



Characterization of Snow Pack Over Pyrenees Using Remote Sensed Data for Runoff Modeling

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Characterization of snow pack evolution is a key parameter for regions where water supply is mainly due to snow melt and runoff.

Main goal of the project “AGORA”, partially founded by the Catalan government, is to study the impact of assimilating earth observed data in a water prediction numerical model. The site chosen for the study cover the Pyrenees area in Catalonia.

As first step an observation of the water balance terms, such as snow cover, snow water equivalent, changes in soil water content, have been done through extensive in situ campaigns in the area of study.

Collocated earth observed data from both passive, e.g. MERIS, MODIS, and active, e.g. ENVISAT-ASAR, ENVISAT-RA, sensors have been collected during the surveys. These measurements will be used to develop and validate algorithms for the characterization of the snow pack appropriately tuned for the area of interest.

The final phase of the project will evaluate the impact of assimilating remote sensing data into an hydrological model developed to cope with the significant weather changes in time and space in the area of study.

Preliminary results of the activity scheduled during the first year of the project will be highlighted. The importance of developing application based on remote sensed and in situ data will be discussed.