



**Statement by Nat Gopalswamy, President of SCOSTEP, on agenda item
"General exchange of views" in support of the application for Permanent
Observer's status with the Committee on the Peaceful Uses of Outer Space**

June 07, 2012

Mr. Chairman, distinguished delegates and representatives,

The Scientific Committee on Solar Terrestrial Physics (SCOSTEP) is pleased to make a statement in support of its application for permanent observer status with the Committee on Peaceful Uses of Outer Space. SCOSTEP is an interdisciplinary body of the International Council for Science (ICSU), charged with the long-term responsibility to promote international, interdisciplinary programs in solar-terrestrial physics.

SCOSTEP is governed by a Bureau, whose members come from a number of international scientific unions and ICSU interdisciplinary bodies. These are: the Committee on Space Research (COSPAR), the International Association of Geomagnetism and Aeronomy (IAGA), the International Association of Meteorology and Atmospheric Sciences (IAMAS), the International Astronomical Union (IAU), the International Union of Pure and Applied Physics (IUPAP), the International Union of Geodesy and Geophysics (IUGG), the Scientific Committee on Antarctic Research (SCAR), and the International Union of Radio Science (URSI). All these organizations have significant interest in how the Sun varies and how the variability affects life on Earth over various time scales.

SCOSTEP is pleased to note that at the forty-ninth session of the Scientific and Technical Subcommittee of COPUOS, the Working Group on the Long-term Sustainability of Outer Space Activities established an expert group on Space Weather. SCOSTEP is striving to clarify the science behind the Space Weather phenomenon and hence it is highly beneficial to have a closer relationship between COPUOS and SCOSTEP. SCOSTEP's permanent observer status with COPUOS will provide an opportunity for a close collaboration in Space Weather issues.

SCOSTEP has run a number of international scientific programs over the past thirty years. During the performance period of a scientific program, which typically lasts for four years, SCOSTEP brings in experts from all over the world to assess the current state of knowledge in the chosen topic and develops the scientific framework needed to make significant progress. The current scientific program of SCOSTEP is known as the Climate and Weather of the Sun-Earth System (CAWSES). The CAWSES program was established to answer four key scientific questions in solar terrestrial physics:

What are the solar influences on Earth's climate?
How will geospace respond to an altered climate?
How does short-term solar variability affect the geospace environment?
What is the geospace response to variable waves from the lower atmosphere?

Task groups led by reputed scientists have been established to tackle these questions. The main functions of CAWSES are coordinating international activities in observations, modeling and applications crucial to achieving a better understanding of Earth's space environment and its impacts on life and society.

Discussion is under way to establish the next scientific program, when CAWSES ends in 2013. One of the proposed topics is "Extreme Space Weather Events". The objective would be to estimate the biggest possible eruption from the Sun in the form of a coronal mass ejection or a solar flare and the resultant extreme space weather.

SCOSTEP is pleased to note that COPUOS reviews the scope of international cooperation in peaceful uses of outer space, devises programs in this field and encourages continued research and the dissemination of information. These activities are in line with SCOSTEP's objectives, so there is clear opportunity for cooperation and leverage that will benefit many countries in the world, especially the developing countries.

SCOSTEP conducts periodic symposia attended by hundreds of scientists from all over the world. The quadrennial symposia provide opportunities to review the entire field of solar terrestrial physics, while other meetings focus on the current scientific program. The proceedings of the symposia and meetings are promptly published and made available on line for free.

In addition to running scientific programs, SCOSTEP is heavily invested in Capacity Building in developing countries and public outreach. SCOSTEP has partnered with the International Space Weather Initiative (ISWI), the International Union of Radio Science (URSI) and ICSU regional offices to promote capacity building and education activities throughout the world. The capacity building activities consist of three main elements: (i) conducting advanced schools in Space Weather/Space Science (ii) organizing teacher workshops for the benefit of school teachers, and (iii) conducting space instrumentation workshops to disseminate information on low-cost ground-based instruments that can be deployed in developing countries to gather valuable data on space weather. Three Space Weather/Space Science schools will be organized in the three key regions of the world where there is growing need and interest in solar-terrestrial research: Asia Pacific (2012), Africa (2013), and South America (2014). SCOSTEP has also been developing outreach material in the form of comic books on topics of solar terrestrial physics. These books explain in simple terms how human society is affected by solar variability. The comic books are available on line in many languages of the world.

In summary, SCOSTEP envisions an excellent synergy between its activities and the objectives of COPUOS.

Thank you, Mr. Chairman.