Figure of rare earth elemental abundances removed due to copyright restrictions.

See figure 3.1 on page 26 of Tolstikhin, Igor and Jan Kramers. "The Evolution of Matter: From the Big Bang to the Present Day." Cambridge University Press, 2008.

Given that the r-process nucleosynthetic production ratio for $^{235}U/^{238}U$ is roughly 1.35 ± 0.3, use the present-day terrestrial isotope ratio to estimate the "age of the elements" assuming a one-time production event for these isotopes.

Figures of recession velocity vs. distance removed due to copyright restrictions.

See figure 4.4 on page 50 of Tolstikhin, Igor and Jan Kramers. "The Evolution of Matter: From the Big Bang to the Present Day." Cambridge University Press, 2008.

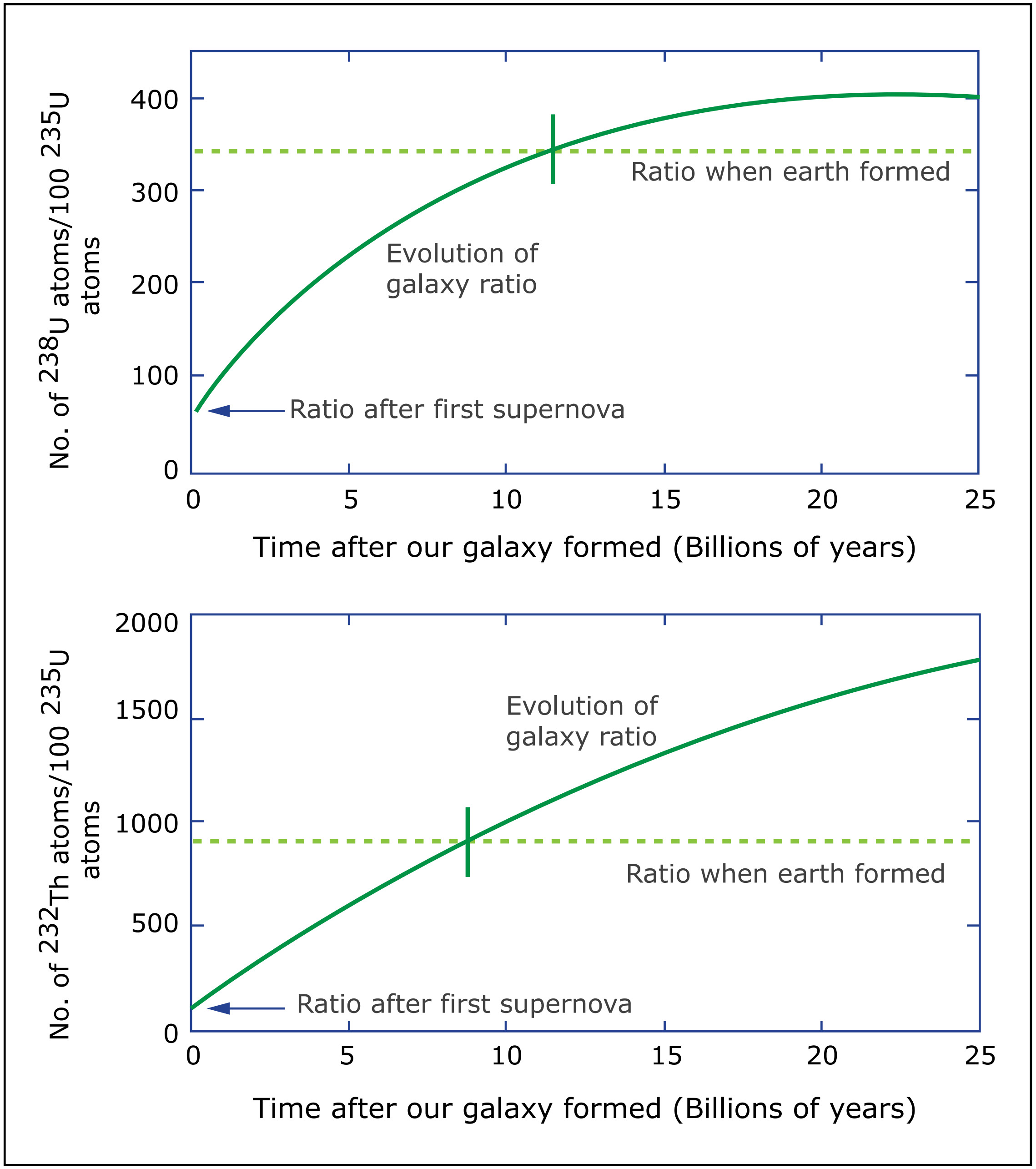

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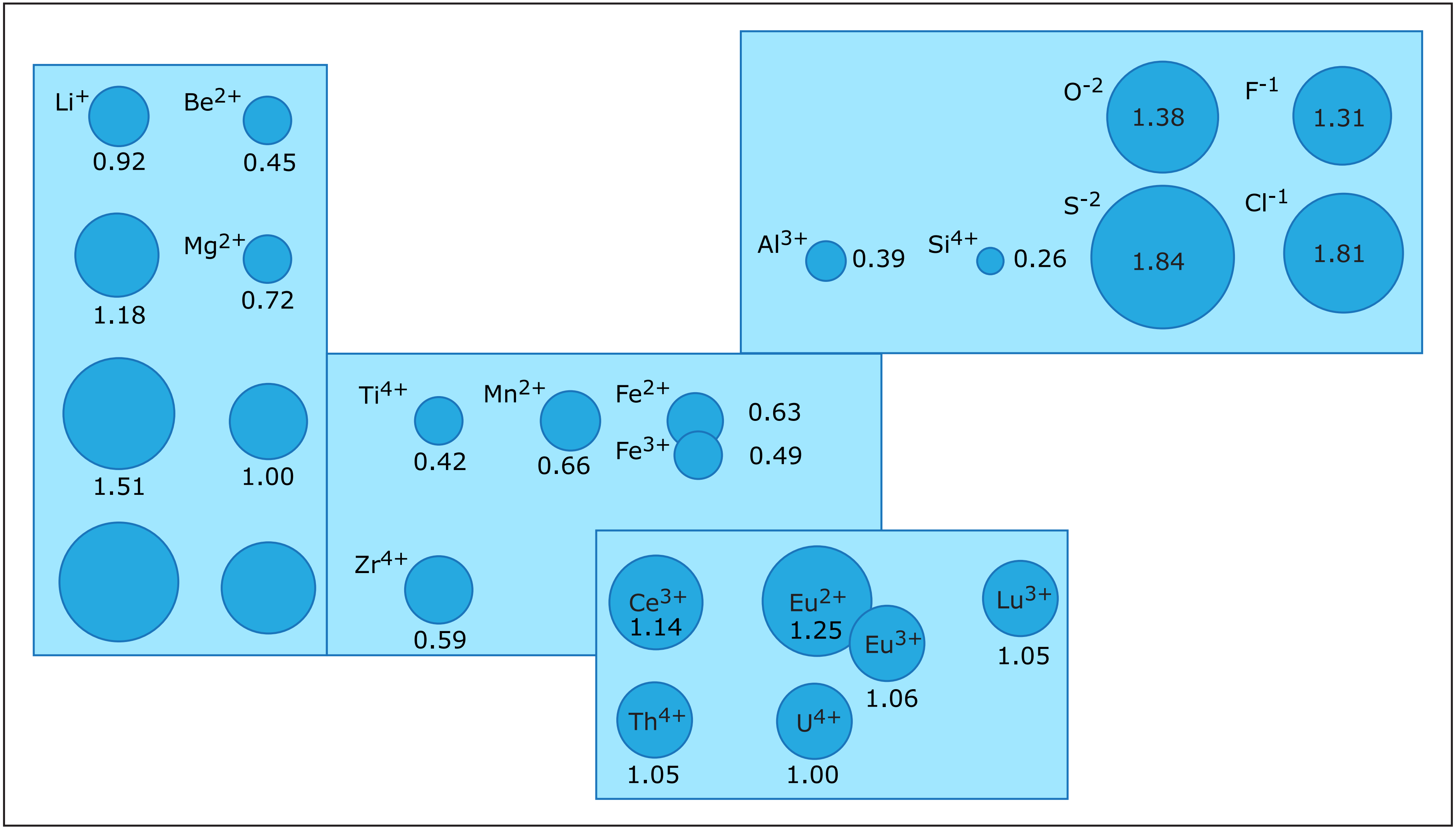
Figure of uranium and thorium ratios vs. time and age removed due to copyright restrictions.

