

# Financial Profile

*for the year ending June 30, 2009 (unaudited)*



**Reader's Note:** *In this section, we present summary financial information that is unaudited. Each year the Carnegie Institution, through the Audit Committee of its Board of Trustees, engages an independent auditor to express an opinion about the financial statements and the financial position of the institution. The complete audited financial statements are made available on the institution's website at [www.CarnegieScience.edu](http://www.CarnegieScience.edu).*

The Carnegie Institution of Washington experienced a challenging period financially during fiscal year 2009. Our endowment declined by approximately 27% in value during this period. This decline was consistent with the general trend in the financial markets and with the experience of other endowments at institutions of higher education and nonprofit organizations. Throughout the period, Carnegie held sufficient cash and bond funds to meet all ongoing operational requirements, debt obligations, and investment obligations, and avoided the need for any liquidation of investments and financial resources at otherwise unfavorable terms. Like most other institutions, Carnegie has tried to deal with this situation by restricting its budget, while simultaneously ensuring the continuation of a healthy scientific enterprise.

Carnegie has spent considerable time during the last year, under the supervision of the Board of Trustees, to ensure that our investments continue to provide the foundation for long-term growth. Even with the recent decline, the endowment's value over the last decade has grown from \$478 million to approximately \$663 million (as of September 9, 2009). As a result, over the period 2001-2009, average annual increases in endowment contributions to the budget were 6.6%. For 2009-2010, the endowment support for the budget will decline by 3.8%. Carnegie will continue to balance the requirement for stable support for current operations with preservation of capital to meet long-term needs.

In the near term, the hardship resulting from the endowment decline has been substantially alleviated by the availability of increased federal and foundation support. Carnegie's federal support has grown from \$24.5 million in 2006 to \$29.7 million in 2009. This is a testament to the high quality of Carnegie scientists and their ability to compete successfully for federal support. Funding from foundations has grown from an average of about \$3.2 million per year in the period from 2000 to 2003 to about \$5.6 million per year in 2007-2009.

Carnegie's long-term financial strength was reaffirmed this past year by Moody's Investors Service and Standard & Poor's. These rating agencies reviewed Carnegie's financial position and gave the institution their highest and second highest rankings, respectively, a level achieved by only a few nonprofit organizations. Carnegie's financial strength is based upon an investment strategy that seeks long-term positive returns from the diversified investments within its endowment; a disciplined spending policy that balances today's needs with the long-term requirements of the institution and the interests of future scientists; and the continued support of organizations and individuals who recognize the value of nurturing basic science.

*Carnegie Institution for Science*

Throughout its history, a primary source of support for the institution's activities is its endowment. This reliance on institutional funding provides an important degree of independence in the research activities of the institution's scientists. For a number of years, under the direction of the Finance committee of the board, Carnegie's endowment has been allocated among a broad spectrum of asset classes including fixed-income instruments (bonds), equities (stocks), absolute return investments; real estate partnerships; private equity; and natural resources partnerships. The goal of this diversified approach is to generate attractive overall performance and minimize the volatility that would exist in a less diversified portfolio.

The Finance committee of the board regularly examines the asset allocation of the endowment and readjusts the allocation, as appropriate. The institution relies upon external managers and partnerships to conduct the investment activities, and it employs a commercial bank to maintain custody. The following chart shows the allocation of the institution's endowment among the asset classes it uses as of June 30, 2009.

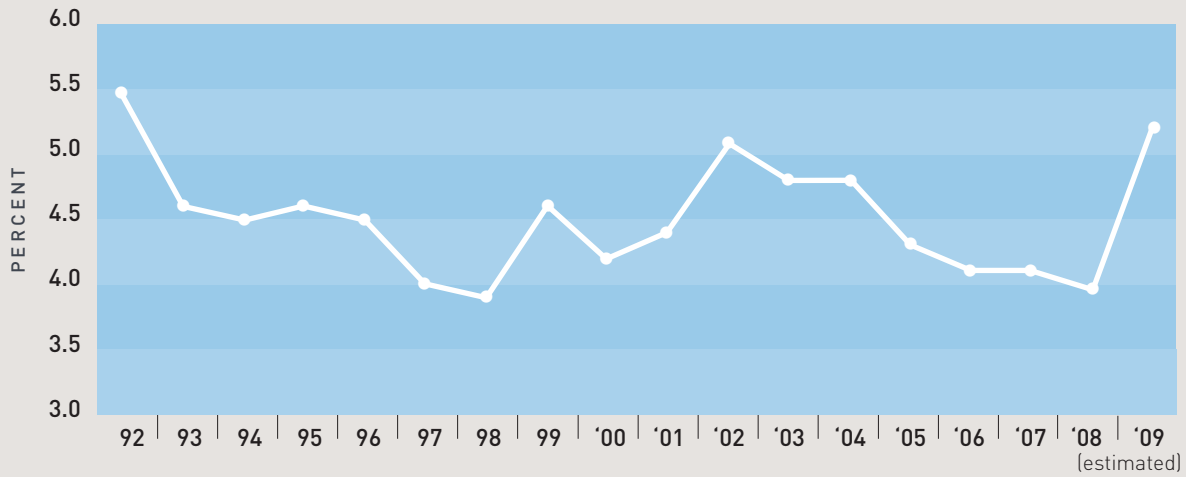
Asset Class	Target	Actual
Common Stock	35.0%	33.0%
Alternative Assets	55.0%	58.6%
Fixed Income and Cash	10.0%	8.4%

Carnegie's investment goals are to provide high levels of current support to the institution and to maintain the long-term spending power of its endowment.

Carnegie has also pursued a long-term policy of controlling its spending rate, bringing the budgeted rate down in a gradual fashion from 6+ percent in 1992 to 5.00% for 2009. Beginning with fiscal year 2008, Carnegie has revised its spending method from calculating the five percent against a simple three-year average of year-ending endowment values to a 70/30 rule, which factors in the previous year's spending. That is, the amounts available from the endowment under the 70/30 rule is made up of 70% of the previous year's budget, adjusted for inflation, and 30% of the most recently completed year-end endowment value, multiplied by the spending rate of 5.0% and adjusted for inflation and for debt. This method reduces volatility from year-to-year. The following figure depicts actual spending as a percentage of ending market value for the last 18 years.

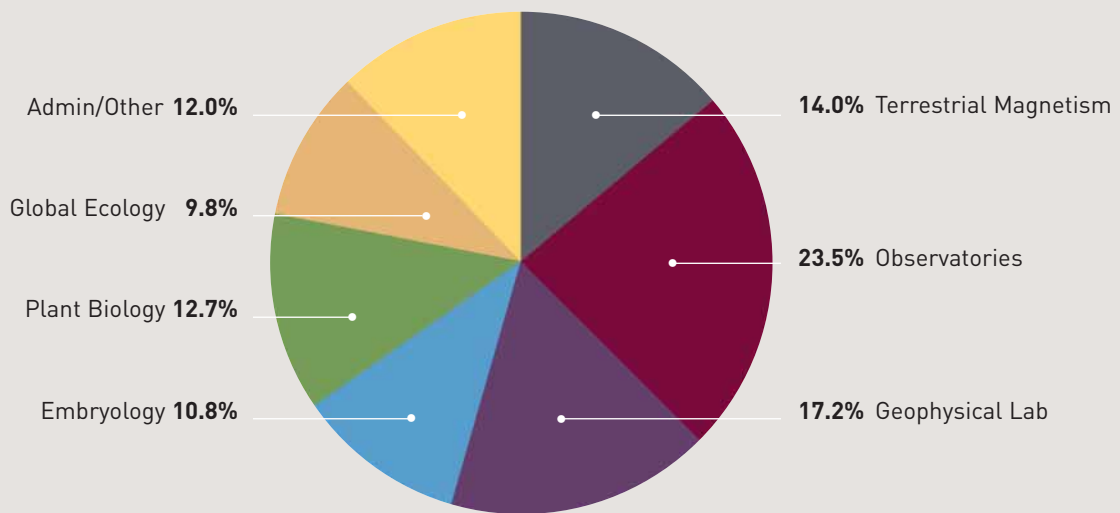
In addition to investment performance and spending restraint, Carnegie benefits from external support. Within Carnegie's endowment, there are a number of "funds" that provide support either in a general way or targeted to a specific purpose. The largest of these is the Andrew Carnegie Fund, begun with the original gift of \$10 million. Mr. Carnegie later made additional gifts totaling another \$12 million during his lifetime. This tradition of generous support for Carnegie's scientific mission has continued throughout our history, and a list of donors in fiscal year 2009 appears in an earlier section of this year book. In addition, Carnegie receives important federal and private grants for specific research purposes, including support from the Howard Hughes Medical Institute for researchers at the Department of Embryology.

