

Prediction of Solar Cycle 25

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There is growing acceptance of the suggestion by Schatten et al. (GRL 5, 411, 1978) that the Sun's polar fields during a few years leading up to solar minimum is a 'seed' for the next solar cycle, being transported to and amplified in the interior by the solar global dynamo. If so, Predicting the size of the next solar cycle then comes down to predicting [or better: measuring] the polar fields. I use the observations since 1976 from WSO supplemented by the latest data from HMI to determine the solar axial Dipole Moment [DM] comparing it to DM at the previous minimum. Already at this time [≈ 2 years before minimum] the DM now is larger than the previous DM signaling that solar cycle 25 will be larger than cycle 24. Including the evidence from the recent heliospheric magnetic field [that also is a precursor of the cycle] leads to an estimate for SC25 approximately midway between cycles 20 and 24.