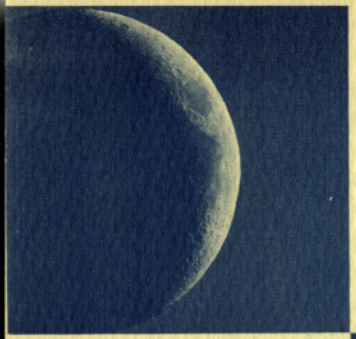
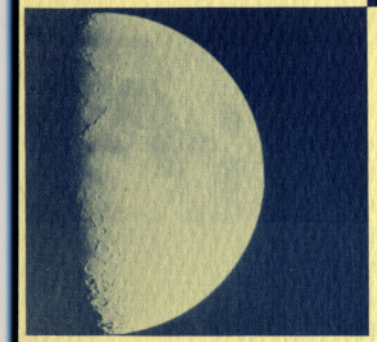
rocket city astronomical association

HUNTSVILLE, ALABAMA





One-half, one-fourth, and one-eighth Moon through the RCAA telescope. (Photos by Schmitz and Stuhlinger)

This brochure was compiled and edited by Bill Isbell with assistance from Conrad Swanson, George Ferrell and Ralph Jennings

Photographs used herein were taken by RCAA members Everett Robertson, Gert Schmitz, Ernst Stuhlinger, and Bill Isbell

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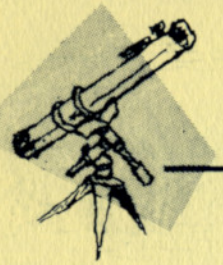
ROCKET CITY ASTRONOMICAL ASSOCIATION

FOREWORD*

In the fall of 1945, shortly after my arrival in the United States, I became ill and was sent to William Beaumont Army Hospital in El Paso, Texas. The doctors said I had hepatitis and prescribed a fatless diet and several weeks of complete rest.

My bed neighbor in the hepatitis ward was a young corporal. His home was a ranch near El Paso, and he had just returned from the war in the Pacific. We became good friends and used to stroll through the hospital's endless covered walkways while he mercilessly destroyed my long cherished illusions about the pleasant and carefree life in the South Sea island paradise. One evening we were standing at the hospital fence watching the sun, beyond the tremendous expanses of desert, set on the Sacramento Mountains. The range was well over a hundred miles distant, but in the clear desert air it looked as if it were but a stone's throw away. To my continental eyes, accustomed to the verdant valleys and hills of central Europe, the sight was overwhelming and grandiose, but at the same time I felt in my heart that I would find it very difficult ever to develop a genuine

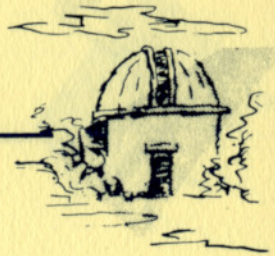
*Wernher von Braun, "Where Are We Going?," SPACE Journal, Summer 1957 (Re-printed).



emotional attachment to such a merciless landscape which, while unable to support more than a mere trace of vegetation, dwarfed man by its very expanse.

It was obvious that my friend the Texas corporal did not share my hidden sentiments in the least. He was visible moved by the colorful spectacle. At last I ventured a carefully veiled question. I wanted to find out what in this desolate landscape it was that could make a man feel homesick for it. His reply was simple and exhaustive: "I want to see where I am going."

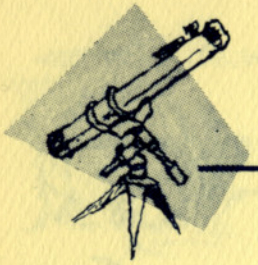
I have often thought of these wonderful words. In our daily labors as engineers engaged in the business of building bigger and better rockets, most of us live as if we were in a fog. We do not see where we are going. We proudly declare that our rockets will soon conquer outer space for man. Our work is moving along at a fast clip; we derive great personal satisfaction from our progress, and every day brings us closer to the realization of our cherished dream: space flight. But how many of us ever bother to take a look at the grandiose scenery which we are about to open as a new theater of man's activity? And yet, all we have to do is to look up to the heavens on a starry night.



Astronomy is as old as mankind itself. Celestial events such as solar and lunar eclipses were regarded by ancient man as feats of demons. Later, with the rise of the great religions, they were interpreted as manisfestations of God's omnipresence and universal rule. As early as 4000 B.C., skillful astronomers began to predict eclipses with astounding accuracy. This demonstrated ability of astronomers to predict certain events of the future gave birth to astronomy's illegitimate child, astrology, the protagonists of which ventured with their predictions into noncelestial spheres.

