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Invited Lecture

EMISSION LINE VARIABILITY IN THE AGN STORM DATASET

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The AGN Space Telescope and Optical Reverberation Mapping program (AGN STORM) was the first reverberation mapping (RM) study designed to simultaneously probe the kinematics of all the strong UV and optical line-emitting regions in a local AGN. The AGN STORM campaign targeted the Seyfert I galaxy NGC 5548, and was built around a large HST-COS program that executed in 2014. The campaign was supported by intensive monitoring using Swift, and by ground-based spectroscopic and photometric observations. In this talk I will review what we have learned from line variability in this unprecedented campaign, while emphasizing puzzling and unexpected results that challenge our current understanding of the AGN structure.