

26 May 2016

FIRST ANNOUNCEMENT

The 23rd Session of the Asia-Pacific Regional Space Agency Forum **(APRSAF-23)**

“Building a Future through Space Science, Technology and Innovation”
15-18 November 2016, Manila, the Philippines

Dear Sir/Madam,

On behalf of the co-organizers, we are pleased to announce that the twenty-third session of the Asia-Pacific Regional Space Agency Forum (APRSAF-23) will take place from 15 to 18 November 2016 in Manila, the Philippines, under the theme entitled “Building a Future through Space Science, Technology and Innovation.” APRSAF-23 will be jointly organized by the Department of Science and Technology of the Philippines (DOST), the Department of Foreign Affairs of the Philippines (DFA), the Ministry of Education, Culture, Sports, Science and Technology of Japan (MEXT) and the Japan Aerospace Exploration Agency (JAXA).

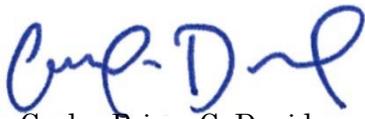
Nowadays, space technology has become essential for its applications in many areas such as earth observation, communication, navigation, disaster management, weather monitoring, climate change, and many others. With the challenges of sustainable development, it is important for countries to work together and effectively utilize the full potential of space technology for a better future.

APRSAF-23 will bring together leading space sector in the region as well as the stakeholders and relevant entities that have been actively involved in, or interested in, space endeavors and regional collaborations. We warmly welcome new participants, not only from space agencies, but also from relevant ministries, user organizations of space technologies, development aid agencies, the private sector, universities, and international/regional organizations. As an open and flexible framework for regional cooperation, APRSAF encourages voluntary participation by anyone who is interested in its work.

Further details of APRSAF-23, including the programme and associated events and the travel arrangements and logistics, will be made available on our website (http://www.aprsaf.org/annual_meetings/aprsaf23/meeting_details.php) soon .

We sincerely hope that you will join us at the APRSAF-23, and we look forward to welcoming you and your colleagues in Manila in November 2016.

Sincerely,



Dr. Carlos Primo C. David

Executive Director

Philippine Council for Industry, Energy and Emerging

Technology Research and Development (PCIEERD)

Department of Science and Technology (DOST)

Philippines



Mr. Ryuichiro Shirama

Deputy Director General,

Research and Development Bureau

Ministry of Education, Culture, Sports,

Science and Technology of Japan



Dr. Naoki Okumura

President

Japan Aerospace Exploration Agency



The 23rd Session of the Asia-Pacific Regional Space Agency Forum (APRSAF-23)

“Building a Future through Space Science, Technology and Innovation ”

15-18 November 2016, Manila, the Philippines

Background

The Asia-Pacific Regional Space Agency Forum (APRSAF) was established in 1993 following the declaration adopted at the Asia-Pacific International Space Year Conference (APIC) in 1992 with two objectives: 1) to enhance the development of space programs of countries in the Asia-Pacific region, and 2) to exchange information and opinions to explore possibilities for cooperation in space activities. APRSAF has held twenty two annual meetings jointly organized by the Ministry of Education, Culture, Sports, Science and Technology of Japan (MEXT), the Japan Aerospace Exploration Agency (JAXA) and the local organizations of the host countries, to discuss current space-related issues and possible cooperation mainly in the Asia-Pacific region. To date, Australia, India, Indonesia, Japan, Malaysia, Mongolia, the Republic of Korea, Singapore, Thailand and Vietnam have hosted the APRSAF sessions.

The last session, the twenty-second session of APRSAF (APRSAF-22), was convened in Bali, Indonesia, under the theme entitled “Sharing Solutions through Synergy in Space” and was jointly organized by the Ministry of Research, Technology and Higher Education of Indonesia (RISTEK-DIKTI), the National Institute of Aeronautics and Space, Indonesia (LAPAN), MEXT and JAXA. Approximately 480 people from 28 countries and regions, and 10 international organizations participated in the session. APRSAF-22 adopted the recommendations ([Appendix-A](#)) as a result of the discussions in the plenary session and proposals from the four working groups. The four working groups are Space Applications Working Group (SAWG), Space Technology Working Group (STWG), Space Environment Utilization Working Group (SEUWG) and Space Education Working Group (SEWG).

APRSAF promotes concrete regional cooperation using space technology through open and voluntary participation. To reflect a broad range of views and voices, APRSAF highly encourages participation from diverse organizations such as space agencies, relevant ministries, user organizations of space technologies, development aid agencies, the private sector, universities, and international/regional organizations.

