Review of the revised version of the paper:

"A new time-independent formulation of fractional release"

written by Jennifer Ostermller et al.

General:

The paper significantly improved. Especially, the introduction and the description of the problem are well-written and well-done. I have only few minor comments listed below.

Minor points:

1. Abstract, L3-5

   Here my recommendation: ...affects the calculation of the Ozone Depletion Potential (ODP). In this context time-independent values are needed which, in particular, should be independent of the trends in the tropospheric mixing ratios....

   I would not use the notation "steady-state" here because steady-state can also be understood in the context of steady state of forcing (i.e. trends of halogenated trace gases) or steady state of the whole atmosphere (no change in the BD circulation). What you mean is the independence of the definition of FRF on the tropospheric trends of the halogenated trace gases.

2. P2 L12

   "However, FRF should not be dependent..." - great sentence. I would like to have something similar in the abstract (see above)

3. P3 L31

   You use the notation "entry mixing ratio" at the location r for $\chi_{entry}(r, t)$. For me it is much more a reference mixing ratio which has to be defined in appropriate way. Maybe you use this notation because of "historical reason". This could be OK if you explain it in this way. I would recommend to add 1-2 sentences to clarify this point.

4. P4 eq (2)

   I would recommend to write:

   $$\chi_{entry}(r, t) = \chi_{trop}(t - \Gamma(r))$$

   where $\Gamma(r)$ is the mean age of a steady state atmosphere (see eq. (3)).

5. P5 L17-19

   I would remove these 2 sentences. They confuse more than explain

6. P6 L25

   Maybe more simple: "This tracer is linearly increasing in time in the lowest model layer"

7. P7 L25

   You should discuss different lifetimes of your idealized tracers earlier in the text, e.g. at the end of section 3.1 (after L21). It would make the following text easier to understand. Maybe you simply shift the lifetime discussion to this place.