

CGD SEMINAR



DATE: Tuesday, May 29, 2018

TIME: 11 a.m.

LOCATION: NCAR, 1850 Table Mesa Drive
Mesa Lab, Main Seminar Room

TITLE: Circumglobal Teleconnections and
Linkages with Heat Waves in the
Northern Hemisphere Summer

SPEAKER: Haiyan Teng, NCAR

ABSTRACT:

In contrast to some well-known teleconnection patterns that have strong variations in the meridional direction, such as the NAO and PNA, there is a class of intrinsic planetary wave patterns of subseasonal and longer co-variability that are primarily orientated in the zonal direction. These patterns are often referred to as circumglobal teleconnections (CGTs). They are associated with the waveguiding effect of the tropospheric mean jet on Rossby waves. In recent years, many studies have reported close linkages between midlatitude extremes (heat waves, floods) and CGTs in the northern summer, although the mechanisms for the CGTs should be less effective in the summer. In this talk, I shall review our recent work on the seasonality of the tropospheric waveguide teleconnections and their connections with the US heat waves. I shall use a series of CESM1 prescribed soil moisture experiments as an example, to discuss how land surface forcing, together with synoptic eddies, can force a circumglobal response despite the much weaker mean jets and waveguide effects in the northern summer.

Live webcast: <http://ucarconnect.ucar.edu/live>

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