

TAGS AIR III GRAVITY METER

(TURNKEY AIRBORNE GRAVITY SYSTEM)
WITH AEROGRAV DATA PROCESSING SOFTWARE



TAGS represents the latest development in a long line of LaCoste-based airborne gravity systems, stretching back to the first successful airborne gravity flights in 1958. Over the last 50 years, LaCoste gravimeters have acquired hundreds of thousands of line kilometers of gravity data during academic, government, and commercial surveys. TAGS blends the latest in GPS and data acquisition technology with the solid foundation of the LaCoste dynamic gravimeter.

CONTROL SYSTEM FEATURES

- Easy setup, configuration and operation
- Real Time Data Output to Serial Port and Internal Hard drive at 1hz with data redundancy by the Data Logger
- Differential GPS positioning
- Real Time graphic plots with user-selectable time bases

HARDWARE FEATURES INCLUDE

- The Air III has solid-state Fiber-Optic Gyros (FOGs) enabling the highest sensitivity possible using direct digital output.
- Enhanced digital control system records data and monitors system performance with greater reliability.
- DSP Platform Control using a digital signal processor board to keep the platform level independently of the system computer, allowing higher platform gain which gives faster response times and smaller errors.
- Laboratory tests show a dynamic repeatability of better than 0.25 milliGals.
- Increased Precision – Internal sampling of the analog signals at 1000 Hz improves accuracy, avoids aliasing, and produces 21 bit effective resolution.
- Employs industrial-grade electronics designed for long life and high reliability even in adverse conditions.
- Uninterruptible Power Supply is standard on the system.
- Aircraft inverter (28V DC to 110 V AC) included with the system.
- Spring Tension Encoder stores value in permanent memory.
- Integrated GPS and Rubidium oscillator provides stable time base and precision sampling.
- Full customer support.
 - Installation, training, survey setup and assistance
 - Fully modular spare electronics plug-ins for less downtime
 - On call technical support



APPLICATIONS INCLUDE

- Geoid Mapping
- Regional Geophysics
- Petroleum Explorations
- Mineral Explorations

HARDWARE SPECIFICATIONS

COMPONENT	VARIABLE	SPECIFICATIONS
SENSOR	RANGE: DRIFT: TEMPERATURE SETPOINT:	20,000 milliGals (worldwide) 3 milliGals per month or less 45° to 65°C
STABILIZED PLATFORM	PLATFORM PITCH: PLATFORM ROLL: PLATFORM PERIOD: PLATFORM DAMPING:	± 22 degrees ± 25 degrees 4 to 4.5 Minutes .707 of Critical
CONTROL SYSTEM	RECORDING RATE: SERIAL OUTPUT: ADDITIONAL I/O:	1 Hz RS-232 Electronics Temperature Sensor Temperature Sensor Pressure
SYSTEM PERFORMANCE	RESOLUTION: STATIC REPEATABILITY: ACCURACY: 50,000 mGal Horizontal Acceleration 100,000 mGal Horizontal Acceleration 100,000 mGal Vertical Acceleration	0.01 milliGals 0.05 milliGals 1.0 milliGals or better 0.25 milliGals 0.50 milliGals 0.25 milliGals
MISC.	OPERATING TEMPERATURE STORAGE TEMPERATURE POWER EQUIPMENTS (INTO UPS) DIMENSIONS: WEIGHT:	5° to 50°C -10° to 50°C 240 watts average 450 watts max 80-265 VAC, 47-63Hz 71 x 56 x 84 cm 28 x 22 x 33 in System: 140kg (309 lbs)
GRAVITY UNITS	1 Gal = 1cm/sec ² Earth's gravity varies from 978 to 983 Gals at the surface. (978,000 mGals to 983,000 mGals)	

AEROGRAV DATA PROCESSING SOFTWARE

The AeroGrav Data Processing software is designed to be used in the field to immediately process data after each survey flight.

