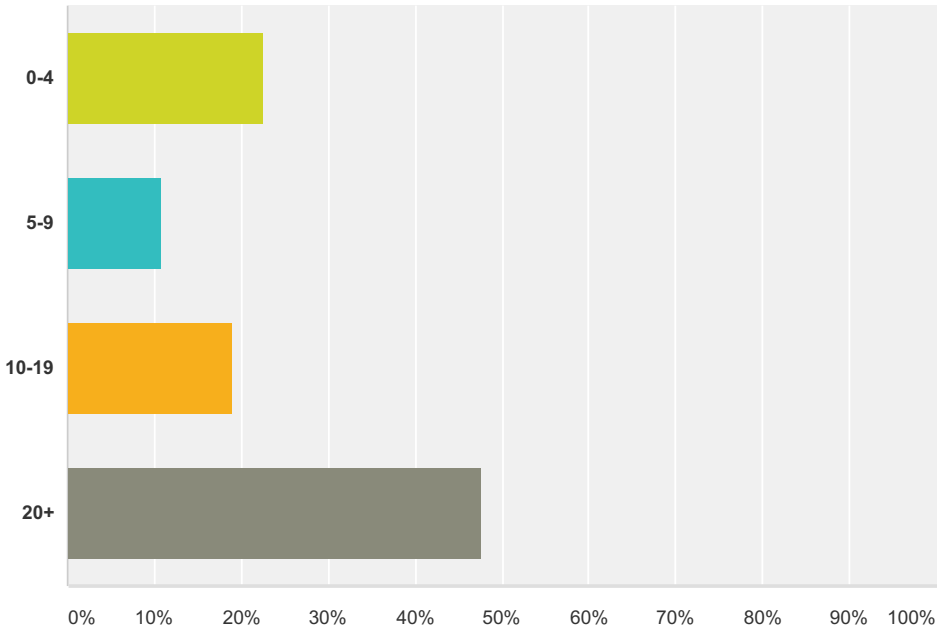
Q1 How many years has it been since you've completed your formal education?

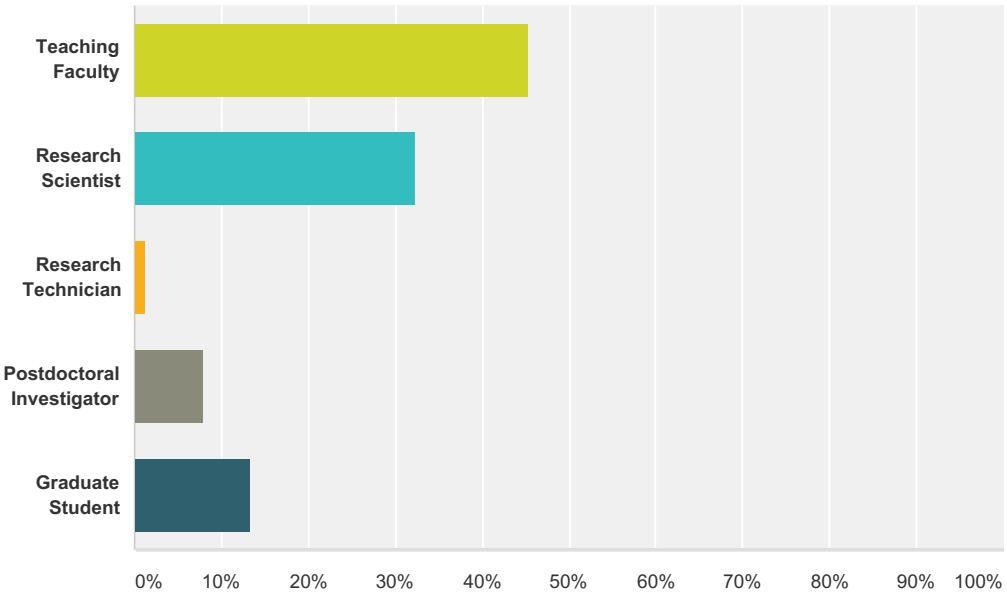
Answered: 258 Skipped: 5



Answer Choices	Responses	
0-4	**22.48%**	58
5-9	**10.85%**	28
10-19	**18.99%**	49
20+	**47.67%**	123
Total		**258**

Q2 What is your present position within your institution?

Answered: 241 Skipped: 22



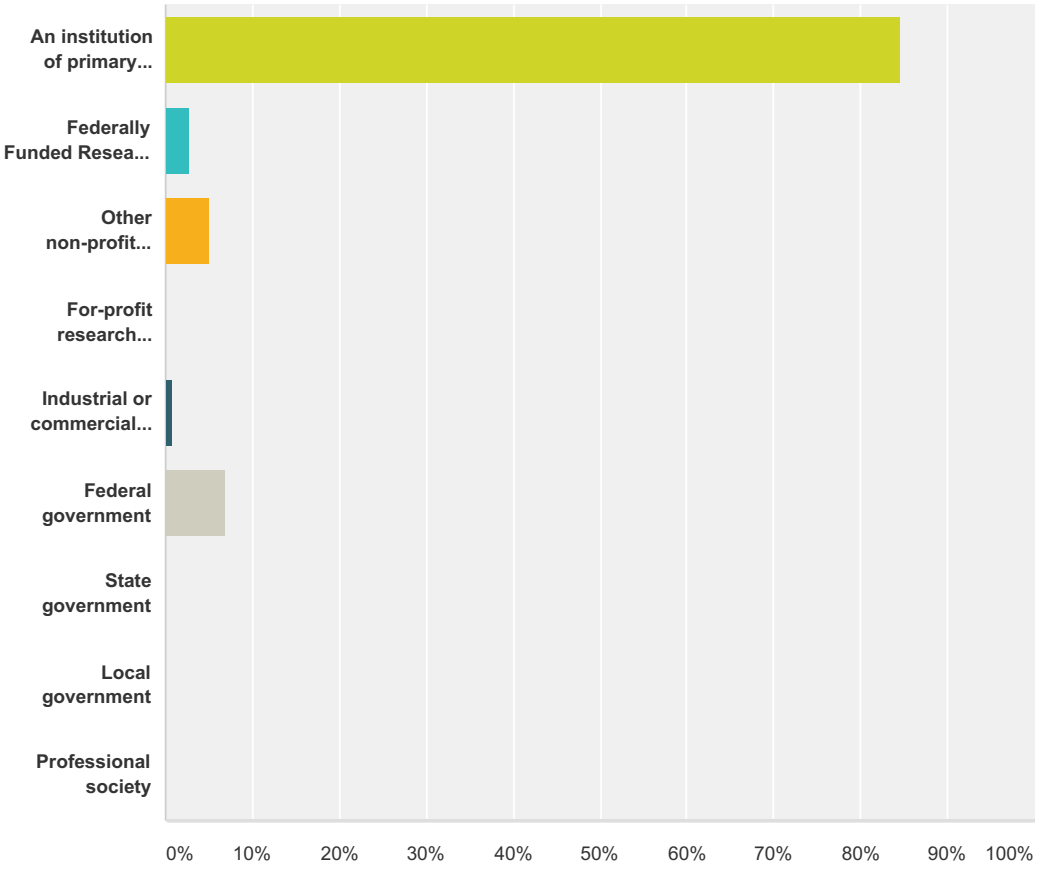
Answer Choices	Responses	
Teaching Faculty	**45.23%**	109
Research Scientist	**32.37%**	78
Research Technician	**1.24%**	3
Postdoctoral Investigator	**7.88%**	19
Graduate Student	**13.28%**	32
Total		**241**

#	Other (please specify)	Date
1	Specialist - operational, admin, and research	7/1/2016 8:52 PM
2	Marine Operations Manager	7/1/2016 1:41 PM
3	Seismological network director	6/29/2016 10:54 PM
4	Assistant Professor	6/29/2016 11:38 AM
5	undergraduate research assistant	6/29/2016 9:26 AM
6	Director	6/27/2016 6:56 PM
7	Software Engineer	6/27/2016 4:45 PM
8	Govt employee	6/27/2016 10:03 AM
9	emeritus with USGS and Univ. Alaska Fairbanks	6/21/2016 4:19 PM
10	As a tenured member of the faculty I am engaged in both teaching and research	6/20/2016 5:52 PM
11	Staff Geologist	6/20/2016 9:02 AM
12	Staff Scientist	6/20/2016 7:08 AM

13	senior scientist	6/18/2016 4:42 PM
14	Professor	6/18/2016 12:25 PM
15	semi-retired	6/18/2016 10:05 AM
16	ADJUNCT	6/18/2016 9:51 AM
17	Regular tenured faculty	6/17/2016 6:22 PM
18	Teaching and Research Faculty	6/16/2016 9:39 AM
19	Associate Dean	6/14/2016 5:57 PM
20	Research and graduate teaching - primarily grant-supported	6/14/2016 12:25 PM
21	Project Manager	6/14/2016 11:54 AM
22	50% teach/50% research	6/14/2016 9:30 AM
23	And Associate Director	6/13/2016 5:58 PM
24	Administrator	6/13/2016 4:02 PM

Q3 Please select the organizational type that most closely corresponds to your organization.

Answered: 258 Skipped: 5



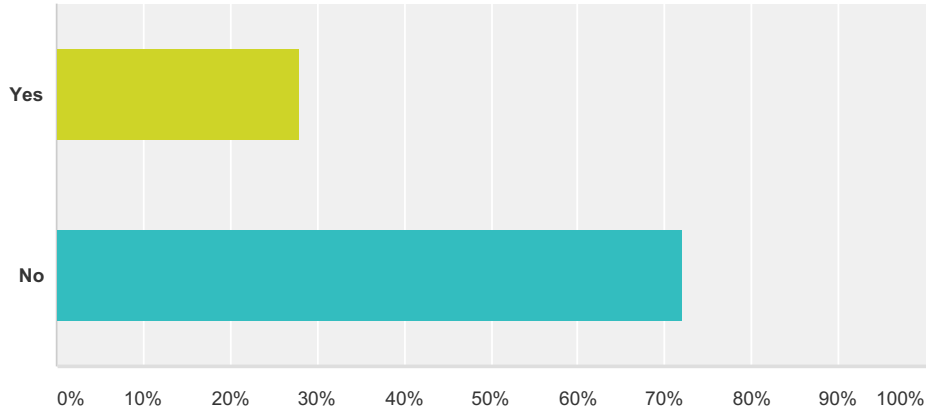
Answer Choices	Responses	
An institution of primary and/or secondary education, ie. college and/or university	**84.50%**	218
Federally Funded Research and Development Center (FFRDC)	**2.71%**	7
Other non-profit research organization	**5.04%**	13
For-profit research organization	**0.00%**	0
Industrial or commercial company	**0.78%**	2
Federal government	**6.98%**	18
State government	**0.00%**	0
Local government	**0.00%**	0
Professional society	**0.00%**	0
Total		**258**

#	Other (please specify)	Date

1	Non-profit consortium	6/14/2016 11:54 AM
2	currently unemployed	6/14/2016 1:27 AM
3	I am currently an intern aboard the R/V Sharp	6/14/2016 12:59 AM

Q4 Do you have to raise more than fours months of salary per year?

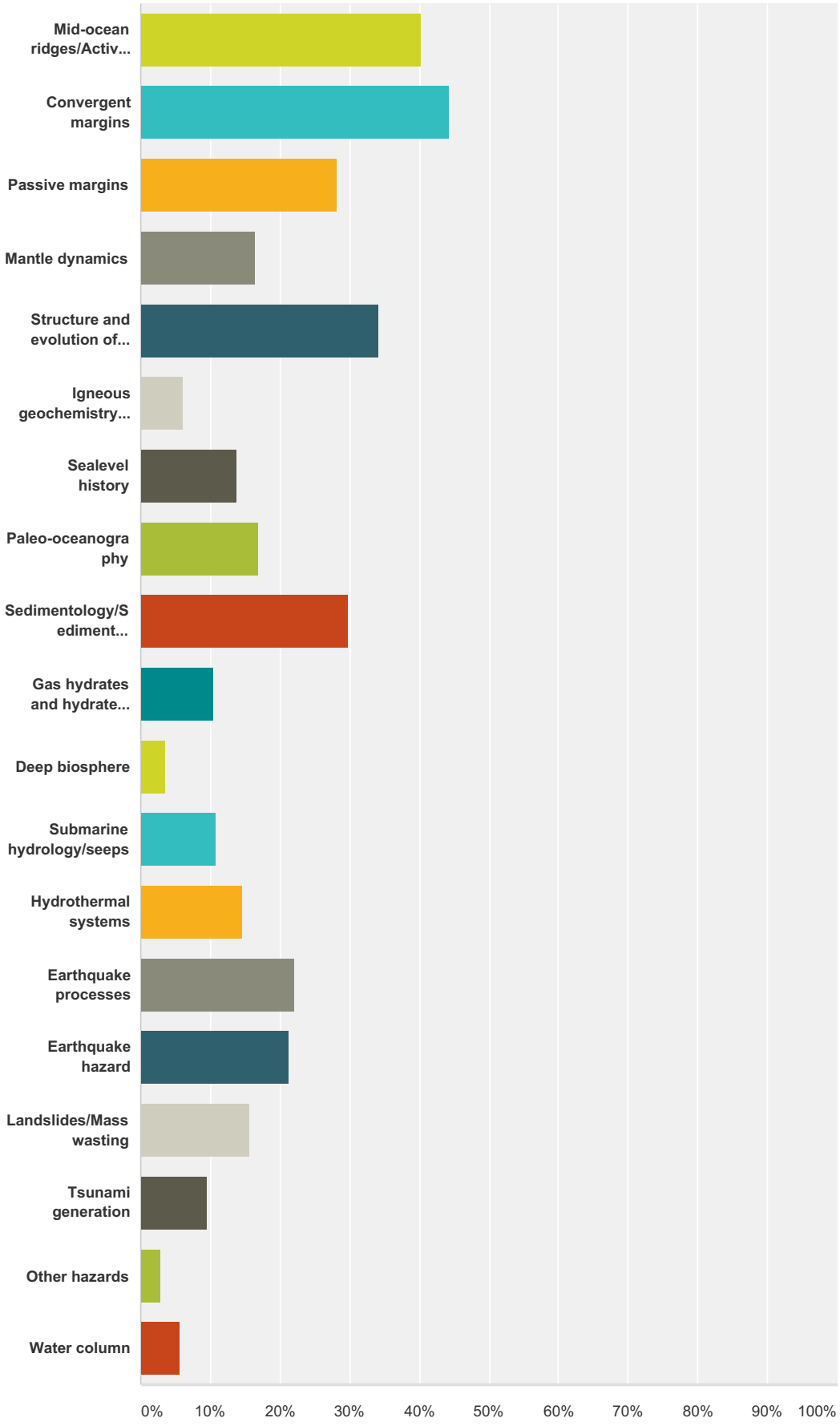
Answered: 258 Skipped: 5



Answer Choices	Responses	
Yes	**27.91%**	72
No	**72.09%**	186
Total		**258**

Q5 What is the primary focus of your area of research? (select all that apply)

Answered: 248 Skipped: 15


Mid-ocean ridges/Activ...
Convergent margins
Passive margins
Mantle dynamics
Structure and evolution of...
Igneous geochemistry...
Sealevel history
Paleo-oceanography
Sedimentology/Sediment...
Gas hydrates and hydrate...
Deep biosphere
Submarine hydrology/seeps
Hydrothermal systems
Earthquake processes
Earthquake hazard
Landslides/Mass wasting
Tsunami generation
Other hazards
Water column
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%

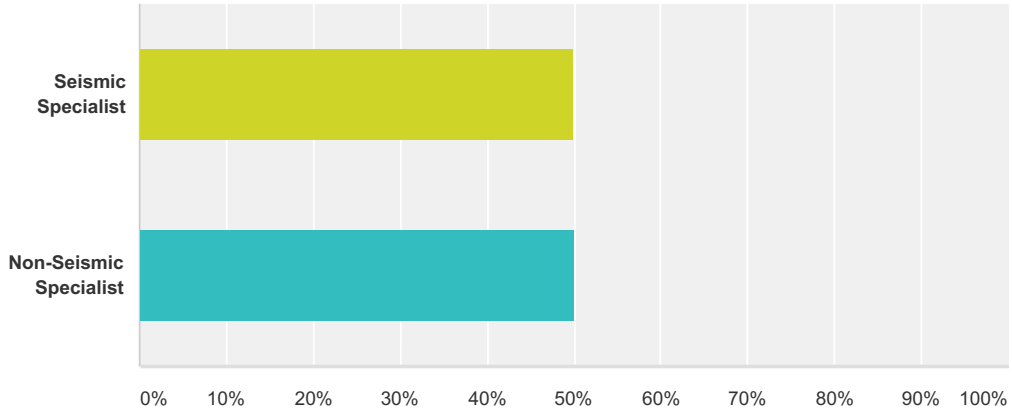
Answer Choices	Responses	
Mid-ocean ridges/Active rifts/Transforms	**40.32%**	100
Convergent margins	**44.35%**	110
Passive margins	**28.23%**	70
Mantle dynamics	**16.53%**	41
Structure and evolution of the lithosphere	**34.27%**	85
Igneous geochemistry/petrogenesis	**6.05%**	15
Sealevel history	**13.71%**	34
Paleo-oceanography	**16.94%**	42
Sedimentology/Sediment stratigraphy/architecture	**29.84%**	74
Gas hydrates and hydrate stability	**10.48%**	26
Deep biosphere	**3.63%**	9
Submarine hydrology/seeps	**10.89%**	27
Hydrothermal systems	**14.52%**	36
Earthquake processes	**22.18%**	55
Earthquake hazard	**21.37%**	53
Landslides/Mass wasting	**15.73%**	39
Tsunami generation	**9.68%**	24
Other hazards	**2.82%**	7
Water column	**5.65%**	14
Total Respondents: 248		

#	Other (please specify)	Date
1	Seamounts, habitat mapping, volcanology	7/1/2016 8:52 PM
2	As science support, I work with several PI's that address most of the above.	7/1/2016 1:41 PM
3	paleomagnetism	7/1/2016 12:14 AM
4	Volcano magma plumbing structure	6/30/2016 10:51 AM
5	active tectonics	6/29/2016 1:49 PM
6	Volcano hazards	6/29/2016 12:57 PM
7	paleobiology	6/28/2016 4:23 AM
8	volcano morphology, scientific visualization	6/27/2016 5:34 PM
9	Support the scientific community	6/27/2016 4:45 PM
10	paleoclimate, terrestrial environments from marine sediments, organic geochemistry	6/22/2016 9:19 AM
11	All above	6/21/2016 8:54 AM
12	My primary focus in on the strcuture, composition, physical state and evolution of the oceanic crust	6/20/2016 5:52 PM
13	I was chief scientist for Sperm Whale Seismic Studies in GOM	6/20/2016 11:30 AM
14	Current: Ground motion estimation, given known hazards; Former (Ph.D.): Fault structure and hazard through active-source seismic imaging	6/20/2016 10:55 AM

15	seamounts	6/18/2016 11:21 AM
16	Impact craters; glacial sequence stratigraphy	6/17/2016 9:22 PM
17	OBS noise interferometry and receiver function method development	6/17/2016 4:36 PM
18	Electromagnetic induction in Earth	6/15/2016 4:22 PM
19	But no longer engaged in active research.	6/14/2016 5:57 PM
20	Volcanic processes	6/14/2016 4:26 PM
21	carbon cycle and changes in sedimentation patterns	6/14/2016 12:23 PM
22	Volcanology	6/14/2016 11:03 AM
23	Arctic Ocean	6/14/2016 10:22 AM
24	Volcanology	6/14/2016 9:48 AM
25	We are currently working with NOAA Fisheries on Scallop Surveys	6/14/2016 12:59 AM
26	transform margins	6/13/2016 5:41 PM
27	upper-ocean circulation	6/13/2016 4:29 PM
28	marine seismology, cryo-seismology	6/13/2016 4:14 PM
29	geothermal; magnetotelluric imaging	6/13/2016 3:55 PM
30	Biological Oceanography	6/13/2016 3:54 PM

Q6 Please indicate your specialty below:

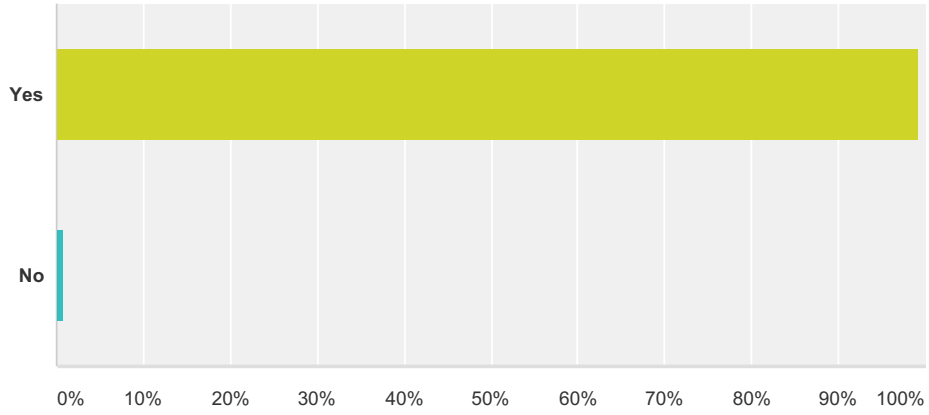
Answered: 259 Skipped: 4



Answer Choices	Responses	
Seismic Specialist	**49.81%**	129
Non-Seismic Specialist	**50.19%**	130
Total		**259**

Q7 Do you plan to use seismic data in the future?

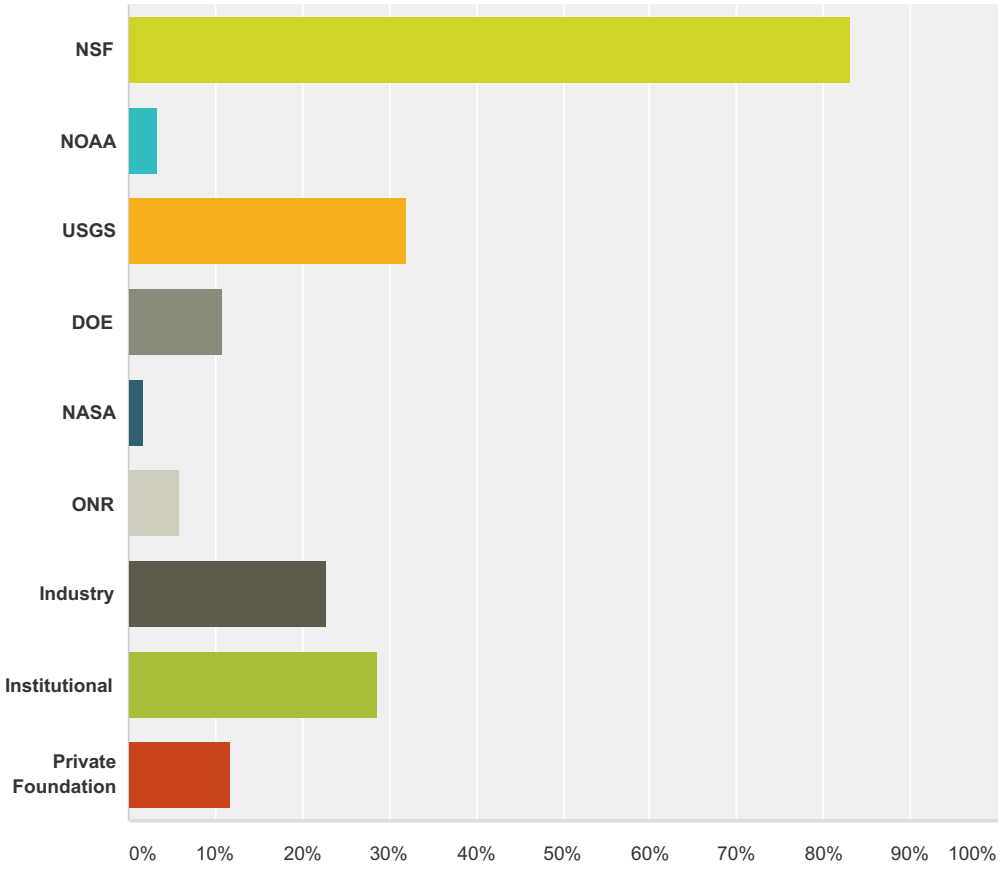
Answered: 120 Skipped: 143



Answer Choices	Responses	
Yes	**99.17%**	119
No	**0.83%**	1
Total		**120**

Q8 What is the source of funding for your research using seismic data? (select all that apply)

Answered: 119 Skipped: 144



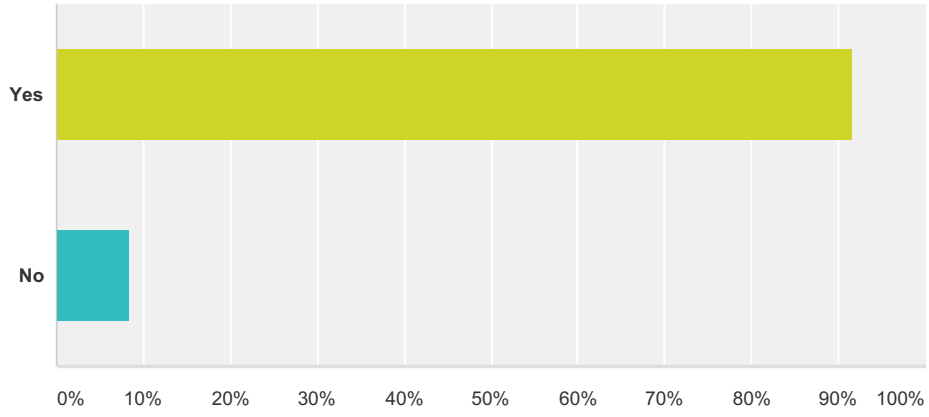
Answer Choices	Responses	
NSF	83.19%	99
NOAA	3.36%	4
USGS	31.93%	38
DOE	10.92%	13
NASA	1.68%	2
ONR	5.88%	7
Industry	22.69%	27
Institutional	28.57%	34
Private Foundation	11.76%	14
Total Respondents: 119		

#	Other (please specify)	Date

1	BOEM?	7/1/2016 1:47 PM
2	EU	6/29/2016 6:09 PM
3	NRC/NETL	6/29/2016 5:37 PM
4	USGS is only occasionally. Also formerly DoD	6/27/2016 10:17 AM
5	State Department	6/27/2016 10:08 AM
6	The BOEM receives all data acquired under permit in the U.S. OCS	6/20/2016 9:04 AM
7	NSERC	6/20/2016 7:11 AM
8	State Department	6/18/2016 10:47 PM
9	BOEM	6/17/2016 9:26 PM
10	state	6/15/2016 11:40 AM
11	Have had ONR support, but not in last 15 years	6/14/2016 1:19 PM
12	NSERC	6/14/2016 9:46 AM
13	BOEM	6/13/2016 4:29 PM

Q9 Are you familiar with where to find and how to obtain archived seismic data?

Answered: 121 Skipped: 142



Answer Choices	Responses	
Yes	**91.74%**	111
No	**8.26%**	10
Total		**121**

Q10 What data archives have you used?

