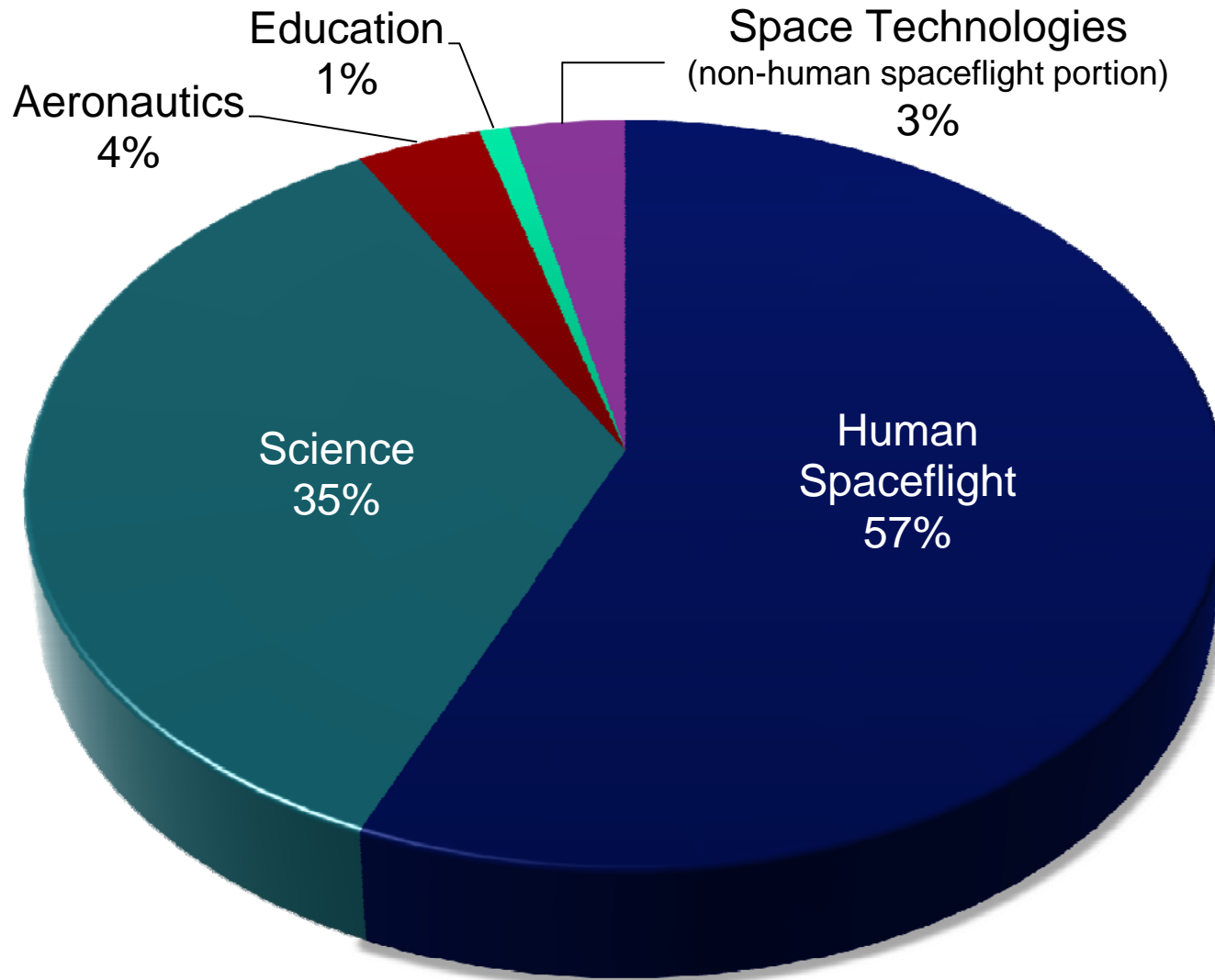


Science at NASA

Waleed Abdalati
NASA Chief Scientist

FY 12 NASA Programmatic Budget



FY 2012 Budget Request

Budget Authority (\$M)	FY 2010	FY 2011 Annualized CR	FY 2011 Authorization Act	FY 2012	Outyears are notional			
					FY 2013	FY 2014	FY 2015	FY 2016
Science	4,498	4,469	5,006	5,017	5,017	5,017	5,017	5,017
Earth Science	1,439		1,802	1,797	1,822	1,819	1,858	1,915
Planetary Science	1,364		1,486	1,540	1,429	1,395	1,344	1,257
Astrophysics	647		1,076	683	758	775	780	811
James Webb Space Telescope	439			375	375	375	375	375
Heliophysics	608		642	622	634	653	660	659
Aeronautics	497	501	580	569	569	569	569	569
Space Technology	275	327	512	1,024	1,024	1,024	1,024	1,024
Exploration Systems	3,626	3,594	3,706	3,949	3,949	3,949	3,949	3,949
Human Exploration Capabilities	3,288		2,751	2,810	2,810	2,810	2,810	2,810
Commercial Spaceflight	39		612	850	850	850	850	850
Exploration Research and Development	299		343	289	289	289	289	289
Space Operations	6,142	6,147	5,508	4,347	4,347	4,347	4,347	4,347
Space Shuttle	3,101		1,610	665	80	1	1	1
International Space Station	2,313		2,780	2,841	2,960	3,005	3,098	3,175
Space and Flight Support	728		1,119	841	1,307	1,341	1,248	1,172
Education	180	183	146	138	138	138	138	138
Cross-Agency Support	3,018	3,019	3,111	3,192	3,192	3,192	3,192	3,192
CoF and ECR	453	448	394	450	450	450	450	450
Inspector General	36	36	37	38	38	38	38	38
NASA FY 2012	18,724	18,724	19,000	18,724	18,724	18,724	18,724	18,724

Note: FY10 and FY11 figures have been adjusted to show comparable Exploration technology content within the Space Technology account consistent with the FY12 Budget. FY11 CR column does not include 51M SBIR payback transfer from Science/ESMD to Space Technology and will be communicated via future op plan.

The National Aeronautics and Space Act

