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## UFO sightings a lot of hot air

Monday, 8 May 2006 [Judy Skatsoo](#)

ABC/Reuters



A UK government says UFOs may be just glowing clouds of plasma (*Image: iStockphoto*)

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British defence authorities have come up with an explanation for UFOs that is bound to disappoint those who are convinced they've seen a flying saucer.

A [Ministry of Defence](#) report, which will be made public later this month, says what UFO watchers may be seeing unusual atmospheric effects like glowing plasma clouds.

"Considerable evidence exists to support the thesis that the events are almost certainly attributable to physical, electrical and magnetic phenomena in the atmosphere," the report concludes.

Plasma is an ionised gas described by Sir William Crookes in 1879 as 'radiant matter' because of its tendency to glow.

A plasma effect is also responsible for spectacular auroras like the northern lights (aurora borealis) and southern lights (aurora australis), says astronomer Dr Paul Francis of the [Australian National University](#).

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Francis says he sometimes investigates reported UFO sightings at the Mount Stromlo Observatory, where he is a fellow, and plasma clouds provide a plausible explanation.

"It's quite clear that there are lights in the sky that people really do see and it's quite clear they're not aliens," he says.

### **Radiant matter**

Plasma clouds are electrically conductive collections of charged particles.

They form when there's an equal distribution of positive and negative charges, making the overall charge neutral.

"A plasma cloud is going to be by nature composed of electrons and ions," says Professor Iver Cairns, a space physicist from the [University of Sydney](#).

"When they recombine to form atoms they're going to release light and therefore they will glow."

He says plasma clouds tend to stick together but they can be shaped by magnetic forces and factors like winds in the normal atmosphere.

Lightning can also cause plasma clouds, Francis says.

"Whenever you get a lot of energy such as a lightning bolt, or an aurora caused by the winds of the Sun, this generates plasma," he says.

"Gas has to be pretty hot to turn into plasma."

### **Ball lightning**

Professor Bob Vincent from the school of chemistry and physics at the [University of Adelaide](#) says UFO observers may also be seeing ball lightning, mysterious orbs of glowing light also attributed to plasma.

"The cause of ball lightning is still not well known and there's some discussion of whether that's plasma clouds induced by lightning," he says.

Other explanations for UFOs have included upside-down mirages caused by light over the horizon, meteors and weather balloons, particularly at sunset, Francis says.

Venus is commonly mistaken for a UFO and a British battleship even fired at it during World War II.

### **Does plasma affect your brain?**

Plasmas can also cause "extended memory retention and repeat experiences" of UFO sightings because they generate strong electromagnetic fields which affect the temporal lobes of the brain, one newspaper report quotes the UK defence scientists as saying.

But Francis says this is unlikely.

"Electromagnetic fields do have an effect on people but this is a very small effect," he says.

"If there was a plasma ball sitting three inches in front of your nose it might have some effect ... but these [clouds] are many kilometres away."

Dr David Clarke and Gary Anthony of [Sheffield Hallam University](#), will present findings from the report *Unidentified Aerial Phenomena in the UK Air Defence Region* later this week.

The report, which they obtained under a Freedom of Information request, will also appear on the UK Ministry of Defence's website next week.

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