LOOKING AT THE LIGHT

In this supplementary section we are going to look at the phenomenon of magnetic polarity and how magnets work. Why the north pole is the north pole and why it is different from the south pole. What gives magnets there properties and why do similar poles of magnets repel each other.

SUPPLEMENTARY - C

INDEX OF THIS SECTION

INTRODUCTION

These papers are about Sub Molecular Interface Bonding, which is an explanation of the mechanics of atomic formation, structure and linking. It looks at how sub atomic particles form into atoms, how simple atoms form large atoms and the way atoms bond together into molecules, the foundations of matter.

The papers have been split into sections or books primarily to keep the file sizes down to an acceptable level so people with slow internet access can easily down load the files. It also means you can download just the parts you want. See **"Introduction and Full Project Index"** for full information.

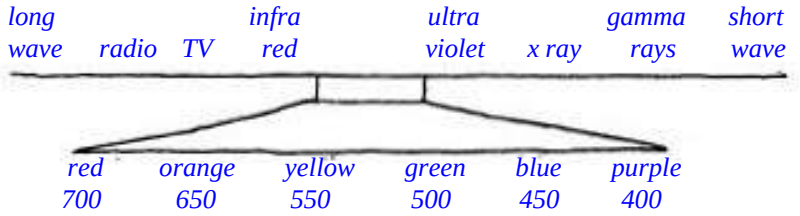
Issue 1 - 20 Nov. 2015

LOOKING AT THE LIGHT

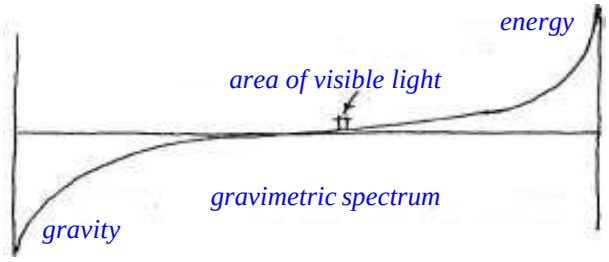
Spectrum of Light

This section is about light which is that part of the gravimetric spectrum that we see with out eyes. This section looks at the behaviour of light waves and defines how they operate within the sub molecular world. We look at field effects of light and explain some of the common observations.
Before reading this section on the papers you should have read the Book 4 detailing the fundamental element of light, the movement of energy rings.

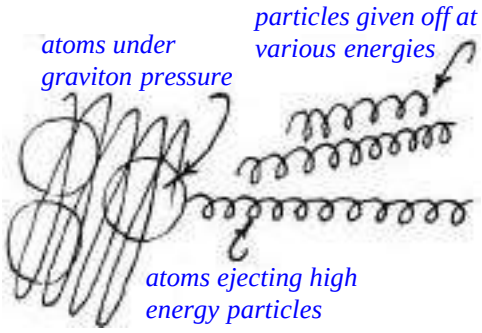
Light is an energy wavelength in the range of 400 to 700 nanometers which we perceive using our optic sensors as colours and shades. From this information we determine the position and shape of world around us.



We have looked at the gravimetric scale previously and seen this area of light wavelength is near the cusp of the scale, a point in the energy scale just into the positive side before energy turns into gravity. This scale we have learnt is a picture of the frequency vectors of sub molecular interface particles and that these particles are small bundles of rotating energy following a set track.

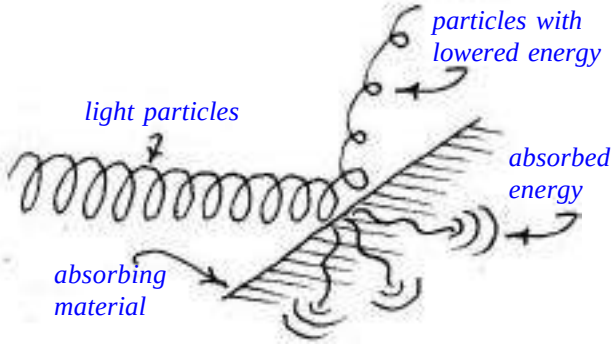


Light particles have a life span, this span is from the point of creation to the point of conversion.



Light particles are generated in high energy atoms as described in the main body of the text dealing with these particles. Any atom in a high energy state may be producing sub molecular interface particles in a wide range of energies only some being in the visible light range. The light particles are ejected at a particular frequency and vector speed, they will continue on this vector until interrupted by another force.

The light particle will cease to exist when the energy contained in the particle is either altered or absorbed. Altered light is where the particle will change one or more of its vectored parameters, this will cause the particle to move out of the visible light range either up into the high energy end of the spectrum of down into lower frequencies. An absorbed particle will have its energy converted into another form of energy ether heat, electrical or gravitational.

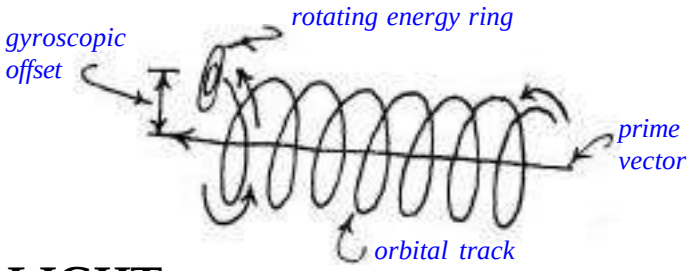


Particles

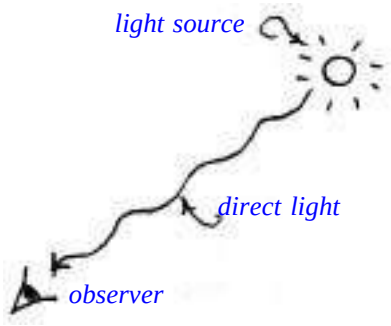
It must be remembered all the time while we are thinking about light we are actually referring to a continuous stream of sub molecular interface particles, that these particles are rotating in a helix along a given vector and still subject to all the rules governing sub molecular particles. They are two dimensional, have an energy front, trail a vortex and are travelling in a forward rotating motion. It is these properties that give us the information to unravel some of the seemingly conflicting properties of 'light' and it associated wave forms. It is these particles we see and convert into image.

