Supplementary tables to the manuscript:

Comparison of aerosol optical depth from satellite (MODIS), Sun photometer and pyrheliometer ground-based measurements in Cuba.

Juan Carlos Antuña-Marrero[1], Victoria Cachorro Revilla[2], Frank García Parrado[1], Ángel de Frutos Baraja[2], Albeth Rodríguez Vega[1], David Mateos[2], René Estevan Arredondo[3,1], Carlos Toledano[2]

[1] Atmospheric Optics Group of Camagüey (GOAC), Meteorological Institute of Cuba, Camagüey, Cuba
[2] Atmospheric Optics Group (GOA), University of Valladolid (UVA), Valladolid, Spain

[3] Huancayo Observatory, Geophysical Institute of Peru, Huancayo, Peru

	Monthly Statistics for single observations AOD Deep Blue																	
	Terra						Aqua						Terra + Aqua					
Month	RMSE	MAE	BIAS	R	f	N	RMSE	MAE	BIAS	R	f	N	RMSE	MAE	BIAS	R	f	N
J	0.049	0.035	-0.019	0.32	0.86	160	0.035	0.026	-0.009	0.25	0.91	54	0.046	0.032	-0.017	0.34	0.87	214
F	0.052	0.039	-0.026	0.63	0.83	118	0.038	0.029	-0.008	0.34	0.85	68	0.047	0.035	-0.019	0.63	0.84	186
M	0.081	0.058	-0.045	0.68	0.66	109	0.056	0.036	-0.020	0.60	0.88	69	0.072	0.050	-0.035	0.65	0.75	178
A	0.104	0.078	-0.066	0.68	0.59	34	0.062	0.048	-0.040	0.61	0.71	35	0.085	0.063	-0.053	0.69	0.65	69
M	0.091	0.078	-0.073	0.73	0.51	35	0.082	0.066	-0.064	0.74	0.69	29	0.087	0.073	-0.069	0.74	0.59	64
J	0.116	0.102	-0.101	0.75	0.31	49	0.105	0.092	-0.085	0.83	0.50	6	0.115	0.101	-0.100	0.76	0.33	55
J	0.135	0.096	-0.080	0.81	0.63	27	0.099	0.077	-0.017	0.89	0.71	28	0.118	0.086	-0.048	0.82	0.67	55
A	0.132	0.105	-0.092	0.69	0.50	64	0.137	0.122	-0.096	0.78	0.30	20	0.133	0.109	-0.093	0.63	0.45	84
S	0.116	0.103	-0.103	0.72	0.22	55	0.064	0.057	-0.027	0.82	0.56	9	0.110	0.097	-0.092	0.66	0.27	64
O	0.084	0.068	-0.068	0.70	0.44	48	0.070	0.060	-0.058	0.80	0.42	19	0.080	0.066	-0.065	0.62	0.43	67
N	0.063	0.051	-0.051	0.74	0.54	39	0.045	0.030	-0.022	0.85	0.82	22	0.057	0.044	-0.040	0.66	0.64	61
D	0.042	0.031	-0.019	0.25	0.85	142	0.037	0.029	-0.017	0.36	0.85	60	0.040	0.030	-0.019	0.31	0.85	202

Table S1: Tabulated results of the comparison between single observations AOD_t, AOD_a and AOD_{ta} derived using DB algorithm with AOD_{SP} at monthly scale.

Supplementary figures to the manuscript:

Comparison of aerosol optical depth from satellite (MODIS), Sun photometer and pyrheliometer ground-based measurements in Cuba.

Juan Carlos Antuña-Marrero[1], Victoria Cachorro Revilla[2], Frank García Parrado[1], Ángel de Frutos Baraja[2], Albeth Rodríguez Vega[1], David Mateos[2], René Estevan Arredondo[3,1], Carlos Toledano[2]

[1] Atmospheric Optics Group of Camagüey (GOAC), Meteorological Institute of Cuba, Camagüey, Cuba
[2] Atmospheric Optics Group (GOA), University of Valladolid (UVA), Valladolid, Spain

