



*From the GEONETCast Americas Coordination Group  
and AmeriGEOSS*

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# **GEONETCast Americas (GNC-A):** **Delivering Regional and National** **Data, Products and Observations**

Presented by:  
Paul Seymour, NOAA/NESDIS  
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# GEONETCast Americas

## What is GEONETCast?

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- GEONETCast is a distribution system for environmental satellite data and products using commercial TV satellites and low cost, off-the-shelf reception technology;
- GEONETCast is a Foundational Task under the GEO Common Infrastructure
  - Previously: part of GEO Task – IN-04: GEOSS Communication Networks
- GEONETCast Americas is a Foundational Task within AmeriGEOSS



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# GEONETCast Americas

## Mission and Objectives

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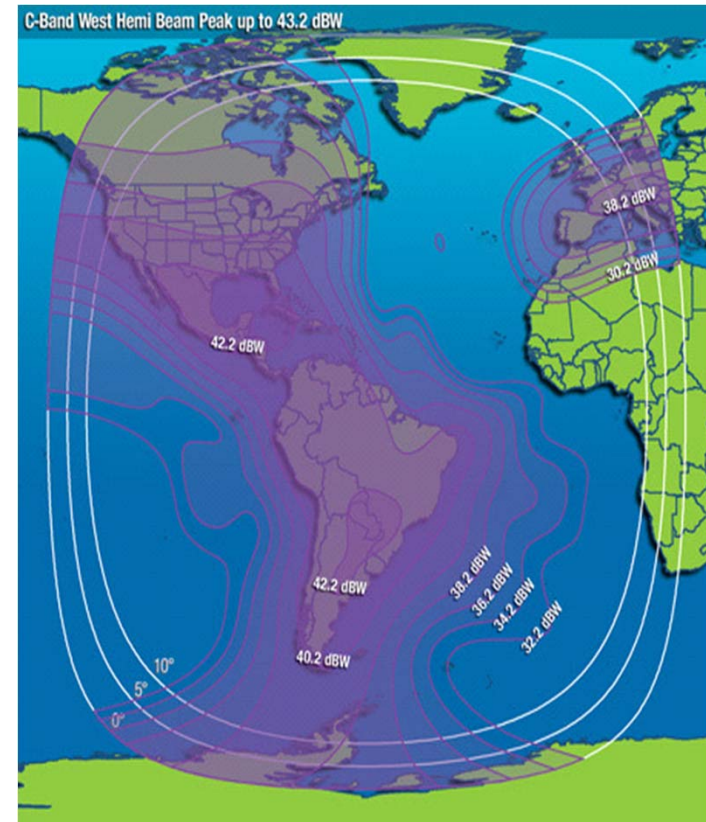
- GEONECast's Mission: "Provide data distribution system within GEOSS by which environmental data and products will be transmitted to users through regional networks over communications satellites."
- Objective: "Provide global information as a basis for sound decision making in critical areas".
  - "Focus on areas of the world where high speed land lines and/or internet are not available or in regions where terrestrial communication lines have been disrupted by disasters."
- WMO Region III/IV Satellite Data Requirements and Support  
GEOSS Societal Benefit Areas



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# GEONETCast Americas General Description

- Regional component of the Global GEONETCast
- Provided by the U.S./NOAA
- Footprint covers
  - Most of North America
  - Caribbean Region
  - Central South America
- Operational since Spring 2008



