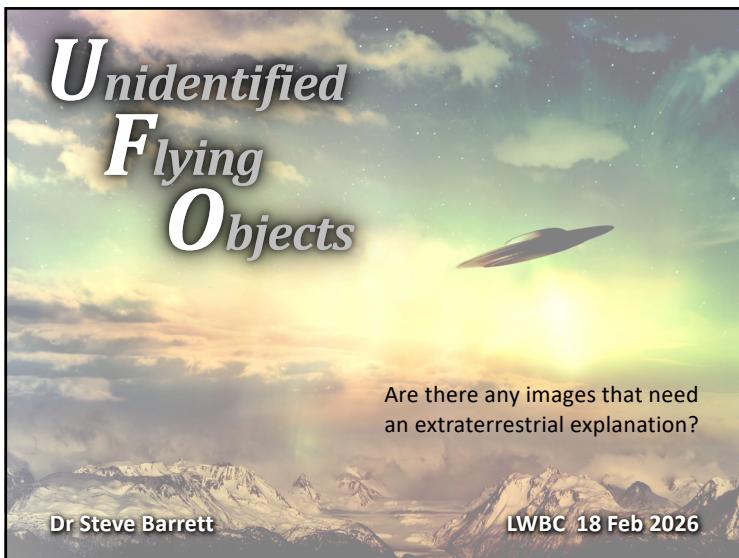


# UFOs



## Statistics Don't Lie

Have extraterrestrial aliens visited Earth? ✓ 40%

Are extraterrestrial aliens visiting *now*? ✓ 35%

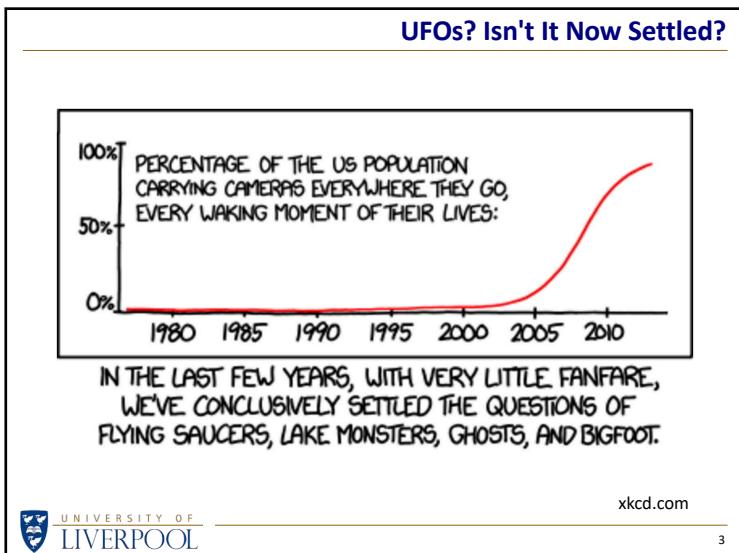
That's less than the number who believe in ghosts (60%)  
but greater than telekinesis (25%)  
or Bigfoot (20%)

[ ... or evolution (31%) ]

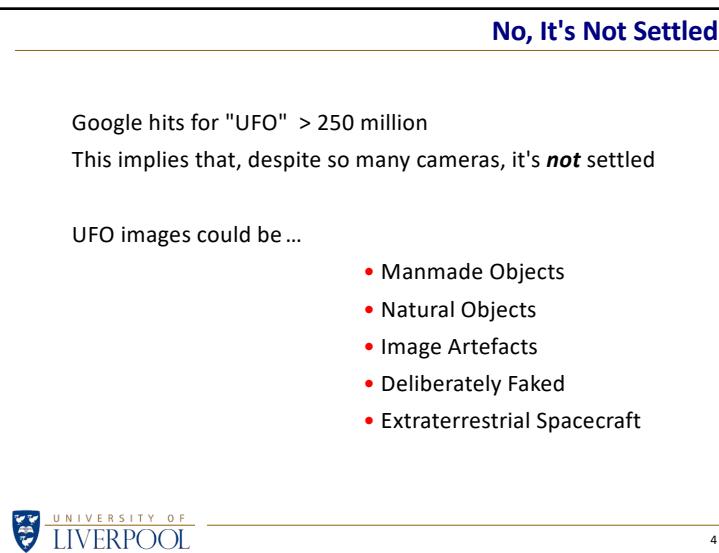


Chapman University Survey 2018

2



3



4

# UFOs

## Definitions and Claims

I will conform to the conventional usage of the acronym UFO to mean an object observed in the sky that is not readily identified.

