We are grateful to the reviewer for their constructive comments including the lunar AOD uncertainty assessment and more complete referencing of prior work in the field.

The manuscript makes a thorough assessment of the lunar-based aerosol optical depth within AERONET. The performance of this new AERONET product is successful as shown by a robust statistical analysis and comparison to the well-established daytime AOD, including cloud screening. The explanations on the limitations of the technique are very illustrative. The paper is worth publication in AMT upon correction of several aspects that are not sufficiently explained (minor revision):

1. The uncertainty of the lunar-based AOD is not provided. For daytime, the 0.01-0.02 of Holben et al 1998 paper is widely known. What is it for AERONET lunar AOD product? Should it depend on airmass, lunar phase angle, AOD itself…? Uncertainty assessment is crucial if you intend to provide an assessment of this product. Nothing is said on the quality assurance of lunar-based data. Will this product have a level 2? Are the quality criteria the same as for solar version 3 AOD?

The paper discusses the absence of curvature check at night (less effective cloud-screening) which could also introduce differences in the lunar data relative to the solar data. Assuming no differences due to clouds, the accuracy of solar and lunar will be equivalent (within the small differences noted) for the same airmass regardless of AOD. AOD accuracy (solar or lunar) is highly dependent on airmass, improving with larger airmass (m) by a factor of 1/m, therefore accuracy is normally stated for AM=1. Additional analyses of solar/lunar disparity by binned lunar phase angle is now included in the paper which indicates mean differences are $<$ 0.005 in all bins except the large LPA range (80°-90°) for 440nm. Triplet variability of lunar AOD measurements are also larger than solar AOD (see Fig 17). Based on the observed differences of AOD for solar/lunar transition intervals however the combined effects of these extra uncertainties is not sufficient to preclude lunar AOD from L2 designation with the same nomimal 0.01-0.02 AOD uncertainties at AM=1.

Mean AOD differences by LPA bin for each wavelength are provided in Table S3 in the supplemental section.

Table S3: Mean AOD differences and sample sizes (N) by lunar phase angle (LPA) bin and wavelength channel.

	440 nm		500 nm		675 nm		870 nm		1020 nm		1640 nm	
LPA bin (°)	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
$(-90, -80]$	-0.0019	7650	-0.0001	8104	0.0043	8324	0.0022	8358	0.0004	8177	0.0007	5812
$(-80, -70]$	-0.0007	10117	0.0004	10633	0.0026	10956	0.0006	10961	-0.0013	10683	0.0010	10172
$(-70, -60]$	-0.0014	11633	0.0004	12108	0.0025	12403	0.0002	12358	-0.0015	12234	0.0002	11466
$(-60, -50]$	-0.0016	11973	-0.0001	12403	0.0023	12429	0.0005	12427	-0.0008	12320	0.0005	11549
$(-50, -40]$	-0.0020	13087	-0.0016	13368	0.0014	13528	0.0002	13552	-0.0015	13428	0.0003	12636
$(-40, -30]$	-0.0009	12990	-0.0006	13172	0.0018	13297	0.0008	13266	-0.0007	13253	0.0009	12330
$(-30, -20]$	-0.0013	13645	-0.0006	13815	0.0010	13901	0.0002	13873	-0.0008	13757	0.0004	13075
$(-20, -10]$	-0.0005	18416	-0.0002	18500	0.0004	18651	0.0003	18605	-0.0001	18472	0.0002	17457
$(-10, 0]$	0.0006	20707	0.0008	20787	0.0004	20933	0.0005	20932	0.0005	20702	0.0006	19782
$(0, +10]$	0.0004	22668	0.0002	22677	-0.0004	22842	-0.0002	22853	0.0003	22586	0.0003	21403
$(+10, +20]$	0.0011	20739	0.0013	20819	-0.0012	21036	-0.0001	21018	0.0010	20764	0.0003	19718
$(+20, +30]$	0.0017	15949	0.0020	16180	-0.0015	16312	0.0003	16288	0.0019	16029	0.0005	15518
$(+30, +40]$	0.0020	15489	0.0011	15777	-0.0018	15990	0.0003	15949	0.0022	15757	-0.0001	14892
$(+40, +50]$	0.0042	15492	0.0013	15825	-0.0016	16074	-0.0006	16032	0.0026	15729	0.0007	15155
$(+50, +60]$	0.0000	13994	0.0002	14587	-0.0017	14764	-0.0012	14811	0.0014	14489	-0.0005	13891
$(+60, +70]$	-0.0002	13058	0.0000	13842	-0.0016	14161	-0.0002	14162	0.0008	13761	-0.0008	13353
$(+70, +80]$	0.0045	11522	0.0037	12110	-0.0006	12391	0.0016	12403	0.0017	12060	0.0003	11849
$(+80, +90]$	0.0072	6933	0.0059	7307	-0.0008	7463	0.0025	7455	0.0025	7230	-0.0001	5809

