

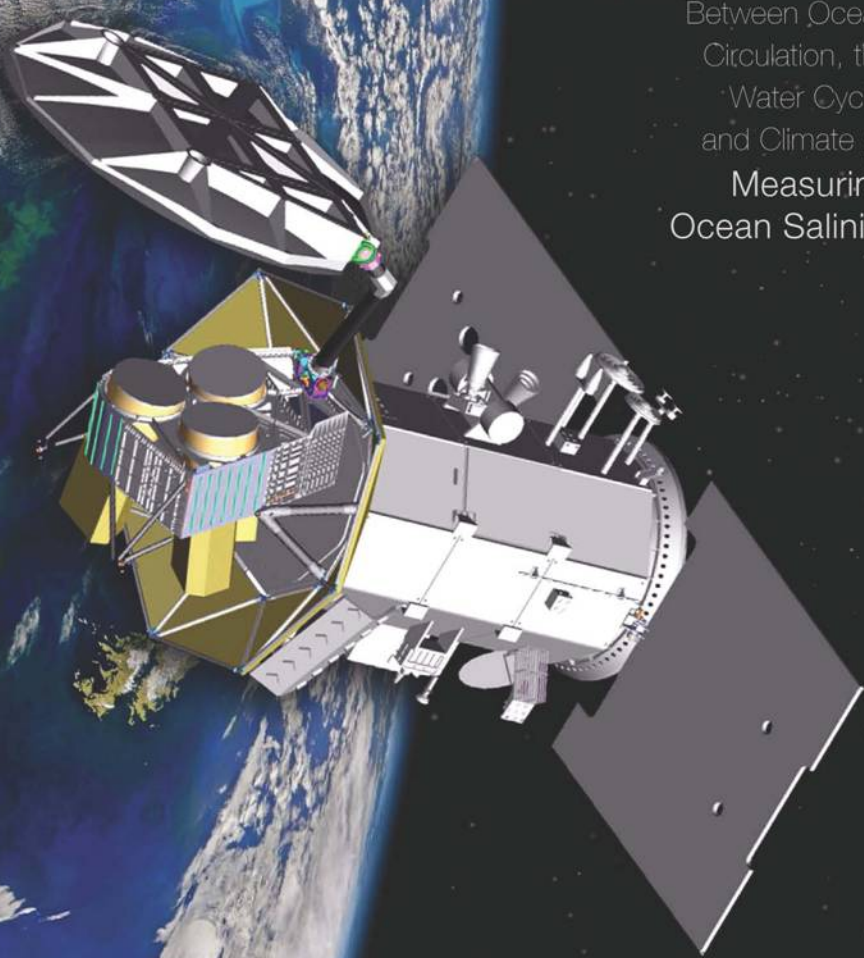
National Aeronautics and Space Administration

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



Aquarius Cal/Val Workshop

Understanding
the Interaction
Between Ocean
Circulation, the
Water Cycle,
and Climate by
Measuring
Ocean Salinity

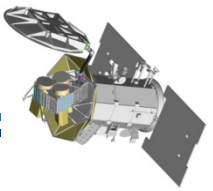


Aquarius/SAC-D

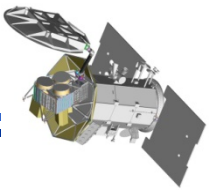
March 26-28, 2012

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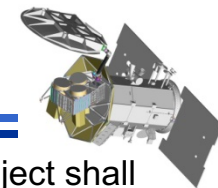
CONAE • GSFC • JPL



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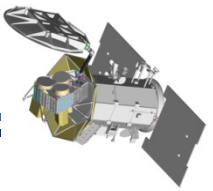


- Assess radiometer calibration performance (drift correction, antenna pattern, cold sky)
- Review the RFI mitigation algorithms and determine changes for v1.3 and/or v1.4 if needed
- Review scatterometer calibration performance and algorithm and changes for v1.4
- Review the geophysical correction algorithms and performance – ascending-descending bias; rain impact; Faraday rotation correction
- Make decisions on the path toward v1.4 processing



- Requirement: No later than twelve (12) months after the end of the IOC period, the Aquarius Project shall deliver the first release of data products (containing at least six (6) months of data) to a NASA Distributed Active Archive Center (DAAC).
- OOCO (IOC): Ends in November 2011
- Cal/Val phase begins at the end of OOCO with a duration of 12 months
- Milestones and meetings:
 - Cal/val meetings: November 2011, 26-28 March 2012
 - April 2012 – Aquarius/SACD science team meeting

	2011							2012						
	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	
Pointing and Time Tag Assessment	█		█											
Radiometric Cal Bias Removal	█					█								
RFI	█		█											
Rain Filtering						█		█						
Model Functions	█													
Reprocessing	█		█			█			█				█	
Error Assessment	█													
Asc/Des Bias						█								



- Asc/Dec biases
 - There are about 0.2-0.3 psu bias between ascending (lower) and descending (higher)
 - There is about 0.1 dB radar sigma0 bias (higher for descending; larger for HH)
- Possible sources
 - Rain
 - Faraday rotation (TV, TH and Third Stokes)
 - Roughness and wave effects (direction)
 - SST (diurnal)
 - Galactic reflection (affect radiometer TB, not scatterometer sigma0)
 - TB Calibration (unlikely)