



UNIVERSITY  
of HAWAI'I  
MĀNOA

## Department of Atmospheric Sciences Seminar Announcement

Department of Atmospheric Sciences, S.O.E.S.T., University of Hawai'i at Mānoa  
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# Rapid change of sea ice in recent years

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**Date:** Wednesday, March 21, 2018  
**Refreshments:** 3:00pm at MSB lanai  
Free Cookies, Coffee & Tea Provided  
(Please Bring Your Own Cup)  
**Seminar Time:** 3:30pm  
**Location:** Marine Sciences Building, MSB 100

### Abstract:

Based on the data of Arctic sea ice concentration from National Snow and Ice Data Center (NSIDC) and Hadley Center (HC), it turns out that Arctic sea ice is undergoing a rapid process of change. The sea ice extent has a trend of decrease and has two decadal transitions. It can be divided into three stages: ①1979 ~1996, ②1997~2006 and ③2007~2016. The linear trend and oscillation of sea ice was relatively small in first stage. Then the Arctic sea ice decreased quickly, and its trend reached to about three times than before, but the interannual oscillation was very small. After 2007, the trend of decrease was insignificant, but the oscillation increased dramatically. But what causes this kind of rapid change? It is caused by the external forcing, internal forcing or both of them? Since the polar region is a highly nonlinear system, how does this nonlinear process affect the change of sea ice? In this seminar, a conceptual sea ice model will be shown and try to explain the rapid change of sea ice.