

HiSeasNet

INTERNET FOR OCEANOGRAPHIC SHIPS AT SEA

HiSeasNet 2016 Review

**RVTEC San Diego
November 3, 2016**

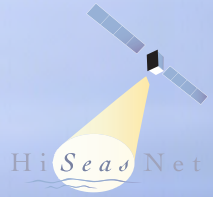
**Kevin Walsh
Scripps Institution of Oceanography
kwalsh@ucsd.edu**

2016 Transitions and Highlights



- ◆ **HiSeasNet Team Transition II**
- ◆ **Network Infrastructure Scaling**
 - ◆ Architecture expanded for dedicated AOR and POR bandwidth expansions
 - ◆ Trans-Atlantic Ku service
- ◆ **Network Operations and Support**
 - ◆ Shared situational awareness - Slack upgrade
 - ◆ InMon Traffic Sentinel implementation
 - ◆ Life cycle replacements
- ◆ **HiSeasNet Future Directions**
 - ◆ Better integration with FBB and GX
 - ◆ Standardize – reference architecture
 - ◆ Engineer for increased bandwidth
 - ◆ Manage bandwidth as an end-to-end service
 - ◆ Routine system checks during mobilization
 - ◆ Continue to baseline systems and operations

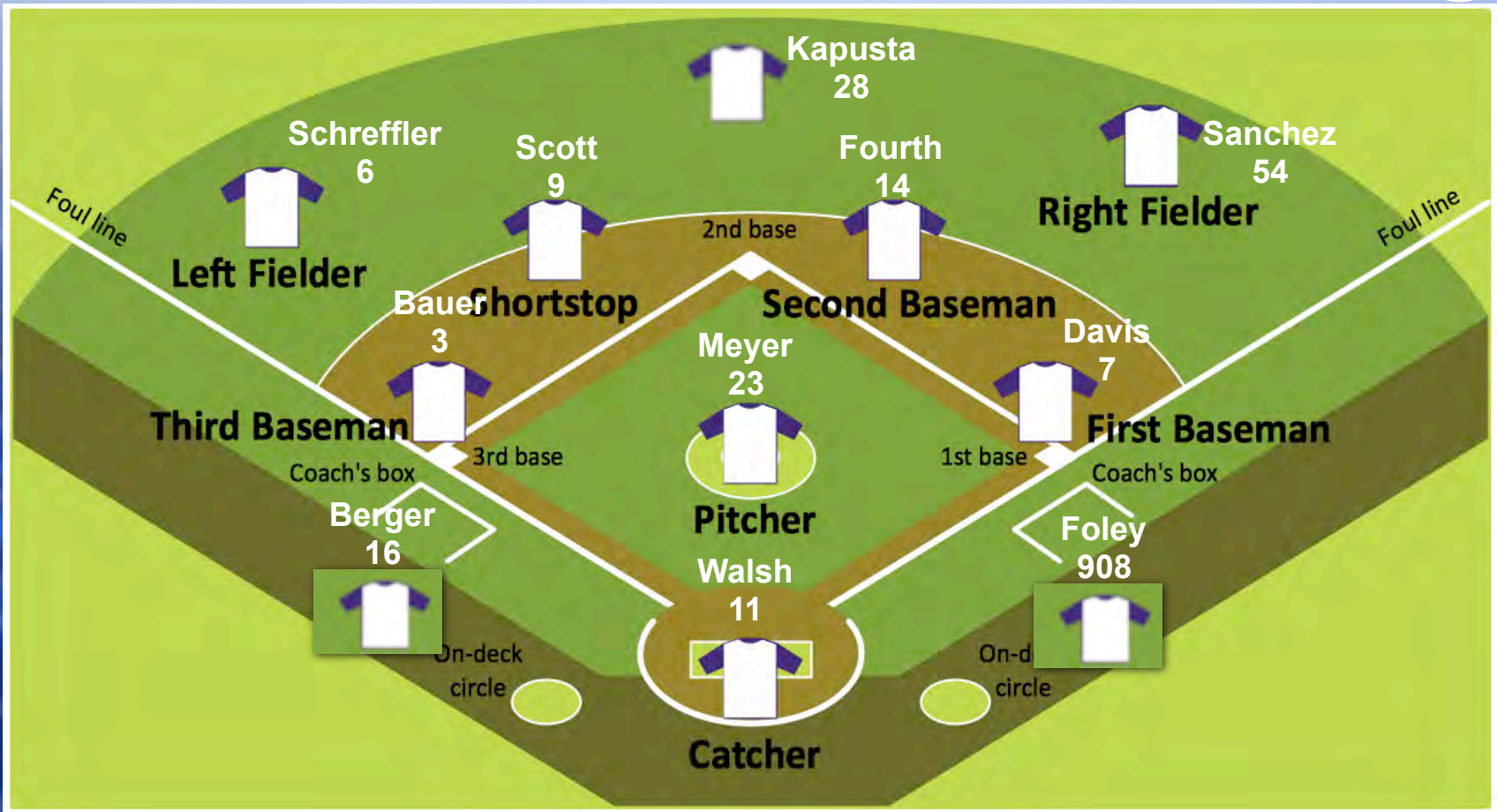
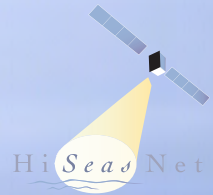
Thank You for your continued patience



