



## **FY2022 Nuclear Physics Workforce Survey**

### Office of Nuclear Physics

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This report conveys the results of the October 2022 survey of scientific workforce in the Department of Energy, Nuclear Physics (NP) program. The same procedure as in previous years was used. People were counted in the categories of permanent Ph.D. staff, temporary Ph.D. staff, Ph.D. staff not supported by DOE, DOE-supported graduate students, and graduate students not supported by DOE. Counts of Ph.D.'s awarded were also collected. In all cases, people were asked to self-define whether they were primarily doing experimental or theoretical work. Persons who receive support from the National Science Foundation are not included in this survey.

On October 1, 2022, the survey shows that 2,755 supported and non-supported scientists and students were associated with the program. Of this number DOE supported 923 permanent Ph.D. staff, 415 temporary Ph.D. staff, and 715 graduate students. Not supported directly by DOE but associated with the program were an additional 204 Ph.D. staff and 498 graduate students.

Summaries of the numerical data for the years 2002 through 2022 are provided as well as separate summary data for the national laboratories and universities, and statistics on the Ph.D.'s awarded. Out of the 715 graduate students supported 106 graduate students were awarded Ph.D.'s in 2022.

Brenda May

Results of Nuclear Physics Workforce Surveys

DOE Supported Workforce Data

Workforce Counts on October 1st

**SUMMARY OF LABORATORIES & UNIVERSITIES**

**Both Experimental and Theory**

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
<b>Permanent Staff</b>	689	682	689	690	676	683	702	727	746	742	699	724	733	779	871	873	872	813	833	844	839	807	804	884	771	852	923
<b>Temporary Staff</b>	346	360	380	394	363	362	364	410	403	388	344	341	365	364	423	434	411	381	360	344	365	376	379	404	413	391	415
<b>Graduate Students</b>	423	422	415	404	408	408	442	457	473	509	486	472	493	516	538	550	546	517	518	522	530	539	555	614	574	630	715
<b>TOTAL</b>	1458	1464	1484	1488	1447	1453	1508	1594	1622	1639	1529	1537	1591	1659	1832	1857	1829	1711	1711	1710	1734	1722	1738	1902	1758	1873	2053
<b>Ph.D.s Awarded</b>	96	97	100	95	87	67	100	79	66	80	92	69	89	85	90	86	104	117	72	86	102	105	88	108	113	91	106

**Experimental**

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
<b>Permanent Staff</b>	536	538	547	551	542	536	554	577	586	582	555	557	574	607	690	677	678	632	662	670	672	637	635	700	589	641	686
<b>Temporary Staff</b>	263	280	299	298	286	287	277	319	308	295	266	256	266	254	311	314	315	292	269	254	280	274	277	305	305	297	307
<b>Graduate Students</b>	321	323	323	319	320	319	338	354	361	394	375	348	364	382	400	403	390	364	385	389	404	398	423	462	429	453	527
<b>TOTAL</b>	1120	1141	1169	1168	1148	1142	1169	1250	1255	1271	1196	1161	1204	1243	1401	1394	1383	1288	1316	1313	1356	1309	1335	1467	1323	1391	1520
<b>Ph.D.s Awarded</b>	71	66	67	70	56	48	67	63	45	51	68	48	62	54	63	57	75	75	49	61	67	67	63	86	72	57	71

**Theory**

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
<b>Permanent Staff</b>	153	144	142	139	134	147	148	150	160	160	144	167	159	172	181	196	194	181	171	174	167	170	169	184	182	211	237
<b>Temporary Staff</b>	83	80	81	96	77	75	87	91	95	93	78	85	99	110	112	120	96	89	91	90	85	102	102	99	108	94	108
<b>Graduate Students</b>	102	99	92	85	88	89	104	103	112	115	111	124	129	134	138	147	156	153	133	133	126	141	132	152	145	177	188
<b>TOTAL</b>	338	323	315	320	299	311	339	344	367	368	333	376	387	416	431	463	446	423	395	397	378	413	435	435	435	482	533
<b>Ph.D.s Awarded</b>	25	31	33	25	31	19	33	16	21	29	24	21	27	31	27	29	29	42	23	25	35	38	25	22	41	34	35



