

Committee on Science, Space, and Technology

U.S. House of Representatives

Witness Disclosure Requirement - "Truth in Testimony"
Required by House Rule XI, Clause 2(g)(5)

1. Your Name: DR. ETHAN J. SCHREIER		
2. Are you testifying on behalf of the Federal, or a State or local government entity?	Yes	No X
3. Are you testifying on behalf of an entity that is not a government entity?	Yes X	No
4. Other than yourself, please list which entity or entities you are representing: ASSOCIATED UNIVERSITIES, INC. NATIONAL RADIO ASTRONOMY OBSERVATORY		
5. Please list any Federal grants or contracts (including subgrants or subcontracts) that you or the entity you represent have received on or after October 1, 2008: PLEASE SEE ATTACHED 'SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS' YEARS ENDED SEPT. 30, 2009 - FEB. 28, 2012		
6. If your answer to the question in item 3 in this form is "yes," please describe your position or representational capacity with the entity(ies) you are representing: PRESIDENT, ASSOCIATED UNIVERSITIES, INC.		
7. If your answer to the question in item 3 is "yes," do any of the entities disclosed in item 4 have parent organizations, subsidiaries, or partnerships that you are not representing in your testimony? VIRTUAL ASTRONOMICAL OBSERVATORY, LLC	Yes X	No
8. If the answer to the question in item 3 is "yes," please list any Federal grants or contracts (including subgrants or subcontracts) that were received by the entities listed under the question in item 4 on or after October 1, 2008, that exceed 10 percent of the revenue of the entities in the year received, including the source and amount of each grant or contract to be listed: NATIONAL SCIENCE FOUNDATION: OPERATIONS OF THE NATIONAL RADIO ASTRONOMY OBSERVATORY; AWARD # AST-0223851 MANAGEMENT AND OPERATIONS OF THE NATIONAL RADIO ASTRONOMY OBSERVATORY; AWARD # AST-0836064		

I certify that the above information is true and correct.

Signature: _____

Date: 13 April 2012

Associated Universities, Inc.

Schedule of Expenditures of Federal Awards

Year Ended September 30, 2009

Federal Grantor/Pass-Through Grantor/Program/Grant Name	CFDA Number	Award Number	Pass-through grantor's number	Federal Expenditures
National Science Foundation:				
National Science Foundation Cooperative Agreement - National Radio Astronomy Observatory	47.049	AST-0223851	N/A	\$ 148,113,878
Pass-through from -				
Johns Hopkins University:				
- Aerospace Education Services Program	43.001	NNN06AA01C	946695	23,360
- Mathematical and Physical Sciences	47.049	AST-0122449	2000009788	35,955
- Aerospace Education Services Program	43.001	NNN06AA01C	946695	5,396
Subtotal Johns Hopkins University				<u>64,711</u>
Total National Science Foundation				<u>148,178,589</u>
Department of Defense: United States Air Force:				
Pass-through from - MIT Lincoln Laboratory	12.000	FA8721-05-C-0002	33058879	<u>626,411</u>
Total Department of Defense: United States Air Force				<u>626,411</u>
National Aeronautics and Space Administration:				
National Aeronautics and Space Administration - Technology Transfer	43.002	NNG07EF451	AST-02236933	5,527
Pass-through from -				
University of California - Santa Cruz				
- Aerospace Education Services Program	43.001	NNX08AV60G	S0182248	19,263
Smithsonian Astrophysical Observatory				
- Aerospace Education Services Program	43.001	NAS8-03060	AR6-7006X	5,355
Jet Propulsion Laboratory:				
- Technology Transfer	43.002	NM0710076	1364752	125,000
- Technology Transfer	43.002	NM0710076	1375566	52,285
- Technology Transfer	43.002	NM0710076	1374189	10,000
- Technology Transfer	43.002	NM0710076	1350497	496,160
- Technology Transfer	43.002	NM0710076	1378237	10,000
- Technology Transfer	43.002	NM0710076	1379018	116,323
- Technology Transfer	43.002	NM0710076	1379053	8,360
- Technology Transfer	43.002	NM0710076	1367913	100,000
- Technology Transfer	43.002	NM0710076	1386969	46,310
- Technology Transfer	43.002	NM0710076	1387014	146,280
Subtotal Jet Propulsion Laboratory				<u>1,110,718</u>
Total National Aeronautics and Space Administration				<u>1,140,863</u>
Total Expenditures of Federal Awards				<u>\$ 149,945,863</u>

See accompanying notes to the schedule of expenditures of federal awards.

Associated Universities, Inc.

