

Martian Meteorite

Los Angeles



This photograph is of the smaller of two fragments of Los Angeles meteorite. The two fragments weigh 452.6 and 245.4 grams making the total known weight of the Los Angeles meteorite 698 grams. The Los Angeles meteorite has been classified as a Mars meteorite, or more specifically a basaltic shergottite. This smaller rock has a classic ballistic shape and flow lines in the fusion crust which formed as the meteorite fell through Earth's atmosphere. A 1cm square cube is shown in the photo for scale. The meteorite was discovered by Robert Verish somewhere in the Mojave Desert in California. At the time, it was not recognized as a meteorite and sat in Verish's rock collection in his backyard for nearly 20 years. In October 1999, the finder was cleaning out his rock collection and recognized two rocks as being meteorites. This was soon confirmed at UCLA, who also confirmed the rock's Martian origin.

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Los Angeles

Los Angeles County, California, USA

Recognized 1999 October 30

Martian basalt (shergottite)

Two stones, weighing 452.6 and 245.4 g, respectively, were found by Bob Verish in his backyard while he was cleaning out a box of rocks that was part of his rock collection. The specimens may have been collected ~ 20 years ago in the Mojave Desert. Classification and mineralogy (A. Rubin, P. Warren, and J. Greenwood, *UCLA*): a basalt with a texture closely resembling that of the QUE 94201; plagioclase laths, 43.6 vol%, $An_{41}Or_4$ to $An_{58}Or_1$, have been shocked to maskelynite; Ca-pyroxene, 37.7 vol%, ranges from $Fs_{45}Wo_{13}$ to $Fs_{45}Wo_{37}$ to $Fs_{72}Wo_{24}$; other mineral modes (in vol%), silica = 4.9, fayalite = 4.2, K-rich felsic glass = 2.4, titanomagnetite = 3.5, Ca phosphate = 2.7 (including whitlockite and chlorapatite), pyrrhotite = 0.7, and ilmenite = 0.2; contains a higher proportion of plagioclase than Shergotty or Zagami, and has pyroxene that is moderately more ferroan than that in QUE 94201. Specimens: main masses with finder; 30 g, *UCLA*; 20 g, *SI*. Note, one may encounter references to the two masses as Los Angeles 001 and 002, or stone no. 1 and stone no. 2, respectively; these are unofficial designations.