

The banner features a satellite in the upper left corner, a person's silhouette in the center, and a ship's mast on the right. The text "HiSeasNet" is prominently displayed in white on a dark background.

HiSeasNet

INTERNET FOR OCEANOGRAPHIC SHIPS AT SEA

HiSeasNet Focus Group Meeting

November 15, 2010
Bermuda

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Scripps Institution of Oceanography

Agenda

- ◆ 2010 changes, projects, plea for feedback
- ◆ Open format
 - ◆ Open, informal discussion
 - ◆ I have a list of possible topics
 - ◆ Toss out your own
 - ◆ Open discussion?
 - ◆ Show-and-tell
 - ◆ Tech-to-tech chatter of stuff that works or doesn't
 - ◆ Open forum
 - ◆ Q&A with me or each other?
 - ◆ Demos of web/other stuff?
 - ◆ Small group/break-out discussion?
- ◆ Schedule more discussion for later?

Changes in 2010

- ◆ POR moved to NSS-9 (183W) for 512kbps bandwidth
- ◆ AOR bandwidth upped to 512kbps on IS-707
- ◆ G-18 (Alaska) used by Pt Sur and Wecoma from June-Nov 2010
- ◆ Accelerators mostly rolled out (all but Langseth)
 - ◆ ~??% improvement shore-to-ship
 - ◆ ~??% improvement ship-to-shore
- ◆ Seward Johnson left

Grassroots projects

- ◆ Blacklist proxy setup (SIO)
 - ◆ Optionally filters web browsing to reduce bandwidth usage
- ◆ FBB/HSN failover tunnels ships (SIO)
 - ◆ Quick auto-cutover between HSN and FBB links
- ◆ DAC/Comtech cable (WHOI)
 - ◆ Helps keep antenna on the right bird
- ◆ Modem and DAC settings monitoring scripts (WHOI)
 - ◆ Gets a dump of the current settings, potentially from shore

Feedback

- ◆ How do we better coordinate satellite assignments/changes?
 - ◆ Schedules updates
 - ◆ Work area descriptions beyond just start/end ports
- ◆ Are the current slot assignments correct?
- ◆ Are maintenance visits working/helping
- ◆ Are accelerators being used?
- ◆ What do you want to see in 2011?

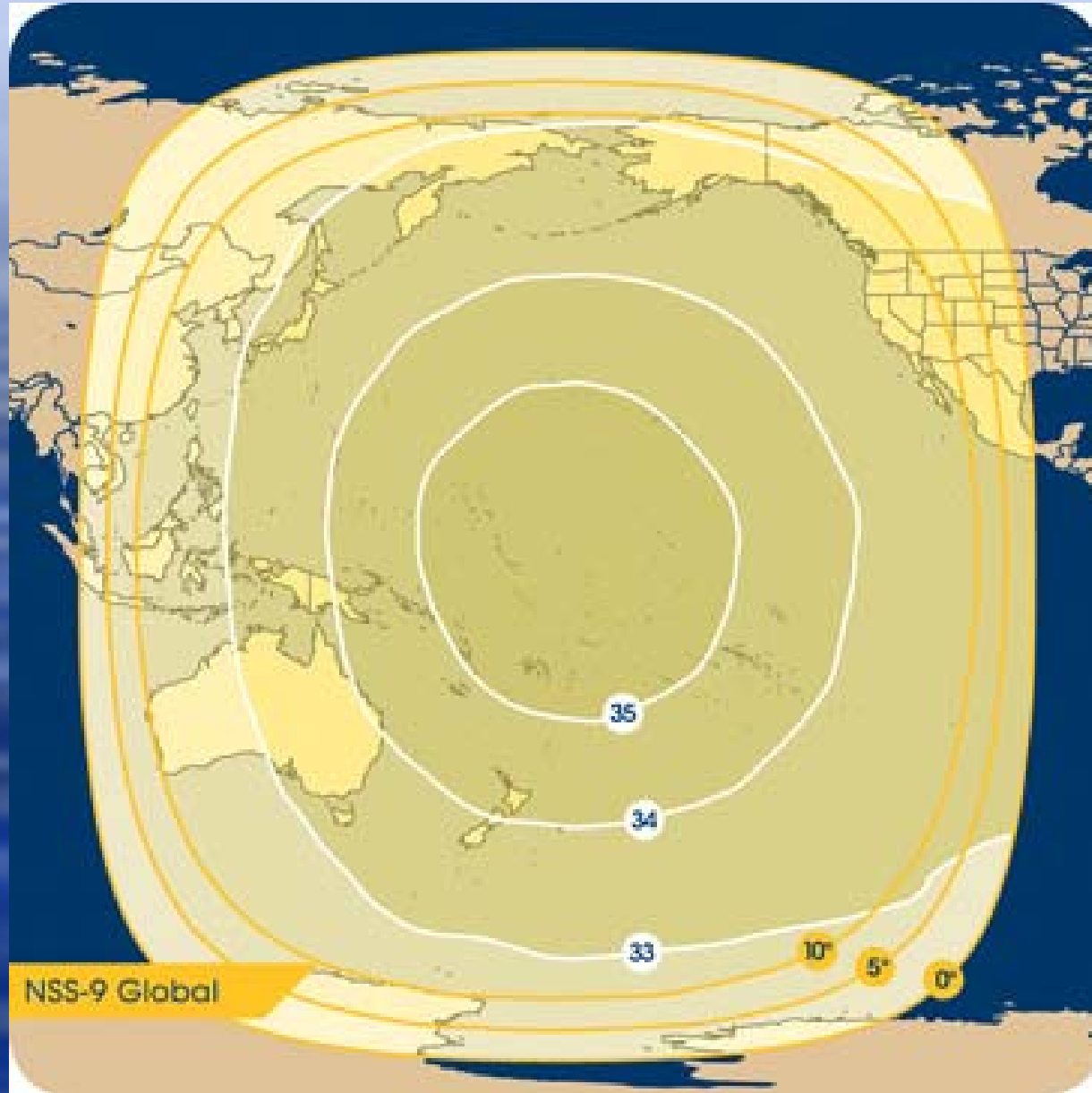
What to talk about next?

