



United States Department of the Interior

GEOLOGICAL SURVEY
RESTON, VA 22092

National Mapping Division
Office of Technical Management
Branch of Geometronics

REPORT OF CALIBRATION

For: Kern Precise Leveling Rod

Calibration date: 6-13-91

USGS number: T-306420

Serial number: 183161H

Face type: 0.5 cm

This leveling rod has been compared in the horizontal position to a one meter invar bar standard, No. 600, manufactured by the Societe Genevoise d'Instruments de Physique. This standard was calibrated by the National Institute of Standards and Technology and reported 4/24/91 to be within 1.9 microns of a true meter.

The straight line distances between centers of the indicated graduations at 25 degrees Celsius are as follows:

Graduations	Length (meters)	Graduations	Length (meters)
2 to 22	1.000055	61 to 81	1.000054
2 to 42	2.000136	61 to 101	2.000127
2 to 60	2.900192	61 to 119	2.900195

The length values given above are not in error more than 5×10^{-5} meters. This accuracy is based on the limits imposed by the standard and comparator used, the calibration procedure, and the physical character of the rod graduations.

The mean optimum temperature for this rod is - 2.5 degrees C.

The above calibration and temperature computation have been performed in accordance with procedures documented in the USGS laboratory manual USGS Level Rod Calibration (June 1982).

Calibration performed by Gordon H. Shupe

Signature: Gordon H. Shupe Date: 6-14-91