

The background is a deep blue night sky filled with numerous stars of varying colors and sizes. Several prominent galaxies are visible, including a large, bright, elliptical galaxy in the upper left and several smaller, more distant galaxies scattered throughout. A bright star with a prominent four-pointed diffraction pattern is located near the top center. In the bottom right corner, a small globe of the Earth is shown, with a person standing on its surface next to a large, red telescope mounted on a tripod. The telescope is pointed towards the starry sky. The overall scene suggests a connection between the vastness of the universe and human observation from Earth.

**ILLUSTRATING YOUR WORLD**  
*(OR AT LEAST YOUR PAPERS)*

# OUTLINE

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**Part 1) What to graph: save words, use pictures**

**Part 2) How to graph: software to try**

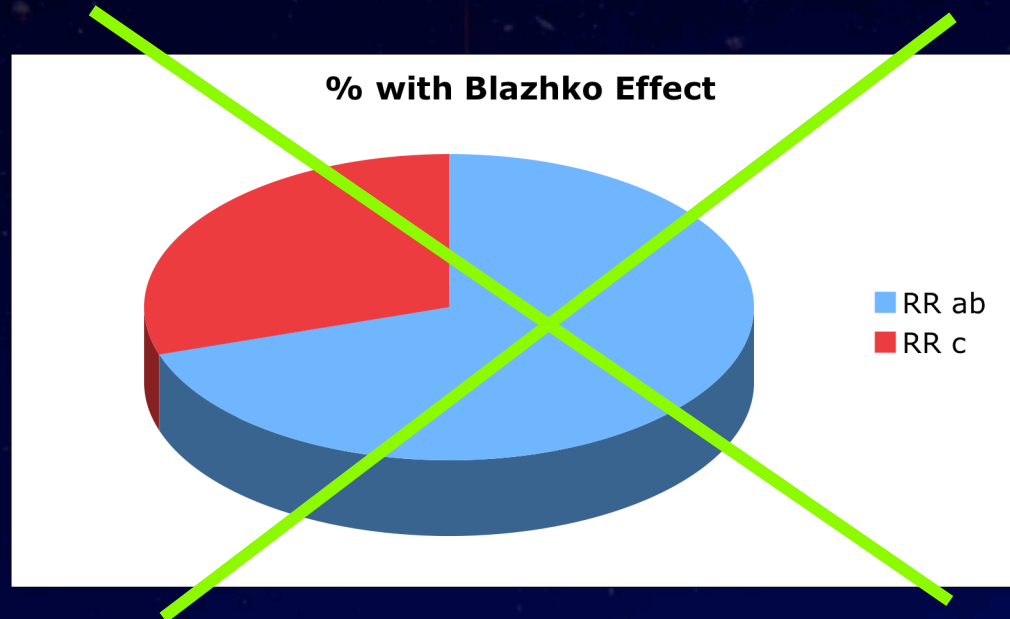
**Part 3) Limiting your graphs (or, size matters)**



A deep space photograph of a galaxy cluster, featuring a central bright star with a crosshair. The background is filled with numerous galaxies and stars. In the bottom right corner, a small figure stands on a planet's surface, looking through a telescope.

