An object approach for the automated galaxy detection task in MUSE hyperspectral data

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Résumé

This communication focuses on the automated galaxy detection task in the hyperspectral data cube provided by the MUSE spectrograph. A marked point process detection framework is used, yielding a natural sparse representation of the MUSE data. The estimation of the parameters and the detection of the galaxy configuration are performed jointly, within a fully Bayesian framework. The model is designed to be scale
invariant in order to take into account the high dynamical ranges that exist in the data cube. The galaxies are detected from benchmark data mimicking real data. Their spectrum and the spectral properties of the astrophysical background are also estimated.

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