

similar DNA depending on which nucleotides are counted and which are excluded. Modern humans can have a single recent ancestor <10,000 or 100,000–200,000 years ago depending on whether a relationship with chimpanzees is assumed and which types of mutations are considered.

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Clear picture—blurry story?

Tas Walker

Last year NASA published a picture from the Hubble Space Telescope (HST) of a famous celestial duo in the constellation Draco—the spiral galaxy NGC 4319 and the quasar Markarian 205 (Mrk 205).¹ NASA's picture (Figure 1), published through the Space Telescope Science Institute, reveals incredible detail in the celestial pair. But the accompanying press seems blurred.

The article asserts that 'appearances can be deceiving'. This is because, although the two objects appear to be neighbours, in reality, according to NASA, they 'don't even live in the same city'. Blandly the article declares that the duo is separated by time and space. According to NASA, NGC 4319 is 80 million light-years from Earth and Mrk 205 is more than 14 times farther out, residing 1 billion light-years away. NASA explains that the apparent close alignment of Mrk 205 and NGC 4319 as 'simply a matter of chance'.

The justification? Astronomers used two methods to determine the distances to these objects. First, they measured how their light has been stretched in space due to the universe's expansion. Then they measured how much the ultraviolet light from Mrk 205 dimmed as it passed through the interstellar gas of NGC 4319.¹ Presto!

Thirty years of controversy ignored

Most people would not know the history behind this celestial 'odd couple'. Those who do know are dumfounded by the attitude in this article. This celestial duo has been a source of contention for 30 years and is still controversial.² But

you would never learn that from the NASA press release.

Halton Arp observed and reported some unusual features about this pair in 1971. They appear very close in the sky but have vastly different redshifts (0.00453 for the galaxy and 0.07085 for the quasar). If redshift is a reliable indicator of stellar distance, then obviously their closeness must be just a fluke. Yet Arp reported a visible connection between the two (Figure 2).³

This couple has prompted an extensive exchange in the astronomical literature. For example, in 1983 Jack Sulentic published a definitive paper showing the reality of the connection.⁴ Further papers were published with Arp in 1987.^{5,6} The duo is discussed in both of Arp's books.^{7,8} They were observed by an amateur in the 1990s using the HST, and the connection confirmed, but these observations were not published.⁹

After all this debate we now get this STScI press release (repeated in *Sky and Telescope*,¹⁰ and *Astronomy*¹¹ magazines), which does not mention any of the previous 30 years of serious observation, scientific debate, or controversy!

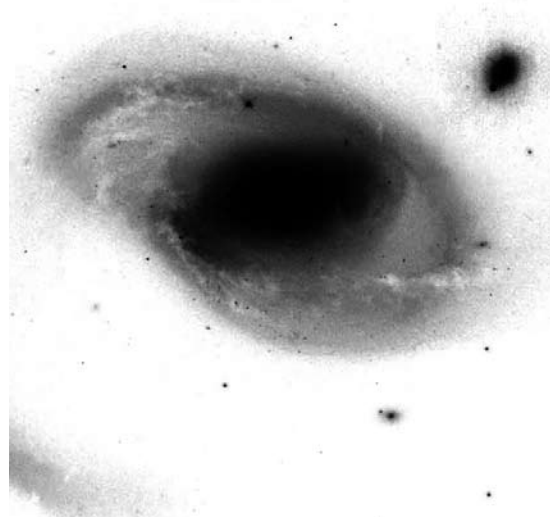


Photo composite by NASA

Figure 1. The spiral galaxy NGC 4319 (centre) and quasar Markarian 205 (upper right). This reversed NASA image represents 1.8 arcminutes across and is a composite of two shots, one taken in 1997 and another in 2002. Altogether 1.4 hours of HST observations were used to create the image. Note the bridge is faintly visible.



Figure 2. An isophote of the galaxy and the quasar (below) from the 200 inch Palomar telescope (north is up, east is left). The luminous bridge connecting the two objects is clearly visible, indicating they not only appear to be neighbours, but are neighbours. This photo appears in Arp, Ref. 7.

Interpretations driven by cosmology?

The NASA commentary on the space image refers to dark and unusually misshapen dust lanes in the galaxy's inner region and claims they are evidence of a disturbance. Of course they can't attribute this disturbance to the quasar which appears alongside the galaxy, in the image as large as life. That's because, driven by their ideological framework, they have already placed the quasar a billion light years away. So, the disturbance must be due to some unseen cause, perhaps another galaxy not visible in the photograph. These interpretations seem to be motivated less by the observations of the billion-dollar HST, and more by a prior cosmological commitment. It is hard to imagine that this is the best way for science to proceed.

It seems that some people would like to erase part of the history of astronomy. Is this because the NGC-4319 observations are so problematical for current cosmological thinking? The discussions in scientific journals over 30 years that have seriously questioned the methods of measuring distance are

ignored. Is this omission to protect the current cosmological view from the need to compete with any contrary opinion?

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Extrasolar planets suggest our solar system is unique and young

Rod Bernitt

More extrasolar planets discovered

The claims that more planets have been discovered in orbit around nearby stars continue to make the news,^{1,2} with over 100 now documented.³ A recent report in *Sky & Telescope* discloses

'The new discoveries, like most of the previously known exoplanets, generally follow eccentric (elongated) orbits and are closer to their stars than the giant planets in our solar system are to the Sun.'²

Much excitement concerns the star 55 Cancri. Apparently, it has a Jupiter-like planet orbiting further out—at about 5.9 AU with a mass about 4.05 M_{Jupiter}. (AU, stands for astronomical unit, the unit of length for solar-system-scale measurement, and equals the average distance of the Earth from the Sun. The mass unit, M_{Jupiter}, is based on the mass of the planet Jupiter, about 318 times the mass of the Earth.) Because this exoplanet with 55 Cancri exists, so the thinking goes, other exoplanets must exist much farther out from their host stars. If so, our solar system would not be unique.

Evolutionists hope that many stars will be discovered with habitable Earth-like planets and gas-giant planets orbiting far from their host stars—similar to our solar system configuration. It's interesting that this latest speculation has arisen from extrapolating a single observation with both mass and measured orbital eccentricity ($e = 0.16$) much greater than Jupiter's ($e = 0.05$). The reports also reveal that 55 Cancri apparently has two other Jovian-mass planets orbiting much closer (< 0.3 AU). Obviously the planetary system for 55 Cancri is not particularly