Until the Middle Ages, a man could make a good living as an astrologer, but with astronomy alone he could not. This is the simple reason behind the strange fact that many of the world's greatest astronomers held remunerative jobs as Royal Court Astrologers. With the advent of the Renaissance and the Age of Enlightenment, astrology fell into disgrace. Astronomy as a science was purified of superstitious beliefs and hocuspocus, but astronomers became poor. To this day, astronomy deservedly has the reputation of being a "poor" science.

Rocketry is about to change this. When artificial satellites begin circling the earth, astronomical laws, hitherto used exclusively



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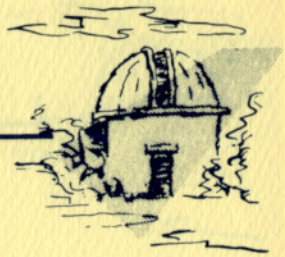
to describe the motions of heavenly bodies, will be applied to man-made equipment.

Astronomical observations will be needed not only to determine the paths of comets, but also to check on the performance of rocket guidance systems. Astrophysical research related to cosmic and other radiation will be heavily called upon to resolve the remaining questions which require answers before man himself can set out on his travels through outer space. That "poor" science, astronomy, needs a shot in the arm to be ready for the coming age of rocket power.

Thus it was only logical that, about a year ago, a group of Huntsville rocket scientists and engineers, as well as a number of business people and youths of the community, banded together to form the Rocket City Astronomical Association. We had no money, no official support, only unbounded enthusiasm. Generous donations from Huntsville citizens and business firms permitted us to take action. Today, the Association owns atop Monte Sano a fine observatory, the silvery dome of which houses one of the finest reflector telescopes in the South. Now that much of the work of its own establishment is done, our Association has set as one of its objectives the task of administering the shot in the arm for astronomy and related sciences. With this particular goal in mind we

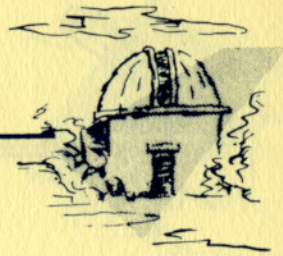


have launched this magazine to acquaint interested persons with the problems that must be answered, and the direction in which we must go in our efforts to achieve space travel.

The valuable contributions of the young people in the formation of our Association is in itself significant. Today's "teenagers" will be the space pilots of tomorrow, and youngsters have always had that keen sense for the essential that grownups so frequently lack. The future space pilots want to know where they will be going, and they are well aware of the fact that outer space is an awfully big place -- even bigger than Texas.

Dr. Wernher von Braun, Chief of Development Operations at the Army Ballistic Missile Agency helped to organize Huntsville's amateur astronomers and, as president of the RCAA, has been their leader ever since.

ROCKET CITY ASTRONOMICAL ASSOCIATION



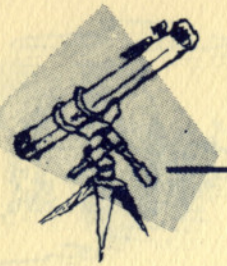
HISTORY

The Beginning

In the fall of 1954, sixteen-year-old Sammy Pruitt sold several Huntsville high school classmates on the idea of forming a club to study astronomy. Failing in their initial try to interest more boys of their own age, the group turned their efforts toward soliciting the help of a few scientists at nearby Redstone Arsenal. Among the early responders from the Army's famous missile team were Dr. Wernher von Braun and Dr. Ernst Stuhlinger.

The Association had its beginnings in a series of informal meetings at the home of Dr. Martin Schilling, another Redstone Arsenal rocketeer, during the Winter of 1954 and early Spring of 1955. Adults and teen-agers participated in the discussions about astronomy. It was at one of these early meetings that a decision was made to form an association and buy a large telescope. Inspired by von Braun's leadership, members kicked in with nearly $800.00 toward the purchase of a telescope. And while von Braun went shopping for a suitable scope, plans were made to build an observatory. Wilhelm Angele, another Army missile expert, volunteered to design the observatory building .

The first temporary officers and directors were elected April 4, 1955. They were, von Braun, president; B. Spencer Isbell, vice-president; Samuel F. Pruitt, secretary; Erwin



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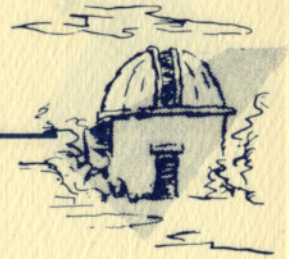
W. Priddy, treasurer; Stuhlinger, Charles T. Paludin, Gerd Schilling, Conrad D. Swanson and Dean Breasseale, directors.

