

**Engineering Group Tasks (updated 4/28/16)**

Task ID	Task	Description	Assignee	Notes	Where	Priority	Unit	When
01	Instrument Cooling System (ICS)	Install and test flow meters into SX ADSEC. This is a repeat of what was done for the DX side.	Mike Gusick, Gene Holmberg, Dan Cox, Dave Ashby	There are 3 parts (phases) to this task. Phase I is to complete the ADSEC cooling line flow meter. Phase II is to add flow meters to the global Left and right systems. Phase III is to integrate a plan of action to react to detected leaks. Approx 2mo of work. Some work to be done in prep. Wiring can start early.	Telescope, Level 4	1	ICS	Summer 2016
02	M3 Refurbishment	Overhaul SX and DX M3 units	Jonathan Kern, Mike Gusick, Gen Holmberg	DX will need some tasks to be carried out to complete last summer's rebuild. SX need a complete rebuild. Requires staged removal from telescope (SX then DX)	Tucson		1 M3	Summer 2016
03	Balance adjustments	Add weight to telescope to prepare for L-N installation in Fall	Jonathan Kern, Mike Gardiner, Dave Ashby	Change the weights on the telescope to accommodate L-N. This can be done after shutdown and before L-N install??	Telescope		1 Telescope	Fall 2016
04	ADSEC: TSS	Upgrade TSS on DX and SX	Roberto Biasi, James Riedl, Conrad V., Guido B.	Dependency: MicroGate providing upgrade path. May require cleanroom and telescope testing? Must be reviewed by the FRB.	Clean room		1 AdSec	Summer 2016
05	ADSEC: Connectorization	Install connector savers	James Riedl		Mountain, Clean room		3 AdSec	Summer 2016
06	AGW Units Maintenance	Unit 2 maintenance of cameras. Image shifting	Jonathan Kern, Mike Gusick, Gene Holmberg, Dave Ashby	PM to be performed before Unit 3 & 4 handoff to PEPSI. Units 1 & 2 pm and HK upgrades can be deferred for another year.	Tucson	3	AGW	Summer 2016
07	Oil Mitigation	Install wipes and covers	Jim Wiese	Replumbing requires HBS to be off and telescope to be zenith	Mountain		3 Telescope	Summer 2016
08	Replace PH0001 & PH0002	Replace utility building pumps	Mike G. (Support?)	Engineering support and facility balancing. Staggered replacement. Will require ~2 weeks. The pumps are obsolete. Recommendation is to have system inspected and serviced by outside vendor.	Utility Bldg		1 Facility	Summer 2016
09	Primary Aluminization	Process to start week of Aug 1	James Riedl, James Howard (support)	John L. to provide info and washing			1 Telescope	
10	Cal Swing Arms	Re-cable limit switches to bypass controller			Telescope		3 Telescope	
11	Sun Avoidance	Complete the implementation of the sun avoidance mechanism.	Mike Gusick, Gene Holmberg, Dan Cox	This item may be completed prior to summer shutdown. Schedule driver will be scheduling access to enclosure PLC and testing	Mountain, Levels 10,5,2, Enclosure	1	ECS	April 27, May 2-5
12	Bell jar pump	Adding pump stack		Would like to be completed prior to recoating. Also PC work.	High Bay		2 Bell Jar	
13	Jib crane repair	Repair jib crane between Lvl 9 & 10		May be a summer task. There is no Jib on level 9???	Enclosure		3 Enclosure	Before summer
14	Mirror Cooling Modifications	Improvements to the primary mirror cell cooling system (MVS)	Ashby, Gardiner	Requires modifications to mirror cell injectors and software development. May include Mirror cell baffling as described in PP2016	Mountain, Telescope, Mirror Cells		Telescope	Summer 2016
15	Gen2 Collimation	Implement new collimation control of telescope	Ashby, Bidick		Tucson		AOS	Spring 2017
16	Bolemo control valve replacement	Bolemo valves are failing and need replacing		Bolemo control valves for glycol (HBS and aftercoolers and bypass valves. Engineering is not ready to move forward with replacing the valves. John L. would like to replace	Mountain, Telescope, HBS		5 HBS, Telescope	Summer 2017
17	Actuator Maintenance	Periodic swap and maintenance of primary mirror actuators	Jonathan Kern	Swap and recalibrate. Not a summer task. Agreement that replace when needed. Tucson to calibrate test stand, Mountain to calibrate and swap units. Need training. Last one was in 2006. Jonathan to setup stand and calibrate. Also provide training to mountain staff. Mountain staff would be responsible for the refitting of the actuators.	Mountain, High bay		5 Telescope	Spring 2017
