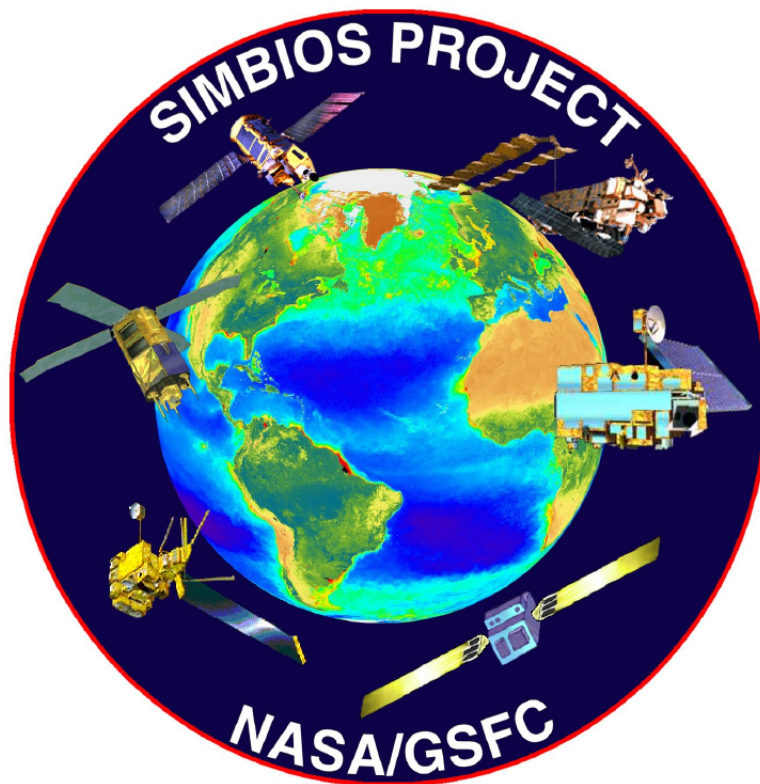


# SeaWiFS/SIMBIOS Intercalibration Round-Robin Experiment: **SIRREX-8**

Gerhard Meister



## Overview:

- Background
- Available instruments
- Activities and schedule

## SIRREX history (1992-2001):

- Goal: Consistency between radiance and irradiance calibrations
- SIRREX 1-3 at CHORS: Sphere radiance uncertainties decreased from 5-7 % to 1.1-1.5 %, FEL lamp irradiance uncertainty decreased from 8 % to 1 %
- SIRREX 4 at NIST: training on measurement protocols
- SIRREX 5 at NIST: training on measurements and instrument intercomparisons
- SIRREX 7: determination of radiance and irradiance calibration at Satlantic (in progress)

## SIRREX history (continued):

- SIRREX 6: calibration comparison at 10 different laboratories
- SIRREX 8: calibration verification at 4 different laboratories

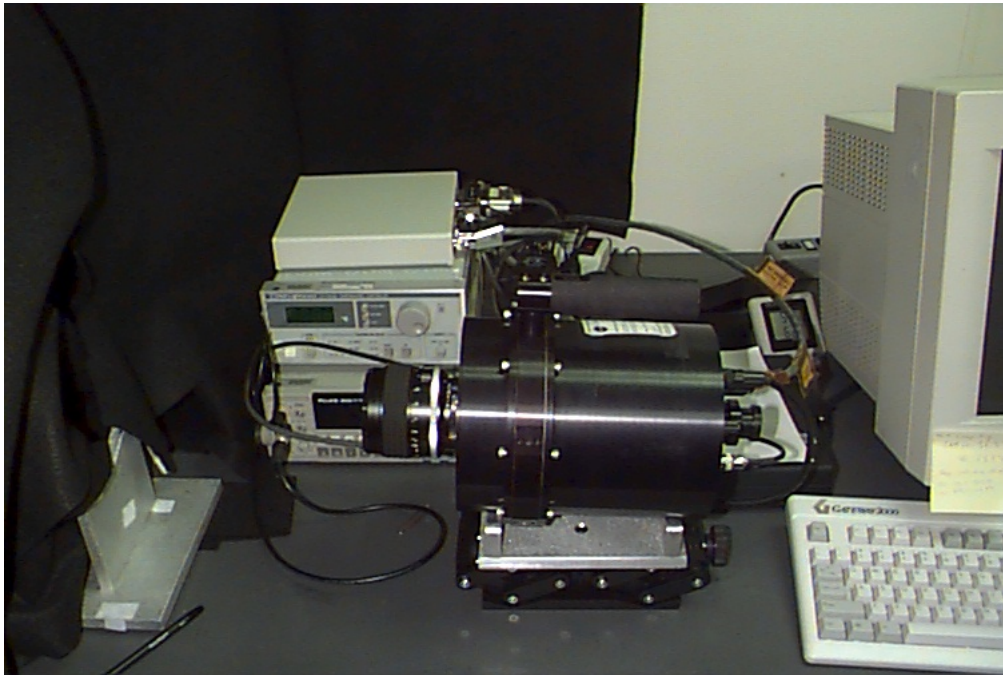
## Instruments used:

