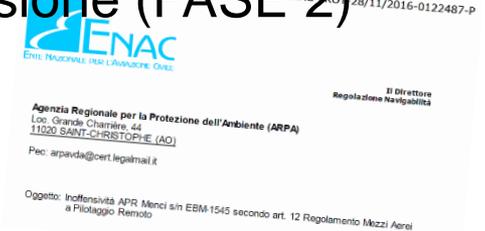


3 – Fotogrammetria da UAV: realizzazione della missione (FASE 2)



ACQUISIZIONE IMMAGINI



senseFly Swinglet CAM

- 15' autonomia
- 0,550 Kg
- camera: RGB, NIR (12 Mp – 16 Mp)

senseFly eBee RTK

- 20' autonomia
- 0,640 Kg
- camera: RGB, NIR, RE, S.D.O.A.
- modalità: standalone, **RTK base**, **RTK virtual**

DJI Phantom 4 PRO

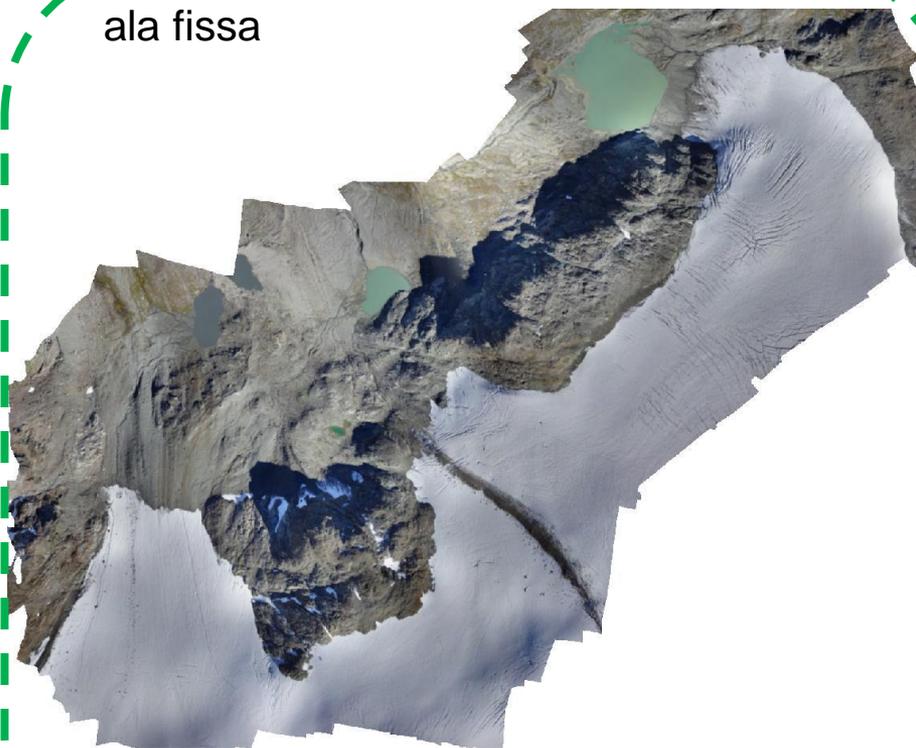
- 23' autonomia
- 1,400 Kg
- 1" , 20 MP



3 – Fotogrammetria da UAV: realizzazione della missione (FASE 2)

ACQUISIZIONE IMMAGINI

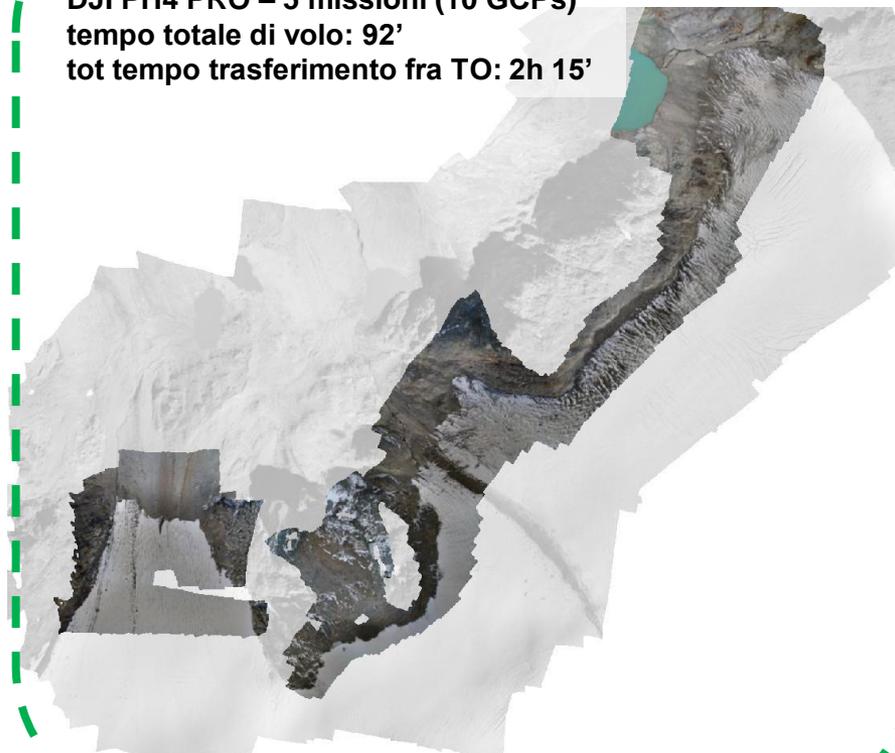
ala fissa



Ghiacciaio del Rutor – rilievo 09/2016
SenseFly ebee RTK – 2 missioni (2 GCPs)
tempo totale di volo: 39'

