**Cruise 2015-58**

**Discovery UV survey / weather station servicing field trip.**

**Report from party chief, Darren Tuele**

On this, our 3rd UV survey , we expanded our UV sampling program to include the collection of CDOM as another component to understanding the UV attenuation puzzle.  Sophie Johannessen from our Photochemical lab had set us up with sampling equipment and protocols as well as offering to run our CDOM samples during their next sample run.  We also received sampling support from Ian Perry, PBS, in the way of Nina Nemcek who looked after the tedious filtration work on this trip.

We mounted the BIC2104P UV sensor to the top of the SBE-25 Seabird CTD.  Profiles were taken to a depth of 10 meters, the limit of conducting cable on the UV sensor.  The Biospherical UV sensor measures 4 channels of immersed cosine irradiance at 305, 313, 320 and 380nm.  The Discovery area was inundated with some 68 mm of rain 2 days prior to our sampling and unusual amounts of silt and run off were quite evident in the surface waters. The CTD was equipped with a transmissometer, fluorometer and an oxygen sensor.  We also recorded the Solar and UV data from the Davis weather stations as a way of monitoring cloud cover changes during the CTD profiles.  CTD / UV profiles were conducted in Homfray Channel, Toba Inlet and 3 in Phillips Arm for a total of 5 profiles.  CDOM samples were collected at Homfray and all Phillips Arm stations from surface, 5 and 10 m depths.  Phillips 1 station was just outside the Marine Harvest Canada fin fish farm who are nearing harvest time in the grow cycle.  We sampled from farm to estuary on an ebb tide in Phillips arm.  Samples were collected into 1 L dark plastic bottles from a 1.7L Niskin and pre-filtered through a GF/F filter prior to being passed through a 0.2 um filter into amber 120ml glass bottles.  Filtration was done using 140 ml syringes fitted with tubing connected to 47 mm in line filter holders. Samples were kept in a cooler on ice during the day stored in the fridge overnight.

