



Supplement of

Chronological and sedimentological investigations of the Late Pleistocene succession in Osterbylund (Schleswig-Holstein, Germany)

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Figure S1: Sediment above the Eemian peat strongly disturbed by periglacial sliding into the push syncline. Former Ah- and Ae-horizons of the palaeosoil OBL 2 are disrupted and overturned. In the underlying sand sample LUM 498 was taken for OSL dating. Photograph: H.-J. Stephan, November 2003.



Figure S2: OBL 3 (podsol) and position of sample LUM 1139. Photograph: H.-J. Stephan, September 2005.

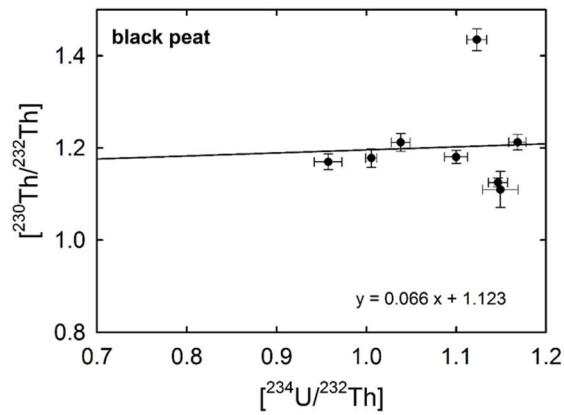
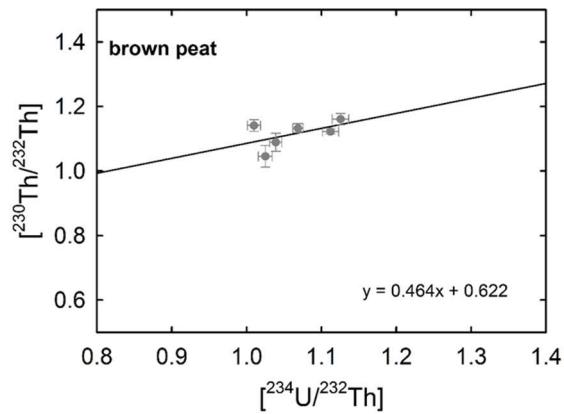


Figure S3: Rosholt-Type I plot for both the black and brown peat layers. The Rosholt plot therefore gives first evidence for open-system behaviour of the two data sets.