**WHAT TO GRAPH:**  
SAVE WORDS, USE PICTURES

# USE PICTURES TO EXPAND IDEAS



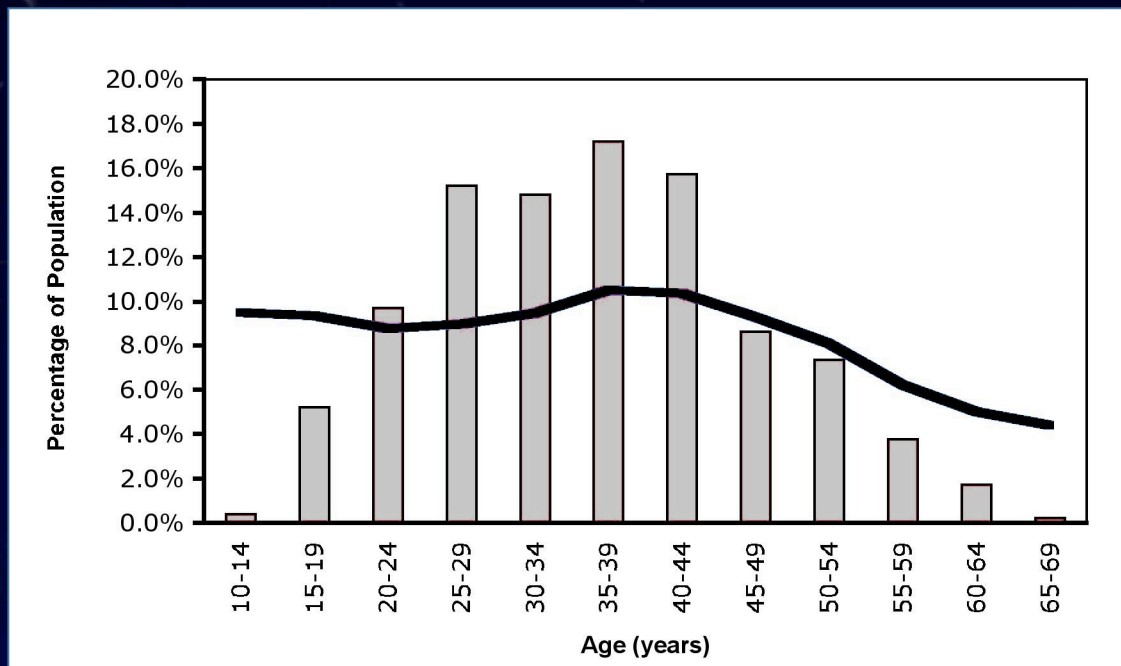
But remember, not everything needs a plot!



# WHAT'S GOOD

## Graphs

- Lightcurves
- Period vs Theta
- Fourier Spectrum
- O-C diagrams
- JD vs phase
- JD vs mag



