

[REDACTED]

[REDACTED]

SECTION 4 OF 18

[REDACTED]

[REDACTED]

BODY

SUBJECT: SCIENCE AND WEAPONS REVIEW CABLE,
SW SWRC 89-5002K, 10 JANUARY 1989

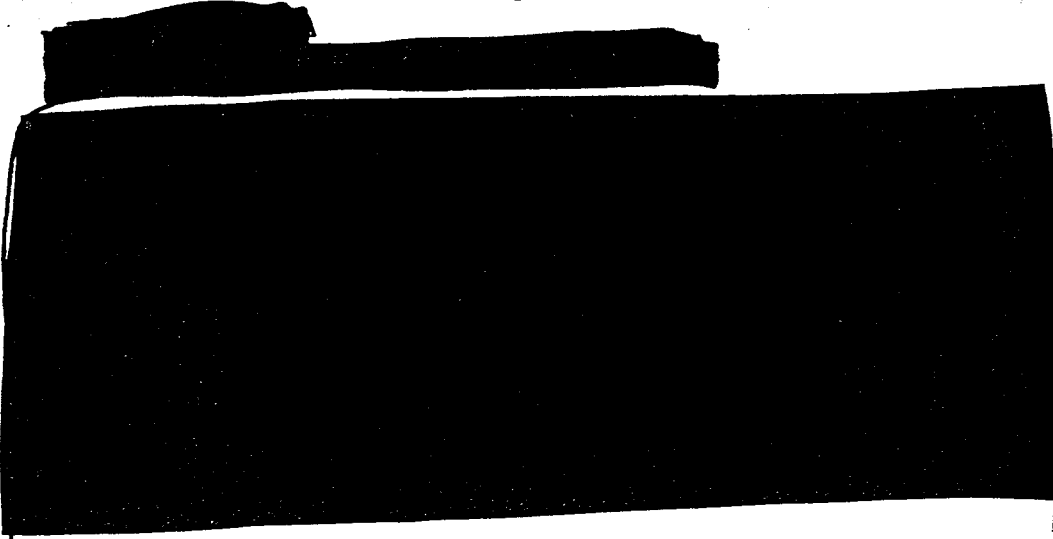
Refer to
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HYPERVELOCITY GUN. THE PROTOTYPE HAS A BARREL ABOUT 4 METERS LONG, ABOUT 45 CENTIMETERS (CM) IN DIAMETER IN THE REAR, AND TAPERING TO ABOUT 18 CM IN FRONT. PROPULSION IS STARTED BY ELECTROMAGNETIC FORCE FOLLOWED BY A CHEMICAL CHARGE TO INCREASE VELOCITY. THE SYSTEM HAS ACHIEVED A VELOCITY OF 1,950 METERS PER SECOND. THE TESTS HAVE BEEN CONDUCTED AT THE SOREQ NUCLEAR RESEARCH FACILITY SOUTH OF TEL AVIV. THE FINAL GUN PROBABLY WILL HAVE A CALIBER OF ABOUT 155 MILLIMETERS. THE COST OF THIS PROGRAM IS 85 DOLLARS MILLION.

[REDACTED]

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Refer to

HEL PROGRAM

ISRAEL HAS AN EXTENSIVE LASER RESEARCH AND DEVELOPMENT COMMUNITY. THERE ARE 35 ISRAELI FIRMS, AS WELL AS A NUMBER OF UNIVERSITIES, ENGAGED IN ELECTRO-OPTICS AND LASER RESEARCH AND PRODUCTION. THE CENTER OF EXCELLENCE FOR CHEMICAL LASERS AT BEN GURION UNIVERSITY HAS A GRANT UNDER THE SDI FRAMEWORK TO DEVELOP NOVEL CHEMICAL LASERS. SOURCE REPORTING INDICATES THAT THE WEAPON SYSTEMS DIVISION OF RAFAEL, THE ISRAELI ARMS DEVELOPMENT AUTHORITY, IS WORKING ON AN AIRBORNE CHEMICAL LASER WEAPON SIMILAR TO THE US MIRCL SYSTEM. HOWEVER, RAFAEL SEEMS TO LACK DATA ON MISSILE VULNERABILITY TO LASER ATTACK. GIVEN THE DIFFICULTIES THE UNITED STATES HAS ENCOUNTERED IN TRYING TO DEVELOP LASERS FOR MISSILE DEFENSE, WE BELIEVE THAT THE ISRAELI AIRBORNE HEL WILL BE MORE USEFUL AGAINST CRUISE MISSILES THAN AGAINST BALLISTIC MISSILES.

SPACE-BASED SENSORS

WITH THE LAUNCH OF THEIR FIRST SATELLITE, THE ISRAELIS DEMONSTRATED THE CAPABILITY TO PLACE A SATELLITE IN LOW EARTH ADMIN

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