

GeoPRISMS Data Portal

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1) Introduction

The GeoPRISMS Data Portal of the Marine Geoscience Data System is funded by NSF under the IEDA Facility cooperative agreement to provide data services to the GeoPRISMS community. For each GeoPRISMS primary site, the data portal has been populated with a range of existing high-priority terrestrial and marine data sets. For the EARS primary site, this includes, for example, links to the EAGLE, KRISP and Tanzania-BSE seismic experiments. The portal offers customised searches for GeoPRISMS-related data, and the GeoPRISMS bibliography database seamlessly links papers to the data sets and to funding awards.

GeoMapApp, Virtual Ocean and EarthObserver are map-based tools that provide rich data exploration, analysis and visualisation functionality (Figures 1 and 3).

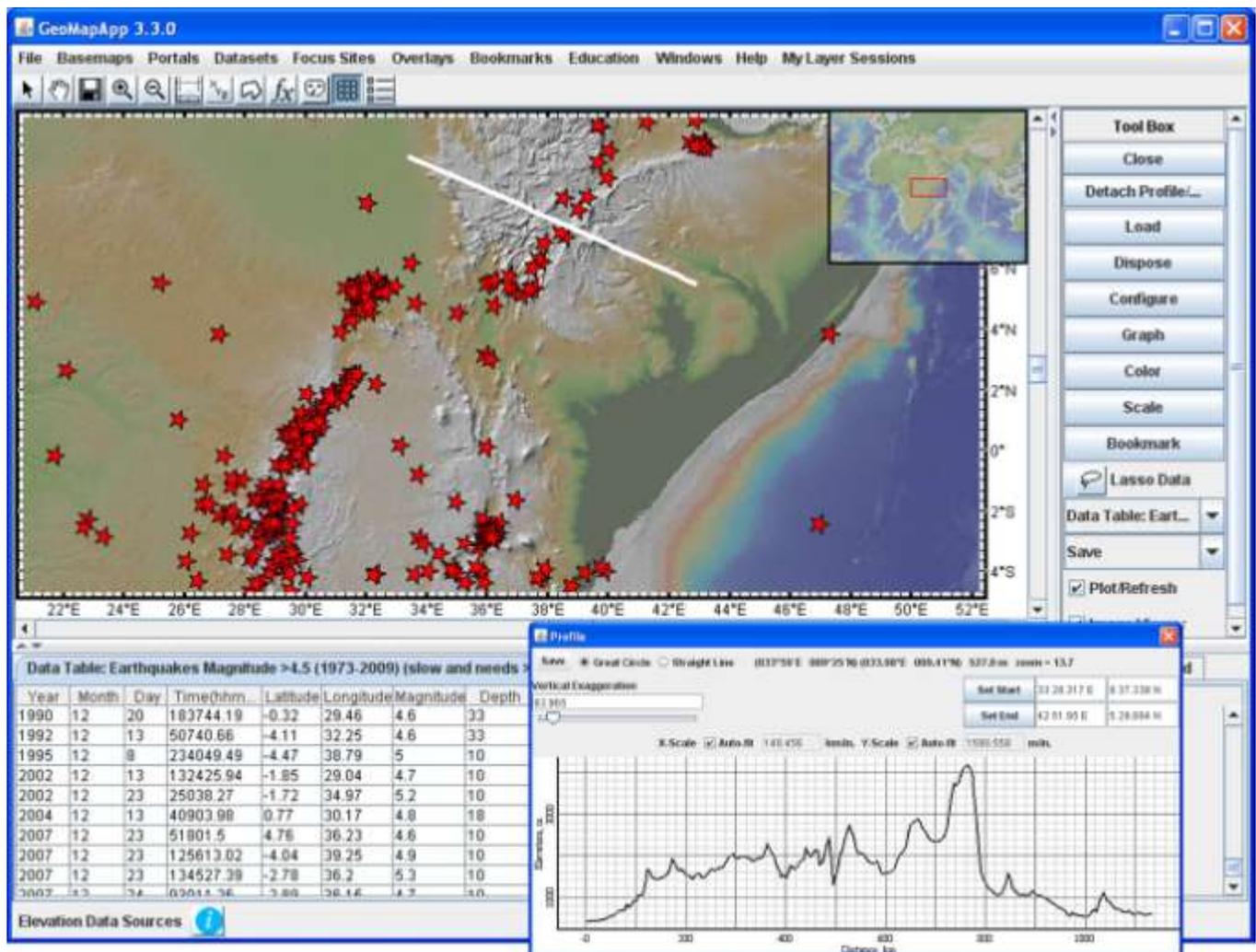


Figure 1: GeoMapApp screenshot with red star symbols showing USGS NEIC earthquake locations for events with magnitudes > 4.5 during the period 1973-2009. The locations are plotted on top of the 30m-resolution joint Japanese-US ASTER land elevation grid. The white line across the rift shows the location of the topographic profile displayed in the lower window. Clicking a symbol on the map highlights the information record in the table beneath, and vice versa. Records can be captured with a free-hand lasso drawing tool, and saved. The image can also be saved in various formats. Users are able to import their own data sets such as grids and spreadsheets.

2) Services

- **Data Portal**

The GeoPRISMS data portal, like the predecessor MARGINS portal, is fully integrated with the wider Lamont database system and offers a compilation of pre-existing data sets of interest to the community. Links are provided to EARS-related projects such as the Ethiopia-Kenya Broadband Seismic Experiment, and a simple search function, described below, provides user access to the data. As funding for GeoPRISMS research projects gets underway, the portal team will work with PIs, members of the community and the GeoPRISMS Office to ensure appropriate capture of marine and terrestrial field program information and derived data products.

<http://www.marine-geo.org/portals/geoprisms/>

- **Search for Data**

Data can be found (Figure 2) by searching on key words such as data or device type, name of field program or investigator, by geographic location, and even by award numbers. Filtered searches and auto-complete technology help speed users towards data.