Schedule of Expenditures of Federal Awards

Year Ended September 30, 2010

Federal Grantor/Pass-Through Grantor/Program/Grant Name	CFDA Number	Award Number	Pass-through grantor's number	Federal Expenditures
National Science Foundation:				
National Science Foundation Cooperative Agreement: Operations of the National Radio Astronomy Observatory	47.049	AST-0223851	N/A	\$ 82,800,924
Management and Operations of the National Radio Astronomy Observatory	47.049	AST-0836064	N/A	48,754,042
ARRA - Infrastructure Improvements at the National Radio Astronomy Observatory	ARRA - 47.049	AST-0948120	N/A	2,539,859
The Pulsar Search Collaboratory	47.076	DRL-0737641	N/A	187,583
Intergovernment Personnel Act	47.070	AST-1027064	N/A	128,587
US/China Bi-Lateral Workshop	47.079	OISE-0819073	N/A	14,944
U.S. Participation in the Academia-Sinica-Hosted Millimeter Wave Workshop	47.079	OISE-0929121	N/A	5,139
Pass-through from - University of California Berkeley	47.070	AST-0804508	N/A	1,863
University of Virginia Precision Array to Probe the Epoch of Reionization (PAPER)	47.070	AST-0804523	PO #825560	11,952
Precision Array to Probe the Epoch of Reionization (PAPER)	47.070	AST-0804523	PO #964640	1,940
Subtotal University Of Virginia				<u>13,892</u>
University of North Carolina Major Research Instrumentation - Skynet Robotic Network - ARRA	ARRA - 47.082	AST-0959447	5-54872	15,258
Total National Science Foundation				<u>134,462,091</u>
Department of Defense: United States Air Force:				
Pass-through from - MIT Lincoln Laboratory	12.000	FA8721-05-C-0002	33058879	797,053
Total Department of Defense: United States Air Force				<u>797,053</u>
National Aeronautics and Space Administration:				
Models Across Cosmological Times - XMM Newton	43.002	NNG08EO37P	4200267863	45,404
Pass-through from - University of California - Santa Cruz Gamma-ray Large Area Space Telescope - Pulsar Searches	43.001	NNX08AV60G	S0182248	(792)
University of Colorado Lunar University Node Astro Research	43.002	NNA09DB30A	0000070044	58,802
Space Telescope Science Institute What Drives the Conversion of Gas to Stars in Galaxies	43.002	NAS5-26555	HST-HF-51258.01-A	104,155
Hunting for Optical Companions to Binary MSPS in Globular Clusters	43.002	NAS5-26555	HST-GO-11615.01-A	12,379
Subtotal Space Telescope Science Institute				<u>116,534</u>
Smithsonian Astrophysical Observatory The Spin and Magnetic Moment of Neutron Star in Cassiopeia A	43.001	NAS8-03060	GO9-0069B	26,443
Jet Propulsion Laboratory Impact of Active Galactic Nucleus (AGN) on Galaxy Evolution	43.002	NM0710076	1289215	(789)
Direct Diagnostics Triggered Star Formation	43.002	NM0710076	1350497	11,810
Spitzer Infrared Spectrograph (IRS) Observations of Masive High - z Galaxies	43.002	NM0710076	1364752	4,054
The Spitzer Extragalactic Representative Volume Survey	43.002	NM0710076	1367913	90,379
The Spitzer Survey of Stellar Structure in Galaxies	43.002	NM0710076	1374189	10,692
Mapping Molecular Hydrogen Excitation and Mass in Nearby Galaxies	43.002	NM0710076	1375566	11,155
First Clues to Star Formation in the High Redshift Tail of Submill. Galaxies	43.002	NM0710076	1378237	4,506
Spectroscopic Confirmation of two candidate Z-8 Galaxies	43.002	NM0710076	1379018	19,224
Great Observatories Origins Deep Survey	43.002	NM0710076	1386969	13,622
Infrared Spectrogrash Observation of Four Exceptionally Red 24 Micron	43.002	NM0710076	1399942	1,521
Subtotal Jet Propulsion Laboratory				<u>166,174</u>
Johns Hopkins University John Hopkins University Chandrayaan	43.001	NNN06AA01C	946695	34,891
MIT Lincoln Labs Lunar Array Raodio Cosmology	43.000	NNX08AM30G	5710002441	21,970
West Virginia Space Grant Consortium Search for Extra-Terrestrial Intelligence - From Project Ozma to the Enterp	43.001	NNX10AK62H	5006466	10,000
West Virginia University Research Consortium Partnership for International Research and Education (PIRE)	47.079	OISE-0968296	09-547-NRAO	6,903
Total National Aeronautics and Space Administration				<u>486,329</u>
Total Expenditures of Federal Awards (Research and Development Cluster)				<u>\$ 135,745,473</u>

See accompanying notes to the schedule of expenditures of federal awards.

