SKYWATCH

'Serving Mobile's Amateur Astonomy Community'
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Obscured by Clouds...

Winter '95 ESC Public Stargaze Held

Threatening clouds and plummeting temperatures didn't deter the approximately 250 Mobile-area school children who converged on the **Environmental Studies Center** for the Winter 1995 Public Stargaze. While the conditions brought on by a passing cold front were certainly not optimum for observing *anything*, many young people *did* get their first 'live' view of the Moon at this Stargaze, which is a joint production of **Diane Martin** and the Mobile Public Schools' Environmental Studies Center and the Mobile Astronomical Society. Despite frequent 'breaks' we were forced to take when the Moon disappeared behind cloud banks, all of our guests appeared to be *very* happy with their experience.

Since the stargaze was due to start at 6:30PM, **Pat Rochford** and I arrived at the ESC at about a quarter to six in order to allow ourselves time to set-up my 12.5" Newtonian and my 8" SCT. Pat had left his incredible 24" at home, since the less-than-optimum conditions which were being predicted for the night of the Stargaze, November 28, made the effort required to transport and set-up a *really* big telescope seem a little excessive. One glance at the sky showed that we were indeed in for poor and possibly *severe* weather. Pat, Diane and I tuned-in a local weather report on one of the Centers's TVs, and the meteorologist made it clear that the already cloudy conditions were only going to get *worse*.

As we stood discussing the

Many young people got their first 'live' view of the Moon. *Photo courtesy Lick Observatory*

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situation, though, a few children began to arrive at the ESC, so we decided to go ahead and set-up the 12.5" Dob, in hopes of showing the Moon to what we *anticipated* would be a small number of visitors. While we were putting the telescope together, and getting it pointed at the near-first quarter Moon which was peeping through the clouds, we couldn't help but notice that the temperature was now starting to drop *rapidly*. 'Oh well,' we thought, 'We'll show the Moon to three or four little ones, pack-up, and be home in time to watch *Frazier*!' WRONG! When we looked up from the scope, we were amazed to see a *long* parade of cars and school busses pulling into the ESC grounds! Almost *immediately*, there was a line of about 50-60 EXCITED children, parents and teachers waiting to get a look through the telescope. Luckily, it was then that George Byron arrived with his little Astroscan. As soon as he had his scope set up, though, it *also* attracted a long line of visitors! Since a quick look around showed that cars were *still* pulling into the parking lot, Pat went ahead and opened the observatory and got the C8 pointed at Luna. But still they came! A little more relief was provided when Loxley Greaves arrived with his lovely Meade DS-10. By the end of the evening we estimated that approximately *250 children and adults* had viewed the Moon through the four telescopes we had operational!

Though public stargazes can be a bit tiring (and trying) for the 'telescope operators', all I had to do to restore my energy was to look at the bright faces of the kids and listen as they chirped-out their questions. Believe me, this is more than enough reward for spending an evening showing off the skies! And beyond this, there is always the possibility that the child who looks through your telescope may be taking the first step on a journey that leads her or him to astrophysics or the astronaut corps! In fact, I think that sharing the heavens is *the* most enjoyable and important 'job' of amateur astronomy! The ESC/MAS will hold the next public stargaze during the Spring of 1996; all are encouraged to attend and help out with this worthy public service project!★

--Rod

From City Lights to Deep Space

The Moon's getting ready to rise and it's cold out here! How about something a little easier than M76 and NGC 1023 this time?! Hmm...I *was* thinking we should catch M74 before it sets... But, ok, here's an easy, quick catch, a Messier object that hardly anyone ever looks at. And it holds a delicious surprise!

