

Catalog of Positions and Spectroscopic Properties of Galaxies in the A1367 Cluster

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Abstract. In the present work the results of an optical spectroscopy study of 8 galaxies projected in the central part of the A1367 cluster are reported. The observations were made using the 2.2 m. Guillermo Haro Telescope in Cananea (Mexico), and the Boller and Chivens spectrograph. A catalog of the optical positions of more than 100 galaxies in the cluster is presented. The redshifts of 7 galaxies were determined from their absorption systems, while for the remaining galaxy was obtained from its strong emission lines of H-alpha, S II, O III and H-beta. For one of the galaxies the emission redshift is $z = 0.015$, not showing absorptions lines at the cluster redshifts ($z = 0.026$), which argues that it is located between the observer and the A1367 cluster.

Keywords. Clusters, Galaxies, optical spectra

The cluster A1367, located at $Z=0.021-0.025$ has more than 100 members for more than half of which their redshifts are available. In this work we report the spectroscopic investigation of 8 members. The observation were carried out with 2.12 m. Guillermo Haro Telescope in Cananea (Mexico), and the Boller and Chivens spectrograph. Spectra of 40 galaxies with magnitudes from 14m to 18m were measured. The pre-processing stage included all essential steps of CCD image handling: taking into account bias, dark current and flat-fielding, as well as filtering out matrix drawbacks and cosmic rays. The processing itself consisted of subtracting spectral lines of the night sky and wavelength calibration with the use of the built-in He-Ar standard source. For the A1367 cluster we identify 7 absorption systems and 3 objects show bright emission lines. Measured redshift in emission for two galaxies (Z is more than 0.7) argue that they are located behind the A1367 cluster. But for the galaxy number 4 in the table the redshift measured with emission lines is 0.0154, and no absorptions at redshifts of A1367 were found.

| N | RA(2000.0) | DEC(2000.0) | R(mag) | B(mag) | Z_{em} | Z_{abs} |
|---|-------------|-------------|--------|--------|----------|-----------|
| 1 | 11 43 44.41 | 19 44 42.3 | 14.58 | 16.73 | 0.7676 | 0.7676 |
| 2 | 11 43 53.56 | 19 44 22.1 | 13.54 | 15.61 | | 0.0199 |
| 3 | 11 43 59.56 | 19 46 44.2 | 11.12 | 13.14 | | 0.0175 |
| 4 | 11 44 1.90 | 19 47 3.9 | 11.93 | 12.18 | 0.0154 | |
| 5 | 11 44 3.03 | 19 44 25.1 | 14.02 | 16.20 | | 0.0216 |
| 6 | 11 44 5.34 | 19 45 12.0 | 14.57 | 15.78 | | 0.0032 |
| 7 | 11 44 7.66 | 19 44 15.4 | 10.94 | 13.32 | 0.7798 | 0.0261 |
| 8 | 11 44 8.74 | 19 45 20.2 | 14.63 | 16.39 | | 0.0014 |