



Newsletter

2024/07

nº 16

EDITORIAL
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LAST NASE COURSES
TEACHING MATERIALS

Editorial

The first news is that from now on, this Newsletter will no longer be sent by email. It can be accessed on the NASE website (www.naseprogram.org) and on its new **Instagram** account **@naseastronomy**.



NASE has expanded its content offerings. An ASTRONOMYKIDS course has been developed for preschool teachers, that is, for very young students under 7 years old. It has been quite a challenge. Five new workshops have been developed: Neighboring Planets, Phases of the Moon, Global Earth, Paths of the Sky, and Star Party, which will be available on the NASE website.

Additionally, NASE's proposal for the celebration of the International Day of Light (IDL) in 2024 is called the "Messier Challenge." It consists of observing at least one object from the Messier catalog any day between March 20 and September 23, 2024, making a drawing or taking a photograph of it, and accompanying it with a brief story, real or invented, associated with the object. The observation can be done with the naked eye, with binoculars, or with a telescope if available. To ensure the availability of instruments does not hinder the challenge, some objects that can be distinguished without instrumental help have also been selected, added to a list of weaker ones. At the end of the Newsletter, you will find some tips for observing with the naked eye or with binoculars.



Finally, the diploma for the best local NASE group of 2023, which rewards the quality and work they have done throughout the year, has been awarded. It went to the Local Group of Guatemala. Edgar Cifuentes has led this LG since 2012, as a teacher in the Department of Physics at the University of San Carlos of Guatemala. With enormous difficulty, he has kept the Program alive both in the capital and in other cities of the country, developing workshops annually, involving his students in delivering content, and training trainers. Edgar is an example of commitment and love for science and science education; an example of volunteering that makes NASE great.



News

ASTRONOMYKIDS: A New Course for Teachers

Last year, in 2023, the NASE working group in Turkey requested a new course focused on teachers working with very young children, before they enter primary school or in the early grades of that stage. While we were considering this possibility, the NASE WG in Romania requested a similar course. After several months, a team of NASE members, in cooperation with primary and preschool teachers, prepared the course that can be found on our website, in Workshops 12, 13, 14, 15, and Working Group 3, at [this link](#).

It is an intuitive and practical course that includes: 1) a children's story presenting the evolution of stars like the Sun as a "star child" with sister stars and planets, explaining its future evolution, which includes a very special party that will end up creating future stars (Workshop 12); 2) a simple way to observe the sky in the Orion constellation area, with examples of different stellar evolution objects (Working Group 3); 3) some examples of solar system bodies, with simple models, orbital examples played out in the schoolyard, and dioramas (Workshop 13); 4) an introduction to the surface of the Moon through naked-eye or binocular observations (Workshop 14); and 5) the parallel Earth model in the schoolyard, with a "global" viewpoint of the planet (Workshop 15).

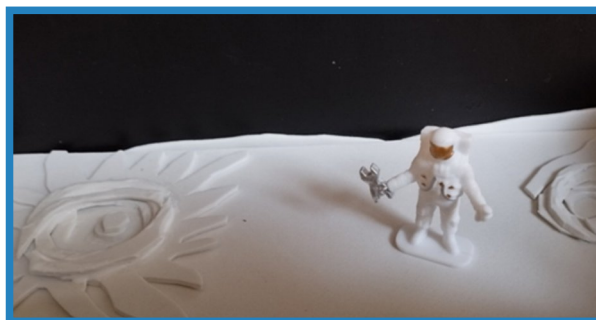
The explanations of the topics are aimed at teachers and therefore include more extensive information for them, which is not necessary for the students, so that teachers have more comprehensive information. We know that children often ask open-ended questions that require additional details from the teacher to provide a correct answer. For this reason, the PowerPoint presentations on the website are prepared for teachers, not for children, because they need appropriate adaptation by the teacher to present the activities to the students.

So far, this course has been used in Turkey, Romania, and Hungary, with great success! Other countries have this course scheduled for the coming months. We invite you to organize this new course in your countries and with your teams. The future astronomers are in kindergarten!

Currently, the materials for this course are translated into several languages (Spanish, English, Catalan, French, Portuguese, Romanian, and Turkish) and we are translating them into more languages.



