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DEFENSE INTELLIGENCE AGENCY

WASHINGTON, D.C. 20340-



U-2,637/SVI-1 (FOIA)

27 May 1999

Mr. John Greenwald Jr.  
[REDACTED]

Dear Mr. Greenwald:

This responds to your request under the Freedom of Information Act dated 16 December 1996. Therein you requested records concerning HaleBopp comet. A search of DIA's systems of records located one document responsive to your request.

Upon review, it has been determined that some portions of this document are not releasable. The information withheld is exempt from release pursuant to 5 U.S.C. 552 (b)(2), Freedom of Information Act. Subsection (b)(2) applies to information which pertains solely to the internal rules and practices of the Agency. All reasonably segregable portions of the document are attached hereto.

You are advised that a requester may appeal, within 60 days, an initial decision to withhold a record or part thereof. Should you wish to exercise this right, you may do so by referring to case #0894-96 and addressing your appeal to:

Defense Intelligence Agency  
ATTN: SVI-1 (FOIA)  
Washington, D.C. 20340-5100

Sincerely,

ROBERT P. RICHARDSON  
Chief, Freedom of Information Act Staff

1 Enclosure a/s

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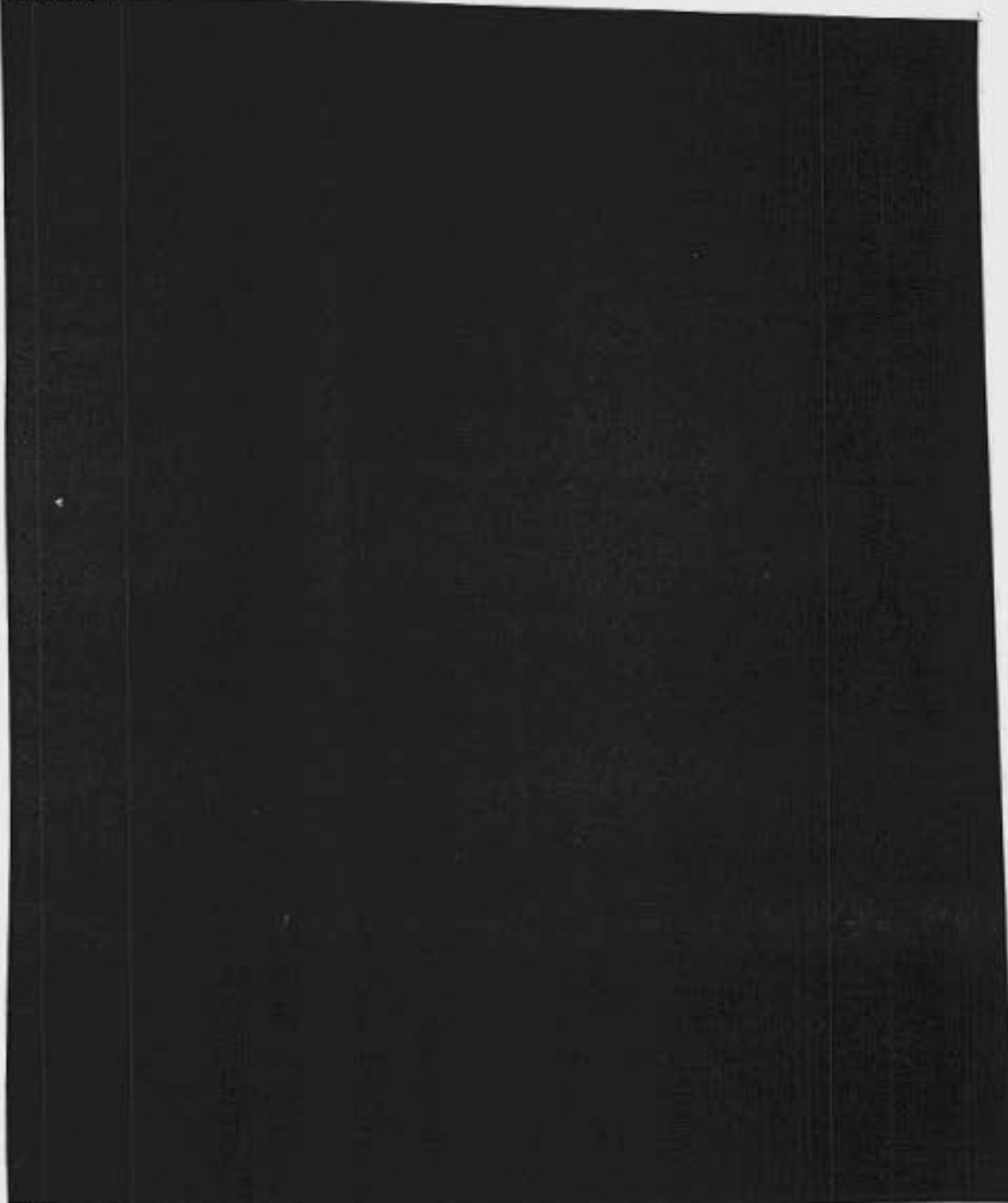
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U N C L A S S I F I E D

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PART I OF II

SERIAL: IIR [REDACTED]

/\*\*\*\*\* THIS IS A COMBINED MESSAGE \*\*\*\*\*/

BODY

PASS: [REDACTED]

COUNTRY: CHINA (CH).

