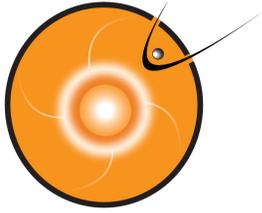


Fast Track WSA-ENLIL + Cone model runs

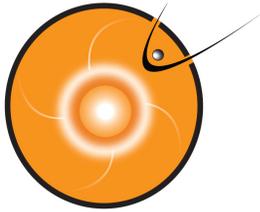
2015-06-08





Outline

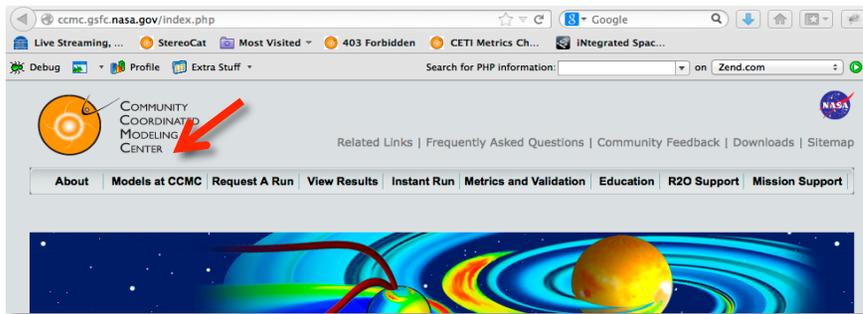
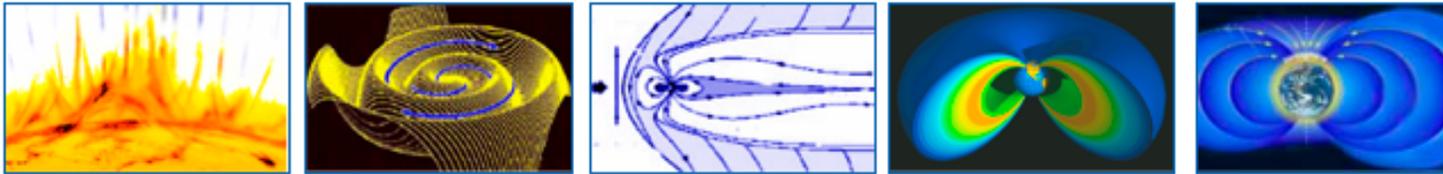
- CCMC Runs on Request System
- Submitting your FastTrack ENLIL+Cone model run
- Analyzing your simulation results
- FastTrack DEMO and hands-on practice



CCMC Runs on Request system

CCMC Runs on Request systems allows anyone to run space weather models hosted at the CCMC. There are over 40 models available for Runs on Request at:

