clearly seen in the photograph taken with the 6-m telescope.

Markaryan 323 (Sc, sd 2, 4711 km/sec). A galaxy with bright nucleus and spiral arms that cannot be well traced. There are many faint condensations in the galaxy, only one of which is a superassociation. It is only slightly less bright than the nucleus.

Markaryan 332 (SBc, s 2, 2882 km/sec). This has an unusual lenticular bar with starlike nucleus. The two brightest superassociations are in one arm, and one of them is at the end of the bar. In the other arm, which traces a spiral arm, there are four condensations with brightness much less than the first two.

LITERATURE CITED


MORPHOLOGICAL INVESTIGATION OF GALAXIES WITH ULTRAVIOLET EXCESS

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A description is given of 43 galaxies with ultraviolet excess. Photographs of them obtained with the 2.6-m reflecting telescope of the Byurakan Astrophysical Observatory are reproduced. Individual morphological details and condensations are discussed.

1. Introduction

The investigation of galaxies with ultraviolet excess in Kazaryan's lists [1-3] shows that they constitute a rich group of very interesting galaxies of different morphologies. A detailed study of them is of no small interest. Morphological and spectrophotometric investigation of these galaxies can give an additional possibility for advancing our ideas about the nature and evolution of active galaxies.

The majority of galaxies in Kazaryan's lists [1-3] are faint objects with photographic magnitudes in the range 15m-17m. In this paper, we reproduce large-scale photographs of 43 of the galaxies in Kazaryan's lists and describe them. We have found interesting structural details not revealed in the Palomar Sky Survey.

2. Observational Material

During the summer of 1980 the 2.6-m reflecting telescope at the Byurakan Astrophysical Observatory was used to obtain direct photographs of a number of galaxies
with ultraviolet excess in the three published lists of Kazaryan [1-3]. Blue ORWO Zu-21 plates were used and the exposure was 25 min (the original scale was 1 mm = 20"). The program of our observations included only the Kazaryan galaxies projected onto the sky with small mutual separations. Further spectroscopic investigation of these galaxies may reveal physical pairs among them.

Below, we give a detailed description of the morphology of the galaxies, which are identified by Kazaryan's numbering (their coordinates, estimates of the photographic magnitudes, and form of the spectra are given in [1-3]), and also reproductions of the galaxies (the scale in the photographs is 1 mm - 4'31).

1. No. 42. The spherical starlike central region of the galaxy, which has a diameter of 4" but is hardly brighter than the background, is surrounded by a faint barely visible halo measuring 6" × 20" and elongated in the east-west direction. In the Palomar Sky Survey, it appears as a lenticular galaxy. It could be a spiral.

2. No. 44. The spherical star shaped central region of the galaxy with diameter of about 4" appears to be surrounded by a thin ring-shaped halo of diameter ~6", which in its turn is situated within a faint barely visible lenticular halo measuring about 8" × 12". In the Palomar Sky Survey it resembles an elliptical galaxy.

3. No. 49 = MCG 11-19-30 [4]. A spiral galaxy with bright spherical nucleus of diameter ~5". Spiral arms, in which inhomogeneities can be seen, leave the central part of the galaxy to the north and the south and can be traced from the center of the galaxy up to 12" in a straight line in both directions. In the Palomar Sky Survey it resembles an irregular galaxy.

4. No. 50. The very bright apparently uniform central region of the galaxy with diameter measuring about 7" × 9" is surrounded by a faint halo ~12" × 22". In the Palomar Sky Survey it appears fairly compact. It may be an elliptic galaxy or a galaxy of type SO.

5. No. 65. A spiral galaxy. From the compact bright, almost starlike nucleus,