SUBJECT: IIR [REDACTED] DEFENSE SCIENCE,  
TECHNOLOGY, AND INDUSTRY REPORT,  
1-15 JAN 96, PART I OF IIWARNING: THIS IS AN INFORMATION REPORT, NOT  
FINALLY EVALUATED INTELLIGENCE. REPORT  
U N C L A S S I F I E D.-----  
DEPARTMENT OF DEFENSE  
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DOI: 960101-960115.

REQS: [REDACTED]

SOURCE: [REDACTED]

SUMMARY: AVIC PRODUCTION RATES. AIR FORCE'S LATEST  
MODEL FIGHTER IN LIVE FIRE MISSILE TESTS AT SHIP TARGET  
AT SEA. CHINA ANNOUNCES PLANS TO BUILD TEN NUCLEAR  
POWER REACTORS OVER NEXT DECADE. LONG MARCH-4B  
UNDERGOES VIBRATION TESTS IN BEIJING.

TEXT: 1. INTRODUCTION

A. THIS REPORT CONTAINS SUMMARIES OF PRC MEDIA  
REPORTS ON DEVELOPMENTS IN THE DEFENSE SCIENCE,  
TECHNOLOGY, AND INDUSTRY (DSTI) SECTOR FROM 1 TO 15  
JANUARY 1996.

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## INDUSTRIES CORPORATIONS

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## 2. DSTI ORGANIZATION

A. CHINA NATIONAL SCIENCE FOUNDATION ELECTS 27 NEW MEMBERS AT THIRD PLENARY MEETING (CHINA DAILY - CD, 4 JAN). THE ELECTED SCIENTISTS WILL SERVE A FIVE YEAR TERM, SPANNING THE 9TH FIVE YEAR PLAN (FYP) PERIOD. FOUNDATION DIRECTOR (DIR) ((ZHANG)) CUNHAO AND DEPUTY DIRS ((SUN)) SHU AND ((CHEN)) JIAER WERE RE-ELECTED FOR A SECOND TERM AT THE MEETING, HELD IN BEIJING LAST WEEK. DURING THE 8TH FYP, THE FOUNDATION FUNDED 38 MAJOR RESEARCH PROGRAMS, 300 KEY RESEARCH PROJECTS AND 17,252 NORMAL STUDIES. DURING THE 9TH FYP, IT PLANS TO SUPPORT ABOUT 40 MAJOR RESEARCH PROGRAMS, 600 TO 700 KEY PROJECTS, AND ABOUT 18,000 NORMAL STUDIES. THE 3,500 NORMAL STUDIES FUNDED EACH YEAR ARE EXPECTED TO RECEIVE AN AVERAGE GRANT OF ABOUT 100,000 YUAN.

B. CHINA METEOROLOGICAL BUREAU SIGNS AGREEMENT WITH "SYBASE CHINA" TO BUILD NATIONAL METEOROLOGICAL DATABASE (CHINA ELECTRONIC NEWS - CEN, 5 JAN). AT THE SIGNING CEREMONY IN BEIJING ON 20 DEC 95, IT WAS REVEALED THAT CONSTRUCTION OF THE DATABASE HAS ALREADY BEGUN. THE MULTIMEDIA DATABASE WILL COVER METEOROLOGICAL BUREAUS AND STATIONS IN CHINA'S 30 PROVINCES AND MUNICIPALITIES AND IS BASED ON THE "SYBASE DATABASE MANAGEMENT SYSTEM."

## 3. SIGNIFICANT DEFENSE R&amp;D ACHIEVEMENTS

A. KUNMING MACHINE TOOLS COMPANY DEVELOPS NEW "PROSTHETIC INDUSTRIAL ROBOT" (CHINA MACHINERY AND ELECTRONICS DAILY, 2 JAN). THE NEW ROBOT CAN WORK AROUND THE CLOCK FOR FIVE DAYS AND NIGHTS CONTINUOUSLY AND LIFT OBJECTS WEIGHING UP TO 60 KILOGRAMS (KG). IT HAS MAN-MACHINE DIALOG, AUTOMATIC RESTART, SELF-ADJUSTMENT, SELF-DIAGNOSIS, SELF-PROTECTION, AND OTHER FUNCTIONS THAT ALLOW IT TO PERFORM SHIFTING, STACKING, WELDING, POLISHING, FLAME CUTTING, AND OTHER SIMILAR TASKS. THE ROBOT RECENTLY PASSED TECHNICAL APPRAISAL TESTING.

