ISSN 2433-8818

BIRDS Project Newsletter

Issue No. 25
(27 February 2018)

Members of BIRDS -1, -2, and -3 on 4 October 2017, at Tobata Campus

Edited by:
G. Maeda
Laboratory of Spacecraft Environment Interaction Engineering (LaSEINE)
Kyushu Institute of Technology (Kyutech)
Kitakyushu, Japan

Archive website: http://www.birds-project.com/birds1/newsletter.html
All back issues are archived at this website.

La SEINE

SEIC Space Engineering International Course

All back issues of this newsletter can be easily downloaded.
Go to here: http://www.birds-project.com/birds1/newsletter.html and scroll down to the desired issue.

Table of Sections

The Guest Box

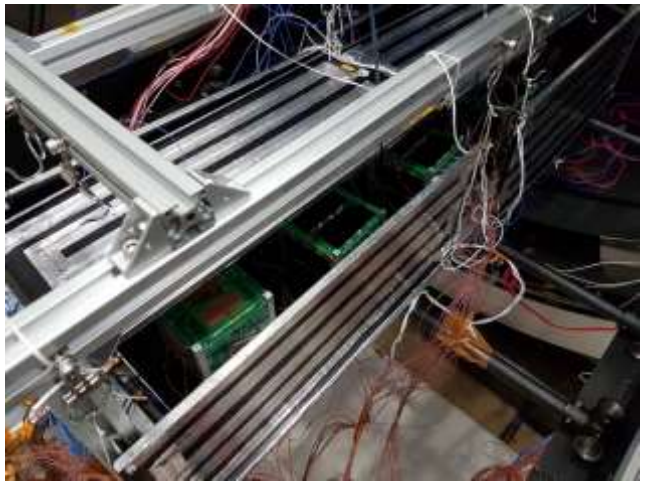
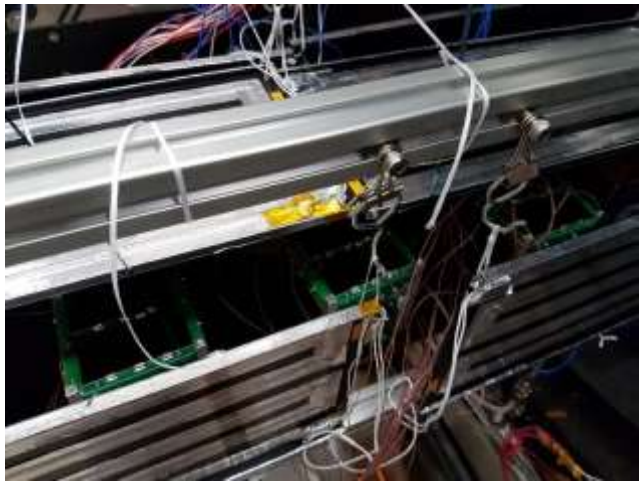
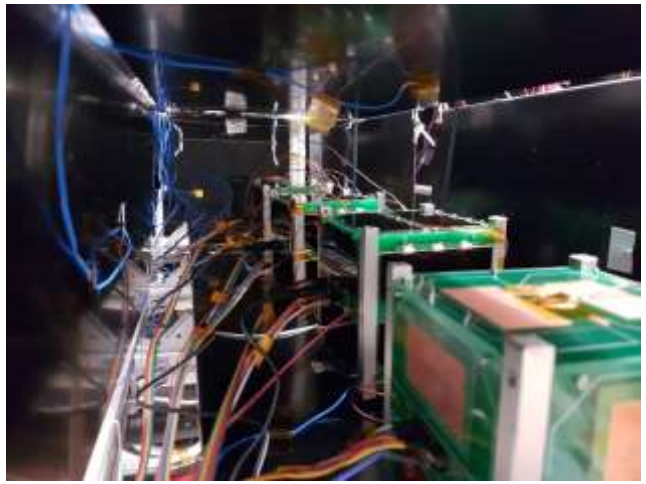
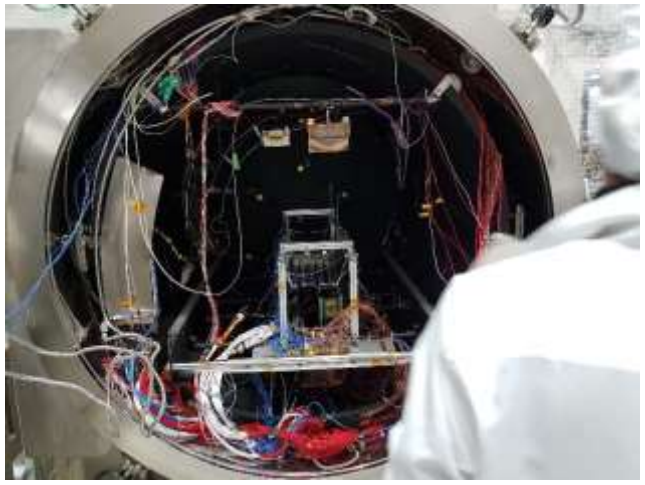
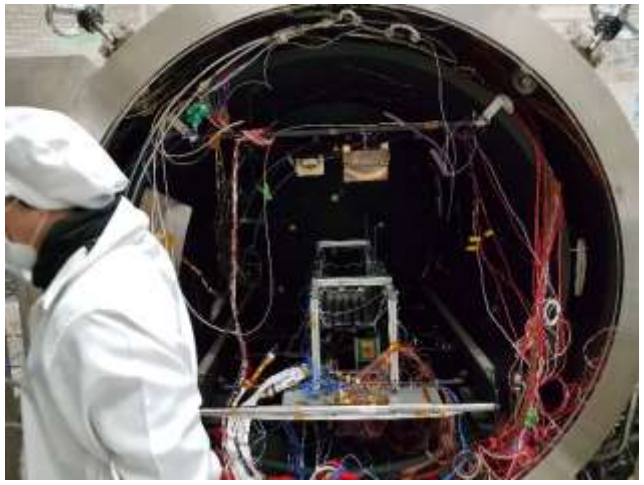
From Japan (BIRDS-3)

http://www.unibo.jp

This is the rocket launch site of JAXA's "Tanegashima Space Center" in Kagoshima Prefecture. It is among the most beautiful launch complexes in the world. JAXA has another launch site called Uchinoura, but it is north of here. Tanegashima is about as far south as you can go in Japan for rocket launches.

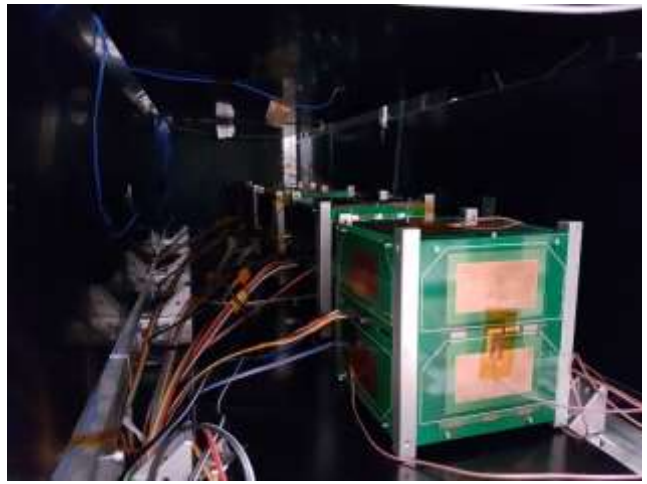
- from M. Kishimoto (BIRDS-3)

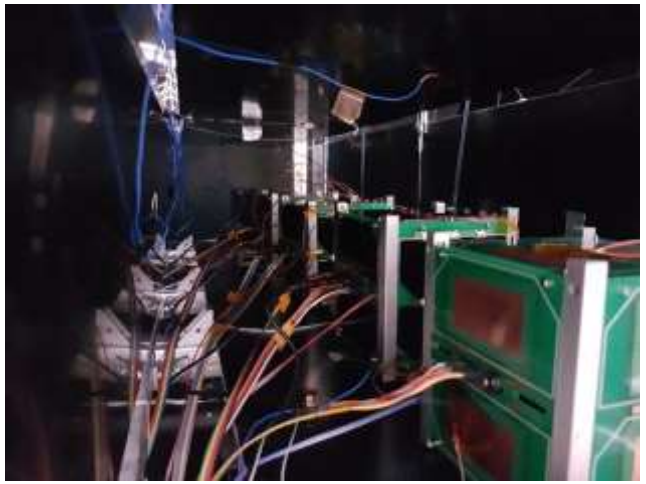
01. More photos of BIRDS-2 thermal vacuum test in January

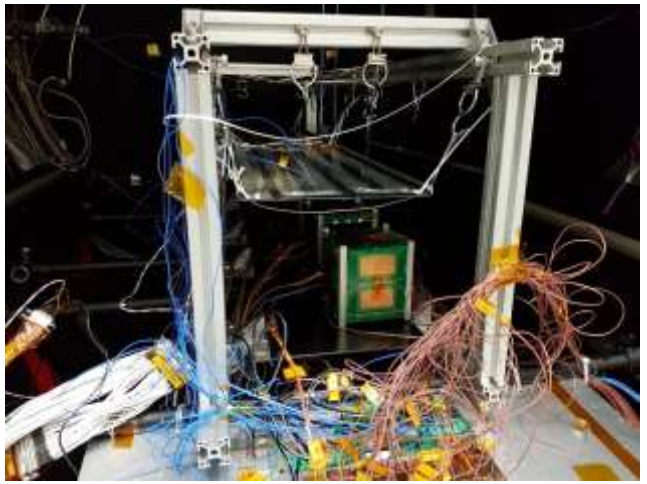







Photos are courtesy of Dr. S. Kim.

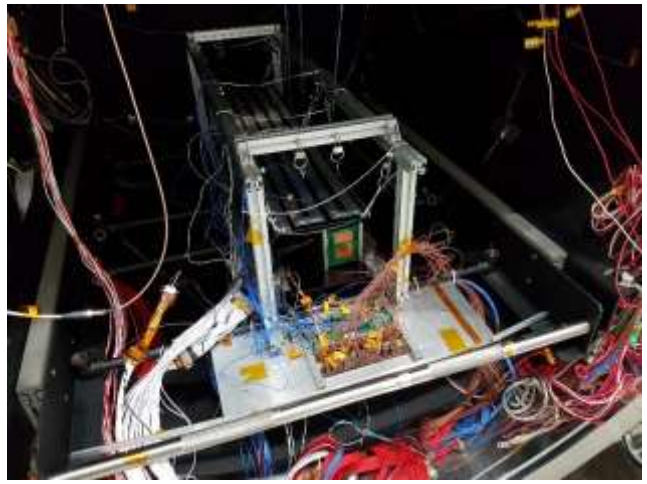
. . . continued on the next page.

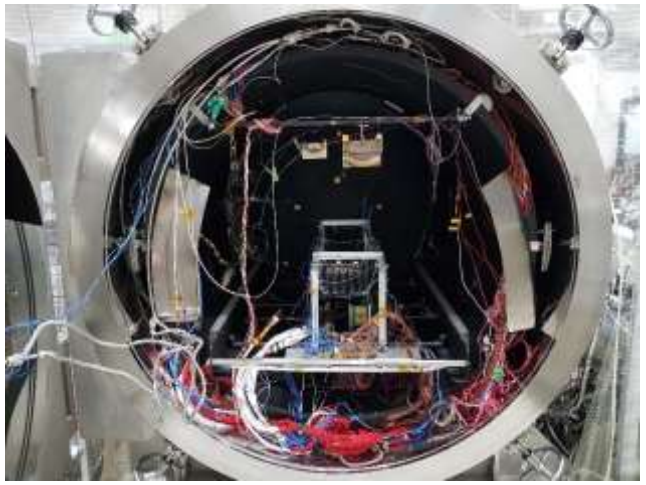






Note: Testing more than one satellite at the same time.





Photos are courtesy of Dr. S. Kim.

02. UNISEC celebrated its 15th anniversary on 27 January 2018 …. See the next four pages

17.12.27 「UNISEC１５周年記念イベント」開催のご案内

UNISECは来年2月14日にNPOとして**満15年**となります。 今までの感謝の気持ちを込めて、また、これからのUNISECの発展を込めまして、「１５周年記念イベント」を開催いたします。

日時：　2018年1月27日（土）13：00～18：30
場所：　東京大学 武田ホール
参加費：事前振込 ３，０００円（社会人・学生一律）
当日支払 ３，５００円（社会人・学生一律）
参加費には親睦会の軽食代も含まれています。

Random event photos are on the next page.

プログラム（予定） PDF詳細版

- パネルディスカッション（司会進行：東大 中須賀教授）「UNISEC第一世代による放談会－UNISECで得たもの－」
- パネルディスカッション（司会進行：東工大 松永教授）「日本の宇宙ミッションの課題」
- 歴代UNISON代表からの一言（司会進行：アクセルスペース代表　中村友哉）
- これからのUNISECの国際展開について
- UNISEC行動規範
- 親睦会（アルコール付き軽食）

Prof. Nakasuka (Univ. of Tokyo) gave this talk

UNISEC 15周年記念イベントにて、第二代UNISEC理事長・中須賀教授よりご説明を賜りました。
UNISEC行動規範(YouTube動画)
https://www.youtube.com/watch?v=H59QFOufqOY&feature=youtu.be

Prof. Mengu Cho delivered the above presentation







15

Years of UNISEC






The University of Tokyo

Takeda Hall
武田ホール

Venue: Takeda Hall of the University of Tokyo, 27 Jan. 2018, 13:00-18:30

From Prof Cho's presentation file (UNISEC 15th anniversary event) . . . sample of media reports on BIRDS


