

# **Tandem-ALPI-PIAVE Beam Time Schedule**

INFN-LNL

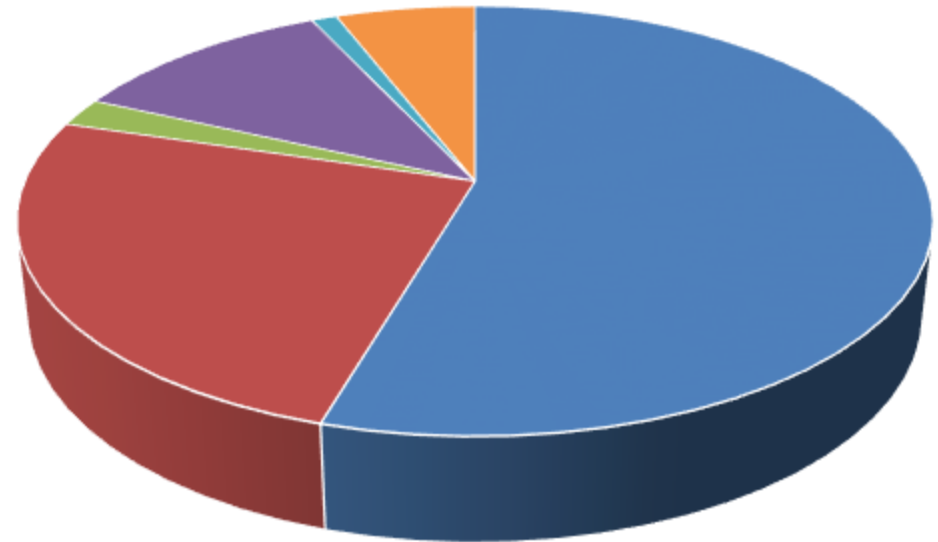
Users' Board Meeting  
November 16-17, 2023

# Beam Time Requests in '22-'23 PACs

# PAC Dec 2022 - Beam Time Availability

**Jan 23, 2023 – May 31, 2023 (TAP)**  
**Jun 1 2023 – July 28, 2023 (TA)**

**PA: 108 Days available**  
**TA: 58 Days available**



■ new experiments	■ backlog NP
■ backlog IP	■ Acc. Div. Test & maint.
■ Radioprotection	■ Director

- 33 days: Backlog PA (NP+IP)
- 16 days: Backlog TA (NP)
- 2 days: Backlog T (IP)
- 20 days: Acc. Div. Tests and Tandem maintenance
- 2 days: Radioprotection
- 11 days: Director



**103 days (70 PA + 33 TA) for new experiments**

# PAC – December 2022

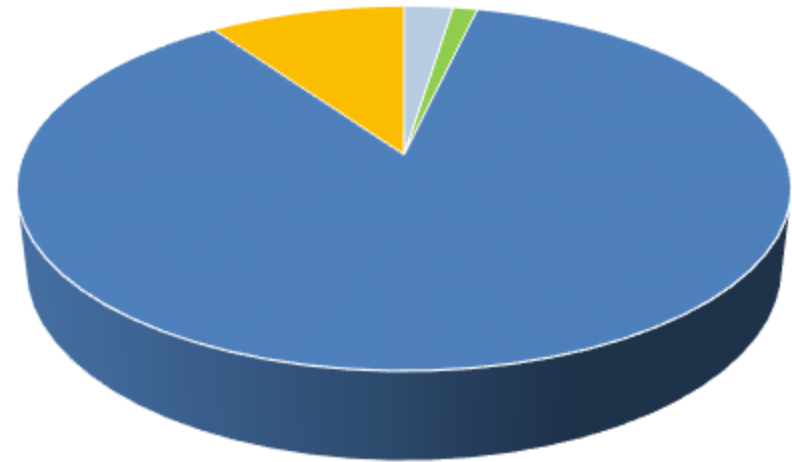
Total Request <i>29 Proposals</i>	(230+68) days	
<b>Nuclear Physics</b> <i>Proposals + 1 LOI</i>	(212+68) days	94 %
Interdisciplinary Physics <i>Proposals</i>	(18+(4)) days	6 %
Total Approved (priority A)	85 days	
<b>Nuclear Physics</b>	70PA+8TA days	91.0 %
Interdisciplinary Physics	2+5(+4) days	9.0 %

**103 days available-85 priority A => 18 days for priority B experiments**

# PAC Jul 2023 - Beam Time Availability

**Oct 2 2023 – Dec 23, 2023 (Tandem)**

**Tandem: 81 Days available**



Rad. Prot. Tests    backlog IP  
new experiments    Director



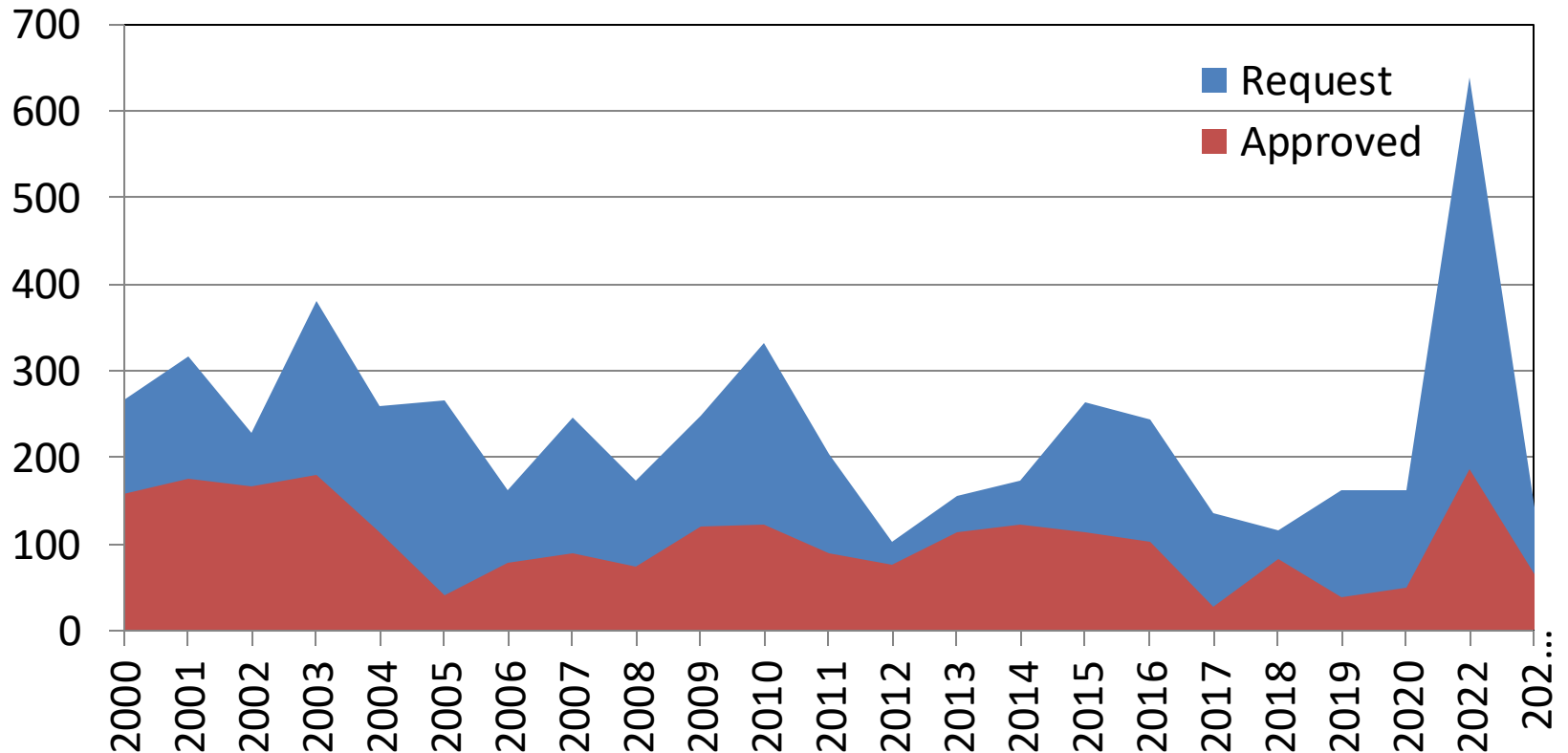
**71 days (Tandem) for new experiments**

