Rip Current Observations and Monitoring Tool Calibration for Southern California

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Rip current observations were taken by experienced lifeguards working with the National Weather Service's Weather Forecast Office in San Diego, California. The data reveal consistent features in rip current patterns and associated surf conditions. We find that rip current occurrence may be controlled by the incoming swells and local beach profile. To test the quality of preliminary data to diagnose the occurrence of rip currents and surf conditions, we applied two formulas based on Wright and Short (1983) and Guza and Inman, (1975). We calibrate the scheme with visual observations made by the lifeguards. The goal is to provide a simple monitoring tool that can be useful for lifeguards and local forecasters in determining the threat of rip currents at a specific beach. Hourly coastal wave and tide data are also collected concurrently and used as reference data. We will present the observational data set and discuss the skill of the algorithms.