

Backward uniqueness for the heat equation in cones

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It is known that a bounded solution of the heat equation in a half-space which becomes zero at some time must be identically zero, even though no assumptions are made on the boundary values of the solutions. In a recent example, Luis Escauriaza showed that this statement fails if the half-space is replaced by cones with opening angle smaller than 90 degrees. Here we show the result remains true for cones with opening angle larger than 110 degrees. The proof covers heat equations having lower-order terms with bounded measurable coefficients.

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