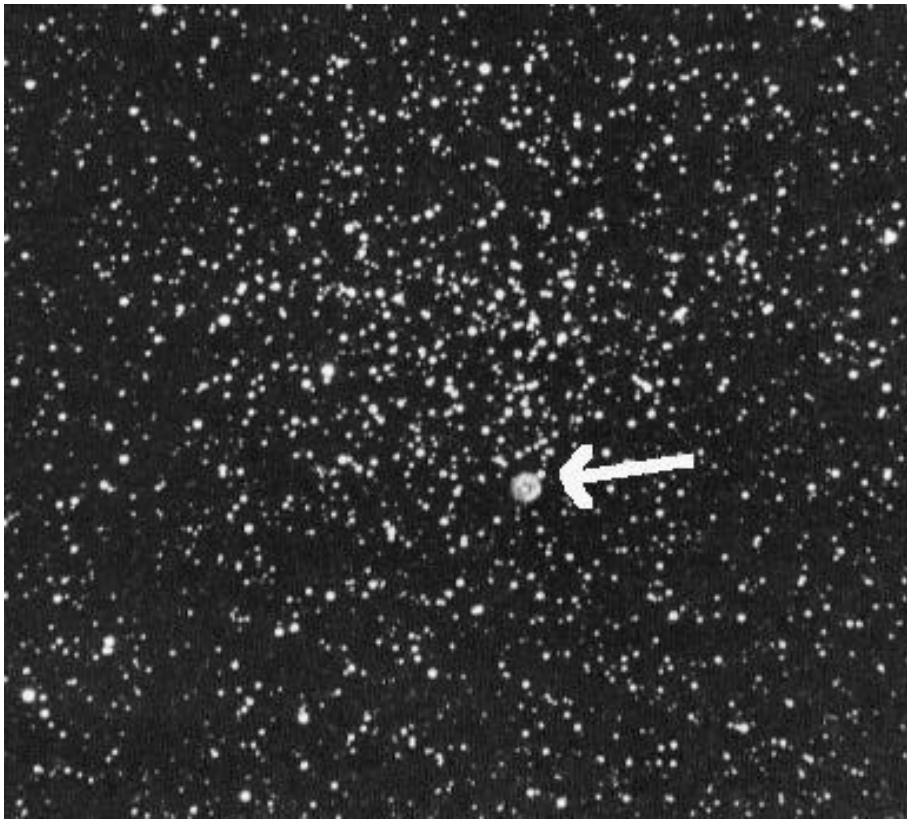
M46 (NGC 2437/CR 159)), R.A. 7h41m47s, DEC -14°48'56", MAG 6.1 OPEN CLUSTER, TRUMPLER TYPE III 2 m, SIZE = 27'X27'

NGC 2438 (PK 231+4.2), R.A. 7h41m47s, DEC -14°43'59", MAG 11.0 PLANETARY NEBULA, VORONTSOV-VELYAMINOV TYPE 4(2). SIZE = 1'X1'.

Although M46 resides within the borders of the somewhat obscure constellation Puppis (the POOP DECK of the obsolete giant constellation ARGO NAVIS), it is very easy to find about 14.4° east of Sirius. The only complication is the possibility of mistaking M46 for M47, another nice open cluster which lies only about 1.5° to the west. Referring to your star atlas, you'll see that M46 (and M47) form a near right triangle with bright Sirius and mag 2.2 ρ Puppis. Minimal optical aid (finder or binoculars) should easily show both M46 and M47. Just remember that M46 is on the east and M47 is on the west (and take into account the usually INVERTED image of a finder scope).

Once you have the cluster situated in the middle of your field, you'll be amazed at how pretty it is! Consisting of at least 150 stars between magnitudes 10-13, this small (<30' across) beauty puts on a nice show in just about any scope. Imagine, though, how wonderful a sight it is under dark skies, since it is situated right in the heart of the marvelous Puppis Milky Way! Even on a very poor night in the city, however, I recorded in my log that M46 was '*...lovely and compact. Scattered clouds and haziness tonight, so this cluster is a little dim. Outstanding nevertheless (with 4" f11 Newtonian).*'

Once you've formed a general impression of this cluster, look a bit closer. About 7' north of the center of this little cloud of stars, you'll find M46's 'surprise', the planetary nebula NGC 2438. The magnitude of this little devil, 11.0, sounds dim, but its small size (about 1' x 1') makes it actually rather bright. If it doesn't jump out at you, examine the field carefully for a 'star' that seems a little 'fuzzy'. If you still can't make it out, increase your magnification. While this makes



Lovely M46 in Puppis with little NGC 2438 arrowed. *Photo courtesy Lunar and Planetary Laboratory*.

the view a little less pretty, it makes the nebula more obviously non stellar and also darkens your field. If NGC 2438 remains invisible, check to MAKE SURE YOU'RE NOT REALLY LOOKING AT M47 RATHER THAN M46! I would classify NGC 2438 as a 'moderately difficult' object (from the city, anyway), but it's definitely doable, so keep after it!

