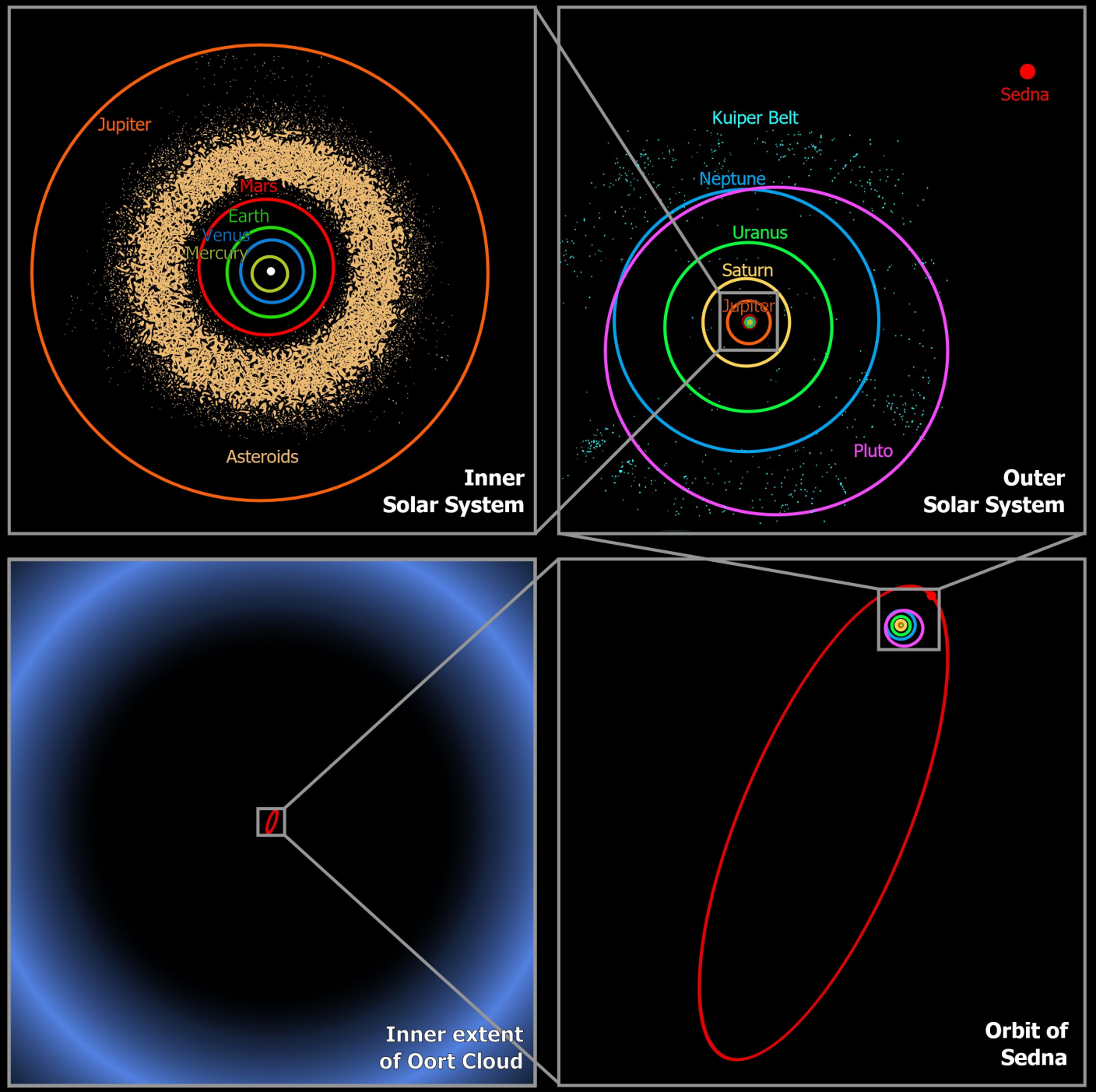
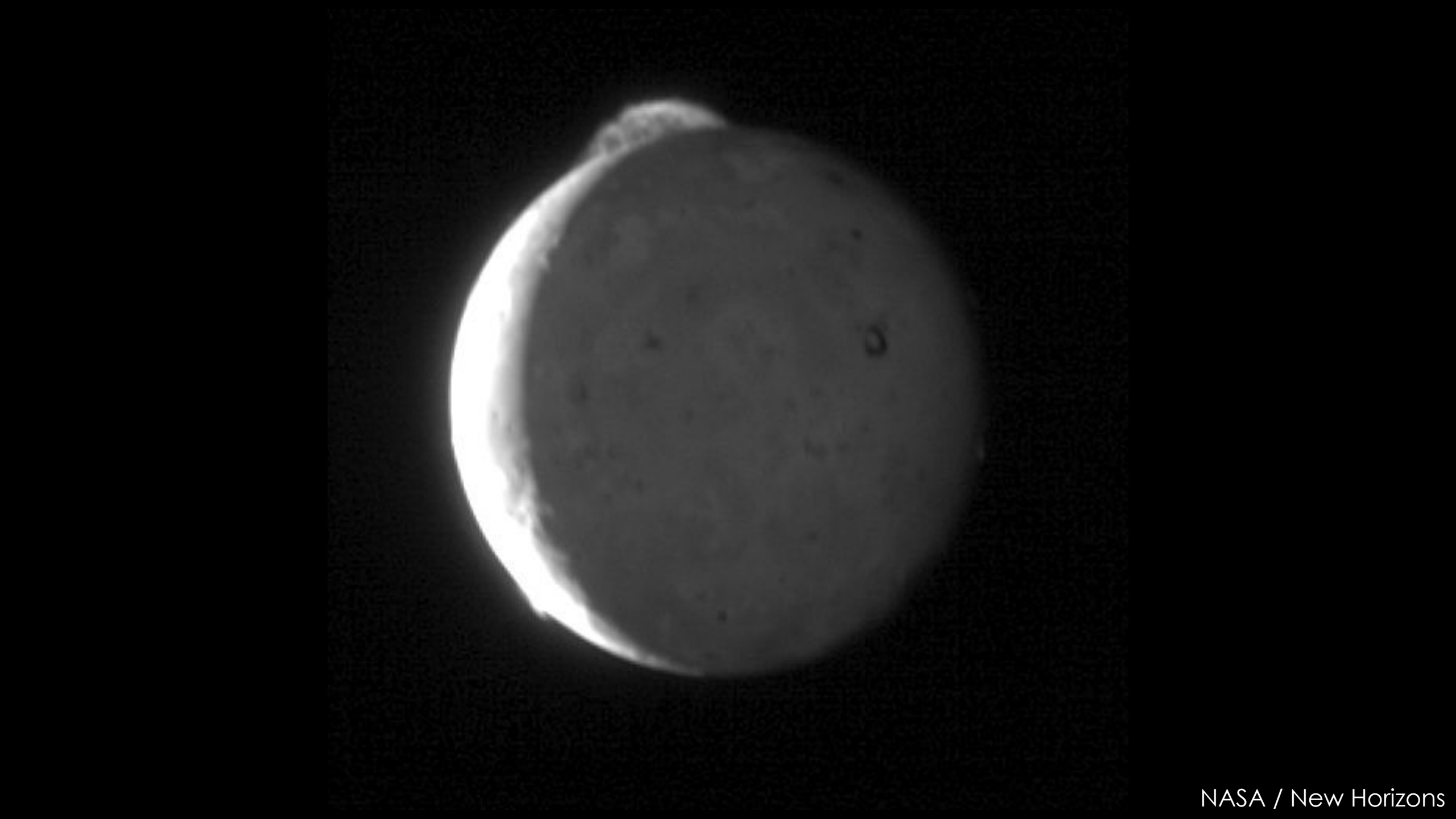
15 минут
об истории Солнечной системы

