

NATIONAL SCIENCE FOUNDATION  
4201 Wilson Boulevard  
ARLINGTON, VIRGINIA 22230



OFFICE OF  
INSPECTOR GENERAL

MEMORANDUM

Date: MAR 29 2012

To: Mary F. Santonastasso, Director  
Division of Institution and Award Support

Karen Tiplady, Director  
Division of Grants and Agreements

From: Dr. Brett M. Baker  
Assistant Inspector General for Audit

Subject: Audit Report No. OIG-12-1-003  
University of Notre Dame

This memo transmits Foxx & Company's audit of NSF Award Numbers PHY-0216783, DGE-0504495, PHY-0715396, DMS-0905227, and DEB-0918306 awarded to the University of Notre Dame (UND). The audit determines the allowability of NSF-funded costs claimed for the awards from August 1, 2003 through March 31, 2011, totaling \$15,292,807 in costs claimed and \$965,586 in cost share claimed for the awards.

Except for the \$244,430 of questioned NSF-funded costs, the auditors determined that the costs and cost share claimed by UND under the NSF awards appear fairly stated and are allowable, allocable and reasonable for the NSF awards. Additionally, for NSF American Reinvestment Recovery Act (ARRA) Awards DMS-0905227 and DEB-0918306, the auditors found that UND had correctly segregated ARRA funding from non-ARRA funding in its accounting system, and properly reported ARRA expenditures and jobs created in its quarterly reports.

The questioned costs consisted of:

- \$99,767 of unsupported participant support costs,
- \$19,563 of unsupported travel costs,
- \$44,300 of unsupported and unallowable subaward costs [\$9,340 for University of Chicago (UC) and \$34,960 for Michigan State University (MSU)], and
- \$80,800 of participant support costs that were approved by NSF in UND's subaward budget, but not included by UND in its subawardee MSU's approved budget (action taken without NSF approval).

Foxx & Company noted several compliance and internal control deficiencies in financial management practices at UND, and UND's subawardees, University of Chicago (UC) and Michigan State University (MSU), that contributed to the questioned costs and, if not corrected, could impact current and future NSF awards. Specifically, the auditors recommended that UND revise its record retention and participant support procedures and fully implement its existing policies and procedures to monitor its subawardees' claimed costs. It was also recommended that UND require UC to implement policies and procedures to improve the timeliness of its labor effort reporting and certifications and require UC and MSU to ensure adequate documentation of attendance at conferences and support for travel days, for charges made on its NSF awards.

In UND's response, dated March 12, 2012, UND stated that it revised its subrecipient monitoring procedures and agreed to review and revise, as necessary, its record retention, travel and participant support procedures. UND's response is described after each recommendation and is included in Appendix A. The exhibits referred to in UND's response were too voluminous to include in the final report, however, the entire response was provided separately by OIG to the Division of Institution and Award Support.

Please coordinate with our office during the six month resolution period, as specified by OMB Circular A-50, to develop a mutually agreeable resolution of the audit findings. Also, the findings should not be closed until NSF determines that all recommendations have been adequately addressed and the proposed corrective actions have been satisfactorily implemented.

We are providing copies of this memorandum to the NSF Program Directors for each of the awards audited. The responsibility for audit resolution rests with the Division of Institution and Award Support, Cost Analysis and Audit Resolution Branch (CAAR). Accordingly, we ask that no action be taken concerning the report's findings without first consulting CAAR at 703-292-8244.

#### OIG Oversight of Audit

To fulfill our responsibilities under Government Auditing Standards, the Office of Inspector General:

- Reviewed Foxx & Company's approach and planning of the audit;
- Evaluated the qualifications and independence of the auditors;
- Monitored the progress of the audit at key points;
- Coordinated periodic meetings with Foxx & Company and notified NSF officials as to audit progress, findings and recommendations, issuance of draft report and the awardee's complete response to draft report;
- Reviewed the audit report prepared by Foxx & Company to ensure compliance with Government Auditing Standards; and
- Coordinated issuance of the audit report.

Foxx & Company is responsible for the attached auditor's report on the University of Notre Dame and the conclusions expressed in the report. We do not express any opinion on the auditor's report or the conclusions expressed therein.

We thank your staff for the assistance that was extended to our auditors during this audit. If you have any questions regarding this report, please contact Jannifer Jenkins at (703) 292-4996 or David Willems at (703) 292- 4979.

Attachment

cc: Alex Wynnyk, Branch Chief, CAAR  
C. Denise Caldwell, Program Director JINA, MPS/PHY  
Kathleen McCloud, Program Director QuarkNet, MPS/PHY  
Melur Ramasubramanian, Program Director IGERT, EHR/DGE  
Maria H. Noronha, Program Director Gromov, MPS/DMS  
Saran Twombly, Program Director LTREB, BIO/DEB

**University of Notre Dame**

Notre Dame, Indiana 45556

NATIONAL SCIENCE FOUNDATION  
AWARD NUMBERS PHY-0216783, DGE-0504495, PHY-0715396,  
DMS-0905227, and DEB-0918306

FINANCIAL AUDIT OF FINANCIAL SCHEDULES AND  
INDEPENDENT AUDITOR'S REPORT  
For the Period August 01, 2003 TO March 31, 2011

**Foxx & Company**  
Certified Public Accountants  
324 West Ninth Street, Suite 700  
Cincinnati, Ohio 45202

## EXECUTIVE SUMMARY

The National Science Foundation (NSF) Office of Inspector General (OIG) engaged Foxx & Company to perform an audit on \$15,292,807 in costs claimed and \$965,586 in cost sharing claimed as reported on the March 31, 2011 Federal Financial Reports (FFR) and cost sharing reports submitted to NSF by the University of Notre Dame (UND) for NSF Award Numbers PHY-0216783, DGE-0504495, PHY-0715396, DMS-0905227 and DEB-0918306. As of March 31, 2011, UND had two hundred and four (204) active NSF awards totaling over \$98.57 million. The audit objectives included determining whether: (1) the UND's system of internal control is adequate to account for and safeguard NSF funds, (2) the UND's costs claimed are allowable and in conformity with the terms and conditions of the NSF awards and Federal requirements, (3) UND complied with American Reinvestment and Recovery Act (ARRA) requirements and other applicable laws, regulations, and award terms and conditions and (4) findings in the 2006 and 2007 Office of Management and Budget (OMB) Circular A-133 Single Audits, the 2006 NSF desk review and the 2009 NSF site review had been addressed by UND.

UND was selected for audit because of potential weaknesses in internal control over its financial and grant administration of its NSF awards noted in OMB A-133 Single Audits and NSF Desk and Site reviews.

Except for \$244,430 (about 1.5 % of total claimed costs) in participant support, travel costs and subcontracts costs claimed, we determined that the costs claimed by the University of Notre Dame under NSF Award Numbers PHY-0216783, DGE-0504495, PHY-0715396, DMS-0905227 and DEB-0918306, appear fairly stated and are allowable, allocable and reasonable for the NSF awards. Specifically, the \$244,430 questioned consisted of UND unsupported participant support costs of \$99,767; unsupported travel costs of \$19,563; unallowable and unsupported subaward costs of \$44,300; and an additional \$80,800 of participant support costs that were proposed in a subaward budget (approved by NSF), but UND did not include this amount in the subaward approved budget (action taken without NSF approval).

Additionally, our review disclosed that Notre Dame correctly separated its ARRA funding from non ARRA funding in its accounting system and properly reported ARRA expenditures on a quarterly basis including the computation of jobs created.

Our review of the previously identified audit recommendations from the Single Audits for FYs 2006 and 2007 revealed that the recommendations were adequately addressed. Also, the FYs 2008, 2009 and 2010 Single Audits did not have any findings. In addition, the results of the 2006 NSF desk review and the 2009 NSF site review were adequately addressed by the University of Notre Dame. See Appendix B of this report for details.

In addition, we noted compliance and internal control deficiencies in financial management practices at UND, and UND's subawardees, University of Chicago (UC) and Michigan State University (MSU), that contributed to the questioned costs and, if not corrected, could impact current and future NSF awards. Specifically:

- UND, UC, and MSU could not always provide adequate documentation to support its claimed costs.

- Improvements were needed for UND's subaward monitoring program for NSF funded subawards. UND officials were unaware of issues noted by our review because their monitoring procedures did not identify these issues.
- The University of Chicago's certifications of time charged to the NSF award were not approved for periods ranging from 143 to 227 days from the dates the time was incurred.
- The University of Chicago's travel policy needs to be revised to show official work and conference work and conference/workshop attendance dates.

To address these compliance and internal control deficiencies, we recommend that NSF's Director of Institution and Award Support (DIAS) address and resolve the following recommendations made to UND to: Provide adequate documentation to support the costs questioned or return the \$244,430 questioned to NSF; establish procedures to ensure that records are maintained for all NSF awards for at least 3 years after the final project is approved; periodically review procedures to ensure established procedures are working as designed; always obtain approval from NSF for changes to the participant support cost category; ensure that established subawardee monitoring procedures are followed not just limited to reviewing Single Audits; and for all current and future awards ensure that subawardees funded by NSF awards adhere to all federal and NSF requirements for participant support, personnel costs, and travel incurred under the awards.

UND's response to each finding is included in the text of the report following the auditor's recommendations. UND provided additional documentation which supported many of the items questioned in the draft audit report. Our comments on UND's response follow each of UND's responses. A summary of UND's response is included in Appendix A of this report. In UND's response, dated March 12, 2012, UND stated that it revised its subrecipient monitoring procedures and agreed to review and revise, as necessary, its record retention, travel and participant support procedures. UND, the University of Chicago and Michigan State provided an enormous volume of documentation which supported a significant amount of cost questioned in the draft report. The University of Chicago disagreed with the findings on the timeliness of the annual time certifications and documentation for its travel report policy. UND's complete response could not be included in the final report because it was too voluminous. UND's response in its entirety was provided to the NSF Division of Institution and Award Support.

The findings in this report should not be closed until NSF has determined that all the recommendations have been adequately addressed and the proposed corrective actions have been satisfactorily implemented.

For a complete discussion of the audit findings, refer to the Report on Internal Control Over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Schedules Performed in Accordance with *Government Auditing Standards*.

University of Notre Dame

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## INTRODUCTION

## BACKGROUND

We were engaged by the National Science Foundation; Office of Inspector General (NSF-OIG) to perform an audit of the funds awarded and expended under five NSF awards to the University of Notre Dame (UND). In addition to conducting internal control and substantive testing at UND, Foxx & Company conducted substantive testing for subawards funded by PHY-0216783 awarded to the Michigan State University (MSU) and the University of Chicago (UC).

The University of Notre Dame (UND), founded in 1842, is an independent university located in Notre Dame, Indiana, adjacent to the city of South Bend, Indiana. The UND is organized into the colleges of Arts and Letters, Science, Engineering, College of Business, School of Architecture, the Law School, the Graduate School, 10 major research institutes, more than 40 centers and special programs, and the University Library system. As of March 31, 2011, UND had two hundred and four (204) active NSF awards totaling over \$98.57 million.

UND, MSU and UC are independent universities and are required to follow the administrative and cost principles specified in 2 CFR 220 (formerly OMB Circular A-21) and the Uniform Administrative Requirements for Grants and Agreements With Institutions of Higher Education 2 CFR 215 (formerly OMB Circular A-110), respectively.

UND was selected for audit because of potential weaknesses in internal control over its financial and grant administration of its NSF awards noted in Office of Management and Budget A-133 Single Audits for FYs 2006 and 2007. Also, a 2006 NSF desk review noted issues with not adequately documented expenditure approval procedures or established thresholds to require additional management approval for large expenditures and UND had not documented policies, procedures or other guidance to assist employees responsible for administering NSF-funded awards in identifying and accounting for unallowable costs. A 2009 NSF site visit review noted that UND had implemented all the recommended measures that were identified by the 2006 desk review. However, the 2009 site visit recommended that UND develop procedures for the preparation, submission and reconciliation of the Federal Financial Reports.

Cost categories, approved budget, and claimed costs for the five NSF awards audited were as follows:

### **Grant Nos. PHY-0216783, DGE-0504495, PHY-0715396, DMS-0905227, DEB-0918306**

Cost Categories	Total Budget	Budgeted Costs				
		PHY-0216783	DGE-0504495	PHY-0715396	DMS-0905227	DEB-0918306
Salaries and Wages	\$2,491,212	\$1,588,576	\$175,856	\$390,998	\$81,782	\$254,000
Fringe Benefits						
Equipment						
Travel	483,142	154,464	140,000	148,178	18,000	22,500
Participant Support	4,338,866	452,080	1,982,500	1,904,286	0	0
Materials and Supplies	420,918	26,523	355,159	11,936	4,800	22,500
Publication	34,000	0	15,000	8,000	7,500	3,500
Consultant Services	260,000	0	0	260,000	0	0
Sub awards	6,725,276	6,025,876	0	699,400	0	0
Other Direct Costs	468,500	10,000	150,000	296,000	0	12,500
<b>Total Direct Costs</b>						
Indirect Costs						
Total Costs	\$18,084,100	\$10,185,080	\$3,144,381	\$4,117,983	\$186,761	\$449,895
Amendment #2	\$(377,983)	0	0	(377,983)	0	0
<b>Total Costs</b>	<b>\$17,706,117</b>	<b>\$10,185,080</b>	<b>\$3,144,381</b>	<b>\$3,740,000</b>	<b>\$186,761</b>	<b>\$449,895</b>
Cost Sharing	\$965,586	\$965,586	\$0	\$0	\$0	\$0

Cost Categories	Total Claimed	Claimed Costs through 3/31/2011				
		PHY-0216783	DGE-0504495	PHY-0715396	DMS-0905227	DEB-0918306
Salaries and Wages	\$2,361,830	\$1,473,641	\$440,384	\$337,575	\$44,450	\$65,780
Fringe Benefits	396,721	261,533	19,185	95,953	7,792	12,258
Equipment	267,993	178,323	89,670	0	0	0
Travel	426,125	214,960	100,282	101,811	8,694	378
Participant Support	3,521,704	398,992	1,719,644	1,403,068	0	0
Materials and Supplies	116,668	24,636	61,934	12,279	2,639	15,180
Publication	14,881	12,635	2,209	37	0	0
Consultant Services	268,778	110,621	1,320	156,837	0	0
Sub awards	6,424,289	6,054,861	0	369,428	0	0
Other Direct Costs	2,500	0	0	0	0	2,500
<b>Total Direct Costs</b>	<b>\$13,801,489</b>	<b>\$8,730,202</b>	<b>\$2,434,628</b>	<b>\$2,476,988</b>	<b>\$63,575</b>	<b>\$96,096</b>
Indirect Costs						
<b>Total Costs</b>						
Cost Sharing	\$965,586	\$965,586	\$0	\$0	\$0	\$0

**Cooperative Agreement PHY-0216783** was for the Joint Institute for Nuclear Astrophysics - JINA. The purpose of this award was to support the Joint Institute for Nuclear Astrophysics. The Institute, which is under the guidance of UND' Principal Investigator (PI), acts as a broad forum for a collaborative and synergistic approach in addressing two fundamental problems posed in Nuclear Astrophysics, The Origin of the Elements and The fate of matter at the extreme conditions of Neutron Star Laboratories. JINA involves scientists from three universities, the University of Chicago, Michigan State University, and the University of Notre Dame. UND was awarded \$10,185,080, for the period for August 1, 2003 to July 31, 2011, with a cost sharing requirement of \$965,586.

**Continuing Grant DGE-0504495** was a continuing grant for Global Theory for the Physics of the High-Tc Cuprates. The purpose of this award is to support the establishment of a new interdisciplinary graduate program in Global Linkages of Biology, Environment and Society (GLOBES) at the University of Notre Dame. The program integrates research, training, and educational activities among complementary faculty in ecology, evolution and environment, infectious disease, social science, ethics, law, and economics. This grant was awarded to UND for the period from July 15, 2005 to June 30, 2011 in the amount of \$3,144,381.

**Continuing Grant PHY-0715396** was a continuing grant for QuarkNet. The purpose of this award is to fund QuarkNet, which is a national program that partners high school science teachers and students with particle physicists working in experiments at the scientific frontier. These experiments are searching for answers to fundamental questions about the origin of mass, the dimensionality of spacetime and the nature of symmetries that govern physical processes. This grant was awarded to UND for the period from September 15, 2007 to August 31, 2011 in the amount of \$4,117,983. This award was reduced to \$3,740,000 by Amendment No. 2.

**ARRA Award DMS-0905227** was a 2009 American Recovery and Reinvestment Act (ARRA) award for Gromov-Witten Invariants and Integrable Systems. This funding was to be used to study universal equations and other properties of Gromov-Witten invariants of compact symplectic manifolds, as well as the interaction with integrable systems. Gromov-Witten invariants are defined by the intersection theory on moduli spaces of stable pseudo-holomorphic maps from Riemann surfaces to compact symplectic manifolds. UND was awarded \$186,761 effective July 15, 2009 through June 30, 2012.

**ARRA Award DEB-0918306** was a 2009 American Recovery and Reinvestment Act (ARRA) for LTREB Renewal: Ecosystem Structure and Function in Palouse Grasslands. The purpose of this

funding was to continue with the long-term experimental study of grasshoppers, their names (predators and parasites), their food plants and nutrients for these plants in Montana Palouse grassland ecosystem. Grasshoppers are the dominant herbivores in this ecosystem and strongly influence the ecosystem functioning (nutrient cycling and primary production). UND was awarded \$449,895 effective September 1, 2009 through August 31, 2014.

## ***AUDIT OBJECTIVES, SCOPE AND METHODOLOGY***

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### **AUDIT OBJECTIVES**

The audit objectives include determining whether: (1) the UND's system of internal control is adequate to account for and safeguard NSF funds, (2) the UND's costs claimed are allowable and in conformity with the terms and conditions of the NSF awards and Federal requirements, and (3) UND complied with applicable laws, regulations, and award terms and conditions. In addition, substantive testing was performed of cost claimed under subawards to Michigan State University and the University of Chicago funded under Award No. PHY-0216783 to determine if the costs claimed were allowable in accordance with federal requirements.

Specific objectives of the audit were to:

1. Determine whether UND has an adequate system of internal controls over administrating its NSF ARRA and non-ARRA funds to account for and ensure compliance with applicable OMB Circular and NSF award requirements. The analysis of the internal controls includes the five (5) interrelated components of internal controls, including the control environment, risk assessment, control activities, information and communication, and monitoring pursuant to SAS 109 through SAS 117. However, an opinion on the internal control is not part of this engagement.
2. Identify and report instances of noncompliance with laws, regulations, and the provisions of the award agreements and weaknesses in UND's internal controls over compliance and financial reporting that could have a direct and material effect on the Schedule of Award Costs. In addition, the ability of UND to properly administer, account for, and manage its NSF ARRA and non-ARRA awards would be evaluated.
3. Determine and report on whether UND adequately monitored their sub-awards.
4. Follow-up on recommendations identified in UND's FYs 2006 and 2007 OMB Circular A-133 audit reports, NSF's 2006 Desk Review and the 2009 NSF Site Visit Report to determine if the report issues and recommendations were satisfactorily addressed and implemented.
5. Determine and report on whether UND's Schedules of Award Costs present fairly, in all material respects, the costs claimed on the Federal Cash Transaction Reports/Federal Financial Reports and cost sharing in conformity with NSF-OIG Financial Audit Guide and the terms and conditions of the NSF award.
6. Determine whether UND properly accounted for and segregated its ARRA funded awards from its non-ARRA funded awards in its accounting system.

7. Determine whether UND provided accurate and timely ARRA quarterly reporting including accurate reporting of jobs created under ARRA for NSF Awards No. DMS-0905227 and DEB-0918306.