M46, a Trumpler type III 2 m open cluster (detached with no concentration toward center, moderate range in brightness, moderately rich), is located about 5000 light years away, and is, thus, about 30 light years across. NGC 2438, which is classified as type 4(2) in the Verontsov-Velyaminov scheme (ring structure/smooth disk), is most probably a foreground object, being, perhaps, about 3000-3500 light years from Earth.

It is cold out here, but now I'm hooked on the Winter Milky Way again! Monercerous is riding high in the sky...I wonder how its clusters will look in that new 12mm Nagler Santa brought me?! It seems really dark tonight...I bet I might be able to see a hint of the Rosette Nebula tonight! And so it goes, night after night, year after year. The skies are comfortingly unchanging, but they also seem forever full of new wonders. Even those objects I've seen a hundred times before are still capable of delighting me with their well-remembered beauty.★

--Rod

Book of the Month: Sagan, Carl and Ann Druyan. *Comets*. Random House, New York, NY. 1985. ISBN 0-394-54908-2.

I'll admit that I didn't read this book when it came out. It was first published during the time of Halley's Comet, and, by the time I saw this work on the shelves, I was *bloody sick* of comets! But, in the wake of the Hale-Bopp discovery, I was on the look-out for a good general interest book on comets when I happened to see this on sale at Barnes and Noble (for about $5.00!). A good read with much useful information. Beautifully illustrated.

Astrobytes

Mail's in. Ahh....let's see….hmmm, VR Labs? Oh, yeah, the dudes I bought Mars Explorer from (rrrip). Ok, 'First Light, the upgrade for Distant Suns. Do the Dream: *First Light*, your cosmic playground. Land on Mars and explore--the ultimate multimedia adventure! Bring the planets up close enough to touch! Play with the planets like celestial baubles! Catch a ride on Galileo to Jupiter! Print star charts! Play among the stars! Approach the Sun from 100 light-years! Your virtual world never ends! Only $69.00 for registered users of any VR Labs program!' *Whoa! A great new Windows planetarium! Where's my credit card!*

I'll admit it: I'm a sucker for new astronomy software. Here on the Gulf Coast, such a large percentage of our nights are clouded out that the avid astronomer has to find some kind of an outlet. And I've found mine in

astronomical computing. While I've been using personal computers for about 16 years now, and have become very wary of the advertising copy for new software, the ad for this new CD was just so appealing that I couldn't resist. The order taker at VR (Virtual Reality) Labs was courteous and helpful, and I soon had a copy of the program on its way to me.

In a fairly short period of time, First Light was on my doorstep. Opening the box, I was immediately disappointed by the fact that there is no manual included, only a short pamphlet containing the installation instructions. A glance at these instructions revealed that the user's manual is a file on the CD which can be read and printed using Adobe Acrobat (an Acrobat reader is also included on the CD). While this is *OK*, I feel that it's *nowhere near* as handy as having a traditional printed manual. Oh well.

After quickly scanning the rest of the 'quick start' instructions, I set about installing the program (which, incidentally, requires about 5mb of hard disk space). Installation was completely automated, and, before long, *First Light* had set itself up, created a new program group which contained icons for both the program and the Adobe Acrobat reader, and was ready to run the for the first time. I was VERY interested to see how this new multimedia planetarium would stack-up against one of my all time favorites, *RedShift*.

First Light ran well, if a little slowly, on my 25mhz 486 computer (it should be noted that the company makes clear that their program needs a PENTIUM processor for optimum operation). In all, it was about *three minutes* before I was greeted with the opening program screen, a display of the 'sky tonight' with buttons for accessing an astronomically oriented calendar, the planetarium, or the 'nightly grabbag' (a short 'hypertext' astronomy lesson, the subject of which changes nightly). A bit concerned about the program's sluggish operation, I tried it on a DX2-66 computer at work (which also sports a 4X CD ROM drive and 16mb of RAM), but the improvement seemed minimal over my computer, so I'm guessing that it would probably take a 100mhz Pentium to really make *First Light* fly. When I first installed *First Light* on my system I was running Windows 3.1. Upgrading to Windows 95 did make quite a noticeable improvement in the program's speed. What was my overall appraisal of First Light 1.0? That it has a number of very nice features, some features which look better in the ads than they do on the computer, and, unfortunately, a few really annoying bugs.