APRSAF-23

Dates and Venue

Dates: 15-18 November 2016

Venue: Sofitel Philippine Plaza Manila

CCP Complex, Roxas Boulevard, Pasay City, Manila, 1300, Philippines.

<http://www.sofitelmanila.com/>

Organizers

APRSAF-23 will be co-organized by the following organizations:

Philippines: Department of Science and Technology of the Philippines (DOST)
Department of Foreign Affairs of the Philippines (DFA)

Japan: Ministry of Education, Culture, Sports, Science and Technology of Japan (MEXT)
Japan Aerospace Exploration Agency (JAXA)

Objectives

While serving as an open and flexible forum to promote concrete cooperation, APRSAF also aims to contribute to solving regional socio-economic problems by further expanding the use of space technologies and its applications.

With this in mind, the twenty-third session of APRSAF (APRSAF-23) will be held under the theme entitled “Building a Future through Space Science, Technology and Innovation”. APRSAF-23 has organized four working groups – Space Applications, Space Technology, Space Environment Utilization, and Space Education – to share information about the activities and future plans of each country and region, and to discuss further cooperation in these respective areas. The plenary session will feature information exchange sessions on space policies and latest programs of each country and discussions on common regional issues and interests.

Expected Participants

Space agencies, relevant ministries, user organizations of space technologies, development aid agencies, the private sector, universities, and international/regional organizations will be expected to participate in APRSAF-23.

Overall Schedule

Plenary and Working Groups

Dates	Event	Venue
15-18 November	APRSAF-23 <ul style="list-style-type: none"> ➤ 15-16 November Working Group Sessions ➤ 17-18 November Plenary Session 	Sofitel Philippine Plaza Manila

APRSAF Activities & APRSAF Related Projects

Dates	Event	Venue
12-13 November	Water Rocket Event and Can Satellite Competition	University of the Philippines Los Baños College, Laguna
14 November	SAFE Workshop	Sofitel Philippine Plaza Manila
	Kibo-ABC Workshop	
14-16 November	8th Asia Oceania Regional Workshop on GNSS	
16 November (TBC)	New Cooperation Session	
15-18 November	Poster Contest	
	Exhibition	
17 November	Welcome Reception	
18 November	Cultural Tour	TBD

Plenary and Working Groups

The plenary session will take place on the third and fourth day of APRSAF-23 on 17-18 November. It will feature reports by APRSAF participating countries as well as by these APRSAF initiatives: Sentinel Asia (disaster management support system in the Asia-Pacific region), SAFE (Space Applications For Environment), and Kibo-ABC (Asian Beneficial Collaboration Through “Kibo” Utilization). MGA (Multi-GNSS Asia), and APRSAF related project, will also report on their activities at the plenary session.

The first and second day of APRSAF-23 (15-16 November) will be devoted to the sessions of the four working groups: Space Application Working Group (SAWG), Space Technology Working Group (STWG), Space Environment Utilization Working Group (SEUWG) and Space Education Working Group (SEWG). The four Working Group sessions will take place in parallel.

APRSaf Activities & APRSAF Related Project

On 14 November, workshops will be conducted by two APRSAF Initiatives: SAFE and Kibo-ABC. Water Rocket Event, Poster Contest and Exhibition will also take place prior to or in parallel with APRSAF-23. The 8th Asia Oceania Regional Workshop on GNSS, an APRSAF-related project, will take place from 14 to 16 November.

Side Events

An “APRSAF Side Event” is a meeting, conference, or similar event proposed and performed by APRSAF participating organizations during the APRSAF annual session. The APRSAF Secretariat is now accepting proposals for the APRSAF Side Event and the closing date for submission is 10 July 2016. The Guidelines & Request Form are in Appendix-B. Relevant information is available on the APRSAF website: http://www.aprsaf.org/annual_meetings/aprsaf23/side_events.php

Points of Contact for APRSAF-23

Please direct all inquiries concerning APRSAF-23 to:

Ms. Kumiko Tanabe

APRSAF-23 Secretariat, c/o Japan Aerospace Exploration Agency (JAXA)

Ochanomizu sola city, 4-6 Kandasurugadai, Chiyoda-ku, Tokyo, 101-8008, Japan

E-mail: secretariat@aprsaf.org or FAX: +81-3-5209-3205

APRSAF Activities

■ **New Cooperation Session**

Date: 16 November 2016 (TBC)

Venue: Sofitel Philippine Plaza Manila

<Contact for further information>:

