

Progress at the Shanghai Electron Beam Ion Trap



Shanghai EBIT Lab
Modern Physics Institute
Fudan University, Shanghai

The important times of the Shanghai EBIT

•Jan 2002, launching ;

•Jul 2002, conceptual design finished;

•Apr 2003, engineering design of cryogenic system,superconductor magnets,drift tube assembly,electron collector assembly,transport system and relevant adjusting structures finished;

•Jul 2003, engineering design of high voltage system, ion injection and extraction system finished;

•Nov 2003, engineering design of power supply and control system finished;

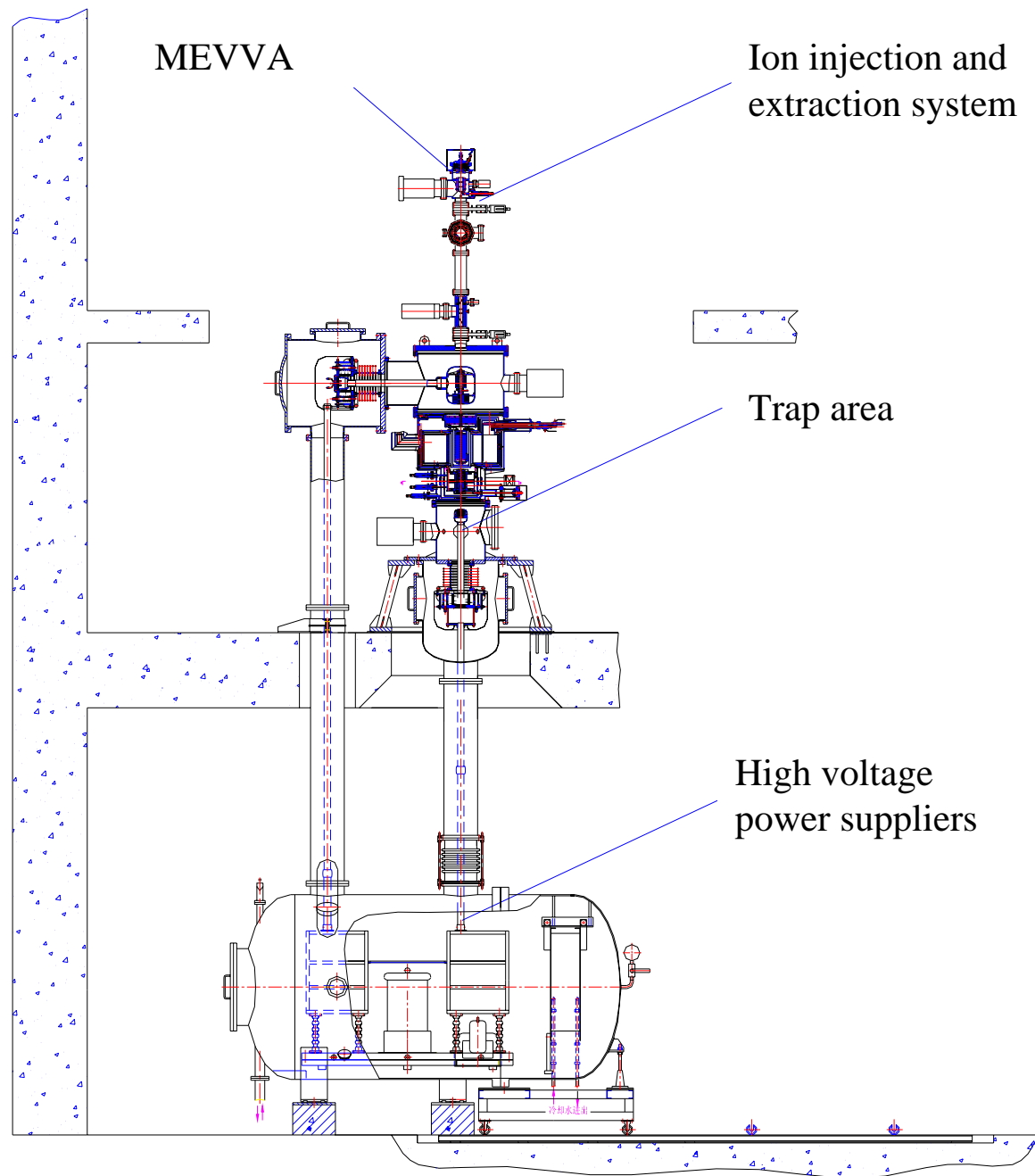
•Mar 2004, Lab construction finished; April, installation started;

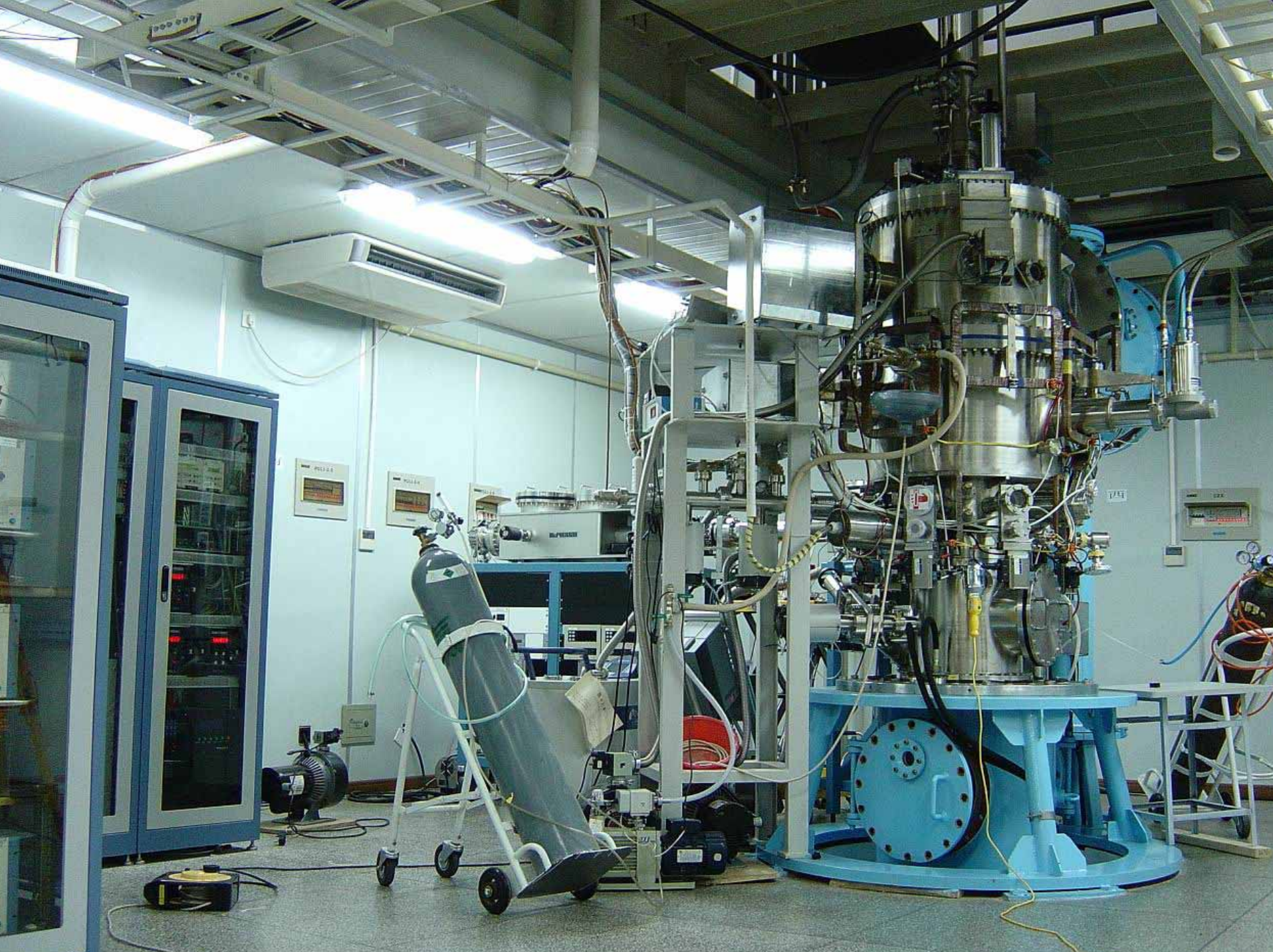
•Dec 2004, first electron beam; May 2005, first spectrum;

