 | 22426 | 579A |
| 83 | Quadratic Coefficient_Chan 11 | -3.092E-05 | 22649 | 5879 |
| 84 | Quadratic Coefficient_Chan 12 | -3.527E-05 | 21223 | 52E7 |
| 85 | Quadratic Coefficient_Chan 13 | -4.396E-05 | 18374 | 47C6 |
| 86 | Quadratic Coefficient_Chan 14 | -3.786E-05 | 20374 | 4F96 |
| 87 | Quadratic Coefficient_Chan 15 | -4.139E-05 | 19216 | 4B10 |
| 88 | Quadratic Coefficient_Chan 16 | -1.343E-05 | 28384 | 6EE0 |
| 89 | Quadratic Coefficient_Chan 17 | -3.116E-05 | 22570 | 582A |
| 90 | Quadratic Coefficient_Chan 18 | -1.644E-05 | 27397 | 6B05 |
| 91 | Quadratic Coefficient_Chan 19 | -1.708E-05 | 27187 | 6A33 |
| 92 | Quadratic Coefficient_Chan 20 | -1.916E-05 | 26505 | 6789 |
| 93 | Quadratic Coefficient_Chan 21 | -1.914E-05 | 26511 | 678F |
| 94 | Quadratic Coefficient_Chan 22 | -2.946E-05 | 23128 | 5A58 |
| 95 | Alignment_K_01_X | 0.00588 | 33044 | 8114 |
| 96 | Alignment_K_01_Y | 0.04440 | 34970 | 889A |
| 97 | Alignment_K_01_Z | 0.04606 | 35053 | 88ED |
| 98 | Alignment_K_48_X | 0.00288 | 32894 | 807E |
| 99 | Alignment_K_48_Y | 0.01640 | 33570 | 8322 |
| 100 | Alignment_K_48_Z | 0.07406 | 36453 | 8E65 |
| 101 | Alignment_K_96_X | -0.01012 | 32244 | 7DF4 |
| 102 | Alignment_K_96_Y | 0.05140 | 35320 | 89F8 |
| 103 | Alignment_K_96_Z | 0.10506 | 38003 | 9473 |
| 104 | Alignment_A_01_X | 0.03088 | 34294 | 85F6 |
| 105 | Alignment_A_01_Y | 0.09140 | 37320 | 91C8 |
| 106 | Alignment_A_01_Z | 0.02306 | 33903 | 846F |
| 107 | Alignment_A_48_X | 0.01988 | 33744 | 83D0 |
| 108 | Alignment_A_48_Y | 0.04340 | 34920 | 8868 |
| 109 | Alignment_A_48_Z | 0.07406 | 36453 | 8E65 |
| 110 | Alignment_A_96_X | -0.03112 | 31194 | 79DA |
| 111 | Alignment_A_96_Y | 0.04540 | 35020 | 88CC |
| 112 | Alignment_A_96_Z | 0.10206 | 37853 | 93DD |
| 113 | Alignment_V_01_X | 0.05088 | 35294 | 89DE |
| 114 | Alignment_V_01_Y | 0.05940 | 35720 | 8B88 |
| 115 | Alignment_V_01_Z | 0.03906 | 34703 | 878F |
| 116 | Alignment_V_48_X | 0.02988 | 34244 | 85C4 |
| 117 | Alignment_V_48_Y | 0.03240 | 34370 | 8642 |
| 118 | Alignment_V_48_Z | 0.07406 | 36453 | 8E65 |
| 119 | Alignment_V_96_X | -0.02012 | 31744 | 7C00 |

| Word No. | Name | Value | Counts Dec | Counts Hex |
|---|---|---|---|---|
| 120 | Alignment_V_96_Y | 0.02140 | 33820 | 841C |
| 121 | Alignment_V_96_Z | 0.09006 | 37253 | 9185 |
| 122 | Alignment_W_01_X | 0.05688 | 35594 | 8B0A |
| 123 | Alignment_W_01_Y | -0.09860 | 27820 | 6CAC |
| 124 | Alignment_W_01_Z | 0.11706 | 38603 | 96CB |
| 125 | Alignment_W_48_X | -0.00512 | 32494 | 7EEE |
| 126 | Alignment_W_48_Y | -0.00160 | 32670 | 7F9E |
| 127 | Alignment_W_48_Z | 0.07406 | 36453 | 8E65 |
| 128 | Alignment_W_96_X | -0.06712 | 29394 | 72D2 |
| 129 | Alignment_W_96_Y | 0.03340 | 34420 | 8674 |
| 130 | Alignment_W_96_Z | 0.09606 | 37553 | 92B1 |
| 131 | Alignment_G_01_X | 0.12488 | 38994 | 9852 |
| 132 | Alignment_G_01_Y | -0.10060 | 27720 | 6C48 |
| 133 | Alignment_G_01_Z | 0.11806 | 38653 | 96FD |
| 134 | Alignment_G_48_X | 0.05388 | 35444 | 8A74 |
| 135 | Alignment_G_48_Y | 0.04540 | 35020 | 88CC |
| 136 | Alignment_G_48_Z | 0.07406 | 36453 | 8E65 |
| 137 | Alignment_G_96_X | -0.07312 | 29094 | 71A6 |
| 138 | Alignment_G_96_Y | 0.10040 | 37770 | 938A |
| 139 | Alignment_G_96_Z | 0.13006 | 39253 | 9955 |
| 140 | K_SHELF_PRT_R0 | 1999.102 | 33034 | 810A |
| 141 | K_SHELF_PRT_alpha | 0.00385190 | 37038 | 90AE |
| 142 | K_SHELF_PRT_delta | 1.72445 | 34489 | 86B9 |
| 143 | K_SHELF_PRT_RC | 0.7680 | 2560 | A00 |
| 144 | V_SHELF_PRT_ R0 | 1999.393 | 33131 | 816B |
| 145 | V_SHELF_PRT_ alpha | 0.00385345 | 37069 | 90CD |
| 146 | V_SHELF_PRT_ delta | 1.67775 | 33555 | 8313 |
| 147 | V_SHELF_PRT_RC | 0.8490 | 2830 | B0E |
| 148 | W_SHELF_PRT_ R0 | 1999.660 | 33220 | 81C4 |
| 149 | W_SHELF_PRT_ alpha | 0.00385295 | 37059 | 90C3 |
| 150 | W_SHELF_PRT_ delta | 1.69590 | 33918 | 847E |
| 151 | W_SHELF_PRT_RC | 0.8490 | 2830 | B0E |
| 152 | G_SHELF_PRT_ R0 | 1999.801 | 33267 | 81F3 |
| 153 | G_SHELF_PRT_ alpha | 0.00385120 | 37024 | 90A0 |
| 154 | G_SHELF_PRT_ delta | 1.77535 | 35507 | 8AB3 |
| 155 | G_SHELF_PRT_RC | 0.6891 | 2297 | 8F9 |
| 156 | K_RFE_PRT _R’0 | 2000.343 | 33448 | 82A8 |
| 157 | K_RFE_PRT _A1 | 0.127560 | 42520 | A618 |
| 158 | KA_RFE_PRT_R’0 | 2000.534 | 33511 | 82E7 |
| 159 | KA_RFE_PRT_A1 | 0.127593 | 42531 | A623 |
| 160 | V_RFE_PRT_R’0 | 2000.214 | 33405 | 827D |
| 161 | V_RFE_PRT_A1 | 0.127611 | 42537 | A629 |
| 162 | V_PRI_PLO_PRT_R’0 | 1999.954 | 33318 | 8226 |
| 163 | V_PRI_PLO_PRT_A1 | 0.127665 | 42555 | A63B |

| Word No. | Name | Value | Counts Dec | Counts Hex |
|---|---|---|---|---|
| 164 | V_RED_PLO_PRT_R'0 | 2000.113 | 33371 | 825B |
| 165 | V_RED_PLO_PRT_A1 | 0.127641 | 42547 | A633 |
| 166 | V_IF_PRT_R'0 | 2000.278 | 33426 | 8292 |
| 167 | V_IF_PRT_A1 | 0.127686 | 42562 | A642 |
| 168 | W_RFE_PRT_R'0 | 2000.254 | 33418 | 828A |
| 169 | W_RFE_PRT_A1 | 0.127689 | 42563 | A643 |
| 170 | SAW_FILT_PRT_R'0 | 1999.342 | 33114 | 815A |
| 171 | SAW_FILT_PRT_A1 | 0.129504 | 43168 | A8A0 |
| 172 | W_IF_PRT_R'0 | 2000.399 | 33466 | 82BA |
| 173 | W_IF_PRT_A1 | 0.127701 | 42567 | A647 |
| 174 | W_PRI_GDO_PRT_R'0 | 2001.516 | 33839 | 842F |
| 175 | W_PRI_GDO_PRT_A1 | 0.127620 | 42540 | A62C |
| 176 | W_RED_GDO_PRT_R'0 | 2000.461 | 33487 | 82CF |
| 177 | W_RED_GDO_PRT_A1 | 0.127641 | 42547 | A633 |
| 178 | G_PRI_CSO_PRT_R'0 | 2000.643 | 33548 | 830C |
| 179 | G_PRI_CSO_PRT_A1 | 0.127626 | 42542 | A62E |
| 180 | G_RED_CSO_PRT_R'0 | 2000.134 | 33378 | 8262 |
| 181 | G_RED_CSO_PRT_A1 | 0.127665 | 42555 | A63B |
| 182 | G1_IF_PRT_R'0 | 2000.711 | 33570 | 8322 |
| 183 | G1_IF_PRT_A1 | 0.127608 | 42536 | A628 |
| 184 | G2_IF_PRT_R'0 | 2000.218 | 33406 | 827E |
| 185 | G2_IF_PRT_A1 | 0.127647 | 42549 | A635 |
| 186 | RCVPS_A_PRT_R'0 | 1997.272 | 32424 | 7EA8 |
| 187 | RCVPS_A_PRT_A1 | 0.129468 | 43156 | A894 |
| 188 | RCVPS_B_PRT_R'0 | 1999.195 | 33065 | 8129 |
| 189 | RCVPS_B_PRT_A1 | 0.128691 | 42897 | A791 |
| 190 | OCXO_PRI_PRT_R'0 | 1999.702 | 33234 | 81D2 |
| 191 | OCXO_PRI_PRT_A1 | 0.127899 | 42633 | A689 |
| 192 | OCXO_RED_PRT_R'0 | 1997.513 | 32504 | 7EF8 |
| 193 | OCXO_RED_PRT_A1 | 0.128448 | 42816 | A740 |
| 194 | DSPA_1553_PRT_R'0 | 1999.706 | 33235 | 81D3 |
| 195 | DSPA_1553_PRT_A1 | 0.127641 | 42547 | A633 |
| 196 | DSPB_1553_PRT_R'0 | 1998.365 | 32788 | 8014 |
| 197 | DSPB_1553_PRT_A1 | 0.128844 | 42948 | A7C4 |
| 198 | SPA_PS_A_PRT_R'0 | 1996.893 | 32298 | 7E2A |
| 199 | SPA_PS_A_PRT_A1 | 0.128964 | 42988 | A7EC |
| 200 | SPA_PS_B_PRT_R'0 | 1999.408 | 33136 | 8170 |
| 201 | SPA_PS_B_PRT_A1 | 0.129249 | 43083 | A84B |
| 202 | DSPA_PROC_PRT_R'0 | 1999.702 | 33234 | 81D2 |
| 203 | DSPA_PROC_PRT_A1 | 0.127644 | 42548 | A634 |
| 204 | DSPB_PROC_PRT_R'0 | 1996.053 | 32018 | 7D12 |
| 205 | DSPB_PROC_PRT_A1 | 0.128709 | 42903 | A797 |
| 206 | SD_MECH_TEMP_R0 | 2000.746 | 33582 | 832E |
| 207 | SD_MECH_TEMP_A1 | 0.128958 | 42986 | A7EA |

| Word No. | Name | Value | Counts Dec | Counts Hex |
|---|---|---|---|---|
| 208 | SD_PS_PRTA_R0 | 2002.936 | 34312 | 8608 |
| 209 | SD_PS_PRTA_A1 | 0.129255 | 43085 | A84D |
| 210 | SD_PS_PRTB_R0 | 1996.153 | 32051 | 7D33 |
| 211 | SD_PS_PRTB_A1 | 0.129342 | 43114 | A86A |
| 212 | MUXREST1_A | 2003.671 | 34557 | 86FD |
| 213 | MUXREST2_A | 2003.995 | 34665 | 8769 |
| 214 | MUXREST1_B | 2003.830 | 34610 | 8732 |
| 215 | MUXREST2_B | 2003.830 | 34610 | 8732 |

**Table 19-2 Scan Table for Scan Profile Number 1**

| Address | Hex | 18-Bit θ |
|---|---|---|
| 80008500 | 0B00 | 359.3023686 |
| 80008501 | FE04 | |
| 80008502 | 0300 | 359.5797686 |
| 80008503 | FECE | |
| 80008504 | 0700 | 359.8571586 |
| 80008505 | FF98 | |
| 80008506 | 0000 | 0.1345586 |
| 80008507 | 0062 | |
| 80008508 | 0800 | 0.4119586 |
| 80008509 | 012C | |
| 8000850A | 0000 | 0.6893586 |
| 8000850B | 01F6 | |
| 8000850C | 0400 | 0.9681586 |
| 8000850D | 02C1 | |
| 8000850E | 0000 | 1.2455586 |
| 8000850F | 038B | |
| 80008510 | 0800 | 1.5229586 |
| 80008511 | 0455 | |
| 80008512 | 0000 | 1.8003586 |
| 80008513 | 051F | |
| 80008514 | 0400 | 2.0777586 |
| 80008515 | 05E9 | |
| 80008516 | 0000 | 2.3551586 |
| 80008517 | 06B3 | |
| 80008518 | 0800 | 2.6325586 |
| 80008519 | 077D | |
| 8000851A | 0000 | 2.9099586 |
| 8000851B | 0847 | |
| 8000851C | 0400 | 3.1873586 |
| 8000851D | 0911 | |
| 8000851E | 0000 | 3.4648586 |
| 8000851F | 09DB | |
| 80008520 | 0800 | 3.7422586 |
| 80008521 | 0AA5 | |
| 80008522 | 0000 | 4.0196586 |
| 80008523 | 0B6F | |
| 80008524 | 0400 | 4.2970586 |
| 80008525 | 0C39 | |
| 80008526 | 0000 | 4.5744586 |
| 80008527 | 0D03 | |
| 80008528 | 0800 | 4.8532586 |
| 80008529 | 0DCE | |
| 8000852A | 0000 | 5.1306586 |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 8000852B | 0E98 | |
| 8000852C | 0400 | 5.4080586 |
| 8000852D | 0F62 | |
| 8000852E | 0000 | 5.6854586 |
| 8000852F | 102C | |
| 80008530 | 0800 | 5.9628586 |
| 80008531 | 10F6 | |
| 80008532 | 0000 | 6.2402586 |
| 80008533 | 11C0 | |
| 80008534 | 0400 | 6.5176586 |
| 80008535 | 128A | |
| 80008536 | 0000 | 6.7950586 |
| 80008537 | 1354 | |
| 80008538 | 0800 | 7.0724586 |
| 80008539 | 141E | |
| 8000853A | 0000 | 7.3498586 |
| 8000853B | 14E8 | |
| 8000853C | 0400 | 7.6272586 |
| 8000853D | 15B2 | |
| 8000853E | 0000 | 7.9046586 |
| 8000853F | 167C | |
| 80008540 | 0800 | 8.1820586 |
| 80008541 | 1746 | |
| 80008542 | 0000 | 8.4594586 |
| 80008543 | 1810 | |
| 80008544 | 0400 | 8.7368586 |
| 80008545 | 18DA | |
| 80008546 | 0000 | 9.0156586 |
| 80008547 | 19A5 | |
| 80008548 | 0800 | 9.2930586 |
| 80008549 | 1A6F | |
| 8000854A | 0000 | 9.5704586 |
| 8000854B | 1B39 | |
| 8000854C | 0400 | 9.8478586 |
| 8000854D | 1C03 | |
| 8000854E | 0000 | 10.1252586 |
| 8000854F | 1CCD | |
| 80008550 | 0800 | 10.4026586 |
| 80008551 | 1D97 | |
| 80008552 | 0000 | 10.6800586 |
| 80008553 | 1E61 | |
| 80008554 | 0400 | 10.9574586 |
| 80008555 | 1F2B | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 80008556 | 0000 | 11.2348586 |
| 80008557 | 1FF5 | |
| 80008558 | 0800 | 11.5122586 |
| 80008559 | 20BF | |
| 8000855A | 0000 | 11.7896586 |
| 8000855B | 2189 | |
| 8000855C | 0400 | 12.0670586 |
| 8000855D | 2253 | |
| 8000855E | 0000 | 12.3445586 |
| 8000855F | 231D | |
| 80008560 | 0800 | 12.6219586 |
| 80008561 | 23E7 | |
| 80008562 | 0000 | 12.9006586 |
| 80008563 | 24B2 | |
| 80008564 | 0400 | 13.1780586 |
| 80008565 | 257C | |
| 80008566 | 0000 | 13.4554586 |
| 80008567 | 2646 | |
| 80008568 | 0800 | 13.7329586 |
| 80008569 | 2710 | |
| 8000856A | 0000 | 14.0103586 |
| 8000856B | 27DA | |
| 8000856C | 0400 | 14.2877586 |
| 8000856D | 28A4 | |
| 8000856E | 0000 | 14.5651586 |
| 8000856F | 296E | |
| 80008570 | 0800 | 14.8425586 |
| 80008571 | 2A38 | |
| 80008572 | 0000 | 15.1199586 |
| 80008573 | 2B02 | |
| 80008574 | 0400 | 15.3973586 |
| 80008575 | 2BCC | |
| 80008576 | 0000 | 15.6747586 |
| 80008577 | 2C96 | |
| 80008578 | 0800 | 15.9521586 |
| 80008579 | 2D60 | |
| 8000857A | 0000 | 16.2295586 |
| 8000857B | 2E2A | |
| 8000857C | 0400 | 16.5069586 |
| 8000857D | 2EF4 | |
| 8000857E | 0000 | 16.7857586 |
| 8000857F | 2FBF | |
| 80008580 | 0800 | 17.0631586 |
| 80008581 | 3089 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 80008582 | 0000 | 17.3405586 |
| 80008583 | 3153 | |
| 80008584 | 0400 | 17.6179586 |
| 80008585 | 321D | |
| 80008586 | 0000 | 17.8953586 |
| 80008587 | 32E7 | |
| 80008588 | 0800 | 18.1727586 |
| 80008589 | 33B1 | |
| 8000858A | 0000 | 18.4501586 |
| 8000858B | 347B | |
| 8000858C | 0400 | 18.7275586 |
| 8000858D | 3545 | |
| 8000858E | 0000 | 19.0049586 |
| 8000858F | 360F | |
| 80008590 | 0800 | 19.2823586 |
| 80008591 | 36D9 | |
| 80008592 | 0000 | 19.5597586 |
| 80008593 | 37A3 | |
| 80008594 | 0400 | 19.8371586 |
| 80008595 | 386D | |
| 80008596 | 0000 | 20.1145586 |
| 80008597 | 3937 | |
| 80008598 | 0800 | 20.3919586 |
| 80008599 | 3A01 | |
| 8000859A | 0000 | 20.6693586 |
| 8000859B | 3ACB | |
| 8000859C | 0400 | 20.9481586 |
| 8000859D | 3B96 | |
| 8000859E | 0000 | 21.2255586 |
| 8000859F | 3C60 | |
| 800085A0 | 0800 | 21.5029586 |
| 800085A1 | 3D2A | |
| 800085A2 | 0000 | 21.7803586 |
| 800085A3 | 3DF4 | |
| 800085A4 | 0400 | 22.0577586 |
| 800085A5 | 3EBE | |
| 800085A6 | 0000 | 22.3351586 |
| 800085A7 | 3F88 | |
| 800085A8 | 0800 | 22.6126586 |
| 800085A9 | 4052 | |
| 800085AA | 0000 | 22.8900586 |
| 800085AB | 411C | |
| 800085AC | 0400 | 23.1674586 |
| 800085AD | 41E6 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 800085AE | 0000 | 23.4448586 |
| 800085AF | 42B0 | |
| 800085B0 | 0800 | 23.7222586 |
| 800085B1 | 437A | |
| 800085B2 | 0000 | 23.9996586 |
| 800085B3 | 4444 | |
| 800085B4 | 0400 | 24.2770586 |
| 800085B5 | 450E | |
| 800085B6 | 0000 | 24.5544586 |
| 800085B7 | 45D8 | |
| 800085B8 | 0800 | 24.8332586 |
| 800085B9 | 46A3 | |
| 800085BA | 0000 | 25.1106586 |
| 800085BB | 476D | |
| 800085BC | 0400 | 25.3880586 |
| 800085BD | 4837 | |
| 800085BE | 0000 | 25.6654586 |
| 800085BF | 4901 | |
| 800085C0 | 0800 | 25.9428586 |
| 800085C1 | 49CB | |
| 800085C2 | 0000 | 26.2202586 |
| 800085C3 | 4A95 | |
| 800085C4 | 0400 | 26.4976586 |
| 800085C5 | 4B5F | |
| 800085C6 | 0000 | 26.7750586 |
| 800085C7 | 4C29 | |
| 800085C8 | 0800 | 27.0524586 |
| 800085C9 | 4CF3 | |
| 800085CA | 0000 | 27.3298586 |
| 800085CB | 4DBD | |
| 800085CC | 0400 | 27.6072586 |
| 800085CD | 4E87 | |
| 800085CE | 0000 | 27.8846586 |
| 800085CF | 4F51 | |
| 800085D0 | 0800 | 28.1620586 |
| 800085D1 | 501B | |
| 800085D2 | 0000 | 28.4394586 |
| 800085D3 | 50E5 | |
| 800085D4 | 0400 | 28.7168586 |
| 800085D5 | 51AF | |
| 800085D6 | 0000 | 28.9956586 |
| 800085D7 | 527A | |
| 800085D8 | 0800 | 29.2730586 |
| 800085D9 | 5344 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 800085DA | 0000 | 29.5504586 |
| 800085DB | 540E | |
| 800085DC | 0400 | 29.8278586 |
| 800085DD | 54D8 | |
| 800085DE | 0000 | 30.1052586 |
| 800085DF | 55A2 | |
| 800085E0 | 0800 | 30.3826586 |
| 800085E1 | 566C | |
| 800085E2 | 0000 | 30.6600586 |
| 800085E3 | 5736 | |
| 800085E4 | 0400 | 30.9374586 |
| 800085E5 | 5800 | |
| 800085E6 | 0000 | 31.2148586 |
| 800085E7 | 58CA | |
| 800085E8 | 0800 | 31.4923586 |
| 800085E9 | 5994 | |
| 800085EA | 0000 | 31.7697586 |
| 800085EB | 5A5E | |
| 800085EC | 0400 | 32.0471586 |
| 800085ED | 5B28 | |
| 800085EE | 0000 | 32.3245586 |
| 800085EF | 5BF2 | |
| 800085F0 | 0800 | 32.6019586 |
| 800085F1 | 5CBC | |
| 800085F2 | 0000 | 32.8806586 |
| 800085F3 | 5D87 | |
| 800085F4 | 0400 | 33.1581586 |
| 800085F5 | 5E51 | |
| 800085F6 | 0000 | 33.4355586 |
| 800085F7 | 5F1B | |
| 800085F8 | 0800 | 33.7129586 |
| 800085F9 | 5FE5 | |
| 800085FA | 0000 | 33.9903586 |
| 800085FB | 60AF | |
| 800085FC | 0400 | 34.2677586 |
| 800085FD | 6179 | |
| 800085FE | 0000 | 34.5451586 |
| 800085FF | 6243 | |
| 80008600 | 0800 | 34.8225586 |
| 80008601 | 630D | |
| 80008602 | 0000 | 35.0999586 |
| 80008603 | 63D7 | |
| 80008604 | 0400 | 35.3773586 |
| 80008605 | 64A1 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 80008606 | 0000 | 35.6547586 |
| 80008607 | 656B | |
| 80008608 | 0800 | 35.9321586 |
| 80008609 | 6635 | |
| 8000860A | 0000 | 36.2095586 |
| 8000860B | 66FF | |
| 8000860C | 0400 | 36.4869586 |
| 8000860D | 67C9 | |
| 8000860E | 0000 | 36.7643586 |
| 8000860F | 6893 | |
| 80008610 | 0800 | 37.0431586 |
| 80008611 | 695E | |
| 80008612 | 0000 | 37.3205586 |
| 80008613 | 6A28 | |
| 80008614 | 0400 | 37.5979586 |
| 80008615 | 6AF2 | |
| 80008616 | 0000 | 37.8753586 |
| 80008617 | 6BBC | |
| 80008618 | 0800 | 38.1527586 |
| 80008619 | 6C86 | |
| 8000861A | 0000 | 38.4301586 |
| 8000861B | 6D50 | |
| 8000861C | 0400 | 38.7075586 |
| 8000861D | 6E1A | |
| 8000861E | 0000 | 38.9849586 |
| 8000861F | 6EE4 | |
| 80008620 | 0800 | 39.2623586 |
| 80008621 | 6FAE | |
| 80008622 | 0000 | 39.5397586 |
| 80008623 | 7078 | |
| 80008624 | 0400 | 39.8171586 |
| 80008625 | 7142 | |
| 80008626 | 0000 | 40.0945586 |
| 80008627 | 720C | |
| 80008628 | 0800 | 40.3720586 |
| 80008629 | 72D6 | |
| 8000862A | 0000 | 40.6494586 |
| 8000862B | 73A0 | |
| 8000862C | 0400 | 40.9281586 |
| 8000862D | 746B | |
| 8000862E | 0000 | 41.2055586 |
| 8000862F | 7535 | |
| 80008630 | 0800 | 41.4829586 |
| 80008631 | 75FF | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 80008632 | 0000 | 41.7603586 |
| 80008633 | 76C9 | |
| 80008634 | 0400 | 42.0378586 |
| 80008635 | 7793 | |
| 80008636 | 0000 | 42.3152586 |
| 80008637 | 785D | |
| 80008638 | 0800 | 42.5926586 |
| 80008639 | 7927 | |
| 8000863A | 0000 | 42.8700586 |
| 8000863B | 79F1 | |
| 8000863C | 0400 | 43.1474586 |
| 8000863D | 7ABB | |
| 8000863E | 0000 | 43.4248586 |
| 8000863F | 7B85 | |
| 80008640 | 0800 | 43.7022586 |
| 80008641 | 7C4F | |
| 80008642 | 0000 | 43.9796586 |
| 80008643 | 7D19 | |
| 80008644 | 0400 | 44.2570586 |
| 80008645 | 7DE3 | |
| 80008646 | 0000 | 44.5344586 |
| 80008647 | 7EAD | |
| 80008648 | 0800 | 44.8132586 |
| 80008649 | 7F78 | |
| 8000864A | 0000 | 45.0906586 |
| 8000864B | 8042 | |
| 8000864C | 0400 | 45.3680586 |
| 8000864D | 810C | |
| 8000864E | 0000 | 45.6454586 |
| 8000864F | 81D6 | |
| 80008650 | 0800 | 45.9228586 |
| 80008651 | 82A0 | |
| 80008652 | 0000 | 46.2002586 |
| 80008653 | 836A | |
| 80008654 | 0400 | 46.4776586 |
| 80008655 | 8434 | |
| 80008656 | 0000 | 46.7550586 |
| 80008657 | 84FE | |
| 80008658 | 0800 | 47.0324586 |
| 80008659 | 85C8 | |
| 8000865A | 0000 | 47.3098586 |
| 8000865B | 8692 | |
| 8000865C | 0400 | 47.5872586 |
| 8000865D | 875C | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 8000865E | 0000 | 47.8646586 |
| 8000865F | 8826 | |
| 80008660 | 0800 | 48.1420586 |
| 80008661 | 88F0 | |
| 80008662 | 0000 | 48.4194586 |
| 80008663 | 89BA | |
| 80008664 | 0400 | 48.6968586 |
| 80008665 | 8A84 | |
| 80008666 | 0000 | 48.9756586 |
| 80008667 | 8B4F | |
| 80008668 | 0800 | 49.2530586 |
| 80008669 | 8C19 | |
| 8000866A | 0000 | 49.5304586 |
| 8000866B | 8CE3 | |
| 8000866C | 0400 | 49.8078586 |
| 8000866D | 8DAD | |
| 8000866E | 0000 | 50.0852586 |
| 8000866F | 8E77 | |
| 80008670 | 0800 | 50.3626586 |
| 80008671 | 8F41 | |
| 80008672 | 0000 | 50.6400586 |
| 80008673 | 900B | |
| 80008674 | 0400 | 50.9175586 |
| 80008675 | 90D5 | |
