

## NEW NORWEGIAN GLACIER MAPS

(Aerial photogrammetric maps)

Sylglaciären (1958 - 1978), Salajekna (1957 - 1982), Midtre Folgefonna  
(1959 - 1981)

G. Østrem, Norwegian Water Resources and Energy Administration, Oslo

The Glaciology Division within the Norwegian Water Resources and Energy Administration (NVE) has published a great number of maps since the Division was formed in 1962. The main reason for the production of such special, large-scale glacier maps is a result of the demand for detailed mass balance investigations on selected glaciers to provide basic glacier-hydrological information for future hydroelectric power production. Thus, all Norwegian glaciers on which mass balance-observations have been performed were mapped at scales of 1:10,000 or 1:20,000, all with 10m-contour intervals. Most of these maps were printed in colour and published as enclosures to various annual glaciological reports from NVE.

Cases in which more than one series of aerial photographs was used for the compilation of the map resulted in more than one map being printed on the same sheet; the maps included in the present volume were compiled in this way.

### 1. Sylglaciären

No less than five different compilations were made, resulting in five individual glacier maps showing the glacier-covered area in 1958, 1966, 1971, 1975, and 1978. Further comments are printed on the back of the map.

### 2. Salajekna

The glacier surface was mapped from aerial photographs taken in 1950 (probably the earliest modern verticals taken of a glacier in Norway), 1957/58, 1971, and 1980/82. Due to its location on the international border between Norway and Sweden, photographs from both countries were used in the compilation work. The glacier shows a general trend of retreat but has increased in thickness in certain parts of the accumulation area (cf. the back of the map). Due to the size of the glacier,

the most recent map is reproduced at a scale of 1:20,000, whereas the three older ones are portrayed at 1:50,000. The compilation accuracy is, however, equal for all four maps.

### 3. Midtre Folgefonna

Only two maps are printed. The most recent one, based upon verticals from 1981, is reproduced at a scale of 1:10,000. The other map, showing the glacier surface in 1959, is reduced to 1:20,000. Here also, a general trend of glacier shrinkage is obvious, but the glacier thickness has increased in certain areas. The summit of this small ice cap has moved significantly in an easterly direction. This may be explained by a pronounced increase in westerly components of the winter (November - April) wind pattern since 1959 (see reverse of the map).

All three maps have a UTM-grid, whereas geographical and local coordinates are indicated in the frame. Printing is in four colours.