

# **Astronomical League**

## **Observing Program Division**

### **Annual Report 2023**

Submitted by the Astronomical League Observing Program Division Directors:

Aaron Clevenson

Cliff Mygatt

Al Lamperti

Maynard Pittendreigh

Marie Lott

#### **Highlights for the year:**

2022-2023 was a good year for the Astronomical League Observing Programs. A total of 878 certificates and/or pins were issued during the previous year (2022) and as of this time, a grand total of 18,269 certificates have been issued by the Observing Program Division. At the end of this report, there is a detailed analysis of the individual observing programs and awards. Budget information for the next year for the Observing Program Division as well as the total expenses for the previous year were sent separately to the AL Treasurer.

The Division continues to pursue Observing Program opportunities to increase the breadth and depth of our offerings:

- New object types.
- New educational opportunities.
- New observational skill development.
- Opportunities for Binocular Observers.
- Opportunities for Imagers.
- Opportunities for observers to utilize remote telescopes.
- Opportunities for southern hemisphere observers.
- Opportunities for use of vision enhancing tools.

We also continue to work on increased AL Branding across our offerings:

- Use of the Observing Program Division logo.
- Pins to recognize Observing Program Coordinators and Observing Program Directors.
- Observing Program web page standard look and feel.
- Awards database standardization.
- Observing Program requirements standardization:
  - Latitude and Longitude of observer.
  - Seeing and Transparency of the sky.
- Observing Program pin standards:
  - To include Astronomical League.
  - To include the name of the Observing Program.

At the AL-Con in 2022 there were a total of two proposals. They were adopted:

- **Bennett Observing Program**
- **Solar Neighborhood Observing Program**

These proposed Observing Programs for consideration by Council at the AL-Con in 2023 were reviewed by Observing Program Directors. A summary of those reviews and recommendations was submitted to the President, Carroll Iorg and to the Council via email.

The list of known Observing Program Proposals for review at the 2023 AL-Con are:

- **2023 Annular Solar Eclipse Special Observing Award**
- **2024 Total Solar Eclipse Special Observing Award**

Four new Coordinators were appointed for observing programs in the past year: Rob Lentini, Mike Hotka, Emma Terlep, and Richard Benson.

Records for the Observing Program Division are reported by calendar year. Official reporting is through May 1 of the current year.

Observing Programs by activity level:

- Those programs with over 50 certificates in the past year:
  - Outreach Award (130 certificates)
  - AL Observing Challenges (60 certificates)
  - Citizen Science Awards (52 certificates)
- There were no programs with between 25 and 49 certificates this past year:
- Those programs with between 10 and 24 in the past year:
  - Alternate Constellations Obs. Prog.
  - Beyond Polaris Observing Program
  - Binocular Double Star Obs. Prog.
  - Binocular Messier Obs. Program
  - Carbon Star Observing Program
  - Constellation Hunters – Northern Skies Observing Program
  - Double Star Observing Program
  - Galileo Observing Program
  - Globular Cluster Observing Prog.
  - Herschel 400 Observing Program
  - Hydrogen Alpha - Solar Obs. Prog.
  - Library Telescope Award
  - Lunar Observing Program
  - Master Observer Award
  - Messier Observing Program
  - NASA Observing Challenges
  - Observer Award
  - Planetary Nebula Observing Program
  - Solar Neighborhood Observing Prog.
  - Solar System Observing Program
  - Stellar Evolution Observing Program
  - Sunspotter Observing Program
  - Universe Sampler Observing Program

- Those programs with between 5 and 9 in the past year:
  - Active Galactic Nuclei Obs. Prog.
  - Advanced Binocular Double Star Observing Program
  - Advanced Observer Award
  - Asteroid Observing Program
  - Bright Nebula Observing Program
  - Caldwell Observing Program
  - Comet Observing Program
  - Deep Sky Binocular Obs. Program
  - Galaxy Groups and Clusters Obs. Prog.
  - Local Galaxy Group and Neighborhood Observing Program
  - Lunar – Binocular Observing Program
  - Lunar Evolution Observing Program
  - Lunar II Observing Program
  - Master Observer – Silver Award
  - Mentoring Award
  - Multiple Star Observing Program
  - Northern ARP Observing Program
  - Open Cluster Observing Program
  - Radio Astronomy Observing Program
  - Sketching Observing Program
  - Sky Puppy Observing Program
  - Southern Sky Binocular Obs. Prog.
  - Southern Sky Telescope Obs. Prog.
  - Target NEO Observing Program
  - Urban Observing Program
  
- Those programs with 4 or less in the past year:
  - Analemma Observing Program
  - Arp Peculiar Galaxies – Southern Observing Program
  - Asterism Observing Program
  - Astronomy Before the Telescope Observing Program
  - Binocular Master Observer Award
  - Binocular Variable Star Obs. Prog.
  - Constellation Hunters - Southern Observing Program
  - Dark Nebula Observing Program
  - Dark Sky Advocate Obs. Award
  - Earth Orbiting Satellite Obs. Prog.
  - Flat Galaxy Observing Program
  - Foundations of Imaging Obs. Prog.
  - Galileo's TOES Obs. Certificate
  - Galileo's TOES II Obs. Certificate
  - Herschel II Observing Program
  - Herschel Hustle Certificate
  - Herschel Society Certificate
  - Jupiter Observing Program
  - Mars Observing Program
  - Master Imager Award
  - Master Observer – Gold Award
  - Master Observer – Platinum Award
  - Master Observer – Triple Crown Award
  - Meteor Observing Program
  - Nova Observing Program
  - Occultation Observing Program
  - Southern Planetary Nebula Obs. Prog.
  - Spectroscopy Observing Program
  - Two in the View Observing Program
  - Variable Star Observing Program
  - Youth Astronomer Observing Program

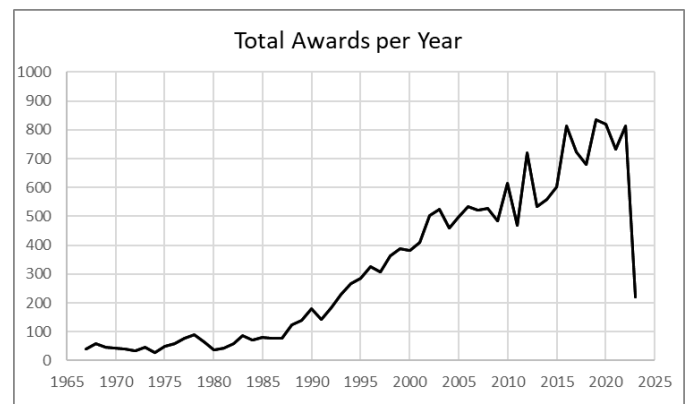
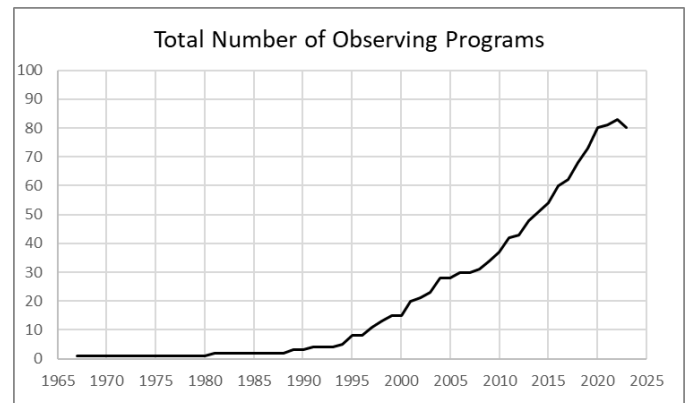
## Accomplishments for the Overall AL Observing Program:

- These Observing Program Manuals are maintained and reproduced for the AL Store by the Observing Program Division:
  - A Pathway to the Stars
  - Carbon Stars
  - Carpe Lunam (new)
  - Exploring the Starry Realm
  - Galaxy Groups and Clusters
  - Globular Clusters
  - Herschel 400
  - Herschel II
  - Journal – Imaging
  - Journal – Visual Observing
  - Jupiter
  - Local Galaxy Groups
  - Mars
  - Math for Amateur Astronomers
  - Meteors
  - Planetary Nebula
  - Sky Puppy
  - Universe Sampler
- The Observing Program Division also maintains and updates the AstroNotes for the Astronomical League.
- There were no issues requiring the attention of the Observing Program Directors in the past year. Issues were minor and handled well by the Observing Program Coordinators. None were escalated to the AL President. All have been resolved.

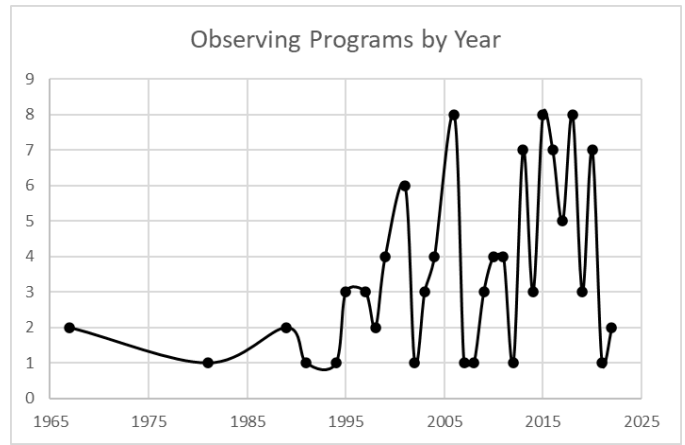
Since the introduction of our first Observing Program in 1967, Messier, the Observing Program Division has grown significantly. It currently offers 123 different certificates to our members.

These coordinators have more than three Observing Programs:

- Cliff Mygatt, Brad Young and Scott Kranz each have more than 3 coordination roles.
- Three coordination roles per Coordinator is the best practice that we follow.
- We have a total of 40 different Coordinators coordinating 75 Observing Programs and Awards. There are a total of 123 different certificates (by level and program) issued through the Astronomical League.

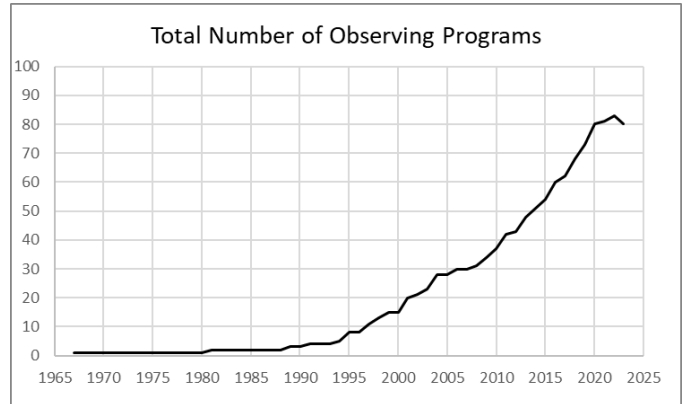


Observing Programs Adopted:



Total Observing Programs

(Note: that the number of Observing Challenges varies from year to year)



Respectfully submitted,  
Aaron B. Clevenson  
Clifton B. Mygatt, Jr.  
Al Lamperti  
W. Maynard Pittendreigh  
Marie Lott  
National Observing Program Directors

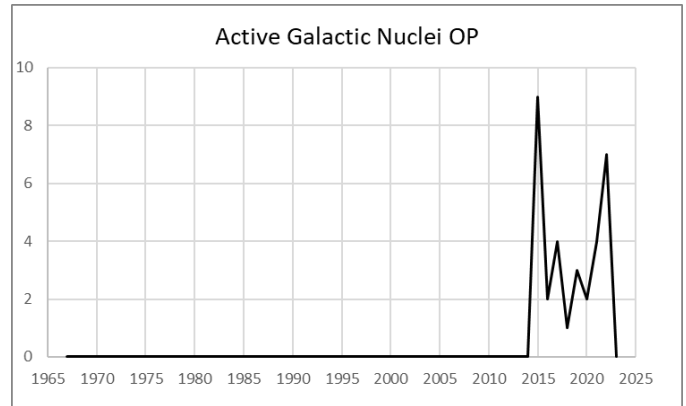
June 15, 2023

## Individual Observing Program Data

### Active Galactic Nuclei Observing Program

Coordinator Name: Al Lamperti

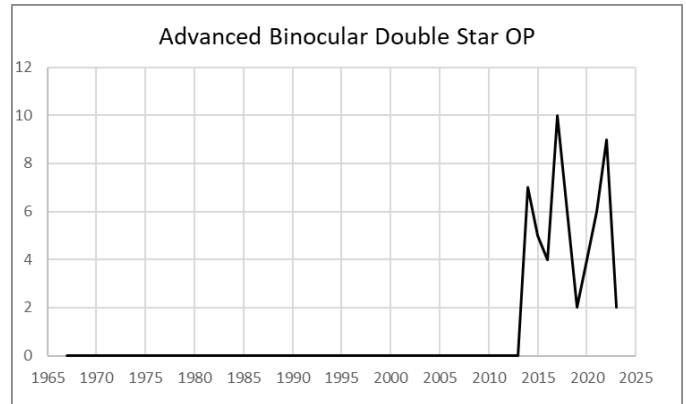
Certificates issued this year: 7  
 Certificates issued ever: 32



