Supplement of The Cryosphere, 8, 2255–2274, 2014
http://www.the-cryosphere.net/8/2255/2014/
doi:10.5194/tc-8-2255-2014-supplement

The Cryosphere Open Access

Supplement of

Study of a temperature gradient metamorphism of snow from 3-D images: time evolution of microstructures, physical properties and their associated anisotropy

N. Calonne et al.

Correspondence to: N. Calonne (neige.calonne@meteo.fr) and F. Flin (frederic.flin@meteo.fr)

General Information

In the following, we provide the 3-D visualizations of the seven images of snow samples used in our study. Images are cubic and have a size of 5.5 x 5.5 x 5.5 mm^3. For a better visualization of the facetted shapes, the images are presented "upside down": the top (respectively, the base) of the images corresponds to the lowest (highest) and warmest (coolest) side of the physical sample. The arrows in blue, green and red correspond to the x-, y- and z-directions of the images, respectively, z being along the direction of gravity. The color code is defined as follows:

- **Figures 1.a – 7.a:** Colors represent **the mean curvature** of surfaces ranging from -36 to +36 mm^{-1} such as the convexities, flat shapes and concavities are shown in red, yellow and green, respectively.

- **Figures 1.b – 7.b:** Colors represent **the Gaussian curvature** of surfaces ranging from -781 to +781 mm^{-2}, such as the dome-shaped (concave or convex), flat or cylindrical and saddle-shaped surfaces are shown in red, yellow and green, respectively.

Sample 0A – Rounded Grains (RG)

0 hour under temperature gradient.

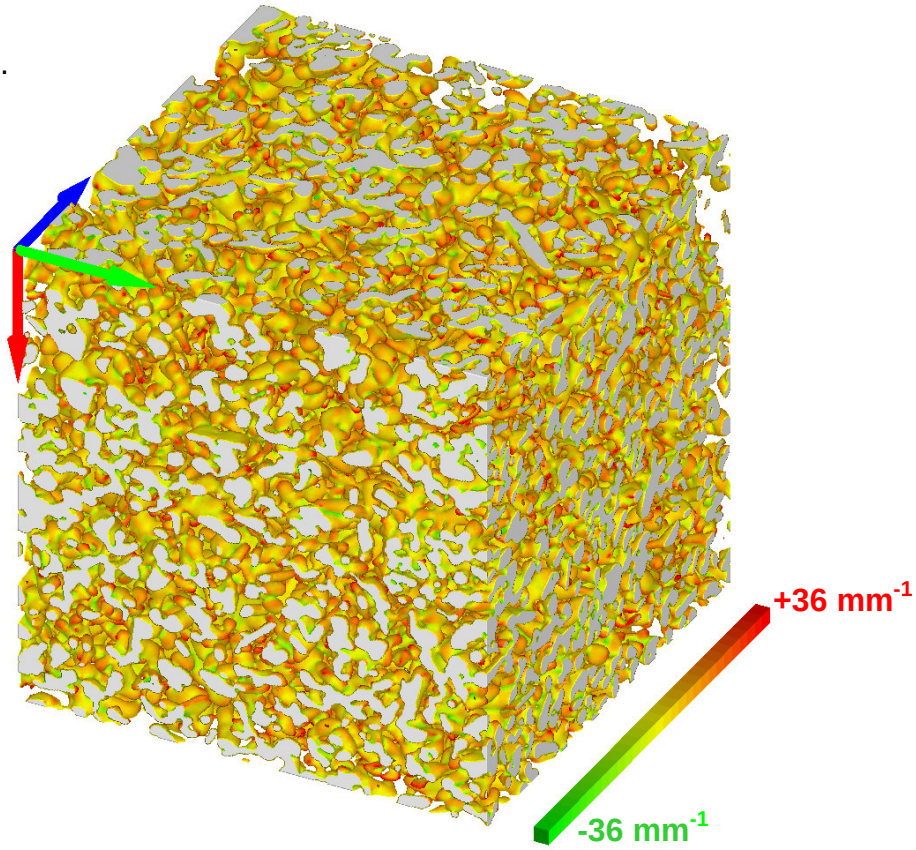

Figure 1.a: Mean curvature.

