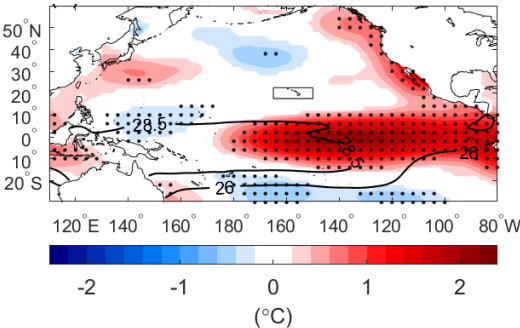
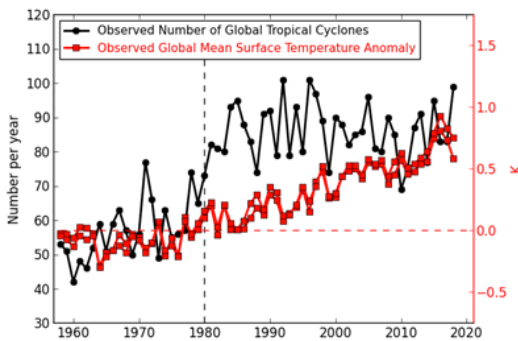


## Climate Variability, Climate Change and Tropical Cyclones Activity



Eastern Pacific El Niño in winter



Global Warming



3 cat-4 hurricanes over Central North Pacific, Aug 30 2015

**ATMO 752, CRN: 78863**      **Instructor: Pao-Shin Chu (chu@hawaii.edu)**

*Mon, Wed, Fri 10:30 – 11:20 am, HIG310, Credits: 3*

**Prerequisite:** Graduate students (SOEST). For undergraduate students in the ATMO Department or students in other colleges, please inquire instructor for possible overrides.  
**Textbook:** Chu and Murakami, 2022: Climate Variability and Tropical Cyclone Activity. Cambridge University Press.

### Course outline:

#### 1. Introduction of climate variability:

Intraseasonal, interannual to decadal variability in the Pacific and Atlantic basins.

#### 2. Introduction of climate change:

Observed changes and their causes; Future changes, risk and impacts.

#### 3. Observed tropical cyclone activity in a warming climate:

For the next three parts we will cover storm activity (e.g., genesis, track, landfalling, intensity) over the North and South Pacific, South China Sea, and North Atlantic.

#### 4. Intraseasonal to interannual variability and tropical cyclones

#### 5. Decadal to interdecadal variability and tropical cyclones

#### 6. Future projection of tropical cyclone activity under climate change