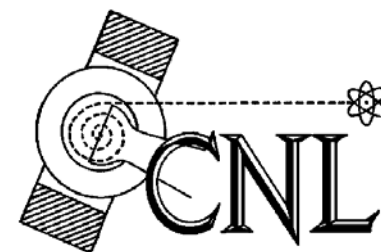
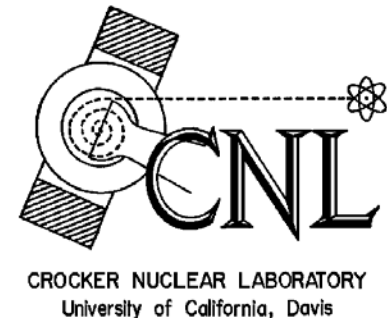


IMPROVE XRF Laboratory Status & Changes

Chuck McDade
Crocker Nuclear Laboratory
University of California, Davis
Durango, Colorado
September 2007



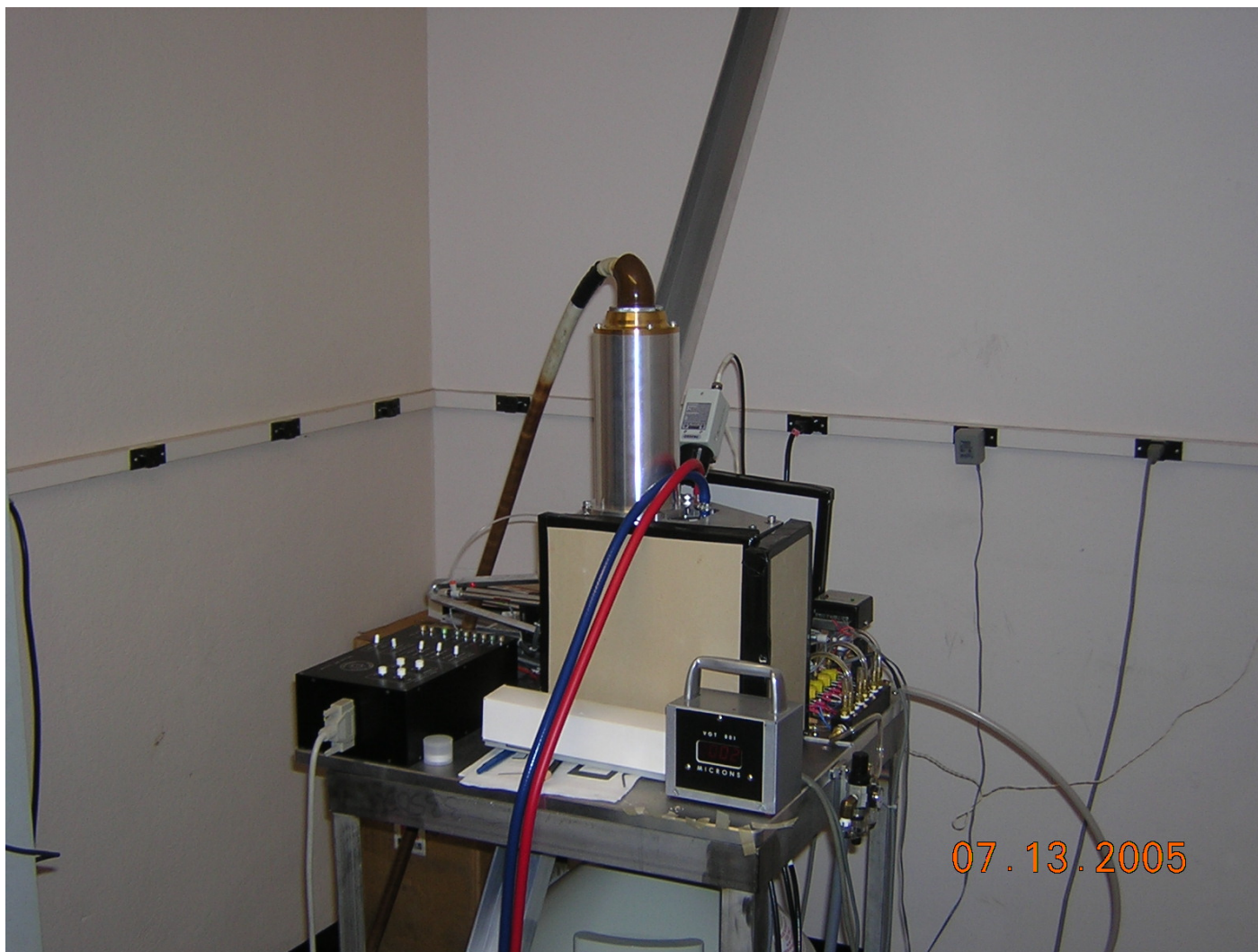
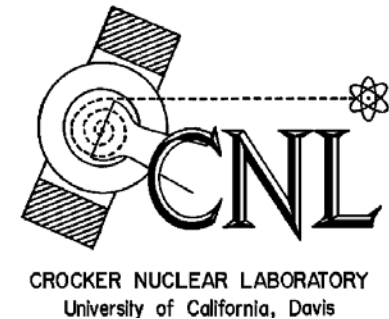
CROCKER NUCLEAR LABORATORY
University of California, Davis



