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NEWS RELEASE
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EMBARGOED UNTIL: 15:00 (CET) THURSDAY 31 MAY, 2001

Heic0106 - Hubble Unveils A Galaxy in Living Colour

A-roll

1. Hubble above the Earth. Opens aperture door (hatch).
2. Hubble above Earth, Hubble slews (turns) and opens aperture door (hatch).
3. Hubble above Earth, Hubble slews (turns) and opens aperture door (hatch). Hubble observes the stars, region of sky zooms up. Zoom on region of sky. Zoom continues, ring galaxy NGC 1512 appears. The 'circumnuclear' star-burst ring in the centre (in full colour) appears.
4. The 7 individual observations of the star-burst ring colour-coded according to their wavelength (blue – ultraviolet, green/yellow - visible and red – infrared).

1. An extensive, multi-wavelength study with the NASA/ESA Hubble Space Telescope is showing the many faces of the galaxy NGC 1512.

2. Hubble's unique vantage point high above the atmosphere allows scientists to see objects over a broad range of wavelengths from the ultraviolet to the infrared.

3. Taking advantage of Hubble's sharp vision, as well as its unique wavelength coverage, a team of Israeli and American astronomers has performed one of the broadest and most detailed studies ever of star-forming regions in a galaxy.

The galaxy, NGC 1512, is a so-called barred spiral galaxy in the southern constellation of Horologium. Located 30 million light years away - relatively 'nearby' as galaxies go - it is bright enough to be seen with amateur telescopes. The galaxy spans 70,000 light years, nearly as much as our own Milky Way galaxy.

The galaxy's core is unique for its stunning 2,400 light year wide circle of infant star clusters, called a 'circumnuclear' starburst ring. Starbursts are episodes of vigorous formation of new stars and are found in a variety of galaxy environments.

4. The new results, which will be published in the June issue of the *Astronomical Journal*, show that in NGC 1512 newly born star clusters exist in both dusty and clean environments. The clean clusters are readily seen in ultraviolet and visible light, appearing as bright, blue clumps in the image. However the dusty clusters are revealed only by the glow of the gas clouds in which they are hidden, as detected in red and infrared wavelengths by the Hubble cameras. This glow can be seen as red light permeating the dark, dusty lanes in the ring.

"The dust obscuration of clusters appears to be an on-off phenomenon" says Dan Maoz, who headed the collaboration. *"The clusters are either completely hidden, enshrouded in their birth clouds, or almost completely exposed."* The scientists believe that stellar winds and powerful radiation from the bright, newly born stars have cleared away the original natal dust cloud in a fast and efficient 'cleansing' process.

Studies like this one emphasise the need to observe at many different wavelengths to get the full picture of the processes taking place.

B-roll

All A-roll animations + additional:

5. The 7 individual colour-coded observations. Annotations showing wavelengths.
6. Hubble above the Earth (different view)
7. Hubble above the Earth (different view)
8. Hubble above the Earth (different view)

TIMECODE		TITLE	DURATION
In	Out		
01:00:00:00	01:01:00:00	CB + 1KHz	00:01:00:00
01:01:00:00	01:02:00:00	BB	00:01:00:00
01:02:00:00	01:04:18:17	A-roll	00:02:18:17
01:04:21:04	01:08:32:14	B-roll	00:04:11:10
		Animation 1	00:00:11:01
		Animation 2	00:00:09:02
		Animation 3	00:01:01:23
		Animation 4	00:00:24:01
		Animation 5	00:00:24:00
		Animation 6	00:00:08:00
		Animation 7	00:00:08:01
		Animation 8	00:00:10:01

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