Results of Nuclear Physics Workforce Surveys

DOE Supported Workforce Data

Workforce Counts on October 1st

**SUMMARY OF UNIVERSITIES**

**Both Experimental and Theory**

	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>
<b>Permanent Staff</b>	368	364	369	363	359	367	364	358	362	363	339	342	346	362	372	395	401	375	389	402	419	394	382	426	375	407	445
<b>Temporary Staff</b>	212	217	233	231	223	225	227	238	228	217	207	207	215	217	244	252	231	241	232	222	222	240	239	240	255	231	262
<b>Graduate Students</b>	361	359	336	342	355	353	385	380	405	421	389	394	409	431	441	449	462	437	440	455	471	465	478	528	500	556	637
<b>TOTAL</b>	941	940	938	936	937	945	976	976	995	1001	935	943	970	1010	1057	1096	1094	1053	1061	1079	1112	1099	1099	1194	1130	1194	1344
<b>Ph.D.s Awarded</b>	86	88	85	95	87	67	100	79	66	80	92	69	89	85	90	86	104	117	72	86	102	105	88	108	113	91	106

**Experimental**

	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>
<b>Permanent Staff</b>	258	258	263	261	256	255	253	254	255	258	247	239	244	252	264	275	279	256	279	293	309	289	276	311	261	288	313
<b>Temporary Staff</b>	153	160	175	169	165	170	166	171	169	165	163	159	158	152	176	183	173	182	173	167	173	177	177	184	189	175	198
<b>Graduate Students</b>	264	265	253	264	271	271	284	284	301	314	291	283	294	310	314	320	314	298	315	331	354	342	356	389	373	396	463
<b>TOTAL</b>	675	683	691	694	692	696	703	709	725	737	701	681	696	714	754	778	766	736	767	791	836	808	809	884	823	859	974
<b>Ph.D.s Awarded</b>	62	60	55	70	56	48	67	63	45	51	68	48	62	54	63	57	75	75	49	61	67	67	67	86	72	57	71

**Theory**

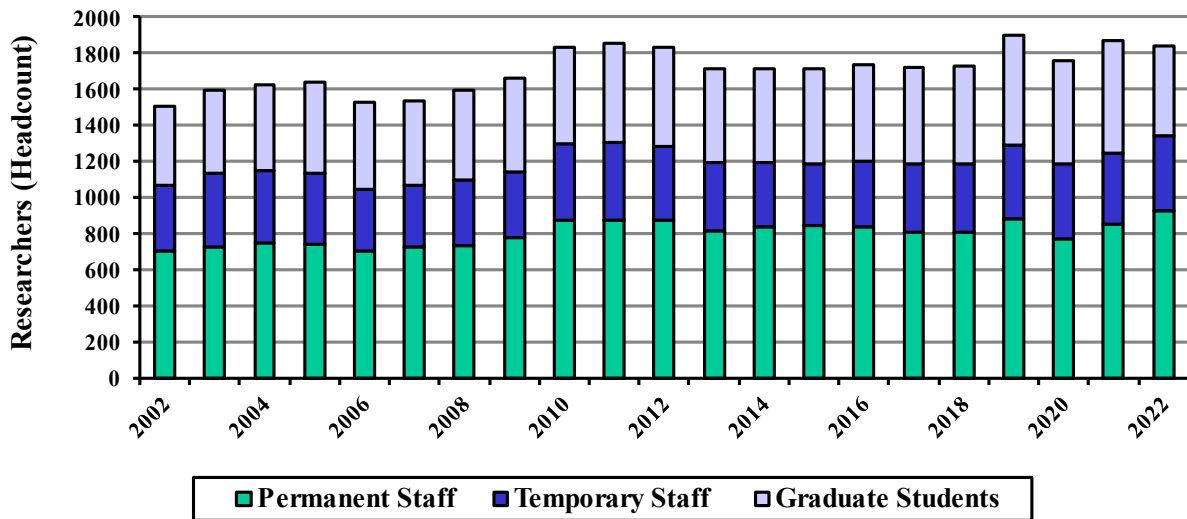
	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>
<b>Permanent Staff</b>	110	106	106	102	103	112	111	104	107	105	92	103	102	110	108	120	122	119	110	109	110	105	106	115	114	119	132
<b>Temporary Staff</b>	59	57	58	62	58	55	61	67	59	52	44	48	57	65	68	69	58	59	59	55	49	63	63	56	66	56	64
<b>Graduate Students</b>	97	94	83	78	84	82	101	96	104	107	98	111	115	121	127	129	148	139	125	124	117	123	122	139	127	160	174
<b>TOTAL</b>	266	257	247	242	245	249	273	267	270	264	234	262	274	296	303	318	328	317	294	288	276	291	290	310	307	335	370
<b>Ph.D.s Awarded</b>	24	28	30	25	31	19	33	16	21	29	24	21	27	31	27	29	29	42	23	25	35	38	25	22	41	34	35



