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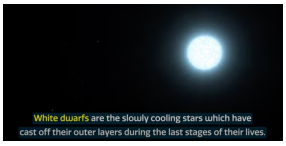
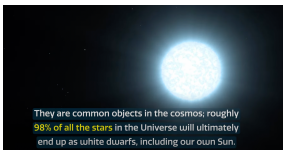
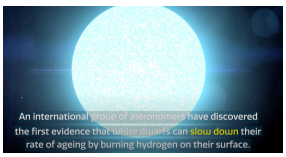
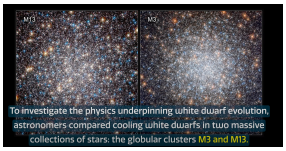
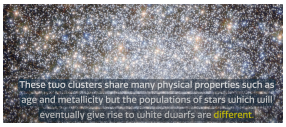
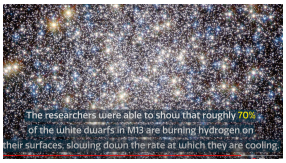
Space Sparks Episode 6: Hubble Discovers Hydrogen-Burning White Dwarfs Enjoying Slow Ageing	**Visual Notes**
00:00-0:10 Intro	
00:11-00:34 White dwarfs are the slowly cooling stars which have cast off their outer layers during the last stages of their lives. They are common objects in the cosmos; roughly 98% of all the stars in the Universe will ultimately end up as white dwarfs, including our own Sun.	 
00:35-00:45 Studying these cooling stages helps astronomers understand not only white dwarfs, but also their earlier stages as well.	
00:46-00:56 The prevalent view of white dwarfs as inert, slowly cooling stars has now been challenged by observations from the NASA/ESA Hubble Space Telescope.	
00:57-01:07 An international group of astronomers have discovered the first evidence that white dwarfs can slow down their rate of ageing by burning hydrogen on their surface.	

01:08-01:57 To investigate the physics underpinning white dwarf evolution, astronomers compared cooling white dwarfs in two massive collections of stars: the globular clusters M3 and M13. These two clusters share many physical properties such as age and metallicity but the populations of stars which will eventually give rise to white dwarfs are different. This makes M3 and M13 together a perfect natural laboratory in which to test how different populations of white dwarfs cool. The researchers were able to show that roughly 70% of the white dwarfs in M13 are burning hydrogen on their surfaces, slowing down the rate at which they are cooling.	   
01:58-02:10 This discovery could have consequences for how astronomers measure the ages of stars in the Milky Way.	

Total Time: 02:18