## Illustrations

- Charts
- Equipment

### Remember:

- Error Bars
- Comparison Curve
- Theoretical Model



# EXAMPLES

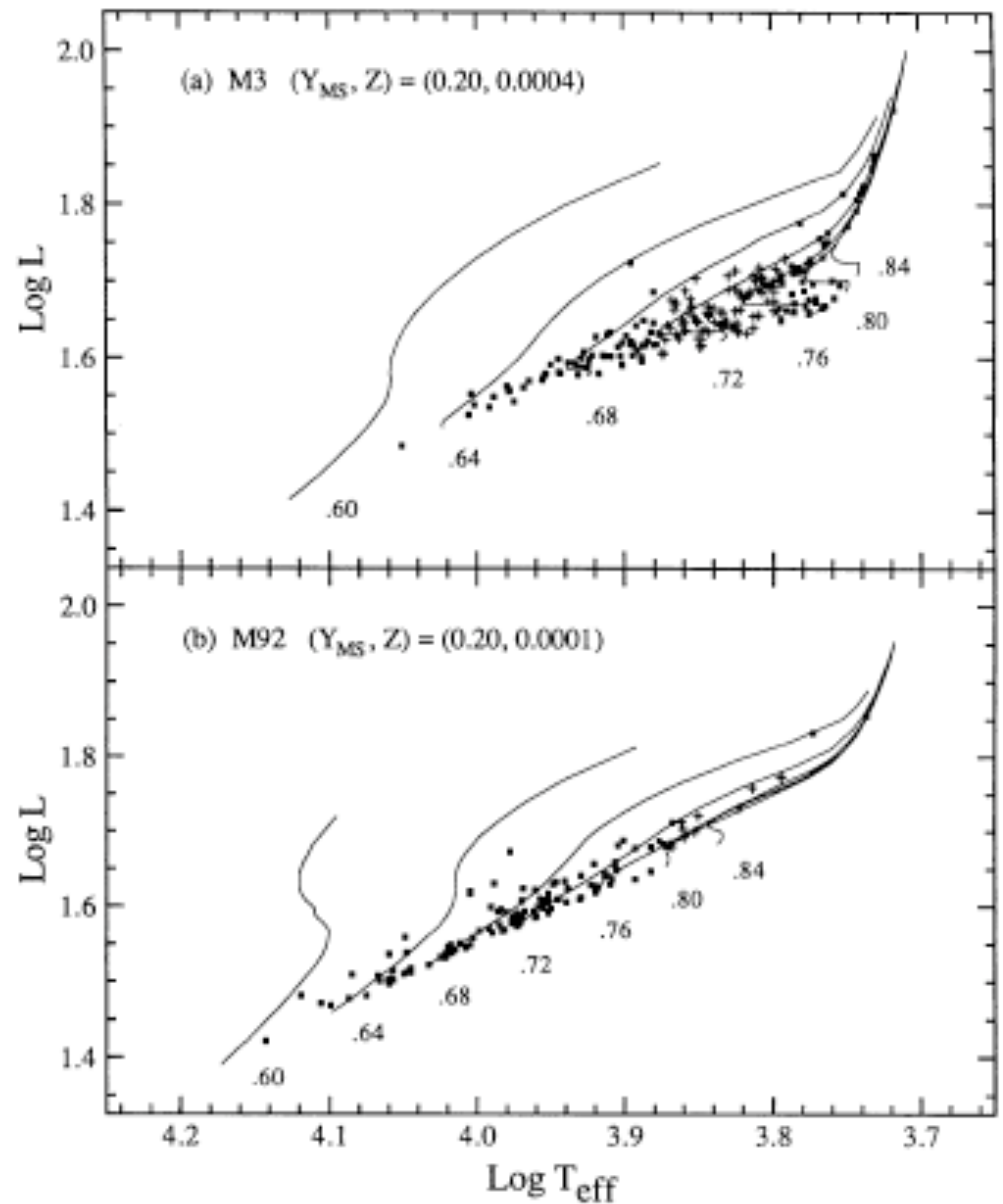
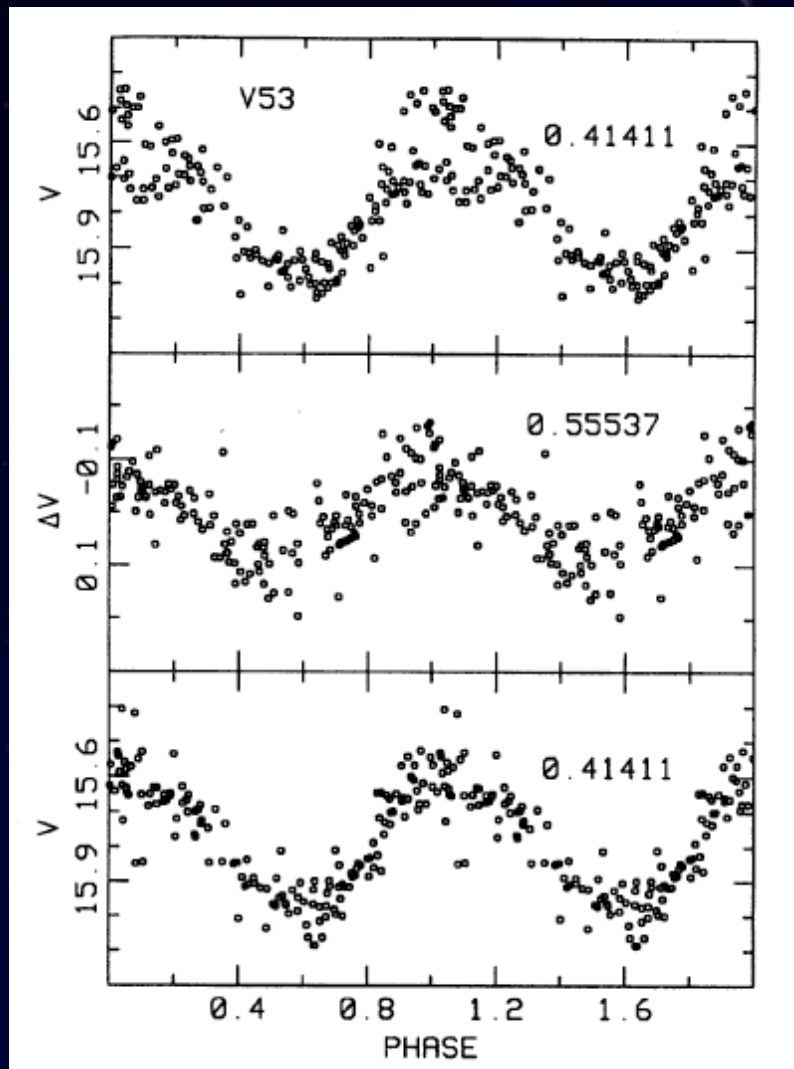


