

IYA Dark Skies Script Actions and Narration
Northern Hemisphere: Star Count Using Orion
Designed for use with Stellarium version 0.9.1

Synopsis: This script is designed to encourage people to participate in the Globe at Night (GaN) Star Count program. GaN asks people to observe the constellation Orion, determine the limiting magnitude visible from their viewpoint, and report this data to the GaN website.

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:

The Globe at Night star count program asks participants to observe the constellation Orion and report the limiting magnitude visible from their observation point. The goal of this program is to measure light pollution in given locations. To help you provide the best data for Globe at Night, let's look at Orion under differing amounts of light pollution.

The sky is set for March 21, 2009 at about 9 pm, in the middle of the Globe at Night data collection period for that year. Orion is in the southwestern part of the sky at this time. In a moment we'll turn off the Orion label and artwork so that we can see the stars, but try to keep the image of Orion in your mind.

<PAUSE>

Here we are observing under a light-pollution free sky. There are far too many stars visible in Orion and the rest of the sky to count. Notice that you can easily see an arm of our galaxy, the Milky Way, stretching across the sky. If this is how Orion looks when you make your observations, then you're extremely lucky! Report your sky as a magnitude 7.

<PAUSE>

Most of us are not fortunate enough to have magnitude 7 skies. Let's increase the amount of light pollution to simulate more common views. Notice how some of the very dimmest stars are disappearing. You can easily see Orion's sword and many stars in his belt, although not as many stars as with the magnitude 7 sky. If this is how Orion looks when you make your observations, then report your sky as a magnitude 6.

<PAUSE>

Magnitude 6 is regrettably still darker than many of us experience. Let's further increase our light pollution levels. More stars have dropped out of sight. Now you can see only six stars in Orion's belt, and you should be able to find his sword, though it may require a bit of effort. If this is how Orion looks when you make your observations, then report your sky as a magnitude 5.

<PAUSE>

Let's further increase the amount of light pollution. Notice how even more stars have disappeared. Now we see only four stars in Orion's belt and just the point of his sword. If this is how Orion looks when you make your observations, then report your sky as a magnitude 4.

<PAUSE>

Let's pretend that we're entering the outskirts of a major city like New York or Paris. There are bright streetlights and big, brightly illuminated buildings. We're losing more stars to the light pollution, and we're down to only three stars in Orion's belt. We can still see the bright stars that make his shoulders, his right knee, and his left foot. If this is how Orion looks when you make your observations, then report your sky as a magnitude 3.

<PAUSE>

Let's head toward the middle of this big city, where there are even more buildings, cars, and street lights to pollute our sky. Now we can see only two stars in Orion's belt. We've also lost sight of the star that makes Orion's right knee and can no longer see any stars in his sword. If this is how Orion looks when you make your observations, then report your sky as a magnitude 2.

<PAUSE>

For some people in particularly bright parts of a very big city, even fewer stars than this are visible. Let's increase our light pollution levels even more... Now we can see no stars in Orion's belt and only Orion's two brightest stars: Betelgeuse and Rigel. If this is how Orion looks when you make your observations, then report your sky as a magnitude 1.

<PAUSE>

The 2008 Globe at Night star count was conducted in late February and early March. Data from that star count is available on the Globe at Night website. You'll also find details there about the 2009 star count. The more people who participate, the more accurate the data collection will be, so please try your best to participate!