

## ***Short Papers***

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### Solar Gravity Power

The original arguments of Helmholtz and Kelvin purporting to show that gravitational energy from the collapse of a cloud of gas is insufficient to power the Sun relies on what was known about normal matter at the time. We now know that matter can exist at densities up to  $10^{18}$  times normal. Thus, if the Sun were to be formed from the collapse of a non-uniform body with a high degree of central condensation an almost unlimited amount of energy could be released. A simple model, in which we take the core of the Sun to contain a growing black hole radiating at its Eddington limit, would clearly provide a great deal of power. We therefore believe that dismissal of gravitational energy as a source of power in the Sun is premature.

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