The following statements added to the text.

"When assessed in 10° lunar phase angle bins, the mean AOD 440_{nm} transition differences were within $±$0.005 for all bins except [80°- 90°] (0.0072) which has the lowest lunar signal but also compromises a small fraction of observations (2.7%). Mean AOD differences for 675nm and longer wavelengths were within $\pm$ 0.002 for all LPA bins. These statistics are presented in Table S3 in the supplemental section."

2. The method for correction of the ROLO needs a much more detailed description. As far as I know, it is the first AERONET publication on lunar AOD. You need to explain it, from the beginning. Give formulation, details and references on the applied calibration (lunar Langley plot, etc.). If all calculation of lunar AOD is just the same as for solar AOD in version 3, please state it and refer to Giles et al paper. Even astronomical libraries (SPICE?) need to be reported and referenced. For reproducibility, the correction factors for each wavelength must be provided, together with descriptive statistics, probably binned for phase angle intervals. For instance, the noisy data in Figure 2 are worth some comment (reasons?) and quantification.

Additional details on the exact selection process for solar/lunar langley correction have been added. A table of the derived ROLO correction coefficients for each CIMEL wavelength will be included in Table S2 in the supplemental section.

The following text has been added to the paper.

"A large number of Automated Langleys (Langley pair counts ranged from 634 to 1537 depending on channel) were made with empirically determined thresholds based on AOD and correlation coefficient of the Langley fit, with lunar Langleys computed following the same Langley protocol used for solar Langleys. The updated corrections in this paper are now based on a much larger set of solar/lunar Langley pairs than were used for the original provisional lunar dataset. For each corresponding pair of solar and lunar Langleys, the pair was retained if the associated AOD was below a wavelength-dependent maximum AOD (0.015–0.04), the average AOD during the solar and lunar Langley intervals agreed within δAOD, and the correlation coefficient was sufficiently high. These thresholds were selected to balance Langley quality with the number of Langley pairs over the full LPA range (Table~S2 in the Supplement)."

The specific thresholds used are listed in Table S2 in the supplemental section.:

Table S2: Langley pair quality thresholds by channel.

Channel (nm)	max AOD	δ AOD	C.C.
440	0.04	0.002	0.95
500	0.03	0.002	0.95
675	0.02	0.001	0.95
870	0.01	0.001	0.95
1020	0.01	0.001	0.95
1640	0.015	0.001	0.99

Once the LPA-adjusted calibration coefficient is acquired, the calculation of lunar AOD is carried out identically as for solar AOD.

The greater noise in Fig.2 for 440nm is primarily due to lower signal for the 440nm. The majority of scatter is associated with earlier versions of the Model T sun/sky/moon photometer while more recent versions are generally less divergent. The dataset was not restricted to only the most recent cimels however because it reduced the number Langley pairs by 2-3x and because the scatter is quite random. Regardless, the computed LOESS fit for each potential set was very similar with overlapping confidence interval for all or most of the range though, and the CI band is noticeably narrower for the more inclusive dataset (including older model T), particularly at the extremes (|LPA| > 70) where data are sparse – which is the expected benefit of the larger number of input points.

