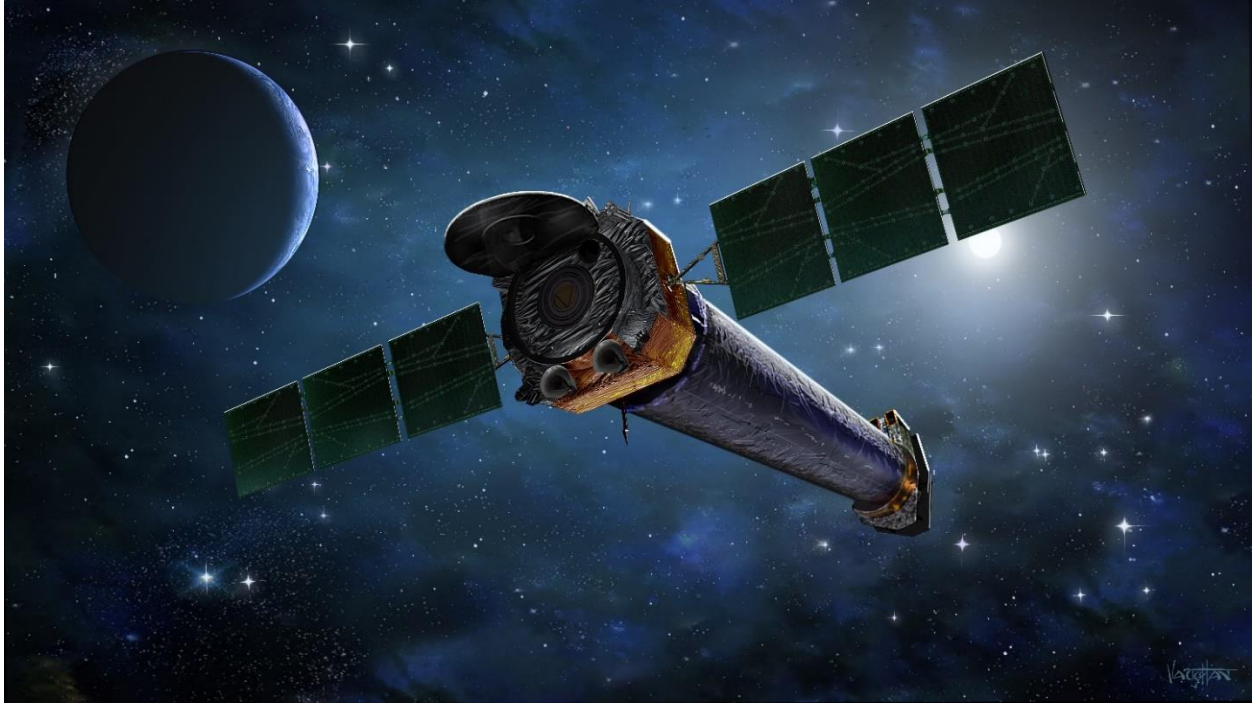


CHANDRA X-RAY OBSERVATORY



TERMS AND CONDITIONS FOR OBSERVING CYCLE AWARDS

Effective: January 2025

Smithsonian Astrophysical Observatory
60 Garden Street
Cambridge, MA 02138

SMITHSONIAN ASTROPHYSICAL OBSERVATORY
TERMS AND CONDITIONS
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CHANDRA X-RAY OBSERVATORY
OBSERVING CYCLE AWARDS

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**SMITHSONIAN ASTROPHYSICAL OBSERVATORY
CHANDRA X-RAY OBSERVATORY
OBSERVING CYCLE AWARDS**

KEY CHANGES

ARTICLE	CHANGE
VIII[C]	Equipment
VIII[D]	Computing Devices
IV[A]	Equipment
XXIX	Malign Foreign Talent Recruitment Program
	Updated various references from GCAM Appendix D to NASA Terms and Conditions

I TERMS OF ACCEPTANCE

A. Authority

Chandra X-ray Center [hereafter CXC] Awards are issued by the Smithsonian Astrophysical Observatory [hereafter SAO] for and on behalf of the National Aeronautics and Space Administration [hereafter NASA] under contract NAS8-03060. SAO is under contract to NASA to prepare and issue Calls for Proposals for observations with the Chandra X-ray Observatory [hereafter CXO] and for research or outreach projects related to the goals of the CXO program; prepare and conduct independent peer reviews of proposals; select proposals for observation time, research, and funding as recommended by the peer reviews; issue funding instruments on behalf of NASA in the form of grants; determine the period-of-performance of each Award; and administer each Award issued through closeout. Funding may be awarded in time-phased increments and is dependent upon the availability of funds from NASA.

B. Purpose of the Awards

Chandra Observing Awards are issued to provide opportunities for the scientific community to study the structure and emission properties of astrophysical sources of high-energy radiation, using observational and related data from the Chandra X-ray Observatory and/or other sources as appropriate.

C. Issuance of Awards

All awards will be issued by the SAO Subawards Section [hereafter the Subawards Section] with the exception of awards to NASA Centers and Other Federal Agencies as defined in Article IV [B]. For the latter, the award funding will be made directly by the NASA Marshall Space Flight Center [hereafter MSFC] via an interagency transfer of funds, and these Grant Awards will be administered by MSFC. Information regarding these awards may be obtained by contacting the CXC Director's Office.

D. Terms of Acceptance

These Terms and Conditions are binding on the Award Recipient Institution [hereafter Award Recipient or Awardee]. They are applicable to all CXC Observing Cycle Awards issued by SAO. Acceptance of this Award constitutes assurance that the Award Recipient will comply with each of the Terms and Conditions of the Award and the applicable Federal statutes, regulations, and guidelines.

E. Order of Precedence

Should there be any inconsistencies in this Award; the order of precedence is as follows:

- the Award,
- the Special Conditions [if any are attached to the Award],
- the Terms and Conditions, and
- the Approved Technical and Cost proposal[s].

F. Assistance Listing Number

The Assistance Listing number to be used for Chandra awards is 43.001.

II STATUTORY AND ADMINISTRATIVE PROVISIONS

A. The Code of Federal Regulations [CFR], Office of Management and Budget [OMB] Guidance, and the Federal Acquisition Regulation [FAR], NASA Grant and Cooperative Agreement Manual (GCAM)

By accepting this Award, the Recipient certifies that it will comply with all applicable Federal standards and requirements as set forth in the CFR, OMB Circulars, and the FAR:

- Title 2 of the Code of Federal Regulations (2CFR), Subtitle A, Office of Management and Budget Guidance for Federal Financial Assistance and 2 CFR 1800, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards.
- For Profit organizations should note that, unless stated to the contrary in the Grant Award or Amendment documents, the recipient shall be governed by the FAR cost principles implemented at FAR part 30, Cost Accounting Standards Administration and FAR part 31, Contract Cost Principles and Procedures.

B. Statutory Governance

If any Federal or State statute specifically prescribes policies or specific requirements that differ from the Terms and Conditions provided herein, the provisions of the statute shall govern.

III CERTIFICATION AND ASSURANCE OF COMPLIANCE

By accepting the Award, the Recipient certifies that it will agree to perform all actions and support all intentions stated in the Code of Federal Regulations [CFR], Title 2: Grants and Agreements Part 200, including but not limited to:

1. Assurance of Compliance with NASA Regulations concerning Nondiscrimination as required by NASA Terms and Conditions Appendix B, Part A
2. Certification Regarding Lobbying Title 31, U.S. Code Section 1352.
3. Certification Regarding Nonprocurement Debarment, and Suspension [Nonprocurement], Title 2 CFR, Chapter XVIII, Part 1880.