The Properties of Light

Light is considered to be a packet of energy traveling in a straight line from A to B at a constant speed. This as we have seen is only partly true and has lead to seemingly conflicting collected data about the properties of light and associated electro magnetic waves.



SEEING LIGHT



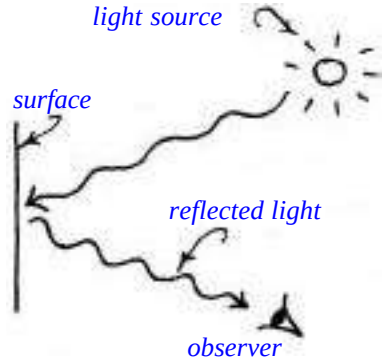
Direct light

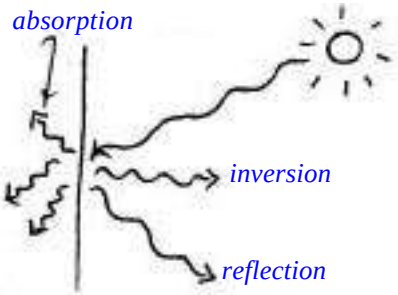
Light emitting from a high energy source will appear as a bright white light as the source will (in this case) be emitting all frequencies and resonance's within this range, the energy from the combined emissions produce sufficient energy to register as white on the cells at the back of the eye. The cells in the eye absorb the energy of the sub molecular particles converting them directly into electrical signals which register with the brain.

Reflected Light

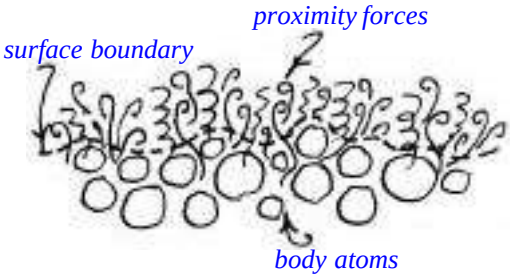
Although direct light can be registered by the human eye is not designed for this intensity of light a can be damaged by light of great intensity. The main and most useful source of light is that of reflected light, this is light that has bounced from the surface of a material.

Reflected light is less intense than direct light as it is reduced in energy by its contact with a physical surface. Light is as we have seen sub molecular interface particles traveling at the parameters we detect with our eyes. Light is a series of wavelengths comprising a range of frequencies between purple and red.

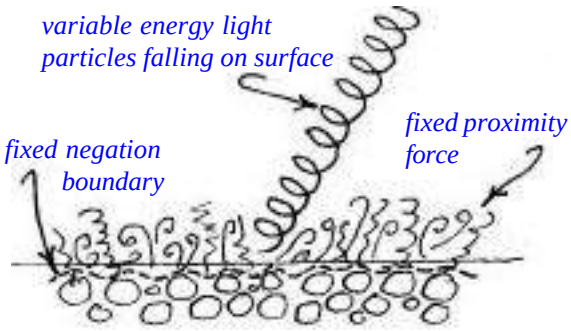




When light generated from a prime source hits the surface of an object many process take place, the prime process is **reflection**, the second process is **scatter**, the third **absorption** and the fourth process is **inversion**.



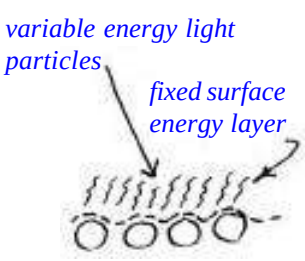
The surface of any material is comprised of atoms it can be a combination of a few different types of atom or many dozens of different types of atom. The surface also has a small active layer above the surface, the proximity force made up of gravity and sub molecular particles interacting with the atoms

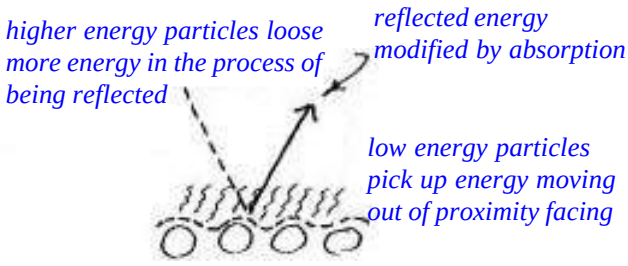


When light hits a solid surface it penetrates the proximity forces then hits negation boundary of the atoms themselves. As this process is happening the 'light' particles loose energy, because the surface forces are constant (sort of) and the 'light' particles are a spread out range of energies, the effect the surface contact has on the light particles is slightly different between the bottom and top of the light range.

The different 'light' frequencies will loose different amounts of energy as it passes through the proximity force. The different energies remaining after this loss will then have differing impact on the negation boundaries of the atoms.

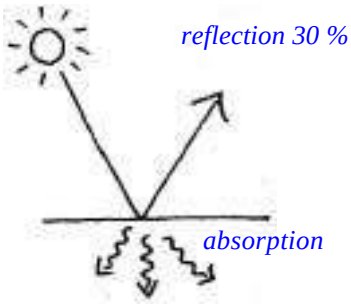
The reflection property an atom imposes on a particle when being pushed away by the negation forces, combined with the energy it picks up from the proximity forces, as it moves away from the surface, tends to compress 'light' frequencies towards a single area of the spectrum. This is because the higher energy particles loose more energy on being reflected than low energy particles. Higher frequencies are lowered and lower frequencies are lifted. Different surfaces have different proximity and negation forces altering the reflected 'light' in particular patterns of colour shift.