Preparing a cake as a convection model in Workshop 12



Workshop 14: lunar surface diorama

News

MESSIER CHALLENGE, NASE-UNESCO IDL 2024 PROJECT

In 2024, the NASE-UNESCO proposal for the International Day of Light (IDL) invites everyone to look up at the starry night and discover the "jewels" found in the "toolbox" known as the Messier Catalog. This invitation encompasses observing non-stellar objects detectable even without instruments, locating these objects in the celestial sphere using NASE tools, and sharing the stories that the sky tells or inspires in us.

French astronomer Charles Messier (1730-1817) discovered over a dozen comets and, through his observational work, differentiated those objects from others that were faint (like nebulae) or extended and composed of stars (like clusters or galaxies). Thus, he created a list of objects that appeared to be comets but were not. The compilation of this list, along with Pierre Méchain, is known as the "Messier Catalog." It is one of the most famous lists of astronomical objects, and many of the objects included in it are still referenced by their Messier number.

The list of Messier objects was originally published in 1771 and included only 45 objects. In 1774, Messier himself completed it to include 103 objects. Other astronomers used Messier's notes to eventually finish the list with 110 objects, which is how we know it today.

This catalog was compiled by European astronomers, and therefore there are no objects below 35° South declination. For this reason, some additional objects have been included in the list of proposed objects for the 2024 NASE Messier Challenge.

The main goal of this project is to observe at least one of the objects from the list in Table 1, make a drawing or take a photograph of it, and accompany it with a brief story, real or invented, associated with the object. The observation can be done with the naked eye, with binoculars, or with a telescope if available. These options are related to the visibility of the selected objects for the activity. In addition to those distinguishable without instruments, weaker ones have also been included. Afterward, simply send the report to the email address:

newsletter.nase@gmail.com

indicating the name of the teacher and students, along with a brief description of the observed object and a drawing or photo of it. At the end of this Newsletter, there are some tips for observing with binoculars.










Name	Messier Objetc	Description	Magnitude	Location	
<i>The Pleiades</i>	M45	Open Cluster	1,4	Taurus	
<i>The Hyades</i>		Open Cluster	0,5	Taurus	
<i>Andromeda Galaxy</i>	M31	Galaxy	3,5	Andromeda	
<i>Orion Nebula</i>	M42	Nebula	4	Orion	
<i>Ptolemy Cluster</i>	M7	Open Cluster	3,5	Scorpio	
<i>Omega Centauri</i>		Globular Cluster	3,9	Centaurus	
<i>The Jeweler</i>		Open Cluster	4,2	Crux	
<i>Greater Magellanic Cloud</i>		Galaxy	0,9	Gold / Mensa	
<i>Lesser Magellanic Cloud</i>		Galaxy	2,7	Tucan	

Table 1

Courses

347 Lahijan, Iran 1st-2nd May, 2023
in cooperation with Mehr Observatory.

348 Praia, Cape Town, May 6 - June 6, 2023
In cooperation with planetario do Porto.

349 Tianjin, China, May 9th, 2023
In cooperation with Beijing Planetarium.

350 Malargüe, Argentina, 5th-6th May, 2023
In cooperation with Facultad de Ciencias Exactas y Naturales de la Universidad Nacional de Cuyo, Observatorio Pierre Auger and CONICET.

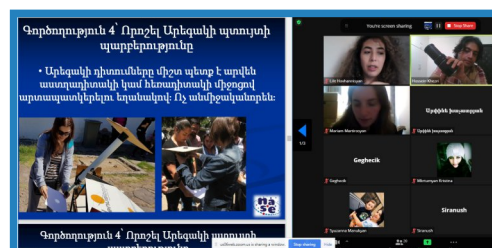
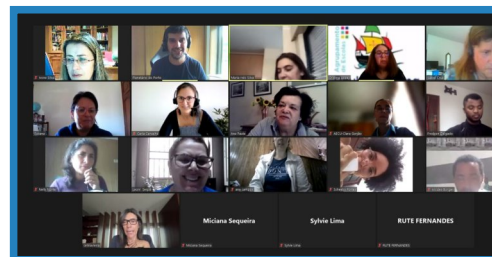
351 Dakar Senegal 19th-20th May, 2023
In cooperation with National Outreach Coordination Committee for Senegal in the IAU Office for Astronomy Outreach (OAO).

352 Ulaanbaatar, Mongolia, 26th-27th May, 2023
In cooperation with National University of Mongolia.

353 Malargüe, Argentina, 2nd-3rd June, 2023
In cooperation with Facultad de Ciencias Exactas y Naturales de la Universidad Nacional de Cuyo, Observatorio Pierre Auger and CONICET.