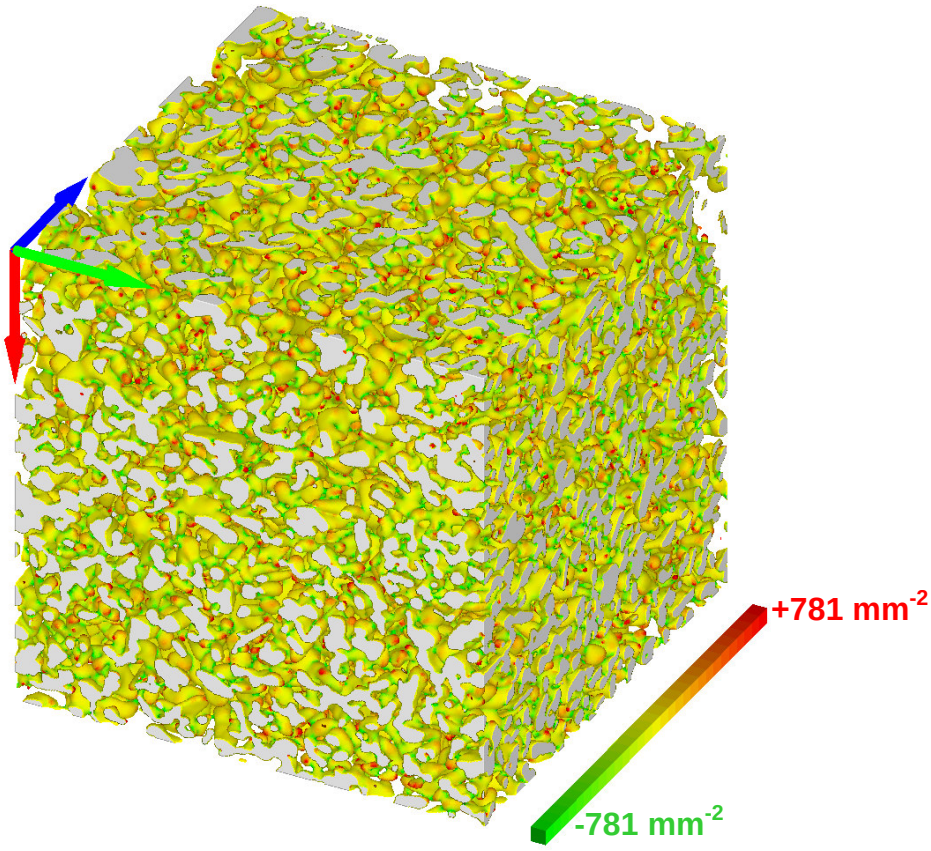

Figure 1.b: Gaussian curvature.

Sample 1A – Rounded Grains (RG)

73 hours under temperature gradient.

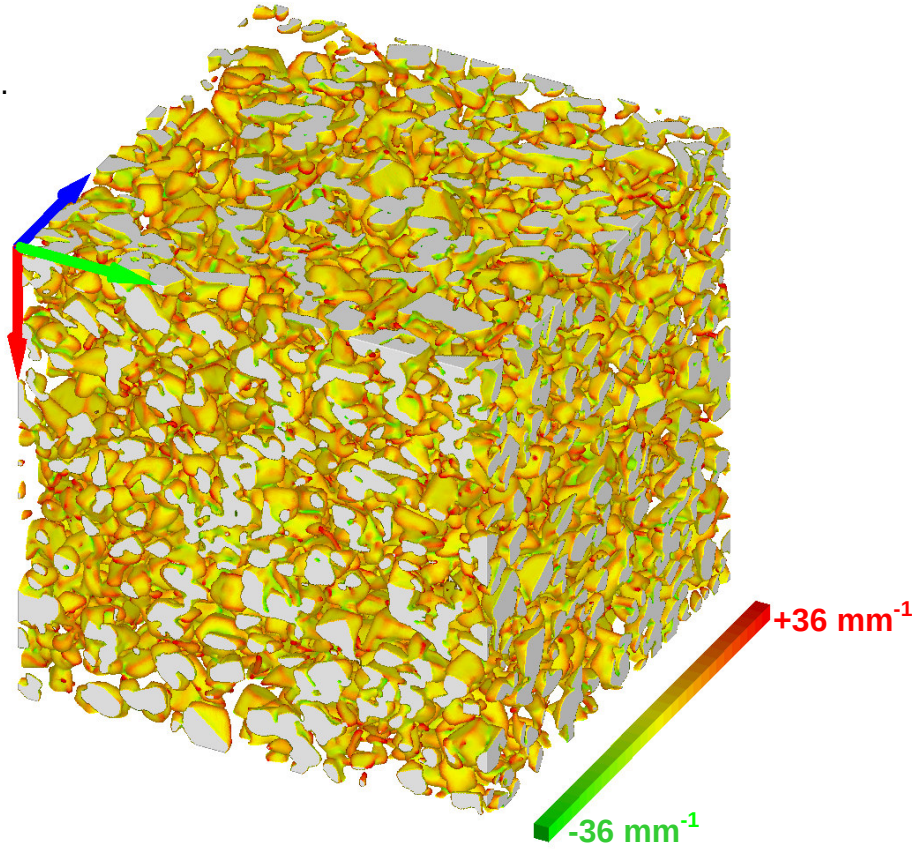

Figure 2.a: Mean curvature.