Георгий Махатадзе



NASA / JPL-Caltech / R. Hurt


NASA / JPL-Caltech



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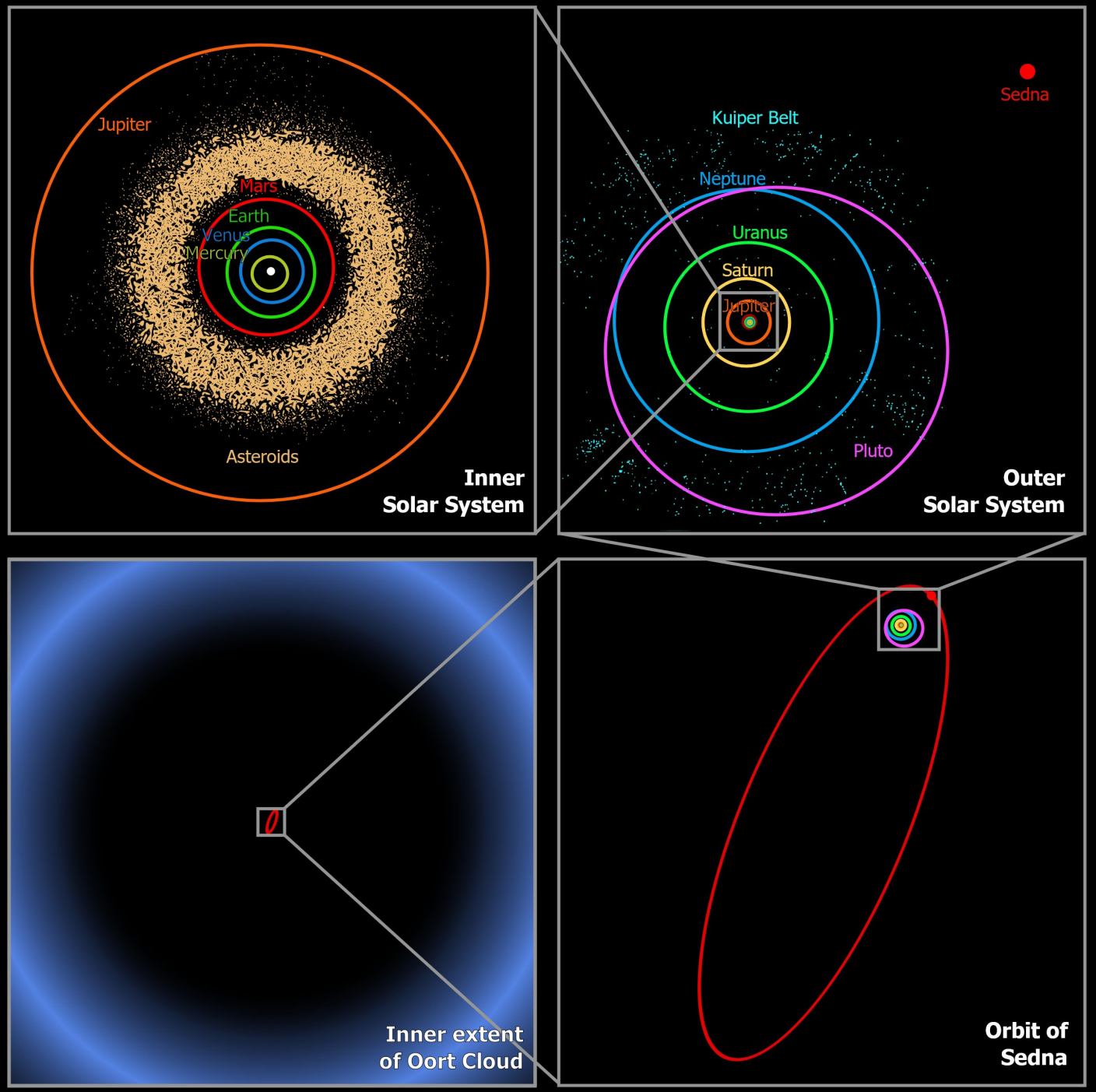
gettyimages
Phil Mislinski



