

The XACT laboratory

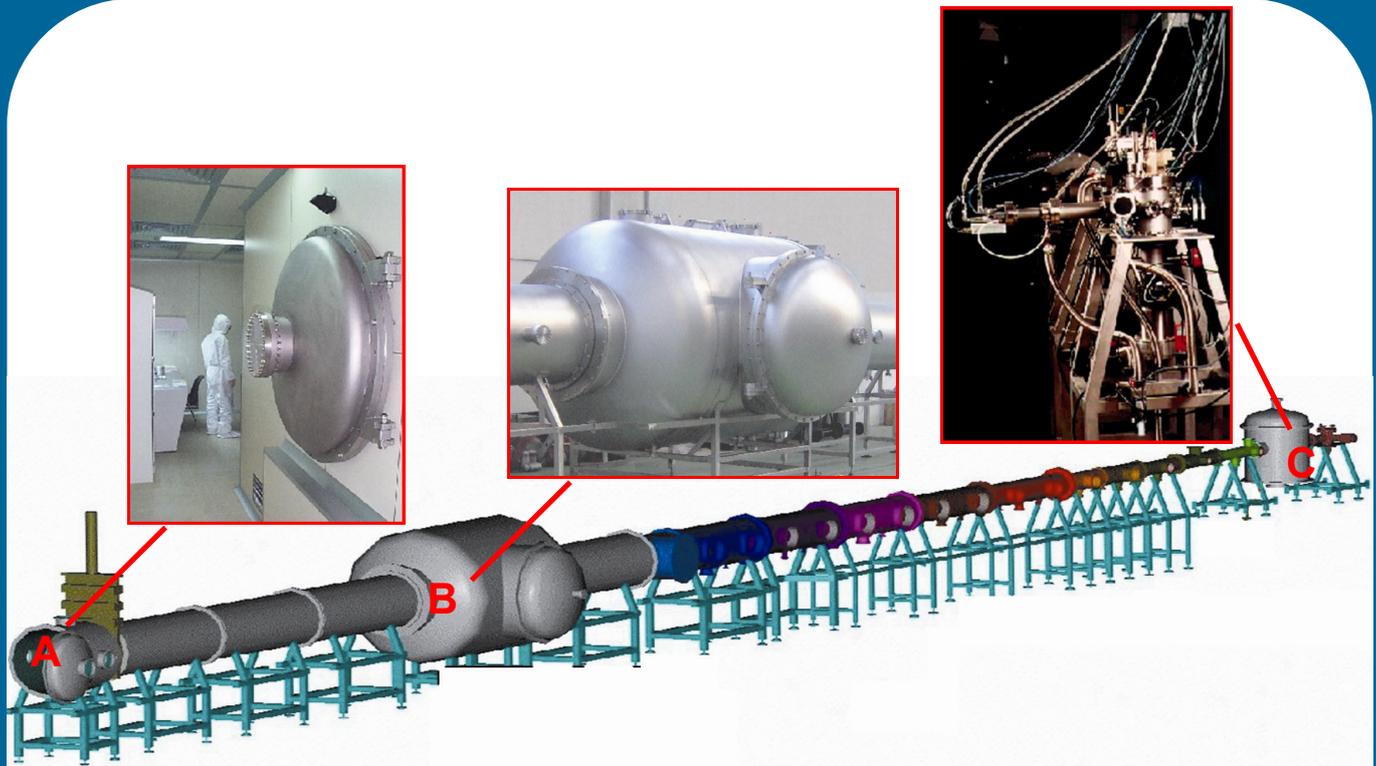


Fig. 1. Diagram showing the high-vacuum tube at the XACT laboratory: **A** The high vacuum chamber door, accessible from the clean room. **B** The chamber for X-ray telescope testing. **C** The X-ray source.

absorbed by single X-photons, through a direct measurement of the temperature increase taking place in the detector upon X-photons absorption. This technological development is not presently aimed at any specific mission but can be applied to several other sectors besides astronomy (medicine, biology, material analysis).

- **A microelectronics laboratory** equipped with very sophisticated instruments to manufacture microdevices and microcircuits for X-ray detection.
- **A modern workshop** equipped with numerical control apparatus to manufacture many of the necessary mechanical equipment.

Soft X-rays and hard X-rays

Similar in nature to light, x-ray also show “colours”. They differ in the same physical features that allow, for instance, the distinction between red and violet light. And in keeping the analogy with visible light, soft X-rays correspond to the red colour, hard X-rays to the violet.



Fig. 2. The cryostat used for developing low temperature detectors.