## **SCOPE AND METHODOLOGY**

We performed inquiries and walkthroughs of the expenditure, revenue, payroll, and reporting/drawdown cycles at the University of Notre Dame in regard to the five NSF awards in the scope of our audit. The purpose of our inquiries and walkthroughs was to obtain an understanding of the internal controls over these cycles, to assess the control strengths and weaknesses which were in place, and to devise and execute tests of the controls. Our tests were designed not only to address the controls in place but also to address the audit objectives. In conducting the survey and internal control assessments, we interviewed key personnel of each organization related to the operations for specific audit areas as deemed necessary. We reviewed and documented the organizations procedures and policies, and tested significant controls. In addition, we performed substantive testing of the costs claimed by Michigan State University and the University of Chicago under subawards funded by NSF Award No. PHY-0216783.

We conducted our audit in accordance with auditing standards generally accepted in the United States of America, the standards applicable to financial audits contained in *Government Auditing Standards* (2007 Revision) issued by the Comptroller General of the United States, and the guidance provided in the *National Science Foundation OIG Audit Guide* (August 2007), as applicable. Foxx & Company also complied with the most current AICPA financial audit standards, including the Statements on Auditing Standards (SAS) 62, 99, and 102 through 117.

These standards and the NSF OIG Audit Guide require that we plan and perform the audit to obtain reasonable assurance about whether amounts claimed to NSF as presented in the Schedules of Award Costs, (Schedules A-1 through A-5) are free of material misstatements. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the Schedules of Award Costs. An audit also includes assessing the accounting principles used and the significant estimates made by UND, as well as evaluating the overall financial schedule presentation. We believe that our audit provides a reasonable basis for our opinion.

**AUDIT REPORT ON FINANCIAL STATEMENTS  
AND  
SUPPLEMENTAL INFORMATION**



National Science Foundation  
 Office of Inspector General  
 4201 Wilson Boulevard  
 Arlington, Virginia 22230

## INDEPENDENT AUDITORS' REPORT ON FINANCIAL SCHEDULES

We have audited the costs claimed by the University of Notre Dame (UND) to the National Science Foundation (NSF) on the Federal Financial Reports (FFRs) for the NSF awards listed below. In addition, we audited the amount of cost share claimed on the NSF awards, as applicable. The FFRs, as presented in the Schedules of Award Costs (Schedules A-1 through A-5), are the responsibility of the University of Notre Dame's (UND) management. Our responsibility is to express an opinion on the Schedules of Award Costs (Schedules A-1 through A-5) based on our audit.

Award Number	Award Period	Audit Period
PHY-0216783	08/01/03 - 07/31/11	08/01/03 - 03/31/11
DGE-0504495	07/15/05 - 06/30/11	07/15/05 - 03/31/11
PHY-0715396	09/15/07 - 08/31/11	09/15/07 - 03/31/11
DMS-0905227	07/15/09 - 06/30/12	07/15/09 - 03/31/11
DEB-0918306	09/01/09 - 08/31/14	09/01/09 - 03/31/11

We conducted our audit in accordance with auditing standards generally accepted in the United States of America, the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States (2007 revision), and the guidance provided in the *National Science Foundation OIG Audit Guide* (August 2007), as applicable. Those standards and the *National Science Foundation OIG Audit Guide*, require that we plan and perform the audit to obtain reasonable assurance about whether the amounts claimed to NSF as presented in the Schedules of Award Costs (Schedules A-1 to A-5) are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the Schedules of Award Costs (Schedules A-1 through A-5). An audit also includes assessing the accounting principles used and the significant estimates made by UND's management, as well as evaluating the overall financial schedule presentation. We believe our audit provides a reasonable basis for our opinion.

The Schedule of Questioned Costs (Schedule B) explains \$244,430 (1.5%) of total claimed costs that we questioned as to their allowability under the NSF award agreements. These questioned costs include inadequately supported or unallowable participant, travel, and subaward costs. Questioned costs are (1) costs for which there is documentation that the recorded costs were

expended in violation of the laws, regulations or specific award conditions, (2) costs that require additional support by the awardee, or (3) costs that require interpretation of allowability by NSF's Division of Institution and Award Support. The final determination as to whether such costs are allowable will be made by NSF. The ultimate outcome of this determination cannot presently be determined. Accordingly, no adjustment has been made to costs claimed for any potential disallowance by NSF.

In our opinion, except for the \$244,430 of questioned NSF-funded costs, the Schedules of Award Costs (Schedules A-1 through A-5) referred to above present fairly, in all material respects, the costs claimed on the FFRs and cost sharing claimed for the period of August 01, 2003 through March 31, 2011, in conformity with the provisions of the NSF-OIG Audit Guide, federal grant requirements, the *National Science Foundation Grant Policy Manual*, terms and conditions of the NSF awards and on the basis of accounting described in the Notes to the Financial Schedules, which is a comprehensive basis of accounting other than generally accepted accounting principles. These schedules are not intended to be a complete presentation of financial position of UND in conformity with accounting principles generally accepted in the United States of America.

In accordance with *Government Auditing Standards*, and guidance provided in the *National Science Foundation OIG Audit Guide*, we have also issued a report dated February 10, 2012, on our consideration of UND's internal control over financial reporting and our tests of UND's compliance with certain provisions of laws, regulations, grant agreements, and NSF award terms and conditions and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* and should be considered in assessing the results of our audit.

Our audit was conducted for the purpose of forming an opinion on the Schedules of Award Costs (Schedules A-1 to A-5). The accompanying schedules B, C-1 and C-2, D-1 and D-2, and E-1 are presented for purposes of additional analysis, as required by the *National Science Foundation OIG Audit Guide*. Such information has been subjected to the auditing procedures applied in the audit of the Schedules of Award Costs and, in our opinion, is fairly stated, in all material respects, in relation to the Schedules of Award Costs.

This report is intended solely for the information and use of the University of Notre Dame's Management and subawardees at the discretion of Notre Dame's management, the National Science Foundation, the University of Notre Dame's cognizant federal audit agency, the Office of Management and Budget, and the Congress of the United States and is not intended to be, and should not be used, by anyone other than these specified parties.

Foxx & Company  
Cincinnati, Ohio  
February 10, 2012



**INTERNAL CONTROLS AND  
COMPLIANCE**



National Science Foundation  
 Office of Inspector General  
 4201 Wilson Boulevard  
 Arlington, Virginia 22230

**REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING AND  
 ON COMPLIANCE AND OTHER MATTERS BASED ON AN AUDIT OF  
 FINANCIAL SCHEDULES PERFORMED IN ACCORDANCE WITH  
 GOVERNMENT AUDITING STANDARDS**

We have audited the costs claimed as presented in the Schedules of Award Costs (Schedules A-1 through A-5), which summarize financial reports submitted by the University of Notre Dame (UND) to the National Science Foundation (NSF) and claimed cost share, as applicable for the awards and periods listed below and have issued our report thereon dated February 10, 2012.

<b>Award Number</b>	<b>Award Period</b>	<b>Audit Period</b>
PHY-0216783	08/01/03 - 07/31/11	08/01/03 - 03/31/11
DGE-0504495	07/15/05 - 06/30/11	07/15/05 - 03/31/11
PHY-0715396	09/15/07 - 08/31/11	09/15/07 - 03/31/11
DMS-0905227	07/15/09 - 06/30/12	07/15/09 - 03/31/11
DEB-0918306	09/01/09 - 08/31/14	09/01/09 - 03/31/11

We conducted our audit of the Schedules of Award Costs as presented in Schedules A-1 through A-5 in accordance with auditing standards generally accepted in the United States of America, the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States (2007 revision), and the guidance provided in the *National Science Foundation Audit Guide* (August 2007), as applicable.

**INTERNAL CONTROL OVER FINANCIAL REPORTING**

In planning and performing our audit of the Schedules of Award Costs (Schedules A-1 through A-5) for the period August 01, 2003 to March 31, 2011, we considered UND’s internal control over financial reporting as a basis for designing our auditing procedures for the purpose of expressing our opinion on the financial schedules, but not for the purpose of expressing an opinion on the effectiveness of UND’s internal control over financial reporting. Accordingly, we do not express an opinion on the effectiveness of UND’s internal control over financial reporting.

Our consideration of internal control over financial reporting was for the limited purpose described in the preceding paragraph and was not designed to identify all deficiencies in internal control over financial reporting that might be significant deficiencies or material weaknesses and therefore, there can be no assurance that all deficiencies, significant deficiencies, or material weaknesses have been identified. However, as described below in the Findings and Recommendations, we identified certain deficiencies in internal control over financial reporting that we consider to be material weaknesses and other deficiencies that we consider to be significant deficiencies.

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct misstatements on a timely basis. A material weakness is a deficiency, or a combination of deficiencies, in internal control such that there is a reasonable possibility that a material misstatement of UND's financial schedules will not be prevented, or detected and corrected on a timely basis. We consider the deficiencies described in Finding Nos. 1 through 3 to be material weaknesses. A significant deficiency is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance. We consider the deficiencies described in Finding Nos. 4, 5 and 6 to be significant deficiencies.

## **COMPLIANCE AND OTHER MATTERS**

As part of obtaining reasonable assurance about whether UND's financial schedules are free of material misstatement, we performed tests of UND's compliance with certain provisions of applicable laws, regulations, and NSF award terms and conditions, noncompliance with which could have a direct and material effect on the determination of financial schedule amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests of compliance disclosed instances of noncompliance that are required to be reported under *Government Auditing Standards* and the *National Science Foundation OIG Audit Guide* and are described in Finding Nos. 1 through 6 in the Findings and Recommendations below.

A summary of UND's responses to each of the findings identified in our audit are described below after each recommendation and is included in its entirety as Attachment A. We did not audit UND's response and accordingly, we express no opinion on it.

## **FINDINGS AND RECOMMENDATIONS**

### **Finding 1 – Incurred Costs not Supported by Adequate Documentation and Lack of Approval for Unmet Participant Support Costs--University of Notre Dame**

The University of Notre Dame could not provide support for a large amount of costs claimed under NSF Awards Nos. PHY-0216783, PHY-0715396 and DGE-0504495. We found that UND could not provide adequate documentation supporting travel costs, participant support costs and subaward costs claimed under the NSF awards totaling \$200,130. Although the University of Notre Dame had detailed procedures for maintaining records supporting costs incurred on sponsored programs, the University of Notre Dame could not readily provide accounting documentation to support all costs claimed tested. In addition, its two subawardees under Award No. PHY-0216783 could not support \$44,300 of costs claimed. (See Findings 2

and 3 for details) As a result, a total of \$244,430 of travel, participant support, and subaward costs have been questioned.

According to 2 CFR 215.21 (formerly OMB Circular A-110), recipients’ financial management systems shall provide for: (1) accurate, current and complete disclosure of the financial results of each federally-sponsored project, (2) records that identify adequately the source and application of funds including records containing information pertaining to Federal awards, authorizations, obligations, unobligated balances, asset, outlays income and interest, and, (3) effective control over and accountability for all funds. In addition, 2 CFR 215.20(b) states that, “recipients’ financial management systems shall provide for accounting records including cost accounting records that are supported by source documentation”. According to 2 CFR 220, C, to be allowable for a federal grant, cost must be reasonable and allocable to federal awards. In addition, 2 CFR 220 requires costs incurred and claimed under federal awards to be adequately supported. Also, NSF General Grant Conditions (GC-1) in effect at the time of the award states, Paragraph 7 a. states “Participant support costs are direct costs for items such as stipends or subsistence allowance, travel allowances and registration fees paid to or on behalf of participants or trainees (but not employees) in connection with meetings, conferences, symposia or training projects.” Paragraph 7 b. states: “Funds provided for participant support may not be used by grantees for other categories of expense without the specific prior written approval of the cognizant NSF Program Officer”. Finally, 2 CFR 215.53(b) and NSF Grant Administration Regulations require NSF awardees to maintain records, supporting documents, statistical records and other records pertinent to a grant for at least three years from submission of the final project report.

The University of Notre Dame could not provide supporting documentation such as expense reports, invoices, and participant lists (including sign-in sheets) for participant support and travel costs for a portion of the transactions selected for audit. According to the University of Notre Dame officials, supporting documentation may have been destroyed in accordance with the University of Notre Dame’s record retention policy. Other documentation could not be located or was maintained by the Principal Investigator and not readily available. In addition, \$80,800 of participant support costs were proposed in a subaward budget (approved by NSF), but UND did not include this amount in the subaward approved budget (action taken without NSF approval). The following is an explanation of the questioned costs by cost category:

*UND Travel*

Travel cost transactions selected for audit of \$19,563 claimed on NSF awards are questioned because documentation was either destroyed or missing to support the travel costs claimed. As a result, there was no assurance that travel costs claimed were reasonable, allocable, and allowable under the NSF awards. Therefore, we questioned \$19,563 of travel costs charged to NSF Award Nos. PHY-0216783, PHY-0715396, and DGE-0504495 for lack of documentation, as follows:

<b>Award</b>	<b>Category</b>	<b>Amount Claimed</b>	<b>Amount Questioned</b>	<b>Reason for Question Cost</b>
PHY-0216783	Travel	\$214,960	\$4,839	Lack of documentation. UND unable to provide documentation.
DGE-0504495	Travel	\$100,282	\$8,955	Lack of documentation. UND unable to provide documentation.
PHY-0715396	Travel	\$101,811	\$5,769	Lack of documentation. UND unable to provide documentation.
<b>Total</b>		<b>\$417,053</b>	<b>\$19,563</b>	

### *UND Participant Support*

Notre Dame officials could not provide adequate documentation supporting the transactions selected for participant support costs claimed of \$99,767. As a result there was no assurance that participant support costs claimed were reasonable, allocable, or allowable for the NSF awards. Therefore, we questioned \$99,767 of participant support costs charged to NSF Award Nos. PHY-0216783 and PHY-0715396 for lack of documentation, as follows:

<b>Award</b>	<b>University</b>	<b>Category</b>	<b>Amount Claimed</b>	<b>Amount Questioned</b>	<b>Reason for Questioning Cost</b>
PHY-0216783	Notre Dame	Participant Support Costs	\$ 398,992	\$ 2,096	Lack of documentation. UND unable to provide documentation.
PHY-0715396	Notre Dame	Participant Support Costs	1,403,068	97,671	Lack of documentation. UND unable to provide documentation.
<b>Total</b>				<b>\$99,767</b>	

### *Unmet Subaward Participant Support*

The University of Notre Dame had a subagreement with Michigan State University (MSU) as a subawardee under Award No. PHY-0216783. Although MSU's budgeted participant support cost category, approved by NSF in the original award was for \$686,000, the subaward that UND provided to MSU only had a budget for participant support of \$605,200. UND did not obtain approval from NSF to reduce the amount of participant support on the approved subaward. Accordingly, the difference of \$80,800 was questioned because UND did not request advance approval from the NSF program office to reduce the participant support amount on the subawardee as required by GC-1 Paragraph 7 b. which states: "Funds provided for participant support may not be used by grantees for other categories of expense without the specific prior written approval of the cognizant NSF Program Officer". Such requests must be submitted electronically via the NSF FastLane system. UND officials stated that because the university was a member of the Federal Demonstration Partnership it had the power to approve all changes to the subagreement with MSU. However, it is our position that since the \$80,800 was not included in the MSU subagreement, UND did not meet NSF's requirement to obtain prior approval from NSF before entering into the subagreement with MSU that reduced NSF-approved subaward participant support costs by \$80,800. As a result, we questioned \$80,800 that NSF approved for MSU subaward participant support costs, but were used for other categories of expense without prior NSF approval.

The University of Notre Dame had written policies and procedures for accounting for sponsored programs. These procedures were detailed and included procedures that if correctly followed would have provided for adequate documentation to support the costs incurred under the NSF awards.

The University of Notre Dame's inability to maintain documentation supporting a large portion of its NSF awards represents an internal control weakness. All federally funded grantees should maintain adequate accounting documentation to support costs claimed under federal awards. Had the University of Notre Dame's policies and procedures been followed by its personnel the documentation requested should have been available. Without such documentation, there was no assurance that the amounts claimed under the NSF funded awards were reasonable, allowable, or actually incurred.

**Recommendation No. 1:**

We recommend that the NSF Director of the Division of Institution and Award Support address and resolve the following recommendation made to the University of Notre Dame:

- a. develop procedures to retain documentation supporting award costs maintained by other departments within the university for at least three years after the close of federal awards,
- b. perform periodic reviews of its policies and procedures to ensure that procedures are working as designed including documenting attendance at participant support activities and ensuring that travel incurred on federal awards is documented,
- c. establish and implement policies and procedures to ensure that university officials obtain prior approval from NSF before using funds budgeted for participant support on other cost categories, and
- d. provide documentation to support the questioned travel, participant support and subaward costs or refund the \$200,130 questioned to NSF.

*Awardee Comments*

For recommendations 1a and 1b, the University generally concurred and will take action toward concentrating on the areas identified during the audit. For recommendation 1c, the University believes it obtained approval from NSF prior to moving the participant support costs for the subagreement. In addition, the University believes it did not need prior approval since it participates in the Federal Demonstration Partnership and has the authority to move subaward amounts budgeted for participant support to other cost categories without NSF approval. We assume that the University believes the \$80,800 should be accepted. For Recommendation No. 1d, the University provided a schedule of the remaining questioned \$162,260 (\$19,563+\$142,697) by travel, participant support and subcontract costs as questioned in the draft report. As shown in Appendix A, the University provided various explanations of the documentation that was or was not available to support the questioned cost. For the travel cost questioned the University provided explanations such as the documentation no longer exists, the receipts are no longer legible, itemized receipts from the employee incurring the expense were not available, documentation was requested from UND sources but the people were out on a medical emergency, and \$6,975 for travel charged to DGE-0504495 was removed from the claim. Also, there is a statement from the PI explaining why \$5,768.88 of travel was transferred from travel under PHY-0216783 to the participant support cost category on PHY-0715396. For the questioned participant support the University provided different Exhibits to answer amounts questioned during the audit (See Appendix A). In addition, the University stated that for several of the amounts documentation was not available because the documentation had been destroyed (\$1,789) itemized receipts were not provided by individual employees (\$187), individuals that were requested to provide documentation had a medical emergency (\$22,420), an explanation in Exhibit 7 of why there are not sign in sheets for this type of participant support (\$65,110) and an amount that was charged to the project through a clerical error (\$120) which the University stated was removed from the claim. The details supporting the amounts are included in Notre Dame's written comments in Appendix A of this report.

*Auditor's Response*

The action proposed by the University for Recommendation 1a and 1b should, if properly implemented, resolve the record retention issue. In regard to Recommendation 1c for the

\$80,800 moved from subawardee participant support to other cost categories by UND without NSF approval, we recommend that NSF determine if the University's actions pertaining to the participant support is in accordance with the Federal Demonstration Partnership.

In regard to the University's response to recommendation 1d, we have the following comments (these amounts are included in the same order as UND's comments in Appendix A)

<b>Cost Category</b>	<b>Award No.</b>	<b>Amount Questioned</b>	<b>Amount Accepted</b>	<b>Reason for Auditor Action</b>
Travel	PHY-0216783	\$3,059.54	\$0	UND stated that the documentation was destroyed in accordance with its record retention policy. The \$3,059.43 remains questioned in the final report.
Travel	PHY-0216783	\$1,625.30	\$0	UND stated that the receipts could not be read. The \$1,625.30 remains questioned in the final report.
Travel	PHY-0216783	\$ 32.33	\$0	UND stated that the documentation was destroyed in accordance with its record retention policy. The \$32.33 remains questioned in the final report.
Travel	PHY-0216783	\$ 122.00	\$0	UND stated that the documentation was destroyed in accordance with its record retention policy. The \$122.00 will remain questioned in the final report.
Travel	DGE-0504495	\$6,975.00	\$0	UND stated it removed the amount from claim after our audit period. Because the amount was in the claim as of the end of the audit period. The \$6,975 remains questioned in the final report.
Travel	DGE-0504495	\$ 1,744.59	\$0	UND stated that it could not provide an individual receipt from the person incurring the cost. The \$1,744.59 will remain questioned in the final report.
Travel	DGE-0504495	\$ 235.00	\$0	Same as above. The \$235 remains questioned in the final report.
Travel	PHY-0715396	\$5,768.88	\$ 0	UND provided \$8,521.62 of travel documentation for various trips to seminars and meetings (UND Exh. 2). There was also an explanation about QuarkNet program and the I2U2 program being related or the same. Since no time was charged by these two individuals to either the PHY-0216783 or the PHY-0715396 awards during these trips, the

				\$5,768.88 should not be direct charges of these awards. Therefore, the \$5,768.88 remains questioned in the final report.
<b>Total Questioned</b>		<b>\$19,562.64</b>	<b>\$0</b>	

We have not accepted any of the travel expenses questioned in the draft report based on the University's written comments. Although travel expenses may have been incurred, documentation to support that these travel amounts benefitted the NSF awards was not provided.