More Potential Topics

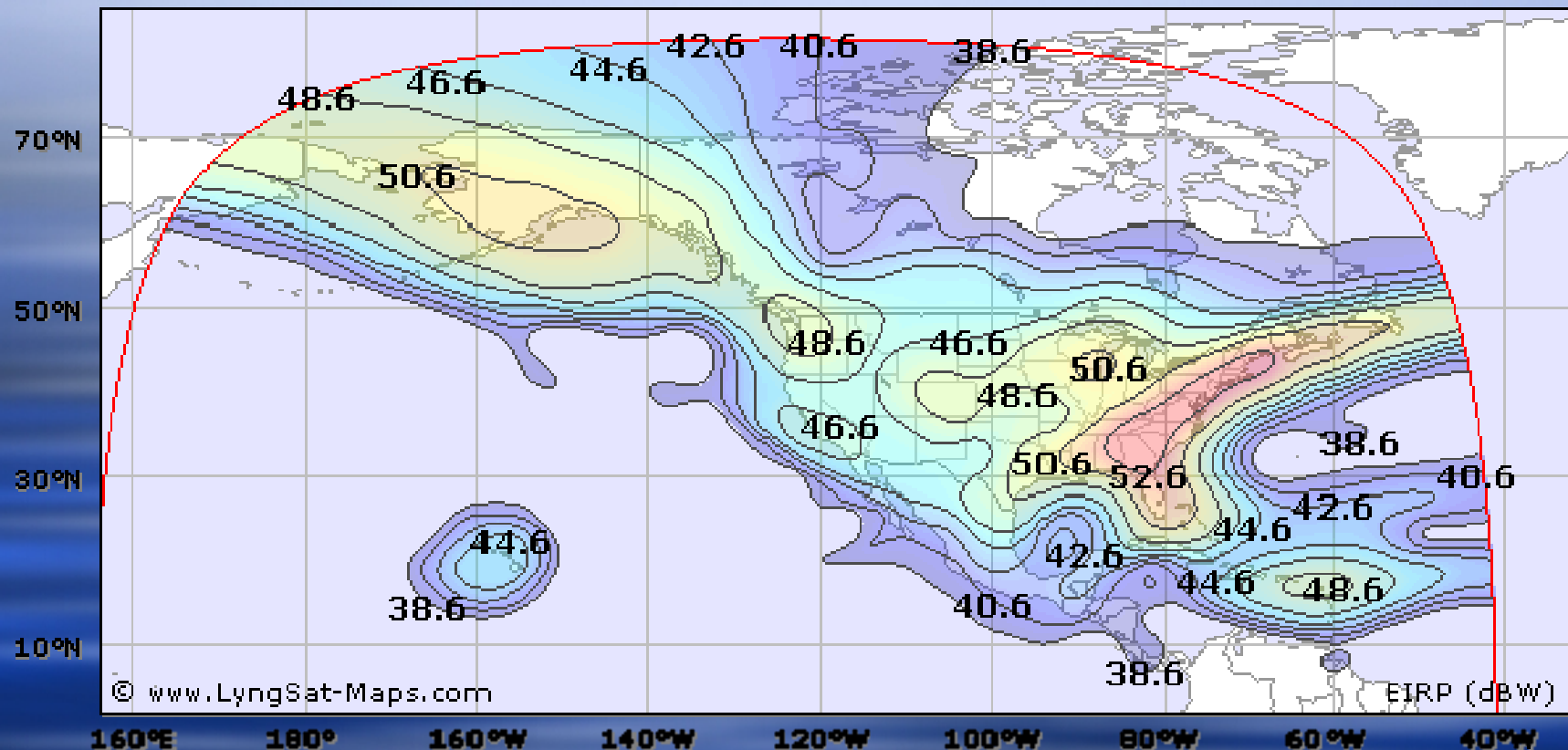
- ◆ Accelerators
 - ◆ Installation, use, policies, tuning process, etc.
- ◆ Wider coverage areas
 - ◆ GE-23, Med, IOR, Alaska, split Ku into AOR/POR?
- ◆ Wiki demo/discussion
- ◆ Tracking issues and DAC/Comtech cable
- ◆ HSN-wide parent web proxy
 - ◆ Elective, could provide shared caching, antivirus/ad filtering, blacklisting, ToS tagging for various URLs/TLDs
- ◆ Security/firewalls/DoS – Need support from HiSeasNet?
- ◆ Routing
 - ◆ Tunnel alternatives?
 - ◆ MobileIP, VPNs, etc.
- ◆ Bandwidth
 - ◆ Upgrades, shared vs. separate
- ◆ Training
 - ◆ Feedback...did it work in the long term? Do we need more?
- ◆ Policies
 - ◆ What are they? How to enforce them? Should they be the same?
- ◆ Services offered on ships (IM, web, mail, Skype, streamed data, etc)
 - ◆ Who is running what? How does it work? What does Science expect now?
- ◆ Random feedback / discussion / experiences

