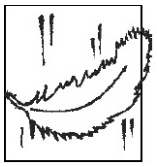

Astronomers studying a highly dense, strongly magnetised neutron star called RX J1856.5-3754, have uncovered a fascinating quantum effect called 'vacuum birefringence'. The existence of this phenomenon was first proposed in the 1930s. This predicts that empty space—a vacuum—isn't really empty; rather, it is full of virtual particles that appear and vanish all the time..

While it is expected that light can travel through vacuum without being changed, highly magnetized vacuum behaves as a prism for the propagation of light, and affects its polarization. This effect known as vacuum birefringence affects the polarisation of passing light