



Reliëfweergave op landkaarten



- korte introductie reliëfweergave op kaarten
- geschiedenis van reliëfweergave (historische kaarten)
- moderne methodes
- workshop Blender

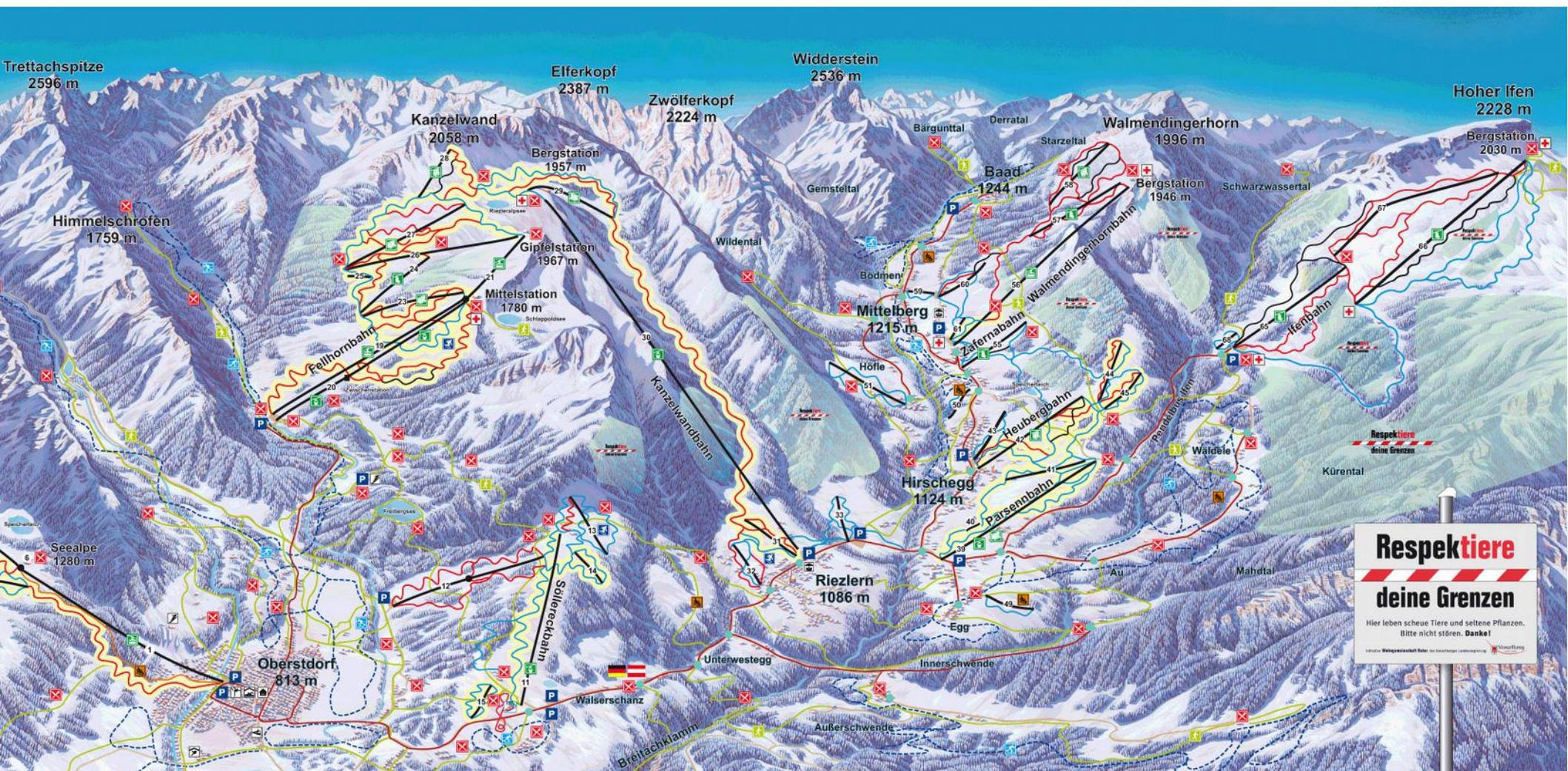
Websites:

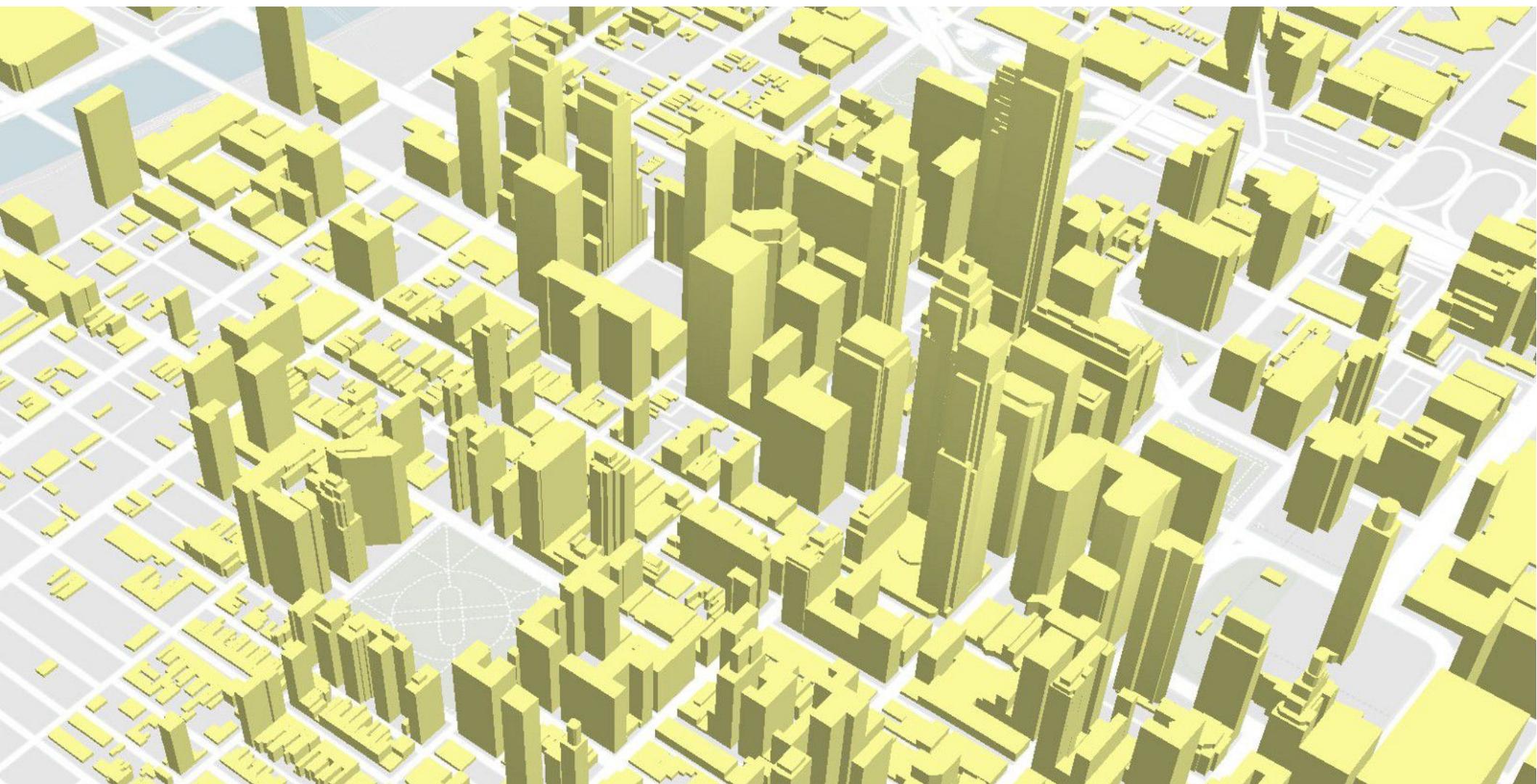
- hoogtedata: Nasa, [viewfinderpanoramas](#)
- www.shadedrelief.com van Tom Patterson
- www.reliefshading.com
- Blender tutorial van Daniel P. Huffman
(somethingaboutmaps.wordpress.com)

Manieren om reliëf te visualiseren op een kaart

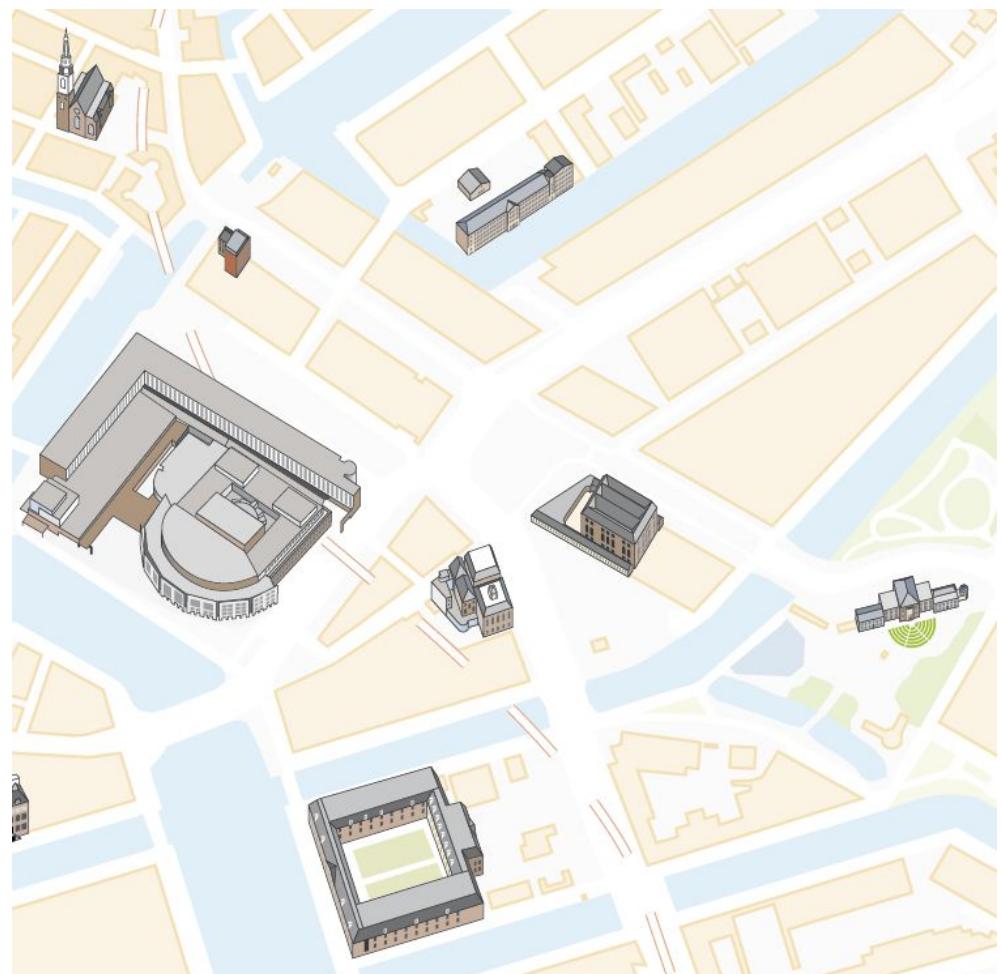
- kaarten met zijaanzicht (oblique)
- planimetrische kaarten met oblique reliëfweergave
- planimetrische kaarten met schaduwering en/of hoogtelijnen

