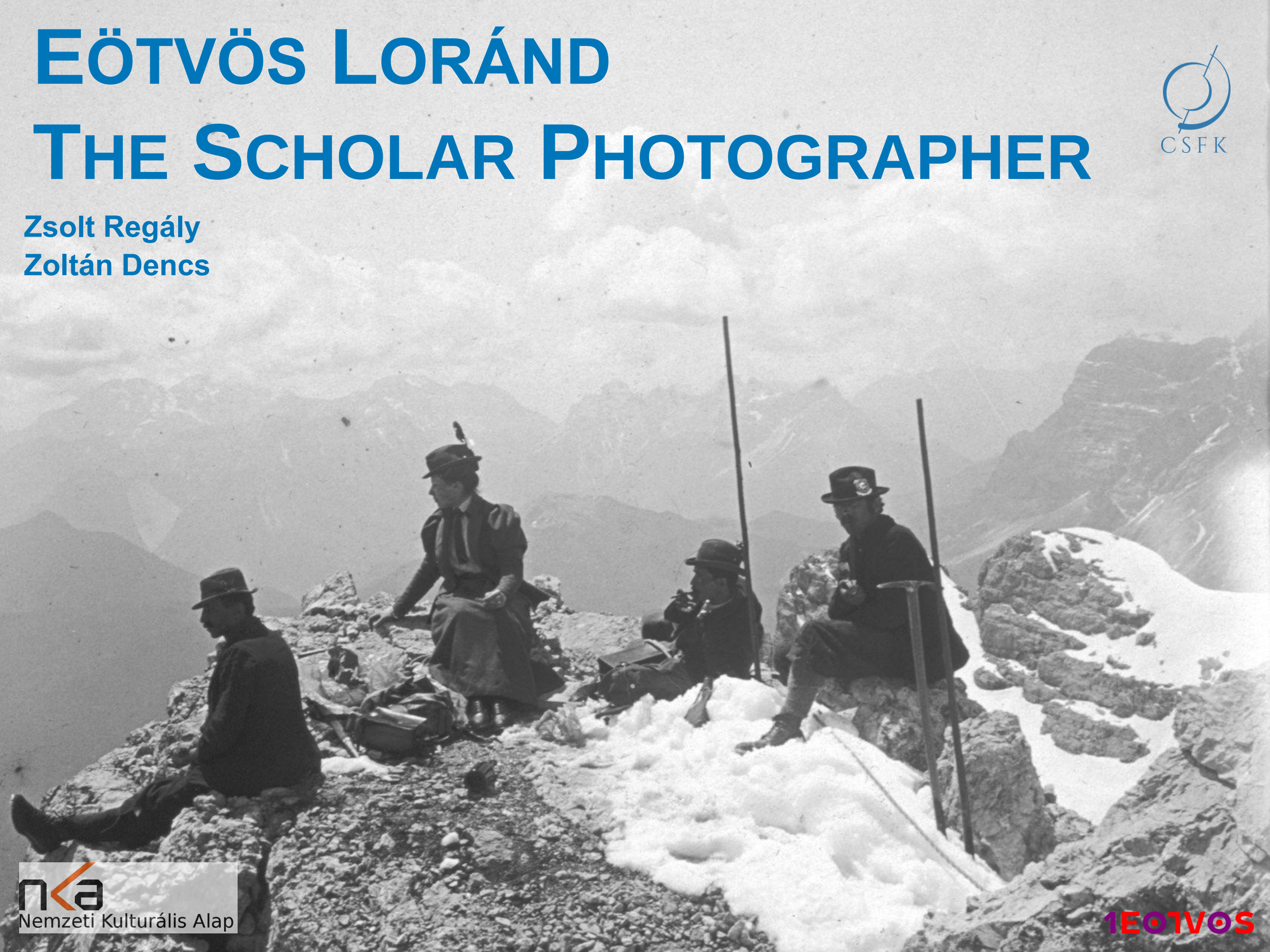
# Eötvös Loránd
# The Scholar Photographer

Zsolt Regály
Zoltán Dencs



Nemzeti Kulturális Alap

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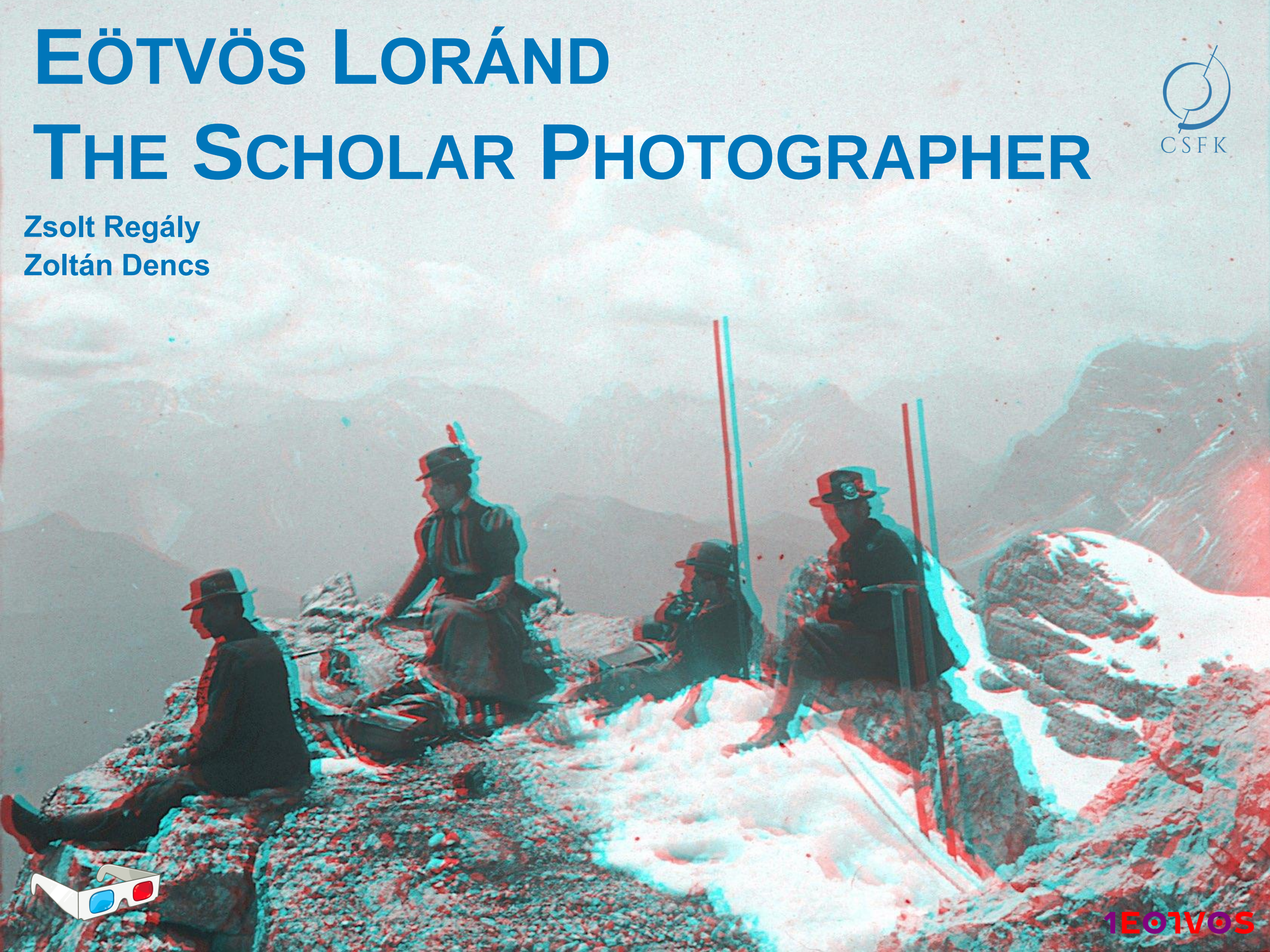
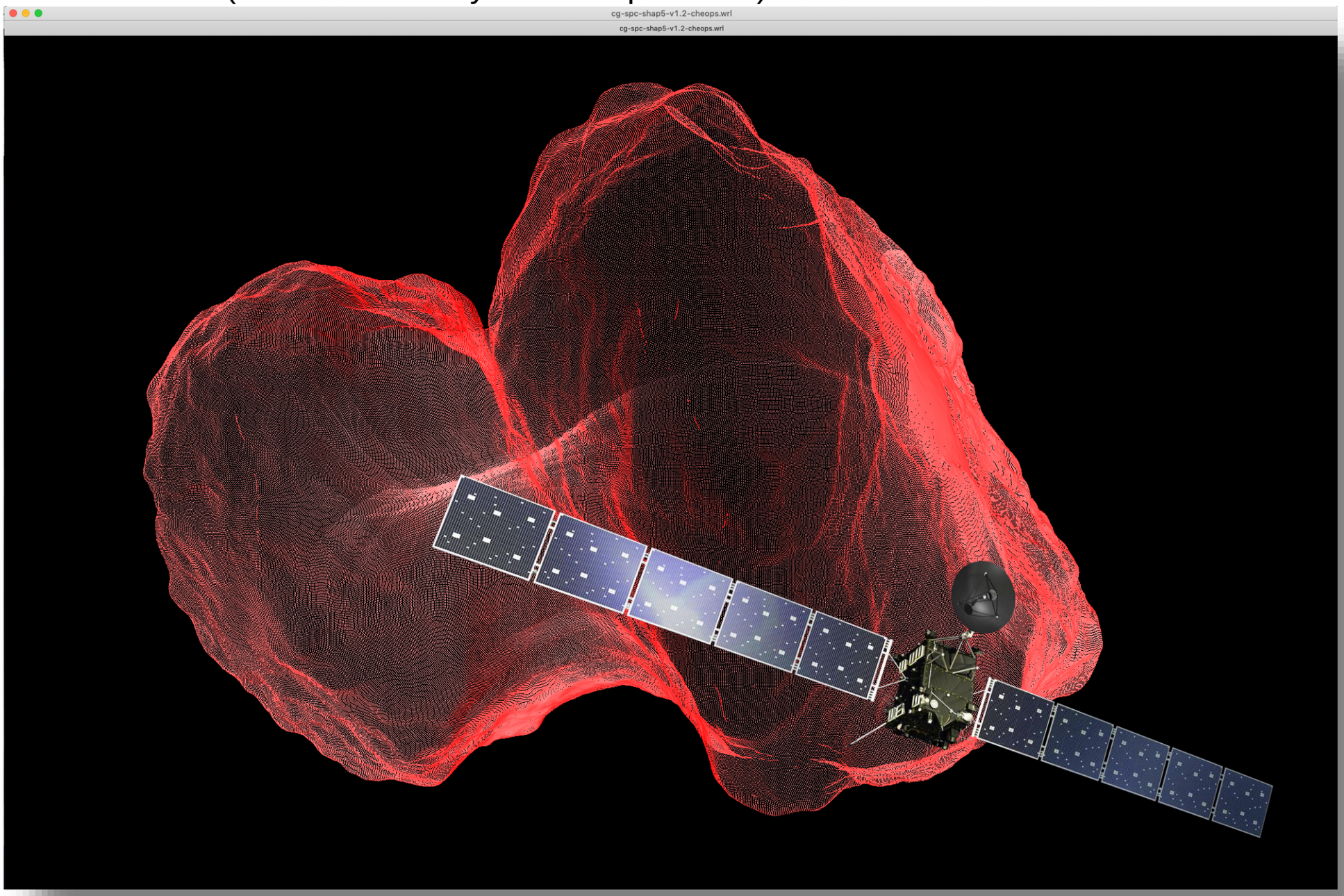


# 67P/Csurjumov–Geraszimenko Comet

3D VRL modell (measurements by Rosetta spacecraft)



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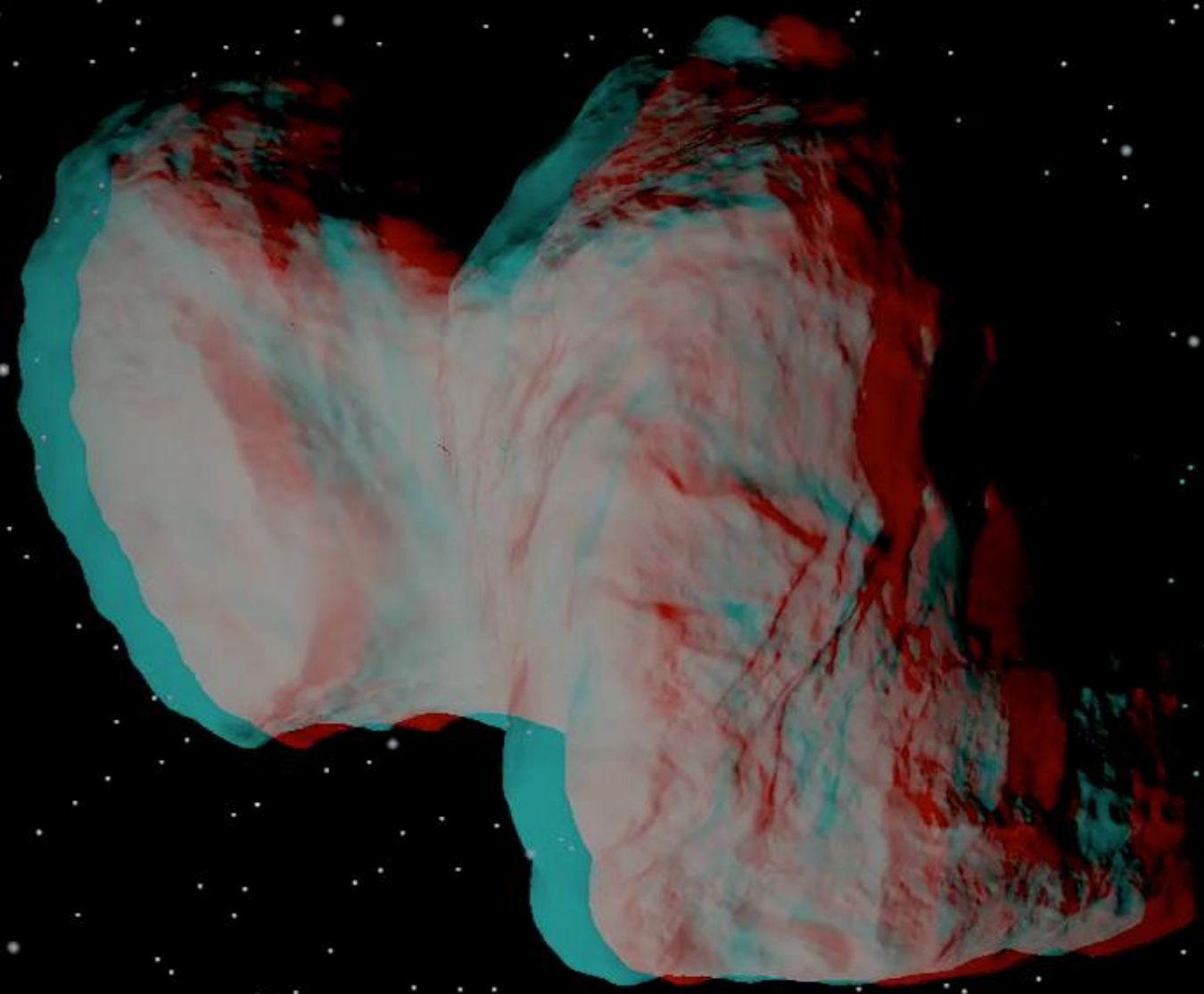

# Visual Perception of 3D space

**Monocular perception**

- Focusing
- Overlapping objects
- Size of known objects
- Linear convergence (e.g. parallel lines)
- Textures blurred by distance

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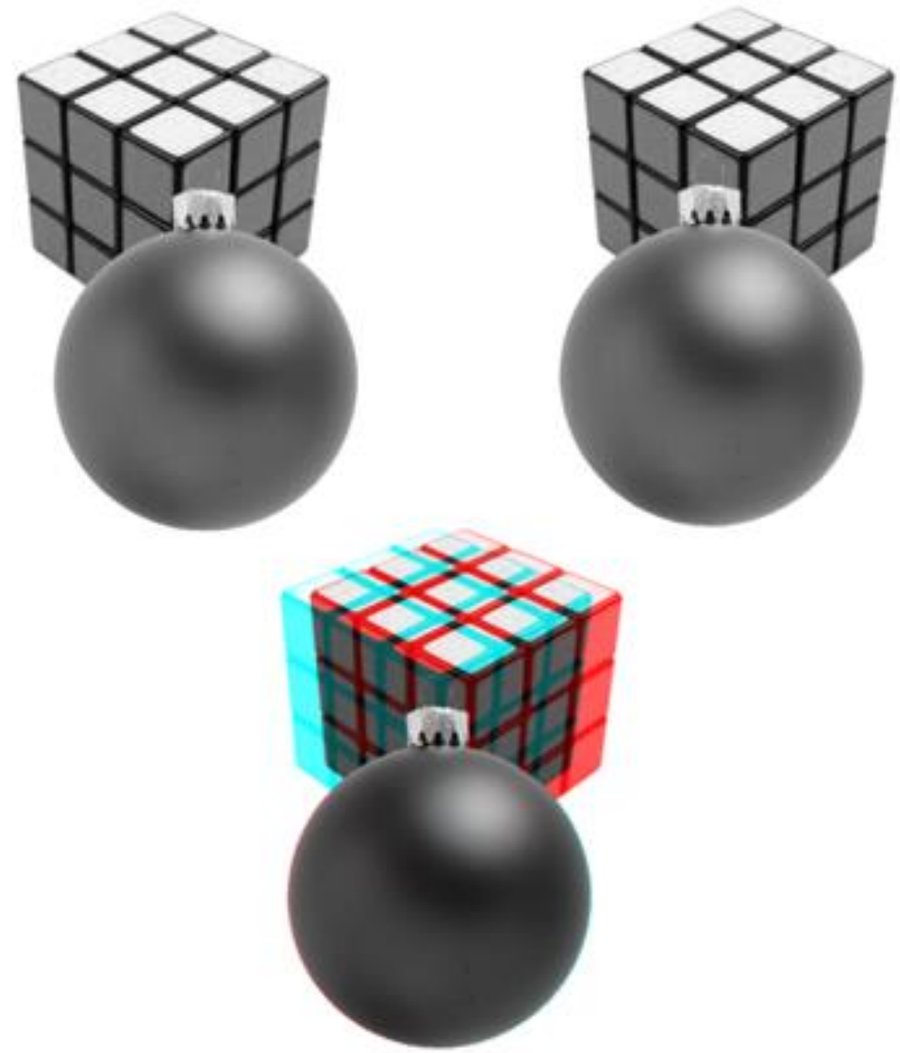
**Binocullar perception**