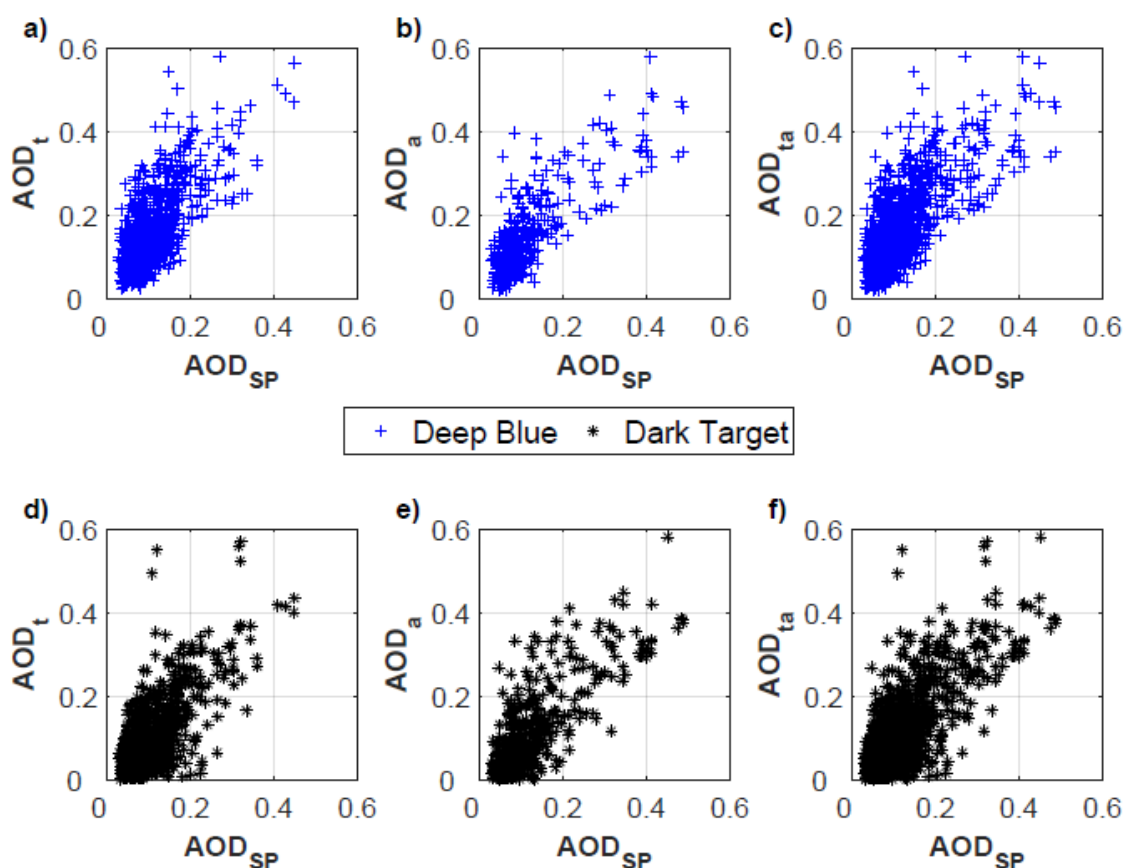[3] Huancayo Observatory, Geophysical Institute of Peru, Huancayo, Peru

