WHAT IS LIGHT POLLUTION?

Light pollution is excessive, misdirected or obtrusive artificial (usually outdoor) light. This inappropriate or excessive use of artificial light can have serious environmental consequences for humans, safety, wildlife and our climate.

TYPES OF LIGHT POLLUTION

LIGHT TRESPASS

Light falling where it is not intended or needed.

SKYGLOW

Brightening of the night sky over inhabited areas.

GLARE

Excessive brightness that causes visual discomfort.

LIGHT CLUTTER

Bright, confusing and excessive groupings of light sources .

While artificial lights disrupt the natural day-night pattern there are practical solutions everyone can implement, to combat light pollution.

4 WAYS S YOU CAN MAKE A DIFFERENCE

- 1. INSTALL lighting only when and where it is needed.
- 2. USE energy-saving features such as dimmers and motion sensors on outdoor lights.
- 3. SHIELD your lighting so light shines down, not up.
- 4. EDUCATE your friends and colleagues about the importance of good lighting for our health, economy and environment.



13.8 Ga (billion years) ago THE BIG BANG Beginning of space and time	13.5 Ga ago
13.3 Ga (billion years) ago	FIRST BLACK HOLES FORM 13.2 Ga ago
MASS STAR FORMATION	FIRST GALAXIES FORM
11 Ga ago STAR FORMATION RATE PEAKS	11 Ga ago UNIVERSE STARTS TO COOL
10.4 Ga ago UNIVERSE BECOMES HABITABLE First life-friendly star systems emerge	Temperatures average around 13,000 K
75.0000	8.8 Ga ago MILKY WAY'S THIN DISK STARTS TO FORM
7.5 Ga ago MOST POWERFUL GAMMA-RAY BURST EVER OBSERVED BY HUMANS	
	5.5 Ga ago
*	MILKY WAY BECOMES A SPIRAL GALAXY
4.4 Ga ago OCEANS FORM ON EARTH Asteroids bring water to Earth	4.2 Ga ago LIFE EMERGES ON EARTH
	3.1 Ga ago
3 Ga ago CYANOBACTERIA DEVELOP TRUE PHOTOSYNTHESIS	FIRST LAND BACTERIA
Life begins to produce oxygen	
25.6	
2.5 Ga ago GREAT OXYGENATION EVENT Bacterially produced oxygen starts to accumulate in the atmosphere	2.5 Ga ago MOVEMENT OF THE TECTONIC PLATES COMMENCES
1.4 Ga ago	1.6 Ga ago MITOCHONDRIA ASSIMILATE INTO EUKARYOTIC CELLS
POPULATION OF STROMATOLITES RAPIDLY RISE	850 Mya (million years ago)
	POPULATION OF STROMATOLITES STARTS TO DECLINE
540-529 Mya ago CAMBRIAN EXPLOSION Exponential diversification of life	445 Mya ago ORDOVICIAN EXTINCTION EVENT
	• 231 Mya ago
225 Mya ago FIRST MAMMALS	FIRST DINOSAURS
	80 Mya ago AUSTRALIA SPLITS FROM ANTARCTICA
66 Mya ago CRETACEOUS EXTINCTION EVENT 75% of all species go extinct	
or an species go extinct	
2.2 Mya ago ——————————————————————————————————	2.5 Mya ago
FIRST MEMBERS OF GENUS HOMO APPEAR	CURRENT ICE AGE BEGINS

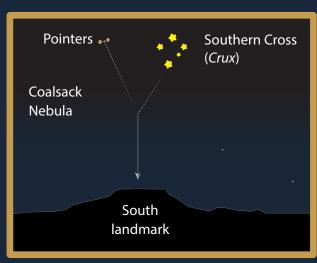


ENJOY THE DARKNESS

It can take your eyes a while to adjust fully to the darkness. It is best to get comfy and turn off mobile phones, car lights and flashlights. If you have to use a light use a red light as this will not impact vision as much as white. The galaxy that contains our own solar system, the **MILKY WAY**, is especially easy to see in Australia. The galaxy appears from Earth as a band of light formed from stars that cannot be individually distinguished by the naked eye.

FINDING SOUTH ①

THE SOUTHERN CROSS or *Crux* comprises circumpolar stars that are visible from most locations in the Southern Hemisphere yearround. To find south draw a line perpendicular to the halfway point between the two pointer stars. Where that line meets the line formed by the two most widely separated stars in the Southern Cross is the south point in the sky. From the pole drop a line straight down to the horizon.



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