See figure 7.1 on page 81 of Tolstikhin, Igor and Jan Kramers. “The Evolution of Matter: From the Big Bang to the Present Day.” Cambridge University Press, 2008.



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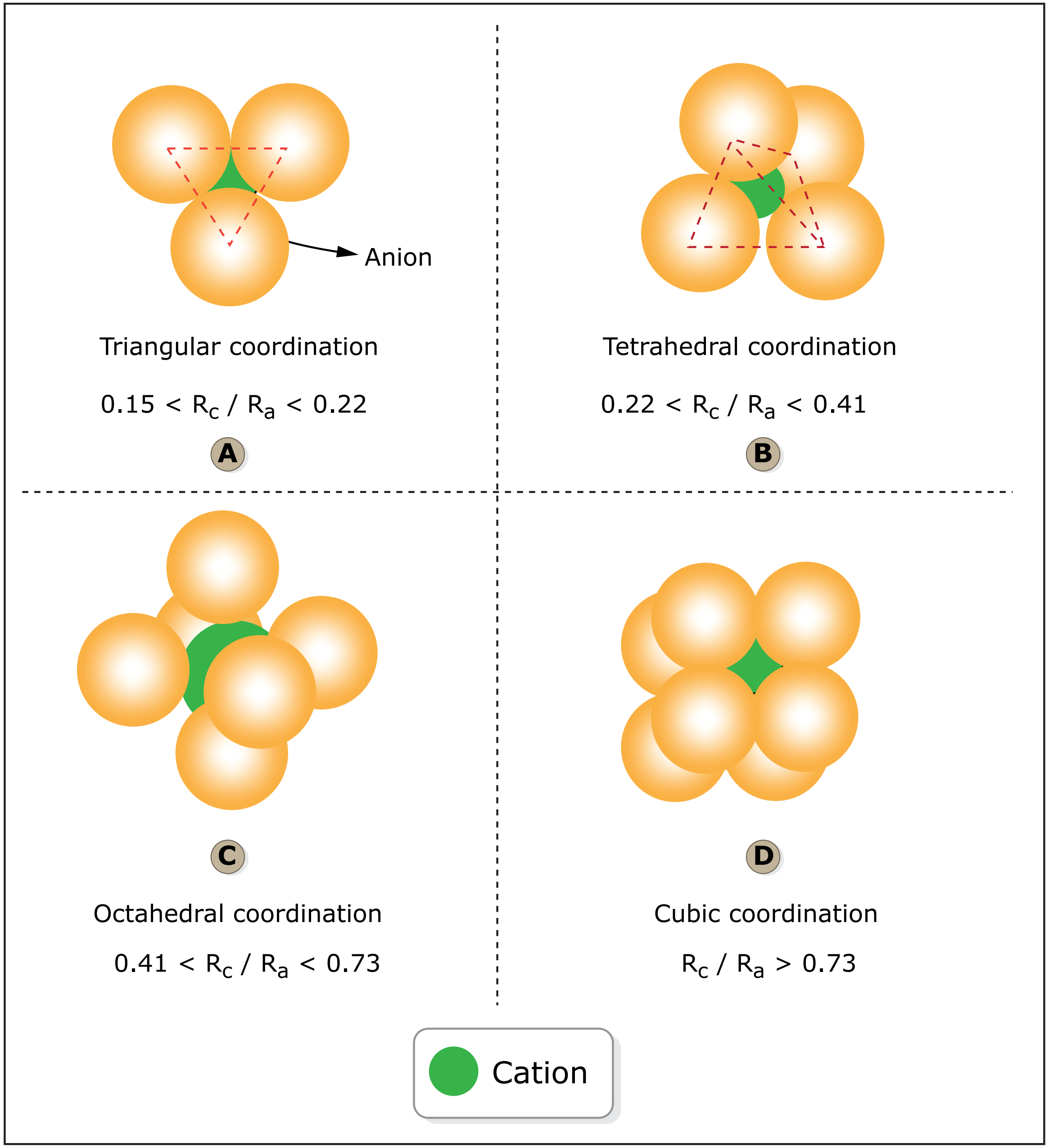

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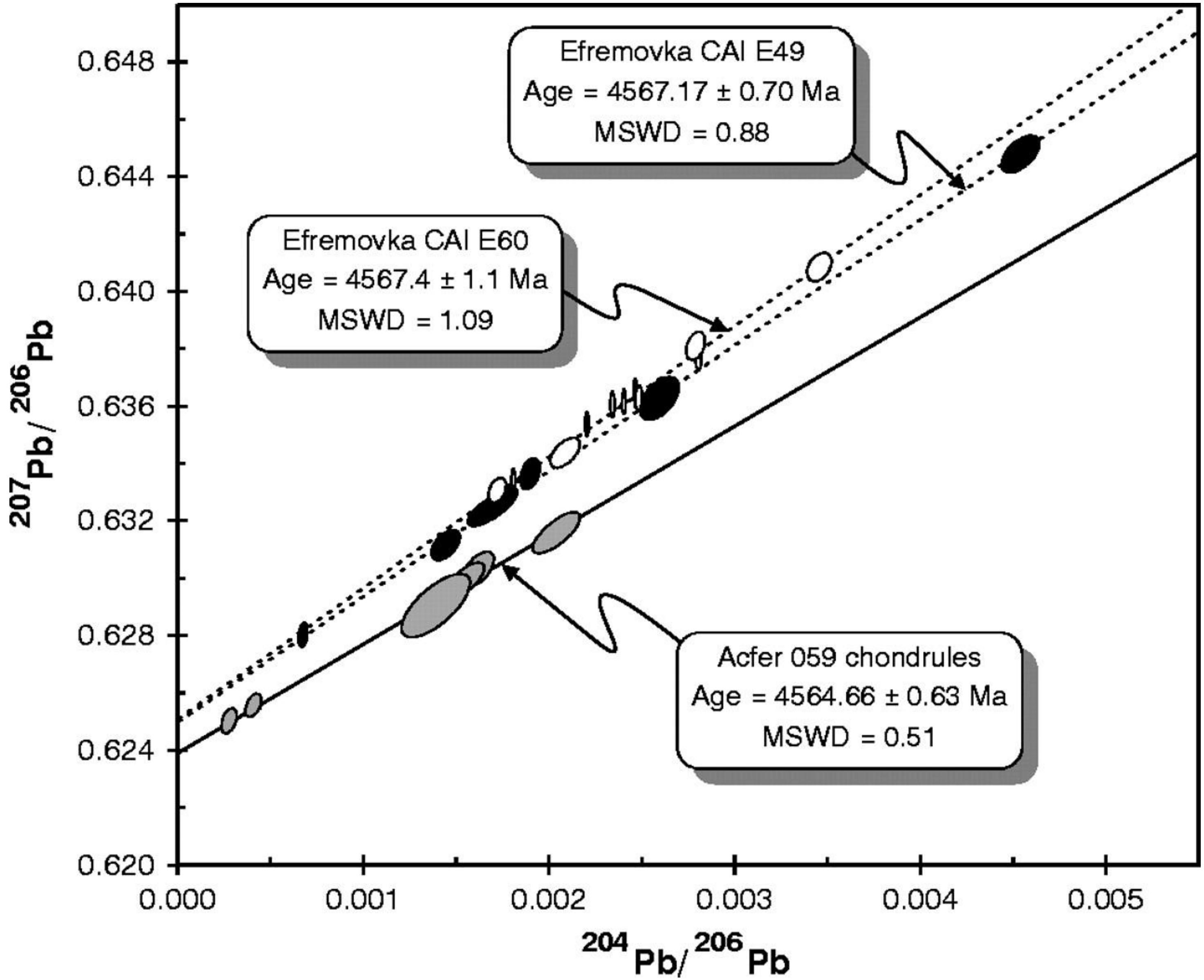
Figure of $^{87}Sr/^{86}Sr$ vs. $^{87}Rb/^{86}Sr$ (atomic) removed due to copyright restrictions.