| 80008676 | 0000 | 51.1949586 |
| 80008677 | 919F | |
| 80008678 | 0800 | 51.4723586 |
| 80008679 | 9269 | |
| 8000867A | 0000 | 51.7497586 |
| 8000867B | 9333 | |
| 8000867C | 0400 | 52.0271586 |
| 8000867D | 93FD | |
| 8000867E | 0000 | 52.3470586 |
| 8000867F | 94E6 | |
| 80008680 | 0800 | 52.7522586 |
| 80008681 | 960D | |
| 80008682 | 0000 | 53.2411586 |
| 80008683 | 9771 | |
| 80008684 | 0000 | 53.8151586 |
| 80008685 | 9913 | |
| 80008686 | 0000 | 54.4729586 |
| 80008687 | 9AF2 | |
| 80008688 | 0800 | 55.2159586 |
| 80008689 | 9D0F | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 8000868A | 0000 | 56.0439586 |
| 8000868B | 9F6A | |
| 8000868C | 0000 | 56.9558586 |
| 8000868D | A202 | |
| 8000868E | 0000 | 57.9528586 |
| 8000868F | A4D8 | |
| 80008690 | 0800 | 59.0350586 |
| 80008691 | A7EC | |
| 80008692 | 0000 | 60.2009586 |
| 80008693 | AB3D | |
| 80008694 | 0000 | 61.4520586 |
| 80008695 | AECC | |
| 80008696 | 0000 | 62.7868586 |
| 80008697 | B298 | |
| 80008698 | 0800 | 64.2082586 |
| 80008699 | B6A3 | |
| 8000869A | 0000 | 65.7119586 |
| 8000869B | BAEA | |
| 8000869C | 0000 | 67.3022586 |
| 8000869D | BF70 | |
| 8000869E | 0000 | 68.8774586 |
| 8000869F | C3EB | |
| 800086A0 | 0800 | 70.3399586 |
| 800086A1 | C814 | |
| 800086A2 | 0000 | 71.6899586 |
| 800086A3 | CBEB | |
| 800086A4 | 0000 | 72.9258586 |
| 800086A5 | CF6F | |
| 800086A6 | 0000 | 74.0505586 |
| 800086A7 | D2A2 | |
| 800086A8 | 0800 | 75.0613586 |
| 800086A9 | D582 | |
| 800086AA | 0000 | 75.9594586 |
| 800086AB | D810 | |
| 800086AC | 0000 | 76.7449586 |
| 800086AD | DA4C | |
| 800086AE | 0000 | 77.4165586 |
| 800086AF | DC35 | |
| 800086B0 | 0800 | 77.9768586 |
| 800086B1 | DDCD | |
| 800086B2 | 0000 | 78.4231586 |
| 800086B3 | DF12 | |
| 800086B4 | 0000 | 78.7582586 |
| 800086B5 | E006 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 800086B6 | 0000 | 79.0356586 |
| 800086B7 | E0D0 | |
| 800086B8 | 0800 | 79.3130586 |
| 800086B9 | E19A | |
| 800086BA | 0000 | 79.5904586 |
| 800086BB | E264 | |
| 800086BC | 0000 | 79.8678586 |
| 800086BD | E32E | |
| 800086BE | 0000 | 80.1452586 |
| 800086BF | E3F8 | |
| 800086C0 | 0800 | 80.4226586 |
| 800086C1 | E4C2 | |
| 800086C2 | 0000 | 80.7000586 |
| 800086C3 | E58C | |
| 800086C4 | 0400 | 80.9774586 |
| 800086C5 | E656 | |
| 800086C6 | 0000 | 81.2548586 |
| 800086C7 | E720 | |
| 800086C8 | 0800 | 81.5322586 |
| 800086C9 | E7EA | |
| 800086CA | 0000 | 81.8096586 |
| 800086CB | E8B4 | |
| 800086CC | 0400 | 82.0870586 |
| 800086CD | E97E | |
| 800086CE | 0000 | 82.3644586 |
| 800086CF | EA48 | |
| 800086D0 | 0800 | 82.6418586 |
| 800086D1 | EB12 | |
| 800086D2 | 0000 | 82.9206586 |
| 800086D3 | EBDD | |
| 800086D4 | 0400 | 83.1980586 |
| 800086D5 | ECA7 | |
| 800086D6 | 0000 | 83.4754586 |
| 800086D7 | ED71 | |
| 800086D8 | 0800 | 83.7528586 |
| 800086D9 | EE3B | |
| 800086DA | 0000 | 84.0302586 |
| 800086DB | EF05 | |
| 800086DC | 0400 | 84.3077586 |
| 800086DD | EFCF | |
| 800086DE | 0000 | 84.6263586 |
| 800086DF | F0B7 | |
| 800086E0 | 0800 | 85.0286586 |
| 800086E1 | F1DC | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 800086E2 | 0000 | 85.5134586 |
| 800086E3 | F33D | |
| 800086E4 | 0000 | 86.0806586 |
| 800086E5 | F4DA | |
| 800086E6 | 0000 | 86.7301586 |
| 800086E7 | F6B3 | |
| 800086E8 | 0800 | 87.4635586 |
| 800086E9 | F8C9 | |
| 800086EA | 0000 | 88.2792586 |
| 800086EB | FB1B | |
| 800086EC | 0000 | 89.1787586 |
| 800086ED | FDAA | |
| 800086EE | 0100 | 90.1592586 |
| 800086EF | 0074 | |
| 800086F0 | 0900 | 91.2235586 |
| 800086F1 | 037B | |
| 800086F2 | 0100 | 92.3716586 |
| 800086F3 | 06BF | |
| 800086F4 | 0100 | 93.6021586 |
| 800086F5 | 0A3F | |
| 800086F6 | 0100 | 94.9149586 |
| 800086F7 | 0DFB | |
| 800086F8 | 0900 | 96.3102586 |
| 800086F9 | 11F3 | |
| 800086FA | 0100 | 97.7892586 |
| 800086FB | 1628 | |
| 800086FC | 0100 | 99.3507586 |
| 800086FD | 1A99 | |
| 800086FE | 0100 | 100.9945586 |
| 800086FF | 1F46 | |
| 80008700 | 0900 | 102.7221586 |
| 80008701 | 2430 | |
| 80008702 | 0100 | 104.5307586 |
| 80008703 | 2955 | |
| 80008704 | 0100 | 106.4245586 |
| 80008705 | 2EB8 | |
| 80008706 | 0100 | 108.3993586 |
| 80008707 | 3456 | |
| 80008708 | 0900 | 110.4579586 |
| 80008709 | 3A31 | |
| 8000870A | 0100 | 112.5988586 |
| 8000870B | 4048 | |
| 8000870C | 0100 | 114.8235586 |
| 8000870D | 469C | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 8000870E | 0100 | 117.1307586 |
| 8000870F | 4D2C | |
| 80008710 | 0900 | 119.5202586 |
| 80008711 | 53F8 | |
| 80008712 | 0100 | 121.9921586 |
| 80008713 | 5B00 | |
| 80008714 | 0100 | 124.5478586 |
| 80008715 | 6245 | |
| 80008716 | 0100 | 127.1859586 |
| 80008717 | 69C6 | |
| 80008718 | 0900 | 129.9078586 |
| 80008719 | 7184 | |
| 8000871A | 0100 | 132.7120586 |
| 8000871B | 797E | |
| 8000871C | 0100 | 135.5987586 |
| 8000871D | 81B4 | |
| 8000871E | 0100 | 138.5678586 |
| 8000871F | 8A26 | |
| 80008720 | 0900 | 141.6206586 |
| 80008721 | 92D5 | |
| 80008722 | 0100 | 144.7558586 |
| 80008723 | 9BC0 | |
| 80008724 | 0100 | 147.9734586 |
| 80008725 | A4E7 | |
| 80008726 | 0100 | 151.1704586 |
| 80008727 | ADFF | |
| 80008728 | 0900 | 154.2439586 |
| 80008729 | B6BD | |
| 8000872A | 0100 | 157.1923586 |
| 8000872B | BF20 | |
| 8000872C | 0100 | 160.0172586 |
| 8000872D | C729 | |
| 8000872E | 0100 | 162.7184586 |
| 8000872F | CED8 | |
| 80008730 | 0900 | 165.2934586 |
| 80008731 | D62B | |
| 80008732 | 0100 | 167.7461586 |
| 80008733 | DD25 | |
| 80008734 | 0100 | 170.0738586 |
| 80008735 | E3C4 | |
| 80008736 | 0100 | 172.2766586 |
| 80008737 | EA08 | |
| 80008738 | 0900 | 174.3557586 |
| 80008739 | EFF2 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 8000873A | 0100 | 176.3113586 |
| 8000873B | F582 | |
| 8000873C | 0100 | 178.1419586 |
| 8000873D | FAB7 | |
| 8000873E | 0100 | 179.8475586 |
| 8000873F | FF91 | |
| 80008740 | 0A00 | 181.4295586 |
| 80008741 | 0411 | |
| 80008742 | 0200 | 182.8880586 |
| 80008743 | 0837 | |
| 80008744 | 0200 | 184.2214586 |
| 80008745 | 0C02 | |
| 80008746 | 0200 | 185.4313586 |
| 80008747 | 0F73 | |
| 80008748 | 0A00 | 186.5162586 |
| 80008749 | 1289 | |
| 8000874A | 0200 | 187.4775586 |
| 8000874B | 1545 | |
| 8000874C | 0200 | 188.3138586 |
| 8000874D | 17A6 | |
| 8000874E | 0200 | 189.0252586 |
| 8000874F | 19AC | |
| 80008750 | 0A00 | 189.6144586 |
| 80008751 | 1B59 | |
| 80008752 | 0200 | 190.0785586 |
| 80008753 | 1CAB | |
| 80008754 | 0200 | 190.4177586 |
| 80008755 | 1DA2 | |
| 80008756 | 0200 | 190.6951586 |
| 80008757 | 1E6C | |
| 80008758 | 0A00 | 190.9725586 |
| 80008759 | 1F36 | |
| 8000875A | 0200 | 191.2499586 |
| 8000875B | 2000 | |
| 8000875C | 0200 | 191.5273586 |
| 8000875D | 20CA | |
| 8000875E | 0200 | 191.8048586 |
| 8000875F | 2194 | |
| 80008760 | 0A00 | 192.0822586 |
| 80008761 | 225E | |
| 80008762 | 0200 | 192.3596586 |
| 80008763 | 2328 | |
| 80008764 | 0600 | 192.6370586 |
| 80008765 | 23F2 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 80008766 | 0200 | 192.9144586 |
| 80008767 | 24BC | |
| 80008768 | 0A00 | 193.1931586 |
| 80008769 | 2587 | |
| 8000876A | 0200 | 193.4706586 |
| 8000876B | 2651 | |
| 8000876C | 0600 | 193.7480586 |
| 8000876D | 271B | |
| 8000876E | 0200 | 194.0254586 |
| 8000876F | 27E5 | |
| 80008770 | 0A00 | 194.3028586 |
| 80008771 | 28AF | |
| 80008772 | 0200 | 194.5802586 |
| 80008773 | 2979 | |
| 80008774 | 0600 | 194.8576586 |
| 80008775 | 2A43 | |
| 80008776 | 0200 | 195.1350586 |
| 80008777 | 2B0D | |
| 80008778 | 0A00 | 195.4124586 |
| 80008779 | 2BD7 | |
| 8000877A | 0200 | 195.6898586 |
| 8000877B | 2CA1 | |
| 8000877C | 0600 | 195.9672586 |
| 8000877D | 2D6B | |
| 8000877E | 0200 | 196.2858586 |
| 8000877F | 2E53 | |
| 80008780 | 0A00 | 196.6841586 |
| 80008781 | 2F75 | |
| 80008782 | 0200 | 197.1633586 |
| 80008783 | 30D2 | |
| 80008784 | 0200 | 197.7236586 |
| 80008785 | 326A | |
| 80008786 | 0200 | 198.3650586 |
| 80008787 | 343D | |
| 80008788 | 0A00 | 199.0873586 |
| 80008789 | 364B | |
| 8000878A | 0200 | 199.8907586 |
| 8000878B | 3894 | |
| 8000878C | 0200 | 200.7737586 |
| 8000878D | 3B17 | |
| 8000878E | 0200 | 201.7391586 |
| 8000878F | 3DD6 | |
| 80008790 | 0A00 | 202.7842586 |
| 80008791 | 40CF | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 80008792 | 0200 | 203.9103586 |
| 80008793 | 4403 | |
| 80008794 | 0200 | 205.1174586 |
| 80008795 | 4772 | |
| 80008796 | 0200 | 206.4056586 |
| 80008797 | 4B1C | |
| 80008798 | 0A00 | 207.7748586 |
| 80008799 | 4F01 | |
| 8000879A | 0200 | 209.2236586 |
| 8000879B | 5320 | |
| 8000879C | 0200 | 210.7548586 |
| 8000879D | 577B | |
| 8000879E | 0200 | 212.3657586 |
| 8000879F | 5C10 | |
| 800087A0 | 0A00 | 214.0576586 |
| 800087A1 | 60E0 | |
| 800087A2 | 0200 | 215.8305586 |
| 800087A3 | 65EB | |
| 800087A4 | 0200 | 217.6844586 |
| 800087A5 | 6B31 | |
| 800087A6 | 0200 | 219.6194586 |
| 800087A7 | 70B2 | |
| 800087A8 | 0A00 | 221.6340586 |
| 800087A9 | 766D | |
| 800087AA | 0200 | 223.7310586 |
| 800087AB | 7C64 | |
| 800087AC | 0200 | 225.9077586 |
| 800087AD | 8295 | |
| 800087AE | 0200 | 228.1654586 |
| 800087AF | 8901 | |
| 800087B0 | 0A00 | 230.5041586 |
| 800087B1 | 8FA8 | |
| 800087B2 | 0200 | 232.9238586 |
| 800087B3 | 968A | |
| 800087B4 | 0200 | 235.4246586 |
| 800087B5 | 9DA7 | |
| 800087B6 | 0200 | 238.0050586 |
| 800087B7 | A4FE | |
| 800087B8 | 0A00 | 240.6678586 |
| 800087B9 | AC91 | |
| 800087BA | 0200 | 243.4103586 |
| 800087BB | B45E | |
| 800087BC | 0200 | 246.2338586 |
| 800087BD | BC66 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 800087BE | 0200 | 249.1383586 |
| 800087BF | C4A9 | |
| 800087C0 | 0A00 | 252.1238586 |
| 800087C1 | CD27 | |
| 800087C2 | 0200 | 255.1904586 |
| 800087C3 | D5E0 | |
| 800087C4 | 0200 | 258.3380586 |
| 800087C5 | DED4 | |
| 800087C6 | 0200 | 261.4649586 |
| 800087C7 | E7B9 | |
| 800087C8 | 0A00 | 264.4697586 |
| 800087C9 | F045 | |
| 800087CA | 0200 | 267.3550586 |
| 800087CB | F87A | |
| 800087CC | 0300 | 270.1180586 |
| 800087CD | 0056 | |
| 800087CE | 0300 | 272.7589586 |
| 800087CF | 07D9 | |
| 800087D0 | 0B00 | 275.2802586 |
| 800087D1 | 0F05 | |
| 800087D2 | 0300 | 277.6794586 |
| 800087D3 | 15D8 | |
| 800087D4 | 0300 | 279.9577586 |
| 800087D5 | 1C53 | |
| 800087D6 | 0300 | 282.1137586 |
| 800087D7 | 2275 | |
| 800087D8 | 0B00 | 284.1503586 |
| 800087D9 | 2840 | |
| 800087DA | 0300 | 286.0647586 |
| 800087DB | 2DB2 | |
| 800087DC | 0300 | 287.8568586 |
| 800087DD | 32CB | |
| 800087DE | 0300 | 289.5295586 |
| 800087DF | 378D | |
| 800087E0 | 0B00 | 291.0800586 |
| 800087E1 | 3BF6 | |
| 800087E2 | 0300 | 292.5096586 |
| 800087E3 | 4007 | |
| 800087E4 | 0300 | 293.8169586 |
| 800087E5 | 43BF | |
| 800087E6 | 0300 | 295.0048586 |
| 800087E7 | 4720 | |
| 800087E8 | 0B00 | 296.0705586 |
| 800087E9 | 4A28 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 800087EA | 0300 | 297.0139586 |
| 800087EB | 4CD7 | |
| 800087EC | 0300 | 297.8379586 |
| 800087ED | 4F2F | |
| 800087EE | 0300 | 298.5397586 |
| 800087EF | 512E | |
| 800087F0 | 0B00 | 299.1206586 |
| 800087F1 | 52D5 | |
| 800087F2 | 0300 | 299.5793586 |
| 800087F3 | 5423 | |
| 800087F4 | 0300 | 299.9171586 |
| 800087F5 | 5519 | |
| 800087F6 | 0300 | 300.1945586 |
| 800087F7 | 55E3 | |
| 800087F8 | 0B00 | 300.4719586 |
| 800087F9 | 56AD | |
| 800087FA | 0300 | 300.7507586 |
| 800087FB | 5778 | |
| 800087FC | 0300 | 301.0281586 |
| 800087FD | 5842 | |
| 800087FE | 0300 | 301.3055586 |
| 800087FF | 590C | |
| 80008800 | 0B00 | 301.5829586 |
| 80008801 | 59D6 | |
| 80008802 | 0300 | 301.8603586 |
| 80008803 | 5AA0 | |
| 80008804 | 0300 | 302.1377586 |
| 80008805 | 5B6A | |
| 80008806 | 0300 | 302.4151586 |
| 80008807 | 5C34 | |
| 80008808 | 0B00 | 302.6925586 |
| 80008809 | 5CFE | |
| 8000880A | 0300 | 302.9699586 |
| 8000880B | 5DC8 | |
| 8000880C | 0300 | 303.2473586 |
| 8000880D | 5E92 | |
| 8000880E | 0300 | 303.5247586 |
| 8000880F | 5F5C | |
| 80008810 | 0B00 | 303.8021586 |
| 80008811 | 6026 | |
| 80008812 | 0300 | 304.0795586 |
| 80008813 | 60F0 | |
| 80008814 | 0300 | 304.3569586 |
| 80008815 | 61BA | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 80008816 | 0300 | 304.6343586 |
| 80008817 | 6284 | |
| 80008818 | 0B00 | 304.9131586 |
| 80008819 | 634F | |
| 8000881A | 0300 | 305.1905586 |
| 8000881B | 6419 | |
| 8000881C | 0300 | 305.4679586 |
| 8000881D | 64E3 | |
| 8000881E | 0300 | 305.7453586 |
| 8000881F | 65AD | |
| 80008820 | 0B00 | 306.0227586 |
| 80008821 | 6677 | |
| 80008822 | 0300 | 306.3001586 |
| 80008823 | 6741 | |
| 80008824 | 0700 | 306.5775586 |
| 80008825 | 680B | |
| 80008826 | 0300 | 306.8550586 |
| 80008827 | 68D5 | |
| 80008828 | 0B00 | 307.1324586 |
| 80008829 | 699F | |
| 8000882A | 0300 | 307.4098586 |
| 8000882B | 6A69 | |
| 8000882C | 0700 | 307.6872586 |
| 8000882D | 6B33 | |
| 8000882E | 0300 | 307.9646586 |
| 8000882F | 6BFD | |
| 80008830 | 0B00 | 308.2420586 |
| 80008831 | 6CC7 | |
| 80008832 | 0300 | 308.5194586 |
| 80008833 | 6D91 | |
| 80008834 | 0700 | 308.7982586 |
| 80008835 | 6E5C | |
| 80008836 | 0300 | 309.0756586 |
| 80008837 | 6F26 | |
| 80008838 | 0B00 | 309.3530586 |
| 80008839 | 6FF0 | |
| 8000883A | 0300 | 309.6304586 |
| 8000883B | 70BA | |
| 8000883C | 0700 | 309.9078586 |
| 8000883D | 7184 | |
| 8000883E | 0300 | 310.1852586 |
| 8000883F | 724E | |
| 80008840 | 0B00 | 310.4626586 |
| 80008841 | 7318 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 80008842 | 0300 | 310.7400586 |
| 80008843 | 73E2 | |
| 80008844 | 0700 | 311.0174586 |
| 80008845 | 74AC | |
| 80008846 | 0300 | 311.2948586 |
| 80008847 | 7576 | |
| 80008848 | 0B00 | 311.5722586 |
| 80008849 | 7640 | |
| 8000884A | 0300 | 311.8496586 |
| 8000884B | 770A | |
| 8000884C | 0700 | 312.1270586 |
| 8000884D | 77D4 | |
| 8000884E | 0300 | 312.4044586 |
| 8000884F | 789E | |
| 80008850 | 0B00 | 312.6818586 |
| 80008851 | 7968 | |
| 80008852 | 0300 | 312.9606586 |
| 80008853 | 7A33 | |
| 80008854 | 0700 | 313.2380586 |
| 80008855 | 7AFD | |
| 80008856 | 0300 | 313.5154586 |
| 80008857 | 7BC7 | |
| 80008858 | 0B00 | 313.7928586 |
| 80008859 | 7C91 | |
| 8000885A | 0300 | 314.0702586 |
| 8000885B | 7D5B | |
| 8000885C | 0700 | 314.3476586 |
| 8000885D | 7E25 | |
| 8000885E | 0300 | 314.6250586 |
| 8000885F | 7EEF | |
| 80008860 | 0B00 | 314.9024586 |
| 80008861 | 7FB9 | |
| 80008862 | 0300 | 315.1798586 |
| 80008863 | 8083 | |
| 80008864 | 0700 | 315.4572586 |
| 80008865 | 814D | |
| 80008866 | 0300 | 315.7347586 |
| 80008867 | 8217 | |
| 80008868 | 0B00 | 316.0121586 |
| 80008869 | 82E1 | |
| 8000886A | 0300 | 316.2895586 |
| 8000886B | 83AB | |
| 8000886C | 0700 | 316.5669586 |
| 8000886D | 8475 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 8000886E | 0300 | 316.8456586 |
| 8000886F | 8540 | |
| 80008870 | 0B00 | 317.1230586 |
| 80008871 | 860A | |
| 80008872 | 0300 | 317.4005586 |
| 80008873 | 86D4 | |
| 80008874 | 0700 | 317.6779586 |
| 80008875 | 879E | |
| 80008876 | 0300 | 317.9553586 |
| 80008877 | 8868 | |
| 80008878 | 0B00 | 318.2327586 |
| 80008879 | 8932 | |
| 8000887A | 0300 | 318.5101586 |
| 8000887B | 89FC | |
| 8000887C | 0700 | 318.7875586 |
| 8000887D | 8AC6 | |
| 8000887E | 0300 | 319.0649586 |
| 8000887F | 8B90 | |
| 80008880 | 0B00 | 319.3423586 |
| 80008881 | 8C5A | |
| 80008882 | 0300 | 319.6197586 |
| 80008883 | 8D24 | |
| 80008884 | 0700 | 319.8971586 |
| 80008885 | 8DEE | |
| 80008886 | 0300 | 320.1745586 |
| 80008887 | 8EB8 | |
| 80008888 | 0B00 | 320.4519586 |
| 80008889 | 8F82 | |
| 8000888A | 0300 | 320.7307586 |
| 8000888B | 904D | |
| 8000888C | 0700 | 321.0081586 |
| 8000888D | 9117 | |
| 8000888E | 0300 | 321.2855586 |
| 8000888F | 91E1 | |
| 80008890 | 0B00 | 321.5629586 |
| 80008891 | 92AB | |
| 80008892 | 0300 | 321.8403586 |
| 80008893 | 9375 | |
| 80008894 | 0700 | 322.1177586 |
| 80008895 | 943F | |
| 80008896 | 0300 | 322.3951586 |
| 80008897 | 9509 | |
| 80008898 | 0B00 | 322.6725586 |
| 80008899 | 95D3 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 8000889A | 0300 | 322.9499586 |
| 8000889B | 969D | |
| 8000889C | 0700 | 323.2273586 |
| 8000889D | 9767 | |
| 8000889E | 0300 | 323.5047586 |
| 8000889F | 9831 | |
| 800088A0 | 0B00 | 323.7821586 |
| 800088A1 | 98FB | |
| 800088A2 | 0300 | 324.0595586 |
| 800088A3 | 99C5 | |
| 800088A4 | 0700 | 324.3369586 |
| 800088A5 | 9A8F | |
| 800088A6 | 0300 | 324.6144586 |
| 800088A7 | 9B59 | |
| 800088A8 | 0B00 | 324.8931586 |
| 800088A9 | 9C24 | |
| 800088AA | 0300 | 325.1705586 |
| 800088AB | 9CEE | |
| 800088AC | 0700 | 325.4479586 |
| 800088AD | 9DB8 | |
| 800088AE | 0300 | 325.7253586 |
| 800088AF | 9E82 | |
| 800088B0 | 0B00 | 326.0027586 |
| 800088B1 | 9F4C | |
| 800088B2 | 0300 | 326.2802586 |
| 800088B3 | A016 | |
| 800088B4 | 0700 | 326.5576586 |
| 800088B5 | A0E0 | |
| 800088B6 | 0300 | 326.8350586 |
| 800088B7 | A1AA | |
| 800088B8 | 0B00 | 327.1124586 |
| 800088B9 | A274 | |
| 800088BA | 0300 | 327.3898586 |
| 800088BB | A33E | |
| 800088BC | 0700 | 327.6672586 |
| 800088BD | A408 | |
| 800088BE | 0300 | 327.9446586 |
| 800088BF | A4D2 | |
| 800088C0 | 0B00 | 328.2220586 |
| 800088C1 | A59C | |
| 800088C2 | 0300 | 328.4994586 |
| 800088C3 | A666 | |
| 800088C4 | 0700 | 328.7782586 |
| 800088C5 | A731 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 800088C6 | 0300 | 329.0556586 |
| 800088C7 | A7FB | |
| 800088C8 | 0B00 | 329.3330586 |
| 800088C9 | A8C5 | |
| 800088CA | 0300 | 329.6104586 |
| 800088CB | A98F | |
| 800088CC | 0700 | 329.8878586 |
| 800088CD | AA59 | |
| 800088CE | 0300 | 330.1652586 |
| 800088CF | AB23 | |
| 800088D0 | 0B00 | 330.4426586 |
| 800088D1 | ABED | |
| 800088D2 | 0300 | 330.7200586 |
| 800088D3 | ACB7 | |
| 800088D4 | 0700 | 330.9974586 |
| 800088D5 | AD81 | |
| 800088D6 | 0300 | 331.2748586 |
| 800088D7 | AE4B | |
| 800088D8 | 0B00 | 331.5522586 |
| 800088D9 | AF15 | |
| 800088DA | 0300 | 331.8296586 |
| 800088DB | AFDF | |
| 800088DC | 0700 | 332.1070586 |
| 800088DD | B0A9 | |
| 800088DE | 0300 | 332.3844586 |
| 800088DF | B173 | |
| 800088E0 | 0B00 | 332.6618586 |
| 800088E1 | B23D | |
| 800088E2 | 0300 | 332.9406586 |
| 800088E3 | B308 | |