The raw field data from the survey aircraft and ground GPS base station can be immediately processed to produce the free-air and Bouger gravity anomalies along survey lines. The processed data can be exported to mapping packages such as Geosoft Oasis Montaj or the Generic Mapping Tools (GMT) for such tasks as survey line leveling, gridding and mappings. With rapid data turnaround, the data quality issues and possible system problems can be identified and operation issues are dealt with in a timely fashion.

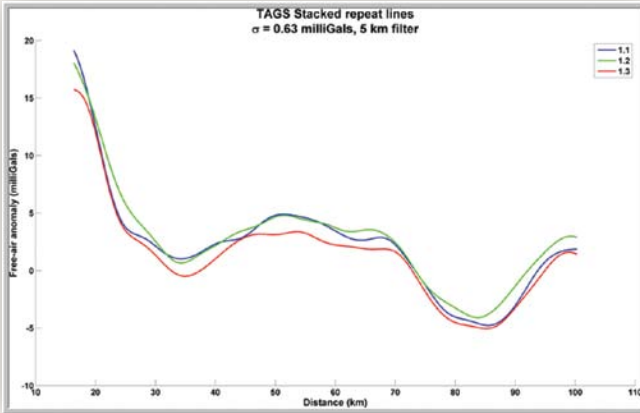


AeroGrav Data Processing Software Startup Screen.

AEROGRAV DATA PROCESSING SOFTWARE SPECIFICATIONS

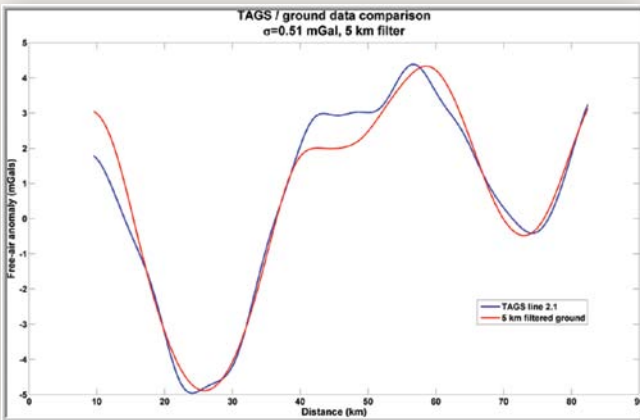
AeroGrav Data Processing Software	Version 1.1.10
Backward compatible to	Version 1.1.6
Storage Requirement	Installed size: 2.2MB
Operating System	Vista and XP SP3

SAMPLE DATA 1



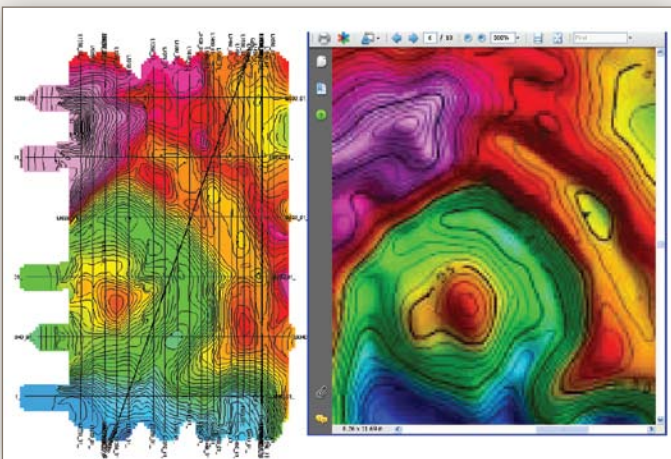
Multiple repeat flights over a test line in the southern United States agree at the 0.64 milliGal level after filtering to a spatial resolution of 5 kilometers.

SAMPLE DATA 2



TAGS airborne gravity test data acquired in the southern United States shows an excellent comparison with public-domain ground gravity data (station spacing approximately 500 meters). The two datasets agree at the 0.5 milliGal level after filtering to a spatial resolution of 5 kilometers.

SAMPLE DATA 3



TAGS final data map example.



1401 Horizon Ave. | Lafayette, CO 80026
PHONE (303) 828-3499 FAX (303) 828-3288
EMAIL info@microglacoste.com

WWW.MICROGLACOSTE.COM


A DIVISION OF LRS