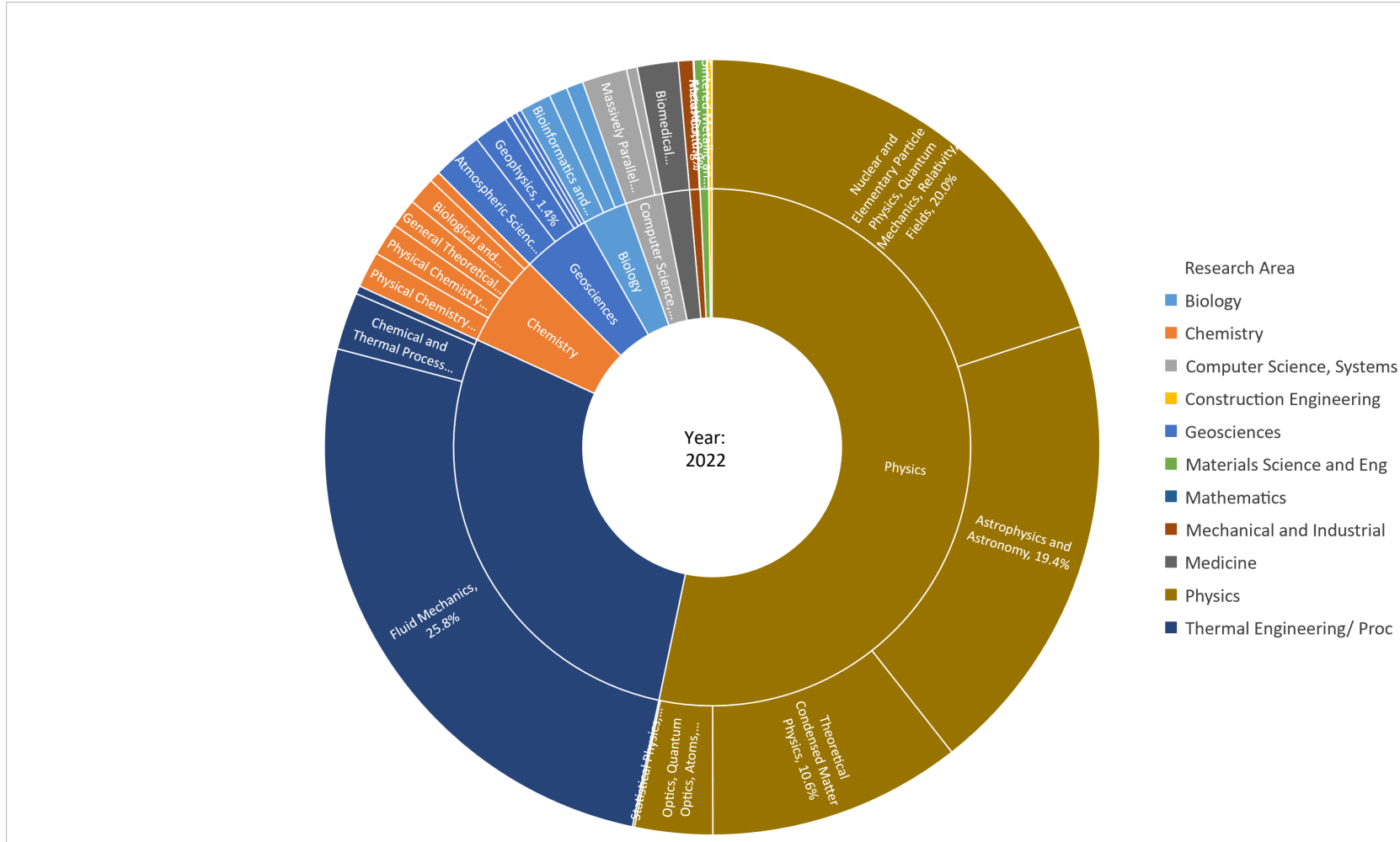


SuperMUC-NG
Usage Report



Usage by Month

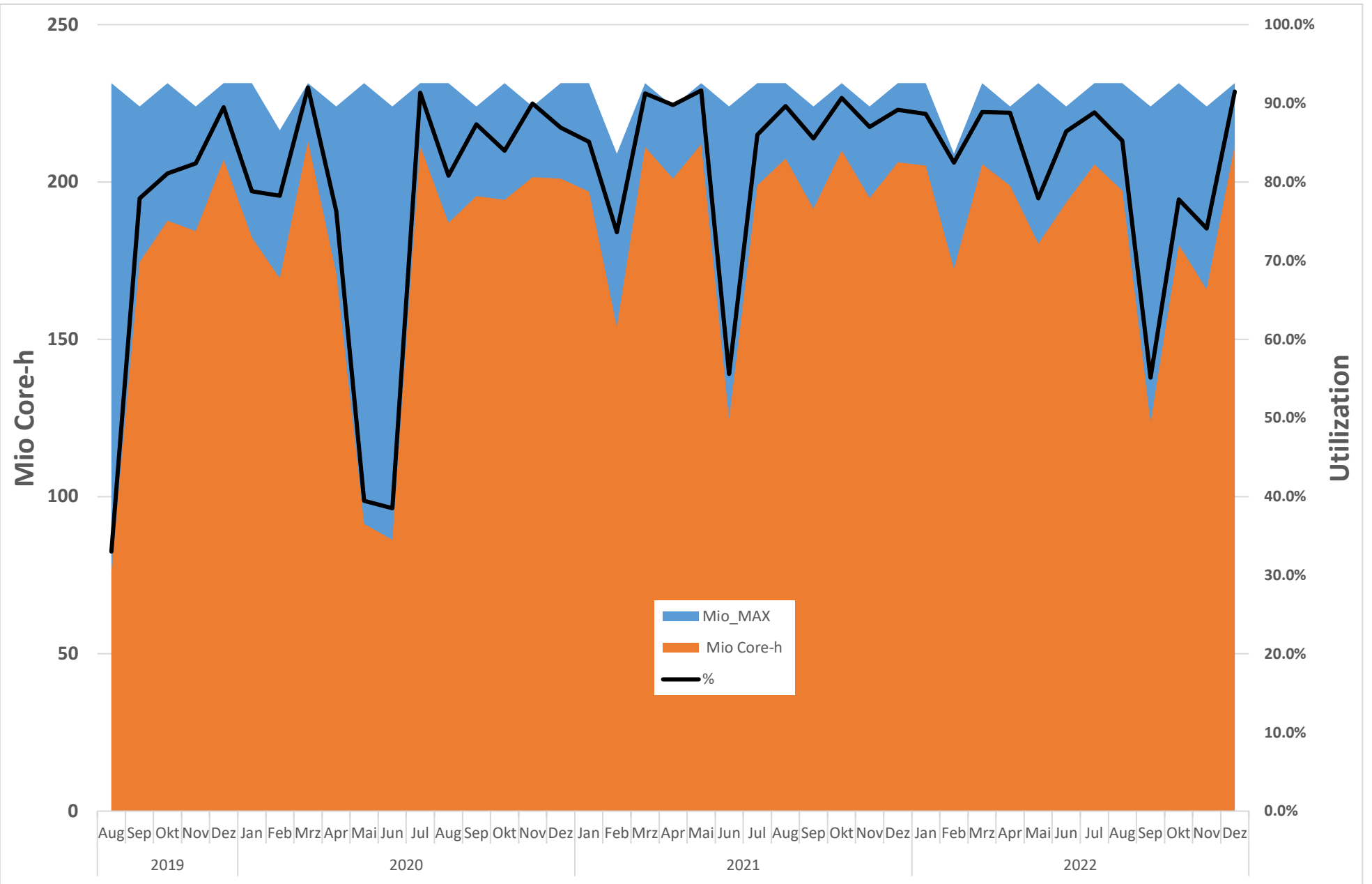
Usage

Date	Mio_MAX	Mio Core-h	%	Jobs
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
Jan	231.4	196.9	85.1%	49337
Feb	209.0	153.9	73.6%	33262
Mrz	231.4	211.1	91.2%	42485
Apr	223.9	201.0	89.8%	36112
Mai	231.4	212.0	91.6%	33933
Jun	223.9	124.5	55.6%	26573
Jul	231.4	199.0	86.0%	46100
Aug	231.4	207.4	89.6%	34126
Sep	223.9	191.5	85.5%	35375
Okt	231.4	209.9	90.7%	33786
Nov	223.9	194.9	87.0%	25767
Dez	231.4	206.3	89.2%	287782
2020	2732.2	2104.1	77.0%	659920
Jan	231.4	182.4	78.8%	89838
Feb	216.5	169.4	78.3%	61502