http://www.marine-geo.org/tools/new_search/index.php?initiative=GeoPRISMS

Data Type	Date	Instrument Info	Lead Investigator(s)	Expedition/Compilation	References
Seismic: Passive <i>Field</i> (IRIS)	2001-10-01 2003-02-28	Seismic: Seismometer	Maguire	EARS: EAGLE	Data Set References
Seismic: Passive <i>Field</i> (IRIS)	2000-03-01 2002-07-31	Seismic: Seismometer	Nyblade	EARS: Ethiopia-Kenya-BSE	Data Set References
Seismic: Passive <i>Field</i> (IRIS)	1994-05-01 1995-06-30	Seismic: Seismometer	Nyblade	EARS: Tanzania-BSE	Data Set References

Figure 2: Example of data portal search results listing. Links at left take users to IRIS for information and seismic data files. Links at right open pages giving field program information and with just a couple of clicks allow users to view publications tied with the data sets.

- **Data Visualisation and Exploration**

The GeoMapApp and Virtual Ocean tools offer a rich variety of options for users to plot, analyse and visualise their data in a geographical setting (Figures 1 and 3). EarthObserver, a recently-released app for the iPad™, iPod Touch™ and iPhone™ offers instant mobile access to a large range of built-in data sets.

<http://www.geomapp.org/> , <http://www.virtualocean.org/> , <http://www.earth-observer.org/>

- **Bibliography**

The GeoPRISMS references database provides an integrated, searchable resource that links publications to data sets and funding awards. Currently comprising almost 400 papers of direct relevance for GeoPRISMS science, the database can be searched on author, title, journal, year, and primary site. All displayed results can also be exported in EndNote™ format. The bibliography page provides a simple tool to allow anyone to submit references for inclusion in the database.

<http://www.marine-geo.org/portals/geoprisms/references.php>

- **Data Management Plan Tool**
All proposals submitted to NSF must be accompanied by a Data Management Plan. With NSF input we created a simple web page that allows PIs to fill in information boxes and generate a data management plan in PDF format to be attached to the proposal.
<http://www.iedadata.org/compliance/plan>
- **Data Compliance Reporting Tool**
This tool helps PIs demonstrate compliance with funding agency data policies by allowing PIs to inventory their data contributions, with links to award numbers.

