



FLNP User Program 2019

Informational report

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PAC CM, Dubna 20-21.01.2020



Work schedule of the IBR-2 reactor in 2019

I cycle:	January 14 – January 27	I ROUND
II cycle:	February 04 – February 22	I ROUND
III cycle:	March 11 – March 22	I ROUND
IV cycle:	April 08 – April 26	I ROUND
V cycle:	May 13 – May 28	I ROUND
VI cycle:	cancelled due to technical reasons	
VII cycle:	October 14 - October 28	II ROUND
VIII cycle:	November 11– November 22	II ROUND
IX cycle:	December 02– December 16	II ROUND



FLNP USERT PROGRAM 2019 - **2680 h** for experiments

I ROUND – all facilities

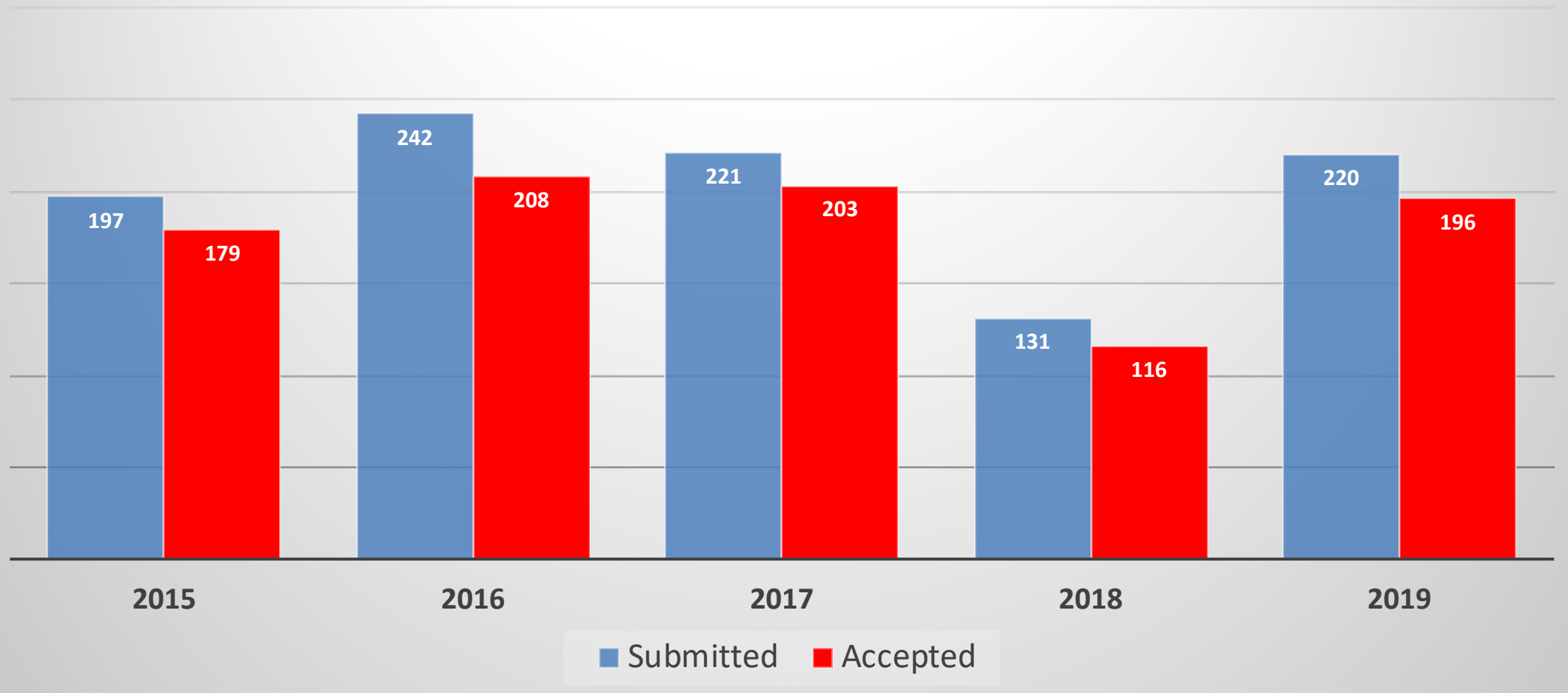
II ROUND – because of technical reason, without YuMO facility

YuMO Experiments During VII-IX IBR cycles:

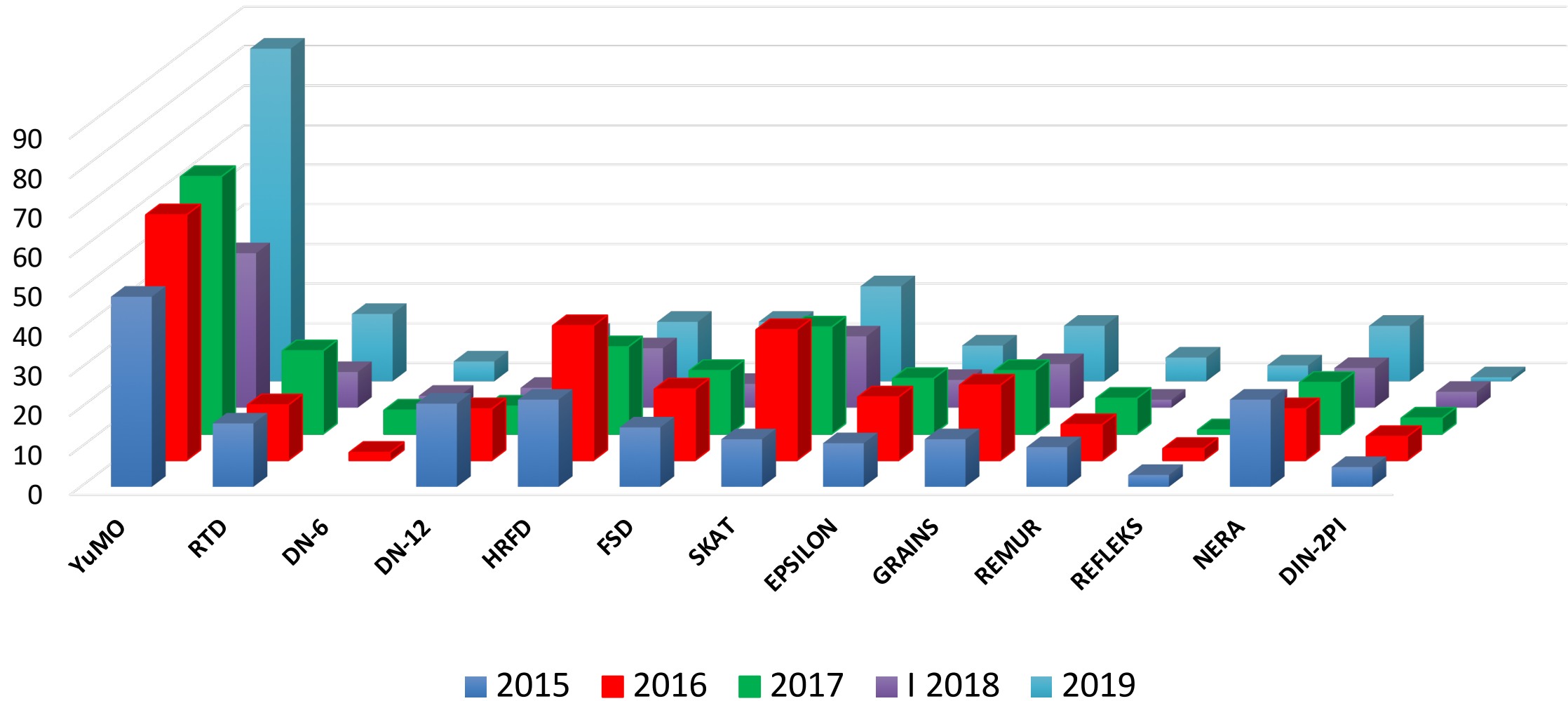
- ❖ Russian Science Foundation Grants
 - RSF Grants “on the basis of the existing world-class scientific infrastructure” (in 3 of 4 Grants received in this category, SANS measurements at the YuMO instrument were planned. Approximately 50 % of planned experiment were carried out;
- ❖ Maintenance of the YuMO instrument:
 - Experiments for the calculations of the beam profile and flux of the YuMO instrument;
 - Methodical experiments;
 - Test experiments with new electronics for the data acquisition system;
- ❖ Some “collaboration experiments”: Romania; Poland; Czech Republic; Hungary; Russian Federation; etc.



