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**Committee on the Peaceful  
Uses of Outer Space  
Scientific and Technical Subcommittee  
Forty-ninth session  
Vienna, 6-17 February 2012**

**Draft report****Addendum****X. International Space Weather Initiative**

1. In accordance with General Assembly resolution 66/71, the Scientific and Technical Subcommittee considered agenda item 13, "International Space Weather Initiative", under the workplan contained in annex I to document A/AC.105/933.
2. The representatives of China, Japan, India, Pakistan, the Russian Federation and the United States made statements under agenda item 13. During the general exchange of views, statements relating to the item were also made by representatives of other member States.
3. The Subcommittee heard the following scientific and technical presentations:
  - (a) "Long-term monitoring of total solar irradiance", by the representative of Switzerland;
  - (b) "International Space Weather Initiative update", by the representative of the United States.
4. The Subcommittee had before it a note by the Secretariat containing information received from Member States and observers on national and regional activities related to the International Space Weather Initiative (A/AC.105/C.1/102).
5. The Subcommittee noted that the objectives of the Initiative were to develop the scientific insight necessary to understand the solar-terrestrial relationships inherent in space weather, to reconstruct and forecast near-Earth space weather and to communicate that knowledge to scientists, engineers, policymakers and the general public.



6. The Subcommittee welcomed the fact that participation in the Initiative was open to all countries, as instrument hosts or as instrument providers. The Initiative is governed by a Steering Committee of 16 members, which meets once a year to assess progress and provide prioritization for the upcoming year. National coordinators from 83 countries help to coordinate activities of the Initiative at the national level.
7. The Subcommittee noted that the Initiative consisted of three elements: the instrument array programme to operate and deploy space weather instruments; the data coordination and analysis programme to develop predictive models using Initiative data; and training, education and public outreach programmes. The Subcommittee also noted the initiatives implemented under those elements.
8. The Subcommittee further noted the inclusion of space weather issues by States in their national space programmes.
9. The Subcommittee noted that space weather events could have a significant disruptive impact on the infrastructure of countries located at lower latitudes, and that such countries could also become vulnerable owing to technological and economic interdependence and the growing importance of space assets in the delivery of vital services.
10. The view was expressed that through the Initiative coordinated international research would continue on universal processes in the solar system that affected the interplanetary and terrestrial environments, and that there would be continued coordination in the deployment and operation of new and existing instrument arrays aimed at understanding and predicting the effects of space weather on the Earth and the near-Earth environment.
11. The Subcommittee noted with appreciation that information on the ground-based worldwide instrument arrays was being regularly distributed through a newsletter published by the Space Environment Research Centre of Kyushu University, Japan, and through the International Space Weather Initiative website, maintained by the Bulgarian Academy of Sciences ([www.iswi-secretariat.org](http://www.iswi-secretariat.org)).
12. The Subcommittee noted with appreciation that the Office for Outer Space Affairs continued to support the study of the effect of sudden disturbances on the ionosphere through the use of the sudden ionospheric disturbance monitor installed at its permanent outer space exhibit at the United Nations Office at Vienna.
13. The Subcommittee welcomed the fact that the United Nations Programme on Space Applications had organized the United Nations/Nigeria Workshop on the International Space Weather Initiative. The Workshop was co-organized with the National Space Research and Development Agency (NASRDA) of Nigeria and held in Abuja from 17 to 21 October 2011. The Subcommittee also welcomed the upcoming workshop, scheduled to take place in Quito from 8 to 12 October 2012, to be hosted by the Quito Astronomical Observatory on behalf of the Government of Ecuador.

