

# Metadata

<b>Dataset Name</b>	KuKa Rothera 2023 Processed Waveforms
<b>Dataset General Type</b>	Polarimetric, Nadir-looking Ku/Ka-band Waveforms
<b>Dataset Type</b>	Dataset
<b>Dataset Level</b>	0
<b>Program Website</b>	<a href="https://defiant.ac.uk/">https://defiant.ac.uk/</a>
<b>Keyword Vocabulary</b>	Polar Data Catalogue
<b>Keyword Vocabulary URL</b>	<a href="https://www.polardata.ca/pdcinput/public/keywordlibrary">https://www.polardata.ca/pdcinput/public/keywordlibrary</a>
<b>Theme</b>	
<b>Dataset Status</b>	In Progress
<b>Maintenance and Update Frequency</b>	Not planned
<b>Dataset Last Revision Date</b>	2024-11-28
<b>Dataset DOI</b>	
<b>Metadata Creation Date</b>	2024
<b>Publisher</b>	CanWIN
<b>Dataset Authors</b>	
<b>Dataset Authors 1</b>	
<b>Name</b>	Mallett, Robbie
<b>Type of Name</b>	Personal
<b>Email</b>	<a href="mailto:robbie.d.mallett@uit.no">robbie.d.mallett@uit.no</a>

**Affiliation** Centre for Earth Observation Science - University of Manitoba

**ORCID ID** 0000-0002-1069-6529

ORCID

<http://orcid.org/>

**Dataset  
Authors 2**

**Name** Nandan, Vishnu

**Type of Name** Personal

**Email** [vishnun@am.amrita.edu](mailto:vishnun@am.amrita.edu)

**Affiliation** Centre for Earth Observation Science - University of Manitoba

**ORCID ID** 0000-0002-5133-2676

ORCID

<http://orcid.org/>

**Contributors**

**Contributors 1**

**Name**

**Role**

**Email**

**Affiliation**

**ORCID ID**

**Project Data  
Curator**

Stroeve, Julienne

**Project Data  
Curator  
email**

[julienne.stroeve@umanitoba.ca](mailto:julienne.stroeve@umanitoba.ca)

**Project Data  
Curator  
Affiliation**

Centre for Earth Observation Science - University of Manitoba

**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>

**Terms of Access**

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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

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