

**THE ARTIFICIAL SATELLITES OBSERVATION USING  
THE COMPLEX OF TELESCOPES OF RESEARCH  
INSTITUTE MYKOLAIV ASTRONOMICAL  
OBSERVATORY**

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The special methods are needs for observation of artificial objects (AO) due to the fast apparent motion relative to the stars especially for Low Earth Orbit. The special methods, telescopes and software were developed in RI MAO for AO observation. The combined method of observation consists in separated accumulation of images of reference stars and artificial objects and using for observation of artificial objects on all orbits type. The TDI mode and camera rotator using for full-frame camera and allows to obtain the point-like images of artificial object at all type of orbits. The method of accumulation frames with shift are using for TV CCD cameras and allows to obtain the point-like images of artificial objects with apparent motion up to 0.5°/s. The three telescopes of MOBITEL complex using for observation of artificial satellites in RI MAO: the KT-50 (D=0.5m , F=3.0m ), the telescope equipped of full-frame CCD-camera (3k×3k), field of view 0.7°×0.7°, limiting magnitude 18.5 (for exposure 120s). Mezon (D=0.23 m ,F= 0.8 m), the telescope equipped of full-frame CCD-camera (3k×3k), field of view 2.7°×2.7°,limiting magnitude 16 (for exposure 120s). TV-telescope (D=0.05 m ,F= 0.14 m), the telescope equipped of TV CCD-camera Watec 902 h, field of view 2.8°×2.1°, limiting magnitude 11).