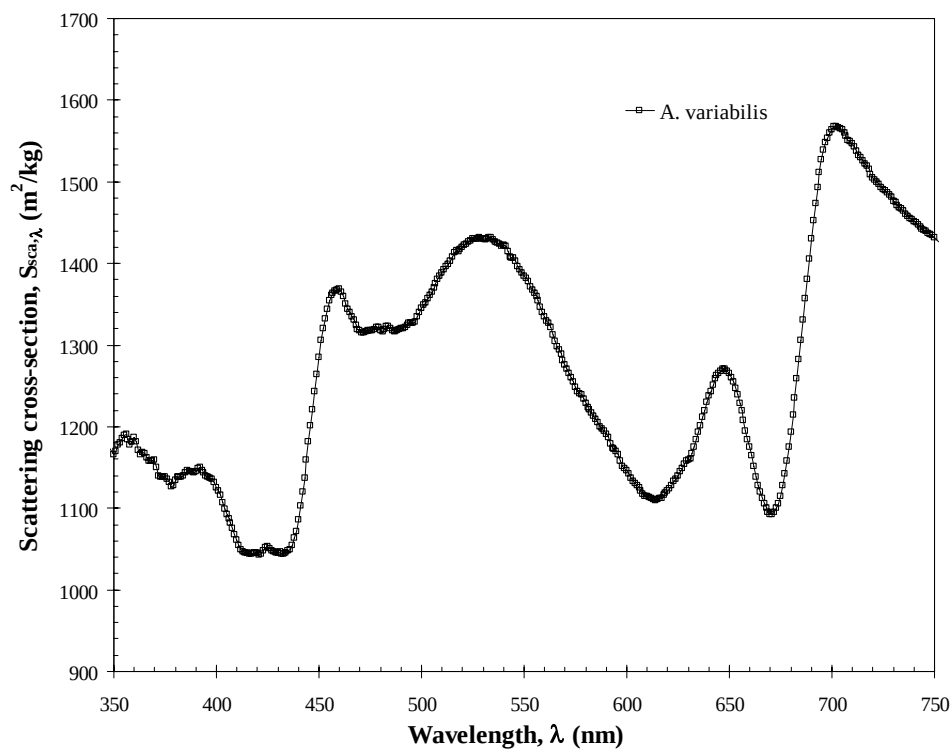
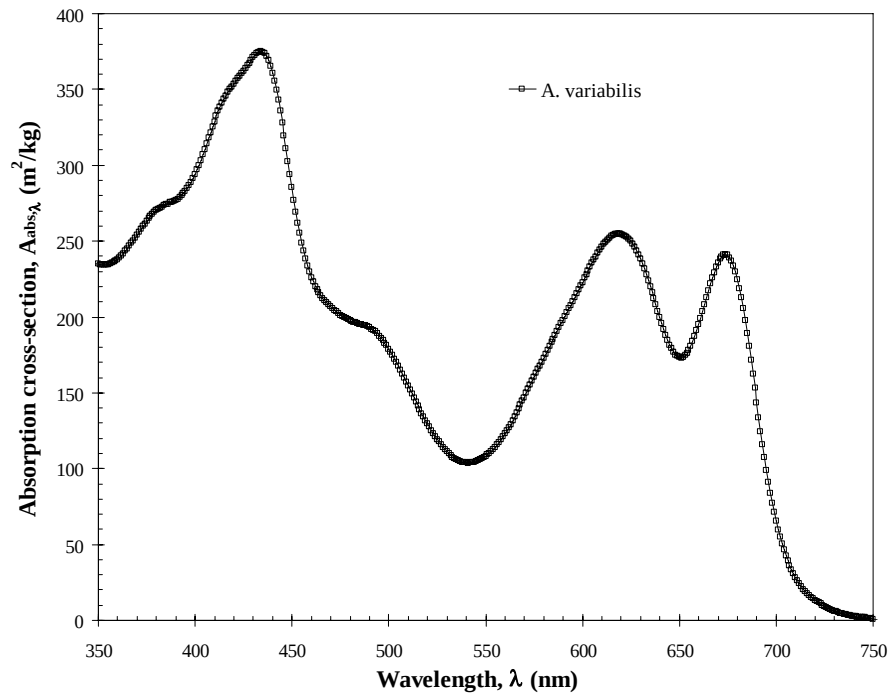


