

Abstract Submitted
for the APR13 Meeting of
The American Physical Society

A proposed model for ordinary gravitation DAVID STALLARD, Retired — A model is proposed for ordinary gravitation, i.e. far from a black hole, to conform to Newton's law. Weinberg wrote: "the exchange of these gravitons (zero mass, spin two) will produce just the gravitational effects that are predicted by general relativity." Leo Blitz showed that dark matter in the galaxy has gravitational effects on visible matter. Postulate: An isolated, spherical mass m in nearly-zero-gravity space is presumed to radiate gravitons isotropically and to receive an isotropic flow-rate of gravitons of equal power from dark matter. Example 1: An isolated hydrogen atom m receives gravitons and rises in gravitational energy to a level such that the next incoming graviton causes the discharge of three gravitons in the same vector direction, one having helicity opposite to that of the incoming graviton. If the latter is from visible matter, gravitational attraction results. Energy, linear momentum and spin are conserved. Example 2: m is a small spherical mass. If a spherical mass M is introduced nearby, its radiation causes a reduction in the flow-rate of gravitons received in the vicinity of M from m , and an increase in the oppositely-directed gravitons from m , which then experiences a momentum force attracting it to M .

David Stallard
Retired

Date submitted: 25 Feb 2013

Electronic form version 1.4