UNIVERSITY of HAWAI'I MĀNOA

Department of Atmospheric Sciences Seminar Announcement

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SCHOOL OF OCEAN AND EARTH SCIENCE AND TECHNOLOGY

Interdecadal Variation of the South Asian High

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Date:	**Wednesday, October 9, 2019**
Refreshments:	**3:00pm at MSB courtyard**
	Cookies, Coffee & Tea Provided
Seminar Time:	**3:30pm**
Location:	**Marine Sciences Building, MSB 100**

Abstract:

The characteristics and possible physical mechanism of interdecadal variation of the intensity of the South Asian High (SAH) in summer are analyzed using the NCEP/NCAR reanalysis data and NOAA extended reconstructed sea surface temperature (SST) data. The results indicate that a remarkable interdecadal transition occurred in the late 1970s that increased the intensity of SAH, or, an abrupt climate change was around 1978. A comparative analysis between the weak and strong period of the SAH intensity shows that the related anomalous patterns of the atmospheric circulation (including wind field, air temperature field and vertical velocity field) are nearly opposite to each other. The surface latent heat flux anomalies over the plateau (especially in the northwest of the plateau) in summer exert great influence on the interdecadal variation of the SAH intensity and the surface sensible heat flux anomalies play a more crucial role. Consistent with the interdecadal variation of the SAH intensity, the monopole mode of the tropical Indian Ocean SST in summer also experienced a low to high transition in the late 1970s. To some extent, this can reveal the impact of the anomalous monopole mode of the tropical Indian Ocean SST in summer on interdecadal variation of the SAH.