Oblique





Planimetrisch Oblique Reliéf





Geografisch correcte kaart



1538 Ägidius Tschudi

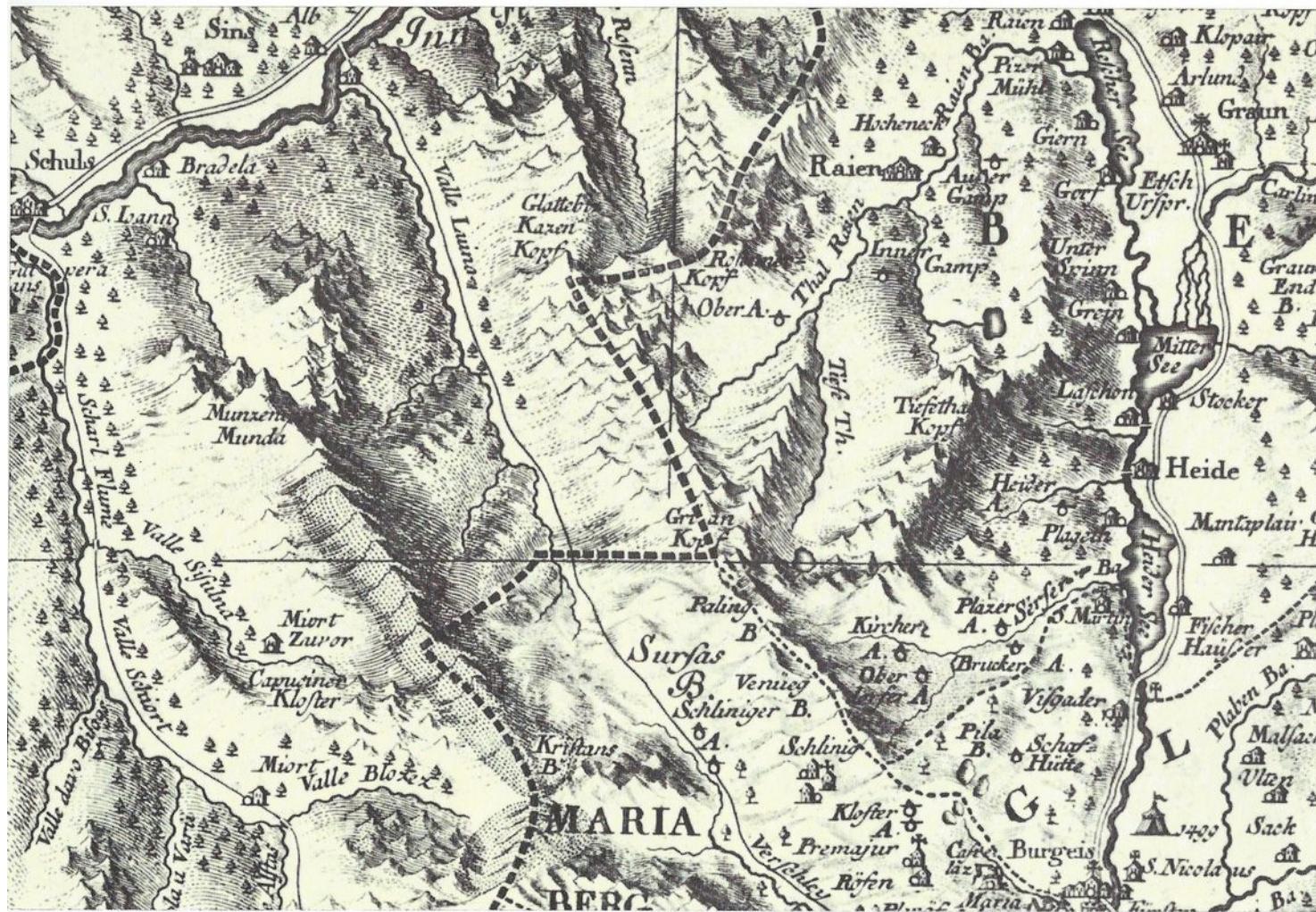


1664 Hans Conrad Gyger

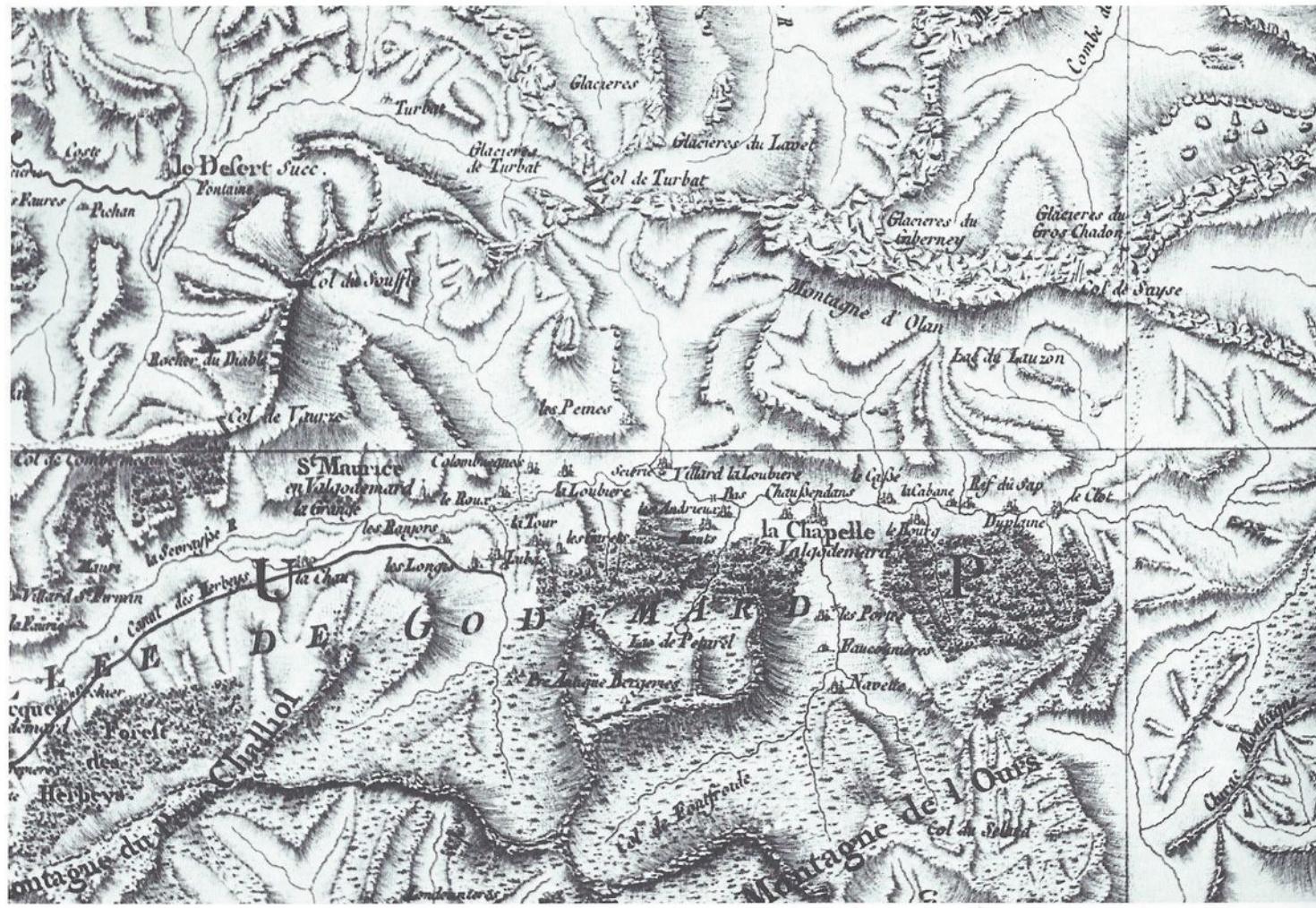




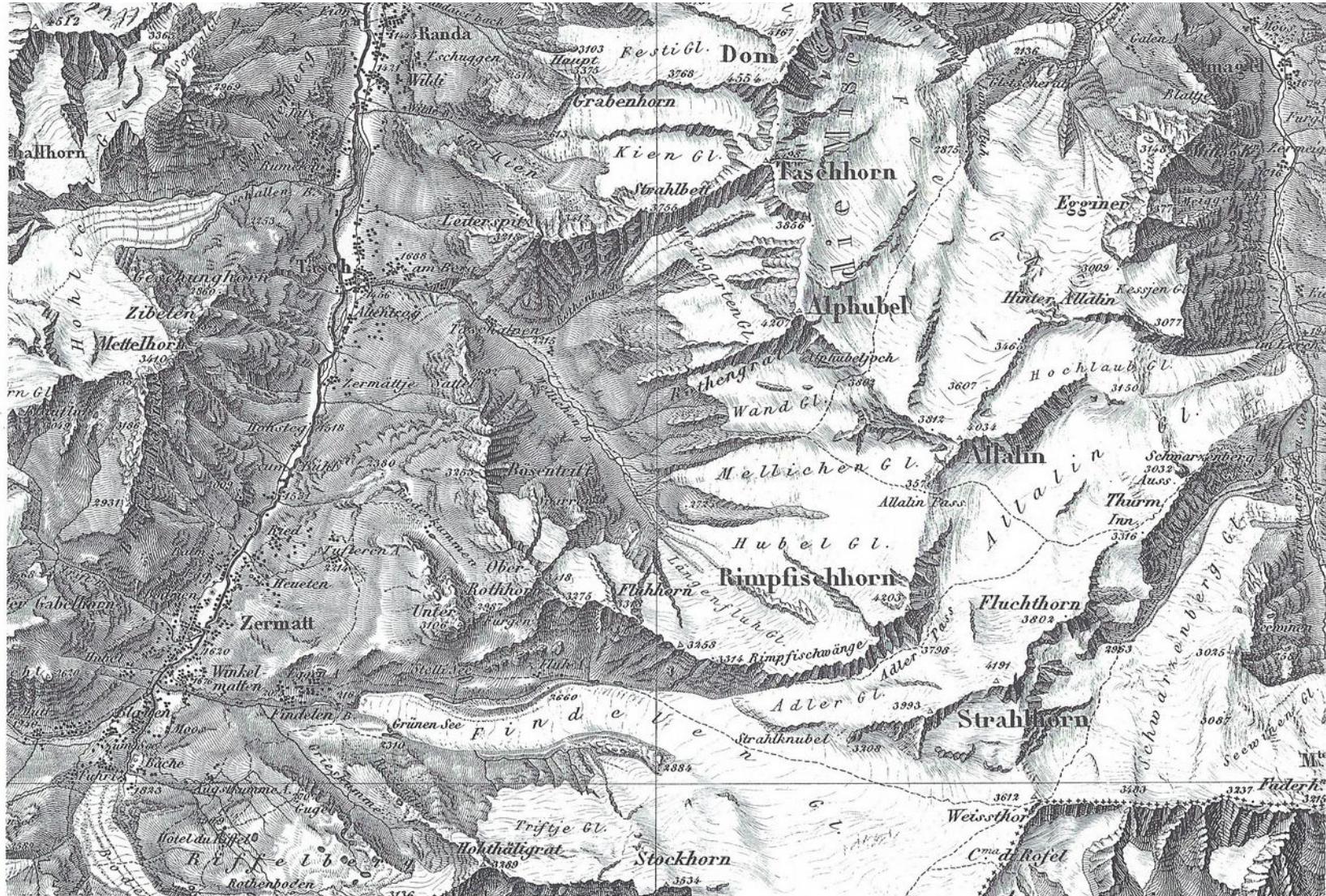
