



MISO/PFPE

2025-2029

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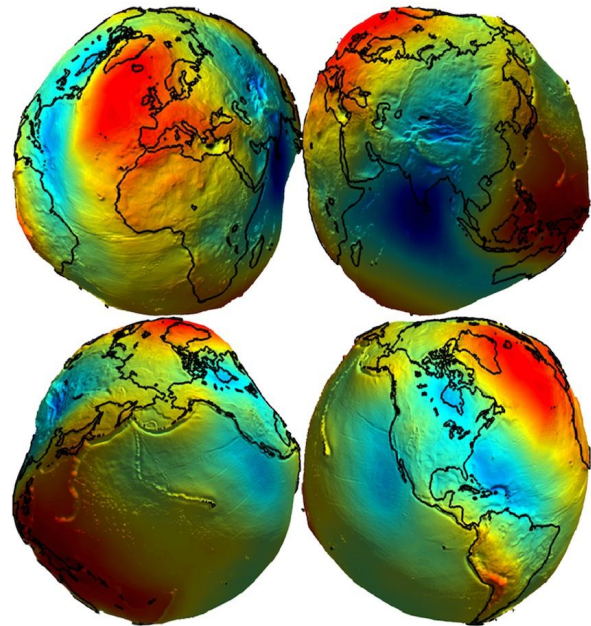


PFPE Breakout Session

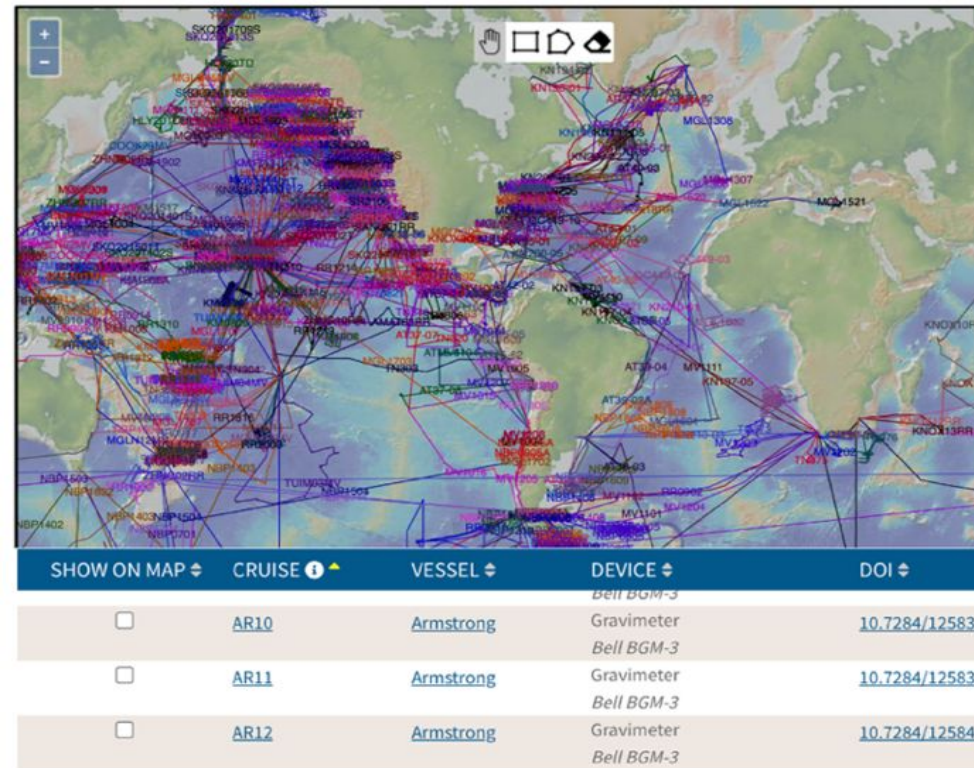
10.22.2024

- WHY IMPORTANT?
- RECAP – CURRENT BGM3 and DGS operations
- ROLE CLARITY –Vessel SSSG teams and PFPE support (and DgS contact)
- GRAVITY/LAND TIEs
- CY2024 sharing trouble shoot cases

PFPE Breakout Session: Why important?



