

ΣΠΣ The Physics and Astronomy Honor Society: Induction Ceremony and Reception

2024-04-12

Department of Physics, Yale University
Chapter Chartered on October 1, 2020

SPS & ΣΠΣ – Linked, but Distinct



The **Society of Physics Students (SPS)** is open to all who have an interest in physics and astronomy. SPS Chapters are chartered at two-year and four-year colleges and universities. With over 800 chapters, SPS is the professional society of undergrad students and their mentors.



Sigma Pi Sigma (ΣΠΣ) is the physics and astronomy honor society and is linked to SPS through our shared constitution. ΣΠΣ chapters are restricted to colleges and universities that offer a strong physics or astronomy program. With over 100,000 lifelong members, ΣΠΣ fosters opportunities to connect and contribute to each other and the broader physics and astronomy communities.

Together they form an organization devoted inclusion and excellence.



The Mission

Sigma Pi Sigma ($\Sigma\Pi\Sigma$) exists to:

- Honor scholarship
- Encourage interest in physics and astronomy
- Promote service
- Provide fellowship



A brief History of ΣΠΣ

ΣΠΣ was established at Davidson College, NC on December 11, 1921

“I became acquainted with some students at Davidson College, NC... a very high-class liberal arts college... [They] came up with ΣΠΣ... I said, ‘Oh... that’s what we ought to have here at Penn State.’”

Marsh White, ‘founder’ of Sigma Pi Sigma

The first signatures in the first red book

DAVIDSON COLLEGE

DAVIDSON, N.C.

FOUNDERS	NAME	CLASS OR POSITION	REC'D.
1	DOUGLASS, JAMES McDONELL	PROF. PHYSICS	DEC. 11, 1921
2	WOOD, WM. WOODHULL	" MATH. PHYSICS	"
3	POORE, ROBT. H.	"	"
3 (B)	DEW, MARCUS CECIL	"	"
4	CURRIE, LAWRENCE MACLAURIN	INSTR. PHYSICS	"
5	MC CAIN, WALKUP KENNARD	"	"
6	BRICE, ROBT. MARION	"	"
7	DOUGLASS, JOHN LEIGHTON	PROF. MATH	"
8	PRICE, JOHN KRAUTHAMER	"	"
9	(SIGNED MR. DUNNINGS SIGNED)	"	"
56	MCGIRT, ROGER MARTIN	"	MAR. 11, 1922
10 (A)	SMITH, HUGH HOLLINGSWORTH	"	"
10 (B)	LAFAR, DAVID ROBERTSON	"	"
10 (C)	SLOAN, SAMUEL REED	"	"
10 (D)	CREE, HUGH DUNNIN	"	"
11	BOUSHER, EDWARD EARL	"	NOV. 27, 1922
12	BROWN, CHAS. VICTOR, JR.	"	"
13	CURRIE, JOHN B.	"	"

The beginning...

