

**The variations of density of star-like sources  
in SUPERCOSMOS survey -  
gravitational lensing by globular clusters ?**

A.V. Yushchenko<sup>1,2</sup>, Chulhee Kim<sup>1</sup>

*1Department of Earth Science Education, Chonbuk National University,*

*2Odessa Astronomical observatory, Odessa National University,*

*Park Shevchenko, Odessa, 65014, Ukraine*

We try to explain quasar-galaxy associations by gravitational lensing by globular clusters, located in the halos of foreground galaxies. We propose observational test for verification of this hypothesis. It predicts the overdensities of star-like sources around foreground galaxies.

We processed SUPERCOSMOS sky survey and found overdensities and underdensities of star-like sources with zero proper motions in the vicinities of foreground galaxies from CfA3 catalog. We show mean effect for galaxies with different redshifts. Two effects can explain observational data - these are lensing by globular clusters and lensing by dwarf galaxies. We made CCD 3-color photometry with 1.8 meter telescope to select extremely lensed objects around several galaxies for spectroscopic observations.