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Service Change Notice 18-85
National Weather Service Headquarters Silver Spring MD
700 AM EDT Fri Aug 24 2018

To: Subscribers:
-NOAA Weather Wire Service
-Emergency Managers Weather Information Network
-NOAAPort
Other NWS Partners, Users and Employees

From: Joseph Pica
Director, NWS Office of Observations

Subject: Addition of GOES-17 Imagery to the Satellite Broadcast Network: Effective August 28, 2018

Effective on or after Tuesday, August 28, 2018, at approximately 1700 Coordinated Universal Time (UTC), the Geostationary Operational Environmental Satellite-17 (GOES) Advanced Baseline Imager (ABI) Sectorized Cloud and Moisture Imagery (SCMI) will be added to the Satellite Broadcast Network (SBN, also known as NOAAPort).

The GOES-17 ABI imagery will be in a pre-operational validation and testing phase through at least early November 2018, during which time there may be one or more data outages. NOAA's GOES-17 satellite has not been declared operational; its data are preliminary and undergoing testing. Users receiving these data through any dissemination means assume all risk related to their use of GOES-17 data and NOAA disclaims any and all warranties, whether express or implied, including (without limitation) any implied warranties of merchantability or fitness for a particular purpose.

The GOES-17 ABI bands perform differently during the day and during certain seasons. Channel availability and quality will fluctuate seasonally depending on the amount of solar radiation absorbed by the instrument. During the instrument’s cool seasons (near the summer and winter solstice), all channels are expected to be available 24 hours per day. During the instrument's warm seasons (before and after the vernal and autumnal equinoxes), experts estimate 7 channels (bands 1-7) will be available 24 hours per day and the other 9 channels (bands 8-16) will be saturated and images will be degraded or unusable 2-6 hours per night. These estimates are preliminary and are still being refined. The warmest part of the season is coming up in early September; performance estimates will need to be confirmed through observation during that time.

Additional, more technical information can be found at the following website:

https://www.goes-r.gov/users/transitionToOperations17.html

This preliminary imagery is being disseminated to enable the testing of networks and systems with actual GOES-17 imagery so users will be able to evaluate the imagery during this validation/test period.

NOAA does not recommended this preliminary imagery be used in operational forecast processes, especially during the initial months of this validation/test period. Any downstream postings of these data should clearly convey their preliminary, non-operational and in-testing nature. Furthermore, this data stream may be subject to temporary unannounced data outages during this validation and testing period. One or more follow-on notices will provide information on the progress and conclusion of the validation period.

Refer to prior Service Change Notice 17-24, which introduced similar GOES-16 SCMI to the SBN:

https://www.weather.gov/media/notification/pdfs/scn17-24goes-16.pdf

and to Service Change Notice 18-66, which introduced the ABI fixed-grid mapping for the SCMI on the SBN:

https://www.weather.gov/media/notification/pdfs/scn18-66goes-16_imagery_transition.pdf

The GOES-17 SCMI will conform to the fixed-grid projection. For information about the ABI Fixed Grid, please refer to the GOES-R Product Definition and Users' Guide:

http://www.goes-r.gov/users/docs/PUG-L1b-vol3.pdf

In the future, the SBN will carry additional GOES-17 products. This notice concerns only the addition of GOES-17 ABI imagery. Future notices will be issued for other GOES-17 products that will be added to the SBN at a later date and for tests that will take place during this validation/test period.

GOES-17 is currently at its checkout and validation station over 89.5 degrees west longitude. It has not yet been designated GOES East or West. The GOES-17 spacecraft will eventually be repositioned to its final operational station.

The SBN's GOES-R West channel (product identifier (PID) 107) will be used to disseminate the GOES-17 imagery. For the foreseeable future and until further notice, the operational GOES-East (GOES-16) and GOES-West (GOES-15) data will remain unchanged on SBN.

The World Meteorological Organization (WMO) headers for the GOES-17 SCMI will be as follows, with references to the 11-character template:

Template: T1 T2 A1 A2 ii CCCC

T1 = T
T2 = I
A1 = R for large-scale (non-mesoscale) sectors

= U for mesoscale sectors

A2 Where A1=R, for large-scale (non-mesoscale) sectors, A2 corresponds to geographical sectors as follows:

= C for the Center CONUS sector
= U for the Center Full Disk

Note that the large scale sectors (and hence the A2 values) are expected to change after GOES-17 satellite is drifted to its operational station. A notice describing this change will be disseminated in advance.