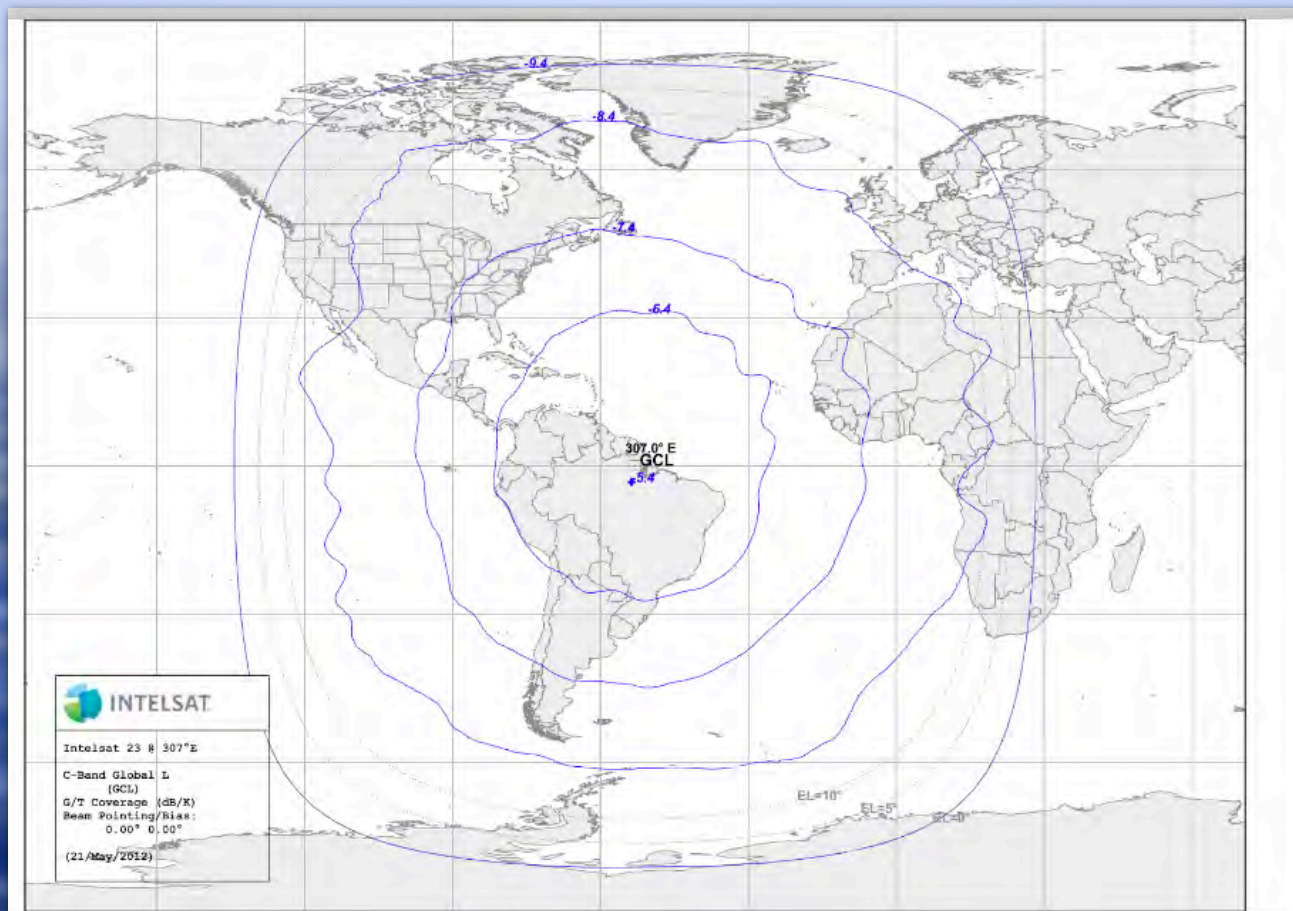
*Patience is something you admire in the driver
behind you, but not in one ahead.*

