

## Data Supplement

The following tables contain the area, relief, and numbers of craters for all considered climatic/geologic provinces.

### Polar tundra (ET)

#### Shields:

$A_i[\text{km}^2]$	1238869	196957	24331	20581
$\Delta_i[\text{m}]$	224	478	582	815
$n_i$	2	0	1	0

$$A = \sum_i A_i = 1480737 \text{ km}^2, \Delta = \frac{\sum_i A_i \Delta_i}{\sum_i A_i} = 272 \text{ m}, \sum_i \frac{A_i}{\Delta_i} = 6005 \frac{\text{km}^2}{\text{m}}, n = \sum_i n_i = 3$$

#### Platforms:

$A_i[\text{km}^2]$	505944	374548	48061	40622	28363	13015
$\Delta_i[\text{m}]$	72	122	77	126	36	249
$n_i$	0	1	0	0	0	0

$$A = \sum_i A_i = 1010553 \text{ km}^2, \Delta = \frac{\sum_i A_i \Delta_i}{\sum_i A_i} = 94 \text{ m}, \sum_i \frac{A_i}{\Delta_i} = 11873 \frac{\text{km}^2}{\text{m}}, n = \sum_i n_i = 1$$

## Orogens:

$A_i[\text{km}^2]$	865292	178668	123976	111396	102642	32729
$\Delta_i[\text{m}]$	534	172	623	204	321	1050
$n_i$	0	1	0	0	0	0

$$A = \sum_i A_i = 1414703 \text{ km}^2, \Delta = \frac{\sum_i A_i \Delta_i}{\sum_i A_i} = 467 \text{ m}, \sum_i \frac{A_i}{\Delta_i} = 3754 \frac{\text{km}^2}{\text{m}}, n = \sum_i n_i = 1$$

## Basins:

$A_i[\text{km}^2]$	34049	18459
$\Delta_i[\text{m}]$	189	706
$n_i$	0	0

$$A = \sum_i A_i = 52507 \text{ km}^2, \Delta = \frac{\sum_i A_i \Delta_i}{\sum_i A_i} = 371 \text{ m}, \sum_i \frac{A_i}{\Delta_i} = 207 \frac{\text{km}^2}{\text{m}}, n = \sum_i n_i = 0$$

## Igneous provinces:

$A_i[\text{km}^2]$	42292	9663	6455
$\Delta_i[\text{m}]$	522	845	965
$n_i$	0	0	0

$$A = \sum_i A_i = 58410 \text{ km}^2, \Delta = \frac{\sum_i A_i \Delta_i}{\sum_i A_i} = 624 \text{ m}, \sum_i \frac{A_i}{\Delta_i} = 99 \frac{\text{km}^2}{\text{m}}, n = \sum_i n_i = 0$$

### Extended crust:

$A_i[\text{km}^2]$	698124	89495	68747	18385
$\Delta_i[\text{m}]$	447	104	617	408
$n_i$	1	0	0	0

$$A = \sum_i A_i = 874750 \text{ km}^2, \Delta = \frac{\sum_i A_i \Delta_i}{\sum_i A_i} = 424 \text{ m}, \sum_i \frac{A_i}{\Delta_i} = 2582 \frac{\text{km}^2}{\text{m}}, n = \sum_i n_i = 1$$

### All (13) erosive provinces (shields, orogens, igneous):

$$A = \sum_i A_i = 2953850 \text{ km}^2, \Delta = \frac{\sum_i A_i \Delta_i}{\sum_i A_i} = 372 \text{ m}, \sum_i \frac{A_i}{\Delta_i} = 9859 \frac{\text{km}^2}{\text{m}}, n = \sum_i n_i = 4$$