# PAC – July 2023

Total Request <i>24 Proposals</i>	(144+13) days	
<b>Nuclear Physics</b> <i>18 Proposals</i>	(129+13) days	90 %
Interdisciplinary Physics <i>6 Proposals</i>	(15) days	10 %
Total Approved (priority A)	71 days	
<b>Nuclear Physics</b>	64 days	90 %
Interdisciplinary Physics	7 days	10 %

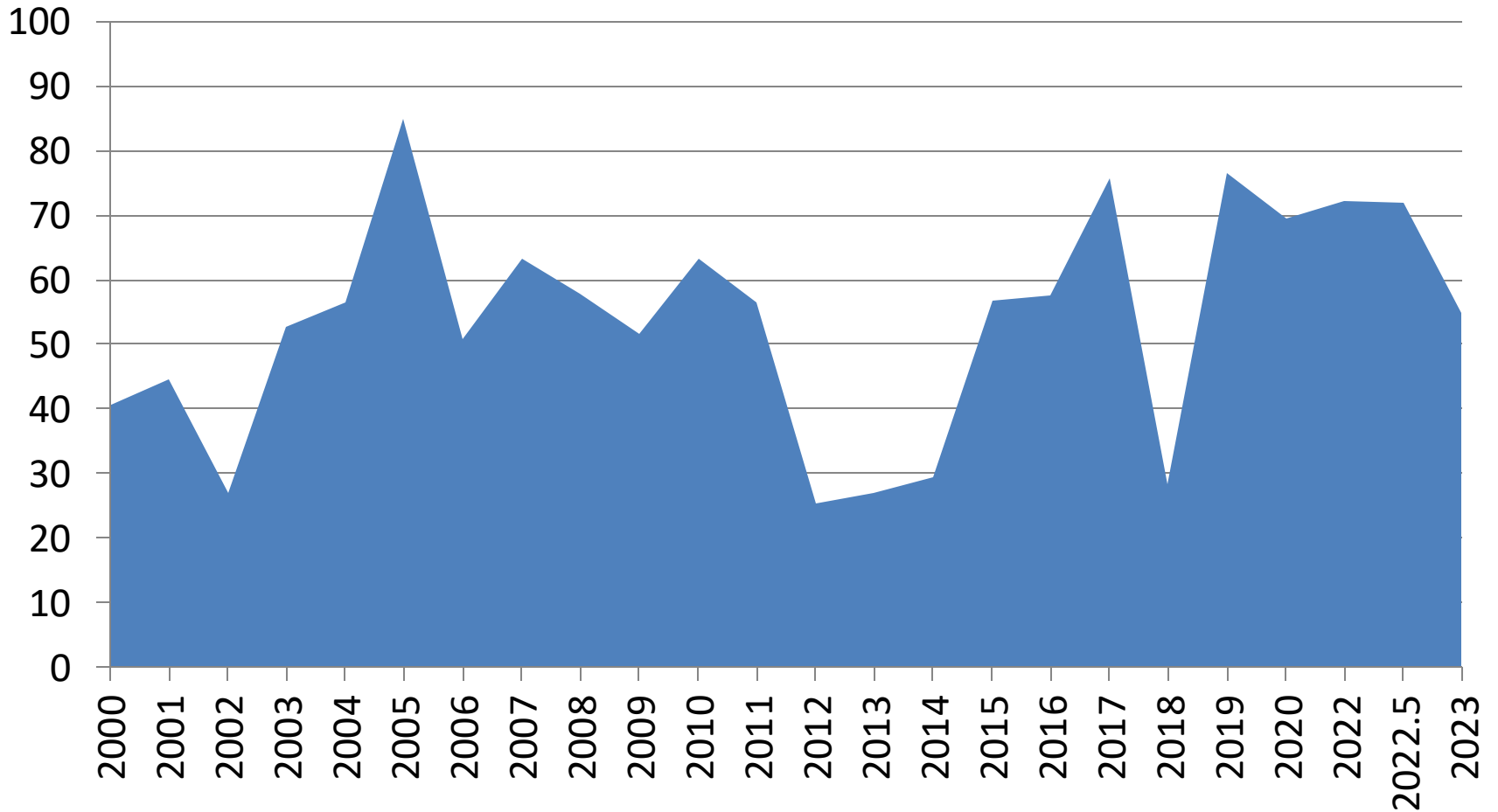
**Up to seven days more possible for priority B experiments if start on 25th September**