Answered: 104 Skipped: 159

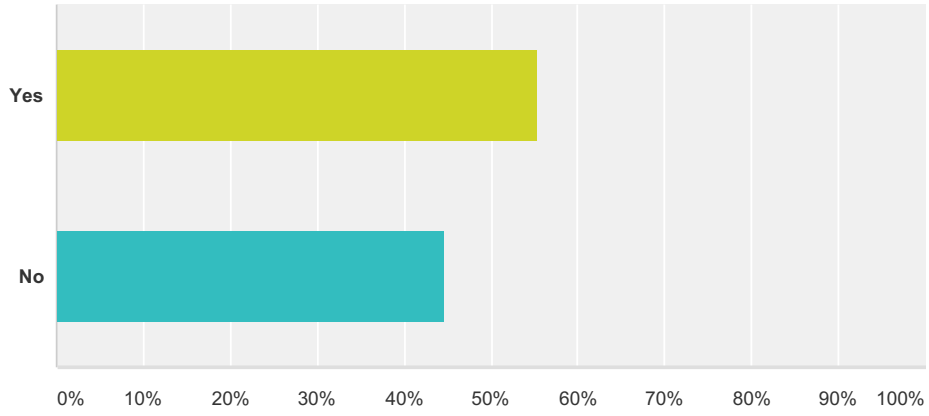
#	Responses	Date
1	Marine Geoscience Data System; UTIG seismic data center	7/1/2016 1:16 PM
2	NAMSS, Infobank/CMGDS, MGDS, R2R, UTportal, NCEIportal	6/30/2016 6:49 PM
3	IRIS	6/30/2016 4:44 PM
4	Marine Geoscience Data System	6/30/2016 4:23 PM
5	IRIS DMC	6/30/2016 2:55 PM
6	IRIS DMC	6/30/2016 10:54 AM
7	IRIS DMC	6/30/2016 10:52 AM
8	IRIS, WWSSN film chips, Hi-NET, JMA, GeoScope	6/29/2016 10:56 PM
9	IRIS DMC, EIDA	6/29/2016 6:46 PM
10	IRIS	6/29/2016 5:37 PM
11	LDEO, UTIG, USGS - Walrus	6/29/2016 5:37 PM
12	UTIG seismic portal, COCORP	6/29/2016 5:25 PM
13	IRIS DMC	6/29/2016 12:58 PM
14	IRIS DMC	6/29/2016 11:52 AM
15	IRIS data center	6/29/2016 11:50 AM
16	UTIG Academic data portal	6/29/2016 11:50 AM
17	Mostly stuff from the IRIS DMC. Currently we are using TA data from the Alaska-Yukon area.	6/29/2016 11:39 AM
18	IRIS DMC	6/29/2016 10:25 AM
19	IRIS	6/29/2016 9:30 AM
20	IRIS	6/29/2016 9:10 AM
21	ASP UTIG	6/29/2016 8:39 AM
22	IRIS, EIDA, ORFEUS, GEOFON	6/29/2016 8:13 AM
23	IRIS; also local databases	6/29/2016 7:47 AM
24	IRIS DMC, SCEC	6/29/2016 7:37 AM
25	IRIS-DMC	6/29/2016 12:36 AM
26	USGS NAMSS, UTIG, Lamont	6/28/2016 11:08 PM
27	CI	6/28/2016 6:01 PM
28	ASP at UTIG and at LDEO	6/27/2016 5:23 PM
29	MGDS, Institutional archives	6/27/2016 3:18 PM
30	IRIS DMC	6/27/2016 2:30 PM
31	UTIG ASP, NAMMS, GeoMapApp	6/27/2016 1:51 PM
32	University of Texas, USGS	6/27/2016 1:07 PM
33	UTIG, IRIS	6/27/2016 12:51 PM
34	IRIS DMC	6/27/2016 12:20 PM
35	UTIG Academic Seismic Portal, USGS	6/27/2016 12:08 PM

36	IRIS DMC, MGDS for non-seismic data	6/27/2016 10:17 AM
37	NGDC/NCEI, UT, GeoMapApp	6/27/2016 10:08 AM
38	UTIG, LDEO, USGS	6/27/2016 9:46 AM
39	Academic Seismic Portal at LDEO, UTIG Seismic Data Center	6/23/2016 11:43 AM
40	OBS data	6/22/2016 11:21 PM
41	IRIS, IEDA	6/21/2016 7:24 PM
42	USGS	6/21/2016 4:55 PM
43	IEDA/MGDS, SDLS, UTIG portal	6/21/2016 9:47 AM
44	IRIS	6/20/2016 1:54 PM
45	LDEO, UTIG	6/20/2016 12:44 PM
46	NAMSS, USGS	6/20/2016 12:39 PM
47	MGDS at LDEO, IRIS	6/20/2016 11:20 AM
48	USGS CMGDC	6/20/2016 10:57 AM
49	industry, Videpi	6/20/2016 10:52 AM
50	ASP; USGS	6/20/2016 10:08 AM
51	USGS	6/20/2016 9:04 AM
52	IRIS	6/20/2016 7:11 AM
53	IRIS DMC	6/19/2016 2:53 PM
54	IODP	6/19/2016 12:20 AM
55	usually industry archives	6/18/2016 11:56 PM
56	Columbia University Portal	6/18/2016 10:47 PM
57	My own plus UTIG	6/18/2016 2:50 PM
58	Bgr	6/18/2016 2:51 AM
59	UTIG Ldeo anatarctic Usgs	6/17/2016 9:26 PM
60	LDEO MGDS and IRIS for OBS data	6/17/2016 7:45 PM
61	NAMSS	6/17/2016 7:45 PM
62	IRIS DMC	6/17/2016 5:55 PM
63	IRIS DMC	6/17/2016 4:40 PM
64	Lamont, UTexas repositories	6/17/2016 3:31 PM
65	MGDS - LDEO & UTIG	6/17/2016 3:27 PM
66	Lamont, UTIG, IRIS	6/17/2016 1:36 PM
67	IRIS DMC. I don't know about active source.	6/17/2016 1:31 PM
68	IRIS	6/17/2016 10:02 AM
69	USGS NAMSS, UTIG, Lamont, NGDC	6/16/2016 2:27 PM
70	IRIS, MGDS	6/16/2016 2:43 AM
71	IRIS, Lamont, UTIG	6/15/2016 7:29 PM
72	UTIG, USGS, LDEO	6/15/2016 12:06 PM
73	UTIG portal, GeoMapApp, NAMSS,	6/15/2016 11:45 AM
74	UTIG, MGDS	6/15/2016 11:40 AM
75	IRIS, various european & Scandinavian databases	6/15/2016 8:10 AM
76	seismic: IEDA- academic seismic portal; IRIS; CTBTO-CSS. non-seismic IEDA/MGDS & NGDC	6/14/2016 6:54 PM

77	Cascadia Initiative	6/14/2016 3:20 PM
78	IRIS DMC - I use primarily passive data recorded on OBSs, not active source data.	6/14/2016 1:19 PM
79	IRIS DMC	6/14/2016 1:01 PM
80	IRIS DMC, UT, Geomar, personal connections	6/14/2016 12:34 PM
81	USGS NAMSS; UTIG and LDEO seismic portals, NGDC, others	6/14/2016 12:28 PM
82	IRIS DMC	6/14/2016 12:13 PM
83	IRIS DMC	6/14/2016 11:51 AM
84	Academic Seismic Portal (ASP): LDEO (shot gathers), UTIG (stacks);NaAonal Archive of Marine Seismic Surveys (NAMSS)	6/14/2016 10:26 AM
85	MGDS	6/14/2016 10:16 AM
86	Geomapapp	6/14/2016 9:54 AM
87	For example, NSF funded data bases at LDEO and UTIG	6/14/2016 9:46 AM
88	UTIG ASP, LDEO	6/14/2016 9:23 AM
89	ASP	6/14/2016 8:22 AM
90	MGDS	6/14/2016 12:08 AM
91	Academic Seismic Portal at UTIG and LDEO; IRIS	6/13/2016 9:28 PM
92	ngdc ldeo utig	6/13/2016 7:39 PM
93	UTIG/L-DEO seismic data portals	6/13/2016 6:01 PM
94	Marine Geoscience Data System Academic Seismic Portal	6/13/2016 5:46 PM
95	UTIG, USGS, MGDS, NGDC	6/13/2016 5:43 PM
96	LDEO/UTIG Marine Seismic Data Center, IRIS DMC	6/13/2016 5:30 PM
97	USGS, UTIG, LAMONT	6/13/2016 5:08 PM
98	marine geoscience data system	6/13/2016 5:07 PM
99	JWEED	6/13/2016 4:58 PM
100	MARGINS	6/13/2016 4:29 PM
101	IRIS-DMC	6/13/2016 4:16 PM
102	IRIS, UTIG	6/13/2016 4:07 PM
103	UTIG-ASP, LDEO-ASP, USGS Marine Seismic Data Archive	6/13/2016 4:07 PM
104	UTIG ASP, LDEO MGDS, NAMSS, USGS CMGDS	6/13/2016 4:00 PM

Q11 Have you requested or used seismic data collected by groups outside of the U.S.?

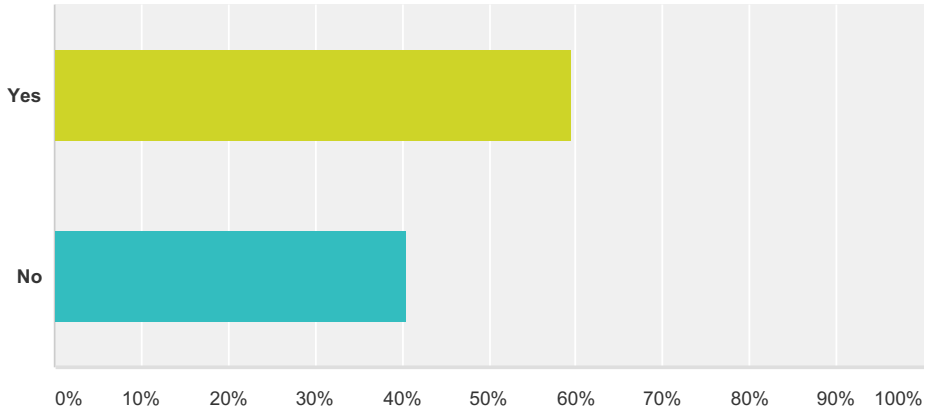
Answered: 121 Skipped: 142



Answer Choices	Responses	
Yes	**55.37%**	67
No	**44.63%**	54
Total		**121**

Q12 Have you collaborated with international partners in collecting seismic data?

Answered: 121 Skipped: 142



Answer Choices	Responses	
Yes	**59.50%**	72
No	**40.50%**	49
Total		**121**

Q13 If you have collaborated with international partners, what countries were your partners from and what types of data did you collect?

Answered: 74 Skipped: 189

#	Responses	Date
1	Canada/multibeam and 2D seismic (airguns)	7/1/2016 1:47 PM
2	United Kingdom - MCS & OBS refraction	7/1/2016 1:16 PM
3	Germany, Turkey	6/30/2016 8:10 PM
4	Spain, Canada, Costa Rica	6/30/2016 4:44 PM
5	The partners are mostly graduate students from Germany, Norway, and South Korea. The primary focus was to collect 2D MCS data (total length of the profiles, ~5300 km), besides the MCS, swath bathymetry; potential field gravity and magnetic; sonobuoy refraction; CHIRP subbottom; temperature, velocity: sound; and the navigation	6/30/2016 4:23 PM
6	Iceland, Norway, Japan, United Kingdom, Greece, Germany; active source marine seismic refraction data	6/30/2016 10:54 AM
7	UK, Greece, active source recorded by OBSs	6/30/2016 10:52 AM
8	seismograms	6/29/2016 10:56 PM
9	Seismic data, Ecuador, France, UK	6/29/2016 6:46 PM
10	Greece	6/29/2016 6:09 PM
11	New Zealand (Seismic reflection), Germany (VSP)	6/29/2016 5:37 PM
12	New Zealand - MCS, Heat Flow. Germany and Norway - 3D MCS	6/29/2016 5:37 PM
13	Portugal, 2-D seismic	6/29/2016 5:25 PM
14	Japan - collected ocean bottom seismic data (passive and active source). Also collaborated with small countries (Fiji, Tonga, etc)	6/29/2016 11:50 AM
15	Japan - 2D and 3D MCS	6/29/2016 11:50 AM
16	Canada	6/29/2016 11:39 AM
17	UK - active and passive source OBS data	6/29/2016 9:10 AM
18	many	6/29/2016 8:13 AM
19	Peru; passive broadband data	6/29/2016 7:37 AM
20	France - high resolution single channel seismic reflection data	6/27/2016 5:23 PM
21	France, MCS	6/27/2016 3:18 PM
22	France- High Resolution Multichannel 2d and 3d seismic data	6/27/2016 2:38 PM
23	Spain, Costa Rica, 2D and 3D seismic	6/27/2016 1:07 PM
24	Mexico, New Zealand - marine MCS data	6/27/2016 12:51 PM
25	United Kingdom - active source	6/27/2016 12:20 PM
26	UK, seismic reflection and refraction	6/27/2016 12:08 PM
27	Canada, Mexico, Papua New Guinea, Malawi, Tanzania. Primarily passive seismic data, onshore and offshore. Some active-source onshore-offshore deismic data.	6/27/2016 10:17 AM
28	UK, Indonesia, Poland - MCS, SCS and multibeam sonar	6/27/2016 9:51 AM
29	Denmark, Canada, Costa Rica - OBS/MCS/Onshore-offshore	6/27/2016 9:46 AM
30	Greece (multi-channel seismic)	6/23/2016 11:43 AM

31	New Zealand, France	6/22/2016 11:21 PM
32	Germany- passive seismic	6/21/2016 7:24 PM
33	Seismic reflection, Austrailia, New Zealand, Japan, Germany, Canada, France, Itlay, UK	6/21/2016 4:55 PM
34	Canada, seismic-reflection data	6/20/2016 12:39 PM
35	US/Canada OBS data	6/20/2016 7:11 AM
36	Japan, mcs	6/19/2016 4:22 PM
37	France and the UK	6/19/2016 2:53 PM
38	Japan (3D seismic), Korea (2D lines)	6/19/2016 12:20 AM
39	Japan, Germany; reflection seismic	6/18/2016 2:50 PM
40	France, Indonesia. Multi-channel seismic reflection + OBS	6/18/2016 2:51 AM
41	MCS and OBS with UK, Japan, Mexico	6/17/2016 9:26 PM
42	Japan: OBS and pressure sensor data	6/17/2016 4:40 PM
43	Germany, MCS	6/17/2016 3:31 PM
44	Canada, Portugal, Spain, United Kingdom. 2D/3D MCS, OBS, Multi-beam sonar, Gravity, Magnetic	6/17/2016 3:27 PM
45	New Zealand and Japan (MCS + OBS + onshore-offshore)	6/17/2016 1:36 PM
46	Japan - OBS. New Zealand - land seismic data.	6/17/2016 1:31 PM
47	Canada, Japan,	6/17/2016 10:02 AM
48	Canada, high-res MCS	6/16/2016 2:27 PM
49	Canada - OBS earthquake data	6/16/2016 2:43 AM
50	Germany, some reflection and SP-OBS. Japan, onshore networks.	6/15/2016 7:29 PM
51	Seismic data in Japan, Australia, South Africa, Canada	6/15/2016 12:06 PM
52	Canada, Russia. Multichannel seismic data	6/15/2016 11:45 AM
53	Germany - MCS; Norway - MCS; Denmark - MCS; Mexico - MCS (these are programs where the named country contributed funds to collect data or actually collected the data, as opposed to just letting us work in their waters - that list is longer)	6/15/2016 11:40 AM
54	UK; OBS crustal refraction	6/14/2016 6:54 PM
55	Canada, OBS data	6/14/2016 1:19 PM
56	Germany, passive source seismic	6/14/2016 12:34 PM
57	Germany, Chile, France (seismic reflection, OBS controlled and natural source)	6/14/2016 12:28 PM
58	England, Refraction	6/14/2016 12:13 PM
59	Broadband seismic data (inc. OBS): Ethiopia, Papua New Guinea	6/14/2016 11:51 AM
60	UK - 2D MCS, Germany - p-cable, Japan - 3D MCS & VSP,	6/14/2016 10:16 AM
61	France, multichannel seismic data; Germany, single-channel and multichannel seismic data	6/14/2016 10:15 AM
62	Israel, France Turkey, Chirp, Multichannel 2D	6/14/2016 9:54 AM
63	France (OBS), Canada (OBS), USA (MCS&OBS)	6/14/2016 9:46 AM
64	n/a	6/14/2016 8:22 AM
65	UK, Germany, Spain, France, Turkey, Tanzania, Malawi. Multichannel seismic reflection and wide-angle reflection/refraction data for sedimentary, crustal and/or upper mantle structure	6/14/2016 12:08 AM
66	brazil single channel seismic 3.5 kHz	6/13/2016 7:39 PM
67	MCS (2D and 3D) - Canada, UK, Germany, Indonesia, Israel	6/13/2016 6:01 PM
68	n/a	6/13/2016 5:43 PM
69	Germany, United Kingdom	6/13/2016 5:30 PM

70	Germany, France, Taiwan, Costa Rica; MCS, OBS, onshore/offshore, passive seismic	6/13/2016 5:08 PM
71	Germany, England; offshore active source wide angle refraction data	6/13/2016 4:58 PM
72	NZ, France, China, shallow seismic reflection	6/13/2016 4:29 PM
73	Japan, France - Borehole seismic data	6/13/2016 4:16 PM
74	Canada; broadband seismic data	6/13/2016 4:07 PM

Q14 Briefly describe the science questions you have addressed using seismic data.

Answered: 106 Skipped: 157

#	Responses	Date
1	Mid-Ocean ridge processes, rifting, earthquake hazard	7/1/2016 1:16 PM
2	Sedimentary evolution of lakes, basins, slopes	6/30/2016 8:10 PM
3	oceanic and continent-ocean plate boundary structures and processes, magma distribution, fault system evolution, basin-scale sediment distribution, diagenesis/geotherm, hydrate and gas concentration, continental slope mass wasting, deep-water sediment routing, ocean island evolution, marginal basin formation	6/30/2016 6:49 PM
4	The purpose of the MGL1112 expedition is to indirectly test proposed opening models for the Canada Basin by investigating subsurface seismic-geomorphology of the southern Chukchi Borderland in order to constrain the timing and type of tectonic deformations in the Arctic Ocean. The project is still in progress and about to be concluded in less than a year with three to four papers. This research will eventually put substantial constraints on the opening models of the Canada Basin.	6/30/2016 4:23 PM
5	Nature of upper mantle flow beneath oceanic plates	6/30/2016 2:55 PM
6	Mid ocean ridge mantle and crustal structure; plume-ridge interactions; plate-scale lithospheric structure; magma plumbing structure	6/30/2016 10:54 AM
7	Magmatism and tectonics at mid-ocean ridges, hotspots, convergent margins. Structure of the earth and seismicity, both related to magmatic, hydrothermal, or tectonic processes.	6/30/2016 10:52 AM
8	mantle structure, earthquake physics, seismic hazard	6/29/2016 10:56 PM
9	Sub-slab mantle flow, Dynamics surrounding LLSVPs, Dynamics at passive margins, Crustal anisotropy in South America	6/29/2016 6:46 PM
10	Passive margin architecture, Climate change	6/29/2016 5:37 PM
11	Hydrate dynamics, margin heat flow, thermal evolution	6/29/2016 5:37 PM
12	Rift structure, crustal structure	6/29/2016 5:25 PM
13	Role of tectonic tremor in earthquake cycle	6/29/2016 12:58 PM
14	Imaging magma production in arcs and spreading centers; Earthquake properties in subduction zones; Volatile cycles in subduction zones	6/29/2016 11:50 AM
15	convergent margin structure and tectonics, fault reflectivity and seismic attributes, deriving physical properties from seismic velocity.	6/29/2016 11:50 AM
16	Mantle structures.	6/29/2016 11:39 AM
17	Upper mantle seismic velocity structure in Indian Ocean	6/29/2016 10:25 AM
18	mostly microearthquake studies to study tectonic, magmatic, and hydrothermal processes at MORs	6/29/2016 9:10 AM
19	magma genesis in subduction zones, nature of continental and oceanic lithosphere, rifting and passive margin evolution	6/29/2016 8:13 AM
20	What are the characteristics and origin of deep crustal structures? What are the source processes of crustal and slab earthquakes?	6/29/2016 7:47 AM
21	Upper mantle anisotropic and dynamics; patterns of mantle convection; deep mantle processes; evolution of continental lithosphere	6/29/2016 7:37 AM
22	Break up tectonic plates, lithospheric thickening / thinning	6/29/2016 12:36 AM
23	Earthquake physics	6/28/2016 6:01 PM
24	Characterization of mid-ocean ridge magmatic systems. Nature and origin of mid-ocean ridge segmentation. Evolution of oceanic lithosphere. Low temperature hydrothermal alteration with crustal aging. Hydration of the lithosphere. Oceanic plate structure and relationship with subduction zone properties.	6/28/2016 6:39 AM

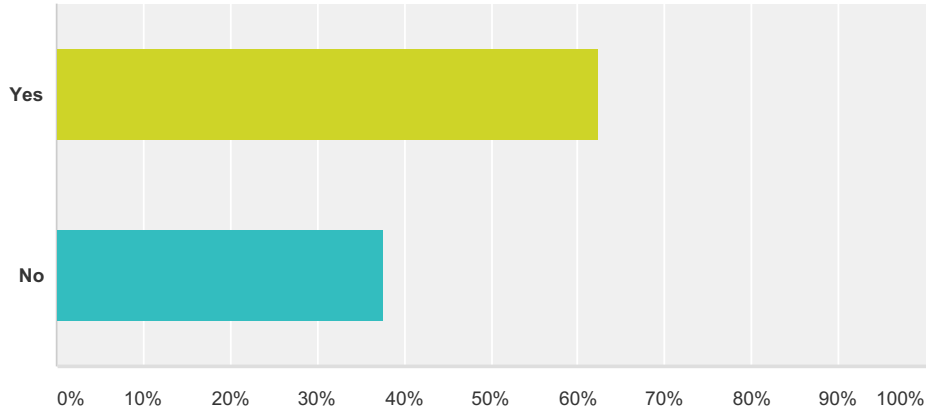
25	sea level history on shelves, slope canyon evolution, abyssal sediment transport and ocean circulation, paleoceanographic history, tectonic history of ocean structures, passive margin evolution	6/27/2016 5:23 PM
26	Evolution of oceanic crust over long time scales, velocities in oceanic crust	6/27/2016 3:18 PM
27	Fault Activity- Seimic Stratigraphy- Earthquake induced processes	6/27/2016 2:38 PM
28	Structure of subduction zones (plate interface detail + upper mantle structure), island arc composition and relation to crust production.	6/27/2016 2:30 PM
29	longterm evolution of oceanic lithosphere, climate tectonic interactions at convergent margins, influences on submarine mass wasting, carbonate platform evolution	6/27/2016 1:51 PM
30	Deformation, seismic initiation, shallow seeps	6/27/2016 1:07 PM
31	active faults; architecture of rifted margins	6/27/2016 12:51 PM
32	The importance of permeability in controlling the heat flux of black smoker hydrothermal systems. Mechanisms that contribute to magmatic focusing at mid-ocean ridges.	6/27/2016 12:20 PM
33	Crustal structure	6/27/2016 12:08 PM
34	dynamics and evolution of the lithosphere/asthenosphere; dynamics of deformation and melting in extensional systems; role of water in mantle deformation in both extension and subduction; stabilization of continental lithosphere	6/27/2016 10:17 AM
35	The uppermost (<50 m) stratigraphy to better understand the seafloor morphology	6/27/2016 10:08 AM
36	I have worked on a number of questions, from the structure of gas hydrate systems to the deep structure of continental margins to seismic oceanography.	6/27/2016 9:46 AM
37	Reservoir characterization for CO2 sequestration, characterization of active and passive rift margins, characterization of subduction margins	6/23/2016 11:43 AM
38	Subduction zone, back arc and ridge structure and seismicity	6/22/2016 11:21 PM
39	structure of shallow subduction zone, earthquake processes at subduction zones	6/21/2016 7:24 PM
40	Physical setting of great megathust earthquakes, origin and evolution of the Aleutian-Bering Sea Region, origin of the Chuchi Cap, Arctic Ocean, origin of the large subshelf basins of the Bering Sea, origin and evolution of the Tonga-Lau region, origin and evolution of the Emperor Seamounts, origin, evolution, and implications of the large, Meiji drift body of the NW Pacific, oroigin and plate tectonic implication of the large Zodiac Fan complex, North Pacfic, crustal recycling at subduction zones, origin of large methane gas and methane hydrate deposits of the Bering Sea Basin	6/21/2016 4:55 PM
41	estuarine sediment dynamics; glacial history of Antarctica	6/21/2016 9:47 AM
42	Earthquake seismicity	6/20/2016 1:54 PM
43	Dynamics of plate boundaries, passive margin evolution, earthquake hazard	6/20/2016 12:44 PM
44	Marine Geohazards	6/20/2016 12:39 PM
45	magma storage and supply at mid -ocean ridges and other volcanic systems, seismic reflections in the water (seismic oceanography)	6/20/2016 11:20 AM
46	I studied fault structure and hazards in the Inner Continental Borderlands, and the Salton Trough. These data were used to constrain the fault location, geometry, and segmentation to use as input into hazard models and estimation of likelihood of throughgoing rupture through segment boundaries.	6/20/2016 10:57 AM
47	stratigraphic and structural framework	6/20/2016 10:52 AM
48	What are the magntiudes and frequencies of submarine landslides along continental margins; what is the spatial relationship between gas hydrates and submarine landslides	6/20/2016 10:08 AM
49	Margin evolution, sequence stratigraphy and their effect on petroleum systems	6/20/2016 9:04 AM
50	Seafloor deformation, microseisms	6/20/2016 7:11 AM
51	Subduction zone processes. Great earthquakes	6/19/2016 4:22 PM
52	Structure of mid-ocean edges, hotspot structure and structure of convergent margins	6/19/2016 2:53 PM
53	Forearc basin initiation and early evolution	6/19/2016 12:01 PM
54	Fluid flow patterns and gas hydrate accumulation to estimate the amount of gas lock in place in dynamic hydrate reservoirs and the relationship to structures/fluid flow patterns as evidence is seismic data.	6/19/2016 12:20 AM
55	karstification in the Persian Gulf, evolution of structures in the P Gulf, evolution of faults in GOM	6/18/2016 11:56 PM

56	Hydrate plume structures in the sub seafloor	6/18/2016 10:47 PM
57	Deformation in accretionary prisms, development of forearc regions; structure of oceanic crust	6/18/2016 2:50 PM
58	North Atlantic Cenozoic paleoceanography; general stratigraphy of deep-marine sedimentary systems	6/18/2016 12:59 PM
59	Active faults and crustal structure	6/18/2016 2:51 AM
60	Subduction zone hazards, tectonic climate interactions,glaciated margins, impact craters	6/17/2016 9:26 PM
61	crustal structure, magma dynamics, faulting	6/17/2016 7:45 PM
62	Marine terraces and sea level history	6/17/2016 7:45 PM
63	How do acoustic waves in the water column and body waves in the crust couple to Scholte waves in the presence of bathymetric gradients? How can we adapt receiver function methodology to image below low-Vs marine sediments?	6/17/2016 4:40 PM
64	Stratigraphy, Mass Transport Deposits, Fluid flow	6/17/2016 3:31 PM
65	Seafloor surface processes, faulting, fluid flow, paleo-surface processes, slope conditioning.	6/17/2016 3:27 PM
66	Crustal structure and physical properties in subduction zones	6/17/2016 1:36 PM
67	lithospheric structure, tectonics, earthquake and tsunami source studies	6/17/2016 1:31 PM
68	Earthquake source processes and seismic hazard	6/17/2016 10:02 AM
69	earthquake and tsunami hazards, active tectonics, sequence stratigraphy	6/16/2016 2:27 PM
70	Rather a small box for this input! Understanding mid-ocean ridge structure, dynamics, volcanism and hydrothermal systems. Characterizing hazards at subduction zones	6/16/2016 2:43 AM
71	deep earth structure, seismicity, thrust zone and mantle melting processes, subduction cycling, rift tectonics	6/15/2016 7:29 PM
72	Gas and gas hydrates distribution, cold seep and sediment architecture	6/15/2016 12:06 PM
73	Origin or rifts, passive margins, and major tectonic boundaries in continental crust.	6/15/2016 11:45 AM
74	rift initiation; rifted margin formation and structure; magmato-tectonic interactions in rifting; MOR melt extraction and residual melt column composition and fabric; oceanic and continental arc structure; magma/sediment interactions; gas migration in hydrate reservoirs; paleo subsurface freshwater and submarine groundwater discharge; passive-margin cold seeps; hydration of subducting lithosphere; seismicity of oceanic transforms; secondary magmatic evolution of oceanic plates (distal off-axis magmatism); Jurassic quite zone magnetic signatures; other stuff	6/15/2016 11:40 AM
75	asthenospheric and lithospheric structure	6/15/2016 8:10 AM
76	US lithospheric structure, primarily Suwannee Terrane	6/14/2016 7:09 PM
77	island crustal structure; oceanic core complex structure & evolution; MOR seismicity; hydroacoustic propagation/lossAK forearc basin structure;	6/14/2016 6:54 PM
78	seismic tomography of velocity and anelasticity	6/14/2016 3:20 PM
79	Mostly mantle structure related to lithosphere and asthenospheric processes	6/14/2016 1:19 PM
80	What is the origin of mid-ocean ridge segmentation? How does lithospheric anisotropy evolve away from the plate boundary?	6/14/2016 1:01 PM
81	subduction megathrust processes	6/14/2016 12:34 PM
82	relationship between crustal structure and subduction zone earthquakes, plumbing seafloor methane vents and seeps, deep structure of rifts, extensional margins and strike-slip faults	6/14/2016 12:28 PM
83	Patterns of mantle flow, mid-ocean ridge processes, basalt genesis	6/14/2016 12:13 PM
84	Structure of the upper mantle using teleseisms	6/14/2016 11:51 AM
85	How do off-axis magma lenses distribute at mid-ocean ridge flanks and what are their 3D structures? How does the crustal structure, the distribution and extent of faults of Juan de Fuca plate evolve from ridge to Cascadia deformation front? How does the consolidation state of underthrust and accreted sediments affect the slip behavior of the shallowest portion of the plate interface at Cascadia?	6/14/2016 10:26 AM
86	Hydrate distribution and vent systems, fluid migration and faulting, seismogenic zone, subduction zone tectonics	6/14/2016 10:16 AM
87	Past sea-level changes, onset of ocean currents, continental margin architecture	6/14/2016 10:15 AM
88	sediment transport and deposition, initiation of subduction, offsets of transform faults, crustal accretion	6/14/2016 9:54 AM

