

Data Management during the Arctic Boreal Vulnerability Experiment

Peter Griffith

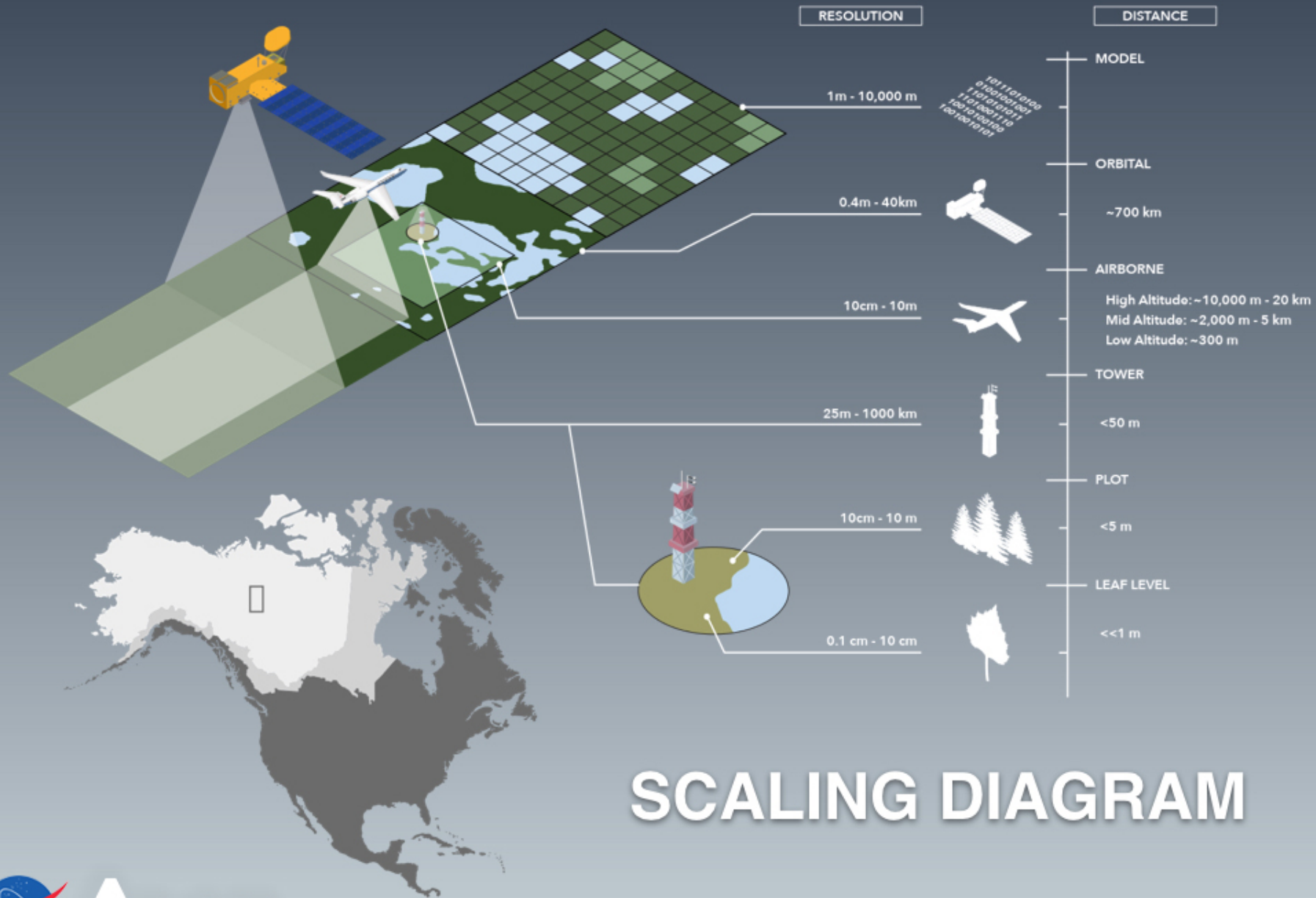