IV ELIGIBILITY

A. Eligibility for Funding

Subject to the availability of funds from NASA, funding will be provided to support eligible investigators of approved proposals. In the case of Co-Investigators [CoIs] seeking funding, Awards will be issued directly to the CoI's institution in order to avoid double-charging of institutional overheads.

U.S. Investigators that receive sufficiently high evaluations during the Stage 1 research review and who require financial support are invited to submit a Stage 2 Cost Proposal. Only U.S. PIs and CoIs are eligible to receive funding. ***Note that the investigator's primary institution must be U.S. based in order to be eligible for funding.*** "U.S. Investigators" are defined to be those investigators that fall into one of the following categories:

- U.S. Citizens residing in the United States
- U.S. Citizens residing abroad if salary/stipend and support are being paid by a U.S. institution, and
- U.S. permanent residents and foreign national scientists working in the United States if salary/stipend and support are being paid by US institutions.

[Note: These definitions include U.S. CoIs on observing projects with non-U.S. PIs]

B. Eligibility for Awards

Participation in this program is open to the following categories of institutions and organizations:

- **Educational Institutions** – Universities or two- and four-year colleges accredited to confer degrees beyond that of the K-12 grade levels.
- **Nonprofit, Nonacademic Organizations** – Private or Government supported research laboratories, universities, consortia, museums, observatories, professional societies, educational organizations, or similar institutions that directly support advanced research activities but whose principal charter is not for the training of students for academic degrees.
- **NASA Centers** – Any NASA Field Center and the Jet Propulsion Laboratory.
- **Other Federal Agencies** – Any non-NASA, U.S. Federal Executive agency or Federally Funded Research and Development Center [FFRDC] sponsored by a Federal agency.
- **Commercial Organizations** – Organizations of any size that operate for profit or fee and that have appropriate capabilities, facilities, and interests to conduct the proposed effort.
- **Non-U.S. Organizations** – Institutions outside the United States that propose on the basis of a policy of no-exchange-of-funds.

Each proposal must have one, and only one, Principal Investigator [PI]. Any other individuals who are actively involved in the program should be listed as Co-Investigators [CoIs]. The PI is responsible for the scientific and administrative conduct of the project and is the formal contact for all communications with the CXC.

Proposals by non-U.S. PIs that have one or more U.S. CoIs who require funding *must* designate one of the U.S. CoIs as the "Administrative PI". This person will have general oversight and responsibility for the budget submissions by the U.S. CoIs in Stage 2. When a U.S. investigator obtains funds for a project that involves non-U.S. investigators, no funding may flow through the U.S. investigator to the non-U.S. investigators. This prohibition includes funding for travel and equipment.

C. System for Award Management (SAM) and Unique Entity Identifier (UEI)

In accordance with 2 CFR 25, Unique Entity Identifier and System for Award Management, all entities that propose for or receive an award must be registered in SAM prior to submitting their proposal, maintain an active SAM registration with current information at all times during which it has an active Chandra award or proposal under consideration, and provide its UEI in each proposal. Proposers are required to review and update their information in the SAM database annually from the date of initial registration or subsequent updates. SAO may not issue an award or financial modification to an existing award until the entity has complied with the requirements to provide a valid UEI and maintain an active SAM registration with current information. At the time of issuing an award, if the intended recipient has not complied with the UEI or SAM requirements, SAO may determine that the applicant is not qualified to receive an award and use that determination as a basis for non-selection. Exceptions to this section are shown in the 2 CFR 25.110.

The Unique Entity Identifier is the universal identifier assigned by SAM.gov to uniquely identify an entity. Additional information about registration procedures may be found at SAM.gov.

D. Risk Evaluation

SAO has the obligation to ensure that recipient institutions meet the requirements related to the award of federal funds. SAO will review the reports and findings from audits performed under 2 CFR 200, Subpart F – Audit Requirements or the reports and findings of any other available audit as well as reviewing SAM for exclusions. If the awardee has previously received Chandra awards, the awardee's history of performance will be reviewed. The review will include compliance with the terms and conditions of the award, i.e., timely submission of both program performance reports and financial reports.

Should the awardee not meet the above criteria, SAO may impose additional requirements such as additional project monitoring and detailed financial reports.

V TERM OF AWARD

Unless specifically stated in the award documents, the period-of-performance and the budget period are the same.

A. Commencement of Awards

General Observer Awards: In general, the period-of-performance for General Observer Awards will begin upon receipt of the initial observational data by the Principal Investigator, and this period will be so identified in the Award documents. Target of Opportunity [TOO] awards with more than one approved target may be incrementally funded as each target is successfully observed, and the data released to the PI.

All Other Awards: Awards for other categories will be issued shortly after the issuance of the notification of approval for funding and receipt of funding from NASA. This includes such categories as Director's Discretionary Time, Archival Research, Theory/Modeling, and Special Projects.

It should be noted, however, that, in general, the initial release of awards for a cycle will not take place until January.

B. Duration

In general, awards will be issued with an initial period-of-performance of two years. However, Multi-Cycle Observing Awards (MCOPs) can be issued with a three-year period-of-performance when requested. Awards that are a result of a transfer will be issued with a one-year period-of-performance.

In cases where an award has been issued with a two- or three-year period-of-performance and the project has been completed earlier than anticipated, the Recipient Institution may choose to close the award early. The Recipient Institution should submit a written request for a change to the end-date of the award and provide the new end-date. If applicable, the annual report will be waived by SAO. An amendment will be issued to change the period-of-performance and the Report Filing Guide will be updated with the revised final reports due dates.

C. Preparatory Costs

In unusual cases where the Investigator requires work to be accomplished prior to the observation, e.g., Correlative Study activities at other wavelengths [see Article VIII [H] of these Terms and Conditions], up to 25% of the approved funds can be awarded before the first observation has been taken. If pre-award funding is required, the Award Recipient shall submit a written justification which shall include a statement describing the work that must be accomplished on the project prior to award to the SAO Subawards Section after the investigator's institution has received notification that it will be receiving funding.

D. Incremental Funding

Grants totaling less than \$30,000 will be issued in their entirety following initial observation of the proposed target. Grants of \$30,000 to \$99,999 will be issued in two equal increments, the first increment following the initial observation of the proposed target and the second increment when at least 75% of the previously awarded funds have been invoiced. Grants of \$100,000 or more will be issued in three equal increments, or in multiple increments at the discretion of the CXC, the first increment following the initial observation of the proposed target and succeeding increments when at least 75% of the previously awarded funds have been invoiced.

The Subawards Section will notify the Award Recipient in writing whenever additional funds are added to the Award Recipient's account. No action is required of the Award Recipient. Note that all awards are subject to the availability of funds from NASA. Any costs incurred that exceed the funds available are made at the risk of the recipient institution.

E. Request for No-Cost Extensions

1. *No-Cost Extensions:*

A no-cost extension is allowable and can be requested for one 12-month period when necessary to complete work that was part of the original award if the analysis of the data cannot be completed within the authorized Award period. The Award Amendment to provide the no-cost extension is dependent upon the Award Recipient being in compliance with all of the reporting requirements of the Award [e.g., Financial and Program Performance Reports].

In order to exercise the no-cost extension, the Award Recipient must submit an Annual Program Performance Report on Form CRG-99-1 or equivalent and request the no-cost extension at least 30 days (but not more than 90 days) prior to the Award end-date. The Awardee must provide supporting reasons for the extension and the proposed new end-date. The required documents must be submitted to the Subawards Section. No-cost extensions will not be executed until the required Annual Report is received. This extension cannot be exercised merely for the purpose of using unobligated Award balances. *It is important to note that the request for extension is a request to change the terms of the award and must be submitted by someone authorized to negotiate changes at the Recipient Institution.*

All expenditures incurred during the no-cost extension period must be included in the approved Award documents and must be related to the approved objectives of the project. No new financial obligations will be allowed after the award end date.

