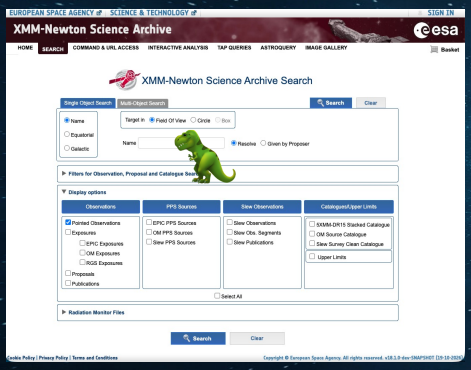
XMM-NEWTON SCIENCE ARCHIVE: Forthcoming Release of the New Angular-Based Portal

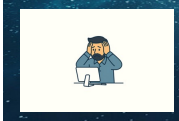
A. Ortega[1], A. Siles[1], J. Espinosa[1], M. Fernández[1], G. Belanger[2], E. Jiménez[3] and R. Bhatawdekar[2]
[1]Starion for ESA, [2]European Space Agency, [3]Quasar SR

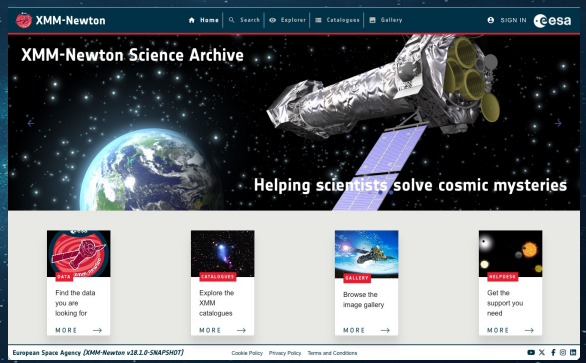
The new XMM-Newton Science Archive (XSA), created in collaboration with XMM-Newton Archive Scientists, introduces a next-generation approach based on scientific use cases and workflows. Planned for launch in 2027, the archive aims to maximize the scientific exploitation of XMM-Newton space science data and improve the user experience. Built with the Angular framework, the new XSA follows concepts and reusable widgets now adopted across other ESA Science Archives.

MODERN INTERFACE — Transitioning from traditional Data Forms into a New Era of Science Portals



GWT:
- Outdated look & feel
- Hard to maintain
- Hard to extend



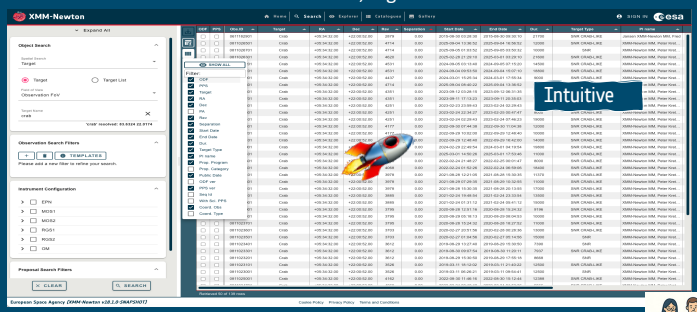


Angular:
- New look & feel, aligned with other missions
- User-friendly oriented
- Robust and maintainable architecture
- Modular approach
- Enhanced performance
- Reusable components
- Responsive user interface
- Personal expertise and resource optimization
- UX principles within the ESA Archives ecosystem

SAME DATA, BETTER INTERFACE: Offering seamless exploration of X-ray data with dedicated sections

Launched in 1999, XMM-Newton is ESA's cornerstone X-ray observatory, dedicated to studying the high-energy Universe. Its large collecting area, highly sensitive instruments, and ability to perform long, uninterrupted observations make it one of the most powerful X-ray observatories ever built. Observing simultaneously with its three X-ray detectors (EPIC-pn, EPIC-MOS and RGS) and optical/UV monitor camera (OM), XMM-Newton is able to study high-energy phenomena in the Universe across the spectral, imaging, and time domains.

Search: Observations Metadata, High Level Science Products



Catalogues Explorer

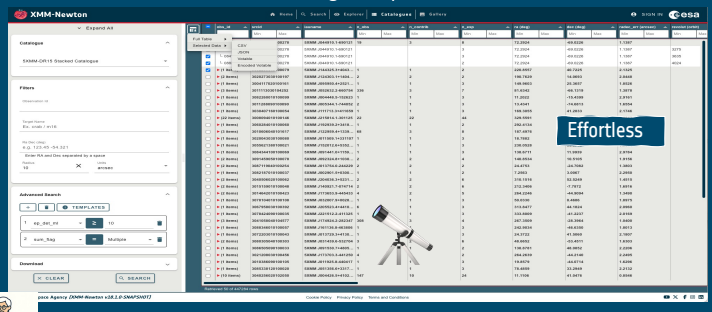
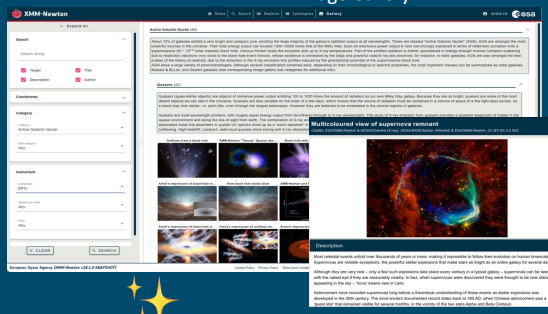
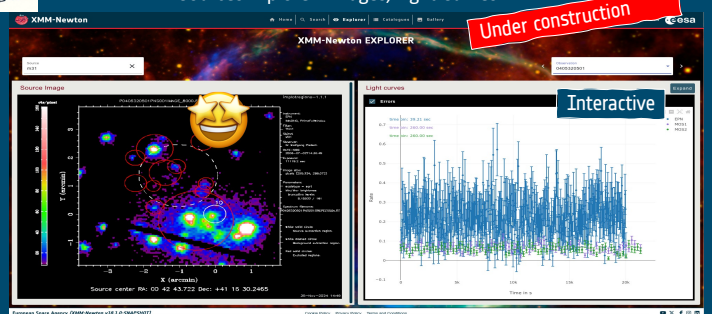




Image Gallery



Sources Explorer: Images, Light Curves...



ONE UPGRADE, DOUBLE THE IMPACT: more value for users and less complexity for developers

FOR OUR USERS

- Modern and User-Friendly Experience
- Faster and Smoother Interactions
- Data is the same, interaction is better
- Consistent Look and Feel Across ESA Archives
- Intuitive UX Based on Common Design Principles: The Archives look the same, but the data is different
- Reliable and High-Quality User Experience
- Updates implemented faster



FOR THE DEVELOPERS

- Faster Development Through Component Reusability
- Robust and Maintainable Architecture
- Modular and Scalable Development Approach
- Reduced Code Duplication and Maintenance Effort
- Reusable Components Across Multiple Applications and Missions
- Consistent Design System and Development Standards
- Optimized Resources Through Shared Expertise

REFERENCES

XSA: XMM-Newton Science Archive
https://nxsa.esac.esa.int

XMM-Newton Science Operations Centre
https://www.cosmos.esa.int/web/xmm-newton

ESAC Science Data Centre
https://www.cosmos.esa.int/web/esdc

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