(National Geospatial Agency)



<https://www.rvdata.us/>

R2R
ROLLING DECK TO REPOSITORY

SEARCH

NOAA NCEI

Assembly Centers
Long-Term Archives

Device Specialties
Assessment & Feedback
Data & Documentation

Device Type: Gravimeter x

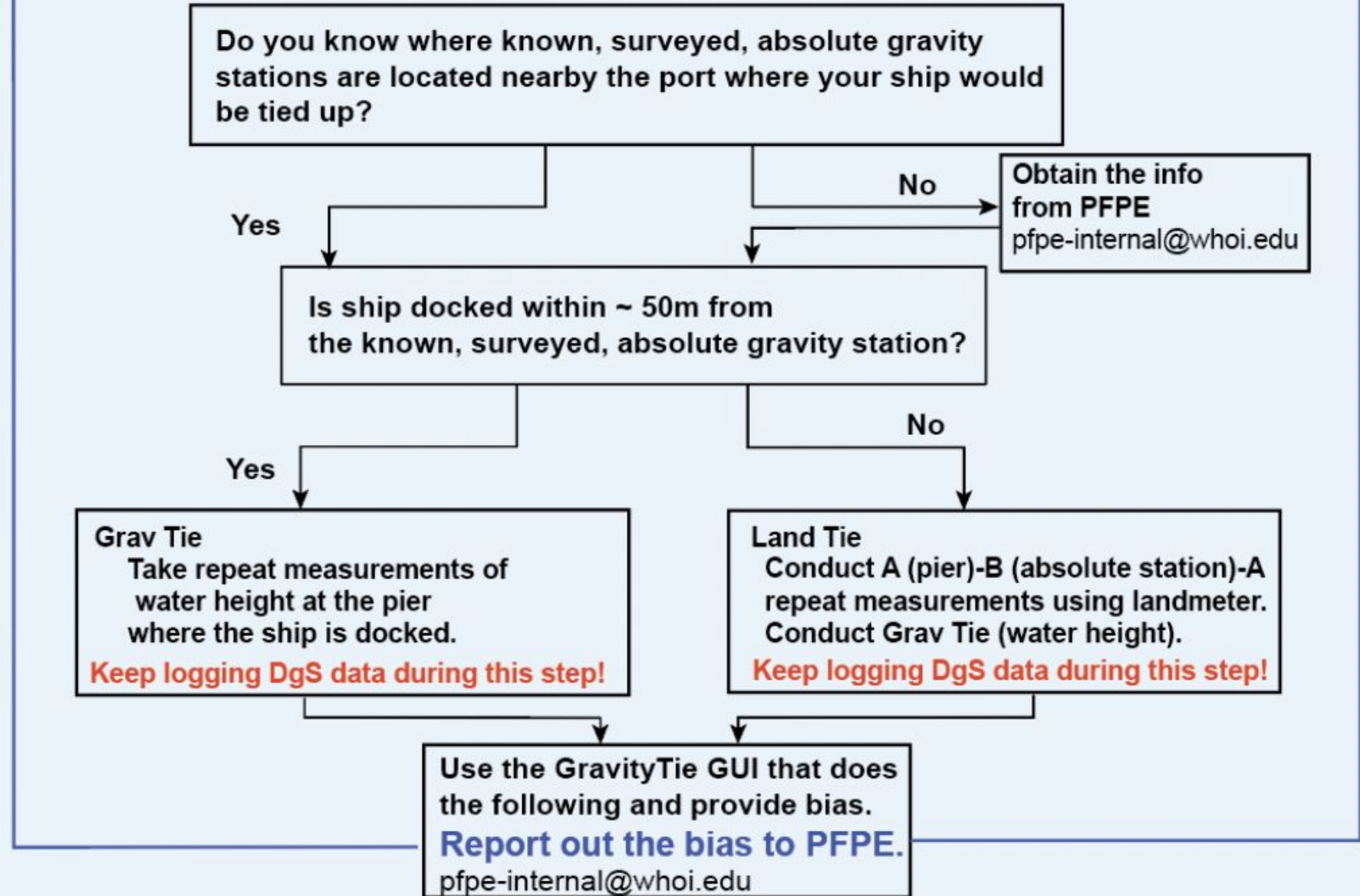
Device Type

SEARCH **Clear Search Filters** **RESET**

842 Results [Download Table](#)

GRAVITY/LAND TIES

What exactly are we doing using the grav/land tie software ?



