A DECOUPLED NUCLEUS IN NGC 1052

O.K. SIL'CHENKO
Sternberg Astronomical Institute
University av. 13, Moscow 119899, Russia. E-mail: olga@sai.msu.su

The central part of NGC 1052 has been observed at the prime focus of the 6m telescope with the Multi-Pupil Spectrophotometer equipped with a two-dimensional IPCS. Ninety-nine spectra over the central 14.5"x11" are registered in the spectral range of $\lambda\lambda 4700 - 5400$ AA and are used to map ionized-gas velocities (by $[OIII]\lambda 5007$) and to derive radial profiles of absorption-line equivalent width for $MgI\lambda 5175$, $FeI\lambda 5270$, and H_β.

The observed position-angle dependence of the central line-of-sight velocity gradient in NGC 1052 is fitted with a cosine law. According to it, the position angle of the gas kinematical major axis is equal to 291^o and perfectly agrees with the photometric major axis ($P.A. = 113^o$ – Sparks *et al.*, 1991), and with the stellar kinematical major axis ($P.A. = 302^o$ – Davies & Illingworth, 1986). So our data are fully consistent with an axial symmetry of the very central part of NGC 1052 within a radius of 3".

On a radial profile of $MgI\lambda 5175$, a sharp decrease of magnesium-line strength can be seen at the radius of 4": 3 points between 0" and 4" keep the equivalent width of 5.07 ± 0.09 A, and the next 4 points up to 10" stand at the level of 3.52 ± 0.10 A. The difference is more than 3σ. By using a model metallicity calibration of Mgb by Worthey (1992), a metallicity-break lower limit can be estimated as 0.6 dex. A few elliptical galaxies with magnesium-distinct nuclei are already known (Bender & Surma, 1992; Sil'chenko *et al.*, 1992), but NGC 1052 presents the first case of a RESOLVED distinct nucleus with a definite radius of 4".

References

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