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Raman Scattering and LASERs

by Miles Mathis

In this paper we will compare current light theory to my theory, showing again the deficiencies of the former and the efficiency of the latter. The current explanation of both phenomena (Raman scattering and LASERs) starts with atoms in an excited state, so we need to ask what that means. An excited state should be compared to an unexcited state, which is called by the mainstream a ground state. This is the lowest-energy state, and is called by them a vacuum state. So already we have imprecision. It is admitted that many substances are in a ground state at room temperature, and room temperature on Earth is of course nowhere near absolute zero. Rooms on Earth are also not in vacuum, last time I checked. Logically, common substances in a ground state are simply substances the atoms of which are **in equilibrium with the local charge field**. That charge field strength isn't determined by the vacuum or by absolute zero, it is determined by the Sun's recycled field, and is therefore a result of our place in the galaxy and Solar System.

Now, to excite a substance and cause some part of it to rise above this ground state, we have to add energy. In the current question, we will be adding energy by adding photons. This is a special case already, because normally energy is added to systems with *ions*. Electromagnetic energy is easier to add to a system in the form of electricity or magnetism, and although charge is also involved there, the charge is driving ions of some sort. Here, we have the photons without the ions, which clarifies things somewhat—or should.

Let us begin by studying the mainstream explanation of excitation. As usual, the mainstream tries to explain everything with electrons. Already you can see that is sort of perverse, given that we have simplified the experiments by introducing photons only. So we aren't adding any electrons to the mix, but the mainstream still wants to answer all questions with electrons. They do this because the current theories go back many decades, to a time when electrons were all they had. Going back to the early 1900s, they had used the electron to explain chemical bonding, then Hydrogen emission, and so on, so when they came to the current problem they naturally wished to use their manufactured orbitals to explain this as well. However, I have shown in previous papers that these orbitals don't exist. Even if they did exist, the historical and prevailing theory of bonding would still fail, since it is upside down to its own field potentials most of the time. It is gloriously irrational and contradictory, and always has been, so we have to leave it behind. Bonding, like everything else, is explained not by electron orbitals and bonds, but by charge channels created by the nucleus. The nucleus recycles real photons in defined streams through it and around it, and these streams create all the potentials we see. They also create the bonds in a physical and mechanical manner, with simple plus/minus sockets, as with male/female

plugs. The nucleus is a big spinning engine, made up of many smaller fans, and it creates a real photon wind via a real and classical mechanics. Given that, I think you can already see how the current explanations of Raman scattering and LASERs must fail at the foundational level.

But rather than rehash what I have already shown elsewhere, here we will look closely at how light interacts with matter in these phenomena. To do that, we have to return to mainstream theory, which tells us that an electron in the substance absorbs a photon, gaining its energy and jumping up into a more energetic orbital. Did that ever make any sense? No. How, exactly, does an electron in an orbital absorb a photon? To get anything like an absorption, we must imagine a direct collision. The mainstream doesn't use spins here, notice, explicitly avoiding that with the word "absorption". They don't want to have to deal with spin transfers, so we simply get an energy transfer. Problem is, matter doesn't work that way, and neither do the laws of collision. An electron hit by a photon should obtain its energy in a transfer via momentum, which is a vector. In other words, the electron should be pushed in the direction the photon was going. The odds of this collision bumping the electron into a higher orbital are approaching zero, since the electron has to have some real vector at the time of collision. The chances that the electron's momentum and the photon's momentum would combine to bump the electron up are vanishing. For all practical purposes, the odds are zero, since we require a photon with the perfect energy hitting the electron at the perfect spot in the orbit.

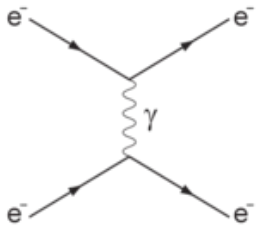
Of course the mainstream uses the cloud dodge here, to deny all possible mechanics. We are told that because we can't measure the electron to be in any place with any definite vector, it doesn't have one. That old dodge has been very useful for the mainstream, but unfortunately for them newer experiments are showing it simply isn't true. Better machines have allowed us to pretty much pinpoint quantum particles, and we now know they don't exist as probability clouds. They exist like anything else: as real particles with real positions and vectors.