Have you used the new GravGUI yet?

The screenshot shows the GravGUI interface with the following sections:

- A: new station**: Three input fields for Read 1, Read 2, and Read 3.
- B: known station**: Three input fields for Read 1, Read 2, and Read 3.
- A: new station**: Three input fields for Read 1, Read 2, and Read 3, with buttons for "Compute mGal at A" and "New test".
- Database - station B**: Includes a checked "Land tie used" checkbox, a dropdown menu set to "G-410", and other dropdowns for "R/V Sikuliaq" and "Other - Other - Other". It also has a "Station number" field and an "mGal at B" field.
- Height**: Three input fields for "Water height to pier (m) 1", "2", and "3", with a "Save filled parameters" button.
- DgS panel**: A plot area with a y-axis from 0 to 1 and an x-axis from 0 to 1. It includes buttons for "Load pre-filled tie info", "Load DgS data", "Plot", and "Compute bias".
- Report / Station A**: Fields for "Lat:", "Lon:", "Station name:", "Elevation (m):", "Meter temp (°C):", and "Personnel:", with a "Generate a gravity tie report" button.

This screenshot shows the GravGUI interface with a file explorer window open, displaying the contents of a report file named "GravityReport.txt".

The file explorer window shows the following file structure:

- gravtiegui_2024v1.2
 - grav_dgs_33_proc
 - grav_dgs_3...413T0000Z
 - grav_dgs_3...414T0000Z
 - grav_dgs_3...415T0000Z
 - grav_dgs_33_raw
 - grav_dgs_3...415T0000Z
 - grav_dgs_3...415T0000Z
 - GravityReport_demo.txt
 - GravityReport_MT.txt
 - GravityReport_rev.txt
 - GravityDen_SKOfact.txt
 - database
 - date2day.m
 - DgS_Gravit...ractice_v0.1
 - DgS_Gravit...ractice_v0.1
 - gaussfit.m
 - GavTie20240511.xlsx
 - grav_dgs_3...511T0000Z
 - GravityReport.txt
 - GravityTie.fig
 - GravityTie.m

The "GravityReport.txt" file content is as follows:

```

Ship: R/V Sikuliaq
Personnel:

#Base station:
Name: Other - Other - Other
Number: Hood Lab
Known absolute gravity (mGal): 981919.526
----- Land tie -----
Land meter #: G-410
Meter temperature (deg):

#New station A:
Name:
Latitude (deg): NaN
Longitude (deg): NaN
Elevation (m): 3.2667
UTC time and meter gravity (mGal) at A1: 2024/05/11 13:40:00 5585.1658
UTC time and meter gravity (mGal) at B: 2024/05/11 13:59:40 5586.4306
UTC time and meter gravity (mGal) at A2: 2024/05/11 14:13:20 5585.1027
Delta_T_ab (s): 1180
Delta_T_aa (s): 2000
Drift (mGal): (5585.1027 - 5585.1658)/2000 = -3.1533e-05
Drift corrected meter gravity at B (mGal): 5586.4306 - 1180 * -3.1533e-05 = 5586.4678
Gravity at pier (mGal): 981919.526 + 5585.1658 - 5586.4678 = 981918.224
----- End of land tie -----
UTC time and water height to pier (m) 1: 2024/05/11 13:04:00 2.95
UTC time and water height to pier (m) 2: 2024/05/11 13:35:00 3.25
UTC time and water height to pier (m) 3: 2024/05/11 14:08:00 3.6

DgS meter gravity (mGal): 12389.8053
Average water height to pier (m): 3.2667
Gravity at pier (mGal): 981919.2321 + 12389.8053 - 3.2667 = 981919.2321
DgS meter bias (mGal): 981919.2321 - 12389.8053 = 969529.4268
----- End -----
    
```

The "DgS panel" in the background shows a plot of "Grav (mGal)" vs "s" with a red box highlighting the value "969529.4268".

Role Clarity:

Vessel SSSG teams and PFPE support (and DgS contact)

CY2024

sharing trouble shoot cases

Responses to PCARs

DD/shipyard period and/or 5-yr regular maintenances

Moving forward