

Minds Beyond Earth

*SETI (The Search for
Extraterrestrial
Intelligence), UFOs, and
the Heavenly Host*

FOR MILLENIA, HUMANS HAVE SEARCHED THE HEAVENS FOR SIGNS, HELP, AND HOPE

- The Psalmist wrote “The heavens declare the glory of God; the skies proclaim the work of his hands.”
- The heavenly realm is beautiful, regular and dependable, almost unchanging
 - The abode of the gods, or God
- Ancient people believed that signs in the sky foretold...
 - the change of seasons
 - the flooding of the Nile
 - tomorrow’s weather
 - impending catastrophes
 - the birth, death, and fortunes of royalty



IN 1959, COCCONI AND MORRISON* SPECULATED THAT ADVANCED CIVILIZATIONS ARE PATIENTLY WAITING TO HEAR FROM US

“It follows, then, that near some star rather like the Sun there are civilizations with scientific interests and with technical possibilities much greater than those now available to us. ... We shall assume that long ago they established a channel of communication that would one day become known to us, and that they look forward patiently to the answering signals from the Sun which would make known to them that a new society has entered the community of intelligence.”

Nature* **184 (#4690), 844-846 (1959)
F. Kaplan, *Nature* **461**, 345 (2009)

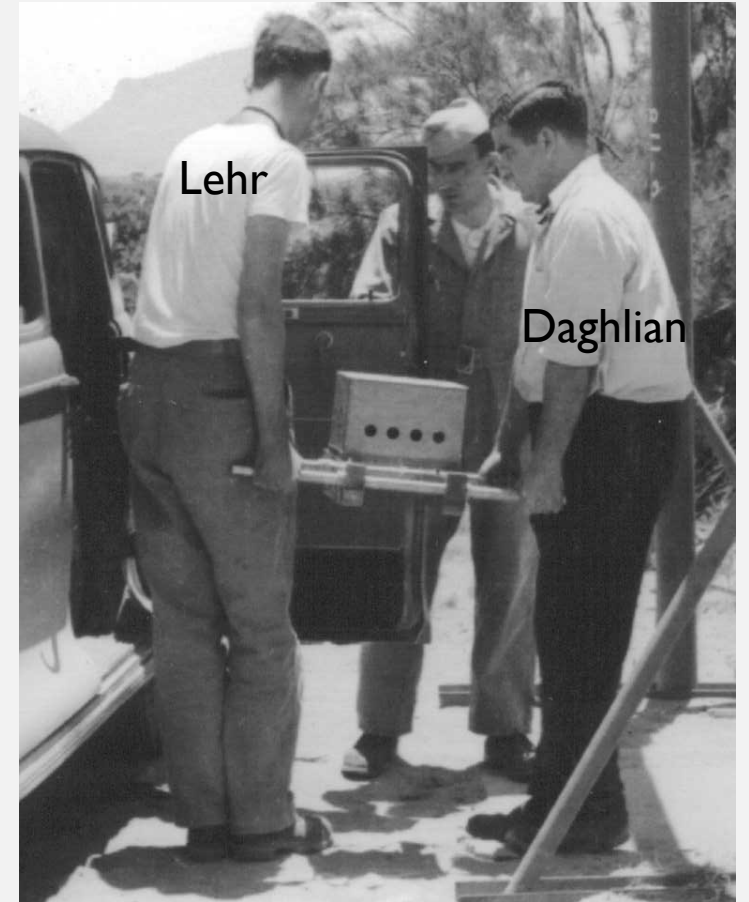


- They proposed a search
 - of stars similar to the Sun, within 15 light years' distance
 - at radio wavelengths near the 21-cm line of molecular hydrogen
 - looking for “a sequence of small prime numbers of pulses, or simple arithmetical sums”

MORRISON WAS LOOKING FOR HOPE

- Veteran of Manhattan Project
 - Student of Oppenheimer's
 - Transported core of "gadget" to Trinity test site in Dodge sedan
 - Helped load Hiroshima and Nagasaki bombs on Tinian
- He hoped that the discovery of an advanced civilization would show that scientific societies could survive the danger posed by nuclear weapons

"Knowledge that (they) had safely passed their nuclear crises would give us renewed hope for our own future. It would help dispel present nagging doubts about the survival value of intelligence." -- Arthur C Clarke, "When the Aliens Come"



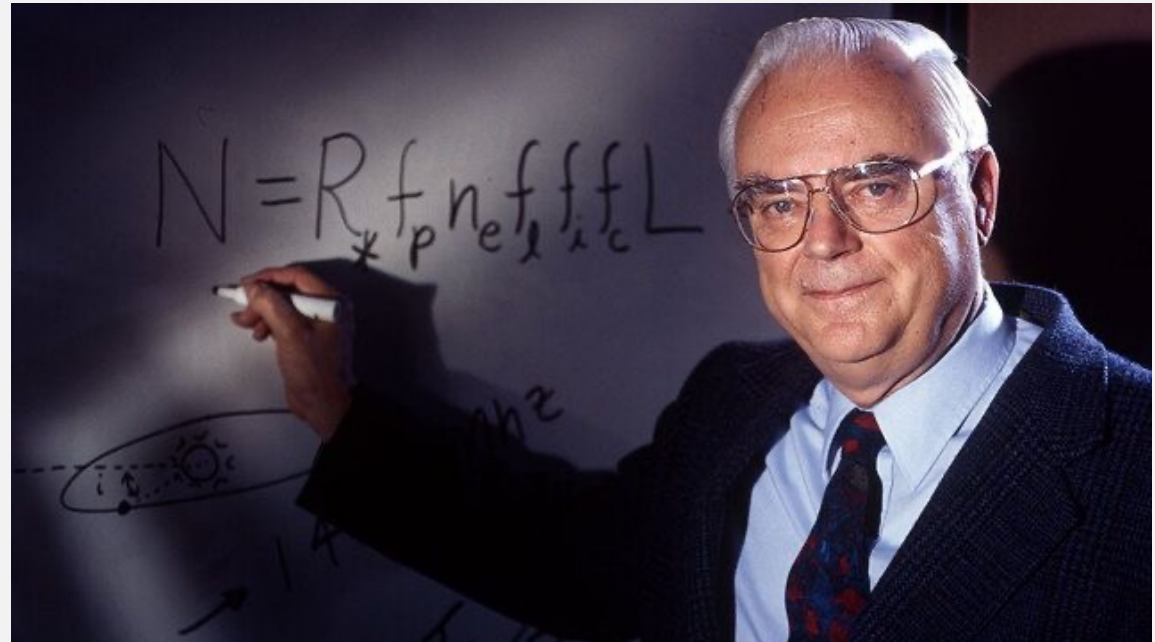
Richard Rhodes, *The Making of the Atomic Bomb* (Simon and Schuster, 1986)
Philip Morrison, *Cosmic Search I*, #1 (1979)
https://en.wikipedia.org/wiki/Philip_Morrison
https://en.wikipedia.org/wiki/Harry_Daghlian

