

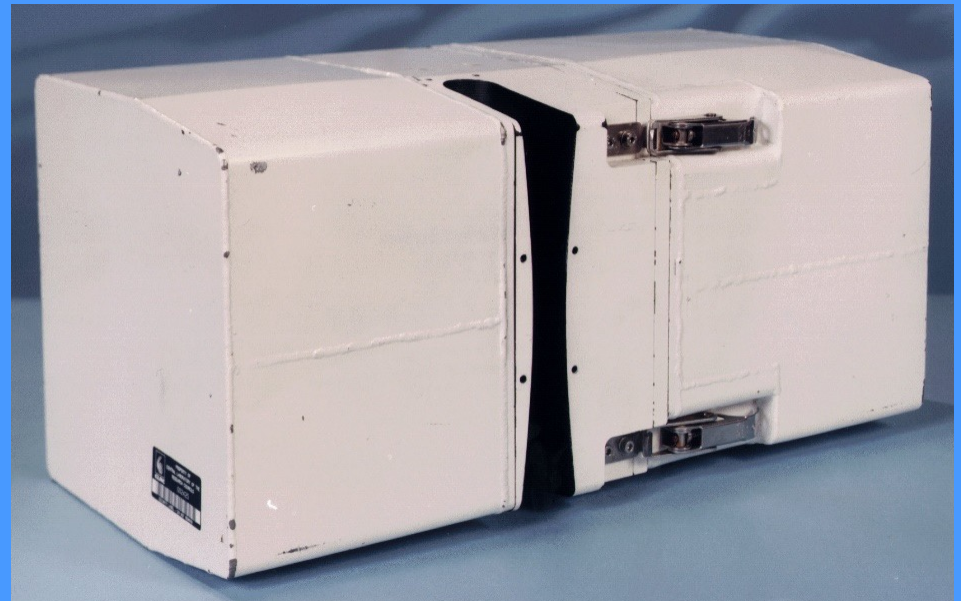


ships4sst

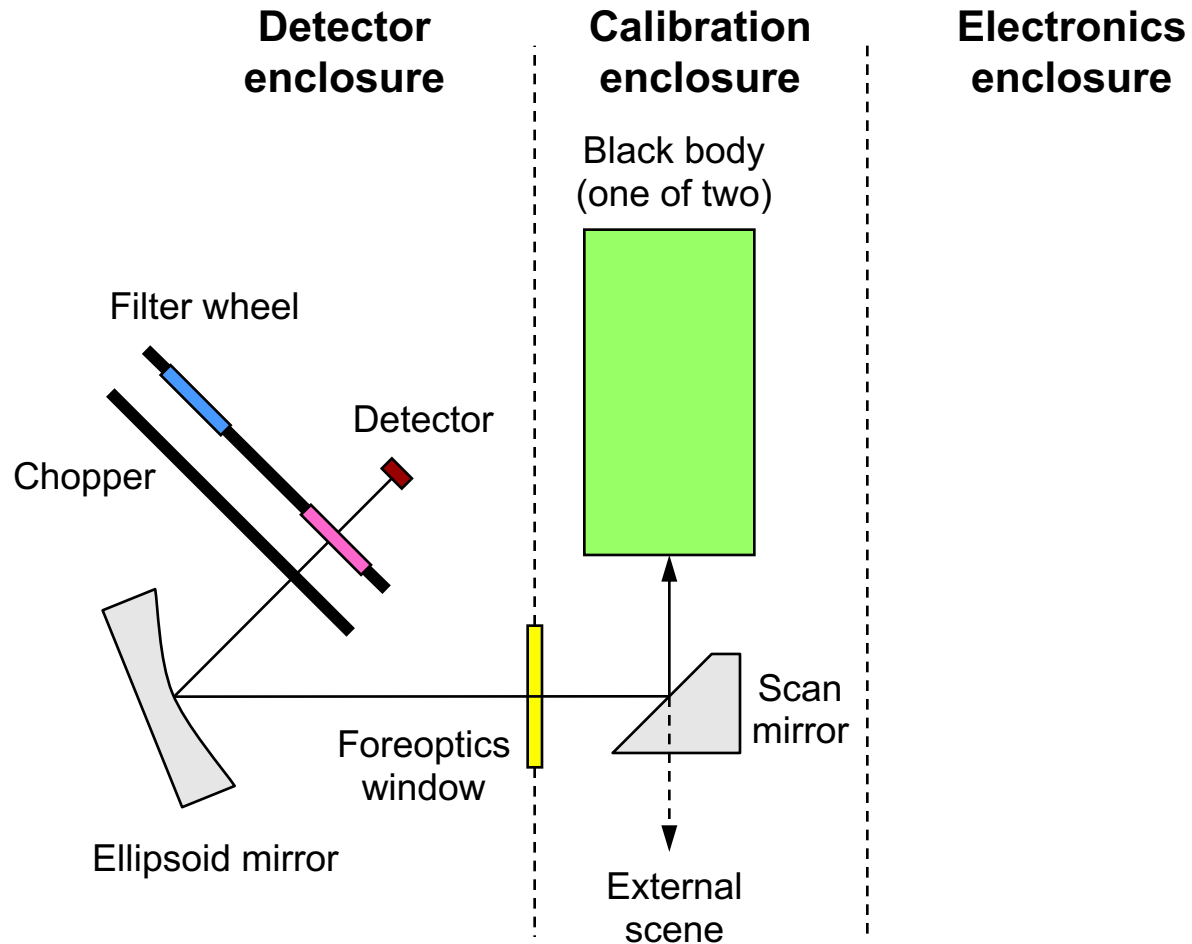
shipborne radiometers for sea surface temperature