Mrz	231.4	212.9	92.0%	55216
Apr	223.9	170.9	76.3%	80881
Mai	231.4	91.3	39.5%	49271
Jun	223.9	86.2	38.5%	23801
Jul	231.4	211.4	91.4%	48823
Aug	231.4	187.0	80.8%	24603
Sep	223.9	195.5	87.3%	40965
Okt	231.4	194.3	84.0%	69044
Nov	223.9	201.5	90.0%	50772
Dez	231.4	201.1	86.9%	65204
2019	1142.1	830.1	72.8%	181474
Aug	231.4	76.4	33.0%	8820
Sep	223.9	174.5	77.9%	33770
Okt	231.4	187.7	81.1%	42718
Nov	223.9	184.4	82.4%	35553
Dez	231.4	207.1	89.5%	60613
Total	9323.7	7482.4	80.2%	1989249

Mio_Max = max of potential usage

= walltime of month * number of cores

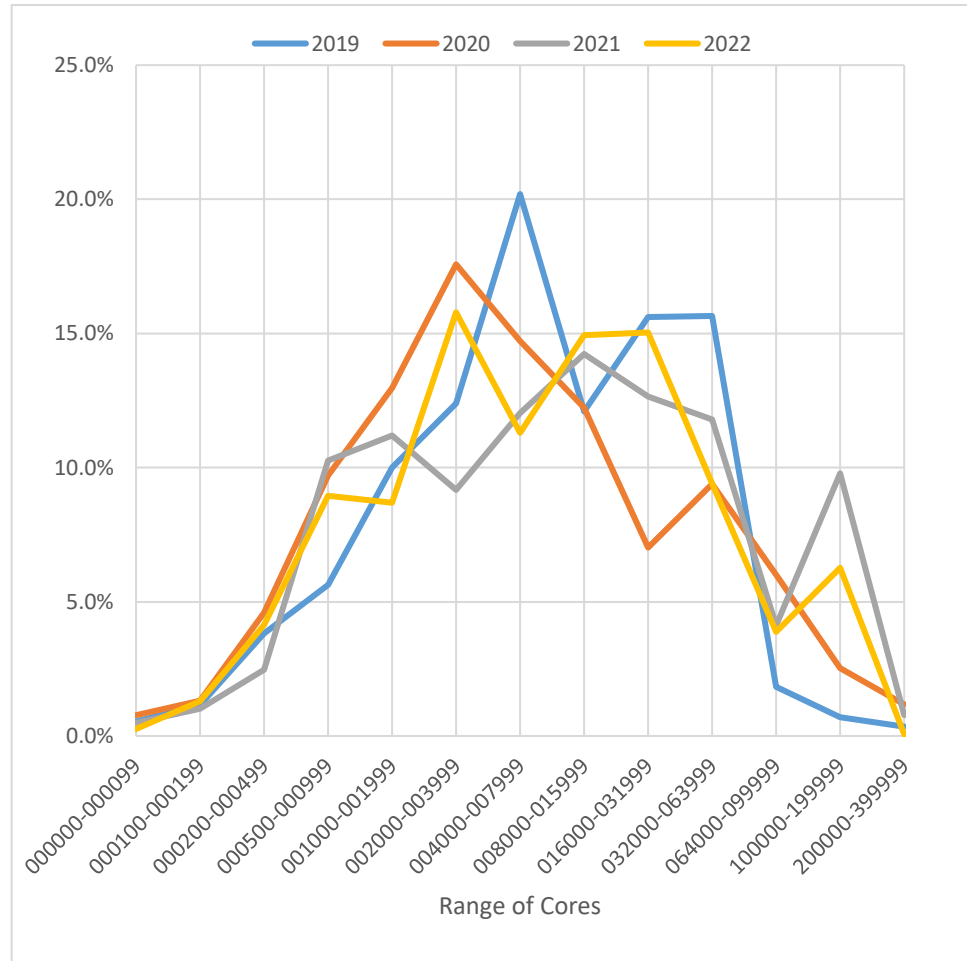
% = utilization = % of Max = Mio Core-h/Mio MAX



