

Magnetic Funnel in a polar Coronal Hole of the Sun

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We establish that the solar wind originates in the corona in magnetic funnels with necks in the photosphere at heights between 5 Mm and 20 Mm. This result is obtained by correlating the Doppler-velocity and radiance maps of spectral lines emitted by various ions with the force-free magnetic field as extrapolated from photospheric magnetograms to different altitudes. Specifically, we find that Ne⁷⁺ ions mostly radiate around 20 Mm, where they have outflow speeds of about 10km/s, whereas C³⁺ ions with no average flow speed mainly radiate around 5Mm.