## Cold (D)

### Shields:

$A_i[\text{km}^2]$	3886514	1148574	861186	255828	176801	99242	89439	65794
$\Delta_i[\text{m}]$	93	140	533	61	370	62	207	671
$n_i$	13	13	1	0	0	2	0	0

$$A = \sum_i A_i = 6583380 \text{ km}^2, \Delta = \frac{\sum_i A_i \Delta_i}{\sum_i A_i} = 172 \text{ m}, \sum_i \frac{A_i}{\Delta_i} = 58207 \frac{\text{km}^2}{\text{m}}, n = \sum_i n_i = 29$$

## Platforms:

$A_i[\text{km}^2]$	5177117	2988298	1928258	1400482	387686	59755	43797	11672
$\Delta_i[\text{m}]$	114	66	70	274	25	59	273	331
$n_i$	2	2	3	1	0	0	0	0

$$A = \sum_i A_i = 11997064 \text{ km}^2, \Delta = \frac{\sum_i A_i \Delta_i}{\sum_i A_i} = 111 \text{ m}, \sum_i \frac{A_i}{\Delta_i} = 140000 \frac{\text{km}^2}{\text{m}}, n = \sum_i n_i = 8$$

## Orogens:

$A_i[\text{km}^2]$	10863532	646975	438864	232560	102053
$\Delta_i[\text{m}]$	582	170	214	613	216
$n_i$	2	0	0	2	0

$$A = \sum_i A_i = 12283985 \text{ km}^2, \Delta = \frac{\sum_i A_i \Delta_i}{\sum_i A_i} = 544 \text{ m}, \sum_i \frac{A_i}{\Delta_i} = 25386 \frac{\text{km}^2}{\text{m}}, n = \sum_i n_i = 4$$

## Basins:

$A_i[\text{km}^2]$	762112	494128	474328	333343	157546	80917	43252
$\Delta_i[\text{m}]$	153	121	90	186	139	117	248
$n_i$	0	1	0	0	0	0	0

$$A = \sum_i A_i = 2345625 \text{ km}^2, \Delta = \frac{\sum_i A_i \Delta_i}{\sum_i A_i} = 138 \text{ m}, \sum_i \frac{A_i}{\Delta_i} = 18136 \frac{\text{km}^2}{\text{m}}, n = \sum_i n_i = 1$$

### Igneous provinces:

$A_i[\text{km}^2]$	479774	60473	23528	21985
$\Delta_i[\text{m}]$	361	515	571	426
$n_i$	0	0	0	0

$$A = \sum_i A_i = 585760 \text{ km}^2, \Delta = \frac{\sum_i A_i \Delta_i}{\sum_i A_i} = 388 \text{ m}, \sum_i \frac{A_i}{\Delta_i} = 1537 \frac{\text{km}^2}{\text{m}}, n = \sum_i n_i = 0$$

### Extended crust:

$A_i[\text{km}^2]$	619507	554832	263996	241087	238003	200608	123307	109259	65274	64304	1669
$\Delta_i[\text{m}]$	292	194	83	64	209	86	616	235	42	55	157
$n_i$	0	0	0	0	0	0	0	0	0	0	0

$$A = \sum_i A_i = 2481846 \text{ km}^2, \Delta = \frac{\sum_i A_i \Delta_i}{\sum_i A_i} = 202 \text{ m}, \sum_i \frac{A_i}{\Delta_i} = 18801 \frac{\text{km}^2}{\text{m}}, n = \sum_i n_i = 0$$

### All (17) erosive provinces (shields, orogens, igneous):

$$A = \sum_i A_i = 19453125 \text{ km}^2, \Delta = \frac{\sum_i A_i \Delta_i}{\sum_i A_i} = 414 \text{ m}, \sum_i \frac{A_i}{\Delta_i} = 85130 \frac{\text{km}^2}{\text{m}}, n = \sum_i n_i = 33$$