89	Many fundamental questions addresed at mid-ocean ridges, subduction zones and rifted margins (e.g., 8 Nature/Science/NatureGeoscience papers in the last 13 years from MCS/OBS investigations)	6/14/2016 9:46 AM
90	Continental margin development processes, inner continental shelf incised valley structures, submarine channel and fan development	6/14/2016 9:23 AM
91	Oceanic crust architecture	6/14/2016 8:22 AM
92	What controls the lateral and downdip extent of great subduction zone earthquakes and their tsunamigenic potential? How much water enters subduction zones and what impact does it have on the generation of earthquakes and magmas? How do faults in the overriding plate of subduction zones contribute to deformation, seismicity and tsunamis? What are the roles of magmatism and pre-existing structures in enabling continental rifting and breakup? What is the role of mantle hydration in enabling continental breakup? How is tectonic segmentation in active rifts manifest throughout the lithosphere, and how do magmatism and deformation vary along and within segments? What conditions promote gradual and catastrophic slope failure on passive rifted margins?	6/14/2016 12:08 AM
93	(1) compensation mechanisms of hotspot swells; (2) nature and geometry of heat sources beneath hydrothermal vents; (3) heterogeneity of oceanic lithosphere; (4) water content of subducting lithosphere; (5) magmatic underplaying beneath intraplate volcanic islands.	6/13/2016 9:28 PM
94	deep sea sedimentation processes	6/13/2016 7:39 PM
95	I am very broad. I have tackled everything from seismic stratigraphy of continental shelves (high-res) to the deep structural and stratigraphic history of both passive and convergent margins.	6/13/2016 6:01 PM
96	Continental margin sedimentary processes, sequence stratigraphy and sea-level history	6/13/2016 5:46 PM
97	Deep-sea fan evolution, crustal-scale tectonic structure, earthquake faults, crustal architecture (seismic tomography)	6/13/2016 5:43 PM
98	How do magmatism and deformation interact in the lithosphere?	6/13/2016 5:30 PM
99	Base of gas hydrate stability in the Gulf of Mexico, Depositional setting of hydrate-bearing resrvoirs	6/13/2016 5:13 PM
100	Structure and evolution of active and passive margins; Structure of active subduction megathrusts; structure and evolution of arc-continent collision;	6/13/2016 5:08 PM
101	origin of Layer 2A in oceanic crust, assessing the geometry and physical state of magma reservoirs, imaging magma delivery system,...	6/13/2016 5:07 PM
102	lithospheric structure of ultra-slow speed oceanic crust	6/13/2016 4:58 PM
103	internal stratigraphyof depositional systems	6/13/2016 4:29 PM
104	ocean-ice interaction, bottom-interacting ocean acoustics	6/13/2016 4:16 PM
105	Lithosphere/Upper mantle/crustal structure.	6/13/2016 4:07 PM
106	offshore earthquake hazards	6/13/2016 4:00 PM

Q15 Do you have students working on seismic data for research?

Answered: 120 Skipped: 143



Answer Choices	Responses	
Yes	**62.50%**	75
No	**37.50%**	45
Total		**120**

Q16 What is your area of expertise?

Answered: 125 Skipped: 138

#	Responses	Date
1	Multibeam data acquisition, processing, interpretation	7/1/2016 8:55 PM
2	Tectonics, Structural Geology, Geomechanics	7/1/2016 4:03 PM
3	sediment magnetism	7/1/2016 12:17 AM
4	crustal motions at convergent margins	6/29/2016 4:23 PM
5	Paleoceanography / Paleoclimatology	6/29/2016 3:36 PM
6	structural geology	6/29/2016 1:50 PM
7	plate tectonics	6/29/2016 1:33 PM
8	paleoceanography	6/29/2016 1:21 PM
9	Convergent margin processes, neotectonics	6/29/2016 1:16 PM
10	Geodynamics	6/29/2016 12:25 PM
11	Gas Hydrates	6/29/2016 12:24 PM
12	Rock Deformation	6/29/2016 11:32 AM
13	tectonics	6/29/2016 10:33 AM
14	geological oceanography & paleoceanography	6/29/2016 9:59 AM
15	Micropaleontology	6/28/2016 3:08 PM
16	micropaleontology & paleoceanography	6/28/2016 12:44 PM
17	pale oceanography and stratigraphy	6/28/2016 11:42 AM
18	Paleoceanography	6/28/2016 11:28 AM
19	hydrogeology, crustal properties	6/28/2016 11:24 AM
20	Tectonics	6/28/2016 7:48 AM
21	Marine paleontology, Earth Environmental History	6/28/2016 4:26 AM
22	Pleistocene ocean circulation and climate	6/27/2016 11:59 PM
23	Pale oceanography, sediment chemistry and lithology	6/27/2016 6:57 PM
24	acoustic imaging, physical volcanology, scientific visualization, data analysis	6/27/2016 5:37 PM
25	basin fluid flow	6/27/2016 5:25 PM
26	Sedimentology, stratigraphy, paleomagnetism, software engineering	6/27/2016 4:47 PM
27	Stable Isotope geochemistry and paleoceanography	6/27/2016 4:38 PM
28	hydrothermal plume chemistry	6/27/2016 4:23 PM
29	Igneous Petrology	6/27/2016 3:41 PM
30	marine geology and geophysics	6/27/2016 3:35 PM
31	Marine geology and volcanology	6/27/2016 3:34 PM
32	magnetics and tectonics	6/27/2016 2:36 PM
33	marine geology, Antarctic glacial history	6/27/2016 12:52 PM
34	Chemical Oceanography	6/27/2016 12:33 PM
35	Marine electromagnetics	6/27/2016 12:07 PM

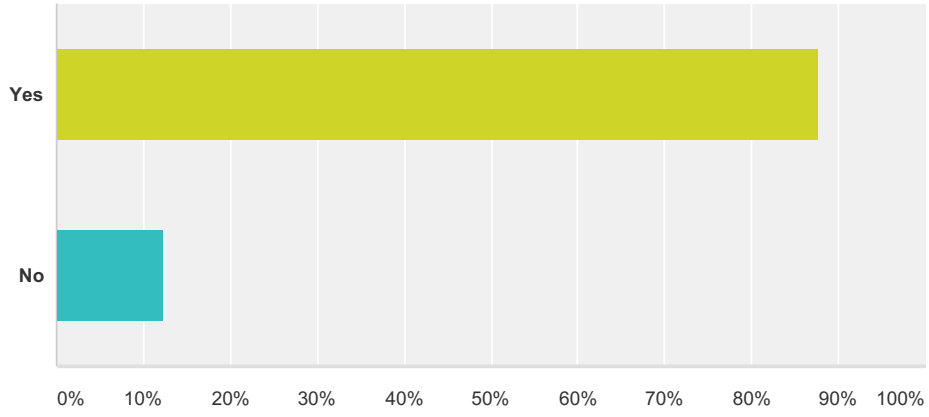
36	shallow subsurface	6/27/2016 10:04 AM
37	Bio-geology deep seafloor	6/27/2016 9:49 AM
38	Geochemistry	6/27/2016 9:43 AM
39	volcanology, geology	6/27/2016 9:37 AM
40	Microbiology	6/27/2016 9:32 AM
41	Geological Oceanograqphy	6/27/2016 9:30 AM
42	Coastal and marine geology with emphasis on modern processes	6/27/2016 9:28 AM
43	Marine Geophysics, Ocean Drilling, and Paleomagnetism	6/24/2016 4:25 PM
44	Chemical Oceanography	6/24/2016 2:30 PM
45	paleoclimate	6/24/2016 12:27 PM
46	organic geochemistry	6/22/2016 9:20 AM
47	Tectonics; Rock, Mineral, and Paleomagnetism	6/20/2016 9:40 PM
48	geochemistry	6/20/2016 6:12 PM
49	rock and mineral physics	6/20/2016 5:55 PM
50	Arc magma petrogenesis	6/20/2016 4:28 PM
51	biological oceanography	6/20/2016 11:32 AM
52	submarine hydrogeology	6/20/2016 11:05 AM
53	marine geology	6/20/2016 10:01 AM
54	coastal plain stratigraphy	6/20/2016 7:33 AM
55	Paleomagnetism	6/19/2016 8:38 PM
56	Sediment biosphere	6/19/2016 4:57 PM
57	Carbonate sedimentology and stratigraphy	6/19/2016 2:20 PM
58	Geochemistry	6/19/2016 4:35 AM
59	Geodynamics	6/19/2016 12:34 AM
60	Ridge tectonics, lithosphere stratigraphy, mantle dynamics	6/18/2016 4:43 PM
61	Marine geology & geophysics	6/18/2016 3:10 PM
62	Geochemistry	6/18/2016 2:03 PM
63	Sea level	6/18/2016 12:52 PM
64	Stratigraphy	6/18/2016 12:40 PM
65	Igneous geochemistry and petrology	6/18/2016 12:31 PM
66	interdisciplinary oceanography	6/18/2016 12:26 PM
67	microfossil/marine sediment geochemistry and sedimentology in paleoclimate reconstruction	6/18/2016 12:24 PM
68	marine geophysics	6/18/2016 11:22 AM
69	paleoceanography/micropaleontology/geochemistry	6/18/2016 10:07 AM
70	marine geophysics (use all disciplines	6/18/2016 10:05 AM
71	Computational tectonics	6/18/2016 9:54 AM
72	GEOCHEM	6/18/2016 9:51 AM
73	Igneous Petrology	6/18/2016 6:49 AM
74	Tectonics	6/17/2016 10:02 PM
75	geodynamics, applied geophysics	6/17/2016 9:16 PM
76	Geodynamics	6/17/2016 8:24 PM

77	Igneous geochemistry	6/17/2016 6:22 PM
78	Paleoclimate, organic geochemistry, paleoceanography	6/17/2016 1:12 PM
79	Marine seismology	6/17/2016 12:42 PM
80	Mid-ocean ridge hydrothermal systems	6/17/2016 12:33 PM
81	marine hydrogeology, marine geophysics (not solid earth anymore)	6/17/2016 9:26 AM
82	marine biogeochemistry	6/16/2016 2:25 PM
83	coring	6/16/2016 2:19 PM
84	Paleoceanography	6/16/2016 9:39 AM
85	earthquake seismology	6/15/2016 7:27 PM
86	tectonics	6/15/2016 8:33 AM
87	geomicrobiology, mostly at the seafloor and below	6/15/2016 3:20 AM
88	geochemistry	6/15/2016 12:10 AM
89	Hydrogeology	6/14/2016 6:06 PM
90	Marine geology and seafloor imaging/mapping.	6/14/2016 5:58 PM
91	Seafloor Mapping	6/14/2016 5:37 PM
92	marine geophysics	6/14/2016 2:27 PM
93	various marine geophysical methods, deep submergence	6/14/2016 12:55 PM
94	Petrology/Geochemistry/MOR tectonics	6/14/2016 12:53 PM
95	Oceanic stratigraphy	6/14/2016 12:41 PM
96	sedimentology, sediment geochemistry, seismic acquisition and interpretation, ocean drilling	6/14/2016 12:25 PM
97	Engineering	6/14/2016 11:54 AM
98	magnetotelluric and controlled-source electromagnetic methods	6/14/2016 11:31 AM
99	Biogeochemical Cycles	6/14/2016 11:17 AM
100	Physical Volcanology	6/14/2016 11:04 AM
101	Marine Geology and Geophysics	6/14/2016 10:22 AM
102	Methane hydrates in continental margin sediments	6/14/2016 10:18 AM
103	marine geology/sedimentology	6/14/2016 9:49 AM
104	geodynamics and volcanology	6/14/2016 9:49 AM
105	sedimentology	6/14/2016 9:31 AM
106	Plaeoceanography and isotope geochemistry	6/14/2016 6:20 AM
107	paleoceanography	6/14/2016 3:49 AM
108	Hydrothermal Systems	6/14/2016 1:28 AM
109	AA in Applied Science and Marine Technology	6/14/2016 1:02 AM
110	Geology and Chemical Oceanography	6/13/2016 11:11 PM
111	Igneous geochemistry, marine geology	6/13/2016 8:45 PM
112	Igneous Petrology	6/13/2016 8:17 PM
113	biogeochemistry	6/13/2016 5:17 PM
114	Structural Geology	6/13/2016 5:02 PM
115	Paleoceanography\Paleoclimate	6/13/2016 4:44 PM
116	geophysics	6/13/2016 4:37 PM
117	marine geophysics	6/13/2016 4:35 PM

118	physical oceanography	6/13/2016 4:30 PM
119	mid-ocean ridge plate boundaries, shallow sediment	6/13/2016 4:05 PM
120	Geology	6/13/2016 4:05 PM
121	Tectonics, seafloor morphology, seafloor mapping & imaging	6/13/2016 4:04 PM
122	Micropaleontology	6/13/2016 4:02 PM
123	petrogenesis at mid-ocean ridges, oceanic plateaus and subduction zones	6/13/2016 4:01 PM
124	Pelagic ecology and climate change	6/13/2016 3:55 PM
125	magnetotellurics, geoelectromagnetics, potential fields, seismic	6/13/2016 3:55 PM

Q17 Have you made use of the products of seismic research in your own research?

Answered: 129 Skipped: 134



Answer Choices	Responses	
Yes	**87.60%**	113
No	**12.40%**	16
Total		**129**

Q18 Please describe how you have used these data/products.

Answered: 115 Skipped: 148

#	Responses	Date
1	In a rudimentary way.	7/1/2016 8:55 PM
2	Interpreting tectonic history, extracting physical/rock properties, ground truthing numerical models	7/1/2016 4:03 PM
3	characterize and understand the geological context of a coring site. Facilitate a spacial understand of information gathered on cored materials	7/1/2016 12:17 AM
4	Investigate margin structure	6/29/2016 4:23 PM
5	Mostly have used single-channel seismic and multibeam data for sediment coring site selection and ocean drilling (ODP, IODP) site surveys.	6/29/2016 3:36 PM
6	contextualize earthquake and bedrock geology on collision zones	6/29/2016 1:50 PM
7	Understand tectonic evolution of polar regions	6/29/2016 1:33 PM
8	interpretation of seismic data from critical locations	6/29/2016 1:16 PM
9	Interpreting rifted margin morphology	6/29/2016 12:25 PM
10	To constrain deformation processes in the crust and mantle	6/29/2016 11:32 AM
11	understanding mid-ocean ridge magmatic systems; using images and results of published studies for a book on oceanic crust	6/29/2016 10:33 AM
12	Planning research cruises, understanding geological processes at seafloor, high-resolution seismic stratigraphy, multibeam sonar mapping	6/29/2016 9:59 AM
13	Primarily locating sites for IODP	6/28/2016 3:08 PM
14	sequence strat, site-to-site correlations	6/28/2016 12:44 PM
15	I've used seismic data to select sites for sediment coring	6/28/2016 11:42 AM
16	To find good coring locations	6/28/2016 11:28 AM
17	collection, processing, analysis, interpretation	6/28/2016 11:24 AM
18	Tectonic analysis	6/28/2016 7:48 AM
19	Publications on ocean history, publications on sediment drifts, site survey for numerous ODP/IODP drilling legs (171B, 165, 207, 342, 361) and proposals (Campell Drift PAL, Newfoundland Drifts II, Nigeria Cretaceous)	6/28/2016 4:26 AM
20	Sediment core stratigraphy	6/27/2016 11:59 PM
21	Site surveys for coring/drilling cruises	6/27/2016 6:57 PM
22	summary data indicating thickness of geologic units and depth to axial magma chamber, earthquake detection and seismicity	6/27/2016 5:37 PM
23	geological interpretation of seismic data	6/27/2016 5:25 PM
24	Pick individual traces out to line up with cores. Build catalogs and search of publicly available seismic catalogs	6/27/2016 4:47 PM
25	Site Survey data; sediment accumulation history, erosional unconformities	6/27/2016 4:38 PM
26	after they have been interpreted and published in the area of magm chamber a sence/presence.	6/27/2016 4:23 PM
27	I compare geochemical data to seismic crustal structures.	6/27/2016 3:41 PM
28	Volcaniclastic deposits on arcs; geologic framework for methane seeps	6/27/2016 3:35 PM
29	Used processed seismic data to aid interpretation of seafloor geology	6/27/2016 3:34 PM
30	I have used seismic data concerning the characteristics of mid-ocean ridge magma chambers and the structure of oceanic crust to make tectonic and structural interpretations in over 100 peer reviewed publications.	6/27/2016 2:36 PM

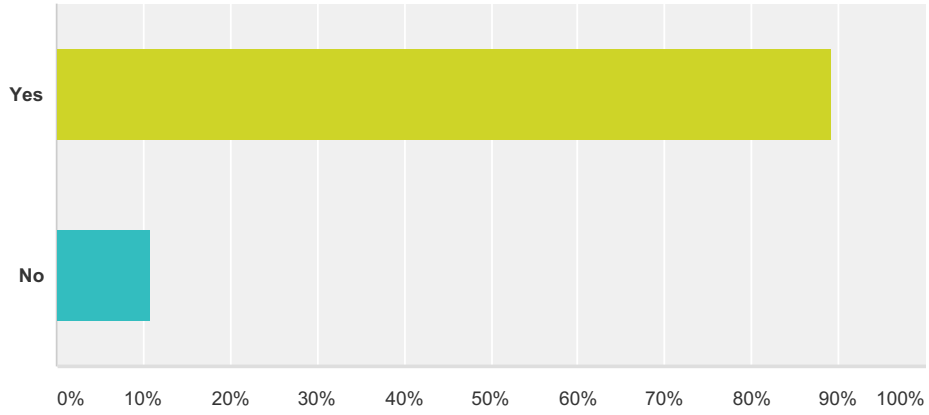
31	at all stages from site selection, to processing, to publishing, to teaching	6/27/2016 12:52 PM
32	for comparison or to provide a framework within which to interpret my own data	6/27/2016 12:07 PM
33	confirmed control of subsurface geology on surface process	6/27/2016 10:04 AM
34	Identify potential cold seeps	6/27/2016 9:49 AM
35	Multichannel seismic results from Axial Seamount and the Juan de Fuca Ridge. By "use" I mean just citing the research of others that informs my own work.	6/27/2016 9:37 AM
36	To find drill sites, determine connected intervals	6/27/2016 9:32 AM
37	Managed Deep Sea AUVs to produce chirp and MBES surveys	6/27/2016 9:30 AM
38	In papers	6/27/2016 9:28 AM
39	For planning ocean drilling projects and investigating local and regional stratigraphy	6/24/2016 4:25 PM
40	Determining best locations for ocean cores	6/24/2016 12:27 PM
41	seismics inform drilling locations from which I need sediments	6/22/2016 9:20 AM
42	tomography; reflection seismic profiles	6/20/2016 9:40 PM
43	Structural controls on fluid pathways	6/20/2016 6:12 PM
44	My work is on the interpretation of crustal seismic structure in terms of the lithologic strcuture and composition of the crust	6/20/2016 5:55 PM
45	Look for extinct volcano vents	6/20/2016 4:28 PM
46	From 2002-2007 our research group studied behavioral response of whales to airguns	6/20/2016 11:32 AM
47	structural context for hydrogeological data	6/20/2016 11:05 AM
48	site selection for coring, basic geologic knowledge	6/20/2016 10:01 AM
49	details of the Chesapeake Bay impact structure	6/20/2016 7:33 AM
50	Integration of IODP drill records with seismic lines.	6/19/2016 8:38 PM
51	Cross sections to help understand the lithology and flow of a particular location.	6/19/2016 4:57 PM
52	Sequence stratigraphy and sea level history	6/19/2016 2:20 PM
53	Crustal structure and thickness. Sediment thickness. Mantle tomography.	6/19/2016 4:35 AM
54	to inform geodynamic models	6/19/2016 12:34 AM
55	Test inferences made from field geology, petrology at ocean ridges	6/18/2016 4:43 PM
56	Mapping regional basin architecture and crustal structure	6/18/2016 3:10 PM
57	Locate faults, source rock horizons, BSR	6/18/2016 2:03 PM
58	Publications	6/18/2016 12:52 PM
59	Analysis of seismic profiles	6/18/2016 12:40 PM
60	to understand and interpret the structure of the ocean crust	6/18/2016 12:31 PM
61	sediment surface feature understanding	6/18/2016 12:26 PM
62	Geological interpretation of sedimentation and volcanism	6/18/2016 11:22 AM
63	Locating drill sites, interpreting drill site records, mapping and understanding a reiogn	6/18/2016 10:40 AM
64	correlation between drill sites; interpretation of non-recovered sediment; preparation of drilling proposals	6/18/2016 10:07 AM
65	MCS seismic reflection and OBS refraction to study crustal and upper mantle structure	6/18/2016 10:05 AM
66	Use to constrain numerical models, understand and constrain processes.	6/18/2016 9:54 AM
67	CHIRP DATA FOR SEDIMENT CORE	6/18/2016 9:51 AM
68	Understanding lithosphere thickness, and melting regions of mantle	6/18/2016 6:49 AM
69	constructing 4D models	6/17/2016 10:02 PM

70	active and passive source seismic data	6/17/2016 9:16 PM
71	Constraints on composition and structure of oceanic crust.	6/17/2016 8:24 PM
72	Subsurface architecture to constrain magnetic modeling	6/17/2016 2:07 PM
73	Understanding depositional environment and siting of piston cores	6/17/2016 1:12 PM
74	Mainly comparing reflection and refraction results	6/17/2016 12:42 PM
75	I use seismic data to develop techniques for source power analysis, and also for understanding tidal triggering.	6/17/2016 12:33 PM
76	I collect the data, work with colleagues to analyze and interpret, and then publish papers.	6/17/2016 9:26 AM
77	for determining best sites for coring	6/16/2016 2:25 PM
78	to better select coring sites; to optimize sample recovery and safety of personnel	6/16/2016 2:19 PM
79	To evaluate coring sites.	6/16/2016 9:39 AM
80	used in papers, proposals, project planning	6/15/2016 7:27 PM
81	My group uses marine seismic images to constrain inversions of electromagnetic data. Seismics for mapping geologic interfaces and EM for mapping fluids contained therein.	6/15/2016 4:23 PM
82	interpretation of growth structures	6/15/2016 8:33 AM
83	not directly, but as an IODP scientist, seismic data is critical to site selection and typically necessary to propose the drilling of new sites	6/15/2016 3:20 AM
84	to determine sediment thickness	6/15/2016 12:10 AM
85	Structure and setting of hydrothermal systems	6/14/2016 6:06 PM
86	Stratigraphy, tectonics, sedimentary process research.	6/14/2016 5:58 PM
87	Ground truthing	6/14/2016 5:37 PM
88	MCS surveys of Cascadia margin	6/14/2016 2:27 PM
89	in combination with multibeam bathymetry, for tectonic interpretation	6/14/2016 12:55 PM
90	Relating melt distribution and stucture of the crust to geochemistry and volcanology	6/14/2016 12:53 PM
91	interpretation of the sedimentary record	6/14/2016 12:41 PM
92	Identification of ocean drilling sites, regional patterns of pelagic sedimentation, mass balance of sediments	6/14/2016 12:25 PM
93	To constrain my EM inversions, and for joint interpretation	6/14/2016 11:31 AM
94	To interpret the history of the Arctic Ocean	6/14/2016 10:22 AM
95	Seismic reflection data define the geometry of hydrate-bearing sediment layers	6/14/2016 10:18 AM
96	I've used seismic sections for understanding regional and local sedimentary setting and for siting of potential coring locations	6/14/2016 9:49 AM
97	location of magma chambers	6/14/2016 9:49 AM
98	I use seismic to select core sites to measure past changes in sea level	6/14/2016 9:31 AM
99	pre-site surveys IODP, site selection coring, stratigraphy	6/14/2016 6:20 AM
100	High-Resolution Seismic survey is essential for detailed coring programs, and a requirement for IODP Site Survey. A particular need for my program is at the high-frequency end if "GI"-type sound sources, and low-noise digital acquisition systems. In recent years I have mostly used non-US systems as they are better maintained and supported that US systems. I think the US community needs access to well supported gear appropriate to task, and if that is impossible, we need sharing or contracting relationship with non-US programs. The systems used in Germany and Denmark are particularly good, and could serve as models for a modern US capability.	6/14/2016 3:49 AM
101	data used in PhD dissertation	6/14/2016 1:28 AM
102	NA	6/14/2016 1:02 AM
103	Site surveys, structural analysis	6/13/2016 8:45 PM
104	Synthesis projects to examine crustal formation/magmatic processes	6/13/2016 8:17 PM
105	interpretation of 2D and 3D seismic volumes for analysis, integration, and publication; Active-source acquisition (OBS)	6/13/2016 5:02 PM

106	Finding locations appropriate to coring and drilling sediment sections	6/13/2016 4:44 PM
107	well correlation	6/13/2016 4:37 PM
108	To understand crustal accretion, structure and composition.	6/13/2016 4:35 PM
109	n/a	6/13/2016 4:30 PM
110	helps understand active processes and structure	6/13/2016 4:05 PM
111	Kingdom	6/13/2016 4:05 PM
112	As data needed to resolve important scientific questions (constraining inferences made from other data sets)	6/13/2016 4:04 PM
113	I often use geophysical surveys for stratigraphic and cruise planning purposes	6/13/2016 4:02 PM
114	Used published seismic studies of crustal thickness, crustal velocity, mantle attenuation, mantle velocity anomalies, mantle anisotropy to constrain petrogenetic and geodynamic hypotheses	6/13/2016 4:01 PM
115	PI of multiple joint MT-seismic and other terrestrial and marine experiments	6/13/2016 3:55 PM

Q19 Do you plan to use seismic data in the future?

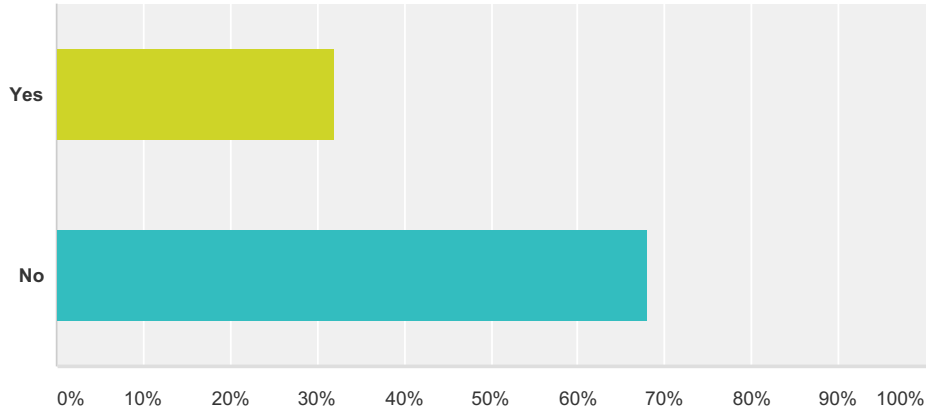
Answered: 129 Skipped: 134



Answer Choices	Responses	
Yes	**89.15%**	115
No	**10.85%**	14
Total		**129**

Q20 Do you have students working on seismic data for research?

