

# Sea Surface Warming around the PIM from Satellite observations



Reul Nicolas-Ifremer-Laboratoire Oceanographie Spatiale

Project: Monitoring of Sea Surface Temperature evolution over the last 30 years from Satellite data around the Small Mediterranean Islands (PIMs)

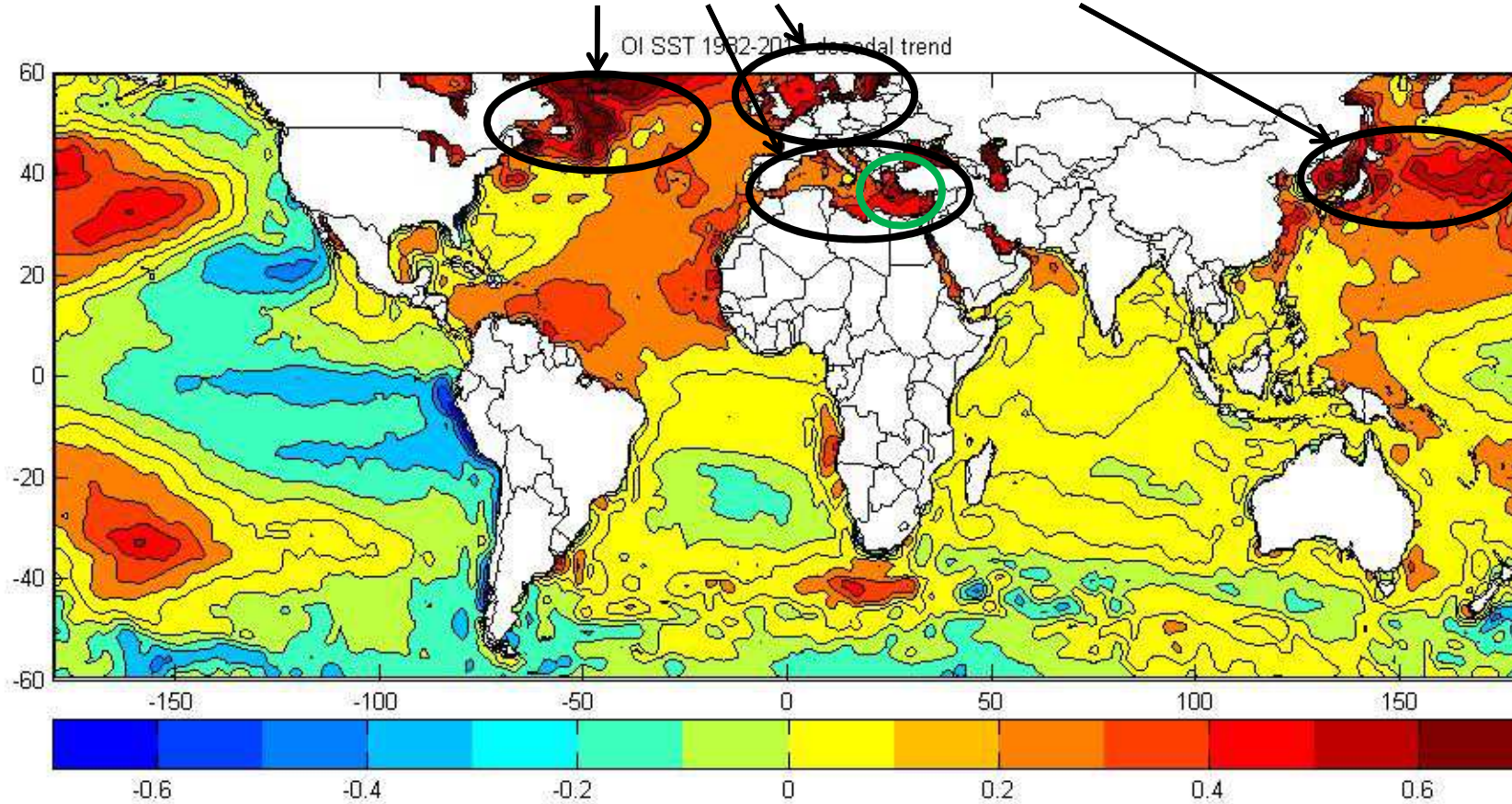


COREGE 2013

Prenom NOM- Organisation / Name SURNAME - Organization

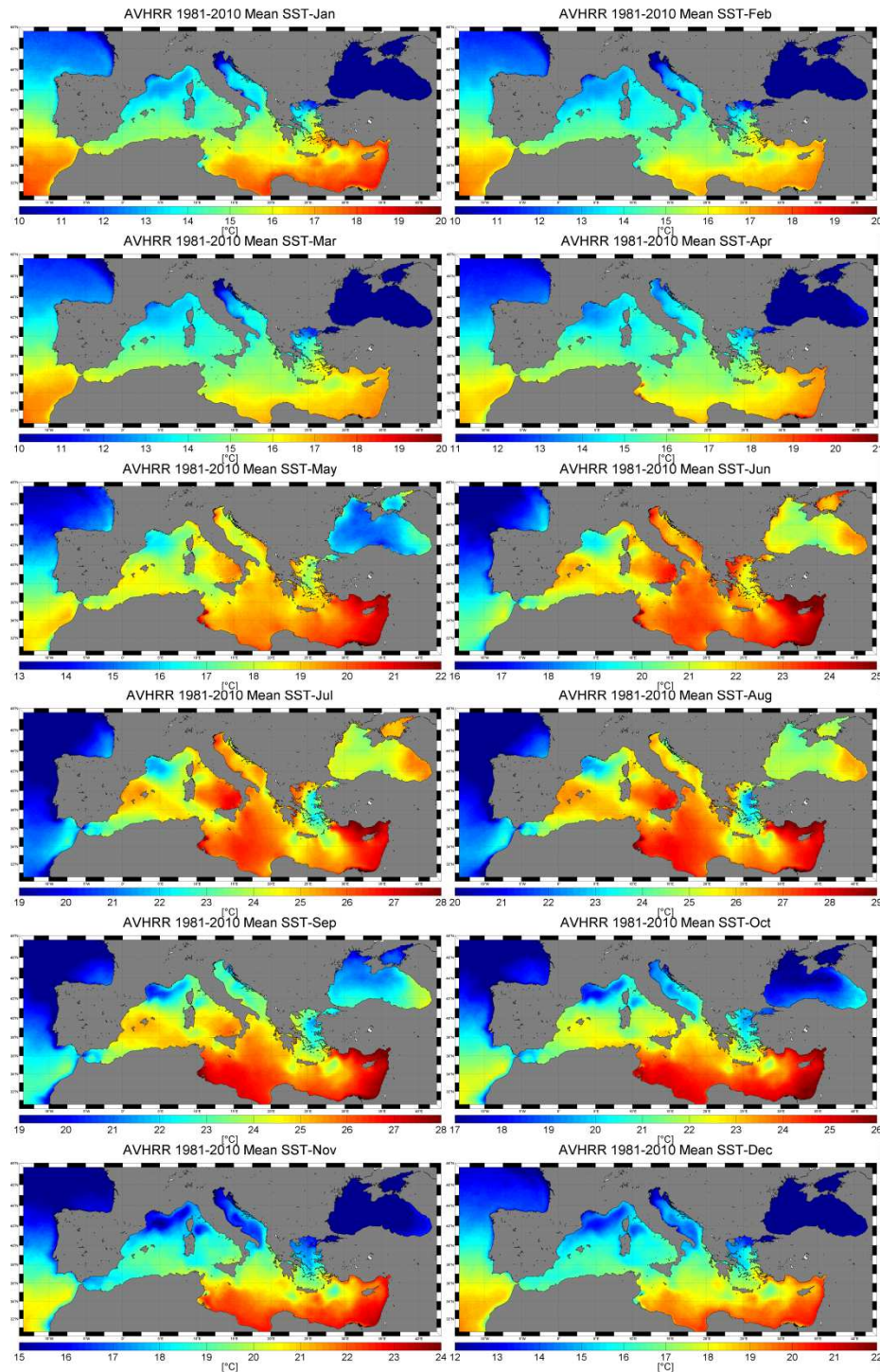


Highest warming rates 1982-2012  $>0.5^{\circ}\text{C}/\text{decade}$

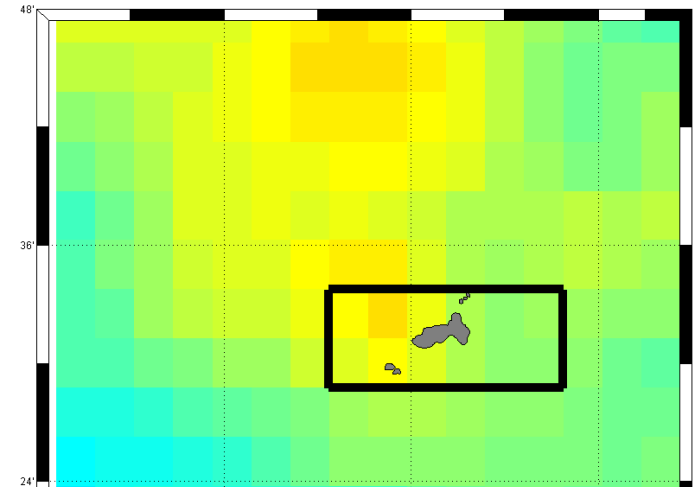
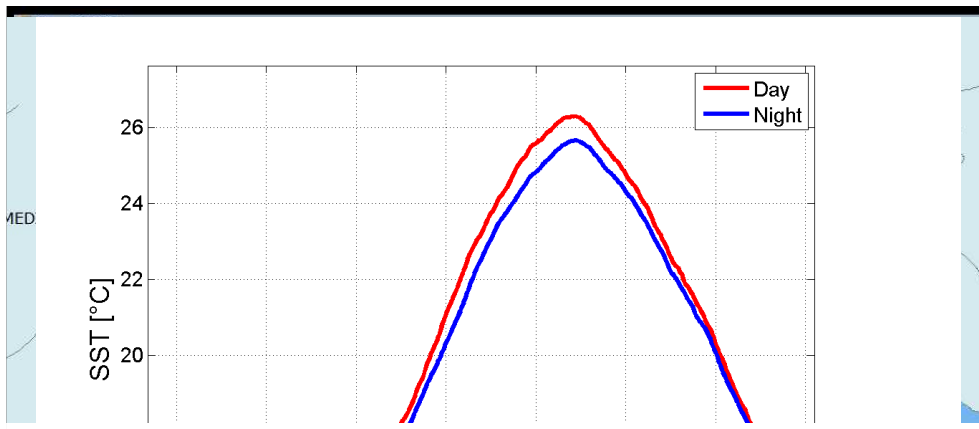


