Future JPSS Product Changes: Moving products from IDPS to NDE/PDA

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SNPP/JPSS EDR Reallocation: IDPS to NDE

- EDRs have been reallocated:
  - IDPS SST -> NDE ACSPO SST
  - IDPS Actvie Fire -> NDE Active Fire
- Future EDRs to be reallocated:
  - VIIRS Aerosol
  - VIIRS Cloud
  - VIIRS Cryosphere
  - OMPS NP
  - OMPS TC

* All NDE products are available in NetCDF4 and other tailored formats.

NDE ACSPO SST

- ACSPO SST in 10-min granule
- Available in NetCDF4 and GHRSST
- *OSPO PAL: John Sapper*

NDE Active Fire Product

Product Name	Product Size
Active Fire in NetCDF4 AF_v1r0_npp_****.nc	12MB per granule

OSPO PAL: Zhaohui Cheng

Outputs

Name	Description	Type	NetCDF4 File
fire mask	Fire mask 2D array (unit-less)	8 bit integer	AF_*nc
algorithm QA	Fire algorithm QA mask 2D array (unit-less)	32 bit Integer	AF_*nc
FP_line	Fire pixel line Sparse data array (unit-less)	16 bit Integer	AF_*nc
FP_sample	Fire pixel sample Sparse data array (unit-less)	16 bit Integer	AF_*nc
FP_latitude	Fire pixel latitude Sparse data array (unit: degrees)	32 bit Float	AF_*nc
FP_longitude	Fire pixel longitude Sparse data array (unit: degrees)	32 bit Float	AF_*nc
FP_power	Fire radiative power Sparse data array (unit: MW)	32 bit Float	AF_*nc
FP_confidence	Fire detection confidence Sparse data array (unit: %)	8 bit Integer	AF_*nc
FP_land	Land pixel flag Sparse data array (unit-less)	8 bit Integer	AF_*nc

Total output for one granule: 11.7 Mb + number of fires * 79 bytes

The number of fires in the sparse array is described by the netCDF dimension "nfire"

Outputs

Output	Type	Description	
Fire Mask	8-bit unsigned integer	Missing – 0	Brightness temperatures for M13 or M15 unavailable
		Scan – 1	Not processed (trim)
		Other – 2	Not processed (other reason)
		Water – 3	Pixel classified as non fire water
		Cloud – 4	Pixel classified as cloudy
		No Fire – 5	Pixel classified as non fire land
		Unknown – 6	Pixel with no valid background pixels
		Fire Low – 7	Fire pixel with confidence strictly less than 20% fire
		Fire Medium – 8	Fire pixel with confidence between 20% and 80%
		Fire High – 9	Fire pixel with confidence greater than or equal to 80%
Fire Algorithm QA Mask	32-bit unsigned integer	Details on next slide	

For each pixel in the granule

Outputs

Fire Algorithm QA Mask (4 bytes for each pixel in the Granule)

Bits	Description
0-1	Surface Type (water=0, coastal=1, land=2)
2-3	Atmospheric correction (reserved for future use)
4	Day/Night (daytime = 1, nighttime = 0)
5	Potential fire (0/1)
6-10	Background window size parameter
11	Fire Test 1 valid (0 - No, 1 - Yes)
12	Fire Test 2 valid (0 - No, 1 - Yes)
13	Fire Test 3 valid (0 - No, 1 - Yes)
14	Fire Test 4 valid (0 - No, 1 - Yes)
15	Fire Test 5 valid (0 - No, 1 - Yes)
16	Fire Test 6 valid (0 - No, 1 - Yes)
17-19	N/A
20	Adjacent clouds (0/1)
21	Adjacent water (0/1)
22-23	Sun Glint Level (0-3)
24	Sun glint rejection
25	False Alarm 1 (excessive rejection of legitimate background pixels)
26	False Alarm 2 (water pixel contamination)
27	Amazon forest-clearing rejection test
28-31	N/A

NDE VIIRS Aerosol products

- Aerosol Detection – Smoke & Dust
- Aerosol Optical Depth
- Aerosol Particle Size
- Volcanic Ash Mass Loading
- Volcanic Ash Height
- *OSPO PAL: Shuang Qiu*

NDE VIIRS Cloud products

- Cloud Mask
- Cloud Top Phase
- Cloud Type
- Cloud Top Height
- Cloud Top Temperature
- Cloud Top Pressure
- Cloud Optical Depth
- Cloud Particle Size Distribution
- Cloud Liquid Water
- Cloud Ice Water Path
- *OSPO PAL: Shuang Qiu*

NDE VIIRS Cryosphere products

- Ice Concentration and Cover
- Ice Surface Temperature
- Ice Thickness/Age
- Snow Cover
- Fractional Snow Cover
- *OSPO PAL: Shuang Qiu*

OMPS V8Pro and V8TOZ

- OMPS NP V8 Profile Ozone
- OMPS TC V8 Total Ozone
- Available in NetCDF4 and BUFR
- *OSPO PAL: Vaishali Kapoor*