International Education on Space Application in China

中国的空间应用国际教育

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1. Background
2. International Education on Space Science and Technologies
3. Preliminary proposal for GNSS education
4. Summary
1. Background

Since 1992, Chinese government promote the multi-lateral cooperation in Asia-pacific area.

In September 2001, China proposed “establishing Asia-pacific space science & technology education center in China” and get the approve by the 6th Asia-pacific Space cooperation general assembly.
In 2002, Office for Outer Space Affairs approve China establish the Space Science and Technology Education Center in Asia Pacific region.

In 23, Nov. 2002, president of BeiHang University SHEN Shituan proposed to establish the Asia Pacific Space Science and Technology Education Center in BeiHang.
In April 2004, the director of UNOOSA, Sergio Camacho, wrote to the Chinese National Space Agency to express support for establishing a regional center for space science & technology application education, which should provide 9 months of courses and capabilities for short-term training.

In Dec. 2004, BeiHang University was approved to establish the Master of Space Technology Application (MASAT) by the Ministry of Education of China.
In Sep. 2006, Mr. Sergio Camacho, Director of Office for Outer Space Affairs visited Beihang University and its International School.
In December 2008, Asia-Pacific Space Cooperation Organization (APSCO) was established in Beijing.

In 16-17, Sep. 2010, APSCO held the 3rd meeting in Beijing.
2. International Education on Space Science and Technology

- Introduction
- Postgraduate class
- Short-term training
- Discipline configuration on GNSS
- R&D on GNSS
- Infrastructure and other
Introduction

1993: The first batch Int’l Students for master degree were enrolled in BUAA
1994: Chinese- Language Training Center was established
1999: Accept Int’l Students funded by China Scholarship Council
2004: International School was established
2007: BUAA International Students Scholarship was established
2008: Admit students on behalf of China Scholarship Council
Since 1993, more than 5,000 students from over 50 countries have been enrolled in BUAA, including more than 600 doctoral and master candidates. Over 300 have been awarded master or doctoral degrees.
International Education

- Bachelor (CHN) - 4 years
- Bachelor (ENG) - 4 years
- Master’s Degree - 2-3 years
- Doctoral Degree - 3-4 years
- Chinese Language Training
- Professional Training
- Summer Session
Int’l Students number from 2001 to 2009

Non-Degree students
Degree students
Students for different students between 2001 and 2009
In July 2006, First postgraduate class was started. 14 students are from 7 countries such as Mongolia, Thailand, Indonesia, Iran, Pakistan, Bangladesh and Peru. All have finished the courses and most of them got the degree.

Ms. Alice Lee, Vice Director of Office for Outer Space Affairs attend the opening ceremony the MASTA2006
In September 2008, 11 students are from Mongolia, Thailand, Indonesia and Pakistan. They have finished 9 months courses study in June 2009 and now entered into phase 2.

In 26, Sep. 2010, 3rd class was open. 11 students from 5 countries, i.e. Pakistan, Peru, Indonesia, Thailand and Mongolia were enrolled.
Short-Term Training

- From 2000 to 2010, Chinese held 5 short term training classes and 1 International Space University training program.

<table>
<thead>
<tr>
<th>Time</th>
<th>Students</th>
<th>Countries</th>
<th>Period</th>
<th>Place</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000, July</td>
<td>22</td>
<td>11</td>
<td>2 weeks</td>
<td>China</td>
</tr>
<tr>
<td>2002, July</td>
<td>31</td>
<td>18</td>
<td>2 weeks</td>
<td>China</td>
</tr>
<tr>
<td>2003, Nov.</td>
<td>29</td>
<td>17</td>
<td>4 weeks</td>
<td>China</td>
</tr>
<tr>
<td>2007, June</td>
<td>117</td>
<td>25</td>
<td>2 months</td>
<td>China</td>
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<tr>
<td>2009, May</td>
<td>42</td>
<td>7</td>
<td>2 weeks</td>
<td>China</td>
</tr>
<tr>
<td>2010, June</td>
<td>15</td>
<td>7</td>
<td>2 weeks</td>
<td>China</td>
</tr>
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</table>
Discipline Configuration on GNSS

- Navigation/ Guidance/ Control
- Test/ Measurement / Instrument
- Communication and Information System
- Precision Instrument / Mechanics
- Electromagnetic / Microwave Tech
- Mechanics design & The

All of These are national level key Disciplines
R&D on GNSS

- National Science Foundation
- High technology R & D Program
- Pilot project for key area
- Civil Aviation Management

Research → Development → Pilot Application → Scientific
Facilities and accommodation

BUAA Campus

- International School Building
- Foreign Students Dormitory (1)
- New Main Building
- Sports Field
- Gymnasium
- Swimming Pool
- Canteen
- Library
- Foreign Students Dormitory (2)

Facilities and accommodation at BUAA Campus.
Classroom & Apartment for Int’l Students
Professional Labs
Life in Class and spare time
Academic & Social Activities
3. Preliminary proposal for GNSS education

**Proposed Program**

- Master Degree on GNSS (Courses + Thesis)
- Senior management training program on GNSS
- Senior professional training program on GNSS
- Basic classes on GNSS (2-4 weeks)
- Training Program on GNSS (2-4 weeks)
- Distance learning classes on GNSS
Teaching Staff

- Teaching staff can be chosen by international recruitment or designation of APSCO Member States and Host institutions.
- According to teaching needs, APSCO- Education & Training Center will invite the professors, researchers and professionals on GNSS at domestic and abroad universities, research institutions and related enterprises as part-time lecturers.
Three funding channels proposed

- **Fund of APSCO**
  
  According to the training and work plans of APSCO- Education & Training Center, APSCO provides an annual budget support.

- **Community Fund**
  
  Establish the fund of education and training. Collect the social funds from enterprises, government, non-governmental organizations and other channels.

- **Fund of supporting units**
  
  Host institutions offer the appropriate support in educational facilities and logistics and provide a certain amount of funding as the teaching expenditure.
4. Summary

- China is interested in becoming the ICG information center on GNSS.

- China has done some fundamental work on space technology education.

- China has good infrastructure for GNSS education.
Integrate the APSCO education center into ICG information dissemination system.
Thanks for your attention!