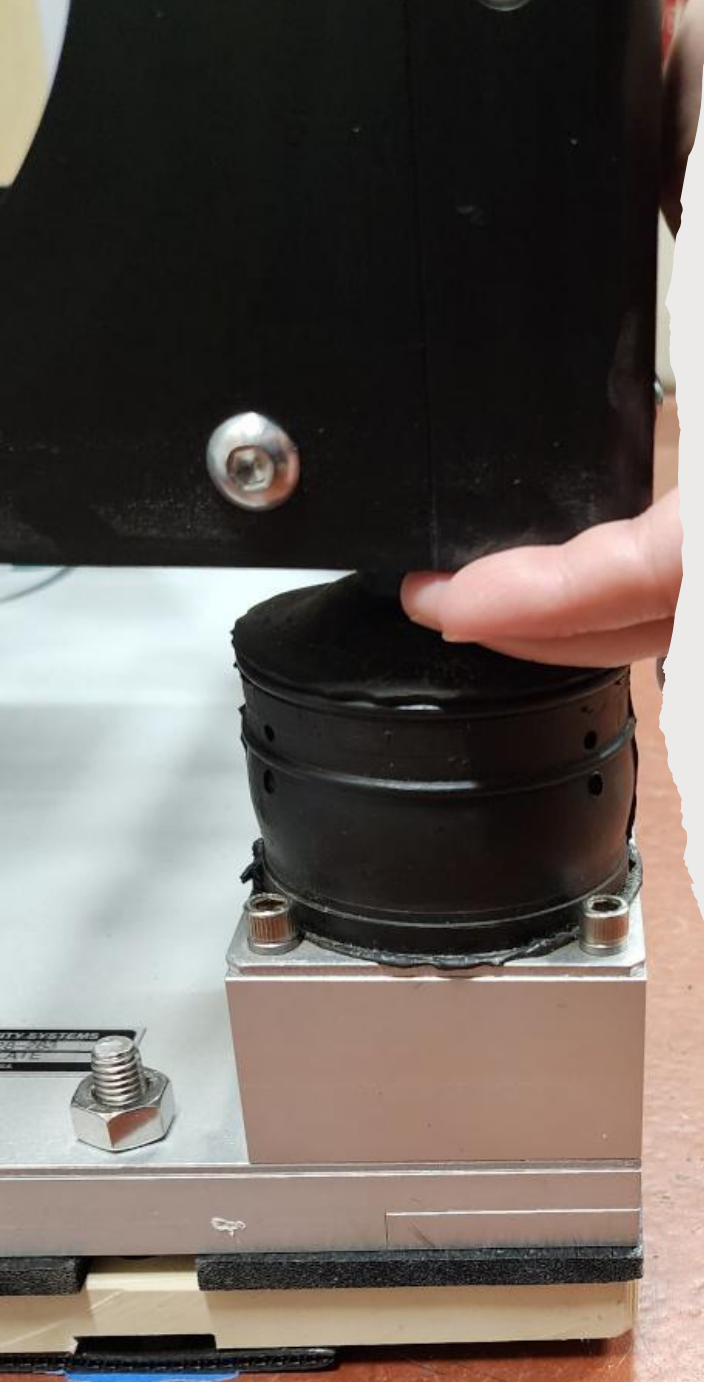


Gravity meters (BGM-3 and DgS)

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How to monitor DgS meters?

- At sea daily
 - Cross and Long level on the top of the DgS stay relatively level
 - Check the 4 air-filled vibration mounts daily attached to the metal base plate to see if there is space, if not they will need to be reinflated
 - Normal pressure is ~35 psi (Pressure 20-25psi, no longer able to isolate the gravimeter from ship vibration)
 - DgS screen is shown on a monitor in the computer lab
 - QC – Gravity is steady ~ 1000
 - VMON – close to zero when in port, at sea can impact the number, but looking for steady value



Any OMG moments so far?

- Revelle:
 - Transit across the South Atlantic this year the QC-Gravity and VMON readings were bouncing all over the place
 - DgS laptop was moved initially to the server room and moved it back to the location of the DgS
 - Readings were better, possible interference running from the transducer room to the sever room
- Ride
 - Latitude numbers were not accurate
 - Software needed to be updated and it fixed the issue

Monitoring the BGM-3 on shore

- Continue to take test points weekly on all meters that were and are still located at MarFac
- Document all data on the Google Drive Excel sheet
- BGM-3's at MarFac
 - Revelle's BGM3 removed Nov 2022 (Sent back to WHOI)
 - Ride's BGM3 removed Jan 2023
 - Atlantis BGM3 removed Jun 2023 (Sent back to WHOI)

