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Directional wave spectrum retrieved from in-situ and remote sensors

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Measurements of ocean surface waves are obtained and studied from various perspectives. A coastal high frequency radar and an acoustic Doppler current profiler have been deployed and operated to detect and determine the source of differences of wave information retrieved. Now more space-borne remote sensors are being used, such as optic devices, as well as real and synthetic aperture radars. We focus in determining advantages and limitations of each method to observe and retrieve directional properties of ocean surface waves. It seems that the various methods complement each other, while we critically exploit the data to determine the accuracy and resolution of wave directional information. Short wave directionality plays an important role in the final directional wave spectrum retrieved, specially under the influence of the observation geometry associated with the wind and wave relative directions.