



**ASTROPHYSICS
SEMINAR SERIES**

**"Epoch of Reionization Studies
with the Murchison Widefield Array"**

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Monday, April 22, 2013

Refreshments at 3:30pm in CAS 500

Talk begins at 4:00pm in CAS 502

Abstract:

The Epoch of Reionization (EoR), the period in the history of the Universe that marks the formation of the first stars and galaxies, may soon be studied in detail by several new instruments currently under development. One particularly promising technique is that of mapping neutral hydrogen structures using the redshifted 21cm radio line. With this goal in mind the Murchison Widefield Array (MWA), a low-frequency radio array in Western Australia, is under construction. While a detection of neutral hydrogen structures will require long integrations with the full array, preliminary results concerning the properties of foregrounds and upper limits on EoR structures have been derived from the 32-element MWA prototype array. I present results from the prototype array, and discuss the prospects for EoR science with the full MWA.