Reference Slides

Pacific C-band Coverage

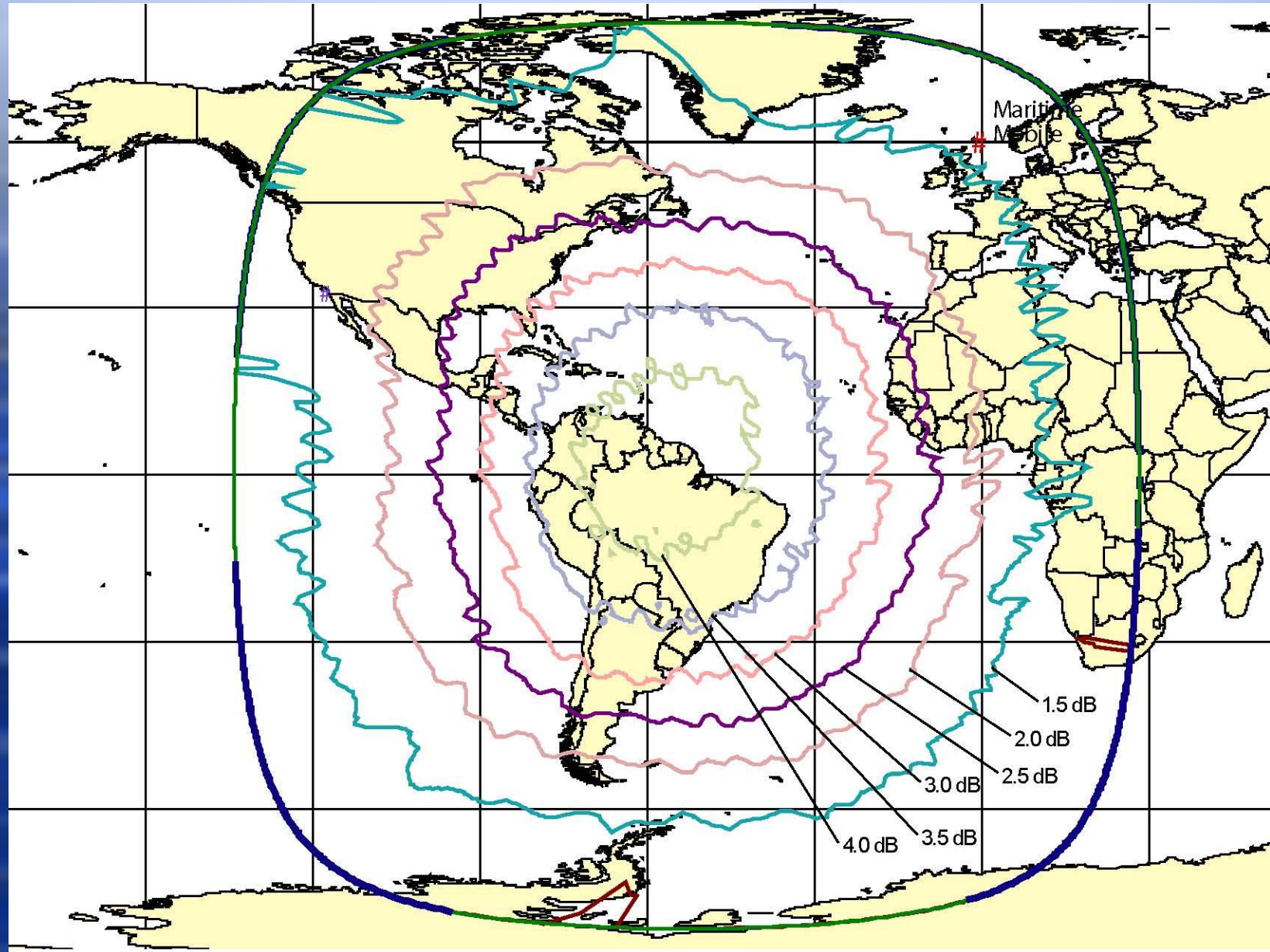


Galaxy-18 Satellite

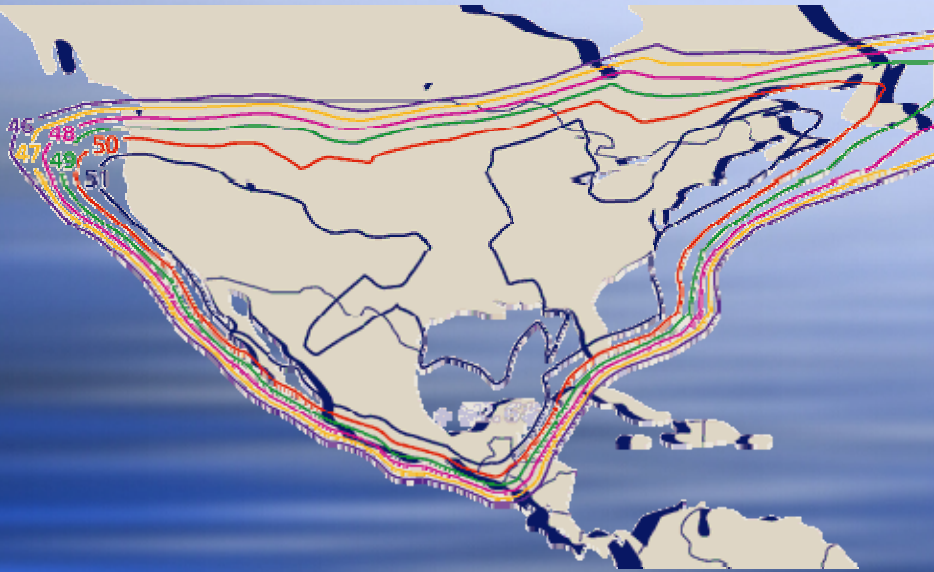


- ◆ Used quite successfully on Pt Sur (1m dish) in Gulf of Alaska in 2009
