



**AstroAutumn-2020**  
**Kyiv, November\*, 2020**

**2 International Conference**  
**Kyiv, November\*, 2020**

**\* The date will be announced soon**

**ДРУГА МІЖНАРОДНА НАУКОВА КОНФЕРЕНЦІЯ  
«Астрономія в Україні: від археоастрономії до  
астрофізики високих енергій»**

**(27 листопада 2020 року, м. Київ)**

# SOFTWARE FOR SEARCH AND MEASURING OF WDS CATALOG DOUBLE AND MULTIPLE STARS FROM DATABASE OF RESULTS OF CCD OBSERVATION

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Double and multiple star systems are source of unique information for determining the parameters of star formation models and for testing stellar models evolution. Therefore observations and measuring of their mutual configuration parameters is still important. Observations of double and multiple star systems at the RI MAO were performed using different telescopes since 2013. In addition, we also have an observational database and proceeding results of the fields in open clusters vicinity, which were performed using the KT-50 telescope (D=500mm, F=3000mm) in 2011- 2020. All astrometric processing was carried out by the Astrometrica software using UCAC4 or GAIA DR2 as reference catalogs. The catalogs of stars positions in the vicinity of open clusters were created as results of these observations.. There are a lot of double and multiple stars in the fields with open clusters. Software for search and measuring of mutual configuration parameters of the double and multiple stars from Washington Double Star Catalog (WDS) are presented. Observational array over 53 nights of 2018 were checked. 7012 CCD images were reduced and in 5308 of them 26966 WDS pairs were found. Total numbers of unique pairs are 1802 in 1297 systems with average number of pair observations near 15. The standard errors of measurements were 0.3" for separations and 0.75° for position angles. The epoch difference between our observations and the last observation in the database is in the range from 2 to 28 years. The comparison with WDS data showed that the residual differences in separations and position angles for close observation periods are in good accordance.