2. *CoI Responsibilities:*

Each CoI and institution is responsible for its own Award and requests for no-cost extensions. The fact that the PI's institution has requested an extension for its Award does not affect the CoI Award.

F. Supplemental Funding Requests

Award Recipients shall make every effort to complete all project activities with the funding provided; however, if unanticipated costs arise in analyzing Chandra data, or if additional analysis is necessary and requires additional funding, a new technical and cost proposal may be submitted and will be considered under the competitive peer review process for the next observing cycle.

VI LIABILITY

A. Responsibility

SAO is authorized to and will make Award payments from funds advanced or authorized to it by NASA and not from its own assets. Administration of the Award program or of specific Awards may be transferred from SAO to NASA or its designee and, in the case of such transfer, SAO will have no further responsibility. **Statutory Governance is addressed in Article II [B] above.**

B. Indemnification

The Award Recipient agrees not to make any claim against the U.S. Government, NASA, or the Smithsonian Institution, its Regents, directors, officers, employees, volunteers, licensees, representatives and agents, with respect to activities under this Award for the injury or death of its employees or of contractor or subcontractor employees, or to the loss of its property or that of its contractors and subcontractors, whether such injury, death, damage or loss arises through negligence or otherwise, except in the case of willful misconduct.

C. Insurance

The Award Recipient shall provide and maintain, during the term of any Award, all appropriate insurance or self-insurance [including but not limited to Workers Compensation, Automobile Liability, and Comprehensive General Liability] on its behalf and on behalf of its employees, agents and representatives.

D. General Release

Neither the Smithsonian nor NASA assumes any liability for the unauthorized use of patented or copyrighted materials. The Award Recipient must take such steps as may be deemed necessary to insure or protect itself, its employees and its property.

It is understood that the Award Recipient is undertaking the work hereunder as an independent contractor, not as an employee of the Smithsonian. Award Recipients are responsible for all actions taken or not taken in the performance of the activities under this Award, and the Smithsonian Institution and NASA expressly disclaim any responsibility to any third party. Further, to the extent allowable by law, the Award Recipient agrees to hold both the Smithsonian and NASA harmless from, and to accept all responsibility for, any harm suffered by anyone arising out of actions of the Award Recipient or its employees, agents, and representatives if visiting SAO.

The Award Recipient's acceptance of payment for the final invoice under this Award shall release the Smithsonian and NASA from all claims of the Award Recipient and from all liability to the Award Recipient concerning the project or work.

VII STANDARDS FOR AWARD ADMINISTRATION

A. Financial and Program Management

The allowability of costs and cost allocation methods for work performed under this Award, up to the amounts specified in the Award, shall be determined in accordance with 2 CFR Part 200 Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards. Award Recipients shall manage all expenditures and actions affecting the Award in a judicious and reasonable manner. Award Recipients shall treat costs consistently in both Federally financed and other activities, as well as between activities supported by different sources of Federal funds.

B. Property

The Award Recipient shall maintain a property management system in accordance with 2 CFR Part 200 Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards.

C. Procurement

The Award Recipient shall maintain procurement standards for the acquisition of supplies and other expendable property, equipment, and services in accordance with 2 CFR Part 200 Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards.

Recipients are encouraged to purchase only American-made equipment and products [Made in America Encouragement NASA Terms and Conditions Section 2.8].

VIII ALLOWABLE COSTS

The following costs associated with the acquisition, calibration, analysis, and publication of Chandra data and related activities are allowable, provided eligibility requirements in Article IV are met:

Any item of cost not mentioned below that is allowable under 2 CFR Part 200 Subpart E, Cost Principles may be considered for inclusion in an Award.

Any item of cost not mentioned below that is incurred by For-Profit Organizations and those Non-Profit Organizations listed in Appendix VIII to Part 200--Nonprofit Organizations Exempted from Subpart E--Cost Principles of Part 200 shall be determined in accordance with Subpart 31.2 of the FAR.

Note: In order for a cost to be allowable, the cost must be incurred during the period-of-performance of the award. Any costs incurred outside the period-of-performance are the responsibility of the recipient institution. See Paragraph F. below for the exception regarding page charges. In situations where pre-award costs are needed the recipient shall follow the procedures under Article V, Term of Award, Paragraph C, Pre-Award Costs.

A. Salaries and Wages

Salary support for project Investigators is allowable provided that it is reasonable for the services rendered and consistent with the Award Recipient's established policies. This requirement applies to staff hired specifically for the project as well as to regular employees of the Award Recipient Institution.

For faculty members in academic institutions, funding is allowable for up to two months of summer salary support within a fiscal year. Exceptions for released time during the academic year may be permitted under special circumstances and such costs must have been justified fully in the proposal budget. Released time for project investigators working in non-academic institutions is allowable provided the compensation requested is reasonable and consistent with each employee's regular full-time salary or rate of compensation.

Funds may not be used to pay more than a person's full-time salary or to pay more than an individual's hourly rate. Also, an individual may not be reimbursed for consulting or other time in addition to a regular full-time salary covering the same period of employment.

Funding for Federal employees is allowable only if they are on leave-without-pay status or hold part-time government positions. Support shall not exceed the full-time pay rate at the time of award.

In accordance with 2 CFR §200.413, the salaries of administrative and clerical staff should normally be treated as indirect (F&A) costs. Direct charging of these costs may be appropriate only if all of the following conditions are met:

1. Administrative or clerical services are integral to a project or activity;
2. Individuals involved can be specifically identified with the project or activity;
3. Such costs are explicitly included in the budget or have the prior written approval from SAO; and
4. The costs are not also recovered as indirect costs.

B. Fringe Benefits

Fringe benefits are an allowable cost if an institution's usual accounting practices treat contributions to employee benefits as direct costs. Fringe benefits must be in accordance with the rate[s] approved by the Award Recipient's Cognizant Federal Agency and must be applied consistently for the period for which the rate is in effect. If unapproved or provisional rates are used, an explanation should be provided to the Subawards Section including the computational basis for the fringe benefits and corresponding allocation base for each rate.

C. Equipment

Equipment means tangible personal property (including information technology systems) having a useful life of more than one year and a per-unit acquisition cost of \$10,000 unless a lower threshold has been established by the Recipient Institution. The purchase of equipment is allowable provided it is in the approved budget. Equipment costs must be in accordance with Article IX of these Terms and Conditions. Unless equipment is requested and specifically authorized in the approved budget, **prior approval from the SAO Subawards Section is required for all equipment purchases.**

Equipment is generally not approved for for-profit organizations.

Equipment for scientists affiliated with non-U.S. institutions is an unallowable cost.

D. Computing Devices

Computing Devices means machines that cost less than \$10,000 and are used to acquire, store, analyze, process and publish data and other information electronically, including accessories (or "peripherals") for printing, transmitting and receiving, or storing electronic information. The purchase of computing devices is allowable as a direct cost **providing the purchase is justified and essential to the performance of the award** and allocable to the project, even if not solely dedicated to the performance of the award. The budget justification must state how the computing device will be used in the conduct of the research.

Purchase of computing devices is generally not allowed during the last six months of the award.

E. Travel

Transportation and subsistence costs for U.S. project personnel who are in travel status on business related to the Award in order to obtain, analyze, or disseminate project-related data are allowable. All travel costs charged to the Award must be for travel that is related directly to the approved project. Allowable charges include expenses for transportation, lodging, subsistence, and related items. Travel for non-U.S. investigators, as defined in Article IV [A], cannot be paid for using Award funds.