### Advanced Binocular Double Star Observing Program

Coordinator Name: Bob Kerr

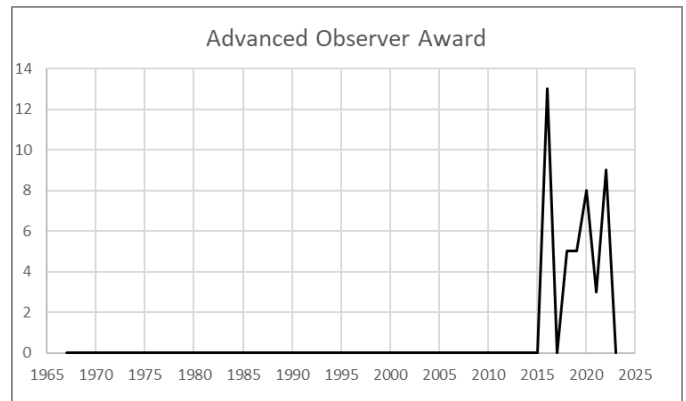
Certificates issued this year: 9  
 Certificates issued ever: 53



### Advanced Observer

Coordinator Name: David Whalen

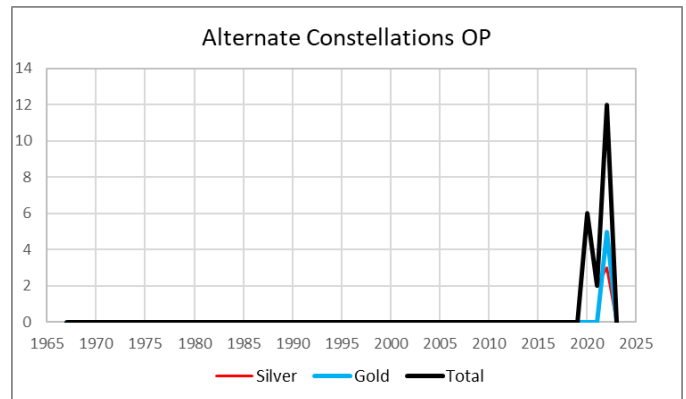
Certificates issued this year: 9  
 Certificates issued ever: 43



### Alternate Constellations

Coordinator Name: Brad Young

|                                |        |      |
|--------------------------------|--------|------|
|                                | Silver | Gold |
| Certificates issued this year: | 3      | 5    |
| Certificates issued ever:      | 11     | 5    |

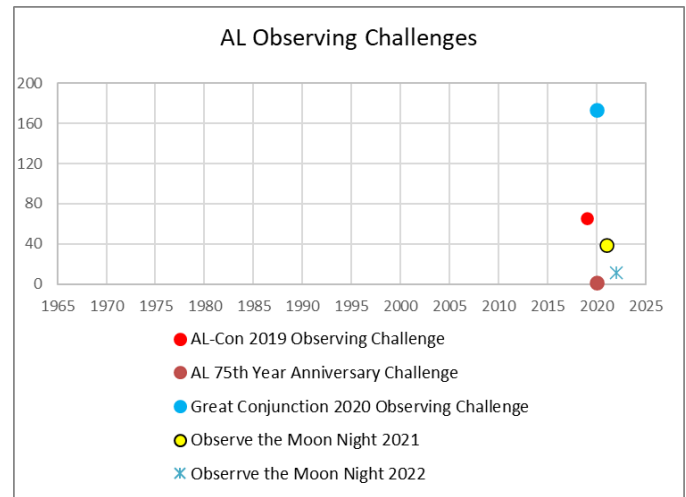


## AL Observing Challenge Certificates

Coordinator Name: Cliff Mygatt

Certificates issued:

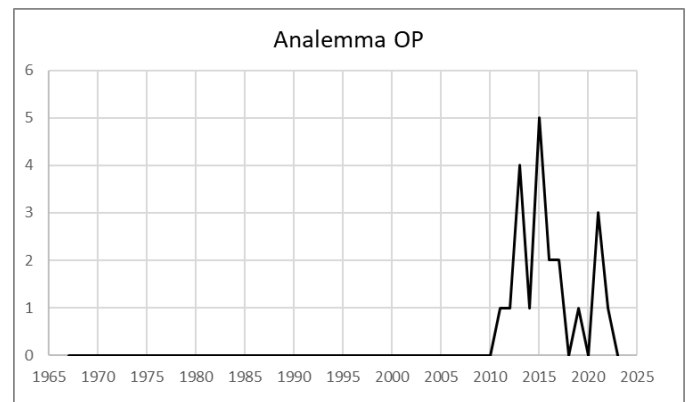
|                                      |     |
|--------------------------------------|-----|
| AL-Con 2017                          | 66  |
| AL 75 <sup>th</sup> Year Anniversary | 2   |
| Great Conjunction 2020               | 173 |
| Observe the Moon 2021                | 39  |
| Observe the Moon 2022                | 11  |



## Analemma Observing Program

Coordinator Name: Douglas Smith

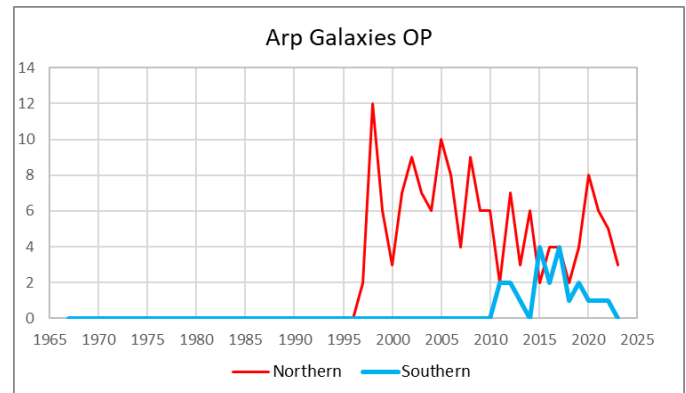
Certificates issued this year: 1  
 Certificates issued ever: 21



## Arp Peculiar Galaxies Observing Program

Coordinator Name: Marie Lott

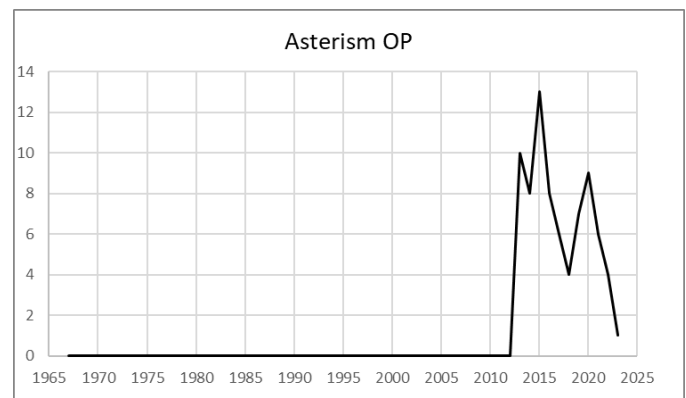
|                                | North | South |
|--------------------------------|-------|-------|
| Certificates issued this year: | 5     | 1     |
| Certificates issued ever:      | 148   | 21    |



## Asterism Observing Program

Coordinator Name: Troy Stratton

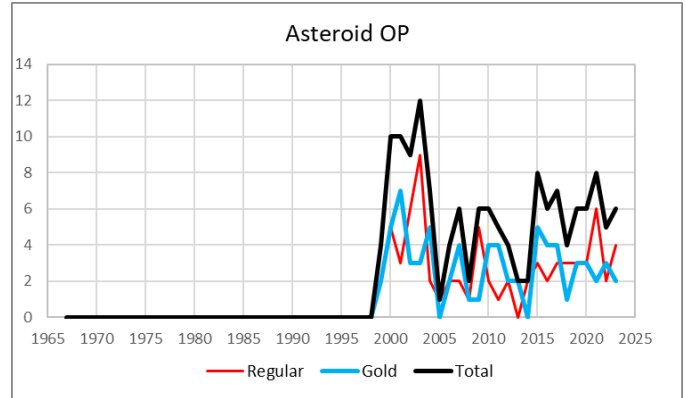
Certificates issued this year: 4  
 Certificates issued ever: 75



### Asteroid Observing Program

Coordinator Name: John Goar

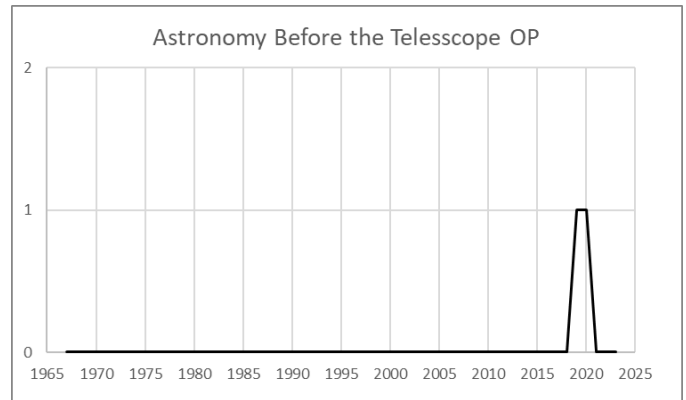
|                                | Regular | Gold |
|--------------------------------|---------|------|
| Certificates issued this year: | 2       | 3    |
| Certificates issued ever:      | 70      | 70   |



### Astronomy Before the Telescope Certificate

Coordinator Name: Steve Boerner

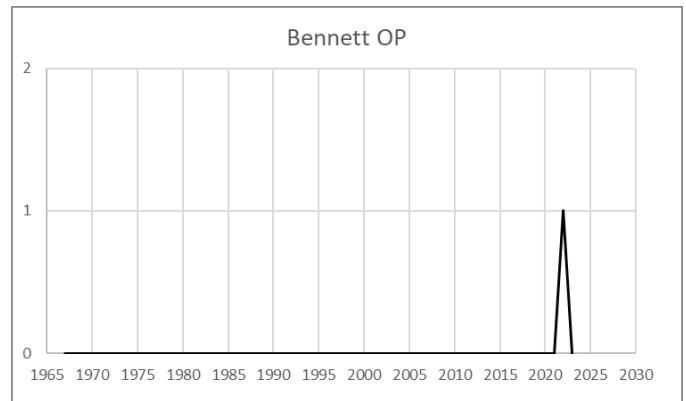
|                                |   |
|--------------------------------|---|
| Certificates issued this year: | 0 |
| Certificates issued ever:      | 2 |



### Bennett Observing Program

Coordinator Name: Bob Lentini

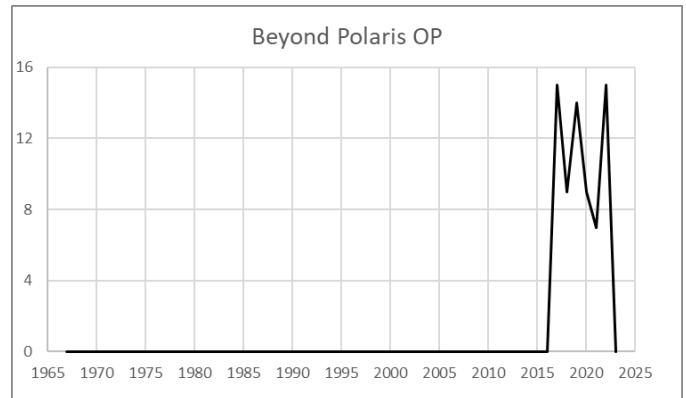
|                                |   |
|--------------------------------|---|
| Certificates issued this year: | 0 |
| Certificates issued ever:      | 1 |