SISTeR

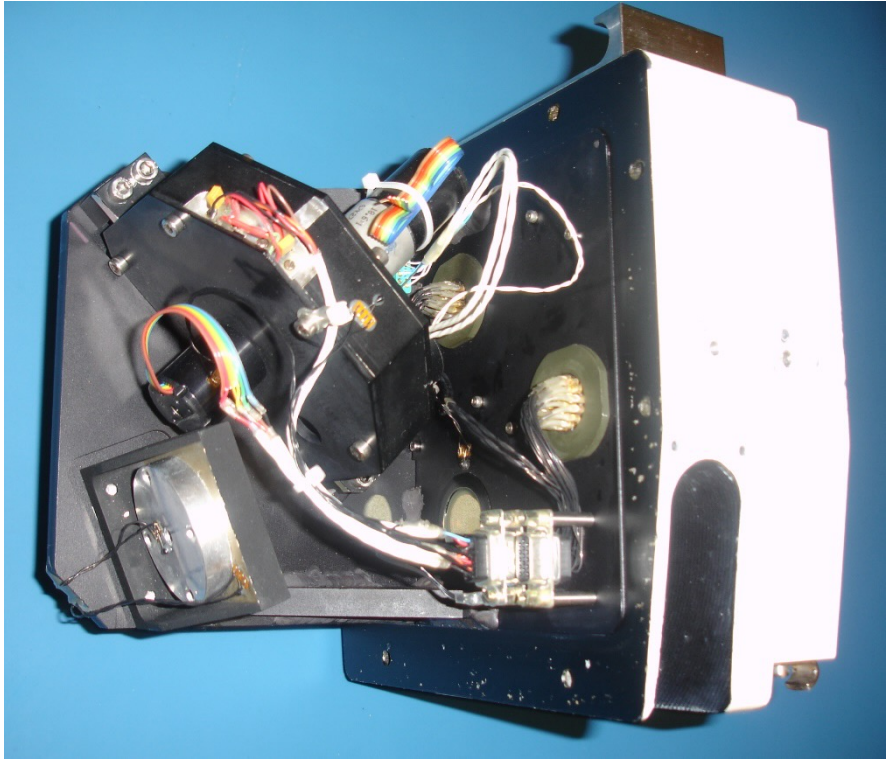
Tim Nightingale
Arrow Lee



SISTeR layout



SISTeR undressed



SISTeR black bodies



SISTeR on the Queen Mary 2

- SISTeR has been deployed since 2010 on the Cunard Line *Queen Mary 2* liner
- Mounted on a dedicated platform above the starboard bridge wing
- Support equipment (UPS, power supplies, data logger, USB and serial repeaters) installed in an internal cabinet and an external weatherproof box
- Data logger laptop connected to ship's Ethernet network. Emails daily level 0 products back to the UK.
- From April/May to January, the QM2 operates a regular service between Southampton and New York, with occasional side-trips
- Makes a round-the-world cruise from January to April/May
- Currently on its 24th cruise