# Beam-Time Request: Nuclear Physics (I)



**Only 1 PAC in 2023**

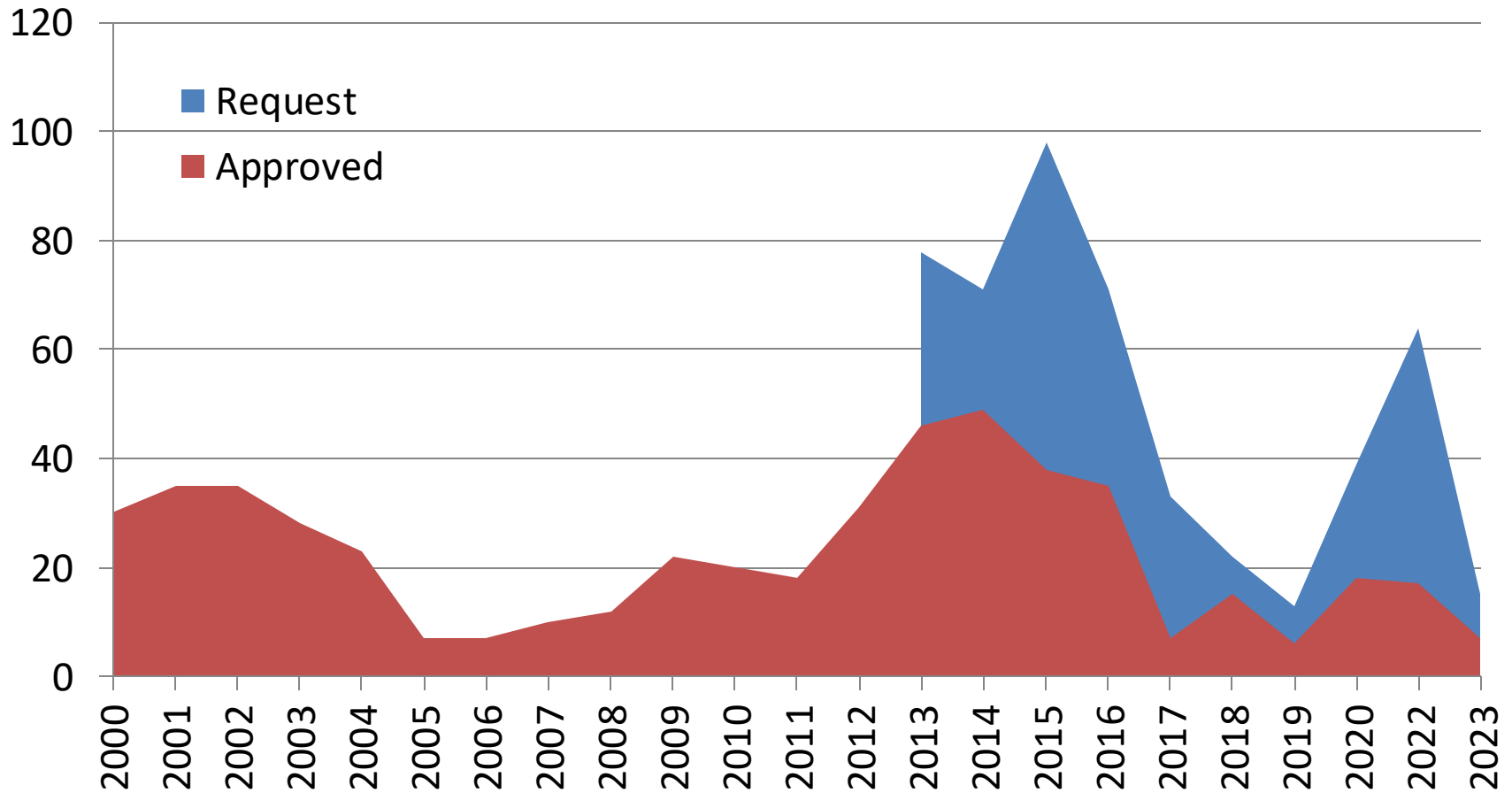
# Rejection Factor: Nuclear Physics



**Only 1 PAC in 2023**

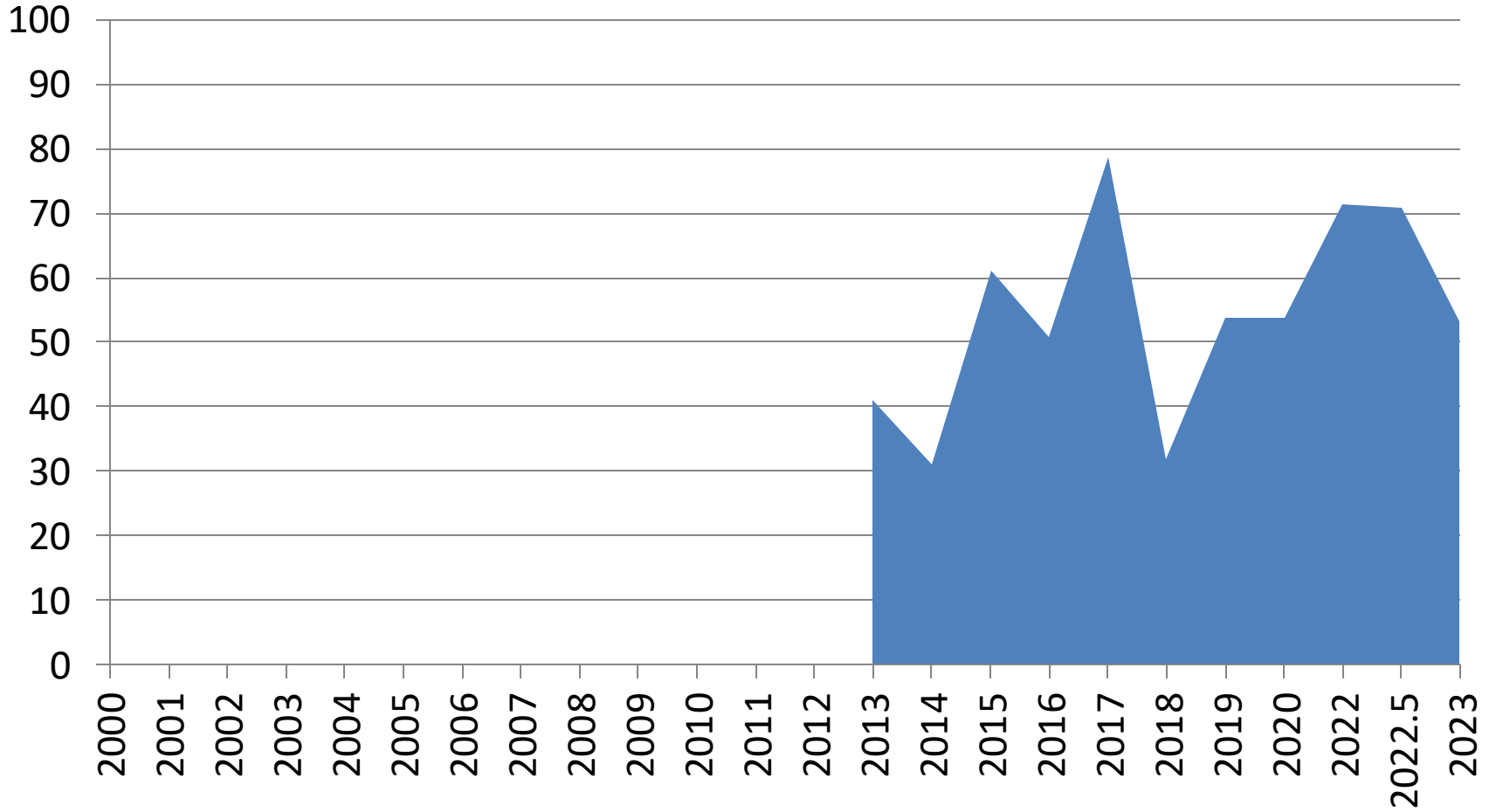


# Beam-Time Request: Interd. Physics

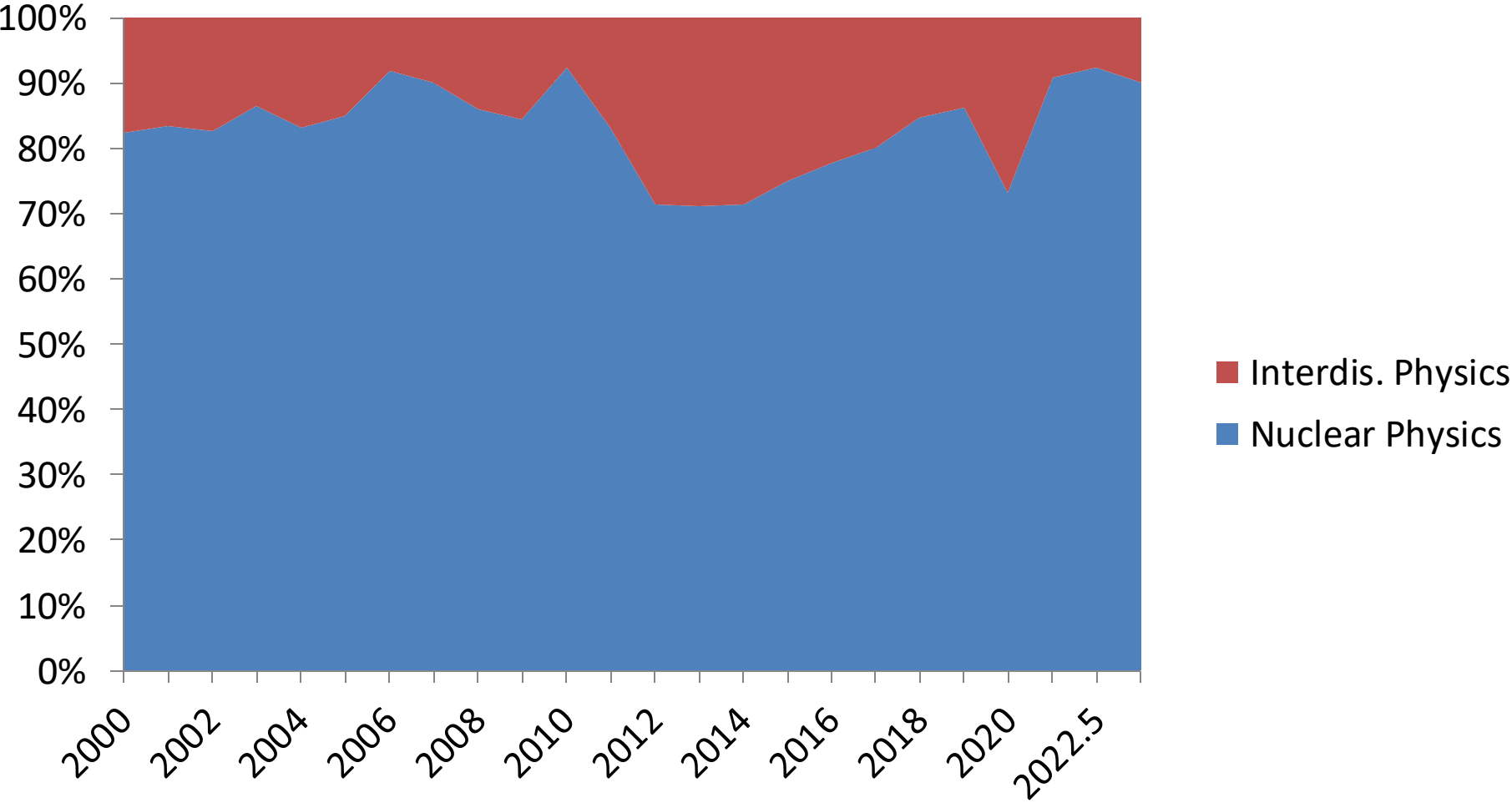


**Only 1 PAC in 2023**

# Rejection Factor: Interd. Physics



# Historical Beam-Time Sharing



**"Semester"**  
**April–December 2022**

# Summary of 2022

Setup	Exp. Hall	Exp.	Beam on Target (hours)	Beam prep. (hours)	% of time
<b>AGATA – complementary detectors</b>	I	6	657	105	25%
<b>AGATA-PRISMA</b>	I	5	1065	264	43%
<b>PISOLO</b>	II	4	327	61	12%
<b>8PLP</b>	II	1	143	25	5%
SIRAD	I	8	228	47	9%
MESH – +30 line	I	4	140	39	6%
TOTAL		28	2560	541	100%

# Nuclear Physics (I)

Nuclear Physics					
Experiment	Setup	Spokesperson	Beam accelerator	BoT+ prep	status
Exp. 22.12 <i>commissioning</i>	AGATA	F. Crespi	32S, 58Ni, 34S - T	17+3	Performed
Exp. 22.18	AGATA	N. Marchini	58Ni - T	4+1	Performed
Exp. 18.16	8pLP	E. Vardaci	32S/36S -T	7	Performed
Exp. 22.07	AGATA	F. Galtarossa	36S -T	7+1	Performed
Exp. 20.10	PISOLO	M. Del Fabbro	26Mg - T	7+2	Performed
Exp. 22.42	AGATA+PRISMA	N. Marginean	32S -T	14+1	Performed
Exp. 20.22	PISOLO	E. Fioretto	32S -T	4	Performed
Exp. 20.33	PISOLO	G. Montagnoli	30Si -T	3	Performed
Exp. 22.02 (commissioning)	AGATA	A. Stefanini	30Si -T	3+1	Performed
Exp. 22.41	AGATA	K. Wrzosek	60Ni - T	5+1	Performed
Exp. 22.11 (B)	AGATA	W. Korten	74Se - T	5.1	Performed
Exp. 22.40 (B)	AGATA+PRISMA	I. Zanon	36S -TA	8+2	Performed

# Nuclear Physics (II)

Nuclear Physics					
Experiment	setup	Spokesperson	Beam	BoT+ prep	status
Exp. 22.23	AGATA+PRISMA	A. Gottardo	208Pb - PA	15+4	Performed
Exp. 22.43 (target test)	AGATA+PRISMA	R.M. Perez Vidal	208Pb - PA	3+(0)	1 Performed
Exp. 22.28	AGATA+PRISMA	L. Corradi	116Sn - PA	14+4	14+4
Exp. 22.04	AGATA+PRISMA	P. Reiter	136Xe -PA	7+3	7+3
Exp. 22.37	PISOLO	D. Carbone	18O - TA	2(+2)	2(+2)
