

SPATIAL AND SPECTRAL EVOLUTION OF MICROWAVE AND X-RAY SOURCES DURING THE SOLAR LIMB FLARE ON FEBRUARY 5, 2023

Julia Shamsutdinova¹, Larisa Kashapova¹, Zhentong Li², Yang Su^{2,3}

*¹Institute of Solar-Terrestrial Physics SB RAS, Irkutsk, Russia,
yulia@iszf.irk.ru*

*²Key Laboratory of Dark Matter and Space Astronomy, Purple Mountain Observatory,
CAS, Nanjing, China*

*³School of Astronomy and Space Science, University of Science and Technology of China,
Hefei, China*

We present the empirical scenario of energy release during the solar limb flare on February 5, 2023. This event was observed with the Siberian Radioheliograph (SRH) within 3–12 GHz range and the Advanced Space-based Solar Observatory / Hard X-ray Imager (ASO-S/HXI) within 10–300 keV range. The combination of these data allowed us to use information about the spectral features and spatial evolution of the flare to explain the disagreement between plasma parameters derived from different spectral regions and to define parameters in a numerical flare scenario. We discuss the agreement between the obtained results and existing flare models, as well as the potential use of flare plasma parameters for diagnostic purposes.