CHRONOLOGICAL LISTING OF SIGMA PI SIGMA CHAPTERS BY THEIR INSTALLATION DATES

1. Davidson College, Davidson, NC -- *December 11, 1921*
2. Duke University, Durham, NC -- *May 14, 1925*
3. Pennsylvania State University, University Park, PA -- *May 17, 1926*
4. Centenary College of Louisiana,
Shreveport, LA (1989-) -- *April 20, 1927*
5. Furman University, Greenville, SC -- *May 16, 1927*
6. William & Mary, College of, Williamsburg, VA -- *June 2, 1927*
7. Tennessee-Chattanooga, University of, Chattanooga, TN -- *May 17, 1929*
8. West Virginia University, Morgantown, WV -- *June 3, 1929*
9. St. Lawrence University, Canton, NY (1929-73) -- *June 7, 1929*
10. Ohio Wesleyan University, Delaware, OH -- *June 5, 1929*
11. Kentucky, University of, Lexington, KY -- *May 15, 1930*
12. Oklahoma, University of, Norman, OK -- *May 17, 1930*
13. Park College, Parkville, MO (1970-79) -- *May 19, 1930*
14. William Jewell College, Liberty, MO -- *May 20, 1930*
15. Morningside College, Sioux City, IA -- *May 21, 1930*
16. Colorado, University of, Boulder, CO -- *May 22, 1930*
17. Washington, University of, Seattle, WA (1930-34) -- *May 26, 1930*
18. Lake Forest College, Lake Forest, IL -- *May 31, 1930*
19. Wooster, College of Wooster, OH (1930-43) -- *June 2, 1930*
20. Wheaton College, Wheaton, IL -- *June 3, 1931*
21. Richmond, University of, Richmond, VA -- *March 16, 1932*
22. Purdue University, West Lafayette, IN -- *April 12, 1932*
23. Miami University, Oxford, OH -- *June 4, 1932*
24. Illinois-Chicago, University of, Chicago, IL -- *June 6, 1932*
25. Philippines, University of the, Quezon City, PI (1932-62) -- *July 6, 1932*
26. Syracuse University, Syracuse, NY (1933-60) -- *May 29, 1933*
49. South Dakota State University, Brookings, SD -- *June 17, 1947*
50. South Dakota, The University of,
Vermillion, SD (1947-59) -- *June 17, 1947*
51. Bucknell University, Lewisburg, PA (1948-74) -- *February 14, 1948*
52. Maryland-College Park, University of,
College Park, MD -- *March 17, 1948*
53. Manchester College, North Manchester, IN -- *April 28, 1948*
54. Colby College, Waterville, ME -- *May 5, 1948*
55. Oregon, University of, Eugene, OR (1948-52) -- *May 10, 1948*
56. Occidental College, Los Angeles, CA -- *May 12, 1948*
57. Arkansas, University of, Fayetteville, AR -- *May 13, 1948*
58. Oklahoma State University, Stillwater, OK -- *May 14, 1948*
59. Emory University, Atlanta, GA -- *May 17, 1948*
60. Utah, University of, Salt Lake City, UT -- *June 8, 1948*
61. Howard University, Washington, DC -- *March 7, 1949*
62. Clemson University, Clemson, SC -- *March 25, 1949*
63. Georgia Institute of Technology, Atlanta, GA -- *March 28, 1949*
64. Gettysburg College, Gettysburg, PA (1949-61) -- *May 2, 1949*
65. Illinois Institute of Technology, Chicago, IL (1949-66) -- *May 7, 1949*
66. Southern Illinois University, Carbondale, IL -- *May 9, 1949*
67. Evansville, University of, Evansville, IN -- *May 10, 1949*
68. Alabama, University of, University, AL -- *May 18, 1949*
69. Maine, University of, Orono, ME -- *May 25, 1949*
70. Trinity College, Hartford, CT (1949-77) -- *May 26, 1949*
71. Delaware, University of, Newark, DE -- *June 1, 1949*
72. Virginia Tech, Blacksburg, VA -- *June 4, 1949*
73. Wyoming, University of, Laramie, WY (1949-74) -- *June 10, 1949*

Marsh White at the Wheaton College ΣΠΣ Installation Ceremony (1931)



Supporting Physics and Astronomy

“From such a modest beginning, ... $\Sigma\Pi\Sigma$ has grown. ... The most serious subject for consideration at the first business meeting after organization was a discussion by Price, Brice and Dew [founding members] as to how much voltage could be applied to “Wooly” Grey, [member of the first induction class] without doing him any permanent injury. A moderate voltage was decided upon, and applied at a later date.” – Radiations, December 1931

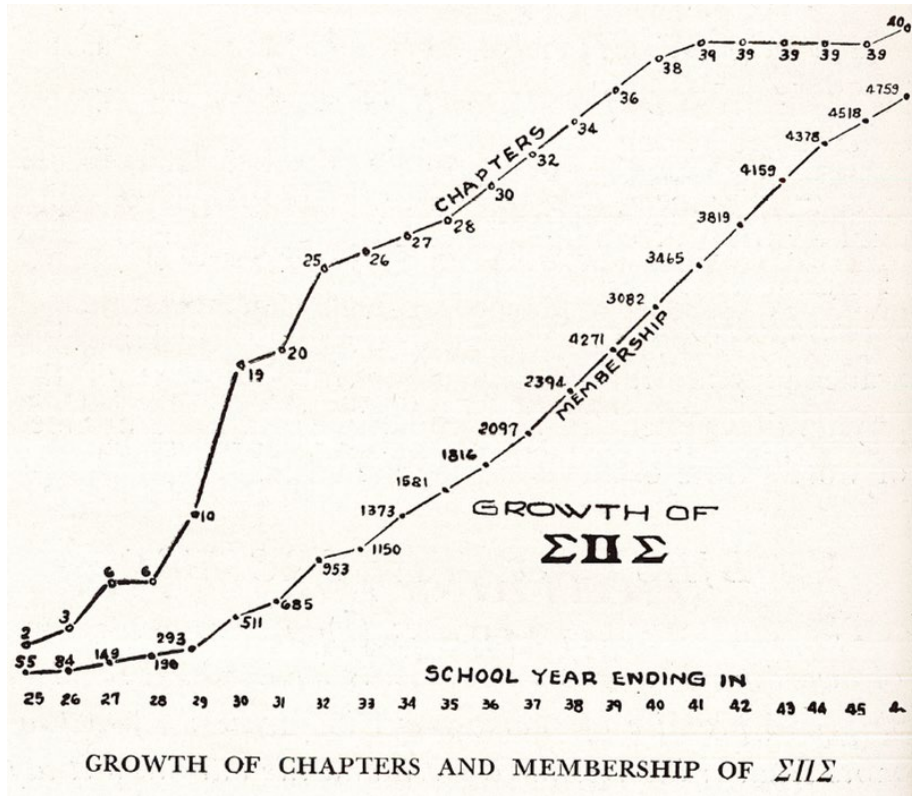
The next entry states that a several moderate voltage were applied and that Wolly was mostly unharmed.