Exp. 20.13	GARFIELD	M. Cicerchia	16,17,18° - TA	8+6	8+6

**Backlog (NP): 44 days (28 PA; 16 TA)**

# Interdisciplinary Physics

Interdisciplinary					
Experiment	setup	Spokesperson	Beam	BoT+ prep	status
Exp. 16.05/16.36/17.03/19.01	MESH	G. Ghigo	197Au/208Pb - PA	2+2	2T + 2PA
Exp. 19.01	FANNILI	I. Porras	14N -T	2+1	Performed
Exp. 22.33	FANNILI	P. Carniti	14N - T	1	Performed
Exp. 22.26	SIRAD	G. Calvo	M.I.S. -T	2	Performed
Exp. 22.39	SIRAD	G. Busatto	Ni/Br/I -T	2	Performed
Exp. 22.33	SIRAD	S. Bagatin	M.I.S. -T	2	Performed
Exp. 20.17	SIRAD	M. Signorelli	M.I.S. -T	1	Performed
Exp. 22.21	SIRAD	S. Mattiazzo	M.I.S. -T	2	Performed
Exp. 22.38	SIRAD	S. Bagatin	M.I.S. - T	1	Performed
Exp. 22.35	STARTRACK	D. Bortot	1,2H - T	1	2T

**Backlog (IP): 4 days (2 T; 2 PA)**



**"Semester"**  
**January 2023-July 2023**

# Nuclear Physics (I)

## Nuclear Physics

Experiment	setup	Spokesperson	Beam	BoT+ prep	status
Exp. 22.28	AGATA+PRISMA	L. Corradi	$^{116}\text{Sn}$ - PA	14+4	Performed
Exp. 22.04	AGATA+PRISMA	P. Reiter	$^{136}\text{Xe}$ - PA	7+3	Performed
Exp. 22.85 (B)	AGATA+PRISMA	J.F. Smith	$^{112}\text{Sn}$ - PA	6+4	Performed
Exp. 22.97	AGATA+PRISMA	T. Mijatovic	$^{208}\text{Pb}$ -PA	8+4	Performed
Exp. 22.81	AGATA-PRISMA	C. Fransen	$^{48}\text{Ca}$ -PA	12+4	12+4 PA
Exp. 22.76 (B)	AGATA-PRISMA	D. Brugnara	$^{136}\text{Xe}$ -PA	12+3	Performed
Exp. 22.78 (B)	AGATA-PRISMA	K. Wimmer	$^{26}\text{Mg}$ - PA	7+3	-
-	AGATA-PRISMA	K. Wimmer	$^{22}\text{Ne}$ - PA	6+3	Performed

# Nuclear Physics (II)

Nuclear Physics					
Experiment	setup	Spokesperson	Beam	BoT +prep	status
Exp. 22.101	AGATA-PRISMA	R. Perez-Vidal	70Zn -PA	9+4	9+4 PA
Exp. 22.96	AGATA-PRISMA	A. Goasduff	129Xe - PA	10+3	7(10)+3 PA
Exp. 22.91	AGATA	G. Pasqualato	18O - T	6+1	Performed
Exp. 22.72	AGATA	J. Ha	1H - T	10+1	Performed
Exp. 22.37	PISOLO	D. Carbone	18O - TA	2(+2)	Performed
Exp. 20.13	GARFIELD	M. Cicerchia	16,17,18O - TA	8+6	8+6

Backlog (NP): 56 days (42 PA; 14 TA, 0 T)

