Title: QSU3 FY2015	***Author:*** NRAO staff	***Date:*** 09/02/2015
NRAO Doc. #: PMD000135		***Version:*** Final

National Radio Astronomy Observatory

Quarterly Status Update 3 FY2015

April - June, 2015

PREPARED BY	ORGANIZATION	DATE
L. Wingate/ADs	Director's Office	08/27/2015

APPROVALS (Name and Signature)	ORGANIZATION	DATE
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NRAO Quarterly Status Update (QSU3 FY2015)
April - June 2015

				Q1 Performance Assessment			Q2 Performance Assessment			Q3 Performance Assessment		
POP Section Number	POP Milestone	Milestone	Completion Date	Cost	Schedule	Technical	Cost	Schedule	Scope	Cost	Schedule	Scope
2.6		**Atacama Large Millimeter/submillimeter Array (ALMA)**										
		Operations										
	1	Carry out AoD shifts at the OSF	12/31/2014									
			3/31/2015									
			6/30/2015									
			9/30/2015									
	2	Hire two data analysts and two scientists	12/31/2014									
	3	Cycle 2 Status Update	12/31/2014									
	4	Support Long Baseline Campaign	12/31/2014									
	5	Eliminate Backlog in Cycle 2 Data Reduction	12/31/2014									
	6	Participate in Cycle 3 Obsmode go / no-go meeting	12/31/2014									
	7	Participate in ALMA Intl Science Conference and Postdoc Symposium	12/31/2014									
	8	Participate in ALMA Operations Readiness Review	3/31/2015									
	9	Offer Data Processing Workshop in Charlottesville	3/31/2015									
	10	Cycle 3 Prep: S/W tests, Documentation Prep, Call for Proposals	3/31/2015									
	11	Cycle 3 Prep: Community Day Events, User Support for Deadlines	6/30/2015									
	12	Cycle 3: Technical Assessments, Tech Secretary Support	6/30/2015									
	13	Cycle 4: Capabilities Planning	6/30/2015									
	17	Pipeline Heuristics: Input on Reference Imaging	12/31/2014									
	18	Pipeline Heuristics: Input on Improved Calibration heuristics	3/31/2015									
		Development										
	19	NA ALMA Development Studies initiated in FY2014 will be completed	3/31/2015									
	20	NA ALMA Development Studies Call for Proposals date – next round (preliminary date)*	3/31/2015									
	21	NA ALMA Ongoing Development Projects initiated in FY12 will be completed	12/31/2014									
		Maintenance and Renewal										
	22	Commission the FE test cryostat at the NTC	3/31/2015									
	23	Install and test one FETIM module in an antenna receiver cabin	6/30/2015									
		NRAO-Chile Office										
	25	Hire NRAO-Chile Chief of Staff	12/31/2014									
	26	Support ALMA HR Department	12/31/2014		On-going			On-going				
			3/31/2015					On-going				
			6/30/2015									
	27	Prepare for Upcoming Union Negotiations	6/30/2015									
			9/30/2015									
	28	Study Alternative Office Locations	12/31/2014					On-going				
3.4		**New Mexico Operations**										
		VLA Science Operations										
	1	Define VLA capabilities to be offered for semester 2015B	12/31/2014									
	2	Define VLA capabilities to be offered for semester 2016A	6/30/2015									
	3	Update VLA documentation to support 2015B Call for Proposals, perform proposal technical reviews	3/31/2015									
	5	Determine baselines and pointing for antennas moving into their C configuration locations	12/31/2014									
	6	Determine baselines and pointing for antennas moving into their CnB and B configuration locations	3/31/2015									
	7	Determine baselines and pointing for antennas moving into their BnA and A configuration locations	6/30/2015									
	8	Subarray observing automated and incorporated into dynamic scheduler	6/30/2015									
	9	Incorporate 4-element API into regular operations	6/30/2015									
	10	Complete VLITE tests requiring B configuration and integrate VLITE into operations	3/31/2015									
	12	Make frequency averaging available in the CBE to lower data rate	3/31/2015									

NRAO Quarterly Status Update (QSU3 FY2015)
April - June 2015

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POP Section Number	POP Milestone	Milestone	Completion Date	Cost	Schedule	Technical	Cost	Schedule	Scope	Cost	Schedule	Scope
		VLA Array Operations										
	13	Reconfigure array to C configuration	12/31/2014									
	14	Reconfigure array to CnB, then B configuration	3/31/2015									
	15	Reconfigure array to BnA, then A configuration	6/30/2015									
	17	Establish DSOC control room for VLA Operations	3/31/2015									
	18	Commence DSOC VLA Operations	6/30/2015									
		VLA Antenna Maintenance										
	21	Perform preventive maintenance on each of two transporters prior to array reconfiguration	12/31/2014									
	22	Perform preventive maintenance on each of two transporters prior to array reconfiguration	6/30/2015									
		VLA Technical Upgrades and Enhancements										
	27	L-Band solar upgrade, 2 additional receivers with full RF upgrade installed	3/31/2015									
	28	X-Band solar upgrade, 3 additional receivers with 20 dB switched attenuators on outputs only, no solar Tcals, installed	6/30/2015									
	30	Ku-Band solar upgrade, 1 additional receiver with 20 dB switched attenuators on outputs only, no solar Tcals, installed	3/31/2015									
	33	FE card cage upgrades, 35 units installed	3/31/2015									
	37	Prototype FE noise diode temperature stabilization assembly tested	6/30/2015									
	39	Install 3rd replacement ACU	6/30/2015									
	40	Install 13 additional DTS transmitter modules with new 3-bit sampler boards	6/30/2015									
	41	Install prototype F318 module in antenna	12/31/2014									
	42	Install 10 production F318 modules in antennas	6/30/2015									
		VLA Observing Capability Enhancements										
	45	Evaluate 6 MJP feeds and write performance memo	6/30/2015									
		VLA Operational Enhancements										
	47	Implement old-style VLA (stepped) tipping scans	6/30/2015									
	49	Develop heuristics for polarization calibration for the VLA calibration pipeline	6/30/2015									
	50	Commission and document improvements to ionospheric calibration	3/31/2015									
		VLBA Science Operations										
	52	Define VLBA capabilities to be offered for semester 2015B	12/31/2014									
	53	Define VLBA capabilities to be offered for semester 2016A	6/30/2015									
	54	Update VLBA documentation to support 2015B Call for Proposals, perform proposal technical reviews	3/31/2015									
		VLBA Antenna Maintenance										
	56	Tiger Team maintenance campaign to OV	6/30/2015									
		VLBA Technical Upgrades and Enhancements										
	58	Install production M450 in a VLBA antenna for testing	6/30/2015									
		VLBA Observing Capability Enhacements										
	59	Commission and document DDC-8 on Effelsberg for 2016B	9/30/2015									
		Site Operations										
	61	Complete electronic door access for the DSOC	12/31/2014									
	62	Renew leases for OV and SC	12/31/2014									
4.4		**West Virginia Operations**										
		GBT Development										
	1	Commissioning of MUSTANG1.5	12/31/2014									
	2	Commissioning of ARGUS receiver	3/31/2015									
		GBT Maintenance										
	3	Beginning of summer painting	6/30/2015									
	6	Beginning of structural inspections	6/30/2015									
5.3		**Central Development Laboratory**										
		Repair, Maintenance, Production, Support										
	2	Design, build and test Qty. 4 MIC LNAs	12/31/2014									
	3	Build and test Band 1 amplifiers	3/31/2015				Cancelled					
	4	Design ALMA Band 2 optical system	12/31/2014									
	5	Test Band 2 optical system	12/31/2014									

