

# Thaxted Astronomical Society

## News

## Features

## NF0058

30 Alien Races Could Be  
Living In Our Galaxy

<https://www.dailymail.co.uk/sciencetech/article-8421449/More-30-intelligent-alien-races-living-galaxy.html>

## More than 30 intelligent alien races could be living in our galaxy at an average distance of 17,000 light years away

Daily Mail 15<sup>th</sup> June 2020 >

- **Astronomers at University of Nottingham claimed there could be 36 civilisations**
- **But they also cautioned that if these are short lived - Earth may be alone**
- **Intelligent civilisations were defined as those sending transmissions into space**

Dozens of intelligent alien races could be living alongside us in the Milky Way, a study has claimed.

The question of whether there are other life forms within our Universe has long preoccupied scientists.

Now researchers at the University of Nottingham have taken a new approach to estimating the number of possible extraterrestrial civilisations, using the assumption that intelligent life develops on other planets in a similar way as it does on Earth.

They calculate that our galaxy could harbour at least 36 intelligent alien races capable of sending radio signals into space.

But they say the average distance to such civilisations is likely to be 17,000 light-years, making detection and communication 'very difficult' with our present technology.

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The team developed a new model to estimate the number of intelligent alien races in our galaxy, which they call the Astrobiological Copernican limit.

The model assumes that it takes around five billion years for intelligent life to form on other planets, as on Earth, and that these planets orbit a star with a high metal content just like the Sun.

This differs from traditional techniques, which rely on making guesses of values relating to life, where opinion varies substantially, according to the researchers.

'Our new study simplifies these assumptions using new data, giving us a solid estimate of the number of civilisations in our galaxy,' first author Dr Tom Westby explained.

Christopher Conselice, Professor of Astrophysics at the University of Nottingham, who led the study, said there should be at least 'a few dozen' active civilisations in our galaxy.

'The idea is looking at evolution, but on a cosmic scale,' he said.

The research shows that the number of civilisations we may be able to detect depends on how long they have been actively sending out signals of their existence into space, such as radio transmissions from satellites or television.

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If other technological civilisations have been around for as long as ours, which is currently 100 years, then there will be about 36 ongoing intelligent technical civilisations throughout our Galaxy.

Professor Conselice added that the research also offers important clues about human civilisation's own 'future and fate'.

'Our new research suggests that searches for extraterrestrial intelligent civilisations not only reveals the existence of how life forms, but also gives us clues for how long our civilisation will last,' he said.

'If we find that intelligent life is common then this would reveal that our civilisation could exist for much longer than a few hundred years.

'Alternatively, if we find that there are no active civilisations in our galaxy it is a bad sign for our own long-term existence.'

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How have scientists previously estimated the likelihood of alien civilisations?

### Drake Equation

Written in 1961 by Frank Drake, this attempts to estimate the number of living and communicative alien civilisations in the Milky Way galaxy.

It takes into account factors including rate of star creation, number of these with planets, and fraction of planets that develop life.

It was designed not to provide an exact number but rather stimulate debate on how many extraterrestrial civilisations there are.

### Statistical Drake Equation

This model, developed in 2010 by Italian astronomer Claudio Maccone, is considered mathematically more complex and robust.

It used values for each factor in the Drake equation accepted by many astronomers to predict there are 4,590 alien civilisations.

### Fermi Paradox

The paradox asks why scientists are predicting so many extraterrestrial civilisations, yet humans are yet to find evidence for any others.