

TECHNICAL REVIEW OF RADIATION EVIDENCE IN CASH-LANDRUM CASE

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The physical injuries sustained in the UFO encounter known as the Cash-Landrum Event (No. 158, April 1981) appears highly symptomatic of acute radiation sickness. Dependent upon the level of the exposure, any or all of the following symptoms would occur:

1. Blood changes (reduced white blood count and anemia); Nausea and vomiting;
3. Diarrhea;
4. General fatigue;
5. Loss of body hair;
6. Bloody diarrhea and/or vomiting;
7. Convulsions and death.

Secondary effects are 1. Chills; 2. Local hemorrhaging; 3. Secondary infections; 4. Increased risk of all forms of cancer.

The level at which each of the above symptoms will occur in any given individual will vary based on personal resistance and health at the time of exposure. The general range list in Table 1 is based on observed data gathered by the Department of Defense (DOD).

Vehicle E-M, Continued

California, 1976) p. 56 & pp. 57-58.

9. *UFO Interference With Automobile Electrical Systems, Part 1, Headlights*, J. McCampbell (CUFOS, Chicago, 1976) p. 164.

10. *Further Evidence of UFO Radiation*, J. McCampbell (MUFON UFO Symposium Proceeding, Seguin, Texas 1977) pp. 25-32.

11. *The UFO Enigma*, D.H. Menzel & E.H. Taves (Doubleday, New York, 1977) pp. 103 & 107.

12. *Vehicle Interference Report*, Compiled by G. Falla (BUFORA, London, 1979).

13. *UFOs-A British Viewpoint*, J. Randles & P. Warrington, (Robert Hale, London, 1979) p. 118-119 & p. 127.

14. *The Encyclopedia of UFOs*, R.D. Story, Ed. (New English Library, London, 1980), p. 111.

15. *UFO Reports Involving Vehicle Interference*, M. Rodeghier, (CUFOS, Chicago, 1981) p. ix, & pp. 132-133.

16. *Size, Distance, and Duration Parameters of the Ignition Interference Effect*, D.A. Johnson (Abstracts of papers to be presented to CUFOS Conference, 1981).

17. *Searching for Patterns in EM UFO sightings*, P. McMahon (unpublished, 1982)

Table 1. Range of radiation exposure vs. symptoms (DOD data).

0-50 rem:	No observable effect
50-100 rem:	Blood changes and at the upper limit, possible radiation sickness (i.e., nausea, diarrhea, and vomiting), mild
100-200 rem:	Onset of radiation sickness with increasing severity, upper ranges, possible loss of body hair
200-300 rem:	Radiation sickness with accompanying first instances of death occurring within 30 days
300-450 rem:	Range considered as LD-50/30 indicating expected 50% of the exposed population will die of physiological damage and complication within 30 days
600-900 rem:	Range considered as LD-100/30, 100% of the exposed population will die within 30 days
5000 rem:	Neurological damage causing immediate incapacitation, convulsions, and death

In the Cash-Landrum case, the observers exhibited radiation sickness of varying severity as well as a local skin burn. The skin burn gives a further clue to the energy of the emitted radiation. For a surface burn to be observed on a person at the distance of 175 feet, the radiation might have been in the spectra of ultraviolet to the soft x-ray region. In this region, the principal radiation interaction is the photoelectric effect which produced the observed burn as well as the sensation of heat.

From the physiological injuries and observed skin burn, it is apparent that a delivered exposure of between 200-300 rem occurred in the observation period of not greater than ten minutes. From this data, the power of the emission can be calculated. For the calculation, it was assumed that the distance from the object was 175 feet and the exposure rate was 1200 rem/hr for a ten-minute period. To further simplify the calculation, it is further assumed that a monoenergetic gamma/X-ray of 50 keV was emitted from an isotropic point

source of the total gamma/X-ray emission, total power could be obtained. The total gamma/X-ray power appears to be around 50 kw.

The amount of power emitted in this fashion can give insight to the possible source of power employed. Several man-made devices will emit radiation in this range and power. These are 1. an unshielded atomic pile; 2. particle accelerators; 3. X-ray devices.

It is possible that the device observed was a military test platform. If this was the case, several types of devices could cause the observed effects such as a nuclear reactor or a large scale magnetohydrodynamic propulsion device. In either case, these devices would require massive shielding (i.e., weight) to make it a manned platform and would therefore most likely dictate that such a test vehicle be remotely piloted for early development. This would require that the pilot be in visual contact with the device, yet maintain sufficient distance to avoid excessive radiation exposure.

