

# The Age of the Earth

## Selected Figures and Tables

from Dalrymple, G. Brent, 1991. *The Age of the Earth*, Stanford University Press

### *The ages of meteorites*

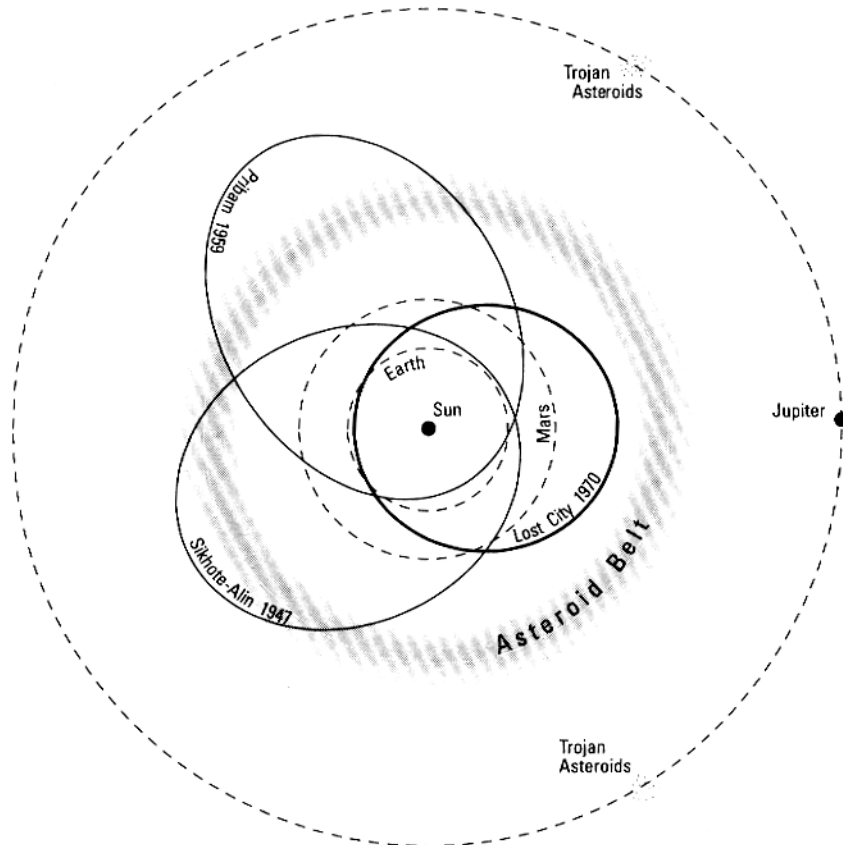


Fig. 6.5. The orbits of several meteorites as determined from photographs of their flight through the atmosphere, from orbital data in Buchwald (1975: 7, 18). Lost City (Oklahoma) and Pribam (Czechoslovakia) are H chondrites. Sikhote-Alin (USSR) is an iron meteorite.

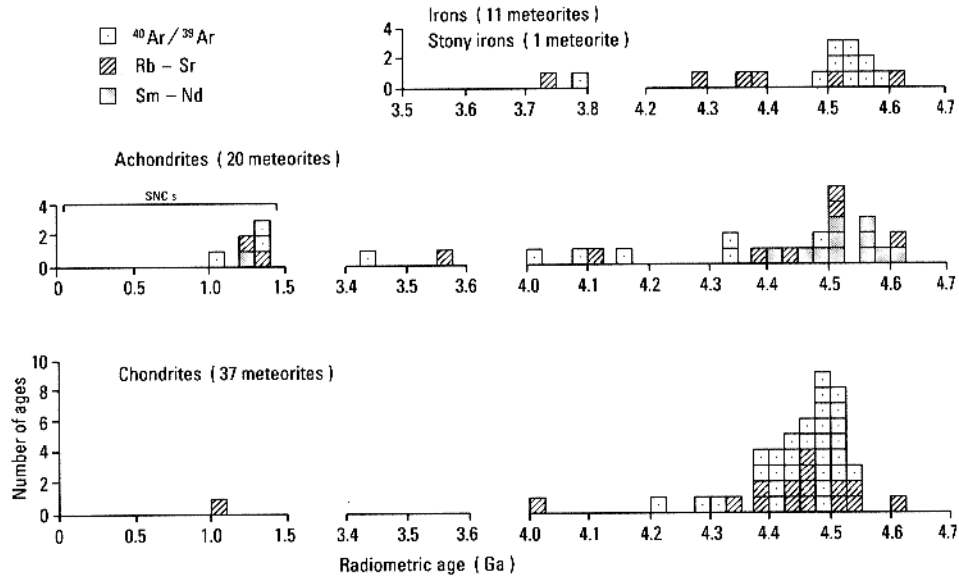


Fig. 6.9. Ninety-four radiometric ages of 69 meteorites. Included are all well-documented and valid isochron and age-spectrum ages with analytical uncertainties of 0.2 Ga or less at the 95% confidence level (two standard deviations) known to the author. The data were compiled from primary literature sources and the ages were converted, if necessary, to the decay constants of Table 3.1.

