



Skywatch

'Serving Mobile's Amateur Astronomy Community'

January-February 1995 • Volume 4 Number 1

Deep South Nights

*Deep South Regional Stargaze
1994*

A nearby tornado, towering thunderstorms, constantly threatening clouds and unremitting swarms of biting insects couldn't dampen the enthusiasm of the dedicated deep sky observers who flocked to Percy Quin State Park (near McComb, Mississippi) for the 12th annual Deep South Regional Stargaze. The Mobile Astronomical Society was very well represented at this year's DSRSG. In attendance were **Dorothy and Rod Mollise, Elaine and Tommy Osborne, Ginny and Anthony Kramer, Wayne Hester, Pat Rochford, Leland Cox, George Byron, new member Sherri Martin, and corresponding member Chuck Schroll.** Despite a few hours of bad weather here and there, everyone came away from the stargaze with wonderful memories of some *utterly fantastic* views of deep sky objects. In addition, the chance to socialize with fellow observers from across the southeast

in the typically friendly and informal atmosphere of DSRSG left us wanting more and looking forward to next year's stargaze.

Although Thursday (this year's DSRSG ran from 3-5 November) dawned to unsettled weather, Dorothy and I packed the car and headed-off to Percy Quin State Park as early as our schedules would allow. After an extremely pleasant drive, we arrived at the DSRSG observing field at about 4:30pm, which left us just enough time to unpack, erect our canopy, and set-up our new 12.5" Dobsonian. Fellow MAS member Wayne Hester had arrived a bit earlier, and had *his* new scope, a 13.1" Odyssey I Dob, ready to go. As sunset approached, the clouds which had been lingering in the sky all day began to disperse. By 6:30pm, the Milky Way was bright and easily visible. While fleeting patches of clouds occasionally forced us to modify our observing programs, sky conditions were generally very good, and Wayne, Dorothy and I observed a large number of beautiful deep sky objects. I think that my *most* memorable observation on Thursday night was of M74. M74, the large face-on spiral galaxy in Pisces, is generally considered a fairly difficult object from less than perfect skies. At DSRSG, though,

it was brighter than I've ever seen it, and I soon realized that my wondering eyes were actually able to (easily) detect **spiral structure** in this distant giant! Sky conditions continued to be good until well after 1:00am, but Dorothy and I called it a night at around 11:00pm. We simply got tired of dealing with the *very* heavy dew (next year I'll have some kind of a dew removal system installed!), and we were also really weary after a long day and a long drive. Die-hard observer Wayne Hester stuck with it till the bitter end, logging some fantastic observations.

Friday morning arrived with (sigh) *more* cloudy skies. Also, those of us who hung-out on the observing field were plagued by biting gnats and mosquitos, which made cans of **Deep Woods Off** as valuable as Nagler eyepieces! One new feature on the observing field this year was the set-up of a commercial dealer from Arkansas, Rex (somebody help me with his last name). This gentleman had a large number of items for sale which ranged from surplus 60mm refractors to high-quality 2" eyepieces. Dorothy and I purchased a pair of nice LED flashlights from Rex, and were amazed at *how much better* his prices were than those of most large

mail-order astronomy dealers. Just about everyone bought *something* from Rex, and he assured us that he'd make every effort to be back for next year's DSRSG. The remainder of Friday was spent waiting for darkness and hoping for clear weather. Dinner Friday evening was our first meal in the park cafeteria, and consisted of the usual plain (but edible) food. Everyone's spirits were high since by now it seemed probable that the skies would clear, and the group meal was thoroughly enjoyable.

The clouds did indeed disperse for a while, and we all spent the next few hours drifting out into the void of space before returning bad weather shut-down the evening's observing run at about midnight. With the threat of clouds ever present, I didn't linger over any one object, but tried to observe as many deep sky wonders as possible. Out of the multitude of objects I saw that night, M76 really stands out. This planetary nebula, the Little Dumbbell in Perseus, looked as nice (at high magnification) as the (big) Dumbbell, M27, usually does! I'd also be remiss if I didn't mention an M15 (the globular in Pegasus) which **completely** filled the field of a 12mm eyepiece, and seemed resolved right down to its diamond core. Over the course of the evening we were treated to some nice views through Elaine Osborne's beautiful new 14.5" Dob. We also got a demonstration of her very nice self-designed and built accessory case-lighted chart case-mirror box. When the clouds finally brought an end to Friday night's observing, we left the field happy and satisfied (but *naturally* wanting more!).

