Lecture 10

## Gemini and Early Apollo

*Collier's* was highly influential in affecting people's imaginations as to what spacecraft should look like, yet it wasn't terribly scientific or realistic.

Gemini computers: pilot entered orbital parameters, computer would guide pilot through how/when the craft required his input

Question of what is the difference between telling the computer what to do via typing in commands versus piloting it with force control. Basically, why is there the feeling that typing in commands is less "control" than using a stick and rudder?

Astronauts frustrated with MIT training on how to use the guidance systems; MIT explanations were really theoretical, when the pilots wanted the practical information.

At first, the Apollo controls and computers were going to be fixable in-flight, but the astronauts' biological emissions (e.g. exhalations) were harmful to the electronics, so they ended up sealing off the controls.

Astronauts really like the shuttle; engineers think some of their suggestions for fully automating the shuttle's landing were repressed. A Russian shuttle successfully flew and landed, fully automatic. The issue of the human role on the shuttle is complex.

Final Project

Final write-ups are due the LAST day of class