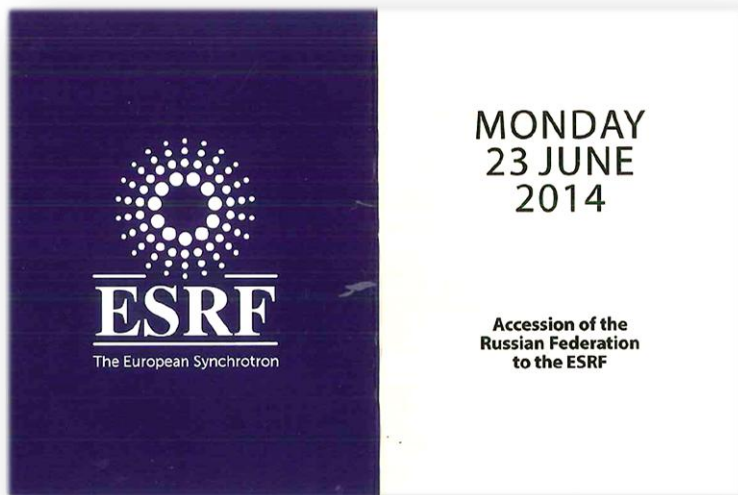


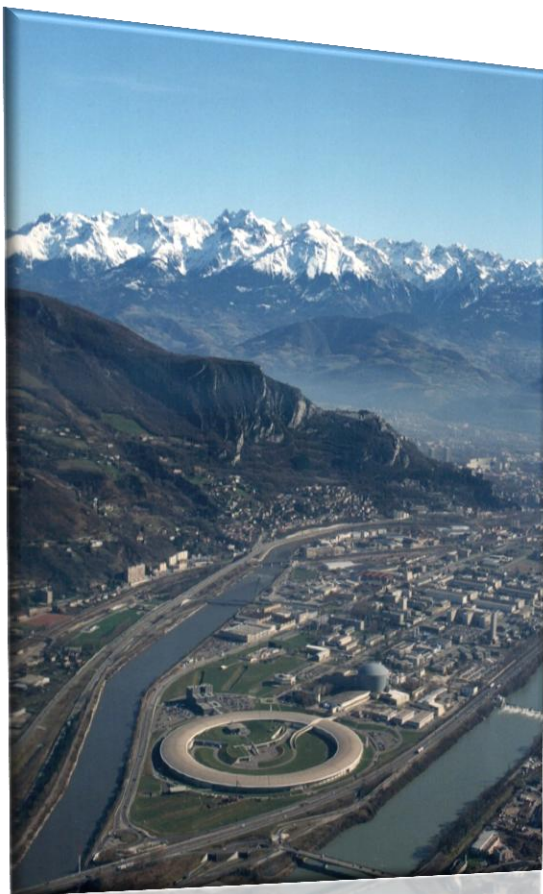


В.П. ДМИТРИЕВ

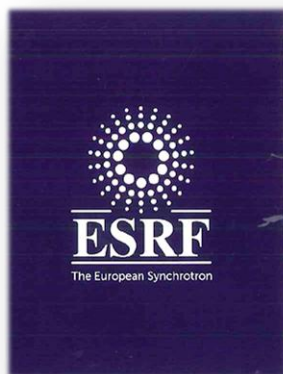
(ESRF, Grenoble & ЮФУ, Ростов-на-Дону)

**Европейский источник синхротронного излучения :
что российские ученые получат от вступления России в ESRF?**

...что российские ученые получат от вступления России в ESRF?



— Вот мы и здесь. Ну и что?



