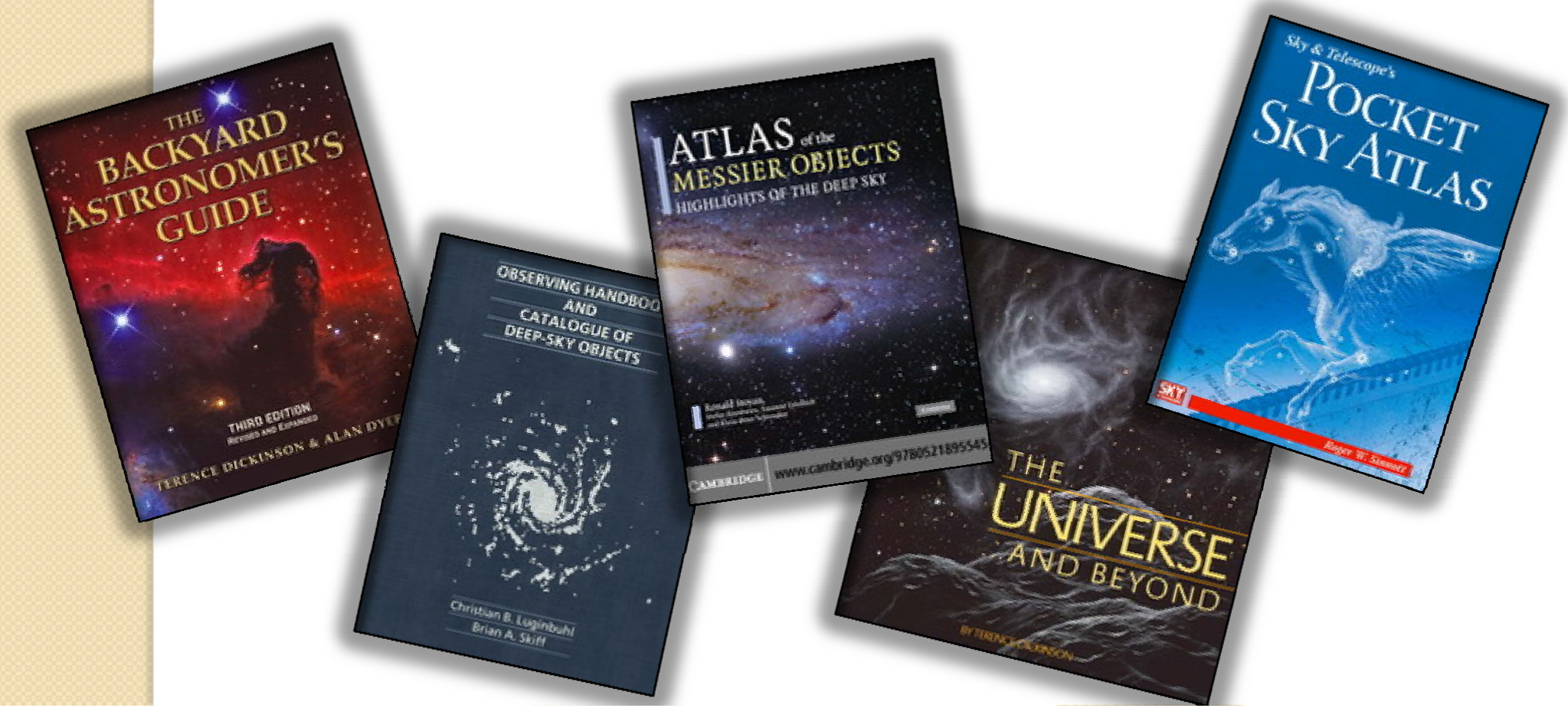
Your Favourite Astronomy Books

Ottawa Astronomy Workshop Series #7

March 14th, 2014



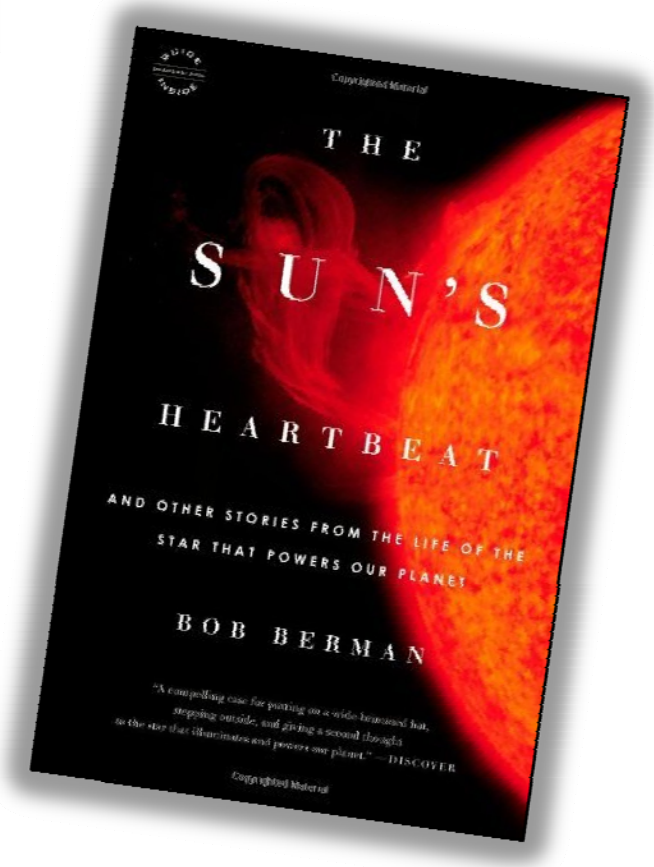