But even without definite positions and momenta, electrons have always had definite masses. An electron that absorbed a photon should have an elevated mass, no? I will be told that photons are massless, but that isn't to the point, since photons do have mass equivalence. If an electron absorbs a discrete bundle of energy of any sort, its mass equivalence should rise. I will be told that in the collision, all the photon's energy is transferred as energy, with no transfer of mass. But that also is illogical. In the absorption, the photon's velocity has dropped from c to the electron's velocity, which is way below c. According to current theory, energy can only be massless at c, so how can the energy transfer at below c but remain massless?

We have the same problem when the electron is said to emit a photon. Actually, we have all the above problems and then a spate of new ones, since emission is even more illogical than absorption. Just for starters, how can an electron emit a photon and maintain the same mass before and after? If you catch a basketball and then later throw it, has your mass remained the same all along?

And how does the electron know to emit this photon? How does the electron know what energy photon it needs to emit? I will be told that in the case of the LASER, the electron is bombarded with a photon, and that photon hit tells it what size photon to cough up, and in what direction. Supposing the previously absorbed photon was still embedded in the electron, and that it was hit by the new photon directly, that might begin to make some sense, but that isn't current theory. As usual, current theory exists by ignoring all mechanics and all sensible questions.

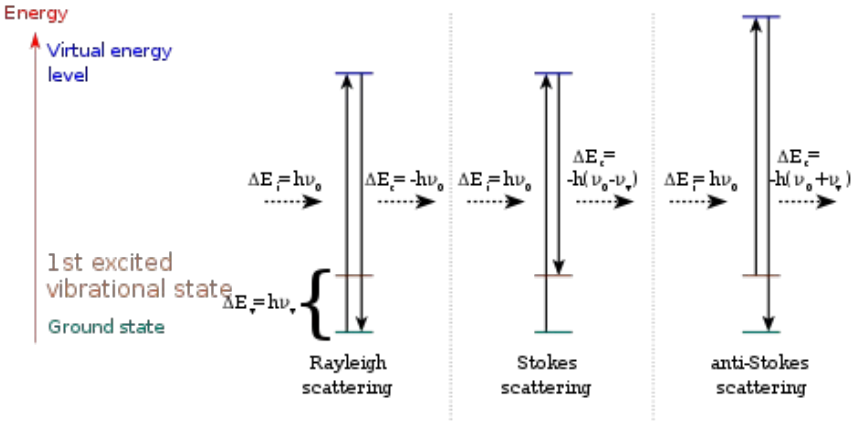
On the Wikipedia page for Raman scattering, they lead with this Feynman diagram:



Pathetic, since that explains precisely nothing. It is just an obvious bit of mystification. Even worse, we are told the photon there is a virtual photon, not a real one. That is even less helpful, if possible, since LASERs make use of real photons, not virtual ones. Adding real energy to a system should cause it to respond with real energy transfers, not virtual energy transfers. And besides, that diagram doesn't even apply to the current problems, since we don't have an electron interacting with an electron. The incoming energy is photonic, so one of those *e*'s in Feynman's diagram needs to be a photon. Are we supposed to believe that a photon interacts with an electron via a virtual photon? What would be the point of that?

Clearly, current theory is an atrocity. So what is really happening when a substance is excited? If the substance is being excited by charge or light alone, the photons boost the ambient field, so the nucleus must recycle a denser stream. In this sense, nothing is being absorbed or emitted. Photons are never absorbed, they are only channeled. The substance responds in a quantized manner not because its electron orbitals are quantized, but because the incoming photons are quantized. **The photons** set the quantization pattern—along with the structure of the substance—not the electrons. As we have seen again and again, the electrons are just buoys in the field, telling us the charge density at that location. But the electrons are simply following the photon wind. Yes, the electrons are quantized, like everything else, but they don't **cause** the quantization. They are just an effect.

With that in mind, let's take a closer look at Raman scattering. We are taught three types of scattering, and Wiki gives us a diagram for them: Rayleigh scattering, Stokes Raman scattering, and Anti-Stokes Raman scattering.