Saturday, the last full day of DSRSG '94, brought with it more bad weather which quickly turned worse. Our return to the observing field early in the morning revealed a vista of downed canopies and rain lashed scopes. Luckily, no one suffered any serious damage and things were soon back to normal. Thanks to the ingenuity of Wayne Hester, the MAS tent canopy was one of the few still standing on Saturday morning. Saturday morning's stormy weather unfortunately turned into Saturday afternoon's severe weather, with a tornado watch being posted by midday. Rain and high winds whipped across the observing field, causing DSRSG organizer Barry Simon to move contest judging and the prize drawing from the observing field to the park pavilion. We

passed the afternoon listening to club representatives give talks on club history and activities. Our own Leland Cox gave a particularly well-received and interesting talk about the activities of the MAS. Following these talks, the winners of the photography, telescope and observing aids/accessories competitions were announced. MAS member Elaine Osborne continued our club's winning history by taking first place in the observing accessory competition. Kudos to Elaine; everyone who saw her accessory case was very impressed. Following the raffle drawing (Leland Cox, Wayne Hester, George Byron, and Sherri Martin were all lucky enough to receive nice prizes) and the yearly group photograph, weather conditions had improved enough to allow us to return to the observing field to check for damage and attempt to dry-out some of our belongings. Supper came and went with little observable clearing of the sky, which caused some observers to (understandably) call it quits and leave for home. Dorothy and I decided to stay through the night, even though I had about given-up on the idea of doing any more observing.

At about 10:00pm, though, we were awakened by Wayne's knock on our door and his announcement that the sky was clearing. I jumped-up, threw on some clothes, and headed for the field. While there was still some distant lightning, the passing of the storm brought what were probably the best skies of the stargaze. I was thrilled to get my first-ever view of the emission nebula NGC 604 (which is *within* the Pinwheel Galaxy, M33). The Orion Nebula was simply **brehtaking**, and I could really have stared at it for hours. Turning our attention to the area around Zeta Orionis, Wayne was actually able to detect the faint nebula IC 434 (without a filter!) which forms the background of the Horsehead Nebula (though he wasn't able to detect the Horsehead itself). While I don't feel that I really saw IC 434, I was able to see the famous Christmas Tree Nebula, NGC 2024 (aka the Flame Nebula or the Tank Tracks Nebula) near Zeta. Later in the evening (actually early in the morning--the skies remained mostly cloud-free for the remainder of the night) Elaine Osborne and Pat Rochford were able to get some nice views of Comet p/Borrelly.

When Sunday morning came, we drove home feeling both happy and sad (as

well as a little tired). Happy because of the good observing and comradeship we'd enjoyed at DSRSG '94; sad because we have to wait a *whole year* for another wonderful DSRSG!

--Rod

From City Lights to Deep Space

Touring Cassiopeia with a 12"

I'll be the first to admit that my 12.5" Newtonian spends a lot of time feeling neglected. It's just *so much* easier to haul-out my trusty 8" reflector when I have the chance to do some spur-of-the-

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If possible, submit articles for *Skywatch* in machine-readable form. 3.5" WordPerfect disks is the preferred submission format, but a wide variety of word processors can be supported. Out of town/state subscriptions are available for a nominal charge (to cover postage). Also, those club members who are unable to pick-up their issues of *Skywatch* at MAS meetings can arrange to receive their issues via mail or in electronic form. Please contact me to make arrangements for this service. Unless otherwise noted the entire contents of *Skywatch* is copyright 1995 by Rod Mollise. If return is desired, postage must accompany all manuscripts, drawings, photos, etc.

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moment backyard observing (I always use the 12" at dark sites, however). Recently though, I awoke with the idea for an observing project which I could execute from my light-polluted site here in the Garden District. I would observe as many of the lovely open clusters in Cassiopeia as a 12" telescope would show. I've always

enjoyed drifting through the Milky Way in this region, but the last time I'd taken a good look at this area my primary instrument was my 4" f11 reflector. I was anxious to see what a larger telescope could pull-out of my bright skies. I was also curious to see whether the clusters which I'd observed in the past would look much different through a larger instrument.

