



Astronomical League

Observing Program Division

Internal White Paper

Database Standards

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Overview

Data Entry in the Awards Database is a rather complex process. There are many steps and people involved . There are many things that need to be done following a standard entry process. This document is designed to document those considerations. The database serves many diverse functions. Standardization is critical to those functions.

- The most important function is to provide the ability for members to search for certifications that they have earned.
- In the event of a request for a replacement pin or certificate, it serves as proof of the award having been earned by that member.
- It also provides the ability for local astronomy society officers to search for certifications earned by their membership.
- The data is also used by some Observing Program Coordinators to verify completion of Observing Programs required as part of their progression. (For example, the Master Observer Progression.)
- This is also the source of information used in the Observing Program Division's annual report to the Astronomical League Council.

Observing Program Coordinator Supplied Information

Requests for certification are processed by the Observing Program Coordinators. It is critical that the information supplied to the Database Manager be correct. Specifically, these items are critical:

- Correct spelling of the members' names.
- Correct spelling and naming of the members astronomical societies.
- Correct formatting for the award numbers.
- Correct naming of the level.

Database Manager Imports of Award Data

The next step in the process depends on the Database Manager entering the data correctly into the on-line database. Care must be taken to accurately enter the data as provided by the Observing Program Coordinators. This includes correcting information that does not follow the standards. Although accuracy of this data is the responsibility of the Observing Program Coordinator, the last line of defense is the Database Manager.

The following sections are the tables of standard values to be used in the database as of the publication of this White Paper. These lists change frequently and more often than this document is updated.

Society Names that are Not Actual Societies

There are times when Society Names are not the names of actual member societies of the Astronomical League. These entries include:

- **Independent** – This Society Name is used for individuals who earn a certification but are not actually members of the Astronomical League. There are very few Observing Programs that allow this. They include:
 - AL Observing Challenges
 - NASA Observing Challenges
 - Radio Astronomy Observing Program – Bronze
 - Sky Puppy
- **Member-at-Large** – This is used as the Society Name for those members who are not part of a specific member society. This is the format that should be used.
- **Lifetime Member** – This is used to recognize those members who are Lifetime Members.
- **Unknown** – This is reserved for those situations where the name of the member's astronomical society has been lost to the sands of time.

Society Names – Special Situations

There are times when a member wants to show multiple Society Names for an award. Usually, this is when a member is part of more than one society and wants the award to appear on searches for both societies. The rules in this situation are:

- We allow this.
- The preference is to have one record in the database for each award.
- Names of the societies should be shown in the Society Name field connected with “ & ”.

Society Names in the database reflect the society of the member when the certification was earned. These are normally not changed:

- When a member switches to a different society, we do not change prior awards.
- When a society changes its name, the Observing Program Directors will review and determine if the database should be updated.
- Errors in the database will be corrected as they are found.

When “, Inc.” is part of a society's name, we do NOT include this in the database.

When the society's name includes “The” (at the start or end) we do NOT include this in the database.

We do NOT abbreviate state names.

Society Names

This list includes all of the actual member societies in the Astronomical League as of the publication date for this White Paper. This list changes regularly.

