The genesis of amateur astronomy in the Lehigh Valley can be traced to a chance encounter in 1894 in Center Square Allentown. A dignified old man wearing a Prince Albert coat and skull cap offered an 18 year-old youth a look through his telescope. The young man viewed the planet Saturn, sparking a lifelong interest in astronomy, and becoming a founding father of amateur astronomy in the Lehigh Valley. The young man was D. George Knecht.

Knecht was born in Sand Spring, North Whitehall Township in 1876. At age 12, he worked on neighboring farms and left school. He went to Allentown in 1894 when he was 18, and started to assist Allentown dentist Dr. Rabenold. He went into dentistry after graduating from Pennsylvania College of Dental Surgery in Philadelphia in 1900 at the age of 24, and had an office 35 N. 9th St. in Allentown from 1900 until he retired in 1962 at the age of 86.

He picked up two second hand astronomy books while in dental school, and started to build telescopes. He admitted later that his first efforts weren’t very good, but he persisted in his efforts. Through the years, he made about a dozen telescopes, and gave about 10 of them away. Beginning in 1926 or 1927, Knecht was a regular attendee of the Stelafane Amateur Telescope Makers annual convention. There he made friends with Dr. Russell W. Porter, architect of the 200 in. Hale Telescope at Mount Palomar, and Albert Ingalls, an editor for Scientific American, who would write a regular column on telescope making, and publish three classic volumes on amateur telescope making. A couple of Knecht’s telescopes were featured in Ingall’s column.
Dr. Knecht also repaired clocks, and he was a poet, writing in Pennsylvania Dutch. Some of his poetry was published in the Morning Call in a newspaper column Pennsylvaanisch Deitsch Eck in the 1940s.

**A Fateful Meeting**

In 1927, a young man of 16 years old by the name of Ralph Schlegel went to Dr. Knecht to have a tooth filled. While he was working on Ralph’s tooth, Dr. Knecht talked about telescope making, and when Ralph left the office, he decided he would also build a telescope.

This serendipitous meeting was to shape organized amateur astronomy in the Lehigh Valley.

A couple of years later, the August 1932 solar eclipse generated the public’s interest in astronomy and telescope making. This eclipse was total for New England and about 80% partial in the Lehigh Valley. On October 9, 1932 the Allentown Morning Call did a feature article on Dr. Knecht’s telescope making activities. He mentioned that he had made six telescopes.

by that time, the largest a 12 in. reflector, and was starting work on a 6 inch refractor. The paper mentioned that locally, telescope makers included Ralph Schlegel, L.J. Holmes, and L.H. Cutten.

The last person named, L.H. Cutten, would become the third member of the core of amateurs that would found the first amateur astronomy group in the Lehigh Valley, the Lehigh Valley Astronomical Society (LVAS).

Leverett Howell Cutten was a native of Nova Scotia. He graduated from the Massachusetts Institute of Technology in 1907 with a degree in mechanical engineering. He was plant manager for Mack Trucks from 1919 to 1949 and was responsible for building many of the plants. He held a 1923 patent for heating and ventilating cars assigned to International Motors Corporation, New York (the parent company for Mack Trucks).

Besides astronomy, his other interests included archery, photography, tool making, and silversmithing. He made ceremonial maces for MIT, Bates, and

L.H. Cutten with Ceremonial Mace at M.I.T.

Courtesy of M.I.T.
Moravian College. When Cutten became interested in archery, he first learned how to make bows and arrows and made them. When he became interested in astronomy, he first learned how to make a telescope and constructed a 10-3/8 inch clock driven reflector and a 6 inch reflector. He took up sculpting after reading “Sculpture Inside and Out” by Malvina Hoffman.

Cutten died in 1960 and left $210,000 in stocks to his son, William Cutten. Cutten’s wife, Illene (King) Cutten died when William was young. The son was raised by Cutten and his widowed sister, Lula Coombs.

**Birth of the LVAS**

Five amateur astronomers met at the home of L.H. Cutten on Thursday, February 27, 1936, and started what would soon be named the Lehigh Valley Astronomical Society. These individuals were:

- L.H. Cutten
- Charles Kleintop
- Albert Almeida
- Forrest Dorney
- Eugene Carl Jr. (secretary)

Two persons were already considered members, but did not attend the first meeting. These were:

- Norman R. Bell
- Dr. D. George Knecht

There were three rules: A monthly meeting; Members should be interested in the work of the club; and only small dues would be asked of the members. By the end of the first meeting, the treasury had 25 cents. Traditionally this group met on Friday evenings.

The next month new members were added:

- Dr. Paul V. Kunkel
- Ralph Schlegel
- Fred Koch
- William Deibert
- Charles Warmkessel

Within a few months, the group grew to 15 members. The group was formally named LVAS in April, 1936. There were no real officers elected, but three advisors were named: Cutten, Knecht, and Schlegel. The other position was Secretary, and the role was filled by Eugene “Digger” Carl.