Herbert Lehr (left) and Harry Daghlian, Jr. (right), loading the assembled Trinity tamper plug and initiator into a sedan for transport

FRANK DRAKE AND PROJECT OZMA: HUMANITY'S FIRST ATTEMPT TO DETECT INTERSTELLAR RADIO TRANSMISSIONS

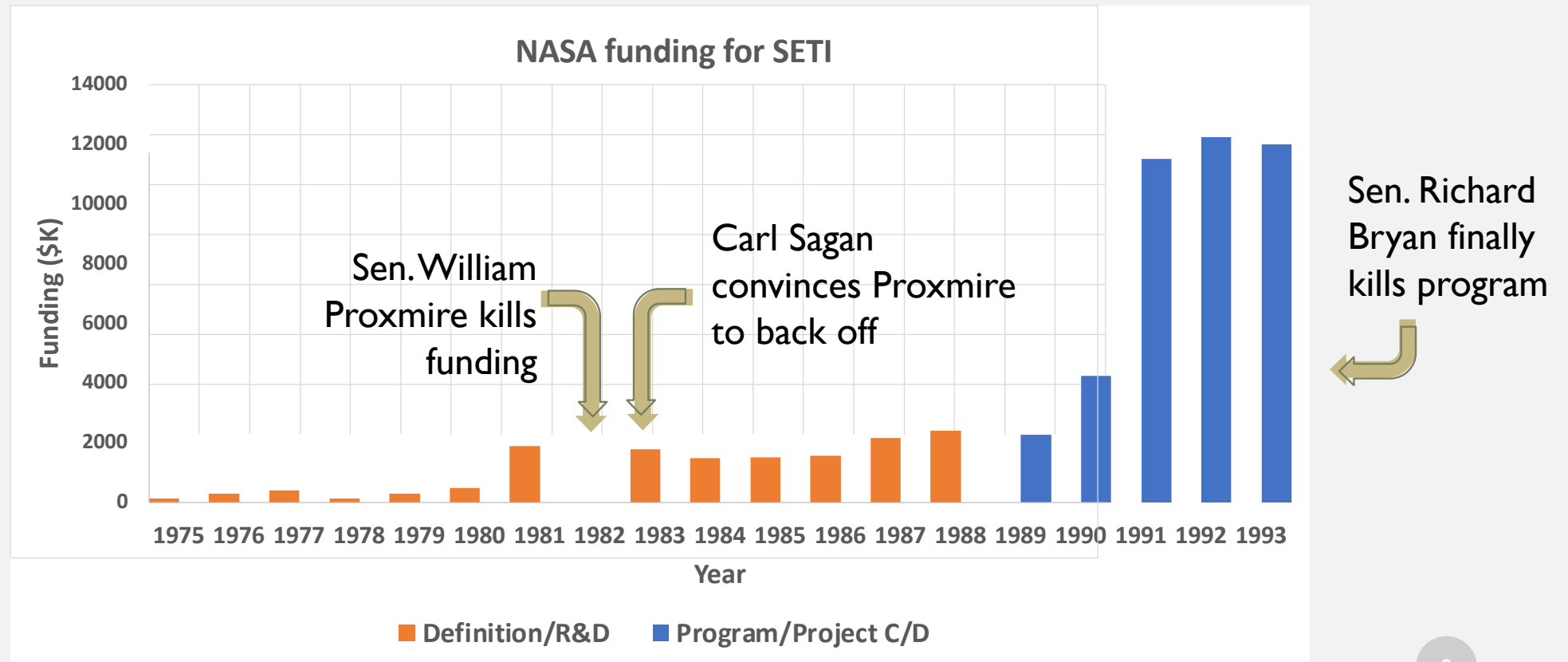
- 1960 Frank Drake at the National Radio Astronomy Observatory (NRAO) in Green Bank, West Virginia
 - Observed stars Tau Ceti and Epsilon Eridani
 - Both about eleven light-years away
 - Both stars about the same brightness as the Sun
- From April to July 1960, for six hours a day, the receiver on 85-foot antenna tuned to the frequency of the 21-centimeter emission line of interstellar hydrogen.
- Single 100 Hz channel receiver was slowly tuned up and down the dial to cover 400 kHz
- Used existing receivers and other technology
- Total cost of project ~ \$2000

<https://www.seti.org/project-ozma>



FOR ALMOST 20 YEARS, NASA PURSUED THE SEARCH FOR EXTRATERRESTRIAL INTELLIGENCE (SETI)

- From 1975 to 1993, the US government spent over \$55M on SETI



DSS-13 antenna at Goldstone Deep Space Communications Complex

<https://www.gdsc.nasa.gov/wp-content/uploads/2012/05/antennas-hi-res-DSSI3-rev.jpg>





Where will you be ...

when we find life beyond Earth?

[JOIN US](#)

[Play Video](#)

*SETI CONTINUES TODAY
WITH PRIVATE FUNDING*

PRIVATELY FUNDED “BREAKTHROUGH INITIATIVE” PARTNERS WITH SETI INSTITUTE

COSMIC Project uses data from a wide-band all-sky survey at the Very Large Array (VLA) near Socorro, NM

COSMIC will search for narrow-band (~1 Hz wide) signals in wide-band VLA data

It’s postulated that artificial signals will be uniquely narrow-band

Massive Radio Array to Search for Extraterrestrial Signals from Other Civilizations

May 1, 2023

Tags: [Press Releases](#), [Partnerships](#), [SETI](#), [SETI Institute](#)



The SETI Institute, the National Radio Astronomy Observatory and the Breakthrough Listen Initiative team up for COSMIC and SETI



Image Credit: VLA/NRAO

May 1, 2023, Mountain View, CA – One of the world’s most powerful radio telescope arrays is joining the hunt for signals from other galactic civilizations. The National Science Foundation’s Karl G. Jansky Very Large Array (VLA), situated about 50 miles west of Socorro, New Mexico, is collecting data that scientists will analyze for the type of emissions that only artificial transmitters make, signals that would betray the existence of a technically accomplished society.