Reynolds OI SST linear decadal trends 1982-2012.  
Courtesy M. Rouault. University of Cape Town

# Cycle Saisonnier Climatologique sur 1981-2010



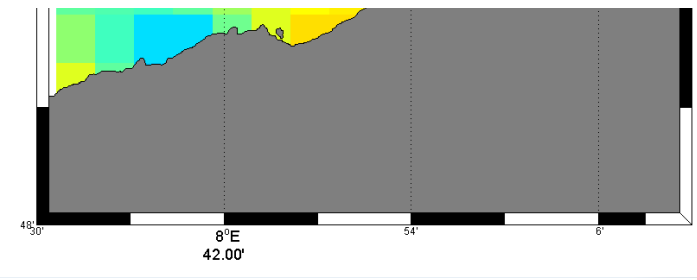
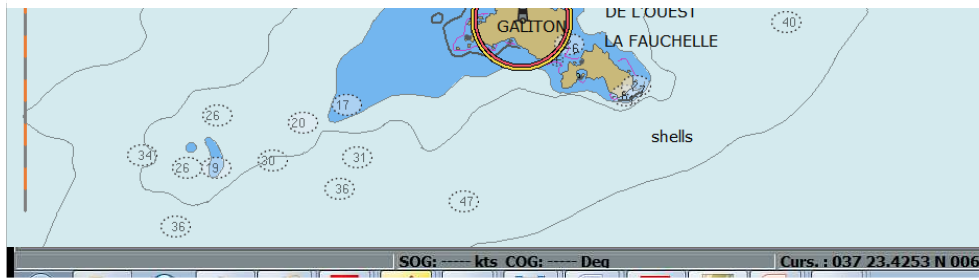
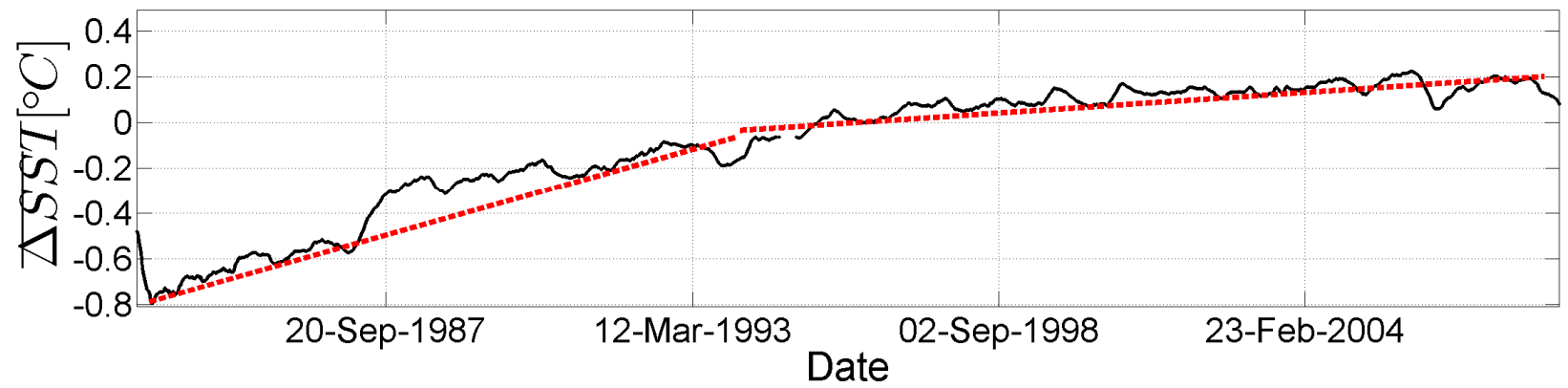
# Example Galite Island



