

SCHMIEDINGERKEES - KITZSTEINHORN, AUSTRIA 1:5,000

(Aerial photogrammetric map)

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The map depicts the glaciers around the Kitzsteinhorn (3202 m a.s.l.) in the northern Glockner group within the High Tauern Range of the Austrian Alps. The largest glacier on the map is Schmiedingerkees (1.63 km²) on the northern slope of Kitzsteinhorn, followed by (Stubacher) Maurerkees (0.52 km²) in the southwest, Kammerkees (0.17 km²) in the east and by the small Winterkartl (0.03 km²) near Maurerkogl (2995 m a.s.l.). Schmiedingerkees is the northernmost glacier in the central Alps.

Production of the map aimed at (1) enabling comparison with earlier large-scale maps of Schmiedingerkees from 1953, 1962, 1967 and 1969 (Austrian glacier inventory); (2) furnishing a topographic basis for the Tauern Power Company and the Kaprun Glacier Transportation System; (3) presentation of the intensely-used glacier area; and (4) documentation of Schmiedingerkees and the glaciers mentioned elsewhere for analysing future changes. The maps of 1967 and 1982 cover a general growth period of Alpine glaciers.

Aerial photography was taken in September 1982 with little snow remaining on the glaciers: the accumulation area ratio of the glaciers was between 0.1 and 0.2, indicating a strongly negative mass balance. Photogrammetrical analysis was done by Ch. Hoberg and R. Puruckherr at the Bochum Polytechnic using a Zeiss-Planimat (Slupetzky and Puruckherr 1989). Contour-line interval is 5 meters and the glacierized area is depicted in a blue-green colour. The extremely reduced snow cover made it possible to distinguish between old snow, firn and ice. The distribution patterns of old snow remains follows in a remarkable way the patterns of topographic convexities/concavities.

The main cartographic elements are depicted using the following colours:

black: map frame with Gauss-Krüger coordinates (Austrian UTM System), morainic ridges and fluted moraines, debris, cable car installations, buildings, trails, writings, altitudes, contour lines in bedrock

brown: vegetation- and soil-covered areas

gray: contour lines in debris-covered areas

blue: contour lines in ice and firn areas, crevasses; lakes, rivers.

green: subalpine forest

blue-green: old snow-firn-ice (increasingly dark)

As a special feature, a cave system (Zeferehöhle) is depicted with its entrance at an altitude of 2447 m a.s.l. and total length of 541 m.

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