### Endowment Spending as a Percent of Ending Endowment Value\*



\*Includes debt financing

### 2009 Expenses by Department (\$82.7 Million)



**Statements of Financial Position (unaudited)**

June 30, 2009 and 2008

	2009	2008
<b>Assets</b>		
Current assets:		
Cash and cash equivalents	3,587,777	957,861
Accrued investment income	46,430	138,050
Contributions receivable	5,519,038	6,885,460
Accounts receivable and other assets	16,750,719	6,474,614
Bond proceeds held by trustee	39	121,904
<b>Total current assets</b>	<b>\$ 25,904,003</b>	<b>\$ 14,577,889</b>
Noncurrent assets:		
Investments	633,525,475	895,939,989
Property and equipment, net	157,980,529	162,108,756
<b>Total noncurrent assets</b>	<b>\$791,506,003</b>	<b>\$1,058,048,745</b>
<b>Total assets</b>	<b>\$817,410,006</b>	<b>\$1,072,626,634</b>
<b>Liabilities and Net Assets</b>		
Accounts payable and accrued expenses	9,759,780	27,217,376
Deferred revenues	40,746,194	36,539,753
Bonds payable	65,358,062	65,303,339
Accrued postretirement benefits	14,560,478	14,486,199
<b>Total liabilities</b>	<b>\$130,424,514</b>	<b>\$ 143,546,667</b>
Net assets:		
Unrestricted	206,347,417	264,490,808
Temporarily restricted	425,774,379	609,844,386
Permanently restricted	54,863,696	54,744,773
<b>Total net assets</b>	<b>\$686,985,492</b>	<b>\$ 929,079,967</b>
<b>Total liabilities and net assets</b>	<b>\$ 817,410,006</b>	<b>\$1,072,626,634</b>

**Statements of Activities<sup>1</sup> (unaudited)**

Periods ended June 30, 2009 and 2008

	2009	2008
Revenue and support:		
Grants and contracts	\$ 34,257,350	\$ 33,051,740
Contributions, gifts	10,102,788	10,227,204
Net gain or (loss) on property disposal	—	[49,772]
Other income	31,966,105	[18,624,082]
Net external revenue	\$ 76,326,242	\$ 24,605,090
Investment income and unrealized gains (losses)	(\$236,535,117)	81,245,420
Total revenues, gains, other support	(\$160,208,875)	\$105,850,510
Program and supporting services:		
Terrestrial Magnetism	11,584,642	11,635,917
Observatories	19,460,830	18,455,315
Geophysical Laboratory	14,202,009	14,125,190
Embryology	8,925,327	8,593,858
Plant Biology	10,506,356	10,518,171
Global Ecology	8,087,259	4,263,800
Other programs	1,273,575	661,776
Administration and general expenses	8,654,348	6,853,537
Total expenses	\$ 82,694,346	\$ 75,107,564
Pension Related Changes	808,745	631,205
Increase (decrease) in net assets	-242,903,220	30,742,946
Net assets at the beginning of the period	929,079,967	897,705,816
Net assets at the end of the period	\$ 686,985,492	\$929,079,967

<sup>1</sup>Includes restricted, temporarily restricted, and permanently restricted revenues, gains, and other support.

# Personnel

*July 1, 2008-June 30, 2009*



## Carnegie Administration

Benjamin Barbin, *Manager of Advancement Activities*  
Sharon Bassin, *Assistant to the President/Assistant Secretary to the Board*<sup>1</sup>  
Shaun Beavan, *Systems Administrator*  
Gloria Brienza, *Budget and Management Analysis Manager*  
Don Brooks, *Building Maintenance Specialist*  
Marjorie Burger, *Financial Manager*  
Cady Canapp, *Human Resources and Insurance Manager*  
Alan Cutler, *Science Writer*  
Robert Ellis, *Web Developer*  
Michelle Fisher, *Events and Facilities Coordinator*<sup>2</sup>  
Shawn Frazier, *Accounting Technician*  
Dina Freydin, *Senior Grants Accountant*  
Susanne Garvey, *Director of External Affairs*  
Jason Gebhardt, *Advancement Researcher*  
Darla Keefer, *Special Assistant for Administration and Building Operations*  
Mulyono Kertajaya, *Business Data Analyst/Developer*  
Ann Keyes, *Payroll Coordinator*  
Yang Kim, *Deputy Financial Manager*  
Lisa Klow, *Executive Assistant to the President*  
George Gary Kowalczyk, *Director of Administration and Finance*  
Tina McDowell, *Editor and Publications Officer*  
Richard Meserve, *President*  
June Napoco-Soriente, *Financial Accountant*  
Mikhail Pimenov, *Endowment Manager*  
Arnold Pryor, *Facilities Coordinator*  
Gotthard Sághi-Szabó, *Chief Information Officer*  
Vinutha Saunshimath, *Computer Systems Associate*<sup>3</sup>  
Ashit Sheth, *Computer Systems Associate*<sup>4</sup>  
Harminder Singh, *Financial Systems Accountant*  
Henry Spencer, *Information Technology Intern*  
John Strom, *Web Manager*  
Mira Thompson, *Manager of Advancement Operations*  
Kenneth Tossell, *Computer Systems Associate*<sup>5</sup>  
Rohan Vanjara, *Web Developer Intern*<sup>6</sup>  
Yulonda White, *Human Resources and Insurance Records Coordinator*  
Jacqueline Williams, *Assistant to Human Resources and Insurance Manager*  
Bryant Zadegan, *Web Developer Intern*<sup>7</sup>

<sup>1</sup>To February 27, 2009

<sup>2</sup>From July 21, 2008

<sup>3</sup>To August 31, 2008

<sup>4</sup>To August 31, 2008

<sup>5</sup>To August 31, 2008

<sup>6</sup>From June 15, 2009

<sup>7</sup>From October 20, 2008

## Carnegie Academy for Science Education

Bianca Abrams, *Director, Math for America*<sup>1</sup>  
Faith Ajayi, *CASE Intern*<sup>2</sup>  
Victor Akosile, *CASE Intern*<sup>3</sup>  
Monica Artis, *CASE Intern*<sup>4</sup>  
Suria Bahadue, *CASE Intern*<sup>2</sup>  
Brenton Bassin, *CASE Intern*<sup>5</sup>  
Sarah Bax, *CASE Mentor*<sup>6</sup>  
Keisha Blackmoore, *CASE Intern*<sup>3</sup>  
Brittney Bradley, *CASE Intern*<sup>2</sup>  
Guy Brandenburg, *First Light Instructor and Mentor*  
Anne Brooks-Hemphill, *CASE Mentor*<sup>6</sup>  
DeMarcus Clark, *CASE Intern*<sup>3</sup>  
Alexander Cole, *CASE Intern*<sup>3</sup>  
Katherine Collins, *Math for America Fellow*<sup>7</sup>  
Asonia Dorsey, *CASE Mentor*<sup>6</sup>  
Vannessa Duckett, *CASE Mentor*<sup>6</sup>  
Julie Edmonds, *Codirector CASE*  
Ricky Garibay, *Intern and First Light Assistant*  
Joseph Green, *CASE Intern*<sup>3</sup>  
Rhia Hardman, *CASE Intern*<sup>3</sup>  
Tashima Hawkins, *CASE Mentor*<sup>6</sup>  
Gayan Hettipola, *CASE Intern*<sup>8</sup>  
Krystn Hodge, *Math for America Fellow*<sup>7</sup>  
Toby M. Horn, *Codirector, CASE*  
Safiya Howard, *CASE Intern*<sup>3</sup>  
Trisha Ibeh, *CASE Intern*<sup>2</sup>  
Joseph Isaac, *CASE Fellow*  
Marlena Jones, *DC Biotech Coordinator*  
Molley Kaiyoorowongs, *Math for America Fellow*<sup>7</sup>  
Loretta Kelly, *CASE Mentor*<sup>6</sup>  
M'Heeraw Kennedy, *CASE Intern*<sup>9</sup>  
Yeelan Ku, *CASE Intern*<sup>10</sup>  
Elishauntae Lindsay, *CASE Intern*<sup>3</sup>  
Lindsay Mann, *Math for America Fellow*<sup>7</sup>  
Michael McCreary, *CASE Intern*<sup>3</sup>  
My'Chelle McCreary, *CASE Intern*<sup>2</sup>  
Sunday McIlwain, *CASE Intern*<sup>3</sup>  
Max Mikulec, *Math for America Fellow*<sup>7</sup>  
Thomas Nassif, *CASE Mentor*<sup>6</sup>  
Stephanie Navarrette, *CASE Intern*<sup>11</sup>  
Yolande Paho, *CASE Intern*<sup>11</sup>  
Debron Rodney, *CASE Intern*<sup>11</sup>  
Marciel Rosario-Rojas, *CASE Intern*<sup>3</sup>  
Brittney Sims, *CASE Intern*<sup>11</sup>  
John Solano, *CASE Fellow*<sup>11</sup>  
Liza Styles, *Math for America Fellow*<sup>7</sup>  
John Tatum, *CASE Mentor*<sup>6</sup>  
Kelechi Ukaegbu, *CASE Intern*<sup>3</sup>  
Juna Wallace, *Intern and First Light Assistant*<sup>11</sup>  
Isaiah West, *CASE Intern*<sup>11</sup>