GALILEO PROJECT SEEKS PHYSICAL EVIDENCE OF EXTRATERRESTRIAL TECHNOLOGY

Goal of the Galileo Project: "to bring the search for extraterrestrial technological signatures of Extraterrestrial Technological Civilizations (ETCs) from accidental or anecdotal observations and legends to the mainstream of transparent, validated and systematic scientific research."

GALILEO PROJECT
UAP INSTRUMENTS



- Project head: Avi Loeb, founding director of Harvard University's — Black Hole Initiative, director of the Institute for Theory and Computation at the Harvard-Smithsonian Center for Astrophysics, and the former chair of the astronomy department at Harvard University (2011–2020)



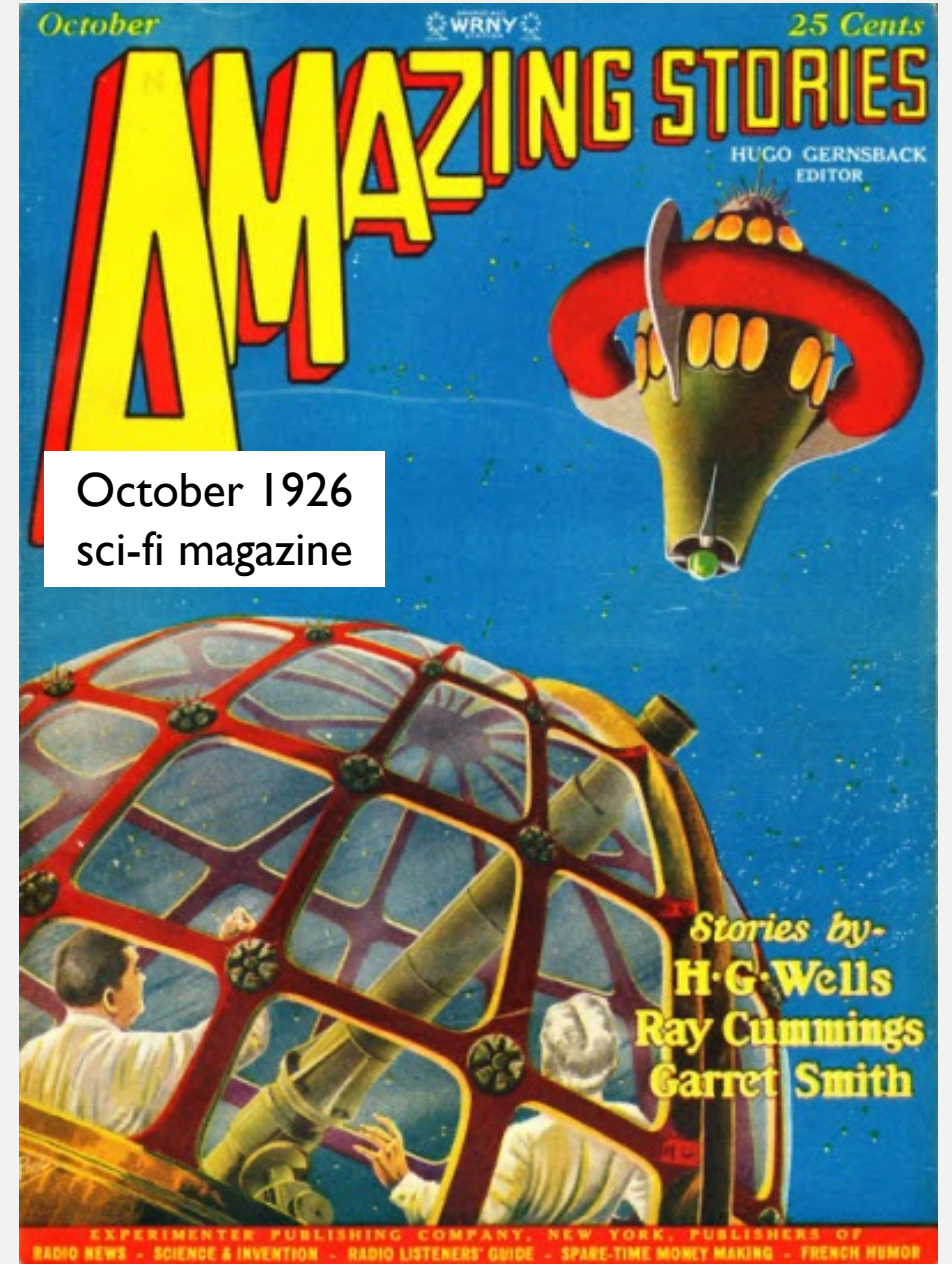
BUT PERHAPS ALIENS ARE NOT SIMPLY WAITING FOR US
TO FIND THEM ...