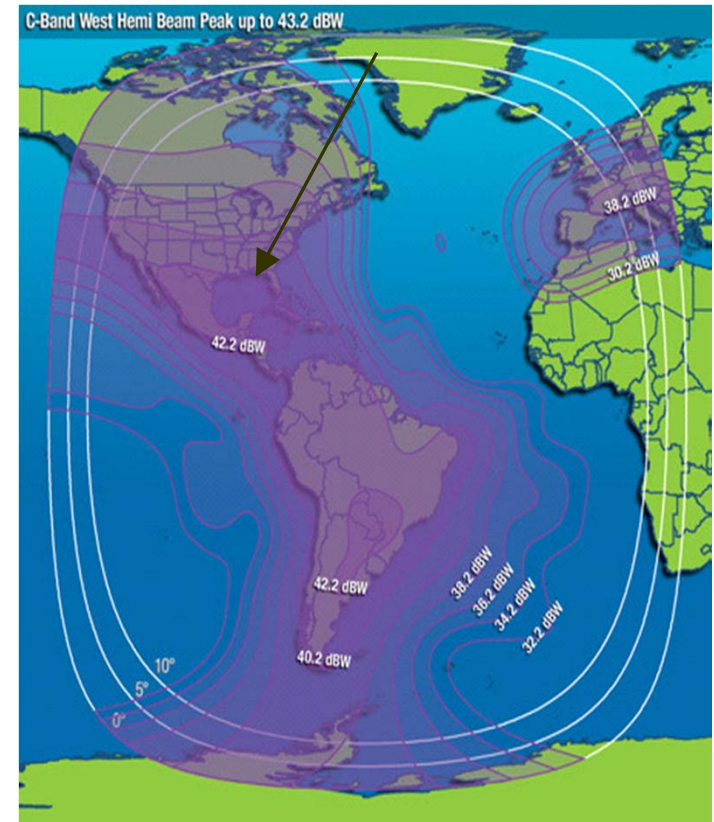


# GEONETCast Americas

## Commercial Satellite Broadcast

- 6.7 total; 6.35 content; megabits per second data rate
- Intelsat-21 (IS-21) geostationary satellite
- Multiplexed C-band DVB-S transponder at 58 deg W
- > 99.5% availability – in actual operations close to 100%

### Coverage Area: Purple Isolines





# GEONETCast Americas

## NWS / ISCS Satellite Broadcast

- U.S. National Weather Service "International Services and Communication Systems" (ISCS) added to GNC-A April 20
- Timely collection and delivery of both time-critical and routine watches, warnings, observations and forecasts.
- Primary delivery by FTP - GTS Internet File Service (GIFS)
- Added to GNC-A as a satellite backup for their users
- Possible conversion of some ISCS stations



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## GNC-A Update – Since ~ June 2015

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- Increase in data rate – Planning for GOES-R / JPSS
- Increased coordination with the Disaster Charter
- Increase in ground receive systems
- Updated receive station manual
- Upgraded architecture at the processing center
- EUMETCast Americas Transition
- Beginning a re-compete of the GNC-A contact
- Re-vitalizing the Coordination Group



# GOES-R/JPSS Product Coordination

- GOES-R ABI Baseline Products–Tentative Plan
  - CMI Imagery, ?? bands, ?? Resolution, Full Disk
  - A selection of the other 23 level II baseline products
  - Geostationary Lightning Mapper – Maybe?
- Which bands and which products?
- Products derived from S-NPP/JPSS imagery
- Products from other sources
  - EUMETCast Americas Transition
- Review of current products



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# GEONETCast Americas Disaster Charter

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- Approved auxiliary data distribution system by the International Charter on Space and Major Disasters
- Project begun to formalize relationship between GEONETCast and the Disaster Charter based on a request from the region
- A formal test will be scheduled later this year
- One candidate is Costa Rica



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# Background - GEONETCast in the Americas

**39** GNC-A stations online or under construction; **34** Planned  
~100 GEONETCast Stations in the Americas

## On line

- Argentina (1)
- Barbados (1)
- Brazil (11)
- Chile (1)
- Colombia (6)
- Costa Rica (4)
- Cuba (1)
- El Salvador (5)
- Mexico (3)
- USA (2)
- Venezuela (1)

## Under Construction

- Belize, Haiti, Mexico (1)

