

Customer: Noah Plymale nplymale@caltech.edu	
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Location: CALTECH, Beckman Institute, Pasadena, CA 91125	
Date & Time Start: May 27 2015	Date & Time Finish: May 29 2015
Instrument Type: Axis Ultra Hybrid DLD	Serial #:

EFFECT OF FAULT	ACTION TAKEN TO CLEAR/ASSESSMENT	FURTHER ACTION REQUIRED?
PM visit,	<ul style="list-style-type: none"> - Check XPS and UPS calibration - energy scale and work function calibration. Set both 50 and 25meV scales at the analyser control unit. - Detector micro channel plate calibration. Increased from 2600 to 2800V. - Check flap valve o-ring. No obvious over pressure during etch. No action taken. - Check load lock clips and alignment, 2x10⁻⁷torr after on hour is normal. No action taken. - Turbo backing pressure is increasing again; possible pump needs new tip seals. Pressure was 3x10⁻³torr. No action taken. - Ion pump pressure gauge has been higher than usual lately. Pressure in the SAC good at 2x10⁻⁹torr - Ion gun tuning, checked the 4Kev 1mm crater overlays the mono spot and is centred for the analyser. 	<p>None</p> <p>None</p> <p>None</p> <p>None</p> <p>None</p> <p>None</p> <p>None</p>
Occasional loss of Xrays HV	Observed this when running the mono. No drop in water flow. No rise in the vac. Seems to occur more often but is not limited to 15KV. Removed dual HV cable. Still occurs. Possible cause is, condensation at external part of feedthrough/water pipe connection. Removed canister and checked it was clear. Further cleaned with isopropanol.	Please monitor.
TPD; MKS	Customer would like a shroud (tube) centred on the analysis area to allow analysis of gases just from this area.	Will as Kratos to get in touch with MKS about a design improvement.
Dual anode	Dual anode (achromatic) may need replacing or removing as it is over five years old.	Recommend the customer replaces the anode soon or removed it from the system.

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INSTRUMENT SETTINGS ON DEPARTURE

STC/SEC Pressure: 1x10 ⁻⁹ torr	Gain: -4.41
SAC Pressure: 2x10 ⁻⁹ torr	Detector V: 2800
Load Lock Pressure: 2x10 ⁻⁷ torr	
AL mono settings;	
Top 6.8	
Right 18.45	
Bottom 19.65	

SPARES – DURING THE VISIT THE FOLLOWING SPARES HAVE BEEN USED FROM YOUR STOCK. IF NECESSARY, PLEASE ORDER REPLACEMENTS AS SOON AS POSSIBLE.

NA

SERVICE ENGINEER'S SIGNATURE:

CUSTOMER'S SIGNATURE:




STEPHEN BROWN

Bruce Brunshwig

