Table A1. Examples concentric craters on Earth and Mars.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Crater** | **Location** | **Coordinates** | **Dout**  **[m]** | **Din**  **[m]** | **Din/Dout** | **H**  **[m]** | **Crater type** |
| Lockne\* | Sweden | 63° 0' N 14° 49' E | 12500 | 7500 | 0.6 | 580 ±50 | Gravity controlled |
| CBIS\* | U.S.A | 37° 17' N 76° 1' W | 90000 | 38000 | 0.42 | 1500 | Collapse |
| Ormö et al. (2013, Fig 6a) | Arcadia Planitia, Mars | 44.66 N 158.73 E | 890 | 400 | 0.45 | 30-80\* | Gravity controlled |
| Ormö et al. (2013, Fig 6b) | Arcadia Planitia, Mars | 44.1 N 158.72 E | 850 | 550 | 0.65 | 30-80\* | Gravity controlled |
| Ormö et al. (2013, Fig 6c) | Arcadia Planitia, Mars | 46.14 N 158.56 E | 700 | 500 | 0.71 | 30-80\* | Gravity controlled |
| Ormö et al. (2013, Fig 6d) | Arcadia Planitia, Mars | 46.61 N 160.65 E | 130 | 35 | 0.27 | 30-80\* | Strength controlled |
| Ormö et al. (2013, Fig 6e) | Arcadia Planitia, Mars | 46.76 N 161.71 E | 350 | 170 | 0.49 | 30-80\* | Strength controlled |
| Ormö et al. (2013, Fig 6f,  plate with several craters) | Arcadia Planitia, Mars | 48.32 N 158.83 E | 220  220  230  240 | 110  90  110  120 | 0.5  0.41  0.48  0.5 | 30-80\*  30-80\*  30-80\*  30-80\* | Strength controlled  Strength controlled  Strength controlled  Strength controlled |
| Ormö et al. (2013, Fig 6g) | Arcadia Planitia, Mars | 46.58 N 159.01 E | 290 | 150 | 0.52 | 30-80\* | Strength controlled |
| Ormö et al. (2013, Fig 6h) | Arcadia Planitia, Mars | 46.64 N 158.89 E | 240 | 120 | 0.5 | 30-80\* | Strength controlled |
| Ormö et al. (2013, Fig 6i) | Arcadia Planitia, Mars | 46.45 N 159.13 E | 450 | 210 | 0.47 | 30-80\* | Strength controlled |
|  |  |  |  |  |  |  |  |
| HRSC h0482\_0000 (north) | South of Valles Marineris | 15°52' S 63°41' W | 50000 | 11400 | 0.23 | 1000 | Collapse? |
| HRSC h0482\_0000 (south) | South of Valles Marineris | 17°41' S 63°36' W | 46000 | 14000 | 0.3 | 1000 | Collapse? |
|  |  |  |  |  |  |  |  |
| Ormö et al. (2013, ”Case A”) | Arcadia Planitia, Mars | 46.58 N 194.84 E | 520 | 340 | 0.65 | 30 | Gravity controlled |
| Ormö et al. (2013, ”Case B”) | Meridiani Planum, Mars | 3.05 S 356.8 E | 1800 | 1000 | 0.56 | 150 | Gravity controlled |
| Ormö et al. (2013, ”Case C”) | Utopia Planitia, Mars | 40.1 N 125 E | 2400 | 1300 | 0.54 | 150 | Gravity controlled |
|  |  |  |  |  |  |  |  |

\*Data for Lockne from Ormö et al. (2013) and for Chesapeake Bay Impact Structure (CBIS) from Kenkmann et al. (2009). Upper layer thickness data for Arcadia Planitia from Bramson et al. (2017).