### Beyond Polaris Observing Program

Coordinator Name: W. Maynard Pittendreigh

|                                |    |
|--------------------------------|----|
| Certificates issued this year: | 15 |
| Certificates issued ever:      | 69 |

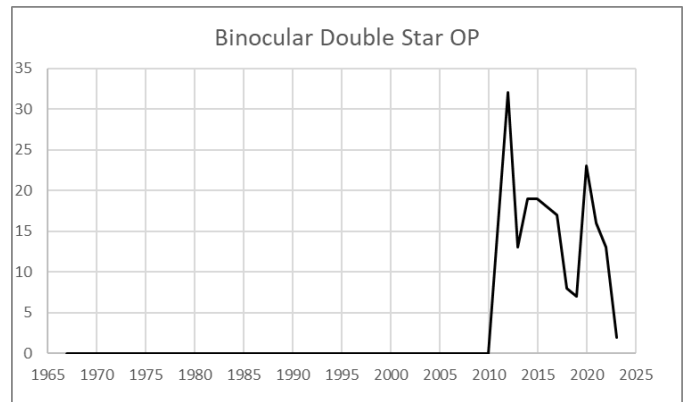




### Binocular Double Star Observing Program

Coordinator Name: Bob Kerr

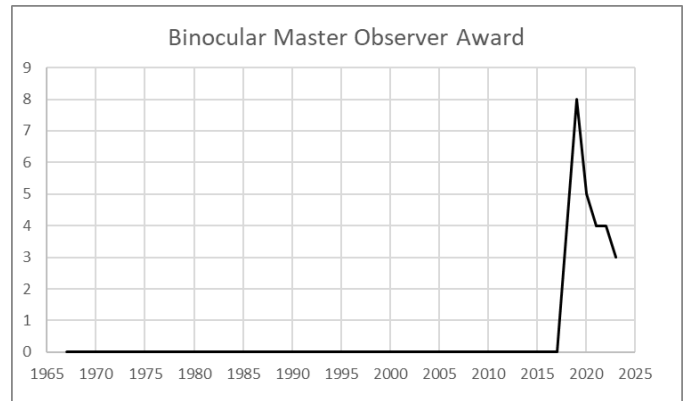
Certificates issued this year: 13  
Certificates issued ever: 201



### Binocular Master Observer Award

Coordinator Name: David Whalen

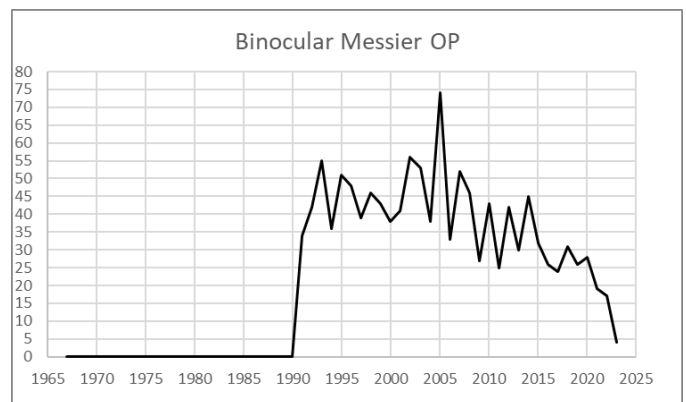
Certificates issued this year: 4  
Certificates issued ever: 25



### Binocular Messier Observing Program

Coordinator Name: John Goar

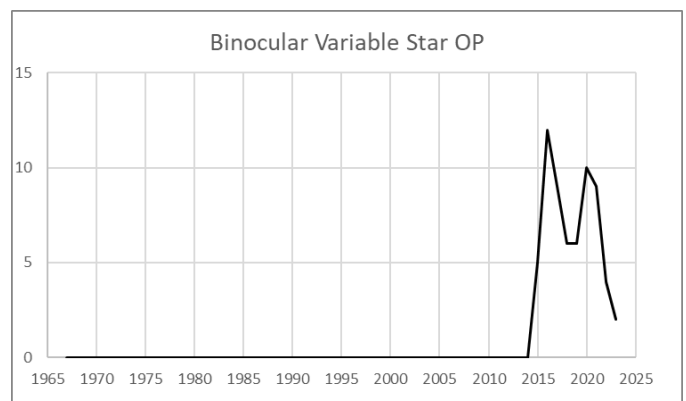
Certificates issued this year: 17  
Certificates issued ever: 1240



### Binocular Variable Star Observing Program

Coordinator Name: Robert Togni

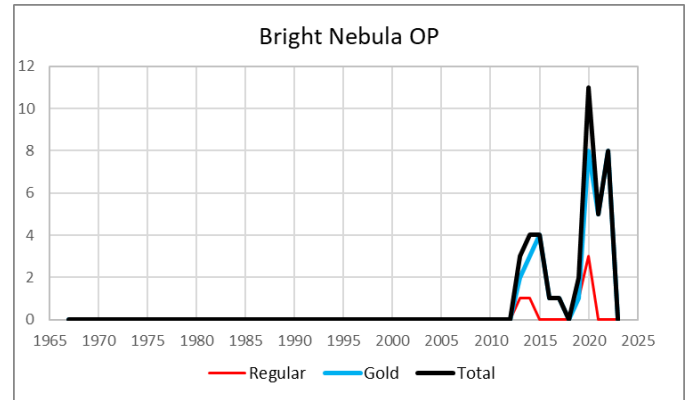
Certificates issued this year: 4  
Certificates issued ever: 61



## Bright Nebula Observing Program

Coordinator Name: Bob Scott

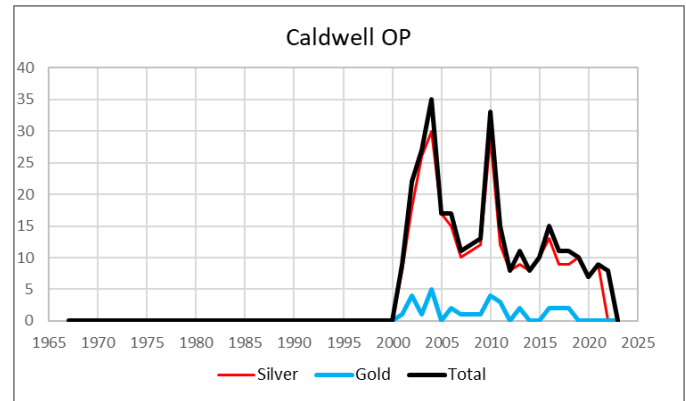
|                                | Regular | Advanced |
|--------------------------------|---------|----------|
| Certificates issued this year: | 0       | 8        |
| Certificates issued ever:      | 6       | 33       |



## Caldwell Observing Program

Coordinator Name: Sue Rose

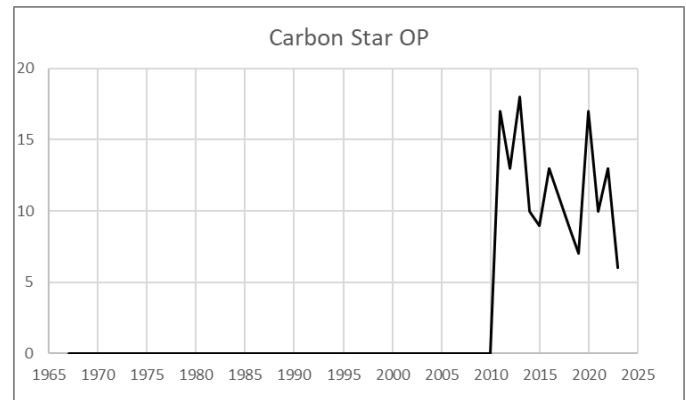
|                                | Silver | Gold |
|--------------------------------|--------|------|
| Certificates issued this year: | 0      | 0    |
| Certificates issued ever:      | 280    | 31   |



## Carbon Star Observing Program

Coordinator Name: Robert Togni

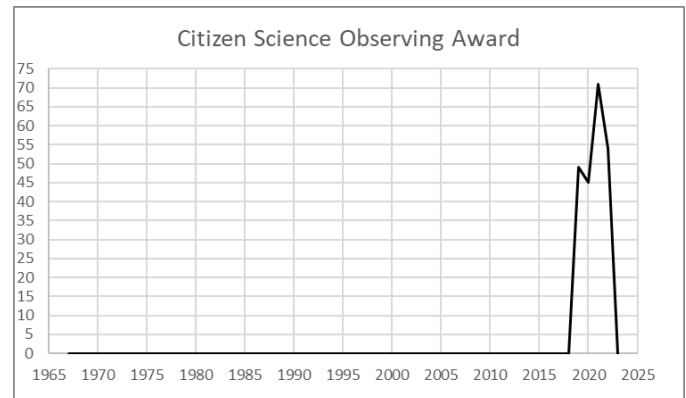
|                                |     |
|--------------------------------|-----|
| Certificates issued this year: | 13  |
| Certificates issued ever:      | 147 |



## Citizen Science Observing Certificates

Coordinator Name: Al Lamperti

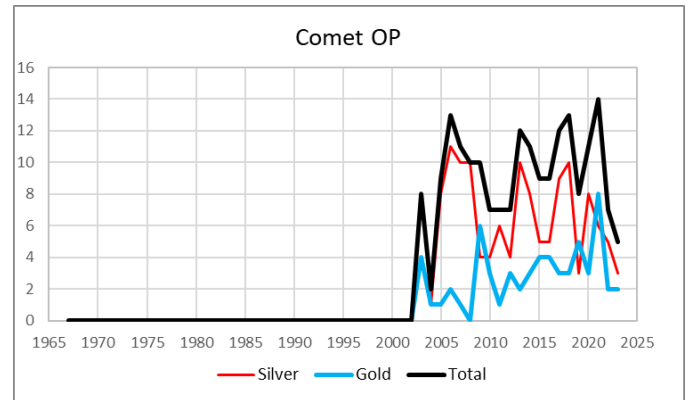
|                                |     |
|--------------------------------|-----|
| Certificates issued this year: | 54  |
| Certificates issued ever:      | 219 |



### Comet Observing Program

Coordinator Name: Scott Kranz

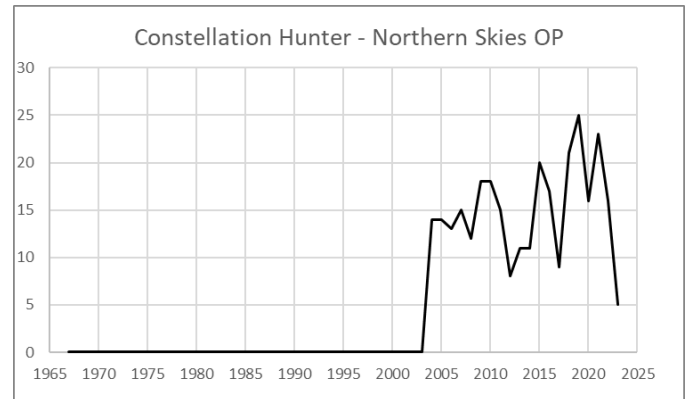
|                                | Silver | Gold |
|--------------------------------|--------|------|
| Certificates issued this year: | 5      | 2    |
| Certificates issued ever:      | 131    | 59   |



### Constellation Hunter – Northern Skies Observing Program

Coordinator Name: Cliff Mygatt

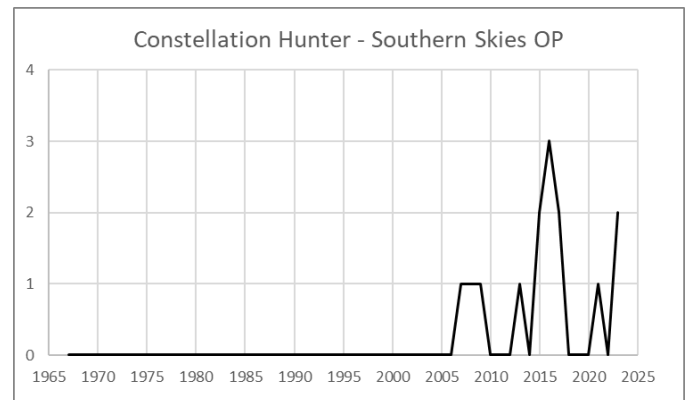
|                                |     |
|--------------------------------|-----|
| Certificates issued this year: | 16  |
| Certificates issued ever:      | 296 |