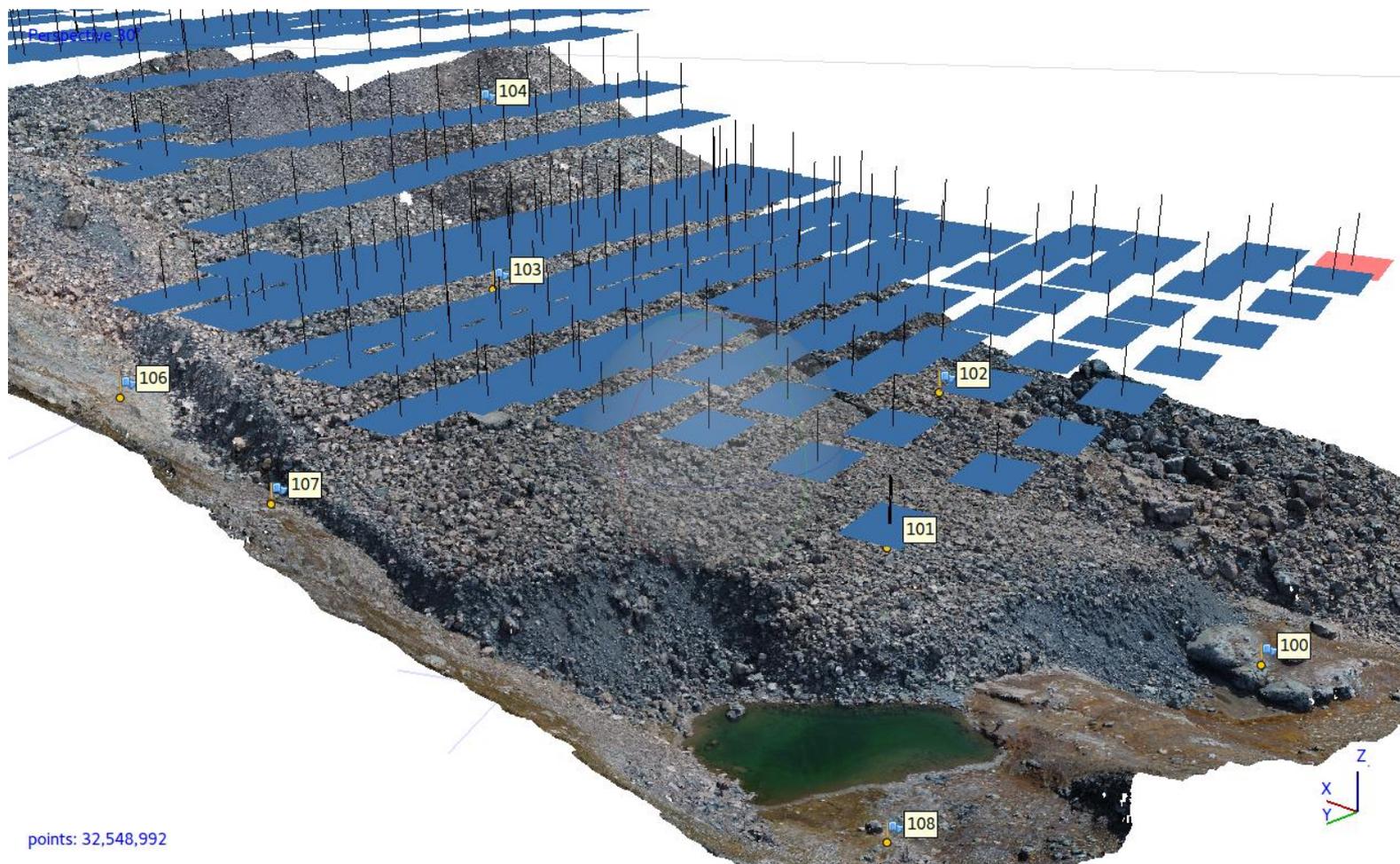
Ghiacciaio del Rutor – rilievo 09/2017
DJI PH4 PRO – 5 missioni (10 GCPs)
tempo totale di volo: 92'
tot tempo trasferimento fra TO: 2h 15'

multirottore



3 – Fotogrammetria da UAV: processing (FASE 3)