| 800088E4 | 0700 | 333.2180586 |
| 800088E5 | B3D2 | |
| 800088E6 | 0300 | 333.4954586 |
| 800088E7 | B49C | |
| 800088E8 | 0B00 | 333.7728586 |
| 800088E9 | B566 | |
| 800088EA | 0300 | 334.0502586 |
| 800088EB | B630 | |
| 800088EC | 0700 | 334.3276586 |
| 800088ED | B6FA | |
| 800088EE | 0300 | 334.6050586 |
| 800088EF | B7C4 | |
| 800088F0 | 0B00 | 334.8824586 |
| 800088F1 | B88E | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 800088F2 | 0300 | 335.1599586 |
| 800088F3 | B958 | |
| 800088F4 | 0700 | 335.4373586 |
| 800088F5 | BA22 | |
| 800088F6 | 0300 | 335.7147586 |
| 800088F7 | BAEC | |
| 800088F8 | 0B00 | 335.9921586 |
| 800088F9 | BBB6 | |
| 800088FA | 0300 | 336.2695586 |
| 800088FB | BC80 | |
| 800088FC | 0700 | 336.5469586 |
| 800088FD | BD4A | |
| 800088FE | 0300 | 336.8257586 |
| 800088FF | BE15 | |
| 80008900 | 0B00 | 337.1031586 |
| 80008901 | BEDF | |
| 80008902 | 0300 | 337.3805586 |
| 80008903 | BFA9 | |
| 80008904 | 0700 | 337.6579586 |
| 80008905 | C073 | |
| 80008906 | 0300 | 337.9353586 |
| 80008907 | C13D | |
| 80008908 | 0B00 | 338.2127586 |
| 80008909 | C207 | |
| 8000890A | 0300 | 338.4901586 |
| 8000890B | C2D1 | |
| 8000890C | 0700 | 338.7675586 |
| 8000890D | C39B | |
| 8000890E | 0300 | 339.0449586 |
| 8000890F | C465 | |
| 80008910 | 0B00 | 339.3223586 |
| 80008911 | C52F | |
| 80008912 | 0300 | 339.5997586 |
| 80008913 | C5F9 | |
| 80008914 | 0700 | 339.8771586 |
| 80008915 | C6C3 | |
| 80008916 | 0300 | 340.1545586 |
| 80008917 | C78D | |
| 80008918 | 0B00 | 340.4319586 |
| 80008919 | C857 | |
| 8000891A | 0300 | 340.7093586 |
| 8000891B | C921 | |
| 8000891C | 0700 | 340.9881586 |
| 8000891D | C9EC | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 8000891E | 0300 | 341.2655586 |
| 8000891F | CAB6 | |
| 80008920 | 0B00 | 341.5429586 |
| 80008921 | CB80 | |
| 80008922 | 0300 | 341.8203586 |
| 80008923 | CC4A | |
| 80008924 | 0700 | 342.0977586 |
| 80008925 | CD14 | |
| 80008926 | 0300 | 342.3751586 |
| 80008927 | CDDE | |
| 80008928 | 0B00 | 342.6525586 |
| 80008929 | CEA8 | |
| 8000892A | 0300 | 342.9299586 |
| 8000892B | CF72 | |
| 8000892C | 0700 | 343.2073586 |
| 8000892D | D03C | |
| 8000892E | 0300 | 343.4847586 |
| 8000892F | D106 | |
| 80008930 | 0B00 | 343.7621586 |
| 80008931 | D1D0 | |
| 80008932 | 0300 | 344.0396586 |
| 80008933 | D29A | |
| 80008934 | 0700 | 344.3170586 |
| 80008935 | D364 | |
| 80008936 | 0300 | 344.5944586 |
| 80008937 | D42E | |
| 80008938 | 0B00 | 344.8731586 |
| 80008939 | D4F9 | |
| 8000893A | 0300 | 345.1505586 |
| 8000893B | D5C3 | |
| 8000893C | 0700 | 345.4280586 |
| 8000893D | D68D | |
| 8000893E | 0300 | 345.7054586 |
| 8000893F | D757 | |
| 80008940 | 0B00 | 345.9828586 |
| 80008941 | D821 | |
| 80008942 | 0300 | 346.2602586 |
| 80008943 | D8EB | |
| 80008944 | 0700 | 346.5376586 |
| 80008945 | D9B5 | |
| 80008946 | 0300 | 346.8150586 |
| 80008947 | DA7F | |
| 80008948 | 0B00 | 347.0924586 |
| 80008949 | DB49 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 8000894A | 0300 | 347.3698586 |
| 8000894B | DC13 | |
| 8000894C | 0700 | 347.6472586 |
| 8000894D | DCDD | |
| 8000894E | 0300 | 347.9246586 |
| 8000894F | DDA7 | |
| 80008950 | 0B00 | 348.2020586 |
| 80008951 | DE71 | |
| 80008952 | 0300 | 348.4794586 |
| 80008953 | DF3B | |
| 80008954 | 0700 | 348.7582586 |
| 80008955 | E006 | |
| 80008956 | 0300 | 349.0356586 |
| 80008957 | E0D0 | |
| 80008958 | 0B00 | 349.3130586 |
| 80008959 | E19A | |
| 8000895A | 0300 | 349.5904586 |
| 8000895B | E264 | |
| 8000895C | 0700 | 349.8678586 |
| 8000895D | E32E | |
| 8000895E | 0300 | 350.1452586 |
| 8000895F | E3F8 | |
| 80008960 | 0B00 | 350.4226586 |
| 80008961 | E4C2 | |
| 80008962 | 0300 | 350.7000586 |
| 80008963 | E58C | |
| 80008964 | 0700 | 350.9774586 |
| 80008965 | E656 | |
| 80008966 | 0300 | 351.2548586 |
| 80008967 | E720 | |
| 80008968 | 0B00 | 351.5322586 |
| 80008969 | E7EA | |
| 8000896A | 0300 | 351.8096586 |
| 8000896B | E8B4 | |
| 8000896C | 0700 | 352.0870586 |
| 8000896D | E97E | |
| 8000896E | 0300 | 352.3644586 |
| 8000896F | EA48 | |
| 80008970 | 0B00 | 352.6418586 |
| 80008971 | EB12 | |
| 80008972 | 0300 | 352.9206586 |
| 80008973 | EBDD | |
| 80008974 | 0700 | 353.1980586 |
| 80008975 | ECA7 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 80008976 | 0300 | 353.4754586 |
| 80008977 | ED71 | |
| 80008978 | 0B00 | 353.7528586 |
| 80008979 | EE3B | |
| 8000897A | 0300 | 354.0302586 |
| 8000897B | EF05 | |
| 8000897C | 0700 | 354.3077586 |
| 8000897D | EFCF | |
| 8000897E | 0300 | 354.5851586 |
| 8000897F | F099 | |
| 80008980 | 0B00 | 354.8625586 |
| 80008981 | F163 | |
| 80008982 | 0300 | 355.1399586 |
| 80008983 | F22D | |
| 80008984 | 0700 | 355.4173586 |
| 80008985 | F2F7 | |
| 80008986 | 0300 | 355.6947586 |
| 80008987 | F3C1 | |
| 80008988 | 0B00 | 355.9721586 |
| 80008989 | F48B | |
| 8000898A | 0300 | 356.2495586 |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 8000898B | F555 | |
| 8000898C | 0700 | 356.5269586 |
| 8000898D | F61F | |
| 8000898E | 0300 | 356.8057586 |
| 8000898F | F6EA | |
| 80008990 | 0B00 | 357.0831586 |
| 80008991 | F7B4 | |
| 80008992 | 0300 | 357.3605586 |
| 80008993 | F87E | |
| 80008994 | 0700 | 357.6379586 |
| 80008995 | F948 | |
| 80008996 | 0300 | 357.9153586 |
| 80008997 | FA12 | |
| 80008998 | 0B00 | 358.1927586 |
| 80008999 | FADC | |
| 8000899A | 0300 | 358.4701586 |
| 8000899B | FBA6 | |
| 8000899C | 0700 | 358.7475586 |
| 8000899D | FC70 | |
| 8000899E | 0300 | 359.0249586 |
| 8000899F | FD3A | |

**Table 19-3 Scan Table for Scan Profile Number 2**

| Address | Hex | 18-Bit θ |
|---|---|---|
| 800089A0 | 0B00 | 359.3023686 |
| 800089A1 | FE04 | |
| 800089A2 | 0300 | 359.5797686 |
| 800089A3 | FECE | |
| 800089A4 | 0700 | 359.8571586 |
| 800089A5 | FF98 | |
| 800089A6 | 0000 | 0.1345586 |
| 800089A7 | 0062 | |
| 800089A8 | 0800 | 0.4119586 |
| 800089A9 | 012C | |
| 800089AA | 0000 | 0.6893586 |
| 800089AB | 01F6 | |
| 800089AC | 0400 | 0.9681586 |
| 800089AD | 02C1 | |
| 800089AE | 0000 | 1.2455586 |
| 800089AF | 038B | |
| 800089B0 | 0800 | 1.5229586 |
| 800089B1 | 0455 | |
| 800089B2 | 0000 | 1.8003586 |
| 800089B3 | 051F | |
| 800089B4 | 0400 | 2.0777586 |
| 800089B5 | 05E9 | |
| 800089B6 | 0000 | 2.3551586 |
| 800089B7 | 06B3 | |
| 800089B8 | 0800 | 2.6325586 |
| 800089B9 | 077D | |
| 800089BA | 0000 | 2.9099586 |
| 800089BB | 0847 | |
| 800089BC | 0400 | 3.1873586 |
| 800089BD | 0911 | |
| 800089BE | 0000 | 3.4648586 |
| 800089BF | 09DB | |
| 800089C0 | 0800 | 3.7422586 |
| 800089C1 | 0AA5 | |
| 800089C2 | 0000 | 4.0196586 |
| 800089C3 | 0B6F | |
| 800089C4 | 0400 | 4.2970586 |
| 800089C5 | 0C39 | |
| 800089C6 | 0000 | 4.5744586 |
| 800089C7 | 0D03 | |
| 800089C8 | 0800 | 4.8532586 |
| 800089C9 | 0DCE | |
| 800089CA | 0000 | 5.1306586 |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 800089CB | 0E98 | |
| 800089CC | 0400 | 5.4080586 |
| 800089CD | 0F62 | |
| 800089CE | 0000 | 5.6854586 |
| 800089CF | 102C | |
| 800089D0 | 0800 | 5.9628586 |
| 800089D1 | 10F6 | |
| 800089D2 | 0000 | 6.2402586 |
| 800089D3 | 11C0 | |
| 800089D4 | 0400 | 6.5176586 |
| 800089D5 | 128A | |
| 800089D6 | 0000 | 6.7950586 |
| 800089D7 | 1354 | |
| 800089D8 | 0800 | 7.0724586 |
| 800089D9 | 141E | |
| 800089DA | 0000 | 7.3498586 |
| 800089DB | 14E8 | |
| 800089DC | 0400 | 7.6272586 |
| 800089DD | 15B2 | |
| 800089DE | 0000 | 7.9046586 |
| 800089DF | 167C | |
| 800089E0 | 0800 | 8.1820586 |
| 800089E1 | 1746 | |
| 800089E2 | 0000 | 8.4594586 |
| 800089E3 | 1810 | |
| 800089E4 | 0400 | 8.7368586 |
| 800089E5 | 18DA | |
| 800089E6 | 0000 | 9.0156586 |
| 800089E7 | 19A5 | |
| 800089E8 | 0800 | 9.2930586 |
| 800089E9 | 1A6F | |
| 800089EA | 0000 | 9.5704586 |
| 800089EB | 1B39 | |
| 800089EC | 0400 | 9.8478586 |
| 800089ED | 1C03 | |
| 800089EE | 0000 | 10.1252586 |
| 800089EF | 1CCD | |
| 800089F0 | 0800 | 10.4026586 |
| 800089F1 | 1D97 | |
| 800089F2 | 0000 | 10.6800586 |
| 800089F3 | 1E61 | |
| 800089F4 | 0400 | 10.9574586 |
| 800089F5 | 1F2B | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 800089F6 | 0000 | 11.2348586 |
| 800089F7 | 1FF5 | |
| 800089F8 | 0800 | 11.5122586 |
| 800089F9 | 20BF | |
| 800089FA | 0000 | 11.7896586 |
| 800089FB | 2189 | |
| 800089FC | 0400 | 12.0670586 |
| 800089FD | 2253 | |
| 800089FE | 0000 | 12.3445586 |
| 800089FF | 231D | |
| 80008A00 | 0800 | 12.6219586 |
| 80008A01 | 23E7 | |
| 80008A02 | 0000 | 12.9006586 |
| 80008A03 | 24B2 | |
| 80008A04 | 0400 | 13.1780586 |
| 80008A05 | 257C | |
| 80008A06 | 0000 | 13.4554586 |
| 80008A07 | 2646 | |
| 80008A08 | 0800 | 13.7329586 |
| 80008A09 | 2710 | |
| 80008A0A | 0000 | 14.0103586 |
| 80008A0B | 27DA | |
| 80008A0C | 0400 | 14.2877586 |
| 80008A0D | 28A4 | |
| 80008A0E | 0000 | 14.5651586 |
| 80008A0F | 296E | |
| 80008A10 | 0800 | 14.8425586 |
| 80008A11 | 2A38 | |
| 80008A12 | 0000 | 15.1199586 |
| 80008A13 | 2B02 | |
| 80008A14 | 0400 | 15.3973586 |
| 80008A15 | 2BCC | |
| 80008A16 | 0000 | 15.6747586 |
| 80008A17 | 2C96 | |
| 80008A18 | 0800 | 15.9521586 |
| 80008A19 | 2D60 | |
| 80008A1A | 0000 | 16.2295586 |
| 80008A1B | 2E2A | |
| 80008A1C | 0400 | 16.5069586 |
| 80008A1D | 2EF4 | |
| 80008A1E | 0000 | 16.7857586 |
| 80008A1F | 2FBF | |
| 80008A20 | 0800 | 17.0631586 |
| 80008A21 | 3089 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 80008A22 | 0000 | 17.3405586 |
| 80008A23 | 3153 | |
| 80008A24 | 0400 | 17.6179586 |
| 80008A25 | 321D | |
| 80008A26 | 0000 | 17.8953586 |
| 80008A27 | 32E7 | |
| 80008A28 | 0800 | 18.1727586 |
| 80008A29 | 33B1 | |
| 80008A2A | 0000 | 18.4501586 |
| 80008A2B | 347B | |
| 80008A2C | 0400 | 18.7275586 |
| 80008A2D | 3545 | |
| 80008A2E | 0000 | 19.0049586 |
| 80008A2F | 360F | |
| 80008A30 | 0800 | 19.2823586 |
| 80008A31 | 36D9 | |
| 80008A32 | 0000 | 19.5597586 |
| 80008A33 | 37A3 | |
| 80008A34 | 0400 | 19.8371586 |
| 80008A35 | 386D | |
| 80008A36 | 0000 | 20.1145586 |
| 80008A37 | 3937 | |
| 80008A38 | 0800 | 20.3919586 |
| 80008A39 | 3A01 | |
| 80008A3A | 0000 | 20.6693586 |
| 80008A3B | 3ACB | |
| 80008A3C | 0400 | 20.9481586 |
| 80008A3D | 3B96 | |
| 80008A3E | 0000 | 21.2255586 |
| 80008A3F | 3C60 | |
| 80008A40 | 0800 | 21.5029586 |
| 80008A41 | 3D2A | |
| 80008A42 | 0000 | 21.7803586 |
| 80008A43 | 3DF4 | |
| 80008A44 | 0400 | 22.0577586 |
| 80008A45 | 3EBE | |
| 80008A46 | 0000 | 22.3351586 |
| 80008A47 | 3F88 | |
| 80008A48 | 0800 | 22.6126586 |
| 80008A49 | 4052 | |
| 80008A4A | 0000 | 22.8900586 |
| 80008A4B | 411C | |
| 80008A4C | 0400 | 23.1674586 |
| 80008A4D | 41E6 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 80008A4E | 0000 | 23.4448586 |
| 80008A4F | 42B0 | |
| 80008A50 | 0800 | 23.7222586 |
| 80008A51 | 437A | |
| 80008A52 | 0000 | 23.9996586 |
| 80008A53 | 4444 | |
| 80008A54 | 0400 | 24.2770586 |
| 80008A55 | 450E | |
| 80008A56 | 0000 | 24.5544586 |
| 80008A57 | 45D8 | |
| 80008A58 | 0800 | 24.8332586 |
| 80008A59 | 46A3 | |
| 80008A5A | 0000 | 25.1106586 |
| 80008A5B | 476D | |
| 80008A5C | 0400 | 25.3880586 |
| 80008A5D | 4837 | |
| 80008A5E | 0000 | 25.6654586 |
| 80008A5F | 4901 | |
| 80008A60 | 0800 | 25.9428586 |
| 80008A61 | 49CB | |
| 80008A62 | 0000 | 26.2202586 |
| 80008A63 | 4A95 | |
| 80008A64 | 0400 | 26.4976586 |
| 80008A65 | 4B5F | |
| 80008A66 | 0000 | 26.7750586 |
| 80008A67 | 4C29 | |
| 80008A68 | 0800 | 27.0524586 |
| 80008A69 | 4CF3 | |
| 80008A6A | 0000 | 27.3298586 |
| 80008A6B | 4DBD | |
| 80008A6C | 0400 | 27.6072586 |
| 80008A6D | 4E87 | |
| 80008A6E | 0000 | 27.8846586 |
| 80008A6F | 4F51 | |
| 80008A70 | 0800 | 28.1620586 |
| 80008A71 | 501B | |
| 80008A72 | 0000 | 28.4394586 |
| 80008A73 | 50E5 | |
| 80008A74 | 0400 | 28.7168586 |
| 80008A75 | 51AF | |
| 80008A76 | 0000 | 28.9956586 |
| 80008A77 | 527A | |
| 80008A78 | 0800 | 29.2730586 |
| 80008A79 | 5344 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 80008A7A | 0000 | 29.5504586 |
| 80008A7B | 540E | |
| 80008A7C | 0400 | 29.8278586 |
| 80008A7D | 54D8 | |
| 80008A7E | 0000 | 30.1052586 |
| 80008A7F | 55A2 | |
| 80008A80 | 0800 | 30.3826586 |
| 80008A81 | 566C | |
| 80008A82 | 0000 | 30.6600586 |
| 80008A83 | 5736 | |
| 80008A84 | 0400 | 30.9374586 |
| 80008A85 | 5800 | |
| 80008A86 | 0000 | 31.2148586 |
| 80008A87 | 58CA | |
| 80008A88 | 0800 | 31.4923586 |
| 80008A89 | 5994 | |
| 80008A8A | 0000 | 31.7697586 |
| 80008A8B | 5A5E | |
| 80008A8C | 0400 | 32.0471586 |
| 80008A8D | 5B28 | |
| 80008A8E | 0000 | 32.3245586 |
| 80008A8F | 5BF2 | |
| 80008A90 | 0800 | 32.6019586 |
| 80008A91 | 5CBC | |
| 80008A92 | 0000 | 32.8806586 |
| 80008A93 | 5D87 | |
| 80008A94 | 0400 | 33.1581586 |
| 80008A95 | 5E51 | |
| 80008A96 | 0000 | 33.4355586 |
| 80008A97 | 5F1B | |
| 80008A98 | 0800 | 33.7129586 |
| 80008A99 | 5FE5 | |
| 80008A9A | 0000 | 33.9903586 |
| 80008A9B | 60AF | |
| 80008A9C | 0400 | 34.2677586 |
| 80008A9D | 6179 | |
| 80008A9E | 0000 | 34.5451586 |
| 80008A9F | 6243 | |
| 80008AA0 | 0800 | 34.8225586 |
| 80008AA1 | 630D | |
| 80008AA2 | 0000 | 35.0999586 |
| 80008AA3 | 63D7 | |
| 80008AA4 | 0400 | 35.3773586 |
| 80008AA5 | 64A1 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 80008AA6 | 0000 | 35.6547586 |
| 80008AA7 | 656B | |
| 80008AA8 | 0800 | 35.9321586 |
| 80008AA9 | 6635 | |
| 80008AAA | 0000 | 36.2095586 |
| 80008AAB | 66FF | |
| 80008AAC | 0400 | 36.4869586 |
| 80008AAD | 67C9 | |
| 80008AAE | 0000 | 36.7643586 |
| 80008AAF | 6893 | |
| 80008AB0 | 0800 | 37.0431586 |
| 80008AB1 | 695E | |
| 80008AB2 | 0000 | 37.3205586 |
| 80008AB3 | 6A28 | |
| 80008AB4 | 0400 | 37.5979586 |
| 80008AB5 | 6AF2 | |
| 80008AB6 | 0000 | 37.8753586 |
| 80008AB7 | 6BBC | |
| 80008AB8 | 0800 | 38.1527586 |
| 80008AB9 | 6C86 | |
| 80008ABA | 0000 | 38.4301586 |
| 80008ABB | 6D50 | |
| 80008ABC | 0400 | 38.7075586 |
| 80008ABD | 6E1A | |
| 80008ABE | 0000 | 38.9849586 |
| 80008ABF | 6EE4 | |
| 80008AC0 | 0800 | 39.2623586 |
| 80008AC1 | 6FAE | |
| 80008AC2 | 0000 | 39.5397586 |
| 80008AC3 | 7078 | |
| 80008AC4 | 0400 | 39.8171586 |
| 80008AC5 | 7142 | |
| 80008AC6 | 0000 | 40.0945586 |
| 80008AC7 | 720C | |
| 80008AC8 | 0800 | 40.3720586 |
| 80008AC9 | 72D6 | |
| 80008ACA | 0000 | 40.6494586 |
| 80008ACB | 73A0 | |
| 80008ACC | 0400 | 40.9281586 |
| 80008ACD | 746B | |
| 80008ACE | 0000 | 41.2055586 |
| 80008ACF | 7535 | |
| 80008AD0 | 0800 | 41.4829586 |
| 80008AD1 | 75FF | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 80008AD2 | 0000 | 41.7603586 |
| 80008AD3 | 76C9 | |
| 80008AD4 | 0400 | 42.0378586 |
| 80008AD5 | 7793 | |
| 80008AD6 | 0000 | 42.3152586 |
| 80008AD7 | 785D | |
| 80008AD8 | 0800 | 42.5926586 |
| 80008AD9 | 7927 | |
| 80008ADA | 0000 | 42.8700586 |
| 80008ADB | 79F1 | |
| 80008ADC | 0400 | 43.1474586 |
| 80008ADD | 7ABB | |
| 80008ADE | 0000 | 43.4248586 |
| 80008ADF | 7B85 | |
| 80008AE0 | 0800 | 43.7022586 |
| 80008AE1 | 7C4F | |
| 80008AE2 | 0000 | 43.9796586 |
| 80008AE3 | 7D19 | |
| 80008AE4 | 0400 | 44.2570586 |
| 80008AE5 | 7DE3 | |
| 80008AE6 | 0000 | 44.5344586 |
| 80008AE7 | 7EAD | |
| 80008AE8 | 0800 | 44.8132586 |
| 80008AE9 | 7F78 | |
| 80008AEA | 0000 | 45.0906586 |
| 80008AEB | 8042 | |
| 80008AEC | 0400 | 45.3680586 |
| 80008AED | 810C | |
| 80008AEE | 0000 | 45.6454586 |
| 80008AEF | 81D6 | |
| 80008AF0 | 0800 | 45.9228586 |
| 80008AF1 | 82A0 | |
| 80008AF2 | 0000 | 46.2002586 |
| 80008AF3 | 836A | |
| 80008AF4 | 0400 | 46.4776586 |
| 80008AF5 | 8434 | |
| 80008AF6 | 0000 | 46.7550586 |
| 80008AF7 | 84FE | |
| 80008AF8 | 0800 | 47.0324586 |
| 80008AF9 | 85C8 | |
| 80008AFA | 0000 | 47.3098586 |
| 80008AFB | 8692 | |
| 80008AFC | 0400 | 47.5872586 |
| 80008AFD | 875C | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 80008AFE | 0000 | 47.8646586 |
| 80008AFF | 8826 | |
| 80008B00 | 0800 | 48.1420586 |
| 80008B01 | 88F0 | |
| 80008B02 | 0000 | 48.4194586 |
| 80008B03 | 89BA | |
| 80008B04 | 0400 | 48.6968586 |
| 80008B05 | 8A84 | |
| 80008B06 | 0000 | 48.9756586 |
| 80008B07 | 8B4F | |
| 80008B08 | 0800 | 49.2530586 |
| 80008B09 | 8C19 | |
| 80008B0A | 0000 | 49.5304586 |
| 80008B0B | 8CE3 | |
| 80008B0C | 0400 | 49.8078586 |
| 80008B0D | 8DAD | |
| 80008B0E | 0000 | 50.0852586 |
| 80008B0F | 8E77 | |
| 80008B10 | 0800 | 50.3626586 |
| 80008B11 | 8F41 | |
| 80008B12 | 0000 | 50.6400586 |
| 80008B13 | 900B | |
| 80008B14 | 0400 | 50.9175586 |
| 80008B15 | 90D5 | |
| 80008B16 | 0000 | 51.1949586 |
| 80008B17 | 919F | |
| 80008B18 | 0800 | 51.4723586 |
| 80008B19 | 9269 | |
| 80008B1A | 0000 | 51.7497586 |
| 80008B1B | 9333 | |
| 80008B1C | 0400 | 52.0271586 |
| 80008B1D | 93FD | |
| 80008B1E | 0000 | 52.3429586 |
| 80008B1F | 94E3 | |
| 80008B20 | 0800 | 52.7371586 |
| 80008B21 | 9602 | |
| 80008B22 | 0000 | 53.2067586 |
| 80008B23 | 9758 | |
| 80008B24 | 0000 | 53.7547586 |
| 80008B25 | 98E7 | |
| 80008B26 | 0000 | 54.3795586 |
| 80008B27 | 9AAE | |
| 80008B28 | 0800 | 55.0813586 |
| 80008B29 | 9CAD | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 80008B2A | 0000 | 55.8613586 |
| 80008B2B | 9EE5 | |
| 80008B2C | 0000 | 56.7169586 |
| 80008B2D | A154 | |
| 80008B2E | 0000 | 57.6507586 |
| 80008B2F | A3FC | |
| 80008B30 | 0800 | 58.6614586 |
| 80008B31 | A6DC | |
| 80008B32 | 0000 | 59.7505586 |
| 80008B33 | A9F5 | |
| 80008B34 | 0000 | 60.9150586 |
| 80008B35 | AD45 | |
| 80008B36 | 0000 | 62.1578586 |
| 80008B37 | B0CE | |
| 80008B38 | 0800 | 63.4762586 |
| 80008B39 | B48E | |
| 80008B3A | 0000 | 64.8742586 |
| 80008B3B | B888 | |
| 80008B3C | 0000 | 66.3478586 |
| 80008B3D | BCB9 | |
| 80008B3E | 0000 | 67.8089586 |
| 80008B3F | C0E1 | |
| 80008B40 | 0800 | 69.1671586 |
| 80008B41 | C4BE | |
| 80008B42 | 0000 | 70.4223586 |
| 80008B43 | C850 | |
| 80008B44 | 0000 | 71.5745586 |
| 80008B45 | CB97 | |
| 80008B46 | 0000 | 72.6237586 |
| 80008B47 | CE93 | |
| 80008B48 | 0800 | 73.5699586 |
| 80008B49 | D144 | |
| 80008B4A | 0000 | 74.4131586 |
| 80008B4B | D3AA | |
| 80008B4C | 0000 | 75.1547586 |
| 80008B4D | D5C6 | |
| 80008B4E | 0000 | 75.7919586 |
| 80008B4F | D796 | |
| 80008B50 | 0800 | 76.3261586 |
| 80008B51 | D91B | |
| 80008B52 | 0000 | 76.7587586 |
| 80008B53 | DA56 | |
| 80008B54 | 0000 | 77.0869586 |
