

## Training data

### Avalanche observations AV1

(Sect. 2.1.1; Switzerland, 3 years)

### SNOWPACK + instability simulations

(Sect. 2.2)

### Avalanche observations AV2

(Sect. 2.1.2; Switzerland, 30 years)

## Model

simulated snowpack / instability

### Avalanche day predictor

Probability of natural avalanche occurrence in surrounding of AWS  
 $P(\text{AvD})$

Estimated depth of failure

### Avalanche size estimator

Probability of observing avalanches of a certain size  
 $P(S \geq s)$

## Validation data

### Avalanche observations AV3

(Sect. 2.1.3; Davos, 5 years)

### SNOWPACK + instability simulations

(Sect. 2.2)

### Regional danger levels DL

(Sect. 2.3; Switzerland, 21 years)