See figure 12.7 on page 179 of Tolstikhin, Igor and Jan Kramers. "The Evolution of Matter: From the Big Bang to the Present Day." Cambridge University Press, 2008.



Source: Amelin, Yuri, Alexander N. Krot, et al. "Lead Isotopic Ages of Chondrules and Calcium-Aluminum-Rich Inclusions." *Science* 297, no. 5587 (2002): 1678-83.

Figure of $^{207}Pb/^{204}Pb$ vs. $^{206}Pb/^{204}Pb$ with 4567 million year reference evolution line removed due to copyright restrictions.

See figure 10.3 on page 121 of Tolstikhin, Igor and Jan Kramers. "The Evolution of Matter: From the Big Bang to the Present Day." Cambridge University Press, 2008.

Figure of $(^{26}Al/^{27}Al)_{INI}$ x10^{-5} and time relative to CAI formation (x10^6 years) vs. various meteorites removed due to copyright restrictions.

See figure 11.7 on page 153 of Tolstikhin, Igor and Jan Kramers. "The Evolution of Matter: From the Big Bang to the Present Day." Cambridge University Press, 2008.

Figure of ages of various meteorites with respect to solar system formation removed due to copyright restrictions.

See figure 13.1 on page 193 of Tolstikhin, Igor and Jan Kramers. "The Evolution of Matter: From the Big Bang to the Present Day." Cambridge University Press, 2008.

Figure of $^{107}Ag/^{109}Ag$ vs. $^{108}Pd/^{109}Ag$, x10^5 of Gibeon Metal and Normal Silver removed due to copyright restrictions.

See figure 12.9 on page 182 of Tolstikhin, Igor and Jan Kramers. "The Evolution of Matter: From the Big Bang to the Present Day." Cambridge University Press, 2008.

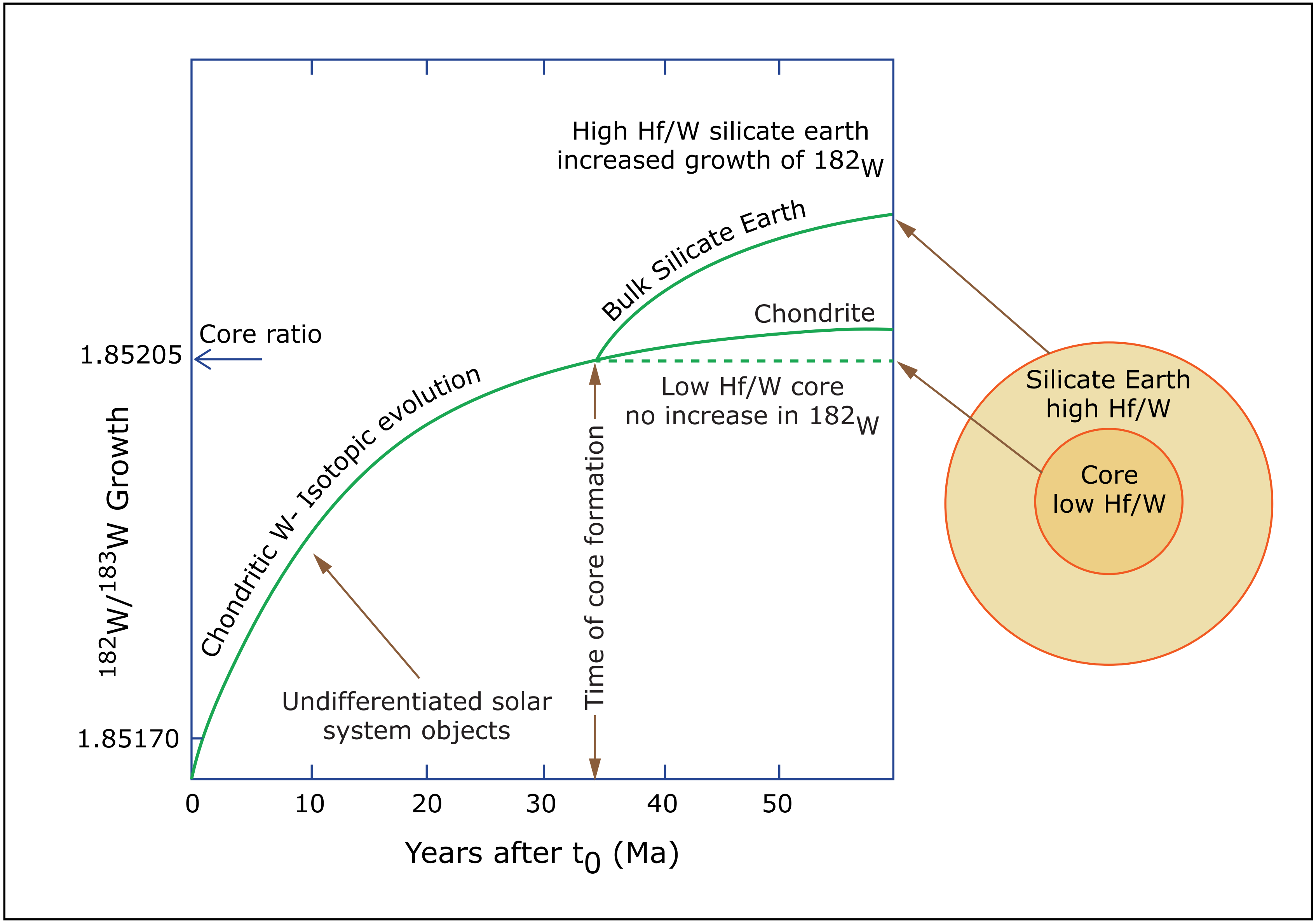


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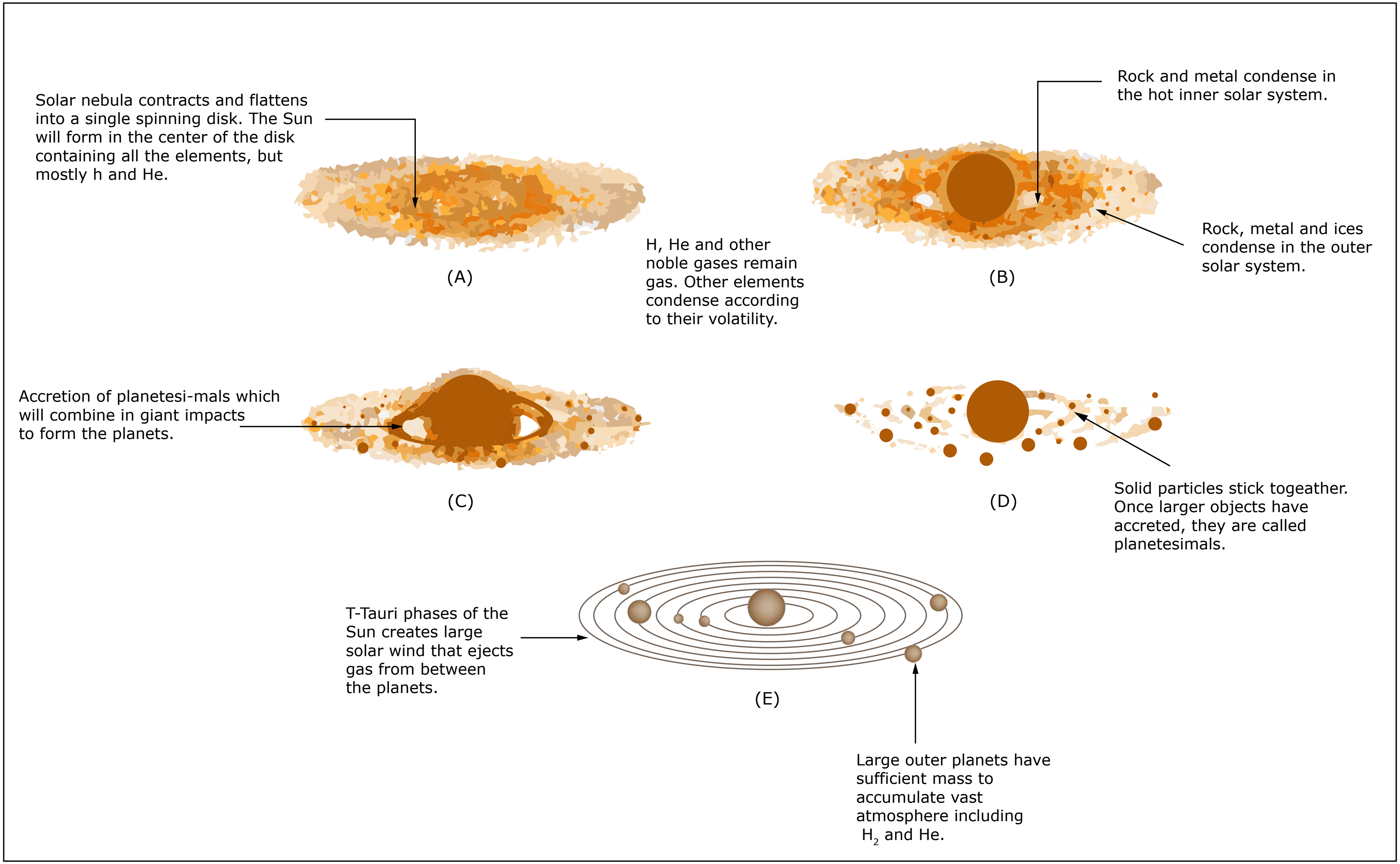
Figure of ε_{182} of Early Archaean samples and 3.8 billion year igneous mix with inset of ε_{182} vs. Cr/Ti for Early Archaean samples, Enstatite chondrites, Allende (C1), and Iron meteorites removed due to copyright restrictions.

