

PERSONAL EXPERIENCE IN ELABORATION, TESTING AND PUTTING TO PRACTICAL APPLICATION OF AIRPLANE, UNMANNED AND MOBILE PLATFORMS WITH MICROWAVE RADIOMETERS ON BOARD AS PRINCIPAL INSTRUMENTS ALONG WITH INFRARED AND OPTICAL SENSORS WHERE APPROPRIATE

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1. ABSTRACT

The team of specialists from IRE RAS and VEGA is experienced in Microwave Radiometers elaboration, testing and putting to practical application since 50th. These are the single-beam, multi-beam and scanning radiometers operating in the wavelength range from 8 mm to 43 cm. During more than 50-year period of time the team members participated in tens of National and International campaigns in 10 Republics of former Soviet Union including Russia, Ukraine, Belarus, Estonia, Armenia, Georgia, Azerbaijan, Uzbekistan, Turkmenistan, Kazakhstan, in Bulgaria, Poland, Hungary, Germany, Cuba, Vietnam and also in the Netherlands and the USA.

As a result of those campaigns, 6 basic microwave radiometric systems, fixed on board of mobile, aircraft and unmanned platforms, also equipped with infrared and optical sensors where appropriate, have been elaborated, tested and put into exploitation for complex remote sensing of the environment.

Presentation is discussing the above systems and is demonstrating the data obtained with these systems in many areas in the World. Attention is made on the application of these systems for remote sensing and mathematical modelling of risky situations.