

User Feedback:
**The CCMC as a
Resource for Research**

Joe Borovsky^{1,2}
1 Space Science Institute
2 University of Michigan

**The CCMC has given me:
Freedom, Flexibility, and Capability**

NASA's Open Data Policy

In the 1990's, NASA space-flight data went from being the private property of spacecraft principle investigators to being publically (and easily) available.

Prior to that, using data was cumbersome, awkward, and restricting.

The standard questions were:

What event do you want?

What are you going to use it for?

How are we going to be involved?

You could not explore somebody's data set unless you visited their institute.

You would never ask:

Can I have your entire data set so I can do statistics?

NASA's Open Data Policy

When NASA data became readily available, it open the door for:

Independent investigations

Exploration of data

Multi-satellite and multi-data-set science

I would guess that everyone considers the open-data move to be a boon to NASA science.

CCMC Is Analogous to the Open-Data Revolution

If your institute did not have the simulation capability that you needed for a specific project, you had to collaborate with a simulation research group.

Drawbacks:

Those colleagues are busy

They have higher priorities than your science topic

You can't explore

You can't knit pick to get things perfect

CCMC gives you **freedom, flexibility, and capability.**

It is cost effective for my NASA and NSF grants.

Specific Comments

- 1) Model selection is excellent**
- 2) Turnaround is fast**
- 3) Ease of web-based graphics is surprising**
- 4) Help with the models has been great**
 - **Help with understanding the numerics**
 - **Interfacing with the code authors**
- 5) Response to special requests has been great**
 - **Supplementary graphic capabilities added by Lutz**
 - **Special runs set up by Masha**

My Diverse CCMC Projects

- 1. What causes field stretching in the dayside magnetosphere.**
- 2. Magnetosphere and magnetosheath under low-Mach-number solar wind.**
- 3. Effect of magnetospheric plasma on solar-wind/magnetosphere coupling.**
- 4. What controls the dayside reconnection rate.**
- 5. Polar-cap potential saturation.**
- 6. Looking at the Earth's reaction to sudden wind shear.**
- 7. Magnetotail disconnection events.**
- 8. Dayside compressions and compressional flows.**
- 9. Orientation of CIR stream interfaces.**
- 10. Exploring vorticity as a diagnostic of solar-wind dynamics.**