



The M-curve of orographic precipitation and its application for estimating precipitation in the mountains

H. Ólafsson (1) and Ó. Rögnvaldsson (2)

(1) University of Iceland, Icelandic Meteorological Office and Institute for Meteorological Research, (2) University of Bergen, Icelandic Meteorological Office and Institute for Meteorological Research

The M-curve is developed to give the connection between the orographic precipitation gradient and the speed of the low level winds blowing perpendicular to the mountain. The curve is developed and calibrated with data from the Reykjanes Experiment (REX). The M-curve is applied to create a 50 year time series of precipitation in the mountains and the result compares reasonably well with groundwater observations.