

# A new look at the archival X-ray transient sky

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The last three decades have seen the development and launch of numerous X-rays observatories, providing a long temporal baseline to use to search for long term transients and test new transient detection methods. In order to take full advantage of this large amount of available data, we have developed a systematic study of the cross-correlation of different X-rays source catalogs using XMM-Newton, Chandra, Swift, ROSAT and early eROSITA data. Our method also takes into account multi-instruments upper limits in the case of non-detections, to search for yet undiscovered X-ray sources that have varied over the last 30 years. Finally, we enhanced this catalog by using complimentary multi-wavelength data to identify the sources.

This method is soon to be embedded into the XMM-Newton pipeline in the form of a trigger system, to alert the community in quasi real time to sources undergoing strong variability by systematically comparing new detections to archival data. We will present here the anticipated results of this pipeline trigger system, as well as some of the objects it has already allowed us to detect in the existing archives, including for instance variable Ultra-Luminous X-ray sources, changing-look AGNs, and Tidal Disruption Events candidates.