B. HEBEI PROVINCIAL WEATHER MODIFICATION OFFICE ACHIEVES BREAKTHROUGH IN PRODUCING RAIN BY ARTIFICIAL

MEANS (SCIENCE AND TECHNOLOGY - S&T DAILY - STD, 3 JAN). IN MAR 90, THE HEBEI S&T COMMITTEE ADOPTED THIS TOPIC AS A KEY 8TH FYP S&T PROJECT. THE OFFICE USED ITS MODERN WEATHER RADARS, SATELLITES, AND PRACTICAL METEOROLOGICAL DATA, AS WELL AS ADVANCED AIRCRAFT SOUNDING SYSTEMS, FOUNDATION REMOTE SENSING, AND OTHER ADVANCED TECHNOLOGIES, TO OBSERVE AND STUDY CLOUD CONDITIONS IN DIFFERENT PARTS OF HEBEI AND DETERMINE THE MICRO-PHYSICAL PROPERTIES OF CLOUDS AND CATALYTIC POTENTIAL OF ARTIFICIALLY SEEDED RAIN CLOUDS. IT ALSO MADE USE OF MICROWAVE REMOTE SENSING TECHNOLOGY TO STUDY THE LAWS OF MOISTURE DISTRIBUTION IN CLOUDS AND WEATHER MODIFICATION RESOURCES. OVER THE PAST SIX YEARS, THE OFFICE HAS INCREASED PRECIPITATION IN THE PROVINCE BY OVER FOUR BILLION CUBIC METERS USING ARTIFICIAL METHODS.

C. SENIOR ENGINEER AT TIANCHUAN GROUP COMPANY DEVELOPS "UNDERWATER TV SYSTEM FOR TURBID WATERS" (XINHUA DAILY TELEGRAPH - XDT, 3 JAN). ((WANG)) ZIGAO (STC-- 3769/1311/7559) MADE USE OF NEW TECHNOLOGY FOR HANDLING TURBIDITY IN WATER TO DEVELOP THIS COLOR TV SYSTEM. IT HAS PROVEN ITS CAPABILITY TO OBTAIN CLEAR IMAGES EVEN IN VERY TURBULENT WATER. THE SYSTEM WILL HAVE WIDE APPLICATION IN PORT CONSTRUCTION, DEEP WATER SALVAGE WORK, OFFSHORE OIL EXTRACTION, DAM CONSTRUCTION, AND BRIDGE PIER REPAIR.

D. "DAYANG-1 OCEAN-GOING SCIENTIFIC EXPLORATION VESSEL" COMPLETES FIFTH OCEAN EXPLORATION EXPEDITION (XDT, 4 JAN). THE EXPEDITION, CONDUCTED FROM JUL TO DEC 95, WAS LED BY "DAYANG-1"'S CHIEF SCIENTIST, ((GUO)) SHIQIN (STC-- 6753/0013/0530), WHO IS ALSO CHIEF ENGINEER OF THE CHINESE SOCIETY OF OCEAN MINERALS R&D. THIS FIFTH EXPEDITION OF THE 8TH FYP CARRIED OUT PROSPECTING AND R&D OF MULTI-METALLIC CONCRETIONS ON 150,000 SQUARE KILOMETERS (KM) OF A UNITED NATION'S APPROVED EXPLORATION ZONE ASSIGNED TO CHINA IN THE EASTERN PACIFIC OCEAN. CHINESE SCIENTISTS USED A DEEP-SEA TOWED SURVEILLANCE SYSTEM FOR THE FIRST TIME DURING THE EXPEDITION. THE TOWED DEVICE, WHICH IS EQUIPPED WITH CAMERAS, SCANNING SONAR, SHALLOW STRATIGRAPHIC SECTION SONAR, AND DEPTH AND HEIGHT SONARS CAN COLLECT SOUND AND IMAGE DATA OF THE SEA BOTTOM MORE THAN 5,000 METERS BENEATH THE SURFACE OF THE WATER. DURING THE EXPEDITION, THE RESEARCH TEAM OBTAINED 22 HOURS OF "UNDERWATER BENTHOGRAPHIC DATA" AND NEARLY 200 PICTURES. (NOTE -- SEE ALSO 1-15 SEP 95 DSTI REPORT.)

E. PURPLE MOUNTAIN OBSERVATORY PREDICTS "HALE-BOPP COMET" WILL PASS CLOSEST TO EARTH ON 1 APR 97 (CD, 8

JAN). THE JIANGSU OBSERVATORY UNDER THE CHINESE ACADEMY OF SCIENCES (CAS) PREDICTS THAT THE COMET WILL NOT COME CLOSE ENOUGH TO THE EARTH TO HAVE A DIRECT INFLUENCE; HOWEVER, IT WILL BE BRIGHT ENOUGH TO BE SEEN WITH THE NAKED EYE IN NORTHEAST AND NORTHWEST CHINA. ((WANG)) SICHAO, ASSISTANT RESEARCHER AT THE OBSERVATORY, NOTED THAT THE COMET COMES NEAR EARTH ONLY ONCE EVERY 3,000 YEARS.

F. RESEARCH INSTITUTE (RI) UNDER STATE OCEANOGRAPHY BUREAU DEVELOPS "FACTORIAL ENCRYPTION TECHNIQUE FOR SONOBUOY DATA" (CHINA OCEAN NEWS - CON, 9 JAN). THE NUMBER 2 OCEANOGRAPHY RI UNDER THE BUREAU HAS DEVELOPED A NEW TECHNIQUE SPECIFICALLY FOR ENCRYPTION OF HYDROMETEOROLOGICAL INFORMATION COLLECTED BY FLOATING PLATFORMS. IN ADDITION TO ENCRYPTING, THE TECHNIQUE CAN ALSO INCREASE DATA RECEPTION RATES OF THE BUOYS FROM 80 TO 98 PERCENT. IT IS CAPABLE OF ENCRYPTING AND DECODING CHINESE, ENGLISH, FIGURES, AND SYMBOLIC DATA. IN CAN ALSO BE USED FOR CALCULATING RATES AND FEES BY INSURANCE AND FUTURES COMPANIES.