Number of proposals



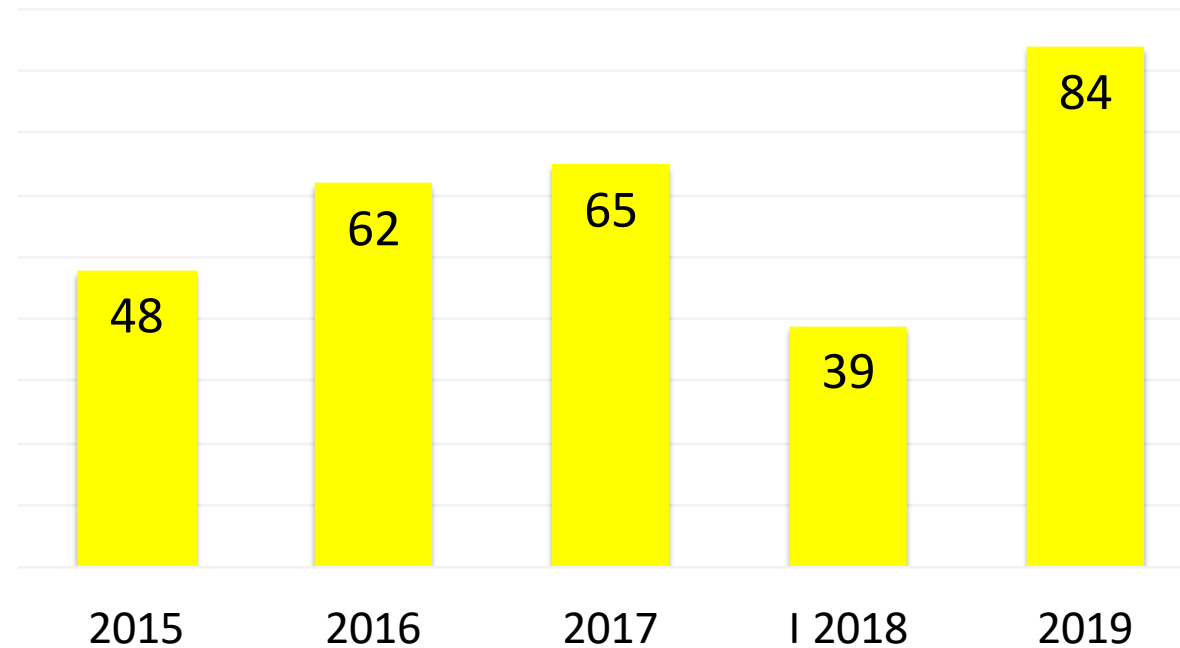
Number of proposals per facility





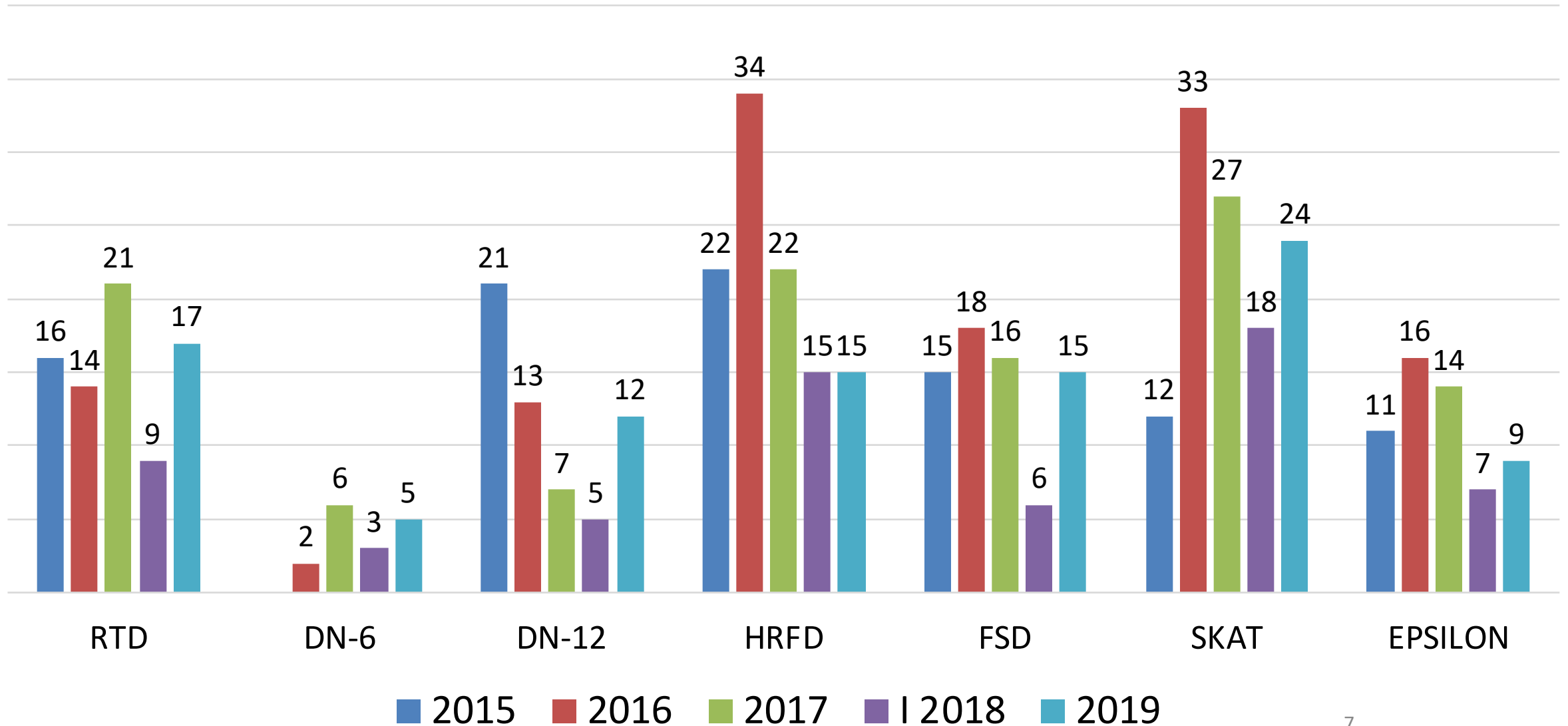
Number of proposals – Small Angle Neutron Scattering

