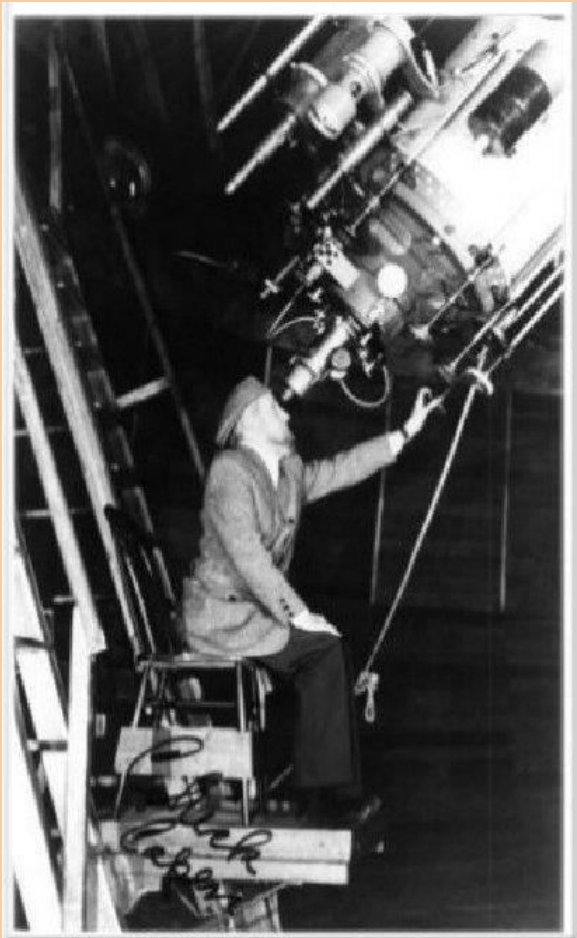
The Planetary Astronomer: Charles F. ("Chick") Capen

Charles F. Capen was a well-known and respected astronomer whose astronomical career spanned over 50 years. His life long collection of astronomical books and papers have been relocated from his home to the Roper Mountain Science Center in Greenville, South Carolina. Presented during the lecture were slides of his library room and the other facilities at the Science Center. In the early morning hours of May 28, 1986 Chick Capen passed away in his home in Cuba Missouri after suffering an acute asthmatic attack.

Announcement: Roper Mountain Science Center has closed the Charles F. Capen Memorial Library and Achieves and is now in storage.



Charles F. ("Chick") Capen, Jr. posing at the Lowell Observatory's 24-inch Clark refractor.

NOTE: **Martian Crater Named for Charles F. "Chick" Capen: A 70 km crater on Mars has been named for the American astronomer Charles F. ("Chick") Capen. It is located in Arabia about 10° north of Schiaparelli (6.57°N, 345.73°W). [Approved by International Astronomical Union (IAU) Working Group for Planetary System Nomenclature (WGPSN) on January 02, 2008, Planetary Names: Crater, craters: Capen on Mars]**

WHO WAS CHARLES F. ("CHICK") CAPEN, JR.?

Charles F. Capen (January 01, 1926- May 28, 1986) was an internationally known scientist and lecturer. Members of the Association of Lunar and Planetary Observers (ALPO) especially knew him well. He was one of the few professional astronomers who contributed to the organization and served as Mars Section Recorder for 17 years. Chick, as we all knew Charles F. Capen, was a pioneer in the study of the Solar System. He helped to establish or construct four major astronomical observatories and was responsible for planning their observational programs and training their personnel. Capen was well known for his vast collection of scientific literature, especially astronomical books and papers.

He was born at Gilman, Illinois on January 1, 1926. During high school, he began to study the Red Planet Mars with a port-able telescope. After high school, Capen went on to earn two diplomas from Spartan College of Aeronautics in 1945-1949 and was a tactical squadron flight instructor with the Army Air Force during the Korean War. He later gave up his love of aviation for astronomy and acquired five years of geophysical and astrophysical education from New Mexico State University, University of Illinois, and Indiana University.

Capen learned the fine art of planetary observing and scientific research under the guidance of Dr. Clyde Tombaugh, discoverer of the planet Pluto, at New Mexico State and the late Dr. Earl C. Slipher, world renown authority on Mars, at Lowell Observatory. A few of his professional accomplishments over the years include the photographic patrols for possible small satellites of the Earth, site testing for the U.S. Air Force facility near Cloudcroft, New Mexico, and the Director of the Smithsonian Astrophysical Observatory Station at Shiraz, Iran in 1957-1960.

In 1962 Capen was appointed Resident Astronomer of the Jet Propulsion Laboratory's Table Mountain Observatory in Southern California where his research helped to support the Mariner space missions to Mars, and as advisor to the Viking space missions to Mars. From 1969 through 1983 he was employed at the Lowell Observatory's Planetary Research Center at Flagstaff, Arizona. He retired from his formal astronomical observatory duties in 1983, moving to Cuba, Missouri to complete his life long work on Mars and comets.

Charles Capen received numerous awards for his achievements, including the Space Science Division Award by the California Institute of Technology - Jet Propulsion Laboratory for his outstanding services during the Mariner IV, VI, and VII space missions as a Mars Team Member, the Institute of Environmental Sciences Award of the Year (1969), the Dr. G. Bruce Blair Gold Medal for outstanding contributions to astronomy (1960), and the Institute of Navigation Award for contributions to astronautics and the conquest of space (1984). In 1969 Thomas Paine, Director of NASA, presented Chick with the Apollo Achievement Award in Washington D.C., in appreciation of his dedicated service to the nation as a member of the Apollo Team whose work resulted in Man's first landing on the Moon. In 1985 Chick was the first recipient of the A.L.P.O. Walter H. Haas Award for his outstanding observational work that has increased our understanding of the planet Mars.