NRAO Quarterly Status Update (QSU3 FY2015)
April - June 2015

				Q1 Performance Assessment			Q2 Performance Assessment			Q3 Performance Assessment		
POP Section Number	POP Milestone	Milestone	Completion Date	Cost	Schedule	Technical	Cost	Schedule	Scope	Cost	Schedule	Scope
	6	Deliver Band 2 optical system	12/31/2014									
	7	Complete ALMA Phasing System hardware and firmware acceptance tests.	12/31/2014									
		Research and Development										
	10	Cryogenically test MMIC amplifier modules using NGC 35nm PHEMT process	6/30/2015									
	11	Cryogenically test MMIC amplifier module using BAE 50nm MHEMT process	6/30/2015									
	16	Implement a six-channel "IRD Backend" using a Kintex-7 FPGA processor.	6/30/2015									
	19	Prototype and evaluate redesigned low noise amplifiers.	6/30/2015									
	20	Integrate and test the digital downconverter with PAF front end	6/30/2015									
	22	Improve PAF electromagnetic and beamforming model	3/31/2015									
6.5		**Science Support & Research**										
		Telescope Time Allocation (TTA)										
	1	CfP for semester 2015B	3/31/2015									
	3	SRP and tech review process, semester 2015B	3/31/2015									
	5	TAC meeting for semester 2015A	12/31/2014									
	6	TAC meeting for semester 2015B	6/30/2015									
	7	Update SW tools requirements for TAC support 2015A	12/31/2014									
	8	Update SW tools requirements for PST 2015B	3/31/2015									
	9	Update SW tools requirements for TAC support 2015B	6/30/2015									
	11	Update documentation for CfP and tools 2015B	3/31/2015									
		Science User Support (SUS)										
	13	4th VLA data reduction tutorial	12/31/2014									
	14	SPF 1 CDE	3/31/2015									
	15	ALMA cycle 3 CDE planning	6/30/2015									
	16	Filaments workshop	12/31/2014									
	17	Revolution in Astronomy	12/31/2014									
	18	AAAS session on Galaxy Assembly	3/31/2015									
	19	SPF 1 meeting	3/31/2015									
	20	Integrated HD requirements	12/31/2014									
	21	RPI and NRAO archive user testing	12/31/2014									
	22	Integrated science portal requirements	6/30/2015									
	23	Summer student selection	3/31/2015									
	24	Summer student offers	3/31/2015									
	25	Summer student program begins	6/30/2015									
	28	Update CASAGUIDES	12/31/2014									
	29	Review ALMA user documents	3/31/2015									
	30	Update CASAGUIDES	6/30/2015									
		SSR Services										
	31	Library contracts negotiated	3/31/2015									
	32	Metrics web interface requirements	3/31/2015									
7.4		**Data Management & Software**										
		Scientific Information Services										
	1	SSO aligned for MyNRAO and ALMA accounts	12/31/2014									
	2	Merger of helpdesk	3/31/2015									
	3	PI Access to NAASC cluster	6/30/2015									
	4	Increase bandwidth to sites	12/31/2014									
	5	Increase bandwidth to sites	3/31/2015									
	6	Increase bandwidth to sites	6/30/2015									
	8	XSEDE access	3/31/2015									
	9	Federated identity management evaluation	3/31/2015									
	10	PSC access	6/30/2015									
	12	Multi-core development testbed installed	12/31/2014									
	13	Unified approach to Lustre backup	6/30/2015									

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April - June 2015

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POP Section Number	POP Milestone	Milestone	Completion Date	Cost	Schedule	Technical	Cost	Schedule	Scope	Cost	Schedule	Scope
		ALMA System Software										
	14	ALMA Fall 2014 Release	12/31/2014									
	15	ALMA Spring 2015 Release	6/30/2015									
	16	ALMA Phasing Project	6/30/2015									
		VLA/VLBA System Software										
	17	Deploy software to support Semester 2014B observing.	3/31/2015									
	18	Deploy software to support Semester 2015A commissioning.	3/31/2015									
	21	Integrate VLITE Operations	3/31/2015									
	22	Deliver Frequency Averaging	12/31/2014									
	23	Write Pointing Table	3/31/2015									
		GBT System Software										
	25	Modify Astrid to Use Streaming	12/31/2014		Cancelled							
	26	Operations software update	12/31/2014									
	27	Vegas Pulsar Modes	12/31/2014									
	28	NRQZ software	3/31/2015					Cancelled				
	30	CLEO Update	6/30/2015								Cancelled	
	31	Parallelize Pipeline	12/31/2014									
	33	Test Pipeline with PSC – evaluate candidates	3/31/2015									
		Software Development										
	34	Operationalize the new NRAO Archive and RPI	3/31/2015									
	35	Implement CASA calibration pipeline in production for the VLA	6/30/2015									
	36	Release CASA version 4.3	12/31/2014									
	37	Release CASA version 4.4	6/30/2015									
	38	Implement PST updates for Semester 2015B Call for Proposals	12/31/2014									
	39	Implement PST updates for Semester 2016A Call for Proposals	6/30/2015									
	40	Implement PHT updates for Semester 2015B TAC Meeting	3/31/2015									
	42	Implement OPT updates for Semester 2015A VLA Observing	12/31/2014									
	43	Implement OPT updates for Semester 2015B VLA Observing	6/30/2015									
	44	Create Architecture for Observatory Tools	3/31/2015									
	45	Expand CASA Test Scope	6/30/2015									
	46	Hand over ALMA Testing to Chile	9/30/2015									
8.5		**Program Management Department**										
		Headquarters										
	1	SOP and Templates available	3/31/2015									
	2	Quarterly Status Updates	12/31/2014									
			3/31/2015									
			6/30/2015									
			9/30/2015									
		New Mexico										
	6	Finalize NM Ops and DMS Training Plan (1st Phase)	12/31/2014									
	7	PM 101 Training	3/31/2015									
	9	Retrospective Analysis of CASA 4.4 Release	6/30/2015									
	10	Host learning session	12/31/2014									
	11	Host learning session	3/31/2015									
	12	Host learning session	6/30/2015									
		Central Development Laboratory										
	14	Develop Training Plan	12/31/2014									
	15	Training lessons provided	12/31/2014									
	16	Training lessons provided	3/31/2015									
	17	Training lessons provided	6/30/2015									
	19	Facilitate Concept Feasibility Gate	6/30/2015									
	20	Call for Study Proposals	3/31/2015									
		Green Bank										
	21	Finalize Green Bank Training Plan	12/31/2014									
	22	PM/SE Implementation Training	3/31/2015									
	23	Host learning session	12/31/2014									
	24	Host learning session	3/31/2015									
	25	Host learning session	6/30/2015									

NRAO Quarterly Status Update (QSU3 FY2015)
April - June 2015

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POP Section Number	**POP Milestone**	**Milestone**	**Completion Date**	**Cost**	**Schedule**	**Technical**	**Cost**	**Schedule**	**Scope**	**Cost**	**Schedule**	**Scope**
10.3		**Education and Public Outreach**										
		STEM Education										
	1	Second round of SJS professional development meetings for educators	12/31/2014									
			3/31/2015									
			6/30/2015									
	2	Curriculum development for SJS web portal complete	6/30/2015									
	3	Develop "vision" for new VLA Visitor/Education Center	12/31/2014									
	4	Develop plan for VLA Visitor/Education Center Capital Fundraising Campaign	3/31/2015							Canceled		
	5	Develop VLA Visitor/Education Center business/operations plan	6/30/2015							Canceled		
	7	Decide upon admission fee structure for existing VLA Visitor Center	12/31/2014									
	8	Implement new admission fee at VLA Visitor center on 1 January 2015	3/31/2015									
	9	Complete Interpretive Training for J. Stanley and L. Baric	6/30/2015									
	11	STEM Career Day at Dominion Virginia Electric	12/31/2014									
	12	10th Grade STEM Day at Piedmont Virginia Community College (if invited)	3/31/2015									
	14	SPOT: Introduce new feature presentation	12/31/2014									
	15	SPOT: Recruit new UVa-based undergraduate ambassadors	12/31/2014		Cancelled							
		News and Public Information										
	16	Convert NRAO public website to Joomla 3 CMS	12/31/2014									
	17	New server-based popular content caching	6/30/2015									
	18	New planetary system content for The Milky Way Explorer	12/31/2014									
	20	Functional spec and design completed for "RadioSky" app	12/31/2014									
	21	iOS version of "RadioSky" app ready for beta testing	6/30/2015									
11.4		**Computing & Information Services**										
	1	Cross training for coverage between sites	3/31/2015									
	3	CCE coordination meeting	12/31/2014									
	4	Migration to Windows 7 compete	12/31/2014									
	5	Evaluation of Windows 8	6/30/2015									
	6	Migration to RHEL 6	3/31/2015									
	7	Replace Network Attached Storage in GB	6/30/2015									
	8	Document Management system	3/31/2015									
	9	Network upgrade review	3/31/2015									
	12	Replacement of end-of-life Video Hub	12/31/2014									
	13	Replacement of legacy room reservation SW	3/31/2015									
12.3		**Diversity**										
		Diversity Council										
	1	Office of Diversity Initiatives/Diversity Council	3/31/2015									
	2	ODI review diversity portfolio/programs, plans to establish metrics	6/30/2015									
		National/Domestic Outreach										
	4	Undergraduate Intern Program for SOC Electronics Division	3/31/2015									
	5	LSAMP, NAC, SOC Summer Youth Employment Program, PING, African American Teaching Fellows coordination	06/31/2015									
	6	Partnership with Native American point of contact and designate representative from CV and SOC	06/31/2015									
		International Outreach										
	7	NINE- NRAO Staff to South Africa – teaching and recruitment	3/31/2015									
	8	UVA/NRAO Chilean PhD Sponsorship	3/31/2015					Cancelled				
		Improve Workplace Culture										
	9	Diversity and Cultural Awareness Training #1	6/31/2015									
13.7		**Human Resources**										
		Policy										
	1	Complete the final revisions, formatting and refinement of the combined Supervisor's Manual and Employee Handbook and ensure posting readiness to NRAO internal website. Obtain appropriate legal review and final review/ approval from NRAO and AUI	12/31/2014									