The aeronautical and space activities of the United States shall be conducted so as to contribute materially to one or more of the following objectives:

- 1) **The expansion of human knowledge of the Earth and of phenomena in the atmosphere and space;**
- 2) The improvement of the usefulness, performance, speed, safety, and efficiency of aeronautical and space vehicles;
- 3) The development and operation of vehicles capable of carrying instruments, equipment, supplies, and living organisms through space;
- 4) The establishment of long-range studies of the potential benefits to be gained from, the opportunities for, and the problems involved in the utilization of aeronautical and space activities for peaceful and scientific purposes;
- 5) The preservation of the role of the United States as a leader in aeronautical and space science and technology and in the application thereof to the conduct of peaceful activities within and outside the atmosphere;
- 6) The making available to agencies directly concerned with national defense of discoveries that have military value or significance, and the furnishing by such agencies, to the civilian agency established to direct and control nonmilitary aeronautical and space activities, of information as to discoveries which have value or significance to that agency;
- 7) Cooperation by the United States with other nations and groups of nations in work done pursuant to this Act and in the peaceful application of the results thereof;
- 8) The most effective utilization of the scientific and engineering resources of the United States, with close cooperation among all interested agencies of the United States in order to avoid unnecessary duplication of effort, facilities, and equipment; and
- 9) The preservation of the United States preeminent position in aeronautics and space through research and technology development related to associated manufacturing processes.

