

This thesis deals with forecast of snow cover made by the numerical weather prediction model ALADIN and with snow cover measurements. First, it describes the model parametrization of snow-related variables. This is followed by a description of the meteorological stations network and of the snow measurements methodology. The main focus of the thesis lies on the validation of snow depth and snow water equivalent forecasts. This is done by comparison of measurements from the winter season 2021/2022 against corresponding ALADIN forecasts with forecast ranges of 6 and 30 hours. The comparison is first made with regard to the overall tendency and the magnitude of the model error. Secondly, it deals with model frequency of snow cover misses or false alarms. Finally, the thesis touches upon the validation of snow density forecast.