- Stereopsis (binocular disparity)



Holger Tauer (2010), Stereo 3D

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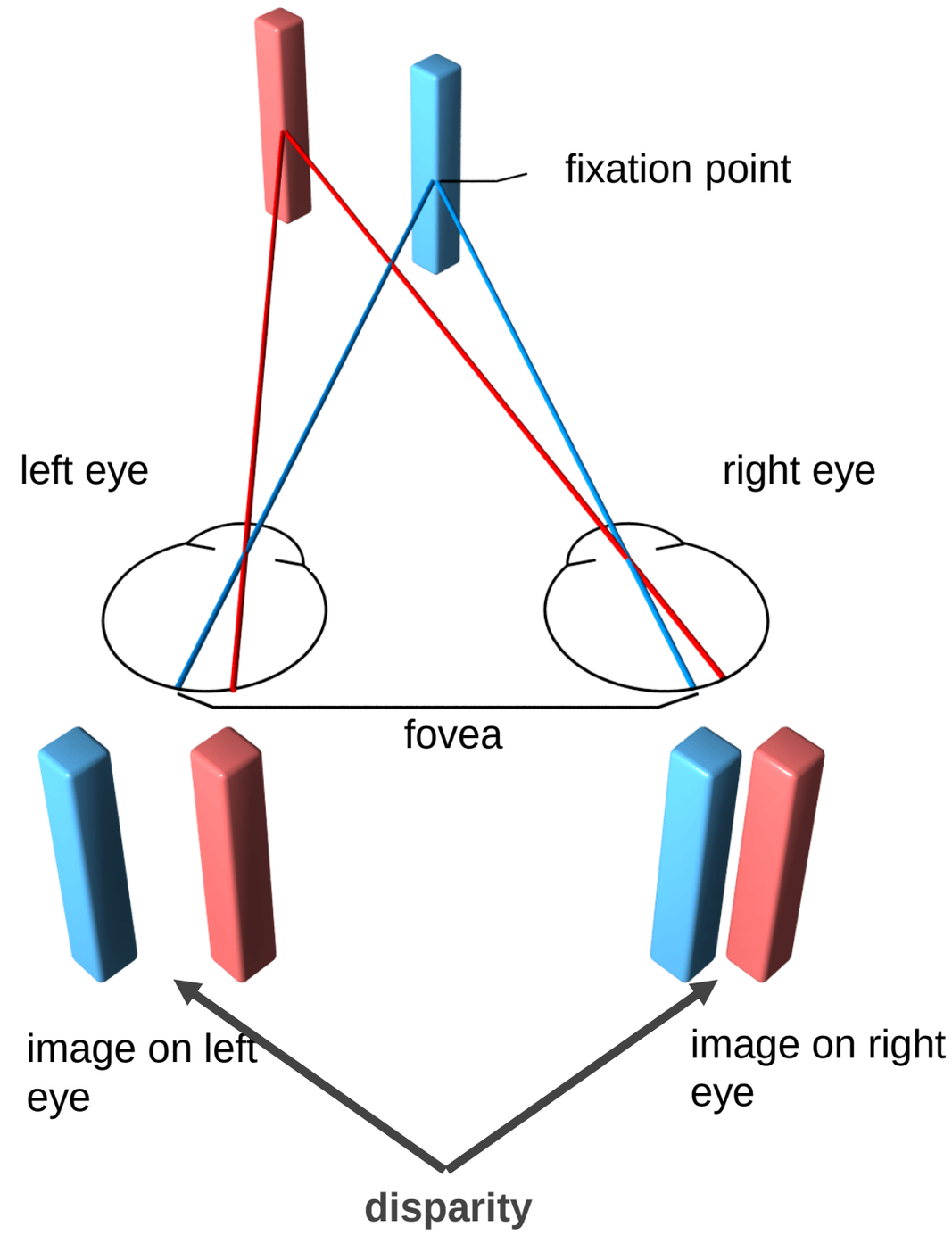

# History of stereoscopy

Theory of stereoscopy: Sir Charles Wheatstone (1838)

Lens stereoscope: David Brewster (1851)

Anagliph technology description: Wilhelm Rollmann (1852)

First anagliph picture (color printing): Louis Ducos du Hauron (1891)

C. Wheatstone

stereoscope

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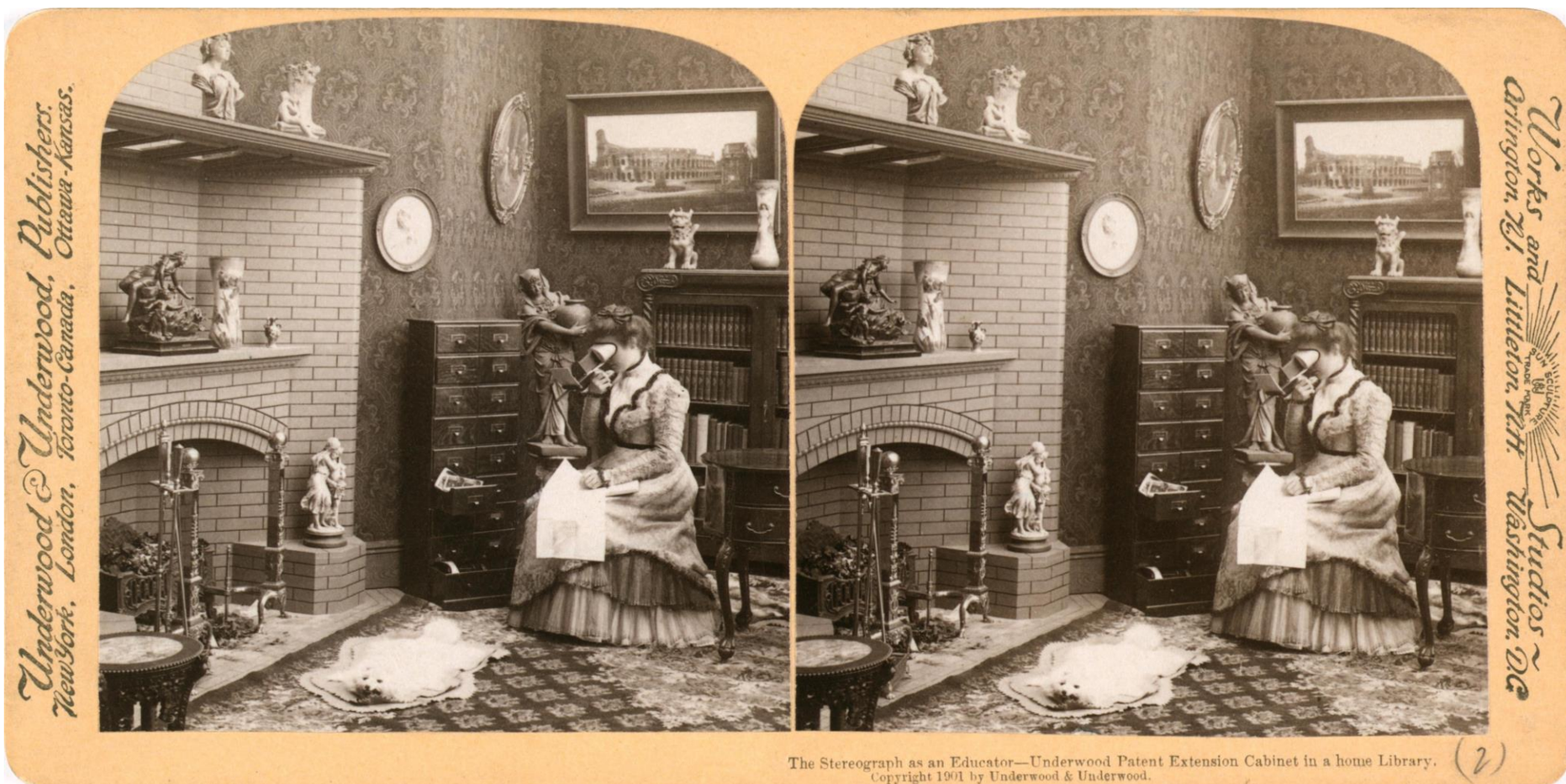
stereoscopic card / stereogram



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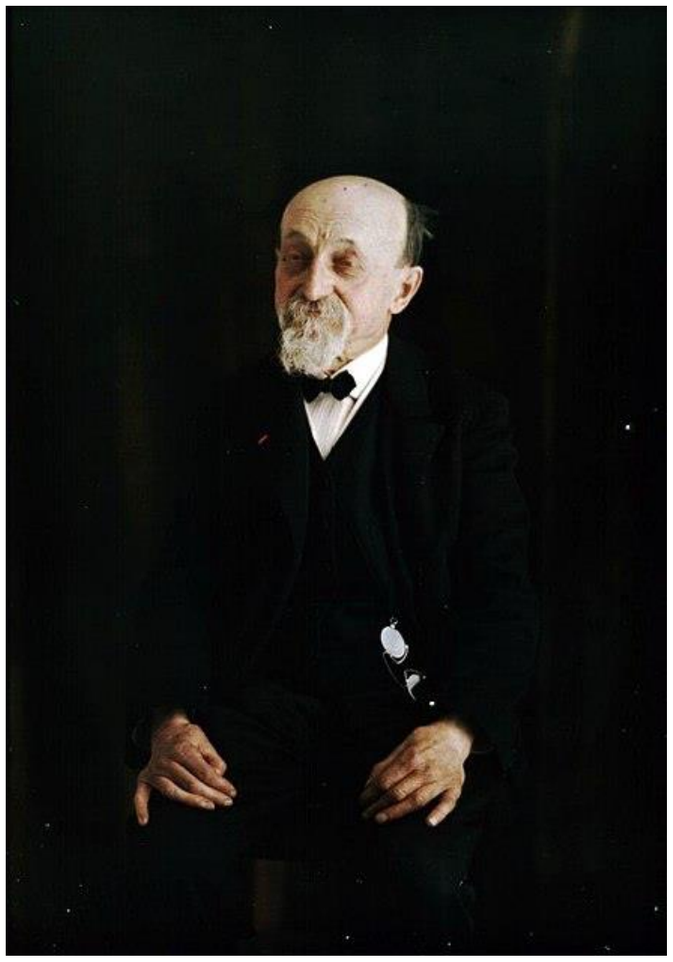

anagliph picture

# "TÖMÖRLÁTVÁNY"

Anschütz & Goerz "Stereo-Ango" camera

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stereoscope

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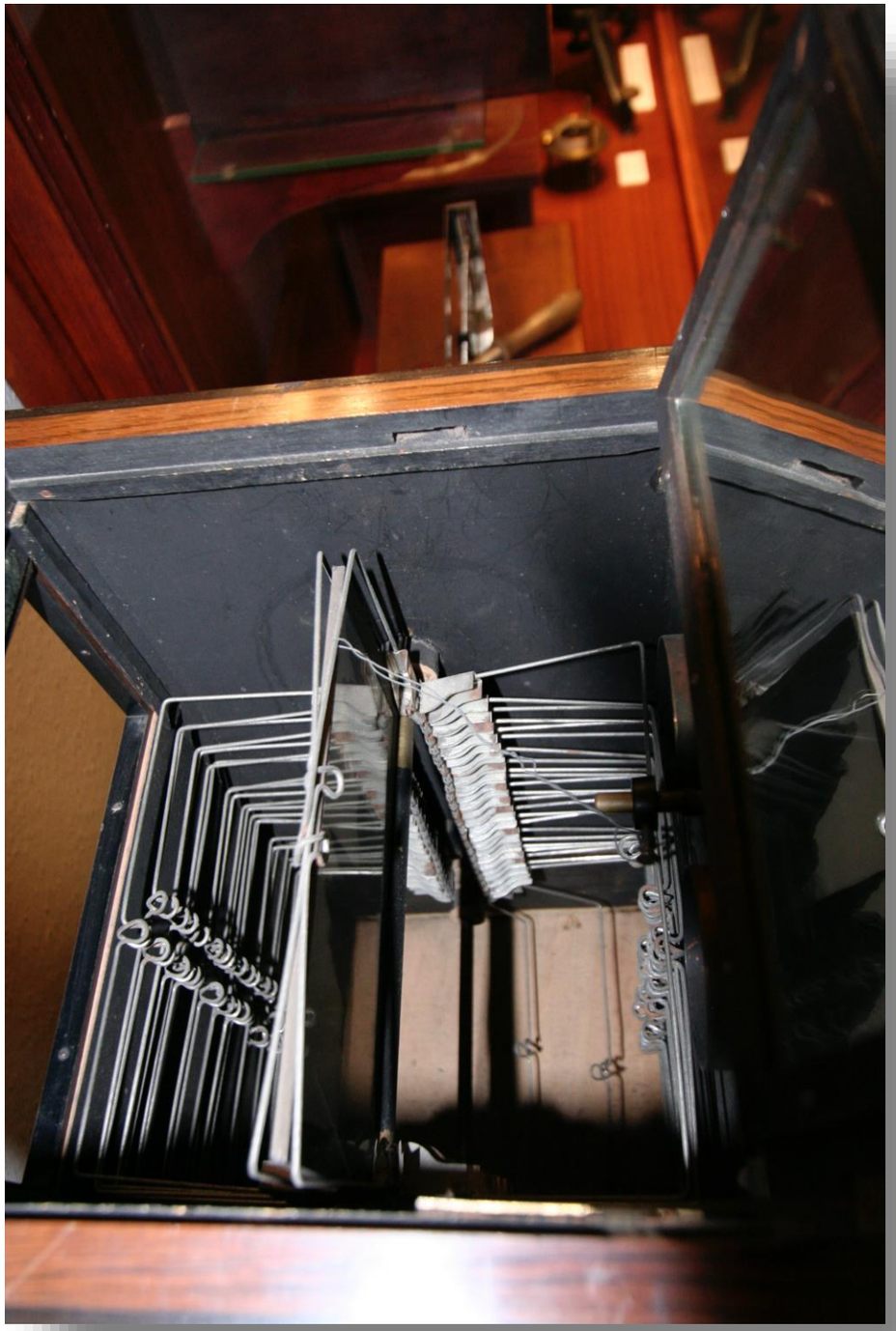
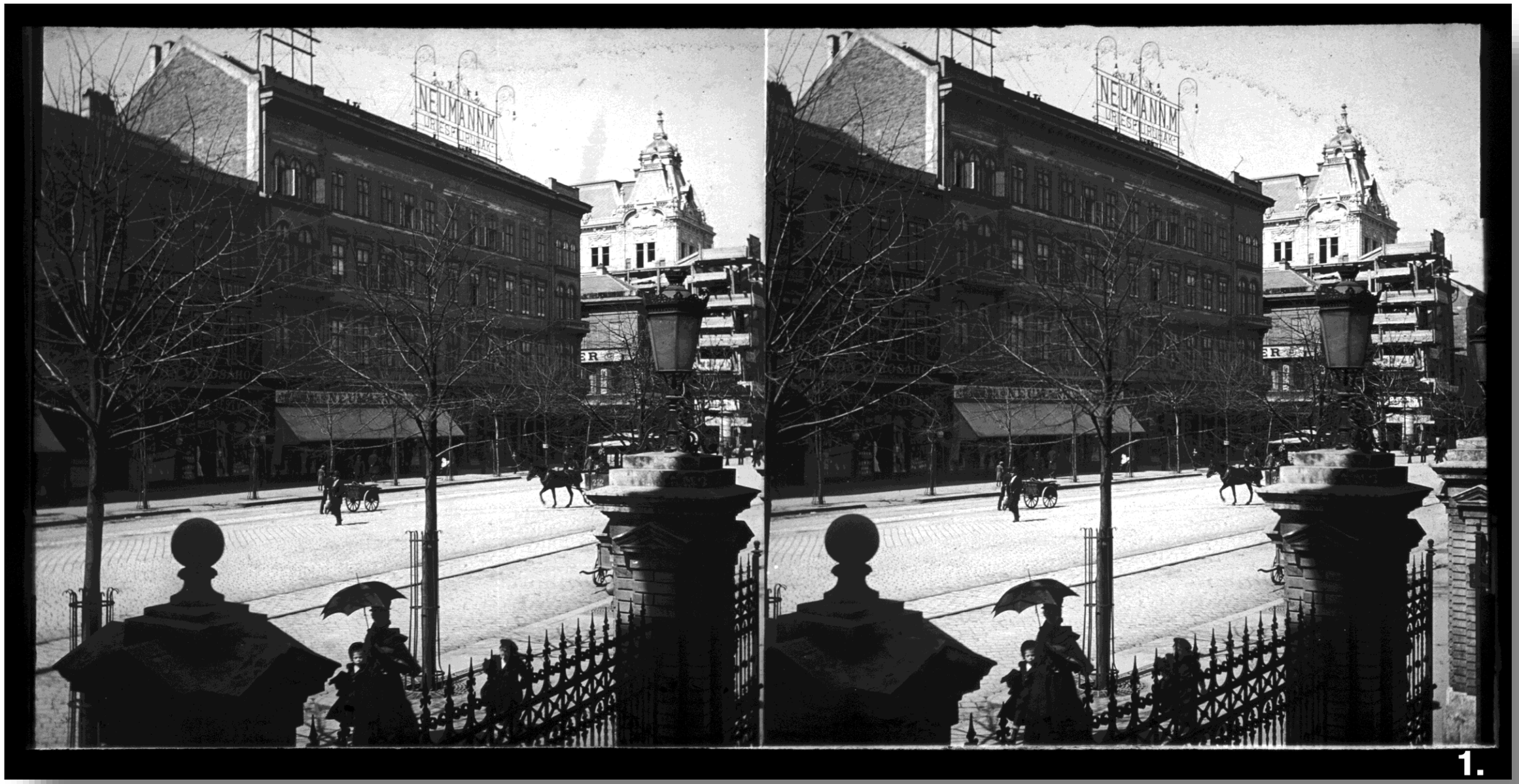