Bill McGlashen

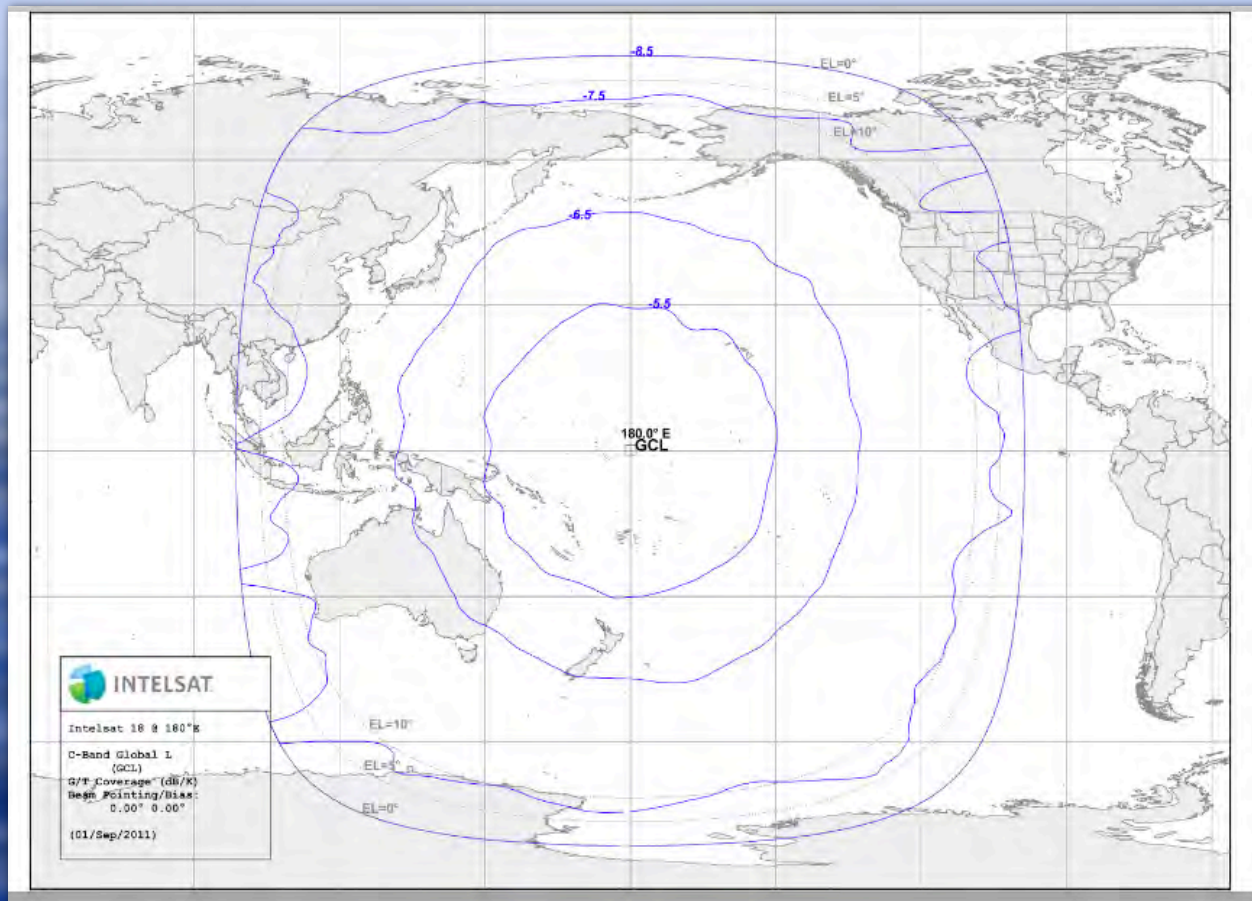
HiSeasNet Support Team



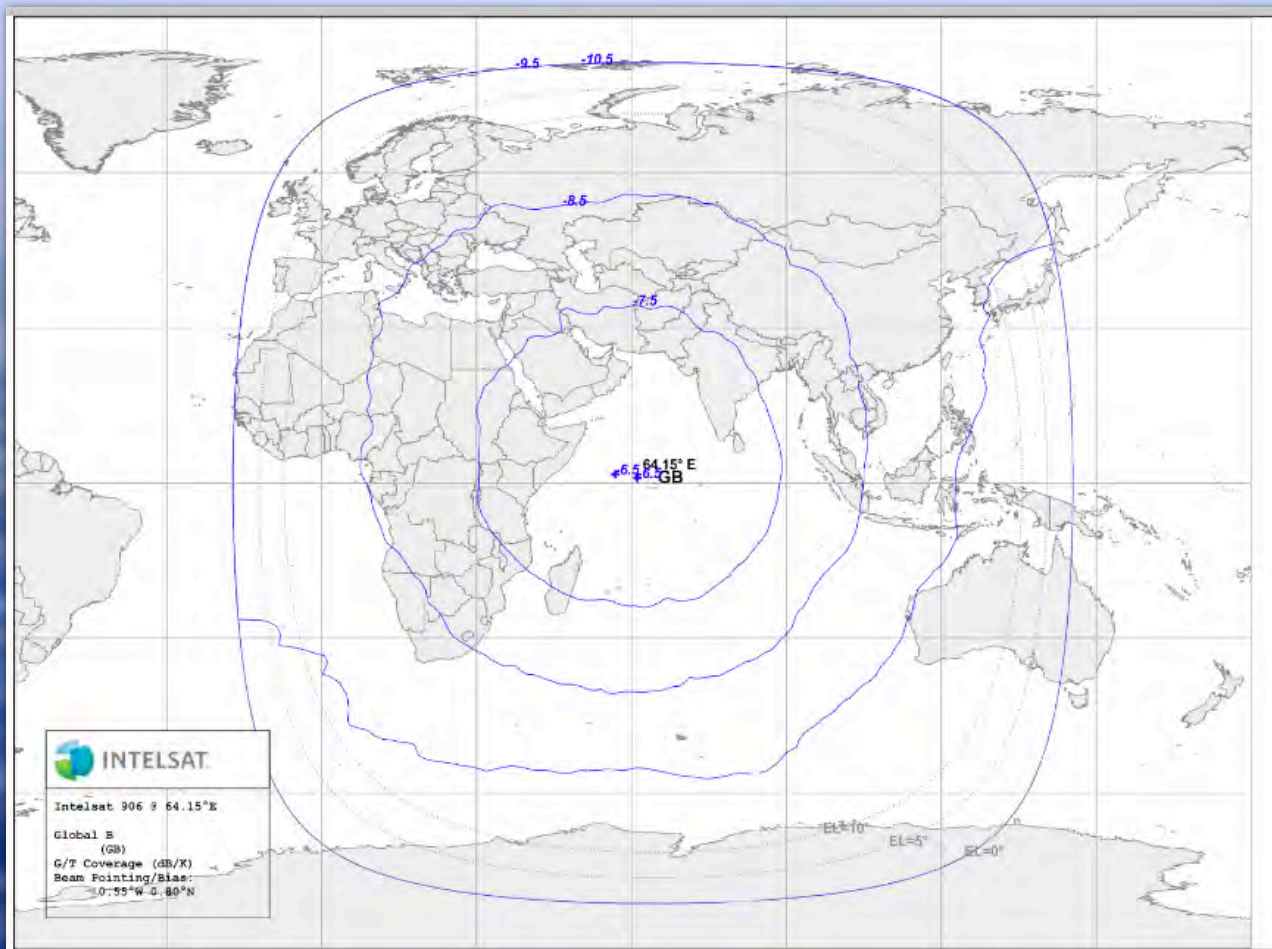
HiSeasNet Support Line (858)822-3356 hiseasnet@ucsd.edu



