EGU 2020

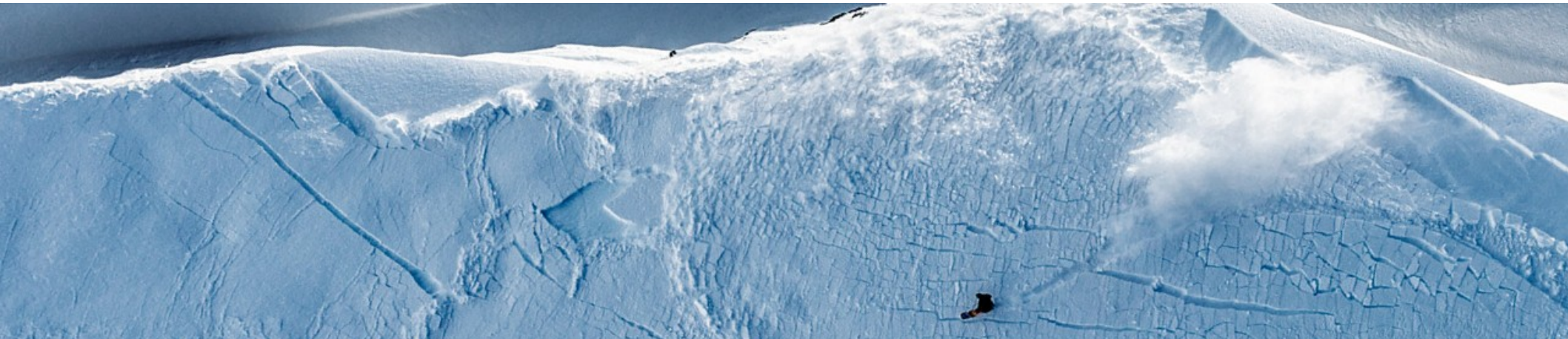
CR3.4

Snow avalanche formation: from snow mechanics to avalanche detection

Co-organized by NH3

Chat room open :
Friday, 8 May 2020
14:00 – 15:45

Convener: Johan Gaume
Co-conveners: Alec van Herwijnen, Ingrid Reiweger



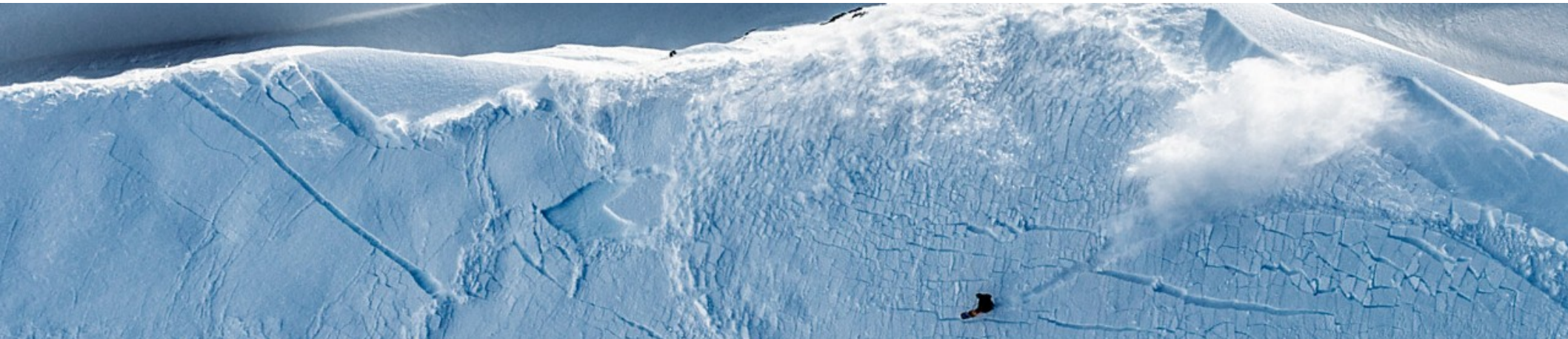
Organisation

Moderators: Johan Gaume (EPFL, Switzerland), Alec van Herwijnen (SLF, Davos)

Scheduling: Friday, 08 May, 14:00–15:45
Introduction // 5mn break //
Block 1 (3 displays) // Block 2 (4 displays) // Block 3 (3 displays) // Block 4 (3 displays)

Authors are invited to post 2 sentences about their work and to clearly identify themselves (name visible, author status indicated, display number :
e.g. Jonas Ritter *(author) display2232*)

