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IN SITU SPECTORADIOMETRIC CALIBRATION
OF EREP IMAGERY
AND OCEANOGRAPHY OF BLOCK ISLAND SOUND

Monthly Progress Report - December 1973

Contract No. - NAS9-13308

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1. Introduction

This document constitutes the monthly progress report on "In Situ Spectroradiometric Calibration of EREP Imagery and Oceanography of Block Island Sound, Skylab EREP Investigation 069/070". This research is being conducted under National Aeronautics and Space Administration Contract No. NAS9-13308. The objectives of this investigation are:

(a) To relate radiometric spectra measurements to space-acquired imagery over test sites in Arizona under EREP task nos. 701224 and 701269.

(b) To determine the utility of sensor systems for oceanographic studies and the correlation of ground-truth acquired in Block Island Sound, New York, with the Skylab data collected under EREP task nos. 646609 and 646638.

2. Work Status

Screening film for S192 data over Block Island Sound, New York, has been received and a request for exact requirements is being sent to PIMO Houston. Black-and-white prints from one of the bands will be made and the necessary annotations for the test area in consideration will be done on these prints for S192 data requirements.

Negatives were made from the NASA-supplied positive imagery over Willcox Playa in Arizona. Bands 4, 5, and 7 of S190A imagery were selected and the negatives were placed into the additive color viewer. The spectral bands were projected as follows:

2. Work Status continued ...

Band 4 - Blue

Band 5 - Green

Band 6 - Red

The composite projection of the three color images was optically registered and was projected directly onto photographic paper. Two magnifications were selected - resulting in a scale of 1:500,000 and a scale of 1:135,000. The vegetation and the agricultural fields appear as red as band 7 was projected red in the additive images. It should be noted that this method incorporating the use of additive color techniques has maintained the resolution in a composite image found by the individual bands of S190A imagery and the small density differences now appear as color differences in the additive photograph.