Aspects of Apollo guidance and control
- approach to computing that was much more about real-time control instead of numerical input-output
- Lanning, Battin
- Draper Labs was innovative in inertial navigation in the late 40’s-50’s

Guidance
- Earth-horizon sighting was okay, but moon-horizon was best, since there was no atmosphere
- Batten did work on recursive estimation for Apollo – how many sightings are needed on the journey, and when do they need to be taken?

Design: optics and inertial unit were too large to put in front of where the astronauts were sitting; crew had to leave their seats to go down and take sightings. This made it less of a real-time piloting job, and more of a discreet, specialized operation.

NASA trusted the pilots to make minimal or no errors; software was designed with this in mind, which was problematic on the occasions when operator errors were made.

Analog computers probably made crew feel like they had more direct control, but there were still digital processes going on.

[slides showing control systems]

Verb-noun computer command syntax

Apollo code was literally woven into computer cores.