

**Authors' response to reviewer#3 comments on manuscript
Dynamics of He⁺⁺ ions at interplanetary shocks
by Sapunova et al.**

Authors thanks a lot to the reviewer for the review. We tried to improve our manuscript despite the lack of specific comments. We increased the number of cases by adding the Earth's bow shock crossings, so our results have become more statistically significant. For more details, you can also see the answer to reviewer#2. It contains extended information about changes which we brought into the article.

Best regards,
Olga Sapunova