Table DR1: OSL results, D_e breakup for Paran samples.

Lab No.	Grain size (μm)	Aliquot size (mm)	No. of discs	D_e (Gy)
PS-40	74-105	5	9	1.55±0.18
	150-177	5	9	1.54±0.44
	150-177	2	23	1.38±0.74
PS-41	88-125	5	13	6.1±1.3
	88-125	2	22	4.9±1.2
PS-42	74-105	5	9	18.3±2.8
	150-177	5	9	21.0±9.1
	150-177	2	24	21.9±10.4
PS-43	74-105	5	9	35.9±11.4
	150-177	5	9	37.7±12.2
	150-177	2	22	32.0±15.8
PS-44	88-125	5	13	66.5±20.7
	88-125	2	24	50.2±23.8
PS-45	74-105	5	9	76.8±16.9
	150-177	5	9	83.4±32.9
	150-177	2	24	93.7±54.3
PS-46	74-105	5	9	112±23
	150-177	5	9	120±34
PS-48	74-105	5	9	185±59
	150-177	5	9	215±58

De values for different grain sizes or aliquot sizes. The 2 mm aliquots were measured using a standardized growth curve based on the average of 5 aliquots.
The averages presented here are unweighted means. In Table 1 the central age model (Galbraith et al. 1999) was used to calculate the most representative De from all measurements.

Table DR2: Luminescence ages for Har Harif samples (from Crouvi et al., 2009)

Sample	Depth (m)	K (%)	U (ppm)	Th (ppm)	Ext. α µGy/a	Ext. β µGy/a	Ext. γ + Cos. µGy/a	Cos. µGy/a	Total dose µGy/a	Aliquots used	D_e (Gy)	Age (ka)
HR-1[2]	0.15	1	2.5	6.4	12	1155	951	-	2118±99	27/29	29.1±0.6	**13.7±0.7**
HR-13 [1]	0.27	0.87	1.7	4.7	9	923	606	243	1782±27	11/12	44.6±1.1	**25.1±0.7**
HR-5	0.40	0.96	0.9	5.6	7	904	1023	-	1934±105	17/18	63.4±1.8	**32.8±2.0**
HR-6	0.77	0.91	1.7	5.4	9	968	966	-	1943±100	13/13	81.6±4.0	**42.0±3.0**
HR-2 [1]	0.90	1	1.7	5.5	9	1007	659	181	1856±29	18/18	90.2±2.7	**48.6±2.7**
HR-7	1.65	0.95	1.8	5.4	9	984	903	-	1896±93	13/13	117±4.2	**61.5±3.8**
HR-16	1.65	0.94	2.1	6.2	11	1033	929	-	1973±96	12/12	127±3.2	**64.4±3.6**
HR-8	1.90	0.67	1.6	4.4	8	749	760	-	1517±79	8/13	117±5.0	**77.4±5.2**
HR-9	2.35	0.67	1.7	5.0	8	775	779	-	1563±81	13/13	118±6.7	**72.5±5.8**
HR-3 [1]	2.55	0.74	1.9	5.1	9	849	603	147	1608±27	11/18	147±3.9	**91.3±2.9**
HR-10	2.75	0.74	1.9	5.1	9	849	790	-	1648±83	13/13	120±8.3	**73.0±6.2**
HR-4 [1]	2.95	0.7	2.1	5.2	10	850	620	135	1615±27	17/18	154±6.6	**95.6±4.4**
HR-11	3.05	0.78	2.0	5.6	10	900	803	-	1713±84	7/13 *6/13*	225±10 *357±15*	**131±8.7** *208±13*
HR-12	3.45	0.57	1.5	3.6	7	651	685	-	1343±73	12/13	242±4.5	**181±10**
HR-14	3.90	0.50	1.8	3.8	8	646	633	-	1287±67	17/17	233±6.7	**181±11**
HR-15	4.30	0.46	1.8	3.5	8	613	590	-	1210±63	12/12	395±22	**326±25**

Horizontal lines separate between the different units. Water contents were estimated at 3±1 % for 0-1 m depth and 5±1 % below that. Gamma + cosmic dose rates were measured in the field using a portable gamma counter, except for samples marked with [1], for which gamma was calculated from the radioelements and the cosmic dose estimated from burial depth. Measurements were carried out on 74-125 µm quartz using a modified SAR protocol (Murray and Wintle, 2000). Preheat temperatures were 10 s at 200-260°C and cutheats for 5 s at 20° below preheat temperature. Preheat plateaus are overall adequate. Recycling ratios are mostly within ±5% of unity, and the contribution of infrared stimulated luminescence to the OSL signal is <5%. Average De and errors were calculated using the Central Age Model (Galbreith et al., 1999). "Aliquots used" are the number of aliquots used from those measured for calculating the average D_e. Samples HR-7 and HR-16 are duplicates, taken from the same horizon 30 cm apart. Sample HR-11 is at the contact between 2 units and exhibit a bi-modal De distribution; both modes are presented. Sample HR-14 was measured using the OSL and the ITL signals (180±11 ka and 183±13 ka, respectively). The De and age presented here is the data combined from the two measurement protocols.