<sup>1</sup>From August 4, 2008

<sup>2</sup>From June 22, 2009

<sup>3</sup>To August 31, 2008

<sup>4</sup>To June 30, 2009

<sup>5</sup>To August 8, 2008

<sup>6</sup>To August 15, 2008

<sup>7</sup>From April 29, 2009

<sup>8</sup>From May 26, 2008

<sup>9</sup>From June 29, 2009

<sup>10</sup>To May 30, 2009

<sup>11</sup>To August 31, 2009



**EMBRYOLOGY** Front Row (left to right): Allan Spradling, Donald Brown, Joseph Gall, Marnie Halpern, Alex Bortvin, Steven Farber. Second row: Connie Jewel, Zehra Nizami, Mary Goll, Pat Cammon, Glenese Johnson, Ellen Cammon. Third row: Rosa Miyares, David MacPherson, Ami Patel, Rong Chen, Courtney Akitake, Margaret Hoang, Anying Zhang. Fourth row: Brian Hollenback, Stephen Heitzer, Sandrine Biau, Shreyas Jadhav, Jianjun Sun, Dianne Williams, Lamia Wahba, Rejeanne Juste. Fifth row: Dolly Chin, William Yarosh, Laura Pinder, Tagide deCarvalho, Eugenia Dikovskaia, Rafael Villagaray, Pedram Nozari, Freddie Jackson. Sixth row: Allison Pinder, Safia Malki, Ona Martin, Lei Lei, Katherine Mitchell, Svetlana Deryusheva, Fred Tan, Zheng-An Wu. Seventh row: Alan Rupp, Sang Jung Ahn, Vicki Losick, Alexis Marianes, C. Evan Siple, Pete Lopez, Daniel Escobar, Kate Lannon, Michelle Macurak. Eighth row: Judith Yanowitz, Pavol Genzor, Arash Adeli, Youngjo Kim, Megan Kutzer, Carol Davnport, Don Fox, Itay Onn, Dean Calahan, Vinny Guacci, Josh Bembenek. Back row: Christine Pratt, Junling Jia, Earl Potts, Robert Levis, Tom McDonough, Daniel Gorelick, Andrew Skora, Godfried Van der Heijden, James Walters, Cheng Xu, Ben Goodman.

## Embryology

### Research Staff Members

Alexsky Bortvin  
 Donald D. Brown, *Director Emeritus*  
 Chen-Ming Fan  
 Steven Farber  
 Joseph G. Gall  
 Marnie Halpern  
 Douglas E. Koshland  
 Allan C. Spradling, *Director*  
 Yixian Zheng

### Staff Associates

Jeffrey Han  
 David MacPherson  
 Judith Yanowitz

### Postdoctoral Fellows and Associates

Sang Jung Ahn, *Research Associate, NIH Grant (Halpern)*<sup>1</sup>  
 Joshua Bembenek, *Howard Hughes Medical Institute Research Associate*<sup>2</sup>  
 Sandrine Biau, *Carnegie Fellow*  
 Rachel Cox, *Howard Hughes Medical Institute Research Specialist*<sup>3</sup>  
 Tagide deCarvalho, *Research Associate, NIH Grant (Halpern)*<sup>4</sup>  
 Svetlana Deryusheva, *Visiting Scientist, Carnegie*  
 Lucilla Facchin, *Eppley Foundation Grant (Halpern) and Carnegie Fellow*  
 Donald Fox, *Jane Coffin Childs Fellowship*  
 Rebecca Frederick, *American Cancer Society Fellowship*

Julie Gleason, *Research Associate, NIH Grant (Farber with Mayo Clinic, subcontract)*<sup>5</sup>  
 Mary Goll, *Damon Runyon Cancer Research Fellowship*  
 Daniel Gorelick, *Carnegie Fellow*  
 Vinny Guacci, *Howard Hughes Medical Institute Research Specialist*  
 Kotaro Hama, *Japan Foundation Fellowship*<sup>6</sup>  
 Shreyas Jadhav, *Carnegie Fellow*<sup>7</sup>  
 Junling Jia, *Howard Hughes Medical Institute Research Associate*<sup>8</sup>  
 Youngjo Kim, *Howard Hughes Medical Institute Research Associate*  
 Yung-Shu Kuan, *Carnegie Fellow*<sup>9</sup>  
 Lei Lei, *Howard Hughes Medical Institute Research Associate*<sup>10</sup>  
 Robert Levis, *Special Investigator, NIH Grant (Spradling with Baylor College of Medicine, subcontract)*  
 Zhonghua Liu, *Howard Hughes Medical Institute Research Associate*  
 Vicki Losick, *Howard Hughes Medical Institute Research Associate*<sup>11</sup>  
 Safia Malki, *Carnegie Fellow*  
 Lucy Morris, *Howard Hughes Medical Institute Research Associate*  
 Sandeep Mukhi, *NIH Grant (Brown)*  
 Todd Nystul, *Howard Hughes Medical Institute Research Associate*  
 Itay Onn, *Howard Hughes Medical Institute Research Associate*  
 Jianjun Sun, *Howard Hughes Medical Institute Research Associate*<sup>12</sup>  
 Frederick Tan, *Howard Hughes Medical Institute Research Associate*<sup>13</sup>  
 Tina Tootle, *Ruth Kirschstein (NRSA) Fellowship*  
 Godfried Van der Heijden, *Carnegie Fellow*  
 Queenie Vong, *Howard Hughes Medical Institute Research Associate*<sup>14</sup>  
 Cynthia Wagner, *Special Investigator, Carnegie Fellow*<sup>15</sup>  
 James Walters, *American Cancer Society Fellow*  
 Shusheng Wang, *Research Associate, NIH Grant (Zheng)*  
 Zheng-an Wu, *Special Investigator, NIH Grant (Gall) and Carnegie Fellow*  
 Cheng Xu, *Carnegie Fellow and NIH Grant (Fan)*

**Predoctoral Fellows and Associates**

Courtney Akitake, *The Johns Hopkins University*  
 Dean Calahan, *The Johns Hopkins University*  
 Juliana Carten, *The Johns Hopkins University*  
 Julio Castaneda, *The Johns Hopkins University*  
 Daniel Ducat, *The Johns Hopkins University*<sup>16</sup>  
 Pavol Genzor, *The Johns Hopkins University*<sup>17</sup>  
 Ben Goodman, *The Johns Hopkins University*  
 Jill Heidinger, *The Johns Hopkins University*  
 Margaret Hoang, *The Johns Hopkins University*  
 Kate Lannon, *The Johns Hopkins University*  
 Christoph Lepper, *The Johns Hopkins University*  
 Daniel Lighthouse, *The Johns Hopkins University*<sup>18</sup>  
 Peter Lopez, *The Johns Hopkins University*  
 Alexis Marianis, *The Johns Hopkins University*<sup>19</sup>  
 David Martinelli, *The Johns Hopkins University*  
 Vanessa Matos-Cruz, *The Johns Hopkins University*  
 Katie McDole, *The Johns Hopkins University*  
 Katherine Mitchell (formerly Lewis), *The Johns Hopkins University*  
 Rosa Miyares, *The Johns Hopkins University*<sup>20</sup>  
 Tim Mulligan, *The Johns Hopkins University*  
 Zehra Nizami, *The Johns Hopkins University*  
 Lori Oroasco, *The Johns Hopkins University*  
 Andrew Skora, *The Johns Hopkins University*  
 Lamia Wahba, *The Johns Hopkins University*  
 Aaron Welch, *The Johns Hopkins University*