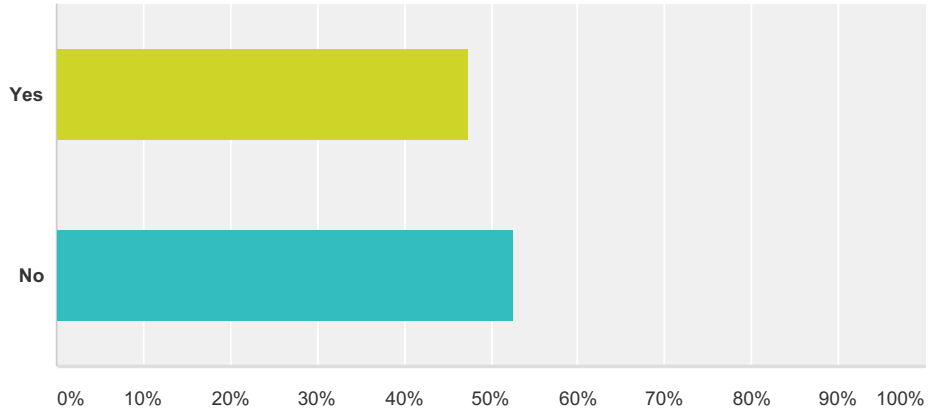
Answered: 128 Skipped: 135



Answer Choices	Responses	
Yes	**32.03%**	41
No	**67.97%**	87
Total		**128**

Q21 Have you ever submitted a proposal through NSF to collect seismic data?

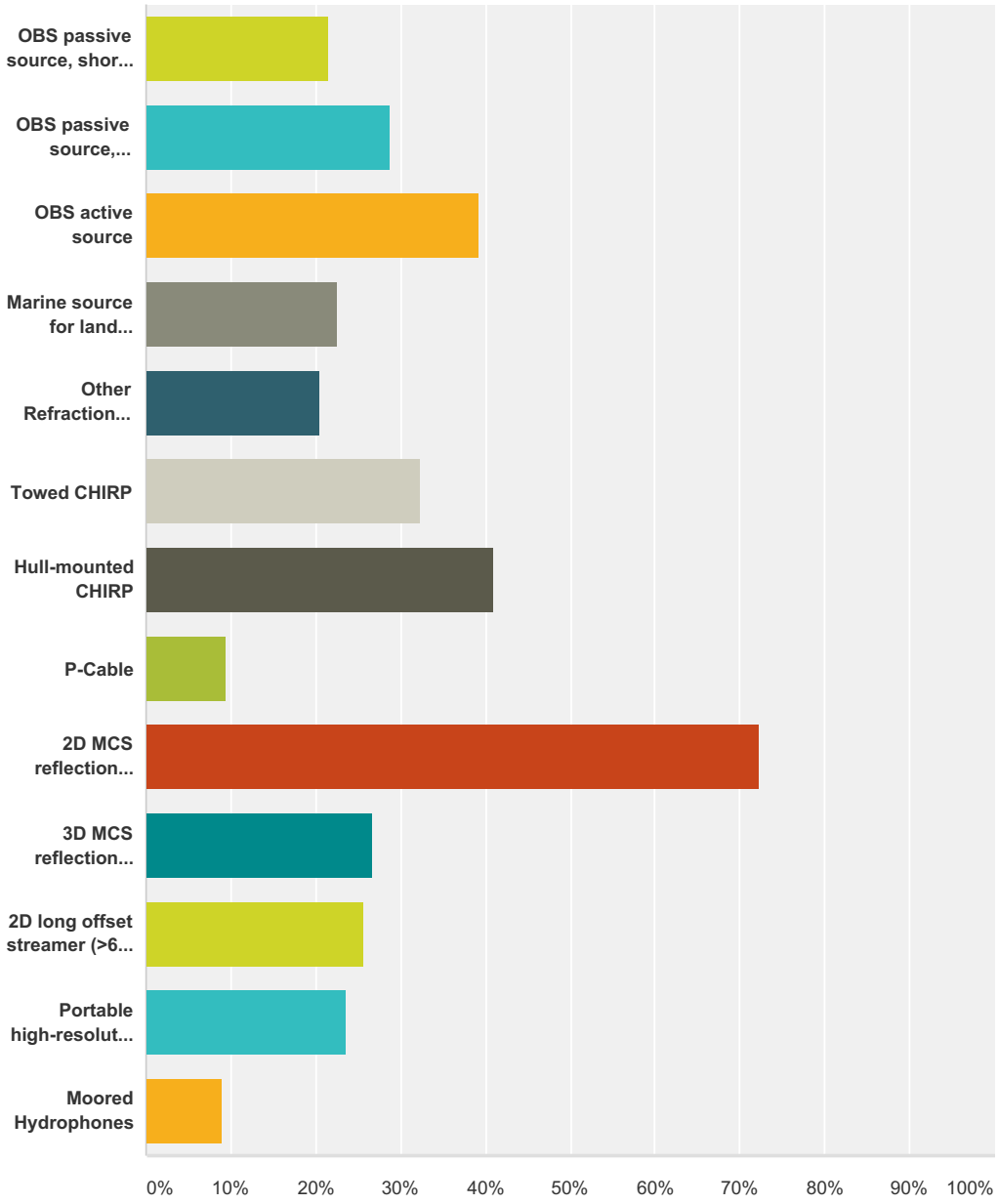
Answered: 238 Skipped: 25



Answer Choices	Responses	
Yes	**47.48%**	113
No	**52.52%**	125
Total		**238**

Q22 What types of seismic facilities/instruments have you used? (select all that apply)

Answered: 191 Skipped: 72



Answer Choices	Responses	
OBS passive source, short period	**21.47%**	41
OBS passive source, broadband	**28.80%**	55
OBS active source	**39.27%**	75
Marine source for land seismometers	**22.51%**	43
Other Refraction (e.g. sonobuoy, long-offset streamer, ESP)	**20.42%**	39

Towed CHIRP	**32.46%**	62
Hull-mounted CHIRP	**40.84%**	78
P-Cable	**9.42%**	18
2D MCS reflection imaging	**72.25%**	138
3D MCS reflection imaging	**26.70%**	51
2D long offset streamer (>6 km) MCS reflection imaging	**25.65%**	49
Portable high-resolution seismic systems (other than p-cable and CHIRP)	**23.56%**	45
Moored Hydrophones	**8.90%**	17
Total Respondents: 191		

#	Other (please specify)	Date
1	Geospace 2D and 3D land MCS data acquisition system	6/30/2016 6:27 PM
2	Haven't collected marine data, just used it.	6/29/2016 10:58 PM
3	Boomer	6/29/2016 4:25 PM
4	none	6/29/2016 1:52 PM
5	Sea ice deployed seismometers	6/29/2016 1:35 PM
6	None of these. My only experiments have been on land. I would welcome finding partners in the OCE community with which I could work, but I haven't found a way to do this yet.	6/29/2016 11:44 AM
7	Currently have only used broadband land stations with passive source, bordering the Indian Ocean	6/29/2016 10:29 AM
8	onshore/offshore data	6/29/2016 8:41 AM
9	PASSCAL broadband	6/29/2016 7:49 AM
10	Onshore passive broadband	6/29/2016 7:38 AM
11	Sentry CHIRP	6/28/2016 11:26 AM
12	reduced data from seismic giving crustal structure	6/27/2016 5:41 PM
13	None - I use the results not the facilities/instruments	6/27/2016 3:51 PM
14	sonobuoys for locating microearthquakes	6/27/2016 2:39 PM
15	land passive source, broadband	6/27/2016 10:21 AM
16	multibeam bathymetry	6/27/2016 10:11 AM
17	The 2D MCS imaging at Axial Seamount is of most interest to me. I don't know what type it is from the list above.	6/27/2016 9:40 AM
18	AUV mounted chirp	6/27/2016 9:32 AM
19	near bottom AUV chrip seismic	6/20/2016 6:16 PM
20	AUV	6/20/2016 12:41 PM
21	OAGC provided airgun array on industry seismic vessel	6/20/2016 11:38 AM
22	Connected to cables seafloor observatories	6/20/2016 7:14 AM
23	reflection using a standard air gun array	6/18/2016 4:46 PM
24	never used myself, but collaborators have	6/18/2016 10:10 AM
25	Al of the above to understand geological processes	6/18/2016 10:00 AM
26	components of much of the above	6/17/2016 10:06 PM
27	seafloor pressure data collected with the OBS (APG and DPG)	6/17/2016 1:34 PM

28	NOTE THAT I HAVE USED ALL THESE SYSTEMS THROUGH THE USGS, NOT NSF-SUPPLIED (except insofar as OBSIP is a NSF facility)	6/17/2016 9:28 AM
29	parasound (small footprint for deep water hi res)	6/15/2016 8:46 AM
30	borehole seismic	6/14/2016 6:59 PM
31	Main use of data was from 2D MCS reflection imaging and CHIRP data	6/14/2016 9:59 AM
32	Have not used, but would like to see AUV-based seismic capabilities, including multi beam and "chirp" sub bottom.	6/14/2016 3:54 AM
33	AUV mounted CHIRP	6/14/2016 1:33 AM
34	single channel seismic 3.5 khz	6/13/2016 7:41 PM
35	Towed Huntec, 3.5 kHz	6/13/2016 5:50 PM
36	onland explosive and passive seismic	6/13/2016 5:13 PM
37	VSP	6/13/2016 4:41 PM
38	none	6/13/2016 4:33 PM
39	short period and broadband on-ice seismometers, J15-3	6/13/2016 4:20 PM
40	I have observed use of some, but have not run them myself.	6/13/2016 4:10 PM
41	I have used data from these systems. I have not used them myself.	6/13/2016 4:05 PM
42	Seafloor DPG	6/13/2016 3:57 PM

Q23 Were the seismic data collected used as the primary or secondary data set to address your science questions?

Answered: 199 Skipped: 64

#	Responses	Date
1	Secondary	7/1/2016 9:01 PM
2	Primary and secondary (depending on project)	7/1/2016 4:06 PM
3	primary	7/1/2016 1:19 PM
4	secondary, but the sites could not be determined with out it.	7/1/2016 12:24 AM
5	primary	6/30/2016 6:53 PM
6	Yes, it is still in use and it will be used.	6/30/2016 6:27 PM
7	primary	6/30/2016 4:46 PM
8	primary	6/30/2016 3:07 PM
9	In all cases seismic data was the primary data set.	6/30/2016 10:58 AM
10	Primary	6/30/2016 10:55 AM
11	Primary	6/29/2016 10:58 PM
12	Primary	6/29/2016 6:48 PM
13	Primary	6/29/2016 5:40 PM
14	Yes	6/29/2016 5:38 PM
15	primary	6/29/2016 5:28 PM
16	Primary	6/29/2016 4:25 PM
17	Secondary	6/29/2016 3:39 PM
18	both	6/29/2016 1:35 PM
19	primary	6/29/2016 1:19 PM
20	secondary	6/29/2016 1:00 PM
21	Primary	6/29/2016 12:26 PM
22	Primary	6/29/2016 11:53 AM
23	primary	6/29/2016 11:52 AM
24	Primary.	6/29/2016 11:44 AM
25	Primary	6/29/2016 11:37 AM
26	Used in conjunction with seafloor geology	6/29/2016 10:37 AM
27	primary	6/29/2016 10:29 AM
28	both purposes	6/29/2016 10:06 AM
29	primary	6/29/2016 9:12 AM
30	Primary	6/29/2016 8:41 AM
31	primary	6/29/2016 7:49 AM
32	Primary	6/29/2016 7:38 AM
33	Proposal wasn't selected for funding.	6/29/2016 12:38 AM

34	primary	6/28/2016 11:09 PM
35	Primary	6/28/2016 6:04 PM
36	secondary	6/28/2016 3:10 PM
37	secondary	6/28/2016 12:45 PM
38	secondary	6/28/2016 11:44 AM
39	secondary	6/28/2016 11:30 AM
40	Secondary	6/28/2016 11:26 AM
41	Primary	6/28/2016 6:44 AM
42	both	6/28/2016 4:30 AM
43	No	6/28/2016 12:00 AM
44	Secondary	6/27/2016 7:00 PM
45	we used OBS data collected by an observatory to estimate earthquake occurance rates	6/27/2016 5:41 PM
46	predominantly to locate optimal coring/drilling sites, but in several cases the seismic images were the only data acquired	6/27/2016 5:30 PM
47	both	6/27/2016 5:27 PM
48	By academics and USGS	6/27/2016 4:49 PM
49	primary	6/27/2016 4:41 PM
50	secondary	6/27/2016 4:27 PM
51	Perhaps secondary. But really I just use results as a comparison to my datasets.	6/27/2016 3:51 PM
52	secondary	6/27/2016 3:36 PM
53	Primary	6/27/2016 3:22 PM
54	Primary	6/27/2016 2:41 PM
55	both	6/27/2016 2:39 PM
56	Primary	6/27/2016 2:33 PM
57	Primary	6/27/2016 1:55 PM
58	Primary	6/27/2016 1:10 PM
59	primary	6/27/2016 12:53 PM
60	primary and secondary	6/27/2016 12:53 PM
61	n/a	6/27/2016 12:36 PM
62	Not related to the seismic data I use to address my science questions (i.e., it was collected for different projects that I am not currently working on).	6/27/2016 12:25 PM
63	primary	6/27/2016 12:10 PM
64	yes	6/27/2016 12:10 PM
65	primary	6/27/2016 10:21 AM
66	secondary	6/27/2016 10:11 AM
67	secondary	6/27/2016 10:05 AM
68	primary	6/27/2016 9:53 AM
69	Gulf of Mexico	6/27/2016 9:52 AM
70	Primary.	6/27/2016 9:48 AM
71	I don't work with seismic data, but the results at Axial Seamount informs my research.	6/27/2016 9:40 AM
72	secondary	6/27/2016 9:33 AM

73	primary	6/27/2016 9:32 AM
74	primary	6/27/2016 9:32 AM
75	Both	6/24/2016 4:34 PM
76	Primary	6/23/2016 11:45 AM
77	primary	6/22/2016 11:23 PM
78	primary	6/21/2016 7:26 PM
79	Hudson River, Long Island Sound, Antarctica	6/21/2016 9:50 AM
80	secondary	6/20/2016 6:16 PM
81	primary	6/20/2016 5:58 PM
82	primary	6/20/2016 12:48 PM
83	primary and secondary	6/20/2016 12:41 PM
84	as primary data to study behavioral response by whales	6/20/2016 11:38 AM
85	primary	6/20/2016 11:23 AM
86	secondary	6/20/2016 11:08 AM
87	They were used as the primary data	6/20/2016 10:59 AM
88	project specific. mostly primary but in some cases, seismic is secondary but always important	6/20/2016 10:10 AM
89	no	6/20/2016 9:05 AM
90	both	6/20/2016 7:36 AM
91	both	6/20/2016 7:14 AM
92	Primary	6/19/2016 4:25 PM
93	Primary	6/19/2016 2:58 PM
94	Secondary	6/19/2016 2:23 PM
95	Yes	6/19/2016 12:04 PM
96	Secondary	6/19/2016 4:38 AM
97	Primary	6/19/2016 12:21 AM
98	primary	6/18/2016 11:57 PM
99	Primary	6/18/2016 10:51 PM
100	Primary	6/18/2016 5:01 PM
101	secondary	6/18/2016 4:46 PM
102	Primary	6/18/2016 3:14 PM
103	Yes	6/18/2016 2:52 PM
104	Secondary	6/18/2016 2:04 PM
105	Primary	6/18/2016 12:54 PM
106	secondary	6/18/2016 12:41 PM
107	secondary	6/18/2016 12:29 PM
108	primary	6/18/2016 11:24 AM
109	both	6/18/2016 10:43 AM
110	for my secondary, for collaborators primary	6/18/2016 10:10 AM
111	primary	6/18/2016 10:08 AM
112	primary	6/18/2016 10:00 AM
113	NO	6/18/2016 9:53 AM

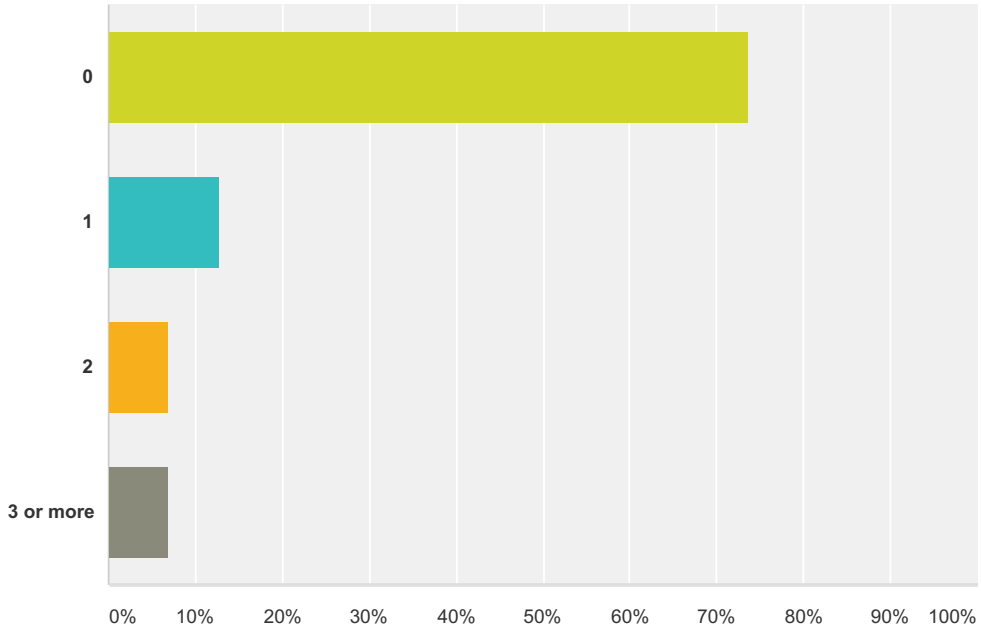
114	primary in some cases, secondary in others	6/18/2016 6:53 AM
115	Primary	6/18/2016 2:54 AM
116	secondary	6/17/2016 10:06 PM
117	Primary	6/17/2016 9:30 PM
118	Both	6/17/2016 8:27 PM
119	primary	6/17/2016 8:02 PM
120	primary	6/17/2016 7:48 PM
121	primary	6/17/2016 7:48 PM
122	primary	6/17/2016 6:34 PM
123	Na	6/17/2016 6:25 PM
124	Primary	6/17/2016 4:42 PM
125	Primary	6/17/2016 3:32 PM
126	Primary	6/17/2016 3:29 PM
127	Both	6/17/2016 2:09 PM
128	Yes	6/17/2016 1:38 PM
129	yes	6/17/2016 1:34 PM
130	secondary	6/17/2016 1:14 PM
131	Primary	6/17/2016 12:44 PM
132	Primary	6/17/2016 12:35 PM
133	primary	6/17/2016 10:04 AM
134	primary	6/17/2016 9:28 AM
135	primary	6/16/2016 2:29 PM
136	secondary	6/16/2016 2:28 PM
137	depends upon project/cruise	6/16/2016 2:23 PM
138	Secondary	6/16/2016 9:40 AM
139	Primary	6/16/2016 2:45 AM
140	both	6/15/2016 7:31 PM
141	n/A	6/15/2016 4:25 PM
142	both	6/15/2016 12:10 PM
143	primary	6/15/2016 11:47 AM
144	primary	6/15/2016 11:46 AM
145	primary	6/15/2016 8:46 AM
146	Primary	6/15/2016 8:13 AM
147	secondary	6/15/2016 12:12 AM
148	primary	6/14/2016 6:59 PM
149	Generally secondary	6/14/2016 6:01 PM
150	Primary	6/14/2016 5:40 PM
151	Yes, primary	6/14/2016 3:22 PM
152	primary	6/14/2016 2:29 PM
153	Primary	6/14/2016 1:23 PM
154	primary	6/14/2016 1:04 PM

155	both	6/14/2016 12:58 PM
156	primary	6/14/2016 12:46 PM
157	primary	6/14/2016 12:37 PM
158	primary	6/14/2016 12:30 PM
159	yes	6/14/2016 12:28 PM
160	Primary	6/14/2016 12:15 PM
161	Primary	6/14/2016 11:52 AM
162	secondary	6/14/2016 11:35 AM
163	Yes	6/14/2016 10:29 AM
164	Primary source	6/14/2016 10:24 AM
165	primary	6/14/2016 10:22 AM
166	The seismic data constrained the overall geometry and extent of hydrate-bearing layers	6/14/2016 10:21 AM
167	Primary data set	6/14/2016 10:20 AM
168	secondary data as base map for establishing continuity and depth of sedimentary horizons	6/14/2016 9:59 AM
169	both primary and secondary	6/14/2016 9:58 AM
170	Primary data	6/14/2016 9:50 AM
171	primary	6/14/2016 9:34 AM
172	Often primary, usually in conjunction with multibeam bathymetry and coring	6/14/2016 9:24 AM
173	Often secondary	6/14/2016 8:24 AM
174	Secondary	6/14/2016 6:22 AM
175	Secondary, but required.	6/14/2016 3:54 AM
176	Primary.	6/14/2016 12:11 AM
177	Primary	6/13/2016 9:38 PM
178	Secondary	6/13/2016 8:52 PM
179	primary	6/13/2016 7:41 PM
180	Primary	6/13/2016 6:02 PM
181	Primary	6/13/2016 5:50 PM
182	primary	6/13/2016 5:47 PM
183	Primary	6/13/2016 5:33 PM
184	primary	6/13/2016 5:13 PM
185	mid Atlantic ridge, Juan de Fuca ridge, East Pacific rise, Hikurangi margin	6/13/2016 5:11 PM
186	primary	6/13/2016 5:04 PM
187	primary	6/13/2016 5:00 PM
188	Primary: no sesmic control, no drilling	6/13/2016 4:46 PM
189	primary	6/13/2016 4:41 PM
190	secondary	6/13/2016 4:39 PM
191	secondary	6/13/2016 4:34 PM
192	n/a	6/13/2016 4:33 PM
193	Primary	6/13/2016 4:20 PM
194	Primary	6/13/2016 4:10 PM
195	primary	6/13/2016 4:08 PM

196	secondary for me (same data were primary for PIs and others)	6/13/2016 4:07 PM
197	secondary	6/13/2016 4:07 PM
198	Primary	6/13/2016 4:02 PM
199	Both	6/13/2016 3:57 PM

Q24 How many times in the last 5 years have you served as PI or Co-PI on a seismic cruise funded by NSF?

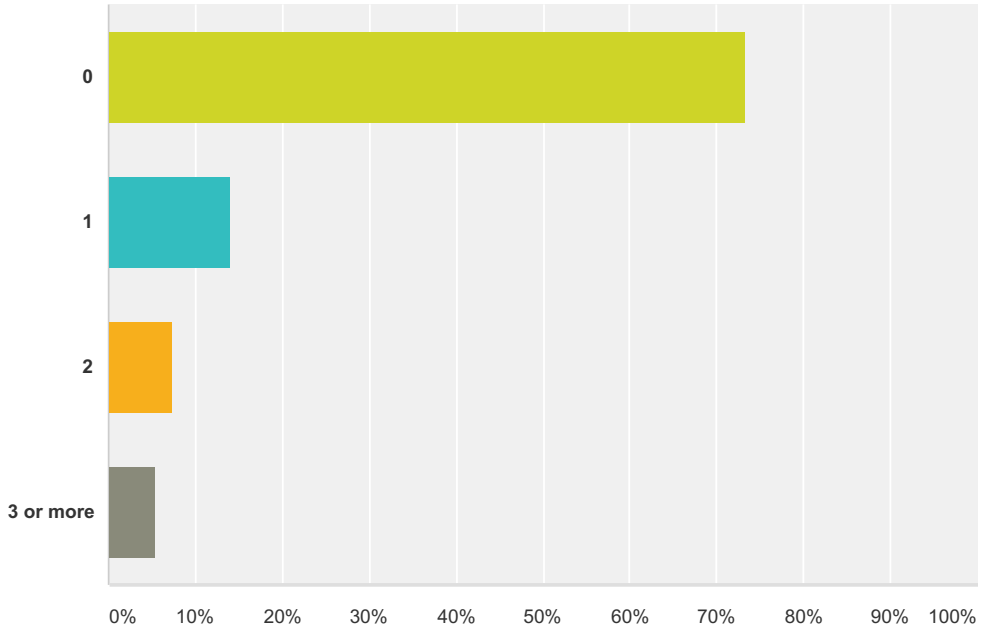
Answered: 235 Skipped: 28



Answer Choices	Responses	
0	**73.62%**	173
1	**12.77%**	30
2	**6.81%**	16
3 or more	**6.81%**	16
Total		**235**

Q25 How many times in the last 5 years have you participated (in a role other than PI/Co-PI) in a seismic cruise funded by NSF?

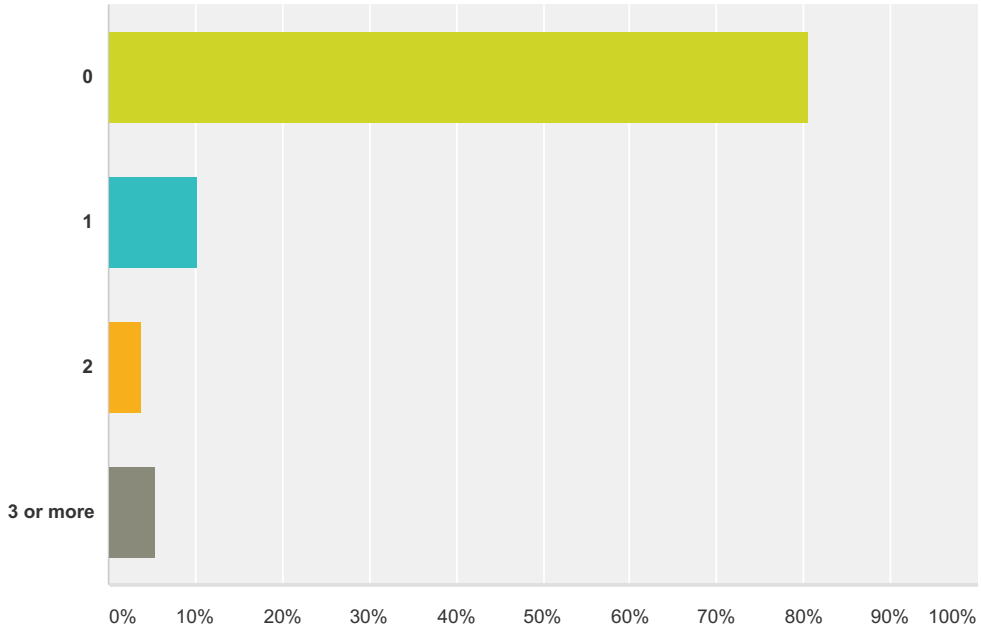
Answered: 236 Skipped: 27



Answer Choices	Responses	
0	**73.31%**	173
1	**13.98%**	33
2	**7.20%**	17
3 or more	**5.51%**	13
Total		**236**

Q26 How many times in the last 5 years have you served as a PI or Co-PI on a seismic cruise funded by a non-NSF funding source?

