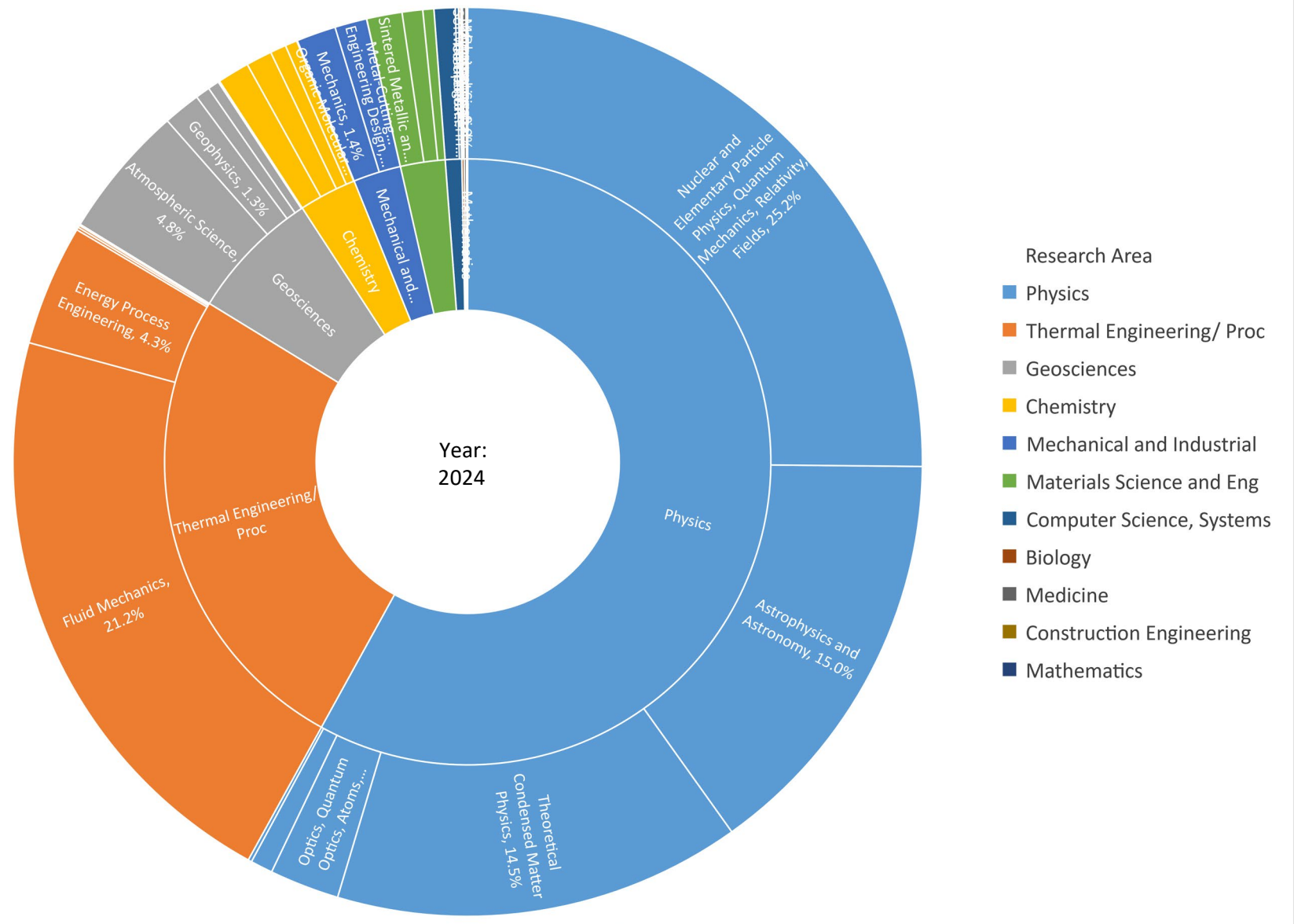


SuperMUC-NG Usage Report



Usage by Month

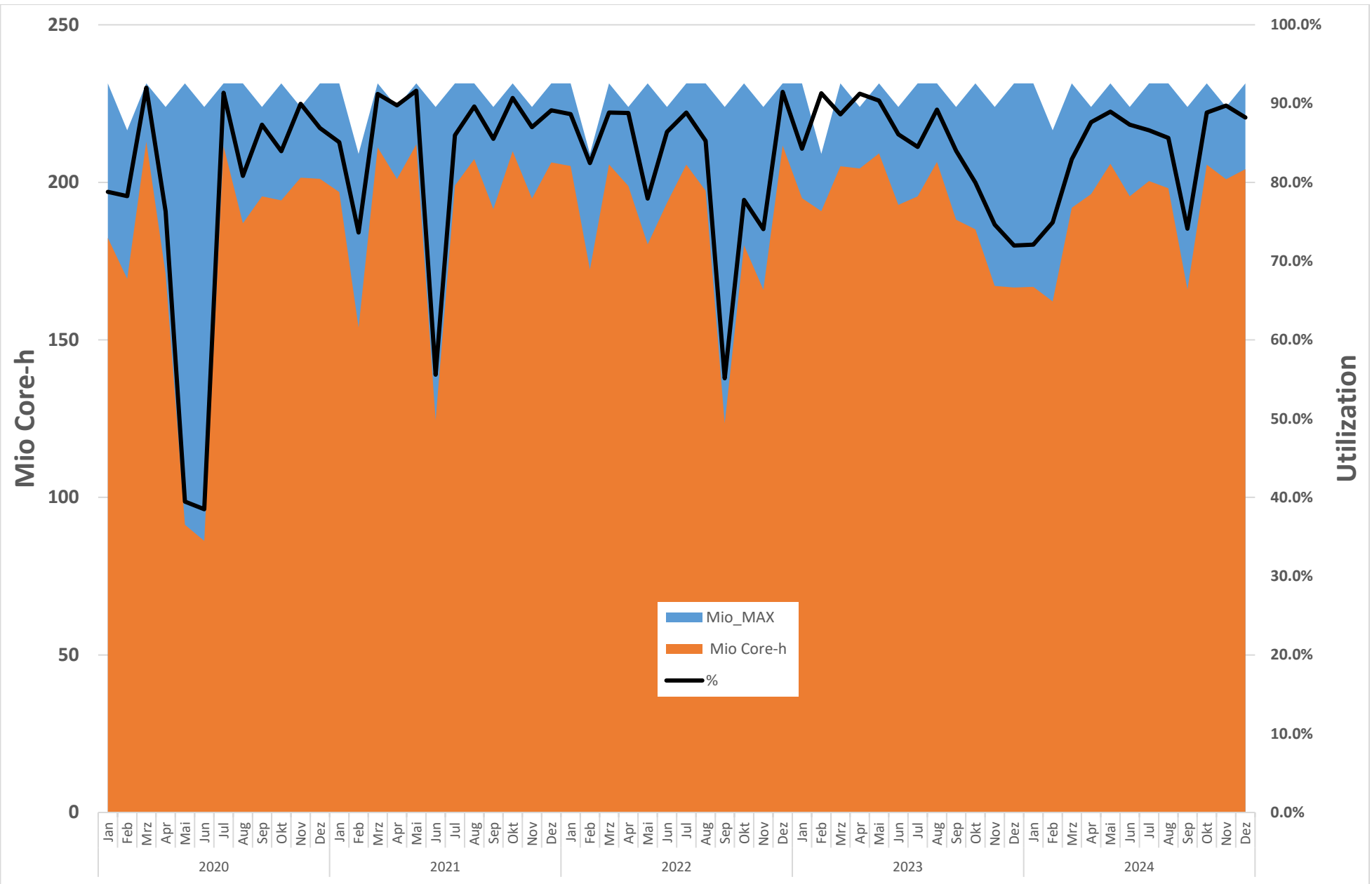
SuperMUC-NG Phase1

Date	Mio_MAX	Mio Core-h	%	Jobs
2024	2732.2	2294.0	83.9%	916935
Jan	231.4	166.8	72.1%	36612
Feb	216.5	162.2	74.9%	34569
Mrz	231.4	191.9	82.9%	21783
Apr	223.9	196.3	87.6%	22219
Mai	231.4	205.9	89.0%	23056
Jun	223.9	195.6	87.3%	35125
Jul	231.4	200.4	86.6%	29727
Aug	231.4	198.1	85.6%	391001
Sep	223.9	166.0	74.1%	111342
Okt	231.4	205.6	88.9%	87895
Nov	223.9	201.0	89.7%	60327
Dez	231.4	204.2	88.2%	63279
2023	2724.7	2306.3	84.7%	486284
Jan	231.4	195.0	84.3%	29788
Feb	209.0	190.9	91.3%	35388
Mrz	231.4	205.1	88.6%	36127
Apr	223.9	204.4	91.3%	29195
Mai	231.4	209.1	90.4%	28627
Jun	223.9	192.8	86.1%	28807
Jul	231.4	195.5	84.5%	37750
Aug	231.4	206.5	89.2%	88275