Absorption and scattering coefficients of *Anabaena variabilis*

Source: H. Berberoglu, and L. Pilon, *Experimental measurements of the radiation characteristics of Anabaena variabilis ATCC 29413-U and Rhodobacter sphaeroides ATCC 49419*, International Journal of Hydrogen Energy, vol. 32, pp. 4772-4785, 2007.
<http://dx.doi.org/10.1016/j.ijhydene.2007.08.018>



λ (nm)	$A_{\text{abs},\lambda}$ (m ² /kg)	$S_{\text{sca},\lambda}$ (m ² /kg)	$E_{\text{ext},\lambda}$ (m ² /kg)	albedo
350	234.93	1166.37	1401.30	0.83
351	234.23	1170.23	1404.47	0.83
352	234.15	1177.49	1411.64	0.83
353	234.37	1180.83	1415.19	0.83
354	234.38	1185.52	1419.90	0.83
355	234.39	1189.95	1424.34	0.84
356	235.05	1190.14	1425.19	0.84
357	235.52	1184.67	1420.19	0.83
358	236.14	1177.69	1413.83	0.83
359	236.92	1181.09	1418.01	0.83
360	237.42	1187.18	1424.60	0.83
361	238.92	1181.57	1420.49	0.83
362	240.19	1171.16	1411.35	0.83
363	241.70	1166.20	1407.90	0.83
364	243.36	1168.05	1411.42	0.83
365	245.04	1166.93	1411.97	0.83
366	246.80	1161.93	1408.73	0.82
367	248.54	1158.55	1407.09	0.82
368	250.14	1157.83	1407.97	0.82
369	252.18	1157.38	1409.56	0.82
370	254.06	1158.74	1412.79	0.82
371	256.19	1149.52	1405.70	0.82
372	257.86	1140.14	1398.01	0.82
373	259.63	1138.80	1398.43	0.81
374	261.41	1138.87	1400.28	0.81
375	263.30	1138.70	1402.00	0.81
376	265.28	1135.73	1401.01	0.81
377	266.58	1131.42	1398.00	0.81
378	267.85	1126.60	1394.45	0.81
379	269.10	1127.85	1396.95	0.81

λ (nm)	$A_{\text{abs},\lambda}$ (m ² /kg)	$S_{\text{sca},\lambda}$ (m ² /kg)	$E_{\text{ext},\lambda}$ (m ² /kg)	albedo
380	270.18	1133.88	1404.06	0.81
381	270.92	1138.08	1409.00	0.81
382	271.88	1138.42	1410.30	0.81
383	272.57	1138.43	1411.00	0.81
384	273.44	1139.12	1412.56	0.81
385	274.03	1143.78	1417.81	0.81
386	274.59	1145.63	1420.23	0.81
387	275.36	1145.02	1420.38	0.81
388	275.93	1144.58	1420.52	0.81
389	276.53	1143.55	1420.08	0.81
390	277.16	1144.93	1422.09	0.81
391	277.82	1148.46	1426.28	0.81
392	278.85	1149.93	1428.78	0.80
393	280.02	1146.49	1426.50	0.80
394	281.38	1143.23	1424.61	0.80
395	283.02	1139.36	1422.38	0.80
396	284.57	1138.22	1422.80	0.80
397	286.69	1136.76	1423.45	0.80
398	288.80	1135.45	1424.26	0.80
399	291.32	1131.29	1422.61	0.80
400	294.02	1124.85	1418.87	0.79
401	296.92	1121.02	1417.94	0.79
402	300.15	1115.50	1415.65	0.79
403	303.31	1107.26	1410.57	0.78
404	306.94	1099.65	1406.59	0.78
405	310.62	1092.53	1403.15	0.78
406	314.23	1087.29	1401.52	0.78
407	317.89	1081.55	1399.44	0.77
408	321.66	1075.16	1396.81	0.77
409	325.34	1067.69	1393.03	0.77