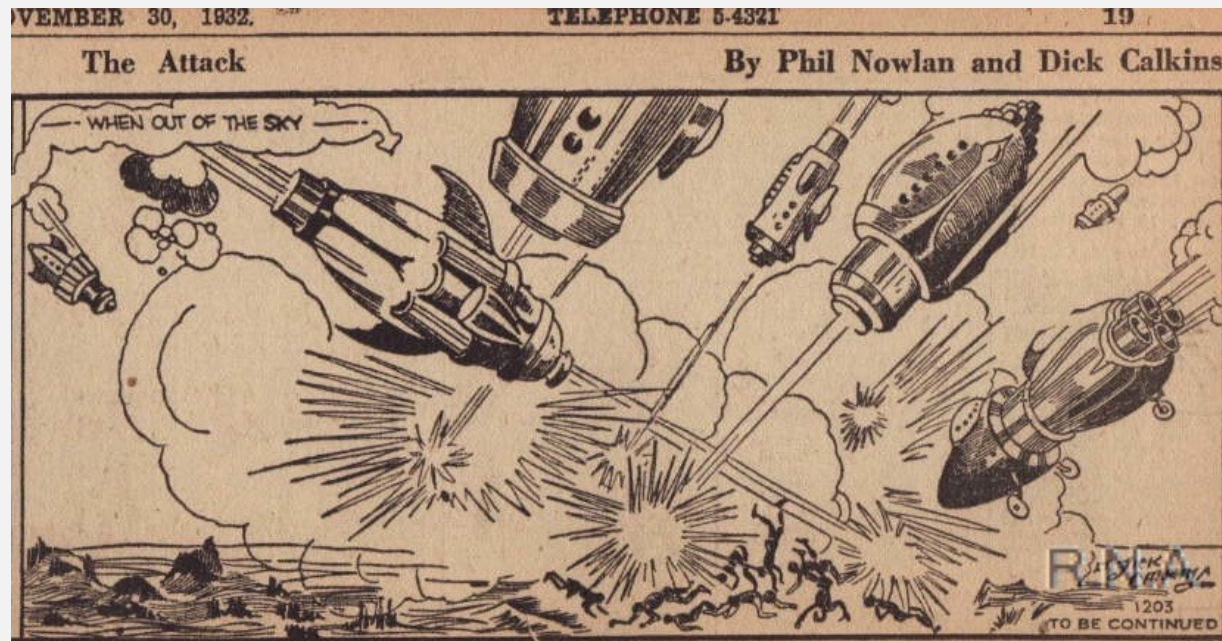
Image by [Pete Linforth](#) from [Pixabay](#)

UNIDENTIFIED FLYING OBJECTS (UFOS) ARE A MAINSTAY OF POPULAR CULTURE

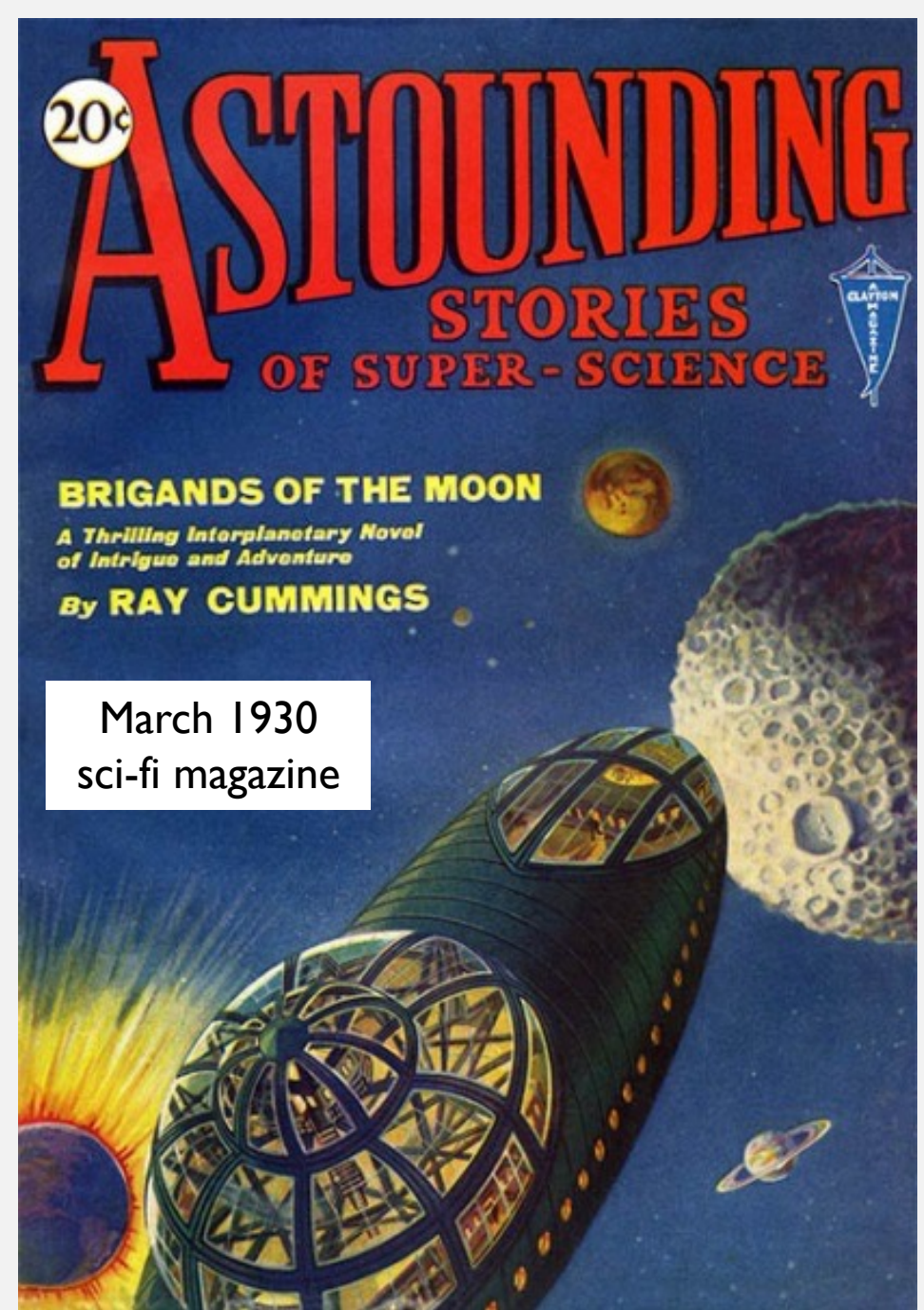
- People persistently report strange experiences with objects and agents from the sky



BY ~1930 WE ALREADY KNEW
WHAT FLYING SAUCERS AND
SPACESHIPS WERE SUPPOSED TO
LOOK LIKE



*Buck Rogers comic strip,
November 1932*



THE 1938 “WAR OF THE WORLDS” RADIO BROADCAST SHOWED THE PUBLIC WAS ANXIOUS ABOUT “ALIEN INVASIONS”

- October 1938 radio episode, directed and narrated by Orson Welles, based on 1897 novel by H. G. Wells
 - Episode is famous for inciting a panic by convincing some members of the listening audience that a Martian invasion was taking place
- Extent of “panic” may have been exaggerated by newspapers to discredit radio
- Anxiety about impending war in Europe may have been a factor

New York Times

Copyright, 1938, by The New York Times Company.

NEW YORK, MONDAY, OCTOBER 31, 1938.