Sep	223.9	188.1	84.0%	53017
Okt	231.4	185.1	80.0%	66415
Nov	223.9	167.1	74.6%	28063
Dez	231.4	166.6	72.0%	24832
2022	2724.7	2239.8	82.1%	463217
Jan	231.4	205.2	88.7%	128842
Feb	209.0	172.3	82.4%	33205
Mrz	231.4	205.7	88.9%	34542
Apr	223.9	198.9	88.8%	36868
Mai	231.4	180.3	77.9%	43918
Jun	223.9	193.5	86.4%	28624
Jul	231.4	205.6	88.8%	27065
Aug	231.4	197.3	85.3%	27901
Sep	223.9	123.5	55.1%	18982
Okt	231.4	180.0	77.8%	23405
Nov	223.9	165.9	74.1%	28960
Dez	231.4	211.7	91.5%	30905
2021	2724.7	2308.5	84.6%	684638
2020	2732.2	2104.1	77.0%	659920
2019	1142.1	830.1	72.8%	181474
Total	14780.6	12082.7	81.7%	3392468

Mio_Max = max of potential usage

= walltime of month * number of cores

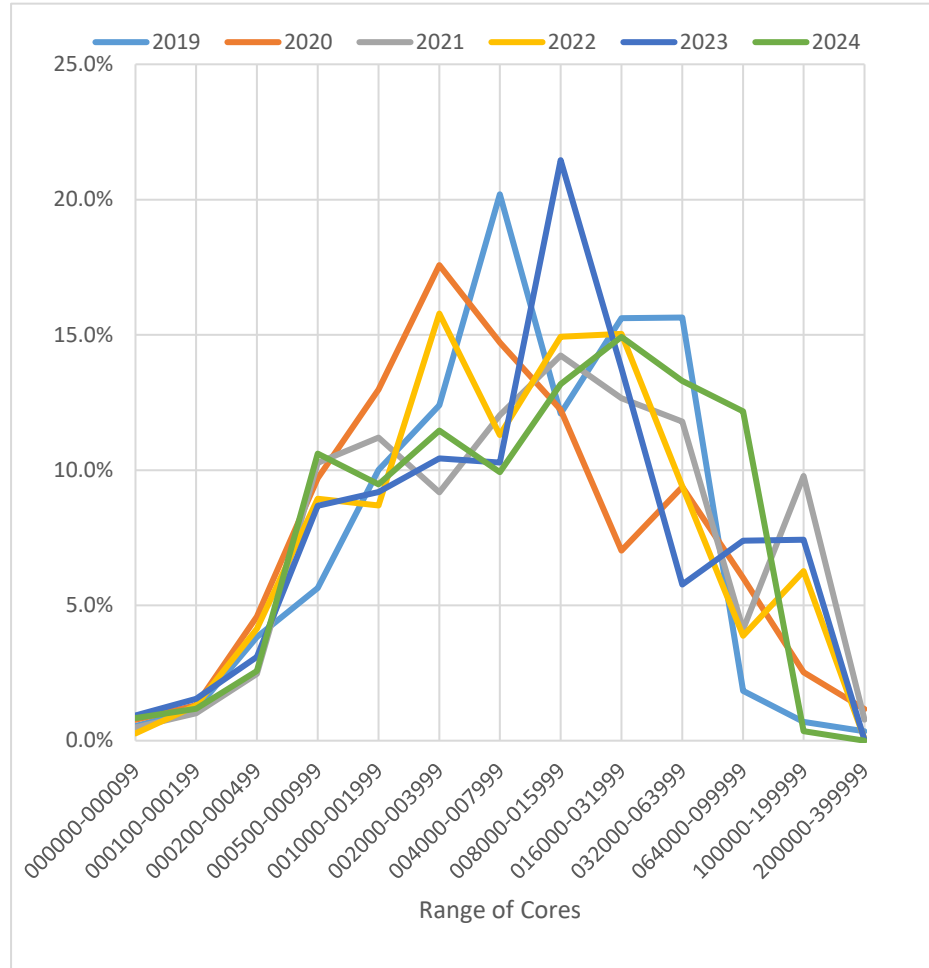
% = utilization = % of Max = Mio Core-h/Mio MAX



