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Time-domain modeling of TES microcalorimeters under AC bias

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We present developments in the simulation of Transition-Edge Sensor (TES) microcalorimeters under AC bias for the purpose of detector studies.

The model extends the TES differential equation system in the DC case to take into account effects of a varying TES reactance during pulses.

The impact of these effects on pulse shapes is examined using simulations based on $Z(T,I)$ surfaces calculated from a Resistively Shunted Junction (RSJ) model of TES devices characterized for the Athena X-IFU.

Less than 5 years of experience since completion of Ph.D

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Student (Ph.D., M.Sc. or B.Sc.)

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