See figure 19.1 on page 247 of Tolstikhin, Igor and Jan Kramers. "The Evolution of Matter: From the Big Bang to the Present Day." Cambridge University Press, 2008.

Figure of ε_{182} of carbonaceous chondrites, ordinary chondrites, and iron meteorites removed due to copyright restrictions.

See figure 11.8 on page 154 of Tolstikhin, Igor and Jan Kramers. "The Evolution of Matter: From the Big Bang to the Present Day." Cambridge University Press, 2008.



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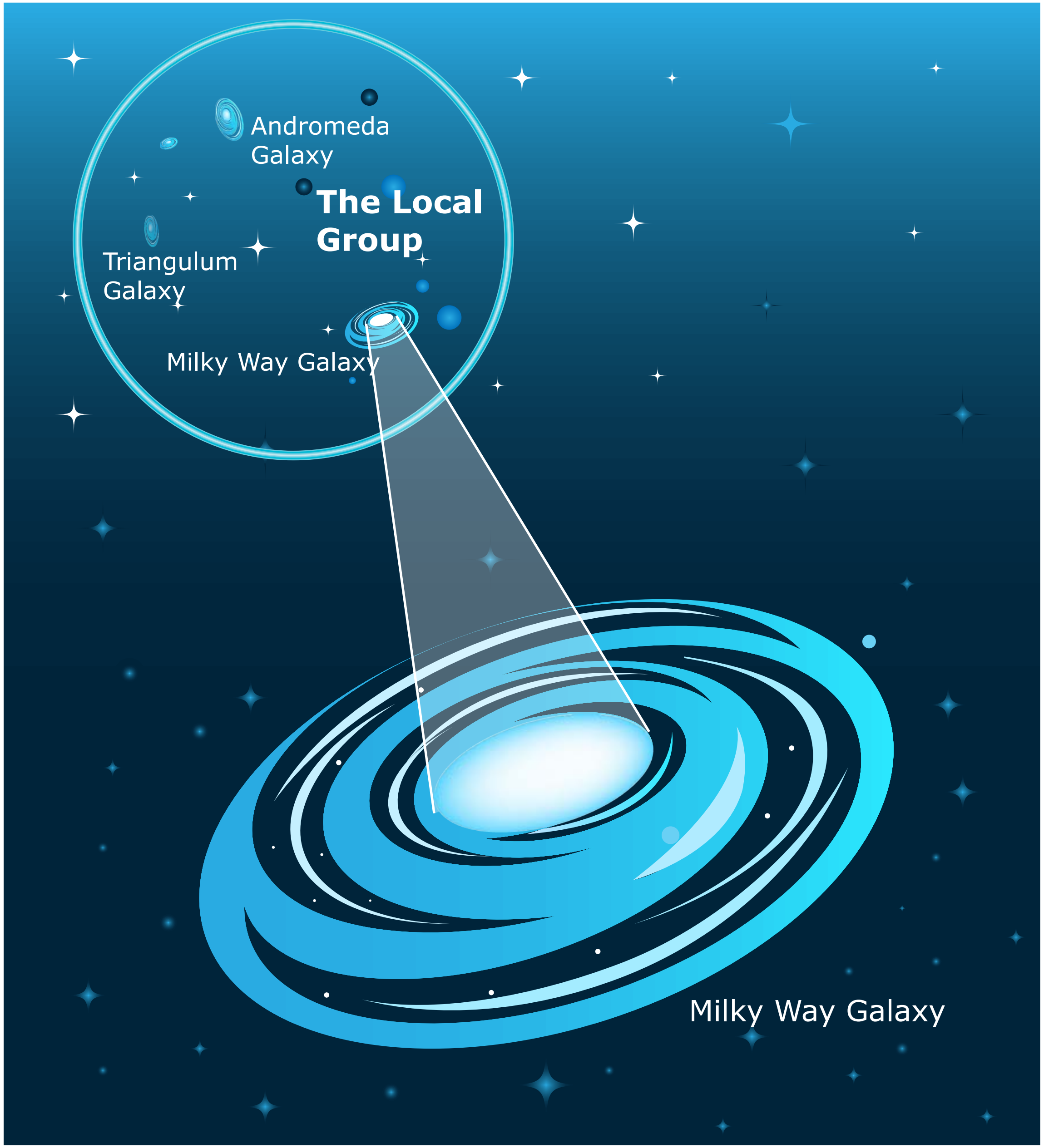

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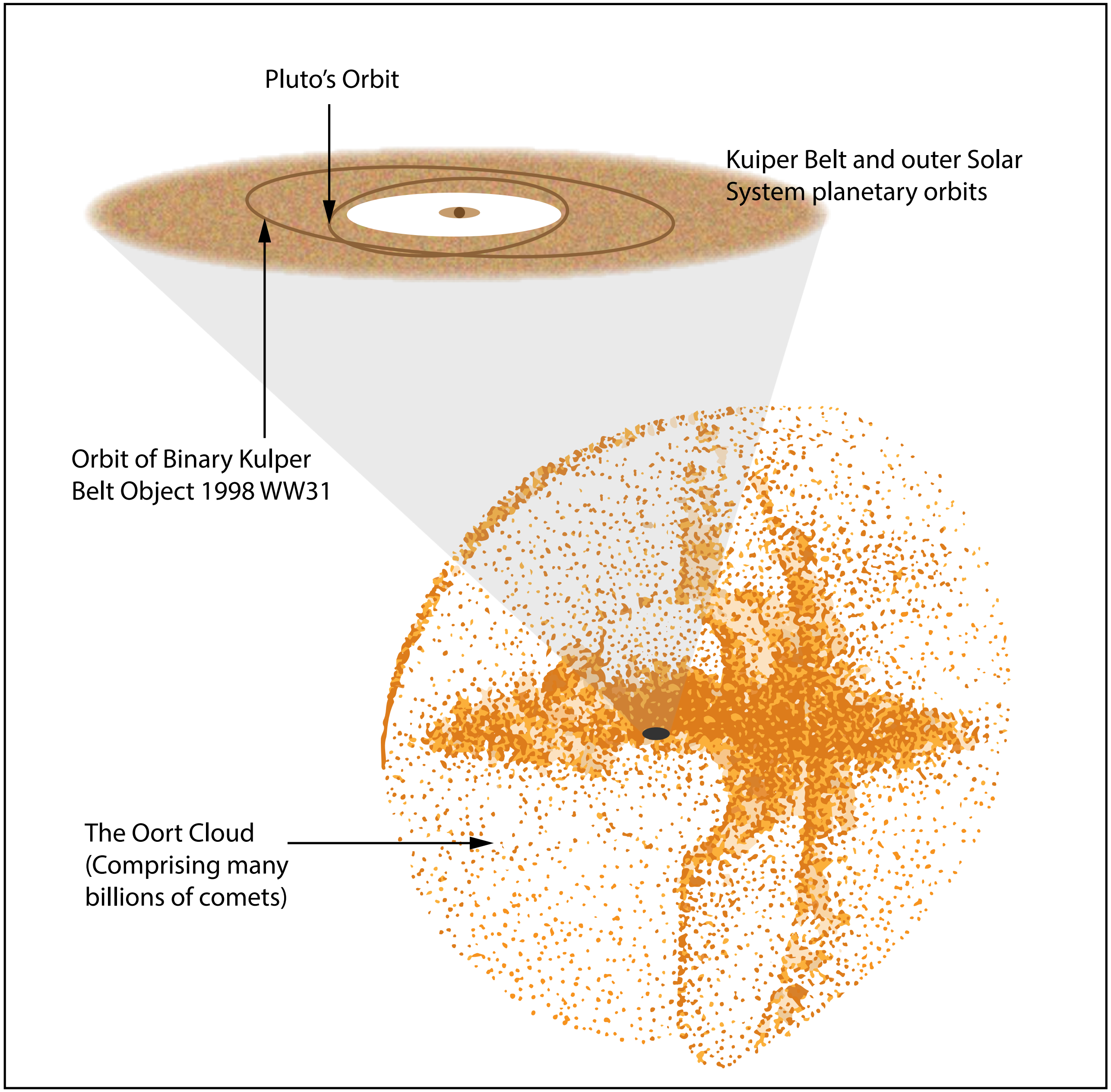