**Supporting Staff**

Arash Adeli, *Animal Technician*<sup>21</sup>  
 Jen Anderson, *Research Technician*  
 Susan Artes, *Carnegie Science Outreach Coordinator*<sup>22</sup>  
 Matthew Atkins, *Animal Technician*<sup>23</sup>  
 Ethan Bennett, *Student Assistant*<sup>24</sup>  
 Keisha Breland, *Animal Technician*<sup>25</sup>  
 Molly Broache, *Research Undergraduate*  
 James Bronson, *Research Undergraduate*<sup>26</sup>  
 Valerie Butler, *Animal Technician*<sup>27</sup>  
 Ellen Cammon, *Howard Hughes Medical Institute Research Technician I*  
 Patricia Cammon, *Howard Hughes Medical Institute Laboratory Helper*  
 Eric Chen, *Research Undergraduate*<sup>28</sup>  
 Richard Chen, *Research Undergraduate*  
 Rong Chen, *Howard Hughes Medical Institute Research Technician I*  
 Dolly Chin, *Administrative Assistant*  
 Katie Cole, *Student Assistant*  
 Karina Conkrite, *Research Technician*  
 Vanessa Damm, *Howard Hughes Medical Institute Laboratory Assistant*  
 Carol Davenport, *Howard Hughes Medical Institute Research Technician III*  
 Bianca Dennis, *Student Assistant*<sup>29</sup>  
 Neha Deshpande, *Research Undergraduate*<sup>30</sup>  
 Eugenia Dikovskaia, *Animal Facility Manager*  
 Chun Dong, *Research Scientist*  
 Jesse Dong, *Student Assistant*<sup>31</sup>  
 Andrew Eifert, *Assistant Facility Manager*  
 Zehra Eifert, *Animal Technician*<sup>32</sup>  
 Daniel Escobar, *Research Undergraduate*<sup>33</sup>  
 Lea Fortuno, *Animal Care Technician*  
 Ariela Friedman, *Student Assistant*<sup>34</sup>  
 Nicole Gabriel, *Animal Care Technician*  
 Tamar Harel, *Student Assistant*<sup>35</sup>  
 Fraser Heinis, *Student Assistant*<sup>36</sup>  
 Steven Heitzer, *Animal Technician*  
 Brian Hollenback, *Animal Technician*  
 Colin Huck, *Animal Technician*<sup>37</sup>  
 Ella Jackson, *Howard Hughes Medical Institute Laboratory Helper*  
 Fred Jackson, *P/T Animal Care Technician*  
 Connie Jewell, *Systems Administrator*  
 Glenese Johnson, *Laboratory Helper*

Rejeanne Juste, *Research Technician*  
 Susan Kern, *Business Manager*  
 Amy Kowalski, *Research Technician*  
 Bill Kupiec, *Information Systems Manager*  
 Megan Kutzer, *Technician*  
 David Lai, *Student Assistant, Ingenuity Program*<sup>38</sup>  
 Jaelyn Lim, *Student Assistant*<sup>39</sup>  
 Jonthan Liu, *Student Volunteer*<sup>40</sup>  
 Michelle Macurak, *Research Technician*  
 Sneha Mani, *Research Undergraduate*  
 Ona Martin, *Howard Hughes Medical Institute Research Technician III*  
 Tom McDonaugh, *Facilities Manager*  
 Khadijah McGhee-Bey, *Student Assistant*<sup>41</sup>  
 Wendy McKoy, *Administrative Assistant*  
 Pedram Nozari, *Animal Technician*<sup>42</sup>  
 Shelley Paterno, *Howard Hughes Medical Institute Research Technician II*<sup>43</sup>  
 Allison Pinder, *Howard Hughes Medical Institute Research Technician III*  
 Laura Pinder, *Student Assistant*<sup>44</sup>  
 Earl Potts, *Animal Technician*  
 Christine Pratt, *Howard Hughes Medical Institute Administrative Assistant II*  
 Joan Pulupa, *Student Assistant*  
 Tosa Puvapiromquan, *Fly Food Technician*<sup>45</sup>  
 Megan Reid, *Student Assistant, Ingenuity Program*<sup>46</sup>  
 Victoria Robinson, *Student Assistant*<sup>47</sup>  
 Lissa Rotundo, *Special Investigator*<sup>48</sup>  
 Michael Sepanski, *Electron Microscopy Technician*  
 Mahmud Siddiqi, *Research Specialist*  
 Desiree Simpson, *Research Undergraduate*<sup>49</sup>  
 Alison Singer, *Research Technician*  
 C. Evan Siple, *Research Technician*  
 Ina Soh, *Research Undergraduate*<sup>50</sup>  
 Jessica Steele, *Carnegie Science Outreach Coordinator*<sup>51</sup>  
 Loretta Steffy, *Accounting Assistant*  
 Allen Strause, *Machinist*  
 Maggie Sundby, *Research Technician*  
 Robert Vary, *Carnegie Science Outreach Educator*<sup>52</sup>  
 Rafael Villagaray, *Computer Technician*  
 Neil Vranis, *Student Assistant*<sup>53</sup>  
 Dianne Williams, *Howard Hughes Medical Institute Research Technician III*  
 Alex Yeh, *Student Assistant*<sup>54</sup>  
 Geoffrey Zearfoss, *Animal Technician*<sup>55</sup>  
 Anying Zhang, *Visiting Scientist*<sup>56</sup>

**Visiting Investigators and Collaborators**

Joel Bader, *Department of Biomedical Engineering, The Johns Hopkins University*  
 Robert Baker, *Department of Physiology and Neuroscience, New York University School of Medicine*  
 James Beck, *Department of Physiology and Neuroscience, New York University School of Medicine*  
 Hugo Bellen, *Baylor College of Medicine*  
 Ian Blair, *Department of Chemistry, University of Pennsylvania*  
 Charles Boone, *University of Toronto, Canada*  
 Dana Carroll, *Department of Biochemistry, University of Utah*  
 Rosalind Coleman, *Department of Nutrition, University of North Carolina*  
 Michael Dean, *Laboratory of Genomic Diversity, NCI-Frederick*  
 Maitreya Dunham, *Carl Icahn Laboratory, Princeton University*  
 Steven Ekker, *Department of Genetics, Cell Biology and Development, University of Minnesota Medical School*  
 Michael Granato, *Department of Cell and Developmental Biology, University of Pennsylvania School of Medicine*  
 David Gresham, *New York University*  
 Matthias Hammerschmidt, *Max Planck Institute for Immunobiology, Germany*  
 Marko Horb, *Institut de Recherches Cliniques de Montréal (IRCM)*  
 Roger Hoskins, *Lawrence Berkeley National Laboratory*  
 Yiannis Ioannou, *Department of Genetics and Genomic Sciences, Department of Gene and Cell Medicine, Mount Sinai School of Medicine*  
 Gary Karpen, *Lawrence Berkeley National Laboratory*

Henry Krause, *Donnelly Centre for Cellular and Biomolecular Research, University of Toronto, Canada*  
 Peter Kwiterovich, *Department of Pediatrics, The Johns Hopkins University*  
 Steven Leach, *Department of Surgery, Division of Surgical Oncology, The Johns Hopkins University School of Medicine*  
 Li Ma, *Laboratory of Molecular Cell Biology and Center of Cell Signaling, Shanghai Institute for Biological Sciences, Chinese Academy of Sciences*  
 Cecilia Moens, *Fred Hutchinson Cancer Research Center*  
 Mari Moren, *National Institute of Nutrition and Seafood Research, Norway*  
 Karen Oogema, *European Molecular Biology Laboratory, Germany*  
 Michael Parsons, *Departments of Surgery and Oncology, The Johns Hopkins University School of Medicine*  
 Erez Raz, *Department of Germ Cell Development, Max Planck Institute for Biophysical Chemistry, Germany*  
 Gerald M. Rubin, *Howard Hughes Medical Institute, Janelia Farm Research Campus*  
 Bernard Thisse, *Department of Cell Biology and the Morphogenesis and Regenerative Medicine Institute, University of Virginia*  
 Christine Thisse, *Department of Cell Biology and the Morphogenesis and Regenerative Medicine Institute, University of Virginia*  
 Milena Vuica, *Department of Pathology, The Johns Hopkins University School of Medicine*