Radio Listeners in Panic, Taking War Drama as Fact

Many Flee Homes to Escape ‘Gas Raid From Mars’—Phone Calls Swamp Police at Broadcast

A wave of mass hysteria seethed through thousands of radio listeners throughout the nation between 8 and 9:30 o'clock last night when Orson Welles broadcast a dramatization of H. G. Wells' fantasy, "The War of the Worlds," led thousands to believe that an interplanetary conflict had started with invading Martians spreading wide death and destruction in New Jersey and New York.



Orson Welles explaining to reporters that he had not intended to cause panic (October 31, 1938)

UFO INTEREST
BLOSSOMED ESPECIALLY
SINCE THE END OF
WORLD WAR II IN 1945

- Media frenzy surrounded the reports on June 24, 1947, that a civilian pilot reported seeing nine objects flying in formation near Mount Rainier
 - Hundreds of “copycat” reports followed during summer 1947, from around the US
 - 1947 Roswell incident
- Phenomenon has been attributed to
 - Postwar fear of Communist influence
 - Anxiety about nuclear weapons
 - New, unfamiliar aircraft
 - Quasi-religious sentiments
 - Something else altogether ...?

SUNDAY, JULY 6, 1947.

SECTION A—PRICE TEN CENTS

MORE ‘FLYING SAUCERS’ SEEN AS MEN OF SCIENCE PONDER SERIOUS ANGLES

Disc Stops And Reverses Self In Flight, Disappears

Astronomers Say They Are Man-Made; Pilot
Jokes But Wireless Report Shows Him
Frightened and Nervous Later; Not
Atomic—Lilienthal

By The Associated Press

The nation was baffled late Saturday night and during the day by “flying saucers” reported seen in 28 states by hundreds of persons, and conjectures came from scores of named and unnamed sources throughout the country.

Official government sources took a “let’s see one” stand on the phenomenon, and so scientists proffered a detailed explanation.

But the Los Angeles Evening Herald and Express quoted an unnamed California Institute of Technology scientist in nuclear physics as suggesting that the saucers might be the result of experiments in “transmutation of atomic energy.” Dr. Harold Urey, atom scientist at the University of Chicago, called that “glibberish.”

At Columbus, Ohio, Louis E.

FIGHTER PLANES READY FOR DISCS

P-51 Ships Are Alerted To Photograph Objects

By The Associated Press

Col. Al Dutton, commanding officer of the Oregon National

Starr, national commander-in-chief of the Veterans of Foreign Wars, asserted at a VFW convention he was expecting information from Washington about “the fleets of flying saucers.” “Too little is being told to the people of this country,” Starr declared.

Two Chicago astronomers said the discs are probably “man made.” The undulating, flashing objects “couldn’t be meteors,” said Dr. Girard Kleuser, director of the University of Chicago’s

Wilmington Star News, 1947,
Public domain, via Wikimedia
Commons

[https://commons.wikimedia.org/wiki/
File:1947-Flying-Disc-Craze-
headline.png](https://commons.wikimedia.org/wiki/File:1947-Flying-Disc-Craze-headline.png)

- Project Sign
 - 1947-1948
- Project Grudge
 - 1948-1952
- Project Blue Book
 - 1952-1969
- AATIP (Advanced Aerospace Threat Identification Program)
 - 2007-2012
- UAPTF (Unidentified Aerial Phenomena Task Force)
 - 2017-2022
- AOIMSG (Airborne Object Identification and Management Synchronization Group - 2021) ⇒ AARO (All-domain Anomaly Resolution Office - 2022)
- NASA UAP Study Team (2022)

A SUCCESSION OF GOVERNMENT PROJECTS AND OFFICES HAS INVESTIGATED UFOS

...or "UAP"

UNCLASSIFIED



OFFICE OF THE DIRECTOR OF NATIONAL INTELLIGENCE

2022 Annual Report on Unidentified Aerial Phenomena (now "Anomalous")

Motivations

- *National security concerns*
 - *Adversary data collection*
 - *Breakthrough aerospace capability*
- *Flight safety, flight hazards*
- *Science*

UNCLASSIFIED

https://en.wikipedia.org/wiki/Project_Blue_Book

https://en.wikipedia.org/wiki/All-domain_Anomaly_Resolution_Office

<https://www.dni.gov/index.php/newsroom/reports-publications/reports-publications-2023/item/2354-2022-annual-report-on-unidentified-aerial-phenomena>

<https://www.defense.gov/News/Releases/Release/Article/2853121/dod-announces-the-establishment-of-the-airborne-object-identification-and-manag/>

2022 ANNUAL REPORT FROM OFFICE OF DIRECTOR OF NATIONAL INTELLIGENCE (ODNI) STATES THAT AARO HAS CATALOGUED 510 TOTAL UAP REPORTS

- Of 510 total UAP reports:
 - 144 were already catalogued during 2004 – 2021 and described in ODNI Preliminary report (June 2021)
 - 80 of these involved observation with multiple sensors
 - 21 involved unusual movement patterns or flight characteristics
 - 11 involved near misses with a UAP
 - 247 were new reports since 5 March 2021
 - More reports in 1½ years than in preceding 17 years
 - 119 were new reports of events occurring prior to 5 March 2021
 - Of the 366 new reports:
 - 26 were characterized as unmanned aircraft systems
 - 163 were characterized as balloons or balloon-like entities
 - 6 were attributed to clutter*
 - 171 were uncharacterized or unattributed

All UAP fall into one of five categories:

- *airborne clutter**
- *natural atmospheric phenomena*
- *US government or industry developmental programs*
- *foreign adversary systems*
- *other*

*E.g., birds, weather events, or airborne debris like plastic bags

SOMEBODY IS ALWAYS CLAIMING THAT THE GOVERNMENT IS HIDING INFORMATION ABOUT ALIENS

- Civilian UFO study group NICAP (National Investigations Committee on Aerial Phenomena) was founded in 1956
 - Throughout its existence, NICAP argued that there was an organized governmental cover-up of UFO evidence
- Roswell incident
 - Debris recovered: July 1947
 - Incident ignored: 1947 – 1978
 - Book: *The Roswell Incident*, C. Berlitz and W. L. Moore (Grosset & Dunlap, 1980)
 - Alleged government cover-up
-
- David Grusch, UFO whistleblower (2023)
 - USAF officer and former intelligence official
 - Claims:
 - US government maintains secretive UFO retrieval program and is in possession of "non-human" spacecraft and "dead pilots"
 - People have been killed to protect the secrecy of the program (though not him)
 - Accuses AARO of withholding information



International UFO Museum and Research Center, Roswell, NM (founded 1991)

You can never disprove a cover-up. Does someone benefit from the public's belief in a cover-up?

