

SASKIA PÖLDMAA

Undergraduate student at MIT

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EDUCATION

Bachelor of Science in Physics (current)	2025 - 2029
Massachusetts Institute of Technology	
• First-year undergraduate intending to minor in mathematics and/or computer science	
Complementary Education	2023 - 2025
Tallinn University of Technology	
• Audited courses on Electrodynamics and Thermodynamics	
Secondary Education	2022 - 2025
Tallinn Secondary School of Sciences	
• Completed secondary education under the Estonian national curriculum	

OLYMPIADS

International Physics Olympiad (IPhO)	
• Silver (2025) & Bronze (2023, 2022) medalist	
European Physics Olympiad (EuPhO)	
• Gold (2025, 2023), Silver (2024) & Bronze (2021) medalist	
• Best female contestant (2025, 2024, 2023)	
International Astronomy and Astrophysics Olympiad (IOAA)	
• Bronze (2023, 2022) medalist	

RESEARCH EXPERIENCE

Independent Research on Cosmic Ray Muons	2023 - 2025
• Built and calibrated a portable muon detector to measure atmospheric muon flux and angular distribution up to 24 km altitude.	
• Designed and implemented data acquisition and analysis using Python, ROOT, custom electronics, and Monte Carlo simulations in CORSIKA.	
• Conducted a follow-up experiment at CERN as part of the Beamlime for Schools competition.	
• Awarded 3rd Grand Award at the 2025 International Science and Engineering Fair (ISEF).	
• Results and project documentation: arxiv:2502.03485 . ISEF project board	

PROFESSIONAL EXPERIENCE

GScan - Research Intern	Sep 2024 - August 2025
• Investigating feasibility of a tomographic muon scanner for imaging dense materials.	
• Designed PCBs and analyzed hodoscope data for track reconstruction.	
CAFA Tech - Engineering Intern	Sep 2024 - July 2025
• Developed a fixed-wing UAV for defense applications	

TEACHING AND OUTREACH

• Designed and taught a course on advanced physics topics for high school students at Tallinn University of Technology (TalTech), focusing on problem-solving techniques.
• Led a weekly high school physics club for four years, teaching students topics beyond the curriculum through problem solving and experiments.