PECASUS - ICAO Designated Space Weather Service Network for Aviation

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The PECASUS Consortium (European Consortium for Aviation Space weather User Services) provides targeted space weather services focusing on the dissemination of warning messages, called ‘advisories’, towards aviation actors. PECASUS services corresponds to extreme space weather events with impact on aviation GNSS systems, HF communication and radiation levels at flight altitudes. In November 2018 ICAO (International Civil Aviation Organization) designated three global space weather service centers. These centers are operated by the European PECASUS consortium, by United States and by the consortium of Australia, Canada, France and Japan.

PECASUS was set-up as a consortium bringing together a number of European partners with proven space weather service capabilities. The PECASUS consortium is coordinated by FMI (Finland) who is also the ultimate responsible for communications towards the aviation sector. The Advisory Messages are produced by STCE (Belgium) on the basis of expert interpretation and data streams produced by DLR (Germany), INGV (Italy), Seibersdorf Laboratories (Austria), STCE (Belgium), SRC (Poland) and FU (Cyprus). In addition, the MetOffice (UK) will act as a resilience node in case of a major failure in the network, while the KNMI (The Netherlands) will take care of user liaison and monitor the PECASUS performance.

The PECASUS Consortium was audited in February 2018 by space weather and operational
management experts, nominated by the World Meteorological Organisation (WMO). The audit addressed a broad spectrum of criteria under Institutional, Operational, Technical and Communication/Dissemination categories. PECASUS was declared fully compliant in all ICAO/WMO criteria with no areas for improvement identified.

Our presentation we will describe the coordinated actions of three ICAO Space Weather Centers, PECASUS network and its operations, and the vision of the PECASUS team to move forward. User interactions such as education and training, user feedback at ESWW, product and performance verification are part of PECASUS operations.