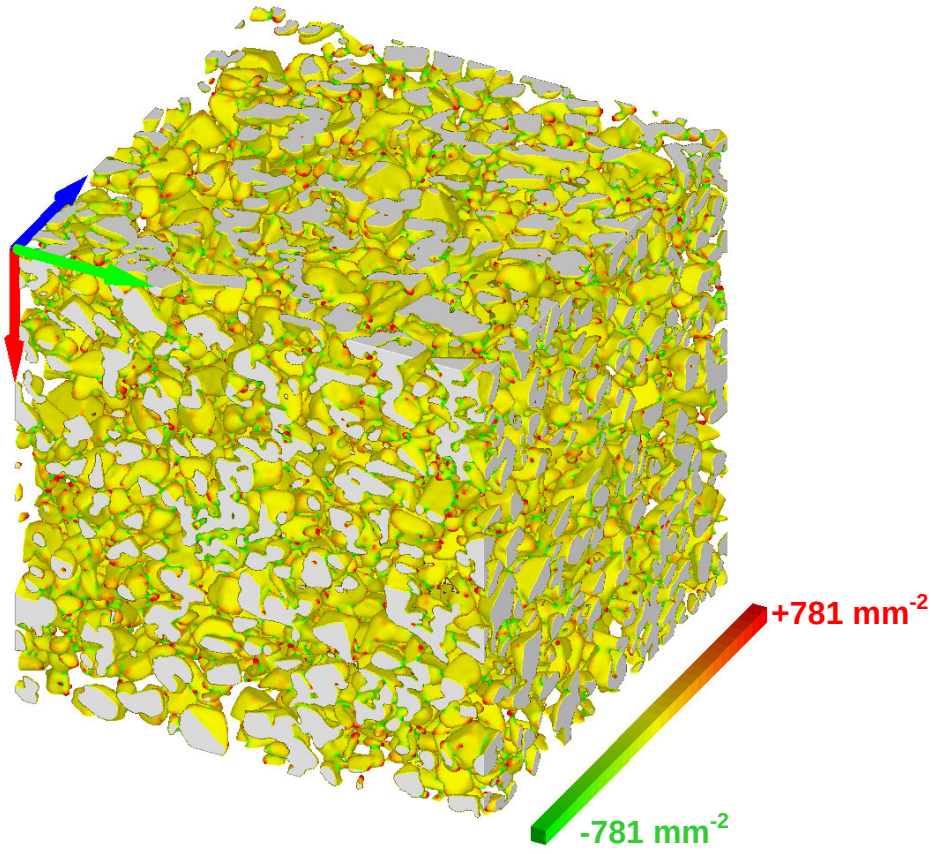

Figure 2.b: Gaussian curvature.

Sample 2A – Facetted Crystals (FC)

144 hours under temperature gradient.

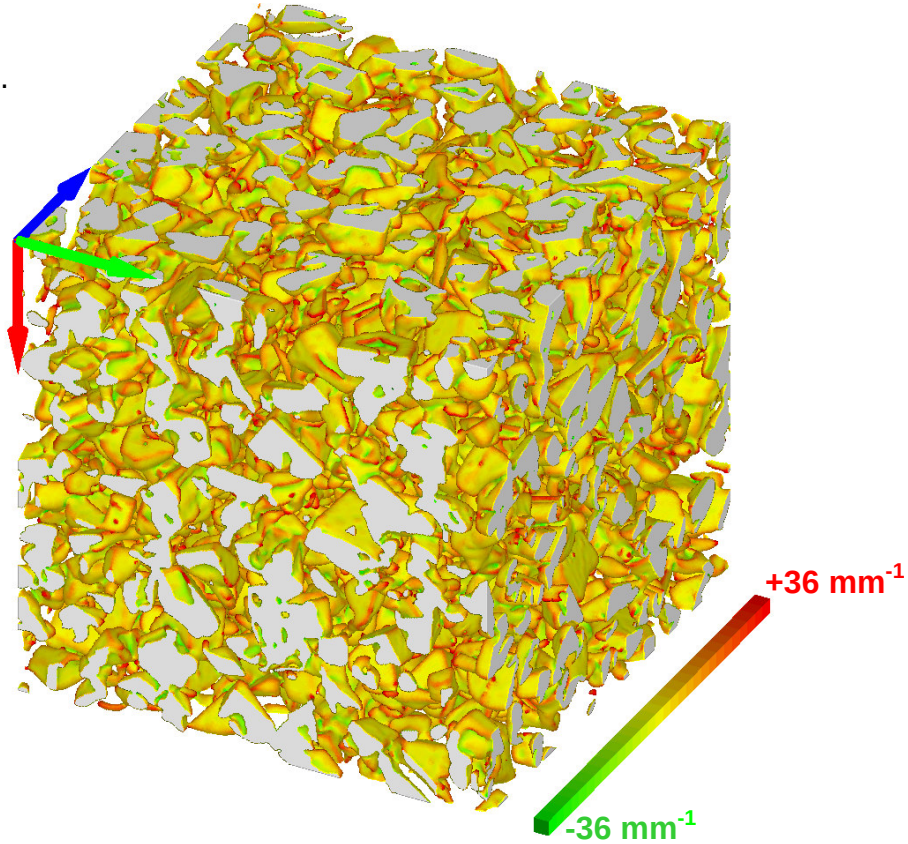

Figure 3.a: Mean curvature.

