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Lake AFB, Arizona

3 March 1953

I. DESCRIPTION

In this instance, the object was never observed, but a high altitude condensation pattern was observed. When first sighted, the contrail was approximately 300-500 feet in diameter. The pattern began with a smooth knife-like leading edge, very thin in depth and with an irregular trailing edge. As the source gave chase, the contrail made a slight dip to the SW and began curving at an estimated 30 degrees. During this maneuver, source and object were at right angles and in observed the pattern to appear as a sharp nose, very thin object about 300-500 feet long with an irregular, sharp trailing edge. Immediately, a heavy condensation trail began to form and extended for approximately 1500 ft. back, at which point it separated into a double trail which split was approximately 1000 ft. long, ending abruptly. At this time, the object was traveling at an estimated 500 mph true air speed. The most unusual feature was that the contrail shaped with the unsighted object, and did not extend across the sky as in the case of conventional aircraft contrails.

II. DISCUSSION

The contrail was observed by the pilots of three F-4U type aircraft with only one giving chase. This pilot chased the contrail for 30-50 miles before breaking off. A full instrument and fuel load was being carried, however, source stated he was climbing with the object fairly well. During the chase, this pilot took approximately 20 feet of gas camera film. This film was reviewed in very good condition, and has been analyzed by the photographic laboratory at WDC. Their conclusions are:

- a. The white streak photographed is probably a vapor trail from a rapidly moving object of unknown velocity. The object itself is invisible in the photographs.
- b. The exhaust vapor trail, apparently from a twin propulsion unit, is more pronounced at the end of the film than at the start, as though the object were accelerating in response to pursuit. The configurations in the trail appear to be the in maneuvers performed by the object.
- c. An additional vapor trail, thought to be due to lifting surfaces, is also in evidence, but it disappears rapidly. This additional vapor trail appears to be contained about the exhaust trail.
- d. Within the period of time represented by the film, the photographic plane may have reduced the distance between the object and itself. However, the flight paths are not parallel by a considerable angle, so that the objects distance and velocity with respect to the plane cannot be determined with useful precision.

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