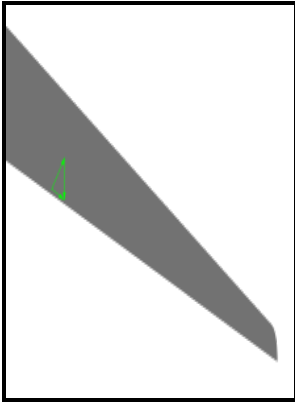


# Flight experiments on the boundary layer characteristics of a swept back wing

College of Aeronautics - Why Do Fast Aircraft Have Swept Wings?



Description: -

-Flight experiments on the boundary layer characteristics of a swept back wing

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On 12 April 1948, a D.

## Swept Wings

A flight vehicle came out of this work in the form of the Army-sponsored Ryan XV-5A, which used two J-85 engines either for cruise thrust or, with its exhaust flow diverted, to drive tip turbines on two wing-mounted lift fans and a nose-mounted pitch fan.

## Swept wing

Representations of the typical oil-flow patterns on the cylinder 18 are shown in FIGS. Although these devices are not as powerful as trailing edge flaps, they are effective when used full span in combination with high-lift trailing edge flaps. On the other hand, as TA always addresses future developments, there is a chance that, if it is taken literally or its results are taken just as a single digit instead of as sensitivities, it might stop a valuable technology development which would have a chance under different boundary conditions.

## Linear and nonlinear development of controlled disturbances in the supersonic boundary layer on a swept wing at Mach 2.5

The suction and blowing can be combined spanwise or chordwise; but the spanwise system is superior to others, at least for a subsonic transport plane, because the disadvantages of suction do not exist. The onset of separation effects for aerofoils and wings, shock-induced separation for laminar boundary layers, and shock-induced separation for laminar boundary layers are also deliberated. The boundary layer relaminarization device is shown as a quadrangular band 11, especially a square band, wherein height 15 equals width 16.

## Transition Flight Experiments on a Swept Wing with Suction

This proved to not be very effective.



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