# DIGITISING EÖTVÖS STEREOGRAMS

scanned stereogram



# DIGITISING EÖTVÖS STEREOGRAMS

left side image

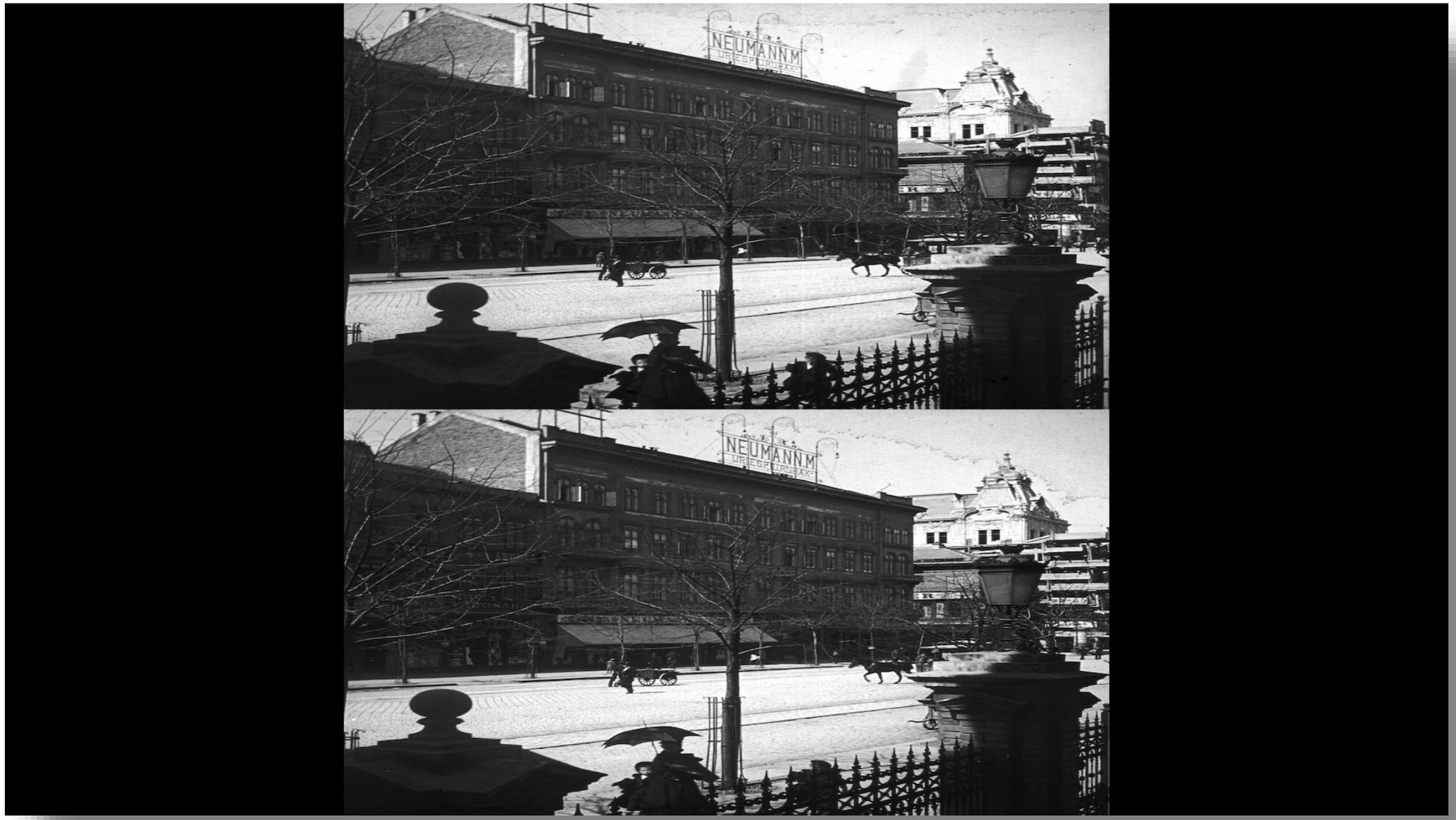

right side image

# DIGITISING EÖTVÖS STEREOGRAMS

side by side for 3D TV

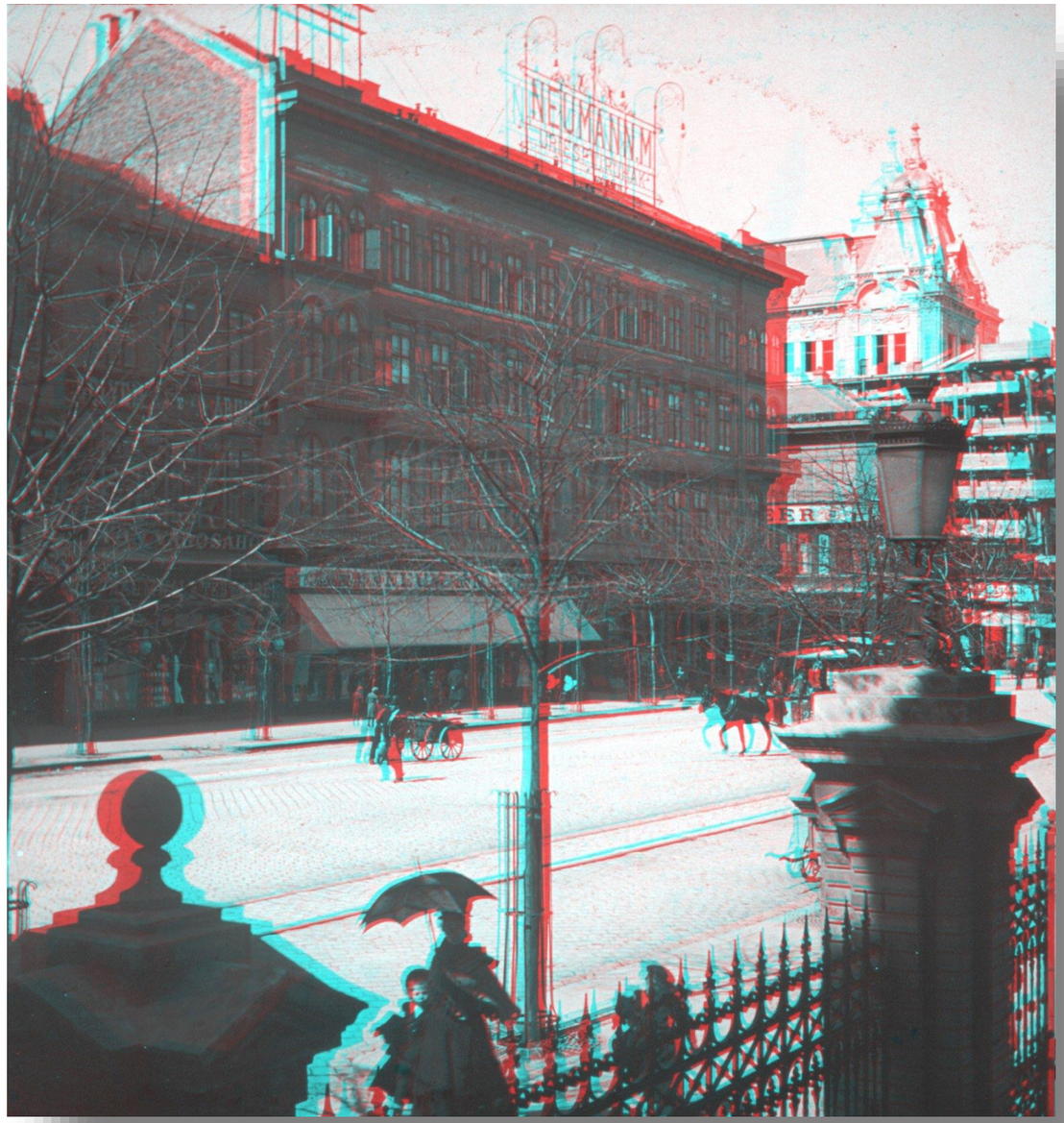
# DIGITISING EÖTVÖS STEREOGRAMS

top-bottom for 3D TV

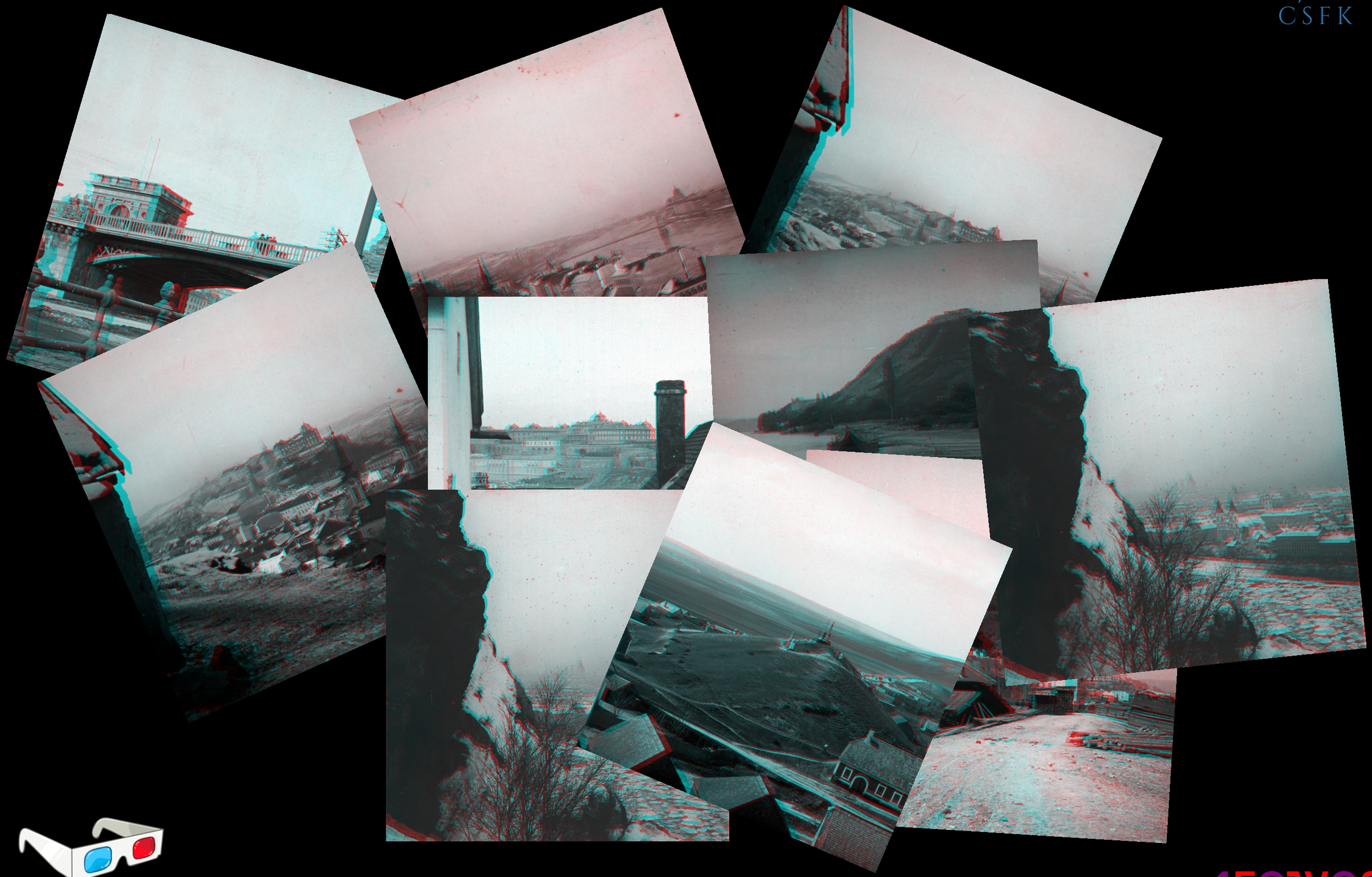


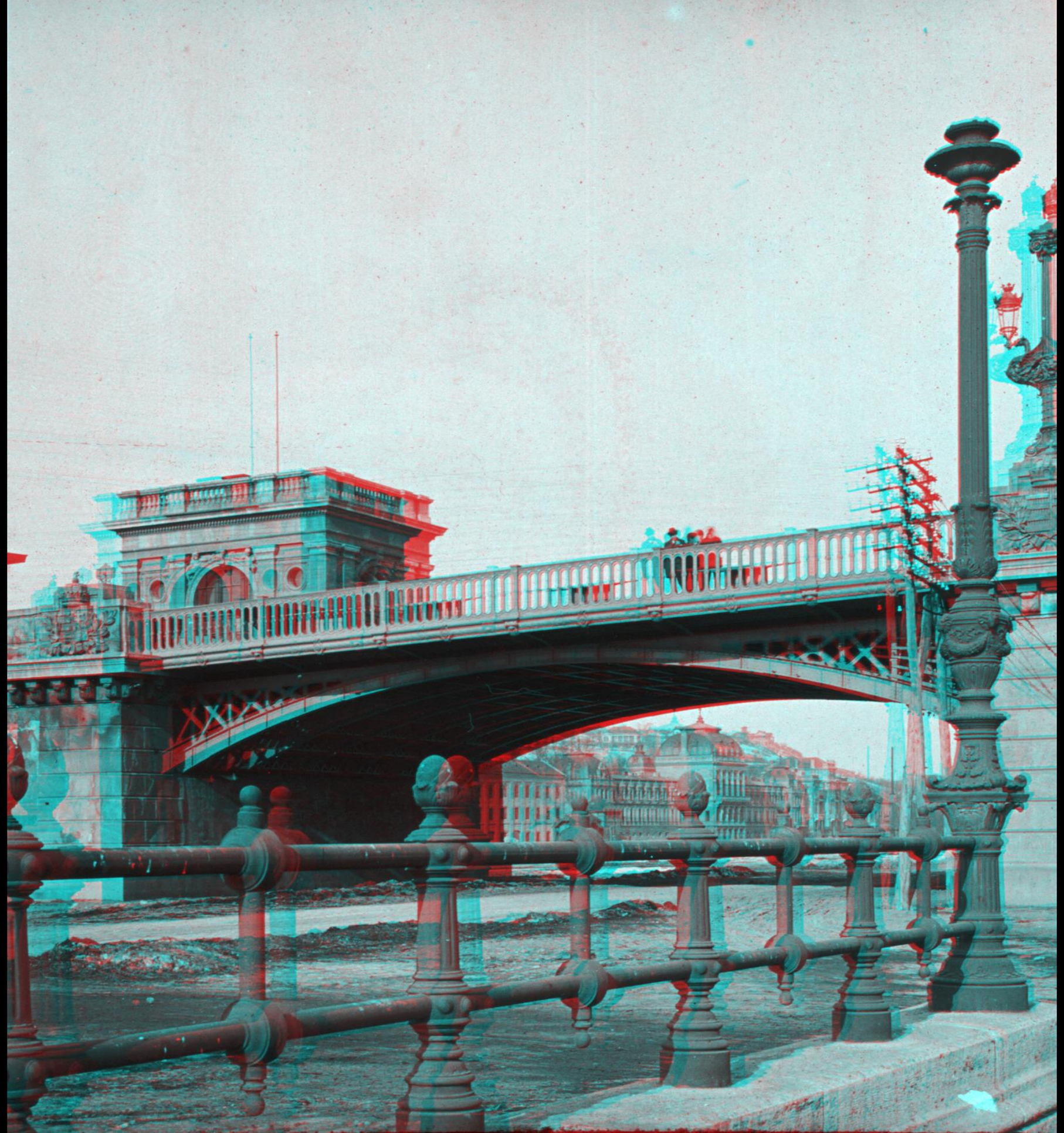
