

1 We would like to thank the Editor and the anonymous Reviewer for having carefully read the
2 revised version of the manuscript. We would like to thank the Editor for providing helpful
3 comments, which improved the manuscript. Point-by-point replies to the comments are here
4 below.

5

6 For clarity and easy visualization, the Editor's comments are shown from here on in black.

7

8 The authors' replies are in blue font with an increased indent below each of the
9 referee's statements. The Line numbers (L.) in our responses refer to the unrevised
10 manuscript.

11

12 The relevant changes in the revised manuscript are below in green.

13

14 **Comments to the author:**

15 I would like to thank the authors for incorporating the suggestions made by the reviewers.
16 The revised version looks pretty good and it is almost ready for publication; however, I have
17 the following additional and final comments before I can accept the manuscript.

18

19 **Minor/Technical Comments:**

20

21 Lines 8 and 274: Should it be "thirds"?

22

23 Yes.

24

25 Line 17: ...-38°C and RH_i >145%...

26

27 Thank you. We adapted this.

28

29 ...-38°C when the relative humidity with respect to ice is above 145%...

30

31 Line 18: ...temperatures and lower RH_i vales...

32

33 Thanks.

34

35 Line 19: "water vapor deposition"

36

37 Done.

38

39 Lines 34-35: ...with respect to ice (RH_{ice}) and liquid water (RH_{water})...

40

41 Done.

42

43 Line 65 and Figure 2: "Of note" sounds a bit strange to me.

44

45 Deleted.

46

47 Lines 65-68: Do the authors know how these changes could have impact the delivered
48 results compared if the "original" version was used?

49

50 These slight modifications, which are unrelated to the main instrument components,
51 should not have impacted the results. We added a sentence.

52

53 Since the main components of the instrument, including the cameras, have been kept
54 in their original condition, we expect that our instrument provides the same results as
55 an unmodified MASC.

56
57

58 Line 68: What do the authors mean with “on the instrument field”?

59

60 We meant measurement field and reformulated two sentences.

61

62 The instrument was installed at two meters above ground next to other field
63 instruments that are part of...

64

65 L. 121: In the WMO SPICE measurement field,...

66

67 Line 89: SUCH with an undefinable habit, SUCH as broken...

68

69 Thank you.

70

71 Line 91:...columns, and rosettes)

72

73 Done.

74

75 Lines 109-110:...profiles of RHice were...

76

77 Done.

78

79 Lines 114-115:...temperature, RHice,...

80

81 Done.

82

83 Line 137: “Radiosondes were.....UTC”. This was already mentioned above. I suggest to
84 delete it.

85

86 O.K.

87

88 Line 151: What do the authors mean with “eventual riming”?

89

90 Thank you. We meant riming degree.

91

92 Line 154: I suggest to replace “meteorological parameters on ground” by “Ground-based
93 meteorological parameters”

94

95 Done.

96

97 Line 166:...i.e. RHwater, pressure...

98

99 Done.

100

101 Line 169: The RHice of the profiles...

102

103 Done.

104

105 Line 170: “meters”

106

107 Thanks.

108 Lines 172-173: RHwater
109
110 Done.
111
112 Line 243: how about “by the degree of unsaturated air”
113
114 Sounds good. Thank you.
115
116 Lines 250-252: I find this a bit speculative as the composition of the INPs was not monitored
117 in the present study. I suggest to change/soften the tone of this conclusion.
118
119 True. We reformulated it and say “we speculate that...”
120
121 Line 251: INPs defined above.
122
123 O.K.
124
125 Line 264: “condensation freezing mode”
126
127 Thanks.
128
129 Line 283: Should it be “in relation to the temperatures observed”?
130
131 Yes.
132
133 Figure 1: In the same line you have “LOCATION” and “LOCATED”. Please fix this.
134
135 Done.
136
137 Figure 8: What do the authors mean with “as shown in a”?
138
139 Thanks. We now refer to the appropriate Figure.
140
141 Figure 12: Should it be “snowfall events”?
142
143 Yes.
144
145 Figure A1. Delete “the” before “pressure”.
146
147 Done.
148
149 Table A2: Date and time FOR each...
150
151 Thank you.
152