Figure S1: Single observations scatter plots of the coincident AOD measurements from the sun photometer and Terra and Aqua MODIS instruments for DB and DT algorithms.: a) to c) Daily means of the AOD_{SP} vs AOD_t , AOD_a and AOD_{ta} respectively for DB algorithm; d) to f) Idem for DT algorithm.
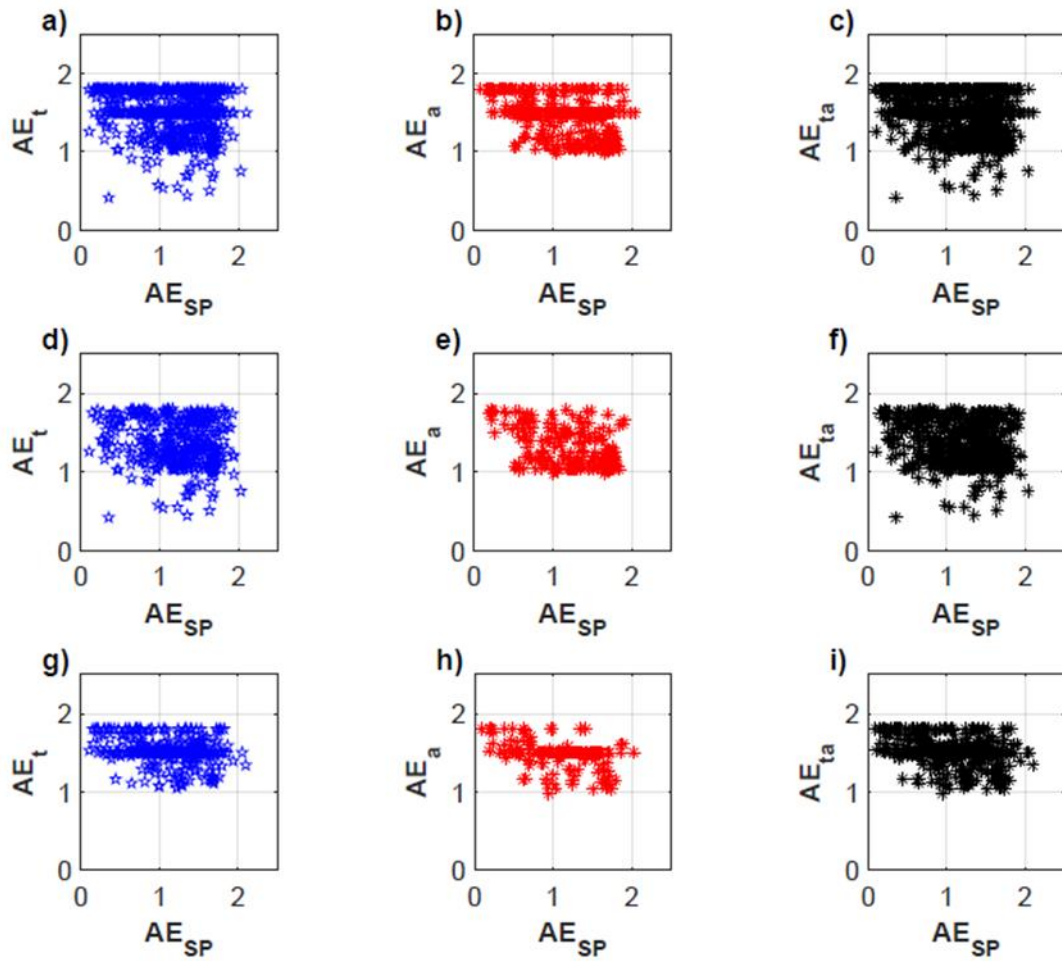
Figure S2: Scatter plots of the coincident AE measurements from the sun photometer and Terra and Aqua MODIS instruments for DB algorithm.: a) to c) Single observation of the AE_{SP} vs AE_t, AE_a and AE_{ta} respectively for DB; d) to f) Idem for Single observation excluding the AE values of 1.5 and 1.8 from MODIS; g) to i) Idem for daily means.
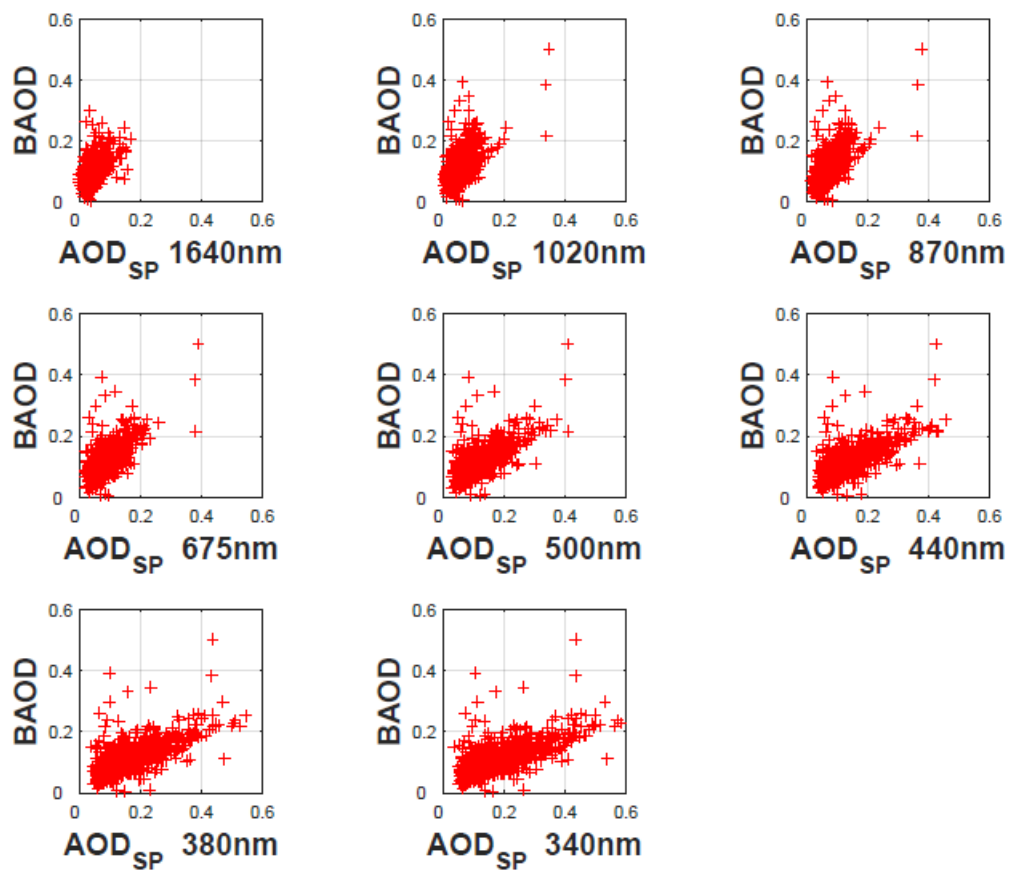
Figure S3: Single observations scatter plots of the coincident BAOD from the pyrheliometers and the sun photometer AOD at each of its eight wavelengths.

