

Poster

Search of correlation between galaxies with H₂O maser and without H₂O maser

Volkov Konstantin and Parfenov Sergey

Ksenia Smirnova (Arashu@rambler.ru)
Ural Federal University, Russia

The work presents a study of the characteristics of ultraviolet and infrared radiation – the luminosity of radiation, the ratios of radiation fluxes – of galaxies in which water molecules (H₂O) megamasers are observed, and their comparison with the characteristics obtained for galaxies in which megamasers H₂O are not detected. Observations of megamasers are of great scientific interest, since, for example, they provide estimates of the masses of supermassive black holes in the centers of galaxies with which they are associated. However, the detection of megamasers is difficult and to increase its probability, it is important to study the characteristics of the radiation characteristics of galaxies with already detected megamasers in different wavelength ranges. The work considers two samples of galaxies with the most similar morphological types. One of the samples included galaxies with maser radiation, and the other – galaxies without maser radiation. As a result of the work, a relationship was found between ultraviolet radiation and PAH radiation for both types of galaxies.