- ◆ No HiSeasNet earth station capabilities right now, would need additional Ku antenna at earth station

Atlantic/Eastern Pacific C-band

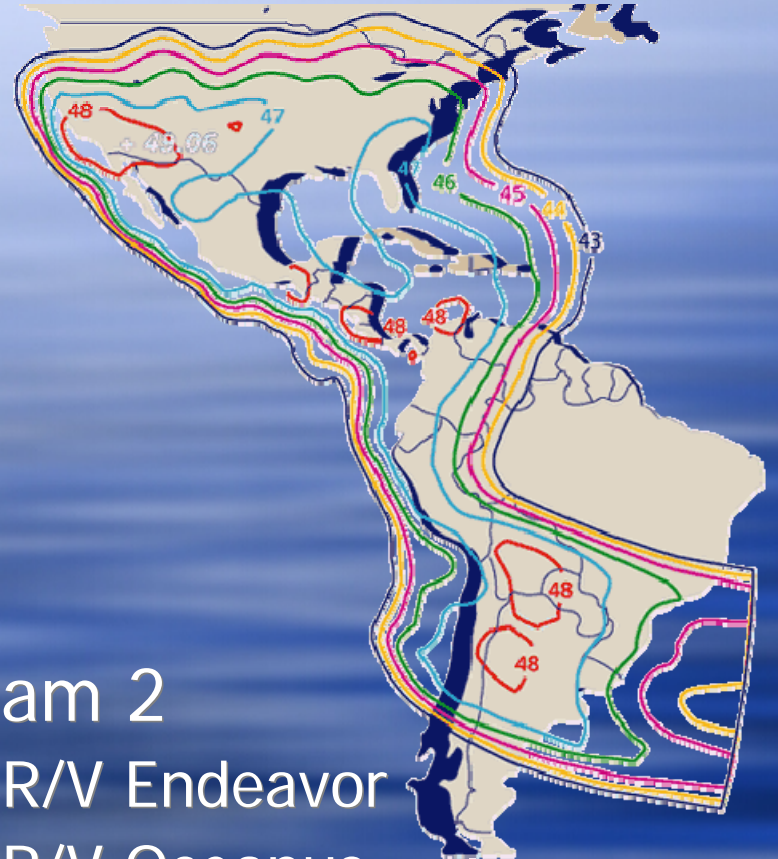


Ku-Band Coverage (SatMex5)



