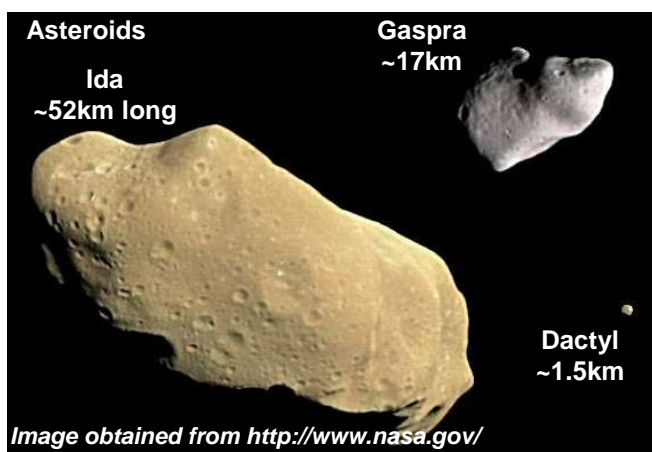


## Meteorites: What are they and where do they come from?

Meteorites are rocks from space. The majority come from the asteroid belt, which is between Mars and Jupiter, and are sent in our direction as debris from impacts.

Some meteorites also come from Mars or the Moon, though these are rarer since the debris has to escape their much greater gravity.



## What are they made of?

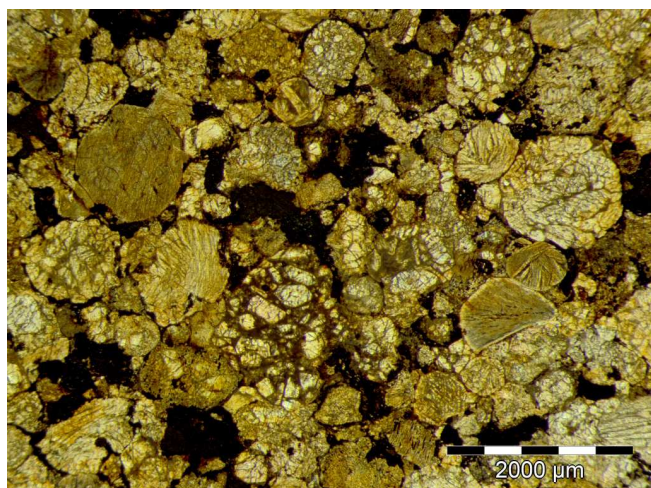
Asteroids are remains from the creation of the solar system 4,500 million years ago. Consequently meteorites contain material dating back to the earliest stages of its history.

They can be divided into 3 groups:

**Irons, stony-irons, and stones.**

These categories can be subdivided depending on the constituents and their mineralogy.

The most common type of meteorite is a subcategory of stones known as chondrites. These are made up of very small spheres called chondrules. Chondrules were molten droplets and are the remains of the oldest material in the solar system. The chondrules accreted to form the first asteroids, some of which came together to make the planets we know today.



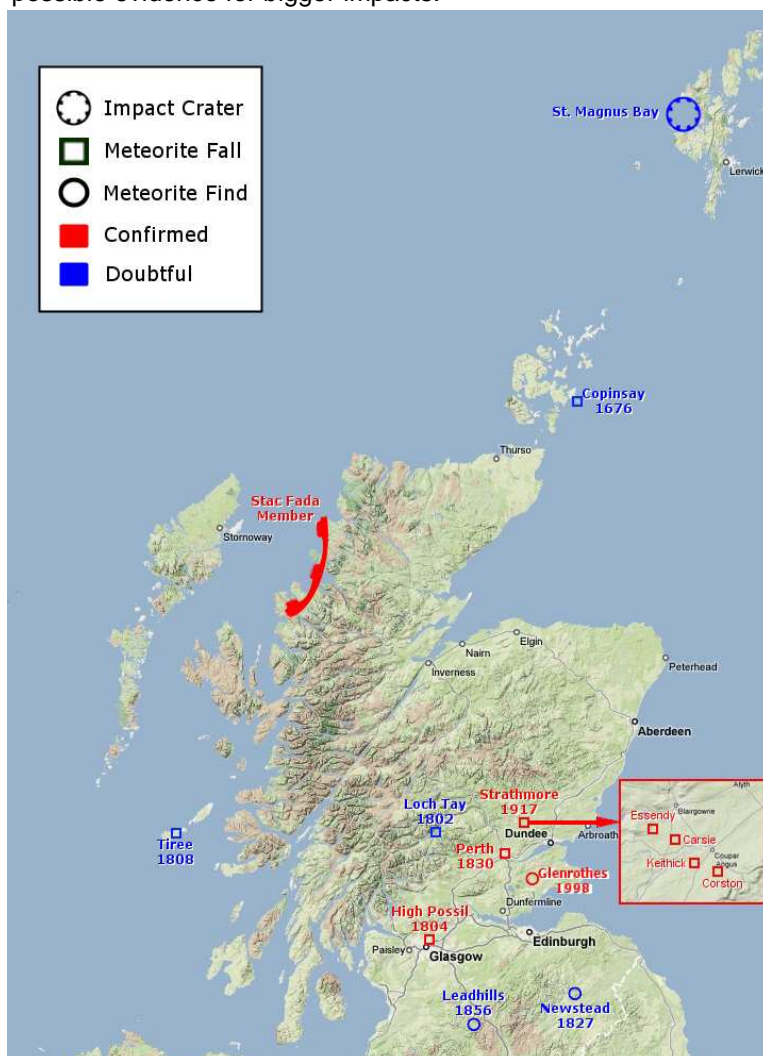
Photograph of chondrules

For more information: <http://www.ges.gla.ac.uk/>

This poster was produced by Kirsty Nicholson

## Scottish Meteorites

A number of meteorites have fallen in Scotland and there is also possible evidence for bigger impacts.



### Known Meteorites:

*High Possil* – Fell in a quarry. Chondrite. *Perth* – Fell during a thunderstorm. Chondrite. *Strathmore* – A series of falls from one meteorite. Chondrite. *Glenrothes* – Found by using a magnet. Chondrite.

### Possible Meteorites:

*Copinsay* – Fell into a boat. *Loch Tay* – Several falls in one small area. *Tiree* – Unknown history. Labelled sample in a museum collection. *Newstead* – Found near a Roman fort. Iron.

### Impacts:

*Stac Fada Member* – Deposit from a 1200 million years old impact. *St. Magnus Bay* – A circular bay and possible crater.

## What are your chances of finding one?

Approximately 6 meteorites fall in Scotland per year. A meteorite will last on the surface for about 100 years.  
 → **645 meteorites currently on the ground.**  
 Scotland covers 78,000km<sup>2</sup>.  
 → **1 meteorite in every 120km<sup>2</sup>.**

## What are the chances of being hit?

There are 2235 falls on land on Earth in one year. The total area of land people take up is 7000km<sup>2</sup>. If a person is outside for ¼ of the day...  
 → There should be **0.026 people hit in a year** (or 1 every 38 years)