Regarding an extraterrestrial origin, I side with Carl Sagan:

*"Extraordinary claims require extraordinary evidence"*

Another useful tool for a rational scientist is Occam's Razor:

*"If there are two explanations for an observation, then the one that requires the least speculation is usually better"*

or

*"Simpler solutions are more likely to be correct than complex ones"*



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## Reliable Information



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## Ideal UFO



*... clear, detailed, in focus, no camera shake, well-exposed ...*



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## Typical UFO



*... blurred, out of focus, camera movement, over-exposed ...*



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# UFOs

## The First UFOs?



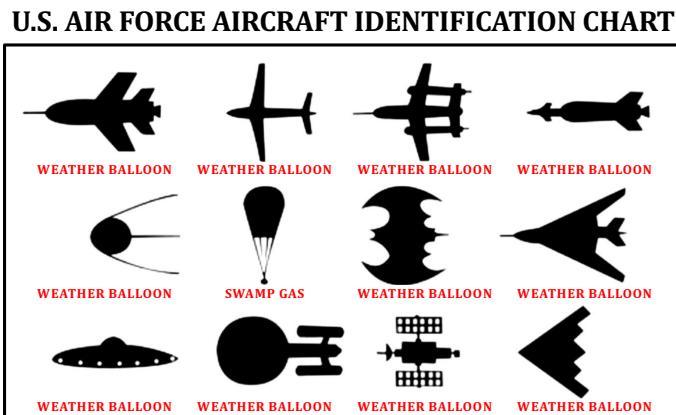
UFOs might be ...

Manmade Objects



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## Identifying a UFO



## UFOs in Formation

A long exposure photo of a fleet of UFOs flying in formation?

No, it's the  
'Pylon of the Month'  
December 2019  
[www.pylonofthemonth.org](http://www.pylonofthemonth.org)



# UFOs



**Space Jellyfish**

Who could see this  
and not think ...

UFO!

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**Falcon Tails**

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**Falcon Nebula**

BRIAN B. HAIDET, 2018

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**Rocket Trails**

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# UFOs

AZURE



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APOD 8 Apr 2019

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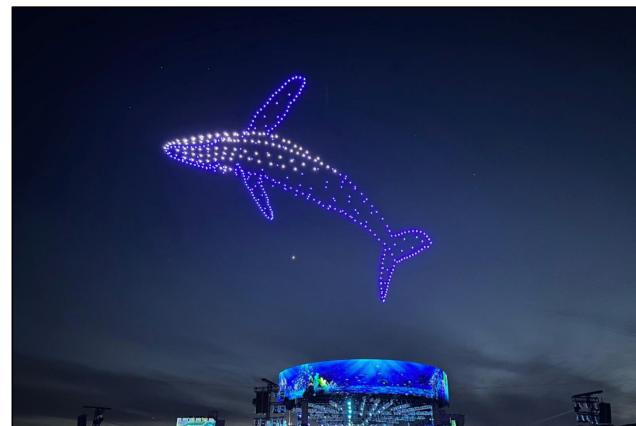
Strange Lights in the Sky



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Precision Drone Control



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UFOs Landing



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# UFOs

## A Good Year For UFOs



**"We don't want to get in the way of a good story, but that's definitely us."**



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## "Super Clear" Footage



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## YouTube Videos

One YouTube video in particular piqued my interest ...

"Puerto Rico's close proximity to [the Bermuda Triangle] may explain why it's a known hotbed for UFOs.

There have been countless UFO sightings over the years, but many experts consider this next piece of footage the Gold Standard. "

Does this 'Gold Standard' for UFO sightings stand up to scrutiny?