# DIGITISING EÖTVÖS STEREOGRAMS

anagliph for conventional TV, projector or printing




# Budapest and its surroundings





CSFK

1E01VOS

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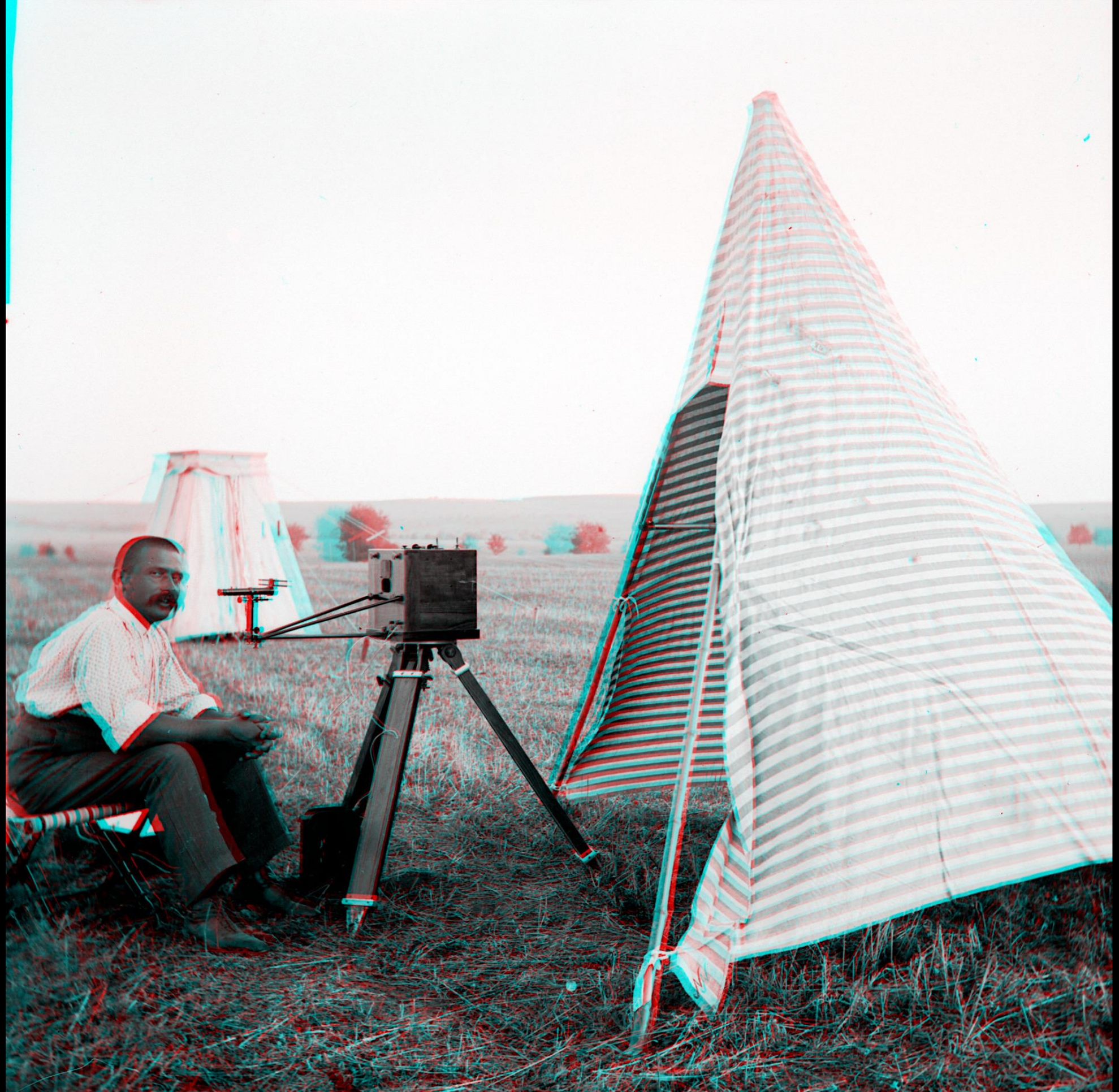
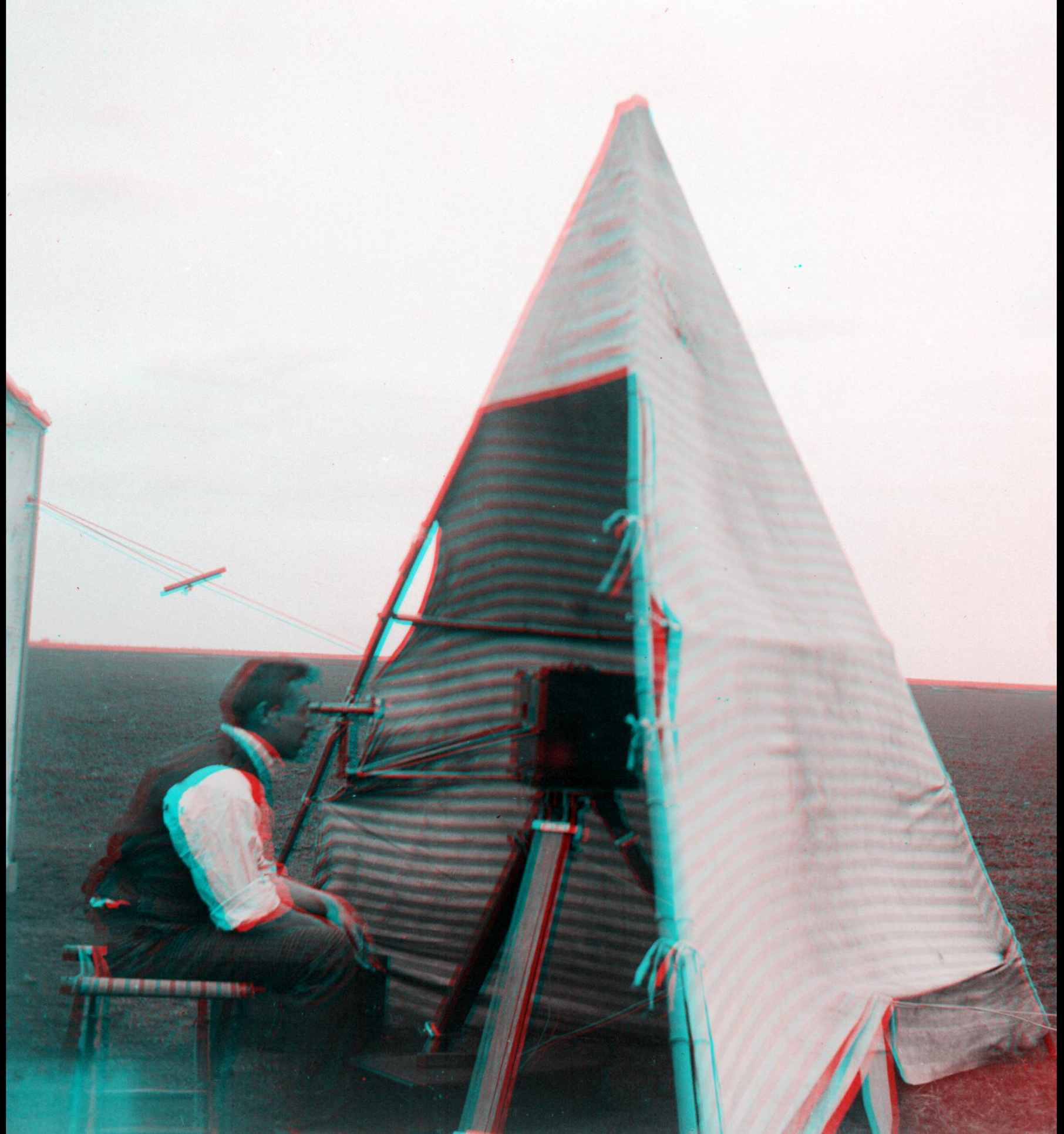
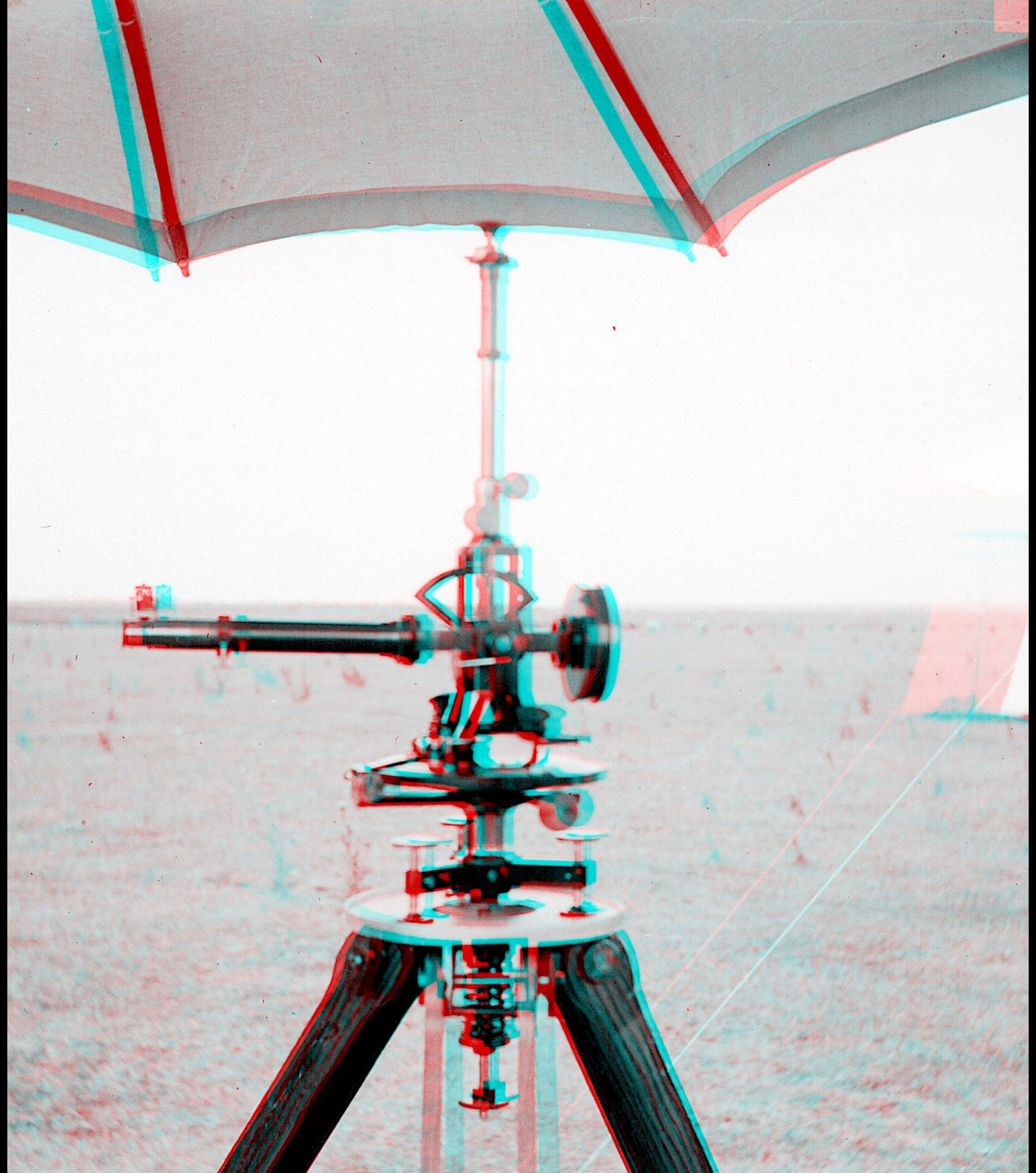
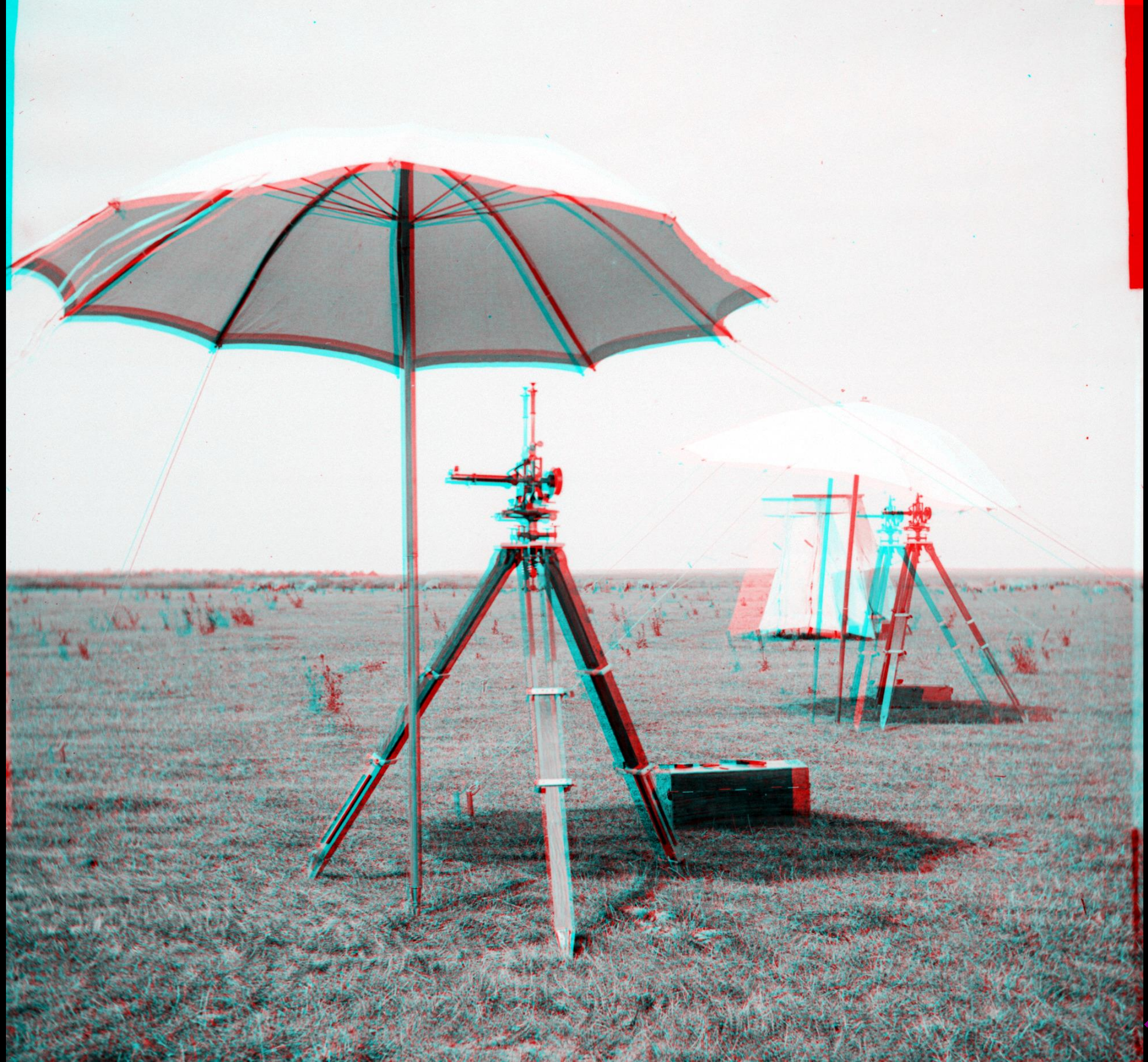
# Field measurements