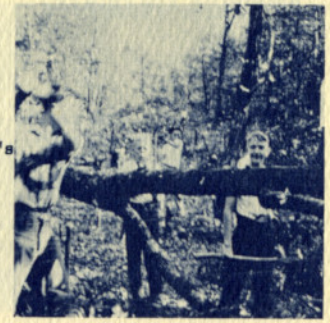
After aerial reconnaissance to pick the best location, Stuhlinger and Paludin were successful in obtaining from the State of Alabama a 13-1/2-acre tract of land in Monte Sano State Park on Huntsville's outskirts. State officials, thoroughly sold on the project, agreed to a nominal rental of $1.00 for a 25-year lease, renewable at the group's option.

The road leading to the observatory site in Monte Sano State Park near Huntsville.

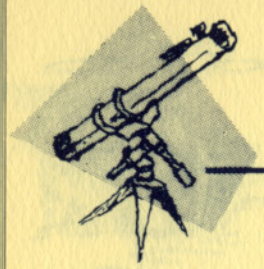


Robert Bradspies proudly surveys a tree stump before its removal from the observatory building site.

As soon as the land was theirs, members fell to the task of removing more than 3,000 trees, big and small. Robert W. Bradspies supervised the tree cutting and site preparation. All the teen-agers pitched in to grub out brush and trees. So did von Braun, Stuhlinger, Priddy, Gerhard Heller, Swanson, Isbell, Eugene Mechtly and George A. Ferrell. Bradspies and Isbell also talked Madison County officials into supplying a bulldozer which removed stumps and scraped out a dirt-and-gravel road.



Teenage members did a lion's share of the tree-cutting.



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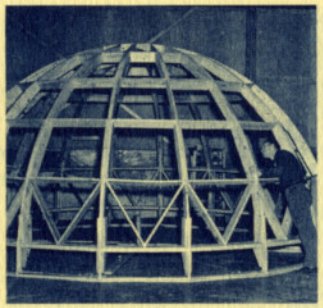
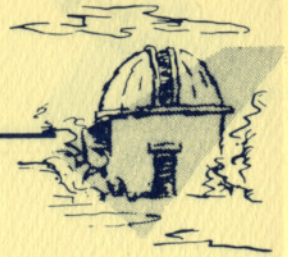


Bill Varendoe checks the dome framework upon which the sheet metal was assembled and welded.

The Association took shape during the latter months of 1955. A constitution and by-laws were agreed upon, the name "Rocket City Astronomical Association" was selected, and, in due course, the organization was incorporated.

In December 1955, the charter officers and directors were selected. Von Braun, Isbell, and Priddy were re-elected president, vice-president and treasurer, respectively. Bradspies was elected secretary and Ferrell corresponding secretary.

Dr. Stuhlinger, with considerable help from his son, Tilman, prepares a post for support of the reinforced concrete dome edifice.

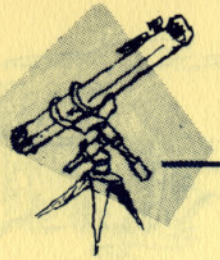


Gerhard Heller pulls concrete vat into position.

Stuhlinger, Angele, Heller, and Swanson were also elected to the Board of Directors.

Ferrell, Mechtly, other members, and some volunteers from outside the Association under the leadership of Angele and Heller undertook the big job of fabricating the observatory dome. The dome presented a knotty engineering problem to inexperienced construction workers. But it was capably executed and completed almost simultaneously with preparation of the observatory site.

Working on framework for reinforced concrete dome support are Stuhlinger, Mechtly and Isbell.



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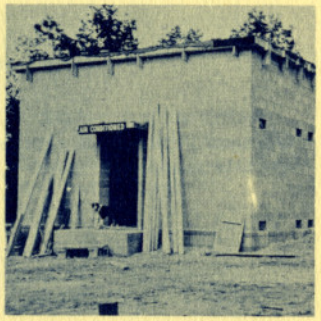
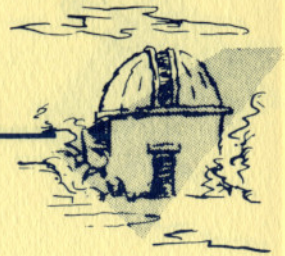


Ready for the next construction phase - placing on the dome.

In the meantime, von Braun purchased a 16-1/2-inch reflector telescope from Rex Bohannan, a sympathetic seller in California for about $600. The mirror alone is said to be worth $2,000.

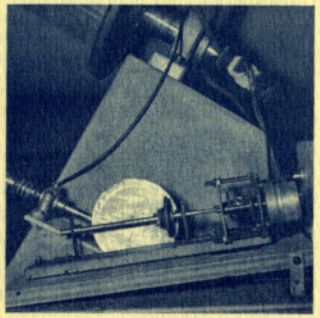
Having acquired a telescope, the Association had to build an observatory to house it. So with von Braun as the organizer, Wednesday evenings were set aside for work. A local contractor was hired to pour the concrete foundation and slab

Members relax after the dome was lowered into place by a crane.

