

Marine Gravimeter System (Gravimeter)



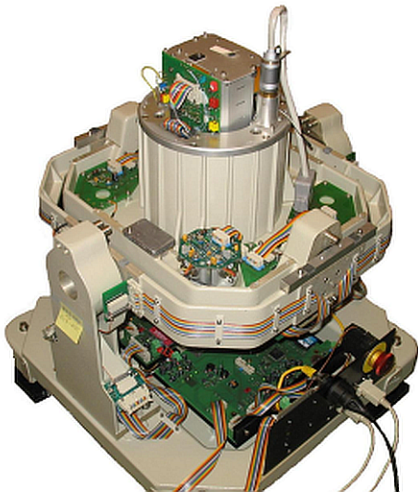
Attention:

Please note that the Marine Gravimeter System can only be operated upon request. Request operations with the Marine Gravimeter System to AWI-Logistics in sufficient time prior to the cruise.

Summary

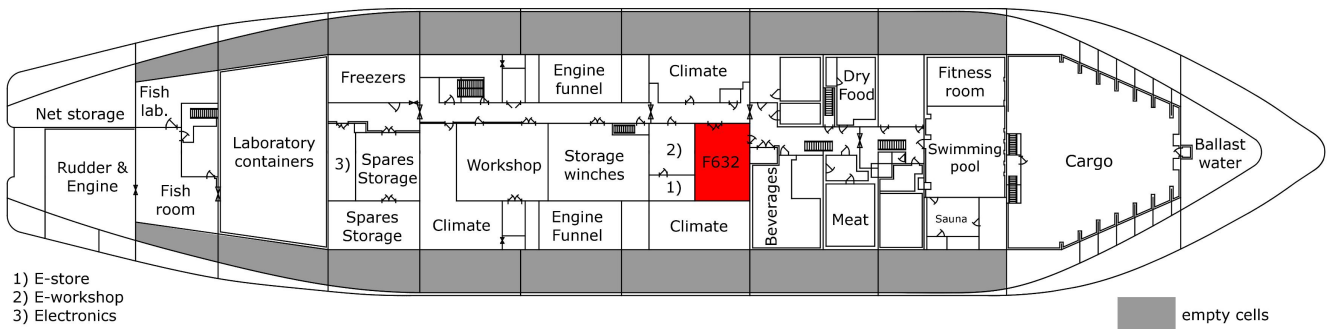
A gravimeter is used to measure accelerations due to the gravitational field of the earth. The gravimeter on board of Polarstern is situated on a gyro-stabilized platform to compensate for the ship's movement. It is a spring and mass system with magnetic compensation, the extension of the spring being proportional to the gravitational force.

Manufacturer	Bodensee Gravimeter Geosystem GmbH (BGGS)
Model	KSS 32 M
Serial No.	n/a
Type	gravimeter
REGISTRY-Link	REGISTRY (1406)



schematic drawing of Polarstern deck F

location of room F632 (gravimeter, gyrocompass, HYDRINS motion sensors)



Gravitymeter KSS 32-M



Gravitymeter KSS 32-M and Data Aquisition Notebook

Contacts

Name	Institution	Role
Thorsten Eggers	Alfred Wegener Institute, Helmholtz Centre for Polar and Marine Research	Engineer In Charge
Alfred Wegener Institute for Polar and Marine Research	Alfred Wegener Institute, Helmholtz Centre for Polar and Marine Research	Owner
Graeme Eagles	Alfred Wegener Institute, Helmholtz Centre for Polar and Marine Research	Principal Investigator, Data Scientist

Components

Position

Info	xyz-position from Alignment Survey Report RV Polarstern (June 2016), located in F632
X	56.99 m (X-0 is at the center of der rudder (ref. design drawing of the vessel), positive X-axis is forward and along vessel centerline)
Y	0.147 m (Y-0 at centerline, positive Y-axis is portside)
Z	11.81 m (Z-0 is set to the lowest point of the keel, positive Z-axis is upwards)

Data logging, storage and archiving

Logged parameters

Parameter	O2ARegistry Output Type	Unit
acceleration	acceleration	m/s ²
Gravity	gravity	mGal

Central geographical ship's position and time standard

Rawdata storage on board

Dship

Data archiving on land

Documentation

The manuals are located in the Gravimeter Room on board.

- [Gravimeter_KSS32M_manual](#) (User Manual, 1 MB)
- [Gravimeter_KSS32M_handout](#) (Factsheet, 598 kB)