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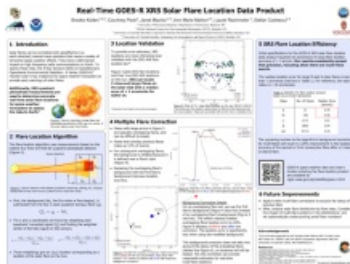
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Poster

Solar flares impact high-frequency radio communications on Earth and can be correlated with geoeffective, or Earth-directed, coronal mass ejections which cause a variety of terrestrial space weather effects. To assess these risks, the X-Ray Sensors (XRS) instrument on Geostationary Operational Environmental Satellites - R Series (GOES-R) monitors solar X-ray irradiance to provide early warnings of solar flares. Additionally, XRS quadrant photodiode measurements are used to determine accurate real-time solar flare locations. Both the X-ray irradiance and the flare locations data products are used operationally by SWPC. This poster will discuss the flare location algorithm, which can locate C-class and larger flares on the solar disk within 1 arcminute for GOES-16 and -17. Multiple consecutive flares make up 12% of flare events; an upcoming revision to the algorithm's background correction will result in a 28% improvement in the location accuracy of the second or third consecutive flare after a C-class or above flare. The updated flare locations data product is available at www.ngdc.noaa.gov/stp/satellite/goes-r.html.



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