◆ Beam 1

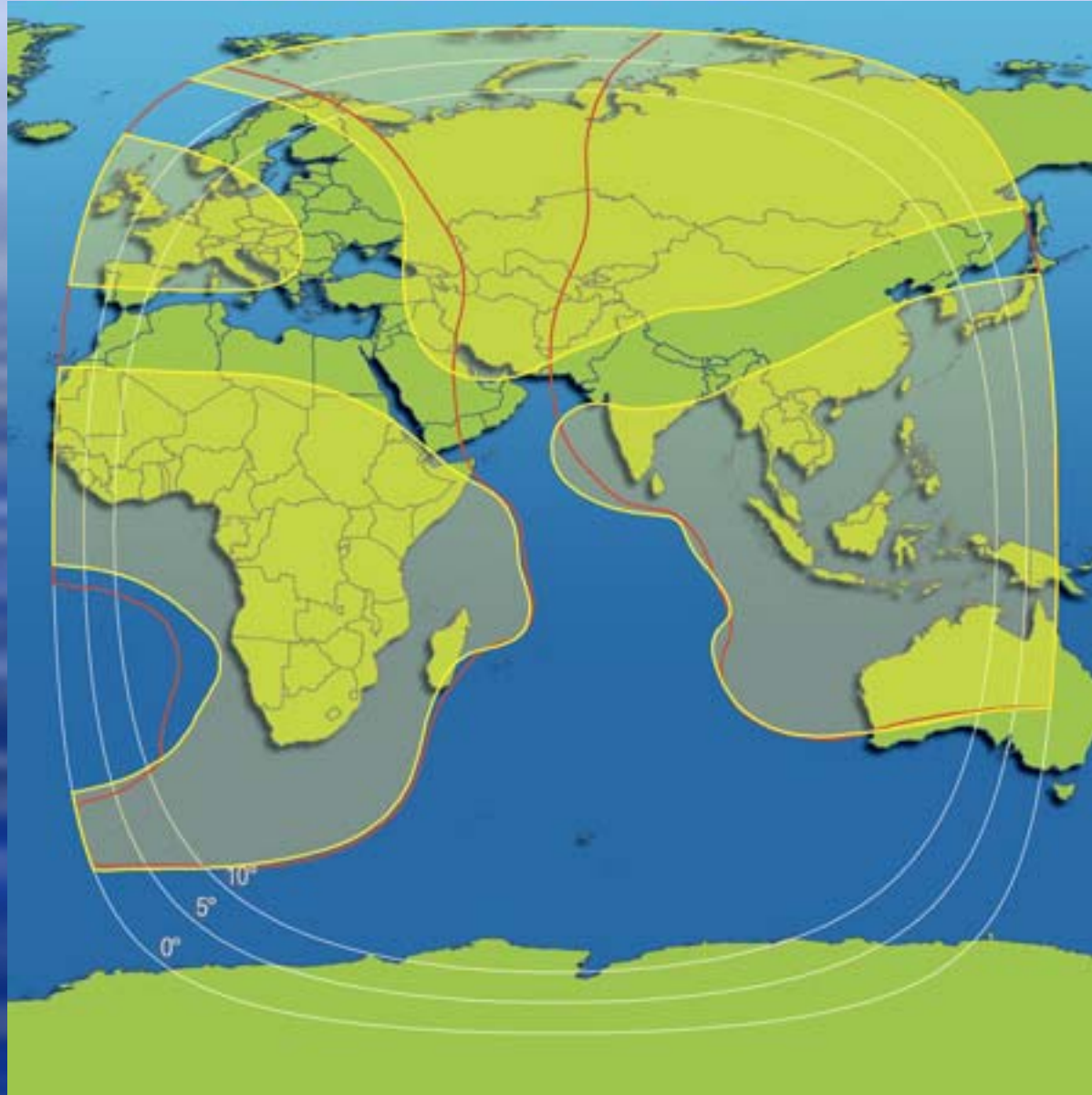
- ◆ R/V New Horizon
- ◆ R/V Point Sur
- ◆ R/V Wecoma



