

Sweet, M.L., Gaillot, G.T., Jouet, G., Rittenour, T.M., Toucanne, S., Marsset, T., and Blum, M.D., 2019, Sediment routing from shelf to basin floor in the Quaternary Golo System of Eastern Corsica, France, western Mediterranean Sea: GSA Bulletin, <https://doi.org/10.1130/B35181.1>.

## **Data Repository**

**Appendix 1.**  $^{14}\text{C}$  Age Information.

**Appendix 2.** Luminescence Age Information.

## Appendix 2. Luminescence Age Information

Core number, Sample interval	USU num.	Num. of aliquots <sup>1</sup>	OSL/ IRSL <sup>2</sup>	Dose rate (Gy/ka)	Equivalent Dose <sup>3</sup> $\pm 2\sigma$ (Gy)	Age $\pm 2\sigma$ (ka)
<b>Core GDEC-1:</b>						
5.33-5.52 mbsf	USU-1019	19 (63)	OSL	2.47 $\pm$ 0.09	40.77 $\pm$ 7.69	<b>16.52 <math>\pm</math> 3.28</b>
10.20-10.30 mbsf	USU-1020	26 (40)	OSL	2.53 $\pm$ 0.11	50.94 $\pm$ 6.67	<b>20.11 <math>\pm</math> 2.93</b>
13.85-14.00 mbsf	USU-1021	28 (48)	OSL	2.28 $\pm$ 0.09	69.10 $\pm$ 11.68	<b>30.35 <math>\pm</math> 5.97</b>
22.95-23.10 mbsf	USU-1022	27 (28)	IRSL	3.57 $\pm$ 0.16	199.82 $\pm$ 13.11	<b>89.8 <math>\pm</math> 11.8</b>
27.75-27.90 mbsf	USU-1023	23 (28)	IRSL	2.97 $\pm$ 0.13	184.00 $\pm$ 16.02	<b>99.5 <math>\pm</math> 10.8</b>
<b>Core GDEC-3:</b>						
6.13-6.19 mbsf	USU-1002	18 (67)	OSL	2.32 $\pm$ 0.09	31.71 $\pm$ 6.75	<b>13.70 <math>\pm</math> 1.69</b>
12.50-12.67 mbsf	USU-1003	17 (57)	OSL	2.17 $\pm$ 0.09	42.81 $\pm$ 10.45	<b>19.72 <math>\pm</math> 2.70</b>
15.30-15.45 mbsf	USU-1004	16 (53)	OSL	2.59 $\pm$ 0.11	51.35 $\pm$ 7.72	<b>19.84 <math>\pm</math> 1.95</b>
30.65-30.80 mbsf	USU-1005	15 (17)	IRSL	2.87 $\pm$ 0.12	99.76 $\pm$ 11.53	<b>58.62 <math>\pm</math> 7.47</b>
37.45-37.60 mbsf	USU-1006	24 (43)	IRSL	3.48 $\pm$ 0.14	139.19 $\pm$ 12.78	<b>73.70 <math>\pm</math> 10.98</b>
<b>Core GDEC-6:</b>						
12.53-12.65 mbsf	USU-1013	25 (50)	OSL	2.26 $\pm$ 0.09	37.70 $\pm$ 2.89	<b>16.66 <math>\pm</math> 1.64</b>
20.10-20.20 mbsf	USU-1014	26 (50)	OSL	2.04 $\pm$ 0.08	43.21 $\pm$ 4.73	<b>21.19 <math>\pm</math> 2.67</b>
28.60-28.75 mbsf	USU-1015	26 (53)	OSL	1.85 $\pm$ 0.07	41.15 $\pm$ 6.53	<b>22.22 <math>\pm</math> 3.79</b>
34.53-34.66 mbsf	USU-1016	21 (62)	OSL	1.80 $\pm$ 0.07	43.20 $\pm$ 9.86	<b>24.03 <math>\pm</math> 5.69</b>
40.15-40.30 mbsf	USU-1017	23 (50)	OSL	1.95 $\pm$ 0.07	56.52 $\pm$ 9.61	<b>28.97 <math>\pm</math> 5.25</b>
46.50-46.65 mbsf	USU-1018	25 (62)	OSL	1.69 $\pm$ 0.06	51.80 $\pm$ 6.03	<b>36.67 <math>\pm</math> 4.05</b>
<b>Core GDEC-8:</b>						
38.35-38.50 mbsf	USU-1007	15 (21)	IRSL	3.22 $\pm$ 0.35	111.59 $\pm$ 6.94	<b>62.12 <math>\pm</math> 8.88</b>
61.98-62.10 mbsf	USU-1008	21 (24)	IRSL	2.58 $\pm$ 0.28	108.81 $\pm$ 8.07	<b>65.63 <math>\pm</math> 9.31</b>
82.30-82.45 mbsf	USU-1009	22 (22)	IRSL	2.45 $\pm$ 0.26	149.70 $\pm$ 14.44	<b>105.1 <math>\pm</math> 16.9</b>
88.40-88.55 mbsf	USU-1012	24 (33)	IRSL	2.34 $\pm$ 0.25	133.07 $\pm$ 11.74	<b>103.5 <math>\pm</math> 15.6</b>
90.00-90.15 mbsf	USU-1010	28 (33)	IRSL	2.16 $\pm$ 0.23	139.97 $\pm$ 5.91	<b>119.1 <math>\pm</math> 17.1</b>
98.80-98.95 mbsf	USU-1011	22 (22)	IRSL	2.17 $\pm$ 0.24	149.19 $\pm$ 10.10	<b>126.9 <math>\pm</math> 18.3</b>

