

## **Associating the Solar Wind Observed by Interplanetary Spacecraft with the Solar Corona**

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Associating in situ solar wind measurements with the solar corona is fundamental not only for understanding the origin and evolution of the solar wind, but also for distinguishing structures originating at the Sun from those generated in interplanetary space. Much progress has recently been made on the spatial distribution of density and velocity in the corona based on the radio occultation, white-light and ultraviolet measurements. As a result, path-integrated density measurements made by the High Altitude Observatory (HAO) Mauna Loa Solar Observatory K-coronameter offer a heretofore unavailable framework of quantitative coronal measurements that can be systematically compared with in situ solar wind measurements for the purpose of associating the Sun and solar wind. In this paper, we will present results on solar wind features such as high speed streams and interaction regions, and their dependence on solar cycle, obtained from comparing the HAO white-light measurements with low-latitude (IMP) and high-latitude (Ulysses) solar wind measurements.