NEW VACUUM XRF SYSTEM

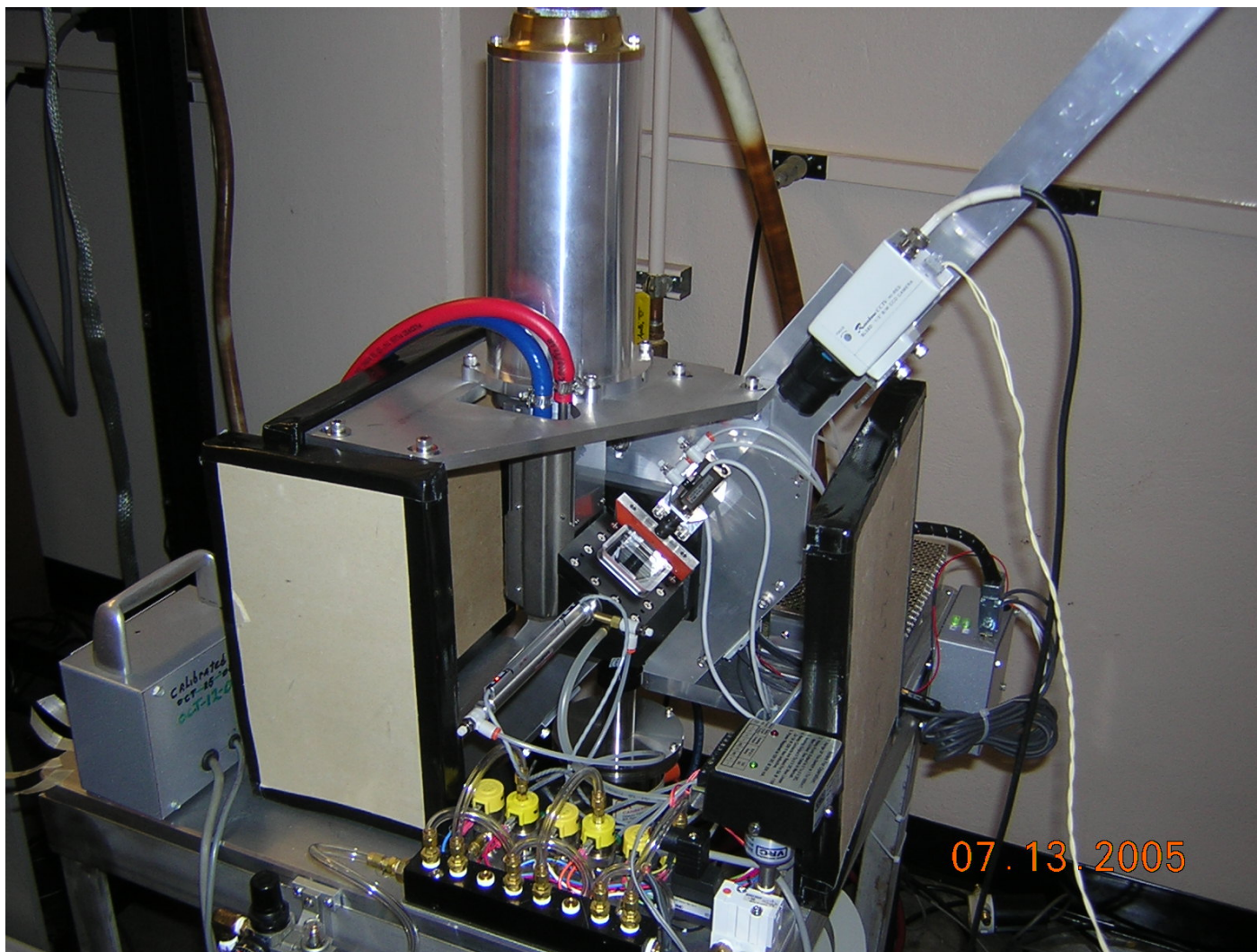


Vacuum XRF System



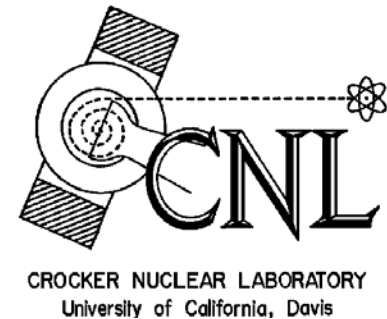


XRF Load-lock Chamber





Vacuum XRF Advantages



- Minimizes Ar peak interference; better MDLs
- No He leakage through Be window; better detector reliability and longer lifetime
- No need for He supply
- 2 systems doubles our capacity, cuts our schedule
- Analysis began with 2005 samples
 - System #1, January 2005
 - System #2, October 2005



Vacuum XRF Evaluation



- Tomorrow Warren White will discuss:
 - Comparing systems 1 & 2 with July 2005 data
 - Differences observed, such as S/Si interference
 - Uncertainties in our XRF data
 - History of $3S/SO_4^-$ ratio; stabilized ~ 1.15 with vacuum Cu XRF