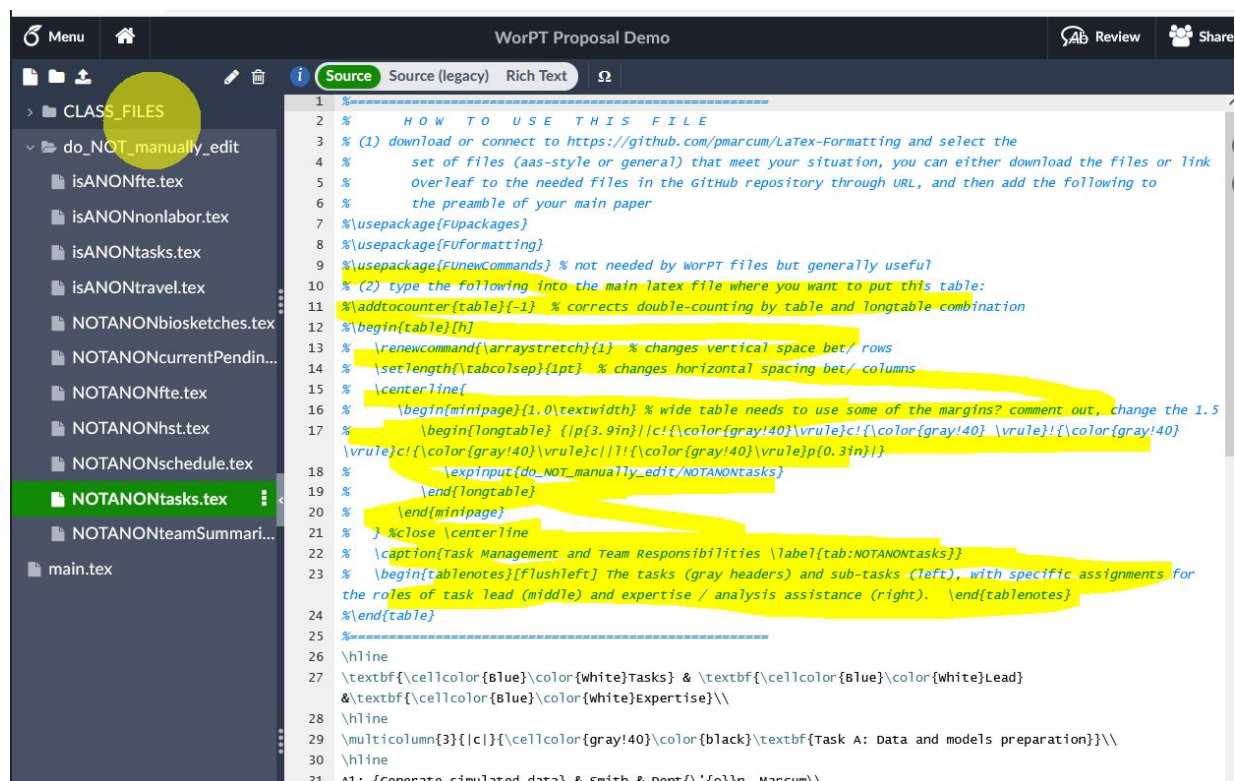


	Page
<b>1 What Is This Document?</b>	<b>2</b>
<b>2 FTEs PER PERSON INFORMATION</b>	<b>3</b>
2.1 <b>Anonymous</b> FTEs per Year per Team Member Role (“isANONfte.tex”) . .	4
2.2 <b>Not Anonymous</b> FTEs per Year Per Named Team Member Role (“NONANONfte.tex”) . . . . .	5
2.3 <b>Not Anonymous</b> HST-style FTE Table for Phase II (“NOTANONhst.tex”) .	6
<b>3 TASKS &amp; SCHEDULES</b>	<b>7</b>
3.1 <b>Anonymous</b> Task Start/Finish vs Role Assignment (“isANONtasks.tex”) .	8
3.2 <b>Not Anonymous</b> Detailed Resource-Loaded Task Timeline w/ Assignments (“NOTANONschedule.tex”) . . . . .	9
<b>4 TASK ASSIGNMENTS</b>	<b>10</b>
4.1 <b>Not Anonymous</b> Simple Task List w/ Named Team Responsibilities (no FTEs) (“NOTANONtasks.tex”) . . . . .	11
4.2 <b>Not Anonymous</b> Team Summary Role Descriptions (“NOTANONteamSum- maries.tex”) . . . . .	12
<b>5 BIOGRAPHICAL INFORMATION ON TEAM MEMBERS</b>	<b>13</b>
5.1 <b>Not Anonymous</b> Biographical Sketches (“NOTANONbiosketches.tex”) . . .	14
5.2 <b>Not Anonymous</b> Current/Pending Info (“NOTANONcurrentPending.tex”) .	18
<b>6 NON-LABOR RELATED BUDGET TABLES</b>	<b>21</b>
6.1 <b>Anonymous</b> Travel Cost per Trip, Total Budget per Year (“isANON- travel.tex”) . . . . .	22
6.2 <b>Anonymous</b> Non-Labor Budget w/ Rolled-up Travel Summary (“isANON- nonlabor.tex”) . . . . .	23