Today's Reviewers

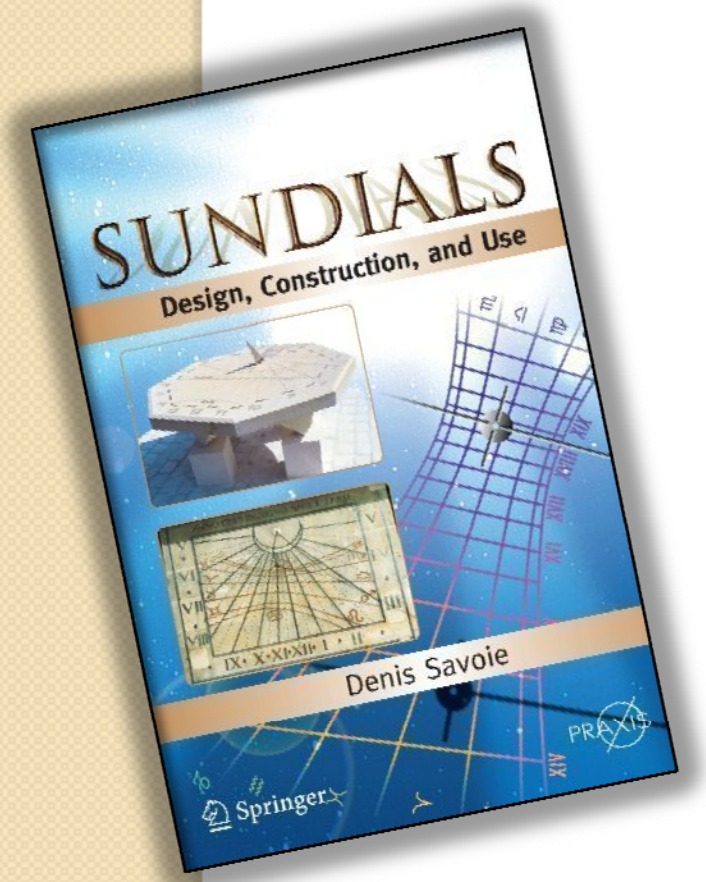
- Mike Moghadam
- Barry Matthews
- John Thompson
- Larry Stewart
- Jim Thompson

