



## **Provision of spatially distributed Snow Cover Information from Photographic Camera Images and its Potential for Snow Model Validation in Alpine Regions**

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The complex climatic and topographic conditions in Alpine regions result in a high spatio-temporal variability in snow cover distribution. Information on snow amount and distribution is of major importance for water management (e.g. for hydropower generation, irrigation or technical snow production), but also provides valuable support in the validation and further development of distributed snow models.

This study investigates the usability of photographic camera images for snow cover extent detection. For the derivation of snow cover maps we apply an adapted version of the software PRACTISE – Photo Rectification And Classification Software v. 2.0 (Härer et al. 2015). Two study sites in Tyrol and Carinthia (Vernagtferner and Astental) were analysed for the winter season 2014/15 with respect to the presence/absence of snow using different camera setups. Continuous photographic image series with different light intensities were analyzed. The results achieved are compared with snow simulations generated by the hydroclimatological model AMUNDSEN and remotely sensed snow cover information (Landsat). The results presented in this study show that the proposed method is capable of producing accurate snow cover maps and has the potential to become a robust method for snow model validation.