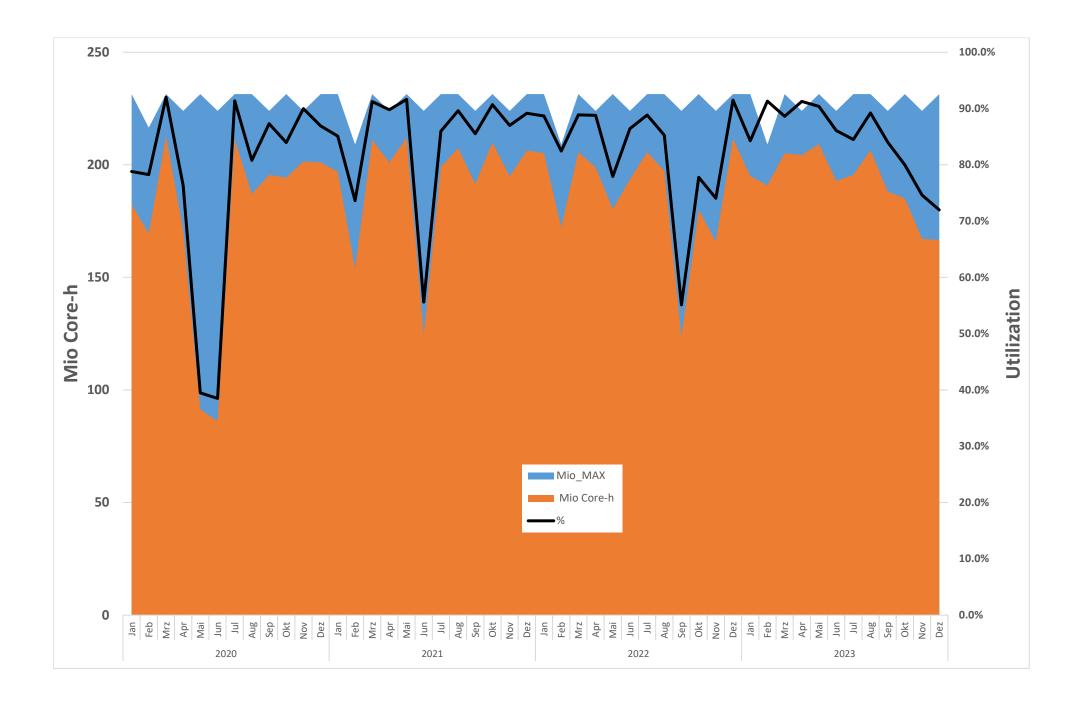


Usage

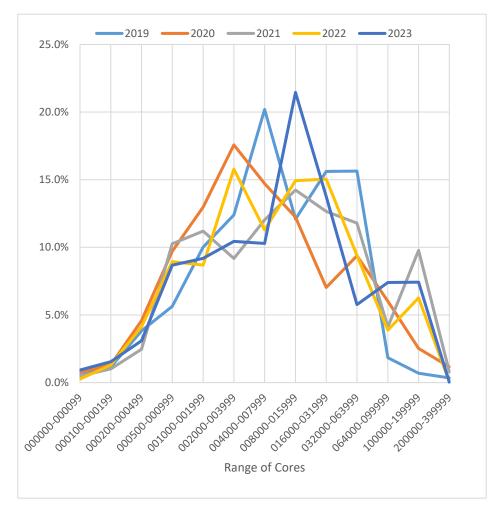
Date	Mio_MAX	Mio Core-h	%	Jobs
2023	2724.7	2306.3	84.7%	486284
Jan	231.4	195.0	84.3%	29788
Feb	209.0	190.9	91.3%	35388
Mrz	231.4	205.1	88.6%	36127
Apr	223.9	204.4	91.3%	29195
Mai	231.4	209.1	90.4%	28627
Jun	223.9	192.8	86.1%	28807
Jul	231.4	195.5	84.5%	37750
Aug	231.4	206.5	89.2%	88275
Sep	223.9	188.1	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
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		91.6%	33933
Jun	223.9	124.5	55.6%	26573
Jul	231.4	199.0	86.0%	46100
Aug	231.4	207.4		34126
Sep	223.9	191.5	85.5%	35375
Okt	231.4	209.9		33786
Nov	223.9	194.9		25767
Dez	231.4	206.3	89.2%	287782
2020	2732.2	2104.1		659920
2019	1142.1	830.1		181474
Total	12048.4	9788.7	81.2%	2475533

