### **Applied Research Building Mission Operations Center**

After launch, spacecraft and balloons must be carefully monitored and commanded from thousands if not millions of miles away. A mission operations center performs this work while a science operations center coordinates the distribution and processing of data. The ARB's Mission Operations Center equips us with all the computers, networks, and software needed to control missions from right here in Tucson.

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#### **FUN FACT!**

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UArizona is one of only a few American universities with the capability to provide mission operations support for NASA Class D missions.



### Applied Research Building Anechoic Chamber

Built with radio-wave-absorbing material, the properties of the anechoic chamber allow researchers to test the performance of antennae and develop new experimental designs.



# The absorptive foam designe(



#### FUN FACT!

The quietest place on Earth is an anechoic chamber built and owned by Microsoft in which the noise level is -20.3 decibels. You can hear the sound of your own beating heart, flowing blood, and grinding bones.



### Applied Research Building Imaging Technology Laboratory

The ITL is a world-leading supplier of advanced scientific imaging sensors for visible, ultraviolet, and x-ray light detection. The most common applications for its imaging technologies are in astronomy and manufacturing.





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#### **FUN FACT!**

Although UV waves are invisible to the human eye, some insects, including bumblebees, can see them.



### Applied Research Building CubeSat Laboratory

This laboratory is a dedicated space for the fabrication of nanosatellites, often called CubeSats, and small space instruments, which represent the next generation of technology for space exploration and scientific investigation.



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### FUN FACT!

A CubeSat is about the size of a cereal box, though the smallest are 4-inch cubes weighing less than 3 pounds.



THE UNIVERSITY OF ARIZONA Research, Innovation & Impact

### Applied Research Building Laboratory for Advanced & Additive Manufacturing

Using state-of-the-art digital fabrication techniques, here researchers will design and fabricate complex materials for applications including national security, space exploration, biomedicine, and communications.



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#### FUN FACT!

The first printer to create three-dimensional objects appeared in 1983, just a year after the first CD was manufactured.



### Applied Research Building Space Materials Curation Facility

This facility is an archive of materials used to study the spectral signatures of artificial and natural objects orbiting in the Earth-Moon system in order to monitor and enhance space traffic management, national security, and planetary defense.

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#### **FUN FACT!**

The European Space Agency estimates that there are more than 170 million pieces of "space junk," (over the size of 1 millimeter) orbiting Earth. Even a onecentimeter object can penetrate the shields on the International Space Station.