Usage by Jobsite

Usage (core-h) by Job size

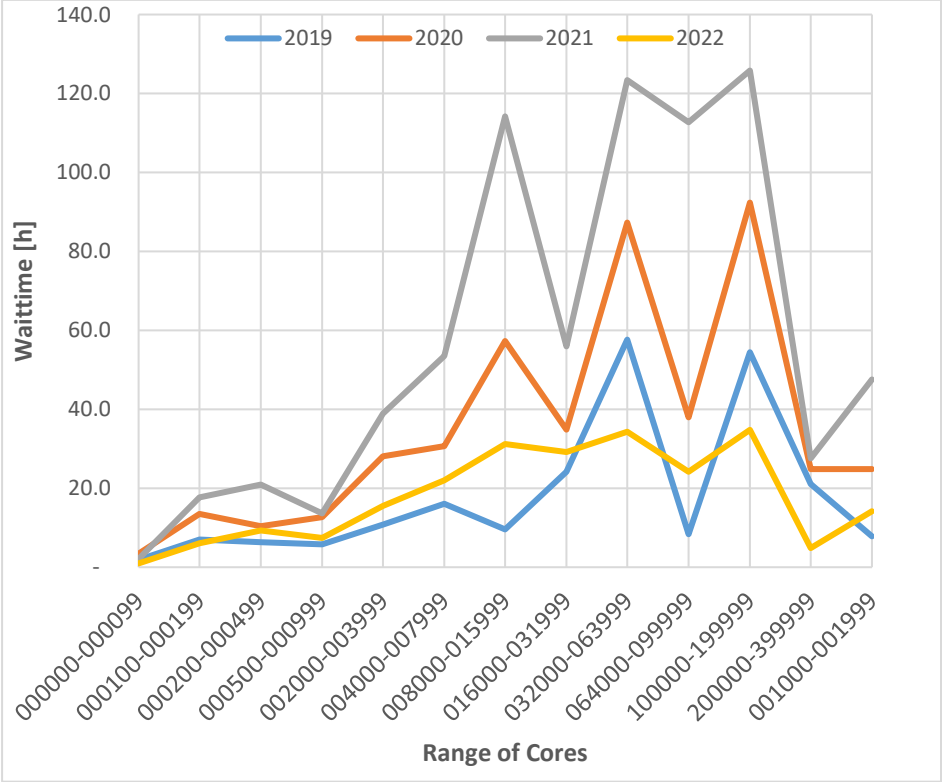
Usage by Job Size					
Range of cores	2019	2020	2021	2022	Total
000000-000099	0.5%	0.8%	0.5%	0.3%	0.5%
000100-000199	1.2%	1.3%	1.0%	1.3%	1.2%
000200-000499	3.8%	4.6%	2.5%	4.1%	3.7%
000500-000999	5.6%	9.7%	10.3%	8.9%	9.2%
001000-001999	10.0%	13.0%	11.2%	8.7%	10.8%
002000-003999	12.4%	17.6%	9.2%	15.8%	13.9%
004000-007999	20.2%	14.7%	12.0%	11.3%	13.5%
008000-015999	12.1%	12.2%	14.2%	14.9%	13.6%
016000-031999	15.6%	7.0%	12.7%	15.0%	12.1%
032000-063999	15.6%	9.4%	11.8%	9.4%	10.8%
064000-099999	1.8%	6.0%	4.1%	3.9%	4.3%
100000-199999	0.7%	2.5%	9.8%	6.3%	5.7%
200000-399999	0.3%	1.2%	0.8%	0.1%	0.6%
Total	100.0%	100.0%	100.0%	100.0%	100.0%



Wait time by Jobsite

Average Wait Time [hours] by Jobsite

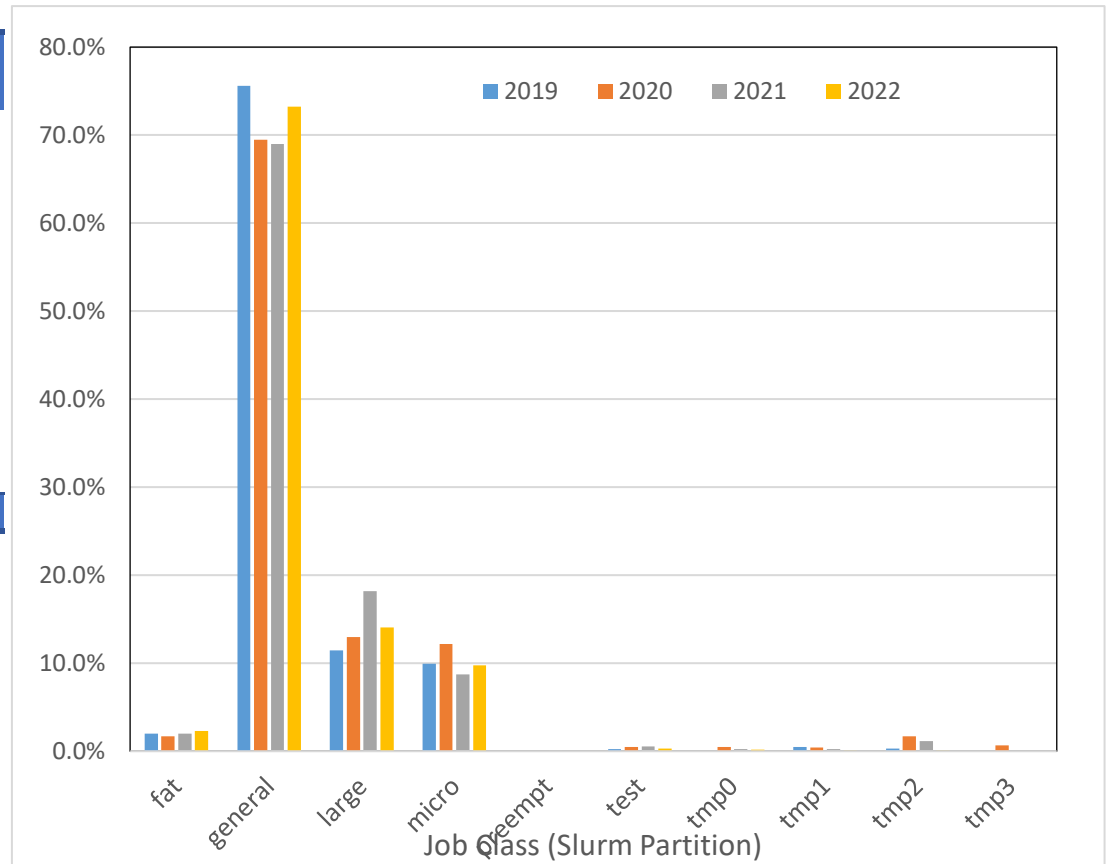
Avg. Wait Time [h]					
Jobsite [cores]	2019	2020	2021	2022	Total
000000-000099	1.9	3.4	2.1	1.0	2.1
000100-000199	7.0	13.5	17.7	6.0	11.0
000200-000499	6.4	10.4	21.0	9.3	11.8
000500-000999	5.7	12.7	13.7	7.5	9.9
002000-003999	10.8	28.1	38.9	15.6	23.3
004000-007999	16.0	30.7	53.5	22.0	30.6
008000-015999	9.6	57.3	114.3	31.3	53.1
016000-031999	24.2	34.9	56.0	29.1	36.0
032000-063999	57.7	87.3	123.4	34.3	75.7
064000-099999	8.3	38.0	112.7	24.2	45.8
100000-199999	54.4	92.4	125.8	34.8	76.8
200000-399999	21.0	24.9	27.6	4.9	19.6
001000-001999	7.8	24.8	47.6	14.2	23.6
Total	17.8	35.3	58.0	18.0	32.3



