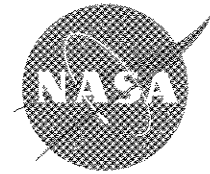


National Aeronautics and Space Administration  
Goddard Space Flight Center  
Greenbelt, MD 20771



Reply to Attn of: 470

November 29, 2011

Memo for the Record:

The Joint Polar Satellite System (JPSS) is the Nation's next generation polar-orbiting operational environmental satellite system, procured by the National Oceanic and Atmospheric Administration (NOAA), through the National Aeronautics and Space Administration (NASA).

JPSS represents significant technological and scientific advances in environmental monitoring and will help advance environmental, weather, climate, and oceanographic science. There are six instruments that will fly on the JPSS satellites that will observe the earth and provide direct readout data for global distribution.

The JPSS program is the continuation of the cancelled National Polar Orbiting Environmental Satellite System (NPOESS) program. There are several international partners that have signed Memorandums of Understanding (MOUs) with the United States Government (NOAA) to participate in the JPSS program.

As part of these MOUs, the USG has agreed to publicly release certain subsets of direct readout data documents that will allow international observers to process and use JPSS data. The JPSS program office has evaluated these requirements for public release and has deemed this subset of program documents to be appropriate for a global audience.

NASA has reviewed the International Traffic in Arms Regulations (ITAR) and the data release requirements for the JPSS Program Plan and has concluded that, while the information or data provided to the potential scientific observers is "technical" in nature, it does not meet the definition of technical data in 120.10 of the ITAR.

Definition of Technical Data:

*Section 120.10 of the ITAR regulations-*

*Technical Data is "information which is required for the design, development, production, manufacture, assembly, operation, repair, testing, maintenance or modification of defense articles. This includes information in the form of blueprints, drawings, photographs, plans, instructions or documentation."*

### **General Assessment:**

The JPSS performance and calibration data to be provided to the potential JPSS science observers is not required to design, develop, produce, manufacture or assemble. However, there may be data contained in this document that is technical in nature and could be considered export controlled. This data does not meet the definition of “technical assistance” and therefore no “technology” is being enabled. MTCR Annex states that “technology” means specific information which is required for the “development”, “production”, “use” of a product. The information may take the form of “technical data” or “technical assistance.” “Technical assistance” may take the forms such as: instructions, skills, training, working knowledge, and consulting services. “Technical data” may take forms such as: blueprints, plans, diagrams, models, formulas, engineering designs and specifications, manuals and instructions. “Use” means operations, installation, maintenance, repair, overhaul, and refurbishing.

In order to release this data, the JPSS program may choose to utilize the 125.4(b)(13) ITAR exemption available for use by the U.S. Government.

### **Background:**

Consistent with other NASA facility-class missions (e.g., HST, Chandra, Spitzer, JWST, EOS), the JPSS Mission intends to provide the international user community with specific “data” that will enable users to accurately assess instrument performance as well as enable scientific understanding of the calibration process and factors governing science data quality. All science and engineering information shared with the international scientific user community will fall outside the scope of “ITAR controlled” technical data, as it is not required for the design, development, production, manufacture, assembly, operation, repair, testing, maintenance, or modification of JPSS spaceflight hardware.

### **JPSS Direct Readout Data**

The documents that will be released by JPSS fall into five categories; Science Documents, Interface Control Documents, Software Documents, Specifications and System Documents.

Science documents will include all Algorithm Theoretical Basis Documents (ATBDs), for each data product, all Operational Algorithm Description (OADs) for each data product, the JPSS Environmental Data Record (EDR) Production Report (PR), the Field Terminal Segment EDR/PR and the EDR Interdependency Report. The ATBD describes the data product being measured, the underlying physics of the measurement and the retrieval algorithm methods. The usually includes an error analysis and the data fields needed for the users of the data product. The OAD describes the software that is used to produce the data product described in the ATBD. The Production Report and the Interdependency Report describes how the algorithms are chained together and dependencies of one algorithm on another, i.e., Sea Surface Temperature (SST) require cloud mask and aerosol optical

depth is calculated before the running of the SST algorithm. Earlier versions of these documents were publically released by the NPOESS Program and its prime contractor, NGAS.

Interface Control Documents (ICD) will include the JPSS to Field Terminal ICD, all JPSS Common Data Format Control Books- External, all JPSS Data Product Profiles, JPSS Common Interfaces and Services ICD Volume 1: External, the NPP Mission Data Format Control Book, the NPP Spacecraft High Rate Data RFICD to the Direct Broadcast Stations, the NPP X-Band Data Format ICD and the JPSS Data Mapping. These documents are the formal means of defining and describing interfaces to the system designed for public access including the means to receive and parse public direct broadcast of data from the satellite and descriptions of the publically release data products.

Software Documents will include the JPSS Application Program Interface (API) User's Guide- Volume 1 (C++) and the JPSS Application Program Interface (API) User's Guide- Volume II (Java and Java Messaging Service (JMS)). These software documents are the definition of the publically distributed software's interfaces in several programming languages.

Specification Documents will include the JPSS System Specification, the Field Terminal Segment Specification, the Data Processing Element Specification, the Field Terminal Technical Specification and the Field Terminal Element Specification.

System Documents will include the JPSS Acronyms document and the JPSS Glossary document.

### **JPSS Public Release Plans**

All Configuration Management (CM) Controlled documents and contractor deliverables (CDCDs) proposed for public release will be evaluated by the JPSS CM team as well as the JPSS Export Control official. If a document is deemed appropriate for public release and falls under the pre-approved subset of documents as outlined above, it will be submitted to the JPSS Program website into a "Data Products" published archive. Released documents will also be submitted to NOAA's CLASS database and NASA's CASI database.

Documents that do not fall under the pre-approved subset of documents will be subject to standard NASA public release processes.

### **Background Documentation**

The public release process that has been proposed in this letter is consistent with prior processes followed under the NPOESS program, through the Integrated Program Office run by Northrup Grumman, the prime contractor on NPOESS. I have attached the NPOESS Public Release Process document as well as the NPOESS Common Data Format Control Book to provide background on what was deemed releasable under the NPOESS program. We anticipate that JPSS will be updating the released NPOESS document as well as releasing new documents that are very similar to those listed in the NPOESS Common Data Format Control Book (CDFCB).

Raytheon is the prime contractor on the JPSS program and has filed a Commodity Jurisdiction (CJ) regarding the export of Interface Data Processing Segment software and Field Terminal Segment software. Both the State Department and the Department of Commerce responded to the CJ, and I have attached their responses. The documents we plan to release have similar applications.

A handwritten signature in black ink, reading "Preston M. Burch". The signature is fluid and cursive, with the first name "Preston" and last name "Burch" clearly legible, and "M." as a middle initial.

Preston Burch  
JPSS Program Manager