

Air-snow transfer of nitrate on the East Antarctic plateau – Part 1 : Isotopic evidence for a photolytically driven dynamic equilibrium

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SUPPLEMENTARY INFORMATION

On Figures 1 to 23, we present a detailed view of nitrate mass fraction and isotopic composition profiles for each snow presented in this work together with the Blunier et al. and the Frey et al.'s snow pits. The black dashed lines represent the fit to the data used to derive the asymptotic values.

- 5 Values in the lower yellow panels represent the asymptotic values. The error bars represent the 1- σ uncertainty calculated for each asymptotic value.

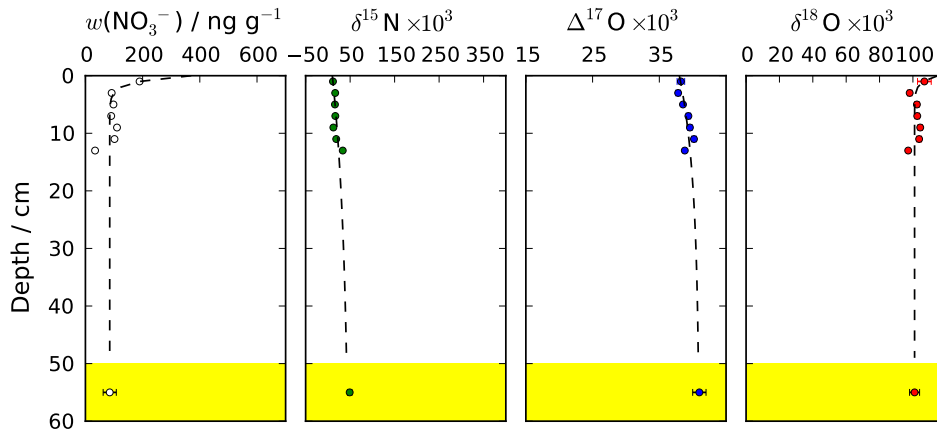


Fig. 1. Site 1 (D10), pit ID : D10 (this study).

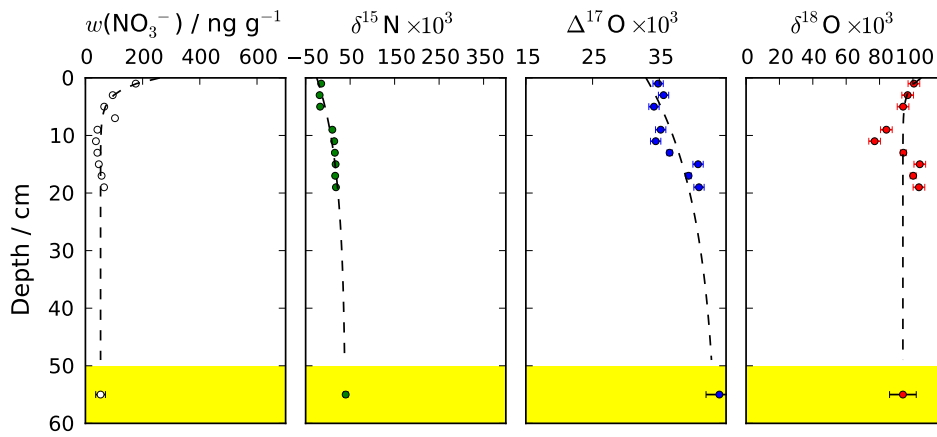


Fig. 2. Site 2, pit ID : II (this study).

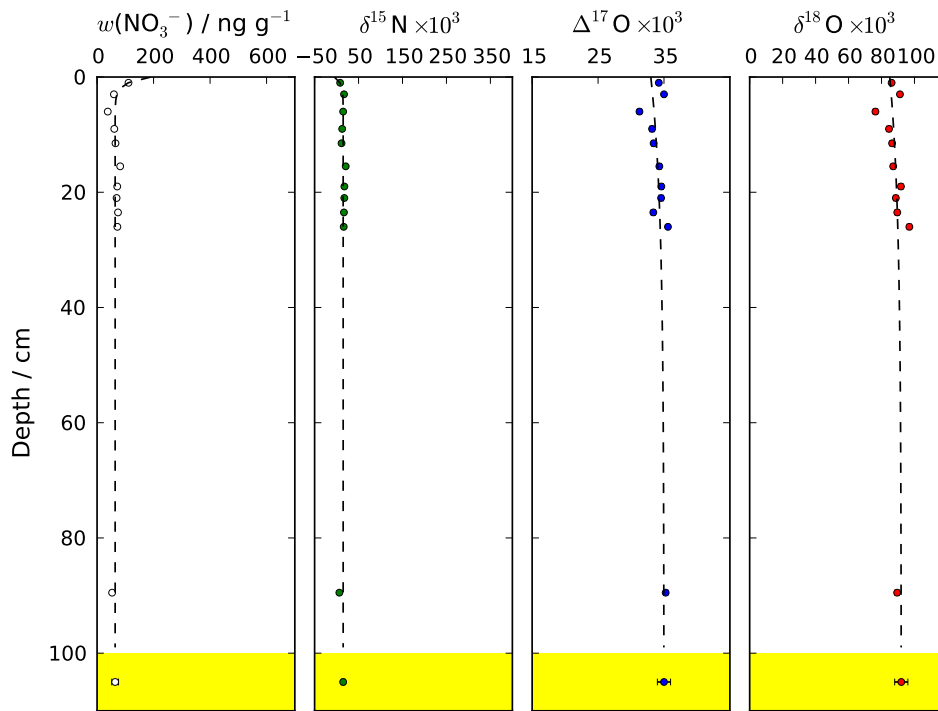


Fig. 3. Site 3, pit ID : IV (this study).

