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E7.3 10975
CR-133754

CENTER FOR RESEARCH, INC.
UNIVERSITY OF KANSAS
ERTS DETAILED IMAGE INTERPRETATION REPORT

CRINC
DIIR No. 2264-8
Date
Prepared April 10, 1973

Subject:

Precipitation Pattern on ERTS-1 Image

Subject Geographic Coordinates 38-48 N/101-12 W NASA Test Site No. NA

NASA Image Descriptors:

Report Summary:

A precipitation pattern in west central Kansas was detected on an MSS image acquired 22 September 1972. Good correspondence was found between the interpolated one-inch isohyet and the apparent precipitation boundary in the image.

Imagery References

CRINC Image No.	NASA Image ID Block	Subject Image X	Coordinates Y	Cloud Cover	Image Quality
MN 00112	E-1061-16564-5	NA	NA	0%	Good

Original photography may be purchased from
EROS Data Center
10th and Dakota Avenue
Sioux Falls, SD 57198

Map References: USGS NJ 14-4, NJ 14-7, Scale 1:250,000

Digital Data Used Yes ___ No X

Image Analyst D. L. Williams, B. L. Barker Principal Investigator Bonnie Barker Donald L. Williams for S. A. Morain

NASA Contract No. NAS 5 24822 User ID No. U664

MMC #060 IV

N73-30314

Unclas 00975

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(E73-10975) PRECIPITATION PATTERN ON
ERTS-1 IMAGE (Kansas Univ. Center for
Research, Inc.) 3 p HC \$3.00 CSCL 04B

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Analysis of an MSS-5 image acquired over west central Kansas on 22 September 1972, revealed a northeastward trending pattern of anomalously dark base tone north of Garden City, Kansas. This pattern was hypothesized to be the result of precipitation. To verify this hypothesis, daily precipitation data from the weather stations in and around the pattern were tabulated for the preceding five days. Precipitation had been reported at all area stations on 20 and 21 September, with reported amounts ranging from 0.27 to 1.68 inches.

The weather stations were located on an enlargement of the image and the precipitation amounts were plotted. The one-inch isohyet was interpolated between these points. Close agreement was found between the isohyet and the edge of the darkened area, except for a small projection of the dark area in the southeastern part of the image.

The results indicate that detection of major precipitation events on MSS images is feasible and that the boundaries of these events may be determined more precisely than by conventional isolining techniques.

Image analysis and reporting required 2 manhours.

Reference

U.S. Department of Commerce, Climatological Data, Kansas, Vol. 86 (9)
September 1972.