λ (nm)	$A_{\text{abs},\lambda}$ (m ² /kg)	$S_{\text{sca},\lambda}$ (m ² /kg)	$E_{\text{ext},\lambda}$ (m ² /kg)	albedo
410	328.92	1060.53	1389.44	0.76
411	332.37	1054.47	1386.85	0.76
412	335.52	1049.61	1385.13	0.76
413	338.34	1046.27	1384.61	0.76
414	341.06	1045.41	1386.47	0.75
415	343.69	1044.84	1388.54	0.75
416	345.94	1044.18	1390.12	0.75
417	348.04	1043.64	1391.68	0.75
418	350.08	1044.77	1394.86	0.75
419	351.81	1045.80	1397.61	0.75
420	353.67	1044.92	1398.59	0.75
421	355.62	1043.36	1398.98	0.75
422	357.31	1044.68	1401.98	0.75
423	358.85	1047.63	1406.48	0.74
424	360.42	1051.38	1411.81	0.74
425	362.11	1053.32	1415.43	0.74
426	364.12	1050.12	1414.24	0.74
427	365.79	1048.08	1413.87	0.74
428	367.57	1046.76	1414.33	0.74
429	369.49	1045.32	1414.80	0.74
430	371.22	1045.73	1416.95	0.74
431	372.58	1046.36	1418.94	0.74
432	374.08	1044.46	1418.54	0.74
433	374.75	1044.62	1419.37	0.74
434	374.80	1045.76	1420.56	0.74
435	374.49	1047.31	1421.80	0.74
436	373.54	1048.99	1422.52	0.74
437	371.60	1054.14	1425.75	0.74
438	369.02	1063.63	1432.65	0.74
439	365.40	1071.71	1437.12	0.75

λ (nm)	$A_{\text{abs},\lambda}$ (m ² /kg)	$S_{\text{sca},\lambda}$ (m ² /kg)	$E_{\text{ext},\lambda}$ (m ² /kg)	albedo
440	360.95	1085.63	1446.58	0.75
441	355.63	1103.47	1459.11	0.76
442	349.53	1120.00	1469.53	0.76
443	343.03	1137.25	1480.28	0.77
444	335.69	1158.68	1494.37	0.78
445	327.76	1181.34	1509.10	0.78
446	319.64	1201.29	1520.93	0.79
447	311.09	1221.12	1532.21	0.80
448	302.17	1243.62	1545.79	0.80
449	293.77	1263.43	1557.20	0.81
450	285.41	1285.42	1570.83	0.82
451	277.17	1306.53	1583.70	0.82
452	269.21	1320.34	1589.54	0.83
453	262.13	1332.67	1594.80	0.84
454	255.35	1343.35	1598.71	0.84
455	248.86	1354.40	1603.25	0.84
456	243.25	1360.99	1604.24	0.85
457	238.28	1363.82	1602.10	0.85
458	233.73	1366.57	1600.30	0.85
459	229.67	1367.69	1597.36	0.86
460	225.94	1368.54	1594.48	0.86
461	223.13	1365.30	1588.44	0.86
462	220.25	1358.93	1579.18	0.86
463	217.86	1350.93	1568.78	0.86
464	215.95	1344.21	1560.16	0.86
465	214.08	1340.13	1554.21	0.86
466	212.35	1335.09	1547.44	0.86
467	210.64	1330.15	1540.79	0.86
468	209.30	1323.98	1533.28	0.86
469	208.05	1319.19	1527.24	0.86

