**COORDINATION GROUP ON SATELLITE DATA REQUIREMENTS FOR RA III AND RA IV**

**Teleconference**

**3 October 2013, 15.00 UTC**

## Summary

**Participants:**

Jhon Valencia, IDEAM, Colombia (jvalencia@ideam.gov.co)
Adriana Paola Barbosa, IDEAM, Colombia (abarbosa@ideam.gov.co)
Carlos Pedraza, IDEAM, Colombia (ceuscategui@ideam.gov.co)
Diego Leonardo Sánchez, IDEAM, Colombia (dlsanchez@ideam.gov.co)
Olga Gonzalez, IDEAM, Colombia (ogonzalez@ideam.gov.co)
Sergio Pereira, INPE, Brazil (Sergio.pereira@cptec.inpe.br)
Luiz Machado, INPE, Brazil (luiz.machado@cptec.inpe.br)
Diego Sousa, INPE, Brazil (?)
Estela Collini, SNM, Argentina (estela.collini@gmail.com)
Kelly Sponberg, UCAR, USA (Kelly.sponberg@noaa.gov)
David Bradley, EC, Canada (david.bradley@ec.gc.ca)
Stephan Bojinski, WMO (sbojinski@wmo.int)

**Agenda**

The agenda was approved without further comments (Annex I).

**1. Introduction of participants**

Participants introduced themselves; the absence of some Group members was noted; Paul Seymour (NOAA) had given advance notice that he was unable to attend due to the temporary shutdown of U.S. government functions.

**2. Outcome of RA IV 16th session (Curacao); Plan for a WMO letter to all PRs in RA III/IV**

S. Bojinski informed on the endorsement of the Group by RA IV-16 in April 2013 (through document RA IV-16/Doc.4.4(2) – WMO Space Programme, see http://raiv-16.wmo.int); a similar endorsement by RA III at its upcoming session in Paraguay is envisaged; he further briefed participants on the plan to send a WMO letter to all PRs in RA III and IV, informing them about the Group, its current membership, and including an invitation to nominate additional members.

**3. Short brief on GOES-13 (East) adjusted scanning schedule**

S Bojinski and K. Sponberg informed about the letter from NOAA NESDIS (Annex III) describing a NOAA proposal for image scans from the GOES-13 (East) imager (see http://www.wmo-sat.info/oscar/instruments/view/879 for details), mitigating the recent decommissioning of the GOES-12 (South America) geostationary satellite. During normal operations, the GOES-East imager provides a full disk image covering South America every 30 minutes. During Rapid Scanning Operations (RSO) of the imager for example during the tropical hurricane season, this frequency of coverage drops to one image every three hours for areas south of the equator. For many users in South America, this low frequency is insufficient.

Based on feedback from users in South America including through the Group's meeting on 8 April 2013 [R-1], NOAA proposes that during RSO, two additional images per hour of 2:15 minutes scan length each could be provided by the GOES-East imager. An option for two frames of coverage (A, B)

obtained this way are suggested in Annex II. The letter encourages the Group to refine together with NOAA the exact schedule and position of these frames, recognizing the technical possibilities. It was suggested that the shape and position of frames could be modified to some extent, however they would have to remain rectangles and that they could be easiest be moved in the E-W direction.

Participants raised the following points in the discussion:

- IDEAM Colombia enquired whether frames A and B could overlap with the "Northern Hemisphere" frame
- E. Collini stressed that coverage of the entire Andean Cordillera was a high priority given the presence of active volcanoes and the areal responsibilities of the Volcanic Ash Advisory Centre Buenos Aires for aviation safety; temporal sampling of 30 minutes is desirable;
- She further noted that regular coverage of the southernmost region of South America, the Antarctic Peninsula, and the ocean in between was important for maritime safety services;
- Colombia expressed a requirement for coverage of the areas just south of the equator south of Colombian territory, especially to capture the airflows and cold fronts that come from the south and the coast of Peru;
- It was noted that eastern and north-eastern parts of Brazil were covered by the EUMETSAT Meteosat geostationary satellites centered at 0° longitude

Finding a broad consensus on the best scanning design among the Group and in consultation with NOAA NESDIS is a high priority over the next two months. More detailed technical information from satellite providers, NESDIS in particular, on the technical possibilities is required. The current schedules of GOES satellites are given here: www.oso.noaa.gov/goes/schd-sector/index.htm.