### Constellation Hunter – Southern Skies Observing Program

Coordinator Name: Cliff Mygatt

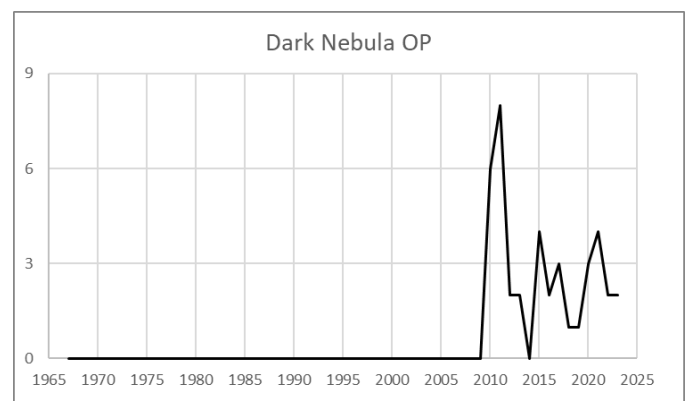
|                                |    |
|--------------------------------|----|
| Certificates issued this year: | 0  |
| Certificates issued ever:      | 12 |



### Dark Nebulae Observing Program

Coordinator Name: Kathy Machin

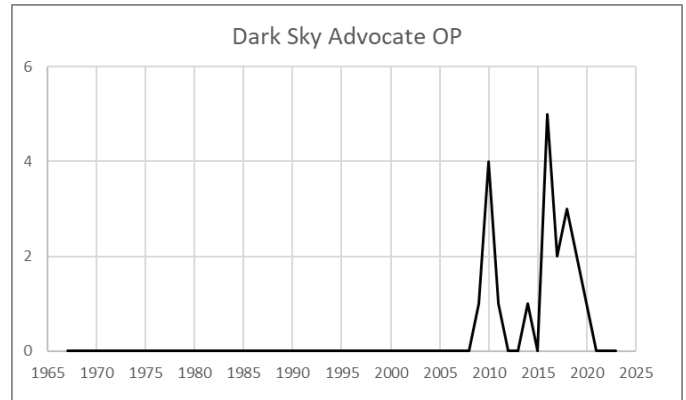
|                                |    |
|--------------------------------|----|
| Certificates issued this year: | 2  |
| Certificates issued ever:      | 38 |



### Dark Sky Advocate Observing Award

Coordinator Name: John Goss

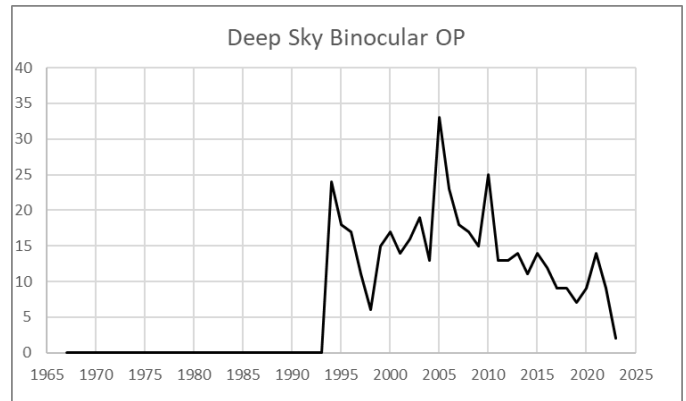
Certificates issued this year: 0  
Certificates issued ever: 20



### Deep Sky Binocular Observing Program

Coordinator Name: Cindy La Russa

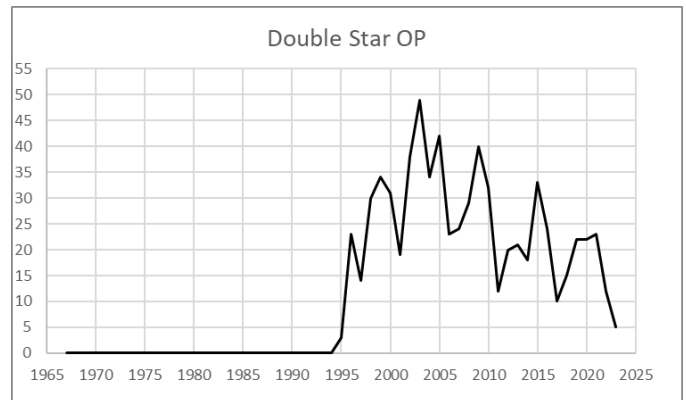
Certificates issued this year: 9  
Certificates issued ever: 435



### Double Star Observing Program

Coordinator Name: Jon Schuchardt

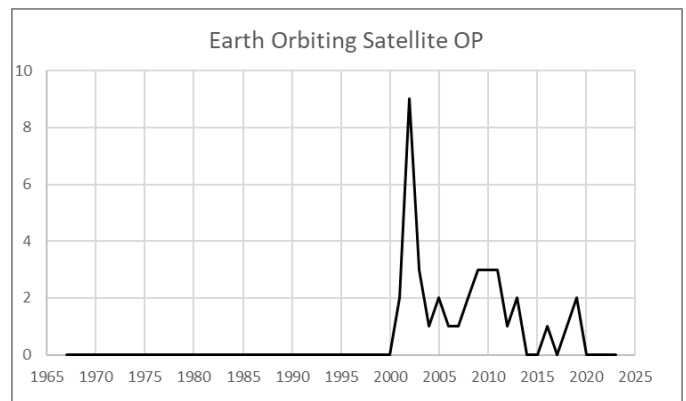
Certificates issued this year: 12  
Certificates issued ever: 697



### Earth Orbiting Satellite Observing Program

Coordinator Name: Brad Young

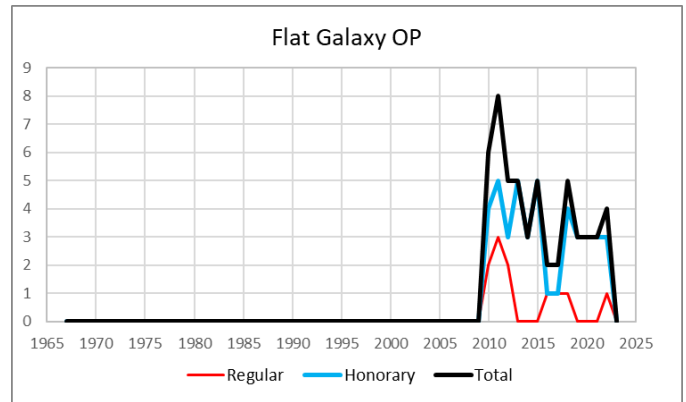
Certificates issued this year: 0  
Certificates issued ever: 37



### Flat Galaxy Observing Program

Coordinator Name: Al Lamperti

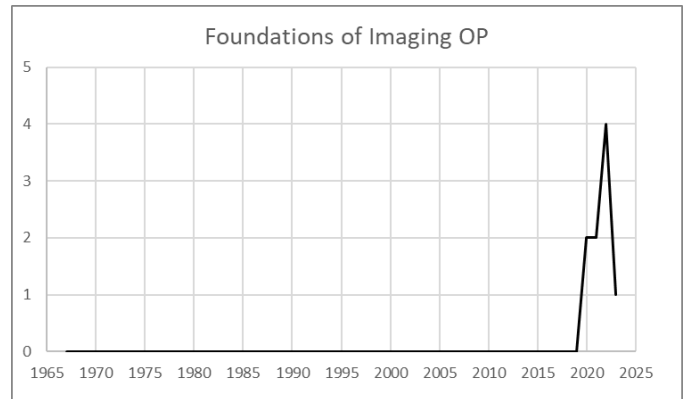
|                                | Regular | Honorary |
|--------------------------------|---------|----------|
| Certificates issued this year: | 1       | 3        |
| Certificates issued ever:      | 11      | 43       |



### Foundations of Imaging Observing Program

Coordinator Name: Dan Crowson

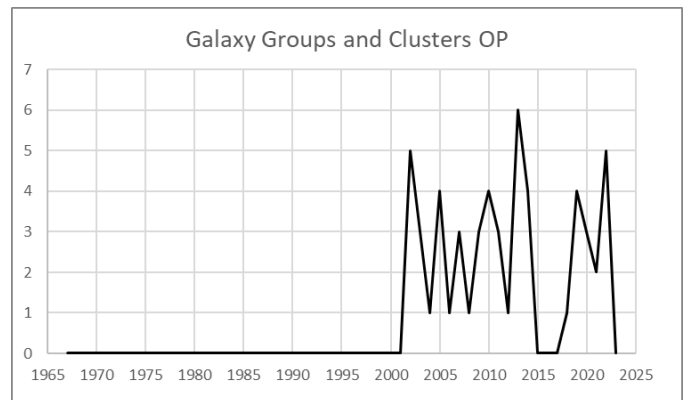
|                                |   |
|--------------------------------|---|
| Certificates issued this year: | 4 |
| Certificates issued ever:      | 8 |



### Galaxy Groups and Clusters Observing Program

Coordinator Name: Russell Pinizotto

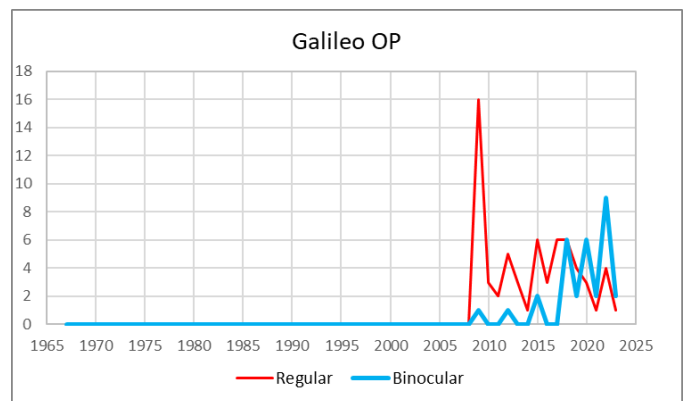
|                                |    |
|--------------------------------|----|
| Certificates issued this year: | 5  |
| Certificates issued ever:      | 54 |



### Galileo Observing Program

Coordinator Name: Michael Hotka

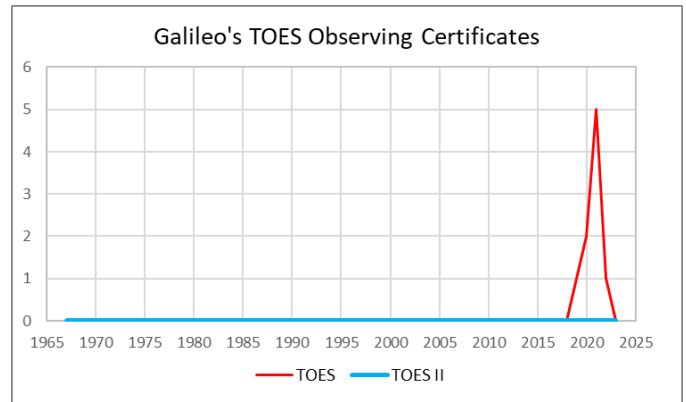
|                                | Regular | Binocular |
|--------------------------------|---------|-----------|
| Certificates issued this year: | 4       | 9         |
| Certificates issued ever:      | 63      | 29        |



### Galileo's T.O.E.S. Certificate3.5

Coordinator Name: Aaron Clevenson

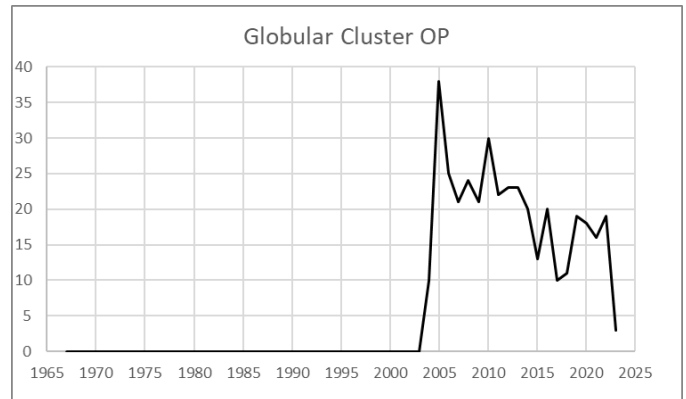
|                                | TOES | TOES II |
|--------------------------------|------|---------|
| Certificates issued this year: | 1    | 0       |
| Certificates issued ever:      | 9    | 0       |



