



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 67: Of galaxies and penguins — Arp 142	Visual notes
O0:00 [Narrator-Dr J]  1. Galaxies spend most of their lives drifting through the cosmic expanse in isolation. But, every so often, two unfortunate galaxies stray just a little too close to one another — as was the case with the duo Arp 142.  Showcased in a stunning new image from Hubble, these two galaxies uncannily resemble a penguin safeguarding its egg. The galaxies are in middle of a violent merger, with clouds of gas and dust colliding at breakneck speeds and triggering bursts of star formation.	
00:39 Intro	UBI
O1:06 [Narrator-Dr J] 2. This episode of the Hubblecast will tell you the story of a penguin and its egg. Well, to be more accurate, it's a pair of galaxies known as Arp 142.  This new Hubble image of the interacting pair shows the blue, twisted form of galaxy NGC 2936, and its partner NGC 2937. These two galaxies are in the middle of a merger event, violently ripping material from one another.  But with a bit of imagination, this turns into a different story. NGC 2936 becomes a penguin hunched over at the bottom of this picture, sheltering the white egg below.	Mac town
O1:57 [Narrator-Dr J] 3. However, this picture of parental love is deceptive. The egg, NGC 2937, is actually ripping its larger companion apart.  The eye of the "penguin" is all that remains of NGC 2936, once a spiral galaxy like our Milky Way. Its disrupted arms streak down through this image, shaping the cosmic bird's "body" as a cascade of blue and red.	

O2:27 [Narrator-Dr J]  4. The gravitational interactions between the galaxies have forged the distinctive shape of Arp 142.  Galaxy mergers are very violent. When two galaxies collide, they can be rendered unrecognisable, as vast clouds of gas and dust race towards each other, crashing forcefully and sparking bursts of star formation.	
O3:00 [Narrator-Dr J] 5. Hubble has been able to view and capture some of these mergers, providing us with beautiful astronomical images and an insight into these turbulent events.  For example, here is a pair of spiral galaxies known as Arp 240. Appearing to hold hands as they dance through the sky, these galaxies are interacting, creating a wispy bridge of material stretching out between the two.  Another stunning merger can be seen in Arp 272, a sparkling galaxy duo linked by their swirling arms.	
O3:40 [Narrator-Dr J] 6. And here is Arp 243, a pinwheeling pair of galaxies that have formed beautiful tidal tails. The nuclei of the two galaxies have now all but merged, forming one larger core at the heart of this messy jumble.  One of the most breathtaking galactic mergers can be found in the Antennae Galaxies — a pair of sparkling galaxies that have interacted to form their own striking and distinctive shape.	
04:15 [Narrator-Dr J] 7. Galactic mergers can produce stunning scenes. Although sometimes serene on the outside, as with our penguin and egg, when we look closer we actually find chaos.	

Ends 04:30