

BULLETIN

volume 83, issue 1 *January 2009*

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**OUR 82nd YEAR OF
ASTRONOMY IN LOS
ANGELES**

Los Angeles Astronomical Society
Griffith Observatory
2800 East Observatory Road
Los Angeles, CA 90027

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**Editor's
Message**

It was a light turnout for our board election and Show and Tell night. Unfortunately, due to a technical glitch with the equipment, we were not able to show anything that night. I'm working on rescheduling Show and Tell night for February or March. This time, Griffith insures me that this time no technical difficulties will arise. We'll see.

Your officers and board members are listed on the next page. Let's give them all of our support and encouragement to make the LAAS successful in its 83rd year !

The annual banquet is on Sunday January 11th at the Odyssey restaurant in Mission Hills in the San Fernando Valley. See the map on page 10 for directions and details. The cost has gone up due to increases in the fees charged by the restaurant; it's \$60.00 per person. Reserve early, as this is usually a well attended event. The speaker is Matt Golombek. Send your reservation and check to the LAAS Treasurer at:

LAAS Treasurer
P.O. Box 56084
Sherman Oaks, CA 91413

My thanks to all who have contributed to the success of the bulletin. Please consider writing or submit images. Articles need to be 1,500 words or less. Submit only a few images at one time, each with its own caption. The

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deadline for submitting bulletin material is the 10th of each month. If possible, please submit electronically to:

BulletinEditor@laas.org

Material may be sent to the LAAS address listed at the top of the column at left, but timely reception and publication cannot be guaranteed. ✧

2009 LAAS Officers and Board Members

President : David Sovereign
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Secretary : Stephen Dashiell
Treasurer : Herbert Kraus

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Alternates:
P.J. Goldfinger
Mary Brown

NGC 7331, Stephan's Quintet, and Halton Arp (an opinion)

By David Nakamoto

Near the Great Square of Pegasus, visible right now high overhead, is an area of the sky where scientific controversy raged just last century, and in some quarters is still raging. The “stars” of that debate were the galaxies compromising the group called Stephan's Quintet. Nearby, both physically and figuratively (as far as this debate is concerned) is the spiral galaxy NGC 7331, just north of the group.

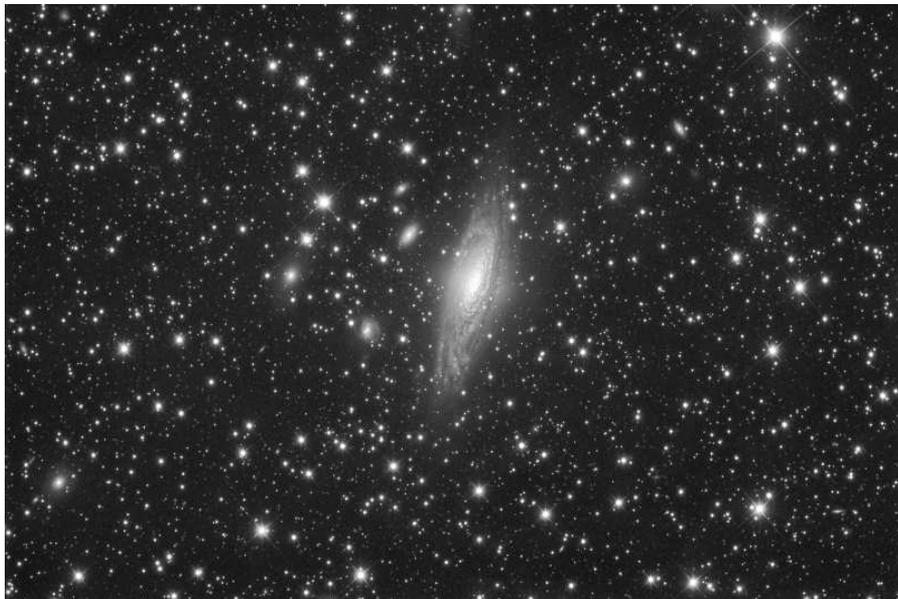
In fact, NGC 7331 is connected to the controversy in a very close way. You see, the whole debate started when Halton Arp began to consider the possibility that there might exist red shifts that are not due to the expansion of the universe. These so-called anomalous red shifts were those where some physical connection seemed to exist between two or more galaxies, but they exhibit very different red shifts. Since Arp believed in the evidence that the galaxies might be physically connected, one of the red shifts had to be due to something other than the expansion of the universe. In most cases, the difference in the red shifts amounted to four to five times or more the recession velocity of the galaxy with the lower red shift. Also, for some reason, Arp considered the anomalous galaxy to be the one with the higher red shift value.