354 and 355 Yerevan, Armenia, 5th-6th and 12th-13th June of, 2023
In cooperation with Byurakan Astrophysical Observatory

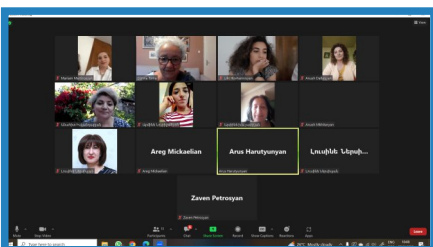
356 Malargüe, Argentina, 23rd-24th June 2023
In cooperation with Facultad de Ciencias Exactas y Naturales de la UNCuyo, Sede Malargue and CONICET.





357 and 358 Yerevan, Armenia, June 26th-27th and 29th-30th, 2023

In cooperation with Byurakan Astrophysical Observatory



359 Malargüe, Argentina, June 30th - July 1st 2023

In cooperation with Facultad de Ciencias Exactas y Naturales de la UNCuyo, Sede Malargue and CONICET.



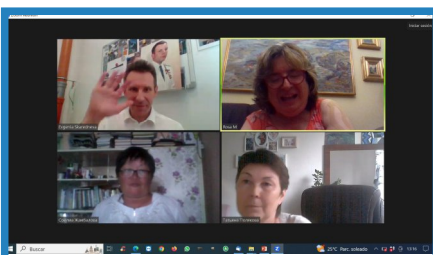
360 Totoras, Argentina, June 30th- July 8th, 2023

In cooperation with Instituto de Educación Superior N°48 "General José de San Martín" de Totoras.



362 Abidjan, Ivory Coast, July 3th-13th, 2023

In cooperation with Association Ivoirienne d'Astronomie and The IAU OAE National Astronomy Education Coordinator Team for Côte d'Ivoire.



363 Irkutsk, Russia, July 4th-5th, 2023

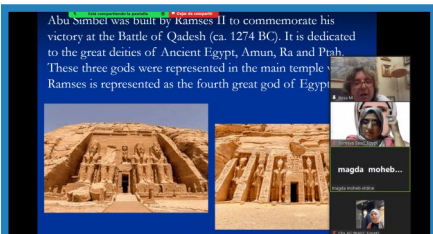
In cooperation with Irkutsk Planetarium.

364 Conakry, Guinea, July 4th-11th, 2023

In cooperation with Association Guinéenne de l'Astronomie.

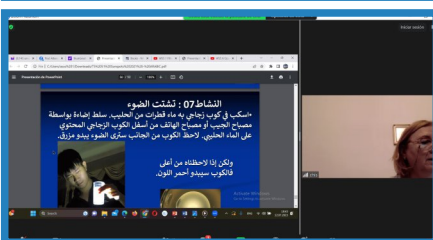
365 Cairo, Egypt, July 5th-6th, 2023

In cooperation with National Research Institute of Astronomy and Geophysics.



366 Cairo, Egypt, July 12th-13th, 2023

In cooperation with National Research Institute of Astronomy and Geophysics.



367 Táchira, Venezuela, July 22nd - August 13th, 2023

In cooperation with Centro Astronomico Caronte.

368 Busan, South Korea, July 24th-26th, 2023

in cooperation with Korea Science Academy of KAIST.

369 Kerman, Iran, August 3rd, 2023

In cooperation with Bkaran Observation Team and Ministry of Education..

370 Zapala, Argentina, August 18th - September 15th, 2023

In cooperation with Universidad Nacional del Comahue, Departamento de Física and

Secretaría Académica de Asentamiento Universitario Zapala.

371 Mishelevka, Russia, August 21st-26th, 2023

In cooperation with the Planetarium of Irkutsk, Irkutsk Regional Astronomical Organization.

372 Dodoma City, Tanzania, August 25th, 2023

In cooperation with Astronomy and Space Science Association of Tanzania and the Open University of Tanzania.

373 y 374 Porto-Novo, Benin, August 31th- September 1st, 2023 and September 9 - October 22, 2023

In cooperation with Bénin Mobile Astronomy Village.

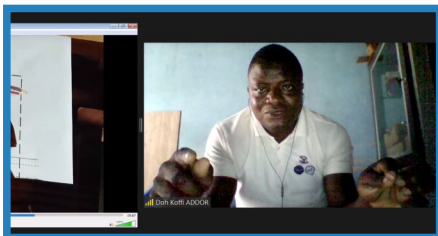
375 Guatemala, Guatemala, September 21st-October 25th, 2023

In cooperation with Escuela de Ciencias Físicas y Matemáticas de la Universidad de San Carlos de Guatemala.

