## Answers to comments by Anonymous Referee #2

We thank the reviewer for his/her comments on our manuscript. Since the other referee (#1) suggested to shorten the manuscript, we have shortened Section 5 on quality assurance, transferring a major part from this section to the supplement.

The point-by-point replies to the comments are provided below:

## Minor comments:

<u>Comment #1:</u> line 58, 1990ies (and later), change to 1990s or '90s: MLA Handbook for Writers of Research Papers, 7th edition. This, from p. 84. "Decades are usually written out without capitalization (the nineties), but it is acceptable to express them in figures (the 1990s, the '60s). Whichever form you use, be consistent."

Answer: Ok

Changes in manuscript: changed to 1990s

Comment #2: line 62, interSect -> intersect

Answer: Ok

Changes in manuscript: changed as suggested

<u>Comment #3:</u> line 67, and later of -> and later on

Answer: Ok

Changes in manuscript: changed as suggested

<u>Comment #4:</u> line 86, ecCodes (earlier referred to as eccodes) be consistent

<u>Answer:</u> Thank you for this hint. We agree.

<u>Changes in manuscript:</u> changed to ecCodes throughout the manuscript

<u>Comment #5:</u> line 86, would change 'was implemented' to 'was utilized'

Answer: Ok

Changes in manuscript: changed as suggested

<u>Comment #6:</u> line 98, ECMWF and IFS are already defined... and throughout, drop repeat acronym definitions

<u>Answer:</u> We agree, except for the definition in the introduction section, although it was already defined in the abstract (abstract may not be read by everybody).

<u>Changes in manuscript</u>: We eliminated repeated acronym definitions throughout the manuscript for ECMWF/IFS/MARS and others.

<u>Comment #7:</u> line 103, "All details can be found in the literature mentioned" is an empty sentence, suggest dropping it.

Answer: Ok

<u>Changes in manuscript:</u> eliminated as suggested

<u>Comment #8:</u> line 113, use ECMWF as it has been defined...

Answer: Ok

Changes in manuscript: changed as suggested

Comment #9: line 116, MARS has been defined...

Answer: Ok

Changes in manuscript: changes as suggested

<u>Comment #10:</u> line 150, choose meta data or metadata and use consistently

Answer: We chose meta data.

<u>Changes in manuscript:</u> changed throughout the manuscript to meta data

<u>Comment #11:</u> line 155, "The horizontal grid type refers to the way how it fields are archived in MARS" not clear...

<u>Answer:</u> We slightly rephrased the sentence, refering to the spatial representation which was already defined on page 4 lines 118-120.

<u>Changes in manuscript:</u> The horizontal grid type refers to the spatial representation.

<u>Comment #12:</u> line 169, inplied -> implied

Answer: Ok

Changes in manuscript: changed as suggested

<u>Comment #13:</u> *line 181, ecessary –> necessarily* 

Answer: Ok

Changes in manuscript: changed as suggested

<u>Comment #14:</u> line 720, Lag rangian -> Lagrangian

<u>Answer:</u> Ok

<u>Changes in manuscript:</u> changed as suggested