*Poster*

# SPAMM
# SPECTRAL PROPERTIES OF AGNs MODELED WITH MCMC

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AGN spectra suffer from blending of multiple emission and absorption components that arise from physically distinct sources at a variety of distance scales from the central BH (e.g. accretion disk, host galaxy, narrow and broad emission lines). Blended features in AGN spectra can lead to biases that can affect BH mass measurements by more than an order of magnitude. Using spectral decomposition, a model is defined that attempts to simultaneously reproduce all AGN components. Most spectral decomposition techniques use best-fit optimization algorithms that are extremely inefficient in sampling the parameter space and do not provide robust estimates of the uncertainties and correlations between different spectral components. These approaches also rely on assumptions that some spectral regions are affected by one component only, and can be used to "fix" the parameters for those components. Our innovative code, SPAMM, addresses all of these issues. SPAMM is an open-source Python package that uses a Bayesian approach and MCMC techniques to perform spectral decomposition on AGN spectra while providing a full description of uncertainties in the models.