The Cryosphere Discuss.,
https://doi.org/10.5194/tc-2019-242-RC1, 2020

The Cryosphere Discussions
Open Access
EGU

Interactive comment on "The role of snow and ice thickness on river ice process in Songhua River basin, Northeast China" *by* Qian Yang et al.

Anonymous Referee #1

Received and published: 9 January 2020

The paper mainly investigates the relationship between ice thickness and ice phenology in three sub-basins of Songhua River in the time interval from 2010 to 2015. The study area is selected as it is a sensitive area to global warming in Northeast China. Application for the obtained results could be in validating the retrieval of ice development by remote sensing.

As general comment the paper present many data, but their discussion is not exhaustive and critical. The introduction is not too effective in presenting the study and its rationale. I therefore suggest to significantly improve Sec 1 and Sec 4.

Other comments: - Sec 2.2: In situ data analyzed are not fully descripted. Their temporal resolution is 5 days, but what about the spatial one? - line 109-11: FUE and BUE have a standard definition? In this case reference is missing, otherwise justify the

Printer-friendly version

Discussion paper

20%. - Sec 2.3: Some comment about the two methodologies adopted are needed, i.e. applicability limits, reliability of results, pros, cons. . . - Figures and caption are generally not consistent. As an example figure 2 and 3 use both notation DOY and dates, and the label (a) and (b) are never cited in caption. - line 179: PC not yet defined - Lines 197-200: Figure 5 does not show DOY - some English revision is needed in the manuscript, for example lines 23-25,40-43, 215,299. . .

Interactive comment on The Cryosphere Discuss., https://doi.org/10.5194/tc-2019-242, 2019.