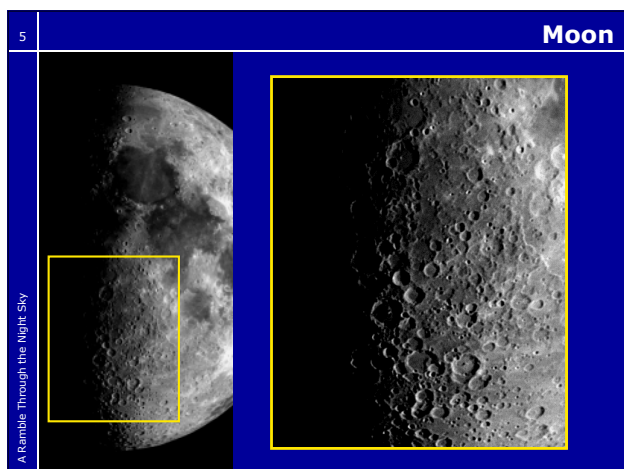
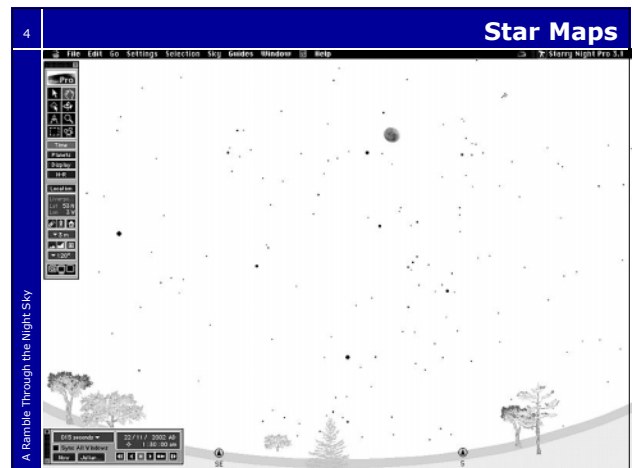


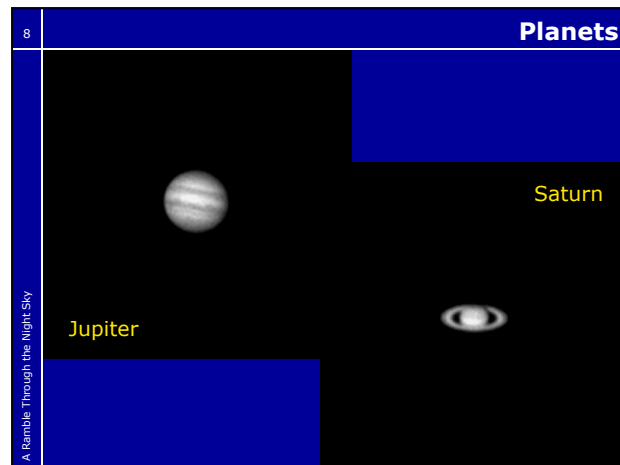
A Ramble Through the Night Sky



2	Contents of Talk
A Ramble Through the Night Sky	What is up there? Moon, stars, planets, comets, aurora, nebulae, galaxies
	How can I find my way around? Magazines, books, planisphere, software
	What if I want to see more? Binoculars, small telescopes, 'smart' telescopes
	How can I take photos? 35mm cameras, electronic cameras
	How can I learn more? Magazines, books, software, courses



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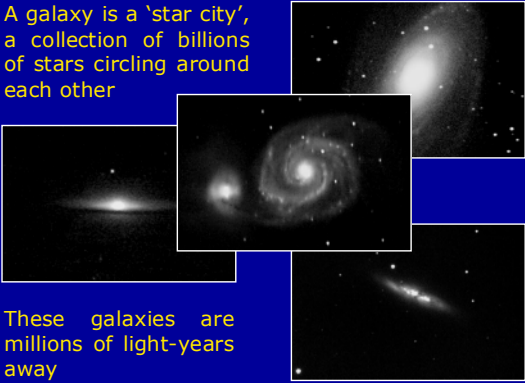


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Galaxies

A galaxy is a 'star city', a collection of billions of stars circling around each other



These galaxies are millions of light-years away

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Want To See More?

Binoculars, small telescopes or big telescopes?

Is the image...

- Bright? Bigger is better
- Clear? Bigger is better
- Steady? Must have a stable mounting
- Big? Not that important

10x50 binoculars are a great way to start


What type of telescopes are there?

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Telescopes

There are many types of telescopes available, making a choice somewhat confusing




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Telescopes

Refractors
Use lenses to focus the light



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Telescopes

Refractors
Use lenses to focus the light

Reflectors
Use mirrors to focus the light



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Telescopes

Refractors
Use lenses to focus the light

Reflectors
Use mirrors to focus the light

Schmidt-Cassegrains
Use both lenses and mirrors



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Telescopes



Refractors
Use lenses to focus the light

Reflectors
Use mirrors to focus the light

Schmidt-Cassegrains
Use both lenses and mirrors

Compact S-C
Have user-friendly controllers to point the telescope

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Astronomical Observatories


A domed observatory provides a stable platform for the telescope and shelter from the wind



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Astronomical Observatories



The Hale telescope was built in the 1940s and has a mirror 5m (200") in diameter.

For half a century, it remained the world's largest telescope.

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Astronomical Observatories



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Taking Photographs

35 mm cameras with 'B' setting

Mount the camera...

- on a fixed tripod
- 'piggy-backed' on a telescope
- onto a telescope, using it as a lens

Manual better than automatic (old cameras!)

Modern digital cameras are very sensitive, but exposure time is limited to ~ 30 sec

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Photos with a Fixed Tripod



~ 30 sec f/2.8 ISO 400

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