MONDAY
23 JUNE
2014

Accession of the
Russian Federation
to the ESRF





**ИНСТРУМЕНТЫ
ВЛИЯНИЯ**

ТЕХНИКА

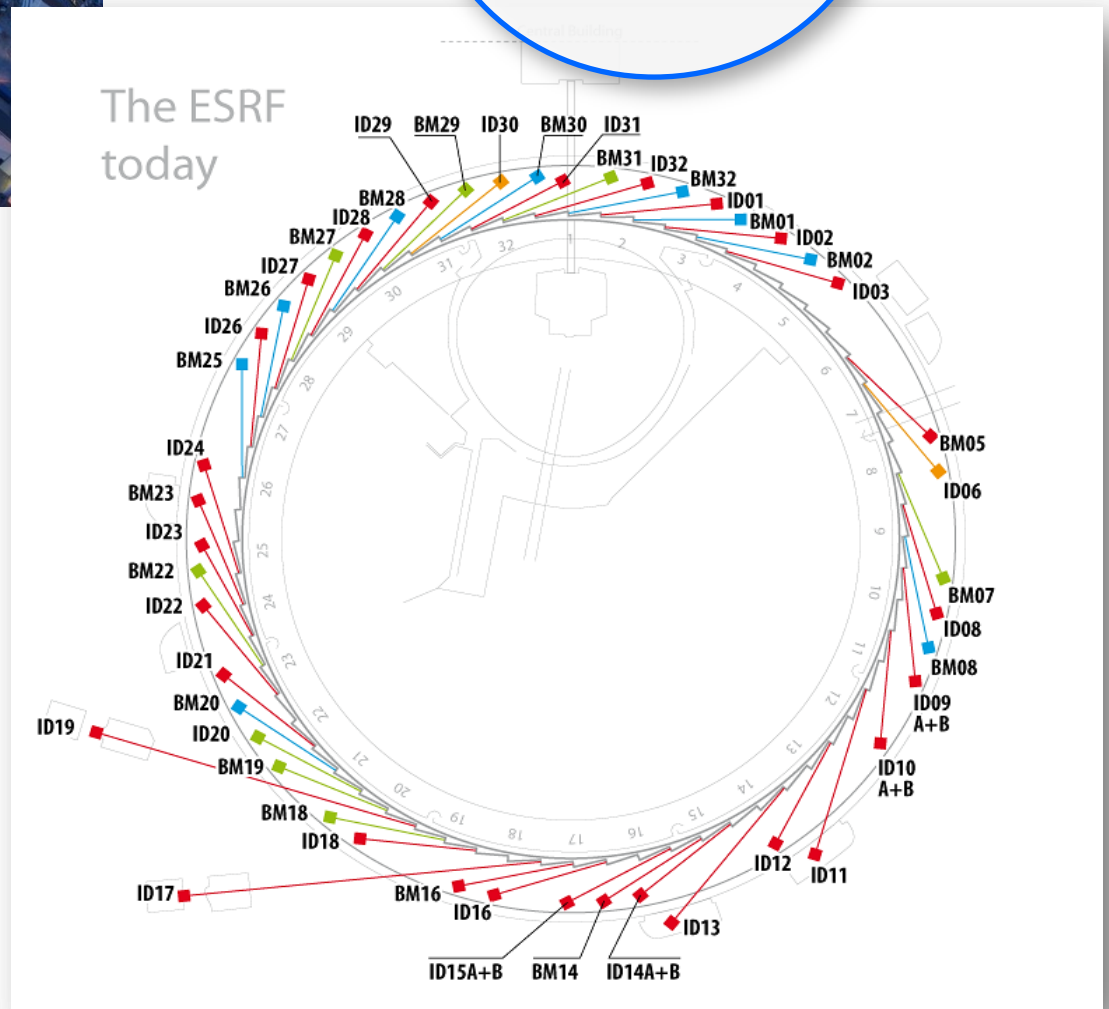
**НАЦИОНАЛЬНАЯ
ПЛАТФОРМА**

ТЕХНИКА



ТЕХНИКА

- Structural biology (9 end stations)
- Structure of materials (5)
- Electronic structure and magnetism (6)
- Dynamics and extreme conditions (5)
- Structure of soft matter (4)
- X-ray imaging (5)
- Collaborating research groups (12)



	Линия	Запрошено смен	Число проектов	Профиль
1	ID01	36	2	Microdiffraction imaging
2	ID02	3	1	Time-Resolved USAXS/SAXS/WAXS
3	ID03	12	1	Surface and Interface X-ray Diffraction
4	ID09	6	1	Angle dispersive high pressure X-ray diffraction
5	ID10	108	7	Soft interfaces and coherent scattering
6	ID11	21	2	Materials science/3D nanoscope
7	ID12	240	13	Polarisation-dependent X-ray Spectroscopy
8	ID13	7	1	Microfocus diffraction
9	ID18	45	3	Nuclear scattering
10	ID22	42	1	High-resolution powder-diffraction
11	ID24	12	1	Energy Dispersive X-ray Absorption Spectroscopy
12	ID26	144	8	High Brilliance X-ray Spectroscopy/X-ray emission spectrometer
13	ID27	9	1	High pressure
14	ID28	18	1	Inelastic X-ray scattering
15	ID32	28	2	Polarisation-dependent Soft X-ray Spectroscopy
16	BM01	131	13	Single crystal and powder X-ray diffraction/ Combined XRD/XAFS/Raman measurements.
17	BM08	7	1	X-ray Diffraction and Absorption
18	BM23	39	3	X-ray absorption spectroscopy
19	BM26	100	8	X-ray absorption spectroscopy; SAXS
20	BM28	15	1	X-ray Magnetic Scattering
21	BM30	18	1	Absorption spectroscopy beamline in Material and Environmental science

