# Reply to Referee #3

First, we appreciate the positive review and, in particular, the detailed comments to improve the manuscript. The replies to the specific comments:

a) The 60° FOV measured by DA1 and DA2 has been clarified on page 3, line 16 "*These measurements will be referred to as zenith radiance with a 60° field of view*". The measurement geometries of each instrument are now also explicitly shown in Fig. 1, which should eliminate any remaining ambiguities.

b) Our measurements are shown for SZA larger than 40° (not 60°) which is representative for mid-latitude locations for most of the year.

c) We have chosen a set of the most representative SZAs (in roughly equal in steps) that illustrate the effects. We do not have a measurement exactly 0.5 hours from local noon, but since it would correspond to 39.5° SZA it would not contribute significant additional information to our data at 41.9° SZA.

d) We have indeed measured complete radiance spectra in the UV-VIS-NIR spectral range which carry an abundance of additional interesting information (e.g. trace gas total columns etc.). Our focus in this study lies on the asymmetries in the sky radiance due to the albedo distribution at a coastline. These effects are showcased by three representative wavelengths, optimizing the ratio of data/conclusion.

The measured total data includes more than 60 spectra of zenith radiance and 30 azimuth scans with each scan consisting of 17 spectra (at each azimuth angle) and scans in the principal plane. Each spectrum consists of 2048 pixels (wavelengths). So the amount of data is significant and the challenge is to distill the information and to show the essential part that contributes to the conclusions. As we assure under *Data availability*, all data are available on request to the corresponding author.

1) Figure1 has been modified, to show the measurement geometry of each instrument. The geometries of observer, sun, sky and coastline is depicted in the left panel of Fig.1 (model set up).

2) 70 ° viewing zenith angle has been added to the caption of Fig 2. Mentioning the almucantar is a valuable improvement (we were a little worried that it would be confusing for the aerosol community where often almucantar is used as jargon for solar almucantar). The almucantar has now been referred to on page 3, line 25 *"…measure the spectral radiance for a set of azimuth angles at 70° zenith angle, i.e. along an almucantar*".

3) The last paragraph of section 2.1 has been clarified, and details about the sun photometer used (PFR-SPM) are given:

"*…a sun photometer (the precision filter radiometer (PFR-SPM) developed by the Physikalisch-Meteorologisches Observatorium (PMOD) in Davos, Switzerland, for the Global Atmospheric Watch Network) was used to measure the aerosol optical depth (AOD) at four wavelength channels, 368 nm, 412 nm, 501 nm and 862 nm*."

4) The SPM measures at the wavelengths of 368 nm, 412 nm, 501 nm and 862 nm, from which we determine the Angstrom coefficients. The difference of the Angstrom interpolated AOD at our wavelengths (e.g. 450 nm) are minor. So yes, differences should be absorbed in the uncertainty bands.

5) The sentence, page 9, line 21 has been clarified to "…*constant AOD over the course of the day*".