

**Scientific and Technical Subcommittee of the
United Nations Committee on the Peaceful Uses of Outer Space**

Statement of Italy

**Agenda Item 10 Space Weather
The 8th of February 2023**

Mr Chair, Distinguished Delegates,

Space weather is an international concern as it represents a potential threat to space systems, human space flight and ground- and space-based infrastructures. As such, it needs to be addressed in a global manner, through international cooperation and coordination, in order to be able to predict potentially severe space weather events and mitigate their impacts. In this regard, Italy has taken an active part in the past STSC Space Weather Expert Group and supports several collaborative initiatives, with the aim to improve international scientific collaboration and coordination and contribute to enhance global resiliency against adverse effects of space weather

Mr Chair,

I am pleased to report on some of the progress of the Italian contribution to space weather research that has focused on various space weather sub-topics.

The Italian Space Agency (ASI) Space Weather Working Group has produced an Italian Space Weather Roadmap. It provides a general perspective for the development of scientific Space Weather activities in Italy. In this context, the development of a prototype of a national scientific Space Weather data centre – the ASI Space Weather Infrastructure (ASPIS), is an important reference point for scientific research in the field of Space Weather. ASPIS is currently being developed by the CAESAR project (Comprehensive spAce wEather Studies for the ASPIS prototype Realization), under the leadership of the National Institute of Astrophysics (INAF), bringing together numerous Italian institutions as partners.

Mr Chair,

Italian teams have been involved several times in the development of new instrumentation for future space missions and ground-based observations. Different forecasting and nowcasting modelling efforts have contributed to the overall progress, at national and international level. In this context Italy participate to numerous international associations and committees space-weather-related as the International Space Weather Initiative

(supported by UNOOSA), the Committee on Space Research (COSPAR), the International Union of Radio Science (URSI), the Scientific Committee on Solar-Terrestrial Physics (SCOSTEP), the Scientific Committee on Antarctic Research (SCAR) and many others.

Mr Chair,

Several Italian scientists strongly supported the recent creation of the European Association called “E-SWAN - European Space Weather and Space Climate Association”, a non-profit bottom-up association started by a public discussion forum, not restricted to Europe. The mission of E-SWAN is ambitious: to unite, sustain, and develop Space Weather and Space Climate activities in Europe. E-SWAN is the natural host for the European Space Weather Week, for the Journal of Space Weather and Space Climate Editorial Committee, and for the Medals. E-SWAN is currently chaired by an Italian scientist and other Italians are members of the Association.

Mr Chair,

Italian institutions are strongly involved in the field of the space weather impacts on aviation. At present Italy participates in the international consortium **PECASUS** (Partnership for Excellence in Civil Aviation Space weather User Services), thanks to the contribution of the National Institute of Geophysics and Volcanology (INGV) and the Italian Civil Aviation Authority (ENAC). PECASUS was selected as one of the four Global Space Weather information service centers as specified by the International Civil Aviation Organisation (ICAO).

Mr Chair,

The Antarctic Geospace and ATmosphere reseArch (AGATA) is a new Programme Research Planning Group (PPG) recently approved by the SCAR. AGATA is led by the Italian National Institute of Geophysics and Volcanology and the Royal Observatory of Belgium and counts a core membership of about 30 Countries by the contribution from several research institutions. AGATA is a coordinated, worldwide effort to monitor, investigate and better understand the physics of the polar atmosphere and the impact of the Sun-Earth interactions on the polar regions. The participation in AGATA is completely open: polar space weather researchers and institutions are welcome to be part.

In frame of the international scientific collaboration I would like also to report on the collaboration between Italy, Canada and Finland for the realization of a common Pan-Arctic

GNSS Infrastructure for Atmospheric science and space weather (PAGINA project), The collaboration between Italy and the Kenya Space Agency for the realization of a new Ionospheric observatory at the Broglio Space Center (NORISK project) and the role of Italy in the European Space Agency Safety Program for the continuation of the pre-operation Space Weather Service Network and its further development (SWESNET project).

Mr Chair,

Finally, I would like to underline the Italian effort in realising Capacity Building and Outreach initiatives, very often in collaboration with international organism like UNOOSA or ICTP. In 2023 at least five initiatives are planned to be realised in Italy, Rome (2), Trieste and L'Aquila, and in Malindi, Kenya. All these events are able to support grants for doctoral students and early career researchers.

Thank you for your kind attention