**Hydrology and
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Discussions**

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Interactive comment on **"Interrelationships between MODIS/Terra remotely sensed snow cover and the hydrometeorology of the Quesnel River Basin, British Columbia, Canada"** *by* **J. Tong et al.**

J. Tong

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Please re-evaluate sections 5.2 and 6.0. It seems to me that some of the material in 5.2 should go in the Results section (6.0).

Response: Following the referee's recommendation, we have moved subsections 5.1 and 5.2 into the results section.

Section 3.1 – It would be good to also mention that there is a MODIS instrument on the

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Aqua spacecraft that provides similar products, even though the paper uses only data from the Terra instrument.

Response: See the revised text at lines: 115-116: "An identical MODIS instrument is mounted on the Aqua spacecraft, launched on 4 May 2002 to provide complimentary snow products."

Line 20, p. 3691 – Dozier (1989) did not discuss the SNOMAP algorithm which was not developed until the late 1990s.

Response: This reference has been deleted in the text and the list of references.

Line 1, p. 3692 – should say 8-day maximum data on a sinusoidal. . .

Response: See the revised text at line 128: "8-day maximum data on a sinusoidal projection and 0.05o, 0.25o daily. . ."

Lines 14-15, p. 3692 – please re-phrase; end of sentence is awkward

Response: See the revised text at lines 144-145: "If a pixel has experienced no snow throughout all 8 days, it is then classified as no snow in MOD10A2."

Line 18, same pg. – perhaps use the word "and" instead of "which"

Response: "which" has been changed to "and".

Line 4, p. 3699 – please re-phrase the following "The percent of cloudy days of MOD10A2. . . " Where did the percent of cloudy days come from?

Response: See the revised text at lines 333-335: "The fraction of cloudy days calculated from MOD10A2, which ranges from 10.5% to 17.7%, is considerably lower than that inferred from MOD10A1."

P. 3699-3700, lines 28 – 1 – shouldn't this result be in the Results section?

Response: Please see previous responses to similar comments above.

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Fig. 3 – it is a bit unclear what is being compared. The top image is all cloudy and represents one day. The middle image cannot be MOD10A2 and Jan. 17th. Do you mean the 8-day period began on Jan. 17th? Ditto for bottom image. Please clarify.

Response: Please see the revised caption for Fig. 3: "Comparison of snow maps for MOD10A1 (top), MOD10A2 (middle), and the SF (bottom) in the QRB within the same period. Snow maps of MOD10A2 (middle) and the SF (bottom) on 17 January 2007 represent the 8-day composite products from MOD10A1 covering the period from 17 January 2007 to 24 January 2007."

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 6, 3687, 2009.