

**A PROPOSED  
ASTRONOMICAL  
OBSERVATORY**

# FOREWORD

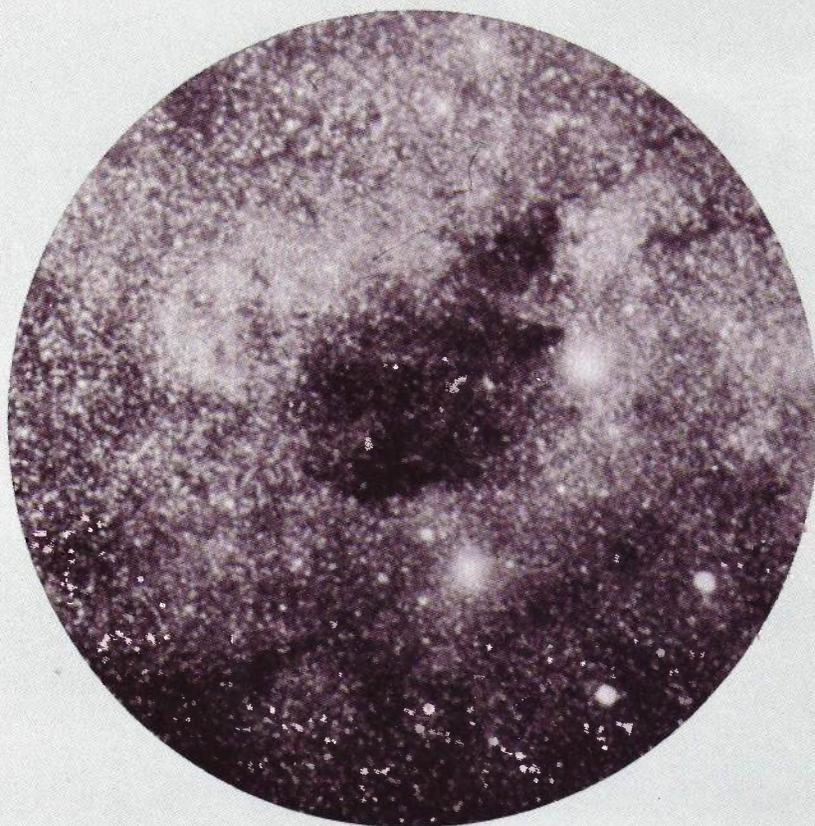
The Milwaukee Astronomical Society was incorporated in 1933 and has grown to a group of 200. The Society regularly supplies important astronomical data to the worldwide astronomical community.

The purpose of the Society is to promote the study of astronomy and allied sciences and foster a public and educational interest in the field of astronomy. It also pursues and encourages astronomical research.

Monthly meetings are open to the public. The Society holds "open houses" at its existing observatory, located in New Berlin, Wisconsin.

The present observatory was financed and is maintained by its members as a non-stock, non-profit corporation. The main instruments now in use are two 12-1/2" reflecting telescopes plus a number of portable instruments.

To this end the Milwaukee Astronomical Society prides itself in being one of the few non-affiliated astronomical observatories in the United States. Important data is supplied to the Smithsonian Astrophysical Observatory, the Naval Observatory, Greenwich Observatory, the American Association of Variable Star Observers and other astronomical groups.



## PROPOSAL

During the course of its existence the Milwaukee Astronomical Society has become more ambitious in its observing programs in the gathering of useful data. The Society has been a leader in the innovation of new programs designed to further increase astronomical knowledge. These programs include observations of variable stars, lunar and planetary motion, comets, novae, eclipses, occultations, solar observations and flare star phenomena. To pursue these programs the membership built special telescopes and other equipment to observe and record the information.

The Society has come to the realization that the instruments and its present site are no longer adequate for the more ambitious programs now in the planning stage.

Therefore, in order to carry out these programs, the Board of Directors has authorized the construction of a larger telescope at a new site. The instrument is to be a 25" Cassegrain reflector designed for photographic and visual use. With auxiliary equipment, photometry and allied studies will be pursued.