•Oct. 2005, e beam: 100 mA, 100KeV;

June 9th 2006, e beam: 160 mA, 120 KeV

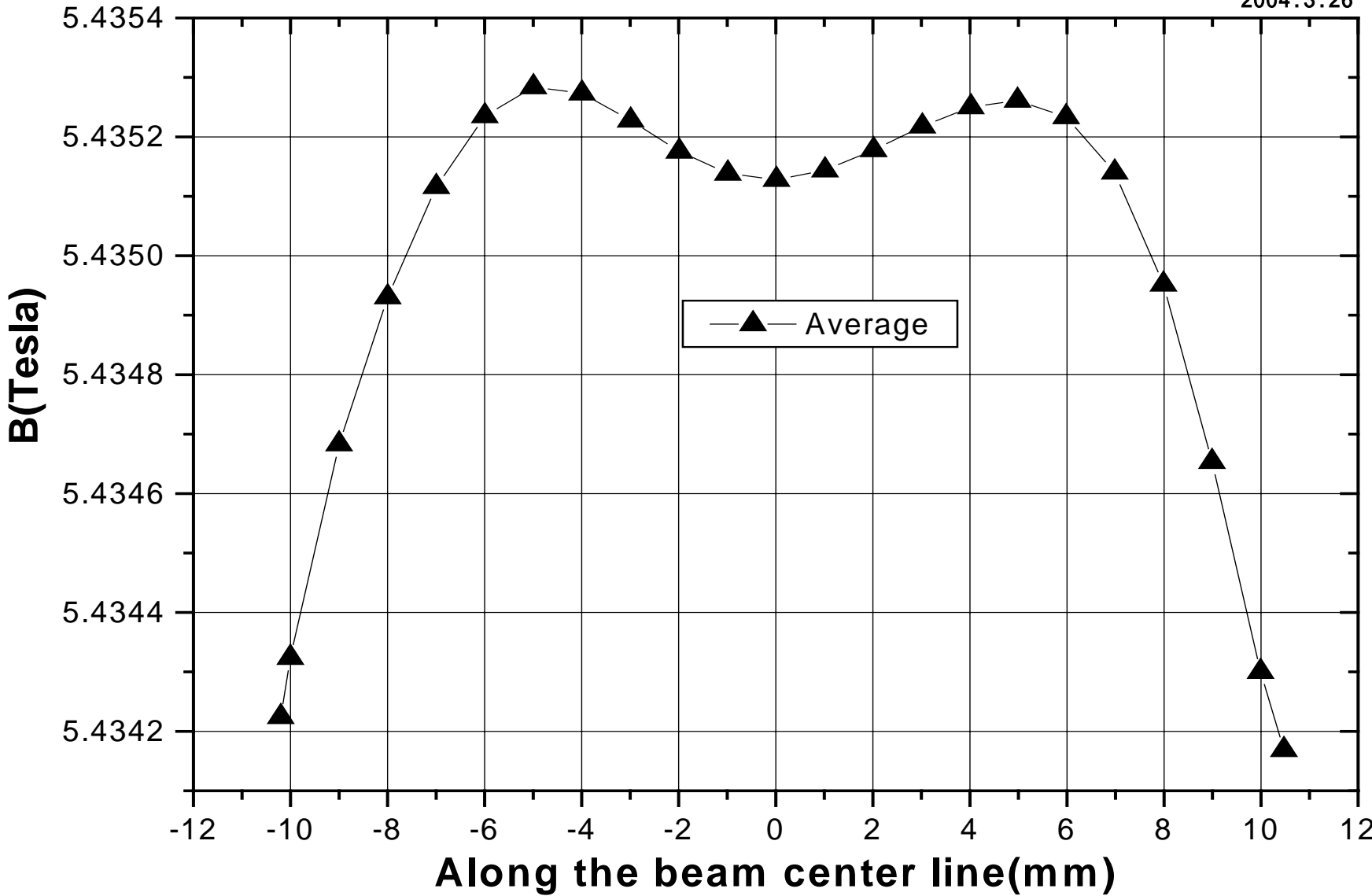
上海EBIT 主体结构





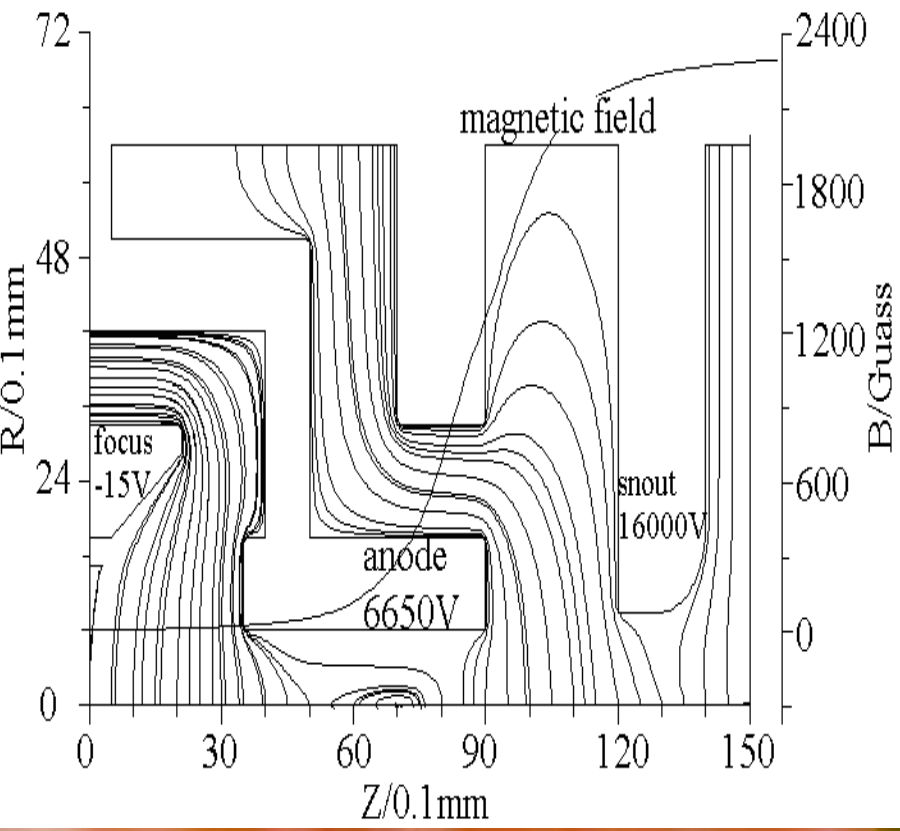