Carl was a diligent secretary: His minutes spanned 1936 through April 1941 when he was drafted. He resumed his secretarial position in March 1946, and continued until at least Dec. 1953. He served in the Army during WWII, came back to Allentown in 1946, and enrolled at Kutztown. He graduated as a teacher in 1954, and began his teaching career with the East Penn School District in 1955. He then taught in Albuquerque, N.M., for 12 years and was selected “Teacher of the Year” in 1967. While in Albuquerque, Carl helped the Scouts build a planetarium at Hodgin Elemen-

an membership award from the National Council, Boy Scouts of America in 1982. He also received the Silver Beaver Award, scouting's highest award, in 1976, and was the organizer of cinematography and astronomy Explorer Post 187. He died in 1987.

From the beginning, LVAS members were active participants in the annual Stellafane convention. On August 8, 1936, Mr. Cutten was the first to register, and Dr. Knecht spoke about the fledgling group at the convention. Interestingly, the speaker that year was none other than Russell W. Porter, who spoke on the 200-inch telescope.

The group met at the home of Leverett Howell (L.H.) Cutten. Cutten had built his homestead in the mid-1920s when most of that area was still open field. Meetings were held on Friday nights. On April 24, 1936, the LVAS name was chosen. In May, the group started reading “The Life of John Brashear.” During the next few months the group discussed the origin of the solar system, the celestial sphere, astronomical photography, telescope making, and they did observing during the summer months.

Eugene Carl’s minutes spanned 1936 through April 1941 when he was drafted. He resumed in March 1946, and continued until at least Dec. 1953.
The Open House Events

In 1936, the society inaugurated Open House events, to further the knowledge of star study in Allentown. The public was invited to these events and attendance grew from 21 at the first event on October 20, 1936, to 35 at the event on June 15, 1937, to 93 at the event held on September 9, 1937. In the summer of 1939, over 400 individuals viewed the heavens through 10 telescopes at the open house, including Allentown’s mayor.

**LVAS Open Houses**

- October 20, 1936: 21 attendees
- June 15, 1937: 35 attendees
- September 9, 1937: 93 attendees (> 100?)
- August 29, 1938: > 200 attendees
- August 21, 1939: 357 attendees (> 400?)
- September 9, 1940: 74 attendees (cloudy)
- October 28, 1941: No record of attendees
- May 6, 1946: 129 attendees (> 150?)
- May 26, 1947: 50 attendees (> 100?)
- June 14, 1948: ~ 100 attendees
- After 1948?????
COME ONE! COME ALL TO
THE LVAS OPEN HOUSE
AND SEE THROUGH
POWERFUL
TELESCOPES
FREE OF CHARGE!!
TO BE HELD ON
MON. EVE, AUG. 29th.
8PM. AT MR. CUTTEN’S HOME,
2815 WASHINGTON STREET
ALLENTOWN PA.
IN CASE OF CLOUDINESS,
WILL BE HELD ON
TUES. OR WEDS. – AUG. 30 or 31
[WHICH EVER IS CLEAR]
A NIGHT OF FUN
AND EDUCATIONAL
PLEASURE FOR ALL!!
SO ————
TELL YOUR FRIENDS!
BRING THEM!
AND ANY OPTICAL INSTRUMENTS
YOU MIGHT HAVE!
—- PRESENTED BY THE —-
LEHIGH VALLEY ASTRONOMICAL SOC.
In January 1937, Ralph demonstrated his homebuilt orrery to the group. As of this writing, the orrery is in the possession of Pete Brooks, and is still functional. Over the next few monthly meetings, there was more reading of the Brashear biography, and a discussion about life on other planets. Discussion must have been lively because at the March 1937 meeting, there was a decision to halt meetings at 10 p.m. In April the group observed through Mr. Robert Fisher’s reflecting telescope. In May, Cutten and Knecht gave a presentation to the Boy Scouts at Cetronia. On June 15th, the second open house event was held, with 35 people present. In July there was discussion of Comet Finsler and, of course the upcoming ATM meeting at Stellafane.

The twelfth annual convention of The Springfield Telescope Makers was held on Saturday August the 14th, 1937 at Springfield Vt. At their mountaintop observatory “Stellafane.”

The convention was opened with registration, however, the Allentown representatives were not quite as fortunate as other years, because they were not the first to register this time. At about two or three o’clock in the afternoon many telescopes from many sections of the country were set up at “Stellafane,” and all those who were interested were examining their favorite scopes. Many persons brought their cameras with them and spent most of the afternoon taking pictures of these splendid pieces of work.

This was followed by the supper which was held this year about 6:30 p.m. at which time everyone enjoyed the famous “bean hole beans” baked by old Mr. Redfield who is also an originator of astronomical poetry and is eight-six years of age. Then the meeting was held, starting at about 8:30 p.m. It was again conducted by one of the originators of the Springfield Telescope Makers, Mr. John Pierce of Springfield. The main portions of the meeting included speeches by persons representing other clubs and societies at which time Eugene Carl spoke for the Allentown group and the LVAS.

