



STAR STUFF

Ford Amateur Astronomy Club Newsletter

Star Stuff

This newsletter is published eleven times per year by:

Ford Amateur Astronomy Club
P.O. Box 7527
Dearborn, MI 48121-7527

Officers

President:	Arica Flores
Vice President:	Ed Halash
Secretary:	Jesse Godsey
Treasurer:	Joseph Bostic

Departments

Webmaster:	Liam Finn
Membership:	Doug Bauer
Newsletter:	Tim Campbell
Equipment:	Jeff Gorman
Speakers:	Sandra Macika

Club Information

The Ford Amateur Astronomy Club meets on the fourth Thursday of each month, except for the combined November/December meeting which meets on the first Thursday of December – at Henry Ford College Administration Services and Conference Center in Dearborn.

President's Corner

by Arica Flores, President

Sidewalk Astronomy – Viewing in Urban Locations

Sidewalk astronomy has been around for a long time, decades in fact. This is the concept of bringing astronomy to urban areas to share the sky with others who may not have the opportunity to see through a telescope without this chance encounter. Although urban areas are very light-polluted there are still quite a few objects that you can view in these areas: The moon, the planets, brighter deep-sky objects like the Orion nebula, beautiful double stars like Albireo and, of course, the Sun. With all the activity on the Sun lately there is no time like the present.

The club was just starting to do more of these events with setting up at Beacon Park in Detroit during the robotics competition and going to Dearborn's Homecoming fair celebration. Then COVID struck, putting an end for a time to our public observing. Now our Beginners' Nights are back in full swing, and it seems like a good time to discuss some more events like this. A good friend of the family reminded me not long ago about the gentleman who used to set up his telescope in front of the Dearborn Library many years ago and how it was his first time ever looking through a telescope. It started a love for the universe for him, and I'm guessing many others have had a similar experience. *(Editor's Note: This was FAAC club member Harold Thomason. Harold passed away in 2017. Harold was known to many people in the area for doing this.)*

If this is something that interests you, send me a email. I would love to hear your input. president@fordastronomyclub.com

Club Information

Refer to our website for a map and directions:

www.fordastronomyclub.com

Observing

The FAAC primary observing location is Spring Mill Pond located within the Island Lake State Recreation Area near Brighton, Michigan. The Club maintains an after-hours permit. Club members can contact any club officer for procedures to enter or exit the park when the main gate is locked.

The club also has use of a private observing site near Gregory Michigan. See the FAAC Groups.io Group for more information.

Inquiries can be directed to info@fordastronomyclub.com

Membership

Membership is open to anyone with an interest in amateur astronomy. The FAAC is an affiliate of the Ford Employees Recreation Association (FERA).

Fees

Annual - New Members: \$30
Annual - Renewals: \$25
(\$30 if not renewed by Jan 31)

Benefits

Membership includes the Star Stuff newsletter, discounts on magazines, discounts at selected

Secretary's Report

by Cheri Grissom, filling in for Jesse Godsey, Secretary

FAAC General Meeting – May 25, 2023

Meeting called to order at 7:08 p.m. by president, Arica Flores. Treasurer, Joe Bostic, and VP, Ed Halash, present. Secretary, Jesse Godsey, absent.. We had twenty-three members attending in person and six online. Everyone introduced themselves.

Member Observing Reports

Tim Dey reported that, in his recent observations of Venus, it appeared very reddish, due to the continued presence of wildfire smoke in our skies. Milton French shared his experience of camping in Montmorency County, Michigan, where he enjoyed very dark skies. He was able to easily make out the Milky Way and all of the stars in the Little Dipper. Sean Pickard talked about his observations of the newly discovered supernova in the Pinwheel Galaxy, M101. Arica Flores has been doing some solar observing, also through the screen of wildfire smoke in the air.

What's Up in the Night Sky

Gordon Hansen went over our monthly calendar of meetings and events. The summer solstice will occur on June 21. A new comet is becoming visible. It's a difficult object now but may brighten over the next few months. Gordon will follow this one and keep us advised. Venus and Mars are prominent in the night sky. Also on the date of the summer solstice, June 21, there will be a nice grouping of Mars, Venus, and the waxing moon. Gordon talked about the supernova in M101. Deep sky objects: Leo, with its wealth of galaxies, is moving westward but is still visible in the early evenings, with its abundance of galaxies. M57 is nearly overhead.

