

FLOSI: FLOW over Orographic Section of Iceland

Guðrún Nína Petersen¹, Haraldur Ólafsson^{1,2} & Þórður Arason¹

¹ Icelandic Meteorological Office, Iceland; ² University of Iceland, Reykjavík, Iceland

In 1962 and 1963 precipitation measurements were made on a line from the capital region of Iceland eastward into the mountain ridge Bláfjöll. The results showed that the precipitation increased about 250% from the lowest station to the highest one. In order to supplement these data in 2018 a field programme was initiated where 26 automatic precipitation gauges were stationed along a similar line during summer and into the autumn - and further over the mountain ridge to the Southern coast. The programme is named Flosi (FLOW over Orographic Section of Iceland) The total length of the cross section is 48 km with measurements from sea level to 350 m a.s.l. In order to obtain reliable results, the programme is expected to last several summers with measurements made along the same line. Here we describe the programme and preliminary results from the first year. The summer and autumn of 2018 were one of the wettest on record. The maximum accumulated precipitation measured by the rain gauges was almost 1500 mm in 6 months. In the middle of November there was a significant precipitation event, with more than 250 mm measured over 24 hours at the highest elevations while about 50 mm were measured upstream at the lowest elevation.