

1939 Tube developments for cm wavelengths (Triodes, Magnetrons etc.).
Communication experiments at cm wavelengths.

1940/41 The research on backscatter phenomena was intensified. Measurement of backscattering cross section of a model aircraft at a scale of 1:10. The aim was to determine the frequency dependence of the cross section.

1944/45 Invention of the field effect transistor (Patent 1945).

1945 American troops occupied on May 8 the still intact Institute which was spared from bomb attacks. After evaluation of FFO developments, almost all machines and instrumentation were destroyed. The valuable library was moved to the Wright-Patterson-Laboratories near Dayton/Ohio.

1954 Reactivation of an interim establishment of the "Flugfunk-Forschungsinstitut in Riem nearby Munich" using rooms and laboratories in the old main building of the Munich airport. First tasks were research and development of three dimensional air traffic control system, instrument landing systems and millimetre wave measurement techniques and respective devices.

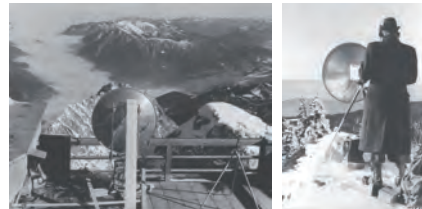
1955 Integration into the „Deutsche Versuchsanstalt für Luftfahrt“ (DVL-German Laboratory for Aviation).

1956 November 1956 - The Institute moved back to Oberpfaffenhofen under the name "DVL-Institute für Flugfunk" (Institute for Aircraft Radio and Microwaves).

1960 In 1960 the two other DVL Institutes in Mühlheim/Ruhr, the Institute for Microwaves and the Institute for Radio Frequency Technology have been transferred to Oberpfaffenhofen and became unified with the Institute für Flugfunk under the name "Institut für Flugfunk und Mikrowellen" (Institute for Aircraft Radio and Microwaves).

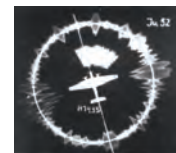
Goals of the Institute were application of radio frequency technique and technology in the field of aviation for communication, navigation and position finding with the research areas antennas and wave propagation, radar, direction finding, landing support and altimetry.

Research on the problem of direction finding was one of the important research topics. An important construction of an electronically switched Doppler direction finder came to a successful conclusion. This system was further developed from industry in the following years.



Communication experiment: 5 cm transmitter on the Zugspitze (left photo), receiver on the 250 km distant Mount Arber, 1939.

Backscatter diagram of a 1:10 down-scaled Ju52 aircraft model, wavelength 6 cm, 1940.



Institute campus at the beginning after the war, 1956.



Experimental set-up of an electronic switched direction finder (left), VHF monopulse tracking antenna for satellite signal reception, diameter 11 m (right).