## Temperate (C)

### Shields:

$A_i[\text{km}^2]$	2586477	520130	427611	381443	115510	113030	24314	3437	2277
$\Delta_i[\text{m}]$	205	173	64	292	103	357	96	1001	347
$n_i$	2	1	0	1	0	0	0	0	0

$$A = \sum_i A_i = 4174228 \text{ km}^2, \Delta = \frac{\sum_i A_i \Delta_i}{\sum_i A_i} = 196 \text{ m}, \sum_i \frac{A_i}{\Delta_i} = 25308 \frac{\text{km}^2}{\text{m}}, n = \sum_i n_i = 4$$

### Platforms:

$A_i[\text{km}^2]$	709933	211785	153368	140362	95828	43950	26992	9463	5149	1850
$\Delta_i[\text{m}]$	24	24	87	104	44	43	432	159	539	8
$n_i$	0	0	0	0	0	0	0	0	0	0

$$A = \sum_i A_i = 1398681 \text{ km}^2, \Delta = \frac{\sum_i A_i \Delta_i}{\sum_i A_i} = 52 \text{ m}, \sum_i \frac{A_i}{\Delta_i} = 44796 \frac{\text{km}^2}{\text{m}}, n = \sum_i n_i = 0$$

### Orogens:

$A_i[\text{km}^2]$	6774678	661870	370203	203769	50869	1785
$\Delta_i[\text{m}]$	749	278	140	356	519	581
$n_i$	1	0	1	0	0	0

$$A = \sum_i A_i = 8063174 \text{ km}^2, \Delta = \frac{\sum_i A_i \Delta_i}{\sum_i A_i} = 671 \text{ m}, \sum_i \frac{A_i}{\Delta_i} = 14742 \frac{\text{km}^2}{\text{m}}, n = \sum_i n_i = 2$$

### Basins:

$A_i[\text{km}^2]$	406971	369143	124201	114294	70426	66682	65777	58195	54799	32501	29028
$\Delta_i[\text{m}]$	98	116	405	51	516	45	224	404	32	212	128
$n_i$	3	0	0	0	0	0	0	0	0	0	0

$$A = \sum_i A_i = 1392017 \text{ km}^2, \Delta = \frac{\sum_i A_i \Delta_i}{\sum_i A_i} = 164 \text{ m}, \sum_i \frac{A_i}{\Delta_i} = 14039 \frac{\text{km}^2}{\text{m}}, n = \sum_i n_i = 3$$

### Igneous provinces:

$A_i[\text{km}^2]$	312702	199111	45709	11000	5504
$\Delta_i[\text{m}]$	201	646	483	458	99
$n_i$	1	0	0	0	0

$$A = \sum_i A_i = 574025 \text{ km}^2, \Delta = \frac{\sum_i A_i \Delta_i}{\sum_i A_i} = 382 \text{ m}, \sum_i \frac{A_i}{\Delta_i} = 2037 \frac{\text{km}^2}{\text{m}}, n = \sum_i n_i = 1$$

### Extended crust:

$A_i[\text{km}^2]$	1196050	1113638	553394	550342	306191	71198	58001	56227	44215	37629	31752	28540	25081	10296	6384
$\Delta_i[\text{m}]$	225	352	130	48	216	344	147	154	199	711	434	778	507	76	78
$n_i$	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0

$$A = \sum_i A_i = 4088939 \text{ km}^2, \Delta = \frac{\sum_i A_i \Delta_i}{\sum_i A_i} = 233 \text{ m}, \sum_i \frac{A_i}{\Delta_i} = 27285 \frac{\text{km}^2}{\text{m}}, n = \sum_i n_i = 4$$

**All (20) erosive provinces (shields, orogens, igneous):**

$$A = \sum_i A_i = 12811428 \text{ km}^2, \Delta = \frac{\sum_i A_i \Delta_i}{\sum_i A_i} = 503 \text{ m}, \sum_i \frac{A_i}{\Delta_i} = 42087 \frac{\text{km}^2}{\text{m}}, n = \sum_i n_i = 7$$

