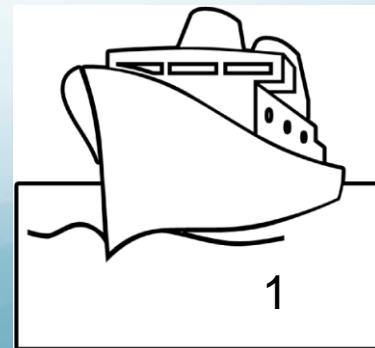


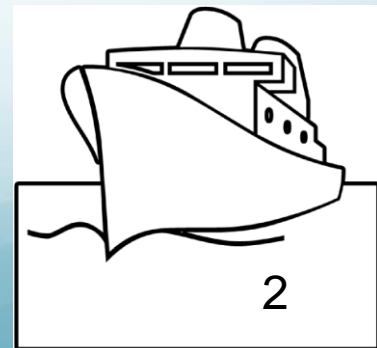
# International Shipbourne Radiometer Network (ISRN)

W. Wimmer, T. Nightingale



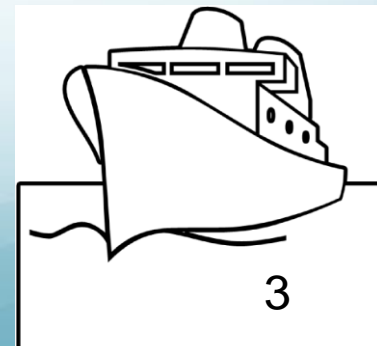
# Outline

- Motivation
- Scope
- Membership
- Activities
- Data
- Facilities



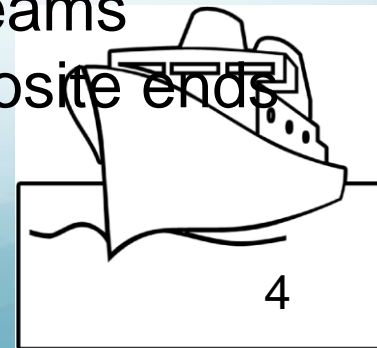
# Why Radiometers

- Validation of SSTskin
- Traceability of measurements
- In the absence of dual-view satellite sensor the reference (fiducial reference measurement)
- Needed for the Gap-Bridging between AATSR and SLSTR
- However global coverage limited



# Motivation

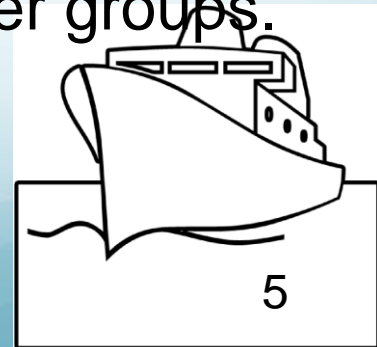
- Regions covered by different teams complement each other to achieve effective global coverage
- Ensure consistently high quality measurement standards across all participants
- Promote best practice in the recently emerged methodology of infrared shipborne radiometry to measure skin SST
- Facilitate the intercalibration and traceability of NMI of ship radiometers
- Encourage operational collaboration such as teams sharing the maintenance of instruments at opposite ends of transoceanic ship routes



# Membership

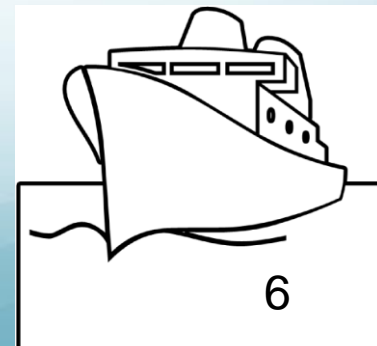
Any person or group:

- Developing, deploying or evaluating shipborne radiometers to measure SST
- Those who have a requirement to use the SST data which radiometers acquire
- Individuals or groups who are considering moving into this field of work
- Additionally, the SRN will welcome involvement by those in related organisations (e.g. GHRSSST, JCOMM) with an interest in actively linking the SRN to those other groups.

