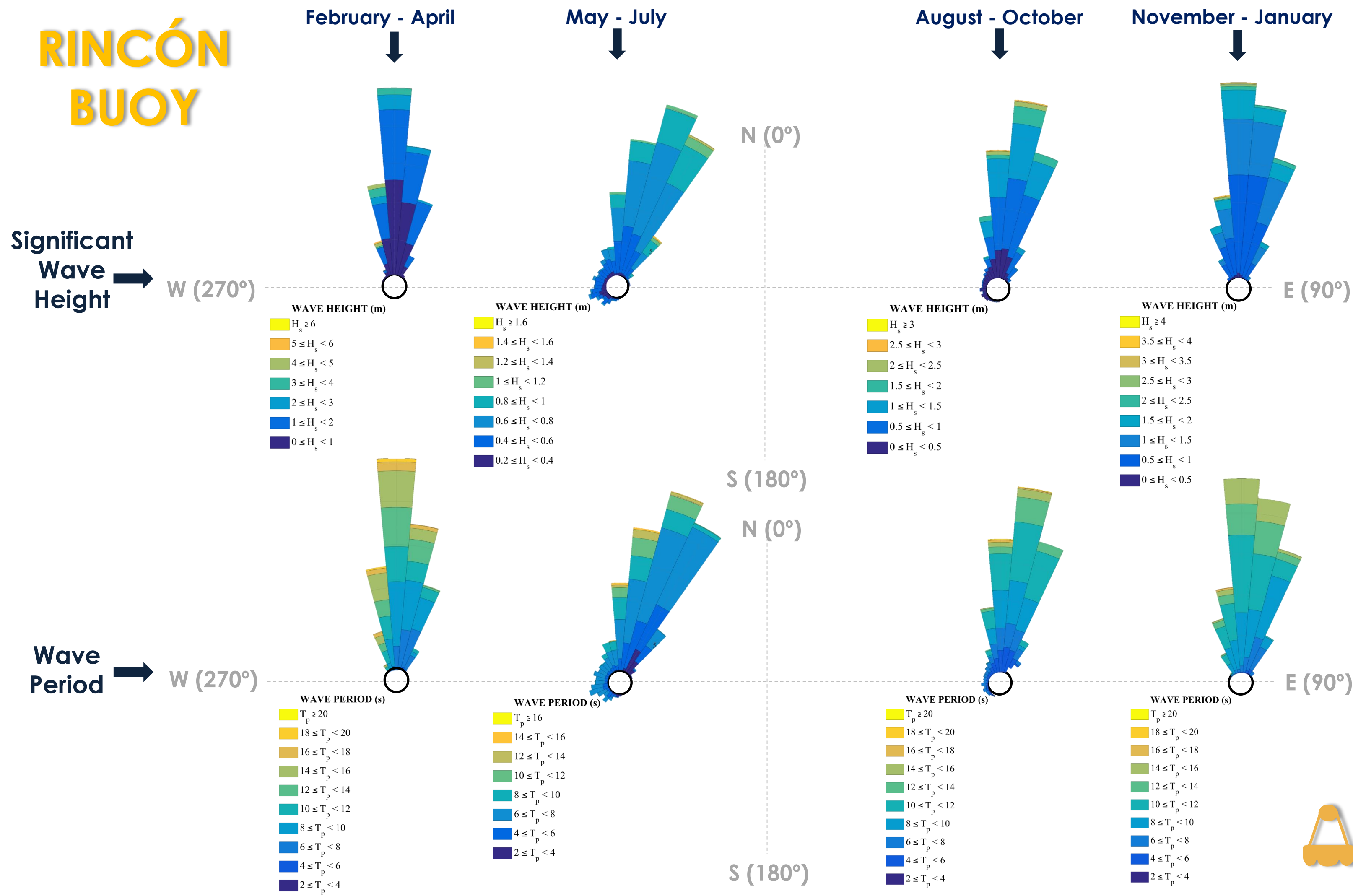


Wave Climate and Beach Response of the Coast of Rincón, Puerto Rico

Patricia Chardón-Maldonado^{1,2}, Peter Rivera^{1,2,3}, & Edward Cruz^{1,2,4}
¹Caribbean Coastal Ocean Observing System / ²UPRM Center for Applied Ocean Science Engineering
³Department of Mechanical Engineering / ⁴Department of Civil Engineering