A look at *Sky Atlas 2000* and a session with *Deep Space 3D* revealed that there'd be around 40 clusters which would be bright enough to provide interesting targets for my scope (given the huge amount of light-pollution present in my skies). A little more narrowing-down left me with an observing list containing 17 clusters, all of which should be within range of 6" telescopes (well, maybe with one or two deletions). After some time spent familiarizing myself with the locations and characteristics of my destinations, all that remained to do was wait for clear skies (this took a while!).

When that rare clear night finally arrived, I was ready to begin my tour of the Celestial Queen. I didn't expect to finish in one evening, and I hope you don't either if you decide to follow me. I'd seen many of these clusters in the past, so I wasn't interested in merely ticking objects off a list. I wanted to spend some time in these stellar nurseries--to try to absorb some *true sense* of them. With a couple of exceptions, these objects are very easy to find, being located near Cassiopeia's 'W', so I'll leave it to you to check their exact locations in your star atlas. One trick for locating 'hard' objects that I discovered fairly recently is that a large aperture finder used *in addition to a Telrad* makes locating deep sky objects much easier in the city. A Telrad is a marvelous invention, but sometimes you need to see guide stars which are invisible to your naked eye in the light-pollution. A 50mm (or larger) finder easily reveals enough stars to make finding most objects easy. One caution: your star atlas may not show all of the objects which I visited (I know that *Sky Atlas 2000* doesn't). In that case, use the coordinates given in each cluster's 'vital statistics' to plot the objects on your map in pencil.

Note: 'Class' in the statistics for each object refers to the open cluster's Trumpler Classification, something that I find very valuable when trying to decide

whether a cluster is **worth observing or not**:

Open Clusters: Trumpler type

Concentration

- I. Detached, strong concentration toward the center
- II. Detached, weak concentration toward the center
- III. Detached, no concentration toward the center
- IV. Not well detached from surrounding star field

Range in brightness

1. Small range
2. Moderate range
3. Large range

Richness

- p Poor (<50 stars)
 m Moderately rich (>50 stars, <100 stars)
 r Rich (>100 stars)

An "n" following the Trumpler type denotes nebulosity in cluster

I suppose that the logical way to conduct a tour of Cassiopeia would be to start at one end of the 'W' and work your way down. Since my wife was very interested in getting a look at NGC 457, the ET (or Owl) cluster, though, I started there, working my way northeast to begin with.

NGC 457/H VII 2, 0h43m25s x 61dgr 47' 1" MAG 7.0 OPEN CLUSTER, CLASS III p n, SIZE 13'.

The justly famous Owl or ET cluster. With a little imagination, you can play 'connect the dots' with the stars in this very beautiful cluster to form a little figure in your mind's eye. Here in the city, the view through my 12.5" is very similar to that in a 6" stationed under suburban skies. About 40-45 cluster members are easily visible. A red star in the Owl's 'left armpit' is very distinctive.

My next stop was NGC 436, which is located only about 39' (a little over one

low-power field) to the northwest of NGC 457...

NGC 436/H VII 45, 1h15m35s x 58dgr 49' 2" MAG 8.8 OPEN CLUSTER, CLASS I 3 r, SIZE 6'.

In the 12" f4.8, this cluster is similar in appearance to M103 as seen by a 6" telescope (i.e. very beautiful). About 25 magnitude 11 and fainter stars are easily visible. The cluster is quite compact, and was best seen at about 90X with a wide field Konig eyepiece.

Continuing on about 3 degrees to the north-northeast, we find our next port of call: M103...

M103/NGC 581, 1h33m13s x 60dgr 42' 5" MAG 7.4 OPEN CLUSTER, CLASS III 2 p, SIZE 6'.

Lovely! A handful of brilliant blue gems with a striking orange star positioned near the center of the cluster. About 25 stars are easily visible, and are arranged in what is basically a triangular shape. In this aperture, the cluster almost seems to display a 3-D effect (I again used about 90X).

Moving northeast for another 39' brings us to the subdued Trumpler 1...

TR 1/CR (COLLINDER) 15, 1h35m43s x 61dgr 17' 1" MAG 8.1 OPEN CLUSTER, CLASS I 3 p, SIZE 5' 30".

