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CORRECTION
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Corrigendum: Iron Availability Influences Silicon Isotope Fractionation in Two Southern Ocean Diatoms (*Proboscia inermis* and *Eucampia antarctica*) and a Coastal Diatom (*Thalassiosira pseudonana*)

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A corrigendum on

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In the original article, there was a mistake in **Table 1** as published. It seems that during the transcription of the data into **Table 1** an error occurred whereby three values from a different experiment were inadvertently added to the average silicon isotope data for iron-limited *Eucampia antarctica* experiment (*Eucampia antarctica* 4.4 nmol L^{-1} Fe; 40 nmol L^{-1} DFB). The corrected **Table 1** appears below. Note that the dataset used to generate Figure 2 was not in error. The authors apologize for this error and state that this does not change the scientific conclusions of the article in any way.

In the original article, the error in **Table 1** was translated through to a silicon isotope value quoted in the Abstract and the Results section of this manuscript. In the Abstract and in the Results section titled "Effects of Fe-Availability on Si Isotope Fractionation" the value of −1.57 ± 0.50‰ ($n = 11$) is in error as result of the error in **Table 1**. The correct value should be −1.82 ± 0.36‰ ($n = 8$).

A correction has been made to the Abstract and the following paragraph in the Results section titled "Effects of Fe-Availability on Si Isotope Fractionation":

Abstract: The fractionation of silicon (Si) isotopes was measured in two Southern Ocean diatoms (*Proboscia inermis* and *Eucampia antarctica*) and a coastal diatom (*Thalassiosira pseudonana*) that were grown under varying iron (Fe) concentrations. Varying Fe concentrations had no effect on the Si isotope enrichment factor (ε) in *T. pseudonana*, whilst *E. antarctica* and *P. inermis* exhibited significant variations in the value of ε between Fe-replete and Fe-limited conditions. Mean ε values in *P. inermis* and *E. antarctica* decreased from (± 1 SD) −1.11 ± 0.15‰ and −1.42 ± 0.41‰ (respectively) under Fe-replete conditions, to −1.38 ± 0.27‰ and −1.82 ± 0.36‰ (respectively) under Fe-limiting conditions. These variations likely arise from adaptations in diatoms arising from the nutrient status of their environment. *T. pseudonana* is a coastal clone typically accustomed to low Si but high Fe conditions whereas *E. antarctica* and *P. inermis* are typically accustomed to

TABLE 1 | Culture conditions, growth rates, Fe concentrations and Results from the Si isotope fractionation experiments for *Proboscia inermis*, *Eucampia Antarctica,* and *Thalassiosira pseudonana*.

Fe Treatment	Fe′ (pmol L^{-1})	Number of replicate cultures	μ (d^{-1})	PFD ($\mu E\ m^{-2}\ s^{-1}$)	*n*	$\delta^{30}Si_{NBS28}$ (per mil)	*f*	α	Fractionation factor (ε, ‰)	*P*
P. inermis										
58.3 nmol L^{-1} Fe; 10 μmol L^{-1} EDTA	3,369	3	0.35 ± 0.02	60	9	−0.55 ± 0.16	0.97 ± 0.06	0.9989 ± 0.0002	−1.11 ± 0.15	
4.4 nmol L^{-1} Fe; 80 nmol L^{-1} DFB	0.09	2	0.09 ± 0.02	60	5	−0.6 ± 0.23	0.68 ± 0.06	0.9986 ± 0.0003	−1.38 ± 0.27	0.08
E. antarctica										
58.3 nmol L^{-1} Fe; 10 μmol L^{-1} EDTA	3,369	4	0.32 ± 0.02	50	12	−0.65 ± 0.33	0.7 ± 0.02	0.9986 ± 0.0004	−1.42 ± 0.41	
4.4 nmol L^{-1} Fe; 40 nmol L^{-1} DFB	0.2	4	0.07 ± 0.01	50	8	−1.04 ± 0.32	0.72 ± 0.07	0.9982 ± 0.0004	−1.82 ± 0.36	0.04
T. pseudonana										
500 nmol L^{-1} Fe; 100 μmol L^{-1} EDTA	418	1	1.52*	133	3	0.09 ± 0.08	0.60	0.9994 ± 0.0001	−0.59 ± 0.11	
250 nmol L^{-1} Fe; 100 μmol L^{-1} EDTA	208	1	1.48*	133	3	0.13 ± 0.37	0.65	0.9995 ± 0.0005	−0.51 ± 0.46	0.8
80 nmol L^{-1} Fe; 100 μmol L^{-1} EDTA	67	1	0.85*	133	3	0.13 ± 0.08	0.67	0.9995 ± 0.0001	−0.51 ± 0.1	0.39
30 nmol L^{-1} Fe; 100 μmol L^{-1} EDTA	25	2	0.72 ± 0.01	133	6	−0.07 ± 0.08	0.87 ± 0.01	0.9993 ± 0.0001	−0.65 ± 0.08	0.42
Growth Media Si (Aquil replicates)					6	0.54 ± 0.13				
Growth Media Si (NaOH replicates)					3	0.53 ± 0.02				
Mean Growth Media Si (Aquil + NaOH replicates)					9	0.54 ± 0.11				

**Max growth rate from single culture, replicate cultures were Fe-replete. Because there was no difference in ε between replicate cultures, the value for ε is the mean of all cultures ± 1 SD. Fractionation factors were calculated from diatom silica as a function of f, where f is the fraction of the original $Si(OH)_4$ remaining in the system once diatoms were harvested. n is the number of measurements from cultures. All values presented as means ±1 SD. P-values are relative to Fe-replete (Fe+) conditions. For T. pseudonana, the Fe-replete concentration is equal to an Fe′ value of 418 pmol L^{-1}.*

High Si, High nitrate low Fe conditions. Growth induced variations in silicic acid ($Si(OH)_4$) uptake arising from Fe-limitation is the likely mechanism leading to Si-isotope variability in *E. antarctica* and *P. inermis*. The multiplicative effects of species diversity and resource limitation (e.g., Fe) on Si-isotope fractionation in diatoms can potentially alter the Si-isotope composition of diatom opal in diatomaceous sediments and sea surface $Si(OH)_4$. This work highlights the need for further in vitro studies into intracellular mechanisms involved in $Si(OH)_4$ uptake, and the associated pathways for Si-isotope fractionation in diatoms.

Effects of Fe-Availability on Si Isotope Fractionation: Mean values for ε varied between the Fe-replete and Fe-limited conditions for the two Southern Ocean diatoms (Table 2). While there was some variability in the values of ε for *E. antarctica*, there was a significant difference in ε ($p = 0.04$) between Fe-replete and Fe-limited conditions, with mean ε values being more negative for Fe-limited cultures (Fe-limited, $\varepsilon = -1.82 \pm 0.36‰$; Fe-replete, $\varepsilon = -1.40 \pm 0.41‰$) (**Table 1**). Mean ε values were also more negative for *P. inermis* cultured under Fe-limited conditions (Fe-limited, $\varepsilon = -1.38 \pm 0.27‰$; Fe-replete, $\varepsilon = -1.11 \pm 0.15‰$). Both Fe-replete and Fe-limited datasets for *P. inermis* exhibited a significant difference at the 90% confidence interval ($p = 0.08$), and removing outliers from both Fe-replete and Fe-limited data sets for *P. inermis* makes the difference more significant ($p = 0.04$).

The authors apologize for this error and state that this does not change the scientific conclusions of the article in any way.

Conflict of Interest Statement: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.