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JoXSZ: Joint X-SZ fitting code for galaxy clusters

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Abstract: The thermal Sunyaev-Zeldovich (SZ) effect and the X-ray emission offer separate and highly complementary probes of the thermodynamics of the intracluster medium.

I will present JoXSZ, the first publicly available code designed to jointly fit SZ and X-ray data coming from various instruments to derive the thermodynamic profiles of galaxy clusters. JoXSZ follows a fully Bayesian forward-modelling approach and improves upon most current and not publicly available analyses.

JoXSZ accounts for beam smearing and data analysis transfer function and adopts flexible parametrization for the thermodynamic profiles. The code is written in Python and the users are free to customise their analysis in accordance with their needs and requirements. JoXSZ is publicly available on GitHub (<https://github.com/fcastagna/joxsz>).

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