

Table III: Compositions Modeled for the Sun and Planets.

	<i>Sun</i>	<i>Jupiter</i>	<i>Saturn</i>	<i>Uranus</i>	<i>Neptune</i>	<i>Minor Planets</i>	<i>k_B per Heavy part</i>
Hydrogen							
Molecular		12%	55%	9%	5%		1.0
Metalic		61.5%	16%				2.0
Ionized	75%						3.0
Helium							
Atomic		3%	2%	2%	1%		1.0
Metalic		14.5%	7%				2.0
Ionized	25%						4.5
Water				65%	68%		
Rock				24%	25%	100%	
Rock and ice		9%	20%				

been proposed to account for the intrinsic luminosities of the heavy planets. However, none of these specifically explain why the planets lie so close to the stellar mass-luminosity relation. The genic energy hypothesis has the advantage that it can account for the observed planetary-stellar association in a relatively simple fashion. If the genic energy hypothesis is correct, then the mass-luminosity values for “brown dwarfs” in the luminosity range $10^{-9} L_{\odot} - 10^{-5} L_{\odot}$ should be found to coincide with the lower main sequence stellar relation.

Genic energy could also explain the high luminosities of x-ray and γ -ray emitting objects such as Cyg X-1 and Cyg X-3 and dwarfs such as AM Herculis objects, which are known to have x-ray luminosities ranging up to $10^4 L_{\odot}$. This energy source could also account for the prodigious cosmic ray energy fluxes radiated by active galactic nuclei. Moreover, since this energy production mechanism is nonlinear and has the ability to function in an explosive mode, it serves as a good candidate energy source for powering novae, supernovae, and galactic core explosions.⁽⁵⁾ Genic-energy-powered supernovae would be expected to develop from a hot blue supergiant stellar phase, rather than from a cool red supergiant phase, which is consistent

with the discovery that the progenitor of supernovae SN1987 was a blue supergiant star.

Future observations providing mass-luminosity data on low luminosity dwarf stars ($10^{-9} L_{\odot} - 10^{-3} L_{\odot}$) should allow a key prediction of the genic energy hypothesis to be checked. Moreover, using presently available technology, it should be possible to directly test the energy dilation hypothesis by transponding hydrogen maser signals between widely separated spacecraft and searching for the presence of a non-Doppler blueshift component in the transponded signals.⁽⁵⁾

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Résumé

Les coordonnées masse-luminosité pour les planètes de Jupiter se trouvent le long de la relation inférieure de la succession stellaire principale masse-luminosité, qui suggère que les planètes et les étoiles naines rouges sont actionnées par un source semblable d'énergie non-nucléaire. Ces découvertes confirment une prévision de la cinétique subquantique que les corps célestes produisent de l'énergie "genic" à cause du déplacement non-Doppler vers le bleu des photons à un taux qui dépend de la valeur du potentiel gravitationnel local. L'énergie genic rend compte aussi de 40% du flux thermal de la lune, de tout le flux thermal intérieur de la terre, et pour plus de la moitié de la luminosité du soleil, ce qui resout le mystère du flux faible des neutrinos solaires. La courbure ascendante dans la masse-luminosité relation et la inflexion de la fonction de luminosité à $0.45 M_{\odot}$ sont attribuées au commencement de la combustion nucléaire, les réactions de fusion ignitant à une masse stellaire plus grande que l'on avait précédemment supposée.