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## Reply to Editor on RCs

Štěpán Štverák et al.

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Author comment on "Io's auroral emissions via global hybrid plasma simulations" by  
Štěpán Štverák et al., Ann. Geophys. Discuss.,  
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Dear Editor,

Two very detailed referee's reports were provided to the manuscript "Io's auroral emissions via global hybrid plasma simulations" by Štverák et al. with a common recommendation for major revisions. Although the received comments pose a rather strong criticism of the manuscript, we are very thankful for such feedback showing us the weaknesses of the performed analysis and the way forward how the paper can be still significantly improved. Since the performed analysis was partly limited on the already existing simulation data set (Šebek et al., 2019), we see a necessity to perform as a first step a new set of dedicated simulation runs to correctly address and analyse the role of the individual plasma processes on the Io's interaction with the magnetospheric environment and thus on the generation of the aurora emissions. This is, however, a highly time demanding task (order of months) and we will therefore rather ask to withdraw the recent submission and later resubmit the fully reworked manuscript once available. We believe that some of the (minor) comments could be either argued or implemented into the manuscript already now, anyway, we prefer to do so after a careful revision of the whole manuscript and solving the major revisions first.

Kind regards,

Štěpán Štverák (on behalf of all co-authors)