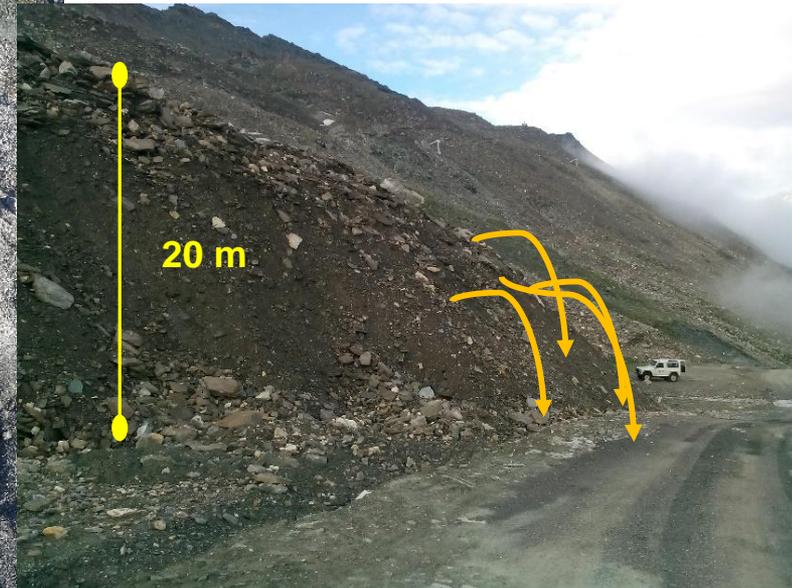
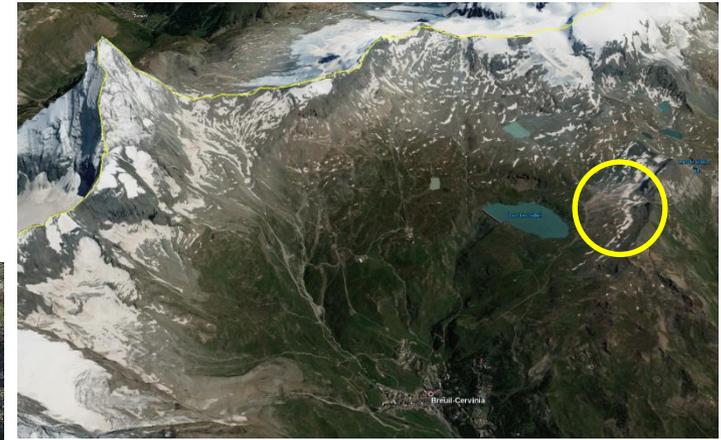
ACQUISIZIONE IMMAGINI



3 – Fotogrammetria da UAV: validazione (FASE 4)

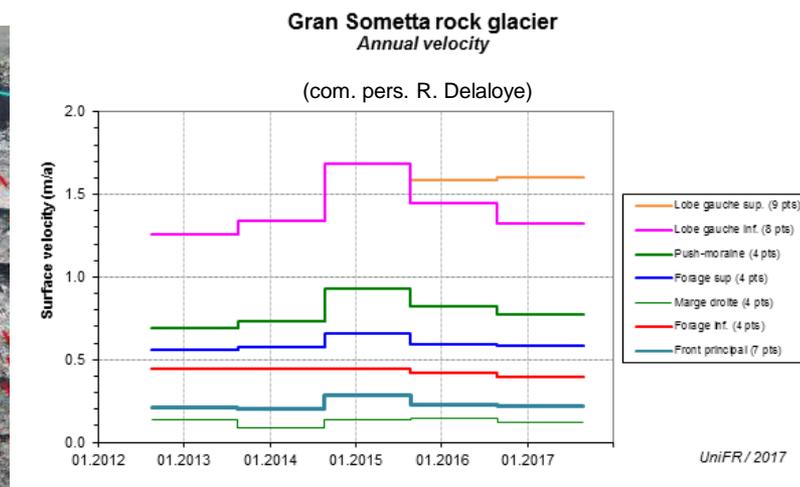
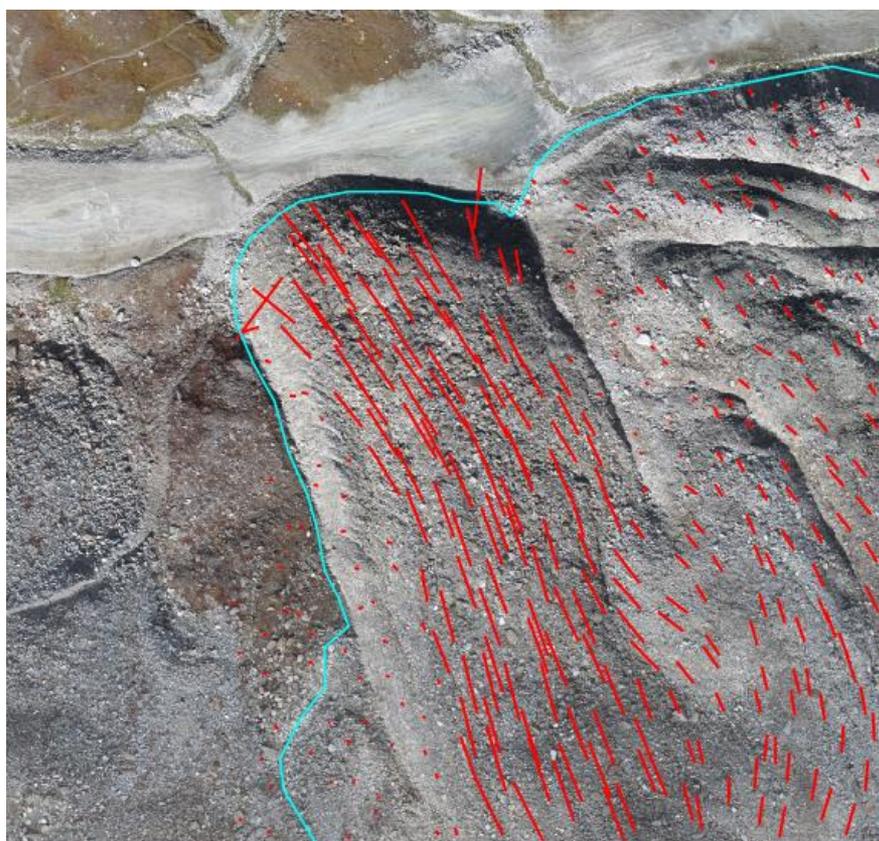