Associated Universities, Inc.

Schedule of Expenditures of Federal Awards

Year Ended September 30, 2011

Federal Grantor/Pass-Through Grantor/Program/Grant Name	CFDA Number	Award Number	Pass-through grantor's number	Federal Expenditures
National Science Foundation:				
National Science Foundation Cooperative Agreement: Operations of the National Radio Astronomy Observatory Management and Operations of the National Radio Astronomy Observatory	47.049	AST-0223851	N/A	\$ 60,779,131
ARRA - Infrastructure Improvements at the National Radio Astronomy Observatory	47.049	AST-0836064	N/A	71,760,208
ARRA - Major Research Instrumentation Recording Media The Pulsar Search Collaboratory	ARRA - 47.082	AST-0948120	N/A	1,973,945
Intergovernment Personnel Act	ARRA - 47.082	AST-0959808	N/A	487,821
Innovations in Data-Intensive Astronomy Workshop	47.076	DRL-0737641	N/A	211,351
NAIC/NRAO Sixth School on Single Dish Radio Astronomy	47.070	AST-1027064	N/A	157,677
Participation in the Academia-Sinica-Hosted Millimeter Wave Workshop	47.080	OCI-1135316	N/A	24,378
	47.079	AST-1128760	N/A	21,183
	47.079	OISE-0929121	N/A	8,260
Pass-through from -				
Virtual Astronomical Observatory AUI VAO NRAO Support - Management and Operations of the Virtual Astronomical Observatory	47.049	AST-0834235	#VAO_2010_4_(1)	313,983
AUI VAO Support - Management and Operations of the Virtual Astronomical Observatory	47.049	AST-0834235	#VAO_2010_1_(1)	92,275
Subtotal Virtual Astronomical Observatory				<u>406,258</u>
Regents of the University of California Advanced Multibeam Spectrometer for the Green Bank Telescope	47.049	AST-1006509	00007521	35,066
University of Virginia Precision Array to Probe the Epoch of Reionization (PAPER)	47.070	AST-0804523	PO #825560	1,365
Precision Array to Probe the Epoch of Reionization (PAPER)	47.070	AST-0804523	PO #964640	39,053
Subtotal University Of Virginia				<u>40,418</u>
University of North Carolina ARRA - Major Research Instrumentation Skynet Robotic Network	ARRA - 47.082	AST-0959447	5-54872	204,384
Cornell University Low Noise Amplifiers for Quasi-Self Complementary Broadband Feed	47.049	AST-0431486	46514-9274	34,828
Total National Science Foundation				<u>136,144,908</u>
National Aeronautics and Space Administration:				
Studies of the Radi Afterglows of Gamma-Ray Bursts in the Era of the Expanded Very Large Array (EVLA)	43.001	NNX10A129G	N/A	38,004
Models Across Cosmological Times - XMM Newton	43.002	NNG08EO37P	N/A	(10,514)
Pass-through from -				
University of Colorado Lunar University Node Astro Research Exploring the Cosmos from the Moon	43.002	NNA09DB30A	70044	109,804
Space Telescope Science Institute What Drives the Conversion of Gas to Stars in Galaxies	43.001	NAS5-26555	HST-HF-51258.01-A	36,904
Hunting for Optical Companions to Binary MSPS in Globular Clusters	43.001	NAS5-26555	HST-GO-11615.01-A	25,735
Formation and Structure of Proto-Planetary Disks Around the Youngest Proto Stars	43.001	NAS5-26555	HST-HF-51300.01-A	9,559
Subtotal Space Telescope Science Institute				<u>72,198</u>
Smithsonian Astrophysical Observatory The Spin and Magnetic Moment of Neutron Star in Cassiopeia A	43.001	NAS8-03060	G09-0069B	2,455
Probing the Early Evolution of Galaxies and Massive Black Holes	43.001	NAS8-03060	PFI-120086	22,419
Subtotal Smithsonian Astrophysical Observatory				<u>24,874</u>
Jet Propulsion Laboratory Direct Diagnostics Triggered Star Formation	43.001	NM0710076	1350497	10,839
Spitzer Infrared Spectrograph (IRS) Observations of Masive High - z Galaxies	43.001	NM0710076	1364752	120,277
The Spitzer Extragalactic Representative Volume Survey	43.001	NM0710076	1367913	27,069
The Spitzer Survey of Stellar Structure in Galaxies	43.001	NM0710076	1374189	85,128
A Complete Census of Star-formation/AGN Activity in A z=0.14 'Protocluster'	43.001	NM0710076	1375100	9,644
Mapping Molecular Hydrogen Excitation and Mass in Nearby Galaxies	43.001	NM0710076	1375566	58,178
Obsuration on Luminous AGNs	43.001	NM0710076	1379053	7,270
Spectroscopic Confirmation of Two Candidate Z-8 Galaxies	43.001	NM0710076	1379018	37,975
Great Observatories Origins Deep Survey	43.001	NM0710076	1386969	16,435
Dust-Based Molecular Gas Maps of Nearby Low-Metallicity Galaxies	43.001	NM0711043	1428043	2,894
First Steps Toward Star Formation: Unveiling the Atomic to Molecular Transition In the Diffuse Interstellar Medium	43.001	NM0711043	1433873	2,332
Subtotal Jet Propulsion Laboratory				<u>378,041</u>
Johns Hopkins University Johns Hopkins University Chandrayaan & Lunar Reconnaissance Orbiter	43.001	NNN06AA01C	946695	21,004
MIT Lincoln Labs Lunar Array Radio Cosmology	43.000	NNX08AM30G	5710002441	(5,861)
West Virginia University Research Consortium Partnership for International Research and Education (PIRE)	47.079	OISE-0968296	09-547-NRAO	101,961
Total National Aeronautics and Space Administration				<u>729,511</u>