Adirondack Public Observatory	Big Bear Valley Astronomical Society
Aerospace Employees Association Astronomy Club	Birmingham Astronomical Society
Alachua Astronomy Club	Black Canyon Astronomical Society
Albany Area Amateur Astronomers, Inc.	Black Hawk Astronomy Club
Albuquerque Astronomical Society	Blue Ridge Astronomy Club
Amarillo Astronomy Club	Bluegrass Amateur Astronomy Club
Amateur Astronomers Association of New York	Boeing Employees Astronomical Society
Amateur Astronomers Association of Pittsburgh	Boise Astronomical Society
Amateur Observers Society of New York	Brazos Valley Astronomy Club
Ames Area Amateur Astronomers	Brevard Astronomical Society
Ancient City Astronomy Club	Broken Arrow Sidewalk Astronomer
Antelope Valley Astronomy Club, Inc.	Bucks-Mont Astronomical Association
Arizona Desert Skygazer Astronomy Club	Buffalo Astronomical Association
Arkansas Oklahoma Astronomical Society	Cape Fear Astronomical Society
Astronomers of Humboldt	Capital Area Astronomy Association
Astronomical Association of Southeast Missouri	Cedar Amateur Astronomers, Inc.
Astronomical Association of Southern Illinois	Central Appalachian Astronomy Club
Astronomical Society of Eastern Missouri	Central Arkansas Astronomical Society
Astronomical Society of Kansas City	Central Florida Astronomical Society, Inc.
Astronomical Society of Las Cruces	Central Missouri Amateur Astronomers
Astronomical Society of Long Island	Central Pennsylvania Observers
Astronomical Society of Northern New England	Central Texas Astronomical Society, Inc.
Astronomical Society of NW Arkansas	Champaign-Urbana Astronomical Society
Astronomical Society of South East Texas	Chapel Hill Astronomical & Observational Society
Astronomical Society of the Palm Beaches	Charlottesville Astronomical Society
Astronomical Society of Toms River Area	Chesmont Astronomical Society
Astronomy Associates of Lawrence	Chester County Astronomical Society
Astronomy Club of Akron, Inc.	Chicago Astronomical Society
Astronomy Club of Asheville	Chippewa Valley Astronomical Society
Astronomy Club of Augusta	Cincinnati Astronomical Society
Astronomy Club of Tulsa	Cleveland County Astronomical Society
Astronomy Enthusiasts of Lancaster County	Clovis Astronomy Club
Astronomy in the Parks Society	Colorado Springs Astronomical Society
Astronomy Section of the Rochester Academy of Science	Corpus Christi Astronomical Society
Atlanta Astronomy Club, Inc.	Crystal Coast Stargazers
Auburn Astronomical Society	Cumberland Astronomical Society
Austin Astronomical Society	Cumberland Astronomy Club
Back Bay Amateur Astronomers	Custer Institute, The
Barnard Astronomical Society	Delaware Astronomical Society
Barnard-Seyfert Astronomical Society	Delaware Valley Amateur Astronomers
Bartlesville Astronomical Society	Denver Astronomical Society
Baton Rouge Astronomical Society	Des Moines Astronomical Society, Inc.
Battle Point Astronomical Association	Door Peninsula Astronomical Society
Bays Mountain Astronomy Club	East Valley Astronomy Club
Bear Valley Springs Astronomy Club	Eastern Missouri Dark Sky Observers
	Echo Ridge Astronomical Society
	El Valle Astronomers

Escambia Amateur Astronomers' Association
 Estes Valley Astronomical Society
 Etna Astros, The
 Eugene Astronomical Society
 Evansville Astronomical Society
 Everett Astronomical Society
 Everglades Astronomical Society
 Flint River Astronomy Club
 Forsyth Astronomical Society
 Fort Bend Astronomy Club
 Fort Wayne Astronomical Society
 Fort Worth Astronomical Society
 Fox Valley Sky Watchers
 Friends of Galileo
 Goddard Astronomy Club
 Grand Strand Astronomers
 Greater Hazleton Area Astronomical Society
 Greensboro Astronomy Club
 Gunnison Valley Observatory
 Haleakala Amateur Astronomers
 Harford County Astronomical Society
 Hawaiian Astronomical Society
 High Desert Astronomy Club, Inc.
 Hill Country Astronomers
 Hopatcong Observatory Astronomy Club
 Houston Astronomical Society
 Howard Astronomical League of Central
 Maryland
 Huachuca Astronomy Club
 Idaho Falls Astronomical Society
 Imperial Polk Astronomical Society
 Indiana Astronomical Society
 Iowa County Astronomers
 Island County Astronomical Society
 Jackson Astronomical Association
 Kalamazoo Astronomical Society
 Kanawha Valley Astronomical Society
 Kansas Astronomical Observers
 Kaua'i Educational Association for Science &
 Astronomy
 Keene Amateur Astronomers
 Kern County Astronomical Society
 La Crosse Area Astronomical Society
 Lackawanna Astronomical Society
 Lake City Astronomical Society
 Laramie Astronomical Society & Space
 Observers
 Las Vegas Astronomical Society
 Lima Astronomical Society
 Litchfield Hills Amateur Astronomy Club
 Local Group of Deep Sky Observers
 Longmont Astronomical Society

