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Author: Dr. Eric Wille  
ESA, The Netherlands

Dr. Marcos Bavdaz  
European Space Agency (ESA), The Netherlands

Dr. Mark Ayre  
ESA, The Netherlands

Dr. Ivo Ferreira  
European Space Agency (ESA), The Netherlands

Dr. SEBASTIAAN FRANSEN  
European Space Agency (ESA), The Netherlands

## PREPARING THE MIRROR TECHNOLOGY FOR THE ATHENA X-RAY TELESCOPE

**Abstract**

The Athena mission (Advanced Telescope for High Energy Astrophysics) requires lightweight X-ray Wolter optics with a high angular resolution and large effective area. For achieving an effective area of 2 m<sup>2</sup> (at 1 keV) and an angular resolution of below 5 arcsec, the Silicon Pore Optics technology was developed by ESA together with a consortium of European industry. Silicon Pore Optics are made of commercial Si wafers using process technology adapted from the semiconductor industry. The Athena Telescope requires several hundreds of mirror modules to be integrated into a large structure. The complete mirror assembly requires a high mechanical stability and good thermal control. In order to move the focus between the two different Athena instruments, a tilting mechanism for the mirror is foreseen.

We present the current design of the Athena mirror concentrating on the technology development status of the Silicon Pore Optics, the integration into the mirror structures and the mirror assembly tilting mechanism.