# Interdisciplinary Physics

Interdisciplinary					
Experiment	Setup	Spokesperson	Beam accelerator	BoT +prep	status
Exp. 22.33, 22.93 (I)	MESH	G. Ghigo	208Pb - PA	4+4	4+4 PA
Exp. 22.93 (II)	MESH	G. Ghigo	197Au - T	2	Performed
Exp. 22.89	SIRAD FALAPHEL	S. Mattiazzo	M.I.S. - T	2	Performed
Exp. 22.99	SIRAD SEE-NV	M. Bagatin	M.I.S. -T	1	1T
<del>Exp. 22.35</del>	<del>STARTRACK</del>	<del>D. Bortot</del>	<del>1H,2H -T</del>	<del>2</del>	<del>2T</del>

**Backlog (IP): 9 days (1 T; 8 PA)**

**Quadrimester**  
**September 2023-December 2023**

# Nuclear Physics (I)

## Nuclear Physics

Experiment	Setup	Spokesperson	Beam accelerator	BoT+p rep	status
Exp. 23.010	AGATA-EUCLIDES-PLUNG	A. Ertoprak	$^{40}\text{Ca}$ - T	6+7	6+7
Exp. 23.006	AGATA-SPIDER	M. Balogh	$^{44}\text{Ca}$ - T	6+3	6+3
Exp. 23.008 (B)	AGATA-SPIDER	K. Hadynska Klek	$^{60}\text{Ni}$ - T	5	Performed
Exp. 23.015	AGATA	C. Petrache	$^{33}\text{S}$ - T	6	Performed
Exp. 23.012	AGATA-DSSD	M. Del Fabbro	$^{24}\text{Mg}$ $^{28}\text{Si}$ - T	8	Performed
Exp. 23.003	AGATA-SPIDER(CD)	J. Skowronski	$^{16}\text{O}$ - T	8	Performed

# Nuclear Physics Proposals (II)

Nuclear Physics					
Experiment	Setup	Spokesperson	Beam accelerator	BoT+ prep	status
Exp. 23.017	EXOTIC-AGATA	M. Mazzocco	${}^7\text{Li} - \text{T}$	4	2 Performed – 2 to be performed
Exp. 23.007	AGATA-SI	F. Galtarossa	${}^{16}\text{O} - \text{T}$	6	To be performed
Exp. 23.009	AGATA-SI	E. Pilotto	${}^{16}\text{O} - \text{T}$	6	To be performed
Exp. 23.011	AGATA-EUCLIDES	D. Stramaccioni	${}^1\text{H} - \text{T}$	5	To be performed
Exp. 23.020	LIRAS	I. Tisma	${}^{12}\text{C} - \text{T}$	7	7

**Backlog (NP): 19 (+10) days ( 19 + 10 T) at the moment**

# Interdisciplinary Physics Proposals (all Tandem)

Tandem – July 2023					
Experiment	setup	Spokesperson	Beam	BoT+ prep	status
Exp. 23.016	SIRAD DSEE	S. Alberton	28Si, 35Cl, 63Cu	1	TBP
Exp. 23.018	SIRAD FALAPHEL	S. Mattiazzo	16O-19F-28Si-35Cl- 58Ni-79Br-107Ag- 127I	1	Perf
Exp. 23.019	MESH	G. Ghigo	197Au	1	Perf
Exp. 22.022	SIRAD SEE16	S. Mattiazzo	16O-19F-28Si-35Cl- 58Ni-79Br-107Ag- 127I	1	TBP
Exp. 23.023	SIRAD SEENV	M. Bagatin	16O-19F-28Si-35Cl- 58Ni-79Br-107Ag- 127I	2	Perf
Exp. 23.024	SIRAD SEPMOS	G. Busatto	64Ni-79Br-127I	1	TBP

**Backlog (IP): 0 days at the moment**



# 2024

- **February – July 2024**

- Accelerators: Tandem+ALPI+PIAVE available
- PAC meeting: 22-24 January 2024

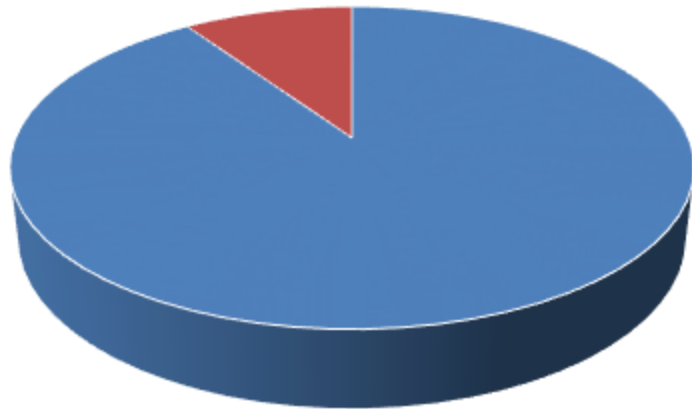
- **October – December 2024**

- Accelerators: Tandem
- PAC meeting: June-July 2024 ?