BBC Sign in News Sport Weather Shop Earth
NEWS
Home Video World Asia UK Business Tech Science Magazine
World Africa Australia Europe Latin America Middle East US & Canada
Ghana launches its first satellite into space

http://www.bbc.com/news/world-africa-40538471


小型衛星 進む国際連携
九工大とナイジェリアなど海外大
4カ国の留


দৈনিক ইত্তেফাক
তরুণকণ্ঠ
facebook.com/ittefaq.torunkantha
ব্রাক বিশ্ববিদ্যালয়ের শিক্ষার্থীদের তৈরি ন্যানো স্যাটেলাইট
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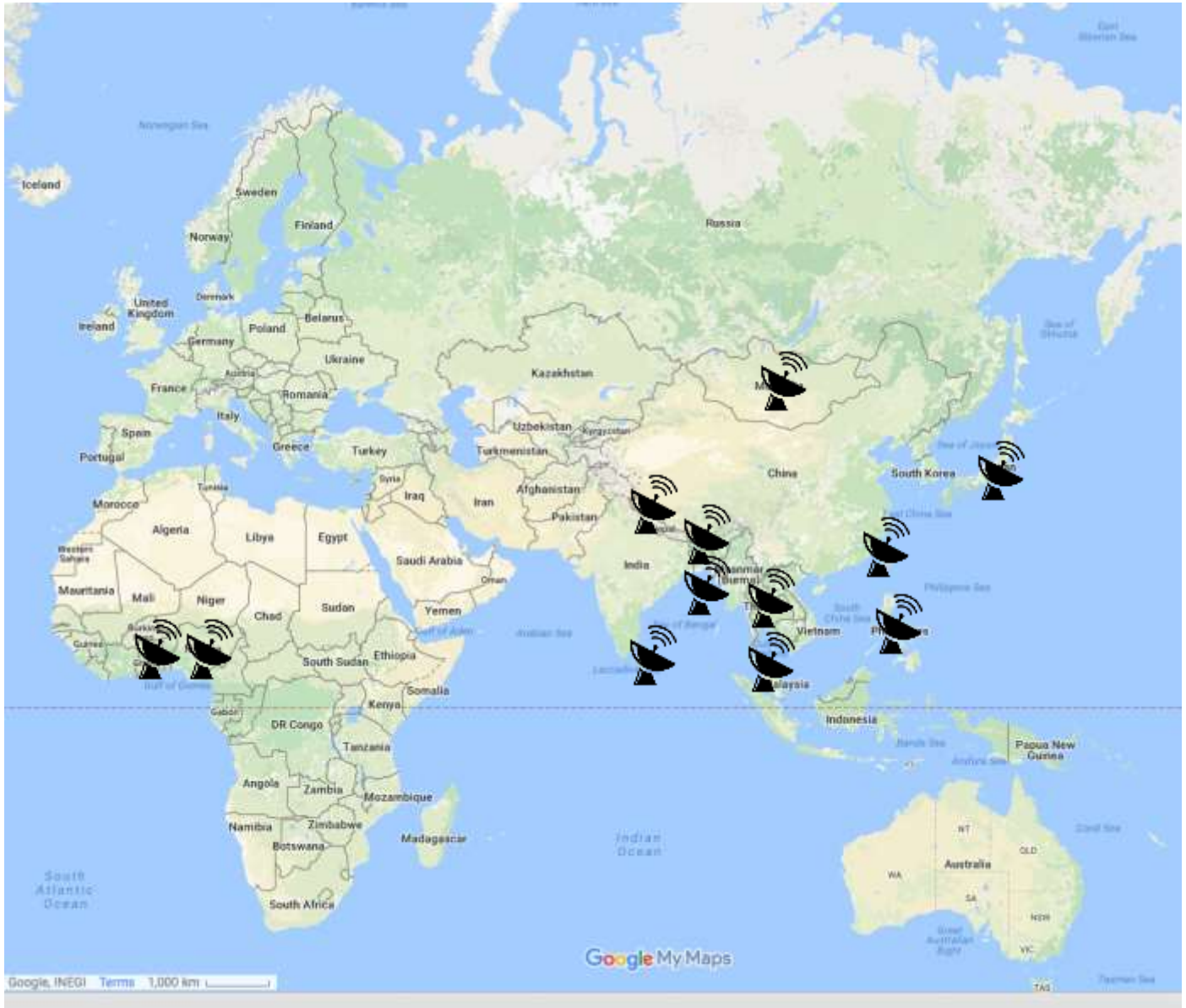
dnn.mn
Манай улс анхны хиймэл дагуулаа ирэх оны тавдугаар сард хөөргөнө


All Nations University ventures into space technology
Quick Read


21 | education
Thursday, 29 June, 2017 | Nigerian Tribune
'FUTA's Edusat-1 will promote satellite technology and space careers among children, youths'
The Federal University of Technology, Akure (FUTA) recently announced its presence in the space technology by emerging as the first university in Nigeria to build and launch a satellite into space. The historic launch took place at the Kennedy Space Centre, Florida, United States. In this online interview from Japan, Mr Ibukun Adebolu, one of the members of the FUTA team that achieved the
education

From Prof Cho's presentation file (UNISEC 15th anniversary event)



← Current extent of the BIRDS Ground Station Network … it is growing

Finally, a very fine video has been produced about this anniversary UNISEC event. It is under four minutes. Please have a look at it here:

https://youtu.be/BQQ1WmlAJcM

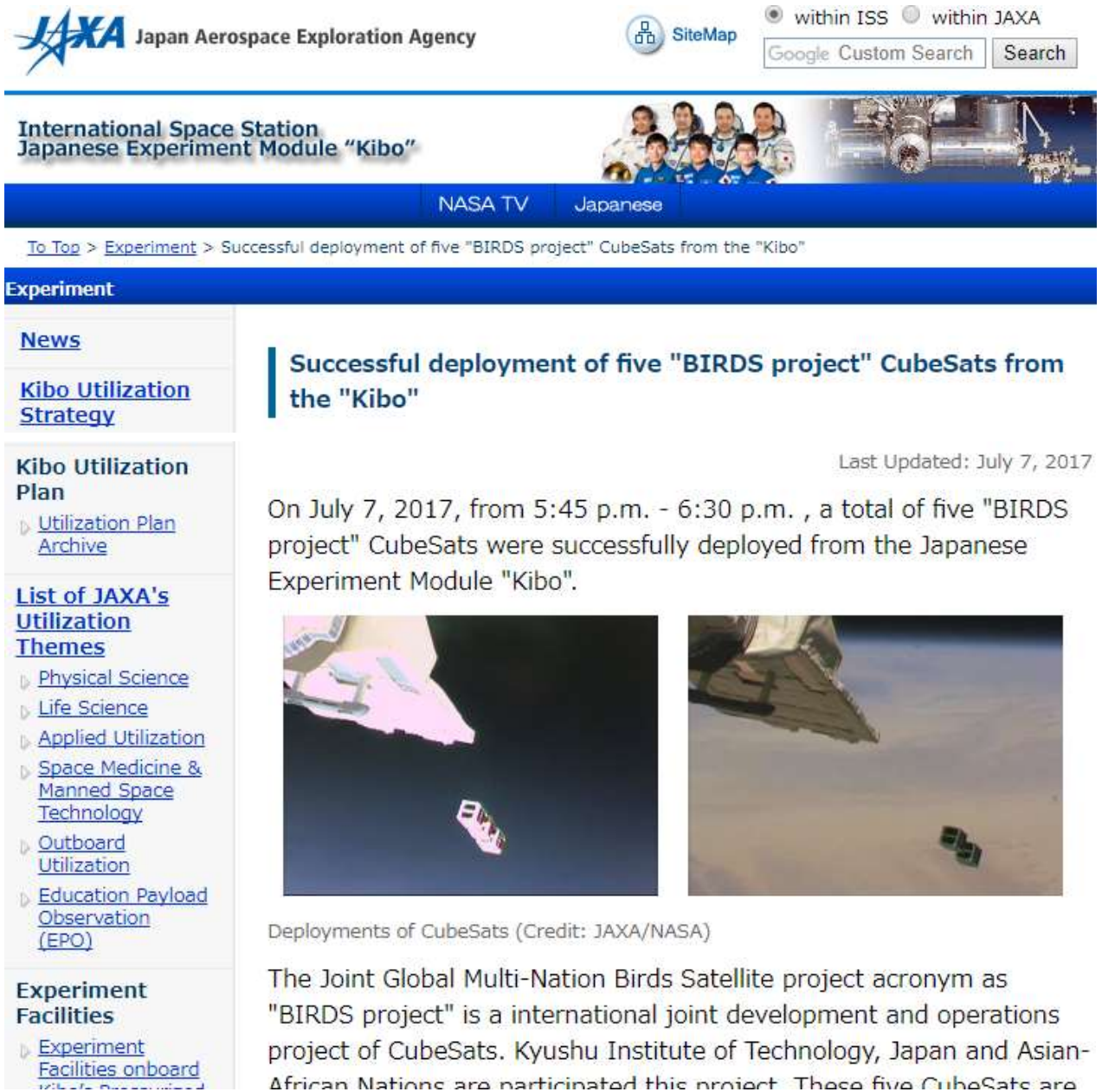
End of section on UNISEC 15th anniversary event

03. Read all about BIRDS-1 deployment (last summer) at JAXA's website

Below is the URL for the website at the right
http://iss.jaxa.jp/en/kiboexp/news/170707_cubesat_birds.html

The basic BIRDS time table

Deployment of BIRDS-1	Summer of 2017
Deployment of BIRDS-2	Summer of 2018
Deployment of BIRDS-3	Summer of 2019
Deployment of BIRDS-4	Summer of 2020



Japan Aerospace Exploration Agency
SiteMap
within ISS within JAXA
Google Custom Search Search

International Space Station
Japanese Experiment Module "Kibo"

NASA TV Japanese

To Top > Experiment > Successful deployment of five "BIRDS project" CubeSats from the "Kibo"

Experiment

News
Kibo Utilization Strategy
Kibo Utilization Plan
Utilization Plan Archive
List of JAXA's Utilization Themes
Physical Science
Life Science
Applied Utilization
Space Medicine & Manned Space Technology
Outboard Utilization
Education Payload Observation (EPO)
Experiment Facilities
Experiment Facilities onboard

Successful deployment of five "BIRDS project" CubeSats from the "Kibo"

Last Updated: July 7, 2017

On July 7, 2017, from 5:45 p.m. - 6:30 p.m. , a total of five "BIRDS project" CubeSats were successfully deployed from the Japanese Experiment Module "Kibo".

Deployments of CubeSats (Credit: JAXA/NASA)

The Joint Global Multi-Nation Birds Satellite project acronym as "BIRDS project" is a international joint development and operations project of CubeSats. Kyushu Institute of Technology, Japan and Asian-African Nations are participated this project. These five CubeSats are

This text continues at the website

04. Getting an ISSN (Int'l Standard Serial Number) in Japan

Advantages of ISSN [according to the Japanese National Centre for ISSN]

"The foremost advantage of ISSN is that any serial publication with an ISSN can be easily identified irrespective of its publishing country, publisher, language, and genre. The ISSN is used to increase the efficiency of receiving, photocopying, lending, indexing serials at libraries and performing the order placement, receiving and other business operations of publishers and book stores with a faster speed and greater accuracy. Further, when registered at the ISSN International Centre, Japanese serial publications will have greater opportunities for overseas circulation . . ."

In Japan, go to this website to learn about how to get your ISSN
http://www.ndl.go.jp/en/data/issn/index.html#Procedures

Cont'd next page

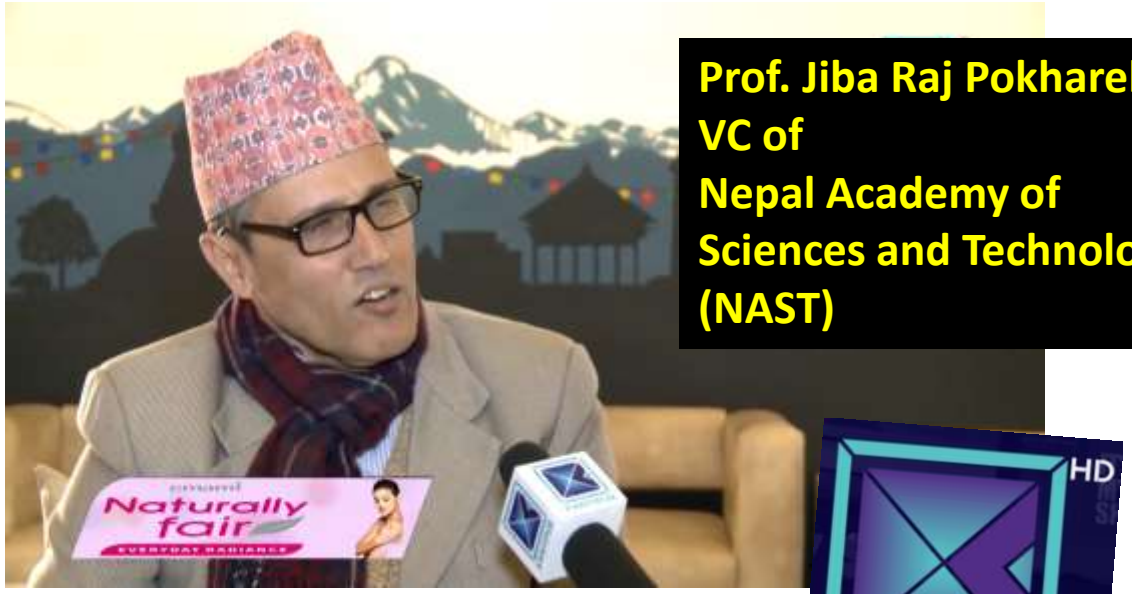
The **BIRDS Project Newsletter** applied for ISSN at the **Japanese National Centre for ISSN** and received the following ISSN from it:

ISSN 2433-8818

From now on, it will appear on the cover page of each issue.

Many thanks to Mr. Touhidul Alam for suggesting the idea of securing an ISSN for this monthly newsletter. He is pursuing a Phd at UKM in Malaysia.

05. Nepal's first satellite (a BIRDS-3 CubeSat) is announced on television



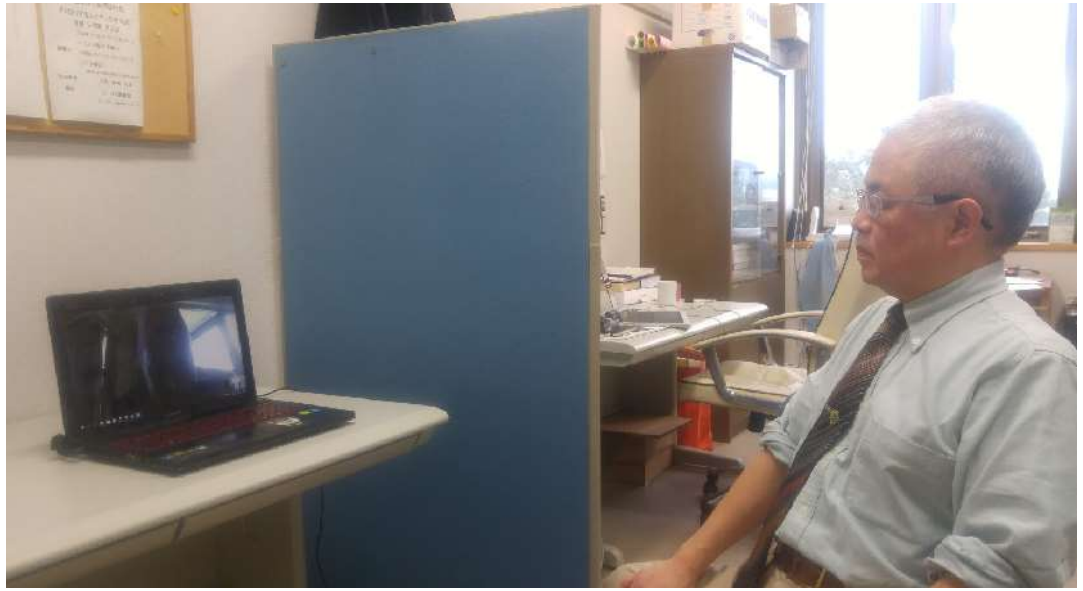
Prof. Jiba Raj Pokharel
VC of
Nepal Academy of Sciences and Technology (NAST)

Kantipur Television, one of the major TV channels in Nepal, announced that Nepal is going to launch its first satellite by 2019. Prof. Jiba Raj Pokharel, the Vice Chancellor of NAST, gave an overview of what the satellite does and how NAST has been involved in the project. Kyutech's name was also mentioned during the report. The report was aired on 29th January 2018.