Associated Universities, Inc.

Schedule of Expenditures of Federal Awards

Year Ended September 30, 2011

Federal Grantor/Pass-Through Grantor/Program/Grant Name	CFDA Number	Award Number	Pass-through grantor's number	Federal Expenditures
Department of Defense:				
United States Air Force				
Pass through from- MIT Lincoln Laboratory	12.910	FA8721-05-C-0002	7000009590	271,111
United States Navy				
Pass through from- Naval Research Laboratory				
Naval Research Laboratory Low Band Receivers	12.300	N00173-10-C-6011	72-1011-10	104,276
U.S. Naval Observatory				
Electronic Transmission of Very Long Baseline Interferometry Data from VLBA Telescopes	12.300	N00189-10-C-Z085	N6228510RC00011	205,654
Total Department of Defense				581,041
Total Expenditures of Federal Awards (Research and Development Cluster)				\$ 137,455,460

See accompanying notes to the schedule of expenditures of federal awards.

**Associated Universities, Inc
Schedule of Federal Awards- Draft
FY 12 Through 2/29/2012**

Grantor Agency	Federal Award Number	Expenditures
<i>National Science Foundation:</i>		
Operations of the National Radio Astronomy Observatory	AST-0223851	\$ 20,216,405.06
Management and Operations of the National Radio Astronomy Observatory	AST-0836064	\$ 27,304,827.96
ARRA-Infrastructure Improvements at the National Radio Astronomy Observatory	AST-0948120	\$ 316,362.41
Pulsar Search Collaboratory	DRL-0737641	(1,630.09)
 <i>Pass through from-</i>		
Virtual Astronomical Observatory		
AUI VAO NRAO SUPPORT - Management and Operations of the Virtual Astronomical Observatory	AST-0834235	120,103.34
<i>Subtotal Virtual Astronomical Obseratory</i>		<u>\$ 120,103.34</u>
 Regents of the University of California		
Advanced Multibeam Spectrometer for the Green Bank Telescope	AST-1006509	393.53
<i>Subtotal Regents of the University of California</i>		<u>\$ 393.53</u>
 University of Virginia		
Precision Array to Probe the Epoch of Reionization (PAPER) (University of Virginia)	AST-0804523	(5,777.77)
Precision Array to Probe the Epoch of Reionization (PAPER) (University of Virginia2)	AST-0804523	2,121.40
Collaborative Research: Precision Array for Probing the Epoch of Reionization (PAPER)	AST-1125558	24,245.13
<i>Subtotal University of Virginia</i>		<u>\$ 20,588.76</u>
 University of North Carolina		
Major Research Instrumentation - Skynet Robotic Network - ARRA	AST-0959447	46,816.85
<i>Subtotal University of North Carolina</i>		<u>\$ 46,816.85</u>
 Cornell University		
Low Noise Amplifiers for Quasi-Self Complementary Broadband Feed	AST-0431486	29,939.00
<i>Subtotal Cornell University</i>		<u>\$ 29,939.00</u>

Massachusetts Institute of Technology

Development of an ALMA Beamformer for Ultra High Resolution VLBI and High Frequency Phased Array Science
Subtotal Massachusetts Institute of Technology

AST-1126433
 47,104.51

\$ 47,104.51

New Jersey Institute of Technology

MRI-R2: Development of Owens Valley Solar Array to a Community Facility - ARRA
Subtotal Massachusetts Institute of Technology

AGS-0959761
 32,484.67

\$ 32,484.67

Subtotal NSF

\$ 48,133,396.00

National Aeronautics and Space Administration:

Searching for Radio Pulsars in FERMI Bright Unidentified Sources

NNH08ZDA001N 2,374.89

Models Across Cosmological Times. X-Ray Multi-Mirror Mission (XMM) Newton AO-7 Cycle of Observations and AO-6 C -Target.

