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Invited lecture

3D SPECTROSCOPIC STUDY OF GALACTIC RINGS: FORMATION AND KINEMATICS

Alexei V. Moiseev

Special Astrophysical Observatory, Nizhnij Arkhyz, 369167 Russia
E-mail: moisav@gmail.com

Different types of ring structures hosted in galaxies are considered. Rings are an interesting problem on galaxy morphology related to the some fundamental aspects of evolutions and dynamics of galaxies: a dark matter distribution, galactic interactions, an internal secular evolution. A significant fraction of rings formed in a disk under the action of gravity torques from a bar-like pattern. In contrast with this internal origin, a phenomenon of polar-ring galaxies is closely connected with processes of interactions and merging. A more rare class of colliding rings represents density waves triggered in a disk after a strong bulls-eye collision with a companion. I briefly review the problem of gas kinematics in rings of different origin. An ionized gas velocity field taken with Fabry-Perot interferometer at the SAO RAS 6-m telescope provide an important information for this study.