### Globular Cluster Observing Program

Coordinator Name: Bob Kerr

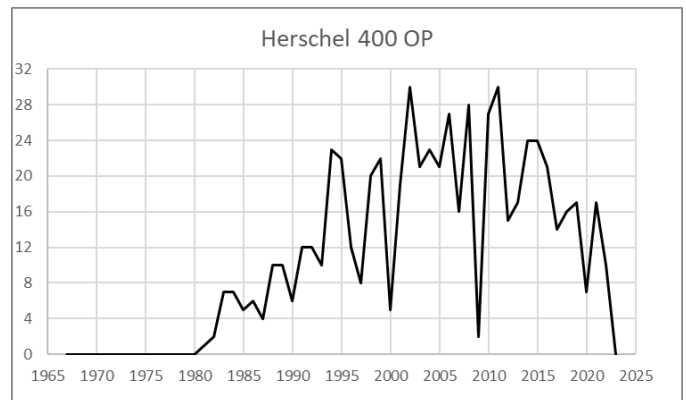
|                                |     |
|--------------------------------|-----|
| Certificates issued this year: | 19  |
| Certificates issued ever:      | 383 |



### Herschel 400 Observing Program

Coordinator Name: Jack Estes

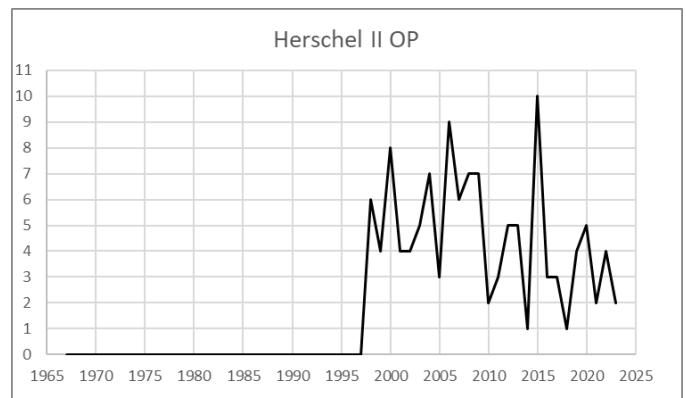
|                                |     |
|--------------------------------|-----|
| Certificates issued this year: | 10  |
| Certificates issued ever:      | 630 |



### Herschel II Observing Program

Coordinator Name: Candace Pratt

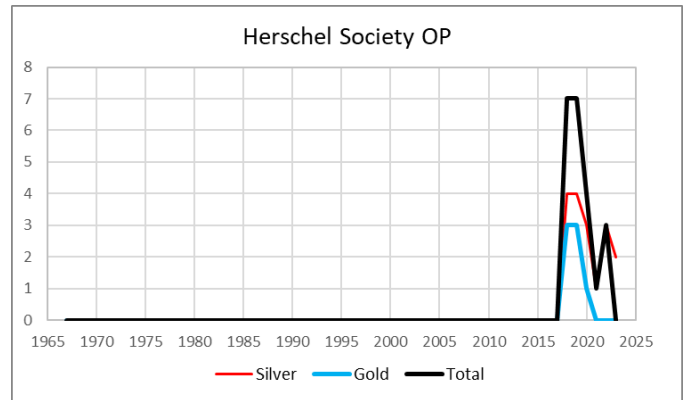
|                                |     |
|--------------------------------|-----|
| Certificates issued this year: | 4   |
| Certificates issued ever:      | 118 |



## Herschel Society Certificates

Coordinator Name: Cliff Mygatt

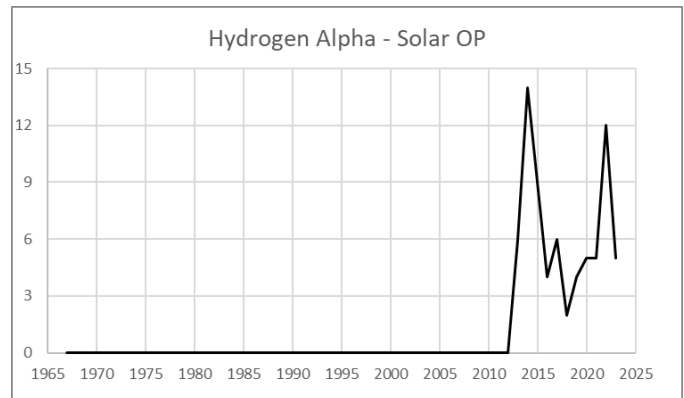
|                                | Silver | Gold |
|--------------------------------|--------|------|
| Certificates issued this year: | 3      | 0    |
| Certificates issued ever:      | 15     | 7    |



## Hydrogen-Alpha Solar Observing Program

Coordinator Name: Mark Simonson

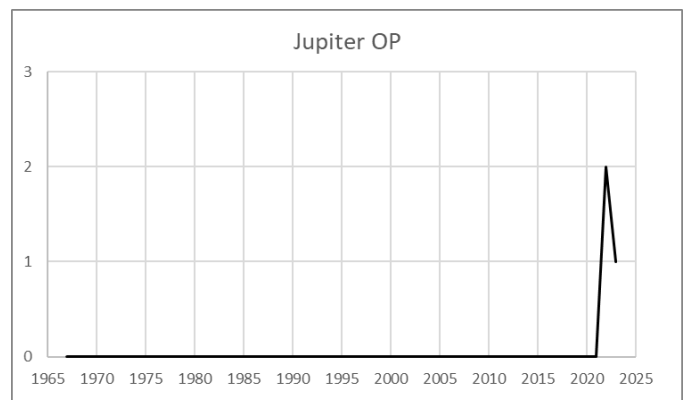
|                                |    |
|--------------------------------|----|
| Certificates issued this year: | 12 |
| Certificates issued ever:      | 67 |



## Jupiter Observing Program

Coordinator Name: Douglas Smith

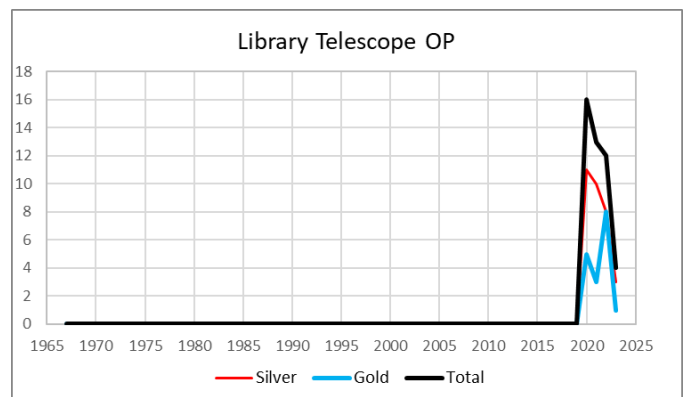
|                                |   |
|--------------------------------|---|
| Certificates issued this year: | 2 |
| Certificates issued ever:      | 2 |



## Library Telescope Observing Award

Coordinator Name: Tom Lynch

|                                | Silver | Gold |
|--------------------------------|--------|------|
| Certificates issued this year: | 8      | 8    |
| Certificates issued ever:      | 29     | 16   |

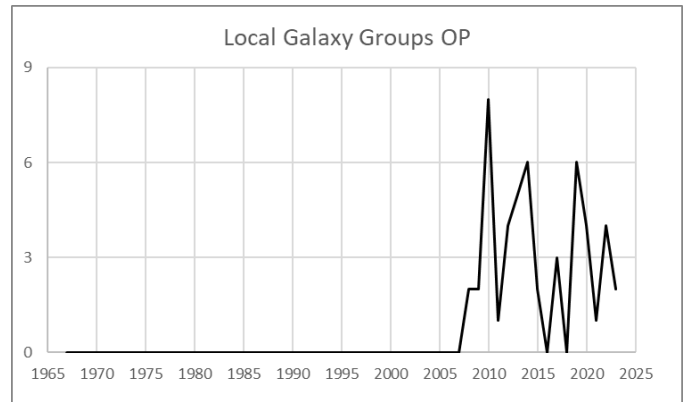


## Local Galaxy Groups and Galactic Neighborhood Observing Program

Coordinator Name: Mark Simonson

Certificates issued this year: 4

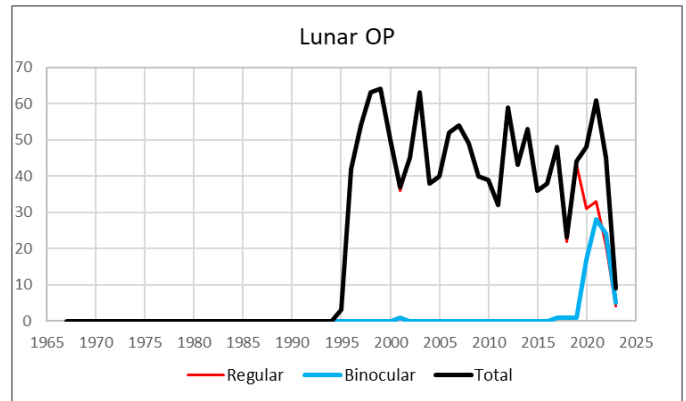
Certificates issued ever: 48



## Lunar Observing Program

Coordinator Name: Chuck Allen

|                                |           |         |
|--------------------------------|-----------|---------|
|                                | Binocular | Regular |
| Certificates issued this year: | 24        | 21      |
| Certificates issued ever:      | 73        | 1190    |

