



Overview of Wind Scatterometer Projects at JPL

18 May 2009
Rob Gaston



National Aeronautics and Space
Administration
Jet Propulsion Laboratory
California Institute of Technology



Thanks to a Fantastic QuikSCAT Mission Team!

- The mission continues to meet its level 1 requirements for data product completeness, content, accuracy and timeliness
 - Accuracy: exceeds requirements
 - 90% global coverage daily
 - Available to forecasters within 3 hours: better than 85%
 - ***Total science data return: 99.2%***



Thanks to a Fantastic QuikSCAT Mission Team!

- The mission continues to meet its level 1 requirements for data product completeness, content, accuracy and timeliness
 - Accuracy: exceeds requirements
 - 90% global coverage daily
 - Available to forecasters within 3 hours: better than 85%
 - **Total science data return: 99.2%**





Thanks to a Fantastic QuikSCAT Mission Team!

- The mission continues to meet its level 1 requirements for data product completeness, content, accuracy and timeliness
 - Accuracy: exceeds requirements
 - 90% global coverage daily
 - Available to forecasters within 3 hours: better than 85%
 - **Total science data return: 99.2%**

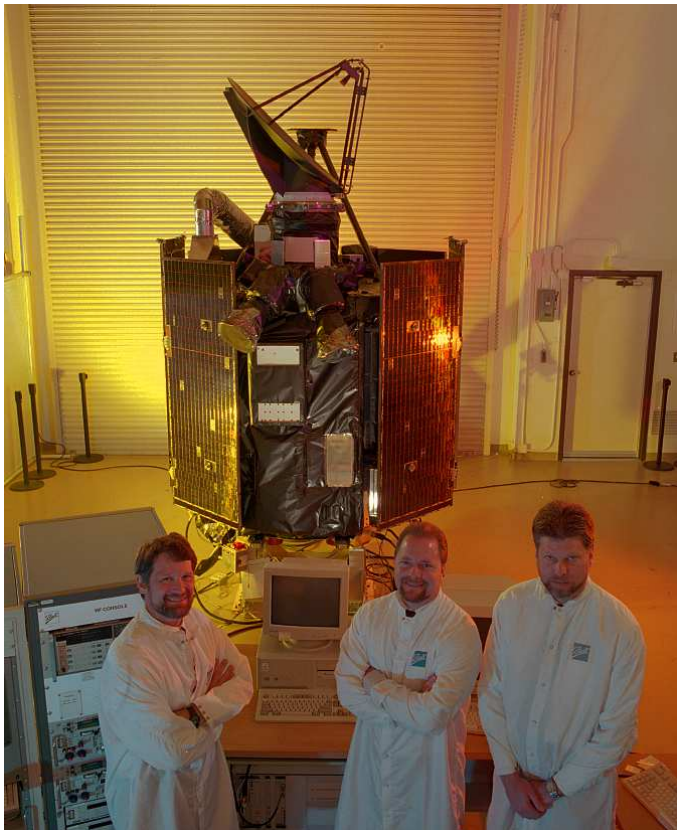




National Aeronautics and Space
Administration
Jet Propulsion Laboratory
California Institute of Technology

Thanks to a Fantastic QuikSCAT Mission Team!

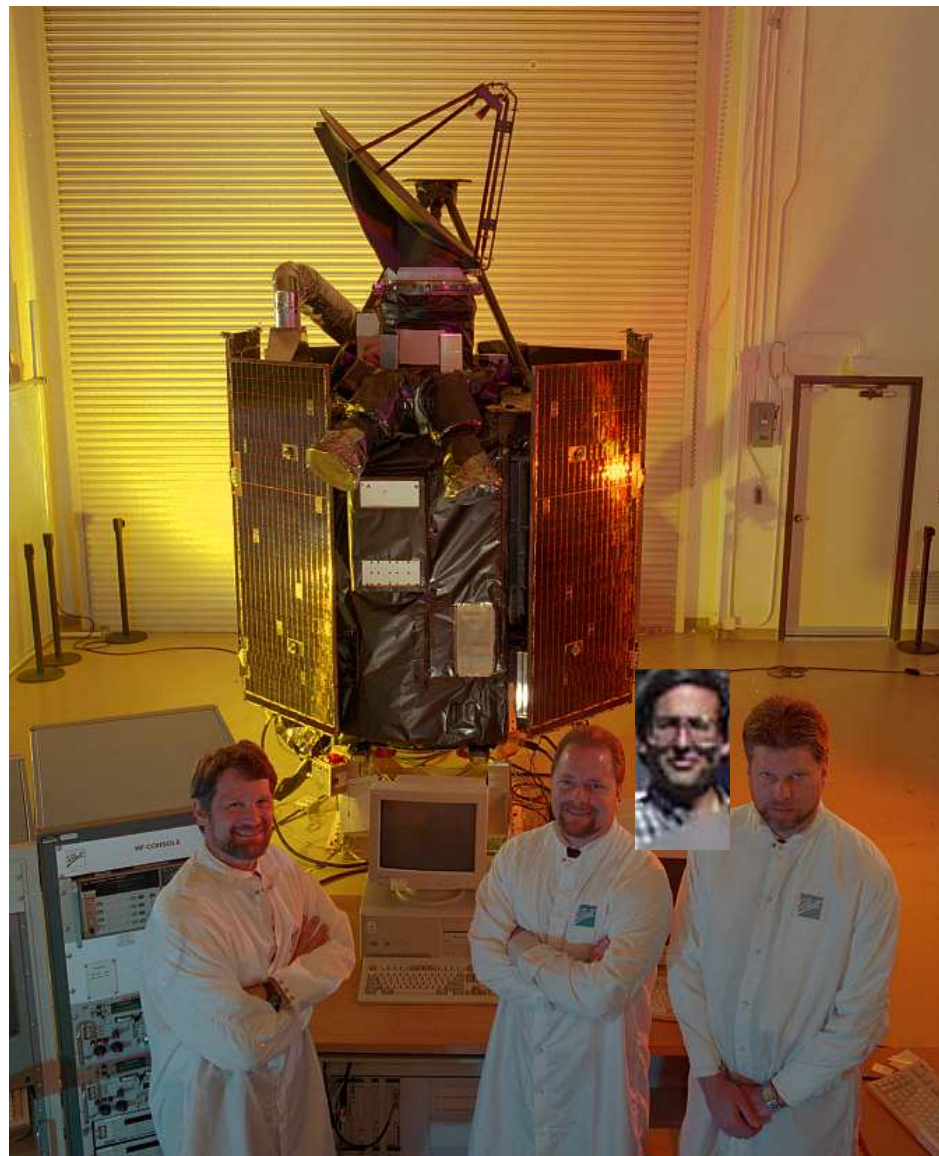
- The mission continues to meet its level 1 requirements for data product completeness, content, accuracy and timeliness
 - Accuracy: exceeds requirements
 - 90% global coverage daily
 - Available to forecasters within 3 hours: better than 85%
 - **Total science data return: 99.2%**





