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QSFit: Automatic analysis of AGN optical spectra

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The QSFit package allows to perform automatic analysis of optical/UV AGN spectra. The software is very easy to use (it just requires the input FITS file) and provides estimates of: emission line luminosities, widths and velocity offsets; host galaxy luminosities; iron lines luminosities at optical and UV wavelengths; Balmer continuum luminosities; continuum slopes and luminosities at several wavelengths; etc. The ultimate purpose of QSFit is to allow astronomers to run standardized recipes to analyse the AGN data, in a simple, replicable and shareable way.
I will present the analysis algorithm and the scientific exploitation of the first catalog of spectral properties, measured on a sample of ~70,000 SDSS spectra of type I AGN with z < 2 (Calderone et al. 2017, http://qsfit.inat.it). Also, I will show how to perform the analysis on new spectral data (regardless of the telescope/instrument used), how to customize the procedure for specific needs, and discuss how QSFit is currently being employed to analyze the low-resolution spectra of AGN in the J-PAS survey.

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