λ (nm)	$A_{\text{abs},\lambda}$ (m ² /kg)	$S_{\text{sca},\lambda}$ (m ² /kg)	$E_{\text{ext},\lambda}$ (m ² /kg)	albedo
470	206.65	1317.38	1524.03	0.86
471	205.68	1314.61	1520.29	0.86
472	204.40	1315.38	1519.78	0.87
473	203.29	1316.17	1519.46	0.87
474	202.16	1317.26	1519.42	0.87
475	201.31	1317.48	1518.79	0.87
476	200.58	1317.14	1517.71	0.87
477	199.77	1318.87	1518.64	0.87
478	198.82	1321.99	1520.80	0.87
479	198.35	1321.68	1520.04	0.87
480	197.90	1318.11	1516.00	0.87
481	197.25	1316.05	1513.30	0.87
482	196.70	1319.27	1515.97	0.87
483	196.15	1322.53	1518.68	0.87
484	195.81	1322.30	1518.11	0.87
485	195.37	1319.96	1515.33	0.87
486	195.13	1317.09	1512.22	0.87
487	194.60	1316.88	1511.48	0.87
488	194.14	1317.90	1512.04	0.87
489	193.58	1319.10	1512.67	0.87
490	192.86	1320.05	1512.90	0.87
491	192.07	1320.54	1512.61	0.87
492	191.18	1322.18	1513.36	0.87
493	190.27	1324.37	1514.64	0.87
494	188.92	1326.64	1515.56	0.88
495	187.56	1326.69	1514.26	0.88
496	186.19	1326.80	1512.99	0.88
497	184.79	1328.74	1513.53	0.88
498	182.91	1334.79	1517.70	0.88
499	181.02	1340.09	1521.11	0.88

λ (nm)	$A_{\text{abs},\lambda}$ (m ² /kg)	$S_{\text{sca},\lambda}$ (m ² /kg)	$E_{\text{ext},\lambda}$ (m ² /kg)	albedo
500	178.99	1344.90	1523.88	0.88
501	176.83	1348.74	1525.57	0.88
502	174.63	1352.07	1526.70	0.89
503	172.30	1356.32	1528.62	0.89
504	169.91	1360.29	1530.20	0.89
505	167.47	1364.65	1532.12	0.89
506	164.82	1370.44	1535.26	0.89
507	162.26	1375.55	1537.81	0.89
508	159.52	1380.17	1539.69	0.90
509	157.00	1384.03	1541.03	0.90
510	154.21	1388.36	1542.58	0.90
511	151.72	1392.92	1544.64	0.90
512	149.01	1396.44	1545.45	0.90
513	146.38	1399.15	1545.53	0.91
514	143.98	1402.48	1546.47	0.91
515	141.38	1408.24	1549.62	0.91
516	138.88	1413.87	1552.75	0.91
517	136.46	1415.60	1552.07	0.91
518	134.21	1415.21	1549.42	0.91
519	131.83	1417.30	1549.13	0.91
520	129.63	1420.38	1550.01	0.92
521	127.37	1422.51	1549.88	0.92
522	125.25	1423.43	1548.69	0.92
523	123.12	1426.10	1549.22	0.92
524	121.16	1427.68	1548.84	0.92
525	119.25	1429.80	1549.05	0.92
526	117.57	1430.56	1548.14	0.92
527	115.85	1430.66	1546.51	0.93
528	114.18	1431.14	1545.32	0.93
529	112.68	1430.39	1543.07	0.93

λ (nm)	$A_{\text{abs},\lambda}$ (m ² /kg)	$S_{\text{sca},\lambda}$ (m ² /kg)	$E_{\text{ext},\lambda}$ (m ² /kg)	albedo
530	111.48	1429.66	1541.14	0.93
531	110.16	1429.14	1539.29	0.93
532	108.92	1430.50	1539.42	0.93
533	107.67	1432.05	1539.72	0.93
534	106.81	1431.18	1537.99	0.93
535	105.92	1428.81	1534.73	0.93
536	105.39	1426.75	1532.14	0.93
537	104.68	1425.54	1530.22	0.93
538	104.15	1423.85	1527.99	0.93
539	104.02	1421.67	1525.68	0.93
540	103.85	1422.89	1526.74	0.93
541	103.68	1421.30	1524.98	0.93
542	103.87	1413.96	1517.83	0.93
543	104.03	1408.31	1512.34	0.93
544	104.31	1406.56	1510.88	0.93
545	104.59	1407.22	1511.81	0.93
546	105.18	1403.21	1508.39	0.93
547	105.84	1396.69	1502.53	0.93
548	106.53	1392.05	1498.58	0.93
549	107.23	1388.44	1495.67	0.93
550	108.11	1385.09	1493.20	0.93
551	109.06	1382.01	1491.08	0.93
552	110.08	1377.42	1487.50	0.93
553	111.60	1371.64	1483.24	0.92
554	112.90	1367.92	1480.82	0.92
555	114.23	1363.50	1477.73	0.92
556	115.58	1359.23	1474.81	0.92
557	117.18	1354.26	1471.44	0.92
558	119.00	1346.42	1465.42	0.92
559	120.91	1340.33	1461.23	0.92