- in SIRREX 6: radiance (Satlantic OCR-200) and irradiance (OCI-200) sensors
- in SIRREX 8: radiometer (SXR-II) and stability monitor (SQM)

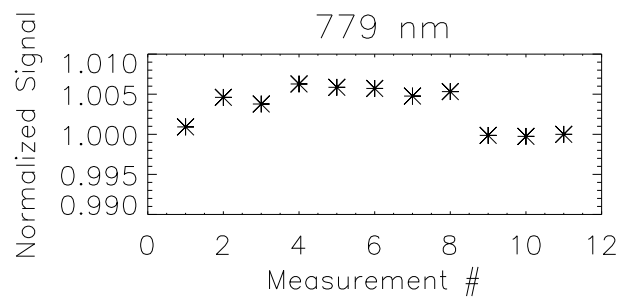
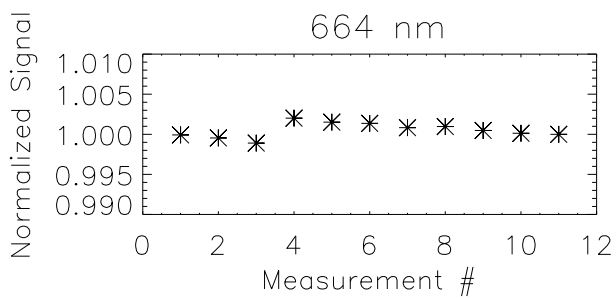
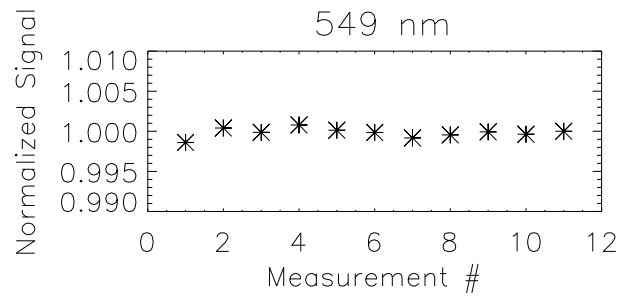
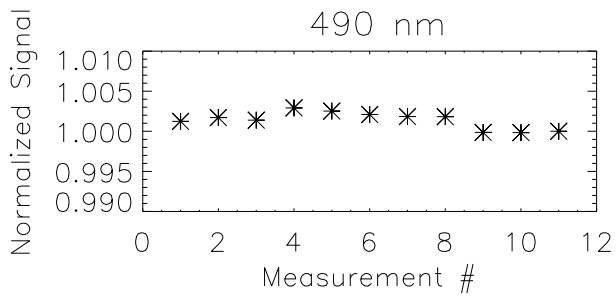
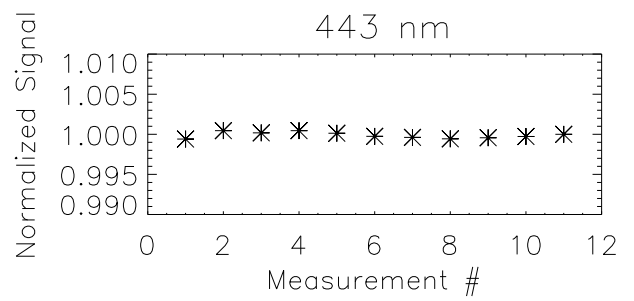
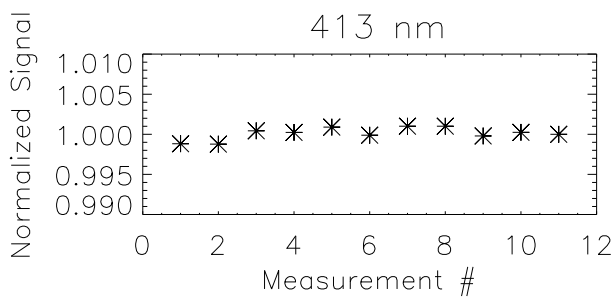
## SeaWiFS Transfer Radiometer SXR-II:

- 6 wavelengths (412 to 780 nm)
- FOV of about 3 cm times 3 cm
- Radiometric accuracy: 0.6 % to 1.3 %, repeatability of 0.1 %

# SeaWiFS Transfer Radiometer SXR-II



## SXR-II stability results:

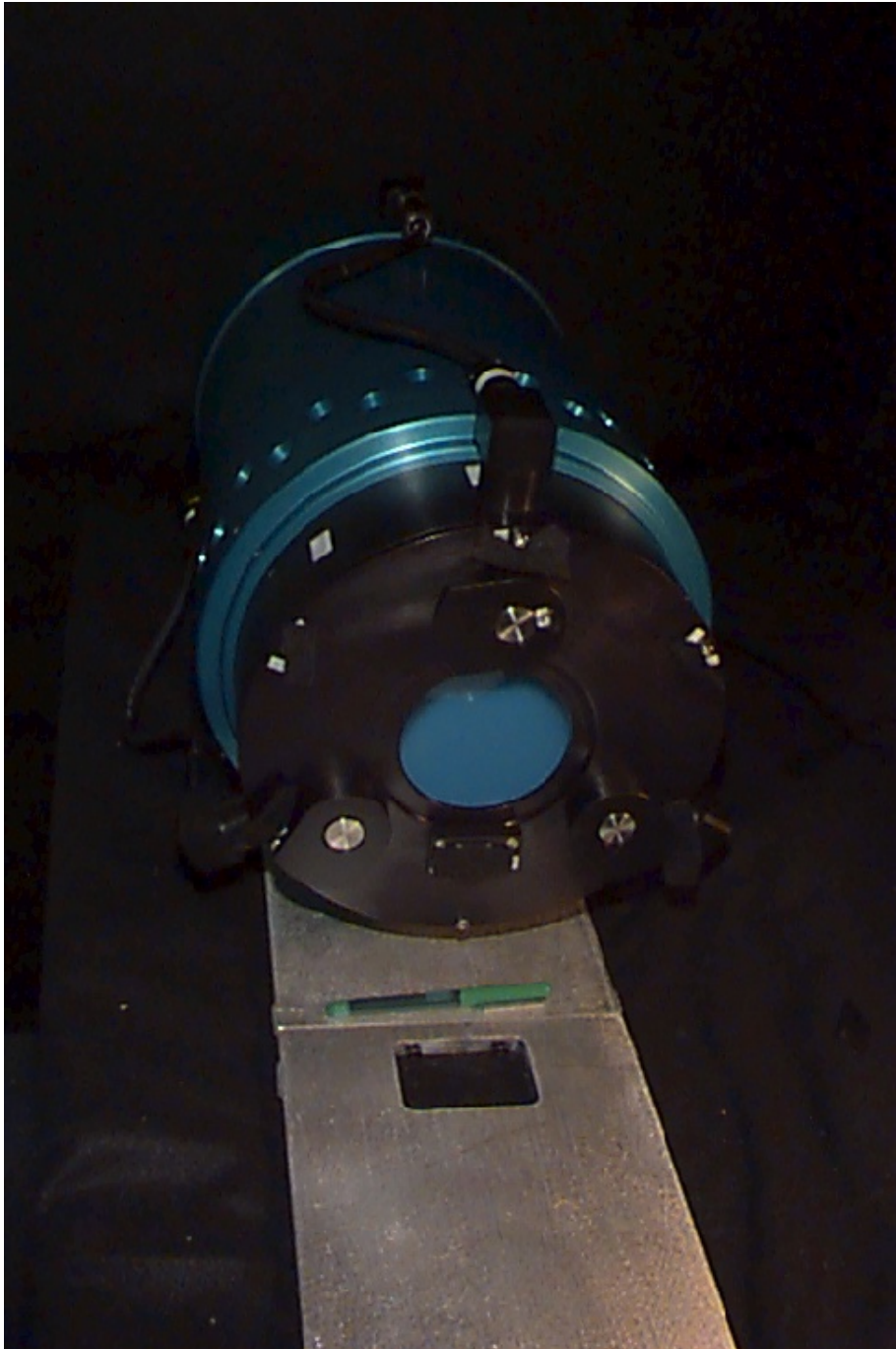


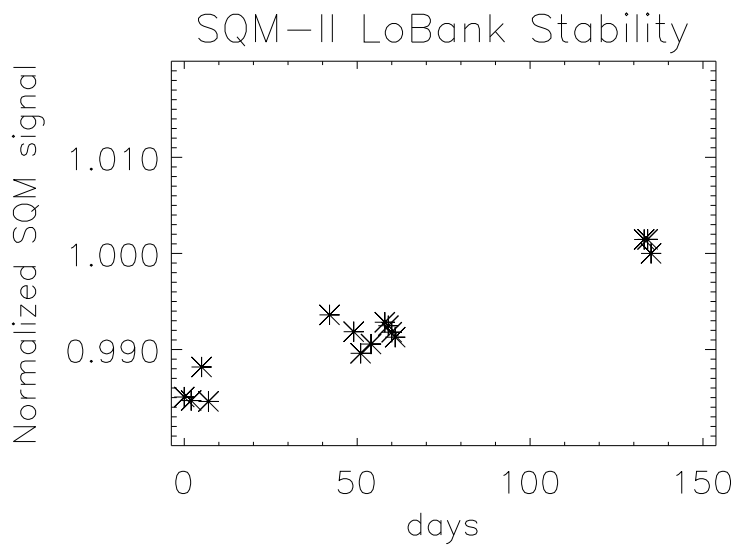
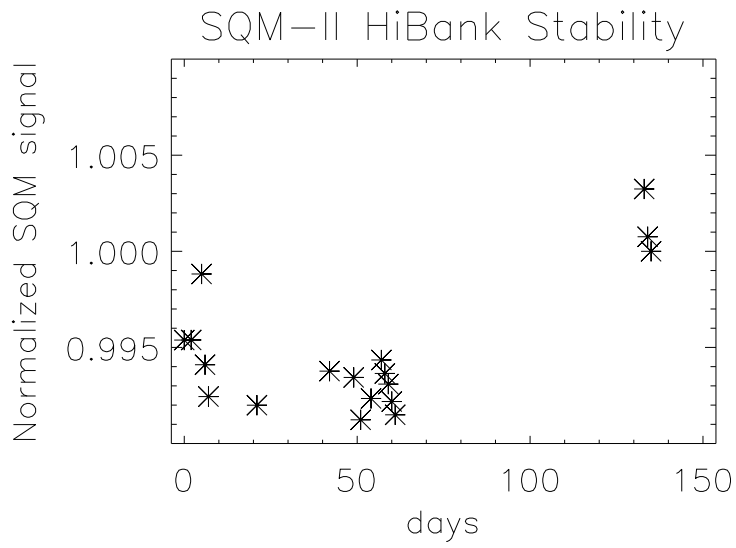
## SeaWiFS Quality Monitor SQM:

- Highly stable portable light source
- Temporal stability: 0.05 to 0.4 %
- Exit aperture with diameter of 9 cm
- Spatial homogeneity problematic



# SeaWiFS Quality Monitor SQM-II

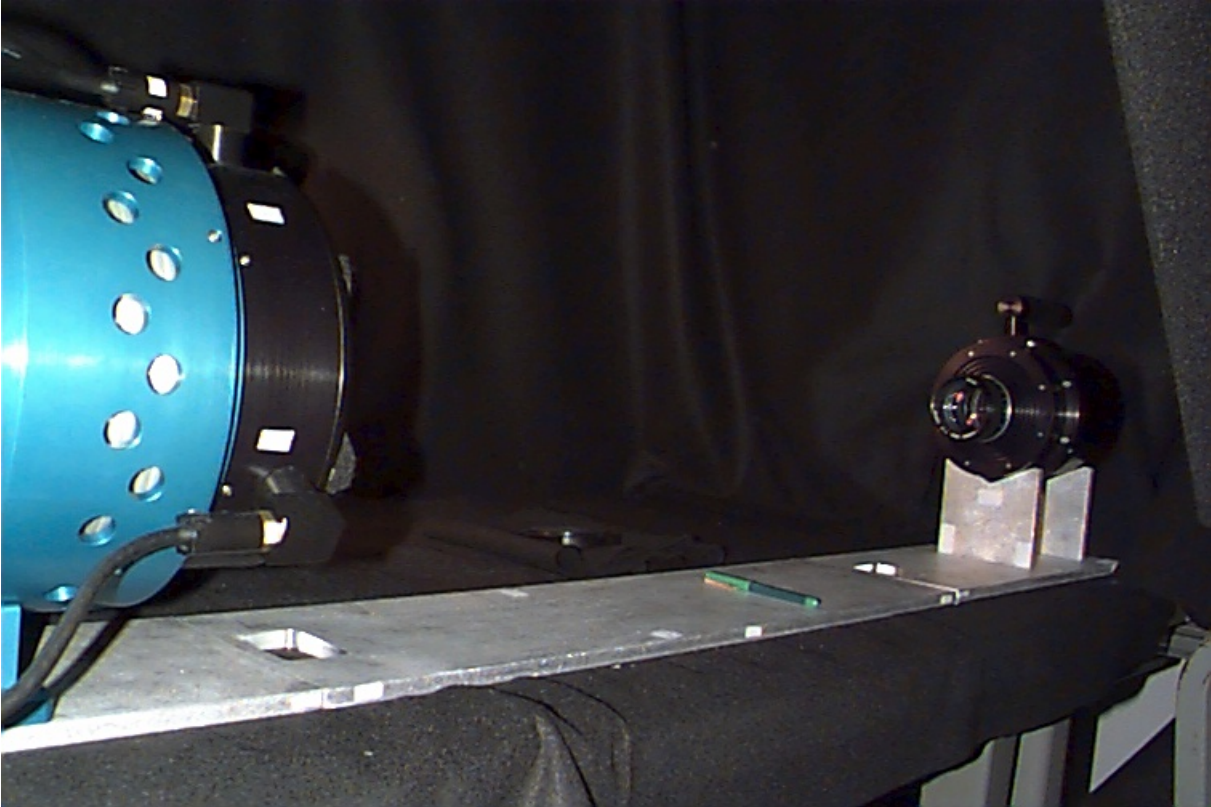




## Activities:

- Verify SXR-II stability with SQM-II
- Measure local lab calibrated radiance with SXR-II
- Possible: local radiometers measure SQM-II

Stability monitoring setup:



## Schedule:

- First: NRL in March/April
- Afterwards:
  1. Hobilab: Monday-Wednesday
  2. UCSB: Thursday-Monday
  3. Scripps: Tuesday-Thursday
- Timeframe: April (or May)