ТЕХНИКА

Всего смен, доступных пользователям: **6000**

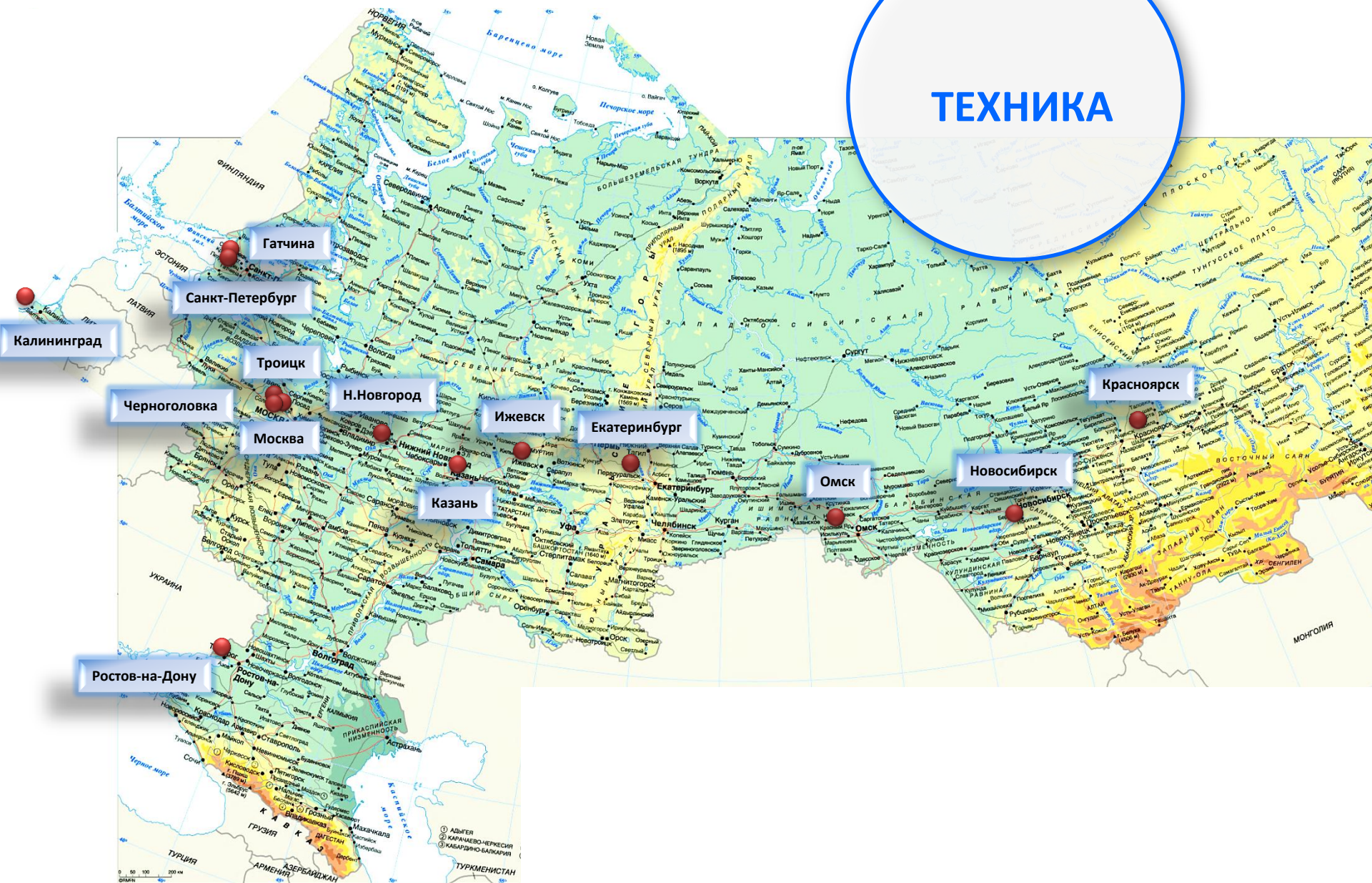
Российская квота (6%) : **360**

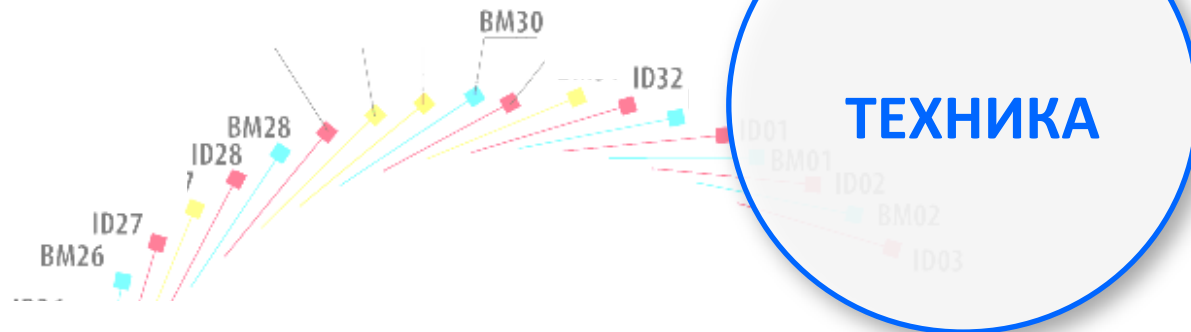
Запрошено смен : **1041**

Подано проектов : **72**

Превышение (overbooking) : **2.9**

ТЕХНИКА





- C01 (ID01, ID03, BM25B, BM32)
- C02 (ID11, ID15A, ID15B, ID31)
- C03 (ID08, ID12, ID20, ID26, ID32, BM28)
- C04 (ID24, BM01B, BM08, BM20, BM23, BM25A, BM26A, BM30B)
- C05 (ID06-LVP, ID09A, ID18, ID27, ID28, BM01A)

- C06 (ID17, ID19)
- C07 (ID13, ID16A&B, ID21, ID22)

- C08 (ID02, BM26B)
- C09 (ID09B, ID10, BM02)

- C10 (Structural Biology Beamlines)

- Structural biology (9 end stations)
- Structure of materials (5)
- Electronic structure and magnetism (6)
- Dynamics and extreme conditions (5)
- Structure of soft matter (4)
- X-ray imaging (5)

