

Interactive comment on “Digital photography for assessing vegetation phenology in two contrasting northern ecosystems” by M. Linkosalmi et al.

Anonymous Referee #3

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The paper demonstrates the possibility of the application of digital repeat photography to monitoring the phenology at two northern locations. The observations are compared to CO₂ flux and meteorological measurements. Some interesting correlations are observed.

The language in sections 2 and 3 is excellent and the figures are well presented. I have some concerns regarding the content of the abstract, introduction and conclusions where the text needs some attention.

1. Abstract

The sentence 'The GCC of wetland developed in tandem with the daily photosynthetic

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capacity estimated from the atmosphere-ecosystem flux measurements' doesn't make sense to me. It needs to be rephrased somehow.

Also in the paper you make use of flux and meteorological measurements at both sites so this needs to be mentioned in the abstract.

2. Introduction

The content in the introduction needs to more directly describe the authors' motivation for the work. The first paragraph is good but the other paragraphs don't clearly indicate to the reader what the 'need' is for the work. The last two paragraphs of the introduction are poorly written and need to be clearer.

Regarding the last two paragraphs perhaps the text from the last paragraph could be incorporated with the first two sentences of the previous paragraph. Then a new paragraph could start with 'The objectives of this study ...'

Also I suggest including a paragraph at the end of the introduction that outlines the structure and content of the paper. This would help the reader.

3. Conclusions

In the introduction you say that one motivating factor is that there is the possibility of using your measurements to support the interpretation of the micrometeorological measurements of CO₂ fluxes. Then in the conclusions you say that you made the observations and the discrepancies may be due to differences on temperature.

That's good but this is one of the most interesting aspects of the paper and needs to be highlighted more. In your opinion do the observations actually help? Could your parallel measurements help understand just CO₂ measurements?

Generally, in what respect would your work help with understanding the connection with the climate and growing season length? Would your work help with land surface models?

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The last paragraph is not clear. Is the second sentence connected to the first sentence? There doesn't seem to be daily observations featured in any of the figures in the paper. The first sentence (and the second sentence?) would be better placed in the results section.

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