## Funded or Planned

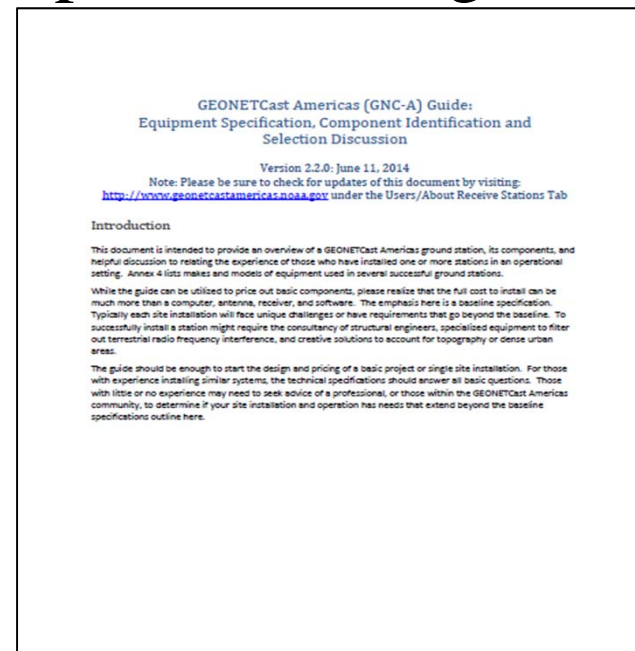
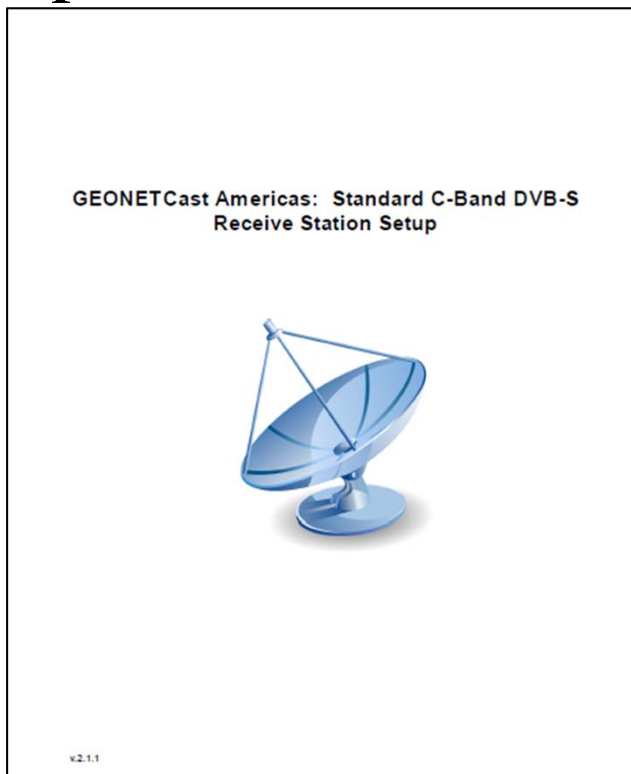
- Argentina (2)
- Mexico (7)
- Colombia (5)
- Brazil (17)
- Chile (1)
- Dominican Republic (1)
- Peru (1)



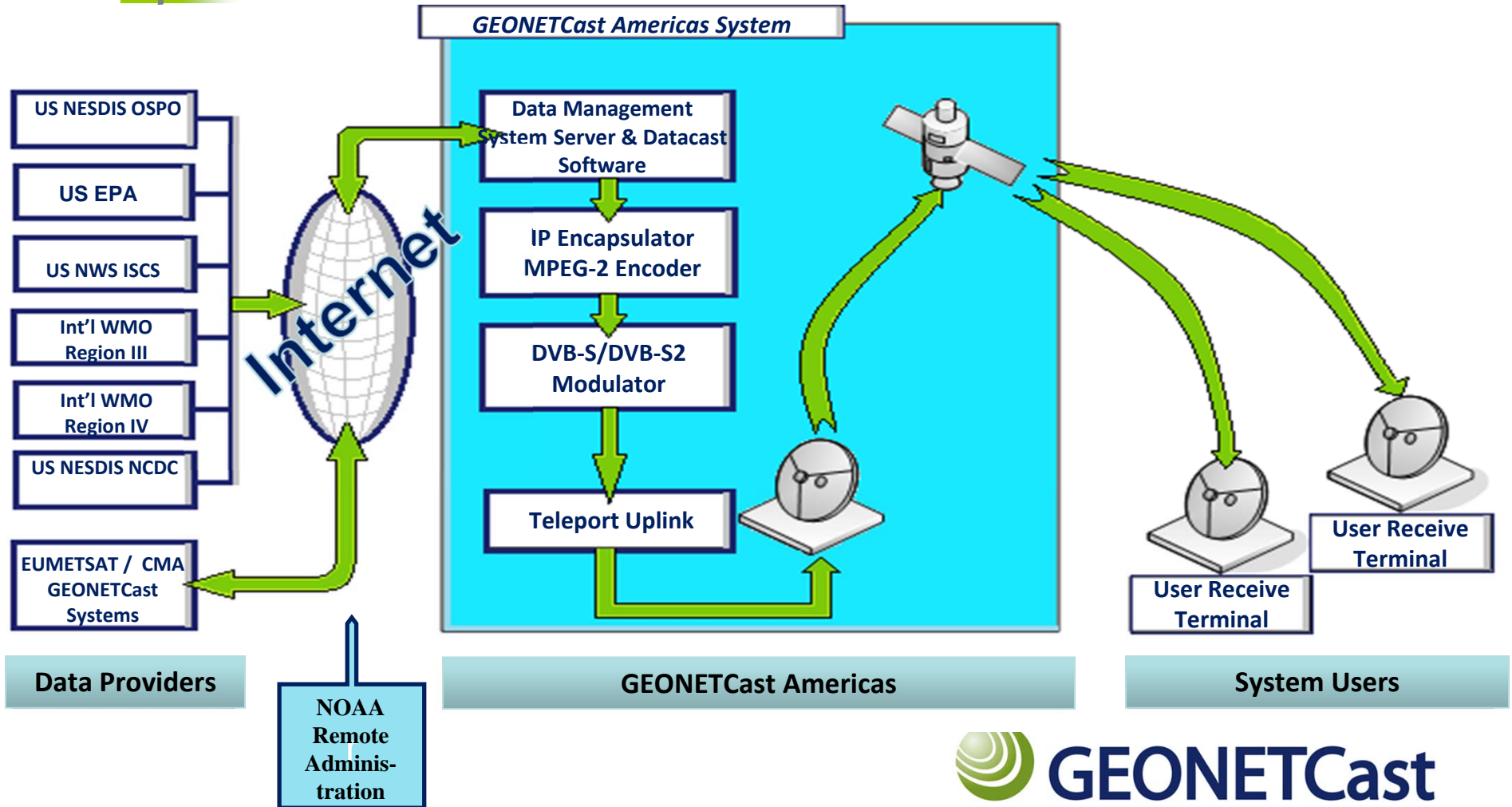
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# GNC-A Receive Station Setup