Current planning includes the transfer of existing equipment from the Society's present observatory to the new site.

## PURPOSE & AFFILIATION

The purpose of the new observatory will be to promote the study of astronomy and allied sciences. To these ends, the observatory will be of use in 2 main areas.

### I. SCIENTIFIC VALUE

The observatory will be made available to qualified individuals who wish to pursue meaningful astronomical research. The size of the instrument will make it suitable for an immense variety of serious work. With this instrument, amateur and professional astronomers will add to the knowledge of the heavens.

### II. EDUCATIONAL VALUE

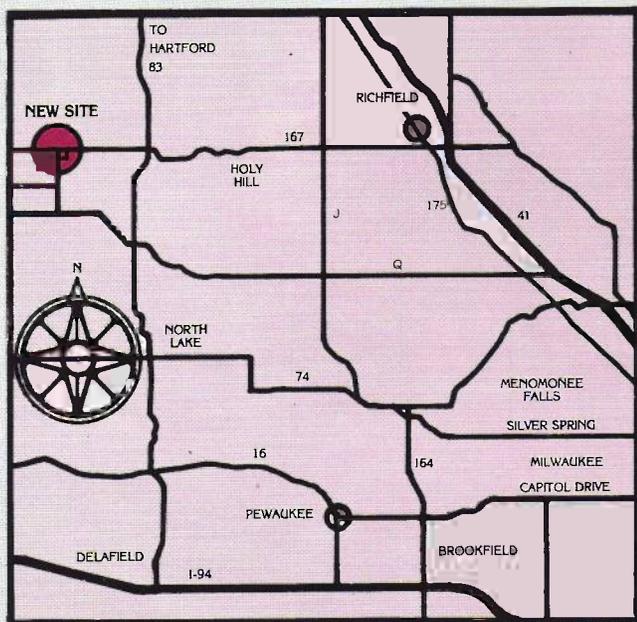
In the southeastern Wisconsin area there are now 6 major institutions of higher learning — few of which have access to a large telescope. The proposed telescope would be made available to these institutions for undergraduate and graduate study.

The general public will be invited to visit the observatory at "Open House" periods.

# LOCATION

Pending the successful drive to fund the telescope and building, an observatory site has been offered to the Milwaukee Astronomical Society as a gift. A parcel of land 5 miles west of Holy Hill, at an elevation of 1000 feet above sea level would be its location. Preliminary sky studies and a survey of the land have been completed. The surrounding area is dark and free of the light pollution of population centers.

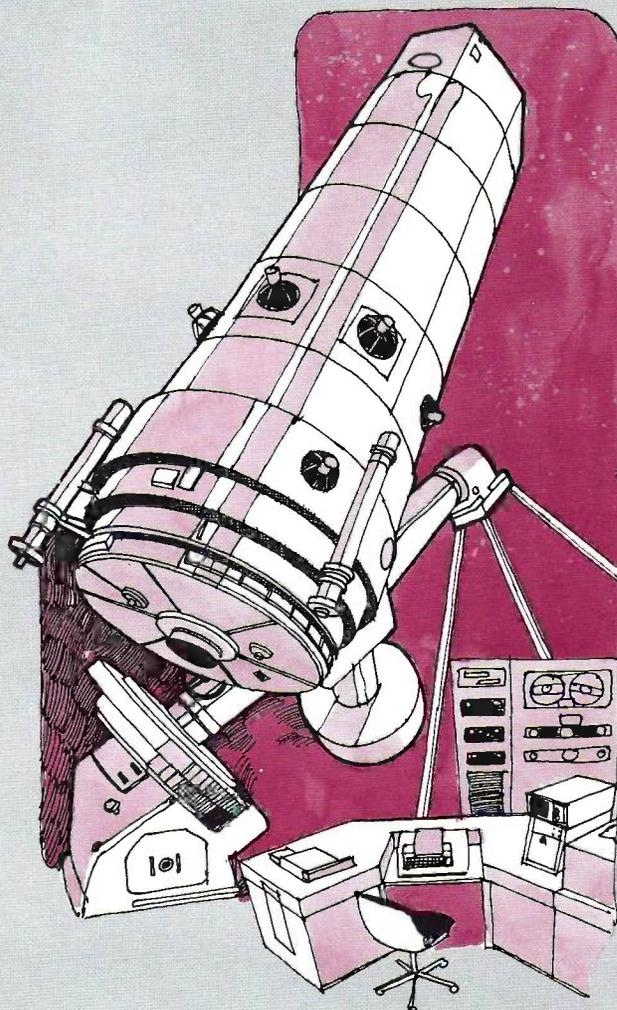
The proposed site is nearly ideal for a major observatory. Land surrounding the location provides more than ample space for future activities, including the relocation of the present observatory where light pollution has become a major problem.