In regard to the \$142,697.31 of participant support questioned on Awards No. PHY-0715396 and PHY-0216783 in the draft report, following is our analysis of the University's comments:

<b>Amount Questioned</b>	<b>Amount Accepted</b>	<b>Reason for Auditor's Action</b>
\$1,042.40	\$110.00	UND provided a sign in sheet for an event in Hawaii in Sep. 2009 along with documentation (UND Exh. 3) for \$110.00 for an airline flight. We have accepted the \$110 and questioned the remaining \$932.40.
\$1,040.00	\$640.00	UND provided \$1,040 of payment info on UND Exh. 4. However, only two attendees receiving \$320 each sent an email as evidence of attendance. Accordingly, we only accepted \$640.
\$24,480.00	\$24,480.00	UND provided on UND Exh. 5, a summary of each week in the six week summer course, a list of the teachers and students along with a picture of the class, and a summary of when the students and teachers were absent. We accepted the documentation in lieu of sign in sheets or attendance records.
\$8,900.00	\$8,900	The University provided a summary of two individuals' time cards for the period 6/21-8/22/10 (Exh. 6) for stipends paid for work performed at the Fermi Lab. We have accepted this documentation and removed the \$8,900 from the final report.
\$500.00	\$0	██████████ unable to provide the support.
\$4,782.80	\$0	The University provided an explanation (UND Exh. 7) of why there were not attendance records at the participant support activities. Also, an explanation of the national program. However, because no documentation was provided that supported the attendance, the \$4,782.80 remains questioned.
\$7,840.00	\$0	Same as above. No documentation provided to support attendance. The \$7,840 remains questioned.
\$8,800.00	\$8,800	The University provided timesheets (Exh. 10) that adequately supported the two teachers that worked on Quark-Net at Fermi-Lab. Accordingly, the \$8,800 is accepted.
\$7,840.00	\$0	██████████ unable to provide the support.
\$19,342.61	\$0	The University provided an explanation (Exhibit 7) of why there were not attendance records at the participant support activities. Also, an explanation of the national program. However, because no documentation was provided that supported the attendance, the \$19,342.61 remains questioned.
\$21,944.82	\$0	Same as above. No documentation provided to support attendance. The \$21,944.82 remains questioned.
\$11,200.00	\$0	Same as above. No documentation provided to support

<b>Amount Questioned</b>	<b>Amount Accepted</b>	<b>Reason for Auditor's Action</b>
		attendance. The \$11,200 remains questioned.
\$4,416.37	\$0	The University provided cost information (Exhibit 9) totaling \$16,892.44 for the \$4,416.37 questioned. The \$4,416.57 represents the amount over the budget of \$12,000. No support of how this related to participant support for the award was not provided. Therefore, the \$4,416.37 remains questioned.
\$12,080.00	\$0	unable to provide the support. The \$12,080 remains questioned.
\$2,000.00	\$0	unable to provide the support. The \$2,000 remains questioned.
(PHY-0216783) \$120.00	\$0	Amount removed from UND's claim. Because it was in claim as of 03/31/11, it remains questioned.
(PHY-0216783) \$38.75	\$0	The University could not provide an individual receipt from the person incurring the cost. The \$38.75 will remain questioned.
(PHY-0216783) \$50.25	\$0	Same as above. The \$50.25 will remain questioned.
(PHY-0216783) \$98.14	\$0	Same as above. The \$98.14 will remain questioned.
(PHY-0216783) \$1,239.00	\$0	The documentation was destroyed in accordance with its record retention policy. The \$1,239 remains questioned.
(PHY-0216783) \$550.00	\$0	The documentation was destroyed. The \$550 remains questioned.
\$110.00	\$0	UND referenced it Exhibit 3 for this amount. It was already accepted above. The \$110 remains questioned.
\$4,282.17	\$0	This expense is for travel to the QuarkNet Advisory board meeting for an individual. UND provided a report on the Advisory board and copy of a slide presentation (Exh. 9). However, minutes of the meeting were never taken, so there is not a record of the meeting or the individual's attendance. Therefore, the \$4,282.17 remains questioned.
<b>\$142,697.31</b>	<b>\$42,930</b>	

As shown above, we have accepted an additional \$42,930 of claimed participant support for Award Nos. PHY-0216783 and PHY-0715396 which has been removed from the final report. The remaining \$19,562.64 of travel and \$99,767 of participant support (\$2,096 for PHY-0216783 and \$97,671 for PHY-0715396) along with the \$80,800 of participant support moved from the MSU subcontract for a total of \$180,567 of participant support will remain questioned in the final report.

## **Finding 2 – Lack of Documentation to Support Incurred Costs at the University of Chicago**

The University of Chicago could not provide adequate support for \$9,340 of costs claimed under the University of Notre Dame subaward funded by NSF Award No. PHY-0216783. The University could not provide documentation such as attendance records, sign in sheets or other documentation to support attendance at participant support events. However, as part of the University's written comments, the University was able to provide other support that we determined was sufficient for us to accept most of the claimed costs. As a result, we questioned \$9,340 of participant support costs claimed.

According to 2 CFR 215.21 (formerly OMB Circular A-110), recipients' financial management systems shall provide for: (1) accurate, current and complete disclosure of the financial results of each federally-sponsored project, (2) records that identify adequately the source and application

of funds including records containing information pertaining to Federal awards, authorizations, obligations, unobligated balances, asset, outlays income and interest, and, (3) effective control over and accountability for all funds. Also, 2 CFR 215.20(b) states that, “recipients’ financial management systems shall provide for accounting records including cost accounting records that are supported by source documentation”. In addition, according to 2 CFR 220, to be allowable for a federal grant, cost must be reasonable and allocable to federal awards and adequately supported. Also, NSF General Grant Conditions (GC-1) in effect at the time of the award states, Paragraph 7 a. states “Participant support costs are direct costs for items such as stipends or subsistence allowance, travel allowances and registration fees paid to or on behalf of participants or trainees (but not employees) in connection with meetings, conferences, symposia or training projects.” Paragraph 7 b. states: “Funds provided for participant support may not be used by grantees for other categories of expense without the specific prior written approval of the cognizant NSF Program Officer”

We found that the University of Chicago could not provide adequate supporting documentation for proof of payment of participant lists (including sign-in sheets) and itemized invoices or approval to use participant support funds in other cost categories. For support for some of the claimed participant support activities we were provided a list of presentations and lectures, bills from Argonne (a U.S. Department of Energy facility managed by an affiliate of the University) was provided that listed various items that were individually billed such as lodging, effort, computer rental, food services, driving and rigging, IPD Media, non-purchase order/SC Services (Stipends) and Food Services-Off site. For effort we would expect a time sheet or certification. For lodging there should be hotel bills with individual’s names that would be tied to attendance sheets or some other support to show that the individuals attended the event. The same level of support for the food services, who was served, etc., that we could trace back to attendance or sign in sheets. The documentation the University of Chicago could not provide during the audit included participant lists (including sign in sheets), detail hotel invoices showing participants, invoice details of reception refreshments and dinners, actual source documents for charges made by Argonne and Cal Tech. However, as part of its written comments to the draft report the University was able to provide additional documentation that resolved a large portion of the original questioned costs. The following table presents the events for which costs remain questioned and the reasons for the remaining questioned costs. A discussion of the support provided and further explanation of the questioned costs are in the notes below.

<b>Ref.</b>	<b>Payee</b>	<b>Purpose</b>	<b>Amount Claimed</b>	<b>Reasons for Questioned Costs</b>
a	Cal Tech	Support for the “Nuclear Astrophysics:1957-2007: Beyond the First 50 Years” at Cal Tech	\$5,000	There was not a breakdown of the \$5,000 to determine what Cal Tech used the \$5,000 for or if was expended on allowable costs.
b.	Argonne	Mass Modeling School conference 5/8-16/2007	\$1,340	Stipends claimed that were not paid, unallowable costs claimed, and stipends paid to employees
c.	Argonne	“Nuclear Astrophysics of the Cosmos 2008” 07/22-26/2008	\$3,000	Stipends not paid and stipends paid to employees.
		<b>TOTAL</b>	<b>\$9,340</b>	

a. *Beyond the First 50 Years” at Cal Tech -\$5,000 questioned*

The support for the \$5,000 was a list of seminars with one seminar circled, a list of individuals that were invited, and a letter dated December 13, 2011 saying that the \$5,000

was for the event. Also, the invoice stated the expense was for the JINA conference. In addition, the University provided a letter dated December 2011 stating that the expenditure was for the JINA conference. However, there was no other documentation supporting what the \$5,000 consisted of or how it was used by Cal Tech. Because there was not a breakdown of what was included in the \$5,000 amount, there is no assurance that the \$5,000 was expended on allowable costs or activities. Therefore, the \$5,000 is questioned as unsupported.

b. *Mass Modeling School - [REDACTED] questioned*

The University did not have time and attendance or sign in sheets for this event. However, the University was able to provide as part of its written comments sufficient documentation in order for a determination that the majority of the costs claimed for this event were acceptable. We have questioned [REDACTED] in stipends claimed for two “no shows” [REDACTED] in stipend payments to three individuals from Michigan State and Notre Dame in accordance with NSF GC-1 that we were able to identify. Paragraph 7 a of GC-1 states that employees are not to be paid stipends. Since Notre Dame and Michigan State are in collaboration with the University of Chicago for these participant support activities, we have questioned the [REDACTED] as payments to employees. Specifically, for the stipends of [REDACTED], we were provided a memo with a list of individuals with a line for the individual to initial when a cash stipend of [REDACTED] in \$20 bills was received. The first list we were provided had no initials. The second list had initials but showed that 2 persons had not collected [REDACTED] each and three individuals that received stipends were employees of Michigan State and Notre Dame. In addition, we identified \$339.51 in unallowable costs from the University’s response. Even though the University returned the [REDACTED] for the “no shows” and the [REDACTED] for the unallowable costs, these amounts were included in the University’s claim at the audit cut off point. Therefore, the costs will remain questioned in this report. Accordingly, we have questioned a total of [REDACTED] [REDACTED] ) for stipends and unallowable costs.

c. *Nuclear Astrophysics of the Cosmos 2008 - [REDACTED] Questioned*

Although the University did not provide or maintain time and attendance or sign in sheets for this event, the University did provide other supporting documentation that we deemed sufficient evidence for us to accept the costs with the exception of the \$600 not paid as stipends to “no shows” and the [REDACTED] (12 employees x [REDACTED] in stipends paid to individuals from Notre Dame, Michigan State and the University of Chicago. According to NSF GC-1, Paragraph 7 a. employees are not to be paid stipends. Since Notre Dame and Michigan State are in collaboration with the University of Chicago for these participant support activities, we consider individuals from these institutions employees. Even though the University returned the [REDACTED] for the “no shows” this amount was included in the University’s claim at the audit cut off point, it is still questioned in this report. Accordingly, we have questioned [REDACTED] in stipends.

This condition occurred in part because the University of Chicago did not ask for support documentation including attendance or sign in sheets from Argonne and Notre Dame for participant support, but instead accepted the bills and paid the amount requested. Because the University of Chicago did not require time and attendance reporting, sign in sheets or some other form of documentation to support participation at events nor could we identify any evidence that the University of Chicago reviewed documentation for participant support activities performed by Argonne and Notre Dame prior to our audit, we do not consider the participant procedures

adequate. As a result, when the audit team requested support documentation it was not readily available, even though NSF GC-1 requires participant support to be accounted for separately. The University of Chicago officials stated that there were no regulations requiring attendance records or sign in sheets for participant support events. Although there are no specific requirements for attendance records, we could not assure ourselves by the information originally provided who actually attended the participant support events and that the documentation provided adequately supported the costs claimed. We could not determine if the cost claimed was eligible or allowable for the NSF funded subaward. However, as part of the draft report process the University was able to gather sufficient documentation to support \$84,372 of the \$93,712 questioned in the draft report. Therefore, the remaining \$9,340 has been questioned

### **Recommendation No. 2:**

We recommend that the NSF Director of the Division of Institution and Award Support address and resolve the following recommendation made to the University of Notre Dame that requires the University of Chicago:

- a. To provide adequate documentation to support the questioned participant support costs or return the \$9,340 questioned to Notre Dame for return to NSF.
- b. For current and future NSF awards and subawards, the University of Chicago should establish procedures for accounting for participant support costs to ensure that adequate supporting documentation such as sign in sheets or attendance records are maintained for all participant support events funded by NSF awards. In addition, original source documentation for other costs associated with participant support events should be maintained, be readily available, accounted for separately and identifiable with the events.

### *Awardee Comments*

The University of Chicago stated: “We strongly maintain that the documentation provided for the questioned costs in Finding No. 2, both the official documentation and the supplemental documentation gathered during the audit, fully support the reasonableness, allocability and allowability of those costs. Further, we maintain that federal regulations do not require “sign in” sheets to support conference costs. The disallowance of those costs because of the absence of such sheets is unreasonable, particularly since we provided ample evidence of attendance.”

The University further stated that it provided the auditors the official documentation the University required for costs selected for review. Documentation primarily included vendor invoices and the University payment authorization from. Vendor invoices included references to associated work orders and/ or descriptions of services and goods provided. The Principal Investigator or his designee requested and approved all invoice payments. The Principal Investigator was in a position to determine if invoiced expenses were appropriate in light of the services provided and if they were in support of the NSF award’s project scope. In addition to the official transaction documentation, the University also provided supplemental vendor documentation to the auditors as requested. The additional documentation is described below in the individual questioned costs comments. The University’s documentation meets any reasonable interpretation of documentation required by OMB Circulars A-21 and A-110 and the NSF Grants policy Statement to support the reasonableness, allocability and allowability of the questioned costs. Two decades of A-133 Audits and more than a dozen NSF award monitoring

reviews and desk audits prove that invoices, purchase orders, work orders and the University payment authorization forms are adequate documentation for sponsored award expenditures.

The University provided a detailed list along with additional documentation for each of the items questioned in the draft report as follows:

a. *Cal Tech \$5,000 Payment to Support “Nuclear Astrophysics: 1957-2007: Beyond the First 50 years at Cal Tech*

The University stated it provided adequate documentation supporting the \$5,000 including a list of conference registrants provided by the Notre Dame JINA administrator. The University provided the Cal Tech invoice for \$5,000 dated June 19, 2007, an email dated July 27, 2007 from the University’s award administrator to the Payment Services Department explaining that the invoice was for support of the Cal Tech JINA Conference. The University further stated that the invoice clearly stated it was for participant support of the Cal Tech JINA Conference. The University also stated it provided a memorandum from the PI dated December 13, 2011, stating that the Prime (we assume the University of Notre Dame) requested the University to support the Cal Tech conference.

b. *Argonne National Laboratory, Mass Modeling School Conference, Questioned*

The University stated that in February 2007, Argonne prepared a Work Project Authorization to provide conference services as follows: a) Student lodging, b) Lecturer support, c) Student support (including meals), d) Materials and supplies (including handouts), and e) Conference coordinator services. The University was presented with an invoice for \$27,317.77 which referenced the work order. The University said that invoice payments are authorized by the PI or his designee. The invoice and its payment authorization became the official documentation for the transaction. The University stated that it provided additional documentation that included vendor employee time records, hotel bills with the names of individuals for whom room expense was charged and documents that could reasonably be substituted for “sign in” sheets.” The University included a schedule of the \$27,318 questioned with an explanation for each item (See Appendix A)

c. *Notre Dame: Frontiers Conference held August 19-21, 2007, \$18,509 Questioned*

The University stated that Notre Dame presented an invoice for \$18,509 dated November 6, 2007. This invoice was for the University’s designated share of expenses associated with the above-referenced conference. Invoice payments are authorized by the PI or his designee. The University provided a table with separate amounts with an explanation of each expense (See Appendix A for details)

d. *Argonne, “Nuclear Astrophysics of the Cosmos 2008” July 22-26, 2008 Amount Questioned \$39,135*

The University stated that in February 2007, Argonne prepared a Work Project Authorization to provide conference services as follows: a) Student lodging, b) Lecturer support, c) Student support (including meals), d) Materials and supplies (including

handouts), e) Conference coordinator services, and f) transportation to the Nuclear Astrophysics of the Cosmos symposium. Argonne submitted three invoices for payment. Invoice payments are authorized by the PI or his designee. The invoices and their payment authorization became the official documentation record for the expense. The University provided a listing of expenses for the three payments to Argonne of \$21,891, \$15,423, and \$1,821. This consisted of a listing of seven items totaling \$21,891 representing Invoice No. 0454C1139 dated September 8, 2008, Invoice No. 0454C1139-02, dated November 21, 2008 in the amount of \$15,423 stating that the amount was for housing 29 individuals at Sodexo's hotel at Argonne, and Invoice No. 0454C1139-03 in the amount of \$14,722 with a list of 5 items and explanations for each. (See Appendix A for details)

e. [REDACTED] *payment for the JINA Advisory Committee Meeting on 03/24/06 Amount Questioned \$3,750*

The University stated that the \$3,750 was for a deposit for a block of rooms housing out-of-town advisory committee members scheduled to attend the March 2006 meeting. The \$3,750 deposit was requirement under a hotel contract. The official documentation for the expense provided to the auditors was the hotel contract and the university payment authorization. Additional documentation provided to the auditors included the final hotel invoice for the actual nights stayed, a list of individuals scheduled to attend the meeting, and a hotel provided list of individual reservations that tied to the number of night referenced on the invoice.

*Auditor's Response*

Foxx has responded to each of the above comments received from the University of Chicago in the same order as listed above:

- a. *Cal Tech JINA Conference, \$5,000 questioned-* Although there is sufficient evidence that the \$5,000 payment was made to Cal Tech based on the documentation provided, there is no support to determine that the \$5,000 was utilized by Cal Tech for allowable costs or activities. It is a fixed amount without a break down of what the \$5,000 consisted of. Therefore, the \$5,000 remains questioned in the final report.
- b. *Argonne National Laboratory, Mass Modeling School Conference, \$27,318*  
Although time and attendance or sign in sheets were not provided there was enough evidence provided to accept the costs. However, we continue to question the [REDACTED] not paid out to "no shows". We have also questioned [REDACTED] representing stipend payments to three individuals from Michigan State and Notre Dame in accordance with NSF GC-1 that we were able to identify. Paragraph 7 a of GC-1 states that employees are not to be paid stipends. Since Notre Dame and Michigan State are in collaboration with the University of Chicago for these participant support activities, we have questioned the \$600 as payments to employees. In addition, we have questioned the [REDACTED] that the University stated were determined to be unallowable. Even though the University returned the [REDACTED] for the "no shows" and the [REDACTED] for the unallowable costs, these amounts were included in the University's claim at the audit cut off point. For future events, sign in sheets or time and attendance records would be better documentation.

c. *Notre Dame: Frontiers Conference held August 19-21, 2007, \$18,509 Questioned*  
Although time and attendance or sign in sheets were not provided there was enough evidence provided to accept the costs. For future events, sign in sheets or time and attendance records would be better documentation.

d. *Argonne, "Nuclear Astrophysics of the Cosmos 2008" July 22-26, 2008 Amount Questioned \$39,135*  
Although time and attendance or sign in sheets were not provided we determined that there was sufficient evidence provided to accept the costs. However, we continue to question the [REDACTED] not paid out to "no shows". Even though the University returned the [REDACTED] for the "no shows" this amount was included in the University's claim at the audit cut off point. In addition, we have questioned the [REDACTED] paid to 12 individuals working for the University of Chicago, Michigan State University, and Notre Dame that were paid the [REDACTED] stipend. According to NSF's General Grant Conditions (GC-1) employees of the institutions should not be paid from participant support. Since this event is in conjunction with all three universities we have questioned stipends paid to employees of these institutions. For future events, sign in sheets or time and attendance records would be better documentation. Also, the University needs to better monitor participant support events held at Argonne more closely to ensure all costs claimed are better supported.

e. [REDACTED] *payment for the JINA Advisory Committee Meeting on 03/24/06 Amount Questioned \$3,750*  
Although time and attendance or sign in sheets for this event were not provided there was other evidence provided that we determined was sufficient for us to accept the costs. For future events, sign in sheets or time and attendance records would be better documentation.

