Abstract:
In 1919, British scientist Eddington organized a total solar eclipse big observation. Confirm photon trajectory is arc line.

What is reason for photon trajectory bend?
Einstein thinks. Gravitation makes photon trajectory bend. Thus created black hole theory.
Magneton constitute substance theory thinks. In magnetic field, photon abide by photon deflect right hand rule.

Due to, photon mass is less than 1/100000 of electron mass. Therefore, it is hard to measure photon trajectory bend.

According to magneton constitute substance theory, design photon new measure. Decrypt photon trajectory bend reason.
Measurement proves, photon trajectory bend is result of photon magnetism and spin and ambient magnetic field interaction, has nothing to do with gravitation.

Key words:
Total solar eclipse, Photon trajectory, Super long solenoid, Laser parallel light tube, Compass.

0. Foreword
Photon, dark matter, electromagnet wave conduction medium, cosmic dust, between them inner link is a urgent research major issues. Photon characteristics research is bear brunt.

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What is reason for photon trajectory bend?

Einstein thinks. Gravitation makes photon trajectory bend. Thus created black hole theory. Magneton constitute substance theory thinks. In magnetic field, photon abide by photon deflect right hand rule.

Due to, photon mass is less than 1/100000 of electron mass. Therefore, it is hard to measure photon trajectory bend.

According to magneton constitute substance theory, design photon new measure.

When photon forward direction perpendicular to ambient magnetic field direction, if 450nm laser beam deflection slope greater than 1/100000, 450nm laser beam curvature radius less than 5000 km, this measure can decrypt photon trajectory bend reason.

1. Measure According

Magneton constitute substance theory thinks:

1. Photon has magnetism and spin. Photon magnet pole are at photon spin axis both ends, abide by photon spin right hand rule. Namely, right hand pollex points to photon south pole, right hand four finger bend direction points to photon spin direction.

2. Photon carry negative charge, possess constant spin direction. Positive charge and negative charge, spin direction is opposite.

3. In magnetic field, photon magnetism and spin causes make photon trajectory bend into arc line.

4. The higher the photon beam frequency, the faster the photon spin speed, the smaller the photon trajectory curvature radius.

5. In magnetic field, electronics abide by ampere force rule. Similar to electron, in magnetic field, photon abide by photon deflect right hand rule. Namely, right hand pollex points to ambient magnetic field N pole, right hand four finger points to photon forward direction, four finger bend direction points to photon trajectory bend direction.

2. Measure Equipment

Exit point, light spot diameter 20mm, distance 100m, light spot diameter 10mm, 450nm laser parallel light tube, one.

Long 4m, outer diameter 40mm, wall thickness 2mm, PVC tube, 25. On the PVC tube,
winding diameter 1mm enamelled round copper wire. PVC tube turn into helitron.

Nonmagnetic, helitron Connection installation equipment, one set.

Direct current supply electricity equipment, one set.

Wide 400mm, long 400mm, reflector plate, one piece.

Compass, one.

3. Measure Conceive

On perpendicular to compass straight line, 25 helitron connect to a long 100m helitron.

When helitron electrify, helitron interal magnetic field direction perpendicular to earth magnetic field direction.

When helitron outage, helitron interal magnetic field direction namely is earth magnetic field direction.

In helitron east end, install 450nm laser parallel light tube, make laser beam pass through helitron middle.

In helitron west end, set upright reflector plate.

When helitron electrify, in helitron interal, photon forward direction parallel to ambient magnetic field direction. On reflector plate, record laser beam light spot position A.

When helitron outage, in helitron interal, photon forward direction perpendicular to ambient magnetic field direction. On reflector plate, record laser beam light spot position B.

In helitron west end, install 450nm laser parallel light tube, make laser beam pass through helitron middle.

In helitron east end, set upright reflector plate.

When helitron electrify, in helitron interal, photon forward direction parallel to ambient magnetic field direction. On reflector plate, record laser beam light spot position C.

When helitron outage, in helitron interal, photon forward direction perpendicular to ambient magnetic field direction. On reflector plate, record laser beam light spot position D.

If position B than position A shift up 1mm, position D than position C shift down 1mm.

Immediately prove, In magnetic field, photon abide by photon deflect right hand rule.

4. Epilogue

When photon forward direction parallel to ambient magnetic field direction, its trajectories is straight line.

When photon forward direction perpendicular to ambient magnetic field direction, its trajectories is arc line.

Photon trajectory bend is result of photon magnetism and spin and ambient magnetic field
interaction, has nothing to do with gravitation.

This measure will prompt world to re-examine black hole theory. This measure will also open photon theory new era.