

Light Pollution



WHAT

CONSEQUENCES

EFFECTS

Photo pollution/
Luminous pollution



Light Pollution

- Excessive artificial light □ increased brightness
- The International Dark Sky Association (IDA) □ adverse effect :
 - sky glow
 - glare
 - light trespass
 - light clutter
 - Decreased visibility
 - Energy waste

Light Pollution

- **Indoor** = lighting in houses or apartments (North America, Europe, Japan, Middle East, North Africa)
- **Outdoor** (main pollutants):
 - more necessary (roadside lamps, traffic lights, vehicle lights, road sign lights, emergency vehicle lights...)
 - Less necessary (store, commercial sign lights, the lights that enlight statues and buildings...)

energy resour
energy crisi

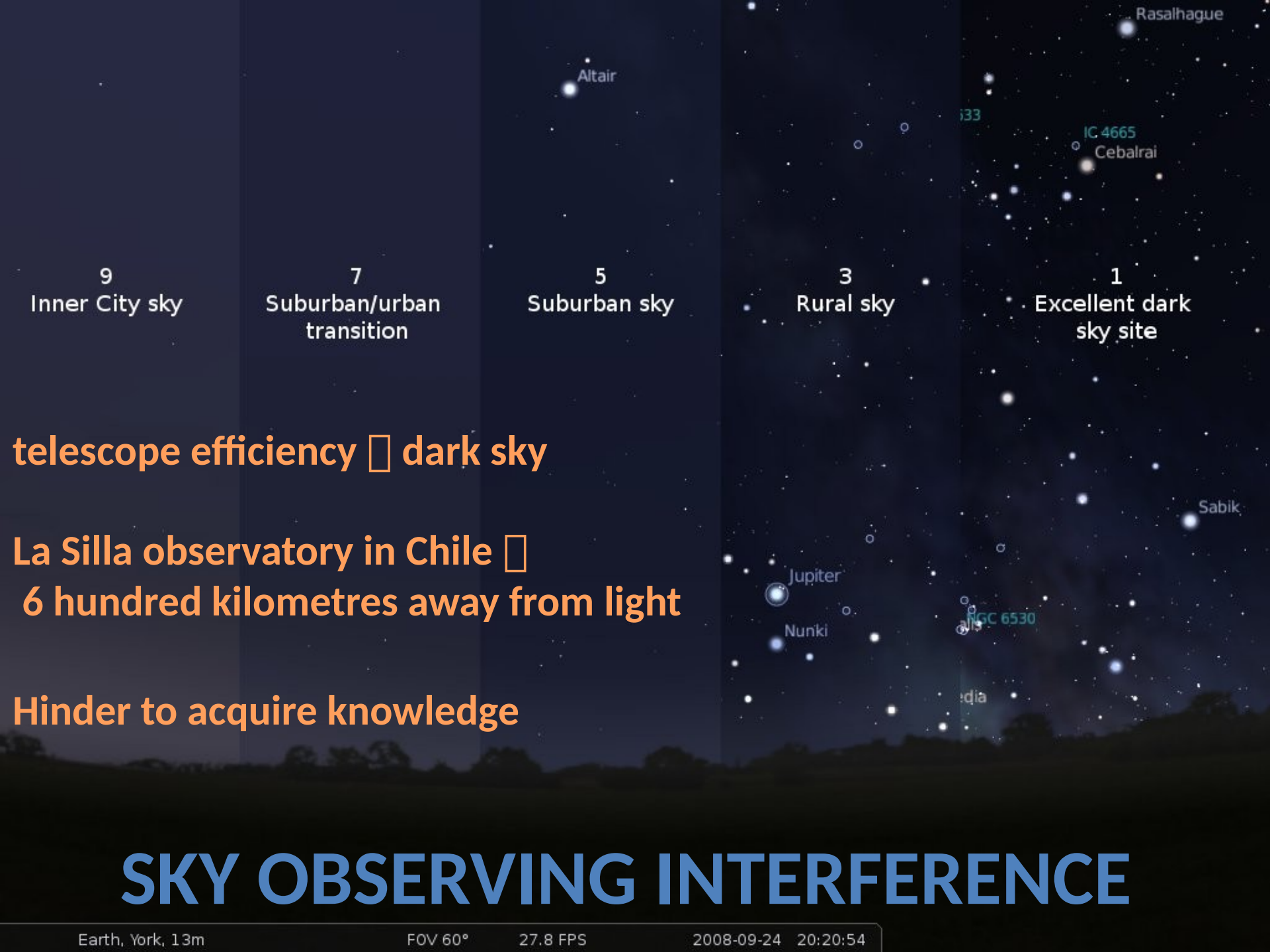


light bulbs

dishwashers

refrigerators





9
Inner City sky

7
Suburban/urban
transition

5
Suburban sky

3
Rural sky

1
Excellent dark
sky site

Altair

Rasalhague

IC 333

IC 4665
Cebalrai

Sabik

Jupiter

Nunki

NGC 6530

Alia

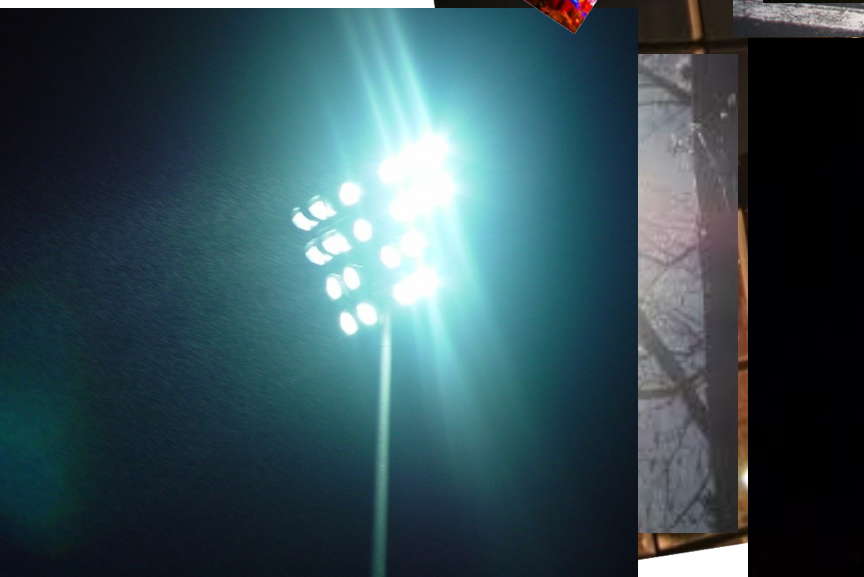
telescope efficiency \square dark sky

La Silla observatory in Chile \square
6 hundred kilometres away from light

Hinder to acquire knowledge

SKY OBSERVING INTERFERENCE

TYPES OF POLLUTION



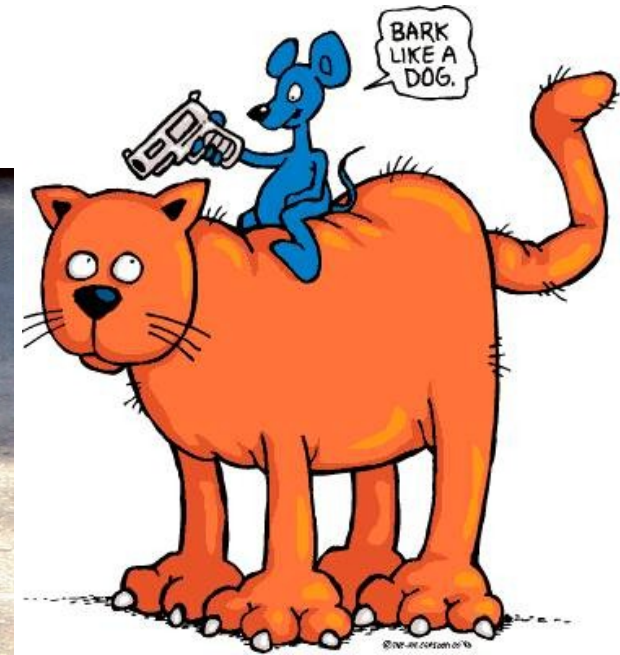


Human health

Fluorescent lighting □ elevate blood pressure by 8 points, increased stress & fatigue □ worker errors □ over-illuminating and bad planning of lighting (not light pollution)

