armap.org

Arctic Research Mapping Application

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a geoportal for project-level logistical and other information about U.S. funded research in the Arctic

- **$ 18** funding agencies
- **1300+** project locations
- **2700+** research projects
- **132** cruise tracks
- **5 Public** Web Services; >100 Other
- **ISO** Metadata
- **Data** Links provided for most
- **Java-Script HTML5** Framework
- **Advanced Search Filters**
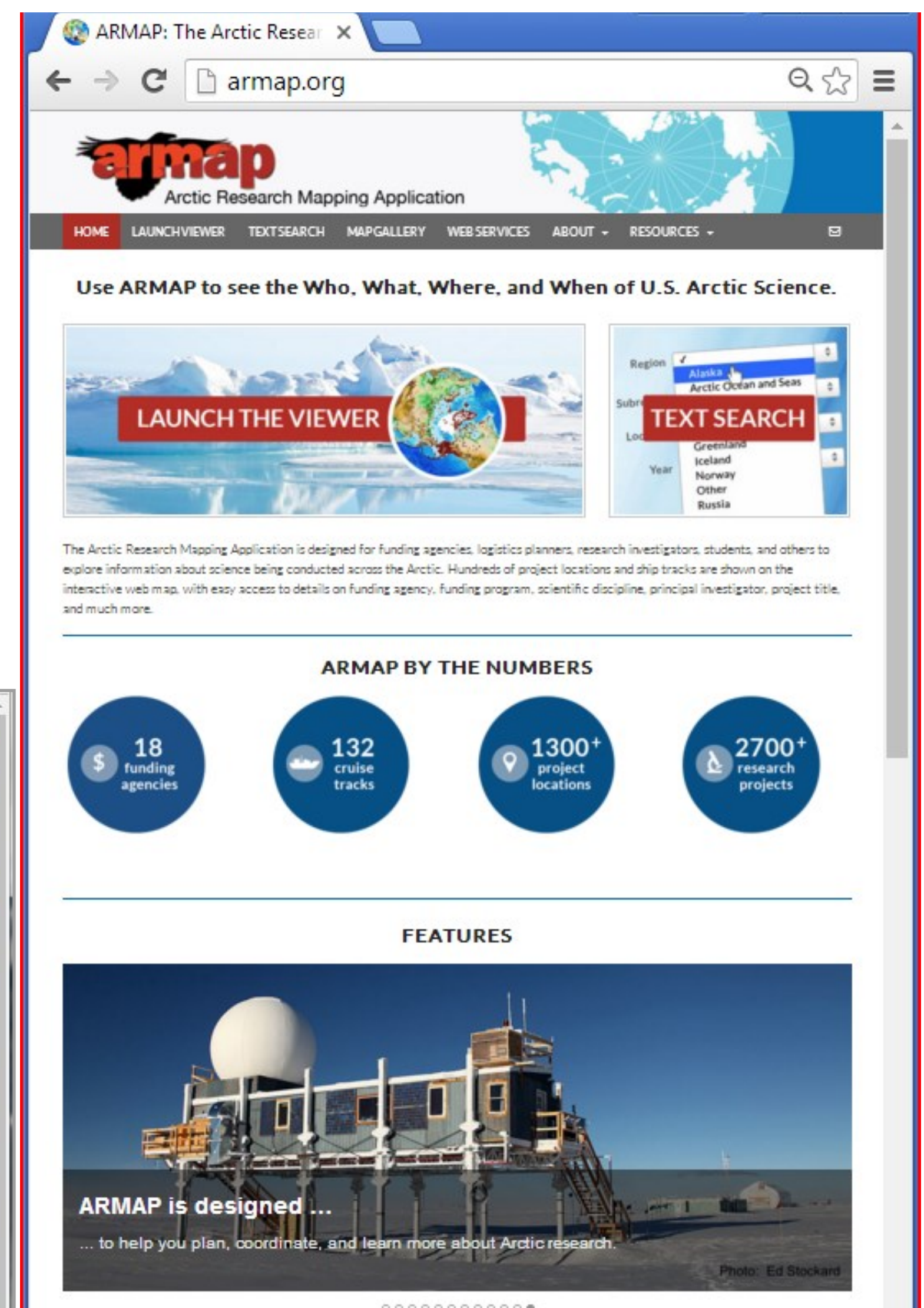

Check out the ARMAP website at http://armap.org

Abstract:
The Arctic Research Mapping Application (ARMAP; http://armap.org/) is a suite of online applications and data services that support Arctic science by providing project tracking information (who's doing what, when and where in the region) for United States Government funded projects. In collaboration with 17 research agencies, project locations are displayed in a visually enhanced web mapping application. Key information about each project is presented along with links to web pages that provide additional information, including links to data where possible. The latest ARMAP iteration has i) reworked the search user interface (UI) to enable multiple filters to be applied in user-driven queries and ii) implemented ArcGIS Javascript API 4.0 to allow for deployment of 3D maps directly into a users web-browser and enhanced customization of popups. Module additions include i) a dashboard UI powered by a back-end Apache SOLR engine to visualize data in intuitive and interactive charts; and ii) a printing module that allows users to customize maps and export these to different formats (pdf, ppt, gif and jpg). New reference layers and an updated ship tracks layer have also been added. These improvements have been made to improve discoverability, enhance logistics coordination, identify geographic gaps in research/observation effort, and foster enhanced collaboration among the research community. Additionally, ARMAP can be used to demonstrate past, present, and future research effort supported by the U.S. Government.
