

1st INIOAS Training Course on Ocean Remote Sensing, 2023



17-21 Jun 2023 | Iranian National Institute for Oceanography and Atmospheric Science | Tehran, IRAN

<https://www.inio.ac.ir/ORSA>

Sea Surface Temperature from Space

Masoud Moradi

Iranian National Institute for Oceanography and Atmospheric Science

moradi_msd@yahoo.com

<https://www.inio.ac.ir>

Interactive Lecture

SLSTR RBT product

- Open example SLSTR RBT file using SNAP
 - *File-> Open Product -> Select file (1 km resolution)*
 - [S3A_SL_1_RBT____20190618T200145_20190618T200445_20210113T074925_0179_046_071_0900_LR1_R_NT_004.SEN3]
 - [S3B_SL_1_RBT____20190618T093412_20190618T093712_20200810T030310_0179_026_307_1980_LR1_R_NT_004.SEN3]
- Expand arrow in *Product Explorer*
- Open 11 micron nadir image
 - *Select Bands -> S*BT_in-> S8_BT_in*
 - Set minimum BT to 285 K and maximum to 300 K
 - Review Bands and Masks

Interactive Lecture

Compare SLSTR RBT product with NASA MODIS SST

- Open example SLSTR WST file using SNAP
 - *File-> Open Product -> Select file (1 km resolution)*
 - [S3B_SL_2_WST____20230613T201510_20230613T201810_20230613T223807_0180_080_285_0900_MAR_O_NR_003.SEN3]
- Open sea_surface_temperature band
 - *Display View*
 - Set Cloud and Coastline masks
 - Calculate SST from K to °C using band Math
 - Expression: sea_surface_temperature-273.15

Interactive Lecture

Compare SLSTR RBT product with NASA MODIS SST

- Create subset from View
- Reproject the subset

- Open MODIS SST file
 - *[AQUA_MODIS.20230613T120001.L2.SST.NRT.nc]*
- Create subset from view
- Reproject the subset

- Review Cloud Masks of the two products

Interactive Lecture

Compare SLSTR RBT product with NASA MODIS SST

- Draw a Transect over the two SST Products
- Compare The results of the two transects

Interactive Lecture

Export SST maps to

- Open in Arc Map
- Compare the two products

Thank You