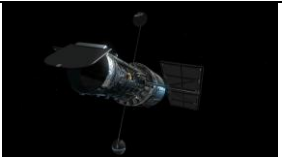


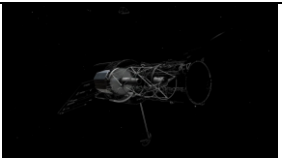


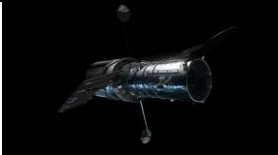








ESO, Karl-Schwarzschild-Str.2
D-85748 Garching bei München,
Germany
Telephone: +49 (0)89 3200 6855
Telefax: +49 (0)89 3200 6480
hubble@eso.org

www.spacetelescope.org

Hubblecast Episode 53: Hidden Treasures in Hubble's Archive		
<p>00:00 [Narrator] Over two decades in orbit, the Hubble Space Telescope has made a huge number of observations. Every week, we publish new ones on the Hubble website.</p> <p>But hidden in Hubble's huge data archives are some truly breathtaking images that have hardly ever been seen.</p> <p>We call them Hubble's Hidden Treasures — and we're looking for your help to bring them to light.</p>		
		
<p>00:49 [Dr J] Hello and welcome.</p> <p>Now, usually in the Hubblecast we look up into space. But in this episode we've got our feet firmly on the ground.</p> <p>That's because there's a lot going on down here on Earth, in order to support what Hubble does up there in space.</p> <p>One of the biggest parts of this is the Hubble Legacy Archive — a huge digital library of practically every observation Hubble has ever made.</p> <p>Now that's over a million observations. So it's not too surprising that it's pretty hard to stay aware of the full range of what's in there.</p>		
<p>01:51 [Narrator] Hubble's instruments are a bit like giant digital cameras, with the telescope as their lens.</p> <p>Just like digital cameras, Hubble produces a lot of data – about 3 to 400 gigabytes a month.</p> <p>Obviously it wouldn't be practical to send astronauts up to collect it all.</p>		

<p>Instead, Hubble bristles with communications antennas, which beam the observations down to Earth.</p> <p>But let's step back a little.</p> <p>What <i>is</i> all this information that is being beamed down? <i>And who looks at the data?</i></p>		
<p>02:21 [Narrator] Getting observing time with Hubble is a privilege. It takes a lot of hard work and insight to prepare a successful set of observations.</p> <p>To protect their investment, and give them the first stab at working on their scientific idea, astronomers get a year to study their data before it's released to the public. And that's when many of the scientific discoveries you hear about get made.</p>		
<p>02:46 [Dr J] But that first year is only the beginning for Hubble data. Once it's made public, absolutely anyone can have a look at it and see what Hubble has been up to.</p> <p>Often, astronomers will make big discoveries using these second-hand data, sometimes many years after they were observed.</p> <p>For example, recent work on the growth of black holes and the properties of dark matter has come from archival data.</p> <p>In addition, comparing old data from the archive with new images from Hubble also lets scientists see how astronomical objects evolve over time.</p> <p>A great example are Hubble's movies of stellar jets, which we looked at in Hubblecast 49.</p>		
<p>03:31 [Narrator] The Hubble Legacy Archive is priceless for astronomers — but it is not only for them.</p> <p>Hubble doesn't just belong to scientists, it belongs to us all.</p>		
<p>03:45 [Narrator] Every week, we pick some of the nicest observations from the Hubble Legacy Archive, process them to bring out their hidden detail and share our choice as the Hubble Picture of the Week.</p> <p>There are also amateur astronomers and hobbyists who go through the archive themselves and look for pretty datasets to process.</p>		
<p>04:06 [Dr J] Now the archive is pretty big, and there are still lots of undiscovered datasets in there to be found.</p> <p>So if you want to lend us a hand, and find some of Hubble's Hidden Treasures, check out our website, which explains how to do it.</p> <p>It's pretty simple once you get the hang of it, and we've prepared some tutorials to get you started.</p>		

<p>04:27 [Narrator] To say thanks for helping us out, we're running a competition between now and the end of May.</p> <p>Find a great dataset and you'll be in with a chance to win an iPod Touch. And if you want to have a shot at processing the data like the professionals do, you could win an iPad.</p> <p>Check out the website for full details.</p>		
<p>04:46 [Dr J] Finding Hidden Treasures in the archive is a lot of fun, and you can uncover some gems that have hardly ever been seen before.</p> <p>Now I'll be back in a future episode to showcase the best pictures you find.</p> <p>But for now, this is Dr J signing off for the Hubblecast. Once again, nature has surprised us beyond our wildest imagination.</p>		

06:02
[ENDS]