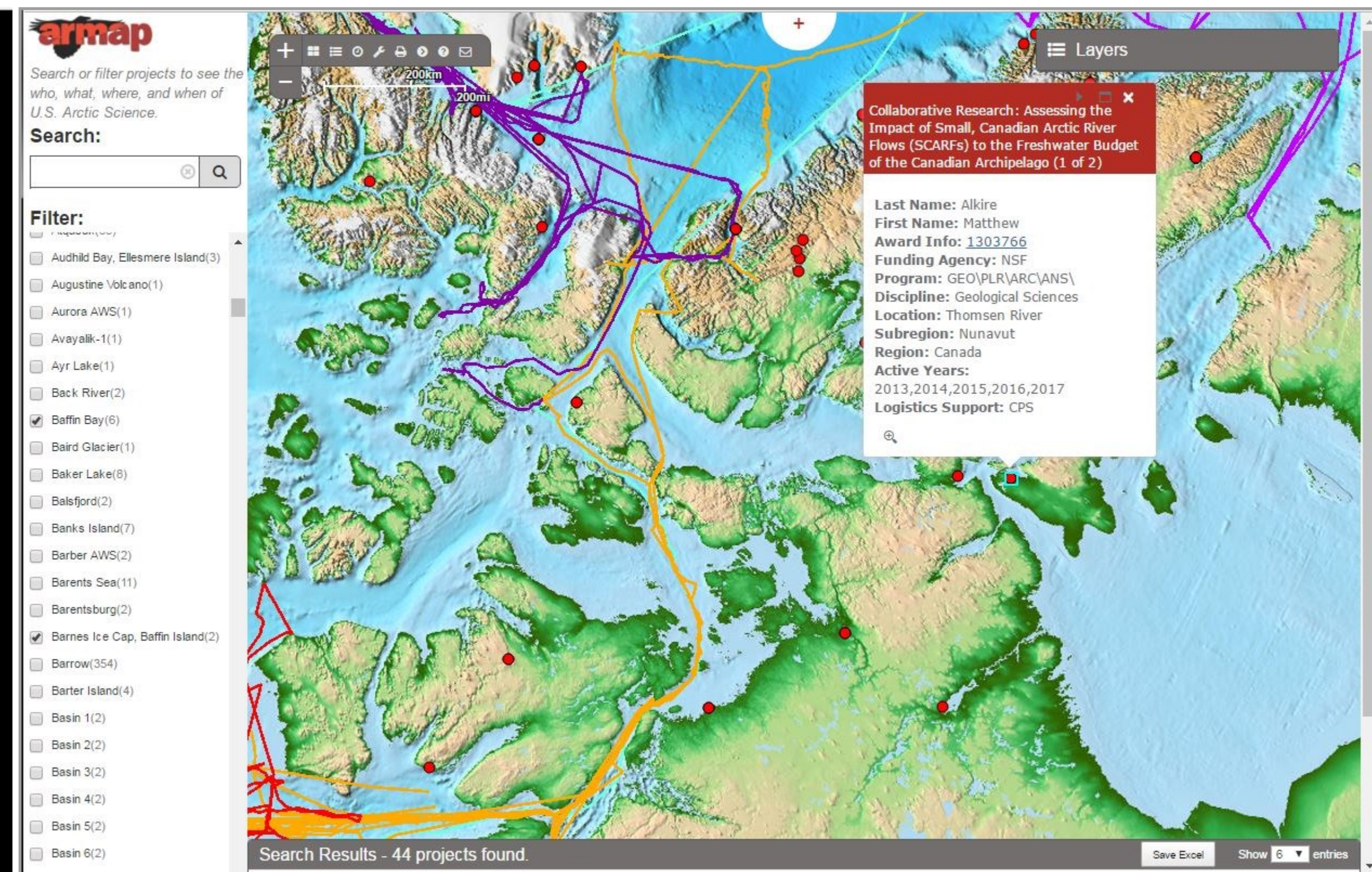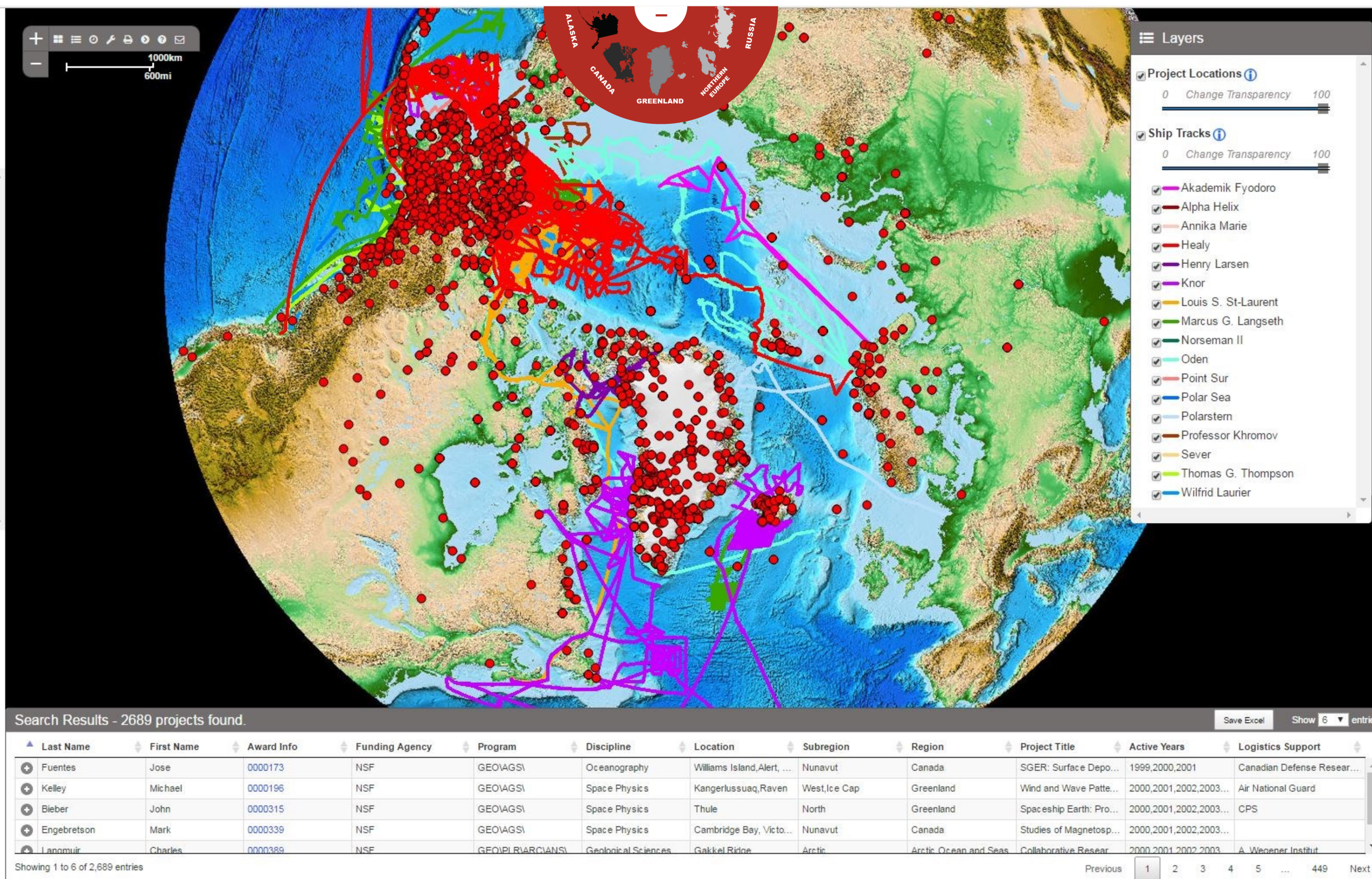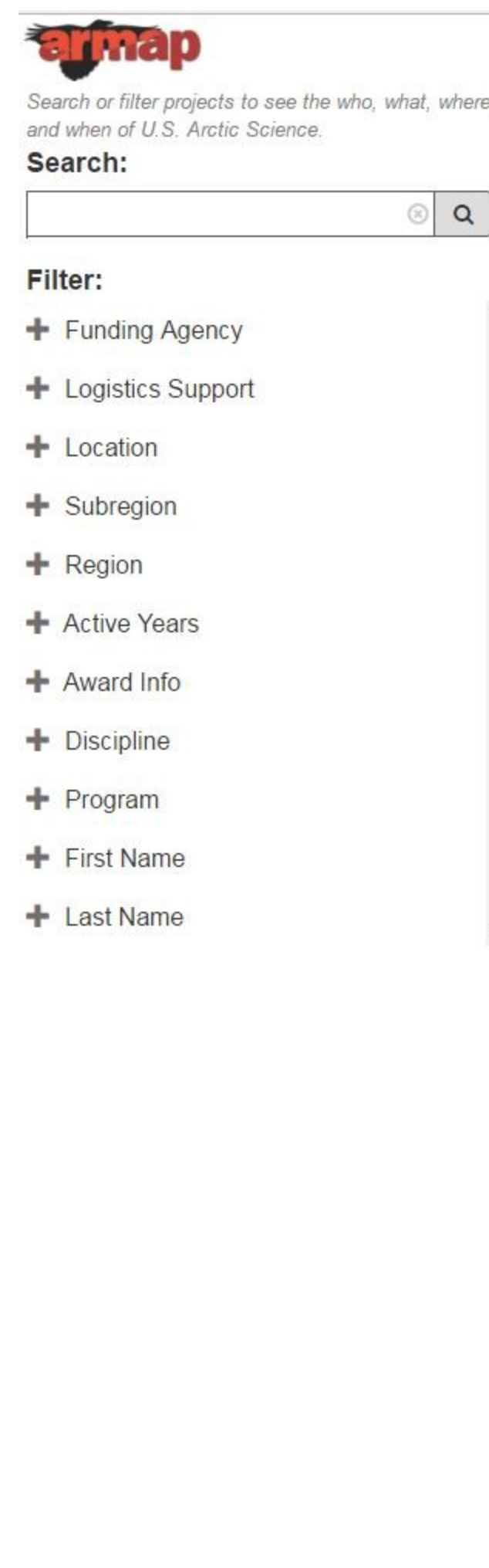
New functionality includes an improved search interface which allows for refining