G. UNIDENTIFIED (UI) CAS UNITS CONDUCT TWO EXPERIMENTS ON "CULTIVATION OF PROTEIN CRYSTALS IN SPACE" (CHINA SPACE NEWS - CSPN, 10 JAN). THE CAS UNITS CONDUCTED THE TWO EXPERIMENTS ON RECOVERABLE SATELLITES LAUNCHED AND RECOVERED IN 1992 AND 1994. THE FIRST EXPERIMENT PRODUCED A CRYSTALLIZATION RATE OF OVER 50 PERCENT; THE SECOND ACHIEVED A RATE OF 70 PERCENT. FOURTEEN DIFFERENT PROTEIN SAMPLES WERE USED IN THE EXPERIMENTS INCLUDING LYSOZYME, A2 SNAKE VENOM PHOSPHODIESTERASE, VENOM HEMORRHAGIN, INSULIN MUTANT, ANTIBACTERIAL POLYPEPTIDE, TRICHOSANTHIS PROTEIN, AND 17-HYDROXYSTERIOD DEHYDROGENASE. THE CRYSTALS CULTIVATED WERE LARGER IN SIZE AND MORE REGULAR IN SHAPE THAN THOSE CULTIVATED ON EARTH.

#### 4. COMMISSION ON S&T AND INDUSTRY FOR NATIONAL DEFENSE (COSTIND)

A. COSTIND ANNOUNCES THAT NATIONAL DEFENSE RESEARCH UNITS WON 121 STATE S&T PROGRESS AWARDS AND 26 STATE INVENTION AWARDS IN 1995 (LIBERATION ARMY DAILY - LAD AND XDT, 5 JAN). THE STATE S&T AWARDS COMMITTEE APPROVED THESE AWARDS IN THE DEFENSE-RELATED FIELDS OF ELECTRONICS, SHIPBUILDING, AERONAUTICS, ASTRONAUTICS, ENGINEERING, PHYSICS, AND WEAPONRY. ONE OF THE NATIONAL DEFENSE PROJECTS WON A STATE SPECIAL-CLASS S&T PROGRESS AWARD, TEN WON FIRST-CLASS STATE S&T PROGRESS AWARDS, 50 WON SECOND CLASS AWARDS, AND 60 WON THIRD CLASS AWARDS. MOST OF THE PROJECTS WERE ON IMPORTANT

TECHNICAL EQUIPMENT URGENTLY REQUIRED FOR ARMY-BUILDING. COSTIND ATTRIBUTED THESE MAJOR BREAKTHROUGHS IN KEY NATIONAL DEFENSE TECHNOLOGIES AS INSTRUMENTAL IN THE RAISING OF CHINA'S NATIONAL DEFENSE S&T LEVELS. MANY OF THE AWARD-WINNING PROJECTS WERE ALSO ABLE TO CONTRIBUTE GREAT ECONOMIC BENEFITS. FOR EXAMPLE, THE "GALAXY-2 GIANT COMPUTER," DEVELOPED BY THE NATIONAL DEFENSE S&T UNIVERSITY, AND THE BEIJING EMULATION CENTER, BUILT BY THE CHINA NATIONAL AEROSPACE INDUSTRY CORPORATION (CORP) (CASC), BOTH WON FIRST CLASS STATE S&T PROGRESS AWARDS. COSTIND ALSO REPORTED THAT DEFENSE RESEARCH UNITS WON NEARLY 1,000 MINISTERIAL, COMMISSION, AND PROVINCIAL LEVEL RESEARCH ACHIEVEMENT AWARDS DURING 1995.

B. COSTIND COMMAND TECHNOLOGY RI DEVELOPS "AEROSPACE TEST COMMAND AND CONTROL EXPERT SYSTEM" (STD, 8 JAN). THE NEW SYSTEM PROVIDES COMMANDERS AT LAUNCH SITES WITH KEY PARAMETERS AT CRUCIAL MOMENTS. IT CAN ALSO GIVE DECISIVE INFORMATION BASED ON TESTS OF VARIOUS SUBSYSTEMS AND ASSESS THE PERFORMANCE OF PRINCIPAL EQUIPMENT INVOLVED IN AEROSPACE TESTING. THE SYSTEM PASSED TECHNICAL APPRAISAL TESTING ON 16 NOV 95.