Usage by Jobsite

Usage (core-h) by Job size

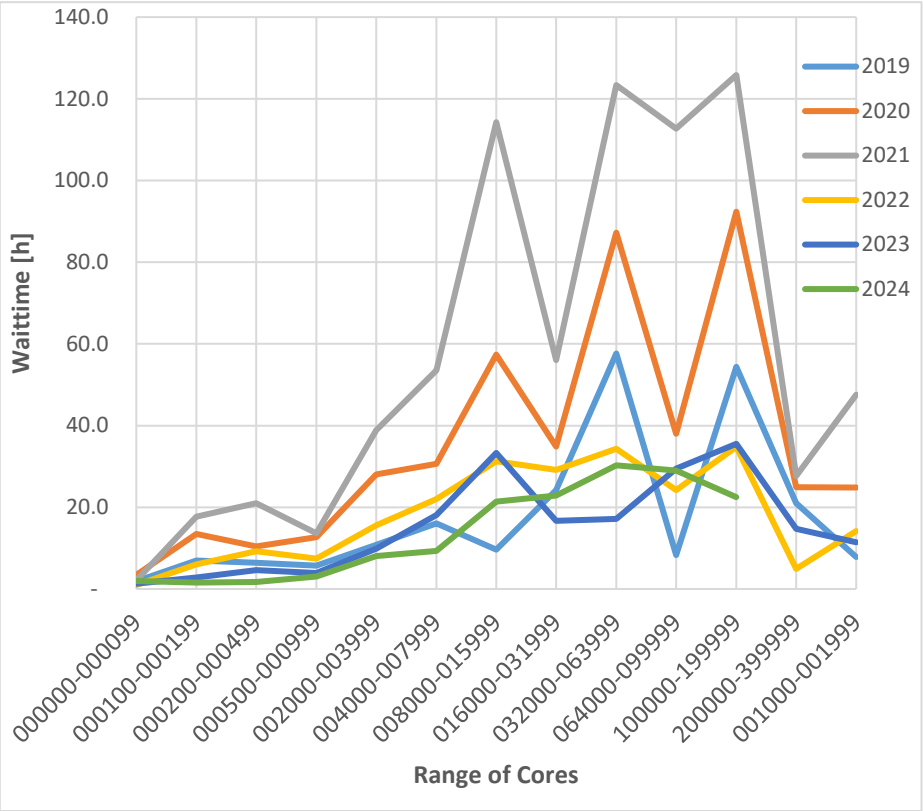
Usage by Job Size							
Range of cores	2019	2020	2021	2022	2023	2024	Total
000000-000099	0.5%	0.8%	0.5%	0.3%	0.9%	0.8%	0.7%
000100-000199	1.2%	1.3%	1.0%	1.3%	1.5%	1.2%	1.3%
000200-000499	3.8%	4.6%	2.5%	4.1%	3.1%	2.6%	3.4%
000500-000999	5.6%	9.7%	10.3%	8.9%	8.7%	10.6%	9.4%
001000-001999	10.0%	13.0%	11.2%	8.7%	9.2%	9.5%	10.3%
002000-003999	12.4%	17.6%	9.2%	15.8%	10.4%	11.5%	12.8%
004000-007999	20.2%	14.7%	12.0%	11.3%	10.3%	9.9%	12.2%
008000-015999	12.1%	12.2%	14.2%	14.9%	21.5%	13.2%	15.0%
016000-031999	15.6%	7.0%	12.7%	15.0%	13.8%	14.9%	13.0%
032000-063999	15.6%	9.4%	11.8%	9.4%	5.8%	13.3%	10.3%
064000-099999	1.8%	6.0%	4.1%	3.9%	7.4%	12.2%	6.4%
100000-199999	0.7%	2.5%	9.8%	6.3%	7.4%	0.4%	5.0%
200000-399999	0.3%	1.2%	0.8%	0.1%	0.0%	0.0%	0.4%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



