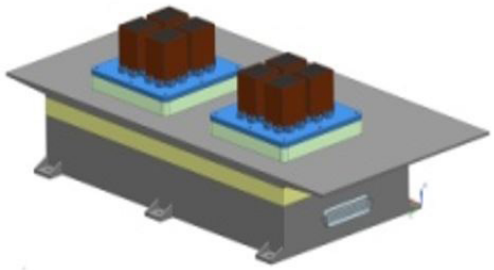
Low Energy X-ray Spectroscopic System

U R Rao Satellite Centre (URSC) of Indian Space Research Organization (ISRO) has developed Low Energy X-ray Spectroscopic System 0.5 keV to 10 keV using Swept Charge Device and Charge Coupled Devices.



Configuration diagram of the Low Energy X-ray Spectroscopic System

Salient Features

- Low energy x-ray spectroscopy system for material analysis.
- X-ray detector system for laboratory experiments such as X-ray Diffraction, X-ray Reflection Fluorescence etc.
- Detector system for space based applications such as planetary sciences and high energy astronomy.

Major Specifications

- Energy Range – 0.5keV to ~10keV.
- System noise as low as ~7e^- RMS for high SNR.
- Readout modes –
  - X-ray event based readout.
  - Full/partial image readout.
- Up to 16 bits digitization.
- Suitable for variety of CCD type detectors from various manufacturers.
- CCD readout frequency – Programmable up to 1Mega pixel per second.
- Multiple channel readout up to – 16 channels.
- Scalable for multiple detector.

Technology Transfer

URSC/ISRO offers to transfer this technology of Low Energy X-ray Spectroscopic System by URSC to industries in India with adequate experience and facilities. Industries interested in obtaining knowhow may write giving details of their present activities, infrastructure and facilities.

Technology Transfer & Industry Coordination Division (TTID),
Programme Planning and Evaluation Group (PPEG),
U R Rao Satellite Centre (URSC), ISRO, HAL Airport Road,
Vimanapura Post, Bangalore – 560 017.
Email-id: tt-icd@ursc.gov.in
Fax No: 080-25205261
https://www.ursc.gov.in/industry/index.jsp