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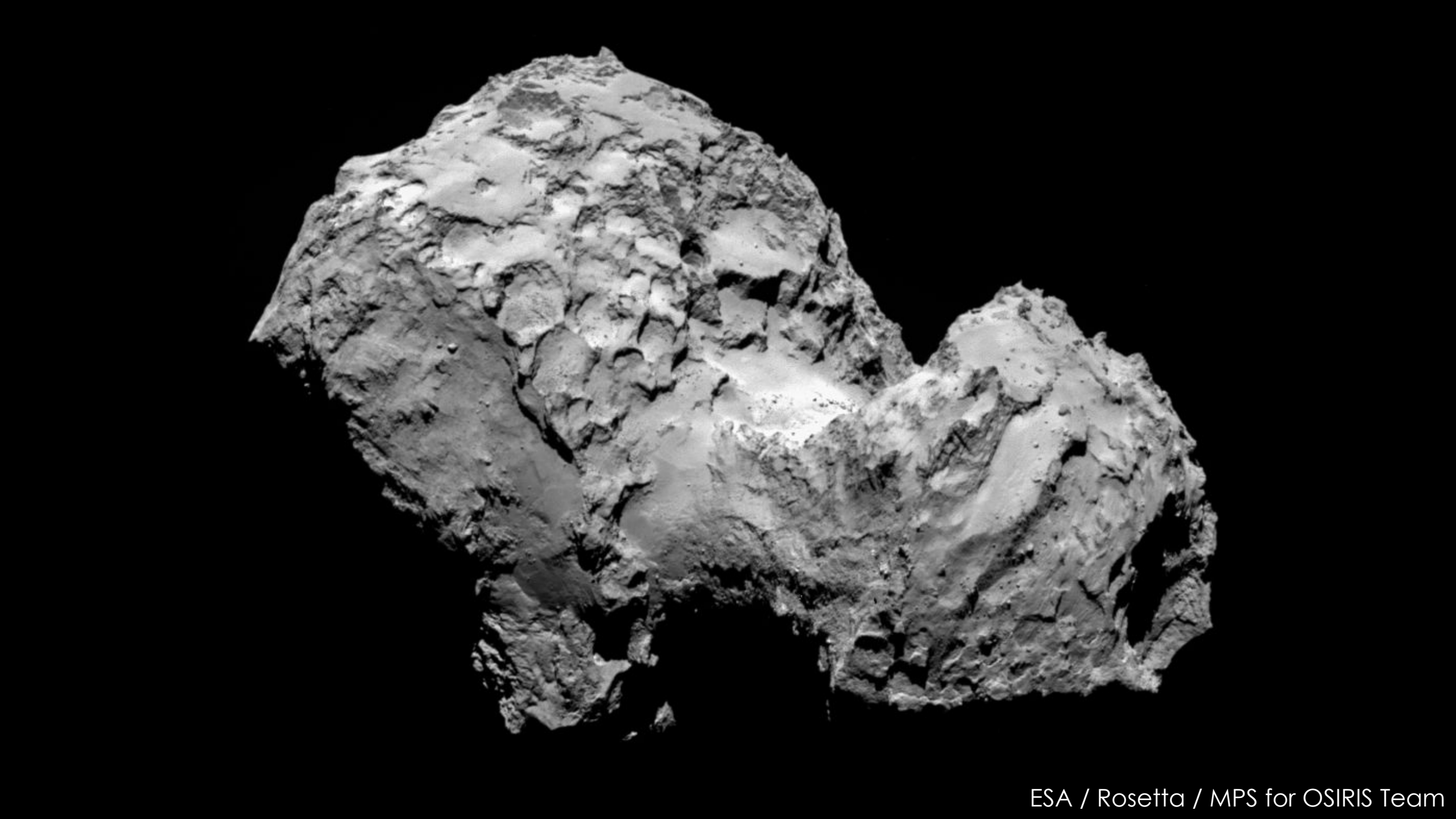


