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Spindown of the 65 millisecond X-ray pulsar in the supernova remnant G11.2-0.3

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We report the first measurement of the spindown rate of the 65 millisecond X-ray pulsar within the supernova remnant G11.2-0.3. The period derivative is measured to be $\dot{P} = (4.40 \, ^{+0.03}_{-0.04}) \times 10^{-14} \, \mathrm{s} \, \mathrm{s}^{-1}$ using the Advanced Satellite for Cosmology and Astrophysics and the Satellite per Astronomia X. From the pulsar period and its derivative, the corresponding surface magnetic field, $B = 1.7 \times 10^{12}$ G, and the characteristic age, $P/(2\dot{P}) = 2.4 \times 10^4$ yrs, are derived. The physical association of the pulsar and supernova remnant with the historical record of AD 386 is discussed in the context of the measured \dot{P} . If the pulsar was formed during the historical event, the initial pulse period should have been relatively slow ($P_0 \simeq 62 \, \mathrm{ms}$). This initial period is more than a factor of three larger than that of a small number of prototypical objects, suggesting a diversity of initial periods for newly formed neutron stars.