ESA/Hubble
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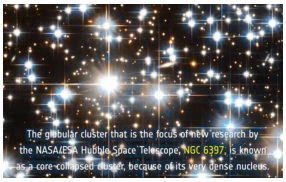
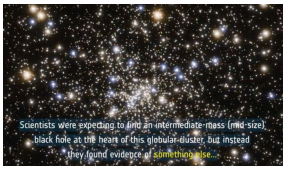
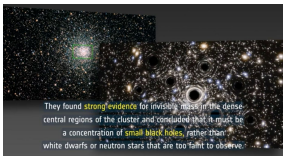
Space Sparks Episode 1	**Visual Notes**
Intro	
Globular clusters are extremely dense stellar systems, in which stars are packed closely together.	
The globular cluster that is the focus of new research by the NASA/ESA Hubble Space Telescope, NGC 6397, is known as a core-collapsed cluster, because of its very dense nucleus.	
Scientists were expecting to find an intermediate-mass (mid-size) black hole at the heart of this globular cluster, but instead they found evidence of something else...	
They found strong evidence for invisible mass in the dense central regions of the cluster and concluded that it must be a concentration of small black holes, rather than white dwarfs or neutron stars that are too faint to observe.	
The scientists predict that NGC 6397 could host more than 20 black holes.	
This is the first measurement of the extent of a collection of black holes in a core-collapsed globular cluster.	

The result was also possible thanks to collaboration between Hubble and ESA's Gaia space observatory, which precisely measures the positions, distances and motions of stars.	

Total Time: 01:40