

SOME RESULTS OF OBSERVATIONS OF BCDGS WITH MULTI-PUPIL SPECTROGRAPH ON 6M TELESCOPE

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1. *Introduction.* The investigations of BCDGs by means of 3D spectroscopy are very important. This method allows to obtain at once spatial and spectral characteristics of the extended objects with an excellent separation of the line emission from continuum, very useful for the investigation of underlying stellar population.

In this method of integral field spectroscopy (proposed for the first time by Courtès, 1980) the field is enlarged and focused on a microlens array. The array produces the spatial sampling and the exit pupil of each microlens acts as a small slit for a wide-field classical grating spectrograph.

2. *Observations.* The observations were made on 6m telescope with the MPFS. In first set we used as a detector IPCS, in subsequent runs - CCD detector. For the reduction of spectra the was software specially developed in SAO (Vlasjuk, 1995) for MPS was used.

3. *Results.* Only the morphological features of BCDGs in the emission lines as well as in the continuum are presented here.

3.1. *Compact objects Mrk 1450 and Mrk 1480.* These objects are very compact in the restored images in H α , [OIII]5007A, [OIII]4959A, lines as well as in the continuum (Fig. 1a,b). But the images in continuum are more extended and shallow. The larger size observed in the continuum could be caused by an extended envelope of old stellar population which is redder than the starforming region.

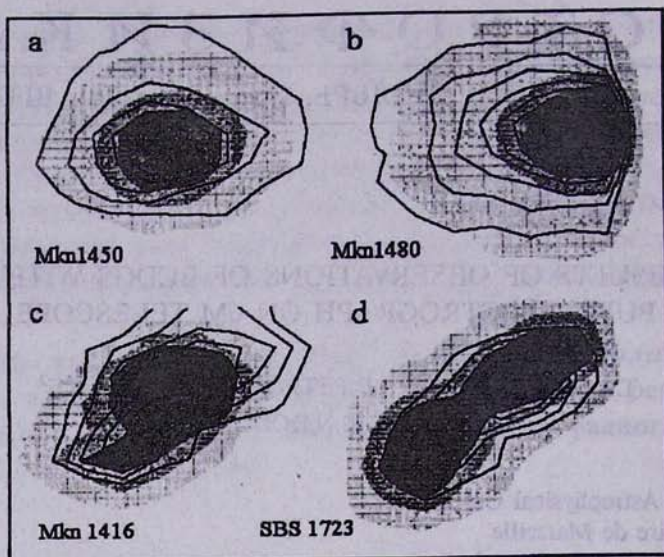


Fig. 1. Intensity maps in [OIII]5007A line (grey) superposed on continuum (isophotes).

3.2. Double objects. In the case of some double objects (Mrk 1416, Mrk 1426, SBS 1723) (Fig. 1 c,d) the peaks of the emission regions coincide with the continuum peaks. The more interesting objects are the galaxies SBS 1154 and Mrk 324 with noticeable separation between emission and continuum regions.

SBS 1154. It represents a striking case of separation of emission and continuum regions (Fig. 2a). It has two emission lobes separated by about 12 arcsec and a double continuum peak located between them. There is no observable difference of radial velocity between the two emission lobes.

Mrk 324. Opposite to the double-structured continuum image, in the emission lines (H_{α} , [OIII]) (Fig. 2 b,c). Images obtained in both spectral regions show color differences between the two continuum peaks, implying that we observe two different stellar populations (Fig. 2b).

The restored image in [SII] lines show the filamentary structure non-congruent with images in H_{α} and [OIII] lines. This filament could be caused by a shock wave which may be triggered by star formation processes, or by a chain of supernovae remnants. These hypotheses are consistent with the detection of a faint [OI] 6300 Å line in this galaxy.

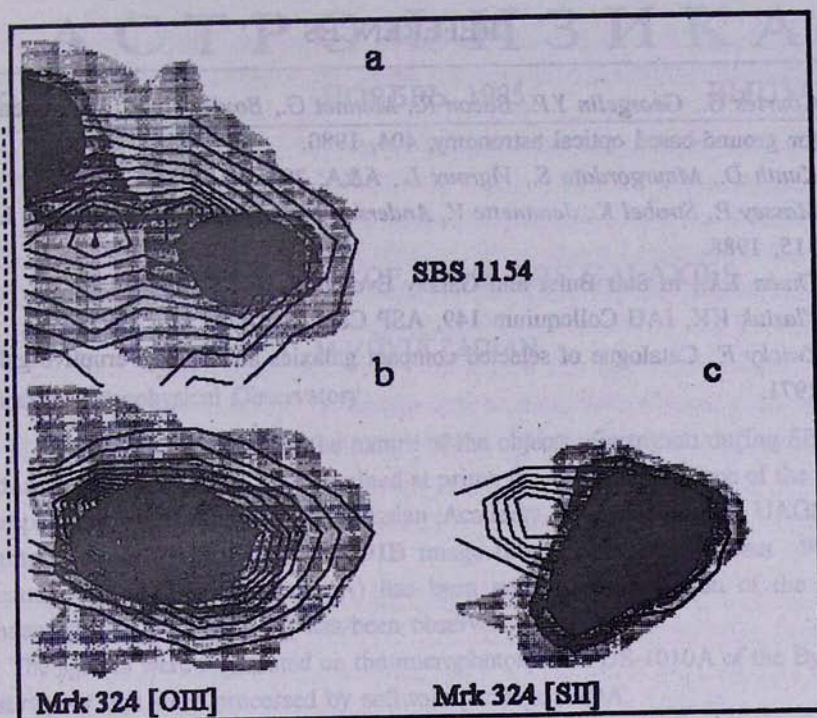


Fig. 2. Intensity maps in [OIII]5007A line (a and b) (grey) and [SII]6716+6731A (c) superposed on continuum (isophotes).

Некоторые результаты наблюдений голубых компактных карликовых галактик на 6м телескопе с многозрачковым спектрографом. Представлены результаты наблюдений голубых компактных карликовых галактик с мультизрачковым спектрографом на 6-метровом телескопе САО РАН. Приводятся восстановленные изображения семи галактик в эмиссионных линиях и континууме. В ряде случаев наблюдается пространственное несовпадение областей, излучающих в линиях и в континууме.

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