



# CCMC-VMR Partnership

## Virtual Model Repository

<http://vmr.engin.umich.edu/>

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# Virtual Model Repository

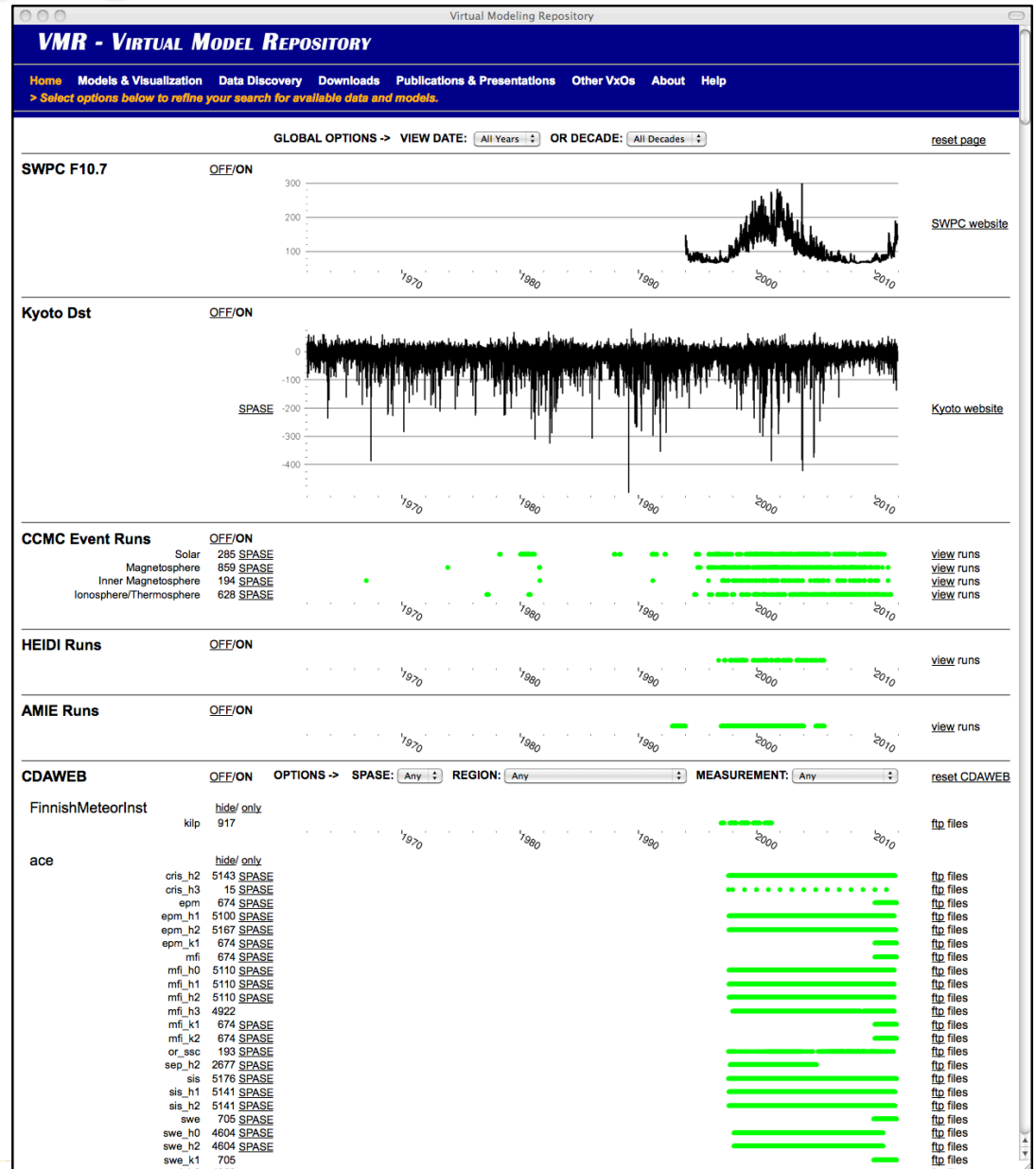
- The VMR is a virtual observatory that enables scientific analysis of numerical models. A variety of model results are made available in a consistent and intuitive way through visualization tools and data/model comparisons. Open access to most model output is provided, especially when used in support of published papers.
- The VMR enables browse/search of model output and satellite data for time periods of scientific interest. Data discovery and exchange is coordinated through various APIs from multiple sites to bring in the relevant data for visualization.



# VMR Homepage

The new VMR homepage allows you to quickly get to the information you want.

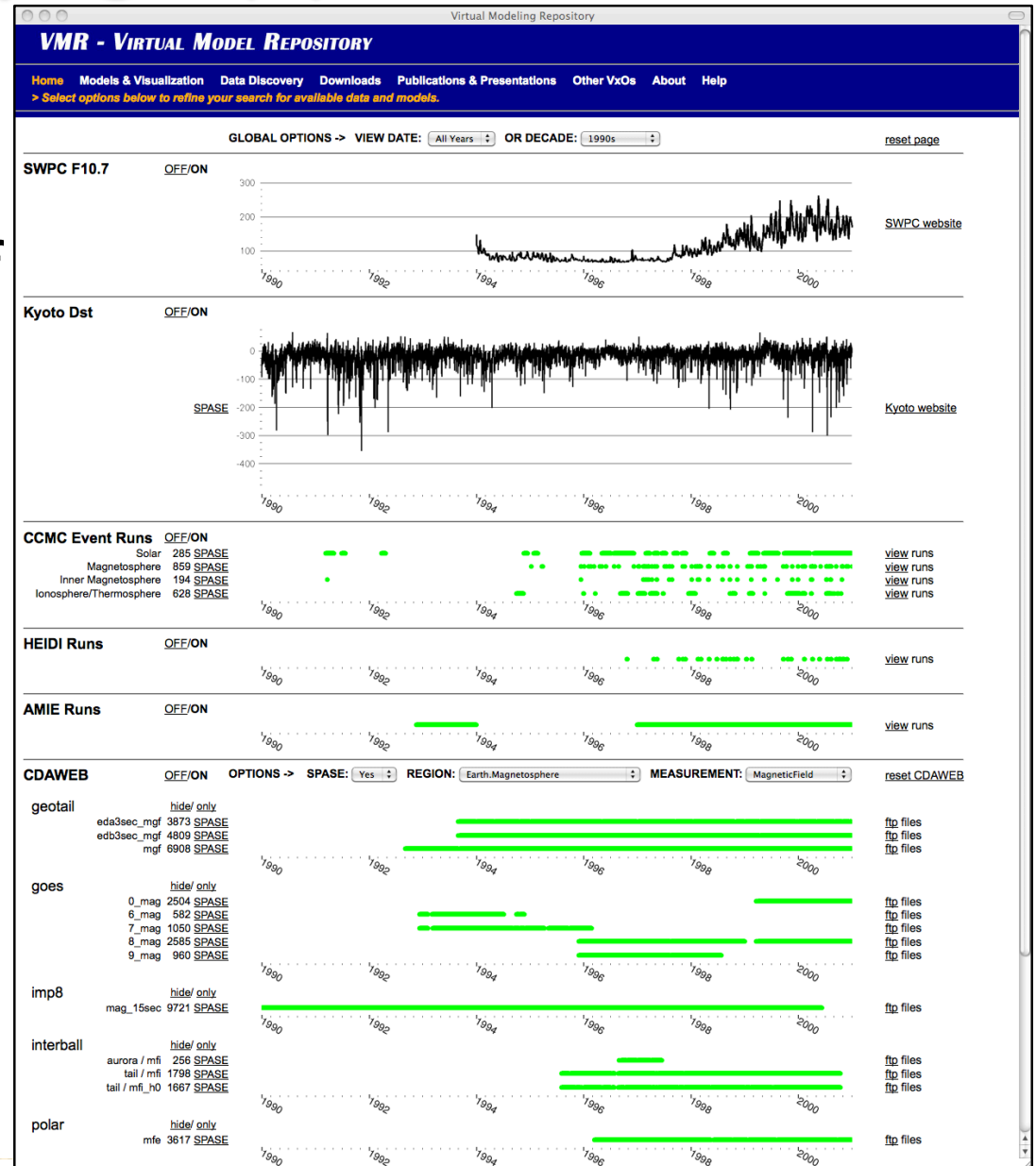
A cross-section of data and model output from a variety of sources is shown with dates of availability immediately visible.