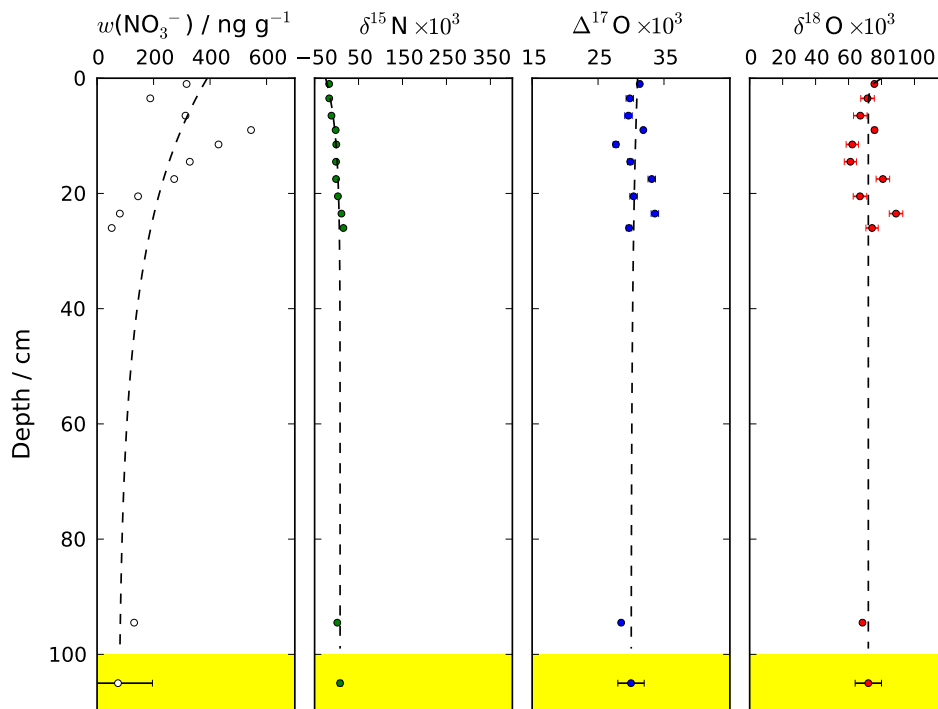


Fig. 4. Site 4, pit ID : VI (this study).

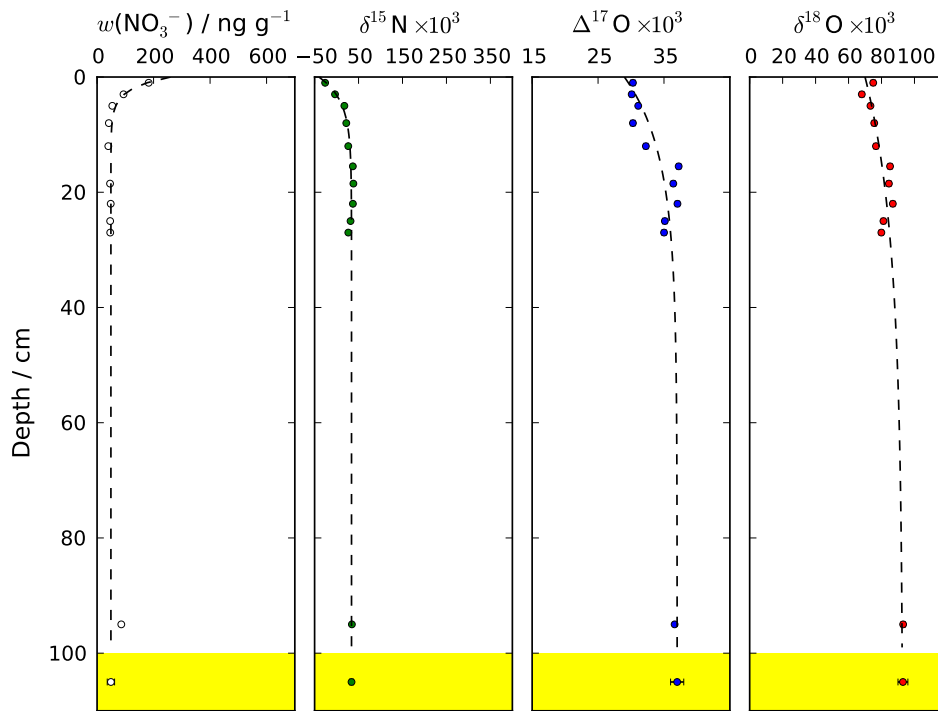


Fig. 5. Site 5, pit ID : VIII (this study).

