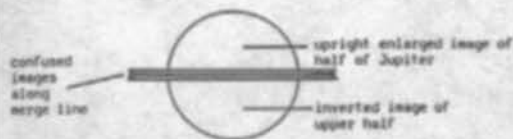
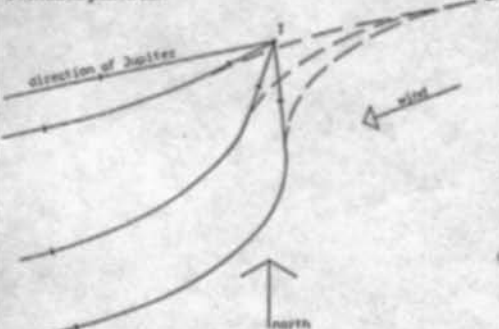


ILHA DA TRINDADE



Above: How a mirage can produce the image in the Trindade pictures.



Above: One way in which a dynamic wave in a vertical thermocline (broken line) can move a mirage image laterally. Light is ducted around the concave part of the thermocline but emerges where the curvature changes, to be seen by an observer at Trindade (T). The scale of this diagram is necessarily very small.

Below: Two enlargements of the image in picture 3. Is it a UFO, a hoax or a mirage of Jupiter?



Above: The probable location of Almirante Saldanha (AS) and the direction of the four photographs taken by Almirante Barauna.

Right: A montage from Barauna's four successful photographs showing the northern tip of Ilha da Trindade and the position of the 'flying object' (ringed) in each picture. Each position lies on a parabolic course, along which the 'object' must have moved. The ring in picture 4 denotes the true position of Jupiter in the sky.



estimated the object's speed at between 900 and 1000kmh! They also estimated that the object was about 36 metres in diameter and about 7 metres high. These estimates must be based on an assumption about the distance of the object (ie that it was only a few kilometres away). However, because the object was not seen in front of any object of known distance, its real distance — and hence its size and speed — cannot be calculated.

Perhaps embarrassed by the subsequent publicity, the Brazilian Navy instructed the crew of *Almirante Saldanha* not to talk to the press. Naturally this led to speculation that the Navy knew more about the incident than had been revealed and only encouraged the idea that the object was a flying saucer or alien craft.

The UFO hypothesis explains nothing; in fact it raises more questions than it answers. Why were aliens interested in a tiny volcanic island, or the ship for that matter, and if they were interested why did they not stay longer? More curious, was how their craft was able to change shape.

## Hoax hypothesis

In 1953 Barauna disputed the authenticity of the photographs taken by Ed Keffel at Barra da Tijuca in Brazil, publishing an article in a popular magazine to demonstrate how the photographs could have been obtained. Unfortunately, some US sceptics used this incident to discredit Barauna, claiming that he had a history of tricks and false photographs and implying that he had faked the Trindade pictures. It was alleged that no-one except a friend had seen the disk flying overhead and that the pictures were double exposures involving 'a model UFO'. This is still the belief of most sceptics and also of some ufologists.

In fact, there is no evidence that the pictures are faked and the circumstances make it extremely

unlikely. If outnumbered by fraudulent UFO witnesses, someone might be persuaded that he had seen something that did not in fact exist. In this case the photographer and his friends were greatly outnumbered by the crew on deck, all of whom have, apparently, confirmed the sighting. Some of the best corroborating witnesses were officers of considerable authority and experience. Also in Barauna's favour is the fact that there are several pictures (fakes are usually single pictures) and the fact that when assembled the pictures show a consistent 'course' for the object. Such a course would be very hard to fake. Nor would a hoaxer have photographed several different models in the same series (to obtain the appearance of changing shape).

## Mirage hypothesis

If the pictures are genuine and they do not show a solid craft, then they may show a natural phenomenon. The principal clue to the identity of that phenomenon is the position in the sky where it disappeared.

Plans of the island are usually shown — inexplicably — inverted, so that the object appears to have been seen to the east. In fact, the object disappeared near the horizon just south of due west. At that very moment the planet Jupiter was setting at that same point! The giant planet (magnitude -1.7) lay just 1° above the horizon on an azimuth of 259°. Normally Jupiter (or any other planet) would be invisible in daylight. That a bright object was seen to disappear at that point indicates that something had made Jupiter visible. Something had also enlarged it, changed its shape and thrown the image around the sky!

All astronomical objects viewed from the surface of the earth are seen through the atmosphere. This always distorts the objects to some extent, for