Small (<5' across in my scope). About 10 stars arranged in a square asterism. Worth a visit because of one prominent red star in the middle of the cluster. Because of its somewhat small size, TR 1 was best seen in a 12mm Orthoscopic eyepiece yielding about 127X (probably even higher power would improve the view somewhat).

Our next target, NGC 654 is a little over 1 degree away (continuing our northeasterly course)...

NGC 654/H VII 46, 1h44m7s x 61dgr 52' 57" MAG 6.5 OPEN CLUSTER, CLASS II 3 m, SIZE 5'.

In the 12.5" scope, about 25 stars are easily visible in this small cluster. A prominent yellow star stands out. My 90X widefield eyepiece yielded a pleasing view.

From NGC 654, we change course and move just one degree southeast for our next stop...

**NGC 663/H VI 31, 1hr46m0s x 61dgr 15'2"
MAG 7.1 OPEN CLUSTER, CLASS III 2 m,
SIZE 16'.**

"NGC 663 is very beautiful tonight!" About 40 bright stars and many faint cluster members are visible. A 27mm Erfle eyepiece (56X) did a good job with this lovely.

Switching directions again and heading about 39° due north brings us to the area of the only object on our tour which I found "difficult"...

**IC 166, 1hr52m12s x 61dgr 49'59" MAG
11.7 OPEN CLUSTER, CLASS III 1 r, SIZE
5' 30".**

I had a rather hard time locating IC 166. It is small, dim (its brightest stars are about magnitude 12+), and rather easy to miss in the midst of Cassiopeia's busy star fields. I was finally able to find this cluster, but only by using a small-area finder chart generated with *Megastar* (showing field stars down to mag 13). Once found, this little cluster was hardly spectacular, with a few faint members winking in and out of view. IC 166 (which is reputed to contain nebulosity) may, however, look much better—and be much easier to find—if your skies are darker than mine (which I'm sure they probably are). This cluster is, unfortunately, not shown in *Sky Atlas 2000*, so you'll have to use a more detailed reference (if you think this little cluster is worth your time, I can certainly supply you with a finder chart).

We've finally come to the eastern terminus of tonight's sky tour. Take a breath, now, and jump all the way to the western end of the "W" and spectacular M52...

**M52/NGC 7654, 23h24m11s x 61dgr 34'59"
MAG 6.9 OPEN CLUSTER, CLASS I 2 r,
SIZE 13'.**

Very compact and pretty. Made most beautiful by a very prominent red star. About 50 (or more) stars are readily visible in my heavily light polluted skies! Stands-out really well from the background star field!

A rather large (6 degrees 25') hop to the south-southeast brings us to a cluster which I thought was even nicer than M52, and which is rivaled only by NGC 457 for the title of "most beautiful star cluster in the neighborhood"...

NGC 7789/H VI 30, 23h57m1s x 56dgr

**43'57" MAG 6.7 OPEN CLUSTER, CLASS
II 1 r, SIZE 16'.**

Outstanding! A showpiece despite heavy light pollution! Very rich. Really resembles a very loose globular (like M71 in Sagitta). A good number of mag 10 stars and many, many mag 12 and fainter cluster members are visible.

Moving east-southeast for about 4 degrees brings us to NGC 129...

**NGC 129/H VIII 79, 0h29m53s x 60dgr
14'4" MAG 6.5 OPEN CLUSTER, CLASS
IV 2 p, SIZE 21'.**

Somewhat large at about 20', but it is made impressive by the presence of bright DL Cassiopeiae (a sixth magnitude star which, I think, is not a cluster member). Pretty in a 27mm Erfle eyepiece at 56X, but 90X brings-out some fainter cluster members. Try to use a fairly high-power wide-field eyepiece on this object.

Going about a degree and a half northward lets us gaze upon NGC 189...

**NGC 189, 0h38m43s x 61dgr 3'60",
MAGNITUDE 8.8 OPEN CLUSTER,
CLASS III 2 p, SIZE 4'42".**

Distinguishable, but not really much there, I must admit. About 10 stars (mag 11 or so) are visible in my 12" here in the Garden District.

Proceeding another 52° on our basically northern course brings us to the much nicer NGC 225...