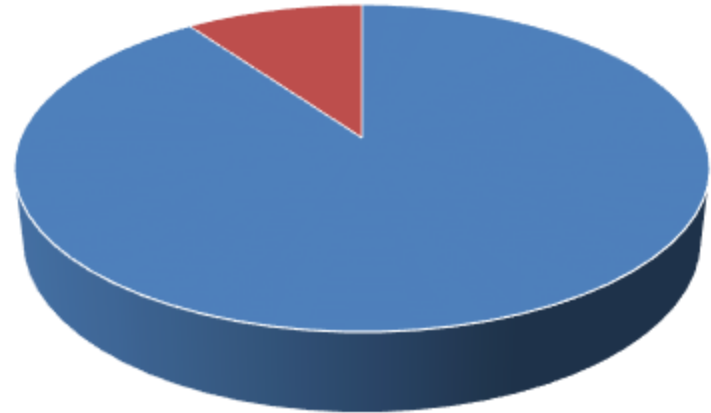
# Beam Time in 2023

**Beam time request  
157 days**



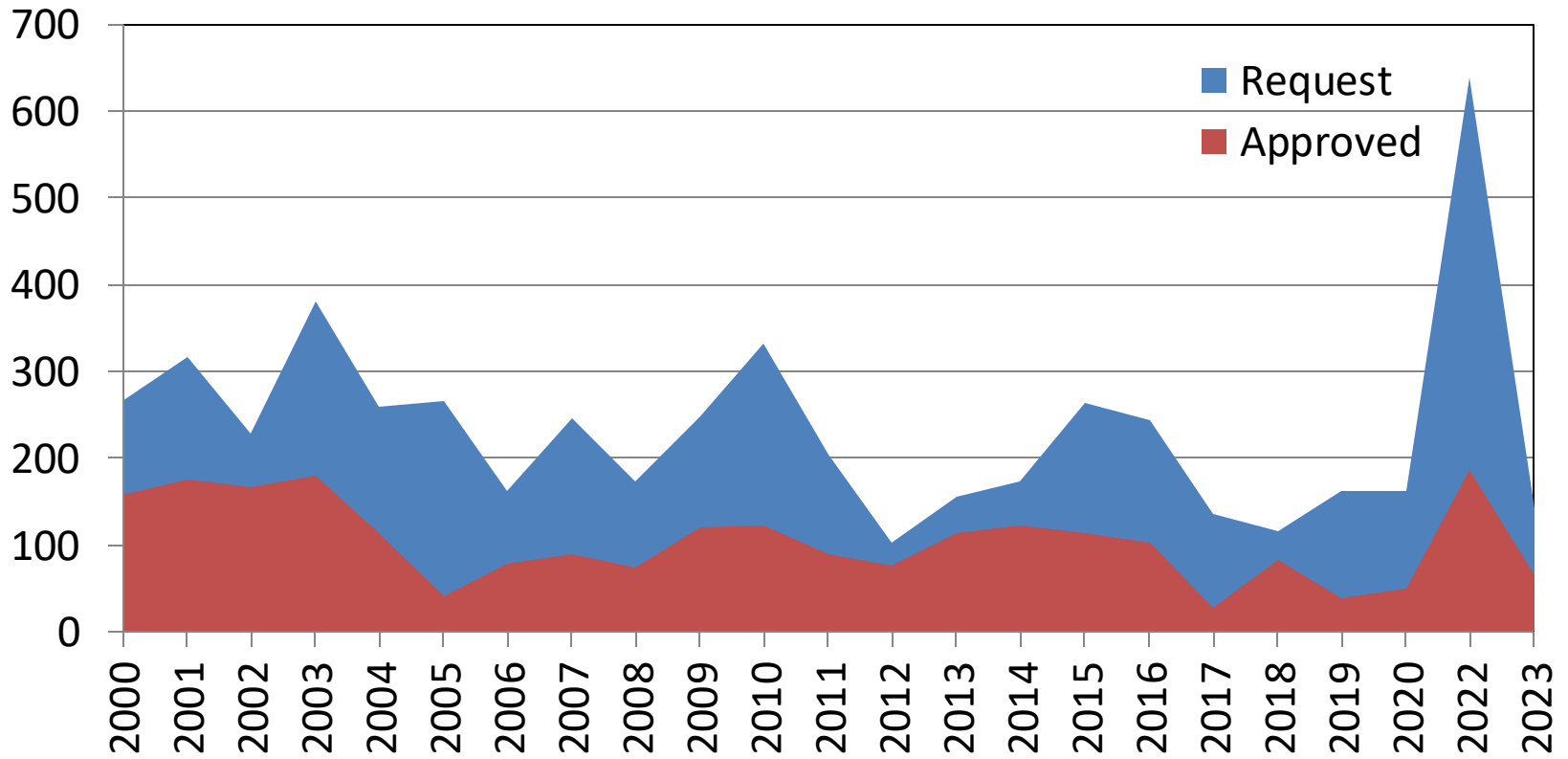
■ NP ■ IP

**Beam time approved  
71 days**

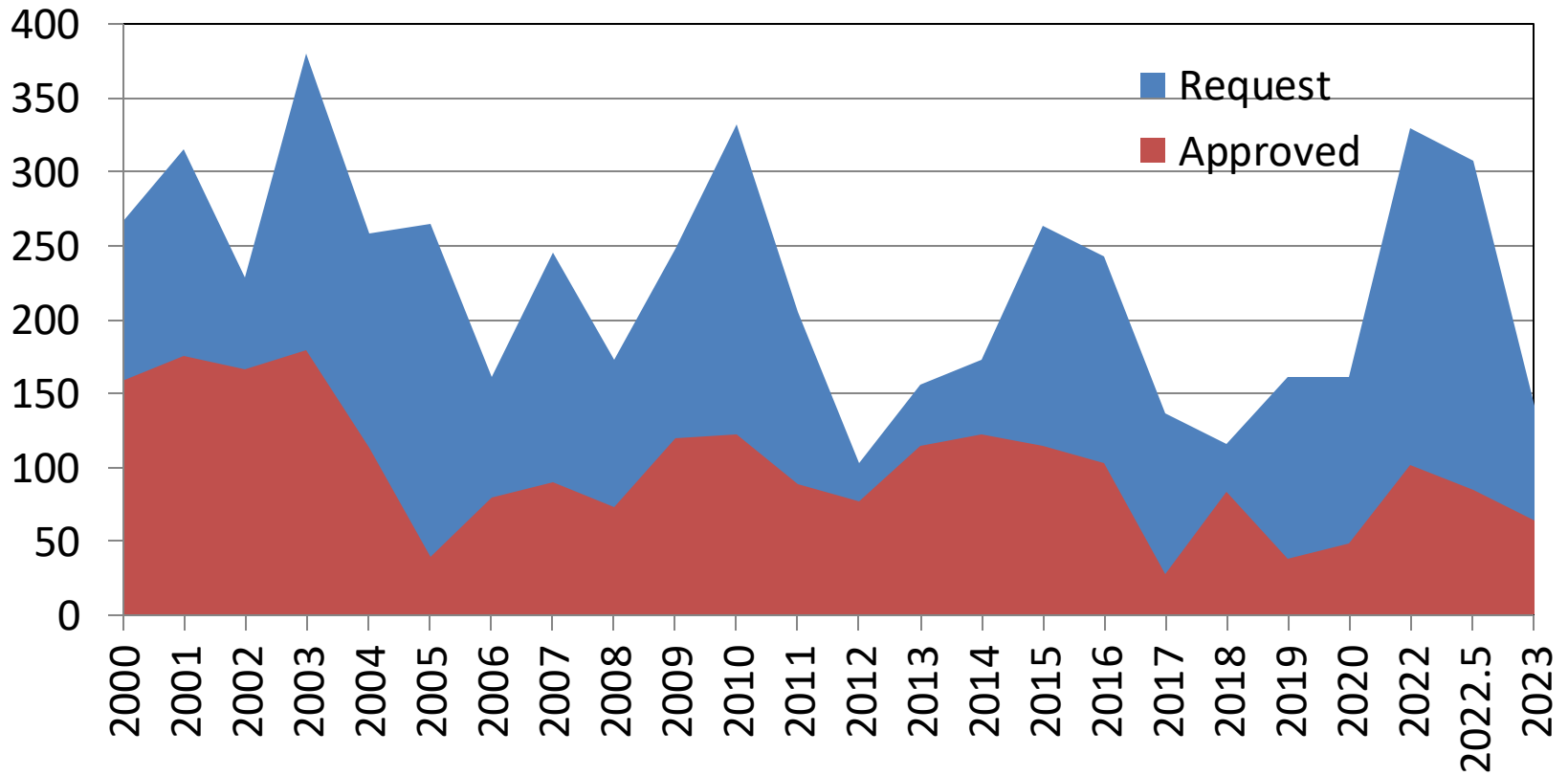


■ NP ■ IP

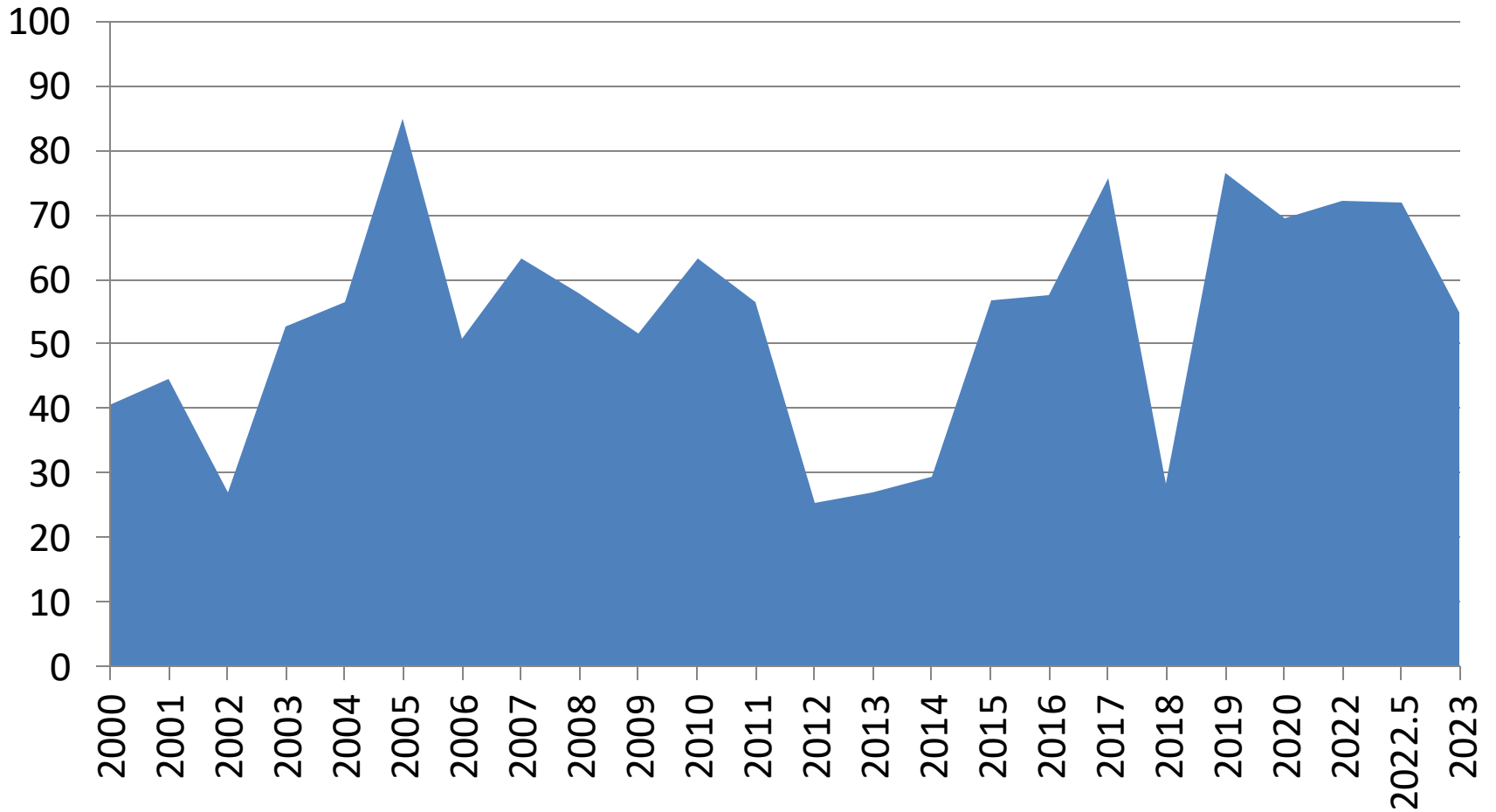
# Beam-Time Request: Nuclear Physics (I)