Transportation costs for personal effects and property are allowable if the travel costs are relevant to the project, are approved in the Award documents, and are in accordance with the relevant CFR Parts and the written travel policies of the Award Recipient Institution.

All travel costs and approvals must be in accordance with Article X of these Terms and Conditions.

F. Supplies

Supplies directly related to the funded project are allowable. Title to supplies vest in the recipient institution upon acquisition. [See 2 CFR §200.314.]

G. Publication Costs

Costs are allowed for the publication of results produced under this Award. Page charges for professional journal publications are allowable where:

1. The publication reports work supported by the grant.
2. The charges are levied impartially on all items published by the journal, whether or not under a Federal award.
3. The Recipient Institution may charge the grant before closeout for the costs of publication or sharing of research results if the costs are not incurred during the period-of-performance of the grant.

H. Computer Services

The costs of computer time and software for the analysis of Chandra data are allowable. The costs must be in accordance with those charged on Federally sponsored projects.

I. Other Direct Costs

1. Other Personnel Costs

Costs and/or stipends for graduate students, post-doctoral research associates, research assistants, and science data aides to assist in the analysis of Chandra data are allowable. All such payments must be in accordance with the standard policies of the Award Recipient Institution.

2. Consultant Services

A consultant is an individual who is critical to the completion of the proposed effort and is paid a fee for his/her services, but who is not considered a sustaining “partner” in the proposed activities as is a CoI. Costs of consultants, including those who are members of a particular profession or possess a special skill and who are not officers or employees of the performing organization, are allowable when reasonable in relation to the services rendered. Payments should be comparable to the normal or customary fees charged and received by the consultant for comparable services.

3. Correlative Studies

Funds for correlative studies at other wavelengths are allowable if they were a part of the approved proposal. Such studies will be considered only insofar as they directly support a specific Chandra investigation. Unless there are exceptional circumstances, such as a CXO/NOAO joint proposal or some archive or survey proposals, funding for ground-based supporting observations should not exceed 10% of the total award amount.

4. Profit and Fees

Profit and fees [including management fees] are unallowable.

J. Indirect Costs

Indirect costs are an allowable charge.

Indirect cost charges shall be based on a Federally negotiated Indirect Cost Rate Agreement. The Award will not be increased to cover any additional costs resulting from the negotiation of an Indirect Cost Rate that is greater than the rate proposed in the budget. However, if the Indirect Cost Rate is decreased, excess funds may be used for other purposes under the grant.

Institutions without a Federally negotiated rate may charge the current de Minimis rate of modified total direct costs [MTDC]. Costs must be consistently charged as either indirect or direct costs but may not be double charged or inconsistently charged as both.

K. Determination of Allowability, Allocability and Reasonableness

It is the Recipient Institution's responsibility to ensure that only allowable, allocable, reasonable, and necessary costs are charged to the Award. All decisions on the allowability, allocability, and reasonableness of cost items will be based on the applicable principles of 2 CFR Part 200 Subpart E and/or the FAR Subpart 31.2.

If an expenditure item is included in the approved budget, provision for it in the Award constitutes authorization to charge this cost, if otherwise allowable.

In no event will funds in excess of actual project costs, including allowed indirect and other direct costs, be provided. Further, neither the Smithsonian nor NASA is obligated to provide reimbursement for the expenditure of funds in excess of the total Award allocation.

L. Unexpended Balances

Any unexpended balance of funds that remains at the end of the Award period shall be returned to SAO in accordance with Article XIII [D][2] of these Terms and Conditions.

IX EQUIPMENT

A. Policy

Equipment means tangible personal property (including information technology systems) having a useful life of more than one year and a per-unit acquisition cost of \$10,000 unless a lower threshold has been established by the Recipient Institution. Award Recipients may be allowed to purchase project-related special and general-purpose equipment specifically required for use exclusively for Award-related research activities as a direct cost with prior written approval. Unless requested and specifically authorized in the approved Award budget, prior approval from the Subawards Section is required for all equipment purchases.

B. Requirements

Requests to fund equipment not already approved in the Award are handled on a case-by-case basis and require the following information for each item:

- A description of the equipment;
- The basis for the estimated cost;
- A description of how it will be used in the project, e.g., data analysis, acquiring data from an instrument, etc;
- A written certification that the equipment will be used exclusively for research activities.

C. Restrictions

Equipment shall be dedicated to the authorized activities of the project throughout the period-of-performance. The Award Recipient shall use the equipment in the project for which it was acquired as long as needed, whether or not the project continues to be supported by CXC Award funds.

No equipment will be transferred to a non-U.S. institution or scientist during or after the period-of-performance.

In general, no equipment shall be purchased by for-profit organizations. If equipment is acquired, NASA's provision entitled "*Equipment and Other Property Under Awards with For-profit Organizations*" [NASA Terms and Conditions section 2.6] is hereby made applicable to the Award.

In general, computing systems are considered to be general-purpose equipment. General-purpose equipment cannot be purchased as a direct cost and thus is not an allowable expenditure unless the Award Recipient is able to justify the sole use and dedication to the project and has received approval from the Subawards Section prior to purchase.

D. Title

Title to and responsibility for all equipment purchased with Award funds are vested in the Award Recipient, with the exception of awards issued to for profit organizations.

Should an Award be transferred from one institution to another, and the purchase of equipment was authorized in the Award, one of the following provisions will apply:

- If the entire cost of the equipment was charged to the Award, the initial Recipient may transfer title to it, provided the new Recipient has provided written documentation to the Subawards Section indicating its willingness to accept title to such equipment. Title will be vested in the new Recipient for the remainder of the Award period.

- If the initial Recipient paid for a portion of the equipment, it is the responsibility of the new Recipient to obtain the transfer of the equipment and to make any compensatory arrangements necessary. Award funds may not be used by the new Recipient to reimburse the initial Recipient.

X TRAVEL

A. Policy

All charges for travel must be in accordance with NASA Terms and Conditions Section 5.9 and the written travel policies of the Award Recipient Institution.

B. United States-Flag Air Carrier Use – Fly America Act

You are required by 49 USC 40118, commonly referred to as the "*Fly America Act*," to use U.S.-flag air carrier service for all air travel. The details associated with the Fly America requirements can be found in Sections 301-10.131 through 301-10.143 of the Federal Travel Regulation Exceptions to this law are provided in §301-10.135. Additional exceptions regarding travel between the United States and another country are in §301-10.136, and travel solely outside the United States in §301-10.137.

XI PAYMENT

Payments to NASA Centers and Other Federal Agencies, as defined in Article IV [B], will be made directly by NASA Marshall Space Flight Center via interagency transfers of funds. Payments to all other Recipients will be made by SAO, and the specifics are addressed below.

All recipient institutions are required to be registered in the System for Award Management (SAM). This information must include banking information to which payments are to be made. If a change in banking information is necessary, the recipient institution shall update SAM. Once the change is made, the recipient institution must notify the appropriate grants specialist. SAO cannot accept requests to change banking information using any other method. It is the Recipient Institution's responsibility to ensure that invoices are not submitted for payment until SAM has been updated and the SAO Grant Specialist is notified in writing.

A. Processes

SAO will pay funds upon receipt of an invoice/request to draw funds. Recipient Institutions should use their institution's computer-generated invoices provided that the certification required under the Uniform Guidance §200.415 is clearly stated on the invoice and the invoice has the required signature. Individual invoices are required for each award. Electronic Funds Transfer [EFT] is the preferred method of payment.

Note: SAO tracks all payments by the SAO Grant Award Number and is unable to track payments using the Recipient Institution's internal tracking/accounting information, should this information be included on the invoice/drawdown request.

