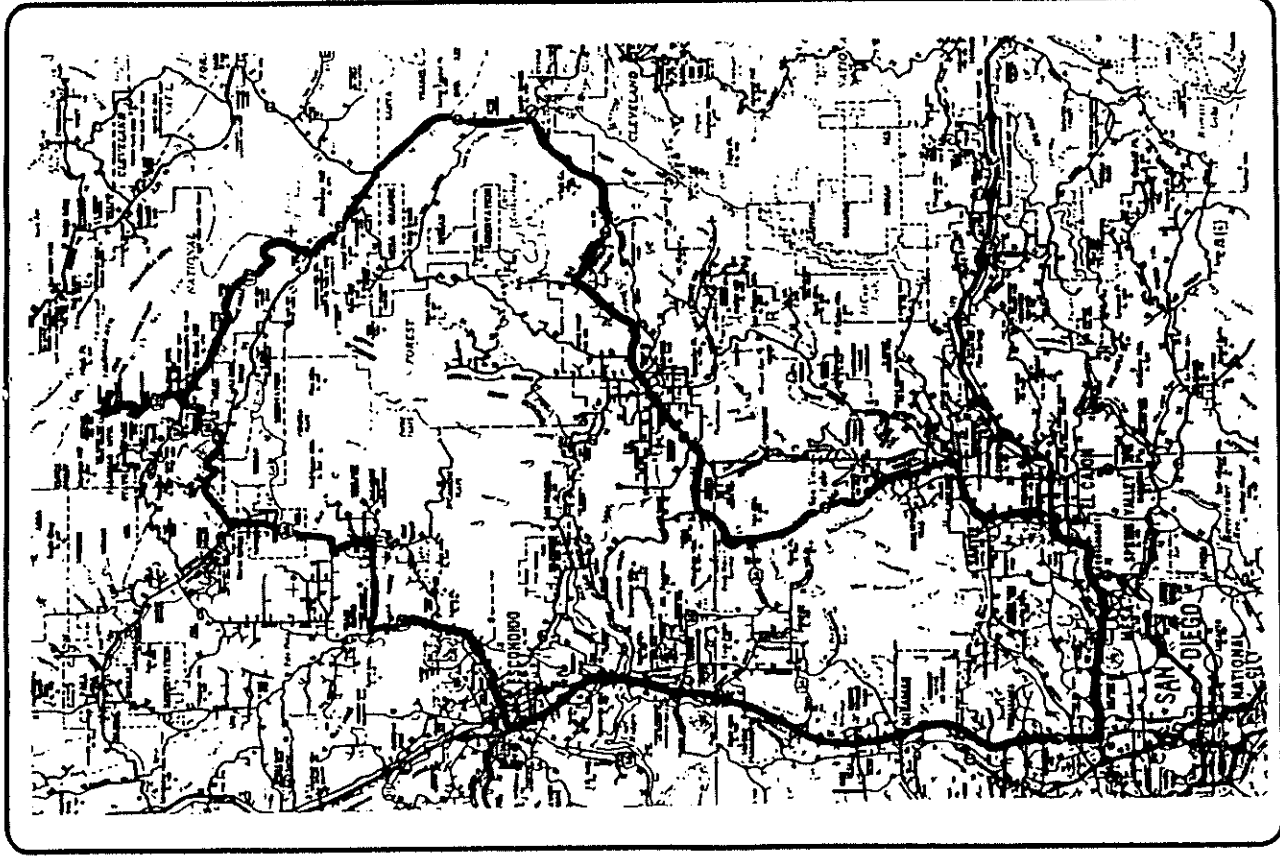


Palomar Observatory

The world famous Palomar Observatory is located on Palomar mountain at an altitude of approximately 5600 feet. The quickest drive from San Diego takes just over an hour via I-8 and I-15 to Escondido, then County Road S-6 to the observatory. A slower, but more interesting route takes Highway #67 from El Cajon to #78 at Romona, then #79 at Santa Isabel, #76 to Lake Henshaw, and S-7 or S-6 to the top. The Observatory and Museum is open most days from 9:00-4:00. The Gus Weber Picnic Area is next to the parking area so you can plan a picnic. It is often very cool at this altitude so you should bring jacket along.