Answering Questions Rooted at the Very Core of the Human Spirit



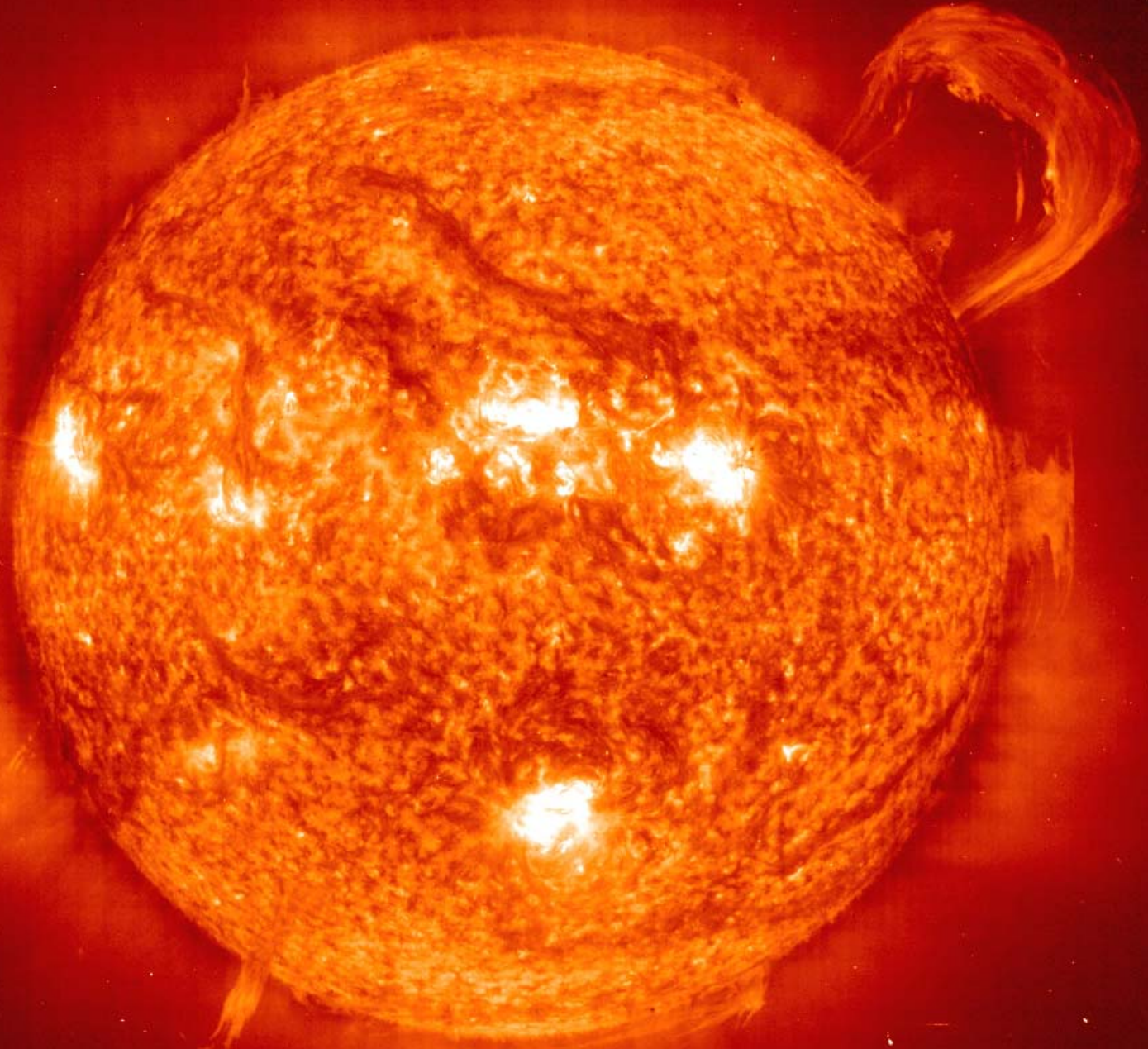
Peering at the Edges of the Universe and the
beginning of time