It is critical that all information contained on the invoice/drawdown request be correct in order to ensure that payments are accurate and are made from and applied to the correct Award. Invoice dates must be current. It is the Recipient Institution's responsibility to ensure the request for funds is correct. Requests for funds that appear to have errors or are missing information will be returned to the Recipient Institution for correction and resubmission.

If an institution has not received payment on an invoice, the institution should notify the Subawards Section to have the issue researched and resolved. Do not re-invoice for the amount not received as this may result in a duplicate payment being issued.

Invoices/requests for drawdown shall be sent via e-mail to: chandrainvoices@cfa.harvard.edu. The subject line of the e-mail must state Chandra Invoice, the Chandra Grant Award number [found in Block 2 of the award documents], and invoice number as follows:

Example: Chandra Invoice, GO0-11263X, #34-1207

Note that failure to follow the instructions may result in the invoice being misdirected and payment will be delayed until the issue is resolved. When submitting the request via e-mail, do not send a hard copy as this may result in a duplicate payment.

Questions regarding payment should be directed to the Grant Officer shown in Block 15 of the Award.

B. Standards

Standards governing the use of banks and other institutions as depositories of funds advanced under Awards are:

- Advances of Federal funds shall be deposited and maintained in insured accounts whenever possible; and
- In accordance with 2 CFR §200.305, Award Recipients shall maintain advances in interest-bearing accounts and any interest earned on Federal advances shall be remitted annually in accordance with Article XIII[D][2] of these Terms and Conditions; and
- Up to \$500 per year in interest earned may be retained by the Award Recipient for administrative expenses.

C. Advances

SAO may advance funds to Award Recipients for the anticipated expenditure of project costs provided Award Recipients maintain or demonstrate the willingness to maintain:

- Written procedures that minimize the time elapsing between the transfer of funds and disbursement by the Award Recipient; and
- Financial management systems that meet the standards for fund control and accountability as established in the OMB Circulars.

Advance payments for up to a 90-day period may be requested.

D. Reimbursement

Reimbursement is the preferred method of payment when the requirements for advances cannot be met. When the reimbursement method of payment is used, SAO will make payment within 30 days after receipt of the billing, unless the billing is improper.

F. Recourse for Non-Compliance

Unless otherwise required by law, statute or contractual agreement, SAO will not withhold payments for proper charges made by Award Recipients at any time during the project period unless:

- The Recipient has failed to comply with the project objectives or the Terms and Conditions of the Award, including the reporting requirements; or
- The Recipient is delinquent in a debt to the United States, as defined in the OMB Circular A-129.

XII PRIOR APPROVAL REQUIREMENTS

The Award Recipient shall submit all requests for prior approval to the SAO Subawards Section a minimum of 30 days prior to the date the approval is needed and shall include a complete justification that clearly demonstrates the relationship to the grant. The SAO Subawards Section will issue written direction, approval, and/or an amendment to the Award. Award Recipients should not assume approvals have been agreed to unless documentation from the SAO Subawards Section has been received.

A. Disengagement by the Principal Investigator

The Investigator specified in the Award documents is considered to be essential to the work being performed. Approval to contract or otherwise transfer a significant part of the research or substantive effort [defined as the absence of the Investigator for more than 3-months or a reduction of 25% or more in time devoted to the project] to another individual or organization must be obtained from SAO by a request in writing by the Investigator, countersigned by the Award Recipient Institution's authorized signatory. After an evaluation of the impact on the program and decision on action appropriate to the situation, approval of such changes will be made by amending the Award; however, if the request is considered to be unacceptable, SAO reserves the right to reject the proposed change, invite alternate proposals, or terminate its support of the project.

B. Changes in Objectives or Scope

The Award Recipient must obtain prior written approval from SAO if there is to be a significant change in the objective or scope of the Award.

C. Changes in the Approved Budget

Award Recipients must obtain prior written approval whenever the proposed budget revision:

- Will result in transferring substantive project activities to a third party; or
- Is for the purchase of equipment not already approved. (See Section VIII[C])
- Reallocation of costs equaling 20% or more of the budget.

A revised Budget Proposal and a detailed budget narrative must be submitted with the request.

Other budgetary changes do not require prior approval.

XIII REPORTING REQUIREMENTS

A. Policy

In accordance with the CFR, all Award Recipients are required to report on their progress with financial and program performance reports at least annually. By accepting funding, the Award Recipient specifically agrees to submit all required reports on time. Due dates for submission of all reports can be found in the Report Filing Guide which is part of the award document. Failure to submit timely reports can result in the suspension of payments and other measures as appropriate. [See Article XXIII.]

Report forms can be found at http://www.cfa.harvard.edu/spp/sp/forms/GO_forms.html. Other formats are acceptable providing they contain all required information.

Reports shall be submitted via pdf attachment to: chandrareports@cfa.harvard.edu. Report Form CRG 99-1, Chandra General Observing Program Performance Report, is formatted in PDF. The form must be downloaded to your computer and is form fillable. Note that space on the form is limited and only the information shown will transmit or print. If additional space is needed, additional pages may be attached.

All reports shall be sent to the SAO Subawards Section at chandrareports@cfa.harvard.edu. See Article XXVII for submission information.

Each CoI Award, issued directly to the CoI institution, shall comply with all reporting requirements including submission of a Final Program Performance Report describing the CoI's contribution to the project.

B. Financial Reports

The Standard Form 425 must be submitted by the Recipient's Finance Office to the SAO Subawards Section at least semi-annually, not later than April 30 for costs incurred up to March 31; and October 30 for costs incurred up to September 30. Individual reports are required for each award. Failure to submit the report on a timely basis signals to SAO that there may be problems that need to be resolved before the grant can go forward. ***A negative report is required.*** The SF 425 should be submitted via e-mail to: chandrainvoices@cfa.harvard.edu.

C. Program Performance Reports

The preferred method of submission is electronic via email. Download the Program Performance Report Form, CRG-99-1, from our website to your computer [http://www.cfa.harvard.edu/spp/sp/forms/GO_perform.pdf], fill in the required information and save the document. Following your Institution's internal policies and procedures, the report shall be emailed to chandrareports@cfa.harvard.edu. Due dates for all reports are in the Report Filing Guide section of the award.

D. Closeout Reports and Requirements

The SAO Subawards Section will review all reports required by this Clause, and the Award Recipient will be notified if the need for additional information is required. The preferred method for submission is electronic as described above in Paragraph C.

1. Final Program Performance Report

Each Investigator receiving funding under an Award is required to submit the Final Program Performance Report not later than the date stated in the Report Filing Guide, normally within 90 days following the expiration of the Award on Form CRG-99-1 or equivalent. It shall include a description of the objectives of the research and the results obtained during the period-of-performance. Please note that the Final Performance Report need not be a long document. An abstract of a published paper or presentation describing the results of the observation[s] will be acceptable. Publications should be listed and should include references to preprints, conferences, presentations, talks and other relevant information. Citations of publications resulting from research and abstracts thereof may serve as all or part of the Final Report.

The Final Program Performance Report shall be submitted via email to: chandrareports@cfa.harvard.edu.

Separately funded CoIs are required to submit a Final Program Performance Report describing the CoI's contribution to the project.

2. Final Financial Report

The Award Recipient shall submit a Final Financial Report for each Award using Standard Form 425 not later than the date stated in the Report Filing Guide, normally within 90 days following the expiration of the Award. The Final Financial Report must clearly be marked as “Final”.

The SF 425 shall be submitted via e-mail to: chandrainvoices@cfa.harvard.edu.

All obligations incurred under the Award shall have been liquidated by this date; neither the Smithsonian nor NASA has an obligation to reimburse costs after the expiration of the 90-day period.

