

M46a EUV Fine Features in Polar Region

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Extreme-ultraviolet Imaging Spectrometer (EIS) on board *Hinode* is capable of obtaining EUV spectrum and context image in two wavelength ranges, 170–210Å and 250–290Å. Its high resolution and efficiency are suitable for studying fine structures of the corona and the transition region.

We studied spatial distribution of fine features in north polar region. While no significant difference between coronal hole and its surroundings was found in Ca II H image taken with the Solar Optical Telescope (SOT), intensity map of He II 256.3Å ($\log T_e = 4.9$) showed a void of bright macro spicules in the coronal hole. Outside the coronal hole, EUV bright features were ubiquitously found. Number density and brightness of macrospicules above the limb were correlated with those of spicules found in Ca II H. In a deep exposure image in He II, faint feature was stretching into the corona.

Coronal line of Fe XV 284.2Å ($\log T_e = 6.3$) showed a different picture. Instead of chromospheric structures noticed in He II spectral line, tiny loops and jets were found co-spatially with magnetic flux concentration on the photosphere. Above the limb, a narrow streamer is found in coronal spectral lines. We summarize characteristics of these features and discuss the relationship among them in view of connectivity of the corona.