AMGeO: Assimilative Mapping of Geospace Observations

T. Matsuo, L. Kilcommons – *University of Colorado, Boulder*

M. Ruhonemi, S. Chakraborty – *Virgina Tech*

B. Anderson, L. Paxton, S. Vines – *John Hopkins Applied Physics Lab*

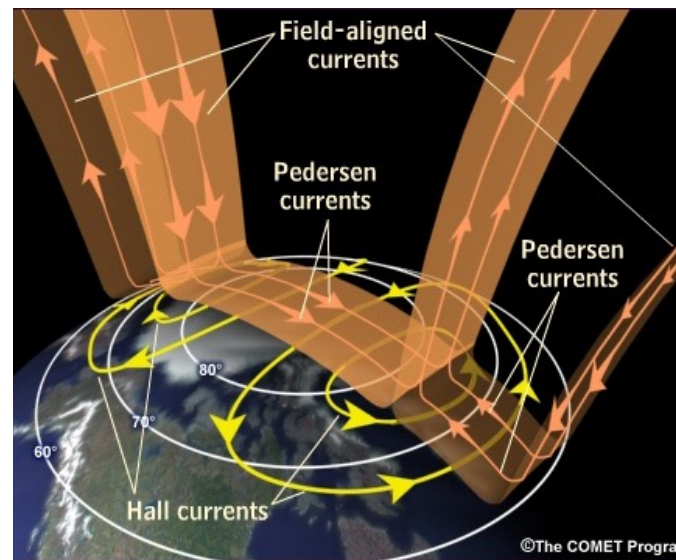E. Macdonald, K. Garcia-Sage – *NASA Goddard*

R. Redmon - *NOAA NCEI*

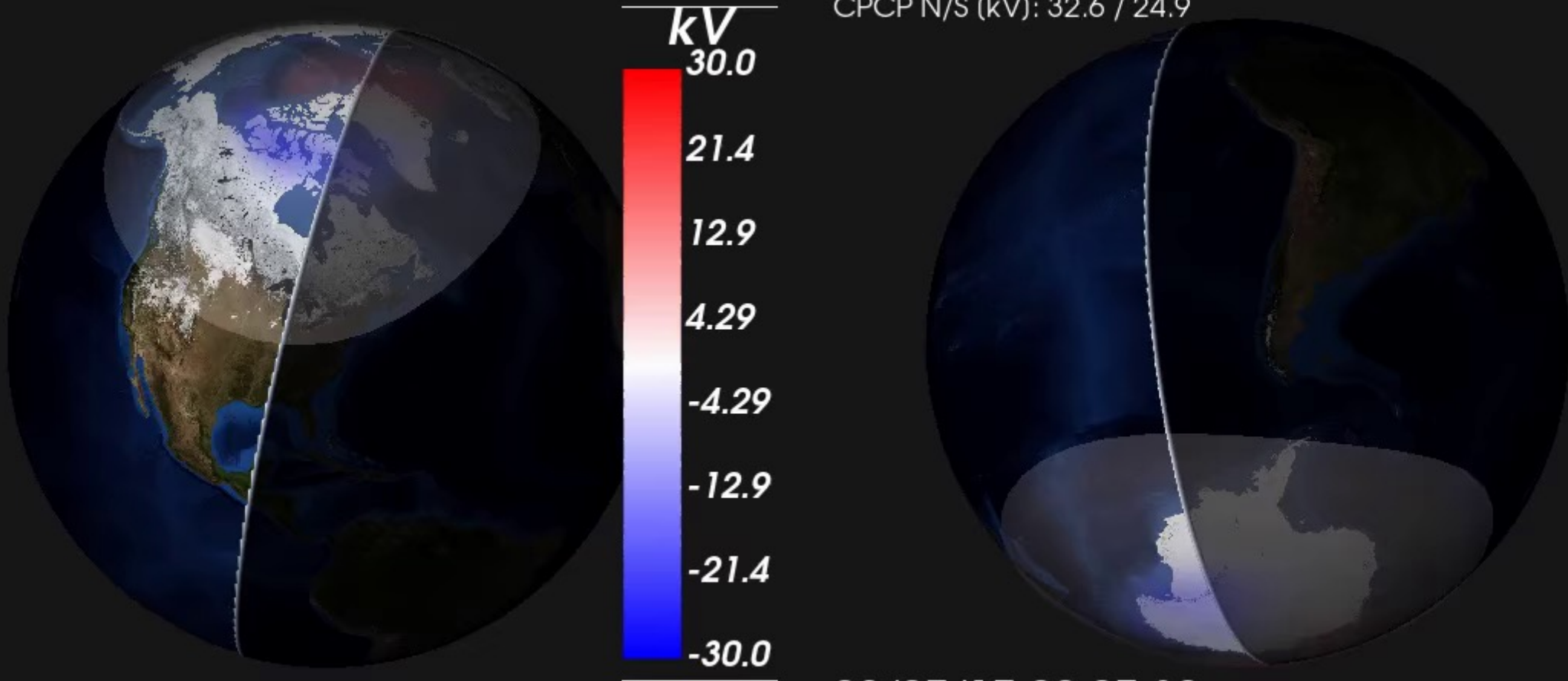A. Bhat - *SRI International*

C. Stolle – *GFZ Potsdam*

EARTHCUBE
(Sep-2019 - Aug-2022)