SISTeR on the Queen Mary 2



SISTeR on the Queen Mary 2



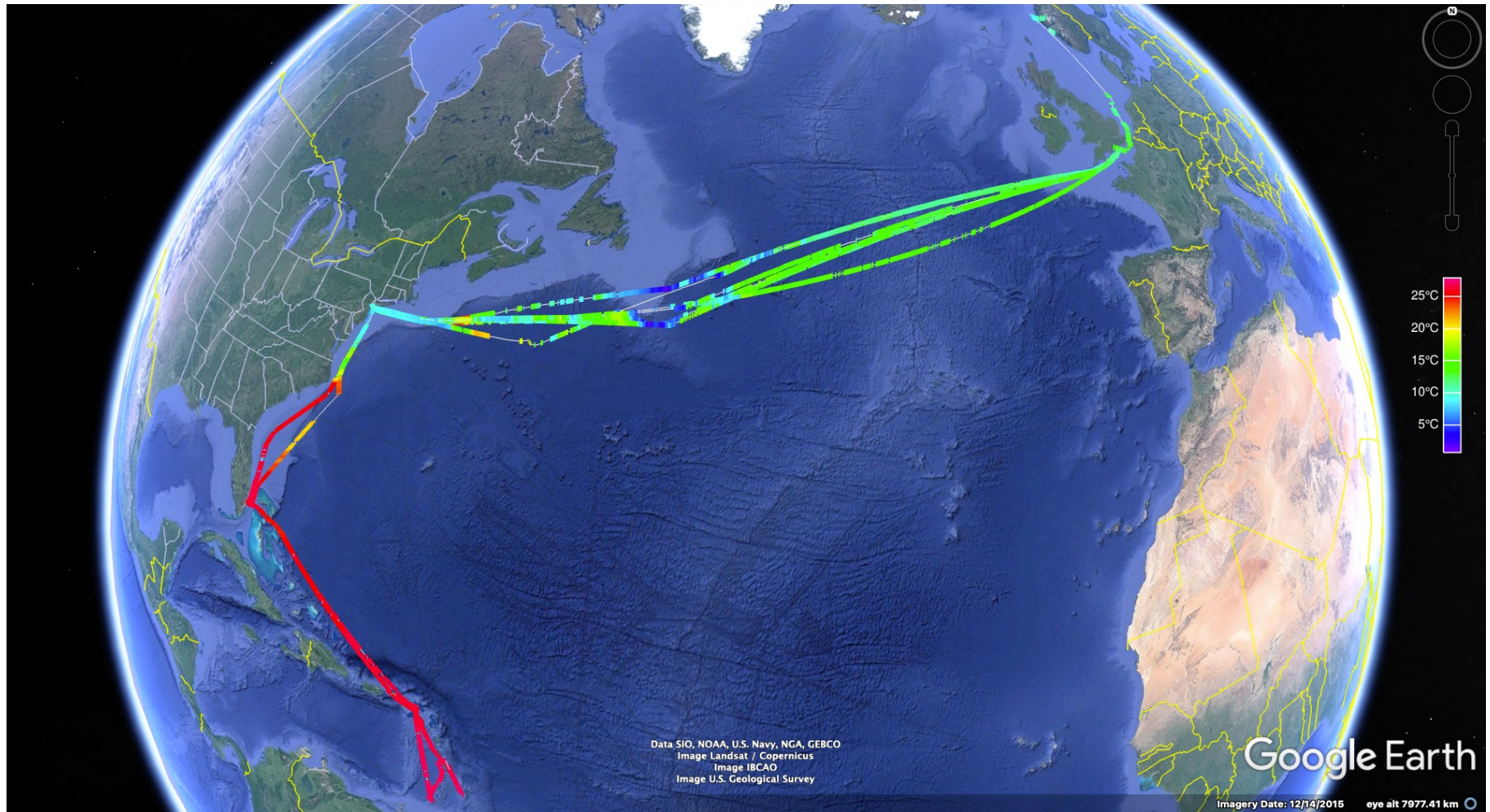
Deployment Summary

Cruise number	Deployment	Retrieval	Days	Route
19	10 January 2019	14 April 2019		World Cruise
20	28 April 2019	14 July 2019	78	New York/North Sea
21	26 September 2019	3 November 2019	38	New York/Nova Scotia
22	10 January 2020	18 April 2020	99	World cruise
COVID				
23	20 March 2022	29 May 2022	70	New York/Caribbean/Norway
Intercomparison				
24	15 July 2022	14 October 2022	53	New York/Nova Scotia/North Sea/Norway

COVID-19

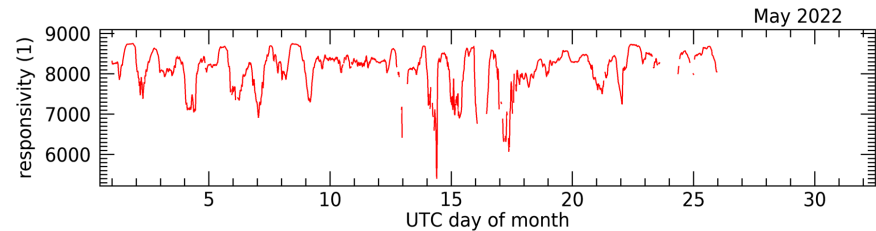
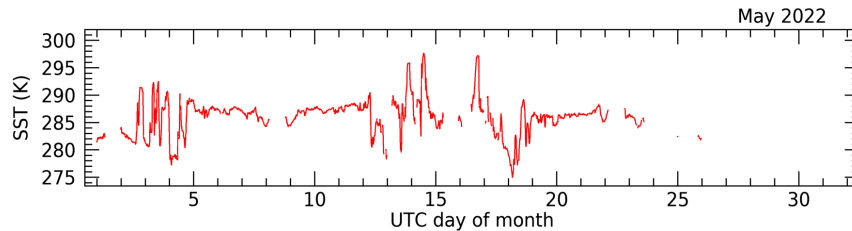
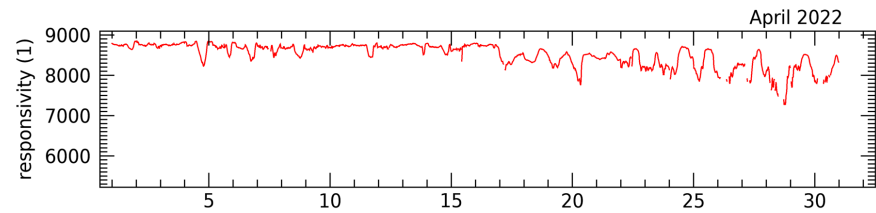