**NGC 225/H VIII 78, 0h43m25s x 61dgr
47'1" MAG 7 OPEN CLUSTER, CLASS III
1 p n, SIZE 12'.**

What a very nice surprise this little cluster is! Really stands-out in the 12" scope. About 15 stars are arranged in a pattern most observers call a "W". To me, though, it looked just like a tiny perfect Sagittarius Teapot!

A final sprint of about 2 degrees to the west brings us to the end of the evening's journey: three little clusters which I thought were both pretty and unique...

**NGC 133 and NGC 146 and KING 14;
0h31m54s x 63dgr 10' Mag 9.4, 9.1, and 8.5
OPEN CLUSTERS; CLASSES IV 1 p, IV 3
p and III 2 p; SIZES 7', 7' and 7'.**

These little clusters are located near Kappa Cassiopeiae. This is a rich area, and while the three clusters do stand-out fairly well, it is

somewhat difficult to decide exactly where each cluster begins and ends. A very nice sight since all three clusters are visible in one low power field. Use your lowest-powered, widest-field eyepiece. There is some feeling, by-the-way, that NGC 133 may be an asterism rather than an actual cluster.

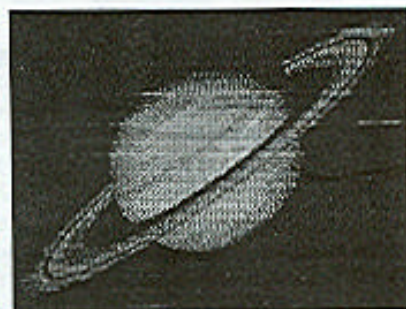
Was I good and sick of open clusters by the time I finished this observing project? Well, maybe a little. But my sense of wonder was restored when I stopped and thought about the implications of what I had seen. In this medium-sized constellation we've visited open cluster after open cluster. Consider how many huge clusters of newborn stars we've seen tonight in one small sample of the Milky Way! Now do you begin to realize how BIG our galaxy is? I did. And was awed.

Book of the Month: Harrington, Phil, *Starware*. John Wiley and Sons, New York, NY, 1994, ISBN: 0-471-57671-9.

Subtitled "The amateur astronomer's ultimate guide to choosing and using telescopes and accessories", *Starware* is an excellent reference for beginner and advanced amateur alike (though maybe not 'the ultimate guide'; there is surprisingly little about astronomy software in this book). I insist that you go out and buy this book! **A MUST-HAVE** (look for an in-depth review soon).

Next Time: The Galaxies are Back!

—Rod



Goodbye to Longtime MAS Members

Long-time Mobile Astronomical Society members Elaine and Tommy Osborne said goodbye to the MAS membership at the December meeting of the club. We are saddened by their departure, but wish them the best in their retirement in Virginia! Good luck Elaine and Tommy, and enjoy those superdark skies!

From the Editor

With this issue we say good-bye to our long-time editor, David Switzer, who must give up his duties due to pressing personal commitments. In every sense, *Skywatch* has been David's baby. A few years ago he started a little, simple newsletter as a service to his astronomy club. But what he wound up with is, in my opinion, one of the better journals published in support of any amateur astronomy club. I've seen some club publications that were slicker or fancier, but very few that were as well-thought-out and informative as David's *Skywatch*! Kudos, David—your steady hand will be missed. I know how difficult it is to keep a project of this type going, given the many pressures we all face from families, jobs, etc. But you kept plugging away—for years—always getting out a newsletter that was both fun to read and useful. You'll be missed, buddy.

—Rod

Newsnotes

Happenings from the world of Professional Astronomy...

Extrasolar Planets: More evidence for the presence of a planetary system around Beta Pictoris has been uncovered by a team led by Dr. Harold Levinson. A long noted oddity in Beta Pic's spectrum is explained by the University of Ontario Researchers as being

caused by inward spiraling comets which have their orbits perturbed by two planets. See the February 1995 issue of *Sky and Telescope* for details.

Where is the missing mass? It has been theorized that much of the 'missing mass' in the universe could be attributed to red dwarfs—stars with masses less than .2 Sun. Unfortunately, deep exposures with the Hubble Space Telescope have revealed far fewer red dwarfs than was expected. Therefore, the missing mass remains missing.