In summary we have accepted \$84,372 of the \$93,712 questioned in the draft report. The remaining \$9,340 remains questioned in the final report.

### **Finding 3 – Lack of Documentation and Unallowable Costs for Participant Support and Travel Costs Claimed at Michigan State University**

Michigan State University could not support a portion of costs claimed under the University of Notre Dame subcontract under NSF Award No. PHY-0216783. We found that Michigan State University claimed \$34,960 of unsupported participant support and travel costs. Michigan State University did not maintain detailed written policies and procedures related to participant support costs nor could it provide adequate documentation to support costs claimed during the audit. However, during the draft report process, Michigan State University was able to provide support for the majority of the costs questioned in the draft report. As a result, a total of \$34,960 claimed under the UND subagreement has been questioned.

NSF Award and Administration Guide §V(B).8.b states that, "to help defray the costs of personal maintenance while participating in a conference or training activity, participants may be paid a stipend, per diem or subsistence allowance, based on the type and duration of the activity, as outlined in the pertinent program solicitation and in the grant." It further states that, "such allowances must be reasonable, in conformance with the usual policy of the grantee organization and limited to the days of attendance at the conference plus the actual travel time required to

reach the conference location by the most direct route available.” In addition, NSF Grant Policy Manual 618.1 (b) states, “Funds provided for participant support may not be used by grantees for other categories of expense without the specific prior written approval of the cognizant NSF Program Officer. Also, 2 CFR 220, Appendix A, J3 states that the costs of alcoholic beverages are unallowable.

According to 2 CFR 215.20(b) recipients’ financial management systems shall provide for accounting records including cost accounting records that are supported by source documentation. Additionally, recipients are required to maintain written procedures for determining the reasonableness, allocability and allowability of costs in accordance with provisions of the applicable Federal costs principles and the terms and conditions of the award.

We originally questioned \$198,020 of participant support and travel costs claimed by Michigan State University under NSF Award No. PHY-0216783 because of lack of documentation. However, because of documentation provided by Michigan State University during the draft report process which supported much of the questioned costs, we accepted \$163,060 of the \$198,020 questioned. The remaining \$34,960 that is still questioned consists of the following:

<b>Cost Category</b>	<b>Amount Questioned</b>
a. Unsupported Participant support	\$13,814
b. Equipment purchased with Participant Support funds	19,510
c. Participant support costs charged to Travel Costs	1,636
<b>Total</b>	<b>\$34,960</b>

*a. Lack of Documentation for Participant Support Costs*

Michigan State University could not provide adequate support for a material amount of participant cost claimed under the federal award during the audit. The supporting documentation not provided included participant lists (including sign-in sheets), invoices, cancelled checks, and inter-fund payments. This condition existed in part because Michigan State University did not maintain written policies and procedures for participant support. However, as part of the draft report process the University was able to provide sufficient documentation for the acceptance of \$133,966 of the \$147,780 questioned. As a result, we questioned unsupported participant support costs of \$13,814. The \$13,814 questioned was for travel expense transactions included in participant support of \$11,364 and \$2,450 donated to Notre Dame’s JINA summer movie series.

1. The travel expenses of \$11,364 were for an individual from outside the U.S. to come to Lansing, Michigan for periods of time in 2007 and 2008. The only documentation to support this as a eligible participant support charges was a short memo dated January 3, 2012, stating that the individual had been a long-term and short-term visitor with JINA at MSU on a number of occasions. According to the memo during this visit, 7/15/07 to 9/30/07, “we carried out a detailed analysis of the kinematics of stellar populations in the Milky way galaxy, with the purpose of understanding the origin and evolution of its various components.” The memo went on to say that it was a large project that required a two month visit. In addition, a list of publications was provided that this person’s name was associated with along with other individuals. The publications ranged from 2008 to 2010. This is the only justification for the stays. Following are the charges:

<b>Amount Questioned</b>	<b>Check No.</b>	<b>MSU Support</b>	<b>Description of Support</b>
\$3,141.22	IDT120404	Exhibit A-8	A hotel bill for a [REDACTED] from 7/15/07 to 9/30/07. As discussed above, a justification was provided for the project, along with a list of publications. Proof of payment was provided. However, as discussed below, the person left for Italy on 8/14/07 and did not return until 9/1/07 even though the hotel room was being charged to participant support while the person was apparently not there.
\$3,112.31	TVL101807	Exhibit A-9	MSU provided a rental car receipt for \$1,942 and meal per diem for 30 days in the amount of \$1,170 for the same individual. The period was 9/1/07 to 9/30/07. There was also an airline ticket attached to the documentation for a trip to Lansing, MI and return to Italy arriving in Lansing on 7/15/07 and returning to Italy on 8/14/07. The Airline ticket of \$1,689.77 was not charged on this transaction but may have been charged to participant support on another transaction we did not include in our sample. In the resolution process NSF should ensure that if the airline ticket amount was charged to the subaward, adequate documentation supporting the charge as beneficial to the subaward should be provided.
\$2,947.75	TVL071408	Exhibit A-10	MSU provided an expense report for a meal allowance from 5/2/08 to 06/09/08 for \$1,521 and a rental car and taxi for \$1,426.75 for the same period for the same individual discussed above. No justification was provided.
\$2,163.00	IDT235671	Exhibit A-15	MSU provided a hotel bill for the period 5/03/08 to 06/08/08 for the same individual listed above. The only justification was the list of publications and the short memo.
<b>\$11,364.28</b>			<b>Total Amount Questioned</b>

The \$11,364 has been questioned because the justification of a memo over 3 years after the fact and a list of publications that could have been done anywhere is not sufficient support for these charges to participant support under the award. There is not sufficient evidence that the \$11,364 benefitted the NSF funded subaward. Furthermore, it appears that the University may have paid for an airline ticket to Italy in the middle of this person's stay at MSU and charged to participant support. We recommend that during the audit resolution process, NSF determine whether or not the cost of the airline ticket was charged to the award, and if it was, the purpose of the trip benefitted the subaward.

2. The \$2,450 questioned was for a donation to the Cinema and Science Outreach Project at Notre Dame. MSU provided a list of 14 different showings at \$5 per showing for 35 tickets for the Notre Dame JINA film festival. The movies were for the most part science fiction movies such as "Blade Runner", "Star Trek: First Contact", "2001: A Space

Odyssey”, “Bride of Frankenstein”, “Fantastic Voyage” and “Close Encounters”. The tickets were to be given to students participating in the Research Experience for Undergraduates programs being held at Notre Dame. Although MSU provided a payment voucher, a cancelled check and a description of the JINA film series at Notre Dame, there was no documentation provided such as a list of individuals that the tickets were provided. Because evidence was not provided that the tickets were used by undergraduate students as stated or by anyone, the \$2,450 is questioned

*b. Purchase of equipment with Participant Support Funds without prior NSF approval*

Michigan State University purchased items of equipment to construct a museum exhibit. The value of the components for the exhibit charged to the subaward was \$16,895. The remaining amount of \$2,615 was for 100 copies of the proceedings of a workshop. Because the equipment charged to the award was for one item, we consider the entire \$16,895 as one amount which meets the equipment threshold. Accordingly, we question the \$16,895 as equipment with funds budgeted specifically for participant support costs and the costs charged to participant support without prior approval from the NSF Program Officer. Therefore, the \$16,895 is questioned. In regard to the \$2,615 expended on the 100 copies of the proceeding on the workshop entitled “Reaction Mechanisms for Rare Isotope Beams” we were not provided with any support as why this benefitted the NSF funded subaward. Accordingly, we questioned the \$16,895 and the \$2,615 for a total of \$19,510, as unsupported.

*c. Travel costs unsupported*

We found that Michigan State University could not provide adequate supporting documentation for some of the lodging, proof of payments to travel agents, and travel authorizations for costs claimed under the NSF funded subagreement during the audit. Michigan State University had written policies and procedures for accounting for sponsored programs. These procedures were detailed and included procedures that if correctly followed would have provided for adequate documentation to support the costs incurred under the NSF awards. However, Michigan State University could not provide during the audit the necessary supporting documentation as required by 2 CFR 215. According to NSF Grant Administration Regulations and 2 CFR 215.53(b), NSF awardees are required to maintain records, supporting documents, statistical records and other records pertinent to a grant for at least three years from submission of the final project report. In addition, 2 CFR 220 requires costs incurred and claimed under federal awards to be adequately supported. During the draft report process Michigan State was able to provide documentation that supported \$28,123 of the \$29,759 questioned in the draft report. The \$1,636 questioned amount remaining is for the payment of rooms for volunteers at a participant support event. These costs do not represent direct travel costs of the subaward because the costs were incurred for volunteers at a participant support event. Accordingly, the \$1,636 is questioned.

**Recommendation No. 3**

We recommend that the NSF Director of the Division of Institution and Award Support address and resolve the following recommendation made to the University of Notre Dame that requires Michigan State University to:

- a. establish and implement policies and procedures to ensure that charges for participant support are supported with adequate documentation such as attendance records or “sign in” in accordance with applicable NSF and federal requirements,

- b. adequately support travel costs charged to NSF funded awards, and
- c. Either provide adequate documentation to support the questioned costs, or refund the \$34,960 questioned to Notre Dame for return to NSF.

*Awardee Comments*

Michigan State stated in a letter to Notre Dame (See Appendix A) that it believed that reasonable documentation had been provided to Foxx & Company for all items listed in the draft audit report. It went on to say that MSU had a long and successful history of working with NSF and Notre Dame, and believed that the items listed in the draft report did in fact benefit the project and are therefore, appropriately charged to the project. In regard to Recommendation No. 3 d & 3e, MSU provided an enormous amount of documentation which they believed supported the \$198,020 questioned in the draft report. Because of the voluminous size of the material provided by MSU (It was contained on a CD disk) it has not been included in the final report but has been reviewed and considered. It can be obtained from the National Science Foundation, Office of Inspector General. We will insert a summary of MSU’s comments in the same order as the audit report.

- a. *Lack of Documentation for Participant Support Costs*

MSU provided the following schedule of participant support costs questioned in the audit totaling \$147,780.37 as follows:

<b>Amount Questioned</b>	<b>Check No.</b>	<b>MSU Support</b>	<b>Description of Support</b>
\$15,098.20	469714	Exhibit A-1	A direct payment voucher paying hotel bill at Mission Point Resort for 10 <sup>th</sup> Symposium on Nuclei in the Cosmos,
\$7,200.00	TVL050307	Exhibit A-2	A cash advance request for \$8,025 for per diems for attendees for <i>the JINA Methods for Nuclear Reaction</i> from 4/9-22/07, a list of the attendees, a travel voucher for the actual amount of \$7,200, and a refund check for \$825.
\$9,474.68	419092	Exhibit A-3	MSU provided a hotel bill with individual names for the JINA Shell Model workshop, with a list of people’s emails, and a description of the workshop.
\$41,309.96	469714	Exhibit A-4	A direct payment voucher paying hotel bill at Mission Point Resort for 10 <sup>th</sup> Symposium on Nuclei in the Cosmos
\$23,685.14	IDT005414	Exhibit A-5	A direct payment voucher, a detailed hotel bill for outside participants for 12 nights, and a picture of some of the participants in the event.
\$22,949.59	IDT015050	Exhibit A-6	MSU provided an estimate of the cost of the work shop, an agenda of the Frontiers 2005 event, a list of presenters, and pictures of some of the attendees and proof of payment.

<b>Amount Questioned</b>	<b>Check No.</b>	<b>MSU Support</b>	<b>Description of Support</b>
\$3,392.55	449294	Exhibit A-7	MSU provided copy of hotel bill for participants, individual lodging bills, workshop agenda, list of participants and a picture of some of the participants and proof of payment.
\$3,141.22	IDT120404	Exhibit A-8	MSU provided a hotel bill for a visiting professor to work on project. The hotel bill was from 7/15/07 to 9/30/07. Also a justification was provided for the project, along with a list of publications.
\$3,112.31	TVL101807	Exhibit A-9	MSU provided a rental car and airline transportation bills for the above visiting professor to come to Lansing MI. Also, proof of payment
\$2,947.75	TVL071408	Exhibit A-10	MSU provided an expense report for the same individual, a signed travel advance form for meals, and a rental car receipt.
\$2,754.00	465811	Exhibit A-11	MSU provided a payment voucher, a list of individuals that registered for the JINA summer research seminar and permission sheets from student parents.
\$2,450.00	562221	Exhibit A-12	MSU provided a payment voucher, a cancelled check a description of the JINA film series at Notre Dame, and a list of 14 different showings at \$5 per showing for 35 tickets.
\$1,953.96	IDT038694	Exhibit A-13	MSU provided a bill from the MSU Union for a banquet in connection with the JINA Shell Model Workshop
\$2,191.86	TVL122905	Exhibit A-14	A travel expense breakdown, a travel advance form and an airline ticket was provided for an individual coming from Brazil
\$2,163.00	IDT235671	Exhibit A-15	MSU provided a hotel bill for about a month for an individual from Italy. See Exhibit A-10
\$1,956.15	419460	Exhibit A-16	MSU provided individual hotel bills for 5 individuals, a list of applicants for the JINA Shell Workshop and a description of the workshop.
\$2,000.00	TVL082808	Exhibit A-17	MSU provided a signed cash advance note proof of purchase of an airline ticket for an individual coming from Brazil.
<b>\$147,780.37</b>			<b>Total Questioned</b>

- b. *Purchase of equipment with Participant Support Funds without prior NSF approval*  
MSU provided invoices totaling \$16,895 for various items of equipment plus an invoice for 100 copies of the proceedings from the workshop on Reaction Mechanisms for Rare Isotope Beams for \$2,615. According to MSU the items of equipment were to develop a museum exhibit, quality visuals of JINA science for public outreach. The equipment purchased and charged to participant support was to be used with other material from other cooperating sources to construct the exhibit. According to MSU the intention was

to provide the visuals to be used at planetariums (including those at JINA sites like ND and MSU) and other museums to promote JINA science to the public. Four of the five invoices were for various items of equipment to construct these visuals.

c. *Unallowable costs claimed as part of Participant Support Costs*

MSU provided an email dated 12/19/11 from the MSU facility stating that no alcohol was served at the event. According to the facility it mistakenly labeled beer, wine, plastic, bar accompaniments, plastic ware, soft drinks and bartender as cups and supplies for the soda and water. However, an invoice dated 02/24/06 from an outside vendor showed that \$175.39 of beer and wine was served at the function. MSU stated that this invoice was not charged to the NSF funded subaward.

d. *Early arrivals and late departures at conferences and workshop*

MSU stated that the individuals needed additional time before and after the events were from out of the country. The University stated that these individuals collaborated with JINA scientists, arriving on a Saturday meant lower airfares, and without a Saturday stay European participants would be prevented from coming to the event.

e. *Unsupported travel costs*

MSU provided detailed information about each of the individual transaction questioned during the audit as follows:

MSU Exhibit No.	Cost Category	Document Number	Transaction Amount	Transaction Date	Questioned Amount	Documentation provided
E.2	Travel	CHK469714	6,503.51	10/20/2008	1,636.00	MSU provided documentation about volunteers that worked at the 10 <sup>th</sup> Symposium on Mackinac Island. The documentation included hours worked, tasks performed, etc. The \$1,636 was for the rooms for the volunteers that was charged to the direct travel category.
E.3	Travel	DIR175338	3,000.30	8/20/2007	3,000.30	MSU provided signed expense report and proof of payment to employee.
E.4	Travel	DIR121373	2,077.29	8/16/2004	2,077.29	MSU provided signed expense report and proof of payment to employee.
E.5	Travel	JVE000038	1,978.92	5/28/2008	1,978.92	MSU provided proof that airline ticket for an employee was purchased and paid for.
E.6	Travel	JVE000038	2,263.47	9/27/2007	2,263.47	MSU provided proof that airline ticket for an employee was purchased and paid for.
E.7	Travel	TVL071207	1,907.99	7/12/2007	1,907.99	MSU provided signed expense report and proof of payment to employee.
E.8	Travel	JVE000038	2,227.98	6/28/2007	2,227.98	MSU provided proof that airline ticket for an employee was purchased and paid for.
E.9	Travel	JVE000038	2,198.27	6/28/2007	2,198.27	MSU provided proof that airline ticket for an employee was purchased and paid for.
E.10	Travel	DIR156385	1,824.57	9/29/2006	1,824.57	MSU provided signed expense report and proof of payment to employee.
E.11	Travel	DIR153605	4,736.08	8/2/2006	4,736.08	MSU provided signed expense report and proof of payment to employee.
E.12	Travel	JVE000038	1,980.35	4/25/2006	1,980.35	MSU provided proof that airline ticket for an employee was purchased and paid for.
E.13	Travel	JVE000038	1,924.58	3/29/2006	1,924.58	MSU provided proof that airline ticket for an employee was purchased and paid for.
E.14	Travel	JVE000038	2,003.08	10/28/2004	2,003.08	MSU provided proof that airline ticket for an employee was purchased and paid for
<b>Total:</b>					<b>\$29,758.88</b>	

*Auditor's Response*

Following is Foxx & Company's evaluation of MSU's comments and our evaluation of the data in the same order as above:

a. *Lack of Documentation for Participant Support Costs*

Following is Foxx & Company's analysis and comment on each of the participant support items:

<b>Amount Questioned</b>	<b>Amount Accepted</b>	<b>Reason for Auditor's Action</b>
\$15,098.20	\$15,098.20	Although time and attendance or sign in sheets were not provided there was enough evidence provided including the picture of the class to accept the costs. For future events, sign in sheets or time and attendance records would be better documentation.
\$7,200	\$7,200	MSU provided sufficient evidence to support the costs charged to participant support. Therefore, the \$7,200 will be accepted in the final report..
\$9,474.68	\$9,474.68	Although time and attendance or sign in sheets were not provided there was enough evidence provided to accept the costs. For future events, sign in sheets or time and attendance records would be better documentation.
\$41,309.96	\$41,309.96	Although time and attendance or sign in sheets were not provided there was enough evidence provided including the picture of the class to accept the costs. For future events, sign in sheets or time and attendance records would be better documentation.
\$23,685.14	\$23,685.14	Although time and attendance or sign in sheets were not provided there was enough evidence provided including the picture of the class to accept the costs. For future events, sign in sheets or time and attendance records would be better documentation.
\$22,949.59	\$22,949.59	Although time and attendance or sign in sheets were not provided there was enough evidence provided including the picture of the class to accept the costs. For future events, sign in sheets or time and attendance records would be better documentation.
\$3,392.53	\$3,392.53	Although time and attendance or sign in sheets were not provided there was enough evidence provided including the picture of the class to accept the costs. For future events, sign in sheets or time and attendance records would be better documentation.

