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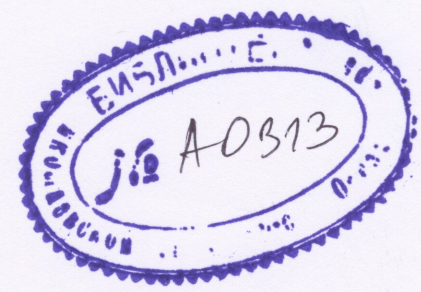
AIRA

UNESCO-ROSTE

**SCIENTIFIC MEETING  
SCIENTIFIC PROGRAMS  
& ASTRONOMY EDUCATION  
IN SEE & UKRAINE**

and

**THIRD MEETING  
of the  
SUB-REGIONAL EUROPEAN  
ASTRONOMICAL COMMITTEE**



**Bucharest, Romania, September 16 -18, 2005**

## SESSION 1

### OBSERVATIONAL PROGRAMS OF SELECTED MINOR PLANETS FOR THE RTT150 WITHIN THE INTERNATIONAL COOPERATION

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New objects of the Solar System are expected to be discovered by the GAIA European space mission. The program GAIA Follow Up was proposed to continue observations of these objects with ground-based means. This programme is open to all telescopes, which have the proper limiting magnitudes and good astrometric qualities.

The first results of astrometric observations of asteroids, carried out at the Russian-Turkish telescope RTT150 in 2004 and at the beginning of 2005, have shown the mean accuracy of a single position of a minor planet in both coordinates not to be greater than 50 mas up to magnitude 17.5 and not worse than 100 mas up to magnitude 20.5. These results give evidence on the great possibilities of the RTT150 for accurate astrometry of minor bodies of the Solar System and on its usefulness if used in the GAIA Follow Up Program. Internal standard error of a single observation of brightness of an asteroid in Rc-band is about 0.01 magnitude at about magnitude 17 and about 0.05 at magnitude 20.

The tasks and programs for observations of selected asteroids in 2005-2007 at the RTT150 within the international cooperation between the observatories of TUG (Turkey), RI NAO (Ukraine) and KSU (Russia) are discussed in this paper.

Solution of such problems as:

- determination of masses of selected asteroids by the dynamical method;
- improvements of orbits of the near-Earth asteroids (NEA);
- research of physical characteristics of selected asteroids from photometric observations

is planned within the future cooperation.

### ASTROMETRIC CALIBRATION OF STELLAR CLUSTERS

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Astrometric properties of images obtained using MSCRED IRAF software package were investigated in this paper. CCD observations of M35 open cluster were taken in an observation run between 10 - 17 October 2004 at Belogradchick Observatory (Bulgaria) using the 60cm Cassegrain telescope endowed with a 1kX1k Apogee 47P CCD camera, leading to a field of size 6.16' with scale of 0.722"/pixel in 2X2 binned mode. Dithered images are resampled and reassembled into a single larger image for which World Coordinate System (WCS) solution is recomputed and investigated.