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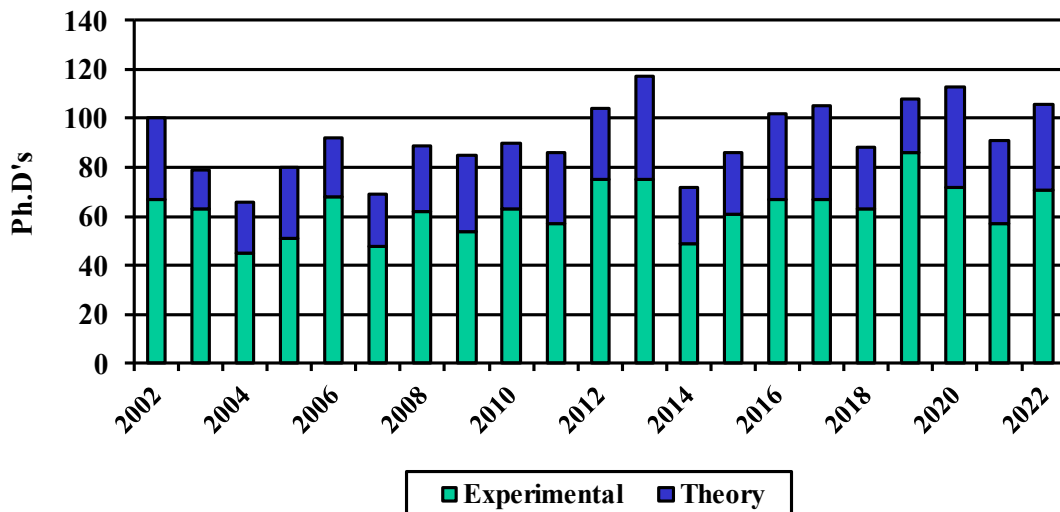
### DOE Support Workforce

Laboratories and Universities



## FY2022 Nuclear Physics Workforce Survey

### Ph.D.s Awarded





## FY2022 Nuclear Physics Workforce Survey

### Statistics on Ph.D.s Awarded

\*Data Collected Since 2004

- **Average Number of Years to Obtain a PhD**
  - 5.7 Years (Average Based on 1679 data points)
- **% U.S. Citizen 53.7%** (% Based on 1679 data points)
- **Males/Females: 81.2% / 18.8%** (% Based on 1679 data points)
- **Race:** (% Based on 1616 data points)
  - **White: 65.8 % Asian: 27.6 % Black or African American: 2.1%**
  - **Hispanic or Latino : 4.1%**
  - **Native Hawaiian and Other Pacific Islander: 0.2%**
  - **American Indian and Alaska Native: 0.2%**
  - **Some Other Race: 0.0%**

## FY2022 Nuclear Physics Workforce Survey

### Statistics on Ph.D.s Awarded

\*Data Collected Since 2004

- **Initial Career Location: USA / Non- USA / Undecided**
  - 80.0% / 15.0% / 5.1% (% Based on 1681 data points)
- **Initial Career Path:** (% Based on 1681 data points)
  - **Applied Research/ National: 2.5%**
  - **Business or Non-Nuclear: 12.7%**
  - **Medical School/ Hospital : 1.6%**
  - **NP Basic Research / National Laboratory: 15.2%**
  - **NP Basic Research/ University: 33.0%**
  - **NP Teacher / Professor : 4.6%**
  - **Other Teacher / Professor: 5.9%**
  - **Other Basic Research / National Laboratory: 1.9%**
  - **Other Basic Research / University: 6.8%**
  - **Research / Nuclear Industry: 4.7%**
  - **Non-Profit: 0.1%**
  - **Other: 2.7%**
  - **Undecided: 8.3%**