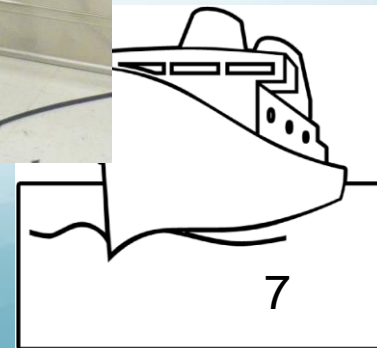


# Activities

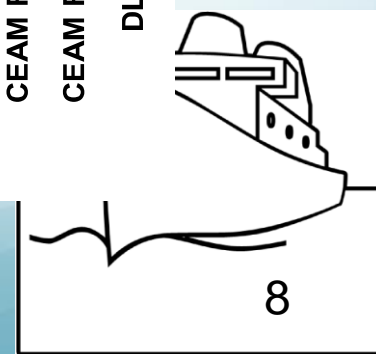
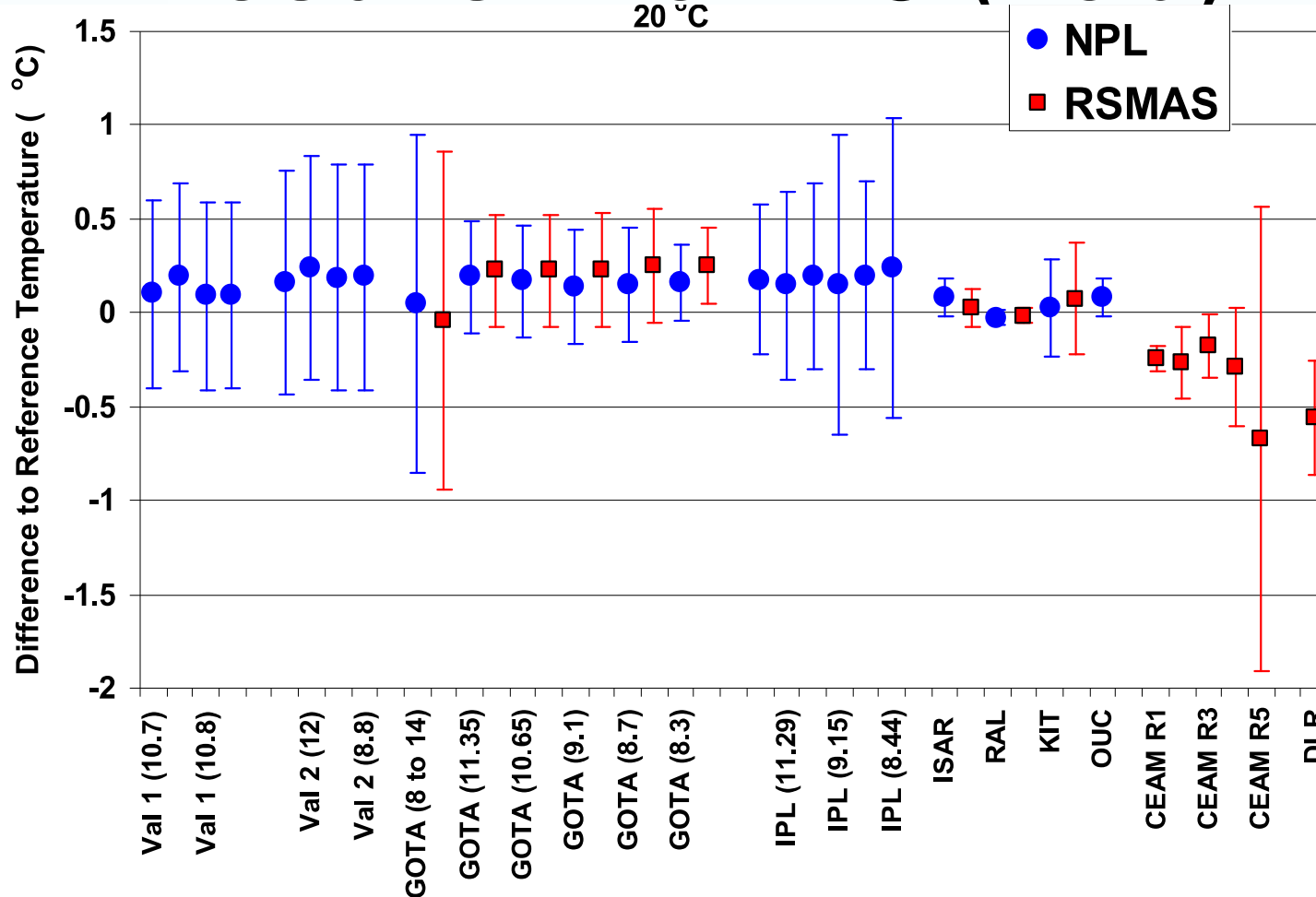
- Developing a rational network of SOO lines
- Promoting best practice (ISSI, FRM4STS, ...)
- Traceability of radiometer calibration to NMI reference standards
- Radiometer intercomparison exercises
- Quality control of Radiometric SST data
- Evolution of shipborne radiometer design and capability