National Aeronautics and Space
Administration
Jet Propulsion Laboratory
California Institute of Technology

Thanks to a Fantastic QuikSCAT Mission Team!





- Loss of redundant systems in recent years is becoming increasingly significant
 - Primary science telemetry transmitter failed 7/2006
 - Redundant GPS unit failed 3/2007
 - Spare battery cell was connected 12/2007
 - Redundant power control unit failed 11/2008
- Other age factors
 - Friction in the scatterometer antenna bearings has increased dramatically over the past couple of years
- Hardware failures are generally becoming more frequent
- The mission operations team is doing an outstanding job, but a catastrophic failure is a possibility at anytime
 - Loss of system redundancy means there are more single point failures capable of ending the mission

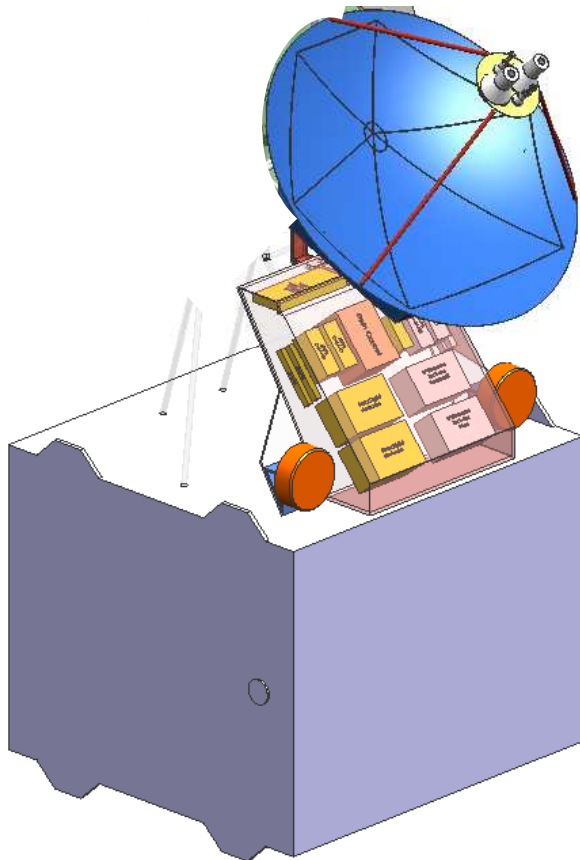


Mitigation Strategies in case of QuikSCAT Failure

- The project places a high priority on the cross calibration between QuikSCAT and ASCAT and is working toward the release in 2011 of a consistently calibrated joint data product with uniform resolution.
- The project provides support to NASA and NOAA in their efforts to obtain access to the data from the Oceansat II (ISRO) and HY-2 (CNSA) scatterometers and will perform the necessary cross calibration when data is available.
 - ◆ Data products consistent with QuikSCAT will be developed and released when possible.
- The project is working with both NASA and NOAA to develop a follow-on instrument featuring Ku and C-band scatterometers that could be launched on JAXA's GCOM-W2 mission planned for January 2016.
 - ◆ Cross calibrating QuikSCAT with other sensors provides the means to achieve continuity in the climate data record until this mission (or another US follow-on to QuikSCAT) is launched



Dual Frequency Scatterometer/GCOM-W2



- NOAA and JAXA partnership on the GCOM-W2 mission has continued moving forward
 - The 3rd and 4th technical meetings on the scatterometer were held in January and April
 - JAXA and NOAA have signed a letter of intent
- JAXA, NOAA, and NASA have established the GCOM-W2 Research and Operational Users Working Group (ROUWG)
 - First meeting was held in Tokyo in April
- NASA and NOAA together are funding the DFS concept development this year
 - JAXA's Mission Definition Review is planned for December 2009

