BOSTON UNIVERSITY

Astrophysics Seminar
Monday, November 2, 2015

Revealing the Hidden Broad Line Region in AGN Using Reverberation Mapping

3:15 pm
Refreshments
CAS Room 500

3:30 pm
Seminar
CAS Room 502

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Abstract:
Echoes from the broad line region in active galactic nuclei (AGN) allow for the measurement of supermassive black hole masses outside the local Universe. However, the detailed structure of the broad line region is difficult to constrain due to the very small scales involved. With a new generation of high-quality reverberation mapping datasets, we can substitute time resolution for spatial resolution and begin to model echoes from the broad line region directly. I will discuss the development of a direct modeling approach for reverberation mapping data capable of measuring the absolute black hole mass and the geometry and dynamics of the broad line region. As an example, I will show an application of this approach to the Lick AGN Monitoring Project 2008 reverberation mapping sample as well as preliminary results for a more recent high-quality dataset from the OSU reverberation mapping collaboration. Finally, I will discuss how this work can improve AGN black hole mass measurements at all redshifts.

Next Week

- *Danilo Marchesini
Tufts University*

- The Growth of Today's Most Massive Galaxies over the last 12.8 Gyr of Cosmic History

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