# VMR Homepage (2)

Selecting a date, observed region of space, and/or type of measurement enables quickly drilling down to the data you are looking for.





# VMR Homepage (3)

When SPASE metadata is available, it can be used to refine the search.

Virtual Modeling Repository: SPASE Viewer

**VMR - VIRTUAL MODEL REPOSITORY**

Home Models & Visualization Data Discovery Downloads Publications & Presentations Other VxOs About Help

> Select options below to refine your search for available data and models.

---

**SPASE description for: de / de2 / ion2s**

Spase  
Version: 2.2.0  
NumericalData  
ResourceID: spase://VSWO/NumericalData/DE2/RPA/PT2S  
ResourceName: DE 2 2s RPA Ion Plasma Parameters  
ReleaseDate: 2011-05-18T00:00:00  
Description: This data set contains the following plasma parameters at 16ms resolution from the DE 2 Retarding Potential Analyzer: ion drift velocity, ion temperature, densities of all ions and of O+, H+, He+, molecular, and high mass ions. Data are available in ASCII from nssdcftp and in CDF format from CDWeb (as well as CDWeb plots and lists). The data span the 18-month DE 2 lifetime, except for a gap from 1981/317 to 1982/041.  
Acknowledgement: Please acknowledge the RPA Principal Investigators, Drs. W.B. Hanson (original P.I.) and R.A. Heelis  
Contact  
PersonID: spase://SMWG/Person/Roderick.A.Heelis  
Role: PrincipalInvestigator  
Contact  
PersonID: spase://SMWG/Person/Robert.M.Candey  
Role: GeneralContact  
InformationURL  
Name: Readme file at NSSDC/SPDF  
URL: ftp://nssdcftp.gsfc.nasa.gov/spacecraft\_data/de/de2/plasma\_rpa/  
AccessInformation  
RepositoryID: spase://SMWG/Repository/NASA/GSFC/SPDF  
Availability: Online  
AccessRights: Open  
AccessURL  
Name: SPDF CDF ftp area  
URL: ftp://cdweb.gsfc.nasa.gov/pub/istp/de/de2/ion2s/  
Description: For ftp retrieval of daily CDF files  
Format: CDF  
DataExtent  
Quantity: 300  
Units: KB  
Per: PLD  
Acknowledgement: Please acknowledge the RPA Principal Investigators, Drs. W.B. Hanson (original P.I.) and R.A. Heelis and the Space Physics Data Facility at NASA/GSFC  
AccessInformation  
RepositoryID: spase://SMWG/Repository/NASA/GSFC/SPDF  
Availability: Online  
AccessRights: Open  
AccessURL  
Name: SPDF ASCII ftp area

Virtual Modeling Repository

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> Select options below to refine your search for available data and models.

GLOBAL OPTIONS -> VIEW DATE: All Years OR DECADE: 1980s reset Page

SWPC F10.7 OFF/ON

Kyoto Det OFF/ON

SPASE Kyoto website

CCMC Event Runs OFF/ON

Solar	285	SPASE		
Magnetosphere	859	SPASE		
Inner Magnetosphere	194	SPASE		
Ionosphere/Thermosphere	628	SPASE		

view runs view runs view runs view runs

HEIDI Runs OFF/ON

AMIE Runs OFF/ON

CDWEB OFF/ON OPTIONS -> SPASE: Any REGION: Any MEASUREMENT: Any reset CDWEB

crres

mea	43	SPASE		
meacid / mea	42			

ftp files ftp files

de

de1 / 62ms_magagms	8			
de1 / 6sec_magagms	3100			
de1 / sai	1861	SPASE		
de2 / ion2s	449	SPASE		
de2 / neutral1s_nacs	539	SPASE		
de2 / plasma500ms_lang	542	SPASE		
de2 / opa16ms	547	SPASE		
de2 / ua16s_all	549			
de2 / wind2s_wats	534	SPASE		

ftp files ftp files ftp files ftp files ftp files ftp files ftp files

helios

helios1 / 6sec_neesmag	995			
helios1 / cohothr_magplasma	79			
helios2 / 6sec_neesmag	777			
helios2 / cohothr_magplasma	51			

ftp files ftp files ftp files ftp files

imp8

gme_h0	57	SPASE		
mag_15sec	9721	SPASE		
mag_320msec	9369			
miplasma_h0	10014	SPASE		

click to see full SPASE record for: spase://VEPO/NumericalData/IMP8/GME/PT30M

IMP8 GME 30-min energetic particle rates and fluxes

Observed Region: Heliosphere.Near/Earth  
Measurement Type: EnergeticParticles

isee

isee1 / 24cr48s_fpe	1028	SPASE		
isee1 / 4sec_mfi	3586	SPASE		
isee1 / 60sec_mfi	1516	SPASE		
isee2 / 4sec_mfi	3618	SPASE		
isee2 / 60sec_mfi	1516	SPASE		

ftp files ftp files ftp files ftp files

isis1

neprof	52	SPASE		
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ftp files



# CCMC Event Runs

We have created an interface to facilitate searching the CCMC Run-on-Request event runs and provide data/model comparisons.

The interface has several search values and sorting options.

Virtual Modeling Repository: CCMC Visualization

**VMR - VIRTUAL MODEL REPOSITORY**

Home **Models & Visualization** Data Discovery Downloads Publications & Presentations Other VxOs About Help  
 > UM SWMF Runs > **CCMC Event Runs** > HEIDI > AMIE > Satellite Plots > IRI/DMSF

**Search NASA's Community Coordinated Modeling Center (CCMC) Run-on-Request Magnetosphere Event Runs**

Timeline: 1975 1980 1985 1990 1995 2000 2005 2010

Layers: solar, heliosphere, magnetosphere, inner magnetosphere, ionosphere/thermosphere

**Search Criteria**

Run start/end date as YYYYMMDD:  /  /

Run Name:

Keyword:

Model:

Run ID:

**Search Results**

... found 859 of 859 in search ...