<sup>1</sup>From November 1, 2008  
<sup>2</sup>From October 1, 2008  
<sup>3</sup>To October 1, 2008  
<sup>4</sup>From June 1, 2009  
<sup>5</sup>To May 1, 2009  
<sup>6</sup>To November 30, 2008  
<sup>7</sup>From April 24, 2009  
<sup>8</sup>From October 1, 2008  
<sup>9</sup>To August 31, 2008  
<sup>10</sup>From June 1, 2009  
<sup>11</sup>From September 15, 2008  
<sup>12</sup>From September 1, 2008  
<sup>13</sup>From August 18, 2008  
<sup>14</sup>To October 31, 2008  
<sup>15</sup>To June 15, 2009  
<sup>16</sup>To May 21, 2009  
<sup>17</sup>To May 21, 2009  
<sup>18</sup>To July 15, 2008  
<sup>19</sup>From June 1, 2009  
<sup>20</sup>From September 1, 2006 (not listed previously)  
<sup>21</sup>From January 12, 2009  
<sup>22</sup>From July 23, 2008  
<sup>23</sup>From June 8, 2009  
<sup>24</sup>From June 15, 2009  
<sup>25</sup>From August 4, 2008  
<sup>26</sup>To December 31, 2008  
<sup>27</sup>From May 22, 2009  
<sup>28</sup>From January 29, 2009  
<sup>29</sup>To August 15, 2008  
<sup>30</sup>To August 15, 2008  
<sup>31</sup>To August 15, 2008  
<sup>32</sup>To January 15, 2009  
<sup>33</sup>From September 3, 2008  
<sup>34</sup>To August 31, 2008  
<sup>35</sup>From May 26, 2009  
<sup>36</sup>To May 21, 2009  
<sup>37</sup>To September 30, 2008  
<sup>38</sup>To June 30, 2008  
<sup>39</sup>To August 31, 2008  
<sup>40</sup>To May 21, 2009  
<sup>41</sup>To August 15, 2008  
<sup>42</sup>From May 13, 2009  
<sup>43</sup>To January 30, 2009  
<sup>44</sup>From June 15, 2009  
<sup>45</sup>To July 31, 2008  
<sup>46</sup>To August 31, 2008  
<sup>47</sup>From May 27, 2009  
<sup>48</sup>From June 15, 2009  
<sup>49</sup>From September 12, 2008  
<sup>50</sup>To April 30, 2009  
<sup>51</sup>To November 15, 2008  
<sup>52</sup>From August 11, 2008  
<sup>53</sup>From May 28, 2009  
<sup>54</sup>From June 9, 2009  
<sup>55</sup>From December 21, 2008  
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Tao Zhou, *New Jersey Institute of Technology, NSLS*

Pavel Zinin, *University of Hawaii, HPCAT*

<sup>1</sup>From August 1, 2007  
(unintentionally omitted last year)

<sup>2</sup>From June 1, 2009

<sup>3</sup>From December 1, 2008

<sup>4</sup>From January 1, 2009

<sup>5</sup>To January 31, 2009

<sup>6</sup>From July 24, 1998

(unintentionally omitted in previous years)

<sup>7</sup>From June 1, 2009

<sup>8</sup>To July 31, 2008

<sup>9</sup>To December 31, 2008

<sup>10</sup>From January 1, 2009

<sup>11</sup>To June 30, 2009

<sup>12</sup>To May 31, 2009

<sup>13</sup>From October 24, 2008

<sup>14</sup>From September 3, 2008

<sup>15</sup>To December 12, 2008

<sup>16</sup>From June 1, 2009

<sup>17</sup>From June 9, 2009

<sup>18</sup>To September 23, 2008

<sup>19</sup>To July 30, 2008

<sup>20</sup>To December 5, 2008

<sup>21</sup>From January 26, 2009

<sup>22</sup>To June 15, 2009

<sup>23</sup>From November 17, 2008

<sup>24</sup>From February 17, 2009

<sup>25</sup>To March 31, 2009; postdoctoral associate  
from April 1, 2009

<sup>26</sup>From October 2, 2008, to June 30, 2009

<sup>27</sup>From July 7, 2008

<sup>28</sup>From September 22, 2008

<sup>29</sup>To November 28, 2008

<sup>30</sup>To March 4, 2009

<sup>31</sup>From June 1, 2009

<sup>32</sup>From June 1, 2009

<sup>33</sup>From June 1, 2009

<sup>34</sup>From December 1, 2007, to November 26, 2008  
(unintentionally omitted last year)

<sup>35</sup>To March 3, 2009

<sup>36</sup>To December 29, 2008

<sup>37</sup>To August 5, 2008

<sup>38</sup>From June 3, 2009

<sup>39</sup>To December 31, 2008

<sup>40</sup>To August 31, 2008

<sup>41</sup>To August 31, 2008

<sup>42</sup>To August 8, 2008

<sup>43</sup>From September 2, 2008

<sup>44</sup>Joint appointment with DTM

<sup>45</sup>Joint appointment with DTM

<sup>46</sup>Joint appointment with DTM

<sup>47</sup>Joint appointment with DTM

<sup>48</sup>From June 16, 2009

<sup>49</sup>Joint appointment with DTM

<sup>50</sup>Joint appointment with DTM

<sup>51</sup>Joint appointment with DTM

<sup>52</sup>From June 24, 2008, to June 30, 2009

<sup>53</sup>From May 20, 2009

<sup>54</sup>From September 1, 2008

<sup>55</sup>Joint appointment with DTM

<sup>56</sup>From April 15, 2009, to June 15, 2009

<sup>57</sup>From August 18, 2008, to December 23, 2008

<sup>58</sup>Joint appointment with DTM

<sup>59</sup>To September 5, 2008

<sup>60</sup>Joint appointment with DTM

## Global Ecology

### Research Staff Members

Gregory Asner

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Steven Davis, *Stanford University*<sup>3</sup>

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Marion O'Leary, *Senior Advancement Consultant*<sup>35</sup>

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Todd Tobeck, *Laboratory Coordinator*

Angela Torney, *Laboratory Assistant*

C. Parker Weiss, *Laboratory Technician*<sup>37</sup>



Asner Group - South America



**GLOBAL ECOLOGY** Above, front row: Matt Colgan, Guayana Paez-Acosta, Robin Martin, Linda Longoria, James Jacobson, Angelica Valdez, Jan Brown, Carey Lambrecht, Ken Caldeira. Middle row: Devon Arcott, Ruth Emerson, John Clark, Bill Anderegg, Alex Nees, Evana Lee, Susan Cortinas, Dahlia Wist, Turkan Eke, Mona Houcheime, Ismael Villa, George Ban-Weiss. Back row: Chris Field, Greg Asner, Marion O'Leary, Hannes Feilhauer, Jennifer Johnson, Chris Anderson, Aravindh Balaji, Parker Weiss, William Hu, Scott Loarie, David Knapp, Adam Wolf, Shaun Levick, Glenn Ford, Larry Giles, Joe Berry, Kris Ebi, Jim Kellner, Mike Mastrandrea,

Paul Sterbentz. Small inset (left to right): Long Cao, Ho-Jeong Shin, Kenny Schneider. Bottom inset, front row (left to right): Lorelí Jiménez, Dina Cancino, Paola Martinez, Robin Martin, Lady Saldaña, Giannina Babilonia, Jazmin Teagua, Sara Del Castillo, Flor Panduro. Top row: Felip Cansino, Juan Vega, Raúl Trujillo, James Rodriguez, Julio Ccoycosi, Gabriel Sangama, Abner Fachin, Nestor Jarama, Greg Asner.

