

# Sheshan station report

## EVN TOG Meeting, December 4<sup>th</sup> 2009, Bonn/Effelsberg

### 1. Observations

#### 1.1 Regular EVN Sessions:

Sheshan station participated in all three EVN sessions in 2009.

In the February-March session Sh was scheduled to observe for 13 experiments at L, C and K band. In the June session there were total 18 experiments at L, C, K and S/X band in Sheshan station. All these observations were performed without any major problem.

In the October-November session Sh was scheduled for 11 experiments at L and C band. Most of the observations were successful except two fringe test experiments F09C2 and N09L3 at the beginning of the session. The F09C2's failure was due to the wrong cable connection between the Mark4 formatter and the Mark5A recorder. In the N09L3 the 100MHz external reference signal from H-maser for the receiver's Phase-Locked-Oscillator was mistakenly changed to 10MHz, consequently a total of 1 hour and 10 minutes data at the beginning of the observation were lost.

#### 1.2 e-EVN Observations:

In 2009, Sh was scheduled total 34 e-VLBI experiments organized by JIVE. We missed 4 e-VLBI observations in September due to the L band receiver maintenance and the antenna bearings replacement. Normally, Sheshan station can work at a data rate of 512Mbps.

#### 1.3 Other observations:

Sheshan station has participated in regular IVS observations, Chang'E-1 satellite observation, and some test experiments of CDAS (Chinese Data Acquisition System).

### 2. Development and maintenance activities

#### 2.1 Mark5:

VLBI terminal structure for EVN observation is VLBA ABBC + Mark4 formatter + Mark5A recorder. The Mark5B recorder is now available at Sheshan station. A problem for the network transfer for Mark5B data has been solved thanks to JIVE staff.

Four new 4TB (500GB\*32) modules have been added in the February-March session.

#### 2.2 Field System

The Field System running at Sheshan station is 9.10.4 version.

#### 2.3 Receivers:

A 6.7 GHz dual circular polarization, room temperature receiver for methanol maser observation will be installed at Sheshan station. The testing observation will be arranged before the next EVN session.

#### 2.4 Antenna:

One azimuth bearing of 25m antenna was broken in the middle of September. Then a total of 4 azimuth bearings were successfully replaced and the radio telescope was back to normal operation on October 20.