**Arid (B)**

**Shields:**

$A_i[\text{km}^2]$	3788052	1539318	1335927	634547	542227	475628	437273	310520	176672	86236	23979
$\Delta_i[\text{m}]$	136	64	57	125	48	39	91	182	733	80	201
$n_i$	3	3	5	0	0	1	0	0	0	1	0

$$A = \sum_i A_i = 9350378 \text{ km}^2, \Delta = \frac{\sum_i A_i \Delta_i}{\sum_i A_i} = 112 \text{ m}, \sum_i \frac{A_i}{\Delta_i} = 112071 \frac{\text{km}^2}{\text{m}}, n = \sum_i n_i = 13$$

**Platforms:**

$A_i[\text{km}^2]$	4933263	1617387	890667	553300	383587	294835	278511	111598	109183	80448	62067	36362
$\Delta_i[\text{m}]$	65	45	152	32	260	24	28	283	20	72	136	11
$n_i$	5	1	1	1	0	0	0	0	0	0	0	0

$$A = \sum_i A_i = 9351207 \text{ km}^2, \Delta = \frac{\sum_i A_i \Delta_i}{\sum_i A_i} = 76 \text{ m}, \sum_i \frac{A_i}{\Delta_i} = 169640 \frac{\text{km}^2}{\text{m}}, n = \sum_i n_i = 8$$



## Orogens:

$A_i[\text{km}^2]$	10809777	580528	190654	109521	77788	43124
$\Delta_i[\text{m}]$	467	62	72	51	261	73
$n_i$	9	2	0	0	0	1

$$A = \sum_i A_i = 11811393 \text{ km}^2, \Delta = \frac{\sum_i A_i \Delta_i}{\sum_i A_i} = 434 \text{ m}, \sum_i \frac{A_i}{\Delta_i} = 38183 \frac{\text{km}^2}{\text{m}}, n = \sum_i n_i = 12$$

## Basins:

$A_i[\text{km}^2]$	2077936	769426	723610	640572	421541	381077	357014	325230	257373	205622	165232	129096	57817	25814	23739
$\Delta_i[\text{m}]$	130	108	35	279	125	19	98	135	20	347	22	52	8	167	39
$n_i$	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0

$$A = \sum_i A_i = 6561097 \text{ km}^2, \Delta = \frac{\sum_i A_i \Delta_i}{\sum_i A_i} = 120 \text{ m}, \sum_i \frac{A_i}{\Delta_i} = 106678 \frac{\text{km}^2}{\text{m}}, n = \sum_i n_i = 2$$

## Igneous provinces:

$A_i[\text{km}^2]$	194452	121158	112883	27952	27099
$\Delta_i[\text{m}]$	295	111	403	263	71
$n_i$	0	0	0	0	0

$$A = \sum_i A_i = 483544 \text{ km}^2, \Delta = \frac{\sum_i A_i \Delta_i}{\sum_i A_i} = 260 \text{ m}, \sum_i \frac{A_i}{\Delta_i} = 2516 \frac{\text{km}^2}{\text{m}}, n = \sum_i n_i = 0$$

## Extended crust:

$A_i[\text{km}^2]$	1561711	1041246	807314	700009	647355	486153	431792	397230	260429	219173	132742	106582	94154	31736	2366
$\Delta_i[\text{m}]$	121	102	467	175	50	27	218	180	43	15	108	117	222	201	709
$n_i$	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0

$$A = \sum_i A_i = 6919991 \text{ km}^2, \Delta = \frac{\sum_i A_i \Delta_i}{\sum_i A_i} = 156 \text{ m}, \sum_i \frac{A_i}{\Delta_i} = 86851 \frac{\text{km}^2}{\text{m}}, n = \sum_i n_i = 2$$

## All (22) erosive provinces (shields, orogens, igneous):

$$A = \sum_i A_i = 21645315 \text{ km}^2, \Delta = \frac{\sum_i A_i \Delta_i}{\sum_i A_i} = 291 \text{ m}, \sum_i \frac{A_i}{\Delta_i} = 152770 \frac{\text{km}^2}{\text{m}}, n = \sum_i n_i = 25$$

