



1880 Oak Avenue, Evanston, IL 60201, USA
Toll Free in USA: 877-MAR-XRAY
Tel: (847) 869-1548
Fax: (847) 869-1587
Email: info@mar-usa.com

Dr. Stephen Ross
Advanced Photon Source
Argonne National Laboratory
9700 South Cass Avenue
Argonne, IL 60439

Quotation No.: 20050414-1
Date: April 14, 2005
Quotation VALID for 90 days.

Customer Tel: 630-252-9510 / 9494
Customer Fax: 630-252-5290
Email: skross@aps.anl.gov

Quotation:

1. Frame Shift Option for marccd 165 detector

Built-in option to marccd data collection software will allow readout in frame-shift mode. In this mode, the user may specify a shift size, in the form of a number of lines to be shifted (n). During a timed exposure, the detector will then respond to an auxiliary input pulse (TTL rising edge) and shift the image on the CCD chip by n lines at approximately 500 μ sec/ 2 lines (Each pulse shifts 2 lines, 1 toward the top and 1 toward the bottom of the image). In an NxN data frame, the shift is split at the horizontal centerline, so that each n line frame-shifted area is N pixels across horizontally and n lines vertically, but will be split in the corresponding raw data frame into 2 n/2 line halves which must be reassembled later. The proper geometric and flat field corrections will be applied and the N/n subimage reassembled into a single NxN frame.

Frame Shift Option for marccd 165 detector sn 69

USD \$ 5,000.00

TERMS OF DELIVERY AND PAYMENT

Time of Delivery	One Month after receipt of order
Terms of Delivery	FOB Destination
Terms of Payment	Net 30

VIA E-MAIL

Christine Muchmore, Ph.D.
Senior Scientist