Animals

- Changed mood & behaviour
- confuse animal navigation
- alter competitive interactions
- change predator-prey relations
- more aggressive



Disruption of ecosystems

- It can be:
 - beneficial
 - neutral
 - damaging



Spiders



SOLUTIONS

- adjusting light's intensity
- turning lights off
- improving lighting fixtures
- adjusting the type
- evaluating the necessity of lights



- the IDA
- Globe at Night (global)
- “Nebo ponoči” in Slovenia
- Earth Hour



Light Pollution

The image shows a night sky filled with stars, with a city skyline and streetlights visible at the bottom. The text 'Light Pollution' is written in a large, white, serif font across the upper middle of the image. Below it, the text 'Not really dangerous just disturbing and hindering' is written in a smaller, grey, sans-serif font. The background is a dark night sky with many small, bright stars. At the bottom, there are silhouettes of buildings and streetlights, with some lights glowing brightly, illustrating the concept of light pollution.

Not really dangerous just
disturbing and hindering

SOURCES

- <http://www.darksky.org/>, 01.01.2012
- http://en.wikipedia.org/wiki/Light_pollution, 01.01.2012
- <http://www.astrosociety.org/education/publications/tnl/44/lightpoll.html>, 01.01.2012
- http://sl.wikipedia.org/wiki/Svetlobno_onesna_%C5%BEenje, 30.12.2011
- Pictures: Google