

Interactive comment on “Assessing the application of a laser rangefinder for determining snow depth in inaccessible alpine terrain” by J. L. Hood and M. Hayashi

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Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 7, 417, 2010.

C750

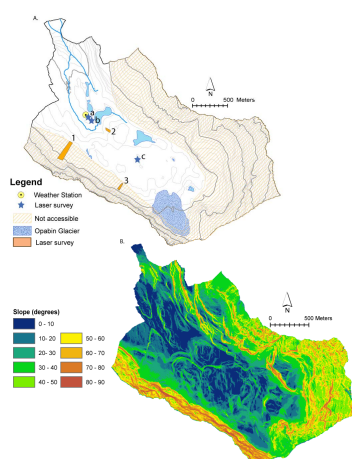


Figure 1. A. Opabin watershed map with locations of laser surveys (1-lower talus, 2-validation slope, 3-upper talus), laser position (a-lower talus, b-validation slope, c-upper talus) and inaccessible area. Contour interval 25m. B. Opabin watershed slope map.

Fig. 1.

C751

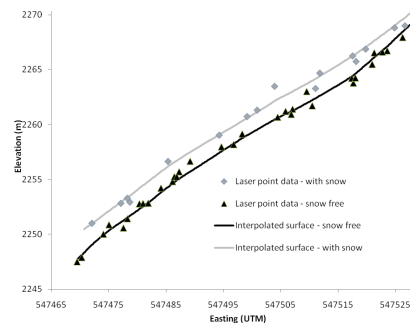


Figure 2. Measured laser point data and local polynomial interpolation.

Fig. 2.

C752

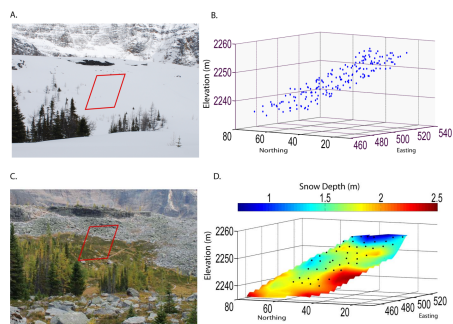


Figure 3. Validation slope A. Snow covered (18 April 2009) B. Distribution of laser points (April) C. Snow free (30 Sept 2009) D. Laser snow depth (black dots show locations of manual snow depth measurements)

Fig. 3.

C753

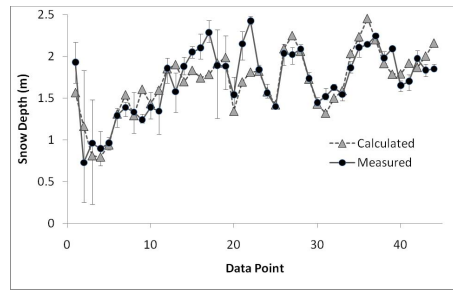


Figure 4. Manually measured versus calculated snow depths at the validation slope. Error bars represent the range of measured depths at each point.

Fig. 4.

C754

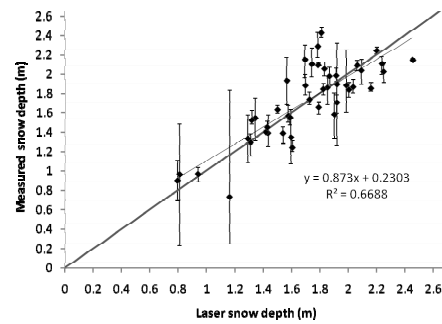


Figure 5. Scatter plot of manually measured versus laser snow depth at the validation slope. Error bars show the variation in measured snow depth.

Fig. 5.

C755

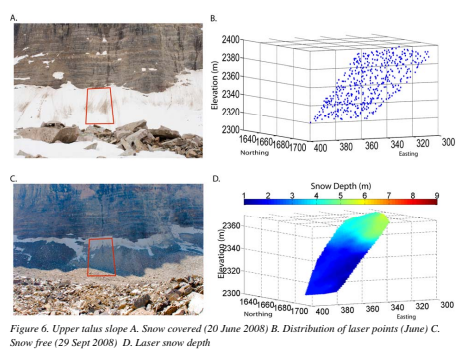


Figure 6. Upper talus slope A. Snow covered (20 June 2008) B. Distribution of laser points (June) C. Snow free (29 Sept 2008) D. Laser snow depth

Fig. 6.

C756

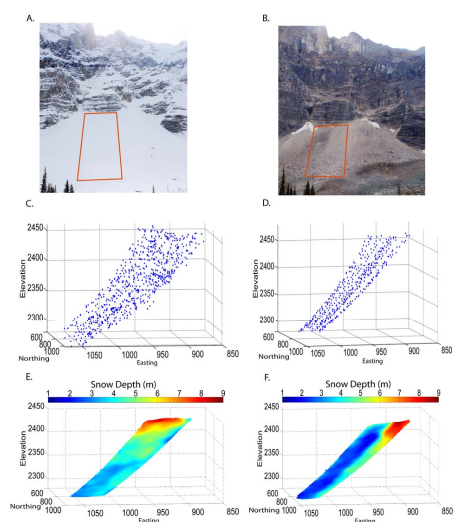


Figure 7. Lower talus slope A. Snow covered (28 April 2009) B. Snow-free (30 Sept 2009) C. Distribution of laser points (20 April 2008) D. Distribution of laser points (18 April 2009) E. Laser snow depth (2008) F. Laser snow depth (2009)

Fig. 7.

C757

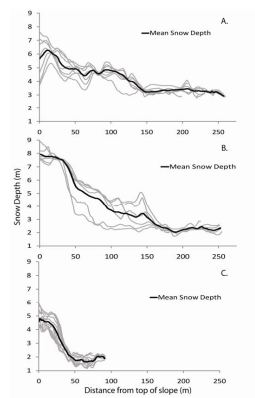


Figure 8. Profiles of snow depth accumulation A. Lower talus, 2008 B. Lower talus, 2009 C. Upper talus, 2008. Grey lines are extracted snow depth profiles. Black lines are the mean snow depths of the extracted snow depth profiles.

Fig. 8.