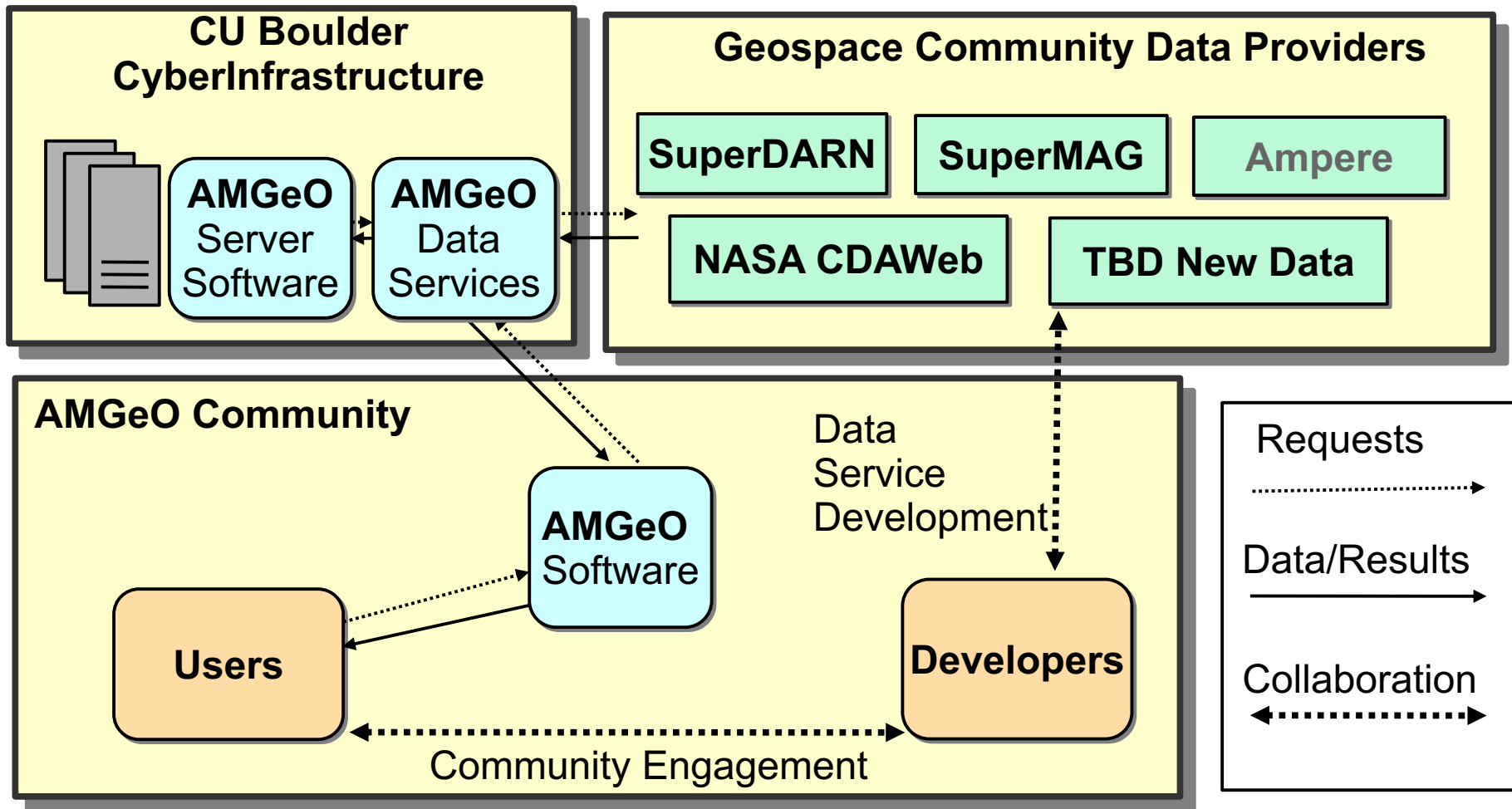**First version of AMGeO released, Dec 2019! Learn more at http://amgeo.colorado.edu**

AMGeO Ionospheric Electric Potential (Geomagnetic Storm)

AMGeO Collaborative Model

CU Boulder CyberInfrastructure

AMGeO Server Software

AMGeO Data Services

Geospace Community Data Providers

SuperDARN

SuperMAG

Ampere

NASA CDAWeb

TBD New Data

AMGeO Community

AMGeO Software

Data Service Development

Users

Developers

Community Engagement

Requests

Data/Results

Collaboration

- AMGeO is a Python package, but also an **exploration** of data access and use in our community

Now I'll switch over to our website
http://amgeo.colorado.edu
to show how to get access to the
AMGeO Github Organization

Project Status

- Version 2 release Winter AGU 2020

- Hosting on NASA CCMC

- Integration with other NSF projects, e.g. Ingeo (NSF CSSI)

- Involving undergraduates

AMGeO undergraduate researchers/developers:
Tanya Leung - CU TAM, website graphic design
Jason Li - CU ASEN, development, research
Valerie Svaldi - CSM ME, testing, research
Willem Mirkovich - CU CS, website full-stack, research

Backup

Data Used in AMGeO

SuperDARN, the Super Dual Auroral
Radar Network

http://vt.superdarn.org/

SuperMAG – ground-based
magnetometers

http://supermag.jhuapl.edu/

<u>Coming soon:</u>

Active Magnetosphere and Planetary Electrodynamics Response Experiment
Space-based magnetometers on ~70 Iridium communications spacecraft

http://ampere.jhuapl.edu/

How to Access/Use AMGeO v1

1. Register at https://amgeo.colorado.edu/register

1. Wait until your registration is confirmed

1. Log in at https://amgeo.colorado.edu/login

1. Go to your account page: https://amgeo.colorado.edu/protected/account

1. Enter your Github username to be added to the AMGeO Github Organization

1. Clone the AMGeO repo from Github

1. Install with setup.py

1. Run the configure.py script and paste in the API key from your account page