Seminarium Astrofizyczne

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Synergies between low- and intermediate-redshift galaxy population classifications revealed with unsupervised machine learning

Machine learning techniques will be crucial for analysing future large galaxy samples and enhancing our understanding of galaxy evolution. Siudek et al. (2018) tested a clustering algorithm on a z~1 VIPERS sample of ~50000 galaxies, a redshift at which the Universe was half its current age and the global star formation rate was much higher than today. Using broadband photometric colours spanning UV to IR wavelengths, they revealed a detailed partition of the galaxy population and established the predictive power of the input colours. We adapt their approach in order to compare their VIPERS sample with a z~0 SDSS-based sample of ~300000 galaxies, with a view to constraining the cosmic evolution of subpopulations of galaxies.

Serdecznie zapraszam,
    Agnieszka Majczyna