**Action 1**: WMO to contact Paul Seymour to find out details about technical possibilities for modifying the GOES-East scanning schedule, and to share results with the Group for further discussion.

**4. Agreement on way forward with regional survey: update on current dissemination means and product requirements**

S. Bojinski recalled the work of the 2009-2011 task team that developed a first of requirements for satellite datasets and products representative of users in RA III and RA IV [R-2]. He showed extracts of the product list, stressing that both providers and users need to validate and regularly update it. He also showed tables of data dissemination systems relevant to the Region (e.g., GEONETCast-Americas, EUMETCast, GTS, internet, GVAP) and their characteristics, based on information in the task team reports [R-2]. There is currently no data dissemination system in RA III operated on a sustained basis.

L. Machado emphasized that strong engagement by the data providers NOAA and EUMETSAT in the main was critical to validate the requirements expressed by users, ie., to answer the question whether a certain product is available from the providers that would satisfy users' needs. He stated that the current list in [R-2] had not been matched with providers' product suites. K. Sponberg pointed out that in some cases, providers needed guidance on what kind of products users really needed.

Secondly, L. Machado stressed that user requirements need updating, and for this purpose, he had developed a draft set of questions for a Region-based survey among users (Annex III).

Thirdly, to improve sustainability of the GEONETCast-Americas DVB-S-based data dissemination system, Luiz informed that a Memorandum of Understanding between NOAA and INPE was under preparation, paving the way for increased bandwidth of the system.

The discussion showed that an update of the current requirements was needed, and this should be done in close collaboration with the satellite data providers to validate the requirements, and to enquire how and through which data dissemination means the providers intend to respond.

The Group should document iterations on the current, “nominal” requirements. The draft regional questionnaire should be reviewed by the Group, and then used for collecting user feedback (also in a Spanish version).

**Action 2**: All members of the Group to familiarize with the documents available at http://satelite.cptec.inpe.br/geonetcast/es/datareq.html.

**Action 3:** All members of the Group to review the regional questionnaire in Annex III, and to provide feedback at the next meeting.

## 5. Next teleconference

The next RA-3-4-SDR Group teleconference is held on 7 Nov 2013 at 15.00 UTC. WMO is going to issue invitations for a webex session.

## 6. AOB

E. Collini asked about the reception system specifications needed for the upcoming GOES-R (which will not be launched before the first quarter of 2016). WMO informed that information of this kind was provided at the NOAA Satellite Conference, and that it was currently developing an online user guide for helping users prepare for the next generation of geostationary satellites. The guide would contain, and link to, material about the upcoming GOES-R, Himawari-8, FY-4A, GEO-KOMPSAT and MTG satellites.

IDEAM Colombia asked about the availability of hourly full disk GOES imagery. WMO noted that this depended on the connectivity of IDEAM with HRIT/LRIT reception systems for direct readout, or the GTS. This requires investigation internal to IDEAM, and with NOAA.

In addition, IDEAM Colombia asked about the possibility to obtain visible nighttime imagery, such as images displayed through the McIDAS system.

**Action 4**: About the request of Colombia regarding the hourly reception of GOES imagery, S. Bojinski will send a written request to Paul Seymour (paul.seymour@noaa.gov).

The meeting closed at 16.30 UTC.

## References

[R-1] Meeting report RA-3-4-SDR Preparatory Meeting 8 April 2013:
http://www.wmo.int/pages/prog/sat/documents/RA-3-4-SDR-Prep_Final-Report.pdf

[R-2 ] Current status of data/product requirements of RA III/IV:
http://satelite.cptec.inpe.br/geonetcast/es/datareq.html

## ANNEX I: AGENDA

1. Introduction of participants

2. Outcome of RA IV 16th session (Curacao); Plan for a WMO letter to all PRs in RA III/IV

3. Short brief on GOES-13 (East) adjusted scanning schedule

4. Agreement on way forward with regional survey: update on current dissemination means and product requirements

5. Next teleconference

6. AOB

## ANNEX II

## NOAA Letter 5 August 2013 and proposed GOES-13 scanning sectors

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL ENVIRONMENTAL SATELLITE, DATA, AND INFORMATION SERVICE

WMO Permanent Representatives
Regional Association III

AUG 05 2013

Dear Permanent Representative:

On August 16, 2013, the National Oceanic and Atmospheric Administration (NOAA) will decommission GOES-12, also referred to as GOES- South America. The satellite is well past its operational life and can no longer be operated safely. NOAA is unfortunately not able to provide a replacement for GOES-12. With its decommissioning, we will again face the situation of the loss of GOES-East imager data over South America when the GOES-East satellite is in Rapid Scan Operation (RSO). With the normal imager schedule, South America receives an image every 30 minutes from GOES-East (GOES-13). During RSO that number drops to one image every three hours for areas south of the equator.

NOAA takes seriously its commitment to supply satellite imagery to its user communities. During the April 2013 NOAA Satellite Conference, and the May WMO Executive Council meeting, our South American partners highlighted the impacts of the loss of GOES-12 data and the limitations when GOES-East is in RSO. We have heard these concerns and want to be responsive.

In the long term, the loss of imager data when GOES-East is in RSO will be resolved when a satellite from the GOES-R series is in the GOES-East position. GOES-R is currently scheduled for launch in 2015 and is scheduled to be placed in GOES-West position. It may be some time before a GOES-R series satellite arrives in the GOES-East position.

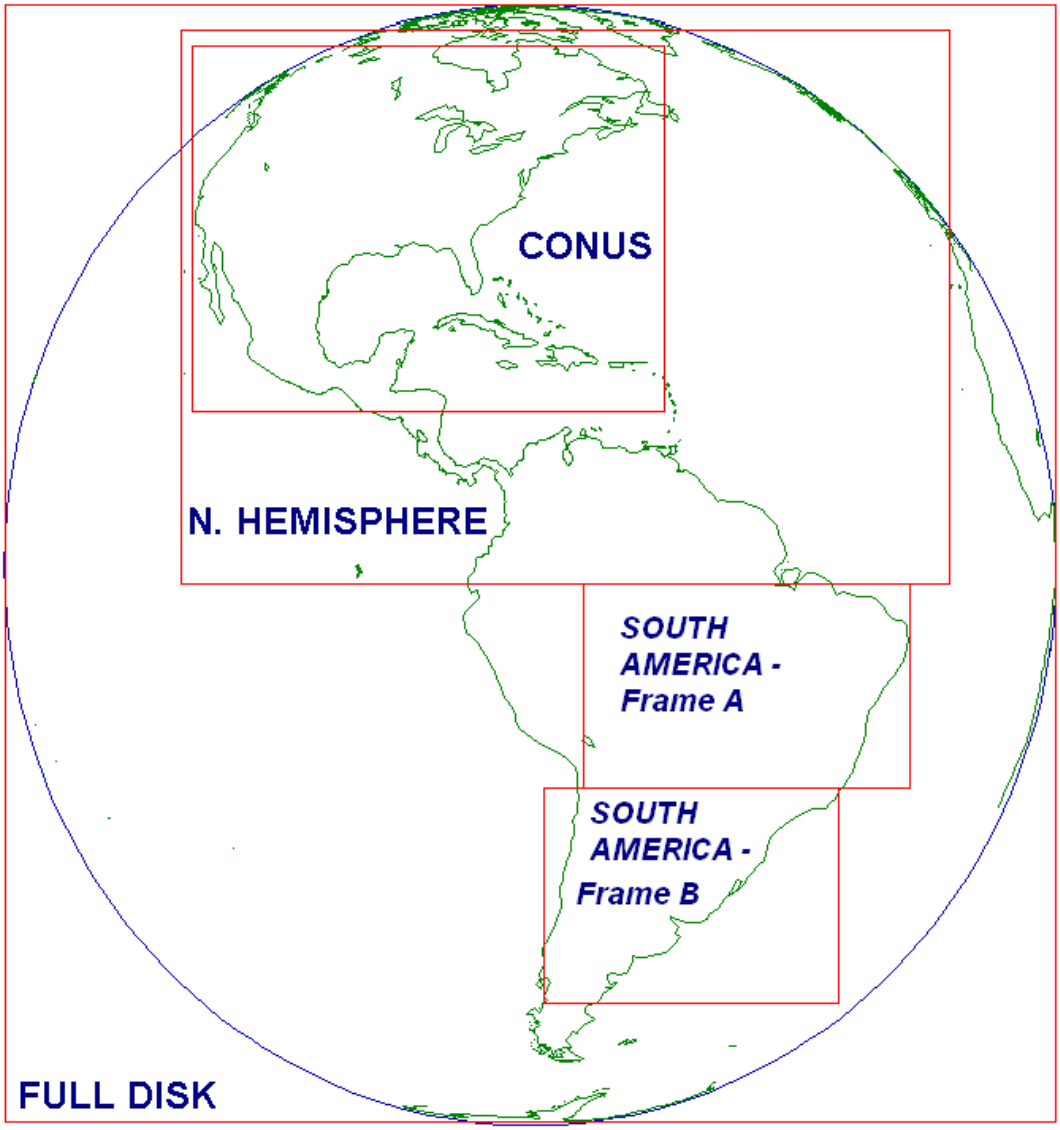
NOAA has closely examined the current GOES-East imager schedule during RSO and found that we will be able to provide two additional short South American images (2 minutes, 15 seconds each) per hour. We request that the WMO RA III and IV Satellite Data Requirements group work with us to further refine, as technically possible, this GOES-East imager schedule change. Although the modified coverage will not be as frequent as what was supplied by GOES-12 or the future GOES-R series, it is an improvement over the current one image every three hours for South America during RSO.