NRAO Quarterly Status Update (QSU3 FY2015)
April - June 2015

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POP Section Number	POP Milestone	Milestone	Completion Date	Cost	Schedule	Technical	Cost	Schedule	Scope	Cost	Schedule	Scope
		Training										
	2	Deliver 4 newly designed Mgmt/Supervisory courses. Courses are: 1) Time off/Attendance/FML, 2) Harassment/ Bullying/Discrimination, 3) The Electronic PEP Process, and 4) Effective Planning and Goal Setting	3/31/2015									
	3	Design two new Mgmt/Supervisory courses	6/30/2015									
		Compensation										
	4	Ensure all reconfiguration changes/improvements are complete in order to launch the electronic PEP process for the FY2014 performance period	12/31/2014									
	5	All preparations complete and salary review worksheets are open to pay decision managers for final merit review decisions	3/31/2015									
	7	Job Description Builder module added to Halogen System. HR Staff will be trained on how to be administrators/users	6/30/2015									
		Benefits										
	8	HR prepares and distributes all open enrollment materials to employees and makes enrollment changes into JDE and with vendors	12/31/2014									
	9	Create and deliver targeted wellness program and processes to address high frequency/high cost illness/injury areas to employees and the Observatory. Proactively identify others trending towards high frequency/high cost	6/30/2015							Cancelled		
		Employment										
	11	Update WFM and Staffing Plans	3/31/2015									
		Human Resources										
	12	Implement Phase 1 Succession Planning	6/30/2015									
14.1		**Communications**										
		Science Communications										
	1	Complete science meeting exhibit re-design	12/31/2014									
	2	Update Research Facilities brochure	12/31/2014									
	3	Submit 2016 AAAS science symposium proposal	6/30/2015									
15.6		**Administration**										
		Business Services										
	2	Establish a time-line and strategize the design of a new chart of accounts.	3/31/2015									
	3	Gather and enter all final revenues, expenses, and adjustments	6/30/2015									
	4	Review current methodologies. Prepare new ones and reveiw with site directors and NRAO Director.	3/31/2015									
		CAP										
	5	Design policy, review and socialize with assistant directors and business managers	12/31/2014									
	6	Design program and obtain approval of Assoc. Director of Administration	3/31/2015									
	7	Design a purchasing training program for users of the purchasing and requisition systems and obtain approval of Assoc. Director of Administration	6/30/2015									
		ES&S										
	8	Implement Hazcom Database	3/31/2015									
	9	Complete ES&S Supervisory Safety training modules	6/30/2015									
		MIS										
	10	Top-level gap analysis review of the JD Edwards enterprise resource planning (ERP) system	3/31/2015									
		TTO										
	13	Collaborate with UVA and NRAO software imaging designers to gauge interest in medical imaging conference. Raise money for conference	6/30/2015									
16.5		**Spectrum Management**										
		Spectrum Management										
	1	Iridium: Initial discussions	12/31/2014									
	2	ITU-R: SG7 WP 7D meetings	12/31/2014									
	3	ITU-R: WP 5B meeting	12/31/2014									
	4	ITU-R: CPM15-2	6/30/2015									

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April - June 2015

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17.1		**Director's Office**										
		ALMA										
	1	ALMA Board Meeting	12/31/2014									
			3/30/2015									
			6/30/2015									
			9/30/2015									
	2	ALMA Director's Council	12/31/2014									
			3/30/2015									
			6/30/2015									
			9/30/2015									
	3	ALMA Completion Review	3/31/2015									
		Corporate Meetings										
	4	AUI Board of Trustees meetings	12/31/2014									
			3/30/2015									
			6/30/2015									
	5	AUI Executive Committee meetings	12/31/2014									
			6/30/2015									
			9/30/2015									
		Science Community										
	6	Appoint new Users Committee members	12/31/2014									
	7	Users Committee meeting	6/30/2015									
		Management Review										
	8	NSF Annual Program Review	12/31/2014									
	9	All Hands presentation	12/31/2014									
			6/30/2015									

QSU 3 FY2015 Report

April – June 2015

POP MILESTONE # 2.6.19

ALMA

NA ALMA Development Studies initiated in FY2014 will be completed

Cost
Schedule
Scope

COST:

Labor Actuals	Expected
$	$
Material Actuals	Expected
$	$
Travel Actuals	Expected
$	$

SCOPE:

SCHEDULE:

Milestone	Schedule	Target
1		
2		
3		

RISK & MITIGATION:

Risk	Mitigation
1 2nd Gen. Rx for ALMA B10 completion 2 2nd Gen Rx for ALMA B6 completion 3 Advanced Solar Obs – completion	One year no cost extension allows resources and coordination for successful completion

2 QSU 3 FY2015

COST: No additional cost – no cost extension

SCOPE: Six study programs were initiated in 2014

SCHEDULE: Three of the six studies were granted no cost extensions to finish. 2nd Generation Receiver for ALMA Band 10 and 2nd Generation Receiver for ALMA Band 6 were delated due to loss of key individuals following the completion of ALMA construction. Advance Solar Observing was granted a one year no cost extension to present requirements for solar observing at the modes meeting for cycle 4 in May 2015 and to enable another set of tests.

RISK & MITIGATION: one year no cost extension allows resources and coordination for successful completion.

POP MILESTONE # 2.6.21

ALMA

Ongoing Development Projects Initiated in FY2012 will be completed.

Cost
Schedule
Scope

COST:

Labor Actuals	Expected
Material Actuals	Expected
Travel Actuals	Expected

SCOPE:

SCHEDULE:

Milestone	Schedule	Target
1 Project Close	12/31/2014	09/30/2015

RISK & MITIGATION:

Risk	Mitigation
1 Delay in Obtaining Fiber Optic Operations Permits	Continue microwave link operation (at no additional cost to project)

3 QSU 3 FY2015

COST: Costs are tracked at a higher WBS level.

SCOPE: Three Development projects were funded. ALMA Phasing Project will complete on time 31 August 2015. Band 5 Local Oscillator will complete on time 30 September 2015.

SCHEDULE: Fiber Optic Connectivity: System is fully functional. We are waiting for Silica who is actively working on the transition of the rights of pass of the area where the cable is laid, from Gas Atacama to them. This is done with the Chilean competent authority (Bienes Nacionales).

RISK & MITIGATION: While awaiting the permits for the Fiber Optic Connection we will continue to fund and use the current microwave communications link at no additional cost to the project.

POP MILESTONE # 2.6.23

ALMA

Install & test one FETIM module in an antenna receiver cabin

Cost
Schedule
Scope

COST:

Labor Actuals	Expected
$	$
Material Actuals	Expected
$	$
Travel Actuals	Expected
$	$

SCOPE:

Implement an independent hardware and/or firmware based interlock system to protect the FE system when abnormal temperature and air-flow conditions arise in the antenna receiver cabin.

SCHEDULE:

Milestone	Schedule	Target
1 Install and test one FE Thermal Interlock Module in antenna receiver cabin.	6/30/2015	11/27/2015

RISK & MITIGATION:

Risk	Mitigation
Not a critical system that affects any science operation, but non availability of a redundant interlock places some risk to the safety of equipment in the receiver cabin.	Risk to receivers is already being managed by monitoring and alarm system implemented in software. Debugging at NA FEIC will likely require firmware to be modified to cure the previously hidden bug.

4 QSU 3 FY2015

COST: Not Applicable, hardware is already delivered, might need firmware/software updates.

SCOPE: The FETIM was tested at the OSF laboratory by the NA team visiting the OSF in March 2015, and was found to be operational. However, when the staff at the OSF installed it on an antenna they could not turn on the turbo pump for FE 059, (same FE was used for FETIM testing earlier). The problem seems to be associated with the removal of the FETIM to compressor M&C interlock cable, which is not present on the antennas (ESO deliverable). Although unexpected, the possibility of such an error was not recognized earlier and was not tested for previously or during the visit. Some additional debugging is needed to make it work without the cable at NA FEIC. Low priority task.

