Video Podcast **Episode 2:** **Galaxy bars and supermassive black holes** **FOR IMMEDIATE RELEASE 15:00 (CET)/9:00 AM EST 3 April, 2007**		
00:00 **[Visual starts]** **00:02** **[Narrator]** Hubble has delivered an unrivalled snapshot of the nearby barred spiral galaxy NGC 1672. This remarkable image provides a high-definition view of the galaxy's large bar, its fields of star-forming clouds and its dark bands of interstellar dust. **00:16** **00:26** **[Woman]** This is the Hubblecast! News and Images from the NASA/ESA Hubble Space Telescope. Travelling through time and space with our host Doctor J a.k.a. Dr. Joe Liske. **00:42** **[Dr. J]** Welcome to the Hubblecast! When we look around us with powerful telescopes almost all the light that comes to us from the Universe originates in stars – billions of them – gathered in galaxies. Galaxies are essentially enormous collections of gas, stars and dust and come in a variety of shapes and sizes. Today I'd like to talk about one particular galaxy NGC 1672		Best zoom/pan on ACS NGC 1672 Image explosion Hubblecast Logo + web site Presented by ESA and NASA TITLE Slide: Episode 2: Galaxy bars and supermassive black holes Virtual studio. Dr J on camera Nametag Image appears

located in the Dorado constellation - also know as Swordfish. Here is a spectacular new image of this galaxy taken with the NASA/ESA Hubble Space Telescope		ZOOM
As you can see straight away it is a spiral galaxy. In fact it is a prototypical example of a so-called barred spiral galaxy and it is viewed nearly faced on.		
01:47 **[Narrator]** Barred spirals differ from normal spiral galaxies, in that their arms do not twist all the way into the centre. Instead, they are attached to the two ends of a straight bar of stars.		Pan on bar
Four principal arms extend from the centre and give NGC 1672 a rather symmetric appearance. Eye-catching dust lanes extend away from the nucleus and follow the inner sides of the spiral arms.		Poetic pan following the arms
Hot, young blue stars are seen in vigorous star forming clusters in the galaxy's spiral arms. Delicate curtains of dust partially obscure the light of the stars behind and colour them red.		Zoom on clusters and dust lanes
02:30 **[Dr J]** NGC 1672 is in fact a sister galaxy to our own Milky Way. The Milky Way galaxy also has a huge bar of stars which was recently seen in great detail by NASA's Spitzer Space Telescope's infrared eyes. Also both galaxies have their spiral arms loosely wrapped.		SPITZER'S MILKY WAY BAR
Astronomers believe that barred spirals have a unique mechanism that channels gas from the disk inward towards the nucleus. This gas is also thought to be a good meal for a putative supermassive black hole anchored at the centre. Moreover, bars appear to be short-lived. If so, astronomers question is: will non-barred galaxies develop a bar in the future, or have they hosted one that died out in the past?		2D schematic: arrows show gas fuelled along the bar into the centre
03:20 **[Narrator]** Behind the galaxy several more distant galaxies are seen. They are also coloured caramel by the dust in NGC 1672. Also seen in the image are a few bright, much closer, foreground stars from our own Milky Way.		Zoom on brown background galaxies and foreground stars
03:40 **[Dr J]** Astronomers are still puzzled about how bars actually originate? Perhaps they are the result of some involuntary instability in the disk that harbours the spiral arms, or maybe the aftermath of galactic collisions? The formation and evolution of bars is, however, still a matter of debate.		Virtual studio. Dr J on camera
This is Dr. J signing off for the Hubblecast.		
Once again nature has surprised us beyond our wildest imagination ...		

04:00 **[Outro]** Hubblecast is produced by ESA/Hubble at the European Southern Observatory in Germany. The Hubble mission is a project of international cooperation between NASA and the European Space Agency. **04:18 END**		

Shotlist

TIMECODE	DESCRIPTION
	A-ROLL
00:00:00	
00:00:12	
00:00:21	
00:00:39	
00:00:50	
00:01:13	
00:01:29	
00:01:50	
00:01:58	
00:02:01	
00:02:15	
00:02:28	
00:02:46	
00:02:53	
00:03:11	**END A-ROLL**
	B-ROLL
00:03:16	A-roll animations and footage unedited
00:09:56	**END B-ROLL**