

Dear Dr. Bingham and the "The Cryosphere" editorial staff,

Thank you all for the time consideration and energy devoted to our manuscript.

An itemized list of the changes made appears below:

Page 1, Lines 2, 4, 9 and 19:

"Ice sheet" has thrice been changed to "ice-sheet". "Ice stream" has been changed to "ice-stream."

Page 1 line 24:

"Data and" has been changed to "data, and"; "to precisely observe the ice surface" has been changed to "to observe the ice surface precisely"

Page 2 line 1:

"Radio echo sounding" deleted

Page 2, line 8: "fast flowing" changed to "fast-flowing"

Page 2, Line 21: "of longer" changed to "of the longer"

Page 2, Lines 24, 25, and 34:

"Ice sheet" has been changed to "ice-sheet". "Lake drainage" changed to "lake-drainage." "Ice stream" has been changed to "ice-stream."

Page 2 Line 29: "Complimentary" changed to "Complementary"

Page 3, Lines 2, 4, 5 and 19:

"Ice sheet" has been changed to "ice-sheet". "Lake drainage" changed to "lake-drainage." "Ice stream" has been changed to "ice-stream."

Page 3 line 24:

"Antarctic ice sheet" changed to "Antarctic Ice Sheet"

Page 3 line 29:

"thermally eroded" changed to "eroded thermally"

Page 4 Line 10:

"glacial-dammed" changed to "ice-dammed"; comma added after citation

Page 4 Line 11:

"Timescale" changed to "timescales"; "days and" changed to "days, and"

Page 4 line 19:

"Simultaneously decreases" changed to "decreases simultaneously"

Page 4 Lines 25, 29, and 31

“Ice dammed” changed to “ice-dammed”; “pressure melting” changed to “pressure-melting”

Page 5 Line 2: Comma inserted

Page 5 line 6: Apostrophe removed

Page 5 Line 8: acronym removed

Page 5 line 16: “Best” changed to “better”

Page 6 Line 3: “comes” changed to “come”

Page 6 Line 4: “water budget” changed to “water-budget”; “lake inflow” changed to “lake-inflow”;  
Acronym now used

Page 6 Line 5: second comparing deleted; “lake-volume” changed to “lake-volume” twice

Page 6 Line 16: “Water system” changed to “water-system”

Page 6 Line 20: “as” changed to “because the”

Page 7 line 7: “Principle” changed to “principal”

Page 7 line 9: hyphen removed from “well posed”; hyphen added in “subglacial-lake drainage”

Page 7 line 15: “pressure melting point” changed to “pressure-melting point”

Page 7 line 20: “viscous ice” changed to “viscous-ice”

Page 9 line 2: “to account” changed to “which accounts”

Page 10 Line 2: hyphen added to “sediment-collapse”

Page 10 Line 4: “Where” changed to “here” thus answering one of life’s greatest philosophical questions. Maybe next time it will be “somewhere else”

Page 11 Line 3: “Flow path” is now “flow-path”; “width changed to “with”

Page 11 Line 4: “.” changes to “,”

Page 11 Line 7: order of “to” and “either” reversed

Page 11 Line 15: “Linked cavity” changed to “linked-cavity”

Page 11 Line 22: “ice base” changed to “ice-base”

Page 12 Line 4: I got rid of “that”

Page 12 Line 21: “Ice sheet” has been changed to “ice-sheet”.

Page 12 Line 24: “Implimentation” changed to “implementation”

Page 12 Line 27: “Discharge level” changed to “discharge-level”

Page 13 Line 3: “Water layer” changed to “water-layer”

Page 13 Line 10: comma added

Page 13 Line 11: "Water layer" changed to "water-layer"

Page 13 Line 13: "Criteria" changed to "criterion"

Page 13 Line 16: "newly formed" changed to "a newly-formed"

Page 13 Line 23: comma added

Page 14 Line 6: "Sheet flow" changed to "sheet-flow"

Page 14 Line 7: "Courrant" changed to "Courant"

Page 14 Line 22: "Lake drainage" changed to "lake-drainage."

Page 14 Line 23: "Draining lakes" changed to "draining the lakes";

Page 14 Line 23: now reads ". . . in lower Whillans and Mercer Ice Streams: see Figures 4b (for SLW), 4c (for SLC and SLM), and 4d (for SLE)."

Page 14 line 25: "real domain" changed to "real-domain"

Page 14 Line 27: "Lythe and Vaughan" changed to "Lythe et al."

Page 14 Line 28: comma added.

Page 15 Line 10: "ice surface" is now "ice-surface"; "draw down" is now "drawdown"

Page 15 Line 14-16: "Lake volume" is now "lake-volume"

Page 15 Line 20: "provided" changed to "proved"

Page 15 Line 20: "better quantifying" is now "quantifying better"

Page 15 Line 20: "flow path" is now "flow-path"

Page 15 Line 21: "affected" is now "affect"

Page 15 Line 22: "to both" is now "both to"

Page 15 Line 23: "directly measure" is now "measure directly"

Page 15 Line 27: "lake volume" changed to "lake-volume"

Page 15 Line 27: "qualitative similar" is now "qualitatively similar"

Page 15 Line 28: "Lake drainage" changed to "lake-drainage."

