CWwavespectra.docx

During the flight on 5 February 2015 the wind at the aircraft altitude was fairly uniform throughout the experiment area, blowing towards the NNE at about 30 m/s. The characteristics of the dominant waves on the sea surface also did not change much. The curve in the top left graph below shows a blowup of the aircraft flight path with the numbered circles indicating the positions of the sequence of seven WSRA directional wave spectra that follow, from left to right and top to bottom. Each spectrum has nine contours from 0.1 to 0.9 of its spectral peak, which is indicated in the upper left corner above the significant wave height (SWH). The half-power contour is bold. The aircraft altitude and the year, month and day are in the lower left corner, followed by time in two formats: hour, minute and second, and seconds of the day. The latitude and longitude are in the lower right corner. The blue radial is the downwind vector times 0.001. The black radial is the aircraft tack. The red radial is the aircraft heading. The solid circles indicate 300, 200 and 100 m wavelengths and the dashed circles indicate 350, 250, 150 and 75 m wavelengths. There were two wave systems in the area, one of about 250 m wavelength propagating towards the East and the other of 150 to 200 m wavelength propagating about 30⁰ more northerly. The SWH increased somewhat and the propagation directions of both systems shifted about 20⁰ more northerly between positions 1 and 7.

 

 

 

 