- submitted by Abhas on 3 Feb. 2018

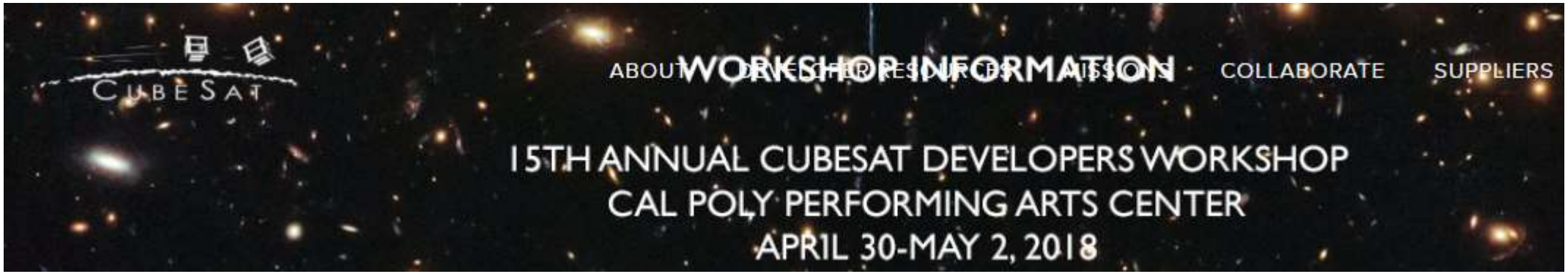
More news about Nepal on the next page.

← A Skype call between Prof. Pokharel (VC of the Nepal Academy of Science and Technology) and G. Maeda took place on 6 February 2018 (and on other days as well) to discuss matters of BIRDS-3.



Escorting the NAST VC to Fukuoka Airport on 19 Jan. 2018; this photo taken at Hakata Bus Terminal on that day.

06. 15th Annual CubeSat Developers Workshop, at Cal Poly, 30-April thru 2-May, 2018



Cont'd on the next page.

Check out these cool links

WORKSHOP 2018 INFORMATION - APRIL 30-MAY 2, 2018

http://www.cubesat.org/

1U-3U CUBESAT DESIGN SPECIFICATION

6U CUBESAT DESIGN SPECIFICATION

New From NASA CubeSat Launch Initiative:

CUBESAT 101: BASIC CONCEPTS AND PROCESSES FOR FIRST-TIME CUBESAT DEVELOPERS

07. 32nd Annual Small Satellite Conference, 4-9 August 2018, Logan, Utah, USA

Cont'd On The Next Page.

Wikipedia on this conference . . .

Read | Edit | View history | Search Wikipedia

Small Satellite Conference

From Wikipedia, the free encyclopedia

Internationally recognized as the premier conference on small satellites, the **AIAA/USU Conference on Small Satellites** (also known as the **Small Satellite Conference**, or **Small Sat**) is held each August on the campus of Utah State University (USU) in Logan, Utah, USA.

Small Satellite Conference

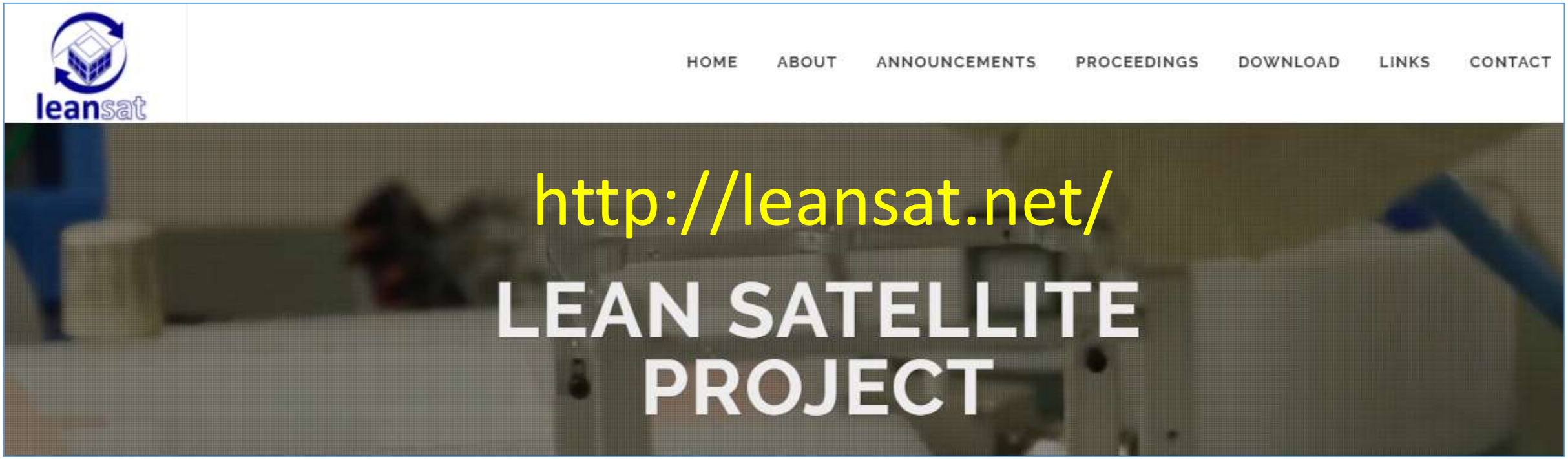
Established	1987
Location	Logan, Utah, United States
Campus	Utah State University

This annual gathering provides a forum for the best minds in the small satellite community to review recent successes, explore new directions, and introduce emerging technologies in small spacecraft development. In addition to creating an excellent environment for networking and speaking with experts in military, science, and academic fields, the Conference offers a program of international relevance, focusing on the key challenges and opportunities facing the small satellite community today.

History [edit]

The first Small Satellite Conference was held in 1987 on the campus of Utah State University in Logan, Utah, USA and has remained there for each succeeding conference. In the beginning, small satellites were not widely accepted but have since become a vital part of the space industry. 'Small' is a relative term as mass continually decreases to create new types of small satellites. Though no standard for small satellites is accepted by all, it is generally assumed to include satellites up to 250 kg.

08. Join the “Lean Satellite Project” of Kyutech



Information about new events and happenings are distributed by mailing list. If you would like to be on this mailing list, please send an e-mail to nets_office@space-kyutech.net indicating your name, position, and affiliation.

- Prof. Mengu Cho
Laboratory of Spacecraft Environment Interaction Engineering
Kyushu Institute of Technology

09. UNISEC-Global delivers statement and presentation at COPUOS in Vienna

Dear UNISEC-Global Community,

UNISEC-Global made a statement on Jan 31 and
made a technical presentation on Feb 1 during STSC-2018.

Statement:
http://www.unisec-global.org/pdf/UNISEC_Statement_at_STSC2018_Jan31.pdf

Presentation file:
http://unisec-global.org/pdf/UNISEC-Global_STSC2018_Feb1.pdf

Four delegates (from Bulgaria, Italy, Japan, Korea) completed the mission.
Thank you very much for your kind support ! !

With warm regards,
Rei Kawashima
http://unisec-global.org/
4-Feb-2018

Mission Idea Contest (MIC) and BIRDS are mentioned on Slide 19. - Editor.

10. The BIRDS-3 weekly meeting

The weekly meeting is every Monday at 4:20 PM.

This one occurred on 5 February 2018. Attendance by all members of the BIRDS-3 Team is mandatory. Problems and progress are thoroughly discussed.

11. “PNST Symposium” mentioned in Japanese education journal

This event was covered in depth in **BIRDS Project Newsletter No. 23**, pages 16-28.

平成３０年　２月　２日（金曜日）　文　教　速　報　（第三種郵便物認可）　第８５２６号　－７－

超小型衛星技術の留学生受入事業
九工大がシンポジウム、活動を総括

右から尾家九工大学長、文科省の泉氏、宇宙環境技術ラボの趙教授（九工大）、国連宇宙部のルーク氏、内閣府宇宙開発戦略推進事務局の行松氏、宇宙航空研究開発機構の若田氏、エジプト宇宙機関のモハメド ヤヒア氏

九州工業大学では、世界的に高まる超小型衛星を用いた宇宙開発能力構築（Capacity Buildingのための人材育成）への需要に応えるため、2011年度に国連宇宙部（UNOOSA）と共同で非宇宙先進国からの留学生を博士後期課程学生として受け入れる事業を開始している。2017年度入学分をもって国費留学生優先配置プログラムの1期目が終了するのに合わせ、これまでの活動を総括するシンポジウムをこのほど開催。参加者は総勢151名に上るなど、大いに盛り上がった。

同事業は「Doctorate on Nanosatellite Technologies」（DNST）としてスタートした。2013年度からは文科省の国費留学生優先配置プログラムに採択され、「Post-graduate study on Nanosatellite Technologies」（PNST）に名称を変更。名称変更に合わせ、九工大に宇宙工学国際コース（SEIC）を設置している。

シンポジウムでは、九工大の尾家学長、文科省の泉氏による挨拶に続いて、趙教授（九工大宇宙環境技術ラボラトリー）がPNSTに関する経過報告を行った。

また、国連宇宙部のルーク氏、内閣府宇宙開発戦略推進事務局の行松氏、宇宙航空研究開発機構の若田氏による基調講演に続いて、PNSTの修了生代表としてエジプト宇宙機関のモハメド ヤヒア氏によるプログラムの報告を実施した。

最後に、基調講演の3名とPNST卒業生のモンゴル国立大学エルカ氏、コスタリカ大学マリエラによるパネルディスカッションを行い、現在学んでいる学生らに向けたメッセージで締めくくられた。

パネルディスカッション
参加した各国からの参加者

広島大で中国四国男女共同参画シンポ

広島大学は、文科省の科学技術人材育成費補助事業である「ダイバーシティ研究環境実現イニシアティブ（牽引型）」の取組の一環として、中国地区・四国地区の女性活躍推進、男女共同参画推進を目的に、第9回中国四国男女共同参画シンポジウムをこのほど開催した。教職員、学生、他大学関係者、地方自治体関係者など約100人が参加した。

講演する堂本氏

「平和で持続可能な社会づくりにおける男女共同参画」を全体テーマに、基調講演は、相田美砂子理事・副学長（大学改革担当）が「広島大学の長期ビジョン

昭和31年12月14日
第三種郵便物認可

文教速報

平成30年2月2日（金曜日）第8526号

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月額:7,020円
（うち消費税 520円）

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FAX 5763
編集部
(03)3251-5765
FAX 5763
E-mail:bunkyo@kancho-t.com

12. What is Hinamatsuri? . . . ひな祭り

Hinamatsuri (雛祭り Hina-matsuri), also called Doll's Day or Girls' Day, is a special day in Japan.

"Hinamatsuri is celebrated each year on March 3. Platforms covered with a red carpet are used to display a set of ornamental dolls (雛人形 hina-ningyō) representing the Emperor, Empress, attendants, and musicians in traditional court dress of the Heian period." More at: https://en.wikipedia.org/wiki/Hinamatsuri

Hinamatsuri store display in Seattle, Washington, USA, featuring all 7 tiers. (Wikipedia)

More on the next page

Promotion of Hinamatsuri by JR Kyushu

Material of this page comes from: https://www.nippon.com/en/features/jg00031/

“Hinamatsuri”: Japan’s Doll Festival

Celebrating Daughters with Fancy Figurines

ひな祭り

Hinamatsuri, or the doll festival, is observed on March 3 to celebrate female children and pray for their continued health and happiness. During the holiday, also known as *momo no sekku* (peach festival), families display ceramic dolls dressed in the ornate, decorative robes of the ancient imperial court. The manufacturing of these figurines remains a thriving example of traditional Japanese craftwork.

An Early Spring Tradition

March 3 marks the observance of the *hinamatsuri* (doll festival), one of five *sekku*, or seasonal festivals, celebrated through the year. Together known as *gosekku*, these events took shape in part through the influence of Chinese philosophy and were first observed by courtiers during the Heian period (794–1185). They fell on the first day of the year’s first month, the third day of the third month, and so on—dates considered to be highly auspicious owing to the doubling of odd numbers for the month and date. (On the modern calendar, they are celebrated on January 1, March 3, May 5, July 7, and September 9.) On these days, ceremonies were conducted and special dishes prepared and eaten to ensure good fortune.

Over time, the March *sekku* took on aspects of a broader tradition involving the making of simple paper dolls called *hitogata*. These dolls were common toys for children of aristocratic families as well as serving as *katashiro*, or emblems used in purification rituals. The *hinamatsuri* gradually became a time to give thanks for the health and development of young girls, thanks to the influence of a traditional form of doll play called *hina-asobi*.

March 3 is also referred to as *momo no sekku*, or the peach festival. The blossoms of the peach tree, which according to the lunar calendar bloom around the beginning of the third month, are not only prized as harbingers of spring but are traditionally thought to ward off malevolent spirits. These aspects, along with their beauty, have combined to make them an essential decoration of the *hinamatsuri*.

Continued next page

SAGA JOKA HINAMATSURI (SAGA CASTLE TOWN DOLL FESTIVAL)

SAGA Number of Hits 1072 Times

SAGA JOKA HINAMATSURI (SAGA CASTLE TOWN DOLL FESTIVAL)

The "hina-matsuri" (doll festival) is famous for the quality and elegance of its hina dolls. The dolls displayed were owned by successive wives of the Nabeshima Lords between the end of the Edo Era and the Meiji Era. The doll sets including other decorative articles are gorgeous and intricate. Some dolls wear "Otome-gata Nabeshima-komon (kimonos with little patterns designated according to clan)," which patterns were used for "kamishimo (formal samurai clothing)" of the Saga clan, and others wear kimonos made of "teori Saga nishiki (classic hand-woven fabric)", and are very elegant, and only to be seen in Saga.