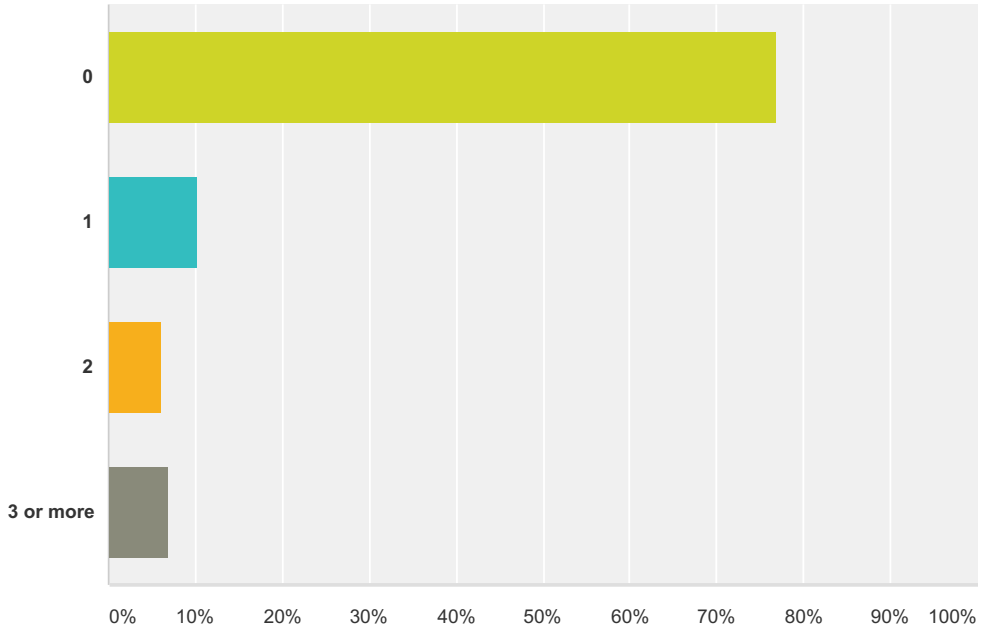
Answered: 236 Skipped: 27



Answer Choices	Responses	
0	**80.51%**	190
1	**10.17%**	24
2	**3.81%**	9
3 or more	**5.51%**	13
Total		**236**

Q27 How many times in the last 5 years have you participated (in a role other than PI/Co-PI) in a seismic cruise funded by a non-NSF funding source?

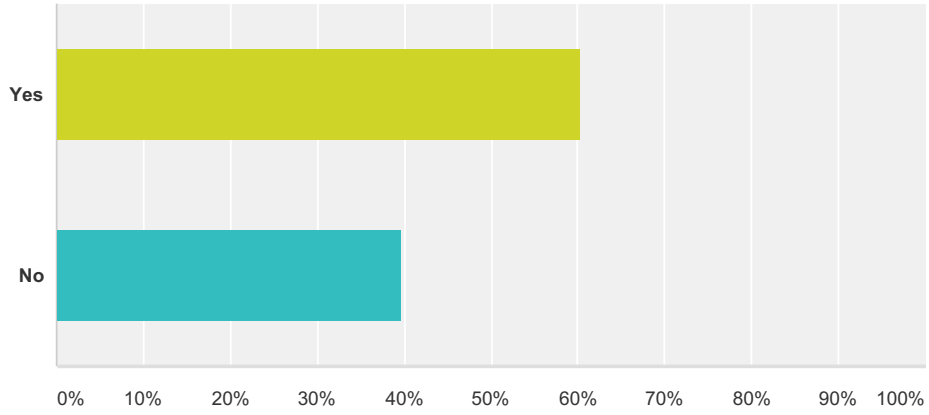
Answered: 234 Skipped: 29



Answer Choices	Responses	
0	**76.92%**	180
1	**10.26%**	24
2	**5.98%**	14
3 or more	**6.84%**	16
Total		**234**

Q28 Are you likely to submit a proposal to NSF for future seismic data collection?

Answered: 237 Skipped: 26



Answer Choices	Responses	
Yes	**60.34%**	143
No	**39.66%**	94
Total		**237**

Q29 If you will submit a proposal, what types of seismic data will you collect?

Answered: 142 Skipped: 121

#	Responses	Date
1	Chirp, probably hull mounted, as secondary to multi beam	7/1/2016 9:01 PM
2	MCS data	7/1/2016 4:06 PM
3	MCS	7/1/2016 1:19 PM
4	Chirp and 2D reflection	7/1/2016 12:24 AM
5	Possibly, 2D and 3D MCS data, including the long offset streamer, and perhaps P-Cable too. This will all depend on aspects of research that I will be working on within the next five years. For example, acquisition of 2D long offset MCS data in the western Chukchi Borderland could possibly provide evidence for the upper and lower crustal extensions of the northern North Chukchi Basin and Chukchi Abyssal Plain, Arctic Ocean.	6/30/2016 6:27 PM
6	3D Reflection, Magnetotelluric	6/30/2016 4:46 PM
7	Active source refraction and reflection and passive source micro earthquake and teleseismic studies	6/30/2016 10:58 AM
8	Passive and actives source seismic data recorded by short period and broadband seismometers	6/30/2016 10:55 AM
9	Would like OBS data, better still realtime data	6/29/2016 10:58 PM
10	Broadband OBS	6/29/2016 6:48 PM
11	On sea ice/ice shelf	6/29/2016 5:40 PM
12	2D MCS	6/29/2016 5:38 PM
13	2-D reflection, refraction	6/29/2016 5:28 PM
14	P cable or 2D MCS	6/29/2016 4:25 PM
15	active source airgun seismic	6/29/2016 1:19 PM
16	2D MCS	6/29/2016 12:26 PM
17	likely broadband land-based data	6/29/2016 11:54 AM
18	Passive broadband OBS, Passive short period OBS, active source OBS	6/29/2016 11:53 AM
19	MCS reflection imaging (2D or 3D)	6/29/2016 11:52 AM
20	Broadband data	6/29/2016 11:44 AM
21	Refraction and passive OBS	6/29/2016 11:37 AM
22	multibeam sonar, chirp, and 2D MCS for several proposals	6/29/2016 10:06 AM
23	passive microearthquake data	6/29/2016 9:12 AM
24	OBS, MCS	6/29/2016 8:41 AM
25	OBS	6/29/2016 8:16 AM
26	OBS short-period, OBS broadband, both shelf and deep	6/29/2016 7:49 AM
27	Passive broadband data, both OBS and onshore	6/29/2016 7:38 AM
28	Broadband OBS, DPG/APG.	6/29/2016 12:38 AM
29	OBSIP pool	6/28/2016 6:04 PM
30	2D MCS	6/28/2016 3:10 PM
31	reflection profiles of sediments	6/28/2016 11:44 AM
32	multichannel seismic (and maybe CHIRP)	6/28/2016 11:26 AM
33	Long-offset MCS. OBS active source, high res seismic	6/28/2016 6:44 AM

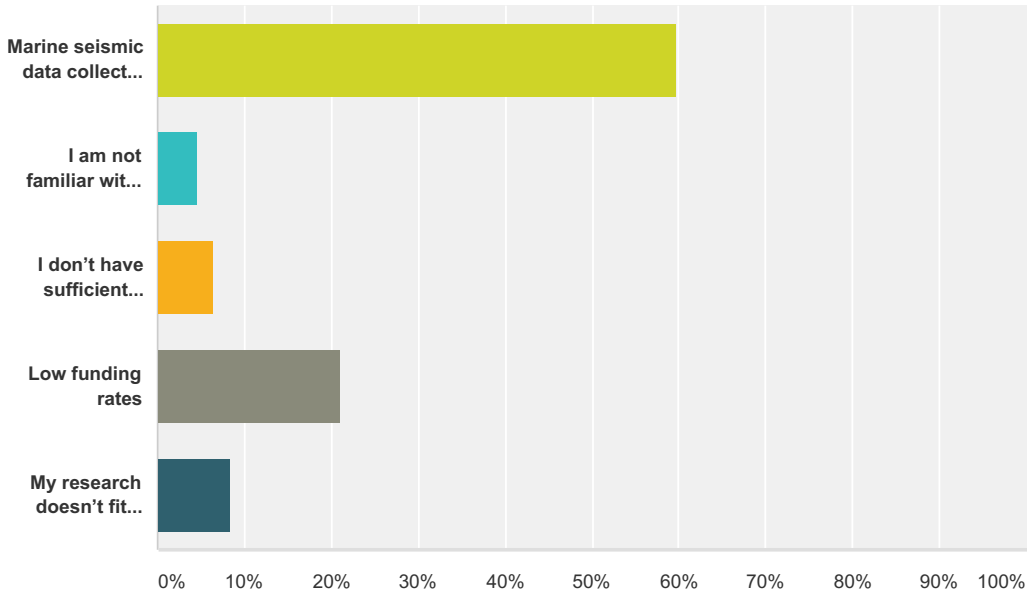
34	2D MCS (and parasound for a non-NSF project)	6/28/2016 4:30 AM
35	Shallow reflection data	6/27/2016 7:00 PM
36	high resolution 2D MCS	6/27/2016 5:30 PM
37	reflection seismic	6/27/2016 5:27 PM
38	2-D seismic reflection	6/27/2016 4:41 PM
39	2D or 3D MCS, Long offset streamer MCS, Active Source OBS	6/27/2016 3:22 PM
40	long offset 2D reflection, 3D reflection, high resolution (short streamer) refraction, active source OBS	6/27/2016 1:55 PM
41	3D seismic	6/27/2016 1:10 PM
42	active OBS, passive OBS, long-offset 2D MCS	6/27/2016 12:53 PM
43	high resolution, GI , solid state, and or mutlichannel	6/27/2016 12:53 PM
44	n/a	6/27/2016 12:36 PM
45	Active source and MCS reflection data	6/27/2016 12:25 PM
46	seismic reflection and refraction	6/27/2016 12:10 PM
47	passive broadband seismic data. Likely to partner with others collecting active-source refraction data	6/27/2016 10:21 AM
48	2D MCS, SCS	6/27/2016 9:53 AM
49	Chirp and potentially sparker or boomer	6/27/2016 9:32 AM
50	Chirp	6/27/2016 9:32 AM
51	Multi-channel seismic (single streamer)	6/23/2016 11:45 AM
52	OBS, active source, MCS	6/22/2016 11:23 PM
53	passive seismic (short period and broadband)	6/21/2016 7:26 PM
54	high resolution; chirp	6/21/2016 9:50 AM
55	OBS, reflection & refraction, seismiscity-part of a multidisciplinary proposal.	6/20/2016 6:16 PM
56	active source OBS and/or seismic reflection	6/20/2016 5:58 PM
57	OBS short-period and broadband	6/20/2016 1:55 PM
58	2-D MCS, 3-D MCS	6/20/2016 11:23 AM
59	MCS data; OBS passive and/or active-source	6/20/2016 10:59 AM
60	active source seismic 2D and/or 3D	6/20/2016 10:10 AM
61	mcs	6/19/2016 4:25 PM
62	Passive broadband	6/19/2016 2:58 PM
63	2D/3D reflection seismic	6/19/2016 12:04 PM
64	There is a need for high frequency and p-cable seismic data to better identify gas hydrates in marine sediments.	6/19/2016 12:21 AM
65	2D MCS	6/18/2016 11:57 PM
66	Chirp	6/18/2016 5:01 PM
67	3D and 2D reflection	6/18/2016 2:52 PM
68	Scs abd mcs	6/18/2016 12:54 PM
69	n/a	6/18/2016 12:41 PM
70	2D MCS	6/18/2016 11:24 AM
71	as above	6/18/2016 10:43 AM
72	active/ passive seismic refraction and reflection connected to a land component	6/18/2016 10:00 AM
73	HIGH REZ 3D	6/18/2016 9:53 AM

74	collaborative with a seismologist	6/18/2016 6:53 AM
75	2D MSC	6/18/2016 2:54 AM
76	active source	6/17/2016 10:06 PM
77	MCS OBS long offset 2d	6/17/2016 9:30 PM
78	OBS Active Source	6/17/2016 8:27 PM
79	maybe hi-res	6/17/2016 8:02 PM
80	MCS Long Streamer 2-D data	6/17/2016 7:48 PM
81	mcs	6/17/2016 7:48 PM
82	passive seismic data primarily	6/17/2016 6:34 PM
83	broadband passive OBS data	6/17/2016 4:42 PM
84	MCS (2D) and sonar water column data	6/17/2016 3:32 PM
85	3D MCS, High-resolution (P-cable)	6/17/2016 3:29 PM
86	OBS, 2D MCS and marine source for land seismometers	6/17/2016 1:38 PM
87	passive source OBS (BB, SP, pressure)	6/17/2016 1:34 PM
88	2D MCS plus hull mounted CHIRP	6/17/2016 1:14 PM
89	Seafloor hydrophone array.	6/17/2016 12:35 PM
90	active (3D) and passive broadband, short-period, and strong-motion	6/17/2016 10:04 AM
91	active source MCS and OBS	6/16/2016 2:29 PM
92	bottom topography and subsediment surface structures	6/16/2016 2:28 PM
93	OBS	6/16/2016 2:45 AM
94	OBS - broadband and SP	6/15/2016 7:31 PM
95	MCS and refraction data at a subduction zone, as part of a joint seismic-EM survey.	6/15/2016 4:25 PM
96	2D long offset MCS	6/15/2016 12:10 PM
97	2D MCS (long streamer), SP OBS, hi-res MCS (GI gun, short streamer)	6/15/2016 11:46 AM
98	Hi res/shallow penetration for neotectonics & paleoseismology	6/15/2016 8:46 AM
99	active and passive source	6/15/2016 8:13 AM
100	sediment thickness	6/15/2016 12:12 AM
101	long-offset 2D MCS/refraction	6/14/2016 6:59 PM
102	Undetermined	6/14/2016 5:40 PM
103	Passive broadband OBS	6/14/2016 3:22 PM
104	OBS deployments	6/14/2016 2:29 PM
105	Perhaps will submit, likely broadband passive with OBS	6/14/2016 1:23 PM
106	Active source dataset	6/14/2016 1:04 PM
107	high-resolution MCS (portable system)	6/14/2016 12:58 PM
108	OBS broadband/intermediate period	6/14/2016 12:37 PM
109	natural source broadband OBS; active source OBS and MCS	6/14/2016 12:30 PM
110	high-resolution seismic reflection data to image pelagic sediments	6/14/2016 12:28 PM
111	Passive, broadband	6/14/2016 12:15 PM
112	OBS short/broad band passive/active source data	6/14/2016 11:52 AM
113	Long offset streamer MCS; active source OBS	6/14/2016 11:35 AM
114	2D/3D MCS data	6/14/2016 10:29 AM

115	MCS data and OBS data using a portable system	6/14/2016 10:24 AM
116	OBS, 2D mcs (long and short offset), p-cable, 3D mcs	6/14/2016 10:22 AM
117	2D MCS imaging -High resolution	6/14/2016 9:59 AM
118	2D seismic reflection	6/14/2016 9:58 AM
119	Controlled source MCS (long streamer) and OBS, perhaps P-cable as well	6/14/2016 9:50 AM
120	chirp	6/14/2016 9:34 AM
121	high resolution 2D MCS, CHIRP	6/14/2016 9:24 AM
122	2D MCS, Chirp, maybe others	6/14/2016 8:24 AM
123	High-frequency GI gun, relatively short multichannel streamer	6/14/2016 3:54 AM
124	Long-offset 2D seismic reflection and wide-angle reflection/refraction data	6/14/2016 12:11 AM
125	active source OBS, 2D long-streamer MCS, 3D MCS	6/13/2016 9:38 PM
126	N/A	6/13/2016 8:52 PM
127	Would be submitting only as a co-PI/collaborator with a seismologist as lead; work would likely involve OBS data (active and/or passive source)	6/13/2016 8:21 PM
128	Primarily MCS	6/13/2016 6:02 PM
129	2D or 3D high-resolution MCS, possibly p-cable and/or chirp	6/13/2016 5:50 PM
130	2D MCS, Chirp/hi-res seismics, short-period OBS	6/13/2016 5:47 PM
131	Seismic data	6/13/2016 5:33 PM
132	MCS, OBS, onshore/offshore, chirp, passive seismic	6/13/2016 5:13 PM
133	3D MCS profiling, 2D long-offset MCS profiling, active source OBS data	6/13/2016 5:11 PM
134	MCS, active-source OBS	6/13/2016 5:04 PM
135	wide angle refraction, MCS	6/13/2016 5:00 PM
136	OBS active source refraction	6/13/2016 4:39 PM
137	high-resolution shallow seismic reflection	6/13/2016 4:34 PM
138	n/a	6/13/2016 4:33 PM
139	Broadband seismic data	6/13/2016 4:10 PM
140	MCS long offset, active OBS	6/13/2016 4:08 PM
141	2D high-resolution MCS, CHIRP, pcable	6/13/2016 4:02 PM
142	Passive broadband OBS	6/13/2016 3:57 PM

Q30 If you will not submit a proposal, what is the primary reason?

Answered: 109 Skipped: 154



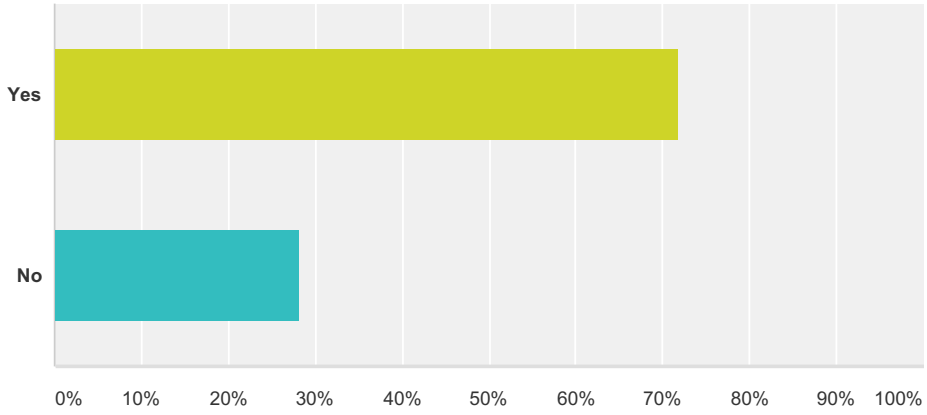
Answer Choices	Responses	
Marine seismic data collection is not my primary area of expertise	**59.63%**	65
I am not familiar with the process of requesting ship time/marine seismic facilities	**4.59%**	5
I don't have sufficient experience in at-sea seismic data collection	**6.42%**	7
Low funding rates	**21.10%**	23
My research doesn't fit within the regional plan of operations for the R/V Langseth over the next 4 years	**8.26%**	9
Total		**109**

#	Other (please specify)	Date
1	Funding from other sources	7/1/2016 1:47 PM
2	my federal agency doesnt have the funding for a Langseth mission	6/30/2016 6:53 PM
3	Here are the few reasons: I am about to graduate in less than a year, and I am not a US citizen. One of the ways of collecting data would be to write a post-doc research proposal. This would require working with a senior researcher (PI or Co-PI, either pre-cruise or on the cruise), particularly specialized in MCS data. This would help me tremendously to gain more confidence in my abilities and learn from the senior researcher and the experience. If this is the case, above picked option can be learned, and I don't see any problems with submitting a research proposal in the next years.	6/30/2016 6:27 PM
4	too busy with land work to dabble underwater now.	6/29/2016 10:58 PM
5	I work for the USGS. I need to have the right academic collaborator to work with.	6/29/2016 1:19 PM
6	USGS can't submit to NSF	6/29/2016 1:00 PM
7	Likely will submit one in the very distant future, but not experienced enough yet.	6/29/2016 10:29 AM
8	Career change, move to adminstration	6/27/2016 7:00 PM
9	I find this a closed shop to a limited number of users.	6/27/2016 5:27 PM

10	I support usages of seismic data	6/27/2016 4:49 PM
11	In the far future I would like to, but since I'm still a student it's not in my immediate future.	6/27/2016 2:33 PM
12	I am semi-retired now and will become completely retired in 2016	6/27/2016 10:11 AM
13	will have others propose	6/27/2016 10:05 AM
14	My research focus has migrated from marine to terrestrial questions.	6/27/2016 9:48 AM
15	USGS - prohibited from submitting proposal as PI	6/20/2016 12:41 PM
16	I am retiring end of this year 2016	6/20/2016 11:38 AM
17	Currently based in Canada, could imagine to be co-PI	6/20/2016 7:14 AM
18	My seismic reflection and refraction requirements are met by geophysical spec companies	6/18/2016 3:14 PM
19	but I intend to collaborate on at least one proposal	6/18/2016 10:10 AM
20	I am now semi (mostly) retired	6/18/2016 10:08 AM
21	n/a	6/17/2016 10:06 PM
22	I work at the USGS and will use USGS equipment, operational personnel, and sources for my work.	6/17/2016 9:28 AM
23	My organization would fund a seismic cruise on an nsf-owned vessel.	6/15/2016 11:47 AM
24	My time as an active researcher has ended	6/14/2016 6:01 PM
25	Approaching retirement	6/14/2016 1:23 PM
26	Other research taking priority over the next 3 years	6/14/2016 12:37 PM
27	US fleet is not sufficiently equipped to perform simultaneously, seismic, multi beam, and sampling cruises	6/14/2016 10:20 AM
28	I'm a consumer of seismic data rather than collector	6/14/2016 9:59 AM
29	foreign country	6/14/2016 6:22 AM
30	retired	6/13/2016 7:41 PM
31	USGS generally does not use NSF funding.	6/13/2016 5:47 PM
32	Not a US Resident and working in US.	6/13/2016 4:07 PM

Q31 Do you understand how to obtain access to the seismic facilities you require?

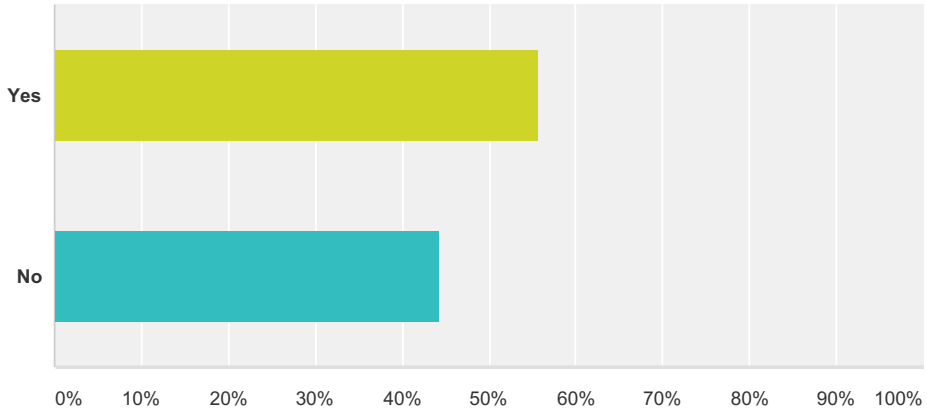
Answered: 231 Skipped: 32



Answer Choices	Responses	
Yes	**71.86%**	166
No	**28.14%**	65
Total		**231**

Q32 Do you understand how the costs of using the facilities/instruments are estimated and how they get included in a proposal to NSF?

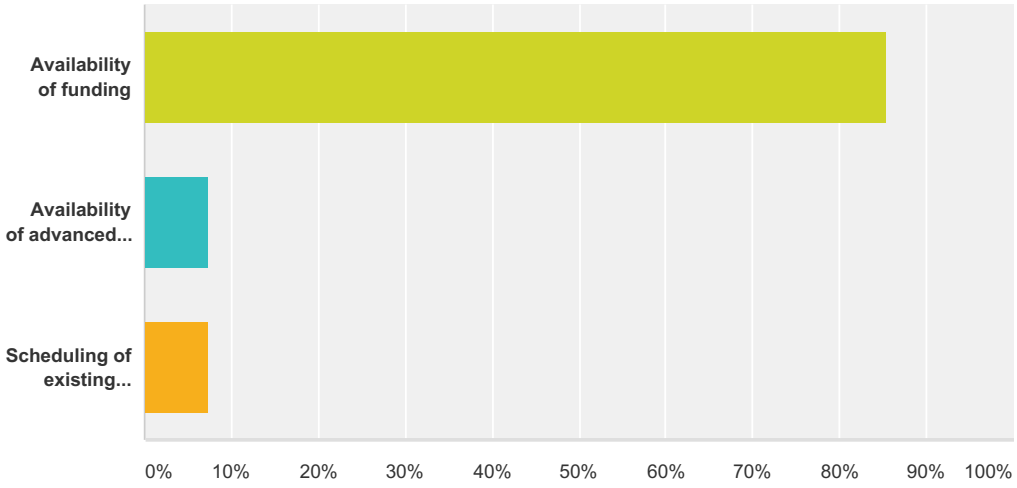
Answered: 233 Skipped: 30



Answer Choices	Responses	
Yes	**55.79%**	130
No	**44.21%**	103
Total		**233**

Q33 What primary factor limits the type of science questions you are able to address today using seismic data?

Answered: 192 Skipped: 71



Answer Choices	Responses	
Availability of funding	**85.42%**	164
Availability of advanced technology	**7.29%**	14
Scheduling of existing facilities	**7.29%**	14
Total		**192**

#	Other (please specify)	Date
1	I haven't really tried, but imagine funding and scheduling are major issues.	7/1/2016 9:01 PM
2	Inability to obtain permits.	7/1/2016 1:47 PM
3	Or lack of capability to run seismic and core (long cores would be even better) on the same cruise	7/1/2016 12:24 AM
4	and associated availability of shoreside technical/data management experts	6/30/2016 6:53 PM
5	Collecting direct samples from basin bounding fault scarps or where basin fill underlying deformed strata are close to the seafloor. In addition to collecting long streamer 2D MCS profiles.	6/30/2016 6:27 PM
6	No likely need based on shift in research direction.	6/29/2016 3:39 PM
7	my own time limitations	6/29/2016 1:52 PM
8	Time. There is an assumption that geoscience departments are either optimized for research (e.g. Lamont), or only teach undergraduates (PUIs). I am in a teaching department in an R1 university--without a viable Ph.D. program. Hence, finding efficient ways to write proposals that can be funded, but involve research that an M.S. student can perform, is the primary limitation I have.	6/29/2016 11:44 AM
9	We need an array of broadband ocean bottom seismometers, which doesn't exist (yet).	6/29/2016 12:38 AM
10	I am not currently working on deep sediment	6/28/2016 11:30 AM
11	I typically use seismic data already collected.	6/28/2016 12:00 AM
12	since I'm usually a secondary user of either processed or open source data, the limitations are sometimes in the difference for what the data was collected for and how I want to reuse it	6/27/2016 5:41 PM

13	small number of vessels that have compressors and/or deck space needed to conduct a seismic investigation of sufficient quality to advance scientific understanding	6/27/2016 5:30 PM
14	Again, I find this a closed shop to a limited number of scientists. Ocean drilling is much more open and inclusive	6/27/2016 5:27 PM
15	Direct access to raw seismic data. Web "click-and-ship" interfaces to seismic data suck. If I can't use wget, the data is pretty much useless.	6/27/2016 4:49 PM
16	n/a	6/27/2016 4:27 PM
17	Nothing. I use the published results.	6/27/2016 3:51 PM
18	I don't feel limited	6/27/2016 3:36 PM
19	Proprietary industry-collected data	6/27/2016 9:52 AM
20	my time	6/27/2016 9:32 AM
21	unknown	6/22/2016 9:20 AM
22	competing research responsibilities	6/20/2016 7:36 AM
23	Lack of computing capability	6/18/2016 10:51 PM
24	little data collected in the Indian Ocean and southern hemisphere	6/18/2016 4:46 PM
25	Availability of funding to seismic specialists whose work complements my research	6/18/2016 12:35 PM
26	As I said, I am now retired, but funding is clearly the greatest restraint	6/18/2016 10:08 AM
27	FAILED TO GET/LACK OF TENURE TRACK POSITIONS	6/18/2016 9:53 AM
28	lack of integration and collaboration among tectonics disciplines	6/17/2016 10:06 PM
29	marine mammals	6/17/2016 7:48 PM
30	It is not an issue for my research	6/17/2016 6:25 PM
31	finding a suitable ship that can adequately accommodate both seismic AND coring (the Langseth is not acceptable))	6/16/2016 2:23 PM
32	lack of adequate funding to complete data analyses and lack of skilled post-docs to efficiently work up datasets	6/15/2016 11:46 AM
33	program willingness to commit to large projects for couple yrs	6/14/2016 6:59 PM
34	N/A	6/14/2016 6:01 PM
35	permitting is a huge problem, even for the relatively small sources I need	6/14/2016 12:28 PM
36	Number of short period OBS instruments.	6/14/2016 9:50 AM
37	Regulations re: Sound Sources / Marine Mammals	6/14/2016 3:54 AM
38	data archival from pre-2000 cruises is limited	6/14/2016 1:33 AM
39	scheduling is also an issue	6/13/2016 5:04 PM
40	availability of specific pieces of COTS gear that do the job	6/13/2016 4:34 PM
41	none	6/13/2016 4:33 PM
42	I would like to use CHIRP and similar systems, but these are seen as "extra expenses" and agencies want to cut them.	6/13/2016 4:10 PM

Q34 If you have not served as a PI on a seismic cruise and do not plan to, please briefly describe why.

