

Sea Ice Thickness from Satellite Radar Altimetry

AWI CryoSat-2 Sea Ice Product

The Sea Ice Radar Altimetry (SIRAL) project of the Alfred Wegener Institute (AWI) is based on satellite radar altimetry data to investigate the sea ice mass balance and related processes to understand Arctic Change. The name of the project is also a homage to the radar altimeter onboard CryoSat-2, the [Synthetic and Interferometric Radar Altimeter](#) (SIRAL) which has been a game changer for sea-ice thickness information from satellite radar altimetry. The thickness information obtained from radar altimetry adds the third dimension to the sea ice concentration data record and is an essential parameter for climate research and numerical weather prediction.

This wiki is dedicated to the documentation of sea ice thickness data sets from radar altimeter data produced at the Alfred Wegener Institute. Please also check the [blog](#) for news and updates as well as the [CS2SMOS wiki](#) for information on merged CryoSat-2/SMOS sea ice thickness data.



This page will be updated shortly with documentation of new processor version 2.6 (since October 2023).

Download	ftp://ftp.awi.de/sea_ice/product/cryosat2/v2p6 (ftp client required)
Documentation	Hendricks, S., & Paul, S. (2023). Product User Guide & Algorithm Specification - AWI CryoSat-2 Sea Ice Thickness (version 2.6), Issued by Zenodo (v2.6). https://doi.org/10.5281/zenodo.10044554
Citation	Hendricks, S., & Paul, S. (2023). Product User Guide & Algorithm Specification - AWI CryoSat-2 Sea Ice Thickness (version 2.6), Issued by Zenodo (v2.6). https://doi.org/10.5281/zenodo.10044554
Whats New	What's new in version 2.6



Operational News

Blog Posts

- Blog: [Start of AWI CryoSat-2 v2.6 near real-time data for winter 2023/24](#) created by [Stefan Hendricks](#)
Oct 05, 2023
[Sea Ice Radar Altimetry \(SIRAL\)](#)
- Blog: [CryoSat-2 near real-time data production ended for 2022/23 winter season](#) created by [Stefan Hendricks](#)
May 08, 2023
[Sea Ice Radar Altimetry \(SIRAL\)](#)
- Blog: [CryoSat-2 near real-time data production interrupted](#) created by [Stefan Hendricks](#)
Nov 10, 2022
[Sea Ice Radar Altimetry \(SIRAL\)](#)
- Blog: [CryoSat-2 data available in version 2.5](#) created by [Stefan Hendricks](#)
Nov 03, 2022
[Sea Ice Radar Altimetry \(SIRAL\)](#)
- Blog: [AWI CryoSat-2 v2.5 pre-announcement](#) created by [Stefan Hendricks](#)
Oct 10, 2022
[Sea Ice Radar Altimetry \(SIRAL\)](#)

Last 5 entries, see full operational news [here](#).

Overview

A full documentation of the AWI CryoSat-2 Sea Ice Product is given in the [Product User Guide & Algorithm Specification](#).

Acknowledgements

Cryosat-2 Level-1 data is courtesy of the European Space Agency
[ESA CryoSat website](#)
[ESA CryoSat-2 Wiki](#)



Sea ice concentration and type data is courtesy of the [Ocean and Sea Ice Satellite Application Facility \(OSI-SAF\)](#)



Global mean sea surface products (DTU21) is courtesy of the [Danish National Space Institute \(DTU Space\)](#)



Snow depth from AMSR2 is courtesy of the [Institute for Environmental Physics of the University Bremen](#)





Science News

Blog Posts

- Blog: [CryoSat-2 2018/2019 Winter Analysis](#) created by [Stefan Hendricks](#)
May 03, 2019
[Sea Ice Radar Altimetry \(SIRAL\)](#)
- Blog: [CryoSat-2: Winter 2017/18 Mean Anomaly](#) created by [Stefan Hendricks](#)
May 14, 2018
[Sea Ice Radar Altimetry \(SIRAL\)](#)
- Blog: [CryoSat-2 Completes 8th Arctic Winter](#) created by [Stefan Hendricks](#)
May 02, 2018
[Sea Ice Radar Altimetry \(SIRAL\)](#)
- Blog: [CryoSat-2: Arctic Update \(May 2018\)](#) created by [Stefan Hendricks](#)
May 02, 2018
[Sea Ice Radar Altimetry \(SIRAL\)](#)
- Blog: [CryoSat-2 & PIOMAS Thickness Anomalies](#) created by [Stefan Hendricks](#)
Apr 10, 2018
[Sea Ice Radar Altimetry \(SIRAL\)](#)

Last 5 entries, see full operational news [here](#).

All blog entries can be found [here](#).