# Inter-comparison 2009

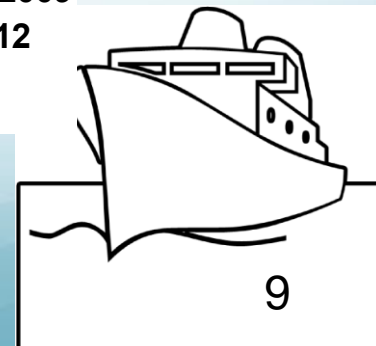
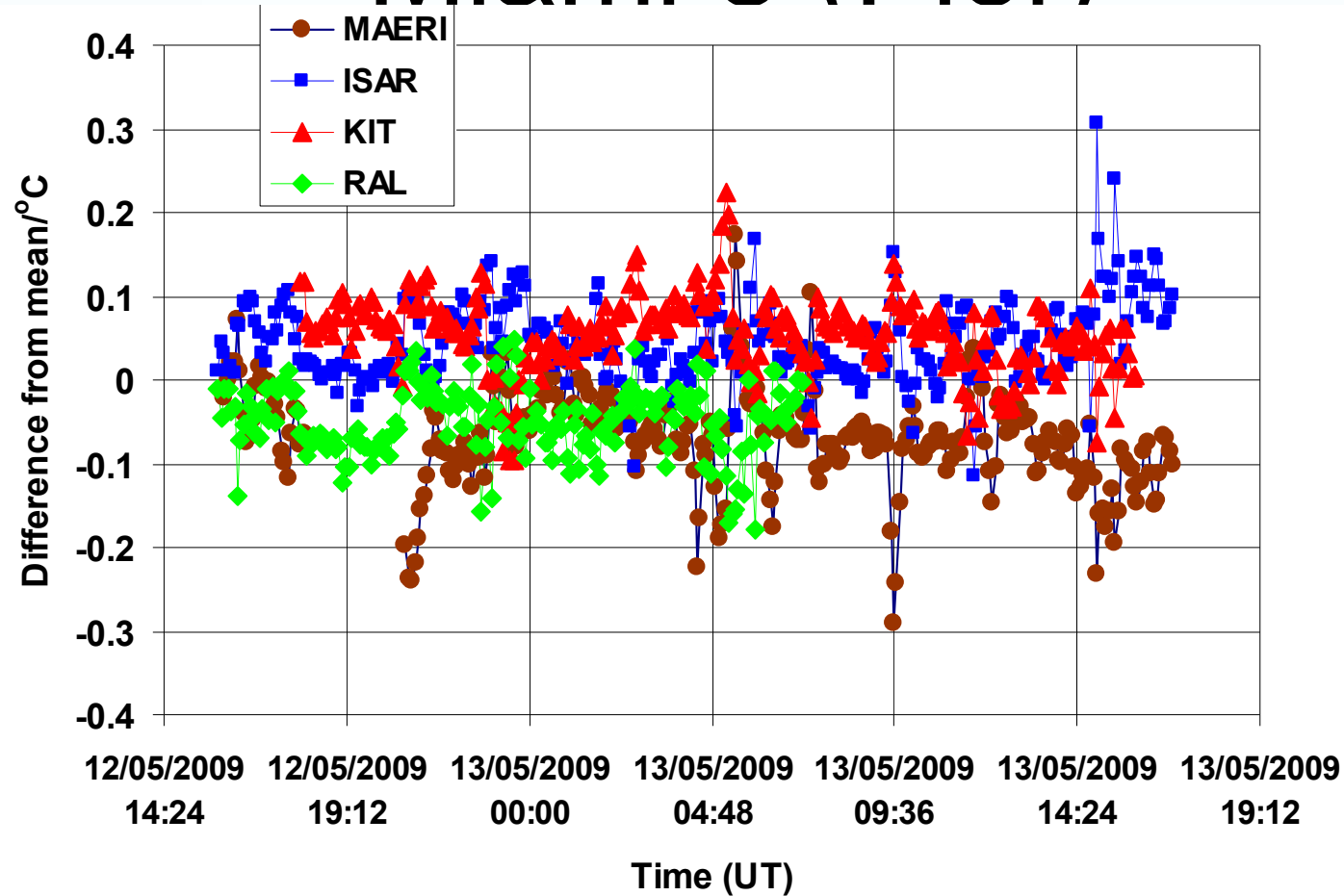