## 1 What Is This Document?

This document illustrates what each table generated from the **WorPT** (Work Plan Tool for proposals) tool looks like when rendered. Use the Table of Contents to quickly jump to a table of interest. The file name corresponding to each table is provided for easy reference.

Note that the table files are not stagnant; they will change with time as we evolve our preferences, and as we identify other tables to add to the list of files generated by **WorPT**. To incorporate the latex table files, *ALWAYS* use the instructions provided at the top of the latex file in the commented region, as those instructions may also change over time (see snapshot of an example of such instructions below. To use the file in a document, all you do is un-comment-out the lines under 2, see yellow highlight:



**Figure 1.** Example of the instructions at the top of the WorPT table files.

Red-colored font appearing in the following table examples indicate captions, descriptions, etc. that will likely need to be edited so that the words match the proposal or paper being worked on.

The most recent version of the [WorPT is here](#). A clean GitHub version will be available soon, and should be the starting point for any new proposal, to ensure that the latest version is being used, and that old info isn't accidentally carried over into the new project. Note that rows are now added to both the Personnel and the Tasks sheets by simply adding the rows the usual "Google Sheet" way, rather than having to hit a button!

## **2 FTEs PER PERSON INFORMATION**

*2.1 Anonymous FTEs per Year per Team Member Role*  
*(“isANONfte.tex”)*

Role	Commitment (FTE)			
	Y1	Y2	Y3	Total
Work Efforts To Be Funded By This Proposal				
PI	0.20	0.15	0.10	0.45
Sci-PI	0.36	0.20	0.15	0.71
coll(1)	0.00	0.00	0.00	0.00
co-I(1)	0.05	0.00	0.12	0.17
<b>Total Funded Work Effort</b>	<b>0.61</b>	<b>0.35</b>	<b>0.37</b>	<b>1.33</b>
Work Efforts Proposed but NOT Funded By This Proposal				
PI	0.00	0.00	0.00	0.00
Sci-PI	0.04	0.00	0.00	0.04
coll(1)	0.05	0.15	0.20	0.40
co-I(1)	0.10	0.10	0.03	0.23
<b>Total Unfunded Work Effort</b>	<b>0.19</b>	<b>0.25</b>	<b>0.23</b>	<b>0.67</b>
Total Work Efforts Proposed (Funded + Unfunded)				
PI	0.20	0.15	0.10	0.45
Sci-PI	0.40	0.20	0.15	0.75
coll(1)	0.05	0.15	0.20	0.40
co-I(1)	0.15	0.10	0.15	0.40
<b>Total Funded + Unfunded Work Effort</b>	<b>0.80</b>	<b>0.60</b>	<b>0.60</b>	<b>2.00</b>

**Table 1.** Details of work efforts per member to be funded for the present proposal; Detailed responsibilities, tied to tasks and science goals, are provided in Sec. ??.

