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Service Change Notice 17-95
National Weather Service Headquarters Silver Spring MD
1130 AM EDT Fri Aug 18 2017

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: NWS Test of Alternately-Mapped Geostationary Operational
Environmental Satellite-16 (GOES-16) Imagery: Effective September 6, 2017

On or after 1500 Coordinated Universal Time (UTC) Wednesday, September 6, 2017, a new test of GOES-16 Advanced Baseline Imager (ABI) Imagery will begin on the Satellite Broadcast Network (SBN, also known as NOAAPort). The products to be evaluated under this test will be very similar to the reprojected GOES-16 Sectorized Cloud and Moisture Imagery (SCMI) already on the SBN, except that the test products will not be reprojected (i.e., remapped) in the same way as most of the SBN's current SCMI. The test is to evaluate mapping the test products to the ABI Fixed Grid, which is a projection based on the viewing perspective of the idealized location of a satellite in geostationary orbit.

The SBN feed of all GOES-16 products remains in a pre-operational validation and testing phase. NOAA's GOES-16 satellite has not been declared operational and its data are preliminary and undergoing testing. Users receiving these data through any dissemination means assume all risk related to their use of GOES-16 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. These products are being added to enable the testing of networks and systems with actual GOES-16 data and so that users will be able to evaluate the products during this validation/test period.

It is not recommended that these preliminary products be used in operational forecast processes. 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 and modifications during this validation and testing period.

GOES-16 will be moved from its current station near 89.2-89.5 degrees west longitude to the GOES-East position at 75.2 degrees west longitude around November 2017, before it is declared operational. Future Service Change Notices will provide further information on the GOES-16 transition to operations and on continuing product validation plans.

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

<https://www.weather.gov/media/notification/pdfs/scn17-24goes16.pdf>

This test will evaluate ABI SCMI on the ABI Fixed Grid because its use will reduce unnecessary reprojection steps and product sizes. Whereas most ABI SCMI on the SBN's GOES-R East channel is reprojected, the GOES-16 full disk imagery on that channel already uses the fixed grid. If this test is successful, it is anticipated that NOAA will transition all SBN SCMI products to the ABI fixed grid during late calendar year 2017. The duration of this fixed grid test is expected to be approximately five weeks, with a tentative test end date of Wednesday, October 11, 2017.

The SBN's GOES-R Series West channel (PID 107) will be used for dissemination of the test data, even though the test data will be from GOES-16, not GOES West. For this test only, the World Meteorological Organization (WMO) headers for the GOES-16 fixed grid imagery will be as follows, with references to the 11-character template:

Template: T1 T2 A1 A2 ii CCCC

T1 = T

T2 = I

A1 = T for large-scale (non-mesoscale) sectors
= U for mesoscale sectors

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

= E for the East contiguous U.S. (CONUS) sector

= P for the Puerto Rico Regional sector

= S for the East Full Disk

Where A1=U, for mesoscale sectors, A2 values corresponds to geographical latitude/longitude areas as follows:

= A for 45 deg. N <= Lat. < 60 deg. N and 120 deg. W < 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-16 at its current location, but these regions could be within range after the satellite's station changes.

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

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

These unique WMO Headers and the unique SBN-channel assignments will be used to differentiate this test's fixed grid GOES-16 SCMI from the SBN's pre-existing GOES-16 SCMI (the latter of which is described in Service Change Notice 17-24, whose link appears earlier in this notice). Two additional features within the test SCMI files will distinguish this test's fixed grid SCMI. The first feature will be the value of the global metadata satellite_id parameter, whose value will be "GOES-17" (even though this test's sensor data will be from GOES-16). The second feature will be the values of the global metadata product_name parameter, whose values will begin with "G17_" (e.g., G17_TCONUS and so on).

During this test and evaluation period, the set of available fixed-grid sectors will change. For example, there will be no mesoscale sectors if and when the GOES-16 ABI scans in mode 4 (a full disk mode).

Approximate hourly product counts and volumes for the GOES-16 fixed grid test stream are as follows:

ABI Sector	Hourly Count	Hourly Volume
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East CONUS	192/hour	2592MBytes/hour
Puerto Rico	64/hour	192MBytes/hour
East Full Disk	64/hour	256Mbytes/hour
Mesoscale	1,920/hour	1,322Mbytes/hour

Product counts and volumes will vary due to ABI mode changes, diurnal variations, file-compression variability, tiling and other factors.

The file format for these products is netCDF4.

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>

Additional information about the flow of GOES-16 products on the SBN has been posted at the following website and will be periodically updated:

http://www.nws.noaa.gov/noaaport/html/GOES_R.shtml

Critical weather or other factors could delay the activation of these products on the SBN.

For questions pertaining to this change or upcoming plans for the addition of GOES-16 products onto NOAAPort, please contact:

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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-16 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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