Run Name	Model	Event Date	Run ID	3D Files
<a href="#">select</a> Bruce_Tepke_111011_3	SWMF v8.01	August 12, 2000	5895	721
<a href="#">select</a> Bruce_Tepke_111011_1	SWMF v8.01	August 10, 2000	5893	961 *
<a href="#">select</a> Martin_Connors_101511_1	OpenGGCM 3.1	March 28, 2009	5884	541 *
<a href="#">select</a> Kris_Kersten_102711_1	BATSRUS with RCM v8.01	October 22, 2001	5874	1
<a href="#">select</a> Jorg-Micha_Jahn_101711_1	BATSRUS v8.01	April 20, 2010	5866	526
<a href="#">select</a> Emine_Kalafatoglu_101711_2	OpenGGCM 3.1	March 8, 2008	5865	301
<a href="#">select</a> Xiangyun_Zhang_102511_2	BATSRUS v8.01	November 30, 2007	5863	241 *
<a href="#">select</a> Xiangyun_Zhang_102511_3	BATSRUS v8.01	November 25, 2007	5862	211 *
<a href="#">select</a> Xiangyun_Zhang_102511_1	BATSRUS v8.01	September 30, 2007	5861	151
<a href="#">select</a> Emine_Kalafatoglu_101711_1	GLUMICS 4-HC-1.11	December 31, 2007	5859	76 *
<a href="#">select</a> Xiangyun_Zhang_101411_1	BATSRUS v8.01	January 29, 2008	5839	360 *
<a href="#">select</a> Thomas_Moore_102011_4	OpenGGCM 3.1	June 19, 2004	5838	31 *
<a href="#">select</a> Thomas_Moore_102011_3	OpenGGCM 3.1	June 19, 2004	5837	
<a href="#">select</a> Thomas_Moore_102011_2	OpenGGCM 3.1	November 11, 2003	5836	
<a href="#">select</a> Thomas_Moore_102011_1	OpenGGCM 3.1	June 13, 2002	5835	
<a href="#">select</a> Swadesh_Patra_100411_3	BATSRUS with RCM v8.01	August 17, 2001	5833	1440 *
<a href="#">select</a> Thomas_Moore_101911_1	OpenGGCM 3.1	June 6, 2002	5825	
<a href="#">select</a> Swadesh_Patra_100411_2	BATSRUS with RCM v8.01	August 18, 2001	5824	1500 *
<a href="#">select</a> Xiangyun_Zhang_101411_3	BATSRUS v8.01	January 29, 2008	5820	360
<a href="#">select</a> Xiangyun_Zhang_101411_2	BATSRUS v8.01	January 23, 2008	5818	180
<a href="#">select</a> Swadesh_Patra_100411_1	BATSRUS with RCM v8.01	August 17, 2001	5815	1440
<a href="#">select</a> rushat_shatur_101211_1	BATSRUS v8.01	January 1, 2000	5810	
<a href="#">select</a> Kris_Kersten_101011_2	BATSRUS with RCM v8.01	October 21, 2001	5809	
<a href="#">select</a> Zhao_Li_100711_1	BATSRUS with RCM v8.01	July 26, 2004	5808	
<a href="#">select</a> rushat_shatur_093011_2	OpenGGCM 3.1	January 1, 2000	5806	
<a href="#">select</a> Kris_Kersten_101011_1	BATSRUS with RCM v8.01	October 18, 2001	5803	420 *
<a href="#">select</a> Shasha_Zou_092911_2	BATSRUS with RCM v8.01	August 1, 2000	5796	721 *
<a href="#">select</a> Shasha_Zou_092911_1	BATSRUS v8.01	August 1, 2000	5794	
<a href="#">select</a> Xiangyun_Zhang_100511_1	BATSRUS v8.01	June 2, 2007	5789	
<a href="#">select</a> Kris_Kersten_092811_1	BATSRUS with RCM v8.01	October 22, 2001	5777	
<a href="#">select</a> Shasha_Zou_092611_2	BATSRUS with RCM v8.01	March 5, 1998	5755	
<a href="#">select</a> Janet_Kozyra_072311_1	BATSRUS v20110131_	January 21, 2005	5743	166 *
<a href="#">select</a> Bruce_Tepke_081011_3	OpenGGCM 3.1	August 10, 2000	5740	
<a href="#">select</a> Shasha_Zou_092611_1	BATSRUS with RCM v8.01	July 5, 1998	5652	
<a href="#">select</a> Kristoffer_Leer_082911_1	BATSRUS with RCM v8.01	July 9, 2005	5633	
<a href="#">select</a> SWPC_SWMF_060411_6	BATSRUS v20110131_	May 14, 2005	5630	4431 *
<a href="#">select</a> Lelia_Mays_080811_1	BATSRUS with RCM v8.01	February 14, 2011	5627	865 *
<a href="#">select</a> Dennis_Gallagher_033110_1a	BATSRUS v20110131	July 15, 2000	5624	
<a href="#">select</a> monte_andres_081511_2	BATSRUS v8.01	April 23, 2000	5623	
<a href="#">select</a> monte_andres_081511_1	BATSRUS v8.01	April 23, 2000	5622	
<a href="#">select</a> Bruce_Tepke_081011_2	BATSRUS v8.01	August 10, 2000	5621	
<a href="#">select</a> Bruce_Tepke_071511_1	OpenGGCM 3.1	April 5, 2010	5593	217 *
<a href="#">select</a> Katrina_Magno_072911_1	BATSRUS with RCM v8.01	January 12, 2008	5584	
<a href="#">select</a> monte_andre_070311_2	OpenGGCM 3.1	March 8, 2008	5576	
<a href="#">select</a> Mattias_Tornquist_071111_1	OpenGGCM 3.1	September 24, 1998	5572	
<a href="#">select</a> Justin_Eifritz_071211_1	BATSRUS with RCM v8.01	April 6, 2010	5571	145 *
<a href="#">select</a> Justin_Eifritz_071311_1	BATSRUS with RCM v8.01	July 22, 2009	5568	
<a href="#">select</a> Katrina_Magno_071511_1	BATSRUS with RCM v8.01	January 26, 2009	5557	
<a href="#">select</a> Zhonghua_Xu_063011_1	BATSRUS with RCM v8.01	September 7, 2002	5552	
<a href="#">select</a> xiangyun_zhang_071811_1	BATSRUS with RCM v8.01	June 2, 2007	5548	
<a href="#">select</a> Katrina_Magno_071511_4	BATSRUS with RCM v8.01	September 4, 2002	5537	
<a href="#">select</a> Katrina_Magno_071511_3	BATSRUS with RCM v8.01	August 2, 2001	5535	



# CCMC Event Runs (2)

A detailed view of the run shows information from the CCMC database as well as satellites that have relevant data for the model run time and have had satellite trajectories extracted from the model output.

Virtual Modeling Repository: CCMC Visualization

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[return](#) **Detail view for CCMC event run SWPC\_SWMF\_052811\_3**

Satellite Data Available	Data-Model Comparison	Model on Satellite Track	Run information:
<b>Satellite</b>	<b>Satellite</b>	<b>Satellite</b>	<a href="#">View run at CCMC site.</a>
Cluster-1 N/A	Cluster-1	Cluster-1 <a href="#">plot model</a>	Event Date August 30 2001
Cluster-2 N/A	Cluster-2	Cluster-2 <a href="#">plot model</a>	Start Time 2001/08/30 19:00
Cluster-3 N/A	Cluster-3	Cluster-3 <a href="#">plot model</a>	End Time 2001/09/01 00:00
Cluster-4 N/A	Cluster-4	Cluster-4 <a href="#">plot model</a>	Key Words SWPC, GEM Challenge
GOES-8 <a href="#">plot B data</a> <a href="#">plot B data +/-1 day</a>	GOES-8 <a href="#">view B</a>	GOES-8 <a href="#">plot model</a>	Model BATSRUS
GOES-9 N/A	GOES-9	GOES-9 <a href="#">plot model</a>	Model Version v20110131
GOES-10 <a href="#">plot B data</a> <a href="#">plot B data +/-1 day</a>	GOES-10 <a href="#">view B</a>	GOES-10 <a href="#">plot model</a>	Validation Level 0
GOES-11 N/A	GOES-11	GOES-11 <a href="#">plot model</a>	Coordinate System for Input GSM
Geotail <a href="#">plot B data</a> <a href="#">plot B data +/-1 day</a>	Geotail <a href="#">view B</a>	Geotail <a href="#">plot model</a>	Coordinate System for Output GSM
IMP-8 N/A	IMP-8	IMP-8 <a href="#">plot model</a>	Dipole Tilt, in the X-Z Plane, at Start deg 18.50
Polar <a href="#">plot B data</a> <a href="#">plot B data +/-1 day</a>	Polar <a href="#">view B</a>	Polar <a href="#">plot model</a>	Dipole Tilt, in Y-Z GSE plane, deg -15.40
Wind <a href="#">plot B data</a> <a href="#">plot B data +/-1 day</a>	Wind	Wind	Update Dipole Orientation with Time yes
			Inflow Boundary R_E 33
			F10.7 203
			Conductance Model auroral
			Corotation yes
			Run Number SWPC_SWMF_052811_3
			3D files saved 1509

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# CCMC Event Runs (3)

Following this link will bring you to the CCMC webpage with the overview information about this run.

