Raytracing simulations of Parker Solar Probe/WISPR images

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The Wide-field Imager for Parker Solar Probe (WISPR) provides unprecedented white-light images of the solar corona and inner heliosphere from unconventional viewpoints thanks to the close perihelion transits of Parker Solar Probe. WISPR images coronal structures at high spatial and time resolutions, but the data analysis needs to consider the continuous change of the observation’s plane-of-sky and hence of the projection due to PSP’s fast orbital speed and high orbital eccentricity. Therefore, it is important to understand how these factors affect the images. Here, we present an analysis of simulated WISPR images and discuss how WISPR data can be analyzed to study the physical conditions of the corona and the near-Sun environment.