ESA / Rosetta / MPS for OSIRIS Team

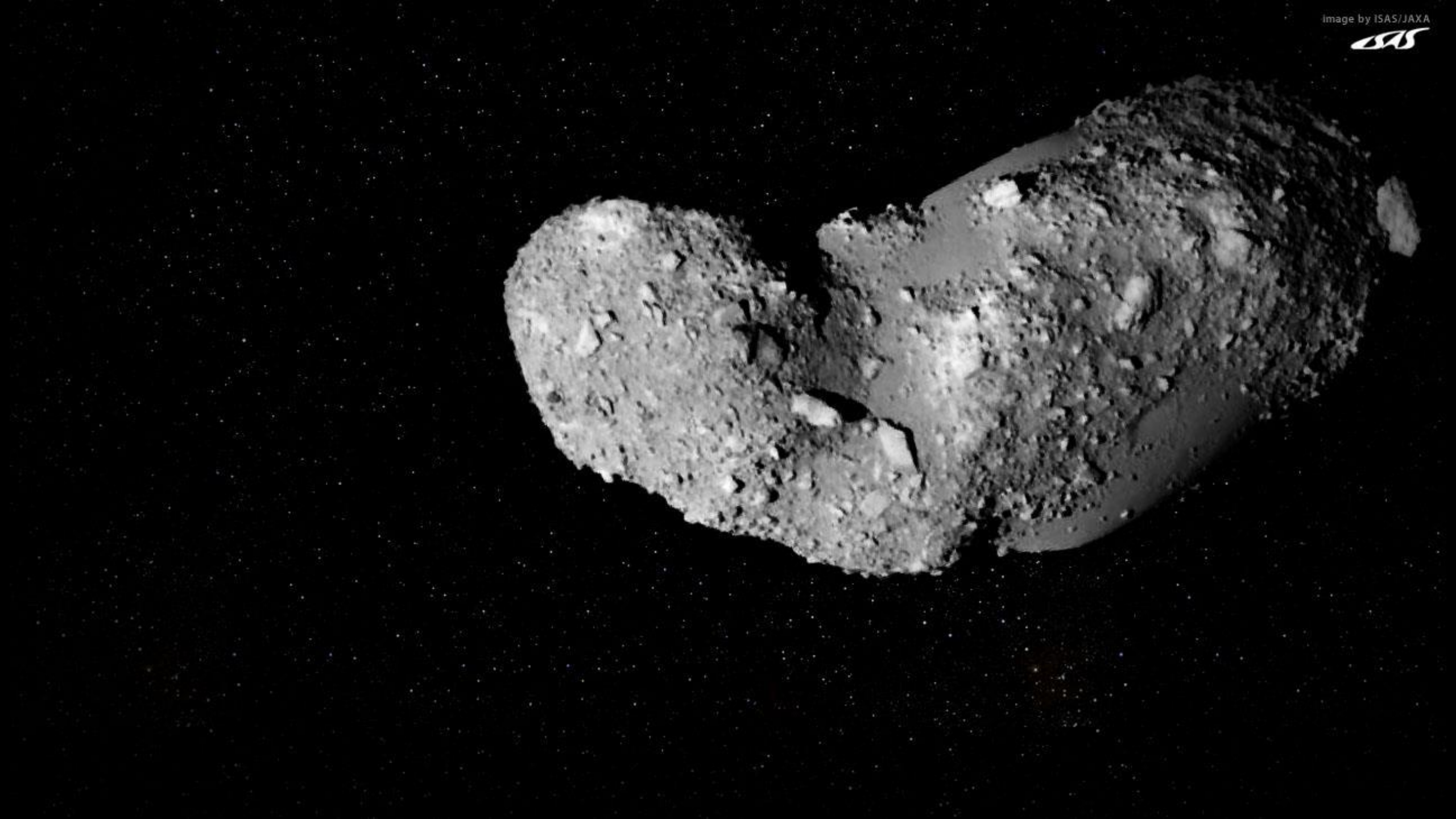


image by ISAS/JAXA

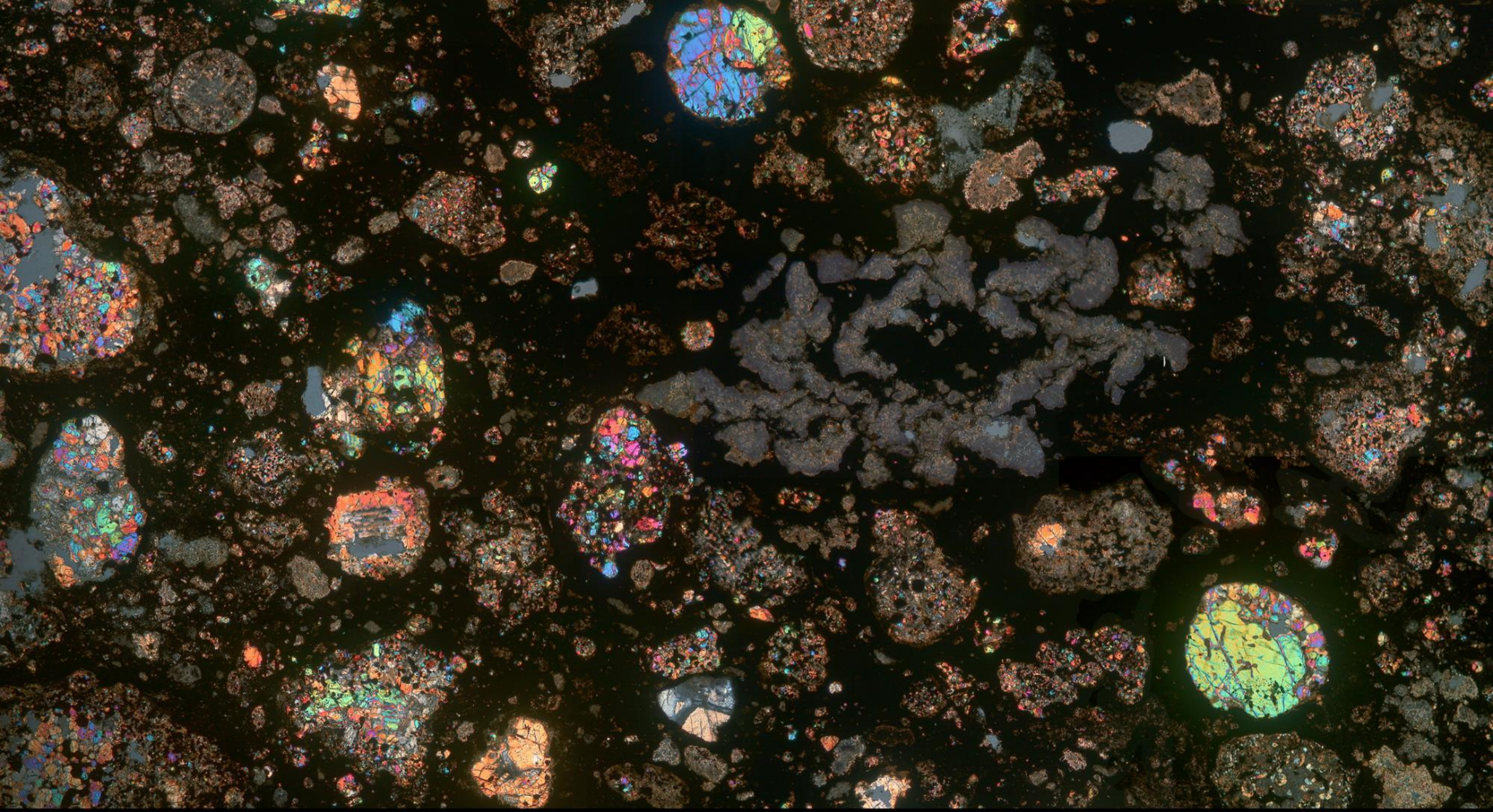
CV3 Allende / Shiny Things

The Ophiuchus star-forming region

