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## UFO UpDates Mailing List

### UFO luminosity - some observations

From: **Mark Cashman** <[mcashman@ix.netcom.com](mailto:mcashman@ix.netcom.com)>  
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Subject: UFO luminosity - some observations

I thought it might be interesting to set some data and speculations before the lists to which I subscribe, in the interest of generating some comments on one of the more interesting areas of UFO physics. The material below is also accessible at

<http://www.temporaldoorway.com/ufolumin.htm>

It often is said that we know very little about UFOs. The following is some of my "beg to differ". However, argumentative persons should note that the working hypothesis used in the following is

- 1) UFOs have an objective existence as solid objects which emit energy.
- 2) UFOs as solid objects have a body and an area outside the body. This "sheath" area is where many luminous effects exist.
- 3) UFO luminosity is probably the result of energetic processes which may very well be technologically generated.

So on to the points of interest...

There are several categories of UFO luminosity:

- a) Full body, b) Patchy body, c) Rim lighting, d) Point sources, e) Beams.

Full body luminosity is usually observed on objects in flight. In rare cases it is observed in a landed or hovering UFO, however, in those cases, the object usually almost immediately engages in flight. Occupants are (I believe) never observed near UFOs in the full body state (in fact, landed UFOs rarely emit luminosity, except in a few cases where emissions from the base of the UFO are seen to continue as the UFO hovers). In some cases, the full body luminosity flashes on and off in a way frequently compared to a fluorescent light startup (this was reported at Levelland (<http://www.temporaldoorway.com/ufo/report/571102.htm>), 1:15 AM). At my website, the Beaver Falls, PA photos (<http://www.temporaldoorway.com/ufoextlu.htm>) represent one of the best examples of full body luminosity. Further, the Levelland case indicates some relationship between full body luminosity and vehicle interference effects (the report in question is not currently included in the summary - however, the witness observed the intensity of his headlights varied inversely with the brightness of the UFO luminosity. It is unknown whether this could be accounted for by the "washing out" of the headlights by the brightness of the UFO).

Patchy body light is usually observed on slow flying or hovering objects. Sometimes this is exhibited as a full body covering which displays different colors on different portions of

the object's geometry (i.e. a dome which differs in color from the body of the object). Other times, as in the Tulsa, OK photo (<http://www.temporaldoorway.com/ufonear1.htm>), there are areas of darkness between the lighting patches, and the patches can be seen to be fairly well delineated.

. Rim lighting can be part of a patchy body light or can be the only lighting displayed by an object. This is sometimes perceived as "portholes" and sometimes as a solid band. It has also been seen to flash in sequence and in unison. Sometimes the rim lighting is seen to provide the illusion of rotation. As shown in the Moreland (<http://www.temporaldoorway.com/ufo/report/590713.htm>) case, it seems this is distinct from the sequential flashing of the sort observed in the Exeter (<http://www.temporaldoorway.com/ufo/report/650903.htm>) case, and actually represents some form of movement around the rim of distinct sources. The Moreland case, among others, also suggests that as with the previous two categories, these "lights" are actually some sort of plasma, probably a cold plasma, and, further, that the generation of this plasma is distinct from that produced by combustion, in that insufficient turbulence exists at the boundary layer to produce the typical loud noise that such "flames" would be expected to generate.

. To the best of my knowledge, there are few close observations of point source lighting. If the Villas Boas case is to be believed, his observation indicates that these are bright areas of the surface of the object rather than incandescent lights as we know them. Further, assuming the validity of the Petit-Rechain photo from Belgium (<http://www.temporaldoorway.com/ufo/report/900404.htm>), we can see that the tips of a triangular UFO show lights which may also be attributable to a plasma phenomenon. In that photo, one can observe interesting striations of density in the light, and wisps which appear to be partly detached from the source. The example of what the Moreland case revealed about the rim lighting of UFOs makes me cautiously willing to consider that point sources are, like the rest of UFO lighting, manifestations of some energetic phenomenon, likely plasmas, near the surface of the UFO.