USEFUL INFORMATION

DATE	2011/02/19 ~ 2011/03/21
ADDRESS	〒840-0823 Kaiwai, Yanagimachi, Saga-shi, Saga
AREA	Saga prefecture Saga, Ogi : Saga prefecture

https://www.welcomekyushu.com/event/?mode=detail&id=9999900000357

End of hinamatsuri article

13. The BIRDS Project and Cho Lab aggressively implements "5S"

***5S** is the name of a workplace organization method that uses a list of five Japanese words: seiri, seiton, seisou, seiketsu, and shitsuke. Transliterated into Roman Script, they all start with the letter "S". The list describes how to organize a work space for efficiency and effectiveness by identifying and storing the items used, maintaining the area and items, and sustaining the new order. The decision-making process usually comes from a dialogue about standardization, which builds understanding among employees of how they should do the work.*

-- from Wikipedia,
https://en.wikipedia.org/wiki/5S_(methodology)

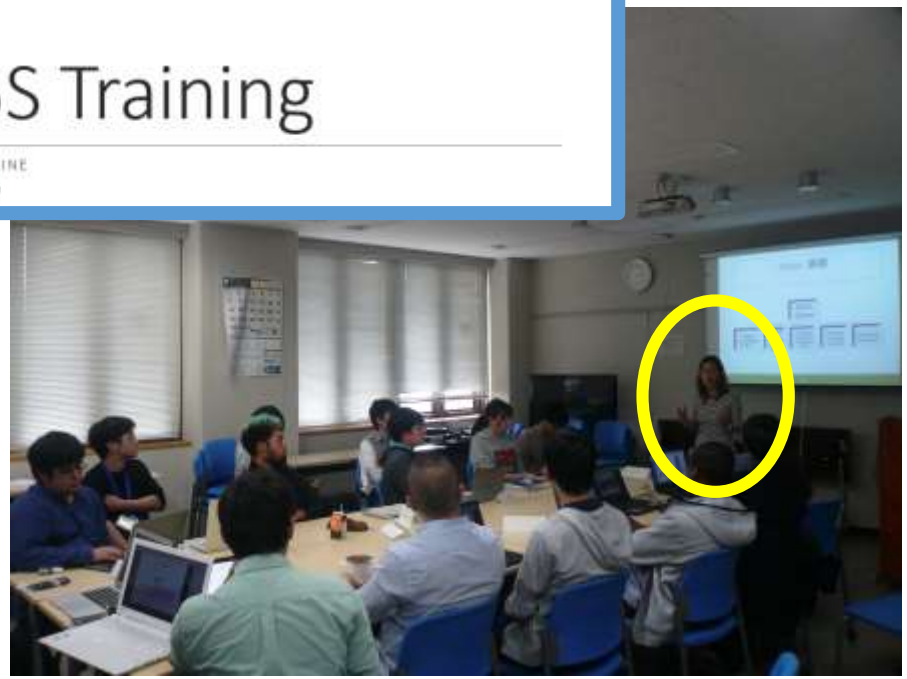
整理（せいり、Seiri）
いらないものを捨てる
整頓（せいとん、Seiton）
決められた物を決められた場所に置き、いつでも取り出せる状態にしておく
清掃（せいそう、Seisou）
常に掃除をする
清潔（せいけつ、Seiketsu）
3S（上の整理・整頓・清掃）を維持し職場の衛生を保つ
躾（しつけ、Shitsuke）
決められたルール・手順を正しく守る習慣をつける

Students doing **5S** on 7th Feb. 2018, after lunch

Cont'd on the next 3 pages

To help us implement 5S, a professional safety and health engineer was hired for the 5S project. She is shown below. On 2 Nov 2017 (13:00～16:00) she led a 5S training class for the students, also shown below.

Teaching good work habits



María J. Matamoros
(from Costa Rica)
Safety and Health Engineer

An example of 5S effectiveness here at Kyutech

Before
(unsafe)

After
(safe)

← 5S poster created by Maria for LaSEINE

Stay tidy and organized: In the long run, it saves a great deal of time.

End of 5S article

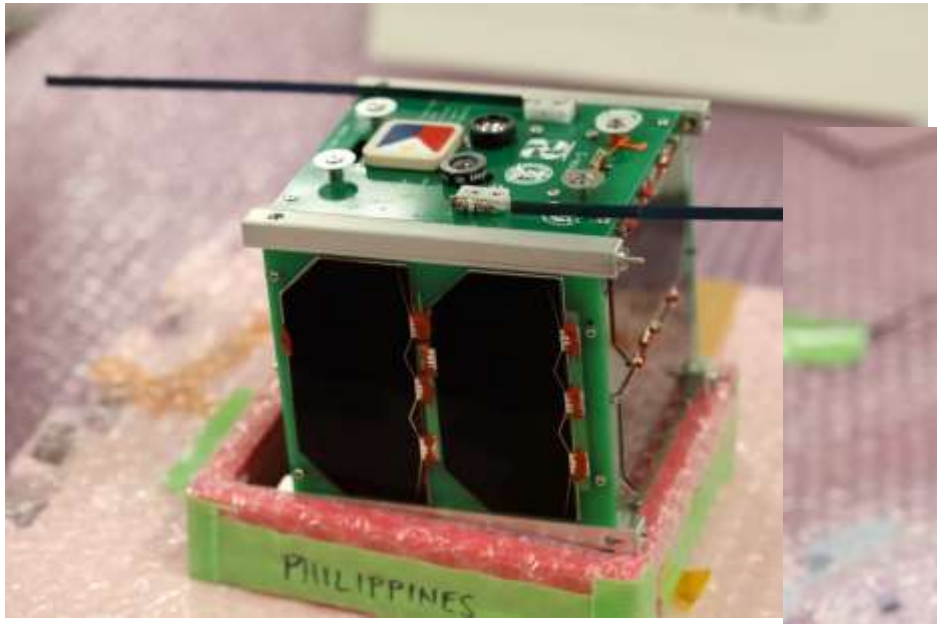
14. Mid-winter snow falls on northern Kyushu . . . 12 Feb 2018

JR Kyushu Tobata Station

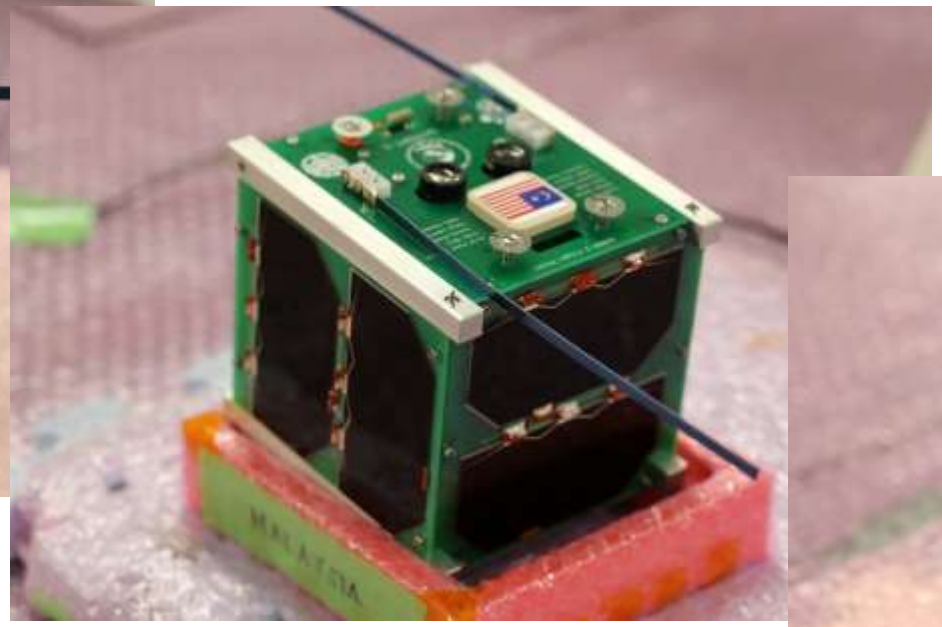
The main gate of Kyutech

15. The three flight models of BIRDS-2 (Philippines, Malaysia, and Bhutan)

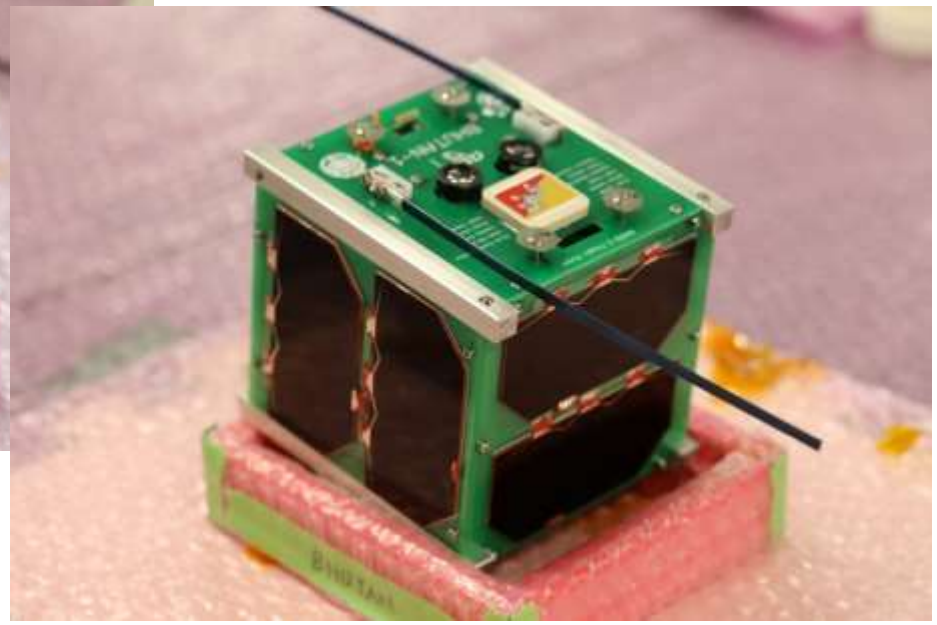
10 Feb 2018 photos



Philippines



Malaysia



Bhutan

16. A simple farewell dinner for Dr Huzaimy of Malaysia

Dr Huzaimy soon leaves Japan to return to Malaysia. We had a small dinner for him on 12 February in his office on the 7th floor.

Dr Huzaimy, who is with UiTM in Malaysia, came to Kyutech to teach this course: "**Space Weather and Satellite System Interaction**". He taught the course each Tuesday from 12 December 2017 to 13 February 2018. It was the first time at Kyutech that you found "Space Weather" in a course title. [The preceding is also mentioned in *BIRDS Project Newsletter No. 23*, Page 29.]

In addition, as the UiTM contact person for UiTM's BIRDS-2 Project, he came to Kyutech to be able to inspect the work of two UiTM students, Azami (2nd from the left) and Syazana (3rd from the left), shown in this dinner photo.

Dr Huzaimy: Thanks for your many academic contributions to Kyutech during your winter stay.

- G. Maeda, The Editor

Sample images taken by flight models of BIRDS-2

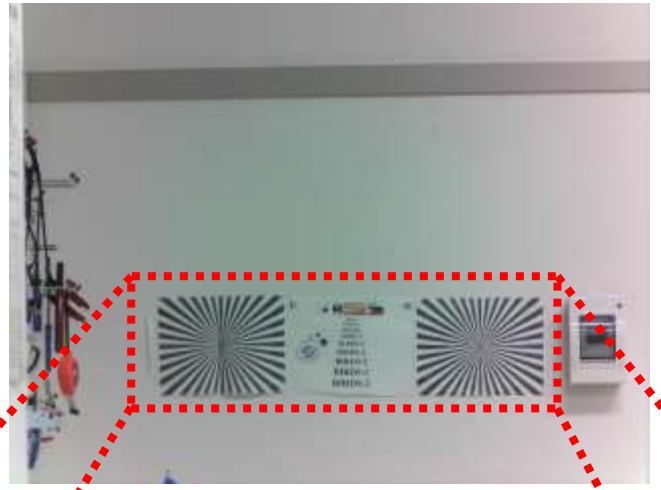
Feb 11th , 2018

Prepared by Azami

Key Parameters (for the next three pages)

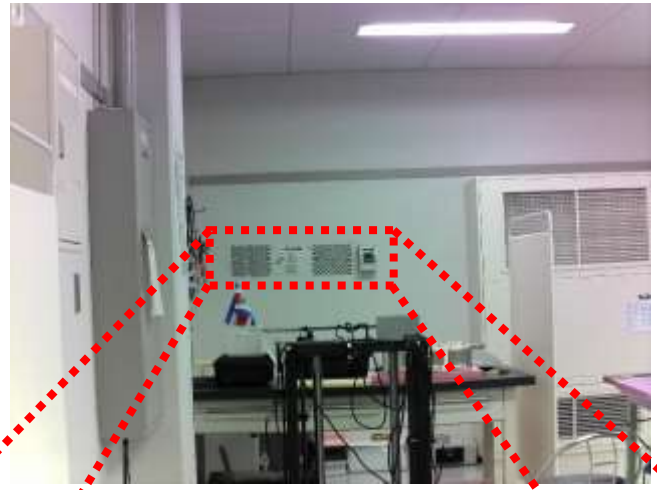
I. Resolution : 2592 x 1944 (5MP)
II. Compress : Default
III. Exposure level : 0
IV. Distance : ~10m
V. Location : Inside clean room, 3rd floor SVBL building

BHUTAN-1 satellite



OVCAM1

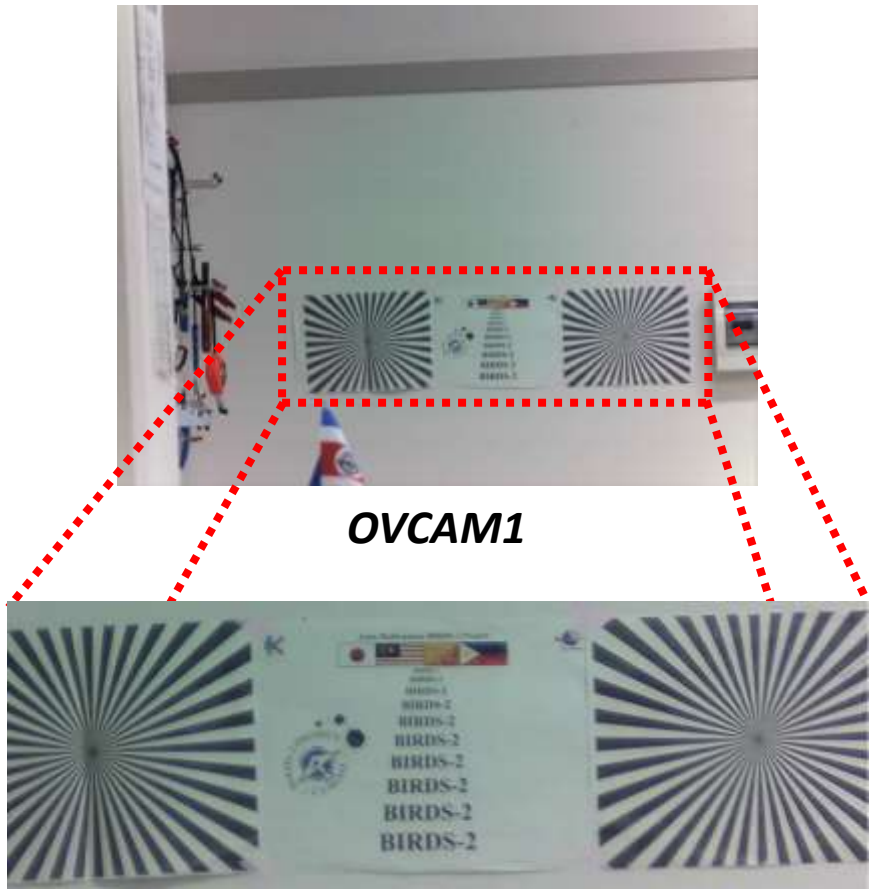
Original images



OVCAM2

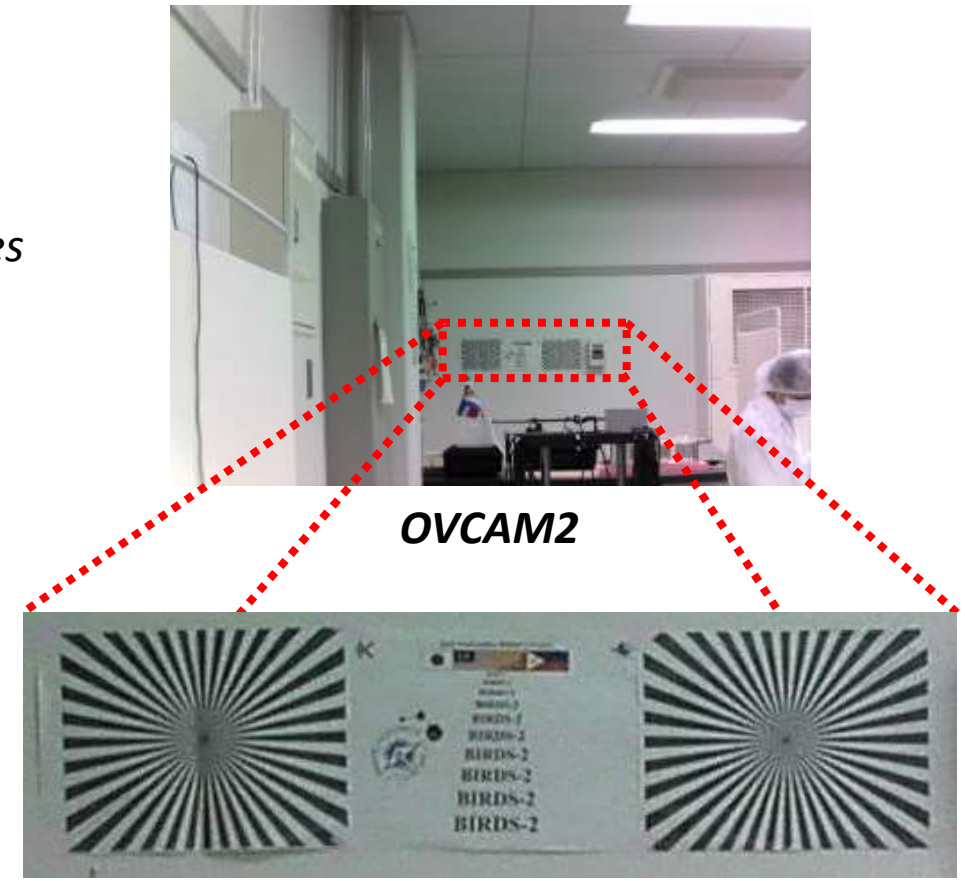
100% zoom

MAYA-1 satellite (Philippines)