5. CHINA NATIONAL AVIATION AND AEROSPACE INDUSTRIES CORPORATIONS

A. CHINA NATIONAL AVIATION INDUSTRY CORP (AVIC) SUMMARIZES INDUSTRY ACCOMPLISHMENTS DURING 8TH FYP (XDT, 28 DEC). AVIC REPORTED THAT IT HAD PRODUCED OVER 1,100 AIRCRAFT AND 2,400 AIRCRAFT ENGINES DURING THE PAST FIVE YEARS. THIS INCLUDED PRODUCTION OF IMPROVED COMMERCIAL AIRCRAFT, SUCH AS THE Y-7H-500 AND Y-8C. THE Y-12-4 HAS ALSO RECEIVED CERTIFICATION FROM THE U.S. FEDERAL AVIATION ADMINISTRATION AND MANUFACTURE IS WELL UNDERWAY ON TEN MCDONNELL-DOUGLAS (MD)-90 AIRLINERS. (NOTE -- SEE ALSO 1-15 NOV 95 DSTI REPORT.)

B. CHINA NATIONAL AERO-TECHNOLOGY IMPORT/EXPORT CORP (CATIC) ANNOUNCES DEVELOPMENT OF "FC-1 LIGHT-WEIGHT FIGHTER" (CD, 31 DEC). CATIC VICE PRESIDENT ((DING)) SHIQING ANNOUNCED THAT THE MULTI-PURPOSE FIGHTER, DEVELOPED IN COOPERATION WITH RUSSIAN, PAKISTANI, AND EUROPEAN AVIATION CO'S, WILL UNDERTAKE ITS MAIDEN FLIGHT IN 1997. THE "FC-1" WILL REPLACE THE F-7 AND A-5 IN THE CHINESE AIR FORCE WHEN IT ENTERS PRODUCTION EARLY IN THE 21ST CENTURY. THE NEW AIRCRAFT IS RELATIVELY INEXPENSIVE AND WILL PERFORM ABOUT 70 PERCENT OF THE FUNCTIONS OF THE WORLD'S MOST ADVANCED AND COSTLY FIGHTERS. (NOTE -- SEE ALSO 1-15 NOV 95 DSTI REPORT.)



C. NANJING AEROSPACE UNIVERSITY AND CHINA HELICOPTER ACADEMY JOINTLY ESTABLISH "HELICOPTER ROTOR STATE KEY LABORATORY" (LAB) (CHINA AVIATION NEWS - CAVN, 2 JAN; CHINA DEFENSE INDUSTRY - CDI, 5 JAN). THE BRANCH OF THE LAB LOCATED AT THE AEROSPACE UNIVERSITY HAS FOUR RESEARCH OFFICES FOR THE STUDY OF ROTOR VORTEX SYSTEMS, DYNAMIC FLIGHT MECHANICS, ROTOR AEROELASTICITY, AND ANTITORQUE TECHNOLOGY. THE BRANCH LOCATED AT THE HELICOPTER ACADEMY SPECIALIZES IN THE STUDY OF ROTOR FLOW FIELD THEORY, AERODYNAMIC LOAD, GROUND EFFECTS, AND HIGH-PERFORMANCE ROTOR BLADES. THE COMBINED LAB HAS A STAFF OF 44, INCLUDING 12 PROFESSORS (PROF) AND RESEARCH FELLOWS AND 19 ASSOCIATE PROFS AND SENIOR ENGINEERS; 56.8 PERCENT OF THE STAFF ARE UNDER THE AGE OF 40. THE LAB COMPLETED 60 PROJECTS DURING THE PERIOD 1993 TO 1995, WHILE IT WAS STILL UNDER CONSTRUCTION AND DEVELOPMENT. IT HAS WON ONE FIRST CLASS STATE S&T PROGRESS AWARD AND 25 PROVINCIAL AND MINISTERIAL-LEVEL S&T PROGRESS AWARDS. IT HAS ESTABLISHED COOPERATIVE TIES WITH LABS IN THE U.S., BRITAIN, RUSSIA, AND SOUTH KOREA. ON 19 DEC 95, THE LAB PASSED TECHNICAL ACCEPTANCE TESTS JOINTLY ORGANIZED BY COSTIND AND AVIC.

D. MORE DATA ON "STATE HIGH-ENERGY BEAM PROCESSING TECHNOLOGY KEY LAB" SET UP BY AVIC'S NUMBER 625 RI (STD, 2 JAN). THE LAB WAS SET UP AT THE SITE OF THE NUMBER 625 AVIATION RI IN 1993. IT IS EQUIPPED WITH A "SIX-COORDINATE YAG LASER PROCESSING SYSTEM," A "ROBOT-OPERATED VACUUM PLASMA SPRAYING SYSTEM," AND A "150 KILOVOLT NINE CUBIC METER ELECTRON BEAM WELDING MACHINE." IT RECENTLY PASSED TECHNICAL ACCEPTANCE TESTS ORGANIZED BY COSTIND AND AVIC.

E. CATIC TO DISPLAY "K-8 MILITARY JET TRAINER" AT SINGAPORE'S "ASIAN AEROSPACE 1996 EXHIBITION" (CD, 3 JAN). CATIC WILL ALSO DISPLAY THE "Y7H-500 CARGO AIRCRAFT" AT THE SHOW TO BE HELD IN SINGAPORE FROM 6 TO 11 FEB 96. CATIC VICE PRESIDENT ((WANG)) DAWEI SAID THE "K-8," MANUFACTURED BY THE NANCHANG AIRCRAFT CORP, WOULD PERFORM FLIGHT DEMONSTRATIONS DURING THE EXHIBITION; HOWEVER, THE "Y7H-500," BUILT BY THE XIAN AIRCRAFT CORP, WOULD ONLY BE AVAILABLE FOR STATIC DISPLAY.