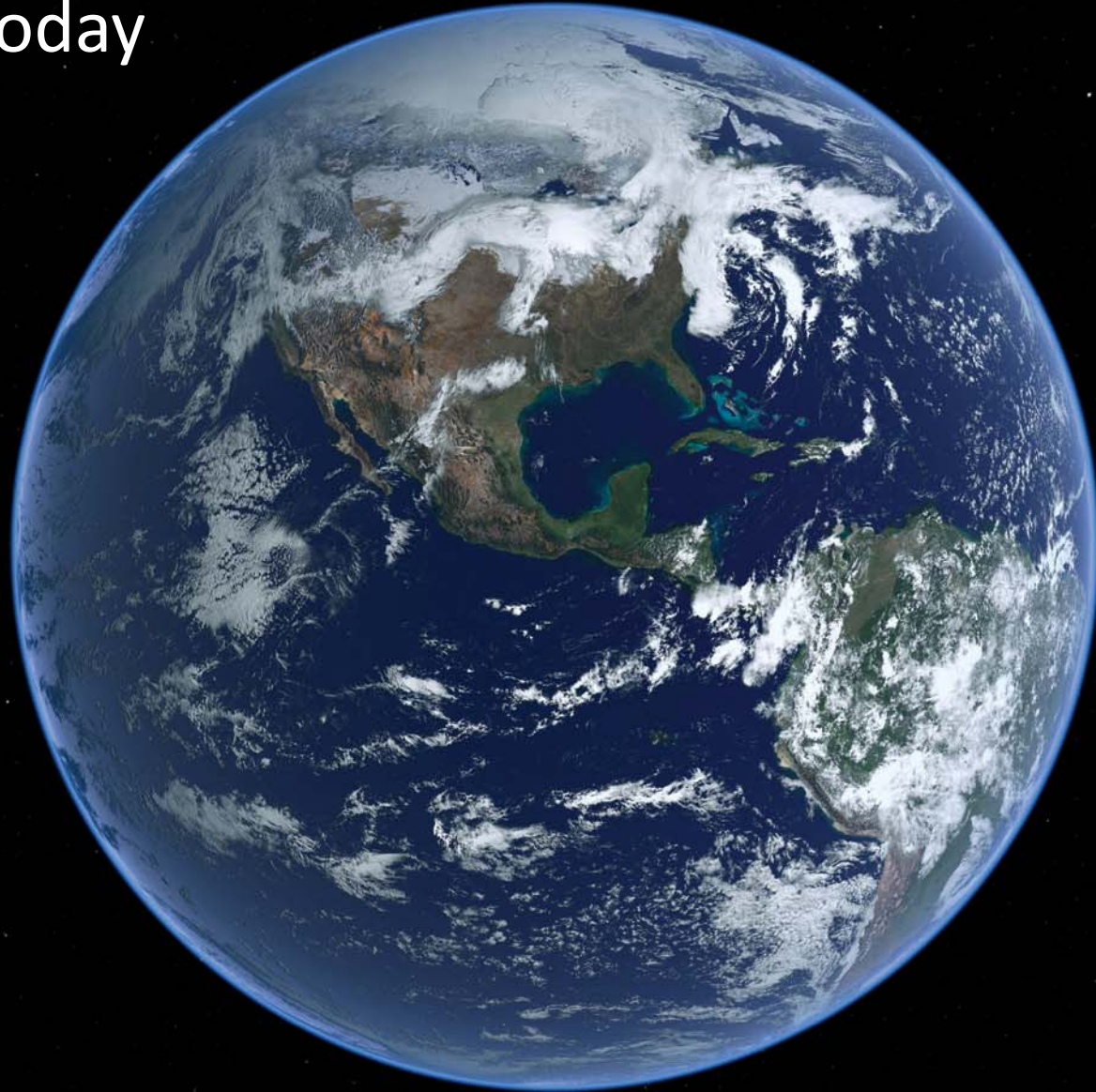
Exploring Our Neighbors in the Solar System