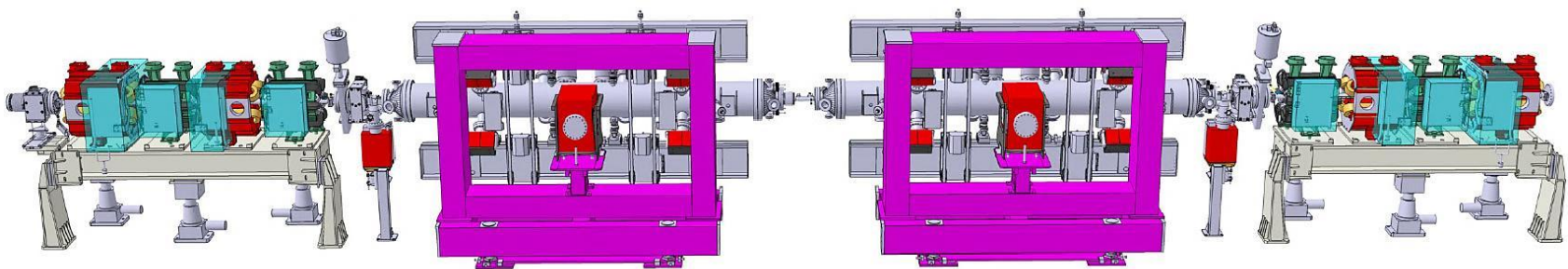
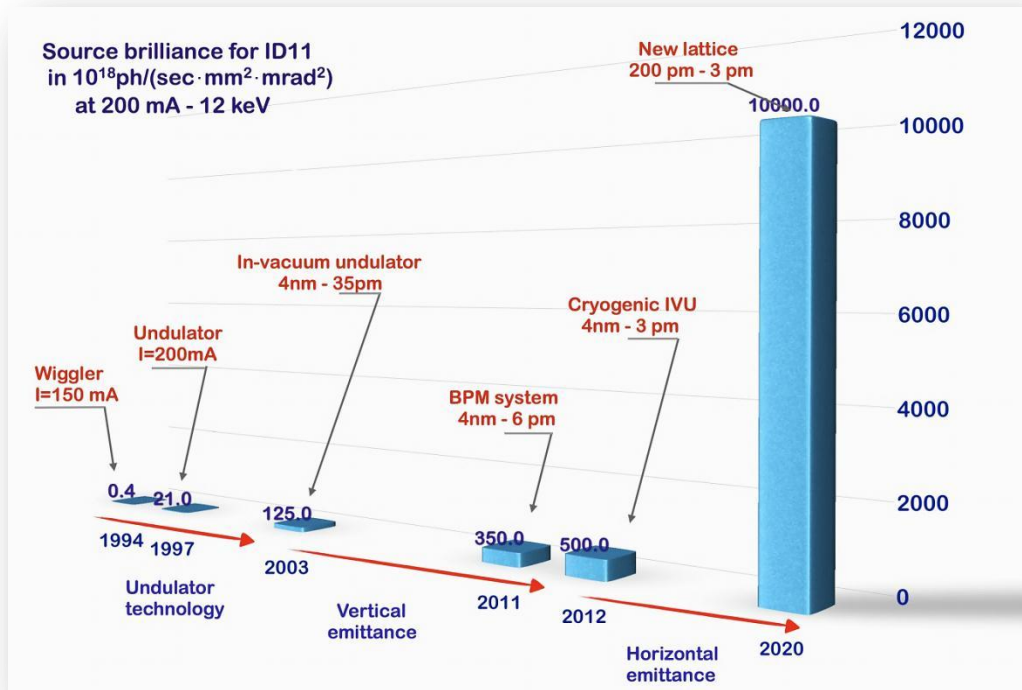
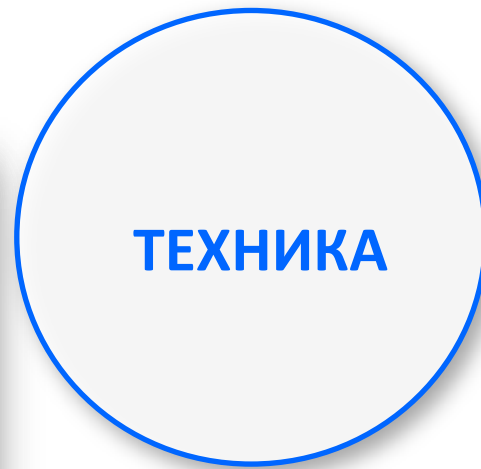
- Collaborating research groups (12)



ТЕХНИКА



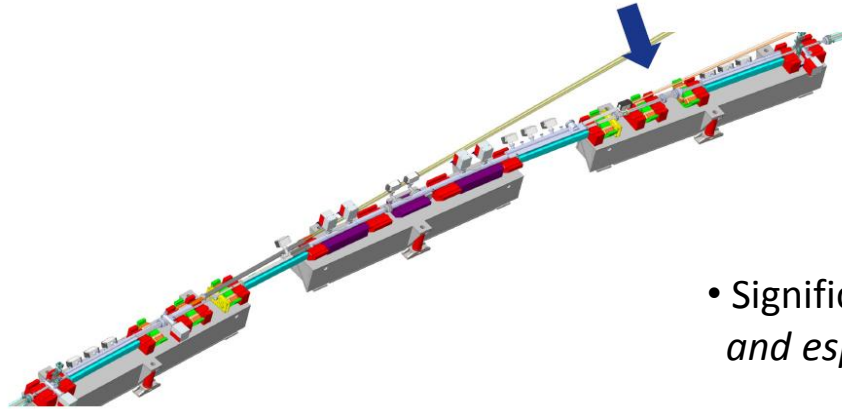
ESRF Upgrade Programme :
Phase II



The Upgrade Programme will make it possible to install more and longer undulators (pink) in the straight sections between the focusing magnets (green and red) and bending magnets.