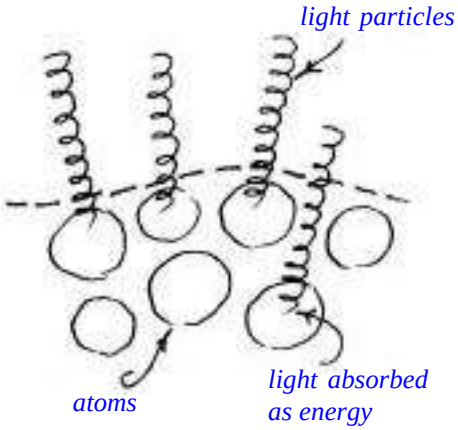




Absorption

Absorption takes place when the light particles hitting a surface are not all reflected or converged, the energy from the particles of light hitting a body are absorbed, either directly into the body mass or indirectly as divergent scatter.



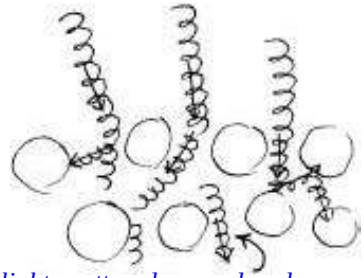


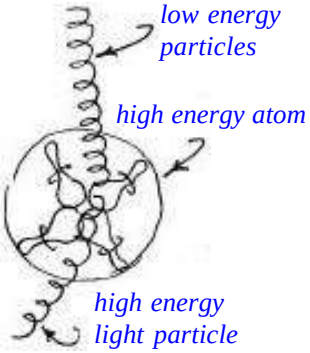
Absorption is where the 'light' sub molecular particles, which are just like any other sub molecular particle, interact with atoms that allow entry through the sub molecular window. When this happens energy from the 'light' particle will interact with the core of the atom and be either ejected in a modified form or absorbed as energy into the super ring core.

The modification an atom can put onto the sub particle can be such that it will be only emitting one band of frequency. The this may be a light band of the colour or non light radiation depending of the structure of the atoms producing the effect.

Scattered

Internal scatter happens when 'light' particles find themselves reacting with a combination of atoms, bouncing from different negation fronts of differing strengths, this rapidly distorts the 'light' particle converting it into lower energies that are quickly converted.





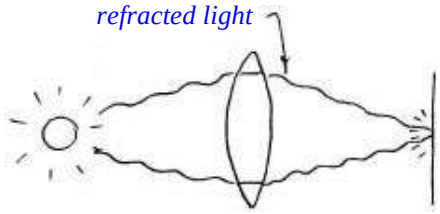
Inversion

Inversion is the process where 'light' particles return from contact with atoms not as reduced energies of the original particles but as an enhanced energy particle. Here 'light' particles interact with atoms usually by entering the molecular window but instead of loosing energy to the atom take energy away from the atom. In this situation the atoms within a body doing this would seem to be generating 'light'.

REFRACTED LIGHT

Refraction

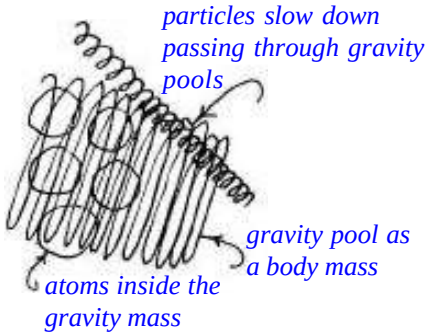
To understand better some of the processes described above we will look in greater detail at one of the simple but important interactions of light, refraction. This is the process where light is bent when passing through different materials or close to a body mass. This upsets the simple concept that light travels in straight lines but it does not upset the sub molecular particle rule that a particle vector will continue in a single direction until acted upon by another force.

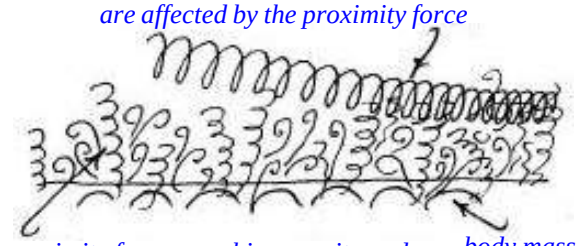


The two forces that can act upon sub molecular particles without causing their destruction are **gravity** and **proximity forces.**

Gravity

Gravity affects the vector speed of particles both in their linear vector and orbital vector because gravity acts like a break becoming viscous the denser it becomes. This has the effect of absorbing energy from particles as they travel through heavier gravity fields.





proximity forces combine gravity and sub molecular particles to form a surface wash.

Proximity Forces

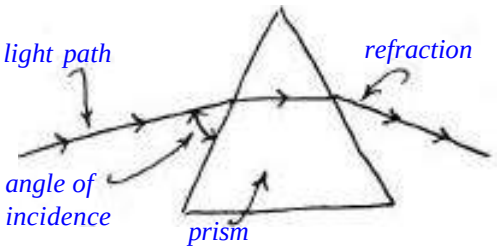
Proximity Forces cause energy to be lost by either deflection or interaction. Here a light particles interact with he sub molecular particles surrounding the surface of a body.

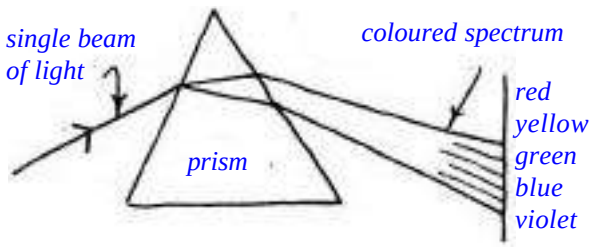
The forces push or drag light particles causing them to deviate from their original track

PRISMATIC REFRACTION

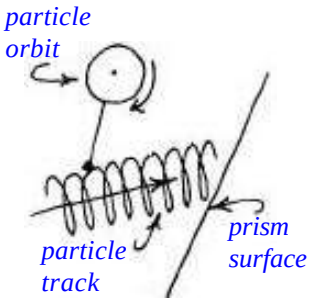
Prismatic refection is the commonest known type of light refraction and was fundamental in the discovery that light is a combination of wavelengths not a single entity. Here we look at this type of refraction in detail as it is typifies the basic properties of refraction.

