

Physics 3002
Problem Set 5, due 3/4/09

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1. Ryden problem 6.6.

2. Derive the condition on $\Omega_{\Lambda,0}$ and $\Omega_{m,0}$ such that one has a big bounce solution to the Friedmann equation. This is a universe that in general has matter, curvature and the cosmological constant, and lives in the upper left corner of Fig. 6.3 of Ryden. The condition should be in the form of an inequality that involves $\Omega_{\Lambda,0}$ and $\Omega_{m,0}$.