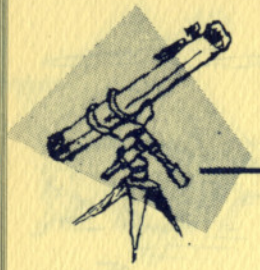


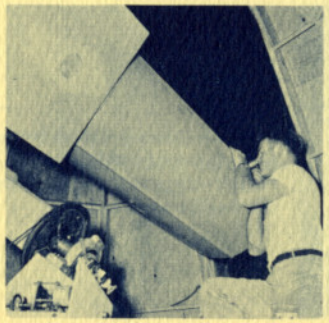
Dr. von Braun, third from left, joined in with the "ditch-diggers" working on the septic tank system.

floor, but members took over from there. Quincy B. Love supervised early construction work on the building and spent much of his time laboring at the site. He was given considerable help by Mechtly, Priddy, von Braun, Stuhlinger, Ferrell, Heller, Isbell, and a few others. The plumbing and lavatory facilities were installed as the concrete-block-walls went up. Several thousand pounds of concrete were poured to form the telescope mount and the supporting ring for the dome. The reinforced steel and concrete



The first telescope drive was assembled as a temporary measure to allow observation of Mars on the planets close approach to Earth in 1956.



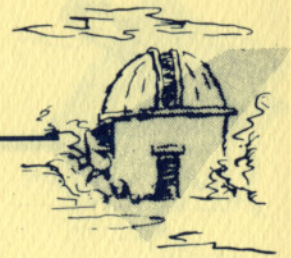


Eugene Mechtly checks on the telescopes field of view.

ring supporting the dome measures 24 feet square outside and has an inside diameter of 18 feet. The dome sits on rollers, traverses 360 degrees, and has electrically driven motors to move it. A sliding door in the dome reveals the heavens to the telescope.

Stuhlinger assembled a temporary clock drive which moves the telescope in hour angle, westward, to compensate for the Earth's rotation eastward. Electricity and heaters and a pay telephone were installed. Although mechanical equipment excavated the long ditch in which the water main was to be installed, members themselves laid the pipes and did the back filling by hand. They also installed a septic tank system.

In preparation for the first observations, Mechtly, who was a physicist at the Missile Agency, found the field of view for the lower power eyepiece of the telescope to be 45.0 minutes of arc by measuring the time required for Mars to move from one side of the field of view

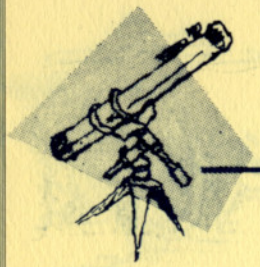


to the other. With the higher powered eyepiece, the field would include about half a Lunar diameter, or 7.9 minutes of arc. These values were later confirmed by direct observations of the Moon.

Construction work on the observatory building began in April, 1956. It was sufficiently advanced by September to permit observation of the direct opposition of Mars on September 6 when the planet was closer to Earth than it had been in 17 years and would be for another 15 years.

More than $3,000 in cash and materials was contributed by business firms and interested individuals. The money was used to purchase materials and equipment for the observatory. But more money was needed to complete the building and provide the equipment. So Isbell proposed an alliance between the RCAA and a group of technical writers and illustrators he had assembled to produce a magazine dealing with Space travel and the associated sciences. Isbell and the other members of the staff of his magazine, called SPACE

Taking some "first looks" through the Newtonian optics are Love, Mechtly, Swanson and Stuhlinger.



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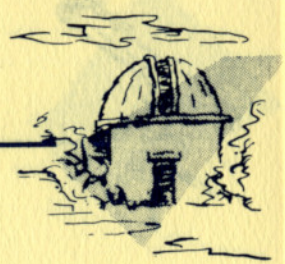


Journal, agreed to contribute profits derived from public sales toward the completion of the observatory. Other RCAA officers and members were skeptical of Isbell's venture into the publication field with an inexperienced staff. But he sold von Braun on the idea after assuring him that SPACE Journal would be separated from other RCAA activities and he, together with his staff, would assume all financial responsibilities.