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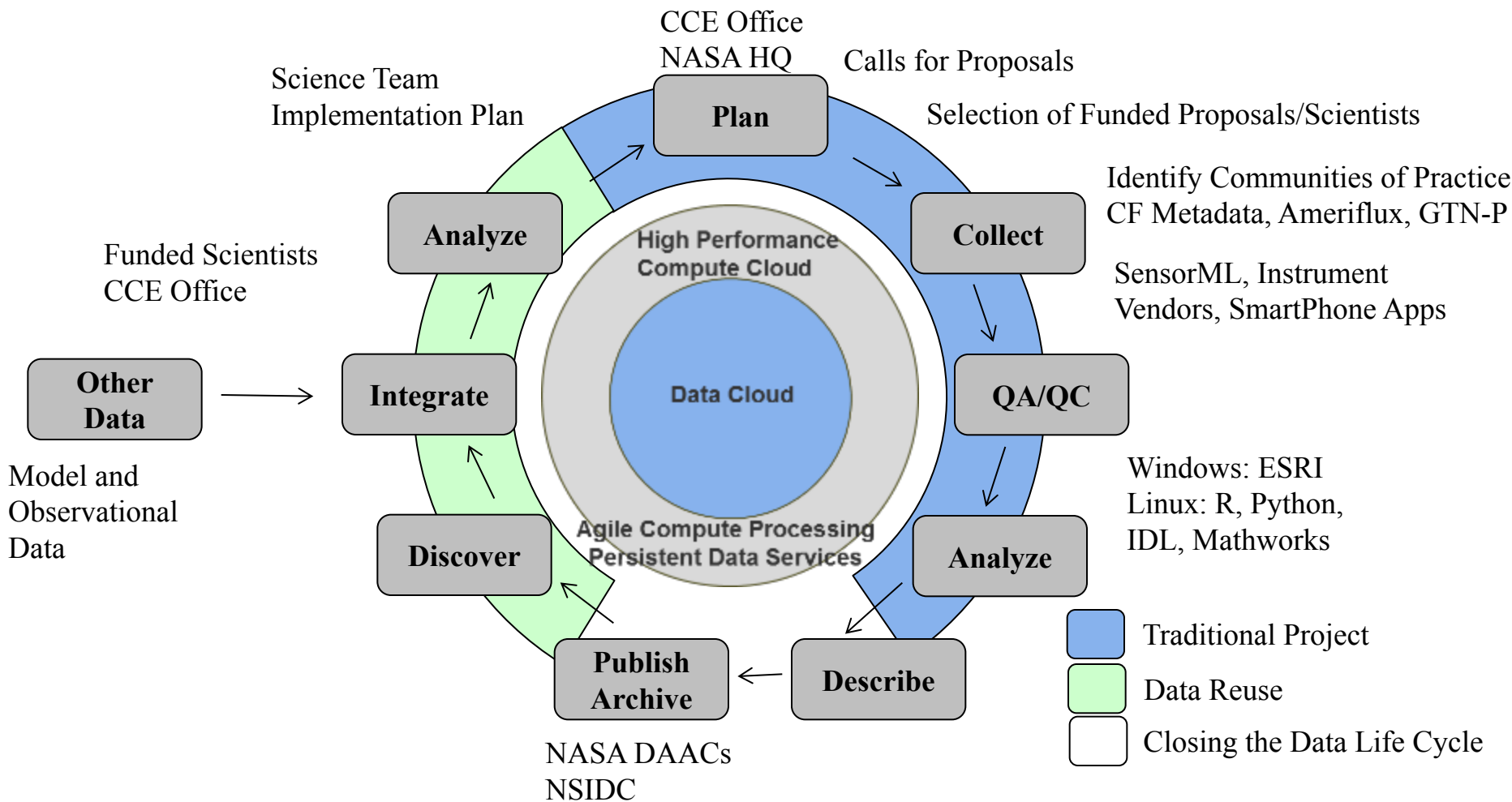
With