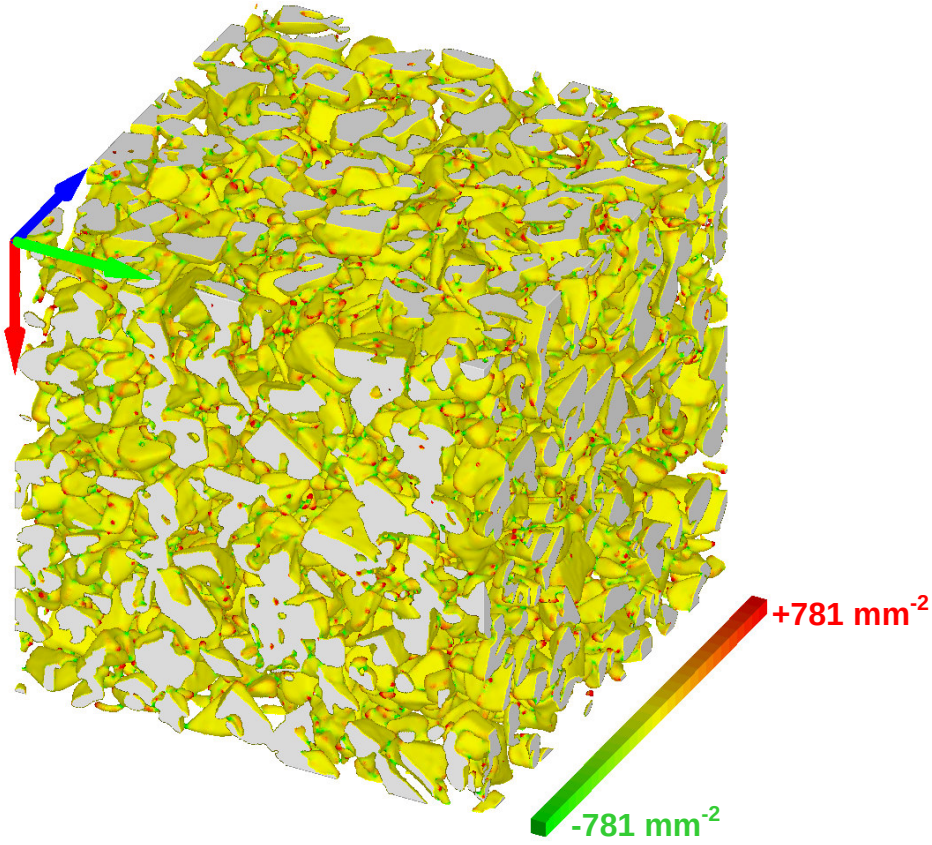

Figure 3.b: Gaussian curvature.

Sample 3A – Depth Hoar (DH)

217 hours under temperature gradient.