Mio_Max = max of potential usage = walltime of month * number of cores % = utilization = % of Max = Mio Core-h/Mio MAX



Usage (core-h) by Job size

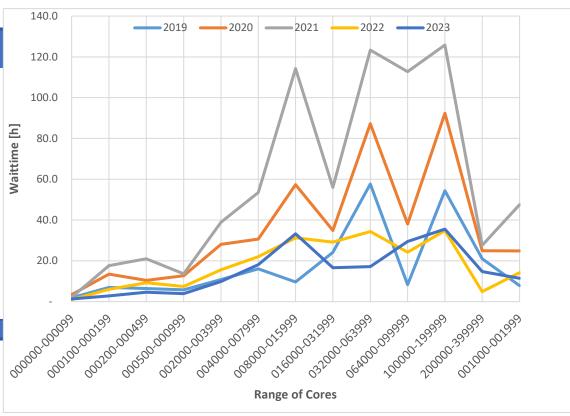
Usage by Job Size						
Range of cores	2019	2020	2021	2022	2023	Total
000000-000099	0.5%	0.8%	0.5%	0.3%	0.9%	0.6%
000100-000199	1.2%	1.3%	1.0%	1.3%	1.5%	1.3%
000200-000499	3.8%	4.6%	2.5%	4.1%	3.1%	3.6%
000500-000999	5.6%	9.7%	10.3%	8.9%	8.7%	9.1%
001000-001999	10.0%	13.0%	11.2%	8.7%	9.2%	10.4%
002000-003999	12.4%	17.6%	9.2%	15.8%	10.4%	13.1%
004000-007999	20.2%	14.7%	12.0%	11.3%	10.3%	12.7%
008000-015999	12.1%	12.2%	14.2%	14.9%	21.5%	15.5%
016000-031999	15.6%	7.0%	12.7%	15.0%	13.8%	12.5%
032000-063999	15.6%	9.4%	11.8%	9.4%	5.8%	9.6%
064000-099999	1.8%	6.0%	4.1%	3.9%	7.4%	5.0%
100000-199999	0.7%	2.5%	9.8%	6.3%	7.4%	6.1%
200000-399999	0.3%	1.2%	0.8%	0.1%	0.0%	0.5%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



Wait time by Jobsize

Average Wait Time [hours] by Jobsize

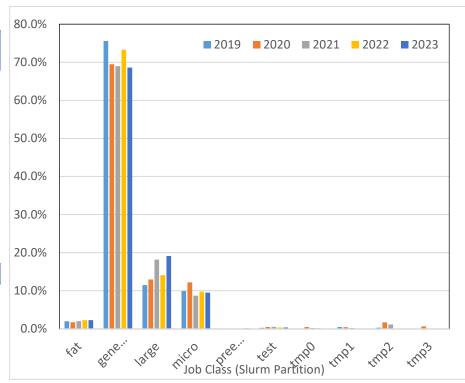
Avg. Wait Time [h]						
Jobsize [cores}]	2019	2020	2021	2022	2023	Total
000000-000099	1.9	3.4	2.1	1.0	1.3	1.9
000100-000199	7.0	13.5	17.7	6.0	2.8	9.4
000200-000499	6.4	10.4	21.0	9.3	4.6	10.3
000500-000999	5.7	12.7	13.7	7.5	3.9	8.7
002000-003999	10.8	28.1	38.9	15.6	9.9	20.7
004000-007999	16.0	30.7	53.5	22.0	18.1	28.1
008000-015999	9.6	57.3	114.3	31.3	33.3	49.2
016000-031999	24.2	34.9	56.0	29.1	16.6	32.2
032000-063999	57.7	87.3	123.4	34.3	17.1	63.9
064000-099999	8.3	38.0	112.7	24.2	29.5	42.6
100000-199999	54.4	92.4	125.8	34.8	35.5	68.6
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	21.2
Total	17.8	35.3	58.0	18.0	15.3	28.9