Since its inception, $\Sigma\Pi\Sigma$ & SPS have supported department goals and been reflections of our community.

First Covers of the Radiations Publication



Marsh W. White



Students from chapters would gather every few years to form 'congresses' that would guide how the organization supported students and members. Congresses helped to promote the new organization.

1st Congress 1928: Davidson College, NC

4th Congress 1939: Ohio State University, OH

7th Congress 1962: University of Kansas, KS

11th Congress 2000: College Park, MD

13th 2008: Fermilab, IL

16th 2022: Washington, DC



“...You’re supposed to remember them [secret handshakes and such], but I’ve forgotten. When I’d go to install a chapter I’d teach it all to them. You used to shake hands and ... say certain names or phrases.” – Oral Interview with M. White



An organization evolving

In the 1950's, AIP (American Institute of Physics) and SPS began hatching a plan to support students and education issues. On April 22, 1968, Articles of Agreement between the AIP Student Sections and ΣΠΣ were signed, creating a joined Society of Physics Students (SPS) and ΣΠΣ. Both societies remain supported by AIP to this day.

The organization continues to evolve - in 2021, SPS and ΣΠΣ changed its constitution to explicitly define that both societies must support both physics and astronomy students.



Members of the Society's Executive Council, including the new officers elected during the convention, are (l. to r. in the rear) Vincent E. Parker, chancellor, Marsh W. White, executive secretary; (l. to r. in the front) Walter French, vice president, L. Worth Seagon-dollar, president, and Stanley S. Ballard, immediate past president.

SPS & ΣΠΣ today

Our societies continue to grow:

- + 840 SPS chapters
- + 580 ΣΠΣ chapters
- + 100,000 lifetime ΣΠΣ members
- +100 Honorary ΣΠΣ Members
- +40 international chapters
- New ΣΠΣ Service Awards
- New ΣΠΣ Leadership Scholarship
- Yearly Regional Events
- Physics and Astronomy Congresses



Yale Students Winning Awards

Barkotel Zemenu wins Sigma Pi Sigma Leadership Scholarship



January 5, 2024

Yale Physics (Intensive) major Barkotel Zemenu – a senior undergraduate researcher in Yale Wright Lab’s Moore Group and co-president of Yale Society of Physics Students (SPS) – was named the Fall 2023 recipient of the [Sigma Pi Sigma Leadership](#)

[Scholarship](#).

[Sigma Pi Sigma](#) is the oldest and only American honor society for physics and astronomy. The purpose of the Sigma Pi Sigma scholarship program is to support Sigma Pi Sigma members and to encourage the pursuit of high scholarship in physics and astronomy. The scholarship is awarded to Sigma Pi Sigma majors that are within 10 years of their induction for the purpose of supporting advanced education.



ΣΠΣ Physics and Astronomy Congresses

[Click on the picture for a video about the 2025 Congress](#)



Recent themes:

2025 – Supporting Phase Shifts

2022 – 100 years of Momentum

2019 – Making Waves &
Breaking Boundaries

2016 – Unifying Fields:
Science Driving Innovation

ΣΠΣ and its members are the official hosts of the Physics and Astronomy Congresses. This meeting aims to provide students:

- National voice around issues facing their departments
- Strong connection to the national organization of SPS & ΣΠΣ
- Networking and Community Building initiatives
- Career and graduate school guidance



Yale at PhysCon in 2022

Yale at PhysCon 2022



October 13, 2022

Six undergraduates from the Physics Department including Society of Physics Students (SPS)-Wyatt Kremer, Dawson Thomas, and Barkotel Zemenu-and Women in Physics members-Annie Giman, Sally Jiang, and Julia Levy-

traveled to the [2022 Physics Congress \(PhysCon\)](#) in Washington, D.C. The Physics Congress brings together physics students, alumni, and faculty members for three days of frontier physics, interactive professional development workshops, and networking. Hosted by Sigma Pi Sigma, the physics honor society, anyone interested in physics is invited to attend.



