JPRS 77236 26 January 1981

China Report

SCIENCE AND TECHNOLOGY

No. 79



FOREIGN BROADCAST INFORMATION SERVICE

Approved for Release

51

JPRS 77236

26 January 1981

CHINA REPORT Science and Technology

No. 79

CONTENTS

NATIONAL DEVELOPMENTS	
UFO Phenomenon in China Analyzed (Cha Leping, Lin Hongjing; ZIRAN ZAZHI, Sep 80)	1
Eyewitness Accounts of UFO Sightings Published (Jin Tao; KEXUE SHIDAI, Oct 80)	6
APPLIED SCIENCES	
Television Receiver for Broadcast Satellites Developed (DIANZI XUEBAO, Jun 80)	11
Yield of LK N-MOS Dynamic RAM Chips Over 20 Percent (DIANZI XUEBAO, Jun 80)	12
HCP System for Automatic Compiler Programs Described (Liu Ouye; DIANZI XUEBAO, Jun 80)	13
Information on DYL-1300, 77-1 Microcomputers Presented (DIANZI XUEBAO, Mar 80)	17
Increasing Speed of Microcomputerized Sequential Machines Discussed (Jiang Mingde; DIANZI XUEBAO, Mar 80)	18
DYL 12-Bit High-Speed Look-Ahead Carry Generator Described (Wang Shoujue, et al.; DIANZI XUEBAO, Mar 80)	31
Simplified Calculations of Two-Way Slabs, Cylindrical Shells (Ding Dajun; GONGXUEYUAN XUEBAO, Dec 79)	43
Briefs Geological Survey Conference Time Transmitting Station	66 66

NATIONAL DEVELOPMENTS

UFO PHENOMENON IN CHINA ANALYZED

Shanghai ZIRAN ZAZHI [NATURE JOURNAL] in Chinese No 9, Sep 1980 pp 685-686

[Article by Cha Leping [2686 2867 1627] and Lin Hongjing [5677 4767 2468]: "Preliminary Survey of Unidentified Aerial Phenomena in China"]

[Text] Every country in the world has had large numbers of reports giving eyewitness accounts of unidentified flying objects (UFO's). During the past half year, fan; of the study of UFO phenomena in 15 of China's provinces, municipalities and autonomous regions have also collected and exchanged almost 100 examples of eyewitness accounts. This shows that in the vast territory of China, UFO's objectively exist as a phenomenon.

Reports about unidentified flying objects may be divided into three categories on the basis of their shapes.

The first type has been described as being like a disk or a globe in shape, with some being ovular or egg shaped. During daylight hours, they frequently appear as being silver in color, while at night they emit an orange-red brilliance. They are frequently accompanied by a white smoke cloud that has been emitted. This type has appeared in about 80 percent of the reports. The following are several fairly classic real examples.

At 2100 hours on 13 November 1978, Zhang Zhengmin [1728 1767 2402], a student in the 76th class of the Department of Space Physics at Wuhan University returned to his dormitory from the school library. As he entered the door, he said that the "moon" in the west was really frightening and had become much larger than usual. His roommates, Cheng Shanda [4453 1472 1129] and Han Erfan [7281 0059 4907] did not believe him because at this hour the moon should be in the east. The three thereupon rushed out of the room to take a look and sure enough, there in the west at a 40° angle of elevation in a clear night sky was a round object with a visual diameter of about l degree, giving off an orange-red light at a light intensity slightly less than of a full moon. The top part of the object was covered with a slowly curling cloud mass. The concealed portion was at times large and at times small. The entire object was slowly flying in a west by north direction, its color becoming deeper and deeper, and its brightness also gradually diminishing, but its visual diameter showed no apparent decrease in size. Classmate Cheng Shanda said, "There was complete silence at the time, and the three of us felt a little afraid. When the chemistry building blocked our view of the object, we raced to the top of the big

library (a high place) to look at it some more, but we don't know where it flew. The entire period of observation was about 10 minutes, and some pedestrians in the street also stopped to watch it." This example of an observation of a flying object was quite representative. More than 10 examples reported from another nine provinces and municipalities also described flying objects in either exactly the same way or extremely similarly. Among them, two examples also reported these objects as having flown into a cloud, illuminating the entire cloud in an extremely magnificent sight.

At 1800 hours on 9 September 1976, Hu Suisheng [5170 6659 3932] and some comrades from the No 2 Chemical Plant in Jiangxi Province were listening to a broadcast at the main entrance to his home on Huancheng Xilu, Yichun City, Jiangxi Province. Suddenly they looked up to see a silvery flying object in the air at a 60 degree angle of elevation that was shaped like a pair of cymbals connected together and revolving on its vertical axis perpendicular to the lower line of the setting sun. It constantly spurted out a silvery vapor, and it was at an elevation of approximately somewhat more than 2,000 meters. It flew at a fairly rapid speed from the east toward the northwest and disappeared in a distant mountain valley. The period of observation totalled 5 minutes. There were many witnesses in the streets at the time, and everyone discussed the event excitedly but without being able to explain it.