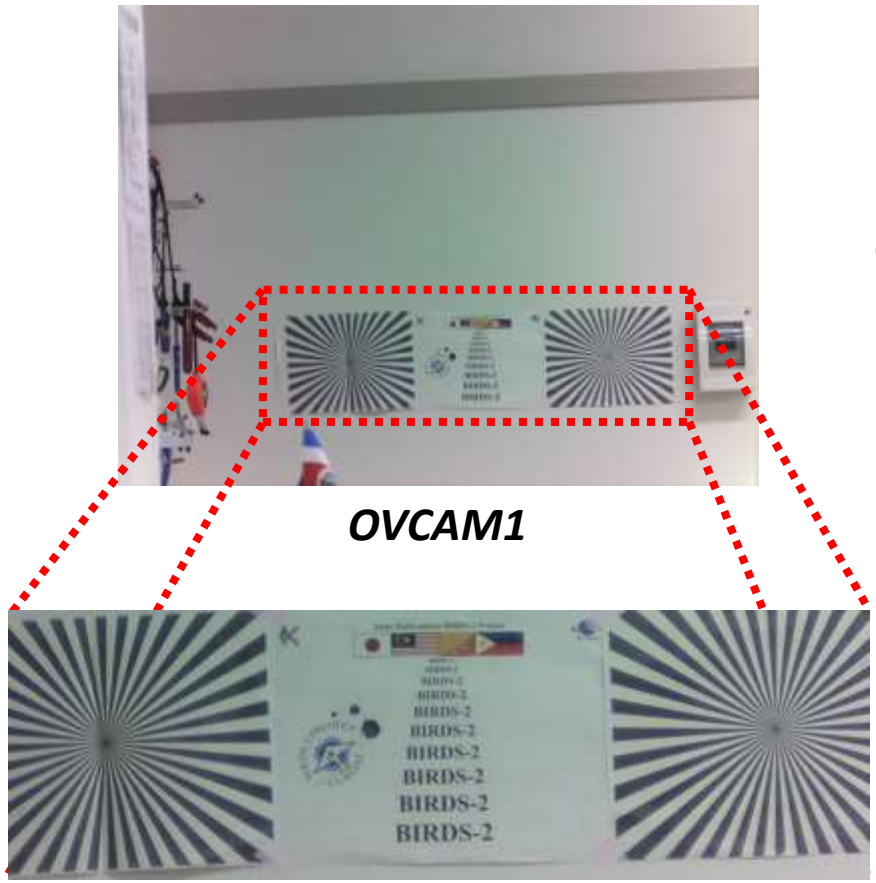


Original images

100% zoom



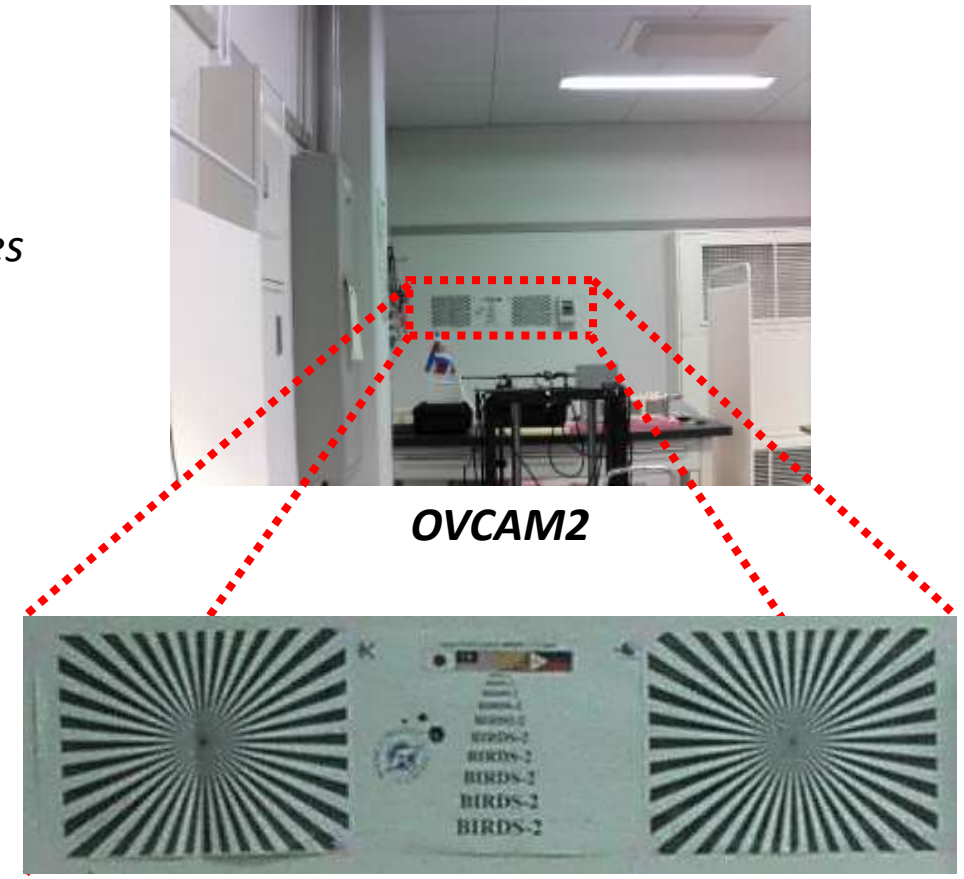
UiTMSAT-1 satellite (Malaysia)



OVCAM1

Original images

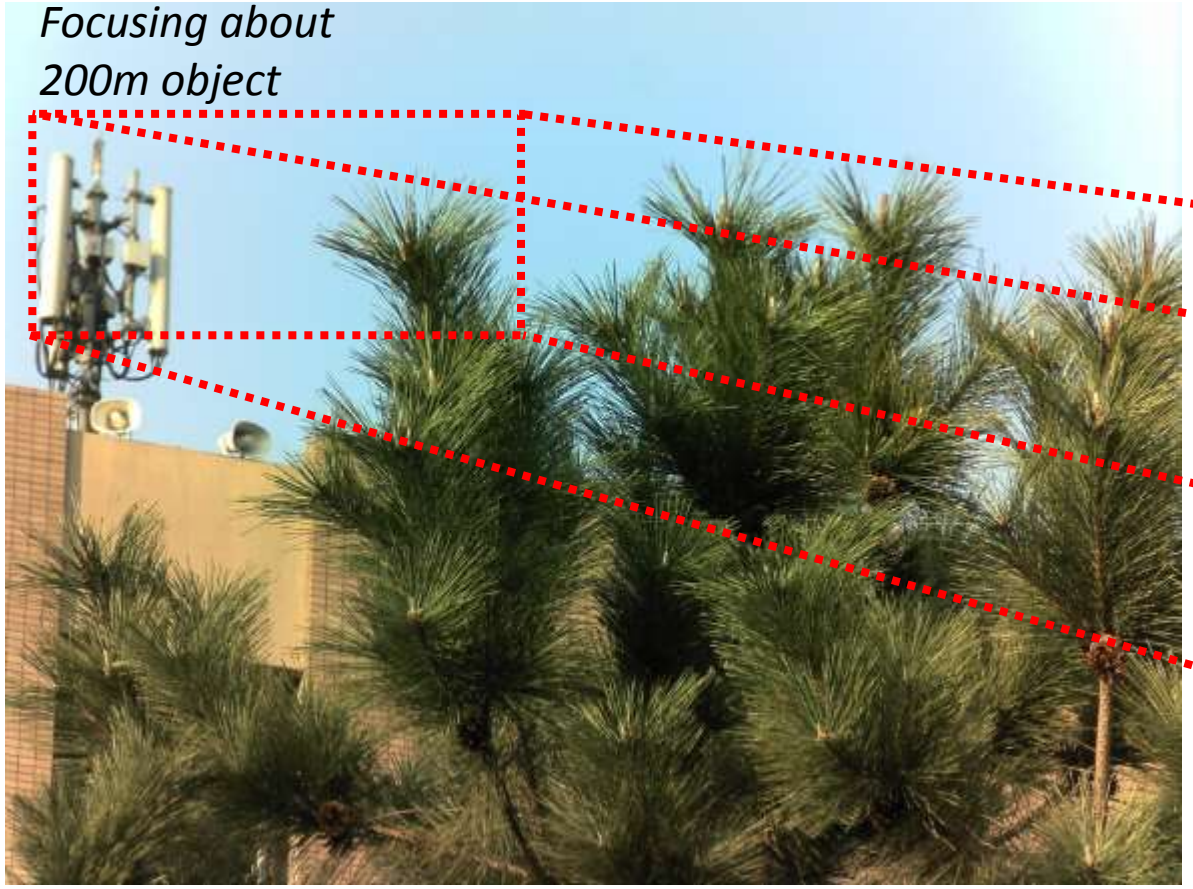
100% zoom



OVCAM2

Capturing Outdoor Images

***Conclusion**:*
OVCAM's narrow lens has results almost as good as images captured by a smartphone's camera.



Original image by OVCAM1

100% zoom by smartphone 16MP

100% zoom

End of camera report by Azami

18. The list of BIRDS articles that appeared in the news media last year

https://www.evergreenpsychotherapycenter.com/violence-media-affects-childrens-behavior/

On the next three pages you will see a list of BIRDS articles published during Fiscal Year 2017, which runs from first of Aprill 2017 til the last day of March 2018. This list was compiled by Maisun (BIRDS-1 member) for the 2017 LaSEINE Annual Report.

You can read the original articles by going to the BIRDS website. The same list is there. But on that list, you can click on **"link"** and see the article.

Note:
If you see a BIRDS article published in your country, please send it to me, the editor of this newsletter.

maeda@ise.kyutech.ac.jp

https://www.libertynation.com/media-polls-lowest-trust-level-decades/

No.	Title [in English]	Title [local language]	Date Published	Country of Publication	Name of Publication
1	The rocket onboard "Mazaalai" satellite launched successfully	“Мазаалай” хиймэл дагуулыг тээвэрлэсэн пуужин амжилттай хөөрлөө	2017/6/4	Mongolia	**IKON**
2	"Mazaalai" satellite w ill be transmit the national anthem from space	“МАЗААЛАЙ” ХИЙМЭЛ ДАГУУЛ МОНГОЛЫН НУТАГ ДЭЭГҮҮР ӨНГӨРӨХДӨӨ ТӨРИЙН ДУУЛЛАА ЭГШИГЛҮҮЛНЭ	2017-11-18	Mongolia	**TUSGAL**
3	ICT Expo finishes today		2017/10/20	Bangladesh	Prothom Alo
4	Japan satellite project w on AIRBUS diversity aw ard	โครงการจากญี่ปุ่นคว้ารางวัลชนะเลิศด้านความหลากหลายทางวิศวกรรมของ “แอร์บัส”	2017-10-16	Thailand	**ryt9**
5	Nano satellite made by 3 Bangladeshi student in Earth orbit	পৃথিবীর কক্ষপথে বাংলাদেশের ৩ শিক্ষার্থীর তৈরি ন্যানো স্যাটেলাইট	2017/7/8	Bangladesh	Janakantha
6	BRAC ONNESHA launched to orbit Earth	পৃথিবী প্রদক্ষিণে ন্যানো স্যাটেলাইট ‘ব্র্যাক অণ্বেষা’ ডেক্ষপণ	2017/7/8	Bangladesh	Ittefaq
7	ONNESHA in orbit	অন্বেষা কক্ষপথে	2017/7/8	Bangladesh	Prothom Alo
8	BRAC Onnesha blasts off		2017/7/8	Bangladesh	Daily sun
9	BRAC Onnesha sets off into space		2017/7/8	Bangladesh	New Age BD
10	Brac Onnesha' starts orbiting Earth		2017/7/8	Bangladesh	Daily Asian Age
11	Bangladesh in orbit	কক্ষপথে বাংলাদেশ	2017/7/8	Bangladesh	Kaler Kontho
12	BRAC ONNESHA flies	আকাশে উড়ল ‘ব্র্যাক অন্বেষা’ ন্যানো স্যাটেলাইট	2017/7/8	Bangladesh	Jugantor
13	Bangladesh's first nanosatellite BRAC Onnesha blasts into space		2017/7/8	Bangladesh	BD New s 24
14	Nano-satellite ‘Brac Onnesha’ starts orbiting Earth		2017/7/7	Bangladesh	Observer BD