376 Nouakchott, Mauritania, September 30 - October 1, 2023

In cooperation with Astronomy Association of Mauritania.





377 Guadalajara, Mexico, October 5th-6th, 2023

In cooperation with Universidad de Guadalajara, Centro Universitario de Ciencias Exactas e Ingenierías and Instituto de Astronomía y Meteorología



379 Quito, Ecuador, October 10th-11th, 2023

In cooperation with the National Polytechnic School and the Planetarium of the Military Geographic Institute.



380 Campo Mourão, Brazil, October 20th-21st, 2023

In cooperation with UTFPR Universidade Tecnológica Federal Do Paraná.

381 y 382 Hanoi, Vietnam, November 2nd-6th, 2023

In cooperation with VNU Hanoi University of Science.



383 Santo Domingo, Dominican Republic, November 6th-21th, 2023

In cooperation with EDUCA and Ministerio de Educación (MINERD) en el Proyecto Centros Educativos de Innovación.

384 Tsevie, Togo, November 21st -22nd, 2023

In cooperation with Science Géologique pour un Développement Durable.



385 Riga, Latvia, December 4th -6th, 2023

In cooperation with Latvia University.

386 Ulaanbaatar, Mongolia, December 28th.29th, 2023

In cooperation with National University of Mongolia.

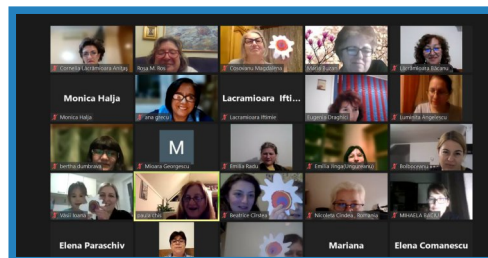


387 Bucharest, Romania, February 5th-7th 2024

In cooperation with the school inspector for mathematics and astronomy, Education Ministry.

388 Dolna Mitropolia, Bulgaria, February 5th-7th, 2024

In cooperation with Municipality Dolna Mitropolia and Municipal center for extracurricular activities and Department of Astronomy, Sofia University "St. Kliment Ohridski".



389 Managua, Panamá, February 5th-9th, 2024

In cooperation with Facultad de Ciencias Naturales, Exactas y Tecnología de la Universidad de Panamá, unities: Departamento de Física y Centro de Investigación para el Mejoramiento de la Enseñanza de Ciencias Naturales y Exactas.



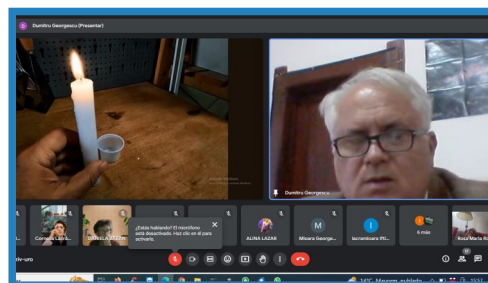
390 Lahijan, Iran, February 6th-7th, 2024

In cooperation with Mehr Observatory



391 Bucharest, Romania, February 7th-9th 2024

In cooperation with the school inspector for mathematics and astronomy, Education Ministry.



392 Tunis, Tunisia, February 7th-9th, 2024

In cooperation with Cite des Sciences de Tunisia and Ministry of Education of Tunisia.



393 Barcelona, Spain, February 13th-15h, 2024

In cooperation with Master de Secundaria de Biologia, Geologia, Física i Química, Universitat de Barcelona.



394 Cluj-Napoca, Romania, February 13th - March 12th, 2024

In cooperation with the school inspector for mathematics and astronomy, Education Ministry..

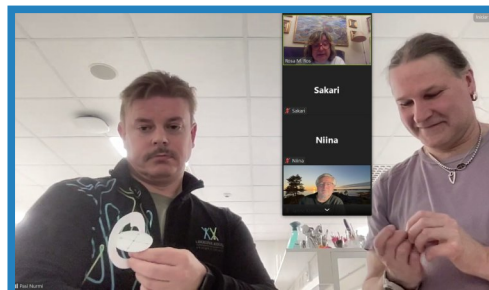
395 Turku, Finland, February 14th-15th, 2024

In cooperation with Turku University.