Club Business

Secretary's report is in StarStuff. Joe gave a treasurer's report. Our social media sites are up to date.

Our Beginners' Night/Public Observing planned for Saturday the 27th does not look good as far as the skies. Friday the 26th looks much more favorable. There was discussion, and the general consensus was to move the official event to Friday, with members of course being free to gather at the park on Saturday if the weather does happen to turn favorable.

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area equipment retailers, and after-hours access to the Island Lake observing site and private observing sites.

Astronomy or Sky & Telescope magazine discounts are available by contacting the FAAC club treasurer treasurer@fordastronomyclub.com for the discount form. The form should be sent to the respective publisher with your subscription request and payment. Do not send money directly to FAAC.

The FAAC has a pool of equipment including telescopes, cameras, and other gear used for outreach. Much of the gear can be borrowed for personal use in the interest of furthering your knowledge and experience in astronomy.

Please see the equipment list for further information.

Club Wear

Club logo-wear (embroidered with club logo) can be ordered directly through LLBeanBusiness.com

See the groups.io files section for ordering information and instructions on how to request the correct logo.

Communication

The FAAC uses Groups.io for our email distribution list (both formal and informal discussion.)

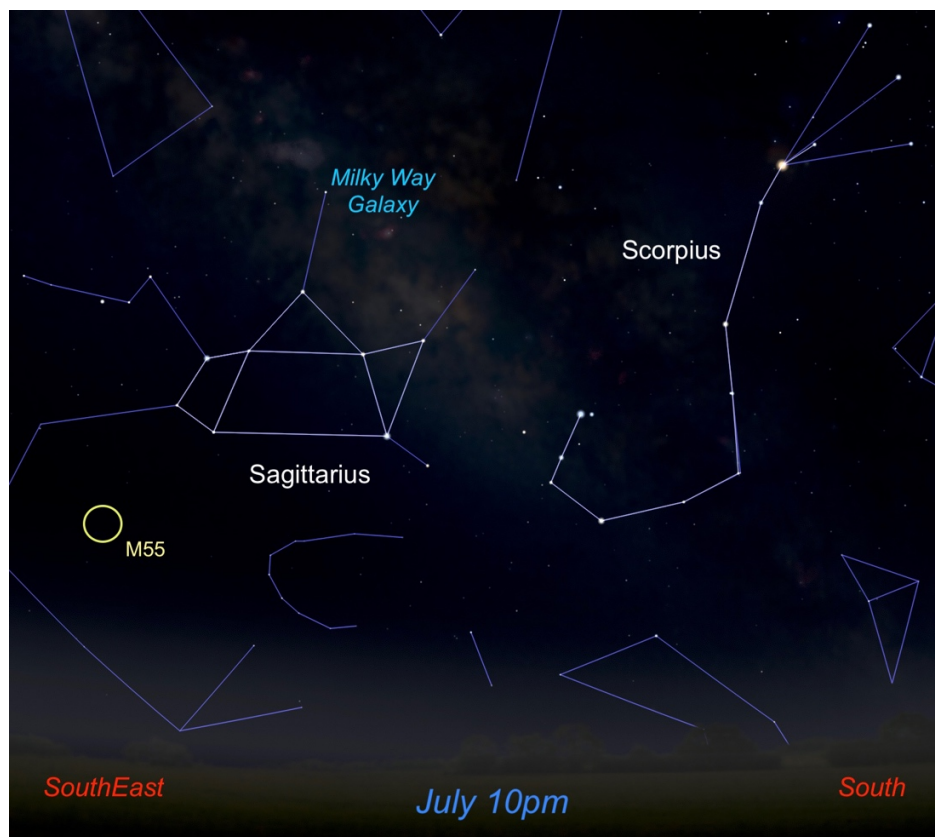
Observing nights & locations (scheduled and unscheduled as weather permits), equipment

Find a Ball of Stars

by Linda Shore, Ed.D



French astronomer Charles Messier cataloged over 100 fuzzy spots in the night sky in the 18th century while searching for comets – smudges that didn't move past the background stars so couldn't be comets. Too faint to be clearly seen using telescopes of the era, these objects were later identified as nebulae, distant galaxies, and star clusters as optics improved. Messier traveled the world to make his observations, assembling the descriptions and locations of all the objects he found in his Catalog of Nebulae and Star Clusters. Messier's work was critical to astronomers who came after him who relied on his catalog to study these little mysteries in the night sky, and not mistake them for comets.