No.	Title [in English]	Title [local language]	Date Published	Country of Publication	Name of Publication
15	Mazaalai satellite enters the trajectory orbit to execute the 4 experiments	"Мазаалай" дөрвөн туршилт гүйцэтгэхээр тойрог замдаа орлоо	2017/7/7	Mongolia	**IKON**
16	Mazaalai	"Мазаалай" хиймэл дагуул өнөөдөр тойрог замдаа орно	2017/7/7	Mongolia	**ikon.mn**
17	Mazaalai satellite enters trajectory orbit	Мазаалай хиймэл дагуул тойрог замд орлоо.	2017/7/7	Mongolia	**Gogo News Agency**
18	"Mazaalai" satellite successfully deployed in space	“МАЗААЛАЙ” ХИЙМЭЛ ДАГУУЛ САНСРЫН ТОЙРОГ ЗАМД ОРЛОО	2017-07-07	Mongolia	**Mongolian News Agency**
19	First Bangladeshi nanosatellite starts orbiting around Earth		2017/7/7	Bangladesh	Dhaka Tribune
20	BRAC ONNESHA in orbit	ব্র্যাক অন্বেষা কক্ষপথে	2017/7/4	Bangladesh	Jugantor
21	"Mazaalai" satellite's 4 main missions	Мазаалай” хиймэл дагуул нь сансарт дөрвөн туршилтийг гүйцэтгэнэ	2017-06-30	Mongolia	**Eagle TV**
22	Mazaalai satellite to orbit over Mongolia 5-6 times per day	Мазаалай хиймэл дагуул өдөрт 5-6 удаа Монгол дээгүүр өнгөрнө.	2017/6/20	Mongolia	**Gogo News Agency**
23	SBN TV News: NUM gives certificate to organizations and individuals for their contribution to build MAZAALAI	SBN Мэдээ: Мазаалай хиймэл дагуулыг зохион бүтээхэд туслалцаа үзүүлсэн иргэд АА Н-д батламж гардууллаа	2017/6/19	Mongolia	**SBN TV**
24	President of NUM talks about importance of satellite; on Mongolian National Broadcaster TV	МУИС-ийн захирал Я.Төмөрбаатар: 'Мазаалай" хиймэл дагуулын ач холбогдол	2017/6/19	Mongolia	**MNB**
25	What is the missions of the "Mazaalai" satellite?	МАЗААЛАЙ” ХИЙМЭЛ ДАГУУЛ ЯМАР ҮҮР ЭГТЭЙ ВЭ?	2017-06-06	Mongolia	**News Agency Mongolia**
26	"Mazaalai" satellite's launch & Social media reactions	“МАЗААЛАЙ” ХИЙМЭЛ ДАГУУЛ ХӨӨРСӨНТЭЙ ХОЛБООТОЙ ХӨГЖИЛТЭЙ 10 ПОСТ	2017-06-06	Mongolia	**UB.LIFE**

No.	Title [in English]	Title [local language]	Date Published	Country of Publication	Name of Publication
27	The Mazaalai satellite which created by Mongolian scientists .	МОНГОЛ ЭРДЭМТДИЙН БҮТЭЭСЭН "МАЗААЛАЙ" ХИЙМЭЛ ДАГУУЛЫГ ХӨӨРГӨВ	2017-06-05	Mongolia	**Bloomberg Mongolia TV**
28	Mongolia's first satellite sent into space	Монголын анхны хиймэл дагуул сансарт хөөрлөө.	2017/6/4	Mongolia	**Gogo News Agency**
29	Mongolian first satellite will be launched on Sunday	Монголын анхны хиймэл дагуулыг Ням гарагт хөөргөхөөр болжээ	2017/6/2	Mongolia	**IKON**
30	The Mazaalai satellite registrered the Mongolian first space launched object.	Монгол Улсын сансарт хөөргөсөн анхны биет зүйлсэд мазаалай хиймэл дагуулыг бүртгэлээ	2017/6/2	Mongolia	**IKON**
31	Flight of Mongolia's first satellite postponed due to rain	Монголын анхны хиймэл дагуулын хөргөлт борооны улмаас хойшлогдлоо.	2017/6/2	Mongolia	**Gogo News Agency**
32	"Mazaalai" satellite registered as first spacecraft sent into space from Mongolia	Монгол улсын сансарт хөөргөсөн анхны биет зүйлсэд “МАЗААЛАЙ” хиймэл дагуулыг бүртгэлээ	2017-06-02	Mongolia	**Communications Regulatory Commision of Mongolia**
33	First Mongolian satellite "Mazaalai" will be launched on June 2 at 5:50 pm from NASA.	Монгол улсын анхны ”Мазаалай” хиймэл дагуул НАСА-гаас 6 сарын 2-ны 05.50 минутанд хөөрнө	2017-06-01	Mongolia	**Zindaa**
34	Ground station for country’s first nano-satellite inaugurated at Brac University		2017/5/25	Bangladesh	Dhaka Tribune
35	SBN TV News: Mongolian First satellite MAZAALAI will launch next month	SBN Мэдээ: Монгол Улс анхны хиймэл дагуулаа ирэх сарын эхээр хөөргөнө	2017/5/23	Mongolia	**SBN TV**
36	Bloomberg Mongolia TV Interview about First Mongolian Satellite	Монголын анхны хиймэл дагуулын тухай Bloomberg Mongolia телевизийн ярилцлага	2017/5/22	Mongolia	**Bloomberg Mongolia TV**
37	Brac University’s nano-satellite to hit orbit in May		2017/4/25	Bangladesh	The Daily Star
38	Mongolian first satellite "Mazaalaai" enters the its trajectory orbit today.	"Мазаалай" хиймэл дагуул өнөөдөр тойрог замдаа орно	2017-04-02	Mongolia	**Times MN**

19. Ghana coastline captured by camera of Kyutech HORYU-IV satellite

CAM mission (13.02.2018, ~01:40 JST)

Ghana from Google Maps

HORYU-IV

The above material from "Dima" (Dr Dmytro Faizullin) on 17 February 2018

20. First Ground Station Operation Workshop @ Kyutech --- 22 Jan - 01 Feb (2018)

Report by Apiwat J. and Maisun M.

In January 2018, Kyutech invited young engineers from 12 countries to attend the **First Ground Station Operation Workshop** at Kyutech, Japan. Purposes of the workshop were to (1) carry out hands-on training on satellite operation, especially operation of CubeSat constellation utilizing ground station network (2) Discuss the Store and Forward (S&F) mission, (3) Discuss the ground sensors for S&F, and (4) Discuss lessons learnt of BIRDS-1 operations.

Sponsored by the following:

JSPS 独立行政法人 日本学術振興会 Japan Society for the Promotion of Science

Infostellar

Kyutech Kyushu Institute of Technology

La SEINE Laboratory of Spacecraft Environment INteraction Engineering

International Workshop on Lean Satellite
IWLS 2018

Day #1-3, Jan 22

International Workshop on Lean Satellite 2018 Group Photo

Participants of First Ground Station Operation Workshop attended the International Workshop on Lean Satellite during Jan 22-25. The purpose of IWLS is to further promote the study of lean satellites.

Laboratory of Spacecraft Environment INteraction Engineering

LaSEINE Facilities Tour

Day #2, Jan 23 Afternoon

Participants of the workshop visited Center of Nano Satellite Testing which is one of main facilities of LaSEINE.
More than 80 percent of small satellites built in Japan (less than 50kg class) are tested at Kyutech.

Dr.Kim introduces many types of Vacuum Chambers to the guests.

LaSEINE Facilities Tour

Day #2, Jan 23 Afternoon

Highlight photo in front of BIRDS GS antenna

Apiwat explains the GS antenna

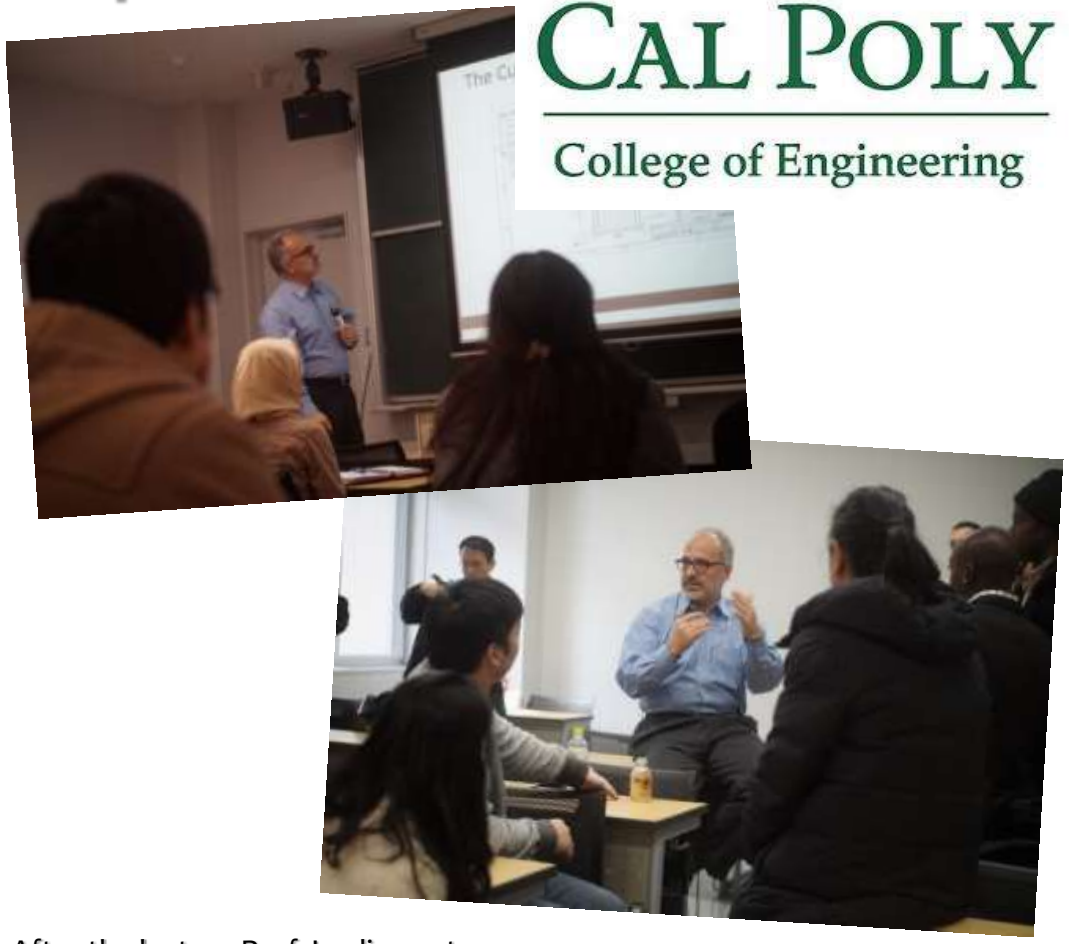
HORYU-IV S-band Dish Antenna

Special lecture by Prof. Jordi Puig-Suari of Cal Poly: “Role of small satellites in workforce development”

Day #4, Jan 25

Prof. Jordi Puig-Suari (in the blue shirt)

CAL POLY
College of Engineering

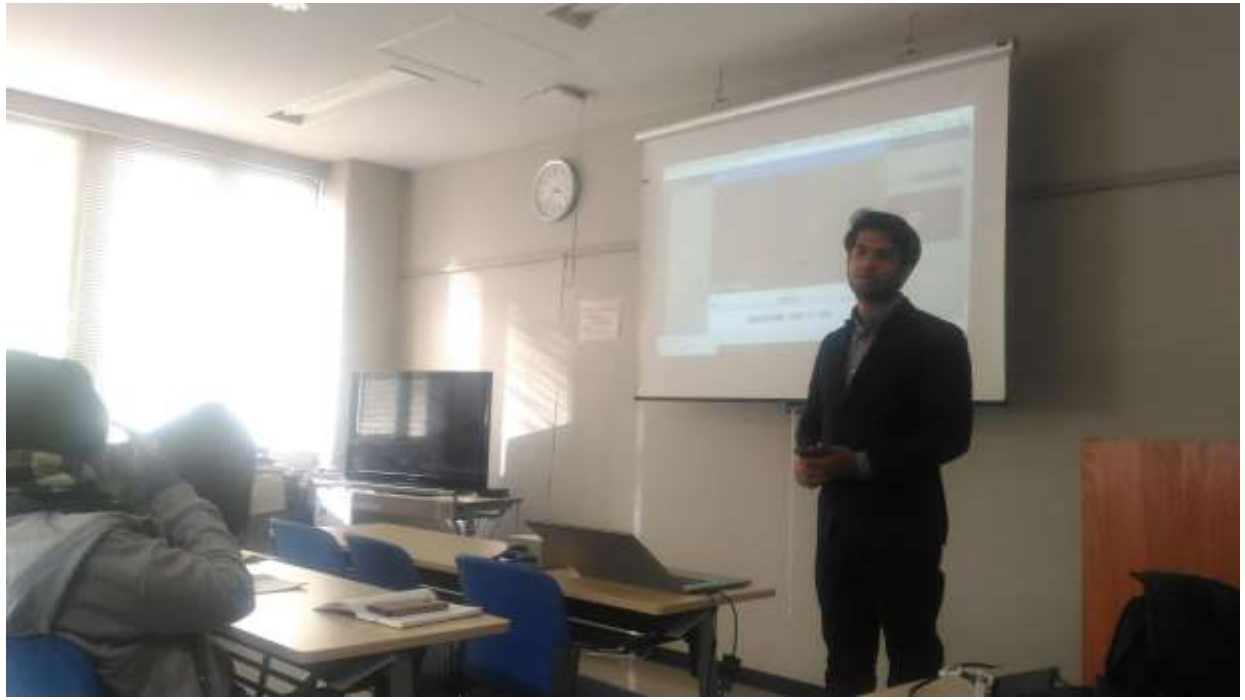


After the lecture Prof.Jordi spent
some time with student and workshop participants

Lectures by Dr. Naomi Kurahara and Mr. Vijayan, both with Infostellar, Inc.

Day #4, Jan 26 Afternoon

Dr. Kurahara gave lectures on Satellite Ground Station and Radio communications



Mr. Vijayan demonstrates Infostellar Ground Station Network device by remote control of the ground station antenna in Tokyo.

More lectures by Dr. Naomi Kurahara

Day #5, Jan 26

Dr. Kurahara gave lectures on Satellite Commanding & Telemetry and Radio Regulation.

The Radio Regulation lecture was very interactive. Participants engaged in a lively discussion about radio regulation related to small satellite and ground stations.

Ground Station Installation Training

Day #5-6, Jan 26-27

Trying to control the antenna rotator by using tracking software

Installing antenna rotator

Connect rotator control cable

Estaban with his coaxial cable

On-orbit Satellite Operation Training

Day #5, Jan 26

Maisun introduces the Kyutech BIRDS GS to participants. Participants got hands-on experience to control the ground station for receiving AOBA VELOX-3 and HORYU-4 satellites.

The ground station was able to receive signals of HORYU-4 and AOBA VELOX-3.

Satellite Operation Training using BIRDS-2 Engineering Model

Day #6, Jan 27

Adrian gave a presentation on BIRDS-2 satellite project and communication subsystem. In this session participants have opportunity to learn the operation software of BIRDS-2 that will be used in real operation.

Demonstration of BIRDS-2 operation software

Sunday Workshop Excursion: The Mojiko Area

Day #7, Jan 28

Mojiko station is the terminus of the first railway line in Kyushu built in 1914. Mojiko station is about 10 minutes by train from Kokura station which is the central station in Kitakyushu. We started our trip here!!

https://pix10.agoda.net/hotelImages/251/251713/251713_15111808120037818212.jpg?s=1024x768

Mojiko Area was cleaned up during the past ten years so as to make it more attractive to tourists.

It is today totally different from the immediate post-war years of this historic port city.

Excursion stop: Karato Fish Market

Day #7, Jan 28

Sushi, etc.

Karato Fish Market is located in Shimonoseki, Yamaguchi Prefecture. You can enjoy very fresh sushi, seafood bowls, and blowfish soup at Karato Market.

Excursion stop: Kyushu Railway History Museum

Day #7, Jan 28

Real trains

Model trains

Kyushu Railway History Museum is located near Mojiko station -- about 2 minutes away on foot. In side the museum are a lot of train cars including a steam locomotive and old version of Shinkansen train.

Presentations by workshop participants …cont'd next page….