Where A1 = U, for mesoscale sectors, A2 values corresponds to geographical latitude/longitude areas as follows:
= A for 45 degrees (deg.) N <= Latitude (Lat.) < 60 deg. N and 120 deg. W < Longitude (Long.) <= 135 deg. W
= B for 45 deg. N <= Lat. < 60 deg. N and 105 deg. W < Long. <= 120 deg. W
= C for 45 deg. N <= Lat. < 60 deg. N and 90 deg. W < Long. <= 105 deg. W
= D for 45 deg. N <= Lat. < 60 deg. N and 75 deg. W < Long. <= 90 deg. W
= E for 45 deg. N <= Lat. < 60 deg. N and 60 deg. W < Long. <= 75 deg. W
= F for 30 deg. N <= Lat. < 45 deg. N and 120 deg. W < Long. <= 135 deg. W
= G for 30 deg. N <= Lat. < 45 deg. N and 105 deg. W < Long. <= 120 deg. W
= H for 30 deg. N <= Lat. < 45 deg. N and 90 deg. W < Long. <= 105 deg. W
= I for 30 deg. N <= Lat. < 45 deg. N and 75 deg. W < Long. <= 90 deg. W
= J for 30 deg. N <= Lat. < 45 deg. N and 60 deg. W < Long. <= 75 deg. W
= K for 15 deg. N <= Lat. < 30 deg. N and 120 deg. W < Long. <= 135 deg. W
= L for 15 deg. N <= Lat. < 30 deg. N and 105 deg. W < Long. <= 120 deg. W
= M for 15 deg. N <= Lat. < 30 deg. N and 90 deg. W < Long. <= 105 deg. W
= N for 15 deg. N <= Lat. < 30 deg. N and 75 deg. W < Long. <= 90 deg. W
= O for 15 deg. N <= Lat. < 30 deg. N and 60 deg. W < Long. <= 75 deg. W
= P for 0 deg. N <= Lat. < 15 deg. N and 90 deg. W < Long. <= 135 deg. W
= Q for 0 deg. N <= Lat. < 15 deg. N and 60 deg. W < Long. <= 90 deg. W
= R for 45 deg. N <= Lat. < 90 deg. N and 135 deg. W < Long. <= 180 deg. W
= S for 0 deg. N <= Lat. < 45 deg. N and 135 deg. W < Long. <= 180 deg. W
= T for 60 deg. N <= Lat. < 90 deg. N and 90 deg. E < Long. <= 135 deg. W
= U for 0 deg. N <= Lat. < 60 deg. N and 90 deg. E < Long. <= 60 deg. W
= V for 0 deg. N <= Lat. < 90 deg. N and 180 deg. W < Long. <= 90 deg. E
= W and X are reserved for future use
= Y for 90 deg. S <= Lat. < 0 deg. S and 105 deg. W < Long. <= 90 deg. E
= Z for 90 deg. S <= Lat. < 0 deg. S and 90 deg. E < Long. <= 105 deg. W

Where mesoscale boxes T, U and Z extend across the prime meridian (0 deg. longitude) and boxes V and Y extend across the International Dateline (180 deg. longitude). Sector boundaries of 0 deg. N or 0 deg. S refer to the equator. The "<=" symbols refer to "less than or equal to." Note that some of the regions above are out of range from GOES-17 at its current location, but these regions could be within range of existing or future GOES-R series satellites, such as GOES-16.

ii = ABI channel number (01 - 16); between the ii and CCCC is a space.

CCCC = KNES (signifies products originated by the National Environmental Satellite, Data and Information Service (NESDIS)).

Approximate hourly product counts and volumes for the GOES-17 fixed grid test stream are as follows (volumes vary during the course of the day):

ABI Sector	Hourly Count	Hourly Volume
Center CONUS	192/hour	160 MBytes/hour
Center Full Disk	64/hour	75 Mbytes/hour
Mesoscale	1,920/hour	1,640 Mbytes/hour

The file format for these products is netCDF4.

Critical weather or other factors could affect the timing of this activation.

For questions pertaining to this test or upcoming plans for the addition of GOES-17 products onto NOAAPort, please contact:

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NOAA/NWS Office of Observations
Silver Spring, MD
Email: brian.gockel@noaa.gov

and

AWIPS Network Control Facility (NCF) Help Desk
NOAA/NWS Office of Central Processing
Silver Spring, MD
Email: nws.ncf.supervisors@noaa.gov

For questions regarding the scientific or technical content of the NOAAPort-disseminated GOES-17 products, please contact:

Environmental Satellite Processing Center (ESPC) Help Desk
Suitland, MD
Phone: 301-817-3880
Email: espcoperations@noaa.gov

National Service Change Notices are online at:

https://www.weather.gov/notification/archive

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