

# Image: Spotting orbital debris from the ground

6 April 2017



Credit: Marco Langbroek, 2017

On 30 March, NASA astronauts Shane Kimbrough and Peggy Whitson ventured outside the International Space Station on a seven-hour spacewalk. The duo's work included installing four thermal shields on the US Tranquility module, protecting a docking port.

Unfortunately, one shield was lost during the spacewalk. It posed no immediate danger to the astronauts and they went on to install the remaining shields on the port.

The lost shield is in orbit some distance in front of the Station and is visible from Earth through a pair of good binoculars.

During the evening of 3 April, Marco Langbroek, from Leiden, the Netherlands, photographed the shield passing over in the night sky, using a Canon EOS 60D DSLR camera and a Samyang 1.4/85 mm lens.

In a pair of excellent images created from a series of photos, the shield is seen as the very faint, thin streak (in the image at left), followed a minute later by the Station itself, seen as the thick streak (in the image at right).

The shield is about 1.5 x 0.6 m, and is expected to

drop from orbit and burn up in the atmosphere within a few months.

"The item poses very little risk to navigation, and an accidental release like this is not unexpected given the complexity and challenges of working outside during a spacewalk," says Holger Krag, Head of ESA's Space Debris Office.

He says the incident does, however, put a spotlight on the current [space debris](#) situation.

"There are some 750 000 debris objects 1–10 cm in orbit, and any one of these could damage or destroy a functioning satellite."

Later this month, ESA's Space Debris Office will host the 7th European Conference on Space Debris, the world's largest gathering on this topic. The conference will be opened by ESA Director General Jan Woerner and NASA's former orbital debris chief scientist, Donald Kessler.

Highlight talks will address acute issues like debris avoidance measures, novel concepts for removing debris and the deployment of large constellations of several thousand satellites for telecommunications.

Provided by European Space Agency

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