searches by location, active year, region, etcetera (above) via back-end Apache SOLR technology. Filtered data may be downloaded to a spreadsheet or output as printed maps. Ship tracks from the Rolling Deck to Repository (R2R) and other archives are also included in the application (above) and animation (right). Click on a dot to obtain a popup with more details.
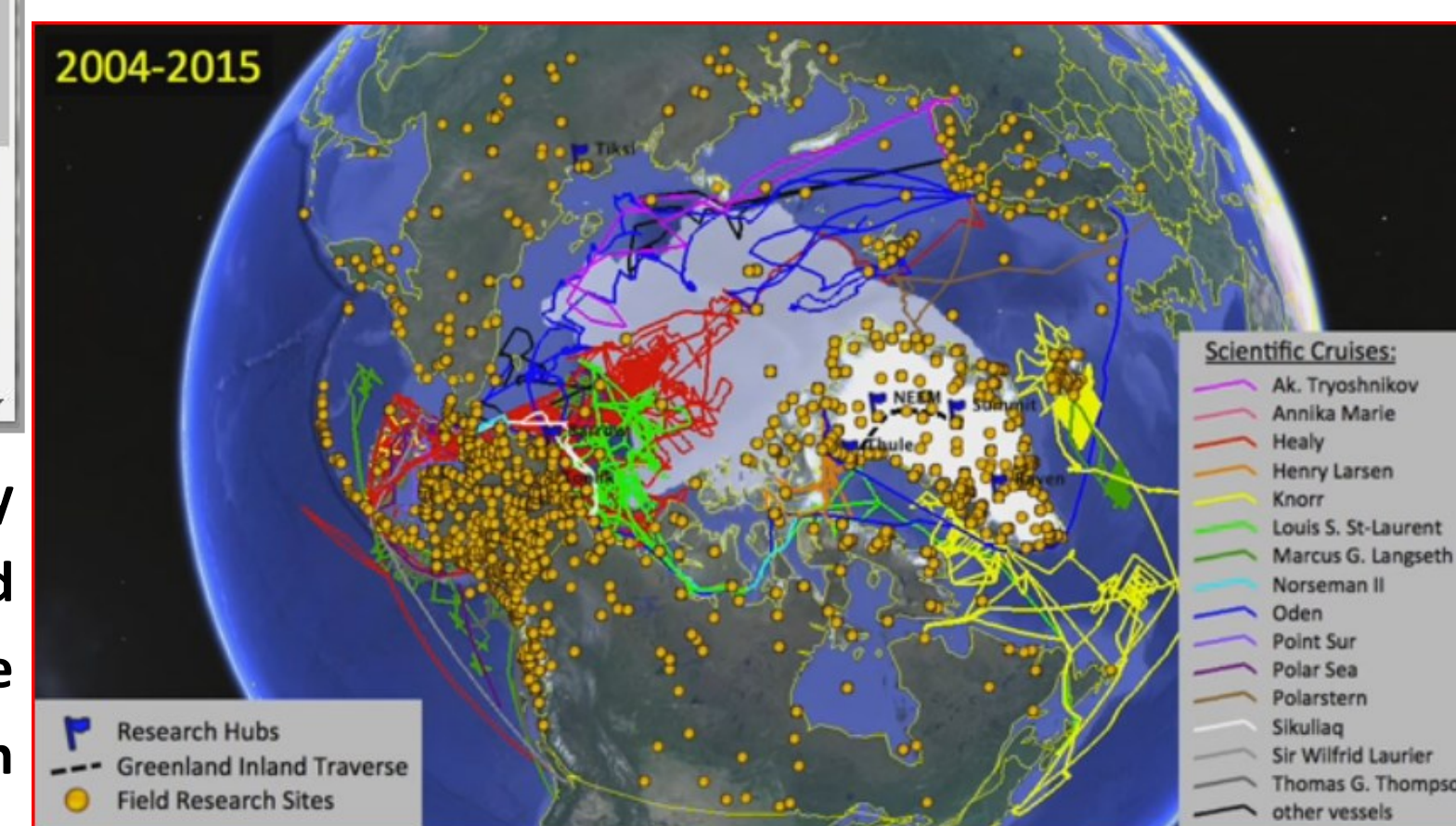