23

## Puerto Rico 2013

US Customs and Border Patrol aircraft (infrared camera)



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# UFOs

## Puerto Rico 2013

US Customs and Border Patrol aircraft (infrared camera)



25

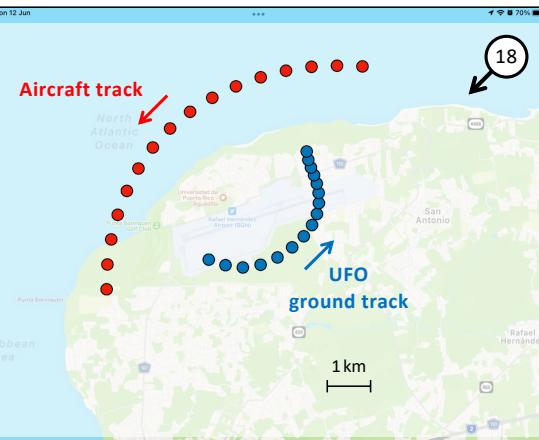
## Puerto Rico 2013

US Customs and Border Patrol aircraft (infrared camera)



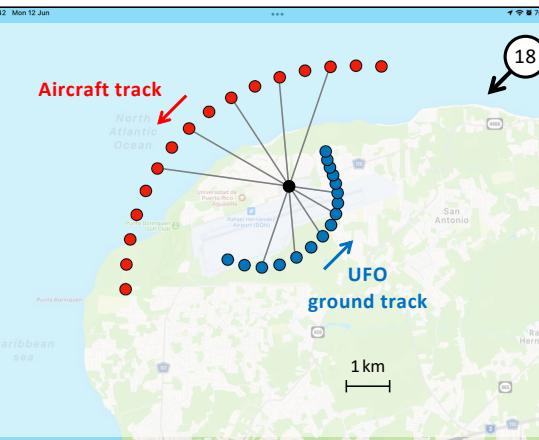
26

## UFO Track



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## UFO Movement



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# UFOs

## Occam's Razor

"Of countless UFO sightings, many experts consider this the Gold Standard."

The YouTube description:

A metallic orb...  
... moving at incredible speed  
... with no obvious propulsion  
... into a 18 mph headwind

The infrared camera sees an object that "does not match anything we know of".

An alternative explanation:

The object is essentially static  
It is drifting slowly downwind

It is probably a balloon



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UFOs might be ...

Natural Objects



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## Clouds of the Month



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## Unusual Clouds



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# UFOs

## Light Pillars



© www.salamapaja.fi



APOD 18 Dec 2013 33

## Light Pillars



VINCENTBRADY.COM



APOD 24 Oct 2018 34

## Light Pillars



 @WisconsinWeatherPhotography



@TomPurdyWI



@TomPurdyWI



35

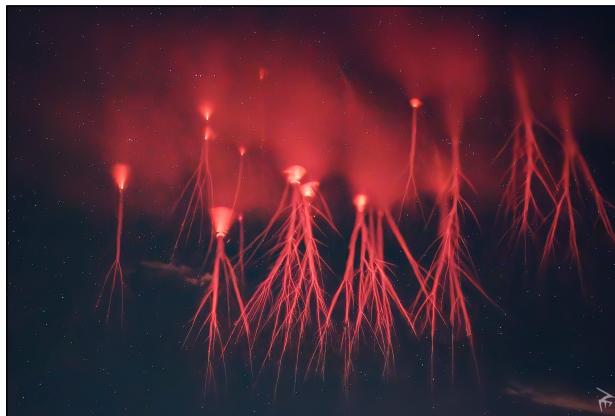
## Fluctuating Lights



APOD 8 Nov 2011 36

# UFOs

## Red Sprites



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APOD 2 Oct 2023

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## Arc-Shaped UFO over Ontario

"Nearing the end of the day ...  
I sat down on my deck facing  
west ... something caught my  
eye ... it was brilliant white ...

In truth I cannot be sure what  
it truly is ... my conclusion is a  
'UFO'.

My friend ... thinks the object  
is as big as two airliners ...  
I thought one airliner, but  
maybe he's right!"



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UFOs might be ...

Image Artefacts



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## UFOs in the USA?

Mysterious lights in the  
sky photographed over  
Washington DC in 1952

... or maybe they are just  
reflections of lights in the  
foreground

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# UFOs

## UFO? – Image Artefacts

"The large craft came so close to the photographer that the windows can even be seen in the image."



"UFO sighting is 100% proof ALIENS are here on Earth."



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## UFO? – Image Artefacts



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## Shooting Into the Sun



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## No Camera Jerk



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"Note the power lines in the photo. As you see, the wires show absolutely no distortion which would indicate no camera jerk. Also based on the wires in the photo you can tell we were shooting almost straight up."

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# UFOs

## Huge Slab in Sky



"... what appears to be a flat, rectangular aircraft with lights around its edges hovering in the air."