3) Data Policy

Led by Susan Schwartz, the GeoPRISMS data policy was compiled by a sub-committee of the GeoPRISMS Steering and Oversight Committee, with input from NSF and the database group.
<http://www.geoprisms.org/data-policy.html>

4) Community Outreach and Accountability

A representative from the database group plans to attend GeoPRISMS meetings to act as a community liaison, to increase awareness about the data portal services, and to solicit feedback and advice on products and resources. A report on database activities will appear in the GeoPRISMS twice-yearly newsletter, and, at each GeoPRISMS Steering and Oversight Committee meeting, a report will be given and data-related discussions held.

The GeoPRISMS data manager, Andrew Goodwillie, and the database team are keen to help the community with questions related to data, analysis tools or the GeoPRISMS bibliography.

5) References

GeoPRISMS Data Portal Status Report, *GeoPRISMS Newsletter*, Spring 2012, vol 28, page 22.
http://geoprisms.org/images/stories/documents/newsletters/issue28_opt.pdf

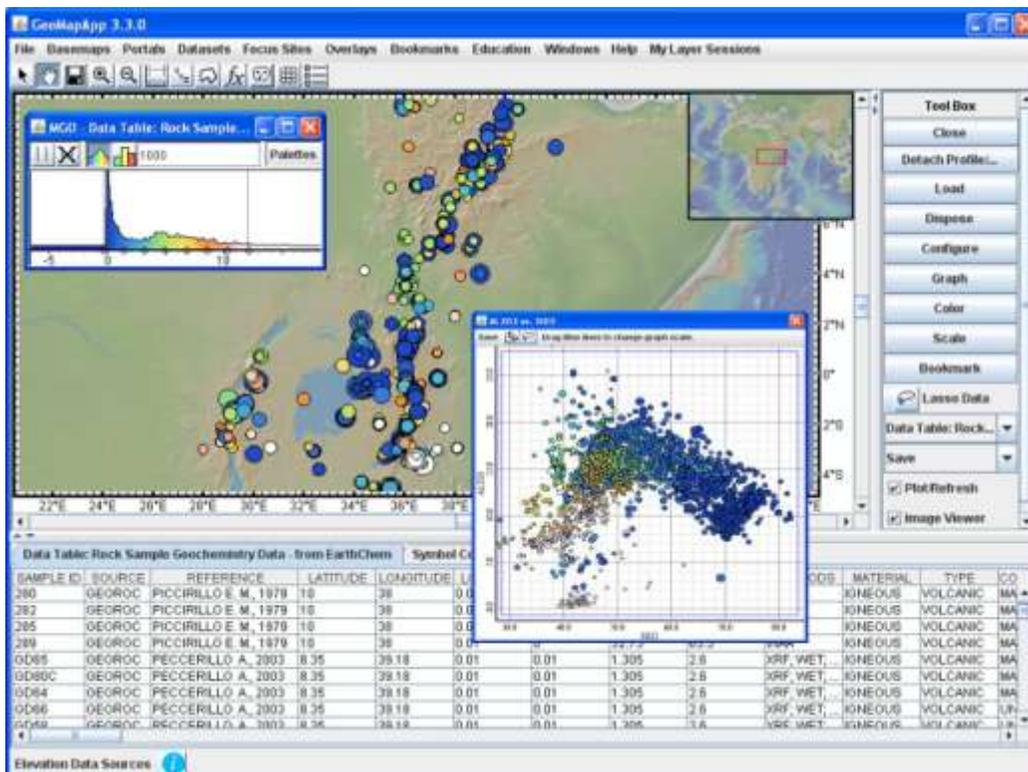


Figure 3: Geochemical analytical data of EARS volcanic rock samples from the EarthChem database. Symbols are coloured on MgO content, scaled on K₂O, and the inset graph shows Al₂O₃ plotted against SiO₂. A lasso tool allows records to be captured and saved.