Elias 2-27 as seen by ALMA

Kuiper Belt orbit

L. Pérez / B. Saxton / MPIfR / NRAO / AUI / NSF / ALMA / ESO / NAOJ / NASA / JPL Caltech / WISE Team



The Ophiuchus star-forming region

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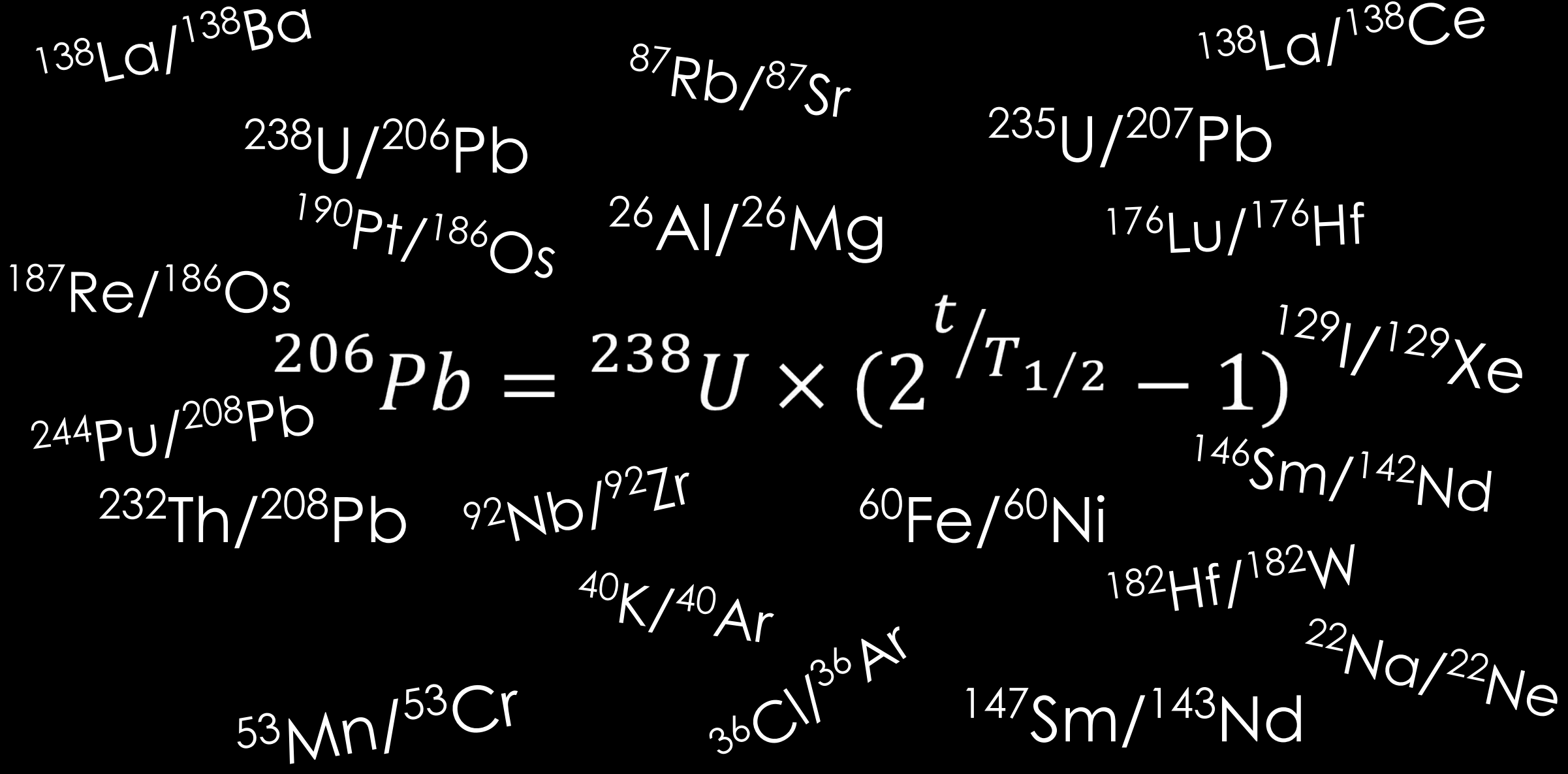
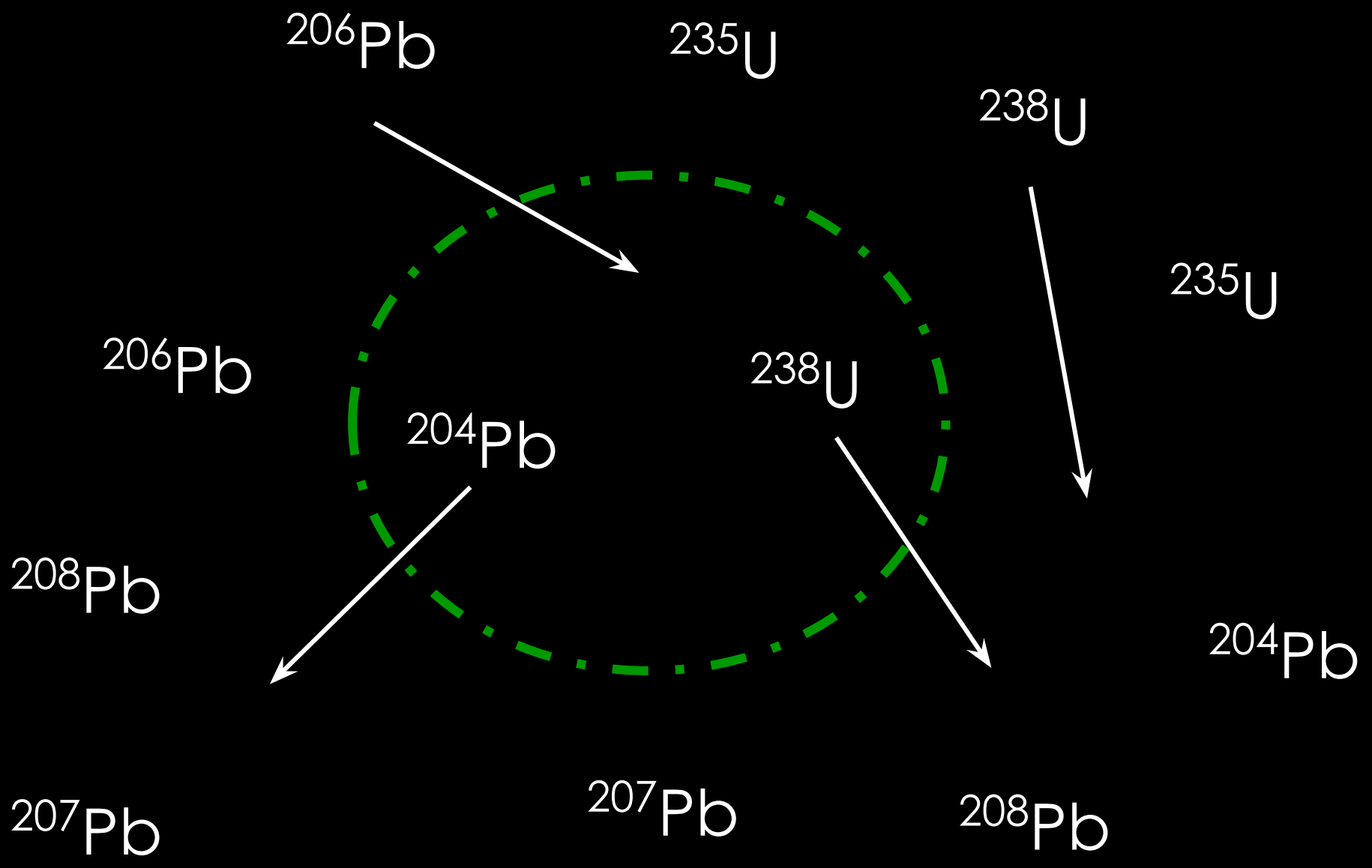
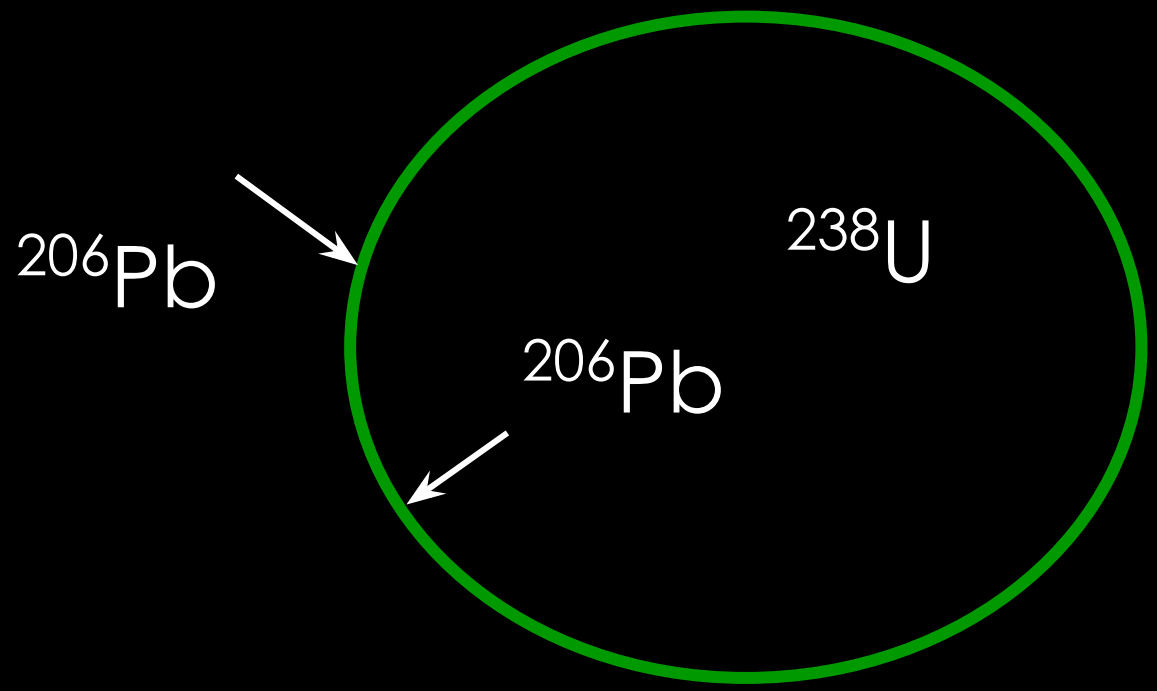
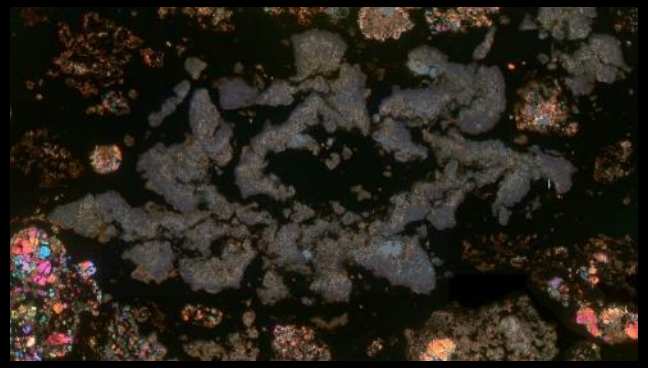
Zeptozephyr / Valve