Two well-known speakers of the evening included Mr. James Stokley from the Franklin Institute in Philadelphia and Mr. Russell Porter the organizer of the Springfield Telescope Makers and a designer of the 200 inch telescope to be erected on top of Mt. Palomar in California for the Mt. Wilson Observatory.

Mr. Porter brought movies of the great mechanism with him which showed the giant mirror’s travel across the continent from Corning N.Y. to Mt. Palomar. Following the meeting, the twelfth convention was adjourned.

After the meeting, however, everyone seemed to turn all eyes toward the splendidous heavens. The evening was perfect, the sky being literally studded with stars. The heavens itself was an inspiring sight. The Milky Way streamed from one horizon to another, the moon was low in the western sky, Mars, Jupiter and Saturn were visible and greatest of all many saw the much talked of “Finsler Comet” with the naked eye and needless to say it was wonderful in a telescope. So after a full evening of this magnificent celestial entertainment we headed down the trail again, the next morning to be homeward bound.
In March 1938 the LVAS Bulletin debuted. This publication was initially produced on a hectograph machine or early ditto machine, using a gelatin base. The first issue featured an article by Leonard Tielmann on Spectroscopy. In September 1939, Dr. Knecht was featured on the cover of the LVAS Bulletin. Despite the difficulty in creating masters, and the limited print runs available using this process, the LVAS Bulletins are creative and sophisticated. They combined typewritten text with graphics and handwritten headings. Initially, they were printed chap-book, or bulletin-sized, with four pages produced from one 8-1/2 x 11 in sheet printed two sides. Within a year, the bulletins were printed in a full-page format and stapled.

At the 1938 meetings, programs included the Moon, variable stars, and observing. In November 1938 there was talk of a junior group, though no further information exists about such a group.

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The January, 1939 meeting featured Ralph Schlegel and Norman Bell, who showed the group a “Preview of the Stars” with the aid of a stereopticon constructed by Schlegel. A stereopticon is a slide projector or "magic lantern", which has two lenses, usually one above the other. The two lenses are used to dissolve between images when projected. The meeting minutes recorded that “Ralph operated the projector which presented a very vivid picture of the starry heavens at various seasons of the year; While Mr. Bell pointed out the constellations and brighter stars.” In February, LVAS member Norman Bell, then a student at Lehigh University, spoke on “The Moon and its Geography.” Bell received his B.S. in electrical engineering from Lehigh University in 1939 and his
M.S., also in engineering, from Cornell University in 1945. In April 1945 he became affiliated with American Association for the Advancement of Science. He joined North Carolina State University in 1958 and stayed there until his retirement in 1982.

The March 1939 LVAS Bulletin featured an article entitled “Star Mythology” by Dr. Paul V. Kunkel (1903-1974), an LVAS member who was chairman of the mathematics department at Cedar Crest College from 1935 to 1967. At the April meeting, Ralph Schlegel returned to give “A Preview of the Nebulae,” and showed slides of notable nebula, including the Owl Nebula, the Dumbbell Nebula, and, yes, the Andromeda Nebula. In August, 1939, the annual LVAS open house had an estimated attendance of 400 people, the largest gathering in the club’s history. One of the attendees at the open house was Lionel Adda, who joined LVAS the following month. He would become the next secretary of the group.

The LVAS had 17 members at the beginning of 1940, and added three members that year. Notable members included piano teacher Paul Schubert (1893-1966) and his son Luther; Charles Warmkessel (1897-1992) who was at various times a cabinet maker, an employee at Allentown Paint, and a radio mechanic for Gehringer-Harlacher Company in Allentown.

In 1940-1941, D.W. Rosebrugh, Secretary of the American Association of Variable Star Observers, wrote a series of articles on telescope mountings for the LVAS Bulletin. Ralph Schlegel was very active that year; he presented on the 200-inch mounting using slides by Russell Porter. In December, Ralph presented on comets, and showed
slides of comet Cunningham, a comet which made it to magnitude 3.6. The group started reading the book “Men, Mirrors, and Stars,” and many of the discussions at the general meetings focused on telescope making in general, and the 200-inch telescope specifically.

The September 9, 1940 Open House was not as well attended. According to the meeting minutes, “This “open house” was not quite as fine as those held in 1939-38 due to the scattered clouds in the sky which tended to break up the observation somewhat, although several objects of public interest could be well viewed. … It was believed that all who attended the meeting enjoyed it thoroughly as many of the visitors expressed their opinions of it to the members. The total registration count was seventy-four. It was felt that the cloudy skies kept many away from the meeting. Noticed in the registrations was a visitor from Columbia Missouri. The mayor of our city later expressed his regrets for not being able to attend.”

To be continued in Part 2