Field distribution in SC coil

2004.3.26

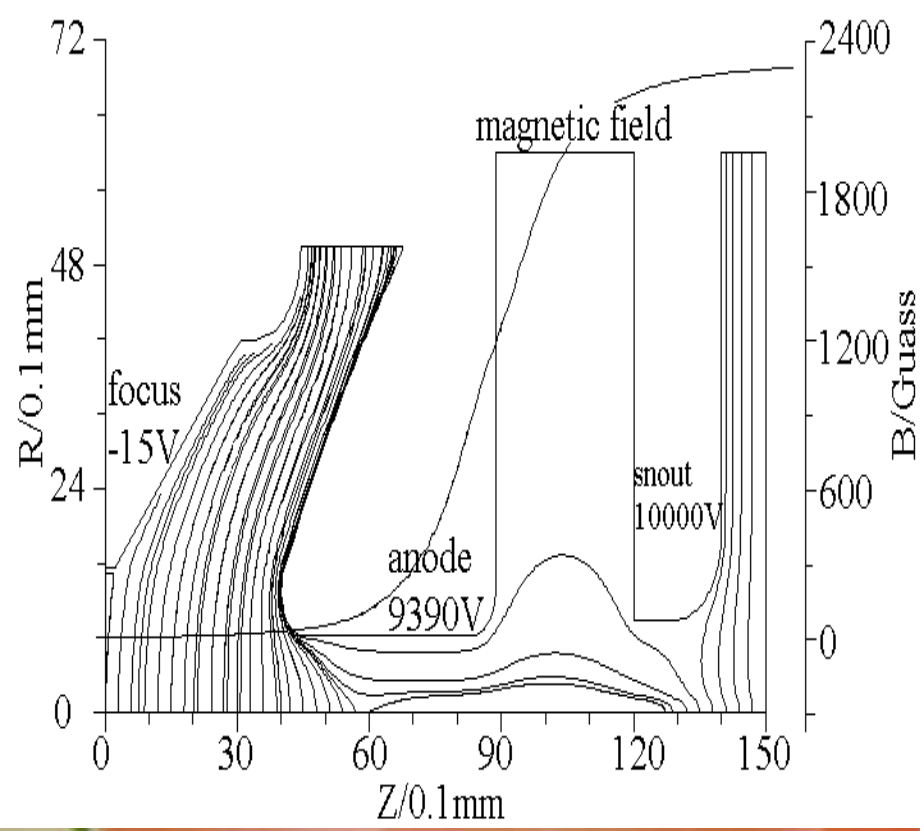




egunA

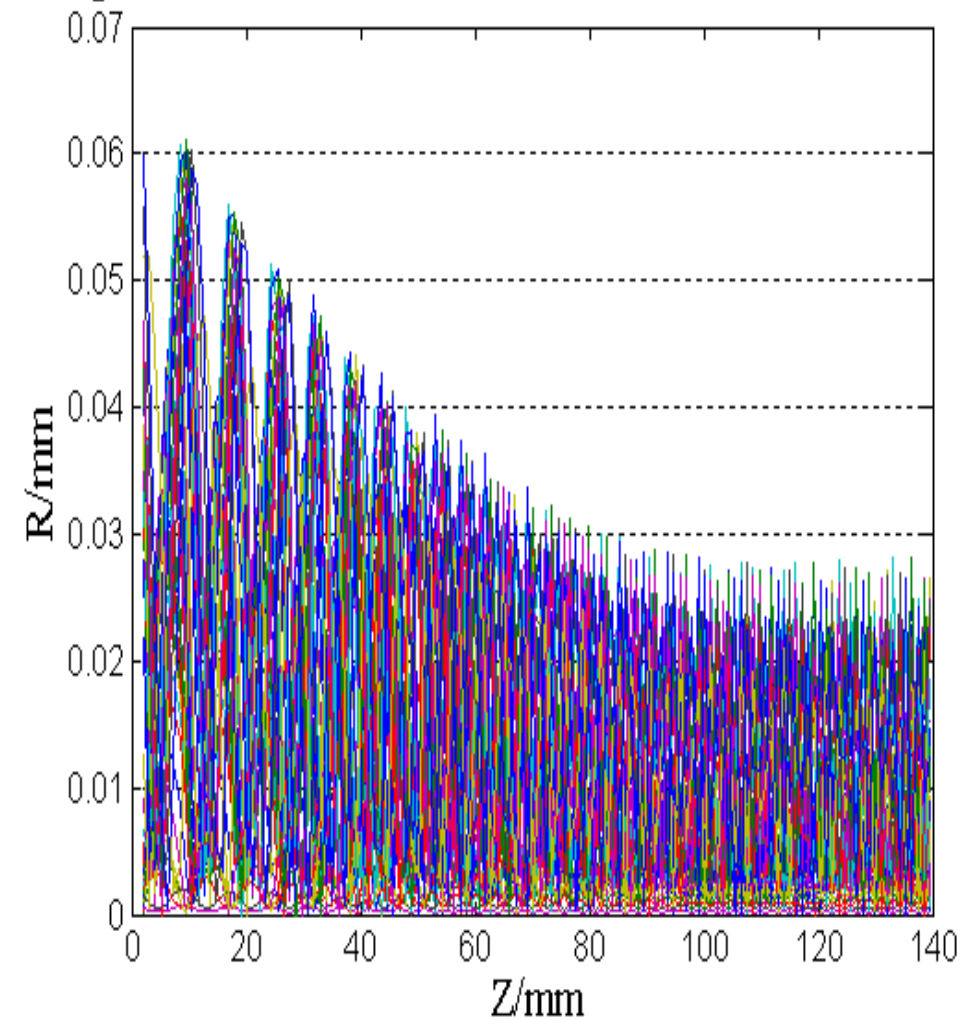


egunB

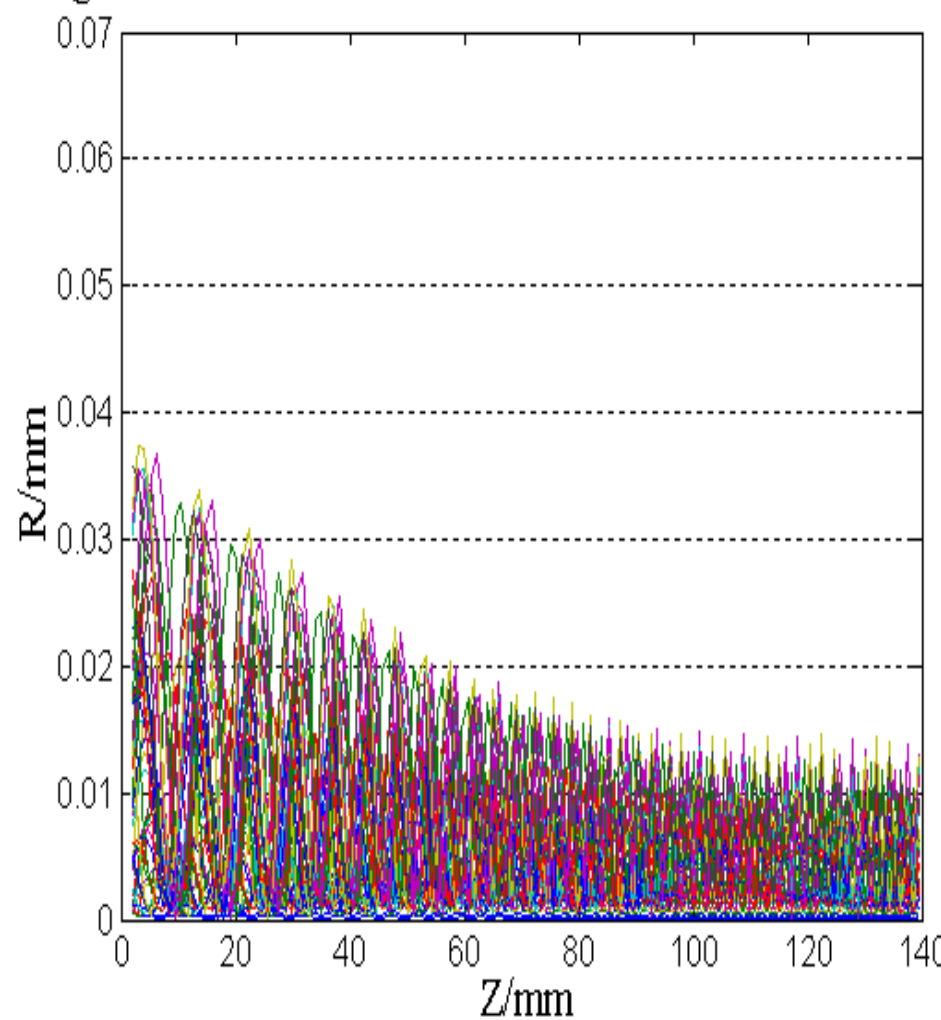


250 mA at 200 KeV.