## **XII. Examination of the physical nature and technical attributes of the geostationary orbit and its utilization and applications, including in the field of space communications, as well as other questions relating to developments in space communications, taking particular account of the needs and interests of developing countries, without prejudice to the role of the International Telecommunication Union**

14. In accordance with General Assembly resolution 66/71, the Scientific and Technical Subcommittee considered agenda item 15, "Examination of the physical nature and technical attributes of the geostationary orbit and its utilization and applications, including in the field of space communications, as well as other questions relating to developments in space communications, taking particular account of the needs and interests of developing countries, without prejudice to the role of the International Telecommunication Union", as a single issue/item for discussion.

15. The representatives of Saudi Arabia, the Russian Federation and Venezuela (Bolivarian Republic of) made statements under agenda item 15. During the general exchange of views, statements relating to the item were also made by representatives of other member States, the representative of Ecuador on behalf of the Group of Latin American and Caribbean States and the representative of South Africa on behalf of the Group of African States.

16. The Subcommittee heard the following scientific and technical presentations:

(a) "Actual situation in the geostationary orbit", by the representative of the Czech Republic;

(b) "Fostering fast telecommunications development through the use of Q-V band satellite links", by the representative of Italy.

17. The Subcommittee welcomed the information provided in the annual report for 2011 of the Radiocommunication Bureau of the International Telecommunication Union (ITU) on the use of the geostationary satellite orbit and other orbits ([www.itu.int/itu-R/space/snl/report](http://www.itu.int/itu-R/space/snl/report)), as well as other documents referred to in conference room paper A/AC.105/C.1/2012/CRP.17. The Subcommittee invited ITU to continue submitting reports to it.

18. The Subcommittee noted the information on the situation in the geostationary orbit contained in conference room paper A/AC.105/C.1/2012/CRP.25.

19. Some delegations were of the view that the geostationary orbit was a limited natural resource that was at risk of becoming saturated, thereby threatening the sustainability of space activities in that environment; that its exploitation should be rationalized; and that it should be made available to all States, under equitable conditions, irrespective of their current technical capabilities, taking into account in particular the needs of developing countries and the geographical position of certain countries.

20. Some delegations were of the view that in the use of the geostationary orbit account should be taken of the needs of developing countries and priority should be

given to space activities that could contribute to sustainable development and to the achievement of the Millennium Development Goals (A/56/326, annex).

21. The view was expressed that the geostationary orbit provided unique potential for access to communications and information, in particular for assisting developing countries in implementing social programmes and educational projects, and for providing medical assistance. The delegation expressing that view was also of the view that it was important to use the geostationary orbit in compliance with international law, in accordance with the decisions of ITU and within the legal framework established in the relevant United Nations treaties.

22. Some delegations expressed the view that close communication should be maintained among the Scientific and Technical Subcommittee, the Legal Subcommittee and other relevant bodies of the United Nations system, with the aim of promoting the development of binding international standards that addressed the use of the geostationary orbit.

23. The view was expressed that the allocation of frequency resources in the geostationary orbit could be improved by applying a new method, that the proposed new method would allow a State that did not have registered applications for radio-broadcasting satellite systems in the range of 21.4-22 GHz to enjoy a special registration-guaranteed procedure with the Radiocommunications Bureau of ITU and that, as a result of the application of that method, the share of compatible systems in the above-mentioned range would increase from 9.3 per cent to 76.7 per cent.

24. Some delegations were of the view that this item should remain on the agenda of the Subcommittee and that its study could be carried out, as necessary, by working groups or intergovernmental panels in order to ensure the use of the geostationary orbit in accordance with international law.

### **XIII. Draft provisional agenda for the fiftieth session of the Scientific and Technical Subcommittee**

25. In accordance with General Assembly resolution 66/71, the Subcommittee considered agenda item 16, "Draft provisional agenda for the fiftieth session of the Scientific and Technical Subcommittee".

26. The Subcommittee noted that the Secretariat had scheduled the fiftieth session of the Subcommittee to be held from 11 to 22 February 2013.