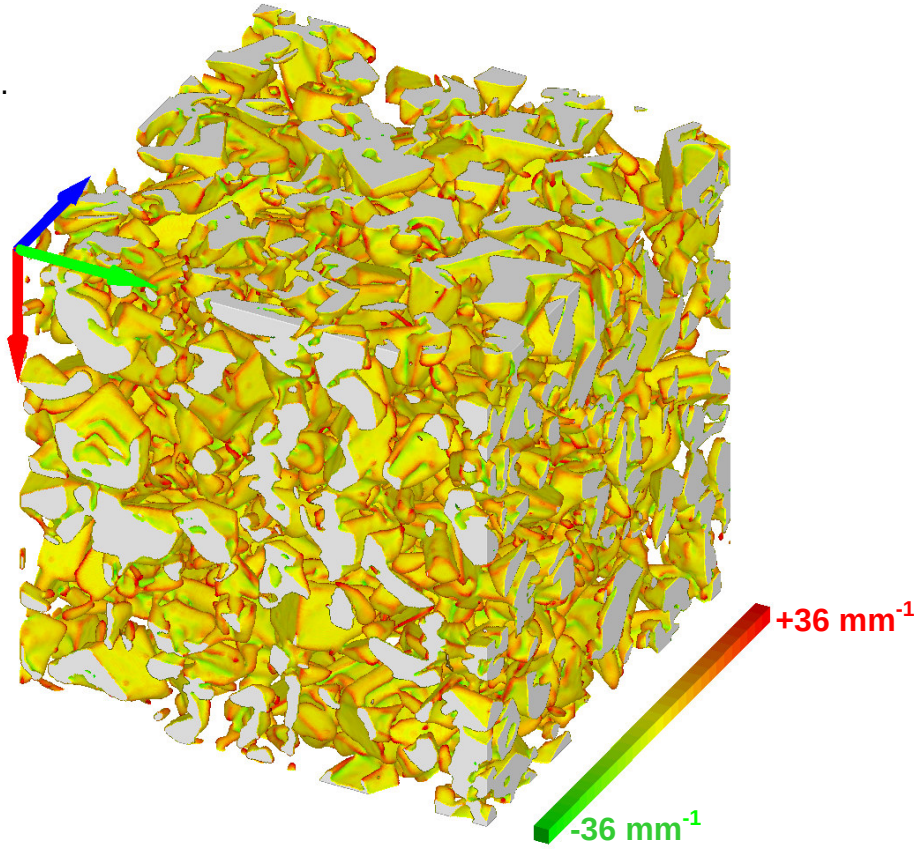

Figure 4.a: Mean curvature.

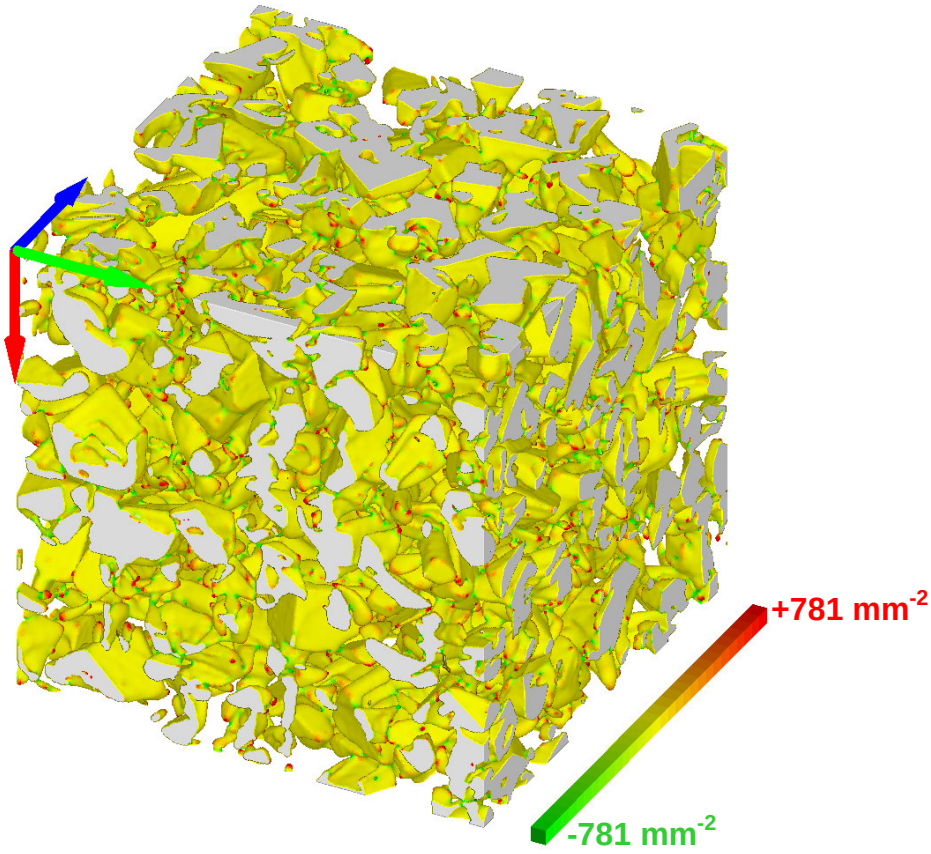

Figure 4.b: Gaussian curvature.

Sample 4A – Depth Hoar (DH)

313 hours under temperature gradient.

