Abstract Submitted
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The GW space-time formalism at finite temperatures[1] MATTHIEU VERSTRAETE, Physics Dept University of York, CHRISTOPH FREYSOLDT, PATRICK RINKE, Fritz-Haber Institut MPG Berlin Germany, REX GODBY, Physics Dept University of York — We present the generalization of the space-time formulation of the GW approximation in many-body perturbation theory. The main changes are introduced in the treatment of the imaginary time and frequency dependency of the polarizability, screening, and self-energy. The discrete Matsubara frequencies and finite imaginary time intervals for integration are taken into account. Efficient fitting and interpolation schemes are developed to avoid a large increase in the grid sizes when going to metallic and finite-T systems.

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