"UFO enthusiasts and conspiracy theorists have claimed it is an advanced type of spy craft known as a TR-3B."



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UFOs might be ...

Faked



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## UFO? – UF Faux



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## UFO? – UF Faux



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# UFOs

## UFO? – UF Faux



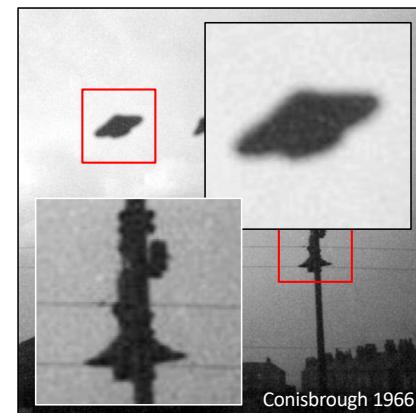
Conisbrough 1966



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## UFO? – UF Faux



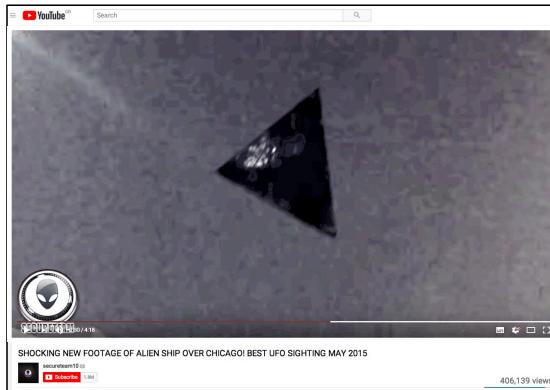
Conisbrough 1966



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## UFO? – UF Faux



SHOCKING NEW FOOTAGE OF ALIEN SHIP OVER CHICAGO! BEST UFO SIGHTING MAY 2015



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## UFO? – UF Faux

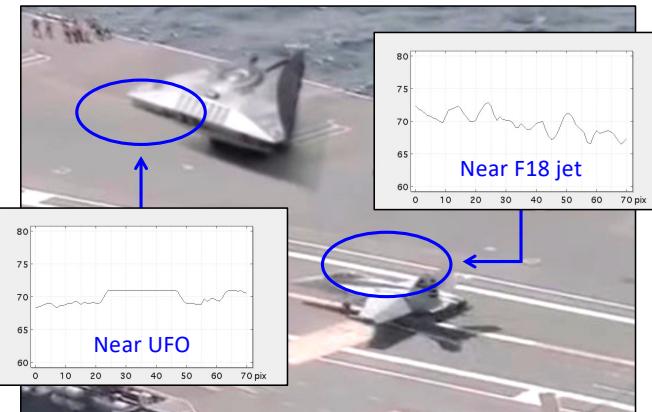


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# UFOs

**UFO? – UF Faux**



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**UFO? – UF Faux**



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**UFO? – UF Faux**



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UFOs might be ...

Extraterrestrial Spacecraft

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# UFOs

**NASA Report**



NASA  
UNIDENTIFIED ANOMALOUS PHENOMENA  
Independent Study Team Report

"Extraordinary claims require extraordinary evidence."

"Metadata ... are often absent, making ... a thorough understanding of context difficult."

"There is no conclusive evidence suggesting an extraterrestrial origin for UAP."

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**Extraterrestrials?**

The lack of evidence for extraterrestrial UFOs leads to a question ...

The number of stars in the Milky Way	$\approx$	300 billion
Most have planetary systems	$\div 2$	$\Rightarrow$ 150 billion
Quite a few planets are Earth-like	$\div 3$	$\Rightarrow$ 50 billion
Life may have originated	$\div 100$	$\Rightarrow$ 500 million
Complex life may have evolved	$\div 100$	$\Rightarrow$ 5 million
Intelligent life may have evolved	$\div 100$	$\Rightarrow$ 50 thousand

So if the galaxy is full of civilisations – **Where are they?**

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**Extraterrestrials?**



"Look again at that dot. That's here. That's home. That's us. On it ... every human being who ever was, lived out their lives ... – on a mote of dust suspended in a sunbeam."

Pale Blue Dot  
Carl Sagan 1994

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*Unidentified Flying Objects*

[www.liverpool.ac.uk/~sdb/Talks](http://www.liverpool.ac.uk/~sdb/Talks)

Dr Steve Barrett LWBC 18 Feb 2026