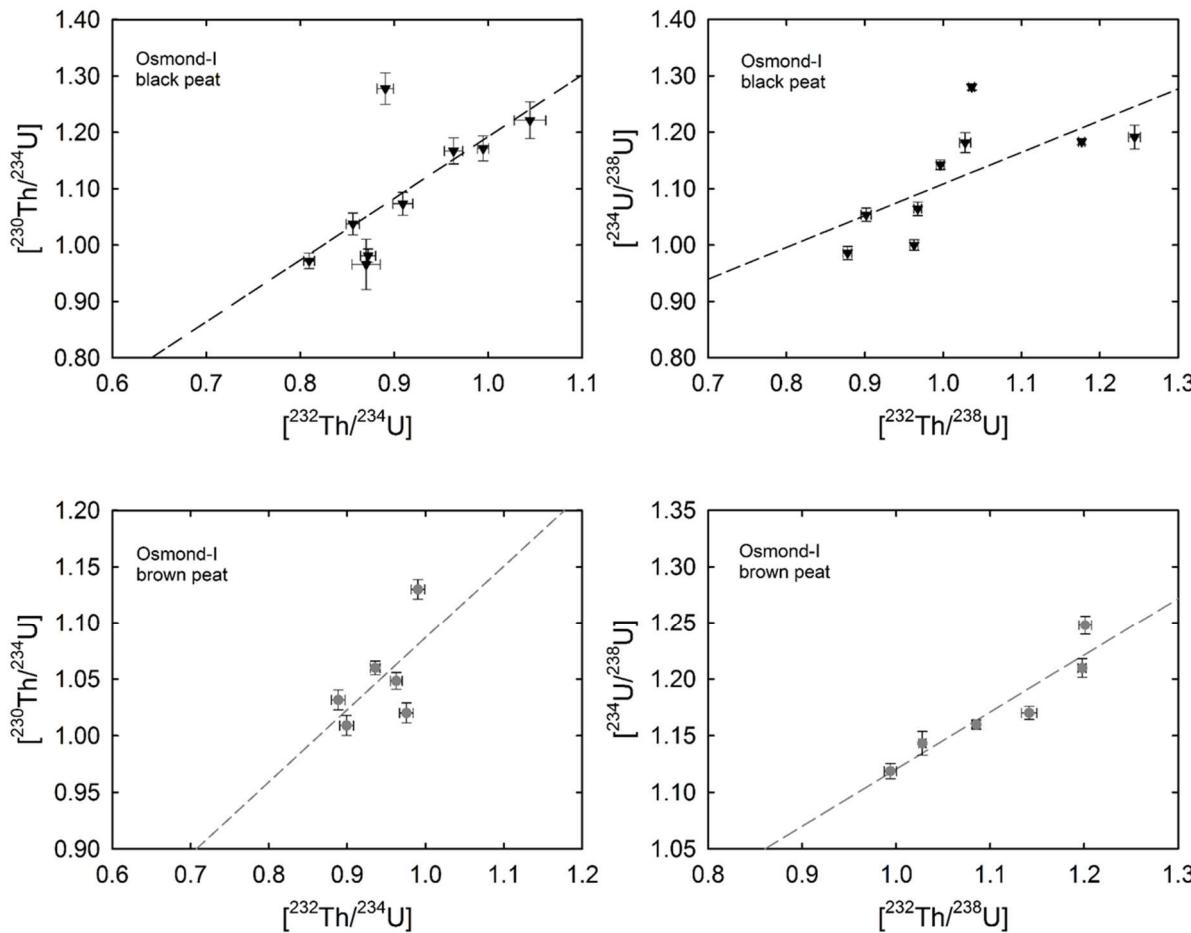


Figure S4: Osmond-I plots for both the black and the brown peat, showing scatter much wider than analytical error would suggest. The data imply open-system behaviour.

