

Poster

## BPT-sigma relation in nearby dwarf galaxies

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In order to study the state of galactic ISM the intensity emission line ratios (BPT diagrams, named after "Baldwin, Phillips & Telervich") are used to separate main ionization sources: hot massive young OB stars in the star formation HII regions, active galactic nuclei, shock waves related with supernova remnants and other feedback processes like a supersonic turbulence generated by stellar winds. In the intermediate cases, for example, when the contributions of radiation from OB stars and from shock waves mix, identification becomes uncertain, and the issue remains unresolved on what determines the observed conditions of the diffuse ionized gas including the one on large distances from the galactic plane. Adding of an extra parameter - the gas velocity dispersion in the line-of-sight to classical diagnostic diagrams (i.e. "BPT-sigma"relations) helps to find a solution. We announced the project aimed for expanding a sample of objects to study the "BPT-sigma"relation in the interstellar medium of the local star forming galaxies. We are going to combine the ionized gas velocity dispersion maps derived from the scanning Fabry-Perot interferometer observations at the SAO RAS 6-m telescope with the emission lines ratio obtained from the archival long-slit spectroscopic data. The first results of this study is presented.