

Metadata

Dataset Name	KuKa Rothera 2023 Processed Waveforms
Dataset General Type	Polarimetric, Nadir-looking Ku/Ka-band Waveforms
Dataset Type	Dataset
Dataset Level	0
Program Website	https://defiant.ac.uk/
Keyword Vocabulary	Polar Data Catalogue
Keyword Vocabulary URL	https://www.polardata.ca/pdcinput/public/keywordlibrary
Theme	
Dataset Status	In Progress
Maintenance and Update Frequency	Not planned
Dataset Last Revision Date	2024-11-28
Dataset DOI	
Metadata Creation Date	2024
Publisher	CanWIN
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**Dataset
Collection
Start Date**

2023-03-17

**Dataset
Collection
End Date**

2023-10-09

**Sample
Collection**

Sample Collection 1**Sampling Instrument Name**

Prosensing KuKa

Standardized Sampling Instrument Name**Sample Collection Method Name**

Polarimetric Radar Scanning

Comment**Method Link****Method Summary**

This directory contains processed waveform data from the KuKa radar instrument from its deployment at Rothera Research Station during 2023. Data were collected over sea ice, open water, glacial ice and terrestrial snow. In addition, calibration experiments were performed on a metal sheet and over concrete inside the aircraft hanger. The data are therefore extremely diverse and contact should be made with the Rothera DEFIANT project team prior to any scientific analysis. Any such analysis will require auxiliary data concerning the nature of the target in the footprint (sea ice, land-ice, snow etc). Data are processed at full bandwidth (see Willatt et al., 2023 GRL for details on this) using the KuKaPy Python package (<https://doi.org/10.5281/zenodo.7967057>).

Method Description Type

Methods

Activity Collection Type

Field Measurement

Preferred citation**Analytical Instrument****Analytical Instrument 1****Analytical Instrument Name****Standardized Analytical Instrument Name****Analytical Instrument Identifier Id****Analytical Instrument Title Type**

Alternative Title

Analytical Instrument Identifier Type**Analytical Method**

Analytical Method 1

Analytical Method Name

Method Link

Method Summary

Laboratory

Comments All data are geolocated with the exception of calibration measurements that occurred in the aircraft hangar where no GPS fix was available. Due to a persistent issue with the instrument clocks, the accuracy of timestamps are not always guaranteed.

Variables Measured

License Name

Creative Commons Attribution 4.0 International

Licence Type

Open

Embargo Date

Licence URL

<https://spdx.org/licenses>

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Awards

Awards 1

Award Title Canada C150 Research Chairs

Website

Funder Name NSERC

Funder Identifier Code

Funder Identifier Type

Funder Identifier Scheme

Grant Number

Related Resources

Related Resources 1

Related Resource Name

Resource Code

Identifier Type

Relationship To This Dataset

Resource Type Online Resource

Type

Series Name

Publications

Publications 1

Publication Name

Identifier Code

Identifier Type

Relationship to this dataset

Resource Type Online Resource

Publication Type

Spatial regions

antarctica

Spatial extent West Bound Longitude

Spatial extent East Bound Longitude

Spatial extent South Bound Latitude

Spatial extent North Bound Latitude

Data and Resources

URL	https://canwinerddap.ad.umanitoba.ca/erddap/files/Defiant_Rothera_Campaign_0bb4_eeb0_9c06/KuKa_Data/
Name	KuKa data
Description	This dataset contains processed waveform data from the KuKa radar instrument from its deployment at Rothera Research Station during 2023.
Format	.nc
Resource Category	data