

Ann. Geophys. Discuss., community comment CC1  
<https://doi.org/10.5194/angeo-2022-2-CC1>, 2022  
© Author(s) 2022. This work is distributed under  
the Creative Commons Attribution 4.0 License.

## **Comment on angeo-2022-2**

Wieslaw M. Macek

---

Community comment on "Fine structure and motion of the bow shock and particle energisation mechanisms inferred from Magnetospheric Multiscale (MMS) observations" by Krzysztof Stasiewicz and Zbigniew Kłos, Ann. Geophys. Discuss., <https://doi.org/10.5194/angeo-2022-2-CC1>, 2022

---

The authors of the paper have explained structure of distribution functions in velocity space with double beam features depicted in Fig. 3. In my view, these new results are convincing. I also think that the anisotropy could somehow be related to the crescent structures often observed in MMS data. Anyway, a stochastic resonance acceleration process confirmed by those observations is an interesting possibility for energization mechanism for the collisionless plasma upstream of the Earth's bow shock.