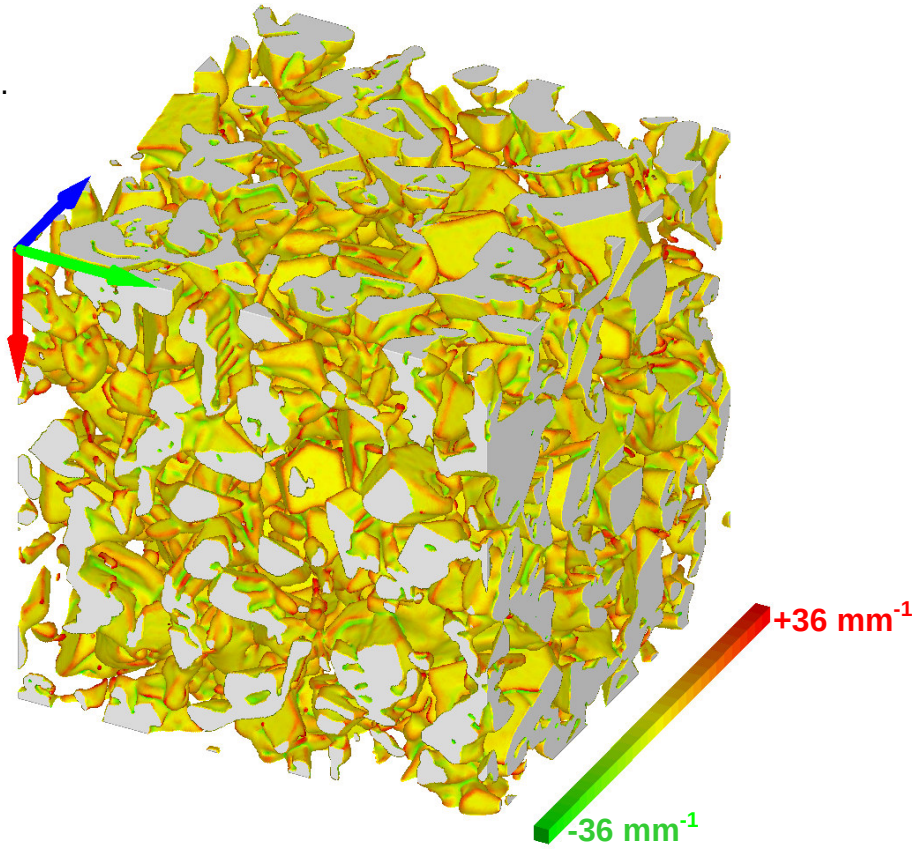

Figure 5.a: Mean curvature.

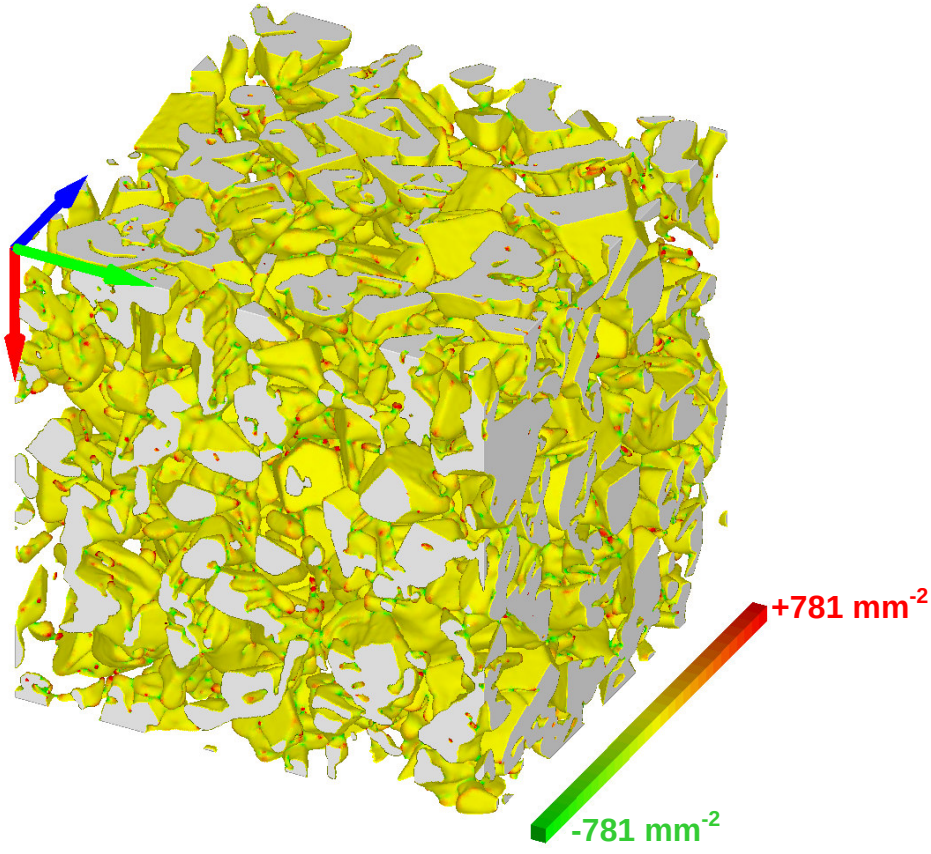

Figure 5.b: Gaussian curvature.

Sample 5G – Depth Hoar (DH)

409 hours under temperature gradient.

