

The Fifteenth Session of the Asia-Pacific Regional Space Agency Forum (APRSAF-15)
Space Education and Awareness Working Group
(9-10 December 2008, Ha Noi, Vietnam)

PROVISIONAL AGENDA

- 1. Opening of the session**
- 2. Adoption of the agenda**
- 3. General exchange of views on space education and awareness increase**
- 4. Joint educational activities for primary and secondary school students and teachers**
 - a. Water rocket event**
 - b. Poster contest**
 - c. Space education forum and seminar**
 - d. Educational activities in celebration of the International Year of Astronomy in 2009**
 - e. Other activities**
- 5. Joint educational initiatives for university and graduate students and young professionals**
- 6. Ways and means to promote collaborations among space scientists and engineers and educators to expand space education activities for young people**
- 7. New and innovative funding sources to support space education activities**
- 8. Other matters**

Annexes:

- 1. Indicative schedule of work**
- 2. Format for a written report under item 3 of the provisional agenda**

ANNOTATIONS¹

1. Opening of the session

Following the customary practice, the Space Education and Awareness Working Group during the fifteenth session of the Asia-Pacific Regional Space Agency Forum (APRSAF) would be co-chaired by Dr. Doan M. Chung of Vietnam Academy of Science and Technology (VAST), representing the Vietnamese host institutions, and Prof. T. Kubota of Japan Aerospace Exploration Agency (JAXA), representing the Japanese co-organizers of APRSAF. The co-chairs may make opening remarks, outlining the work of the Working Group.

2. Adoption of the agenda

The Working Group will review the provisional agenda for its adoption.

3. General exchange of views on space education and awareness increase

The members of the Working Group are invited to submit reports containing information on: i) highlights of formal and informal education relating to space activities in the past year; ii) future plans for educational initiatives relating to space activities; and iii) proposals, if any, for activities to be undertaken by the Working Group. The format for submitting the report is provided in Annex 2 of this document. The submission received by the Secretariat by 28 November 2008 would be distributed at the first meeting of the Working Group during APRSAF-15.

Each member of the Working Group or his/her alternate attending APRSAF-15 would be invited to orally report on the major developments and activities carried out in his/her country or by his/her international organization in the past year to promote space education and to increase public awareness of the benefits of space activities. The oral report should focus on those activities that are not covered in the submitted reports in writing. The maximum of 8 minutes each would be allocated.

¹ The annotations are not part of the agenda to be adopted by the APRSAF Space Education and Awareness Working Group.

4. Joint educational activities for primary and secondary school students and teachers

a. Water rocket event

As agreed by the Working Group, the fourth APRSAF Water Rocket Event will be held from 13 to 14 December 2008 with the participation of students from 12 to 16 years old from countries in Asia and the Pacific. The outline of the Water Rocket Event and the rules for the launch competition were circulated to the Working Group members on 16 October 2008ⁱⁱ. The Secretariat and the local organizer will brief the Working Group on the status of the preparations for the Event.

Pursuant to the agreement of the Working Group, APRSAF International Water Rocket Education Workshop was held from 30 June to 3 July 2008 in Melbourne, Australia. The Workshop was co-organized by the Victorian Space Science Education Centre (VSSEC) and JAXA. The Working Group will hear the results of the Workshop.

One of the outcomes of the above Workshop is the establishment of the Internet-based "Wiki-site" for the purpose of exchanging views, information and education materials among any individuals interested in water rocket activities for educational purposes. Members of the Working Group are invited to use the above Wiki-site to further promote water rocket activities in their countries. The Working Group will hear a presentation on the Wiki site.

The Working Group should decide whether to continue APRSAF Water Rocket Event in 2009 and, if so, identify a venue and determine likely dates. Should it decide to hold the Water Rocket Event in 2009, the Working Group may also wish to consider the possibility of creating an additional category for launch competition, in addition to competing for the accuracy of launch as in the past events.

At its last session, the Working Group agreed that its interested members could start developing leaflets on water rockets in the languages spoken in their countries. Members of the Working Group are encouraged to submit such leaflets prior to APRSAF-15.

Concerning the question of sponsorship to organize national water rocket competitions and to support the participation of school children and their accompanying teachers in APRSAF Water Rocket Events, members of the Working Group are encouraged to share their experience with and information on finding funding sources.