$^{138}La/^{138}Ba$
$^{87}Rb/^{87}Sr$
$^{138}La/^{138}Ce$
$^{238}U/^{206}Pb$
$^{235}U/^{207}Pb$
$^{190}Pt/^{186}Os$
$^{26}Al/^{26}Mg$
$^{176}Lu/^{176}Hf$
$^{187}Re/^{186}Os$
$^{206}Pb = {}^{238}U \times (2^{t/T_{1/2}} - 1)$
$^{129}I/^{129}Xe$
$^{244}Pu/^{208}Pb$
$^{146}Sm/^{142}Nd$
$^{232}Th/^{208}Pb$
$^{92}Nb/^{92}Zr$
$^{60}Fe/^{60}Ni$
$^{182}Hf/^{182}W$
$^{40}K/^{40}Ar$
$^{22}Na/^{22}Ne$
$^{53}Mn/^{53}Cr$
$^{36}Cl/^{36}Ar$
$^{147}Sm/^{143}Nd$

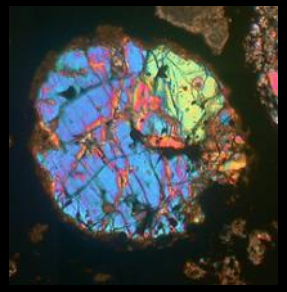

^{206}Pb
^{235}U
^{238}U
^{235}U
^{206}Pb
^{238}U
^{204}Pb
^{208}Pb
^{204}Pb
^{207}Pb
^{207}Pb
^{208}Pb

^{238}U





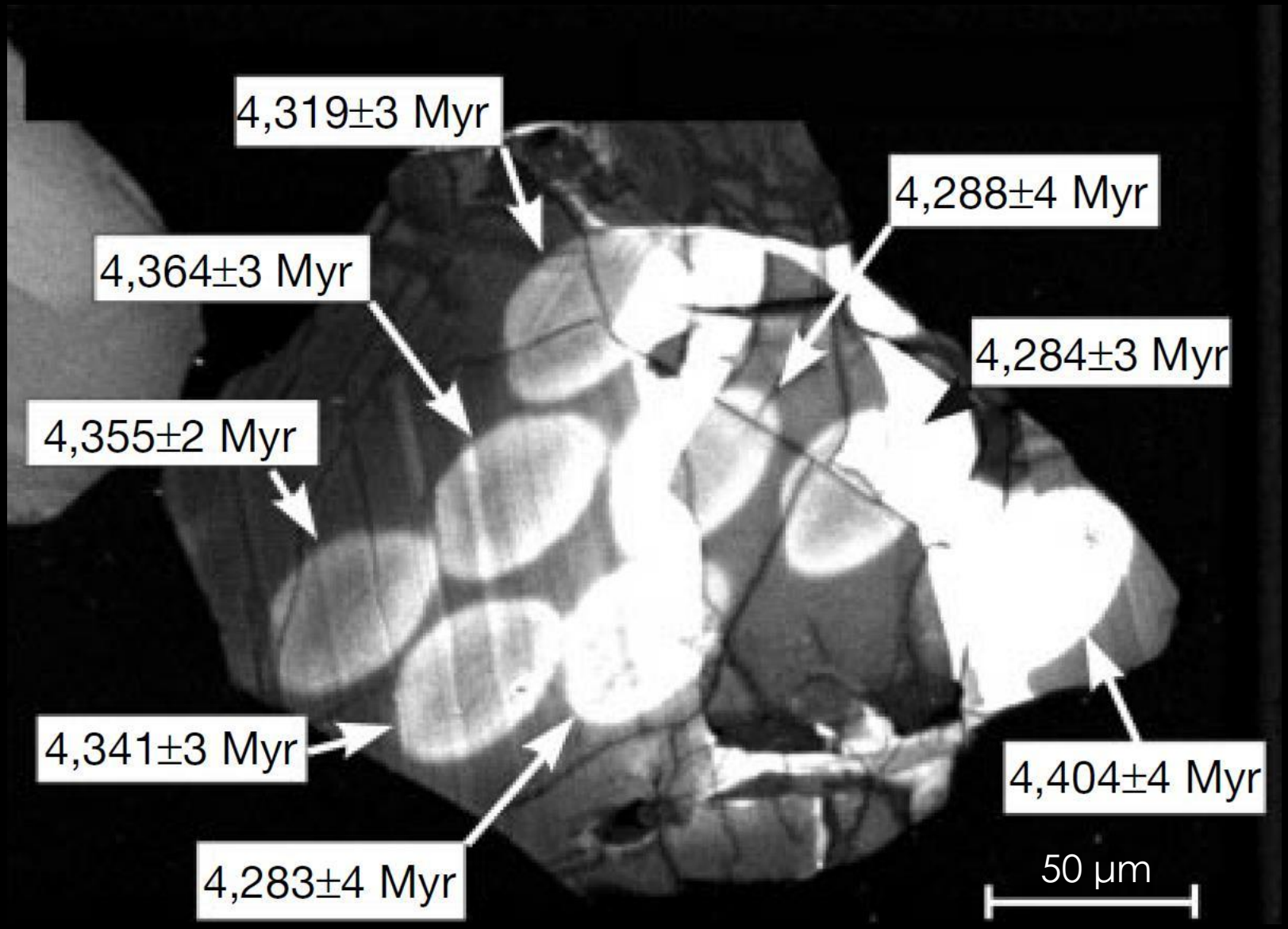
первые конденсаты –
тугоплавкие включения
4 568