Examining the Sun the Fuels Us



Understanding The Planet We Live on Today

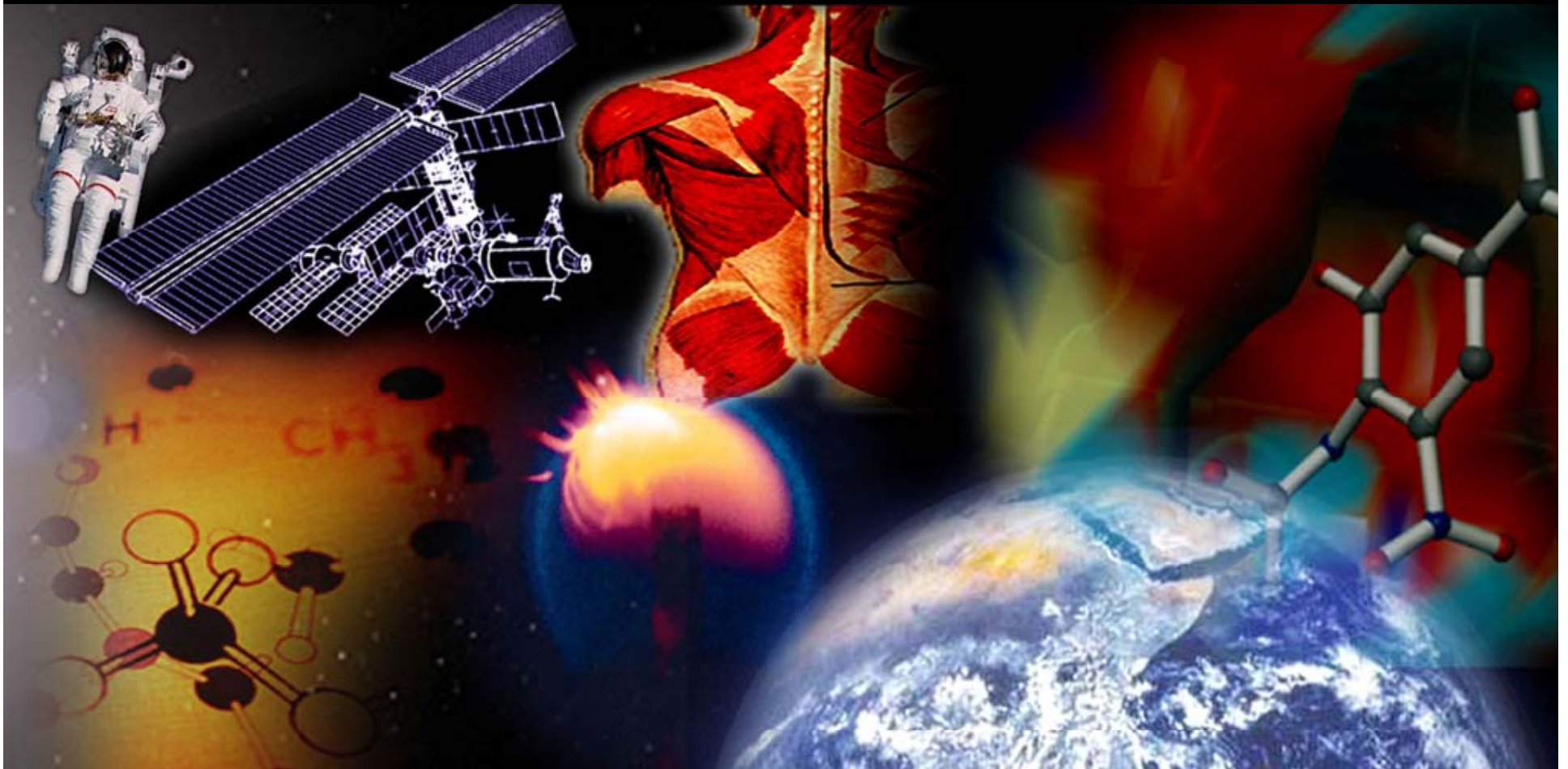




