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Supplement of

**Quality assessment of the Ozone_cci Climate Research Data Package
(release 2017) – Part 1: Ground-based validation of total ozone
column data products**

Katerina Garane et al.

Correspondence to: Katerina Garane (agarane@auth.gr)

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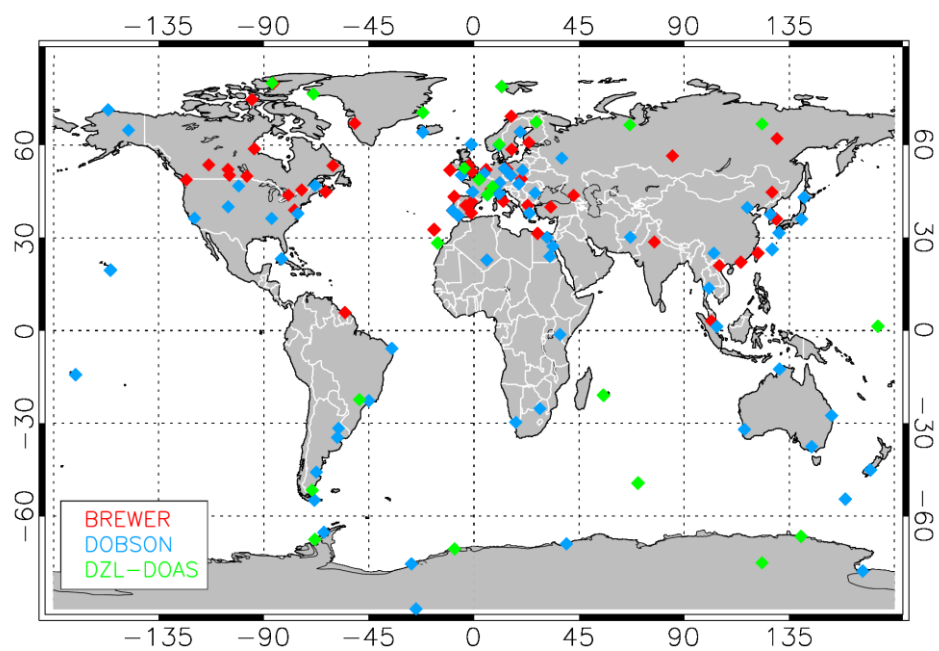


Figure S 1. The locations of the WOUDC/NDACC ground-based instruments reporting total ozone columns used in this study. For further information on these station, refer to Table S 1, Table S 2 and Table S 3.

Table S 1. The NDACC DOAS UV-Visible instruments selected for this study.

Station ID	Station name	Station Location	Latitude	Longitude	Elevation (m.a.s.l.)	Instrument	Start date	End date
315	Eureka	Canada	80.05°N	86.41°W	610	SAOZ	2004	2016
089	Ny Alesund	Spitsbergen	78.91°N	11.88°E	15	DOAS	1991	2012
460	Thule	Western Greenland	76.53°N	68.74°W	30	SAOZ	1991	2016
459	Scoresbysund	Eastern Greenland	70.48°N	21.95°W	68	SAOZ	1993	2016
262	Sodankylä	Finland	67.37°N	26.63°E	179	SAOZ	1990	2016
752	Zhigansk	Eastern Siberia	66.79°N	123.35°E	50	SAOZ	1994	2013
821	Salekhard	Western Siberia	66.50°N	66.70°E	137	SAOZ	2002	2009
658	Harestua	Norway	60.20°N	10.80°E	596	DOAS	1994	2013
601	Aberystwyth	Great Britain	52.45°N	4.07°W	50	SAOZ	1998	2017
049	Paris	France	48.85°N	2.35°E	65	SAOZ	2005	2016
	Guyancourt	France	48.78°N	2.05°E	165	SAOZ	2010	2016
041	Jungfrauoch	Switzerland	46.55°N	7.98°E	3580	SAOZ	1990	2012
040	Observatoire de Haute Provence	France	43.94°N	5.71°E	650	SAOZ	1993	2016
300	Izaña	Canaries Island	28.30° N	15.50° W	2367	DOAS	2000	2013
728	Tarawa	Kiribati	1.35°N	172.92°E	0	SAOZ	1993	1999
614	Bauru	Brazil	22.34°S	49.03°W	640	SAOZ	1996	2016
436	Reunion	Reunion Island	20.90°S	55.48°E	85	SAOZ	1994	2015
674	Kerguelen	Kerguelen Island	49.35°S	70.26°E	10	SAOZ	1996	2016
817	Rio Gallegos	Argentina	51.60°S	69.31°W	650	SAOZ	2008	2016
028	Dumont d'Urville	Antarctica	66.67°S	140.02°E	20	SAOZ	1988	2016
709	Rothera	Antarctic Peninsula	67.57°S	68.12°W	30	SAOZ	1996	2010
323	Neumayer	Antarctica	70.68°S	123.31 °E	42	DOAS	1999	2013
641	Dome Concordia	Antarctica	75.10°S	123.31 °E	3233	SAOZ	2007	2016

Table S 2. The WOUDC Dobson instruments selected for this study.