Liz Hoy, Dan Duffy, and many many others



SCALING DIAGRAM

Section 4.3 Data Management Life Cycle



Augmented from Rüegg et al 2014 in *Front Ecol Environ*

Section 2.4 Data Policy

- Sharing Data, standard metadata and data product formats, Credit to Data Collectors, Protecting the rights of students, Fundamental Principles for the Use of Indigenous or Local Knowledge, Archive, Sharing Models

Section 2.4 Data Policy

9. Acknowledgements

Each publication or presentation arising from participation in ABoVE should acknowledge all organizations that provided funding, data, and/or logistical support. Use Grant Numbers!

ABoVE investigators should also include an acknowledgement in each publication or presentation arising from participation in ABoVE. The wording shall be similar to the following: “This study was part of the Arctic Boreal Vulnerability Experiment.”

Upon publication of results, investigators should send the CCE Office an electronic copy of the publication.

Section 2.4 Data Policy

10. Resolving conflicts over data and the data policy.

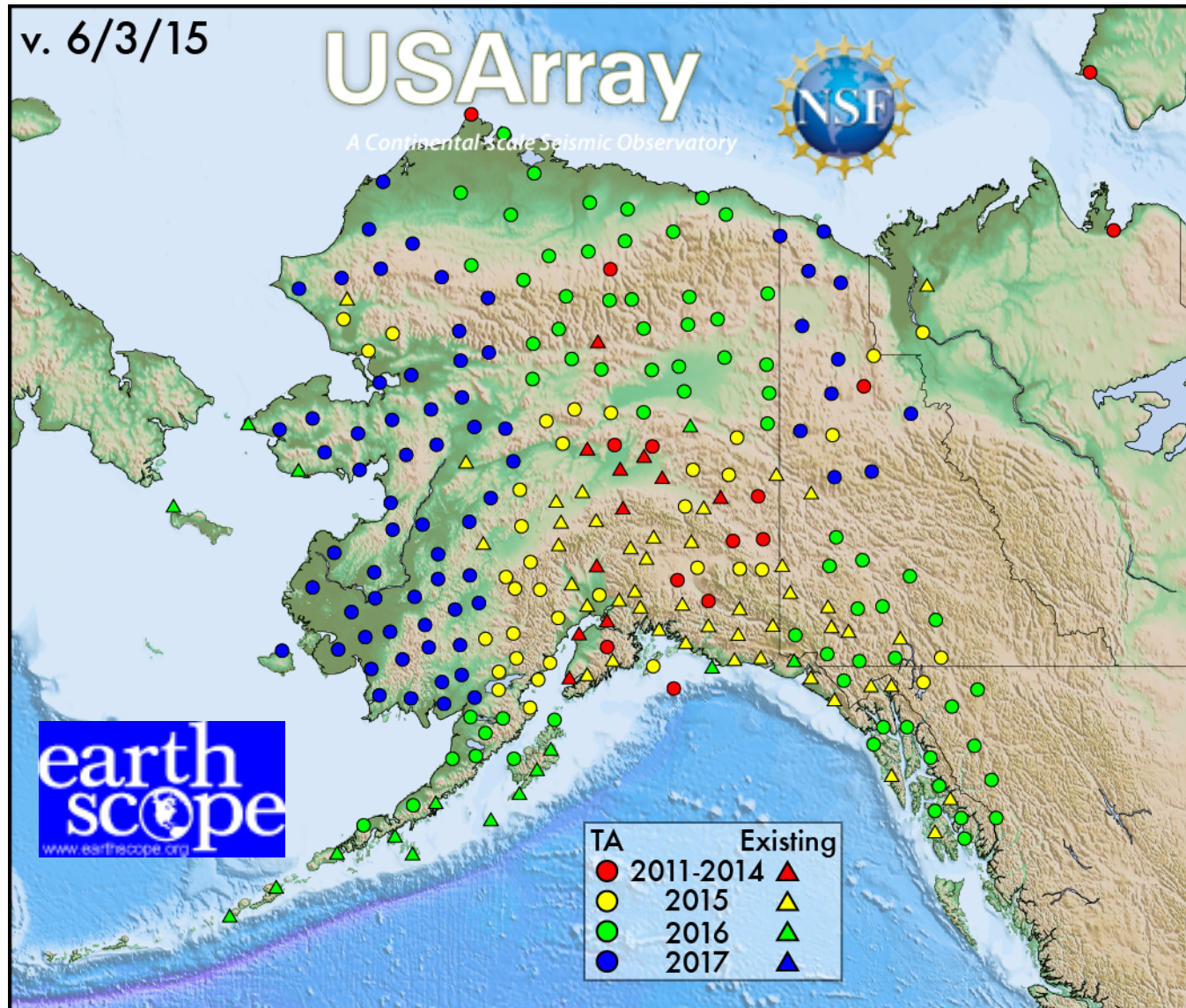
Conflicts over the interpretation of this Data Policy, or its implementation, will be resolved at the lowest level possible within the science team, who should refer to the American Geophysical Union **Policy for Scientific Integrity and Professional Ethics (2013)**. Direct resolution of issues between investigators is preferred; the CCE Office and or sponsoring agencies may become involved if resolution cannot be reached.

