

This rendering of the CubeSat structure shows off the compact board and battery design along with the conical aeroboom chamber. Fitting the entire structure to a 1U form factor has been one of the team's biggest challenges.



A successful aeroboom deployment on a weather balloon test flight. Altitude: 120,000 ft

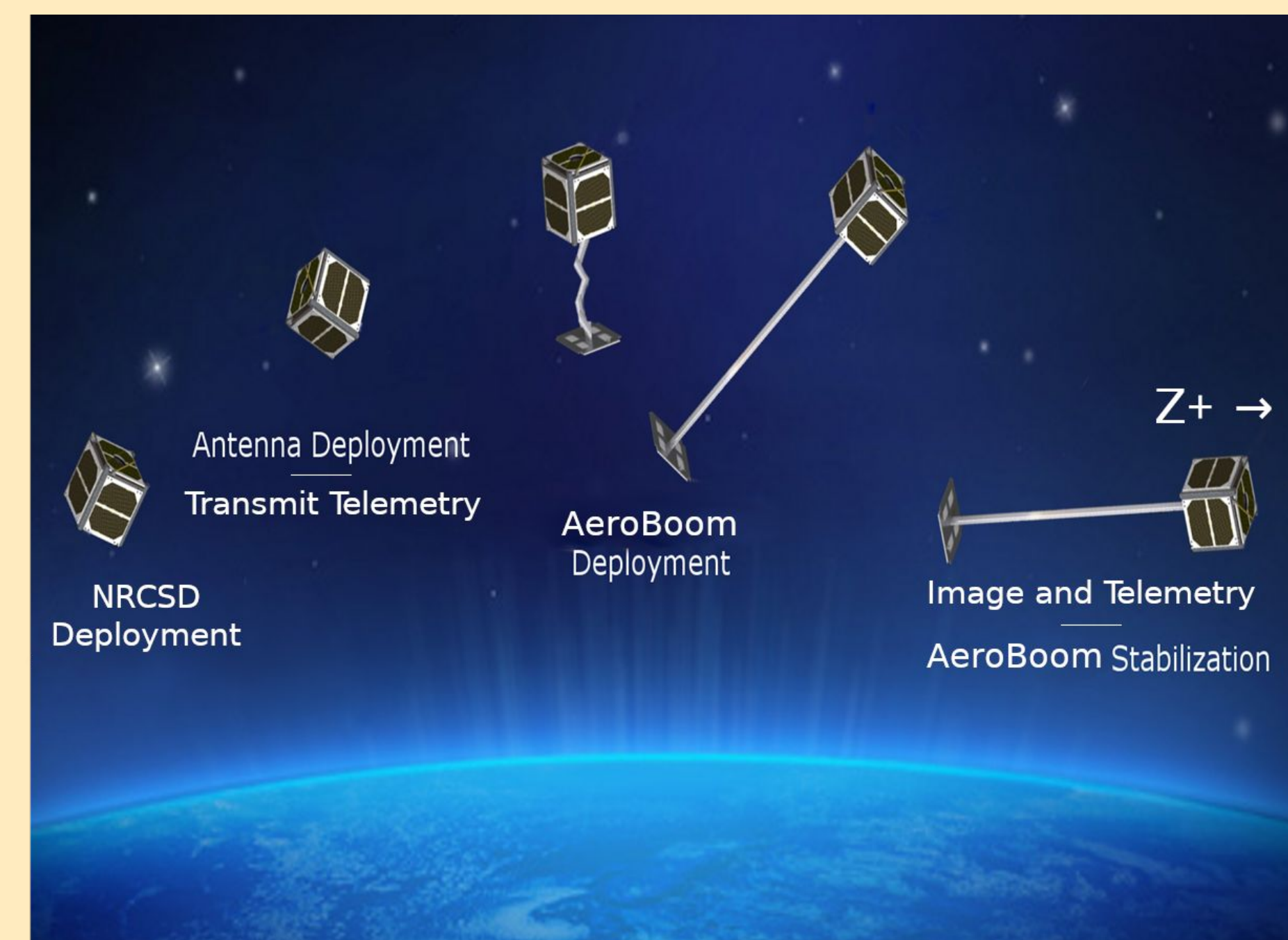
## THE GAS TEAM

The Utah State University (USU) Get Away Special (GAS) team is a primarily undergraduate microgravity research team funded by the generosity of the Utah NASA Space Grant Consortium. Still bearing the name of the now-discontinued NASA program for sending student experiments to space via space shuttle, the GAS team continues a legacy of hands-on engineering and research for students at USU.

Our current primary project is centered around an experimental deployable known as an "aeroboom."

## THE AEROBOOM

The aeroboom is the primary experiment aboard the GAS Passive Attitude Control System (GASPACS) CubeSat. Designed for a 1U form factor, the aeroboom is an inflatable tube of teflon and carbon fibre coated with a resin that cures and hardens when exposed to sunlight. In theory, it provides a stabilization effect via a drag plate at the end of the boom which catches stray particles of gas in low-earth orbit.



## PROJECT STATE

- **Successful PDR completion**
- Wire-cutting circuit completed
- Initial structure design completed
- Successful ground station image reception from the International Space Station
- Development on extending aeroboom shelf life
- Development on communication protocols
- Development on electrical schematics, cable diagrams, and PCB layout
- Development on modeling heat distribution
- Development on embedded software