Twitter Thread by M.P.



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We think of this planet, the sun, our solar system, all of this around us as a somewhat stable even static background against which we live.

But our star and solar system have a temporary impermanent existence just like we do. The sun is about half-way through its lifespan...

After about 4.5 billion years of life so far, our sun is living through a relatively stable part of its life in middle-age.

But in about 5 billion years it will run out of hydrogen. It will expand to become so large that it will envelope the Earth.

After enveloping Mercury, Venus, and perhaps even Earth our sun will burn as a Red Giant in its final phases of life.

Over millions of years, a blink of an eye relative to its lifespan, our sun will flash and shrink and grow and shrink again and change our entire solar system.

Cold planets far away from the sun might be warmed, and ice may become atmospheres or oceans on them.

As the sun ejects mass, creating a planetary nebula, the core will heat up and then cool.

Eventually our sun will be a white dwarf.

For trillions of years the white dwarf that used to be our warm, life-giving, sun will radiate away all of its remaining energy. Cooling, dying, crystallizing, until it is dark and lifeless.

A black dwarf, the corpse of our sun, will be all that remains.

From the perspective of the totality of time, the entire universe looking at itself, our sun flares into life like match being struck, blazes brightly for a minute, and shrivels to a black carbon remnant.

Imagine all the billions of stars flaring into life, burning, dying.

Imagine solar systems forming around billions of stars on fire. Spinning into existence, basking in the warmth, and then destroyed by explosions, frozen by neglect as the stars burn out, or sent into deep slow time under blueshift skies as their stars collapse into black holes.

The whole universe
shatters into a hundred pieces.
In the great death
there is no heaven, no earth.
Once body and mind have turned over,
there is only this to say:
past mind cannot be grasped,
present mind cannot be grasped,
future mind cannot be grasped.

— D■gen



Image: The Veil Nebula, 110 light-years across, about 2,100 light-years away. A mosaic of six Hubble pictures of a small area roughly two light-years across, a tiny fraction of the nebula's vast structure, all that remain of what was a star 20 times more massive than our sun.

The fast-moving blast wave from the ancient explosion is plowing into a wall of cool, denser interstellar gas, emitting light. The nebula lies on the edge of a large bubble of low-density gas, blown into space by the dying star before its self-detonation. (NASA/ESA/Hubble)