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Synopsis of the prototype parabolic trough

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The 20kW prototype parabolic trough was completed and the novel receiver performance measured in a realistic setting, completing a project that has led to this point over many years. The final analysis veers away from the original theoretical description, using a more conventional approach and detailed thermal network, necessitated by the insufficient vacuum levels obtained during testing. We fit the new theoretical description to the data, approximating parameters for both the cooling and heating regime, and extrapolate the performance of a similar system with added insulation instead of an evacuated annulus.

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None

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