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> UM SWMF Runs > CCMC Event Runs > HEIDI > AMIE > Satellite Plots > IRI/DMSR

return **Detail view for CCMC event run SWPC\_SWMF\_052811\_3**

Satellite Data Available	Data-Model Comparison	Model on Satellite Track	Run information:
<b>Satellite</b>	<b>Satellite</b>	<b>Satellite</b>	<a href="#">View run at CCMC site.</a>
Cluster-1 N/A	Cluster-1	Cluster-1 <a href="#">plot model</a>	Event Date August 30 2001
Cluster-2 N/A	Cluster-2	Cluster-2 <a href="#">plot model</a>	Start Time 2001/08/30 19:00
Cluster-3 N/A	Cluster-3	Cluster-3 <a href="#">plot model</a>	End Time 2001/09/01 00:00
Cluster-4 N/A	Cluster-4	Cluster-4 <a href="#">plot model</a>	Key Words SWPC, GEM Challenge
GOES-8 <a href="#">plot B data</a> <a href="#">plot B data +/-1 day</a>	GOES-8 <a href="#">view B</a>	GOES-8 <a href="#">plot model</a>	Model BATSRUS
GOES-9 N/A	GOES-9 <a href="#">view B</a>	GOES-9 <a href="#">plot model</a>	Model Version v20110131
GOES-10 <a href="#">plot B data</a> <a href="#">plot B data +/-1 day</a>	GOES-10 <a href="#">view B</a>	GOES-10 <a href="#">plot model</a>	Validation Level 0
GOES-11 N/A	GOES-11	GOES-11 <a href="#">plot model</a>	Coordinate System for Input GSM
Geotail <a href="#">plot B data</a> <a href="#">plot B data +/-1 day</a>	Geotail <a href="#">view B</a>	Geotail <a href="#">plot model</a>	Coordinate System for Output GSM
IMP-8 N/A	IMP-8	IMP-8 <a href="#">plot model</a>	Dipole Tilt, in the X-Z Plane, at Start deg 18.50
Polar <a href="#">plot B data</a> <a href="#">plot B data +/-1 day</a>	Polar <a href="#">view B</a>	Polar <a href="#">plot model</a>	Dipole Tilt, in Y-Z GSE plane, deg -15.40
Wind <a href="#">plot B data</a> <a href="#">plot B data +/-1 day</a>	Wind	Wind	Update Dipole Orientation with Time yes
			Inflow Boundary R_E 33
			F10.7 203
			Conductance Model auroral
			Corotation yes
			Run Number SWPC_SWMF_052811_3
			3D files saved 1509

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# CCMC Event Runs (4)

Here you see the CCMC page for this run.

If satellite trajectories have been computed from this run output, they will be listed here.

Run information

COMMUNITY COORDINATED MODELING CENTER

Related Links | Frequently Asked Questions | Community Feedback | Downloads | Sitemap

About | Models at CCMC | Request A Run | View Results | Instant Run | Metrics and Validation | Education | RT Simulations

### SWPC\_SWMF\_052811\_3

Title/Introduction:

Key Word: SWPC, GEM Challenge

Model Type: GM  
Model: BATSRUS version v20110131

Inflow Boundary Conditions:  
Start Time: 2001/08/30 19:00  
End Time: 2001/09/01 00:00  
Dipole Tilt at Start in X-Z Plane: 18.50 deg.  
Dipole Tilt in Y-Z GSE Plane: -15.40 deg.  
Dipole Update With Time: yes  
Ionospheric Conductance: auroral

Radio Flux 10.7 cm: 203  
Coordinate System for the Output: GSM  
Initial Solar Wind (SW) Parameters in GSM Coordinates:

SW Density: 3.60000 n/cc  
SW Temperature [Kelvin]: 83109.29000 Kelvin  
X Component of SW Velocity: -461.04000  
Y Component of SW Velocity: -31.53000 km/sec  
Z Component of SW Velocity: -13.29000 km/sec  
IMF Bx: 0.00000 nT  
IMF By: -3.89000 nT  
IMF Bz: -4.77000 nT  
IMF |B|: 6.16000 nT  
IMF Clock Angle: 219.2 deg.

- [View solar wind input data](#)
- [List solar wind input data in ASCII format \(see format description here\).](#)
- [View Magnetosphere](#)
- [Create Timeseries in Magnetosphere](#)
- [View Ionosphere](#)

View pre-computed timeseries data:

- [Northern hemisphere polar cap flux and area](#)
- [Southern hemisphere polar cap flux and area](#)
- [Magnetopause standoff and closest approach within 30 deg. of Sun-Earth line \(local noon\)](#)
- [Polar cap boundary at 24 magnetic local times](#)
- [Ionospheric dissipation](#)

- [View Rice Convection Model data](#)
- [View Rice Convection Model data mapped to ionosphere](#)

View model outputs along satellite trajectories:

- Cluster-1
- Cluster-2
- Cluster-3
- Cluster-4
- GOES-10
- GOES-11
- GOES-8
- GOES-9
- Geotail
- IMAGE
- IMP-8
- LANL-89
- LANL-90
- LANL-91
- LANL-94
- LANL-95





# CCMC Event Runs (6)

Only runs where the satellite extraction has been made and where the satellite has its magnetic field data published can be used for data/model plots.

A variety of plots can be made from this page.

Virtual Modeling Repository: CCMC Visualization

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[return](#) **Detail view for CCMC event run SWPC\_SWMF\_052811\_3**

Satellite Data Available	Data-Model Comparison	Model on Satellite Track	Run information:
<b>Satellite</b> Cluster-1 N/A Cluster-2 N/A Cluster-3 N/A Cluster-4 N/A GOES-8 <a href="#">plot B data</a> <a href="#">plot B data +/-1 day</a> GOES-9 N/A GOES-10 <a href="#">plot B data</a> <a href="#">plot B data +/-1 day</a> GOES-11 N/A Geotail <a href="#">plot B data</a> <a href="#">plot B data +/-1 day</a> IMP-8 N/A Polar <a href="#">plot B data</a> <a href="#">plot B data +/-1 day</a> Wind <a href="#">plot B data</a> <a href="#">plot B data +/-1 day</a>	<b>Satellite</b> Cluster-1 Cluster-2 Cluster-3 Cluster-4 GOES-8 <a href="#">view B</a> GOES-9 <a href="#">view B</a> GOES-10 <a href="#">view B</a> GOES-11 <a href="#">view B</a> Geotail <a href="#">view B</a> IMP-8 <a href="#">view B</a> Polar <a href="#">view B</a> Wind	<b>Satellite</b> Cluster-1 <a href="#">plot model</a> Cluster-2 <a href="#">plot model</a> Cluster-3 <a href="#">plot model</a> Cluster-4 <a href="#">plot model</a> GOES-8 <a href="#">plot model</a> GOES-9 <a href="#">plot model</a> GOES-10 <a href="#">plot model</a> GOES-11 <a href="#">plot model</a> Geotail <a href="#">plot model</a> IMP-8 <a href="#">plot model</a> Polar <a href="#">plot model</a> Wind	<a href="#">View run at CCMC site.</a> Event Date August 30 2001 Start Time 2001/08/30 19:00 End Time 2001/09/01 00:00 Key Words SWPC, GEM Challenge Model BATSRUS Model Version v20110131 Validation Level 0 Coordinate System for Input GSM Coordinate System for Output GSM Dipole Tilt, in the X-Z Plane, at Start deg 18.50 Dipole Tilt, in Y-Z GSE plane, deg -15.40 Update Dipole Orientation with Time yes Inflow Boundary R_E 33 F10.7 203 Conductance Model auroral Corotation yes Run Number SWPC_SWMF_052811_3 3D files saved 1509

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# Plot Satellite B field

Satellite magnetic field plots can be made for the modeled a custom time period.

