Conclusions of the research:

1. 66 typical geometric descriptions of the Atlas Detector were selected
2. Developed classification of programming methods for geometric descriptions, which combined - typical programming methods for the cylindrical class 29, 135 for the concave class and 252 for the combined class
3. Identified Typical classes and methods for programming geometric descriptions of the Atlas Detector were identified
4. For programming polygonal objects, it has been proven that polygon methods provide better performance compared to solid-body primitive methods, which increases with the number of objects - 8% for CPU and 20% for RAM
5. For the programming of cylindrical objects, it was found that the change of methods causes a slight change in performance, which reaches 4% with the increase in the number of objects
6. Polygon methods for programming combined objects have better performance than solid-body primitive methods, and this difference increases in direct proportion to the number of objects
7. A simulation performance study infrastructure has been created
8. The effectiveness of the Tube method for the programming tasks of cylindrical objects was revealed
9. The effectiveness of the Arbitrary Polygon method for the programming of polygonal objects was revealed
10. Slight differences were found between the Cube and Pyramid methods for both polygonal and combined object programming tasks.
11. Programming methods were ranked by performance