Usage by Job Class

% Usage (core-h) by Jobclass

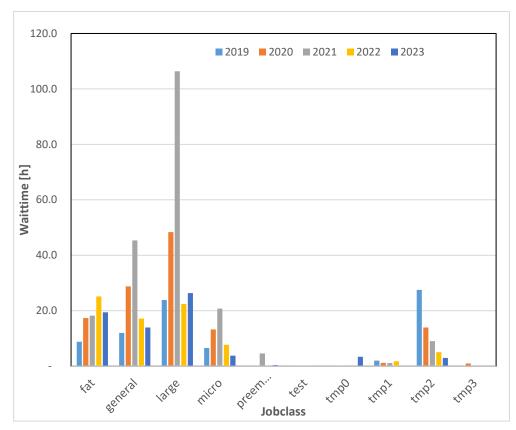
Usage						
	2019	2020	2021	2022	2023	Total
fat	2.0%	1.7%	2.0%	2.3%	2.3%	2.1%
general	75.6%	69.5%	69.0%	73.3%	68.6%	70.5%
large	11.5%	12.9%	18.2%	14.1%	19.1%	15.8%
micro	9.9%	12.2%	8.7%	9.8%	9.5%	10.0%
preempt	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%
test	0.2%	0.5%	0.5%	0.3%	0.3%	0.4%
tmp0	0.0%	0.5%	0.2%	0.2%	0.0%	0.2%
tmp1	0.5%	0.4%	0.2%	0.1%	0.0%	0.2%
tmp2	0.3%	1.7%	1.1%	0.1%	0.0%	0.7%
tmp3	0.0%	0.6%	0.0%	0.0%	0.0%	0.1%
Total	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	Total
fat	8.8	17.3	18.3	25.1	19.4	17.8
general	12.0	28.8	45.3	17.2	14.0	23.5
large	23.9	48.4	106.3	22.4	26.3	45.5
micro	6.6	13.3	20.8	7.7	3.8	10.4
preempt	na	na	4.6	na	0.4	2.5
test	0.1	0.1	0.1	0.0	0.0	0.1
tmp0	na	0.2	0.0	0.1	3.4	0.9
tmp1	2.0	1.2	1.2	1.8	0.2	1.3
tmp2	27.5	14.0	9.1	5.1	3.0	11.7
tmp3	na	1.0	0.0	na	na	0.5
Total	11.5	13.8	20.6	9.9	7.8	13.0