Usage by Job Class

% Usage (core-h) by Jobclass

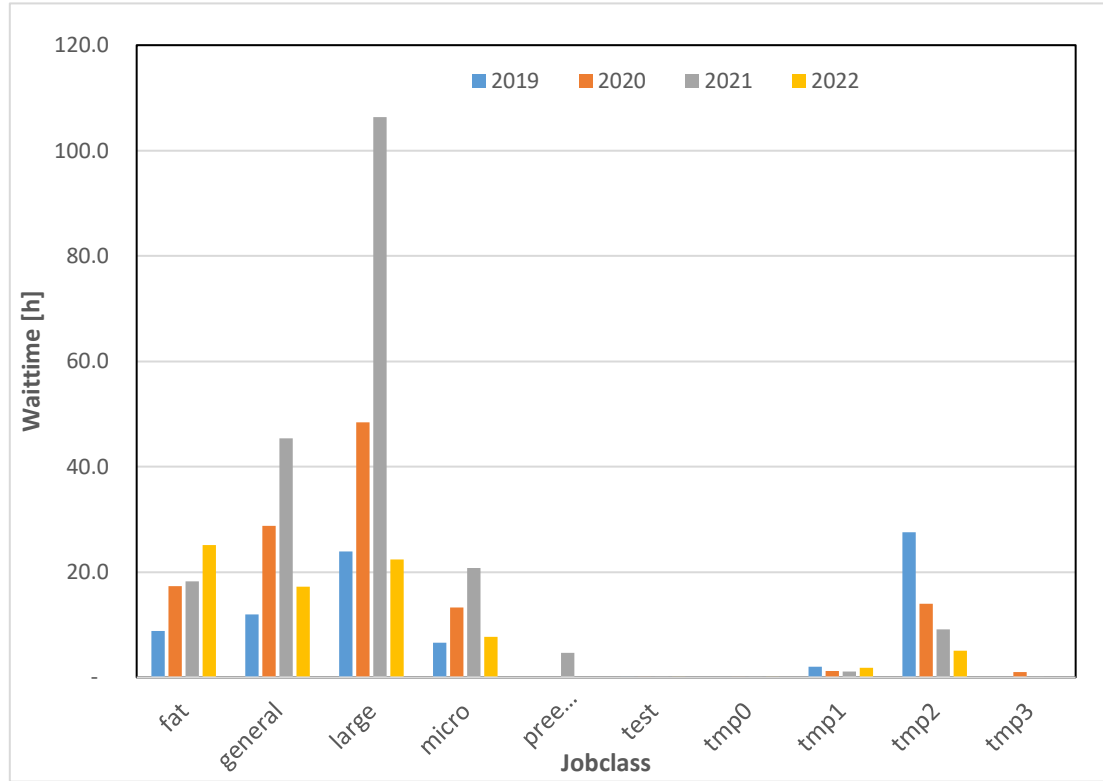
Usage	2019	2020	2021	2022	Total
fat	2.0%	1.7%	2.0%	2.3%	2.0%
general	75.6%	69.5%	69.0%	73.3%	71.1%
large	11.5%	12.9%	18.2%	14.1%	14.7%
micro	9.9%	12.2%	8.7%	9.8%	10.1%
preempt	0.0%	0.0%	0.0%	0.0%	0.0%
test	0.2%	0.5%	0.5%	0.3%	0.4%
tmp0	0.0%	0.5%	0.2%	0.2%	0.2%
tmp1	0.5%	0.4%	0.2%	0.1%	0.3%
tmp2	0.3%	1.7%	1.1%	0.1%	0.9%
tmp3	0.0%	0.6%	0.0%	0.0%	0.2%
Total	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	Total
fat	8.8	17.3	18.3	25.1	17.4
general	12.0	28.8	45.3	17.2	25.8
large	23.9	48.4	106.3	22.4	50.3
micro	6.6	13.3	20.8	7.7	12.1
preempt	na	na	4.6	na	4.6
test	0.1	0.1	0.1	0.0	0.1
tmp0	na	0.2	0.0	0.1	0.1
tmp1	2.0	1.2	1.2	1.8	1.5
tmp2	27.5	14.0	9.1	5.1	13.9
tmp3	na	1.0	0.0	na	0.5
Total	11.5	13.8	20.6	9.9	14.4