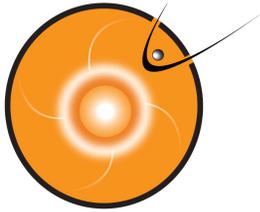
<http://ccmc.gsfc.nasa.gov>



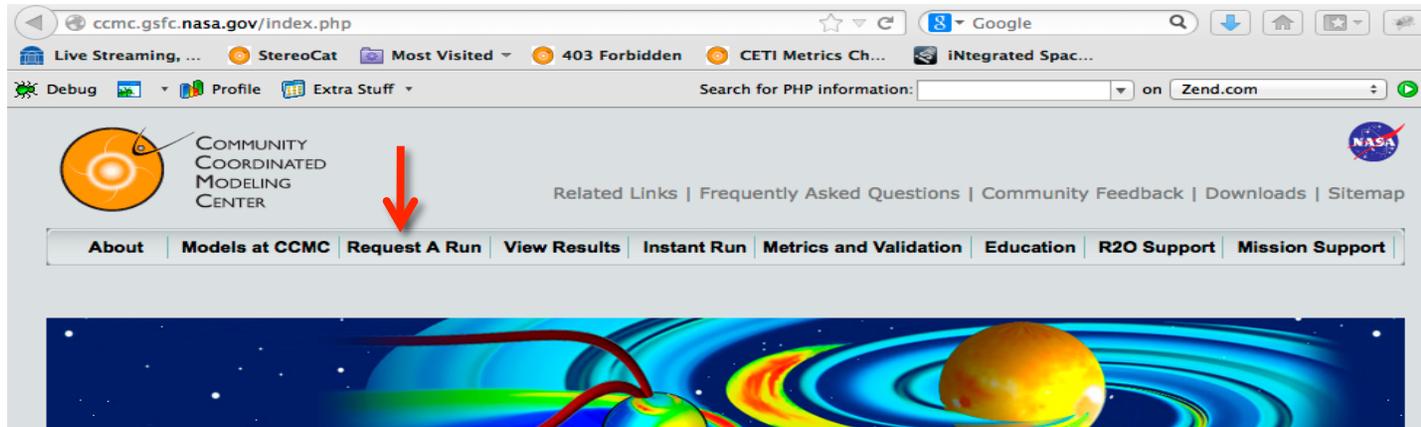
MODELS at a glance



CORHEL/MAS /WSA/ENLIL/	J. Linker, Z. Mikic, R. Lionello, P. Riley, N. Arge, D. Odstrcil	PSI, AFRL, U.Colorado
SWMF/SC/IH	Bart van der Holst, Igor Sokolov, Ward Manchester, Gabor Toth, Darren DeZeeuw and Tamas Gombosi	CSEM
ENLIL	D. Odstrcil	Univ. of Colorado at Boulder
ENLIL with Cone Model	D. Odstrcil	Univ. of Colorado at Boulder
Heliospheric Tomography with SMEI data	B. Jackson, P. Hick	CASS/UCSD (SMEI)
Heliospheric Tomography with IPS data	B. Jackson, P. Hick	CASS/UCSD (SMEI or IPS)
Exospheric Solar Wind	H.Lamy, V.Pierrard	IASB-BIRA



Submitting ENLIL requests

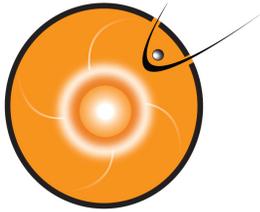


Submission for ENLIL with Cone Model requests

Click on a link below to select how you would like to submit your request:

- [Regular run submission](#)

→ FastTrack: <http://ccmc.gsfc.nasa.gov/FastTrack>



FastTrack run submission (*cont.*)

Provide:

- your contact information,
- Run Number (you can submit a limited number of runs per day and they will be distinguished by this number)
- the number of CMEs in your simulation (limit 6)

Your contact information:

Your run results will be published online under your :

First Name (Given): (required)

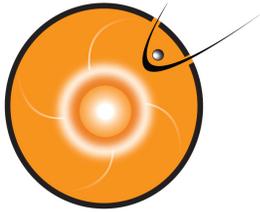
Last Name (Family): (required)

E-mail: (required)

Run Number: ←

Specify the number of CMEs for this run:

Number of CMEs: (up to 6 CMEs allowed)



FastTrack run submission (*cont.*)

Enter CME parameters (e.g., parameters derived in a StereoCAT session):

CME # 1:

CME Detection Date/Time: (YYYY-MM-DD) (

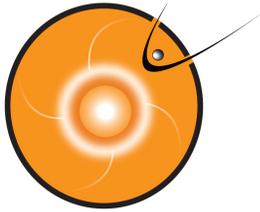
Date/Time at 21.5 Rs: (YYYY-MM-DD)

Velocity:

Latitude:

Longitude:

Half Angle:



FastTrack run submission (*cont.*)

Enter CME parameters (e.g., parameters derived in a StereoCAT session):

CME # 1:

CME Detection Date/Time: (YYYY-MM-DD) (

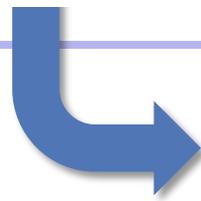
Date/Time at 21.5 Rs: (YYYY-MM-DD)

Velocity:

Latitude:

Longitude:

Half Angle:



Run results are usually ready in 1-2 hours
(for events within the last 3 months)

Dear

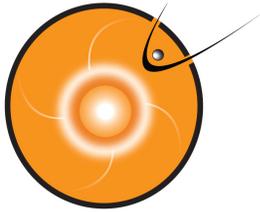
Your request has been submitted on: June 4, 2014, 3:00 pm.
The registration number for the run you submitted is:
Aleksandre_Taktakishvili_060414_SH_1.

You will receive an e-mail when the simulation(s) have finished.

We appreciate your interest in the CCMC.

Sincerely,

The CCMC staff



Run completion notification

Run completion notification emails contain:

- Estimate of the CME arrival at Earth
- Estimate of the CME arrival at planets (and satellites)
- Link to the run results available on the CCMC website



```
*****
Estimate issued on 2014/06/04, 11:10:37 EST
*****

Arrival time(year/month/day, hr:min UT) =2014-06-07T05:15Z
(confidence level +-7 hours)

Duration of the disturbance (hr) = 24.6
(confidence level +-8 hours)

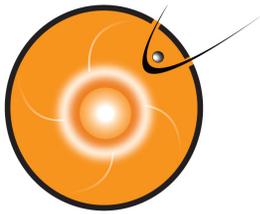
Minimum magnetopause standoff distance: Rmin(Re)=6.1
(under quiet conditions: Rmin(Re)=10;
R_geosynchr(Re)=6.6)

Kp index for three possible IMF clock angles
(angle 180 gives the maximum possible estimated Kp):
(Kp)_90=4
(Kp)_135=6
(Kp)_180=6
```

```
Inner planets:

Experimental ICME estimate
*****
Stereo A
*****
Arrival time(year/month/day,
hr:min UT) =2010-04-22T15:03Z

*****
Stereo B
*****
CME did not hit the StereoB.
or
CME impact is very weak.
```



Run results on the CCMC website

The link in the run notification email will take you to your run results page on the CCMC website.

