

## ***Interactive comment on “Flex\_extract v7.1 – A software to retrieve and prepare ECMWF data for use in FLEXPART” by Anne Philipp et al.***

### **Anonymous Referee #2**

Received and published: 21 May 2020

The manuscript "Flex\_extract v7.1 – A software to retrieve and prepare ECMWF data for use in FLEXPART" presents an exhaustive introduction of software written to retrieve driving variable data for the Lagrangian particle transport model, FLEXPART. This software is critical to the use of FLEXPART and has been widely used by the research community for a number of years. However, the complexity and required knowledge of the software certainly presented an obstacle for many in using FLEXPART itself.

The major refactor of the software is a welcomed contribution and will greatly facilitate the use of FLEXPART. Further, however, it seems there will be stand-alone use cases of Flex\_extract given some of the features and facilities it provides for working with the ECMWF data archives.

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The manuscript itself is extensive, and upon a cursory review it would be easy to say it is too long, and should be shortened. However, as a reference document it provides some key information and gives a good overview of the developer's decisions regarding certain choices. If the editor or other reviewers find shortening is required, it is this reviewer's opinion that Section 5 on quality assurance – though interesting – is not necessarily required. In particular the section on code metrics seems rather extensive.

I recommend publication with a few minor corrections, noted below.

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."

line 62, interSect → intersect

line 67, and later of → and later on

line 86, ecCodes (earlier referred to as eccodes) be consistent

line 86, would change 'was implemented' to 'was utilized'

line 98, ECMWF and IFS are already defined... and throughout, drop repeat acronym definitions

line 103, "All details can be found in the literature mentioned" is an empty sentence, suggest dropping it.

line 113, use ECMWF as it has been definged...

line 116, MARS has been defined...

line 150, choose meta data or metadata and use consistently

line 155, "The horizontal grid type refers to the way how it is archived in MARS" not clear...

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line 169, inplied → implied

line 181, ecessary → necessarily

line 720, Lag rangian → Lagrangian

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Interactive comment on Geosci. Model Dev. Discuss., <https://doi.org/10.5194/gmd-2019-358>, 2020.