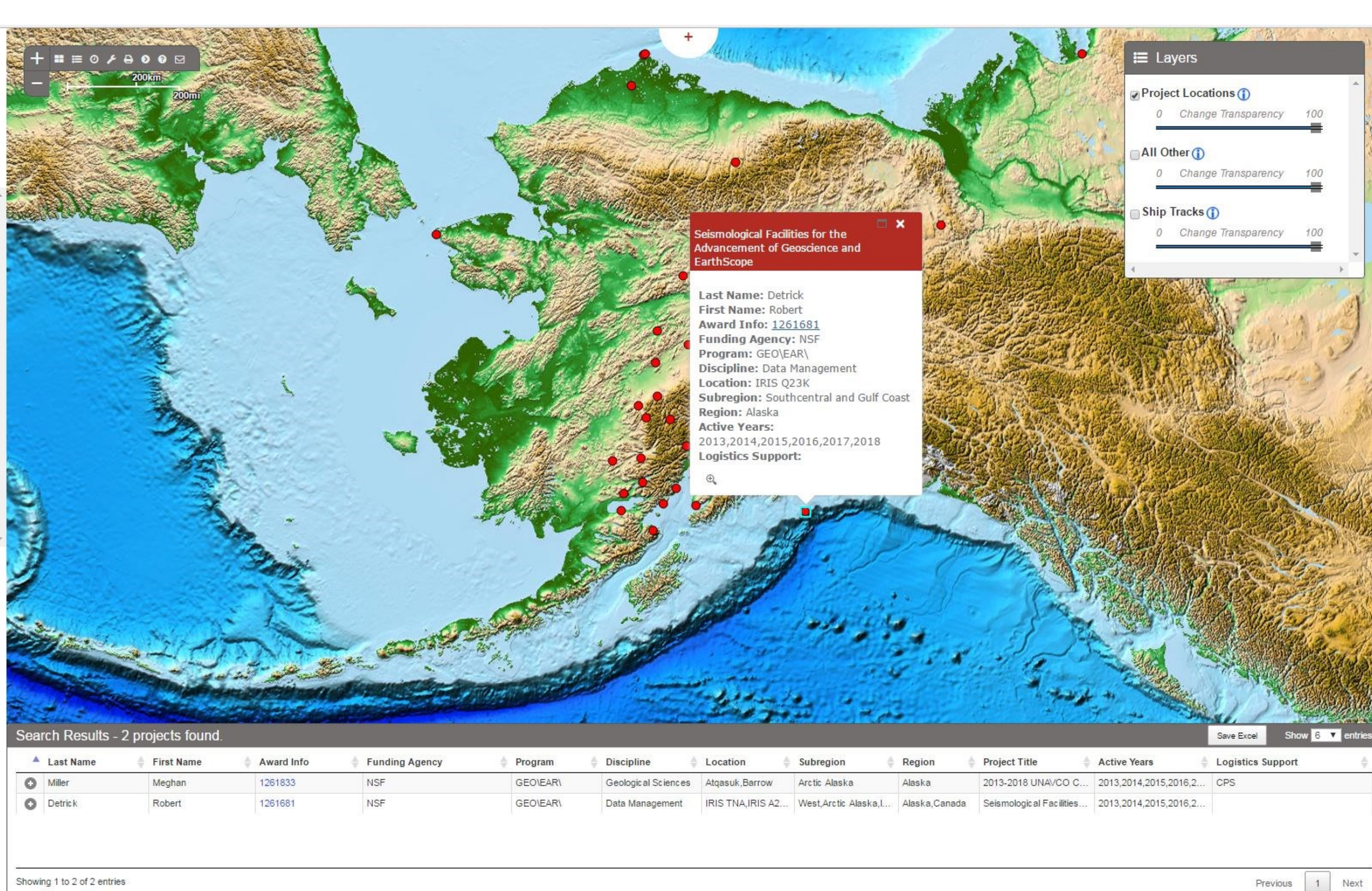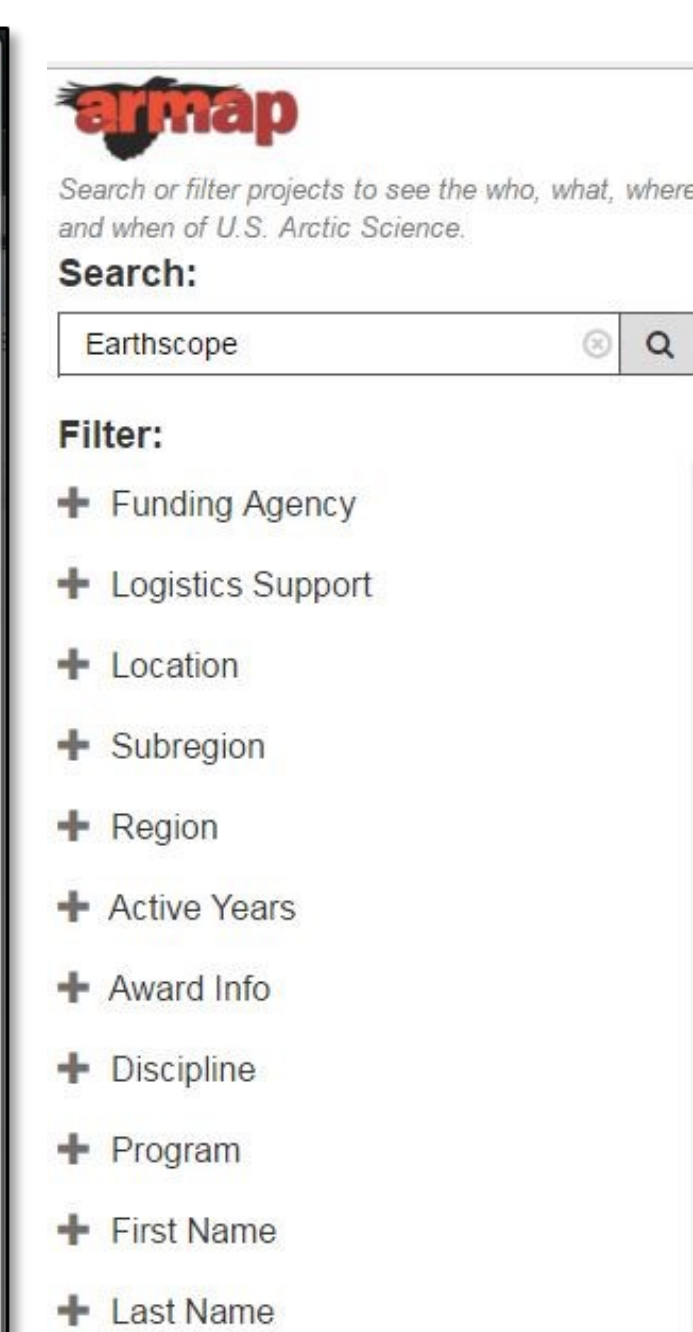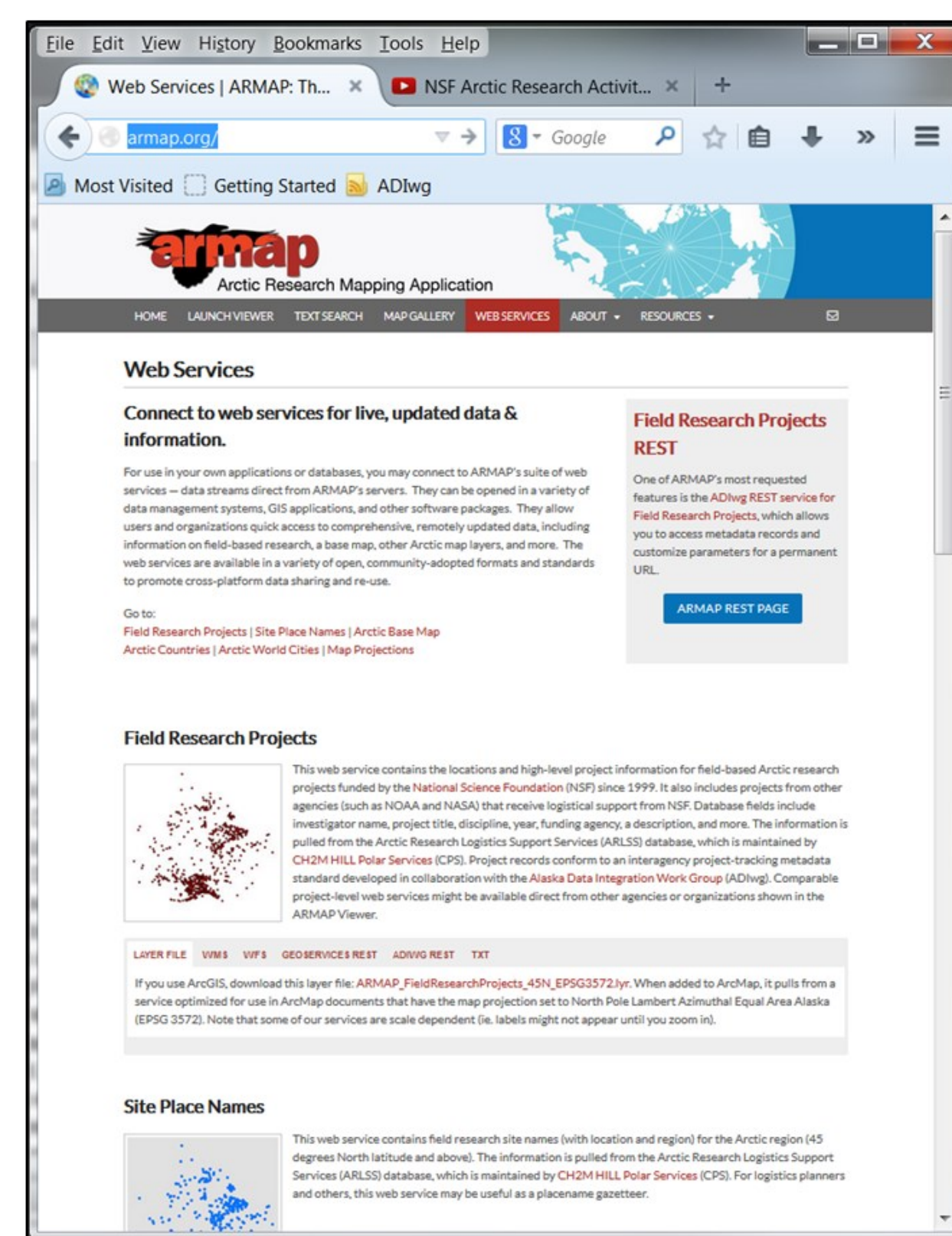

NSF Arctic Research Activities 2004 to 2015
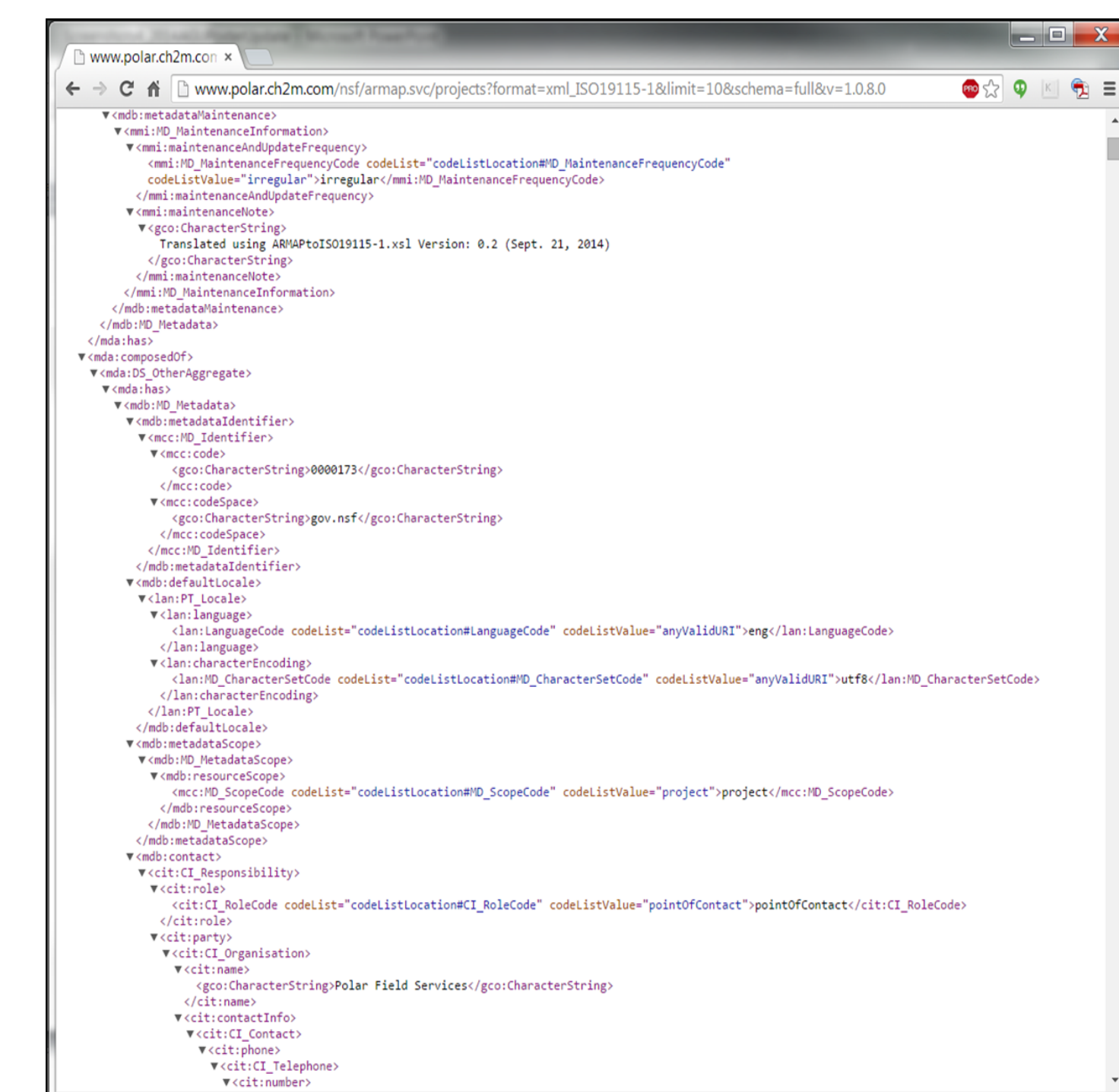
The new ARMAP Viewer (above) has been compiled in a JavaScript HTML5 framework for improved functionality and support for mobile devices. ARMAP covers activities supported by 18 US agencies for the entire Arctic. ARMAP has partnered with the Alaska Data Integration Working Group (ADIwg), to develop and implement an interagency standard that draws from FGDC for project metadata ~ who's doing what, when and where (left, showing RESTful web service of "Project" metadata in an ISO implementation). The orientation of the polar map can be switched using the regional wheel tool (above).