

Mineral Spotlight: Celestite

What do red fireworks, color TVs, the world's most precise atomic clock, and the state of Ohio have in common? They all contain the element strontium that comes from celestite, this week's Mineral of the Week! Celestite (also known as celestine) is strontium sulfate. Its name comes from the Latin "coelestis", meaning "heavenly", due to its sky-blue color.

Though its color is reminiscent of the sky, celestite most commonly comes from the sea. Crystals can be precipitated directly from seawater, but can also form in sedimentary rocks, like limestones, dolomites, and sandstones. In cavities in these rocks, celestite often forms geodes (crystals lining the walls of a void space). The world's largest geode is one of celestite crystals. The geode (also known as Crystal Cave) is on South Bass Island, in Ohio, and measures 35 feet in diameter at its widest. Tourists can enter and view the massive (18 inch) celestine crystals. Have you been to Crystal Cave?

Celestite is the primary ore for strontium, used in a wide array of products, mentioned above. Strontium is also important for understanding the age of rocks – rubidium-87 decays to strontium -87 with a half life of around 49 billion years. Geologists use strontium dating to understand events from the infant solar system up until only a few million years ago.

This feature was posted on Dice Museum social media by Museum curator Jillian Herlinger on 8/23/2022.

