Progress of the International Centre for GNSS Science Technology Education

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Outline

• Background

• Major GNSS Education Activities in 2012-2013

• Facility and Capacity Building of the Centre

• Summary
1 Background

- Great achievements in space technology have been made in China.
- More countries in the world join the space club.

“Shenzhou” 5 Spaceship
“Chang ‘e” Lunar Exploration
“BeiDou” Navigation Satellite
1 Background

• Great development and wide use of GNSS technology
• Growing demands on GNSS education from developing countries.
1 Background

The establishment of the International Centre for GNSS Science Technology and Education at Beihang University, China was proposed in the United Nations International International Meeting on the Applications of GNSS on 12-16 December 2011 in Vienna.
Beihang University, the first aerospace university in China, has been engaged in space international education since 2000 with the support of China National Space Administration (CNSA).

- **Schools**: 28
- **State Key Laboratories**: 7
- **Undergraduate Programs**: 57
- **Master’s Programs**: 144
- **Doctoral Programs**: 49
- **Students**: 25,825
  - **Undergraduates**: 13,704
  - **Graduates**: 12,121
- **Faculties & Staffs**: 3,799
Internationalization - “UPS”
2 Major GNSS Education Activities in 2012-2013

Summer School on GNSS frontier technology 2012

It is recognized that there is a significant shortage of well-educated and highly-skilled professionals in GNSS and related fields in the Asia-Pacific region.

The objective of the one-week program is to provide a comprehensive overview on selected areas of GNSS theory, hardware, software and applications. The program is open to postgraduates, PhD students, and early career professionals.
2  Major GNSS Education Activities in 2012-2013

1) Summer School on GNSS frontier technology 2012

8 renowned experts were invited to give lectures on several selected topics, covering receiver design, ground-based and space-based augmentation, user precise positioning and integrity algorithms, and processing of multiple GNSS and multi-frequency data.

**Date:** 25-31 August, 2012  
**Venue:** Beihang University  
**Participants:** 60+
2) Master Degree Program on GNSS 2012

Duration: Sep, 2012 – June, 2014
Participants: 20
Country: Indonesia, Iran, Mongolia, Pakistan, Peru, Spain, Thailand

2 Major GNSS Education Activities in 2012-2013

2) Master Degree Program on GNSS 2012

<table>
<thead>
<tr>
<th>1st stage: Core Courses Study in China (9 months) (Leading to postgraduate certificate of Beihang)</th>
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<tbody>
<tr>
<td>Module I: 2 months for fundamental courses</td>
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<td>Module III: 3 months for pilot-project (practice)</td>
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<tr>
<th>2nd stage: Advanced Research Project in Participant’s Homeland: 12 month (Leading to Master degree of Engineering of China)</th>
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<tr>
<td>I. Advanced Project</td>
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<td>III. Graduation and Granting Master Degree in China</td>
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Degree will be offered by Beihang University.
2 Major GNSS Education Activities in 2012-2013

2) Master Degree Program on GNSS 2012

Opening Ceremony
2 Major GNSS Education Activities in 2012-2013

2) Master Degree Program on GNSS 2012
2 Major GNSS Education Activities in 2012-2013

3) BeiDou International Exchange and Training Center

Inaugurated on August 24, 2012, Beihang University
2 Major GNSS Education Activities in 2012-2013

3) BeiDou International Exchange and Training Center

**Role:** it is one of the professional branches of CSNO, and is a nonprofit international educational institution.

**Tasks:** To organize the education and training projects in GNSS fields according to the plan and arrangement of CSNO; To develop various kinds of programs for long-term / short-term trainings and degree education and to train the talents in GNSS for all over the world; To establish a exchange and cooperation platform in GNSS.
2 Major GNSS Education Activities in 2012-2013

4) International Exchange and Cooperation
2 Major GNSS Education Activities in 2012-2013

5) The Coming Program in 2013

MASTA Program on GNSS 2013

2nd BeiDou/GNSS Summer school 2013

北京航空航天大学
3 Facility and Capacity Building of the Centre

Beihang Space Application Education Center

Beihang University
Space Applications Education Centre
was founded in 2004
3 Facility and Capacity Building of the Centre

- Inside the Centre
- Seminar Room
- Distant Learning Room
- Computer Room
3 Facility and Capacity Building of the Centre

Facilities for space technology applications education

Remote Sensing (RS) Data Receiving Ground Station on campus

RS & Geographic Information System (GIS) Lab

Global Navigation Satellite System (GNSS) Lab
3 Facility and Capacity Building of the Centre

Organization

ICG

CNSO

Beihang

(BeiDou Exchange and Training Centre)
International Center for GNSS Science Technology Education
(ICG Information Centre)

Secretary

Beihang Electronic Information and Engineering School

Beihang International School

Advisory Community

Partners

Beihang International School
3 Facility and Capacity Building of the Centre

BeiDou/GNSS Exhibition Corner at Aerospace Museum
BeiDou/GNSS Education and Application Demonstration System is going to set up in 2013.

3 Facility and Capacity Building of the Centre

- Satellite Monitoring Centre
- Xi'an Station
- GNSS Exhibition
- iGMAS Station
- Education and Training
- Discussions
- WuHan Observation Station
- GNSS Application Experience
3 Facility and Capacity Building of the Centre

• Sponsor

• Partners
Thanks for Your Attention!

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