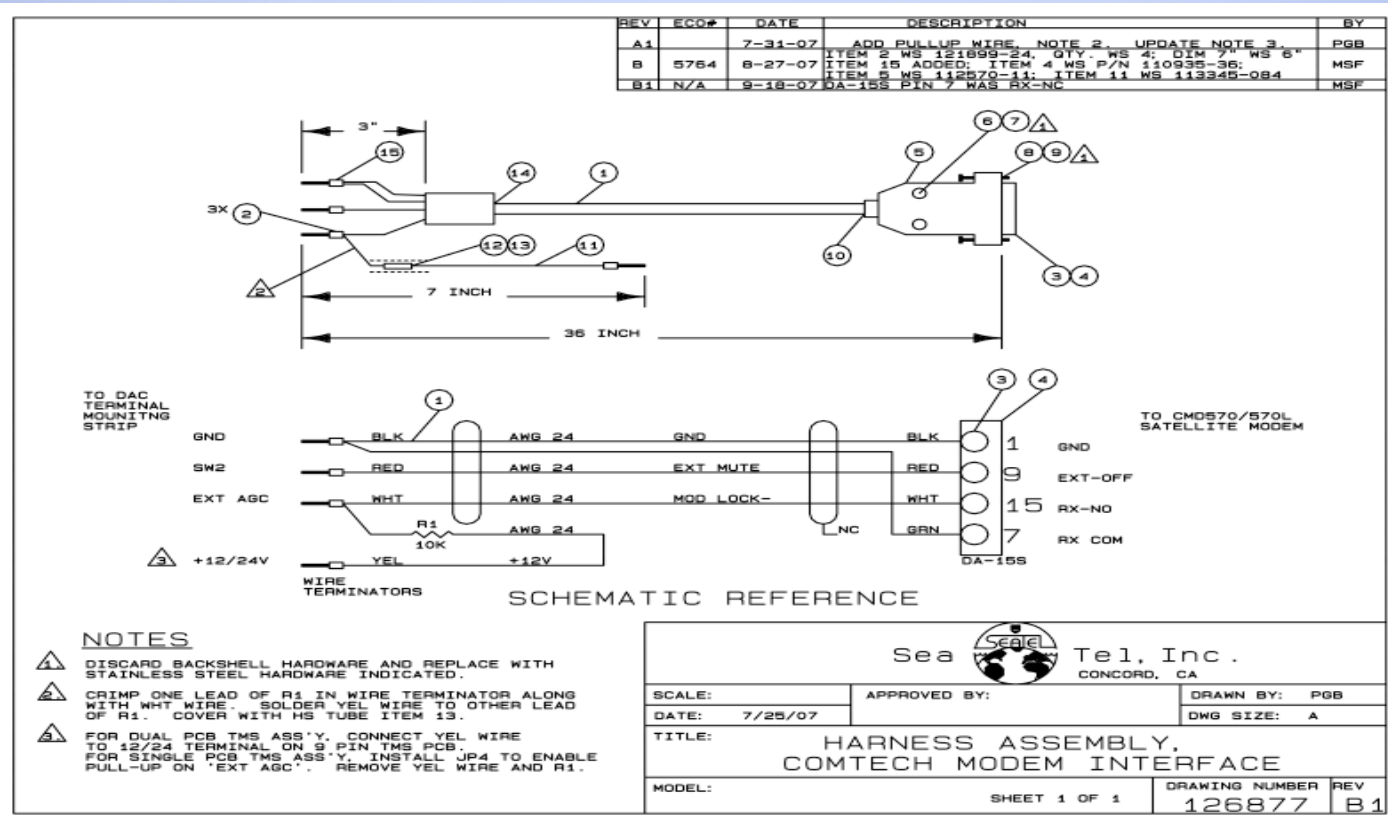
◆ Beam 2

- ◆ R/V Endeavor
- ◆ R/V Oceanus
- ◆ R/V Pelican
- ◆ R/V Walton Smith

Indian Ocean C-band

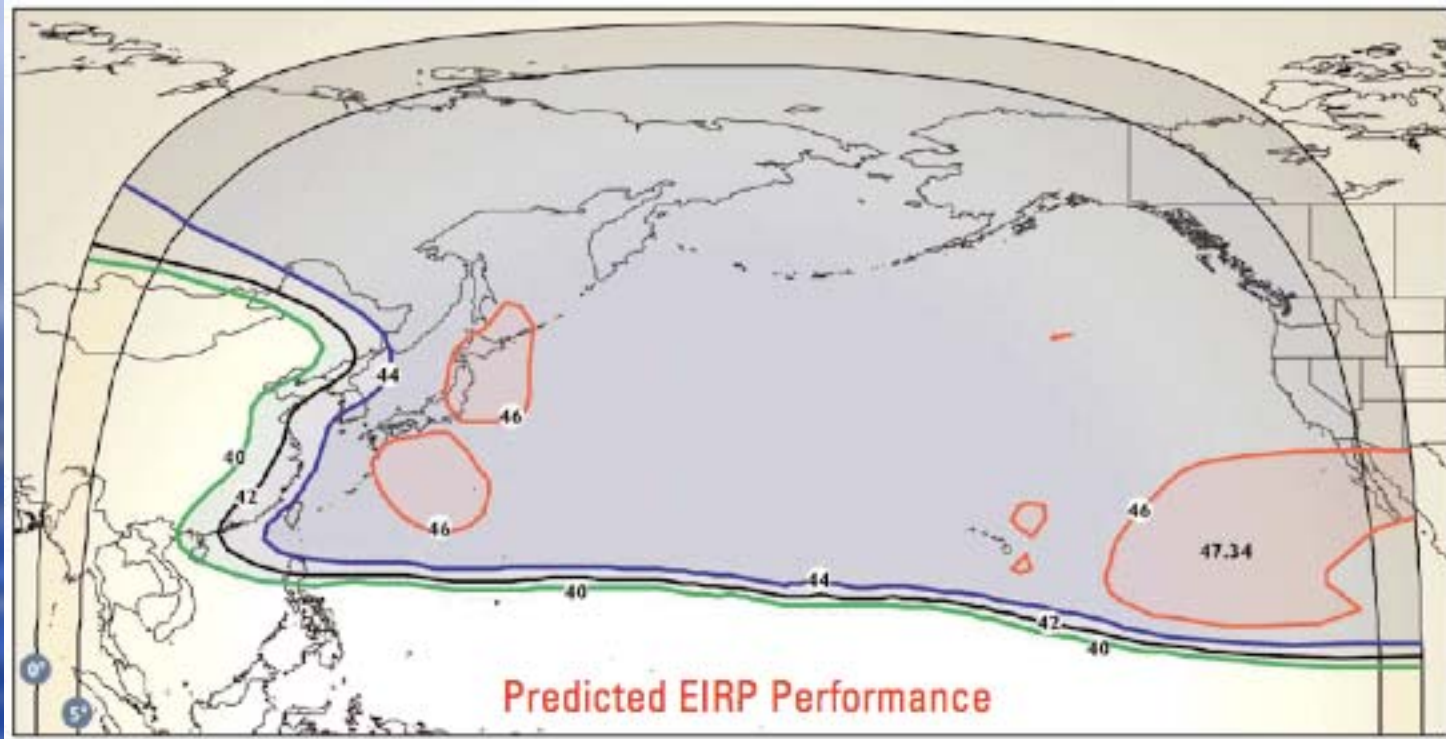


