

E7.4-10784

CR 140137

"Made available under NASA sponsorship
in the form of a summary report. This dis-
tribution of terrain properties survey
data is for information and without liability
for any use made thereof."

W 4-34751

Unclas
00784

G3/13

(E74-10784) TERRAIN PROPERTIES AND
TOPOGRAPHY FROM SKYLAB ALTIMETRY Monthly
Progress Report, Jul. 1974 (Naval
Research Lab.) 2 p HC \$4.00 CSCL 08E

Organization: Naval Research Laboratory

Title: Terrain Properties and Topography
from Skylab Altimetry

Period Covered: Monthly Progress Report, July 1974

EREP Number: EPN 363

Contract Number: T-4716B

Principal Investigator: Allan Shapiro

Date Written: 16 September 1974

Technical Monitor: Larry York
NASA Johnson Space Center
Code TF6
Houston, Texas 77058

A summary of the data analysis of four terrain passes has begun. The summary consists of a catalogue that compares the available radar signature with the available ground truth for each observed area. To permit statistical estimates, and smooth the jitter of the AGC and Range Tracker loop, the basic footprint of each observed area has been increased to 15 km along track, with the cross track diameter remaining at about 8 km. The radar signature consists of (a) the received power, (b) the topographic height, (c) the rise time and trailing time of radar return, and (d) the maximum autocorrelation coefficient. The corresponding ground truth consists of (a) vertical extent of footprint, (b) type of terrain, (c) location, and (d) amount of precipitation. Accessory data gives Pass number, date of observation, operating submode, and frame number. The catalogue incorporates corrections to AGC due to (1) error in calibration at JSC, and (b) calibration correction for waveform of point target.

This work will continue in the next reporting period,
and results will be prepared for final report.