SPACE-TIME CONJUNCTION

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KEY POINTS

THERE ARE ONLY TWO POINTS IN THIS DISCUSSION THAT DIFFER SLIGHTLY FROM THE STANDARD MODEL

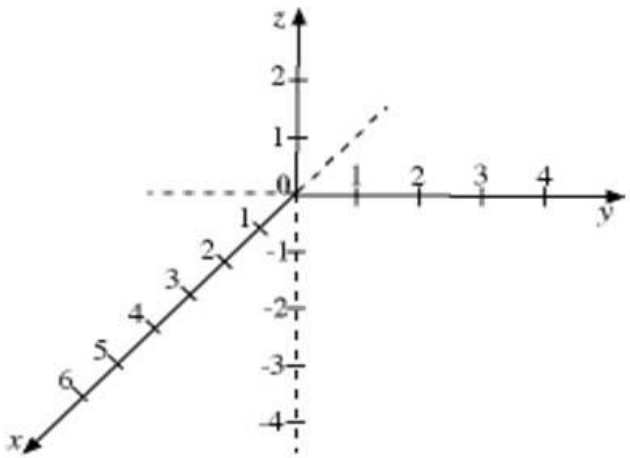
NEITHER OF THESE DIFFERENCES CONFLICT WITH THE LAWS OF PHYSICS

FIRST – A MODIFIED GEOMETRIC REPRESENTATION IS OFFERED THAT FACILITATES DISCUSSION

SECOND – A PRESUMPTIVE BOUNDARY CONDITION THAT HAS BEEN USED IN DETERMINING SOLUTIONS TO SCHROEDINGER'S WAVE EQUATIONS IS SLIGHTLY MODIFIIED

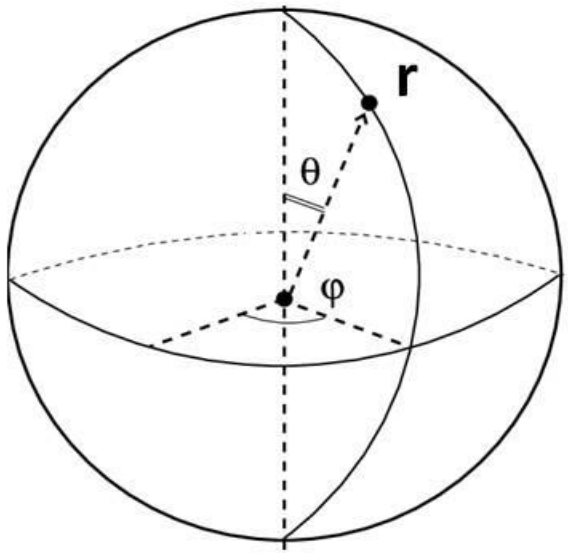
ALTERNATE GEOMETRY

SPACE



- SPACE STRUCTURE
- THREE – DIMENSIONAL
- LINEAR (x, y, z)
- "DOMAIN" OF MASS

TIME



- TIME STRUCTURE
- THREE – DIMENSIONAL
- SPHERICAL (r, Θ, φ)
- "DOMAIN" OF ENERGY

SCHROEDINGER'S EQUATIONS

FROM THE BEGINNINGS OF QUANTUM PHYSICS THE RULE HAS BEEN THAT ANY DERIVED WAVE FUNCTIONS MUST BE CONTINUOUS ACROSS A PARTICLE BOUNDARY

WE ALL BELIEVED (OR PRESUMED) THIS MEANT THAT THE WAVE FUNCTION ITSELF MUST REDUCE TO ZERO AT THAT BOUNDARY.

NO ONE ARGUED. . . . IT SEEMED LOGICAL. . . . BUT

WHAT IF WE ALLOW THE MAGNITITUDE TO BE NON-ZERO AND ENFORCE THE CONTINUITY REQUIREMENT BY ALLOWING THE FUNCTIONAL FORM TO CHANGE.AT THE BOUNDARY?

EVANESCENT FRINGE REGION

CHANGING THE BOUNDARY RESTRICTION CAN HAVE THE EFFECT OF CHANGING THE WAVE FUNCTION FROM HARMONIC TO EVANESCENT

AN EVANESCENT WAVE (OR FIELD, IF YOU PREFER) DECAYS IN A SHORT DISTANCE AND WILL ONLY EXIST IN A FRINGE REGION ABOUT THE PARTICLE

