CubeSats at BLUEsat
Introduction to BLUEsat

● BLUEsat is a student society focused on space based research and development. Our aim is

“to take on practical space engineering projects and in doing so, give students hands-on experience on space technology”

● Our current projects include:
  • QB50 Groundstation Collaboration
  • GreenSat Mission
  • Satellite Subsystems
  • Stratospheric Balloons
  • Off World Robotics
Groundstation

- BLUEsat’s 70cm Yagi Antennas
  - GNU Radio & Gpredict to connect with orbiting satellites
  - Direwolf & hardware TNC for packet radio decryption and encryption

- Groundstation
  - 2m & Amateur Radio license
  - Waverley amateur radio club
  - St George amateur radio club
Groundstation

- BLUEsat Groundstation is the communication link between ACSER and the QB50 EC0
- BLUEsat Groundstation is building towards more future missions
  - OMOTENASHI
  - GreenSat
GreenSat

- The major satellite project for 2017
- An orbital platform for biological and agricultural experiments in space
- GreenSat will provide a cost-effective means of performing biological experiments in space
- The focus will be on paving the way for agriculture in orbit to feed future astronauts
- The conditions on board will be similar to those expected of future space farming vessels

GreenSat

- GreenSat will be designed with the following considerations:
  - Atmosphere
  - Radiation
  - Chemicals/nutrients
  - Illumination, either through sunlight or artificial light
  - Artificial gravity through centrifugal forces
  - Population levels in complex biospheres
  - Contamination of the space environment
- Project is currently in the research phase
- Pending a successful application, this project will be presented at the IAC 2017 in September
- Next year will be detailed design and ground experiments
Conclusion

● BLUEsat is a gateway for UNSW students to learn the skills and experience to succeed in the growing space industry
● BLUEsat is looking for
  • collaboration with existing missions to make use of our resources
  • begin launching our CubeSats, either through outside commission or a BLUEsat-designed mission
  • professional level advice, support and monetary assistance
Contact Us

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