  - 2-3 books each, 5-10 min per book

Mike Moghadam

- "The Sun's Heartbeat", by Bob Berman

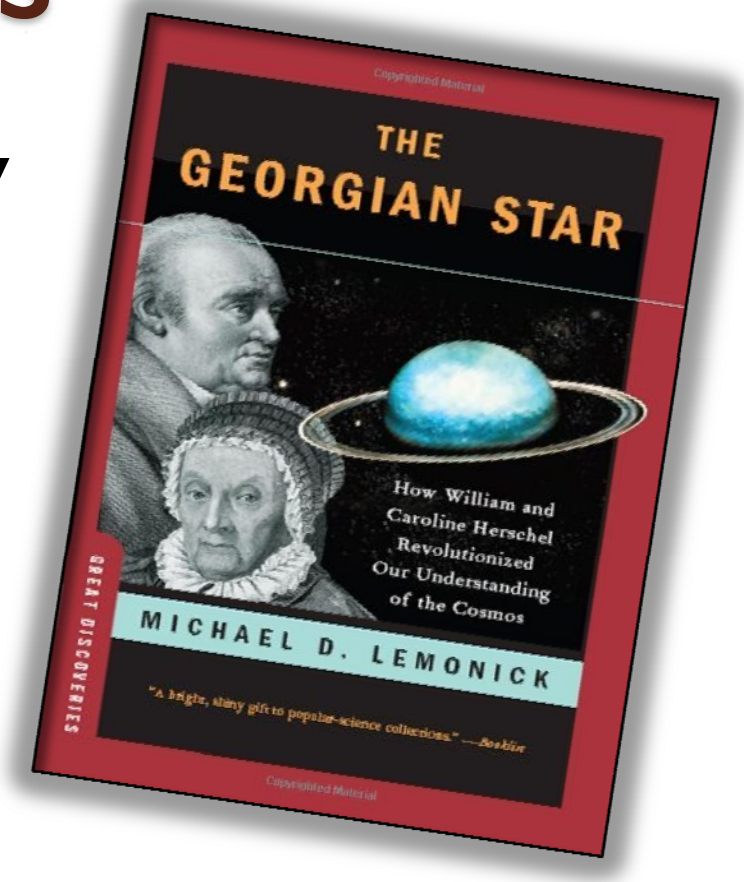


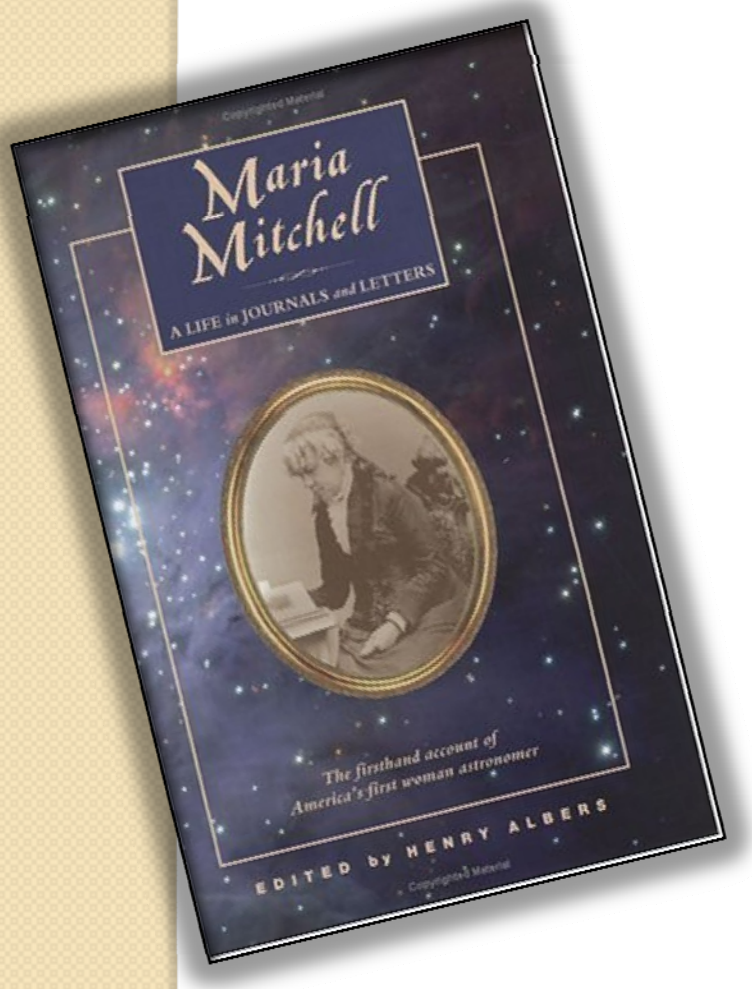