Let's examine some of the aspects of First Light which were so highly touted in the flyers and magazine ads. **Land on and explore Mars:** Well...sort of. First off, you only have a very limited number of landing sites (understandable I guess). More disappointingly, 'landing' on Mars consists of merely watching a quicktime movie of a descent and landing on the Martian surface. While it is true that you have a 360° panorama of the landscape , it is in the usual small, grainy, low resolution format which we've become accustomed to with Windows video. Apparently these movies were generated with the company's *Vista Pro* program, and are basically pale imitations of the planetary 'movies' developed by JPL. Don't get me wrong, these landing sequences are interesting, just don't expect to be bowled-over (as the ad copy will lead you to believe you *will be*). **Play with the planets like baubles:** While in hover mode (viewpoint near one of the planets) you can click on the disk of a planet and change its inclination with respect to your viewpoint. While this feature works, it's so slow (on 486 computers, anyway) that I hardly felt like I was '*playing with a bauble*'. All in all, I found the hover mode less useful than *RedShift*'s 'follow/move around planet' features. On the up side, though, the planets *are* very nicely (and realistically) rendered. **Approach the Sun from 100 Light-years:** I don't really know how useful it is to view the Solar System from this distance, but the Solar System View is one of the nicest features of *First Light*. I found it particularly useful in visualizing the path of Comet Hale-Bopp.

How about the rest of the program? How useful is it? In general I was pleased, though *First Light* does have its quirks. For example, the monthly calendar accessible from the opening screen is very nice, showing Lunar phases and other astronomical events of interest (meteor showers, etc.). But the program doesn't give you the option of *printing* the calendar! The planetarium itself is attractive, and includes the SAO catalog, the NGC catalog, and the *Hubble Guide Star Catalog* (GSC). The only complaint here is one of omission. It would be nice to have the IC catalog in addition to the NGC, and there is surely room for it on a CD. I enjoyed the many still pictures included on the CD, but more deep sky data would have been more useful (especially in this day and age when you can get just about any astronomy-related image you want from the Internet for free). *First Light* also contains a selection of movies which includes the HST repair mission and (you guessed it) Apollo 11 footage and the Magellan Venus 'movies'. Come on guys! *Surely* you could have

found something fresher than this to give us! As with *RedShift*, I found *First Light*'s movies to be marginally interesting 'space fillers.' The only saving grace here is that some of *First Light*'s movies, unlike those on *RedShift*, do contain audio tracks.

Now for the most depressing aspect of this program: The Bugs. While this is Version 1.0, and it would be understandable if there were a few bugs lurking, First Light has more than its share. To make sure that the particular configuration of my machine wasn't what was causing the difficulties, I was careful to try the problematical operations on two other computers. The first bug that I noted was a problem concerning the Hubble Guide Star Catalog. Like many programs, *First Light* only allows you to activate the GSC when you are zoomed-in on a small area. This keeps your screen from becoming overly cluttered with dim GSC stars. Good Idea. But I found that my screens were still cluttered with more GSC stars than I wanted. No matter what I did, I was always presented with all of the GSC stars--down to *magnitude 16*. The magnitude filter had absolutely no effect. This is a problem for me, since I like to make finder charts with a magnitude limit of about 13. 16 is *really* too dim; there are just too many dim stars on my charts which I won't be able to see through my telescope. I e-mailed a question about this problem to the author (commendably his e-mail address is included in the documentation), and he responded immediately, saying that the magnitude filter had 'worked at one time' and that he would check on it and 'get back to me'. But after about three months I've had no further communication from him.

Another, perhaps more *serious* bug, concerns the program's 'find' function. With certain overlays enabled on the planetarium screen (horizon 'skyline' seems to be the primary offender), the find function stops working. With the skyline (a silhouette of buildings, trees, etc along the horizon, just like in a 'real' planetarium) turned on, the program couldn't even locate the constellation Lyra, *much less* M57!

Another bug reared its head when I was entering Comet orbital elements. While this feature is easy to use, and allowed me to enter an orbit for Comet Hale-Bopp quickly, it has a weird quirk: It will not allow you to enter a date greater than 31. The original orbital elements for Hale-Bopp were on April 1.XXXX (1997). When these were refined to March 31.XXX, I tried to reenter them. But *First Light* would not let me enter any date greater than 31.0. When I attempted to enter the numbers to the right of the decimal, the program only beeped at me! Not really a big problem, but *annoying*.