Complete garbage, as usual. I have already shown in my paper on Rayleigh scattering that it is actually Anti-Stokes, with a huge production of energy. And without real spins, it is impossible for the mainstream to explain Anti-Stokes scattering mechanically. We are taught that Anti-Stokes shifts are only possible with a cooling of the crystal (dissipation of thermal phonons) or something similar, but it

is known that Anti-Stokes shifts occur without cooling of the substance, as in the atmosphere. Rayleigh scattering in the atmosphere is actually an Anti-Stokes shift, with no cooling of the atmosphere. What allows this is the rising charge field of the Earth, and magnetic spinups in the charge field.

Now, the mainstream knows this on some level, which you can see at Wikipedia in the section on Raman scattering called "selection rules". There, they admit the effect depends on the **polarizability** of the various states. Mechanically, that must mean it depends on the real spins involved, but the mainstream will not go there. They prefer a mechanically unassigned polarity, since this allows them more wriggle room and skirts the necessity of coming up with rational diagrams. As we have seen, mainstream physicists can't draw or visualize to save their lives, and that is the real reason they gave up on real spins around the time of Maxwell, 150 years ago.

It is true that Raman scattering can either boost or tamp down photon energies, but the mechanism for that is real spin. Spin is polarized, and can be either up or down, in the simplest analysis. Energy is boosted when spins match, causing spin-ups; and damped when spins are opposite, causing spin-downs. This is why direction is also critical in all such experiments: if you keep the same production of light and the same substance, only changing the direction of the light or the charge field, you can reverse the entire field and thereby the outcome. Why? Because the same photon moving up becomes an antiphoton when moving down. And a photon moving left becomes an antiphoton moving right. Everything in the experiment has a chirality, and chirality is reversed by reversing direction. If you have a watch with a hand on it, you can see this for yourself. Your watch moving toward you spins clockwise, obviously. But turn it around and move it away from you. It is now spinning counter-clockwise.

From all this, you can see that the very word "scattering" is a misnomer. It gets you thinking in the wrong direction from the start. Nothing is being scattered in Raman scattering. The introduced light is simply joining the already existing charge streams, which are also light. Unless the introduced light is IR, it won't match the existing charge streams in frequency, but that is of little concern. The closer it is to IR, the easier it is to step down to the nuclear channels, but the nucleus can channel any EM radiation through or around it, given the proper help.

As more indication that electrons in orbitals are not involved, see the section on Raman scattering called "space-coherence", where it is admitted that the phase shift involved is a simple function of the incoming and outgoing wavelengths of the light. If orbitals were involved, we would need to include the changing orbital distances and other factors. The fact that we don't indicates that whatever is causing a variance in electron energies is not causing a jump in orbital levels. In other words, the electron may be a player here, but not in the way we are told.

Now, what about LASERs? If you take a substance that is already excited and hit it with the same photons it is already producing, you can get **amplification by stimulated emission**. How does the mainstream explain that? Basically, it doesn't even try. It satisfies itself by *describing* the process, not *explaining* it. You can see why they normally don't try to explain it by consulting the page on stimulated emission at Wikipedia, which *does* try to explain it. Here are the first two sentences there:

Stimulated emission is the process by which an incoming photon of a specific frequency can interact with an excited atomic electron (or other excited molecular state), causing it to drop to a lower energy level. The liberated energy transfers to the electromagnetic field, creating a new photon with a phase, frequency, polarization, and direction of travel that are all identical to the photons of the incident wave.

Hoo-boy! Does anyone but me read these things closely? I have to think not. Why would an

incoming photon cause a drop to a *lower* energy level? Normally, incoming energy causes an increase in energy, not a drop. If the photon is hitting the electron, it should cause an energy increase, not a decrease, right? Collisions don't normally cause negative energy transfers, do they? So I guess we are supposed to believe the incoming photon just blows by the electron in a close pass, its wind causing the electron to cough up a photon—a photon that just happens to be the same size and energy as the one that just passed. So where we had one photon, we now have two, one the clone of the other. Convenient. And the "liberated" photon joins the EM field. Does it really? And how does it do that? I thought photons weren't affected by EM fields. And what is this EM field they are talking about, at this level? Do they mean the charge field of the nucleus, or what? If it is the charge field of the nucleus, how does this real liberated photon join it? I thought the charge field of the nucleus was composed of virtual (messenger) photons. How does a real photon join a field of virtual photons? You see, the mainstream doesn't have a real charge field composed of real photons, so the statement "joins the EM field" is an empty telling. There is nothing there for a real photon to join.

