

## ***Interactive comment on “About the effects of polarising optics on lidar signals and the $\Delta 90$ -calibration” by V. Freudenthaler***

**Anonymous Referee #3**

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This manuscript represents a very large and comprehensive body of work. Yes, it may be pedantic, but it is very well organized and very thorough. Best of all, the extensive mathematical formalism is boiled down by the author to just a few very valuable conclusions, so the main points are never lost. The conclusions suggest "best practices" for building polarization-sensitive lidars, so they are valuable to the worldwide lidar community.

The paper is well suited for the special issue on EARLINET, for this reason: EARLINET is not a geographically-distributed set of identical lidars (as MPLNET is), it is a network of mostly home-grown lidars that are different in their design details. For that reason, one paper discussing polarization techniques for the whole network must necessarily cover a wide range of designs and techniques. In writing such a paper, the author has also benefitted a much wider community of lidar practitioners. This is a happy outcome.

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For these reasons, I regard the paper as an excellent contribution that is well worth publishing.

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