How satisfied am I with *First Light*? Fairly satisfied. Despite the bugs and the slow operation, I've enjoyed using the program, and have found it reasonably useful; especially for plotting comet orbits. Do I recommend it? Maybe. With reservations. If you have a fast, modern computer you may find this program more enjoyable than I did. However, I would still suggest that you wait for a later revision of the program which addresses some of the problems that the current release, unfortunately, 'features.'

I see that a new version of *RedShift* has been released. It will be interesting to see how it compares to *First Light*. But for now the title of 'King of the Multimedia Planetariums' still goes to the original *RedShift*.★

--Rod

My Back Pages

AstroPoem

To Hale-Bopp

A dim smudge.
A merest pinprick
Of light.
I convince myself:
'I've seen you!'
But what does your future hold,
Hale-Bopp?
Do you,
Like your long-lost sisters,
Still have the power
To terrify and madden
An awed humanity?

--Rod Mollise

Club Notes

November 1995 Meeting: The presentation for November's meeting, *CCDs in Amateur Astronomy*, was given by your editor and Loxley Greaves. We were particularly interested and impressed by the amount of work and study which Loxley has done concerning the building of Richard Berry's 'Cookbook Camera.' Following the presentation, a lively discussion of CCDs evolved into a plan to build one of the cameras as a club project. Further, the membership voted to allocate club funds toward the purchase of parts needed to finish the CCD (the power supply is already complete, thanks to Pat Rochford, and Loxley has purchased the machined camera housing with his own funds). It's been a *while* since I've seen MAS members as excited as they were at this meeting! This has the makings of a great club experience! The scope of this project means that there is *certainly* room (and necessity) for all club members to make contributions to the effort!

December 1995 Meeting: Following a discussion of the Dark Site 'problem' (with some good suggestions being made by Leland Cox), we finalized plans for the traditional MAS Holiday Dinner. As in the past couple of years, it will be held at **Shoney's at Tillman's Corner**. The time and date will be the regularly scheduled meeting time, so join us at Shoney's on January 3 at 7:00 pm for some food and fun!

RUMOURS

The report that I had concerning the possible shut-down of Kenneth Novak & Co. has turned-out to be (mostly) false. Apparently Mr. **Novak** is still mailing catalogs and **taking orders**. I have *not* seen his ads in recent issues of the astronomy magazines, though, and reports of unusually long delays on orders persist....

In the 'what a coincidence!' department, I see that **Meade** has **raised the price of its 16"** Starfinder Dob to $1095.00 (in the wake of Coulter's bankruptcy?), which is still a wonderful price for what is a good quality 16" telescope....

I hear that plans to begin construction of **Mobile's Imax** (Omnimax?) theatre are **proceeding** (despite the carps of a few who are, as usual, suspicious of anything *new)*. Sure would like to get another chance to see *The Dream is Alive*....

Have you seen Meade's ads for its new **Magellan I** digital setting circles? **At $295.00** they seem to have all the features of units that have been selling for $800.00+ (JMI's DSC Max, for instance). The combination of features/price makes my mouth water!....

Apparently Maksutov maker **Questar**, which, your reporter has been told, has declared **Chapter 11 bankruptcy**, is continuing in business. I'm hearing conflicting stories, though, concerning the question of whether they're still producing their amateur telescopes **or not** (Questar has, it seems, done considerable business in the past with government and industry)....

I have in hand the December number of *The Meteor*, the newsletter of the **Escambia Amateur Astronomers**. If you want to know what a *determined* club can accomplish, just browse through a few issues of Dr. Wayne Wooten's *excellent* publication!

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Skywatch
C/O Rod Mollise
1207 Selma St.
Mobile, AL 36604
(334)432-7071
FAX: Same
E-mail: maf00068@maf.mobile.al.us

If possible, submit materials for *Skywatch* in machine-readable form. WordPerfect 6.1/6.0/5.1 format is preferred, but a wide range of word processors is supported. Members of the *Mobile Astronomical Society* currently receive their issues of *Skywatch* at no cost at Society meetings, but mail subscriptions to *Skywatch* are available for a nominal fee. If return is desired, postage must accompany all manuscripts, drawings, photographs, etc.

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Well, that's all for this issue, folks...hope you enjoyed reading it! Let us know what you think--suggestions are always very welcome! The very best to you and yours during the coming new year. And, of course, CLEAR SKIES!

Peace,

Rod &Dorothy