CSFK










UNESCO

# Mountains and lakes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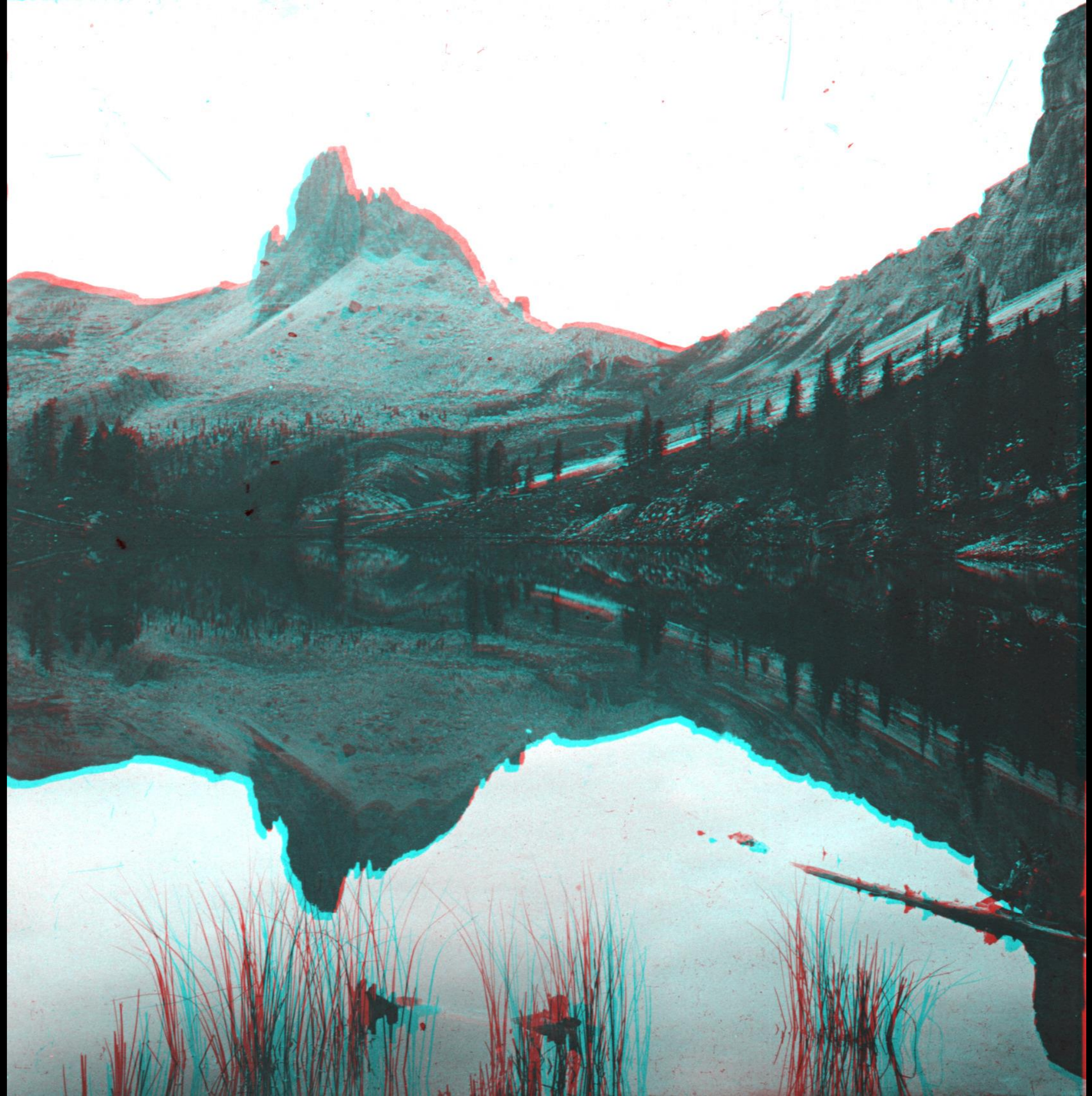

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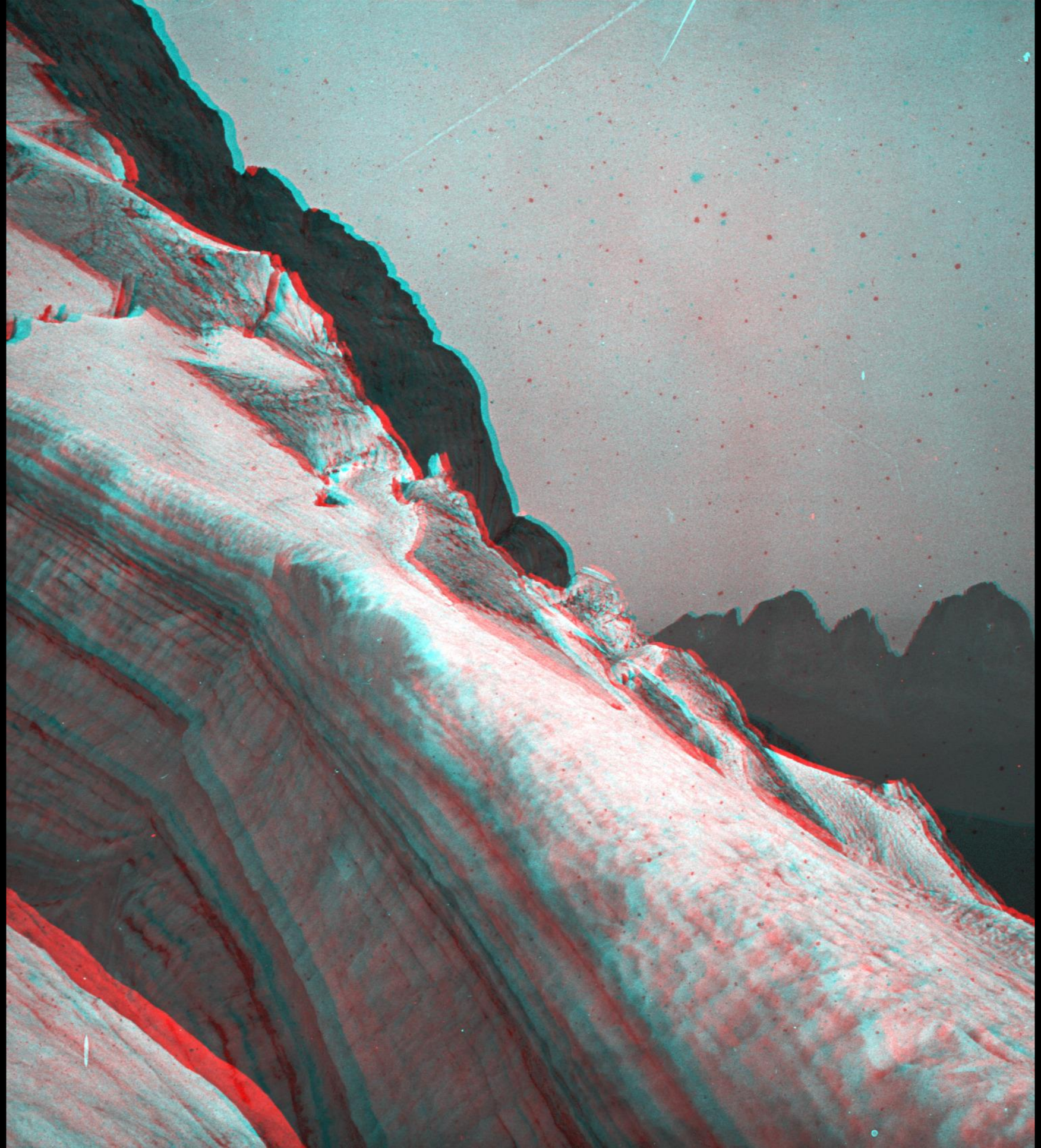

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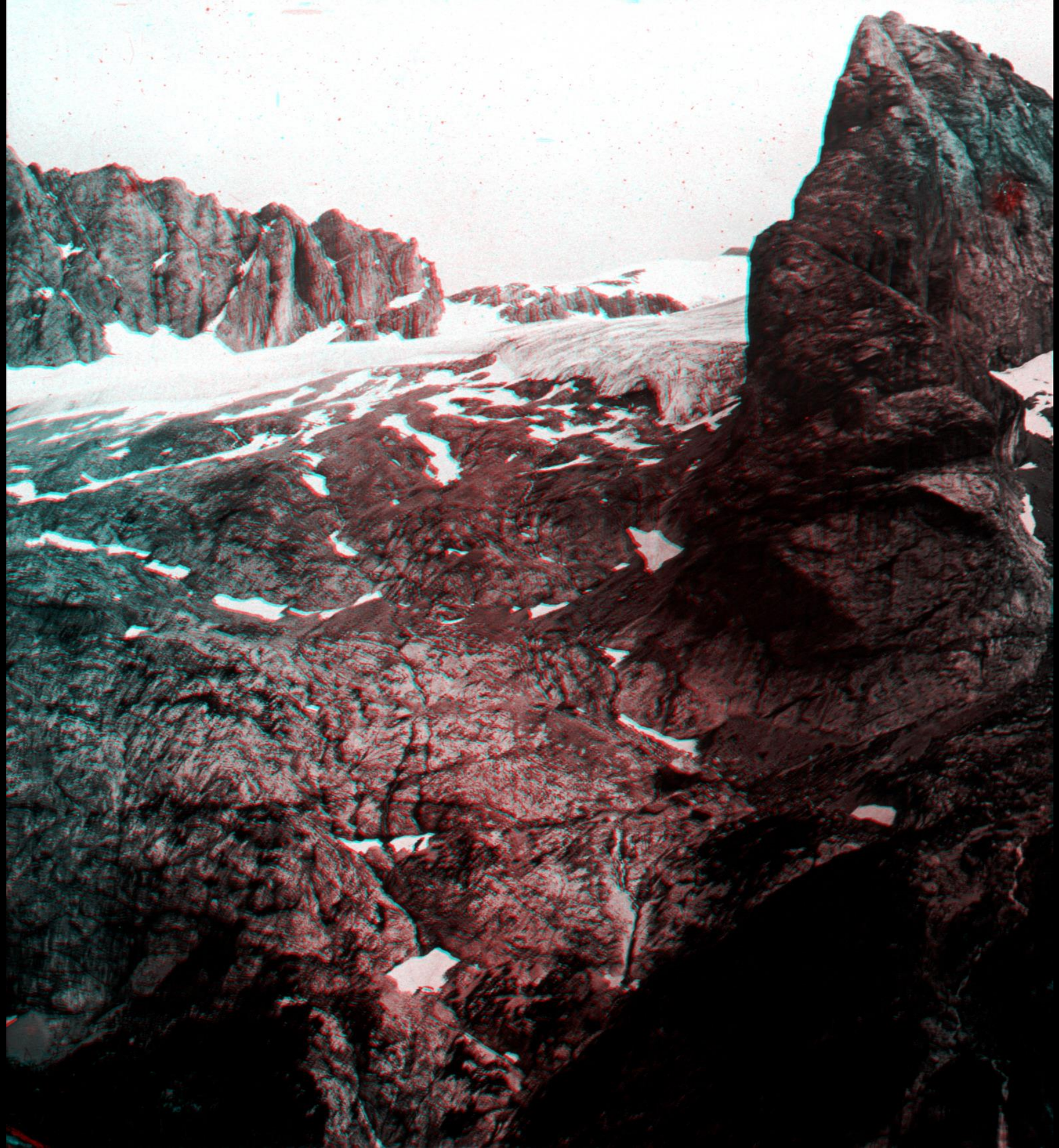

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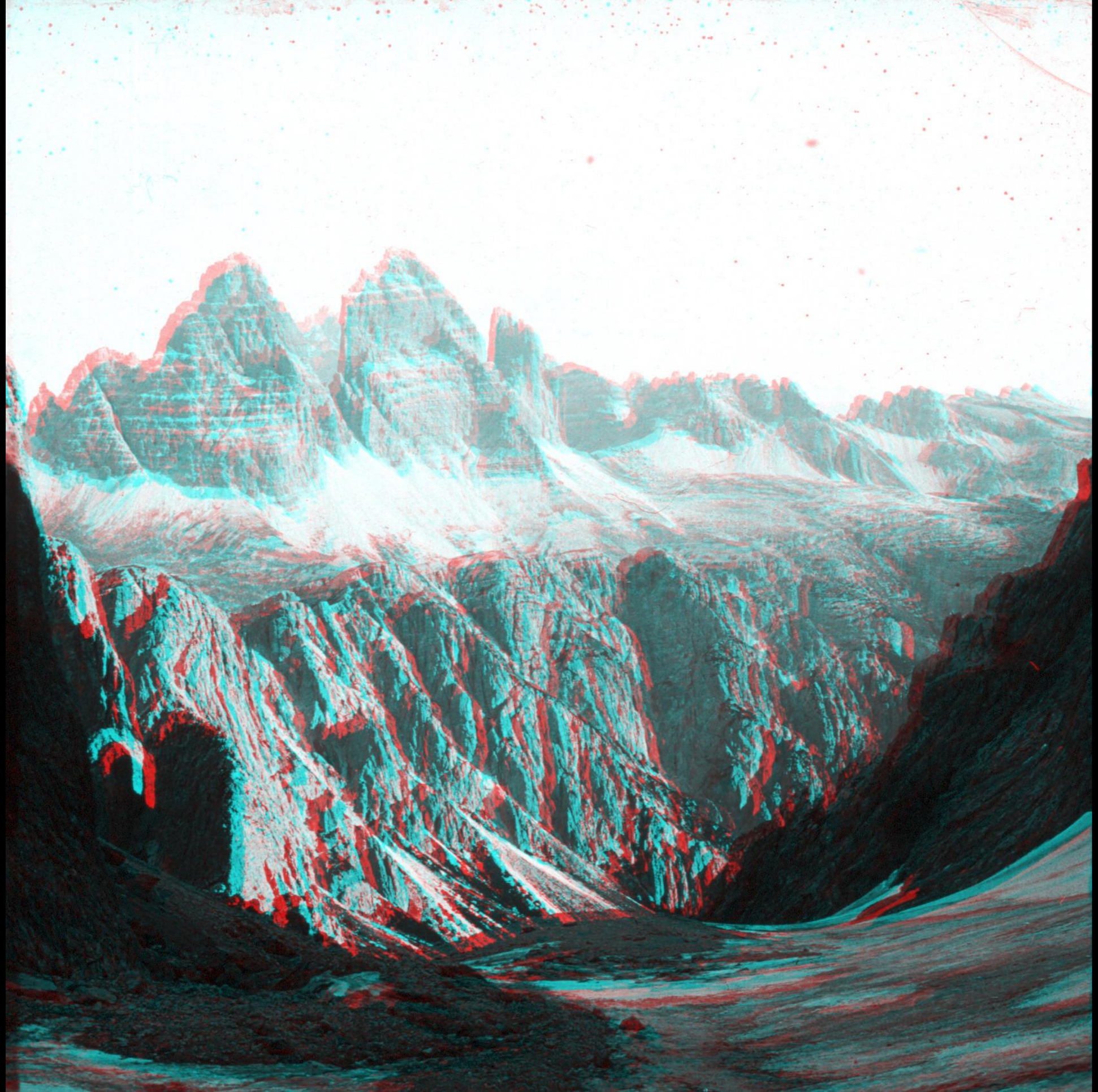

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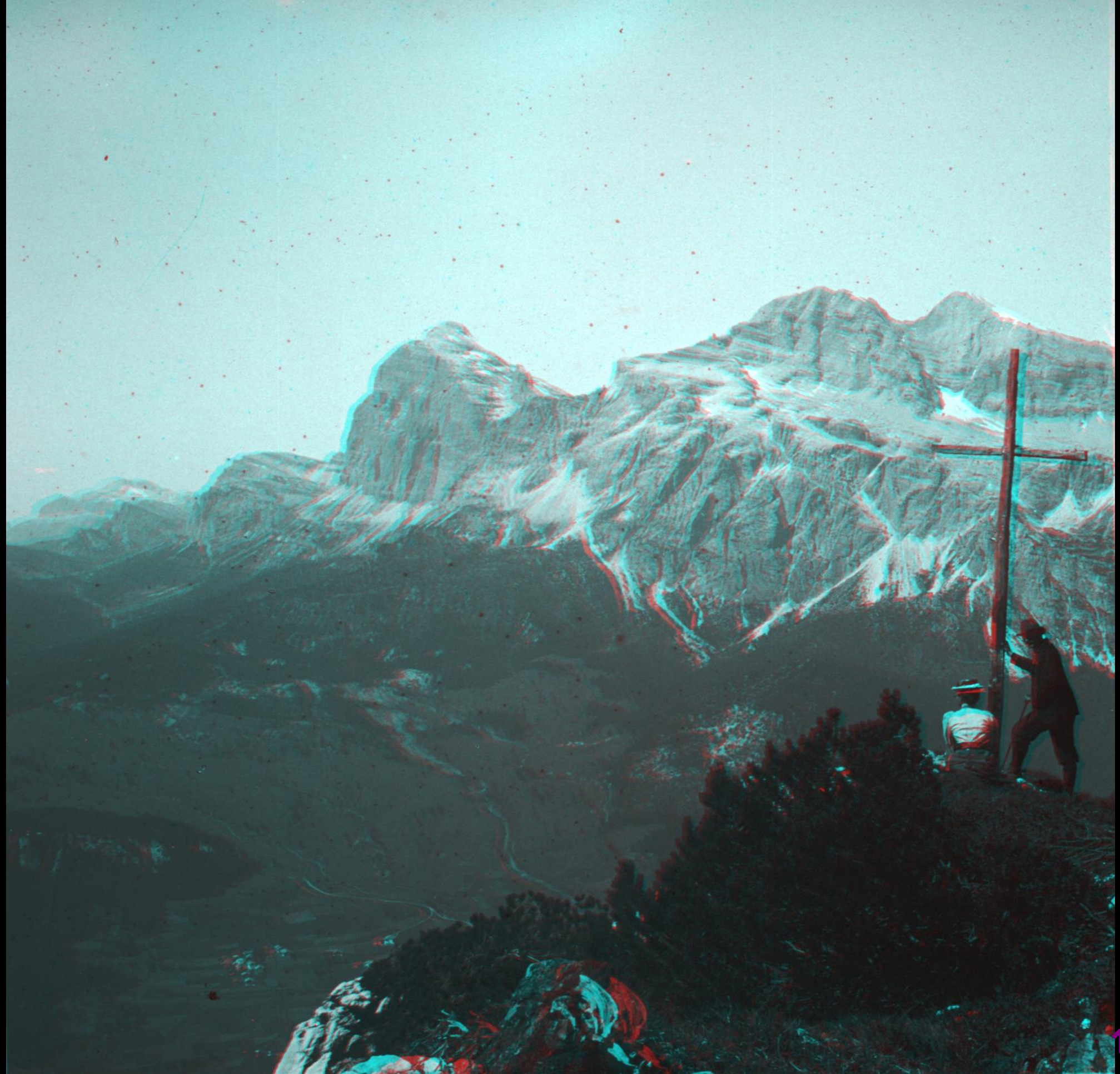