INTRODUCTION

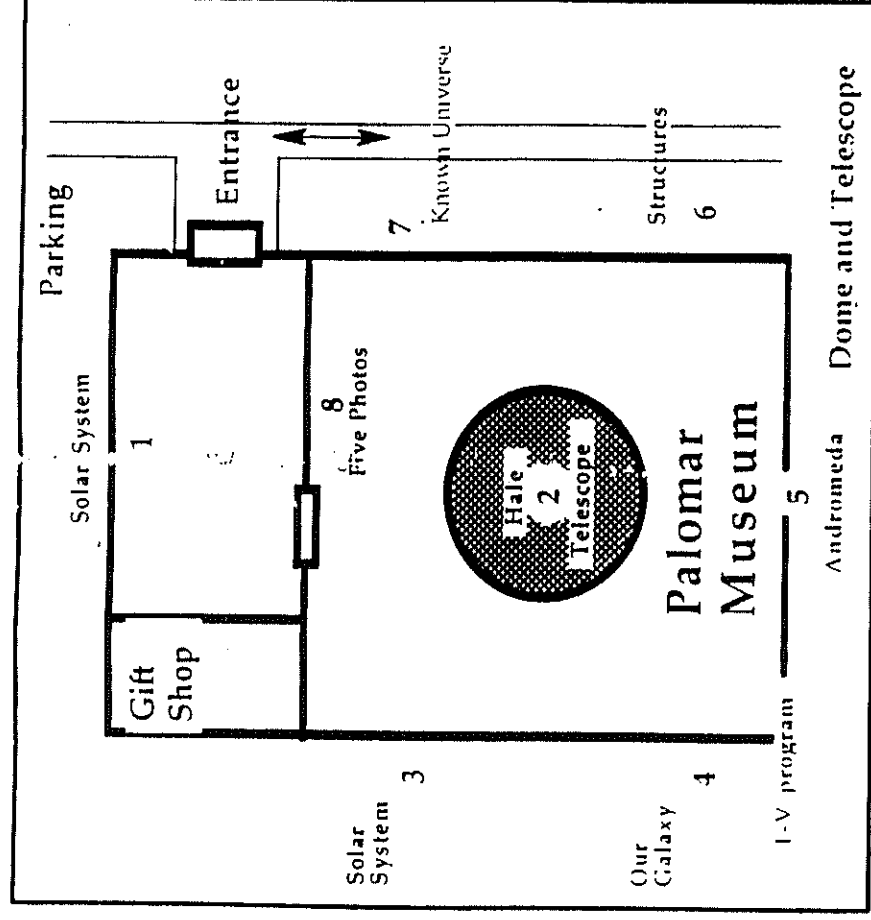
The Hale Telescope is named for George Ellery Hale, an American astronomer who suggested its construction. The main mirror is a concave disk _____ inches in diameter. It is made of _____ tons of Pyrex glass. This mirror collects 360,000 times as much light as the human eye. The telescope can photograph objects at a distance of several billion light-years. A light-year is about _____ trillion miles.*

*(Answers to these and other questions can be found at the Palomar Museum and/or from an Earth Science text or other reference books.)

As you enter the museum you'll notice a wall plaque on the right telling "Some Facts About Our Solar System". Using this plaque or a reference source complete the chart shown below:

Our Solar System

The Sun is _____ Million miles away			
Name of Planet	Diameter	# of moons	
Mercury	4,800 kilometers	0	
Venus	_____	0	
Earth	12,700 kilometers	1	
_____	6,800 kilometers	2	
Jupiter	_____	_____	18
_____	120,000 kilometers	_____	
Uranus	52,000 kilometers	8	
Pluto	2,300 kilometers	1	



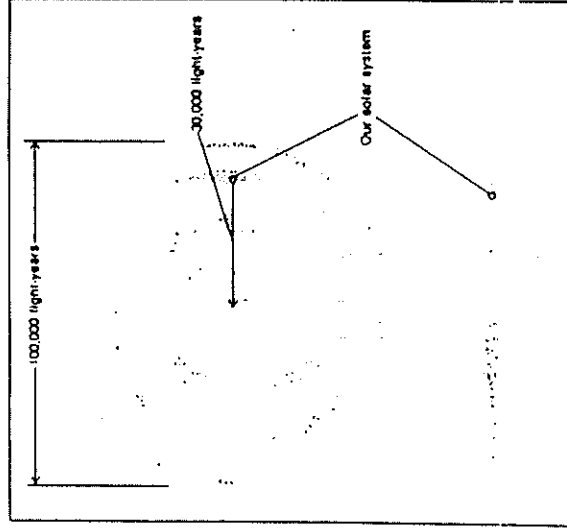
2. ENTER THE MAIN MUSEUM ROOM AND WALK TO THE MODEL OF THE MIRROR.

This is a full size model of the famous Hale Telescope mirror. It was molded of Pyrex glass in the year _____ and slowly ground into the proper concave/convex (circle one) from 1936 until 19____. The telescope was first put into use in what year? _____

3. GO TO YOUR RIGHT AND FIND "THE SOLAR SYSTEM".

What is meant by "The Solar System?" _____

How far across is our Solar System? _____



4. CONTINUE ALONG THE WALL TO THE "OUR GALAXY" DISPLAY.

According to the information in this display (or *from a reference book*) what is the diameter of our galaxy? _____

4a. THE T-V PROGRAM ABOUT PALOMAR.