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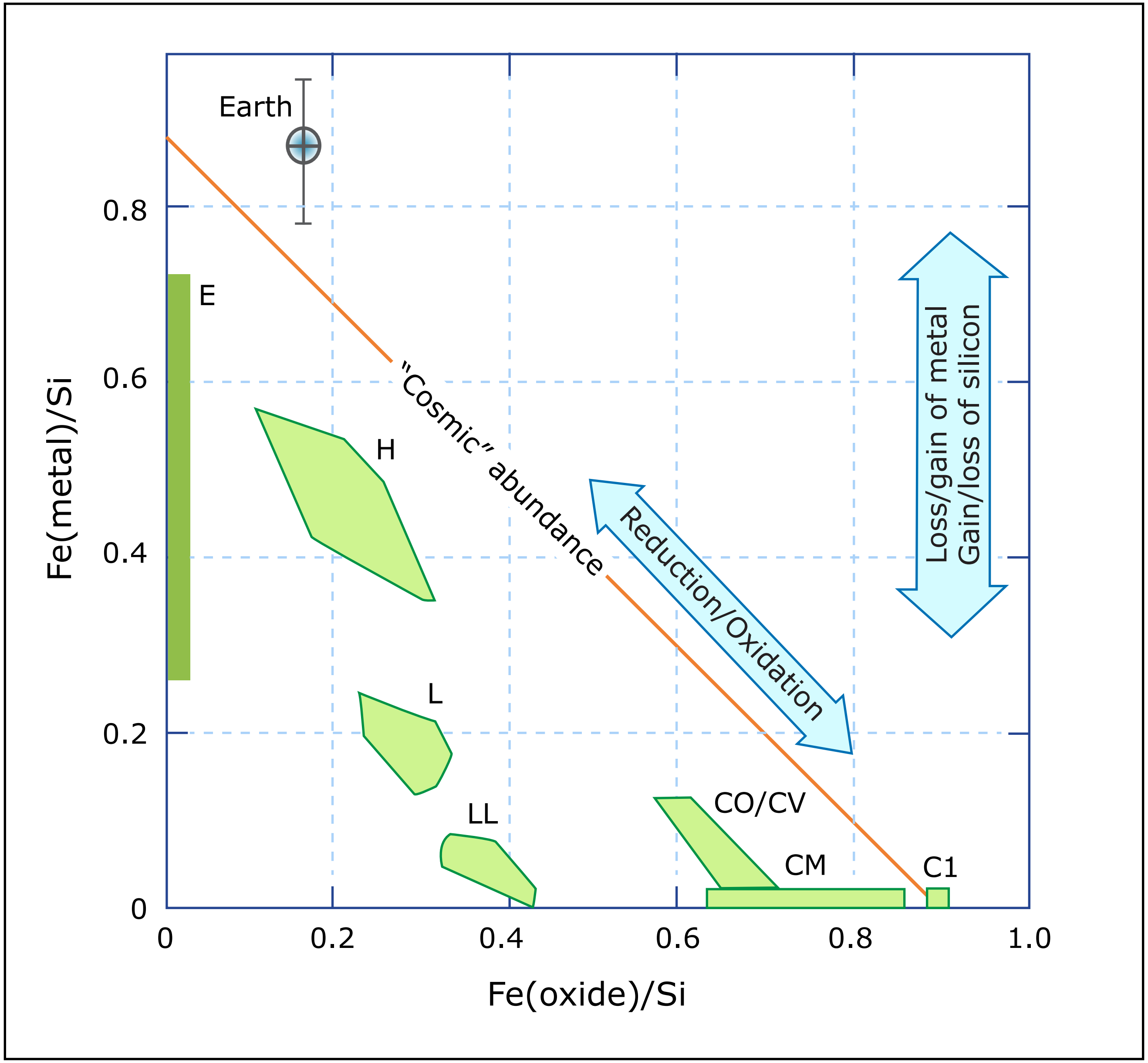

Image by MIT OpenCourseWare. After figure 11.1 in Tolstikhin, Igor and Jan Kramers. "The Evolution of Matter: From the Big Bang to the Present Day."

Figure of ε_{182}(Earth) - ε_{182}(initial) vs. time (millions of years) and Concentration/concentration in C1 vs. time (millions of years) removed due to copyright restrictions.

See figure 18.3 on page 241 of Tolstikhin, Igor and Jan Kramers. "The Evolution of Matter: From the Big Bang to the Present Day." Cambridge University Press, 2008.