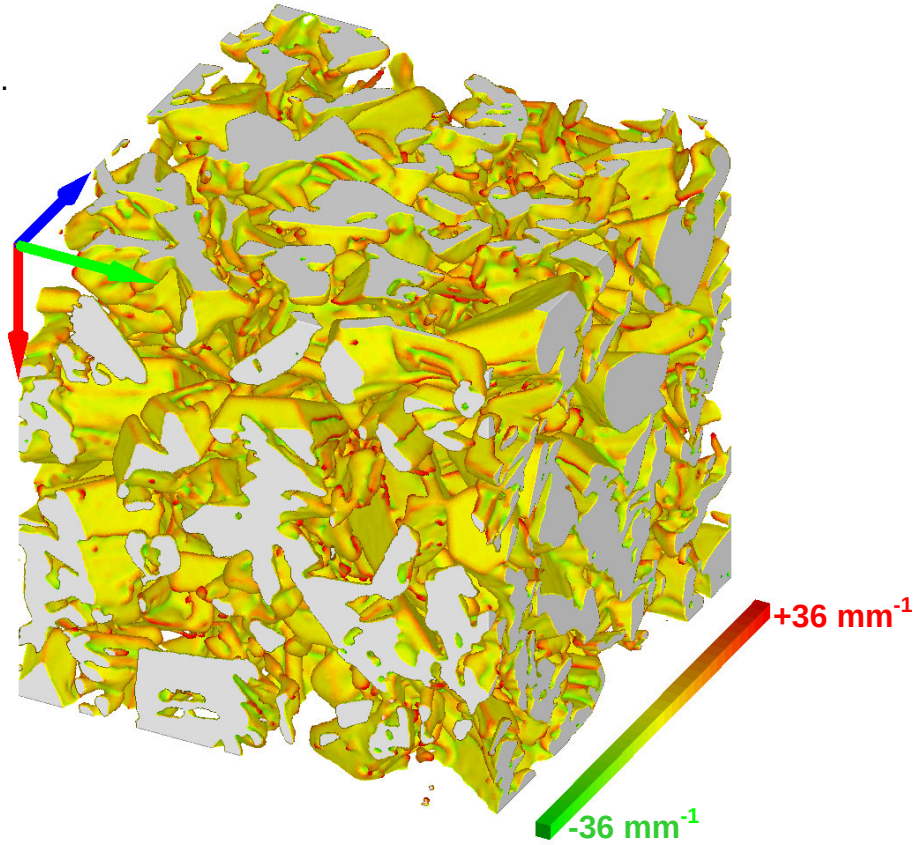

Figure 6.a: Mean curvature.

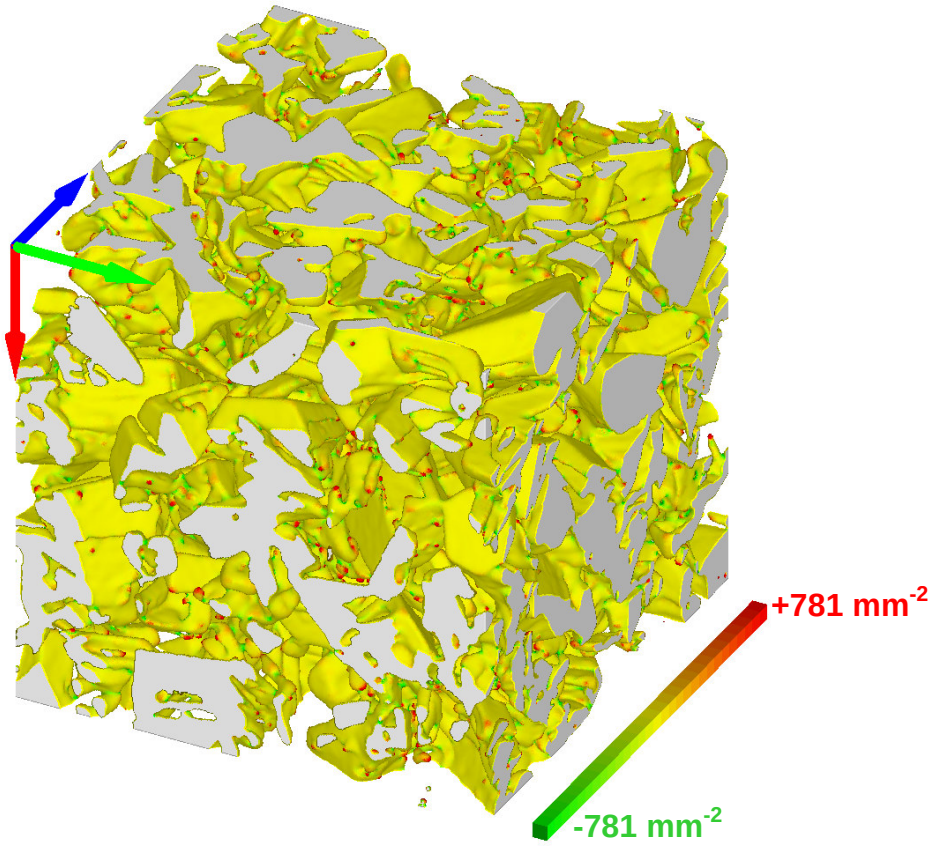

Figure 6.b: Gaussian curvature.

Sample 7G – Depth Hoar (DH)

500 hours under temperature gradient.