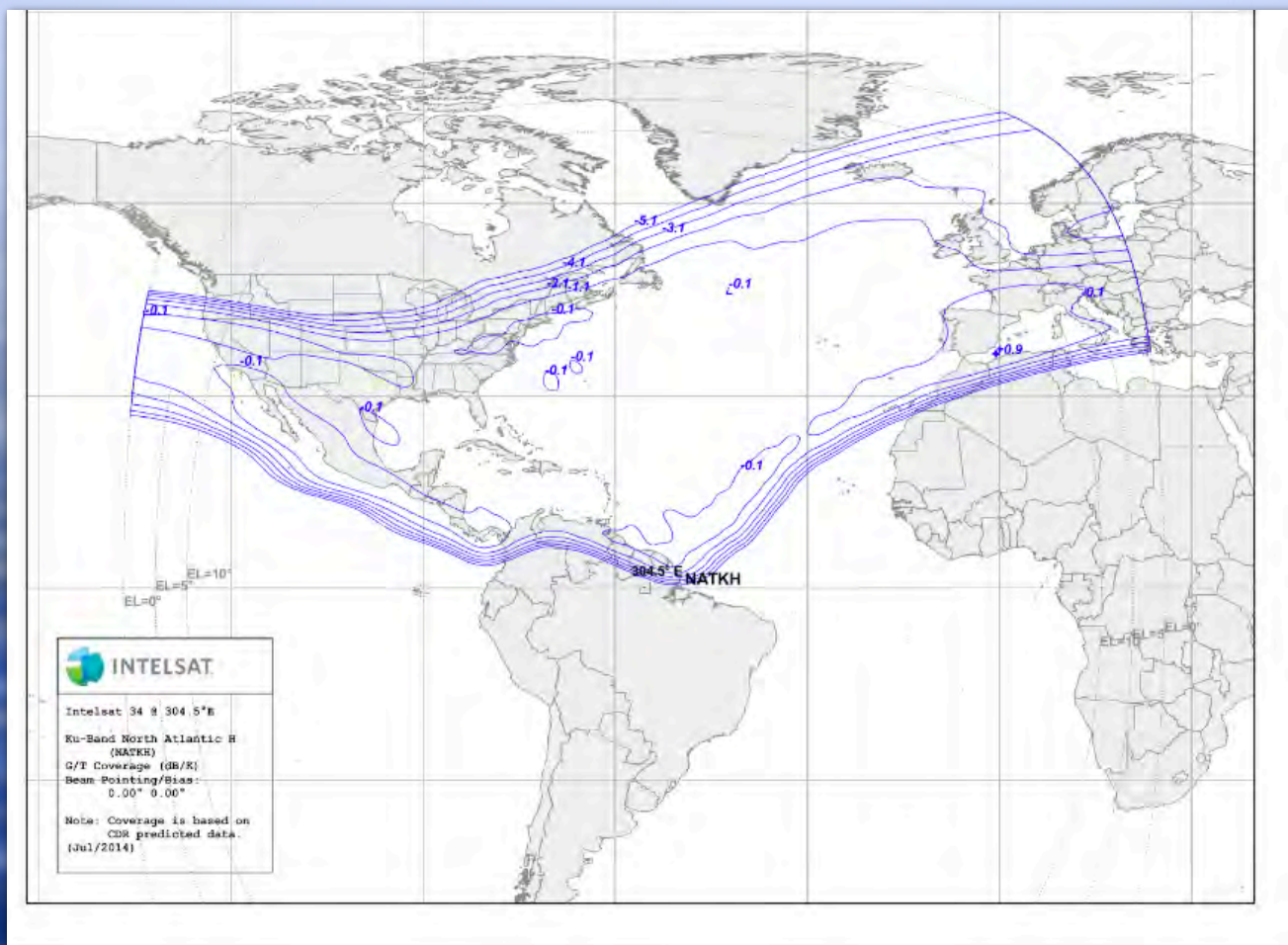
Global Atlantic C-band Beam



Global Pacific C-band Beam



Global Indian Ocean C-band Beam

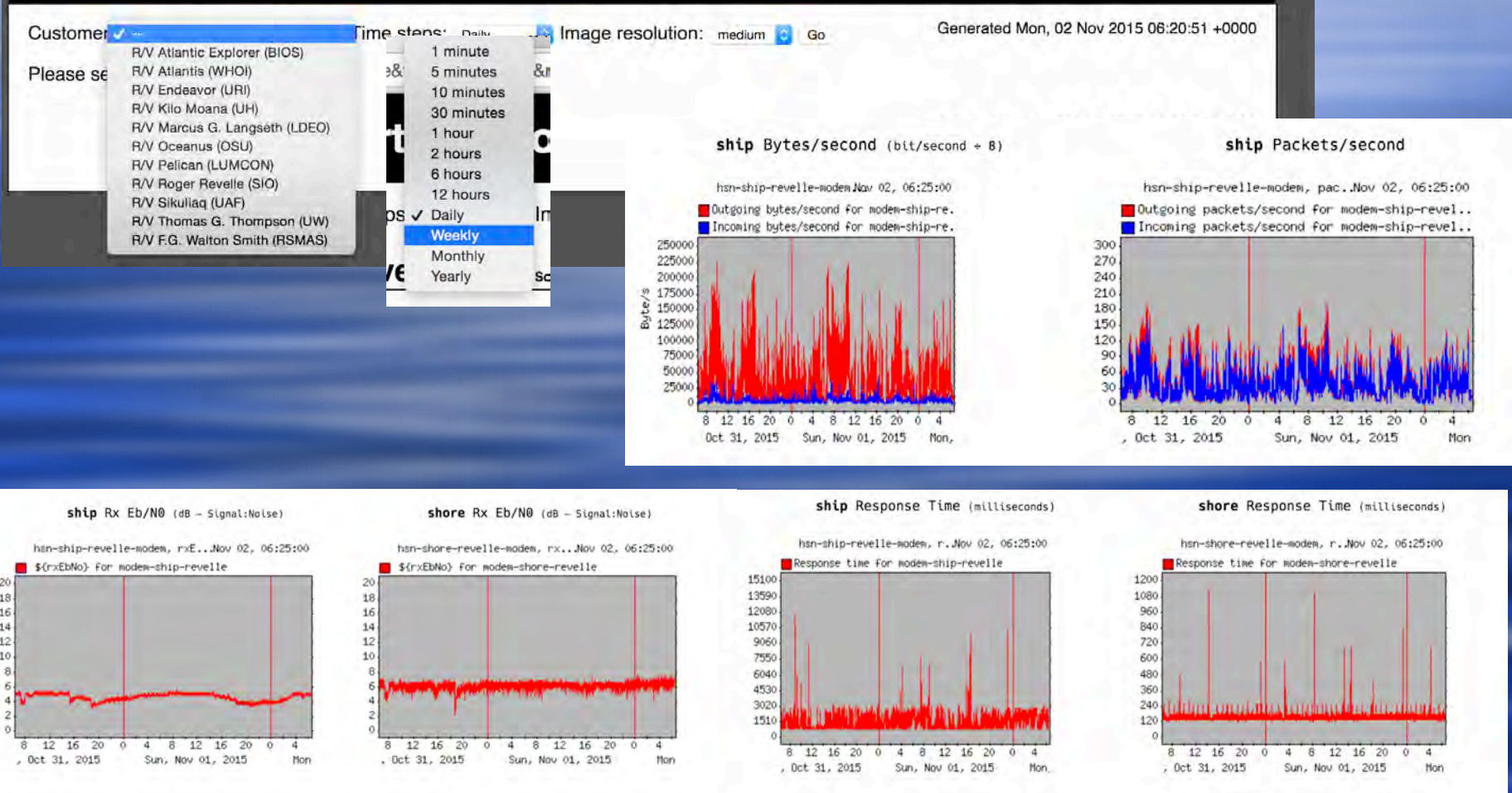


Northern Trans -Atlantic Ocean Ku-band Beam

RVTEC 2016 – San Diego



HiSeasNet Earth Station customer informational graphs



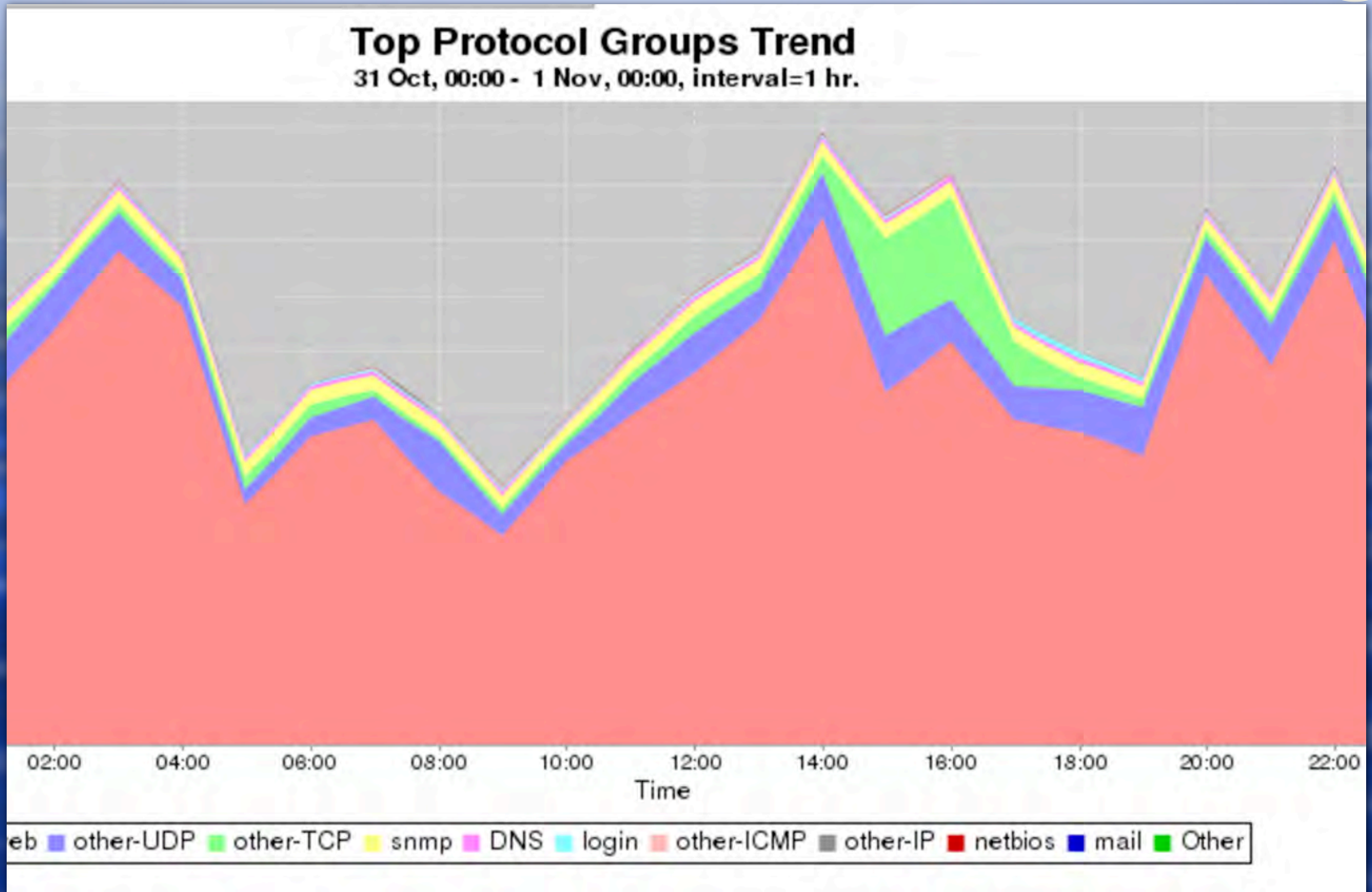
Slack - Collaboration and Situational Awareness

UNCLASSIFIED

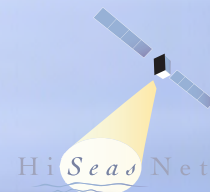


The image is a collage of several Slack interface screenshots. On the left, a vertical sidebar shows a list of channels including 'earth_station_ops', 