THE ASSERTION HERE IS THAT THIS BECOMES THE PHYSICAL IDENTIFICATION OF ELECTRIC CHARGE

UNTIL NOW THE ONLY DEFINITION OF CHARGE HAS BEEN COULOMB'S LAW, WHICH IS SIMPLY AN EMPIRICAL MEASUREMENT

THE DISCONTINUITY

INITIALLY IT APPEARED THAT THE DISCONTINUITY WOULD NATURALLY FALL AT THE ONE-HALF **PI** INTERVALS IN A WAVE FUNCTION. THIS WOULD SEEM TO GIVE AN INHERENT SINGLE-VALUED POSITIVE OR NEGATIVE PARTICE CHARGE

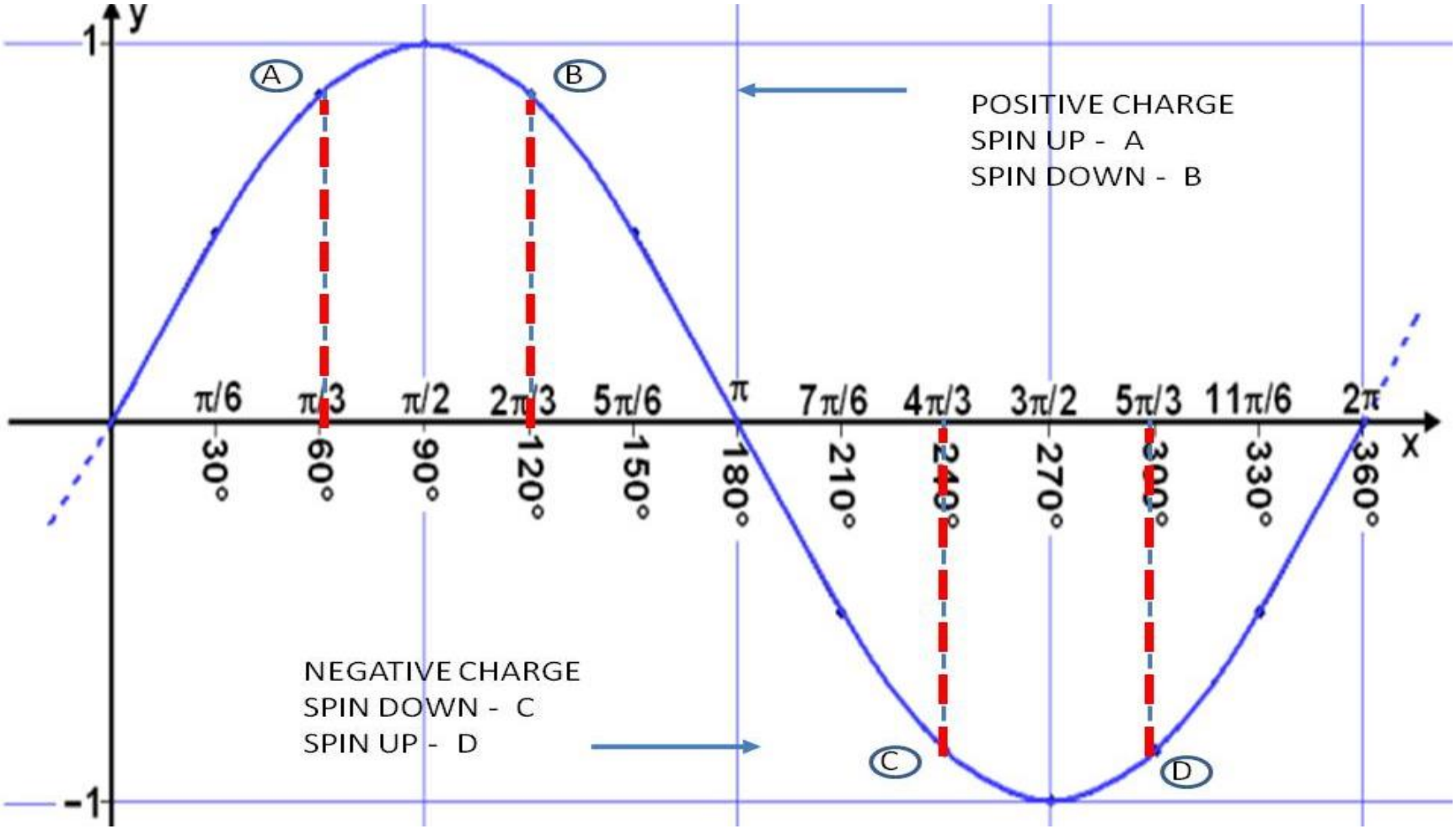
THAT PROVED TO BE NARROWLY LIMITING AND WOUJLD NOT BE FLEXIBLE FOR ACCOMMODATING THE STRUCTURE OF QUARKS.

