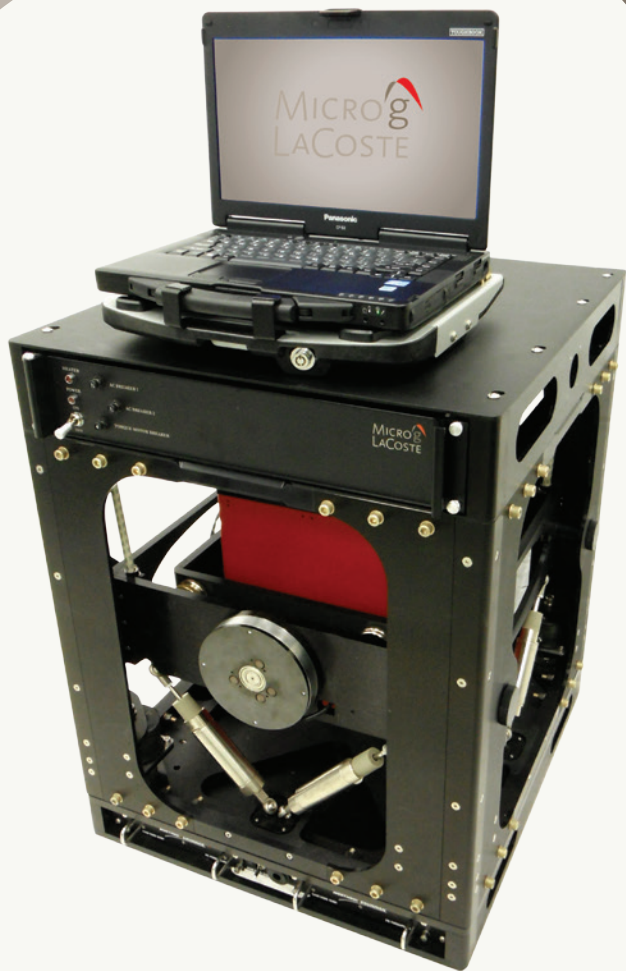


# MGS-6 MARINE GRAVITY METER



The latest in a line of Marine Gravity Meters going back over 50 years. The MGS-6: Smaller, lighter, and over 100X more quiet than its predecessor.

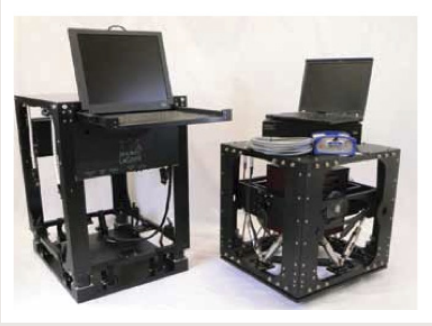
MICROg  
LACOSTE  
A DIVISION OF LRS

# M

ICRO-G LACOSTE IS PROUD TO ANNOUNCE

the next generation of marine based dynamic gravity meters: The Marine Gravity System-6 (MGS-6). It

represents the next generation in a long line of LaCoste-based dynamic gravity systems, stretching back to the first successful dynamic gravity meter tests on ships more than 50 years ago. Note



though, that the MGS-6 is more than a simple upgrade to the Air-Sea System II (AS-2). The MGS-6 is based on the smaller, lighter, more power-efficient TAGS-6 (airborne) platform, and employs the same full-force feedback sensor. In both

systems, the platform control and data acquisition system have been overhauled, resulting in unparalleled data quality.

## NEW FEATURES

- Smaller sensor/gimbal (60%)
- Lighter sensor/gimbal (30%)
- New slip ring technology on the gimbal makes for a more robust and reliable stable platform
- Larger pitch (25° vs. 22°) and larger Roll (35° vs. 25°) ranges
- Full feedback:  $\pm 500,000$  mGal range on beam
- 100 times the dynamic acceleration range
- Double oven temperature control
- Temperature controlled electronics
- Separate, rack-mountable electronic unit and computer allow for more flexibility in configuration
- Lockable gimbal
- System ships with gimbal installed in frame
- Static repeatability improved (0.02 vs. 0.05 milliGals)
- Reduced power requirements (75 vs. 240W)
- Greatly reduced size: 48% smaller (59 x 53 x 56cm vs. 71 x 56 x 84cm, frame size)
- Greatly reduced weight (101kg vs. 121kg, including UPS and electronics)

