

## SUPPLEMENTARY MATERIAL

# Observations, Remote Sensing, and Model Simulation to Analyze Southern Brazil Antarctic Ozone Hole Influence

**Table S1.** Dates of events of influence of the Antarctic ozone hole on the SSO station and respective value of Brewer's TOC, its reduction percentage in relation to monthly climatology, and the isentropic level of ozone reduction in the profile of the AURA satellite/MLS. The layer of the largest reduction and the percentage of this reduction, in addition to the level and characteristic of the polar transport observed towards the region of the SSO station. (-) Indicates that there was no observation by the instrument.

Day	Brewer		OMI		AURA/MLS		Modelo MIMOSA	
	TOC (DU)	Reducti on(%)	TOC (DU)	Reducti on(%)	Level (K)	Reducti on (%)	Level (K)	Characteristic Dynamic
24/08/2005	270,8	-4,91	270,1	-5,16	550–650	-11	500	Filament
13/09/2005	278,2	-6,17	271,8	-8,32	550-600	-10	500	Filament
29/09/2005	280,5	-5,38	273,2	-7,88	750–800	-9	450	Filament
11/10/2005	273,9	-6,1	262,5	-10,03	550–700	-18	500	Filament
24/10/2005	278,4	-4,56	270,6	-7,24	700–750	-7	675–850	Filament
16/11/2005	271,8	-5,28	262	-8,69	600–800	-31	525–850	Tongue
07/08/2006	258,7	-9,17	250,9	-11,91	400–550	-18	450–675	Filament
22/08/2006	269	-5,53	269	-5,55	650–850	-23	500–850	Filament
30/08/2006	278,3	-5,25	277,2	-7,2	700–900	-10	675–850	Filament
11/09/2006	277,1	-6,46	272,8	-8,01	650–850	-12	675–850	Tongue
19/09/2006	277,1	-6,64	265,2	-10,56	650–850	-14	675–850	Filament
07/10/2006	260,7	-10,65	254,3	-12,83	400–550	-22	675–850	Filament
12/10/2006	278,6	-4,52	276,4	-5,25	650–850	-17	675–850	Filament
28/10/2006	272,2	-6,68	266,7	-8,59	650–750	-10	675–850	Filament
19/11/2006	267,4	-6,82	267,2	-6,88	600–900	-22	500–850	Filament
30/11/2006	265,4	-7,5	260,8	-9,11	400–500	-11	450–525	Filament
13/09/2007	-	-	274,7	-7,31	600–850	-9	600–850	Filament
08/10/2007	267,5	-8,29	267	-8,46	600–700	-15	500–850	Tongue
13/10/2007	282	-3,35	276,1	-5,36	850	-11	675–850	Filament

07/08/2008	265,5	-6,78	272,8	-4,23	400–600	-20	450–525	Filament
20/08/2008	255,8	-10,19	259,1	-9,01	400–550	-27	400–450	Filament
04/09/2008	261,7	-11,72	263	-11,29	400–550	-10	400–675	Filament
27/09/2008	276,7	-6,67	-	-	650–800	-11	675–850	Tongue
11/10/2008	278,2	-4,65	278,2	-4,66	700–800	-11	675–850	Tongue
26/10/2008	266,5	-8,64	266,7	-8,6	650–850	-13	675–850	Tongue
01/11/2008	252,1	-12,14	253,8	-11,54	700–850	-18	675–850	Filament
03/09/2009	-	-	248,9	-14,59	600–900	-36	400–850	Filament
29/09/2009	-	-	270,2	-8,89	400–650	-23	400–675	Filament
16/11/2009	-	-	262,6	-8,47	400–500	-22	675–850	Filament
23/11/2009	-	-	264,2	-7,91	550–650	-12	675–850	Tongue
28/11/2009	-	-	262	-8,69	550–650	-12	850	Tongue
08/08/2010	-	-	269,4	-5,39	800–900	-13	675–850	Filament
23/08/2010	-	-	271,1	-4,81	700–900	-16	600	Filament
04/09/2010	-	-	275	-7,29	500–900	-9	500–850	Filament
13/09/2010			278,93	-5,95	650–900	-12	500–675	Filament
13/10/2010	-	-	274	-6,07	400–900	-19	400–850	Filament
21/10/2010	-	-	259,7	-10,96	450–650	-18	500–675	Filament
18/09/2011	-	-	280,3	-5,46	650–900	-20	675	Filament
06/08/2012	267,4	-6,11	269,5	-3,52	700–950	-32	675–850	Filament
18/08/2012	266,6	-6,37	268,3	-5,58	400–500	-17	450–675	Filament
05/09/2012	281	-5,22	280,5	-5,41	400–450	-10	400–525	Filament
14/09/2012	267,7	-9,7	281,6	-5,04	650–850	-12	675–850	Filament
22/09/2012	277,4	-6,46	283,6	-4,35	500–550	-10	675–850	Filament
14/10/2012	252,6	-13,4	254,8	-12,66	550–700	-21	450–850	Tongue
26/10/2012	274,1	-6,03	265,7	-8,91	450–500	-22	500–675	Filament
10/11/2012	268,3	-6,48	267,1	-6,93	700–850	-12	675–850	Filament
20/08/2013	-	-	260,05	-8,70	400–600	-14	600–850	Filament
28/08/2013	-	-	260,4	-8,85	650–850	-17	600	Filament
06/09/2013	-	-	274	-7,59	450–850	-9	450–675	Filament
19/09/2013	-	-	271,7	-8,38	450–600	-19	400–850	Filament
04/10/2013	-	-	274	-6,08	400–750	-16	675–850	Filament
20/10/2013	-	-	266,8	-8,53	450–650	-13	450–850	Tongue
26/10/2013	-	-	276,94	-5,09	450–600	-11	500–850	Filament

09/11/2013	251,9	-12,21	257,5	-10,14	650–850	-11	675–850	Filament
10/08/2014	-	-	268,4	-5,76	550–750	-7	600	Tongue
22/08/2014	-	-	255,32	-10,36	400–850	-10	600	Filament
09/09/2014	-	-	275,7	-8,06	650–900	-9	600	Filament
01/10/2014	277,6	-4,84	279,9	-4,06	700–850	-6	600	Filament
13/10/2014	-	-	275,8	-5,56	550–700	-11	600–850	Tongue
19/10/2014	272,9	-6,44	275,7	-5,5	400–500	-19	600	Filament
03/11/2014	-	-	269,91	-5,95	550–800	-21	500–850	Filament
30/11/2014	258,4	-9,93	246,5	-12,11	400–500	-20	600	Filament

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