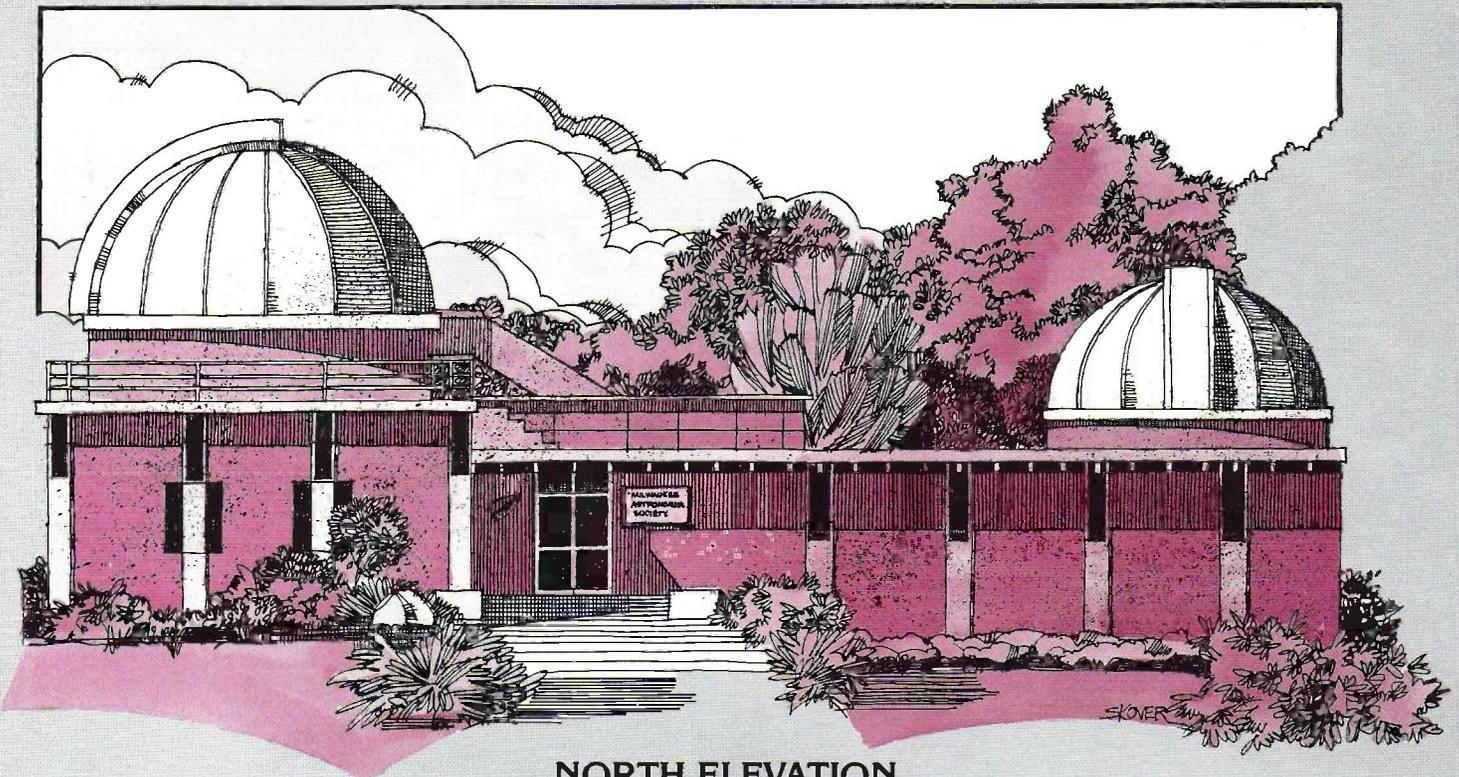
# TELESCOPE

Initial plans provide for a classical Cassegrain Reflector System. The primary mirror will be 25" in diameter with a focal ratio of f-3. Multiple secondary mirrors will give final ratios of 10, 20, and 30 for specialized photographic and photometric studies.

The instrument will stand on a vibration isolated concrete pier extending below the building into the ground to a depth of 20 feet. The weight of the telescope and pier is estimated at 25 tons. The telescope's mount is of a design preferred by many of the major observatories.



# BUILDING



**NORTH ELEVATION**

The building will consist of 3 functional areas: dome, office and service area.

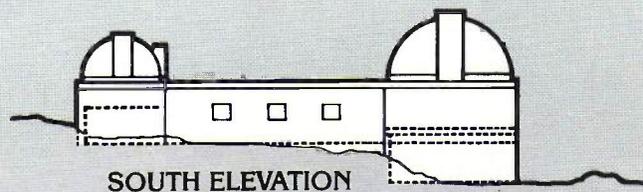
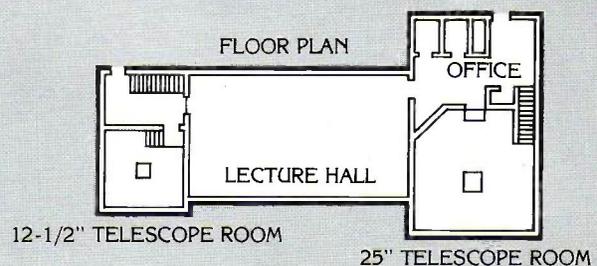
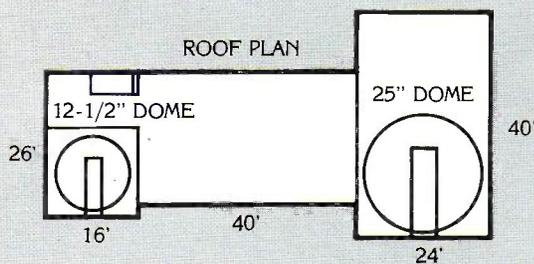
The dome will be steel, 22 feet in diameter with a vertical slit 4' wide. All dome motion and operation will be electrically controlled in conjunction with the main telescope.

The dome will house the instrument and be supplied with electronic controls to allow the telescope to properly track celestial objects.

The office will provide an area for reference materials and record storage. This is the only heated area for office work and rest facilities.

The service area will contain a photographic dark-room and selected machine tools as will be required for proper maintenance.

All construction will be masonry to achieve maximum fire resistance, minimum maintenance, and a pleasing exterior appearance.



**SOUTH ELEVATION**

# COSTS

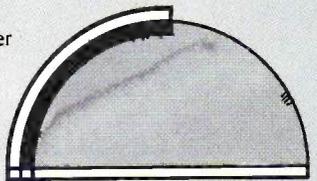
Initial estimates of the complete installation indicate that the observatory will have a value of \$250,000.

Actual costs should be lower by virtue of services available through the diverse skills of the members of the Society in the areas of construction, design, instrument making, optical work, art, architecture, etc.