egunA

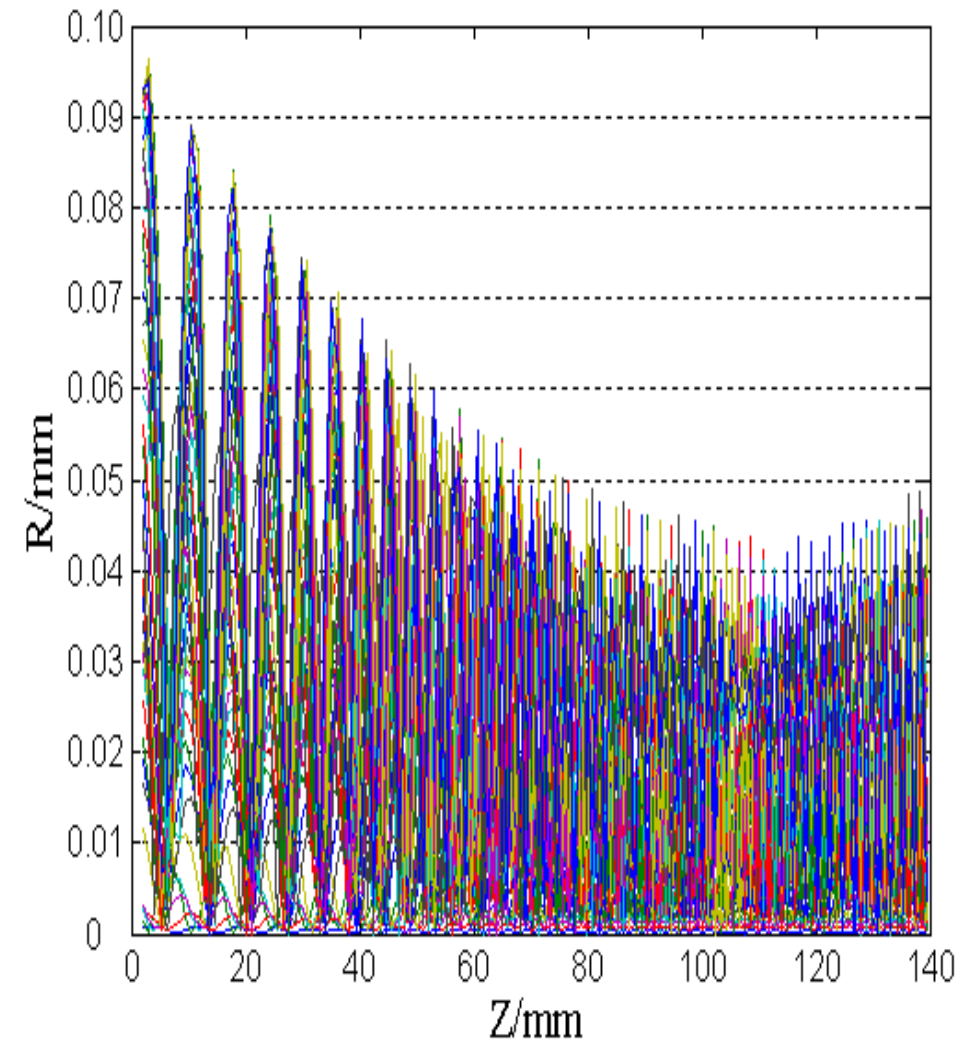


egunB

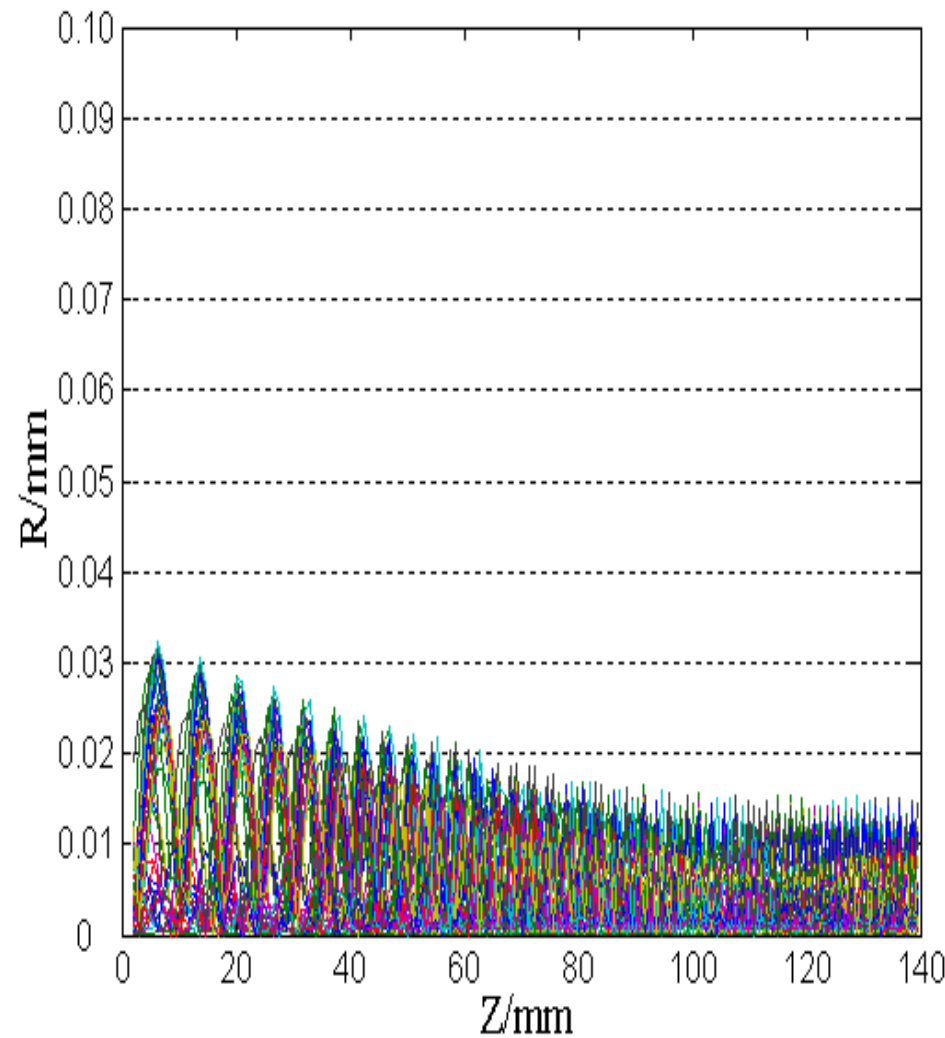


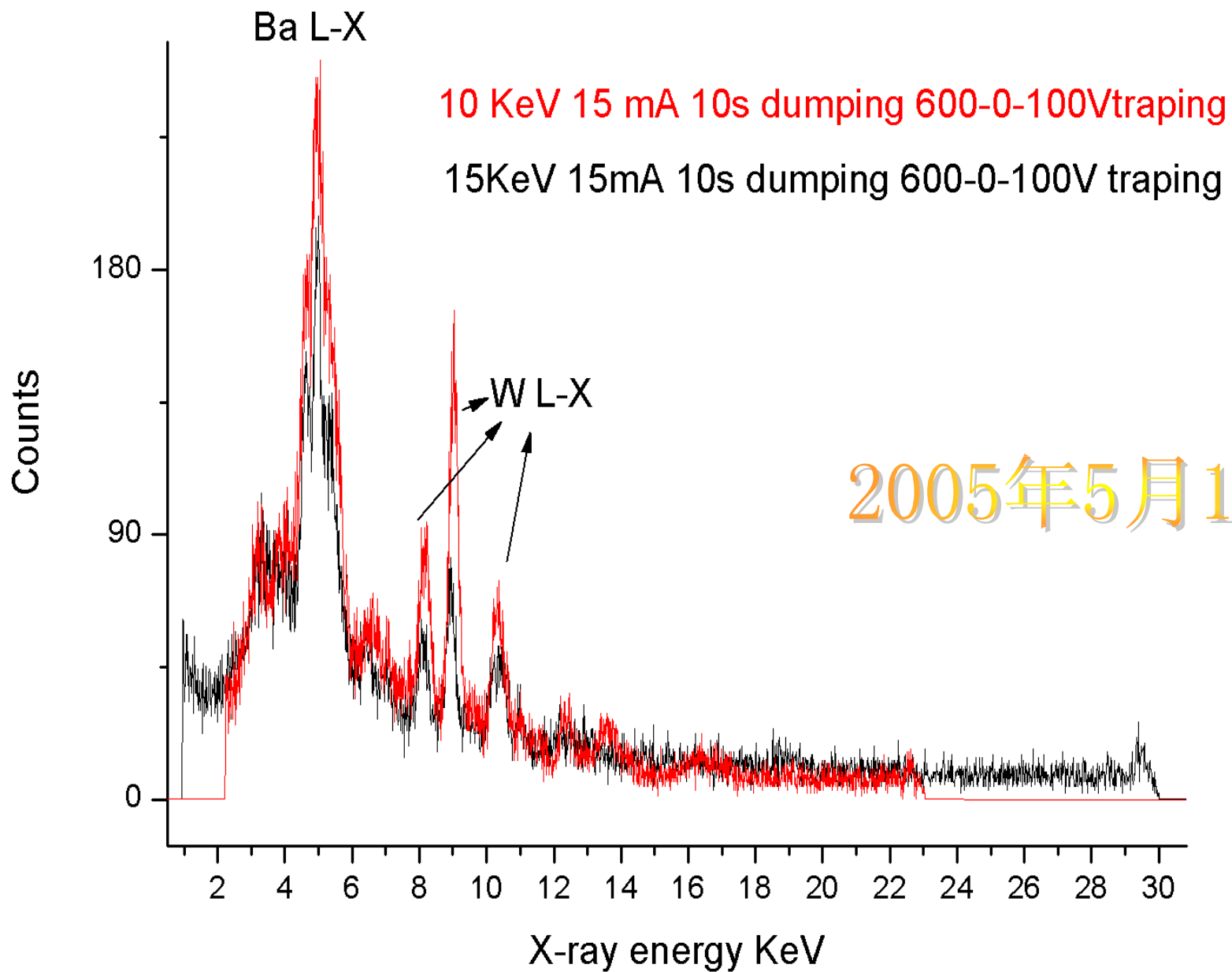
5 mA at 10 KeV.

