

Dome and Levy Spectrometer Maintenance Tasks

revised: November 13, 2012

SYSTEM	PROCEDURE	DURATION	FREQUENCY	NOTES
Azimuth Cable Wrap	<p>Inspect wires for damage</p> <p>Check IGES chain and plastic slide plates for wear</p> <p>Confirm End of Travel limits are functioning</p> <p>Check wires at strain relief points on both ends of IGES chain</p>	30 minutes	Every 3 months	
Dome Fan coil units and inside piping	<p>Inspect FC1 and control valve for leaks</p> <p>Inspect FC2 and control valve for leaks</p> <p>Inspect FC3 and Control valve for leaks</p> <p>Inspect utility trough that runs under level 1 floor for leaks (access by lifting aluminum diamond plate near exit door)</p>	15 minutes	Every 6 months	
Instrument Chiller	<p>Check Water level</p> <p>Inspect water for Algae</p> <p>Check and clean filter as required</p> <p>Inspect hoses from chiller to instrument manifold</p> <p>Inspect all exterior valves and piping at the manifold for leaks</p>	30	Every 4 months	
Multistack (Dome) Chiller	<p>Check compressor controller for errors</p> <p>Record suction and pump side operating pressures for both compressors</p> <p>Remove back cover of Multistack and inspect interior for leaks</p> <p>Switch to standby pump (unit has two independent pumps. Switch between pump periodically to confirm operation)</p>	30	Every 3 months	
Dome Bogie wheels	<p>Inspect contact patch of each wheel by back illuminating with flash light</p> <p>Visually check wheels for bulges (indication of tread delamination)</p> <p>Inspect ring beam for wear patterns and cleanliness</p> <p>Check inside azimuth guide roller clearance. Rotate dome 180 degrees and check again to confirm the dome is not binding</p>	60 minutes	Every 6 months	
Level 1 light seals	<p>Inspect red silicone rubber seal between level 1 ceiling and fixed ring wall</p> <p>Inspect seal between level 1 ceiling and telescope pier</p>	15 minutes	Every 6 months	
Dome Azimuth Drive wheels	<p>Check wheel patch with flashlight and mirror.</p>	60 minutes	Every 6 months	

	<p>Check coupling between motor and encoder to ensure set screws are tight</p> <p>Move dome and confirm no unusual noises come from either drive (Master and Slave)</p>			
Vent Doors	<p>Visually inspect slider guide to confirm it is running properly in the guide track.</p> <p>Manually open and close each door to confirm proper operation</p>	30 minutes	ever 6 months	
Dome Shutter Manual controls	Test manual controls as noted under "UPS" to confirm they function correctly.		every 3 months	
Estops	<p>Test Estop #1</p> <p>Test Estop #2</p> <p>Test Estop #3</p> <p>Test Estop #4</p> <p>Test Estop #5</p> <p>Test Estop #6</p>	20 minutes	Every 6 months	
Shutter drives	Listen for noises when testing manual controls	N/A	every 3 months	
UPS	<p>Check display to confirm proper operation</p> <p>Kill main AC power and manually open and shut dome on UPS. Record estimated run time when at full load)</p> <p>Open and close 1 more time on battery. Record Reserve level</p>	45 minutes	Every 3 months	
Firm Alarm	<p>Test applicable devices (those that have a test button)</p> <p>Kill power to lighting circuit and confirm emergency light come on</p> <p>Inspect alarm panel batteries- replace as required</p>	45 minutes	Every 6 months	
Rodent Control	Check traps on Level 1	15 minutes	1 per month	
Lightening protection system	<p>Exterior Lightning arrestors-visual check</p> <p>Dome brush assemblies (4 locations on ring beam) Check condition and contact</p>	15 minutes	As Required	After any significant
Weather station	<p>Visual inspection of tower</p> <p>Check computer and battery</p> <p>Clean Rain sensor with isopropyl alcohol</p> <p>Visually inspect ultrasonic anemometer</p>	40 minutes	every 4 months	Tower must be lowered to

Snow melt cables	Confirm Cable gets hot when on- check cable at the base of the arch girders on the front side of the dome.	15 minutes	every 6 months	
Interior lights	Turn lights on all levels- confirm bulbs are not burned out- replace as required	10 minutes	every 6 months	
Spectrometer systems	Check and record Ion Pump current Check Cryotiger operating pump pressure	15 minutes	ever 3 months	