

[illegible]

**Table S2.** Daily exposure times in minutes, mean for the latitude given, for maintenance of 25OHD levels under climatological all-sky conditions, clear horizon at noon. Skin type V, 35% skin area exposed, vertical body, averaged over all sides exposed simultaneously. W = Vitamin D Winter. ND = no cloud data available.

[illegible]



**Table S4.** Daily exposure times in minutes, mean for the latitude given, for maintenance of 25OHD levels under climatological clear-sky conditions, clear horizon, at noon. Skin type V, 35% skin area exposed, horizontal body, 2 sides exposed. W = Vitamin D Winter.

[illegible]

**Table S5.** Daily exposure times in minutes, mean for the latitude given, for maintenance of 25OHD levels under climatological clear-sky conditions, clear horizon, at noon. Skin type VI, 35% skin area exposed, horizontal body, 2 sides exposed. W = Vitamin D Winter.

[illegible]

**Table S6.** Daily exposure times in minutes, mean for the latitude given, for maintenance of 25OHD levels under climatological all-sky conditions, clear horizon, at noon. White skin (ST I-IV), 35% skin area exposed, horizontal body, 2 sides exposed W = Vitamin D Winter. ND = no cloud data available.

Lat/ Mth	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
90	ND	ND	ND	ND	ND	ND	N D	ND	ND	ND	ND	ND
80	ND	ND	ND	ND	ND	ND	N D	ND	ND	ND	ND	ND
70	W	W	W	W	8	7	6	9	W	W	W	W
60	W	W	W	7	5	3	4	5	9	W	W	W
50	W	W	7	4	3	2	2	3	4	9	W	W
40	W	6	4	3	2	2	2	2	2	4	8	W
30	4	3	2	2	1	1	1	1	2	2	4	5
20	2	2	1	1	1	1	1	1	1	2	2	2
10	1	1	1	1	1	1	1	1	1	1	1	2
0	1	1	1	1	1	1	1	1	1	1	1	1
-10	1	1	1	1	2	2	2	1	1	1	1	1
-20	1	1	1	2	2	3	3	2	2	1	1	1
-30	1	1	2	2	4	5	5	3	2	2	1	1
-40	1	2	3	5	9	W	W	8	4	3	2	2
-50	2	3	5	11	W	W	W	W	8	5	3	2
-60	3	5	10	W	W	W	W	W	9	4	3	3
-70	ND	ND	W	W	W	W	W	W	W	4	2	3
-80	ND	ND	ND	ND	ND	ND	N D	ND	ND	ND	ND	ND
-90	ND	ND	ND	ND	ND	ND	N D	ND	ND	ND	ND	ND

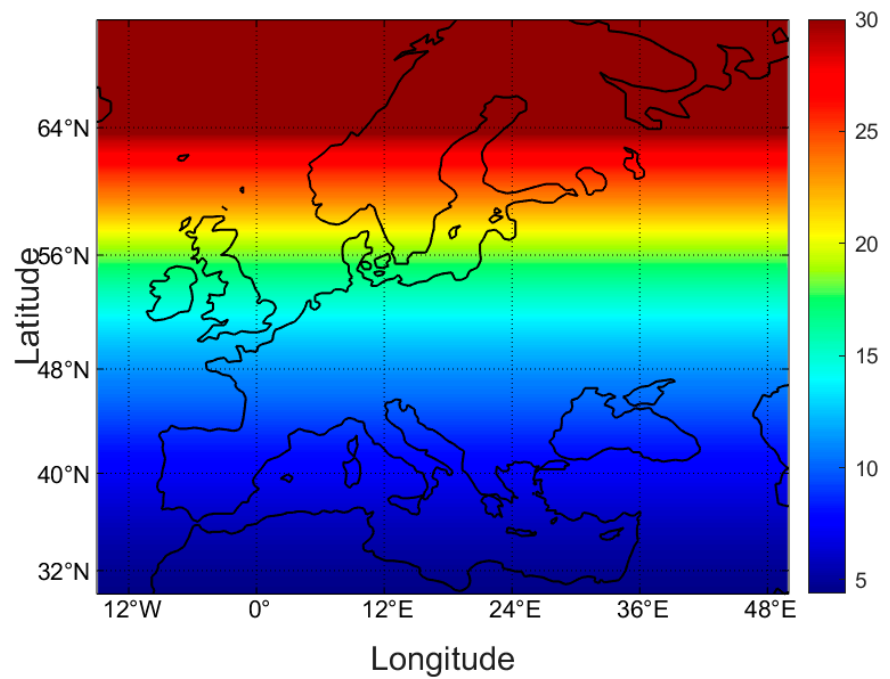
**Table S7.** Daily exposure times in minutes, mean for the latitude given, for maintenance of 25OHD levels under climatological all-sky conditions, clear horizon, at noon. Skin Type V, 35% skin area exposed, horizontal body, 2 sides exposed. W = Vitamin D Winter, ND = no cloud data available.

