



Currents in the Dead Sea: Lagrangian and Eulerian observations

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The Dead Sea is a terminal hypersaline lake located in the lowest surface on Earth (currently -429 m bsl). The physical properties of the brine are significantly different than in common marine systems: the DS brine density is ~ 1.24 gr/cc and its viscosity ~ 3 times higher than marine systems. We present observational data on wind and currents in the Dead Sea. The observation setup includes a few fixed (Eulerian) stations which are equipped with wind meter and current meter profiler that covers the entire water column (ADCP). Thermal stratification is continuously measured in some of the stations using a thermistor chain. Lagrangian drifters that record the shallow water currents were released in liner array of single drifters between the fixed stations, and also in triplets (15 m triangle). The results include the measured time series data of wind (atmospheric forcing) and the measured current profiles from the fixed stations. Data of the Lagrangian drifters is presented as trajectories along with vector time series. Quality control check included comparison of drifter data and ADCP data whenever the drifters passed by the fixed stations; a very good agreement was found between the different measuring approaches. We discuss the following issues : (i) the relation between the wind and current data, (ii) the Lagrangian trajectories and transport aspects.