λ (nm)	$A_{\text{abs},\lambda}$ (m ² /kg)	$S_{\text{sca},\lambda}$ (m ² /kg)	$E_{\text{ext},\lambda}$ (m ² /kg)	albedo
560	122.77	1334.70	1457.47	0.92
561	124.79	1329.73	1454.52	0.91
562	127.00	1327.26	1454.26	0.91
563	129.20	1321.29	1450.49	0.91
564	131.76	1312.08	1443.84	0.91
565	134.22	1304.38	1438.60	0.91
566	136.73	1298.57	1435.30	0.90
567	139.31	1294.10	1433.41	0.90
568	141.84	1288.22	1430.06	0.90
569	144.46	1280.87	1425.32	0.90
570	146.90	1275.81	1422.71	0.90
571	149.68	1270.27	1419.96	0.89
572	152.38	1265.92	1418.30	0.89
573	155.06	1260.52	1415.58	0.89
574	157.64	1254.42	1412.07	0.89
575	160.39	1248.21	1408.61	0.89
576	163.15	1242.73	1405.88	0.88
577	165.59	1240.56	1406.15	0.88
578	167.89	1238.96	1406.85	0.88
579	170.50	1234.43	1404.93	0.88
580	173.08	1228.97	1402.06	0.88
581	175.77	1224.04	1399.81	0.87
582	178.20	1220.88	1399.08	0.87
583	180.58	1217.22	1397.80	0.87
584	183.08	1212.72	1395.80	0.87
585	185.55	1209.61	1395.16	0.87
586	188.20	1205.56	1393.76	0.86
587	190.77	1200.20	1390.97	0.86
588	193.16	1196.79	1389.95	0.86
589	195.47	1194.97	1390.44	0.86

λ (nm)	$A_{\text{abs},\lambda}$ (m ² /kg)	$S_{\text{sca},\lambda}$ (m ² /kg)	$E_{\text{ext},\lambda}$ (m ² /kg)	albedo
590	197.97	1190.92	1388.90	0.86
591	200.41	1186.85	1387.26	0.86
592	202.89	1178.90	1381.79	0.85
593	205.36	1173.91	1379.26	0.85
594	207.66	1172.37	1380.03	0.85
595	210.20	1170.32	1380.52	0.85
596	212.83	1165.92	1378.75	0.85
597	215.26	1157.69	1372.95	0.84
598	217.90	1150.81	1368.71	0.84
599	220.45	1148.47	1368.92	0.84
600	222.83	1146.35	1369.17	0.84
601	225.57	1141.77	1367.34	0.84
602	227.93	1137.63	1365.56	0.83
603	230.55	1133.62	1364.16	0.83
604	233.06	1130.91	1363.97	0.83
605	235.39	1127.95	1363.35	0.83
606	237.65	1124.85	1362.51	0.83
607	239.82	1121.71	1361.53	0.82
608	242.05	1117.75	1359.80	0.82
609	244.21	1114.85	1359.06	0.82
610	246.18	1114.44	1360.62	0.82
611	247.99	1114.00	1361.99	0.82
612	249.52	1112.60	1362.12	0.82
613	250.97	1110.22	1361.20	0.82
614	252.21	1109.87	1362.08	0.81
615	253.38	1111.17	1364.55	0.81
616	254.09	1112.51	1366.60	0.81
617	254.78	1112.12	1366.90	0.81
618	254.86	1115.55	1370.41	0.81
619	254.93	1118.45	1373.38	0.81