Look to the south in July and August to see the teapot asterism of Sagittarius. Below the handle you'll see a faint smudge of M55 through binoculars. More "faint fuzzies" can be found in the steam of the Milky Way, appearing to rise up from the kettle. Image created with assistance from Stellarium: stellarium.org

Most easily spotted from the Southern Hemisphere, this "faint fuzzy" was first cataloged by another French astronomer, Nicholas Louis de Lacaille in 1752 from Southern Africa. After searching many years in vain through the atmospheric haze and light pollution of Paris, Charles Messier finally

questions, events, outreaches, etc. are normally discussed via this list.

Join by visiting <https://groups.io/g/FordAstronomyClub> to request membership.

Articles & Submissions

Your submissions to Star Stuff are welcome! Send your story and/or images to the editor at: starstuff@fordastronomyclub.com

Observatory

The FAAC maintains and operates the Hector J Robinson Observatory (HJRO) at Lincoln Park Schools.

The observatory houses a 14" Celestron C14 Schmidt Cassegrain Telescope as well as other instruments and can be used by club members.

The observatory is adjacent to the athletic field situated between the Lincoln Park Middle School and High School buildings near

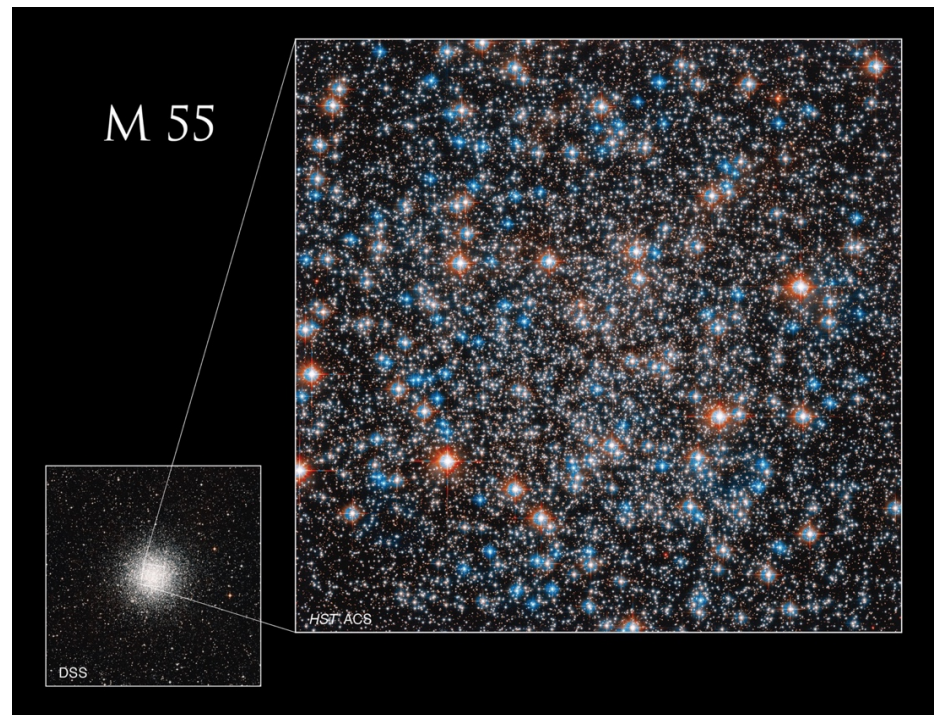
1701 Champaign Rd.
Lincoln Park, MI 48146

The school system has designated four "key-holders" within the club who have the ability to open the observatory.

Call (313) 444-5850 to learn when the observatory is opening (or request an opening).

added it to his catalog in July of 1778. Identified as Messier 55 (M55), this large, diffuse object can be hard to distinguish unless it's well above the horizon and viewed far from city lights.