| 80008B55 | DB45 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 80008B56 | 0000 | 77.3657586 |
| 80008B57 | DC10 | |
| 80008B58 | 0800 | 77.6431586 |
| 80008B59 | DCDA | |
| 80008B5A | 0000 | 77.9205586 |
| 80008B5B | DDA4 | |
| 80008B5C | 0000 | 78.1979586 |
| 80008B5D | DE6E | |
| 80008B5E | 0000 | 78.4753586 |
| 80008B5F | DF38 | |
| 80008B60 | 0800 | 78.7527586 |
| 80008B61 | E002 | |
| 80008B62 | 0000 | 79.0301586 |
| 80008B63 | E0CC | |
| 80008B64 | 0400 | 79.3075586 |
| 80008B65 | E196 | |
| 80008B66 | 0000 | 79.5849586 |
| 80008B67 | E260 | |
| 80008B68 | 0800 | 79.8623586 |
| 80008B69 | E32A | |
| 80008B6A | 0000 | 80.1397586 |
| 80008B6B | E3F4 | |
| 80008B6C | 0400 | 80.4171586 |
| 80008B6D | E4BE | |
| 80008B6E | 0000 | 80.6945586 |
| 80008B6F | E588 | |
| 80008B70 | 0800 | 80.9719586 |
| 80008B71 | E652 | |
| 80008B72 | 0000 | 81.2493586 |
| 80008B73 | E71C | |
| 80008B74 | 0400 | 81.5281586 |
| 80008B75 | E7E7 | |
| 80008B76 | 0000 | 81.8055586 |
| 80008B77 | E8B1 | |
| 80008B78 | 0800 | 82.0829586 |
| 80008B79 | E97B | |
| 80008B7A | 0000 | 82.3603586 |
| 80008B7B | EA45 | |
| 80008B7C | 0400 | 82.6377586 |
| 80008B7D | EB0F | |
| 80008B7E | 0000 | 82.9577586 |
| 80008B7F | EBF8 | |
| 80008B80 | 0800 | 83.3615586 |
| 80008B81 | ED1E | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 80008B82 | 0000 | 83.8503586 |
| 80008B83 | EE82 | |
| 80008B84 | 0000 | 84.4230586 |
| 80008B85 | F023 | |
| 80008B86 | 0000 | 85.0794586 |
| 80008B87 | F201 | |
| 80008B88 | 0800 | 85.8210586 |
| 80008B89 | F41D | |
| 80008B8A | 0000 | 86.6477586 |
| 80008B8B | F677 | |
| 80008B8C | 0000 | 87.5582586 |
| 80008B8D | F90E | |
| 80008B8E | 0000 | 88.5525586 |
| 80008B8F | FBE2 | |
| 80008B90 | 0800 | 89.6319586 |
| 80008B91 | FEF4 | |
| 80008B92 | 0100 | 90.7951586 |
| 80008B93 | 0243 | |
| 80008B94 | 0100 | 92.0434586 |
| 80008B95 | 05D0 | |
| 80008B96 | 0100 | 93.3755586 |
| 80008B97 | 099A | |
| 80008B98 | 0900 | 94.7914586 |
| 80008B99 | 0DA1 | |
| 80008B9A | 0100 | 96.2924586 |
| 80008B9B | 11E6 | |
| 80008B9C | 0100 | 97.8785586 |
| 80008B9D | 1669 | |
| 80008B9E | 0100 | 99.5484586 |
| 80008B9F | 1B29 | |
| 80008BA0 | 0900 | 101.3021586 |
| 80008BA1 | 2026 | |
| 80008BA2 | 0100 | 103.1410586 |
| 80008BA3 | 2561 | |
| 80008BA4 | 0100 | 105.0636586 |
| 80008BA5 | 2AD9 | |
| 80008BA6 | 0100 | 107.0713586 |
| 80008BA7 | 308F | |
| 80008BA8 | 0900 | 109.1628586 |
| 80008BA9 | 3682 | |
| 80008BAA | 0100 | 111.3381586 |
| 80008BAB | 3CB2 | |
| 80008BAC | 0100 | 113.5986586 |
| 80008BAD | 4320 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 80008BAE | 0100 | 115.9442586 |
| 80008BAF | 49CC | |
| 80008BB0 | 0900 | 118.3721586 |
| 80008BB1 | 50B4 | |
| 80008BB2 | 0100 | 120.8866586 |
| 80008BB3 | 57DB | |
| 80008BB4 | 0100 | 123.4849586 |
| 80008BB5 | 5F3F | |
| 80008BB6 | 0100 | 126.1669586 |
| 80008BB7 | 66E0 | |
| 80008BB8 | 0900 | 128.9327586 |
| 80008BB9 | 6EBE | |
| 80008BBA | 0100 | 131.7851586 |
| 80008BBB | 76DB | |
| 80008BBC | 0100 | 134.7198586 |
| 80008BBD | 7F34 | |
| 80008BBE | 0100 | 137.7397586 |
| 80008BBF | 87CB | |
| 80008BC0 | 0900 | 140.8433586 |
| 80008BC1 | 909F | |
| 80008BC2 | 0100 | 144.0321586 |
| 80008BC3 | 99B1 | |
| 80008BC4 | 0100 | 147.3060586 |
| 80008BC5 | A301 | |
| 80008BC6 | 0100 | 150.5580586 |
| 80008BC7 | AC41 | |
| 80008BC8 | 0900 | 153.6822586 |
| 80008BC9 | B524 | |
| 80008BCA | 0100 | 156.6815586 |
| 80008BCB | BDAC | |
| 80008BCC | 0100 | 159.5530586 |
| 80008BCD | C5D7 | |
| 80008BCE | 100 | 162.2996586 |
| 80008BCF | CDA7 | |
| 80008BD0 | 900 | 164.9185586 |
| 80008BD1 | D51A | |
| 80008BD2 | 100 | 167.4110586 |
| 80008BD3 | DC31 | |
| 80008BD4 | 100 | 169.7772586 |
| 80008BD5 | E2EC | |
| 80008BD6 | 100 | 172.0156586 |
| 80008BD7 | E94A | |
| 80008BD8 | 900 | 174.1291586 |
| 80008BD9 | EF4D | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 80008BDA | 100 | 176.1149586 |
| 80008BDB | F4F3 | |
| 80008BDC | 100 | 177.9743586 |
| 80008BDD | FA3D | |
| 80008BDE | 0100 | 179.7074586 |
| 80008BDF | FF2B | |
| 80008BE0 | 0A00 | 181.3142586 |
| 80008BE1 | 03BD | |
| 80008BE2 | 0200 | 182.7946586 |
| 80008BE3 | 07F3 | |
| 80008BE4 | 0200 | 184.1473586 |
| 80008BE5 | 0BCC | |
| 80008BE6 | 0200 | 185.3736586 |
| 80008BE7 | 0F49 | |
| 80008BE8 | 0A00 | 186.4736586 |
| 80008BE9 | 126A | |
| 80008BEA | 0200 | 187.4473586 |
| 80008BEB | 152F | |
| 80008BEC | 0200 | 188.2946586 |
| 80008BED | 1798 | |
| 80008BEE | 0200 | 189.0156586 |
| 80008BEF | 19A5 | |
| 80008BF0 | 0A00 | 189.6089586 |
| 80008BF1 | 1B55 | |
| 80008BF2 | 0200 | 190.0772586 |
| 80008BF3 | 1CAA | |
| 80008BF4 | 0200 | 190.4177586 |
| 80008BF5 | 1DA2 | |
| 80008BF6 | 0200 | 190.6951586 |
| 80008BF7 | 1E6C | |
| 80008BF8 | 0A00 | 190.9725586 |
| 80008BF9 | 1F36 | |
| 80008BFA | 0200 | 191.2499586 |
| 80008BFB | 2000 | |
| 80008BFC | 0200 | 191.5273586 |
| 80008BFD | 20CA | |
| 80008BFE | 0200 | 191.8048586 |
| 80008BFF | 2194 | |
| 80008C00 | 0A00 | 192.0822586 |
| 80008C01 | 225E | |
| 80008C02 | 0200 | 192.3596586 |
| 80008C03 | 2328 | |
| 80008C04 | 0600 | 192.6370586 |
| 80008C05 | 23F2 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 80008C06 | 0200 | 192.9144586 |
| 80008C07 | 24BC | |
| 80008C08 | 0A00 | 193.1931586 |
| 80008C09 | 2587 | |
| 80008C0A | 0200 | 193.4706586 |
| 80008C0B | 2651 | |
| 80008C0C | 0600 | 193.7480586 |
| 80008C0D | 271B | |
| 80008C0E | 0200 | 194.0254586 |
| 80008C0F | 27E5 | |
| 80008C10 | 0A00 | 194.3028586 |
| 80008C11 | 28AF | |
| 80008C12 | 0200 | 194.5802586 |
| 80008C13 | 2979 | |
| 80008C14 | 0600 | 194.8576586 |
| 80008C15 | 2A43 | |
| 80008C16 | 0200 | 195.1350586 |
| 80008C17 | 2B0D | |
| 80008C18 | 0A00 | 195.4124586 |
| 80008C19 | 2BD7 | |
| 80008C1A | 0200 | 195.6898586 |
| 80008C1B | 2CA1 | |
| 80008C1C | 0600 | 195.9672586 |
| 80008C1D | 2D6B | |
| 80008C1E | 0200 | 196.2858586 |
| 80008C1F | 2E53 | |
| 80008C20 | 0A00 | 196.6841586 |
| 80008C21 | 2F75 | |
| 80008C22 | 0200 | 197.1633586 |
| 80008C23 | 30D2 | |
| 80008C24 | 0200 | 197.7236586 |
| 80008C25 | 326A | |
| 80008C26 | 0200 | 198.3650586 |
| 80008C27 | 343D | |
| 80008C28 | 0A00 | 199.0873586 |
| 80008C29 | 364B | |
| 80008C2A | 0200 | 199.8907586 |
| 80008C2B | 3894 | |
| 80008C2C | 0200 | 200.7737586 |
| 80008C2D | 3B17 | |
| 80008C2E | 0200 | 201.7391586 |
| 80008C2F | 3DD6 | |
| 80008C30 | 0A00 | 202.7842586 |
| 80008C31 | 40CF | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 80008C32 | 0200 | 203.9103586 |
| 80008C33 | 4403 | |
| 80008C34 | 0200 | 205.1174586 |
| 80008C35 | 4772 | |
| 80008C36 | 0200 | 206.4056586 |
| 80008C37 | 4B1C | |
| 80008C38 | 0A00 | 207.7748586 |
| 80008C39 | 4F01 | |
| 80008C3A | 0200 | 209.2236586 |
| 80008C3B | 5320 | |
| 80008C3C | 0200 | 210.7548586 |
| 80008C3D | 577B | |
| 80008C3E | 0200 | 212.3657586 |
| 80008C3F | 5C10 | |
| 80008C40 | 0A00 | 214.0576586 |
| 80008C41 | 60E0 | |
| 80008C42 | 0200 | 215.8305586 |
| 80008C43 | 65EB | |
| 80008C44 | 0200 | 217.6844586 |
| 80008C45 | 6B31 | |
| 80008C46 | 0200 | 219.6194586 |
| 80008C47 | 70B2 | |
| 80008C48 | 0A00 | 221.6340586 |
| 80008C49 | 766D | |
| 80008C4A | 0200 | 223.7310586 |
| 80008C4B | 7C64 | |
| 80008C4C | 0200 | 225.9077586 |
| 80008C4D | 8295 | |
| 80008C4E | 0200 | 228.1654586 |
| 80008C4F | 8901 | |
| 80008C50 | 0A00 | 230.5041586 |
| 80008C51 | 8FA8 | |
| 80008C52 | 0200 | 232.9238586 |
| 80008C53 | 968A | |
| 80008C54 | 0200 | 235.4246586 |
| 80008C55 | 9DA7 | |
| 80008C56 | 0200 | 238.0050586 |
| 80008C57 | A4FE | |
| 80008C58 | 0A00 | 240.6678586 |
| 80008C59 | AC91 | |
| 80008C5A | 0200 | 243.4103586 |
| 80008C5B | B45E | |
| 80008C5C | 0200 | 246.2338586 |
| 80008C5D | BC66 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 80008C5E | 0200 | 249.1383586 |
| 80008C5F | C4A9 | |
| 80008C60 | 0A00 | 252.1238586 |
| 80008C61 | CD27 | |
| 80008C62 | 0200 | 255.1904586 |
| 80008C63 | D5E0 | |
| 80008C64 | 0200 | 258.3380586 |
| 80008C65 | DED4 | |
| 80008C66 | 0200 | 261.4649586 |
| 80008C67 | E7B9 | |
| 80008C68 | 0A00 | 264.4697586 |
| 80008C69 | F045 | |
| 80008C6A | 0200 | 267.3550586 |
| 80008C6B | F87A | |
| 80008C6C | 0300 | 270.1180586 |
| 80008C6D | 0056 | |
| 80008C6E | 0300 | 272.7589586 |
| 80008C6F | 07D9 | |
| 80008C70 | 0B00 | 275.2802586 |
| 80008C71 | 0F05 | |
| 80008C72 | 0300 | 277.6794586 |
| 80008C73 | 15D8 | |
| 80008C74 | 0300 | 279.9577586 |
| 80008C75 | 1C53 | |
| 80008C76 | 0300 | 282.1137586 |
| 80008C77 | 2275 | |
| 80008C78 | 0B00 | 284.1503586 |
| 80008C79 | 2840 | |
| 80008C7A | 0300 | 286.0647586 |
| 80008C7B | 2DB2 | |
| 80008C7C | 0300 | 287.8568586 |
| 80008C7D | 32CB | |
| 80008C7E | 0300 | 289.5295586 |
| 80008C7F | 378D | |
| 80008C80 | 0B00 | 291.0800586 |
| 80008C81 | 3BF6 | |
| 80008C82 | 0300 | 292.5096586 |
| 80008C83 | 4007 | |
| 80008C84 | 0300 | 293.8169586 |
| 80008C85 | 43BF | |
| 80008C86 | 0300 | 295.0048586 |
| 80008C87 | 4720 | |
| 80008C88 | 0B00 | 296.0705586 |
| 80008C89 | 4A28 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 80008C8A | 0300 | 297.0139586 |
| 80008C8B | 4CD7 | |
| 80008C8C | 0300 | 297.8379586 |
| 80008C8D | 4F2F | |
| 80008C8E | 0300 | 298.5397586 |
| 80008C8F | 512E | |
| 80008C90 | 0B00 | 299.1206586 |
| 80008C91 | 52D5 | |
| 80008C92 | 0300 | 299.5793586 |
| 80008C93 | 5423 | |
| 80008C94 | 0300 | 299.9171586 |
| 80008C95 | 5519 | |
| 80008C96 | 0300 | 300.1945586 |
| 80008C97 | 55E3 | |
| 80008C98 | 0B00 | 300.4719586 |
| 80008C99 | 56AD | |
| 80008C9A | 0300 | 300.7507586 |
| 80008C9B | 5778 | |
| 80008C9C | 0300 | 301.0281586 |
| 80008C9D | 5842 | |
| 80008C9E | 0300 | 301.3055586 |
| 80008C9F | 590C | |
| 80008CA0 | 0B00 | 301.5829586 |
| 80008CA1 | 59D6 | |
| 80008CA2 | 0300 | 301.8603586 |
| 80008CA3 | 5AA0 | |
| 80008CA4 | 0300 | 302.1377586 |
| 80008CA5 | 5B6A | |
| 80008CA6 | 0300 | 302.4151586 |
| 80008CA7 | 5C34 | |
| 80008CA8 | 0B00 | 302.6925586 |
| 80008CA9 | 5CFE | |
| 80008CAA | 0300 | 302.9699586 |
| 80008CAB | 5DC8 | |
| 80008CAC | 0300 | 303.2473586 |
| 80008CAD | 5E92 | |
| 80008CAE | 0300 | 303.5247586 |
| 80008CAF | 5F5C | |
| 80008CB0 | 0B00 | 303.8021586 |
| 80008CB1 | 6026 | |
| 80008CB2 | 0300 | 304.0795586 |
| 80008CB3 | 60F0 | |
| 80008CB4 | 0300 | 304.3569586 |
| 80008CB5 | 61BA | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 80008CB6 | 0300 | 304.6343586 |
| 80008CB7 | 6284 | |
| 80008CB8 | 0B00 | 304.9131586 |
| 80008CB9 | 634F | |
| 80008CBA | 0300 | 305.1905586 |
| 80008CBB | 6419 | |
| 80008CBC | 0300 | 305.4679586 |
| 80008CBD | 64E3 | |
| 80008CBE | 0300 | 305.7453586 |
| 80008CBF | 65AD | |
| 80008CC0 | 0B00 | 306.0227586 |
| 80008CC1 | 6677 | |
| 80008CC2 | 0300 | 306.3001586 |
| 80008CC3 | 6741 | |
| 80008CC4 | 0700 | 306.5775586 |
| 80008CC5 | 680B | |
| 80008CC6 | 0300 | 306.8550586 |
| 80008CC7 | 68D5 | |
| 80008CC8 | 0B00 | 307.1324586 |
| 80008CC9 | 699F | |
| 80008CCA | 0300 | 307.4098586 |
| 80008CCB | 6A69 | |
| 80008CCC | 0700 | 307.6872586 |
| 80008CCD | 6B33 | |
| 80008CCE | 0300 | 307.9646586 |
| 80008CCF | 6BFD | |
| 80008CD0 | 0B00 | 308.2420586 |
| 80008CD1 | 6CC7 | |
| 80008CD2 | 0300 | 308.5194586 |
| 80008CD3 | 6D91 | |
| 80008CD4 | 0700 | 308.7982586 |
| 80008CD5 | 6E5C | |
| 80008CD6 | 0300 | 309.0756586 |
| 80008CD7 | 6F26 | |
| 80008CD8 | 0B00 | 309.3530586 |
| 80008CD9 | 6FF0 | |
| 80008CDA | 0300 | 309.6304586 |
| 80008CDB | 70BA | |
| 80008CDC | 0700 | 309.9078586 |
| 80008CDD | 7184 | |
| 80008CDE | 0300 | 310.1852586 |
| 80008CDF | 724E | |
| 80008CE0 | 0B00 | 310.4626586 |
| 80008CE1 | 7318 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 80008CE2 | 0300 | 310.7400586 |
| 80008CE3 | 73E2 | |
| 80008CE4 | 0700 | 311.0174586 |
| 80008CE5 | 74AC | |
| 80008CE6 | 0300 | 311.2948586 |
| 80008CE7 | 7576 | |
| 80008CE8 | 0B00 | 311.5722586 |
| 80008CE9 | 7640 | |
| 80008CEA | 0300 | 311.8496586 |
| 80008CEB | 770A | |
| 80008CEC | 0700 | 312.1270586 |
| 80008CED | 77D4 | |
| 80008CEE | 0300 | 312.4044586 |
| 80008CEF | 789E | |
| 80008CF0 | 0B00 | 312.6818586 |
| 80008CF1 | 7968 | |
| 80008CF2 | 0300 | 312.9606586 |
| 80008CF3 | 7A33 | |
| 80008CF4 | 0700 | 313.2380586 |
| 80008CF5 | 7AFD | |
| 80008CF6 | 0300 | 313.5154586 |
| 80008CF7 | 7BC7 | |
| 80008CF8 | 0B00 | 313.7928586 |
| 80008CF9 | 7C91 | |
| 80008CFA | 0300 | 314.0702586 |
| 80008CFB | 7D5B | |
| 80008CFC | 0700 | 314.3476586 |
| 80008CFD | 7E25 | |
| 80008CFE | 0300 | 314.6250586 |
| 80008CFF | 7EEF | |
| 80008D00 | 0B00 | 314.9024586 |
| 80008D01 | 7FB9 | |
| 80008D02 | 0300 | 315.1798586 |
| 80008D03 | 8083 | |
| 80008D04 | 0700 | 315.4572586 |
| 80008D05 | 814D | |
| 80008D06 | 0300 | 315.7347586 |
| 80008D07 | 8217 | |
| 80008D08 | 0B00 | 316.0121586 |
| 80008D09 | 82E1 | |
| 80008D0A | 0300 | 316.2895586 |
| 80008D0B | 83AB | |
| 80008D0C | 0700 | 316.5669586 |
| 80008D0D | 8475 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 80008D0E | 0300 | 316.8456586 |
| 80008D0F | 8540 | |
| 80008D10 | 0B00 | 317.1230586 |
| 80008D11 | 860A | |
| 80008D12 | 0300 | 317.4005586 |
| 80008D13 | 86D4 | |
| 80008D14 | 0700 | 317.6779586 |
| 80008D15 | 879E | |
| 80008D16 | 0300 | 317.9553586 |
| 80008D17 | 8868 | |
| 80008D18 | 0B00 | 318.2327586 |
| 80008D19 | 8932 | |
| 80008D1A | 0300 | 318.5101586 |
| 80008D1B | 89FC | |
| 80008D1C | 0700 | 318.7875586 |
| 80008D1D | 8AC6 | |
| 80008D1E | 0300 | 319.0649586 |
| 80008D1F | 8B90 | |
| 80008D20 | 0B00 | 319.3423586 |
| 80008D21 | 8C5A | |
| 80008D22 | 0300 | 319.6197586 |
| 80008D23 | 8D24 | |
| 80008D24 | 0700 | 319.8971586 |
| 80008D25 | 8DEE | |
| 80008D26 | 0300 | 320.1745586 |
| 80008D27 | 8EB8 | |
| 80008D28 | 0B00 | 320.4519586 |
| 80008D29 | 8F82 | |
| 80008D2A | 0300 | 320.7307586 |
| 80008D2B | 904D | |
| 80008D2C | 0700 | 321.0081586 |
| 80008D2D | 9117 | |
| 80008D2E | 0300 | 321.2855586 |
| 80008D2F | 91E1 | |
| 80008D30 | 0B00 | 321.5629586 |
| 80008D31 | 92AB | |
| 80008D32 | 0300 | 321.8403586 |
| 80008D33 | 9375 | |
| 80008D34 | 0700 | 322.1177586 |
| 80008D35 | 943F | |
| 80008D36 | 0300 | 322.3951586 |
| 80008D37 | 9509 | |
| 80008D38 | 0B00 | 322.6725586 |
| 80008D39 | 95D3 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 80008D3A | 0300 | 322.9499586 |
| 80008D3B | 969D | |
| 80008D3C | 0700 | 323.2273586 |
| 80008D3D | 9767 | |
| 80008D3E | 0300 | 323.5047586 |
| 80008D3F | 9831 | |
| 80008D40 | 0B00 | 323.7821586 |
| 80008D41 | 98FB | |
| 80008D42 | 0300 | 324.0595586 |
| 80008D43 | 99C5 | |
| 80008D44 | 0700 | 324.3369586 |
| 80008D45 | 9A8F | |
| 80008D46 | 0300 | 324.6144586 |
| 80008D47 | 9B59 | |
| 80008D48 | 0B00 | 324.8931586 |
| 80008D49 | 9C24 | |
| 80008D4A | 0300 | 325.1705586 |
| 80008D4B | 9CEE | |
| 80008D4C | 0700 | 325.4479586 |
| 80008D4D | 9DB8 | |
| 80008D4E | 0300 | 325.7253586 |
| 80008D4F | 9E82 | |
| 80008D50 | 0B00 | 326.0027586 |
| 80008D51 | 9F4C | |
| 80008D52 | 0300 | 326.2802586 |
| 80008D53 | A016 | |
| 80008D54 | 0700 | 326.5576586 |
| 80008D55 | A0E0 | |
| 80008D56 | 0300 | 326.8350586 |
| 80008D57 | A1AA | |
| 80008D58 | 0B00 | 327.1124586 |
| 80008D59 | A274 | |
| 80008D5A | 0300 | 327.3898586 |
| 80008D5B | A33E | |
| 80008D5C | 0700 | 327.6672586 |
| 80008D5D | A408 | |
| 80008D5E | 0300 | 327.9446586 |
| 80008D5F | A4D2 | |
| 80008D60 | 0B00 | 328.2220586 |
| 80008D61 | A59C | |
| 80008D62 | 0300 | 328.4994586 |
| 80008D63 | A666 | |
| 80008D64 | 0700 | 328.7782586 |
| 80008D65 | A731 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 80008D66 | 0300 | 329.0556586 |
| 80008D67 | A7FB | |
| 80008D68 | 0B00 | 329.3330586 |
| 80008D69 | A8C5 | |
| 80008D6A | 0300 | 329.6104586 |
| 80008D6B | A98F | |
| 80008D6C | 0700 | 329.8878586 |
| 80008D6D | AA59 | |
| 80008D6E | 0300 | 330.1652586 |
| 80008D6F | AB23 | |
| 80008D70 | 0B00 | 330.4426586 |
| 80008D71 | ABED | |
| 80008D72 | 0300 | 330.7200586 |
| 80008D73 | ACB7 | |
| 80008D74 | 0700 | 330.9974586 |
| 80008D75 | AD81 | |
| 80008D76 | 0300 | 331.2748586 |
| 80008D77 | AE4B | |
| 80008D78 | 0B00 | 331.5522586 |
| 80008D79 | AF15 | |
| 80008D7A | 0300 | 331.8296586 |
| 80008D7B | AFDF | |
| 80008D7C | 0700 | 332.1070586 |
| 80008D7D | B0A9 | |
| 80008D7E | 0300 | 332.3844586 |
| 80008D7F | B173 | |
| 80008D80 | 0B00 | 332.6618586 |
| 80008D81 | B23D | |
| 80008D82 | 0300 | 332.9406586 |
| 80008D83 | B308 | |
| 80008D84 | 0700 | 333.2180586 |
| 80008D85 | B3D2 | |
| 80008D86 | 0300 | 333.4954586 |
| 80008D87 | B49C | |
| 80008D88 | 0B00 | 333.7728586 |
| 80008D89 | B566 | |
| 80008D8A | 0300 | 334.0502586 |
| 80008D8B | B630 | |
| 80008D8C | 0700 | 334.3276586 |
| 80008D8D | B6FA | |
| 80008D8E | 0300 | 334.6050586 |
| 80008D8F | B7C4 | |
| 80008D90 | 0B00 | 334.8824586 |
| 80008D91 | B88E | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 80008D92 | 0300 | 335.1599586 |
| 80008D93 | B958 | |
| 80008D94 | 0700 | 335.4373586 |
| 80008D95 | BA22 | |
| 80008D96 | 0300 | 335.7147586 |
| 80008D97 | BAEC | |
| 80008D98 | 0B00 | 335.9921586 |
| 80008D99 | BBB6 | |
| 80008D9A | 0300 | 336.2695586 |
| 80008D9B | BC80 | |
| 80008D9C | 0700 | 336.5469586 |
| 80008D9D | BD4A | |
| 80008D9E | 0300 | 336.8257586 |
| 80008D9F | BE15 | |
| 80008DA0 | 0B00 | 337.1031586 |
| 80008DA1 | BEDF | |
| 80008DA2 | 0300 | 337.3805586 |
| 80008DA3 | BFA9 | |
| 80008DA4 | 0700 | 337.6579586 |
| 80008DA5 | C073 | |
| 80008DA6 | 0300 | 337.9353586 |
| 80008DA7 | C13D | |
| 80008DA8 | 0B00 | 338.2127586 |
| 80008DA9 | C207 | |
| 80008DAA | 0300 | 338.4901586 |
| 80008DAB | C2D1 | |
| 80008DAC | 0700 | 338.7675586 |
| 80008DAD | C39B | |
| 80008DAE | 0300 | 339.0449586 |
| 80008DAF | C465 | |
| 80008DB0 | 0B00 | 339.3223586 |
| 80008DB1 | C52F | |
| 80008DB2 | 0300 | 339.5997586 |
| 80008DB3 | C5F9 | |
| 80008DB4 | 0700 | 339.8771586 |
| 80008DB5 | C6C3 | |
| 80008DB6 | 0300 | 340.1545586 |
| 80008DB7 | C78D | |
| 80008DB8 | 0B00 | 340.4319586 |
| 80008DB9 | C857 | |
| 80008DBA | 0300 | 340.7093586 |
| 80008DBB | C921 | |
| 80008DBC | 0700 | 340.9881586 |
| 80008DBD | C9EC | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 80008DBE | 0300 | 341.2655586 |
| 80008DBF | CAB6 | |
| 80008DC0 | 0B00 | 341.5429586 |
| 80008DC1 | CB80 | |
