Lunar Exploration Missions Since 2006

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I. Introduction and status of missions list from New Views I

A. Pre-Apollo Apollo, Luna
B. Galileo, Clementine, Lunar Prospector, SMART-1?
C. What we learned, what we didn't
D. Ongoing science (retroreflectors, reanalysis of old data – seismology, samples keep on giving) [links to other chapters]

II. Lunar Missions Since 2006 (in chronologic order)

A. SELENE/Kaguya
B. ARTEMIS
C. Chang'e-1
D. Chandrayaan-1 (and refer to concurrent data from EPOXI, Cassini VIMS)
E. Moon Impact Probe
F. Lunar Reconnaissance Orbiter (LRO)
G. Lunar Crater Observation Sensing Satellite
H. Chang'e-2
I. Gravity Recovery and Interior Laboratory (GRAIL)
J. Lunar Atmosphere and Dust Environment Explorer (LADEE)
K. Chang'e-3
L. Chang'e-5
M. Other?

For each mission section:

1. Payloads, instruments, capabilities, coverage, performance
2. Operational parameters
3. Data collection and data products
    a. Volume of data collection, types and number of products, high-level (most usable), major products
    b. Documentation
    c. Calibration info, including links to using samples to calibrate datasets (tie points on Moon) [links to other chapters]
    d. Software and "user guides" if any
4. Major discoveries and outcomes
5. Online access to digital data (possibly @USGS under PDS Annex?)

III. Next Steps to the Moon

1. What measurements and capabilities are needed next?
    a. Exploration architectures
    b. Moon in role of international visions for leveraging other Solar System destinations and as a platform for other sciences (bio, Earth, astronomy) [link to GER]
2. New lunar mission plans (brief) – government led
3. Commercial efforts [link to other chapters, e.g., Resources, ISRU]

IV. Summary

1. We stand at the threshold of great discoveries…