2.2 *Not Anonymous FTEs per Year Per Named Team Member Role*  
 (“NONANONfte.tex”)

Name	Role	Commitment (FTE)			
		Y1	Y2	Y3	Total
Work Efforts To Be Funded By This Proposal					
Dan J. Dentón, III	PI	0.20	0.15	0.10	0.45
Sally K. Smith	Sci-PI	0.36	0.20	0.15	0.71
Gisella Z. Gala	coll(1)	0.00	0.00	0.00	0.00
Pamela M. Marcum	co-I(1)	0.05	0.00	0.12	0.17
Total Funded Work Effort		0.61	0.35	0.37	1.33
Work Efforts Proposed but NOT to Be Funded By This Proposal					
Dan J. Dentón, III	PI	0.00	0.00	0.00	0.00
Sally K. Smith	Sci-PI	0.04	0.00	0.00	0.04
Gisella Z. Gala	coll(1)	0.05	0.15	0.20	0.40
Pamela M. Marcum	co-I(1)	0.10	0.10	0.03	0.23
Total Unfunded Work Effort		0.19	0.25	0.23	0.67
Total Work Efforts Proposed (Funded + Unfunded)					
Dan J. Dentón, III	PI	0.20	0.15	0.10	0.45
Sally K. Smith	Sci-PI	0.40	0.20	0.15	0.75
Gisella Z. Gala	coll(1)	0.05	0.15	0.20	0.40
Pamela M. Marcum	co-I(1)	0.15	0.10	0.15	0.40
Total Funded + Unfunded Work Effort		0.80	0.60	0.60	2.00

**Table 2.** FTE/WYE for all team members.

*2.3 Not Anonymous HST-style FTE Table for Phase II*  
*(“NOTANONhst.tex”)*

**Table 3.** Work Effort for All Team Members

**Program #:** HST-xx-xxxxx (Cycle XX)

**Science PI:** Dr. Sally Smith

Contributor	Position Institution US/Foreign	Role	\$?	FTE
Dan J. Dentón, III Principal Investigator	professor University of CBA US	will lead production of emission maps, image mosaic reduction, and paper #1; will assist with generating simulated data, identifying fields of interest, code documentation and with paper #2.	Y	0.45
Sally K. Smith Science PI	postdoc University of CBA US	will lead simulated data for model input and thermal model incorporation, and code documentation. and will assist with emission maps, image mosaics and field identification, and papers 1-2 writing.	Y	0.75
Gisella Z. Gala Collaborator	professor ZXY Institute of Science F	will assist with identification of fields & galaxies, papers 1-2, and image mosaic reduction.	N	0.40
Pamela M. Marcum co-Investigator	research scientist NASA ARC US	will lead identification of fields and paper #2, and assist with simulated data, thermal emission models, paper #1 and code documentation.	Y	0.40

### 3 TASKS & SCHEDULES

### 3.1 *Anonymous Task Start/Finish vs Role Assignment* (“isANONtasks.tex”)



Task Description	Start		Finish		Task	Team
	Y	Q	Y	Q	Lead	Expertise
Task A: Data and models preparation						
A1: Generate simulated data	1	1	1	2	Sci-PI	PI, co-I(1)
A2: Make emission maps	1	1	1	3	PI	Sci-PI
A3: Incorporate thermal emission models	1	3	1	3	Sci-PI	co-I(1)
Task B: Application to archive						
B1: Determine fields of interest	1	3	2	1	co-I(1)	Sci-PI, PI, coll(1)
B2: Reduction of image mosaics	2	1	2	3	PI	Sci-PI, coll(1)
Task C: Documentation and publications						
C1: Code documentation & verification	2	2	3	1	Sci-PI	co-I(1), PI
C2: Pub 1: pipeline and improved images	2	4	3	2	PI	Sci-PI, co-I(1), coll(1)
C3: Pub 2: galaxy identifications	3	1	3	4	co-I(1)	Sci-PI, PI, coll(1)

**Table 4. Task Timeline:** Team member roles, rightmost column, are cross-referenced with corresponding names in the non-anonymized personnel and work effort table. **Paper 1:** Sample and methods for enhancing detectability of low SB X-ray emission, presentation of emission maps, description of database and pipeline software (which will be released in a public repository at the time of paper submission). **Paper 2:** Methodologies for measuring the gas halo size and other gas properties, analysis of the diffuse hot gas halos as functions of galaxy properties (environment, galaxy morphology, stellar mass, and SFR based on *Chandra*, *HST*, and *Spitzer* observations, and the SED models from the GSWLC; application of multivariate methods to “baseline” the gas halo sizes (Sect. ??). **Note 1:** See Sec. ??.