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

LV2 LV3 LV4

	2010	2020	2021	2022	2022	To
	2019	2020	2021	2022	2023	
/Sics	57.8%	52.9%	56.0%	53.3%	57.9%	
Particles, Nuclei and Fields	26.8%	25.8%	20.5%	20.0%	29.1%	
Nuclear and Elementary Particle Physics, Quantum Mechanics, Relativity, Fields	26.8%	25.8%	20.5%	20.0%	29.1%	
Astrophysics and Astronomy	20.8%	16.7%	19.3%	19.4%	13.5%	
Astrophysics and Astronomy	20.8%	16.7%	19.3%	19.4%	13.5%	
Condensed Matter Physics	9.7%	8.2%	13.6%	10.7%	11.9%	
Theoretical Condensed Matter Physics	9.7%	7.4%	13.1%	10.6%	11.9%	10
Experimental Condensed Matter Physics	0.0%	0.8%	0.5%	0.1%	0.0%	(
Optics, Quantum Optics and Physics of Atoms, Molecules and Plasmas	0.5%	2.1%	2.5%	3.2%	1.7%	2
Optics, Quantum Optics, Atoms, Molecules, Plasmas	0.5%	2.1%	2.5%	3.2%	1.7%	
Statistical Physics, Soft Matter, Biological Physics, Nonlinear Dynamics	0.0%	0.0%	0.0%	0.0%	1.7%	(
Statistical Physics, Soft Matter, Biological Physics, Nonlinear Dynamics	0.0%	0.0%	0.0%	0.0%	1.7%	
rmal Engineering/ Process Engineering	26.5%	27.3%	22.2%	28.5%	27.4%	2
Heat Energy Technology, Thermal Machines, Fluid Mechanics	26.5%	26.8%	22.2%	26.1%	26.7%	2
Fluid Mechanics	26.4%	22.3%	19.1%	25.8%	26.5%	2
Technical Thermodynamics	0.1%	4.4%	3.1%	0.3%	0.2%	
Energy Process Engineering	0.0%	0.2%	0.0%	0.0%	0.0%	
Process Engineering, Technical Chemistry	0.1%	0.5%	0.0%	2.4%	0.7%	(
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%	0.0%	
sciences	4.9%	2.6%	5.9%	4.2%	5.8%	
Atmospheric Science, Oceanography and Climate Research	0.9%	0.3%	2.1%	2.1%	4.3%	
Atmospheric Science	0.9%	0.3%	2.1%	2.1%	4.3%	
Geophysics and Geodesy	0.9%	1.3%	3.2%	1.7%	1.2%	
Geophysics	0.5%	0.8%	2.5%	1.4%	1.1%	
Geodesy, Photogrammetry, Remote Sensing, Geoinformatics, Cartography	0.3%	0.5%	0.7%	0.3%	0.0%	
Geochemistry, Mineralogy and Crystallography	3.2%	0.9%	0.3%	0.2%	0.3%	
Geochemistry, Mineralogy and Crystallography	3.2%	0.9%	0.3%	0.2%	0.3%	
Water Research	0.0%	0.0%	0.2%	0.2%	0.1%	(
Hydrogeology, Hydrology, Limnology, Urban Water Management, Water Chemistry, Integrated Water Resources Management	0.0%	0.0%	0.2%	0.2%	0.1%	
	0.0%	0.0%	0.0%	0.0%	0.0%	
Geography	0.0,0	0.075	2.0,3	0.070		
Geography Physical Geography	0.0%	0.0%	0.0%	0.0%	0.0%	(