References for the NAIF/SPICE library used for lunar geometry have been added.

The following text has been added to Section 2:

"The greater noise in Figure 2 at 440,nm is primarily attributable to the lower signal in this channel. Most of the scatter is associated with earlier versions of the Model~T Sun–Sky–Moon photometer, whereas more recent instrument versions generally exhibit less divergence. However, the dataset was not restricted to the most recent CIMEL instruments because doing so reduced the number of Langley pairs by a factor of 2–3 and because the additional scatter is largely random. Nevertheless, the LOESS fits derived from each candidate dataset were very similar, with overlapping confidence intervals over all or most of the LPA range. The confidence interval band is noticeably narrower for the more inclusive dataset, which includes the earlier Model~T instruments, particularly at large phase angles ($|\mathrm{LPA}| > 70^{\circ}$) where data are sparse. This increased precision is the expected benefit of the larger number of input observations."

Also you should say in the revised text of the paper that the calculation of the lunar AOD is the same as for the solar AOD and give the Giles et al. (2019) reference. This is a reasonable question that many other readers may have.

This is now stated.

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3. The references to prior work in the field are rather incomplete and, in some cases, also inaccurate. I miss citation to prior work in lunar photometry within AERONET (e.g. Berkoff et al 2011, several Barreto et al papers), to studies reporting ROLO inaccuracies (e.g. Lacherade et al 2013 in comparison to satellite, or the assessment by Stone et al 2020, Kieffer 2022). The correction by Roman et al is not based on star photometry; it relies on day-night continuity in AOD. Star photometry is used as an independent measurement to validate the results. The NASA Air Lusi project or other lunar models are not mentioned either.

The initial sections have been expanded, adding 9 additional references including:.

Acton, C., Bachman, N., Semenov, B., & Wright, E. (2017). A Look Towards the Future in the Handling of Space Science Mission Geometry. Planetary and Space Science*, 150, 9–12. https://doi.org/10.1016/j.pss.2017.02.013*

Acton, C. H. (1996). Ancillary Data Services of NASA's Navigation and Ancillary Information Facility. Planetary and Space Science*, 44, 65–70. https://doi.org/10.1016/0032-0633(95)00107-7*

Barreto, Á., Cuevas, E., Damiri, B., Guirado, C., Berkoff, T., Berjón, A. J., Hernández, Y., Almansa, A. F., Gil, M., & Yela, M. (2013). A New Method for Nocturnal Aerosol Measurements with a Lunar Photometer Prototype. Atmospheric Measurement Techniques*, 6, 585–598. https://doi.org/10.5194/amt-6-585-2013*

Barreto, Á., Granados-Muñoz, M.-J., Cuevas, E., Alados-Arboledas, L., Román, R., Gröbner, J., Kouremeti, N., Almansa, A. F., Stone, T., Toledano, C., Sorokin, M., Holben, B., Canini, M., & Yela, M. (2016). The New Cimel CE318-T Sun–Sky–Lunar Multiband Photometer: Comprehensive Performance Evaluation. Atmospheric Measurement Techniques*, 9, 631–654. https://doi.org/10.5194/amt-9-631-2016*

Barreto, Á., Román, R., Cuevas, E., Pérez-Ramírez, D., Berjón, A. J., Kouremeti, N., Kazadzis, S., Gröbner, J., Mazzola, M., Toledano, C., Benavent-Oltra, J. A., Doppler, L., Juryšek, J., Almansa, A., Victori, S., Maupin, F., Guirado-Fuentes, C., González, R., Vitale, V., Goloub, P., Blarel, L., Antuña, J., Alados-Arboledas, L., Woolliams, E., Taylor, S., & Yela, M. (2019). Evaluation of Night-Time Aerosol Measurements and Lunar Irradiance Models in the Frame of the First Multi-Instrument Nocturnal Intercomparison Campaign. Atmospheric Environment*, 202, 190–211. https://doi.org/10.1016/j.atmosenv.2019.01.006*