APRSAF Secretariat. E-mail: secretariat@aprsaf.org FAX: +81-3-5209-3208

■ **SAFE Initiative Workshop**

Date: 14 November 2016

Venue: Sofitel Philippine Plaza Manila

Reference: <http://www.eorc.jaxa.jp/SAFE/>

<Contact for further information>:

Dr. Masahiko Honzawa

TEL: +81-50-3362-4116 FAX: +81-29-868-2961 E-mail: honzawa.masahiko@jaxa.jp

■ **Kibo-ABC Initiative Workshop**

Date: 14 November 2016

Venue: Sofitel Philippine Plaza Manila

Reference: http://www.aprsaf.org/initiatives/kibo_abc/

<Contact for further information>:

Ms. Yoshimi Osada

TEL : +81-50-3362-3387 FAX : +81-29-868-3950 E-mail: Kibo-ABC@aprsaf.org

■ **Water Rocket Event**

Co-organizers: DOST and JAXA

Date: 12-13 November 2016

Venue: University of the Philippines Los Baños College, Laguna
Jose R Velasco Ave, Los Baños 4031, Laguna, Philippines

■ **Can Satellite Competition**

Co-organizers: DOST and JAXA

Date: 12-13 November 2016

Venue: University of the Philippines Los Baños College, Laguna
Jose R Velasco Ave, Los Baños 4031, Laguna, Philippines

■ **Poster Contest**

Theme: “My Dream Planet”

Co-organizers: DOST and JAXA

Date: 15-18 November 2016

Venue: Sofitel Philippine Plaza Manila

<Contact for further information about the Water Rocket Event, Can Satellite Competition and Poster Contest >:

Mr. Yuki Ishida, JAXA Space Education Center

TEL: +81-50-3362-6438 FAX: +81-42-759-8612 E-mail: z-kokusai@edu.jaxa.jp

More information on the Water Rocket Event, Can Satellite Competition and Poster Contest will be made available in due course. Please check the APRSAF website (<http://www.aprsaf.org>) for more updates.

■ **APRSAF-23 Exhibition**

Date: 15-18 November 2016

Venue: Sofitel Philippine Plaza Manila

Relevant information about the APRSAF-23 Exhibition will be made available on the APRSAF website in due course: http://www.aprsaf.org/annual_meetings/aprsaf23/

APRSAF Related Project

■ **8th Asia Oceania Regional Workshop on GNSS**

Date: 14-16 November 2016

Venue: Sofitel Philippine Plaza Manila

Reference: <http://www.multignss.asia/>

<Contact for further information>:

Dr. Kazutoshi Sato

TEL : +81-50-3362-7163 FAX : +81-29-868-5987 E-mail: satoh.kazutoshi@jaxa.jp

Other Matters

Further details about APRSAF-23, including logistics arrangements, program updates and online registration will be made available in due course. Please check for the latest information on the APRSAF website at <http://www.aprsaf.org>.

Information about the APRSAF will also be provided via APRSAF News Mail and APRSAF News Letter. To subscribe to them, please visit https://www.aprsaf.org/newsmails_newsletters/form/.

Participation in APRSAF-23 is free although participants are responsible for covering their travel and accommodation costs.

Attachments

Appendix-A Recommendations Adopted at APRSAF-22

Appendix-B APRSAF Side Event Guidelines & Request Form



**Summary and Recommendations of
the 22nd Session of the Asia-Pacific Regional Space Agency Forum
(APRSAF-22)
December 1-4, 2015
Bali, Indonesia**

The 22nd session of the Asia Pacific Regional Space Agency Forum (APRSAF-22) was successfully held in Bali, Indonesia, from December 1-4, 2015, under the overall theme “Sharing Solutions through Synergy in Space,” with the aim of enhancing regional cooperation for promoting space utilization, advancing space technology development and solving common agendas in the Asia-Pacific region. The session was attended by 478 participants from 28 countries and regions, as well as 10 international organizations.

The participants of APRSAF-22:

1. Welcomed the continuous efforts, in response to the Recommendations adopted at the previous 21st Session of APRSAF, for promoting space technology development and its applications that support socio-economic benefits in the region;
2. Confirmed that space technologies have been effectively applied to highly prioritized areas that include environmental monitoring, disaster risk reduction, agricultural applications, forestry, and ocean monitoring;
3. Emphasized the importance of ensuring that solutions are effectively adopted in the region by strengthening partnerships not only with space agencies but also with user entities, development aid agencies as well as with the private sector, whose participation in APRSAF-22 was highly welcomed;
4. Encouraged joint efforts to utilize the environment of outer space, including the unique platform of the International Space Station (ISS) Kibo, aiming at the advancement of human capacity;
5. Acknowledged the importance of collaboration worldwide towards space exploration activities, and welcomed active discussions at the regional level towards acquiring new knowledge from space, and promoting research and development;
6. Confirmed further promotion of regional cooperation in educational activities on the subject of space, which inspires young people who are responsible for the next generation;
7. Welcomed the activity reports from the four working groups (WGs)—Space Applications, Space Technology, Space Environment Utilization, and Space Education—including the three ongoing APRSAF Initiatives: Sentinel Asia, Space Applications For Environment (SAFE) and Kibo-ABC; and

