

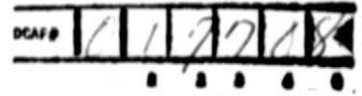
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QUARTERLY REPORT TO NASA ON
LANDSAT 2 PROJECT NO.29020
HYDROLOGICAL INVESTIGATIONS IN NORWAY



FROM JOHNNY SKORVE, CO-INVESTIGATOR
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INTRODUCTION

LANDSAT 2 images of Southern Norway from February and
March 1975 have been studied. The scenes show a winter
situation, and at that time of the year, the snowmelting
is neglectable.

DESCRIPTION AND PRELIMINARY RESULTS

Except for a rim along the southeastern coast and the
outer Oslofjord lowland, the area is snowcovered. These
February and March images are the first LANDSAT winter
pictures of the Oslo region. The winter scenes reflect
interesting features.

Most of Norway experienced an extremely mild winter in
1975, and the LANDSAT 2 images do show the resulting
extraordinary icesituation. Fjords, lakes and rivers that
during winter time nearly always are completely icecovered,
were this year icefree or only partly icecovered.

Changes that have taken place during two LANDSAT cycles,
have been determined by comparing the 14. February and
21. March images.

The snow on the LANDSAT 2 images do strongly enhance
features like roads and urban settlements. One illustrating
example is seen on the flat, open terrain east of lake Mjøsa.
Here small villages and narrow roads are clearly seen, while
they are completely invisible on snowfree images.

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A study of scene no.2024-10031 and 2024-10035 of 15.February proves to be of geological interest. This is because of the enhancement introduced through the combination of low solar angle and snowcover. These LANDSAT images should be very valuable as supplementary material for the structure and lineament mapping already done on the basis of LANDSAT 1 images of Norway from 1972 and 73.

I find the quality of LANDSAT 2 imagery superior to that of number one.

The study of spring and summer images will now be initiated for mapping the decrease in areal extent of the snowcover and determination of snowlines. The LANDSAT 2 data will be compared with oblique angle aerial photographs of selected areas taken simultaneously with LANDSAT 2 passes over Norway. Ground truth measurements and data will be used in the further interpretation of the LANDSAT 2 images.



Johnny Skørve

Oslo, 28.August 1975