In accordance with Title 2 section 200.344 Closeout Paragraph F, the recipient institution must promptly refund any balances of unobligated cash that the Federal awarding agency or pass-through entity paid in advance or paid and that are not authorized to be retained by the non-Federal entity for use in other projects. See section 200.346 for requirements regarding unreturned amounts that become delinquent debts.

A refund for any balance of advanced unexpended funds shall be sent to SAO. The preferred method is via EFT. In cases where EFT is not possible, funds may be returned via check. For EFT instructions, contact the Grant Specialist shown in block 15 of the award document. The check advice is required to state the Chandra Award Number. Interest earned in excess of \$500 shall also be returned to the SAO Subawards Section with the Final Financial Report.

The closeout of an Award does not affect SAO’s right to disallow costs and recover funds on the basis of a later audit or other review, or the Award Recipient’s obligation to return any funds due as a result of later refunds, corrections or other transactions.

Final Financial Reports noted as “Interim” will not be accepted.

3. Final Patent and Invention Report

If pertinent, the Award Recipient shall submit a Final NASA Form 1679, “*Disclosure of Inventions and New Technology [Including Software]*” within 90 days of the end of the Award period. This report shall list all reportable items. A negative report is required.

4. Final Equipment Report

With the exception of for-profit organizations, title to any and all equipment is vested with the Recipient Institution [see Article IX, Clause D]. Therefore, no equipment report is required.

XIV PROPRIETARY RIGHTS

A. Rights

In general, investigators have exclusive access to their General Observing scientific data during the 6 months following the date on which the data are made available to the Investigator in a form suitable for scientific analysis. At the end of the proprietary period, data will be placed in the CXC public archive where they will be available for analysis by any interested investigator.

Please note that Director’s Discretionary Awards will have a proprietary period of up to three months or no proprietary period associated with them. The Archival Research, Theory/Modeling, Very Large Projects, X-ray Visionary Projects, and Special Project Awards do not have a proprietary period associated with them.

B. Waivers

Investigators wishing to request a proprietary period shorter than one year or to waive their proprietary rights can state this choice to the Subawards Section in writing. Because of the potential benefit to the community at large, particularly in the case of large projects, Investigators are asked to give this possibility serious consideration whenever they feel that such waivers would not be harmful to their programs.

C. Public Information

Investigators should be aware of the great public information potential of Chandra data. Cases may arise in which it would be appropriate to release Chandra data, for public-affairs purposes only, during the proprietary period. In such cases, it is hoped that Investigators will cooperate with the CXC’s Office of Education and Public Outreach [address is given in

Section XV(B)] to provide such information to the public. In no case, however, will proprietary Chandra data be released for such purposes without the concurrence of the Investigator. All Investigators whose data are released for public-affairs purposes will receive full acknowledgment. Investigators shall endeavor in good faith to inform the CXC of any planned press releases at the earliest practical time and shall consider seriously and in good faith any comments, suggestions, or requests made by the CXC prior to such press release.

XV PUBLICATIONS AND PRESS RELEASES:

A. Publications

All publications of material based on or developed under this Award must carry the following acknowledgment of the Chandra Program:

“Support for this work was provided by the National Aeronautics and Space Administration through Chandra Award Number _____ issued by the Chandra X-ray Observatory Center, which is operated by the Smithsonian Astrophysical Observatory for and on behalf of the National Aeronautics Space Administration under contract NAS8-03060.”

[Note: The Chandra Award Number is found in Block 2 of the award document.]

Except for articles or papers published in peer-reviewed scientific, technical, or professional journals, the exposition of results from research supported by this Award should also include the following disclaimer:

“Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author[s] and do not necessarily reflect the views of the Smithsonian Astrophysical Observatory and or the National Aeronautics and Space Administration.”

All releases of photographic or illustrative data products should include the following acknowledgement on the credit line:

“Photograph [or illustration, figure, etc.] courtesy of the Chandra X-ray Observatory Center, which is operated by the Smithsonian Astrophysical Observatory on behalf of NASA, and [*the Principal Investigator’s Institution*].”

Award recipients shall send a copy of each paper resulting from Chandra observations to the CXC Director’s Office.

B. Press Releases

One of the objectives of the Chandra Program and of the NASA Space Science Enterprise is to inform the public of the wonderful science results that are the result of their investment, through public tax dollars, in the Chandra X-ray Observatory. The CXC shares science results with the public through its web site, by means of press releases and Space Science Updates, and by other means. As a recipient of Chandra observing time or funding, you are expected to participate in this endeavor by informing the CXC press officer, early in the process, (i) if you have a result that is of unusual scientific importance or may be particularly intriguing to the public and (ii) any time you or your institution are preparing a press release or other press event based on your Chandra-supported research. The CXC press officer is:

Ms. Megan Watzke
Smithsonian Astrophysical Observatory
60 Garden Street, Mail Stop 06
Cambridge, MA 02138-1516
Telephone: 617-496-7998
mwatzke@cfa.harvard.edu

XVI PATENTS AND INVENTIONS

For all organizations other than commercial firms classified as large business, the determination of the rights of ownership and disposition of inventions resulting from the performance of the work under this Award shall be in accordance with 37 CFR Part 401 “*Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts, and Cooperative Agreements*” and NASA’s implementing regulations. NASA’s provision entitled “*Patent Rights*” [NASA Terms and Conditions Section 3.1] is hereby made applicable to this Award. In accordance with this clause, the Award Recipient shall include an appropriate patent rights provision in all subgrants and subcontracts. All disclosures of subject inventions, election of rights, utilization reports, and other reports and information required by these

clauses shall be submitted to the SAO Subawards Section using NASA Form 1679, “*Disclosure of Inventions and New Technology [Including Software]*”, as required.

For commercial firms classified as large business, NASA’s provisions entitled “*New Technology*” [NASA Terms and Conditions Section 3.3] and “*Designation of New Technology Representative and Patent Representative*” [NASA Terms and Conditions Section 3.4] are hereby made applicable to this Award.

XVII RIGHTS IN DATA

The rights in data resulting from the performance of the work under this Award shall be in accordance with NASA’s provisions entitled “*Rights in Data*”, [NASA Terms and Conditions Section 3.2] and “*Intangible Property*”, 2 CFR §200.315.

A. Standards

The Investigators are expected to promptly disseminate significant findings from research and educational activities supported by the Award by submitting such findings to appropriate journals for publication, with authorship that accurately reflects the contributions of those involved. Investigators are expected to share with other researchers the data and other supporting materials created or gathered in the course of the work. Investigators and Award Recipients are encouraged to share software and inventions or otherwise to act to make the innovations they embody widely useful and usable.

Adjustments and, where essential, exceptions may be allowed to safeguard the rights of individuals or the validity of results, or to accommodate the legitimate interests of investigators. The CXC Director’s Office shall be consulted in such circumstances. See Article XXVII for contact information.

B. Confidentiality Parameters

If information that the Award Recipient considers to embody trade secrets or to comprise commercial or financial information that is privileged or confidential is disclosed orally or visually to SAO, such information must be reduced to tangible, recorded form, identified and marked with a suitable notice or legend, and furnished to the SAO Subawards Section within 10 days after such oral or visual disclosure, or SAO will have no duty to limit or restrict disclosure or use of such information, and shall not incur any liability for, any such disclosure or use.

C. Government Privilege

The Recipient hereby awards to the Federal Government a royalty-free, nonexclusive and irrevocable license to use, reproduce, distribute [including distribution by transmission] to the public, prepare derivative works from, and display publicly, data resulting from this Award in whole or in part and in any manner for Federal purposes and to have or permit others to do so for Federal purposes only.

In order that the Federal Government may exercise its license rights in data, the Federal Government, upon request to the Award Recipient, shall have the right to review and/or obtain delivery of data resulting from the performance of work under this Award and to authorize others to receive data to use for Federal purposes.

