



The largest specimen in the collection, the 16-kilogram **Gibeon**, is mounted on a low pedestal so that children can touch it, per the wish of the Kaler family.

**Goose Z. Kaler (1954–2010) of Olympia, Washington**, a geologist by training, was an avid scientific collector, focusing on stratigraphy, anatomy, vertebrate paleontology, and meteorites. He authored and co-authored a number of scientific papers and had a passion for philosophy, poetry, and opera. Goose worked many years for the Washington state library system, established the Eryops Science Museum, and taught science to autistic children at the Olympia Open Door Autism Clinic. He was much loved by all who knew him.

### Sources:

*The Schwade Meteorite Collection catalog* (Jim Schwade)

### For more information:

[geology.com/meteorites/iron-meteorites.shtml](http://geology.com/meteorites/iron-meteorites.shtml)  
[novaspace.com/METEOR/Types.html](http://novaspace.com/METEOR/Types.html)  
[nineplanets.org/meteorites.html](http://nineplanets.org/meteorites.html)  
[meteorite.org](http://meteorite.org)

### Special thanks to:

Jim and Maxine Kaler  
Jim Schwade  
Isabelle Hoygaard  
Jared Painter and Derek Herges

MACS201308

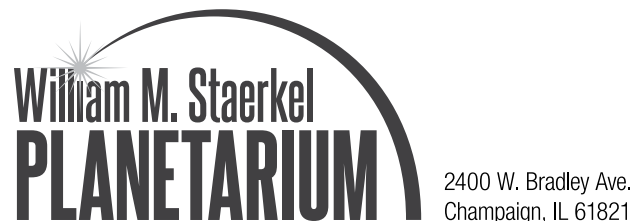


### IMMERSE YOURSELF IN SPACE.

Feel like you're part of the action watching shows at the William M. Staerkel Planetarium. Our 50-foot dome, the second largest in Illinois, is equipped with the latest in projection and sound technology, offering you an optimal viewing experience!

- Our Digistar 4 digital full-dome projection system, the first in the state, uses two JVC D-ILA projectors to cover the dome and immerse the audience in video.
- Our Zeiss M-1015 machine projects about 7,600 simulated stars, the Sun, the Moon, and five planets onto the dome. Catch stunning, realistic views of the heavens as seen from any point on Earth, simulated motions of the planets, and more.
- 64 panels of LED dome lighting are programmed for sophisticated chase sequences and to light specific areas, such as a sunset glow.
- Our Lexicon Digital Controller audio system features five McCauley speakers mounted behind the dome and subwoofers mounted in the theater wall. Hear realistic explosions, rocket launches, earthquakes, and more!
- Comfortable, reclined theatre-style seating provides the right environment for stargazing on the overhead screen.

Visit our website for the current show schedule: [parkland.edu/planetarium](http://parkland.edu/planetarium).



2400 W. Bradley Ave.  
Champaign, IL 61821



# The Goose Kaler Memorial Meteorite Collection

on loan from the James Kaler family

# The Goose Kaler Memorial Meteorite Collection

on loan from the James Kaler family

The Staerkel Planetarium is thrilled to share with its visitors a meteorite collection formerly owned by the late Goose Kaler of Washington state. Meteorites are fragments of asteroids that have hit the Earth. On loan from the Dr. James B. Kaler family, the Goose Kaler Memorial Meteorite Collection comprises several meteorites on display in our lobby. These include Canyon Diablo samples, a stony-iron Pallasite from Argentina, a polished Gibeon slice from Na-

mibia, Africa, and an iron sample from Eastern Siberia. The "monster" of this collection, the 16-kilogram Gibeon specimen, has been displayed so that children may touch it, per the wish of the Kaler family.

We invite you to enjoy the Goose Kaler Memorial Meteorite Collection while it is here with us, and again express our indebtedness to the Dr. James B. Kaler family for granting our community this unique interplanetary experience.



**Esquel** is a pallasite meteorite found near the town of Esquel, Argentina. Pallasites are a type of stony-iron meteorite that can exhibit yellowish olivine crystals when cut and

polished, such as in our backlit slice. In 1951, a farmer uncovered the meteorites near Esquel while digging a hole for a water tank.

**Gibeon** is a meteorite that fell in the African country of Namibia most likely during pre-historic times. The meteorite was discovered by the Nama people



and used by them to make tools and weapons. In 1836, the English captain J.E. Alexander collected samples of the meteorite in the vicinity of the Great Fish River and sent them to London. There, famed astronomer Sir John Herschel analyzed them and confirmed for the first time the extraterrestrial nature of the material. The fragments of the meteorite in the strewn field are dispersed over an elliptical area 275 km long and 100 km wide. Gibeon meteorites are composed of an iron-nickel alloy containing significant amounts of cobalt and phosphorus. The crystal structure of this meteorite provides a classic example of fine octahedrite and the Widmanstätten pattern.



## Sikhote-Alin

is an iron meteorite that fell in 1947 in the Sikhote-Alin Mountains in eastern Siberia. An estimated 70

tons of material survived the fiery passage through the atmosphere. At around 10:30 a.m. on February 12, 1947, eyewitnesses observed a large bolide brighter than the Sun that came out of the north. The bright flash and the deafening sound of the fall were observed for more than 300 km around the point of impact, about 440 km northeast of Vladivostok. A smoke trail, estimated to be more than 30 km long, remained in the sky for several hours. Because the meteorite fell during daytime, many eyewitnesses observed it. Sikhote-Alin is a massive fall, with the overall size of the meteoroid estimated at approximately 99,000 kg. Some of the fragments made impact craters, the largest of which was about 25 meters across and 6 meters deep. The Sikhote-Alin meteorite is composed of approximately 93% iron, 5.9% nickel, 0.42% cobalt, 0.46% phosphorus, and 0.28% sulfur, with trace amounts of germanium and iridium. To view a Russian documentary on the fall (with subtitles) go to [youtube.com/watch?v=45losqysM3c](https://www.youtube.com/watch?v=45losqysM3c).

Not much information exists on the **Klamath Falls** meteorite except that it was discovered in 1952 outside the Oregon town of Klamath Falls. The original meteorite's mass was estimated to be 13 kg, and it contains a rare form of iron.



The **Canyon Diablo** meteorite is responsible for the creation of "Meteor Crater" or the Barringer Crater near Flagstaff, Arizona. Fragments of the

meteorite have been collected around the crater and in Canyon Diablo, which lies 5 km west of the crater. The impact time is estimated to be 50,000 years ago. The biggest fragment is the Holsinger meteorite with a mass of 635 kg, on display in the Meteor Crater Visitor Center. The first written account of the crater dates to the late 1800s. Originally thought to be volcanic, geologist Eugene Shoemaker's research provided evidence of an ancient impact.

A **Stony Chondrite** is a non-metallic meteorite that constitutes the most common type that falls to earth. Note the "chondrules," or round grains. Chondrites are thought to be part of small asteroids not large enough to have undergone melting and differentiation.