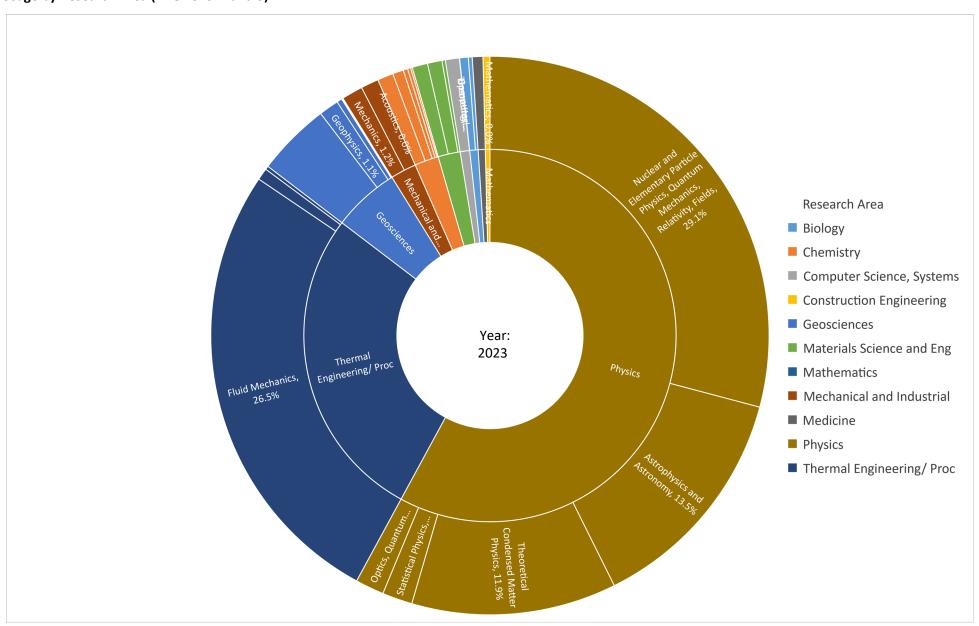
Usage by Research Area

Physical and Theoretical Chemistry	0.3%	1.3%	2.7%	2.7%	0.9%	1.
Physical Chemistry of Molecules, Interfaces and Liquids - Spectroscopy, Kinetics	0.0%	0.4%	2.0%	1.5%	0.9%	1.
General Theoretical Chemistry	0.3%	0.9%	0.8%	1.2%	0.0%	0
Chemical Solid State and Surface Research	0.9%	1.5%	0.5%	1.8%	0.9%	1
Theory and Modelling	0.9%	1.5%	0.4%	0.4%	0.6%	О
Physical Chemistry of Solids and Surfaces, Material Characterisation	0.0%	0.0%	0.1%	1.4%	0.3%	(
Solid State and Surface Chemistry, Material Synthesis	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%	1
Biological and Biomimetic Chemistry	0.0%	2.3%	1.4%	1.2%	0.1%	:
Molecular Chemistry	0.0%	0.0%	0.0%	0.0%	0.2%	(
Inorganic Molecular Chemistry	0.0%	0.0%	0.0%	0.0%	0.2%	
y sy same and the	4.2%	5.2%	5.3%	2.8%	0.7%	
Basic Biological and Medical Research	4.2%	5.2%	5.3%	2.1%	0.5%	
Bioinformatics and Theoretical Biology	1.8%	2.1%	4.6%	1.3%	0.0%	
Biophysics	1.1%	2.5%	0.6%	0.8%	0.5%	
Biochemistry	1.3%	0.5%	0.1%	0.0%	0.0%	
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%	
outer Science, Systems and Electrical Engineering	2.3%	1.9%	2.5%	2.3%	0.8%	
Computer Science	2.3%	1.9%	2.5%	2.3%	0.8%	
Massively Parallel and Data-Intensive Systems	2.2%	1.9%	2.5%	1.9%	0.8%	
Computer Architecture and Embedded Systems	0.0%	0.0%	0.0%	0.4%	0.0%	
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%	
icine	0.6%	1.9%	1.8%	1.7%	0.6%	
Medicine	0.6%	1.9%	1.8%	1.7%	0.6%	
Biomedical Technology and Medical Physics	0.6%	1.9%	1.8%	1.7%	0.6%	
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%	(

