

## ***Interactive comment on “Surge dynamics on Bering Glacier, Alaska, in 2008–2011” by E. W. Burgess et al.***

**RJ Motyka (Referee)**

rjmotyka@uas.alaska.edu

Received and published: 26 April 2012

### General Comments

First, I would like to commend the authors for pulling together a diverse and robust set of data on the recent Bering Glacier surges. This contribution should have great appeal particularly to all surging glacier aficionados and also to the glaciers community in general. The paper provides a wealth of information; however wading through this labyrinth of data can at times make for some difficult reading. Nevertheless, the authors do an admirable job helping us find our way through it all. Mauri Pelto did a great job of providing detailed online commentary on this paper and I concur with most of his points and need not repeat them here. The response of the authors indicates that they are taking steps to address Pelto's comments. My judgment is that this paper deserves

C399

Full Screen / Esc

Printer-friendly Version

Interactive Discussion

Discussion Paper



publication once Peltos' comments are addressed plus the comments I have below.

### Specific Comments

1. The discussion on the 1993-95 surge in latter part of the "Intro" section is quite lengthy and I am not quite sure it fits in there anyway. How about putting it into a separate section entitled "Background" or "Previous Surge"? Intro could then be fleshed out more as per Pelto's suggestion.
2. Reference is made to an ASTER DEM but no reference or supporting information is presented. What year? Who made it? How good is it?
3. The "Conclusions" section actually reads more like a "Discussion" section and I believe should be titled as such.
4. I think it is important to summarize the salient points of the paper in a true "Summary" or "Conclusions" section. Bring it all together so that a reader can see main points and results of your study.
5. Another Alaska surging glacier that has received much study is the Black Rapids Glacier in the Alaska Range. Are there any parallels that can be drawn from those studies and the BGS surges?
6. The paper is generally well written but there are a number of instances where word choices and grammar could or should be improved (outlined below).
7. Is there any significance to the heights of boxes overlaid on timelines in Figures 4 and 5?
8. There some irregularities in references: some cited are not listed while others listed are not cited. The reference list and citations in the text should both undergo a thorough proofing.

### Technical Corrections

Full Screen / Esc

Printer-friendly Version

Interactive Discussion

Discussion Paper



## Abstract

L 3-4: tense

L 6: During the first phase flow. ....

L9: ...surge was initiated. . .

L 12: Change to: “..but the largest accelerations occurred at the location where driving stress increased during quiescence.”

L 13: change: “.. rapid..” to “..increases in..”

L 14: “Transpired” odd verb to use here. How about “manifested” instead?

## Intro

P3 L3: “though” to “through”

L4: not quite understanding the last part. Can you explain better?

L5: “...steepening, which..”

L6: “initiated” to “started”

L16: OK, so what happened to 80 - 90 km stretch?

L23 on: Separate section?

L27: “Velocity data were unable to. . .”

P4 L20: consistent use of tense: use to used

P5 L8: define SLC

P6 L4: ASTER DEM, What’s this all about? I don’t remember mention of this product as yet. Is there a reference?

P9 L13-14: Not quite sure what you are trying to say here. Could be written more

Full Screen / Esc

Printer-friendly Version

Interactive Discussion

Discussion Paper



clearly.

P10 L10: "If" to "of"

P11 L11: Conway 2009 not listed in references

L13: ASTER DEM again

P13: "Conclusions" This really reads more like a "Discussion" section than "Conclusions". Suggest titling it as such and then add a summary or brief conclusion section summarizing results.

P 14 L1: tense? Causes to caused?

L5: "The fact that the. . .

L19: initiated to started?

L20: "that" to "to"

P18: Muskett reference does not appear in the narrative.

P21 Figure 2 caption: do you mean to reference Fig. 5 here? Also, do the heights of boxes have any significance?

P24 Fig. 5: The difference in line thickness is not apparent.

---

Interactive comment on The Cryosphere Discuss., 6, 1181, 2012.

Full Screen / Esc

Printer-friendly Version

Interactive Discussion

Discussion Paper