F. CHINA'S TOP MILITARY LEADER SPEAKS AT AEROSPACE INDUSTRY WORK CONFERENCE (CD, 3 JAN). CENTRAL MILITARY COMMISSION VICE CHAIRMAN ((LIU)) HUAQING TOLD ATTENDEES AT THE MEETING THAT THE SPACE INDUSTRY FACED A HEAVY TASKED DURING THE 9TH FYP PERIOD AND URGED THEM

TO REDOUBLE THEIR EFFORTS AND STRIVE FOR GREATER ACHIEVEMENTS. STATE S&T COMMISSION MINISTER ((SONG)) JIAN ALSO MET WITH AND TALKED TO THE PARTICIPANTS. DURING THE MEETING, CASC ANNOUNCED THAT IT WOULD SET UP A "COMMITTEE TO ACCELERATE USE OF AEROSPACE TECHNOLOGY FOR CIVILIAN PURPOSES." THE COMMITTEE WILL SUPERVISE SIX PROFESSIONAL GROUPS TASKED TO OVERSEE SPECIFIC FIELDS, SUCH AS SATELLITES, COMPUTERS, AND SPACE MEDICINE.

G. CHINA AVIATION PRECISION MACHINERY RI DEVELOPS "SZC-J866 THREE-COORDINATE MEASURING MACHINE" (CAVN, 9 JAN). THE RI, WHICH IS ALSO KNOWN AS THE NUMBER 303 AVIATION RI, HAS DEVELOPED CHINA'S FIRST THREE-COORDINATE MEASURING DEVICE. IT HAS POINT AND CONTINUOUS SCANNING FUNCTIONS AND A SELF-LEARNING PROGRAM. IT HAS SUCCESSFULLY OVERCOME THE TECHNICAL IMPASSE ENCOUNTERED WHEN ATTEMPTING TO MEASURE FREE CURVATURES. IT RECENTLY PASSED TECHNICAL APPRAISAL TESTING IN WHICH EXPERTS RATED ITS PERFORMANCE AS MEETING THE STANDARDS OF ADVANCED GERMAN PRODUCTS. (NOTE -- SEE ALSO 16-30 NOV 95 DSTI REPORT.)

H. CASC'S FIRST AEROSPACE RESEARCH ACADEMY CONDUCTS VIBRATION TESTS ON LONG MARCH (LM)-4B CARRIER ROCKET (CSPN, 10 JAN). THE ROCKET, WHICH WAS DEVELOPED AND BUILT BY THE SHANGHAI AEROSPACE BUREAU, WAS SHIPPED TO BEIJING BY SPECIAL TRAIN IN LATE DEC 95. THE LM-4B WAS FILLED WITH LIQUID FUEL AND TRANSDUCERS WERE INSTALLED ON IT ON 24 DEC. THE VIBRATION TEST WAS CONDUCTED ON 1 JAN 96.

I. BEIJING AEROSPACE UNIVERSITY DEVELOPS CHINA'S FIRST UNMANNED HELICOPTER, THE "SEA GULL" (HONG KONG TA KUNG PAO, 11 JAN; XDT, 12 JAN). THE SMALL HELICOPTER WEIGHS 300 KG AND HAS AN ENGINE CAPACITY OF 80 HORSEPOWER. THE "SEA GULL" IS LIFTED BY TWO COAXIAL UP-AND-DOWN ROTARY WINGS, ONE MOVING CLOCKWISE AND THE OTHER COUNTER-CLOCKWISE. THE HELICOPTER IS VERY FLEXIBLE AND WILL HAVE WIDE APPLICATION IN AERIAL PHOTOGRAPHY, AERIAL SURVEILLANCE, ERECTION OF COMMUNICATIONS LINES BY AIR, AND AERIAL LIFTING. THE AIRCRAFT RECENTLY COMPLETED ITS MAIDEN FLIGHT SOMEWHERE IN NORTH CHINA.

J. CHINA S&T ASSOCIATION HOSTS "AVIATION TECHNOLOGIES AND INDUSTRIAL DEVELOPMENT SEMINAR" (CAVN, 12 JAN). THE MEETING, HELD IN BEIJING ON 4 AND 5 JAN, WAS ATTENDED BY ABOUT 20 SENIOR EXPERTS FROM THE CHINA AEROSPACE SOCIETY, THE CHINA INERTIAL TECHNOLOGY SOCIETY, THE CHINESE SOCIETY FOR STUDY OF HIGH AND NEW TECHNOLOGIES INDUSTRIALIZATION, THE CHINESE SOCIETY FOR

STUDY OF COMPOSITE MATERIALS, AND THE TECHNOLOGY AND ECONOMICS SECTION OF THE STATE COUNCIL DEVELOPMENT RESEARCH CENTER. AVIC GENERAL MANAGER (GM) ((ZHU)) YULI (STC-- 2612/5148/3810) AND DEPUTY GM ((ZHANG)) YANZHONG (STC-- 1728/1750/0112) BRIEFED PARTICIPANTS ON THE CURRENT SITUATION AND DEVELOPMENT PLANS OF THE AVIATION INDUSTRY. THE CHINA S&T ASSOCIATION PLANS TO HOLD A LARGER SEMINAR ON AVIATION HIGH TECHNOLOGY AND INDUSTRY IN THE FOURTH QUARTER 1996.