YuMO



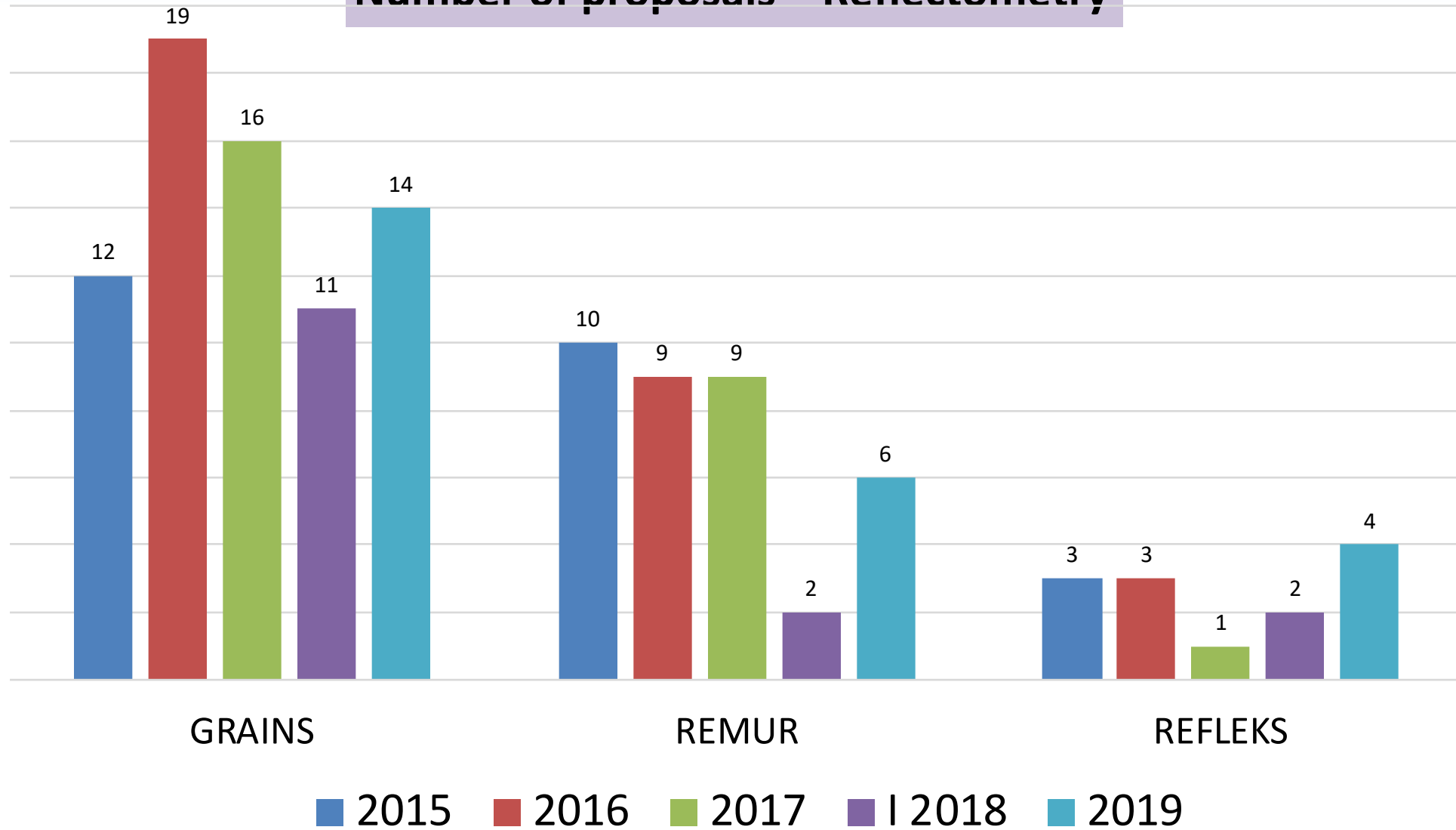


Number of proposals – Diffraction



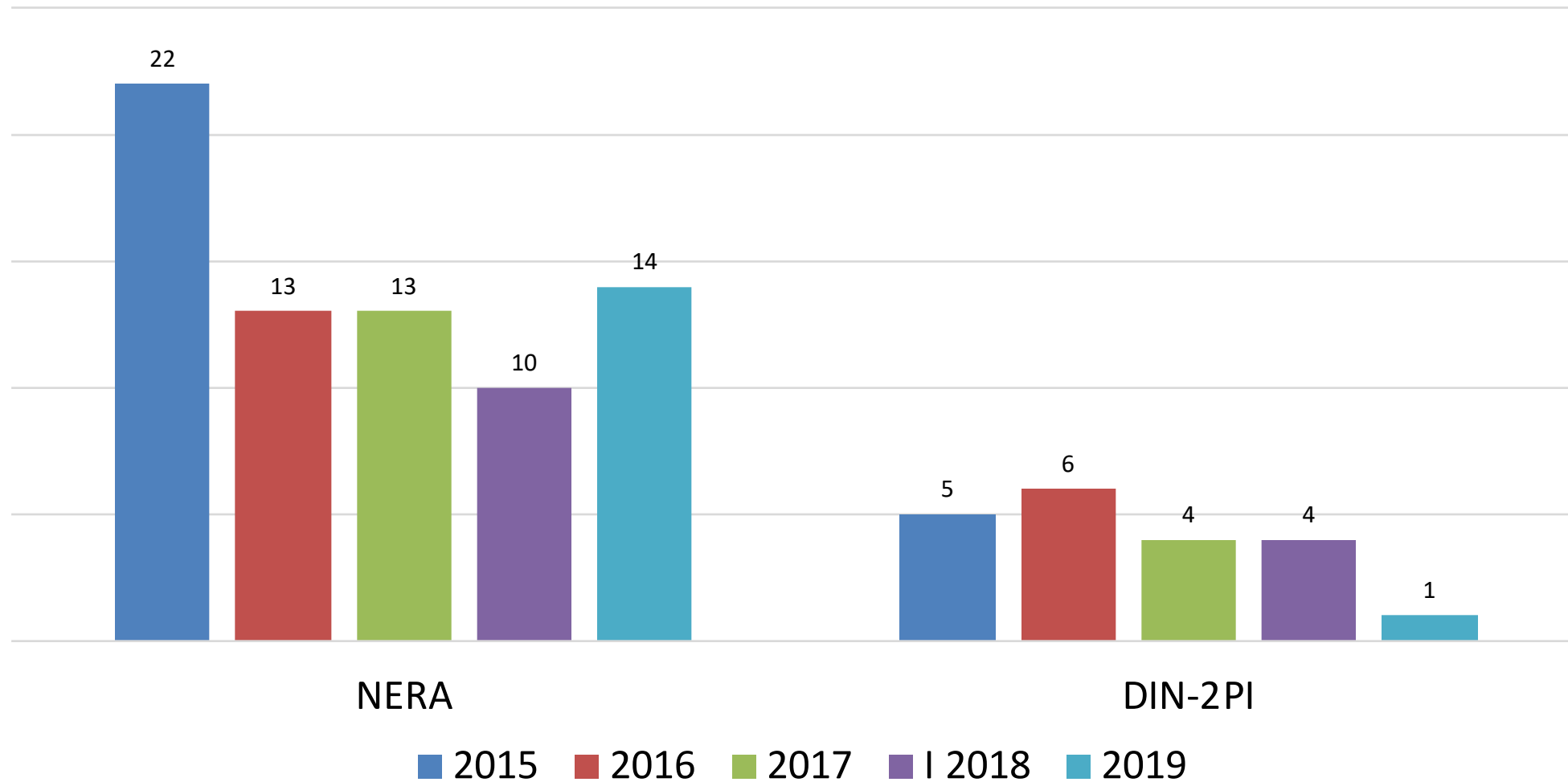


Number of proposals – Reflectometry



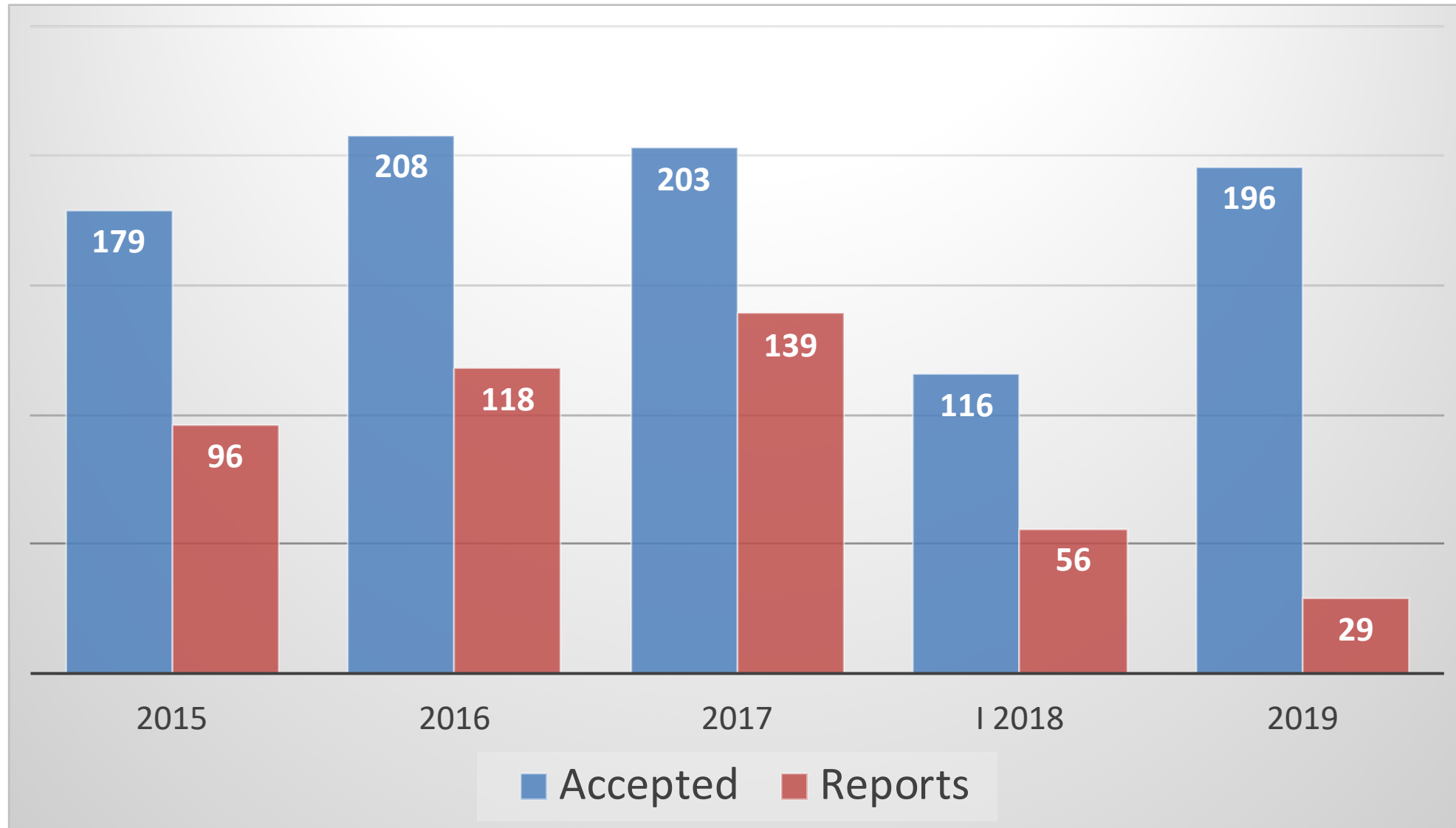


Number of proposals – Spectroscopy



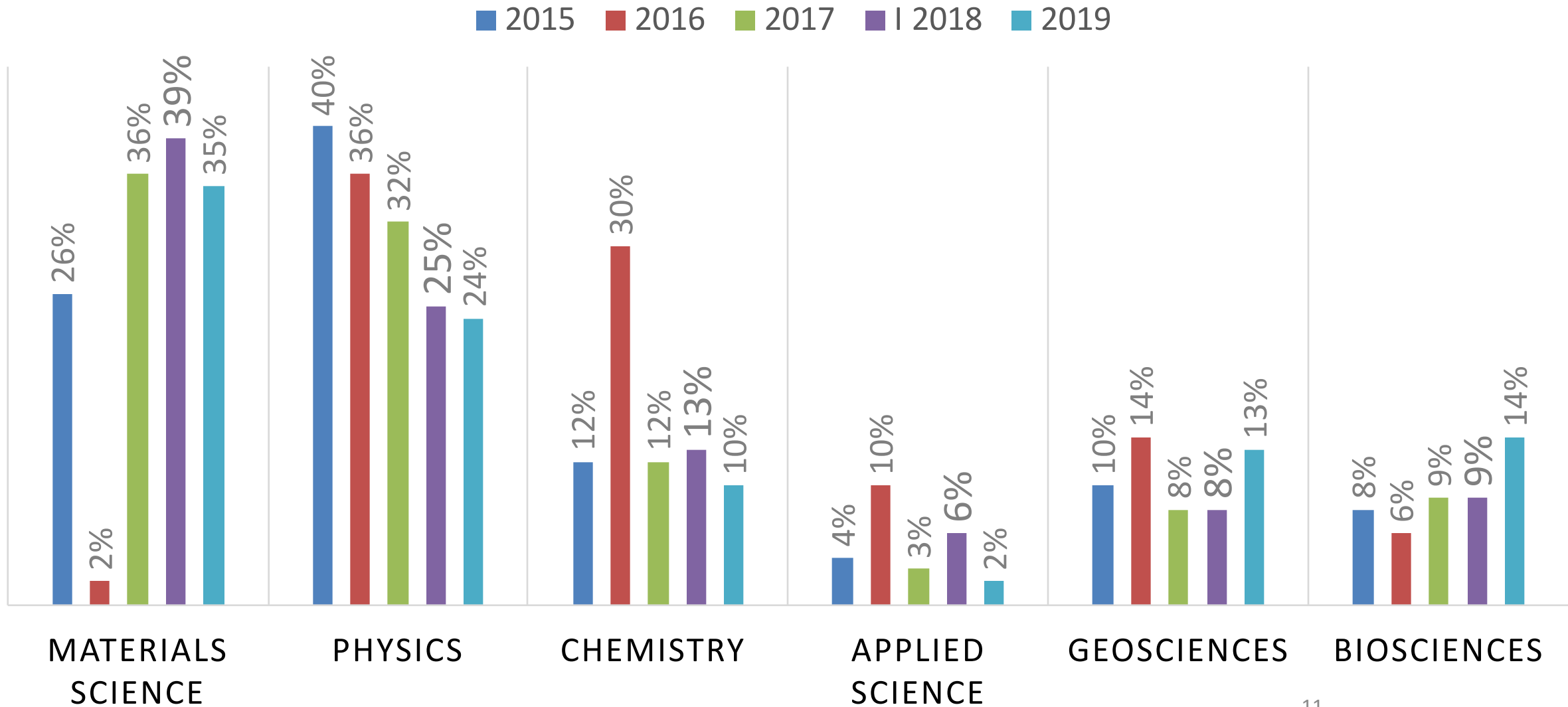


The ratio of numbers of experimental reports to number of accepted proposals

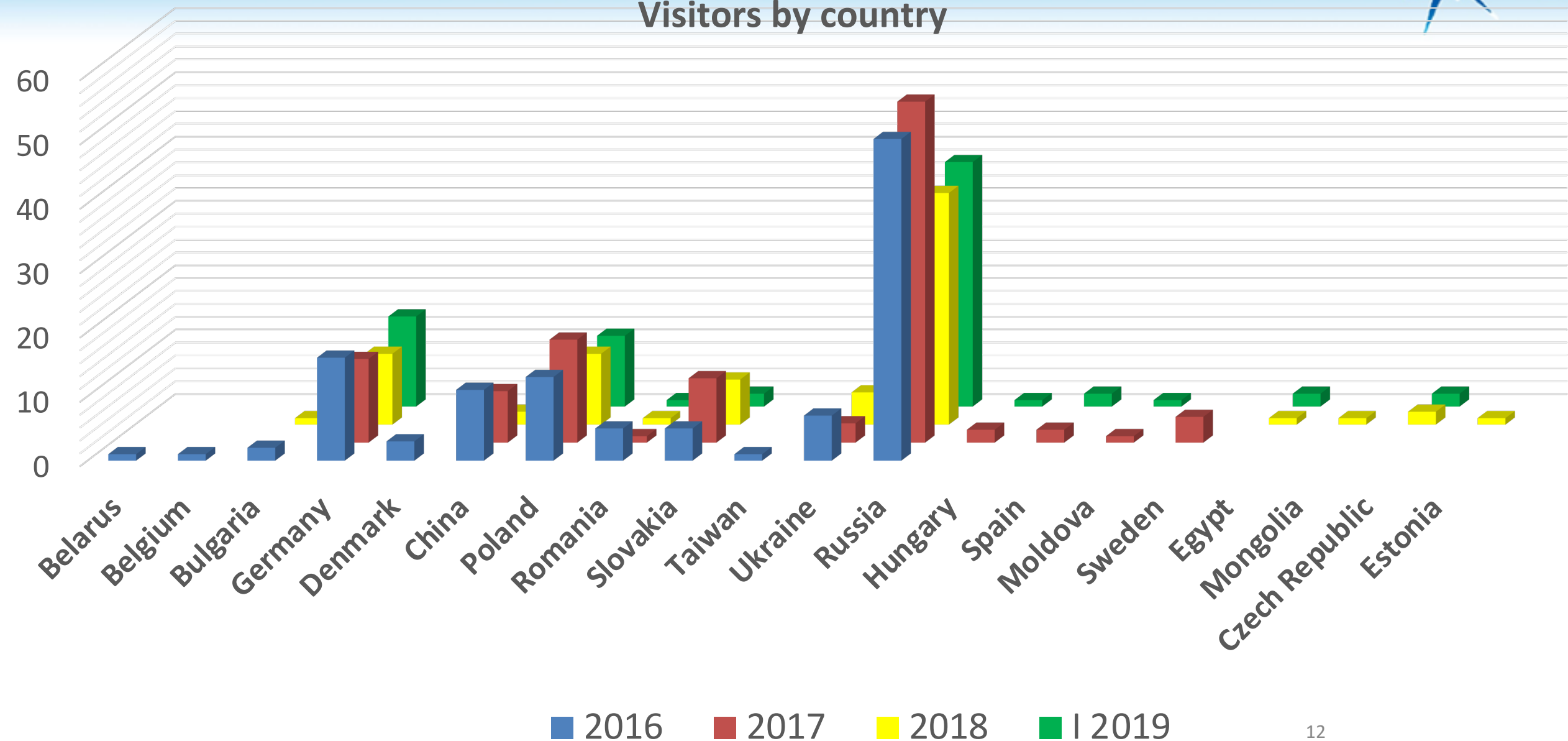




Proposal distribution with science correlation



Visitors by country

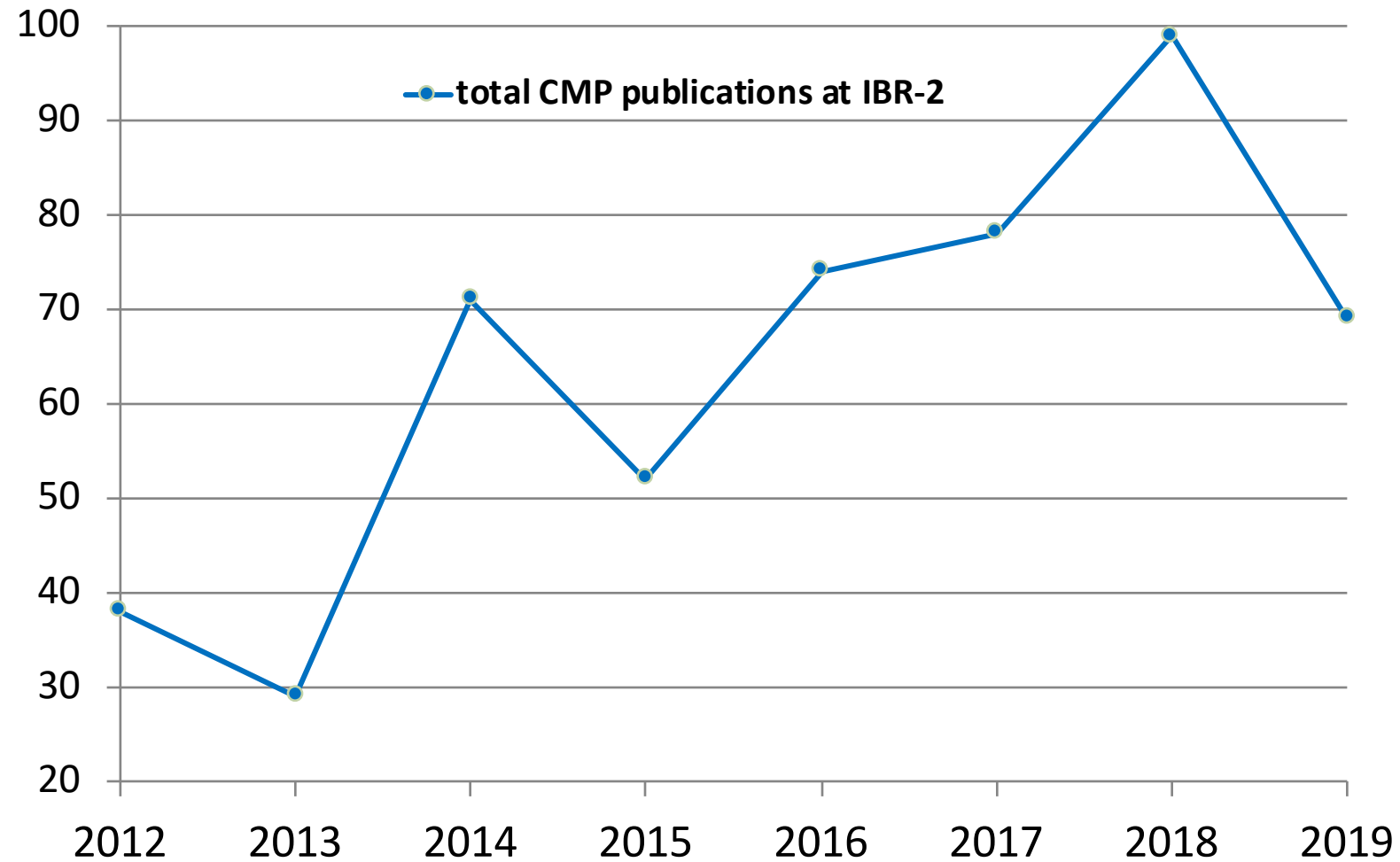


Russian Institutions 2018-2019

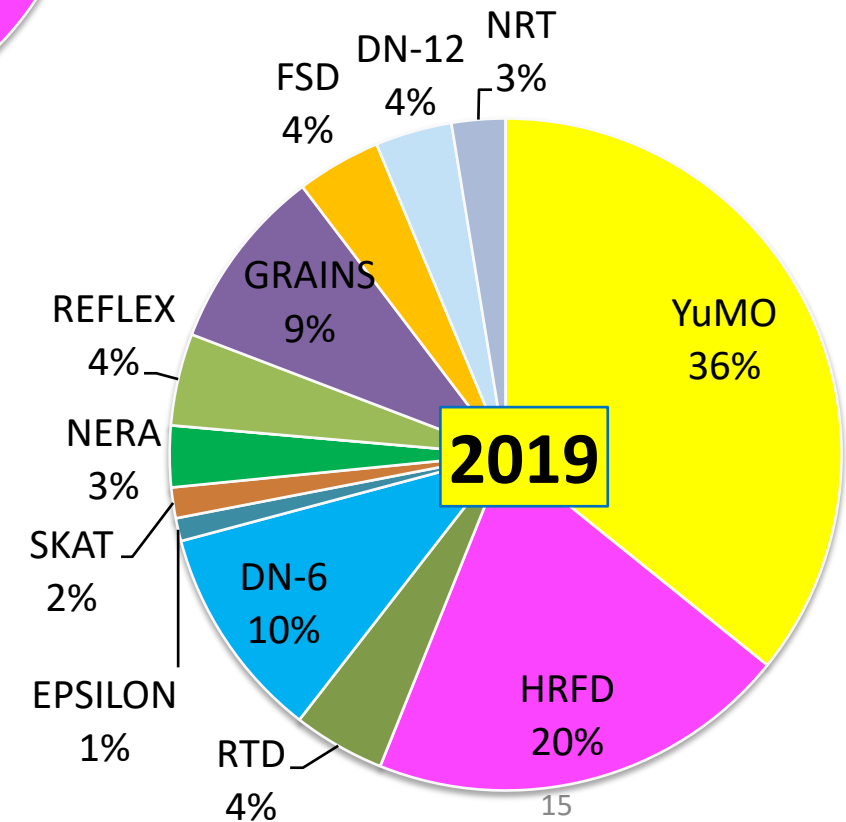
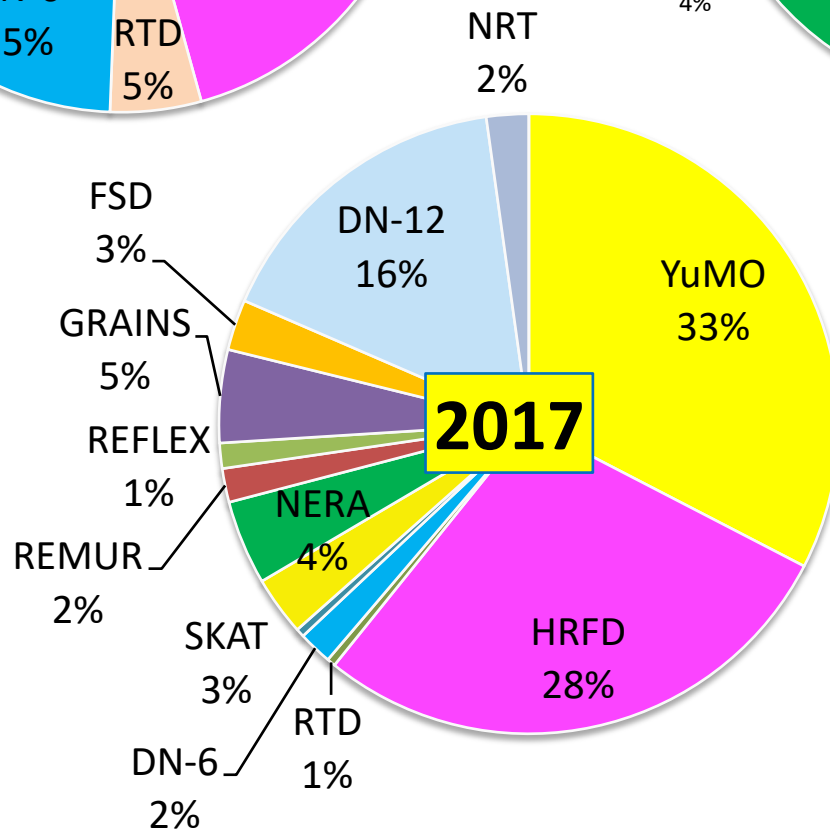
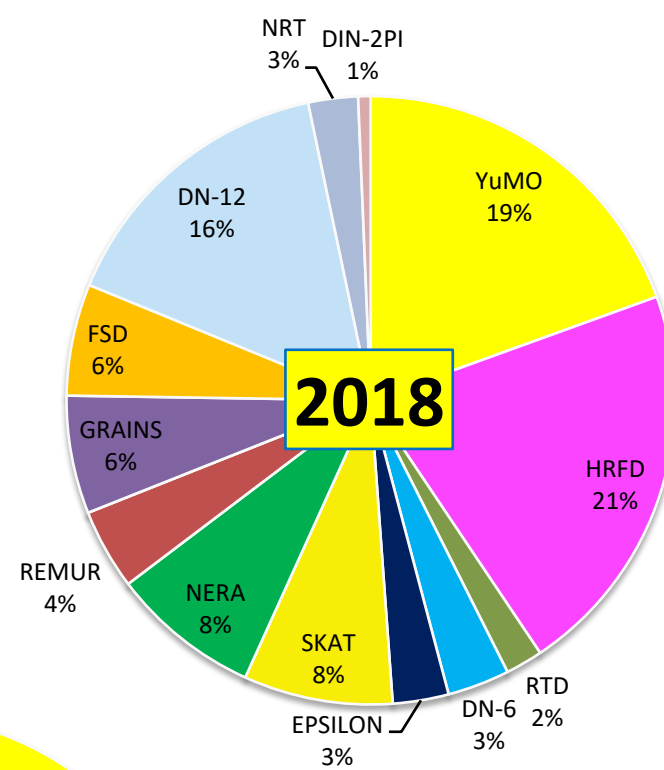