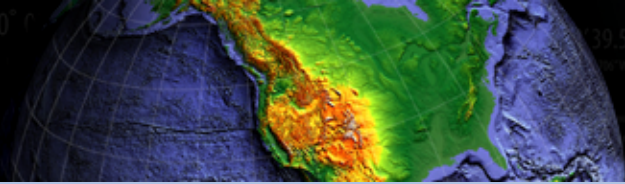
Long-tail data during ABoVE

- Engage existing methodological communities of practice whenever possible
- Develop methodological guidelines where they don't exist
- Use ORNL DAAC best practices

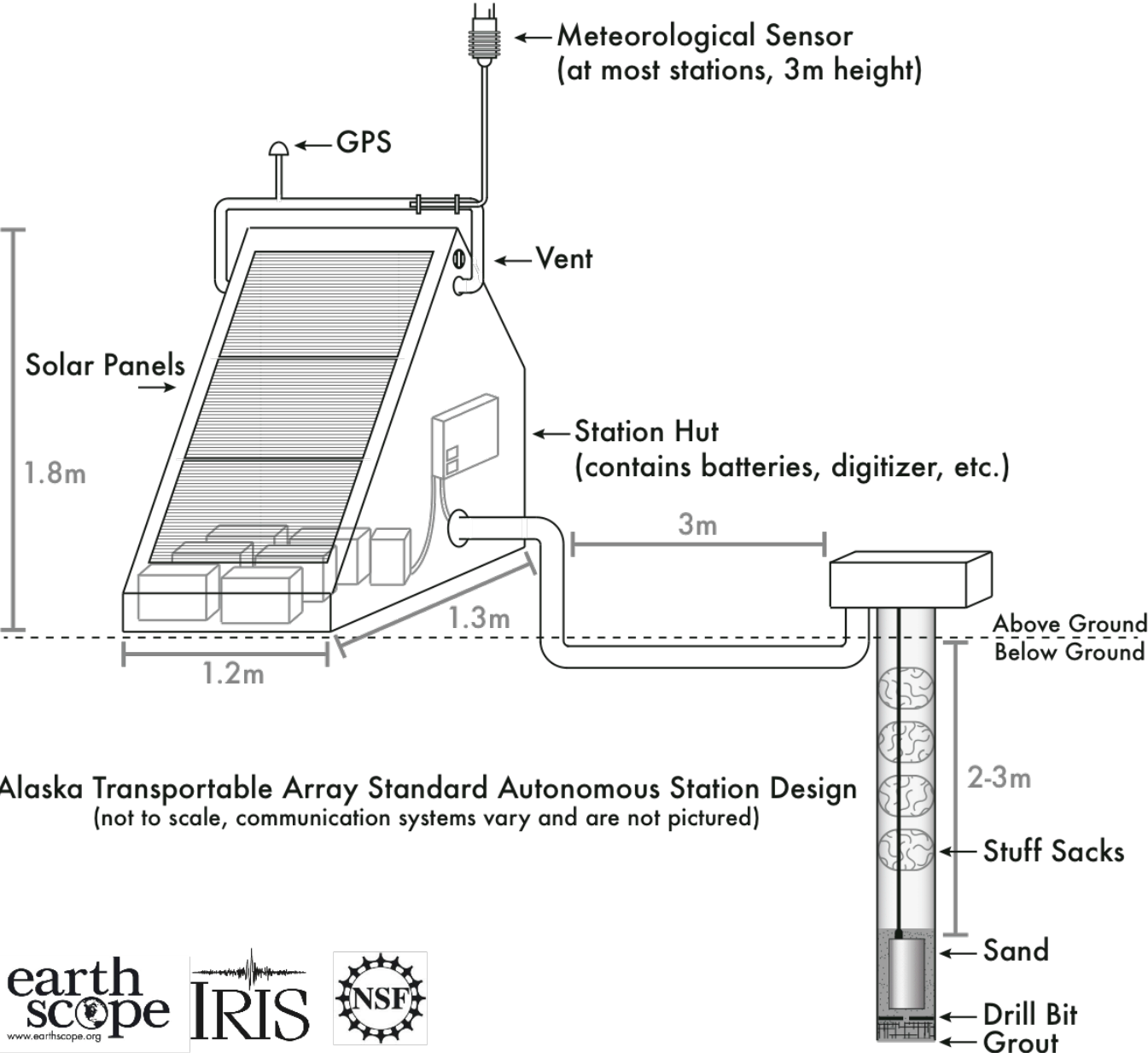


Transportable Array Deployment to Alaska and Western Canada





The Swiss Army knife ...



Alaska Transportable Array Standard Autonomous Station Design
(not to scale, communication systems vary and are not pictured)

Equipment & Instruments

Basics:
Power, shelter and data comms

Added:
Barometric Pressure
Infrasound

In Alaska:
Strong Motion Instruments

Meteorological Packages

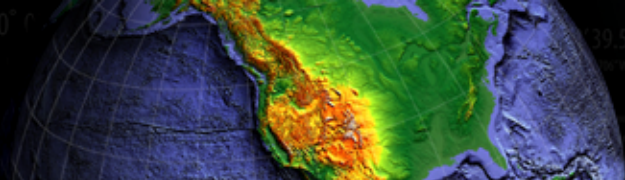
Soil Temperature profilers

And applied [the observational technique](#) in other fields;