[illegible]

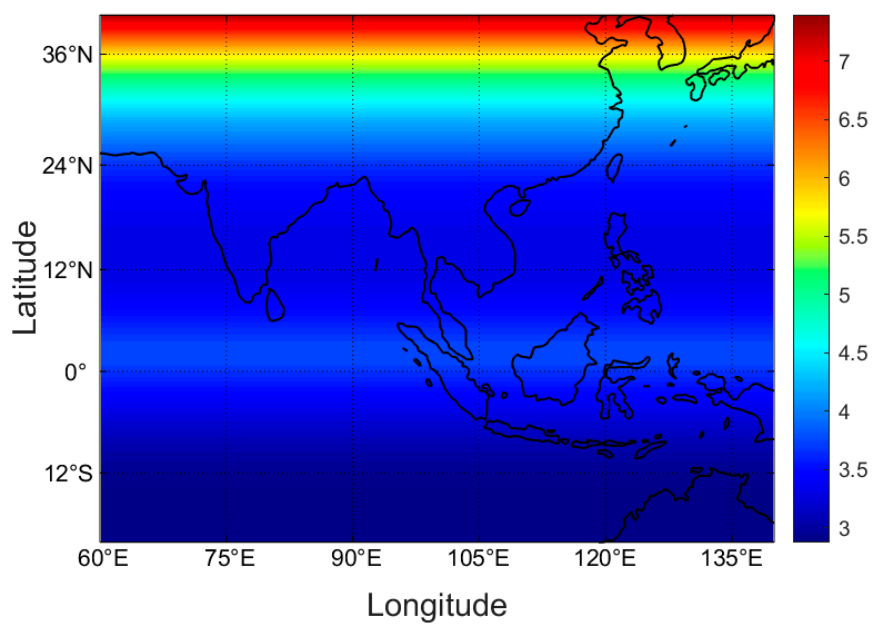
**Table S8.** Daily exposure times in minutes, mean for the latitude given, for maintenance of 25OHD levels under climatological all-sky conditions, clear horizon, at noon. Black skin (ST VI), 35% skin area exposed, horizontal body, 2 sides exposed. W = Vitamin D Winter, ND = no cloud data available.

[illegible]