Station ID	Station Name	Station location	Latitude	Longitude	Elevation (m.a.s.l.)	Start date	End date
111	Amundsen Scott	Antarctica	-89.98	-24.8	2835	1995	2016
268	Arrival Heights	Antarctica	-77.83	166.4	250	1995	2016
57	Halley Bay	Antarctica	-75.52	-26.73	31	1995	2017
101	Syowa	Antarctica	-69	39.58	21	1995	2017
232	Vernadsky Faraday	Antarctica	-65.25	-64.27	7	1995	2017
339	Ushuaia	Argentina	-54.85	-68.31	7	1995	2016
29	Macquarie Island	Australia	-54.48	158.97	6	1995	2017
342	Comodoro Rivadavia	Argentina	-45.78	-67.5	43	1995	2016
256	Lauder	New Zealand	-45.03	169.68	3701	1995	2017
253	Melbourne	Australia	-37.48	144.58	125	1995	2017
91	Buenos Aires	Argentina	-34.58	-58.48	25	1995	2014
159	Perth	Australia	-31.95	115.85	2	1995	2016
343	Salto	Uruguay	-31.58	-57.95	31	1996	2013
340	Springbok	South Africa	-29.67	17.9	1	1995	2016
27	Brisbane	Australia	-27.47	153.03	5	1995	2017
265	Irene	South Africa	-25.25	28.22	1524	1995	2016
200	Cachoeira Paulista	Brazil	-22.68	-45	573	1995	2017
191	Samoa	USA	-14.25	-170.57	82	1995	2017

84	Darwin	Australia	-12.47	130.83	0	1995	2017
219	Natal	Brazil	-5.83	-35.2	32	1995	2017
175	Nairobi	Kenya	-1.27	36.8	1710	1995	2012
214	Singapore	Singapore	1.33	103.88	14	1995	2012
216	Bangkok	Thailand	13.73	100.57	2	1995	2017
31	Mauna_loa	USA	19.53	-155.58	3397	1995	2017
2	Tamanrasset	Algeria	22.8	5.52	1395	1995	2017
311	Havana	Cuba	23.17	-82.33	50	2005	2015
245	Aswan	Egypt	23.97	32.45	193	1995	2017
209	Kunming	China	25.02	102.68	1917	1995	2014
190	Naha	Japan	26.2	127.67	29	1995	2017
409	Hurghada	Egypt	27.25	33.72	22	2001	2017
10	New Delhi	India	28.63	77.22	216	1995	2015
152	Cairo	Egypt	30.08	31.28	35	1995	2017
11	Quetta	Pakistan	30.18	66.95	1799	1995	2013
7	Kagoshima	Japan	31.63	130.6	283	1995	2005
14	Tateno	Japan	36.05	140.13	31	1995	2017
106	Nashville	USA	36.25	-86.57	182	1995	2017
341	Hanford	USA	36.32	-119.63	73	1995	2017
213	El Arenosillo	Spain	37.1	-6.73	41	1995	2012
252	Seoul	Korea	37.57	126.95	84	1995	2013
107	Wallops Island	USA	37.87	-75.52	4	1995	2017
293	Athens	Greece	38	23.7	15	1995	2017
82	Lisbon	Portugal	38.77	-9.13	105	1995	2002
208	Shiangher	China	39.77	117	13	1995	2017
67	Boulder	USA	40.02	-105.25	1634	1995	2016
12	Sapporo	Japan	43.05	141.33	19	1995	2017
40	Haute Province	France	43.92	5.75	580	1995	2017
201	Sestola	Italy	44.22	10.77	1030	1995	2002
226	Bucharest	Romania	44.48	26.13	92	1995	2015
419	Bordeaux	FRA	44.81	-0.56	58	1995	2003
19	Bismarck	USA	46.77	-100.75	511	1995	2017
35	Arosa	Switzerland	46.77	9.67	1860	1995	2013
20	Caribou	USA	46.87	-68.02	192	1995	2017
100	Budapest	Hungary	47.43	19.18	140	1995	1998
99	Hohenpeissenberg	Germany	47.8	11.02	975	1995	2017
96	Hradec Kralove	Czech_Republic	50.18	15.83	285	1995	2017
36	Camborne	UK	50.22	-5.32	88	1995	2003
53	Uccle	Belgium	50.8	4.35	100	1995	2009
68	Belsk	Poland	51.83	20.78	180	1995	2017
50	Potsdam	Germany	52.38	13.05	89	1995	2003
116	Moscow	Russia	55.75	37.57	187	1995	2004
165	Oslo	Norway	59.92	10.72	50	1995	1998
43	Lerwick	UK	60.15	-1.15	90	1995	2017
51	Reykjavik	Iceland	64.13	-21.9	60	1995	2014
284	Vindeln	Sweden	64.25	19.77	0	1995	2017
105	Fairbanks	USA	64.8	-147.89	138	1995	2017
199	Barrow	USA	71.32	-156.6	11	1995	2017
89	Ny Alesund	Norway	78.93	11.88	0	1995	1997

Table S 3. The WOUDC Brewer instruments selected for this study.