But July is great month for getting your own glimpse of M55 – especially if you live in the southern half of the US (or south of 39°N latitude). Also known as the "Summer Rose Star," M55 will reach its highest point in northern hemisphere skies in mid-July. Looking towards the south with a pair of binoculars well after sunset, search for a dim (mag 6.3) cluster of stars below the handle of the "teapot" of the constellation Sagittarius. This loose collection of stars appears about 2/3 as large as the full Moon. A small telescope may resolve the individual stars, but M55 lacks the dense core of stars found in most globular clusters. With binoculars, let your eyes wander the "steam" coming from the teapot-shaped Sagittarius (actually the plane of the Milky Way Galaxy) to find many more nebulae and clusters.



The large image shows just the central portion of M55 taken by the Hubble Space Telescope. Above Earth's atmosphere, this magnificent view resolves many individual stars in this cluster. How many can you count through binoculars or a backyard telescope?

Original Image and Credits: NASA, ESA, A. Sarajedini (Florida Atlantic University), and M. Libralato (STScI, ESA, JWST); Smaller image: Digital Sky Survey; Image Processing: Gladys Kober

As optics improved, this fuzzy patch was discovered to be a globular cluster of over 100,000 stars that formed more than 12 billion years ago,

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Planetarium

FAAC members are volunteer operators for the Hammond Planetarium at Henry Ford College.

Planetarium shows are free and open to the public.

Four seasonal planetarium shows are offered per year with the stars and constellations of the current season as well as a multi-media presentation featuring select planets.

Public planetarium shows are normally the third Wednesday of each month at 7:00pm. Please see the planetarium schedule for specific times. It is posted here:

fordastronomyclub.com/hfc-planetarium

Social Media

The FAAC has several social media accounts. Members are encouraged to join and follow them.

Facebook

facebook.com/FordAstronomyClub

Twitter

twitter.com/Ford_Astro

Scheduled Club Events

Month	Date	Sunset	Location
June	24th	9:13pm	Spring Mill Pond
July	22nd	9:02pm	Spring Mill Pond
August	26th	8:17pm	Spring Mill Pond

Upcoming Club Meeting Topics & Speakers

Meeting	Speaker	Topic
June 22	Stephen Shore	Supernovae and the Recent Supernova in M101
July 27	Michael Poxon	Tantrums in the Stellar Nursery
August 24	Andy Macica	Lick Historical Collections

June Talk Details

Supernovae and the Recent Supernova in M101

*Stephen Neil Shore, Prof. of Astrophysics,
Univ of Pisa and Associate Editor, Astronomy & Astrophysics*

Talk Description:

Supernovae are the signal of a catastrophic failure of mechanical balance in a star that leads to its collapse. The result is the formation of a neutron star, the densest state of matter in the Universe, and the explosive ejection of the rest of the outer layers. That fireball is the source of the heaviest elements and the drivers of the chemical state of the surrounding interstellar gas. Dr. Steve will review what we currently know about this fateful moment in stellar evolution and what you can understand with spectroscopy, photometry, and a bit of imagination.

Bio:

Dr. Steven N. Shore has an MSc in earth and space sciences from SUNY-Stony Brook (1974) and a PhD in astronomy from Univ. of Toronto (1978), with a postdoc at Columbia (1978).

He went on to Case Western Reserve Univ. ('79-84), operations at Space Telescope Science Institute and New Mexico Tech and VLA ('84-89), and

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Secretary's Report (Con't from Page 2)

Outreach: Nothing coming up soon. We have done three or four different schools just in the past month. Arica thanked all of our volunteers who helped make these events possible.

Liam asked who is planning to travel for the 2024 eclipse. He has been reaching out to a few locations in Texas to try to firm up plans for a location where our members could gather. Nothing is certain yet, but he will continue to pursue this.

Speaker

Thomas Drummond, COO of Orion's Quest, gave a talk entitled, "Using the International Space Station to Engage Students in Authentic STEM Research." Orion's Quest is a company that is making it possible to connect research conducted aboard the ISS to classrooms around the globe. Mr. Drummond talked about the mission and how the program works. There are many different research projects students can choose based on their interests. Over twenty years, there have been forty-two US states, fourteen different countries, and around nine hundred different classrooms from grades four through twelve and beyond that have participated. Just a few popular examples are "Worms in Space 2.0," "Biofilms in Space and You," "Spiders in Space," "Butterflies in Space," "Plant Growth in Space," and many more.