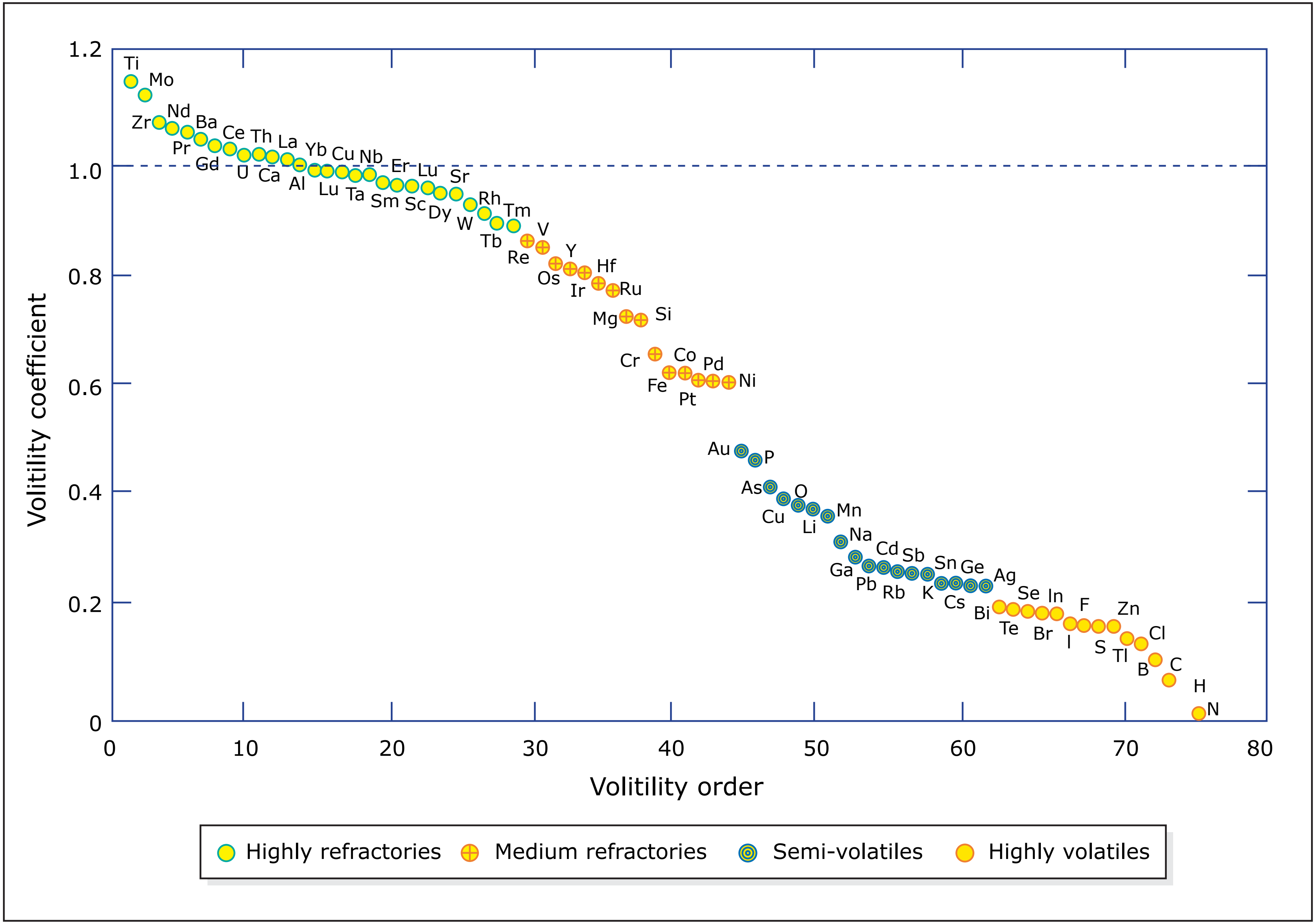

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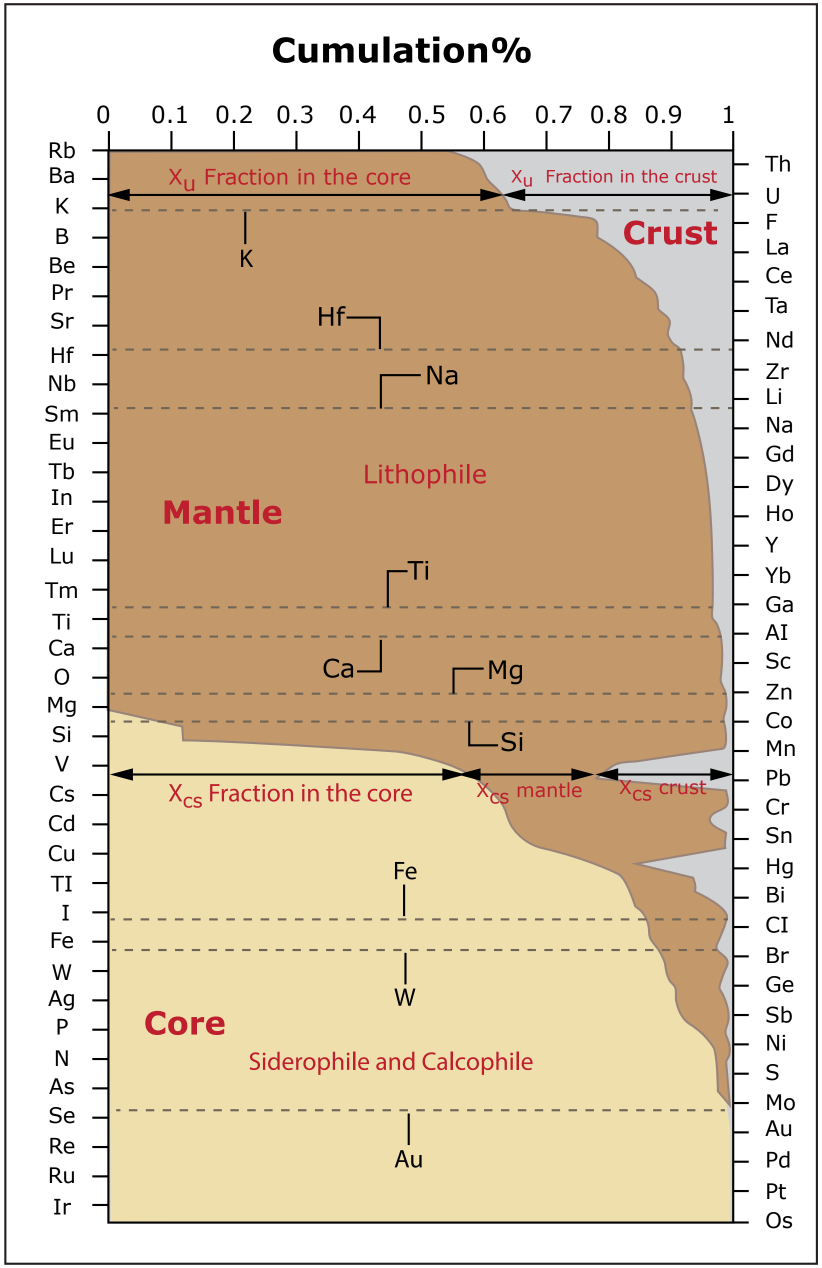
Figure of Depletion relative to C1 and refractory element vs. Increasing siderophile behavior of refractory and transitional elements and volatile elements and low-pressure metal-silicate partition coefficients removed due to copyright restrictions.

See figure 18.1 on page 232 of Tolstikhin, Igor and Jan Kramers. “The Evolution of Matter: From the Big Bang to the Present Day.” Cambridge University Press, 2008.



