



NASA Status for Beacon Manufacturer's Workshop

21 May 2010

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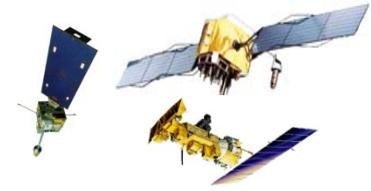
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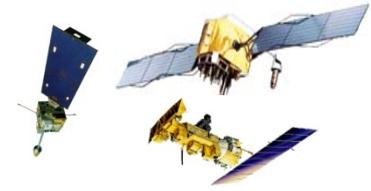
Topics



- **SARLAB**
- **GOES-P testing**
- **DASS**
- **Beacon spec work**
- **Battery Work**



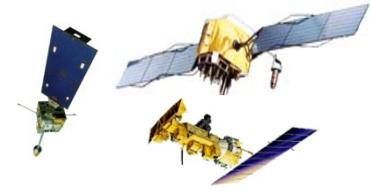
SARLab



- **SARLAB is the facility that replaced the old SEDL satellite test site and also houses the DASS Proof of Concept ground station.**
- **NASA has a maintenance contract for the LUTS and Spirent GPS Simulator**
- **NASA installed 406 receive capability on nearby col tower for calibration, antenna pattern measuring purposes**
- **Temporary T007 compliant antenna test facility taken down. Permanent facility under consideration**



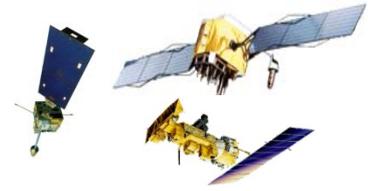
GOES-P Testing



- Sarlab is conducting the post launch testing of the NOAA GOES-P spacecraft



DASS Status



- **Nine DASS repeater equipped GPS satellites in orbit – no change from last year**
- **Agreement with Air Force to get DASS on Block 3B .**
- **Proof of Concept Ground Station**
 - Vendor has completed documentation-In process of contract closeout
 - Pursuing a follow on contract with TSI for maintenance and upgrades- expect contract this summer



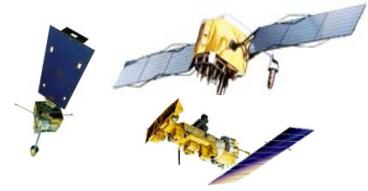
Beacon Work



- **Beacon Spec revision activities**
 - submitted section on GPS simulator requirement for PLB spec Annex G
 - EPIRB spec revision in process
- **Bit rate testing**
 - In March 2010 ran tests using SARLab, NOAA and TSI GEOLUTS and a beacon simulator transmitting through GOES-12 of various beacon bit rates from 396 to 404 bps and C/No's from 37 to 24. Data being analyzed
 - Developed MATLAB method to measure bit rate variations within a burst.
 - Preparing presentations for Sept 2010 Experts' Working Group on Next Generation Beacon Requirements
- **Beacon Coding study**
 - TSI completed study on using CCSDS specified convolutional and Reed –Solomon coding schemes. Simulation results did not show any improvement over existing BCH coding. Reason probably has to do with code's suitability for small blocks.
 - Preparing a paper for the Sept 2009 Experts' Working Group on Next Generation Beacon Requirements



Li Ion Battery work



- **NASA tasked by interagency Joint Working Group to chart a path forward given the new C/S interim Li Ion rechargeable type approval procedure.**
- **Investigated batteries with various battery experts from DoD and NASA as well as interagency working groups**
- **Found many problems with the interim procedure**
- **Prepared presentations for SC-110, BMW and JC-24**