The NOAA points of contact for this effort are Eric Madsen, eric.madsen@noaa.gov and Susan West, susan.west@noaa.gov. Please address any questions or concerns to them. We look forward to continuing collaboration with NOAA satellite users throughout the Western Hemisphere.

Sincerely,

Mary E. Kicza
Assistant Administrator for
Satellite and Information Services

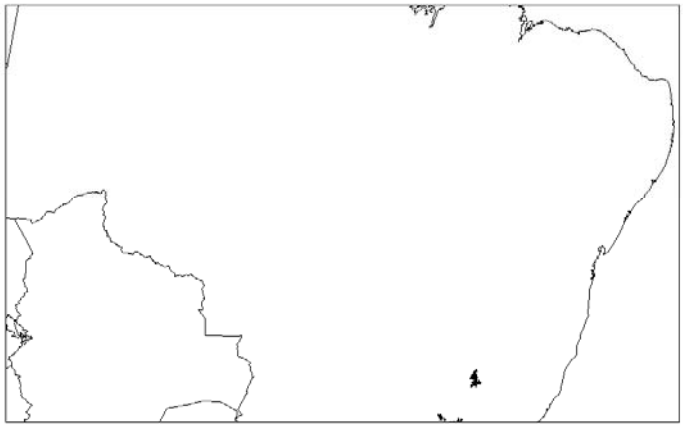
## *GOES East Rapid Scanning scenario @75°W*



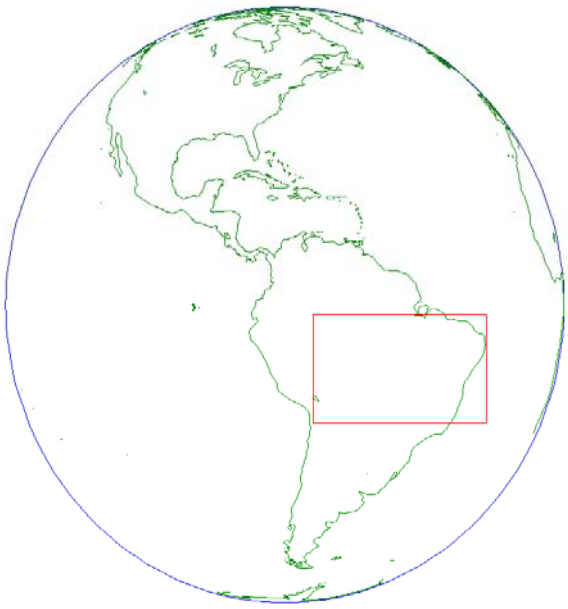
## 2 minute 2 second South America A @ 75°W

| | Lat | Lon | Elev | Scan | Line | Pixel | NS C.I | EW C.I | Time |
|---|---|---|---|---|---|---|---|---|---|
| Start: | -1.681 | -70.055 | -0.30 | 0.08 | 0079 | 16300 | 4,3716 | 2,4026 | 2:02 |
| Stop: | -21.348 | -30.299 | -3.46 | 6.29 | 10050 | 22200 | 5,4479 | 3,3790 | |
| Center: | -10.859 | -53.706 | -1.88 | 3.58 | | | | | |