Usage by Research Area

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

LV2 LV3 LV4

Usage	2019	2020	2021	2022	Total
Physics	57.8%	52.9%	56.0%	53.3%	54.5%
Particles, Nuclei and Fields	26.8%	25.8%	20.5%	20.0%	22.5%
Nuclear and Elementary Particle Physics, Quantum Mechanics, Relativity, Fields	26.8%	25.8%	20.5%	20.0%	22.5%
Astrophysics and Astronomy	20.8%	16.7%	19.3%	19.4%	18.8%
Astrophysics and Astronomy	20.8%	16.7%	19.3%	19.4%	18.8%
Condensed Matter Physics	9.7%	8.2%	13.6%	10.7%	10.8%
Theoretical Condensed Matter Physics	9.7%	7.4%	13.1%	10.6%	10.4%
Experimental Condensed Matter Physics	0.0%	0.8%	0.5%	0.1%	0.4%
Optics, Quantum Optics and Physics of Atoms, Molecules and Plasmas	0.5%	2.1%	2.5%	3.2%	2.4%
Optics, Quantum Optics, Atoms, Molecules, Plasmas	0.5%	2.1%	2.5%	3.2%	2.4%
Statistical Physics, Soft Matter, Biological Physics, Nonlinear Dynamics	0.0%	0.0%	0.0%	0.0%	0.0%
Statistical Physics, Soft Matter, Biological Physics, Nonlinear Dynamics	0.0%	0.0%	0.0%	0.0%	0.0%
Thermal Engineering/ Process Engineering	26.5%	27.3%	22.2%	28.5%	26.0%
Heat Energy Technology, Thermal Machines, Fluid Mechanics	26.5%	26.8%	22.2%	26.1%	25.1%
Fluid Mechanics	26.4%	22.3%	19.1%	25.8%	22.8%
Technical Thermodynamics	0.1%	4.4%	3.1%	0.3%	2.3%
Energy Process Engineering	0.0%	0.2%	0.0%	0.0%	0.1%
Process Engineering, Technical Chemistry	0.1%	0.5%	0.0%	2.4%	0.9%
Chemical and Thermal Process Engineering	0.0%	0.0%	0.0%	2.4%	0.7%
Biological Process Engineering	0.1%	0.5%	0.0%	0.0%	0.1%
Chemistry	1.2%	5.0%	4.7%	5.7%	4.7%
Physical and Theoretical Chemistry	0.3%	1.3%	2.7%	2.7%	2.1%
Physical Chemistry of Molecules, Interfaces and Liquids - Spectroscopy, Kinetics	0.0%	0.4%	2.0%	1.5%	1.2%
General Theoretical Chemistry	0.3%	0.9%	0.8%	1.2%	0.9%
Biological Chemistry and Food Chemistry	0.0%	2.3%	1.4%	1.2%	1.4%
Biological and Biomimetic Chemistry	0.0%	2.3%	1.4%	1.2%	1.4%
Chemical Solid State and Surface Research	0.9%	1.5%	0.5%	1.8%	1.2%
Theory and Modelling	0.9%	1.5%	0.4%	0.4%	0.8%
Physical Chemistry of Solids and Surfaces, Material Characterisation	0.0%	0.0%	0.1%	1.4%	0.4%
Solid State and Surface Chemistry, Material Synthesis	0.0%	0.0%	0.0%	0.0%	0.0%
Molecular Chemistry	0.0%	0.0%	0.0%	0.0%	0.0%
Inorganic Molecular Chemistry	0.0%	0.0%	0.0%	0.0%	0.0%
Biology	4.2%	5.2%	5.3%	2.8%	4.4%
Basic Biological and Medical Research	4.2%	5.2%	5.3%	2.1%	4.2%
Bioinformatics and Theoretical Biology	1.8%	2.1%	4.6%	1.3%	2.6%

Usage by Research Area

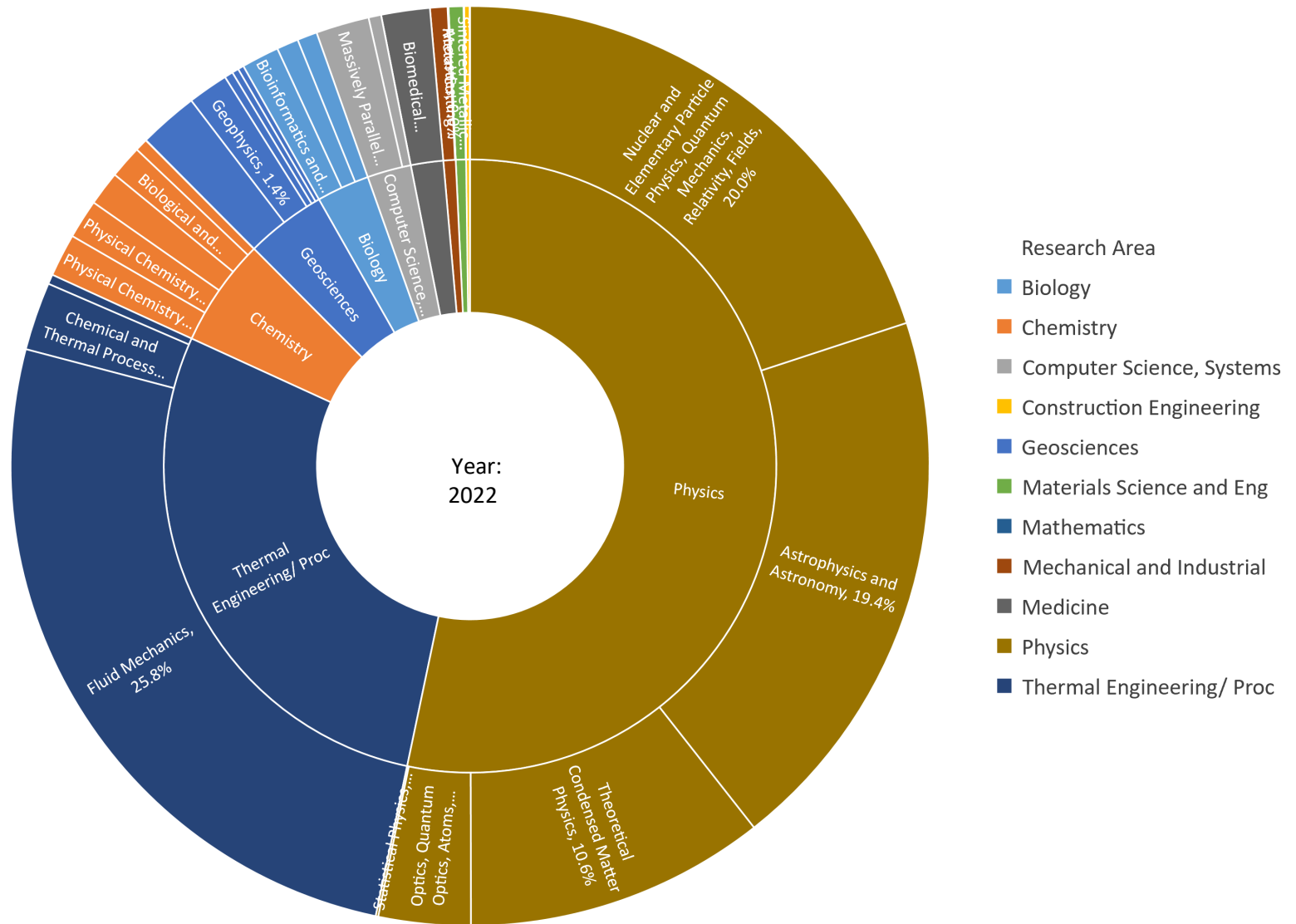
Biol	Ba Biophysics	1.1%	2.5%	0.6%	0.8%	1.3%
	Biochemistry	1.3%	0.5%	0.1%	0.0%	0.3%
	General Genetics	0.1%	0.0%	0.0%	0.0%	0.0%
	Cell Biology	0.0%	0.0%	0.0%	0.0%	0.0%
	Zoology	0.0%	0.0%	0.0%	0.7%	0.2%
	Evolution, Anthropology	0.0%	0.0%	0.0%	0.7%	0.2%
	Geosciences	4.9%	2.6%	5.9%	4.2%	4.4%
	Geophysics and Geodesy	0.9%	1.3%	3.2%	1.7%	2.0%
	Geophysics	0.5%	0.8%	2.5%	1.4%	1.5%
	Geodesy, Photogrammetry, Remote Sensing, Geoinformatics, Cartography	0.3%	0.5%	0.7%	0.3%	0.5%
	Atmospheric Science, Oceanography and Climate Research	0.9%	0.3%	2.1%	2.1%	1.5%
	Atmospheric Science	0.9%	0.3%	2.1%	2.1%	1.5%
	Geochemistry, Mineralogy and Crystallography	3.2%	0.9%	0.3%	0.2%	0.8%
	Geochemistry, Mineralogy and Crystallography	3.2%	0.9%	0.3%	0.2%	0.8%
	Water Research	0.0%	0.0%	0.2%	0.2%	0.2%
	Hydrogeology, Hydrology, Limnology, Urban Water Management, Water Chemistry, Integrated Water Resources Management	0.0%	0.0%	0.2%	0.2%	0.2%
	Geography	0.0%	0.0%	0.0%	0.0%	0.0%
	Physical Geography	0.0%	0.0%	0.0%	0.0%	0.0%
	Computer Science, Systems and Electrical Engineering	2.3%	1.9%	2.5%	2.3%	2.3%
	Computer Science	2.3%	1.9%	2.5%	2.3%	2.3%
	Massively Parallel and Data-Intensive Systems	2.2%	1.9%	2.5%	1.9%	2.1%
	Computer Architecture and Embedded Systems	0.0%	0.0%	0.0%	0.4%	0.1%
	Interactive and Intelligent Systems, Image and Language Processing, Computer Graphics and Visualisation	0.1%	0.0%	0.0%	0.0%	0.0%
	Theoretical Computer Science	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%
	Systems Engineering	0.0%	0.0%	0.0%	0.0%	0.0%
	Traffic and Transport Systems, Logistics, Intelligent and Automated Traffic	0.0%	0.0%	0.0%	0.0%	0.0%
	Electrical Engineering and Information Technology	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%
	Medicine	0.6%	1.9%	1.8%	1.7%	1.7%
	Medicine	0.6%	1.9%	1.8%	1.7%	1.7%
	Biomedical Technology and Medical Physics	0.6%	1.9%	1.8%	1.7%	1.7%
	Epidemiology, Medical Biometry, Medical Informatics	0.0%	0.0%	0.0%	0.0%	0.0%
	Microbiology, Virology and Immunology	0.0%	0.0%	0.0%	0.0%	0.0%
	Virology	0.0%	0.0%	0.0%	0.0%	0.0%
	Materials Science and Engineering	1.5%	1.5%	0.6%	0.5%	0.9%
	Materials Science	1.5%	1.5%	0.6%	0.5%	0.9%
	Thermodynamics and Kinetics of Materials	1.5%	1.5%	0.5%	0.5%	0.9%
	Biomaterials	0.0%	0.0%	0.1%	0.0%	0.0%