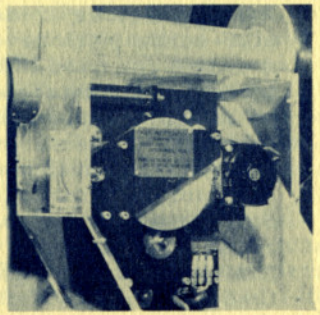
Two years later, in the Spring of 1957, a publisher had been found who would print the first edition on credit. SPACE Journal hit the newsstands in twelve cities within two weeks after the Russians launched Sputnik I. The sale of SPACE Journal was phenomenal, as new magazine sales go, but a poor business arrangement with a New York distributor resulted in a net loss. Nevertheless, the effort was far from being unsuccessful. Good press notices about SPACE Journal in national publications brought the magazine to the attention of several would-be investors. A one-year contract was obtained which guaranteed $5000.00 less editorial, graphic art, and other expenses incurred in preparation of the magazine, to the Rocket City Astronomical Association. Isbell obtained an advance payment for the second edition, and this money, less expenses and part of the loss suffered from the first edition, was sufficient to make the RCAA debt-free.

The SPACE Journal Staff and their business end counterparts, Space Enterprises, Inc. of Nashville, Tennessee, have contributed more than $10,000 toward the Association's observatory. SPACE Journal has met with national acclaim and has received favorable write-ups in both Time and Newsweek. Subscriptions are $2.00 per year and may be obtained by writing to SPACE Journal, P. O. Box 82, Huntsville, Alabama.

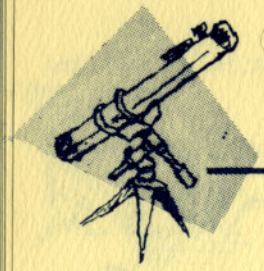
Recent

RCAA invited the Southeastern Region of the Astronomical League to hold its annual meeting in Huntsville May 10-11, 1958. Programs were held at the Huntsville Electric Auditorium, and a banquet for several hundred persons was arranged at the Russell Erskine Hotel.

Perhaps the most important acquisition during the last several months is the Cassegrainian secondary mirror designed and fabricated by J. W. Fecker. Clarence Ellis, one of the members, then designed a swivel eyepiece which was fabricated by his company, Brown Engineering.



The new telescope drive.



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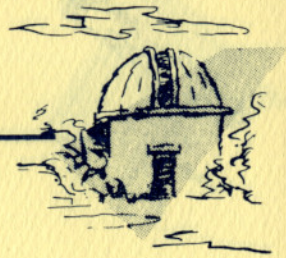


The spider support, also designed by Ellis was made by Reynolds Metals. Of particular importance to the RCAA membership is the fact that none of the materials or labor cost a cent. After all hardware became available, Clarence Ellis installed the optics and collimated them. It is now possible to do a great deal of observing from the floor, straight through the hole in the 16-1/2-inch primary, rather than make the arduous climb up the ladder. It should be pointed out, of course, that the Newtonian focus still has important uses, i.e., nebular photography. For close examination of the Lunar surface on a clear night, nothing is better than the Cassegrainian with its three times effective increase in focal length and corresponding increase in magnification. Celestial objects viewed through the instrument are particularly well defined when the new orthoscopic eyepieces are used.

Another accessory item of which RCAA is very proud is an astronomical micrometer. The micrometer was sent to von Braun as a Christmas present; he in turn gave it to the Association. A large number of measurements of the micrometer-screw pitch have been made. When properly mounted and used to determine star positions, planetary diameters, etc., the accuracy should be of the order of 0".1 or better.

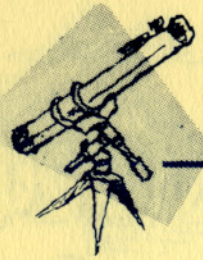
Astronomical photography at Monte Sano Observatory has made progress, thanks to Gert Schmitz who has obtained celestial pictures both at the Newtonian and the Cassegrainian focus. His Lunar photographs come very close to the theoretical limit of resolution with this telescope.

Gert Schmitz (second from left), George Ferrell and current RCAA vice president, Conrad Swanson check the 16 1/2" mirror after a resurfacing job.

The first observatory director, Wilhelm Angele, has not only supervised building the observatory, fabrication of precision instruments, and construction of all kinds, but has personally put in hundreds of hours of his own time with his own hands doing numerous engineering jobs. Fabrication of slow motions in right ascension and declination, graduation of the circles, mounting of large Palomar-Mt. Wilson transparencies, painting, and construction of all kinds.

The observatory recently acquired two large electrical clocks: one mean time and set for Universal Time (GMT), and one a sidereal clock and set for local uniform sidereal time. Maximum error during several months is two or three seconds. Evidence indicates that this is due to variations in frequency of electric power.

Some of the observatory's library acquisitions of importance are the following: American Ephemeris and Nautical Almanac for most recent year; DeLuxe Atlas of the Heavens (Becvar) with



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Atlas Coeli Catalogue; Elger's Map of the Moon; The Moon, by Wilkins & Moore; 12 large transparencies from Palomar-Mt. Wilson; several large Astromurals (Moon, spiral, Sun).

