

Photons Characteristics

Wei-Xiong Huang

July 11, 2014

Abstract: Photon has beeline kinetic energy and spin kinetic energy. Photons spin axis perpendicular to Photons motion direction. Photon beam frequency is proportional to Photons spin speed. Photons magnetic pole at spin axis both ends. Photons electric charge absolute value is proportional to spin kinetic energy. Depth study Photons characteristics, will be able to crack more universe unsolved mysteries.

Key words: Photons frequency, Photons spin, photodynamic effect, photoelectric effect, optical-magneto effect

0. Foreword

Atom=>Photon=>Low speed Photons=>Micro speed Photons=>Atom. Photon, low speed Photons, micro speed Photons, three different moving speed microscopic substances. Only photon are to can observed microscopic substances. Understand Photons characteristics, will be able to understand many universe mysteries.

1. Photons Characteristics

Magnetic and spin are microscopic substances talent natures. Magnetic make microscopic substances attracted to each other, and orderly arrangement. Collision can make microscopic substances spin speed converted into beeline speed. Collision also can make microscopic substances beeline speed converted into spin speed. Photon is a light speed flying rotational magnetic gyro. Photon has following characteristics.

1.1. Photons Spin Axis Perpendicular To Photons Movement Direction

Photon has beeline kinetic energy and spin kinetic energy. Photons spin axis perpendicular to Photons motion direction. So, Photons motion trajectory is a circular arc. Circular arc curvature radius is Inversely proportional to spin speed.

1.2. Photon Beam Frequency Is Proportional To Photons Spin Speed

Photon beam frequency is proportional to Photons spin speed. Single frequency photon beam called monochromatic light. Multiple monochromatic light mixing photon beam called polychromatic light. Monochromatic light Photons spin speeds are same.

Emission point and emission angle same monochromatic light trajectory are same. Monochromatic light maximum irradiating distance is inversely proportional to monochromatic light frequency. When distance is large enough, high frequency monochromatic light lead guaitou reentry emission point. So, the distance greater, the high frequency monochromatic light less. This phenomenon is called blue blanking.

1.3. Photon Has Magnetic

Photons magnetic pole at spin axis both ends. Photons spin axis perpendicular to Photons motion direction. So, magnetic field can change photons motion direction.

1.4. Photon Has Electric

Photons electric charge absolute value is proportional to spin kinetic energy. Photons spin speed is proportional to photon beam frequency. So, Photons electric charge absolute value is proportional to photon beam frequency.

With positive charge photon comply with left hand spin rule. Left hand spin rule is, left thumb pointing to north, four fingers bending direction pointing to spin direction.

With negatively charged photon comply with right hand spin rule. Right hand spin rule is, right thumb pointing to north, four fingers bending direction pointing to spin direction.

1.5. Photon Can Continue Decomposed

Zeeman optical effect showed, strong magnetic field make a spectra line is decomposed into several spectra lines. This means, strong magnetic field make a monochromatic light is decomposed into several different monochromatic light.

Strong magnetic field can not make Photons spin speed changed into several different spin speed. Strong magnetic field can only make photon is decomposed into several different spin speed photons.

This proves, photon is can continue decomposed microscopic substances.

2. Example Proof

Following collected examples can indirect proof the above abstract thinking conclusions.

2.1. Total Solar Eclipse Observed And Measured

1919 total solar eclipse the observed and measured confirmed, Photons trajectory is a circular arc. This proved, Photons spin axis perpendicular to Photons motion direction.

2.2. Fermi Bubbles

In 2010, "Fermi" gamma-ray telescope discovered galaxy center jet out the two Fermi bubbles.

Fermi bubble side view show, gamma-ray and X-ray trajectories are arc shape, not beeline. Moreover, gamma-ray arc curvature radius less than X-ray arc curvature radius.

Fermi bubble overlook view show, gamma-ray radiation ring radius less than X-ray radiation ring radius.

This proved, Photons spin axis perpendicular to Photons motion direction. Also proved, photon beam frequency is proportional to Photons spin speed.

2.3. Optical Prism

Optical prism light scatter graph show, monochromatic light frequency the higher, monochromatic light trajectory curvature radius the smaller. This proved, photon beam frequency is proportional to Photons spin speed.

2.4. Radiation Ring's Radius

In 2006, Fermi Gamma-ray telescopes, Swift satellite, Rossi X-ray detector, HESS optical telescopes, cooperation to shooting blazar PKS 2155-304 jet out multiple ray images. PKS 2155-304 image display, frequency same ray constitute radius same radiation ring. Ray frequency the higher, radiation ring radius the smaller.

March 2009, radio telescope discovered supernova "SN2009bb" explosion. It jet out low frequency radio emissions, but no jet out high frequency gamma rays.