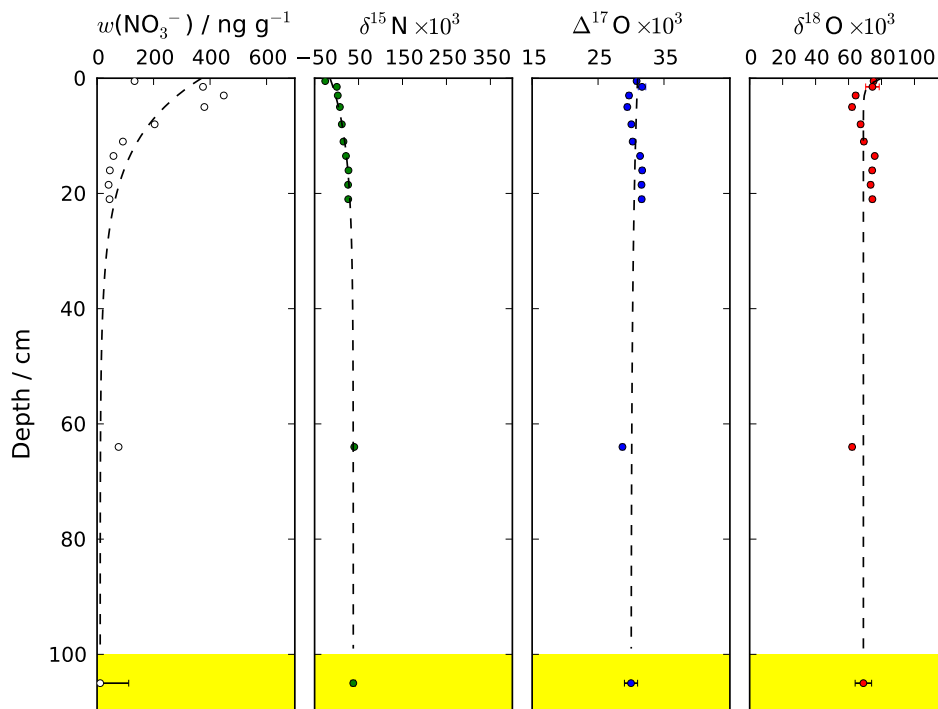


Fig. 6. Site 6, pit ID : X (this study).

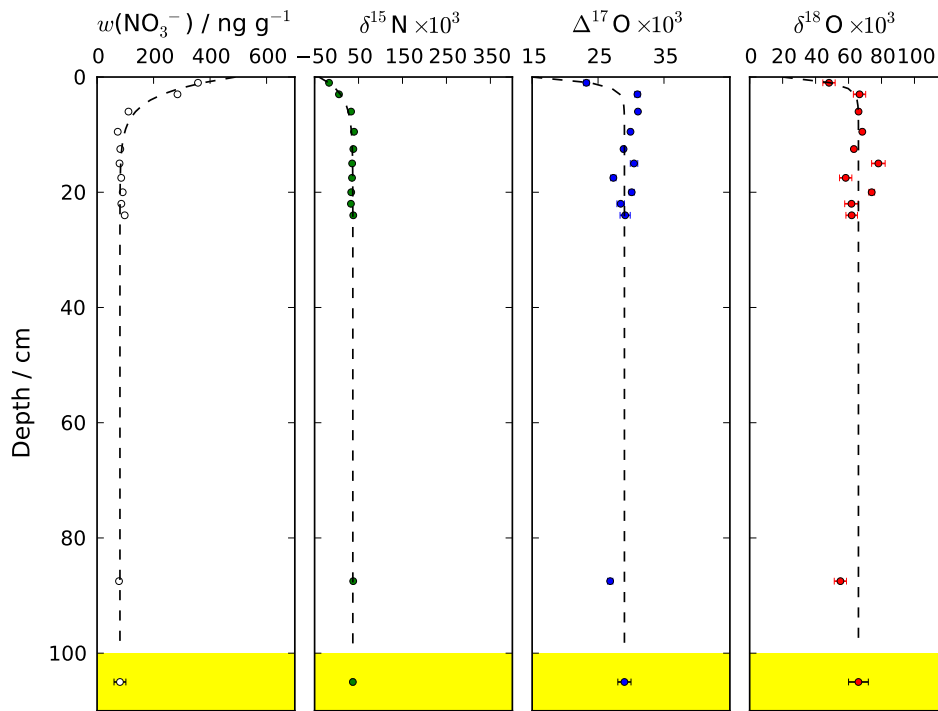


Fig. 7. Site 7, pit ID : XII (this study).