Page 15 Line 31: "models" changed to "model's"

Page 16 Line 2: "Lake drainage" changed to "lake-drainage."

Page 16 Line 3: "30 year" is now "30-year"

Page 16 Line 9: "began" is now "begin"

Page 16 Line 11: "an" added to read "show an ~ 4 year"

Page 16 Line 20: "Lake drainage" changed to "lake-drainage."

Page 16 Line 24: "Lake volume" changed to "lake-volume."

Page 16 Line 28: Figure reference removed.

Page 16 Line 29: "Decreased and" is now "decreased, and"

Page 16 Line 32: comma added between "increased" and "however"

Page 17 Line 2: "then draw" changed to "then to draw"

Page 17 Line 3: comma inserted between "level" and "however"

Page 17 Line 10: "lake volume" changed to "lake-volume"

Page 17 Line 11: "Using a constant" changed to "using constant"

Page 17 Line 20: "Flow path" is now "flow-path"

Page 17 Line 25: "distributed system" changed to "distributed-system"

Page 17 Line 28: "of the" added between "portion" and "total"

Page 17 Line 29: "to" changed to "and"

Page 17 Line 32: "lake volume" changed to "lake-volume"

Page 18 Line 3: "lake volume" changed to "lake-volume"

Page 18 Line 3: "rise in falls" changed to "rises and falls"

Page 18 Line 4: Hyphen removed

Page 18 Line 8: "higher volume" is now "higher-volume"

Page 18 Line 17: "Water was leaving" changed to "water leaving"

Page 19 Line 2: "range as such" changed to "range, because such"

Page 19 Line 5: Comma inserted between "conversely" and "parameter"

Page 19 Line 12: "the" removed

Page 19 Line 17: "a" changed to "an"; comma added between "environment" and "supporting"

Page 19 Line 18: "no" changed to "not"

Page 19 Line 21: "radar" changed to "RES"

Page 19 Line 24: "Ice sheet" has been changed to "ice-sheet"

Page 19 line 26: "Siple Coast style lake drainage" changed to "Siple-Coast-style lake-drainage"

Page 20 line 2: comma inserted between "deformation" and "should"

Page 20 Line 8: “observations” deleted

Page 20 Line 9: “radar” changed to “RES”

Page 20 Line 11: “to effectively constrain our model” is now “to constrain our model effectively”

Page 20 Line 18: “system to eventually come” changed to “system eventually to come”

Page 20 Line 19: “increased” changed to “increases”

Page 20 Line 20: “related” changed to “relates”

Page 20 Line 23: “the a “ changed to “a”

Page 20 Line 29: “work however” changed to “ work, however”

Page 21 Line 2: “is a sufficient” changed to “acts as a”

Page 21 Line 7: “ice marginal” changed to “ice-marginal”

Page 21 Line 13: “radar” changed to “RES”

Page 21 Line 13: “More traditional radar sounding technology” changed to “RES”

Page 21 Line 16: “sediment” changed to “sediments”

Page 21 Line 18: “radar sounding” changed to “RES”

Page 21 Line 21: “of” changed to “between”

Page 21 Line 28: “Lake drainage” changed to “lake-drainage.”

Page 21 Line 28: “to fully understand” changed to “to understand fully”

Page 21 Line 30: “Ice sheet” has been changed to “ice-sheet”

Page 22 Line 1: “ice bed“ changed to “ice – bed”

Page 22 Line 3: “from” changed to “of”

Page 22 Line 7: “velocity” changed to “speed”

Page 22 Line 16 and 18: “Ice sheet” has been changed to “ice-sheet”

Page 22 Line 23: “Ice stream” has been changed to “ice-stream”

Page 22 Line 24: “effective pressure” changed to “effective-pressure”

Page 22 Line 25: “correlated” changed to “correlates”

Page 22 Line 31: “that” changed to “the”

Page 22 Line 32: comma added between “intriguingly” and “recent”; “WIS” expanded into “Whillans Ice Stream”

Page 23 Line 1: “to” added between “necessary” and “create”

Page 23 Line 2: Hodson added to reference list.

Page 23 Line 3 and 5: “radar sounding” is now “radio-echo sounding”

Page 29: “Satellite detected” is now “satellite-detected”; “radar sounding” is now “radio-echo sounding”; and “Ice Streams” is now capitalized.

Page 31: spelling of “floatation” changed to “flotation”

Page 32: ice base changed to “ice base”; “figures” changed to “figure”

Page 33: “gray” changed to “grey”

Page 34: from “(Carter et al., 2013)” changed to from “Carter et al., (2013)”