Usage by Research Area

Ma	Materials Engineering	0.0%	0.0%	0.0%	0.0%	0.0%
	Sintered Metallic and Ceramic Materials	0.0%	0.0%	0.0%	0.0%	0.0%
	Mechanical and Industrial Engineering	0.7%	1.4%	0.7%	0.6%	0.9%
	Mechanics and Constructive Mechanical Engineering	0.7%	1.4%	0.7%	0.6%	0.9%
	Engineering Design, Machine Elements, Product Development	0.6%	0.5%	0.5%	0.6%	0.5%
	Mechanics	0.1%	0.9%	0.2%	0.0%	0.3%
	Acoustics	0.0%	0.0%	0.0%	0.0%	0.0%
	Production Technology	0.0%	0.0%	0.0%	0.0%	0.0%
	Metal-Cutting Manufacturing Engineering	0.0%	0.0%	0.0%	0.0%	0.0%
	Construction Engineering and Architecture	0.1%	0.1%	0.1%	0.2%	0.1%
	Construction Engineering and Architecture	0.1%	0.1%	0.1%	0.2%	0.1%
	Applied Mechanics, Statics and Dynamics	0.1%	0.1%	0.1%	0.2%	0.1%
	Geotechnics, Hydraulic Engineering	0.0%	0.0%	0.0%	0.0%	0.0%
	Mathematics	0.2%	0.1%	0.1%	0.0%	0.1%
	Mathematics	0.2%	0.1%	0.1%	0.0%	0.1%
	Mathematics	0.2%	0.1%	0.1%	0.0%	0.1%
	Agriculture, Forestry and Veterinary Medicine	0.0%	0.0%	0.0%	0.0%	0.0%
	Agriculture, Forestry and Veterinary Medicine	0.0%	0.0%	0.0%	0.0%	0.0%
	Basic Research on Pathogenesis, Diagnostics and Therapy and Clinical Veterinary Medicine	0.0%	0.0%	0.0%	0.0%	0.0%
Total		100.0%	100.0%	100.0%	100.0%	100.0%