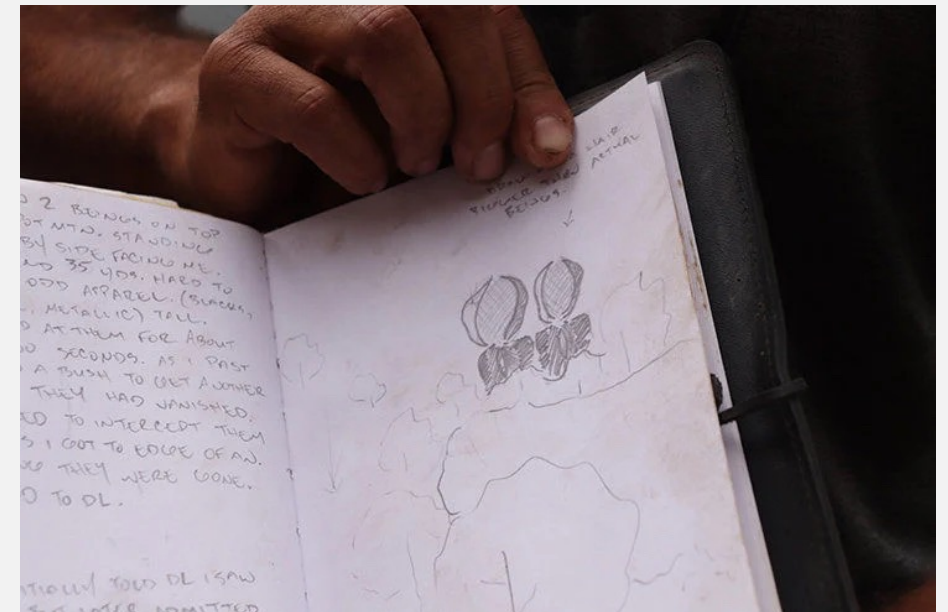
https://en.wikipedia.org/wiki/National_Investigations_Committee_On_Aerial_Phenomena

https://en.wikipedia.org/wiki/Roswell_incident

https://en.wikipedia.org/wiki/David_Grusch_UFO_whistleblower_claims

<FAVORITE UFO STORY>

- 1-2 September 2019 -- Two bow hunters from Taos, NM
 - Hunting for elk on Cerro de la Olla northwest of Taos
 - Caldera at top of mountain
- 9:30 AM 1 Sept -- One hunter noticed two figures on his side of the caldera: "...very tall shapes of these beings, standing side by side, staring right at me... The shape that would be like their heads, it looked like they had huge hoods on. It looked like two ribbons coming off either side to a point at the top and bottom ..."
- 2 Sept: "...big tent structure, like a circus tent, 50-60 feet tall"
- "When we topped the hill, it was gone. Just gone."



UFOS AND ALIENS KEEP GRIPPING THE POPULAR IMAGINATION



BUT NOW LET'S PASS ON TO THE REALM OF CULTURE AND RELIGION

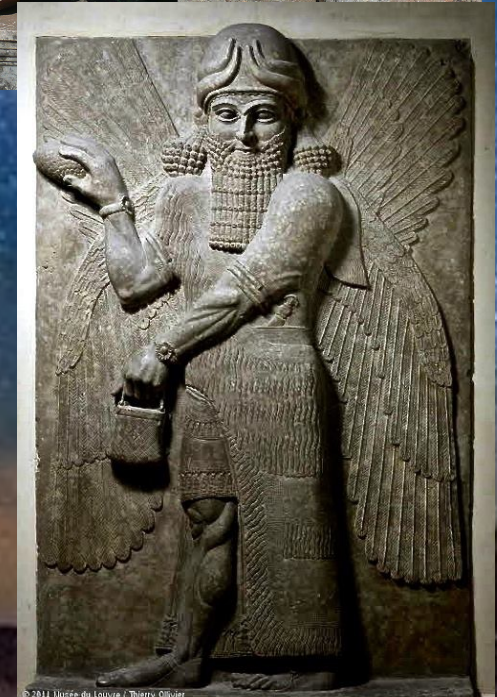
- Angels are (at least) a cultural and religious concept, involving superhuman beings from the sky, like UFOs
- Many cultural traditions, since ancient times, refer to superhuman beings
- But no government programs are searching for “angels”