Charles F. Capen was well known for his early work with color filters, psychophysical observational studies, colorimetry of the planets, and a pioneer in color astrophotography since 1954. Examples of his innumerable astronomical and nature photographs and science texts are found in prime TV specials, magazines, encyclopedias, and astronomical books and journals of many nations. He published over 150 research papers dealing with astronomy and geophysics, 100 popular natural science articles, and three books.

For more than 26 years he lectured at universities, public schools, and astronomical societies around the world. For several years he had the honor of being an Alexander F. Morrison Science Lecturer while at California Institute of Technology-JPL. In 1983, Capen presented results of his research to the august body of the General Assembly of the International Astronomical Union meeting in Greece.

C.F. Capen biographical sketches can be found in Marquis "Who's Who, Frontier Science & Technology, American Biographical Institute, Community Leaders and Noteworthy Americans," and "Personalities of the West and Midwest." Capen was a member of the International Astronomical Union, American Astronomical Society (AAS), American Geophysical Union, Division of Planetary Sciences of the AAS and Director of Mars Section of the Association of Lunar and Planetary Observers.

At the time of his death, Chick Capen was completing his work as co-author of the well-known book, Introduction to Observing and Photographing the Solar System, co-authored by Thomas A. Dobbins and Donald C. Parker. Soon after Capen passed away, Jeff Beish completed the book Mars Observer's Handbook they had worked on for several years and was published by the Planetary Society and second and subsequent printing by the Astronomical League.

THE ROPER MOUNTAIN SCIENCE CENTER

After a four-year search for an appropriate location for this prized collection, we elected in January 1990 to sell it to the Roper Mountain Science Center in Greenville, South Carolina. The dedication for the library took place on May 12, 1990, adjacent to the 7th largest refracting telescope in the United States, indeed a most appropriate location for Chick Capen's library. After all, he spent 26 years observing with Lowell Observatory's 24-inch Clark refractor.

LEFT: Virginia Capen standing next to Capen Library Plaque. RIGHT: The 23-inch Clark Refractor telescope in the Charles F. Daniel Observatory.

The library is housed within the Center's 170-seat 50-foot planetarium. Doug Gegen (Director, 1986 - 2011) of the Charles E. Daniel Observatory, and the co-author presented several papers before the dedication. Virginia Capen and her two sons, Rigel Capen and Regulas Capen performed the ribbon cutting ceremony.

The Roper Mountain Science Center is operated by the School District of Greenville County, South Carolina and is one of the finest astronomy teaching facilities in the country. Besides the new 50-foot Digistar planetarium, the Science Center features the historic 23-inch Alvan Clark refractor, formerly at Princeton University. This instrument is the sister telescope of the Lowell Observatory's 24-inch Clark located on Mars Hill in Flagstaff, Arizona where Capen spent many years on the observatory's staff.

Conceived in the late 1970's as a state of the art teaching facility the Science Center provides instruction in all the sciences for students and teachers. One of the very few centers in the country of its kind. Located on its 62 acres is the 45-foot dome that houses the Charles F. Daniel Observatory's 23-inch Alvan Clark refractor. The center includes the Symmes Hall of Science featuring many scientific exhibits, study halls, physics and chemistry laboratory, optical and astronomical instrumentation shop, and a 300-seat auditorium. Also, a two- thousand-seat amphitheater provides a venue for music and theater throughout the year while concerts are given in the warm summer months.

New to the Center is a major planetarium. The T.C. Hooper Planetarium Sciencesphere features a Digistar projection system that is based on computer generated video images provided by a $60,000 fisheye lens and a Digital Corp. MicroVax computer system. The planetarium seats 170 and features one of the most modern and up-to-date sound and video systems in the world.

As Curator of Astronomy at the Center, author Doug Gegen (Ret), encourages both amateur and professional members of ALPO and the Astronomical League to visit the observatory to examine any of the materials in the Capen Library and Archives and to use the 23-inch refractor for lunar and planetary studies. Also avail-able is the Mogey 6-inch refractor that is equipped with white light and H-alpha solar filters and several Newtonians from 8 to 12.5 inches in aperture.

The 23-inch refractor was completed in 1882 for Princeton University and was the main instrument in their Halsted Observatory. The well-known astronomers Harlow Shapely, Henry Norris Russell, and Charles Young used it. In 1933, the telescope was entirely rebuilt by J.W. Fecker Company that provided a much heavier mount and new tube assembly. The lens was "figured" by Alvan Clark and his sons that have provided many excellent observing sessions and some of the best views of Mars for the authors also the internationally known astrophotographer Donald C. Parker. For more information see Gegen's excellent article in Sky and Telescope Magazine, May 1988 or write to: Greg Cornwell, Roper Mountain Science Center, 402 Roper Mountain Road, Greenville, SC 29615.

It is hoped that serious amateur planetary astronomers and professionals will take advantage of the resources at the Science Center. There are accommodations close by, and class schedules normally allow for late night telescope use. In exchange for telescope time you would be asked to contribute your time and efforts to present a talk with the students or interested public on the work that you are doing. Not a bad price for using a 23- inch.