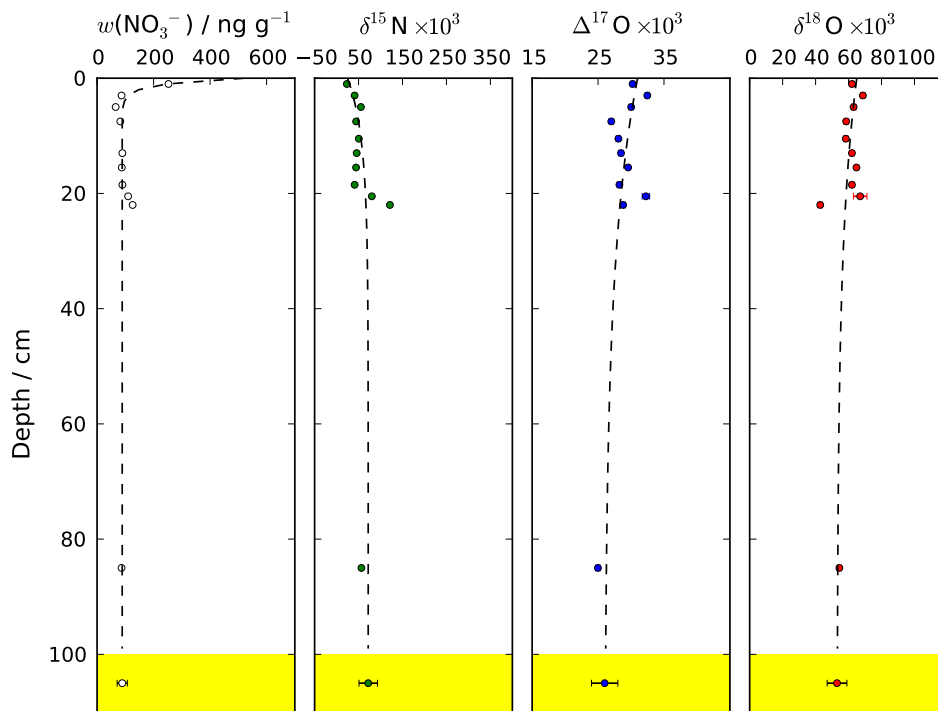


Fig. 8. Site 8, pit ID : XIV (this study).

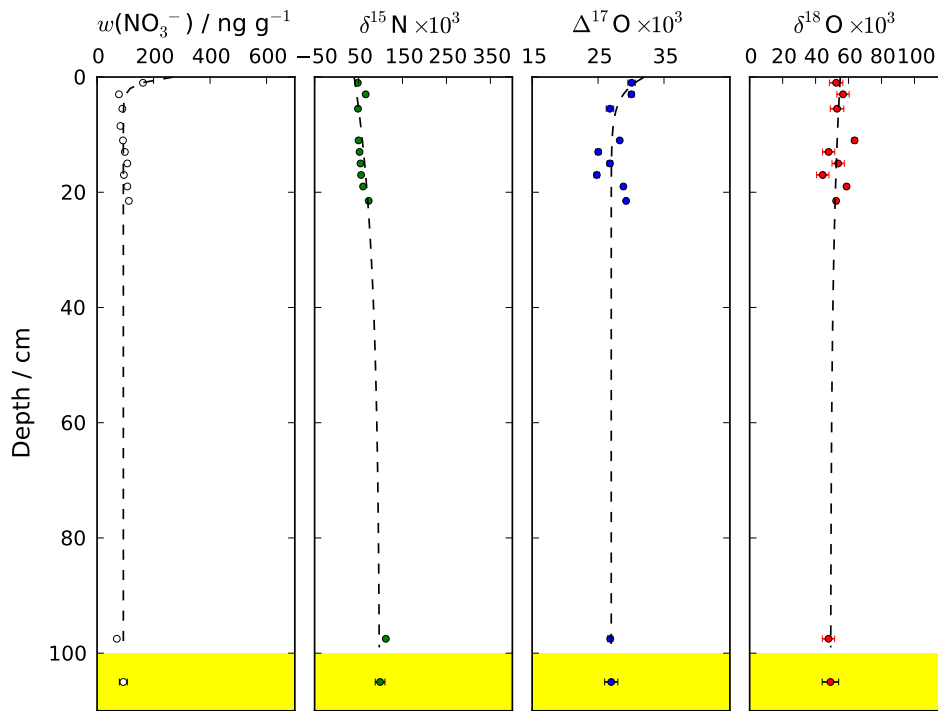


Fig. 9. Site 9, pit ID : XVI (this study).

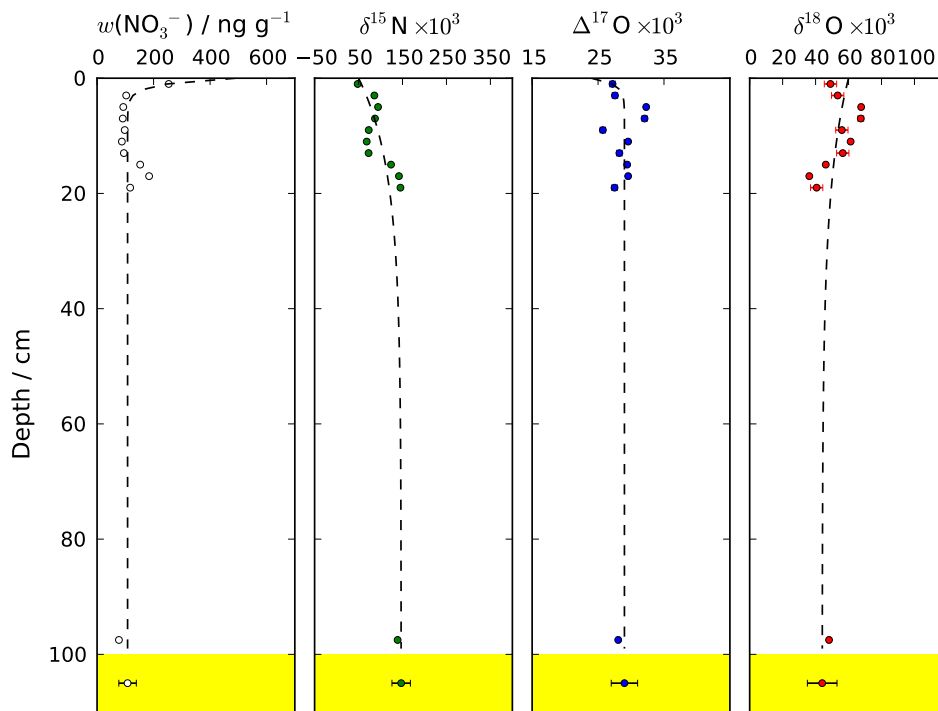


Fig. 10. Site 10, pit ID : XVIII (this study).