- "Sundials: Design, Construction, and Use", by Denis Savoie

Barry Matthews

- "The Georgian Star", by Michael D. Lemonick

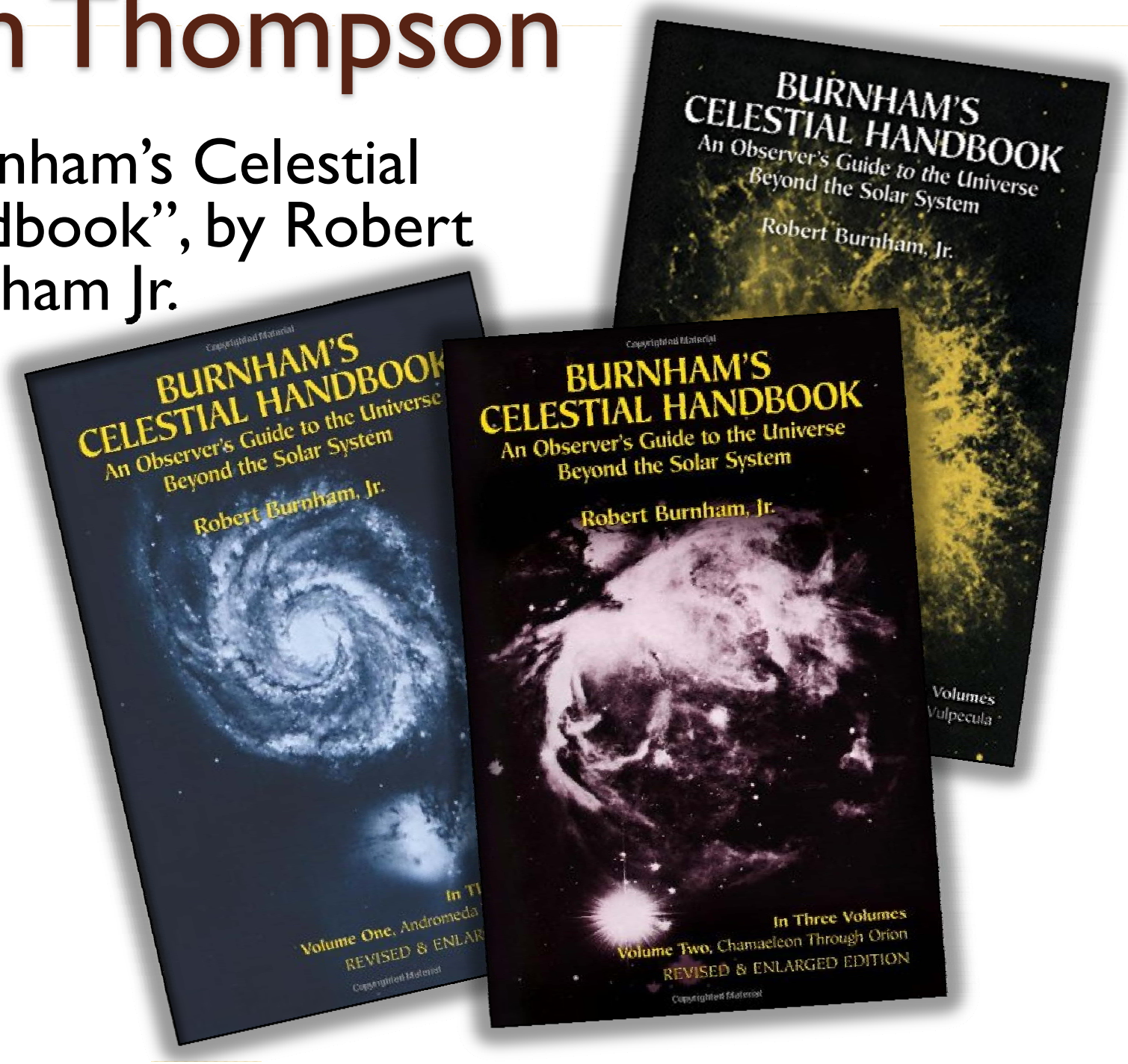