λ (nm)	$A_{\text{abs},\lambda}$ (m ² /kg)	$S_{\text{sca},\lambda}$ (m ² /kg)	$E_{\text{ext},\lambda}$ (m ² /kg)	albedo
620	254.74	1120.81	1375.55	0.81
621	254.23	1123.62	1377.85	0.82
622	253.51	1127.36	1380.87	0.82
623	252.52	1132.52	1385.04	0.82
624	251.45	1136.14	1387.59	0.82
625	249.80	1139.82	1389.62	0.82
626	248.15	1144.30	1392.45	0.82
627	246.00	1148.29	1394.29	0.82
628	243.47	1153.98	1397.45	0.83
629	240.96	1157.76	1398.72	0.83
630	238.14	1158.78	1396.92	0.83
631	235.01	1161.07	1396.08	0.83
632	231.74	1166.60	1398.34	0.83
633	228.04	1174.47	1402.51	0.84
634	224.07	1184.58	1408.65	0.84
635	220.26	1192.72	1412.98	0.84
636	216.14	1200.88	1417.02	0.85
637	211.98	1211.40	1423.37	0.85
638	207.86	1219.97	1427.83	0.85
639	203.53	1229.72	1433.26	0.86
640	199.36	1237.54	1436.90	0.86
641	195.50	1243.11	1438.61	0.86
642	191.61	1250.69	1442.30	0.87
643	187.90	1259.17	1447.07	0.87
644	184.72	1262.46	1447.18	0.87
645	181.57	1265.85	1447.43	0.87
646	179.13	1268.45	1447.58	0.88
647	176.86	1270.21	1447.07	0.88
648	175.07	1270.22	1445.29	0.88
649	173.88	1267.73	1441.61	0.88

λ (nm)	$A_{\text{abs},\lambda}$ (m ² /kg)	$S_{\text{sca},\lambda}$ (m ² /kg)	$E_{\text{ext},\lambda}$ (m ² /kg)	albedo
650	173.28	1265.09	1438.37	0.88
651	173.13	1260.72	1433.85	0.88
652	173.67	1254.72	1428.39	0.88
653	174.61	1247.11	1421.72	0.88
654	176.17	1238.64	1414.80	0.88
655	178.07	1228.29	1406.36	0.87
656	180.65	1219.08	1399.73	0.87
657	183.85	1208.12	1391.97	0.87
658	187.14	1194.86	1382.01	0.86
659	190.90	1184.16	1375.06	0.86
660	194.89	1174.48	1369.38	0.86
661	199.15	1164.75	1363.90	0.85
662	203.67	1152.02	1355.69	0.85
663	208.24	1138.70	1346.94	0.85
664	212.89	1128.45	1341.34	0.84
665	217.40	1119.49	1336.89	0.84
666	221.70	1111.80	1333.50	0.83
667	225.77	1105.11	1330.88	0.83
668	229.44	1099.71	1329.15	0.83
669	232.98	1094.74	1327.73	0.82
670	235.84	1092.66	1328.50	0.82
671	238.14	1092.76	1330.91	0.82
672	239.90	1095.47	1335.37	0.82
673	240.67	1100.41	1341.09	0.82
674	241.00	1106.09	1347.09	0.82
675	240.69	1115.18	1355.86	0.82
676	239.11	1128.22	1367.33	0.83
677	236.85	1141.59	1378.45	0.83
678	233.65	1158.33	1391.98	0.83
679	229.62	1174.56	1404.17	0.84

