

Sky Gazing for Aliens

Why in news?

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- US government recently declassified information about "Advanced Aerospace Threat Identification Program" (AATI).
- This has revived long subdued interests in Unidentified Flying Objects (UFO) and Alien life-forms.

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What is AATI program?

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- Humanity has always been fascinated by the possibility of extraterrestrial life through unverified word-of-mouth spotting of aliens.
- \bullet Most governments have largely been diligent in suppressing all evidences that could possibly fuel such speculative thoughts. \n

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- But the recent declassification of information about the AATI program and videos related to it has given good impetus for rejuvenated interest in aliens.
- AATI was an investigative program into UFOs, that was operational between 2007 and 2012, which had documented various suspected alien movement.
- Notably, a retired military officer who headed AATI has also come on record, stressing the need to continue investigating UFOs.

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How has conspiracy theories fared?

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- Unsubstantiated conspiracy theorists are currently apleantly and overwhelmingly support the existence of aliens and their visit to the Earth.
- UFOs got significant attention for the $1^{\rm st}$ time during the 2nd world war, when many military pilots reported sighting of saucer shaped objects.
- \bullet Subsequently, the number of such claims increased and came from all sorts of people even alien abduction theories were flouted. \n
- Notably, "Area 51" a remote part of the Nevada desert in the US, that houses an Air Force base, is a darling for conspiracy mongers due to its secretiveness.

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Most conspiracy theorists believe that the Air Base is actually a cover-up for
a facility to research into aliens that have either - died on Earth, been
captured alive, or have come as ambassadors.

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What were some government initiated programs?

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- During the Cold War era, air forces worldwide were on an eternally alert mode for the fare of possible missile attacks.
- The alertness provided for ample sighting of flying objects, most of which were eventually identified but some does remain as yet unidentified.
- While the western governents were more worried about Russians than about alien life, they nevertheless initiatited investigations on UFOs
- Notable, US Air Force initiated "Project Blue Book" which began UFO investigations in 1947 and reviewed over 12,000 sightings till 1969.
- \bullet While most sightings were concluded as stars, oddly-shaped clouds other terrestrial objects, about 701 of them remain unexplained. \n
- Similarly, Britain convened the "Flying Saucer Working Party", which also investigated UFOs and arrived at conclusions akin to the US project.

What are some significant scientific works in this field?

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• The famous astronomer Frank Drake through his "Drake Equation" guesses that there could be considerable number of alien civilisations.

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• In 1961, he listed the variables for determining the number of alien civilisations capable of using radio signals in the Milky Way Galaxy.

• Drake estimated the:

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rate of formation of suitable stars

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 $\circ\,$ number of such stars with planets in orbit

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• possible number of inhabitable planets

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• He postulated that life might exist or emerge in future in a small fraction of such inhabitable planets.

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• Further, he stressed that the possibility of emergence of intelligent civilisations capable of radio communication was an even smaller fraction of those plantes.

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 While his was essentially a guess work by extrapolation of data, advancements in telescopes has helped considerably to improvise space research.

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 Notably, a large number of exo-planets perceivably condusive for life has been spotted to be orbiting stars but we're still guessing about the other variables.

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What are the speculations?

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- Considering the vastness of the cosmos, alien life is indeed very much possible and it might even be humanoid and carbon-based.
- As thousands of exo-planets have already been identified by Kepler Space Observatory, Earth-like conditions may exist in some of these.
- Notably, comets have been found to possess amino acids, that are key for the evolution carbon based life forms.
- However, people like Nobel winning physist Enrico Fermi has been critical of such hypothesis, as there is no conclusive proof of their existence.
- \bullet While there is a possibility that aliens don't exist, there is also a possibility that they've not developed intelligence or that they're consciously lying low. \n
- Also, considering the interstellar distances, if a civilisation 1000 light years away had discovered radio waves at the time we did, then their first signal would reach us around 3000 AD.

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Source: Business Standard

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