Authors are invited to post 2 sentences regarding the highlights of their work at the beginning of their block



Schedule (for guidance)

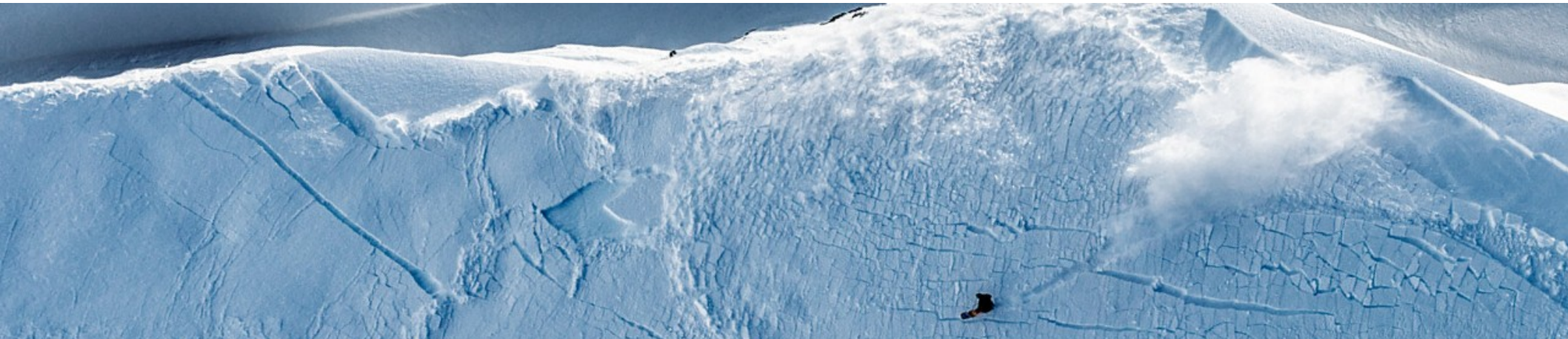
13h45 : The chat opens
.useful information will be displayed by the conveners
.all participants are invited to look at the summary session video available here :
https://meetingorganizer.copernicus.org/EGU2020/displays/34950

14h00-14h20 : Block 1 - Effect of snow microstructure on snow failure
D2232 Ritter et al. // D2233 Blatny et al. // D2234 Bobillier et al.

14h25-14h50 : Block 2 – Crack propagation : macroscopic characterization and modeling
D2235 Rosendahl et al. // D2236 Bergfeld et al. // D2237 Trottet et al. // D2238 Puzrin et al.

14h55-15h15 : Block 3 – Snow stability and avalanche forecasting
D2239 Birkeland et al. // D2240 Richter et al. // D2241 Mayer et al.

15h20-15h40 : Block 4 – Large scale processes
D2242 Brozova et al. // D2244 Perez-Guillen et al. // D2246 Comola et al.



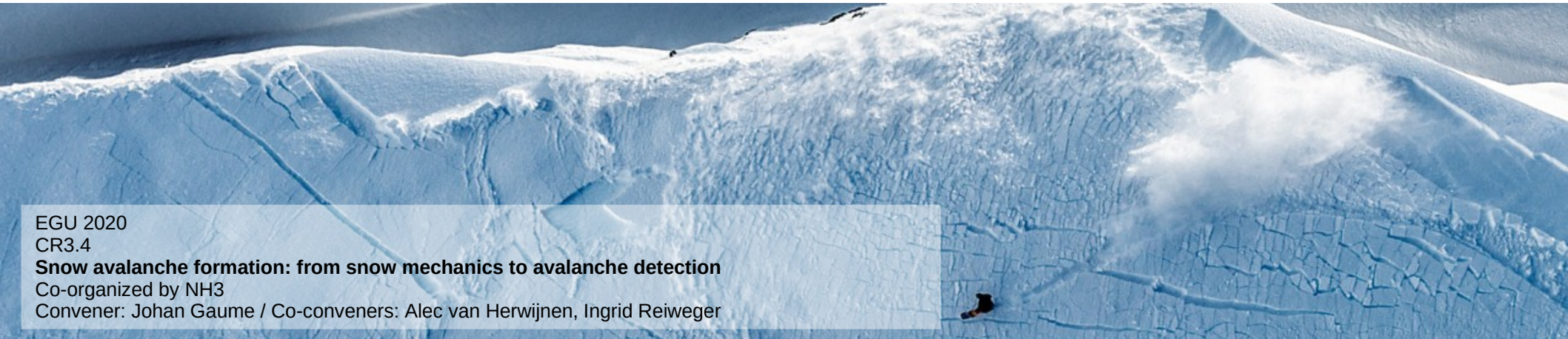
BLOCK 1 : 14:00 – 14h20 (for guidance)