| 80008DC2 | 0300 | 341.8203586 |
| 80008DC3 | CC4A | |
| 80008DC4 | 0700 | 342.0977586 |
| 80008DC5 | CD14 | |
| 80008DC6 | 0300 | 342.3751586 |
| 80008DC7 | CDDE | |
| 80008DC8 | 0B00 | 342.6525586 |
| 80008DC9 | CEA8 | |
| 80008DCA | 0300 | 342.9299586 |
| 80008DCB | CF72 | |
| 80008DCC | 0700 | 343.2073586 |
| 80008DCD | D03C | |
| 80008DCE | 0300 | 343.4847586 |
| 80008DCF | D106 | |
| 80008DD0 | 0B00 | 343.7621586 |
| 80008DD1 | D1D0 | |
| 80008DD2 | 0300 | 344.0396586 |
| 80008DD3 | D29A | |
| 80008DD4 | 0700 | 344.3170586 |
| 80008DD5 | D364 | |
| 80008DD6 | 0300 | 344.5944586 |
| 80008DD7 | D42E | |
| 80008DD8 | 0B00 | 344.8731586 |
| 80008DD9 | D4F9 | |
| 80008DDA | 0300 | 345.1505586 |
| 80008DDB | D5C3 | |
| 80008DDC | 0700 | 345.4280586 |
| 80008DDD | D68D | |
| 80008DDE | 0300 | 345.7054586 |
| 80008DDF | D757 | |
| 80008DE0 | 0B00 | 345.9828586 |
| 80008DE1 | D821 | |
| 80008DE2 | 0300 | 346.2602586 |
| 80008DE3 | D8EB | |
| 80008DE4 | 0700 | 346.5376586 |
| 80008DE5 | D9B5 | |
| 80008DE6 | 0300 | 346.8150586 |
| 80008DE7 | DA7F | |
| 80008DE8 | 0B00 | 347.0924586 |
| 80008DE9 | DB49 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 80008DEA | 0300 | 347.3698586 |
| 80008DEB | DC13 | |
| 80008DEC | 0700 | 347.6472586 |
| 80008DED | DCDD | |
| 80008DEE | 0300 | 347.9246586 |
| 80008DEF | DDA7 | |
| 80008DF0 | 0B00 | 348.2020586 |
| 80008DF1 | DE71 | |
| 80008DF2 | 0300 | 348.4794586 |
| 80008DF3 | DF3B | |
| 80008DF4 | 0700 | 348.7582586 |
| 80008DF5 | E006 | |
| 80008DF6 | 0300 | 349.0356586 |
| 80008DF7 | E0D0 | |
| 80008DF8 | 0B00 | 349.3130586 |
| 80008DF9 | E19A | |
| 80008DFA | 0300 | 349.5904586 |
| 80008DFB | E264 | |
| 80008DFC | 0700 | 349.8678586 |
| 80008DFD | E32E | |
| 80008DFE | 0300 | 350.1452586 |
| 80008DFF | E3F8 | |
| 80008E00 | 0B00 | 350.4226586 |
| 80008E01 | E4C2 | |
| 80008E02 | 0300 | 350.7000586 |
| 80008E03 | E58C | |
| 80008E04 | 0700 | 350.9774586 |
| 80008E05 | E656 | |
| 80008E06 | 0300 | 351.2548586 |
| 80008E07 | E720 | |
| 80008E08 | 0B00 | 351.5322586 |
| 80008E09 | E7EA | |
| 80008E0A | 0300 | 351.8096586 |
| 80008E0B | E8B4 | |
| 80008E0C | 0700 | 352.0870586 |
| 80008E0D | E97E | |
| 80008E0E | 0300 | 352.3644586 |
| 80008E0F | EA48 | |
| 80008E10 | 0B00 | 352.6418586 |
| 80008E11 | EB12 | |
| 80008E12 | 0300 | 352.9206586 |
| 80008E13 | EBDD | |
| 80008E14 | 0700 | 353.1980586 |
| 80008E15 | ECA7 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 80008E16 | 0300 | 353.4754586 |
| 80008E17 | ED71 | |
| 80008E18 | 0B00 | 353.7528586 |
| 80008E19 | EE3B | |
| 80008E1A | 0300 | 354.0302586 |
| 80008E1B | EF05 | |
| 80008E1C | 0700 | 354.3077586 |
| 80008E1D | EFCF | |
| 80008E1E | 0300 | 354.5851586 |
| 80008E1F | F099 | |
| 80008E20 | 0B00 | 354.8625586 |
| 80008E21 | F163 | |
| 80008E22 | 0300 | 355.1399586 |
| 80008E23 | F22D | |
| 80008E24 | 0700 | 355.4173586 |
| 80008E25 | F2F7 | |
| 80008E26 | 0300 | 355.6947586 |
| 80008E27 | F3C1 | |
| 80008E28 | 0B00 | 355.9721586 |
| 80008E29 | F48B | |
| 80008E2A | 0300 | 356.2495586 |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 80008E2B | F555 | |
| 80008E2C | 0700 | 356.5269586 |
| 80008E2D | F61F | |
| 80008E2E | 0300 | 356.8057586 |
| 80008E2F | F6EA | |
| 80008E30 | 0B00 | 357.0831586 |
| 80008E31 | F7B4 | |
| 80008E32 | 0300 | 357.3605586 |
| 80008E33 | F87E | |
| 80008E34 | 0700 | 357.6379586 |
| 80008E35 | F948 | |
| 80008E36 | 0300 | 357.9153586 |
| 80008E37 | FA12 | |
| 80008E38 | 0B00 | 358.1927586 |
| 80008E39 | FADC | |
| 80008E3A | 0300 | 358.4701586 |
| 80008E3B | FBA6 | |
| 80008E3C | 0700 | 358.7475586 |
| 80008E3D | FC70 | |
| 80008E3E | 0300 | 359.0249586 |
| 80008E3F | FD3A | |

**Table 19-4 Scan Table for Scan Profile Number 3**

| Address | Hex | 18-Bit θ |
|---|---|---|
| 80008E40 | 0B00 | 359.3023686 |
| 80008E41 | FE04 | |
| 80008E42 | 0300 | 359.5797686 |
| 80008E43 | FECE | |
| 80008E44 | 0700 | 359.8571586 |
| 80008E45 | FF98 | |
| 80008E46 | 0000 | 0.1345586 |
| 80008E47 | 0062 | |
| 80008E48 | 0800 | 0.4119586 |
| 80008E49 | 012C | |
| 80008E4A | 0000 | 0.6893586 |
| 80008E4B | 01F6 | |
| 80008E4C | 0400 | 0.9681586 |
| 80008E4D | 02C1 | |
| 80008E4E | 0000 | 1.2455586 |
| 80008E4F | 038B | |
| 80008E50 | 0800 | 1.5229586 |
| 80008E51 | 0455 | |
| 80008E52 | 0000 | 1.8003586 |
| 80008E53 | 051F | |
| 80008E54 | 0400 | 2.0777586 |
| 80008E55 | 05E9 | |
| 80008E56 | 0000 | 2.3551586 |
| 80008E57 | 06B3 | |
| 80008E58 | 0800 | 2.6325586 |
| 80008E59 | 077D | |
| 80008E5A | 0000 | 2.9099586 |
| 80008E5B | 0847 | |
| 80008E5C | 0400 | 3.1873586 |
| 80008E5D | 0911 | |
| 80008E5E | 0000 | 3.4648586 |
| 80008E5F | 09DB | |
| 80008E60 | 0800 | 3.7422586 |
| 80008E61 | 0AA5 | |
| 80008E62 | 0000 | 4.0196586 |
| 80008E63 | 0B6F | |
| 80008E64 | 0400 | 4.2970586 |
| 80008E65 | 0C39 | |
| 80008E66 | 0000 | 4.5744586 |
| 80008E67 | 0D03 | |
| 80008E68 | 0800 | 4.8532586 |
| 80008E69 | 0DCE | |
| 80008E6A | 0000 | 5.1306586 |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 80008E6B | 0E98 | |
| 80008E6C | 0400 | 5.4080586 |
| 80008E6D | 0F62 | |
| 80008E6E | 0000 | 5.6854586 |
| 80008E6F | 102C | |
| 80008E70 | 0800 | 5.9628586 |
| 80008E71 | 10F6 | |
| 80008E72 | 0000 | 6.2402586 |
| 80008E73 | 11C0 | |
| 80008E74 | 0400 | 6.5176586 |
| 80008E75 | 128A | |
| 80008E76 | 0000 | 6.7950586 |
| 80008E77 | 1354 | |
| 80008E78 | 0800 | 7.0724586 |
| 80008E79 | 141E | |
| 80008E7A | 0000 | 7.3498586 |
| 80008E7B | 14E8 | |
| 80008E7C | 0400 | 7.6272586 |
| 80008E7D | 15B2 | |
| 80008E7E | 0000 | 7.9046586 |
| 80008E7F | 167C | |
| 80008E80 | 0800 | 8.1820586 |
| 80008E81 | 1746 | |
| 80008E82 | 0000 | 8.4594586 |
| 80008E83 | 1810 | |
| 80008E84 | 0400 | 8.7368586 |
| 80008E85 | 18DA | |
| 80008E86 | 0000 | 9.0156586 |
| 80008E87 | 19A5 | |
| 80008E88 | 0800 | 9.2930586 |
| 80008E89 | 1A6F | |
| 80008E8A | 0000 | 9.5704586 |
| 80008E8B | 1B39 | |
| 80008E8C | 0400 | 9.8478586 |
| 80008E8D | 1C03 | |
| 80008E8E | 0000 | 10.1252586 |
| 80008E8F | 1CCD | |
| 80008E90 | 0800 | 10.4026586 |
| 80008E91 | 1D97 | |
| 80008E92 | 0000 | 10.6800586 |
| 80008E93 | 1E61 | |
| 80008E94 | 0400 | 10.9574586 |
| 80008E95 | 1F2B | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 80008E96 | 0000 | 11.2348586 |
| 80008E97 | 1FF5 | |
| 80008E98 | 0800 | 11.5122586 |
| 80008E99 | 20BF | |
| 80008E9A | 0000 | 11.7896586 |
| 80008E9B | 2189 | |
| 80008E9C | 0400 | 12.0670586 |
| 80008E9D | 2253 | |
| 80008E9E | 0000 | 12.3445586 |
| 80008E9F | 231D | |
| 80008EA0 | 0800 | 12.6219586 |
| 80008EA1 | 23E7 | |
| 80008EA2 | 0000 | 12.9006586 |
| 80008EA3 | 24B2 | |
| 80008EA4 | 0400 | 13.1780586 |
| 80008EA5 | 257C | |
| 80008EA6 | 0000 | 13.4554586 |
| 80008EA7 | 2646 | |
| 80008EA8 | 0800 | 13.7329586 |
| 80008EA9 | 2710 | |
| 80008EAA | 0000 | 14.0103586 |
| 80008EAB | 27DA | |
| 80008EAC | 0400 | 14.2877586 |
| 80008EAD | 28A4 | |
| 80008EAE | 0000 | 14.5651586 |
| 80008EAF | 296E | |
| 80008EB0 | 0800 | 14.8425586 |
| 80008EB1 | 2A38 | |
| 80008EB2 | 0000 | 15.1199586 |
| 80008EB3 | 2B02 | |
| 80008EB4 | 0400 | 15.3973586 |
| 80008EB5 | 2BCC | |
| 80008EB6 | 0000 | 15.6747586 |
| 80008EB7 | 2C96 | |
| 80008EB8 | 0800 | 15.9521586 |
| 80008EB9 | 2D60 | |
| 80008EBA | 0000 | 16.2295586 |
| 80008EBB | 2E2A | |
| 80008EBC | 0400 | 16.5069586 |
| 80008EBD | 2EF4 | |
| 80008EBE | 0000 | 16.7857586 |
| 80008EBF | 2FBF | |
| 80008EC0 | 0800 | 17.0631586 |
| 80008EC1 | 3089 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 80008EC2 | 0000 | 17.3405586 |
| 80008EC3 | 3153 | |
| 80008EC4 | 0400 | 17.6179586 |
| 80008EC5 | 321D | |
| 80008EC6 | 0000 | 17.8953586 |
| 80008EC7 | 32E7 | |
| 80008EC8 | 0800 | 18.1727586 |
| 80008EC9 | 33B1 | |
| 80008ECA | 0000 | 18.4501586 |
| 80008ECB | 347B | |
| 80008ECC | 0400 | 18.7275586 |
| 80008ECD | 3545 | |
| 80008ECE | 0000 | 19.0049586 |
| 80008ECF | 360F | |
| 80008ED0 | 0800 | 19.2823586 |
| 80008ED1 | 36D9 | |
| 80008ED2 | 0000 | 19.5597586 |
| 80008ED3 | 37A3 | |
| 80008ED4 | 0400 | 19.8371586 |
| 80008ED5 | 386D | |
| 80008ED6 | 0000 | 20.1145586 |
| 80008ED7 | 3937 | |
| 80008ED8 | 0800 | 20.3919586 |
| 80008ED9 | 3A01 | |
| 80008EDA | 0000 | 20.6693586 |
| 80008EDB | 3ACB | |
| 80008EDC | 0400 | 20.9481586 |
| 80008EDD | 3B96 | |
| 80008EDE | 0000 | 21.2255586 |
| 80008EDF | 3C60 | |
| 80008EE0 | 0800 | 21.5029586 |
| 80008EE1 | 3D2A | |
| 80008EE2 | 0000 | 21.7803586 |
| 80008EE3 | 3DF4 | |
| 80008EE4 | 0400 | 22.0577586 |
| 80008EE5 | 3EBE | |
| 80008EE6 | 0000 | 22.3351586 |
| 80008EE7 | 3F88 | |
| 80008EE8 | 0800 | 22.6126586 |
| 80008EE9 | 4052 | |
| 80008EEA | 0000 | 22.8900586 |
| 80008EEB | 411C | |
| 80008EEC | 0400 | 23.1674586 |
| 80008EED | 41E6 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 80008EEE | 0000 | 23.4448586 |
| 80008EEF | 42B0 | |
| 80008EF0 | 0800 | 23.7222586 |
| 80008EF1 | 437A | |
| 80008EF2 | 0000 | 23.9996586 |
| 80008EF3 | 4444 | |
| 80008EF4 | 0400 | 24.2770586 |
| 80008EF5 | 450E | |
| 80008EF6 | 0000 | 24.5544586 |
| 80008EF7 | 45D8 | |
| 80008EF8 | 0800 | 24.8332586 |
| 80008EF9 | 46A3 | |
| 80008EFA | 0000 | 25.1106586 |
| 80008EFB | 476D | |
| 80008EFC | 0400 | 25.3880586 |
| 80008EFD | 4837 | |
| 80008EFE | 0000 | 25.6654586 |
| 80008EFF | 4901 | |
| 80008F00 | 0800 | 25.9428586 |
| 80008F01 | 49CB | |
| 80008F02 | 0000 | 26.2202586 |
| 80008F03 | 4A95 | |
| 80008F04 | 0400 | 26.4976586 |
| 80008F05 | 4B5F | |
| 80008F06 | 0000 | 26.7750586 |
| 80008F07 | 4C29 | |
| 80008F08 | 0800 | 27.0524586 |
| 80008F09 | 4CF3 | |
| 80008F0A | 0000 | 27.3298586 |
| 80008F0B | 4DBD | |
| 80008F0C | 0400 | 27.6072586 |
| 80008F0D | 4E87 | |
| 80008F0E | 0000 | 27.8846586 |
| 80008F0F | 4F51 | |
| 80008F10 | 0800 | 28.1620586 |
| 80008F11 | 501B | |
| 80008F12 | 0000 | 28.4394586 |
| 80008F13 | 50E5 | |
| 80008F14 | 0400 | 28.7168586 |
| 80008F15 | 51AF | |
| 80008F16 | 0000 | 28.9956586 |
| 80008F17 | 527A | |
| 80008F18 | 0800 | 29.2730586 |
| 80008F19 | 5344 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 80008F1A | 0000 | 29.5504586 |
| 80008F1B | 540E | |
| 80008F1C | 0400 | 29.8278586 |
| 80008F1D | 54D8 | |
| 80008F1E | 0000 | 30.1052586 |
| 80008F1F | 55A2 | |
| 80008F20 | 0800 | 30.3826586 |
| 80008F21 | 566C | |
| 80008F22 | 0000 | 30.6600586 |
| 80008F23 | 5736 | |
| 80008F24 | 0400 | 30.9374586 |
| 80008F25 | 5800 | |
| 80008F26 | 0000 | 31.2148586 |
| 80008F27 | 58CA | |
| 80008F28 | 0800 | 31.4923586 |
| 80008F29 | 5994 | |
| 80008F2A | 0000 | 31.7697586 |
| 80008F2B | 5A5E | |
| 80008F2C | 0400 | 32.0471586 |
| 80008F2D | 5B28 | |
| 80008F2E | 0000 | 32.3245586 |
| 80008F2F | 5BF2 | |
| 80008F30 | 0800 | 32.6019586 |
| 80008F31 | 5CBC | |
| 80008F32 | 0000 | 32.8806586 |
| 80008F33 | 5D87 | |
| 80008F34 | 0400 | 33.1581586 |
| 80008F35 | 5E51 | |
| 80008F36 | 0000 | 33.4355586 |
| 80008F37 | 5F1B | |
| 80008F38 | 0800 | 33.7129586 |
| 80008F39 | 5FE5 | |
| 80008F3A | 0000 | 33.9903586 |
| 80008F3B | 60AF | |
| 80008F3C | 0400 | 34.2677586 |
| 80008F3D | 6179 | |
| 80008F3E | 0000 | 34.5451586 |
| 80008F3F | 6243 | |
| 80008F40 | 0800 | 34.8225586 |
| 80008F41 | 630D | |
| 80008F42 | 0000 | 35.0999586 |
| 80008F43 | 63D7 | |
| 80008F44 | 0400 | 35.3773586 |
| 80008F45 | 64A1 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 80008F46 | 0000 | 35.6547586 |
| 80008F47 | 656B | |
| 80008F48 | 0800 | 35.9321586 |
| 80008F49 | 6635 | |
| 80008F4A | 0000 | 36.2095586 |
| 80008F4B | 66FF | |
| 80008F4C | 0400 | 36.4869586 |
| 80008F4D | 67C9 | |
| 80008F4E | 0000 | 36.7643586 |
| 80008F4F | 6893 | |
| 80008F50 | 0800 | 37.0431586 |
| 80008F51 | 695E | |
| 80008F52 | 0000 | 37.3205586 |
| 80008F53 | 6A28 | |
| 80008F54 | 0400 | 37.5979586 |
| 80008F55 | 6AF2 | |
| 80008F56 | 0000 | 37.8753586 |
| 80008F57 | 6BBC | |
| 80008F58 | 0800 | 38.1527586 |
| 80008F59 | 6C86 | |
| 80008F5A | 0000 | 38.4301586 |
| 80008F5B | 6D50 | |
| 80008F5C | 0400 | 38.7075586 |
| 80008F5D | 6E1A | |
| 80008F5E | 0000 | 38.9849586 |
| 80008F5F | 6EE4 | |
| 80008F60 | 0800 | 39.2623586 |
| 80008F61 | 6FAE | |
| 80008F62 | 0000 | 39.5397586 |
| 80008F63 | 7078 | |
| 80008F64 | 0400 | 39.8171586 |
| 80008F65 | 7142 | |
| 80008F66 | 0000 | 40.0945586 |
| 80008F67 | 720C | |
| 80008F68 | 0800 | 40.3720586 |
| 80008F69 | 72D6 | |
| 80008F6A | 0000 | 40.6494586 |
| 80008F6B | 73A0 | |
| 80008F6C | 0400 | 40.9281586 |
| 80008F6D | 746B | |
| 80008F6E | 0000 | 41.2055586 |
| 80008F6F | 7535 | |
| 80008F70 | 0800 | 41.4829586 |
| 80008F71 | 75FF | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 80008F72 | 0000 | 41.7603586 |
| 80008F73 | 76C9 | |
| 80008F74 | 0400 | 42.0378586 |
| 80008F75 | 7793 | |
| 80008F76 | 0000 | 42.3152586 |
| 80008F77 | 785D | |
| 80008F78 | 0800 | 42.5926586 |
| 80008F79 | 7927 | |
| 80008F7A | 0000 | 42.8700586 |
| 80008F7B | 79F1 | |
| 80008F7C | 0400 | 43.1474586 |
| 80008F7D | 7ABB | |
| 80008F7E | 0000 | 43.4248586 |
| 80008F7F | 7B85 | |
| 80008F80 | 0800 | 43.7022586 |
| 80008F81 | 7C4F | |
| 80008F82 | 0000 | 43.9796586 |
| 80008F83 | 7D19 | |
| 80008F84 | 0400 | 44.2570586 |
| 80008F85 | 7DE3 | |
| 80008F86 | 0000 | 44.5344586 |
| 80008F87 | 7EAD | |
| 80008F88 | 0800 | 44.8132586 |
| 80008F89 | 7F78 | |
| 80008F8A | 0000 | 45.0906586 |
| 80008F8B | 8042 | |
| 80008F8C | 0400 | 45.3680586 |
| 80008F8D | 810C | |
| 80008F8E | 0000 | 45.6454586 |
| 80008F8F | 81D6 | |
| 80008F90 | 0800 | 45.9228586 |
| 80008F91 | 82A0 | |
| 80008F92 | 0000 | 46.2002586 |
| 80008F93 | 836A | |
| 80008F94 | 0400 | 46.4776586 |
| 80008F95 | 8434 | |
| 80008F96 | 0000 | 46.7550586 |
| 80008F97 | 84FE | |
| 80008F98 | 0800 | 47.0324586 |
| 80008F99 | 85C8 | |
| 80008F9A | 0000 | 47.3098586 |
| 80008F9B | 8692 | |
| 80008F9C | 0400 | 47.5872586 |
| 80008F9D | 875C | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 80008F9E | 0000 | 47.8646586 |
| 80008F9F | 8826 | |
| 80008FA0 | 0800 | 48.1420586 |
| 80008FA1 | 88F0 | |
| 80008FA2 | 0000 | 48.4194586 |
| 80008FA3 | 89BA | |
| 80008FA4 | 0400 | 48.6968586 |
| 80008FA5 | 8A84 | |
| 80008FA6 | 0000 | 48.9756586 |
| 80008FA7 | 8B4F | |
| 80008FA8 | 0800 | 49.2530586 |
| 80008FA9 | 8C19 | |
| 80008FAA | 0000 | 49.5304586 |
| 80008FAB | 8CE3 | |
| 80008FAC | 0400 | 49.8078586 |
| 80008FAD | 8DAD | |
| 80008FAE | 0000 | 50.0852586 |
| 80008FAF | 8E77 | |
| 80008FB0 | 0800 | 50.3626586 |
| 80008FB1 | 8F41 | |
| 80008FB2 | 0000 | 50.6400586 |
| 80008FB3 | 900B | |
| 80008FB4 | 0400 | 50.9175586 |
| 80008FB5 | 90D5 | |
| 80008FB6 | 0000 | 51.1949586 |
| 80008FB7 | 919F | |
| 80008FB8 | 0800 | 51.4723586 |
| 80008FB9 | 9269 | |
| 80008FBA | 0000 | 51.7497586 |
| 80008FBB | 9333 | |
| 80008FBC | 0400 | 52.0271586 |
| 80008FBD | 93FD | |
| 80008FBE | 0000 | 52.3402586 |
| 80008FBF | 94E1 | |
| 80008FC0 | 0800 | 52.7220586 |
| 80008FC1 | 95F7 | |
| 80008FC2 | 0000 | 53.1738586 |
| 80008FC3 | 9740 | |
| 80008FC4 | 0000 | 53.6956586 |
| 80008FC5 | 98BC | |
| 80008FC6 | 0000 | 54.2861586 |
| 80008FC7 | 9A6A | |
| 80008FC8 | 0800 | 54.9481586 |
| 80008FC9 | 9C4C | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 80008FCA | 0000 | 55.6787586 |
| 80008FCB | 9E60 | |
| 80008FCC | 0000 | 56.4793586 |
| 80008FCD | A0A7 | |
| 80008FCE | 0000 | 57.3486586 |
| 80008FCF | A320 | |
| 80008FD0 | 0800 | 58.2893586 |
| 80008FD1 | A5CD | |
| 80008FD2 | 0000 | 59.2986586 |
| 80008FD3 | A8AC | |
| 80008FD4 | 0000 | 60.3781586 |
| 80008FD5 | ABBE | |
| 80008FD6 | 0000 | 61.5275586 |
| 80008FD7 | AF03 | |
| 80008FD8 | 0800 | 62.7456586 |
| 80008FD9 | B27A | |
| 80008FDA | 0000 | 64.0351586 |
| 80008FDB | B625 | |
| 80008FDC | 0000 | 65.3933586 |
| 80008FDD | BA02 | |
| 80008FDE | 0000 | 66.7405586 |
| 80008FDF | BDD7 | |
| 80008FE0 | 0800 | 67.9943586 |
| 80008FE1 | C168 | |
| 80008FE2 | 0000 | 69.1548586 |
| 80008FE3 | C4B5 | |
| 80008FE4 | 0000 | 70.2218586 |
| 80008FE5 | C7BE | |
| 80008FE6 | 0000 | 71.1968586 |
| 80008FE7 | CA84 | |
| 80008FE8 | 0800 | 72.0785586 |
| 80008FE9 | CD06 | |
| 80008FEA | 0000 | 72.8681586 |
| 80008FEB | CF45 | |
| 80008FEC | 0000 | 73.5630586 |
| 80008FED | D13F | |
| 80008FEE | 0000 | 74.1673586 |
| 80008FEF | D2F7 | |
| 80008FF0 | 0800 | 74.6768586 |
| 80008FF1 | D46A | |
| 80008FF2 | 0000 | 75.0929586 |
| 80008FF3 | D599 | |
| 80008FF4 | 0000 | 75.4170586 |
| 80008FF5 | D685 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 80008FF6 | 0000 | 75.6944586 |
| 80008FF7 | D74F | |
| 80008FF8 | 0800 | 75.9731586 |
| 80008FF9 | D81A | |
| 80008FFA | 0000 | 76.2506586 |
| 80008FFB | D8E4 | |
| 80008FFC | 0000 | 76.5280586 |
| 80008FFD | D9AE | |
| 80008FFE | 0000 | 76.8054586 |
| 80008FFF | DA78 | |
| 80009000 | 0800 | 77.0828586 |
| 80009001 | DB42 | |
| 80009002 | 0000 | 77.3602586 |
| 80009003 | DC0C | |
| 80009004 | 0400 | 77.6376586 |
| 80009005 | DCD6 | |
| 80009006 | 0000 | 77.9150586 |
| 80009007 | DDA0 | |
| 80009008 | 0800 | 78.1924586 |
| 80009009 | DE6A | |
| 8000900A | 0000 | 78.4698586 |
| 8000900B | DF34 | |
| 8000900C | 0400 | 78.7472586 |
| 8000900D | DFFE | |
| 8000900E | 0000 | 79.0246586 |
| 8000900F | E0C8 | |
| 80009010 | 0800 | 79.3020586 |
| 80009011 | E192 | |
| 80009012 | 0000 | 79.5794586 |
| 80009013 | E25C | |
| 80009014 | 0400 | 79.8568586 |
| 80009015 | E326 | |
| 80009016 | 0000 | 80.1356586 |
| 80009017 | E3F1 | |
| 80009018 | 0800 | 80.4130586 |
| 80009019 | E4BB | |
| 8000901A | 0000 | 80.6904586 |
| 8000901B | E585 | |
| 8000901C | 0400 | 80.9678586 |
| 8000901D | E64F | |
| 8000901E | 0000 | 81.2878586 |
| 8000901F | E738 | |
| 80009020 | 0800 | 81.6943586 |
| 80009021 | E860 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 80009022 | 0000 | 82.1873586 |
| 80009023 | E9C7 | |
| 80009024 | 0000 | 82.7654586 |
| 80009025 | EB6C | |
| 80009026 | 0000 | 83.4287586 |
| 80009027 | ED4F | |
| 80009028 | 0800 | 84.1786586 |
| 80009029 | EF71 | |
| 8000902A | 0000 | 85.0149586 |
| 8000902B | F1D2 | |
| 8000902C | 0000 | 85.9377586 |
| 8000902D | F472 | |
| 8000902E | 0000 | 86.9444586 |
| 8000902F | F74F | |
| 80009030 | 0800 | 88.0389586 |
| 80009031 | FA6C | |
| 80009032 | 0000 | 89.2185586 |
| 80009033 | FDC7 | |
| 80009034 | 0100 | 90.4847586 |
