



*Read-me for Data Users*

**MEMORANDUM FOR:** The JPSS Program Record  
**SUBMITTED BY:** JPSS NUCAPS Products Team Lead, Ken Pryor  
**CONCURRED BY:** JPSS Algorithm Management Project Lead Lihang Zhou  
**APPROVED BY:** JPSS Program Scientist Mitch Goldberg

**SUBJECT:** NOAA-20 validated maturity status  
**DATE:** 10/24/2019/

**Validated maturity status declaration for OLR**

**Maturity Review Date:** 10/24/2019  
**Effective Date:** 10/24/2019  
**Operational System:** NUCAPS, Version #2.5.2.2

The JPSS Algorithm Maturity Readiness Review Board approved the release of the NUCAPS to the public with a Validated maturity level quality as of 10/24/2019 (effective date), based on JPSS Validation Maturity Review held on 10/24/2019 (link to review artifacts).

1. Maturity stage definition (<http://www.star.nesdis.noaa.gov/jpss/AlgorithmMaturity.php>)
2. Algorithm Description:
  - List of Products (Collection Short Name (CSN): 'NUCAPS-EDR')
    - Outgoing Longwave Radiation (OLR)
  - Product requirements/Exclusions (LIRDS): see artifact at TBD
  - Quality flags (Table): See artifact at TBD
  - Product evaluation/validation: See artifact at TBD
  - Product availability/reliability
    - N20 NUCAPS-EDR data been produced since 5/23/2018 (Provisional maturity) with V4.3. The primary change from V4.3 to the current version includes algorithm upgrade to derive OLR using NOAA-20 CrIS radiances. A hierarchy of validation data sets were used to validate the product and achieve validated maturity.
  - Algorithm performance dependence: None
  - Known errors/issues/limitations: TBD
3. Changes since last maturity stage: Provisional to Validated
4. Review board recommendations
5. Path Forward/Future Plan: Future enhancements may include upgrades to the quality flags embedding super-saturation, NUCAPS algorithm improvements with CAMEL emissivity for improved land surface emissivity characteristics, potential improvements towards swath edges using local angle corrections.
6. Additional Items to note

Additional information is available in the {JPSS Product} algorithm theoretical basis document (ATBD) and validation maturity review briefing, which can be accessed at:

<http://www.star.nesdis.noaa.gov/jpss/Docs.php>



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