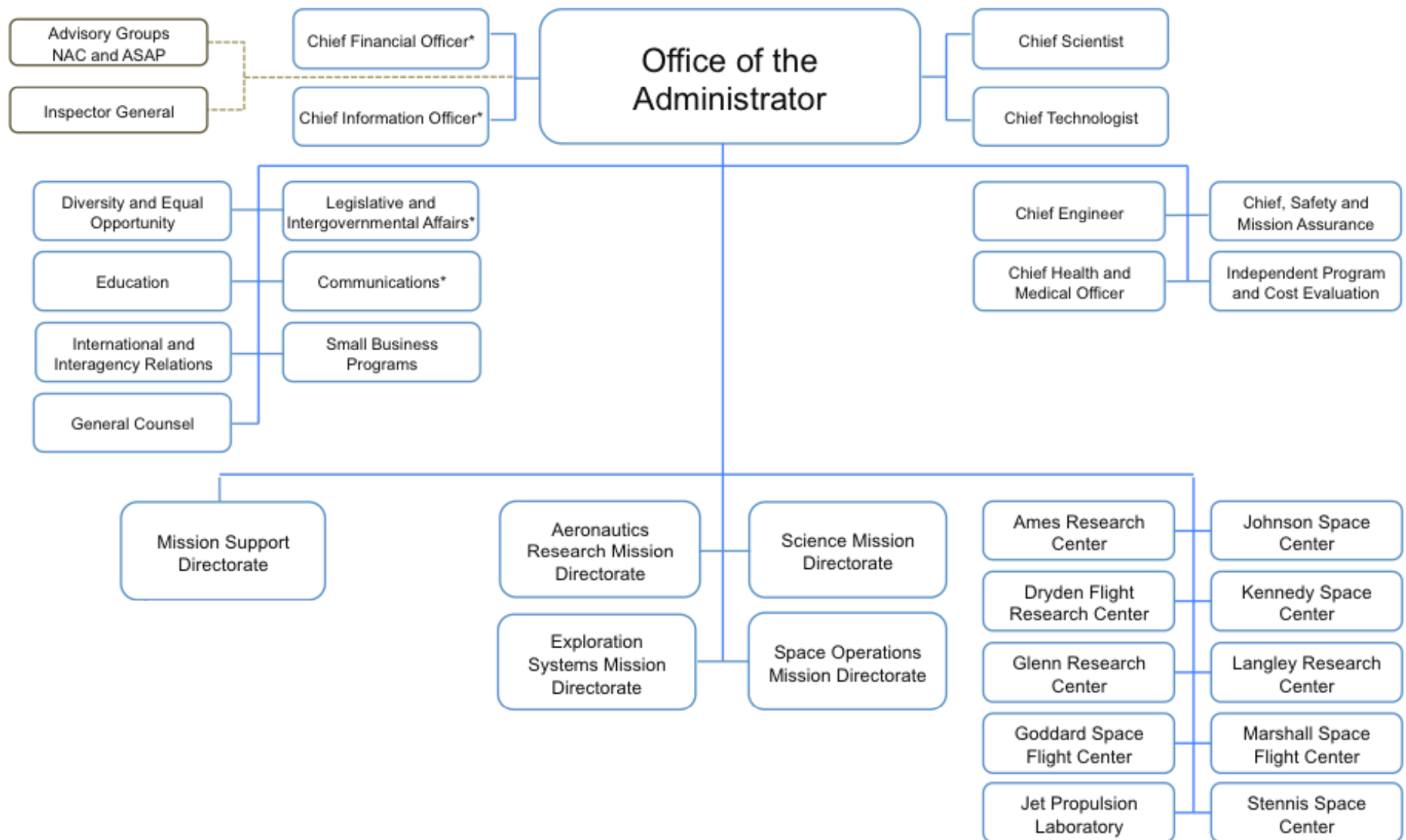
Understanding
the Planet that our
Descendants will Live on Tomorrow