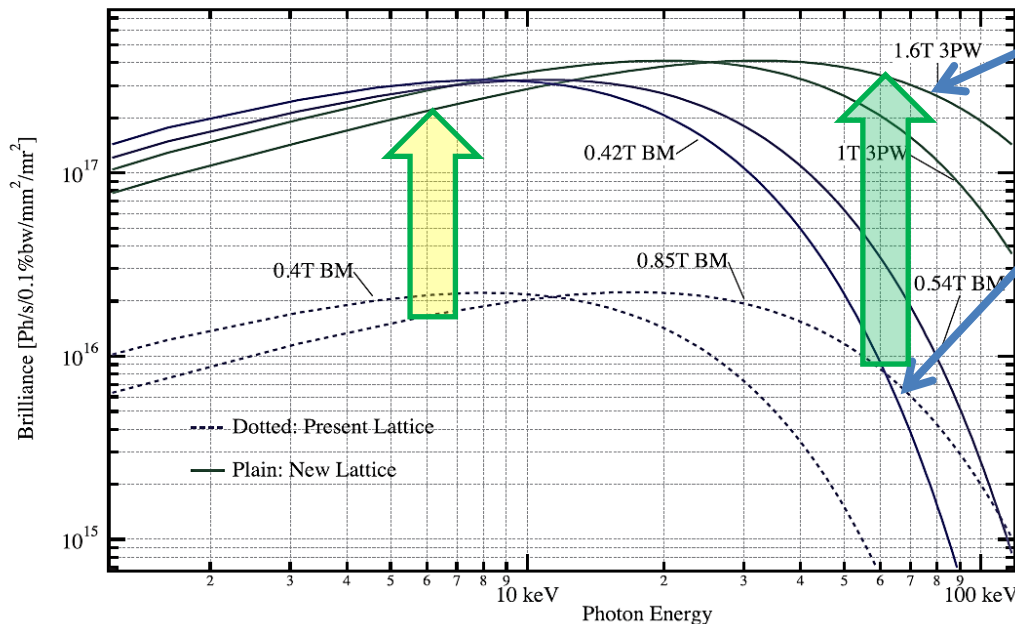
The ESRF unveils plans for a new storage ring that will boost the brilliance of its X-rays by a factor of 50.

ТЕХНИКА



- Significant photon flux gain at all X-ray energies and especially at **High Energies** (>40keV).

Photon flux gain plot



Possible new BM01 sources

Existing BM01 source

Enabling new scientific opportunities:

- High energy diffraction or XAFS under extreme (industrial) conditions
- Total scattering

A large blue circle with a subtle drop shadow, centered on a white background. Inside the circle, the text "НАЦИОНАЛЬНАЯ ПЛАТФОРМА" is written in white, bold, uppercase letters.