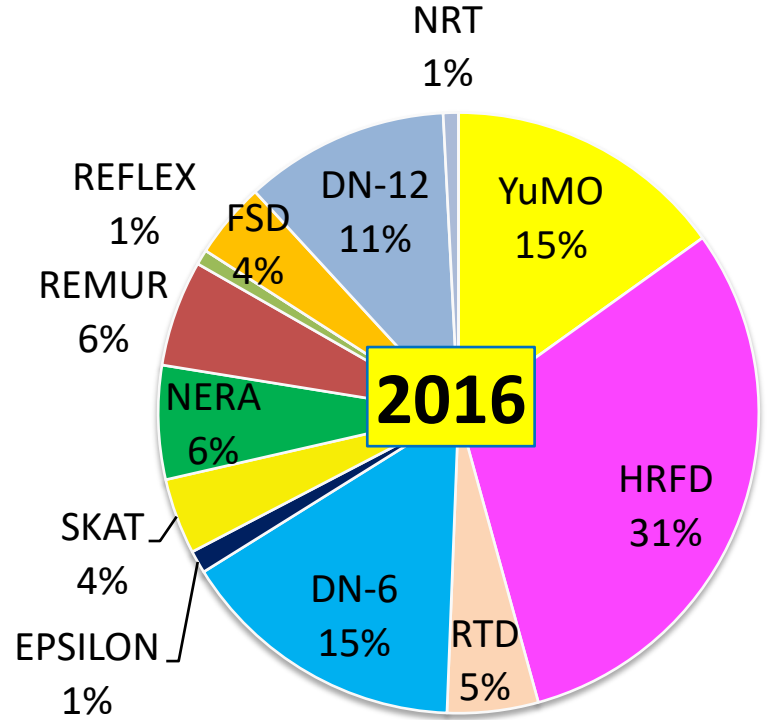
Borissiak Paleontological Institute of RAS	SCAT
Moscow State University	YuMO/HRFD/NERA/Grains
National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)	FSD
Schmidt Institute of Physics of the Earth, RAS	SKAT
Prokhorov General Physics Institute of the RAS	NERA
Institute for Theoretical and Experimental Physics FSBO SSC RF	YuMO
Institute of Geology of Ore Deposits, Petrography RAS	SKAT
Saint Petersburg State Polytechnical University	HRFD/SKAT
Petersburg State University	NERA /HRFD/
Petersburg Nuclear Physics Institute NRC KI	YuMO/REMUR/GRAINS
NRC “Kurchatov institute” – CRISM “Prometey”	SKAT/RTD/YuMO
Ioffe Institute	YuMO
Institute of Cytolgy RAS	YuMO
FSBI Influenza Institute MH RF	YuMO
Institute of Macromolecular Compounds, RAS	YuMO
Kazan Federal University	DN-12
Lobachevsky State University of Nizhni Novgorod	RTD
Institute of Metallurgy UrD RAS	HRFD
Institute of Metal Physics	REFLEX-P
Ufa State Aviation Technical University	FSD
Institute of High-temperature Electrochemistry UB RAS	HRFD
Tula State University	SKAT
Sterlitamak State Pedagogical University	DIN-2PI
I. Kant Baltic Federal University	DIN-2PI
Boreskov Institute of Catalysis, Novosibirsk	YuMO
Institute of Solid State Chemistry and Mechanochemistry SB RAS	RTD
Institute of High-temperature Electrochemistry UB RAS	NERA/HRFD