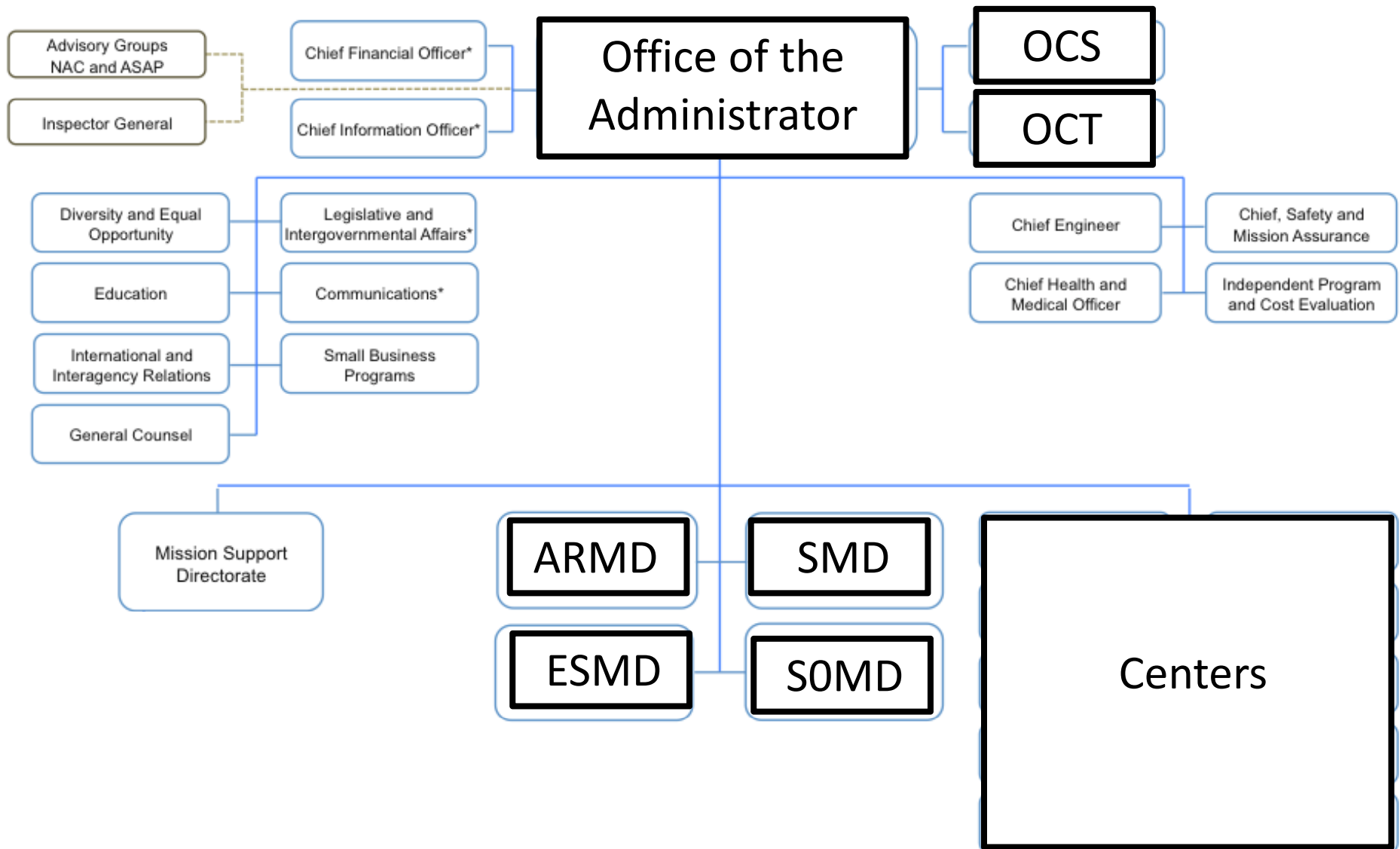
Investigating Biological and Physical Processes in the Space Environment



NASA Organizational Chart



NASA Organizational Chart



OCS Key Functions

- Advise the NASA Administrator on Scientific Matters
 - Independent voice
 - Unburdened by direct implementation concerns
- Provide representation of NASA science interests to highest level of NASA management
- Serve as a key point of contact for scientific matters at NASA
 - In particular those that span directorates, centers, other agencies, etc.
- Foster interaction across directorates and centers and with the external community
- Facilitate international and interagency collaborations

Overarching Goals

- Maximize the Science Return of this Agency on taxpayer investments
 - Merit
 - Value
 - Integrity of processes
- Achieve instant recognition of NASA as a ***science*** agency among public, sponsors, and stakeholders.

Challenges

- Difficult Budget Environment
 - Meeting the challenge of level-funding
- Rising costs of access to space
- More compelling science than resources to achieve them

Guidance in Content Comes from Decadal Surveys

- Astrophysics: 2010
- Planetary Science: March, 2011
- Heliophysics: 2012
- Life and Microgravity Sciences, March 2011
- Earth Science: 2007
 - Additional modifications based on White House priorities

Science

to

Inspire...

...Science To Serve

