

## H-SAF CASE STUDY

<b>Product Name</b>	<b>H10 – SN-OBS-01</b>	<b>Validation Institute</b>	<b>DPC</b>
<b>Case Study Period</b>	<b>23-01-2010 24-01-2010</b>	<b>Case Study Geographical Area</b>	<b>Italy</b>

### METEOREOLOGICAL EVENT DESCRIPTION

The area investigated in this case study covers the whole of Italy. The study is performed for January 23 (for North Italy) and 24 (rest of Italy) , 2010.

### DATA/PRODUCTS USED

The MODIS images used for recognition of the snow cover are named AERONET\_Ispra.2011023.terra.721.250m, AERONET\_Rome\_Tor\_Vergata.2011024.aqua.721.250m, AERONET\_Rome\_Tor\_Vergata.2011025.terra.721.250m and they are in HDF format (an example is reported in Fig 32).

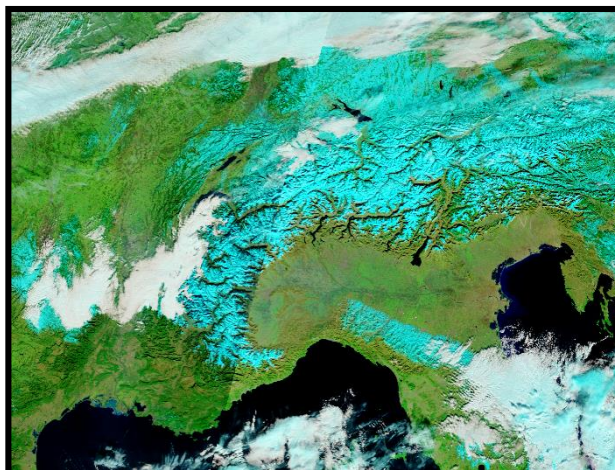


Figure 1 MODIS images used for recognition of the snow surface

### RESULT OF COMPARISON

For Ground data, 701 information were used; they are divided in 335 data from “Nevemont System”, 225 data from the network of centres for forecasting and surveillance of effects (automatic stations) and 141 data from Meteomont Service CFS and the CTA (manual stations) (fig 33).

The snow ground data have been spatialized on snow cover detected by on 23172 Km<sup>2</sup> for Alps and 40203 Km<sup>2</sup> for Apennines (see fig 34 and 35).