Instrument Scientific Outcome

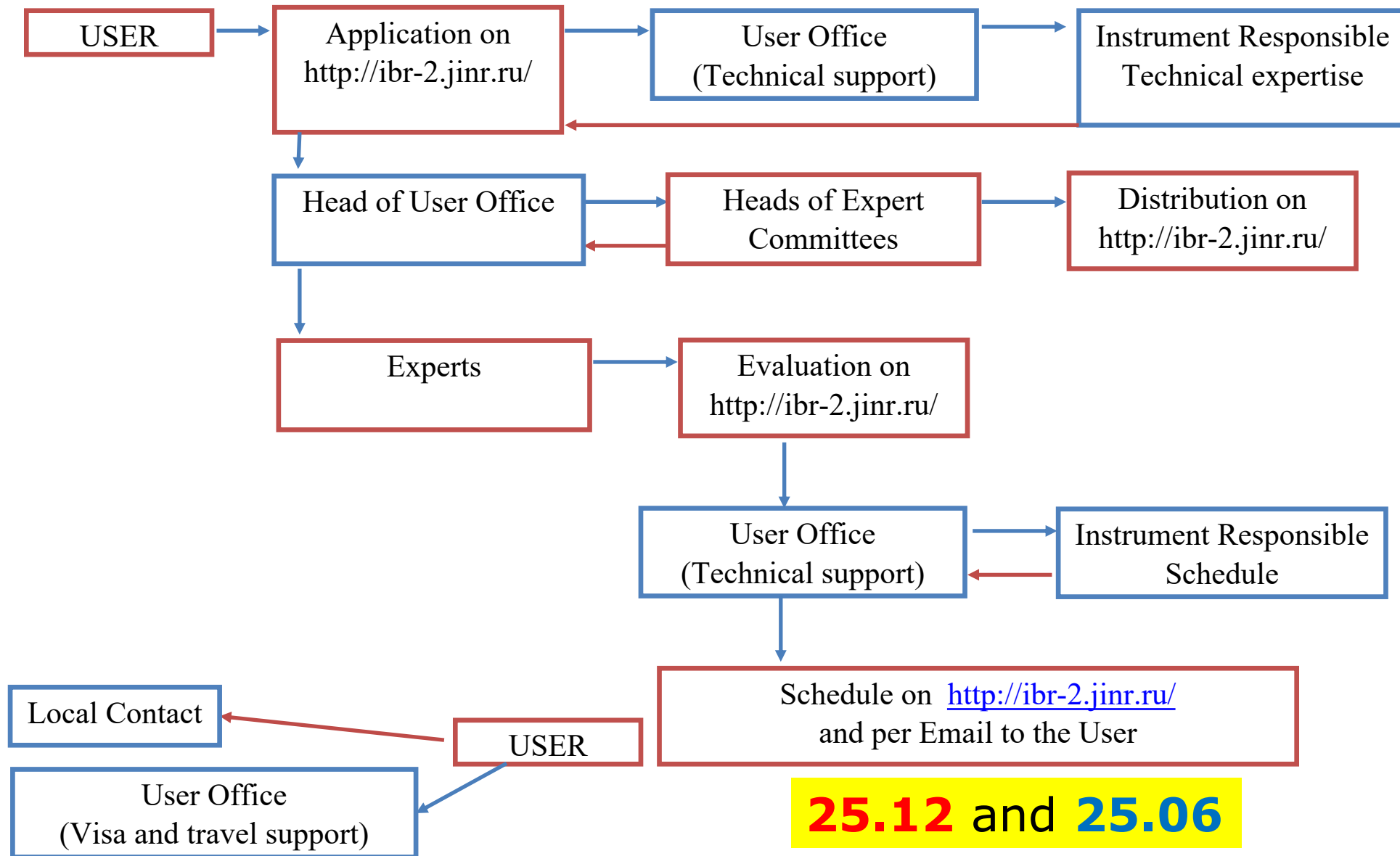


Instrument Scientific Outcome -
the statistics after applying a
weighting factor that is based on
the journal impact factor.