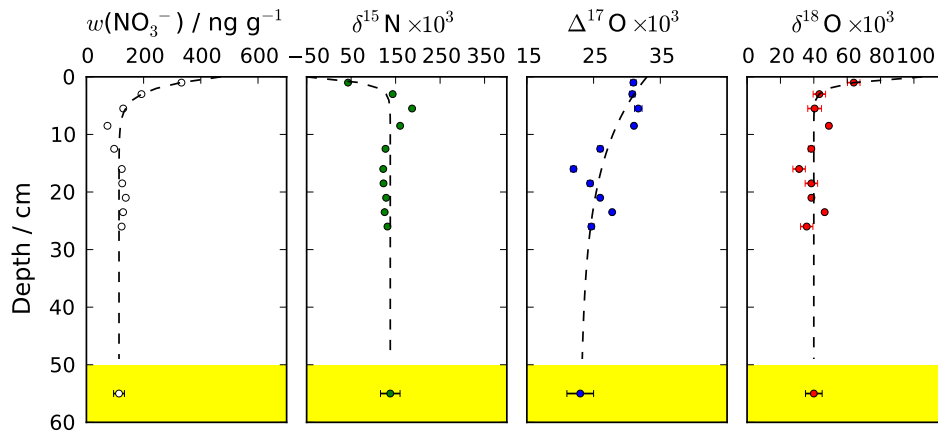


Fig. 11. Site 11, pit ID : XX (this study).

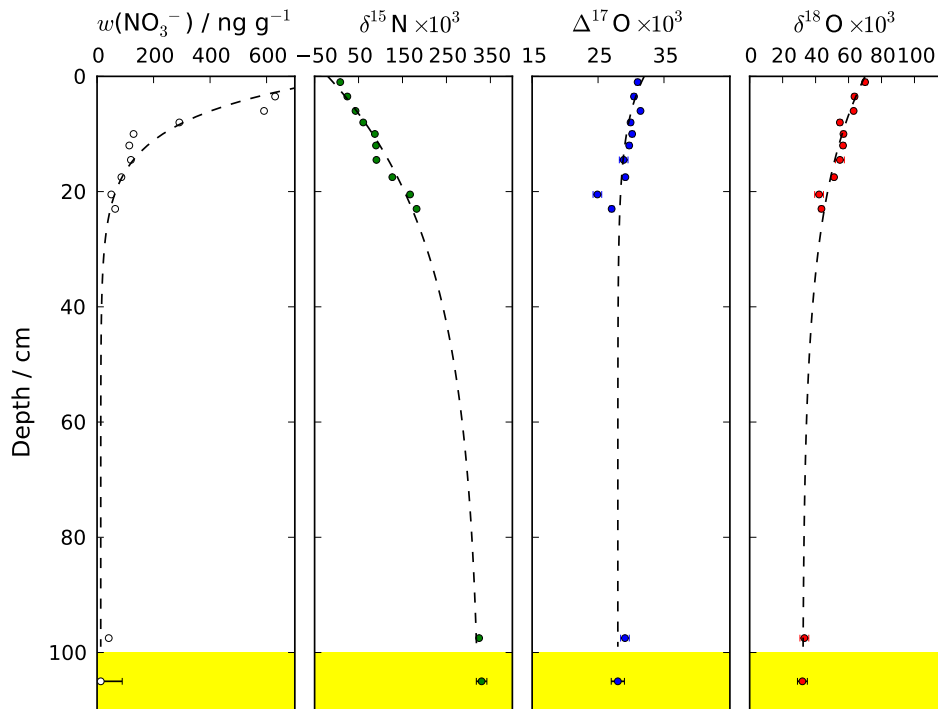


Fig. 12. Site 12, pit ID : XXII (this study).

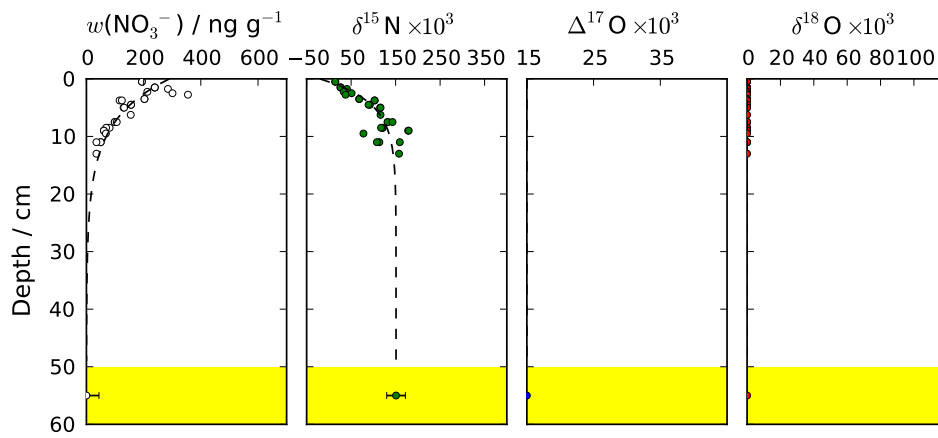


Fig. 13. Site 13 (Dome C), pit ID : DC03 (Blunier et al., 2005).