Landslide detection

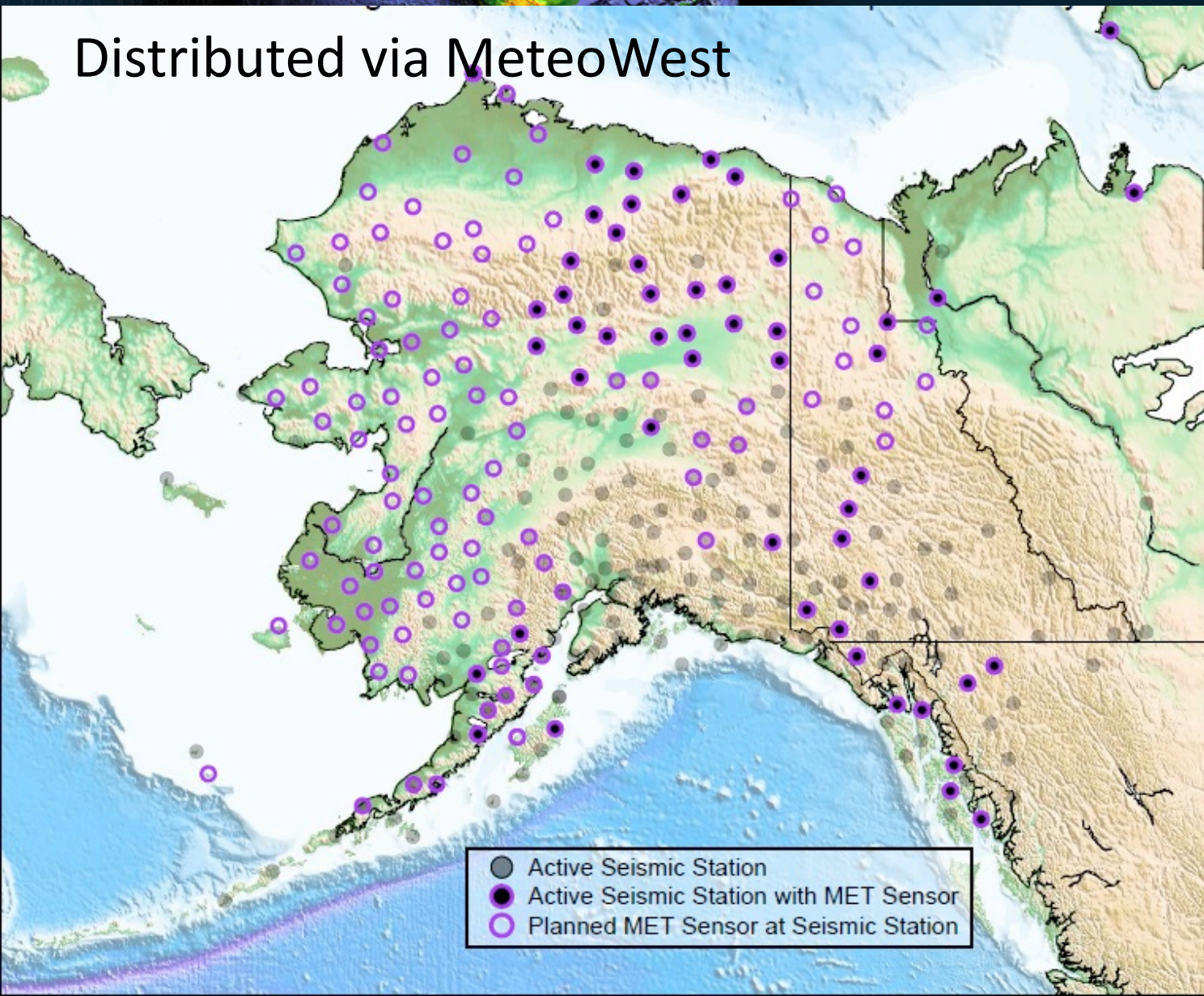
Sea Ice thickness monitoring

Distributed barometric pressure



Met sensors in AK

Distributed via MeteoWest



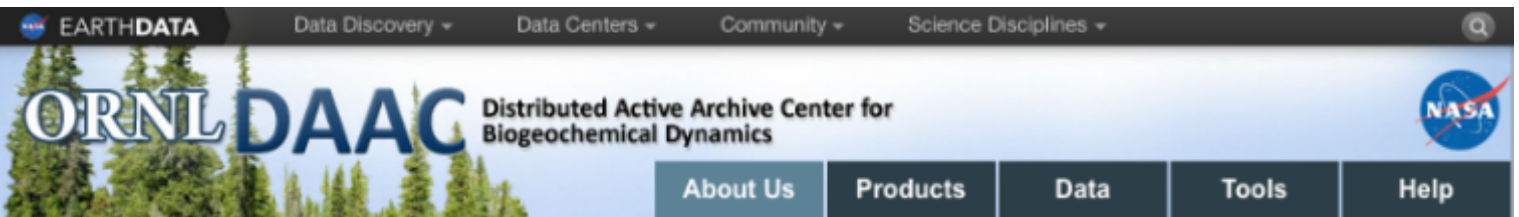
30 TA supplied
35 UCSD
52 NOAA NWS
40 NASA ABoVE
2 Yukon Wildlands