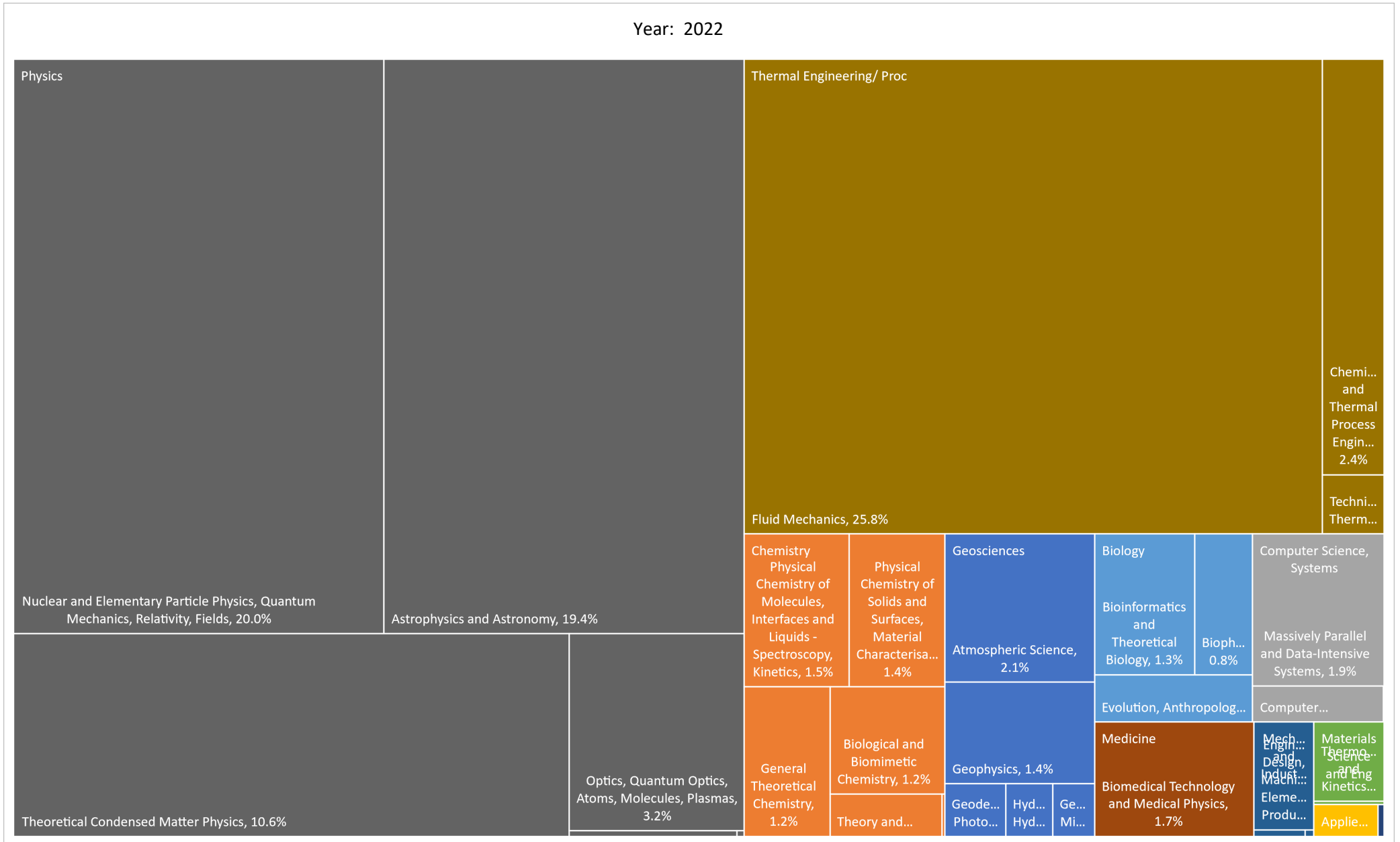
Usage by Research Area

Usage by Research Area (DFG Level 2 and 3)



Usage by Research Area

Usage by Research Area (DFG Level 2 and 3)



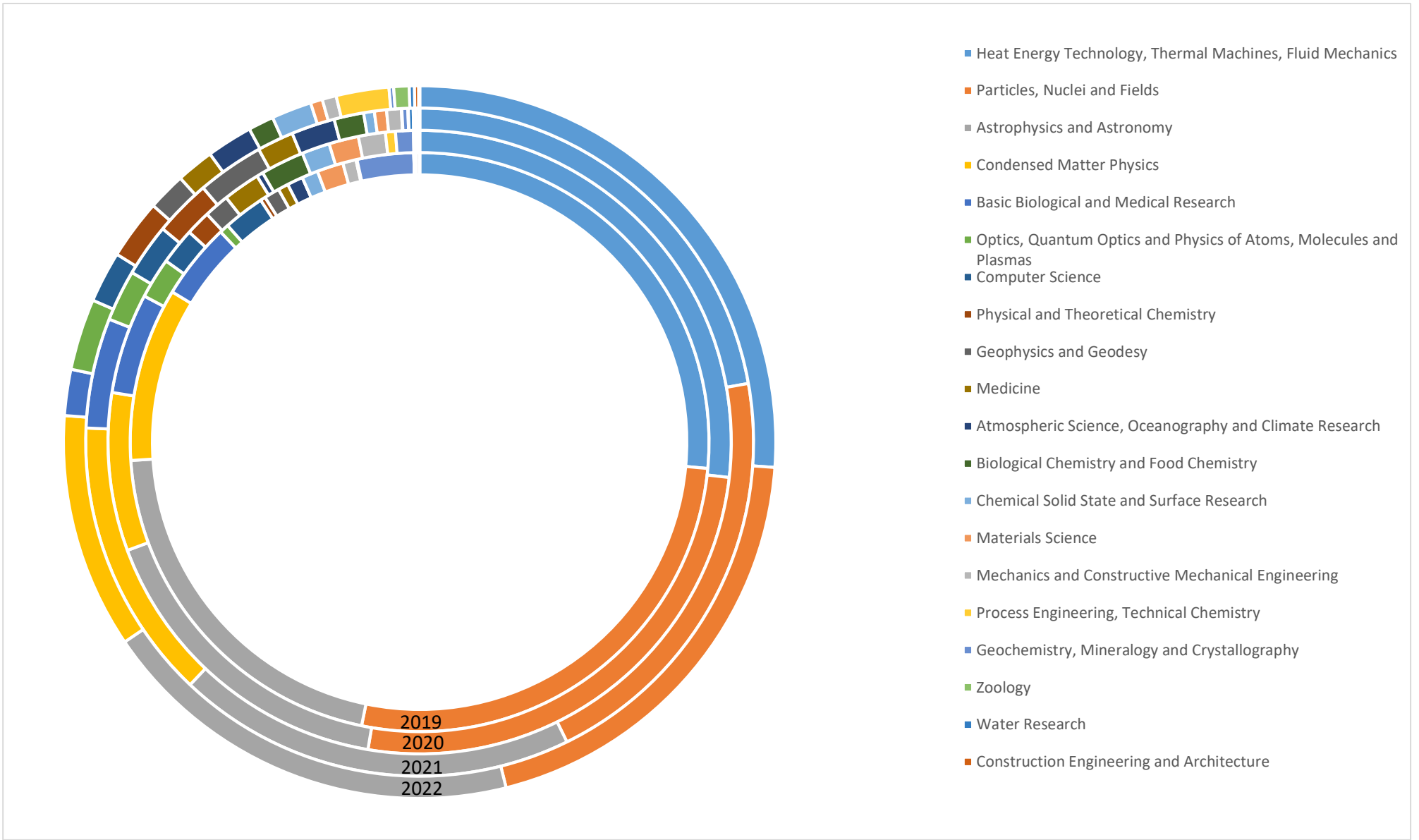
Usage by Research Area

Usage by research Area (DFG Level 3)

