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## Exploring the X-ray filamentary structure in Frontier Fields Cluster MACSJ0717.5+3745

*Tuesday 16 August 2022 11:55 (5 minutes)*

We present the results of Chandra and XMM-Newton X-ray imaging and spatially-resolved spectroscopy of the filament in MACSJ0717.5+3745, an intermediate redshift ( $z=0.5458$ ) and exceptionally massive ( $3.5 \pm 0.6 \times 10^{15}$  solar masses) Frontier Fields cluster experiencing multiple mergers. Tight constraints placed on the thermodynamical properties of the filament are acquired using a joint fitting of spectra using nested parameter sampling within a Bayesian framework.

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