egunA



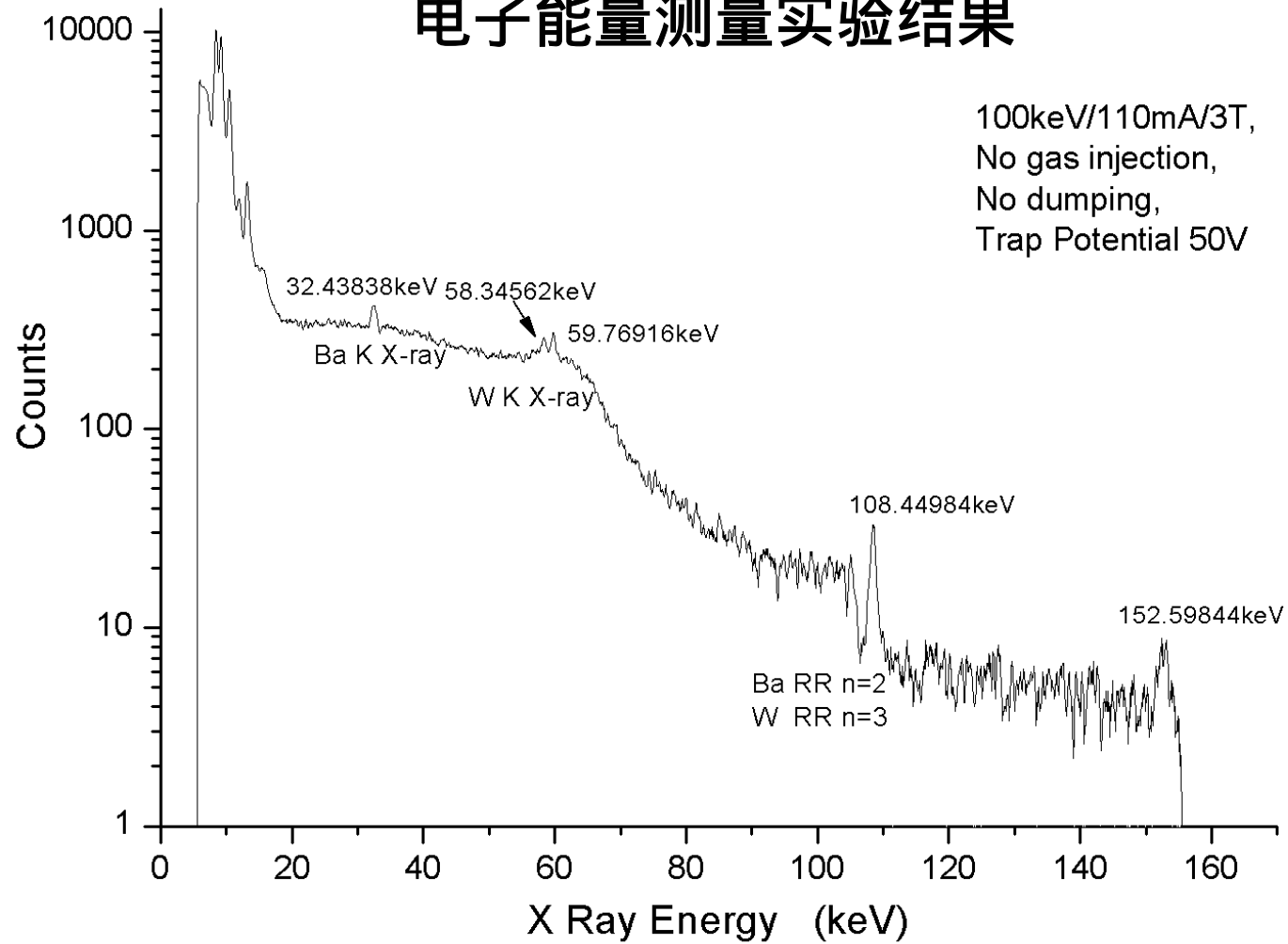
egunB



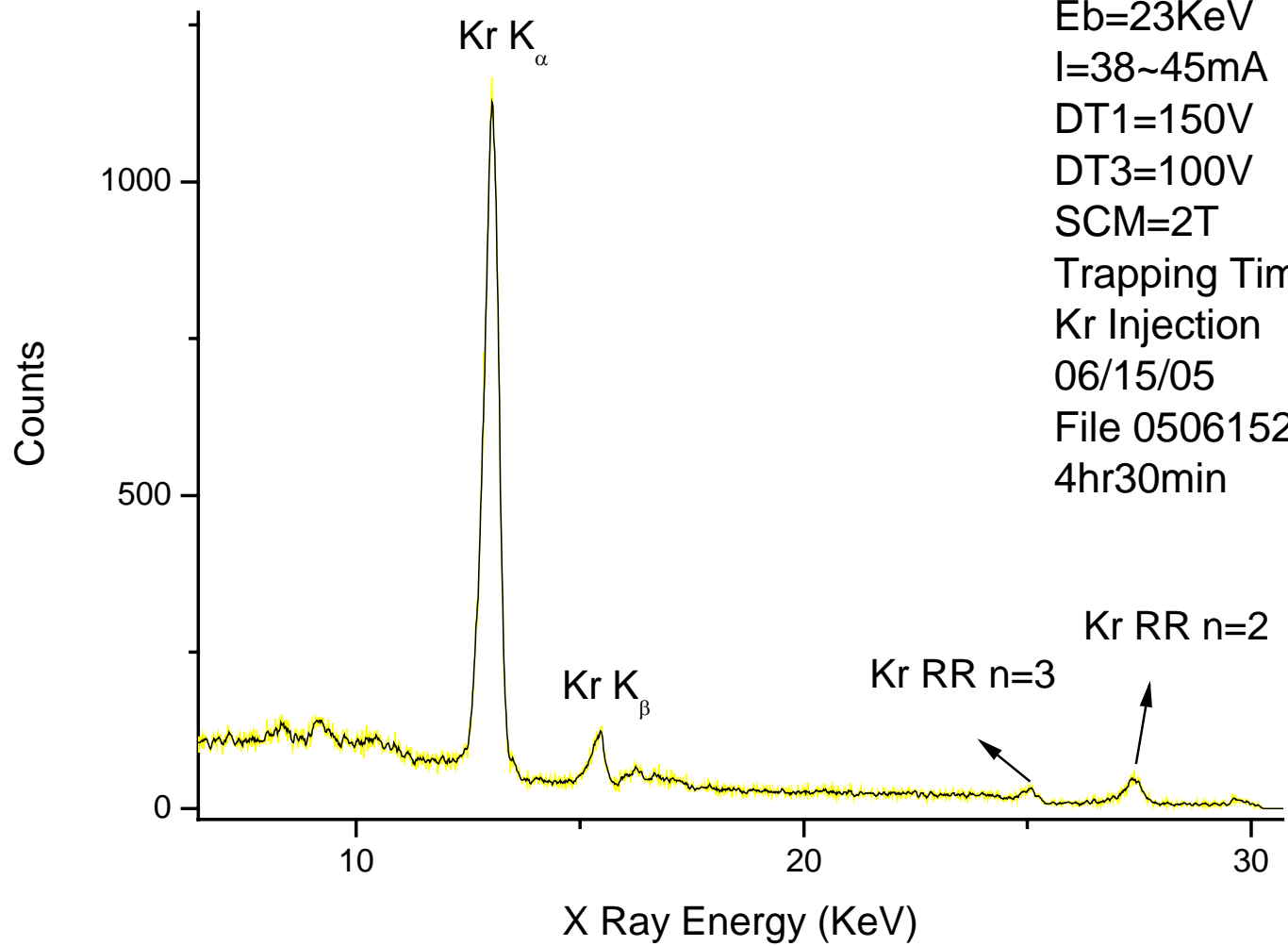


2005年5月12日

电子能量测量实验结果

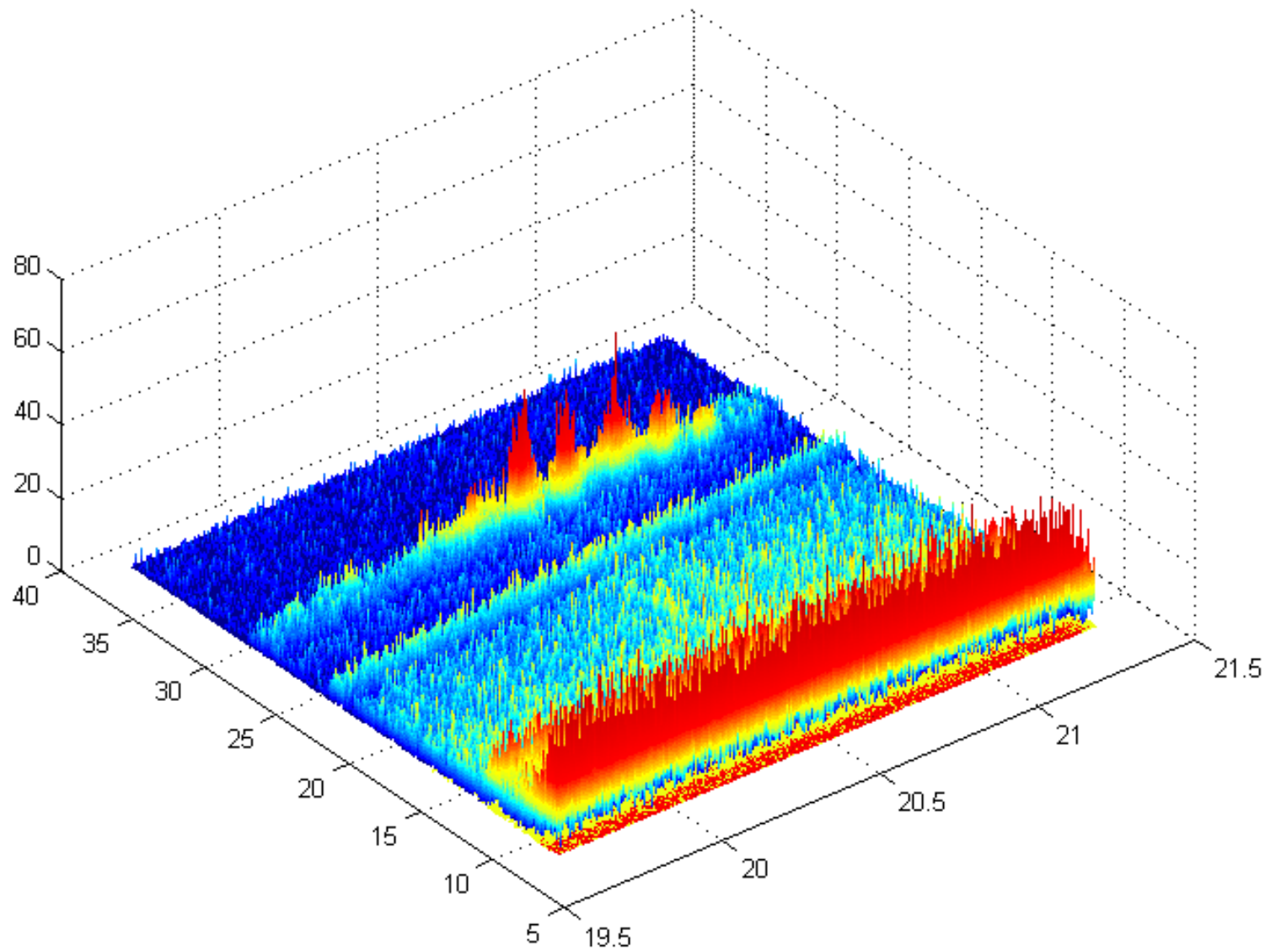


