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Studies on solar flares and shocks based on solar EUV images taken by STEREO

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Space weather researches have been actively discussed in the world. Solar flares and related CMEs are especially important as a generator of SEPs and strong radiations in X-rays and in EUVs. STEREO satellites, which was launched in 2006, are observing the sun from different points on the orbital path of the earth at 1AU. STEREO aims to derive 3-dimensional structure of solar corona, eruption, and so on. By STEREO data, therefore, we can study the structure of flare-related ejections and shocks in more detail. Moreover, we can know the "invisible" solar surface from the earth. In this presentation, we show recent observations on solar eruptions and shocks by STEREO. We also discuss how much we can predict flare radiations/SEPs by using only solar full-disk images in EUVs.

Keywords: solar flare, MHD shock, corona, particle acceleration, SEP