Berkoff, T. A., Sorokin, M., Stone, T., Eck, T. F., Hoff, R., Welton, E., & Holben, B. (2011). Nocturnal Aerosol Optical Depth Measurements with a Small-Aperture Automated Photometer Using the Moon as a Light Source. Journal of Atmospheric and Oceanic Technology*, 28, 1297–1306. https://doi.org/10.1175/JTECH-D-10-05036.1*

Kieffer, H. H. (2022). Spectral Irradiance of the Moon: Applied Multiple-Instrument-Based Sensing. Journal of Applied Remote Sensing, 16, 038502. https://doi.org/10.1117/1.JRS.16.038502

Schlief, A. H., Marquis, J. W., Zhang, J., Reid, J. S., & Miller, S. D. (2026). Intercomparison of Nighttime Aerosol Optical Depth Retrievals from Both Reflectance-Based and City Light-Based Methods Using VIIRS DNB Data. EGUsphere, 2026, 1–31. https://doi.org/10.5194/egusphere-2026-2225

Zhang, J., Reid, J. S., Sorenson, B. T., Miller, S. D., Román, M. O., Wang, Z., Spurr, R. J. D., Jaker, S., Eck, T. F., & Rubin, J. I. (2025). Towards Gridded Nighttime Aerosol Optical Thickness Retrievals Using VIIRS Day–Night Band Observations over Regions with Artificial Light Sources. Atmospheric Measurement Techniques, 18, 1787–1810. https://doi.org/10.5194/amt-18-1787-2025

Other comments:

Line 24: there must be much more targeted references about sun photometer observations in Ny Alesund (and polar regions in general).

The seasonal intervals of continual day or night plus insufficient solar position below the horizon for most of the adjacent periods mean that there is no short interval overlap of solar and lunar AOD (minimum transition time gap for Ny_Ålesund_AWI is > 8 hours) so it's not possible to rely on day/night AOD transition comparisons used in this study to assess lunar AOD accuracy at such latitudes (78.9°). Limited statistics for mean AOD$_{440nm}$ differences for all sites with

|Latitude| > 60° can be computed for the four sites (Kuopio (Lat= 62.9°, Yellowknife_Aurora (62.5°), Narsarsauc (61.2°), Marambio (-64.2°)) with day/night transition events <= 3 hours (mean diff = 0.0009 $\pm$ 0.014, N=369).

The following line has been added to the Introduction:

"At such high latitudes, the seasonal intervals of continual day or night combined with insufficiently low solar position below the horizon in the adjacent periods to permit lunar observations means that there is almost no overlap of solar and lunar AOD observations in the AERONET record for such polar sites."

The following line has been added to Section 4.1:

"No dependence of the 3-hour transition AOD difference on latitude is observed when the data are binned by latitude (see Table~S5 in the Supplement). Limited statistics (due to larger day/night time gaps at very high latitudes) at sites with $|\text{Latitude}| > 60°$ can be computed for four sites: Kuopio ($62.9°$), Yellowknife_Aurora ($62.5°$), Narsarsauc ($61.2°$), and Marambio ($-64.2°$) which exhibit a very small mean $\text{AOD}_{440\,\text{nm}}$ difference of 0.0009 ± 0.014 ($N = 369$)."

Line 26-28: if you speak about the AERONET lunar method, this is the first time it is described, so you cannot mention it as if it were well known.

This line was out of place and is removed.

Line 28-35: the two papers cited here are just examples of usage of the preliminary (and undescribed) lunar AERONET product. Are these the only 2 papers using lunar AOD until now? Or are they just examples? Why these?

The number of papers using lunar AOD data are limited and the majority were based on the provisional non-research quality product. We include three papers using the final AERONET lunar AOD product listed here:

Zhang, J., Reid, J. S., Sorenson, B. T., Miller, S. D., Román, M. O., Wang, Z., Spurr, R. J. D., Jaker, S., Eck, T. F., and Rubin, J. I.: Towards gridded nighttime aerosol optical thickness retrievals using VIIRS day–night band observations over regions with artificial light sources, Atmos. Meas. Tech., 18, 1787–1810, https://doi.org/10.5194/amt-18-1787-2025, 2025.