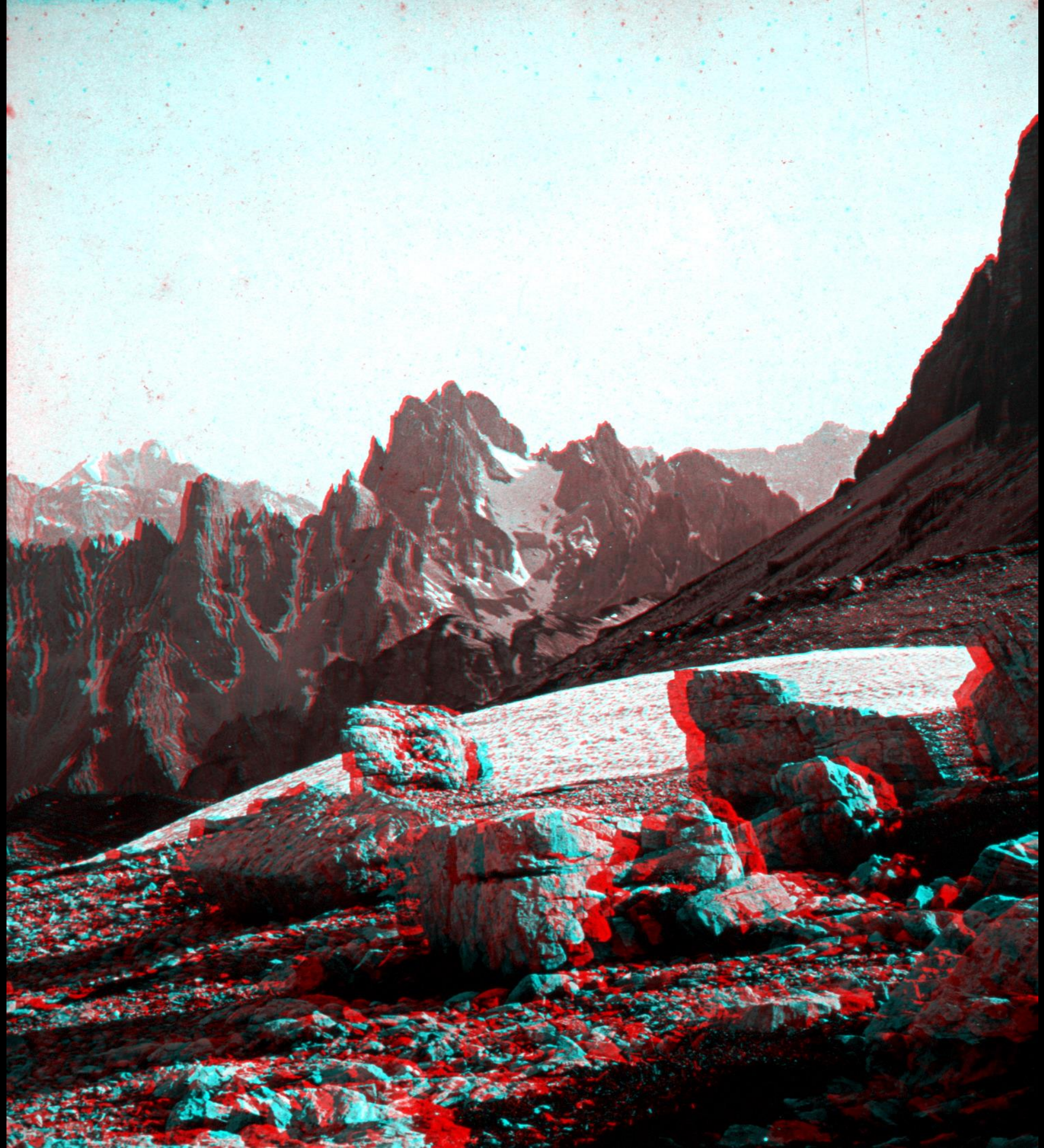

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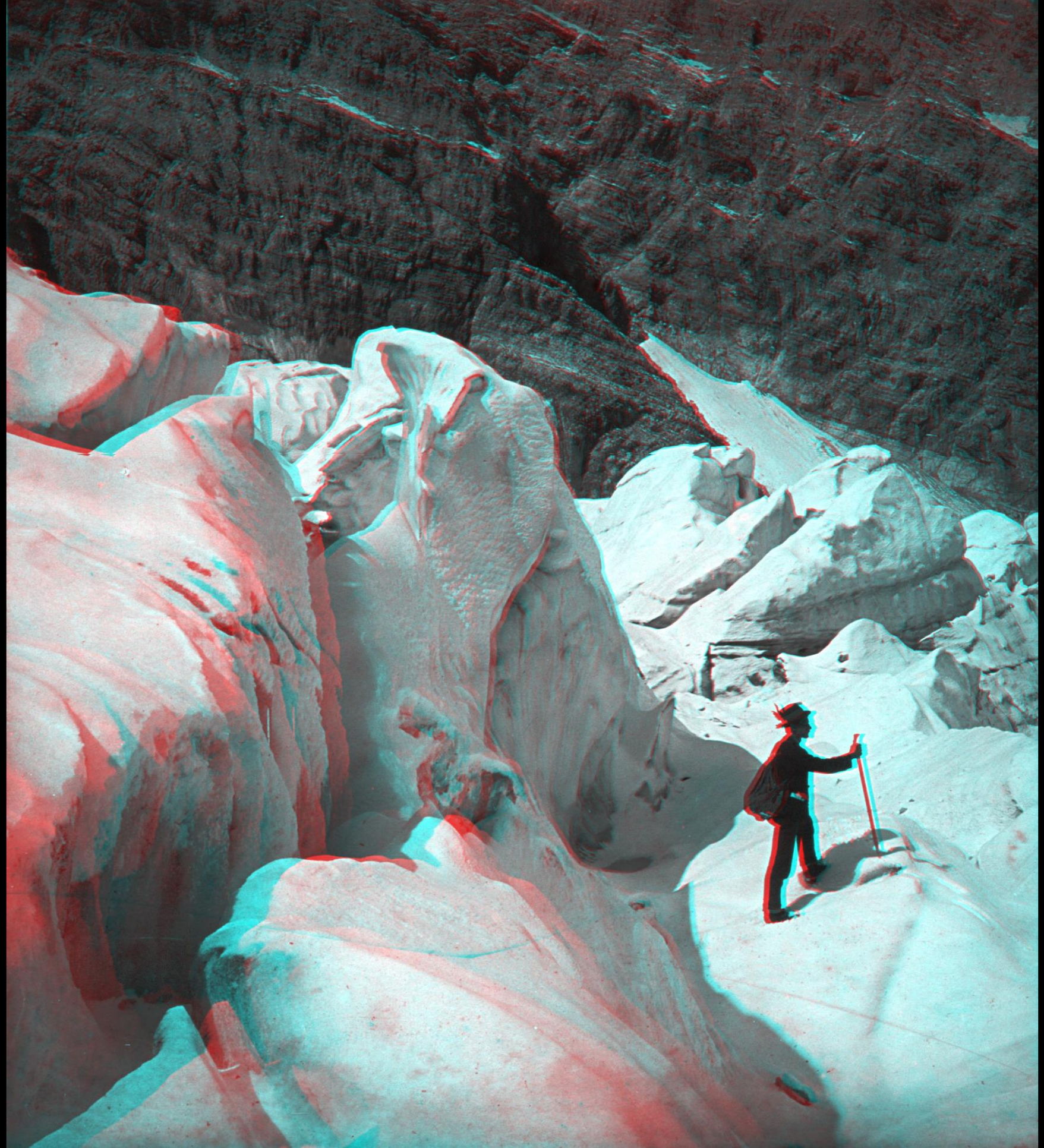

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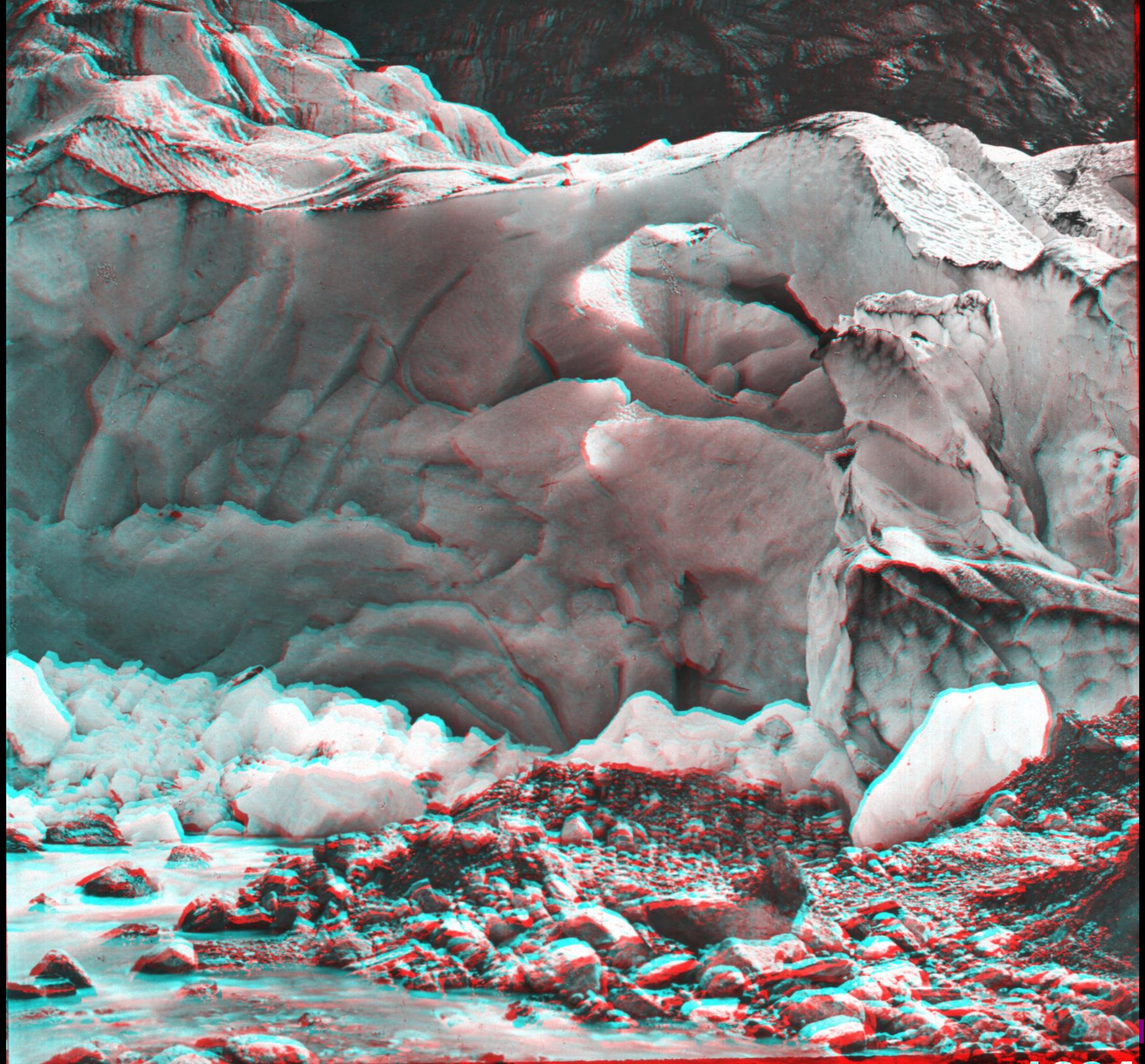

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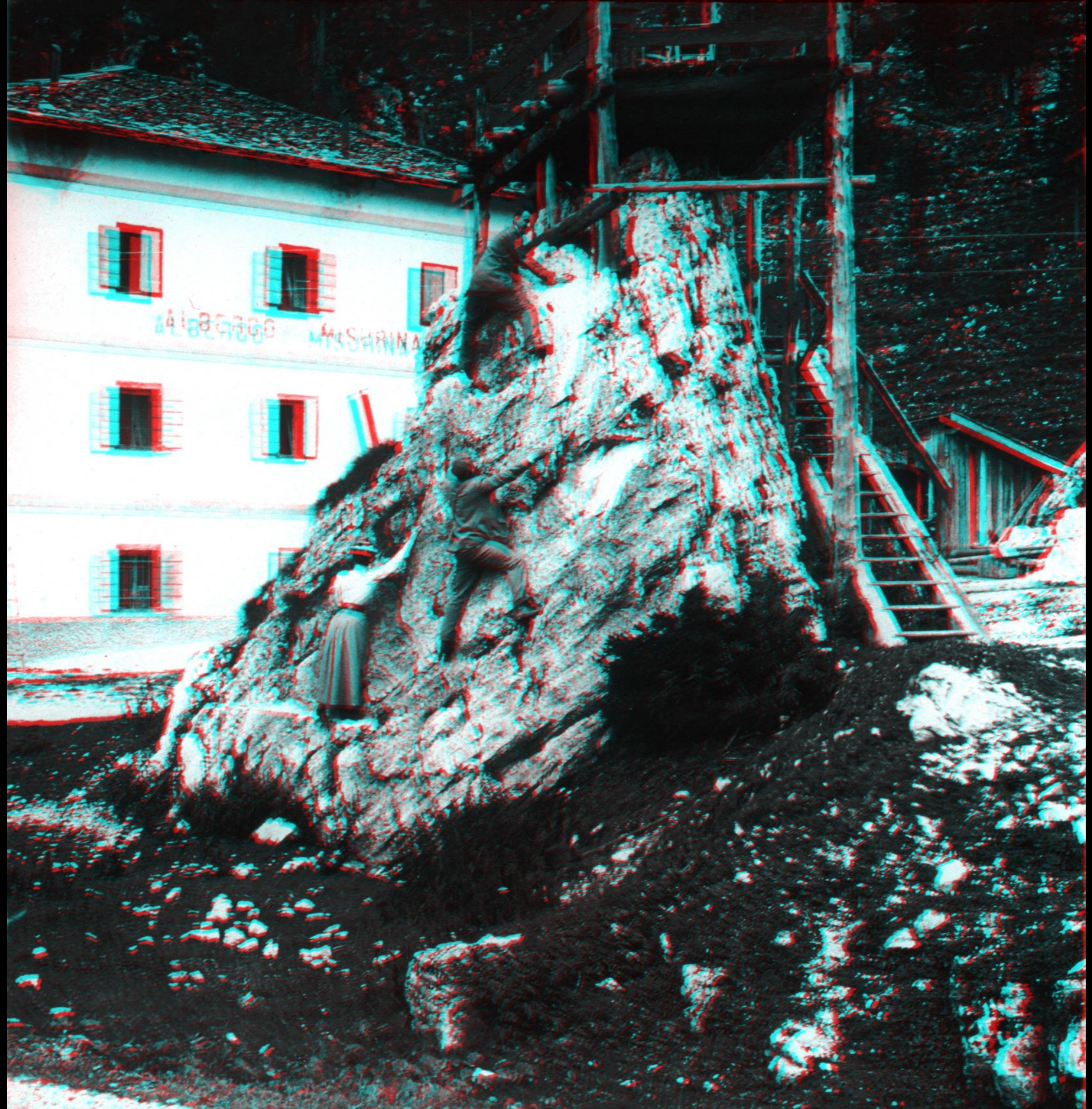
GEOTVOS



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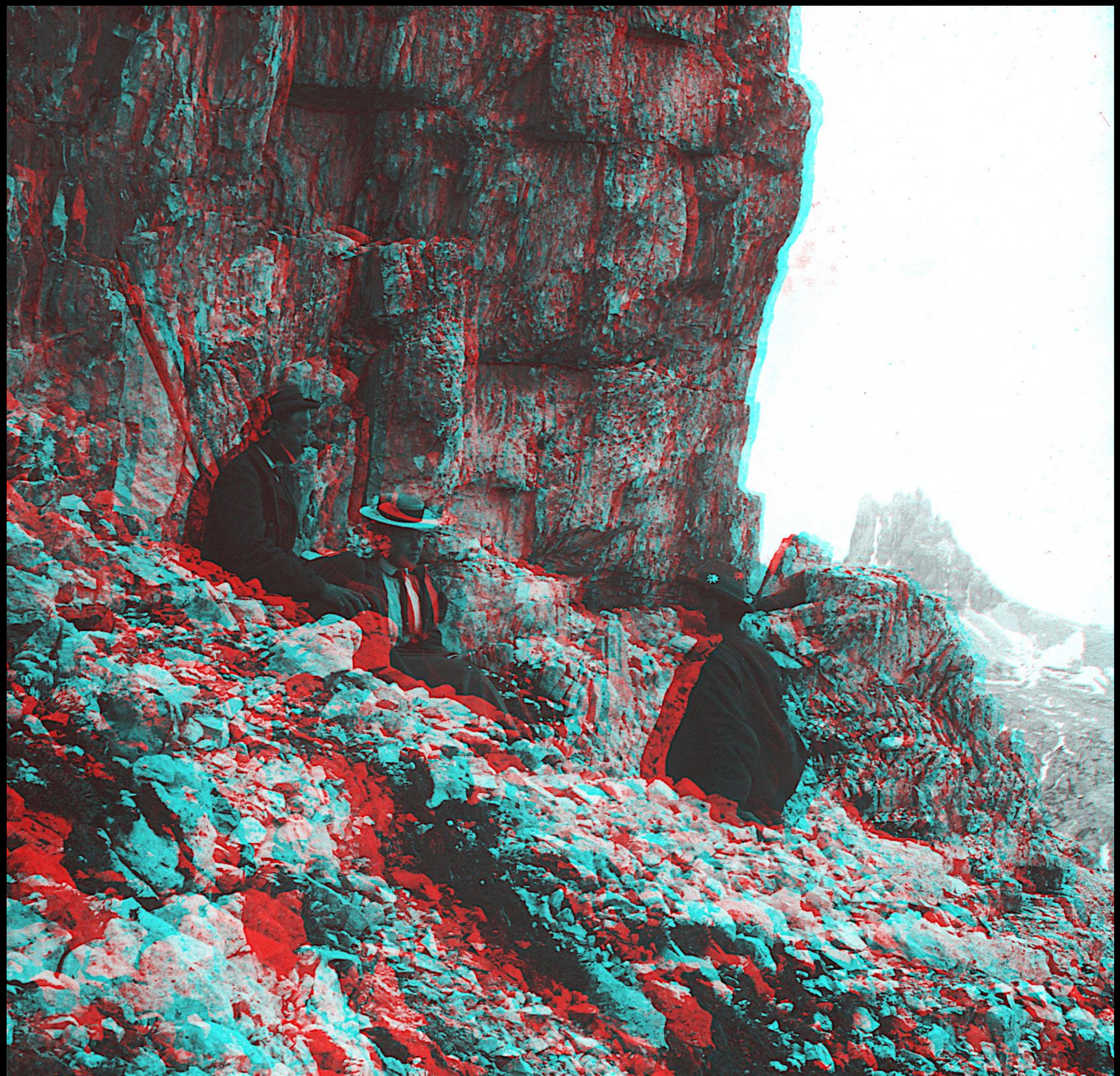