4 – Casi studio: rock glacier Gran Sometta (Cervinia, Valtournenche – AO)



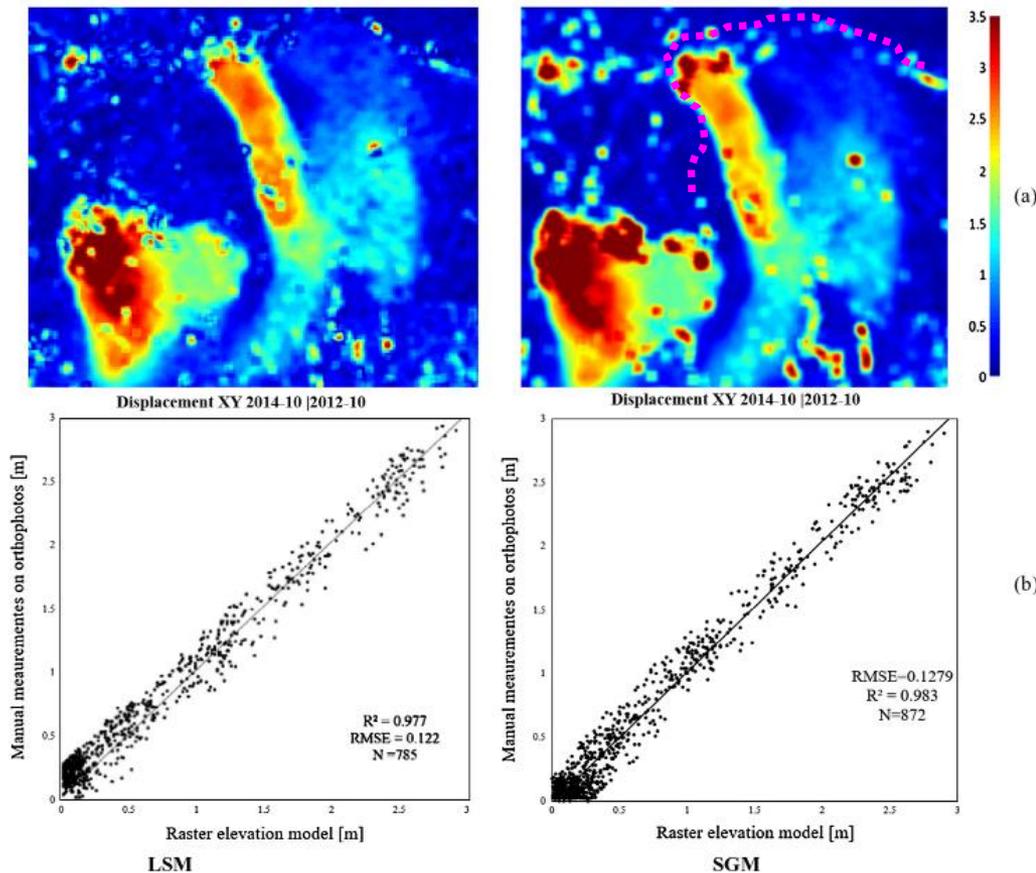
4 – Casi studio: rock glacier Gran Sometta (Cervinia)

Misura degli spostamenti superficiali e determinazione campi di velocità
 (picking manuale su ortomosaici)



4 – Casi studio: rock glacier Gran Sometta (Cervinia)

