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Descriptive study of X-class flares released in the year 2014, during the double peak of SC-24

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Abstract

During the declining phase of the Solar cycle 24, a new peak appeared on January 7, 2014. The release of x-class flares, with the high energetic particles, were found to be more intense than that occurred during the main peak of the same cycle. Few X-class flares were released, lately, during the year 2014. We note that during the last 5 solar cycles, a new peak has appeared, releasing high energetic particles and X-class solar flares, which are called the secondary peak or the double peak of solar cycle. The aim of this descriptive study is to follow the morphological and magnetic changes of the active region before, during, and after the production of X-class flares according to data analysis. Furthermore, the causes of the release of such eruptive storms have been discussed for the period, year 2014, during the double peak of the solar cycle 24.

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