Plans are being made to make presentations by TV as soon as a new Huntsville station is broadcasting. And with the acquisition of a tape recorder, the RCAA Moonwatch team under the direction of Dr. Rudolph Festa will be in a position to put the 12 satellite telescopes donated by the Coca Cola Company to good use.

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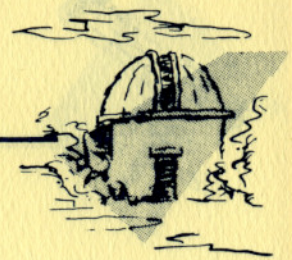
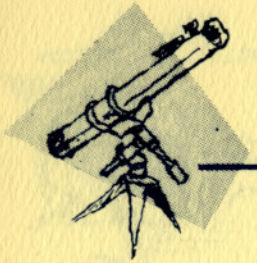


ORGANIZATION

The Rocket City Astronomical Association was organized as a "scientific and educational association of scientists, engineers, and people from all walks of life interested in the advancement of astronomy and associated sciences." Thirty charter members incorporated the organization under the laws of the State of Alabama as a nonprofit, nonsubsidized organization deriving its operating funds and materials from membership dues, fund raising projects, and contributions.

The thirty charter members are listed below:

Wilhelm Angele
Thomas Beckert
Robert Brandon
Dean Breasseale
William D. Escher
George A. Ferrell
Thomas Gunter
Gerhard Heller
Eike Hueter
Uwe Hueter
B. Spencer Isbell
J. Rob Maulsby
Eugene A. Mechtly
James Norman, Jr.
Charles T. Paludin
Franz Pauli
Juergen Patt
E. Wayne Priddy
Samuel F. Pruitt
Dr. Martin Schilling
Gerd Schilling
Hartmut Schilling
Rolf Sieber
Dr. Ernst Stuhlinger
Conrad D. Swanson
Gerald Swanson
Ronald Warner
Dr. Wernher von Braun
William W. Varnedoe
Helmut Zoike

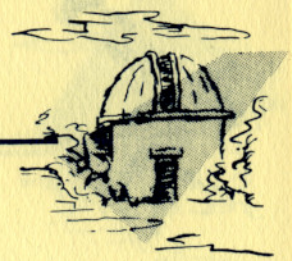


RCAA

The framework of the association is designed to carry out its aims and purposes as effectively as possible. The affairs of the association are controlled by the board of directors which consists of nine members and is administered by five officers. Officers are elected annually to the positions of president, vice-president, secretary, treasurer, and corresponding secretary. Board members are elected to serve three year terms, and three board positions come up for election each year.

The officers and board conduct the routine direction of the association's business, but any change in the by-laws, or any proposal for a fundamental innovation in policy has to be approved or disapproved by a vote of the members as a whole. From this, it will be noted that the setup of the organization is thoroughly democratic.

ROCKET CITY ASTRONOMICAL ASSOCIATION



OBJECTIVES

The principal objectives of the association are an active membership of interested persons to promote interest in astronomy and associated sciences among the members, the public and industry.

The organization is devoted solely to science; it has no commercial interests, no political alliances, and no religious affiliations. It is not operated for profit; its entire income is expended in furthering its aims.

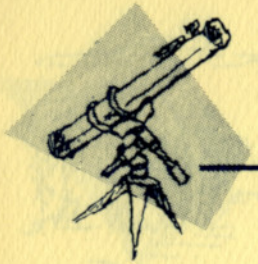
Present projects and activities are designed to accomplish the following:

a. To keep members up-to-date on the latest advances in astronomy through its monthly meetings, correspondence and other media.

b. To provide an observatory for the use of its members, especially those doing individual research.

c. To offer facilities and services for the education and enjoyment of the public, especially those associated with schools, service organizations, churches, and Boy and Girl Scouts of America.

A prime objective is to serve the youth of our community. In this respect, the by-laws of the association list the following aims and purposes:



RCAA

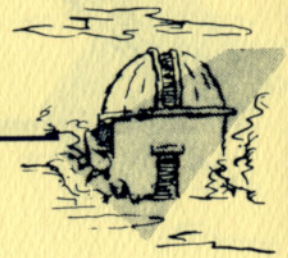
a. To promote the science of astronomy.

b. To foster observational and computational work, and craftmanship opportunities in the various fields of astronomy.

c. To provide a medium for correlating amateur activities of the association with professional research.

d. To make the organization a benefit and credit to both its members and the surrounding community.

ROCKET CITY ASTRONOMICAL ASSOCIATION



ACTIVITIES

Construction of Observatory

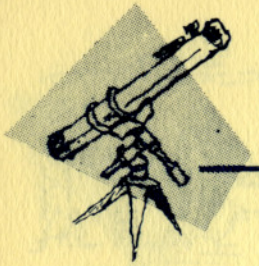
The most important activity of the Rocket City Astronomical Association has been and still is the construction of a suitable observatory building to house the 16-1/2-inch reflector-type telescope. The bulk of work on the building itself has been accomplished. Some interior finishing is still in progress and installation and adjustment of some equipment must be finalized before the construction work can be considered complete.