# Results Miami 3 (Lab)



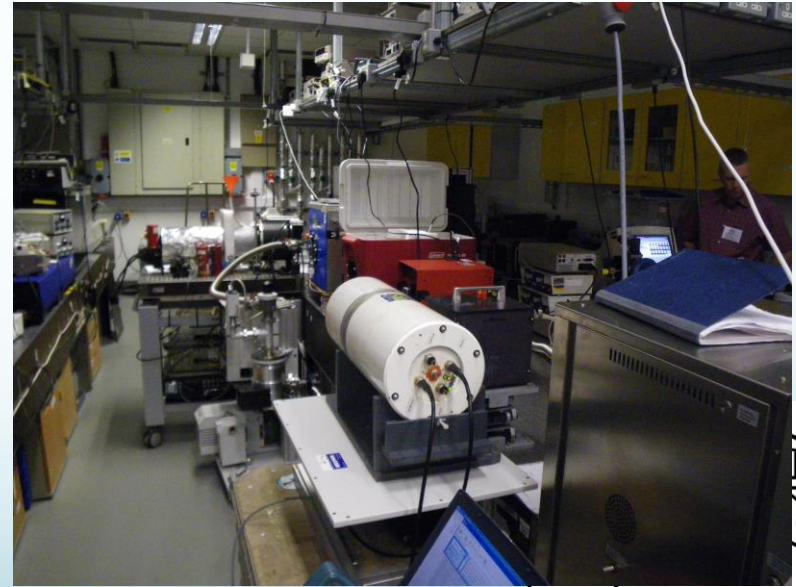


# Miami 3 (Pier)



# FRM4STS – NPL

- NPL Laboratory
  - Radiometers and Black Bodies
- Wrasbury Reservoir
  - Radiometers
- Poster



# FRM4STS – NPL

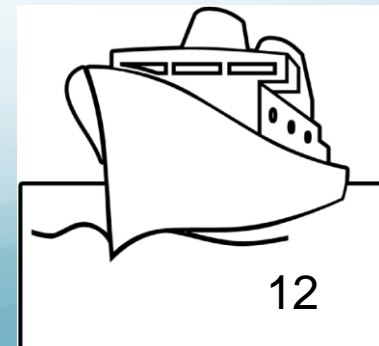
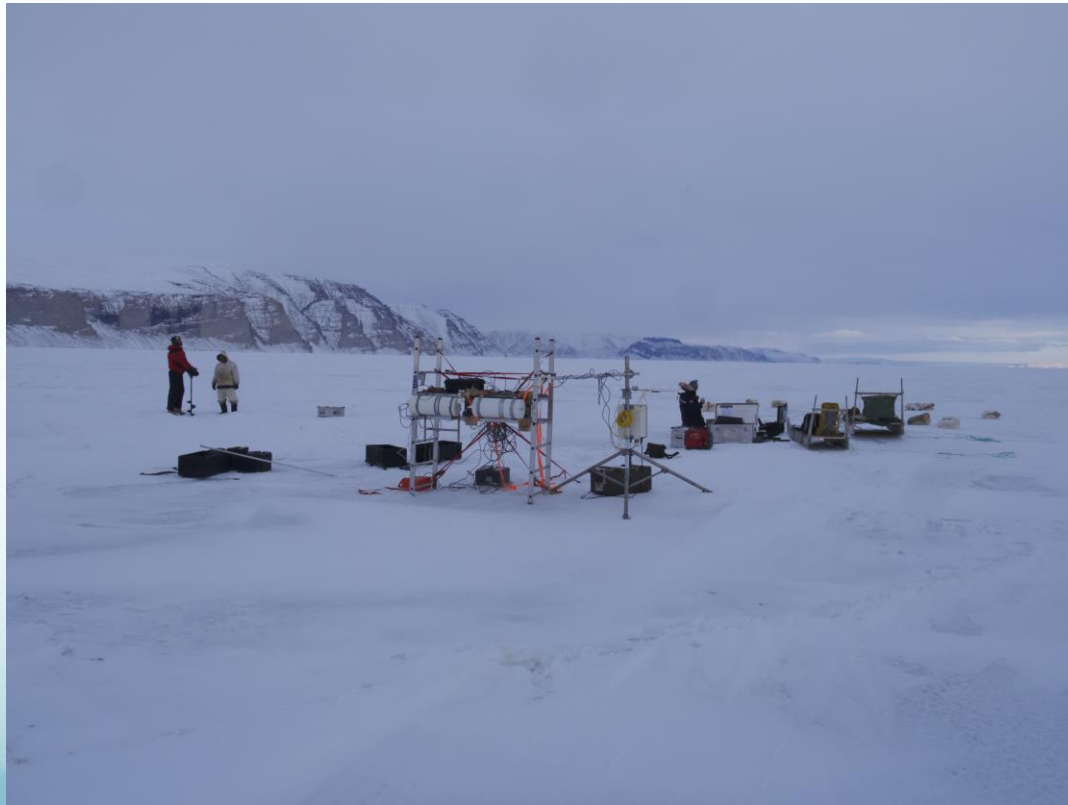