ⁱⁱ Per Coordinated Universal Time (UTC).

b. Poster contest

Following the agreement of the Working Group at its last session, the Poster Contest is being held under the theme “Wonders of the Universe” for participation by students from 8 to 11 years old from countries in Asia and the Pacific. The rules for the Poster Contest were distributed to the Working Group members on 16 October 2008ⁱⁱⁱ.

The final selection of the winners for APRSAF Best Poster Award and Special Poster Awards will take place during APRSAF-15. Prior to APRSAF-15, the members of the Working Group will be provided with further information on the submitted posters and the methods and schedule for the final selection.

The Working Group should determine whether to continue APRSAF Poster Contest in 2009 and, if so, agree on a theme for the next Contest and the schedule of associated work.

At its last session, the Working Group agreed to consider ways and means to develop a calendar for the year 2009 using the posters submitted for APRSAF Poster Contest. Members of the Working Group are requested to submit to the Secretariat, prior to APRSAF-15, for any suggestions and ideas for developing such a calendar. The Working Group should discuss, during APRSAF-15, whether such a calendar could be developed and if so, how it should be developed and distributed.

c. Space education forum and seminar

Pursuant to the recommendations of the Working Group in the past, the following space education forum and seminar have been organized to date:

- i) APRSAF/UNESCO Space Education Forum, 4 March 2006, Hanoi, Vietnam, co-organized by JAXA and the Ministry of Education, Culture, Sports Science and Technology (MEXT) of Japan in cooperation with UNESCO with the support of VAST;
- ii) APRSAF/UNESCO/LAPAN Space Education Seminar on “Space Science and Technology and Their Applications”, 11-12 December 2006, Jakarta, Indonesia, co-organized by JAXA and the National Institute of Aeronautics and Space of Indonesia (LAPAN) in cooperation with UNESCO with the support of the Science Center, Taman Mini Indonesia Indah.

ⁱⁱⁱ Per Coordinated Universal Time (UTC).

The Working Group may wish to consider any proposals submitted by its members to organize future space education forums and seminars in Asia and the Pacific, bearing in mind its agreement to convene such forums and seminars in cooperation with UNESCO.

d. Educational activities in celebration of the International Year of Astronomy in 2009

The Working Group agreed at its last session that all interested countries should consider organising activities in the area of astronomy toward the celebration of the International Year of Astronomy and report to the Working Group at its next meeting in 2008 on those activities. The Working Group also invited its members to submit to the Secretariat the educational materials available and information on the teaching methods used in the area of astronomy in their countries for circulation to the members of the Working Group through its web site and that of UNESCO.

The Working Group would hear reports by its members on the activities that have been organized or are currently being planned in the area of astronomy in celebration of the International Year of Astronomy. A list of available educational materials and information on teaching methods in the area of astronomy, if received from its members prior to APRSAF-15, would be distributed to the Working Group.

e. Other activities

The Working Group may wish to consider any proposals for other activities that might be undertaken within the framework of APRSAF for primary and secondary school students and teachers in Asia and the Pacific.

5. Joint educational initiatives for university and graduate students and young professionals

At its last session, the Working Group agreed that it was desirable to organize a training seminar for trainers to teach CanSat activities. That agreement was reached taking into account the results of the International CanSat Workshop held in February 2007 in Tokyo with the participation of 10 countries from Asia and the Pacific. The Working Group will be briefed on the status of organization of such a seminar.

The Working Group members are being invited to report on CanSat activities carried out in their countries in the past year and to share information on upcoming activities. The Working Group may wish to consider opportunities for further collaborations in carrying out CanSat activities especially for university and graduate students.

The Working Group may wish to consider any proposals that might be presented by its members to undertake joint educational initiatives within the framework of APRSAF for the benefit of university and graduate students and young professionals.

6. Ways and means to promote collaborations among space scientists and engineers and educators in expanding space education activities for young people

At its last session, the Working Group recalled the following recommendations of the APRSAF Space Science Education Workshop, which was held in March 2006, in Ha Noi, Vietnam:

- 1) Closer links should be established between the members of the Working Group and researchers in space science and engineering within each of the countries participating in APRSAF, to exchange ideas and views on how the efforts made by those researchers to enhance educational activities could be better supported by the Working Group;
- 2) The Working Group could give consideration to establishing an informal group of researchers in space science and engineering and educators that could serve as resource persons to assist the Working Group in carrying out joint space education activities within the framework of APRSAF.

