

ORGANIZATION <i>Arizona Board of Regents, The University of Arizona</i>				
DEPARTMENT/UNIT <i>Department of Astronomy/Steward Observatory</i>				
SPONSOR <i>NSF</i>				
PROJECT TITLE <i>Integration of the Supercam Heterodyne Array onto the APEX Telescope</i>				
PI <i>Craig Kulesa</i>				
PERFORMANCE PERIOD <i>August 2014 - June 2015</i>				
	YEAR 1		TOTAL	TOTAL
	LABOR RATE	LABOR HRS.	YEAR	TOTAL
PERSONNEL			\$ 557	\$ 557
<i>Senior Personnel</i>			\$ 557	\$ 557
Craig Kulesa, PI (1% effort for 11 months)	\$ 27.84	20	\$ 557	\$ 557
	\$ -	-	\$ -	\$ -
FRINGE BENEFITS - Rates effective 7/1/13 and beyond			\$ 159	\$ 159
Faculty and Appointed Personnel @28.6%		\$ 557	\$ 159	\$ 159
PERSONNEL + FRINGE BENEFITS TOTAL			\$ 716	\$ 716
OTHER DIRECT COSTS			\$ 19,884	\$ 19,884
Computer equipment (2 SSDs for SuperCam control computer)			\$ 1,255	
Fabricated Equipment; APEX Mechanical Mounting Interface			\$ 9,170	
Packing Materials/Supplies			\$ 1,448	
Shipping Costs			\$ 3,571	
Fabricated Equipment: Optical Interface: 2 HDPE, AR-grooved lenses			\$ 2,413	
<i>Electical Interfaces: Power supplies, chopper wheel, thermal sensing & control</i>			\$ 2,027	
TOTAL DIRECT COSTS (TDC)			\$ 20,600	\$ 20,600
INDIRECT COSTS - 52.5%, effective 7/1/2014			\$ 10,815	\$ 10,815
MTDC BASE = Total Direct Costs (TDC) less capital equipment, less Tuition Remission (50% of Graduate Student fringe), and on first \$25K of EACH subcontract				
	Base	IDC		
Base (on salaries, operations, travel)	\$ 20,600	\$ 10,815		
Base (on first \$25K of EACH subcontract)	\$ -	\$ -		
TOTAL PROJECT COSTS			\$ 31,415	\$ 31,415

Project Title: <i>Large Lyα Nebulae in the NOAO Deep Wide-Field</i>	YEAR 1			YEAR 2					
	Aug 11, 2008 - Aug 10, 2009			Aug 11, 2009 - June 30, 2010			July 1, 2010 - Aug 10, 2010		
	FY 2009 Rate	Labor Hrs.	TOTAL FY 2009	FY 2010 Rate	Labor Hrs.	SUBTOTAL FY 2010	Year 3 Rate	Labor Hrs.	SUBTOTAL FY 2010
PERSONNEL									
Senior Personnel									
Arjun Dey, PI	\$ 59.36	-	\$ -	\$ 61.32	-	\$ -	\$ 61.32	-	\$ -
<i>Senior Personnel Subtotal</i>		-	\$ -	-	-	\$ -	-	-	\$ -
Appointed Personnel									
	\$ 41.54	-	\$ -	\$ 42.91	-	\$ -	\$ 44.33	-	\$ -
	\$ 41.54	-	\$ -	\$ 42.91	-	\$ -	\$ 44.33	-	\$ -
<i>Appointed Personnel Subtotal</i>		-	\$ -	-	-	\$ -	-	-	\$ -
Classified Staff									
	\$ 19.16	-	\$ -	\$ 19.79	-	\$ -	\$ 20.44	-	\$ -
	\$ 19.16	-	\$ -	\$ 19.79	-	\$ -	\$ 20.44	-	\$ -
<i>Classified Staff Subtotal</i>		-	\$ -	-	-	\$ -	-	-	\$ -
Graduate Students									
M. Prescott, Graduate Research Assistant - AY (9-months) @	\$ 21.53	800	\$ 17,224	\$ 22.24	800	\$ 17,792	\$ 22.24	-	\$ -
M. Prescott, Graduate Research Assistant - summer (3-month)	\$ 24.81	464	\$ 11,512	\$ 25.63	232	\$ 5,946	\$ 25.63	232	\$ 5,946
<i>Graduate Students Subtotal</i>		1,264	\$ 28,736	1,032	\$ 23,738	232	\$ 5,946	232	\$ 5,946
Labor Subtotal		1,264	\$ 28,736	1,032	\$ 23,738	232	\$ 5,946	232	\$ 5,946
FRINGE BENEFITS - Rates effective 7/1/08 and beyond									
Faculty and Appointed Personnel @ 28.9%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Classified Staff @ 44.7%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Graduate Students @ 36% (26.6% IDC exempt)	\$ 28,736	\$ 10,345	\$ 23,738	\$ 8,546	\$ 5,946	\$ 2,141	\$ -	\$ -	\$ -
Fringe Benefits Subtotal			\$ 10,345		\$ 8,546		\$ 2,141		\$ -
Personnel Labor + ERE Totals			\$ 39,081		\$ 32,284		\$ 8,087		\$ -
OTHER DIRECT COSTS									
OPERATIONS									
Computer	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Computer network connections & technical support @ \$320/workstation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Materials and Supplies	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Communications (postage/Fedex, phone/fax, copying/printing)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Publication costs, 25 pages @ \$110/pg.	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TRAVEL									
<i>International conference (Europe or IAU in Brazil) and one Collaborative Meeting (Montreal, PQ, Canada to Tucson)</i>									
		Domestic	Intern'l		Domestic	Intern'l		Domestic	Intern'l
Airfare @ \$500 RT (domestic); \$1300 RT (int'l)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Lodging @ \$150/night (domestic); \$175/night (int'l) x # of nights	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Per diem @ \$50/day (domestic); \$75/day (int'l) x # of days	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Parking @ \$9 x # of days	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Rental car @ \$55/day (domestic); \$80/day (int'l) x # of days	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Conference registration @ \$300 per person	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total per trip	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CAPITAL EQUIPMENT			\$ -		\$ -		\$ -		\$ -

