

# Antarctic Meteorological Research and Data Center Dataset Development & Stewardship Project

For

Near-term Variability and Prediction of the Antarctic Climate System  
AntCLIM<sup>now</sup> Project  
Scientific Committee on Antarctic Research (SCAR)

Final Report

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Or on-line at:

<https://amrdcdata.ssec.wisc.edu/dataset/amrdc-dataset-development-stewardship-project-report-2023-antclimnow>

## A. Project Summary

There are several institutions around the world that host and offer Antarctic meteorological datasets, with no clearinghouse that links them together. Hence, the SCAR Scientific Research Program, Near-term Variability and Prediction of the Antarctic Climate System (AntClim<sup>Now</sup>) has a major goal of improving access and coordination of Antarctic climate and meteorological data. This project aids those seeking Antarctic meteorological data and to specifically support the AntClim<sup>Now</sup> data stewardship and scientific research program by linking disparate archives and data holdings into the newly developed Antarctic Meteorological Research and Data Center (AMRDC) Repository (<https://amrdcdata.ssec.wisc.edu/>).

## B. Project Status

As of 30 June 2023, the AMRDC has accomplished the following tasks:

- A total of 98 datasets have been linked into the AMRDC Data Repository
- A specific project collection has been made for this effort:
  - <https://amrdcdata.ssec.wisc.edu/group/antclimnow-project>
 and the new AntCLIM<sup>now</sup> collection can be found on this page:
  - <https://amrdcdata.ssec.wisc.edu/group>
- All newly linked datasets are available via general and advanced search in the AMRDC Data Repository
- An additional set of datasets have been identified, are still being evaluated and will be added to the AMRDC Data Repository in the near future.
- This effort will be an on-going aspect of the AMRDC Data Repository moving forward into the future.

While a few examples continue the actual data, external data links are denoted in the records. For example:

**Meteorological data from ice-free areas in Yukidori Zawa, Langhovde and Kizahashi Hama, Skarvsnes, and Skallen on Soya Coast, East Antarctica during January 2017 - December 2018**

Meteorological data recorded by automatic weather stations (AWSs) in the Yukidori Zawa (Yukidori Valley), Langhovde, and in Kizahashi Hama, Skarvsnes on the Soya Coast of East Antarctica.

External dataset

This dataset, has a full entry in the AMRDC repository:

# Meteorological data from ice-free areas in Yukidori Zawa, Langhovde and Kizahashi Hama, Skarvsnes, and Skallen on Soya Coast, East Antarctica during January 2017 - December 2018

Meteorological data recorded by automatic weather stations (AWSs) in the Yukidori Zawa (Yukidori Valley), Langhovde, and in Kizahashi Hama, Skarvsnes on the Soya Coast of East Antarctica.

## Data

[Download all](#)

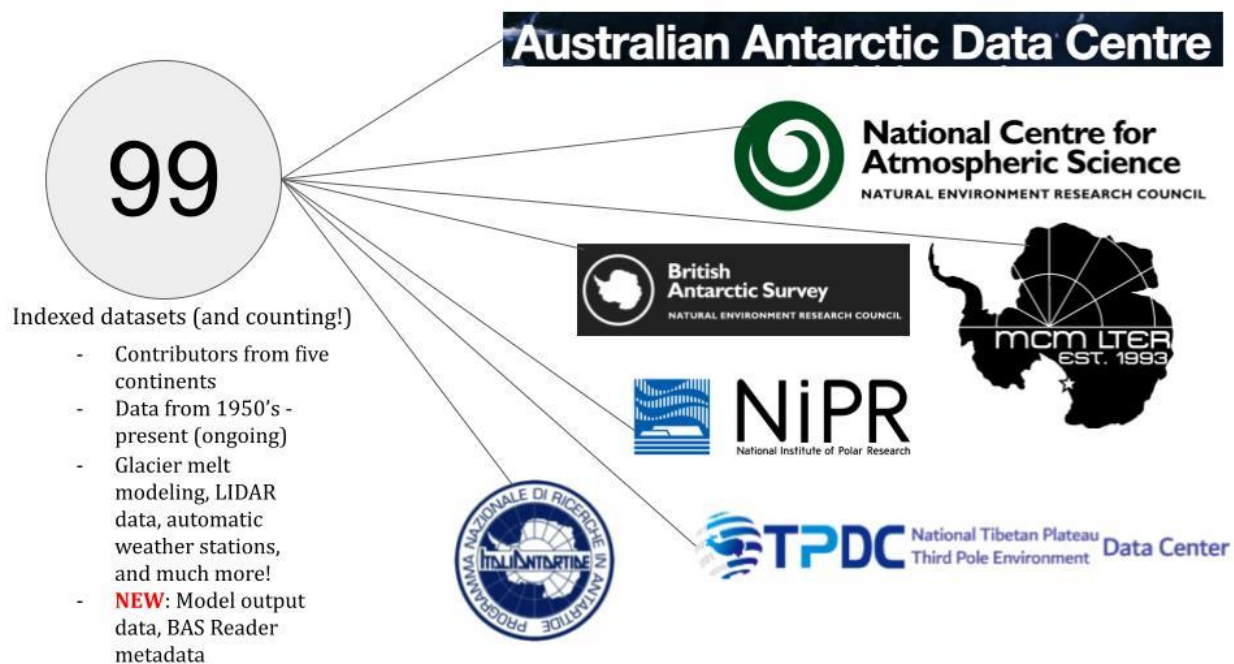

Link to external dataset: <https://ads.nipr.ac.jp>

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[Barometric pressure](#)
[Relative humidity](#)
[Wind](#)