Wait time by Jobsite

Average Wait Time [hours] by Jobsite

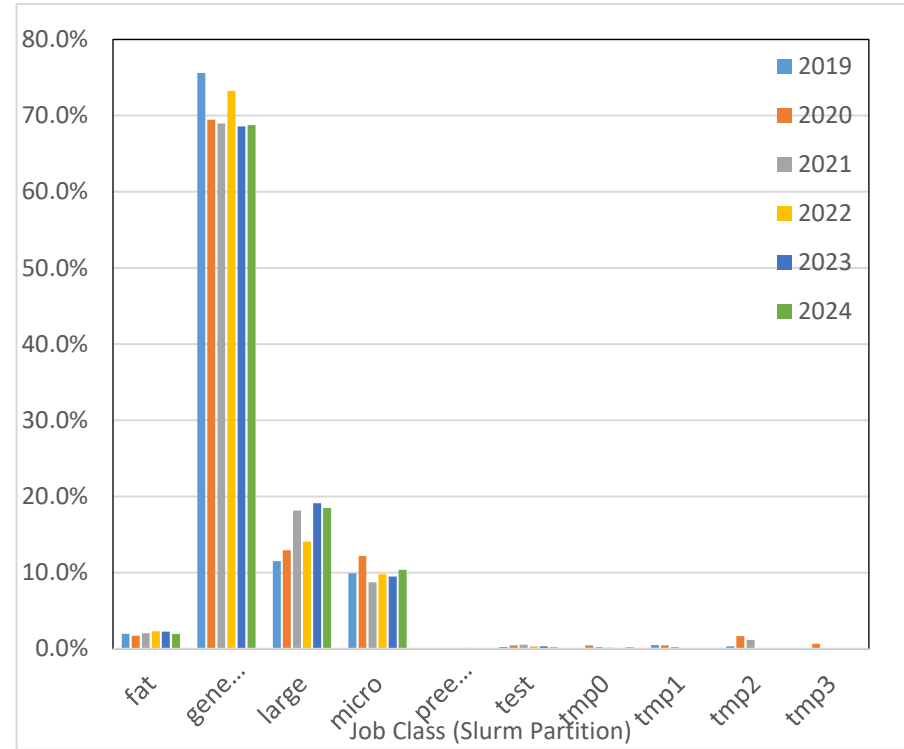
Avg. Wait Time [h]							
Jobsite [cores]	2019	2020	2021	2022	2023	2024	Total
000000-000099	1.9	3.4	2.1	1.0	1.3	2.0	1.9
000100-000199	7.0	13.5	17.7	6.0	2.8	1.6	8.1
000200-000499	6.4	10.4	21.0	9.3	4.6	1.7	8.9
000500-000999	5.7	12.7	13.7	7.5	3.9	3.0	7.8
002000-003999	10.8	28.1	38.9	15.6	9.9	8.1	18.6
004000-007999	16.0	30.7	53.5	22.0	18.1	9.3	24.9
008000-015999	9.6	57.3	114.3	31.3	33.3	21.4	44.5
016000-031999	24.2	34.9	56.0	29.1	16.6	22.9	30.6
032000-063999	57.7	87.3	123.4	34.3	17.1	30.3	58.3
064000-099999	8.3	38.0	112.7	24.2	29.5	29.0	40.3
100000-199999	54.4	92.4	125.8	34.8	35.5	22.5	60.9
200000-399999	21.0	24.9	27.6	4.9	14.8		18.6
001000-001999	7.8	24.8	47.6	14.2	11.5	3.4	18.2
Total	17.8	35.3	58.0	18.0	15.3	12.9	26.4



Usage by Job Class

% Usage (core-h) by Jobclass

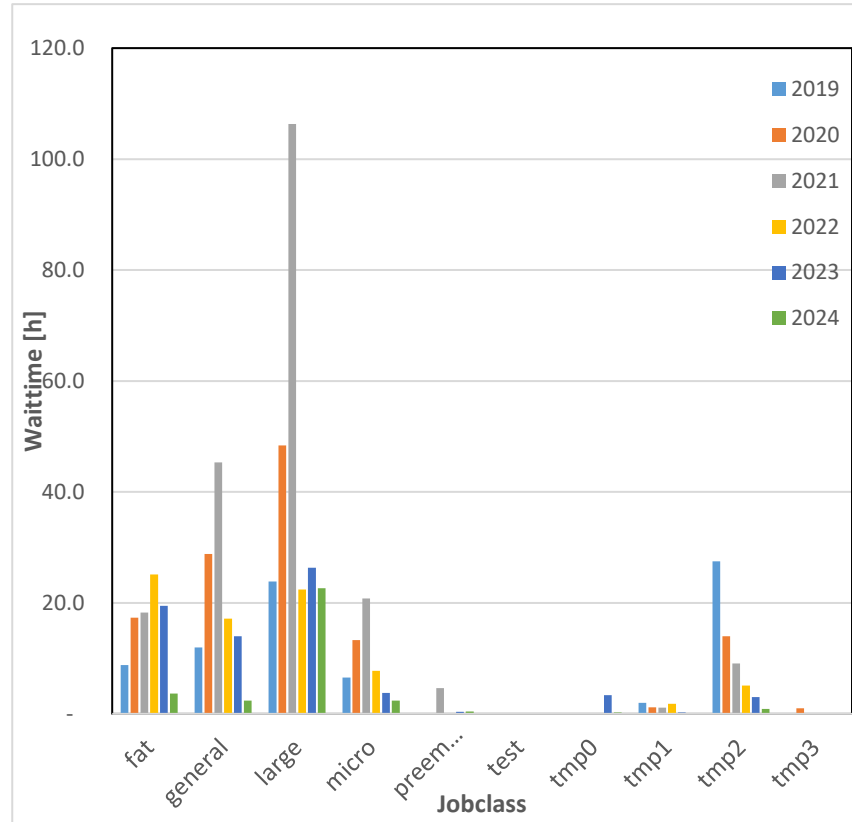
Usage	2019	2020	2021	2022	2023	2024	Total
fat	2.0%	1.7%	2.0%	2.3%	2.3%	2.0%	2.1%
general	75.6%	69.5%	69.0%	73.3%	68.6%	68.8%	70.2%
large	11.5%	12.9%	18.2%	14.1%	19.1%	18.5%	16.3%
micro	9.9%	12.2%	8.7%	9.8%	9.5%	10.4%	10.1%
preempt	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%
test	0.2%	0.5%	0.5%	0.3%	0.3%	0.2%	0.4%
tmp0	0.0%	0.5%	0.2%	0.2%	0.0%	0.2%	0.2%
tmp1	0.5%	0.4%	0.2%	0.1%	0.0%	0.0%	0.2%
tmp2	0.3%	1.7%	1.1%	0.1%	0.0%	0.0%	0.6%
tmp3	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	0.1%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



Waittime by Job Class

Average Wait Time [hours] by Jobclass

Avg Wait_h	2019	2020	2021	2022	2023	2024	Total
fat	8.8	17.3	18.3	25.1	19.4	3.7	15.5
general	12.0	28.8	45.3	17.2	14.0	2.4	17.4
large	23.9	48.4	106.3	22.4	26.3	22.7	39.0
micro	6.6	13.3	20.8	7.7	3.8	2.4	9.1
preempt	na	na	4.6	na	0.4	0.5	1.8
test	0.1	0.1	0.1	0.0	0.0	0.1	0.1
tmp0	na	0.2	0.0	0.1	3.4	0.3	0.7
tmp1	2.0	1.2	1.2	1.8	0.2	na	1.3
tmp2	27.5	14.0	9.1	5.1	3.0	0.9	8.6
tmp3	na	1.0	0.0	na	na	na	0.5
Total	11.5	13.8	20.6	9.9	7.8	4.5	11.1