FIG. 1.—Synthetic HB models of M3 (group I) and M92 (group II) with HB evolutionary tracks. Track parameters are  $(Y_{\text{MS}}, Y_{\text{HB}}, Z, M_c) = (0.20, 0.2143, 0.0004, 0.5003)$  and  $(Y_{\text{MS}}, Y_{\text{HB}}, Z, M_c) = (0.20, 0.2113, 0.0001, 0.5090)$  for M3 and M92, respectively. RR Lyrae variables are represented by plus signs, and each track is labeled by its total mass in solar units.

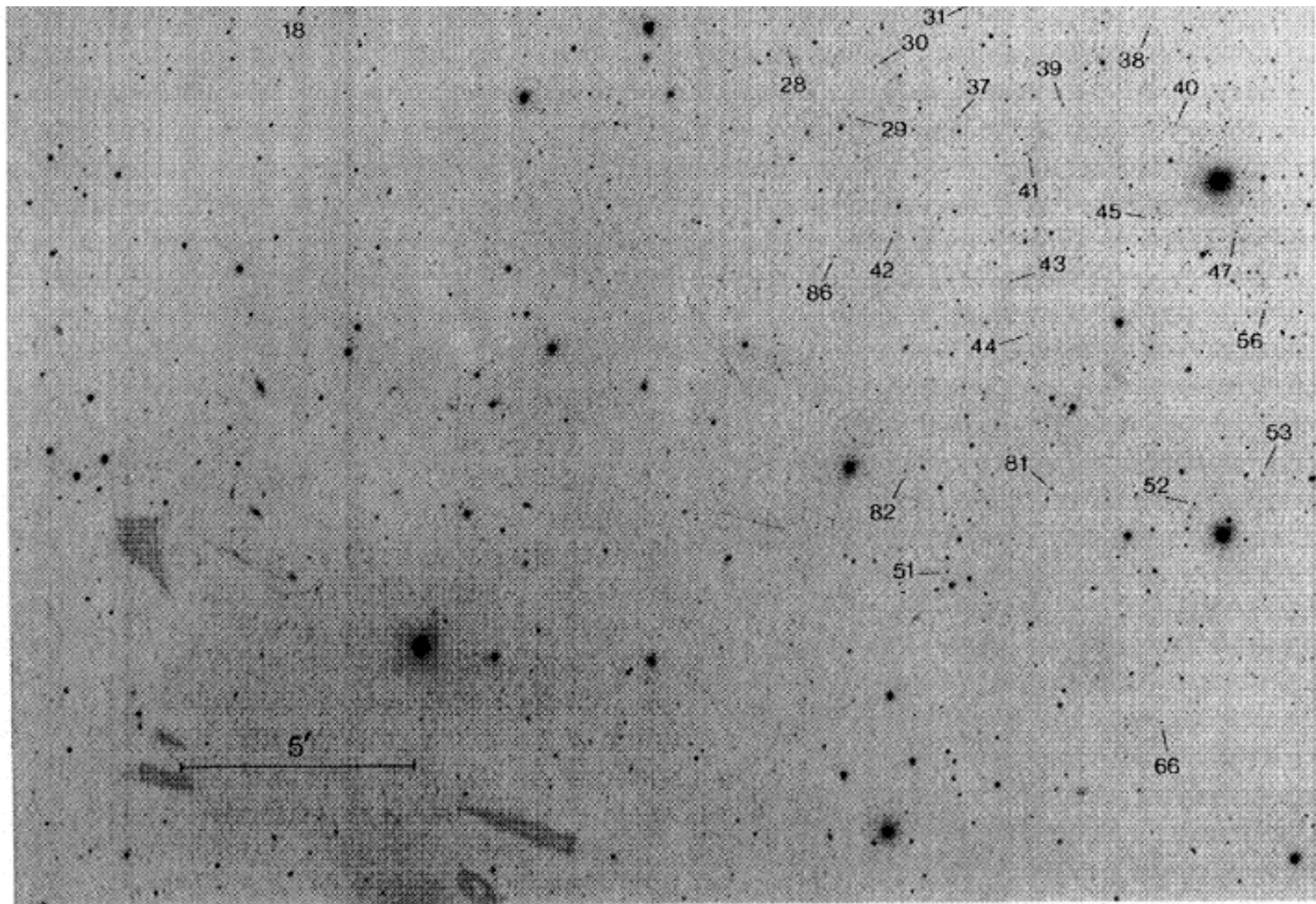
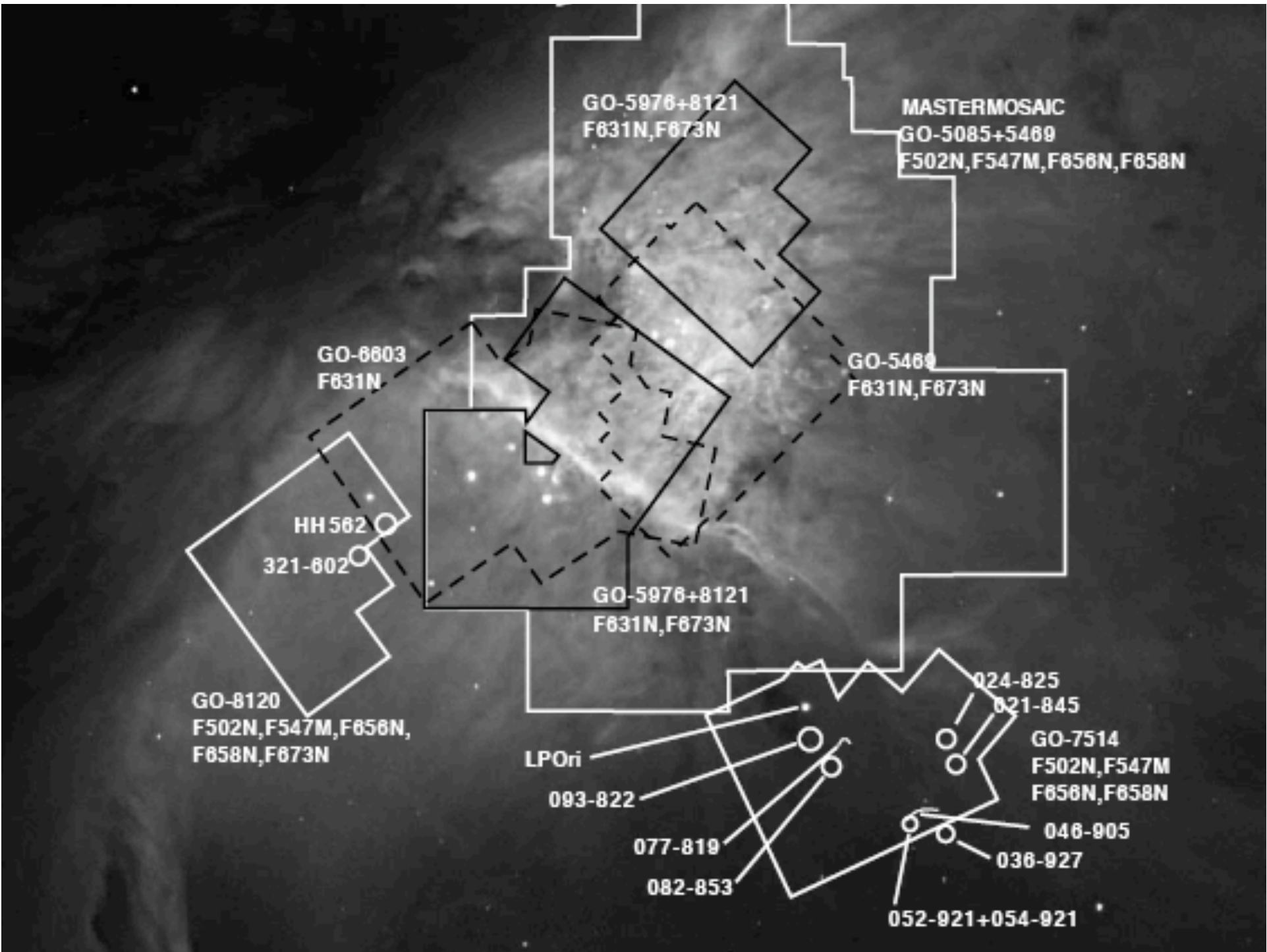
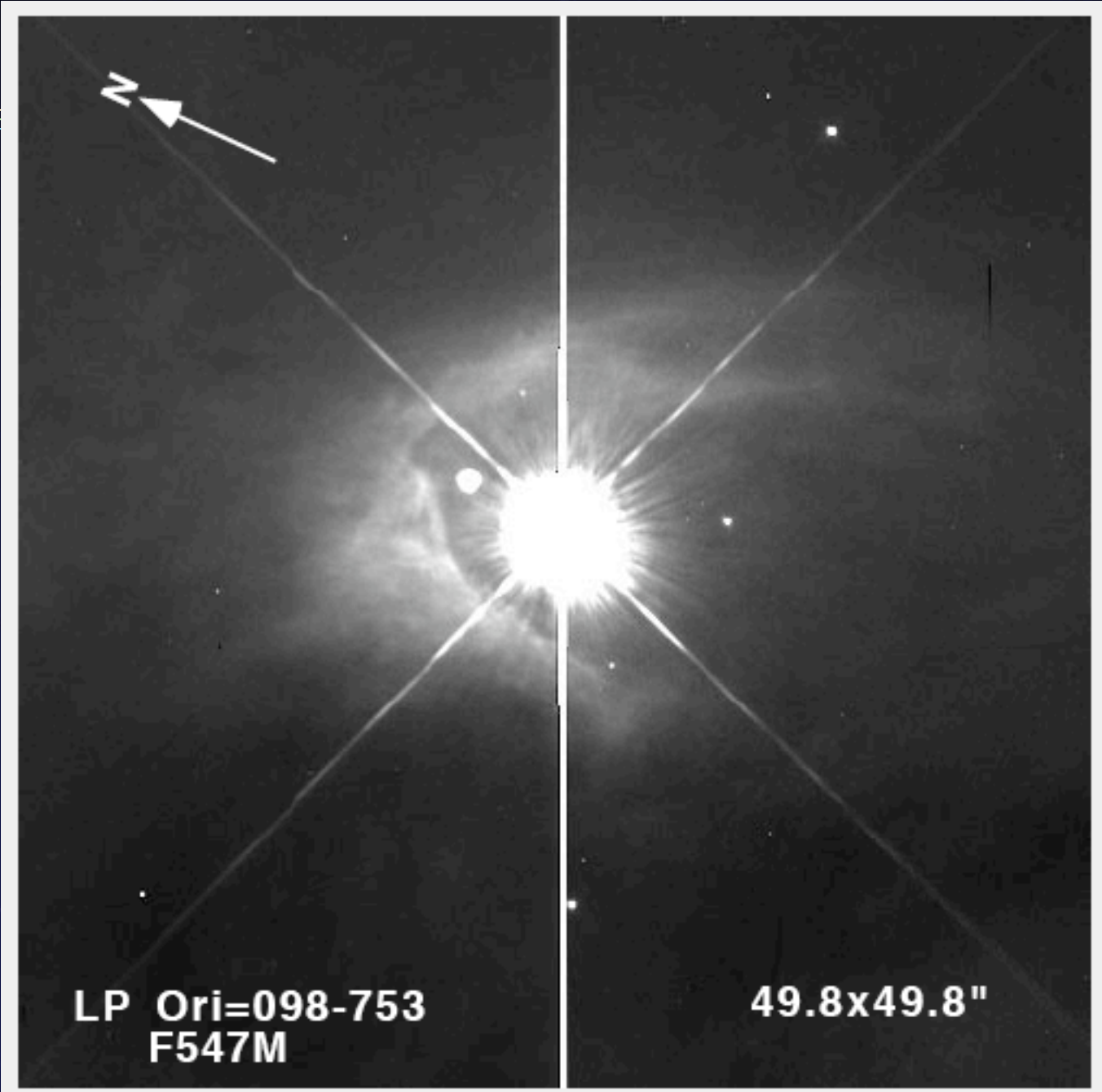