DAC/Modem Cable



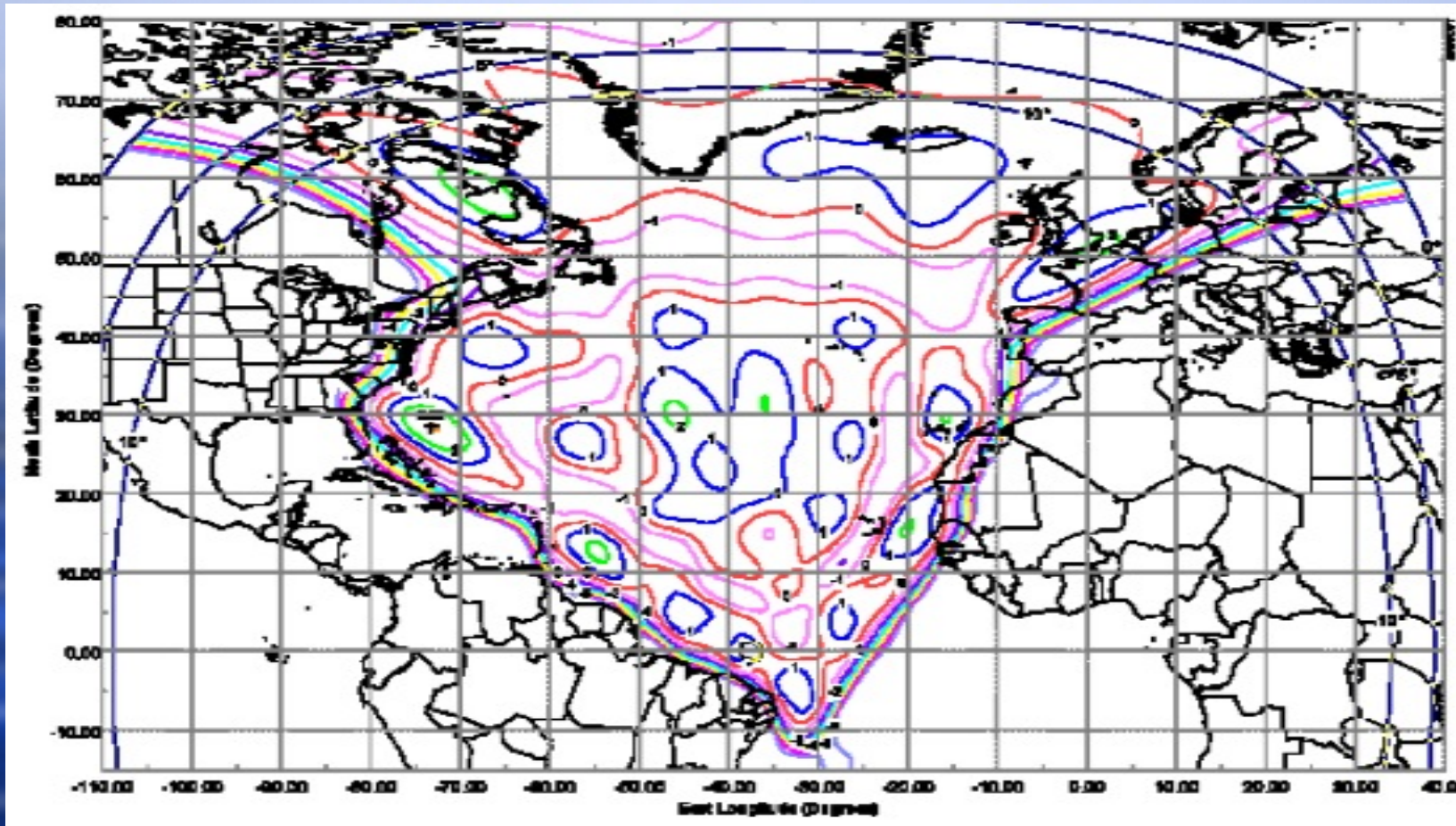
- ◆ Starting some testing with this, but havent been able to get it to work as advertised
- ◆ Schematic in manuals and on wiki

