The manuscript by Skov et al. deals with an 11-yrs data set of atmospheric GEM observations in the high Arctic. As such, it is meriting for publication in ACP. My rating for scientific significance is excellent and scientific quality is good while the presentation is of only low to fair quality. I generally agree with the comments put by Referee 2 in his/her exhaustive review.

Two items that disturbed me are the substandard quality of graphs and the lack of updated information on Polar Hg cycling.

Following the authors' reply to referee 2, I subjectively judge that the authors have responded to the remarks in an adequate way (presentation quality raised to "good") .

I have a few remaining comments concerning previous Figure 5 and the atmospheric/snow chemistry:

There are substantial advances in the knowledge of Arctic Hg cycling using stable isotopes.

- An example is that dry deposited Hg^0 rather than AMDE-sourced Hg comprises the majority (~76–91%) of snowmelt Hg^{II} in the coastal Arctic [1, 2].

It is appropriate that this info is added to Fig. 5. and mentioned in Section 3. 1

There has also been a progression in the assessment of Br-induced GEM oxidation.

- The authors should consider responding and citing e. g. the following paper: Wang S, McNamara SM, Moore CW, Obrist D, Steffen A, Shepson PB, et al. Direct detection of atmospheric atomic bromine leading to mercury and ozone depletion. Proceedings of the National Academy of Sciences 2019; 116: 14479-14484.

References

1. Douglas, T.A., and J.D. Blum, *Mercury Isotopes Reveal Atmospheric Gaseous Mercury Deposition Directly to the Arctic Coastal Snowpack.* Environmental Science & Technology Letters, 2019. **6**(4): p. 235-242.
2. Jiskra, M., et al., *Insights from mercury stable isotopes on terrestrial–atmosphere exchange of Hg(0) in the Arctic tundra.* Biogeosciences, 2019. **16**(20): p. 4051-4064.