

SUPPLEMENTARY MATERIAL

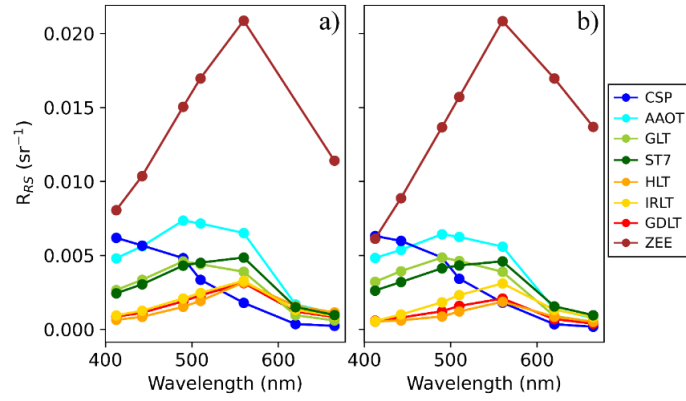


Figure S1. Mean spectral $R_{RS}(\lambda)$ values at the various AERONET-OC sites from *in situ* (a) and OLCI S3A and S3B (b) data.

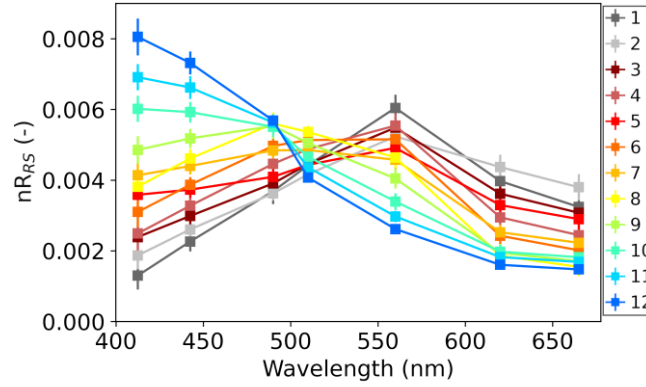


Figure S2. Mean and standard deviation values of the 12 clusters identified by ISODATA from OLCI $nR_{RS}(\lambda)$ spectra at all the coastal European AERONET-OC sites obtained with alternative parametrization.

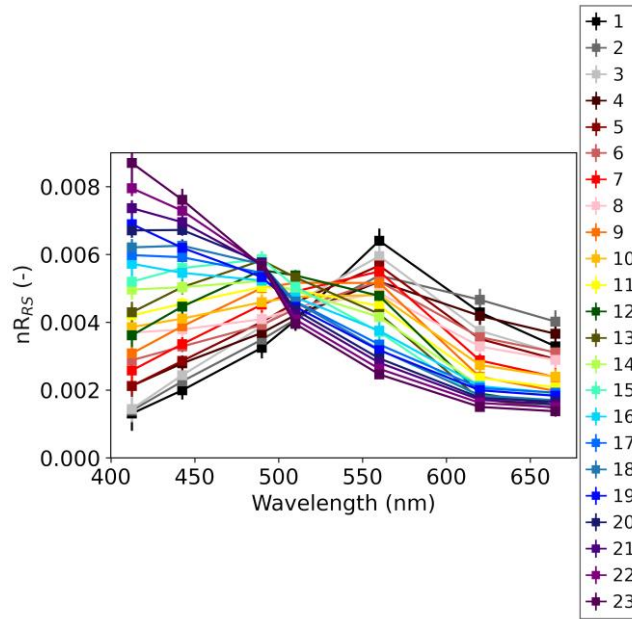


Figure S3. Mean and standard deviation values of the 23 clusters identified by ISODATA from OLCI $nR_{RS}(\lambda)$ spectra at all the coastal European AERONET-OC sites obtained with alternative parametrization.

Table S1. Mean (\pm standard deviation) weighted values of Sun zenith angle (SZA), viewing zenith angle (OZA) from OLCI

data and aerosol optical thickness at 865 nm (AOT) from AERONET-OC data for S3A match-ups.

<i>c</i>	<i>SZA</i> (°)	<i>OZA</i> (°)	<i>AOT</i>
1	43 (±8)	29 (±13)	0.04 (±0.02)
2	46 (±8)	24 (±13)	0.06 (±0.03)
3	44 (±7)	24 (±14)	0.05 (±0.03)
4	43 (±9)	26 (±15)	0.05 (±0.03)
5	45 (±8)	19 (±14)	0.05 (±0.03)
6	44 (±12)	26 (±15)	0.06 (±0.03)
7	46 (±11)	22 (±15)	0.06 (±0.03)
8	44 (±11)	24 (±14)	0.06 (±0.04)
9	44 (±11)	21 (±15)	0.07 (±0.03)
10	48 (±12)	21 (±15)	0.07 (±0.04)
11	49 (±13)	27 (±16)	0.06 (±0.04)
12	52 (±14)	24 (±14)	0.04 (±0.02)
13	51 (±12)	24 (±15)	0.05 (±0.02)
14	45 (±8)	22 (±15)	0.07 (±0.04)
15	42 (±6)	20 (±15)	0.06 (±0.03)

Table S2. Mean (± standard deviation) weighted values of Sun zenith angle (SZA), viewing zenith angle (OZA) from OLCI data and aerosol optical thickness at 865 nm (AOT) from AERONET-OC data for S3B match-ups.

<i>c</i>	<i>SZA</i> (°)	<i>OZA</i> (°)	<i>AOT</i>
1	44 (±8)	30 (±14)	0.05 (±0.03)
2	43 (±5)	24 (±14)	0.06 (±0.03)
3	44 (±6)	22 (±14)	0.04 (±0.02)
4	43 (±10)	23 (±15)	0.05 (±0.03)
5	46 (±9)	19 (±15)	0.05 (±0.02)
6	43 (±11)	26 (±16)	0.06 (±0.03)
7	46 (±10)	21 (±15)	0.06 (±0.03)
8	43 (±10)	24 (±15)	0.06 (±0.03)
9	43 (±11)	22 (±15)	0.06 (±0.03)
10	48 (±11)	23 (±14)	0.06 (±0.03)
11	52 (±13)	27 (±15)	0.05 (±0.04)
12	53 (±13)	27 (±16)	0.04 (±0.02)
13	50 (±13)	26 (±15)	0.05 (±0.03)
14	42 (±10)	27 (±15)	0.06 (±0.03)
15	40 (±7)	28 (±16)	0.07 (±0.03)