SCHEDULE: Currently attempting to recreate the problem at the NA FEIC using the test cryostat. New target date provided. We will attempt to test at the OSF again in late September/early October 2015, when personnel are scheduled to visit the site for other support activity.

RISK & MITIGATION: Explained on the slide.

POP MILESTONE # 3.4.8

New Mexico Operations

Automate subarray observing

Cost
Schedule
Scope

COST:

Labor Actuals	Expected
Not tracked at this level	
Material Actuals	Expected
Not tracked at this level	
Travel Actuals	Expected
Not tracked at this level	

SCOPE:

Observations using multiple VLA subarrays were effectively done by hand during FY2014.

This mode will be automated and incorporated into the dynamic scheduler for testing during FY2015.

SCHEDULE:

Milestone	Schedule	Target
1 subarray observing "by hand"	3/31/2014	3/31/2014
2 subarray observing automation	6/30/2015	TBD

RISK & MITIGATION:

Risk	Mitigation
1 Slightly reducing user chances to observe priority C (filler projects)	Continue scheduling subarrays manually
2 Delay other observatory activities caused by effort being used for manual scheduling	Tasks with less urgency will be delayed while automation is not available

5 QSU 3 FY2015

COST: Not tracked at this level

SCOPE: The VLA can be split up in subarrays. That is, some of the 27 antennas and corresponding baselines can be ordered to do a completely different and independent program than other antennas. This may be the case when an observer has asked to divide up the array for a single project to observe a source simultaneously in multiple bands or to observe multiple different sources simultaneously that do not need the full array, or when one antenna is split off from the main array for inclusion in a VLBI array by another user (though this last option, also called "Y1", is not currently offered for general observing).

SCHEDULE: Observations using multiple subarrays were stabilized during FY2014, but must still be scheduled by hand and cannot go through the dynamic scheduler. Work on automating subarrays has been slower than planned, mostly because of staffing issues in the SSA software group, but we continue to schedule multiple subarray observing by hand quite effectively.

RISK & MITIGATION:

1. The risk to users of not having subarray observing automated is a slightly reduced chance of observing for priority C (filler) projects. Mitigation is to continue scheduling subarrays manually.
2. The impact on the observatory is that effort is used for manual scheduling that could be used on more important (but less urgent) tasks, while we don't have automation we will continue giving priority to manual scheduling.

POP MILESTONE # 3.4.49

New Mexico Operations

Pipeline polarization heuristics

Cost
Schedule
Scope

COST:

Labor Actuals	Expected
Not tracked at this level	
Material Actuals	Expected
Not tracked at this level	
Travel Actuals	Expected
Not tracked at this level	

SCOPE:

The VLA Calibration Pipeline Polarization Heuristics will extend the use of the pipeline to polarization experiments.

SCHEDULE:

Milestone	Schedule	Target
1 Heuristic development	6/30/2015	6/30/2016

RISK & MITIGATION:

Risk	Mitigation
1 Users have to calibrate data manually	Provide documentation.
2 Delaying VLA Sky Survey since it needs pipelined polarization calibration	Divert effort of polarization experts to this task

6 QSU 3 FY2015

COST: Not Tracked at this level.

SCOPE:
The VLA calibration pipeline heuristics for Stokes I continuum is well-tested and stable. Calibration heuristics still need to be developed and implemented in VLA CASA pipeline framework for:
– Polarimetry
– Weak calibrators (relative to sub-band BW), includes spectroscopy
– Handling gain compression due to RFI
– Application of switched power corrections
– Low-frequencies (<1GHz)
– Imaging

SCHEDULE: Available effort focused on validation of the CASA integrated pipeline for Stokes I continuum and on heuristic development for imaging Stokes I continuum and the application of switched power calibration instead of polarization calibration, to accommodate availability of relevant staff expertise in FY15. Polarization calibration will be carried over to FY16 Q3.

RISKS & MITIGATION:
1. Without polarization calibration the calibration pipeline users will continue to have to calibrate their data by hand. The observatory is providing detailed documentation to ensure this is possible.
2. The VLA Sky Survey will need polarization calibration to be pipelined, as polarimetry is one of the key science drivers for the survey. To this end NRAO will divert effort of polarization experts on staff to the task of automating polarization calibration in the pipeline in FY16. This mitigation strategy is shared with DMS CASA/Pipeline development, this group has a new hire that will start contributing to this effort in September.

POP MILESTONE # 3.4.62

New Mexico Operations

Renew of VLBA land leases

Cost
Schedule
Scope

COST:

Labor Actuals	Expected
Not tracked at this level	
Material Actuals	Expected
No materials budget for this activity	
Travel Actuals	Expected
No travel budget for this activity	

SCOPE:

St. Croix, VI site land use lease has been renewed.

Owens Valley, CA site is not renewed yet. NRAO is awaiting lease negotiation outcome by Cal Tech (we sublease from Cal Tech).

SCHEDULE:

Milestone	Schedule	Target
1 St. Croix Lease renewed	12/31/14	12/31/14
2.Owens Valley Lease renewed	03/31/15	TBD

RISK & MITIGATION:

Risk	Mitigation
1 Impact on VLBA operating budget (increase in lease cost)	Adjust VLBA Operating budget.
2 Impact on VLBA operations	Avoid by periodic follow up of Cal Tech negotiation progress.

7 QSU 3 FY2015

COST: So far the lease cost has been a symbolic token paid yearly to Cal Tech.

SCOPE: No issues.

SCHEDULE:
St Croix Lease: The lease has been signed by all parties. The lease is for ten years with two five year options.

Owens valley Lease: Cal Tech negotiates this lease and it has been expired for 1 ½ years. NRAO sub leases from Cal Tech. Progress has been marginal in the last quarter, according to Cal Tech Owens Valley Radio Observatory Executive Director. Date is show as TBD now, due to uncertainty about when the lease will be signed.

RISK & MITIGATION:
1. Cal Tech has leased Owens Valley, CA for a low yearly fee. Probability of a cost increase is low. Budget would need adjustment if happens.
2. Impact VLBA Operations is unlikely to occur.

POP MILESTONE # 5.3.19

Central Development Lab

Prototype and evaluate redesigned Low Noise Amplifier

Cost
Schedule
Scope

COST:

Labor Actuals	Expected
$ 260,926.93	$ 307,503.00
Material Actuals	Expected
$ 19,195.45	$ 56,250.00
Travel Actuals	Expected
$ 1,353.17	$ 0

SCOPE:

No change in scope.

SCHEDULE:

Milestone	Schedule	Target
1 Prototype and evaluate redesigned low noise amplifiers	6/30/2015	9/15/2015

RISK & MITIGATION:

Risk	Mitigation
1 Delays in machining.	Use external machine shop if required.

8 QSU 3 FY2015

SCOPE: No change in scope.

SCHEDULE: Completion of this milestone was delayed for several reasons, including (a) limited personnel availability in GB, (b) unexpected electronics failures requiring circuit modifications and rebuilt blades, and (c) a decision to use a new micro controller in order to accommodate standardization with other Green Bank receivers.

RISK: Possible delays cause by machine shop work load. Mitigation: Send the job out to an external machine shop if required.

POP MILESTONE # 5.3.20

Central Development Lab

Integrate & test the Digital Downconverter with the PAF Frontend

Cost
Schedule
Scope

COST:

Labor Actuals	Expected
$ 260,926.93	$ 307,503.00
Material Actuals	Expected
$ 19,195.45	$ 56,250.00
Travel Actuals	Expected
$ 1,353.17	$ 0

SCOPE:

No Change to Scope.

SCHEDULE:

Milestone	Schedule	Target
1 Integrate and test the digital downconverter with PAF front end	6/30/2015	12/31/16

RISK & MITIGATION:

Risk	Mitigation
1 Very little risk as testing is already in progress	

9 QSU 3 FY2015

SCHEDULE: Resources were diverted from this task by (a) the need to study, troubleshoot, and test receiver and PAF system hardware in order to identify the cause of system temperature dependence on source, (b) Internal discussions and review of PAF project scope (c) resource limitations within CDL.

RISK & MITIGATION: Very little risk as testing is already in progress.

POP MILESTONE # 6.5.21

Science Support & Research

RPI and NRAO archive user testing

Cost
Schedule
Scope

COST:

Labor Actuals	Expected
DMS funds this activity at a higher WBS level.	
Material Actuals	Expected
$	$
Travel Actuals	Expected
$	$

SCOPE:

RPI and NRAO archive user testing

SCHEDULE:

Milestone	Schedule	Target
1 Deliver Initial Archive/RPI for internal testing (DMS)	N/A	8/31/2015
2 Internal Testing Done (SSR)	N/A	12/31/2015
3 Operationalize the Archive and RPI	3/31/2015	TBD

RISK & MITIGATION:

Risk	Mitigation
1 Operational issues with existing NRAO archive	See DMS 7.4.34

10 QSU 3 FY2015

COST: DMS funds this activity at a higher WBS level. Costs are not tracked for this milestone.