If a narrow white light source hits the surface of an equilateral glass prism the light source is refracted, which means the vector along which the light was traveling is altered. The light bends at the point it hits the surface, traveling through the prism on a vector inward angled into the smallest angle (acute) of incidence. The light travel along this vector until it hits the opposite face of the prism, here the vector is altered again but altered in reverse. The light bends going out of the glass prism and angle toward the largest angle (obtuse) of incidence.

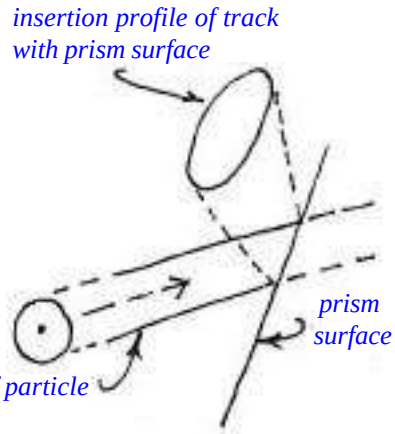




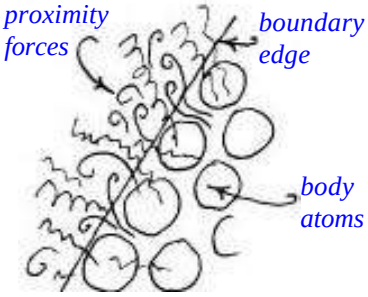
The result of the bending of light is to spread out the different wavelengths of white light into coloured components. It spreads out the wavelengths into detectable components. To understand why this happens and discover the properties of refection we need to move our thoughts down to the sub atomic level to where light waves and individual atoms interface.



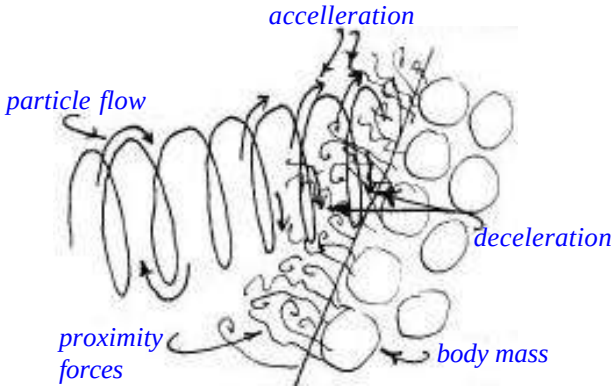
If we follow the track of a sub molecular interface particle as it approaches the surface of the prism we see that even though it is a single particle the helical track it is tracing has significant width. This overall width of the track, the vector offset distance, means that a particle approaching a surface, at any angle other than vertical, hits the surface at different times on the circle of interface.



If we consider the particle path to be a tube the side of the tube forming the acute angle with the surface will hit the surface first, followed by the rest of the tube bit by bit until the opposite edge hits the surface. The junction will be in the form of an ellipse.



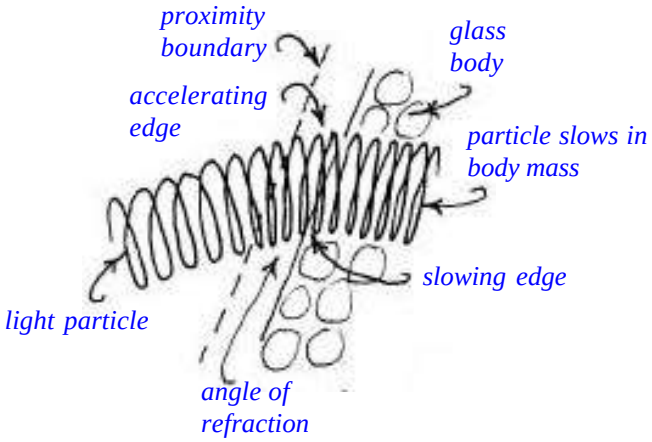
At this scale of particle interface the surface is not a single knife edge point it is a boundary of churning atoms forming peaks and cavities covered with an atmosphere of proximity forces. As the particles falls into this mass the forces and local gravity get denser, this gravity together with particle proximity forces act like a break slowing the particle as it moves into this mass. The particle looses energy as it slows down.



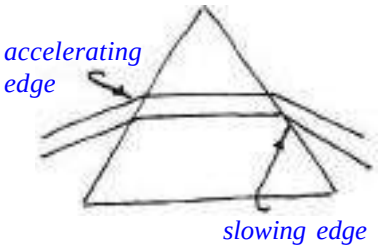
The track of the particle however is circular and as it moves up and away from the surface to the top of its orbit, it starts gaining energy from the pushing buoyancy effect of the proximity forces.

The circular motion will cause the particle to slow on its orbit near the surface and speed up as it moves away.

This motion makes the particle turn in toward the retarding surface.

