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SUBJECT: Visit to WADC

4 Nov 52

Facts and Discussion

1. On 4 Nov 52 Capt E. J. Ruppelt and Lt R. M. Olsson visited Col Hood, chief of the Nuclear Powered Aircraft Branch of WADC. Previous to this visit, Col Hood had contacted ATIC in regard to certain sightings of UFO's at Oak Ridge National Laboratory, Tennessee, in which he and a Naval officer had attempted to obtain correlation between sightings and peaks in radiation backgrounds.

2. Col Hood stated that in Jul 50, the person who was then head of the Physics Department at Vanderbilt University (Col Hood could not recall his name, but stated he would find out and notify ATIC) said that he believed there might be some correlation between sightings of UFO's and increases in radiation. Col Hood and a Naval officer became interested and attempted to correlate these occurrences.

3. To effect this correlation, they went to a radar site at the Knoxville Airport (now an ADC AC&W Squadron - he did not know for sure whether or not it was ADC at that time) and got a copy of their log of unknown tracks. They then got the records from several radiation monitoring stations in the Oak Ridge area and attempted to make a correlation. Their attempts to correlate the data were not too successful. The radiation detection equipment that was used was the standard equipment set up to monitor the background count in four separate areas at the laboratory. One type of counter measured alpha radiation and one type gamma radiation (these were not the directional types of coincidence counters used at Los Alamos). Col Hood stated that approximately three times per month, peaks would be recorded on the tapes, sometimes on either the alpha counter or gamma counter and sometimes on both simultaneously. They took these peaks and the unknown radar pickups and in some cases were able to correlate them. No written record was made or kept, consequently, the percent correlation is not known.

4. Col Hood gave the name of a Mr. Ed Bettis of the Oak Ridge National Laboratory who could possibly give more details. Mr. Bettis is an electronics specialist on the NEPA project.

5. The possibility of detecting the passage of a nuclear powered aircraft was discussed. Col Hood stated that ground counters would definitely register if such an aircraft passed overhead. He said that if he remembered correctly, it had been computed that the aircraft being designed in the U.S. would give 1 Rontgen from an altitude of 50'. This is not dangerous if taken instantaneously. (For persons continually exposed, 1/80 of this is the limit.) This 1 Rontgen at 50' drops off with the square of the distance or $R = k/d^2$. He stated that naturally the shielding determines how much radiation would be detected. On an unshielded missile the level would rise by a factor of 10^6 . As far as can be determined, this would be the only way to detect a nuclear powered aircraft as the configuration is completely conventional.

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6. The possibility of instrumentation was discussed. Col Hood said that during 1950 an airborne counter had been devised and attempts were made to use it in the wing tank of an F-47 at Oak Ridge. As far as he knew, this was never done because they could not get a powerful enough power source. He stated he didn't believe an airborne system would be too successful because the area that would give radiation would be too localized. His idea on instrumentation was to utilize a magnetometer in an effort to establish whether or not a reported object was material or not. (Contrary to what we've been told, he believed a magnetometer could be easily obtained that had a fairly long range - up to 50 to 75,000', if not more.) He suggested a setup of several types of instruments all cross checking each other, a magnetometer, a directional coincidence counter for radiation and radar.

7. During his visit to ATIC this summer, Col Hood had mentioned the fact that his branch was interested in Einstein's latest theories on a relationship between gravity and lines of magnetic force(???). His branch has contacted Einstein and obtained the names of several people whom he thought could pursue this idea further and determine how his theory could be utilized for power. The Office of Flight Research is now contacting these people to see whether or not they would accept a study contract.

8. Col Hood's suggestion was that we go ahead with a limited instrumentation program now. His idea was that the cost would be low and he believes we could get at least preliminary data that we could expand on. He offered ATIC any aid his branch could give.

Conclusions

9. The only conclusion is that these people made a very preliminary type of study on the correlation of unknown radar pickups and rises in radiation. There is definitely nothing to "get our teeth into". Again, however, there are indications that there may be some correlation present.

10. The use of a magnetometer may be feasible to determine whether a material object is present and if this object is in any way utilizing the earth's magnetic field in any way.

Recommendations

11. More details on the incidents at Oak Ridge should be obtained. Mr. Betts and the head of the Physics Department at Vanderbilt University should be contacted to see if any correlations have been attempted since 1950.

12. Someone at WADC should be contacted to learn more about magnetometers.

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