D. Copyright

Except as otherwise provided in these Terms and Conditions, the Investigator, author, or Award Recipient Institution may copyright any book, publication, or other copyrightable material developed as a result of the analysis of Chandra data or the work funded under this Award, although SAO and NASA reserve a royalty-free, nonexclusive and irrevocable right to reproduce, publish, prepare derivative works, or otherwise use and authorize others to use the work for their purposes.

Except as otherwise specified in the Award, Recipients may own or permit others to own copyright in all subject writings. Subject writing means any material that is or may be copyrightable under Title 17 of the USC and is produced in the performance of work under this Award. Subject writings include such items as reports, books, journal articles, software, databases, sound recordings, videotapes, and videodisks. The Award Recipient agrees that if it or anyone else does own copyright in a subject writing, the Federal Government will have a nonexclusive, nontransferable, irrevocable, royalty-free license to exercise or have exercised for or on behalf of the United States throughout the world all the exclusive rights provided by copyright. Such license, however, will not include the right to sell copies or recordings of the copyrighted works to the public.

E. Protecting SAO and NASA Interests

The Award Recipient agrees to acquire, through written agreement or an employment relationship, the ability to comply with these requirements and, in particular, to acquire the ability to convey rights in a subject writing to a foreign participant if directed by SAO. The Award Recipient further agrees that any transfer of copyright or any other rights to a subject writing by the Award Recipient or by anyone who the Award Recipient has allowed to own such rights will be made subject to these conditions.

XVIII PROGRAM INCOME

Unless otherwise specified in the Award, program income received or accruing to the Award Recipient during the period of the Award is to be retained by the Award Recipient, added to the funds committed to the project, and thus used to further project objectives. Beyond the period of the Award, the Recipient has no obligation with respect to program income earned from license fees and royalties for copyrighted material, patents, patent applications, trademarks, and inventions produced under this Award.

XIX TRANSFERRING THE AWARD

A. Allowability

Requests for transfers are required to be submitted prior to the investigator's departure from the current institution. When an Investigator plans to leave an institution during the course of an Award, the institution has the prerogative to nominate a substitute Investigator, to request that the Award be terminated and closed out, or to request that the Award be transferred to the Investigator's new institution. In the latter case, and where the Investigator's original and new institutions agree, SAO will facilitate a transfer of the Award and assignment of the remaining unobligated funds to the Investigator's new institution.

If appropriate, the Award will be closed on an equitable basis [Termination for Convenience] and reissued to the new institution. The balance of unexpended funds from the original Award Recipient will be the amount available for transfer to the new Award Recipient. No adjustments will be made for a higher indirect cost rate.

B. Procedures

1. Current Institution

- A letter from the current institution that is signed by the institution's authorized signatory to the SAO Subawards Section stating that: (a) the Investigator is leaving the current institution and has requested that the award be transferred to their new institution and (b) the institution agrees with the transfer and requests that SAO transfer the award.
- Provide the Final Financial Report; Final Program Performance Report, and the Final Patents and Inventions Report [If no patents or inventions, a negative report is required].

Note: the award cannot be transferred until the award at the current institution is closed.

2. New Institution

The new institution must submit to the SAO Subawards Section a cost proposal for the balance of funds to be transferred. The cost proposal must be submitted within 30 days from the date the new institution receives notice of the transfer and the amount available to be transferred. The proposal must be in accordance with the latest version of the Chandra Call for Proposals [CfP]. The Cost Proposal consists of the Chandra Cost Proposal Cover Page, Chandra Cost Proposal Budget Form, Budget Justification Narrative and, a copy of the institutions' federally approved Indirect Cost [IDC] Rate Agreement. The signature of the Institutional Representative on the Chandra Cost Proposal Cover Page verifies that the proposing institution complies with the required certifications and assurances. Note: Transfers are issued with a one-year period of performance.

If the purchase of equipment was authorized to the original Award Recipient, one of the following Terms and Conditions shall apply, as appropriate:

- If CXC funds were used to pay for the entire cost of the equipment, the current Award Recipient Institution may transfer the equipment provided the new institution has indicated its willingness to accept title to such equipment. Title will be vested in the new institution for the remainder of the Award period.
- If the current institution paid for a portion of the equipment, it is the responsibility of the Investigator to secure agreement for the transfer of the equipment and to make any compensatory arrangements necessary. Award funds may not be used to reimburse the current institution for funds used to purchase the equipment.

Upon receipt and approval of the above information, SAO will close out the current Award and take the required action to transfer the balance of Award funds to the new institution.

XX RECORDS AND AUDITS

A. Records

Financial records, supporting documents, statistical records, and other records pertinent to this Award shall be retained by the Award Recipient for a period of three years from the date of submission of the Final Funds Report and Request. Exceptions to the three-year rule include the following:

- If the purchase of equipment is approved and title to the equipment is vested in the Award Recipient, records for such items shall be retained for three years after its final disposition.
- Records that relate to audits, appeals, litigation, or the settlement of claims arising out of the performance of the project shall be retained until such audits, appeals, litigation, or claims have been settled.
- Records relating to projects realizing project income shall be retained for a period of three years from the submission of the Final Program Performance Report CRG-99-1.
- Unless court action or audit proceedings have been initiated, the Award Recipient may substitute copies of original records.

In order to avoid duplicate record keeping, SAO may make special arrangements with the Award Recipient to retain any records that are needed for joint use. SAO may request transfer to its custody of records not needed by the Award Recipient when it determines that the records possess long-term retention value. When the records are transferred to or maintained by SAO, the three-year retention requirement is not applicable to the Award Recipient. In the rare event that this provision is exercised, SAO will negotiate a mutually agreeable arrangement with the Award Recipient regarding reimbursement of costs.

B. Audits

Award Recipients that are Institutions of Higher Education and Non-Profit Entities shall comply with the requirements of 2 CFR Part 200, Subpart F. Audits shall be made by an independent auditor in accordance with generally accepted government auditing standards covering financial audits. As required, Award Recipients shall provide copies of these reports to the SAO Subawards Section.

For-Profit organizations that have completed a recent audit shall provide a copy of the report to the SAO Subawards Section. If no recent audit has been done then the Subawards Section will determine with the institution, on a case-by-case basis, the audit requirements.

C. Accessibility

SAO and any of its duly authorized representatives, including NASA and the Comptroller General of the United States, shall have timely and unrestricted access, during normal working hours, to any of the Award Recipient's books, documents, papers, or other records as pertinent, for the purpose of making audits, examinations, excerpts, transcripts, and copies of such documents. This right also includes timely and reasonable access to an Award Recipient's personnel for the purpose of interview and discussion related to such documents. The rights of access in this paragraph are not limited to the required retention period but shall last as long as records are retained.

XXI SITE VISITS

As required, SAO and its authorized representatives have the right at all reasonable times to make site visits to review project accomplishments, Award Recipient management control systems, administration and management of the Award, and any required technical assistance needs. The Award Recipient shall provide all reasonable facilities and assistance for the safety and convenience of SAO's representatives.

XXII SAFETY

The Award Recipient shall act responsibly in matters of safety and shall take all reasonable safety measures in performing under this grant. The Award Recipient shall comply with all applicable federal, state, and local laws relating to safety. The Award Recipient shall maintain a record of and will notify the Cognizant Grant Officer immediately [within one workday] of any accident involving death, disabling injury or substantial loss of property in performing this grant. The Award Recipient will immediately [within one workday] advise the Cognizant Grant Officer of hazards that come to its attention as a result of the work performed.

