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# Upon the characterization of avalanche loading on impacted structures: a new approach based on inverse analysis

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Understanding the action of a snow avalanche against structures is limited by our poor knowledge on the dynamic loading which strongly depends on the mutual influences of the flow and the obstacle. New experiments have been conducted at real scale to quantify the avalanche loading from its consequences (strain, acceleration). An inverse analysis procedure is developed and is validated both by numerical and laboratory tests. Then, in situ measurements on experimental devices are exploited in order to quantify the avalanche's pressure at different scales: First results confirm the feasibility and reliability of this original approach and validate its ability to provide new knowledge in this ticklish field.