Métr

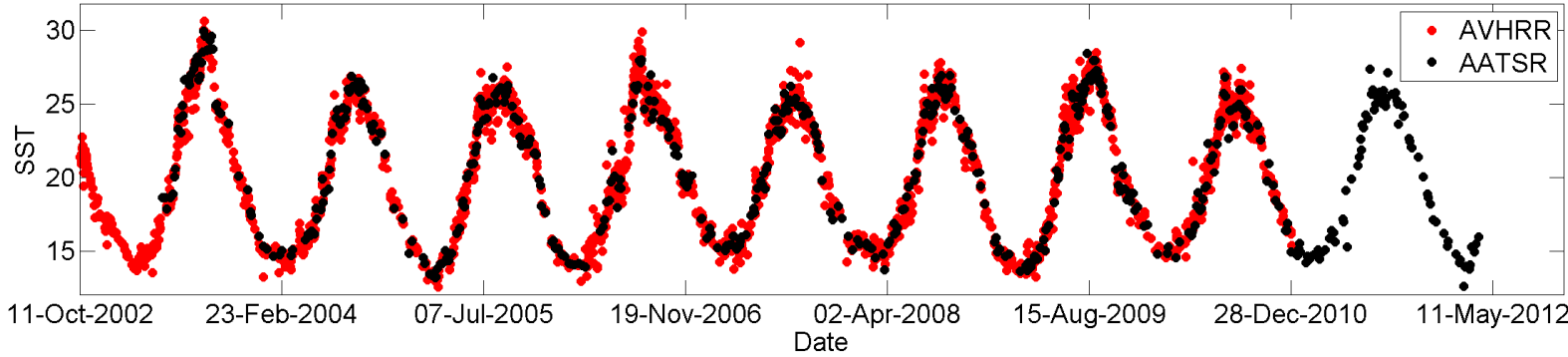
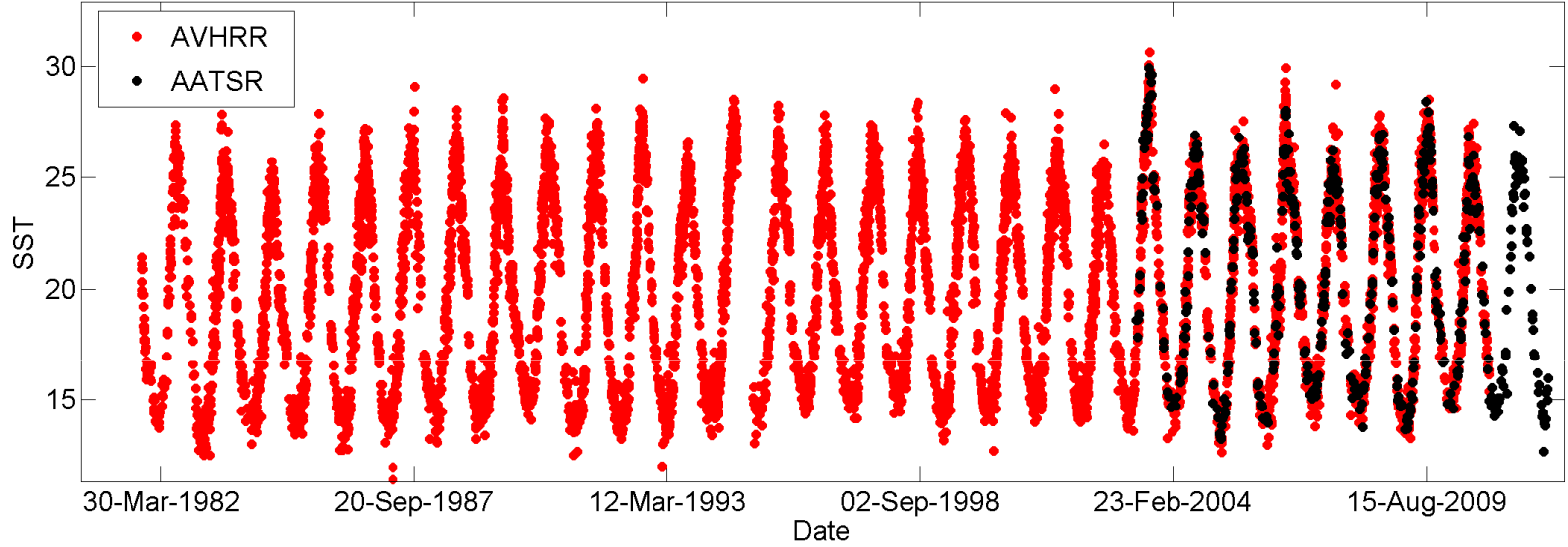
shells