λ (nm)	$A_{\text{abs},\lambda}$ (m ² /kg)	$S_{\text{sca},\lambda}$ (m ² /kg)	$E_{\text{ext},\lambda}$ (m ² /kg)	albedo
680	224.70	1192.79	1417.48	0.84
681	218.95	1214.14	1433.08	0.85
682	212.53	1235.29	1447.83	0.85
683	205.40	1258.41	1463.82	0.86
684	197.82	1281.68	1479.50	0.87
685	189.45	1305.70	1495.14	0.87
686	180.71	1330.23	1510.94	0.88
687	171.54	1356.86	1528.40	0.89
688	162.28	1380.90	1543.18	0.89
689	152.91	1405.08	1558.00	0.90
690	143.30	1430.02	1573.32	0.91
691	133.77	1452.25	1586.02	0.92
692	124.67	1473.01	1597.68	0.92
693	115.75	1493.25	1609.00	0.93
694	107.26	1510.97	1618.23	0.93
695	99.03	1526.66	1625.69	0.94
696	91.30	1539.01	1630.31	0.94
697	84.01	1547.89	1631.90	0.95
698	77.46	1553.91	1631.37	0.95
699	71.24	1559.78	1631.02	0.96
700	65.42	1564.32	1629.74	0.96
701	59.83	1567.75	1627.58	0.96
702	54.96	1567.95	1622.91	0.97
703	50.46	1566.21	1616.67	0.97
704	46.38	1565.54	1611.92	0.97
705	42.77	1563.23	1606.01	0.97
706	39.22	1559.80	1599.02	0.98
707	36.18	1555.83	1592.01	0.98
708	33.38	1551.38	1584.76	0.98
709	30.65	1548.82	1579.47	0.98

λ (nm)	$A_{\text{abs},\lambda}$ (m ² /kg)	$S_{\text{sca},\lambda}$ (m ² /kg)	$E_{\text{ext},\lambda}$ (m ² /kg)	albedo
710	28.25	1546.25	1574.50	0.98
711	25.88	1542.37	1568.25	0.98
712	23.96	1537.64	1561.60	0.98
713	22.33	1532.82	1555.14	0.99
714	20.46	1530.17	1550.62	0.99
715	18.90	1525.90	1544.80	0.99
716	17.57	1522.29	1539.86	0.99
717	16.34	1519.18	1535.52	0.99
718	15.26	1515.12	1530.39	0.99
719	14.27	1508.35	1522.62	0.99
720	13.22	1504.39	1517.61	0.99
721	12.36	1502.88	1515.24	0.99
722	11.60	1500.20	1511.80	0.99
723	10.88	1496.57	1507.45	0.99
724	9.95	1493.43	1503.37	0.99
725	9.35	1490.61	1499.97	0.99
726	8.57	1489.34	1497.91	0.99
727	7.72	1486.49	1494.21	0.99
728	7.12	1484.46	1491.58	1.00
729	6.38	1480.87	1487.25	1.00
730	6.21	1475.75	1481.97	1.00
731	5.79	1474.62	1480.41	1.00
732	5.33	1471.06	1476.39	1.00
733	4.82	1468.57	1473.39	1.00
734	4.41	1467.21	1471.62	1.00
735	3.90	1464.02	1467.91	1.00
736	3.87	1460.29	1464.16	1.00
737	3.39	1457.61	1461.00	1.00
738	3.08	1455.48	1458.56	1.00
739	2.84	1454.00	1456.84	1.00

λ (nm)	$A_{\text{abs},\lambda}$ (m ² /kg)	$S_{\text{sca},\lambda}$ (m ² /kg)	$E_{\text{ext},\lambda}$ (m ² /kg)	albedo
740	2.75	1451.24	1453.98	1.00
741	2.51	1449.63	1452.14	1.00
742	2.27	1447.15	1449.42	1.00
743	2.21	1444.98	1447.19	1.00
744	2.21	1442.53	1444.74	1.00
745	2.02	1440.75	1442.77	1.00
746	1.68	1439.20	1440.89	1.00
747	1.44	1437.46	1438.90	1.00
748	1.25	1436.09	1437.34	1.00
749	1.11	1433.86	1434.97	1.00
750	0.92	1431.37	1432.30	1.00