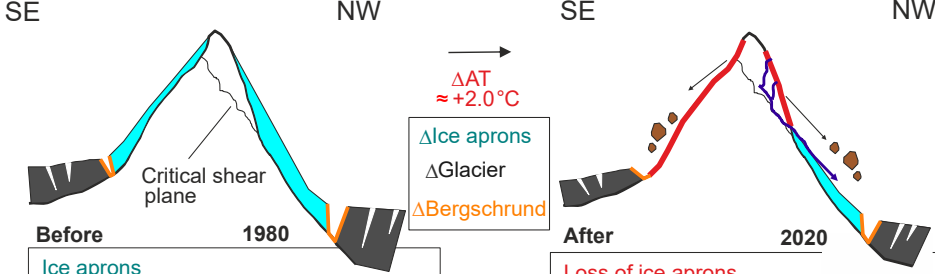


**Ice aprons**

- ($i_a$) reflect solar incoming radiation
- ($i_b$) protect rock from warming above 0°C
- (ii) seal rock mass and prevents water infiltration
- (iii) seal rock mass and hinders smaller rockfall volumes from detachment

**Loss of ice aprons**

- ($i_a$) exposes bedrock to radiative warming
- ($i_b$) enables propagation of positive summer temperatures & heat waves into bedrock
- (ii) enables infiltration of water, advective warming of permafrost rock and transient build up of hydrostatic water pressure
- (iii) changes stress field in rock mass by ice loss and induced rockfalls

Thermal modeling
Sect. 3.1

S1
S2
S3

Mechanical modeling
Sect. 3.2