1774 Peter Anich



1793 César-François Cassini



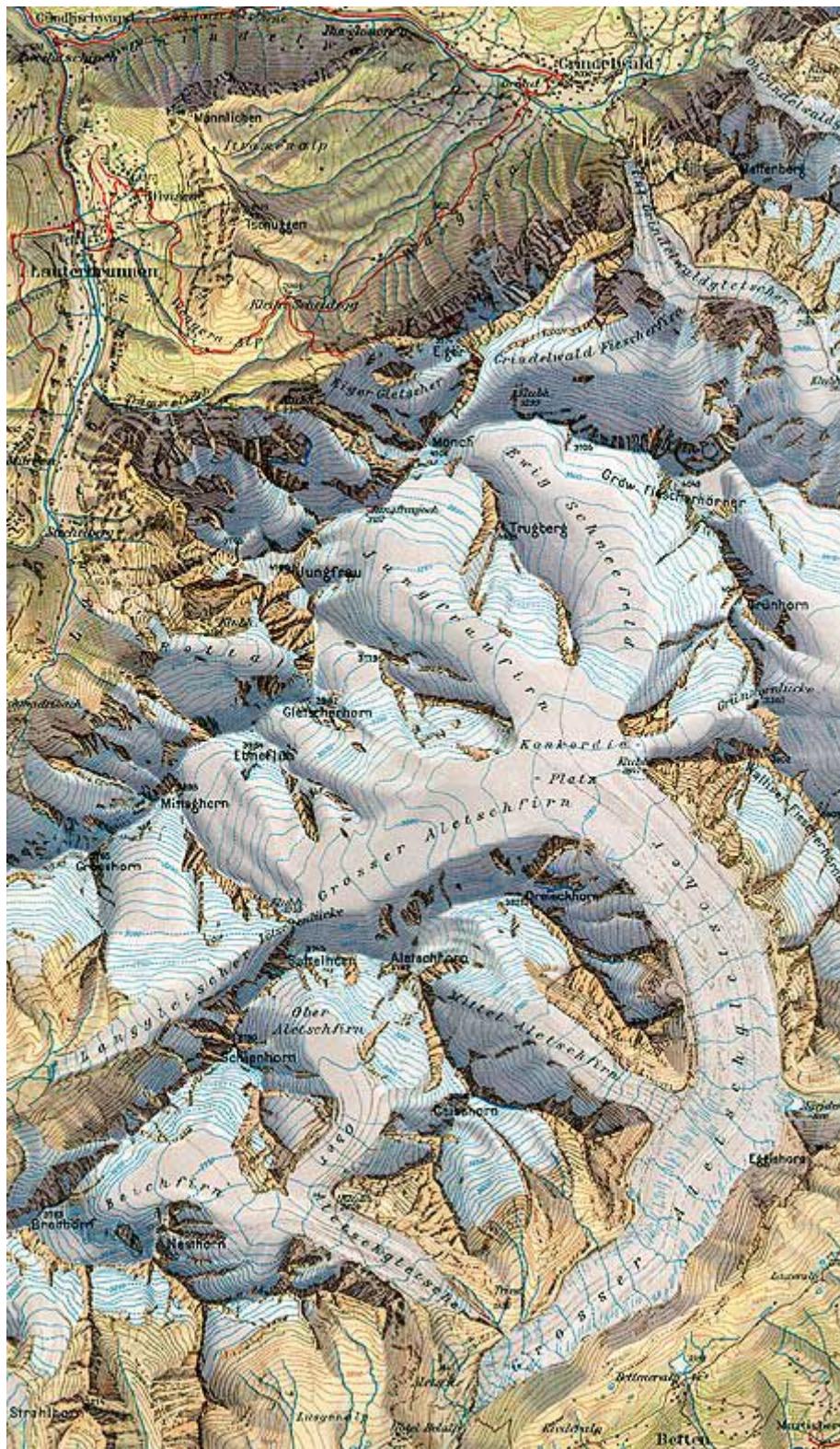
1832 Guillaume Henri Dufour

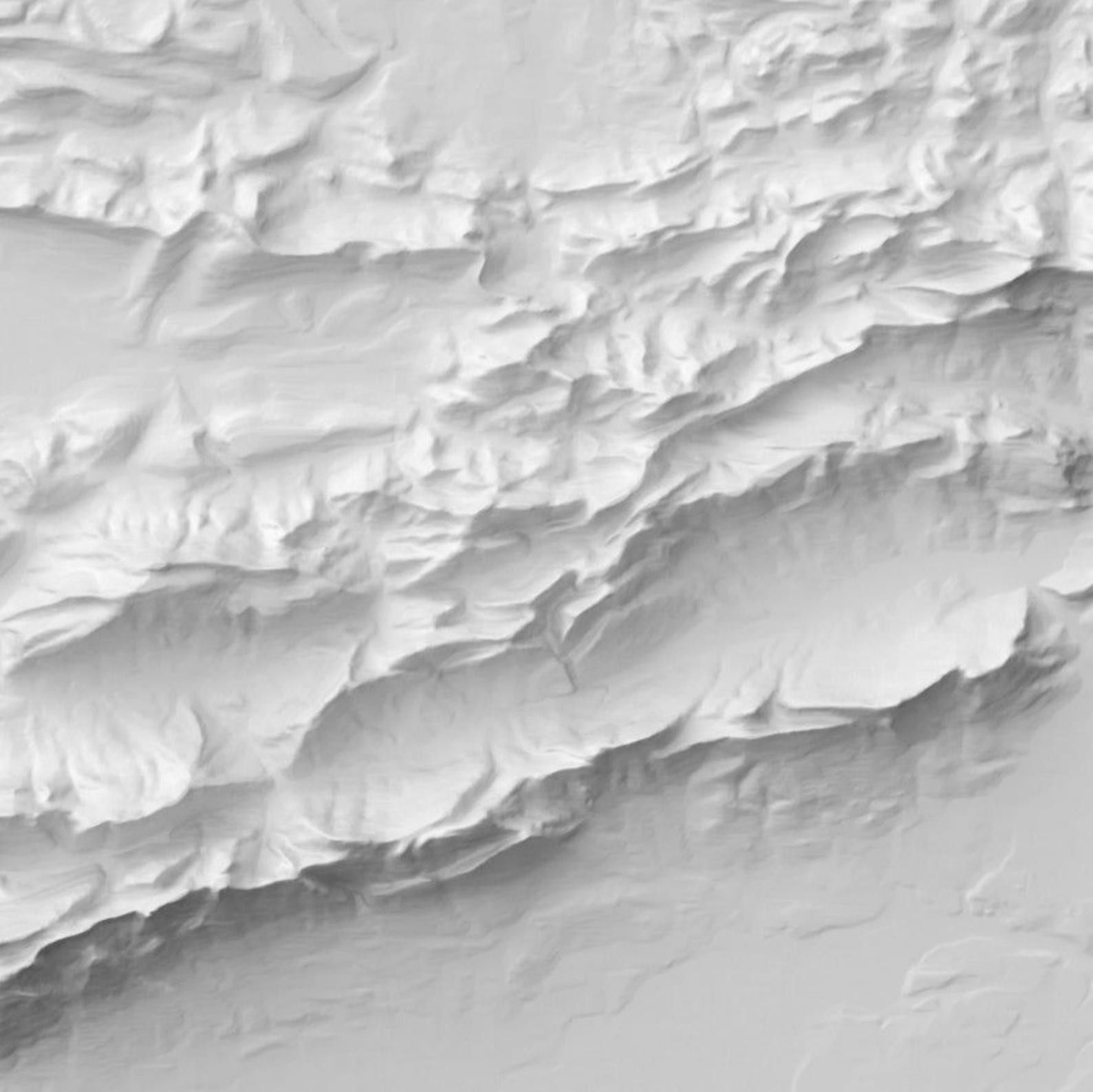


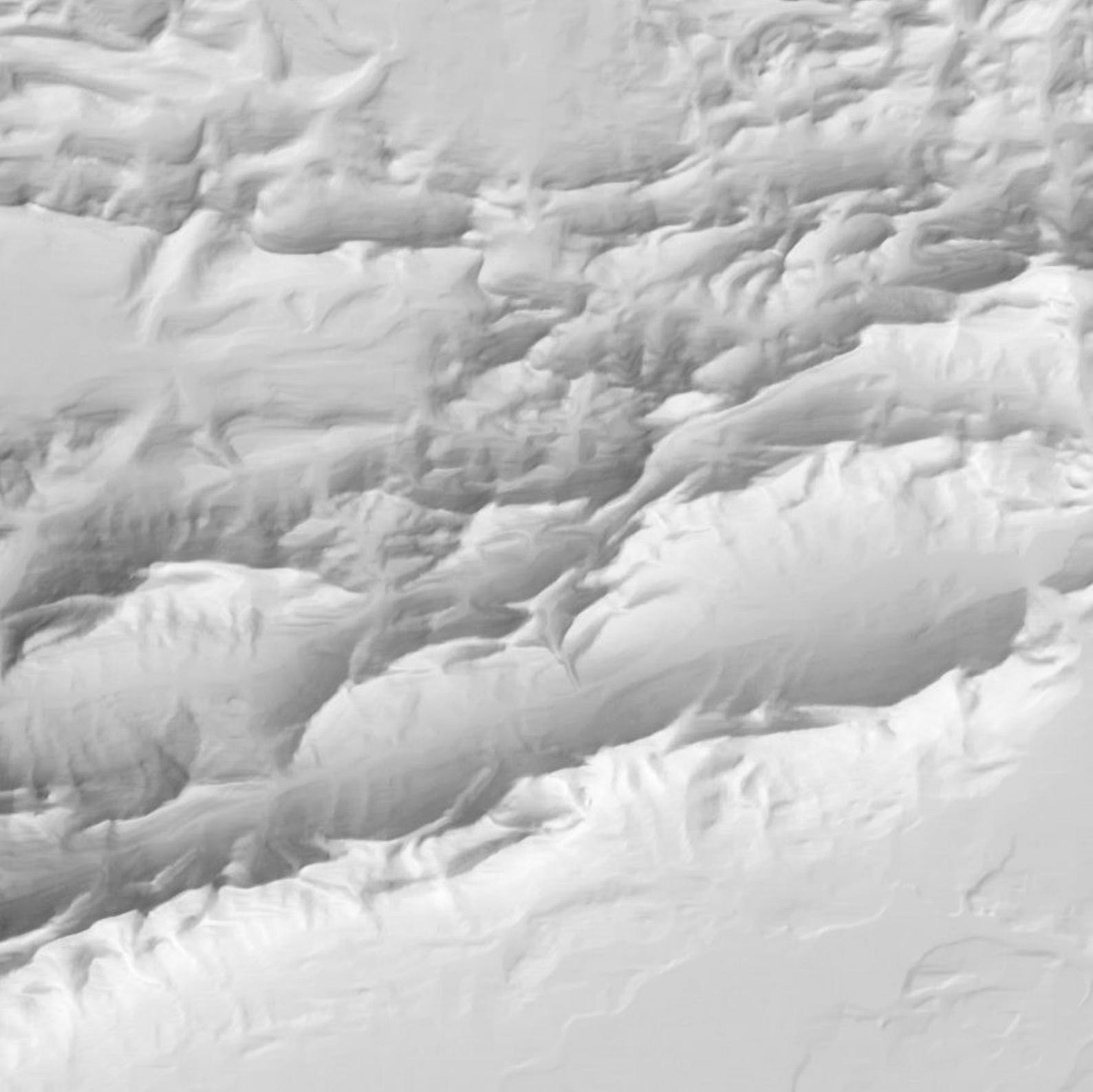
1878