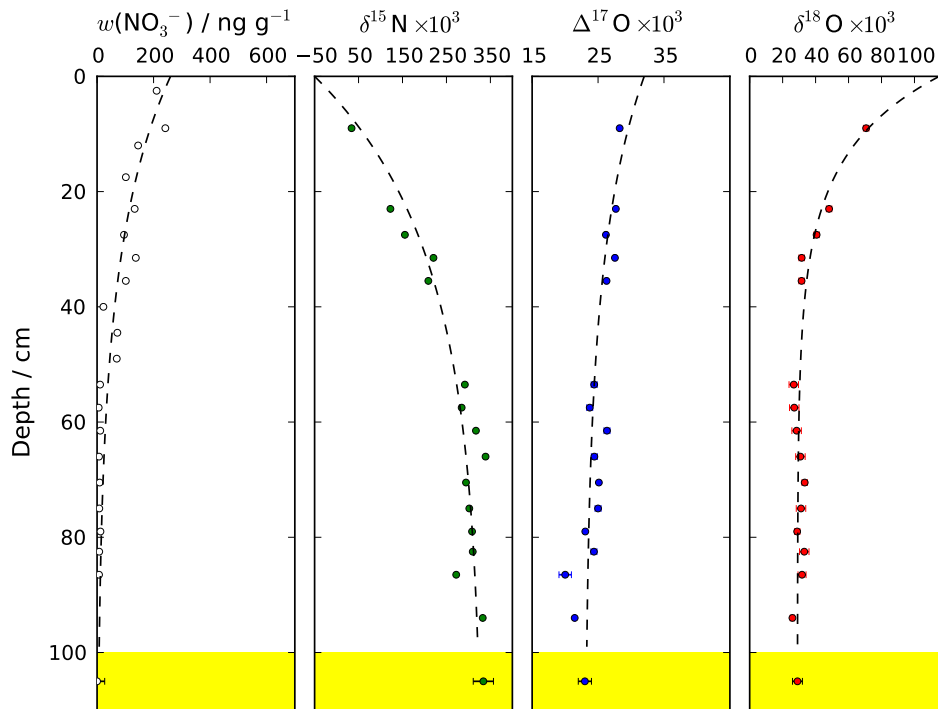


Fig. 14. Site 13 (Dome C), pit ID : DC04 (Frey et al., 2009).

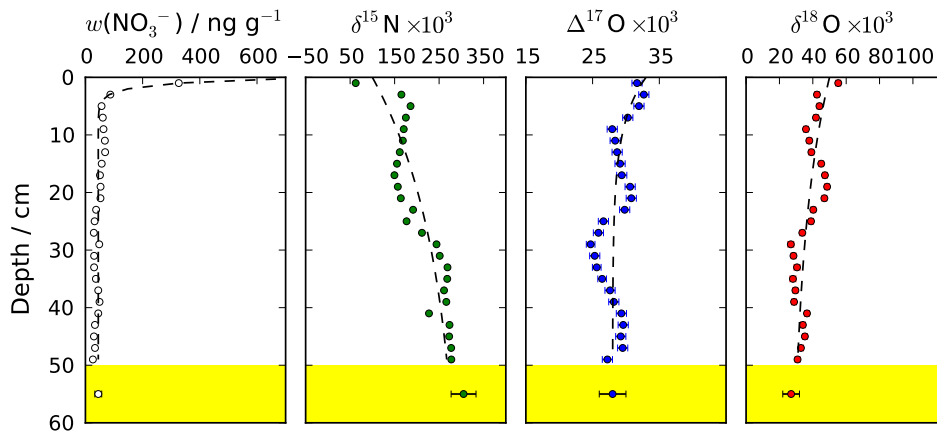


Fig. 15. Site 13 (Dome C), pit ID : DC07-1 (Frey et al., 2009).

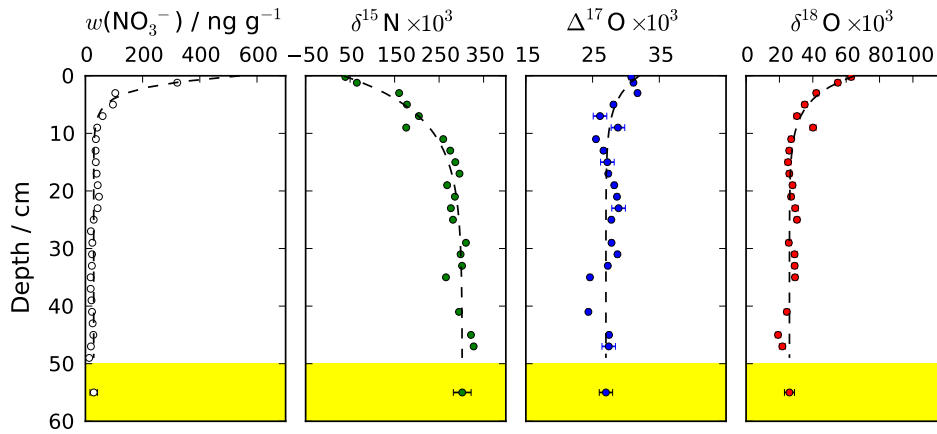


Fig. 16. Site 13 (Dome C), pit ID : DC07-2 (this study).