'hsnadm_notify', and 'rvtec'. Below this is a 'DIRECT MESSAGES' section with contacts like 'slackbot', 'alant', and 'dswensen'. A central screenshot shows a bot notification from 'HiSeasNet InterMapper bot' with a warning about a device status for 'modme-ship-sikuliaq (192.168.96.198)'. The notification includes details like 'Address: 192.168.96.198', 'Probe Type: SNMP Teledyne Q-Flex satellite modem probe (port 161 SNMPv2c)', 'Device Status: Warning', 'Last Time Down: 11 hours, 19 minutes, 40 seconds', 'SysUpTime: 10 days, 1 hour, 41 minutes, 46 seconds', 'Device Condition: Rx signal below threshold. Threshold: -54.1575', and 'Counts: Down: 295, Critical: 12, Alarm: 9'. Below this is a direct message conversation between '@mhuey' and 'kwalsh' from October 5th, discussing a direct message history and XMPP client. On the right, another screenshot shows a channel view for 'earth_station_ops' with messages from 'kwalsh' and 'jmeyer' dated October 14th and 15th, discussing application icons and a DAC Remote Panel. A third screenshot at the bottom right shows a channel view for 'earth_station_ops' with messages from 'kwalsh' dated October 15th, discussing a pedestal replacement and azimuth blackout limits.