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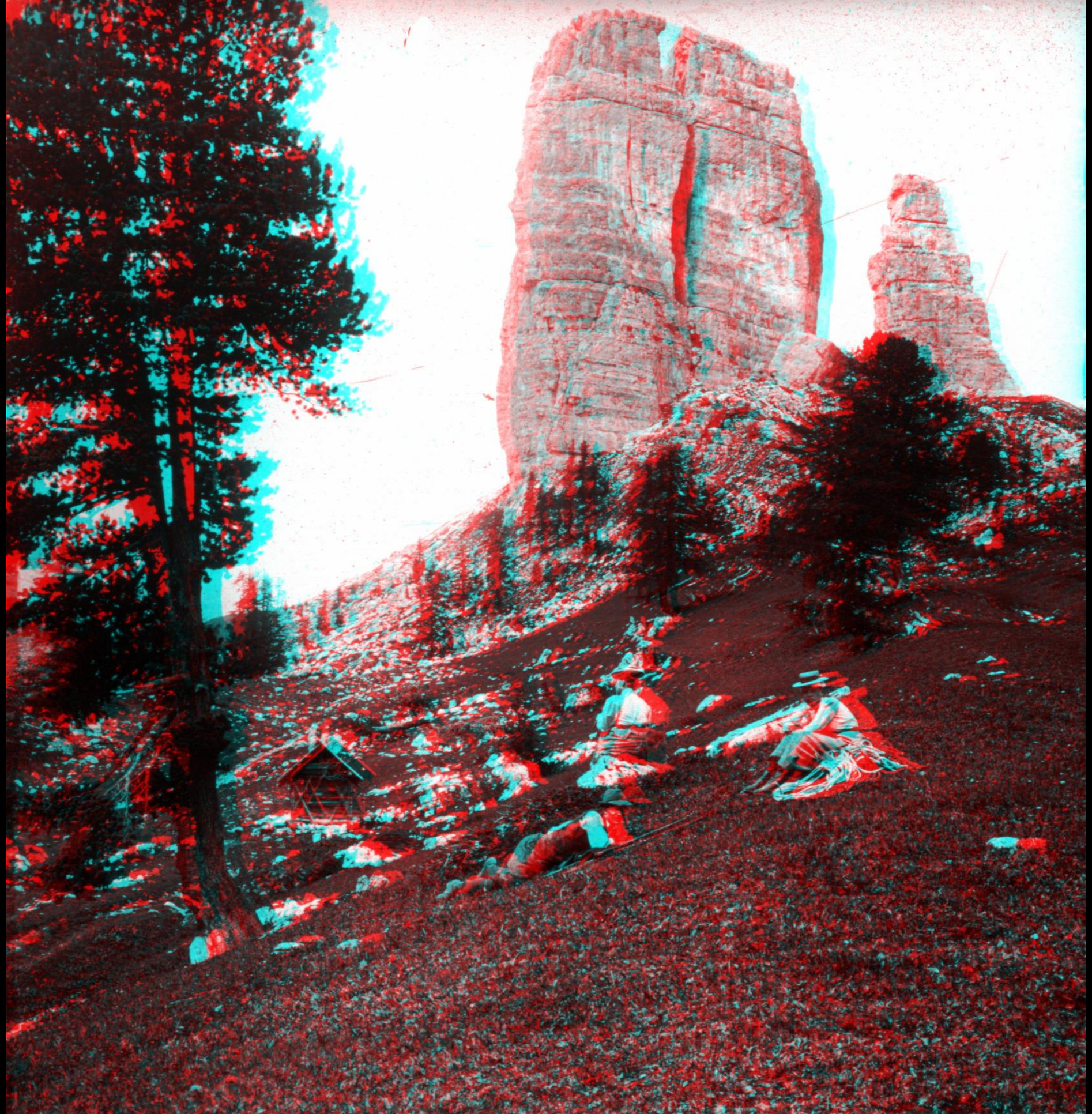

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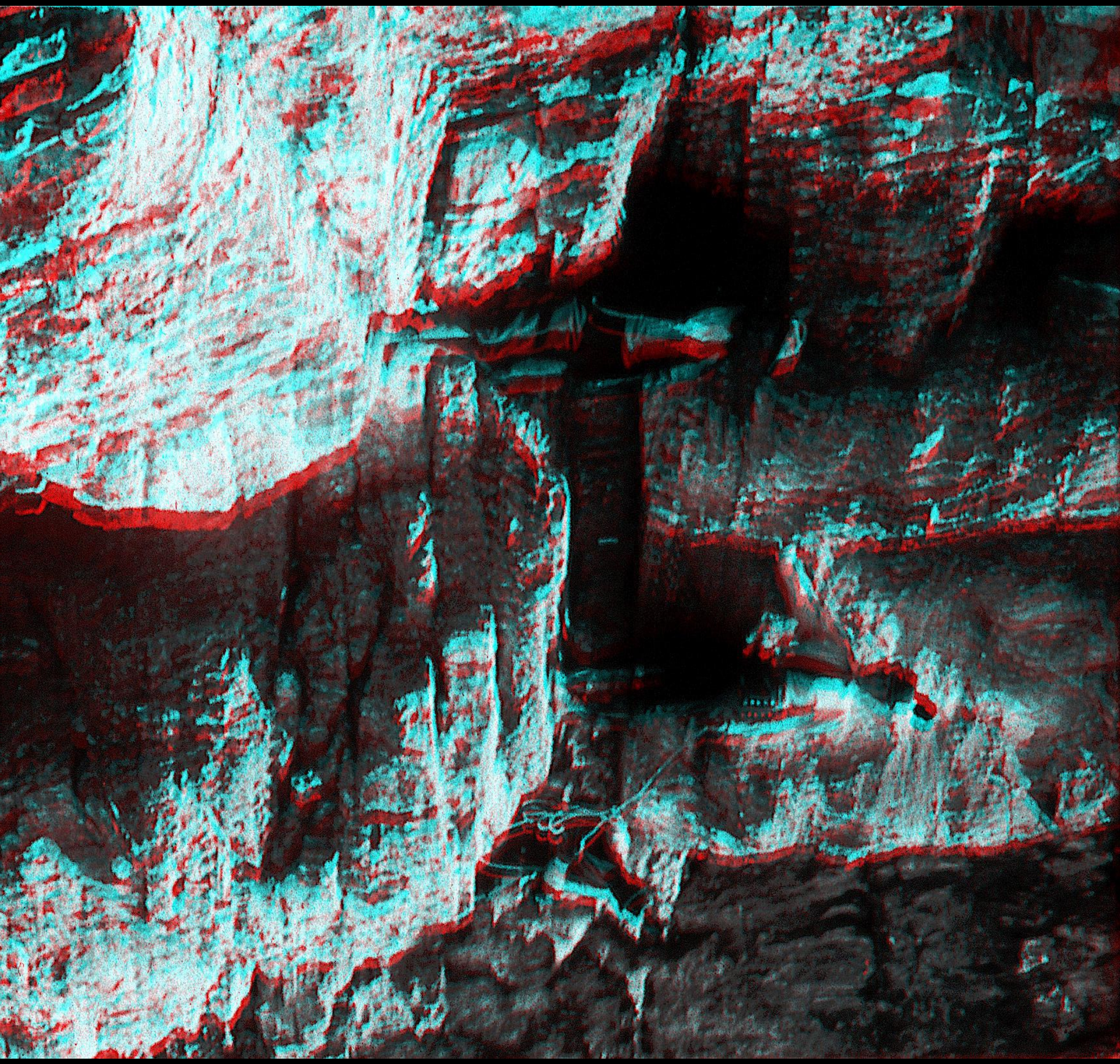

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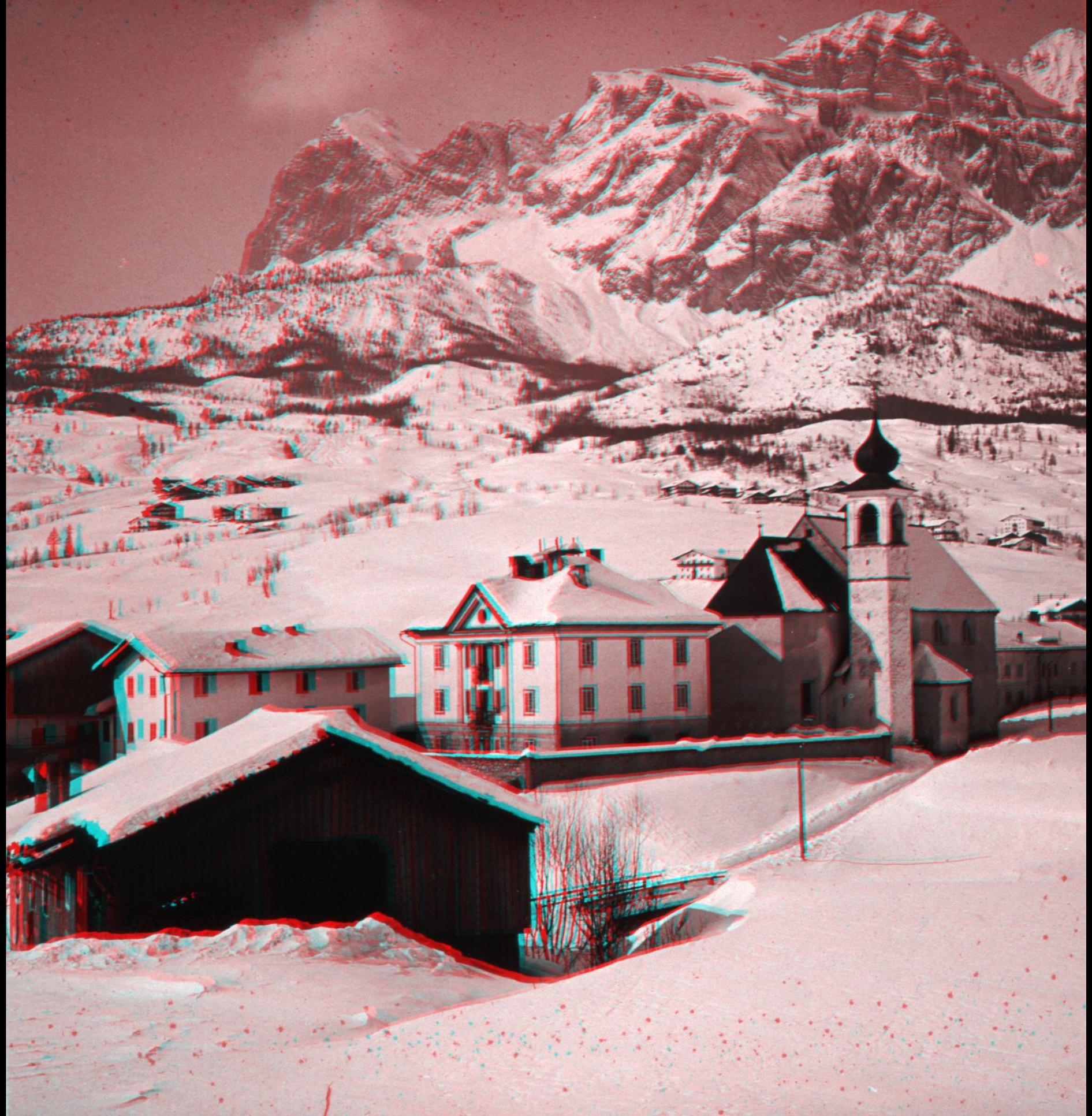

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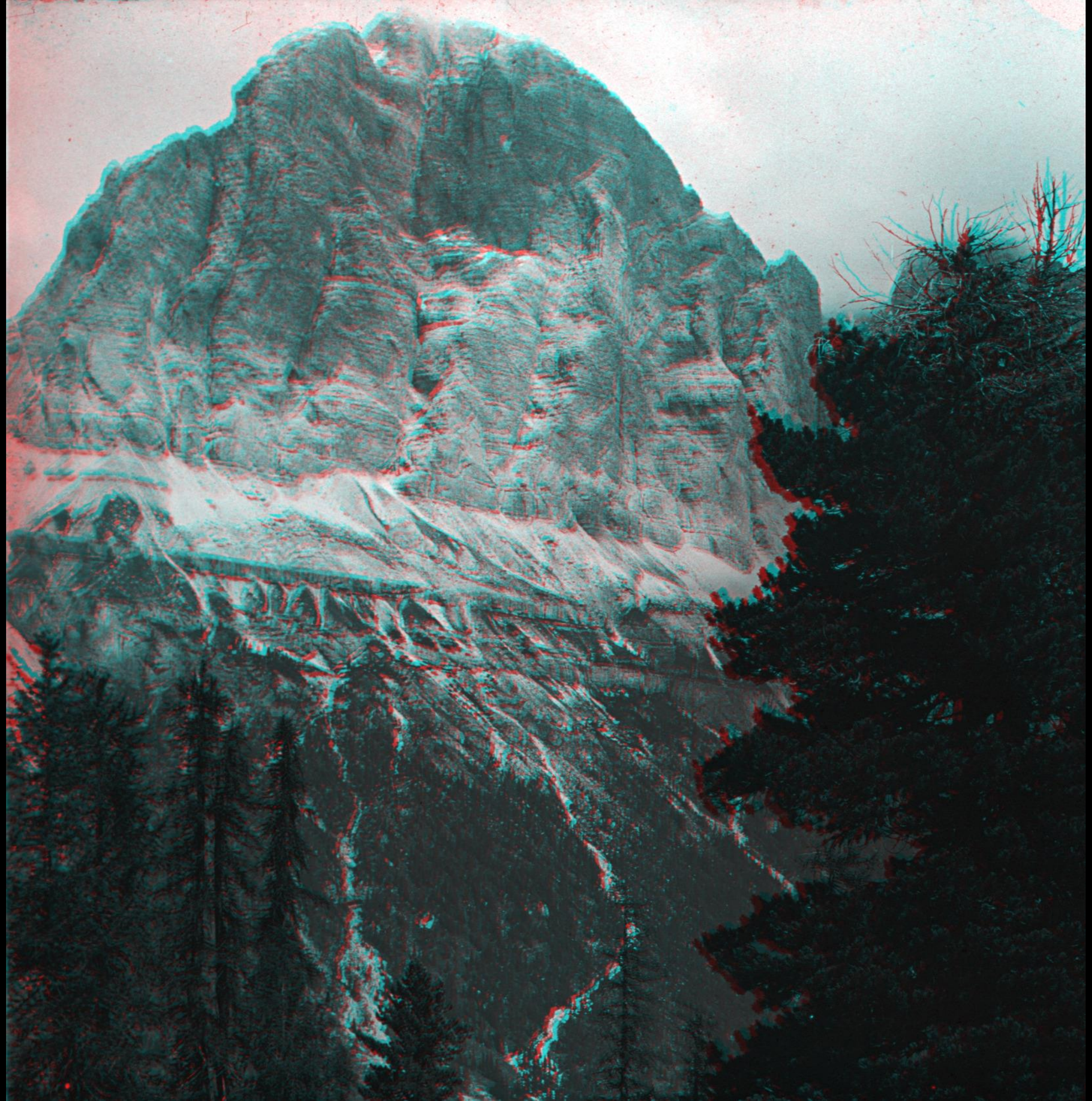

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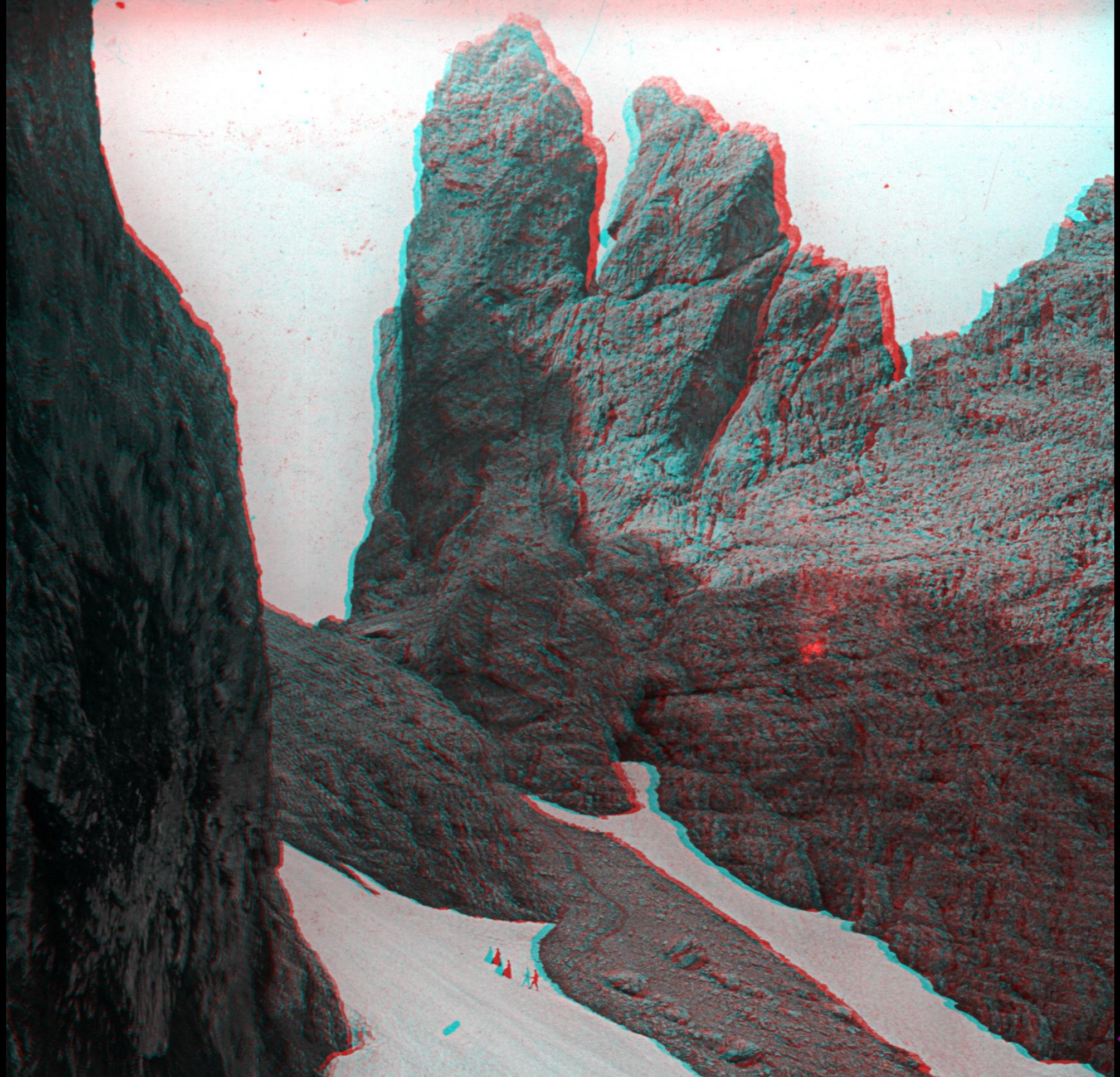