18	Replace CH0402	Replace Summer chiller		From 2016 Program Plan. Can be accomplished outside of summer.	Mountain		3 ICS	Fall 2016
19	Platform between lower treehouse	This platform is to access the	JH	Design and install platform.	Telescope		3 Telescope	Fall 2016
20	ADSEC: Swap TS4 with TS3		Guido Brusa, Conrad Vogel, Michael L.	Dependency: Progress of TS3 recoating	Mountain, Clean room, Telescope w/ RR & 4D		3 AdSec	Summer 2017
21	Mirror Covers	Design and build mirror covers	JH		Mountain, Telescope, ECS		1 Telescope, ECS	Summer 2018
22	LUCI Lab Calibration source		Rob Reynolds		Cleanroom		4 Instrument	End of summer 2016
23	Crane Inspection Platform	Design, fabricate and install platform for crane inspection and repairs	Conrad Vogel	Platform and clamps in fab at VROOM. Railings in fab at URIC. Due April 20 & 22 respectively.	Mountain, Telescope, Crane		1 Telescope, Crane	May 20, 2016
24	Thin Shell Coating (TS3)	Aluminize backside of TS3	Guido Brusa, Conrad Vogel, Richard Sosa		Sunnyside		5 AdSec	Fall 2016
25	AGW3 & 4 maintenance	Perform maintenance on units 3 & 4 in prep for hand over to PEPSI	Jonathan Kern, Mike Gusick, Gen Holmberg	Unit 4 undergoing alignment.	Tucson		2 Instrument	June 1, 2016
26	Spare M3 Crate	Rework the spare M3 control crate	Gene H, Mike Gu, Students	System is experiencing issues with the CPU board week of April 5. The crate is needed to check out the M3 units after reconditioning in Tucson this summer.	Tucson		3 Telescope	June 2016
27	4D interferometer Mounting	Relocate and mod the enclosure	Jonathan Kern		Tucson, Mountain		3 Telescope, AdSec, Instrument	Summer 2016
28	Roof Repairs	Dog house and high bay roof mods & repairs	Jonathan Kern		Mountain		1 Facility	Spring 2016
29	Fall arrest	Install fall arrest on enclosure roof	Jonathan Kern		Mountain		Facility	Spring 2016
30	Bulb Seal replacement	Contract replacement of bulb seal	Jonathan Kern		Mountain		Facility	Fall 2016
31	Rear platform modifications	Design, Fab, install platform mods to rear of telescope.	James Howard	Platforms are completed at VROOM Eng. I have asked JH to coordinate with CV on delivery of the parts to BC and Mtn.	Mountain, Telescope, Crane		3 Telescope	Summer 2016
32	HBS PLC recovery	Siemens PLC failed due to water infiltration.		PPLC card were replaced. JH has contacted PLC expert to reconstruct the code. Once code is stable group needs to take ownership.	Mountain, Level 4		1 HBS, Telescope	Spring 2016
33	Chiller controller	Honeywell controller that is supported by Tyler in Safford	Dan Cox	No spares, no telemetry. Risk of failure would and response time from Safford. Dan, John L. and Tyler have talked about this for a number of years	Mountain, Level 4		2 Facility	ASAP
34	Climitech telemetry	Utility bldg system does not have telemetry.	Dan Cox		Mountain, utility building		Facility	
35	LBCs	Replace fibers in cable wrap	James Riedl	Replace damaged fibers in the hub cable wrap	Mountain, Telescope		2 Instrument	Summer 2016
36	LBC Servicing	Remove cryostats, pump on, bake getters, clean optics	Rob Reynolds		Mountain, Telescope		2 Instrument	Summer 2016
37	ARGOS Swing Arm	Wire limit switch for use in			Telescope		Telescope	Summer 2016
38	ARGOS T/T Fiber replacement	Install new connector for DX T/T fiber	Gustavo Rehmer, Jime Wiese	Waiting on Potsdam to finish and ship the fibers ends	Mountain, AGW1, Telescope		3 Instrument	Summer 2016
39	AO Cube Fix	Determine if there is a technical fix to the AO Cube shadowing of the LUCI wide field mode		Need drawings and specs on the flower box.	Tucson		3 Instrument	Fall 2016
40	Replacement HP HBS pumps	Voith pumps is too slow at delivery. Need another pump that is US based	JH	JL asked for assistance on this task. Need to ID alternative pump manufacturer and get pumps on order. Desire would be to have as close to "drop-in" as possible.	Tucson		2 Facility	Spring 2016