Status of Aquarius/SAC-D

David M. Le Vine
Aquarius Deputy PI
Goddard Space Flight Center
Greenbelt, MD  20901
Aquarius/SAC-D

- **Instrument**
  - L-band
  - Radiometer and Radar
  - 3 Beam Pushbroom
  - Polarimetric

- **Mission**
  - Sun-synch orbit 6 am/6pm
  - Night time look
  - 675 km Alt; 7 day revisit

- **Science**
  - Global maps of Sea Surface Salinity
  - Accuracy: 0.2 psu; 150 km; monthly
  - Seasonal and annual variations

- **Partnership**
  - CONAE (Argentina): Spacecraft (SAC-D)
  - NASA/GSFC: L-band radiometer
  - NASA/JPL: L-band scatterometer
# Aquarius/SAC-D Instruments

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Objective</th>
<th>Description</th>
<th>Resolution</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aquarius</td>
<td>Sea Surface Salinity (SSS)</td>
<td>Radiometer (1.4 GHz) Radar (1.26 GHz)</td>
<td>76x 94 km 84x120 km 96x156 km</td>
<td>NASA</td>
</tr>
<tr>
<td>MWR: Microwave Radiometer</td>
<td>Precipitation; Wind speed; sea ice</td>
<td>23.8 and 37 GHz 390 km swath</td>
<td>40 km</td>
<td>CONAE</td>
</tr>
<tr>
<td>NIRST: New Infrared Sensor Technology</td>
<td>Fires, Sea Surface Temp</td>
<td>3.8, 10.7, 11.7 μm 180 km swath</td>
<td>350 m</td>
<td>CONAE</td>
</tr>
<tr>
<td>HSC: High Sensitivity Camera</td>
<td>Urban lights; Fire detection</td>
<td>450-900 μm 700 km swath</td>
<td>200-300 m</td>
<td>CONAE</td>
</tr>
<tr>
<td>DCS: Data collection System</td>
<td>Environmental data collection</td>
<td>401.55 MHz uplink</td>
<td>2 contact/day 200 platforms</td>
<td>CONAE</td>
</tr>
<tr>
<td>ROSA: Radio Occultation Sounder for Atmosphere</td>
<td>Atmospheric Temp &amp; humidity profiles</td>
<td>GPS occultation</td>
<td>300 km</td>
<td>ASI (Italy)</td>
</tr>
<tr>
<td>CARMEN 1: ICARE &amp; SODAD</td>
<td>Effects of Radiation space μ-particles &amp; debris</td>
<td>Si/LI detectors and SMOS sensors</td>
<td></td>
<td>CNES (France)</td>
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</tbody>
</table>
Ready to Go!
Launch: June 9 from VAFB

Aquarius/SAC-D ready to ship to VAFB after environmental testing (March, 2011).

Assembly of Delta-II rocket, VAFB
Information

• General Information:
  – http://aquarius.gsfc.nasa.gov/

• Specific Information and Data Products:
  – http://oceancolor.gsfc.nasa.gov/AQUARIUS/

• Media Releases
  – http://www.nasa.gov/topics/earth

• Pictures:
  – http://mediaarchive.ksc.nasa.gov/search.cfm?cat=228