

Double Star Program Received the IAA Laurels for Team Achievement Award

In the award ceremony in Prague on September 26, 2010, the International Academy of Astronautics (IAA) awarded the Laurels for Team Achievement Award to the Double Star/Cluster Team. Prof. Liu Zhenxing, Member of CAS and the principal scientist of the Double Star program, attended the ceremony.

The Laurels Team Achievement Award is an honorable award in the international astronautic community. It is one of the two major awards given by IAA every year, the other for individual recipients. The team award was established in 2000 with the first laurels given to the Russian Mir Space Station team. The following awardees include the Space Shuttle team, SOHO, Hubble Space Telescope, Sprit (MER-A) and Opportunity (MER-B) teams.

The Double Star Program was a significant space science project complemented by China National Space Administration in collaboration with ESA Cluster Program. The program consisted of two satellites, TC-1 and TC-2. They were launched into space in December 2003 and in July 2004 respectively. TC-1 functioned on its orbit for 46 months while TC-2 for 51 months, much longer than their designed life spans of 18 months and 12 months.

The Double Star Program was China's first satellite program designed and operated for scientific research purpose. On June 7, 2002, the *Science* magazine published a report about the Double Star Program on its "News Focus" section in issue 296.

The two satellites of Double Star Program fly in equatorial and polar orbits near the earth. The Cluster Program consists of four satellites of the same kind flying in a higher altitude polar orbit which formed a quadrangle. The distances among the Cluster satellites can be adjusted in the range from hundreds to thousands kilometers. The six satellites together enable the first coordinated six-point measurements of the Earth magnetosphere.

The launch of TC-2 and the implementation of the Double Star Program together were selected as one of the "China's Top Ten Achievements in Science in 2004" by Members of CAS and CAE.

The Double Star Program was the first major China-ESA space science collaboration. China National Space Administration was responsible for the design and launch of two satellites. CAS was responsible for ground data reception and application research. ESA provided 7 testing instruments from the Cluster Program and developed the Neutral Particle Imager on TC-2 in a joint effort with Chinese scientists. In addition, ESA provided a ground station for data reception and science operation for the European instruments.

From 2003 to 2009, NSFC provided strong support to the Double Star Program, including a major program and a major international cooperation project.