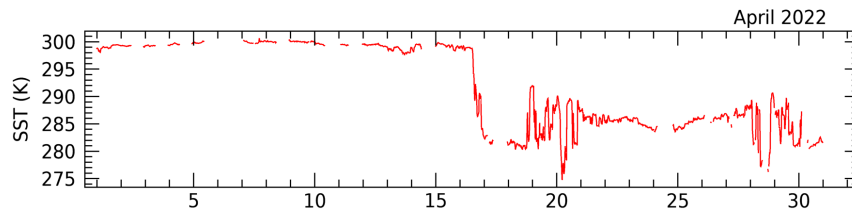
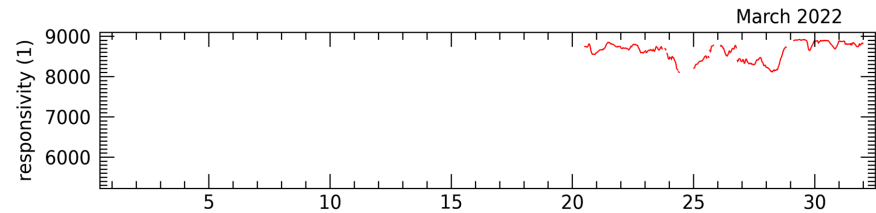
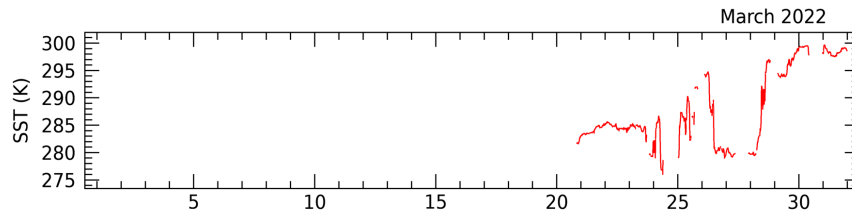
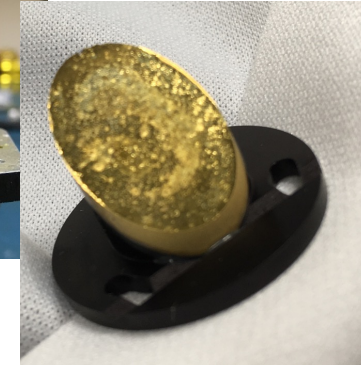
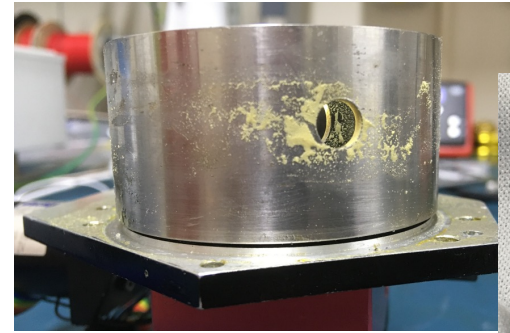
- COVID-19 lockdown while SISTeR was at sea
- Stayed deployed on the QM2 for almost a year
- Finally taken down by Cunard crew and returned in January 2021
- Instrument in fairly good shape – needed a good clean and a replacement scan mirror and window but was otherwise functional. Even calibrated up relatively well
- Took some time to re-establish communications with Cunard
- Finally redeployed after two years on March 20th