<b>Amount Questioned</b>	<b>Amount Accepted</b>	<b>Reason for Auditor's Action</b>
		documentation.
\$3,141.22	\$0	A hotel bill was provided for the period 07/15/07 to 9/30/07. The only justification that was provided was a short memo and a list of publications from 2008 to 2010. In addition, this individual traveled to Italy from 8/14 to 9/1/07 even though the hotel room was apparently charged while the individual was out of the country. We have not accepted the \$3,141.22 because we do not believe the justification for the long stay was sufficient. Also, the individual was not using the hotel room for about 2 weeks of the time. Accordingly, we have not accepted the \$3,141.22 as participant support.
\$3,112.31	\$0	This expense for rental car and meal per diem from 9/1/07 to 9/30/07 is for the same individual for a long term visit to MSU. As discussed above this person's activities were not linked to a specific participant support events and the justification did not support such a long stay. also
\$2,947.75	\$0	This expense is for the same individual as above for a travel advance for meals, and a rental car receipt from 5/2/08 to 6/9/08. The costs are questioned as participant support for the same reason as above.
\$2,754.00	\$2,754.00	Although time and attendance or sign in sheets were not provided there was enough evidence provided to accept the costs. For future events, sign in sheets or time and attendance records would be better documentation.
\$2,450.00	\$0	Although MSU provided a payment voucher, a cancelled check a description of the JINA film series at Notre Dame, and a list of 14 different showings at \$5 per showing for 35 tickets there was no documentation provided that the tickets were used by undergraduate students as stated or by anyone. Therefore the costs remain questioned.
\$1,953.96	\$1,953.96	Although time and attendance or sign in sheets were not provided there was enough evidence provided to accept the costs. For future events, sign in sheets or time and attendance records would be better documentation.
\$2,191.86	\$2,191.96	MSU provided sufficient documentation to support the cost claimed. Accordingly, we have accepted the \$2,191.96 in the final report.
\$2,163.00	\$0	This expense is for a hotel bill from 5/3/08-6/08/08, for the same individual mentioned above that was at MSU for an extended period of time in 2007. The justification does not support such a

<b>Amount Questioned</b>	<b>Amount Accepted</b>	<b>Reason for Auditor's Action</b>
		long stay and expense. Therefore, the \$2,163 is questioned as participant support.
\$1,956.15	\$1,956.15	Although time and attendance or sign in sheets were not provided there was enough evidence provided to accept the costs. For future events, sign in sheets or time and attendance records would be better documentation.
\$2,000.00	\$2,000.00	MSU provided sufficient documentation to support the cost claimed. Accordingly, we have accepted the \$2,000 in the final report.
<b>\$147,780.37</b>	<b>\$133,966.09</b>	

As a result of our review, we have accepted \$133,966 of the \$147,780 questioned in the draft report based on the additional documentation provided by MSU in its written comments to the draft report. The remaining \$13,814 remains questioned in the final report.

- b. *Purchase of equipment with Participant Support Funds without prior NSF approval*  
MSU provided documentation that showed that \$16,895 of the \$19,510 was equipment related to building a museum exhibit. It consisted of 2 projectors at \$4,190, and 16 Detector Packages purchased for \$12,705 in 2004, 2005, 2006 and 2007. We do not know what the total cost of the exhibit because MSU stated it was being constructed in cooperation with other universities. Because the items purchased were part of building the same component, the exhibit, the \$16,895 exceeds the \$5,000 threshold for equipment. Therefore, the \$16,895 will remain questioned in the final report. The \$2,615 charged for 100 copies is also questioned because there was no explanation provided for how this document was used or benefited the NSF funded subaward. Accordingly, the \$19,510 remains questioned in the final report.
- c. *Unallowable costs claimed as part of Participant Support Costs*  
Although MSU provided an email that stated that there was no alcohol served at a participant support event, another document showed that alcohol had in fact been provided by an outside vendor for the event. Because of the small amount of the charge and the fact that an outside vendor did provide alcohol which MSU stated it did not charge to the subaward, the \$255 has been accepted in the final report.
- d. *Early arrivals and late departures at conferences and workshop*  
MSU provided specific reasons for the extra days before or after the conferences for each of the individuals coming from Europe for the conference. Therefore, the \$716 has been accepted in the final report.
- e. *Unsupported travel costs*  
We have accepted \$28,122.88 of the \$29,758.88 questioned in the draft report based on the additional documentation provided by MSU in its written comments. However, we

have not accepted the \$1,636 charged for the volunteers' room accommodations at the participant support event. This amount is not a valid charge to the travel cost category because it was incurred in support of a participant support event not a direct cost of travel for the subaward.

#### **Finding No. 4 – UND's Monitoring of Subawards Needs Improvements**

Improvements are needed to UND's NSF funded subaward monitoring program. Our audit revealed problems at both the University of Chicago and Michigan State University for costs incurred under subawards for NSF Award No. PHY-0216783. These findings included the lack of documentation to support participant support costs at both institutions, undocumented travel costs, untimely approval of time charges, and charging of unallowable costs, to the NSF funded project which were not identified by Notre Dame's subaward monitoring program.

The monitoring of subawards is required by 2 CFR 215.51 (formerly OMB Circular A-110) and OMB Circular A-133. According to 2 CFR 215.51 Recipients are responsible for managing and monitoring each project, program, subaward, function or activity supported by the award. Recipients shall monitor subawards to ensure sub-recipients have met the audit requirements as delineated in 2 CFR 215.26. OMB Circular A-133, Section .400(d)(3) requires recipients of federal awards to monitor the activities of subawardees as necessary to ensure that Federal awards are used for authorized purposes in compliance with laws, regulations, and the provisions of contracts or grant agreements and that performance goals are achieved.

Notre Dame did have procedures for monitoring subrecipients which were quite extensive and in accordance with federal requirements. However, the only evidence we could find pertaining to monitoring the Michigan State and University of Chicago subawards under Award No. PHY-026783 were letters sent to each institution asking about issues identified in Single Audit reports. We were not provided with any support for other monitoring procedures as prescribed in UND's monitoring policies such as requests for support of costs claimed for selected cost categories or on-site visits to review costs incurred. However, as shown by our audit, there were instances of non compliance with federal requirements at both institutions. Had Notre Dame been more proactive in monitoring these subawards as prescribed by UND's subrecipient monitoring procedures, such as reviewing selected original documentation, i.e. time and attendance sheets at participant support events, travel expense reports, etc., the issues noted by our audit may have been identified and corrected prior to the completion of the subawards.

#### **Recommendation No. 4**

We recommend that the NSF Director of the Division of Institution and Award Support address and resolve the following recommendation made to the University of Notre Dame that, for current and future NSF awards, UND fully implement its existing procedures for its subawardee monitoring to ensure that all subawardees are complying with federal requirements for all NSF funded subawards.

#### *Awardee's Comments*

The University stated the following: Based on a comprehensive review of our existing policies and procedures performed prior to the NSF audit late in 2010 related to sub-recipient monitoring, the University began implementing as of July 1, 2011, additional subrecipient monitoring steps

to ensure that costs incurred on funds passed to other entities are allowable, allocable and reasonable. In addition to requesting A-133 audit reports from all sub-recipients we have initiated the following processes:

- a. Completing a formal risk-assessment for all new sub-award agreements
- b. Completion of a risk assessment for all awards and increments where activity occurred for the prior fiscal year
- c. Audits of selected transactions
- d. Additional focus on high-risk cost categories

The University went on to say “We believe that by fully implementing these processes we will reduce the risk of unallowable costs on all sub-awards and be in compliance with the federal requirements surrounding sub-recipient monitoring.”

#### *Auditor’s Response*

The University’s sub-recipient monitoring steps listed in its comments, if implemented properly, should resolve the intent of the recommendation.

#### **Finding No. 5 – Untimeliness of Effort Certifications at the University of Chicago**

The University of Chicago’s (subgrantee) policy requires the Payroll Department to generate and distribute Annual Certification Statements to departments approximately 90 days after the close of the fiscal year. However, the university had not established a turnaround requirement for when the Annual Certification Statements were due back to the Payroll Department.

According to 2 CFR 220, *Cost Principles for Educational Institutions*, requires that labor costs charged to Federal awards must reasonably reflect the actual labor effort contributed by the employee to meet the objectives of the award. While the university can initially charge Federal awards based on budgeted, planned, or assigned work activity, university officials are required to subsequently confirm that the labor effort costs charged to an award reasonably represent the actual labor effort. In addition, 2 CFR 220 requires that the distribution of salaries and wages of professorial and professional staff to be certified annually by the employee, principal investigator, or responsible officials using suitable means of verification that the effort was performed. Although Federal requirements do not specify when an effort report should be completed, university officials should provide the after-the-fact confirmation as close to the end of the effort reporting period as possible to ensure its reliability.

Additionally, OMB Circular A-110, Uniform Administrative Requirement for Grant and Agreements with Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations, requires nonfederal entities receiving federal awards to establish and maintain internal controls designed to reasonably ensure compliance with Federal laws, regulations, and program compliance requirements.

During our audit of payroll transactions, we noted that, for all payroll expenditures tested, effort certifications were signed well after the effort reporting period. The certification dates ranged from 143 to 227 days after the end of the effort reporting period. The following table summarizes the number of days after the effort reporting period it took university officials to approve Annual Certification Statements,

<b>Days After Effort Reporting Period</b>	<b>Number of Effort Reports</b>
1 to 90	0
121 to 150	11
151 to 180	11
181 to 210	0
211 to 240	1
<b>Total</b>	<b>23</b>

Although we did not question any costs as a result of this finding, we believe this is too long of a delay after the reporting period to effectively represent the effort expended during the period. A timely submission of effort reports will alleviate potential mistakes due to the length of time passed after the effort reporting period.

The University's effort reporting policy does not specify the number of days from the end of the effort reporting period that Annual Certification Statements must be signed and returned to the payroll department. We believe that, without a definitive timeline to adhere to, the problem will continue.

#### **Recommendation No. 5**

We recommend that NSF's Director of the Division of Institution and Award Support address and resolve the following recommendation made to UND to require the University of Chicago to establish and implement policies and procedures ensuring effort certifications are properly completed in a timely manner and as close to the end of the effort reporting period as possible.

#### *Awardee Comments*

The University of Chicago disagreed with the finding that its effort certifications are untimely. The University stated that its payroll distribution (effort reporting) system produces Annual Certification Statements after the October payroll processing. Departments have up to three months after the original monthly payroll distribution to make an adjustment. Therefore, since the end of the University's fiscal year is June 30, the departments have up to September 30 to make adjustments. These adjustments are processed in the October payroll and are distributed the first week in November. The Certified ACSs are due back by the first full business week of the new calendar year. Based on this procedure the University stated only 1 certification was untimely, and that was because the individual was working in Washington, D.C. The University went on to say that monthly payroll distributions are reviewed throughout the year. Timely adjustments and corrections are made within three months of the original distribution.

#### *Auditor's Response*

We disagree with the University. Based on their procedure (which is apparently not in writing) it takes over 6 months from the end of the year to produce annual certifications of effort. The federal regulations require timely revisions and we do not agree that 6 months after the end of the year is timely. Our finding provided 90 days which we believe is reasonable. In addition, we

did not find any monthly revisions to time charges during the course of the year but did find annual changes. Accordingly, the finding and recommendation remains in the final report.

### **Finding No. 6 – Improvement Needed in Travel Report Policy at the University of Chicago to Include All Travel Activity**

Improvements are needed in the University of Chicago’s travel policy to ensure travel vouchers reflect official work and conference/workshop attendance dates. A few transactions reviewed showed university employees arriving several days before and departing several days after the conference or workshop.

The OMB Circular A-21 § J.53.b, states that, “costs incurred by employees and officers for travel, including costs of lodging, other subsistence, and incidental expenses, shall be considered reasonable and allowable only to the extent such costs do not exceed charges normally allowed by the institution in its regular operations as the result of the institution’s written travel policy.” Additionally, NSF Award and Administration Guide §V(B).8.b states that, “to help defray the costs of personal maintenance while participating in a conference or training activity, participants may be paid a stipend, per diem or subsistence allowance, based on the type and duration of the activity, as outlined in the pertinent program solicitation and in the grant.” It further states that, “such allowances must be reasonable, in conformance with the usual policy of the grantee organization and limited to the days of attendance at the conference plus the actual travel time required to reach the conference location by the most direct route available.”

During our audit at the University of Chicago, we found that for a few of the travel transactions reviewed, employees of the university arrived several days prior to conferences or workshops and departed several days after conferences or workshops. In certain situations, it might be necessary to arrive days before and depart days after a conference to save on airfare, but only if the difference between the regular airfare and reduce airfare exceeds the addition meals and lodging per diem. However, we found that employees were arriving as early as 6 days before a conference and departing as late as 7 days after the conference, without documenting any justification for the additional overnight stays noted on the travel vouchers.

After several inquiries, the University of Chicago provided adequate written explanations obtained from the travelers for why each trip was extended. No costs will be questioned because we were satisfied with the explanations. However, we believe this is still a finding because at the time of travel the university paid the additional costs without explanation.

#### **Recommendation No. 6:**

We recommend that the NSF Director of the Division of Institution and Award Support address and resolve the following recommendation made to the University of Notre Dame that requires the University of Chicago, for future travel charged to NSF funded projects, amend its travel policies to ensure that charges on travel vouchers reflect official work and conference or workshop attendance dates and additional days traveled are adequately explained and documented.

#### *Awardee Comments*

The University of Chicago stated in its written comments: “The University disagrees that there any significant deficiencies in its travel policies and procedures. The University’s Financial Policy #1202: Travel Policies and Procedures states that reimbursements provided to travelers

(faculty, staff, students, and guests) must be for work-related expenses (Appendix 6). The traveler must provide a statement on the travel reimbursement request substantiating the amount, time and business purpose of the travel expenses. It is the responsibility of the person authorizing the travel reimbursement to obtain the knowledge necessary to attest that the travel expense is reasonable, allocable and allowable. If a traveler's travel dates extended beyond what was reasonable for the trip's business purpose, it would be the responsibility of the person authorizing the trip's travel expenses to ensure that unnecessary travel expenses were not reimbursed. In the cases cited, the business purpose did not specifically address the additional days of travel, but as the auditors noted, subsequent documentation was provided to support the additional days of travel, lending support to the University's contention that its policies and procedures are effective."

*Auditor's Response*

We disagree with the University of Chicago's position on this issue. In the instances cited in the finding the person responsible for authorizing the travel did not have the knowledge that the additional days were business related when the travel expense was reimbursed. The traveler did provide the information on the expense report. It was necessary for the University to go back and obtain the information over 3 years after the fact because the auditors requested it. The information of why it was necessary to travel days before and after the official conference should have been filed with the original expense report if the University's travel policy was followed. Accordingly, the recommendation remains in the final report.

This report is intended solely for the information and use of the University of Notre Dame's Management and subawardees at the discretion of Notre Dame's management, the National Science Foundation, the University of Notre Dame's cognizant federal audit agency, the Office of Management and Budget, and the Congress of the United States and is not intended to be, and should not be used, by anyone other than these specified parties.

Foxx & Company  
Cincinnati, Ohio  
February 10, 2012

A handwritten signature in cursive script that reads "Foxx & Company". The signature is written in black ink and is positioned to the right of the typed name.

**FINANCIAL SCHEDULES AND  
SUPPLEMENTAL INFORMATION**

**University of Notre Dame**  
**Notre Dame, Indiana**  
**National Science Foundation Award No. PHY-0216783**  
**Schedule of Award Costs**  
**August 1, 2003 to March 31, 2011**  
**Interim**

<u>Cost Category</u>	<u>Approved Budget</u>	<u>Claimed Costs (A)</u>	<u>Questioned Costs</u>	<u>Schedule Reference</u>
Direct Costs:				
Salaries and wages	\$1,588,576	\$ 1,473,641		
Fringe benefits	223,216	261,533		
Equipment	707,400	178,323		
Travel	154,464	214,960	4,839	Note 1, Sch. B
Participant support	452,080	398,992	2,096	Note 2, Sch..B
Other direct costs:				
Materials and supplies	26,523	24,636		
Publication costs	-	12,635		
Consultant services	-	110,621		
				Note 3, Sch.B and Schedule C-1 and C-2
Subcontracts	6,025,876	6,054,861	125,100	
Other	10,000	-		
Total direct costs	<u>\$9,188,135</u>	<u>\$8,730,202</u>	<u>\$132,035</u>	
Indirect costs	██████████	██████████		
Subtotal	<u>\$10,185,080</u>	<u>\$9,818,707</u>	<u>\$132,035</u>	
Total	<u>██████████</u>	<u>██████████</u>	<u>██████████</u>	
Cost sharing	<u>\$965,586</u>	<u>\$ 965,586</u>	<u>\$</u>	

(A) The total claimed costs agree with the total expenditures reported by UND on the Federal Financial Reports for the quarter ended March 31, 2011. Claimed costs reported above were taken directly from UND's books of accounts.

See Accompanying Notes to Financial Schedules

Schedule A-2

**University of Notre Dame  
Notre Dame, Indiana  
National Science Foundation Award No. DGE-0504495  
Schedule of Award Costs  
July 15, 2005 to March 31, 2011  
Interim**

<u>Cost Category</u>	<u>Approved Budget</u>	<u>Claimed Costs (A)</u>	<u>Questioned Costs</u>	<u>Schedule Reference</u>
Direct Costs:				
Salaries and wages	\$175,856	\$ 440,384		
Fringe benefits				
Equipment				
Travel	140,000	100,282	8,955	Note 1, Sch. B
Participant support	1,982,500	1,719,644		
Other direct costs:				
Materials and supplies	355,159	61,934		
Publication costs	15,000	2,209		
Consultant services	-	1,320		
Subcontracts	-	-		
Other	150,000	-		
Total direct costs	<u>          </u>	<u>          </u>	<u>\$8,955</u>	
Indirect costs	<u>          </u>	<u>          </u>	<u>-</u>	
Subtotal	<u>\$3,144,381</u>	<u>\$2,577,139</u>	<u>\$8,955</u>	
Total	<u><u>\$ 3,144,381</u></u>	<u><u>\$ 2,577,139</u></u>	<u><u>\$8,955</u></u>	

(A) The total claimed costs agree with the total expenditures reported by UND on the Federal Financial Reports for the quarter ended March 31, 2011. Claimed costs reported above were taken directly from UND's books of accounts.

See Accompanying Notes to Financial Schedules

**University of Notre Dame**  
**Notre Dame, Indiana**  
**National Science Foundation Award No. PHY-0715396**  
**Schedule of Award Costs**  
**September 15, 2007 to March 31, 2011**  
**Interim**

<u>Cost Category</u>	<u>Approved Budget</u>	<u>Claimed Costs (A)</u>	<u>Questioned Costs</u>	<u>Schedule Reference</u>
Direct Costs:				
Salaries and wages	\$390,998	\$ 337,575		
Fringe benefits	████████	████████		
Equipment	████████	█		
Travel	148,178	101,811	5,769	Note 1, Sch. B
Participant support	1,904,286	1,403,068	97,671	Note 2, Sch. B
Other direct costs:				
Materials and supplies	11,936	12,279		
Publication costs	8,000	37		
Consultant services	260,000	156,837		
Subcontracts	699,400	369,428		
Other	296,000	-		
Total direct costs	████████	████████	\$103,440	
Indirect costs	████████	████████	-	
Subtotal	\$4,117,983	\$2,680,518	\$103,440	
Amendment with lump sum deobligation of funds	(377,983)			
Total	\$ 3,740,000	\$ 2,680,518	\$103,440	

(A) The total claimed costs agree with the total expenditures reported by UND on the Federal Financial Reports for the quarter ended March 31, 2011. Claimed costs reported above were taken directly from UND's books of accounts.