- Updated version of the setup doc in English & Spanish
- Specification doc in English, Spanish, Portuguese



# GEONETCast-Americas System Architecture





# GNC-A System Architecture Upgrade

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- Data Management System Server & Datacast Software
- Virtualized single server
- Database and application on same server
- Improved FTP file server supporting more protocols
- Improved throughput, latency and provider interface
- Engineering support contract to improve bandwidth management, system data collection, monitoring and reporting - Preparation for GOES-R data input

# EUMETCast Americas Transition and GNC-A Contract Re-compete

- EUMETCast Americas Transition by Dec 2016
  - Non-imagery products evaluated
  - Will be placed on GNC-A at least temporarily
    - Not on GNC-A already
    - Not regional over Europe, Africa or North Atlantic
    - 3 hour unrestricted, full disk, full resolution imager stays
- Beginning a re-compete of the GNC-A contract by February 2018
  - Some probability of transferring to a new vendor
    - Will try to maintain use of IS-21



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# GNC-A Coordination



- **Google Groups and [gnc.americas@noaa.gov](mailto:gnc.americas@noaa.gov)**
- **<https://groups.google.com/forum/#!forum/gnc-a-forum>**
- **GNC-A Coordination Group and Committees**
  - **Broadcast: Diego Souza, Paul Seymour, Knight Sky, LLC**
  - **Receive Station: Diego Souza, Rosario Alfaro (Paul Seymour)**
  - **User Committee; Content Sub-committee:**
    - **Eric Madsen (NESDIS IIA GNC-A and GNC contact)**
  - **User Committee: Users Sub-committee:**
    - **Bernie Connell, Humberto Barbosa, Luiz Machado**
    - **This is the committee that can make things happen**
    - **We need this group to be active**



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# GNC-A – Content Coordination

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- **We need to review the GNC-A products.**
  - **There is an existing set of WMO Region III/IV requirements that has been prioritized and sent out for review.**
  - **There is a list of products that are on EUMETCast Americas**
  - **There are GOES-R Baseline Products (CMI Imagery & Level II**
- **Please think about this during the week as we go through the agenda and you hear about upcoming satellite data and products from GOES-R and JPSS.**
- **At the end of the day on Thursday or sooner if we find a time, we would like to have a discussion on the GNC-A products and the process to administrate them.**



# GNC-A – Resources

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- **Home Page:** <http://geonetcastamericas.noaa.gov/>
- **Contact Email:** [gnc.americas@noaa.gov](mailto:gnc.americas@noaa.gov)
- **Product Request Form:**
  - <http://geonetcastamericas.noaa.gov/GNC-A%20Product%20Request%20and%20Submission%20Form>
- **Publications including the product list**
  - <http://geonetcastamericas.noaa.gov/other-publications.html>
  - **Including Product List**



# GNC-A - Contacts and Links

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- Eric Madsen - [Eric.Madsen@noaa.gov](mailto:Eric.Madsen@noaa.gov)
  - NESDIS International and Interagency Affairs
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  - INPE / CPTEC / DSA
- [www.geonetcastamericas.noaa.gov](http://www.geonetcastamericas.noaa.gov)
- GEONETCast Americas Forum (by invitation)