

# David Malament and the Conventionality of Simultaneity: A Reply

Grünbaum, Adolf (2001) David Malament and the Conventionality of Simultaneity: A Reply.

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## Abstract

In 1977, David Malament proved the valuable technical result that the simultaneity relation of standard synchrony with respect to an inertial observer  $O$  is uniquely definable in terms of the relation of causal connectibility. And he claimed that this definability undermines my own version of the conventionality of metrical simultaneity within an inertial frame.

But Malament's proof depends on the imposition of several supposedly "innocuous" constraints on any candidate for the simultaneity relation relative to  $O$ . Relying on Allen I. Janis's 1983 challenge to one of these constraints, I argue that Malament's technical result did not undermine my philosophical construal of the ontological status of relative metrical simultaneity. Furthermore, I show that (a) Michael Friedman's peremptorily substantialist critique of my conception, which Malament endorses, is ill-founded, and (b) if Malament had succeeded in discrediting my own conventionalist version of metrical simultaneity, he would likewise have invalidated Einstein's pioneering version of it.

**Keywords:** Grünbaum's Reply to Malament; metrical simultaneity; conventionality; unique causal definability

**Subjects:** [General Issues: Conventionalism](#)

**ID Code:** 184

**Deposited By:** [Grünbaum, Adolf](#)

**Deposited On:** 06 March 2001