NNG08EO37P (390.12)

Pass Through from-

University of Colorado

Lunar Univ Node Astro Research: Exploring the Cosmos from the Moon

NNA09DB30A 12,342.53

Subtotal University of Colorado

12,342.53

Space Telescope Science Institute

Formation and Structure of Proto-Planetary Disks Around the Youngest Proto Stars

NAS5-26555 39,775.87

Subtotal Space Telescope Science Institute

\$ 39,775.87

Smithsonian Astrophysical Observatory

Probing the Early Evolution of Galaxies and Massive Black Holes with Nearby Star-Forming Dwarfs

NAS8-03060 1,077.23

Probing the Early Evolution of Galaxies and Massive Black Holes with Nearby Star-Forming Dwarfs

NAS8-03060 35,812.44

Subtotal Smithsonian Astrophysical Observatory

\$ 36,889.67

Jet Propulsion Laboratory

Direct Diagnostics Triggered Star Formation

NMO710076 (1,312.15)

Spitzer Infrared Spectrograph (IRS) Observations of Masive High - z Galaxies

NMO710076 667.51

The Spitzer Survey of Stellar Structure in Galaxies	NMO710076	83,580.11
A Complete Census of Star-formation/AGN Activity in a z=0.14 'Proto-cluster	NMO710076	350.24
Mapping Molecular Hydrogen Excitation and Mass in Nearby Galaxies	NMO710076	(17,093.65)
First Clues to Star Formation in the High Redshift Tail of Submill. Galaxies	NMO710076	2,893.64
Spectroscopic Confirmation of two candidate Z-8 Galaxies with Infrared Spectrograph	NMO710076	12,708.59
Great Observatories Origins Deep Survey: Far Infrared Imaging with Herschel	NMO710076	896.41
Measuring Emissivity Indices of Dust in Dense Cores with the SPIRE/FTS	NMO711043	195.49
First Steps Toward Star Formation: Unveiling the Atomic to Molecular Transition in the Diffuse Interstellar Medium	NMO711043	2,246.78
Diffuse ISM Phases in the Inner Galaxy	NMO711043	1,376.09
Subtotal Jet Propulsion Laboratory		86,509.06
Johns Hopkins University		
JHU CHANDRAYAAN-1 & Lunar Reconnaissance Orbiter	NNN06AAA01C	(28,039.78)
Subtotal Johns Hopkins University		(28,039.78)
MIT Lincoln Labs		
Lunar Array Radio Cosmology	NNX08AM30G	(917.03)
Subtotal MIT Lincoln Labs		(917.03)
West Virginia University Research Consortium		
An International Pulsar Timing Array for Gravitational Wave Detection (PIRE)	OISE-0968296	37,104.67
Subtotal West Virginia University Research Consortium		37,104.67
Total National Aeronautics and Space Administration	\$	185,649.76
Department of Defense: United States Navy		
<i>Pass through from-</i>		
Naval Research Laboratory		
Naval Research Laboratory Low Band Receivers	N00173-10-C-6011	76,792.98
Subtotal Naval Research Laboratory		76,792.98

U.S. Naval ObservatoryElectronic Transmission of Very Long Baseline
Interferometry Data from VLBA Telescopes

N00189-10-C-Z085

163,950.32

Subtotal U.S. Naval Observatory**163,950.32****Total Department of Defense: United States Navy****240,743.30****Total Expenditures Per SEFA****\$****48,559,789.06****Reconciliation to Consolidated Statement of Activities**

Add: Private Grants (excluding Lockheed Martin)

MIT/LL BU 2941

142,442.13

APJ

\$

1,437.53

Cal-Tech Inducers

\$

1,666.60

Cornell EVLA-type C-Band

100,441.79

ESO - Antonio Perfetto

41,058.87

European Union

18,120.07

Prelim work RadioAstron from MIT fixed price money

10,410.01

Max Planck

(1,955.60)

Nw Mexico Health Dept. Diabetes Prevention

5,328.45

Lockheed Martin

52,351.52

48,931,090.43

Amount per GL

48,931,090.43

Difference

(0.00)