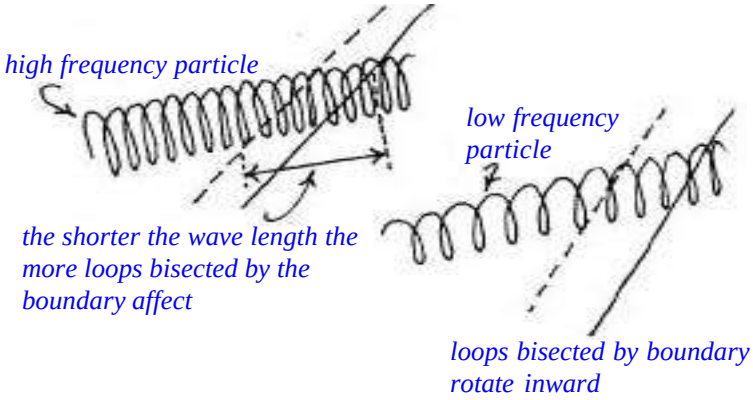


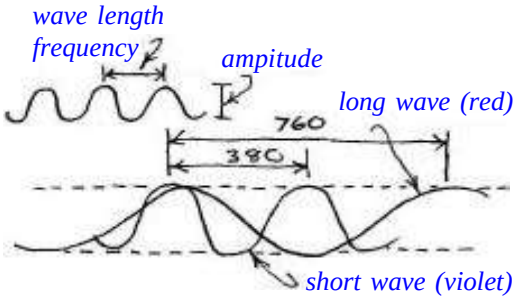
Think of car wheels going round a corner, the inside wheels move slower that the outside wheels

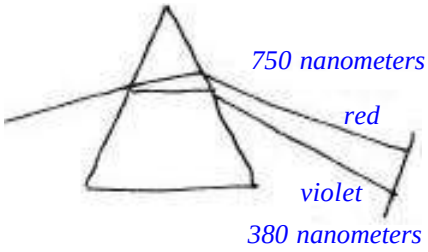


The reverse process happens when the particle moves in the opposite direction, out of the dense body and into a lower gravitational body, in this case out of the glass prism.

It can be seen from this process that the slightly different speeds of particles would cause them to have slightly different cornering patterns, or refraction angle, which would make them separate and spread out, the greater number of rotations a particles has within the proximity facing area the more the particle turns. We see spread as a separation into different colours.

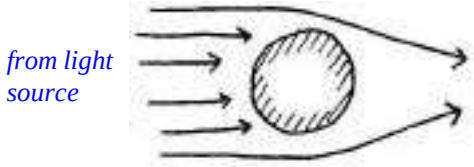




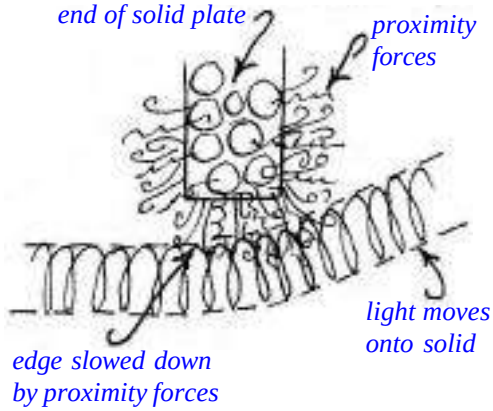


PROXIMITY REFRACTION

As seen from the detailed description above the boundary between materials plays an important part in the process of refraction.

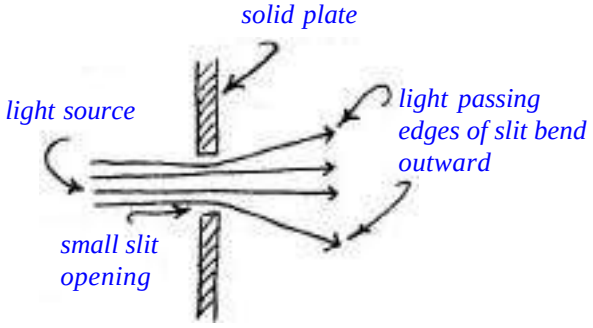


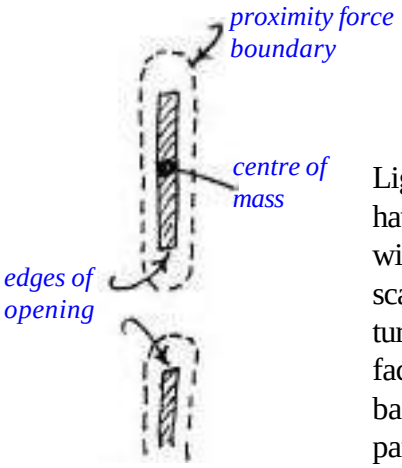
A similar process takes place when light waves come close to but do not make contact with a dissimilar dense body. In this case the light is affected by the proximity forces surrounding an object at the sub particle level. Light particles passing near an object and passing through the area of proximity facing will bend inward toward that object.



If light particles traveling on a single vector pass through a slit in a sheet of dense material they will have unrestricted passage through the hole. There is however a boundary, this is the boundary between the empty slit and the solid material. This boundary between solid and empty has at the sub particle level a gradient of density, the proximity facing.

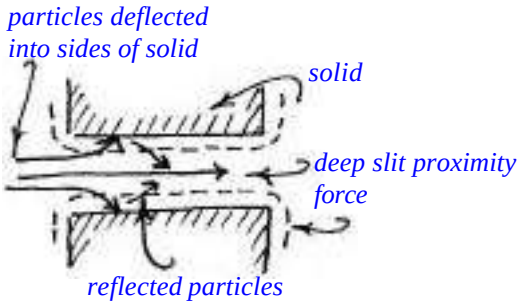
This proximity gradient will cause the light particles traveling next to the boundary edge to pass through part of this area. Here the same rules apply as for the boundary in the prism described previously. The particle is traveling along a tubular vector, the side passing near to the boundary edge will move through denser gravity of the proximity field and will slow down. This will cause the light particle to turn towards the boundary edge. The particle is being deflected toward the body mass.

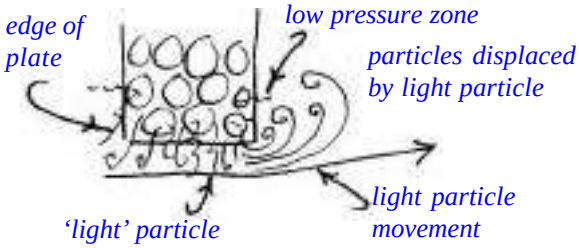




The amount of deflection happening on proximity deflection depends upon the body mass. A short edge with a slit will have less proximity force than a long edge this is because the particle mass is divergent from the center of the mass.