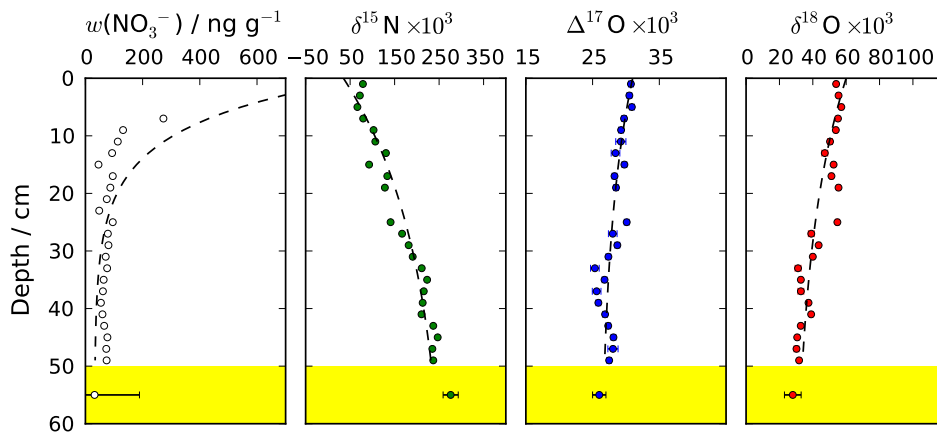


Fig. 17. Site 13 (Dome C), pit ID : DC07-3 (this study).

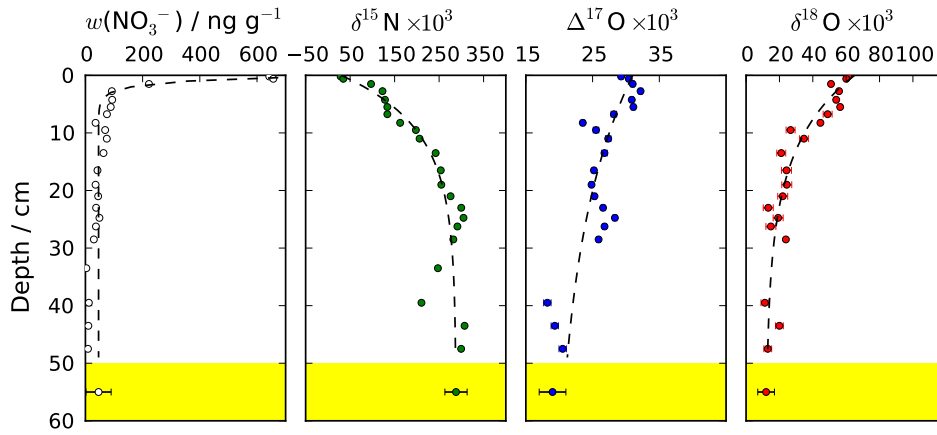


Fig. 18. Site 14, pit ID : S1 (this study).

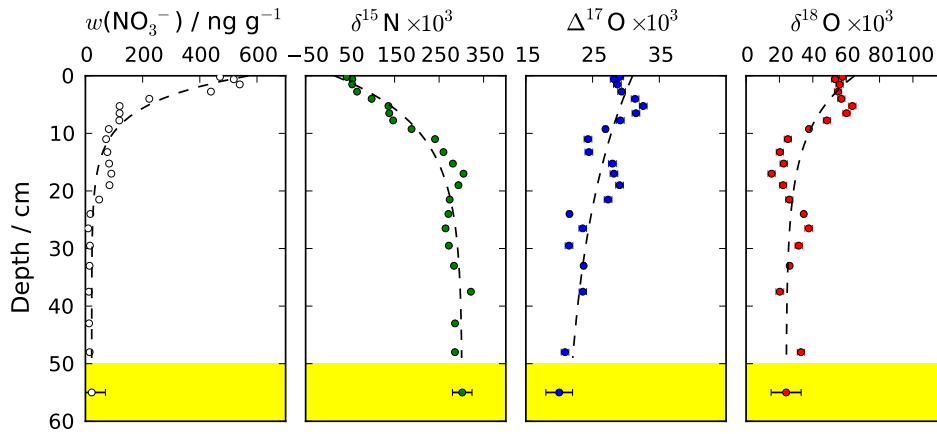


Fig. 19. Site 15, pit ID : S2 (this study).

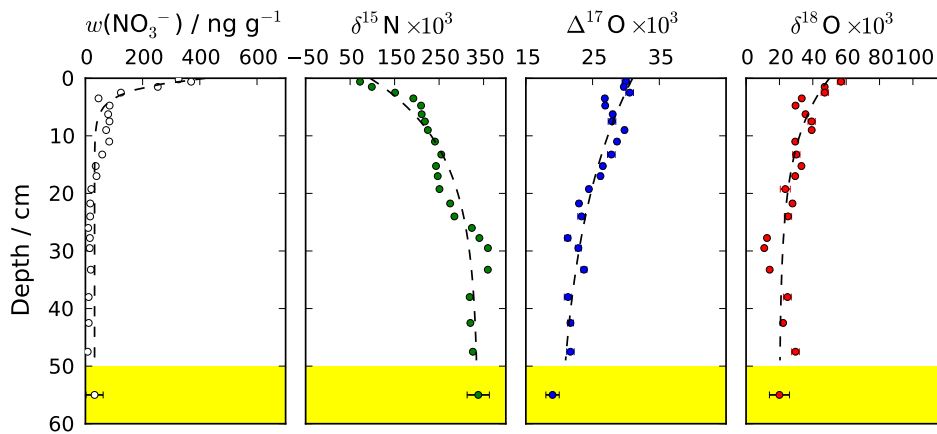


Fig. 20. Site 16, pit ID : S3 (this study).