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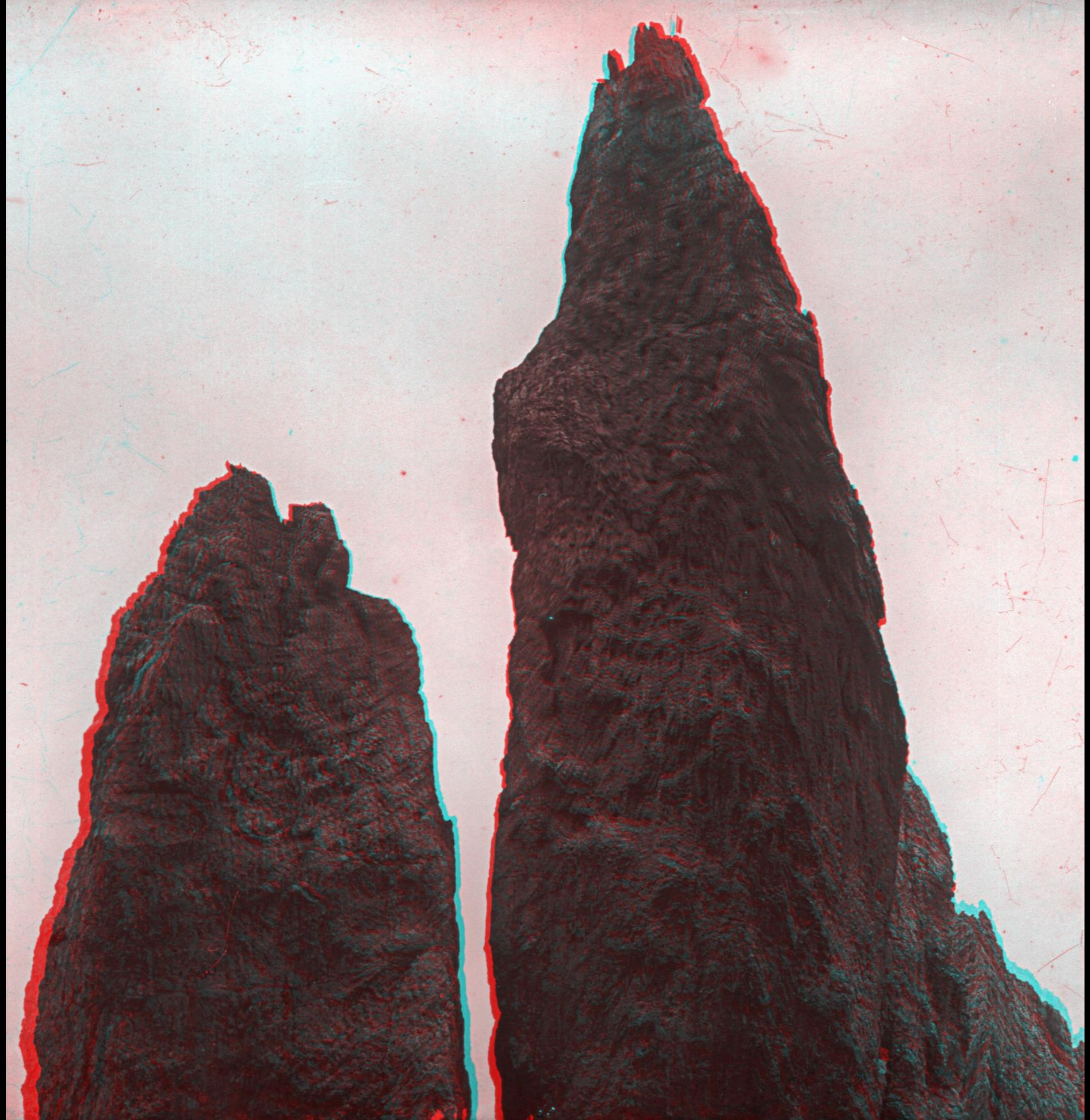

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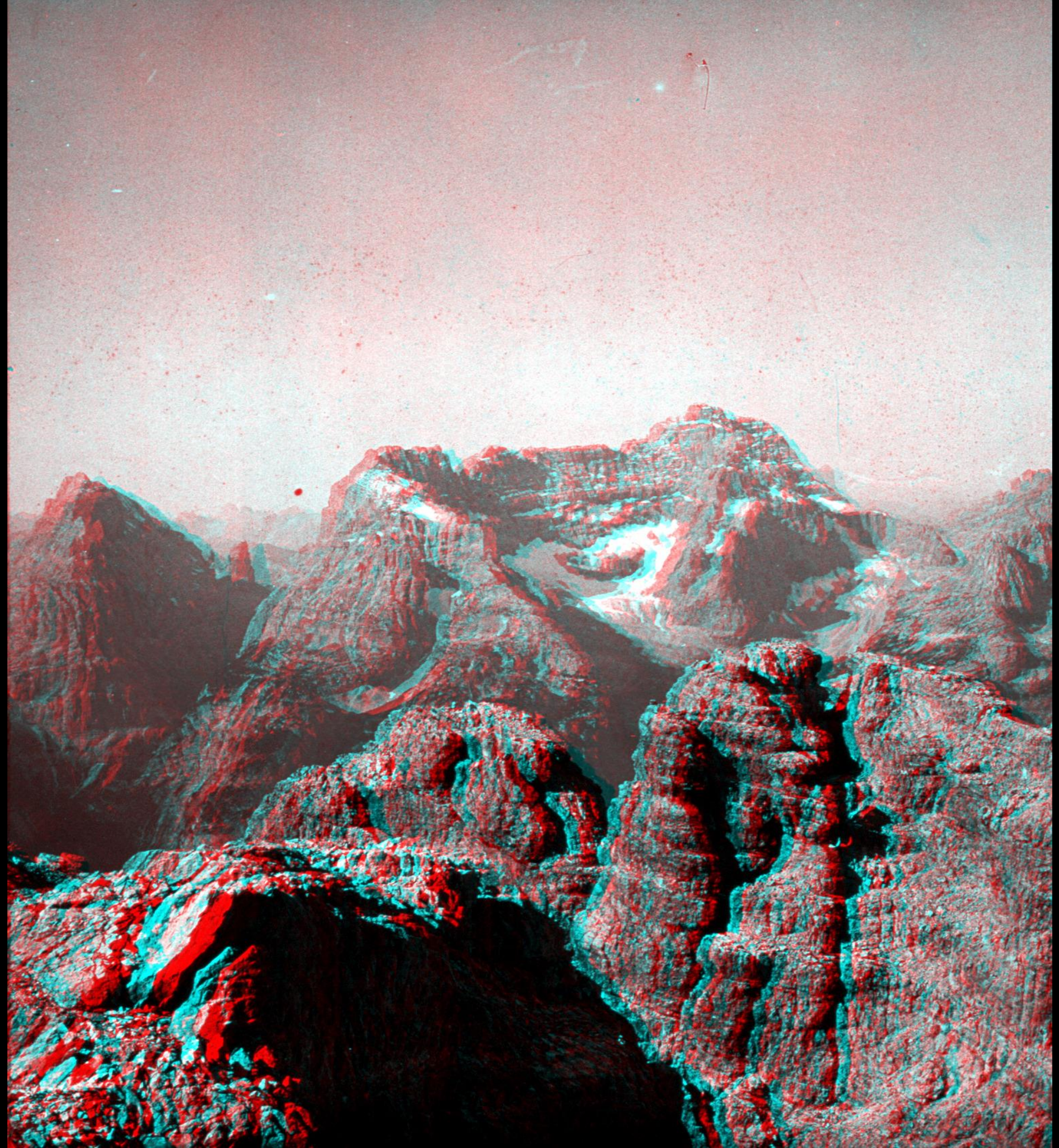

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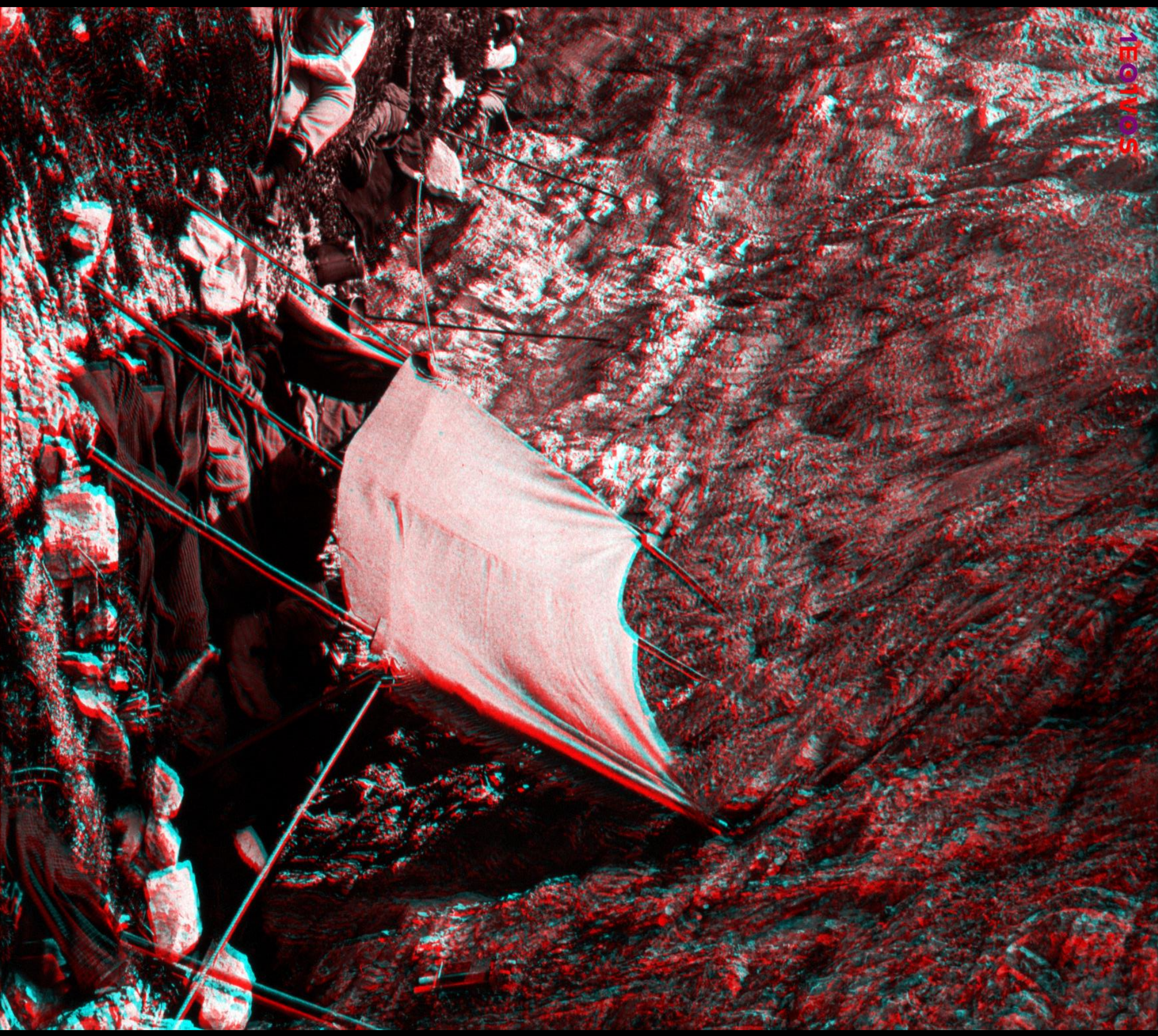
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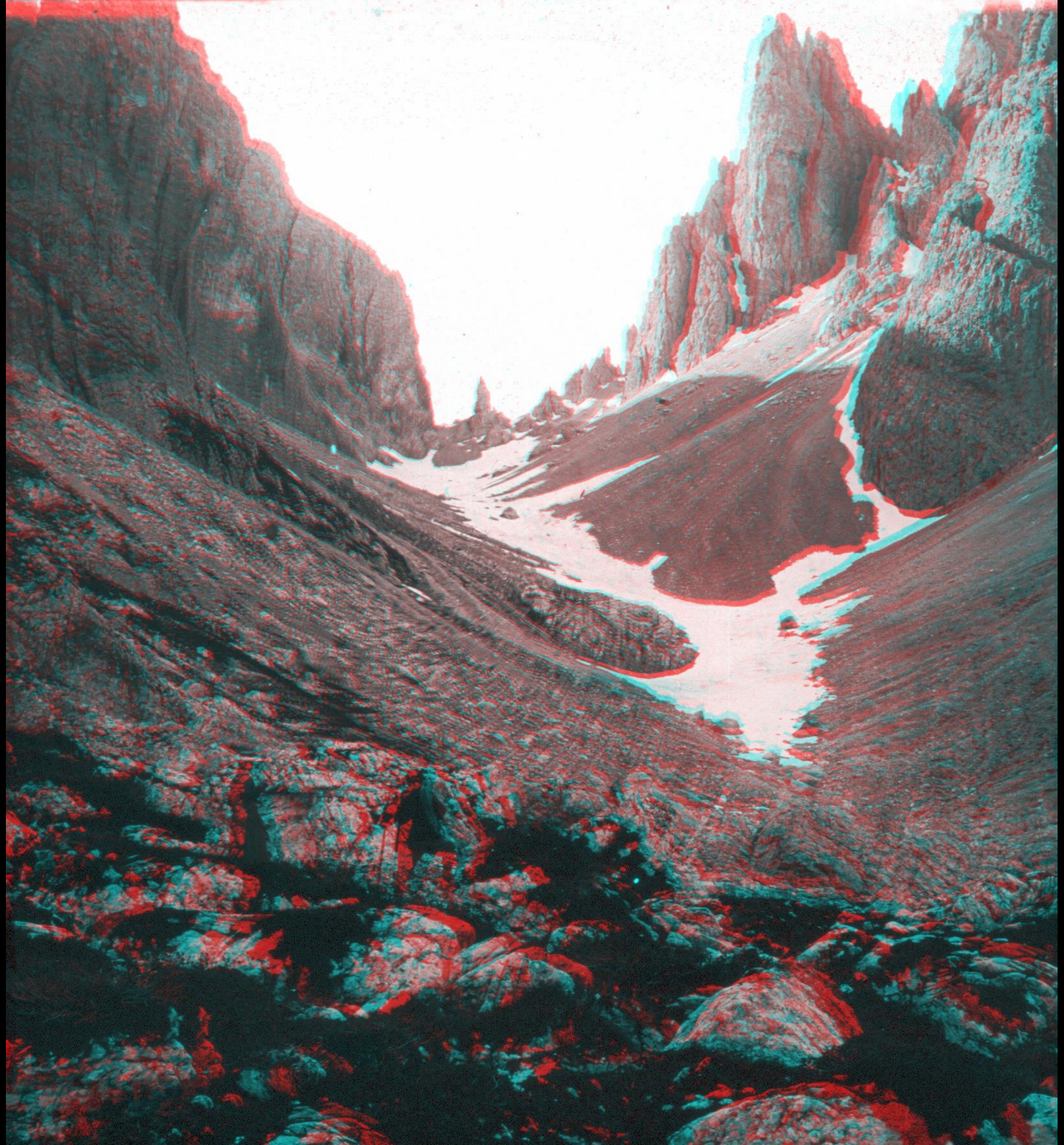


CSFK

1EOTVOS

CSFK

1E01VOS


CSFK

1E01V0S


1E01V0S
CSFK
1E01V0S

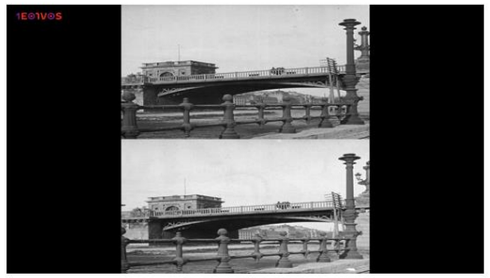
# 3D photos made by Roland Eötvös

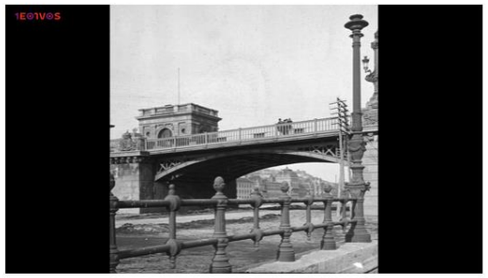
Stereoscopic photos made by Roland Eötvös form a part of MBFSZ Eötvös Loránd Memorial Collection. Zsolt Regály (MTA CSFK CSI 3D Numerical Astrophysical Laboratory), in 2019, in frames of a project supported by National Cultural Fund of Hungary, performed a digital conversion of a few hundred pictures, and produced digital 3D images in three different 3D formats (ANAGLYPH, SIDE BY SIDE, TOP AND BOTTOM).

## Budapest and its environment


3D anaglyph photos

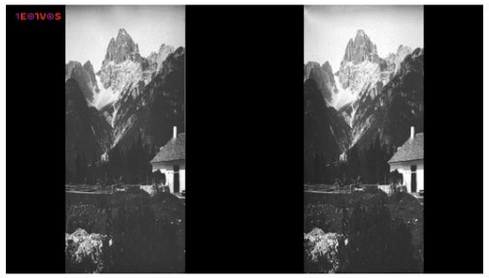

3D SBS photos


3D TB photos


MONO (R) photos

## Mountains (Dolomites and elsewhere)


3D anaglyph photos


3D SBS photos


3D TB photos


MONO (R) photos

## Field Measurements