2025 Physics and Astronomy Congress - Supporting Phase Shifts

October 30 – November 1, 2025

Downtown Denver, Colorado, USA

- Two poster sessions
- $\Sigma\Pi\Sigma$ member day and reception
- UC Denver sponsored High Energy Hot Chocolate and Game Night
- SPS Chapter/Club Showcase
- 21 workshops
- Tours of regional laboratories
- Visits to local PhD Programs
- Lunch with Scientists



Honorary Chair:

Dame Jocelyn Bell Burnell

Confirmed Plenaries:

- Eric Cornell, NIST/JILA
- Renee Horton (Workshop)
- Sarah Hurst
- Julieann Pollard-Larkin, MD
Anderson Cancer Center
- Donnell Walton, Corning Inc.



Lifelong Service Opportunities

Sigma Pi Sigma members serve the physics community in many ways, for example:

- Supporting local and national SPS programs
- Representing physics to the public
- Providing alumni networks
- Working for sound national science policies
- Offering science outreach opportunities



Symbolism



The Key

Voltmeter with lamp & dynamo



The Insignia

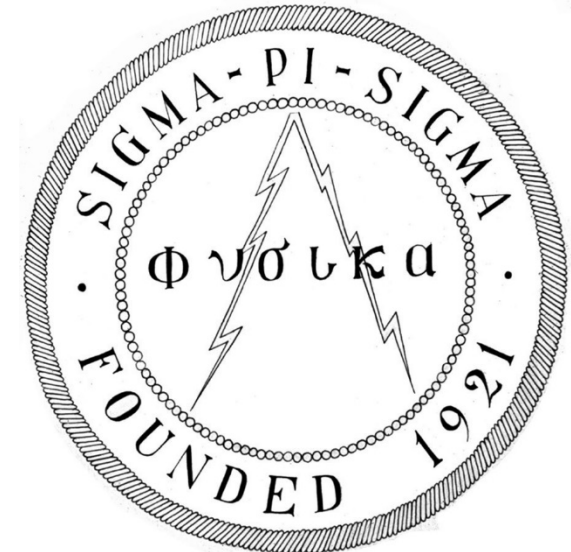
The Motto

Σκεψις Προστατης Συνεσεως

Pronunciation: **S**kép-sis **P**raw-stah-tays **S**oon-ess-eh-occe

Translation: Investigation the Forerunner of Knowledge

The Seal



Induction: Signing of the Book

Remember, as you pen your name,

- ΣΠΣ was founded by students and faculty.
- You are joining a distinguished group, connected by common ties of physics and astronomy.
- You are to uphold honor, encouragement, and lifetime service and fellowship.
- Signing begins a lifelong connection to the society and your chapter.



Our Yale Inductees!

Class of 2024

*Matt Bruning - Physics
*Sofie Fusco - Physics
*Sophia Getz - Physics
Finn Gibson - Mathematics & Physics
Ruobin Han - Physics (Intensive)
Eitan Minsky-Fenick - Physics (Intensive)
*Pranav Parakh - Mathematics & Physics
Jack Roche - Physics
Jake Schaffer - Physics
Catherine Zhang - Physics & Geosciences



Class of 2025

*Nathan Apfel - Mathematics & Physics
*Diego Aspinwal - Physics
*Timothy Atkeson - Physics (Intensive)
*Peter Bowman-Davis - Physics (Intensive)
*Aaron Chizhik - Physics (Intensive)
*William Cho - Physics (Intensive)
Grant Fitez - Physics (Intensive)
*Adrian Hall - Physics (Intensive)
Lane Healy - Physics (Intensive)
*Henry Kaplan - Physics (Intensive)
*Reece Kirkpatrick - Physics
Body Nies - Physics
*Andrew Nupp - Physics (Intensive)
*Khelan Parikh - Physics (Intensive)
Roshan Pourghasemi - Physics (Intensive)
*Quazi Rumman Rahman - Physics (Intensive)
*Alex Roseman - Physics (Intensive)
Misheal Saah - Mathematics & Physics
Din-Ammar Tolj - Physics (Intensive)

Starred () entries above have accepted membership.*



Induction into ΣΠΣ

New Inductees will repeat this in unison:

I, Your Name, agree to uphold the pillars of ΣΠΣ:

- Encourage those seeking knowledge and competence in physics and astronomy;
- Develop and maintain an attitude of service;
- Support colleagues, promote fellowship, and honor excellence in physics and astronomy;
- And, encourage scholarship in physics and astronomy, at all levels.