## Tropical (A)

### Shields:

$A_i[\text{km}^2]$	4383353	3761851	1845957	1786693	873448	474769	228818	44038
$\Delta_i[\text{m}]$	195	134	168	111	178	72	400	244
$n_i$	0	1	0	1	0	5	0	0

$$A = \sum_i A_i = 13398928 \text{ km}^2, \Delta = \frac{\sum_i A_i \Delta_i}{\sum_i A_i} = 161 \text{ m}, \sum_i \frac{A_i}{\Delta_i} = 90078 \frac{\text{km}^2}{\text{m}}, n = \sum_i n_i = 7$$

## Platforms:

$A_i[\text{km}^2]$	1495837	588615	490663	65948	44440	26429	20654	16469	6735
$\Delta_i[\text{m}]$	38	127	224	23	169	6	57	593	37
$n_i$	0	3	0	0	0	0	0	0	0

$$A = \sum_i A_i = 2755790 \text{ km}^2, \Delta = \frac{\sum_i A_i \Delta_i}{\sum_i A_i} = 95 \text{ m}, \sum_i \frac{A_i}{\Delta_i} = 53908 \frac{\text{km}^2}{\text{m}}, n = \sum_i n_i = 3$$

## Orogens:

$A_i[\text{km}^2]$	3857139	540508	140797	56493	51152
$\Delta_i[\text{m}]$	623	361	378	323	95
$n_i$	0	0	0	0	0

$$A = \sum_i A_i = 4646090 \text{ km}^2, \Delta = \frac{\sum_i A_i \Delta_i}{\sum_i A_i} = 576 \text{ m}, \sum_i \frac{A_i}{\Delta_i} = 8775 \frac{\text{km}^2}{\text{m}}, n = \sum_i n_i = 0$$

## Basins:

$A_i[\text{km}^2]$	1195958	616395	154093	111619	110965	19220	13242
$\Delta_i[\text{m}]$	84	81	36	166	31	67	10
$n_i$	0	0	0	0	0	0	0

$$A = \sum_i A_i = 2221492 \text{ km}^2, \Delta = \frac{\sum_i A_i \Delta_i}{\sum_i A_i} = 81 \text{ m}, \sum_i \frac{A_i}{\Delta_i} = 32015 \frac{\text{km}^2}{\text{m}}, n = \sum_i n_i = 0$$

### Igneous provinces:

$A_i[\text{km}^2]$	243922	144341	10245	1612
$\Delta_i[\text{m}]$	133	575	434	183
$n_i$	1	0	0	0

$$A = \sum_i A_i = 400120 \text{ km}^2, \Delta = \frac{\sum_i A_i \Delta_i}{\sum_i A_i} = 301 \text{ m}, \sum_i \frac{A_i}{\Delta_i} = 2112 \frac{\text{km}^2}{\text{m}}, n = \sum_i n_i = 1$$

### Extended crust:

$A_i[\text{km}^2]$	1242514	1120258	451676	436582	382713	295849	135475	111192	90716	83181	69014	39246	27501	21749	12927	4457
$\Delta_i[\text{m}]$	73	361	128	236	69	12	85	147	75	671	104	41	479	674	76	103
$n_i$	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0

$$A = \sum_i A_i = 4525050 \text{ km}^2, \Delta = \frac{\sum_i A_i \Delta_i}{\sum_i A_i} = 180 \text{ m}, \sum_i \frac{A_i}{\Delta_i} = 61782 \frac{\text{km}^2}{\text{m}}, n = \sum_i n_i = 2$$

### All (17) erosive provinces (shields, orogens, igneous):

$$A = \sum_i A_i = 18445137 \text{ km}^2, \Delta = \frac{\sum_i A_i \Delta_i}{\sum_i A_i} = 268 \text{ m}, \sum_i \frac{A_i}{\Delta_i} = 100966 \frac{\text{km}^2}{\text{m}}, n = \sum_i n_i = 8$$