SCHEDULE: Schedule is delayed due to loss of key DMS staff and underestimation of the integration work involved in moving from a prototype through testing to a production system. A testable NRAO Archive and separate Reprocessing Pipeline Interfaces (RPI) for the EVLA and ALMA are anticipated in August 2015. Hence, it is anticipated that SSR testing will be completed during Q1 of FY16. POP16 has been updated to reflect this. See DMS four-square for POP Milestone 7.4.34.

SCOPE: User testing of RPI and NRAO archive

RISK & MITIGATION: Operational issues with the existing NRAO archive may divert attention from this effort and delay the schedule. User testing awaits delivery of DMS milestone.

POP MILESTONE # 6.5.22

Science Support & Research

Integrated Science Portal Requirements

Cost
Schedule
Scope

COST:

Labor Actuals	Expected
$	$
Material Actuals	**Expected**
$	$
Travel Actuals	**Expected**
$	$

SCOPE:

Final requirements for integrated science portal.

SCHEDULE:

Milestone	Schedule	Target
1 Integrated Science Portal Requirements	Q3 FY15	Q4 FY15

RISK & MITIGATION:

Risk	Mitigation
1 Delay in implementation by DMS of integrated science portal	1 SSR/DMS priorities reviewed – portal is at lower priority than the AAT/RPI and TTA tool suite

11 QSU 3 FY2015

COST: No impact

SCHEDULE: Schedule delayed by a quarter. Preliminary Requirements are under review.

RISK & MITIGATION: while there is risk in the implementation of the integrated science portal, it must be viewed within the context of higher DMS priorities – the new archive and RPI and the TTA software tool suite.

Integrated Science Portal Requirements

POP MILESTONE # 7.4.30

Data Management & Software

CLEO Update

- [ ] Cost
- [ ] Schedule
- [ ] Scope

COST:

Labor Actuals	Expected
DMS funds this activity at a higher WBS level.	
Material Actuals	Expected
$	$
Travel Actuals	Expected
$	$

SCOPE: Update the system design and implement a replacement for the CLEO Device Manager.

Milestone cancelled

SCHEDULE:

Milestone	Schedule	Target
1 CLEO Device Manager Update	6/30	cancelled

RISK & MITIGATION:

Risk	Mitigation
1 Single support resource	Cross-train DMS resources

12 QSU 3 FY2015

COST: DMS funds this activity at a higher WBS level. Costs are not tracked for this milestone.

SCHEDULE: This project had planned to use student resources from the WVU Engineering division for implementation. They were to have completed the work as part of a Senior Capstone project under the guidance of the GBT Software Development group. However, no students signed up for this project.

Initial work was completed as part of updating the system design. Technical options were evaluated, the technology chosen (C++/Qt), the high level architecture defined, and a milestone-based project plan created.

The project is ready to go when resources are available. At this time, the work is judged to be lower priority than operational work and other GB POP goals, and no DMS resources are available so this milestone will be cancelled.

SCOPE: CLEO is a set of applications which provides a graphical user interfaces used for monitoring and debugging of telescope components. It is written in Tcl/Tk, and should be updated to a more current technology standard.

RISK & MITIGATION: Support for CLEO is primarily done by one science resource (Ron Maddalena), who has moved to half-time. While there is some basic knowledge of Tcl/Tk across DMS, it is not sufficient to support CLEO. If Ron leaves NRAO, DMS resources would be cross-trained to provide support.

The existing system, while not optimal, will continue to meet the need for an interface for monitoring and debugging of telescope components.

POP MILESTONE # 7.4.34

Data Management & Software

Operationalize the new NRAO Archive & RPI

Cost
Schedule
Scope

COST:

Labor Actuals	Expected
DMS funds this activity at a higher WBS level.	
Material Actuals	Expected
$	$
Travel Actuals	Expected
$	$

SCOPE: Operationalize the New NRAO Archive and RPI prototyped in FY14.

SCHEDULE:

Milestone	Schedule	Target
1 Operationalize the Archive and RPI	3/31/2015	TBD

RISK & MITIGATION:

Risk	Mitigation
1 Operational issues with existing NRAO archive	1 Use non-project resources when possible
2 ALMA development needed	2 Use local database and SSO2 signon

13 QSU 3 FY2015

COST: DMS funds this activity at a higher WBS level. Costs are not tracked for this milestone.

SCHEDULE: Schedule is delayed due to loss of key staff and underestimation of the integration work involved in moving from a prototype through testing to a production system. A testable NRAO Archive and separate Reprocessing Pipeline Interfaces (RPI) for the EVLA and ALMA are anticipated in August 2015. The final delivery date is TBD due to the need to fill the positions and train new staff.

SCOPE: Operationalize the New NRAO Archive and RPI prototyped in FY14. No scope issues.

RISK & MITIGATION: Operational issues with the existing NRAO archive may divert attention from this effort and delay the schedule. To the extent possible this work will be directed to non-project resources.

Access to ALMA data using the VO software may require agreement and development work by the ALMA project. Also, federated signon across NRAO and ALMA would require ALMA development effort. To address this, fallback plans include accessing the data from an NRAO copy of the ALMA database, and using authentication capabilities similar to the existing SSO2 until federation could be agreed and put in place.

POP MILESTONE # 7.4.35

Data Management & Software

Implement CASA calibration pipeline in production for the VLA

Cost
Schedule
Scope

COST:

Labor Actuals	Expected
DMS funds this activity at a higher WBS level.	
Material Actuals	Expected
$	$
Travel Actuals	Expected
$	$

SCOPE: Replace the current scripted VLA pipeline with the CASA pipeline in production.

SCHEDULE:

Milestone	Schedule	Target
1 VLA integration	6/30	Completed in August

RISK & MITIGATION:

Risk	Mitigation
1 None	

14 QSU 3 FY2015

COST: DMS funds this activity at a higher WBS level. Costs are not tracked for this milestone.

SCHEDULE: The software was delivered and tested as scheduled, but additional work was required to deploy it as a robust production pipeline process. This work was completed 7/24/15.

SCOPE: Replace the current scripted VLA pipeline with the CASA pipeline in production.

RISK & MITIGATION: None, the work is now complete.

POP MILESTONE # 7.4.44

Data Management & Software

Create Architecture for Observatory Tools

Cost
Schedule
Scope

COST:

Labor Actuals	Expected
DMS funds this activity at a higher WBS level.	
Material Actuals	Expected
$	$
Travel Actuals	Expected
$	$

SCOPE: Review the current design of user facing tools, in particular the PST, PHT, and OPT. Develop an architecture for improvement.

SCHEDULE:

Milestone	Schedule	Target
1 Create Observatory Tools Architecture	3/31/2015	TBD

RISK & MITIGATION:

Risk	Mitigation
1 Continuing user frustration with tools	1 Prioritize/address key issues
2 Focus on New Archive and RPI	2 Accept

15 QSU 3 FY2015

COST: DMS funds this activity at a higher WBS level. Costs are not tracked for this milestone.

SCHEDULE: Schedule was delayed due to lack of clear input on requirements. Schedule is TBD. An initial workshop was held in September 2014 to gather ideas for reorganizing the toolset. The consensus opinion was that moving towards an ALMA-like toolset for proposing, reviewing, approving, and setting up observations might be possible. More detailed requirements are needed to evaluate the practicality of this approach. A proposed model with additional detail will be circulated in the July timeframe in order to gather additional input.

SCOPE: Review the current design of user facing tools, in particular the PST, PHT, and OPT. Develop an architecture for improvement.
No scope issues.

RISK & MITIGATION: The Users Committee and other similar groups have pointed out deficiencies in the toolset. These have been prioritized by the Committee and evaluated by the development team. High priority/low effort items will be implemented in the current software.

Focus on New Archive and RPI will continue to delay this, as the resources required for development and testing are for the most part the same people needed for providing input to and developing the architecture/direction for this toolset.

POP MILESTONE # 7.4.46

Data Management & Software

ALMA Testing Handover

Cost
Schedule
Scope

COST:

Labor Actuals	Expected
DMS funds this activity at a higher WBS level.	
Material Actuals	Expected
$	$
Travel Actuals	Expected
$	$

SCOPE: Hand over Phase B testing of software and documentation to Chile IRM

SCHEDULE:

Milestone	Schedule	Target
1 Handover ALMA Testing to Chile	9/30	complete

RISK & MITIGATION:

Risk	Mitigation
1 None	

16 QSU 3 FY2015

COST: DMS funds this activity at a higher WBS level. Costs are not tracked for this milestone.