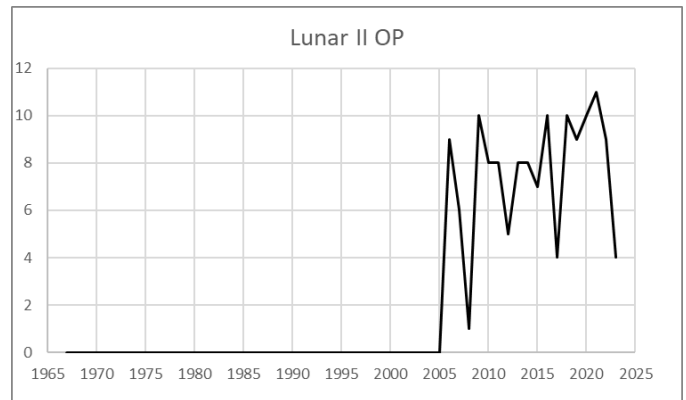


## Lunar II Observing Program

Coordinator Name: Cliff Mygatt

Certificates issued this year: 9

Certificates issued ever: 133

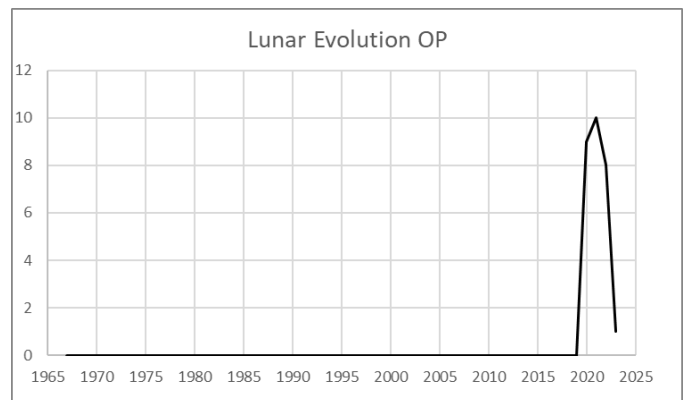


## Lunar Evolution Observing Program

Coordinator Name: Chuck Allen

Certificates issued this year: 8

Certificates issued ever: 27

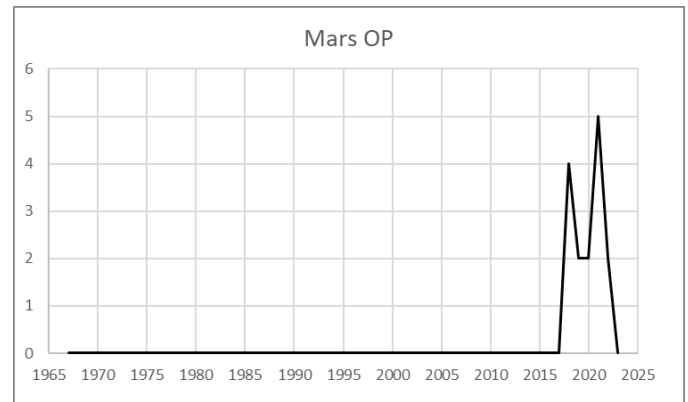




## Mars Observing Program

Coordinator Name: Mark Simonson

Certificates issued this year: 2  
 Certificates issued ever: 15



## Master Observer Award

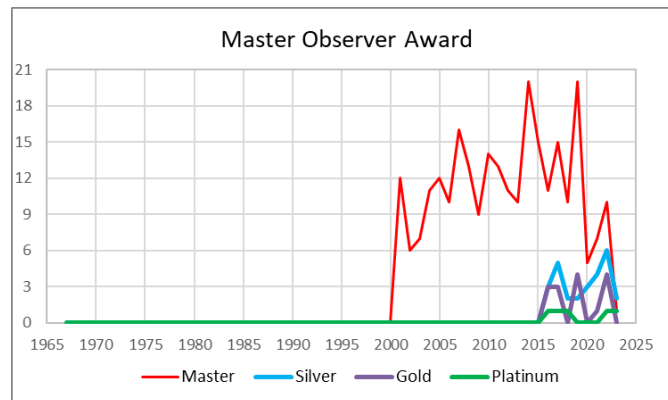
Master Observer – Silver Award

Master Observer – Gold Award

Master Observer – Platinum Award

Coordinator Name: David Whalen

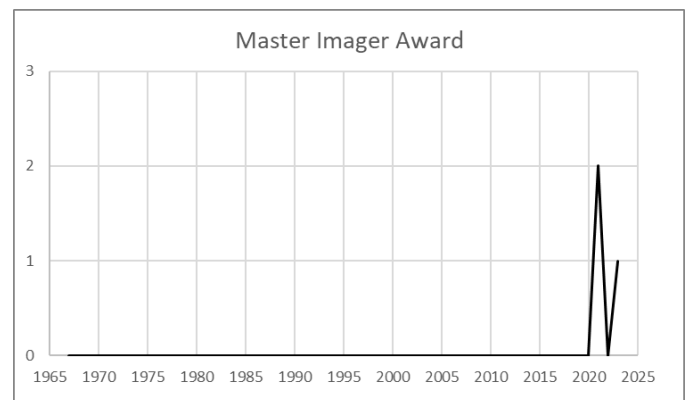
|                                | Master | Silver | Gold | Platinum |
|--------------------------------|--------|--------|------|----------|
| Certificates issued this year: | 10     | 6      | 4    | 1        |
| Certificates issued ever:      | 257    | 25     | 15   | 4        |



## Master Imager Award

Coordinator Name: David Whalen

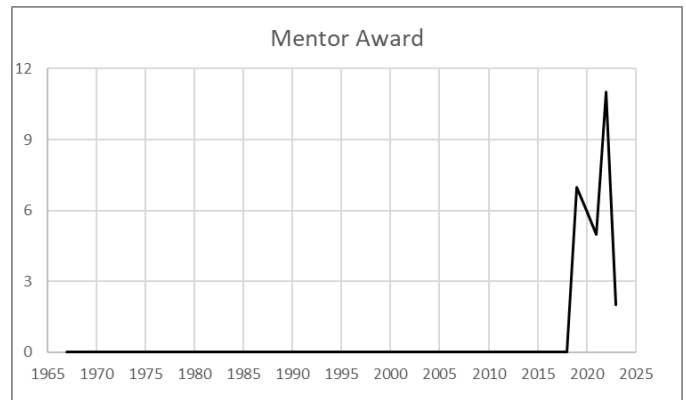
Certificates issued this year: 0  
 Certificates issued ever: 2



### Mentor Award

Coordinator Name: Emma Terlep

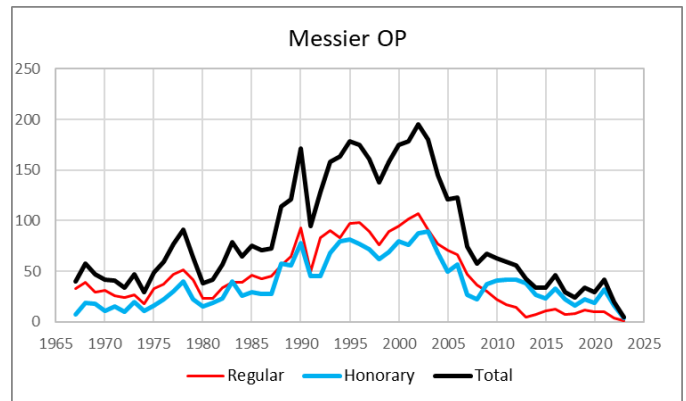
Certificates issued this year: 11  
Certificates issued ever: 29



### Messier Observing Program

Coordinator Name: Scott Kranz

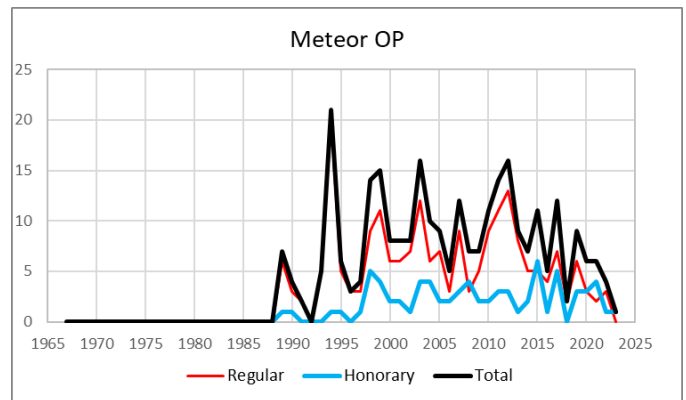
|                                |         |          |
|--------------------------------|---------|----------|
|                                | Regular | Honorary |
| Certificates issued this year: | 4       | 16       |
| Certificates issued ever:      | 2560    | 2207     |



### Meteor Observing Program

Coordinator Name: Scott Kranz

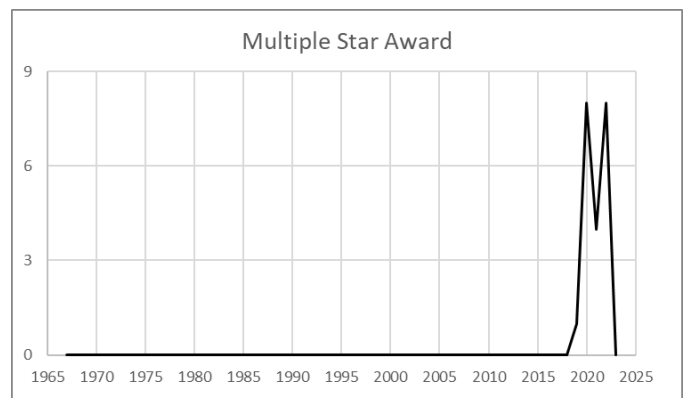
|                                |         |          |
|--------------------------------|---------|----------|
|                                | Regular | Honorary |
| Certificates issued this year: | 3       | 1        |
| Certificates issued ever:      | 209     | 74       |



### Multiple Star Observing Program

Coordinator Name: Steve McGaughey

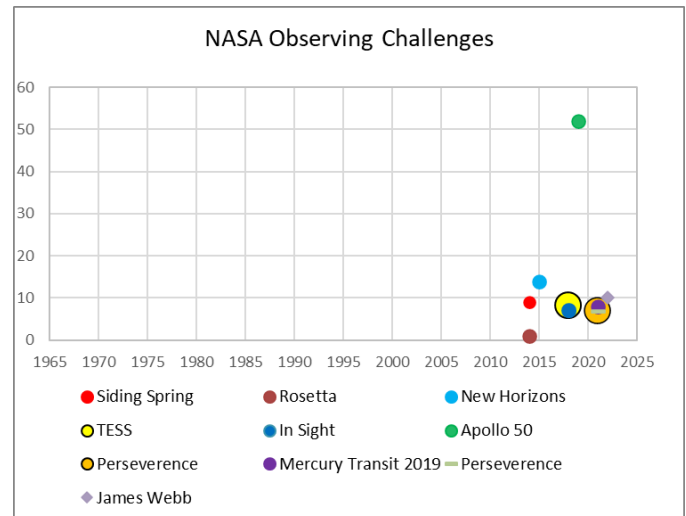
Certificates issued this year: 8  
Certificates issued ever: 21



## NASA Observing Challenge Certificates

Coordinator Name: Richard Benson

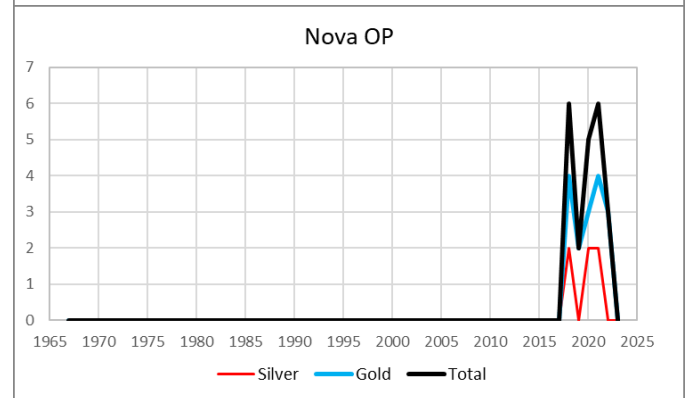
|                            |        |    |
|----------------------------|--------|----|
| 1. Siding Spring           | (2013) | 9  |
| 2. Rosetta                 | (2013) | 1  |
| 3. New Horizons            | (2014) | 14 |
| 4. TESS                    | (2018) | 8  |
| 5. InSight                 | (2018) | 7  |
| 6. Apollo 50 <sup>th</sup> | (2019) | 52 |
| 7. Mercury Transit         | (2019) | 8  |
| 8. Perseverance            | (2021) | 7  |
| 9. James Webb              | (2022) | 10 |



## Nova Observing Program

Coordinator Name: Raymond Howard

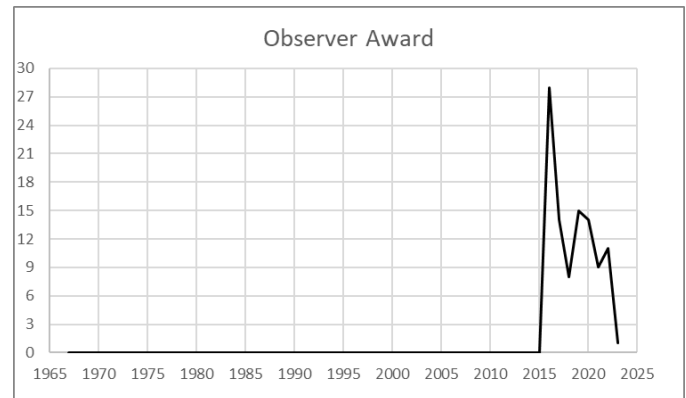
|                                | Silver | Gold |
|--------------------------------|--------|------|
| Certificates issued this year: | 0      | 3    |
| Certificates issued ever:      | 6      | 16   |



## Observer Award

Coordinator Name: David Whalen

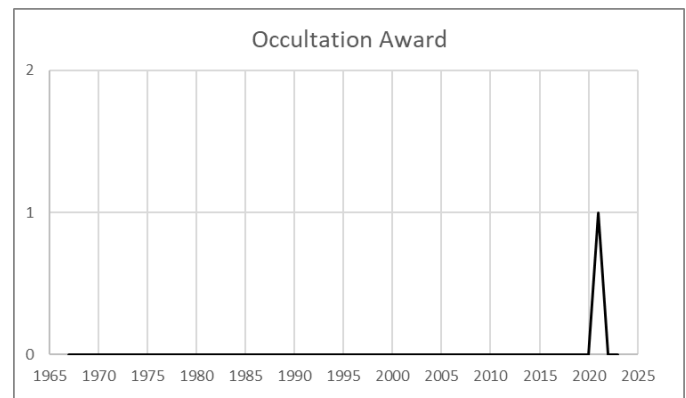
|                                |    |
|--------------------------------|----|
| Certificates issued this year: | 11 |
| Certificates issued ever:      | 99 |



