# CTD DEPLOYMENT (adapted for 2101RL)

## CTD PREP ~20 MINS BEFORE STATION ARRIVAL
- Rig bottles open, close spigots, tighten breathers
- Remove PAR + pH **caps**, pull **hoses**

## SEASAVE PREP ~1 MIN BEFORE CAST
- Turn on **deck unit**
- Start **data acquisition** 'Real Time Data' > 'Start' (without saving data to file)
- 'Select Output File Name' > **change filename** to YYMM### (make sure saving to ~~C:\YYMM~~)     *D:\2101RL*
- Change info in Seasave header form > 'OK'
    - triple-check the 'Station#', 'Cast #' and 'Cast Type' (ROS, ~~PRODO~~, SCCOOS)

## LAUNCH CTD
- Zero at surface and **down 10 m**, wait for pumps to turn on, and fill out console ops sheet
- Bring to **surface**, **erase** plots, and **start archiving** ('Display' > 'Erase All' / 'Real Time Data' > 'Start Archiving')
    - Make sure data file is named properly (C:\YYMM\YYMM###.hex) and archiving
- Bring to **terminal depth** (30 meters/min for the first 100, and no faster than 60 meters/min after that)
    - For shallow stations: watch altimeter (never get <5m from bottom in calm weather or <10m in rough weather)
    - If not archiving: return to surface, start data archiving, hold for 1 min, then back down
    - If mislabeled: finish cast but rename the files after data acquisition is stopped but before CTRL+ALT+B

## AT TERMINAL DEPTH
- 'Add to **NAV** file'
- Record '**CTD at Depth**' in Event Logger (make sure line/station are correct before recording event. If incorrect, manually select line/station and then reset event logger after station)
- Fill in **cast shee**t: depth, lat/long, etc. and all the depth-specific values (wire out, time, temp, salinity)
- **Mark + trip** bottles, scroll mouse away!
- Bring up to each target depth, record all values, mark and trip bottles
    - *** If extra marker: edit .mrk file before CTRL+ALT+B
    - *** If extra bottle tripped: create a marker for it, flag as 'Extra-no samples' in CESL

## RECOVER CTD
- **Stop data acquisition** ('Real Time Data' > 'Stop'), **CTRL+ALT+B**
- Turn off **deck unit**
- **Cap** PAR + pH sensors
- Load sample log in **CESL** (click Next), change case numbers, highlight bottles (LTER, Skip, NCOG, etc.)
    - *** If there is a mistrip on a duplicate depth, mark as 'Skip', instead of 'Mistrip'
- Draw **oxygens** (and DIC's if necessary) and then other samples
- Input sampler **initials, save, print**
- Get chl form from printer and filter **chlorophylls**

## POST-CAST
- **Shake oxygens** for second time, exchange oxygen case if full, fill out **sample labels** for next station
- Connect **pump tubes** and **flush** system with DI for ~10 sec
- Undo **open bottles** (unless station is less than 1hr away)
- Reset **carousel** arms and hose off with fresh water

## ARCHIVING
- **Save** each picture as YYMM###a, b, or c (hint: can be done during the upcast to save time)
- **Move** all files (should be 10 files total) into Archive dir
- Hole punch Sample Log and Console Ops sheet and put in **binder**
- **Erase plots** ('Display' > 'Erase Plots') and set **axes** to proper ranges depending on depth of next station ('Modify Range')