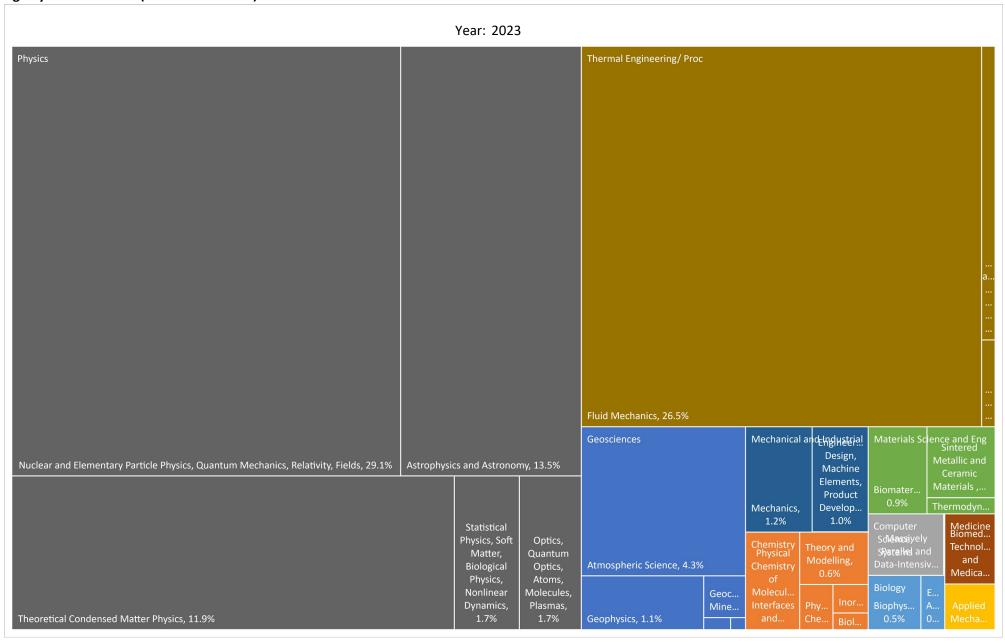
Usage by Research Area

Mechanical and Industrial Engineering	0.7%	1.4%	0.7%	0.6%	2.3%	1.2%
Mechanics and Constructive Mechanical Engineering	0.7%	1.4%	0.7%	0.6%	2.3%	1.2%
Engineering Design, Machine Elements, Product Development	0.6%	0.5%	0.5%	0.6%	1.0%	0.7%
Mechanics	0.1%	0.9%	0.2%	0.0%	1.2%	0.5%
Acoustics	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Production Technology	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Metal-Cutting Manufacturing Engineering	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%	1.2%
Materials Science	1.5%	1.5%	0.6%	0.5%	1.1%	1.0%
Thermodynamics and Kinetics of Materials	1.5%	1.5%	0.5%	0.5%	0.2%	0.7%
Biomaterials	0.0%	0.0%	0.1%	0.0%	0.9%	0.2%
Materials Engineering	0.0%	0.0%	0.0%	0.0%	0.8%	0.2%
Sintered Metallic and Ceramic Materials	0.0%	0.0%	0.0%	0.0%	0.8%	0.2%
Construction Engineering and Architecture	0.1%	0.1%	0.1%	0.2%	0.4%	0.2%
Construction Engineering and Architecture	0.1%	0.1%	0.1%	0.2%	0.4%	0.2%
Applied Mechanics, Statics and Dynamics	0.1%	0.1%	0.1%	0.2%	0.4%	0.2%
Geotechnics, Hydraulic Engineering	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Mathematics	0.2%	0.1%	0.1%	0.0%	0.0%	0.1%
Mathematics	0.2%	0.1%	0.1%	0.0%	0.0%	0.1%
Mathematics	0.2%	0.1%	0.1%	0.0%	0.0%	0.1%
Agriculture, Forestry and Veterinary Medicine	0.0%	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%	0.0%
Basic Research on Pathogenesis, Diagnostics and Therapy and Clinical Veterinary Medicine	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total Control of the	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Usage by Research Area (DFG Level 2 and 3)



