pyresice - Python Package for Reusability-Targeted Sea Ice Databases

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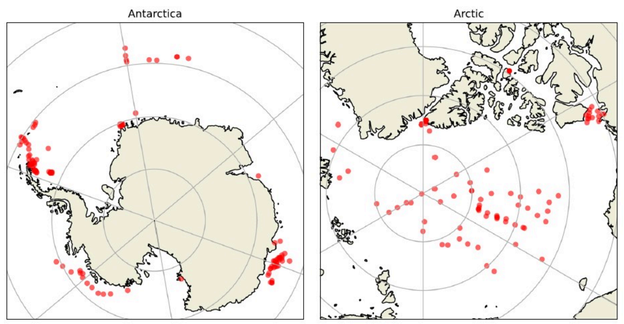
Database, Sea Ice Cores

Overview

- Python package accompanying the RESICE (Reusability-targeted Enriched Sea Ice Core Database) database
- Enables reuse of heterogeneous sea ice core data
- validation of physics-based models
- Coupled multiphysics support
- training of data-driven algorithms

Sea Ice Core Locations in RESICE



Color intensity indicates density of available sea ice cores.

Features

- Combines data & metadata from 287 sea ice cores and 138 sources
- Automatic metadata enrichment with Python routines
- Reproducible, traceable data compilation
- Harmonized units, coordinates, and naming standards

pyresice

[1])

Bibliography

[1] A. Simson, A. Yildiz, and J. Kowalski, "Reusability-targeted enrichment of sea ice core data," *scientific data*, 2025, doi: https://doi.org/10.1038/s41597-025-04665-x.

Data Sources

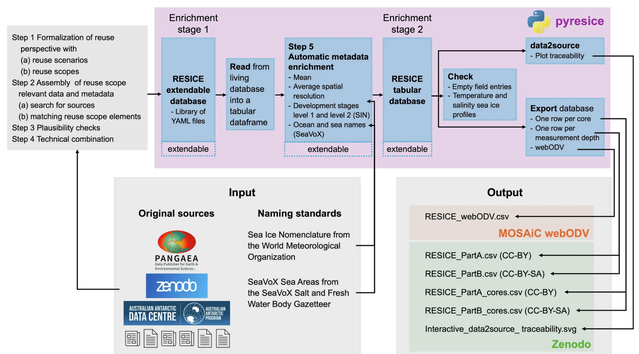
Data from three different sources.

Australian Government | Australian Antarctic Program | Australian Antarctic Data Centre

PANGAEA Data Publisher for Earth & Environmental Science

Get started using Docker Containers

Database preparation steps



Useful Links

Publication

Tests

Contact

GitLab