

Abstract Submitted  
for the 4CF07 Meeting of  
The American Physical Society

**A Method for Predicting Quasar Luminosity Consistent With the NASA/IPAC Extragalactic Database** MORRIS ANDERSON — It is widely accepted that quasar radiation is emitted from a thick torus shaped accretion disk surrounding a black hole. However, the Chandra X-ray Observatory wide field panorama released on March 12, 2007, indicates many quasars do not have an accretion disk and cannot be explained by this representation. A solution is presented that does not require or exclude an accretion disk. It is based on the method first suggested in the 2004 APS Four Corners Section Fall Meeting presentation, “Wave Propagation in a Gravitational Field.” This model makes it possible to predict quasar luminosity as a function of gravitational redshift in qualitative agreement with the population distribution recorded in the NASA/IPAC Extragalactic Database. Furthermore, it indicates conditions may become critical at a redshift of 3.5 causing a quasar to ignite in a form of radiation limited gravitational collapse. These results offer a possible explanation for a peak, at a redshift of 3.75, in the observed population distribution. The success of this approach provides convincing evidence that gravity is the primary influence behind both the radiant power and redshift of quasars.

Morris Anderson

Date submitted: 08 Aug 2007

Electronic form version 1.4