Louisville Astronomical Society
 Lowcountry Stargazers Club
 Magdalena Astronomical Society
 Magic Valley Astronomical Society
 Manheim Township Astronomy Club
 Marquette Astronomical Society
 Mason Star Gazers
 Miami Valley Astronomical Society
 Michiana Astronomical Society
 Middle Georgia Astronomical Society
 Midlands Astronomy Club, Inc.
 Mid-Western Astronomers
 Millstream Astronomy Club
 Milwaukee Astronomical Society
 Minnesota Astronomical Society
 Mohawk Valley Astronomical Society
 Moonstruck Astronomy Club
 Mount Shasta Stargazers
 Naperville Astronomical Association
 NASA Langley Exchange Skywatchers
 National Capital Astronomers
 Neville Public Museum Astronomical Society
 New Hampshire Astronomical Society
 North East Wisconsin Stargazers
 North Houston Astronomy Club
 Northeast Florida Astronomical Society
 Northeast Kansas Amateur Astronomers'
 League, Inc.
 Northeast Nebraska Astronomy Club
 Northern Colorado Astronomical Society
 Northern Cross Science Foundation
 Northern Virginia Astronomy Club
 Northwest Suburban Astronomers
 Norwood Dark Sky Advocates
 Oakland Astronomy Club
 Odyssey Astronomy Club
 Ogden Astronomical Society
 Oglethorpe Astronomical Association
 Ohio Valley Astronomical Society
 Oil Region Astronomical Society, Inc.
 Oklahoma City Astronomy Club
 Olympic Astronomical Society
 Omaha Astronomical Society
 Palouse Astronomical Society
 Paul Hummel Astronomy Club of Boulder
 Penobscot Valley Stargazers
 Peoria Astronomical Society
 Phoenix Astronomical Society, Inc.
 Planetary Studies Foundation
 Platte Valley Astronomical Observers
 Pocatello Astronomical Society
 Pomona Valley Amateur Astronomers

Pontchartrain Astronomy Society, Inc.
Popular Astronomy Club
Prairie Astronomy Club, Inc.
Prescott Astronomy Club
Psalm 19 Astronomy Society
Racine Astronomical Society
Raleigh Astronomy Club, Inc.
Rappahannock Astronomy Club
Richland Astronomical Society
Richmond Astronomical Society
Rio Rancho Astronomical Society
River Bend Astronomy Club
Riverside Astronomical Society
Roanoke Valley Astronomical Society
Rochester Astronomy Club
Rockford Amateur Astronomers, Inc.
Rockland Astronomy Club
Rose City Astronomers
Roswell Astronomy Club
S.T.A.R. Astronomy Society
Sacramento Valley Astronomical Society
Saint George Astronomy Group
Salt Lake Astronomical Society
San Antonio Astronomical Association
San Bernadino Valley Amateur Astronomers
San Diego Astronomy Association
San Juan Stargazers
San Mateo County Astronomical Society
Sangamon Astronomical Society
Seattle Astronomical Society
Sheboygan Astronomical Society, Inc.
Shenandoah Astronomical Society
Shenandoah Valley Stargazers
Shoreline Amateur Astronomical Association
Shoreline Astronomical Society, The
Shreveport-Bossier Astronomical Society, Inc.
Skokie Valley Astronomers
Skylight Astronomical Society, Inc.
Skyscrapers, Inc.
Smoky Mountain Astronomical Society
Sonoma County Astronomical Society
South Bay Astronomical Society
South Jersey Astronomy Club
South Plains Astronomy Club
South Shore Astronomical Society, The
Southeastern Iowa Astronomy Club
Southern Colorado Astronomical Society