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> [UM SWMF Runs](#) > [CCMC Event Runs](#) > [HEIDI](#) > [AMIE](#) > [Satellite Plots](#) > [IRI/DMSP](#)

Plot of GOES-12 data for 2006-12-14 07:00:00 to 2006-12-16 00:00:00

GOES-12 (plot of B\_GSM\_c from cdaweb.gsfc.nasa.gov)

To make a *similar* plot yourself that you can modify further, paste the line below into [autoplot](#) yourself.  
vap:ftp://cdaweb.gsfc.nasa.gov/pub/istp/goes/12\_mag/%Y/goes12\_k0\_mag\_%Y%m%d\_v...cdf?B\_GSM\_c&timerange=2006-12-14+through+2006-12-16

You can also download [this](#) file and load it into [autoplot](#).

**Enter your own date/time range to view satellite data:**

Enter date and time as YYYY-MM-DD / HH:MM:SS      data range: 2003-04-08 - current

Begin:  /

End:  /

**View plots already created for this satellite from other runs: (6)**

NOTE: If your plot says 'no data set' in the upper left corner, then there is likely a gap in the data available from cdaweb for the time period selected. Date correction is made if available, but not for gaps in availability. That feature will be added at some point.

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# Plot Output Along Trajectory

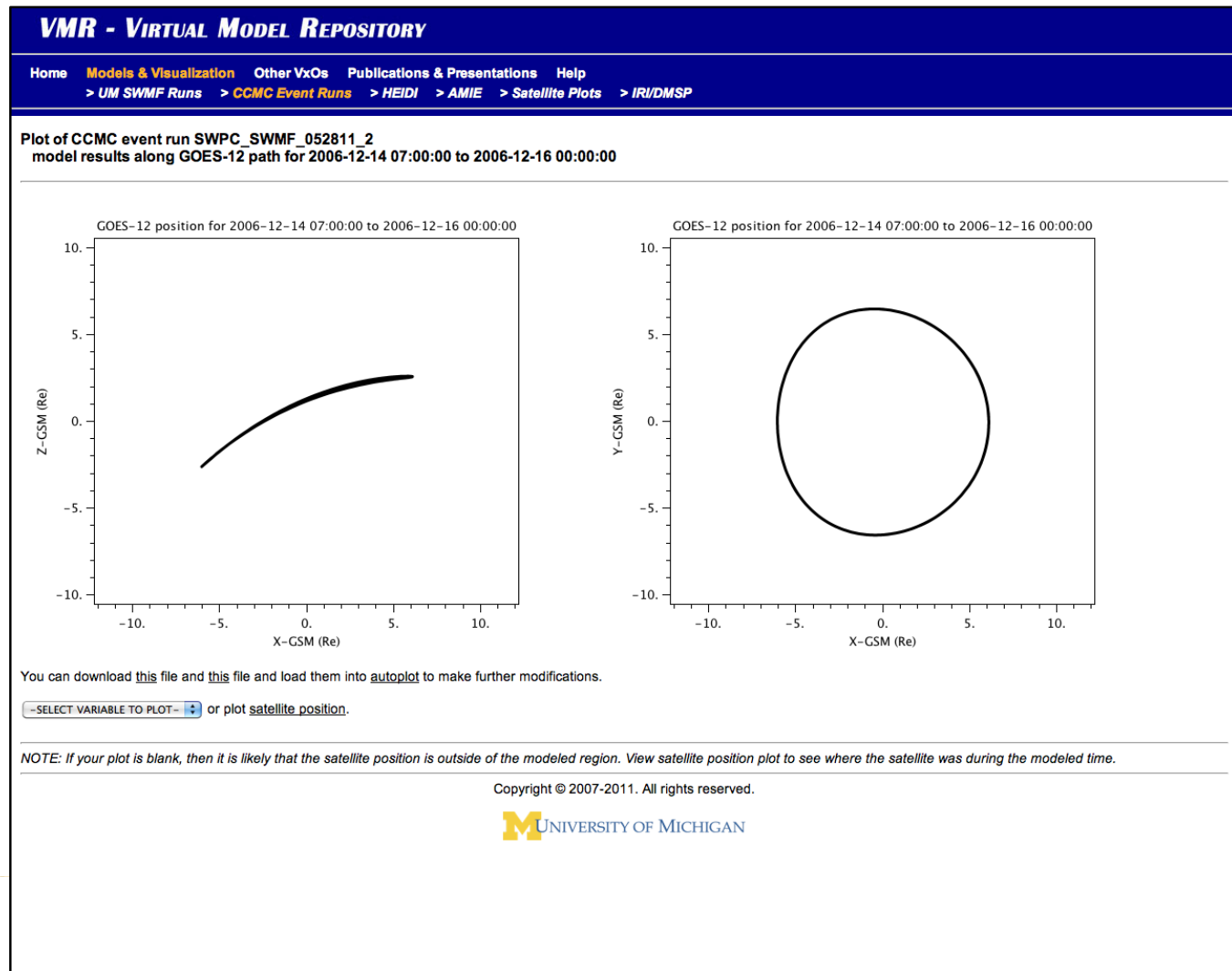
Model density along the GOES-12 trajectory for the modeled time period.





# Plot Satellite Location

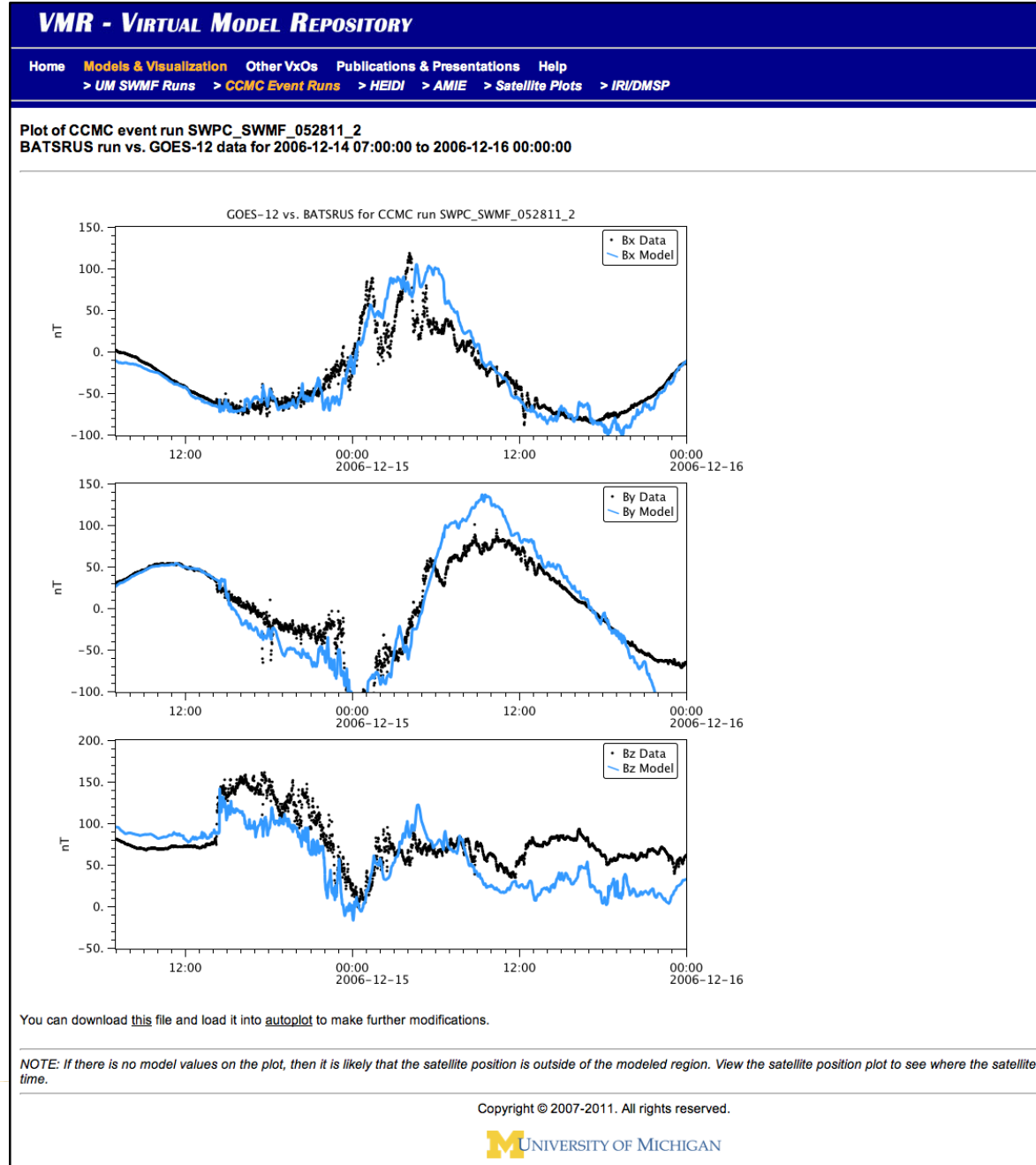
GOES-12 location for the modeled time period.