At 2130 hours on 9 September 1979, Shao Shengnan [5135 3932 0589], and Shen Ziran [3088 5261 3544], technicians at the People's Dayuan Farm in Jianli County, Hubei Province sighted a round flying object in the southwestern sky at a 70 degree angle of elevation. It was emitting a red and yellow ray of light and the forward part of it was circled with blue. Its brightness was about that of a 1 or 2 star; its visual diameter was about 30'; it trailed an awl-shaped tail, its length was four times the diameter of its round head; and its height was estimated at 1,000 to 2,000 meters. It flew rapidly and soundlessly from the northeast toward the southwest. They immediately called two people out to take a look at it. When they saw it only at about a 15 degree angle of elevation, suddenly it changed to a right angle and slowed speed, and then at an included angle of about 10 degrees to the horizon, it changed flight direction to fly toward the southeastern horizon where trees blocked the view and it disappeared. The period of observation was about 1 minute.

At 2140 hours on 9 September 1979, an outdoor movie was being shown at the Hunan Diesel Engine Plant at Zhangmuqiao, Changde County, Hunan Province when suddenly a commotion broke out in the audience, which frantically turned their heads to look upward at the sky in amazement. Lo Xuezhi [5012 1331 4249], a functionary in the plant's political department turned his head to look, seeing an object in the sky to the west at about 1,500 meters. It was oval shaped in appearance and emitted a powerful red and yellow light that was brighter than the full moon. The head of the object was orange-red, and it trailed a bright tail which seemed to be emitting a gas. It flew silently and parallel to the ground from the north toward the southwest, disappearing after 3 minutes. Lo Xuezhit used the 2.5 power binoculars he was carrying at the time to examine the object carefully, and wrote an exhaustive report. Changde County is 145 kilometers from Jianli County. On that night, the sky was clear and cloudless. This object might possibly have been the same object as the object in the example next above. If so, it may be inferred that its flying

Carrier and the same of the sa

speed was at least 850 kilometers per hour, and if you take into consideration the reduction in speed to change direction, it must have actually been even faster. In addition, according to Lo Xuezhi's estimate, the visual diameter of the long axis was greater than 2 degrees, so at a distance of 1500 meters, its lineal angle must have been more than 50 meters.

Disc shaped unidentified flying objects sometimes also appear at high altitudes. One summer night in 1965, when Song Jiandong [1345 1696 2639] of the broadcasting station in Jingan County, Jiangxi County was looking at the stars, (Song was on a temporary duty assignment in Beijing at the time in the courtyard at 20 Shangsitiao, Chongwen District), when unexpectedly he sighted a small bright point of light moving across the night sky from west to east at a speed similar to that of most artificial satellites. Soon afterward he discovered that a rather large point of light had appeared behind the first one. After 10 seconds or so, the distance between the two points of light gradually narrowed, and Song Jiandong immediately aimed his homemade astronomical telescope at them. He saw that the large point of light appeared oval in shape and emitted green light. The small point of light remained in the shape of a dot. When he again used his unaided eyes to look, the large point of light suddenly collided with the small point of light at a speed several times what it had been. The two moved now left now right in pursuit of each other as though playing. As the two points of light almost collided, they both disappeared at the same time. Song Jiandong looked, his eyes astounded and his mouth agape, and recorded the event immediately thereafter. He felt they were positively not meteorites or artificial satellites.

In still another report, an unidentified flying object appeared at low altitudes, frequently shining a powerful beam of light toward the surface of the earth. In late January 1979, an unidentified flying object of ordinary shape stopped suspended above a highway in Training County, Fujian Province shining a blinding light downward and scaring in all directions three women from Zhukou Commune who were going to market before dawn. In February of the same year, an extremely bright flying olject darted across an airfield in Shanxi "lighting up half the sky." Similar reports have also come from Jiangsu and Hubei provinces. At 0930 on 1 July, Liu Baoren [0491 1405 0088], Tian Qing [3944 7230], and Zhao Yauyan [6392 3601 3601] of the Institute of Electronics, Chinese Academy of Sciences, were waiting for a bus at the Qijiahuozi bus stop in the northern suburbs of Beijing. They sighted a ball shaped flying object in the sky with an estimated diameter of 10 meters. From the bottom of it projected a tail that looked like a stick that was about 5 meters long, and hung straight down. It flew from due southeast toward the northeast against the wind at the speed of most airplanes and without noise of any kind. Inquires made by the witnesses revealed that on that day no meteorological or atmospheric testing balloons had been released by the Beijing Observatory or the Beijing Municipal Environmental Protection Bureau. Only the Beijing Meteorology Station had released a meteorology balloon, but the balloon was white, while the flying object appeared to be dark gray in color. The times did not jibe either.

The second category are huge, long unidentified flying objects. They rarely appear.

At 2040 hours on 23 October 1978, a huge, long unidentified flying object appeared in the sky over a certain airfield in Gansu Province. It carried two bright lights

ti in the second to the second to be the second of the

in front and at the tail, and flew from east to west. The speed of movement of this object was not astounding, but according to a report from airforce pilots and ground support personnel who had been watching an outdoor movie at the airfield, its visual diameter was 30 degree to 35 degrees. It covered half the sky, causing extreme astonishment. At the estimated height of 6,000 to 8,000 meters that they gave, its length must have been greater than 1,000 meters.