Southern Cross Astronomical Society
Southern Maine Astronomers
Southern Oregon Skywatchers
Southwest Florida Astronomical Society, Inc.
Spokane Astronomical Society
Springfield Astronomical Society
Springfield Telescope Makers
St. Louis Astronomical Society
Star City Astronomy Network
Starlight Astronomy Club
Steele County Astronomical Society
Stillwater Stargazers
Sugar Creek Astronomical Society
TAC - AL (The Astronomy Connection)
Tallahassee Astronomical Society
Temecula Valley Astronomers
Texas Astronomical Society of Dallas
Texas Star Party, Inc.
The Villages Astronomy Club
Toledo Astronomical Association
Treasure Coast Astronomical Society
Tri-City Astronomy Club
Tri-State Astronomers
Tri-Valley Stargazers
Tucson Amateur Astronomy Association
Tulare Astronomical Association
Twin City Amateur Astronomers, Inc.
Umpqua Astronomers
University Lowbrow Astronomers
Utah Valley Astronomy Club
Ventura County Astronomical Society
Vermont Academy Astronomy Club
Vermont Astronomical Society, The
Von Braun Astronomical Society
Wabash Valley Astronomical Society
Warren Astronomical Society
Warsaw Astronomical Society
Wehr Astronomical Society
West End Dark Sky Alliance
West Kentucky Amateur Astronomers
West Texas Astronomers
Western Colorado Astronomy Club
Westminster Astronomical Society
Whatcom Association of Celestial Observers
Yakima Valley Astronomy Club
Yellowstone Valley Astronomy Association, Inc.
York County Astronomical Society

Program Names

This is a complete list of all Program Names and Levels Names used in the database as of the time of the publication of this White Paper. This list changes regularly.

The plan is to use these standard levels for all future Observing Programs:

- (none) – this is used for Observing Programs that have only one level.
- Silver, Gold – these are used for Observing Programs that have a partial completion level.
- Bronze, Silver, Gold – these are used for Observing Programs that have three completion levels.
- Platinum – this is reserved and is only used by the Master Observer Progression.
- AL Observing Challenges and NASA Observing Challenges – new levels will be added as needed to cover new challenges as they become available to the membership.
 - AL Observing Challenges are those based on celestial objects.
 - NASA Observing Challenges are those based on NASA missions.
- Citizen Science – a new level is added any time that a member meets the requirements for a new citizen science challenge.
- Planetary Transit Special Observing Awards – new levels will be added as new Transits are added.
- Partial, Complete, Full List – these are used for Observing Programs when there are multiple levels as well as the inclusion of a full list option when the list is larger than the completion requirement. (For example, the Bennett Observing Program.)
- Honorary – reserved for honorary certificates that are issued to recognize individuals responsible for the list. (For example, the Caldwell Observing Program.)
- Eyes Only, Binocular, Telescope – these are used when an Observing Program has designations for partial completion based on tools used.

Name of Levels will begin with an Upper-Case letter.

Some of the levels currently in use in the on-line database will change as we move to this standard.

Observing Program or Award	Levels
Active Galactic Nuclei Observing Program	(none)
Advanced Binocular Double Star Observing Program	(none)
Advanced Observer Award	(none)
AL Observing Challenges	<ul style="list-style-type: none"> • 75th Year Anniversary Challenge • Galaxy Challenge 2.0 - 2023 • Galaxy Observing Challenge - 2022 • Globular Cluster Challenge - 2022 • Great Conjunction - 2020 • Moons of the Solar System Challenge • Observe the Moon - 2021 • Observe the Moon – 2023 (additional ones added often)
AL-Con Observing Challenge	<ul style="list-style-type: none"> • 2019 – Gold • 2019 – Silver • 2019 – Participant
Alternate Constellations Observing Program	<ul style="list-style-type: none"> • Gold • Silver
Analemma Observing Program	(none)
Asterism Observing Program	(none)
Asteroid Observing Program	<ul style="list-style-type: none"> • Gold • Regular
Astronomy Before the Telescope Observing Certificate	(none)
Bambury 600 Observing Certificate	(none)
Bennett Observing Program	<ul style="list-style-type: none"> • Complete • Full List
Beyond Polaris Observing Program	(none)
Binocular Double Star Observing Program	(none)
Binocular Master Observer Award	(none)
Binocular Messier Observing Program	(none)
Binocular Variable Star Observing Program	(none)
Bright Nebula Observing Program	<ul style="list-style-type: none"> • Advanced • Regular
Caldwell Observing Program	<ul style="list-style-type: none"> • Honorary • Gold • Silver
Carbon Star Observing Program	(none)