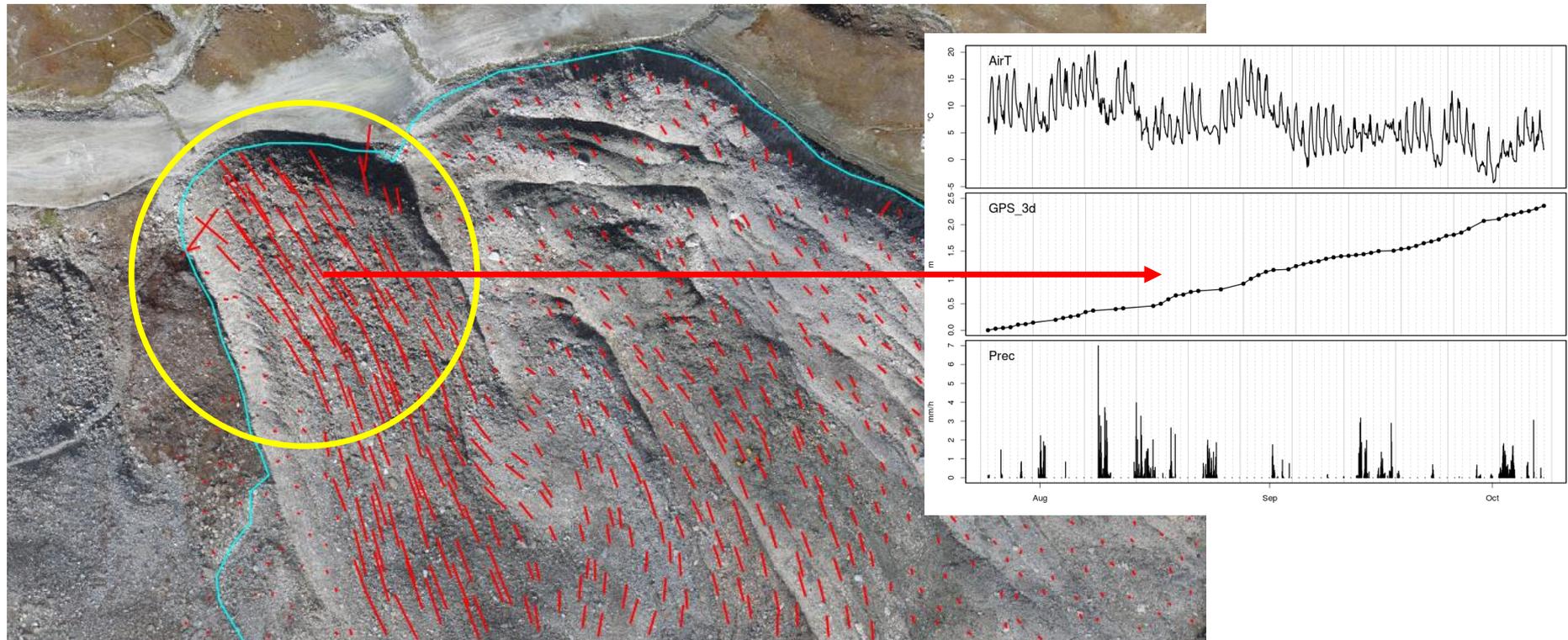
Misura degli spostamenti superficiali e determinazione campi di velocità
 (analisi automatica con Least Squares Matching (LSM) e Semi-Global Matching (SGM))



Dall'Asta et al. (2017) - Unmanned Aerial Systems and DSM matching for rock glacier monitoring. ISPRS J. Photogram. Remote Sensing

4 – Casi studio: rock glacier Gran Sometta (Cervinia)

Analisi preliminare comportamenti a supporto di altri monitoraggi
(installazione stazione GNSS fissa per monitoraggio in continuo)

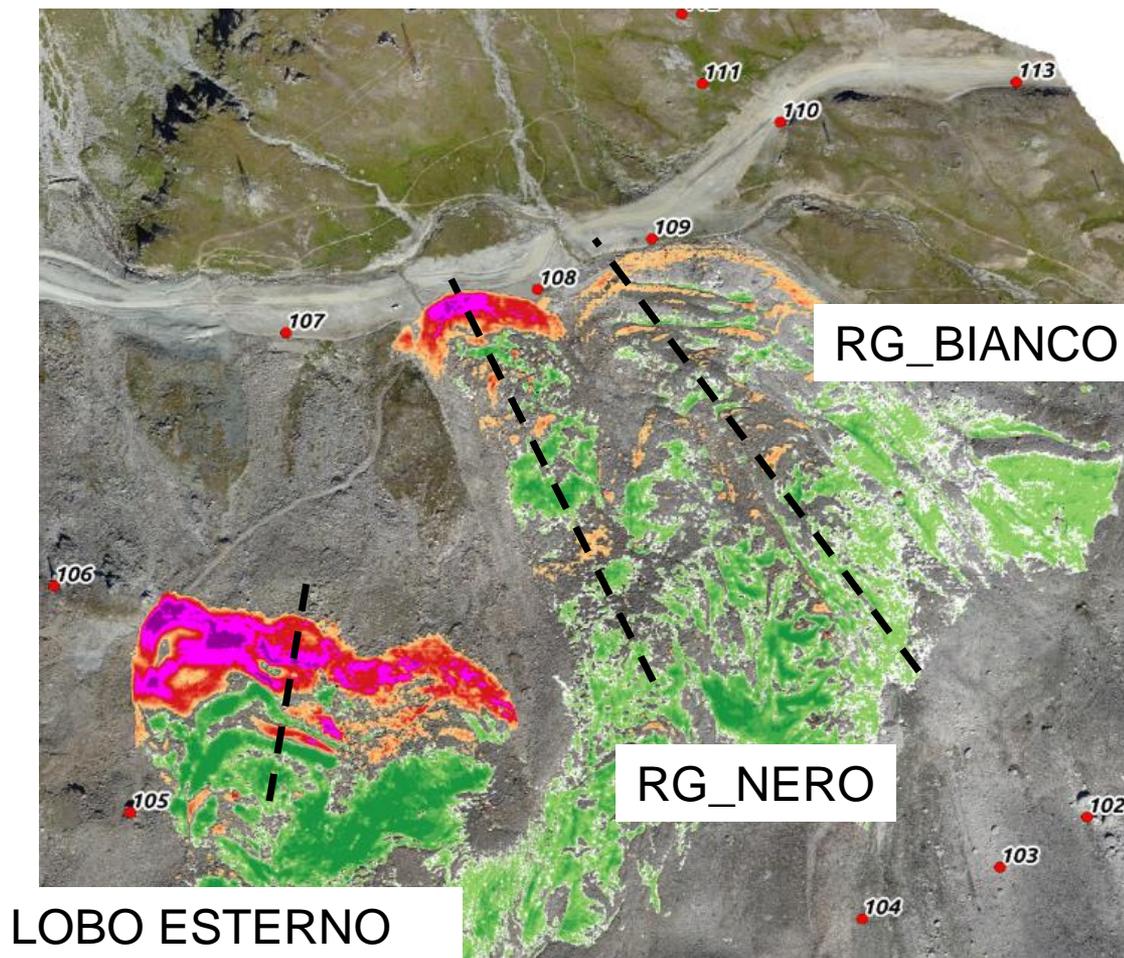
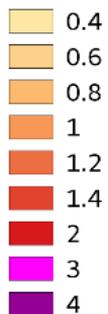
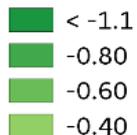