The third category of unidentified flying objects are in the shape of a spiral nebula. Composed of a brighted lightly central core, and revolving arms composed of small points of light radiated by the core, the volume may be enormous.

At 2300 hours on 26 July 1977, Zhang Zhousheng [1728 6650 3932] of the Yunnan Observatory observed an unidentified flying object of this type with an apparent visual diameter 5 degrees in extent in Chengdu, Sichuan Province. He made a record and conducted investigations, discovering that for 180 kilometers north and south many people had seen this unidentified flying object at the same time. Additionally, Yang Fozhang [2799 0154 4545] of the Chengdu Geology Institute, and Qian Ruhu [6929 3168 5706] of the Shanghai Ruijin Telecommunications Component Plant saw similar unidentified flying objects in Chengdu and in Anhui respectively.

We have made the following preliminary analysis of these unidentified flying object phenomona, which we provide for everybody's consideration.

- (1) Prior to 1978, "flying saucer" incidents were virtually unheard of in China, but numerous reports based on data from prior to this time have appeared. Additionally, those giving eyewitness accounts include scientists and technicians, pilots, cadres, and teachers, and in most cases tens or thousands of people witnessed them at the same time. In the course of inquiries, ample witnesses have been provided. Consequently, we feel all the phenomena reported are substantially reliable and were actually experienced by the eye witnesses. Possibilities that they were fabricated, imagined, or were rare psychological phenomena are not great.
- (2) On the basis of existing scientific knowledge, some reports may be explained by already known physical phenomena or already known rarely seen phenomena such as meteorites, fragments of man made aerial navigation devices, atmospheric whirl-pools, balloons, the effects of atmospheric electrical discharges, ball shaped lightning flashes, and flashes of light from the earth preceding an earthquake. But explanation of some reports in terms of already known phenomena is either difficult or extremely farfetched, as for example, the strong light emitted by the flying objects and their mobility at high altitudes. Toward these phenomena, we must adopt an objective attitude of respect for facts and strive to use existing scientific knowledge to explain them, without brushing aside the possibility of phenomena not yet known, and conduct serious scientific observations and study without any preconceptions. As regards hypotheses about UFO's being related to extraterrestrial or terrestrial creatures as yet unknown, we must also accept those parts that are credible and consider them without totally denying them altogether.

- (3) Most of the cases reported were not only similar in form and characteristics to reports from abroad of UFO's, but there also seems to be a rather extraordinary correlation in the times of events. Between 1971 and 1973, the United States and the United Kingdom experienced large numbers of eye witness accounts, and in China the number of reports showed a small surge as well. On 18 September 1976 in Tehran, Iran, an airforce Phantom fighter aircraft and a UFO had a combat encounter that raised a furor, while during this same time, the number of reports increased in China. During the summer and autumn of 1977, there was a case of UFO's in various places in Europe, and the number of reports in China were also fairly numerous. For example, Yuan Chenxin [5913 2182 2450] of the Institute of Paleoanthropology of the Chinese Academy of Sciences sighted a disc shaped unidentified flying object in the forest area of Shennongjia in Rubei Province. Fang Qing [2455 7230] and others from the Shanxi Teachers College observed an orange-red saucer shaped unidentified flying object at Taiyuan. On 21 October 1978, an incident took place in Australia in which a UFO caused the disappearance of an airplane, and two days later in China a correspondingly huge unidentified flying object of similar characteristics was observed. In early 1979 in New Zealand, storms broke out everywhere and there were corresponding reports inside China. On 17 August, a Japanese pilot photographed a UFO, and 2200 hours on 21 August, Beijing student Wang Jianmin [3769 1696 3046] observed in the skies over Beijing a blue disc shaped unidentified flying object flying in a complex path, now fast now slow, and able to stop suddenly. On the morning of 10 November, Fan Da [5400 6671], a cadre at Danzhu Commune, Pingnan County, Guangxi Province observed from the fourth floor of a building a silvery oval shaped unidentified flying object that constantly spurted forth some substance as it flew. The next day an incident occured in Spain in which a UPO forced the landing of a passenger jet aircraft.
- (4) By comparison with some events reported abroad, the substance of reports currently being received in China is rather pedestrian. For example, there have been no instances in which unidentified flying objects have caused power outages or blotted out communications. There have been no photographs or movies taken, or material evidence left behind. There have been no cases of peril to humans or to social order. There certainly have been no cases of "flying saucer men." Inasmuch as most flying objects have not outstandingly exceeded the flying ability of manmade flying objects, it is not impossible that some of them have been manmade objects manufactured for special purposes.

Owing to the limitations of certain conditions, and because quite a few reports have contained no precise dates or were recorded unscientifically, their value has to be discounted. Among the people there are possibly numerous incidents of unidentified aerial phenomena awaiting our investigation and analysis. We hope that more aficionados will join in this work, and when they have sightings that they will get in touch by sending a letter to Cha Leping, Department of Space Physics, Wuhan University, Wuhan.

9432

CSO: 4008

The same of the sa