We thank the referee for his comments and respond in the following. Below, bold texts are the original referee comments.

The authors describe new algorithms and data base to optimize and validate a wild fire plume model. The work is of excellent scientific quality, also the work is very useful and I am sure the data base on injection heights based on satellite data and the optimised plume model set the standard for the future. The first version of the manuscript was too long and not very readable in parts though. the authors have made a substantial effort to restructure the manuscript and put the heavy technical and cryptical part in the Appendix.

There are now two possibilities, either accept the manuscript as it is or, as the overall manuscript is still comparable in volume to original one and with 80 pages extremely long to reduce the Appendix.

My overall recommendation would still be to remove Appendix B1 and remove Figures 14-18 or 15-18. Instead of removing information this makes the paper more likely to be downloaded and read. The authors can provide if they want B1 as a technical Memo on their Website

We thank the Referee for his positive view of the paper. Although the Appendices are long, we think that they are of importance for some readers - especially those working directly on this topic. In particular, the results comparing the Dozier algorithm as applied to near-simultaneous scenes from both MODIS and BIRD is new. Therefore we have opted to keep the material in Appendix B - though putting it in the Appendix has kept the main manuscript much shorter. If the editor really wishes to shrink the length further we could move the Appendices into Supplementary Materials.