SnowNoSnow 2019

Contact person: Roberto Salzano

via Madonna del Piano 10, 50019 Sesto Fiorentino (FI) Italy

roberto.salzano@cnr.it

+39 055522 6587

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Ny-Ålesund, Svalbard islands (Norway)

# Short abstract

The campaign was scheduled considering different tasks: fieldwork was on identifying ground control points useful for the geometrical correction of cameras installed at the CNR Climate Change Tower. We completed the experimental setup with a new stereoscopic camera supported by two sensors, one in the visible and one in the near-infrared wavelengths ranges. A near-infrared illuminator was also installed for acquiring images during the nighttime. The final setup is now capable to cover the whole year and it support the monitoring of the snow cover in terms of extension and of surface roughness. These information will be included in the data chain where satellite optical images will be processed considering the fractional snow cover retrieved by terrestrial photography.

# Keywords

*Fractional snow cover, snow reflectance, satellite multispectral image, terrestrial photography*

# Scientific question

Terrestrial photography provides information about the snow cover that can be combined to remotely sensed images in order to enhance the estimation of the snow cover extension at high latitudes. Ground-based cameras support the availability of long time series concerning the fractional snow cover and the macro-physical characteristics of the surface under heavy cloud conditions.

# Location:

Hemisphere: *North*

Location coordinates (in Google form): *78.917498, 11.894075*

Campaign start and end dates: *7.05.2019 - 20.05.2019*

Type of measurements (mark with an x):

|  |  |  |  |
| --- | --- | --- | --- |
| Ground-based in-situ | Ground-based remote sensing | Airborne in-situ | Airborne remote sensing |
| X |  |  |  |

# Measured parameters:

Aerosols, details:

Gases, details:

Clouds, details:

Others, what: *Fractional snow cover, surface roughness*

# Part of a bigger project / activity / infrastructure? If yes, which one?

*Climate Change Tower infrastructure*

# Participating institutes

*National Research Council of Italy (Institute of Atmospheric Pollution Research)*

# Additional participation possible? Wishes

# Optional files (e.g. map)