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Subj: Anomalous Luminous Phenomena (Seventh Report)

May 23, 1950

to move horizontally. However, a strictly vertical infall is also very rarely observed in the case of genuine meteor falls.

3. An analysis just completed of the time distribution of the green fireballs so far observed permits us to add an 11th item to the list of differences given in paragraph 1 above. The graph of frequency versus local time which accompanies the present report shows that the maximum frequency of sighting of green fireballs (occurring at approximately 2030) coincides in time with neither the frequency maximum for ordinary meteors (occurring at approximately 0300) nor the frequency maximum for meteorite falls (occurring at approximately 1600).

4. Inspection of the graph referred to in paragraph 3 also will show that most of the green fireballs have been sighted in a time interval extending from about 5 p.m. to 11 p.m. (MST). This concentration might be even more pronounced if it were possible to screen out of the secondary maximum, around 2 a.m. (MST), all ordinary meteors which have been mistakenly identified as green fireballs. That such misidentification has occurred is strongly suggested by the near coincidence in time of the secondary maximum of the green fireballs and the well established early morning maximum of the ordinary meteors.

5. Some significance may attach to the fact that the time interval alluded to in paragraph 4 extends from about 7 a.m. to 1 p.m. in the Ural region of the USSR. Since missiles moving with velocities of the order of those found for the green fireballs for which real path determinations have been possible would travel from the southern Urals to New Mexico in less than 15 minutes, a possible interpretation of the concentration of sightings referred to in paragraph 4 is that the green fireballs result from guided missiles launched from bases in the Urals in the morning hours before cloudiness due to convection or blinding afternoon dust storms can interfere with non-radar tracking, such as has been used by the Optical Trajectory Section at White Sands Proving Ground.

6. There is also a pronounced concentration of green fireball incidents on the four days, Friday, Saturday, Sunday, Monday, almost all of the most widely observed incidents having occurred on Saturday or Sunday.

7. It is a curious and fairly well-established fact that there has been a distinct decline in the number of green fireball sightings during the last two months, within which the number of so-called "flying saucer" incidents in this region has attained an all-time high.

8. Although I have recently received from Dr. Joseph Kaplan of the Scientific Advisory Board a letter containing the statement "Frankly, I don't know of any U. S. experiments that would result in the appearance of these unconventional objects, and neither does Von Karman". I still

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