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Observations of precipitation in Svarfaðadalur valley, N-Iceland

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Motivated by frequent avalanches, precipitation was observed with 40 automatic raingauges in Svarfaðardalur valley in North-Iceland. The raingauges were placed in a regular grid with 3 km intervals and they covered most of the valley and the surrounding mountains. The observations revealed large precipitation gradients. The maximum accumulated precipitation was about 5 times the minimum accumulated precipitation, yet both the stations giving the extreme values are at sea level and only 9 km between them. The precipitation pattern, both upstream and downstream of the mountains, is very dependent upon wind direction and to some extent upon wind speed.