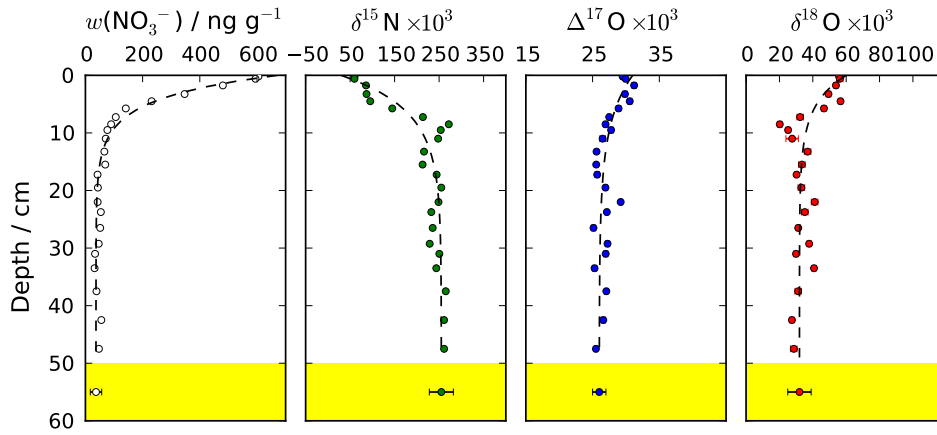


Fig. 21. Site 17 (Vostok), pit ID : S4 (this study).

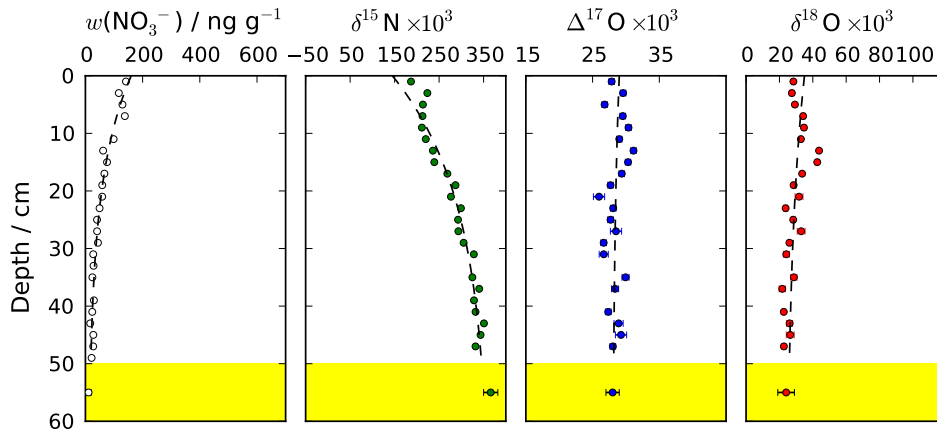


Fig. 22. Site 17 (Vostok), pit ID : V09-1 (this study).

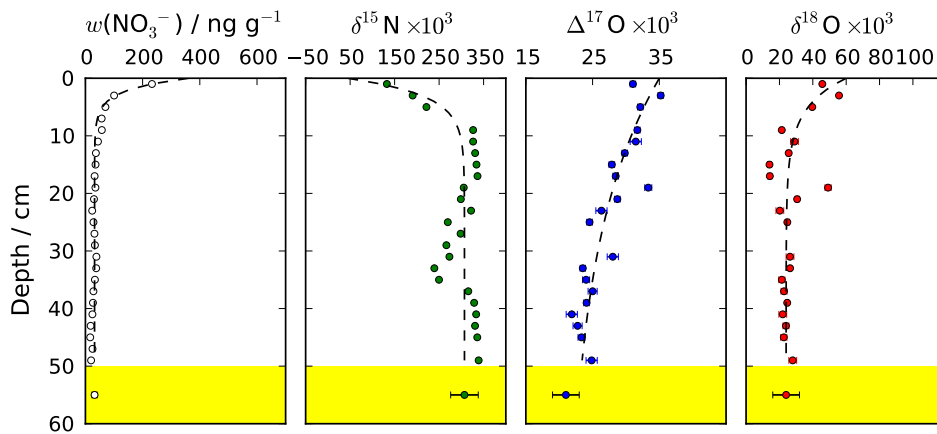


Fig. 23. Site 17 (Vostok), pit ID : V09-2 (this study).

Table 1. Decay parameter, η / cm, obtained for the measured quantity X ($= w(\text{NO}_3^-)$, $\delta^{15}\text{N}$, $\Delta^{17}\text{O}$ and $\delta^{18}\text{O}$).

Site	$w(\text{NO}_3^-)$	$\delta^{18}\text{O}$	$\Delta^{17}\text{O}$	$\delta^{15}\text{N}$
1 (D10)	1	1	17	28
2	2	2	22	15
3	1	22	21	1
4	26	1	28	9
5	2	26	13	4
6	11	1	28	11
7	3	1	1	3
8	1	26	28	10
9	1	28	3	28
10	1	18	1	15
11	2	1	14	1
12	7	22	9	28
13 (DC)	7	1	1	4
13 (DC)	28	13	28	28
13 (DC)	1	28	8	28
13 (DC)	2	4	4	7
13 (DC)	8	28	27	28
14	1	12	28	9
15	5	9	28	9
16	2	11	27	12
17 (Vk)	4	5	8	6
17 (Vk)	17	28	28	21
17 (Vk)	2	5	28	3
m \pm 1- σ	6 \pm 8	13 \pm 11	18 \pm 11	14 \pm 10