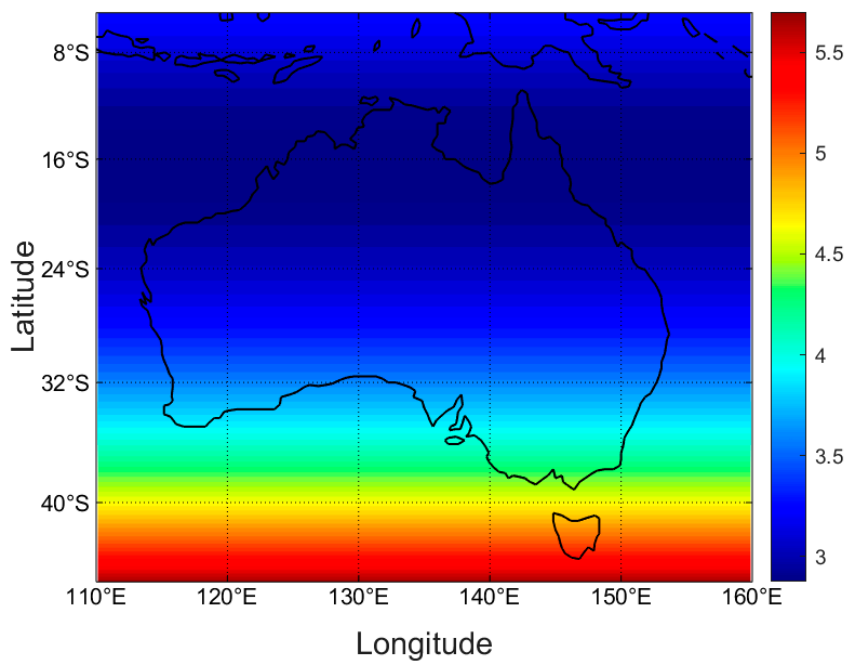




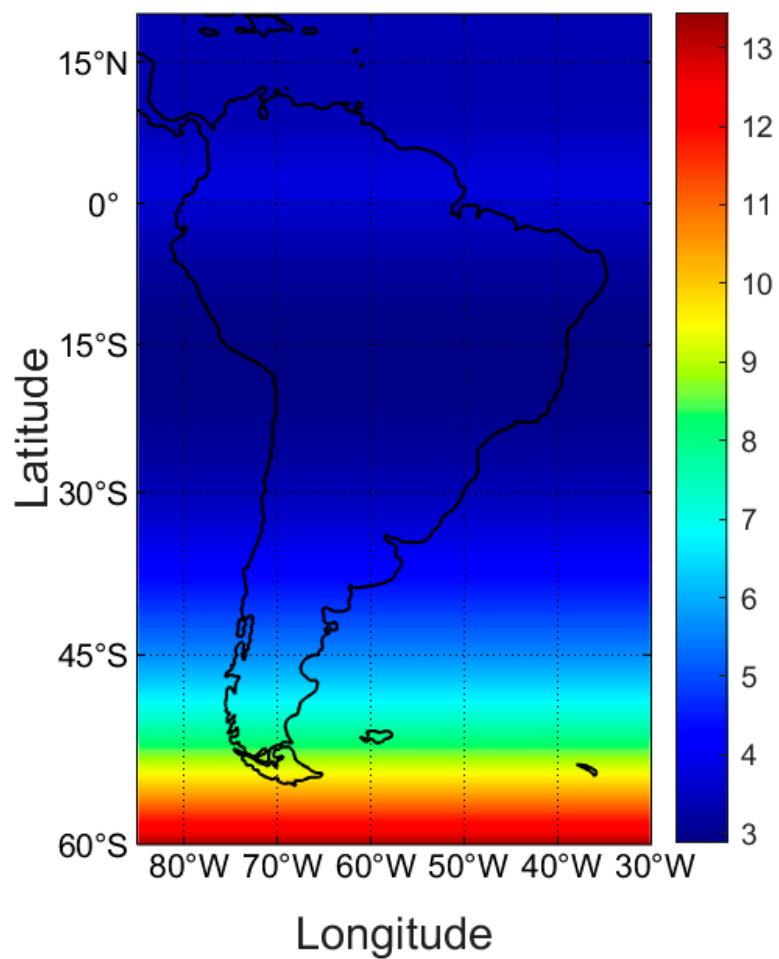
**Figure S1.** March maintenance dose times (mins) for clear sky conditions at noon, white skin types, 35% skin area exposed, vertical body, average all sides, for Europe. Note the different colour scales. The high latitude brown region indicates where the UVI is below the defined VDW values.



**Figure S2.** March maintenance dose times (mins) for clear sky conditions at noon, white skin types, 35% skin area exposed, vertical body, average all sides, for Southern Asia. Note the different colour scales.



**Figure S3.** March maintenance dose times (mins) for clear sky conditions at noon, white skin types, 35% skin area exposed, vertical body, average all sides, for Australia. Note the different colour scales.



**Figure S4.** March maintenance dose times (mins) for clear sky conditions at noon, white skin types, 35% skin area exposed, vertical body, average all sides, for South America. Note the different colour scales.