Light traveling trough a deep slit will have less chance of getting through without being deflected and scattered as the initial deflection will turn the light particle into the side face of the slit causing it to bounce back and scatter into the path of the particles in the center of the slit.





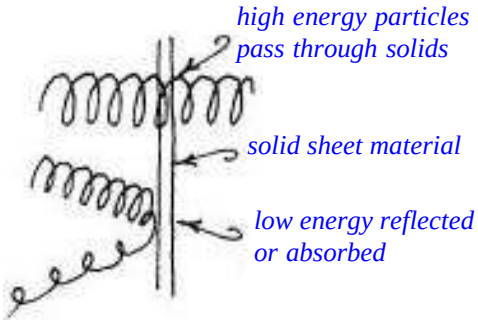
Proximity refraction also has another element in its determination, that of vortex drag. As particles pass through the slit the movement of particles creates a particle vortex on the opposite side to the light source.

This is a low pressure zone created just behind the side of the edge of the slit. This zone is caused by the movement of particles passing the edge and dragging with it come of the free surface particles. This low pressure zone pulls on all the particles in the vicinity including the particles of light passing the edge. This process cannot capture the light but bends the light particle slightly further into the body face.

GLASS

Here we get to the very nitty gritty and one of the reasons why I embarked on this project in the first place.

The question of why light penetrates a material like glass but not a material like aluminum is curious but comes down to the atomic structure of the materials and the state at which the atoms are held within that structure.



All materials are to some extent transparent, not necessarily to light waves but to other types of frequency waves, gravity ,magnetism, x-rays, radio waves. Although we talk about different types of waves for convince they all in fact the same thing radiation. Thus transparency has to be considered as part of the same physical process as light transmission as all these radiation waves sit upon the same gravimetric scale. All these process are fundamentally different manifestations of the same basic element the sub molecular interface particle.

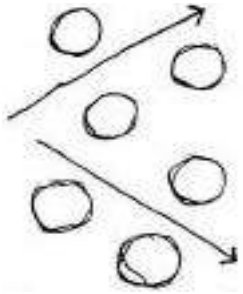
There are two aspects of a materials transparency, the first is how particles can penetrate a body and the second is why they do not. They are both the same thing but we have to deal with them separately for the sake of clarity. We will start with the properties that make materials transparent to radiation.

Transparency to radiation in general.

There are three properties that affect the apparent transparency of a body to radiation, i.e., sub molecular particle penetration, these are **density**, **bonding matrix** and **energy**.

Density

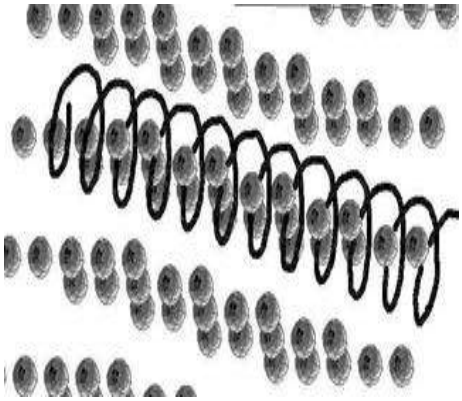
All solid bodies of matter are fundamentally a loose collection of atoms held together by mutually attractive graviton waves. At the sub atomic level atoms have at normal pressures proportionally large gaps between them. To sub molecular interface particles these gaps are massive areas of open space through which to travel. Think of a rocket passing through the asteroid belt, the chances are it may hit an asteroid but there is also a chance it will not.



particles pass through voids between atoms

Bonding Matrix

The fact that solid bodies have gaps between the atoms is coupled with the bonding matrix of a material. Particular materials owe their physical properties to the way the atoms forming that material are bonded together, this atomic bonding lattice is the bonding matrix. The bonding matrix is set pattern of atoms running through the whole material. Combine this matrix property with the information about the sub molecular interface particles traveling with a helix motion and you have a key and a lock situation. This helical motion allows a particle of a particular frequency to screw its way though a solid body moving around and between atoms where as a particle traveling in a straight line would quickly hit an obstructing atom.

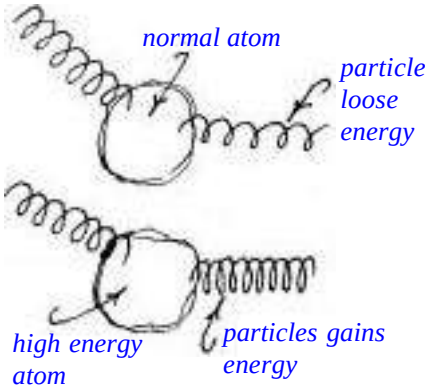


Energy

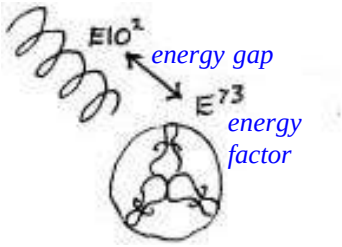
The third and most important part of particle penetration is energy.

Both sub molecular particles and solid atomic body's have quantities of energy. The particle as raw vectored energy and the atoms contained within a body have interactive energy. When these particles meet they interact in the way that was detailed in section on interface bonding. What happens to the interfacing particle depends upon the two energy states, that of the atom and that of the particle, the differential between the two energy potentials is the energy gap.

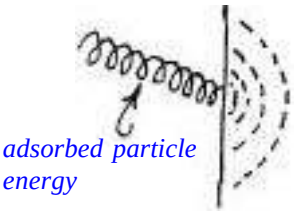
If an atom is of lower energy that the particle some of the particles energy is transferred into the atom and the particle looses some of it energy potential.



