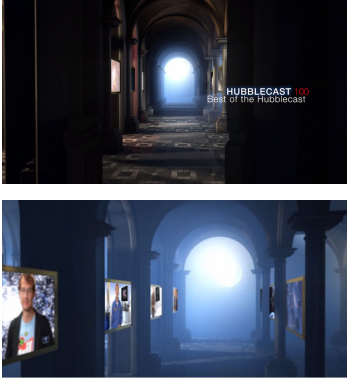





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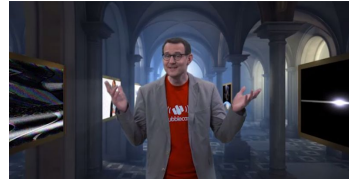
Hubblecast Episode 100: Best of the Hubblecast	Visual notes
<p>00:01 [Dr J] 1. As Hubble reaches the grand old age of 27 the Hubblecast team have a lot to celebrate.</p> <p>For the past 10 years we've been capturing the science, culture, successes and trials of Hubble and we reflect on the highs — and lows — of the Hubblecast in this, our 100th episode!</p>	
<p>00:24 [Dr J] 2. Hello and welcome to the Hubblecast. Now we all know that Hubble is an amazing telescope, amazing enough to fill 100 episodes, that's about 10 hours worth of the Hubblecast. So what's changed over time? What are some of the best, funniest, or just weirdest episodes that we've made?</p> <p>That's exactly the question, that we, the Hubblecast team, have been asking ourselves, and so, let's take a look at our, Hubblecast highlights.</p>	

00:53

[Dr J]

3. Remember these? In episodes 50, 78 and 79, we answered your questions about Hubble and astronomy, which were fantastic! And here's my favourite bit.

[Audio from clip: If the Universe is expanding what is the centre point of the expansion?]



01:11

[Dr J]

4. The answer is, everywhere! Now the key is to realise, that the term Big Bang does not describe an event in space, but rather, one in time. The Big Bang was not an explosion it was an event, that happened everywhere at the same time, and the Universe was infinitely large right from the start, and so there is no single point from which the Universe is expanding, and also, there is no centre. It is simply impossible to define a centre in an infinitely large space.



01:43

[Dr J]

5. We had good fun with these episodes, and what they showed us, was that you were really interested in the challenging physics concepts that lie at the core of Hubble science, and we've gone to some lengths to try and explain these.










01:58








[Dr J]

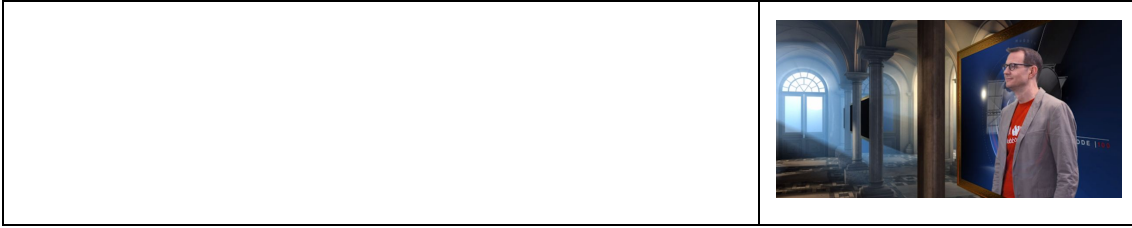
6. We've used diagrams...

[Audio from clip: ...it bends the space around it and acts like a gigantic magnifying glass.]



<p>02:08</p> <p>7. [Audio from clip: ... what our 3D Universe expands into...]</p> <p>[Dr J] We've used balloons....</p> <p>[Audio from clip: ...is just as meaningless.]</p>	
<p>02:18</p> <p>8. [Audio from clip: Let's say goodbye to Hubble's pretty pictures...]</p> <p>[Dr J] And we even used... unicorns?</p> <p>[Audio from clip: Rainbows?]</p>	 
<p>02:28</p> <p>[Dr J] 9. And, for the sake of the Hubblecast, we even disregard our own personal safety, like the time I got blown up by a supernova... several times.</p>	
<p>02:42</p> <p>[Dr J] 10. Even after 10 years, we're not bored, because Hubble gives us so much to work with. We've explored its history, celebrated its birthdays, and followed its last servicing mission.</p> <p>But most of all, we've been delving into Hubble's most amazing discoveries, and finding new ways to share them with you.</p> <p>We covered supernovae, black holes, distant galaxies, exoplanets, ah, and quasars.</p>	  

	
<p>03:21</p> <p>11. [Audio from clip: Now when matter falls into a black hole it forms this big swirling disc which heats up and creates a lot of powerful radiation. The more matter falls into the black hole, the more powerful the radiation. Now these active accreting black holes are called quasars and they're amongst the most luminous and most powerful objects in the Universe.]</p>	
<p>03:44</p> <p>[Dr J]</p> <p>12. What we're trying to do at the Hubblecast, is to bring the scientific insights that Hubble has afforded to us, their implications, but also their fun and beauty, to everyone. And there's plenty of beauty to be found, just look at this.</p> <p>Now at the Hubblecast, we've been very lucky to have an incredibly talented team over the years. A team of writers, directors, producers, cameramen, illustrators, and visual artists. It is only with their help, that we all get to enjoy Hubble's data in all of it's glory and travel to places like the Pillars of Creation.</p>	  
<p>04:30</p> <p>[Dr J]</p> <p>13. They also illustrate for us, those things that have to be left to the imagination. All to the next generation of telescopes.</p> <p>Now those were our favourite Hubblecast moments, but what are yours? Tell us on Facebook or Twitter.</p> <p>This is Dr J, signing off for the Hubblecast.</p>	 



Ends 05:10