Some countries in the region are strengthening their efforts to integrate subjects relating to space science and technology and their application into the education curricula for primary and secondary schools. Such efforts are being made often through collaborations between researchers in space science and technology and educators.

As one of the examples of such efforts, the Working Group will hear a presentation on the collaborative project by VSSEC, Ecolinc and Victorian Department of Education and Early Childhood Learning of Australia as well as Space Education Center of JAXA to develop "Frogs in Orbit" program, which is a hands-on program integrating biology, ecology and physics. The program was launched this year, in 2008, which was declared by the World Association of Zoos and Aquaria as the International Year of the Frog.

The Working Group would hear reports on any other reports by its members on the efforts made in their countries to promote collaborations among space scientists and engineers and educators to expand space education activities for young people.

7. New and innovative funding sources to support space education activities

Beginning with the organization of the first APRSAF Water-Boosted Rocket Event in 2005, the Working Group has been making action-oriented recommendations and has undertaken many joint educational activities in the past years. The annual APRSAF Water Rocket Events and Poster Contests are a few of such examples.

While the host institutions and JAXA have provided funding to support the organization of the activities as well as to defray the travel cost of selected participants from developing countries, the participating countries of APRSAF Water Rocket Events and Poster Contests, often through the institutions and organizations of Working Group members, covered the cost of the organization of national contests to select the participants for both APRSAF events, held at the regional level.

In view of the common challenge faced by many countries in securing funding sources and in order to further expand space education activities to benefit a greater population of young people in the region, the members of the Working Group are encouraged to share their experiences and information on identifying sponsors other than their own organizations. The Working Group may wish to consider compiling “lessons learned” in obtaining funding support for space education activities in various countries and developing a joint fund-raising strategy in support of regional space education initiatives undertaken within the framework of APRSAF, with a view to diversifying the funding sources.

8. Other matters

Time permitting, additional matters that may come to the attention of the Working Group will be discussed.

**Annex 1: Indicative schedule of work of the Space Education and Awareness Working Group
(9-10 December, Ha Noi, Vietnam)**

Co-Chairs: Doan Ming Chung (Vietnam Academy of Science and Technology, Vietnam)

Takashi Kubota (Japan Aerospace Exploration Agency, Japan)

| <i>Date</i> | <i>Time</i> | <i>Agenda Item(s)</i> |
|------------------------|-------------|---|
| 9 December, Tuesday | 10:00 | 1. Opening of the session <ul style="list-style-type: none"> • Remarks by the Co-Chairs |
| | | 2. Adoption of the agenda <ul style="list-style-type: none"> • APRSAF/SEA-WG/2008/1 |
| | | 3. General exchange of views ⁱ <ul style="list-style-type: none"> • N. Mathers (Australia) "Activities of Victorian Space Science and Education Center" (TBC) • F. R. Sarker (Bangladesh) "Space Awareness Activities in Bangladesh" • TBC (Cambodia) "TITLE OF THE PRESENTATION" (TBA) • TBC (India) "TITLE OF THE PRESENTATION" (TBA) • TBC (Indonesia) "TITLE OF THE PRESENTATION" (TBA) • Gulnara Omarova (Kazakhstan) "TITLE OF THE PRESENTATION" (TBA) • E. Hirohama (Japan) "Report of JAXA Space Education Center on Its Activities in 2007-8" • TBC (Malaysia) "TITLE OF THE PRESENTATION" (TBA) • TBC (Nepal) "TITLE OF THE PRESENTATION" (TBA) • TBC (Pakistan) "TITLE OF THE PRESENTATION" (TBA) • Angelli Cortez (Philippines) "TITLE OF THE PRESENTATION" (TBA) • TBC (Republic of Korea) "TITLE OF THE PRESENTATION" (TBA) • Indika Medagangoda (Sri Lanka) "TITLE OF THE PRESENTATION" (TBA) • TBD (Thailand) "TITLE OF THE PRESENTATION" (TBA) • Doan M. Chung (Vietnam) "TITLE OF THE PRESENTATION" • TBC (AIT) "TITLE OF THE PRESENTATION" (TBA)) <p>[SPEAKER LIST TO BE UPDATED]</p> |
| | 12:30 | <i>Lunch break</i> |

ⁱ The participating members of the Working Group are invited to indicate their intention to make brief presentations under this agenda item by 28 November 2008. The time allocated to each presentation is 8 minutes at maximum.