$\Delta$ VHRR SST Anomaly time series Galite Island

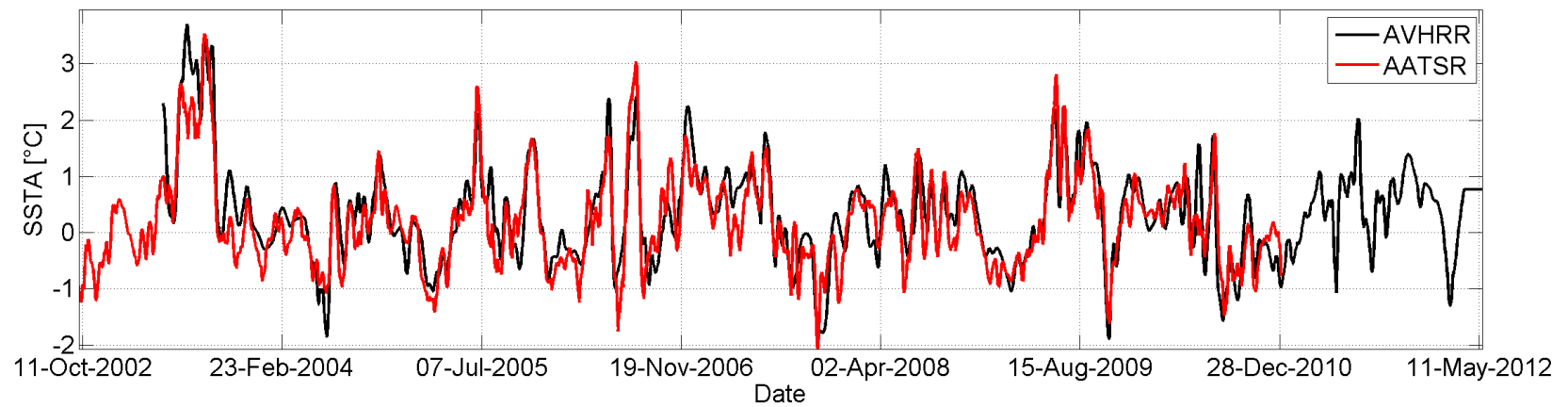
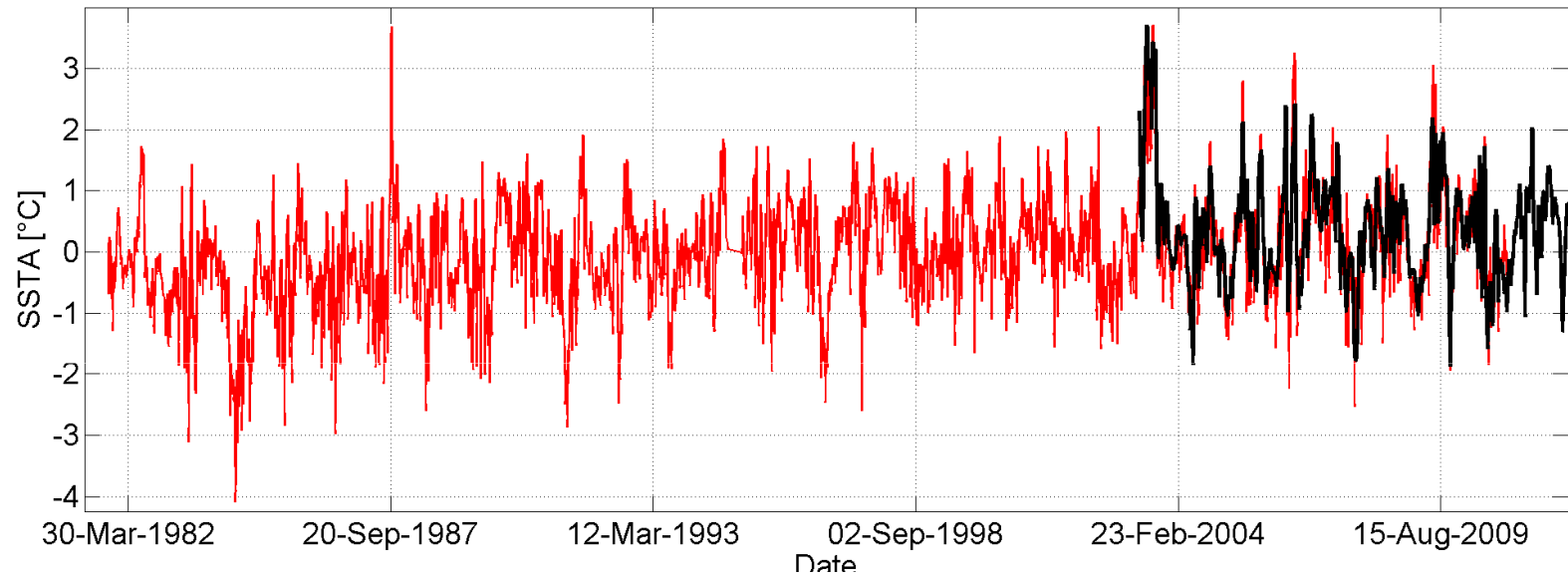