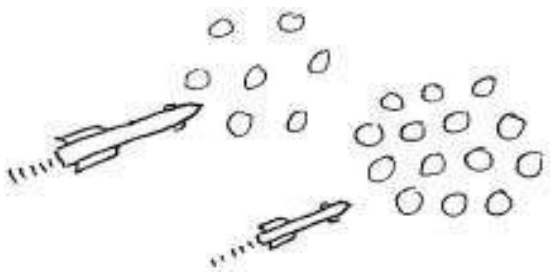
If the opposite is true and the atom is of high energy then the sub molecular particle can gain energy. Which of these happens depends upon the energy gap and where that gap is located in the energy scale of the gravimetric chart. If the particle and atom are of the same energy the neither will be affected.



It can be seen from the above that sub molecular particles can penetrate material substances but to do so certain conditions have to be met. If these conditions are not met then the radiation will be converted by the atomic structure into something else, usually heat or gravimetric compression.



adsorbed particle energy

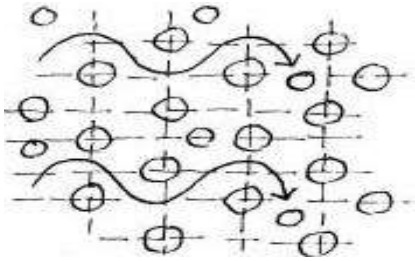


Density

The denser a material the harder it is for radiation to penetrate, here there are two factors. If we go back to the analogy of the rocket passing through the asteroid belt the a bigger rocket is more lightly to be hit, also if there are more rocks it is more likely to get hit.

Bonding Matrix

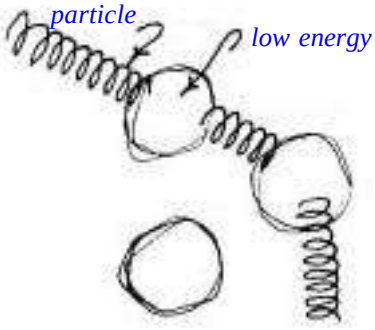
A particle will follow a set vector helix therefore if the matrix of a solid is such that it deviates form the particular set grid pattern the penetrating particle will become out of synchronization with the matrix and hit an atom.



irregular atomic matrix provide more of a barrier or energy particles

high energy particle

low energy



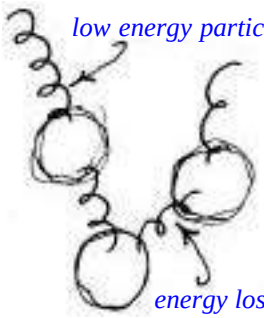
very little loss between interactions

Energy

If a low energy particle comes into contact with a normal energy atom it will interface but have little direct impact on the atom, it will be thrown back again into the void to contact with other atoms each time loosing some of its energy until completely absorbed and converted into body energy.

If a very high energy particle hits the body of low energy atoms some of the energy will be absorbed but sufficient energy will remain for the particle to penetrate deeper into the body and depending upon the thickness, exit still within its original frequency parameters.

low energy particle

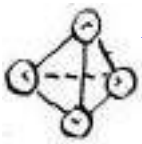


energy loss on each interface soon depletes energy

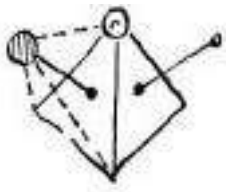
Light and glass

All the above rules apply to the light frequency radiation and light behaves in the same way as all the other radiation. The property of light penetration of glass is just the single point where some of these properties hit the balance where a matching harmonic between a particles frequency, energy and dynamic sit perfectly with that of an atoms energy and matrix.

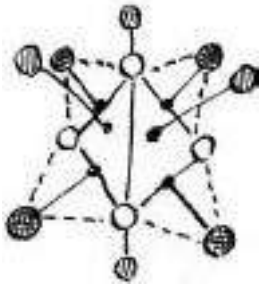
Glass



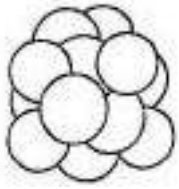
prime bond spike on each point of the pyramid



second spike central to each of the four faces



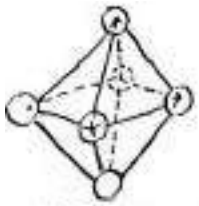
the next spike on each edge of the pyramid equal distance from the other points give silicon 1 (14)



natural silicon on pyramid stack

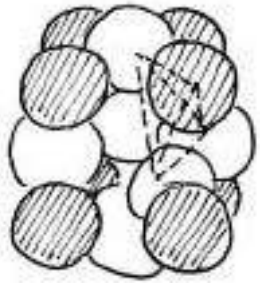
Clear glass is comprised mainly of silicon and it is this that is the key to its transparency to light frequency particles. Silicon is a primary element based upon the 14 unit stack, that is it has 14 basic atomic spikes making up the single atom.

Silicone in its natural state will form as a natural stack on the tetrahedron, the three sided pyramid. In this state it is opaque because the atomic windows give it an obtuse atomic reflex angle and energy profile less than that of 'light'.



diamond shape two four sided pyramids reflected

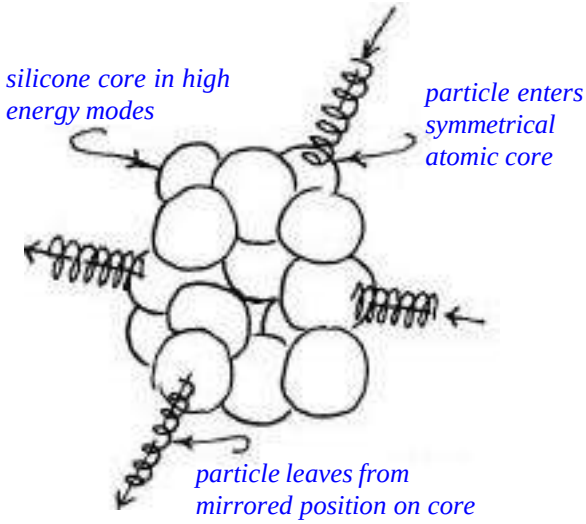
additional spike on each face adding 8 a total of (14) Silicon 2

