

# Waiting for ET to call earth back

By TIM RADFORD

**T**HOMAS JEFFERSON — to name but one US president — was convinced that they were out there. And last week the Vatican seemed prepared to concede that good extraterrestrials could go to Heaven, just like good earthlings.

From Copernicus onwards, the scientific community has suspected that life could exist elsewhere.

The Copernican principle says there is nothing special about us, or where we are in space and time. If life can start up on one dull little planet orbiting a so-so star on the edge of a nondescript galaxy, then it can happen anywhere.

The problem is that — whatever the UFO communi-

whatever the UFO community claims — alien civilisations are extraordinarily difficult and expensive to detect, and so far nobody has managed it.

Several US or international SETI (search for extraterrestrial intelligence) programs have been abandoned in the past two decades: yet another one (called BETA — billion-channel extraterrestrial assay) was launched on Monday by Harvard astronomers.

The sky is being watched or listened to at every possible wavelength: mapped for gamma radiation, x-rays, the infrared, the ultraviolet, the visible, the microwave and radio frequencies, by telescopes on earth and in space.

The watchers are young, alert and eager for fame: they are the people who have discovered black holes, pulsars, comets, asteroids, quasars, gravitational lensing, superclusters, and even the embers of the Big Bang.

They have detected helium on the sun, organic compounds in meteorites, vast clouds of microscopic diamonds between the stars and cosmic quantities of alcohol drifting in space.

But they have not found any extraterrestrial life, or spaceships either.

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month, tentatively identified two stars which might be orbited by planets. But that is all.

They are working on the principle that one star in 200 might have an earth-type planet orbiting it: on the assumption that most stars are a few billion years older than the sun.

So, just in this galaxy alone, there could be a billion planets containing civilisations vastly older and more advanced than ours. (There are at least a billion other galaxies all with a billion planets suitable for life.)

So where is everybody?

The optimists say that ET is out there, but there is just no way that anyone can think of getting in touch and having a meaningful conversation.

Visiting is probably out of the question.

To cross a distance of 10 or 100 light years in a lifetime would require a staggering expense of fuel to accelerate to speeds near the velocity of light.

It would then require the same quantity of fuel to slow down, and then start up again and stop again for the return journey — at the end

return journey — at the end of which the cosmonaut would be caught up in Einsteinian paradox.

He or she would have aged 30 or 50 or 100 years and everybody back home would have been dead for centuries.

That is why ET has not popped round for a cup of tea. That is why mostly humans listen on radio wavelengths, and rather hope ET is listening for us too.

With the advent of the television age, a huge expanding bubble of information, led by *I Love Lucy*, is blooming outwards in space at the speed of light, past Alpha Centauri, heading towards the Pegasus constellation.

With luck, ET will tune in, watch the show, get the message and get back to us.

But that will take another 40 years. And, having seen some programs, he might not bother.

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— The Guardian

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