SCHEDULE: This work has been completed. Testing of ALMA control and correlator software has now been handed over to and accepted by Chile IRM, along with the documentation, ahead of schedule. As agreed, NRAO code development and unit testing will remain coordinated with the ICT.

SCOPE: Hand over Phase B testing of software and documentation to Chile IRM. This is the integration testing and verification step which happens after initial testing by the developers.

RISK & MITIGATION: None

POP MILESTONE # 10.3.2

Education & Public Outreach

Curriculum development for SJS Portal Complete

Cost
Schedule
Scope

COST:

Labor Actuals	Expected
$	$
Material Actuals	**Expected**
$	$
Travel Actuals	**Expected**
$	$

SCOPE:

Seven modules are online.

SCHEDULE:

Milestone	Schedule	Target
1 Curriculum posted on SJS web portal	06/30/15	09/30/15

RISK & MITIGATION:

Risk	Mitigation
1 Loss of key personnel	Accept, backfillASAP

17 QSU 3 FY2015

COST: SJS received a no-cost extension.

SCHEDULE: Seven of the modules are online, a few more are still in production and will be in place before the end of FY 2015.

SCOPE: As feedback continues, scope for curriculum need is scaled.

RISK & MITIGATION: The project reset is accepted, because the new project plan has stakeholder buy-in, is being handled via the NRAO PMD, and has achievable cost, schedule, and scope goals.

POP MILESTONE # 10.3.4 &10.3.5

Education & Public Outreach

Develop VLA Visitor/Education Center business operations plan

- [ ] Cost
- [ ] Schedule
- [ ] Scope

COST:

Labor Actuals	Expected
$	$
Material Actuals	**Expected**
$	$
Travel Actuals	**Expected**
$	$

SCOPE:

Project has been canceled, and a new project plan initiated in the PMD.

Milestone cancelled

SCHEDULE:

Milestone	Schedule	Target
1 VLA Visitor/Ed Center Business and Ops plan	06/30/15	NONE

RISK & MITIGATION:

Risk	Mitigation
1 Project is rejected	Accept, make new plan

18 QSU 3 FY2015

Plan as presented in Q1 was rejected due to unacceptable cost, schedule, and scope. All FY 2015 POP milestones now cancelled. New project plan currently in PMD, new milestones appear in FY 2016 POP.

POP MILESTONE # 10.3.16

Education & Public Outreach

Convert NRAO Public website to Joomla3

Cost
Schedule
Scope

COST:

Labor Actuals	Expected
$	$
Material Actuals	Expected
$	$
Travel Actuals	Expected
$	$

SCOPE:

SQL search scripts, unexpected iOS updates, and Facebook plugins are not compatible.

SCHEDULE:

Milestone	Schedule	Target
1 Upgrade new CMS	12/31/15	TBD
2 Caching running	06/30/15	06/29/15

RISK & MITIGATION:

Risk	Mitigation
1 Loss of key personnel	Accept, backfill, and abandon Joomla
2 Visitor complaints	Accept
3 Functionality loss	Seek workarounds

19 QSU 3 FY2015

COST: EPO funds this activity at a higher WBS level. Costs are not tracked for this milestone.

SCHEDULE: EPO WebDev announced her resignation while a NM-based WebDev was onsite in CV. He called emergency status on the upgrade, and it was finally delivered. However, functionality was lost due to incompatibility between new Joomla and certain plugins. With loss of webdev, and no Joomla expertise in house, and no funds available to hire a contractor, the complete conversion has not been possible.

SCOPE: Joomla's "one-click" upgrade was false advertising, and functionality was lost due to SQL updates, iOS updates, and Facebook updates that have created incompatibilities with Joomla3. The task of complete conversion is much larger than budgeted.

RISK & MITIGATION: The loss of key personnel has been across departments, with the resignation of the EPO WebDev and promotions of both NRAO WebDevs with no backfill. EPO is hiring a new WebDev, and redesigning the public website in a more stable, more broadly used platform to reduce this risk. So far, we have not had online visitors complain about the issues we have noted, but there is not much we can do to fix them without Joomla resources. The Facebook issue has a workaround.

POP MILESTONE # 10.3.21

Education & Public Outreach

iOS version of RadioSky App ready for Beta testing

Cost
Schedule
Scope

COST:

Labor Actuals	Expected
$	$
Material Actuals	Expected
$	$
Travel Actuals	Expected
$	$

SCOPE:

Project is on spec.

SCHEDULE:

Milestone	Schedule	Target
1 iOS version ready for beta testing	06/30/15	12/30/15

RISK & MITIGATION:

Risk	Mitigation
1 Shared resources unavailable	Accept, or hire contractors, match PEP/POP goals for accountability
2 Loss of key personnel	Accept, or find funds to hire contractors

20 QSU 3 FY2015

COST: EPO and DMS fund this activity at a higher WBS level. Costs are not tracked for this milestone.

SCHEDULE: The milestone is typically reached by coordinated effort between EPO and DMS; however, the GBT and VLA pipelines, plus VEGAS spectrometer real time data display projects have been given higher priority by the non-EPO ADs who supervise the developers assigned to this project.

SCOPE: The builds for this app remain on spec.

RISK & MITIGATION: Sharing resources whose PEPs and department POPs do not include this project means EPO has no leverage to keep it on schedule. In future, we will not create EPO POP project that include resources which are shared between departments, unless the project is also in their POP/PEPs.

POP MILESTONE # 12.3.2

Diversity

Office of Diversity & Inclusion

Cost
Schedule
Scope

COST:

Labor Actuals	Expected
$	$
Material Actuals	Expected
$	$
Travel Actuals	Expected
$	$

SCOPE: ODI review diversity portfolio Programs, plans to establish metrics

SCHEDULE:

Milestone	Schedule	Target
1Review portfolio, programs, plans to establish metrics	06/30/2015	12/31/2015

RISK & MITIGATION:

Risk	Mitigation
1 Low	Appoint Director Sept. 2015

21 QSU 3 FY2015

SCHEDULE: This milestone was not met due to the departure of the Director of Programs within the Office of Diversity & Inclusion. The vacancy was posted and we expect to announce the replacement for the vacancy in September 2015.

POP MILESTONE # 13.7.1

Human Resources

NRAO HR Policy Manual

Cost
Schedule
Scope

COST:

Labor Actuals	Expected
$	$
Material Actuals	Expected
$	$
Travel Actuals	Expected
$	$

SCOPE:

Complete final revisions, formatting and refinement of the combined Supervisor's Manual and Employee Handbook and ensure posting readiness to the NRAO internal website. Legal review/approval. Posted to HR Website, communications to employees.

SCHEDULE:

Milestone	Schedule	Target
1Update HR Manual	12/31/2014	09/30/2015

RISK & MITIGATION:

Risk	Mitigation
1 No risk	Complete enhancements to the HR Website. Open new website and release and communicate new HR Policy Manual at same time.

22 QSU 3 FY2015

SCHEDULE: Postponed release to coordinate with the HR website enhancements. Manual will be available by end of Qtr. 4.

RISK & MITIGATION: No risk, all policies are currently available to all employees in existing manuals and on the HR website. New manual is complete/waiting for completion of HR website enhancements accompanied by a holistic communication to employees.

POP MILESTONE # 13.7.9

Human Resources

Comprehensive Benefits Wellness Program

- [ ] Cost
- [ ] Schedule
- [ ] Scope

COST:

Labor Actuals	Expected
$	$
Material Actuals	**Expected**
$	$
Travel Actuals	**Expected**
$	$

SCOPE:

Milestone has been cancelled.

SCHEDULE:

Milestone	Schedule	Target

RISK & MITIGATION:

Risk	Mitigation
1 Low	Move deliverable to Q2 2016 due to health plan provider's (CIGNA) timeline to enable access to non-participants.

This milestone has been cancelled due to budget constraints.

POP MILESTONE # 13.7.11

Cost
Schedule
Scope

Human Resources

Update Workforce Management/Staffing Plan

COST:

Labor Actuals	Expected
$	$
Material Actuals	Expected
$	$
Travel Actuals	Expected
$	$

SCOPE:

Update/revise WFM and Staffing Plans

SCHEDULE:

Milestone	Schedule	Target
1 Update WFM/Staffing Plan	03/31/2015	09/30/2015

RISK & MITIGATION:

Risk	Mitigation
1 Low	Staffing Summit scheduled 9/14-9/19/15 in SOC with stakeholders. Upon completion of the meeting, WFMP will be updated.