3.2 *Not Anonymous Detailed Resource-Loaded Task Timeline w/  
Assignments (“NOTANONschedule.tex”)*

TASK TITLES	TASK												TASK ASSIGNMENTS id #wks	TOTAL		
	TIMELINE													Σ	FTE \$	\$
	YR1				YR2				YR3							
	1	2	3	4	1	2	3	4	1	2	3	4				
A Data and models preparation																
A1 Generate simulated data													ss 8 pm 2 dd 4	0.27	0.04	1
A2 Make emission maps													dd 6 ss 6	0.23	0.00	1
A3 Incorporate thermal emission models													ss 6 pm 4	0.19	0.08	1
B Application to archive																
B1 Determine fields of interest													pm 2 dd 1 ss 1 gg 4	0.15	0.12	1
B2 Reduction of image mosaics													dd 4 ss 3 gg 5	0.23	0.10	1
C Documentation and publications																
C1 Code documentation & verification													ss 8 dd 3 pm 6	0.33	0.12	1
C2 Pub 1: pipeline and improved images													dd 4 pm 2 ss 4 gg 6	0.31	0.12	1
C3 Pub 2: galaxy identifications													pm 4 dd 3 ss 3 gg 6	0.31	0.12	1

□ Resource-loaded project schedule, where: =Not funded by this grant, =funded by this grant,  $\Sigma$  =funded + unfunded; Tasks are listed (left side), with duration of task activity indicated in blue-colored timelines that measure quarter-years (1,2,3,4). Task assignments identify specific team members responsible for implementation with associated work weeks, where color indicates institutional affiliation (blue=funded/U.S., black=not funded/U.S., red=international). "Total FTE" (right side) are integrated work-weeks converted into FTE per task (1 FTE=12 months), displayed as "total", "unfunded by this grant", and "funded by this grant", resp. Assignment identities: **dd**: Dan Dentón, **gg**: Gisella Gala, **pm**: Pamela Marcum, **ss**: Sally Smith

## 4 TASK ASSIGNMENTS

Also see TABLE 4 and 3.2

*4.1 **Not** Anonymous Simple Task List w/ Named Team Responsibilities  
(no FTEs) (“NOTANONtasks.tex”)*

Tasks	Lead	Expertise
<b>Task A: Data and models preparation</b>		
A1: Generate simulated data	Smith	Dentón, Marcum
A2: Make emission maps	Dentón	Smith
A3: Incorporate thermal emission models	Smith	Marcum
<b>Task B: Application to archive</b>		
B1: Determine fields of interest	Marcum	Smith, Dentón, Gala
B2: Reduction of image mosaics	Dentón	Smith, Gala
<b>Task C: Documentation and publications</b>		
C1: Code documentation & verification	Smith	Marcum, Dentón
C2: Pub 1: pipeline and improved images	Dentón	Smith, Marcum, Gala
C3: Pub 2: galaxy identifications	Marcum	Smith, Dentón, Gala

The tasks (gray headers) and sub-tasks (left), with specific assignments for the roles of task lead (middle) and expertise / analysis assistance (right).

**Table 5.** Task Management and Team Responsibilities

## 4.2 *Not Anonymous Team Summary Role Descriptions* (*“NOTANONteamSummaries.tex”*)

Dr. **Dan J. Dentón, III, PI**, will lead the emission maps production, and the reduction of image mosaics related to archive applications. Finally, he will lead the first publication, a paper describing the pipeline and improved images. His  $\sim 15$  years of experience in image analysis are needed for successful and timely completion of these tasks. In addition to leading these tasks, he will assist with model preparation by generating simulated data, and will identify fields of interest for the archive-related work, as well as help with code documentation and the development of the second publication.

Dr. **Sally K. Smith, Sci-PI**, will lead simulated data generation for models input and the incorporation of thermal models, as well as code documentation. Her extensive work with model simulations and archival processes are well-matched to these roles. Additionally, her expertise will be used to assist with generation of emission maps, identifying fields of interest, reduction of image mosaics and in the development of both publications.

Prof. **Gisella Z. Gala, coll(1)**, will assist with fields and galaxy identification and image mosaic reduction, as well as with the development of Papers 1 and 2. Her extensive experience in image analysis will significantly reduce the risk of false positive detections created by artifacts.

Dr. **Pamela M. Marcum, co-I(1)**, will lead the identification of fields and the second publication, a paper on galaxy identification. Her background in extragalactic astronomy is essential for successful implementation of these tasks. In addition to these responsibilities, she will provide expertise in the model preparation by generating simulated input data, and in the incorporation of thermal emission models. She will also assist with documentation and will co-author the first publication.

