The first Alpine Space rockfall events database

An Alpine Space rockfalls database for what?
1. Improvement of the concept of the energy line (Heim 1932) by developing and testing new topographic indexes
2. Calibration and validation the new rockfall statistical model ROCK-EU
3. Performance evaluation of the models and mapping methodologies developed by the project consortium

The data collected for each boulder
1. Position of the release point
2. Position of the stopping point
3. Its volume
4. If possible land use description with a specific focus on forest stands
5. Calculation of the topographic profile using a DTM
   A specific field survey application on ArcGIS collector has been developed.

The topographic indexes use:
- They are calculating after the normalization of each topographic profile according to the maximal elevation difference
- They are based on the calculation of Normalized Areas and concavity parameters

At the 10th October 2018, the database contains 9537 records corresponding to 4296 events

\[ \beta = 61.80 \times e^{-0.864 \times NA} \]
\[ R^2 = 0.82 \quad RMSE = 4.00^\circ \]