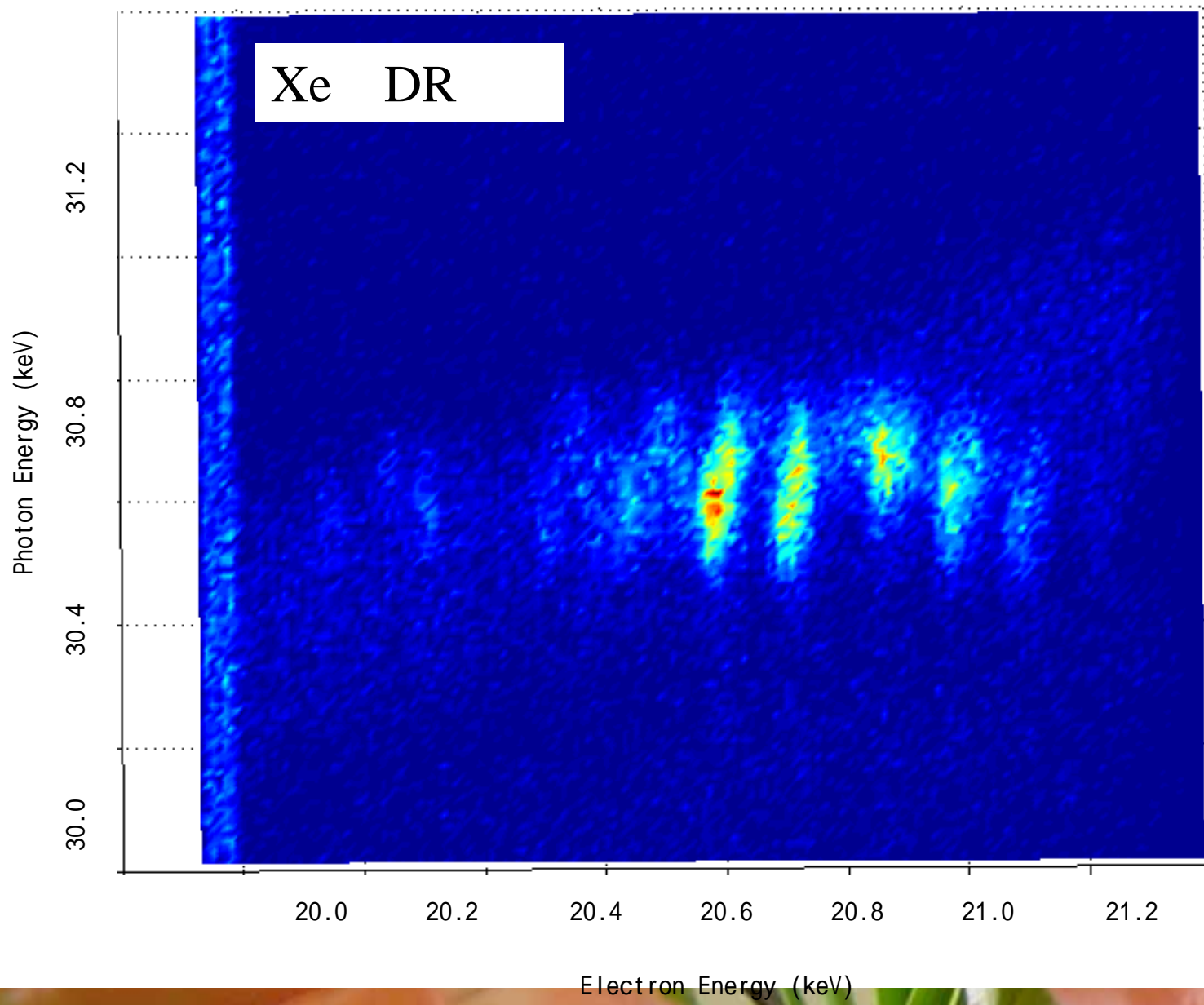
10月24日

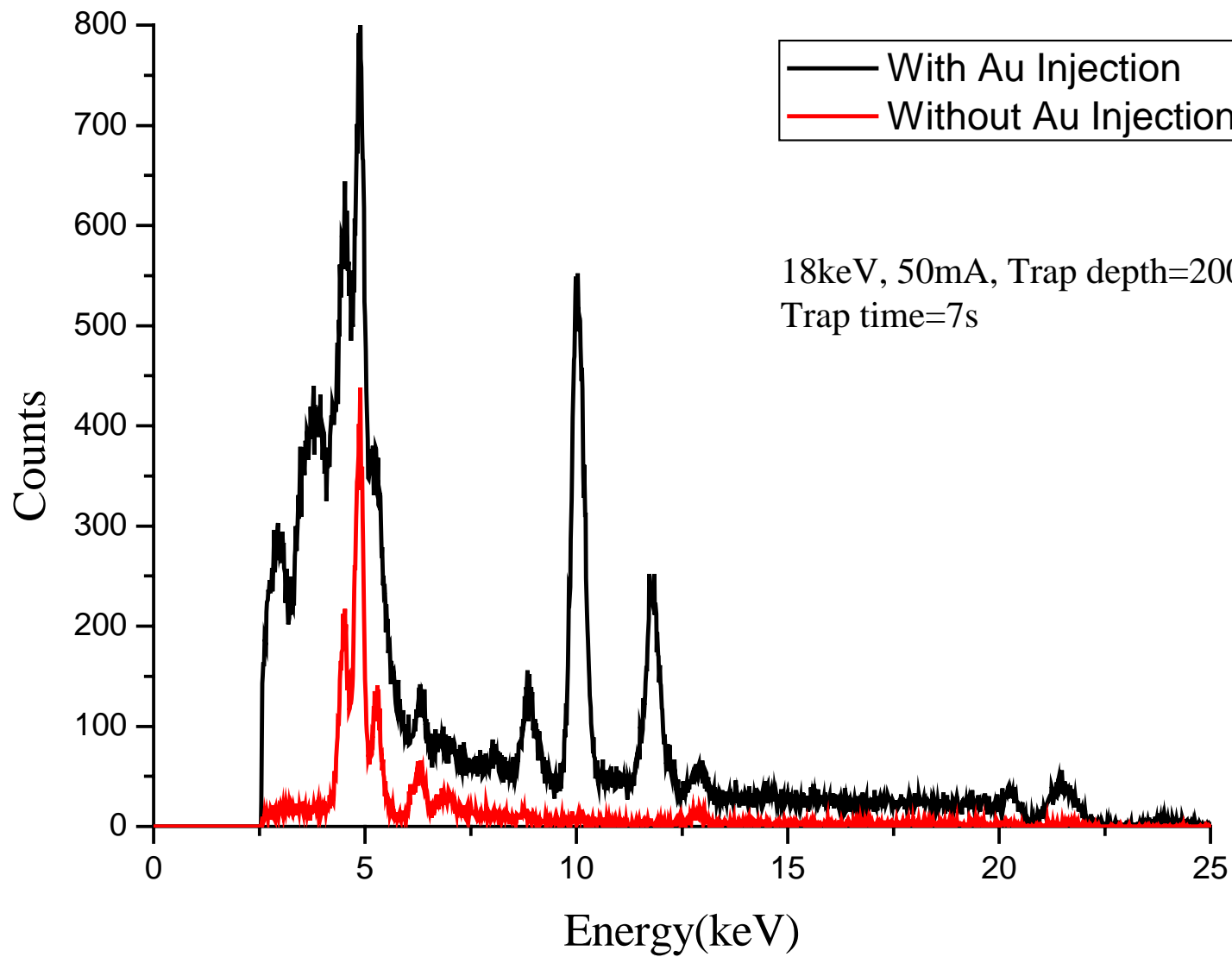


Eb=23KeV
I=38~45mA
DT1=150V
DT3=100V
SCM=2T
Trapping Time=3s
Kr Injection
06/15/05
File 0506152101
4hr30min