8. Recognized their tangible advancement, and agreed on the following summary and recommendations for future activities:

[Space Applications Working Group (SAWG)]

9. Welcomed the host country report by Indonesia and the progress of space applications in various fields in Indonesia;
10. Discussed in the host country session various space applications in marine environmental monitoring, which is one of the most important fields in the Asia-Pacific region;
11. Confirmed success stories where the activities of SAFE are being applied to the Asia-Pacific region through the framework of development aid agencies (e.g. Asian Development Bank (ADB), Japan International Cooperation Agency (JICA)), including the cases for agriculture application and national frameworks by scaling up the SAFE results.
12. Confirmed discussions on Sentinel Asia:
 - Welcomed that the Vietnam Academy of Science and Technology (VAST) has become the 7th Data Provider Node (DPN) with its VNREDSat satellite and that Sentinel Asia is developing through the increasing cooperation of DPNs and Data Analysis Nodes (DANs);
 - Recognized that the third phase of Sentinel Asia Success Story in the Philippines had commenced;
 - Recognized that rapid and continuous response of Sentinel Asia contributes to substantial disaster management activities such as the flooding in Myanmar;
 - Confirmed that the First Steering Committee (FSC) meeting was successfully held in Bangkok, and discussed the implementation strategy towards a sustainable and autonomous framework, including close information exchange between space technology and GIS-related organizations (SGO) and disaster management organizations (DMO), improving server architecture for rapid archiving, analyzing and sharing information, and capacity building for DAN as well as for users.
13. Confirmed discussions on Weather and Climate:
 - Realized the importance of promoting the integration of Earth observations (GEO and LEO), Multi-GNSS (Global Navigation Satellite System) and ICT (Information and Communication Technology) to solve national and regional issues (e.g. agriculture, forest, and public health) in Asia;
 - Confirmed the outcomes of the workshop on the non-meteorological applications of Himawari-8, held in Brisbane in August 2015. The workshop discussed the utilization of Himawari-8 data in various areas, identifying focus areas where Himawari-8 products, other than weather forecasting products, would be useful for land, sea, and atmosphere;

- Welcomed that a dedicated website has been prepared to facilitate and to form professional communities, and that an ad-hoc team will be launched with the aim of establishing a new initiative at the next APRSAF-23;
 - Recognized the establishment of a new initiative, establishing an ad-hoc team led by Australian and Japanese experts promoting the use of Himawari-8 data now available not only for weather forecasting but also for various other applications, and to draw the attention of other countries to such new applications. The first action of the team will be coordinating an Australia-Japan cooperative research program to validate the accuracy of aerosols and surface reflectance retrieved from Himawari-8 data.
14. Discussed important factors for the expansion of success cases of space applications to the regional scale in the Asia-Pacific, in cooperation with international organizations;
15. Welcomed the exchange of information and opinions by focusing on important tasks for improving societal benefits in the Asia-Pacific region, and confirmed the results of activities via initiatives including Sentinel Asia, SAFE, and Weather and Climate Application Promotion:
- Forestry: Discussed the current and possible space applications in the future from the perspective of forest fire monitoring and forest monitoring including haze and cloud detection by integrating utilization of earth observation satellites (such as Himawari, MODIS, GOSAT, and GCOM-C).
- Agriculture: Confirmed the excellent progress of activities including rice crop monitoring via the Group on Earth Observations Global Agricultural Monitoring Initiative (GEOGLAM) Asia-Rice and the smooth provision of the rice crop outlook to the Food and Agriculture Organization (FAO) in association with the Association of Southeast Asian Nations (ASEAN). Welcomed the development of SAFE results as technical assistance projects by the ADB;
- Water resource management: Welcomed the progress of satellite-based rainfall data applications in the international project of the United Nations Educational, Scientific, and Cultural Organization (UNESCO) and ADB for flood alerts, and flood forecasting system by the Hydro and Agro Informatics Institute (HAI) of Thailand.
16. Shared the status of on-going and planned regional projects for food security, especially for drought and flood impact including ASEAN (AFSIS), the United Nations Economic and Social Commission for Asia and the Pacific (UN-ESCAP), the Mekong River Commission (MRC), SERVIR-Mekong, and GEOGLAM.

