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## Department of Atmospheric Sciences M.S. Defense Announcement

Department of Atmospheric Sciences, S.O.E.S.T., University of Hawai'i at Mānoa  
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M.S. Defense Title:

# HEAVY PRECIPITATION FROM HURRICANE LANE ON HAWAI'I ISLAND

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**Date: Tuesday, June 18, 2019**  
**Time: 3:00pm**  
**Location: IPRC Conference Room, POST 414**

### Abstract:

Hurricane Lane (2018) significantly impacted the Hawaiian Islands, bringing heavy rainfall and widespread flooding especially to Hawai'i Island. Rain gauges measured >50" of rainfall on the windward slopes of Hawai'i Island over four days. In this study, an 8-hr period during an early part of the storm was analyzed. This period was chosen because winds were primarily easterly. Thus this time period serves as an analogue for the typical trade wind flow and precipitation pattern Hawai'i Island receives much of the year. An analysis of several observational datasets of the storm environment and the resulting precipitation provides strong evidence for orographic enhancement during the early part of Hurricane Lane's impacts on the Hawaiian Islands. Lane was an ideal case study for understanding the factors that lead to heavy rainfall in Hawai'i, and acts as a proxy for understanding high rainfall events.