Xe DR







HPGe I

Imaging

Spectrometer 30-1A

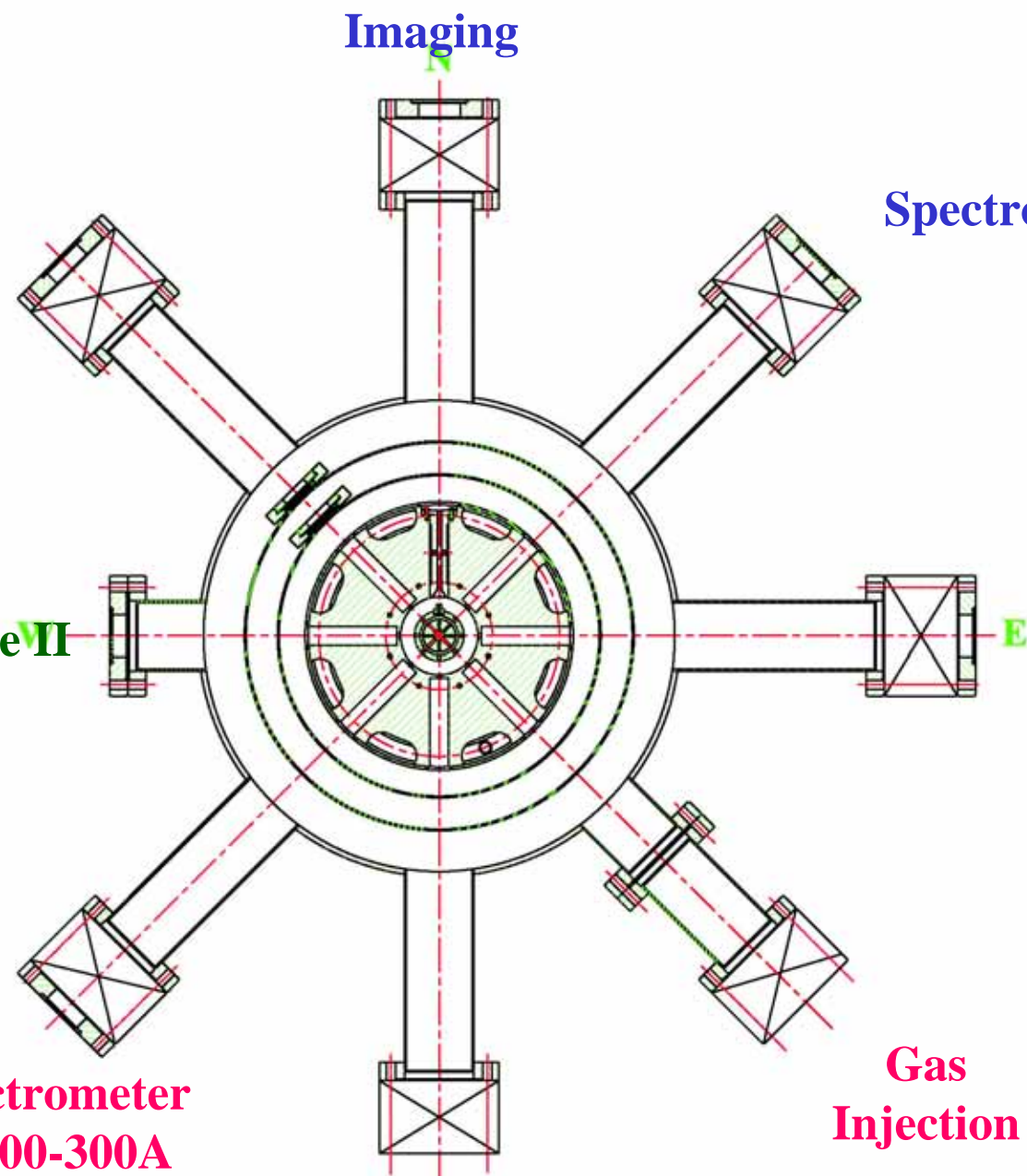
HPGe II

Spectrometer 300-20A

Spectrometer 10000-300A

Gas Injection

X-ray calibration source device