(CONTINUED)

OPEN LETTER TO PHILIP KLASS

Re: Statements Made on NOVA Program

By Bruce S. Maccabee, PhD
(MUFON Maryland State Director)

Transcript of the Statement by Phillip Klass regarding the initial radar detections and reporting of targets by the Wellington Air Traffic Controller during the beginning of the New Zealand sightings (from the NOVA program), followed by John Cordy, an air traffic controller in New Zealand (involved in previous sightings):

Klass: No, it's interesting, I think in that connection, to point out that the function of an air traffic controller is to maintain safe separation between an airplane and another aircraft....and yet the Wellington radar traffic controller did not bother, even, to call Captain Startup's plane and say "I have unknown targets in your vicinity". He did not do that until Captain Startup called and said "I've got a TV camera crew on board....do you have any interesting blips for me?". And then the traffic controller said "Oh yes, I have one, I think ten miles to

ahead, or five miles to your left, or six miles to the right," and so on. The interesting thing is, if Captain Startup at that point really thought that there was some unknown aircraft in his vicinity or directly ahead of him, he would certainly have said to the controller, "Please vector me out of the way. If this is a craft, you don't know its identity, if its not operating under your control, vector me around it because I don't want to run the risk of a collision." Yet, Captain Startup didn't ask for such directions, nor did the traffic controller volunteer them. And so, based on that, I think, each of them knew that these were simply atmospheric angels, or anomalous blips.

Cordy: We have to be rather careful when we do pass odd messages to aircraft because you mustn't distract the pilot from his primary duty, which is flying the aircraft safely.

(Editor's Note: Dr. Maccabee's

letter is too long and detailed to print in full, including a minute-by-minute reconstruction of the relevant portions of the 1978 New Zealand sightings and communications between the pilot, Capt. William Startup, and air traffic control. The author may be contacted at 10706 Meadowhill Rd., Silver Spring, MD 20901. The following excerpts are an outline of the letter contents.)

Dear Phil:

I believe that you owe an apology to UFOlogists and to the general public who may have watched the NOVA documentary, as well as to the pilot, copilot, and air traffic controller who were involved in the New Zealand sightings.

(continued on next page)

Radiation, Continued

Although a true unknown cannot be discounted, it is my opinion that this case is due to a military device not responding to flight control signals and the principals in this case observed the device during the subsequent recovery operation.

Comments on Stowe Analysis

(Mr. Stowe's analysis was reviewed by Dr. Peter Rank, Madison, Wisc., MUFON consultant in Radiology. Excerpts from his review follow.—Ed.)

Mr. Stowe is to be congratulated for the depth of his knowledge and the thoroughness of his analysis. Many of the general principles he has enumerated were used by me in evaluating the Cash/Landrum case, only with less precision.

I would agree totally with Mr. Stowe's analysis on pages 1 and 2. (The portion published here; the balance consisted of physics and mathematical calculations.—Ed.) Mr. Stowe has made certain assumptions which may

or may not be warranted. The first assumption is that the principals in this case suffered total body radiation. This is by no means clear.

I do not believe that a general dosage level can be assigned to the Cash/Landrum case. My reasoning is based upon the observation, to the best of my knowledge, that although both women had symptoms of radiation sickness, there were no well documented changes in the blood and the diarrhea reported was not bloody in nature.

My analysis assumed that ionizing radiation, exact wavelength undetermined, was responsible for most of the symptoms. We also know that the women had exposure to light as well as to infrared waves. As Mr. Stowe points out, some of the erythema of the skin can be attributed to ultraviolet, and some certainly can be attributed to shorter wavelengths with higher energy and of an ionizing nature. The extent to which microwave radiation was involved is not clear, and I was unable to come to a position with regard to it.

The data Mr. Stowe quotes from the Department of Defense are based primarily on the results of total body radiation at Hiroshima, as well as the pioneering research of Dr. Warren Shields, pathologist, who was one of the first investigators into the effects of radiation following World War II. It must be emphasized that our experience with human total body radiation is limited to these wartime episodes, plus a very few radiation accidents at nuclear installations since then.

I have no opinion as to the source of the radiation in the Cash/Landrum case, either military or unidentified, but must certainly agree that any of the three possibilities outlined by Mr. Stowe could be likely. Nevertheless, it must be emphasized that the source of this radiation probably was an instrument that emitted a wide variety of electromagnetic waves. It is therefore misleading to assume that monoenergetic rays of any kind are the principal determinant of the patient's symptoms.