Citizen Science Observing Program	(this list has 100s of levels and they are added often)
Comet Observing Program	<ul style="list-style-type: none"> • Gold • Silver
Constellation Hunter – Northern Skies Observing Program	(none)
Constellation Hunter – Southern Skies Observing Program	(none)
Dark Nebula Observing Program	(none)
Dark Sky Advocate Award	<ul style="list-style-type: none"> • Honorary • Regular
Deep Sky Binocular Observing Program	(none)
Double Star Observing Program	(none)
Earth Orbiting Satellite Observing Program	(none)
Flat Galaxies Observing Program	<ul style="list-style-type: none"> • Honorary • Regular
Galaxy Groups and Clusters Observing Program	(none)
Galileo Observing Program	(none)
Galileo's T.O.E.S. Observing Certificate	(none)
Galileo's T.O.E.S. II Observing Certificate	(none)
Globular Cluster Observing Program	(none)
Herschel 400 (Southern) Observing Program	(none)
Herschel 400 Observing Program	(none)
Herschel Hustle Observing Certificate	(none)
Herschel II Observing Program	(none)
Herschel Society Program	<ul style="list-style-type: none"> • Gold • Silver
Hydrogen-Alpha Solar Observing Program	(none)
Imaging – Bennett	(none)
Imaging – Caldwell	(none)
Imaging – Messier	(none)
Jupiter Observing Program	(none)
Library Telescope Award	<ul style="list-style-type: none"> • Gold • Silver
Local Galaxy Group and Galactic Neighborhood Observing Program	<ul style="list-style-type: none"> • Regular Challenge • Southern Challenge
Lunar Evolution Observing Program	(none)
Lunar II Observing Program	(none)
Lunar Observing Program	(blank) <ul style="list-style-type: none"> • Binocular
Mars Observing Program	(none)
Master Imager Observing Award	(none)
Master Observer - Triple Crown Award	(none)
Master Observer - Platinum Award	(none)

Master Observer - Gold Award	(none)
Master Observer - Silver Award	(none)
Master Observer Award	(none)
Mentor Award	(none)
Messier Observing Program	<ul style="list-style-type: none"> • Honorary • Regular
Meteor Observing Program	<ul style="list-style-type: none"> • Honorary • Regular
Multiple Star Observing Program	(none)
NASA Observing Challenges	<ul style="list-style-type: none"> • InSight • James Webb Telescope • New Horizons • Regular • Rosetta • Siding Spring • TESS (additional ones added often)
Northern Arp Peculiar Galaxies Observing Program	(none)
Nova Observing Program	<ul style="list-style-type: none"> • Gold • Silver
Observer Award	(none)
Occultation Observing Program	(none)
Open Cluster Observing Program	<ul style="list-style-type: none"> • Advanced • Basic
Outreach Award	<ul style="list-style-type: none"> • Honorary • Master • Stellar • Outreach
Planetary Nebula Observing Program	<ul style="list-style-type: none"> • Advanced • Basic
Planetary Transit Special Observing Awards	<ul style="list-style-type: none"> • Mercury 2016 • Mercury 2019 • Venus 2004 • Venus 2012
Radio Astronomy Observing Program	<ul style="list-style-type: none"> • Gold • Silver • Bronze
Sketching Observing Award Program	(none)
Sky Puppy Observing Program	(none)
Solar Eclipse Special Award - 2017	<ul style="list-style-type: none"> • Level 1 • Level 2 • Level 3
Solar Eclipse Observing Challenge - Annular Eclipse 2023	<ul style="list-style-type: none"> • Gold • Silver