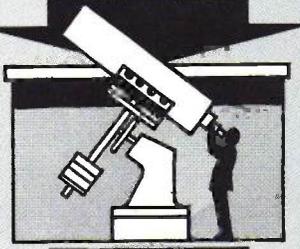
	Cost	Value
Telescope & Pier	\$ 30,000	\$ 40,000
Optics	5,000	25,000
Dome	30,000	35,000
Building	15,000	20,000
Land	—0—	5,000
Misc. Equipment	5,000	10,000
Machine Shop & Service Area	5,000	10,000
Road & Landscape	5,000	10,000
<b>Sub-Total:</b>	<b>\$ 95,000</b>	<b>\$155,000</b>
Additional Costs for moving the present equipment to the new site are:		
2 Domes and Meeting Room	\$ 50,000	\$ 80,000
Moving & Setup	10,000	15,000
<b>Sub-Total:</b>	<b>\$ 60,000</b>	<b>\$ 95,000</b>
<b>GRAND TOTAL:</b>	<b>\$155,000</b>	<b>\$250,000</b>

## BREAK DOWN BY AREAS

**DOME**  
22 feet in diameter  
Motor driven  
\$30,000



**TELESCOPE AND OPTICS**  
\$35,000

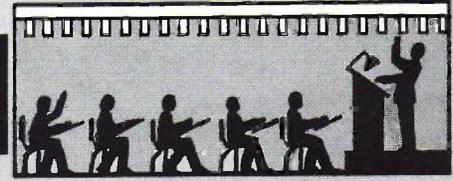
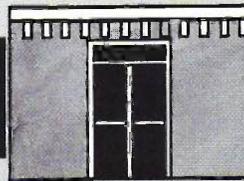
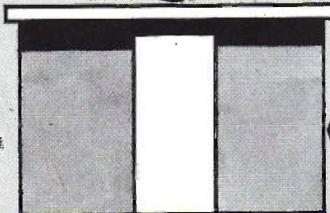


**SHOP AND SERVICE AREA**  
For optical and mechanical work  
\$10,000

### MEETING ROOM

The room will accommodate people for lectures, films, closed circuit TV and symposiums. School groups, astronomical organizations, civic groups and the general public will be invited to attend various programs.  
\$65,000 (with road)

**BUILDING**  
\$15,000



# PROGRESS REPORT

In early January the Board of Directors of the Milwaukee Astronomical Society authorized the planning and construction of the proposed observatory Progress to this date is as follows:

The land for the observing site has been offered. A donation of 1 acre has been made by Mr. & Mrs. W. B. Albrecht.

The telescope design is complete and cost estimates are underway. The design and drawings were done by members of the Society.

A 25" pyrex mirror blank has been donated to the Society by Miss Cora Zemlock, a longtime member. As a historical note, it is believed to be a trial blank poured by Corning Glass Works prior to the casting of the 200" Palomar mirror.

A telescope building fund has been established and is growing with donations from members and interested friends.

Preliminary estimates indicate that approximately \$100,000, will be needed to complete the first phase of this project.