Day #8, Jan 29

Mary Ann (Philippines)

Afifah (Malaysia)

Esteban (Costa Rica)

Yasir (Sudan)

Rita (Taiwan)

Shourob (Bangladesh)

Presentations by workshop participants

Day #8, Jan 29

Ernest (Ghana)

Ayodeji (Nigeria)

Dr. Tsegaye (Ethiopia)

Vasan (Thailand)

Altansukh (Mongolia)

Karma (Bhutan)

BIRDS2 -- Store and Forward (S&F) Mission
BIRDS3 – Data Collection Mission

Day #9, Jan 30

Adrian made a presentation on BIRDS-2 Store and Forward mission and Ground Sensor Terminal (GST)

Tharindu introduces BIRDS-3 Data Collection system and LoRA technology

Technical Discussion on BIRDS-2 S&F mission

Day #9, Jan 30

Purpose of the technical discussion on S&F mission was to discuss on feasibility of ground sensor to be used for S&F mission and other technical development plan. Turo (seated in front of screen) was the moderator for this discussion.

Mary Ann shared her experience on ground sensor in Philippines

Esteban shared information of ground sensor to be used with IRAZU

BIRDS-1 Satellite Project Presentation and Satellite Operation Lesson Learn Discussion

Day #10, Feb 1

BIRDS-1 operation report by Turo

Fault Tree Analysis (FTA) by Taiwo

BIRDS-1 Satellite communication subsystem by Maisun

BIRDS Project won this award ⇒

Discussion on lessons learnt from BIRDS-1

Closing ceremony of the workshop

Day #10, Feb 1

Prof. Cho presents the **RBF** (Remove Before Flight) pin and flag of Bangladesh (both went to the ISS) of BIRDS-1-Bangladesh to Shourob, the workshop participant from Bangladesh.

Holding the JSPS Core-to-Core Program banner
(JSPS covered the travel costs of the overseas participants)

End of the Workshop Report by Apiwat and Maisun.

BIRDS-2 Satellite Passes Over Ground Stations

Version 1.0

(see the next two pages)

by Cheki Dorji (BIRDS-2, Bhutan)

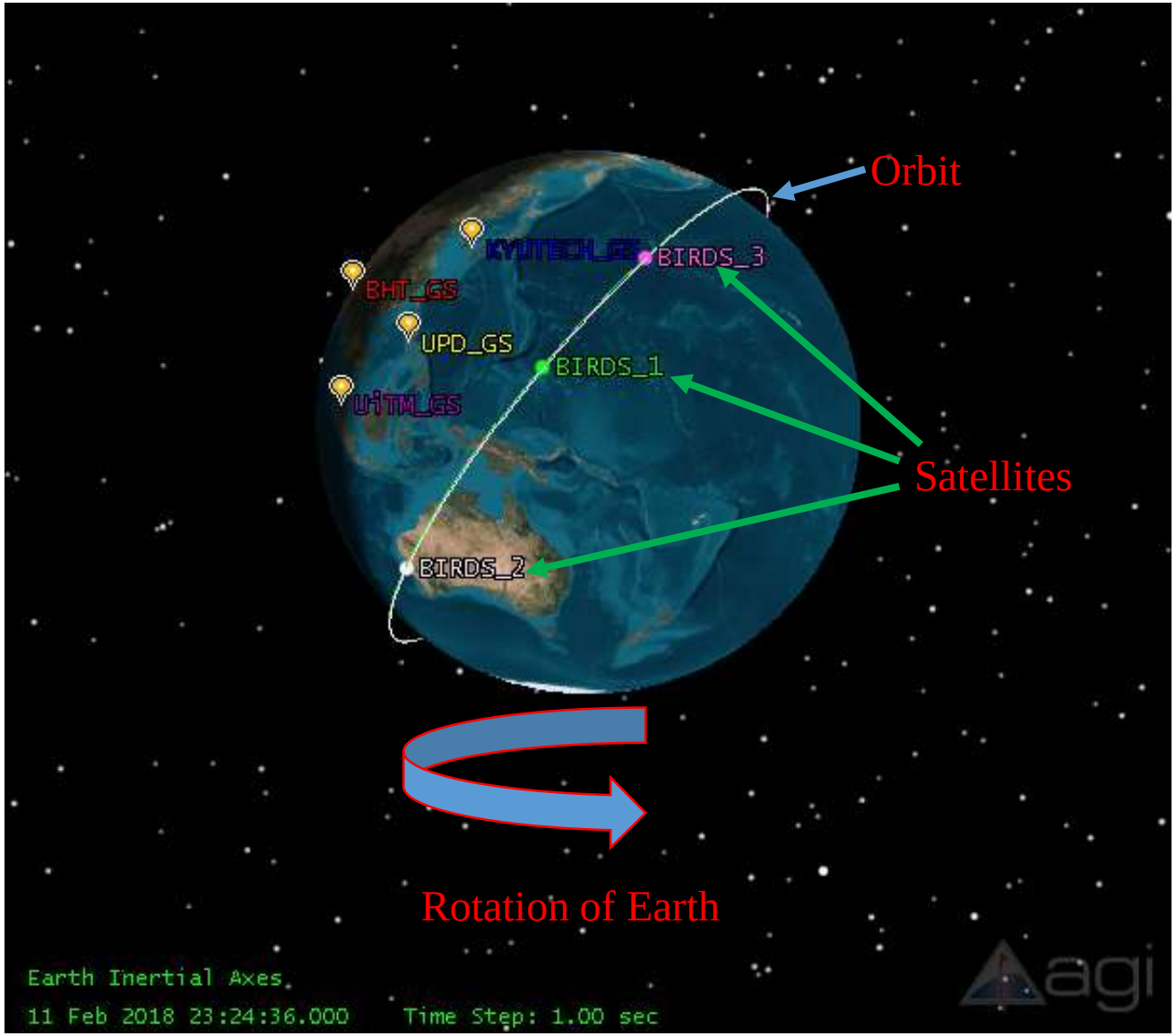
BIRDS-2 CubeSats will be deployed into orbit from the International Space Station (ISS).

Orbital Parameters:

1. Inclination: ~ 51.6˚
2. Altitude : ~ 400 km
3. Orbital period : ~ 90 minutes

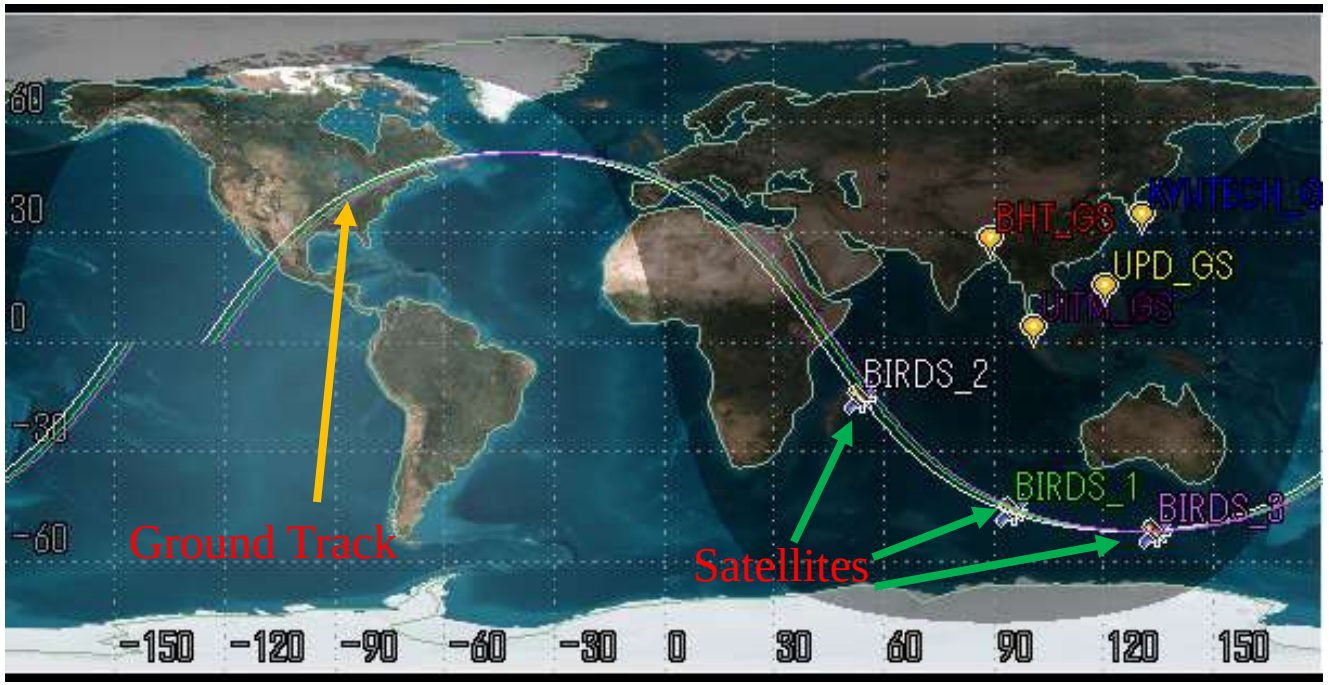
Figure on the right shows location of BIRDS-2 ground stations. It is interesting to note that 3 of the stations are located with almost the same inclination as that of satellite's orbit. This configuration can be taken advantage of in doing some of the mission operations.

On the orbit are 3 satellites of BIRDS-1 which were deployed from the same pod of ISS. This is the separation acquired after 7 months.



Satellite Passes over BIRDS-2 Ground Stations

Following figure shows the ground track on Earth of 3 satellites. Inclination angle of orbit sets the limit to which places on Earth can access satellite. Places with latitude greater than 51.6˚ (North or South) will not have contact with the BIRDS satellites.



Ground Station	Duration (Minutes)	Start Time	End Time
UPD_GS	4:44	12:54:42 AM	12:59:27 AM
KYUTECH_GS	1:22	1:01:57 AM	1:03:20 AM
UiTM_GS	6:05	2:24:13 AM	2:30:18 AM
UPD_GS	2:50	2:31:29 AM	2:34:19 AM
KYUTECH_GS	6:02	2:35:13 AM	2:41:16 AM
BHT_GS	5:51	4:03:22 AM	4:09:14 AM
BHT_GS	2:06	5:41:19 AM	5:43:26 AM
KYUTECH_GS	5:20	9:04:06 AM	9:09:27 AM
KYUTECH_GS	4:50	10:40:12 AM	10:45:02 AM
BHT_GS	4:30	12:10:51 PM	12:15:21 PM
UPD_GS	5:24	12:18:05 PM	12:23:30 PM
BHT_GS	4:51	1:46:32 PM	1:51:24 PM
UiTM_GS	6:06	1:52:56 PM	1:59:03 PM

Table shows the typical passes of a satellite over 4 ground stations in a day. Ground stations can have satellite access for an average of about 5 minutes each pass. But some passes can be as short as 1 minute or less. Satellite operations will be done taking this into consideration along with other factors like elevation, azimuth angle and so on.

End of article by Cheki

Vibration testing of BIRDS-2 flight models

Version 1.0

(see the next four pages)

by Cheki Dorji (BIRDS-2, Bhutan)

On the night of 6th February 2018, BIRDS-2 CubeSats underwent one of the last and most important environmental tests: Vibration Test (VT).

Three CubeSats were put under severe environments simulating the rocket launch. Different rockets have different requirements.

Step 1 :

Assemble the satellite. This should be the final assembly of satellite. If satellite has to be opened again after VT, it is bad news!

Step 2 : Make sure that the satellites work before vibration test (VT). If a satellite doesn't function as expected after VT, you know where to look into problem then.

Photo taken after 2 days of final assembly and rigorous functionality tests.

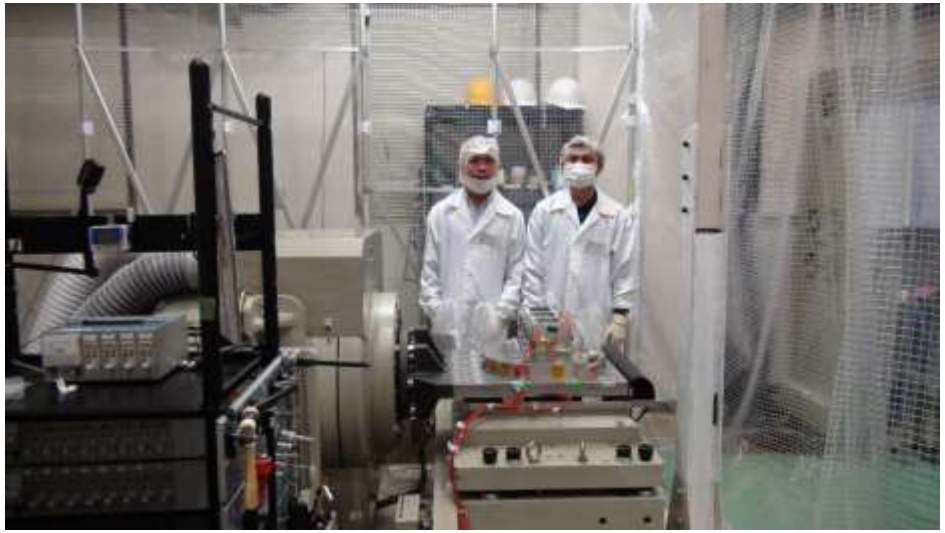
Step 3 : Do the test!

Group photo before the test. All 3 CubeSats are in the POD on the shaker.

If you look closer, you can see someone outside the test area, in the rear. He is one of our Assistant Professors. He stayed as late as the students -- guiding and supervising the various tests.

Our very supportive Japanese team.

Step 4 : Check the functionality of satellite during and after the VT. During VT, it should be made sure that satellite doesn't turn ON. After VT, satellite should function just like it did before the test



RESULTS:

None of the satellites need to be opened again. That is good news!

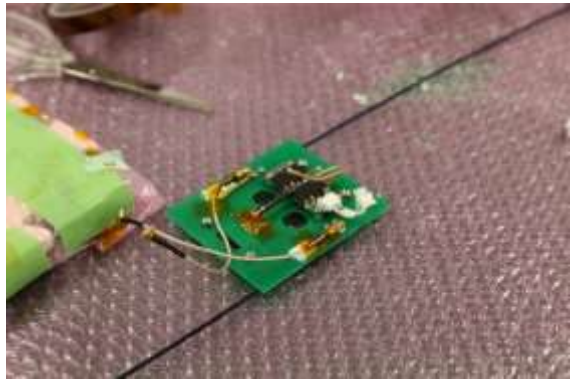
All satellites function as expected after vibration test.

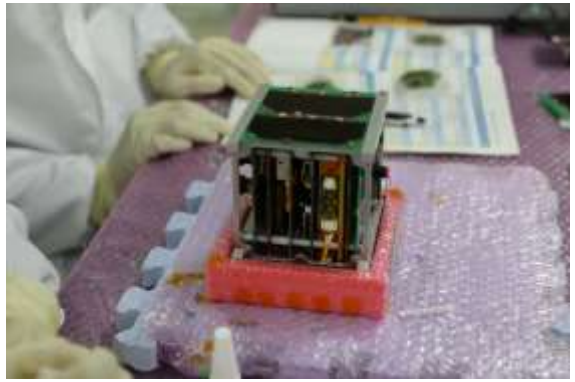
Satellites were able to bear the simulated stresses of rocket launch.

