



The  $m$ -index is basically calculated by constructing 24 time series for each year, being the hourly values for 00:30UT, 01:30 UT, ..., 23:30UT. For each series they now calculate the standard deviation over the entire year. This gives them 24 values for the year. They then take the median of these to be the  $m$ -index or that year and for that station. If they have several stations, the median of the individual medians for each station becomes the final  $m$ -index.

Problems [that you do not mention, unless asked] include:

- 1) Sq is not removed as Sq may vary from day to day
- 2) Secular variation (12 nT /year for the above graph] should have been subtracted, otherwise that adds to the variance