

MGS-6 MARINE GRAVITY SYSTEM



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.

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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 L&R-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: $\pm 500,000$ milliGal 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 milliGal).
- Reduced power requirements (75 vs. 240W).
- Greatly reduced frame size: 48% smaller (59 x 53 x 56cm vs. 71 x 56 x 84cm).
- Greatly reduced weight (101 kg vs. 121 kg, including UPS and electronics).

APPLICATIONS INCLUDE

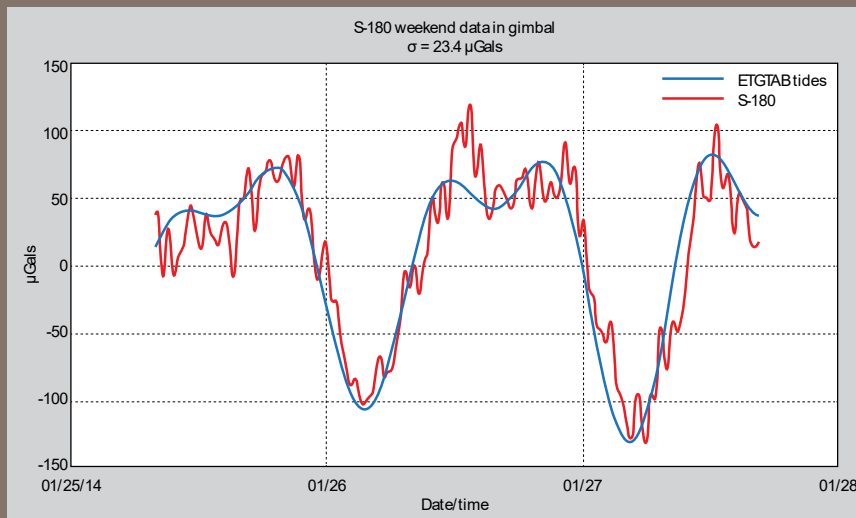
- Geoid Mapping
- Regional Geophysics
- Petroleum Exploration
- Mineral Exploration

NEW FULL FORCE FEEDBACK SENSOR:

- FULL FEEDBACK: $\pm 500,000$ MILLIGAL RANGE ON BEAM.
- 100 TIMES THE DYNAMIC ACCELERATION RANGE.
- DOUBLE OVEN TEMPERATURE CONTROL.
- TEMPERATURE CONTROLLED ELECTRONICS,
ACCELEROMETERS, AND FIBER OPTIC GYROS.

SAMPLE DATA:

New system is 100x quieter than older air-damped and magnetic-damped systems. Below is a plot of earth 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: $\pm 500,000$ MILLIGAL
	DRIFT:	3 MILLIGAL PER MONTH OR LESS
	TEMPERATURE SETPOINT:	45° TO 65° C
STABILIZED PLATFORM	PLATFORM PITCH:	± 25 degrees
	PLATFORM ROLL:	± 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 milliGal in 2 minutes
	DYNAMIC REPEATABILITY:	0.75 milliGal 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 300 WATTS MAXIMUM
	DIMENSIONS:	61.4 x 55.5 x 72.0 CM (INCLUDING UPS AND BUILT IN ELECTRONICS RACK)
	WEIGHT:	68KG (SENSOR, GIMBAL, AND FRAME), 101KG (ALL COMPONENTS).

SPECIFICATIONS SUBJECT TO CHANGE



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