| <i>Date</i> | <i>Time</i> | <i>Agenda Item(s)</i> | |
|---------------------------|------------------|---|--|
| 9 December, Tuesday | 13:30 | <p>4. Joint educational activities for primary and secondary school students</p> <p>4-a. Water rocket event</p> <ul style="list-style-type: none"> • Briefing by the Secretariat of the Working Group • Preparations for APRSAF-15 Water Rocket Event <ul style="list-style-type: none"> ➢ Nguyen Thanh Long (Vietnam) • Results of APRSAF International Water Rocket Education Workshop and presentation of the Water Rocket Wiki site <ul style="list-style-type: none"> ➢ T. Chiku (Japan) and N. Mathers (Australia) • Discussion <ul style="list-style-type: none"> ➢ Water rocket leaflets in languages ➢ Sponsorship ➢ APRSAF Water Rocket Event in 2009 <p>4-b. Poster contestⁱⁱ</p> <ul style="list-style-type: none"> • Briefing by the Secretariat of the Working Group • Preparations for the APRSAF Poster Contest <ul style="list-style-type: none"> ➢ Phung Duc Thuong (Vietnam) / E. Ando (Japan) • Discussion <ul style="list-style-type: none"> ➢ APRSAF Poster Contest in 2009: Theme ➢ Possible development of a calendar for 2009 <p>4-c. Space education forum and seminar</p> <ul style="list-style-type: none"> • Discussion <p>4-d. Educational activities in celebration of the International Year of Astronomy</p> <ul style="list-style-type: none"> • Reports by SEA WG members <ul style="list-style-type: none"> ➢ F. R. Sarker (Bangladesh) ➢ E. Hirohama (Japan) <p>4-e. Other activities</p> <ul style="list-style-type: none"> • Discussion | |
| | 15:00 | <i>Coffee/tea break</i> | |
| | 15:15 – 16:00 | 5. | <p>Joint educational initiatives for university and graduate students and young professionals</p> <ul style="list-style-type: none"> • Status of the organization of a CanSat training seminar for trainers <ul style="list-style-type: none"> ➢ T. Chiku (Japan) • Reports on CanSat activities <ul style="list-style-type: none"> ➢ N. Mathers (Australia) ➢ TBA (Malaysia) (TBC) ➢ TBA (Thailand) (TBC) • Discussion |
| 10 December, Wednesday | 9:30 | <p>6. Collaborations among space scientists and engineers and educators</p> <ul style="list-style-type: none"> • Examples of collaborations <ul style="list-style-type: none"> ➢ N. Mather (Australia): “Frogs in Orbit” program ➢ E. Hirohama/T. Chiku (Japan): “Science of Flight” teaching guides • Discussion <p>7. New and innovative funding sources to support space education activities</p> <ul style="list-style-type: none"> • Exchange of experiences and information on identifying sponsors for education activities • Discussion <p>8. Other matters</p> | |

ⁱⁱ The item will be closed after the review and approval of the selection of the winners for APRSAF-15 Poster Contest, which is tentatively scheduled for Wednesday morning, 10 December.

| <i>Date</i> | <i>Time</i> | <i>Agenda Item(s)</i> | |
|---------------------------|---------------------------------|--|--|
| 10 December, Wednesday | 10:30 | <i>Coffee/tea break</i> | |
| | 10:50 | 4-b. | Poster contest <ul style="list-style-type: none"> • Report by the Secretariat of the Working Group on the results of the selection of winners • Review and approval of the results |
| | 12:30 | <i>Lunch break</i> | |
| | 13:30 – 15:00 ⁱⁱⁱ | Observations and recommendations <ul style="list-style-type: none"> • Review of the draft and discussion Adoption of the conclusions and recommendations of the Working Group | |

ⁱⁱⁱ The reception hosted by the Ministry of Education, Culture, Sports, Science and Technology (MEXT) of Japan follows at 17:30 hrs. at a venue to be announced

Annex 2: Format for a written report under item 3 of the provisional agenda, “General exchange of views on space education and awareness increase”

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|---|
| Country (or name of the organization in the case of international organization): |
| 1. Highlights of formal and informal education relating to space activities |
| |
| 2. Future plans for educational initiatives relating to space activities |
| |
| 3. Proposals for initiatives to be undertaken by the Working Group |
| |