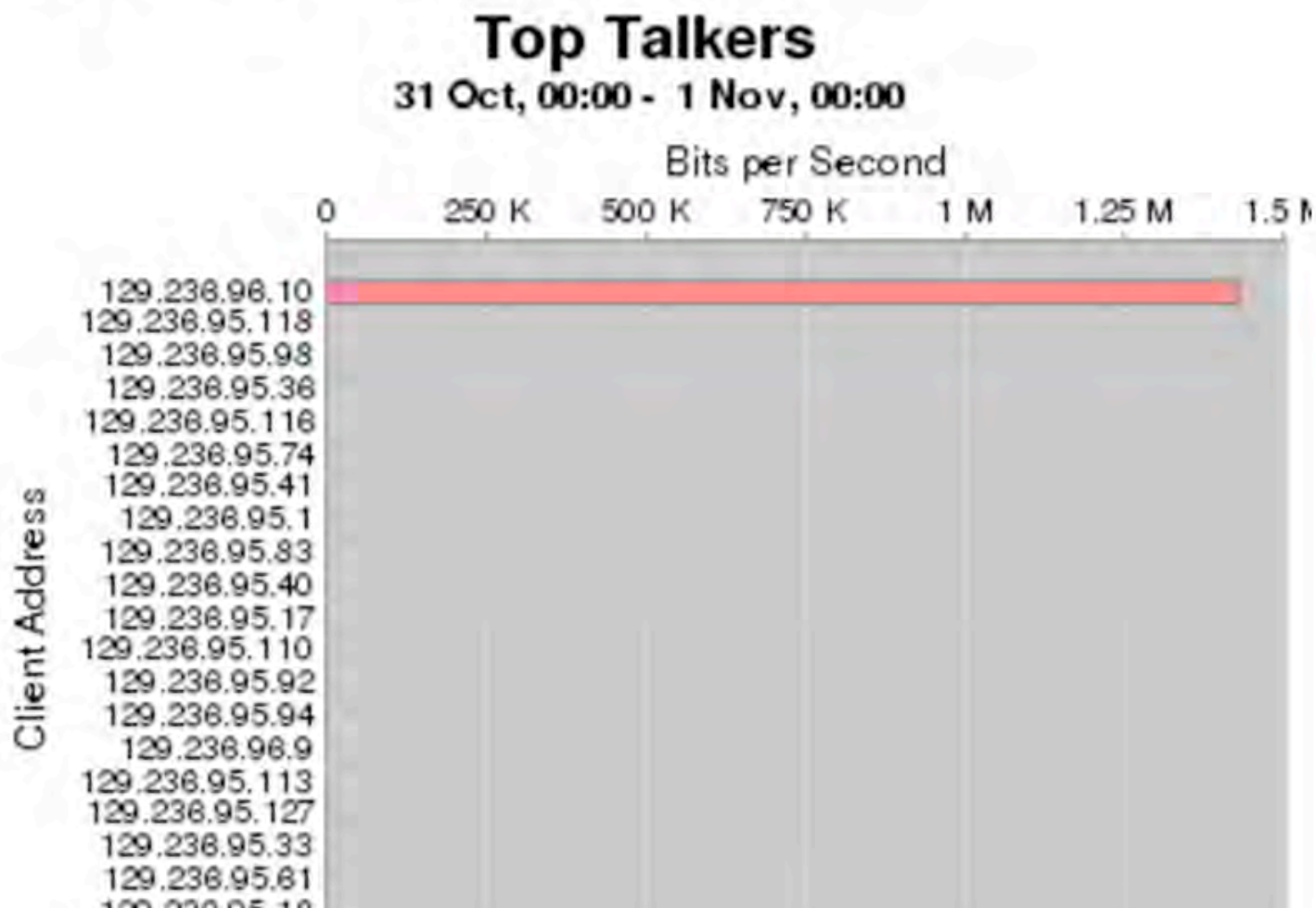
InMon Implementation



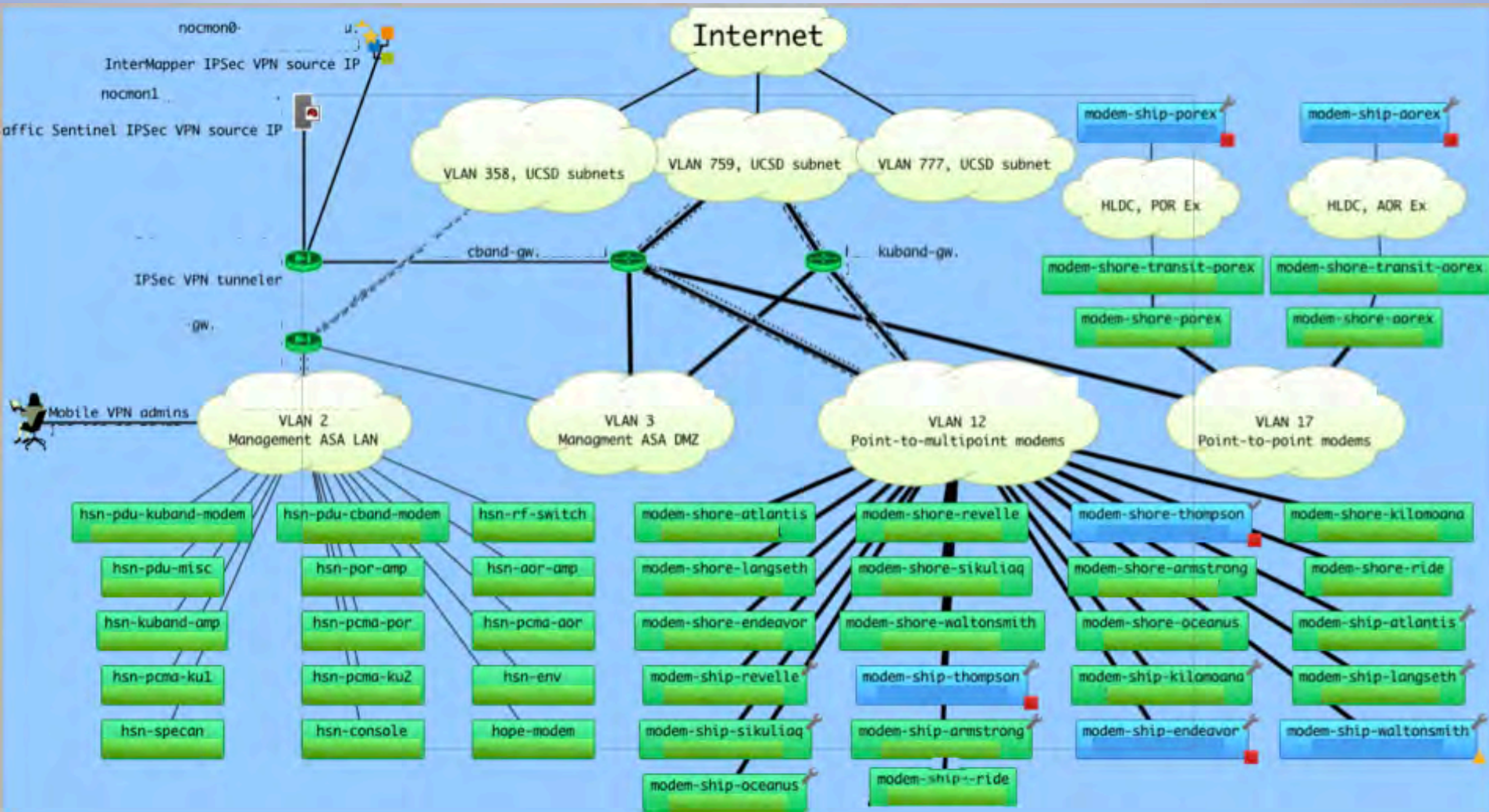
InMon— Daily Reports by Ship



Top R/V Marcus G. Langseth addresses



HiSeasNet Layer 3 Conceptual Architecture



HiSeasNet Goals for 2017



- ◆ **Matrix support with SIO STS**
- ◆ **Network Operations and Support**
 - ◆ **Life cycle replacements (modulo funding)**
 - ◆ **Radomes**
 - ◆ **LMR 600**
 - ◆ **Bigger amps**
- ◆ **HiSeasNet Future Directions**
 - ◆ **Better integration with FBB and GX**
 - ◆ **Standardize – reference architecture per class of vessel – reduction of variants**
 - ◆ **Engineer for increased bandwidth**
 - ◆ **Manage bandwidth as an end-to-end service**
 - ◆ **Routine system checks during mobilization**
 - ◆ **Continue to baseline systems and operations**

Thanks for the reason why



I am a viking of some note.
Knut's my name and here I float.
Out on the sea in a great big boat.
And I'm the one who beats the drum in
time.

To stroke the oars that drive our
galleons on.
And while we rowed we had our song.
And we had our god and it may seem
odd.
But at least there was a cause.

Caught a wind and we upped the sail.
Lost two ships when it turned to a gale.
Down went a third when she rammed
on a whale.
Though we despaired we could not fail.
And through it all we never faltered.

Late at night I lay on the deck.
Wondering why I risk my neck.
Picture myself in a sinking wreck.
Ande down I'm going not knowing why.
I just can't quite recall the reason why.

It's such a drag to carry on
*But there was a cause, but there was a
cause. But there was a reason.
Reason*

If you like I'll be your viking.
Sit you down to a nordic meal.
Give you strength that you might wield.
A viking sword and a viking shield.
And off well sail in mighty ships of
yore.
Perhaps we shouldn't let our hands get
sore.
We need someone to pull the oars.
And to do the chores.

*So we need a cause, we need a reason,
reason why*

The "Viking Song"
Todd Rundgren
Something/Anything 1972