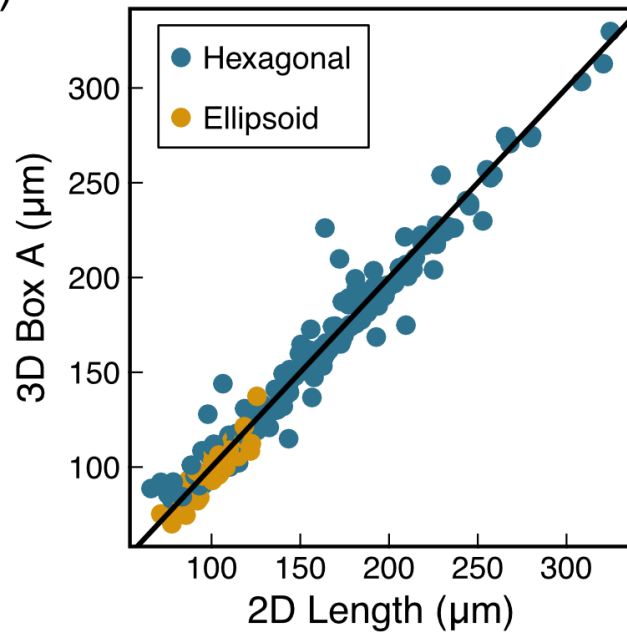


UPDATED TABLE 3

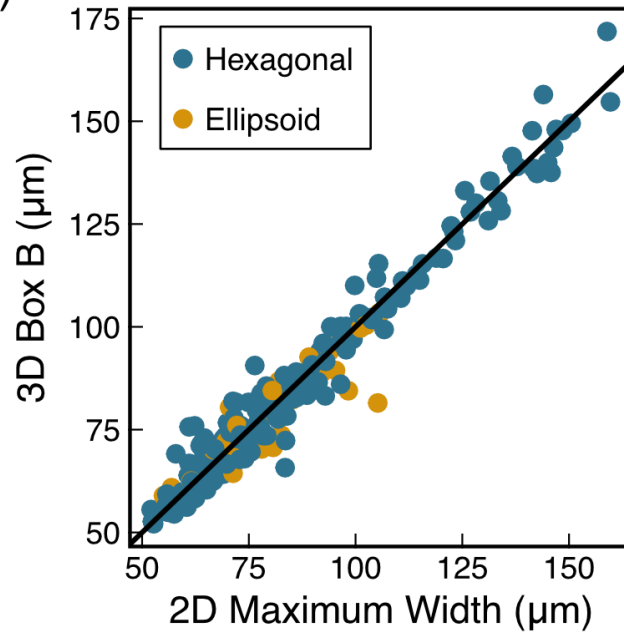
This Study: 237 apatite grains; CT resolution: 0.64 μm				
	avg.		abs. avg. %	
	3D/2D ^b	1s	diff. ^c	1s
All data: 237 grains				
Volume	0.85	0.17	19	13
²³⁸ F _T	0.96	0.04	4	4
R _{FT}	0.92	0.07	8	6
Length/Box A	1	0.07	5	6
Width 1/Box B	0.99	0.06	5	4
Width 2/Box C	1.09	0.14	13	10
Hexagonal apatite: 201 grains				
Volume	0.87	0.17	18	12
²³⁸ F _T	0.97	0.03	4	3
R _{FT}	0.93	0.06	7	5
Length/Box A	1.01	0.07	5	6
Width 1/Box B	1	0.06	4	4
Width 2/Box C	1.11	0.12	13	10
Ellipsoid apatite: 36 grains				
Volume	0.75	0.17	26	15
²³⁸ F _T	0.92	0.05	8	4
R _{FT}	0.86	0.08	15	8
Length/Box A	0.98	0.06	6	3
Width 1/Box B	0.97	0.07	6	5
Width 2/Box C	0.97	0.16	12	11
Previous Studies				
	avg.		abs. avg. %	
	3D/2D	1s	diff.	1s
Cooperdock et al. (2019): 108 apatite grains; CT resolution: 4-5 μm				
Volume	0.82	0.22	23	16
²³⁸ F _T	1.01	0.02	2	2
R _{FT}	1.02	0.07	5	5
Length/Box A	0.98	0.1	4	6
Width 1/Box B	1.03	0.07	16	8
Width 2/Box C	N/A	N/A	N/A	N/A
Glotzbach et al. (2019): 24 apatite grains; CT resolution: 1.2 μm				
Volume	1.04	0.2	15	13
²³⁸ F _T	0.99	0.02	2	2
R _{SV} ^d	0.93	0.06	8	5

Reply-Fig. 1: a) 2D length vs. 3D Box A, b) 2D max. width vs. 3D Box B, and c) 2D min. width vs. 3D Box C.

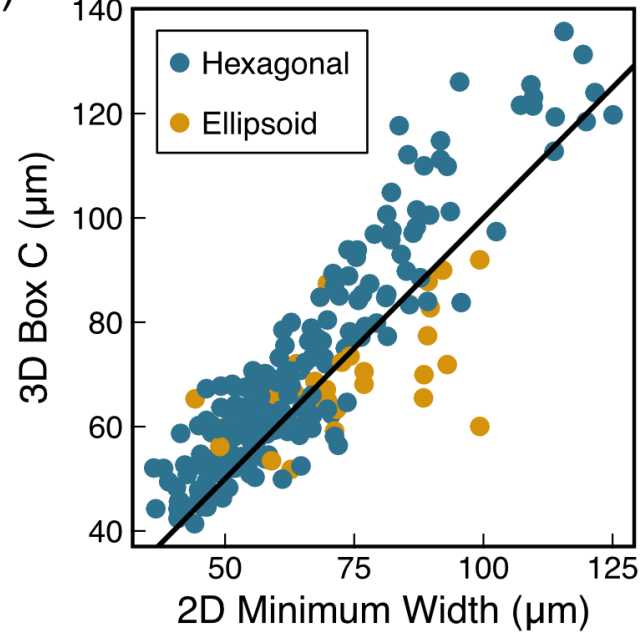
a)



b)



c)



Corrections and uncertainties for 2D values calculated using the minimum and maximum width.

Volume

Geometry	Correction ^a	% Uncert. ^b (1s) for apatite grains of all sizes	
Volume			
Hex.	1.27	21%	
Ellip.	0.86	28%	

Isotope-specific F_T values

Geometry	Correction	% Uncert. (1s) for medium-sized ^c apatite grains	% Uncert. (1s) for large-sized ^d apatite grains	
²³⁸ F _T				
Hex.	1.08	6%	3%	
Ellip.	0.96	6%	6%	
²³⁵ F _T				
Hex.	1.08	8%	4%	
Ellip.	0.95	7%	7%	
²³² F _T				
Hex.	1.08	8%	4%	
Ellip.	0.95	7%	7%	
¹⁴⁷ F _T				
Hex.	1.02	2%	1%	
Ellip.	0.98	1%	1%	

R_{FT}

Geometry	Correction	% Uncert. (1s) for apatite grains of all sizes	
R _{FT}			
Hex.	1.15	9%	
Ellip.	0.91	10%	

Reply-Fig. 2: 2D calculations using both the maximum and minimum widths.