## Additional Information

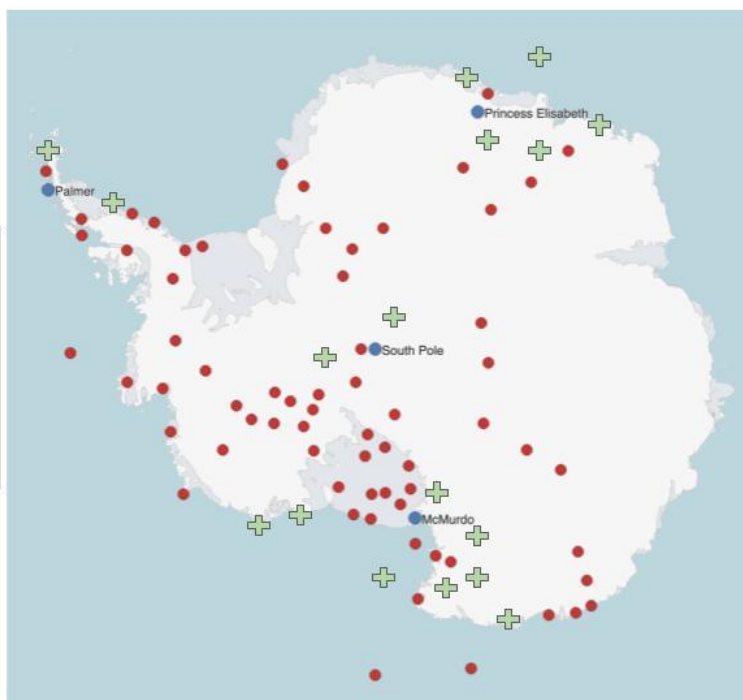
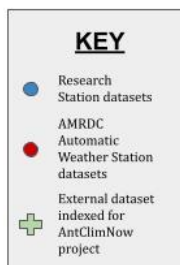
Source	<a href="https://ads.nipr.ac.jp/data/meta/A20201030-001/record">https://ads.nipr.ac.jp/data/meta/A20201030-001/record</a>
Author	Kudoh, S., T. Wada, S. Shimada, M. Otani, J. Elster, M. Uchida, S. Imura
Maintainer	Arctic Data archive System (ADS), Japan
Last Updated	September 28, 2022, 2:41 PM (UTC-05:00)
Created	September 28, 2022, 2:40 PM (UTC-05:00)
Categories	Automatic Weather Station
Citation	Kudoh, S., T. Wada, S. Shimada, M. Otani, J. Elster, M. Uchida, S. Imura, 2021, Meteorological data from ice-free areas in Yukidori Zawa, Langhovde and Kizahashi Hama, Skarvsnes, and Skallen on Soya Coast, East Antarctica during January 2017 - December 2018, 1.00, Arctic Data archive System (ADS), Japan, <a href="http://doi.org/10.17592/001.2020103001">http://doi.org/10.17592/001.2020103001</a> .
Collection Begin Date	2017-01-01
Collection End Date	2018-12-31
DOI	<a href="http://doi.org/10.17592/001.2020103001">http://doi.org/10.17592/001.2020103001</a>
Format	Text
Principal Investigator(s)	Kudoh, S., T. Wada, S. Shimada, M. Otani, J. Elster, M. Uchida, S. Imura

Both locations provide direct links to the original data repository where this data resides. To date, over 99 datasets from research organization across 6 continents are now linked into the repository.



Below is a geographical coverage map that reveals the current holdings in the repository. Green crosses are datasets linked and indexed in the AMRDC repository as a part of this project:

### Extended Geographical Coverage



## C. Future Plans

This project has a goal of continuing this work into the future. As external datasets are identified, they will be added to the AMRDC Data Repository collection. Some specific repositories will be monitored for new data including the United States Antarctic Program Data Center (USAP-DC; <https://www.usap-dc.org/>), PANGAEA (<https://pangaea.de/>), and Zenodo (<https://zenodo.org/>) to name a few. Overall, this will be an on-going effort updated in the future as an index/database for obscure Antarctic meteorological datasets especially. Indexing other datasets has spurred interest in our own group regarding collaborating with external indices (Polder, etc.).

One challenge we have discovered is the availability of datasets that do not completely have a full set of metadata. This ends up leaving only a partial metadata record in the AMRDC archive. While this is unfortunate, it is of greater value to the community to have a partial entry, than none at all. We will be including more of these datasets soon.

The funded effort here was included in all presentations on the AMRDC including at the recently held 18<sup>th</sup> Workshop on Antarctic Meteorology and Climate (WAMC) along with the prior 17<sup>th</sup> WAMC. We will present our work at future meetings and workshops (e.g. the 2<sup>nd</sup> Annual US SCAR meeting, IUGG Assembly in Berlin, etc.) to update the community on the latest AMRDC data repository efforts.

## D. Acknowledgements

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