In the case of Stephan's Quintet, the situation seemed to be reversed, with NGC 7320 being the odd man out, with a much lower red shift than the other four members of the group. But the controversy didn't end with that. NGC 7331 also shares the same red shift with NGC 7320. And some of the smaller, fainter galaxies in the same field of view with Stephan's Quintet and NGC 7331 also share similar red shifts with either the faster members of the Quintet or with NGC 7320 and 7331.

Now, at this stage, someone else might have come to the conclusion that NGC 7320, 7331 and the other galaxies that shared the same red shift were a smaller, closer group that just happened to be sitting in front of a much more distant group which included four members of the Quintet, and that NGC 7320 happened to sit in with these other four.

But apparently Arp was not just “someone else”.

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This image of NGC 7331 was taken by the Italian amateur Danilo Pivato

Date: 2008.08.29 - 00h 10m U.T.

Instrument: BRC250 1280/5

Sensor: CCD SBIG ST-10XME @ -25° C. + filter
Clear

Exposure: 15 x 600 seconds - Total Time: 2.5h

Site: Forca Canapine 1440m (PG) - Italy

There is a lot more than meets the eye in the image. At left is a close-up of NGC 7331 from the above image, showing the incredible detail Pivato captured in his amazing image. Despite being embroiled in a controversy, NGC 7331 appears to be a typical, but beautiful, spiral.

other evidence. Now one of the anomalous red shift galaxies was shown to be at the distance it should have been if its red shift was cosmological.

The nail in the coffin, you'd think, but this result didn't satisfy Arp and some of the other campers in the anomalous red shift tent. He even went so far as to suggest the Type I supernova might have been exceptional, but it would HAVE to be to be 5 magnitudes different from other Type Is and place NGC 7319 at the same distance as NGC 7320.

Even as this was happening, the other lines of evidence that Arp collected to support his view came under fire. All have been proven wrong, or at least can be strongly questioned. This often happens when pushing images on photographic plates where unevenness in the recording of light on the plates can be brought out by pushing the contrast too far, and "features" start appearing. Then it just takes someone looking hard for evidence to support their ideas to make something out of what is really nothing. Alas, such things happen often in science, by professional and amateur alike, in all fields.

One big piece of counter-evidence was the resolution of NGC 7320 into stars by the Hale 200-inch telescope. This was done as far back as 1970, and the

(Continued on page 8)



Part of Stephan's Quintet. Image courtesy of the Hubble Space Telescope Institute. NGC 7319 is the barred spiral, NGC 7318A & B are the interacting galaxies towards the lower right corner, and part of NGC 7320 is peaking out from the bottom of the image.



Shock Wave in Stephan's Quintet

Spitzer Space Telescope • IRAC
Visible: Calar Alto Observatory

NASA / JPL-Caltech / Max-Planck Institute / P. Appleton (SSC/Caltech)

ssc2006-08a

This image, courtesy of the Spitzer Space Telescope group, shows the Quintet in infrared light. NGC 7318 looks like a happy face just to the right of center. Perhaps it's laughing at us as it presents a view of the Quintet that seems to show it is connected to both NGC 7319 to its left and NGC 7320 below and to the left. But superposition is something that does happen, and cannot be disentangled without moving to a second viewpoint. Since we can't do that, we're left with a puzzle.

feat was repeated by the Hubble space telescope to much greater resolution. The other members do not resolve into stars, as can be seen in the Hubble space telescope image presented on the previous page.

Now, you'd THINK that this would end the controversy, but alas, life, and science, are sometimes not so clean cut.

Recently (2006) a Spitzer Infrared Telescope image, shown above, seems to

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show that there is material from the closely interacting galaxies NGC 7318 and NGC 7320 to the left and NGC 7319 above and to the left. At least, that's what many who support Arp's views, mostly amateurs, see; a true physical connection between the galaxies, and hence the high velocity of NGCs 7318 and 7319 are not cosmological. But to me, the evidence doesn't seem convincing, or at least not as convincing as the Hubble image. The filaments of NGC 7318 might be superimposed on the other two galaxies. The only way to resolve this is to find out what the appearance of the three galaxies would be if we had a second viewpoint radically different from the only one we have, stuck in the Milky Way galaxy. But perhaps the Hubble image does give us that second viewpoint, for if the three galaxies are indeed at the same distance, why aren't NGC 7318 and 7319 resolved into stars as NGC 7320 is?