## Occultation Observing Program

Coordinator Name: Steve Conard

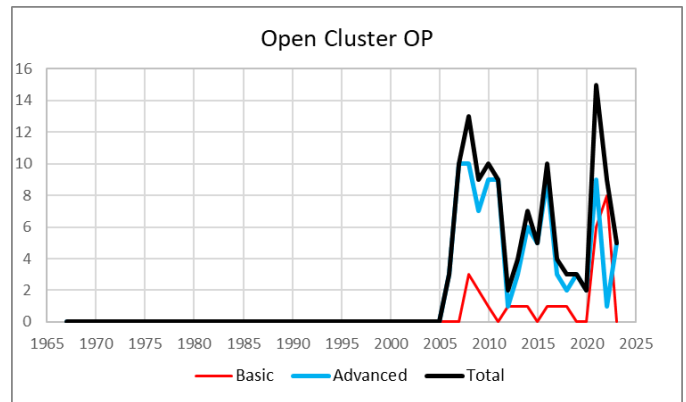
|                                |   |
|--------------------------------|---|
| Certificates issued this year: | 0 |
| Certificates issued ever:      | 1 |



### Open Cluster Observing Program

Coordinator Name: Cliff Mygatt

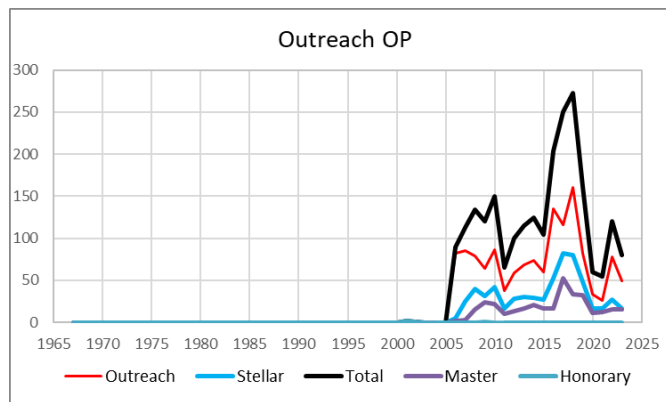
|                                | Basic | Advanced |
|--------------------------------|-------|----------|
| Certificates issued this year: | 8     | 1        |
| Certificates issued ever:      | 26    | 92       |



### Outreach Observing Award

Coordinator Name: W. Maynard Pittendreigh

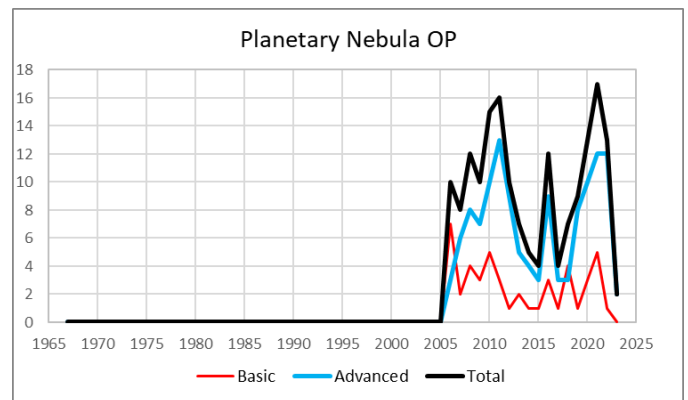
|                                | Honorary | Outreach | Stellar | Master |
|--------------------------------|----------|----------|---------|--------|
| Certificates issued this year: | 0        | 78       | 27      | 15     |
| Certificates issued ever:      | 4        | 1325     | 596     | 316    |



### Planetary Nebulae (Northern and Southern) Observing Program

Coordinator Name: Ted Forte

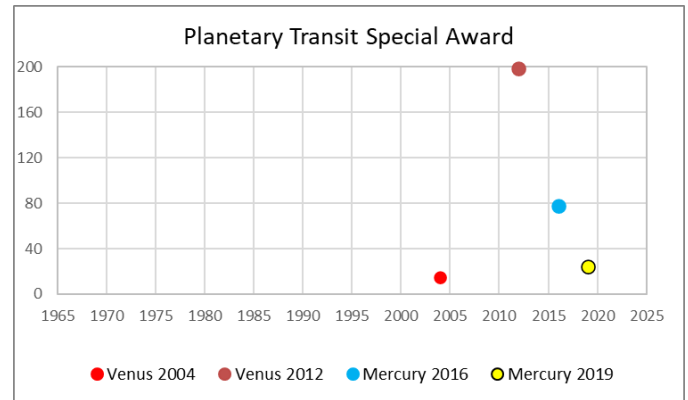
|                                | Basic | Advanced |
|--------------------------------|-------|----------|
| Certificates issued this year: | 1     | 12       |
| Certificates issued ever:      | 47    | 125      |



## Planetary Transit Special Observing Award

Coordinator Name: Aaron Clevenson

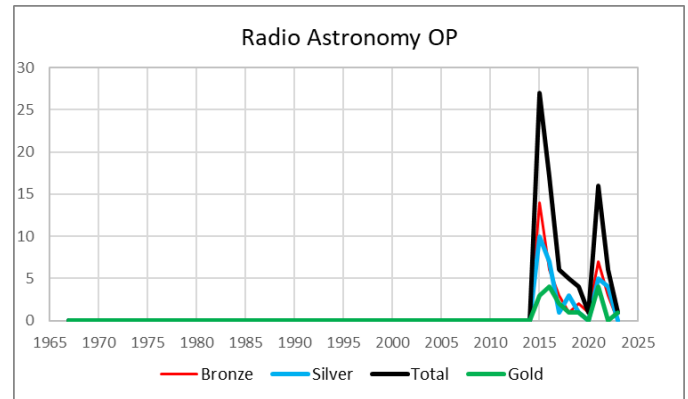
|              |     |
|--------------|-----|
| Venus 2004   | 20  |
| Venus 2012   | 195 |
| Mercury 2016 | 78  |
| Mercury 2019 | 24  |



## Radio Astronomy Observing Program

Coordinator Name: Steve Boerner

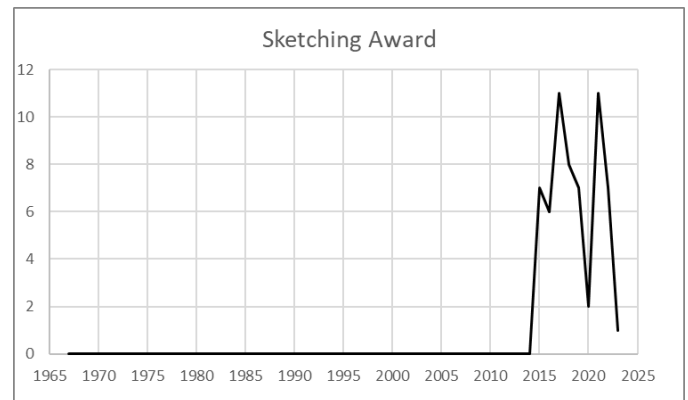
|                                | Bronze | Silver | Gold |
|--------------------------------|--------|--------|------|
| Certificates issued this year: | 3      | 4      | 0    |
| Certificates issued ever:      | 37     | 31     | 15   |



## Sketching Observing Award

Coordinator Name: Cindy L. Krach

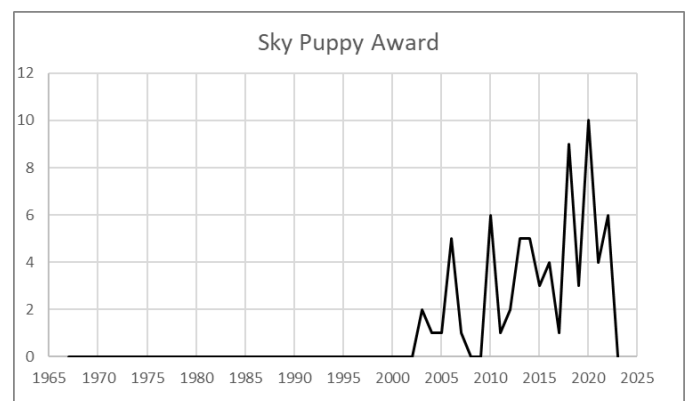
|                                |    |
|--------------------------------|----|
| Certificates issued this year: | 7  |
| Certificates issued ever:      | 59 |



## Sky Puppy Observing Program

Coordinator Name: Aaron Clevenson

|                                |    |
|--------------------------------|----|
| Certificates issued this year: | 6  |
| Certificates issued ever:      | 69 |

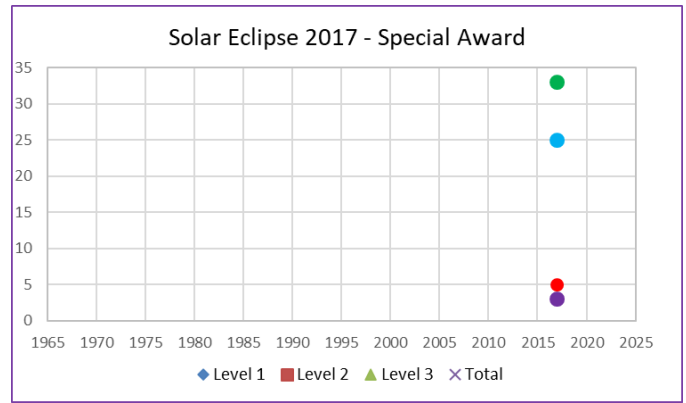


### Solar Eclipse – 2017 Special Observing Award

Coordinator Name: Aaron Clevenson

Certificates issued:

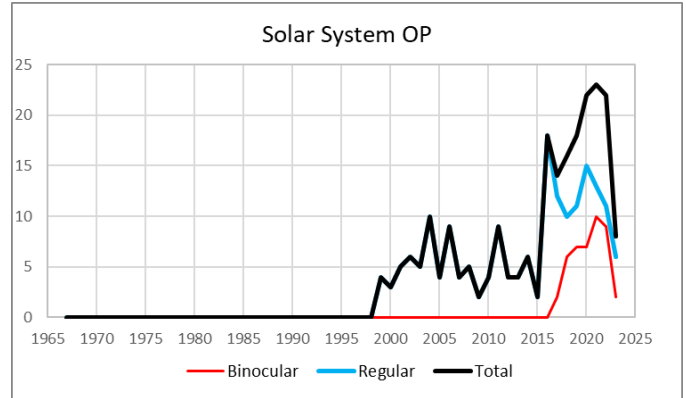
|         |    |
|---------|----|
| Level 1 | 5  |
| Level 2 | 3  |
| Level 3 | 25 |



### Solar System Observing Program

Coordinator Name: Chuck Allen

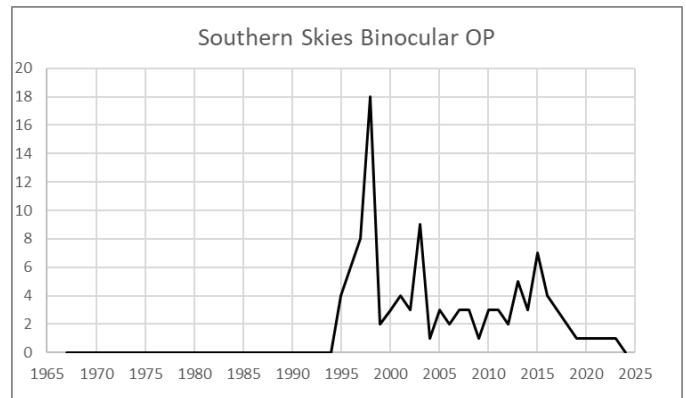
|                                |           |         |
|--------------------------------|-----------|---------|
|                                | Binocular | Regular |
| Certificates issued this year: | 9         | 11      |
| Certificates issued ever:      | 41        | 176     |



### Southern Skies Binocular Observing Program

Coordinator Name: Cindy La Russa

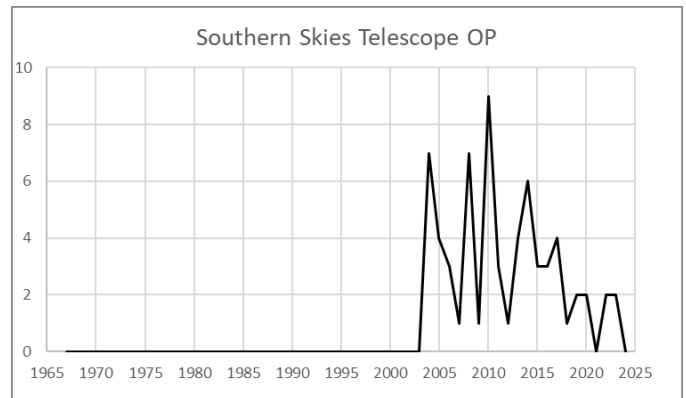
|                                |     |
|--------------------------------|-----|
| Certificates issued this year: | 1   |
| Certificates issued ever:      | 106 |