Cruise 23



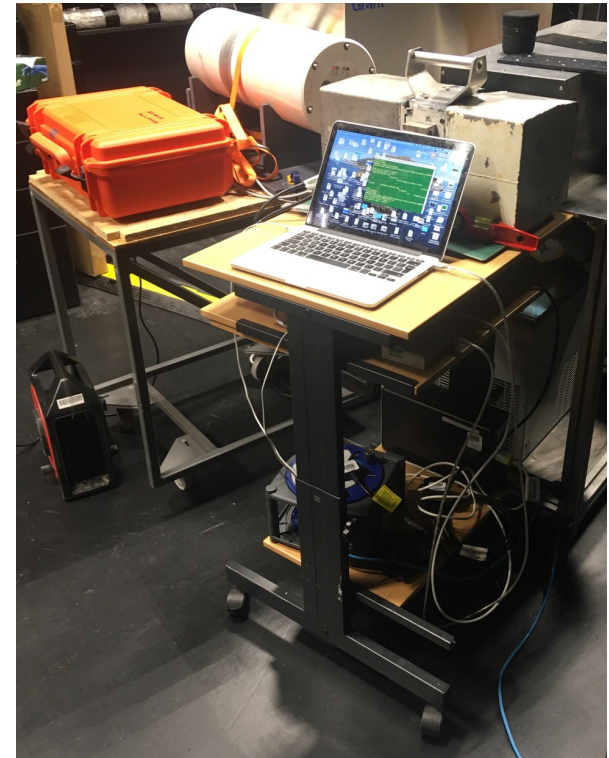
Cruise 23

- Serial data cable replaced
- Instrument running normally
 - Full set of SSTs
 - Some data dropouts
 - Build-up of yellow dust (pollen?) on scan drum



ISFRN intercomparison

- Took part in ISFRN intercomparison at NPL...