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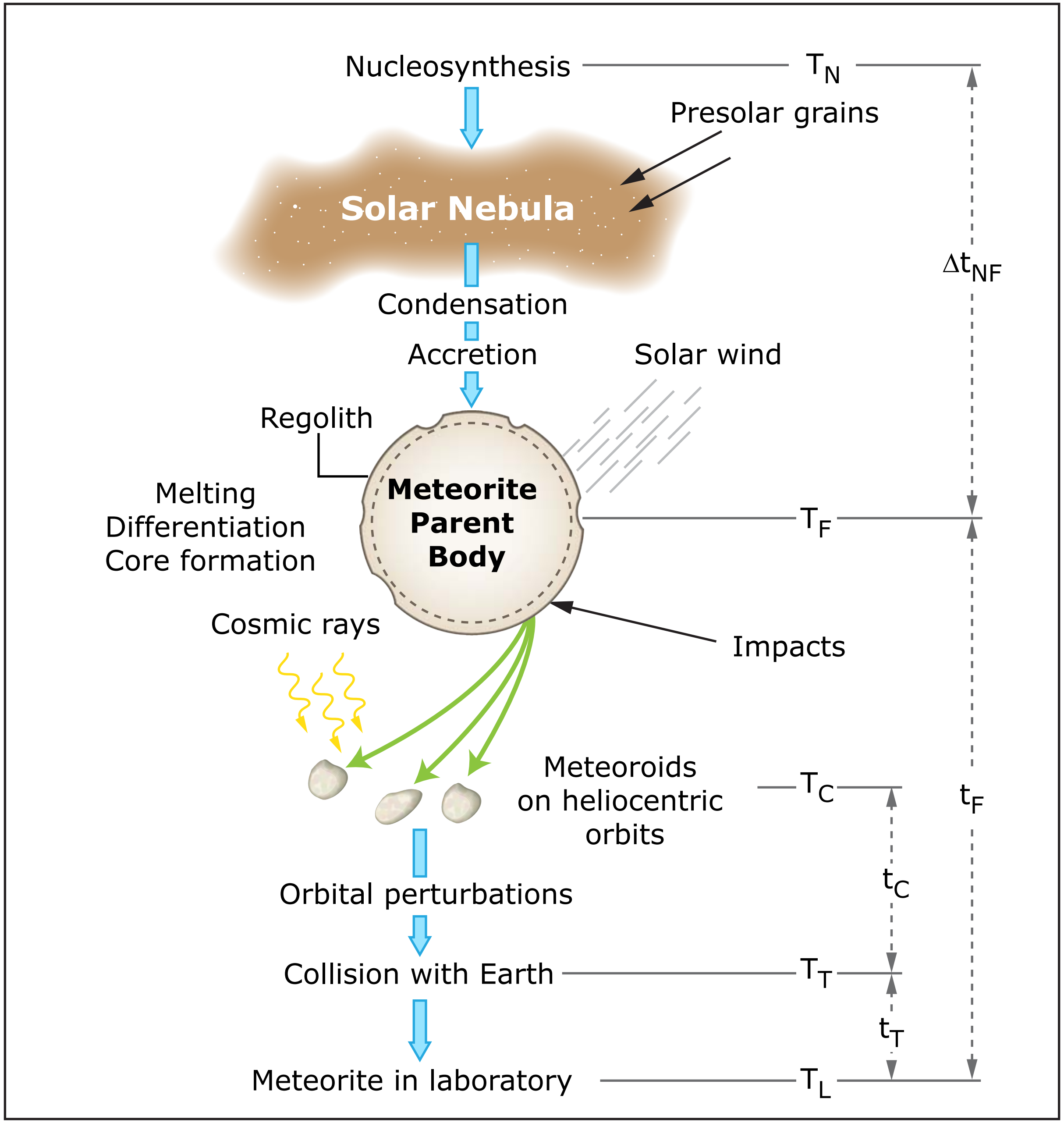
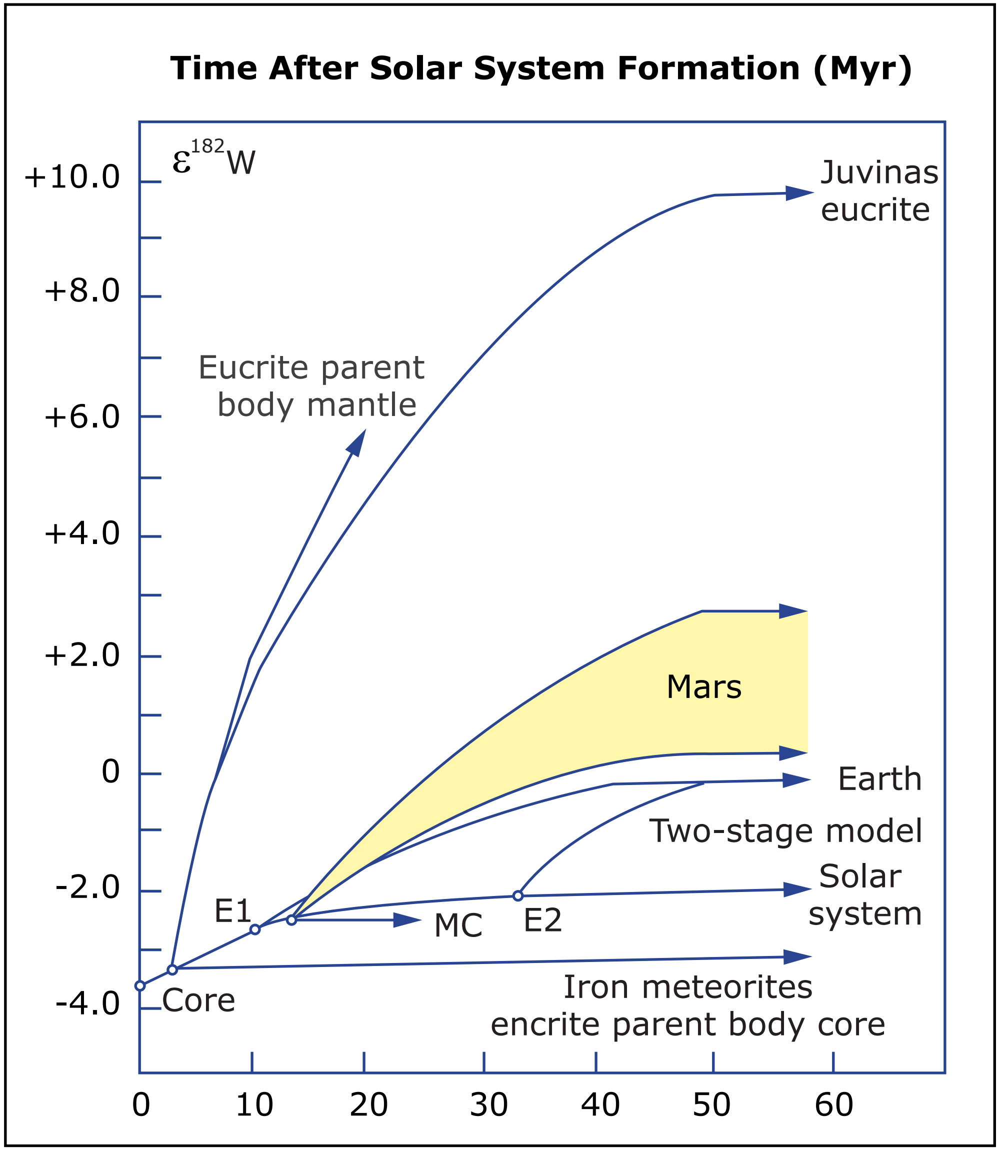


Image by MIT OpenCourseWare. After figure 98 in Heide & Wlotzka, Meteorites.



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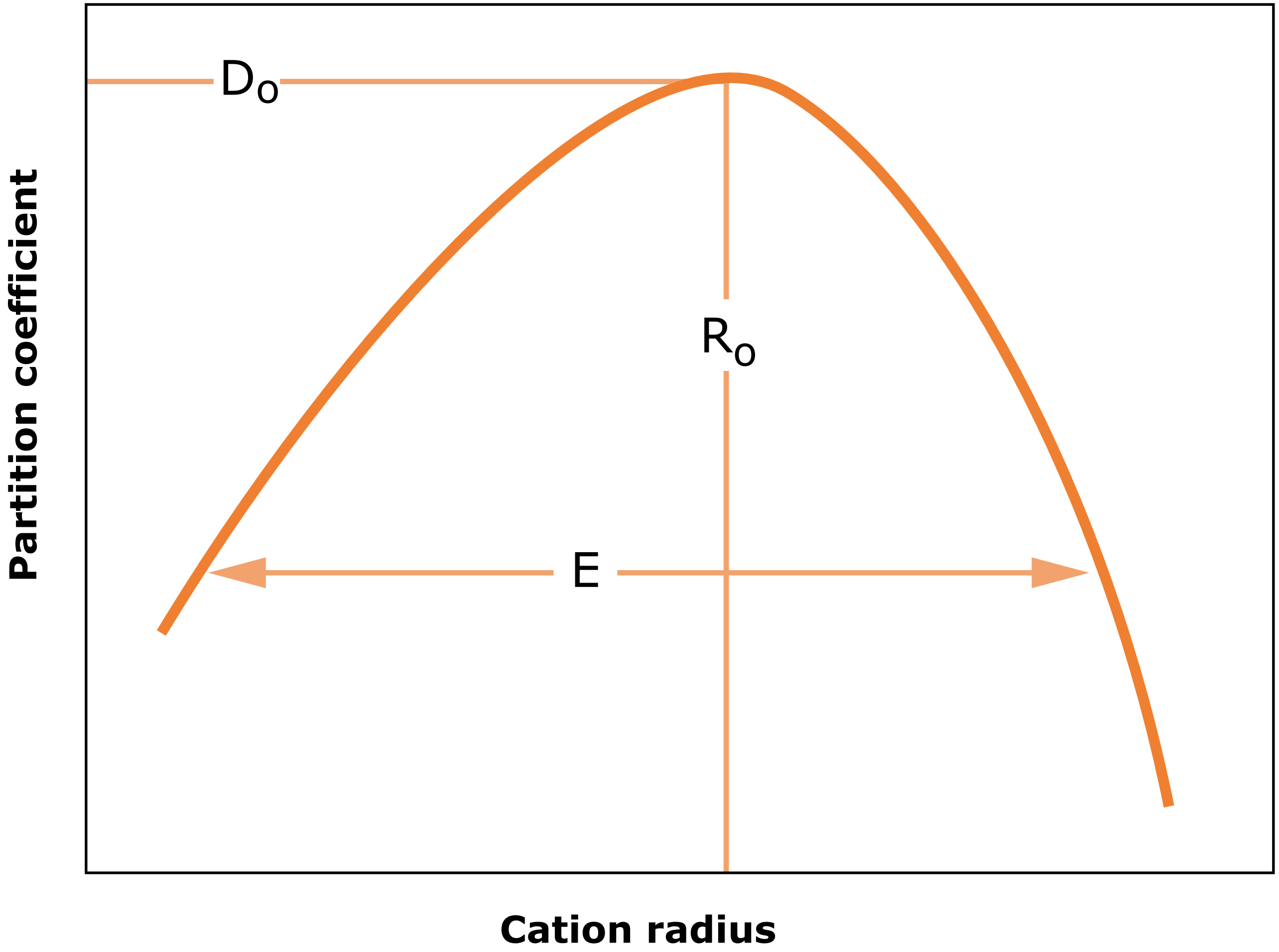
Partition model



