Referee #1

We would like to thank the anonymous reviewer #1 for valuable comments and support to improve the paper. In the revised manuscript, all these comments have been fully addressed, please see below. Comments of the reviewer are in black. Our responses are in red.

General comments:
The scientific question of this manuscript is clear and this study is innovative. The paper is well structured in the sections of instrumentation, data analysis and uncertainty estimation. I would suggest an improvement of the Introduction section, and a further discussion about the temporal pattern of the advetion term on the basis of Fig. 18. Additionally, English language should be double checked.
Revision/response: Thank you for the good assessment of our paper. The Introduction section was re-organized. Figs. with results of measurements were discussed more detailed. The English language was checked as well as possible. Furthermore, during the article processing of final revised papers for publication in AMT, English language copy-editing is included which will polish last shortcomings.

Specific comments:
Introduction section
- Page 2 Line 8 says 'significant values', and Line 31 mentioned the threshold value of '5 μmol m-2 s-1'. It would be better to organized them into one paragraph.
Revision/response: The sentences were organized into one paragraph.

- Page 2 Line 27 talks about the recent measurements of advection, while Page 3 Line 12 talks about the uncertainties of these measurements. It would be better to organized them into one paragraph.
Revision/response: The parts of text about measurements and uncertainties were organized into one paragraph.

- Page 3 Line 33. Separate the texts from 'Consequently' as a new paragraph.
Revision/response: The text was separated and organized as a new paragraph.

English check, such as:
- Page 2 Line 17 should be 'with Vm as..., c as..., t as...'
Revision/response: The sentence was corrected.

- Page 2 Line 31. single sentence merge to a paragraph.
Revision/response: Two sentences were merged and replaced to the first part of the Introduction.

- Page 7 Line 21 to Page 8 Line 6. and Page 8 Line 30 should be written in past tense.
Revision/response: We wrote the first sentence of this paragraph in Past Tense. We did not change the sentences 'Fluxes of CO2 (NEE), H2O (evapotranspiration) and sensible heat are available on a half-hourly basis.' and 'which are permanently updated according to sensor and software development'. The

EC measurements have been active since 2002 (permanent measurement station). Present Perfect is used here, because the action is continuing until now.

Page 8 Line 5: ’class-a-pan’ should begin with capitalized letter.
Revision/response: It was corrected.

- Page 8 Line 25: should be ’which was equipped’.
Revision/response: It was corrected.

The two equations in Eq. (3) can be numbered separately.
Revision/response: The two equations were numbered separately.

FIg. 1 can be merged with Fig. 2.
Revision/response: The two Figs. were merged into Fig. 1.