- "Maria Mitchell", edited by Henry Albers

John Thompson

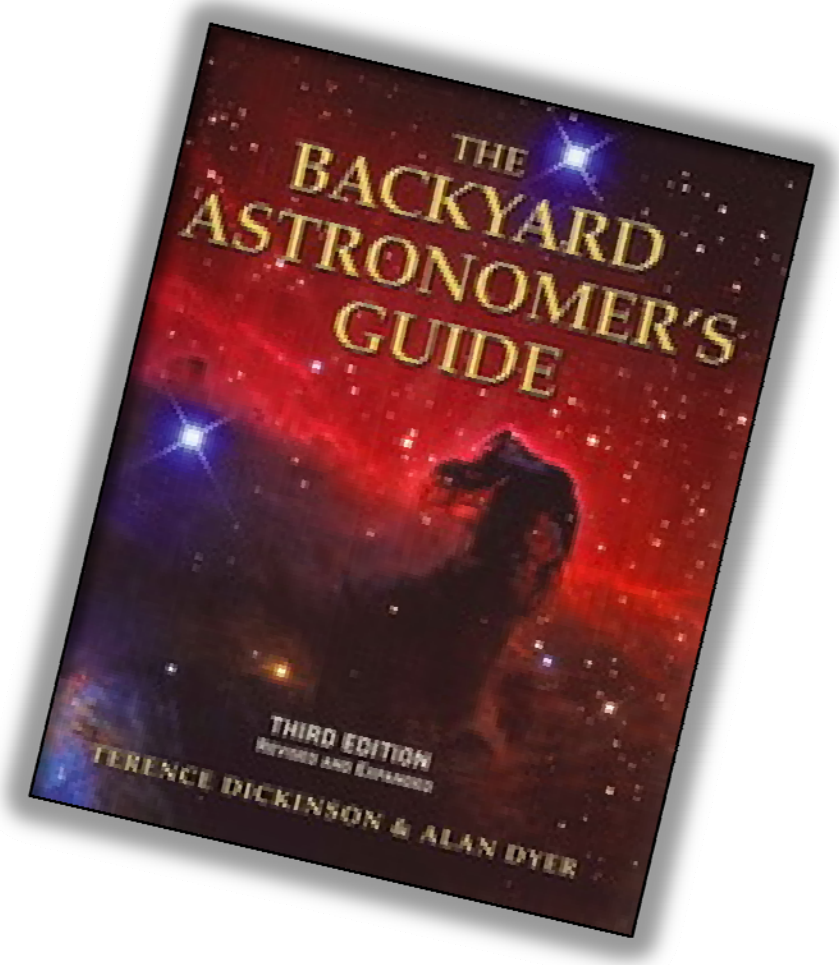
- "Burnham's Celestial Handbook", by Robert Burnham Jr.



