

Ann. Geophys. Discuss., author comment AC2  
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## Reply on AC1 / 2

Maria Elena Innocenti et al.

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Author comment on "Unsupervised classification of simulated magnetospheric regions" by  
Maria Elena Innocenti et al., Ann. Geophys. Discuss.,  
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We will add an estimate on the agreement between the different classification experiments, with F1 as reference.

The SOMS + K-means classification and the pure K-means classification of the training dataset at time  $t_0 + 210$  minutes (depicted in Figure 7) classify 92.15 % of the points in the same cluster, 92.74 % if the two magnetosheath clusters just downstream the bow shock are considered the same. This is because different classification mostly occurs for inner magnetospheric clusters, see Fig. 7.

In the table in the supplemental material , we report the % of points classified in the same cluster as for F1 (second column) for the different feature sets used. Third column (header "M"): the two magnetosheath clusters downstream the bow shock are considered one

Notice: the feature set numbering is changed with respect to the submitted manuscript, to match the labeling in the new version.

Please also note the supplement to this comment:  
<https://angeo.copernicus.org/preprints/angeo-2021-33/angeo-2021-33-AC2-supplement.pdf>