27. The Subcommittee noted that, in accordance with General Assembly resolution 66/71, it would submit to the Committee its proposal on the draft provisional agenda for the fiftieth session of the Subcommittee and recommended that the following substantive items be included in the draft provisional agenda:

1. General exchange of views and introduction of reports submitted on national activities.
2. United Nations Programme on Space Applications.

3. Implementation of the recommendations of the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE III).
  4. Matters relating to remote sensing of the Earth by satellite, including applications for developing countries and monitoring of the Earth's environment.
  5. Space debris.
  6. Space-system-based disaster management support.
  7. Recent developments in global navigation satellite systems.
  8. Space weather.
  9. Items to be considered under workplans:
    - (a) Use of nuclear power sources in outer space;  
(Work for 2013 as reflected in the multi-year workplan in paragraphs 8 and 9 of annex II to the report of the Scientific and Technical Subcommittee on its forty-seventh session (A/AC.105/958))
    - (b) Near-Earth objects;  
(Work for 2013 as reflected in the multi-year workplan in paragraph 9 of annex III to the report of the Scientific and Technical Subcommittee on its forty-eighth session (A/AC.105/987))
    - (c) Long-term sustainability of outer space activities.  
(Work for 2013 as reflected in paragraph 23 of the terms of reference and methods of work of the Working Group on the Long-Term Sustainability of Outer Space Activities, contained in annex II to the report of the Committee on its fifty-fourth session (A/66/20))
  10. Single issue/item for discussion: examination of the physical nature and technical attributes of the geostationary orbit and its utilization and applications, including in the field of space communications, as well as other questions relating to developments in space communications, taking particular account of the needs and interests of developing countries, without prejudice to the role of the International Telecommunication Union.
  11. Draft provisional agenda for the fifty-first session of the Scientific and Technical Subcommittee, including identification of subjects to be dealt with as single issues/items for discussion or under multi-year workplans.
28. The Subcommittee noted that the topic for the symposium to be organized in 2013 by the International Astronautical Federation, in accordance with the agreement reached by the Subcommittee at its forty-fourth session, in 2007 (A/AC.105/890, annex I, para. 24), should be considered by the Committee at its fifty-fifth session under the agenda item on the report of the Scientific and Technical Subcommittee on its forty-ninth session.
29. The Subcommittee noted the conclusion of the item entitled "International Space Weather Initiative" and agreed that an item entitled "Space weather" should

be introduced as a regular item on the agenda of the Subcommittee, in order to allow member States of the Committee and international organizations with permanent observer status with the Committee to exchange views on national, regional and international activities related to space weather research with a view to promoting greater international cooperation in that area. The Subcommittee noted that it could, through that item, serve as an important advocate for efforts to close the gaps that existed in the space weather research field.

30. The Subcommittee noted with appreciation that Romania, in its capacity as Chair of the Committee, had sent a letter to the Secretariat of the United Nations Conference on Sustainable Development (Rio+20) (A/AC.105/C.1/2012/CRP.10) officially submitting the contribution of the Committee to the Conference (A/AC.105/993) for consideration in the preparation of the zero draft of the outcome document of the Conference.

31. The Subcommittee noted the important contribution of space technology to sustainable development. In that regard, the Subcommittee invited Member States of the United Nations to contribute to the drafting process of the outcome document of the Conference with reference to the fundamental role of space-technology-based data and geospatial information for the management of sustainable development in the twenty-first century.

32. In that context, the Subcommittee agreed that the following sentence should be inserted in the subsection on science and technology of chapter V, section C, of the zero draft, as paragraph 118 bis:

We recognize the fundamental significance of space-technology-based data and geospatial information for global, regional and national policymaking, programming and project operations related to the sustainable development and use of our natural and environmental resources endowment, and we shall support more effective efforts to promote the development of all countries and regions of the world.

33. The Subcommittee requested the Secretariat to communicate paragraphs [...] above in a note verbale to the Permanent Missions of Member States to the United Nations in Vienna, in view of the urgency of the matter.