Review of revised paper acp-2026-161: Linking In-Canopy Chemistry to Above-Canopy O3, BVOCs, and NOx Gas Fluxes in the Amazon Rainforest by Brown et al.

I have checked the response to the raised comments as well as the revised paper. Many revisions have been made also tackling the comments raised by the other reviewer. The model system itself has been described in much more detail (also partly in response to the other reviewer's comments) and most of the issues that I raised seem to properly tackled. Therefore, I deem the paper to be acceptable for publication in ACP upon addressing mostly some last minor issues.

Based on a previously shared comment you introduced the following modification.
Line 98: "This acts as a first step towards identifying the important features of trace gas exchange required for improved representation of tropical forest in-canopy chemistry in global models"

I don't think it is mainly/only about improved representation of tropical forest in-canopy chemistry; it is about the combined role of all in-canopy interactions including biogenic emissions, chemistry, turbulence and deposition ultimately determining the effective atmosphere-biosphere exchange fluxes in large-scale (regional and global) models.

Also triggered by the statement in the abstract (line 24/35): "Whilst canopy models have been applied to temperate forests, there are few studies in tropical forests", I might refer you to another tropical forest study (lead by one of your co-authors, Atmos. Chem. Phys., 18, 3403–3418, 2018 https://doi.org/10.5194/acp-18-3403-2018, for which we also used a multi-layer canopy model) showing that there is more than chemistry involved in these BVOC/O3 interactions of the tropical forest; wet and dry non-stomatal removal processes. I am also bringing this up in response to your modified model deposition description and the discussion about non-stomatal removal in NOx exchange (lines 1076/1077). In this discussion you could shortly elaborate on not considering such differentiation between wet and dry non-stomatal removal processes (or did I miss something?). With a tropical rainforest canopy, the role of canopy wetness by rain/dewfall interception might have relevant implications for BVOC (especially the more soluble products), O_3 (and NO_x?) exchange.

You mention in the paper that there were no O_3 dry deposition velocity measurements and which made me aware that for the diagnosed periods (since later on they collected/are still measuring (?) O_3 fluxes at ATTO) that there are no O_3 flux measurements. It would be useful to explicitly mention this in the methods sections, also given a strong focus in your model analysis on the role of in-canopy chemistry on O_3 canopy-top fluxes but which then mostly relies on using only O_3 concentration measurements.

Line 166/167: In the modified section on constraining these 1-D canopy model experiments you now mention on the specifics of the nudging procedure that it secures that "the below-canopy environment is more likely to be well-represented and analysis can focus on below-canopy processes". This is not properly reflecting some of the motivations to nudge canopy exchange model experiments. It is also very useful to compare model simulated and observed atmosphere-biosphere fluxes, e.g.,

seeing changes in bi-directional exchange of NOx/BVOCs due to changing advection conditions.