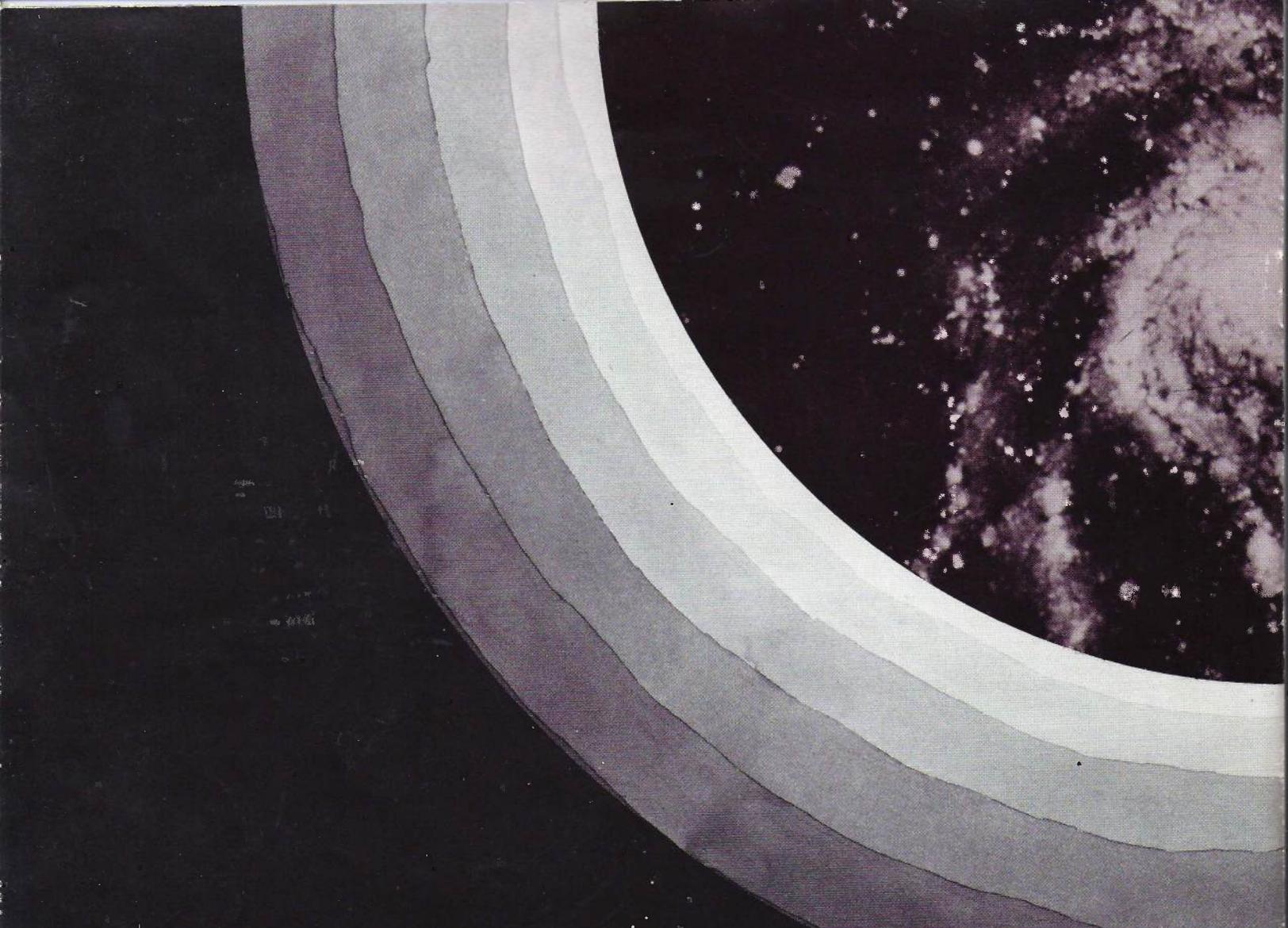
# OUR APPEAL

The purpose of this brochure is to obtain funds and services for the completion of the observatory within 4 years. The overall cost is not large in comparison to the benefits that will be reaped by the enrichment of knowledge to all interested people in southeastern Wisconsin.

Everyone has an opportunity to participate in making the observatory a reality. Many already have had the satisfaction of helping financially and others have given of their time and services.

Friends of the Milwaukee Astronomical Society are urged to give generously. Your contributions are vital to the successful completion of this project.





# TAX BENEFITS

The Federal Government and the State of Wisconsin, recognizing the value of the activities of the Milwaukee Astronomical Society have declared the Society to be tax exempt. Therefore, all contributions to this project are fully tax deductible.

Contributions made to the observatory fund will be carefully recorded for recognition, and major donors will be remembered by means of a bronze engraving affixed to the telescope pier.

Your generous contribution will make this project a reality and a lasting tribute to the community.



**THE MILWAUKEE ASTRONOMICAL SOCIETY**

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