**НАЦИОНАЛЬНАЯ
ПЛАТФОРМА**

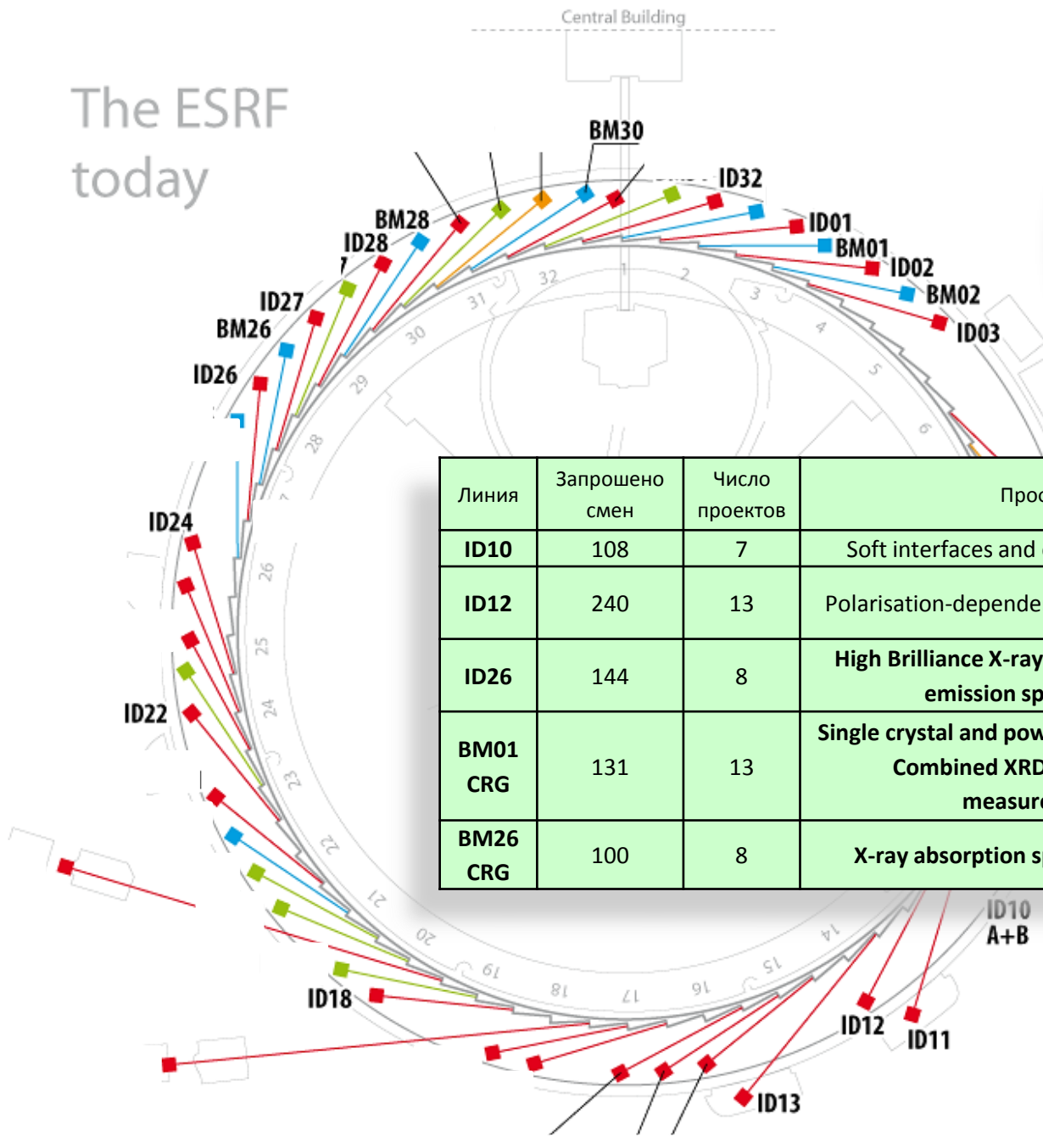
The ESRF
today

	Линия	Запрошено смен	Число проектов	Профиль
1	ID01	36	2	Microdiffraction imaging
2	ID02	3	1	Time-Resolved USAXS/SAXS/WAXS
3	ID03	12	1	Surface and Interface X-ray Diffraction
4	ID09	6	1	Angle dispersive high pressure X-ray diffraction
5	ID10	108	7	Soft interfaces and coherent scattering
6	ID11	21	2	Materials science/3D nanoscope
7	ID12	240	13	Polarisation-dependent X-ray Spectroscopy
8	ID13	7	1	Microfocus diffraction
9	ID18	45	3	Nuclear scattering
10	ID22	42	1	High-resolution powder-diffraction
11	ID24	12	1	Energy Dispersive X-ray Absorption Spectroscopy
12	ID26	144	8	High Brilliance X-ray Spectroscopy/X-ray emission spectrometer
13	ID27	9	1	High pressure
14	ID28	18	1	Inelastic X-ray scattering
15	ID32	28	2	Polarisation-dependent Soft X-ray Spectroscopy
16	BM01	131	13	Single crystal and powder X-ray diffraction/ Combined XRD/XAFS/Raman measurements.
17	BM08	7	1	X-ray Diffraction and Absorption
18	BM23	39	3	X-ray absorption spectroscopy
19	BM26	100	8	X-ray absorption spectroscopy; SAXS
20	BM28	15	1	X-ray Magnetic Scattering
21	BM30	18	1	Absorption spectroscopy beamline in Material and Environmental science