GHR SST XVII - ISRN



# FRM4STS – ICE inter-comparsion

- March – April 2016
  - ISAR 03 and ISAR 08 + Campbell IR120



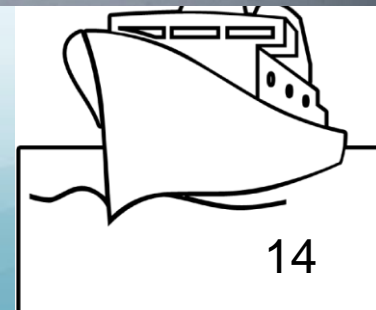


# FRM4STS – ICE inter-comparsion

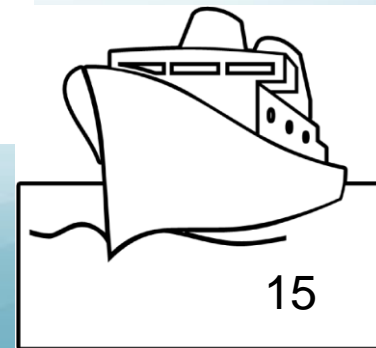
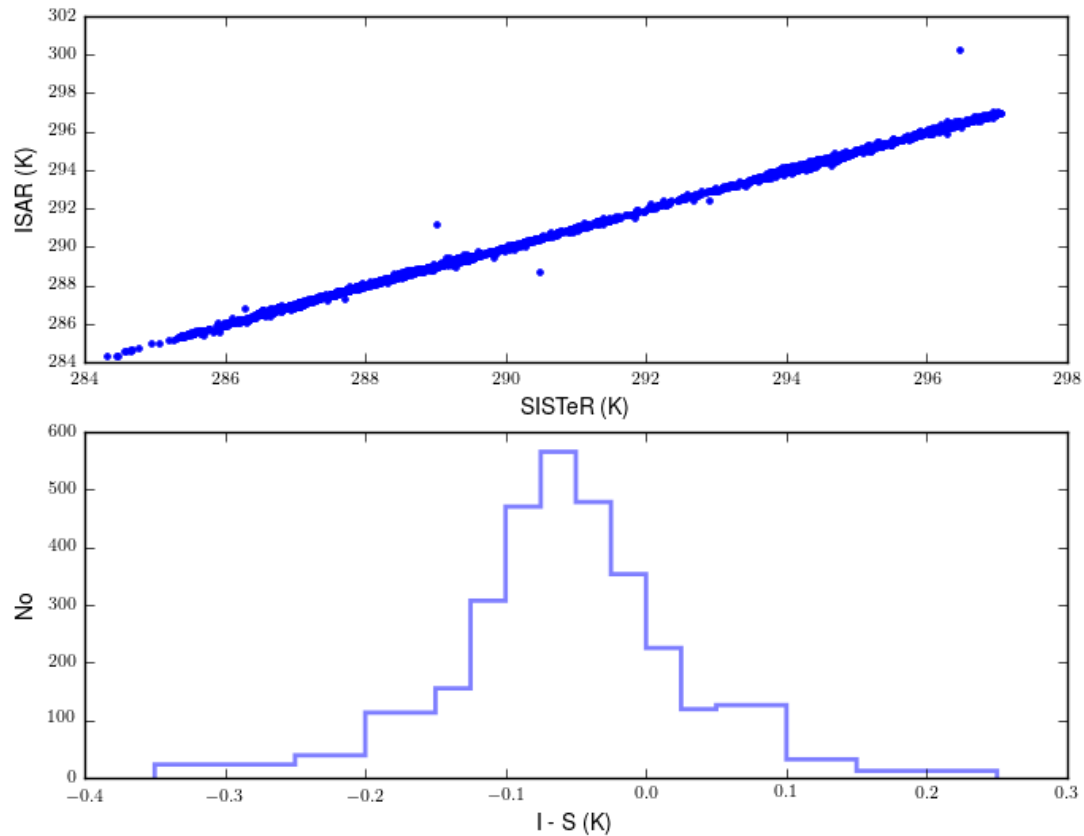