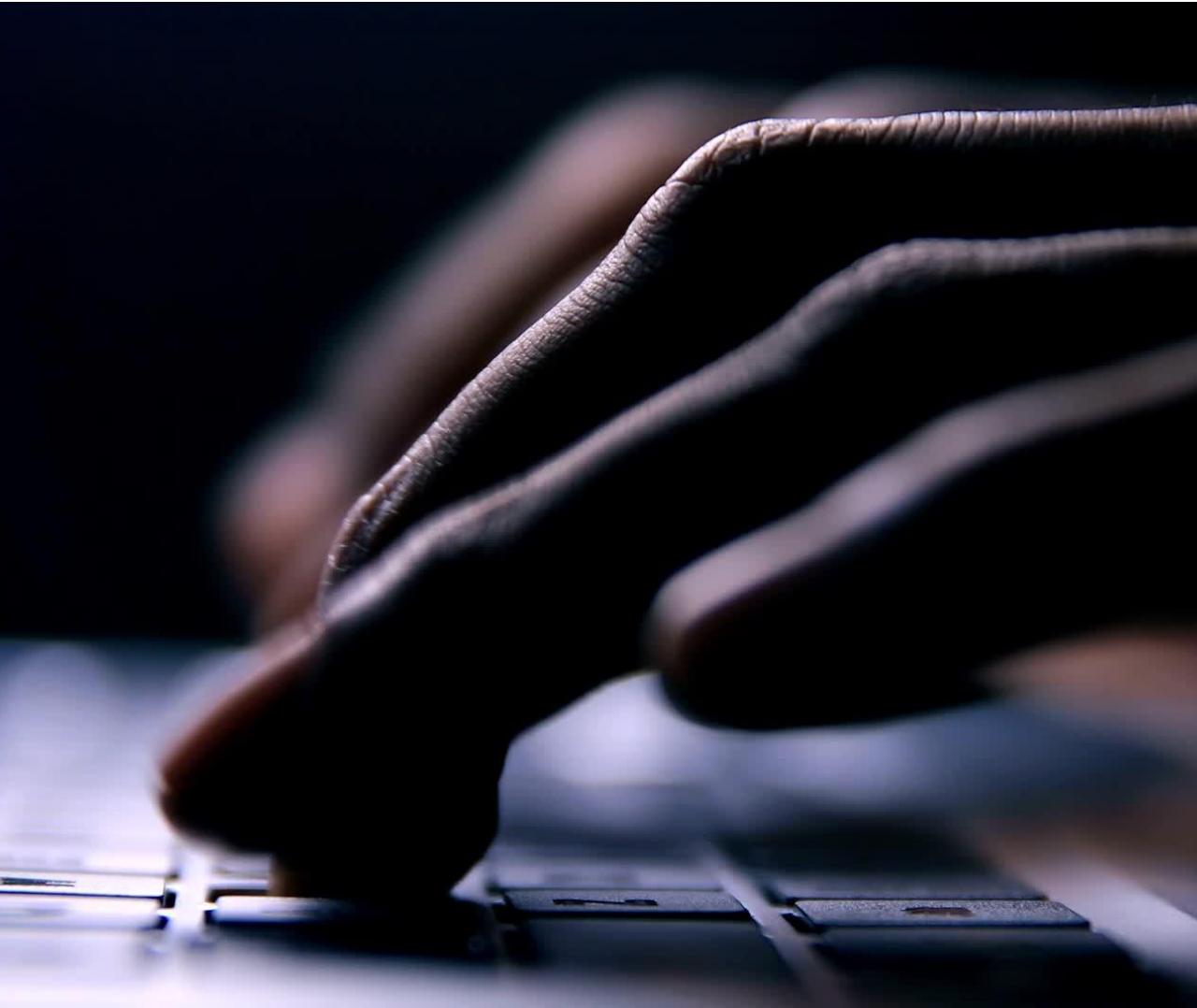


Importance of Gravity Ties and Land Ties

- Both types of ties are taken at known locations (established by the NGA) usually located near the pier
- Taken 24 hours after the ship has been docked
- Perform a Gravity tie every time the ship is in port
- Perform Land tie – when the ship is more than one ship length from the mark
- Instrument Calibration



SIO Practices:



- Constantly collect data, if possible
- At end of cruise data is uploaded to SOMTS
- R2R takes the data and makes it available to the public

Gravity tie and Land tie Data:

- BGM-3 laptop had a location for the gravity tie data
- DgS laptop does not currently have that option, so data is sent to PFPE

Questions for PFPE:

- Gravity tie and Land tie:
 - In the future, what do you want us to do with the data we gather? Currently we are sending it an in email to PFPE to calculate the bias.
 - Will there be a software update to have options for the bias readings to be input to the laptop?
 - Do you still want 3 readings every 30 min for the land tie with the new Automatic DgS reader?
 - What are the proper steps for gathering the raw data directly from the meter to the usb-drive?
 - How often do you want us to send PFPE data sets?