НАЦИОНАЛЬНАЯ
ПЛАТФОРМА

The ESRF
today

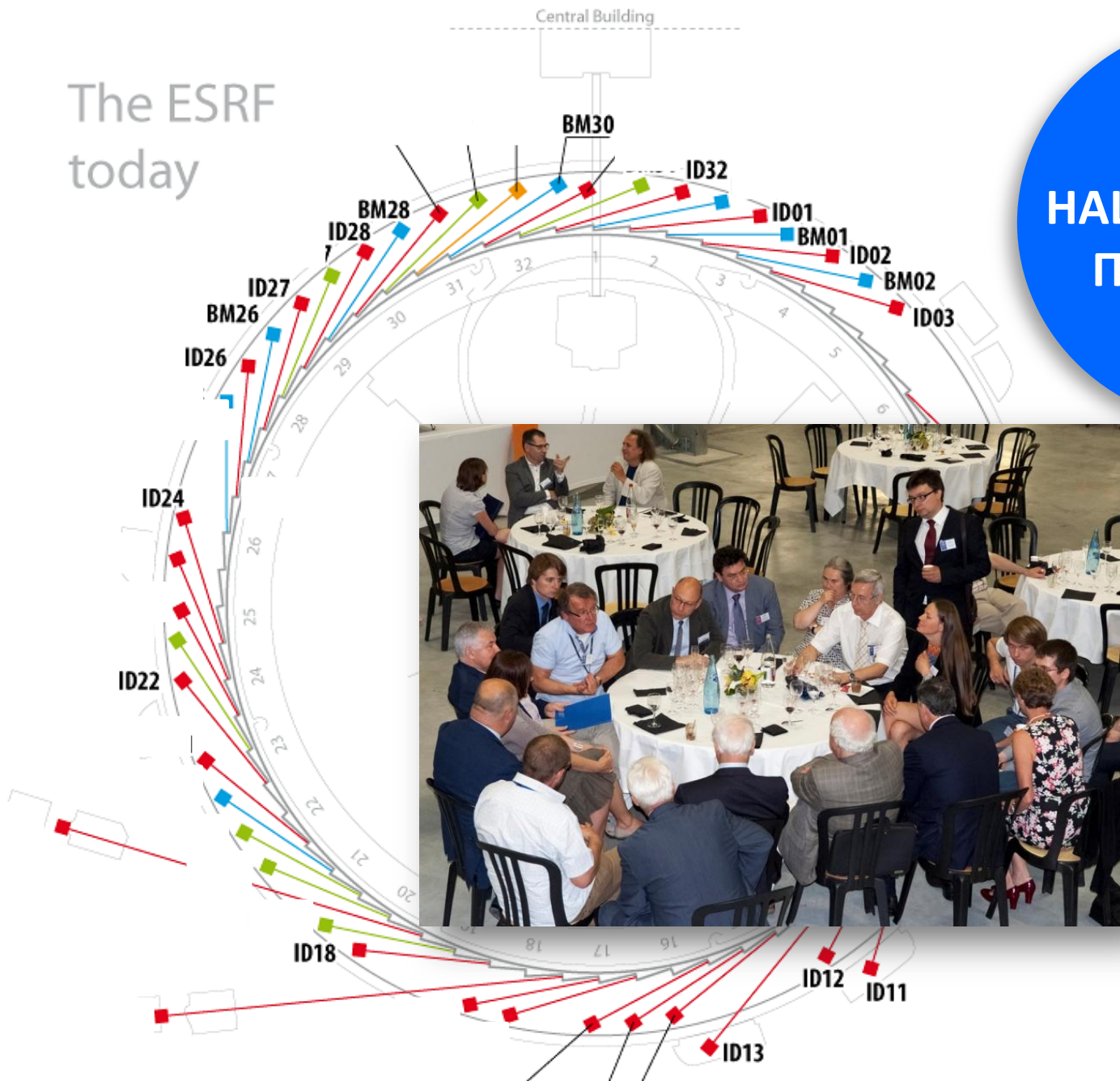
НАЦИОНАЛЬНАЯ
ПЛАТФОРМА



Линия	Запрошено смен	Число проектов	Профиль
ID10	108	7	Soft interfaces and coherent scattering
ID12	240	13	Polarisation-dependent X-ray Spectroscopy
ID26	144	8	High Brilliance X-ray Spectroscopy/X-ray emission spectrometer
BM01 CRG	131	13	Single crystal and powder X-ray diffraction/ Combined XRD/XAFS/Raman measurements.
BM26 CRG	100	8	X-ray absorption spectroscopy; SAXS