Usage by Research Area

Usage by Research Area (DFG Classification Level 2, 3 and 4)

LV2 LV3 LV4

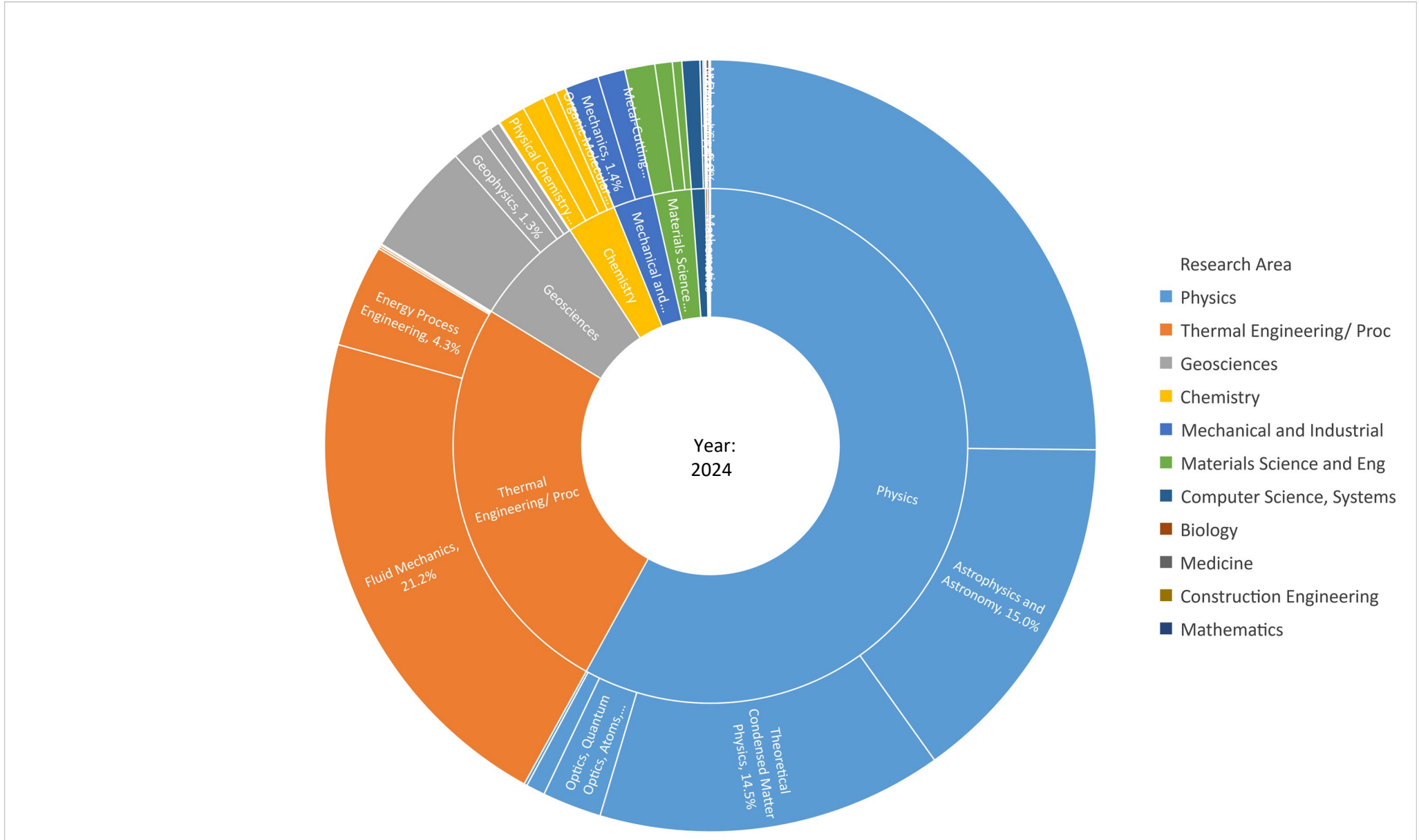
Usage	2019	2020	2021	2022	2023	2024	Total
Physics	57.8%	52.9%	56.0%	53.3%	57.9%	58.0%	55.8%
Particles, Nuclei and Fields	26.8%	25.8%	20.5%	20.0%	29.1%	25.2%	24.3%
Nuclear and Elementary Particle Physics, Quantum Mechanics, Relativity, Fields	26.8%	25.8%	20.5%	20.0%	29.1%	25.2%	24.3%
Astrophysics and Astronomy	20.8%	16.7%	19.3%	19.4%	13.5%	15.0%	17.1%
Astrophysics and Astronomy	20.8%	16.7%	19.3%	19.4%	13.5%	15.0%	17.1%
Condensed Matter Physics	9.7%	8.2%	13.6%	10.7%	11.9%	14.6%	11.7%
Theoretical Condensed Matter Physics	9.7%	7.4%	13.1%	10.6%	11.9%	14.5%	11.4%
Experimental Condensed Matter Physics	0.0%	0.8%	0.5%	0.1%	0.0%	0.1%	0.3%
Optics, Quantum Optics and Physics of Atoms, Molecules and Plasmas	0.5%	2.1%	2.5%	3.2%	1.7%	2.5%	2.3%
Optics, Quantum Optics, Atoms, Molecules, Plasmas	0.5%	2.1%	2.5%	3.2%	1.7%	2.5%	2.3%
Statistical Physics, Soft Matter, Biological Physics, Nonlinear Dynamics	0.0%	0.0%	0.0%	0.0%	1.7%	0.8%	0.5%
Statistical Physics, Soft Matter, Biological Physics, Nonlinear Dynamics	0.0%	0.0%	0.0%	0.0%	1.7%	0.8%	0.5%
Thermal Engineering/ Process Engineering	26.5%	27.3%	22.2%	28.5%	27.4%	25.7%	26.2%
Heat Energy Technology, Thermal Machines, Fluid Mechanics	26.5%	26.8%	22.2%	26.1%	26.7%	25.7%	25.6%
Fluid Mechanics	26.4%	22.3%	19.1%	25.8%	26.5%	21.2%	23.2%
Technical Thermodynamics	0.1%	4.4%	3.1%	0.3%	0.2%	0.1%	1.5%
Energy Process Engineering	0.0%	0.2%	0.0%	0.0%	0.0%	4.3%	0.9%
Hydraulic and Turbo Engines and Piston Engines	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%
Process Engineering, Technical Chemistry	0.1%	0.5%	0.0%	2.4%	0.7%	0.0%	0.7%
Chemical and Thermal Process Engineering	0.0%	0.0%	0.0%	2.4%	0.7%	0.0%	0.6%
Biological Process Engineering	0.1%	0.5%	0.0%	0.0%	0.0%	0.0%	0.1%
Geosciences	4.9%	2.6%	5.9%	4.2%	5.8%	7.1%	5.1%
Atmospheric Science, Oceanography and Climate Research	0.9%	0.3%	2.1%	2.1%	4.3%	4.8%	2.6%
Atmospheric Science	0.9%	0.3%	2.1%	2.1%	4.3%	4.8%	2.6%
Geophysics and Geodesy	0.9%	1.3%	3.2%	1.7%	1.2%	1.4%	1.7%
Geophysics	0.5%	0.8%	2.5%	1.4%	1.1%	1.3%	1.4%
Geodesy, Photogrammetry, Remote Sensing, Geoinformatics, Cartography	0.3%	0.5%	0.7%	0.3%	0.0%	0.1%	0.3%
Geochemistry, Mineralogy and Crystallography	3.2%	0.9%	0.3%	0.2%	0.3%	0.4%	0.6%
Geochemistry, Mineralogy and Crystallography	3.2%	0.9%	0.3%	0.2%	0.3%	0.4%	0.6%
Water Research	0.0%	0.0%	0.2%	0.2%	0.1%	0.5%	0.2%
Hydrogeology, Hydrology, Limnology, Urban Water Management, Water Chemistry, Integrated Water Resources Management	0.0%	0.0%	0.2%	0.2%	0.1%	0.5%	0.2%
Geography	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Physical Geography	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Chemistry	1.2%	5.0%	4.7%	5.7%	2.1%	3.1%	3.9%