Answered: 106 Skipped: 157

#	Responses	Date
1	I worked in the commercial marine seismic industry (operations) for a few years before grad school. My research after that took a different route. I don't feel like an expert in the field and don't have the processing resources/skills.	7/1/2016 9:08 PM
2	I am a technician.	7/1/2016 1:47 PM
3	First, I need to be submitting two/three articles and find a position where I will enjoy what I do more, and getting paid reasonably well after long years of study.	6/30/2016 7:33 PM
4	Plenty of serious science and hazard issues on land.	6/29/2016 11:00 PM
5	NA	6/29/2016 6:56 PM
6	Have served as PI	6/29/2016 4:28 PM
7	Seismic acquisition is not a primary focus of mine. I have mostly participated on cruises where other individuals had that responsibility.	6/29/2016 3:44 PM
8	not my expertise	6/29/2016 1:53 PM
9	not my primary area of research	6/29/2016 1:23 PM
10	Federally funded	6/29/2016 1:00 PM
11	It is not directly related to my expertise. I am focused on multiphase modeling of hydrate systems.	6/29/2016 12:26 PM
12	No interest in cruise	6/29/2016 11:55 AM
13	not my primary expertise; I collaborate with seismic specialists	6/29/2016 10:41 AM
14	Might plan to in distant future, but currently a graduate student.	6/29/2016 10:31 AM
15	I am a "land seismologist" but could imagine joining a cruse for marine seismic data.	6/29/2016 7:51 AM
16	not my expertise	6/28/2016 12:46 PM
17	I would participate on a seismic survey but as a collaborator because I don't have the technical background	6/28/2016 11:46 AM
18	Not primary specialty	6/28/2016 12:01 AM
19	Career change	6/27/2016 7:01 PM
20	seismic data and its results serves as a context for the projects or questions I'm most interested rather than the focus	6/27/2016 5:45 PM
21	I am heavily involved in the ocean drilling program and interpreting seismic. I rely mostly on industry data. I find the NSF reflection seismic community to be fairly insular.	6/27/2016 5:29 PM
22	I now only work with people before and after they collect their data.	6/27/2016 4:54 PM
23	N/A	6/27/2016 4:30 PM
24	not my area of interest	6/27/2016 4:28 PM
25	I am not a seismologist.	6/27/2016 4:15 PM
26	retiring soon	6/27/2016 3:39 PM
27	Not my area of expertise	6/27/2016 3:36 PM
28	I served as a PI back in the 80s, since then my interests have evolved, and I find it much more effective to use and interpret seismic data collected by others, especially MCS, an area in which I have never been an expert.	6/27/2016 2:44 PM
29	Nor my area of research	6/27/2016 12:45 PM
30	I am currently graduate student and do not yet have the experience necessary to be a PI.	6/27/2016 12:29 PM

31	I rely on other experts to collect seismic data as it is not my area of expertise	6/27/2016 12:11 PM
32	NA	6/27/2016 10:37 AM
33	semi-retired now and completely retired in 2016	6/27/2016 10:12 AM
34	Seismic data is secondary to my work	6/27/2016 10:07 AM
35	Data generally available to me without my being a PI	6/27/2016 9:56 AM
36	My focus is on process sedimentology which requires using a combination of tools, and deeper seismic is less critical. That said, my exposure to MCS has been very limited, and this certainly limits my planning/ability to use it.	6/27/2016 9:52 AM
37	Not my specialty	6/27/2016 9:42 AM
38	Lack of funding and expertise to compete for NSF funding sources	6/27/2016 9:34 AM
39	Not my area of expertise	6/27/2016 9:34 AM
40	I have been a Chief Scientist and Shipboard Scientist on drilling cruises, which require seismic data but rarely collect it.	6/24/2016 4:38 PM
41	I use sediment core data, but I understand the need for seismic data in site selection for sediment coring, though I have not used it myself	6/22/2016 9:22 AM
42	didn't get funded	6/21/2016 9:52 AM
43	My primary research interests and time commitments lie elsewhere.	6/20/2016 9:45 PM
44	Not a geophysicsist	6/20/2016 6:18 PM
45	It seems that a lot of the necessary information regarding how to plan and organize a seismic cruise is passed on via word of mouth, rather than being available to every PI that would like to independentely start using NSF marine facilities. The threshold is too high for somebody who has not been initiated to the field as a graduate student or postdoc.	6/20/2016 1:01 PM
46	I am retiring end of this year 2016	6/20/2016 11:39 AM
47	As noted above, it is not my expertise and provides supporting data for my work.	6/20/2016 11:10 AM
48	I was a student until this past August, and as such could not serve as a PI.	6/20/2016 11:06 AM
49	not my main investigation theme	6/20/2016 10:55 AM
50	Recent data quality on the U.S. Atlantic Margin collected by USGS was poor	6/20/2016 9:06 AM
51	I work for a federal agency.	6/20/2016 7:38 AM
52	Marine seismic acquisition is not my primary area of expertise.	6/19/2016 2:24 PM
53	Not a seismologist	6/19/2016 4:42 AM
54	I have not served as a PI because I am currently a PhD student. I do intent to server as a PI in the future.	6/19/2016 12:25 AM
55	logistics - 2 small children	6/19/2016 12:00 AM
56	Lack of funding to participate	6/18/2016 11:02 PM
57	non specialist	6/18/2016 4:51 PM
58	I work in an oversight and consulting role for seismic data acquisition	6/18/2016 3:15 PM
59	I'm an interpreter of seismic primarily; but would be open to contributing to acquisition in the future (with the right collaborators)	6/18/2016 1:03 PM
60	I do plan to	6/18/2016 12:55 PM
61	Not my specialization	6/18/2016 12:35 PM
62	not my area of expertise	6/18/2016 12:30 PM
63	Not my area of expertise	6/18/2016 12:26 PM
64	Not a geophysicist	6/18/2016 10:48 AM
65	not my expertise	6/18/2016 10:14 AM
66	CANNOT AS AN ADJUNCT	6/18/2016 9:56 AM
67	Have not been to sea for years - kids	6/18/2016 6:54 AM

68	no need to go to sea	6/17/2016 10:09 PM
69	do not know how to organize/request the funding	6/17/2016 9:20 PM
70	I plan to in future.	6/17/2016 1:39 PM
71	I have and do serve as a PI, but I won't be doing that on a NSF cruise.	6/17/2016 9:44 AM
72	not my primary area of expertise, I work with colleagues who have the expertise	6/16/2016 2:30 PM
73	I'm a technician	6/16/2016 2:24 PM
74	Seisimcs is not my field.	6/16/2016 9:41 AM
75	N/A	6/16/2016 2:49 AM
76	if you mean active source, I don't have that expertise. OBS proposals are only getting funded if "community".	6/15/2016 7:38 PM
77	defer to younger generation	6/15/2016 9:05 AM
78	i am a microbiologist, but work with scientists who use seismics, both through IODP and through NSF Oceanography	6/15/2016 3:24 AM
79	not my primary interest	6/15/2016 12:13 AM
80	Not my primary expertise	6/14/2016 6:08 PM
81	Aged out	6/14/2016 6:02 PM
82	Not qualified	6/14/2016 5:41 PM
83	N/A	6/14/2016 2:30 PM
84	Although I collaborate with scientists who are seismologists, I am not one and don't plan to participate on a cruise.	6/14/2016 12:57 PM
85	The success rate is too low, the bureaucratic issues with the Langseth are overwhelming and the ship does not allow for integrated research, personal inexperience in seismic acquisition and inexperience of group because so little seismic acquisition was funded over the last decade that an entire generation of sea-going geophysicist is undertrained.	6/14/2016 10:39 AM
86	Seismic data collection is not my primary area of expertise	6/14/2016 10:22 AM
87	Expertise is in using interpreted data imaging and not on collection	6/14/2016 10:00 AM
88	not my area of expertise	6/14/2016 9:51 AM
89	Langseth is not the appropriate tool for the job	6/14/2016 8:26 AM
90	I'm not a seismologist	6/14/2016 1:35 AM
91	I have not used seismic data in my research.	6/13/2016 11:13 PM
92	NA	6/13/2016 10:20 PM
93	I'm not a seismologist	6/13/2016 8:56 PM
94	Not a seismologist, lack necessary expertise (but would be willing to serve as co-PI if appropriate).	6/13/2016 8:35 PM
95	retired--don't submit proposals anymore	6/13/2016 7:42 PM
96	Don't use or need seismic data	6/13/2016 5:19 PM
97	Grad student	6/13/2016 5:15 PM
98	Collaborate with colleagues who are experts in seismics	6/13/2016 4:48 PM
99	serve as collaborator	6/13/2016 4:42 PM
100	not my area of expertise	6/13/2016 4:35 PM
101	N/A	6/13/2016 4:25 PM
102	Better for me to work with others, who are more expert	6/13/2016 4:09 PM
103	N/A	6/13/2016 4:08 PM
104	I am nto a geophysicist	6/13/2016 4:06 PM
105	Not my primary area; use seismic as complementary data sets to other primary ones	6/13/2016 3:59 PM
106	Not a field I study	6/13/2016 3:57 PM

Q35 If you have not served as a PI on a seismic cruise but would like to, please briefly describe what new efforts or infrastructure would enhance your ability to serve as a PI on a seismic cruise.

Answered: 65 Skipped: 198

#	Responses	Date
1	Available training and/or pairing with those experienced in the field. having the hardware, software, and know-how to process the data are also major issues.	7/1/2016 9:08 PM
2	enough deck space to core and run seismic on the same cruise	7/1/2016 12:35 AM
3	Working for a period of time with a senior researcher, who actively publish articles and are specialized in MCS data.	6/30/2016 7:33 PM
4	Tempting to propose a zillion OBSs and APGs alone the PNW seafloor.	6/29/2016 11:00 PM
5	greater pool of broadband OBS instruments, funding opportunities for broadband OBS deployments outside of EAR, ships that can accomodate broadband OBS deployments while prefoming oceanographic or biologic cruises	6/29/2016 6:56 PM
6	Availability of funding and vessel	6/29/2016 5:39 PM
7	Nothing is stopping me	6/29/2016 4:28 PM
8	N/A	6/29/2016 3:44 PM
9	student participation	6/29/2016 1:23 PM
10	"Consulting services" to help potential PIs design appropriate surveys.	6/29/2016 12:00 PM
11	I don't feel I have the time to figure out the process, and have found it difficult to get to know and collaborate with existing researchers that perform seismic cruises. Things that would help me are: 1) Networking opportunities for non early career scientists with OCE researchers, and webinars explaining the process and the types of science NSF funds.	6/29/2016 11:50 AM
12	Low funding rates have been discouraging.	6/29/2016 8:18 AM
13	N/A	6/28/2016 12:01 AM
14	n/a	6/27/2016 5:45 PM
15	Nope. It detracts from the time I have to write and fix software.	6/27/2016 4:54 PM
16	I have not yet because I am currently a graduate student, but I hope to one day. Availability of funding (particularly funding for exploratory missions that are less hypothesis driven) would enhance my ability greatly.	6/27/2016 4:30 PM
17	Ability to dredge/interdisciplinary programs.	6/27/2016 4:15 PM
18	n/a	6/27/2016 3:36 PM
19	Additional workshops directed towards early career scientists to prepare them to serve as a PI.	6/27/2016 12:29 PM
20	NA	6/27/2016 10:37 AM
21	I think having some training (not just for very early career scientists) on seismic data collection and analysis would be invaluable	6/27/2016 9:52 AM
22	Clarification of marine mammal issues	6/23/2016 11:47 AM
23	More funding available for PI salaries	6/20/2016 1:56 PM
24	It would help to have a website or webinars where to become familiar with the existing NSF facilities (which vessels are preferred for what work), to explain the process of how to submit a proposal to use the NSF facilities, to navigate the environmental permitting requirements and so on. These moving parts are all essential to build a project that includes a seismic cruise and may seem trivial to those within the field but are often insurmountable barriers to those who have never submitted a project in the US.	6/20/2016 1:01 PM
25	better networking opportunities to find co-PIs - hard to break in without co-PIs if you haven't been a PI before	6/20/2016 11:32 AM

26	n/a	6/20/2016 11:10 AM
27	Availability of funding for seismic acquisition; availability of ship time.	6/20/2016 11:06 AM
28	More availability for ship time	6/19/2016 4:27 PM
29	N/A at this time	6/19/2016 12:00 AM
30	University and department do not have reputation in seismic field	6/18/2016 11:02 PM
31	ABILITY TO WRITE/SUBMIT PROPOSALS AS AN ADJUNCT	6/18/2016 9:56 AM
32	no new efforts needed	6/18/2016 6:54 AM
33	n/a	6/17/2016 10:09 PM
34	workshop on organization and funding request	6/17/2016 9:20 PM
35	There is simply not enough ship time available. Cruises go to established PIs, which at some level makes sense given the scarcity of resources. However, it makes it very difficult for others to break into the field.	6/17/2016 8:33 PM
36	Increased funding to provide more OBSIP instruments, and maintaining the combined active/passive source capabilities that the Langseth offers our community.	6/17/2016 5:01 PM
37	I am a graduate student. As such, I need to graduate.	6/17/2016 3:35 PM
38	Availability of funding	6/17/2016 1:39 PM
39	Willingness of MGG to fund Broadband OBS projects	6/15/2016 7:38 PM
40	$$	6/15/2016 8:17 AM
41	No	6/14/2016 5:41 PM
42	More open chance as a participant	6/14/2016 3:23 PM
43	N/A	6/14/2016 12:57 PM
44	Better horizontals on broadband OBSs	6/14/2016 12:18 PM
45	Training/role for sub-PI in training	6/14/2016 11:54 AM
46	Having access to the new 12 km long streamer on the Langseth	6/14/2016 11:39 AM
47	As an early career scientist hoping to serve as a PI of a seismic survey in the near future, the thing I'd like to learn the most is how to plan a seismic experiment. MLSOC has organized one pre-AGU workshop to introduce the planning procedure, which is great. But some kind of hands-on experience would be better. For example, there could be an early-career marine seismologists workshop during which we are given a certain geologic region and certain scientific targets for the seismic survey. Then we can work in groups to design the experiments, thinking about how many OBSs we would need, how much MCS data we need to acquire, and how many ship days we would request. At the end we would submit a report in NSF-required format, and our report to be reviewed and given feedbacks. I think having this training would be very helpful for us when we start to plan our first real seismic experiment.	6/14/2016 11:14 AM
48	A longterm effort to reintroduce the experience into the community so that more than a small group of scientists exist within the US that are capable of leading a seismic cruise.	6/14/2016 10:39 AM
49	For site surveys that I might be a PI on, availability of both 2D and High -res seismic options are key.	6/14/2016 10:00 AM
50	More early career workshops that allow graduate students/postdocs to understand the way the infrastructure pool operates, how to write proposals incorporating seismic equipment and costs.	6/14/2016 9:35 AM
51	More availability and re-focus on portable seismic systems	6/14/2016 8:26 AM
52	NA	6/13/2016 10:20 PM
53	Information on how to include seismic equipment in a proposal	6/13/2016 8:56 PM
54	n/a	6/13/2016 8:35 PM
55	n/a	6/13/2016 7:42 PM
56	NSF currently offers an incredible infrastructure (R/V M. Langseth) for recovering active source seismic data with a newly updated hydrophone streamer that offers both 3D and long offsets capabilities. Additional funding would allow extensive use of this incredible facility.	6/13/2016 5:56 PM
57	Streamlining the process to propose and use seismic facilities.	6/13/2016 5:51 PM

58	just getting my PhD	6/13/2016 5:02 PM
59	N/A	6/13/2016 4:48 PM
60	n/a	6/13/2016 4:35 PM
61	N/A	6/13/2016 4:25 PM
62	N/A	6/13/2016 4:09 PM
63	Regional plan is good for anticipation and proposal preparation	6/13/2016 4:09 PM
64	N.A	6/13/2016 4:08 PM
65	more cheif scientist training cruises	6/13/2016 4:05 PM

Q36 If you have served as a PI on a seismic cruise please describe your experience (for example, Was it successful? What could have made it better?, etc.)

Answered: 99 Skipped: 164

#	Responses	Date
1	N/A	7/1/2016 9:08 PM
2	Yes it was successful. Mostly gradual improvements in sources, streamers, navigation etc. All of which have happened even if there is a lag from industry practices	7/1/2016 2:04 PM
3	seismics were limited by ice conditions. In this case it was an international vessel and there were other issues.	7/1/2016 12:35 AM
4	succesfull	6/30/2016 8:14 PM
5	Extremely successful, credit to experienced academic partners, skill and round-the-clock dedication of Langseth seismic acquisition team, and good luck with weather and equipment. Could have gone poorly with aged and worn equipment at the point of failure, overworked shipboard technical experts at verge of health problems, no technician expertise in non-seismic geophysical systems (grav ties, multibeam troubleshooting, CTD operation all unsupported)	6/30/2016 7:46 PM
6	I wasn't a PI, however I was responsible from on- and post-cruise 2D MCS data processing and near real-time plotting for the MGL1112 expedition. We could have changed orientation of the collected 2D MCS profiles from oblique (to the structural trend) to perpendicular. Having an expert eye on MCS data that could make structural and stratigraphic observations and their interpretations very quickly, with a mind that has a very good idea of pre-cruise expectations of the area, could have modified the pre-cruise acquisition plan during the cruise. Although we could have imaged the subsurface more strategically, I would say it was mostly a successful expedition.	6/30/2016 7:33 PM
7	Data collection was very successful. For active source work the environmental permitting process was the most difficult (more guidance and clarity would help).	6/30/2016 11:09 AM
8	Most seismic cruises have been very successful, yielding new data and insights to earth processes. For active source studies, the permitting and coordination with LDEO and NSF can be improved.	6/30/2016 11:01 AM
9	N/A	6/29/2016 11:00 PM
10	NA	6/29/2016 6:56 PM
11	Successful. Wait until now for modern equipment.	6/29/2016 4:28 PM
12	N/A because have never been the PI on a dedicated seismic cruise.	6/29/2016 3:44 PM
13	succesful on some	6/29/2016 1:38 PM
14	Recent cruises have been very successful - good support from both ship operators and OBS facility	6/29/2016 11:58 AM
15	Yes, both were successful, proving unique new constraints on the rheological properties of the lithosphere and oceanic mantle, in addtion to new data relevant to the interpretation of seismic anisotropy	6/29/2016 11:39 AM
16	It was generally successful.	6/29/2016 10:27 AM
17	For the most part the seismic facilities function fairly well, and all of the experiments I have conducted have been successful to varying degrees. Improving the robustness of OBS data (i.e., data recovery rates) would be the one thing I would look at.	6/29/2016 9:14 AM
18	It was extremely successful - great experience.	6/29/2016 7:44 AM
19	successful	6/28/2016 6:08 PM
20	Yes it was uccessful (20+ years ago)	6/28/2016 11:31 AM
21	Successful, but frustrating, limited processing capabilities and knowledge	6/28/2016 11:27 AM
22	Very successful. Acquired all and excellent data to address our science questions.	6/28/2016 6:50 AM

23	In termsof NSF, my most recent PI involvment was for site survey for what becamse IODP Leg 342; our survey, using the Lamont high res system, was very succesful both for that leg, subsequent papers, and in support of a new IODP proposal to dill Oligocene-Miocene drifts on the Newfoundland Ridges. I think NSF got good value for the money. We did have failure of the compressor at two points, and we also had failure of the main coring winch on KNORR causing the loss of our piston corer. .	6/28/2016 4:52 AM
24	N/A	6/28/2016 12:01 AM
25	Yes, successful, and appropriate for the larger drilling mission.	6/27/2016 7:01 PM
26	n/a	6/27/2016 5:45 PM
27	in-place, shipboard equipment essential for a fully successful seismic cruise broke down on both of my last 2 cruises; more funds available for maintaining mission-critical equipment are needed	6/27/2016 5:42 PM
28	It has been 20 years. At the time it was successful.	6/27/2016 5:29 PM
29	It's been a long time, but the docs for the ships systems, testing methodology and test history were horrible. Non-standard file formats (e.g. Knudsen keb, EdgeTech segy, etc) and badly done segy	6/27/2016 4:54 PM
30	Yes, it was successful proimary site survey (ODP) and independent scientific inquiry	6/27/2016 4:46 PM
31	N/A	6/27/2016 4:30 PM
32	n/a	6/27/2016 3:36 PM
33	worked great, use of sonobuoys and later OBS arrays to locate earthquakes	6/27/2016 2:44 PM
34	Very successful 2D long offset reflection cruise as a PI. Communication from LDEO OMO and NSF could have been much better. There were problems with scheduling and permitting that we didn't know about until we were at sea. That could have all been very easily avoided.	6/27/2016 2:00 PM
35	Very successful; but engine problems with Langseth was an issue; science was hurt by not being able to record water column data	6/27/2016 1:14 PM
36	It was successful because we had the necessary help to deal with the marine mammal regulations. We were also able to run a test cruise to make sure our equipment was all working, prior to running the full cruise. Having expert technicians on board who were familiar with the seismic equipment, and with the IT data management, were key requirements to have the cruise be successful	6/27/2016 1:00 PM
37	N/A	6/27/2016 12:29 PM
38	Very successful, high-quality technical staff	6/27/2016 12:12 PM
39	In almost all cases, high risk but high reward, with range of results. Data collection of broadband OBS is very difficult, and data loss is large. Despite this, in most cases the results have been excellent (including multiple papers in the high-profile journals). In once case losses prevented the primary goal of the experiment, but student still produced work on a secondary topic that is highly sited. Marine seismology allows us to explore questions we have no other access to. The excitement and knowledge gained overome the losses and failures	6/27/2016 10:37 AM
40	successful	6/27/2016 10:12 AM
41	I have sailed as Chief or Co-Chief Scientist 6 times on R/V Ewing, 3 times on R/V Langseth, and twice on R/V Hatteras. It's pretty difficult to sum up those experiences in a survey like this. Overall, they were very successful.	6/27/2016 10:00 AM
42	It was successful. More funding, equipment	6/27/2016 9:54 AM
43	Yes, it was successful but some noise issues were problematic. I don't collect seismic enough to be an expert. It would be invaluable to have some research training (both field and lab) and access to a seismic consultant/tech for proposal planning and during/after cruises.	6/27/2016 9:52 AM
44	Very successful - but if I had not had extensive experience in the type and use of the technology, I could see how things could go badly	6/23/2016 11:47 AM
45	Very, very successful.	6/22/2016 11:27 PM
46	It would be beneficial if staff from different IICs could deploy other IICs equipment	6/21/2016 7:32 PM
47	n/a	6/20/2016 11:10 AM
48	Very successful	6/19/2016 3:01 PM
49	N/A	6/19/2016 12:00 AM

50	Best was industry 3D cruise; previously several 2D cruises on Ewing -- mostly successful; could have been better with more modern equipment that was used more often so that shipboard personnel were able to adequately support the science program	6/18/2016 2:57 PM
51	Yes it was very successful	6/18/2016 12:55 PM
52	On Langseth. Very successful. I would like to have access to better processing software.	6/18/2016 11:26 AM
53	It was successful - the main issue was weather, not the seismic gear. The facilities (on the Ewing) were first rate.	6/18/2016 10:13 AM
54	When using seismic data to constrain models the main limitation is time. The PIs specializing in seismic data acquisition are underfunded to do the processing/interpretation/research needed to use the data. It takes way more time than it should.	6/18/2016 10:04 AM
55	na	6/18/2016 6:54 AM
56	n/a	6/17/2016 10:09 PM
57	Experience acquiring seismic on the Langseth has been exceptional; also found many options for acquiring high res data using the UTIG systems including shooting highres on the Palmer; need for more vessels with compressors to allow for broader use of huh res seismic; need for the Langseth to continue	6/17/2016 9:36 PM
58	successful on the Ewing	6/17/2016 8:03 PM
59	very successful	6/17/2016 7:51 PM
60	Was successful.	6/17/2016 6:43 PM
61	Was successful; scheduling can be problematic	6/17/2016 3:33 PM
62	Very good. Though the scheduling system is confusing, and since the lead PI is the main point of contact the info the other PIs receive depends on the lead PI (who sometimes does a good job communicating with the team and sometimes does not)	6/17/2016 1:41 PM
63	Successful, seismics was not the focus of the cruise but a tool for siting piston cores and understanding their geologic context.	6/17/2016 1:16 PM
64	Some are succesful, some are not. There is great variability in the technical reliability of the OBSIP groups.	6/17/2016 10:08 AM
65	We have been highly successful acquiring seismic data and processing them at the USGS. We are able to do most of what we need to do in-house. We have the compliance framework well under control, in addition to having the sources, streamers, and operational/technical personnel and processing personnel.	6/17/2016 9:44 AM
66	I am not sure what you are asking.	6/16/2016 2:49 AM
67	more shallow-water-capabe OBS instruments.	6/15/2016 7:38 PM
68	Extremely successful. Langseth is a great facility to have available.	6/15/2016 2:48 PM
69	The experience was extremely successful, yielding a rich data set. Coming off the ship with SEGY data with complete navigation information in the headers would have made it ideal.	6/15/2016 12:22 PM
70	All very successful - existing seismic facilities are very good	6/15/2016 12:07 PM
71	on non-US R/V: good experience	6/15/2016 9:05 AM
72	Very Successful. Biggest ROI would occur by putting more instruments on the seafloor	6/15/2016 8:17 AM
73	more of an IODP issue than MGG since problems were in borehole deployments	6/14/2016 7:06 PM
74	Have not in past ten years.	6/14/2016 6:02 PM
75	NA	6/14/2016 5:41 PM
76	successful	6/14/2016 2:30 PM
77	Largely successful, could have been better with more reliable OBSs.	6/14/2016 1:28 PM
78	I will serve as a PI next year (first time)	6/14/2016 1:00 PM
79	I collected data on MGL1208, and the cruise was successful. Our major problem was a time-constrained cruise to do both coring and seismic. Also, it would have been good to have a simple underway system so that digital seismic could have been gathered as a standard underway activity. Most of the seismic data in the oceans are analog, low resolution, and with poor coverage.	6/14/2016 12:37 PM
80	Some cruises have had poor data recovery because of inadequate pre-cruise testing of OBSs from the OBSIP due to inadequate funding for such testing.	6/14/2016 12:36 PM

81	Cruise was successful, led to a drilling cruise of ODP, several papers were published based on the seismic data and the data is in great demand by researchers	6/14/2016 10:39 AM
82	Every data acquisition effort has been very successful. What would make these projects more sucessful would be more funds for data processing, analysis and interpretation.	6/14/2016 10:31 AM
83	I led a cruise on the Langseth in 2011. I was skeptical about the ship's capabilities. There had been problems. All went VERY well, thanks, largely to Sean Higgins and the crew onboard.	6/14/2016 10:27 AM
84	N/A	6/14/2016 10:00 AM
85	I had a successful cruise and collected most of the data I intened to acquire	6/14/2016 9:59 AM
86	Highly successful!	6/14/2016 9:56 AM
87	very successful, great team	6/14/2016 9:37 AM
88	Successful in part because non-US partners were well funded, well organized, well staffed, and had a strong service mentality.	6/14/2016 4:08 AM
89	I think that my programs were very successful, thanks to the excellent facilities and technical staff provided by the Langseth and the OBSIP pool. Without these facilities, it would not be possible to acquire cutting edge deep penetration seismic reflection and wide-angle reflection refraction data in challenging environments necessary for the science.	6/14/2016 12:21 AM
90	Experiences have been very good, I consider the cruises in which I've been PI to be very successful. The main factors contributing to a successful seismic cruise are a scientific party that includes enough expertise on acquisition and processing of the different seismic datasets to be acquired, and a highly skilled technical staff supporting acquisition (e.g., RV MGL technicians, OBSIP personnel). Factors that usually can affect negatively the quality of a seismic cruise are poor maintenance of equipment or not replacing/upgrading aging equipment.	6/13/2016 10:20 PM
91	n/a	6/13/2016 8:35 PM
92	Generally successful, although we have encountered difficulties. The first attempt with the P-cable system off New Jersey in 2014 was aborted due to problems with the P-Cable and ultimately electrical systems failure on the Langseth. The second attempt a year later (2015) was successful, but the navigation data appears to have been unsufficiently precise (this problem wasencountered during processing and may have been the result of cost-cutting during acquisition). We are working to address these problems.	6/13/2016 6:01 PM
93	We have been highly successful--the R/V Langseth is very competent.	6/13/2016 5:31 PM
94	N/A	6/13/2016 4:48 PM
95	n/a	6/13/2016 4:35 PM
96	Everything went very well.	6/13/2016 4:25 PM
97	Successful. More OBS would have helped.	6/13/2016 4:20 PM
98	N/A	6/13/2016 4:09 PM
99	N.A	6/13/2016 4:08 PM

Q37 What types of seismic facilities will be required to address critical science questions in the future?

