



Figure 10: Sloan r' band image of Anik cluster from the 24-inch F/4 RAPTORS telescope. The exposure time is 3 seconds and the field of view is 45 x 45 arc minutes and the image is binned 2x (1.32"/pixel)

6. SUMMARY

Five engineering students designed and constructed two 24" F/4 Newtonian telescopes for tracking RSOs to complete their capstone requirement for the engineering degree at the University of Arizona. Over the course of the 2016-2017, the team created, edited, and presented designs of each of the systems within the telescope. When the final design had been approved, the team sent the drawings of the parts to be machined, the mirror to be refigured, and assembled the electrical components. The team constructed the telescopes and showcased them at Engineering Design Day put on by the College of Engineering at the University of Arizona. After the showcase, the students operationalized one of the telescopes in the observatory at the Lunar and Planetary Laboratory. Today, the telescope is used for gathering astrometric, photometric, and spectroscopic data on RSOs in Earth orbit.

7. ACKNOWLEDGEMENT

We to thank University of Arizona's office of Research, Discovery and Innovation for support our project.