INTEGRATED THERMO-OPTICAL AND MECHANICAL MODELING OF TELESCOPIC SYSTEMS AND DEVELOPMENT OF ACTIVE OPTICS TECHNOLOGY

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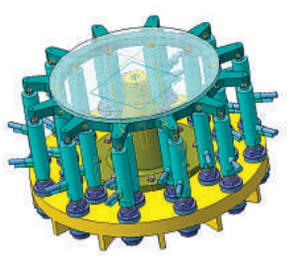
OBJECTIVES
Increasing the resolution of telescopic systems, the use of active elements that systematically correct the aberrations of the wave front in telescopes

AREAS OF USE
Aerospace Industry, Optics, Mechanical Engineering

LEGAL DEFENSE
RF patent for the invention Nº 2213185 - Method for compensating optical aberrations using a deformable mirror.
USA Patent Nº 9804388 - Method for compensating optical mirror with a deformable mirror

IMPLEMENTATION
The project is operating at the JSC RC “Progress”.

The project is used to improve designs and provide thermal conditions in promising optical-electronic telescopic systems for Earth’s remote sensing. The use of new approaches allows to avoid the design parameters determination for consistently specified criteria. This greatly facilitates and reduces the cost of construction. The developed technical solution meets the modern requirements of ensuring high resolution of telescopes.



PECULIARITIES
A new method of modal decomposition has been developed and on its basis a control system for active optics has been created, original procedures for integrated thermo-optical-modeling of telescopic systems are being carried out.

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CORE COMPETENCIES
#ACTIVE OPTICS, #SPACE TELESCOPES, #THERMO-OPTICAL AND MECHANICAL MODELING, #METHOD OF MODAL DECOMPOSITION