K. CAVN PROFILES NUMBER 608 AVIATION RI (12 JAN). THIS AVIC RI IS A DESIGN, RESEARCH, AND TESTING CENTER FOR MEDIUM AND SMALL-SIZE AIRCRAFT ENGINES, HELICOPTER SPEED REDUCTION GEARS, AND LIGHT GAS TURBINE ENGINES. DURING THE 8TH FYP PERIOD, IT WON 31 STATE, PROVINCIAL, AND MINISTERIAL-LEVEL S&T PROGRESS AWARDS. IT UNDERTOOK THE TASK OF DEVELOPING FIVE AIRCRAFT ENGINE MODELS, WORKING IN CLOSE CONJUNCTION WITH THE NANFANG AVIATION POWER MACHINERY CO. THREE OF THE ENGINES HAVE ALREADY BEEN INSTALLED ON AIRCRAFT AND MAJOR BREAKTHROUGHS HAVE BEEN ACHIEVED IN THE DEVELOPMENT OF THE OTHER TWO MODELS. THE TURBOPROP-9 (WJ-9) ENGINE, JOINTLY DEVELOPED BY THE 608 RI AND NANFANG CO, WAS BUILT TO REPLACE THE CURRENT ENGINE ON THE Y-12 PASSENGER AIRCRAFT. IT HAS PASSED DOZENS OF AIRWORTHINESS TESTS AND 150 HOURS OF ENDURANCE TESTS. IT IS THE FIRST TURBOPROP ENGINE DEVELOPED IN CHINA.

L. CASC HOSTS SECOND AEROSPACE WORK CONFERENCE IN HEBEI PROVINCE (CSPN, 13 JAN). THE MEETING WAS HELD IN LANGFANG FROM 10 TO 13 JAN AND WAS ATTENDED BY CASC GM ((LIU)) JIYUAN (STC-- 0491/4764/0626), DEPUTY GMS ((WANG)) LIHENG (STC-- 3769/4409/1854), ((BAI)) BAIER (STC-- 4101/2157/1422), AND ((XIA)) GUOHONG (STC-- 1115/0948/3163); LEADING CADRE FROM THE STATE COUNCIL, STATE PLANNING COMMISSION, STATE ECONOMICS AND TRADE COMMISSION, COSTIND, MINISTRY OF FINANCE, AND PARTY CENTRAL ORGANIZATION DEPARTMENT (DEPT); AND DSTI SECTOR OFFICIALS FROM PROVINCIAL AND MUNICIPAL LEVELS. GM LIU DELIVERED A REPORT ENTITLED -- "DEEPEN REFORMS, STRENGTHEN MANAGEMENT, AND STRIVE FOR ALL-AROUND COMPLETION OF THE 9TH FYP." HE SUMMED UP CASC'S WORK DURING THE 8TH FYP PERIOD, OUTLINED THE INDUSTRY'S GUIDING IDEOLOGY AND TEN MAJOR MEASURES FOR THE 9TH FYP PERIOD, AND THEN DISCUSSED THE CORRECT HANDLING OF SEVEN MAJOR RELATIONSHIPS IN WORK DURING THE 9TH FYP PERIOD. THE TEN MEASURES INCLUDE ENSURING DEVELOPMENT AND PRODUCTION OF AEROSPACE PRODUCTS AND THE SATISFACTORY COMPLETION OF DOMESTIC AND FOREIGN SATELLITE LAUNCHES.

## 6. CHINA STATE SHIPBUILDING CORPORATION (CSSC)

A. NUMBER 726 RI UNDER CSSC'S SEVENTH ACADEMY DEVELOPS "WARSHIP TV OBSERVATION SYSTEM" (CHINA SHIP NEWS - CSN, 13 JAN). THE NEW SYSTEM EMPLOYS MULTIPATH MONITORING AND MULTI-MEDIA COMPUTER TECHNOLOGY TO COMBINE MONITORING WITH CONTROL. ITS DEVELOPMENT ENABLES WARSHIP CAPTAINS AND HELMSMEN TO SEE EVERY BLINDSPOT ON THEIR VESSEL FROM THE CONTROL ROOM. AFTER MORE THAN TWO YEARS OF TRIAL APPLICATION ON BOARD SELECTED WARSHIPS, THE SYSTEM PASSED TECHNICAL APPRAISAL TESTING IN SHANGHAI RECENTLY.

B. WUHU SHIPYARD DELIVERS FOUR MILITARY VESSELS AND FOUR COMMERCIAL FREIGHTERS TO USERS IN 1995 (CSN, 13 JAN). THE FOUR MILITARY VESSELS WERE DELIVERED TO PLA UNITS ON 24 AND 27 DEC 95. THE COMBINED TONNAGE OF THE VESSELS BUILT IN 1995 WAS 31,153 TONS. THE SHIPYARD'S TOTAL OUTPUT VALUE FOR THE YEAR WILL BE ABOUT 247 MILLION YUAN.

