

Title A Submillimeter Spectroscopic Galactic Plane Survey using Supercam at the HHT
Organization The University of Arizona
PI, Co-PI Craig A. Kulesa, Christopher K. Walker
Sponsor/Program NSF Astronomy & Astrophysics Research Grants (AAG), solicitation 12-589
Performance Period 9/1/2014 - 8/31/2017

	YEAR 1			YEAR 2			YEAR 3			3 YEAR TOTALS
	Year 1 Rate	Labor Hrs.	TOTAL YEAR 1	Year 2 Rate	Labor Hrs.	TOTAL YEAR 2	Year 3 Rate	Labor Hrs.	TOTAL YEAR 3	
PERSONNEL										
Appointed Personnel										
Kulesa, Craig - PI	\$ 27.84	80	\$ 2,227	\$ 28.76	80	\$ 2,301	\$ 29.71	80	\$ 2,377	\$ 6,905
Walker, Christopher - Co-I	\$ 66.66	80	\$ 5,333	\$ 68.86	80	\$ 5,509	\$ 71.13	80	\$ 5,691	\$ 16,532
Peters, William	\$ 35.69	80	\$ 2,855	\$ 36.87	80	\$ 2,949	\$ 38.08	80	\$ 3,047	\$ 8,851
Duffy, Brian	\$ 31.57	160	\$ 5,051	\$ 32.61	-	\$ -	\$ 33.69	-	\$ -	\$ 5,051
<i>Appointed Personnel Subtotal</i>		400	\$ 15,466		240	\$ 10,759		240	\$ 11,114	\$ 37,339
On Call/Temporary Staff Subtotal										
Jack Cochran	\$ 45.00	40	\$ 1,800	\$ 46.49	-	\$ -	\$ 48.02	-	\$ -	\$ 1,800
<i>On Call Staff Subtotal</i>		40	\$ 1,800		-	\$ -		-	\$ -	\$ 1,800
Undergraduate Student										
Undergrad (summer)	\$ 12.00	200	\$ 2,400	\$ 12.40	200	\$ 2,479	\$ 12.81	200	\$ 2,561	\$ 7,440
<i>Undergraduate Student Subtotal</i>		200	\$ 2,400		200	\$ 2,479		200	\$ 2,561	\$ 7,440
Graduate Students										
Graduate Research Assistant - AY (9-months) @ 50% FTE	\$ 22.61	800	\$ 18,089	\$ 23.36	800	\$ 18,685	\$ 24.13	800	\$ 19,302	\$ 56,076
Graduate Research Assistant - summer (3-months) @ full-time	\$ 26.05	464	\$ 12,086	\$ 26.91	464	\$ 12,485	\$ 27.79	464	\$ 12,897	\$ 37,468
<i>Graduate Students Subtotal</i>		1,264	\$ 30,175		1,264	\$ 31,170		1,264	\$ 32,199	\$ 93,544
Labor Subtotal		1,904	\$ 49,841		1,704	\$ 44,408		1,704	\$ 45,874	\$ 140,123
FRINGE BENEFITS - Rates effective 7/1/13 and beyond										
Faculty and Appointed Personnel @ 30.0%	\$	15,466	\$ 4,640	\$	10,759	\$ 3,228	\$	11,114	\$ 3,334	\$ 11,202
On Call/Temporary Staff @ 10%	\$	1,800	\$ 180	\$	-	\$ -	\$	-	\$ -	\$ 180
Undergraduate Student @ 3.5%	\$	2,400	\$ 84	\$	2,479	\$ 87	\$	2,561	\$ 90	\$ 260
Graduate Students @ 59.5% (50.0% IDC exempt)	\$	30,175	\$ 17,954	\$	31,170	\$ 18,546	\$	32,199	\$ 19,158	\$ 55,658
Fringe Benefits Subtotal			\$ 22,858			\$ 21,861			\$ 22,582	\$ 67,301
Personnel Labor + ERE Totals			\$ 72,699			\$ 66,269			\$ 68,456	\$ 207,424
OTHER DIRECT COSTS										
OPERATIONS										
Replacement disks for survey products	\$	120	\$ 120	\$	120	\$ 120	\$	120	\$ 120	\$ 360
New IF processor LO units for dual-line mode (2 x \$1000)	\$	2,000	\$ 2,000	\$	-	\$ -	\$	-	\$ -	\$ 2,000
Minor electronics repairs, materials and supplies (obj code 5290)	\$	500	\$ 500	\$	517	\$ 517	\$	-	\$ -	\$ 1,017
Communications (postage/Fedex, phone/fax, copying/printing) (obj code 5560)	\$	250	\$ 250	\$	258	\$ 258	\$	267	\$ 267	\$ 775
Conference Registration (1 student/year)	\$	150	\$ 150	\$	155	\$ 155	\$	160	\$ 160	\$ 475
Publication costs charges (3 papers x 8 pages x \$110 in each year)	\$	2,640	\$ 2,640	\$	2,727	\$ 2,727	\$	2,817	\$ 2,817	\$ 8,184
Refurbishment, Sumitomo cold head	\$	5,000	\$ 5,000	\$	-	\$ -	\$	-	\$ -	\$ 5,000
Refurbishment Parts, CTI-350 cold head	\$	1,000	\$ 1,000	\$	-	\$ -	\$	-	\$ -	\$ 1,000
Instrument transport and installation at MGIO	\$	2,500	\$ 2,500	\$	-	\$ -	\$	-	\$ -	\$ 2,500
TRAVEL			\$ 1,605			\$ 1,658			\$ 1,713	\$ 4,976
<i>1 domestic conference (AAS) for 1 student/year</i>		AAS Conference	MGIO		AAS Conference	MGIO		AAS Conference	MGIO	
Airfare (\$400 roundtrip)	\$	400	\$ -	\$	413	\$ -	\$	427	\$ -	\$ 840
Lodging (\$100/night x 4 nights)	\$	400	\$ -	\$	413	\$ -	\$	427	\$ -	\$ 840
Per diem (\$49/day x 5 days)	\$	245	\$ -	\$	253	\$ -	\$	261	\$ -	\$ 509
Rental car for MGIO (14 days, \$40/day)	\$	-	\$ 560	\$	-	\$ 578	\$	-	\$ 598	\$ 1,138
Total per trip	\$	1,045	\$ 560	\$	1,079	\$ 578	\$	1,115	\$ 598	\$ 2,681
CAPITAL EQUIPMENT			\$ 9,600			\$ -			\$ -	\$ 9,600
IF processor filter set for dual-line mode	\$	9,600	\$ 9,600	\$	-	\$ -	\$	-	\$ -	\$ 9,600
Total Other Direct Costs			\$ 25,365			\$ 5,435			\$ 5,077	\$ 35,876
TOTAL DIRECT COSTS			\$ 98,064			\$ 71,704			\$ 73,533	\$ 243,300
INDIRECT COSTS - 51.5%, effective 7/1/10										
MTDC BASE = Total Direct Costs (TDC) less capital equipment, less Tuition Remission (50.0% of Graduate Student fringe), and on first \$25K of EACH subcontract										
		MTDC Base	IDC		MTDC Base	IDC		MTDC Base	IDC	
Base (on salaries, operations, travel)	\$	73,376	\$ 37,789	\$	56,119	\$ 28,901	\$	57,433	\$ 29,578	\$ 115,518
Total Indirect Costs			\$ 37,789			\$ 28,901			\$ 29,578	\$ 96,268
TOTAL PROJECT COSTS			\$ 135,853			\$ 100,605			\$ 103,111	\$ 339,569