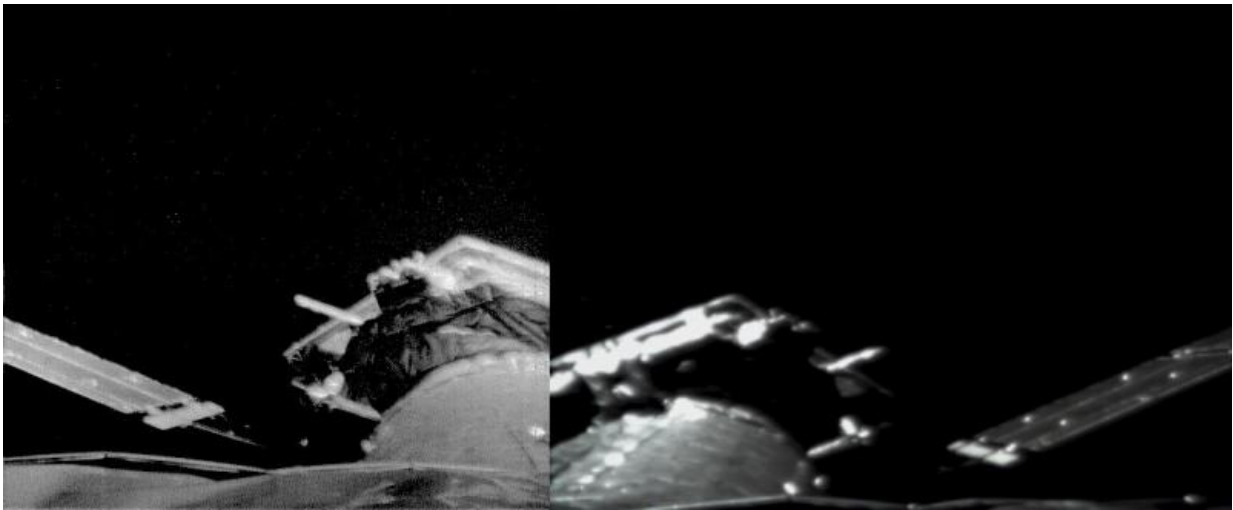


## Image: Space selfie from XMM-Newton X-ray observatory

December 8 2016

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Credit: ESA

Launched on 10 December 1999, XMM-Newton is an X-ray observatory designed to investigate some of the most violent phenomena in the Universe. Sources that emit large amounts of X-rays include remnants of supernova explosions and the surroundings of black holes.

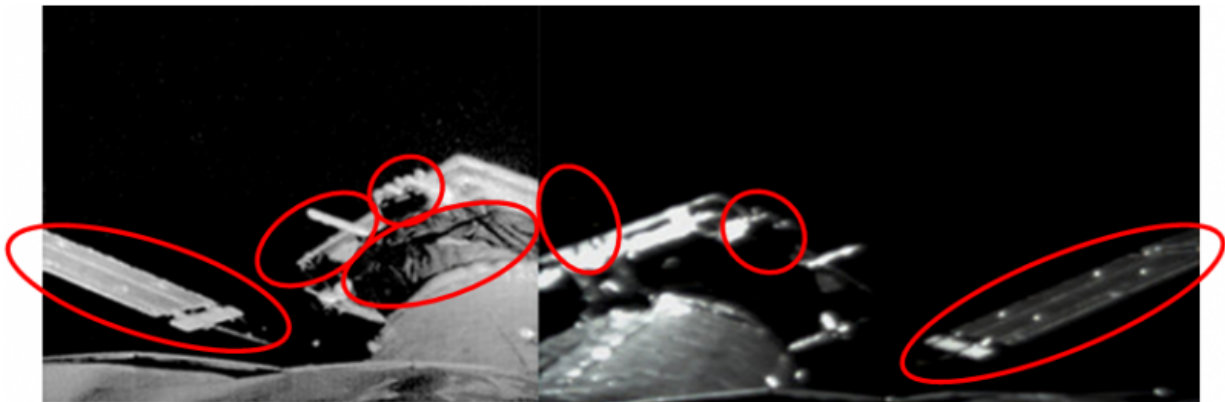
Detecting this energetic radiation is a daunting endeavour, requiring techniques that are greatly different from those used in traditional telescopes. In the case of XMM-Newton, it carries three telescopes of 58 nested mirrors each. These sit at one end of a 7 m-long tube, while at the

other end are the scientific instruments at the focus.

The two images in this collage were taken by the two low-resolution monitoring cameras mounted on opposite sides of the focal plane assembly, looking along the pointing direction of the telescope tube towards the service module (see below for an annotated version with explanation).

The cameras were originally used by controllers to check how the solar wings unfolded after launch, and have remained dormant since 2003.

When these images were captured on 14 September 2016 at 06:50 GMT, XMM-Newton was in its 3070th orbit at around 50 000 km altitude and in contact with mission controllers at ESA's mission control in Darmstadt, Germany, via the antenna at Kourou, French Guiana.



In the image on the left, one camera captured the Sun side of one of XMM's solar wings (at left in the image), and the dark multilayer insulation on the service module, the bright Sun-shielding behind and a dark box-like structure topped by a pair of thrusters (at right in the image). In the image on the right, the other camera captured the dark tripod of the S-band antenna (at left in the image) and then the 2A/2B thruster pair (at centre) and XMM's other solar wing (at right). Credit: European Space Agency

Provided by European Space Agency

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