The most recent (to my knowledge) contention is that sitting right below the core of NGC 7319, the barred spiral above and to the left in both the Hubble and Spitzer image, is a quasar. Now how can a quasar, with a red shift a lot greater than NGC 7319, be seen right on front of the galaxy? There is also "evidence" that the two are physically connected.

To me, this is a simple matter of a quasar seen THROUGH the intervening galaxy. Not all galaxies, or even parts of a galaxy, are opaque, so it is possible to see objects through them. Many examples exist where this occurs.

And Stephan's Quintet and NGC 7331 aren't the only examples.

NGC 4319 and the Markarian quasar Ma 205 seems to be connected, even though they have very different red shifts. This object has garnered as much attention and debate as Stephan's Quintet.

NGC 7603 is connected to a small companion by a filament of material but have vastly different red shifts. Seyfert's Sextet is another example.

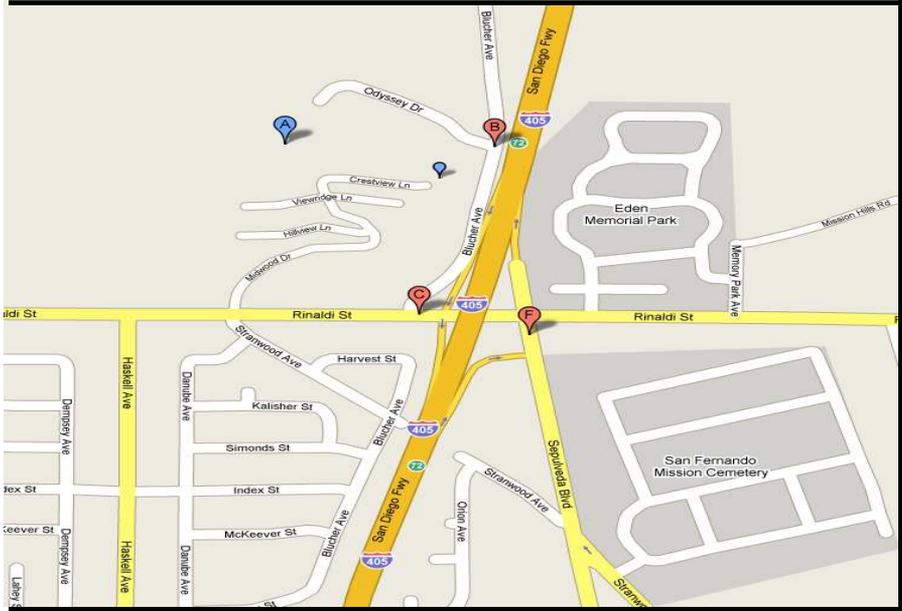
VV 172 is linear chain of galaxies, and seems to be a group, but one of the members imbedded within the group has a very different red shift from the others.

All of these are generally faint, small, and hard to see through amateur instruments. But if you like scientific controversies and wild ideas, you might try and look up these and other objects on Arp's list and give them a shot. Perhaps one day they'll resolve the contradictory data from these anomalous groups, and who knows what they'll teach us about the universe?

✧

(This material is based in part on material from Paolo Maffei's "Monsters in the Sky")

The 2009 Annual Banquet



The annual banquet will be held at the Odyssey Restaurant on Sunday January 11th, happy hour starting around 5:00 pm. Reservations are \$60.00 per person. To reserve, send your name, the number of reservations, and a check made out to the LAAS and send to the LAAS Treasurer at:

LAAS Treasurer
P.O. Box 56084
Sherman Oaks, CA 91413

To get there, take the 405 freeway north past the 118 freeway and get off at Sepulveda, then turn left then left again to get on Rinaldi St. If you get on the 5 freeway you went too far. Those heading south on the 5 should get off on the 405 freeway and the next offramp should be Rinaldi, then turn right.

Head west. The FIRST street past the 405 is Blucher. Turn right on that and the signs should direct you to the Odyssey. I believe it's the first street on the left.

Our speaker will be Matt Golombek, the Landing Site Scientist for the Mars Exploration Program at JPL, and project scientist for the Mars Pathfinder Rovers. His topic is the exploration of Mars.

Griffith Observatory

Public Star Party Procedure

PJ Goldfinger handles our Griffith Observatory Public Star Party List. As patrons may drive up freely and reservations are no longer needed, we will continue to keep a sign up list for this event. Please note changes may occur in future PSP events and to read the policy below each month.

