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From:    Joseph Pica
Director, NWS Office of Observations

Subject: NWS Test of Fixed Grid Mapped Geostationary Operational Environmental Satellite-16 (GOES-16) Imagery, June 14-15, 2018

From approximately 1500 UTC on Thursday, June 14, 2018, and 1500 UTC Friday, June 15, 2018, NWS will broadcast test GOES-16 Advanced Baseline Imager (ABI) Imagery on the Satellite Broadcast Network (SBN, also known as NOAAport). This ABI imagery is sometimes referred to as Sectorized Cloud and Moisture Imagery (SCMI). The mapping of the test SCMI will conform to the ABI Fixed Grid, a projection based on the viewing perspective of the idealized location of a satellite in geostationary orbit. GOES-16 ABI SCMI on the Fixed Grid map projection was evaluated on the SBN during October and November 2017 as described in Service Change Notice (SCN) 17-95:
https://www.weather.gov/media/notification/pdfs/scn17-95goes16test.pdf

Please also refer to SCN 17-24, which initially introduced reprojected (non-fixed-grid) GOES-16 SCMI to the SBN:

As mentioned in SCN 17-95, NOAA will transition all SCMI products broadcast on the SBN to the ABI fixed grid. The test is currently scheduled to take place June 14-15, 2018, and is expected to be the final pre-transition test.

The SBN GOES-R West channel (PID 107) will be used to disseminate this test's fixed-grid data. The GOES-16 SCMI on the GOES-R East channel (PID 108) will be unaffected by this final 24-hour test. This test will therefore be transparent to the vast majority of AWIPS field sites; however, it is anticipated that the GOES-16 SCMI on the GOES-R East channel will transition to the fixed grid projection in mid-to-late June, as will be described in the SCN forthcoming in next several days.

The WMO headers for this test's 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 CONUS sector
    = P for the Puerto Rico Regional sector
    = S for the 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
      135 deg. W < Long. <= 180 deg. W
    = Q for 0 deg. N <= Lat. < 15 deg. N and
      90 deg. W < Long. <= 135 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

If/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 of future GOES-R series satellites, such as GOES-17.

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

CCCC = KNES (signifies products originated by NESDIS)

These unique WMO Headers and SBN-channel assignments should be used to differentiate this test's fixed grid GOES-16 SCMI from the pre-existing GOES-16 SCMI. An additional feature within the test SCMI files will distinguish this test's fixed grid SCMI. The values of the global metadata product_name parameter will begin with "G17_" (e.g., G17_ECONUS and so on).

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

<table>
<thead>
<tr>
<th>ABI Sector</th>
<th>Hourly Count</th>
<th>Hourly Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONUS</td>
<td>192/hour</td>
<td>2592MBytes/hour</td>
</tr>
<tr>
<td>Puerto Rico</td>
<td>64/hour</td>
<td>192MBytes/hour</td>
</tr>
<tr>
<td>Full Disk</td>
<td>64/hour</td>
<td>256Mbytes/hour</td>
</tr>
<tr>
<td>Mesoscale</td>
<td>1920/hour</td>
<td>1322Mbytes/hour</td>
</tr>
</tbody>
</table>

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

Critical weather or other factors could affect the timing of this test.
For questions pertaining to this test or upcoming plans for the addition of GOES-16 products onto NOAAPort, please contact:

Brian Gockel  
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-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/

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