We were reminded that the ISS will not be in orbit forever and is expected to be decommissioned in approximately 2030. Not to worry, though. As of right now, four different organizations have contracts to continue orbital research around our planet. Also, the Artemis missions to the moon are coming up, and missions to Mars will follow. Science will go on! Encouraging STEM learning among students is crucial. Today's young people will be the scientists and astronauts of the future.

The talk was followed by a question-and-answer session.

Sandra Macika talked to us about the Wayne-Oakland Science Olympiad which is coming up June 10, at Schoolcraft College. This is an event that offers trophies and medals to competitors in many different science-related events. Sandra is the Supervisor for the Astronomy Event. She needs four or five volunteers to help with scoring. Please contact her personally if you would be able to help.

Meeting adjourned at 9:05 p.m.

June 1, 2023 Board Meeting Summary

(Videoconference meeting.) All board members present except for Jesse Godsey. Ten additional members present.

Our speaker for the June general meeting will be Steven Neil Shore. He has asked us to choose the topic from several of his areas of expertise. After discussion, the consensus was we would like to have a talk about supernovae, including the new one in M101.

Treasurer's report was given by Joe. Membership, Social Media, and Website reports were given, with nothing new to report. Jeff advised he is still working on verifying our club equipment inventory with the caretakers. We had discussion about Cheri continuing to fill in for Jesse as secretary during his absence. It is understood she is not an elected officer and does not have voting privileges.

Cheri is also working on cleaning up and filling in our page on Night Sky Network: nightsky.jpl.nasa.gov/. This is a resource for people all over the country who are looking for local astronomy clubs and events.

The club's new coffee mugs have arrived. Stay tuned for information on how to purchase one. We talked about the technical glitches we are having with our hybrid meetings. We are making good progress. Some issues have been resolved; others will hopefully be fixed by the next meeting.

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Equipment

The FAAC maintain an equipment pool of telescopes, binoculars, cameras, and other equipment used for special events. Much of this equipment is available to members.

Each piece of equipment is either stored by a club volunteer who offers to be the caretaker of the item, or by the person who last borrowed the item.

Most equipment can be borrowed for one-month durations. At the end of the month, the borrower can extend the loan if no other members have requested it.

Some items are reserved for special events use and are not normally available to be borrowed.

If you are interested in borrowing an item, please contact either the current holder of the equipment, or contact the club equipment manager, Jeff Gorman, at equipment@fordastronomyclub.com

Item	Held by	Item	Held by
Telescopes		Display Items	
TK1 Coronado Personal Solar Telescope (Doublestack) w/Meade Autostar Goto Mount	Jessica Edwards	Astronomy Event Sign (3' x 6')	Gordon Hansen
TK5 4.5" Reflector on Fitz GEM mount	Jerry Jamula	Astronomy Event Signs 18x24" (x8)	Liam Finn
TK6 8" Orion XT8i Dobsonian	Dan Smith	PVC Display Board - Folding	Sandra Macika
TK7 TPO 8" f/4 Newtownian Astrograph (OTA Only - no mount)	Bhru Patel	Banner - Small (24" x 32")	George Korody
TK8 20" f/5 Obsession Dob, Ladder & EP Kit	Liam Finn	Banner - Medium (24" x 72")	Sandra Macika
Presentation Tools		Banner - Large (32" x 16')	George Korody
Projector (older)	Jim Frisbie	Tri-Fold Presentation Boards	George Korody
Projector (newer)	Gordon Hansen	Other	
Projection Screen 8'	John McGill	Canopy (10' x 10')	Liam Finn
Projection Screen 6'	Liam Finn	Pop Cooler	Sean Pickard
Bullhorn	Liam Finn	TA Sky Quality Meter	Liam Finn
Speaker System w/Wireless Mic	Liam Finn	Demonstration Tools	
		Weigh on Planets Scale	Liam Finn
		Lunar Phase Kit	Bob MacFarland
		100' Scale Model Solar System Kit	Bob MacFarland
		NSN Meteorite (Outreach) kit	Sandra Macika