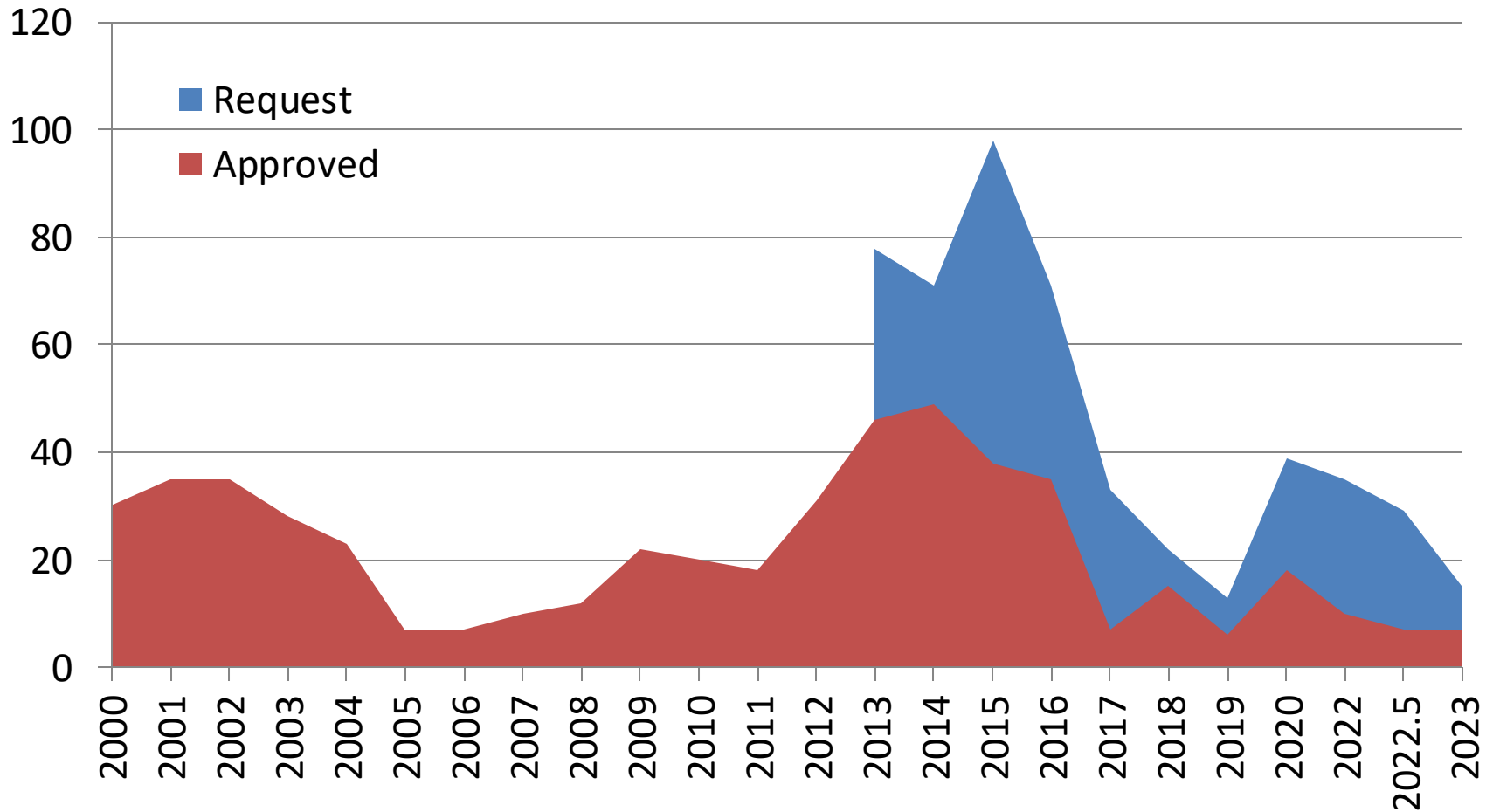
# Beam-Time Request: Nuclear Physics (II)