<sup>1</sup> Number of aliquots used in age calculation and number of aliquots analyzed in parentheses.

<sup>2</sup> Optically stimulated luminescence (OSL) age analysis using the single-aliquot regenerative-dose procedure of Murray and Wintle (2000) on 2 mm small-aliquots of quartz sand; or infrared stimulated luminescence (IRSL) age analysis at 50°C following Wallinga et al. (2000). IRSL ages corrected for fading following the methods by Auclair et al. (2003) and Huntley and Lamothe (2001).

<sup>3</sup> Equivalent dose (D<sub>e</sub>) calculated using the Central Age Model (CAM) Galbraith and Roberts (2012).

Table 2. Dose rate information

Lab-#	Grain size ( $\mu\text{m}$ )	H <sub>2</sub> O content (wt. %)	K (%)	Rb (ppm)	Th (ppm)	U (ppm)
USU-1002	150-250	62.7	2.66	128.5	13.4	2.1
USU-1003	150-250	55.9	2.32	129.5	13.7	1.6
USU-1004	150-250	52.9	2.52	140.0	17.8	2.1
USU-1005	150-250	36.5	1.89	98.6	8.4	1.0
USU-1006	150-250	45.4	2.49	117.0	10.8	1.7
USU-1007	150-250	40.4	2.15	103.5	8.0	1.3
USU-1008	75-150	40.4	1.98	99.4	5.8	0.8
USU-1009	75-150	40.4	1.81	92.0	5.7	0.8
USU-1010	75-150	40.4	1.42	71.8	5.5	0.8
USU-1011	75-150	40.4	1.43	72.2	5.6	0.8
USU-1012	150-250	40.4	1.45	72.6	5.6	0.8
USU-1013	75-150	41.2	2.09	121.4	10.6	2.1
USU-1014	150-250	36.3	2.08	113.0	9.1	1.0
USU-1015	150-250	38.8	2.05	103.0	6.5	1.0
USU-1016	150-250	36.3	2.01	112.0	5.8	0.8
USU-1017	150-250	20.6	1.96	92.9	4.4	0.8
USU-1018	150-250	43.9	1.91	103.5	6.2	1.1
USU-1019	75-150	52.6	2.75	148.5	8.7	2.5
USU-1020	75-150	34.6	1.87	113.0	13.6	2.9
USU-1021	75-150	39.1	1.83	111.5	11.5	2.7
USU-1022	63-125	39.5	1.90	111.5	10.8	2.7
USU-1023	90-150	39.5	1.56	90.5	8.0	2.3