In cosmic background radiation, common low frequency photon beam, such as microwave, radio wave. Rare high frequency photon beam, such as gamma rays, X-rays, ultraviolet rays, visible light.

Any natural rainbow image display, blue arc curvature radius less than red arc curvature radius.

These phenomena proved, photon beam frequency is proportional to Photons spin speed.

These phenomena reason are blue blanked.

2.5. Magneto-optical Effect, Optical-magneto Effect

Faraday effect, Kerr effect, Cotton-Mouton effect, Zeeman effect, these magneto-optical effects have proved, magnetic field can change monochromatic light movement direction.

Stephen Rand found, when light passes through some kind insulation material, produced optical- magneto effect is stronger hundred million times than the previously expected.

Optical-magneto effect strength equivalent to electromagnetic effect strength.

These effects prove, photon has magnetic. Photons magnetic pole at spin axis both ends.

2.6. Electro-optic Effect, Photoelectric Effect

Franz-Karl Brindisi effect, Stark effect, electrochromic effect, Pockels effect, Kerr effect, these electro-optic effect have proved, electric field changed Photons motion direction.

Photoemission effect, photoconductive effect, photovoltaic effect, these photoelectric effect have proved, photoelectric effect strength are proportional to photon beam frequency.

These effects prove, photon has electric. Photons electric charge absolute value is proportional to spin kinetic energy, is proportional to photon beam frequency.

3. Photons Characteristics Application

Using Photons characteristics can decipher many universe mysteries.

3.1. Laser Principle

Launch point, launch angle, spin rate are exactly photons, photons track and photons impact point sure same.

Laser is monochromatic light. So, laser divergence is extremely small, brightness is extremely high.

3.2. Spectral Principle

Polychromatic light pass through grating slits, filter become launch point and emission angle are same the polychromatic light.

In launch point and launch angle same polychromatic light, different frequencies monochromatic light trajectories different, same frequency monochromatic light trajectories same.

All monochromatic light photons impact point constitute spectral image.

3.3. Universe Big Bang

Due to distant astral starlight blue blanking, starlight inside high frequency monochromatic light proportion inversely proportional to astral and earth distance. That is, astral away from earth the farther, starlight inside high frequency monochromatic light proportion the lower.

Starlight blue blanking produce starlight spectral redshift.

Starlight spectral redshift degree is proportional to astral and earth distance. Starlight spectral redshift change rate is proportional to astral relative to earth speed.

Starlight spectral redshift change rate was positive, represent astral go away earth. Starlight spectral redshift change rate was negative, represent astral come toward earth.

By starlight spectral redshift degree inferred the astral relative to earth speed, is the universe big bang hypothesis logic error.

Earth in all directions distant astral starlight all have found redshift. If, redshift cause is astral fast retreat. Well, earth bound to become universe big bang detonate point. Earth bound to become universe center. This is inconsistent with facts.

In summary, universe big bang hypothesis does not hold.

4. Experiment Detect

The following experiments can verify Photons characteristics. Conditional enthusiasts can accordingly design conduct test.

4.1. Laser Trajectory

Precision measurement can found laser trajectory is circular arc shape. Circular arc radius is inversely proportional to laser frequency. Magnetic field can change laser direction. Powerful magnetic field can make laser decomposed into several monochromatic light.

4.2. Optical-Magneto Effect

On iron pipe winding many circle optical fiber. Iron pipe magnetic field strength is proportional to through optical fiber light intensity. Iron pipe magnetic field strength is proportional to winding optical fiber circle number. Iron pipe magnetic field strength and the through optical fiber light frequency may be unrelated.

4.3. Photodynamic effect

In a strong magnetic field, perpendicular suspension an slim optical fiber, magnetic field is perpendicular to optical fiber. When light through optical fiber, optical fiber swing. Optical fiber swinging direction perpendicular to optical fiber and magnetic field. Optical fiber swinging amplitude is proportional to light intensity, light frequency, magnetic field strength.

4.4. Electronic Attract Each Other

Rotation direction same gyroscopic repel each other. Rotation direction contrary gyroscopic attract each other.

In same magnetic field, electron rotation direction same. So, the same magnetic field electron repel each other. In contrary magnetic field, electron rotation direction contrary. So, the contrary magnetic field electron attract each other.

Difficulty is, how to make contrary magnetic field electron encounter.

4.5. Charged Magnetic Ball

In weightless environment, charged magnetic ball will spin.

With positive charge magnetic ball comply with left hand spin rule. Left hand spin rule is, left thumb pointing to north, four fingers bending direction pointing to spin direction.

With negatively charged magnetic ball comply with right hand spin rule. Right hand spin rule is, right thumb pointing to north, four fingers bending direction pointing to spin direction.

5. Epilogue

Depth study Photons characteristics, will be able to crack more universe unsolved mysteries.