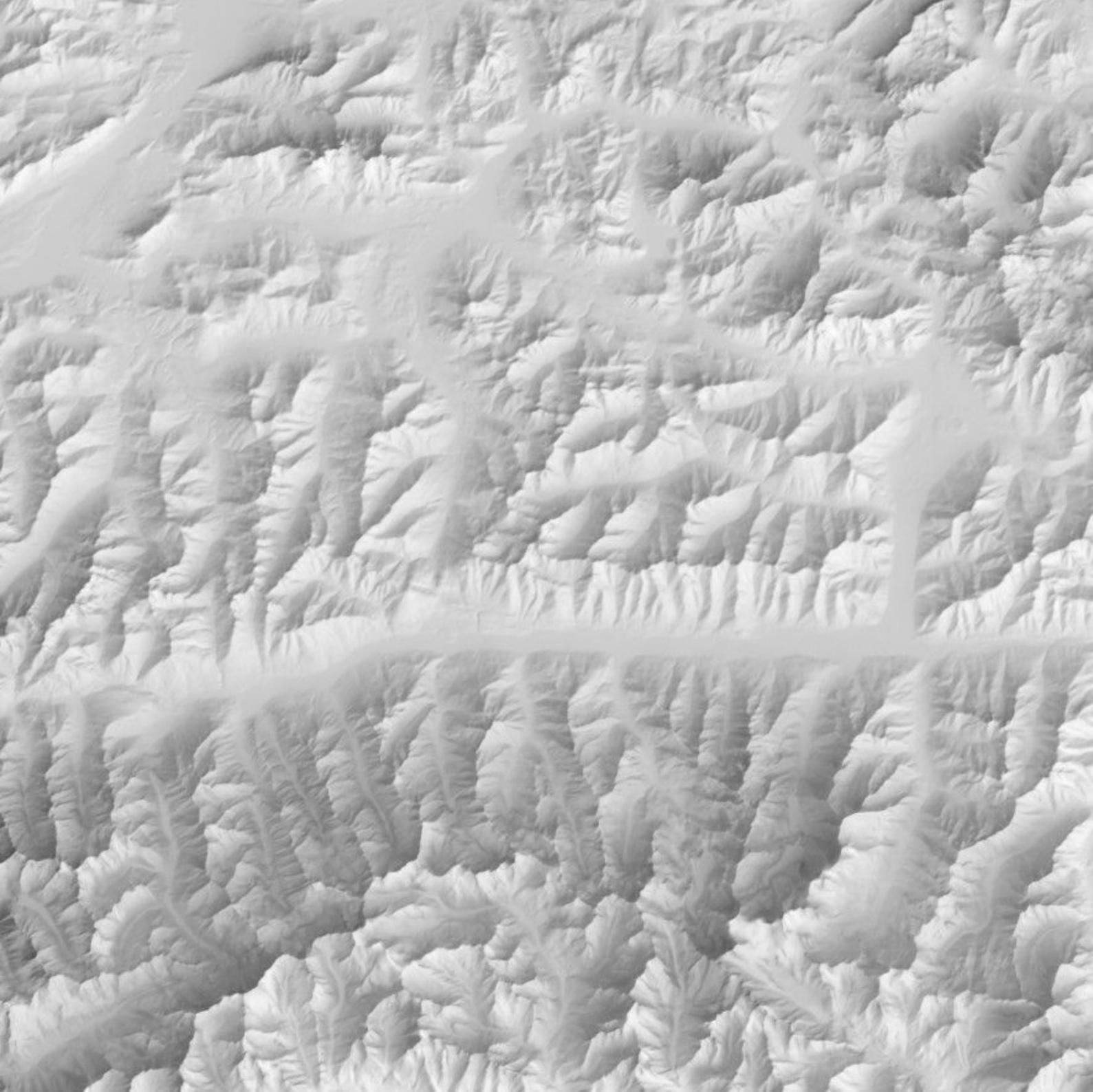
Eduard Imhof, 1932











Technieken

- potlood, airbrush
- Photoshop
- Natural Scene Designer
- Blender

Wenschow (vanaf ca. 1925)

THE UNIQUE WENSCHOW RELIEF



Blender

- Tutorial van Daniel Huffman
- Somethingaboutmaps
- #practicarto
- Open source 3D programma
- Soort fotostudio

Blender

- DEM (digitaal hoogtemodel) 16-bits tiff
- Blender: new file
- Blender setup (cycles render, feature set: experimental)

Plane

- Locatie
- Formaat
- Material (Diffuse BSDF = Bidirectional scattering distribution function)
- DEM, extend
- UV-unwrap

Camera

- Locatie
- Formaat (resolution)
- Rotation
- Orthographic

Licht

- Sun
- Richting (bv. 0,45,135)
- Size (maakt wellicht niet uit)
- Nodes: strength (ca. 3)

Plane (2)

- Add convertor: math, multiply
- Material settings: displacement=true
- Modifier (subdivision surface, simple, adaptive)

Save + extra opties

- Save image
- Voeg extra lichtbron toe
- Voeg gekleurde kaartlaag toe