New Determination of the Orbit of Iapetus

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Vienne and Duriez (1991,1992) have built TASS (Théorie Analytique des Satellites de Saturne), which presents a coherent representation of the motion of all satellites of Saturn with an internal precision of a few kilometers. On the basis of the theory we give a usable representation of the motion of Iapetus. From fitting it to the photographic observations, we derive a new determination of the orbit of Iapetus. The residuals are compared to those obtained by Harper and Taylor (1993)