24 QSU 3 FY2015

SCHEDULE: A strategic staffing summit is scheduled for September 14- 16, 2015 to bring stakeholders together to review FY15 and FY16 Staffing data. Facilitated discussions regarding FY17 – FY20 staffing needs to include new initiatives will also take place. We will incorporate discussions regarding succession planning, skills, skill gaps, new talent and effective recruitment strategies into the discussion. This is an Observatory-wide project where Division Heads who have responsibilities in carrying out mission critical work will be involved in the staffing discussions.

SCOPE: Scope has changed to allow stakeholders across the Observatory to participate in the staffing summit. The completed staffing and skills analysis will be used to develop an updated Observatory wide workforce management plan.

POP MILESTONE # 13.7.12

Cost
Schedule
Scope

Human Resources

Implement Phase I Succession Planning

COST:

Labor Actuals	Expected
$	$
Material Actuals	Expected
$	$
Travel Actuals	Expected
$	$

SCOPE:

Implement Phase I Succession Planning – ID top 5-7 key/critical roles and create succession plan (readiness assessment, development plan, recruiting plan)

SCHEDULE:

Milestone	Schedule	Target
1 Implement Phase I Succession Plan	06/30.2015	09/30/2015

RISK & MITIGATION:

Risk	Mitigation
1 Low to medium	Presentation of guide and succession planning process to begin at Strategic Staffing Summit in September 2015

25 QSU 3 FY2015

SCHEDULE: Succession Planning Guide drafted, reviewing for refinements. Critical roles identified for Phase I. Presentation of guide and succession planning process to begin at Strategic Staffing Summit in September 2015.

POP MILESTONE #15.6.3

Administration

Enter all final revenues, expenses, and adjustments

Cost
Schedule
Scope

COST:

Labor Actuals	Expected
$	$
Material Actuals	Expected
$	$
Travel Actuals	Expected
$	$

SCOPE:

SCHEDULE:

Milestone	Schedule	Target
1 Complete ALMA Work in Progress Capitalization	06/30/2015	09/30/2015
2 Complete Close-out Report	06/30/2015	09/30/2015

RISK & MITIGATION:

Risk	Mitigation

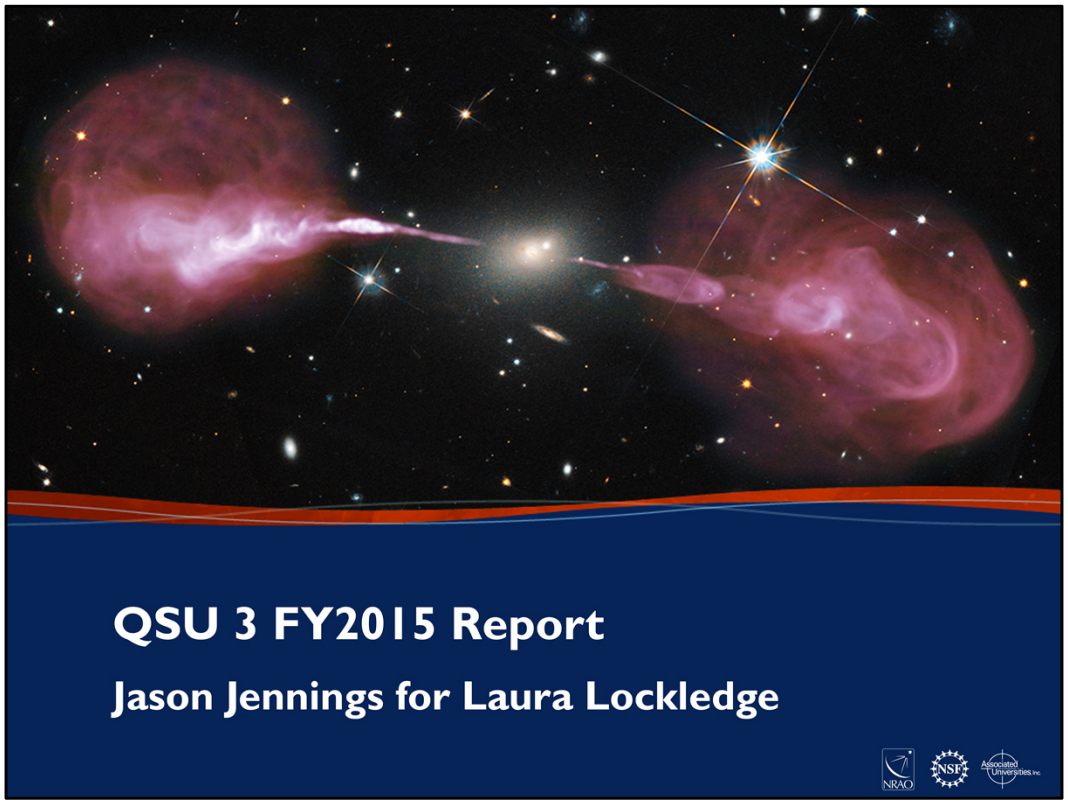
26 QSU 3 FY2015

IN PROCESS

- Follow-up meeting held with NSF 16 July 2015 regarding capitalization process. AUI/NRAO representatives: Steven Geiger, Jason Jennings, Pete McEvoy, Kim O'Farrell, and William Randolph. NSF representatives: Jeff Leithead, Taina Munoz-Mulero, Phil Puxley and two NSF contract auditors, Kate Mason and Nikki Reed.
- Final report draft prepared by William Randolph. In edits as of 27 July 2015.

COMPLETED

- Value balances among Executives are settled.
- Construction accounts on NRAO books are closed.


QSU 3 FY2015 Report
Jason Jennings for Laura Lockledge
NRAO
NSF
Associated Universities, Inc.

Q3 FY15 Summary

- Overall Issues
  - Benefits – Currently slightly over-recovered – good as expenditures expected to pick up as year progresses and deductibles are met
  - Promotions took effect with May payroll
  - ICC slightly over-recovered compared to year-to-date actual costs. Expenditures on ICC related activities have been reduced or delayed. ALMA Ops underspend impacts recovery

- NRAO Ops
  - Budget includes distribution of FY15 over-guidance & carry-forward items.
  - Reserve for FY16 carried in Admin. (Infrastructure reserve)

FY15 YTD by Major WBS Category

NRAO Ops – Q3

	FY15 POP Budget	FY15 Rev. Budget	FY15 YTD Actual	YTD % Rev Budget
NSF	40,000	43,140	43,140	100.0
Telescope Time Sale	2,391	1,915	1,764	92.1
Carryforward/Other	1,750	4,908	5,019	102.3
Total CSA-1 Revenues	**44,141**	**49,963**	**49,923**	**99.9**
Telescope Ops	17,966	19,397	12,858	66.3
Development	2,787	2,759	1,853	67.2
Science Ops	5,475	5,861	3,743	63.9
Admin Services	14,255	15,685	11,235	71.6
Director's Office	3,488	3,635	2,426	66.7
FY15, Total	**43,970**	**47,337**	**32,114**	**67.8**
FY15 CSA-1 Net	**171**	**2,626**	**17,809**	

- C/F includes prior year open commits of $790K.
- Reclass of some POP items from Common Costs to Program.
- All salary and most programmatic distributions have been made. Net figure is planned carry-forward for FY16 items described in previous QSU reports.

FY15 YTD by Major WBS Category

ALMA Ops – Q3

	FY15 POP Budget	FY15 Rev. Budget	FY15 YTD Actual	YTD % Rev Budget
Telescope Ops	23,607	25,919	16,934	65.3
Development	5,626	8,081	2,604	32.2
Science Ops	6,627	6,973	3,545	50.8
Admin Services	4,460	4,460	3,371	75.6
Director's Office	2,949	3,367	2,064	61.3
FY15 , Total	**43,269**	**48,800**	**28,518**	**58.4**
Development Reserve	1,231			
Open Commits	4,406		5,472	
C/F For FY15 Fuel		1,800		
C/F for Future Years	4,950	3,256		
All ALMA Resources	**53,856**	**53,856**	**33,990**	**63.1**

- Development Reserve & PY Open Commitments are reflected in the revised budget.
- Open commitments includes external development, Newrest contract, and student awards.