Effect of snow microstructure on snow failure

D2232 | EGU2020-22435
Microstructural insights into the compressive failure of snow based on a peridynamic framework
Jonas Ritter, Henning Löwe, and Michael Zaiser

D2233 | EGU2020-10203
Microstructure-based modeling of snow using the material point method and finite strain elastoplasticity
Lars Blatny, Henning Löwe, Stephanie Wang, Chenfanfu Jiang, and Johan Gaume

D2234 | EGU2020-18483
Micromechanical modeling of crack propagation in weak snow layer
Gregoire Bobillier, Alec van Herwijnen, Bastian Bergfeld, Johan Gaume, and Jürg Schweizer



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BLOCK 2 : 14:25 – 14h50 (for guidance)

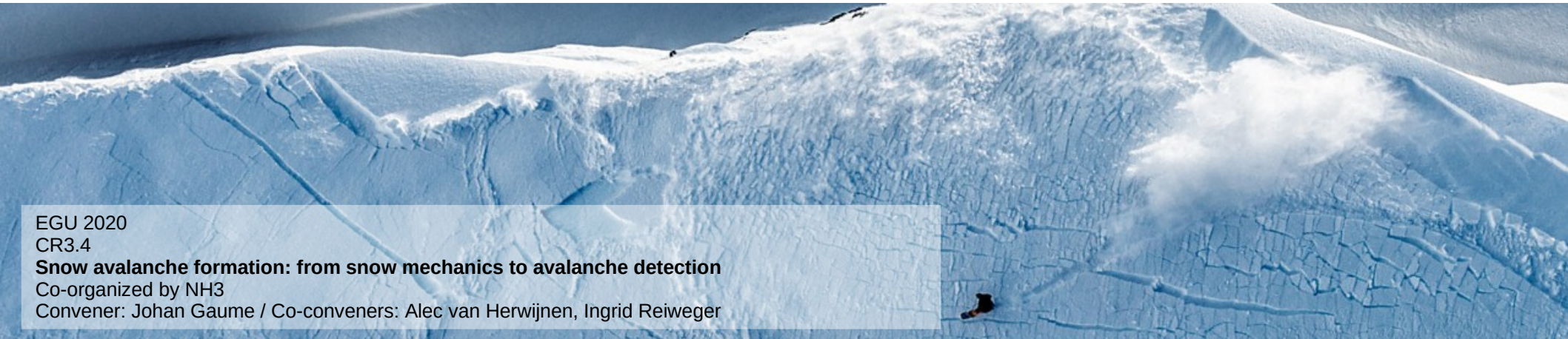
Crack propagation : macroscopic characterization and modeling

D2235 | EGU2020-2409
A comprehensive elastic and fracture model for stratified snowpacks
Philipp L. Rosendahl and Philipp Weißgraeber

D2236 | EGU2020-8369
Measuring slope-scale crack propagation in weak snowpack layers
Bastian Bergfeld, Alec van Herwijnen, Gregoire Bobillier, and Jürg Schweizer

D2237 | EGU2020-20604
Sharp transition in modes of dynamic crack propagation in dry-snow slab avalanche release
Bertil Trottet, Alec van Herwijnen, Stephanie Wang, Chenfanfu Jiang, Joseph Teran, and Johan Gaume

D2238 | EGU2020-22530
Can earthquakes lead to delayed avalanche release ?
Alexander M. Puzrin, Thierry Faug, and Itai Einav