## 5 BIOGRAPHICAL INFORMATION ON TEAM MEMBERS

### 5.1 ***Not** Anonymous Biographical Sketches (“NOTANONbiosketches.tex”)*

**Dr. Daniel Dentón (Principal Investigator):**

University of CBA

**Education**

01/01/2000–12/31/2003, University of XYZ, B.S., astronomy

01/01/2004–12/31/2008, University of ABC, Ph.D., astrophysics

**Appointments**

01/01/2012–present, professor, University of CBA

01/03/2009–01/08/2011, postdoc, University of ZYX

**Additional Awards, Positions, Fellowships and Proposals**

01/05/2011, Best Researcher of the Year

01/10/2011–01/10/2012, Awarded 100 hrs on Gigantic Telescope

2023, Nobel Prize in Physics

**Publications relevant for the proposal:**

- Lopez-Rodriguez, E., Mao, S.A., Beck, R., et al. (inc. **Denton, D.**), 2022, "Extragalactic magnetism with SOFIA (SALSA Legacy Program) IV: Program overview and first results on the polarization fraction" (submitted to ApJ)
- Young, E.T., Herter, T.L., Gusten, R., et al. (inc. **Denton, D.**), 2021, "Early science results from SOFIA", 8444, 844410
- Miles, J.W., Helton, L.A., Sankrit, R., et al. (inc. **Denton, D.**), 2018, "Capabilities, performance, and status of the SOFIA science instrument suite", SPIA, 8867, 88670N
- Temi, P., **Denton, D.**, Miller, W.E., et al., 2018, "SOFIA observatory performance and characterization", SPIE, 84444, 8444414
- Gehr, R.D., Becklin, E.E., et al. (inc. **Denton, D.**), 2015, "Status of the Stratospheric Observatory for Infrared Astronomy (SOFIA)", Adv. in Space Research, 48, 1004
- **Denton, D.**, Appleton, P.N., Higdon, J.L., 2010, "Large Infrared and Optical Color Gradients in the Carwheel Ring Galaxy: Evidence for the First Epoch of Star Formation in the Wake of an Expanding Ring", ApJ, 399, 57

**Dr. Sally Smith (Science PI):**

University of CBA

**Education**

01/01/2014–12/31/2020, University of lmn, Ph.D., astronomy

01/01/2010–12/31/2014, University of abc, B.S., physics

**Appointments**

01/01/2023–present, research fellow, University of CBA

01/03/2020–01/08/2022, postdoc, University of ZYX

**Additional Awards, Positions, Fellowships and Proposals**

4333, Teaching assistant award

01/10/2011–01/10/2012, Awarded 100 hrs on Gigantic Telescope

**Publications relevant for the proposal:**

- Lopez-Rodriguez, E., Mao, S.A., Beck, R., et al. (inc. **Smith, S.**), 2022, "Extragalactic magnetism with SOFIA (SALSA Legacy Program) IV: Program overview and first results on the polarization fraction" (submitted to ApJ)
  - Young, E.T., Herter, T.L., Gusten, R., et al. (inc. **Smith, S.**), 2021, "Early science results from SOFIA", 8444, 844410
  - Gehr, R.D., Becklin, E.E., et al. (inc. **Smith, S.**), 2015, "Status of the Stratospheric Observatory for Infrared Astronomy (SOFIA)", Adv. in Space Research, 48, 1004
  - **Smith, S.**, Appleton, P.N., Higdon, J.L., 2010, "Large Infrared and Optical Color Gradients in the Carwheel Ring Galaxy: Evidence for the First Epoch of Star Formation in the Wake of an Expanding Ring", ApJ, 399, 57
- 

**Dr. Pamela M. Marcum (co-Investigator):**

NASA ARC

**Education**

1994, University of Wisconsin, Ph.D., Astrophysics

1989, Florida Institute of Technology, M.S., Space Science

1989, Florida Institute of Technology, M.S., Physics

1987, Florida Institute of Technology, B.S., Space Science

**Appointments**

2016–present, research scientist, NASA Ames Research Center

2020–2021, program officer (on detail), NASA HQ, Washington, D.C.

2009–2016, SOFIA project scientist, NASA Ames Research Center

2005–2008, program officer (IPA), NASA HQ, Washington, D.C.