<Recommendations>

17. The following recommendations were made by the SAWG:
- A) To encourage joint activities with development aid agencies such as JICA and ADB, further cooperation with the Group on Earth Observations (GEO), such

as through mutual technical assistance, and further partnerships with international organizations and initiatives including ESCAP, SERVIR-Mekong, MRC, and ASEAN;

- B) To develop new social applications (including forest/land fire detection, and wide-range air and smoke pollution monitoring) based on the data from both geostationary (e.g. Himawari-8) and low Earth orbit (e.g. GCOM-C) satellites in combination with Multi-GNSS and ICT, in support of the establishment of a new initiative at APRSAF-23.

[Sentinel Asia]

18. Noted that Sentinel Asia is the first successful Initiative of APRSAF as a framework for cooperation among Space technology and GIS-related organizations (SGO), and relevant disaster management organizations (DMO) to contribute to disaster management by harnessing space technology. Its activities are being pushed forward through the continuous increase in the number of member organizations and countries. APRSAF fully welcomes each new member to join in Sentinel Asia as a Data Provider Node (DPN), a Data Analysis Node (DAN) or as a member of the Joint Project Team (JPT);
19. Acknowledged that the Steering Committee of Sentinel Asia was established and is implementing a plan to evolve Sentinel Asia STEP3 based on the three strategic concepts endorsed at APRSAF-21 in 2014: jointly drive, end-user-oriented, and strategic management;
20. Confirmed that the First Steering Committee (FSC) meeting was held for overall strategic management, that the establishment of a sustainable and autonomous Sentinel Asia Platform was discussed at this meeting. Such a platform shall use space technology for disaster risk and damage reduction in the Asia-Pacific region through collaboration among SGOs and DMOs, who will share the benefits from this initiative to serve their respective purposes. The work has been commenced for implementation;
21. Endorsed the content of the implementation plan suggested by the FSC, including:
 - timely provision of information valuable for in-situ disaster response activities through close information exchange between the in-situ DMO and DPN/DAN;
 - reconfiguring WGs dedicated to different disaster types through the collaboration of SGO and DMO to discuss and suggest the best plan and methodology of developing and utilizing Earth observation products;
 - promoting collaboration with institutions, universities and consortiums with the aim of establishing an archiving and sharing system of geospatial information and products; and
 - implementing success stories linked with developing projects of each region.

APRSAF welcomes the implementation of the plan and also expects this plan to be

agreed by consensus of all Sentinel Asia members in the Joint Project Team Meeting to be held in January 2016.

<Recommendations>

22. The following recommendations were made regarding Sentinel Asia:

- A) To encourage continuous active discussions in the Sentinel Asia Steering Committee with the support of the JAXA secretariat towards sustainable and autonomous operation of Sentinel Asia;
- B) To welcome the establishment of a system necessary for rapid information sharing and for promoting capacity building to strengthen technological background and ability as well as disaster response ability;
- C) To encourage enhancing the features of Sentinel Asia and its uniqueness—that is, a collaborated framework of SGO and DMO—to promote substantial disaster risk and damage reduction in the Asia-Pacific region; and to collaborate and cooperate with global disaster management frameworks such as the International Disaster Charter, the Global Earth Observation System of Systems (GEOSS), the Committee on Earth Observation Satellites (CEOS) and other United Nations initiatives;
- D) To encourage strengthening the framework and architecture of Sentinel Asia towards the construction of an Asia-Pacific platform on which each member organization and country can pursue benefits by contributing to Sentinel Asia for the sustainable and autonomous operation of Sentinel Asia.

[SAFE] (Space Applications for Environment)

- 23. Welcomed the start-up of new prototyping activities in relation to “Oil palm management” proposed by the Federal Land Development Authority (FELDA) Agricultural Services Sdn Bhd (FASSB), Malaysia; “Rice crop monitoring” proposed by the Ministry of Agriculture, Forestry and Fisheries (MAFF), Cambodia; “Flood forecasting” proposed by the Irrigation Department (ID), Sri Lanka; “Oil palm monitoring” proposed by LAPAN, Indonesia; and “Rice crop monitoring” proposed by the Ministry of Agriculture and Irrigation (MOAI), Myanmar, and confirmed the steady progress of the current prototypes;
- 24. Recognized and appreciated the successful completion of five prototypes: Monitoring of agricultural abandoned land monitoring by Universiti Putra Malaysia (UPM), rice crop monitoring by the Indonesian Center for Agricultural Land Resources Research and Development (ICALRD) and Indonesia’s Ministry of Agriculture (MOA); rice crop monitoring by the Vietnam National Satellite Center (VNSC), the Vietnam Academy of Science and Technology (VAST); coastal monitoring by the Vietnam Academy for Water Resources (VAWR), the Ministry of Agriculture and Rural Development (MARD); and flood forecasting by the National