	Aug 11, 2008 - Aug 10, 2009		Aug 11, 2009 - June 30, 2010		July 1, 2010 - Aug 10, 2010	
SUBCONTRACTS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Other Direct Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL DIRECT COSTS	\$ 39,081		\$ 32,284		\$ 8,087	
INDIRECT COSTS - 51% of MTDC						
MTDC BASE = Total Direct Costs (TDC) less capital equipment, less Tuition Remission (28.2% of Graduate Student fringe), and on first \$25K of each subcontract						
	Base	IDC	Base	IDC	Base	IDC
Base (on salaries, operations, travel)	\$ 31,437	\$ 16,033	\$ 25,970	\$ 13,245	\$ 6,505	\$ 3,350
Base (on first \$25K of each subcontract)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Indirect Costs	\$ 16,033		\$ 13,245		\$ 3,350	
TOTAL PROJECT COSTS	\$ 55,114		\$ 45,529		\$ 11,437	

Project Title: Large Ly α Nebulae in the NOAO Deep Wide-Field

**2 YEAR
 TOTALS**

PERSONNEL		
<i>Senior Personnel</i>		
Arjun Dey, PI	\$	-
<i>Senior Personnel Subtotal</i>		\$ -
<i>Appointed Personnel</i>		
	\$	-
	\$	-
<i>Appointed Personnel Subtotal</i>		\$ -
<i>Classified Staff</i>		
	\$	-
	\$	-
<i>Classified Staff Subtotal</i>		\$ -
<i>Graduate Students</i>		
M. Prescott, Graduate Research Assistant - AY (9-months) @	\$	35,016
M. Prescott, Graduate Research Assistant - summer (3-month)	\$	23,404
<i>Graduate Students Subtotal</i>		\$ 58,420
Labor Subtotal		\$ 58,420
FRINGE BENEFITS - Rates effective 7/1/08 and beyond		
Faculty and Appointed Personnel @ 28.9%	\$	-
Classified Staff @ 44.7%	\$	-
Graduate Students @ 36% (26.6% IDC exempt)	\$	21,032
Fringe Benefits Subtotal		\$ 21,032
Personnel Labor + ERE Totals		\$ 79,452
OTHER DIRECT COSTS		
OPERATIONS		\$ -
Computer		
Computer network connections & technical support @ \$320/		
Materials and Supplies		
Communications (postage/Fedex, phone/fax, copying/printing)		
Publication costs, 25 pages @ \$110/pg.		
TRAVEL		\$ -
<i>International conference (Europe or IAU in Brazil) and one Collaborative Meeting (Montreal, PQ, Canada to Tucson)</i>		
Airfare @ \$500 RT (domestic); \$1300 RT (int'l)		
Lodging @ \$150/night (domestic); \$175/night (int'l) x # of nights		
Per diem @ \$50/day (domestic); \$75/day (int'l) x # of days		
Parking @ \$9 x # of days		
Rental car @ \$55/day (domestic); \$80/day (int'l) x # of days		
Conference registration @ \$300 per person		
Total per trip		
CAPITAL EQUIPMENT		\$ -

SUBCONTRACTS	\$ -
Total Other Direct Costs	\$ -
TOTAL DIRECT COSTS	\$ 79,452
INDIRECT COSTS - 51% of MTDC	
MTDC BASE = Total Direct Costs (TDC) less capital eq	
	Base (on salaries, operations, travel)
	Base (on first \$25K of each subcontract)
Total Indirect Costs	\$ 32,628
TOTAL PROJECT COSTS	\$ 112,080