End of vibration test report by Cheki.

Assembly of BIRDS-2 flight models in the Kyutech Satellite Clean Room

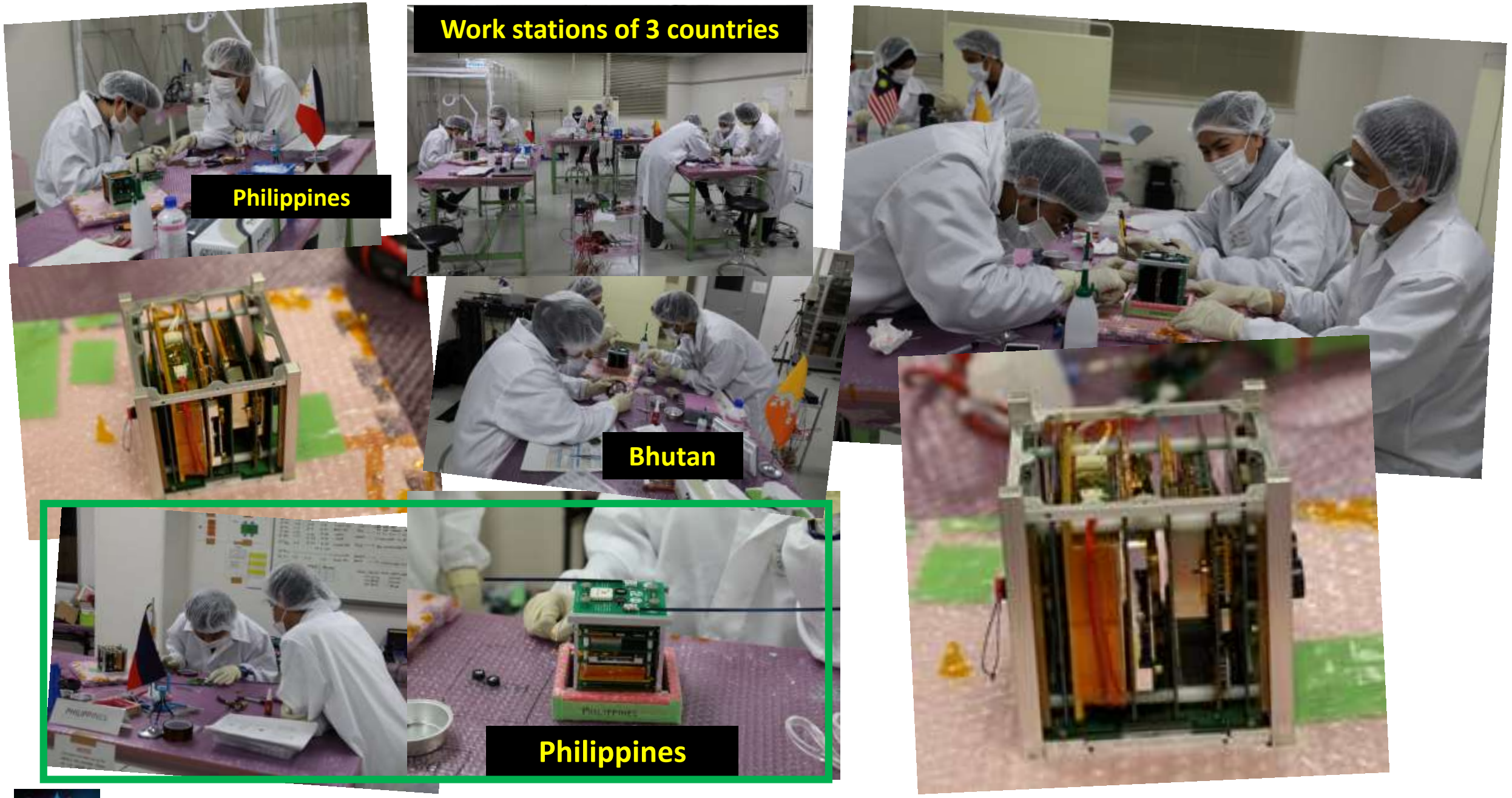
The photos of the next 4 pages were
received from Dr. Kim on 18 Feb 2018
and prepared in PowerPoint by G. Maeda





Malaysia

Work stations of 3 countries


Work stations of 3 countries
Philippines
Bhutan
Philippines

End of BIRDS-2 FM assembly photos from Dr Kim

24. Some BIRDS-3 activities during Jan-Feb 2018 . . . report by Abhas

Jan 26, 2018

BIRDS-3 Lunch

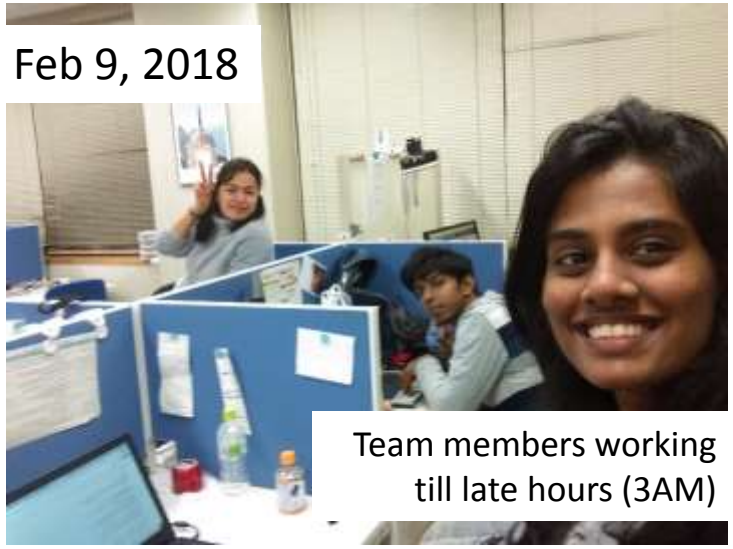
Jan 27, 2018

BIRDS-3 Potluck Dinner

Feb 5, 2018

Evening nourishment by Prof. Maeda

Feb 9, 2018



Team members working till late hours (3AM)

Every Week

BIRDS-3 Meetings

BIRDS-3 members are now firmly in BBM stage and are undergoing the process of fabricating PCBs for testing and integrating system after creating detailed block-diagrams for the whole system. The team will be moving into SVBL facilities on March 12, 2018 .

25. Kenya gathers its strength for taking the plunge into space (Kenya is a candidate for involvement in BIRDS-4)

DAILY NATION | NEWS | BUSINESS | COUNTIES | SPORTS | BLOGS & OPINION

Kenya yet to activate its rich space agenda

SATURDAY FEBRUARY 17 2018

Defence Cabinet Secretary Raychelle Omamo attends the second International Space Forum at Ministerial Level - The African Chapter - at Radisson Blu Hotel, Nairobi, on February 13, 2018. Experts have said that Kenya stands to reap big from space technology. PHOTO | JEFF ANGOTE | NATION MEDIA GROUP

https://www.nation.co.ke/news/Why-work-at-Kenya-Space-Agency-is-yet-to-begin/1056-4309212-10s6deu/index.html

President Uhuru Kenyatta's March 2017 gazette notice establishing the Kenya Space Agency appeared to usher in a new era for Kenyan scientists, but little has happened since.

The agency was given an array of responsibilities that included co-ordinating space-related activities, recommending national space policies and establishing centres of excellence in space science.

But almost a year later, the President has not appointed a chairman of the board, meaning it cannot start operations.

And so when scientists from about 40 countries met in Nairobi for the International Space Forum on Tuesday, Defence Cabinet Secretary (CS) Raychelle Omamo could only enumerate the benefits the inchoate space centre will bring.

ELECTIONS

According to Dr John Kimani, the Kenya Space Agency lead scientist, there will be an operational body by June.

"Last year was a very busy year for the country. Most of the year was spent on electioneering.

"So, we were waiting for the political dust to settle down," Dr Kimani, who was in charge of the National Space Secretariat that was disbanded to give way for the Kenya Space Agency, said.

He added that after Mr Kenyatta's team of Cabinet Secretaries and Principal Secretaries is complete, there will be more focus on State corporations.

"After that, the Defence CS will also appoint three independent members of the board, in consultation with the Executive.

"Once we have that in place, then we will be ready to constitute and inaugurate the board. I can see that happening before June this year," Dr Kimani said at his office at the Department of Defence headquarters.

Text continued on the next page

AGRICULTURE

Dr Kimani, a trainer at the Kenya Defence Forces Technical College, foresees a transformed Kenya once the space agency is in place.

He noted that Kenya will focus on having satellites in the orbit that will help Kenyan authorities perform various applications.

The most immediate application to be launched, he said, will relate to agriculture.

“Using space technology, we will be able to advise farmers about their soils: what needs to be added to their soils.

"Instead of doing the manual soil analysis, using space you can tell the type of soils that we have, what needs to be added, what can best grow in such soil,” the 59-year-old PhD holder said.

SPECIALISTS

He added that the same technology can be used in helping meteorologists predict the weather, assist scientists to find underground and surface water, help in treating patients using technological innovations, assist in urban planning among other functions.

Ms Omamo, speaking at Tuesday’s event, was of the same opinion: “Space technologies can provide effective solutions to the many problems of food security, provision of water and healthcare as well as job creation that African countries need.”

On matters space, there are few Kenyan specialists ready to further opportunities the government will provide, among them Dr Kimani, Prof Paul Baki of Technical University of Kenya (TUK) and Prof Hunja Waithaka.

SATELLITES

Prof Baki told the *Sunday Nation* that Kenya is a “sleeping giant” on matters space. “We have not made use of our geographic location on the Equator; because this is the best place to launch satellites into space. You need minimum energy to send it there. If you’re off the equator, you must spend tonnes of fuel to put something into orbit,” he said.

“This is an area where the government needs to find a partner to work with. Launch of satellites is big business and that alone can help us rake in billions of shillings,” Prof Baki, 52, added.

The scientist said Kenya can take advantage of the Italy-owned Luigi Broglio Space Centre in Malindi. The centre was built in the 1960s but has not been used to launch missiles for almost three decades.

BENEFITS

He said last year’s gazetting of the Kenya Space Agency was the finalisation of years of brainstorming on how Kenya would handle issues relating to space.

The same view is held by Dr Kimani.

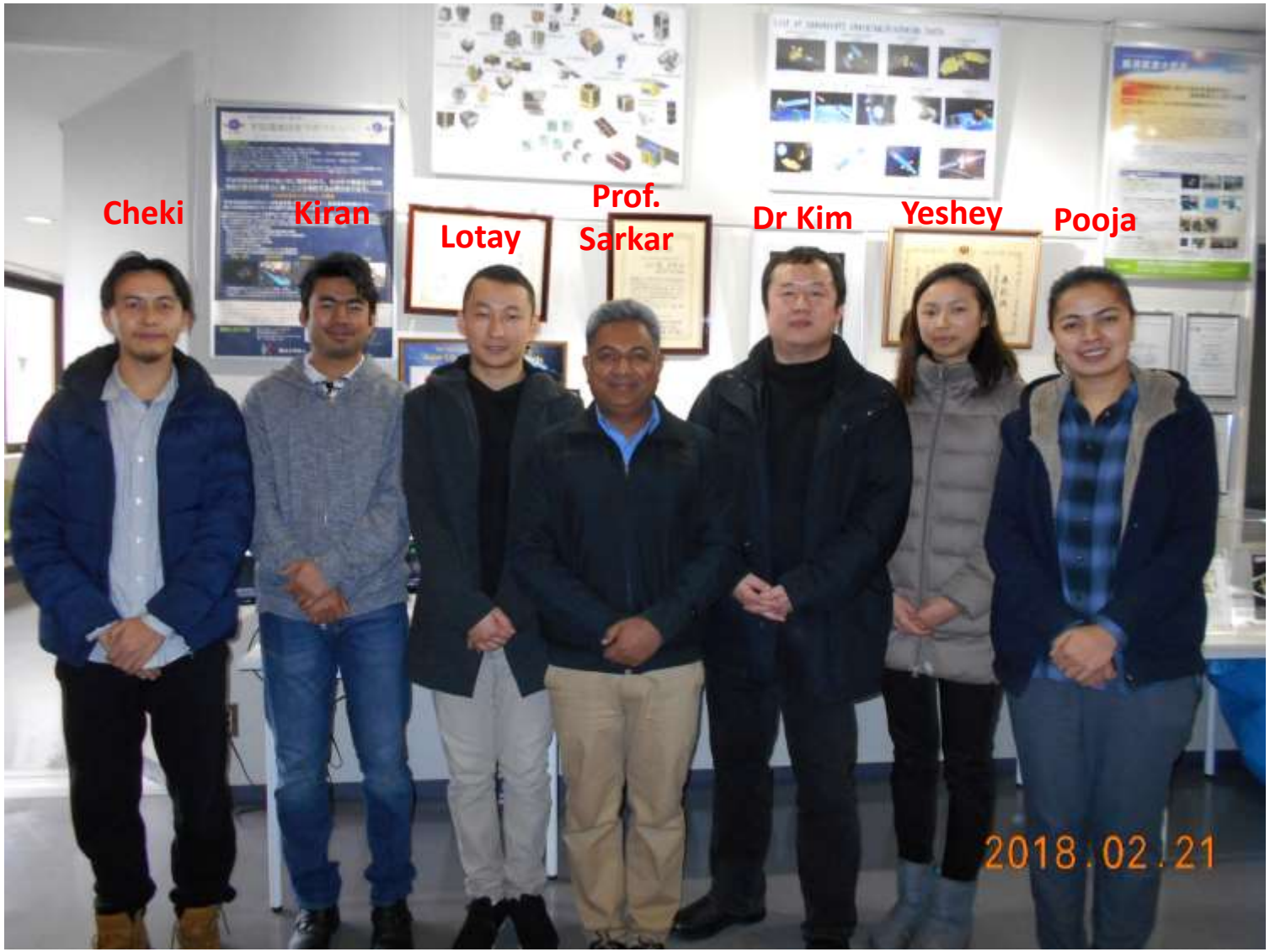
“We tabled the Kenya Space Policy documents to the Cabinet for approval. We realised that if we went the route of the Bill in Parliament it would have taken longer. So, we converted the Bill into an executive order,” he said.

Prof Baki said if Kenya steps up its space programme, it stands to clinch various deals.

“Already, there are many interest groups wanting to do things with us as Kenyans. But without a properly functional agency, there is very little room for engagement,” he said.

[end of item from Daily Nation]

26. A visitor from the Royal University of Bhutan



On 21 Feb. 2018, Kyutech staff and all members of the Bhutan BIRDS team received Prof. Sarkar, whose business card is shown above. He was given a cordial tour of our lab facilities such that he could better understand the nature of the BIRDS Project.

End of this **BIRDS Project Newsletter**

(ISSN 2433-8818)

– Issue Number Twenty-Five

This newsletter is archived at the BIRDS Project website:
http://www.birds-project.com/birds1/newsletter.html

When a new issue is entered in to the archive, an email message is sent out over a mailing list maintained by the Editor (G. Maeda, Kyutech). If you wish to be on this mailing list, or know persons who might be interested in getting notification of issue releases, please let me know.

This newsletter is issued once per month. The main purpose of it is to keep BIRDS stakeholders (the owners of the satellites) informed of project developments.