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Poster

The solar wind density, temperature, and the interplanetary magnetic field strength all correlate well with the solar wind speed. By combining these relationships Wang-Sheeley-Arge (WSA) corrected speed forecasts, we can produce multiday forecasts of the solar wind density, temperature, and interplanetary field strength, and the Kp geophysical index. First, we quantify how well these relationships can work using solar wind speed observations from near Earth in the OMNI data. This establishes a baseline for developing a skill score since the measured upstream Earth are the most accurate estimate of the solar wind speed that encounters Earth. Then, we determine how well the relationships perform at forecasting density, temperature, field strength and Kp index when using multiday WSA speed forecast relative to when using the measured speeds.

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