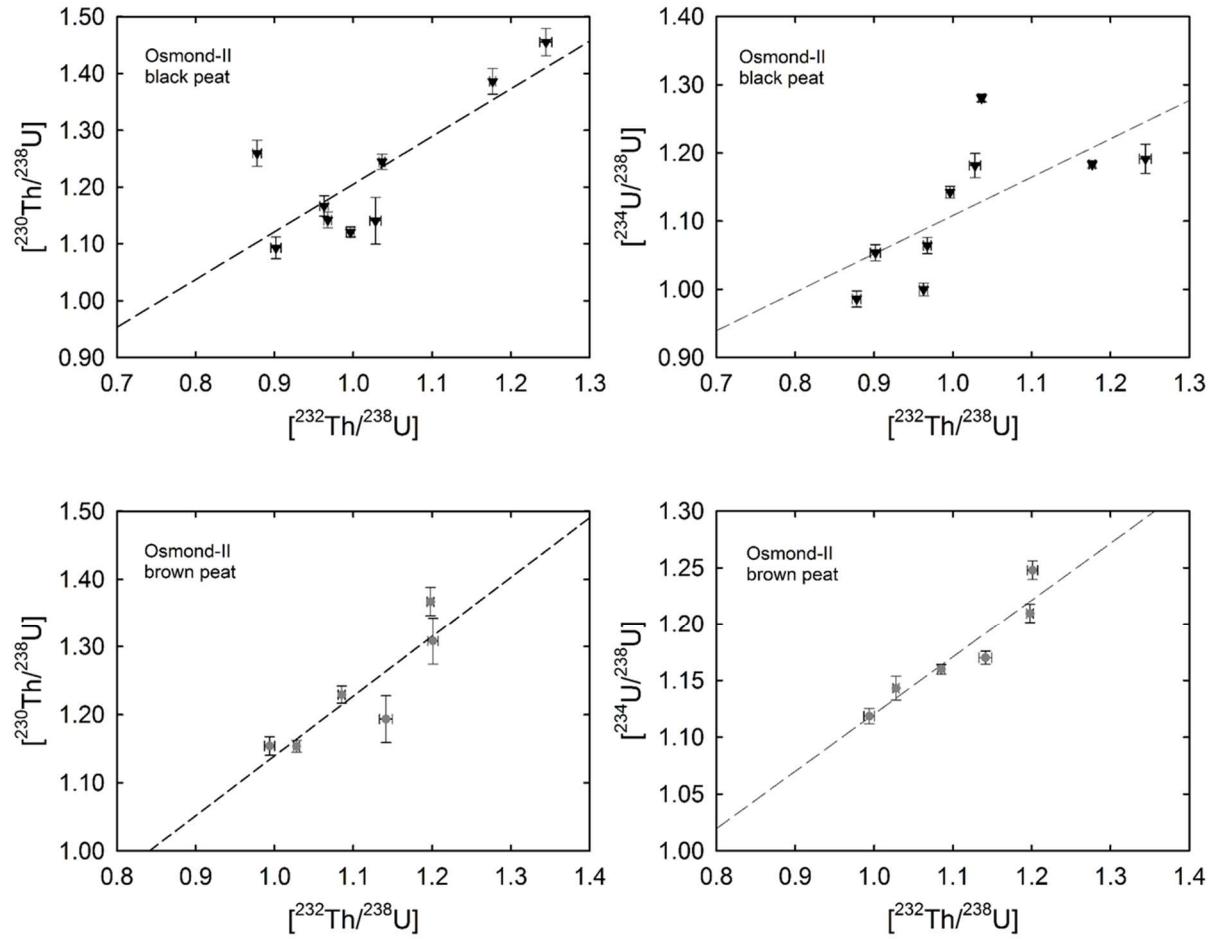


Figure S5: Osmond-II plots for both the black and the brown peat. Again, the scatter implies open-system behaviour.

Table S1: Isotopic data of selected peat samples from Osterbylund measured using TIMS. The errors given are standard deviations (2σ).

TIMS-No.	Profile	sample depth [cm]	^{238}U [dph/g]	^{234}U [dph/g]	^{230}Th [dph/g]	^{232}Th [dph/g]	U conc. [ppm]	Th conc. [ppm]
<i>black peat</i>								
616	2003	40	2.683 ± 0.011	3.197 ± 0.045	3.905 ± 0.049	3.339 ± 0.007	0.06	0.23
617	2003	45-47	1.733 ± 0.006	2.048 ± 0.029	1.978 ± 0.064	1.782 ± 0.006	0.04	0.12
618	2003	50-52	2.412 ± 0.013	2.541 ± 0.017	2.637 ± 0.032	2.175 ± 0.004	0.05	0.15
754	2004-1	15-17	10.671 ± 0.043	10.521 ± 0.080	13.441 ± 0.192	9.369 ± 0.021	0.24	0.64
755	2004-1	22-26	4.567 ± 0.010	5.218 ± 0.033	5.119 ± 0.030	4.551 ± 0.013	0.10	0.31
756	2004-1	30-33	5.824 ± 0.015	6.198 ± 0.057	6.652 ± 0.064	5.635 ± 0.014	0.13	0.38
757	2004-1	38-41	3.859 ± 0.009	3.858 ± 0.027	4.502 ± 0.058	3.716 ± 0.011	0.09	0.25
<i>brown peat</i>								
636	2003	72-74	1.653 ± 0.005	2.063 ± 0.011	2.163 ± 0.050	1.986 ± 0.005	0.04	0.14
637	2003	79-81	1.914 ± 0.004	2.240 ± 0.009	2.285 ± 0.061	2.185 ± 0.011	0.04	0.15
638	2003	87-89	2.813 ± 0.004	3.403 ± 0.023	3.846 ± 0.053	3.370 ± 0.007	0.06	0.23
760	2004-1	90-94	3.214 ± 0.003	3.728 ± 0.012	3.951 ± 0.037	3.488 ± 0.011	0.07	0.24
761	2004-1	98-101	4.194 ± 0.010	4.794 ± 0.040	4.838 ± 0.026	4.311 ± 0.007	0.09	0.29
762	2004-1	105-108	4.929 ± 0.008	5.514 ± 0.028	5.688 ± 0.058	4.899 ± 0.024	0.11	0.33