UK company to build Sun orbiter

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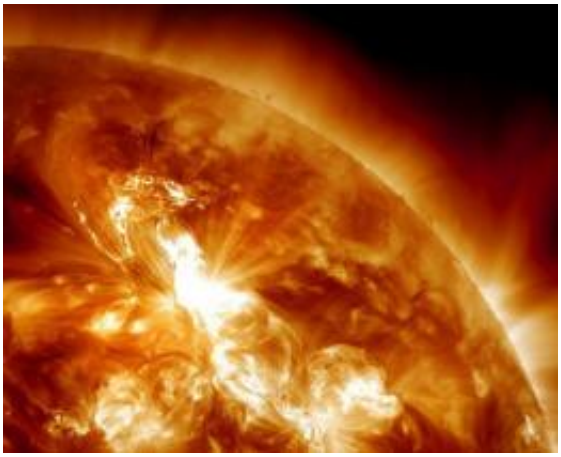

An M9-class solar flare erupts on the Sun's northeastern hemisphere. The European Space Agency has said it had awarded a 300-million-euro contract to a British technology firm to build a satellite to examine the Sun from closer up than any before it.

The European Space Agency said on Friday it had awarded a 300-million-euro ($400 million) contract to a British technology firm to build a satellite to examine the Sun from closer up than any before it.

The Solar Orbiter, to be built by Astrium UK, is due to launch in January 2017 -- coming to within 45 million kilometres (28 million miles) of the Sun -- closer than its nearest planet, Mercury.

Project scientist Daniel Mueller said the satellite, roughly eight cubic metres in size, would have to withstand ten times the solar heat than that

on earth.

"The satellite will have to be equipped with a massive heat shield which is about 500 degrees Centigrade (932 degrees Fahrenheit) on the sun-facing side and about room temperature on the back side to protect the sensitive electronics," he said.

The shield would be about 30 centimetres (12 inches) thick, and could be composed either of titanium wrapped in an insulating foil or a carbon-fiber composite.

The spacecraft will examine solar wind, a phenomenon that disrupts satellite communications.

It will also study the poles to understand how the Sun generates its magnetic field.

The contract with Astrium, a subsidiary of defence giant EADS, is one of the largest ever between the ESA and a UK company, a statement said.

Several European companies will supply parts, while the United States and ESA member states will fund some of the scientific instruments.

"Solar Orbiter is a fantastic mission," said Alvaro Gimenez Canete, ESA director of science and robotic exploration.

"It will help us understand how the Sun, essential to almost all life on Earth, forms the heliosphere (a magnetic 'bubble' surrounding our solar system) and the origin of space wheather, which can have an enormous influence on our modern civilisation."