

ENVIRONMENT NOTE**● Light Pollution**

At night, large cities are often visible from far away. Soft light from windows outlines buildings. Bright lights from stadiums and parking lots shine like beacons. Scattered house lights twinkle like jewels. The sight is stunning!

Unfortunately, astronomers consider all these lights a form of pollution. Around the world, light pollution is reducing astronomers' ability to see beyond our atmosphere.

Sky Glow

Twenty years ago, stars were very visible above even large cities. The stars are still there, but now they are obscured by city lights. This glow, called sky glow, is created when light reflects off dust and other particles suspended in the atmosphere. Sky glow affects the entire atmosphere to some degree. Today, even remote locations around the globe are affected by light pollution.

The majority of light pollution comes from outdoor lights such as headlights, street lights, porch lights, and bright parking-lot and stadium lights. Other sources include forest fires and gas burn-offs in oil fields. Air pollution makes the situation worse, adding more particles to the air so that reflection is even greater.

A Light of Hope

Unlike other kinds of pollution, light pollution has some simple solutions. In fact, light pollution can be reduced in as little time as it takes to turn off a light! While turning off most city lights is impractical, several simple strategies can make a surprising difference. For example, using covered outdoor lights keeps the light angled downward, preventing most of the light from reaching particles in the sky. Also, using motion-sensitive lights and timed lights helps eliminate unnecessary light. Many of these strategies also save money by saving energy.

Astronomers hope that public awareness will help improve the visibility of the night sky in and around major cities. Some cities, including Boston and Tucson, have already made some progress in reducing light pollution. Scientists have projected that if left unchecked, light pollution will affect every observatory on Earth within the next decade.

See for Yourself

With your parents' permission, go outside at night and find a place where you can see the sky. Count the number of stars you can see. Now turn on a flashlight or porch light. How many stars can you see now? Compare your results. How much was your visibility reduced?