2003–2009, associate professor, Texas Christian University (Fort Worth, TX)

1996–2002, assistant professor, Texas Christian University (Fort Worth, TX)

1994–1996, postdoctoral fellow, University of Virginia

**Additional Awards, Positions, Fellowships and Proposals**

2021, VLA/21A-043, "Flares, breaks and warps in the outskirts of the HI and stellar disk of UGC11859", 9h, HI observations, JVL A C-array

2020, VLA/20A-485, "Flares, warps and breaks in the outskirts of the HI and stellar disk of UGC11859", 4h (DDT), HI observations, JVL A C-array

**Publications relevant for the proposal:**

- Ashley, T., **Marcum, P.M.**, Alpaslan, M., Fanelli, M.N., Frost, J.D., 2019, "The Neutral Gas Properties of Extremely Isolated Early-type Galaxies III", AJ, 157, 158



- Alpaslan, M., Grootes, M.W., **Marcum, P.M.**, et al., 2016, "Galaxy And Mass Assembly (GAMA): Stellar mass growth of spiral galaxies in the cosmic web", MNRAS, 457, 2287
  - van Driel, W., **Marcum, P.M.**, Gallagher, J.S., et al., 2001, "HI observations of loose galaxy groups I. Data and global properties", A&A, 378, 370
-

*5.2 Not Anonymous Current/Pending Info*  
*(“NOTANONcurrentPending.tex”)*

Dr. Daniel Dentón (Principal Investigator)	
Current Support	
<b>Title</b>	NSF Proposal 4
<b>Source of Support</b>	NSF/WVU
<b>Program POC</b>	Rick Rodgers; rrogers@nsf.gov
<b>Sci PI</b>	Dan Denton; University of CBA
<b>Admin PI</b>	Ken Kraft; University of CBA
<b>Award Period</b>	05/01/2023–05/01/2024
<b>Award Amount</b>	\$120,000
<b>FTE</b>	0.2
Pending Grant Support	
<b>Title</b>	( <a href="#">this proposal</a> ) WorPT Proposal Demo
<b>Source of Support</b>	NASA/123
<b>Program POC</b>	Cat Candice; ccandice@nasa.gov
<b>PI</b>	Dan Denton; University of CBA
<b>Sci PI</b>	Sally Smith, University of CBA
<b>Award Period</b>	04/01/2024–04/01/2026
<b>Award Amount</b>	\$360,000
<b>FTE</b>	0.2, 0.2 (Yrs 1,2 resp.)
<b>Title</b>	NSF Proposal 5
<b>Source of Support</b>	NSF/ABC
<b>Program POC</b>	Bobby Barker; bbarker@nsf.gov
<b>PI</b>	Ken Kraft; University of CBA
<b>Sci PI</b>	Dan Denton; University of CBA
<b>Award Period</b>	01/01/2024–01/01/2027
<b>Award Amount</b>	\$520,000
<b>FTE</b>	0.3, 0.2, 0.4 (Yrs 1,2,3, resp.)

Dr. Sally Smith (Science PI)	
Current Support	
<b>Title</b>	NSF Proposal 4
<b>Source of Support</b>	NSF/WVU
<b>Program POC</b>	Rick Rodgers; rrogers@nsf.gov
<b>Sci PI</b>	Dan Denton; University of CBA
<b>Admin PI</b>	Ken Kraft; University of CBA
<b>Award Period</b>	05/01/2023–05/01/2024
<b>Award Amount</b>	\$120,000
<b>FTE</b>	0.2
Pending Grant Support	
<b>Title</b>	( <a href="#">this proposal</a> ) WorPT Proposal Demo
<b>Source of Support</b>	NASA/123
<b>Program POC</b>	Cat Candice; ccandice@nasa.gov

<b>PI</b>	Dan Denton; University of CBA
<b>Sci PI</b>	Sally Smith, University of CBA
<b>Award Period</b>	04/01/2024–04/01/2026
<b>Award Amount</b>	\$360,000
<b>FTE</b>	0.2, 0.2 (Yrs 1,2 resp.)
<b>Title</b>	NSF Proposal 5
<b>Source of Support</b>	NSF/ABC
<b>Program POC</b>	Bobby Barker; bbarker@nsf.gov
<b>PI</b>	Ken Kraft; University of CBA
<b>Sci PI</b>	Dan Denton; University of CBA
<b>Award Period</b>	01/01/2024–01/01/2027
<b>Award Amount</b>	\$520,000
<b>FTE</b>	0.3, 0.2, 0.4 (Yrs 1,2,3, resp.)

