

Interactive comment on “Monitoring changes in forestry and seasonal snow using surface albedo during 1982–2016 as an indicator” by Terhikki Manninen et al.

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This is an interesting and thorough study, but some of the methods are hard to follow. In particular, I recommend some effort on simplifying and clarifying the descriptions of sigmoid fits in sections 2.2.1 and 2.2.2; figures of example fits might help.

Minor comments:

page 1, line 26

Forest cover having a significant influence on albedo does not follow from it being an important component of the carbon budget.

C1

page 2, line 11

“by in” – delete one

page 2, line 24

“since 200” is sufficient

page 3, line 3

I think that standalone forcing of land models with climate model outputs is being discussed here, but it is not clear.

page 4, line 6

Delete “only”

page 5, line 21

“using in-situ FSC observations” Is FSC %-units simply %?

page 6, line 11

What is being iterated here?

page 8, line 3

Roesch et al. (2001) is missing from the reference list

page 9, section 2.2.5

JSBACH should produce an albedo. Has this been examined and rejected for comparison with satellite measurements?

page 9, line 30

Same comment again – can the same variable (albedo) be used for melt onset in data and model?

C2

page 9, line 6

“areal trends”

page 10, line 20

“areas being half”

page 11, section 3.1.3

So is this saying that the snow is starting to melt earlier but is not disappearing any earlier?

page 11, line 29

“as snow or water” (or “as snow or rain”)

page 12, line 3

Carelia or Karelia?

page 13, line 11

“also agreed well”

page 13, line 18

“has increased”

Tables 3 to 6

Values in bold font are not explained

Figure 7

Remove Out[151]=

Figure 9

The colours used do not clearly relate to anything

C3

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C4