
Forecast Type: Likelihood (probability) of the occurrence of an M flare, X flare, or Proton Event

Note: Mpred1 = M flare PREDiction day 1
Mpred2 = M flare PREDiction day 2
Mevents = Observed number of M flares,
    etc.

Missing data: NA
Total Records: Total number of daily forecast/observation records used to generate statistics
363

Event Days: Total number of days in the sample on which at least one (M, X, Proton event) occurred
Mevents Xevents Pevents
74 12 0

Mean observation
Mevents Xevents Pevents
0.2 0.033 0

Mean, Median, and Standard Deviation of all forecasts

<table>
<thead>
<tr>
<th>Mpred1</th>
<th>Mpred2</th>
<th>Mpred3</th>
<th>Xpred1</th>
<th>Xpred2</th>
<th>Xpred3</th>
<th>Ppred1</th>
<th>Ppred2</th>
<th>Ppred3</th>
</tr>
</thead>
<tbody>
<tr>
<td>mean</td>
<td>0.23</td>
<td>0.22</td>
<td>0.21</td>
<td>0.10</td>
<td>0.010</td>
<td>0.010</td>
<td>0.010</td>
<td>0.010</td>
</tr>
<tr>
<td>median</td>
<td>0.20</td>
<td>0.20</td>
<td>0.20</td>
<td>0.010</td>
<td>0.010</td>
<td>0.010</td>
<td>0.010</td>
<td>0.010</td>
</tr>
<tr>
<td>sd</td>
<td>0.20</td>
<td>0.19</td>
<td>0.19</td>
<td>0.079</td>
<td>0.075</td>
<td>0.071</td>
<td>0.071</td>
<td>0.067</td>
</tr>
</tbody>
</table>

Mean, Median and Standard Deviation of forecast given the non-occurrence (f|x=0) of an event

<table>
<thead>
<tr>
<th>Mpred1</th>
<th>Mpred2</th>
<th>Mpred3</th>
<th>Xpred1</th>
<th>Xpred2</th>
<th>Xpred3</th>
<th>Ppred1</th>
<th>Ppred2</th>
<th>Ppred3</th>
</tr>
</thead>
<tbody>
<tr>
<td>mean</td>
<td>0.19</td>
<td>0.19</td>
<td>0.19</td>
<td>0.049</td>
<td>0.048</td>
<td>0.044</td>
<td>0.044</td>
<td>0.041</td>
</tr>
<tr>
<td>median</td>
<td>0.15</td>
<td>0.15</td>
<td>0.15</td>
<td>0.010</td>
<td>0.010</td>
<td>0.010</td>
<td>0.010</td>
<td>0.010</td>
</tr>
<tr>
<td>sd</td>
<td>0.17</td>
<td>0.17</td>
<td>0.17</td>
<td>0.077</td>
<td>0.076</td>
<td>0.071</td>
<td>0.071</td>
<td>0.067</td>
</tr>
</tbody>
</table>

Mean, Median and Standard Deviation of forecast given the occurrence (f|x=1) of an event

<table>
<thead>
<tr>
<th>Mpred1</th>
<th>Mpred2</th>
<th>Mpred3</th>
<th>Xpred1</th>
<th>Xpred2</th>
<th>Xpred3</th>
<th>Ppred1</th>
<th>Ppred2</th>
<th>Ppred3</th>
</tr>
</thead>
<tbody>
<tr>
<td>mean</td>
<td>0.39</td>
<td>0.34</td>
<td>0.29</td>
<td>0.13</td>
<td>0.090</td>
<td>0.082</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>median</td>
<td>0.35</td>
<td>0.30</td>
<td>0.25</td>
<td>0.10</td>
<td>0.050</td>
<td>0.050</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>sd</td>
<td>0.24</td>
<td>0.22</td>
<td>0.21</td>
<td>0.10</td>
<td>0.093</td>
<td>0.091</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>
Discrimination: The difference between $[\text{Mean } (f|x=1)]$ and $[\text{Mean } (f|x=0)]$

<table>
<thead>
<tr>
<th>Mpred1</th>
<th>Mpred2</th>
<th>Mpred3</th>
<th>Xpred1</th>
<th>Xpred2</th>
<th>Xpred3</th>
<th>Ppred1</th>
<th>Ppred2</th>
<th>Ppred3</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.195</td>
<td>0.145</td>
<td>0.096</td>
<td>0.081</td>
<td>0.042</td>
<td>0.038</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

Linear correlation ($r$) between forecasts and observations

<table>
<thead>
<tr>
<th>Mpred1</th>
<th>Mpred2</th>
<th>Mpred3</th>
<th>Xpred1</th>
<th>Xpred2</th>
<th>Xpred3</th>
<th>Ppred1</th>
<th>Ppred2</th>
<th>Ppred3</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.387</td>
<td>0.300</td>
<td>0.208</td>
<td>0.184</td>
<td>0.099</td>
<td>0.097</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

Mean Error, Mean Absolute Error, Mean Square Error, and Root Mean Square Errors of forecasts.

<table>
<thead>
<tr>
<th>Mpred1</th>
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<th>Xpred1</th>
<th>Xpred2</th>
<th>Xpred3</th>
<th>Ppred1</th>
<th>Ppred2</th>
<th>Ppred3</th>
</tr>
</thead>
<tbody>
<tr>
<td>ME</td>
<td>0.029</td>
<td>0.29</td>
<td>0.17</td>
<td>0.019</td>
<td>0.076</td>
<td>0.035</td>
<td>0.044</td>
<td>0.041</td>
</tr>
<tr>
<td>MAE</td>
<td>0.019</td>
<td>0.30</td>
<td>0.38</td>
<td>0.016</td>
<td>0.073</td>
<td>0.183</td>
<td>0.041</td>
<td>0.038</td>
</tr>
<tr>
<td>MSE</td>
<td>0.007</td>
<td>0.14</td>
<td>0.39</td>
<td>0.012</td>
<td>0.033</td>
<td>0.188</td>
<td>0.038</td>
<td>0.007</td>
</tr>
<tr>
<td>RMSE</td>
<td>0.278</td>
<td>0.15</td>
<td>0.41</td>
<td>0.077</td>
<td>0.035</td>
<td>0.186</td>
<td>0.044</td>
<td>0.006</td>
</tr>
</tbody>
</table>

Forecast skill with respect to observed climatology (same as prediction efficiency)

<table>
<thead>
<tr>
<th>Mpred1</th>
<th>Mpred2</th>
<th>Mpred3</th>
<th>Xpred1</th>
<th>Xpred2</th>
<th>Xpred3</th>
<th>Ppred1</th>
<th>Ppred2</th>
<th>Ppred3</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.133</td>
<td>0.057</td>
<td>-0.019</td>
<td>-0.042</td>
<td>-0.103</td>
<td>-0.081</td>
<td>-Inf</td>
<td>-Inf</td>
<td>-Inf</td>
</tr>
</tbody>
</table>