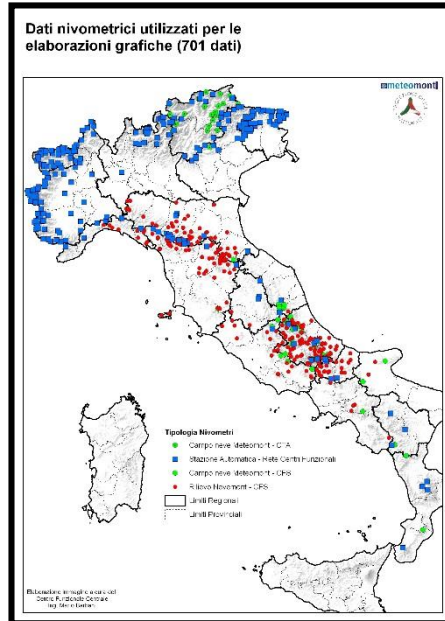


Figure 2 ground data used for the case study

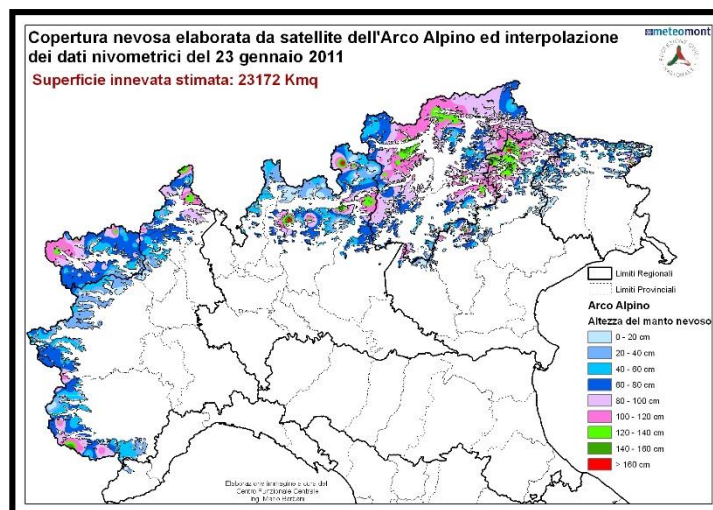


Figure 3 ground data spatialization on snow are detected by MODIS for January 23 (for North Italy) 2010.

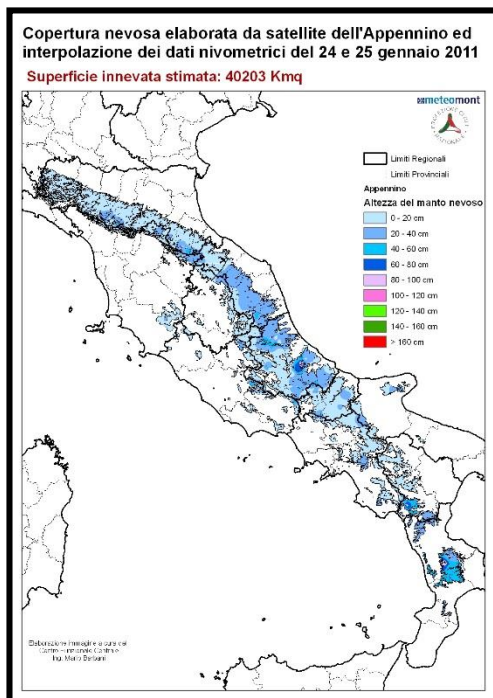


Figure 4 ground data spatialization on snow are detected by MODIS for January 24 (for all Italian territory) 2010

Visual comparison of H10 (fig 36 and 37) with ground and Modis merged product has been performed only qualitatively.

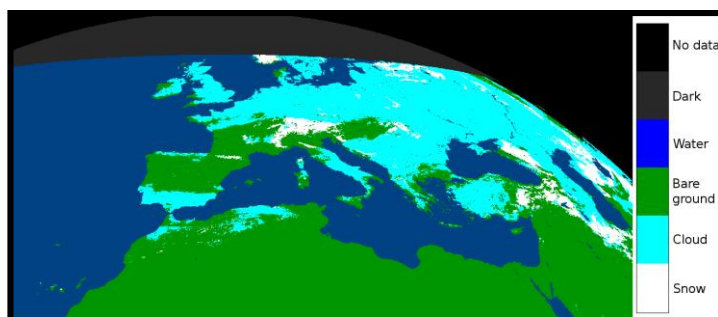


Figure 5 H10 of 23 of January 2010

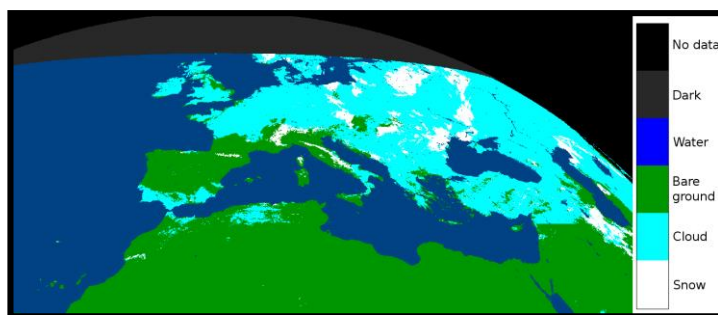


Figure 6 H10 of 24 of January 2010

## CONCLUSION

The snow cover detected by H10 product is very similar to the ground merged Modis data. We have to stress that the resolution of the two products is different. Until now it was not possible to

quantitatively compare the Italian ground data with H10 for these case studies in DPC. The validation procedure to produce statistical scores in DPC is in progress