<sup>1</sup>To August 15, 2008

<sup>2</sup>From September 15, 2008

<sup>3</sup>From October 1, 2008

<sup>4</sup>From September 16, 2008

<sup>5</sup>To August 31, 2008

<sup>6</sup>To August 29, 2008

<sup>7</sup>From September 24, 2008

<sup>8</sup>To March 31, 2009

<sup>9</sup>From November 17, 2008

<sup>10</sup>From March 16, 2009

<sup>11</sup>From August 1, 2008

<sup>12</sup>From March 1, 2009

<sup>13</sup>To August 31, 2008

<sup>14</sup>To June 15, 2009

<sup>15</sup>From March 1, 2009

<sup>16</sup>From September 1, 2008

<sup>17</sup>To June 15, 2009

<sup>18</sup>From September 15, 2008

<sup>19</sup>From September 2, 2008, to March 6, 2009

<sup>20</sup>From April 13, 2009

<sup>21</sup>From June 6, 2009

<sup>22</sup>From January 5, 2009

<sup>23</sup>From June 6, 2009

<sup>24</sup>From December 23, 2008

<sup>25</sup>From November 1, 2008, to February 28, 2009

<sup>26</sup>From April 1, 2009

<sup>27</sup>From June 6, 2009

<sup>28</sup>From August 15, 2008

<sup>29</sup>From October 15, 2008

<sup>30</sup>From December 12, 2008, to April 27, 2009

<sup>31</sup>From April 1, 2009

<sup>32</sup>From April 1, 2009

<sup>33</sup>From September 15, 2008

<sup>34</sup>From April 1, 2009

<sup>35</sup>From January 7, 2008

<sup>36</sup>From December 1, 2008

<sup>37</sup>From January 12, 2009



**THE OBSERVATORIES** First row (left to right): Jenna Ryon, Lea Zernow, Becky Lynn, Jorge Estrada, Luis Ho, Gus Oemler, Silvia Hutchison, Wendy Freedman, Ken Clardy, Robert Storts, Janice Lee, Matt Johns, Amnon Talmor, Lei Bai, Jane Rigby, Laura Sturch. Second row: Dan Kelson, Alan Uomoto, Greg Ortiz, Violet Mager, Vgee Ramiah, Gillian Tong, Ayako Jinno-Kanayama, Arnold Phifer, Sharon Kelly, Eric Persson, John Gruta, Pat McCarthy, Christoph Birk, Mark Seibert, François Schweizer, Joshua Simon, Masami Ouchi, Alan Bagish, Eli Slawson, Ivelina Momcheva. Third row: Scott Rubel, George Preston, Steve Wilson, Luis Ochoa, Edward Villanueva, Arthur Eigenbrot, Cameron Charness, Magnus Haw, Andrew Monson, Jeff Crane, John Mulchaey, Charlie Hull, Earl Harris, Barry Madore, Rob Pitts, Vincent Kowal, Jerson Castillo, Tyson Hare. Not present: John Bagnasco, Greg Burley, Christopher Burns, Paul Collison, Alan Dressler, Jonathan Kern, Minjin Kim, Juna Kollmeier, Ivo Labbé, Zhaoyu Li, Andrew McWilliam, Karín Menéndez-Delmestre, David Murphy, Jesper Rasmussen, Michael Rauch, Allan Sandage, Stephen Shtctman, Jeanette Stone, Ian Thompson.

## The Observatories

### Research Staff Members

Alan Dressler  
Wendy Freedman, *Director*  
Luis Ho  
Juna Kollmeier<sup>1</sup>  
Patrick McCarthy  
Andrew McWilliam  
John Mulchaey  
Augustus Oemler, Jr., *Director Emeritus*  
Eric Persson  
George Preston, *Director Emeritus*  
Michael Rauch  
Allan Sandage, *Staff Member Emeritus*  
François Schweizer  
Leonard Searle, *Director Emeritus*  
Stephen Shtctman  
Ian Thompson  
Ray Weymann, *Director Emeritus*

### Research Associates

Dan Kelson, *Staff Associate*  
Barry Madore, *Senior Research Associate*

### Technical Staff Members

Matthew Johns, *Associate Director of the Observatories*  
Alan Uomoto, *Magellan Technical Manager*

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George Becker, *Postdoctoral Associate*<sup>3</sup>  
Christopher Burns, *Postdoctoral Associate*  
Jeffrey Crane, *Carnegie Fellow*<sup>4</sup>  
Inese Ivans, *Carnegie-Princeton Fellow*<sup>5</sup>  
Daisuke Kawata, *Postdoctoral Associate*<sup>5</sup>  
Andreas Koch, *P/T Research Associate*<sup>6</sup>  
Ivo Labbé, *Hubble Fellow*  
Janice Lee, *Hubble Fellow*  
Zhao-Yu Li, *Research Assistant*<sup>7</sup>  
Jennifer Marshall, *Carnegie Fellow*<sup>8</sup>  
Karín Menéndez-Delmestre, *NSF Fellow*<sup>9</sup>  
Ivelina Momcheva, *Postdoctoral Associate*<sup>10</sup>  
Andy Monson, *Postdoctoral Associate*<sup>11</sup>  
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Jesper Rasmussen, *Chandra Fellow*  
Jane Rigby, *Spitzer Fellow*  
Mark Seibert, *Postdoctoral Associate*  
Joshua Simon, *Carnegie-Vera Rubin Fellow*<sup>12</sup>  
Laura Sturch, *Research Assistant*  
Violet Taylor, *Postdoctoral Associate*  
Haojing Yan, *Physical Scientist Associate*<sup>6</sup>

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Mark Phillips, *Associate Director, Las Campanas Observatory and Magellan Telescopes*  
Miguel Roth, *Director, Las Campanas Observatory*

### Las Campanas Fellows and Associates

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David Floyd, *Magellan Fellow*  
Gaston Folatelli, *Postdoctoral Fellow*  
Maximilian Stritzinger, *Postdoctoral Fellow*

### Las Campanas Visiting Investigator

Nidia Morrell, *Visiting Scientist*

### Support Scientist

David Murphy, *Instrument Scientist*

### External Affairs, Pasadena

Arnold Phifer, *Regional Director of Advancement*

### Giant Magellan Telescope Organization (GMTO)

John Bagnasco, *Senior Opto-Mechanical Engineer*<sup>13</sup>  
Charlie Hull, *Project Mechanical Engineer*<sup>14</sup>  
Matthew Johns, *Project Manager*<sup>15</sup>  
Jonathan Kern, *Telescope Engineering Manager*<sup>16</sup>  
Patrick McCarthy, *Director*<sup>9</sup>  
Stephen Shtctman, *Project Scientist*<sup>17</sup>  
Eli Slawson, *GMT Assistant*<sup>18</sup>  
Amnon Talmor, *Project Engineer*<sup>19</sup>

### Supporting Staff, Pasadena

Alan Bagish, *Las Campanas Observatory Engineer*  
Christoph Birk, *Data Acquisition Programmer*

Jerson Castillo, *Instrument Maker*  
 Ken Clardy, *Programmer*  
 Paul Collison, *Computer Systems Manager*  
 Jorge Estrada, *Electronics Technician*  
 John Grula, *Head Librarian, Information Services/Publications Manager*  
 Tyson Hare, *Mechanical Engineer*  
 Earl Harris, *Shipping and Receiving Specialist*<sup>20</sup>  
 Silvia Hutchison, *Assistant to the Director*  
 Ayako Jinno-Kanayama, *Financial Accountant*<sup>9</sup>  
 Sharon Kelly, *Buyer*  
 Minjin Kim, *Research Assistant*  
 Vincent Kowal, *Machine Shop Foreperson/Instrument Maker*  
 Becky Lynn, *Secretary*  
 Luis Ochoa-Ramirez, *Accounts Payable Specialist*  
 Greg Ortiz, *Assistant, Buildings and Grounds*  
 Robert Pitts, *Assistant, Buildings and Grounds*  
 Vgee Ramiah, *Business Manager*  
 Judith Rosenau, *Special Projects Coordinator*<sup>21</sup>  
 Scott Rubel, *Associate Facilities Manager*  
 Jeanette Stone, *Purchasing Manager*  
 Robert Storts, *Instrument Maker*  
 Edward Villanueva, *Data Analyst and Programmer*<sup>22</sup>  
 Gregory Walth, *Data Analyst*<sup>23</sup>  
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#### Supporting Staff, Las Campanas

Miriél Abarca, *Janitor*  
 Carolina Alcayaga, *Purchasing Officer*  
 Ricardo Alcayaga, *Mechanic*  
 Juan Alfaro, *Magellan Site Maintenance Support*  
 Hernán Ángel, *Driver/Purchaser*  
 Jorge Araya, *Magellan Telescope Operator*  
 Hector Ballbontín, *Chef*  
 Luis Boldt, *Research Assistant*  
 Jorge Bravo, *Magellan Instrument Specialist*  
 Pedro Carrizo, *Plumber*  
 Jilberto Carvajal, *El Pino Guard*  
 Jorge Castillo, *Paramedic*  
 Pablo Castro, *Telescope Controls Programmer*<sup>24</sup>  
 Emilio Cerda, *Magellan Electronics Engineer*  
 Carlos Contreras, *Science Support*<sup>3</sup>  
 Angel Cortés, *Accountant*  
 Henry Cortés, *Electrician*  
 José Cortés, *Janitor*  
 Miguel Cortés, *Mechanic*<sup>25</sup>  
 Jorge Cuadra, *Mechanic Assistant*  
 Oscar Duhalde, *Mechanical Technician*  
 Julio Egaña, *Painter*  
 Juan Espoz, *Mechanic*  
 Glenn Eychaner, *Telescope Systems Programmer*  
 Francisco Figueroa, *Supervisor of Mountain Maintenance*<sup>26</sup>  
 Carlos Flanega, *Janitor*  
 Javier Fuentes, *Night Assistant*  
 Jaime Gómez, *Accounting Assistant*  
 Pablo Gómez, *Supervisor, Mountain and El Pino Maintenance*<sup>27</sup>  
 Danilo González, *El Pino Guard*  
 Luis González, *Janitor*  
 Sergio González, *Science Support*<sup>28</sup>  
 Javier Gutiérrez, *Mechanical Technician Assistant*  
 Nelson Ibacache, *Mechanical Assistant*  
 Patricio Jones, *Magellan Electronics Engineer*  
 Oscar Juica, *Plumber*  
 Marc Leroy, *Assistant Telescope Engineer*  
 Alejandro Leyton, *Electrician*  
 Leonel Lillo, *Carpenter*  
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 Mauricio Martinez, *Magellan Telescope Operator*

