

AGN AS A RESULT OF EVOLUTION OF BINARY GRAVIMAGNETIC ROTATORS

OLGA K.SIL'CHENKO

Sternberg Astronomical Institute, Universitetskij pr., 13, 119899 Moscow, Russia

and

VLADIMIR M.LIPUNOV

*Sternberg Astronomical Institute, Universitetskij pr., 13, 119899 Moscow, Russia
Faculty of Physics, Moscow University, Leninskie Gory, 117234 Moscow, Russia*

Supermassive black holes in AGN can form directly as the results of collapse of supermassive magnetic and rotating stars (gravimagnetic rotators, [5], [4]). In this case naturally we can consider the binary magnetic rotator systems as progenitors of active galactic nuclei. One of the most important consequence of this scenario is an existence of moving galactic nuclei [3], so called "nomadic" nuclei [6].

The most striking picture has been found in the nearest big spiral galaxy **M 31**. Its nucleus is not a Seyfert one; it is known to be a very quiet. But the stellar kinematics reveals a presence of a "dead" black hole with a mass of some $10^7 M_{\odot}$ in the dynamical center of the galaxy coinciding with the center of the very smooth isophotes; and the compact continuum source is shifted by $0.2'' \div 0.5''$ ($1 \div 2 pc$) [1], [2]! **M 31** is a spiral galaxy with a very regular structure; it has no signs of merging. The only proposed hypothesis is a lot of dust distributed in such a way that a true center is fully closed and a small region in $0.5''$ from it is opened. But it is a quite improbable picture: the central isophotes are regular and the nucleus is point-like. We think that our suggestion is more available: in **M 31** we see the supermassive binary system in the center; one of the components (more massive, surely the black hole) is invisible and situated in the dynamical center, and the other is seen as a continuum point-like source. This system may be a prototype of an active galactic nucleus; the only reason why the nucleus of **M 31** is not a Seyfert one is evidently a lack of gas in the very center of the galaxy.¹

References

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¹ After the preparation of this poster was complete, we have received an issue of Hubble Telescope News (Press Release No.STSCL-Pr93-18) where a discovery of a double nucleus in **M 31** is reported. A second, weak point-like luminous source is found in the geometrical center of the galaxy. So, our prediction is fully confirmed.