	Monthly Statistics for single observations AOD Dark Target																	
	Terra						Aqua						Terra + Aqua					
Month	RMSE	MAE	BIAS	R	f	N	RMSE	MAE	BIAS	R	f	N	RMSE	MAE	BIAS	R	f	N
J	0.043	0.034	0.025	0.48	0.88	163	0.046	0.042	0.039	0.39	0.90	52	0.044	0.036	0.028	0.51	0.88	215
F	0.045	0.039	0.036	0.68	0.82	115	0.058	0.051	0.048	0.26	0.68	50	0.049	0.042	0.039	0.72	0.78	165
M	0.072	0.060	0.053	0.53	0.67	98	0.074	0.062	0.056	0.39	0.62	55	0.073	0.061	0.054	0.59	0.65	153
A	0.057	0.051	0.041	0.58	0.74	31	0.058	0.048	0.017	0.75	0.74	38	0.058	0.049	0.028	0.78	0.74	69
M	0.083	0.066	0.059	0.59	0.56	41	0.069	0.058	0.056	0.73	0.76	29	0.078	0.063	0.058	0.70	0.64	70
J	0.085	0.062	-0.042	0.76	0.72	47	0.097	0.075	-0.063	0.81	0.64	14	0.088	0.065	-0.047	0.79	0.70	61
J	0.079	0.064	-0.027	0.83	0.59	32	0.090	0.077	0.020	0.89	0.79	33	0.085	0.071	-0.003	0.87	0.69	65
A	0.105	0.076	-0.040	0.70	0.59	63	0.079	0.064	-0.048	0.79	0.71	41	0.096	0.071	-0.043	0.66	0.63	104
S	0.069	0.060	-0.054	0.71	0.61	57	0.087	0.068	-0.025	0.75	0.68	22	0.074	0.063	-0.046	0.65	0.63	79
O	0.063	0.050	-0.041	0.65	0.69	51	0.055	0.037	-0.027	0.59	0.82	38	0.060	0.044	-0.035	0.52	0.74	89
N	0.043	0.034	-0.018	0.64	0.87	45	0.044	0.034	0.010	0.48	0.87	45	0.044	0.034	-0.004	0.60	0.87	90
D	0.030	0.023	0.003	0.49	0.94	157	0.046	0.035	0.024	0.36	0.94	83	0.037	0.027	0.010	0.35	0.94	240

Table S2: Tabulated results of the comparison between single observations AOD_t, AOD_a and AOD_{ta} derived using DT algorithm with AOD_{SP} at monthly scale.