Usage by Research Area

Chemistry	Physical and Theoretical Chemistry	0.3%	1.3%	2.7%	2.7%	0.9%	1.1%	1.7%
	Physical Chemistry of Molecules, Interfaces and Liquids - Spectroscopy, Kinetics	0.0%	0.4%	2.0%	1.5%	0.9%	1.1%	1.1%
	General Theoretical Chemistry	0.3%	0.9%	0.8%	1.2%	0.0%	0.0%	0.6%
	Chemical Solid State and Surface Research	0.9%	1.5%	0.5%	1.8%	0.9%	1.5%	1.2%
	Theory and Modelling	0.9%	1.5%	0.4%	0.4%	0.6%	0.6%	0.7%
	Physical Chemistry of Solids and Surfaces, Material Characterisation	0.0%	0.0%	0.1%	1.4%	0.3%	0.9%	0.5%
	Solid State and Surface Chemistry, Material Synthesis	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Biological Chemistry and Food Chemistry	0.0%	2.3%	1.4%	1.2%	0.1%	0.4%	1.0%
	Biological and Biomimetic Chemistry	0.0%	2.3%	1.4%	1.2%	0.1%	0.4%	1.0%
	Molecular Chemistry	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%
Inorganic Molecular Chemistry	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	
Organic Molecular Chemistry	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Biology	4.2%	5.2%	5.3%	2.8%	0.7%	0.1%	2.9%	
Basic Biological and Medical Research	4.2%	5.2%	5.3%	2.1%	0.5%	0.1%	2.7%	
Bioinformatics and Theoretical Biology	1.8%	2.1%	4.6%	1.3%	0.0%	0.0%	1.6%	
Biophysics	1.1%	2.5%	0.6%	0.8%	0.5%	0.1%	0.9%	
Biochemistry	1.3%	0.5%	0.1%	0.0%	0.0%	0.0%	0.2%	
General Genetics	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Structural Biology	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Cell Biology	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Zoology	0.0%	0.0%	0.0%	0.7%	0.2%	0.0%	0.2%	
Evolution, Anthropology	0.0%	0.0%	0.0%	0.7%	0.2%	0.0%	0.2%	
Computer Science, Systems and Electrical Engineering	2.3%	1.9%	2.5%	2.3%	0.8%	0.9%	1.7%	
Computer Science	2.3%	1.9%	2.5%	2.3%	0.8%	0.8%	1.7%	
Massively Parallel and Data-Intensive Systems	2.2%	1.9%	2.5%	1.9%	0.8%	0.7%	1.6%	
Computer Architecture and Embedded Systems	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.1%	
Interactive and Intelligent Systems, Image and Language Processing, Computer Graphics and Visualisation	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Theoretical Computer Science	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Operating, Communication, Database and Distributed Systems	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Software Engineering and Programming Languages	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Systems Engineering	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	
Traffic and Transport Systems, Logistics, Intelligent and Automated Traffic	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	
Electrical Engineering and Information Technology	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Electronic Semiconductors, Components, Circuits, Systems	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Mechanical and Industrial Engineering	0.7%	1.4%	0.7%	0.6%	2.3%	2.6%	1.5%	
Mechanics and Constructive Mechanical Engineering	0.7%	1.4%	0.7%	0.6%	2.3%	2.6%	1.5%	
Production Technology	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Materials Science and Engineering	1.5%	1.5%	0.6%	0.5%	1.9%	2.4%	1.4%	