Centre for Hydro-Meteorological Forecasting (NCHMH), the Vietnam National Hydro-Meteorological Service (NHMS), the Ministry of Natural Resources and Environment (MONRE), as well as subsequent efforts to realize the sustainable use of their outcomes;

25. Confirmed that the social issues, space technology needs and actions for solving actual problems were presented at the stakeholder meetings and the international conferences including the Asian Conference on Remote Sensing (ACRS) to enhance partnerships with user organizations and development aid agencies.

<Recommendations>

26. The following recommendations were made regarding SAFE:

- A) To accept the new SAFE follow-up activity framework and implement two follow-up test cases with increased scale, out of the four completed SAFE prototyping activities, for sustainable use of SAFE accomplishments at local levels after the completion of their two-year activities, while expanding cooperation with relevant user organizations and development aid agencies;
- B) To continue finalizing SAFE follow-up activities and revise Terms of Reference (TOR) before the next SAFE workshop.

[Space Technology Working Group (STWG)]

27. In the second year following its establishment, the working group has actively discussed the following activities:

- technological strategies and cross-cutting technologies focused on small satellites;
- applied technologies of high interest in the Asia-Pacific region such as the Automatic Identification System (AIS) and GNSS;
- engineering management such as systems engineering indispensable for practical application of space programs;
- monitoring, reduction and removal of space debris for risk mitigation;
- launch environment and orbit experiment demonstration.

In particular, there was strong interest in technology management, including systems engineering and project management, ensuring reliability and quality control, and there were lively discussions in the sessions on those topics.

28. In addition, panelists exchanged views on the various efforts being made with respect to capacity building and training, sharing the challenges in each country, and expectations towards regional cooperation to solve the problems.

<Recommendations>

29. The following recommendations were made by the STWG:

- A) To promote cooperation opportunities and more participation by sharing

activities and experiences of space technology, small satellites and launch opportunities, technology management, etc. in this area;

- B) To promote information exchange and participation about capacity building and training opportunities in each country, especially seeking opportunities for collaboration among space agencies, industries, universities and laboratories to stimulate active discussions;
- C) To recognize the importance of taking measures with respect to space debris and promote information exchange and discussion regarding technical issues on space debris control and their removal;
- D) To strengthen cooperation among space agencies, industries, universities and laboratories as efforts toward capacity building for development of small satellites and their applications;
- E) To promote the continuation of this WG beyond this year for active space development in Asia-Pacific countries, as it provides excellent opportunities to discuss space technologies.

[Space Environment Utilization Working Group (SEUWG)]

- 30. Noted that “The 1st Space Exploration and Kibo Utilization for Asia Workshop” was successfully held in Jakarta, Indonesia, in cooperation with the National Institute of Aeronautics and Space (LAPAN). The feasibility study of Kibo space experiments proposed in this workshop, such as CubeSat deployment, has started. The second Space Exploration and Kibo Workshop is tentatively planned to be held in an Asian country;
- 31. Recognized the importance of promoting feasibility studies for further Kibo utilization;
- 32. Recognized that experiments using the Exposed Experiment Handrail Attachment Mechanism (ExHAM) can be carried out in a short period of time with a lightweight and existing experiment sample, and that they are useful for satellite design.
- 33. Recognized the importance of technology coordination with member countries for feasibility studies related to the development of nano and micro satellites;
- 34. Comprehended the usefulness of external funds as one of the measures to secure funding for Kibo utilization.

<Recommendations>

- 35. The following recommendations were made by SEUWG:
 - A) To promote space technologies in more space agencies from Asia-Pacific countries in order to accelerate their activities towards the realization of space experiments at Kibo through building cooperation among engineers and researchers in the Asia-Pacific region;
 - B) To accelerate the activities aimed at nano and micro satellite deployment using

Kibo;

- C) To make efforts to secure the funds needed to promote advanced technology and take advantage of the opportunity of space environment utilization.