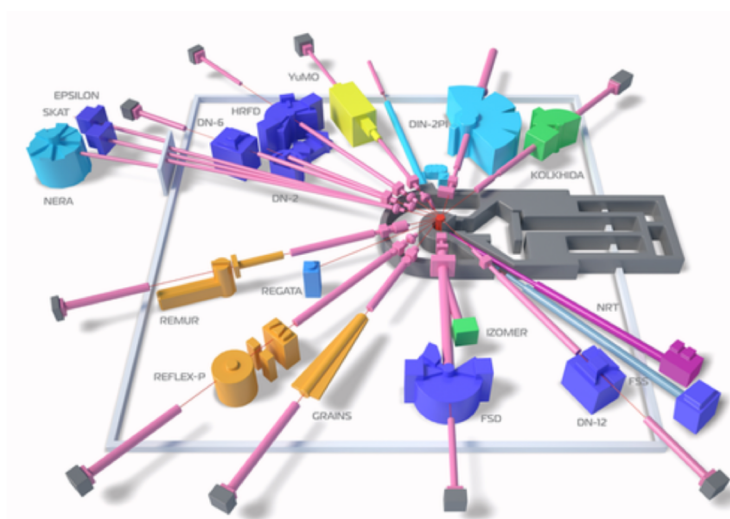


2016	2017	2018	2019
27,9 – Nature Chemistry, 2016, vol. 8, № 5, p. 501-508 DN-6 Ovsyannikov S.V., Bykov M., Bykova E., Kozlenko D.P., Tsirlin A.A., Karkin A.E., Shchennikov V.V., Kichanov S.E., Gou H., Abakumov A.M., Egoavil R., Verbeeck J., McCammon C., Dyadkin V., Chernyshov D., S. van Smaalen, Dubrovinsky L.S.	6,395 – Journal of Power Sources, 372 (2017) 74-81 HRFD Bobrikov I.A., N.Yu. Samoylova, S.V. Sumnikov, O.Yu. Ivanshina, R.N. Vasin, A.I. Beskrovnyi, A.M. Balagurov	12,124 – Nature communications, 9 (2018) 2996. DN-12 Cong J., Zhai K., Chai Y., Shang D., Khalyavin D.D., Johnson R. D., Kozlenko D. P., Kichanov S. E., Abakumov A. M., Tsirlin A. A., Dubrovinsky L., Xu X., Sheng Z., Ovsyannikov S. V., Sun Y.	6,97 – Nanoscale 11(14) (2019) 6838-6845. YuMO Zakharchenko T.K., Avdeev M.V., Sergeev A.V., Chertovich A.V., Ivankov O.I., Petrenko V.I., Shao-Horn Y., Yashina L.V. and Itkis D.M..
4,8 – Electrochimica Acta, 2016, vol. 209, p. 574–581 HRFD Sherstobitova E.A., Gubkina A.F., Bobrikov I.A., Kalashnova A.V., Pantyukhin M.I.	6,337 – Carbon, 114 (2017) 242e249 YuMO Vul A.Ya., E.D. Eidelman, A.E. Aleksenskiy, A.V. Shvidchenko, A.T. Dideikin, V.S. Yuferev, V.T. Lebedev, Yu.V. Kul'velis, M.V. Avdeev	7,173 – J. Additive Manufact. 23 (2018), 225-234. EPSILON Neikter M., Woracek R., Maimaitiyili T., Scheffzük Ch., Strobl M., Antti M.-L., Åkerfeldt P., Pederson R. & Bjerkén C.	6,732 – Acta Cryst B 75 (2019) 1024-1033 HRFD Balagurov A.M., N.Yu. Samoylova, I.A. Bobrikov, S.V. Sumnikov, I.S. Golovin
4,4 – Crystal Growth & Design, 2016, p. 6069–6083 NERA Łuczynska K., Drużbicki K., Lyczko K., Dobrowolski J.Cz.	5,835 – Macromolecules 2017, 50, 339–348 YuMO Shibaev, A. V., Abrashitova, K. A., Kuklin, A. I., Orekhov, A. S., Vasiliev, A. L., Iliopoulos, I., & Philippova, O. E.	6,036 – Acta Mater. 153 (2018) 45-52. HRFD Balagurov A.M., Ivan A. Bobrikov, Sergey V. Sumnikov, Igor S. Golovin	5,155 – Applied Surface Science, 483 (2019) 69-75 YuMO Kyzyma O.A., Avdeev M.V., Bolshakova O.I., Melentev P., Sarantseva S.V., Ivankov O.I., Korobov M.V., Mikheev I.V., Tropin T.V., Kubovcikova M., Kopcansky P., Korolovych V.F., Aksenov V.L., Bulavin L.A.

Period for proposal submission
01.09-15.10 and **01.03-15.04**



25.12 and **25.06**



IBR-2 Current status

Current cycle: January 14, 18:00 - January 27

[Work schedule of the IBR-2 reactor in 2019](#)



Frank Laboratory of Neutron Physics
(FLNP) Official website

- [IBR-2 INSTRUMENTS with the list of REFERENCES and RESPONSIBLE](#)
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Current news

FLNP Directorate and colleagues heartily congratulate Valery Simkin on his jubilee and wish him sound health, peace and prosperity, longevity in life and work, harmony and joy in all things, eternal youth of his heart, every labor and creative success and new achievements.

