



**ASTROPHYSICS
SEMINAR SERIES**

**"Hydrogen and Heavy Element Measurements near the
Epoch of Reionization"**

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**Monday, November 4, 2013
Refreshments at 3:15pm in CAS 500
Talk begins at 3:30pm in CAS 502**

Abstract:

Infrared photometric surveys are now discovering quasars at $z > 6.5$, enabling investigation of neutral Hydrogen and its associated heavy elements at the tail end of the reionization epoch. I will discuss results from our earliest spectroscopic observations of these objects using FIRE on Magellan, and frame these results in the context of early circumgalactic metal pollution. I will also discuss limitations of the current measurements and ways that next-generation telescopes may help address these shortcomings. Finally, I will provide a high-level overview of selected new instrumentation concepts and technology development projects underway at MIT.