

Interactive comment on “Biomass burning induced surface darkening and its impact on regional meteorology in eastern China” by Rong Tang et al.

Anonymous Referee #3

Received and published: 28 February 2020

The manuscript explored the biomass burning induced surface darkening effects and the climate feedback on regional meteorology in eastern China combined with satellite retrievals and WRF-Chem simulations. The paper fits the scope and deserves to be published in this journal with minor revisions.

Major concerns are listed as follows:

1. Line 12-13: “Satellite retrievals show that surfacein the near-infrared broad-band).” This sentence is unclear. Do you mean the decreased surface albedo (-0.16) appears in the harvest season than other seasons? Please rewrite this sentence.
2. Line 17: The same as above. What do you mean of later afternoon, should be
C1

rewritten more accurately.

3. Line 29-33: The sentence is too long and hard to follow. Please revise to short sentences.
4. Line 37-41: As above, please shorten the sentence.
5. The multi citations in this manuscript should be separated by blank space.
6. Line 42: Grammar mistake for “a decrease”. The form “a” is rarely used in front of “decrease”. The sentence can be rewritten as “such decreased surface albedo depends...” or “such surface albedo decline depends...”
7. Line 48-49: Suggested to delete “in estimation”
8. Line 50-51: Delete “Owing to.....maize,”
9. Line 53-54: The sentence can be revised as “farmers, who are eager to deal with tons of wheat straw, always resort to burning on spot rather than taking them as fuel.
10. Line 56: Please be careful to follow the format of this journal. (Ding et al., 2013a; 2015a, 2015b).
11. Line 69-70: Shorten the sentence.
12. Line 71: Should be revised as “decreased surface albedo or surface albedo decline”. similar changes throughout the manuscript.
13. I suggested that the introduction section should be reorganized or revised by native editors.
14. Line 84: (MOD09A1), the other similar changes should also be revised.
15. Figure 1 b-c. The color bar of Figure 1b and 1c should be labeled (units)
16. In Figure 3, the wavelengths for shortwave and near_IR should be given.