Or has some of the missing mass been found? On the other hand, Kitt Peak observers have announced the discovery of a halo of luminous 'dark' matter around NGC 5907. Long CCD exposures reveal an extremely faint halo around this galaxy, which could, supposedly represent some of the missing mass in the universe, assuming there's nothing unusual about this edge-on spiral galaxy in Draco...

Astronomical Software Review

RedShift v1.2

Maris Multimedia
\$59.95 (price may vary slightly with vendor).

Program requirements: 386SX processor (486 recommended), Windows 3.1 (also available for Macintosh and Power Macintosh), 4 Mb RAM, CD ROM drive (a double speed drive is recommended), 256 color SVGA video, 2 Mb of hard drive space (optional), mouse.

I stand on the slopes of Olympus Mons, under the terribly cold, clear skies of Mars. As I turn my gaze to the south, I'm surprised to find an unfamiliar bright (Mag -1.6) blue 'star' intruding among the friendly stars of Sagittarius, a constellation I've known well since boyhood. Then I understand. This pretty blue diamond is EARTH. Science fiction? No... just a typical session with RedShift.

While *RedShift* isn't the first planetarium program to appear on CD ROM, it is the first which really takes advantage of many of the multimedia capabilities of modern PCs. This is what makes the release of this program important, and led me to put *RedShift* at the top of my 'wish list' of astronomical software. To

come directly to the point, *RedShift* is an outstanding, remarkable achievement. Even this awesome planetarium, of course, like any software application, has its strengths and weaknesses and does not do everything well (though it does do a surprising number of things well). But *RedShift* is so good, and has so many features that it really will make obsolete some of the planetarium simulators which amateur astronomers and astronomy educators have been using for the past few years.

RedShift, a Windows application, is readily available by mail-order (and from at least one local source: Software Etc./Barnes and Noble). The program is contained on one CD with no ancillary floppies, and is accompanied by a 58 page spiral-bound user's manual. Installation of *RedShift* is quick and easy, and requires about 2 megs of hard disk space (the program can be run entirely from CD, but use of the hard disk really improves performance).

Following installation, I clicked on the new *RedShift* icon which the setup program had placed on my desktop, and was immediately taken by the beauty of the opening title screen. After a fairly short wait (as CD applications go) for the program to finish loading, I was greeted by an equally beautiful starfield display. About the only further operation I needed to perform, was to set my location to Mobile, Alabama (at boot-up, the program defaults to London, England). Your location, along with other parameters (colors, limiting magnitudes, constellation lines, time zone, etc.) can be saved in a file and loaded the next time you run the program. Unfortunately, the program does not load these preferences automatically, which was one of the few things I didn't like about *RedShift*.

This program, by-the-way, has one of the most unique/practical methods of entering your site location that I've seen. While you can simply enter your latitude/longitude, you also have the capability of specifying your location by clicking on your observing site on a detailed map of the Earth (or the Moon or Mars). While Mobile, Alabama was not labeled on the map, I still found it to be easy to find the location of our city. This feature is the type of thing that I'd like to see more of—a 'bells and whistles' type function which is also inherently useful. I found it much easier to click on locations on a nicely detailed world map than to remember latitudes and longitudes. This feature becomes especially helpful when you move your observing location to the Moon or Mars. Who, for example, has the longitude and latitude of Olympus Mons memorized? For locations other than the Earth, the Moon or Mars, you must still enter latitudes and longitudes (you can set your location to any planet or moon in the Solar System, or, by specifying a *heliocentric*

position, to any place in the system within 100 AU of the Sun!)

When I prepare to review an astronomy program, I usually sit-down and give each feature a thorough check-out. With a program of this magnitude, however, this is not easy to do—I'm still exploring the capabilities of this monster planetarium. A small sampling of *RedShift's* features includes:

- The complete SAO catalog of stars down to about magnitude 10 (though the program *claims* to display stars down to magnitude 12, this is not really the case).
- About 45,000 deep sky objects from a selection of catalogues (the complete NGC/IC as well as many objects from the MCG, PK, UGC etc.). Full information about any displayed object is always only a mouse click away.
- The entire *Penguin Dictionary of Astronomy* (enhanced with animations and hyperlinks).
- over 700 full-screen images of astronomical objects (most of which are of outstanding quality, many, if fact, being photos taken by master astrophotographer David Malin).
- A selection of about a dozen videos including the Magellan/Venus 'movies'.
- Complete, detailed, labeled maps of Earth, the Moon and Mars.
- Fully animated and realistically detailed images of the planets and their moons (this is one of the few programs which I've used which displays realistic lunar eclipses).
- Eclipse finder. *RedShift* will search a user-specified date-range and display the circumstances of the lunar or solar eclipses it finds (the eclipse can then be viewed on the planetarium screen).
- Visibility reports. *RedShift* will generate and display a variety of graphics showing the visibility of selected objects.

Many astronomy programs, of course, can claim numerous features; the true test is how well these features are implemented and how well the program operates as a whole. I'm

happy to report that *RedShift* performed quite well in all respects. At first, I was ready to be disappointed by this program. After all, it is CD ROM based, so I was prepared for glacial operation. Astonishingly, though, this program is actually faster in execution than many of the hard-disk-based planetariums I've used. It is, for example, much faster in performing just about every function (including screen redraws and data searches) than the hard-disk-based planetarium program *Stargaze*. The user interface is very well done. Naturally, all functions can, for the most part, be accessed from the familiar Windows interface menus (file, edit, etc.). Alternately, the program can be run from onscreen 'remote controls'. You can drop-down control panels which resemble attractive audio or video component remotes, and easily operate just about any program feature.

What were my favorites among *RedShift's* many features? Well, other than the basic planetarium functions, I guess that I was most impressed by the image gallery and by the *Penguin Dictionary of Astronomy*. Having a well-indexed selection of 700 really good images is something which I have found to be very useful (as well as being a heck of a lot of fun!). The dictionary is also very useful. In fact, with its animations and hyperlinks, I found this version of the *Penguin Dictionary* to actually be more usable than the printed version. I also felt the maps of the Moon and Mars were rather handy (although their detail is nowhere near that of most printed maps).

What didn't I like about *RedShift*? Well, there were a number of things that I found annoying about this program. First, while I liked the inclusion of a large number of objects from the MCG, PK, UGC and other catalogues, the fact that these deep sky denizens can't be labeled on screen makes their presence a little less helpful than it should have been (you can click on an object and immediately get its identity from the information window which opens, however). It would also have been somewhat helpful to be able to label both NGC and M objects at the same time (you can have M or NGC/IC labels displayed, but not both at the same time). I also found myself wishing for a larger catalogue of stars. The included SAO catalogue does take you down to about Mag 10, but it would have been wonderful (especially when you're zoomed-in to a .5 degree field, for example) if the authors had included at least a part of the GSC (Hubble Guide Star Catalogue). I would have much preferred that the authors include the GSC's millions of stars and leave out the poor quality videos which are present on this disk. These videos, which are in the usual small, grainy Windows Video format, are all of subjects you've seen countless times before (Apollo footage and Magellan Venus

'movies'). They add absolutely nothing to the program. Finally, I wish that there were a way to make the *RedShift* boot-up already configured with my lat/lon, preferences, time, etc. Having to load a 'user file' each time the program is started is a pain.

Please don't get the idea from the above that I didn't like *RedShift*. I do like it and have found it to be quite useful. In fact, I think that my few dislikes stem from the fact that I'm really more interested in 'deep sky charting/observing programs at the moment than I am in traditional computerized planetariums. While any program can be fine-tuned, the folks at Maris Multimedia should be proud of their accomplishment. I highly recommend *RedShift* for any amateur astronomer or astronomy educator. This program was developed by a Russian software design team, and is, fittingly, dedicated to '...the brave men and women of the Russian space program.'

Note: I'm looking forward to obtaining a copy of *Guide, Project Pluto's* big CD-based deep sky/planetarium program shortly. Look for a review soon.

—Rod

Club Notes...

The next regularly scheduled meeting of the Mobile Astronomical Society will be on Wednesday, March 1, 1995. Please make an effort to attend this and every other meeting. Your club needs your support!

Correspondence for the Mobile Astronomical Society should be addressed to:

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Mobile, AL 36693

Meetings are held on the first Wednesday of every month at the Mobile County Public Schools' Environmental Studies Center.