FY15 YTD by Major WBS Category

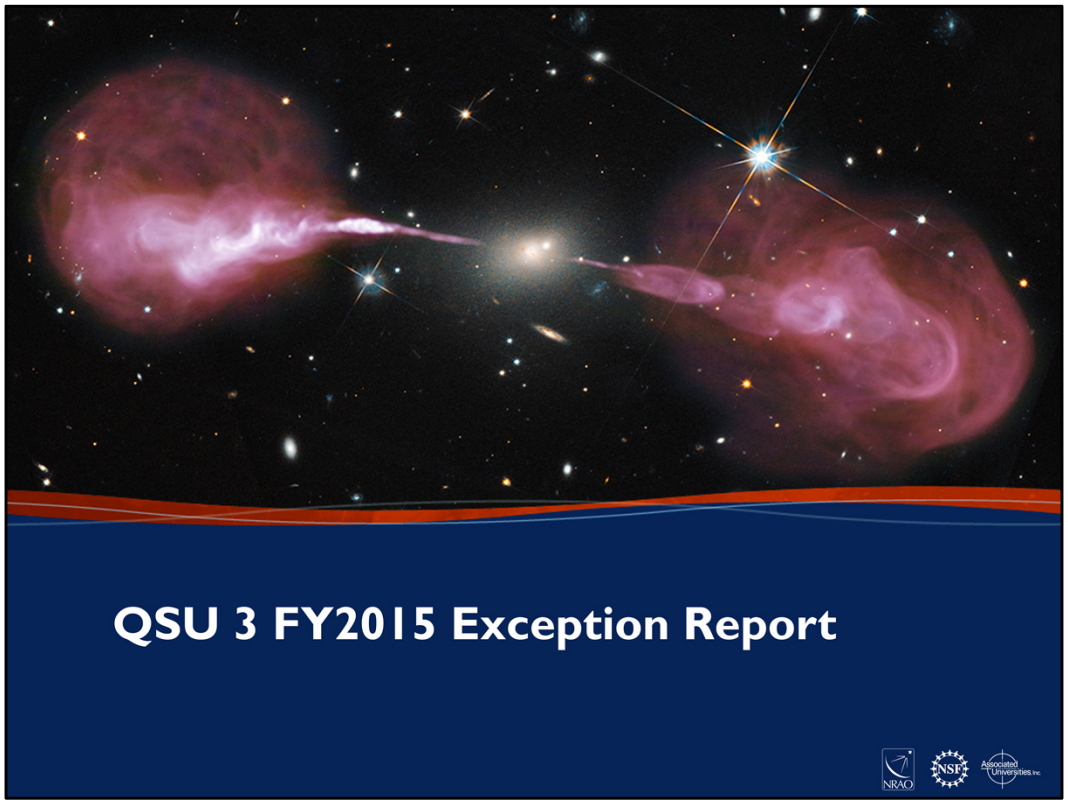
ICC – Q3

	FY15 POP Budget	FY15 Rev. Budget	FY15 YTD Actual	YTD % Rev Budget
Telescope Ops	68	69	90	130.4
Development	779	787	481	61.1
Science Ops	1,722	1,744	1,224	70.2
Admin Services (Gross)	10,911	11,170	7,847	70.3
Director's Office	1,367	1,368	893	65.3
FY15 Total, Non CSA Sources	**14,847**	**15,138**	**10,535**	**69.6**
Admin Recoveries (CSA's)	(13,654)	(13,945)	(9,446)	67.7
External Recovery	(1,193)	(1,193)	(1,228)	102.9
FY15 NET	**(1)**	**-**	**(139)**	

- Status: Over-recovered
- Excludes open commitments of $298K
- External recovery ahead by $335 primarily due to ALMA-C

FY15 Budget Exceptions

- Additional expenditures to be undertaken in Q4 based on availability of funds
- $200K – NM Track materials to support accelerated maintenance
- $150K – GBT Track steel purchase
- $160K – VLA Visitor Center – road and parking lot relo
- $ 60K - VLBA Fiber, Los Alamos station


QSU 3 FY2015 Exception Report

POP MILESTONE #7.4.15

Title: ALMA Spring 2015 Release

- The following items were prioritized by ALMA to be delivered in this release, which is a slight change from the POP description:
  - Improved Operations Support
  - Added baseline correlator sub-array capability
  - Added flags into ASDM flag table in QuickLook
  - Entirely new version of QuickLook deployed
  - Improved control error handling and reporting
  - Added WVR parameters and SchedBlock into the ASDM
  - Made improvements to Total Power Processor

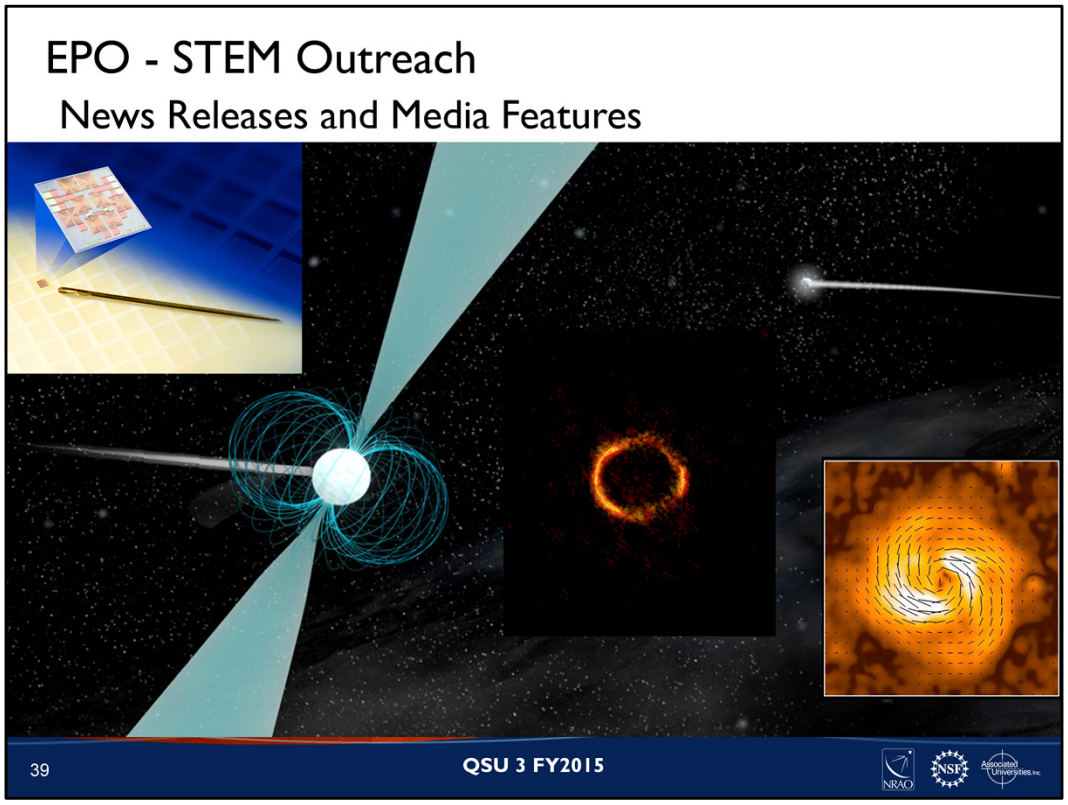
EPO

Tania Burchell

- 25 REU Radio Astronomy Boot Camp students
- 16 Skynet Junior Scholars Youth Leader Workshop students
- 45 Chautauqua Short Course adult students
- 727 Skynet Junior Scholars members, 119 educators trained
- 1376 observations with 20-meter telescope for Skynet Junior Scholars program

- 300 Enchanted Skies Star Party participants
- 828 VLA Open House participants
- 3234 students and 162 teachers reached via WV SPOT
- 270 Space Race Rumpus participants
- 120 Starquest participants
- Family Science Lab
- Piano Concert
- 100 StarLab, 43 HighTech Tours participants
- 240 Moriarty High Scholl Career Fair participants
- Presentation to the NM Science Teachers Convention
- 50 Current New Media STEAM event in Magdalena participants
- 18 Science Club Connection participants from Maine via Skype
- 9 ACEAP Ambassadors to ALMA

- 189,691 people reached by Facebook this Quarter (www.facebook.com/thenrao)
- 10,257 followers on Twitter through this Quarter (@TheNRAO, @ALMANRAO, @IamGBT, @VLArray)
- 5,940 VLA visitors
- 11,109 GB visitors
- Monthly issues of Chilean ALMA newsletter reaches 500 contacts/month
- Congressional representatives from the Science and Technology Commission visited ALMA in June



- 16 Press releases (8 ALMA, 4 VLA, 1 GBT, 1 NTC, 2 ER)
- 2 Announcements (2 ALMA)
- Five-part BBC Radio 4 series on Green Bank, West Virginia http://www.bbc.co.uk/programmes/b05v7td5
- Rocky Mountain Adventure Quest visited the VLA for its "Hitting the Road" PBS series that airs on Colorado Public TV: https://www.youtube.com/watch?v=Nl8v3Dc-YpA
- 13 articles in Chilean press

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