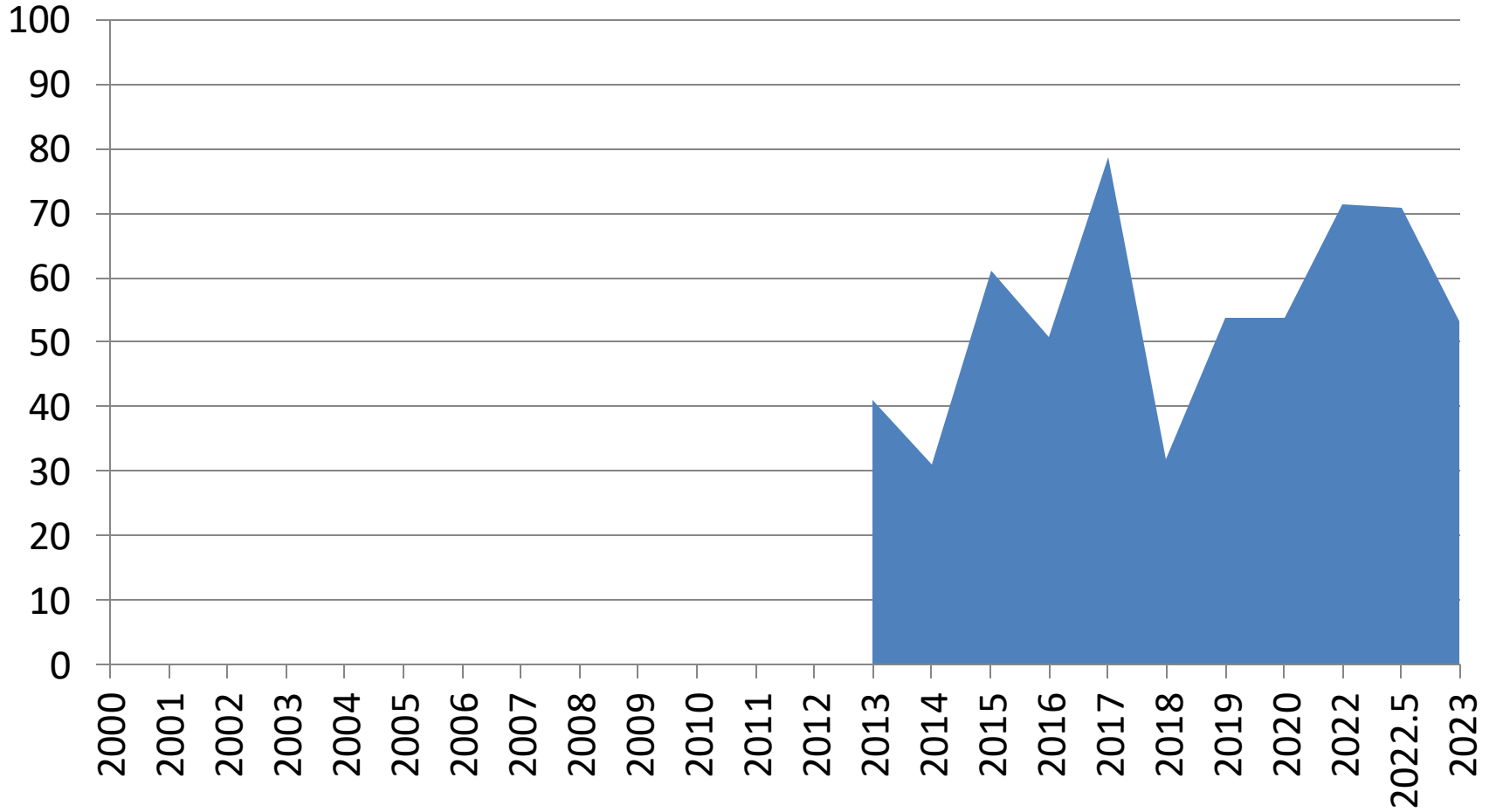
# Rejection Factor: Nuclear Physics



# Beam-Time Request: Interd. Physics

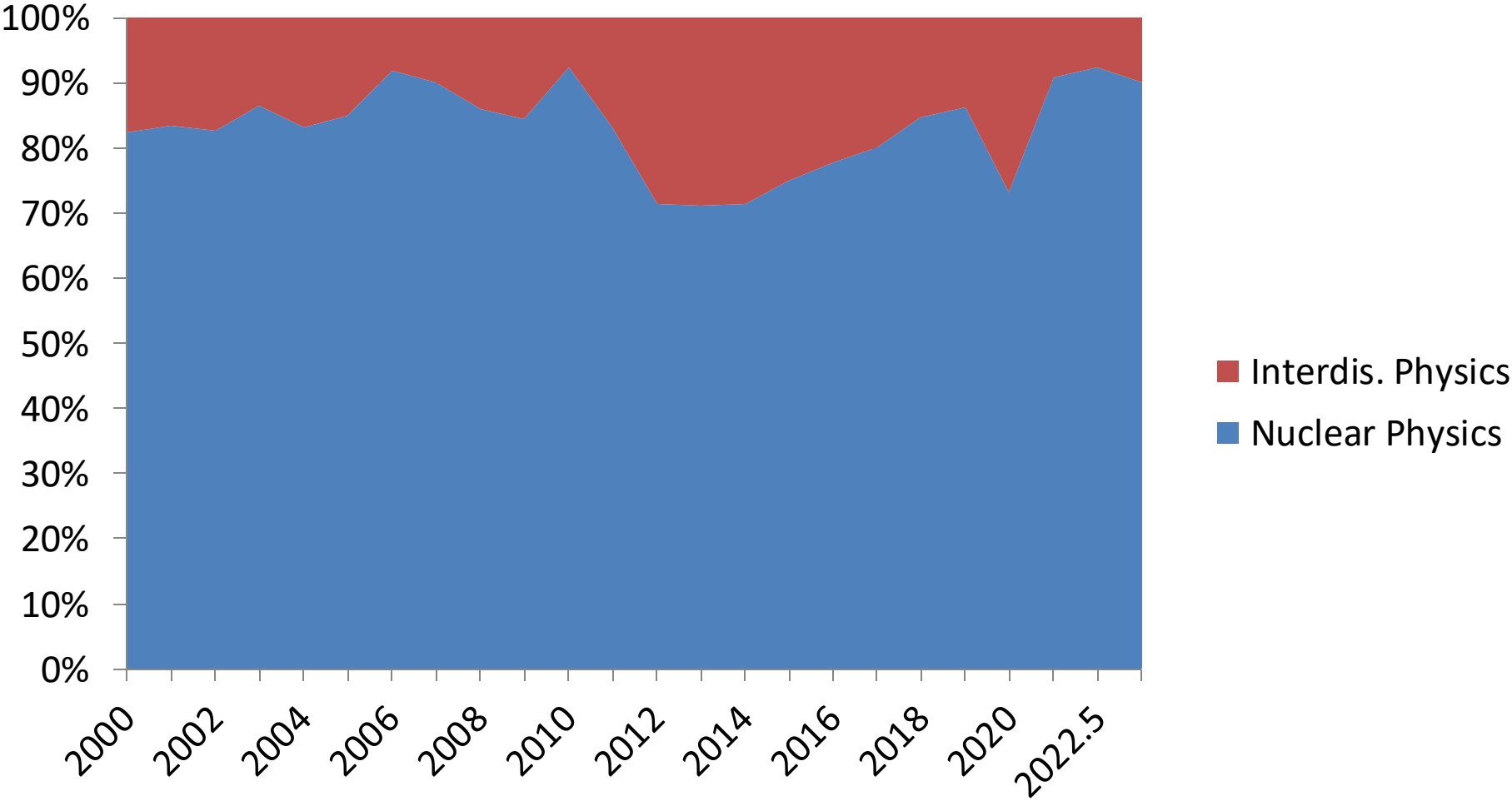


# Rejection Factor: Interd. Physics





# Historical Beam-Time Sharing



## III. Future

# 2024

- **January – July 2024**

- Accelerators: Tandem+ALPI+PIAVE available
- PAC meeting: December 2023

- **October – December 2023**

- Accelerators: Tandem
- PAC meeting: May-June 2024 ?







# Two scenarios

1. T maintenance in April: no TAP beam in April



**103 days (70 PA + 33 TA) for new experiments**

2. T maintenance in June: no TAP beam in (almost all) June, three more weeks of PA beam in April



**103 days (90 PA + 13 TA) for new experiments**

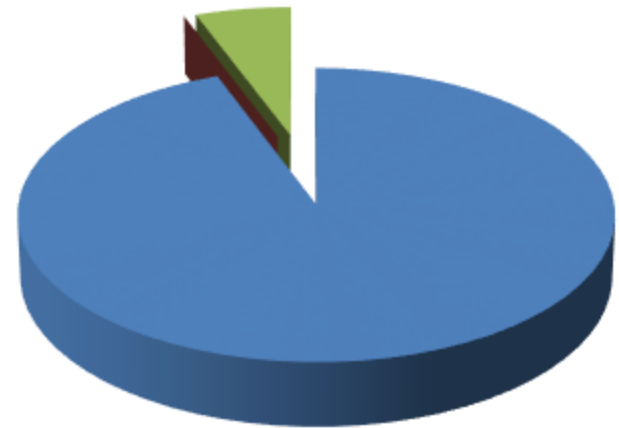
# TAP Proposals

## Nuclear Physics (330)



- TANDEM (136.5)
- TANDEM+ALPI (30)
- PIAVE+ALPI (163.5)

## Interdisciplinary Physics (35)



- TANDEM (33)
- TANDEM+ALPI (0)
- PIAVE+ALPI (2)