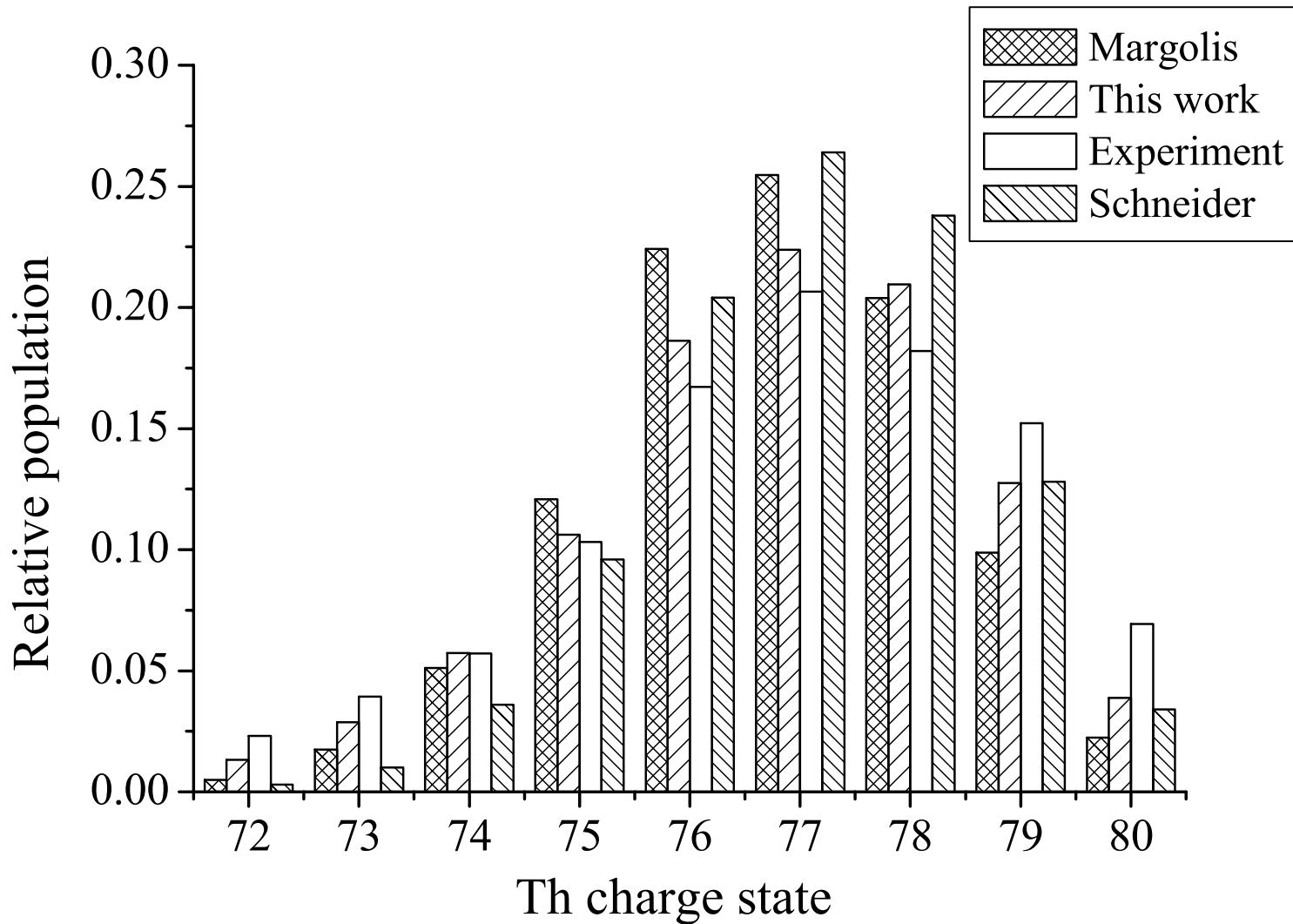
Spectrometer: 300-10000Å



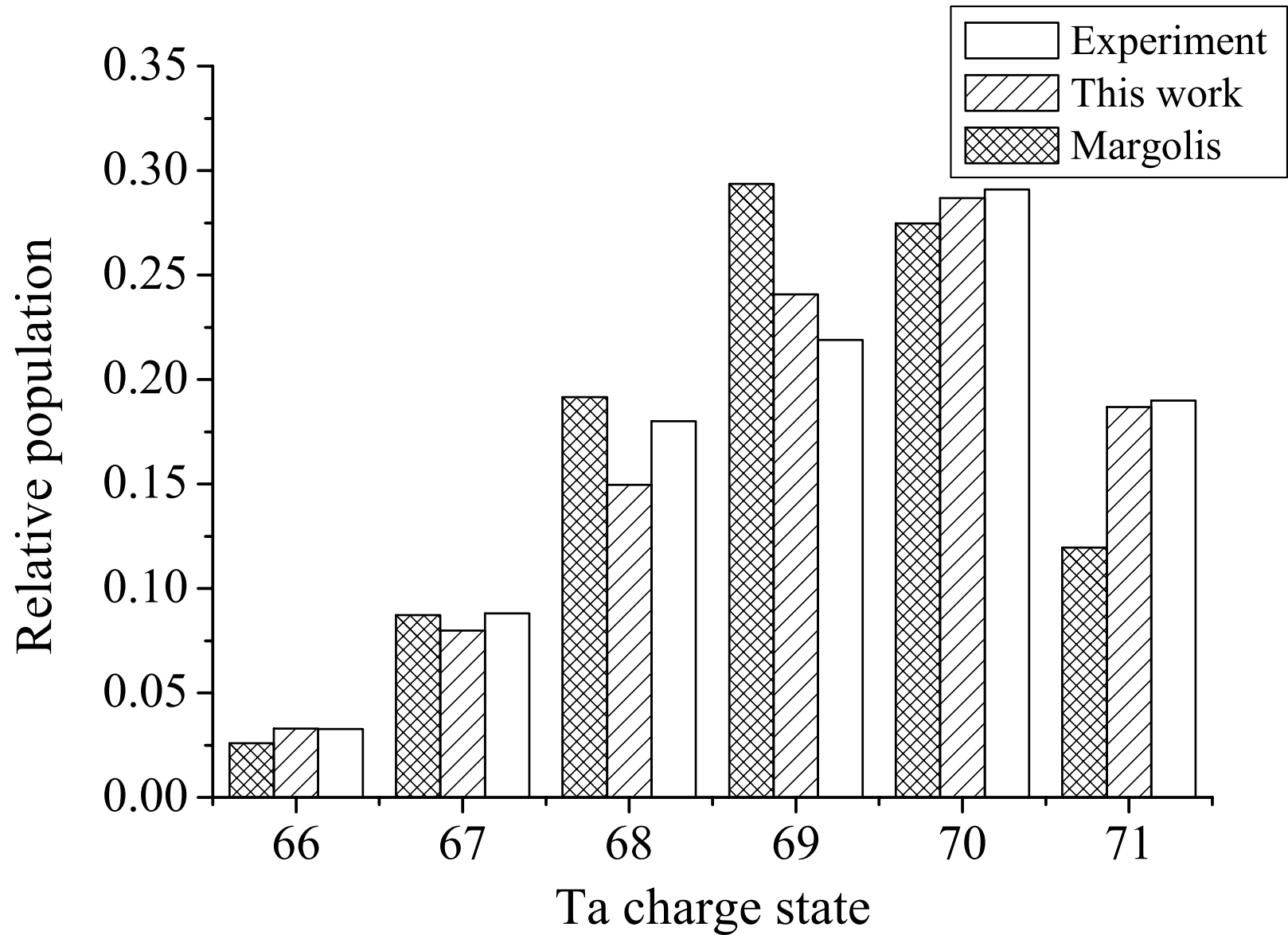
Spectrometer 1-30Å



24keV, 100mA, 3T, trapping potential 100V, 3s



78keV, 200mA, 4T, 100V trapping, 3s.





Thank you!