This reminds us of many other mainstream fudges, whereby the same particles in the same field cause opposite effects, depending on what the theorists need. An incoming photon can apparently either cause an electron to absorb or emit, depending on what we see. Sort of like how a free electron can either move toward an anion or a cation, depending on what the ionic or covalent bond requires.

As usual, mainstream theory isn't just bad, it is horrific. They tell you these outrageous things to your face, and then browbeat you into accepting them. And the whole history of Modern physics is made that much more disgusting by the levels of salesmanship accompanying it. Our man Feynman, who we saw above—responsible for the "diagrams" bearing his name—was one of the worst, trying to sell a patched-together jalopy as a Bugatti Chiron.

So what is actually happening with stimulated emission? Well, it has nothing to do with electrons in orbitals, since they don't exist. In some situations, the electrons at the south pole of the nucleus (the primary valence electrons) may get involved, but they aren't *causing* the phenomenon. Like the nucleus itself, they are simply channeling photons. Yes, electrons channel photons as well, though on a much smaller scale. Anyway, in both excitation and stimulated emission, the basic mechanism is a boost of the existing ambient charge field, already channeling through the nucleus. When we introduce light, we are basically introducing new charge, since light and charge are the same thing: photons. The boosted charge stream spins up the nucleus, which then spins up the entire charge stream. In short, visible light spins up the IR photons in the ambient charge field to match its wavelength.

If the channeled charge stream *already* matches its wavelength, due to prior boosting, then a LASER is created. Since the existing stream has been pre-tuned to the incoming stream, the incoming stream can pass straight through the nucleus along the main channel, south pole to north, with no stepping up or

down and therefore no interference. The skids have been greased, so to speak. Energy losses (or gains) during LASER production are then explained by the specific nuclear configuration, as well as by the orientation of the substance relative to the Earth's charge field. The Earth's own charge field can never be vacuumed from the experiment, so it will always interfere to some extent. And the configuration of most nuclei will also interfere, since in almost all situations and temperatures most nuclei will want to pull some charge out equatorially. Plus, we always have to consider the reverse charge stream or anticharge moving north to south against our main line. Since on the Earth, about 1/3 of all ambient charge is antiphotons, that anticharge will be entering the north pole of the nucleus, not the south pole. Depending on the experimental set-up, that charge can either spin up or spin down the main charge stream going north. See my paper on Period Four and through-charge for more on that mechanism.

As you can see from the above analysis, LASER strength is going to be maximized when all three factors are maximized. In other words, when the proper substance is used, the proper orientation is achieved, and the anticharge is minimized. The proper substance is one where the nucleus has no carousel level, (meaning group one and two elements, in the simplest analysis).* In this case, the spinning nucleus will not be trying to pull charge out equatorially. The proper orientation to the Earth's charge field would be inline with it, meaning straight up. A LASER pointing straight up will be boosted by the Earth's charge field. In this case, the south pole of the nucleus is most open to charge coming out of the Earth. Anticharge can be minimized in several ways. LASERs would be powerful on Venus, for instance, where the charge field is very imbalanced. Venus' charge profile doesn't have much of a mix, which is why it is non-magnetic. There, the reverse stream is very weak, and it wouldn't interfere with the LASER. On the Earth, there are various ways to pre-tamp the reverse stream, some of which the mainstream already knows about, so I won't list them here. You just want your ambient charge field to be very rich in photons and very poor in antiphotons, and that can be achieved with a strong magnetic field of the right sort. It is fairly easy to turn antiphotons into photons (flip them over), or to exclude antiphotons.

*Since LASER production is a form of conduction by the nucleus, you want to create a substance with the best conduction. Normally that would be Silver, but since Silver has a large carousel level, it will want to pull some charge out equatorially. Just as the strongest magnets are compounds, the best LASER will be composed of some compound substance, chosen to maximize through-charge in one direction. I have shown that the strongest magnets actually rearrange the outer level of the nucleus in subtle ways, so we should seek to do a similar thing with our LASER. In other words, we don't have to be satisfied with the existing structure of each element. Given the right sequence of elements in compound, we can create our own nuclear structures to suit our purposes.