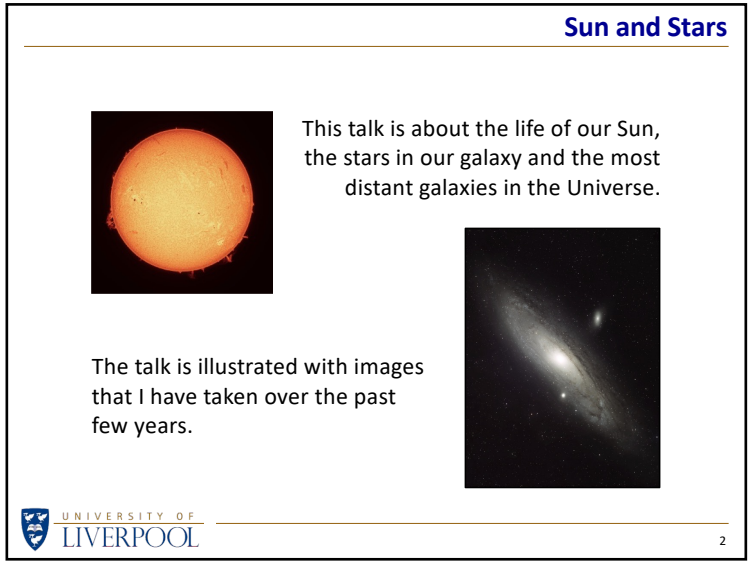

SUN
AND STARS
Dr Steve Barrett
SU3A 23 Nov 2026


Sun and Stars
This talk is about the life of our Sun, the stars in our galaxy and the most distant galaxies in the Universe.
The talk is illustrated with images that