s22

From: s22
Sent: Saturday, 26 June 2021 5:45 PM
To: s22 (CorpAffairs, North Ryde)
Cc: s22
Subject: Re: Query re US UAP/UFO report [SEC=OFFICIAL]

OK, many thanks s22

Cheers,
s22

On 26 Jun 2021, at 5:41 PM, s22 (CorpAffairs, North Ryde) s22 @csiro.au> wrote:

Many thanks s22 I've noted your preferred email address.
I'm not aware of any updates re Parkes BLC1; if people are interested to know more on this I'll be directing them to s22 at UC Berkeley for the Breakthrough Listen science team.
Best wishes
s22

Communication Manager, Space, Astronomy and Scientific Computing
Corporate Affairs | CSIRO
s22 @csiro.au | s22

From: s22
Sent: Saturday, 26 June 2021 5:17 PM
To: s22 (CorpAffairs, North Ryde) s22 @csiro.au>
Cc: s22 @industry.gov.au>; s22 @industry.gov.au>; s22 (CorpAffairs, Marsfield) s22 @csiro.au>
Subject: Re: Query re US UAP/UFO report [SEC=OFFICIAL]
Hi s22
Many thanks - yes, s22 mentioned this was coming. Much appreciated.
All noted, and I'm happy for you to put my contact details into the brief. This email address s22 is the most convenient one since it goes to my phone.
My only question was whether there has been any further analysis of the Parkes BLC1 signal, but I guess I'd have heard something if there was!
I haven't had any media approaches today - they're all too busy with lockdown…
Thanks again and all the best,
s22

On 26 Jun 2021, at 4:56 PM, s22 (CorpAffairs, North Ryde) s22 @csiro.au> wrote:
Hi s22 I'm not sure if s22 will have had a chance to send you this brief CSIRO prepared late yesterday, attached for your info.
Do let me know if you have any questions or receive interest from media wanting to speak with us directly about SETI.
Best wishes
s22

Communication Manager, Space, Astronomy and Scientific Computing
Corporate Affairs | CSIRO
s22 @csiro.au | s22

Response to release of US report on UAPs

June 2021

Background

Media outlets (eg Scientific American) have been speculating that the US Government is expected to release an unclassified report into unidentified aerial phenomena (UAPs, also known as UFOs) in late June 2021. Media reporting is also expected to be heightened around 2 July, which is known by some as 'World UFO Day'.

We're expecting to receive media enquiries into whether CSIRO has been researching UAPs and whether our researchers think alien life exists elsewhere in the Universe. Researchers from several Australian organisations have recently provided comment on the existence of aliens for The Conversation.

CSIRO doesn't investigate or research UAPs although our Space & Astronomy team does work on the search for extraterrestrial intelligence or SETI, which is an established area of radio astronomy research. This includes:

- Researchers using our own and other instruments to look for chemical signatures that might indicate life elsewhere in the Universe and/or the origins of life, or searching for signs of technologically advanced civilisation by looking for 'technosignatures' (incoming radio light) that may be associated electronic signals.
- Over the past five years our Parkes radio telescope has been contracted for use by the Breakthrough Prize Foundation for SETI research; the Breakthrough Listen science program (observations and interpretation of data) is led by the Berkeley SETI Research Center at the University of California, Berkeley's astronomy department.

In the past, our Parkes radio telescope has been used for SETI research:

- In 1966 US astronomer s22 studied a radio source (PKS 1934–63) that had a spectrum similar to the one predicted as best for interstellar communication. However, the source was later confirmed to be a galaxy.
- In 1992 a team from the University of Western Australia looked for narrow spectral-line emission from 176 targets, at a frequency of pi times the frequency of radiation from neutral hydrogen gas – a number that would be well known to an advanced extraterrestrial civilisation.
- In 1995 Parkes was used by the California-based SETI Institute for six months for its global Project Phoenix, the largest SETI search up until that time. It involved looking for signals from the neighbourhoods of 1000 nearby Sun-like stars ('nearby' being less than 200 light-

years away from us). Two hundred of the target stars can only be seen from the southern hemisphere, and these were the ones studied with Parkes.

- In 1998 scientists from the University of Western Sydney (now Western Sydney University) put a 'piggyback' experiment on Parkes, Southern SERENDIP (Search for Extraterrestrial Radio Emissions from Nearby Developed Intelligent Populations). Rather than needing telescope time of its own, SERENDIP combed through data from any source the telescope was observing.

The search for extraterrestrial intelligence forms part of the science case for the international Square Kilometre Array project, which will have telescopes located in Western Australia and South Africa.

CSIRO response to release of the report

CSIRO won't be commenting on the release of the report or UAPs, however, our spokespeople can comment on the SETI research we do; they need to be prepared to deflect any questions they receive about the report, UAPs or details of the science program with Breakthrough Listen.

Key messages

- At CSIRO we don't investigate or research unidentified aerial phenomena but we support the search for extraterrestrial intelligence, or SETI.
- SETI is an established area of radio astronomy research and our researchers use our own and other instruments to look for signs that might indicate life exists elsewhere in the Universe.
- Our Parkes radio telescope has been used by the Breakthrough Listen scientific program since 2016 to search for evidence of advanced life in the Universe, and by other similar programs in the past.
- Other than on Earth, no signs of intelligent life have so far been found in our Solar System or beyond.
- The likelihood of detecting life existing elsewhere in the Universe is extremely low, but certainly not zero. There are millions of stars with at least one planet in our own Galaxy, and billions of galaxies like our own, so there is a chance that life has evolved elsewhere.