# Side by Side Inter-comparison

- The ISAR SISTeR side by side inter-comparison on the QM2 ran 11<sup>th</sup> Sept. 2015 to 5<sup>th</sup> Nov. 2015
  - Issues with the Rain Gauges limited the usable data
  - Early results look promising.

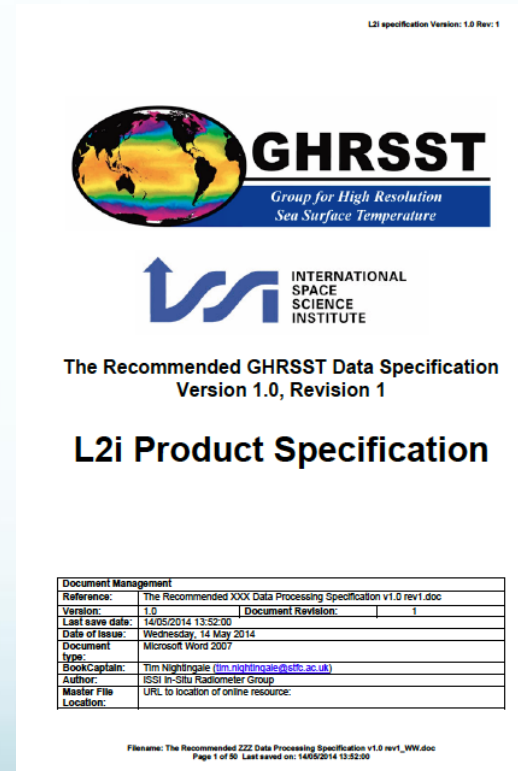


# ISAR – SISTeR data QM2



# Data format

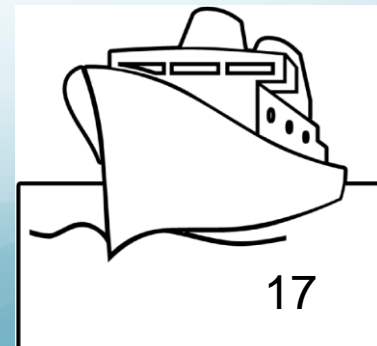
- File names:
  - 20151109000442-UoS-L2i-SSTskin-ISAR\_002-D052\_PtA-v01.0-fv01.4
- Data format:
  - L2r document
  - ISAR v2.7 processor





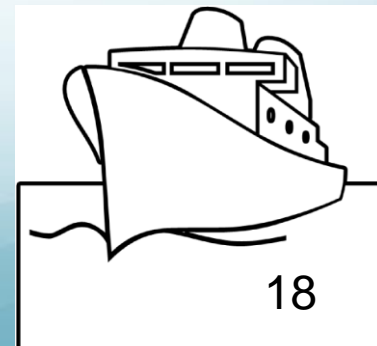
# Facilities

- Web page [www.isrn.rl.ac.uk](http://www.isrn.rl.ac.uk)
- Central Data archive
  - At RAL/NEODC
    - ISAR, SISTeR
  - Radiometer data in L2r format with uncertainties
- Wiki, user forum
  - Exchange experiences
- Documentation
  - Best practice
  - Data format
  - Data Processors

