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Interactive comment on "Multi-model ensemble simulations of olive pollen distribution in Europe in 2014" *by* Mikhail Sofiev et al.

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The paper deals with the ensemble modelling of the olive pollen distribution, which can have practical application in allergy forecasting. This problem is not very often considered in the simulations performed by air quality community and has its own specifics. Therefore some additional efforts have to be spent in order to understand the processes, relevant parameters and data important for the preparation of such simulations. This is quite clearly described in the paper. The system based on multi-model ensembling has been set-up to perform simulations for a chosen period of 2014 year. Estimation of source term is based on the special modelling and is also described in the paper. The ensemble setup is based on 6 models, 5 of them using the same meteorological data (ECMWF IFS). This means that this ensemble concerns, in principle, dispersion models – meteorological variety is practically disregarded. From statistics

point of view such number of the models can be not enough in real application, but can be treated as a first step. It seems that adding models driven by different meteo data could be important in case of building operational system of this type modelling. The authors proposed also an "optimized ensemble" model basing on properly chosen linear combination. This model has shown good skills although the choice of some parameters (like alpha, beta) seems to be rather art than to be based on pure mathematical approach.

The presented results have shown some capabilities of the constructed ensemble but also indicated problems like the shift of the whole season. This needs further research and is strictly related to meteorological forecast.

For specific comments see attached file.

Please also note the supplement to this comment:
http://www.atmos-chem-phys-discuss.net/acp-2016-1189/acp-2016-1189-RC1-supplement.pdf

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