Instrument View



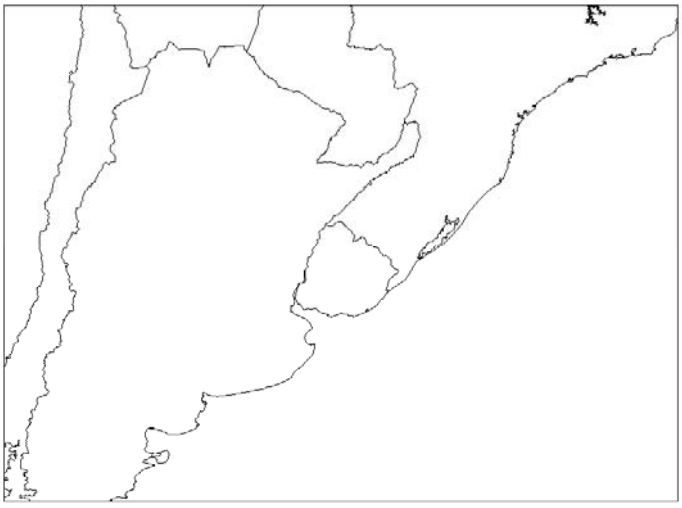
Earth View



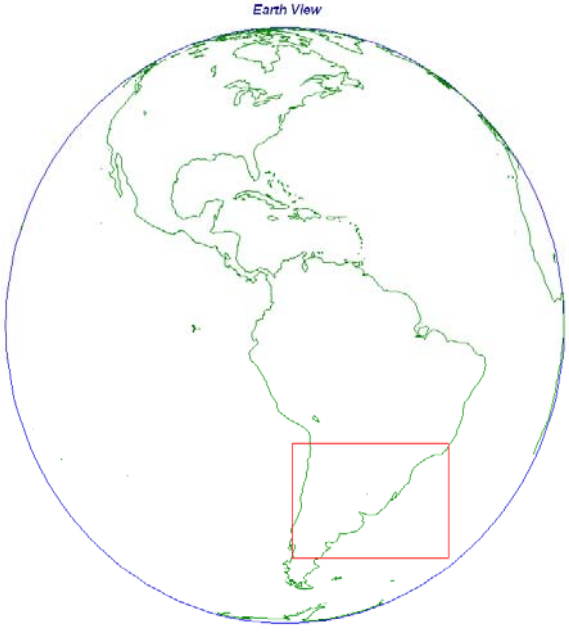
## 2 minute 2 second South America B @ 75°W

| | Lat | Lon | Elev | Scan | Line | Pixel | NS C.I | EW C.I | Time |
|---|---|---|---|---|---|---|---|---|---|
| Start: | -20.185 | -73.566 | -3.46 | 0.24 | 10050 | 15600 | 5,4479 | 2,3326 | 2:02 |
| Stop: | -49.028 | -16.736 | -6.81 | 5.10 | 12140 | 20900 | 6,5658 | 3,2498 | |
| Center: | -31.679 | -56.499 | -5.14 | 2.67 | | | | | |

Instrument View



Earth View



**ANNEX III**

Draft questions for survey within RA III and RA IV (circulated to Group by Luiz Machado, 27 Jun 2013):

1) What are your satellite data requirements?
2) What is the main use of satellite data?
3) Do you intend to buy direct readout stations for the next satellite generation?
4) How would you like receive satellite data?
5) Are you aware about Geonetcast/Eumetcast?
6) Are you are aware of the RAIII and RAIV data requirements; if yes, do you agree with these satellite data requirements? If not please access the data requirement in the following address and comment.
http://satelite.cptec.inpe.br/geonetcast/br/datareq.html
7) What data reception system do you use (Eumetcast or Geonetcast)
8) Is this information useful for your service/institution?
9) Would you like to upload data and products to the Geonetcast system?
10) Is your institution ready/considering to contribute to the budget of the Geonetcast dissemination system?