

# Sharing raw ApRES data

We strongly recommend that contributors to NECKLACE share raw data from their instruments in an open-access data repository. This will allow us to update the collated dataset as our processing software continues to develop and improve. Most contributors should be able to host data in their National Antarctic Data Centre, but if this facility is not available then [Pangaea](#) provides a good free alternative. Many data centres allow data to be embargoed for a period to allow the field team first right of publication.

## 1. Files to upload

\*.DAT data files, or netcdf converted using Paul Breen's [lossless conversion script](#)

Config file from instrument SD card (this retains useful information about the deployment)

## 2. Writing metadata

There is a lot of advice online for writing good metadata (e.g. [this guide](#)). Some key points to include for ApRES data are included below, and particularly using the keywords "ApRES" and "NECKLACE" will help to link all the relevant datasets together and make them easier to find.

*Title:* Include location, data type, time period e.g. *Phase-sensitive radar (ApRES) time series from Thwaites eastern ice shelf, 2020*

*Description:* This should include

- Date of deployment
- Date of retrieval
- Location of deployment
- Location of retrieval (optional but preferred)
- Any independent measurements of ice thickness at location
- Details of any site revisits/changes to antennas
- Information on any related publications

*Keywords:* We request you include keywords: ApRES, NECKLACE. These keywords will help data users to quickly search for all raw data contributing to the NECKLACE project

*Recommended Global Change Master Directory (GCMD) Keywords:*

Earth Science -> Cryosphere -> Glaciers/Ice Sheets -> Ice Shelves  
(UUID: 681e59ee-2006-454d-82d3-c9be49cc67a5)

Earth Remote Sensing Instruments -> Active Remote Sensing -> Imaging Radars -> pRES  
(UUID: 9ca1af5f-e2d6-4412-9efc-5eeefae8f0dc)

Land-based Platforms -> Field Sites -> Ice Shelf  
(UUID: dd445d5a-14d5-4813-b1cb-243799a044f7)

# Sharing processed ApRES data

NECKLACE will publish a reduced time series of melt rates, but you may also wish to share a higher-resolution time series of derived products such as melt and internal thickness change. We include some tips for publishing these datasets to make them as useful as possible.

## 1. Files to upload

Data file including: melt rate time series, vertical strain rate time series, uncertainties

Config file from instrument - this retains information about deployment

Config file from processing script - this retains information on processing choices

## 2. Writing metadata

There is a lot of advice online for writing good metadata (e.g. [this guide](#)). Some key points to include for ApRES data are included below, and particularly using the keywords “ApRES” and “NECKLACE” will help to link all the relevant datasets together and make them easier to find.

*Title:* Include location, data type, time period e.g. *Basal melt rates from phase-sensitive radar (ApRES): Thwaites eastern ice shelf, 2020*

*Description:* This should include:

- Date of deployment and retrieval
- Location of deployment
- Location of retrieval (optional but preferred)
- Frequency range used for processing
- Brief description of processing steps e.g. did you assume linear vertical strain?
- Any comments on data quality/challenges in processing
- Information on any related publications

*Keywords:* We request you include keywords: ApRES, NECKLACE. These keywords will help data users to quickly search for all raw data contributing to the NECKLACE project

*Recommended Global Change Master Directory (GCMD) Keywords:*

Earth Science -> Cryosphere -> Glaciers/Ice Sheets -> Ice Shelves  
(UUID: 681e59ee-2006-454d-82d3-c9be49cc67a5)

Earth Science -> Cryosphere -> Glaciers/Ice Sheets -> Glaciers/Ice Sheet Thickness  
(UUID: 5034ba1f-7208-40a1-beeb-43aefe1c0c33)

Earth Science -> Cryosphere > Glaciers/Ice Sheets > Glacier Mass Balance/Ice Sheet Mass Balance  
(UUID: 9f408faa-a427-44e9-a194-b1b9caff1e6d)

Earth Remote Sensing Instruments -> Active Remote Sensing -> Imaging Radars -> pRES  
(UUID: 9ca1af5f-e2d6-4412-9efc-5eeefae8f0dc)

Notes: We highly recommend providing dates in W3C/ISO 8601 date standard, which specifies the international standard notation of YYYY-MM-DD or YYYY-MM-DDThh:mm:ss.