4 – Casi studio: rock glacier Gran Sometta (Cervinia)

Analisi multitemporale DSM (2017/08 – 2012/10)

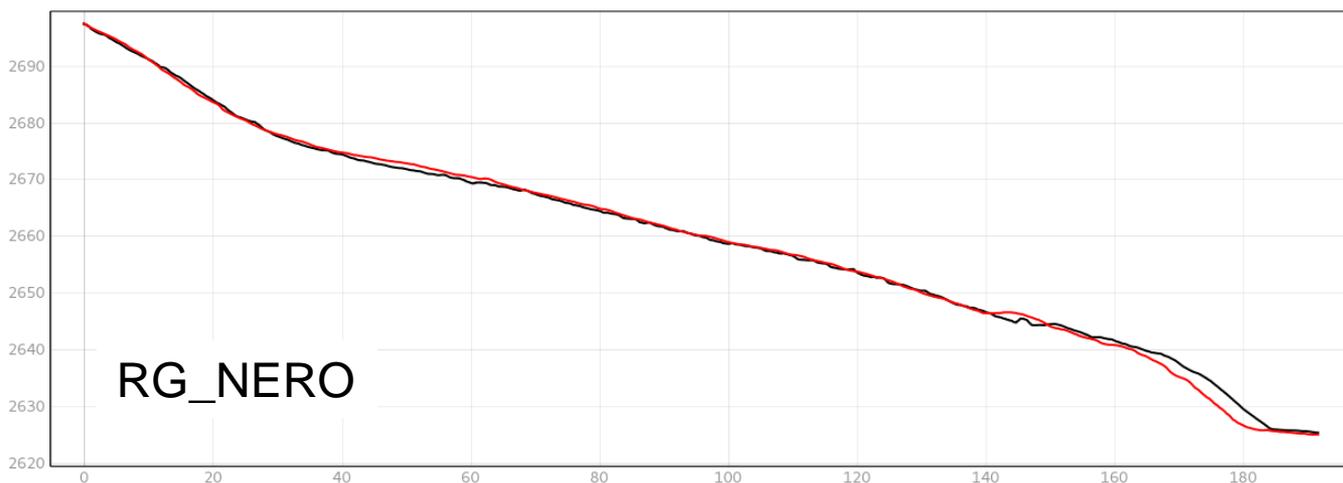
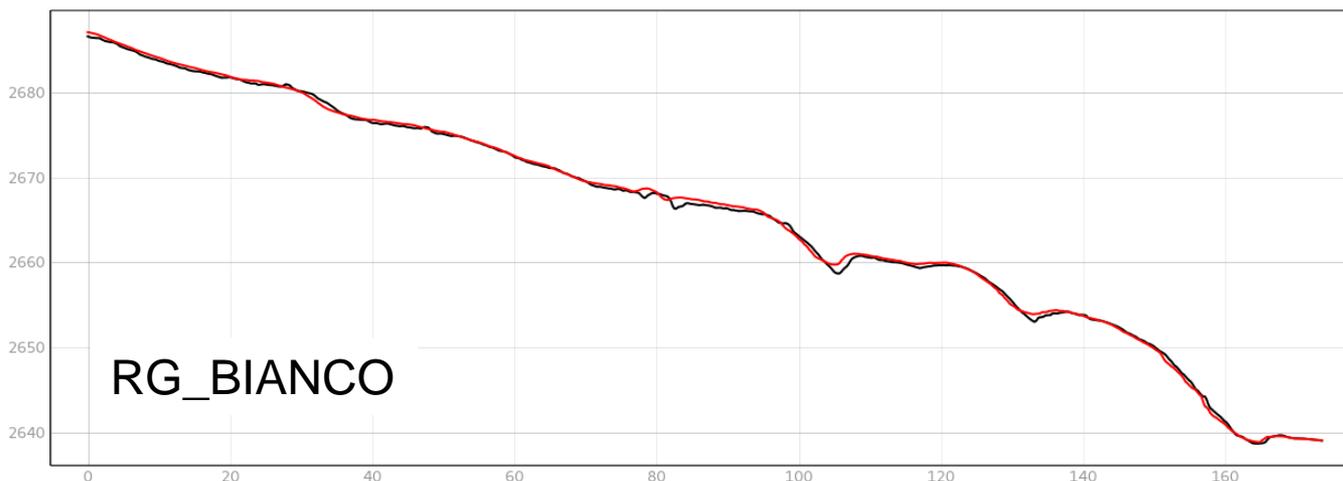
● GCP

