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Hydrology and Earth System Sciences Discussions

Interactive comment on "Use of laser-scan technology to analyse topography and flow in a weir pool" *by* P. E. Dresel et al.

Anonymous Referee #2

Received and published: 7 May 2012

General comments:

This paper presents the use of a laser-scan technique for use in quantifying the volume of water in a weir pool that has not reached discharge level. The method presented could be important in water resource studies, particularly in quantification studies in drying climates.

Overall I rate this manuscript as excellent significance, and good in terms of scientific and presentation quality. However the paper could be improved, as outlined below.

Specific comments:

1)- The title of the paper and the focus of the content is on the development and ap-

plication of the method, rather than the implication of the data collected during testing. Considering this, I think that the content would be better presented in a more technically focused paper, rather than as a research article.

In light of this, the authors should consider removing some of the background (region specific details and such) and focus more on the uses and application of laser technology in similar scenarios, and emphasise how this research differs from that.

Technical edits:

1)- pg 3724, staring line 6: this paragraph discussing the overall study area and 3 paired catchments is somewhat confusing. Fig. 1, which could be used to help explain this, does not help to clarify how there are 3 paired catchments in the study area.

2)- pg 3724, line 17: Reference 'Australian Government Bureau of Meteorology' does not quote a date, nor does it appear in the reference list as that. Does this correspond to 'climate data online' (pg 3730, line 21)? Please amend.

3)- pg 3726, line 1: -0.2m should have an en dash, not an em dash.

4)- pg 3726, various: 'local coordinate system', 'local coordinates' - what is the local coordinate system?

5)- Fig 1, 3, 4: require North arrows

6)- Fig 4: Move A & B identifiers to top left corners - they are hard to read where they are. What do -0.168 and 0.032 refer to? This is not clear in the legend nor the caption.

7)- Fig 5: remove title from top, fix y-axis label to remove the ˆ. The legend is not very clear - 'poly' etc. Caption "at a height of 0.1 on the stick gauge" - 0.1 m? Please clarify.

8)- Authors should consider having someone proofread for grammar, as several commas are required within the text for easier understanding and flow.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 9, 3721, 2012.