FIG. 1. (a) Photograph identifying the variable stars on the northeast side of the Ursa Minor dwarf galaxy. Not shown are the stars V46, 85, 87, 89, and 91. The reproduction is from the P60 photographic plate P1259.





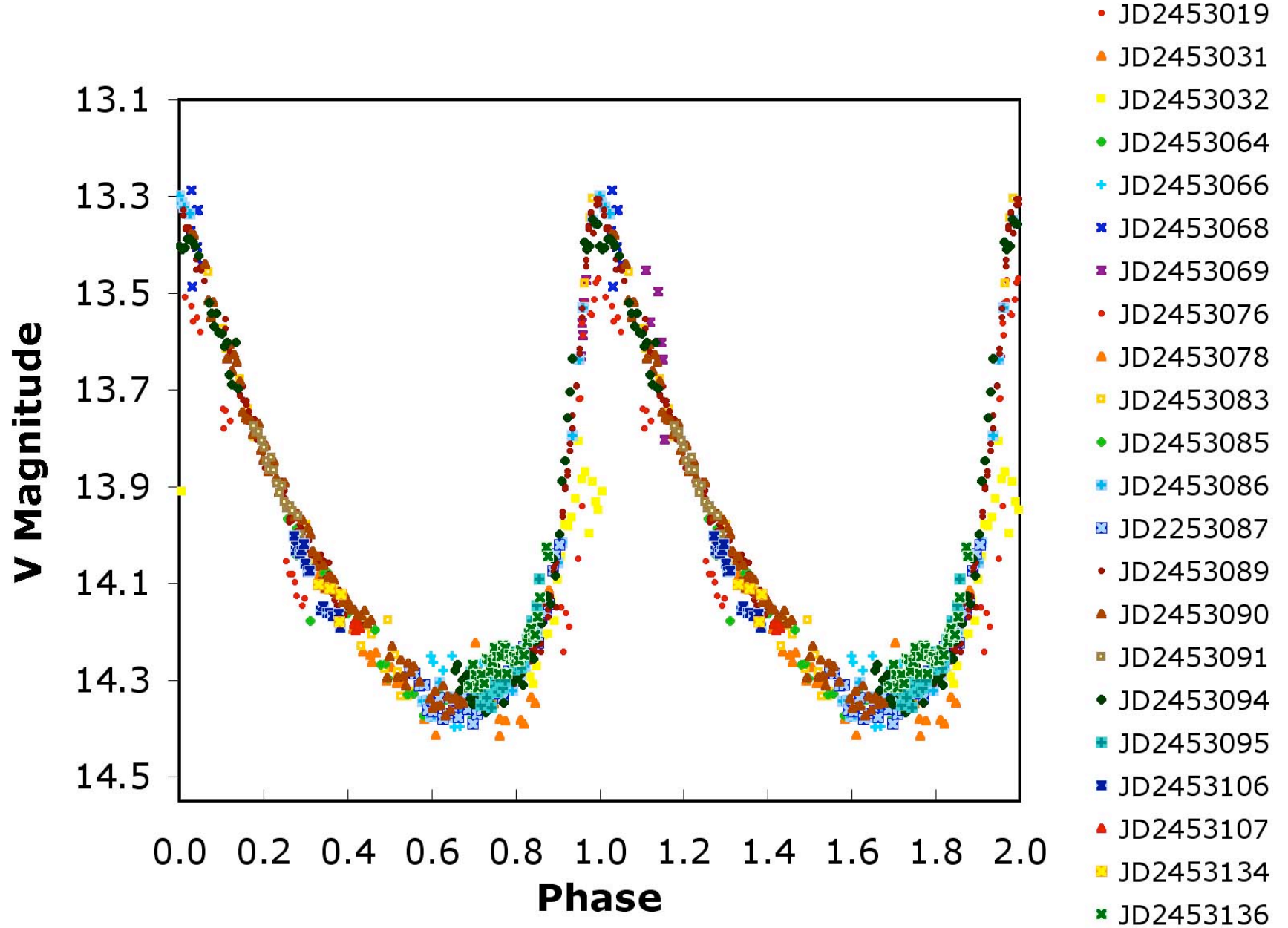


LP Ori=098-753  
F547M

49.8x49.8"