Moonwatch Program

A Moonwatch team requires a minimum of 25 people, including alternate observers, to operate the 12 satellite-observing telescopes. The association's Moonwatch team is now under the direction of Dr. Rudolph Festa. Future plans include observations of all orbiting vehicles and the planned re-entry of the first man-carrying space vehicles.

Astronomical Photography

The observatory dark room has been completed and some excellent photographs have already been made through the telescope by Mr. Gert Schmitz. The association hopes to add more photographic equipment and expand the capabilities for many and varied projects in astronomical photography.



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Astrionics

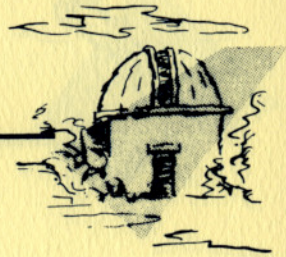
Ambitious astrionic projects in the "talking stage" include closed-circuit TV, with image amplification and "tranquilization", and photo-electric photometry. Organized by Ronald Ferddie, important contributions have been made by E. Wells and G. Donnini.

Meetings

Nationally known speakers and outstanding science films have keynoted association meetings in the past. Speakers and subjects have included Dr. Allen Hynek on "The Moonwatch Program;" Dr. Karel Hujer on "Observatories of the World;" Dr. Wernher von Braun on "Conquest of Space" and "Exploration of Mars;" Dr. Ernst Stuhlinger on "Ion Propulsion to Mars;" Dr. John O'Keefe on "Amateur Contributions to Geodetics;" and Mr. H. Ruppe on "Exploration of the Moon." Movies have included many American Telephone Company astronomical series films and several Walt Disney produced space lectures.

Dedication and Open House

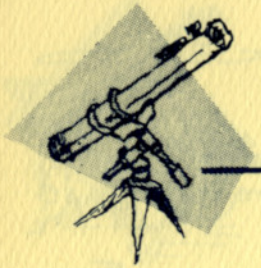
A current project is the formal dedication and opening of the observatory to the public. In line with the original objectives of the association, the board of directors have designated Wednesday night of each week as the official time to show equipment to, and make possible observation of celestial objects by, the general public.



FINANCES

No organization, whatever its nature or purpose, can operate without funds to meet its running expenses. That is true also of the Rocket City Astronomical Association; but, despite the financial burden of building and maintaining an observatory independently, the dues are nominal.

The association's observatory building and equipment have been assessed a value of $37,737.26. All debts have been paid off and the association's bank balance shows cash assets in the neighborhood of $9,000. The financial records are audited annually by the certified public accounting firm of Ernst and Ernst, and the observatory building and equipment are covered by insurance.



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MEMBERSHIP

Scientists and technicians of neighboring Redstone Arsenal comprise the bulk of the organization's present 130 membership. Others are teenagers and adult amateur astronomers living mostly in the Huntsville area. Professor Hermann Oberth, a former senior member of the Wernher von Braun missile team and a pioneer in astronautics, is the organization's only honorary member.

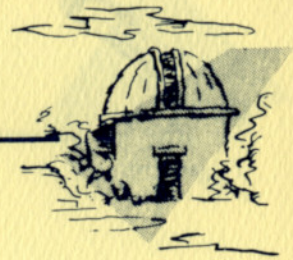
The association is a member of the American Astronomical League and cooperates with many professional societies on joint projects.

The only qualifications necessary for membership in the association are a desire to learn, a willingness to participate, and an interest in astronomy or its associated sciences.

Regardless of your background, there is a place for you in the activities of the Rocket City Astronomical Association. We shall welcome you as a member. All members can participate in all activities, vote on all business, and receive all association publications.

Information pertaining to the various classes of membership, dues, and benefits may be obtained by writing to:

Secretary
RCAA
P. O. Box 620
Huntsville, Alabama

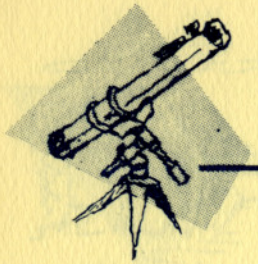


BENEFACTORS

Contributions have been received from these non-members as of 1 June 1959.

