

IYA Dark Skies Script Actions and Narration

Southern Hemisphere: Light Pollution

Designed for use with Stellarium version 0.9.1

Synopsis: *This script simulates the sky as viewed under different amounts of light pollution and provides basic ideas to combat light pollution.*

Note: *There are several pauses built into the Stellarium script; these are marked in the narration. To progress to the next part of the script, press the "k" key.*

Suggested Narration:

We all know that light pollution affects our view of the sky, but it is difficult to tell how great the impact is when we don't have the power to turn all the lights in the area on and off. The good news is that we can do that here!

Let's start our observations under a very dark sky, as if we were camping in a forest clearing a long distance away from any street lights or buildings. Our sky is set for March 21, 2009 at about 9 pm. You may notice that we can see an arm of the Milky Way, our own home galaxy, and the Large and Small Magellanic clouds, which are satellite galaxies of the Milky Way.

<PAUSE>

We can easily see many constellations, including Orion and his hunting dog Canis Major, Crux the Southern Cross, Centaurus, Leo, Gemini, and Eridanus. Let's just take a moment to appreciate all the heroes and animals and monsters and important inventions in the sky...

<PAUSE>

Now let's put away the constellations, then leave our forest clearing and head into a small town. This town doesn't have many buildings or streetlights, but it doesn't take much to affect our view of the sky. We can still see the Milky Way and the Magellanic Clouds, but we have to look harder for them.

<PAUSE>

Let's turn on more streetlights in this town to increase the amount of light pollution. Many of the dimmest stars are dropping out of sight, making the view of the sky less impressive. It's also become very difficult to find the Milky Way and Magellanic Clouds with this amount of light pollution.

<PAUSE>

We'll head into a small city now, with more buildings and streetlights than we just experienced. Do you still see the Milky Way and Magellanic Clouds? No, we've lost them due to the effects of all those lights. More stars are now hidden from view as well. The major constellations are easier to find, as it is hard to see stars that are not in those patterns in the sky. We could observe bright objects like the moon and naked eye planets, but our targets would be much more limited than with the darker skies we experienced earlier.

<PAUSE>

However, many people experience even worse skies than what we're currently viewing. Let's move into the middle of a big city like New York or Paris, to see how that changes our view of the sky. Now it is hard to recognize even the brightest constellations, as the lights have blocked out some of their dimmer stars. This is quite sad, isn't it?

What can you do to combat the effects of light pollution? It is simplest to start by evaluating your own actions. Do you often use lights outside your home? If so, be sure to just turn them on when you need them, rather than leaving them on all the time.

<PAUSE>

Are your outside lights shielded, so that the light shines down toward the ground rather than up onto the sky? This picture shows an example of a shielded streetlight.

If you are convinced that you—or your landlord—have done as much as you can do around your home, consider making a presentation at a city council meeting to discuss the problem of light pollution. Some members of your local astronomy club might be willing to join you for such a presentation.

<PAUSE>

There are many resources online to help you with other ideas. A good place to start is the International Dark-Sky Association website. They offer suggestions for light fixtures, educational resources, conferences, and more.

<PAUSE>

Let's remind ourselves of the beauty of a dark sky... We'll move out of the big city, through the outskirts of the city, into the small town, and then finally back to our forest clearing far away from any lighting. Isn't this beautiful dark sky a sight worth protecting?