Delta DTM (2016/10-2012/10)



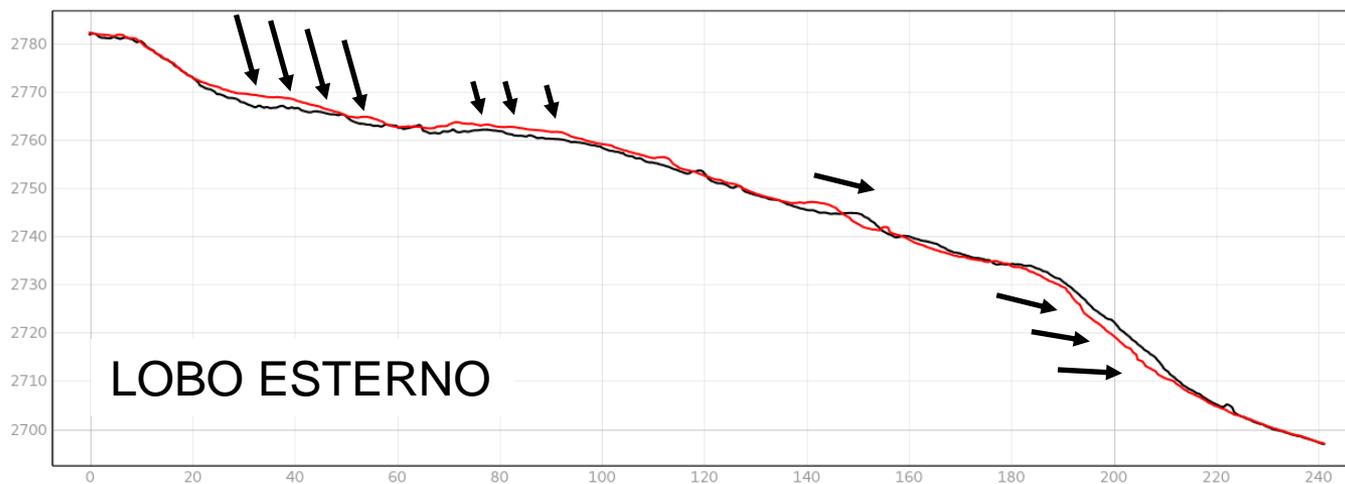
4 – Casi studio: rock glacier Gran Sometta (Cervinia)

Variazione profili longitudinali (2017/08 – 2012/10)



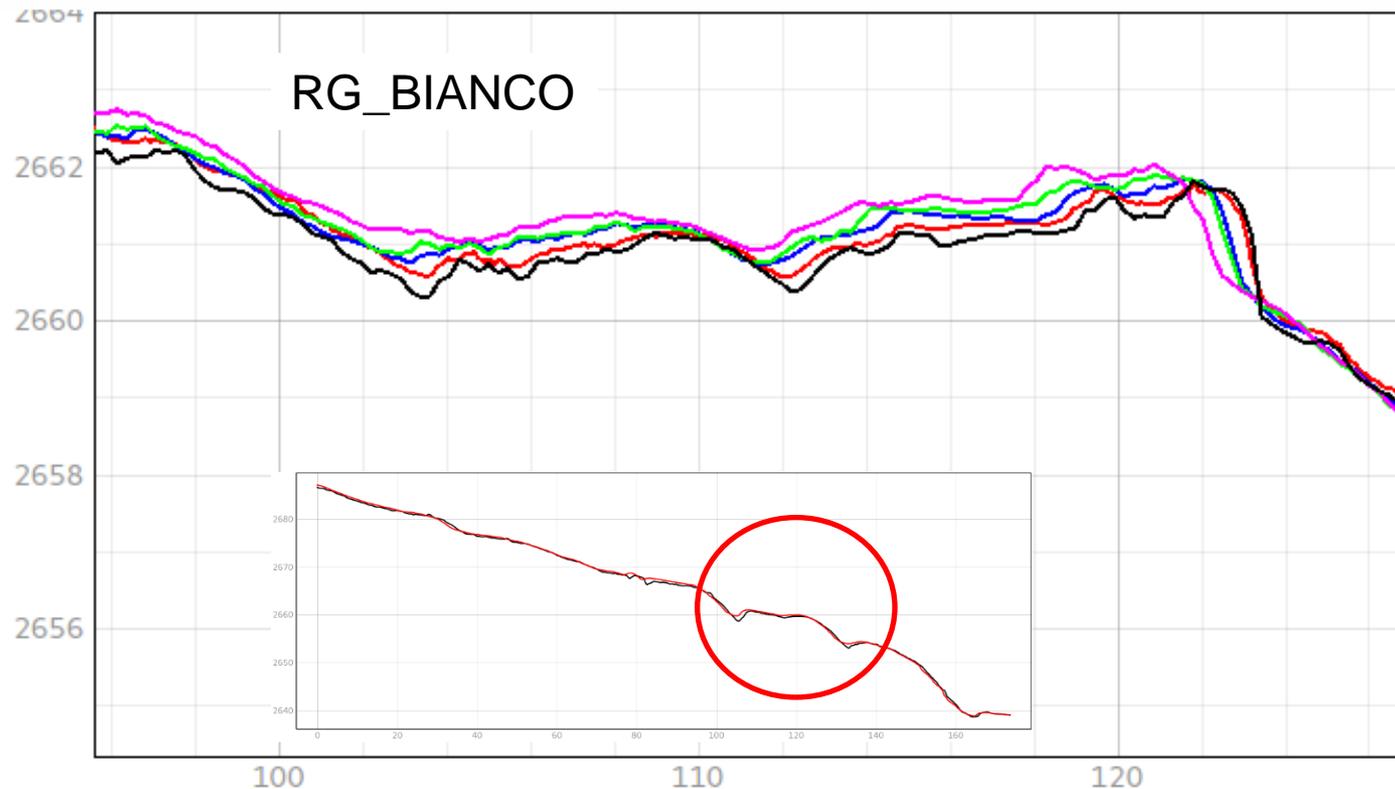
4 – Casi studio: rock glacier Gran Sometta (Cervinia)

