

# PROJECT / Integrated Lens Antenna Shaping

## ILASH



Shape optimization of  
integrated lens antennas

### Main Objective:

ILASH project aimed at developing and delivering to ESA-ESTEC a validated software tool for the design, analysis and optimization of high permittivity circular symmetric integrated lens antennas (ILA) with optimized coupling to incoming broadband on-axis beam, or to narrowband off-axis beams in scanning applications – the ILASH tool.

The tool is especially tailored for the design and optimization of mm-wave or sub-mm-wave shaped double-shell lenses that enable the radiation pattern compliance with two simultaneous conditions selected from a predefined list.

The experimental validation of the tool is based on scaled lens prototypes operating between 40 GHz and 65 GHz.

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