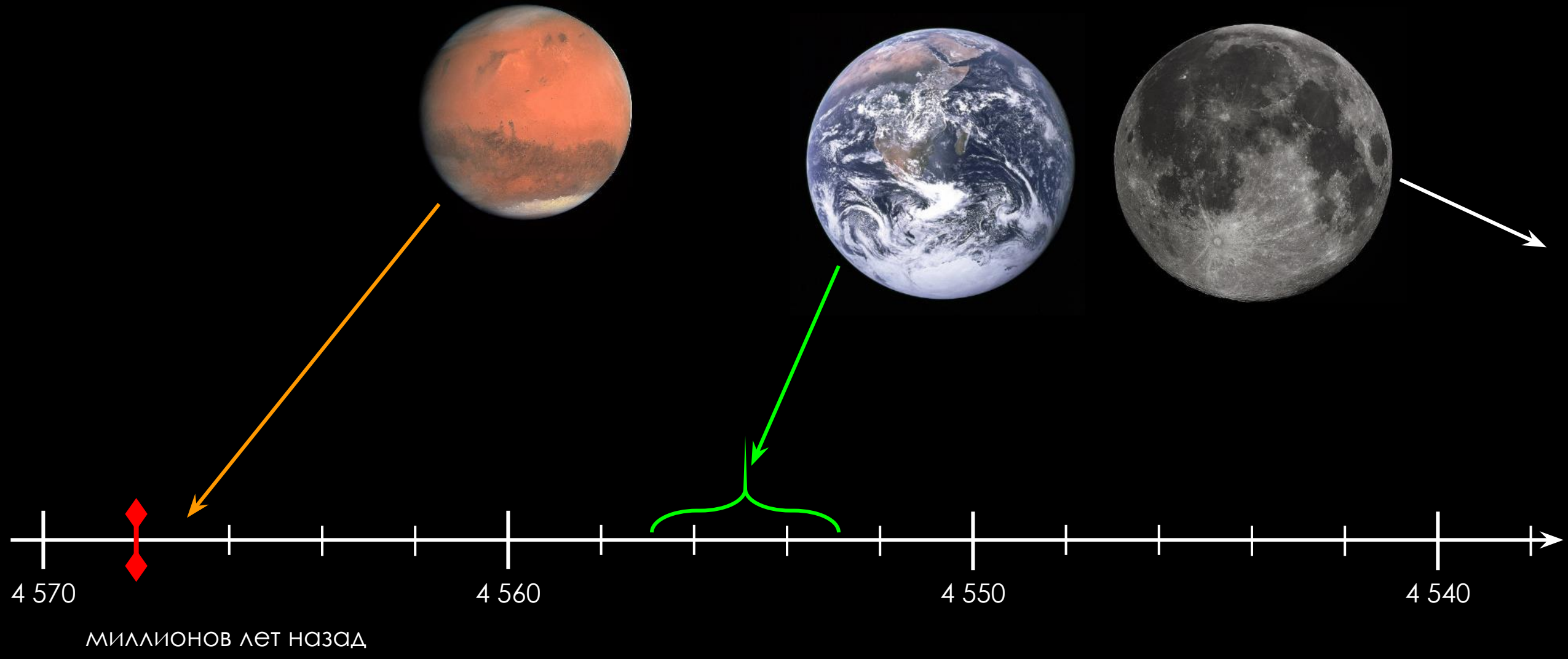
хондры

Веста – один из самых
древних астероидов
4 565

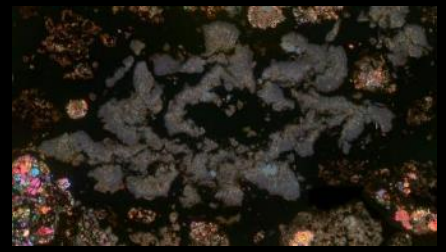
NASA / Dawn / Björn Jónsson

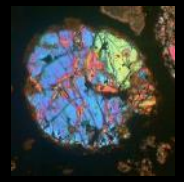


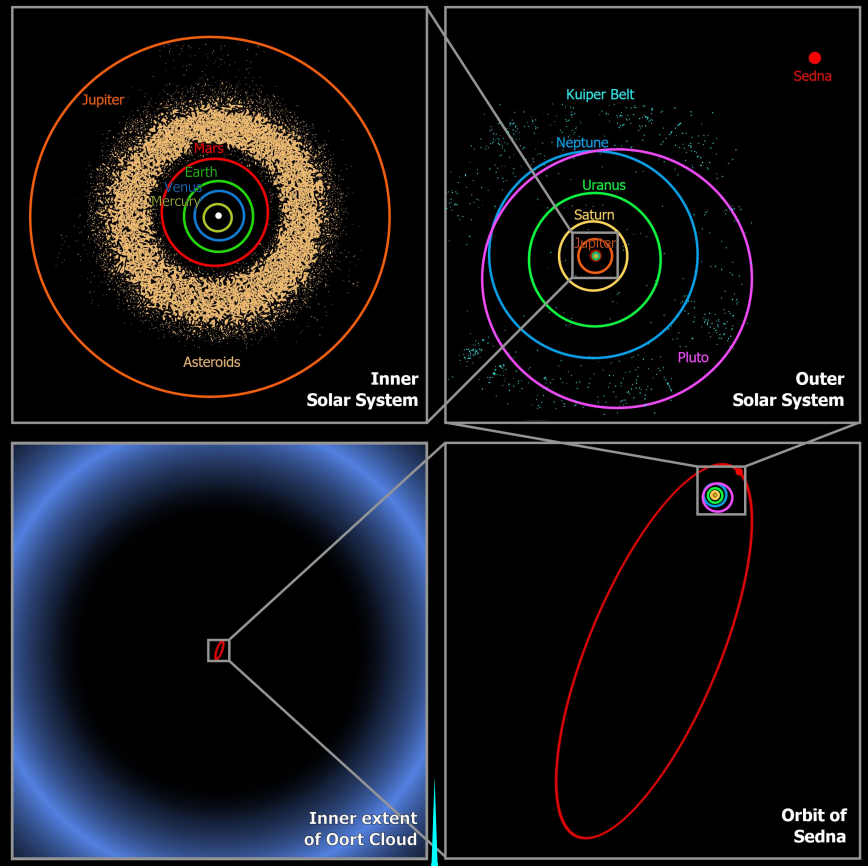
Wilde &al., Nature, 2001



NASA; Apollo 17; Gregory H. Revera







5 4 3 2 1 сейчас

миллиардов лет назад

Спасибо!

xkcd.com