

The distribution and isotopomeric characterization of nitrous oxide in the Eastern Gotland Basin (central Baltic Sea)

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SUPPLEMENTARY INFORMATION

Table S1: Data from all stations with sampling depths, N₂O concentrations, N₂O saturations, their $\delta^{15}\text{N}_{\text{bulk}}$, $\delta^{18}\text{O}$, site preferences (SP), $\delta^{15}\text{N}_{\alpha}$ - and $\delta^{15}\text{N}_{\beta}$ -values.

Station	Depth (m)	[N ₂ O] (nM)	N ₂ O % Saturation	$\delta^{15}\text{N}$ -N ₂ O (‰)	$\delta^{18}\text{O}$ -N ₂ O (‰)	SP (‰)	$\delta^{15}\text{N}_{\alpha}$ (‰)	$\delta^{15}\text{N}_{\beta}$ (‰)
25	3	13.3	100.5	7.62	41.93	24.02	19.4	-4.62
25	10	13.2	100.2	8.22	43.23	13.45	14.76	1.31
25	20	13.5	100.5	7.59	43.1	0.45	7.71	7.26
25	35	14.8	92.2	7.12	42.45	2	7.86	6.17
25	50	14.8	91.1	5.29	44.02	21	17.44	-3.62
25	60	14.4	91.1	5.28	44.07	24.79	18.23	-6.57
25	69	8.6	58.9					
25	71	22.1	151.5	6.51	46.18			
25	73	3.4	23.3					
25	75	1.6	10.9					
25	80	1.0	7.1					
25	89	0.2	1.3					
25	91	0.7	5.3					
25	93	6.2	45.0	-3.06	54.31	34.74		
25	100	11.3	82.4	3.07	50.37			
25	110	11.1	81.9	2.31	46.38	15.15		
25	120	9.5	70.0	3.02	48.14			
25	137	7.9	58.6	-0.52	45.82			
25	139	5.2	38.6	-4.25	48.46			
25	141	4.0	29.5	5.49	50.93			
25	150	0.8	5.9					
25	175	0.8	5.9					
25	200	0.8	6.0					

25	225	0.8	6.0					
25	233	0.8	5.9					
26	65	13.5	89.2	5.98	45.85	25.13	18.34	-6.79
26	68	14.6	98.6	6.27	51.72	31.29	21.67	-9.62
26	71	2.9	19.8					
26	73	1.7	11.7					
26	72							
26	73	1.5	10.3					
26	75	0.9	6.2					
26	78	0.7	5.2					
26	81	0.8	5.5					
26	81							
26	85	9.7	69.4	4.47	51.8	34.23		
27	3	13.3	101.7					
27	65	14.4	92.3	13.42	53.21	66.89		
27	69	14.0	93.7	6.88	59.4	47.82		
27	72	7.4	50.4	5.06	59.51	68.64		
27	74	5.6	38.5	11.32	53.3			
27	75	3.0	21.1					
27	76	1.9	13.2					
27	78	1.8	12.6					
27	81	1.4	9.8					
27	81							
27	87	6.9	49.1					
28	3	12.8	99.1					
28	10	13.0	100.1	6.75	41.89	10.5	11.86	1.36
28	30	15.0	94.3	7.68	44.02	37.69	26.23	-11.46
28	40	15.0	94.1	7.41	42.82	35.69	24.97	-10.72
28	50	14.9	93.2	6.84	43.58	20.87	17.08	-3.79
28	60	14.7	92.7	4.98	48.01	20.47	15.05	-5.42
28	70	14.9	98.2	5.17	44.51	12.66	11.37	-1.29
28	75	15.6	106.4	6.49	52.84	12.57	12.62	0.05
28	78	19.4	132.7	6.56	54.34	20.48	16.61	-3.87
28	80	20.5	140.6	7.68	43.17	21.49	18.21	-3.29
28	81	21.6	148.8	7.6	55.53	19.68	17.24	-2.45
28	82	18.1	125.7	8.22	41.84	39.9	27.86	-12.05
29	70	14.5	96.0	5.5	48.05	22.86	16.74	-6.11
29	74	15.2	103.0	5.52	49.31	9.38	10.09	0.72

29	77	9.8	67.0	3.76	49.38	38.5		
29	79	12.1	83.4	3.93	49.77	30.51		
29	81	20.5	142.4	7.89	55.27	-2.1	6.74	8.84
29	83	5.9	41.3	3.23	50.58			
29	83	4.2	29.6	0.66	40.3	1.91		
29	84	2.3	16.5					
29	86	1.4	10.0					
29	89	1.1	7.8					
30	65	13.2	87.2	39.34	59.04	33.53		
30	68	34.5	233.7	7.27	42.38	34.52		
30	70	1.6	10.7					
30	71	1.5	10.3					
30	72	1.8	12.1					
30	75	0.9	6.4					
30	92	1.0	7.3					
30	95	8.5	61.0	3.05	49.66			
30	96	4.6	33.3					
30	98	9.1	65.6	1.01	40.07			
32	1	12.1	104.3	7.27	41.32	11.57	12.89	1.33
32	5	12.3	102.5	6.5	42.81	30.01	21.26	-8.75
32	10	12.6	102.2	6.72	42.43	26.26	19.62	-6.64
32	20	13.0	100.1	2.44	48.02	12.04	8.39	-3.66
32	30	13.8	96.9	6.59	40.3	20.66	16.73	-3.94
32	40	14.6	95.6	7.13	43.79	28.92	21.35	-7.57
32	50	15.2	104.4	7.74	44.83	33.82	24.37	-9.45
32	58	15.6	109.4	6.35	44.33	28.93	20.58	-8.35
32	70	19.6	150.9	3.16	46.23	31.25	18.6	-12.65
32	80	20.3	161.9	-8.1	49.91	26.7	5.28	-21.42
32	85	6.8	54.3	-9.28	49.98	29.19		
32	88	15.7	125.2	-11.96	50.76	38.73	7.44	-31.28

Fig S1: The plot of $\delta^{15}\text{N}_a$ - vs. $\delta^{18}\text{O-N}_2\text{O}$ in the oxygen deficient zone of all stations.

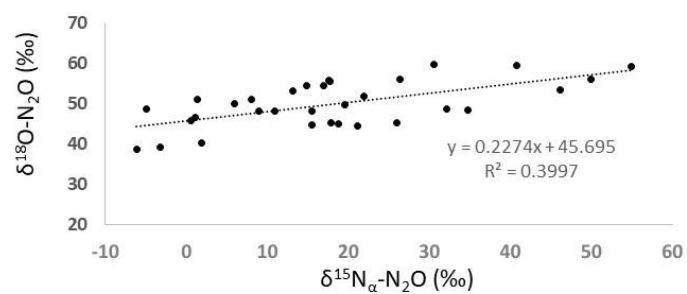


Fig S2: The plot of dual nitrate isotopes in the oxygen deficient zone of Station 32.