# Plot Data/Model Comparison

Modeled vs. measured magnetic field data for the modeled time period.





# Other Models in the VMR

- IRI can be run through the VMR and comparison plots made with DMSP data.
- A large collection of AMIE runs are available.
- HEIDI runs for 90 intense storms are available, each run with five different code settings.
- Many SWMF runs are also available. Numerous simulations have been performed at the University of Michigan using the SWMF. Some of those runs have led to publications, including event studies and numerical analysis papers. Many of these runs, as well as other runs where we have collaborated with others are available at the VMR.





# SWMF Runs

The interface for the SWMF runs is setup to be similar to the CCMC runs page.

**VMR - VIRTUAL MODEL REPOSITORY**

Home [Models & Visualization](#) Other VxOs Publications & Presentations Help  
 > [UM SWMF Runs](#) > [CCMC Event Runs](#) > [HEIDI](#) > [AMIE](#) > [Satellite Plots](#) > [IRI/DMSP](#)

**Search SWMF runs at the University of Michigan**

Search Criteria	Search Results																																																																																																																																																																					
Run start/end date as YYYYMMDD: <input type="text"/> / <input type="text"/>	... found 33 of 33 in search ...																																																																																																																																																																					
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<input type="submit" value="submit"/> <input type="reset" value="reset"/>	<table border="0"> <tr> <td><a href="#">select</a></td> <td>By-Study-2007</td> <td>sort by <a href="#">model</a></td> <td>sort by <a href="#">event date</a></td> <td>sort by <a href="#">execution date</a></td> </tr> <tr> <td><a href="#">select</a></td> <td>GEM-Metrics-2009_run20010831</td> <td>SWMF GM-IE</td> <td>December 22, 2001</td> <td>March 28, 2007</td> </tr> <tr> <td><a href="#">select</a></td> <td>GEM-Metrics-2009_run20031029</td> <td>SWMF GM-IE</td> <td>August 31, 2001</td> <td>April 24, 2009</td> </tr> <tr> <td><a href="#">select</a></td> <td>GEM-Metrics-2009_run20050831</td> <td>SWMF GM-IE</td> <td>October 29, 2003</td> <td>April 24, 2009</td> </tr> <tr> <td><a href="#">select</a></td> <td>GEM-Metrics-2009_run20061214</td> <td>SWMF GM-IE</td> <td>August 31, 2005</td> <td>April 24, 2009</td> </tr> <tr> <td><a href="#">select</a></td> <td>Kozyra_run20050121_DeZeeuw-GMIEIM-New7hrsA</td> <td>SWMF 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<td>May 4, 1998</td> <td>August 13, 2009</td> </tr> <tr> <td><a href="#">select</a></td> <td>Ridley-Numerics-Paper_run03_CoarseGrid3</td> <td>SWMF GM-IE</td> <td>May 4, 1998</td> <td>August 13, 2009</td> </tr> <tr> <td><a href="#">select</a></td> <td>Ridley-Numerics-Paper_run04_DEFAULT</td> <td>SWMF GM-IE</td> <td>May 4, 1998</td> <td>August 13, 2009</td> </tr> <tr> <td><a href="#">select</a></td> <td>Ridley-Numerics-Paper_run05_FineGrid1</td> <td>SWMF GM-IE</td> <td>May 4, 1998</td> <td>August 13, 2009</td> </tr> <tr> <td><a href="#">select</a></td> <td>Ridley-Numerics-Paper_run07_SokolovSolver</td> <td>SWMF GM-IE</td> <td>May 4, 1998</td> <td>August 14, 2009</td> </tr> <tr> <td><a href="#">select</a></td> <td>Ridley-Numerics-Paper_run08_LimiterBeta1.0</td> <td>SWMF GM-IE</td> <td>May 4, 1998</td> <td>August 14, 2009</td> </tr> <tr> <td><a href="#">select</a></td> <td>Ridley-Numerics-Paper_run09_LimiterBeta1.4</td> <td>SWMF GM-IE</td> <td>May 4, 1998</td> <td>August 14, 2009</td> 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# SWMF Runs (2)

Basic run information is shown, such as grid, solver, boundary conditions, etc., as well as upstream values.

**VMR - VIRTUAL MODEL REPOSITORY**

[return](#)

**Run Info**

**Plot Regions**

**GM**  
1D-logfile  
2D-y=0-plt  
2D-z=0-plt  
3D-plt

**IE**  
1D-logfile  
2D-idi

**IM**

**Extra Files**  
[view \(3\)](#)

**SWMF Plotting Tool: Kozyra\_run20050121\_DeZeeuw-GMIEIM-New7hrsB**

Select a plot region from the left list ...

**Run Information:**

```

BLOCKS = 5356 8 x 8 x 8
BODYNUMDENSITY = 28.00
BORIS = T 0.0100
BTHETATILT = 9.7924
CELLS = 2742272
CODEVERSION = BATSRUS 9.00
COORDSYSTEM = GSM
COROTATION = T
FLUXTYPE = Rusanov
GAMMA = 1.666667
ITER = 1500
NPROC = 46
ORDER = 2 mc3, beta= 1.20000
RBODY = 2.50
SAVEDATE = Save Date: 2011/06/14 at 11:25:50
TIMEEVENT = 2005/01/21 15:00:00.000
TIMEEVENTSTART = 2005/01/21 15:00:00.000
TIMESIM = T=0000:00:00
          
```

**Upstream conditions:**

# VMR - VIRTUAL MODEL REPOSITORY

[return](#)

## SWMF Plotting Tool: Kozyra\_run20050121\_DeZeeuw-GMIEIM-New7hrsB / IE / 1D-logfile

Run Info

=> Select plot options below and click 'Update plot'

Plot Regions

Plot variable:

- GM
- 1D-logfile
- 2D-y=0-plt
- 2D-z=0-plt
- 3D-plt

cpcpn

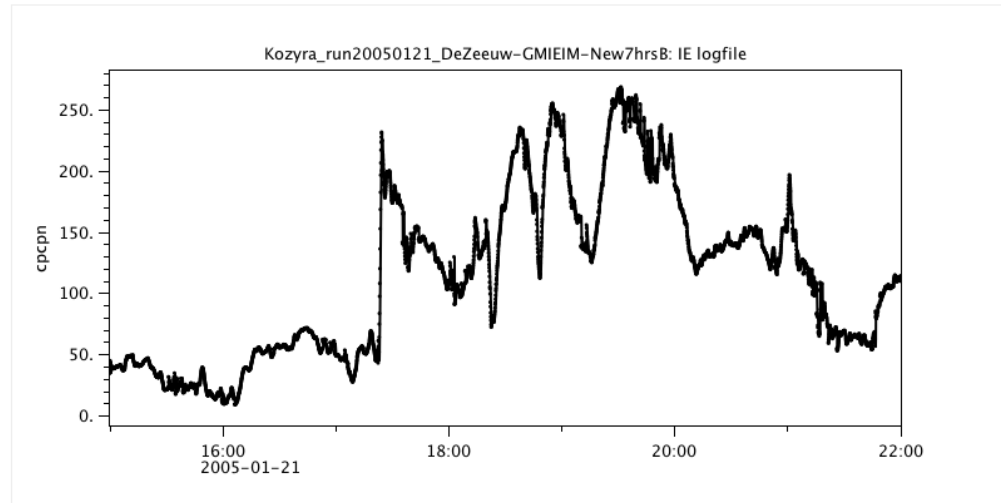
Update Plot

- IE
- 1D-logfile**
- 2D-idi

Plot result for: IElogfile.txt

Extra Files

[view \(3\)](#)



Click [here](#) to view instructions to download data and recreate this figure locally.