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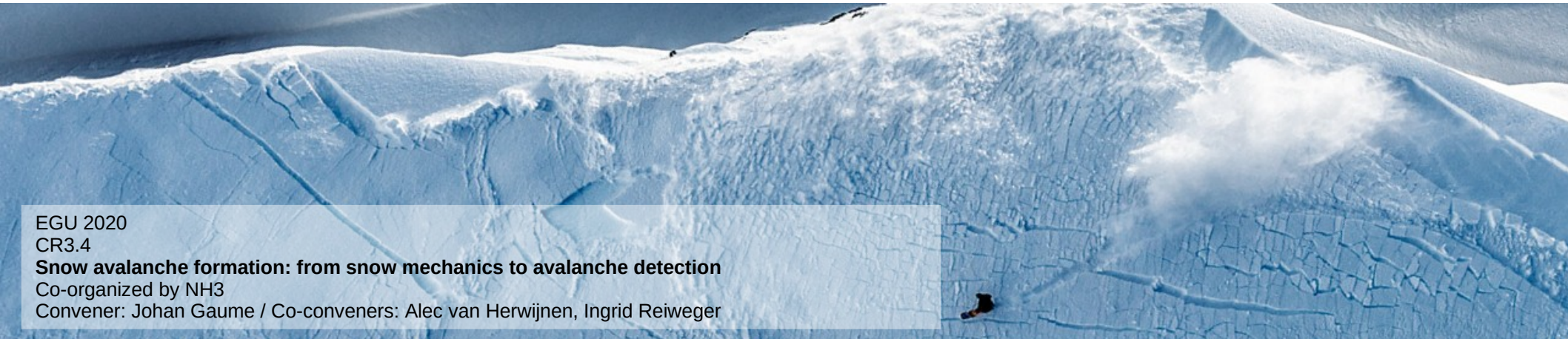
BLOCK 3 : 15:55 – 15h15 (for guidance)

Snow stability and avalanche forecasting

D2239 | EGU2020-22491
Changes in the mechanical properties of snow relevant to crack propagation in the hours and minutes following loading
Karl W. Birkland, Bastian Bergfeld, and Alec van Herwijnen

D2240 | EGU2020-19589
Simulating snow instability in complex terrain
Bettina Richter, Alec van Herwijnen, Mathias W. Rotach, and Jürg Schweizer

D2241 | EGU2020-18898
Comparing simulated and manual snow profiles to derive thresholds for modeled snow instability metrics
Stephanie Mayer, Alec van Herwijnen, Mathias Bavay, Bettina Richter, and Jürg Schweizer



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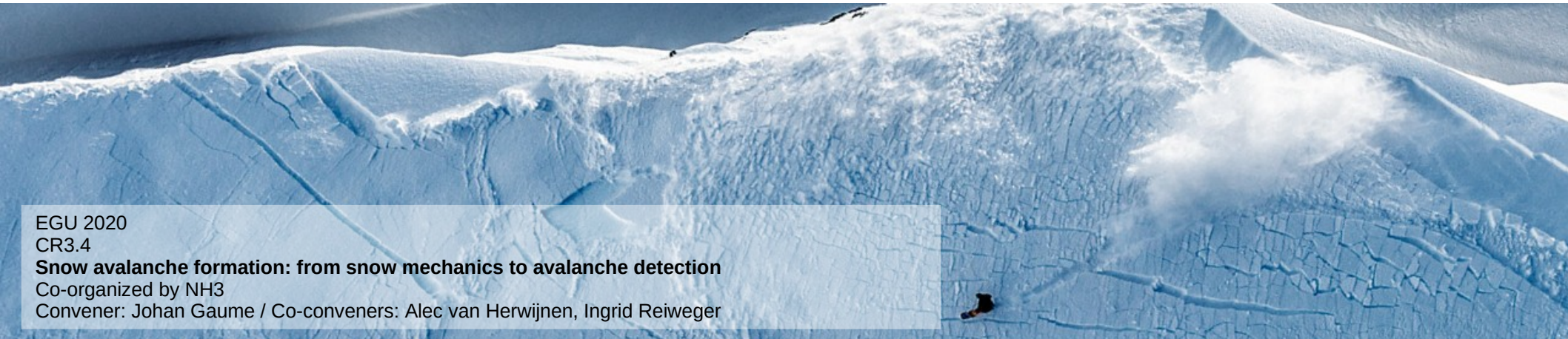
BLOCK 4 : 15:20 – 15h40 (for guidance)

Large scale processes

D2242 | EGU2020-8922
Potential avalanche release in windthrow areas: the effect of snow height and terrain roughness
Natalie Brožová, Tommaso Baggio, Michaela Teich, Alexander Bast, and Peter Bebi

D2244 | EGU2020-13407
Seismic localization and dynamical characterization of snow avalanches and slush flows of Mt. Fuji, Japan
Cristina Pérez-Guillén, Kae Tsunematsu, Kouichi Nishimura, and Dieter Issler

D2246 | EGU2020-22679
The role of surface cohesion in wind-driven snow transport
Francesco Comola, Johan Gaume, Jasper Kok, and Michael Lehning



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