Table 1. DSi concentrations (ppm), $\delta^{30}Si_{DSi}$ (‰) and $\delta^{29}Si_{DSi}$ (‰) with respective uncertainties South Basin sites BAIK13_1a and b. Dates of sampling are provided. Uncertainties are 2σ unless stated. The weighted average of all $\delta^{30}Si_{DSi}$ and $\delta^{29}Si_{DSi}$ are provided along with the respective 95% confidence interval and MSWD. Data are plotted in Figure 3.

	Water depth (m)	DSi (ppm)	$\delta^{30}Si_{DSi}$ (‰)	Prop' 2s abs	$\delta^{29}Si_{DSi}$ (‰)	Prop' 2s abs
BAIK13_1a	0.4	1.22	**+2.34**	0.15[1]	**+1.22**	0.10[1]
03/03/2013	10	1.19	**+2.17**	0.15[1]	**+1.18**	0.09[1]
	24	1.17	**+2.55**	0.15[1]	**+1.29**	0.10[1]
	40	1.12	**+2.18**	0.11	**+1.18**	0.06
	100	1.06	**+2.22***	0.31	**+1.27***	0.19
	180	0.66	**+2.40**	0.08	**+1.23**	0.04
BAIK13_1b	1	0.74	**+2.16**	0.09	**+1.14**	0.04
12/03/2013	10	1.21	**+2.44**	0.15[1]	**+1.20**	0.05[1]
	20	1.15	**+2.28**	0.10[1]	**+1.17**	0.04[1]
	50	1.16	**+2.29**	0.16[1]	**+1.26**	0.11[1]
W.A MEAN			**+2.28**	**0.09**[1]	**+1.19**	**0.03**[1]
MSDW			**4.1**		**1.9**	

**This water sample was not pre-concentrated, refer to methods.*

[1]These water sample values are weighted averages for sample replicates that are analytically robust. These errors are at the 95% confidence interval.

Table 2. Open, sequencing trap and sediment core $\delta^{30}Si_{diatom}$ data and respective uncertainties (2σ). Mean values for open and sequencing trap $\delta^{30}Si_{diatom}$ compositions are provided along with 95% confidence and the population MSWD value (in bold). Respective water column depths are presented along with the relative abundance of *Synedra acus* var *radians* (data not available for sequencing traps). Total dry mass sediment fluxes are also shown for open trap data (mg m^{-2} d^{-1}). All open trap data are plotted in Figure 4.

Code name	Water column depth (m)	$\delta^{30}Si_{diatom}$ (‰)	Prop' 2s abs	$\delta^{29}Si_{diatom}$ (‰)	Prop' 2s abs	Sediment Flux (mg m^{-2} d^{-1})	*Synedra acus* var *radians* (% abundance)
Z1	100	**+1.19**	0.12	**+0.62**	0.07	1584	90
Z2	200	**+1.28**	0.11	**+0.70**	0.06	1503	90
Z3*	300	**+1.11**[1]	0.15	**+0.61**[1]	0.08	1686	93
Z4	400	**+1.32**[1]	0.16	**+0.69**[1]	0.10	1772	93
Z5	600	**+1.38**[1]	0.15	**+0.71**[1]	0.10	1942	88
Z6	700	**+1.38**	0.17	**+0.69**	0.11	1997	94
Z7	900	**+1.26**	0.14	**+0.66**	0.10	1980	92
Z8	1100	**+1.21**	0.13	**+0.60**	0.10	1887	94
Z9	1300	**+1.17**[1]	0.12	**+0.61**[1]	0.07	1943	92
Z10	1350	**+1.25**	0.11	**+0.62**	0.10	1999	86
W.A Mean		**+1.23**	0.06[1]	**+0.63**	0.03[1]		
MSWD		**2.9**		**1.6**			
Sequencing traps							
A4	May	**+0.67**	0.06	**+0.36**	0.04	1650	
A6	July	**+1.22**	0.08	**+0.53**	0.09	175	
A7	August	**+1.37**	0.07	**+0.69**	0.03	169	
Mean		**+1.09**	0.74 (2SD)	**+0.53**	0.33 (2SD)		
	Sediment cores						
BAIK13_1C	0.6-0.8 cm	**+1.30**	0.08	**+0.68**	0.05		
BAIK13_4F	0.2-0.4 cm	**+1.43**	0.13	**+0.75**	0.04		

[1]*These water sample values are weighted averages for sample replicates that are analytically robust. These errors are at the 95% confidence interval.*