XXIII SUSPENSION, TERMINATION, AND ENFORCEMENT

A. Suspension

The suspension of an Award is an action that temporarily suspends sponsorship pending corrective action[s] by the Award Recipient or pending a decision to terminate the Award. SAO may, on reasonable notice to the Award Recipient, suspend the Award in whole or in part and withhold further payments. It may prohibit the Award Recipient from incurring additional fund obligations pending corrective action[s] by the Award Recipient or a final decision to terminate the Award. Necessary and proper costs during the period of suspension will be allowed provided the costs are reasonable and are in accordance with the Terms and Conditions of the Award documents. The Award Recipient shall obtain written authorization from the Subawards Section for these expenditures.

B. Termination

The Award can be terminated in whole or in part at the discretion of SAO if an Award Recipient materially fails to comply with the Terms and Conditions of this Award or if SAO determines that the continuation of the project would not produce beneficial results commensurate with the further expenditure of funds. The termination conditions, including the effective date, shall be by mutual agreement to the extent possible. The Award Recipient shall not incur new obligations for the terminated portion after the effective date and shall cancel as many outstanding obligations as possible. Full credit for non-cancelable obligations properly incurred prior to the termination will be allowed.

The Award Recipient may terminate this Award by sending written notification to the Subawards Section setting forth the reasons for such termination. Included in the notification will be the effective date and, in the case of partial termination, the portion of the Award to be terminated. Should SAO determine that the reduced or modified portion of the Award would not accomplish the purposes for which the Award was made, the Award may be terminated in its entirety.

C. High-Risk Award Recipients

SAO may impose additional requirements for high-risk Award Recipients that have a history of poor performance, are not financially stable, have a financial management system that does not meet the standards prescribed above, have not conformed to the Terms and Conditions of a previous Award, have not submitted timely reports, or are otherwise not responsible.

Award Recipients will be notified in writing as to: the nature of the additional requirement[s]; the reason for the additional requirement[s]; the nature of the corrective action[s] needed; the time allowed for completing the corrective action[s]; and the method[s] for requesting reconsideration of the additional requirement[s] imposed.

The additional requirements will be removed once all corrective actions have been completed.

D. Recoveries

SAO reserves the right to recover unexpended award funds or funds spent out of compliance with the Terms and Conditions of this Award. The retention of payments by the Award Recipient or the recovery by SAO under a terminated Award shall be determined in accordance with the legal rights and liabilities of the parties.

E. Enforcement

Enforcement remedies for non-compliance set forth in [NASA Terms and Conditions Section 1.9], "*Termination and Enforcement*", are included by reference in this document.

In taking an enforcement action, SAO shall provide the Award Recipient an opportunity for a hearing, appeal, or other administrative proceeding to which the Award Recipient is entitled under any statute or regulation applicable to the action involved.

F. Investigation of Research Misconduct

Recipients of this Award are subject to the Requirements of 14 CFR Part 1275 [NASA Terms and Conditions Section 4.5], "Investigation and Research Misconduct."

XXIV TRAFFICKING IN PERSONS

The Award Recipient shall comply with 2 CFR §175 "*Award Term for Trafficking in Persons*" which implements the requirement in paragraph (g) of section 106 of the Trafficking Victims Protection Act of 2000 (TVPA), as amended (22 U.S.C. 7104(g)).

XXV DRUG-FREE WORKPLACE

The Award Recipient shall comply with 2 CFR Part 182 "*Requirements for a Drug-Free Workplace*". A drug-free workplace means the site[s] for the performance of work done by the Award Recipient in connection with a specific grant at which employees of the Award Recipient are prohibited from engaging in the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance.

XXVI CLEAN AIR AND WATER

Reference [NASA Terms and Conditions Section 5.8]. Applicable only if the award exceeds \$150,000, or a facility to be used has been the subject of a conviction under the Clean Air Act [42 U.S.C. 1857c–8(c)(1)] or the Federal Water Pollution Control Act [33 U.S.C. 1319(c)], and is listed by EPA, or if the award is not otherwise exempt.

The Recipient agrees to the following:

- (a) Comply with applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended [42 U.S.C. 7401 *et seq.*] and of the Federal Water Pollution Control Act [33 U.S.C. 1251 *et seq.*].
- (b) Ensure that no portion of the work under this award will be performed in a facility listed on the Environmental Protection Agency [EPA] List of Violating Facilities on the date that this award was effective unless and until the EPA eliminates the name of such facility or facilities from such listings.
- (c) Use its best efforts to comply with clean air standards and clean water standards at the facility in which the award is being performed.
- (d) Insert the substance of the provisions of this clause into any nonexempt subaward or contract under the award.
- (e) Report violations to the SAO Subawards Section.

XXVII RESEARCH MISCONDUCT

Recipients of this Award are subject to the requirements of 14 CFR Part 1275, "Research Misconduct" and all associated policies and procedures of the recipient institution.

XXVIII RESTRICTIONS ON FUNDING ACTIVITIES WITH CHINA

- (a) Pursuant to Public Law 117-103, Section 526; and all applicable subsequent Appropriations Acts (hereinafter, "the Acts"), NASA is restricted from using funds appropriated in the Acts to enter into or fund any grant or cooperative agreement of any kind to participate, collaborate, or coordinate bilaterally with China or any Chinese-owned company, at the prime recipient level or at any subrecipient level, whether the bilateral involvement is funded or performed under a no-exchange of funds arrangement. [GCAM Appendix A 3]
- (b) Definition: "China or Chinese-owned Company" means the People's Republic of China, any company owned by the People's Republic of China, or any company incorporated under the laws of the People's Republic of China.
- (c) The restrictions in the Acts do not apply to commercial items of supply needed to perform a grant or cooperative agreement.
- (d) Subawards - The recipient shall include the substance of this provision in all subawards made hereunder.

[Note: For purposes of this provision, Taiwan is not considered part of the People's Republic of China; however, Hong Kong is considered part of the People's Republic of China.]

XXIX MALIGN FOREIGN TALENT RECRUITMENT PROGRAM

All recipient institutions shall comply with the malign foreign talent recruitment program prohibitions described in Section of the GCAM 16.16, Malign Foreign Talent Recruitment Programs (MFTRP). The definition of MFTRP can be found at 42 U.S.C. 19237(4). Annual certification requirements can be found at 42 U.S.C. 19232(a)(1). Annual certifications are not submitted to SAO but award recipients shall maintain these annual certifications in their files.

XXX FORMS

Report forms can be found at http://www.cfa.harvard.edu/spp/sp/forms/GO_forms.html. Other formats are acceptable providing they contain all required information.

Reporting:

SF 425	Federal Financial Report
Form CRG-99-1	Chandra General Observing Program Performance Report
NASA Form 1679	Disclosure of Inventions and New Technology [Including Software]

XXXI CONTACTS AND ADDRESSES

A. CXC Director's Office

For scientific matters, contact:

CXC Help Desk
cxchelp@cfa.harvard.edu

B. Subawards Section

For cost proposal and Grant Award concerns, contact:

Ms. Carol Dzengelewski, Supervisor/Senior Grant Officer
Tel: 617-496-7705
Email: cdzengelewski@cfa.harvard.edu

Mr. John Sloan, Grant Specialist
Tel: 617-495-7447
Email: jsloan@cfa.harvard.edu

Or e-mail: grants@cfa.harvard.edu

C. Useful World Wide Web Addresses

Chandra X-ray Observatory Center Homepage:	http://cxc.harvard.edu
SAO's Subawards Section Homepage:	http://www.cfa.harvard.edu/spp/sp/policies/grants.html
Federal Acquisition Regulation Homepage:	https://www.acquisition.gov/Far/
Code of Federal Regulations	http://www.ecfr.gov/cgi-bin/ECFR?page=browse