Dr. Pamela M. Marcum (co-Investigator)	
Current Support	
<b>Title</b>	Extended Hot Gas Halos of Galaxies
<b>Source of Support</b>	NASA/ADAP
<b>Program POC</b>	Douglas Hudgins; (202) 358-0988; douglas.m.hudgins@nasa.gov
<b>PI</b>	Pamela Marcum
<b>Sci PI</b>	Alex Borlaff
<b>Award Period</b>	(anticipated) 04/15/2023–04/15/2026
<b>Award Amount</b>	\$995,417
<b>FTE</b>	0.35, 0.25, 0.40 (Years 1, 2, 3 resp.)
<b>Title</b>	STRAYCOR: Stray-light Background Correction for HST ACS and WFC3
<b>Source of Support</b>	NASA/HST Archive
<b>Program POC</b>	STScI/AURA; (410) 338-4200; gms_mail@stsci.edu
<b>Sci PI</b>	Alex Borlaff
<b>Admin PI</b>	Pamela Marcum
<b>Award Period</b>	(anticipated) 03/20/2023–03/20/2025
<b>Award Amount</b>	\$368,868
<b>FTE</b>	0.25, 0.25 (Years 1, 2, resp.)
<b>Title</b>	Exploring the Origin of Lenticular Galaxies With Chandra/ACIS
<b>Source of Support</b>	NASA/Chandra Archive
<b>Program POC</b>	Michael McCarthy; mmccarthy@cfa.harvard.edu; 617-495-7262
<b>PI</b>	Alex Borlaff
<b>Admin PI</b>	Pamela Marcum
<b>Award Period</b>	01/20/2023–01/20/2024
<b>Award Amount</b>	\$215,800
<b>FTE</b>	0.15 (Year 1)
Pending Grant Support	
<b>Title</b>	( <a href="#">this proposal</a> ) WorPT Proposal Demo
<b>Source of Support</b>	NASA/123
<b>Program POC</b>	Cat Candice; ccandice@nasa.gov
<b>PI</b>	Dan Denton; University of CBA
<b>Sci PI</b>	Sally Smith, University of CBA

<b>Award Period</b>	04/01/2024–04/01/2026
<b>Award Amount</b>	\$360,000
<b>FTE</b>	0.2, 0.2 (Yrs 1,2 resp.)
<b>Title</b>	ROSALIA: Roman’s Sky Analyst for LSB Imaging & Astronomy
<b>Source of Support</b>	NASA/Roman Research & Support
<b>Program POC</b>	Dominic Benford; dominic.j.benford@nasa.gov
<b>Sci PI</b>	Alex Borlaff
<b>Admin PI</b>	Pamela Marcum
<b>Award Period</b>	09/01/2023–09/01/2027
<b>FTE</b>	0.25, 0.2, 0.2, 0.25 (Years 1,2,3,4 resp.)

## **6 NON-LABOR RELATED BUDGET TABLES**

### 6.1 *Anonymous Travel Cost per Trip, Total Budget per Year* (“isANONtravel.tex”)

The below table provides travel costs:

Travel Cost Details								
Year	#Trips	Dest.	<i>per trip</i>					Total
			Airfare	per diem	Conf. Fee	Ground Transp.	per trip	
<b>Yr1</b>	4	domestic	\$700	\$1,320	\$500	\$300	\$2,820	\$11,280
	2	internat'l	\$1,750	\$1,600	\$800	\$500	\$4,650	\$9,300
<b>Yr2</b>	6	domestic	\$700	\$1,320	\$500	\$300	\$2,820	\$16,920
	2	internat'l	\$1,750	\$1,600	\$800	\$500	\$4,650	\$9,300
<b>Yr3</b>	5	domestic	\$700	\$1,320	\$500	\$300	\$2,820	\$14,100
	2	internat'l	\$1,750	\$1,600	\$800	\$500	\$4,650	\$9,300

**Table 7.**

#### Notes and assumptions:

While final destinations are not known at this time, domestic and international costs are estimated based on values taken from NASA Travel Guidebook using historical averages for a 5– and 5–day conference for U.S. and European cities, resp., likely to host topical meetings aligned with the science of the proposed work. Domestic lodging and per diem rates are set by the GSA; international lodging and per diem are set by the Dept. of State (note that M&IE is included in the per diem values shown here).