Usage DFG_TOPIC_LVL3_DESC	Year				
	2019	2020	2021	2022	Total
Heat Energy Technology, Thermal Machines, Fluid Mechanics	26.5%	26.8%	22.2%	26.1%	25.1%
Particles, Nuclei and Fields	26.8%	25.8%	20.5%	20.0%	22.5%
Astrophysics and Astronomy	20.8%	16.7%	19.3%	19.4%	18.8%
Condensed Matter Physics	9.7%	8.2%	13.6%	10.7%	10.8%
Basic Biological and Medical Research	4.2%	5.2%	5.3%	2.1%	4.2%
Optics, Quantum Optics and Physics of Atoms, Molecules and Plasmas	0.5%	2.1%	2.5%	3.2%	2.4%
Computer Science	2.3%	1.9%	2.5%	2.3%	2.3%
Physical and Theoretical Chemistry	0.3%	1.3%	2.7%	2.7%	2.1%
Geophysics and Geodesy	0.9%	1.3%	3.2%	1.7%	2.0%
Medicine	0.6%	1.9%	1.8%	1.7%	1.7%
Atmospheric Science, Oceanography and Climate Research	0.9%	0.3%	2.1%	2.1%	1.5%
Biological Chemistry and Food Chemistry	0.0%	2.3%	1.4%	1.2%	1.4%
Chemical Solid State and Surface Research	0.9%	1.5%	0.5%	1.8%	1.2%
Materials Science	1.5%	1.5%	0.6%	0.5%	0.9%
Mechanics and Constructive Mechanical Engineering	0.7%	1.4%	0.7%	0.6%	0.9%
Process Engineering, Technical Chemistry	0.1%	0.5%	0.0%	2.4%	0.9%
Geochemistry, Mineralogy and Crystallography	3.2%	0.9%	0.3%	0.2%	0.8%
Zoology	0.0%	0.0%	0.0%	0.7%	0.2%
Water Research	0.0%	0.0%	0.2%	0.2%	0.2%
Construction Engineering and Architecture	0.1%	0.1%	0.1%	0.2%	0.1%
Mathematics	0.2%	0.1%	0.1%	0.0%	0.1%
Statistical Physics, Soft Matter, Biological Physics, Nonlinear Dynamics	0.0%	0.0%	0.0%	0.0%	0.0%
Molecular Chemistry	0.0%	0.0%	0.0%	0.0%	0.0%
Production Technology	0.0%	0.0%	0.0%	0.0%	0.0%
Systems Engineering	0.0%	0.0%	0.0%	0.0%	0.0%
Agriculture, Forestry and Veterinary Medicine	0.0%	0.0%	0.0%	0.0%	0.0%
Electrical Engineering and Information Technology	0.0%	0.0%	0.0%	0.0%	0.0%
Geography	0.0%	0.0%	0.0%	0.0%	0.0%
Materials Engineering	0.0%	0.0%	0.0%	0.0%	0.0%
Microbiology, Virology and Immunology	0.0%	0.0%	0.0%	0.0%	0.0%
Total	100.0%	100.0%	100.0%	100.0%	100.0%

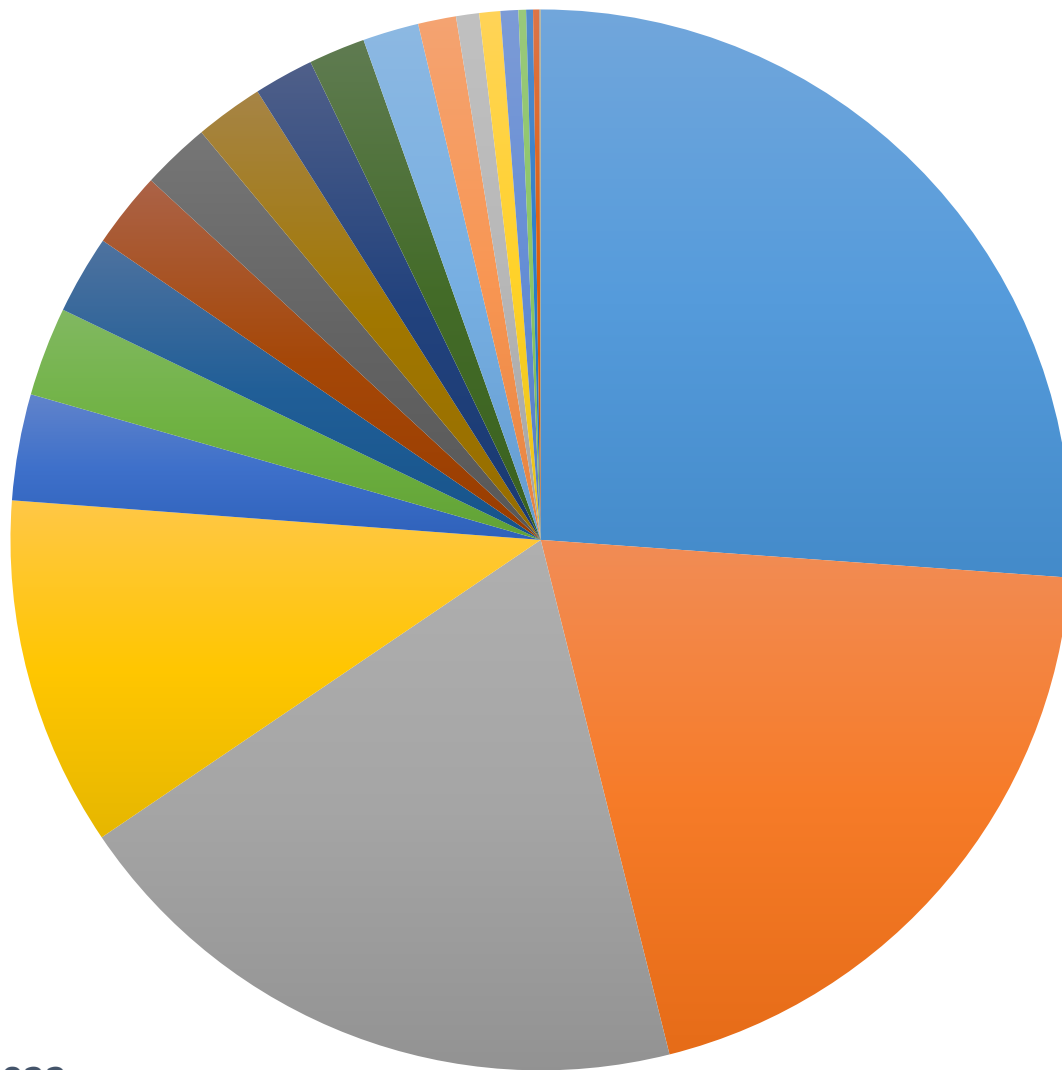
Usage by Research Area

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

Optics, Quantum Optics and Physics of Atoms, Molecules and Plasmas

Physical and Theoretical Chemistry

Process Engineering, Technical Chemistry

Computer Science

Basic Biological and Medical Research

Atmospheric Science, Oceanography and Climate Research

Chemical Solid State and Surface Research

Geophysics and Geodesy

Medicine

Biological Chemistry and Food Chemistry

Zoology

Mechanics and Constructive Mechanical Engineering

2022

Year