Answered: 141 Skipped: 122

#	Responses	Date
1	As now a mix from chirp, hi-res MCS to long offset MCS	7/1/2016 2:04 PM
2	Having a global class facility with enough deck space to run seismics off the stern and core of the side	7/1/2016 12:35 AM
3	3D seismic and long sedimentary cores	6/30/2016 8:14 PM
4	continued access to high energy seismic system and multichannel receiver system - deep penetration work is still a priority	6/30/2016 7:46 PM
5	What are the examples of critical science questions?	6/30/2016 7:33 PM
6	Larger number of short period, four-component seismometers. Larger number of broadband instruments. Ability to collect densely recorded active-source data for seismic imaging using travel time tomography and full waveform inversion.	6/30/2016 11:01 AM
7	SEAFLOOR GEODESY!, plus OBSs and APGs.	6/29/2016 11:00 PM
8	OBS stations that can be deployed for longer periods of time.	6/29/2016 6:56 PM
9	My biggest problem with the current academic seismic program is that acquisition is treated independently of processing. My background is in industry where processing is part of acquisition so I really don't understand their separation by NSF. ENAM is a good example, where a single acquisition effort has turned into highly fragmented processing. Pre-stach depth migration is pretty standard nowadays, this should be just part of the acquisition.	6/29/2016 5:35 PM
10	Ships doing MCS are essential	6/29/2016 4:28 PM
11	Not sure beyond keeping access to facilities available.	6/29/2016 3:44 PM
12	OBS, seismic refraction, 2D & 3D reflection	6/29/2016 1:38 PM
13	High resolution and high frequency systems are needed to see details. Low resolution, deep penetrating data is not the end all.	6/29/2016 1:21 PM
14	More offshore passive source	6/29/2016 1:00 PM
15	Real 3D, long streamer (8 km or longer) capability that is actually realistically available.	6/29/2016 12:00 PM
16	Well funded OBS facilty, advanced OBSs with better noise characteristics due to burial or shielding, Good powerful seismic source, streamers and facliites for at least 2D reflection seismology	6/29/2016 11:58 AM
17	More broadband instruments in the oceans.	6/29/2016 11:50 AM
18	more 3D seismic data collection in many different tectonic environments	6/29/2016 10:41 AM
19	Increased resolution data and accessibility. For one proposal, I sought small commercial company's help with high-resolution MCS because very high quality at same or lower cost than UNOLS, plus more flexible in availability. Please note -- I fully appreciate cost is real issue that is difficult to overcome.	6/29/2016 10:27 AM
20	OBS, airgun for MCS/refraction, probably cabled observatories	6/29/2016 9:14 AM
21	OBS's with higher signal to noise, particularly on horizontal components.	6/29/2016 8:18 AM
22	The ship schedule needs to be explained inside the NSF solicitation itself. Much time is wasted on proposal efforts that cannot proceed due to lack of ship.	6/29/2016 7:51 AM
23	Availability of board and instruments - longer deploy times would be highly desirable. Active source setups such as that available now on the Langseth are critical.	6/29/2016 7:44 AM
24	Long-term deployment of buried broadband ocean bottom sensors.	6/29/2016 12:38 AM
25	lower noise instruments (better designed OBS packages), absolute pressure gauges and well-calibrated DPGs	6/28/2016 6:08 PM
26	improved basic seismic capabilities of UNOLS ships used for sediment coring- e.g. improve on existing 3.5 kHz	6/28/2016 11:46 AM

27	MCS, Sentry CHIRP	6/28/2016 11:27 AM
28	I suggest using funding for research rather than seismic acquisition and processing. Professional seismic companies can produce exceptional quality data; academia should focus more on interpreting these data	6/28/2016 7:54 AM
29	Access to long-streamer MCS. Access to long and short period OBS. Access to high resolution MCS systems. Seafloor cables.	6/28/2016 6:50 AM
30	We cannot do innovative IODP science without new seismic. We cannot have a drilling program that only revists previously drilled sites. We absolutely must be able to collect site survey. I am presently in Germany planing a DFG-funded cruise because of the low funding rates in NSF and I have coleagues who are doing going to China to continue their work. This is not an ideal situation.	6/28/2016 4:52 AM
31	seismic reflection (3D) to get crustal structure; OBS (broadband?) to understand sources and impacts of seismicity at MORs; probably lots more that doesn't come to mind offhand	6/27/2016 5:45 PM
32	very high resolution imaging in shallow-water sediment to monitor Earth's past behavior under different climate conditions; high-resolution imaging of open-ocean sediments to select safe drill sites needed to monitor climate change at every location on Earth possible (including lakes); OBS equipment in numbers like the land-based Portable Array with ships that can both deploy them and shoot to them	6/27/2016 5:42 PM
33	for me..3d seismic...	6/27/2016 5:29 PM
34	Direct access to all public raw data. e.g. wget http://example.org/cruise/line01113.sgy.xz	6/27/2016 4:54 PM
35	Ships capable of seismic survey and piston/gravity/multi-corer coring	6/27/2016 4:46 PM
36	Longer streamers, more dual MCS/OBS cruises in order to investigate deeper processes. More long term OBS deployments.	6/27/2016 4:30 PM
37	Shallow water OBS that can target the shelf environment in amphibious experiments. Longer deployment OBS, potentially with a method of checking state of health of the instrument remotely. Shielded OBS instruments.	6/27/2016 2:45 PM
38	OBS arrays and MCS, both 2D and 3D	6/27/2016 2:44 PM
39	Long offset 2D seismic reflection, 3D seismic, large volume marine acoustic source, high resolution 2D and 3D reflection	6/27/2016 2:00 PM
40	3D seismic, long offset streamers, P-cable	6/27/2016 1:14 PM
41	2D and 3D active source seismics;	6/27/2016 1:00 PM
42	Deep penetration seismic reflection/refraction, large pools of ocean bottom seismometers	6/27/2016 12:12 PM
43	maintaining some form of active source seismic capability will be important.	6/27/2016 12:11 PM
44	the coupling of active-source seismic, broadband seismic, geodesy, and MT are all clearly needed to move forward on imaging the solid-earth dynamic processes that control the evolution of the planet (as well as major geohazards). Spanning the required range of resolution, spatial and depth extent, and time scale, and provide sensitivity to critical parameters such as fluid content, composition, and temperature, requires a well coordinated effort. Developing facilities that mazimize the investement required to collect such data will be critical for accomplishing our goals	6/27/2016 10:37 AM
45	Long-streamer 2D MCS; P-cable or other high-res 3D; passive and active-source OBS.	6/27/2016 10:00 AM
46	Near bottom (very high res) seismic...AUV	6/27/2016 9:56 AM
47	All... there is not one solution. Moreover, new technologies and exploration with old ones is necessary.	6/27/2016 9:52 AM
48	Ability to map more sites - ie: funding	6/27/2016 9:34 AM
49	Rapid acquistion of seismic profiles over new areas of interest for ocean drilling	6/24/2016 4:38 PM
50	Multi-channel seismic	6/23/2016 11:47 AM
51	OBS, active source, MCS	6/22/2016 11:27 PM
52	ones that can continue to acquire instruments with the greatest capabilities (including strong motion sensors, pressure gauges and other new technology). Also staffed at a level so that excellent support to PIs is provided	6/21/2016 7:32 PM
53	mobile high-resolution system for various ships and small boats (1 van, small airgun, short streamer)	6/21/2016 9:52 AM
54	OBS pool of instruments available and ships to deploy them	6/20/2016 1:56 PM
55	ocean-going vessels	6/20/2016 12:43 PM
56	up to date streamer	6/20/2016 11:32 AM

57	economical access to MCS, either by contract or with dedicated ship	6/20/2016 11:10 AM
58	P-cable seismic facilities, continued MCS facilities, larger OBS pool. Strong-motion OBS could be very useful for monitoring projects, as well as contributing to strong ground motion studies. Cabled arrays (including OBS, pressure sensors, etc., such as ONC's array and Japan's incoming array) should be considered for the future as well, as these instruments can be used as passive or active-source, may be used for monitoring, and real-time data streams can contribute to early warning - particularly important for Cascadia!	6/20/2016 11:06 AM
59	vessels and facilities to image deep and shallow continental margins and to understand earthquake hazards	6/20/2016 10:12 AM
60	Better integration of potential field and seismic reflection data	6/20/2016 9:06 AM
61	seafloor instruments, active sources from ships, data management	6/19/2016 3:01 PM
62	Mcs. In my view obs research is over supported. Takes too much of science budget.	6/19/2016 4:42 AM
63	ability to collect site survey data required for drilling	6/19/2016 12:00 AM
64	OBS arrays, reflection	6/18/2016 4:51 PM
65	Long-offset (> 6000 m), large number of cable (> 8) 3D	6/18/2016 2:57 PM
66	3D seismic is critical to better understand stratigraphic architecture of sedimentary archives with expanded temporal resolution (e.g., contourite drifts)	6/18/2016 1:03 PM
67	Langseth class	6/18/2016 12:55 PM
68	contracted surveys would be sufficient	6/18/2016 12:30 PM
69	Langseth will do great if better funded. Need a seismic processing facility so PIs without that infrastructure can access.	6/18/2016 11:26 AM
70	sufficient availability/affordability of shiptime so that lack of seismic data does not limit drilling proposals	6/18/2016 10:14 AM
71	There is a need for both 3-D seismics and long streamers as available on the Langseth, but another pressing need is for lower cost (perhaps somewhat less capable) systems that can be deployed for important problems that don't need all that fire power.need is for	6/18/2016 10:13 AM
72	3D seismic and OBS	6/18/2016 10:04 AM
73	VSP, HIGH REZ 3D, OCEAN BOTTOM SYSTEMS, PASSIVE/ACTIVE MICROSEISMIC	6/18/2016 9:56 AM
74	adequate funding for active sourse experiments for upper crust experiments	6/17/2016 10:09 PM
75	3D p cable would be great but compressor availability in unols is an issue; opportunity of the long offset 2d is a new nearly untapped element to langseth	6/17/2016 9:36 PM
76	very long offset high resolution state of the art streamer, well tuned large gun array	6/17/2016 7:51 PM
77	OBSIP and active source (2 and 3 D), large number of instruments for dense and/or large deployments.	6/17/2016 6:43 PM
78	In the long term I think it would be great to increase the number of cabled borehole seismic stations in our oceans to facilitate high-quality receiver function gathers and look at temporal evolution of the ambient noise wavefield in the oceans.	6/17/2016 5:01 PM
79	High-resolution (P-cable).	6/17/2016 3:35 PM
80	Quality techs for vessels of opportunity and mobile facilities	6/17/2016 3:33 PM
81	high frequency response to record small earthquakes, high dynamic range to record large earthquakes on scale. Increased ease of deployment, decrease cost. Increased efficiency. Accurate and thorough calibration of all sensors. Better documentation of any changes in digitizers, and testing of changed equipment before deployment.	6/17/2016 1:41 PM
82	Availability of a long (>12 km) streamer	6/17/2016 1:39 PM
83	Access to 2D MCS plus CHIRP on ships that can take long piston cores on the same cruise	6/17/2016 1:16 PM
84	More OBSs, both active and passive-source	6/17/2016 12:46 PM
85	telemetered OBSs that can record the full range of seismic ground motions in subduction zones on scale with millisecond or better timing accuracy.	6/17/2016 10:08 AM
86	P-cable is likely to be more important than large-scale traditional seismics (e.g., Langseth)	6/17/2016 9:44 AM
87	For myself, those than can be used to choose optimal sediment coring sites on high sedimentation rate margins that may be geologically complex	6/16/2016 2:30 PM
88	A seismic vessel, ocean bottom seismometers and long term seismic observatories	6/16/2016 2:49 AM

89	Ability for long-deployment, large-number of OBS packages in a variety of water depths. better coupling to sea floor (burial?). coupled accleerometer and GPS packages in some settings. data access w/o ships (e.g. AUV).	6/15/2016 7:38 PM
90	3D MCS, long offset MCS and OBS refraction data.	6/15/2016 4:28 PM
91	Integrated high-resolution and long offset date. A variety of scales and resolutions is what is most needed to solve the scientific problems I (and my organization) address.	6/15/2016 2:48 PM
92	Large air-gun seismic - it is the only way to get high snr deep into the seafloor.	6/15/2016 12:22 PM
93	A facility like Langseth; more SP OBS to enable 5-km spacing; quieter BB OBS for more compliance work; less expensive OBS facility	6/15/2016 12:07 PM
94	AUV/ROV for paleoseismology at trench depths	6/15/2016 9:05 AM
95	more OBS or even just OBH available	6/15/2016 8:17 AM
96	either a dedicated ship like the Langseth, designed specifically for seismics, or a pool of seismic resources maintained and readily available for use as needed that provides an equivalent data type and quality as can be obtained from the Langseth	6/15/2016 3:24 AM
97	portable systems	6/15/2016 12:13 AM
98	OBS array (broadband, seismicity, active source); long-offset 2D MCS capability	6/14/2016 7:06 PM
99	High resolution, 3-D and deep penetration (all three)	6/14/2016 6:02 PM
100	Undetermined	6/14/2016 5:41 PM
101	OBS	6/14/2016 3:23 PM
102	both MCS and OBS data acquisition	6/14/2016 2:30 PM
103	For my type of research, the most important development will be buried or shielded seismometers that minimize horizontal, long-period noise. Also, larger arrays of OBSs are necessary for some problems.	6/14/2016 1:28 PM
104	Denser arrays	6/14/2016 1:04 PM
105	high-resolution portable system, for rapid deployment and deployment in lakes	6/14/2016 1:00 PM
106	We need both good multichannel high-resolution systems and a low-fold system that can be towed at near-underway speeds (8 knots or greater) to get better regional coverage. There is essentially no digital seismic reflection data available for most of the oceans	6/14/2016 12:37 PM
107	Seafloor geodesy and improved length of time on OBS broadbands is needed	6/14/2016 12:37 PM
108	natural and controlled source OBS (short period and broadband), MCS (both portable high resolution and long-streamer, large-source designed for deep crustal imaging and seismic tomography)	6/14/2016 12:36 PM
109	Array of OBS arrays in Pacific, SZO, long-term OBS deployments, borehole OBS (low-noise horizontals)	6/14/2016 11:54 AM
110	Long streamer seismic reflection data to image the deep structure. The refraction data recorded by the long streamer in combination with OBS data can retrieve detailed velocity information of the subsurface. 3D seismic reflection data are necessary to image the structures accurately in the geologically complex regions.	6/14/2016 11:14 AM
111	3D seismic data is paramount for most scientific questions relying on seismic data alone and limited core or well control	6/14/2016 10:39 AM
112	3D mcs, long offset 2D mcs, and VSPs	6/14/2016 10:31 AM
113	Nothing new. More of the RV Langseth. Maybe a more reasonable, ice capable, US portable MCS system.	6/14/2016 10:27 AM
114	2D and 3D seismic reflection data acquisition and processing	6/14/2016 10:22 AM
115	Advances in OBS and sound sources will likely be critical	6/14/2016 10:00 AM
116	R/V Langseth long streamer MCS (including 3D) and large number of small OBS. For this reason I am currently leading a CFI proposal in Canada to build a 200 small OBS	6/14/2016 9:56 AM
117	my greatest problem is a need for training on the ever-changing software	6/14/2016 9:37 AM
118	More access to high-resolution seismic systems that are available to all users, not simply those that belong to individuals or specific institutions.	6/14/2016 9:35 AM
119	Array of tools, sized fit to mission. AUV's in the future.	6/14/2016 4:08 AM
120	real time OBS/OBH data access	6/14/2016 1:35 AM

121	We will need broadband and short-period OBS that can be deployed in the full range of water depths for as long as possible together with the ability to acquire deep penetration seismic reflection data with large sources and a long (>8 km) streamer. In the future, I hope that our OBS fleet can be expanded to also include a larger number of small, cheap, easy-to-deploy OBS that can be used for dense 2D/3D active/passive sources surveys.	6/14/2016 12:21 AM
122	Large arrays of OBSs; long streamer; low-frequency sources.	6/13/2016 10:20 PM
123	Well maintained seismic equipment inventory and facilities	6/13/2016 8:56 PM
124	The ability to conduct high resolution 3-D seismic tomography will be important to better understanding crustal formation/magmatic processes. Requires the ability to conduct experiments with large numbers of OBSs.	6/13/2016 8:35 PM
125	All we have and more	6/13/2016 6:04 PM
126	High-resolution systems with a range of frequencies to support sedimentary and paleoceanography projects.	6/13/2016 6:01 PM
127	Supporting the use of the R/V M. Langseth seismic facility	6/13/2016 5:56 PM
128	Large, long-offset 2D seismic reflection vessels, smaller GI gun and sparker seismic systems, short-period OBS instruments	6/13/2016 5:51 PM
129	The Langseth is well prepared for future work. A better designed OBS facility or transition to large numbers of "nodes" may be required to achieve next generation imaging from full waveform inversion, 2D and 3D reflection imaging using multiples and primaries, and for better passive seismic data analysis in marine areas.	6/13/2016 5:31 PM
130	3D, long-offset, active-source MCS and OBS; crossing the shoreline	6/13/2016 5:06 PM
131	continual network of passive OBSs	6/13/2016 5:02 PM
132	MCS	6/13/2016 4:48 PM
133	long-offset streamers, high-resolution systems, programatic funding	6/13/2016 4:42 PM
134	Edgetech 512i chirp on all vessels that operate in continental shelf waters.	6/13/2016 4:40 PM
135	n/a	6/13/2016 4:35 PM
136	No comment	6/13/2016 4:25 PM
137	Need for better (more broadband at high and low frequencies, better coupled, better timed, lower self-noise, longer on-bottom duration) seafloor seismic stations. We need more OBS, both short-period and broadband. Need to retain capability for 8+ km 2-D streamer. Need to be able to acquire 3-D seismic, possibly by contract.	6/13/2016 4:20 PM
138	Portable and high-resolution systems that can be used on any general-purpose research vessel	6/13/2016 4:09 PM
139	not sure	6/13/2016 4:06 PM
140	3d high resolution seismic surveys (also repeated surveys allowing us to study landform change over time)	6/13/2016 4:05 PM
141	Borehole high temperature seismic; possibly rotational seismic	6/13/2016 3:59 PM

Q38 What types of training or other efforts would enhance your ability to use existing data, collect new data, or otherwise increase you access to seismic data?

Answered: 110 Skipped: 153

#	Responses	Date
1	See #26.	7/1/2016 9:08 PM
2	Improved access to advanced MCS processing capabilities such as various prestack migrations & SRME	7/1/2016 2:04 PM
3	Ability to obtain permits for airguns.	7/1/2016 1:47 PM
4	as somebody who works on cores, being able to easily access seismic and view data of regions of interest would be very useful for planning and interpretation. I would be interested in seismics for dummy course that would allow access to data viewing, even if what you do with it is limited.	7/1/2016 12:35 AM
5	seismic data interpretation	6/30/2016 8:14 PM
6	Continued partnership on environmental regulation and PR hurdles, continued focus on improvement/further population of data management and access portals, support in getting content-rich metadata in shape (not just skeletal ISO fields), encouraging development of and training on openly-available seismic processing and analysis packages (as we in smaller shops are priced out of industry standard packages).	6/30/2016 7:46 PM
7	I just need to graduate.	6/30/2016 7:33 PM
8	For younger PIs, a science steering committee would be useful to provide advice on experiment design and in the case of active source data some input on the permitting process. Which is formidable and a deterrent, thus we need to help younger PIs.	6/30/2016 11:01 AM
9	Not a big problem now.	6/29/2016 11:00 PM
10	Having alignment, compliance, and tilt corrected OBS data downloadable from the DMC	6/29/2016 6:56 PM
11	None	6/29/2016 4:28 PM
12	Probably not applicable at my career stage.	6/29/2016 3:44 PM
13	student training	6/29/2016 1:23 PM
14	A cultural shift to better acceptance that commercial processing is often the best and most appropriate way to get excellent imaging out of MCS data, meaning funding to secure such processing being considered part of the cost of the data acquisition.	6/29/2016 12:00 PM
15	I would love to be involved in a hands-on class that shows me how to process active source data.	6/29/2016 11:50 AM
16	More opportunities for graduate student participation, and better advertising of these opportunities.	6/29/2016 10:31 AM
17	NSF's efforts to improve multibeam sonar data collection are greatly appreciated. A similar effort might benefit Chirp equipment and data collection.	6/29/2016 10:27 AM
18	Webinars on available instrumentation and more information on process of crafting budgets for proposals.	6/29/2016 8:18 AM
19	Focused training workshops for new investigators on how to use marine seismic data would be great. For example, for OBS data, how do you deal with orientations? How do you deal with water column reverberations? Short, focused workshops would be useful.	6/29/2016 7:44 AM
20	short courses for PIs	6/28/2016 11:46 AM
21	Basic acquisition and processing for working scientists, short courses	6/28/2016 11:27 AM
22	The seismic data from the SE United States is of such poor quality that it is essentially useless; it is not worth funding efforts to get such poor quality data	6/28/2016 7:54 AM
23	It is a pity that, like the modeling community, the geophysics community is relatively insular. the use and interpretation of seismic data should be more regularly used in general geology/Earth history courses. This is an educational problem that has kept geophysics as a 'high priesthood'.	6/28/2016 4:52 AM

24	Digitizing paper archives.	6/28/2016 12:01 AM
25	can't think of anything obvious	6/27/2016 5:45 PM
26	funding to staff seismic cruises with early-career scientists as much-needed watchstanders and incentives for PIs to devote serious effort to training those participants before, during and after the cruise	6/27/2016 5:42 PM
27	Have open documents for testing of hardware and data. e.g. A tool to check for valid segy. Automatic upload of data and cruise notes	6/27/2016 4:54 PM
28	I understand the basics of seismic data collection and interpretation but rely on one of two colleagues to handle the details.	6/27/2016 4:46 PM
29	A more uniform data storage/processing/sharing system with excellent meta data would be nice.	6/27/2016 4:30 PM
30	More thorough examination and training for best practices in OBS data usage. Community that is trained in identifying and troubleshooting problems with cooperation from experts at national offices (e.g. OBSIP) or the instrument centers. At the broadband, for example, workflows that guide scientists what types of pre-processing need to be done in conjunction with different seismic analysis techniques to get the most out of the data. An introduction for early career scientists on what the proposal process looks like for marine seismic experiments.	6/27/2016 2:45 PM
31	all I need is a clear presentation of the data with a transparent assessment about the uncertainties	6/27/2016 2:44 PM
32	Offer more training opportunities for us to learn about the newest technology.	6/27/2016 1:00 PM
33	Workshops directly before or after meetings (e.g., AGU, IRIS, OBSIP, etc.). This would make it much easier to attend such meetings.	6/27/2016 12:29 PM
34	enhancing inter-operability of active/passive seismic data would be very helpful.	6/27/2016 10:37 AM
35	Not applicable to me - but I think that an annual program of workshops on 2D MCS processing, 3D MCS interpretation, and Langseth cruise planning would be helpful for early-career folks.	6/27/2016 10:00 AM
36	I could imagine different training or a multiday training (e.g., day 1 planning/tools, day 2 collection/challenges, day 3 processing/problems)	6/27/2016 9:52 AM
37	Workshops and shortcourses	6/27/2016 9:46 AM
38	workshops would be good	6/27/2016 9:34 AM
39	Training courses at scientific meetings or workshops	6/24/2016 4:38 PM
40	working with shipboard acquisition facilities.	6/23/2016 11:47 AM
41	Short courses that specifically address marine seismic data would be very useful to help more students use this data.	6/21/2016 7:32 PM
42	More training on "how tos" in all fields, from how to process data to how to submit requests for vessels.	6/20/2016 1:01 PM
43	low cost training for different processing software packages to help in selecting the most cost-effective one; online collection of descriptions and user reviews of available software packages	6/20/2016 11:32 AM
44	Funding - active-source seismics are difficult to collect as they are quite cost-limiting for many grants.	6/20/2016 11:06 AM
45	collect new data on the eastern US	6/20/2016 7:38 AM
46	Increased training in reflection seismic data processing techniques	6/19/2016 12:06 PM
47	The biggest barrier is funding opportunities to collect the high resolution seismic data needed to resolve gas hydrate occurences in marine sediments-particularly in regions where there is no apparent bottom simulating reflection.	6/19/2016 12:25 AM
48	community links and collaborations; information on how to access data previously aquired by R/V Langseth	6/19/2016 12:00 AM
49	Need better access to computing resources and understanding within department that algorithm develoment is an important part of seismic analysis	6/18/2016 11:02 PM
50	None	6/18/2016 2:57 PM
51	Making the downloading and loading of (onto software packages) VERY easy; this is a giant hurdle still! It needs to be so easy that an undergrad can do it in an afternoon	6/18/2016 1:03 PM
52	software training	6/18/2016 12:30 PM
53	Short course on seismic data collection prior to a cruise. Better access to post-cruise processing.	6/18/2016 11:26 AM
54	A real NSF funded center for data processing with enough staff to accelerate the processing process and make data available very quickly to the rest of the community.	6/18/2016 10:04 AM

55	FULLY TRAINED IN SEISMIC PROC & INTERP	6/18/2016 9:56 AM
56	cyber integration of datasets	6/17/2016 10:09 PM
57	3D nav concerns hamper p cable so some effort there would be good; otherwise availability of funding for MCS and OBS is biggest challenge	6/17/2016 9:36 PM
58	maybe a yearly workshop/newsletter with info on where databases are etc	6/17/2016 9:20 PM
59	salary for techs or processing	6/17/2016 7:51 PM
60	not sure	6/17/2016 6:43 PM
61	I think MCS data would be incorporated more broadly in our community if we increased the number of MCS training workshops for early-career scientists.	6/17/2016 5:01 PM
62	Workshops such as ENAM seem to be a very good idea!	6/17/2016 3:35 PM
63	More processing workshops like those that have been done in the past	6/17/2016 2:11 PM
64	The OBSIP workshops have been helpful. The active source workshops/training have been well advertised and seem like a great opportunity.	6/17/2016 1:41 PM
65	none, collaborators work with the seismic data	6/17/2016 1:16 PM
66	International data sharing agreements. For instance between NSF and JAMSTEC, would be very powerful.	6/17/2016 10:08 AM
67	Training is not the limitation here. The limitations are funding dollars, compliance environment, etc.	6/17/2016 9:44 AM
68	data user training	6/16/2016 2:30 PM
69	I think PI training cruises are a good idea	6/16/2016 2:49 AM
70	continue limited # of community experiments like Cascadia, to empower new users.	6/15/2016 7:38 PM
71	I would encourage graduate students to participate in training and build their expertise with a variety of software packages (including home-grown ones).	6/15/2016 2:48 PM
72	As I mentioned previously, navigated SEGY should be the gold standard. This should either be done as part of the acquisition, or with open source software post cruise	6/15/2016 12:22 PM
73	I have plenty of access; but training for interested scientists and students would enhance the stability of existing facilities - annual or bi-annual MCS workshops and/or annual 2-week dedicated training cruises would be great	6/15/2016 12:07 PM
74	International collaborations sharing facilities and data	6/15/2016 9:05 AM
75	How to training for obtaining more research $$$$	6/15/2016 8:17 AM
76	maybe a seismics for non-experts course, which would help me wth basic interpretation and to better collaborate with experts	6/15/2016 3:24 AM
77	post processing	6/15/2016 12:13 AM
78	continued access to ship that conduct 2D long-offset MCS	6/14/2016 7:06 PM
79	Undetermined	6/14/2016 5:41 PM
80	Workshop	6/14/2016 3:23 PM
81	training with processing	6/14/2016 1:00 PM
82	Most processing for pelagic sediment work is very simple. It would be very useful to have some basic seismic processing programs maintained and accessible.	6/14/2016 12:37 PM
83	I am a senior member of the marine seismic community. However, I am still learning. Data archiving has made great strides. A coordinated approach to sharing of and training on various software platforms (especially low cost tools) would be helpful. A training course for students on the various tools, similar to the course IRIS offers for students each summer, would help provide a base level of knowledge for students and foster a sense of community.	6/14/2016 12:36 PM
84	Training to use existing data processing and inversion software	6/14/2016 11:39 AM
85	A mini-workshop to go over all the data archive would be helpful. Maybe this could be part of the suggested workshop in Question 30.	6/14/2016 11:14 AM
86	A seismic processing center would be very beneficial for the geoscientists who want to incorporate seismic data into their research but are not trained in doing so. A ship that has the necessary equipment on board or a facility that has the equipment, which can be placed on the ship.	6/14/2016 10:39 AM

87	Training in the use of seismic industry data processing and analysis software. Seismic data could be used much more effectively with existing software. What is lacking is the time and expertise to use them.	6/14/2016 10:31 AM
88	Cannot think of anything.	6/14/2016 10:27 AM
89	More general training on basic data processing and interpretation	6/14/2016 10:00 AM
90	N/A	6/14/2016 9:56 AM
91	short courses on processing	6/14/2016 9:37 AM
92	NSF should work to reach out to other agencies with seismic datasets and work to have all public data archived in the existing seismic portals. Make sure that data from USGS, BOEM, and others is made available in a timely manner.	6/14/2016 9:35 AM
93	Much more extensive training on the 3D data that Langseth collects.	6/14/2016 8:26 AM
94	Professional data processing and visualization packages are cost-prohibitive to grants (annual licenses are a particular issue when systems are not needed every year). Some centralized access to these tools would help draw in a larger community of users in the US. My experience is that non-US institutions are willing to pay to maintain these computing tools, while US institutions are not. This seems like a fixable issue. If we can lower the hurdles for entry into the field, we will have more users and a more healthy use of the technologies.	6/14/2016 4:08 AM
95	I think that more training opportunities are needed for graduate students and young scientists to increase usage of existing seismic reflection/refraction datasets and of existing marine seismic facilities. Many young scientists that I have met are very keen to use these data/facilities, but don't have the training opportunities to know how to access existing data or acquire their own datasets.	6/14/2016 12:21 AM
96	Not thinking about myself but about the next generation scientists, some kind of summer school (e.g., every 2 years or so) focused each time on a particular type of seismic experiment and data (e.g., 3D MCS; OBS active source, etc.), taking place on a research center or university and/or on a seismic ship (e.g., Langseth) with hands-one training on data acquisition could be a great help towards training a skilled new generations of marine seismologists.	6/13/2016 10:20 PM
97	Workshop on seismic equipment	6/13/2016 8:56 PM
98	Would love to see data repositories also host useful forms of derived data (things that might be of interest to us non-seismologists... e.g., geolocated seismic images, interpretations (like depth to melt lens reflector along a ridge axis), etc.)	6/13/2016 8:35 PM
99	Improving access to seismic data for non-specialists would be very beneficial. Workshops and participation in cruises for early-career scientists would be particularly helpful	6/13/2016 6:01 PM
100	The lack of additional funding is the primary cause that limits my ability to use existing data or collect new data.	6/13/2016 5:56 PM
101	Facilities that have seismic equipment (e.g. LDEO, UTIG) might hold workshops to train on how to propose to use, rent, reserve, and use equipment.	6/13/2016 5:51 PM
102	Train congress to support natural science programs at NSF.	6/13/2016 5:31 PM
103	better education resources and community support for basic skills (i.e. wider dissemination of the specialization)	6/13/2016 5:06 PM
104	tutorial on where different types of public data is	6/13/2016 5:02 PM
105	N/A	6/13/2016 4:48 PM
106	n/a	6/13/2016 4:35 PM
107	No comment	6/13/2016 4:25 PM
108	Better validated software. Software tutorials/training in new data analysis techniques. (Mostly common to land seismology)	6/13/2016 4:20 PM
109	More support for seagoing technicians to acquire and process data at sea	6/13/2016 4:09 PM
110	None	6/13/2016 3:59 PM

Q39 Are improvements to current capabilities needed now, and what capabilities need to be developed?