I have taken over the past few years.
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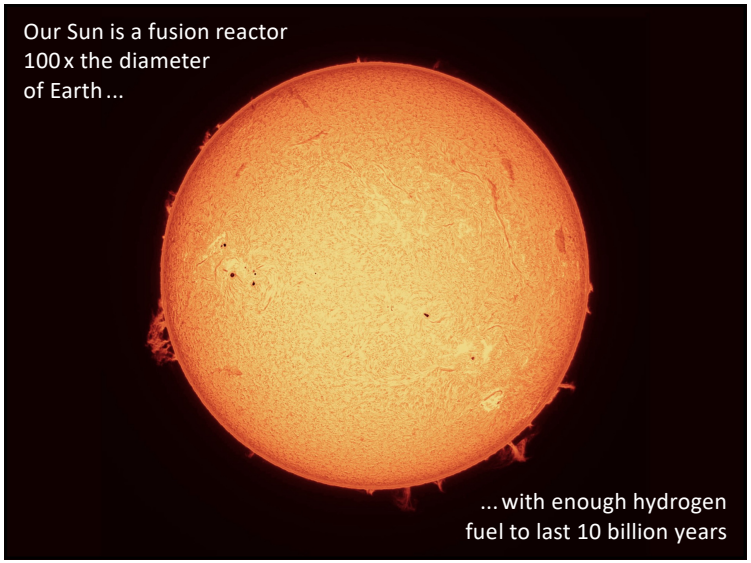
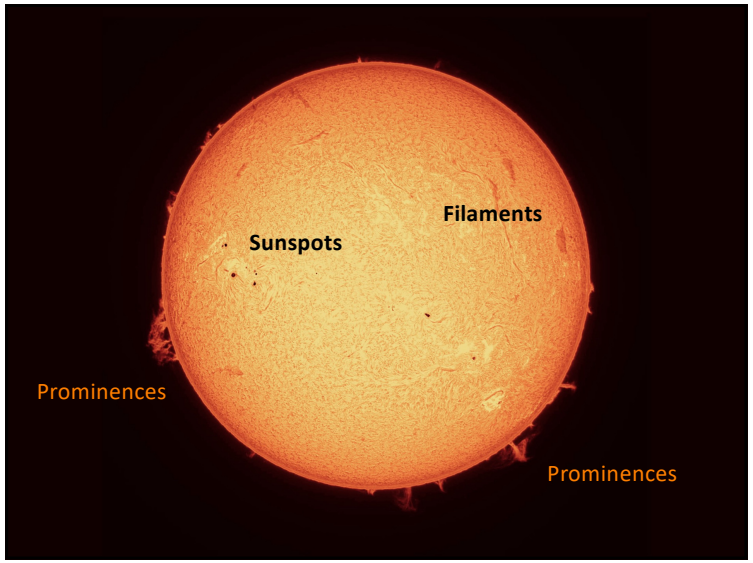
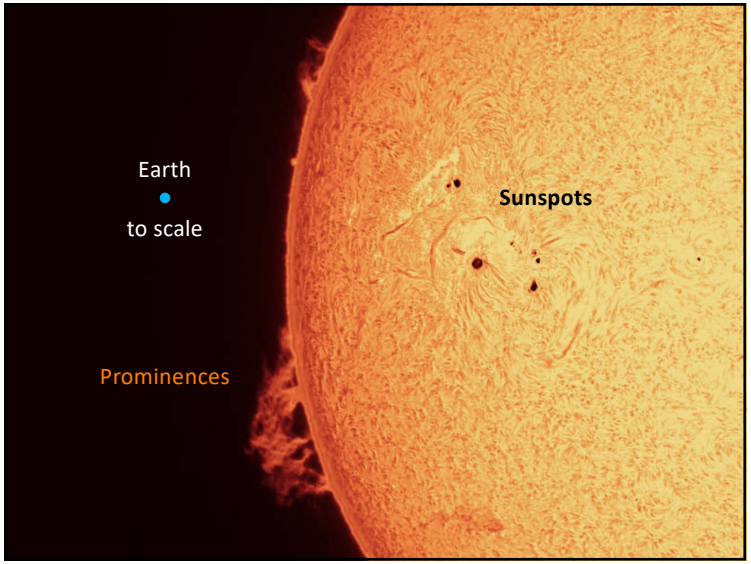
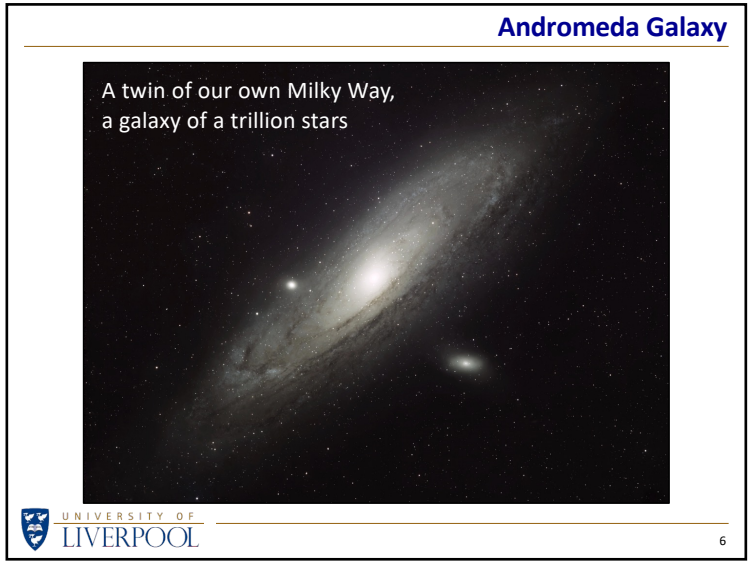