Larry Stewart

- "The Backyard Astronomer's Guide", by Terence Dickinson & Alan Dyer

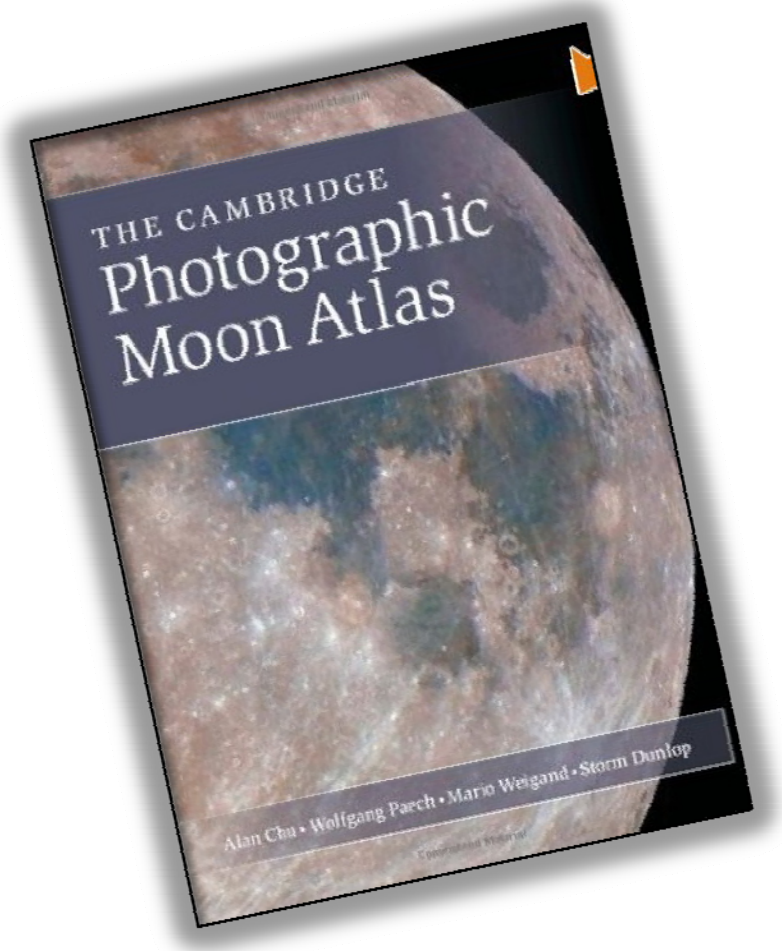
- E-books



Jim Thompson

- "The Cambridge Photographic Moon Atlas", by A. Chu, W. Paech, M. Weigand, & S. Dunlop

- Mystery book(s)...



Mystery book(s)…

- Gerard Kuiper (1905-1973)
  - Dutch born American astronomer
  - Discovered moons Miranda (Uranus) & Nereid (Neptune)
  - Discovered CO2 in Mars atmosphere
  - Discovered Titan's CH4 rich atmosphere
  - Pioneered airborne IR observing in 1960's
  - First suggested existence of "Kuiper Belt"
  - Spent most of career at University of Chicago
  - Moved to Tucson, AZ in 1960 to found the **Lunar and Planetary Laboratory** at the University of Arizona

Lunar & Planetary Laboratory

- Kuiper came to Tucson for greater independence & to be closer to world-class observatories in US SW
- LPL built as a community of scientists dedicated to solar system studies, including the Moon
- Actual knowledge of the Moon at the time was very limited – no-one studying!
- Kuiper convinced the USAF to fund a series of detailed photographic surveys of the Moon, starting in 1960.

Kuiper's Photographic Lunar Atlas

- Series of 4 atlases were produced:
  1. **Photographic Lunar Atlas** –1960, best images in 44 fields, compiled from existing photographic plates (Mt. Wilson, Lick, Pic du Midi, McDonald, & Yerkes), box of 212 17"x21" prints
  2. **Suppl. #1 Orthographic Atlas of the Moon** –1960, best photos in 44 fields from original atlas overlaid with a rectangular grid to allow accurate location of features, folio of 29 18"x21" prints
  3. **Suppl. #2 Rectified Lunar Atlas** –1963, shows 30 fields of Moon as viewed from directly overhead, generated by projecting existing lunar photos onto 3' sphere and re-photographing, folio of 142 18" x 21" prints
  4. **Suppl. #3 & #4 Consolidated Lunar Atlas** –1967, systematic re-photographing of Moon with higher resolution under supervision of LPL (Catalina Obs., US Naval Obs.), box of 227 17"x21" prints

Impact of Kuiper's Lunar Atlas'

- Provided a solid foundation upon which scientific research of the Moon could begin anew
- Developed technologies for rectifying lunar photos, new printing processes for better reproduction of photographic plates
- US Lunar Program heavily dependant upon these atlases and the work of the LPL
- Directly contributed to discoveries like fact that basins are impact features (Orientale)
- Still in use today: Astronomy Magazine, Lunar Wiki, many books & online articles

Let's Have A Look!