[Kibo-ABC] (Asian Beneficial Collaboration through “Kibo” Utilization)

- 36. Shared the results of Asian Try Zero-G 2015. The new selection criteria and category for proposals of Asian Try Zero-G has been introduced. Candidate themes will undergo final consideration, and will be conducted in the year 2016;
- 37. Recognized that the feasibility study of AHiS (Asian Herb in Space) had entered into the final phase, by the National Space Agency of Malaysia (ANGKASA) and JAXA's activity progress reports of preliminary ground control experiments. The mission schedule was confirmed;
- 38. Recognized that each member country considers its own plan for Kibo utilization in line with the mid- and long-term roadmaps proposed by ANGKASA, LAPAN and JAXA.

<Recommendations>

- 39. The following recommendations were made regarding Kibo-ABC:

- A) To continue activities for creating new missions based on the accumulated experience from previous efforts in each of the capacity-building programs such as SSAF, Asian Try Zero-G and parabolic flight experiments;
- B) To encourage activities for providing opportunities for more organizations to participate in the Kibo-ABC Initiative, including the planning and reviewing process for increasing Kibo utilization such as AHiS.

[Space Education Working Group (SEWG)]

- 40. Carried out adjustments of the seminars for teachers and educators to be held in the Asia-Pacific region for the dissemination of space education. Discussed ways to implement space education activities for the future host countries of APRSAF;
- 41. Confirmed that the 11th APRSAF Water Rocket Event, as organized by the WG for the promotion of youth education, was held in Indonesia this year with 58 qualified students from 13 countries around the world, who actively engaged in vigorous exchange. Also confirmed that the 10th poster contest with the theme “Careers in Space”—through which the WG promotes science and technology education at a regional level—received submissions from 32 qualified students from 11 countries, and confirmed that these events will be continued next year;
- 42. Through the above activities, reconfirmed the importance of the role of space education in the human resources development of the next generation, and successfully conducted a special session for members to utilize and experiment with educational materials and tools for two consecutive years to further promote

these activities at the national and regional levels.

<Recommendations>

43. The following recommendations were made by SEWG:

- A) To further promote educational activities, using space as a method, that will be beneficial for the human resource development of the next generation;
- B) To continue to conduct the Water Rocket Event and Poster Contest as means of generating young people's interests in space and nurturing their creativity and innovative thoughts;
- C) To continuously collaborate in self-initiated educational programs in Asia-Pacific countries, in particular for motivating initiatives in host countries of APRSAF.

[Multi-GNSS Asia]

- 44. Recognized the latest activity report on Multi-GNSS Asia (MGA) and welcomed, in particular, the active discussions on cooperation in social problem solutions using GNSS in the ASEAN region. It was also confirmed that progress was expected in regional cooperation for the construction of a system that is easy to use from the viewpoint of users of high-accuracy positioning information in the Asia-Pacific region;
- 45. In addition, recognized that the 7th MGA Conference will be held in Negara Brunei Darussalam from December 7 to 10, 2015. Promoted MGA activities in conjunction with two Horizon 2020 projects related to Galileo: GNSS.asia and BELS.

[New Cooperation Session]

- 46. The New Cooperation Session was established at APRSAF-20 to identify new applications and technologies that had not been covered by the existing WGs. A total of eight proposals were presented from space agencies, academia, the private sector and NPOs. The presented topics included the promotion of participation by industries in APRSAF activities, small satellites, a workshop on the next generation, and asteroid observation networks.

[Exhibition]

- 47. Appreciated the active networking and communication through the exhibition by space agencies, industry and other organizations at APRSAF-22.

[Special Sessions]

(Space and Maritime Applications)

- 48. Welcomed the lively discussion at the special session titled "Space and Maritime Applications" featured by LAPAN, which showcased ongoing projects where space technologies such as satellite applications for maritime issues have been

introduced. Acknowledged the contribution of space technology to fishery and maritime monitoring, and encouraged active support for further expanding utilization.

(Synergy in Space – Space Technology Contributing to Regional Agenda)

49. Shared the success stories and challenges where space technologies were effectively utilized, in particular in the implementation of Sentinel Asia and SAFE initiatives. Highlighted the importance of concentrated efforts in support of solving national and regional issues.

(Regional Cooperation on Space Exploration)

50. Welcomed the discussion on the expansion of international cooperation utilizing the International Space Station (ISS) and regional cooperation towards achieving international collaborative exploration in the special session. Emphasized the importance of promoting regional cooperation towards the global space exploration endeavor.