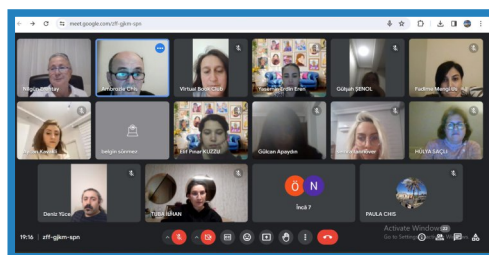
396 Kerman, Iran, February 14th, 2024

In cooperation with Bkaran Observation Team and Ministry of Education.



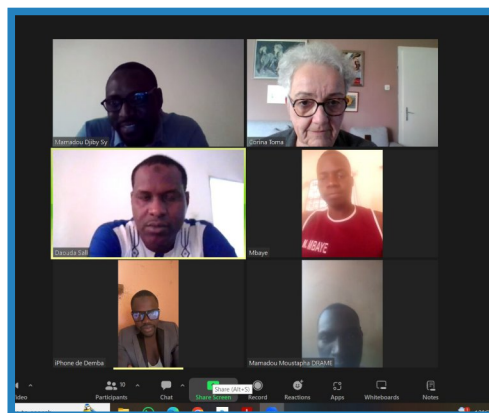
397 İstanbul, Türkiye, February 26th-April 15th, 2024

In cooperation with EXPEDU (Expedition to Education) Association.



398 Dakar, Senegal, March 9th-16th, 2024

In cooperation with National Outreach Coordination Committee for Senegal in the IAU Office for Astronomy Outreach (OAO).



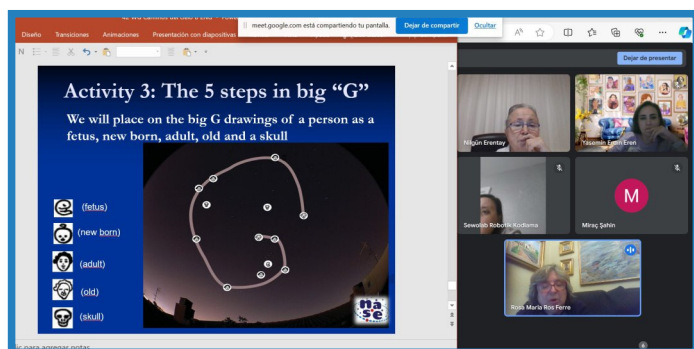
399 İstanbul, Türkiye, April 22nd - 24th, 2024

In cooperation with EXPEDU (Expedition to Education) Association.



400 Mapoto, Mozambique, April 12th-27th, 2024

In cooperation with Planetário do Porto - Centro Ciência Viva / Instituto de Astrofísica e Ciências do Espaço - Universidade do Porto.



TEACHING MATERIALS

OBSERVATION TIPS

1. Choice of Location

To avoid light pollution, observe in a place away from roads and towns. Also, avoid the vicinity of streetlights or isolated lights.

2. Date

The best days are during a new moon or in the waning phase, because early in the evening, when we will be observing, the moon has not yet risen

3. Warm Clothing

Even in summer, the temperature drops at nightfall, and it often gets windy. Keep in mind that we will be stationary for several hours in a row.

4. Naked Eye Observation

To find the chosen celestial object, it is useful to use a sky map or planisphere. A red flashlight is recommended as it doesn't dazzle like white flashlights. In the dark, the eye's pupil gradually dilates, allowing us to see faint objects better; looking at something bright or a white light causes the pupil to constrict rapidly, deactivating the photoreceptors in the retina that enable night vision, and observation is hindered for a while.

5. Observation with the Help of a Mobile Phone

There are many apps that indicate what we are seeing when we point the phone at the sky (Stellarium, Sky Map View, SkyView Lite, etc.), and they can be useful for finding catalog objects.

6. Observation with Binoculars

Although binoculars provide little magnification, they collect much more light than our pupil, allowing us to see objects that are very faint to the naked eye. They also enhance the color differences of objects. Recommended binoculars for observation are 7x50 (7x magnification with a 50 mm objective lens diameter). Higher magnifications cause the image to shake and are difficult to use.

For observing with binoculars, it is advisable to mount them on a tripod to avoid vibrations from our hands that make observation difficult. If a tripod is not available, a chair can be used, sitting with the backrest in front. Rest your arms on the backrest to stabilize the image. If a chair is not available, binoculars can at least be supported on a car or a tree.