Services Contributed

Brigham, Mr. Stanley G.
Brown, Mr. W. C.
Brownie Drugs
Bryan Plumbing Co.
Burgess, Mrs. Rose
Capri Motel
Cochran, Mrs. Mary
Coffee, Dr. John
Condon Drugs
Crutcher, Mr. Andy R.
Dales
Day, Mrs. M. Jane
De Jarnett, Robert
Driscoll, Mr. Victor P.
Garner, Mr. James Paul
Gibsons Barbecue North
Grand News Stand
Hill, Mr. John P., Jr.
Holliday Inn
Holliday House
Jones, G. W. & Sons
King, Edward
McCoy, Mrs. Margaret
Monroe Printing Co.
Morrisons
Mottar, Mrs. Rose
Neisler, Mrs. Lorena
Pearce, Mr. James C.



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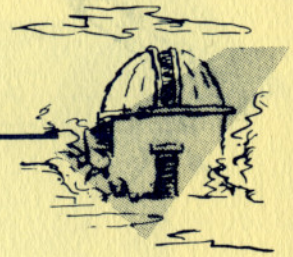
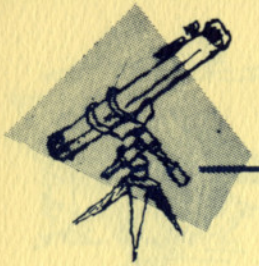
Pitts, Mr. John R.
Priest Company
Book Shop
Russell Erskine News
Southland
Starkey, Mr. Theodore T. Jr.
Stone, Mr. Roy
Walgreens Parkway
Willis, James M.
Wright, Miss Lucy

Cash Contributions

Anderson Motor Co.
Balch, Mrs. Henry W.
Bell, Morring & Richardson
Bibb, Dr. R. C.
Boswell & Cooper
Bragg Furniture Co.
Brooks, Mr. Harold B.
Busann, Inc.
Butler High School, PTA
Butterbaugh, Mr. D. J.
Central Cafe
Chambers, J. L.
Chaney Refrigeration Co.
Clift and Holmberg
Cole, Mr. Arthur
Dunnavants
Eigenbrod, Mr. Walter
First National Bank
Gates, T. P.
Goldsmith, Mr. Lawrence B.



Goldstein, Mr. Abe
Henderson National Bank
Hill Jewelry Co.
Heller, G.
Humphrey, Mr. J. E.
Huntsville Hotel Assn.
Hutchens, Mr. M. M.
Johnson, Mr. Herbert
Johnson and Mahoney
Jones, Mr. Thomas W.
Larkin, Mr. Buck
Laughlin, Dr. J. B.
Lowery, Bob Cotton Co.
Mahood, Mr. C. E.
Mason Furniture Co.
Murphree, Mr. Dean S.
Noogin, Mr. F. K.
Penhall, T. I.
Pipes, Mr. Claude
Ragland, Mr. C. B.
Record, Mr. James
Rhett, Mr. Harry
Ritz Cafe
Russel Erskine Hotel
Sciaky Brothers Inc.
Scott Insurance Agency
Sears-Roebuck and Co.
Space Enterprises, Inc.
State National Bank
Sterchi Furniture Co.
Stevens, Mr. William H.
T. T. Terry's
Twickenham Barber Shop
Twickenham Hotel
Universal Photo Shop
West Huntsville Men's Club



RCAA

Materials and Supplies

Alabama Cooling & Heating Co.
Geo. Behm & Sons Co.
Blake, H. C. Co.
Brown Engineering
Chase Nursery Co.
Coca Cola Co.
Dilworth Lumber Co.
Fecker, J. W. Inc.
Ford Instrument Co.
Gerd Plumbing Co.
Huntsville Brick & Tile Co.
Huntsville Building Material Co.
Huntsville Roofing Co.
Hopper Hardware
Inertol Co.
Johnson Concrete Products Co.
Jones, J. D. Plumbing Co.
Leeds Jewelry Co.
Londons
Miller Brothers
Pate Supply Co.
Reynolds Metals
Sandlin, J. E. Hardware Co.
Vitro Corp. of America

Professor Herman Oberth examines a pilot copy of the first issue of SPACE Journal at a dinner held in his honor. Professor Oberth is the only honorary member of RCAA and the first edition of SPACE Journal was dedicated to him as "Father of Astronautics." Staff members and contributors looking on are (seated, left to right): Ralph E Jennings; James L. Daniels, Jr.; B. Spencer Isbell; Professor Oberth; Dr. Wernher von Braun; and Dr. Ernst Stuhlinger. Standing, left to right, are Gordon D. Willhite Yewell Lybrand; Harold Price; George A. Ferrell; David L. Christensen; and Lew Cimijotti. (Photo by E. H. Robertson)

Star gazing party - Bob Maulsby (looking into telescope) shows other RCAA members how his selfmade telescope works.

RCAA

Moon - Through the RCAA 16 1/2 inch Reflector Telescope on Monte Sano Mountain, Huntsville, Alabama (Photo by Gert Schmitz)