LAAS Members must still sign up on time - Deadline is no later than the Tuesday night prior to the Saturday GO Public Star Party each month. The list information required is:

- Your name, any LAAS Members and Non members in your car.
- Bring Telescope y/n.

NOTE: Those attending without a telescope as a favor will be required to be of some assistance if asked, needed and able.

It is primarily the main focus of any LAAS member who attends this event to be of Public Service with their telescopes in showing the patrons of Griffith Observatory the delights of the nighttime sky. New Members are not expected to adhere to this policy. Please feel free to come up and enjoy the event given you are signed up.

Parking will be on the east side of the Griffith Observatory Hill designated for GO employees. A guard will be stationed with the LAAS GO PSP list. It is always wise to have one's LAAS name badge and/or club ID on them just in case. Unloading telescope and equipment will remain the same procedure as well, with a drive up , drop off and park down hill routine.

The list currently has been updated to 30 spots for LAAS members. First come, first serve.

Please check the LAAS website and Yahoo list for changes and updates in any LAAS event, as there are many communication mediums and some are missed.

To sign up for the Griffith Observatory Star Party the email address is: laas.starparty@gmail.com. Attendance is only granted once a confirmation email has been received. Most important though is to have fun and enjoy! ✧

PJ Goldfinger

Equipment for Sale

Meade 12inch lx 200 classic.

Very good, tracks great. Comes with key pad, 2 instructions books, Telrad, spotter scope, power cord. tripod, Telvue 24 mm eyepiece, canvas foam case, and Meade DSI Pro CCD camera.

Asking \$1500.00

Meade 12 inch lx 200 R:

4 cases:

First has Telvue 12 mm, Meade 26 mm, Telvue 31mm, filters, two inch narrow band #911n Lumicon deep sky, Orion # 80a blue, Lumicon h-beta #486, oxy 111 # 501, h-alpha filter

656 Lumicon h beta # 97.9

power cord , spotter scope, keypad autostar 2, Meade DSI Pro II CCD camera with cord, and program c/d , one storage cabinet with wheels, dew shield. tripod, Maxim DL 4.5 program with c/d

call Tave at (818) 362-5092

Hope you live in south cal; shipping is very expensive. (1)

FOR SALE

8" f/6 Newtonian reflector in a fiberglass tube.

Equatorial mount with AC clock drive.

25mm Super Plossl from Meade.

8X50 finder.

This instrument seems to be an older Optical Craftsman telescope.

Asking price is \$400 and money goes to support LAAS functions.

Contact David Sovereign at (626) 794—0646. (1)

Outreach Program

Come on out to the school and show all the enthusiastic kids, parents, and teachers the night sky. They always appreciate it. And if you get WOW's when they look through you scope, you'll feel good. If no scope, come out anyway and help up set up or answer questions from the kids. So, Outreach volunteers, let's pitch in. I'm sure the kids and adults will appreciate our effort.

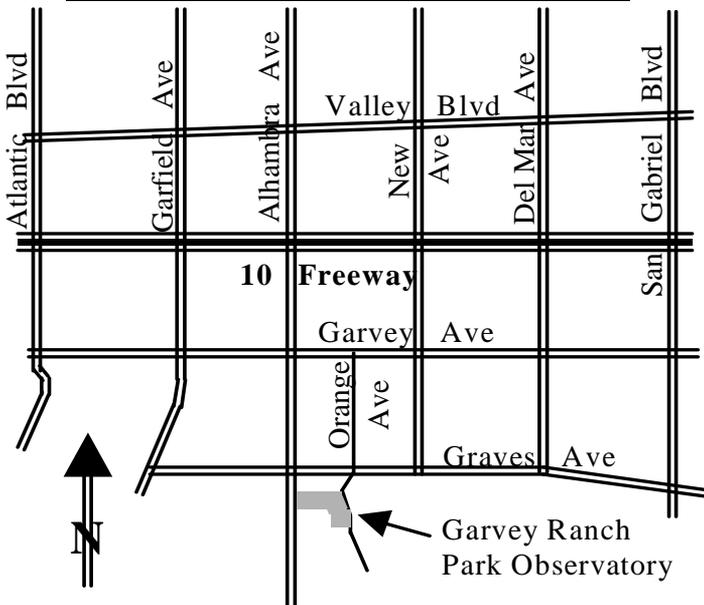
Thanks ! Outreach@laas.org (818) 891-3087 ✧

(Editors Note: Be aware that often these requests come with very little advanced notice. Therefore, we won't post any events in the bulletin unless it is more than a month away. The best way to get news of these events is to use the Internet and either join the LAAS Yahoo group or access the LAAS website. To join the LAAS Yahoo group, see page)

Don DeGregori

Map to Monterey Park Observatory

(The place to build your telescope)



LOANER CORNER



It might not look like it, but the spring and summer star parties are just around the corner. Now is the time for new members and existing members that would like to try out something new to check out one of the LAAS loaner telescopes. At the present time there are several available. All are fully equipped with a set of eyepieces. A simple collimating tool is included with all reflectors and a star diagonal is included with refractors.