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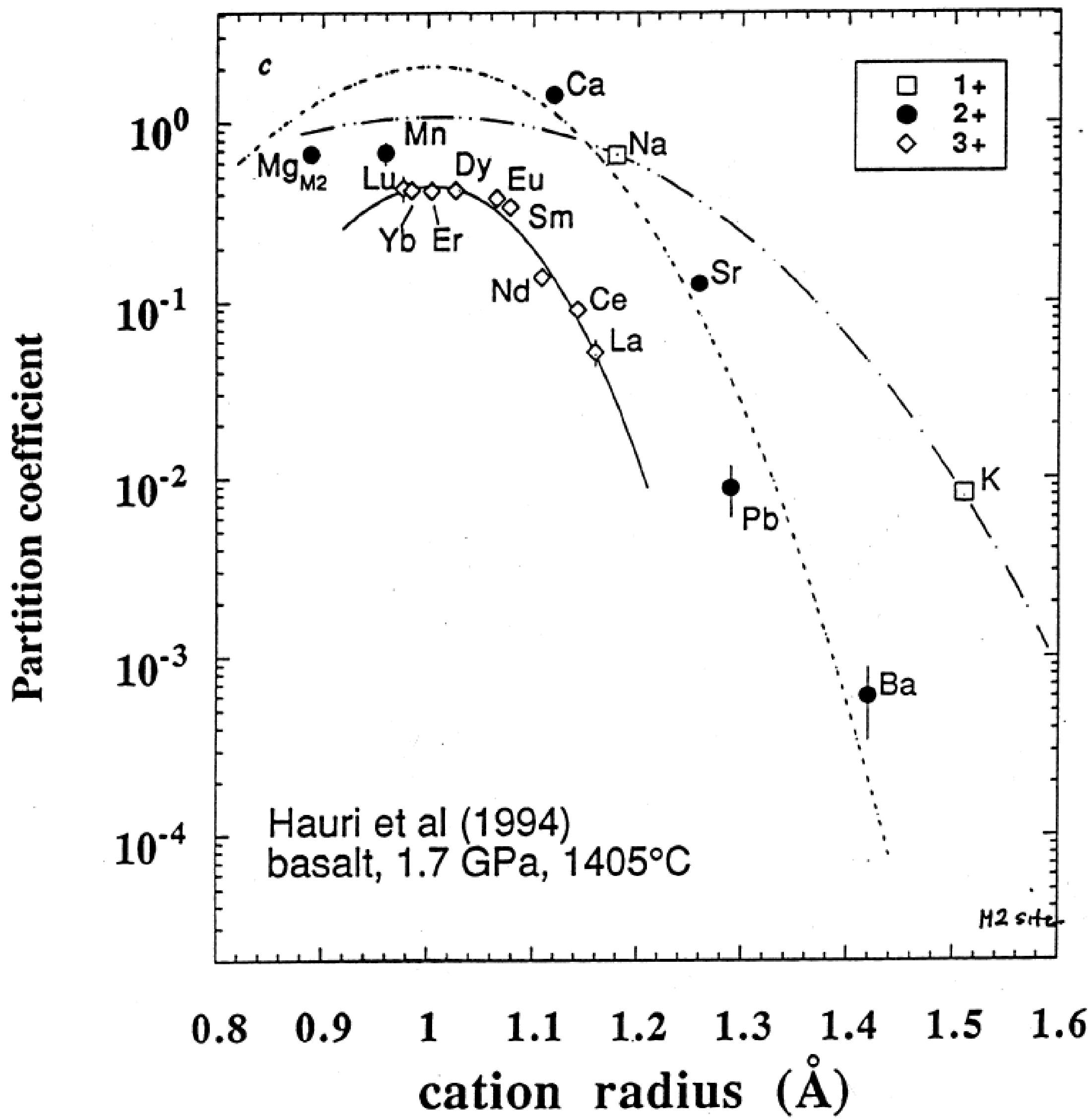
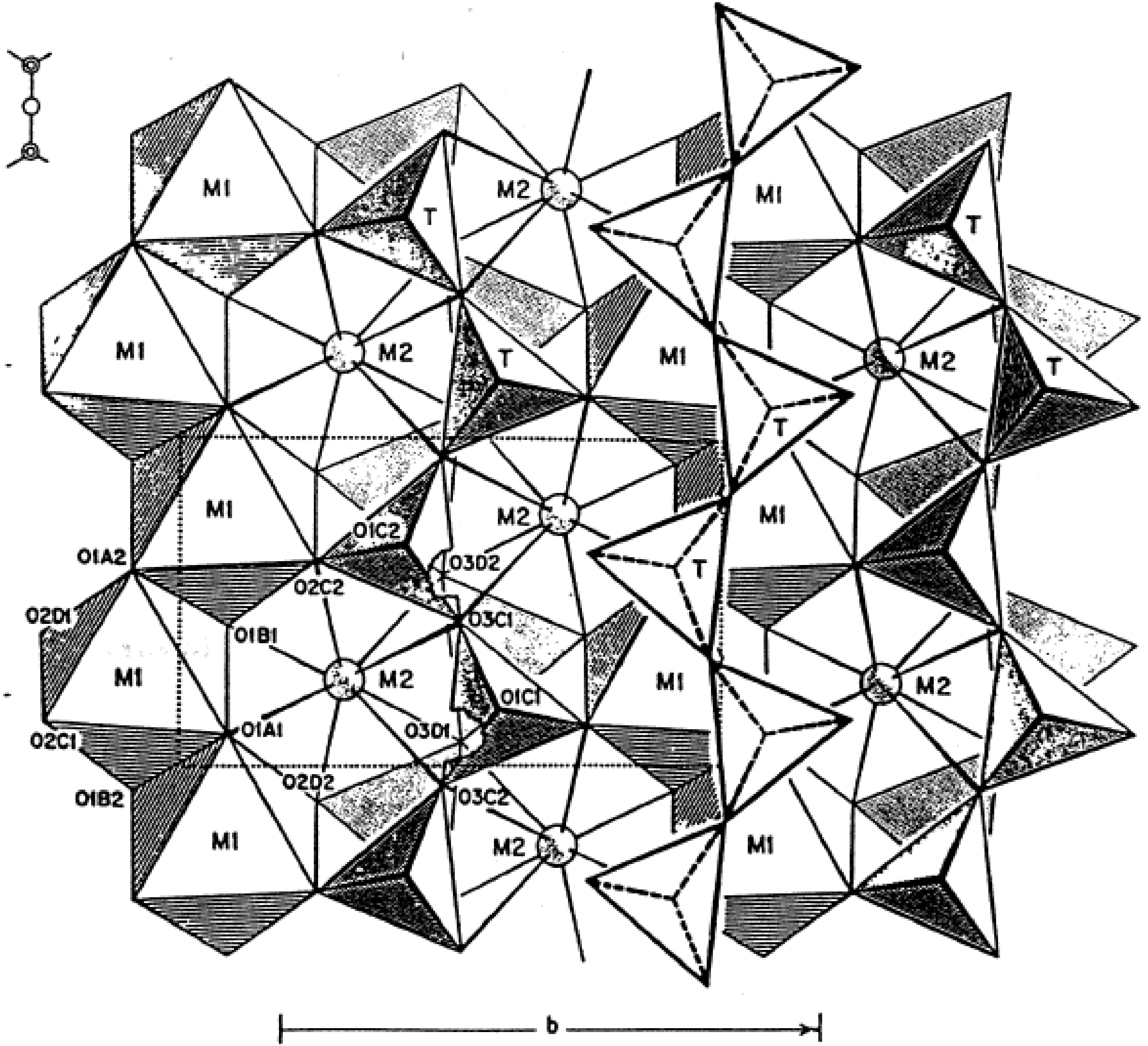
Clinopyroxene



Source: Blundy, Jon, and Bernard Wood. "Partitioning of Trace Elements between Crystals and Melts." *Earth and Planetary Science Letters* 210, no. 3 (2003): 383-97.



M1
M2
T
O1C2
O1A2
O3D2
O2C2
O2D1
O1B1
O3C1
O1C1
O2C1
O1A1
O3D1
O1B2
O2D2
O3C2
b