C. SHANGHAI HUDONG SHIPYARD BUILDS OVER 400,000 TONS OF SHIPPING DURING 1995 (CSN, 13 JAN). THE SHIPYARD BUILT SEVEN SHIPS DURING 1995, WITH TOTAL DISPLACEMENT EXCEEDING 400,000 TONS -- 50,000 TONS MORE THAN ITS OUTPUT IN 1994. IT ALSO MANUFACTURED 140,000 KILOWATTS (KW) OF MARINE ENGINES DURING 1995, THE SAME QUANTITY AS IN 1994. IT CURRENTLY HAS ORDERS IN HAND FOR CONSTRUCTION OF 21 SHIPS WITH A COMBINED TONNAGE OF 620,000 TONS AND 28 MARINE ENGINE SYSTEMS WITH TOTAL CAPACITY OF 240,000 KW. WHEN COMPLETED, THESE CONTRACTS WILL BE WORTH OVER FOUR BILLION YUAN.

7. MINISTRY OF ELECTRONICS INDUSTRY  
(MEI)/COMMUNICATIONS

A. MEI'S NUMBER 11 RI DEVELOPS "DIODE LASER PUMPING SOLID-STATE RUBIDIUM LASER DEVICE" (CDI, 2 JAN). THE PERFORMANCE INDICATORS OF THIS DEVICE'S Q-SWITCHING OUTPUT POWER, LASER MODE, RECURRENCE FREQUENCY, AND LIGHT-WEIGHT CONVERSION EFFICIENCY ARE AMONG THE BEST IN CHINA. THE DEVICE RECENTLY PASSED TECHNICAL APPRAISAL TESTING BY EXPERTS FROM MEI'S ANTICIPATORY RESEARCH BUREAU, WHO RATED ITS LIGHT-WEIGHT CONVERSION EFFICIENCY AS MEETING ADVANCED INTERNATIONAL STANDARDS. (NOTE -- SEE ALSO 1-15 DEC 95 DSTI REPORT.)

B. MEI PRESS CONFERENCE DISCUSSES ELECTRONICS INDUSTRY PRODUCTION TRENDS FOR 1996 (CEN, 2 JAN). ((CHEN)) ZHENGQING (STC-- 7115/2973/3237), MEI

INFORMATION CENTER DIR, REVEALED THAT MEI PLANS TO DEVELOP CHINA'S ELECTRONICS INDUSTRY INTO ONE THAT COMBINES MANUFACTURING, SOFTWARE PRODUCTION, AND INFORMATION SERVICES. IN 1990, THE INVESTMENT PRODUCTS/CONSUMER PRODUCTS/BASIC ELECTRONICS PRODUCTS RATIO WAS -- INVESTMENT-13.55/CONSUMER-52.76/BASIC ELECTRONIC-33.68. IN 1994, IT CHANGED TO -- INVESTMENT-22.61/CONSUMER-42.33/BASIC ELECTRONIC-35.06. A MORE RATIONAL RATIO WOULD BE -- INVESTMENT-34/CONSUMER-31/BASIC ELECTRONIC-35. TO ACHIEVE THIS, MEI MUST ENSURE THAT, DURING THE 9TH FYP, INVESTMENT PRODUCTS WILL ACCOUNT FOR A HIGHER PERCENTAGE, WHILE THE PERCENTAGE OF CONSUMER PRODUCTS WILL CONTINUE TO DROP. DIR CHEN PREDICTED THAT MEI WILL REGISTER GROWTH OF OVER 20 PERCENT IN 1996 WITH TOTAL OUTPUT VALUE BETWEEN 270 AND 280 BILLION YUAN AND TOTAL SALES REVENUE OF ABOUT 180 BILLION YUAN. IN 1996, MEI PLANS TO PRODUCE OVER 14 MILLION COLOR TV SETS, 21 MILLION COLOR TV TUBES, 1.3 MILLION MICROCOMPUTERS, 11 MILLION DIGITAL PROGRAM-CONTROLLED SWITCHBOARD LINES, AND ABOUT THREE MILLION VIDEOTAPE RECORDERS.

C. SHANGHAI GENERAL SCANNER CO DEVELOPS CHINA'S FIRST "HIGH-PERFORMANCE OPTICAL SCANNER" (CEN, 5 JAN). THE NEW SCANNER IS RELIABLE AND STABLE; ITS SCANNING ANGLE, LINEARITY, AND POSITIONING ACCURACY MEET ADVANCED 1990'S INTERNATIONAL STANDARDS. THE SCANNER RECENTLY PASSED TECHNICAL APPRAISAL TESTING IN SHANGHAI, DURING WHICH IT WAS FOUND THAT ITS TECHNICAL PARAMETERS WERE UP TO OR SURPASSED THOSE SPECIFICATIONS ESTABLISHED BY THE SHANGHAI MUNICIPAL S&T COMMITTEE.

COMMENTS: THIS REPORT IS CONTINUED IN IIR



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