GE-23 Satellite



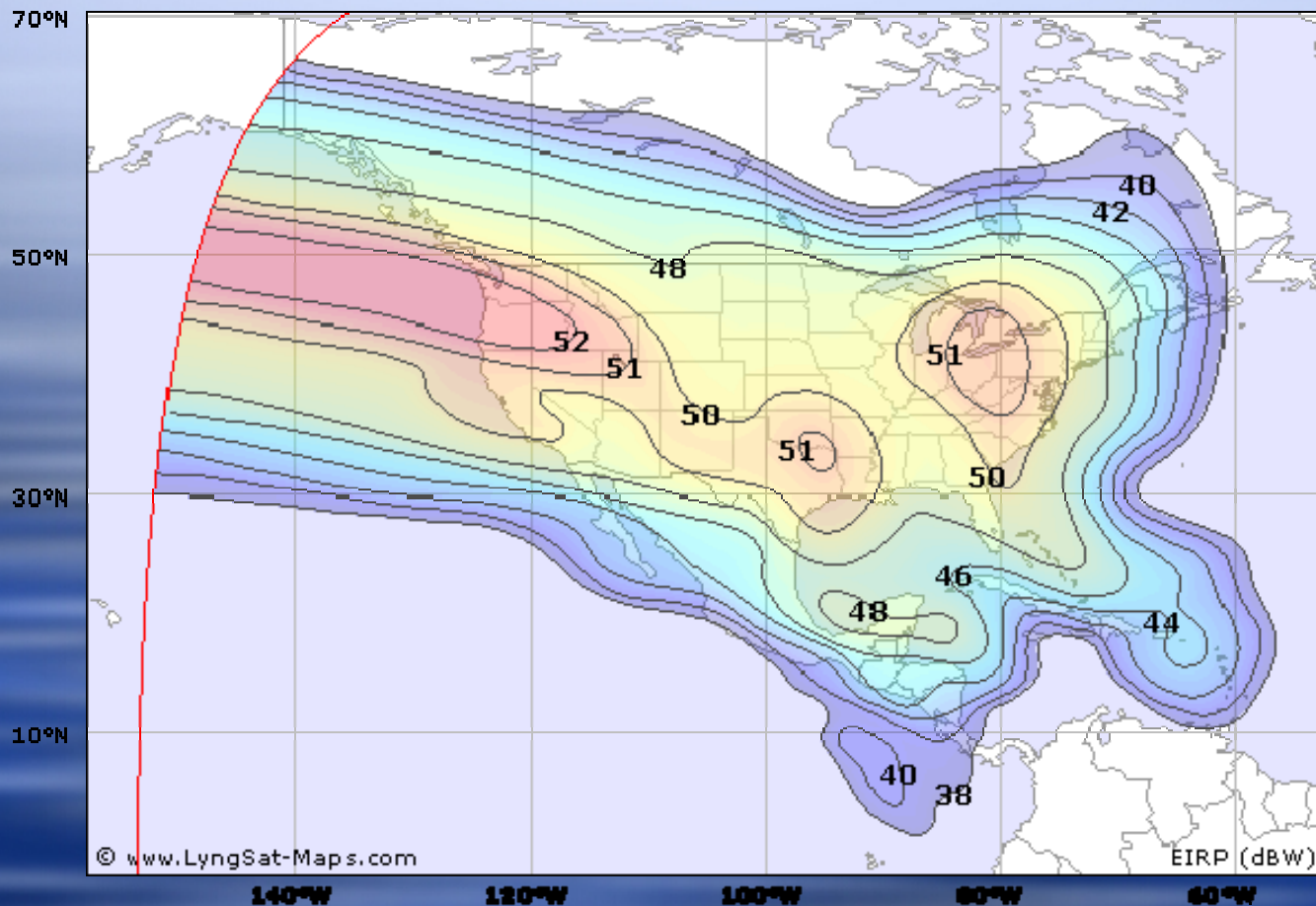
- ◆ Wider beam is weaker and requires larger 1.5m antenna
- ◆ No earth station capabilities right now
- ◆ Strange satellite, needs some hardware changes to shipboard antennas (\$2k?)
- ◆ Availability may be reduced now due to KVH use of satellite
- ◆ Low look angle in port and coastal waters

Telstar 11N



- ◆ No HSN earth station capabilities
- ◆ Sketchy in port and near shore

AMC 6



- ◆ Availability unknown
- ◆ Would require another antenna on shore
- ◆ Look angle gets sketchy at the edge

Typical Ship Network Setup

