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### CORONAL BEHAVIOR BEFORE THE LARGE FLARE ONSET AND ITS IMPACT ON EARTH'S ENVIRONMENT

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Flares are a major explosive event in our solar system. They are often followed by coronal mass ejection that has a potential to trigger the geomagnetic storms. There are various studies aiming to predict when and where the flares are likely to occur. Most of these studies mainly discuss the photospheric and chromospheric activity before the flare onset. In this paper we study the coronal features before the famous large flare occurrence on December 13th, 2006. Using the data from *Hinode/EUV* Imaging Spectrometer (EIS), X-Ray Telescope (XRT), and *Solar and Heliospheric Observatory* (SOHO) /Extreme ultraviolet Imaging Telescope (EIT), we discuss the coronal features in the large scale ( a few 100 arcsec) before the flare onset. Our findings are as follows: 1) The upflows in and around active region start growing from  $\sim 10$  to  $30 \text{ km s}^{-1}$  a day before the flare. 2) The expanding coronal loops are clearly observed a few hours before the flare. 3) Soft X-ray and EUV intensity are gradually reduced. 4) The upflows are further enhanced after the flare. From these observed signatures, we conclude that the outer part of active region loops with low density were expanding a day before the flare onset, and the inner part with high density were expanding a few hours before the onset. We also discuss the impact on Earth's environment of the flare. Further we will discuss the what time scale is important for flare prediction to save our modern life.