

Coronal Transient Activities Observed with Norikura Green-line Imaging System

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We present an overview of solar transient activities in the inner corona (up to 1.5 R_s) observed with NORikura Green-line Imaging system, **NOGIS** (Ichimoto et al. 1999). NOGIS is a 10cm-aperture coronagraph developed at the Norikura Solar Observatory, NAOJ, located at the 2876m summit of Mt. Norikura in the Northern Japan Alps. NOGIS is a unique imaging system that can provide both intensity and Doppler velocity images of 2MK plasma from the coronal green-line emission using a 5303 Angstrom (Fe XIV) Lyot filter. The Doppler images are constructed by subtracting a [$\lambda - 0.45$ Angstrom] image from a [$\lambda + 0.45$ Angstrom] image. The line-of-sight velocity up to ± 25 km/s can be obtained with an accuracy of about 0.6 km/s. Hence, the target phenomena suitable for NOGIS are coronal waves and flows, rather than fast eruptions heading toward the Earth. NOGIS has a field of view of 2000 x 2000 pixels in a full frame mode, and a spatial resolution of 1.84 arcseconds in a partial frame mode. Time resolution is reduced to about 1 minute to increase signal-to-noise ratio.

Since July 1997, NOGIS has observed many flares, plasma ejections, and coronal waves. Based upon full-disk images, we demonstrate how NOGIS's high sensitivity images are useful to investigate the origin of coronal disturbances. By collaborating with **Hinode** (Solar-B) spacecraft, we discuss application to the space weather forecast using NOGIS images.