Usage by Research Area

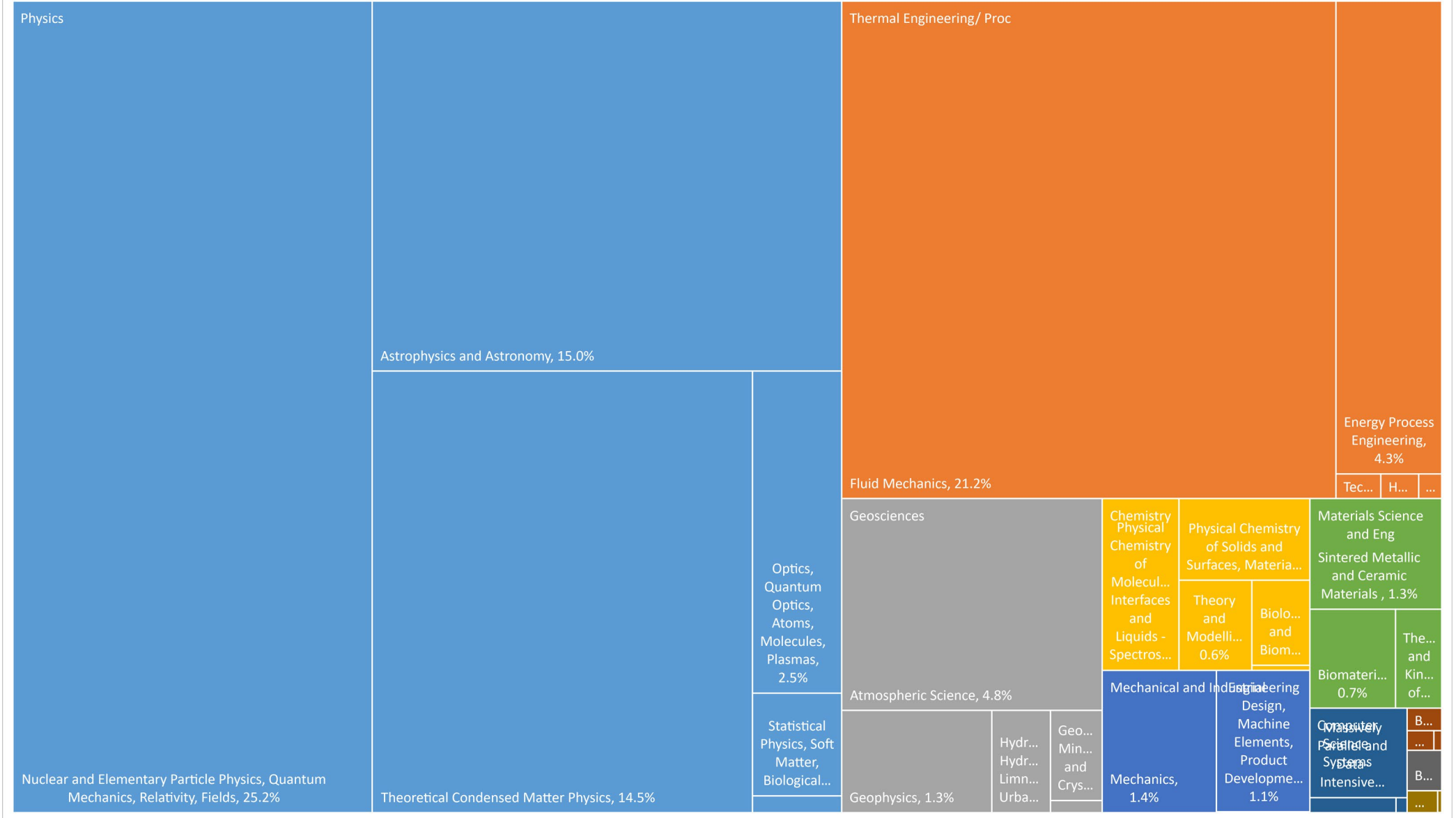
Usage by Research Area (DFG Level 2 and 3)



Usage by Research Area

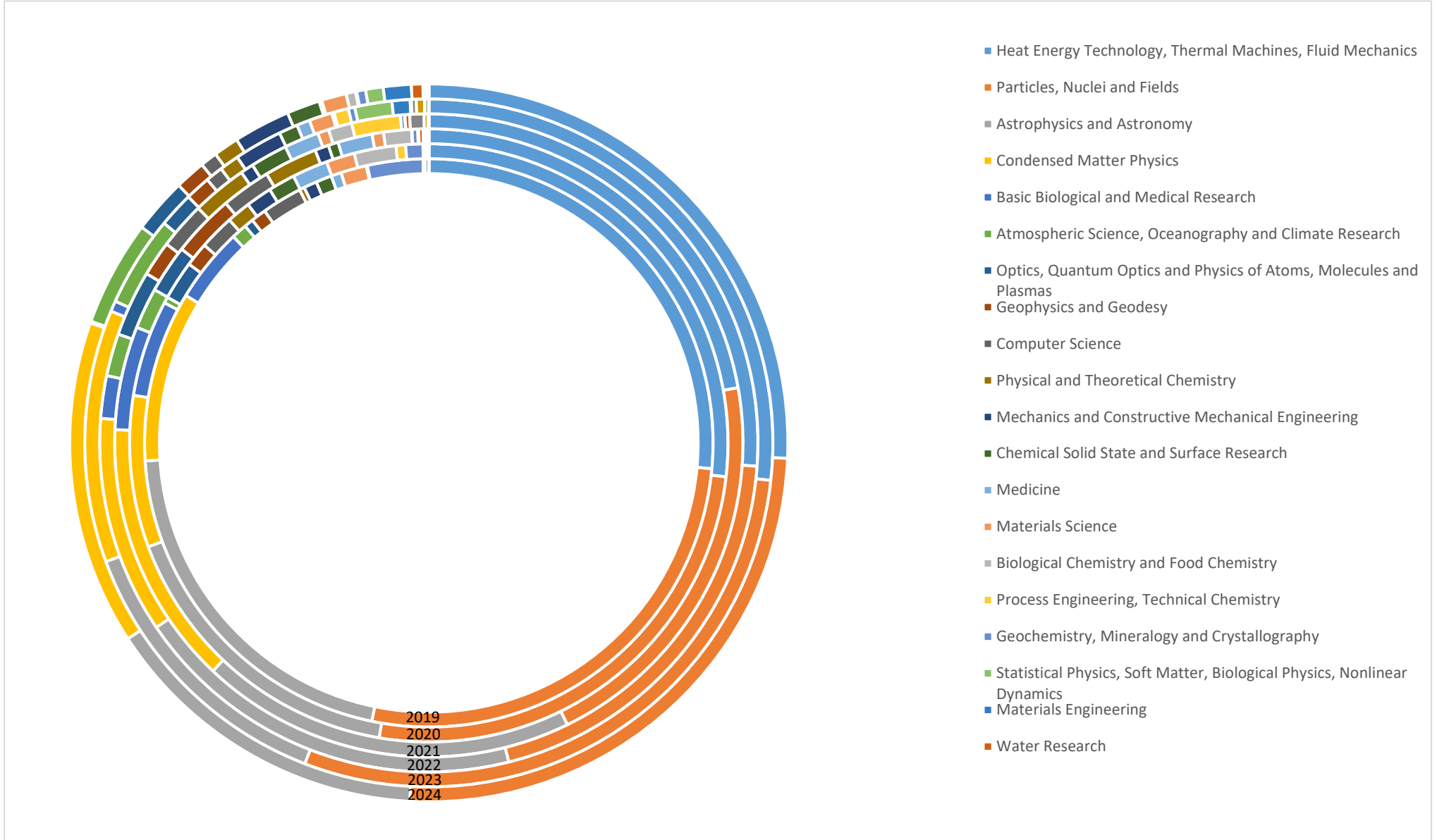
Usage by Research Area (DFG Level 2 and 3)