Miguel Méndez, *Mechanical Technician*  
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 Herman Olivares, *Night Assistant*  
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 Gabriel Prieto, *GMT Site Testing Support*  
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 Jorge Rojas, *Janitor*  
 Felipe Sanchez, *Telescope Controls Programmer*  
 Joanna Thomas-Osip, *Site Test Scientist*  
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 Geraldo Vallardes, *Magellan Telescope Operator*  
 Sergio Vera, *Magellan Telescope Operator*  
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 Jessie Hart, *University of Michigan*  
 Joseph Hennawi, *Massachusetts Institute of Technology*  
 Jesus Hernandez, *University of Michigan*  
 Rodrigo Herrera, *Pontificia Universidad Católica de Chile*  
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 Steven Majewski, *University of Virginia*  
 Sangeeta Malhotra, *Arizona State University*  
 Anna Marino, *Pontificia Universidad Católica de Chile*  
 Phillip Massey, *Lowell Observatory*  
 Mario Mateo, *University of Michigan*  
 Yuichi Matsuda, *Durham University, UK*  
 Michael McDonald, *University of Maryland*  
 Brian McLeod, *Harvard University, CfA*  
 Claudia Mendes De Oliveira, *University of Michigan*  
 Rene Mendez, *Universidad de Chile*  
 Emily Mercer, *University of Michigan*  
 Gabriela Michalska, *Universidad de Concepción, Chile*  
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 Millaray Miranda, *Universidad de Chile*  
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 Ivelina Moncheva, *Pontificia Universidad Católica de Chile*  
 Marcelo Mora, *University of Valparaiso, Chile*  
 Nick Mostek, *Lawrence Berkeley National Laboratory*  
 Veronica Motta, *University of Valparaiso, Chile*  
 Mark Mueller, *Harvard University, CfA*  
 Michael Murphy, *Swinburne University of Technology, Australia*  
 John Norris, *Australian National University*  
 Tim Norton, *Harvard University, CfA*  
 Priscilla Nowajewski, *Universidad de Chile*  
 Edward Olszewski, *University of Arizona*  
 Yoshiaki Ono, *University of Tokyo, Japan*  
 Mark Ordway, *Harvard University, CfA*  
 Mariana Orellana, *University of Valparaiso, Chile*  
 Feryal Ozel, *University of Arizona*  
 Itsvan Papp, *HAT-South Collaboration*  
 Shannon Patel, *University of California, Santa Cruz*  
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 Monica Zorotovic, *Pontificia Universidad Católica de Chile*

<sup>1</sup>From September 1, 2008; formerly  
 Carnegie-Princeton Hubble Fellow

<sup>2</sup>From September 22, 2008

<sup>3</sup>To August 31, 2008

<sup>4</sup>From September 1, 2008; formerly  
 postdoctoral associate

<sup>5</sup>To September 26, 2008

<sup>6</sup>To September 30, 2008

<sup>7</sup>From October 16, 2008

<sup>8</sup>To August 15, 2008

<sup>9</sup>From October 1, 2008, Patrick McCarthy  
 has a joint appointment with Carnegie  
 and GMTO

<sup>10</sup>From May 1, 2009

<sup>11</sup>From June 5, 2009

<sup>12</sup>From November 1, 2008

<sup>13</sup>From August 1, 2008

<sup>14</sup>From July 1, 2008; formerly Magellan  
 supporting staff, Pasadena

<sup>15</sup>No date provided

<sup>16</sup>From March 1, 2009

<sup>17</sup>From March 19, 2009, Stephen Sheckman  
 has a joint appointment with Carnegie  
 and GMTO

<sup>18</sup>Formerly supporting staff, Pasadena

<sup>19</sup>From June 1, 2009

<sup>20</sup>From July 15, 2008; formerly clerk

<sup>21</sup>To March 27, 2009

<sup>22</sup>From September 16, 2008

<sup>23</sup>To July 31, 2008

<sup>24</sup>From August 12, 2008

<sup>25</sup>From July 15, 2008

<sup>26</sup>From September 1, 2008

<sup>27</sup>To July 15, 2008

<sup>28</sup>To June 5, 2009

<sup>29</sup>From May 4, 2009

<sup>30</sup>To December 31, 2008



**DEPARTMENT OF PLANT BIOLOGY** First row (left to right): Wenqiang Yang, Zhiyong Wang, Sue Rhee, Peifen Zhang, Bi-Huei Hou, Claudia Catalanotti, Nik Pootakham, Shaoling Xu, Guillaume Pilot, Sairupa Paduchri, Bindu Ambaru, unknown visitor, Zhiping Deng, Paul Sterbentz. Second row: Angelica Vazquez, Sylvie LaLonde, Kathi Bump, Tanya Beradini, Sam Parsa, Viviane Lanquar, Cynthia Lee, Devaki Bhaya, Maria Sardi, Hitomi Takanao, Yaqi Hao, Jianxiu Shang, Min Yuan. Sitting on side: Chris Wilks, Aung-Kyaw Chi; Third Row: Kun He, Zhiguang Zhao, Tonglin Mao, Mingyi Bai, Guido Grossman, Chang You, Tae-Wuk Kim, Nicole Newell, Evana Lee, Dahlia Wist, Naolia Williams, Diane Chermak, Susanne Wisen, Susan Cortinas, Tian Li, Donghui Li, Bob Muller, Tie Liu, Wolf Frommer, Larry Plotz. Back row: Lee Chae, Peng Xu, Dave Ehrhardt, Ryan Guteirrez, Hulya Aksoy, Sunita Patel, Turkan Eke, David Gonzalez, Clayton Coker, Rosario Gomez, Blaise Hamel, Kate Dreher, Vanessa Swing, Leonardo Magneschi, Glenn Ford, Karthik Karthikeyan, Eva Huala, Ismael Villa, David Swarbreck, Raj Sasidharan, Matt Evans, Kathy Barton.

## Plant Biology

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 David Ehrhardt  
 Wolf B. Frommer, *Acting Director*,<sup>1</sup> *Director*<sup>2</sup>  
 Arthur R. Grossman  
 Seung Y. Rhee  
 Christopher R. Somerville, *Director*<sup>3</sup>  
 Shauna C. Somerville<sup>3</sup>  
 Zhi-Yong Wang

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 Tonglin Mao, *Chinese Agricultural University, China*<sup>6</sup>  
 Iben Møller-Hansen, *University of Copenhagen, Denmark*<sup>7</sup>  
 William Monsell, *Pennsylvania State University*<sup>8</sup>  
 Alexander Pauck, *Rheinische Friedrich-Wilhelms University, Germany*<sup>9</sup>  
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 Erica Stein, *University of California, San Diego*<sup>10</sup>  
 Alexandra Wormit, *Imperial College, UK*<sup>11</sup>

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Melissa Adams, *Carnegie Fellow*<sup>12</sup>  
 Mingyi Bai, *NIH Research Associate*  
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 Claudia Catalanotti, *DOE Research Associate*<sup>14</sup>  
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 Bhavna Chaudhuri, *Carnegie Fellow*<sup>16</sup>  
 Jin Chen, *NSF Research Associate*  
 Li-Qing Chen, *Carnegie Fellow*  
 Antony Chettoor, *Carnegie Fellow*<sup>17</sup>  
 Zhiping Deng, *NIH Research Associate*  
 David Dewez, *NSF Research Associate*<sup>18</sup>  
 María Rosario Gómez-García, *NSF Research Associate*  
 David González-Ballester, *NSF Research Associate*  
 Woei-Jiun Guo, *DOE Research Associate*<sup>14</sup>  
 Kun He, *NSF Research Associate*  
 Mark Heinmickel, *Carnegie Fellow*<sup>17</sup>  
 Ken Ichiro Hibara, *Japan Society for the Promotion of Science Fellow*<sup>3</sup>  
 Friederika Hoermann, *HFSP Research Associate*<sup>19</sup>  
 Do-Young Kim, *NSF Research Associate*<sup>20</sup>