Buddhist “devas” are messengers

- Do not require food
- Fly through the air
- Shine by their own light



*Nike (Ephesus)
personified victory*



*Assyrian “genii” are
winged creatures of
extraordinary
wisdom and power*

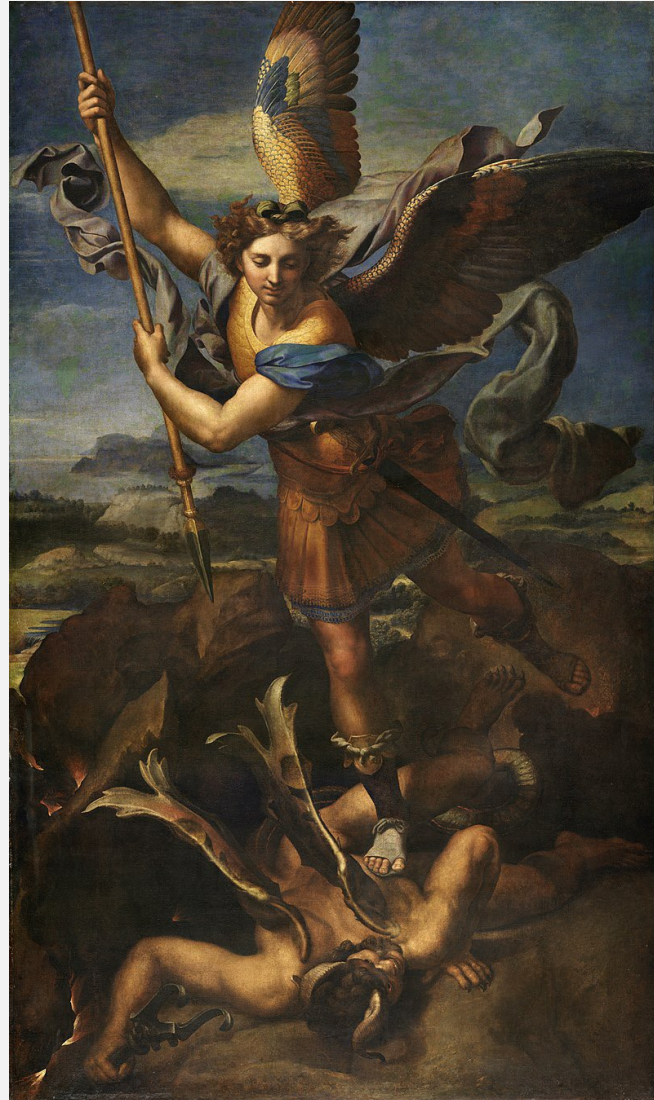
ANGEL HIERARCHIES: BUDDHIST DEVAS ARE GROUPED IN MANY LEVELS



	appearance	behavior	sub-levels
Devas of the Ārūpyadhātu	Have no physical form or location	<ul style="list-style-type: none"> Dwell in meditation on formless subjects Do not interact with the rest of the universe 	
Devas of the Rūpadhātu	Have physical forms, but are genderless and passionless	Live in a large number of "heavens" or deva-worlds that rise, layer on layer, above the earth	4 main groups: <ul style="list-style-type: none"> <i>Śuddhāvāsa</i> devas guard and protect Buddhism on earth <i>Bṛhatphala</i> devas remain in a tranquil state <i>Śubhakarṣna</i> devas rest in bliss <i>Ābhāsvara</i> devas sometimes intervene in the world
Devas of the Kāmadhātu	Have physical forms similar to, but larger than, those of humans	Lead the same sort of lives that humans do, though they are longer-lived and generally more content	<ul style="list-style-type: none"> 4 higher levels Several lower levels

JEWISH AND CHRISTIAN TRADITION ALSO DESCRIBES A HIERARCHY OF THE “HEAVENLY HOST”

- Archangel(s)
- Angels
- Fallen angels
- Nephilim
- Rephaim

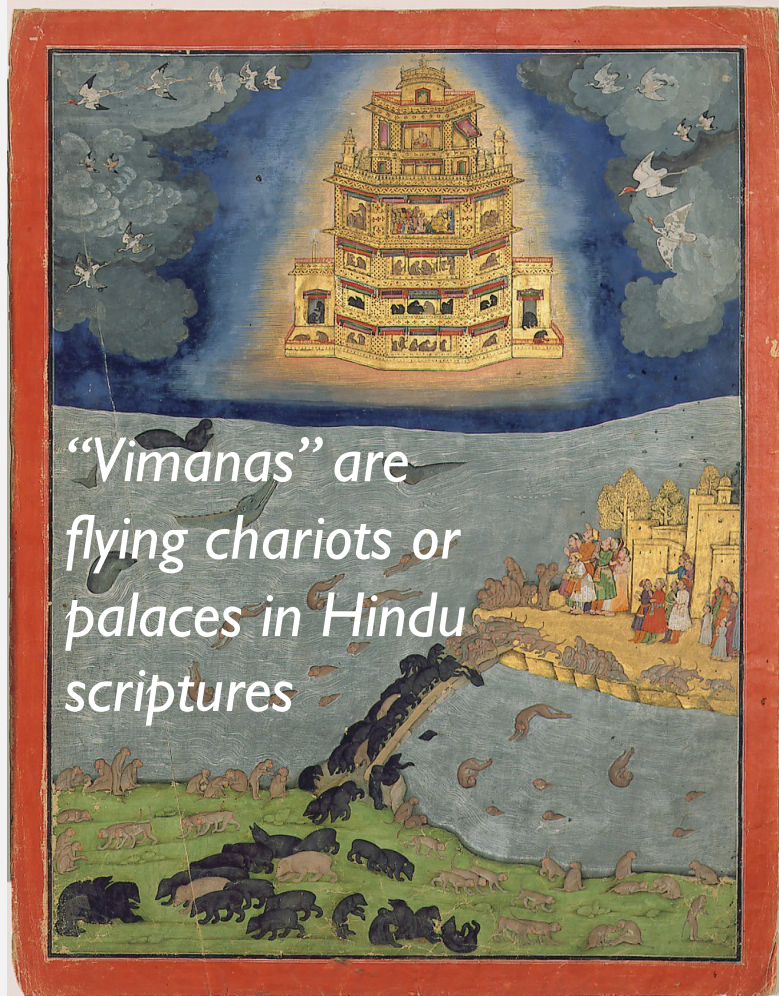


*The Archangel Michael
Vanquishing Satan
(Raphael, 1518)*

Angels are described as servants of God and “watchers” of humanity :

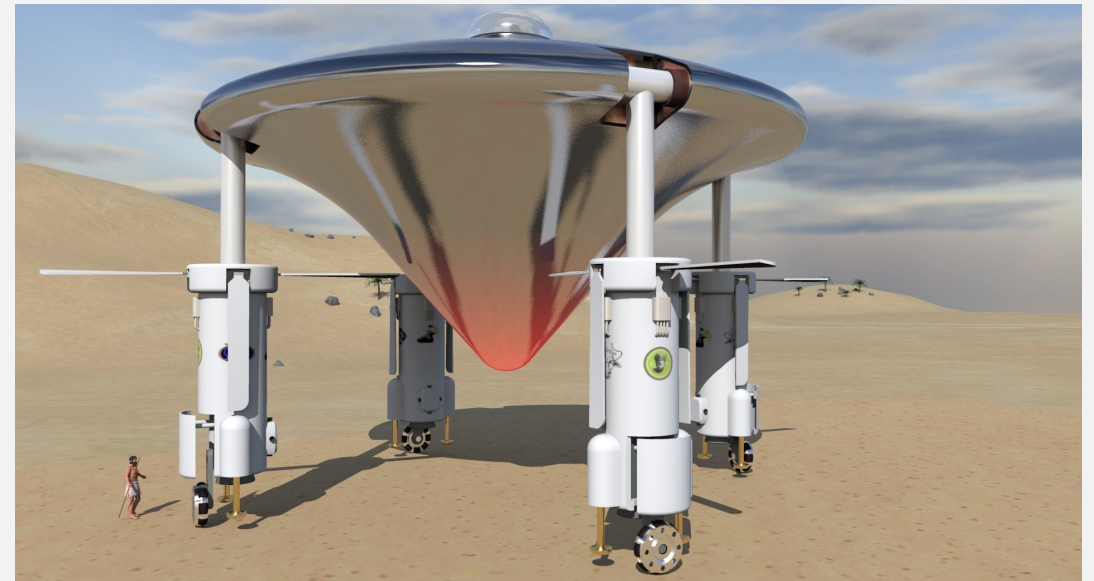
- “Praise the Lord, you his angels, you mighty ones who do his bidding, who obey his word.” (Psalm 103:20, NIV)
- “I saw in the visions of my head as I lay in bed, and behold, a watcher, a holy one, came down from heaven.” (Daniel 4:13, ESV)
- “...the harvest is the end of the world; and the reapers are the angels... The Son of man shall send forth his angels, and they shall gather out of his kingdom all things that offend, and them which do iniquity; And shall cast them into a furnace of fire...” (Matt. 13:39-42, KJV)