LAAS-1: 4.5" f/8 Celestron reflector on a Polaris mount.



LAAS-2: 4.5" f/8 Tasco reflector on an Edmund equatorial mount with a clock drive. This telescope has been upgraded with a 1.25" focuser and 6x30 finder.

LAAS-4: 6" f/5 Telescopic reflector on a Dobsonian mount.

LAAS-6: 10" f/4.5 Discovery reflector on a Dobsonian mount. This fast telescope is also equipped with a Tele View Paracorr to correct off axis coma common with fast paraboloids.

LAAS-4

LAAS-7: 80mm f/15 Meade refractor on an Orion Sky View Deluxe equatorial mount. This is an excellent instrument for the Moon and planets.

LAAS-2

LAAS-8: 80mm f/11.4 Selsi refractor on an equatorial mount.

LAAS-9: 80mm f/6.25 refractor with University Optics objective on an equatorial mount. This fine Rich Field Telescope is good for going through the Messier Catalog.



For more information call: David Sovereign at (626) 794-0646. ✧

David Sovereign

EVENTS CALENDAR

Date	Event	Location and Information
Jan 3rd (Sat)	Public Star Party	Griffith Observatory. See pg 11 for details on how to attend.
Jan 11th (Sun)	Annual Banquet (NO GENERAL MTG IN JAN)	Odyssey Restaurant. See page 10 for directions and information. Matthew Golombek will speak on the exploration of Mars.
Jan 24th (Sat)	Dark Sky Night	Lockwood Valley
Jan 31st (Sat)	Public Star Party	Griffith Observatory. See pg 11 for details on how to attend.
Feb 9th (Mon)	General Meeting	Griffith Observatory Tentatively scheduled, Show and Tell by LAAS members.
Feb 21st (Sat)	Dark Sky Night	Lockwood Valley
Mar 7th (Sat)	Public Star Party	Griffith Observatory. See pg 11 for details on how to attend.

The board meeting is held at 8pm on the Wednesday night prior to the general meeting, at Garvey Ranch Park. In January it will be on the 7th.
The Monday general meetings start at 7:30 pm unless otherwise noted. See each month's bulletin for updates.



LAAS Home Page: <http://www.laas.org>
LAAS Bulletin Online: http://www.laas.org/Resources_Newsletter.htm

LAAS Yahoo Group—how to join

The group is private, and therefore does not come up in a search. To join, send email to: LAAS-subscribe@yahoogroups.com. Include your full name so the moderator can verify your LAAS membership. Your full name is necessary so we can check our records to see if you really are a LAAS member. If approved, you will receive further instructions via email. ✧

Sky and Telescope Subscriptions

Sky and Telescope subscriptions renewals should be sent directly to Sky Publishing. To start a Sky and Telescope subscription, contact the LAAS Treasurer (see the contact information on page 2) directly to get the club rates, then thereafter send the renewal bills directly to Sky Publishing. ✧

Astronomy Magazine Subscriptions

For those that subscribe to Astronomy Magazine through the LAAS, the rate has gone up to \$34 a year, \$60 for two years. ✧

NEEDED

New Members Coordinator

We need a New Members Coordinator. If you're interested, please contact Tim Thompson at timthompson3@verizon.net. ✧

Membership Annual Dues:

Youth	\$ 20.00
Regular (18-65)	\$ 45.00
Senior Citizen (65 and up)	\$ 30.00
Senior Family	\$ 40.00
Family	\$ 60.00
Life	\$ 500.00

Additional fees:

Charter Star member	\$ 30.00
Star member, with pad	\$ 70.00
Star member, no pad	\$ 60.00
Printed Bulletin	\$ 15.00

(Membership due date is indicated on the mailing label)

HANDY PHONE LIST



LAAS Answering Machine (213) 673-7355
Griffith Observatory
Program..... (213) 473-0800
Sky Report.....unavailable for now
Lockwood Site (661) 245-2106
(not answered, arrange time with caller.
Outgoing calls – collect or calling card)
Mt. Wilson Institute..... (626) 793-3100