

**LASER RETROREFLECTOR ARRAY (LARA) FOR IRS
MISSIONS**

BY

K. ELANGO

M. PITCHAIMANI, P. SOMA & S. K. SHIVAKUMAR

**ISRO TELEMETRY, TRACKING AND COMMAND
NETWORK (ISTRAC)
INDIAN SPACE RESEARCH ORGANISATION (ISRO)
BANGALORE – 560058
INDIA**

PRESENTED

**13TH INTERNATIONAL WORKSHOP ON
LASER RANGING
OCTOBER 07 – 11, 2002
WASHINGTON D.C.**

SUMMARY

- **ISRO IS PROVIDING TTC SUPPORT TO MULTIPLE REMOTE SENSING SATELLITES USING ITS GROUND STATIONS WITHIN AND OUTSIDE INDIA**
- **ISRO IS ALSO OPERATING A PRARE STATION AND A P-CODE GPS RECEIVER AT THE SAME CAMPUS, BANGALORE**
- **ISRO HAS LONG EXPERIENCE IN OPERATING THE FIRST GENERATION LASER SYSTEM AT KAVALUR, INDIA FOR MORE THAN A DECADE**
- **ISRO CAN REVIVE SLR PROGRAM IN INDIA AND BECOME PART OF THE GLOBAL SLR NETWORK**
- **NECESSARY INFRASTRUCTURE, EXPERTISE IN HARDWARE, SOFTWARE, ROUND THE CLOCK OPERATION, ORBIT DETERMINATION ETC. ARE AVAILABLE IN ISRO**
- **ISRO HAS OPERATIONAL EXPERIENCE IN ORBIT DETERMINATION/POD FOR MORE THAN TWO DECADES**
- **BANGALORE CAN BE ELEVATED AS ONE OF THE FUNDAMENTAL REFERENCE STATIONS FOR SPACE GEODESY**
- **ISRO CAN COLLABORATE WITH RESEARCH AND ACADEMIC INSTITUTIONS TO EVOLVE A STRONG AND VIBRANT SCIENCE GROUP**

- **ESTABLISHING SLR STATION AT BANGALORE WILL FULFILL THE LONG STANDING GAP IN THE SLR NETWORK AT THE INDIAN SUB-CONTINENT**
- **ISRO HAS PROPOSAL TO CONDUCT INTERNATIONAL WORKSHOP ON SPACE GEODESY TO BRING THE EXPERTS ON A COMMON PLATFORM**
- **ISRO HAS PLANS TO FOSTER SPACE GEODESY IN INDIA BY ESTABLISHING A SPACE GEODESY CENTRE. TOWARDS THIS, A GEODESY DIVISION IS ESTABLISHED RECENTLY**
- **TO GET ACCURATE GROUND IMAGERIES FROM REMOTE SENSING SATELLITES, ISRO HAS PROPOSED TO PUT RETROREFLECTORS TO ITS FUTURE IRS MISSIONS**
- **A DETAILED INTERNAL DESIGN REPORT IS MADE IN THIS RESPECT.**
- **THE REFLECTOR ARRAY IS SIMILAR TO ENVISAT, 9 CUBES ON CONICAL ARRAY**