[Reports on Space Cooperation in the Asia-Pacific Region]

51. Welcomed presentations made by representatives from International organizations including Group on Earth Observations (GEO), the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), the Asia-Pacific Space Cooperation Organization (APSCO), and the Space Foundation from NGOs;
52. Welcomed presentations made by representatives from the United States of America, and the United Kingdom on their active space cooperation with the Asia-Pacific region.

[Executive Committee (ExCom) Activity Report]

53. Appreciated the efforts made by the Executive Committee (ExCom) throughout the year 2015 to make the APRSAF activities more sustainable and effective, and to enhance cooperation with various sectors in a synergistic way;
54. Welcomed the proposal by ExCom to join the efforts of Group on Earth Observations (GEO) and to make a request to GEO that APRSAF to be recognized as an observer.

[APRSAF-23]

55. Welcomed the APRSAF-23 to be held in the Philippines on November 28 – December 1, 2016 and expressed expectations for active preparations through ExCom. [pending announcement by the host country]

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The APRSAF-22 participants were satisfied with the fruitful discussions that took place under the theme “Sharing Solutions through Synergy in Space,” with the aim of exploring further possibilities for the utilization of space technologies, and thus creating various new solutions by sharing knowledge and experience to meet the needs for bettering society in the Asia-Pacific region.



APRSAT Side Event Guidelines

1. An “APRSAT Side Event” is a meeting, conference, contest, outdoor event or other similar event relating to the peaceful uses of outer space, proposed and performed by APRSAT participating organizations, such as a ministry, space agency, university, academic society, international organization and private company. This is distinct from an “APRSAT Activity,” which is a meeting, conference, contest, outdoor event or other similar activity born in the plenary session, working groups or initiatives of APRSAT such as the Initiative Workshop, Water Rocket Event, etc.
2. The proposed side event should be related to APRSAT goals and objectives, and be relevant to the theme of the APRSAT annual session. As a general guideline, side events should:
 - i. Address the common interests of the Asia-Pacific region;
 - ii. Meet the societal needs of the region;
 - iii. Be implemented through regional collaborative efforts, rather than bilateral efforts.
3. Side events may be held on any day during the APRSAT annual session, and are open to all participants of the APRSAT annual session but are independent from the APRSAT program.
4. If the proposed event is aimed at a target audience (such as a closed conference), organizers are advised to consider alternative locations outside the APRSAT venue.
5. Organizations interested in hosting side events should use the APRSAT Side Event Request Form to obtain approval from the co-organizers of APRSAT and the APRSAT Executive Committee. Upon receipt of the form, the co-organizers and the Committee will review the event purpose and description. The APRSAT Secretariat may decline the request depending on the results of their review.
6. All side events will appear in APRSAT announcements, but publicizing the event is the sole responsibility of the event organizers. Printed materials can be distributed during the APRSAT annual session but the APRSAT Secretariat will authorize the

removal of materials if they are deemed inappropriate.

7. Side event organizers should directly request and arrange a meeting room and all equipment they need for the event on their own to the venue's customer service representative. The APRSAF Secretariat will play no role in the arrangement of the venue, and all costs of the events will be borne by the event organizers.
8. The Side Event Request Form should be submitted via e-mail to the following address four months before the APRSAF annual session. The specific submission deadline is stated in the Request Form. Requests received after the deadline will not be considered.

Asia-Pacific Regional Space Agency Forum (APRSAF) Secretariat

Tel: +81-50-3362-5880 Fax: +81-3-5209-3205 E-mail: secretariat@aprsaf.org

9. Side event organizers will receive written notifications of their acceptance or rejection of their requests.
10. Side event organizers are to report the results of their side events to the APRSAF Secretariat after completion of the events.

For further information, please contact:

APRSAF Secretariat

Ochanomizu sola city, 4-6 Kandasurugadai,

Chiyoda-ku, Tokyo 101-8008 Japan

Tel: +81-50-3362-5880

Fax: +81-3-5209-3205

E-mail: secretariat@aprsaf.org

Asia-Pacific Regional Space Agency Forum
The 23rd Session, 15 – 18 November 2016

APRSAP-23 Side Event Request Form

Submission Deadline: 10 July, 2016

Organization: _____

Contact Person: _____

Address: _____

Telephone: _____

Fax: _____

E-mail: _____

Description of the organization (or attach your company brochure) (400 words):

Title of the Event:

Event Purpose (400 words):

Event Description (400 words):

Preferred Date(s):

14th Nov.

15th Nov.

16th Nov.

17th Nov.

18th Nov.

Other ()

I have read and understood the APRSAF Side Event Guidelines. All costs related to the side event will be covered by:

Name of Organization:

Signature:

Name (Block Letters):