Our Sun is a fusion reactor 100x the diameter of Earth...
...with enough hydrogen fuel to last 10 billion years

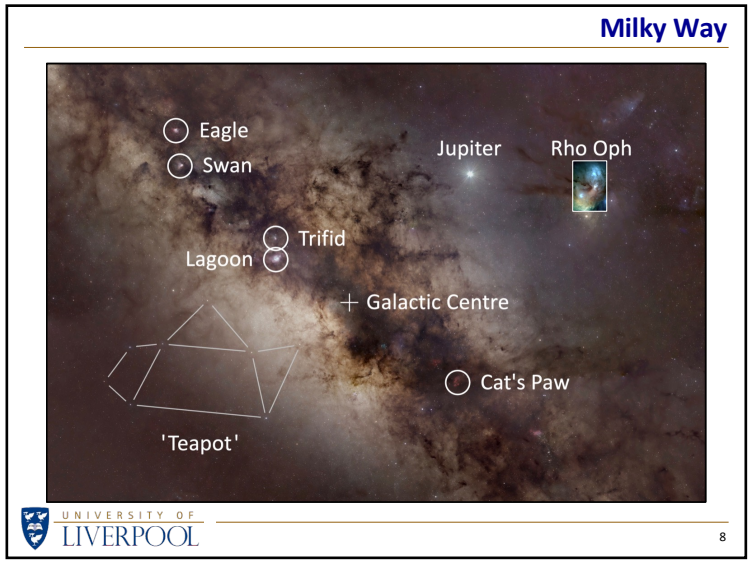

Filaments
Sunspots
Prominences
Prominences

Sun and Stars









Rho Ophiuchi Star Cloud



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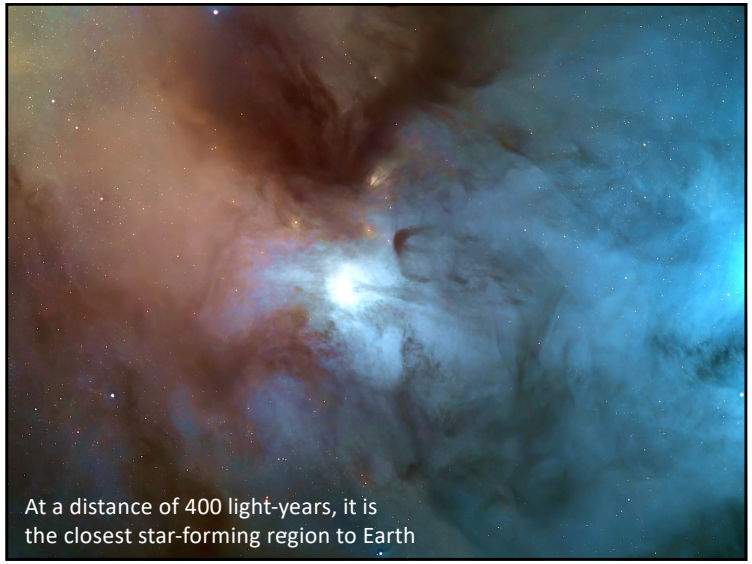
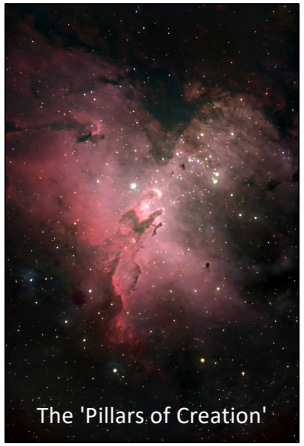


Eagle Nebula



Trifid Nebula



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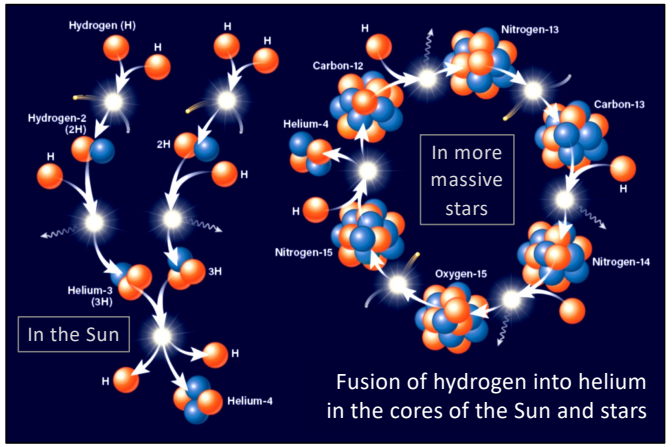
Fusion In Stars



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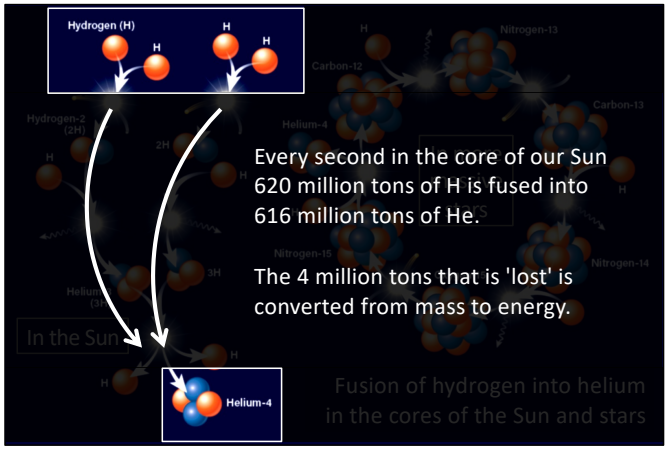
Fusion In Stars

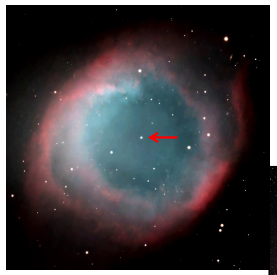


Every second in the core of our Sun 620 million tons of H is fused into 616 million tons of He.

The 4 million tons that is 'lost' is converted from mass to energy.