room 1.0x

# Comparison between multi-sources SSTs (here always the galite islands)

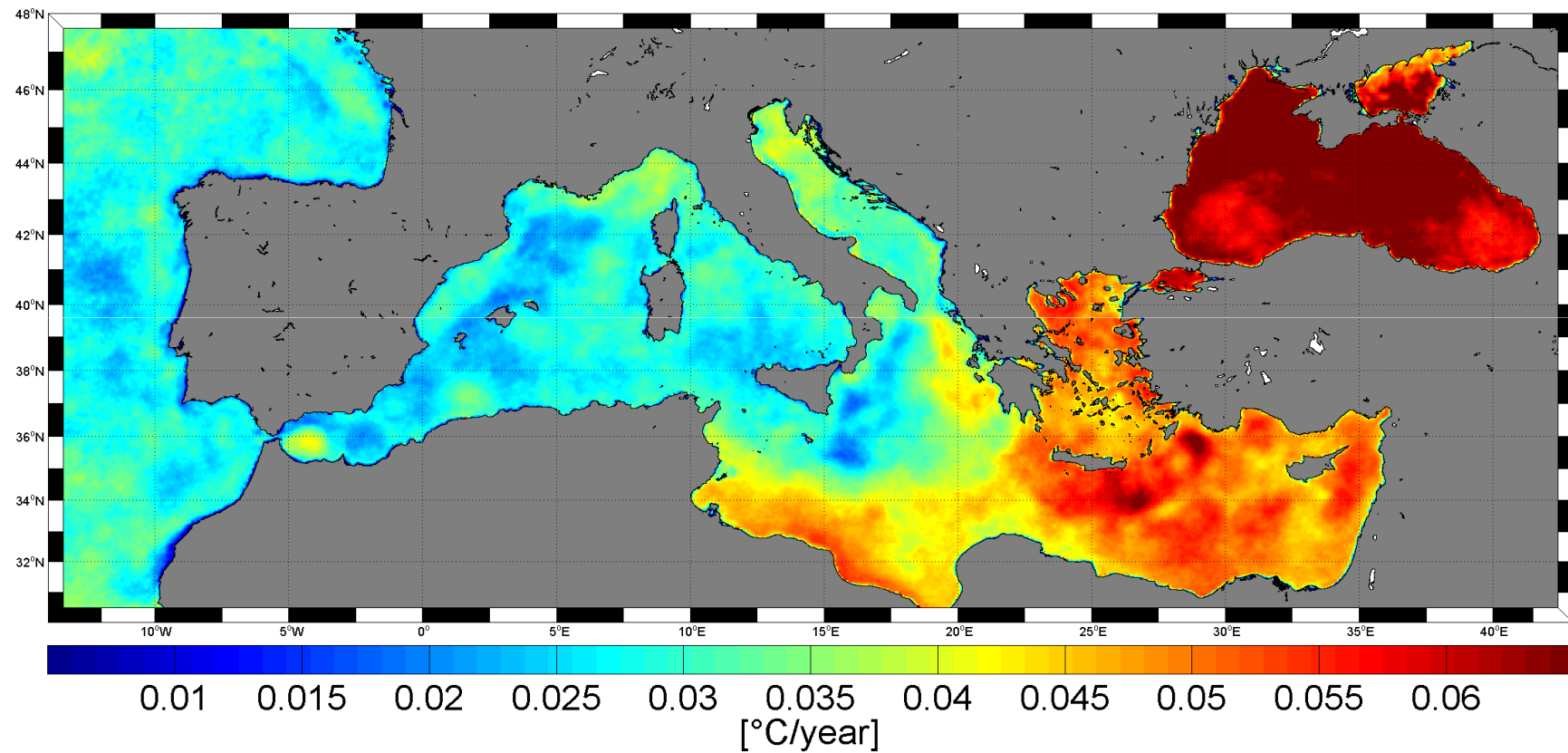


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