IF, INSTEAD, WE ASSUME THE DISCONTINUITY TO OCCUR AT MULTIPLES OF ONE-THIRD **PI**, THEN WE CAN NCORPORATE ALL PARTICLE TYPES

AS AN ADDED BONUS THERE APPEARS TO BE A CLEAR DEFINITION OF "SPIN" WHEN DERIVATIVE OPERATORS ARE APPLIED FOR THESE POINTS

IN THE DIAGRAM (NEXT PAGE) "UP", "DOWN" , "POSITIVE", AND "NEGATIE" ARE ARBITRARILY CHOSEN

THE DISCONTINUITY



THE CONJUNCTION

RECOGNIZE THAT IN THIS GEOMETRY TIME IS NOT A SIMPLE SCALAR VALUE

THE DISTORTION JUST DESCRIBED IS A BUMP IN THE TIME DOMAIN (a.k.a. THE ENERGY DOMAIN) **AND** IT IS DIRECTLY LINKED TO A PHYSICAL PARTICLE

THIS IS THE SPACE-TIME CONJUNCTION

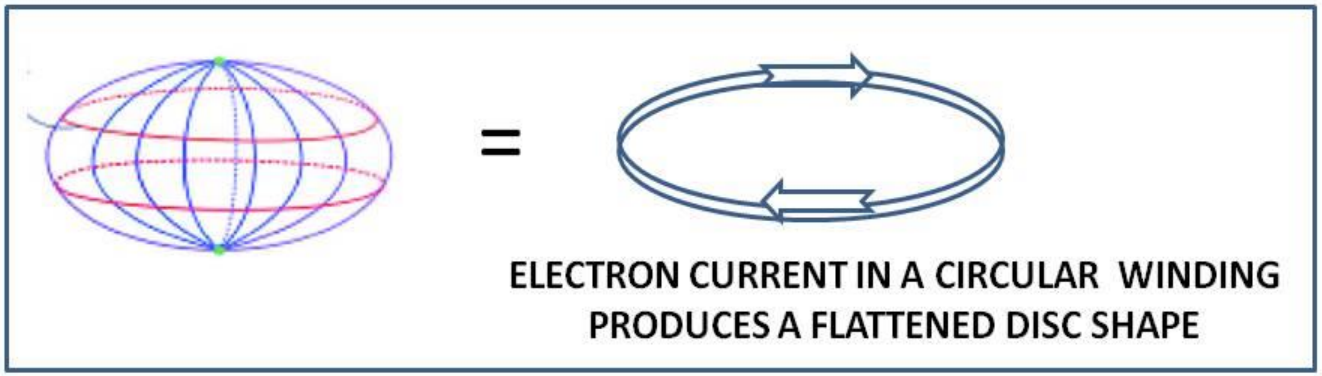
WITH THIS MODEL OF ELECTRIC CHARGE WE CAN NOW SHOW THE RELATIONSHIP OF THE BASIC FORCES IN THE GENERAL MODEL

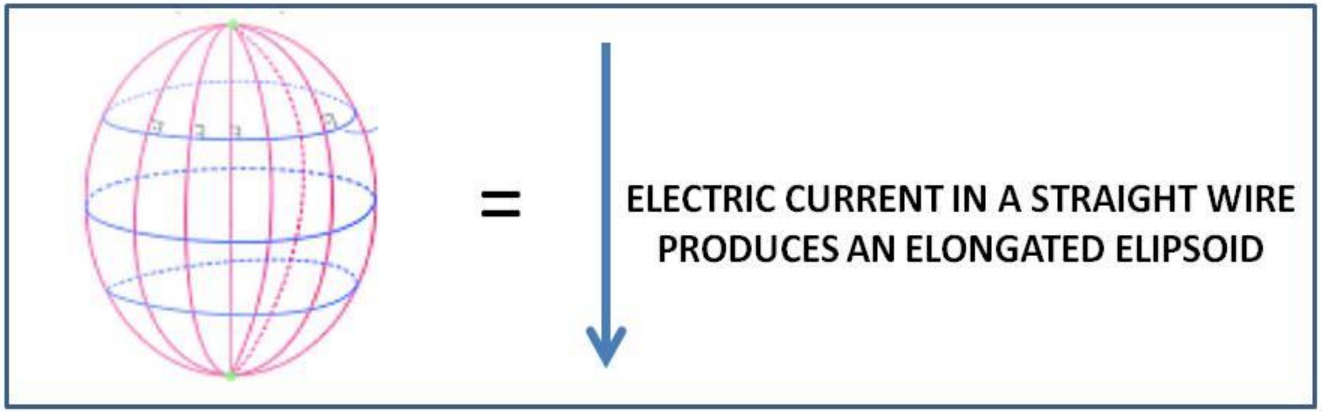
THE FIRST EXAMPLE IS MAGNETISM. ACCELLERATION OF A PARTICLE LINKED TO A TIME DISTORTION WILL STRETCH THE SPHERICAL TIME STRUCTURE INTO ELIPSOID SHAPES WHICH WILL ATTRACT OR REPEL EACH OTHER SO AS TO MINIMIZE ENERGY (TIME OFFSET) DIFFERENCES. THE TWO ANGULAR DIMENSIONS OF THE TIME DOMAIN ARE USED TO DISTINGUISH THE SHAPES