Item	Held by
Imaging Cameras	
C2 Meade Deep Sky Imager Pro III w/Autostar Suite	Gordon Hansen
C6 Canon 60Da Astrophotography DSLR and accessories	Tim Dey
Other Imaging Equipment	
CA1 Rigel Systems Spectrascope	Gordon Hansen
C7 Canon EOS EF 70-200mm f/1.4L IS USM lens & tripod mounting ring (for Canon EOS cameras)	Gordon Hansen
Rokinon 8mm f/3.5 Fish-Eye Lens (Canon EOS Mount)	John McGill
Special Event Items - Not available for Loan Out	
BK2 Zhumell 25x100 Binoculars, hard case, & Zhumell TRH-16 tripod w/soft fabric bag	Sandra Macika
TAK1 Night Vision Image Intensifier for telescopes (2" barrel size)	Tim Dey
Lunt 100mm H-alpha Solar Telescope with Celestron CG-5 equatorial mount	Tim Campbell

Secretary's Report (Con't from Page 6)

We talked about the Club Picnic held in August. More information will follow, but for now the plan is to hold it on August 12, at Spring Mill Pond in Island Lake State Recreation Area. We are not yet sure whether the park will hold the Meteors and S'mores event, but if so, it will be the same day. If the weather is cloudy, we will still have the picnic on that date but will move our Public Observing night to August 26.

We talked about the 2024 solar eclipse, and Liam Finn is working to find a location where members of our club can gather together in Texas. Gatesville, a town south of the Dallas area, is currently a good prospect, and Liam is in contact with city officials there. More information to come.

Ball of Stars (Con't from Page 4)

early in the history of the Universe. Located 20,000 light years from Earth, this ball of ancient stars has a diameter of 100 light years. Recently, NASA released a magnificent image of M55 from the Hubble Space Telescope, revealing just a small portion of the larger cluster. This is an image that Charles Messier could only dream of and would have marveled at! By observing high above the Earth's atmosphere, Hubble reveals stars inside the cluster impossible to resolve from ground-based telescopes. The spectacular colors in this image correspond to the surface temperatures of the stars; red stars being cooler than the white ones; white stars being cooler than the blue ones. These stars help us learn more about the early Universe. Discover even more: <https://www.nasa.gov/feature/goddard/2023/hubble-messier-55>

The Hubble Space Telescope has captured magnificent images of most of Messier's objects. Explore them all:

<https://www.nasa.gov/content/goddard/hubble-s-messier-catalog/>

Speaker (Con't from Page 5)

then on the commissioning team for the Goddard High Resolution Spectrograph on the Hubble Space Telescope at NASA/Goddard ('89-'93), Indiana Univ. South Bend ('93-2003) and finally Univ. of Pisa. He has been scientific editor for *Astrophysical Journal* from 1995 to 2003 and now *Astronomy and Astrophysics* (2003-present), and *Astrophysics and Space Sciences Library* editor for Springer-Verlag since 2018 and astrophysics editor for several physical sciences encyclopedia projects over the years. He is one of the section leaders for the AAVSO (spectroscopy) and serves on the IAU Steering Committee for the Stars and Stellar Physics division. Dr. Steve was also an editor of *Skeptical Inquirer* and is still involved with issues of paranormal beliefs and understanding of science.

He has written "Tapestry of Modern Astrophysics" (2002); "Introduction to Astrophysical Hydrodynamics" (editions 1991, 2006, with 2024 now in preparation); "Dirty Window: The Diffuse Interstellar Medium" (with Loris Magnani, 2017); "Forces in Physics: An Historical Perspective" (2007); "Interacting Binaries" (with Ed van den Heuvel and Mario Livio) (1995), and "Science Writing for Young Astronomers" (2014, with Claude Bertout and a few others from A&A).

Dr. Shore is one of the section leaders for the AAVSO (spectroscopy). He works closely with the ARAS group of small telescope spectroscopist. He serves on the IAU Steering Committee for the Stars and Stellar Physics division.

Being a theoretical and observational astrophysicist, there is really no distinction in my view, my interests in hydrodynamics and radiative transfer and spectroscopy are applied to interstellar medium structure and dynamics, solar physics, stellar and planetary atmospheres, binary star evolution, cataclysmic variables, novae and explosive nucleosynthesis. He

works on space and ground based observations from centimeter radio through gamma ray, most recently at Onsala (millimeter), VLT and HST (optical and ultraviolet spectroscopy), and Fermi (gamma ray).

At Pisa he teaches courses on astrophysical processes (theory), observational astrophysics (labs and observations), conceptual history and philosophy of science (especially physics), atmospheric physics, interstellar medium, extragalactic astronomy and cosmology, exoplanets, and scientific writing and publishing.