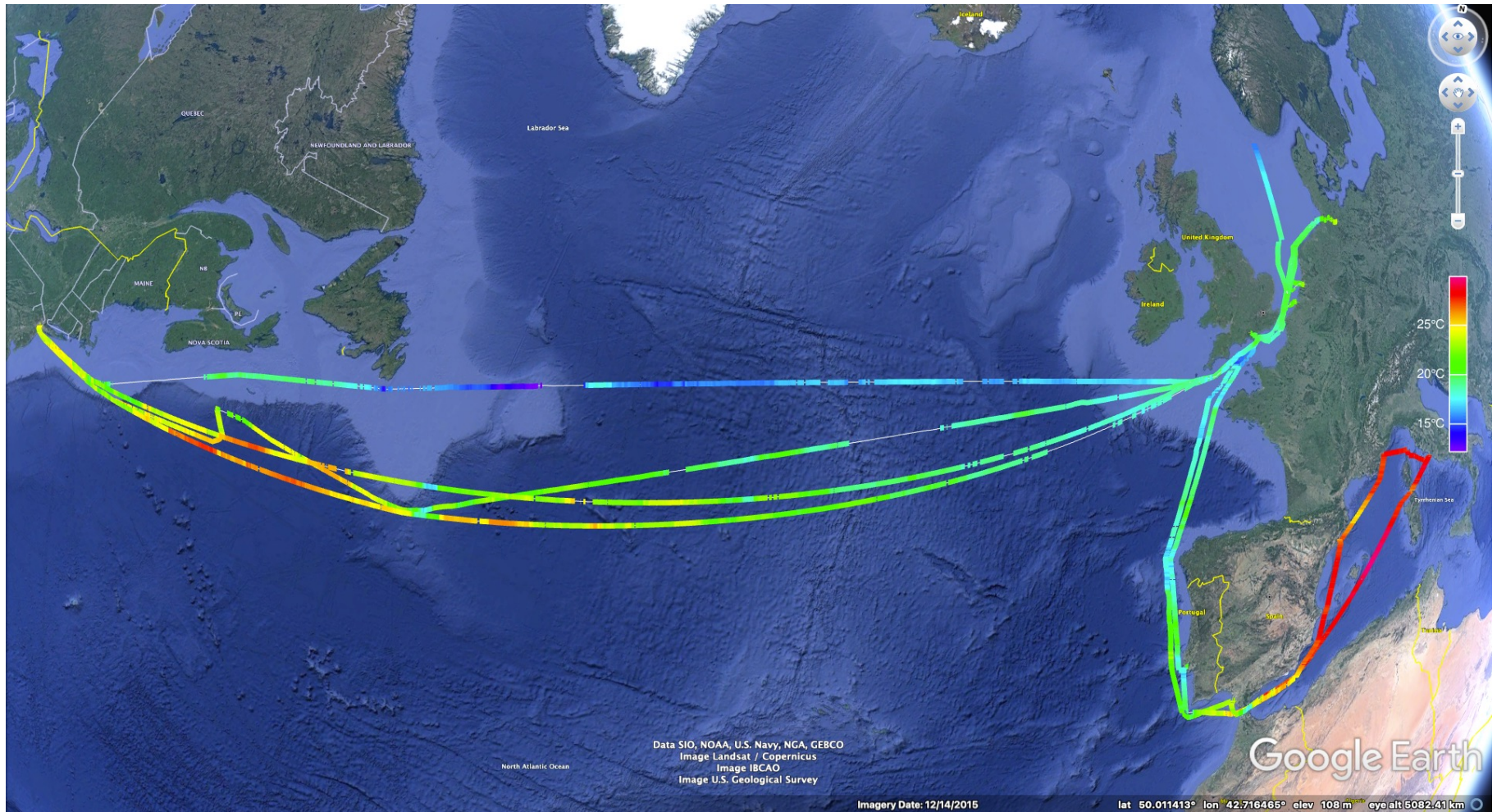


ISFRN intercomparison

- ... and Boscombe pier, near Bournemouth

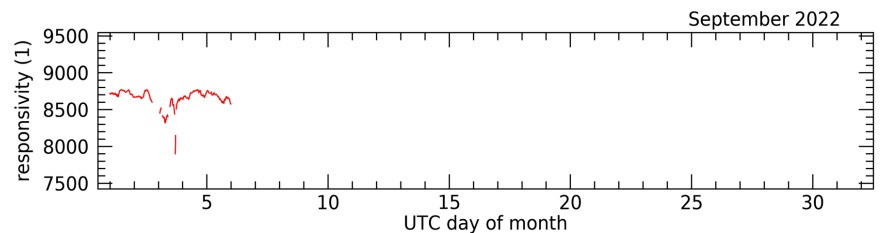
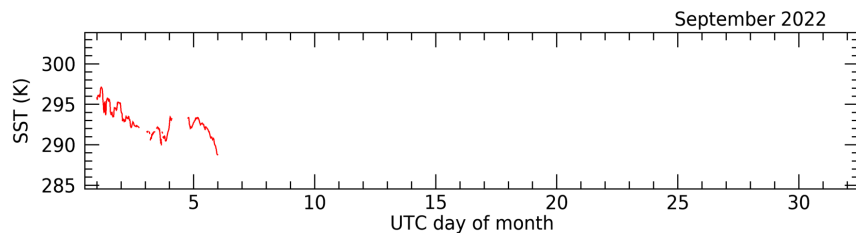
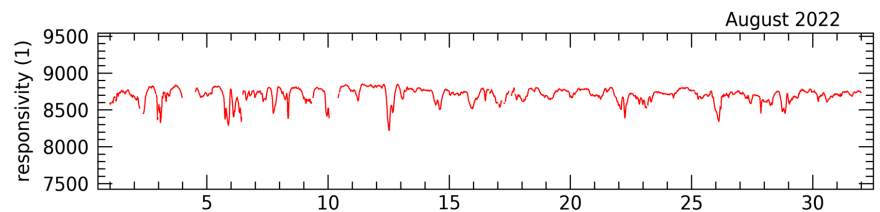
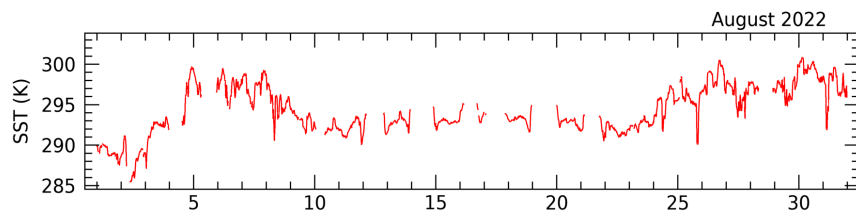
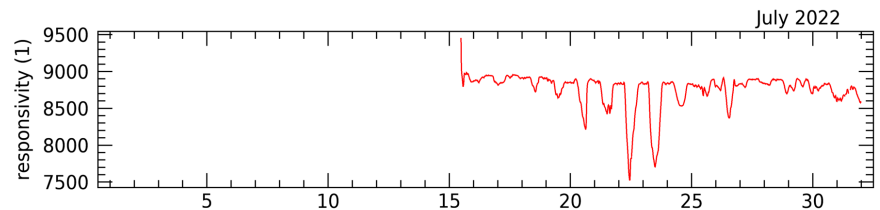
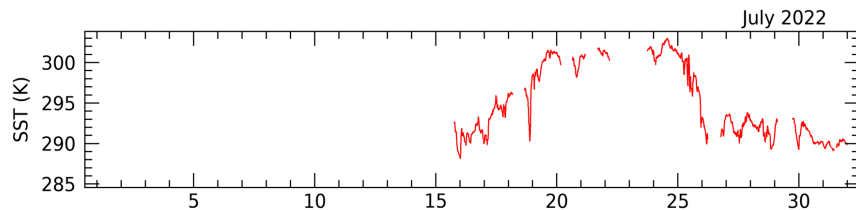


Cruise 24



Cruise 24

- Power cable replaced
- Instrument running normally
 - Full set of SSTs
 - No problems noted



Current status (9th September)

- SISTeR on the QM2
 - Currently in Norway
 - Operating normally
- Plan to retrieve SISTeR on the 14th October for a quick turnaround and redeployment on the 18th October
- Second retrieval on 15th December in time from the first post-COVID “Centenary World Voyage” from 10th January to 23rd April 2023

Future Plans

- Continued Queen Mary 2 deployments
- Commission SISTeR B