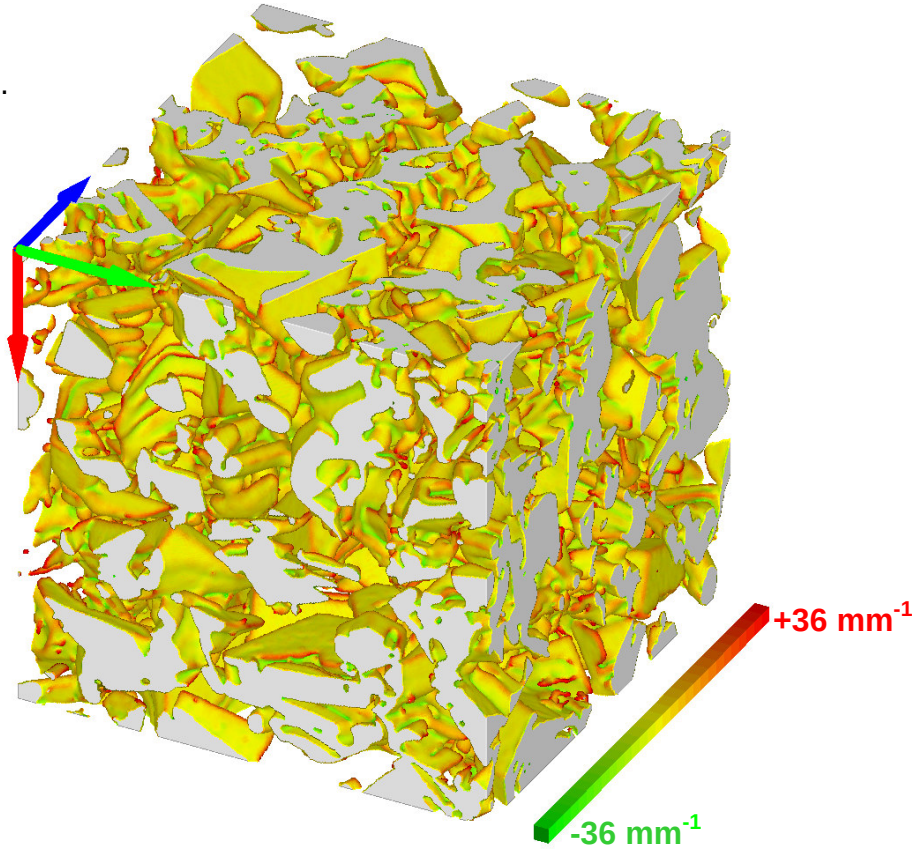

Figure 7.a: Mean curvature.

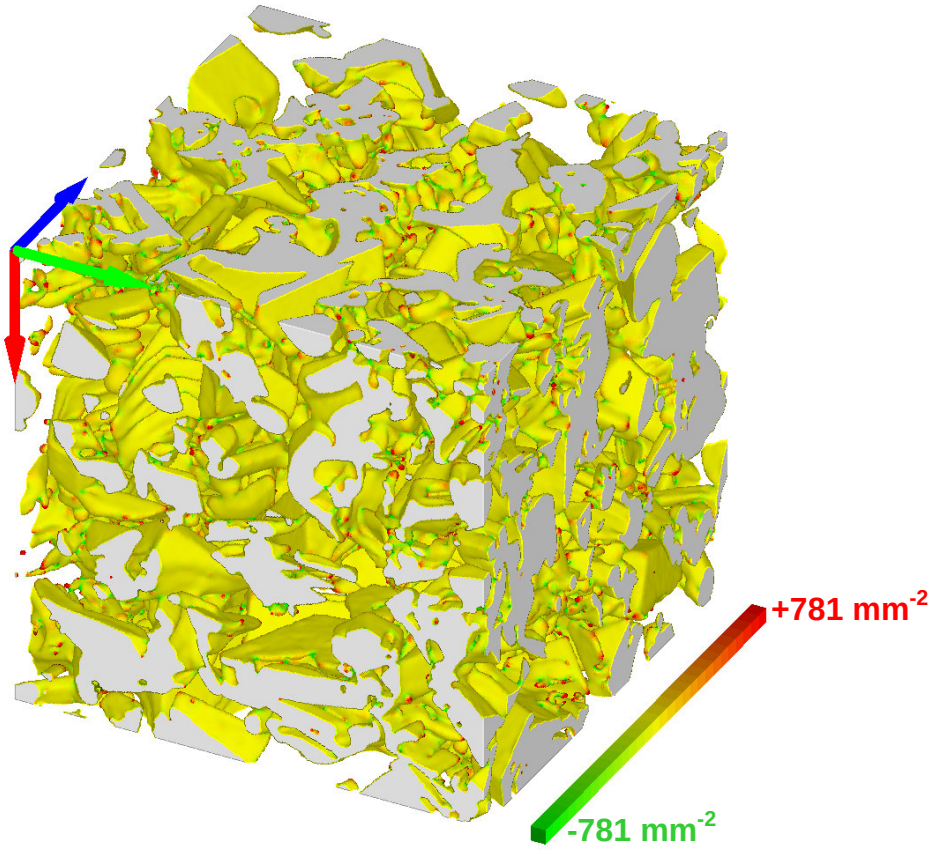

Figure 7.b: Gaussian curvature.