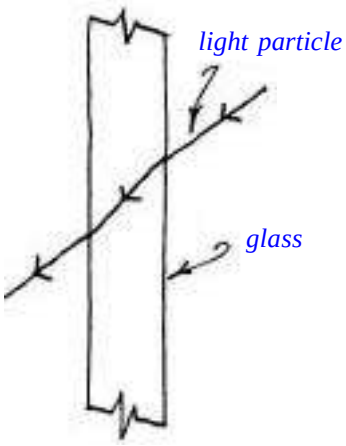


high energy silicon on a diamond shaped

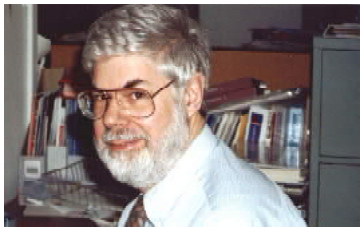
Silicon in its basic state is not transparent and has to be modified to push it into this state. To modify silicon energy is pumped into the basic atomic structure, at the critical energy point the stack arrangement will change from that of the three sided pyramid to that of an octahedron, two four sided pyramids fixed base to base giving an eight faced solid.

This eight faced solid has two special properties, and energy quotient equivalent to that of 'light' particles and more importantly an internal reflex angle of 180 degrees. This 180 degree reflex angle is achieved because of the complete symmetry of the atomic stack within this configuration. This symmetry also leads to a particular grid structure that transfers the reflex of sub molecular interface particles directly along all directions of the internal grid structure.





The Author



I suppose this study started along time ago when I was a very small boy playing with a magnets. It was simple curiosity “How do magnets work”. What was this force pushing against each other when you put two north poles together, an invisible force but a very real one. I did not suddenly realise I had a life’s mission, yet somewhere at the back of my mind there was small box where I would store interesting nuggets of information.

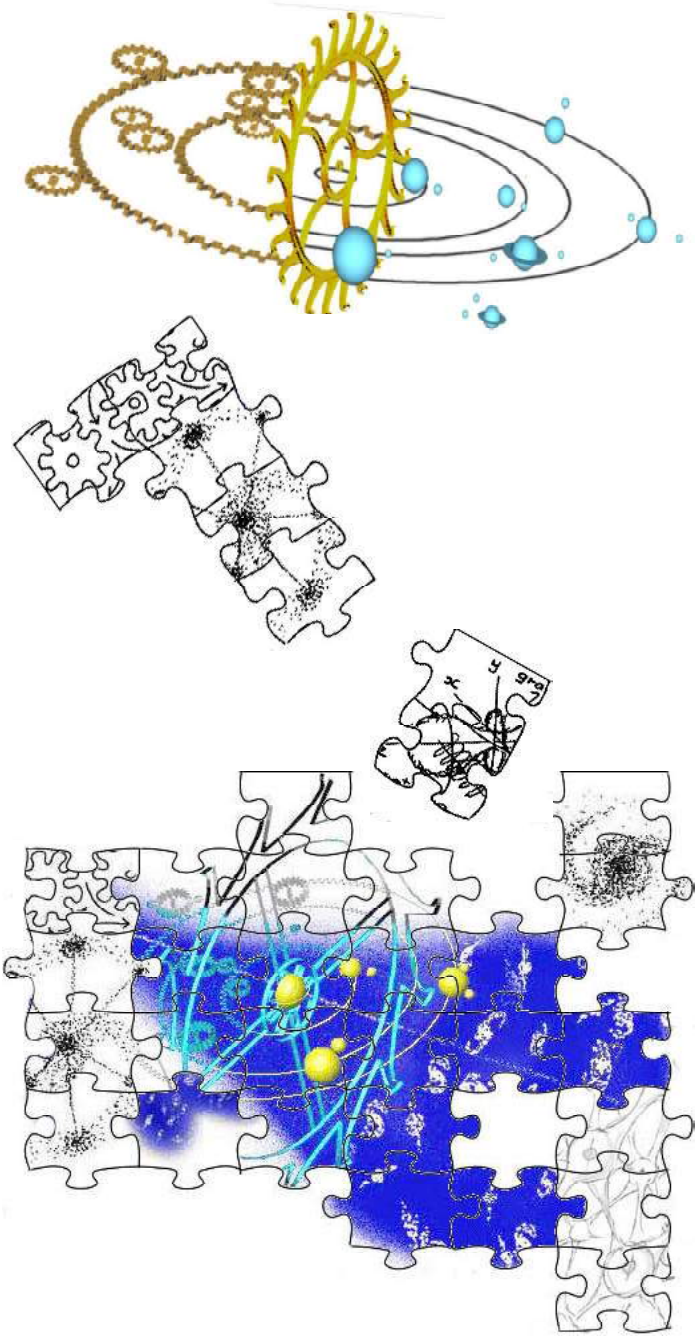
It would take a long time to answer that small boys question. The cold war raged and men were going into space, there was the promise of free atomic energy and the discovery of more atoms than letters of the alphabet. I turned into a nerd, all my mates had girl friends, I had a rocket and a microscope.

I had not set out to produce a project such as this, its evolution has been strange and far from constant. Always however somewhere hiding away in the back of the mind was this small boy ready to pounce on any nugget of information relevant to his quest. Men stood on the moon, the cold war collapsed along with the Berlin Wall and probes were sent to all the planets in the solar system.

Then quite out the blue one day, that small box at the back of my mind opened, It was like a giant jigsaw and the picture began to emerge. It started to make sense.

That day was in 1979 and this is the fourth and I hope the last update. Where I think most of that little boys questions have been answered.

Anthony James Kemp. Jan 2016



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