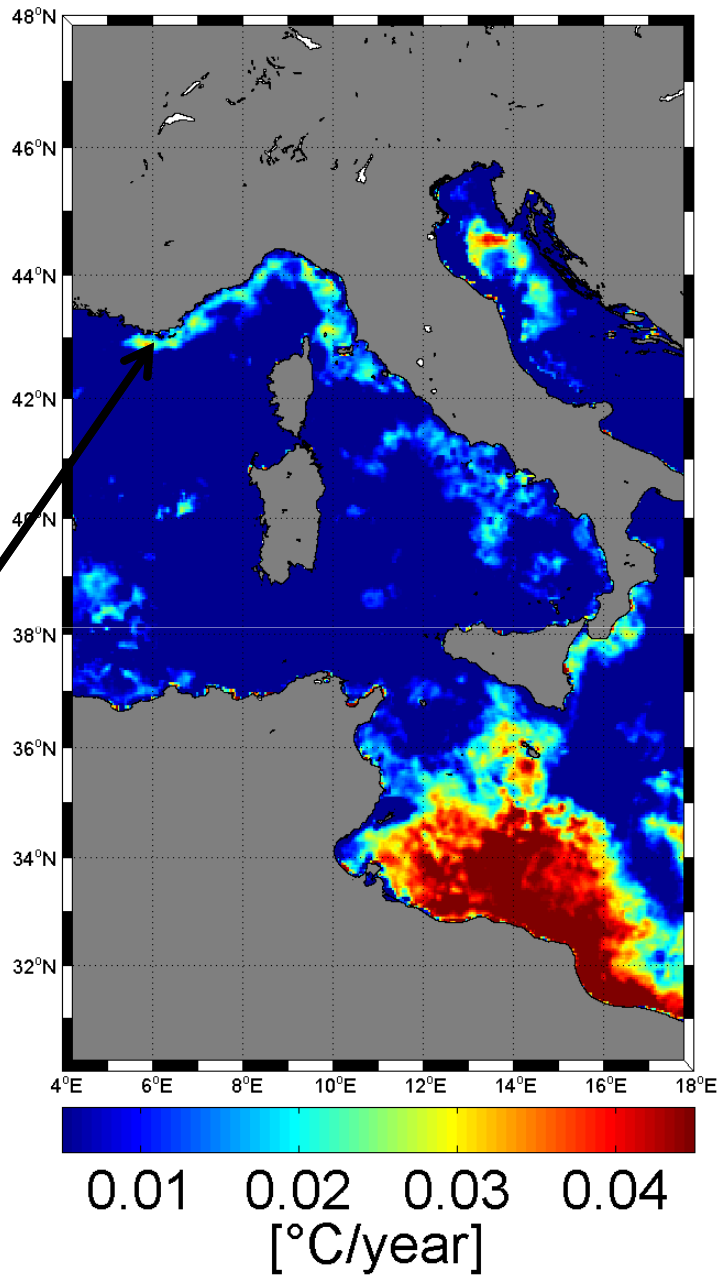
## Sea surface Warming tendency

Horizontal distribution of satellite-derived SST annual linear trends ( $^{\circ}\text{C}/\text{year}$ ) over 1985–2008



