

Update : 2017-06-05 00:00:00  
Bangladeshi nano-sat off to space  
SPACE SCIENCE  
Jannatul Islam



Finally Bangladesh first ever nano-satellite Onnesha hit the orbit on early Sunday. "The BRAC Onnesha satellite is launched by the SpaceX falcon-9 rocket from the USA on 3.3 AM on yesterday. Maisun Ibn Monowar, one of the research team members, told daily sun. Three BRACU students paved Bangladesh's first path for having a footprint into the space by developing the first nano-satellite of the country. The low-cost small satellite, categorized as nanosat, has been designed, developed and assembled by Brac University students-Abdulla Hil Kafi, Maisun Ibn Monowar and Raihana Shams Islam Antara. Kyushu Institute of Technology (KIT) also known as Kyutech-one of the best technology universities of Japan collaborated with Brac University in developing the first nanosat. As part of its academic endeavours, Brac University took this initiative of starting space and remote sensing research in collaboration with Kyutech and SPARRSO almost three years ago. This cross-border interdisciplinary satellite project was supported by Japan for four non-space faring countries and was titled "Joint Global Multi-Nation BIRDS Satellite" or "BIRDS Project". Brac University considers this to be a milestone for "Space Technology Transfer" since it is the first time a Bangladeshi university is working in the field of satellite engineering and technology. Earlier in February, there was a function held at KIT, Japan on Wednesday, Dr Syed Saad Andaleeb, Vice Chancellor of Brac University received the nanosat from Kyutech President Professor Yuji Oie and Professor Mengu Cho, Director, Laboratory of Spacecraft Environment Interaction Engineering, Kyutech. At the sometime, a live video conference was organized at Bangladesh Telecommunication Regulatory Commission (BTRC) in Ramna, where the BTRC Chairman Dr Shahjahan Mahmood joined to observe the nanosat receiving ceremony in Japan. Prof Ziauddin Ahmad, Chairperson, Department of Mathematics and Natural Sciences, BRACU, presided over the ceremony in Dhaka and gave a brief description of Brac Onnesha..Brac Onnesha is shaped as a cube of 10cm edge capable of completing one orbit 400 kilometres above the ground in 90 minutes and passing over Bangladesh four-six times a day. Demonstrating the functionality of the nanosat

through video conference from Japan, Abdulla Hil Kafi, now studying Applied Science for Integrated System Engineering in Kyutech, explained that the nano-satellite would be able to take high quality photographs of land to analyse vegetation, urbanisation, flood, water resources, forestry etc. It will also allow relaying audio signals and attaining communication through HAM radio during emergencies and catastrophe and play the national anthem on days of national importance observe space environment and monitor satellite location, he added. Professor Mengu Cho of Kyutech said Brac Onnesha was easy to build and affordable and their prime objective was to educate the students so that they could go back to build one completely by themselves, presumably in October 2017. The ground station will allow relaying audio signals and capturing communication through HAM radio signals during emergencies and catastrophes and facilitate space environment observations and satellite location monitoring, said BRAC university professor Khallilur Rahman. The low-cost small satellite, categorised as nanosat, has been designed, developed and assembled by BRAC University students at Kyushu Institute of Technology in Japan in February. 'Bangladesh holds a bright future in the far frontiers of space, provided the government invests the necessary financial resources in the research sector, said Fazle Hasan Abed while inaugurating the ground station at the university's campus. The inauguration was followed by a video conference between chairperson Abed and the three students, along with faculty members, responsible for the satellite project in Japan. As part of its academic endeavours, BRAC University took this initiative of starting space and remote sensing research in collaboration with Kyutech and SPARRSO almost three years ago. This cross-border interdisciplinary satellite project was supported by Japan for four non-space faring countries and was titled 'Joint Global Multi-Nation BIRDS Satellite' or BIRDS Project. The nano-satellite was handed over to the authorities by the Japanese institution in February.

Jannatul Islam is with Daily Sun. He can be reached over email at rahad@outlook.com

---