Year: 2024

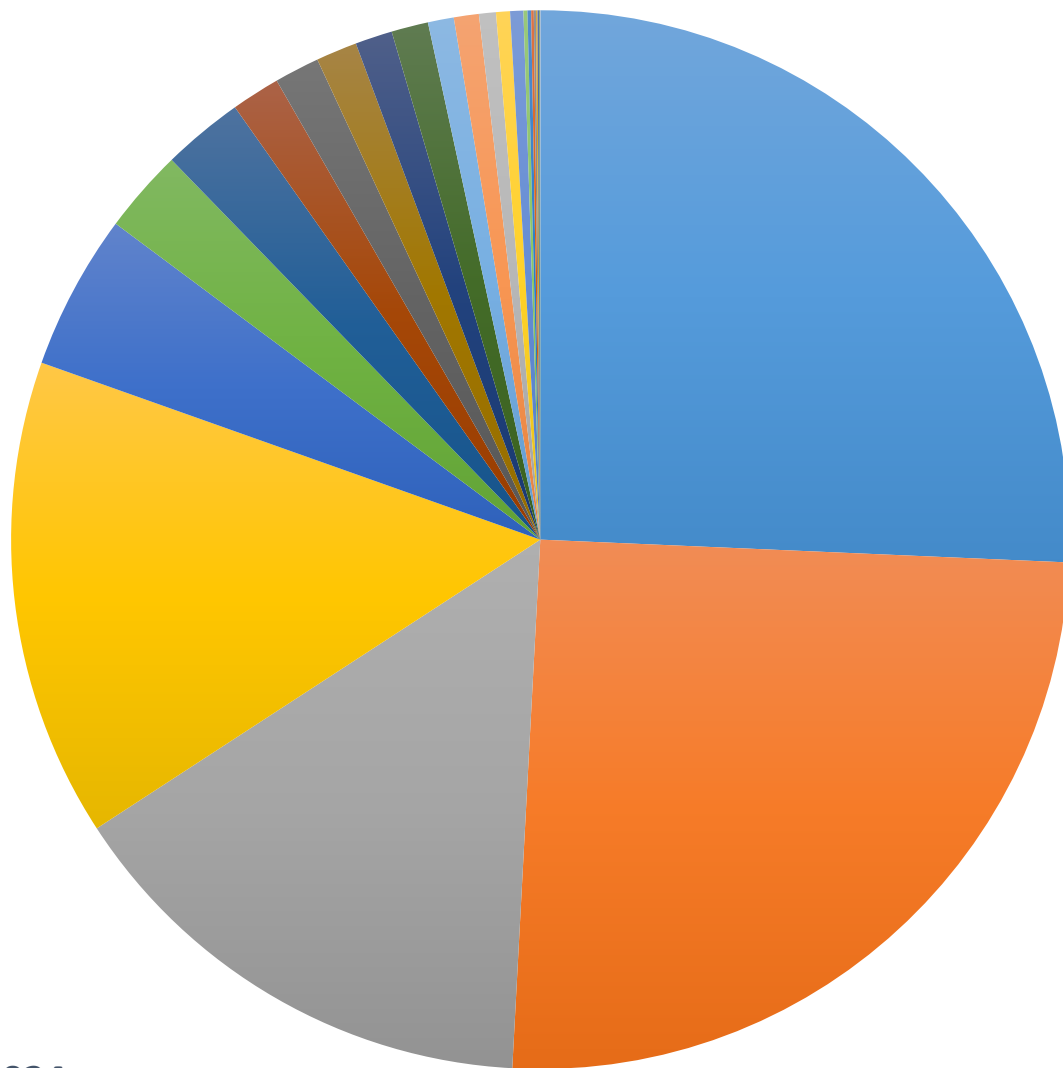


Usage by Research Area

Usage By Research Area (DFG Llevel 3)



Usage



DFG_TOPIC_LVL3_DESC

- Heat Energy Technology, Thermal Machines, Fluid Mechanics
- Particles, Nuclei and Fields
- Astrophysics and Astronomy
- Condensed Matter Physics
- Atmospheric Science, Oceanography and Climate Research
- Mechanics and Constructive Mechanical Engineering
- Optics, Quantum Optics and Physics of Atoms, Molecules and Plasmas
- Chemical Solid State and Surface Research
- Geophysics and Geodesy
- Materials Engineering
- Physical and Theoretical Chemistry
- Materials Science
- Statistical Physics, Soft Matter, Biological Physics, Nonlinear Dynamics
- Computer Science
- Water Research
- Biological Chemistry and Food Chemistry

2024

Year