Schlief, A. H., Marquis, J. W., Zhang, J., Reid, J. S., and Miller, S.: Intercomparison of nighttime aerosol optical depth retrievals from both reflectance-based and city light-based methods using VIIRS DNB data, EGUsphere (preprint), https://doi.org/10.5194/egusphere-2026-2225, 2026.

Li, J., Jin, J., Wong, M. S., Wang, J., Lee, K. H., Qin, K., and Chan, P. W.: Unraveling urban nighttime aerosol characteristics and meteorological factors on AOD-PM relationships in East Asia, Atmos. Environ., 360, 121388, https://doi.org/10.1016/j.atmosenv.2025.121388, 2025.

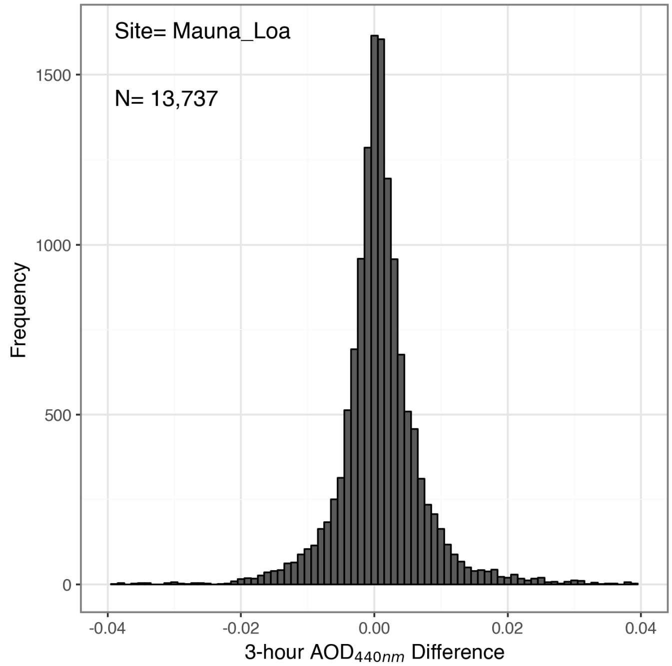
Line 36-39: the final goal of the paper is the assessment of the product, but the description of the retrieval method is key for transparency and must be part of the paper. So far all AERONET products have been extensively described in key publications (Holben, Dubovik, Eck, Smirnov, Giles, Sinyuk, O'Neill…).

No retrievals are possible at night due to the absence of sky radiances. Additional details have been added describing the selection process for solar/lunar langley comparisons (above). Once the LPA-corrected calibration is acquired, the computation of lunar AOD is identical to solar AOD. These are considered measurements of AOD, not retrievals.

Figure 3: visual inspection with such AOD levels is not very indicative of the performance. Try Mauna Loa. On the other hand, the examples shown here illustrate that, for most of the sites, you don't have any practical difference, which is also important and an indirect indication of lunar-based AOD uncertainty.

GSFC was chosen because it shows night to day continuity at both low (AOD 440nm = 0.05) and high AOD (very uncommon at MLO). Also, Mauna Loa normally has very low aerosol loading when AOD may be almost as small as the instrument uncertainty of 0.01 such that wavelength dependence of AOD (solar and lunar) is not robust and the Angstrom exponent would be unreliable. This is only an illustrative example. Precise quantification is provided on a site by site basis for all all locations with more than 50 transition AOD events (Fig 9) which thereby represents 109 sites.

For Mauna Loa specifically, the transition AOD difference = 0.0010 $\pm$ 0.0074 for 13, 737 transition interval comparisons.



If the performance of the night-time AOD is based on the comparison with daytime values, then the possible benefit of finding day-night cycles or systematic differences (lines 15-20) is somehow contradictory. Please clarify.

Comparisons are made by choosing low, stable AOD relatively short intervals of a few hours to minimize the likelihood of aerosol variation. There is no guarantee of stability of aerosol conditions over even this timeframe and the potential for significant differences between day and night AOD will only increase for comparisons that are made for complete day and night observation periods which may be a topic of scientific interest.

