

BPT- σ relation in local galaxies.

D.V. Oparin

Dmitry Oparin (doparin2@gmail.com)

Special Astrophysical Observatory of the Russian Academy of Sciences, Russia

Study of the state of ionized gas in galaxies is crucial for understanding galactic evolution and effects of stellar feedback. Emission lines ratio diagrams (also known as Baldwin-Phillips-Terlevich plots) is a traditional method for analysis of the state of the ionized gas emitting in the optical range. Although it helps easily to separate main ionization sources (like young stars in the H II regions, active galactic nuclei et al.), there are difficulties appearing in intermediate cases. For objects with shocks ionization this problem could be solved by adding to classical BPT-diagrams an extra parameter — line-of-sight velocity dispersion of the ionized gas (σ). We combined velocity dispersion maps obtained with scanning Fabry-Perot Interferometer at the 6-m telescope BTA with emission line ratios obtained from the different integral-field spectroscopy data to analyse the interstellar medium in local galaxies with different sources of ionization.