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# VMR - VIRTUAL MODEL REPOSITORY

[return](#)

## SWMF Plotting Tool: Kozyra\_run20050121\_DeZeeuw-GMIEIM-New7hrsB / GM / 2D-y=0-plt

10 recent  sorting

### Run Info

=> Select plot options below and click 'Update plot'

### Plot Regions

Plotfile: T=Hour:Min:Sec N=Iterations E=Date Time (421 files found)

Y=0: T=0007:00:00 N=0015767 E=2005/01/21 22:00:00.000

#### GM

- 1D-logfile
- 2D-y=0-plt**
- 2D-z=0-plt
- 3D-plt

#### IE

- 1D-logfile
- 2D-idi

#### IM

#### Contour

Variable:  Range:  Min/Max  Custom   Color:  Blue-Green-Red  Blue-Red

#### Grid:

Plot grid?  No  Yes

#### View:

Center at: X=  Y=  with view width

#### Vector Traces:

Plot fieldlines?  No  Yes Line Color:  Black  White

#### Body:

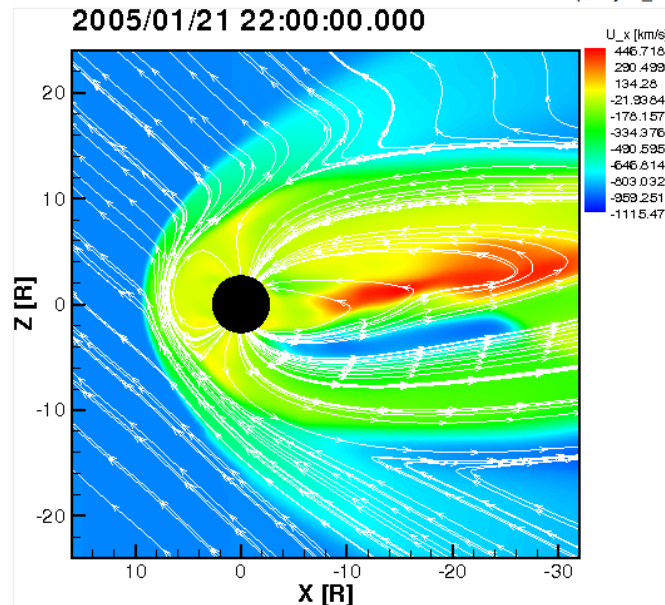
Plot circle at origin?  No  Yes with radius

#### Text Label:

Label:

(wait <1 minute unless fieldlines plotted)

Plot result for: Y=0: T=0007:00:00 N=0015767 E=2005/01/21 22:00:00.000 (file: y=0\_mhd\_1\_t00070000\_n0015767.plt)

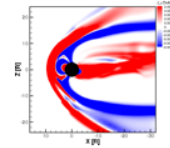


Click [here](#) to view instructions to download data and recreate this figure locally.

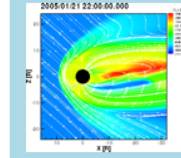
Movies and plots already created with this plot stye:

### Plot Styles

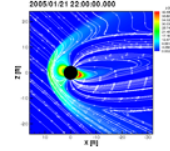
21 (1) [movie](#)



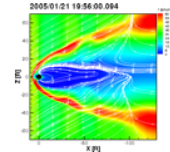
5 (1) [movie](#)



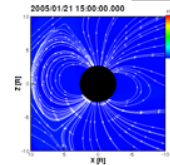
1 (1) [movie](#)



23 (1) [movie](#)



20 (110) [movie](#)



# VMR - VIRTUAL MODEL REPOSITORY

[return](#)

## SWMF Plotting Tool: Kozyra\_run20050121\_DeZeeuw-GMIEIM-New7hrsB / GM / 2D-z=0-plt

10 recent  sorting

### Run Info

=> Select plot options below and click 'Update plot'

### Plot Regions

Plotfile: T=Hour:Min:Sec N=Iterations E=Date Time (421 files found)

Z=0: T=0007:00:00 N=0015767 E=2005/01/21 22:00:00.000

### GM

- 1D-logfile
- 2D-y=0-plt
- 2D-z=0-plt**
- 3D-plt

### IE

- 1D-logfile
- 2D-idl

### IM

### Extra Files

[view \(3\)](#)

### Contour

Variable:  Range:  Min/Max  Custom   Color:  Blue-Green-Red  Blue-Red

### Grid:

Plot grid?  No  Yes

### View:

Center at: X=  Y=  with view width

### Vector Traces:

Plot fieldlines?  No  Yes Line Color:  Black  White

### Body:

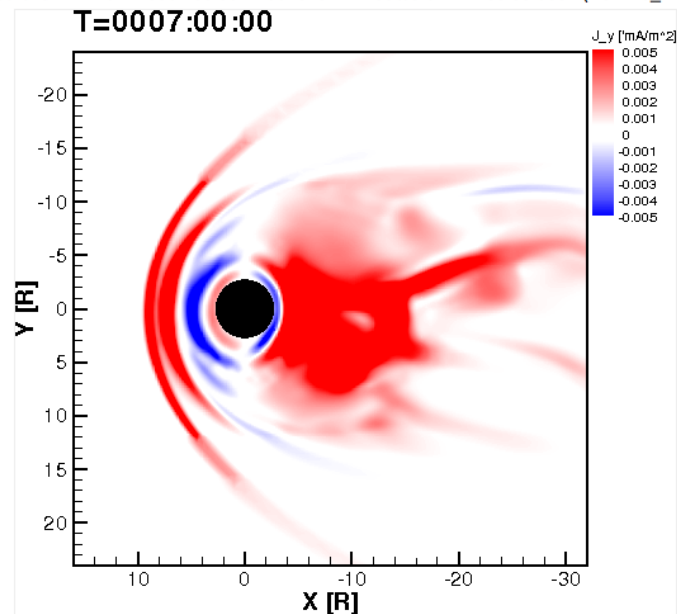
Plot circle at origin?  No  Yes with radius

### Text Label:

Label:

(wait <1 minute unless fieldlines plotted)

Plot result for: Z=0: T=0007:00:00 N=0015767 E=2005/01/21 22:00:00.000 (file: z=0\_mhd\_2\_t00070000\_n0015767.plt)

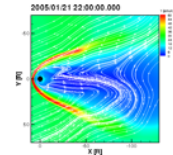


Click [here](#) to view instructions to download data and recreate this figure locally.