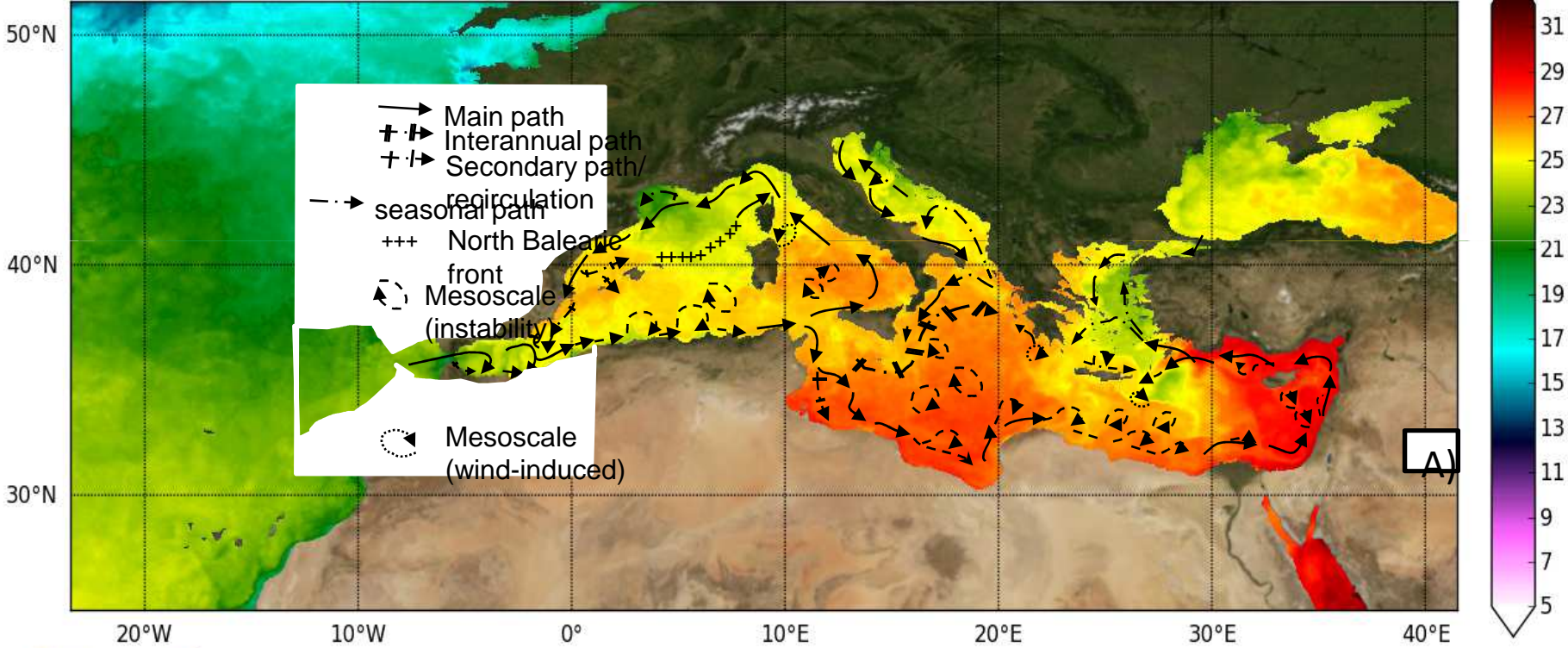
# SST annual linear trends ( $^{\circ}\text{C}/\text{year}$ ) over 2001–2011

Warming along  
Oceanographic  
Paths:  
Here the Northern  
Liguro-Provencal  
current





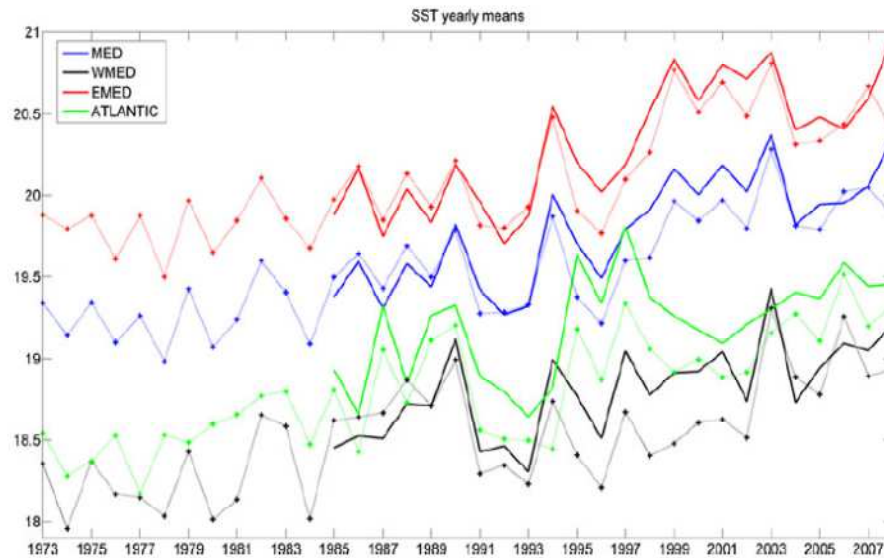
# ODYSSEA / 2013-09-06



# Sea Surface Warming in the Mediterranean Sea

Skliris et al. (2012) re-analyzed twenty-four year of AVHRR-derived sea surface temperature data (1985-2008)

Fig. 2 Time series of basin-average yearly mean satellite-derived SST over 1985–2008 (solid lines) (a) and NOCS-derived SST (dots and crosses) over 1973–2008 (b) for the entire basin (blue), the western basin (black), the eastern basin (red) and the Atlantic area near Gibraltar (green)



# Data base portal & access

Time series of SST  
Warming trends  
SST Anomalies

=> Will be made available soon through for each PIM in a web portal



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