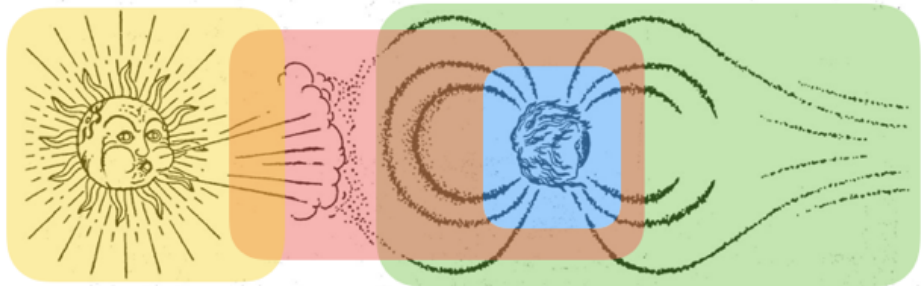


# Quo Vadis?



GEM/CEDAR plenary summary

Ben Chandran

Dave Hysell

Scott McIntosh

Josh Semeter

Jeff Thayer

Mike Wiltberger

“This workshop is being organized to help shape the direction of research in geospace with an emphasis on crystalizing a research program at the NSF on space weather. **The workshop will focus on the experimental infrastructure required for discovery research in the 21st century, with consideration for both basic and applied research driven by cutting edge observations of the Sun - Earth system.** We will develop strategies that can integrate geospace research across outmoded disciplinary boundaries and better align with national priorities.”

- 2 ½ days at NCAR in late May
- 97 registered participants
- 60 5-min. presentations
- 30 min. panels

<https://www2.hao.ucar.edu/events/GeospaceFrontierAgenda>

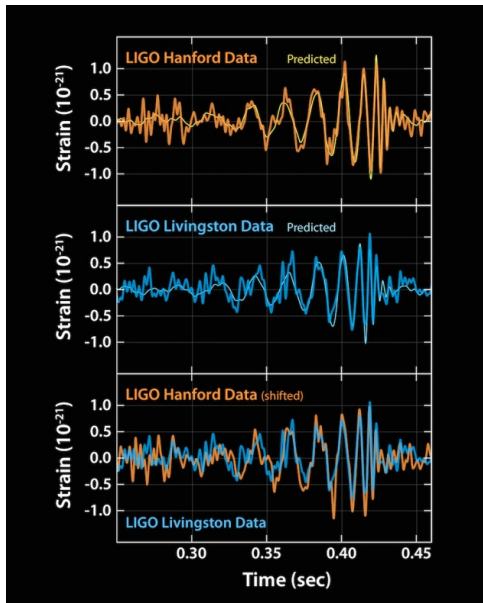
- What major gaps in scientific understanding or engineering capability limit our ability to describe Sun – Earth connections?
- Where is discovery science likely to occur?
- How can we predict the occurrence of, and reaction to, space weather?

- “If **we** had the resources, what would we **do** to have the most **impact?**”

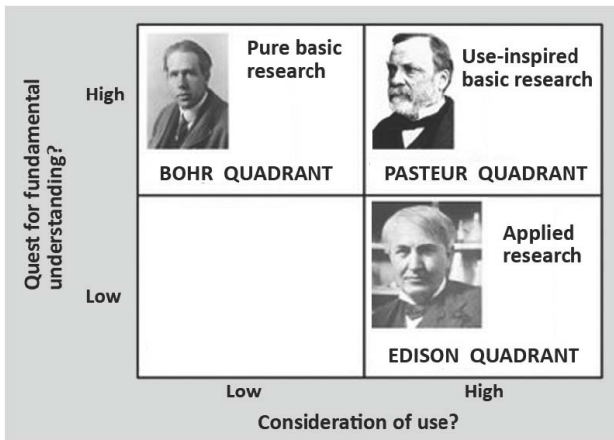
With this workshop, we're striving to ...

- build a community to claim ground-based geospace research, drawn from SHINE/GEM/CEDAR but without the stove piping and better able to collaborate within and outside the division, directorate, ...
- pursue the dual goals (a la Pasteur's quadrant) of discovery and applied research, that is, *space weather*
- define the ground-based instrumentation we need and devise a plan and proposal to secure it

# gravitational waves



# Pasteur's quadrant





## NATIONAL SPACE WEATHER ACTION PLAN

PRODUCT OF THE  
National Science and Technology Council



October 2015



## NATIONAL SPACE WEATHER STRATEGY

PRODUCT OF THE  
National Science and Technology Council



October 2015

- workshop report
  - “Space weather” adopted as foundational principle for this effort.

science topic	observational gap	reference “mission”
coronal magnetism	synoptic observations needed	COSMO, FASR
interplanetary space	“93-million mile gap”	VHF SW radar
geospace plasma and energy sources	undersampled in space and time	sensor networks
weakly ionized neutral gas	neutral observations above 100 km	OASIS

- PREEVENTS workshops
- Decadal Survey



# Quo Vadis?

