## Ivan Krasnyy

STATE RESEARCH NAVIGATION-HYDROGRAPHIC INSTITUTE

## Gravitational lensing of gravity: The Big Zoom theory

Authors: I. V. Krasnyy

Generalization of classical mechanics at cosmological distances, based on geometric interpretation of the gravitational mass is suggested. Relativistic corrections due to geodesics warping in gravitational field are proposed in order to adjust the Newton's law of universal gravitation. The notion of an observable gravitational mass is introduced, which is back deduced from the magnified Schwarzschild radius value, depending on its angular size and distance to celestial body. The corrections are defined by the following factors:

1. The gravitational self-lensing, manifesting itself at a distance of more than 1 pc, and increasing as  $\sqrt{D}$ . Together with other corrections it may explain mass deficit in the universe, rotation curves of the galaxies and provide reasoning for choice of the static closed universe model. 2. Projective zooming in the closed universe, an analogy of scaling in the azimuthal equidistant map projection of the Earth's surface. The scale increases from negligibly small values at near zone to 1.57 at half of the maximal distance, and has asymptotical growth in the antipodal zone. The zooming is accompanied by the gravitational redshift, for the observed masses. It allows us to offer an alternative explanation for the photometric paradox and the CMBR origin. 3. Repulsion, in fact, corresponds to attraction in the opposite direction for a closed universe. This correction also accounts for asymptotic scaling in the antipodal and near zones. 4. Lensing of the gravitational background at antipodal zone. Manifesting inside the minimal focal length of point gravitational lens, it also accounts for possible overestimation of the proper masses of celestial bodies.

Adoption of the model will require a significant adjustment of astronomical distance scale, would provide alternative for the dark matter and energy concepts, and explanations for various anomalies.