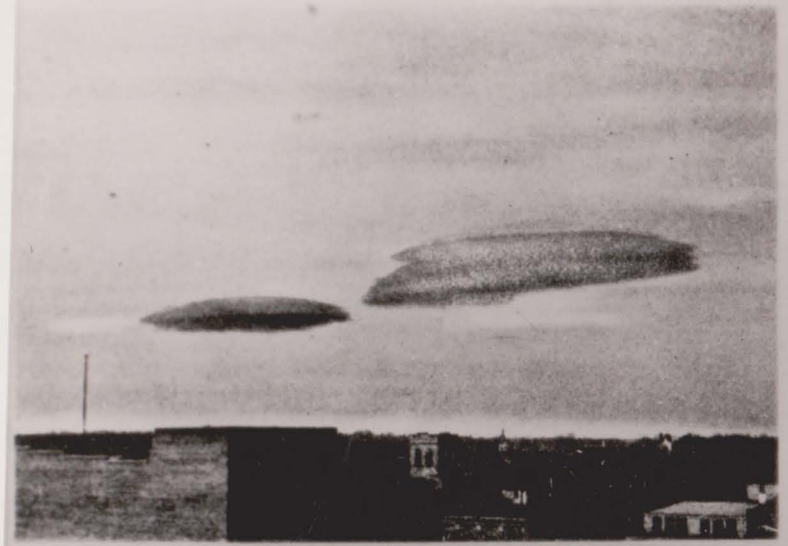

Fig. 83. Noctilucent clouds as observed from Drobak, Norway on the night of 27/28 July, 1909 at 23 h. 1 m. The height of these particular clouds were not measured. But measurements carried out elsewhere in Norway show that the average height is 82 km. lying between 74 and 92 km. (After Störmer.)

164708 AC - The photo in the upper left hand corner is of lenticular clouds. The photo in the upper right hand corner is of noctilucent clouds. The photo in the lower left corner is of parhelia phenomena. The photo in the lower right hand corner is of a mirage. Frequently such phenomena are mistakenly identified as "Flying Saucers".

U.S. AIR FORCE PHOTO

Rob Mercer

Aeronautical Chart & Information Photo Library

number B-163969 A.C.

original source of photo unknown (photo taken during Air Show--)

A low-flying jet, enveloped in an aura of cloud made by the jet itself, can look like a strange object. This condensation phenomenon, called contrail, occurs when areas of low pressure develop on the wing surface; the air cools by expansion in the slowly moving boundary layer in contact with the wing. The depth of the boundary layer and the drop in pressure both increase with increasing air speed, but each depends very closely on the aerodynamic qualities of the wing. An excellent photograph of one such disk produced by a Canberra jet was taken on February 4, 1956, along the coast of Africa near Accra on a morning when the condensation phenomenon occurred several times during air maneuvers. The weather was fine, the sky cloudless with a few patches of haze over the sea, and visibility was more than eight miles. During the display the air speed of the jets was usually too low or the air too dry for the aura to form. "But over the cliff edge where the sea-breeze was just beginning to break through in patches the air would be moist enough to condense about 1½ gm. of water droplets in each cubic metre of air, quite sufficient to produce the observed effect. The effect is increased by higher speeds at the end of a dive (when the angle of incidence of the aerofoil is least) . . . but it is likely that the patchy onset of the sea-breeze was the most important contributing factor." [7]

SOLO MUESTRA