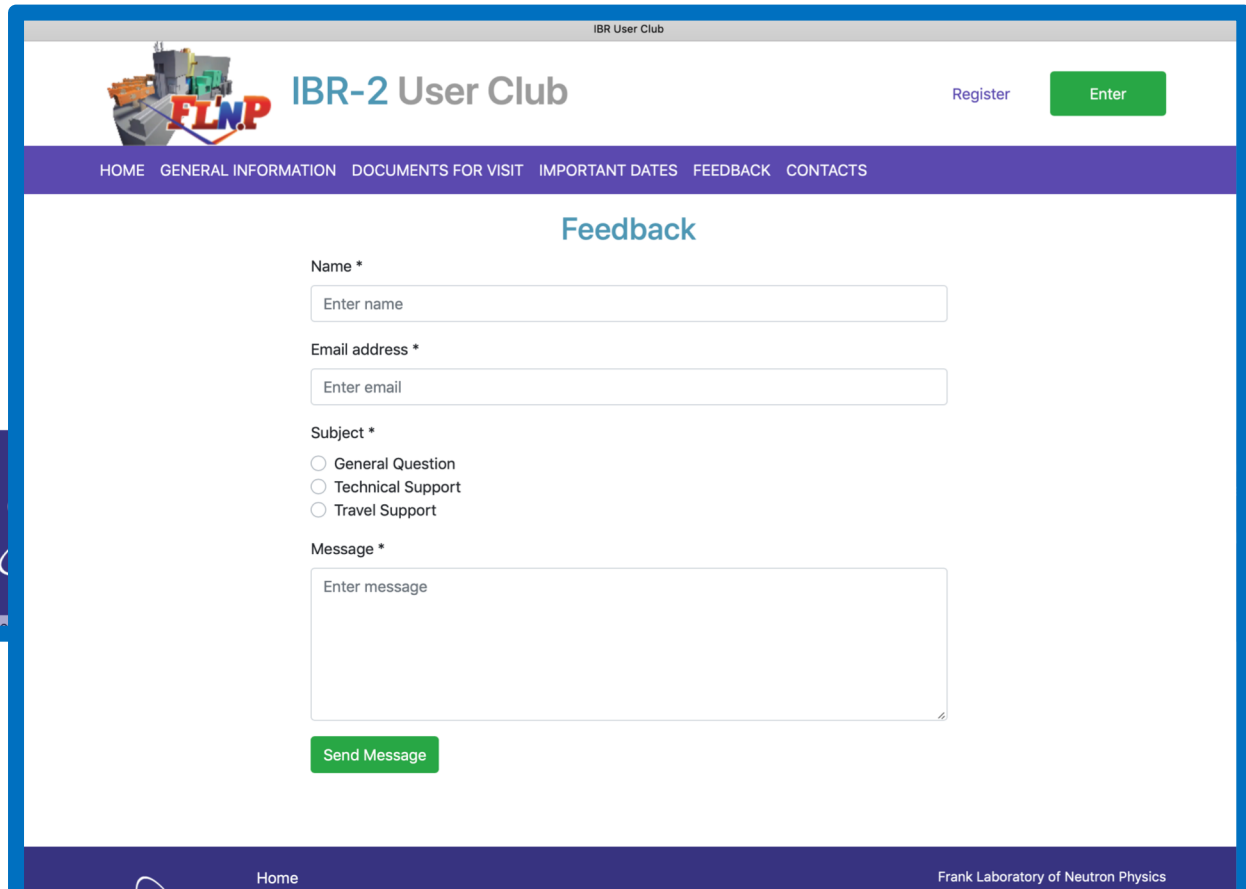
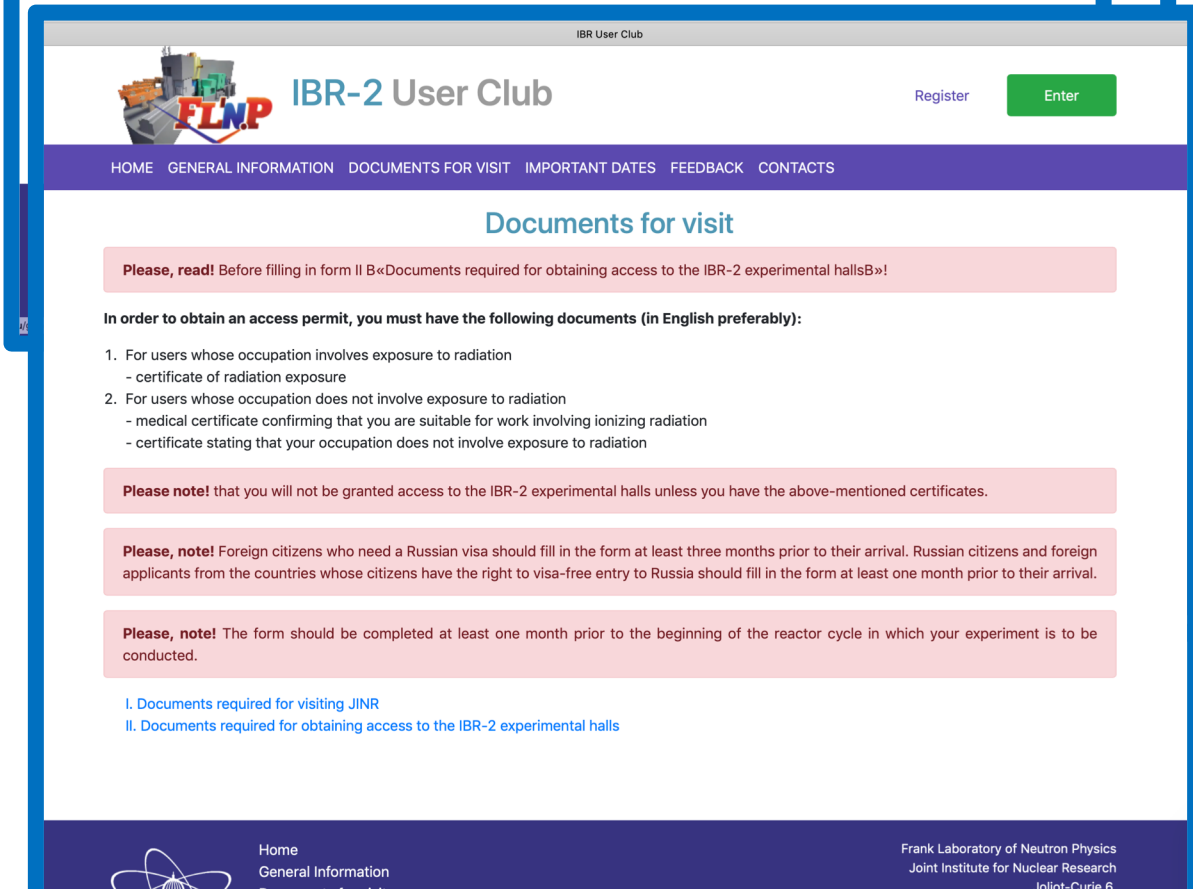
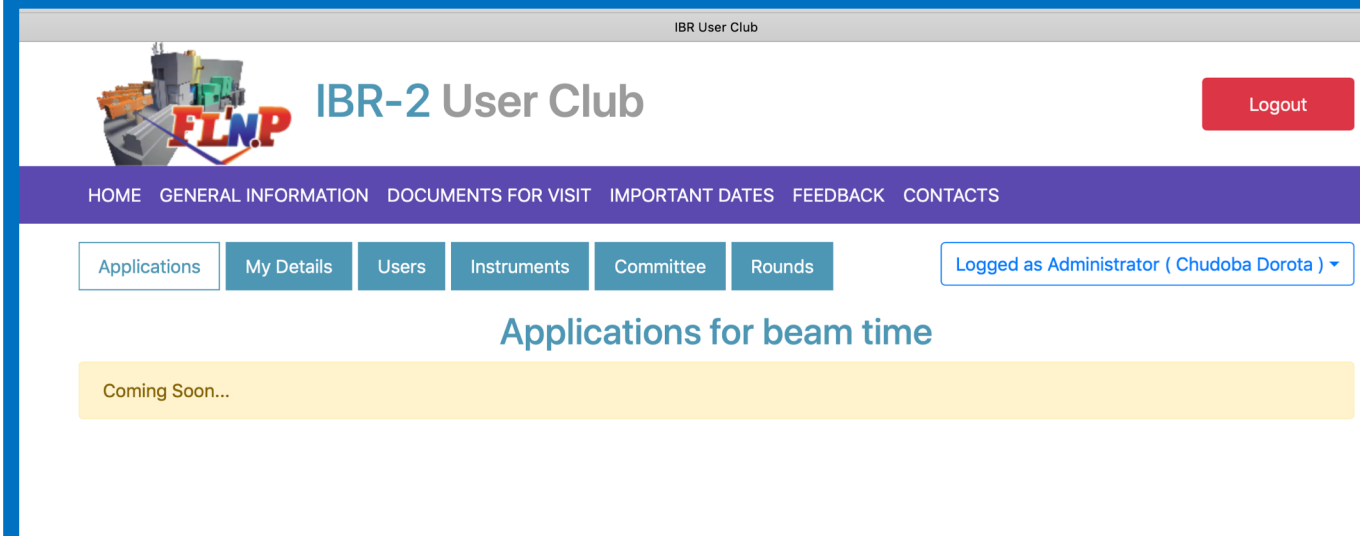
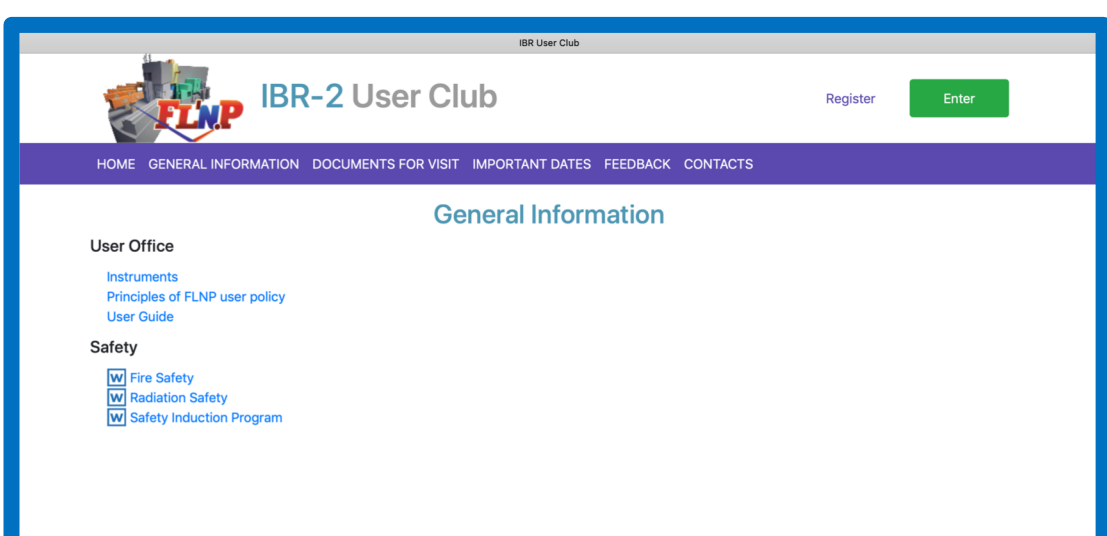
Attention Dear colleagues!

The 6th cycle of IBR-2 operation for physics experiments is canceled for operational reasons.

Information for RNF grant applicants/Информация для грантозаявителей РНФ

Объект инфраструктуры - ИБР-2 содержит информацию

1. Научные установки реактора ИБР-2
2. Перечень применяемых ОИ методик измерений
3. Перечень выполняемых типовых работ
4. Регламент доступа к оборудованию ОИ - Положение о программе пользователей
5. План работы ОИ - Расписание работы установки ИБР-2
6. Локальный акт владельца ОИ о создании ОИ
7. Проект гражданско-правового договора о выполнении работ и (или) оказании услуг для проведения научных исследований, а также осуществления экспериментальных разработок





Instruments

[+ Add New Instrument](#)

#	Instrument	Group	Technical expert	Local contacts	Edit
1	NERA	Lattice and Molecular Dynamics			 
2	DIN-2 PI	Lattice and Molecular Dynamics			 
3	RTD	Atomic and Magnetic Structure			 
4	DN-6	Atomic and Magnetic Structure			 
5	DN-12	Atomic and Magnetic Structure			 
6	SKAT	Atomic and Magnetic Structure			 
7	EPSILON	Atomic and Magnetic Structure			 
8	FSD	Atomic and Magnetic Structure			 
9	HRFD	Atomic and Magnetic Structure			 
10	YuMO	Nanosystems and Soft Matter			 
11	GRAINS	Nanosystems and Soft Matter			 
12	REFLEX	Nanosystems and Soft Matter			 
13	REMUR	Nanosystems and Soft Matter			 
14	REGATA	Neutron Activation Analysis			 

From 01.02.2020 – website testing

Neutron activation analysis:

REGATA (installation will be included in the User Program starting from March 2020)

New Expert Committee: **Neutron Activation Analysis.**

Experts:

Dalhousie University, Canada

Norwegian University of Science and Technology, Norway

The South African Nuclear Energy Corporation (Necsa), South Africa

Ss. Cyril and Methodius University, North Macedonia

Australian Nuclear Science and Technology Organisation, Australia



IBR-2 User Club

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Thank you for your attention!