Abstract:

In August 2018, Hurricane Lane was an impactful event for the Hawaiian Islands that brought widespread rainfall throughout the islands. On the Big Island, windward locations received up to 60 inches of rain in a 4-day period. We use observational datasets to quantify precipitation to understand the role of the terrain and how it affected rainfall on the Big Island. Radar and rain gage analysis shows greater rain rates and rainfall accumulations over the island slopes as compared to the upstream ocean. In the case of Hurricane Lane, we conclude that the combination of the hurricane environment with the island terrain enhanced precipitation.