**Yrs 1-2 funds will be used to present pre-publication findings at science conferences and potentially to fund trips for collaboration with team members (i.e., NASA/GSFC).**

DOMESTIC: per diem+M&IE, car rental/day at \$264 and \$60, resp.

INTERNATIONAL: per diem+M&IE, public transport/day estimated at \$320 and \$100, resp.

TRAVEL PER TEAM MEMBER (summed over 3-year grant):

**PI**: 5 domestic trips; 2 intern'l trips;

**co-I(1)**: 4 domestic trips; 1 intern'l trips;

**Sci-PI**: 6 domestic trips; 3 intern'l trips;

All travel will be to present science results of this project at conferences and/or visits to home institutions of the team members for in-person collaboration. Note that above values above do not include institutional overhead.

## 6.2 *Anonymous Non-Labor Budget w/ Rolled-up Travel Summary* (“*isANONnonlabor.tex*”)

Table 8 shows rolled-up values for travel costs and other non-labor costs. Travel cost details, including costing assumptions used, are presented in Table 7.

Equipment, Travel, Supplies, Page Charges				
Cost Category	Y1	Y2	Y3	Total
<b>Equipment</b>	<b>\$1,200</b>	<b>\$2,300</b>	<b>\$1,700</b>	<b>\$5,200</b>
<b>Travel</b>	<b>\$20,580</b>	<b>\$26,220</b>	<b>\$23,400</b>	<b>\$70,200</b>
<i>Domestic</i>	<i>\$11,280</i>	<i>\$16,920</i>	<i>\$14,100</i>	<i>\$42,300</i>
<i>International</i>	<i>\$9,300</i>	<i>\$9,300</i>	<i>\$9,300</i>	<i>\$27,900</i>
<b>Materials &amp; Supplies</b>	<b>\$300</b>	<b>\$300</b>	<b>\$300</b>	<b>\$900</b>
<b>Publication Costs</b>	<b>\$3,400</b>	<b>\$3,600</b>	<b>\$4,400</b>	<b>\$11,400</b>

Table 8.

### Notes and assumptions:

EQUIPMENT COSTS: In Yrs 1-2, we request a total of \$11K for the purchase of a laptop and associated IT equipment to replace the PI’s aging laptop (purchased in 2018, well past nominal 4-year refresh cycle at the time of the proposed budget period), “NASA-tized” computer equipment (laptops, monitors) for use by the summer interns, and as an “emergency” fund, should the Science PI’s ~3-yr old laptop fail or need repair.

TRAVEL: refer to Table 7.

PUBLICATION COSTS: Our work plan includes the publication of four key manuscripts: (see Table 3.2 for details), but given the student projects, we have budgeted for 8 papers. We request a total of \$2K for publication costs, using the assumption that the papers will fall between “Tier 1” and “Tier 2” categories as defined in ApJ/AJ guidelines. These fees are included in proposed budget.

MATERIALS AND SUPPLIES: We request an annually-averaged budget of \$1,125 to cover purchase of disk space to back up our data products and miscellaneous office and IT supplies at PI and Science-PI home institution. The distribution of these funds is top-heavy at the beginning of the grant period, when such supplies will be needed most. The disk size of the data products will be approximately 39 Gb per exposure: four float32 extensions per CCD, corresponding to the 1) Zodiacal-CIB background, 2) in-field, and 3) out-field stray-light, and 4) thermal emission layers, plus one binary extension for the Solar System object trails (*streak / no streak*), for a total of 18 4096×4096 detector focal plane. Storage of these products will not be required, as they will be immediately produced by the pipeline on a exposure-by-exposure basis. End-to-end simulations shall not exceed 100 Gb, and they will be accessible to the community through a public internet server. Publication IV will require the analysis of an area equivalent to 32 adjacent field of views, the equivalent of a sector of the *Roman*/WFI High Latitude Wide Area Survey, which corresponds to 128 exposures. Assuming an average exposure size of 9 Gb, plus ~40 Gb for the background products, we project that we will require ~10–15 Tb of disk space (including backups).