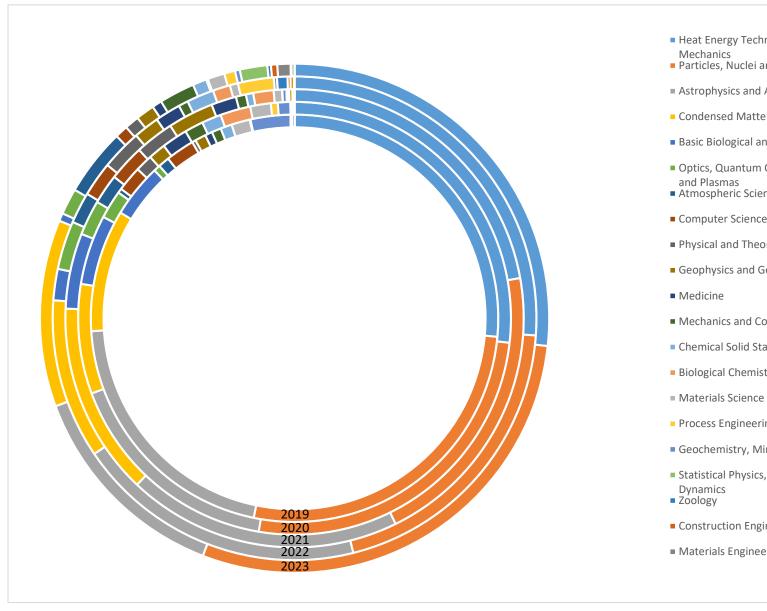
Usage by Research Area (DFG Level 2 and 3)



Usage by research Area (DFG Level 3)

Usage	Year					
DFG_TOPIC_LVL3_DESC	2019	2020	2021	2022	2023	Total
Heat Energy Technology, Thermal Machines, Fluid Mechanics	26.5%	26.8%	22.2%	26.1%	26.7%	25.5%
Particles, Nuclei and Fields	26.8%	25.8%	20.5%	20.0%	29.1%	24.1%
Astrophysics and Astronomy	20.8%	16.7%	19.3%	19.4%	13.5%	17.5%
Condensed Matter Physics	9.7%	8.2%	13.6%	10.7%	11.9%	11.0%
Basic Biological and Medical Research	4.2%	5.2%	5.3%	2.1%	0.5%	3.3%
Optics, Quantum Optics and Physics of Atoms, Molecules and Plasmas	0.5%	2.1%	2.5%	3.2%	1.7%	2.2%
Atmospheric Science, Oceanography and Climate Research	0.9%	0.3%	2.1%	2.1%	4.3%	2.1%
Computer Science	2.3%	1.9%	2.5%	2.3%	0.8%	1.9%
Physical and Theoretical Chemistry	0.3%	1.3%	2.7%	2.7%	0.9%	1.8%
Geophysics and Geodesy	0.9%	1.3%	3.2%	1.7%	1.2%	1.8%
Medicine	0.6%	1.9%	1.8%	1.7%	0.6%	1.4%
Mechanics and Constructive Mechanical Engineering	0.7%	1.4%	0.7%	0.6%	2.3%	1.2%
Chemical Solid State and Surface Research	0.9%	1.5%	0.5%	1.8%	0.9%	1.1%
Biological Chemistry and Food Chemistry	0.0%	2.3%	1.4%	1.2%	0.1%	1.1%
Materials Science	1.5%	1.5%	0.6%	0.5%	1.1%	1.0%
Process Engineering, Technical Chemistry	0.1%	0.5%	0.0%	2.4%	0.7%	0.8%
Geochemistry, Mineralogy and Crystallography	3.2%	0.9%	0.3%	0.2%	0.3%	0.7%
Statistical Physics, Soft Matter, Biological Physics, Nonlinear Dynamics	0.0%	0.0%	0.0%	0.0%	1.7%	0.4%
Zoology	0.0%	0.0%	0.0%	0.7%	0.2%	0.2%
Construction Engineering and Architecture	0.1%	0.1%	0.1%	0.2%	0.4%	0.2%
Materials Engineering	0.0%	0.0%	0.0%	0.0%	0.8%	0.2%
Water Research	0.0%	0.0%	0.2%	0.2%	0.1%	0.1%
Mathematics	0.2%	0.1%	0.1%	0.0%	0.0%	0.1%
Molecular Chemistry	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%
Systems Engineering	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Production Technology	0.0%	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%	0.0%
Electrical Engineering and Information Technology	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Geography	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Microbiology, Virology and Immunology	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Usage By Research Area (DFG Lvevel 3)



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