Tae-Wuk Kim, *Carnegie Fellow*  
 Viktor Kirik, *NSF Research Associate*  
 Sylvie LaLonde, *NIH Research Associate*  
 Viviane Lanquar, *HFSP Fellow*,<sup>20</sup> *CNRS-Marie Curie Fellow*<sup>17</sup>

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 Debbie Alexander, *Curator*<sup>33</sup>  
 Bindu Ambaru, *TAIR Research Assistant*  
 Brandon Araki, *Intern*<sup>34</sup>  
 Tanya Berardini, *Curator*  
 Matthew Blain-Hartung, *Intern*<sup>35</sup>  
 Kathryn Bump, *Business Manager*  
 Hanna Burch, *Intern*<sup>36</sup>  
 Avelino Carbajal, *Facilities Assistant*<sup>4</sup>  
 Leonela Carrido, *Intern*<sup>37</sup>  
 Diane Chermak, *Senior Laboratory Technician*

Raymond Chetty, *Software Engineer*  
 Clayton Coker, *Laboratory Technician*<sup>38</sup>  
 Susan Cortinas, *Grants Administrator*  
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 Irina Degtiar, *Intern*<sup>40</sup>  
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 Hartmut Foerster, *Curator*  
 Glenn A. Ford, *Laboratory Manager*  
 Margarita Garcia-Hernandez, *Curator*  
 Jonathan Gelber, *Intern*<sup>41</sup>  
 Nathan Gendron, *Laboratory Assistant*<sup>42</sup>  
 Bi-Huei Hou, *Laboratory Technician*  
 Eva Huala, *Head Curator*<sup>6</sup>  
 Athikkatuvalu Karthikeyan, *Curator*  
 David Ku, *Intern*<sup>43</sup>  
 Philippe Lamesch, *Curator*  
 Evana Lee, *Financial Analyst*  
 Ricardo Leitao, *Intern*<sup>44</sup>  
 Donghui Li, *Curator*  
 Khar-Wai Lye, *Laboratory Technician*<sup>25</sup>  
 Thomas Meyer, *Software Engineer*  
 Dorianne Moss, *Laboratory Technician*  
 Robert Muller, *Technical Lead Curator*  
 Nicole Newell, *Laboratory Technician*<sup>45</sup>  
 Saman Asgharzadeh Parsa, *Laboratory Technician*<sup>46</sup>  
 Anisha Patil, *Intern*<sup>47</sup>  
 Sunita Patil, *Intern*  
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 Amie Radenbaugh, *Intern*<sup>49</sup>  
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 Peifen Zhang, *Curator*

<sup>1</sup>To March 30, 2009

<sup>2</sup>From April 1, 2009

<sup>3</sup>To March 15, 2009

<sup>4</sup>From July 1, 2008

<sup>5</sup>To November 27, 2008

<sup>6</sup>From November 1, 2008

<sup>7</sup>To June 30, 2008

<sup>8</sup>From March 2, 2009, to April 30, 2009

<sup>9</sup>To December 12, 2008

<sup>10</sup>From November 3, 2008, to February 28, 2009

<sup>11</sup>From June 18, 2008, to July 7, 2008

<sup>12</sup>From June 11, 2008, to September 26, 2008

<sup>13</sup>From August 1, 2008

<sup>14</sup>From October 1, 2008

<sup>15</sup>From July 14, 2008

<sup>16</sup>To September 30, 2008

<sup>17</sup>From May 1, 2009

<sup>18</sup>From March 1, 2009

<sup>19</sup>To August 31, 2008

<sup>20</sup>To April 30, 2009

<sup>21</sup>From December 15, 2008

<sup>22</sup>To June 30, 2009

<sup>23</sup>From June 30, 2009

<sup>24</sup>To March 31, 2009

<sup>25</sup>To October 15, 2008

<sup>26</sup>To March 19, 2009

<sup>27</sup>From February 4, 2009

<sup>28</sup>To June 10, 2009

<sup>29</sup>From September 1, 2008, to January 30, 2009

<sup>30</sup>From September 1, 2008

<sup>31</sup>From June 16, 2008, to November 1, 2008

<sup>32</sup>From July 1, 2008, to November 1, 2008

<sup>33</sup>To April 18, 2009

<sup>34</sup>From June 16, 2009

<sup>35</sup>From July 1, 2008, to September 30, 2008

<sup>36</sup>From August 18, 2008, to June 30, 2009

<sup>37</sup>From June 2, 2008, to August 1, 2008

<sup>38</sup>From October 2, 2008

<sup>39</sup>From June 19, 2008, to August 31, 2008

<sup>40</sup>From July 2, 2008, to August 31, 2008

<sup>41</sup>From June 17, 2008, to August 31, 2008

<sup>42</sup>To July 31, 2008

<sup>43</sup>From June 23, 2008, to September 30, 2008

<sup>44</sup>From July 1, 2008, to November 7, 2008

<sup>45</sup>From September 16, 2008

<sup>46</sup>From October 20, 2008

<sup>47</sup>From June 19, 2008, to August 31, 2008

<sup>48</sup>From June 23, 2008, to September 30, 2008

<sup>49</sup>To November 1, 2008

<sup>50</sup>From June 20, 2008, to September 30, 2008

<sup>51</sup>From October 29, 2008, to December 15, 2008

<sup>52</sup>From November 20, 2008

<sup>53</sup>From January 26, 2009

<sup>54</sup>To September 19, 2008

## Terrestrial Magnetism

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 Nathalie J. Valette-Silver, *National Oceanic and Atmospheric Administration*  
 John C. VanDecar, *Nature Magazine, London*  
 Suzan van der Lee, *Northwestern University*  
 Linda M. Warren, *National Science Foundation*  
 Elisabeth Widom, *Miami University, Ohio*  
 Cecily J. Wolfe, *University of Hawaii*



**DEPARTMENT OF TERRESTRIAL MAGNETISM** First row (left to right): Stella Kafka, Liping Qin, Alicja Wypych, Evgenya Shkolnik, Steven Golden, Wan Kim, Vera Rubin, Maceo Bacote, Natalia Gómez Pérez, Alicia Case, Janice Dunlap. Second row: Wendy Nelson, Jessica Warren, Sandy Keiser, Ben Pandit, Adelio Contreras, Jianhua Wang, Fouad Tera, Shaun Hardy, Ming-Chang Liu, Mike Crawford, Roy Dingus, Frank Gyngard, Fabian Moscoso, Pedro Roa, Sean Solomon. Third row: Rick Carlson, Thomas Ruedas, Jonathan O'Neil, Daniela Power, Nick Moskovitz, David James, Selwyn Sacks, Merri Wolf, Bill Key, James Day, Larry Nittler, John Graham, Ray Aylor, Steve Shirey, Alan Boss, Tim Mock, Paul Butler, Conel Alexander. Not pictured: Guillem Anglada, Gary Bors, John Chambers, Lindsey Chambers, Julio Chanamé, Brenda Eades, Pablo Esparza, Erik Hauri, Mary Horan, Matt Jackson, Alan Linde, Mercedes López-Morales, Nick Schmerr, Brian Schleigh, Scott Sheppard, Terry Stahl, Alycia Weinberger, Wen-che Yu.

*Photo taken on November 2, 2009. Image courtesy Mike Colella*

<sup>1</sup> Killed on August 7, 2009

<sup>2</sup> To September 5, 2008

<sup>3</sup> From September 1, 2008

<sup>4</sup> To October 1, 2008

<sup>5</sup> From August 1, 2008

<sup>6</sup> From August 1, 2008

<sup>7</sup> To December 15, 2008

<sup>8</sup> To October 15, 2008

<sup>9</sup> To October 31, 2008

<sup>10</sup> To November 15, 2008

<sup>11</sup> From September 3, 2008

<sup>12</sup> NAI Fellow From February 1, 2009

<sup>13</sup> To September 20, 2008

<sup>14</sup> From November 24, 2008

<sup>15</sup> Joint appointment with Geophysical Laboratory

<sup>16</sup> Died November 23, 2009

<sup>17</sup> From August 13, 2008

<sup>18</sup> To May 15, 2009

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