RESPONSE TO REVIEWER #1 (reviewer's comment in italic)

In the paper "Photopolarimetric retrieval of snow properties" by M. Ottavani et al. airborne RSP measurements over snow and ice surfaces were analysed. Retrieving RSP measurements, optimal crystal parameters of the developed polarized reflectance model for snow and ice surfaces were estimated.
In the conclusions authors write: "The spectral dependence of the polarized reflectance is larger than for soil or vegetated surfaces, but nonetheless small". Figure 1 (second row) demonstrates strong spectral dependence of the surface polarized reflectance: polarized reflectance at 440nm can be more than 2 times larger than polarized reflectance at 864nm. Authors should make more clear statement about the spectral dependence of polarized reflectance for snow and ice surfaces.

The point we were trying to make here is that the spectral spread of the surface polarized reflectance is only slightly larger than that of other land surfaces. Given its small absolute value, to a very good approximation the retrieved polarized surface reflectance at 2264 nm (essentially all of the polarized signal measured by RSP at altitude) can be subtracted from the polarized signal at any shorter RSP wavelength, where the atmosphere constitute the major contributor, when attempting aerosol retrievals. In view of this argument, we propose to modify the sentence in question (Page 3065, line 18) as follows:
"The spectral dependence of the polarized reflectance is slightly larger than for soil or vegetated surfaces, but nonetheless small relative to typical aerosol contributions (cfr. Fig. 6 in O12)."
The referenced figure is part of the conclusions of our published preliminary study.