

Joint efforts towards future space weather missions: industry perspective

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The damaging effects of space weather on the functioning of our complex high technology society are well recognized by academia, industry and insurance companies. The malfunction of multi-million dollar telecommunications satellites by particle bombardment from solar storms raise considerable concerns regarding the explosion of operating (insurance fees and manufacturing costs (e.g. for extra radiation hardening of spacecraft components and subsystems)). In order to keep risk and cost at a manageable level an integrated early warning system has to be established globally. With the addition of dedicated instruments onboard future satellite (e.g. GOES of NOAA/USA) this network will benefit from databases feeded by current and future scientific satellites: the correct interpretation of space weather effects is a multi-disciplinary science covering interactions from cosmic rays (high energy astrophysics) and the sun (solar astronomy) with the geomagnetic field of the Earth (geophysics). This lecture will guide the student through the programmatics of the implementation of future space weather warning networks with emphasis on the industrial as well as the user community perspective.