### Southern Skies Telescopic Observing Programs

Coordinator Name: Kathy Machin

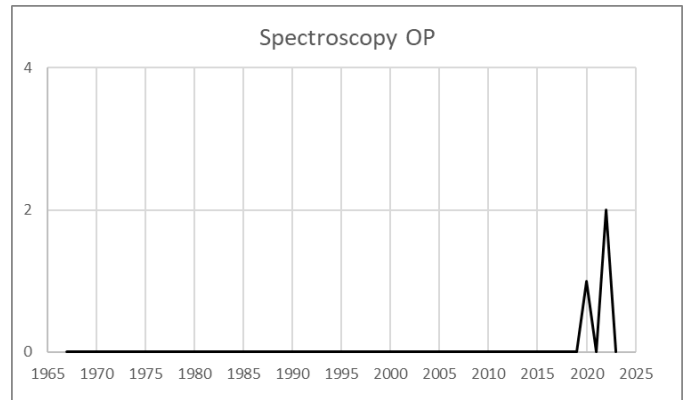
|                                |    |
|--------------------------------|----|
| Certificates issued this year: | 2  |
| Certificates issued ever:      | 63 |



## Spectroscopy Observing Program

Coordinator Name: Steve Boerner

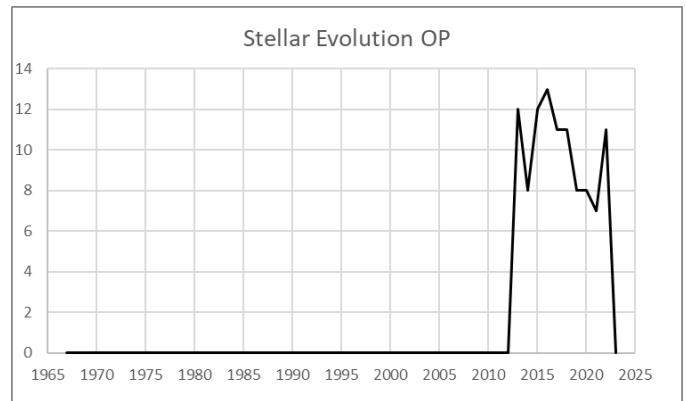
Certificates issued this year: 2  
 Certificates issued ever: 3



## Stellar Evolution Observing Program

Coordinator Name: Bill Pellerin

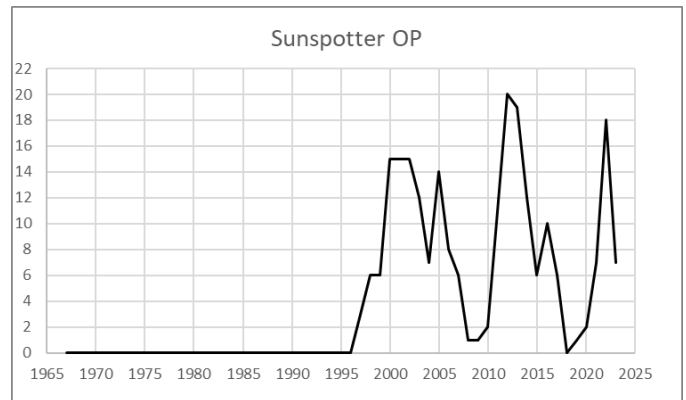
Certificates issued this year: 11  
 Certificates issued ever: 101



## Sunspotter Observing Program

Coordinator Name: Scott Kranz

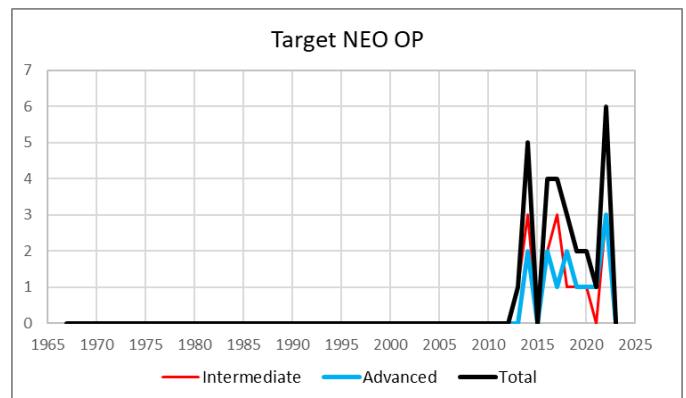
Certificates issued this year: 18  
 Certificates issued ever: 223



## Target NEO Observing Program

Coordinator Names: Dolores Hill and Carl Hergenrother

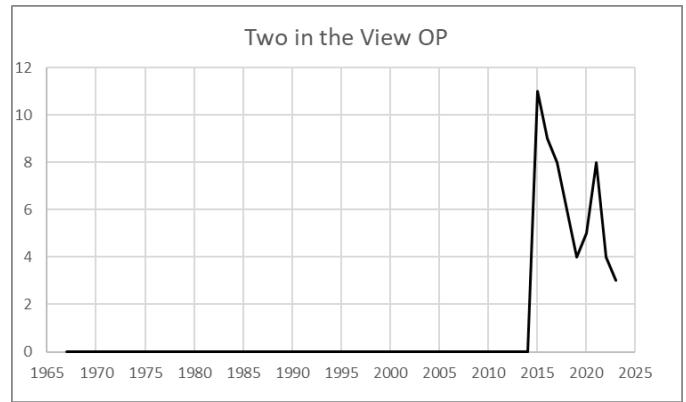
|                                | Intermediate | Advanced |
|--------------------------------|--------------|----------|
| Certificates issued this year: | 3            | 3        |
| Certificates issued ever:      | 15           | 13       |



### Two in the View Observing Program

Coordinator Name: Bob Scott

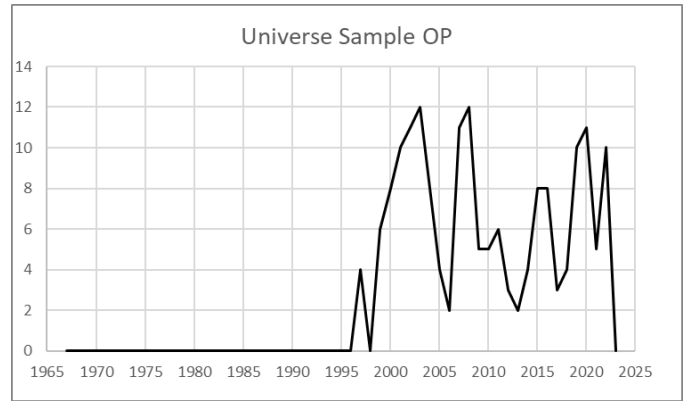
Certificates issued this year: 4  
Certificates issued ever: 55



### Universe Sampler Observing Program

Coordinator Name: Amelia Goldberg

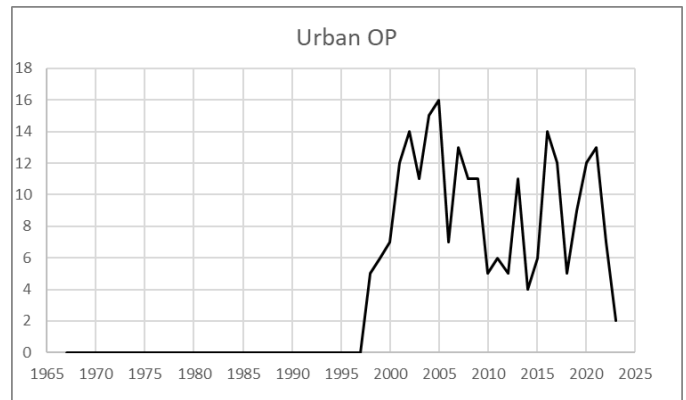
Certificates issued this year: 10  
Certificates issued ever: 172



### Urban Observing Program

Coordinator Name: Terry N. Trees

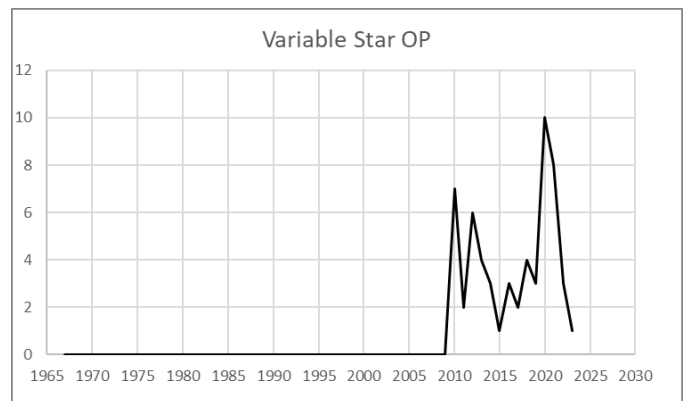
Certificates issued this year: 7  
Certificates issued ever: 237



### Variable Star Observing Program

Coordinator Name: Robert Togni

Certificates issued this year: 3  
Certificates issued ever: 56



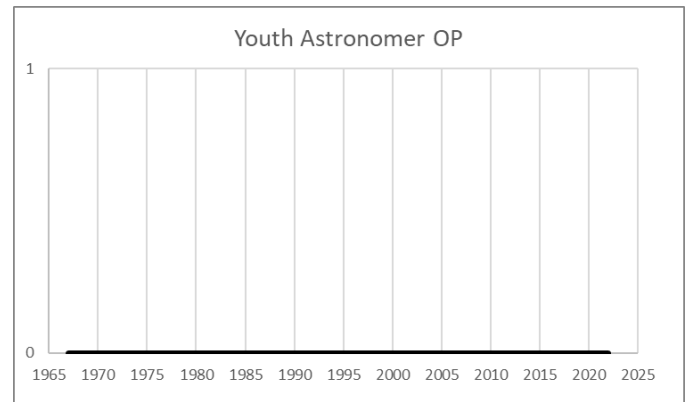


## Youth Astronomer Observing Program

Coordinator Name: Maynard Pittendreigh

Certificates issued this year: 0

Certificates issued ever: 0



## **Astronomical League certifications fall into these classifications:**

- Observing Programs – Require observation, count towards the Master Observer Progression, announced in the Reflector Magazine, and recorded in the on-line database.
- Observing Awards – Do not require observation, sometimes count towards the Master Observer Progression, announced in the Reflector magazine, and recorded in the on-line database.
- Special Observing Awards – Require observation, designed to commemorate a specific one-time astronomical event, does not count towards the Master Observer Progression, announced in the Reflector Magazine, and recorded in the on-line database.
- Observation Challenges – Usually only include a certificate, no pin. Always include an outreach component. These three groups of Observing Challenges have been done:
  - AL Observation Challenges – usually of significant astronomical events.
  - Eclipse Observing Challenges – total and annular solar eclipses visible in the US.
  - NASA Observing Challenges – usually associated with significant NASA milestones.
- Observing Certificates – Often require observation, done in support and as extensions of the Observing Programs, does not count towards the Master Observer Progression, announced in the Reflector magazine, and recorded in the on-line database.
- 5 downloadable certificates – available to anyone and not recorded in the on-line database nor announced in the Reflector magazine.

Many Observing Programs and Observing Awards contain multiple levels and options for completion.

- These have three levels:
  - Outreach Award
  - Radio Astronomy Observing Program
  - Solar Eclipse – 2017 Special Observing Award
- These include a partial level (one or more) of completion as well as a complete level certification (only the top level counts towards the Master Observer Progression):
  - Asteroid Observing Program: silver and gold
  - Bright Nebula Observing Program: regular and gold
  - Caldwell Observing Program: silver and gold. (This is the only example where the two levels count as independent certifications and both count towards the Master Observer Progression.)
  - Comet Observing Program: silver and gold
  - Flat Galaxies Observing Program: regular and honorary
  - Herschel Society: silver and gold
  - Lunar Observing Program: regular and binocular
  - Messier Observing Program: regular and honorary
  - Meteor Observing Program: 6, 12, 18, 24, 30, and 36 hours
  - Target NEO Observing Program: intermediate and advanced
  - Nova Observing Program: silver and gold
  - Open Cluster Observing Program: basic and advanced
  - Planetary Nebula Observing Program: basic and advanced
  - Solar System Observing Program: telescopic and binocular
- Many Observing Programs include options for manual (M) target acquisition as well as device-aided target acquisition.

- Many Observing Programs include options for visual observing as well as imaging (I).
- Many Observing Programs include options for binocular (B) as well as telescopic observations.