Station ID	Station Name	Station location	Latitude	Longitude	Elevation (m.a.s.l.)	Start date	End date
322	Petaling Jaya	Malaysia	3.1	101.65	46	1999	2017
435	Paramaribo	Surinam	5.78	-55.2	5	1999	2016

330	Hanoi	Vietnam	21	105	0	2012	2017
468	Cape d'aguilar	Hong Kong	22.18	114.23	75	2003	2010
2	Tamanrasset	Algeria	22.8	5.52	1395	2011	2017
95	Taipei	Taiwan	25.03	121.52	22	2006	2013
376	Mrsa_mtrouh	Egypt	31.33	27.22	35	1998	2017
287	Funchal	Portugal	32.65	-17.05	59	1995	2002
332	Pohang	Korea	36.03	129.38	0	1995	2016
213	El Arenosillo	Spain	37.1	-6.73	41	2000	2012
346	Murcia	Spain	38	-1.17	69	1995	2017
82	Lisbon	Portugal	38.77	-9.13	105	2000	2002
447	Goddard	USA	38.99	-76.83	100	2000	2010
348	Ankara	Turkey	39.95	32.88	891	2006	2013
308	Madrid	Spain	40.45	-3.55	0	1995	2017
261	Thessaloniki	Greece	40.52	22.97	4	1995	2017
411	Zaragoza	Spain	41.66	-0.94	235	2000	2017
305	Rome University	Italy	41.9	12.52	0	1995	2015
405	La Coruna	Spain	43.33	-8.5	62	1999	2017
282	Kislovodsk	Russia	43.73	42.66	2070	1995	2016
65	Toronto	Canada	43.78	-79.47	198	1995	2014
326	Longfenshan	China	44.75	127.6	0	1995	2015
321	Halifax	Canada	44.9	-63.5	0	1995	2003
319	Montreal	Canada	45.47	-73.75	0	1995	2001
479	Aosta	Italy	45.71	7.33	585	2007	2017
301	Ispra	Italy	45.8	8.63	0	1995	2005
35	Arosa	Switzerland	46.77	9.67	1860	1995	2013
100	Budapest	Hungary	47.43	19.18	140	1999	2013
99	Hohenpeissenberg	Germany	47.8	11.02	975	1995	2017
290	Saturna	Canada	48.78	-123.13	0	1995	2016
331	Poprad Ganovce	Slovakia	49.03	20.32	0	1995	2017
320	Winnipeg	Canada	49.91	-97.24	0	1995	2002
96	Hradec Kralove	Czech Republic	50.18	15.83	285	1995	2017
338	Regina	Canada	50.21	-104.67	0	1995	2005
53	Uccle	Belgium	50.8	4.35	100	1995	2017
353	Reading	UK	51.42	-0.96	51	2002	2017
68	Belsk	Poland	51.83	20.78	180	1995	2005
318	Valentia	Ireland	51.93	-10.25	0	1995	2017
316	Debilt	Netherlands	52	5.18	0	1995	2017
241	Saskatoon	Canada	52.1	-105.28	550	1995	2001
174	Lindenberg	Germany	52.22	14.12	98	1995	2014
50	Potsdam	Germany	52.38	13.05	89	1995	2003
76	Goose	Canada	53.32	-60.38	44	1995	2016
352	Manchester	UK	53.45	-2.26	61	2000	2017
21	Edmonton	Canada	53.57	-113.52	668	1995	2016
481	Tomsk	Russai	56.48	84.97	170	2003	2012
279	Norkoping	Sweden	58.58	16.12	0	1995	2017
77	Churchill	Canada	58.75	-94.07	35	1995	2016
404	Jokioinen	Finland	60.8	23.5	103	1999	2001
123	Yakutsk	Russia	62.08	129.75	98	1995	2005
284	Vindeln	Sweden	64.25	19.77	0	1996	2017
267	Sondrestrom	Greenland	67	-50.98	150	1995	2017
262	Sodankyla	Finland	67.37	26.65	179	1995	2010
476	Andoya	Norway	69.25	15.97	395	2000	2016
24	Resolute	Canada	74.72	-94.98	64	1995	2016
89	Ny Alesund	Norway	78.93	11.88	0	2007	2009
315	Eureka	Canada	79.89	-85.93	10	2001	2016