See Accompanying Notes to Financial Schedules

**University of Notre Dame  
Notre Dame, Indiana  
National Science Foundation Award No. DMS-0905227  
Schedule of Award Costs  
July 15, 2009 to March 31, 2011  
Interim**

<u>Cost Category</u>	<u>Approved Budget</u>	<u>Claimed Costs (A)</u>	<u>Questioned Costs</u>	<u>Schedule Reference</u>
Direct Costs:				
Salaries and wages	\$81,782	\$ 44,450		
Fringe benefits	12,425	7,792		
Equipment	0	0		
Travel	18,000	8,694		
Participant support	0	0		
Other direct costs:				
Materials and supplies	4,800	2,639		
Publication costs	7,500	0		
Consultant services	-	0		
Subcontracts	-	-		
Other	0	-		
<b>Total direct costs</b>	<b>\$124,507</b>	<b>\$63,575</b>	<b>\$ 0</b>	
Indirect costs	██████████	██████████	-	
Subtotal	██████████	██████████	\$ 0	
<b>Total</b>	<b>██████████</b>	<b>██████████</b>	<b>\$ 0</b>	

(A) The total claimed costs agree with the total expenditures reported by UND on the Federal Financial Reports for the quarter ended March 31, 2011. Claimed costs reported above were taken directly from UND's books of accounts.

See Accompanying Notes to Financial Schedules.

**University of Notre Dame  
Notre Dame, Indiana  
National Science Foundation Award No. DEB-0918306  
Schedule of Award Costs  
September 1, 2009 to March 31, 2011  
Interim**

<u>Cost Category</u>	<u>Approved Budget</u>	<u>Claimed Costs (A)</u>	<u>Questioned Costs</u>	<u>Schedule Reference</u>
Direct Costs:				
Salaries and wages	\$254,000	\$ 65,780		
Fringe benefits	42,060	12,258		
Equipment	0	0		
Travel	22,500	378		
Participant support	0	0		
Other direct costs:				
Materials and supplies	22,500	15,180		
Publication costs	3,500	0		
Consultant services	-	0		
Subcontracts	-	-		
Other	12,500	2,500		
Total direct costs	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u> \$ 0
Indirect costs	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u> -
Subtotal	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u> \$ 0
Total	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u> \$ 0

(A) The total claimed costs agree with the total expenditures reported by UND on the Federal Financial Reports for the quarter ended March 31, 2011. Claimed costs reported above were taken directly from UND's books of accounts.

See Accompanying Notes to Financial Schedules.

**UNIVERSITY OF NOTRE DAME**  
**NOTRE DAME, INDIANA 45556**  
**AUDIT OF**  
**NATIONAL SCIENCE FOUNDATION**  
**AWARD NOS. PHY-0216783, DGE-0504495, PHY-0715396, DMS-0905227, DEB-0918306**  
**Notes to the Schedules of Award Costs**

**Note 1:** The \$19,563 questioned represents the following travel costs claimed on the following awards:

Award	Category	Amount Claimed	Amount Questioned	Reason for questioning Cost
PHY-0216783	Travel	\$214,960	\$4,839	Lack of documentation. UND unable to provide documentation
DGE-0504495	Travel	\$100,282	\$8,955	Lack of documentation. UND unable to locate detail
PHY-0715396	Travel	\$101,811	\$5,769	Lack of documentation. UND unable to provide documentation
<b>Total</b>		<b>\$417,053</b>	<b>\$19,563</b>	

The University of Notre Dame could not locate or provide documentation supporting these claimed costs.

**Note 2:** The \$99,767 questioned represents the following participant support costs claimed for the following awards:

Award	University	Category	Amount Claimed	Amount Questioned	Reason for questioning cost
PHY-0216783	Notre Dame	Participant Support Costs	\$ 398,992	\$ 2,096	Lack of documentation. UND unable to provide documentation
PHY-0715396	Notre Dame	Participant Support Costs	1,403,068	97,671	Lack of documentation. UND unable to provide documentation.
<b>Total</b>			<b>\$1,802,060</b>	<b>\$99,767</b>	

Because the University of Notre Dame could not provide adequate documentation to support the participant support costs claimed, the \$99,767 is questioned.

**Note 3:** The \$125,100 questioned consists of \$44,300 in questioned costs claimed under subawards to the University of Chicago and Michigan State University under NSF Award No. PHY-0216783. These costs were questioned primarily for a lack of documentation. In addition, there is an additional \$80,800 of questioned costs for UND moving participant support funds with MSU from the original proposal to other cost categories without prior written approval by NSF, as required by NSF General Grant Conditions (GC-1), Article 7.b. The \$125,100 consisted of the following:

<b>Subaward</b>	<b>Amount Questioned</b>
UND	\$80,800
MSU	\$34,960
UC	\$9,340
	<b>\$125,100</b>

The \$80,800 questioned represents UND's subagreement with Michigan State University as a subawardee under Award No. PHY-0216783 that had a budgeted participant support cost category, approved by NSF in the original award was for \$686,000. However, the subaward provided to Michigan State only had a budget for participant support of \$605,200. Since the award was fully expended, the difference of \$80,800 was for funds approved for participant support by NSF used in other cost categories without prior NSF approval. As a result, we questioned \$80,800 of subaward participant support costs claimed. The remaining questioned costs are described in detail on Schedules C-1 (\$34,960), C-2 (\$9,340), D-1 and D-2.

**University of Notre Dame**  
**Notre Dame, Indiana**  
**National Science Foundation Award No. PHY-0216783**  
**Michigan State University Subaward with UND**  
**Schedule of Subaward Costs**  
**August 1, 2003 to March 31, 2011**  
**Final**

<u>Cost Category</u>	<u>Approved Budget</u>	<u>Claimed Costs (A)</u>	<u>Questioned Costs</u>	<u>Schedule Reference</u>
Direct Costs:		\$		
Salaries and wages	\$1,157,265	1,339,419		
Fringe benefits	409,978	459,811		
Equipment	228,557	-		
Travel	198,888	285,667	1,636	Note 1, Sch D-1
Participant support	605,200	584,580	33,324	Note 2, Sch D-1
Other direct costs:				
Materials and supplies	32,136	82,733		
Publication costs	-	-		
Consultant services	-	3,086		
Subcontracts	763,472	394,342		Note 3, Sch D-1
Other	25,068	56,173		
Total direct costs	<u>\$3,420,564</u>	<u>\$3,205,811</u>	<u>\$34,960</u>	
Indirect costs	<u>          </u>	<u>          </u>	<u>          </u>	
Subtotal	<u>          </u>	<u>          </u>	<u>\$34,960</u>	
Amendments with lump sum de-obligations of funds	<u>          </u>	<u>          </u>	<u>          </u>	
Total	<u>          </u>	<u>          </u>	<u>\$34,960</u>	

**University of Notre Dame**  
**Notre Dame, Indiana**  
**National Science Foundation Award No. PHY-0216783**  
**University of Chicago Subaward with UND**  
**Schedule of Subaward Costs**  
**August 1, 2003 to July 31, 2009**  
**Final**

<u>Cost Category</u>	<u>Approved Budget</u>	<u>Claimed Costs (A)</u>	<u>Questioned Costs</u>	<u>Schedule Reference</u>
Direct Costs:				
Salaries and wages	\$652,045	\$ 674,250		
Fringe benefits	110,145	103,236		
Equipment	-	5,653		
Travel	69,020	96,118		
Participant support	306,000	156,906	9,340	Note 2, Sch D-1
Other direct costs:				
Materials and supplies	12,198	10,418		
Publication costs	3,500	7,403		
Consultant services	-	-		
Subcontracts	-	-		
Other	69,493	101,748		
Total direct costs	<u>\$1,222,401</u>	<u>\$1,155,732</u>	<u>\$9,340</u>	
Indirect costs	[REDACTED]	[REDACTED]	-	
Subtotal	[REDACTED]	[REDACTED]	\$9,340	
Amendments with lump sum deobligations of funds	[REDACTED]			
Total	[REDACTED]	[REDACTED]	<u><u>\$9,340</u></u>	

**University of Notre Dame**  
**Notre Dame, Indiana**  
**National Science Foundation Award No. PHY-0216783**  
**Michigan State University Subaward with UND**  
**Notes to Schedule C-1**

**Note 1:** The \$1,636 questioned represents travel costs claimed under Michigan State's subaward with the University of Notre Dame under NSF Award No. PHY-0216783. The \$1,636 was incurred for rooms for volunteers at a participant support event. Because these individuals were supporting a participant event, the travel should not have been charged to direct travel. Accordingly, the \$1,636 has been questioned as unallowable.

**Note 2:** The \$33,324 questioned represents participant support costs claimed that MSU could not adequately support. The \$33,324 consisted of the following:

<b>Cost Category</b>	<b>Amount Questioned</b>
a. Unsupported Participant support	\$13,814
b. Equipment purchased with Participant Support funds	19,510
<b>Total</b>	<b>\$33,324</b>

- a. The \$13,814 consists of various travel costs charged to participant support for an individual from outside the U.S. that traveled to Lansing for several months in 2007 and 2008. Because MSU did not provide adequate support to show what this individual was actually doing and how it benefitted the NSF funded award, the \$13,814 is questioned.
- b. MSU provided documentation that showed that \$16,895 of the \$19,510 was equipment related to building a museum exhibit. It consisted of 2 projectors at \$4,190, and 16 Detector Packages purchased for \$12,705 in 2004, 2005, 2006 and 2007. Because the items purchased were part of building the same component the cost of \$16,895 exceeds the \$5,000 threshold for equipment. Therefore, the \$16,895 is questioned because it is considered equipment charged to participant support without approval from the NSF program office. The remaining \$2,615 of the \$19,510 questioned was for 100 copies of the proceedings of a workshop which is also questioned because there was no explanation provided for how this document was used or benefitted the NSF funded subaward. Accordingly, the \$19,510 is questioned.

**University of Notre Dame**  
**Notre Dame, Indiana**  
**National Science Foundation Award No. PHY-0216783**  
**University of Chicago Subaward with UND**  
**Notes to Schedule C-2**

**Note 1:** The \$9,340 questioned represents participant support costs claimed under the subaward with UND funded by NSF Award No. PHY-0216783. The University could not provide adequate documentation to support the \$9,340 consisting of the following amounts:

<b>Ref.</b>	<b>Payee</b>	<b>Purpose</b>	<b>Amount Claimed</b>	<b>Reasons for Questioned Costs</b>
a	Cal Tech	Support for the “Nuclear Astrophysics:1957-2007: Beyond the First 50 Years” at Cal Tech	\$5,000	There was not a breakdown of the \$5,000 to determine what Cal Tech used the \$5,000 or if was expended on allowable costs.
b.	Argonne	Mass Modeling School conference 5/8-16/2007	\$1,340	Stipends claimed that were not paid, unallowable costs claimed, and stipends paid to employees
c.	Argonne	“Nuclear Astrophysics of the Cosmos 2008” 07/22-26/2008	\$3,000	Stipends not paid and stipends paid to employees.
		<b>TOTAL</b>	<b>\$9,340</b>	

- a. The University could not provide the composition of the \$5,000. Accordingly, we could not determine if the \$5,000 was expended on allowable costs. Therefore, the \$5,000 is questioned.
- b. The [REDACTED] questioned consists of [REDACTED] for “no shows” that never received the stipend, 3 individuals considered employees for [REDACTED] and [REDACTED] in unallowable costs identified by the University.
- c. The \$3,000 questioned consists of [REDACTED] for “no shows” of three individuals at an event that never received a stipend and [REDACTED] for 12 individuals considered employees of the University of Chicago, Notre Dame, and Michigan State University. In accordance with NSF’s GC-1 employees cannot receive stipends.

**Schedule E-1**

**NATIONAL SCIENCE FOUNDATION AWARD NOS. PHY-0216783, DGE-0504495,  
PHY-0715396, DMS-0905227, DEB-0918306  
SUMMARY SCHEDULES OF AWARDS AUDITED AND AUDIT RESULTS  
AUGUST 01, 2003 to MARCH 31, 2011**

**Summary of Awards Audited**

<b>Award Number</b>	<b>Audit Period</b>	<b>Award Period</b>
PHY-0216783	08/01/03 - 03/31/11	08/01/03 - 07/31/11
DGE-0504495	07/15/05 - 03/31/11	07/15/05 - 06/30/11
PHY-0715396	09/15/07 - 03/31/11	09/15/07 - 08/31/11
DMS-0905227	07/15/09 - 03/31/11	07/15/09 - 06/30/12
DEB-0918306	09/01/09 - 03/31/11	09/01/09 - 08/31/14

<b>Type of Award</b>	<b>Award Description</b>
PHY-0216783 Cooperative Agreement	Joint Institute for Nuclear Astrophysics – JINA. Addressing fundamental problems posed in Nuclear Astrophysics.
DGE-0504495 Research	Support the establishment of a new interdisciplinary graduate program in Global Linkages of Biology, Environment and Society (GLOBES)
PHY-0715396 Research	Continuing grant for QuarkNet to partner high school science teachers and students with particle physicists working on experiments.
DMS-0905227 ARRA – Research	Study universal equations and other properties of Gromov-Witten Invariants and Integrable Systems.
DEB-0918306 ARRA - Research	Study grasshoppers for LTREB Renewal: Ecosystem Structure and Functioning Palouse Grasslands

**Summary of Questioned and Unsupported Costs by Award**

<b>Award Number</b>	<b>Award Budget</b>	<b>Claimed Costs</b>	<b>Questioned Costs</b>	<b>Unsupported Costs</b>
PHY-0216783	\$10,185,080	\$9,818,707	\$132,035	\$132,035
DGE-0504495	\$3,144,381	\$2,577,139	\$8,955	\$8,955
PHY-0715396	\$3,740,000	\$2,680,518	\$103,440	\$103,440
DMS-0905227	\$186,761	\$95,362	-	-
DEB-0918306	\$449,895	\$121,081	-	-
<b>Totals</b>	<b>\$17,706,117</b>	<b>\$15,292,807</b>	<b>\$244,430</b>	<b>\$244,430</b>

## Summary of Questioned Cost by Explanation

Condition	Questioned Cost Amount	Internal Control Weaknesses	Non-Compliance
Lack of documentation for participant support @ UND	\$99,767	X	X
Participant Support charged to other categories without NSF approval @ UND	\$80,800	X	X
Lack of documentation for travel@UND	\$19,563	X	X
Lack of documentation for participant support at a subawardee (U of C)	\$9,340	X	X
Lack of documentation for participant support at a subawardee (MSU)	\$13,814	X	X
Lack of documentation for travel at a subawardee (MSU)	\$1,636	X	X
Unapproved equipment charged to participant support	\$19,510	X	X
<b>Total Questioned Costs</b>	<b>\$244,430</b>		

## Summary of Internal Control Weaknesses and or Non-Compliance Issues

Condition	Internal Control and Non-Compliance	Material Weakness	Significant Deficiency	Amount of NSF Claimed/ Incurred Costs Affected
Incurred Costs not Supported by Adequate Documentation	X	X		\$119,330
Lack of Approval for Unmet Participant Support Costs--University of Notre Dame	X			\$80,800
Lack of documentation-to Support Incurred Costs at the University of Chicago	X	X		\$9,340
Lack of Documentation for Participant Support and Travel Costs Claimed at Michigan State University	X	X		\$34,960
UND's Monitoring of Subawards Needs Improvements	X		X	0
Untimeliness of Effort Certifications at the University of Chicago	X		X	0
Improvement Needed in Travel Report Policy at the University of Chicago to Include All Travel Activity	X		X	0

**UNIVERSITY OF NOTRE DAME**  
**NOTRE DAME, INDIANA**  
**NOTES TO THE FINANCIAL SCHEDULES**  
**From August 01, 2003 to March 31, 2011**

**Note 1: Summary of Significant Accounting Policies**

Accounting Basis

The accompanying financial schedules have been prepared in conformity with National Science Foundation (NSF) instructions, which are based on a comprehensive basis of accounting other than generally accepted accounting principles. Schedules A-1 through A-5 have been prepared by the University of Notre Dame (UND) from the Federal Financial Reports (FFRs) submitted to NSF and UND's accounting records. The basis of accounting utilized in preparation of these reports differs from generally accepted accounting principles. The following information summarizes these differences:

A. Equity

Under the terms of the awards, all funds not expended according to the award agreements and budgeted at the end of the award period are to be returned to NSF. Therefore, the awardee does not maintain any equity in the award and any excess cash received from NSF over final expenditures is due back to NSF.

B. Inventory

Minor materials and supplies are charged to expense during the period of purchase. As a result, no inventory is recognized for these items in the financial schedules.

C. Equipment

Equipment is charged to expense in the period during which it is purchased instead of being recognized as an asset and depreciated over its useful life. As a result, the expenses reflected in the Schedules of Award Costs include the cost of equipment purchased during the period rather than a provision for depreciation.

Except for awards with nonstandard terms and conditions, title to equipment under NSF awards vests in the recipient, for use in the project or program for which it was acquired, as long as it is needed. The recipient may not encumber the property without approval of the federal awarding agency, but may use the equipment for its other federally sponsored activities, when it is no longer needed for the original project.

D. Income Taxes

UND is an educational institution and does not pay income taxes.

**Note 2: Indirect Cost Rates** – UND, the University of Chicago and Michigan State University have federally approved indirect cost rates.

**Note 3:** The departure from generally accepted accounting principles allows NSF to properly monitor and track actual expenditures incurred by UND. The departure does not constitute a material weakness in internal controls.

**ATTACHMENT A – AWARDEE'S  
COMMENTS TO REPORT**

## **WRITTEN COMMENTS FROM AUDITEES**

The University of Notre Dame, Michigan State University and the University of Chicago have provided written comments to the draft audit report. We have only included the transmittal letters and several pages accompanying the transmittal letters on the following pages. All three universities submitted voluminous amounts of information in support of the questioned costs in the draft report. We have summarized after each finding a summary of each university's comments and the auditor's evaluation of the information provided in support of the questioned costs. However, because of the volume of the comments, exceeding 30 megabytes of data, we could not include everything in the final report. The entire written comments have been provided to the NSF, Division of Institution and Award Support.



UNIVERSITY OF  
**NOTRE DAME**

**RESEARCH Sr SPONSORED PROGRAMS ACCOUNTING**

836a Grace Hall  
Notre Dame, Indiana  
46556-5612 USA



March 12, 2012

  
Foxx and Company  
324 W. 9<sup>th</sup> Street, Suite 700  
Cincinnati, OH 45202

RE: NSF Financial Audit

Dear 

Enclosed please find responses, from the University of Notre Dame and our subrecipients, the University of Chicago and Michigan State University, regarding the draft report of the National Science Foundation (NSF) Financial Audit for Awards PHY-0216783, DGE-0504495, PHY-0715396, DMS-0905227, and DEB-0918306.

A CD with additional documentation from Michigan State University will be sent via overnight delivery to your attention as the data file was too large to send in an e-mail attachment. Please do not hesitate to contact me with any questions you may have regarding this information. We look forward to working with you and the NSF in finalizing this audit.

Regards,



Research and Sponsored Programs Accounting

Enclosures

cc: (w/o enclosures)  
  
  


**Finding No. 1— Incurred Costs not Supported by Adequate Documentation and Lack of approval for Unmet Participant Costs**

The University of Notre Dame has provided additional comments and support for the items included in the detailed transaction list provided by Foxx. Please see [Exhibit ND.1](#). Although some of the documentation was either destroyed in accordance with the University retention policies or not maintained centrally, given the nature of the awards (program activities being performed via satellite sites), Notre Dame is confident that the charges made to the awards were allowable, reasonable, and allocable.