Charge to New Members

Continue your commitment as physicists and astronomers to honorable scholarship, irrespective of your ultimate career trajectory. Traditional scientists and 'hidden physicists and astronomers' alike are critical to the future of society.



Read more about [Hidden Physicists](#) or [add your story](#) at Sigma Pi Sigma



ΣΠΣ: Experiences, Opportunities, and Connections

ΣΠΣ encourages lifetime service

- Attend future department induction ceremonies
- Connect to current students:

Alumni Engagement Program

- Support high school students: Adopt-a-Physicist
- Connect to ΣΠΣ members through LinkedIn
- Attend the 2025 ΣΠΣ Physics and Astronomy

Congress

- Give talks to other chapters
- Write for Radiations
- Host student visits




www.sigmapisigma.org

ΣΠΣ


THE PHYSICS AND ASTRONOMY HONOR SOCIETY

100 Years of Physics Excellence




Fellowship

- Access alumni and professionals through local chapters
- Honorary distinction for high academic achievement
- One-year SPS membership
- Eligibility for grants and awards
- Lifetime subscription to *Radiations*, the official publication of ΣΠΣ
- Connect to alma mater and local ΣΠΣ chapters



Professionals

- Access to exclusive networking opportunities
- Enter federal service at a higher pay level
- Professional development opportunities
- National network of Physicists and Astronomers
- Engage with the community: Physics and Astronomy Profiles






Service

- Engage with students at ΣΠΣ-hosted Physics and Astronomy Congresses
- Science advocacy and outreach opportunities
- Host internship opportunities
- Community service projects
- Adopt-a-Physicist program for high school classrooms
- Share your stories with our "Hidden Physicist and Astronomer" resource.

An invitation to ΣΠΣ provides a lifetime of benefits & service opportunities.

Lifetime membership: \$54

Sigma Pi Sigma • The Physics and Astronomy Honor Society • www.sigmapisigma.org
1 Physics Ellipse • College Park, MD 20740 • 301-209-3007 • sigmapisigma@aip.org



Yale Induction (via zoom) 2020 & 2021

Yale's Inaugural Chapter of Sigma Pi Sigma the National Physics Honor Society



Sigma Pi Sigma Induction Fall 2020

October 22, 2020

On Friday, October 16, 2020, Yale joined the ranks of Sigma Pi Sigma, the National Physics Honor Society, as Chapter #584. In a virtual ceremony we inducted 32 members of the classes of 2021 and 2022. This event was spearheaded by David Saunders, '23 and Shantanu Jha, '21, who are both physics

students and officers of the [Yale Society of Physics Students](#), with the encouragement and help of Karsten Heeger (Department Chair) and Nikhil Padmanabhan (DUS).

Celebrating the Yale Physics Undergraduate Class of 2021 and Sigma Pi Sigma inductees



May 21, 2021

On May 19, Yale Physics undergraduates and faculty gathered via Zoom to celebrate both the 32 members of the Yale Physics graduating class of 2021 and the juniors and seniors who have been inducted into Sigma Pi Sigma, the official honor society of the physics

profession. Through election to Sigma Pi Sigma, distinctive achievement and high scholarship in physics is recognized and celebrated. We continue to honor the seniors and inductees by listing their names below:



Congratulations!

Many thanks to the family, friends, & professors, teachers, and mentors who helped our students arrive here.



SPS & ΣΠΣ Leadership:

Kiril Streletzky, SPS President 2021-2025
Blane Baker, ΣΠΣ President 2022-2024
Earl Blodgett, Interim SPS & ΣΠΣ Director
Muge Karagoz, Assistant Director of ΣΠΣ
Kayla Stephens, Assistant Director of SPS

Want to connect?

Sacha Purnell, Member Services

sigmapisigma@aip.org

301-209-3007

www.sigmapisigma.org

