Space Weather Web Tools from CCMC/SWRC:

[Image of web tools and logos]

http://kauai.ccmc.gsfc.nasa.gov/
The CME scoreboard is a research-based forecasting methods validation activity which provides a central location for the community to:

- submit their forecast in real-time
- quickly view all forecasts at once in real-time
- compare forecasting methods when the event has arrived

Please join! All prediction methods are welcome and all are encouraged to participate. Currently registered models include:

- Anemomilos
- ESA Model
- H3DMHD (HAFv.3 +3DMHD)
- HAFv.3
- STOA
- WSA-Enlil + Cone Model
- BHV Model
- DBM
- ECA Model
- Expansion Speed Prediction Model
- HelTomo
- HI J-map technique
- TH Model
- SARM

The scoreboard also includes predictions from the SWRC (Space Weather Research Center) which is a CCMC branch carrying out in-house research-based space weather ops team.

http://swrc.gsfc.nasa.gov/main/cmemodels
http://kauai.ccmc.gsfc.nasa.gov/SWScoreBoard
Space Weather ScoreBoard

CME arrival time predictions from the research community:
The Space Weather ScoreBoard (developed at the Community Coordinated Modeling Center, CCMC) is a research-based forecasting methods validation activity which provides a central location for the community to:

- submit their forecast in real-time
- quickly view all forecasts at once in real-time
- compare forecasting methods when the event has arrived

Using this system:

- Anyone can view prediction tables
- Users can enter in your CME shock arrival time forecast after logging in:
  - Registered Users: Begin by finding your CME under the "Active CMEs" section, then click "Add Prediction" and select your forecasting "Method Type" from the list. (Click here to register for an account.)
  - Power Users: If you do not see your CME listed under the "Active CMEs" section, click "Add CME" to get started (Click here to request power user privileges). To enter the actual CME shock arrival time, click "Edit CME" after you are done entering your prediction(s).
- Click here to see a list of registered methods. If you would like to register your prediction method, please send an email to M. Leila Mays or Yihua Zheng with your model/technique details.

http://kauai.ccmc.gsfc.nasa.gov/SWScoreBoard
Anyone can view predictions, please register to submit predictions.
Community predictions for the January 7, 2014 CME (X1.2 flare):

http://kauai.ccmc.gsfc.nasa.gov/SWScoreBoard
Begin by clicking **Add Prediction** under the "Active CMEs" section and select your forecasting "Method Type" from the list. While logged in, if you do not see any CMEs listed under the "Active CMEs" section, click **Add CME** to get started.

Using this system:

- Anyone can view prediction tables
- Users can enter in your CME shock arrival time forecast after logging in:
  - Registered Users: Begin by finding your CME under the "Active CMEs" section, then click "Add Prediction" and select your forecasting "Method Type" from the list. (Click [here](http://kauai.ccmc.gsfc.nasa.gov/SWScoreBoard) to register for an account.)
  - Power Users: If you do not see your CME listed under the "Active CMEs" section, click **Add CME** to get started (Click [here](http://kauai.ccmc.gsfc.nasa.gov/SWScoreBoard) to request power user privileges). To enter the actual CME shock arrival time, click "Edit CME" after you are done entering your prediction(s).
- [Click here to see a list of registered methods](http://kauai.ccmc.gsfc.nasa.gov/SWScoreBoard). If you would like to register your prediction method, please send an email to [M. Leila Mays](mailto:mleila@ccmc.gsfc.nasa.gov) or [Yihua Zheng](mailto:y.zheng@gsfc.nasa.gov) with your model/technique details.

**Active CMEs:**

**Note:** If you can't find your CME below, please click **Add CME** to add your CME. To enter the actual CME shock arrival time, click "Edit CME" after you are done entering your prediction(s).

<table>
<thead>
<tr>
<th>CME: 2015-01-01T00:00:00-CME-001</th>
</tr>
</thead>
<tbody>
<tr>
<td>Edit CME</td>
</tr>
<tr>
<td>Delete CME</td>
</tr>
<tr>
<td><strong>Add Prediction</strong></td>
</tr>
<tr>
<td>No Prediction Entered for this CME yet!</td>
</tr>
</tbody>
</table>

[http://kauai.ccmc.gsfc.nasa.gov/SWScoreBoard](http://kauai.ccmc.gsfc.nasa.gov/SWScoreBoard)
Prediction Form for CME (2014-01-01T00:00:00-CME-001)

Enter submission time in format (yyyy-MM-dd'T'HH:mm'Z' i.e. 2012-07-12T16:52Z):

**Method Type (details):**

Prediction notes: (Please include all initial conditions/parameters used in your prediction)

Enter predicted CME shock arrival time in format (yyyy-MM-dd'T'HH:mm'Z' i.e. 2012-07-12T16:52Z):

Positive Error Bar in hours (optional):

Negative Error Bar in hours (optional):

Kp Range Lower Limit (optional):

Kp Range Upper Limit (optional):

Dst min. in nT (optional):

Dst min. time in format (yyyy-MM-dd'T'HH:mm'Z' i.e. 2012-07-12T16:52Z) (optional):

[submit]

[cancel]
Scoreboard – Future Improvements

• Automatically accepting and parsing predictions (less work for groups who can populate directories with their predictions)
  • Manually created predictions (e.g. from SIDC)
  • Automatically created predictions (e.g. from Anemomilos, SARM).
    • Challenges: filtering out non-CME related predictions, matching predictions with CME start time.
• Showing table data in dynamic plot form, e.g. Prediction Error vs. Time of Prediction, Prediction Error vs Input parameters.
• Suggestions: We can add an “analysis” field to provide a few sentences about the arrival and predictions. This can also be found in DONKI as notes/comments. We can add the ability for users to also submit their prediction “confidence”.
• Any interest in including STEREO A and B predictions?

• Your suggestions?
Please join! All prediction methods are welcome and all are encouraged to participate. Currently registered models include: *Anemomilos, ESA Model, H3DMHD (HAFv.3 +3DMHD), HAFv.3, STOA, WSA-Enlil + Cone Model, BHV Model, DBM, ECA Model, Expansion Speed Prediction Model, HelTomo, HI J-map technique, TH Model, SARM*

The CME scoreboard is a research-based forecasting methods validation activity which provides a central location for the community to:

• submit their forecast in real-time
• quickly view all forecasts at once in real-time
• compare forecasting methods when the event has arrived

Please visit these websites:

[http://kauai.ccmc.gsfc.nasa.gov/SWScoreBoard](http://kauai.ccmc.gsfc.nasa.gov/SWScoreBoard)