CME(s) parameters
CME arrival at 21.5 Rs time(s): 2014-06-03T10:15
latitude: 12
longitude: 30
half angular width: 45
velocity: 1200

- View [3D Data](#)
- View [control file](#) with input parameters for the run.
- View [quick look graphics for the run](#)

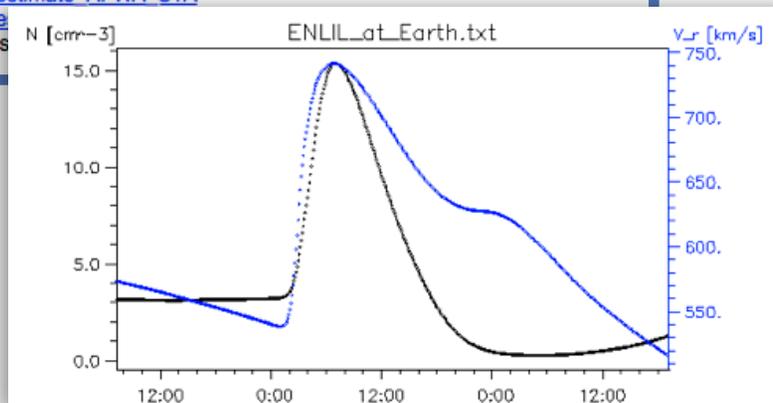
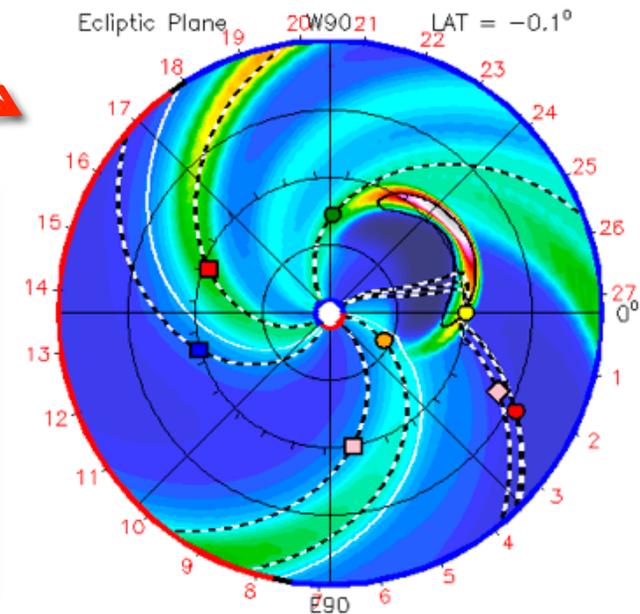
Note: Quick look graphics has been designed by the model developer find more information regarding this option please contact the CCMC

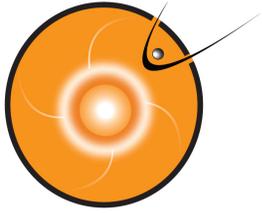
[ENLIL at Earth](#)
[ENLIL at Mars](#)
[ENLIL at Mercury](#)
[ENLIL at Stereo A](#)
[ENLIL at Stereo B](#)
View estimate of the [CME arrival time at Earth](#)
View estimate of the [CME arrival time at Earth for GICs](#)
[CME estimate AFWA Mars](#)
[CME estimate AFWA Messenger](#)
[CME estimate AFWA Spitz](#)
[CME estimate AFWA STA](#)
[CME e](#)
View es



View all Heliosphere Runs
(find link to your request)

● Earth ● Mars ● Mercury ● Venus





FastTrack DEMO and practice

Find 2016-06-09T01:48 CME in DONKI

iSWA layout for 2016-06-09 DEMO CME

<http://go.nasa.gov/1PWPdDH>

Check if there is the CME arrival on the predicted date

DEMO

In-class assignment: submitting a FastTrack ENLIL+Cone model run:

<http://ccmc.gsfc.nasa.gov/support/SWREDI/bootcamp/fasttrack.php>

To submit a FastTrack run go to the CCMC website:

<http://ccmc.gsfc.nasa.gov/FastTrack>

PRACTICE