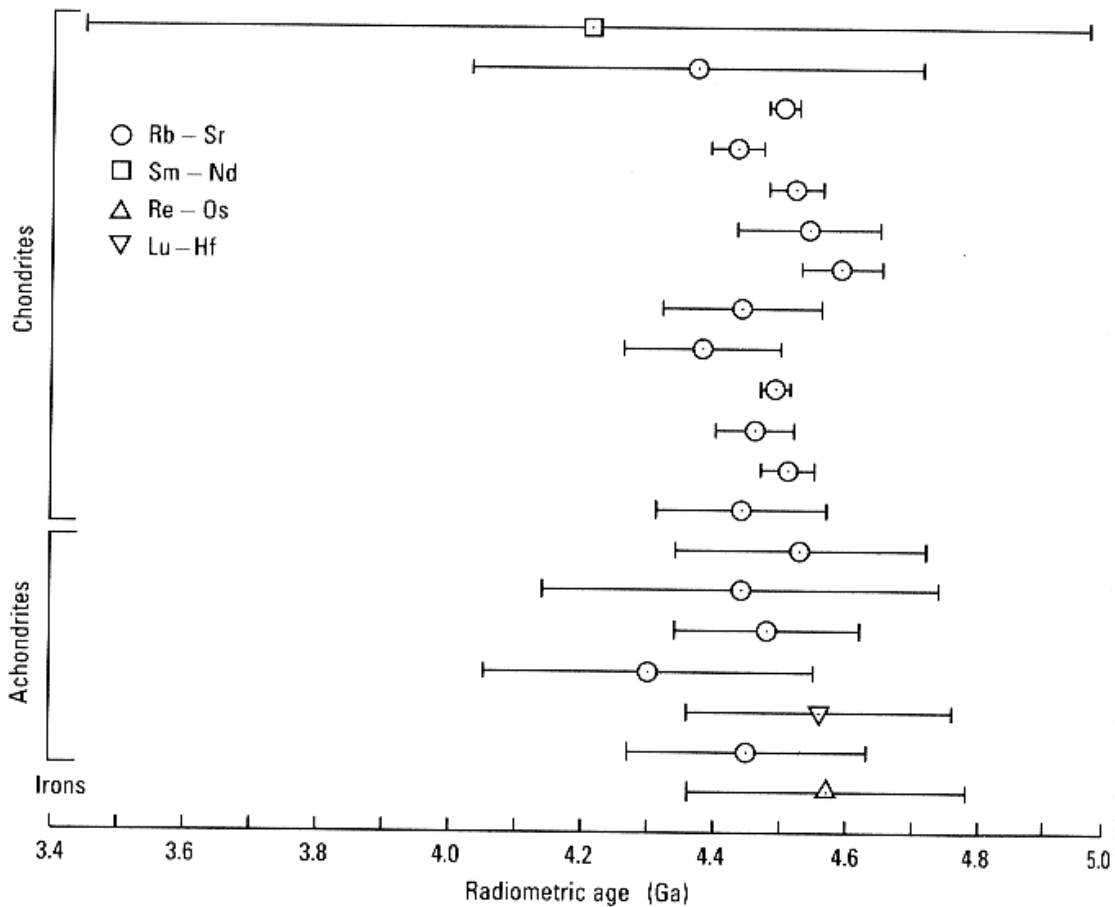


Fig. 6.10. Whole-rock isochron ages for meteorites. (Data from Table 6.4.)