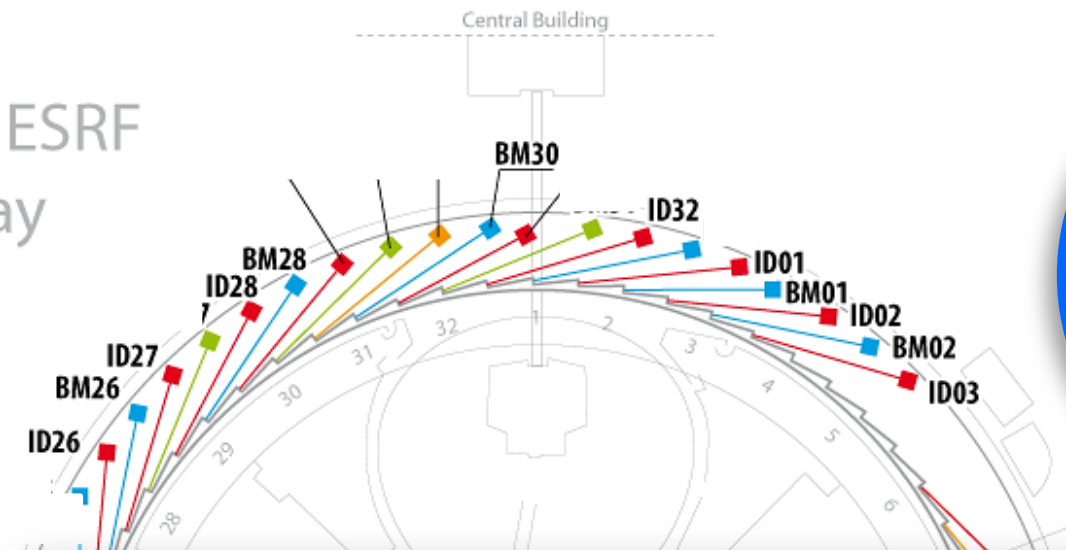
The ESRF
today

НАЦИОНАЛЬНАЯ
ПЛАТФОРМА



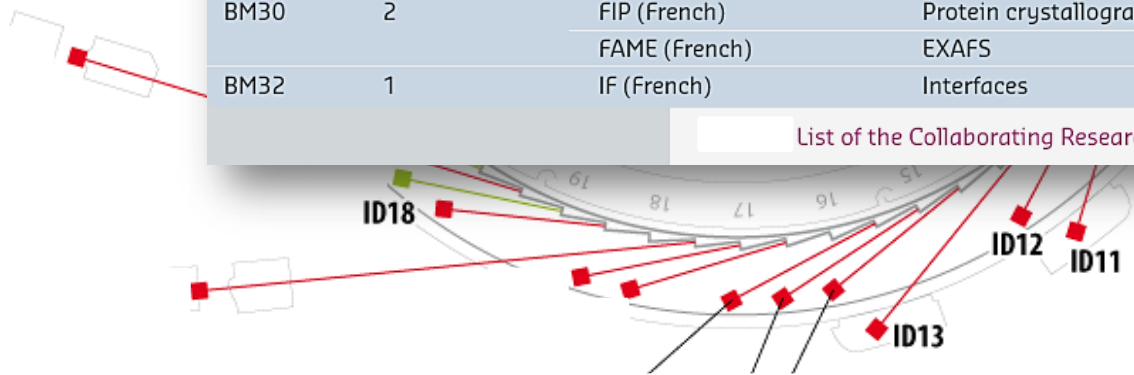
The ESRF
today

НАЦИОНАЛЬНАЯ
ПЛАТФОРМА



SOURCE POSITION	NUMBER OF INDEPENDENT END-STATIONS	BEAMLINE NAME	FIELD OF RESEARCH	STATUS
BM01	2	Swiss-Norwegian BL	X-ray absorption & diffraction	Operational since 01/95
BM02	1	D2AM (French)	Materials science	Operational since 09/94
BM08	1	Gilda (Italian)	X-ray absorption & diffraction	Operational since 09/94
BM20	1	ROBL (German)	Radiochemistry & ion beam physics	Operational since 09/98
BM25	2	SPLINE (Spanish)	X-ray absorption & diffraction	Operational since 04/05
BM26	2	DUBBLE (Dutch/Belgian)	Small-angle scattering	Operational since 12/98
			EXAFS	Operational since 06/01
BM28	1	XMAS (British)	Magnetic scattering	Operational since 04/98
BM30	2	FIP (French)	Protein crystallography	Operational since 02/99
		FAME (French)	EXAFS	Operational since 08/02
BM32	1	IF (French)	Interfaces	Operational since 09/94

List of the Collaborating Research Group beamlines.



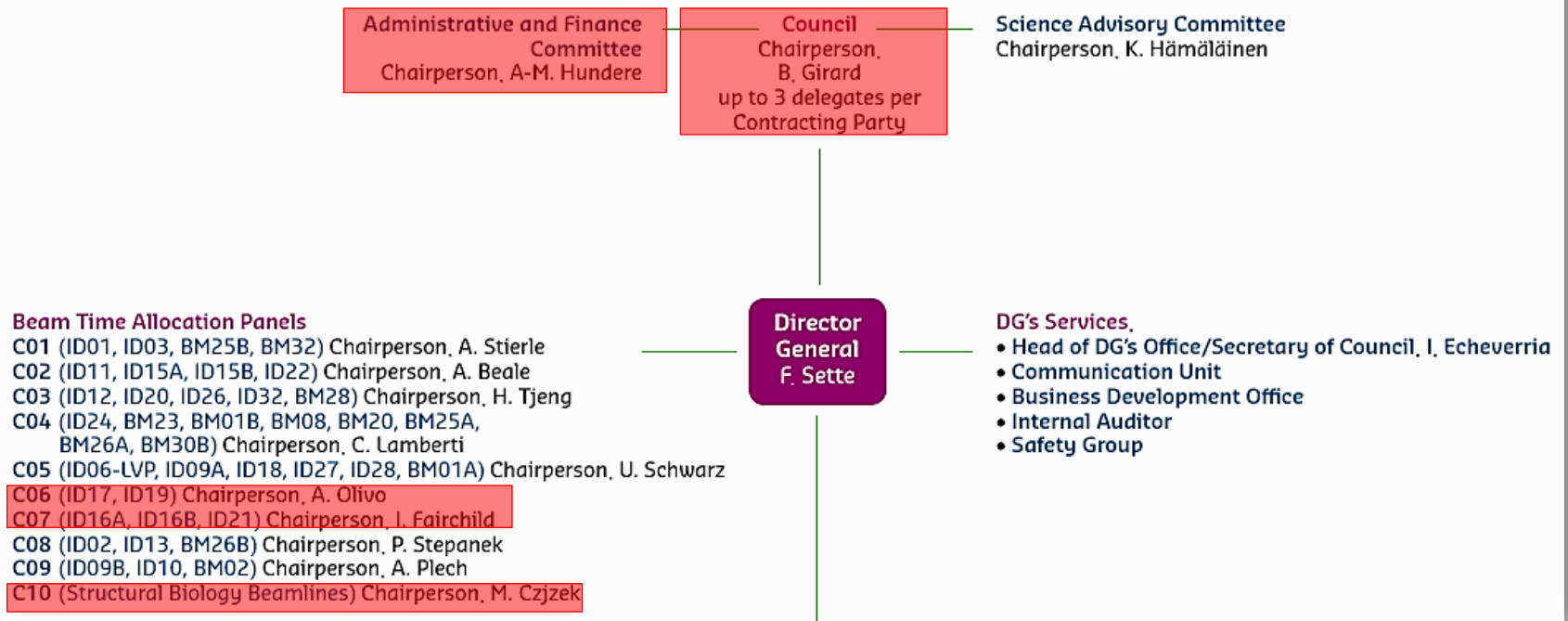
A large red circle with a slight drop shadow is centered on a white background. Inside the circle, the text "ИНСТРУМЕНТЫ ВЛИЯНИЯ" is written in white, bold, uppercase letters.

**ИНСТРУМЕНТЫ
ВЛИЯНИЯ**

ИНСТРУМЕНТЫ ВЛИЯНИЯ

ORGANISATION CHART OF THE ESRF

(AS OF JANUARY 2014)



A large red circle with a slight drop shadow, containing the text "ИНСТРУМЕНТЫ ВЛИЯНИЯ" in white.

**ИНСТРУМЕНТЫ
ВЛИЯНИЯ**

Welcome to Grenoble



Soyez le Bienvenu