. Beams appear to fall into two classes - normal and slow. Normal light beams behave like searchlights or lasers, and are likely to be just such phenomena (though one may note that a laser can be produced from a plasma, and it is possible that UFOs simply control their plasmas in such a way as to cause lasing of various sorts). Slow beams, as observed at Trancas, Argentina (<http://www.temporaldoorway.com/ufo/report/631021.htm>), seem, on the other hand, in view of their propagation speed (3 to 20 feet per second), to be some sort of plasma phenomenon.

Now, in looking at the various cases, one can come to some tentative conclusions:

. Most photos of luminosity show some form of limb darkening, strengthening the idea that UFO luminosity is a plasma. (See, for instance, the Tulsa and Beaver Falls images).

. UFOs must therefore input energy into the near surface area to generate luminosity. This energy does not appear to be heat energy (since UFOs emit relatively low levels of heat in close encounters, and since the expected sound is absent), and thus is more likely to be the result of the injection of electrons (or other particles), UV light, x-rays, or gamma rays into the near surface area. Because of the difficulty of creating plasmas at atmospheric density and temperature, it is also possible (especially in light of the luminosity of some reported submarine UFOs (<http://www.temporaldoorway.com/ufo/report/670720.htm>)) that UFOs create an area of lower atmospheric density near their surface.

. UFOs may maintain the near surface area ionization by emitting energy into the near surface area across the entire surface of the object, or from localized areas (the rim being a likely suspect for disc shaped UFOs, the points for spindle shaped or elliptical UFOs). Further, it is possible that maintaining this ionization even when not in the full body state makes it easier to go to the full body state.

. The maintenance of this ionization may also benefit from

the injection of ionized atoms or molecules into the sheath, much as a gas laser sometimes requires replacement or refreshing of its contents. This may explain the occasional chemical odors and the occasional presence of apparently chemical related burns and rashes in close encounter cases (<http://www.temporaldoorway.com/eyeskin.htm>). On the other hand, these odors and substances may be a by-product of the dissipation of energy injected into the sheath (for instance, could formaldehyde, a frequently reported smell, be produced by chemical reactions in an atmospheric plasma without the injection of potential reactors into the sheath?).

. I would suggest that the point source lighting may well represent the localized injection of energy or energetic atoms / molecules into critical locations of the sheath area when the UFO is in the non-full body state. Some cases suggest these even may be visible in the full body state when the full body emission wavelengths are sufficiently different from those near these localized sources. On the other hand, point sources may also represent random or sporadic lasing of specific areas of the sheath under certain conditions of energy emission or local plasma state. I am skeptical that these represent lighting in the sense of our aircraft lighting.

I am further skeptical that any of the luminosity represents a by product of a propulsion system, since UFOs clearly can fly while in the completely darkened state (note however that one case does show a rim opening that became luminous immediately prior to the witness feeling a force impulse which knocked him down. This case, which appeared in "Above Top Secret" is of unknown reliability - comments would be appreciated). Therefore, I suspect that all luminosity are manifestations of an air sheath for ensuring laminar flow over the UFO body at high speeds.

One other interesting point - a few UFO photos show small detached points and elongated spikes of luminosity (<http://www.temporaldoorway.com/ufomslum.htm>). It is possible that these represent the reaction of moisture with the electrical and magnetic field of the sheath, since some literature indicates a similar phenomenon happens in highly charged clouds.

I also consider it possible that UFO luminosity represents a laser-type phenomenon, in the sense that an energy population inversion might be necessary to allow UFO luminosity to propagate from the base to the edge of the sheath. I am currently attempting to find some mathematical tools which will allow me to calculate some related information:

. The amount of energy needed to create a luminous plasma at various densities and pressures from atmospheric gases.

. What controls the ability of photons to make it from the inside of the plasma to the outside and how can we interpret limb darkening in an attempt to derive the density of the UFO sheath.

I hope this is interesting to the lists, and I'd certainly appreciate any comments or clarification requests.

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