Fusion of hydrogen into helium in the cores of the Sun and stars

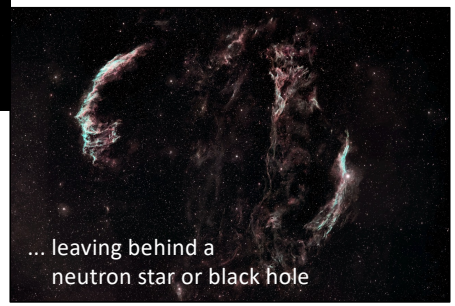
Helix Nebula



The Helix Nebula formed after a star like our Sun ran out of its hydrogen fuel and shrugged off its outer layers, leaving behind a white dwarf star

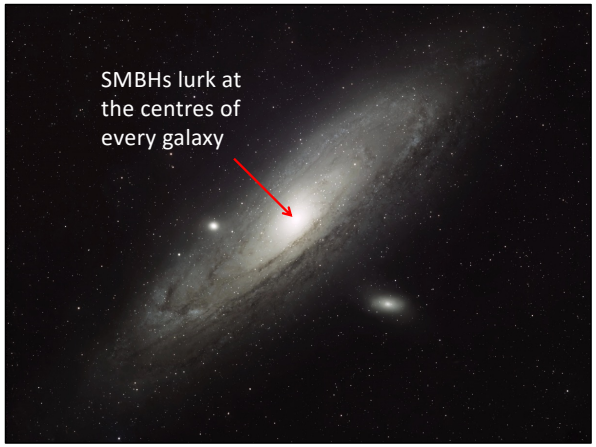
Veil Nebula

Massive stars might end their lives in a supernova explosion

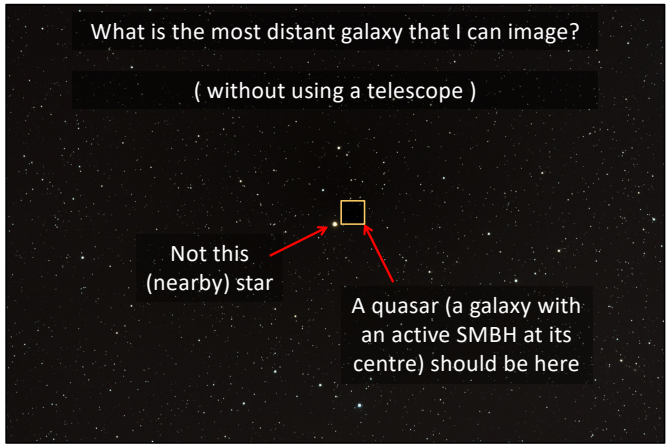


... leaving behind a neutron star or black hole

Supermassive Black Holes



Quasar



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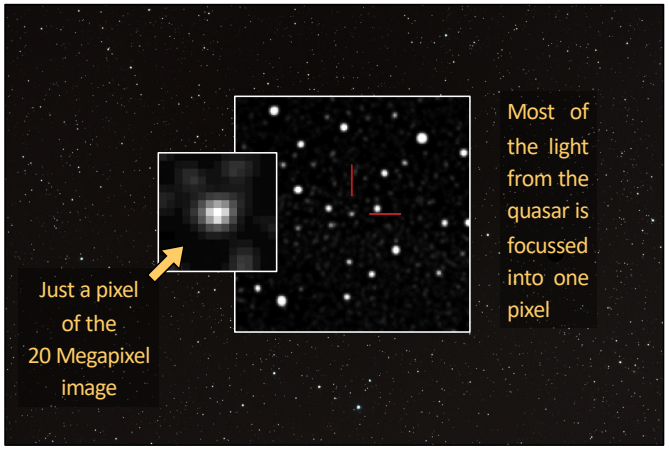

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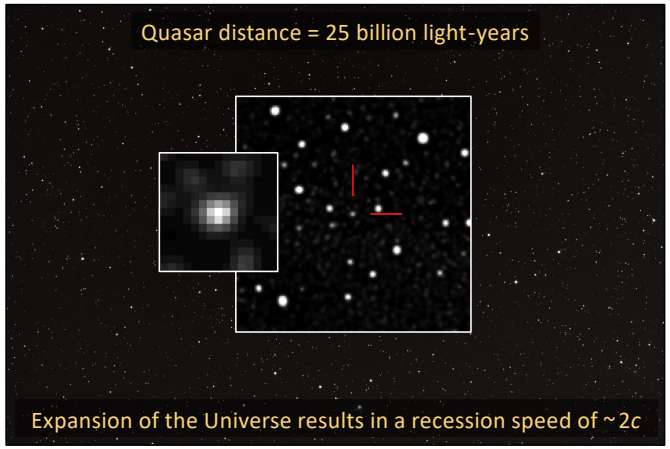
Quasar



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Epilogue

There's a lot of Universe out there for you to explore...

...and you can do a surprising amount from your back garden even if you don't have expensive equipment.

Why don't you give it a go?

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