**Recommendation No. 1:**

**We recommend that the NSF Director of the Division of Institution and Award Support address and resolve the following recommendation made to the University of Notre Dame:**

- a. develop procedure to retain documentation supporting award costs maintained by other departments within the university for at least three years after the close of federal awards,**

*Although the University's current retention policy is structured to meet requirements for the vast majority of federal grants and contracts, the University will revise its current procedures to ensure documentation for awards with extended project periods remain available.*

- b. perform periodic reviews of its policies and procedures to ensure that procedures are working as designed including documenting attendance at participant support activities and ensuring that travel incurred on federal awards is documented,**

*The University periodically reviews its policies and procedures to ensure they are functioning as intended and will continue this practice with a specific focus on the areas noted in the audit findings.*

- c. establish and implement policies and procedures to ensure that university officials obtain prior approval from NSF before using funds budgeted for participant support on other cost categories, and**

*The University receives prior approval from the NSF for re-budgeting participant support funding before redirecting funds from this category to other cost categories. However, the University believes it followed proper protocol via Federal Demonstration Partnership (FDP) authority imparted upon them whereby, the authority for re-budgeting of funding passed down to a subcontractor resided with the University. Due diligence was performed by the University prior to allowing any re-budget to occur to ensure program goals could still be met.*

- d. provide documentation to support the questioned travel, participant support and subaward costs or refund the \$243,060 questioned to NSF.**

*See Exhibit ND.1.1-2 for additional explanation.*

#### **Finding No. 4 — UND's Monitoring of Subawards Needs Improvements**

##### **Recommendation No. 4**

**We recommend that the NSF Director of the Division of Institution and Award Support address and resolve the following recommendation made to the University of Notre Dame that, for current and future NSF awards, UND fully implement its existing procedures for its subawardee monitoring to ensure that all subawardees are complying with federal requirement for all NSF funded subawards.**

*Based on a comprehensive review of our existing policies and procedures performed prior to the NSF audit late in 2010 related to sub-recipient monitoring, the University began implementing as of July 1, 2011 additional sub-recipient monitoring steps to ensure that costs incurred on funds passed to other entities are allowable, allocable and reasonable. In addition to requesting A-133 audit reports from all sub-recipients we have initiated the following processes:*

- *Completing a formal risk-assessment for all new sub-award agreements*  
*The risk assessment takes into consideration factors such as dollar amount, prior A-133 audits and findings, high risk transaction categories, location and history of prior work with the sub-recipients, etc. If the sub-recipient is assessed as high-risk additional steps are taken such as requesting the completion of a financial questionnaire and modification of the sub-award to include increased transaction monitoring and reporting steps.*
  
- *Completion of a risk assessment for all awards and increments where activity occurred for the prior fiscal year*  
*This process enables us to assess whether the sub-recipient's financial situation has changed and may warrant additional monitoring procedures, even though no additional funding has been sent.*
  
- *Audits of selected transactions*  
*Transaction detail requests have been sent to all current high-risk sub-recipients. From the information received we will review and request copies of original receipts for selected transactions. This information will be reviewed in order to support its allowability on the award. In addition, the same requests have been sent to a sample of low risk sub-recipients in order to determine if sub-award costs are allowable on this population as well.*
  
- *Additional focus on high-risk cost categories*  
*All sub-awards with high-risk cost categories (Participant Support, equipment, travel, etc.) will be subject to additional monitoring of incurred costs. Transaction support will be requested on a periodic basis to determine if costs are appropriate. Monitoring activities will focus around specific requirements such as attendance records and justification for travel including exceptions to the fly-America requirements.*

*We believe that by fully implementing these processes we will reduce the risk of unallowable costs on all sub-awards and be in compliance with the federal requirements surrounding sub-recipient monitoring.*

University of Notre Dame  
 NSF Financial Audit  
 Questioned Costs Detail and Additional Comments  
 March 12, 2012

Cost Category	Grant Description	Questioned Amount	Additional Comments/Documentation (see Key Code)
Travel	PHY-0216783	3,059.54	A
Travel	PHY-0216783	1,625.30	B
Travel	PHY-0216783	32.33	A
Travel	PHY-0216783	122.00	A
Travel	DGE-0504495	6,975.00	This expense was subsequently removed from award and is not currently considered a claimed cost to the award.
Travel	DGE-0504495	1,744.59	C
Travel	DGE-0504495	235.00	C
Travel	PHY-0715396	5,768.88	Statement from the PI, in addition to original documentation, has been provided to explain the necessity for the cost transfer. <b>See Exhibit ND.2</b>
		19,562.64	

Cost Category	Grant Description	Questioned Amount	Additional Comments/Documentation (see Key Code)
Participant Support	PHY-0715396	1,042.40	<b>See Exhibit ND.3</b>
Participant Support	PHY-0715396	1,040.00	<b>See Exhibit NDA</b>
Participant Support	PHY-0715396	24,480.00	<b>See Exhibit ND.5</b>
Participant Support	PHY-0715396	8,900.00	<b>See Exhibit ND.6</b>
Participant Support	PHY-0715396	500.00	D
Participant Support	PHY-0715396	4,782.80	Supplemental funding is explained in narrative. <b>See Exhibit NO.7</b>
Participant Support	PHY-0715396	7,840.00	Narrative (Exhibit ND.7) explains nature of student research center. Annual report documents activities; email attests to attendance during research period; documentation includes check requests. There are no sign in sheets, but verifiable evidence of participation.
Participant Support	PHY-0715396	8,800.00	<b>See Exhibit ND.10</b>
Participant Support	PHY-0715396	7,840.00	D
Participant Support	PHY-0715396	19,342.61	Expenses of the national program are explained in the narrative. <b>See Exhibit ND.7</b>
Participant Support	PHY-0715396	21,944.82	Expenses of the national program are explained in the narrative. <b>See Exhibit ND.7</b>
Participant Support	PHY-0715396	11,200.00	The shifting of approved funding from one participant support category to another is explained in narrative.

Cost Category	Grant Description	Questioned Amount	Additional Comments/Documentation (see Key Code)
Participant Support	PHY-0715396	4,416.37	See Exhibit ND.8
Participant Support	PHY-0715396	12,080.00	D.
Participant Support	PHY-0715396	2,000.00	D
Participant Support	PHY-0216783	120.00	F
Participant Support	PHY-0216783	38.75	C
Participant Support	PHY-0216783	50.25	C
Participant Support	PHY-0216783	98.14	C
Participant Support	PHY-0216783	1,239.00	A
Participant Support	PHY-0216783	550.00	A
Participant Support	PM-0715396	110.00	See Exhibit ND.3..
Participant Support	PHY-0715396	4,282.17	This travel expense was for [REDACTED] attendance at the Quarknet Advisory Board meeting. Minutes of this meeting were never produced, but Quarknet PI, [REDACTED], provided slides of his presentation. A 2008 set of Advisory Board recommendations is also provided proving [REDACTED] is a board member. See Exhibit ND.9
		142,697.31	

**University of Notre Dame**

**NSF Financial Audit**

**Questioned Costs Key Code for Exhibit ND.1**

- A Detail not available per University retention policy.
- B Receipts for some of these were provided but deemed as inadequate as the receipt had faded over time.
- C Although the University reviewed and approved supporting documentation reflecting the amount, payee, date and business purpose, an itemized receipt was not available from the submitting employee. Based on this, we believe adequate documentation was presented to ensure allowability, allocability, and reasonableness of the expense on the award. The University will continue to stress the significance of including itemized receipts going forward.
- D The University requested additional information from participation site time cards for teachers [REDACTED] and [REDACTED]. Their Payroll department had previously retrieved the student time cards but neglected to capture the teachers. They have indicated they would return to storage to retrieve them; however, we have not received them yet.
- F This expense resulted from a clerical error and will be removed from the award.



March 12, 2012

[REDACTED]  
Foxx and Company  
324 West 9th Street, Suite 700  
Cincinnati, OH 45202

Dear [REDACTED]

Enclosed is the University of Chicago's response to the draft report dated February 15, 2012 for the audit of the National Science Foundation Award Number PHY-0216783. We respond as a sub-recipient under this prime award to the University of Notre Dame and to the following draft findings:

Finding No. 2: Lack of Documentation to Support Incurred Costs

Finding No. 5: Untimeliness of Effort Certifications

Finding No. 6: Improvement Needed in Travel Report Policy to Include All Travel Activity

We strongly maintain that the documentation provided for the questioned costs in Finding No. 2, both the official documentation and the supplemental documentation gathered during the audit, fully support the reasonableness, allocability and allowability of those costs. Further, we maintain that federal regulations do not require "sign-in" sheets to support conference costs. The disallowance of those costs because of the absence of such sheets is unreasonable, particularly since we provided ample evidence of attendance.

We do not agree with Finding Nos. 5 and 6 that assert there are significant deficiencies in the internal controls of the University's effort and travel systems. Our response provides context and support for those controls.

Please allow us the opportunity to meet with you to review the evidence that supports the questioned costs. This meeting will include the University's Principal Investigator and other applicable University representatives. Feel free to contact me at [REDACTED] if you have any questions.

Sincerely,

[REDACTED]

[REDACTED], Sponsored Award Accounting

Enclosures

- (1) Audit Response
- (2) Additional Documentation

cc: [REDACTED] The University of Chicago  
[REDACTED], The University of Chicago  
[REDACTED], University of Notre Dame  
[REDACTED] Principal Investigator, The University of Chicago



**National Science Foundation Award No. PHY-0216783 The  
University of Chicago Subaward with Notre Dame Audit  
Response and Additional Documentation (Appended)**

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**March 12, 2012**

**Finding 2 – Lack of Documentation to Support Incurred Costs at the University of Chicago**

*Awardee Comments:*

*Award Purpose:*

The Joint Institute for Nuclear Astrophysics (JINA) is a collaboration between the University of Notre Dame, Michigan State University, and the University of Chicago to address a broad range of experimental, theoretical, and observational questions in nuclear astrophysics. The intent of the National Science Foundation's generous support of the Institute is described in the award abstract (see Appendix 1).

JINA organizes extensive series of workshops and exchanges of visitors and students with leading groups and institutes around the world. It is expected that University of Notre Dame, The University of Chicago, and Michigan State University will work together and financially support any workshops and conferences to meet the objectives of the award.

The Institute acts as a broad forum for a collaborative and synergistic approach to research and it includes many associated institutions of higher education, including the California Institute of Technology.

*A. Expense Documentation*

The University of Chicago (University) provided the auditors the official documentation the University required for costs selected for review. Documentation primarily included vendor invoices and the University payment authorization form. Vendor invoices included references to associated work orders and/or descriptions of services and goods provided. The Principal Investigator, [REDACTED], or his authorized designee requested and approved all invoice payments. As Principal Investigator for the award, [REDACTED] was in a position to determine if invoiced expenses were appropriate in light of the services provided and if they were in support of the NSF award's project scope.

In addition to the official transaction documentation, the University also provided supplemental vendor documentation to the auditors as requested. The additional documentation is described below in the individual questioned costs comments.

The University's documentation meets any reasonable interpretation of documentation required by OMB Circulars A-21 and A-110 and the NSF Grants Policy Statement to support the reasonableness, allocability and allowability of the questioned costs. Two decades of A-133 Audits and more than a dozen NSF award monitoring reviews and desk audits prove that invoices, purchase orders, work orders and the University payment authorization forms are adequate documentation for sponsored award expenditures.

Page 1 of 11

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**National Science Foundation Award No. PHY-0216783  
The University of Chicago Subaward with Notre Dame  
Audit Response**

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**March 12, 2012**

*C. Sign-In Sheets*

The auditors' position that a minimum standard of documentation for conference costs cannot be met without participant "sign-in sheets" is unreasonable, particularly in light of other supporting evidence of attendance that the University provided, evidence that included:

- a) Stipend disbursement control sheet initialed by stipend recipients
- b) Meeting and conference agendas
- c) Conference registration lists
- d) Hotel registration lists and hotel guest folios
- e) Security pass lists for conference facilities

The University maintains that for the two University hosted conferences at Argonne National Laboratory, the stipend disbursement control sheet listed above provided the "sign-in sheet" documentation the auditors were insisting upon. The conference participants were entitled to receive a stipend payment and were required to initial their name on the stipend disbursement control sheet when they received payment. Further, there is no federal regulation, policy or procedure requiring "sign-in sheets" to support participant support costs.

*Questioned Costs*

**D.1: Payee, Cal Tech; Purpose, Support "Nuclear Astrophysics: 1957-2007: Beyond the First 50 Years" at Cal Tech; Amount Claimed, \$5,000**

Adequate expense documentation was provided to the auditors, including a list of conference registrants provided by the Notre Dame JINA administrator.

California Institute of Technology (Cal Tech) presented Invoice #070619, dated June 19, 2007, for \$5,000 to support the above referenced conference that was scheduled for July 2007. The official documentation the University provided to the auditors included the invoice, its payment authorization, and an email dated July 27, 2007, from the University's award administrator to the Payment Services Department explaining that the invoice was for support of the Cal Tech JINA Conference. The invoice itself clearly stated the purpose as "Participant Support for the "Nuclear Astrophysics 1957-2007: Beyond the First Fifty Years' conference being held at Cal Tech in Pasadena, CA – July 23-27, 2007."

When auditors requested additional documentation, the University provided the following:

- a) A memorandum, dated December 13, 2011, from [REDACTED], the prime award Principal Investigator, confirming that the prime had requested the University to support the Cal Tech conference with \$5,000 of its award funds. Because the written memorandum was four years after the fact does not diminish the documentation that the University was instructed to support this conference with a \$5,000 of its own award funds.
- b) A list of conference registrants provided by the Notre Dame JINA Administrator.

**National Science Foundation Award No. PHY-0216783  
The University of Chicago Subaward with Notre Dame  
Audit Response**

**March 12, 2012**

**D.2: Payee, Argonne National Laboratory (ANL); Purpose, “Mass Modeling School”  
Conference held May 8-16, 2007; Amount Claimed, \$27,318**

Adequate documentation, including evidence of conference attendance, was provided to the auditors.

In February 2007, ANL prepared a Work Project Authorization (Work Order #04494-00-139) to provide conference services as follows:

- a) Student lodging
- b) Lecturer support
- c) Student support (including meals)
- d) Materials and supplies (including handouts)
- e) Conference coordinator services

ANL presented the University for payment Invoice #7252007, dated July 25, 2007, for \$27,317.77. The invoice referenced the above work order. Invoice payments are authorized by the Principal Investigator or his designee. That invoice and its payment authorization became the official documentation for the transaction.

The University provided additional documentation that included vendor (ANL) employee time records (something we would not expect the vendor to provide unless requested) hotel bills with the names of individuals for whom room expense was charged and documents that could reasonably be substituted for “sign-in sheets.”

The table below includes three columns: invoice description, amount, and additional support. The “invoice description” and “amount” appeared on the ANL invoice. The additional support column contains a description of the additional documentation the University gathered at the auditors request to support the invoice.

<b>Invoice Description</b>	<b>Amount</b>	<b>Additional Support</b>
Sodexho Lodging	\$8,623.10	Sodexho (lodging vendor) invoice, including a list of individuals housed; Individuals housed were also listed on the expected participant list that was provided.
Effort	\$5,768.00	ANL labor schedule personnel for providing conference services, including description of work provided
ICC Enterprises (computer rental)	\$1,155.00	ANL purchase order and vendor invoice for computers needed for the conference
Food Services (on-site)	\$2,427.86	Invoices from vendors for conference meals. [Note: When collecting information for the audit, it was discovered that unallowable charges totaling \$205.40 were included in this bill. Notre Dame was refunded for these costs. See Appendix 2 for the revised Schedule of Costs.]
Driving and Rigging	\$4,357.00	Hours detail for ANL personnel providing services

**National Science Foundation Award No. PHY-0216783**  
**The University of Chicago Subaward with Notre Dame**  
**Audit Response**

**March 12, 2012**

Invoice Description	Amount	Additional Support
IPD Media	[REDACTED]	Hours detail for individuals providing photography services
Non-Purch Order/SC Services	[REDACTED]	<p>ANL's internal request for petty cash to pay [REDACTED] to each of 21 expected participants identified by the University; ANL's petty cash request listed the individuals who were to receive the payment. The list was later used as a stipend disbursement and receipt control sheet. When individuals received their stipend, they initialed their name as it appeared on the control sheet.</p> <p>The copy of the ANL internal request for petty cash was originally provided to the auditors without initials from the participants. The purpose of providing this document was to provide additional support for the purpose of the [REDACTED] invoice item, showing the auditors the list of individuals that were to receive the stipend.</p> <p>As the auditors continued to request "sign-in sheets" and additional supporting documentation for invoice payments, the University pursued ANL to provide documentation of the participants' actual receipt of their stipend payments. In December 2011, ANL was able to provide a copy of the request for petty cash that had the stipend recipients initialed when they received their [REDACTED] stipend. Many of these participants utilized housing and are listed on the above mentioned Sodexo invoice detail.</p> <p>During the course of the audit, it was discovered that ANL incorrectly invoiced the University \$400 for two participants who did not receive a stipend. The University refunded the \$400 to Notre Dame. See Appendix 2 for the revised Schedule of Costs.</p>
Food services (off-site)	[REDACTED]	Receipts for meals with speakers; These costs were determined to be unallowable participant support costs and Notre Dame was refunded for these costs. See Appendix 2 for the revised Schedule of Costs.
<b>Total invoice</b>	<b>\$27,317.77</b>	Conference agenda and Principal Investigator and vendor responses to the auditor's detailed list of questions received on December 9, 2011

**National Science Foundation Award No. PHY-0216783  
The University of Chicago Subaward with Notre Dame  
Audit Response**

**March 12, 2012**

**D.3: Payee, Notre Dame; Purpose, "Frontiers Conference," held Aug 19-21, 2007;  
Amount Claimed, \$18,509**

Adequate documentation, including evidence of conference attendance, was provided to the auditors.

Notre Dame presented to the University for payment Invoice #41556A, dated November 6, 2007, for \$18,509. The invoice was for the University's designated share of expenses associated with the above-referenced conference. Invoice payments are authorized by the Principal Investigator or his designee. That invoice and its payment authorization became the official documentation for the transaction.

The table below shows the information that appeared on the invoice and the additional support the University collected at the request of the auditors.

<b>Invoice Description</b>	<b>Amount</b>	<b>Additional Support</b>
Photocopies	\$48.20	
Morris Inn Lodging	\$7,514.73	List of 33 conference registrants that Notre Dame expected would need lodging accommodations; The final number of accommodations that were needed was 20. Copies of hotel folios for the 20 were given to the auditors.
Reception Refreshments	\$2,088.09	Vendor invoice itemizing charges
Refreshments 8/20	\$1,112.00	Vendor invoice itemizing charges
Refreshments 8/21	\$972.50	Vendor invoice itemizing charges
Luncheon 8/20	\$1,586.23	Vendor invoice itemizing charges
Luncheon 8/21	\$1,418.27	Vendor invoice itemizing charges
Dinner 8/20	\$1,984.03	Vendor invoice itemizing charges
Center administration and coordination fees (\$7 x 3 days x 85 actual attendees)	\$1,785.00	Email dated December 5, 2011 explaining Notre Dame's \$7 rate
<b>Total invoice</b>	<b>\$18,509.05</b>	List of 84 expected registrants from Notre Dame (Appendix 3) to support the meal expenses and fees

**National Science Foundation Award No. PHY-0216783  
The University of Chicago Subaward with Notre Dame  
Audit Response**

**March 12, 2012**

**D.4: Payee, Argonne; Purpose, “Nuclear Astrophysics of the Cosmos 2008”, July 22-26, 2008; Amount Claimed \$39,135**

Adequate documentation, including evidence of conference attendance, was provided to the auditors.