IT'S EASY TO SEE SIMILARITIES BETWEEN SOME RELIGIOUS EPISODES AND EXTRATERRESTRIAL ENCOUNTERS



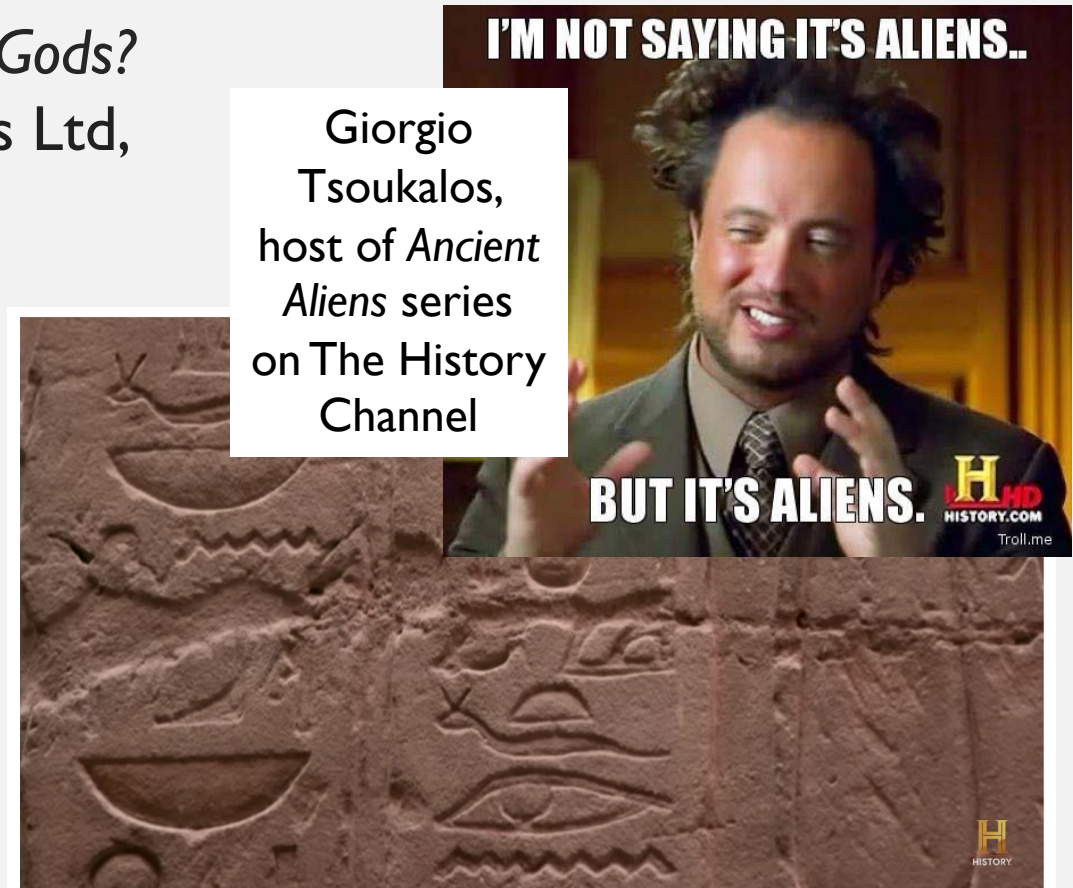
The prophet Ezekiel saw a vision of “the glory of the Lord”

“...This was the appearance and structure of the wheels: They sparkled like topaz, and all four looked alike. Each appeared to be made like a wheel intersecting a wheel. As they moved, they would go in any one of the four directions the creatures faced; the wheels did not change direction as the creatures went. Their rims were high and awesome, and all four rims were full of eyes all around.” (Ezekiel 1:16-18)



POPULAR MEDIA HAVE PORTRAYED RELIGIONS AS A LEGACY OF EXTRATERRESTRIAL ENCOUNTERS

- Erich von Däniken, author of *Chariots of the Gods? Unsolved Mysteries of the Past* (Souvenir Press Ltd, 1969) and several subsequent books
 - Claims extraterrestrials or "ancient astronauts" visited Earth and influenced early human culture
 - Attributes many archeological items to alien technology
 - Heavily criticized for factual and logical errors, and sloppy writing
 - Underestimates abilities of ancient humans
 - May have been influenced by more careful and limited conjectures by Carl Sagan and Iosif Shklovsky in *Intelligent Life in the Universe* (1963)
 - 70 million copies sold as of 2017



Ancient Aliens: Spacecraft Brought Hieroglyphics to Ancient Egypt (S1)

ETS, UFOS, AND ANGELS ARE SIMILAR BUT DIFFERENT

	Non-human intelligence	In the heavens	Relationship to humans	Scientific or government interest	Scientifically detectable	Religious connection
Distant ETs	✓	✓	Unaware of humans	✓	✓	?
Aliens in UFOs	✓	✓	Aware of humans, but perhaps unsympathetic	✓	✓	?
Angels	✓	✓	Pay attention to and interact with humans	X	?	✓

THE CLOSER THEY GET, THE LESS REAL THEY SEEM



SETI

- Scientific search in progress



UAP

- Government projects



angels