Solar Eclipse Observing Challenge - Total Eclipse 2024	<ul style="list-style-type: none"> • Gold • Silver
Solar Neighborhood Observing Program	<ul style="list-style-type: none"> • Eyes Only • Binocular • Telescope
Solar System Observing Program	<ul style="list-style-type: none"> • Binocular • Telescope
Southern Arp Peculiar Galaxy Observing Program	(none)
Southern Planetary Nebula Observing Program	(none)
Southern Sky Binocular Observing Program	(none)
Southern Sky Telescopic Observing Program	(none)
Spectroscopy Observing Program	(none)
Stellar Evolution Observing Program	(none)
Sunspotters Observing Program	(none)
Target NEO Observing Program	<ul style="list-style-type: none"> • Advanced • Intermediate
Two in the View Observing Program	(none)
Universe Sampler Observing Program	(none)
Urban Observing Program	(none)
Variable Star Observing Program	(none)
Youth Astronomer Observing Program	<ul style="list-style-type: none"> • Gold • Silver

Numbering of Awards

The numbering of awards also follows a standard. These are the standards for numbering of awards in the on-line database:

- Normally, for many of the Observing Programs, awards are assigned incrementing numbers. These start at 1 and increase upwards.
 - Future Observing Programs will continue to use certificate numbers.
 - Other Future Awards should be considered for omission of the certificate numbers.
- “0” is used to denote those who have completed the Observing Program but worked on it prior to publication. This is typically testers and developers of the programs.
- Some Observing Programs do not assign numbers at all. Currently, the standard is to use a “1” in the on-line database for all awards for these programs. They include:
 - Advanced Observer Award
 - AL Observing Challenges
 - AL-Con Special Observing Challenge
 - Binocular Master Observer Award
 - Citizen Science Program Certificate
 - Galileo’s T.O.E.S. Observing Certificate
 - Galileo’s T.O.E.S. II Observing Certificate
 - Herschel Society Program Certificate
 - Master Imager
 - Master Observer – Silver Award
 - Master Observer – Gold Award
 - Master Observer – Platinum Award
 - Master Observer – Triple Crown Award
 - Mentor Award
 - NASA Observing Challenges
 - Observer Award
 - Planetary Transit Special Observing Award
 - Solar Eclipse Special Observing Award – 2017
 - Solar Eclipse Special Observing Award – 2023
 - Solar Eclipse Special Observing Award – 2024
- “-B” – is used to denote completion of an Observing Program using Binoculars, when it is not specifically a binocular program. It is **only** used when all requirements are completed using binoculars or naked-eye observations. These include:
 - Galileo
 - Lunar
 - Messier
 - Solar System

- “-M” – is used to denote completion of an Observing Program **only** when all observations were done manually, when it is not explicitly a manual only program.
- “-I” – is used to denote completion of an Observing Program **only** when all observations were through imaging, when it is not explicitly an imaging only program.
- No other suffixes are allowed on certificate numbers with one exception:
 - Universe Sampler uses “-T” for completion using a telescope, and “-N” for completion using eyes-only (naked-eye).

Naming Conventions for Member Names

- Names should be entered into the database based on the preferences of the members.
- A member’s name in the database should be the same for all certifications earned by that member.
- Normally this is a First Name and Last Name.
- Middle Names may be included.
- Middle Initials or First Name Initials may be included.
- Initials should have a “.” after them.
- Suffixes (such as Sr., Jr., II, III, etc.) may be included. This is recommended when there is more than one person in the same local society with the same name. There should be no punctuation between the name and the suffix.
- Prefixes (such as Dr., etc.) may be included but are discouraged.
- Nicknames may be included but only as a replacement for a first name and the member must be consistent for all of their certifications.
- Names can be changed in the database when the member has legally changed their name. It must be done for all of their certifications.



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Rev20240623