MAGNETIC FORCES

ACCELLERATION OF CHARGED PARTICLES PRODUCES MAGNETIC FIELDS BY SLIGHTLY DISTORTING THE SPHERICAL STRUCTURE OF THE TIME DOMAIN

TIME ELIPSOIDS PRODUCED BY MOTION OF A CHARGED PARTICLE





NUCLEAR FORCE

PERHAPS SURPRISINGLY, THE EVANESCENT WAVE/FIELD CAN POTENTIALLY BE USED TO EXPLAIN THE NUCLEAR FORCE

FUSION -- THE SIMPLE PROCESS OF FORCING TOGETHER PROTONS AND NEUTRONS CAN REACH THE LIMIT AT WHICH THE EVANESCENT FRINGE OF THE PROTON INTRUDES ACROSS THE PARTICLE BOUNDARY OF THE NEUTRON

THE RESULT IS THAT THE BASIC FORM OF SCHROEDINGER'S WAVE IS RECOVERED TO PRODUCE THE EQUIVALENT OF A THIRD PARTICLE WHICH TIES THE PROTON AND NEUTRON TOGETHER WITH A NUCLEAR BOND

THIS IS ESSENTIALLY EQUIVALENT TO THE LAB DEMONSTRATION USING TWO PRISMS THAT ARE CLOSE ENOUGH TOGETHER THAT THE EVANESCENT WAVE ON THE EXTERNAL FACE OF A TOTAL INTERNAL REFLECTION SURFACE CAN BE SEEN TO "JUMP THE AIR GAP" TO THE SECOND PRISM AND BE RECOVERED AS ACTUAL LIGHT

ELECTRON BEHAVIOR

ELECTRON BEHAVIOR BECOMES RATHER SIMPLE TO EXPLAIN

WHEN NOT BEING SUBJECTED TO A FORCE THE ELECTRON IS REPRESENTED BY A SIMPLE SCHROEDINGER ‘S WAVE FUNCTION OF PARTICLE MASS

WHEN SUBJECTED TO A FORCE – NOMINALLY AN ELECTRIC FIELD – THE SCHROEDINGER’S WAVE FORM SHIFTS TO THE TIME/ENERGY DOMAIN AND THE “ELECTRON CONTINUES ON AS A WAVE UNTIL THE FIELD IS REMOVED.

NOTE THAT PHASE DIFFERENCES DURING THE TRANSITION WOULD CAUSE A DIFFRACTION PATTERN, EVEN FOR SINGLE ELECTRON TRAJECTORIES

WHEN BOUND TO AN ATOM THE ELECTRON IS UNDER CONSTANT FORCE AND THUS IS STRICTLY A TIME DOMAIN WAVE STRUCTURE. GIVEN THE SPHERICAL TIME DOMAIN, IT IS RATHER EASY TO VISUALIZE THE ELECTRONS AS “SHELLS” AROUND AN ATOMIC NUCLEUS.

RELATIVITY AND REFERENCE FRAMES

THIS FINAL TOPIC COULD BE DISCUSSED AT GREAT LENGTH BUT THE BASIC POINT THAT SHOULD BE RECOGNIZED IS THAT THE TERM “FRAME OF REFERENCE” IS NOT GENERALLY DEFINED IN AN ACCURATE WAY

THE PREFERRED TERM SHOULD BE “REFERENCE POINT”

AGAIN WE MUST STRESS THAT TIME IS NOT A BROAD-AREA SCALAR VALUE

YOU MUST RECOGNIZE THAT TIME IS A DOMAIN WITH EQUAL STANDING TO THE SPACE DOMAIN. EACH WILL HAVE A RERFERENCE POINT (OR POINT OF ORIGIN). WHEN DESCRIBING RELATIVISTIC EFFECTS YOU MUST WORK WITH SINGLE REFERENCE POINTS ONLY

A FLYING METER STICK, A ROCKET SHIP OR ANYTHING ELSE CONSISTS OF AN INFINITE number of REFERENCE POINTS. THE TWO ENDS OF THAT FLYING METER STICK HAVE TWO DIFFERENT TIME COORDINATES RELATIVE TO EACH OTHER

WHEN YOU PERFORM RELATIVISTIC THOUGHT EXPERIMENTS, EACH END OF THAT FLYING METER STICK MUST BE EVALUATED SEPARATELY. WHEN YOU DO THIS, THE PARADOXES SEEM TO VANISH LIKE MAGIC