

## The restless nature of AGN: 10 years later



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## New Types of Flares from Accreting Supermassive Black Holes

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A growing number of transient phenomena in galaxy nuclei have recently begun to shed new light on SMBH demographics and the physics of gas accretion onto these objects, tracing events where this accretion has drastically intensified, diminished, and/or otherwise disturbed. I will present recent results regarding some of these new classes of high-variability phenomena, focusing on insights gained thanks to responsive, multi-wavelength follow-up observations. These include “changing look” AGN that occur on surprisingly short timescales (several weeks), and for which we have strong evidence for the nature of the transition (i.e., accretion vs. obscuration); and other, yet poorly understood flaring AGN with broad Bowen fluorescence emission features, driven by extreme UV radiation that appears within weeks but lasts for well over a year. While these events observationally differ from the tidal disruption events known to date, the physics behind them may be interlinked. Together, these extreme events can greatly advance our understanding of SMBH accretion, teach us how and why SMBHs turn their accretion “on” and “off”, and reveal super-Eddington accretion. I will finally mention how new surveys, such as the SDSS-V, will discover & survey many more SMBH-related transients.

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