# 2004 AH Leo Observations



The background is a deep blue space filled with numerous stars and galaxies. A prominent bright star with a cross-shaped diffraction pattern is located in the upper center. A faint grid of thin lines is visible around this star. In the bottom right corner, a small figure of a person stands on the curved surface of a globe, looking through a large red telescope mounted on a tripod. The globe is partially illuminated from below, creating a soft glow.

# HOW TO GRAPH: SOFTWARE TO TRY

# THE STANDARD TOOLS

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## ~~Micro\$oft Excel (\$229.00)~~

- ~~– Contains limited statistical packages~~
- ~~– Has extensive support and is common~~
- ~~– Can be painful to make precise plots - can't do JAAVSO~~

## KaleidaGraph by Synergy Software (\$199.95)

- Has extensive statistical packages
- Complete, control of all plot elements
- Easy to make templates

## SuperMongo (\$300)

- Makes plots. Makes plots well. Period.



The background is a vast field of galaxies in deep space, including spiral, elliptical, and irregular shapes in various colors. A red rectangular box is drawn around a bright star in the upper-middle section. In the bottom right corner, a small globe shows a person standing next to a large telescope on a tripod, looking towards the sky.

**LIMITING YOUR GRAPHS  
(OR, SIZE MATTERS)**

# e/JAAVSO

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Figures typically appear at the end of the text

- Maximum size: 4.5" by 7"
- Realistically: images do not appear side by side.

## Recommendation:

Plan graphics and captions to fill 4.5" width and fit neatly above each other on 7" high sheet of paper.

## Other:

- Label Coordinates
- Division marks on all four sides



# OTHER JOURNALS

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Check their website!

PASP/ApJ/etc: EPS or PS figures of suitable size

AER: GIF or JPG

Always: Figures are sent in as separate files.



# BEST RECOMMENDATION

Find the most similar paper that you respect and learn from its style and use of artwork!

Don't recreate the wheel

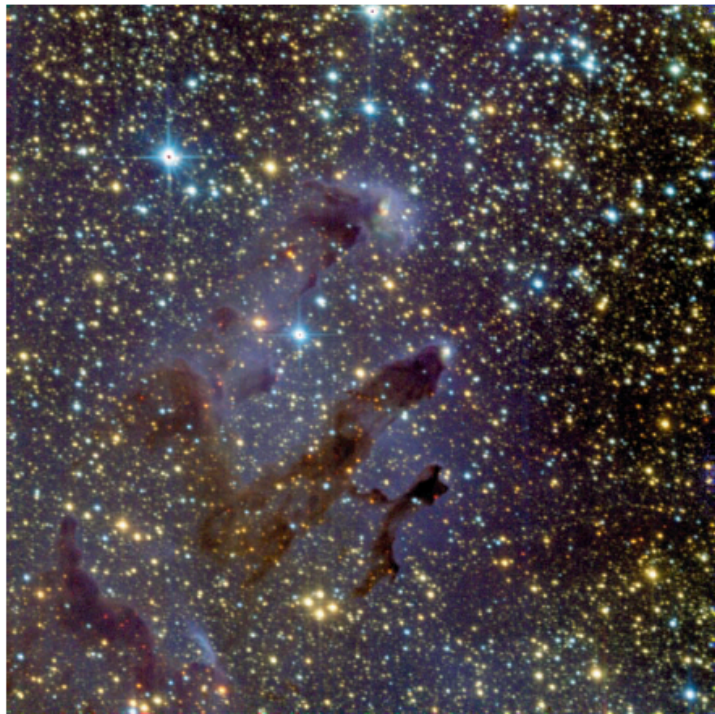


FIG. 1.—*JHK*, three-color composite image of M16 (*J*: blue; *H*: green; *K*: red) obtained by SIRIUS, which was mounted on the UH 2.2 m telescope. The field of view is  $\sim 4'.7$ . North is up, and east is to the left.