| 80009035 | 0161 | |
| 80009036 | 0100 | 91.8360586 |
| 80009037 | 0539 | |
| 80009038 | 0900 | 93.2739586 |
| 80009039 | 0950 | |
| 8000903A | 0100 | 94.7968586 |
| 8000903B | 0DA5 | |
| 8000903C | 0100 | 96.4063586 |
| 8000903D | 1239 | |
| 8000903E | 0100 | 98.1010586 |
| 8000903F | 170B | |
| 80009040 | 0900 | 99.8821586 |
| 80009041 | 1C1C | |
| 80009042 | 0100 | 101.7498586 |
| 80009043 | 216C | |
| 80009044 | 0100 | 103.7026586 |
| 80009045 | 26FA | |
| 80009046 | 0100 | 105.7420586 |
| 80009047 | 2CC7 | |
| 80009048 | 0900 | 107.8665586 |
| 80009049 | 32D2 | |
| 8000904A | 0100 | 110.0775586 |
| 8000904B | 391C | |
| 8000904C | 0100 | 112.3736586 |
| 8000904D | 3FA4 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 8000904E | 0100 | 114.7563586 |
| 8000904F | 466B | |
| 80009050 | 0900 | 117.2254586 |
| 80009051 | 4D71 | |
| 80009052 | 0100 | 119.7798586 |
| 80009053 | 54B5 | |
| 80009054 | 0100 | 122.4206586 |
| 80009055 | 5C38 | |
| 80009056 | 0100 | 125.1466586 |
| 80009057 | 63F9 | |
| 80009058 | 0900 | 127.9591586 |
| 80009059 | 6BF9 | |
| 8000905A | 0100 | 130.8567586 |
| 8000905B | 7437 | |
| 8000905C | 0100 | 133.8423586 |
| 8000905D | 7CB5 | |
| 8000905E | 0100 | 136.9116586 |
| 8000905F | 8570 | |
| 80009060 | 0900 | 140.0674586 |
| 80009061 | 8E6A | |
| 80009062 | 0100 | 143.3097586 |
| 80009063 | 97A3 | |
| 80009064 | 0100 | 146.6372586 |
| 80009065 | A11A | |
| 80009066 | 0100 | 149.9441586 |
| 80009067 | AA82 | |
| 80009068 | 0900 | 153.1219586 |
| 80009069 | B38C | |
| 8000906A | 0100 | 156.1706586 |
| 8000906B | BC38 | |
| 8000906C | 0100 | 159.0902586 |
| 8000906D | C486 | |
| 8000906E | 0100 | 161.8807586 |
| 8000906F | CC76 | |
| 80009070 | 0900 | 164.5422586 |
| 80009071 | D408 | |
| 80009072 | 0100 | 167.0759586 |
| 80009073 | DB3D | |
| 80009074 | 0100 | 169.4792586 |
| 80009075 | E213 | |
| 80009076 | 0100 | 171.7547586 |
| 80009077 | E88C | |
| 80009078 | 0900 | 173.9012586 |
| 80009079 | EEA7 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 8000907A | 0100 | 175.9185586 |
| 8000907B | F464 | |
| 8000907C | 0100 | 177.8082586 |
| 8000907D | F9C4 | |
| 8000907E | 0100 | 179.5674586 |
| 8000907F | FEC5 | |
| 80009080 | 0A00 | 181.1975586 |
| 80009081 | 0368 | |
| 80009082 | 0200 | 182.6998586 |
| 80009083 | 07AE | |
| 80009084 | 0200 | 184.0731586 |
| 80009085 | 0B96 | |
| 80009086 | 0200 | 185.3173586 |
| 80009087 | 0F20 | |
| 80009088 | 0A00 | 186.4324586 |
| 80009089 | 124C | |
| 8000908A | 0200 | 187.4185586 |
| 8000908B | 151A | |
| 8000908C | 0200 | 188.2768586 |
| 8000908D | 178B | |
| 8000908E | 0200 | 189.0046586 |
| 8000908F | 199D | |
| 80009090 | 0A00 | 189.6047586 |
| 80009091 | 1B52 | |
| 80009092 | 0200 | 190.0758586 |
| 80009093 | 1CA9 | |
| 80009094 | 0200 | 190.4177586 |
| 80009095 | 1DA2 | |
| 80009096 | 0200 | 190.6951586 |
| 80009097 | 1E6C | |
| 80009098 | 0A00 | 190.9725586 |
| 80009099 | 1F36 | |
| 8000909A | 0200 | 191.2499586 |
| 8000909B | 2000 | |
| 8000909C | 0200 | 191.5273586 |
| 8000909D | 20CA | |
| 8000909E | 0200 | 191.8048586 |
| 8000909F | 2194 | |
| 800090A0 | 0A00 | 192.0822586 |
| 800090A1 | 225E | |
| 800090A2 | 0200 | 192.3596586 |
| 800090A3 | 2328 | |
| 800090A4 | 0600 | 192.6370586 |
| 800090A5 | 23F2 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 800090A6 | 0200 | 192.9144586 |
| 800090A7 | 24BC | |
| 800090A8 | 0A00 | 193.1931586 |
| 800090A9 | 2587 | |
| 800090AA | 0200 | 193.4706586 |
| 800090AB | 2651 | |
| 800090AC | 0600 | 193.7480586 |
| 800090AD | 271B | |
| 800090AE | 0200 | 194.0254586 |
| 800090AF | 27E5 | |
| 800090B0 | 0A00 | 194.3028586 |
| 800090B1 | 28AF | |
| 800090B2 | 0200 | 194.5802586 |
| 800090B3 | 2979 | |
| 800090B4 | 0600 | 194.8576586 |
| 800090B5 | 2A43 | |
| 800090B6 | 0200 | 195.1350586 |
| 800090B7 | 2B0D | |
| 800090B8 | 0A00 | 195.4124586 |
| 800090B9 | 2BD7 | |
| 800090BA | 0200 | 195.6898586 |
| 800090BB | 2CA1 | |
| 800090BC | 0600 | 195.9672586 |
| 800090BD | 2D6B | |
| 800090BE | 0200 | 196.2858586 |
| 800090BF | 2E53 | |
| 800090C0 | 0A00 | 196.6841586 |
| 800090C1 | 2F75 | |
| 800090C2 | 0200 | 197.1633586 |
| 800090C3 | 30D2 | |
| 800090C4 | 0200 | 197.7236586 |
| 800090C5 | 326A | |
| 800090C6 | 0200 | 198.3650586 |
| 800090C7 | 343D | |
| 800090C8 | 0A00 | 199.0873586 |
| 800090C9 | 364B | |
| 800090CA | 0200 | 199.8907586 |
| 800090CB | 3894 | |
| 800090CC | 0200 | 200.7737586 |
| 800090CD | 3B17 | |
| 800090CE | 0200 | 201.7391586 |
| 800090CF | 3DD6 | |
| 800090D0 | 0A00 | 202.7842586 |
| 800090D1 | 40CF | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 800090D2 | 0200 | 203.9103586 |
| 800090D3 | 4403 | |
| 800090D4 | 0200 | 205.1174586 |
| 800090D5 | 4772 | |
| 800090D6 | 0200 | 206.4056586 |
| 800090D7 | 4B1C | |
| 800090D8 | 0A00 | 207.7748586 |
| 800090D9 | 4F01 | |
| 800090DA | 0200 | 209.2236586 |
| 800090DB | 5320 | |
| 800090DC | 0200 | 210.7548586 |
| 800090DD | 577B | |
| 800090DE | 0200 | 212.3657586 |
| 800090DF | 5C10 | |
| 800090E0 | 0A00 | 214.0576586 |
| 800090E1 | 60E0 | |
| 800090E2 | 0200 | 215.8305586 |
| 800090E3 | 65EB | |
| 800090E4 | 0200 | 217.6844586 |
| 800090E5 | 6B31 | |
| 800090E6 | 0200 | 219.6194586 |
| 800090E7 | 70B2 | |
| 800090E8 | 0A00 | 221.6340586 |
| 800090E9 | 766D | |
| 800090EA | 0200 | 223.7310586 |
| 800090EB | 7C64 | |
| 800090EC | 0200 | 225.9077586 |
| 800090ED | 8295 | |
| 800090EE | 0200 | 228.1654586 |
| 800090EF | 8901 | |
| 800090F0 | 0A00 | 230.5041586 |
| 800090F1 | 8FA8 | |
| 800090F2 | 0200 | 232.9238586 |
| 800090F3 | 968A | |
| 800090F4 | 0200 | 235.4246586 |
| 800090F5 | 9DA7 | |
| 800090F6 | 0200 | 238.0050586 |
| 800090F7 | A4FE | |
| 800090F8 | 0A00 | 240.6678586 |
| 800090F9 | AC91 | |
| 800090FA | 0200 | 243.4103586 |
| 800090FB | B45E | |
| 800090FC | 0200 | 246.2338586 |
| 800090FD | BC66 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 800090FE | 0200 | 249.1383586 |
| 800090FF | C4A9 | |
| 80009100 | 0A00 | 252.1238586 |
| 80009101 | CD27 | |
| 80009102 | 0200 | 255.1904586 |
| 80009103 | D5E0 | |
| 80009104 | 0200 | 258.3380586 |
| 80009105 | DED4 | |
| 80009106 | 0200 | 261.4649586 |
| 80009107 | E7B9 | |
| 80009108 | 0A00 | 264.4697586 |
| 80009109 | F045 | |
| 8000910A | 0200 | 267.3550586 |
| 8000910B | F87A | |
| 8000910C | 0300 | 270.1180586 |
| 8000910D | 0056 | |
| 8000910E | 0300 | 272.7589586 |
| 8000910F | 07D9 | |
| 80009110 | 0B00 | 275.2802586 |
| 80009111 | 0F05 | |
| 80009112 | 0300 | 277.6794586 |
| 80009113 | 15D8 | |
| 80009114 | 0300 | 279.9577586 |
| 80009115 | 1C53 | |
| 80009116 | 0300 | 282.1137586 |
| 80009117 | 2275 | |
| 80009118 | 0B00 | 284.1503586 |
| 80009119 | 2840 | |
| 8000911A | 0300 | 286.0647586 |
| 8000911B | 2DB2 | |
| 8000911C | 0300 | 287.8568586 |
| 8000911D | 32CB | |
| 8000911E | 0300 | 289.5295586 |
| 8000911F | 378D | |
| 80009120 | 0B00 | 291.0800586 |
| 80009121 | 3BF6 | |
| 80009122 | 0300 | 292.5096586 |
| 80009123 | 4007 | |
| 80009124 | 0300 | 293.8169586 |
| 80009125 | 43BF | |
| 80009126 | 0300 | 295.0048586 |
| 80009127 | 4720 | |
| 80009128 | 0B00 | 296.0705586 |
| 80009129 | 4A28 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 8000912A | 0300 | 297.0139586 |
| 8000912B | 4CD7 | |
| 8000912C | 0300 | 297.8379586 |
| 8000912D | 4F2F | |
| 8000912E | 0300 | 298.5397586 |
| 8000912F | 512E | |
| 80009130 | 0B00 | 299.1206586 |
| 80009131 | 52D5 | |
| 80009132 | 0300 | 299.5793586 |
| 80009133 | 5423 | |
| 80009134 | 0300 | 299.9171586 |
| 80009135 | 5519 | |
| 80009136 | 0300 | 300.1945586 |
| 80009137 | 55E3 | |
| 80009138 | 0B00 | 300.4719586 |
| 80009139 | 56AD | |
| 8000913A | 0300 | 300.7507586 |
| 8000913B | 5778 | |
| 8000913C | 0300 | 301.0281586 |
| 8000913D | 5842 | |
| 8000913E | 0300 | 301.3055586 |
| 8000913F | 590C | |
| 80009140 | 0B00 | 301.5829586 |
| 80009141 | 59D6 | |
| 80009142 | 0300 | 301.8603586 |
| 80009143 | 5AA0 | |
| 80009144 | 0300 | 302.1377586 |
| 80009145 | 5B6A | |
| 80009146 | 0300 | 302.4151586 |
| 80009147 | 5C34 | |
| 80009148 | 0B00 | 302.6925586 |
| 80009149 | 5CFE | |
| 8000914A | 0300 | 302.9699586 |
| 8000914B | 5DC8 | |
| 8000914C | 0300 | 303.2473586 |
| 8000914D | 5E92 | |
| 8000914E | 0300 | 303.5247586 |
| 8000914F | 5F5C | |
| 80009150 | 0B00 | 303.8021586 |
| 80009151 | 6026 | |
| 80009152 | 0300 | 304.0795586 |
| 80009153 | 60F0 | |
| 80009154 | 0300 | 304.3569586 |
| 80009155 | 61BA | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 80009156 | 0300 | 304.6343586 |
| 80009157 | 6284 | |
| 80009158 | 0B00 | 304.9131586 |
| 80009159 | 634F | |
| 8000915A | 0300 | 305.1905586 |
| 8000915B | 6419 | |
| 8000915C | 0300 | 305.4679586 |
| 8000915D | 64E3 | |
| 8000915E | 0300 | 305.7453586 |
| 8000915F | 65AD | |
| 80009160 | 0B00 | 306.0227586 |
| 80009161 | 6677 | |
| 80009162 | 0300 | 306.3001586 |
| 80009163 | 6741 | |
| 80009164 | 0700 | 306.5775586 |
| 80009165 | 680B | |
| 80009166 | 0300 | 306.8550586 |
| 80009167 | 68D5 | |
| 80009168 | 0B00 | 307.1324586 |
| 80009169 | 699F | |
| 8000916A | 0300 | 307.4098586 |
| 8000916B | 6A69 | |
| 8000916C | 0700 | 307.6872586 |
| 8000916D | 6B33 | |
| 8000916E | 0300 | 307.9646586 |
| 8000916F | 6BFD | |
| 80009170 | 0B00 | 308.2420586 |
| 80009171 | 6CC7 | |
| 80009172 | 0300 | 308.5194586 |
| 80009173 | 6D91 | |
| 80009174 | 0700 | 308.7982586 |
| 80009175 | 6E5C | |
| 80009176 | 0300 | 309.0756586 |
| 80009177 | 6F26 | |
| 80009178 | 0B00 | 309.3530586 |
| 80009179 | 6FF0 | |
| 8000917A | 0300 | 309.6304586 |
| 8000917B | 70BA | |
| 8000917C | 0700 | 309.9078586 |
| 8000917D | 7184 | |
| 8000917E | 0300 | 310.1852586 |
| 8000917F | 724E | |
| 80009180 | 0B00 | 310.4626586 |
| 80009181 | 7318 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 80009182 | 0300 | 310.7400586 |
| 80009183 | 73E2 | |
| 80009184 | 0700 | 311.0174586 |
| 80009185 | 74AC | |
| 80009186 | 0300 | 311.2948586 |
| 80009187 | 7576 | |
| 80009188 | 0B00 | 311.5722586 |
| 80009189 | 7640 | |
| 8000918A | 0300 | 311.8496586 |
| 8000918B | 770A | |
| 8000918C | 0700 | 312.1270586 |
| 8000918D | 77D4 | |
| 8000918E | 0300 | 312.4044586 |
| 8000918F | 789E | |
| 80009190 | 0B00 | 312.6818586 |
| 80009191 | 7968 | |
| 80009192 | 0300 | 312.9606586 |
| 80009193 | 7A33 | |
| 80009194 | 0700 | 313.2380586 |
| 80009195 | 7AFD | |
| 80009196 | 0300 | 313.5154586 |
| 80009197 | 7BC7 | |
| 80009198 | 0B00 | 313.7928586 |
| 80009199 | 7C91 | |
| 8000919A | 0300 | 314.0702586 |
| 8000919B | 7D5B | |
| 8000919C | 0700 | 314.3476586 |
| 8000919D | 7E25 | |
| 8000919E | 0300 | 314.6250586 |
| 8000919F | 7EEF | |
| 800091A0 | 0B00 | 314.9024586 |
| 800091A1 | 7FB9 | |
| 800091A2 | 0300 | 315.1798586 |
| 800091A3 | 8083 | |
| 800091A4 | 0700 | 315.4572586 |
| 800091A5 | 814D | |
| 800091A6 | 0300 | 315.7347586 |
| 800091A7 | 8217 | |
| 800091A8 | 0B00 | 316.0121586 |
| 800091A9 | 82E1 | |
| 800091AA | 0300 | 316.2895586 |
| 800091AB | 83AB | |
| 800091AC | 0700 | 316.5669586 |
| 800091AD | 8475 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 800091AE | 0300 | 316.8456586 |
| 800091AF | 8540 | |
| 800091B0 | 0B00 | 317.1230586 |
| 800091B1 | 860A | |
| 800091B2 | 0300 | 317.4005586 |
| 800091B3 | 86D4 | |
| 800091B4 | 0700 | 317.6779586 |
| 800091B5 | 879E | |
| 800091B6 | 0300 | 317.9553586 |
| 800091B7 | 8868 | |
| 800091B8 | 0B00 | 318.2327586 |
| 800091B9 | 8932 | |
| 800091BA | 0300 | 318.5101586 |
| 800091BB | 89FC | |
| 800091BC | 0700 | 318.7875586 |
| 800091BD | 8AC6 | |
| 800091BE | 0300 | 319.0649586 |
| 800091BF | 8B90 | |
| 800091C0 | 0B00 | 319.3423586 |
| 800091C1 | 8C5A | |
| 800091C2 | 0300 | 319.6197586 |
| 800091C3 | 8D24 | |
| 800091C4 | 0700 | 319.8971586 |
| 800091C5 | 8DEE | |
| 800091C6 | 0300 | 320.1745586 |
| 800091C7 | 8EB8 | |
| 800091C8 | 0B00 | 320.4519586 |
| 800091C9 | 8F82 | |
| 800091CA | 0300 | 320.7307586 |
| 800091CB | 904D | |
| 800091CC | 0700 | 321.0081586 |
| 800091CD | 9117 | |
| 800091CE | 0300 | 321.2855586 |
| 800091CF | 91E1 | |
| 800091D0 | 0B00 | 321.5629586 |
| 800091D1 | 92AB | |
| 800091D2 | 0300 | 321.8403586 |
| 800091D3 | 9375 | |
| 800091D4 | 0700 | 322.1177586 |
| 800091D5 | 943F | |
| 800091D6 | 0300 | 322.3951586 |
| 800091D7 | 9509 | |
| 800091D8 | 0B00 | 322.6725586 |
| 800091D9 | 95D3 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 800091DA | 0300 | 322.9499586 |
| 800091DB | 969D | |
| 800091DC | 0700 | 323.2273586 |
| 800091DD | 9767 | |
| 800091DE | 0300 | 323.5047586 |
| 800091DF | 9831 | |
| 800091E0 | 0B00 | 323.7821586 |
| 800091E1 | 98FB | |
| 800091E2 | 0300 | 324.0595586 |
| 800091E3 | 99C5 | |
| 800091E4 | 0700 | 324.3369586 |
| 800091E5 | 9A8F | |
| 800091E6 | 0300 | 324.6144586 |
| 800091E7 | 9B59 | |
| 800091E8 | 0B00 | 324.8931586 |
| 800091E9 | 9C24 | |
| 800091EA | 0300 | 325.1705586 |
| 800091EB | 9CEE | |
| 800091EC | 0700 | 325.4479586 |
| 800091ED | 9DB8 | |
| 800091EE | 0300 | 325.7253586 |
| 800091EF | 9E82 | |
| 800091F0 | 0B00 | 326.0027586 |
| 800091F1 | 9F4C | |
| 800091F2 | 0300 | 326.2802586 |
| 800091F3 | A016 | |
| 800091F4 | 0700 | 326.5576586 |
| 800091F5 | A0E0 | |
| 800091F6 | 0300 | 326.8350586 |
| 800091F7 | A1AA | |
| 800091F8 | 0B00 | 327.1124586 |
| 800091F9 | A274 | |
| 800091FA | 0300 | 327.3898586 |
| 800091FB | A33E | |
| 800091FC | 0700 | 327.6672586 |
| 800091FD | A408 | |
| 800091FE | 0300 | 327.9446586 |
| 800091FF | A4D2 | |
| 80009200 | 0B00 | 328.2220586 |
| 80009201 | A59C | |
| 80009202 | 0300 | 328.4994586 |
| 80009203 | A666 | |
| 80009204 | 0700 | 328.7782586 |
| 80009205 | A731 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 80009206 | 0300 | 329.0556586 |
| 80009207 | A7FB | |
| 80009208 | 0B00 | 329.3330586 |
| 80009209 | A8C5 | |
| 8000920A | 0300 | 329.6104586 |
| 8000920B | A98F | |
| 8000920C | 0700 | 329.8878586 |
| 8000920D | AA59 | |
| 8000920E | 0300 | 330.1652586 |
| 8000920F | AB23 | |
| 80009210 | 0B00 | 330.4426586 |
| 80009211 | ABED | |
| 80009212 | 0300 | 330.7200586 |
| 80009213 | ACB7 | |
| 80009214 | 0700 | 330.9974586 |
| 80009215 | AD81 | |
| 80009216 | 0300 | 331.2748586 |
| 80009217 | AE4B | |
| 80009218 | 0B00 | 331.5522586 |
| 80009219 | AF15 | |
| 8000921A | 0300 | 331.8296586 |
| 8000921B | AFDF | |
| 8000921C | 0700 | 332.1070586 |
| 8000921D | B0A9 | |
| 8000921E | 0300 | 332.3844586 |
| 8000921F | B173 | |
| 80009220 | 0B00 | 332.6618586 |
| 80009221 | B23D | |
| 80009222 | 0300 | 332.9406586 |
| 80009223 | B308 | |
| 80009224 | 0700 | 333.2180586 |
| 80009225 | B3D2 | |
| 80009226 | 0300 | 333.4954586 |
| 80009227 | B49C | |
| 80009228 | 0B00 | 333.7728586 |
| 80009229 | B566 | |
| 8000922A | 0300 | 334.0502586 |
| 8000922B | B630 | |
| 8000922C | 0700 | 334.3276586 |
| 8000922D | B6FA | |
| 8000922E | 0300 | 334.6050586 |
| 8000922F | B7C4 | |
| 80009230 | 0B00 | 334.8824586 |
| 80009231 | B88E | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 80009232 | 0300 | 335.1599586 |
| 80009233 | B958 | |
| 80009234 | 0700 | 335.4373586 |
| 80009235 | BA22 | |
| 80009236 | 0300 | 335.7147586 |
| 80009237 | BAEC | |
| 80009238 | 0B00 | 335.9921586 |
| 80009239 | BBB6 | |
| 8000923A | 0300 | 336.2695586 |
| 8000923B | BC80 | |
| 8000923C | 0700 | 336.5469586 |
| 8000923D | BD4A | |
| 8000923E | 0300 | 336.8257586 |
| 8000923F | BE15 | |
| 80009240 | 0B00 | 337.1031586 |
| 80009241 | BEDF | |
| 80009242 | 0300 | 337.3805586 |
| 80009243 | BFA9 | |
| 80009244 | 0700 | 337.6579586 |
| 80009245 | C073 | |
| 80009246 | 0300 | 337.9353586 |
| 80009247 | C13D | |
| 80009248 | 0B00 | 338.2127586 |
| 80009249 | C207 | |
| 8000924A | 0300 | 338.4901586 |
| 8000924B | C2D1 | |
| 8000924C | 0700 | 338.7675586 |
| 8000924D | C39B | |
| 8000924E | 0300 | 339.0449586 |
| 8000924F | C465 | |
| 80009250 | 0B00 | 339.3223586 |
| 80009251 | C52F | |
| 80009252 | 0300 | 339.5997586 |
| 80009253 | C5F9 | |
| 80009254 | 0700 | 339.8771586 |
| 80009255 | C6C3 | |
| 80009256 | 0300 | 340.1545586 |
| 80009257 | C78D | |
| 80009258 | 0B00 | 340.4319586 |
| 80009259 | C857 | |
| 8000925A | 0300 | 340.7093586 |
| 8000925B | C921 | |
| 8000925C | 0700 | 340.9881586 |
| 8000925D | C9EC | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 8000925E | 0300 | 341.2655586 |
| 8000925F | CAB6 | |
| 80009260 | 0B00 | 341.5429586 |
| 80009261 | CB80 | |
| 80009262 | 0300 | 341.8203586 |
| 80009263 | CC4A | |
| 80009264 | 0700 | 342.0977586 |
| 80009265 | CD14 | |
| 80009266 | 0300 | 342.3751586 |
| 80009267 | CDDE | |
| 80009268 | 0B00 | 342.6525586 |
| 80009269 | CEA8 | |
| 8000926A | 0300 | 342.9299586 |
| 8000926B | CF72 | |
| 8000926C | 0700 | 343.2073586 |
| 8000926D | D03C | |
| 8000926E | 0300 | 343.4847586 |
| 8000926F | D106 | |
| 80009270 | 0B00 | 343.7621586 |
| 80009271 | D1D0 | |
| 80009272 | 0300 | 344.0396586 |
| 80009273 | D29A | |
| 80009274 | 0700 | 344.3170586 |
| 80009275 | D364 | |
| 80009276 | 0300 | 344.5944586 |
| 80009277 | D42E | |
| 80009278 | 0B00 | 344.8731586 |
| 80009279 | D4F9 | |
| 8000927A | 0300 | 345.1505586 |
| 8000927B | D5C3 | |
| 8000927C | 0700 | 345.4280586 |
| 8000927D | D68D | |
| 8000927E | 0300 | 345.7054586 |
| 8000927F | D757 | |
| 80009280 | 0B00 | 345.9828586 |
| 80009281 | D821 | |
| 80009282 | 0300 | 346.2602586 |
| 80009283 | D8EB | |
| 80009284 | 0700 | 346.5376586 |
| 80009285 | D9B5 | |
| 80009286 | 0300 | 346.8150586 |
| 80009287 | DA7F | |
| 80009288 | 0B00 | 347.0924586 |
| 80009289 | DB49 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 8000928A | 0300 | 347.3698586 |
| 8000928B | DC13 | |
| 8000928C | 0700 | 347.6472586 |
| 8000928D | DCDD | |
| 8000928E | 0300 | 347.9246586 |
| 8000928F | DDA7 | |
| 80009290 | 0B00 | 348.2020586 |
| 80009291 | DE71 | |
| 80009292 | 0300 | 348.4794586 |
| 80009293 | DF3B | |
| 80009294 | 0700 | 348.7582586 |
| 80009295 | E006 | |
| 80009296 | 0300 | 349.0356586 |
| 80009297 | E0D0 | |
| 80009298 | 0B00 | 349.3130586 |
| 80009299 | E19A | |
| 8000929A | 0300 | 349.5904586 |
| 8000929B | E264 | |
| 8000929C | 0700 | 349.8678586 |
| 8000929D | E32E | |
| 8000929E | 0300 | 350.1452586 |
| 8000929F | E3F8 | |
| 800092A0 | 0B00 | 350.4226586 |
| 800092A1 | E4C2 | |