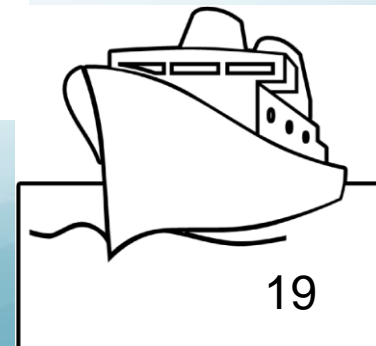
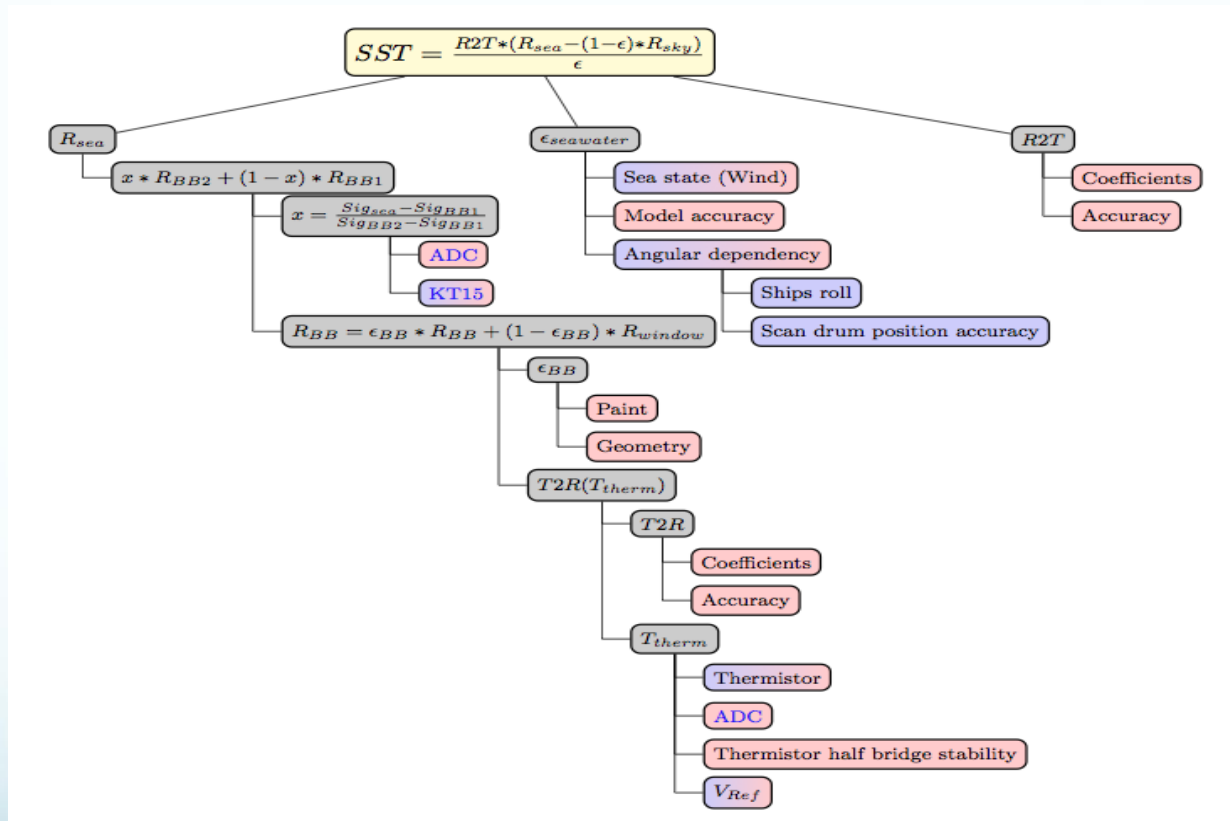


# Next Steps

- Improve web page
- Provide tools foR data upload
- Establish Wiki, user forum
  - Exchange experiences
- Documentation on web page, e.g.:
  - Best practice
  - Data format
  - Data Processors
- Inter-comparison
  - Provide support



# Uncertainties



# Uncertainties