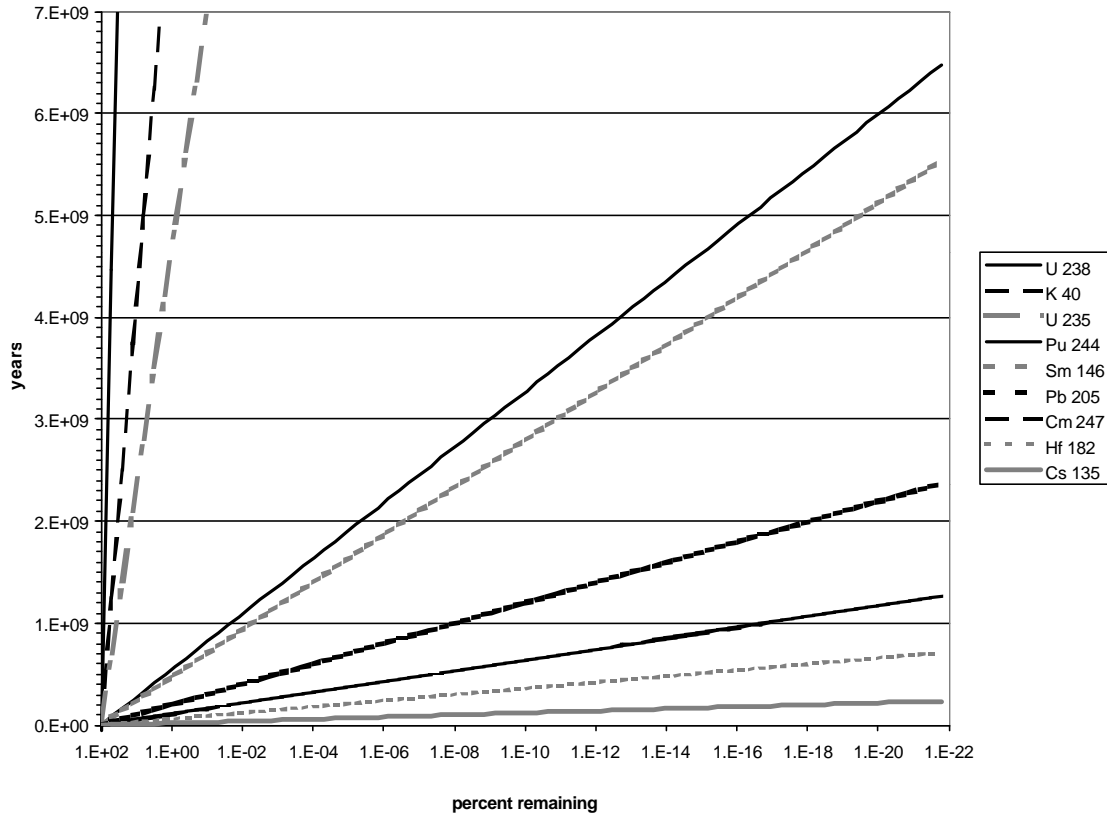
**The missing nuclides**

TABLE 8.3  
*Known Radioactive Nuclides with Half-Lives  
of 1Ma or More*

Nuclide	Half-life (years)	Found in nature?
<sup>50</sup> V	6 x10 <sup>15</sup>	yes
<sup>144</sup> Nd	2.4 x10 <sup>15</sup>	yes
<sup>174</sup> Hf	2.0 x10 <sup>15</sup>	yes
<sup>192</sup> Pt	~1 x10 <sup>15</sup>	yes
<sup>115</sup> In	6 x10 <sup>14</sup>	yes
<sup>152</sup> Gd	1.1 x10 <sup>14</sup>	yes
<sup>123</sup> Te	1.2 x10 <sup>13</sup>	yes
<sup>190</sup> Pt	6.9 x10 <sup>12</sup>	yes
<sup>138</sup> La	1.12x10 <sup>12</sup>	yes
<sup>147</sup> Sm	1.06x10 <sup>12</sup>	yes
<sup>87</sup> Rb	4.88x10 <sup>10</sup>	yes
<sup>187</sup> Re	4.3 x10 <sup>10</sup>	yes
<sup>176</sup> Lu	3.5 x10 <sup>10</sup>	yes
<sup>232</sup> Th	1.49x10 <sup>10</sup>	yes
<sup>238</sup> U	4.47x10 <sup>9</sup>	yes
<sup>40</sup> K	1.25x10 <sup>9</sup>	yes
<sup>235</sup> U	7.04x10 <sup>8</sup>	yes
<sup>244</sup> Pu	8.2 x10 <sup>7</sup>	yes
<sup>146</sup> Sm	7 x10 <sup>7</sup>	no
<sup>205</sup> Rb	3.0 x10 <sup>7</sup>	no
<sup>236</sup> U	2.39x10 <sup>7</sup>	yes-P <sup>a</sup>
<sup>129</sup> I	1.7 x10 <sup>7</sup>	yes-P
<sup>247</sup> Cm	1.6 x10 <sup>7</sup>	no
<sup>182</sup> Hf	9 x10 <sup>6</sup>	no
<sup>107</sup> Pd	~7 x10 <sup>6</sup>	no
<sup>53</sup> Mn	3.7 x10 <sup>6</sup>	yes-P
<sup>135</sup> Cs	3.0 x10 <sup>6</sup>	no
<sup>97</sup> Tc	2.6 x10 <sup>6</sup>	no
<sup>237</sup> Np	2.14x10 <sup>6</sup>	yes-P
<sup>150</sup> Gd	2.1 x10 <sup>6</sup>	no
<sup>10</sup> Be	1.6 x10 <sup>6</sup>	yes-P
<sup>93</sup> Zr	1.5 x10 <sup>6</sup>	no
<sup>98</sup> Tc	1.5 x10 <sup>6</sup>	no
<sup>154</sup> Dy	~1 x10 <sup>6</sup>	no

NOTE: With the exception of those currently produced by natural processes, only nuclides with half-lives longer than 82 Ma are found in nature.

<sup>a</sup>P, currently produced by natural processes.



Percentage of a radioactive nuclide remaining as a function of time for nuclides with various half-lives. Modified from Table 8.7, p 385, Dalrymple (1991).