| 800092A2 | 0300 | 350.7000586 |
| 800092A3 | E58C | |
| 800092A4 | 0700 | 350.9774586 |
| 800092A5 | E656 | |
| 800092A6 | 0300 | 351.2548586 |
| 800092A7 | E720 | |
| 800092A8 | 0B00 | 351.5322586 |
| 800092A9 | E7EA | |
| 800092AA | 0300 | 351.8096586 |
| 800092AB | E8B4 | |
| 800092AC | 0700 | 352.0870586 |
| 800092AD | E97E | |
| 800092AE | 0300 | 352.3644586 |
| 800092AF | EA48 | |
| 800092B0 | 0B00 | 352.6418586 |
| 800092B1 | EB12 | |
| 800092B2 | 0300 | 352.9206586 |
| 800092B3 | EBDD | |
| 800092B4 | 0700 | 353.1980586 |
| 800092B5 | ECA7 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 800092B6 | 0300 | 353.4754586 |
| 800092B7 | ED71 | |
| 800092B8 | 0B00 | 353.7528586 |
| 800092B9 | EE3B | |
| 800092BA | 0300 | 354.0302586 |
| 800092BB | EF05 | |
| 800092BC | 0700 | 354.3077586 |
| 800092BD | EFCF | |
| 800092BE | 0300 | 354.5851586 |
| 800092BF | F099 | |
| 800092C0 | 0B00 | 354.8625586 |
| 800092C1 | F163 | |
| 800092C2 | 0300 | 355.1399586 |
| 800092C3 | F22D | |
| 800092C4 | 0700 | 355.4173586 |
| 800092C5 | F2F7 | |
| 800092C6 | 0300 | 355.6947586 |
| 800092C7 | F3C1 | |
| 800092C8 | 0B00 | 355.9721586 |
| 800092C9 | F48B | |
| 800092CA | 0300 | 356.2495586 |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 800092CB | F555 | |
| 800092CC | 0700 | 356.5269586 |
| 800092CD | F61F | |
| 800092CE | 0300 | 356.8057586 |
| 800092CF | F6EA | |
| 800092D0 | 0B00 | 357.0831586 |
| 800092D1 | F7B4 | |
| 800092D2 | 0300 | 357.3605586 |
| 800092D3 | F87E | |
| 800092D4 | 0700 | 357.6379586 |
| 800092D5 | F948 | |
| 800092D6 | 0300 | 357.9153586 |
| 800092D7 | FA12 | |
| 800092D8 | 0B00 | 358.1927586 |
| 800092D9 | FADC | |
| 800092DA | 0300 | 358.4701586 |
| 800092DB | FBA6 | |
| 800092DC | 0700 | 358.7475586 |
| 800092DD | FC70 | |
| 800092DE | 0300 | 359.0249586 |
| 800092DF | FD3A | |

**Table 19-5 Scan Table for Scan Profile Number 4**

| Address | Hex | 18-Bit θ |
|---|---|---|
| 800092E0 | 0B00 | 359.3023686 |
| 800092E1 | FE04 | |
| 800092E2 | 0300 | 359.5797686 |
| 800092E3 | FECE | |
| 800092E4 | 0700 | 359.8571586 |
| 800092E5 | FF98 | |
| 800092E6 | 0000 | 0.1345586 |
| 800092E7 | 0062 | |
| 800092E8 | 0800 | 0.4119586 |
| 800092E9 | 012C | |
| 800092EA | 0000 | 0.6893586 |
| 800092EB | 01F6 | |
| 800092EC | 0400 | 0.9681586 |
| 800092ED | 02C1 | |
| 800092EE | 0000 | 1.2455586 |
| 800092EF | 038B | |
| 800092F0 | 0800 | 1.5229586 |
| 800092F1 | 0455 | |
| 800092F2 | 0000 | 1.8003586 |
| 800092F3 | 051F | |
| 800092F4 | 0400 | 2.0777586 |
| 800092F5 | 05E9 | |
| 800092F6 | 0000 | 2.3551586 |
| 800092F7 | 06B3 | |
| 800092F8 | 0800 | 2.6325586 |
| 800092F9 | 077D | |
| 800092FA | 0000 | 2.9099586 |
| 800092FB | 0847 | |
| 800092FC | 0400 | 3.1873586 |
| 800092FD | 0911 | |
| 800092FE | 0000 | 3.4648586 |
| 800092FF | 09DB | |
| 80009300 | 0800 | 3.7422586 |
| 80009301 | 0AA5 | |
| 80009302 | 0000 | 4.0196586 |
| 80009303 | 0B6F | |
| 80009304 | 0400 | 4.2970586 |
| 80009305 | 0C39 | |
| 80009306 | 0000 | 4.5744586 |
| 80009307 | 0D03 | |
| 80009308 | 0800 | 4.8532586 |
| 80009309 | 0DCE | |
| 8000930A | 0000 | 5.1306586 |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 8000930B | 0E98 | |
| 8000930C | 0400 | 5.4080586 |
| 8000930D | 0F62 | |
| 8000930E | 0000 | 5.6854586 |
| 8000930F | 102C | |
| 80009310 | 0800 | 5.9628586 |
| 80009311 | 10F6 | |
| 80009312 | 0000 | 6.2402586 |
| 80009313 | 11C0 | |
| 80009314 | 0400 | 6.5176586 |
| 80009315 | 128A | |
| 80009316 | 0000 | 6.7950586 |
| 80009317 | 1354 | |
| 80009318 | 0800 | 7.0724586 |
| 80009319 | 141E | |
| 8000931A | 0000 | 7.3498586 |
| 8000931B | 14E8 | |
| 8000931C | 0400 | 7.6272586 |
| 8000931D | 15B2 | |
| 8000931E | 0000 | 7.9046586 |
| 8000931F | 167C | |
| 80009320 | 0800 | 8.1820586 |
| 80009321 | 1746 | |
| 80009322 | 0000 | 8.4594586 |
| 80009323 | 1810 | |
| 80009324 | 0400 | 8.7368586 |
| 80009325 | 18DA | |
| 80009326 | 0000 | 9.0156586 |
| 80009327 | 19A5 | |
| 80009328 | 0800 | 9.2930586 |
| 80009329 | 1A6F | |
| 8000932A | 0000 | 9.5704586 |
| 8000932B | 1B39 | |
| 8000932C | 0400 | 9.8478586 |
| 8000932D | 1C03 | |
| 8000932E | 0000 | 10.1252586 |
| 8000932F | 1CCD | |
| 80009330 | 0800 | 10.4026586 |
| 80009331 | 1D97 | |
| 80009332 | 0000 | 10.6800586 |
| 80009333 | 1E61 | |
| 80009334 | 0400 | 10.9574586 |
| 80009335 | 1F2B | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 80009336 | 0000 | 11.2348586 |
| 80009337 | 1FF5 | |
| 80009338 | 0800 | 11.5122586 |
| 80009339 | 20BF | |
| 8000933A | 0000 | 11.7896586 |
| 8000933B | 2189 | |
| 8000933C | 0400 | 12.0670586 |
| 8000933D | 2253 | |
| 8000933E | 0000 | 12.3445586 |
| 8000933F | 231D | |
| 80009340 | 0800 | 12.6219586 |
| 80009341 | 23E7 | |
| 80009342 | 0000 | 12.9006586 |
| 80009343 | 24B2 | |
| 80009344 | 0400 | 13.1780586 |
| 80009345 | 257C | |
| 80009346 | 0000 | 13.4554586 |
| 80009347 | 2646 | |
| 80009348 | 0800 | 13.7329586 |
| 80009349 | 2710 | |
| 8000934A | 0000 | 14.0103586 |
| 8000934B | 27DA | |
| 8000934C | 0400 | 14.2877586 |
| 8000934D | 28A4 | |
| 8000934E | 0000 | 14.5651586 |
| 8000934F | 296E | |
| 80009350 | 0800 | 14.8425586 |
| 80009351 | 2A38 | |
| 80009352 | 0000 | 15.1199586 |
| 80009353 | 2B02 | |
| 80009354 | 0400 | 15.3973586 |
| 80009355 | 2BCC | |
| 80009356 | 0000 | 15.6747586 |
| 80009357 | 2C96 | |
| 80009358 | 0800 | 15.9521586 |
| 80009359 | 2D60 | |
| 8000935A | 0000 | 16.2295586 |
| 8000935B | 2E2A | |
| 8000935C | 0400 | 16.5069586 |
| 8000935D | 2EF4 | |
| 8000935E | 0000 | 16.7857586 |
| 8000935F | 2FBF | |
| 80009360 | 0800 | 17.0631586 |
| 80009361 | 3089 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 80009362 | 0000 | 17.3405586 |
| 80009363 | 3153 | |
| 80009364 | 0400 | 17.6179586 |
| 80009365 | 321D | |
| 80009366 | 0000 | 17.8953586 |
| 80009367 | 32E7 | |
| 80009368 | 0800 | 18.1727586 |
| 80009369 | 33B1 | |
| 8000936A | 0000 | 18.4501586 |
| 8000936B | 347B | |
| 8000936C | 0400 | 18.7275586 |
| 8000936D | 3545 | |
| 8000936E | 0000 | 19.0049586 |
| 8000936F | 360F | |
| 80009370 | 0800 | 19.2823586 |
| 80009371 | 36D9 | |
| 80009372 | 0000 | 19.5597586 |
| 80009373 | 37A3 | |
| 80009374 | 0400 | 19.8371586 |
| 80009375 | 386D | |
| 80009376 | 0000 | 20.1145586 |
| 80009377 | 3937 | |
| 80009378 | 0800 | 20.3919586 |
| 80009379 | 3A01 | |
| 8000937A | 0000 | 20.6693586 |
| 8000937B | 3ACB | |
| 8000937C | 0400 | 20.9481586 |
| 8000937D | 3B96 | |
| 8000937E | 0000 | 21.2255586 |
| 8000937F | 3C60 | |
| 80009380 | 0800 | 21.5029586 |
| 80009381 | 3D2A | |
| 80009382 | 0000 | 21.7803586 |
| 80009383 | 3DF4 | |
| 80009384 | 0400 | 22.0577586 |
| 80009385 | 3EBE | |
| 80009386 | 0000 | 22.3351586 |
| 80009387 | 3F88 | |
| 80009388 | 0800 | 22.6126586 |
| 80009389 | 4052 | |
| 8000938A | 0000 | 22.8900586 |
| 8000938B | 411C | |
| 8000938C | 0400 | 23.1674586 |
| 8000938D | 41E6 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 8000938E | 0000 | 23.4448586 |
| 8000938F | 42B0 | |
| 80009390 | 0800 | 23.7222586 |
| 80009391 | 437A | |
| 80009392 | 0000 | 23.9996586 |
| 80009393 | 4444 | |
| 80009394 | 0400 | 24.2770586 |
| 80009395 | 450E | |
| 80009396 | 0000 | 24.5544586 |
| 80009397 | 45D8 | |
| 80009398 | 0800 | 24.8332586 |
| 80009399 | 46A3 | |
| 8000939A | 0000 | 25.1106586 |
| 8000939B | 476D | |
| 8000939C | 0400 | 25.3880586 |
| 8000939D | 4837 | |
| 8000939E | 0000 | 25.6654586 |
| 8000939F | 4901 | |
| 800093A0 | 0800 | 25.9428586 |
| 800093A1 | 49CB | |
| 800093A2 | 0000 | 26.2202586 |
| 800093A3 | 4A95 | |
| 800093A4 | 0400 | 26.4976586 |
| 800093A5 | 4B5F | |
| 800093A6 | 0000 | 26.7750586 |
| 800093A7 | 4C29 | |
| 800093A8 | 0800 | 27.0524586 |
| 800093A9 | 4CF3 | |
| 800093AA | 0000 | 27.3298586 |
| 800093AB | 4DBD | |
| 800093AC | 0400 | 27.6072586 |
| 800093AD | 4E87 | |
| 800093AE | 0000 | 27.8846586 |
| 800093AF | 4F51 | |
| 800093B0 | 0800 | 28.1620586 |
| 800093B1 | 501B | |
| 800093B2 | 0000 | 28.4394586 |
| 800093B3 | 50E5 | |
| 800093B4 | 0400 | 28.7168586 |
| 800093B5 | 51AF | |
| 800093B6 | 0000 | 28.9956586 |
| 800093B7 | 527A | |
| 800093B8 | 0800 | 29.2730586 |
| 800093B9 | 5344 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 800093BA | 0000 | 29.5504586 |
| 800093BB | 540E | |
| 800093BC | 0400 | 29.8278586 |
| 800093BD | 54D8 | |
| 800093BE | 0000 | 30.1052586 |
| 800093BF | 55A2 | |
| 800093C0 | 0800 | 30.3826586 |
| 800093C1 | 566C | |
| 800093C2 | 0000 | 30.6600586 |
| 800093C3 | 5736 | |
| 800093C4 | 0400 | 30.9374586 |
| 800093C5 | 5800 | |
| 800093C6 | 0000 | 31.2148586 |
| 800093C7 | 58CA | |
| 800093C8 | 0800 | 31.4923586 |
| 800093C9 | 5994 | |
| 800093CA | 0000 | 31.7697586 |
| 800093CB | 5A5E | |
| 800093CC | 0400 | 32.0471586 |
| 800093CD | 5B28 | |
| 800093CE | 0000 | 32.3245586 |
| 800093CF | 5BF2 | |
| 800093D0 | 0800 | 32.6019586 |
| 800093D1 | 5CBC | |
| 800093D2 | 0000 | 32.8806586 |
| 800093D3 | 5D87 | |
| 800093D4 | 0400 | 33.1581586 |
| 800093D5 | 5E51 | |
| 800093D6 | 0000 | 33.4355586 |
| 800093D7 | 5F1B | |
| 800093D8 | 0800 | 33.7129586 |
| 800093D9 | 5FE5 | |
| 800093DA | 0000 | 33.9903586 |
| 800093DB | 60AF | |
| 800093DC | 0400 | 34.2677586 |
| 800093DD | 6179 | |
| 800093DE | 0000 | 34.5451586 |
| 800093DF | 6243 | |
| 800093E0 | 0800 | 34.8225586 |
| 800093E1 | 630D | |
| 800093E2 | 0000 | 35.0999586 |
| 800093E3 | 63D7 | |
| 800093E4 | 0400 | 35.3773586 |
| 800093E5 | 64A1 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 800093E6 | 0000 | 35.6547586 |
| 800093E7 | 656B | |
| 800093E8 | 0800 | 35.9321586 |
| 800093E9 | 6635 | |
| 800093EA | 0000 | 36.2095586 |
| 800093EB | 66FF | |
| 800093EC | 0400 | 36.4869586 |
| 800093ED | 67C9 | |
| 800093EE | 0000 | 36.7643586 |
| 800093EF | 6893 | |
| 800093F0 | 0800 | 37.0431586 |
| 800093F1 | 695E | |
| 800093F2 | 0000 | 37.3205586 |
| 800093F3 | 6A28 | |
| 800093F4 | 0400 | 37.5979586 |
| 800093F5 | 6AF2 | |
| 800093F6 | 0000 | 37.8753586 |
| 800093F7 | 6BBC | |
| 800093F8 | 0800 | 38.1527586 |
| 800093F9 | 6C86 | |
| 800093FA | 0000 | 38.4301586 |
| 800093FB | 6D50 | |
| 800093FC | 0400 | 38.7075586 |
| 800093FD | 6E1A | |
| 800093FE | 0000 | 38.9849586 |
| 800093FF | 6EE4 | |
| 80009400 | 0800 | 39.2623586 |
| 80009401 | 6FAE | |
| 80009402 | 0000 | 39.5397586 |
| 80009403 | 7078 | |
| 80009404 | 0400 | 39.8171586 |
| 80009405 | 7142 | |
| 80009406 | 0000 | 40.0945586 |
| 80009407 | 720C | |
| 80009408 | 0800 | 40.3720586 |
| 80009409 | 72D6 | |
| 8000940A | 0000 | 40.6494586 |
| 8000940B | 73A0 | |
| 8000940C | 0400 | 40.9281586 |
| 8000940D | 746B | |
| 8000940E | 0000 | 41.2055586 |
| 8000940F | 7535 | |
| 80009410 | 0800 | 41.4829586 |
| 80009411 | 75FF | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 80009412 | 0000 | 41.7603586 |
| 80009413 | 76C9 | |
| 80009414 | 0400 | 42.0378586 |
| 80009415 | 7793 | |
| 80009416 | 0000 | 42.3152586 |
| 80009417 | 785D | |
| 80009418 | 0800 | 42.5926586 |
| 80009419 | 7927 | |
| 8000941A | 0000 | 42.8700586 |
| 8000941B | 79F1 | |
| 8000941C | 0400 | 43.1474586 |
| 8000941D | 7ABB | |
| 8000941E | 0000 | 43.4248586 |
| 8000941F | 7B85 | |
| 80009420 | 0800 | 43.7022586 |
| 80009421 | 7C4F | |
| 80009422 | 0000 | 43.9796586 |
| 80009423 | 7D19 | |
| 80009424 | 0400 | 44.2570586 |
| 80009425 | 7DE3 | |
| 80009426 | 0000 | 44.5344586 |
| 80009427 | 7EAD | |
| 80009428 | 0800 | 44.8132586 |
| 80009429 | 7F78 | |
| 8000942A | 0000 | 45.0906586 |
| 8000942B | 8042 | |
| 8000942C | 0400 | 45.3680586 |
| 8000942D | 810C | |
| 8000942E | 0000 | 45.6454586 |
| 8000942F | 81D6 | |
| 80009430 | 0800 | 45.9228586 |
| 80009431 | 82A0 | |
| 80009432 | 0000 | 46.2002586 |
| 80009433 | 836A | |
| 80009434 | 0400 | 46.4776586 |
| 80009435 | 8434 | |
| 80009436 | 0000 | 46.7550586 |
| 80009437 | 84FE | |
| 80009438 | 0800 | 47.0324586 |
| 80009439 | 85C8 | |
| 8000943A | 0000 | 47.3098586 |
| 8000943B | 8692 | |
| 8000943C | 0400 | 47.5872586 |
| 8000943D | 875C | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 8000943E | 0000 | 47.8646586 |
| 8000943F | 8826 | |
| 80009440 | 0800 | 48.1420586 |
| 80009441 | 88F0 | |
| 80009442 | 0000 | 48.4194586 |
| 80009443 | 89BA | |
| 80009444 | 0400 | 48.6968586 |
| 80009445 | 8A84 | |
| 80009446 | 0000 | 48.9756586 |
| 80009447 | 8B4F | |
| 80009448 | 0800 | 49.2530586 |
| 80009449 | 8C19 | |
| 8000944A | 0000 | 49.5304586 |
| 8000944B | 8CE3 | |
| 8000944C | 0400 | 49.8078586 |
| 8000944D | 8DAD | |
| 8000944E | 0000 | 50.0852586 |
| 8000944F | 8E77 | |
| 80009450 | 0800 | 50.3626586 |
| 80009451 | 8F41 | |
| 80009452 | 0000 | 50.6400586 |
| 80009453 | 900B | |
| 80009454 | 0400 | 50.9175586 |
| 80009455 | 90D5 | |
| 80009456 | 0000 | 51.1949586 |
| 80009457 | 919F | |
| 80009458 | 0800 | 51.4723586 |
| 80009459 | 9269 | |
| 8000945A | 0000 | 51.7497586 |
| 8000945B | 9333 | |
| 8000945C | 0400 | 52.0271586 |
| 8000945D | 93FD | |
| 8000945E | 0000 | 52.3443586 |
| 8000945F | 94E4 | |
| 80009460 | 0800 | 52.7426586 |
| 80009461 | 9606 | |
| 80009462 | 0000 | 53.2191586 |
| 80009463 | 9761 | |
| 80009464 | 0000 | 53.7753586 |
| 80009465 | 98F6 | |
| 80009466 | 0000 | 54.4125586 |
| 80009467 | 9AC6 | |
| 80009468 | 0800 | 55.1280586 |
| 80009469 | 9CCF | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 8000946A | 0000 | 55.9245586 |
| 8000946B | 9F13 | |
| 8000946C | 0000 | 56.7993586 |
| 8000946D | A190 | |
| 8000946E | 0000 | 57.7551586 |
| 8000946F | A448 | |
| 80009470 | 0800 | 58.7905586 |
| 80009471 | A73A | |
| 80009472 | 0000 | 59.9056586 |
| 80009473 | AA66 | |
| 80009474 | 0000 | 61.1004586 |
| 80009475 | ADCC | |
| 80009476 | 0000 | 62.3748586 |
| 80009477 | B16C | |
| 80009478 | 0800 | 63.7289586 |
| 80009479 | B546 | |
| 8000947A | 0000 | 65.0678586 |
| 8000947B | B915 | |
| 8000947C | 0000 | 66.2942586 |
| 8000947D | BC92 | |
| 8000947E | 0000 | 67.4093586 |
| 8000947F | BFBE | |
| 80009480 | 0800 | 68.4132586 |
| 80009481 | C299 | |
| 80009482 | 0000 | 69.3044586 |
| 80009483 | C522 | |
| 80009484 | 0000 | 70.0845586 |
| 80009485 | C75A | |
| 80009486 | 0000 | 70.7519586 |
| 80009487 | C940 | |
| 80009488 | 0800 | 71.3095586 |
| 80009489 | CAD6 | |
| 8000948A | 0000 | 71.7544586 |
| 8000948B | CC1A | |
| 8000948C | 0000 | 72.0881586 |
| 8000948D | CD0D | |
| 8000948E | 0000 | 72.3655586 |
| 8000948F | CDD7 | |
| 80009490 | 0800 | 72.6429586 |
| 80009491 | CEA1 | |
| 80009492 | 0000 | 72.9203586 |
| 80009493 | CF6B | |
| 80009494 | 0000 | 73.1977586 |
| 80009495 | D035 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 80009496 | 0000 | 73.4751586 |
| 80009497 | D0FF | |
| 80009498 | 0800 | 73.7525586 |
| 80009499 | D1C9 | |
| 8000949A | 0000 | 74.0299586 |
| 8000949B | D293 | |
| 8000949C | 0400 | 74.3073586 |
| 8000949D | D35D | |
| 8000949E | 0000 | 74.5847586 |
| 8000949F | D427 | |
| 800094A0 | 0800 | 74.8622586 |
| 800094A1 | D4F1 | |
| 800094A2 | 0000 | 75.1396586 |
| 800094A3 | D5BB | |
| 800094A4 | 0400 | 75.4170586 |
| 800094A5 | D685 | |
| 800094A6 | 0000 | 75.6944586 |
| 800094A7 | D74F | |
| 800094A8 | 0800 | 75.9731586 |
| 800094A9 | D81A | |
| 800094AA | 0000 | 76.2506586 |
| 800094AB | D8E4 | |
| 800094AC | 0400 | 76.5280586 |
| 800094AD | D9AE | |
| 800094AE | 0000 | 76.8054586 |
| 800094AF | DA78 | |
| 800094B0 | 0800 | 77.0828586 |
| 800094B1 | DB42 | |
| 800094B2 | 0000 | 77.3602586 |
| 800094B3 | DC0C | |
| 800094B4 | 0400 | 77.6376586 |
| 800094B5 | DCD6 | |
| 800094B6 | 0000 | 77.9534586 |
| 800094B7 | DDBC | |
| 800094B8 | 0800 | 78.3489586 |
| 800094B9 | DEDC | |
| 800094BA | 0000 | 78.8214586 |
| 800094BB | E034 | |
| 800094BC | 0000 | 79.3720586 |
| 800094BD | E1C5 | |
| 800094BE | 0000 | 80.0024586 |
| 800094BF | E390 | |
| 800094C0 | 0800 | 80.7096586 |
| 800094C1 | E593 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 800094C2 | 0000 | 81.4952586 |
| 800094C3 | E7CF | |
| 800094C4 | 0000 | 82.3576586 |
| 800094C5 | EA43 | |
| 800094C6 | 0000 | 83.2997586 |
| 800094C7 | ECF1 | |
| 800094C8 | 0800 | 84.3200586 |
| 800094C9 | EFD8 | |
| 800094CA | 0000 | 85.4173586 |
| 800094CB | F2F7 | |
| 800094CC | 0000 | 86.5942586 |
| 800094CD | F650 | |
| 800094CE | 0000 | 87.8480586 |
| 800094CF | F9E1 | |
| 800094D0 | 0800 | 89.1801586 |
| 800094D1 | FDAB | |
| 800094D2 | 0100 | 90.5905586 |
| 800094D3 | 01AE | |
| 800094D4 | 0100 | 92.0791586 |
| 800094D5 | 05EA | |
| 800094D6 | 0100 | 93.6460586 |
| 800094D7 | 0A5F | |
| 800094D8 | 0900 | 95.2912586 |
| 800094D9 | 0F0D | |
| 800094DA | 0100 | 97.0147586 |
| 800094DB | 13F4 | |
| 800094DC | 0100 | 98.8165586 |
| 800094DD | 1914 | |
| 800094DE | 0100 | 100.6951586 |
| 800094DF | 1E6C | |
| 800094E0 | 0900 | 102.6521586 |
| 800094E1 | 23FD | |
| 800094E2 | 0100 | 104.6887586 |
| 800094E3 | 29C8 | |
| 800094E4 | 0100 | 106.8022586 |
| 800094E5 | 2FCB | |
| 800094E6 | 0100 | 108.9939586 |
| 800094E7 | 3607 | |
| 800094E8 | 0900 | 111.2640586 |
| 800094E9 | 3C7C | |
| 800094EA | 0100 | 113.6123586 |
| 800094EB | 432A | |
| 800094EC | 0100 | 116.0389586 |
| 800094ED | 4A11 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 800094EE | 0100 | 118.5438586 |
| 800094EF | 5131 | |
| 800094F0 | 0900 | 121.1256586 |
| 800094F1 | 5889 | |
| 800094F2 | 0100 | 123.7870586 |
| 800094F3 | 601B | |
| 800094F4 | 0100 | 126.5254586 |
| 800094F5 | 67E5 | |
| 800094F6 | 0100 | 129.3434586 |
| 800094F7 | 6FE9 | |
| 800094F8 | 0900 | 132.2383586 |
| 800094F9 | 7825 | |
| 800094FA | 0100 | 135.2114586 |
| 800094FB | 809A | |
| 800094FC | 0100 | 138.2629586 |
| 800094FD | 8948 | |
| 800094FE | 0100 | 141.3926586 |
| 800094FF | 922F | |
| 80009500 | 0900 | 144.6006586 |
| 80009501 | 9B4F | |
| 80009502 | 0100 | 147.7908586 |
| 80009503 | A462 | |
| 80009504 | 0100 | 150.8656586 |
| 80009505 | AD21 | |
| 80009506 | 0100 | 153.8278586 |
| 80009507 | B58E | |
| 80009508 | 0900 | 156.6746586 |
| 80009509 | BDA7 | |
| 8000950A | 0100 | 159.4074586 |
| 8000950B | C56D | |
| 8000950C | 0100 | 162.0263586 |
| 8000950D | CCE0 | |
| 8000950E | 0100 | 164.5312586 |
| 8000950F | D400 | |
| 80009510 | 0900 | 166.9207586 |
| 80009511 | DACC | |
| 80009512 | 0100 | 169.1976586 |
| 80009513 | E146 | |
| 80009514 | 0100 | 171.3592586 |
