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SPACE WEATHER RESEARCH: RECENT RESULTS AND ONLINE CATALOGS

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Space weather is a generic term used to describe the influence of solar activity in the heliosphere, on the planetary magnetospheres and atmospheres, technology - both space borne and ground based, and on human health and life. We highlight selected results from our recent studies on a variety of space weather phenomena, their solar origin and inter-relationship. The impact of space weather on satellites has been also explored by us in view of the SpaceX storm in February 2022. A comparison with the largest to date geomagnetic storm in the current solar cycle is also shown.

Furthermore the recently compiled catalogs of solar energetic particles (protons and electrons), solar flares, radio emission signatures and geomagnetic storms are also presented. All catalogs are provided freely to the scientific community via their dedicated platforms: <https://catalogs.astro.bas.bg/> and https://www.nriag.sci.eg/ace_electron_catalog/.