# APPLICATIONS INCLUDE

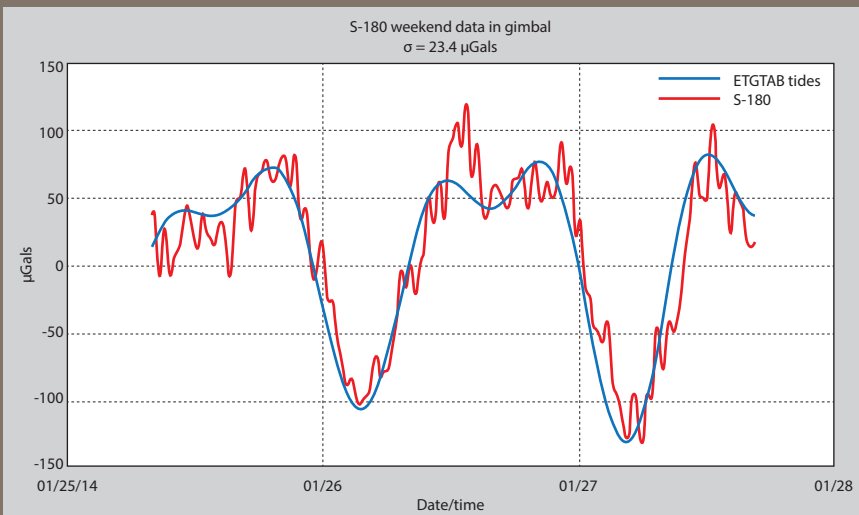
- Geoid Mapping
- Regional Geophysics
- Petroleum Exploration
- Mineral Exploration

## NEW FULL FORCE FEEDBACK SENSOR:

- FULL FEEDBACK:  $\pm 500,000$  mGal RANGE ON BEAM
- 100 TIMES THE DYNAMIC ACCELERATION RANGE
- DOUBLE OVEN TEMPERATURE CONTROL
- TEMPERATURE CONTROLLED ELECTRONICS, ACCELEROMETERS, AND FOGS

## SAMPLE DATA:

New system is 100x quieter than older air-damped and magnetic-damped systems. Below is a plot of the earth's tides over approximately 2 days compared with predicted model. (System is mounted in active gimbal, stationary in laboratory.)



# SPECIFICATIONS

| COMPONENT           | VARIABLE                 | SPECIFICATIONS   |
|---------------------|--------------------------|--|
| SENSOR              | WORLDWIDE RANGE:         | RANGE: $\pm 500,000$ MILLIGALS   |
|                     | DRIFT:                   | 3 MILLIGALS PER MONTH OR LESS  |
|                     | TEMPERATURE SETPOINT:    | 45° TO 65° C   |
| STABILIZED PLATFORM | PLATFORM PITCH:          | $\pm 25$ degrees   |
|                     | PLATFORM ROLL:           | $\pm 35$ degrees   |
|                     | PLATFORM PERIOD:         | 4 to 4.5 Minutes   |
|                     | PLATFORM DAMPING:        | 0.707 of critical  |
| CONTROL SYSTEM      | RECORDING RATE:          | 1 Hz   |
|                     | ADDITIONAL I/O:          | Electronics, Sensor Temperature, Sensor Pressure                       |
| SYSTEM PERFORMANCE  | DYNAMIC RANGE:           | 25,000,000   |
|                     | STATIC REPEATABILITY:    | 0.02 milliGals in 2 minutes  |
|                     | DYNAMIC REPEATABILITY:   | 0.75 milliGals in 2 minutes  |
| MISCELLANEOUS       | OPERATING TEMPERATURE:   | 5° to 50°C   |
|                     | STORAGE TEMPERATURE:     | -10° to 50°C   |
|                     | POWER INPUTS (INTO UPS): | 75 WATTS AVERAGE AT 27°C<br>300 WATTS MAXIMUM                          |
|                     | DIMENSIONS:              | 61.4 x 55.5 x 72.0 CM<br>(INCLUDING UPS AND BUILT IN ELECTRONICS RACK) |
|                     | WEIGHT:                  | 68KG (SENSOR, GIMBAL, AND FRAME),<br>101KG (ALL COMPONENTS).           |

SPECIFICATIONS SUBJECT TO CHANGE



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