| 80009515 | E76C | |
| 80009516 | 0100 | 173.4068586 |
| 80009517 | ED3F | |
| 80009518 | 0900 | 175.3404586 |
| 80009519 | F2BF | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 8000951A | 0100 | 177.1600586 |
| 8000951B | F7EC | |
| 8000951C | 0100 | 178.8642586 |
| 8000951D | FCC5 | |
| 8000951E | 0200 | 180.4559586 |
| 8000951F | 014C | |
| 80009520 | 0A00 | 181.9322586 |
| 80009521 | 057F | |
| 80009522 | 0200 | 183.2945586 |
| 80009523 | 095F | |
| 80009524 | 0200 | 184.5428586 |
| 80009525 | 0CEC | |
| 80009526 | 0200 | 185.6771586 |
| 80009527 | 1026 | |
| 80009528 | 0A00 | 186.6961586 |
| 80009529 | 130C | |
| 8000952A | 0200 | 187.6025586 |
| 8000952B | 15A0 | |
| 8000952C | 0200 | 188.3935586 |
| 8000952D | 17E0 | |
| 8000952E | 0200 | 189.0705586 |
| 8000952F | 19CD | |
| 80009530 | 0A00 | 189.6336586 |
| 80009531 | 1B67 | |
| 80009532 | 0200 | 190.0826586 |
| 80009533 | 1CAE | |
| 80009534 | 0200 | 190.4177586 |
| 80009535 | 1DA2 | |
| 80009536 | 0200 | 190.6951586 |
| 80009537 | 1E6C | |
| 80009538 | 0A00 | 190.9725586 |
| 80009539 | 1F36 | |
| 8000953A | 0200 | 191.2499586 |
| 8000953B | 2000 | |
| 8000953C | 0200 | 191.5273586 |
| 8000953D | 20CA | |
| 8000953E | 0200 | 191.8048586 |
| 8000953F | 2194 | |
| 80009540 | 0A00 | 192.0822586 |
| 80009541 | 225E | |
| 80009542 | 0200 | 192.3596586 |
| 80009543 | 2328 | |
| 80009544 | 0600 | 192.6370586 |
| 80009545 | 23F2 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 80009546 | 0200 | 192.9144586 |
| 80009547 | 24BC | |
| 80009548 | 0A00 | 193.1931586 |
| 80009549 | 2587 | |
| 8000954A | 0200 | 193.4706586 |
| 8000954B | 2651 | |
| 8000954C | 0600 | 193.7480586 |
| 8000954D | 271B | |
| 8000954E | 0200 | 194.0254586 |
| 8000954F | 27E5 | |
| 80009550 | 0A00 | 194.3028586 |
| 80009551 | 28AF | |
| 80009552 | 0200 | 194.5802586 |
| 80009553 | 2979 | |
| 80009554 | 0600 | 194.8576586 |
| 80009555 | 2A43 | |
| 80009556 | 0200 | 195.1350586 |
| 80009557 | 2B0D | |
| 80009558 | 0A00 | 195.4124586 |
| 80009559 | 2BD7 | |
| 8000955A | 0200 | 195.6898586 |
| 8000955B | 2CA1 | |
| 8000955C | 0600 | 195.9672586 |
| 8000955D | 2D6B | |
| 8000955E | 0200 | 196.2858586 |
| 8000955F | 2E53 | |
| 80009560 | 0A00 | 196.6841586 |
| 80009561 | 2F75 | |
| 80009562 | 0200 | 197.1633586 |
| 80009563 | 30D2 | |
| 80009564 | 0200 | 197.7236586 |
| 80009565 | 326A | |
| 80009566 | 0200 | 198.3650586 |
| 80009567 | 343D | |
| 80009568 | 0A00 | 199.0873586 |
| 80009569 | 364B | |
| 8000956A | 0200 | 199.8907586 |
| 8000956B | 3894 | |
| 8000956C | 0200 | 200.7737586 |
| 8000956D | 3B17 | |
| 8000956E | 0200 | 201.7391586 |
| 8000956F | 3DD6 | |
| 80009570 | 0A00 | 202.7842586 |
| 80009571 | 40CF | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 80009572 | 0200 | 203.9103586 |
| 80009573 | 4403 | |
| 80009574 | 0200 | 205.1174586 |
| 80009575 | 4772 | |
| 80009576 | 0200 | 206.4056586 |
| 80009577 | 4B1C | |
| 80009578 | 0A00 | 207.7748586 |
| 80009579 | 4F01 | |
| 8000957A | 0200 | 209.2236586 |
| 8000957B | 5320 | |
| 8000957C | 0200 | 210.7548586 |
| 8000957D | 577B | |
| 8000957E | 0200 | 212.3657586 |
| 8000957F | 5C10 | |
| 80009580 | 0A00 | 214.0576586 |
| 80009581 | 60E0 | |
| 80009582 | 0200 | 215.8305586 |
| 80009583 | 65EB | |
| 80009584 | 0200 | 217.6844586 |
| 80009585 | 6B31 | |
| 80009586 | 0200 | 219.6194586 |
| 80009587 | 70B2 | |
| 80009588 | 0A00 | 221.6340586 |
| 80009589 | 766D | |
| 8000958A | 0200 | 223.7310586 |
| 8000958B | 7C64 | |
| 8000958C | 0200 | 225.9077586 |
| 8000958D | 8295 | |
| 8000958E | 0200 | 228.1654586 |
| 8000958F | 8901 | |
| 80009590 | 0A00 | 230.5041586 |
| 80009591 | 8FA8 | |
| 80009592 | 0200 | 232.9238586 |
| 80009593 | 968A | |
| 80009594 | 0200 | 235.4246586 |
| 80009595 | 9DA7 | |
| 80009596 | 0200 | 238.0050586 |
| 80009597 | A4FE | |
| 80009598 | 0A00 | 240.6678586 |
| 80009599 | AC91 | |
| 8000959A | 0200 | 243.4103586 |
| 8000959B | B45E | |
| 8000959C | 0200 | 246.2338586 |
| 8000959D | BC66 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 8000959E | 0200 | 249.1383586 |
| 8000959F | C4A9 | |
| 800095A0 | 0A00 | 252.1238586 |
| 800095A1 | CD27 | |
| 800095A2 | 0200 | 255.1904586 |
| 800095A3 | D5E0 | |
| 800095A4 | 0200 | 258.3380586 |
| 800095A5 | DED4 | |
| 800095A6 | 0200 | 261.4649586 |
| 800095A7 | E7B9 | |
| 800095A8 | 0A00 | 264.4697586 |
| 800095A9 | F045 | |
| 800095AA | 0200 | 267.3550586 |
| 800095AB | F87A | |
| 800095AC | 0300 | 270.1180586 |
| 800095AD | 0056 | |
| 800095AE | 0300 | 272.7589586 |
| 800095AF | 07D9 | |
| 800095B0 | 0B00 | 275.2802586 |
| 800095B1 | 0F05 | |
| 800095B2 | 0300 | 277.6794586 |
| 800095B3 | 15D8 | |
| 800095B4 | 0300 | 279.9577586 |
| 800095B5 | 1C53 | |
| 800095B6 | 0300 | 282.1137586 |
| 800095B7 | 2275 | |
| 800095B8 | 0B00 | 284.1503586 |
| 800095B9 | 2840 | |
| 800095BA | 0300 | 286.0647586 |
| 800095BB | 2DB2 | |
| 800095BC | 0300 | 287.8568586 |
| 800095BD | 32CB | |
| 800095BE | 0300 | 289.5295586 |
| 800095BF | 378D | |
| 800095C0 | 0B00 | 291.0800586 |
| 800095C1 | 3BF6 | |
| 800095C2 | 0300 | 292.5096586 |
| 800095C3 | 4007 | |
| 800095C4 | 0300 | 293.8169586 |
| 800095C5 | 43BF | |
| 800095C6 | 0300 | 295.0048586 |
| 800095C7 | 4720 | |
| 800095C8 | 0B00 | 296.0705586 |
| 800095C9 | 4A28 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 800095CA | 0300 | 297.0139586 |
| 800095CB | 4CD7 | |
| 800095CC | 0300 | 297.8379586 |
| 800095CD | 4F2F | |
| 800095CE | 0300 | 298.5397586 |
| 800095CF | 512E | |
| 800095D0 | 0B00 | 299.1206586 |
| 800095D1 | 52D5 | |
| 800095D2 | 0300 | 299.5793586 |
| 800095D3 | 5423 | |
| 800095D4 | 0300 | 299.9171586 |
| 800095D5 | 5519 | |
| 800095D6 | 0300 | 300.1945586 |
| 800095D7 | 55E3 | |
| 800095D8 | 0B00 | 300.4719586 |
| 800095D9 | 56AD | |
| 800095DA | 0300 | 300.7507586 |
| 800095DB | 5778 | |
| 800095DC | 0300 | 301.0281586 |
| 800095DD | 5842 | |
| 800095DE | 0300 | 301.3055586 |
| 800095DF | 590C | |
| 800095E0 | 0B00 | 301.5829586 |
| 800095E1 | 59D6 | |
| 800095E2 | 0300 | 301.8603586 |
| 800095E3 | 5AA0 | |
| 800095E4 | 0300 | 302.1377586 |
| 800095E5 | 5B6A | |
| 800095E6 | 0300 | 302.4151586 |
| 800095E7 | 5C34 | |
| 800095E8 | 0B00 | 302.6925586 |
| 800095E9 | 5CFE | |
| 800095EA | 0300 | 302.9699586 |
| 800095EB | 5DC8 | |
| 800095EC | 0300 | 303.2473586 |
| 800095ED | 5E92 | |
| 800095EE | 0300 | 303.5247586 |
| 800095EF | 5F5C | |
| 800095F0 | 0B00 | 303.8021586 |
| 800095F1 | 6026 | |
| 800095F2 | 0300 | 304.0795586 |
| 800095F3 | 60F0 | |
| 800095F4 | 0300 | 304.3569586 |
| 800095F5 | 61BA | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 800095F6 | 0300 | 304.6343586 |
| 800095F7 | 6284 | |
| 800095F8 | 0B00 | 304.9131586 |
| 800095F9 | 634F | |
| 800095FA | 0300 | 305.1905586 |
| 800095FB | 6419 | |
| 800095FC | 0300 | 305.4679586 |
| 800095FD | 64E3 | |
| 800095FE | 0300 | 305.7453586 |
| 800095FF | 65AD | |
| 80009600 | 0B00 | 306.0227586 |
| 80009601 | 6677 | |
| 80009602 | 0300 | 306.3001586 |
| 80009603 | 6741 | |
| 80009604 | 0700 | 306.5775586 |
| 80009605 | 680B | |
| 80009606 | 0300 | 306.8550586 |
| 80009607 | 68D5 | |
| 80009608 | 0B00 | 307.1324586 |
| 80009609 | 699F | |
| 8000960A | 0300 | 307.4098586 |
| 8000960B | 6A69 | |
| 8000960C | 0700 | 307.6872586 |
| 8000960D | 6B33 | |
| 8000960E | 0300 | 307.9646586 |
| 8000960F | 6BFD | |
| 80009610 | 0B00 | 308.2420586 |
| 80009611 | 6CC7 | |
| 80009612 | 0300 | 308.5194586 |
| 80009613 | 6D91 | |
| 80009614 | 0700 | 308.7982586 |
| 80009615 | 6E5C | |
| 80009616 | 0300 | 309.0756586 |
| 80009617 | 6F26 | |
| 80009618 | 0B00 | 309.3530586 |
| 80009619 | 6FF0 | |
| 8000961A | 0300 | 309.6304586 |
| 8000961B | 70BA | |
| 8000961C | 0700 | 309.9078586 |
| 8000961D | 7184 | |
| 8000961E | 0300 | 310.1852586 |
| 8000961F | 724E | |
| 80009620 | 0B00 | 310.4626586 |
| 80009621 | 7318 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 80009622 | 0300 | 310.7400586 |
| 80009623 | 73E2 | |
| 80009624 | 0700 | 311.0174586 |
| 80009625 | 74AC | |
| 80009626 | 0300 | 311.2948586 |
| 80009627 | 7576 | |
| 80009628 | 0B00 | 311.5722586 |
| 80009629 | 7640 | |
| 8000962A | 0300 | 311.8496586 |
| 8000962B | 770A | |
| 8000962C | 0700 | 312.1270586 |
| 8000962D | 77D4 | |
| 8000962E | 0300 | 312.4044586 |
| 8000962F | 789E | |
| 80009630 | 0B00 | 312.6818586 |
| 80009631 | 7968 | |
| 80009632 | 0300 | 312.9606586 |
| 80009633 | 7A33 | |
| 80009634 | 0700 | 313.2380586 |
| 80009635 | 7AFD | |
| 80009636 | 0300 | 313.5154586 |
| 80009637 | 7BC7 | |
| 80009638 | 0B00 | 313.7928586 |
| 80009639 | 7C91 | |
| 8000963A | 0300 | 314.0702586 |
| 8000963B | 7D5B | |
| 8000963C | 0700 | 314.3476586 |
| 8000963D | 7E25 | |
| 8000963E | 0300 | 314.6250586 |
| 8000963F | 7EEF | |
| 80009640 | 0B00 | 314.9024586 |
| 80009641 | 7FB9 | |
| 80009642 | 0300 | 315.1798586 |
| 80009643 | 8083 | |
| 80009644 | 0700 | 315.4572586 |
| 80009645 | 814D | |
| 80009646 | 0300 | 315.7347586 |
| 80009647 | 8217 | |
| 80009648 | 0B00 | 316.0121586 |
| 80009649 | 82E1 | |
| 8000964A | 0300 | 316.2895586 |
| 8000964B | 83AB | |
| 8000964C | 0700 | 316.5669586 |
| 8000964D | 8475 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 8000964E | 0300 | 316.8456586 |
| 8000964F | 8540 | |
| 80009650 | 0B00 | 317.1230586 |
| 80009651 | 860A | |
| 80009652 | 0300 | 317.4005586 |
| 80009653 | 86D4 | |
| 80009654 | 0700 | 317.6779586 |
| 80009655 | 879E | |
| 80009656 | 0300 | 317.9553586 |
| 80009657 | 8868 | |
| 80009658 | 0B00 | 318.2327586 |
| 80009659 | 8932 | |
| 8000965A | 0300 | 318.5101586 |
| 8000965B | 89FC | |
| 8000965C | 0700 | 318.7875586 |
| 8000965D | 8AC6 | |
| 8000965E | 0300 | 319.0649586 |
| 8000965F | 8B90 | |
| 80009660 | 0B00 | 319.3423586 |
| 80009661 | 8C5A | |
| 80009662 | 0300 | 319.6197586 |
| 80009663 | 8D24 | |
| 80009664 | 0700 | 319.8971586 |
| 80009665 | 8DEE | |
| 80009666 | 0300 | 320.1745586 |
| 80009667 | 8EB8 | |
| 80009668 | 0B00 | 320.4519586 |
| 80009669 | 8F82 | |
| 8000966A | 0300 | 320.7307586 |
| 8000966B | 904D | |
| 8000966C | 0700 | 321.0081586 |
| 8000966D | 9117 | |
| 8000966E | 0300 | 321.2855586 |
| 8000966F | 91E1 | |
| 80009670 | 0B00 | 321.5629586 |
| 80009671 | 92AB | |
| 80009672 | 0300 | 321.8403586 |
| 80009673 | 9375 | |
| 80009674 | 0700 | 322.1177586 |
| 80009675 | 943F | |
| 80009676 | 0300 | 322.3951586 |
| 80009677 | 9509 | |
| 80009678 | 0B00 | 322.6725586 |
| 80009679 | 95D3 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 8000967A | 0300 | 322.9499586 |
| 8000967B | 969D | |
| 8000967C | 0700 | 323.2273586 |
| 8000967D | 9767 | |
| 8000967E | 0300 | 323.5047586 |
| 8000967F | 9831 | |
| 80009680 | 0B00 | 323.7821586 |
| 80009681 | 98FB | |
| 80009682 | 0300 | 324.0595586 |
| 80009683 | 99C5 | |
| 80009684 | 0700 | 324.3369586 |
| 80009685 | 9A8F | |
| 80009686 | 0300 | 324.6144586 |
| 80009687 | 9B59 | |
| 80009688 | 0B00 | 324.8931586 |
| 80009689 | 9C24 | |
| 8000968A | 0300 | 325.1705586 |
| 8000968B | 9CEE | |
| 8000968C | 0700 | 325.4479586 |
| 8000968D | 9DB8 | |
| 8000968E | 0300 | 325.7253586 |
| 8000968F | 9E82 | |
| 80009690 | 0B00 | 326.0027586 |
| 80009691 | 9F4C | |
| 80009692 | 0300 | 326.2802586 |
| 80009693 | A016 | |
| 80009694 | 0700 | 326.5576586 |
| 80009695 | A0E0 | |
| 80009696 | 0300 | 326.8350586 |
| 80009697 | A1AA | |
| 80009698 | 0B00 | 327.1124586 |
| 80009699 | A274 | |
| 8000969A | 0300 | 327.3898586 |
| 8000969B | A33E | |
| 8000969C | 0700 | 327.6672586 |
| 8000969D | A408 | |
| 8000969E | 0300 | 327.9446586 |
| 8000969F | A4D2 | |
| 800096A0 | 0B00 | 328.2220586 |
| 800096A1 | A59C | |
| 800096A2 | 0300 | 328.4994586 |
| 800096A3 | A666 | |
| 800096A4 | 0700 | 328.7782586 |
| 800096A5 | A731 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 800096A6 | 0300 | 329.0556586 |
| 800096A7 | A7FB | |
| 800096A8 | 0B00 | 329.3330586 |
| 800096A9 | A8C5 | |
| 800096AA | 0300 | 329.6104586 |
| 800096AB | A98F | |
| 800096AC | 0700 | 329.8878586 |
| 800096AD | AA59 | |
| 800096AE | 0300 | 330.1652586 |
| 800096AF | AB23 | |
| 800096B0 | 0B00 | 330.4426586 |
| 800096B1 | ABED | |
| 800096B2 | 0300 | 330.7200586 |
| 800096B3 | ACB7 | |
| 800096B4 | 0700 | 330.9974586 |
| 800096B5 | AD81 | |
| 800096B6 | 0300 | 331.2748586 |
| 800096B7 | AE4B | |
| 800096B8 | 0B00 | 331.5522586 |
| 800096B9 | AF15 | |
| 800096BA | 0300 | 331.8296586 |
| 800096BB | AFDF | |
| 800096BC | 0700 | 332.1070586 |
| 800096BD | B0A9 | |
| 800096BE | 0300 | 332.3844586 |
| 800096BF | B173 | |
| 800096C0 | 0B00 | 332.6618586 |
| 800096C1 | B23D | |
| 800096C2 | 0300 | 332.9406586 |
| 800096C3 | B308 | |
| 800096C4 | 0700 | 333.2180586 |
| 800096C5 | B3D2 | |
| 800096C6 | 0300 | 333.4954586 |
| 800096C7 | B49C | |
| 800096C8 | 0B00 | 333.7728586 |
| 800096C9 | B566 | |
| 800096CA | 0300 | 334.0502586 |
| 800096CB | B630 | |
| 800096CC | 0700 | 334.3276586 |
| 800096CD | B6FA | |
| 800096CE | 0300 | 334.6050586 |
| 800096CF | B7C4 | |
| 800096D0 | 0B00 | 334.8824586 |
| 800096D1 | B88E | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 800096D2 | 0300 | 335.1599586 |
| 800096D3 | B958 | |
| 800096D4 | 0700 | 335.4373586 |
| 800096D5 | BA22 | |
| 800096D6 | 0300 | 335.7147586 |
| 800096D7 | BAEC | |
| 800096D8 | 0B00 | 335.9921586 |
| 800096D9 | BBB6 | |
| 800096DA | 0300 | 336.2695586 |
| 800096DB | BC80 | |
| 800096DC | 0700 | 336.5469586 |
| 800096DD | BD4A | |
| 800096DE | 0300 | 336.8257586 |
| 800096DF | BE15 | |
| 800096E0 | 0B00 | 337.1031586 |
| 800096E1 | BEDF | |
| 800096E2 | 0300 | 337.3805586 |
| 800096E3 | BFA9 | |
| 800096E4 | 0700 | 337.6579586 |
| 800096E5 | C073 | |
| 800096E6 | 0300 | 337.9353586 |
| 800096E7 | C13D | |
| 800096E8 | 0B00 | 338.2127586 |
| 800096E9 | C207 | |
| 800096EA | 0300 | 338.4901586 |
| 800096EB | C2D1 | |
| 800096EC | 0700 | 338.7675586 |
| 800096ED | C39B | |
| 800096EE | 0300 | 339.0449586 |
| 800096EF | C465 | |
| 800096F0 | 0B00 | 339.3223586 |
| 800096F1 | C52F | |
| 800096F2 | 0300 | 339.5997586 |
| 800096F3 | C5F9 | |
| 800096F4 | 0700 | 339.8771586 |
| 800096F5 | C6C3 | |
| 800096F6 | 0300 | 340.1545586 |
| 800096F7 | C78D | |
| 800096F8 | 0B00 | 340.4319586 |
| 800096F9 | C857 | |
| 800096FA | 0300 | 340.7093586 |
| 800096FB | C921 | |
| 800096FC | 0700 | 340.9881586 |
| 800096FD | C9EC | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 800096FE | 0300 | 341.2655586 |
| 800096FF | CAB6 | |
| 80009700 | 0B00 | 341.5429586 |
| 80009701 | CB80 | |
| 80009702 | 0300 | 341.8203586 |
| 80009703 | CC4A | |
| 80009704 | 0700 | 342.0977586 |
| 80009705 | CD14 | |
| 80009706 | 0300 | 342.3751586 |
| 80009707 | CDDE | |
| 80009708 | 0B00 | 342.6525586 |
| 80009709 | CEA8 | |
| 8000970A | 0300 | 342.9299586 |
| 8000970B | CF72 | |
| 8000970C | 0700 | 343.2073586 |
| 8000970D | D03C | |
| 8000970E | 0300 | 343.4847586 |
| 8000970F | D106 | |
| 80009710 | 0B00 | 343.7621586 |
| 80009711 | D1D0 | |
| 80009712 | 0300 | 344.0396586 |
| 80009713 | D29A | |
| 80009714 | 0700 | 344.3170586 |
| 80009715 | D364 | |
| 80009716 | 0300 | 344.5944586 |
| 80009717 | D42E | |
| 80009718 | 0B00 | 344.8731586 |
| 80009719 | D4F9 | |
| 8000971A | 0300 | 345.1505586 |
| 8000971B | D5C3 | |
| 8000971C | 0700 | 345.4280586 |
| 8000971D | D68D | |
| 8000971E | 0300 | 345.7054586 |
| 8000971F | D757 | |
| 80009720 | 0B00 | 345.9828586 |
| 80009721 | D821 | |
| 80009722 | 0300 | 346.2602586 |
| 80009723 | D8EB | |
| 80009724 | 0700 | 346.5376586 |
| 80009725 | D9B5 | |
| 80009726 | 0300 | 346.8150586 |
| 80009727 | DA7F | |
| 80009728 | 0B00 | 347.0924586 |
| 80009729 | DB49 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 8000972A | 0300 | 347.3698586 |
| 8000972B | DC13 | |
| 8000972C | 0700 | 347.6472586 |
| 8000972D | DCDD | |
| 8000972E | 0300 | 347.9246586 |
| 8000972F | DDA7 | |
| 80009730 | 0B00 | 348.2020586 |
| 80009731 | DE71 | |
| 80009732 | 0300 | 348.4794586 |
| 80009733 | DF3B | |
| 80009734 | 0700 | 348.7582586 |
| 80009735 | E006 | |
| 80009736 | 0300 | 349.0356586 |
| 80009737 | E0D0 | |
| 80009738 | 0B00 | 349.3130586 |
| 80009739 | E19A | |
| 8000973A | 0300 | 349.5904586 |
| 8000973B | E264 | |
| 8000973C | 0700 | 349.8678586 |
| 8000973D | E32E | |
| 8000973E | 0300 | 350.1452586 |
| 8000973F | E3F8 | |
| 80009740 | 0B00 | 350.4226586 |
| 80009741 | E4C2 | |
| 80009742 | 0300 | 350.7000586 |
| 80009743 | E58C | |
| 80009744 | 0700 | 350.9774586 |
| 80009745 | E656 | |
| 80009746 | 0300 | 351.2548586 |
| 80009747 | E720 | |
| 80009748 | 0B00 | 351.5322586 |
| 80009749 | E7EA | |
| 8000974A | 0300 | 351.8096586 |
| 8000974B | E8B4 | |
| 8000974C | 0700 | 352.0870586 |
| 8000974D | E97E | |
| 8000974E | 0300 | 352.3644586 |
| 8000974F | EA48 | |
| 80009750 | 0B00 | 352.6418586 |
| 80009751 | EB12 | |
| 80009752 | 0300 | 352.9206586 |
| 80009753 | EBDD | |
| 80009754 | 0700 | 353.1980586 |
| 80009755 | ECA7 | |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 80009756 | 0300 | 353.4754586 |
| 80009757 | ED71 | |
| 80009758 | 0B00 | 353.7528586 |
| 80009759 | EE3B | |
| 8000975A | 0300 | 354.0302586 |
| 8000975B | EF05 | |
| 8000975C | 0700 | 354.3077586 |
| 8000975D | EFCF | |
| 8000975E | 0300 | 354.5851586 |
| 8000975F | F099 | |
| 80009760 | 0B00 | 354.8625586 |
| 80009761 | F163 | |
| 80009762 | 0300 | 355.1399586 |
| 80009763 | F22D | |
| 80009764 | 0700 | 355.4173586 |
| 80009765 | F2F7 | |
| 80009766 | 0300 | 355.6947586 |
| 80009767 | F3C1 | |
| 80009768 | 0B00 | 355.9721586 |
| 80009769 | F48B | |
| 8000976A | 0300 | 356.2495586 |

| Address | Hex | 18-Bit θ |
|---|---|---|
| 8000976B | F555 | |
| 8000976C | 0700 | 356.5269586 |
| 8000976D | F61F | |
| 8000976E | 0300 | 356.8057586 |
| 8000976F | F6EA | |
| 80009770 | 0B00 | 357.0831586 |
| 80009771 | F7B4 | |
| 80009772 | 0300 | 357.3605586 |
| 80009773 | F87E | |
| 80009774 | 0700 | 357.6379586 |
| 80009775 | F948 | |
| 80009776 | 0300 | 357.9153586 |
| 80009777 | FA12 | |
| 80009778 | 0B00 | 358.1927586 |
| 80009779 | FADC | |
| 8000977A | 0300 | 358.4701586 |
| 8000977B | FBA6 | |
| 8000977C | 0700 | 358.7475586 |
| 8000977D | FC70 | |
| 8000977E | 0300 | 359.0249586 |
| 8000977F | FD3A | |