Answered: 91 Skipped: 172

#	Responses	Date
1	A (quasi)-portable source system for OBS work would be great for but maybe not practical	7/1/2016 2:04 PM
2	More reliable and less expensive 3D seismic.	7/1/2016 1:47 PM
3	Need to avoid aging-out of equipment in the field - PLAN for replacement and modernization of components. Need MORE people in place to provide technical expertise onboard, support the full range of scientific capabilites we have available now.	6/30/2016 7:46 PM
4	Something needs to be invented and this may be called as "near offset multiple energy attenuator."	6/30/2016 7:33 PM
5	See above regarding number of short and long-period OBSs and help with permitting process. 3D active source data recorded by OBSs and land seismometer arrays has great potential. To fulfill that potential the number of OBSs needs to be large and the ability to plan, permit, and execute active source experiments needs to be improved.	6/30/2016 11:01 AM
6	see answer to #32.	6/29/2016 11:00 PM
7	Yes, we should be able to get alignment, compliance, and tilt corrected OBS data from the DMC.	6/29/2016 6:56 PM
8	See 32, the processing end of the current NSF program is very inadequate.	6/29/2016 5:35 PM
9	No Opinion	6/29/2016 4:28 PM
10	Not familiar enough to answer.	6/29/2016 3:44 PM
11	Marine mammal permitting needs to be made simpler. The use of the words "to take" should be abolished from marine mammal permits since MOST all countries interpret that to mean "to KILL" which is how it is defined.	6/29/2016 1:38 PM
12	See 33 above; also we really need the capability to routinely collect multi-streamer, long-offset data.	6/29/2016 12:00 PM
13	need advanced broadband OBSs with better noise characteristics due to burial or shielding, more and better absolute pressure guages, smaller and more easily deployed short period OBSs	6/29/2016 11:58 AM
14	Current commercial 3D seismic data is remarkable, but it is also very expensive to focus primarily on it is impractical and would limit what is accomplished overall. But, in some instances it would add significantly to the likelihood a scientific aim will be achieve, therefore, in certain instances it is warranted (cost-benefit analysis is necessary).	6/29/2016 10:27 AM
15	OBSs with longer deployment times.	6/29/2016 7:44 AM
16	Burial / long-term (>2 year) deployment of OBS broadband instruments.	6/29/2016 12:38 AM
17	lower noise instruments (better designed OBS packages), absolute pressure gauges and well-calibrated DPGs	6/28/2016 6:08 PM
18	my last experience with 3.5 kHz shows we need improvements- but this was on the Knorr so I don't know about newer vessels	6/28/2016 11:46 AM
19	See above comments	6/28/2016 7:54 AM
20	The new long-streamer capability of Langseth is a great improvement. Even longer streamers in future.	6/28/2016 6:50 AM
21	My needs as a paleoceanographer are really very simple. I need (mostly) to image the upper 1 sec TWT of the sediment column. But it would help to be better able to deal with imaging through irregular seafloor, more quickly (or autonomously) collect seafloor bathymetry, and image complex subsurface stratigrpahy (like slumps).	6/28/2016 4:52 AM
22	don't know	6/27/2016 5:45 PM
23	to address issue I mentioned previously, the US fleet needs more ships with compressors and deck space to host a modest-sized seismic acquisition program	6/27/2016 5:42 PM
24	As in 28. Ship with the capabilities to collect seismic data and core	6/27/2016 4:46 PM
25	Probably, but I am not sure.	6/27/2016 4:30 PM
26	Can you dredge?	6/27/2016 4:15 PM

27	I think one of the easier tasks is spending some effort on educating the OBS community (especially new users) on quality control/ troubleshooting/ and best practices. This can save everyone a lot of time in their analysis long term and help the community make the most of datasets that already exist, and is probably lower cost than immediate facilities development.	6/27/2016 2:45 PM
28	no	6/27/2016 2:44 PM
29	System needs to be maintained and upgraded on the Langseth	6/27/2016 1:14 PM
30	I have not been able to really use any of the current capabilities because of lack of funding (proposals denied) so I have not been able to participate in a seismic cruise lately.	6/27/2016 1:00 PM
31	Continue to improve data return and data quality (specifically horizontals) on broadband OBS. Invest in techology that his cheaper and easier to deploy -- we have not scratched the surface on the observations. Integration with other seafloor observables would be a huge benefit in many environments. On the active-source side, resources to expand the range of obvservations are critical. The Earth system is extremely complex, and we need more comprehensive observations to make progress.	6/27/2016 10:37 AM
32	Increased use of commercially available ships, gear and data (which may need to be purchased)	6/27/2016 10:07 AM
33	better open source software	6/27/2016 9:56 AM
34	Probably... how about access to high-res systems for community use on NSF (free) and other projects (for rent)	6/27/2016 9:52 AM
35	Currently, it is virtually impossible to get new data over marine areas of interest. Drill sites must therefore be locate on existing seismic lines or at existing holes.	6/24/2016 4:38 PM
36	We might learn a lot using a still longer streamer or do a few two ship streamer experiments with very long offset experiments.	6/22/2016 11:27 PM
37	seafloor geodesy to go along with seafloor seismics	6/21/2016 7:32 PM
38	future emphasis on high-resolution	6/20/2016 12:43 PM
39	aging/broken equipment should be replaced (streamer, ADCP)	6/20/2016 11:32 AM
40	Cabled arrays (in my opinion) as mentioned above.	6/20/2016 11:06 AM
41	Seismic methods evolve rapidly placing increasing emphasis on new methodologies. Larger numbers of sensors and sensor capability (e.g. 3-D) in streamers and new approaches to seafloor seismology with advanced sensors and better clocks.	6/19/2016 3:01 PM
42	unsure.	6/19/2016 12:00 AM
43	Yes; need to keep computing hardware up to date.	6/18/2016 11:02 PM
44	There are always ways to improve seismic data acquisition as the academic standards are not up to industry standards. Right now we have 3 OBS facilities funded, while most of the equipment they produce can be obtained more cheaply from off-the-shelf commercial vendors. At least two of these should be closed, and the money put back into supporting core research. Expansion of the current seismic capabilities are in conflict with broader more balanced funding of research across disciplines in marine G&G	6/18/2016 4:51 PM
45	See answer #32	6/18/2016 2:57 PM
46	The current facility is underfunded but works well enough. Lack of funding for seismic cruises is the biggest problem.	6/18/2016 11:26 AM
47	MORE LONG TERM OCEAN FLOOR MONITORING	6/18/2016 9:56 AM
48	infrastructure for 4D tectonic models	6/17/2016 10:09 PM
49	Funding more than capability is needed except for wider availability of compressors for high res; none of the new vessels in UNOLS have compressors!	6/17/2016 9:36 PM
50	no - we just need to be able to get funded to use what we have	6/17/2016 7:51 PM
51	obs pool could use comparative testing of different current implemenations to come up with a more streamlined instrument design for successful broadband seismic and pressure recordings. Identifying problems and improving designs takes too long if (essentially) prototypes are deployed for a year without prior complete at sea testing.	6/17/2016 6:43 PM
52	Improvements in horizontal-component data quality on OBS (a larger pool of TRM instruments would be a great start)- would serve to increase the quality of future OBS shear wave splitting, S-wave tomography and receiver function studies.	6/17/2016 5:01 PM
53	No	6/17/2016 3:35 PM

54	Routine ability to collect seismics along with sediment core samples	6/17/2016 1:16 PM
55	OBSIP should stop wastinghuge amounts of money on deploying instruments with low data return rates, poor timing, and inability to record moderate and large earthquakes.	6/17/2016 10:08 AM
56	I am not sure that capabilities are the challenge here.	6/17/2016 9:44 AM
57	don't know	6/16/2016 2:30 PM
58	I think the OBS facilities could be run more efficiently. I think the ML needs to be kept busy to keep the day cost down	6/16/2016 2:49 AM
59	see above.	6/15/2016 7:38 PM
60	There needs to be a simpler way to do environmental compliance for seismic cruises, whether for small or large sources.	6/15/2016 2:48 PM
61	A means of monitoring the far field source signature would aid deconvolution significantly	6/15/2016 12:22 PM
62	somewhat more aggressive maintenance of Langseth would be good; adding a transportable compressor (electric compressor plus generator) to the SIO hi-res system; P-cable would be transformative; sparker sources for SIO and Langseth	6/15/2016 12:07 PM
63	Outsource standard capabilities; develop unique ones	6/15/2016 9:05 AM
64	Need much smaller, lighter, faster-deployed/recovered OBS, and we need 500 of them.	6/15/2016 8:17 AM
65	post processing - either a service or through tutorials	6/15/2016 12:13 AM
66	18-24 mo OBS recording capability; improved, feasible OBS shielding	6/14/2016 7:06 PM
67	Yes, but need ask the next generation of users.	6/14/2016 6:02 PM
68	See #32	6/14/2016 1:28 PM
69	high-resolution MCS data acquisition (mini-streamer) that can be deployed from small boats	6/14/2016 1:00 PM
70	We have been successful doing underway seismic using a 16 channel segment of the Scripps geo-eel streamer. This capability needs to be maintained.	6/14/2016 12:37 PM
71	While there are always technical advances to adopt, the main hurdle is getting funding. For example - we not have a 15 km-long streamer. Let's use it!	6/14/2016 12:36 PM
72	More instruments, cheap/quick deployment, horizontal orientations (somehow...)	6/14/2016 11:54 AM
73	Marine EM facilities that complement seismics should be developed over the next decade	6/14/2016 11:39 AM
74	Improvements on all levels are needed. From more ships with seismic capabilities (just compare France has 3 ships, Germany has 3 ships, US (UNOL) has 1 ship and it is not always at sea).	6/14/2016 10:39 AM
75	Better and more readily available processing facilities.	6/14/2016 10:31 AM
76	Cannot think of anything. Keep RV Langseth moving and maintain flexibility with small portable systems.	6/14/2016 10:27 AM
77	Not sure	6/14/2016 10:00 AM
78	Current capabilities for 2D are adequate (15 km long streamer) for carrying out cutting edge reserach. For 3D MCS, I think that now there are 4 streamers with only 4 km length, which is short. 8 km is needed for 3D surveys.	6/14/2016 9:56 AM
79	3-d seismic is not readily available to the academic community	6/14/2016 9:37 AM
80	Robotic or remotely operated tools may be important into the future, and if they can make the use of ship time more efficient they may be cost effective.	6/14/2016 4:08 AM
81	More communication and coordination among international purveyors of seismic capability	6/13/2016 6:04 PM
82	I think that the capabilities are good, but funding must be adequate to ensure that data collected are of high qualityand and equipment must be maintained so as to be functional when required.	6/13/2016 6:01 PM
83	The access to high-performance computing facilities is needed to better process existing and future seismic data	6/13/2016 5:56 PM
84	The current seismic data facilities in the US are excellent, but there is not enough funding to support them.	6/13/2016 5:53 PM
85	If OBSIP is to retain funding for active-source OBS work they should acquire modern, small-size, cost effective instruments (e.g., Japanese OBSs) and/or develop "node" capability.	6/13/2016 5:31 PM
86	see #32	6/13/2016 4:40 PM
87	n/a	6/13/2016 4:35 PM

88	No comment	6/13/2016 4:25 PM
89	OBS suffer from poor coupling to ground motion with the result that horizontal component data are typically poor at long period. We need to develop a capability to bury seismometers in the seafloor in a cost efficient manner.	6/13/2016 4:20 PM
90	More support for seagoing and shoreside technical support to ensure reliable portable seismic systems, and availability of high-quality processed data for end users.	6/13/2016 4:09 PM
91	See answer to q) 28.	6/13/2016 3:59 PM

Q40 Any additional comments?

Answered: 63 Skipped: 200

#	Responses	Date
1	Even though I worked in the field, now 30 years ago, it seems a bit overwhelming to get back up to speed with it.	7/1/2016 9:08 PM
2	NA	7/1/2016 2:04 PM
3	Without the ability to obtain permits to use airguns in many important areas, including the West Coast, we are unable to address several critical scientific questions. If efforts are being made to improve capabilities, we also need to improve out ability to use them.	7/1/2016 1:47 PM
4	It is unwise to move toward reliance upon international partners and industry contract options to accomplish fundamental US science at sea. If we want to understand the structures and processes that control relevant (domestic and global) hazards, resources, and the resilliance of the global system, we need access to at least 1 blue-water MCS-capable vessel controlled by and funded by the US science system (not USNavy, not industry, not foreign governments - all of whom bring considerable compromises to our way of exploring).	6/30/2016 7:46 PM
5	Watch out for this young man :)	6/30/2016 7:33 PM
6	Exciting time to study quakes and subduction zones!	6/29/2016 11:00 PM
7	No	6/29/2016 4:28 PM
8	I think there is a large community outside the oceanographic institutions that would be interested in oceanic research.	6/29/2016 11:50 AM
9	3D seismic reflection surveys have provided fantastic new data and perspectives on mid-ocean ridges. There need to be many more of these types of studies.	6/29/2016 10:41 AM
10	Thanks.	6/29/2016 7:51 AM
11	NSF's policy on data release for marine seismic data has effectively destroyed the community's critical mass of early and mid-career scientists. The level of monetary investment that goes into each seismic survey should demand that all data be released, no strings attached. The present policy is never enforced, and it blocks younger scientists from entering the community b/c there's usually some dataset that a senior PI has been sitting on in a particular area and refuses to release to the community.	6/28/2016 11:13 PM
12	My needs are simple enough that I do not require a state-of-the-art seismic boat. The Lamont high res cost center was fine for what I need to do. Having said this, more sophisticated tools than High-res SCS would be useful to push marine science beyond the bare minimum of what is required to obtain an IODP drilling leg. I have personally found seismic data useful for interpretation of sedimentary processes and Earth history, but that was possible because we had enough data (not just the required crossing lines) to understand the regional context of drill cores. We are fiscally constrained, but even Congress should be open to the notion that we need to understand our own continental margins--their resources, hazards, and history. Industry will also collect such data, but they have a different, narrower need and will generally not place the data in the public domain where it can be used to advance public understanding of our country and its resources.	6/28/2016 4:52 AM
13	no	6/27/2016 5:45 PM
14	next time, text boxes that expand as I write would provide for more articulate and thorough answers	6/27/2016 5:42 PM
15	Ground truthing seismic data acquisition is critical. Piston and gravity for chirp and ODP drilling for the 2- and 3-D data.	6/27/2016 4:46 PM
16	None.	6/27/2016 4:30 PM
17	just keep the resources we have healthy	6/27/2016 2:44 PM
18	We had access to industry processing; would be good to have good processing potential available	6/27/2016 1:14 PM
19	Industry collects top data that we usually don't have access to; if there were some way to build better relationships with industry regarding the seismic data, I think everybody would benefit	6/27/2016 1:00 PM
20	seismology and geophysics are no longer split into OCE and EAR camps. We span geoscience, and they should be though of as GEO activities.	6/27/2016 10:37 AM

21	Given the expense of the Langseth, and the relatively low frequency of 3D data collection (compared to 2D and long-offset 2D), I do not think that maintaining a 3D seismic vessel is the best course forward. I think a 2D MCS (long streamer, plus P-cable) vessel with the capability to handle a large number of OBS's would be a superior option to the Langseth. Such a vessel would address 90% of the NSF-funded work at a much lower cost. I fear that we are stuck with the Langseth now, but if I could go back to the drawing board, that's what I'd suggest.	6/27/2016 10:00 AM
22	Industry-collected data in US EEZ should be made available	6/27/2016 9:56 AM
23	At present, the seismic usage seems more like a club than a research tool. Efforts to open access and make data collection and/or usage more easy. I would be more included to try to use more seismic if the learning curve wasn't so steep... or if data collection/processing could be outsourced or guidance could be provided.	6/27/2016 9:52 AM
24	as a non-seismic effort, integration workshops would also be good	6/27/2016 9:34 AM
25	Please keep the Langseth or equivalent.	6/22/2016 11:27 PM
26	all I know is that seismic information needs to be available and collectable in the future to support ocean drilling of sediment cores for paleoclimate research	6/22/2016 9:22 AM
27	Seismic methods in general, and seismic reflection in particular, are our only means of knowing the structure of the earth beneath the sea, and the processes that affect it - and us. The range of settings where it is essential is enormous; from the EPR to the Gaskell Ridge, and from Galicia to Cascadia. It is not my area of specialization, but I can see that if we are ever to understand the processes that control seismicity in Cascadia, and the attendant risks and hazards, we will need a much better understanding of the architecture of the Cascadia subduction zone. Deep seismic reflection profiles are of critical importance. The societal benefits are huge. We now have the tool in the form of Langseth, we cannot afford to lose it. For this application alone, I would view the loss of this criticial capability by the NSF as downright irresponsible	6/20/2016 6:29 PM
28	Need seismic data in support of IODP proposal	6/20/2016 6:18 PM
29	I am retiring end of this year 2016	6/20/2016 11:39 AM
30	Collection of marine active-source seismic data is important to continue, as our knowledge of offshore fault structures is meager in comparison to onshore. These faults pose significant hazards to coastal regions, and this hazard is not often reflected in PSHA or engineering studies because the data or information about the structures is just not there. Imaging these fault zones is one of the only ways to adequately quantify the hazard, and include it in further analysis.	6/20/2016 11:06 AM
31	This questionnaire does nothing to address the pivotal question of the proportion of mgg funding that should go to seismic data collection. Why do we have three separate obs facilities? Why are huge obs programs allowed to take such a large fraction of the budget?	6/19/2016 4:42 AM
32	The continued funding and investment in collecting new seismic data is essential. Marine seeps and gas hydrates are worldwide phenomena and undoubtly are major players in our planet's biogeochemical system.	6/19/2016 12:25 AM
33	There is a lot of lip service to STEM, but little substance behind it.	6/18/2016 11:02 PM
34	Consider using industry vessels -- they are always going to be more efficient and will produce better quality data. If a program is worth doing, it is worth doing right -- why try to solve a problem with poor quality equipment that requires 2-5 times more time than using an industry vessel?????	6/18/2016 2:57 PM
35	If Langseth goes away, it will be quite detrimental to my field.	6/18/2016 11:26 AM
36	Difficult to answer some of the questions. I very much appreciate the need for seismic cruises, and have been a participant on several such cruises in the past. However, I am unlikely to ever be a PI or drive needs.	6/18/2016 10:48 AM
37	i am not a specialsit at all though have collaborated on interpretation of seismics, for science as well as for planning drilling. lack of high quality seismic records is the main problem encountered in getting highly interesting proposals to be drill-ready. We need facilities and th funding to use them in order to do scientifically well founded scientific drilling, for a broad set of topics.	6/18/2016 10:14 AM
38	NSF is starving marine seismics out of business which is incredibly short-sighted. In the long run this approach will end up costing them more to do much less.	6/17/2016 7:51 PM
39	No	6/17/2016 3:35 PM
40	OBSIP needs an external saftey review before a major accident happens	6/17/2016 10:08 AM

41	The problem here seems to be the entire approach. NSF is always at least a generation, if not more, behind current technology in seismic acquisition. It is too expensive and technically challenging to keep up with the private sector, and it hardly seems worthwhile. I remain unconvinced that the R/V Langseth is a facility that should be maintained for the short- or long-term. The tax on OCE is just too high for what we are getting from this facility. This is not a popular opinion among MSLOC members or some subset of NSF PIs, but we have to understand that we will forever be in an environment of limited funds and increasing resistance to seismic acquisition by NGOs..Decisions have already been made to keep certain other big-ticket programs going at NSF OCE...we can't keep everything. Yeseth-style seismic site survey, but I don't ses, I know that IODP used to be very dependent on NSF-funded Langesth cruises, but I don't see that being the case so much anymore. And IODP is limping along as well. The USGS, which acquires far more seismic data in a year than NSF does, is increasingly self-sufficient for its substantial needs in data acquisition and processing for its science needs, and I don't see another Law of the Sea scale interagency program (which has used significant Langseth time in the past few years) coming down the pipe soon (barring a major earthquake on the West Coast). Do we as a community really preserve the Langseth platform for the one-off large-scale seismic cruises that happen once every year or so? With the negative synergies that have been in place more than a decade now, the number of students training to be academic active source marine seismologists is slipping as well. How long is NSF OCE going to throw good money after bad to keep the Langseth alive when there are so many other demands on core funding?	6/17/2016 9:44 AM
42	The academic community is struggling and dwindling in numbers due to lack of scientific leadership and poor commitment by PIs to release data. To broaden the user base, NSF needs to adopt a model more similar to the passive source data archives and enforce public data release for all marine seismic data.	6/16/2016 2:33 PM
43	thanks for asking for feedback	6/16/2016 2:30 PM
44	I think there is a tension between OBS facilities and the the Langseth since there is arguably not enough money to do them well. I am not sure that the MLSOC is the best body to take over planning for both of these assets - why not expand the OBSIP oversight committee to do this?	6/16/2016 2:49 AM
45	This is important science, huge hazard implications, and the only tool for seeing below the sea floor with any resolution. It is also a great vehicle for cross-shoreline efforts that engage EAR and hopefully higher up the NSF foodchain.	6/15/2016 7:38 PM
46	Keep supporting the Langseth; it's a unique and important tool for marine geophysicists. Although I'm not a seismologist, I deeply appreciate the importance of the scientific results we get from the Langseth.	6/15/2016 4:28 PM
47	Marine geoscience depends critically on an active source capability, both high-res (dual GI gun) and deeply penetrating (Langseth). Both play a critical role in understanding the geology and geophysics of two-thirds of the planet. I am concerned that because the technology of seismic acquisition and processing has matured, that these techniques and capabilities may be undervalued, or considered less "cutting-edge" by science funders.	6/15/2016 12:22 PM
48	Coordinate marine research internationally; help developing nations to participate in basic research; an integrated international research community can be a positive cultural force	6/15/2016 9:05 AM
49	NEED MORE $$$$$	6/15/2016 8:17 AM
50	looking forward to seeing info on current Langseth streamer data quality	6/14/2016 7:06 PM
51	Reliability and expense are two key factors limiting research with OBSs. Expense probably even more limiting for Langseth work.	6/14/2016 1:28 PM
52	Both seismic reflection and sediment coring activities are severely underfunded. There is a tendency to collect 'postage stamp' studies when most of the oceans lack any digital data whatsoever.	6/14/2016 12:37 PM
53	Users of interpreted seismic data probably outnumber data collectors so consider that as well.	6/14/2016 10:00 AM
54	US NSF Langseth facility has been the brightest start for almost a decade now and the nevy of the whole world. Nobody can adress the type of problems that the US scientist can.	6/14/2016 9:56 AM
55	We need funding for analysis, not just collection.	6/14/2016 9:51 AM
56	I own my own equipment bought through a MRI, but the software updates and then the new computers are a constant expense as opposed to the time when we used paper.	6/14/2016 9:37 AM
57	Because ocean sciences has diffused out of the major oceanographic institutions into smaller university departments, many of these departments don't have teaching capabilities related to marine seismics. Portable short-courses in seismic science, either online or with traveling instructors, could perhaps fill this gap; such educational programs would in turn grow the community of competent users, leading to more efficient use of facilities. Development of educational programs will require some investment.	6/14/2016 4:08 AM
58	NSF cannot afford to let big ship seismic capability disappear from its arsenal of tools. Among other issues, the future of IODP depends upon it.	6/13/2016 6:04 PM

59	International collaboration may help support us seismic data acquisition infrastructure	6/13/2016 5:53 PM
60	Marine seismology can be a strength for US marine research. However, it has been under-funded. A better effort needs to be made to secure dedicated funding for this. If not, the US will fall behind countries such as Germany, France, and the UK.	6/13/2016 5:31 PM
61	I believe that a dedicated UNOLS seismic vessel is a luxury that we cannot afford. The Langseth is too expensive, is underutilized, and no amount of additional cutting-edge gear for 3-D and deepr seismics will make it pertinenet to my work. I need access to high-resolution seismic reflection systems that can operate in shallow (10 -100 m) water depths., and collect data in sandy systems. Most siesmic gear on UNOLS vessels fail in this, and the Langseth does not help given its size and cost. It serves a small and exclusive clientele, and from my perspective, could be replaced by a 40-m multi-purpose vessel with the right workhorse equipment.	6/13/2016 4:40 PM
62	n/a	6/13/2016 4:35 PM
63	none	6/13/2016 4:25 PM