Variazione profili longitudinali (2017/08 – 2012/10)



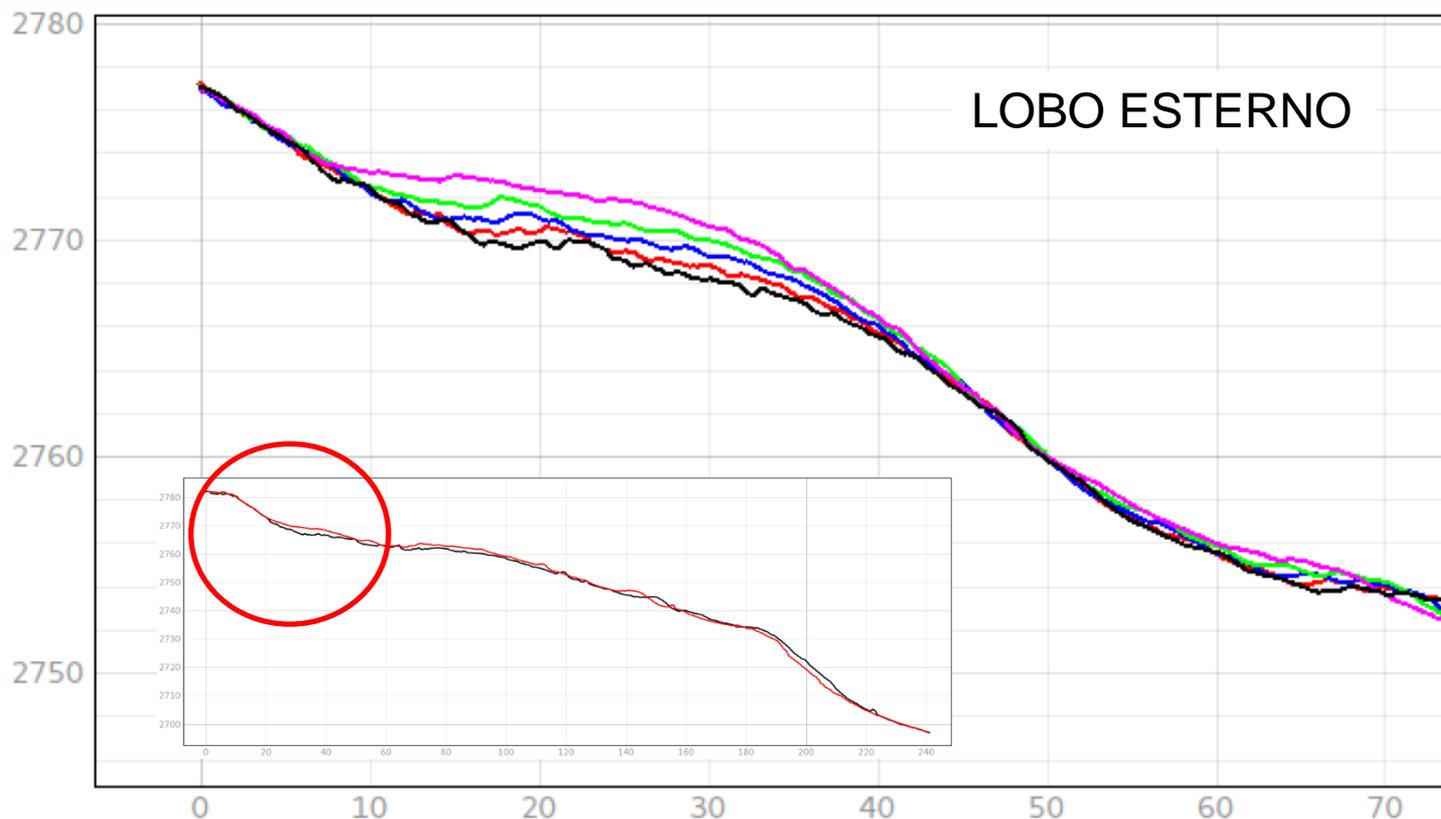
4 – Casi studio: rock glacier Gran Sometta (Cervinia)

Variazione profili longitudinali (2012/10-2014/10-2015/09-2016/08-2017/08)



4 – Casi studio: rock glacier Gran Sometta (Cervinia)

Variazione profili longitudinali (2012/10-2014/10-2015/09-2016/08-2017/08)



4 – Casi studio: rock glacier Gran Sometta (Cervinia)

Variazione quota superficie (2012/10 - 2017/08)