Line 93: 'mechanical' could maybe be replaced with 'geometrical'?

This has been replaced with 'geometric'.

Section 3.1: 'libration' is not explicitly mentioned. Please include it as it is a concept that is pertinent to lunar irradiance modeling.

**The effects of libration are not entirely negligible.

The following text has been added:

"While lunar libration (the apparent oscillation of the Moon that changes the viewing geometry of the lunar surface from Earth) is taken into account by the ROLO calculation, the AERONET bias correction is not explicitly a function this parameter (libration varies independently of LPA) so it will introduce some additional variation which could be consequential at large lunar phase angles. This secondary effect is being assessed currently so the AERONET bias correction and could potentially be refined to include this explicitly for an upcoming data version."

Section 3.1.1: solar 'declination' is not mentioned. More importantly, the discussion really lacks an example for high latitudes (e.g. the Ny Alesund site previously mentioned by the authors). Figure 4 could be enriched with high, low and mid-latitude cases. Nighttime photometry is key in polar regions. The number of possible lunar measurements can range from 0 to 24h within a day depending on the Sun elevation.

It's expected that ROLO computations account well for declination in the modeled lunar TOA irradiance since this is a well-defined effect of orbital dynamics. We see no dependence of the solar lunar AOD agreement on site latitude (see Table S5 in the supplemental section.)

Table S5: Mean and standard deviation of AOD differences by latitude bin.

Latitude bin (°)	Mean difference	Standard deviation	N
$(+60, +70]$	-0.0009	0.0143	365
$(+50, +60]$	0.0023	0.0148	2645
$(+40, +50]$	0.0003	0.0122	51714
$(+30, +40]$	0.0004	0.0121	83253
$(+20, +30]$	0.0022	0.0106	40667
$(+10, +20]$	0.0009	0.0084	15624
$(0, +10]$	-0.0006	0.0116	733
$(-10, 0]$	-0.0021	0.0122	2368
$(-20, -10]$	-0.0009	0.0126	13360
$(-30, -20]$	-0.0004	0.0111	37479
$(-40, -30]$	0.0011	0.0135	11440

Line 130: if the day-night differences depend on calibration, they should be insensitive to AOD. Why limiting to low AOD cases? Isn't aerosol variability an issue in this comparison exercise?

Lunar and solar AOD differences are not sensitive to AOD level, but certainly are sensitive to actual changes in aerosol over the ~3 hours between solar/lunar measurements, the probability of which increases as AOD increases. Thus, the lunar/solar AOD comparisons are selected for lower AOD and greater aerosol stability to minimize the confounding factor of temporal AOD variation between day and night observations.

Lines 138-140: the sentence is unclear to me. Please rephrase. Where is this 'point of reference' shown? What do you mean with: 'with a similar time window gap entirely within the solar day and lunar night' ?

The text was modified to the following to clarify this:

"The transitions compare solar vs. lunar AOD over a ~3 hour interval when aerosol conditions may have changed, which would degrade the comparison accuracy. So, comparable datasets were produced with a similar comparison of AOD with 3-hour lagged AOD for the same measurement type (using only solar AOD and only using lunar AOD). These comparisons would also experience effects due to real aerosol changes within the lagged window and thus provide statistics as a point of reference for the transition AOD differences."

Figures 5, 6, 7: please state in the caption what the color coding means.

Color bar labeling added for these.

Figure 7: the rmse is very small (partly by the huge number of data). But cases of large AOD differences (>0.1) are found in the plots, even for low AOD cases. How can this happen? Is it related to lunar phase? Table 1 indicates STD is reduced for longer wavelengths. Is there some explanation for that?

The solar/lunar comparison is made after an interval of several hours when aerosol conditions can certainly change. Even so, the incidence of large differences at low AOD is extremely small. For the lowest AOD 440nm range from 0-0.1, there are only 140 cases where the 3hr AOD difference is >0.1 out of 301,121 transition events (0.046%) with no notable dependence on LPA. For AOD differences > 0.05 in this AOD range, the percentage of cases rises to 1.21% for the transition events, which is comparable to the 0.85% observed for the 'within day' 3-hour lagged AOD which is fully independent of LPA variation.