Vaisala WXT-520



ABoVE shares data with others



NSF Arctic Data Center



above.nasa.gov @NASA_ABoVE



Section 4.1 Sites and Measurements for ABoVE

Defined Locations

Location hierarchy	Required	Possible Values
domain	yes	core, extended, circumpolar, other
state/territory/province	yes	AK, YK, NWT, NU, BC, AB, MB, SK
grid	yes	ABoVE Defined Grid Cells
region	yes	North Slope, Interior, YK Delta, SewPen, Great Slave Lake, Banks Island
locale	if applicable	Fairbanks, Barrow, Healy, Council, Nome, Yellowknife, Ft. Providence, Hay River, Cambridge Bay
administrative area	if applicable	Denali NP, Wrangells St. Elias, CHARS Watershed, Toolik, BNZ
site	if applicable	Ameriflux_sitename, APEX, Investigator_sitename, Dalton_Highway_xx_m, Highway_xx_k, Wildfire_event_name
<i>subsite</i>	<i>if applicable with site</i>	plots, sample locations, manipulations
transect	if applicable	airborne, ground

Section 4.1 Sites and Measurements for ABoVE

Defined vocabulary of measurements

ABoVE Measurements List by Theme

Defined vocabulary of measurements organized by Measurement Theme. [Download measurements \(.xls\)](#)

Wildlife, Vegetation, Disturbance, Carbon Dynamics, Hydrology, Weather, Snow, Permafrost, Ecosystem Services, Satellite Remote Sensing, Airborne Remote Sensing

Section 4.2 ABoVE Standard Projection and Reference Grid

Standard Projection

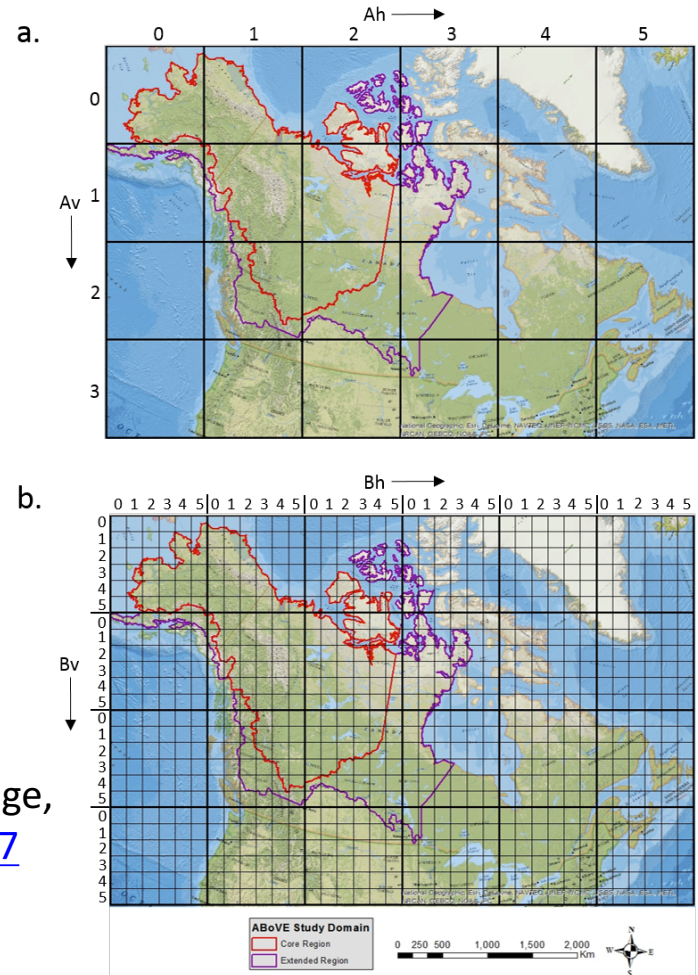
The projection for use and archiving of geospatial data products for the study domain is the Canada Albers Equal Area Conic projection

Reference Grid

A grid for raster-based products derived for the study domain (does not apply to circumpolar datasets)

Citation

Loboda, T.V., E.E. Hoy, and M.L. Carroll. 2017. ABoVE: Study Domain and Standard Reference Grids. ORNL DAAC, Oak Ridge, Tennessee, USA. <http://dx.doi.org/10.3334/ORNLDAAC/1367>



Sites & Measurements