Q&As

Is there any evidence of life elsewhere in our Solar System?

This is a question that international space agencies like NASA are seeking to answer. Missions to Mars, for instance, are focusing on environments where life might or may have existed, such as where water could be present now or have been in the past. To date the most compelling case for microbial life in our Solar System, outside of Earth, was the detection of Phosphine in the troposphere of Venus. This molecule has few explanations for its existence and new NASA missions are currently underway to investigate further.

What are the chances of successfully finding extra-terrestrial intelligence elsewhere in the Universe?

Since 1996, thousands of planets have been discovered beyond our Solar System circling other Sun-like stars and are now increasingly finding ones that are Earth-like. No signs of technology developed by civilisations other than our own have yet been found.

The likelihood of such a discovery is extremely low, but certainly not zero. There are millions of Sun-like stars in our Galaxy with at least one planet around them, and there are billions of galaxies like our own. There is a chance that life has or will evolve elsewhere in the Universe. This might be very simple lifeforms, like the first single-celled organisms that emerged on our planet. However, there is no way of predicting what life may look like or how easily it will be found.

The chances that complex life exists and that we receive signs of their existence are also extremely low, given the vast distances of space and the time it would take for signals to reach us here on Earth.

What might extra-terrestrial intelligent life will be like?

Evolution on Earth has produced an astounding array of organisms, so we might expect nature on an alien world to be similarly varied. Until we make a detection, we simply don't know, just like we didn't know anything about planets around other stars until we started to detect them.

Why do SETI research?

Searching for signs of life on other planets is driven by curiosity about our origins and place in the Universe. Are we alone? This fundamental question has propelled the curiosity of writers and scientists alike for hundreds of years.

Although we continue to explore our Solar System with satellites and robots, other beings are unlikely to be close enough to see signals on the Earth directly. As light travels faster than any spacecraft we can build, our best chance of communication is likely through the detection of light.

In searching the Universe we often find and learn things we didn’t expect. It was through these searches we discovered phenomena such as pulsars. Not only are we searching for the origins of life, or if life outside our Earth exists, we are also looking to fill gaps of our understanding about how the Universe works.

What is CSIRO’s role with Breakthrough Listen?

Breakthrough Listen is a scientific program to search for evidence of advanced life in the Universe. It is the largest program in the search for extraterrestrial intelligence ever undertaken.

Since October 2016, the Breakthrough Listen science program has been using 25 per cent of the science time available on our Parkes telescope, on a full cost recovery basis. The telescope is ideally located in the southern hemisphere to provide the best view of the Galactic plane.

How will you know if you've 'found' a sign of extra-terrestrial intelligence?

It's unlikely, but possible, that an obvious ‘smoking gun’ signal for extra-terrestrial intelligence will be found. A more likely scenario is that when a detection does occur it will be a signal which appears interesting at first and then doesn’t survive a series of increasingly stringent tests.

The properties that a good candidate signal would have are:

- it would be localised to a particular position on the sky where a known planet exists
- it would appear obviously artificial (eg narrow-band, showing an artificial pulse pattern, etc.)
- the signal would follow the proper motions of the star and planets, and
- it would be confirmed by independent teams using independent telescopes, ideally a reasonably long distance away from the telescope that made the discovery.

Spokespeople

CSIRO spokespeople

Commented [s22 : To be confirmed

- s22

Other spokespeople

- Media enquiries on the US report or UAPs can be directed to the Australian Government's Department of Defence media team (media@defence.gov.au).
- The Breakthrough Listen team has nominated a spokesperson to handle all questions relating to their research program and media enquiries should be directed to s22 at UC Berkeley s22 @astro.berkeley.edu).
- The Australian Government's 'Astronomer-at-Large', Professor s22 , is also available to speak with media about SETI research. s22 can be contacted via the DISER team (s22 @industry.gov.au)

Commented [s22]: Or alternative contact?

s22

From: s22
Sent: Wednesday, 9 November 2022 1:28 PM
To: s22
Cc: s22
Subject: Fwd: Outreach update
Attachments: Outreach Events 2022.pdf; ATT00001.htm

s22

Begin forwarded message:

From: s22
Subject: Outreach update
Date: 9 September 2022 at 4:52:21 PM AEST
To: s22 @industry.gov.au
Cc: s22 @industry.gov.au" s22 @industry.gov.au>, s22 @industry.gov.au

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EVENTS LIST 2022

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SpaceNuts Podcasts

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20. 18.5.22 (Ep.305, live) Congressional Hearing on UAPs, SgrA* image, plants in lunar soil, q's on dark matter vs gravity wells, career prospects in India, Population III stars

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24. 16.6.22 (live) JWST μmeteoroid, NASA on UAPs, Pluto occultation, quasar J1144, q's on pro astrocameras, deuterium/hydrogen ratio gradient in SS

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Radio interviews:

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24. 13.4.22 s22 (ABC NSW, ACT 2135) New Setigen algorithms for SETI, qs on quantum gravity, solar corona, UAPs

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39. 18.5.33 s22 (ABC NSW, ACT 2118) Congressional Hearing on UAPs, SgrA* image, plants in lunar soil, q's on DM, cosmological constant, why UAP not UFO, what else has 42, Starlink.

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44. 20.6.22 s22 (ABC Tas, 2108) music, ISS visibility, solstice, NASA and UAPs, q's on heavens-above, object over NZ.

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