(This is a 15 minute program on the history and importance of Palomar)

What atmospheric problem is bothering the researchers at Palomar? _____

5. THE GREAT GALAXY IN THE CONSTELLATION OF ANDROMEDA.

What is a light year? _____

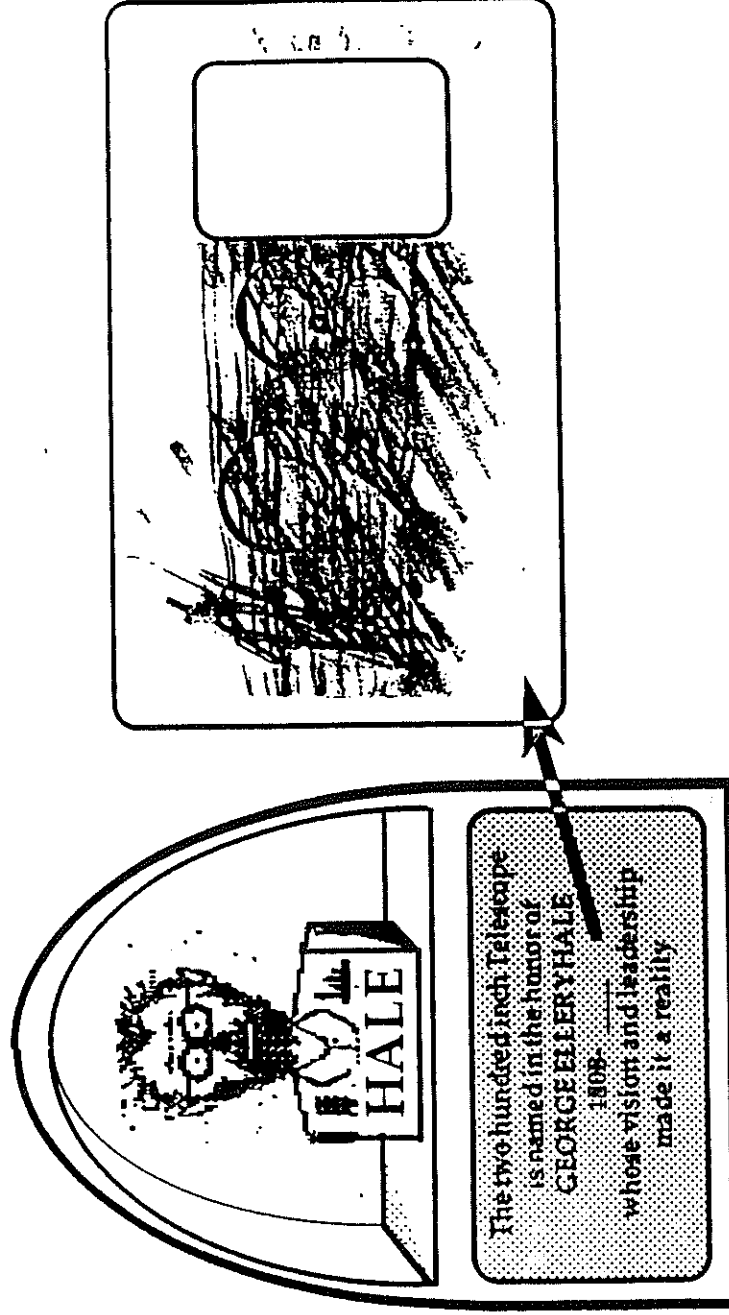
How many miles is that? _____

(Remember: You can find many of these answers in your text and various reference books)

LEAVE THE MUSEUM, TURN RIGHT, AND GO UP THE TRAIL TO THE OBSERVATORY DOME. (It's only about 200 meters but you'll probably get a little out of breath. You are, after all, over a mile high in altitude.)



AS YOU ENTER THE DOME YOU WILL SEE A BUST OF GEORGE ELLERY HALE. TO PROVE YOU ARE REALLY AT THE PALOMAR DOME FINISH THE "PENCIL RUBBING" THAT GIVES THE DATE OF HIS DEATH.



GO ON UP THE _____ How many? STAIRS AND ENTER THE OBSERVATION CHAMBER.

What are your impressions of this building and this trip? _____

HAVE A SLOW, SAFE TRIP HOME. ENJOY YOURSELF IN THIS BEAUTIFUL PART OF SAN DIEGO COUNTY!

IF YOU USED ANY TEXT OR REFERENCE BOOKS TO HELP YOU ON THIS TRIP BE SURE TO INCLUDE THEM HERE IN THE BIBLIOGRAPHY.

1. Ramsey, William L., et. al., *Earth Science*. Holt, Rinehart and Winston, Publishers, New York. 1986.

2.
3.