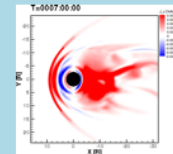
Movies and plots already created with this plot style:

### Plot Styles

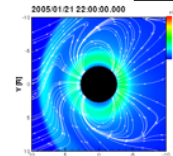
28 (1) [movie](#)



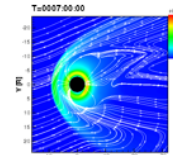
16 (1) [movie](#)



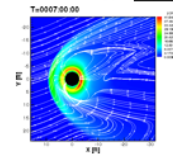
15 (1) [movie](#)



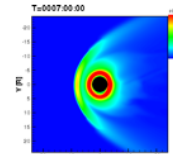
13 (1) [movie](#)



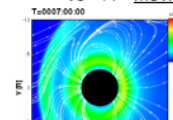
12 (1) [movie](#)



11 (1) [movie](#)



10 (1) [movie](#)



[return](#)

## SWMF Plotting Tool: Kozyra\_run20050121\_DeZeeuw-GMIEIM-New7hrsB / GM / 3D-plt

10 similar [sorting](#)

Run Info

=> Select plot options below and click 'Update plot'

Plot Regions

Plotfile: T=Hour:Min:Sec N=Iterations E=Date Time (85 files found)

T=0007:00:00 N=0015767 E=2005/01/21 22:00:00.000

GM

- 1D-logfile
- 2D-y=0-plt
- 2D-z=0-plt
- 3D-plt**

Contour

Variable:  Range:  Min/Max  Custom   Color:  Blue-Green-Red  Blue-Red

Slice:

Slice 1:  No Slice  X=   Y=   Z=

Slice 2:  No Slice  X=   Y=   Z=

Plot grid on slices?  No  Yes

Isosurface:

No  Yes Variable=  Value=

View:

Center at: X=  Y=  Z=  with view width

Perspective angles: Phi=  Theta=  ([Help me with view angles.](#))

Vector Traces:

Plot last closed fieldlines?  No  Yes (5-10 minutes render time)

Body:

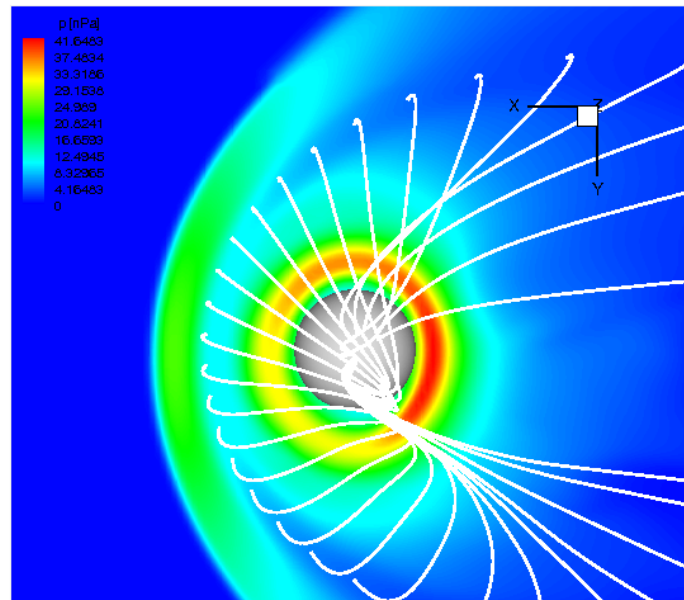
Plot sphere at origin?  No  Yes with radius

Text Label:

Label:

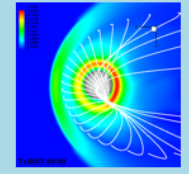
(wait ~1 minute unless fieldlines plotted)

Plot result for: T=0007:00:00 N=0015767 E=2005/01/21 22:00:00.000 (file: 3d\_mhd\_3\_t00070000\_n0015767.plt)

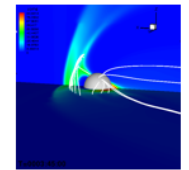


Plot Styles

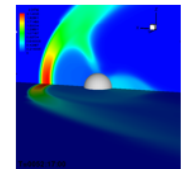
5 (1) [movie](#)



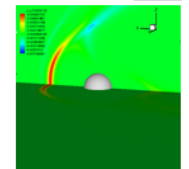
6 (0) [movie](#)



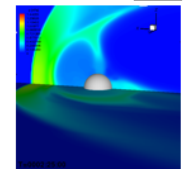
1 (0) [movie](#)



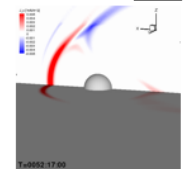
2 (0) [movie](#)



8 (0) [movie](#)



7 (0) [movie](#)



3 (0) [movie](#)



# VMR - VIRTUAL MODEL REPOSITORY

[return](#)

## SWMF Plotting Tool: Kozyra\_run20050121\_DeZeeuw-GMIEIM-New7hrsB / IE / 2D-idl

all numeric  sorting

**Run Info**

=> Select plot options below and click 'Update plot'

**Plot Regions**

Plotfile: N=iteration T=Year:Month:Day - Hour:Min:Sec (421 files found)

**GM**

- 1D-logfile
- 2D-y=0-plt
- 2D-z=0-plt
- 3D-plt

**IE**

- 1D-logfile
- 2D-idl

**IM**

**Extra Files**

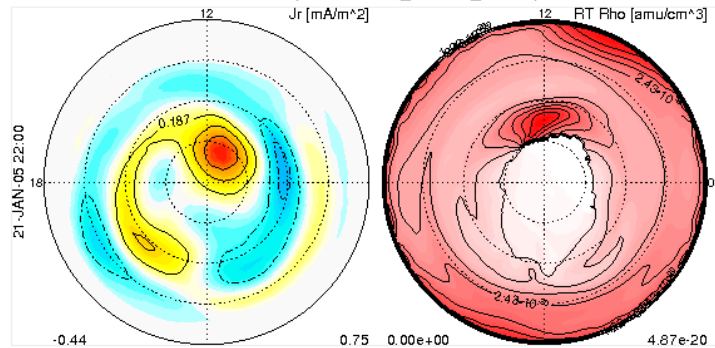
[view \(3\)](#)

**Contour**

NOTE: Not expecting more than 11 variables in file, fix form

- SigmaH [mhos]  Yes  No Range:  Max  Custom
- SigmaP [mhos]  Yes  No Range:  Max  Custom
- Jr [mA/m<sup>2</sup>]  Yes  No Range:  Max  Custom
- Phi [kV]  Yes  No Range:  Max  Custom
- E-Flux [W/m<sup>2</sup>]  Yes  No Range:  Max  Custom
- Ave-E [eV]  Yes  No Range:  Max  Custom
- RT 1/B [1/T]  Yes  No Range:  Max  Custom
- RT Rho [amu/cm<sup>3</sup>]  Yes  No Range:  Max  Custom
- RT P [Pa]  Yes  No Range:  Max  Custom

Plot result for: T=2005:01:21 - 22:00:00 (file: it050121\_220000\_000.idl)



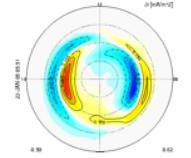
Time to create plot: 2 seconds

Click [here](#) to view instructions to download data and recreate this figure locally.

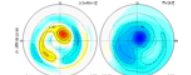
Movies and plots already created with this plot style:

**Plot Styles**

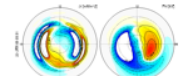
1 (0) [movie](#)



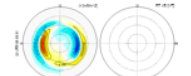
2 (1) [movie](#)



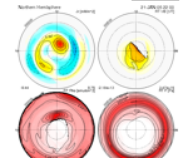
3 (0) [movie](#)



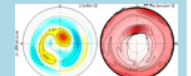
4 (0) [movie](#)



5 (1) [movie](#)



6 (1) [movie](#)





# Conclusions

- We have a history of successful collaboration with the CCMC.
- The CCMC and VMR have setup cross-links on each web page to make more plotting and analysis options available to the community.
- We are looking for feedback on how well the VMR works for you and suggestions for ways to improve it.





# Live Demo

- If we have time, a live demo of the VMR is possible:
- <http://vmr.engin.umich.edu>