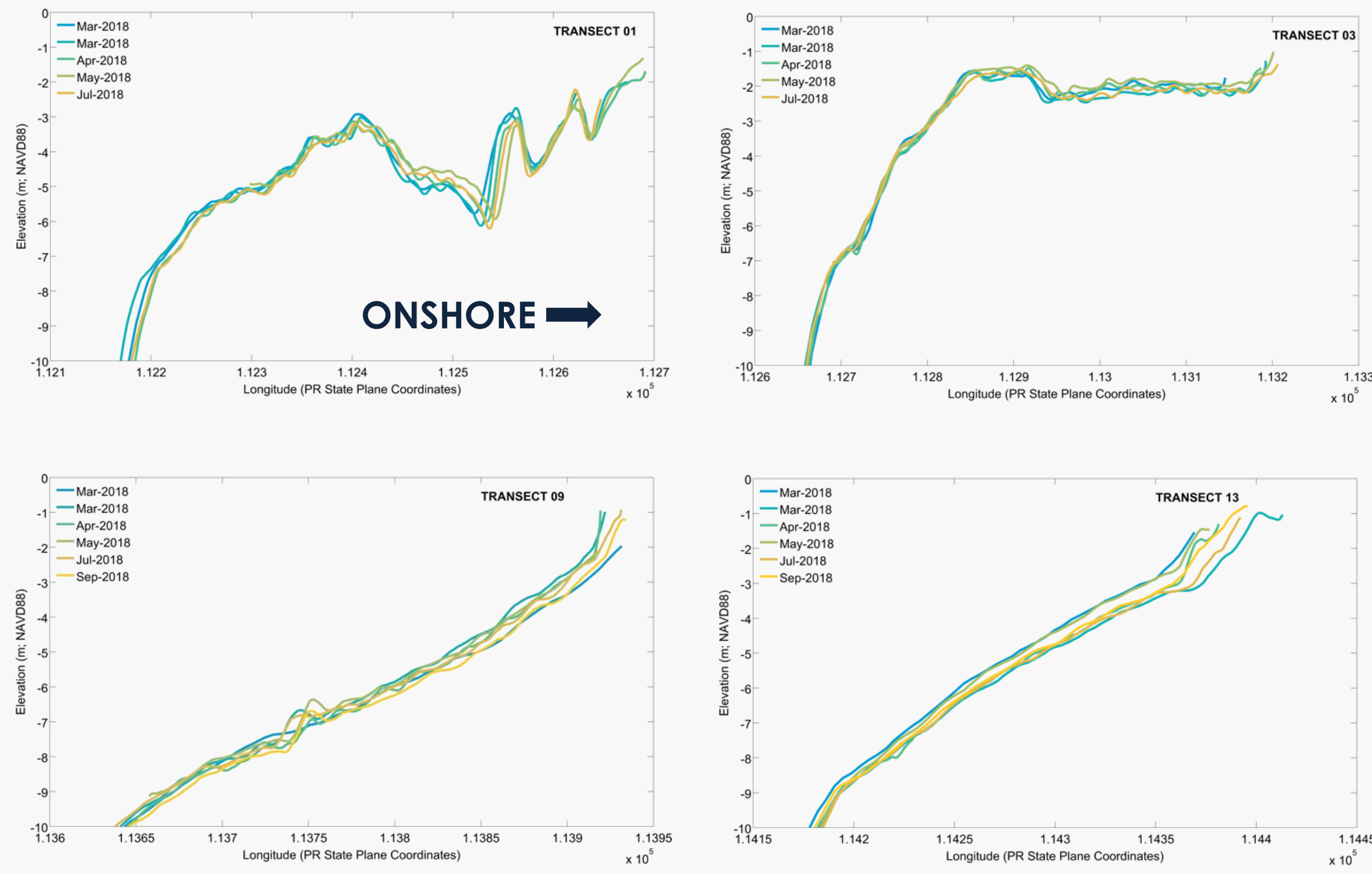
RINCÓN BUOY



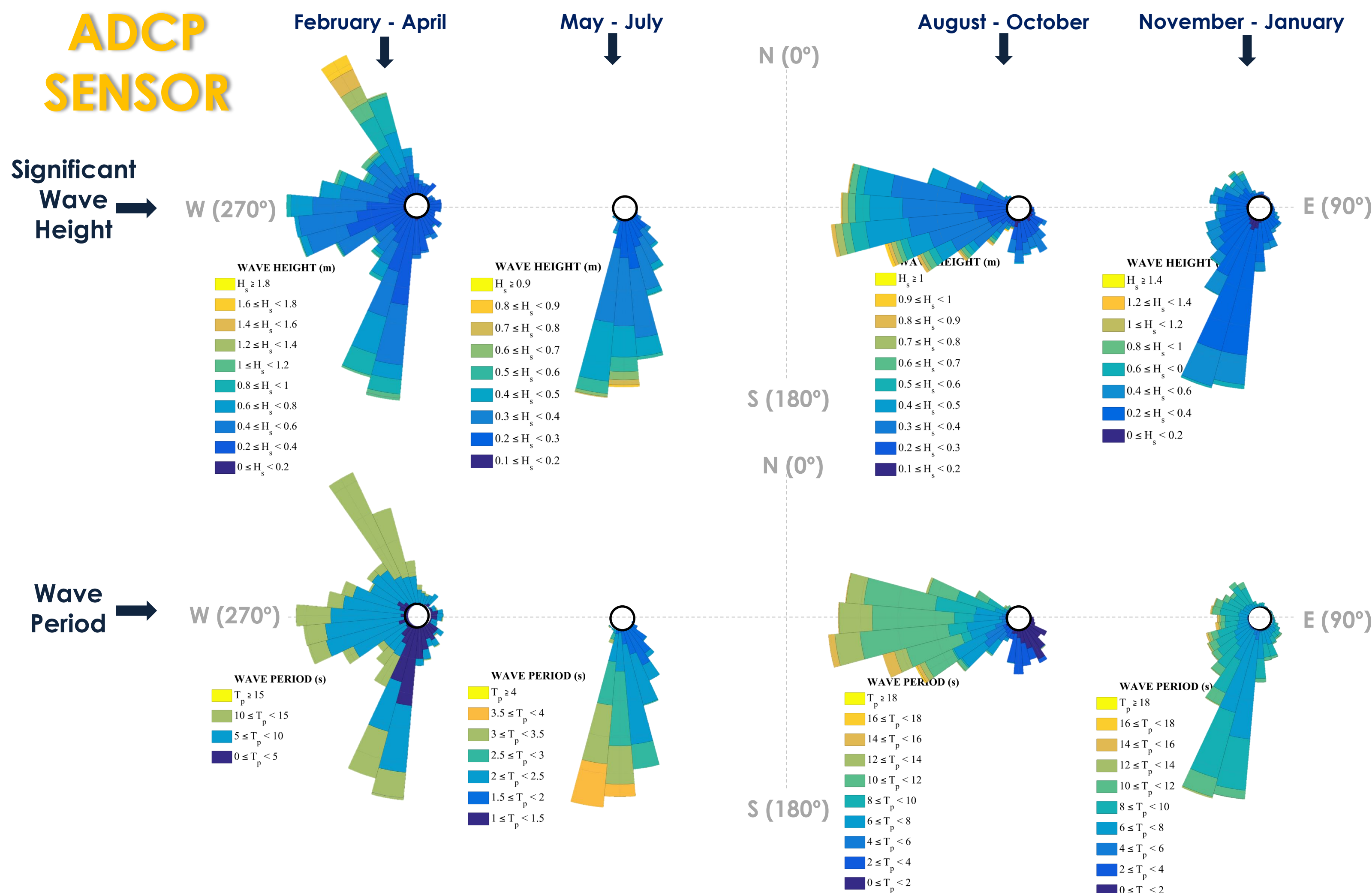
OUR OBSERVATIONS & FINDINGS

- The main objective of the study was to collect detailed hydrodynamic and morphological observations to characterize post-storm recovery dynamics.
- The field data have enabled us to test the hypothesis that after Hurricane Maria's catastrophic impact on the site, beach recovery is dictated by the hydrodynamics resulting from the year's swell season.
- To define the wave climate, data from CARICOOS Rincón buoy and six (6) sensor deployments (ADCPs) performed during 2018-2019 were analyzed.
- The data shows a joint occurrence of wind waves and swell.

MORPHOLOGICAL CHANGES



ADCP SENSOR



- Swell waves were more frequent during the months of February to April.
- A change in direction of the waves and decrease in wave heights was observed along the coast, caused by variation in bathymetry, shoreline orientation and the presence of reefs.
- Post-storm field observations indicate that the westerly swell events induce severe erosion, whereas the north-northwesterly swells help accrete the nearshore.
- The information presented here provides a baseline dataset for future studies related to coastal processes, fundamental for a better understanding of the coastal zone in Rincón, Puerto Rico.

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