

## ***Interactive comment on “Validation of MIPAS IMK/IAA methane profiles” by A. Laeng et al.***

**Anonymous Referee #2**

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In the manuscript presented the authors wish to present to the scientific community the validation of the official MIPAS IAA/IMK methane product. This validation is performed via comparisons to other satellite and in situ measurements of methane using different comparative tools. The paper shows some interesting results however is lacking in many aspects: first of all, I believe that the product should be presented in the beginning of the paper, maybe as a yearly zonal mean or whatever is more adequate and the physics of methane discussed. In this way, the reader will also be introduced to altitudes/seasons of importance to the rest of the text. Also, is this the only MIPAS CH<sub>4</sub> product out there? how has it been compared to other products? is there a full resolution CH<sub>4</sub> product? Secondly, there is no discussion after each section is presented as To what is the physical meaning of the comparisons shown. How are these to be used by other scientists? how do the comparisons shown render this product good to be used by other groups, such as the climate community mentioned in  
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the end of the conclusions section. No mention is made as to whether this is a publicly available product even. Lastly, I suggest that the prime authors read carefully through the annotated text I am attaching to this review and attempt to view their paper through the eyes of a third party interested in the latest in methane science. I trust that the manuscript can be greatly improved with these suggestions.

Please also note the supplement to this comment:  
<http://www.atmos-meas-tech-discuss.net/8/C2725/2015/amtd-8-C2725-2015-supplement.pdf>

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