INTRODUCTION
Rock glaciers are among the best geomorphological expressions of the creep of mountain permafrost. Monitoring rock glacier changes (particularly kinematics) help to provide information about climate impact on mountain permafrost.

METHODS
DJI Phantom 4 RTK with VRS corrections (AGNES)
SfM workflow on PIX4Dmapper
Image correlation CIAS
3d point-cloud comparison (M3C2)

RESULTS
Very high resolution horizontal and vertical displacements.
Detection of 8 different lobes with mean velocities between 0.1-1.3 m yr⁻¹.

CONCLUSIONS
UAVs with RTK-GNSS capability are suitable for finely monitoring alpine terrain without GCPs.

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