In April 2008, ANL prepared a Work Project Authorization (Work Order #04546-00-439) to provide conference services as follows:

- a) Student lodging
- b) Lecturer support
- c) Student support (including meals)
- d) Materials and supplies (including handouts)
- e) Conference coordinator services
- f) Transportation to the Nuclear Astrophysics of the Cosmos symposium

ANL submitted three invoices for payment. Invoice payments are authorized by the Principal Investigator or his designee. The invoices and their payment authorization became the official documentation record for the expense.

**D.4.1: Invoice Date and Number, 9/8/2008, 0454C1139: Amount claimed: \$21,891 of \$27,087**

This ANL invoice was the first of three for conference expenses. ANL invoiced for conference services and fees, conference meals, airfare, and media charges. The official documentation provided to the auditors included the invoice (with item descriptions and amounts as show in the below table) and its payment authorization. The invoice detail shown in the table below was derived from ANL expense ledgers that provided the detail for the \$21,891 of invoiced expenses. Additional supporting documentation provided to the auditors is also described in the below table.

<b>Item Description</b>	<b>Amount</b>	<b>Additional Support</b>
Services provided by ANL personnel	\$10,304.00	ANL labor schedule for personnel expenses and an explanation of how amount was derived based on hours worked
Airfare for three speakers	\$3,809.42	Flight itineraries and receipts for speakers listed on conference agenda
Cafeteria charges	\$6,354.20	Original cafeteria request for each day of the conference; detailed invoice for each of the meals for each conference day (7/22-7/26)
Driving and rigging services	\$4,250.21	Hours detail for individuals providing these services for transporting attendees and conference equipment to/from ANL locations; bus schedule for conference

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**March 12, 2012**

<b>Item Description</b>	<b>Amount</b>	<b>Additional Support</b>
Media services	\$773.60	Hours detail for individuals providing photography and printing services
Stipend payment refunds	██████████	Stipend disbursement control sheet that was initialed by participants receiving stipend payments; This sheet was marked with three “no-shows” (██████████) providing the detail for this refund.  Invoice number 0454C1139-03 (D.4.3 below) included the original request of \$9,600 for the expected 48 participants. [Note: ANL invoiced the stipend transactions out of sequence: the refund was invoiced first while the expected \$9,600 total stipend expense appeared on the third invoice.]
ANL contribution	(\$3,000)	ANL's expected funding contribution to the conference as shown on the work-order
<b>Total invoice</b>	<b>\$21,891.43</b>	Conference agenda, initial list of conference applicants, Principal Investigator and vendor responses to the auditor's detailed list of questions received on December 9, 2011

This invoice did not claim the \$9,600 cash stipend expense noted by the auditors in their draft audit findings. ANL invoiced that expense to the University in their March 31, 2009, invoice number 0454C1139-03 (D.4.3 below).

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Audit Response**

**March 12, 2012**

**D.4.2: Invoice Date and Number, 11/21/2008, 0454C1139-02; Amount claimed: \$15,423**

This invoice was for the conference's housing costs. The official documentation provided to the auditors included the invoice and its payment authorization.

The auditors were provided a list of the 29 individuals who were housed and a lodging folio for each. Additional documentation provided included Sodexo's invoice to ANL for lodging, which listed conference speakers and registrants, and ANL's payment request for the Sodexo invoice.

Attached is additional evidence of conference attendance. Appendix 4 includes hotel registration cards signed by each participant utilizing housing for the conference and Appendix 5 contains a list of gate passes issued to conference participants entering the secured Argonne National Laboratory Campus.

**D.4.3: Invoice Date and Number, 3/31/2009, 0454C1139-03; Amount claimed: \$1,821 of \$14,722**

This was the final conference invoice. The University provided the auditors with the official documentation for the transaction that included the invoice and its payment authorization representing the remaining balance of expenses for the conference. As shown in the table below, the auditors were provided a schedule of costs by category for the services that were being invoiced. Also appearing in the table below is a description of additional supporting documentation that was provided to the auditors. Note that for stipend expenses, cash receipts were provided in the form of an initialed stipend disbursement control sheet.

<b>Cost Category</b>	<b>Amount</b>	<b>Additional Support</b>
Ground Transportation	\$2,141.80	Invoice and description of services from Pontarelli Group Charter for livery service to next JINA conference starting July 27; December 13, 2011 memo from prime recipient, Notre Dame, to confirm that UC was asked to provide this transportation
Speaker Honorariums	\$2,000	ANL Honorarium Vouchers for 4 speakers listed on conference agenda
Speaker Travel Expenses	\$1,087.67	Expense reports and supporting documentation (including receipts) for speaker travel expenses
Stipends	\$9,600	ANL internal request for petty cash to pay \$200 to 48 expected participants identified by the University. ANL's petty cash request listed the individuals who were to receive the payment. The

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Audit Response**

**March 12, 2012**

<b>Cost Category</b>	<b>Amount</b>	<b>Additional Support</b>
		list was later used as a stipend disbursement control sheet. When individuals received their stipend, they initialed their name as it appeared on the control sheet.  [Note: ANL did credit the University for ██████ in stipends that were not distributed to three individuals who did not attend the conference. This credit is reflected on invoice number 0454C1139 (D.4.1 above)]
Effort Adjustment	(\$107)	
<b>Total invoice</b>	<b>\$14,722.47</b>	Principal Investigator and vendor responses to the auditors' detailed list of questions received on December 9, 2011

**D.5: Payee, Fairfield Inn; Purpose, JINA Advisory Committee Meeting, 3/24/2006;  
Amount claimed, \$3,750**

The University paid the hotel deposit for a block of rooms housing out-of-town advisory committee members scheduled to attend the March 2006 meeting. The \$3,750 deposit was a requirement under a hotel contract. The official documentation for the expense provided to the auditors was the hotel contract and the University payment authorization.

Additional documentation provided to the auditors included the final hotel invoice for the actual nights stayed, a list of individuals scheduled to attend the meeting, and a hotel provided list of individual reservations that tied to the number of nights referenced on the invoice.

**Finding No. 5 – Untimeliness of Effort Certifications at the University of Chicago**

The University disagrees that its effort certifications are untimely.

The University's fiscal year ends June 30. Its payroll distribution (effort reporting) system produces Annual Certification Statements (ACS) after the October payroll processing. The October processing date is because departments have until three months after an original monthly payroll distribution to make an adjustment. Therefore, payroll distribution adjustments for June can be submitted through September 30. June adjustments submitted after the September payroll accounting, which takes place in mid-September, are processed in the October payroll accounting. After the October payroll accounting is completed, the ACSs for the previous fiscal year are produced and distributed during the first week of November. Certified ACSs are due back by Friday of the first full business week of the new calendar year. Based upon the ACS

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**March 12, 2012**

timeline, ACSs reviewed by the auditors were returned within the following days of their distribution:

<b>Days after October 31</b>	<b>Number of ACSs</b>
1 to 30	11
31 to 61	11
62 to 92	0
93 to 103	1

The one ACS that was returned 103 days after the end of October was for a faculty member who was working away from campus in Washington D.C.

Monthly payroll distributions are reviewed throughout the year. Timely adjustments and corrections are made within three months of the original distribution. Adjustments not made within three months must be accompanied by an explanation as to why the adjustment is tardy.

All of the award's ACSs, with one exception explained above, were returned timely. In addition, there was no indication by the auditors that any of the award's payroll distribution adjustments were untimely.

**Finding No. 6 – Improvement Needed in Travel Report Policy at the University of Chicago to Include All Travel Activity**

The University disagrees that there any significant deficiencies in its travel policies and procedures.

The University's Financial Policy #1202: Travel Policies and Procedures states that reimbursements provided to travelers (faculty, staff, students, and guests) must be for work-related expenses only (Appendix 6). The traveler must provide a statement on the travel reimbursement request substantiating the amount, time and business purpose of the travel expenses. It is the responsibility of the person authorizing the travel reimbursement to obtain the knowledge necessary to attest that the travel expense is reasonable, allocable and allowable. If a traveler's travel dates extended beyond what was reasonable for the trip's business purpose, it would be the responsibility of the person authorizing the trip's travel expenses to ensure that unnecessary travel expenses were not reimbursed.

In the cases cited, the business purpose did not specifically address the additional days of travel, but as the auditors noted, subsequent documentation was provided to support the additional days of travel, lending support to the University's contention that its policies and procedures are effective.

# MICHIGAN STATE

UNIVERSITY March

8, 2012

University of Notre Dame  
Attn: [REDACTED]  
Research and Sponsored Programs Accounting  
830 Grace Hall  
Notre Dame, IN 46556

RE: Foxx and Company Draft Audit Report, NSF Prime Award PHY-0216783-006,  
Subaward No. 200372

Dear [REDACTED],

Attached is a point-by-point response to the draft audit report received February 15, 2012 from Foxx and Company, related to NSF prime award PHY-0216783-006 and MSU Subaward No. 200372.



MSU believes that reasonable documentation has been provided to Foxx and Company for all items listed in the draft audit report. As you know, MSU has a long and successful history of working with NSF and Notre Dame, and we believe you will agree that the items listed in the draft report did in fact benefit the project and are therefore, appropriately charged to the project.

MSU takes pride in our record of never having had a material financial audit disallowance. Although the draft audit report from Foxx & Company states that MSU has internal control weaknesses, MSU has consistently received A-133 annual audit reports without deficiencies in internal control. MSU expended approximately \$280M in federal grants and contracts in 2011, of which approximately 28% were from NSF. Given the size of our research enterprise, we trust that you can appreciate our reluctance to change procedures without reasonable statistical evidence of an internal control problem.

OFFICE OF  
CONTRACT AND GRANT  
ADMINISTRATION

Michigan State University  
301 Administration Building  
East Lansing, Michigan  
48824-1046

PH: [REDACTED]  
web  
[www.cga.msu.edu](http://www.cga.msu.edu)

If you or members of your staff have additional questions or require additional information, please contact me at [REDACTED], Assistant Director, Contract & Grant Administration at [REDACTED].

[REDACTED] sincerely,  
[REDACTED]  
[REDACTED]  
[REDACTED] and [REDACTED]

Point-by-point response to the draft audit report issued by Foxx & Company related to costs claimed under the University of Notre Dame Subaward No. 200372 under NSF Award No. PHY-0216783.

MSU believes that adequate documentation was provided for costs claimed but Foxx & Company listed those costs as unsupported or unallowable, totaling \$198,020.19. Although the draft report did not include the detailed transaction list of which costs are being questioned, the detailed transaction list was subsequently provided by Notre Dame and is incorporated in this response as **Exhibit MSU.1**. MSU has included both support documentation that was previously submitted to Foxx & Company, and additional support documentation for all costs identified in the detailed transaction list. Foxx & Company's draft audit report references NSF Award and Administration Guide Section V (B).8.b. and NSF Grant Policy Manual 618.1 (b). MSU has provided evidence to demonstrate that expenses were reasonable and consistent with these guidelines as well as MSU's business practices, as identified in MSU's Manual of Business Procedures. Further, MSU has provided substantial evidence to support that the costs identified by Foxx & Company as unallowable alcoholic beverages were not for alcoholic beverages and that any alcohol was charged to an internal, unrestricted MSU departmental account.

MSU believes that the documentation provided hereto further supports that the transactions identified by Foxx and Company were allowable, reasonable, and allocable to the participant support costs and travel costs, appropriate MSU business procedures were followed and that applicable NSF rules and regulations were observed.

**Item A: *Lack of Documentation for Participant Support Costs***

**MSU Response:** Please see **Exhibit MSU.A.1.0** for a summary of support documentation included which relates to the participant support costs identified in the detailed transaction list. Foxx & Company has noted in their draft report that MSU was unable to provide participant lists as support documentation for expenses. However, MSU was able to provide participant lists for all conferences and workshops to Foxx & Company; the participant lists are again provided as part of the support documentation. Foxx & Company has noted that sign-in sheets are required documentation to support evidence of participation and attendance of conference events. MSU acknowledges that using sign-in sheets is an accepted practice for documenting attendance however there are no written Federal requirements that require sign-in sheets as the *only* acceptable form of documentation of attendance. As noted in the Government Auditing Standards (<http://www.oao.00v/assets/590/587281.pdf>), section titled "Obtaining Sufficient, Appropriate Evidence", part 6.58 "In assessing evidence, auditors should evaluate whether evidence taken as a whole is sufficient and appropriate for addressing the audit objectives and supporting findings and conclusions." MSU has an operational procedure, documented in our Manual of Business Procedures and incorporated by reference throughout the Exhibits, which was used to ensure that all charges for travel and participant support costs were allowable, allocable, and in support of the project objectives. In assessing evidence of attendance, the support documentation provided, taken as a whole, is viewed by MSU as sufficient and appropriate to support the questioned costs identified by Foxx & Company in the amount of \$147,780.37.

**Item B:** *Purchase of equipment with Participant Support Funds without prior NSF approval*

**MSU Response:** The Federal definition of equipment, as defined in OMB Circular A-21 Sec J, 18 (a) (2) and incorporated by reference as part of NSF Award No. PHY-0216783 and Subaward No. 200372 is as follows: "Equipment means an article of nonexpendable, tangible personal property having a useful life of more than one year and an acquisition cost which equals or exceeds the lesser of the capitalization level established by the institution for financial statement purposes, or \$5000". The definition of equipment according to OMB Circular A-110 Subpart A, Sec 2 (l), also incorporated by reference as part of the NSF Award and Subaward states: "Equipment means tangible nonexpendable personal property including exempt property charged directly to the award having a useful life of more than one year and an acquisition cost of \$5000 or more per unit."

Further, the NSF Grant Policy Manual, part 612.2:

[http://www.nsf.gov/pubs/manuals/gpm05\\_131/gpm6lsp#612.2](http://www.nsf.gov/pubs/manuals/gpm05_131/gpm6lsp#612.2) which applies to all NSF grants or amendments thereto, define equipment as that which is represented in OMB Circulars A-110 and A-21. All six (6) transactions identified as "equipment" in the detailed transactions list fail to meet the Federal definition of equipment. One of the costs questioned by Foxx & Company as equipment was actually a printing expense for necessary workshop materials, Please see **Exhibit MSU.B.1** for a summary of support documentation included for the expenses identified in the detailed transactions list as equipment *as well as a memo from Notre Dame for these expenses in support of the outreach program.*

**Item C:** *Unallowable costs claimed as part of Participant Support Costs*

**MSU Response:** Please see **Exhibit MSU.C.1.0** for a summary of support documentation included as support that alcoholic beverages were not included as part of the invoice to Notre Dame but rather that the term was simply standard wording by the catering company, who confirmed that the expense was for cups and supplies needed for soda and water. Further, MSU has provided the documentation that supports that alcohol was charged to an internal, unrestricted MSU departmental account.

**Item D:** *Early arrivals and late departures at conferences and workshops*

**MSU Response:** Please see **Exhibit MS11111** for a summary of support documentation included for the early arrivals and late departures. MSU has a travel policy in place to ensure that Federal as well as University funds are used prudently and spent effectively in support of project objectives. Some participants that stayed extra nights were part of the JINA projects collaboration efforts for future JINA related work, The amount that was subsequently charged to the Notre Dame - MSU Subaward as a result of the extra nights to participate on project related objectives is significantly less than the amount that would have been charged had the participants returned on a separate roundtrip airfare to assist the JINA collaborators. In some cases, the extra night was to ensure that necessary international participants were able to attend the workshops as it is widely understood that including a Saturday night stay as part of travel greatly reduces the cost of airfare.

**Item E: *Travel costs unsupported***

**MSU Response:** Please see [Exhibit MSU.E.1](#) for a summary of support documentation included for proof of payment to travelers and travel agents\_ MSU acknowledges that cancelled checks are an accepted practice for documenting payment however there are no written Federal requirements that identify cancelled checks as the *only* acceptable form of documentation of payment, nor that checks are the only acceptable form of payment. MSU has an operational procedure, which was used to ensure that the payments to travelers, travel agents and vendors were processed and received by the recipients in the form of direct deposits, checks, wires, and automatic payments. The operational procedure for reserving travel includes having a corporate credit card for airfare expenses that is charged directly by the travel agency and is paid monthly by way of automatic payment deduction from MSU's bank account. Therefore, on a monthly basis, statements are received by MSU's Travel Office and reconciled to all travel flights reserved during the month. Similar to standard credit cards, once an expense has been charged to the travel corporate credit card, payment is issued to the travel agency for the travel expense. Payments are made to the corporate credit card by way of an automatic monthly deduction from MSU's bank account. Foxx & Company has calculated the amount of \$1,636.00 for room charges of non-MSU employees. This amount is incorrect: the actual cost for the nonMSU employee room charges in question was \$1,517.20 and is detailed as part of the support documentation. These rooms were for volunteers that were necessary for the success of the conference as described in the PI letter of justification, included as [Exhibit MSU.E.2](#). In assessing evidence of payment and allowability, the support documentation provided, taken as a whole, is viewed by MSU as sufficient and appropriate to support the questioned costs identified by Foxx & Company in the amount of \$29,758.88.

**ATTACHMENT B – STATUS OF PRIOR  
REVIEW FINDINGS**

**STATUS OF PRIOR REVIEW FINDINGS**

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A previous NSF 2006 Desk Review, a NSF 2009 Site Visit, and the FYs 2006 and 2007 OMB Circular A-133 audit reports identified concerns. We performed procedures to determine whether these issues had been resolved.

NSF's 2006 Desk Review and 2009 site visit.

As a result of NSF's 2006 desk review and 2009 site visit, NSF recommended that UND develop policies and procedures for the preparation, submission, and reconciliation of the Federal Financial Report. According to the 2009 site visit report, UND had implemented all the recommended measures that were identified by the desk review conducted in October 2006.

Also, the site visit noted that UND had revised its policies for determining the allowability, allocability, and reasonableness of expenditures charged to NSF awards. However, the site visit team did not perform any transaction testing to determine the effectiveness of the changes to the Allowability of Costs policy and the Time and Effort Reporting policy. During our review we did not find any problems with the Time and Effort reporting for the selections we made for our audit.

OMB Circular A-133 Audit

The FYs 2006 and 2007 OMB Circular A-133 audit reports for the University of Notre Dame identified significant deficiencies in internal control over financial and grant management. Specifically, the audits disclosed repeated internal control findings with payroll controls and cost transfers. The A-133 auditors found instances where UND did not have documentation to support the labor charges to federal grants or proper approval for the expenditures. Also, there were instances of untimely and unsupported cost transfers. However, according to the FY 2008 Single Audit these issues were resolved. Also, there were no findings reported in the FY 2009 and 2010 Single Audit reports. In addition, our audit of transactions did not find these problems present.

**ATTACHMENT C – EXIT CONFERENCE**

**EXIT CONFERENCE**

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We conducted a field exit conference on November 17, 2011 with UND. We discussed preliminary findings and recommendations noted during the audit. Representing UND were:

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<b>Name</b>	<b>Title</b>
Ms. [REDACTED]	Assistant Controller Research Sponsored Programs Accounting
Mr. [REDACTED]	Assistant Director Research Sponsored Programs Accounting

Representing the National Science Foundation – Office of Inspector General was:

---

<b>Name</b>	<b>Title</b>
[REDACTED]	Audit Manager

Representing Foxx & Company were:

---

<b>Name</b>	<b>Title</b>
[REDACTED]	Partner
[REDACTED]	Manager
[REDACTED]	Senior Auditor
[REDACTED]	Senior Auditor

HOW TO CONTACT  
THE OFFICE OF INSPECTOR GENERAL

*Internet*

[www.oig.nsf.gov](http://www.oig.nsf.gov)

*Email Hotline*

[oig@nsf.gov](mailto:oig@nsf.gov)

*Telephone*

703-292-7100

Toll-free

1-800-428-2189

**Fax**

703-292-9158

**Mail**

Office of Inspector General  
National Science Foundation  
4201 Wilson Blvd., Suite 1135  
Arlington, VA 22230