Longer wavelengths typically have lower AOD and therefore lower absolute variability over the transition interval.

Line 147: 'excluding' should probably read 'excluded'.

Corrected

Table 2 caption looks somehow incomplete.

Table 2 title now states "3-hour difference of Ångström Exponent, precipitable water (cm), SDA AOD fine and coarse mode components for transition interval".

Line 159: please give quantification of global % of data removed by the curvature threshold. If it's marginal (as it seems from the discussion), it shouldn't be an issue for the network.

Approximately 4.55% of global solar L1.0 AOD are eliminated by the curvature (Figure 16) so it this effect can't be considered negligible.

The following line has been added to Section 4.2.:

"Giles et al. (2019)calculated that 4.55% of global solar Level~1.0 AOD observations are eliminated by the curvature check."

Line 189-190: 'sunphotometer' may be replaced by 'photometer'. More importantly, the Vo/1500 criterion sounds a bit arbitrary and could be better justified (or referenced). And once this is applied in the AOD retrieval scheme, of course the limit on AOD is clear and you don't actually need any real data to justify it. The Beer law and the airmass give it straight. The red curve in Fig.12 can be a simple calculation, it doesn't need data to be supported.

The maximum potential values vs airmass of solar AOD (red curve) are demonstrating observational consistency with the Beer-Lambert relationship which provides validation for the comparable empirical relationships for the lunar AOD maximums.

This threshold was based on empirical observation of AOD crossovers plus has theoretical underpinnings: see Giles at al. (2019). Also Sinyuk et al. (2012) gives theoretical underpinnings for this low signal threshold. This is not really a new issue for lunar since it also applied to solar AOD.

This is maybe not so obvious for the lunar data, especially because the retrieval scheme is not described. Some example of Sun and Moon V_0's (typical values for a Cimel T) would help to understand the differences, as well as the noise levels. Ultimately the signal-to-noise ratio appears to be more limiting factor in the lunar data than the diffuse light (sky) contribution within the instrument field of view, which is in turn the limiting factor with the Sun (wavelength differences may occur, though).

Signal-to-noise will be more of a limiting factor for lunar data at shorter wavelengths for higher AOD conditions. This factor however is instrument-dependent and was more of problem in the earliest sun/sky/moon photometer models.

Averaged across all the CIMELs contributing to the Bias correction relationship, the per-instrument CV (consistency) of the lunar Langley-derived V_0 is ≤1% at all channels.

The following line was added to the text:

"The per-instrument coefficient of variation (CV: std/mean) of moon V_0 was larger (0.52 - 1.05%) than for the sun V_0 (0.19 - 0.67%) for all channels."

The exact values shown in the table below.

Channel	V_0_sun_CV	V_0_moon_CV
440	0.0067	0.0088

Channel	V_0_sun_CV	V_0_moon_CV
500	0.0053	0.0080
675	0.0032	0.0071
870	0.0019	0.0059
1020	0.0035	0.0069
1020In	0.0024	0.0052
1640	0.0020	0.0105

Line 267: why not showing 870 or 1020 nm here if those wavelengths are more pertinent to cloud screening?

Triplet variability is relevant to AOD accuracy as well as cloud-screening and the variation with measurement type is more pronounced for 440nm. The equivalent plot with 675nm triplet data has been added to supplemental data too since this is a wavelength directly used for cloud-screening.

Line 274-275: this is not a conclusion of this study. It's rather a general comment that could be moved to the introduction.

This line was removed and conclusion re-worked.

Line 282: the usable hours of Sun and Moon strongly depend on latitude and season, see comment on section 3.1.1. This part of the conclusions can be enhanced with a global vision (instead of a mid-latitude vision only).

Plots showing the potential observation hours by latitude for solar and lunar observations have been generated and were added to supplemental data as Fig S1, below.