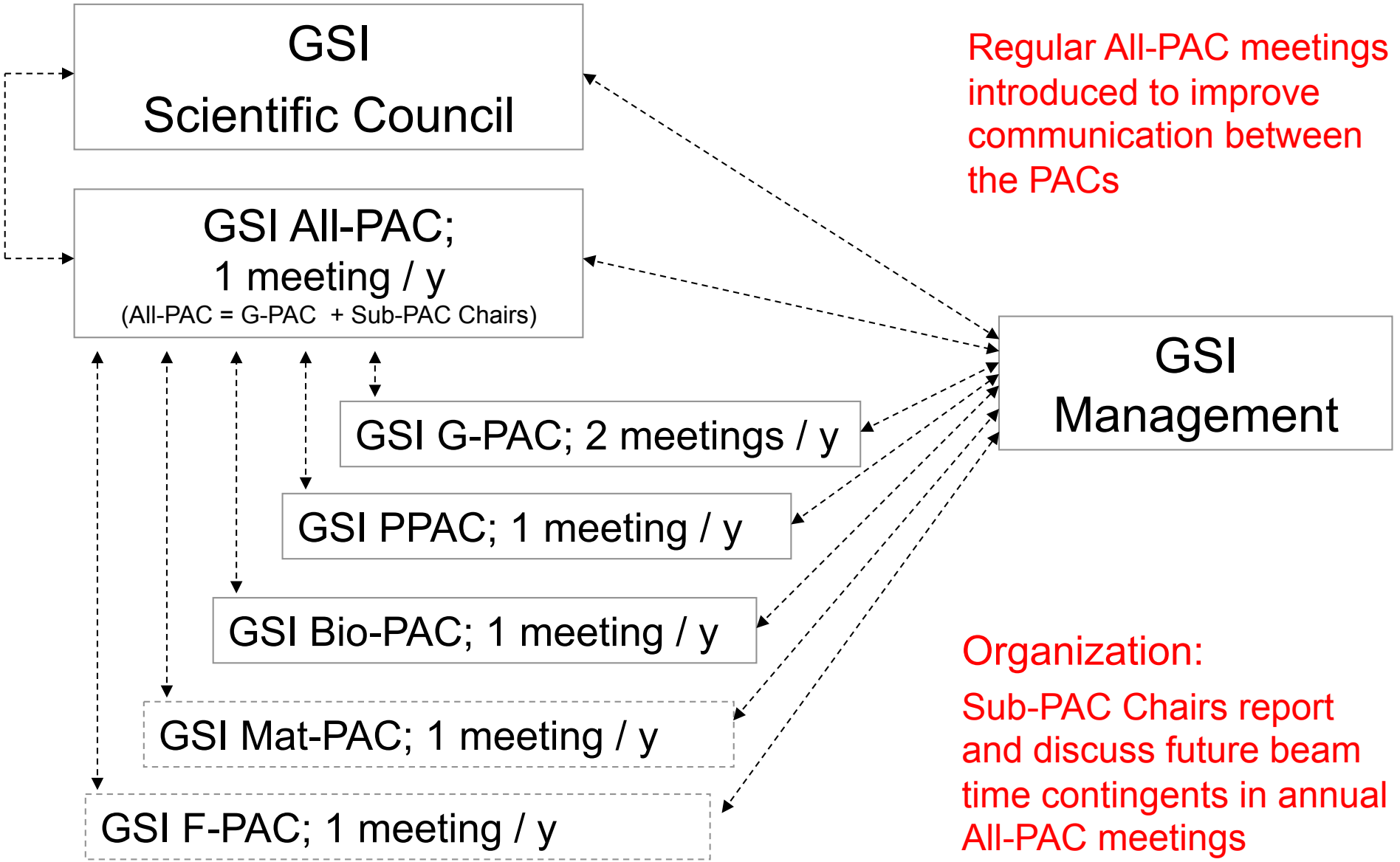
Evaluation of Experiment Proposals at GSI

W.N. Catford

1st ENSAR FCG Meeting, September 27th, 2011
Belgodere, France
With thanks to: Andreas Tauschwitz, GSI

PAC Structure and Organization at GSI



Regular All-PAC meetings introduced to improve communication between the PACs

Organization:

Sub-PAC Chairs report and discuss future beam time contingents in annual All-PAC meetings

General PAC (G-PAC)

Topics:

- Hadron and Nuclear Physics
- Atomic Physics
- Detector Tests (incl. tests for FAIR collaborations)

Members:

Bertram Blank	CEN Bordeaux, France
Yorick Blumenfeld	CERN-ISOLDE, Switzerland
Wilton Catford	Univ. Surrey, UK
Paolo Giubellino (Chair)	IFNF Turin, Italy
Ronnie Hoekstra	KVI Groningen; Netherlands
Stefan Leupold	Uppsala Univ., Sweden
Norbert Pietralla	TUD, Germany
Hendrik Schatz	MSU, USA
Reinhold Schuch	Stockholm Univ., Sweden
Andreas Türler	PSI, Switzerland
Michiharu Wada	RIKEN, Japan
Matthias Weidemüller	Univ. Heidelberg, Germany

PHELIX and Plasmaphysics PAC (PPAC)

Topics:

- High Energy Density Physics
- EOS, phase transitions, and transport properties
- Heavy ion interaction with plasma
- Proton acceleration (imaging, injection in accelerator)
- High field physics

Members:

Sylvie Jacquemot	LULI, Palaiseau, France
Grant Logan	LBNL, Berkeley, USA
Gilles Maynard	LPGP, Univ. Paris-Sud, France
Dieter Schneider, Chair	LLNL-PAT/NIF, USA
Oswald Willi	Univ. Düsseldorf, Germany

Biophysics and Radio-Biology PAC (Bio-PAC)

Topics:

- Biological radiation damage
- Therapy related research (clinical radiobiology, moving targets)
- Space-related research (biological effects)
- Modelling (physics and biology)
- Imaging and Dosimetry

Members:

Francis Cucinotta	NASA Johnson Space Center, Houston, USA
Dudley Goodhead	em. Director Med. Res. Council Rad. and Genome Stability Unit, Oxford, UK
Thomas Haberer	Heidelberg Ion-Beam Therapy Center (HIT), Germany
Amy Kronenberg	LBNL, Berkeley, USA
Günther Reitz (Chair)	German Aerospace Center (DLR), Germany
Laure Sabatier	CEA, Fontenay-aux-Roses, France

Materials Research PAC (Mat-PAC)

Topics:

- Materials modification by ion beams
- Physics and technology of nanostructures
- Problems of radiation hardness

Members:

Pavel Apel	Flerov Laboratory, Dubna, Russia
Serge Bouffard	University of Caen, France
Klas Hjort	University Uppsala, Sweden
Werner Wesch, Chair	Universität Jena, Germany

Program Advisory Committee for FAIR-Related Beam Time Proposals (F-PAC)

Organization:

- F-PAC is an internal advisory committee
- The FAIR technical division and the FAIR collaborations are represented
- Proposals can be submitted any time (no calls or deadlines)
- Committee meetings are done as needed, at least once per year

Topics:

- Irradiation experiments for FAIR accelerator components
- Beam diagnostics and accelerator controls development for FAIR
- Beam lifetimes and charge exchange cross-sections of low-charged heavy ions

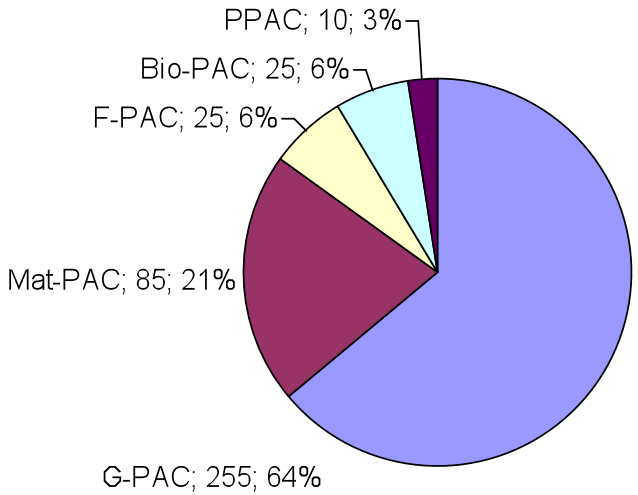
Members:

W. Müller	CBM Collaboration, Technical Coordinator
L. Schmitt	PANDA Collaboration, Technical Coordinator
J. Stadlmann, Chair	GSI, Synchrotrons Department
C. Trautmann	GSI, Materials Research Department
H. Weick	GSI, NUSTAR – FRS, Nuclear Structure

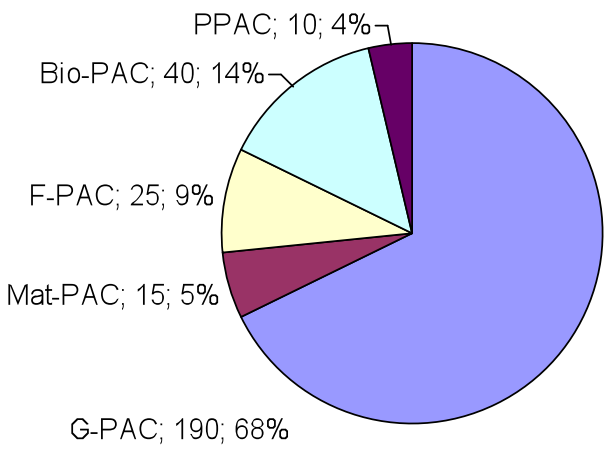
Beam Time Distribution between the PACs

Beam time shares are fixed in yearly All-PAC meetings

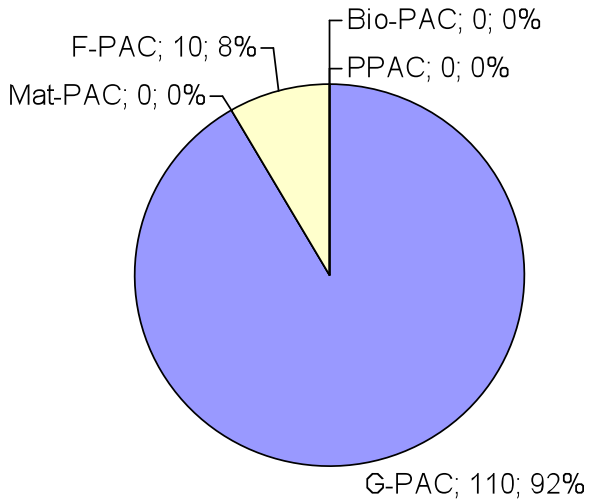
UNILAC; 400 shifts



SIS; 280 shifts



ESR; 120 shifts



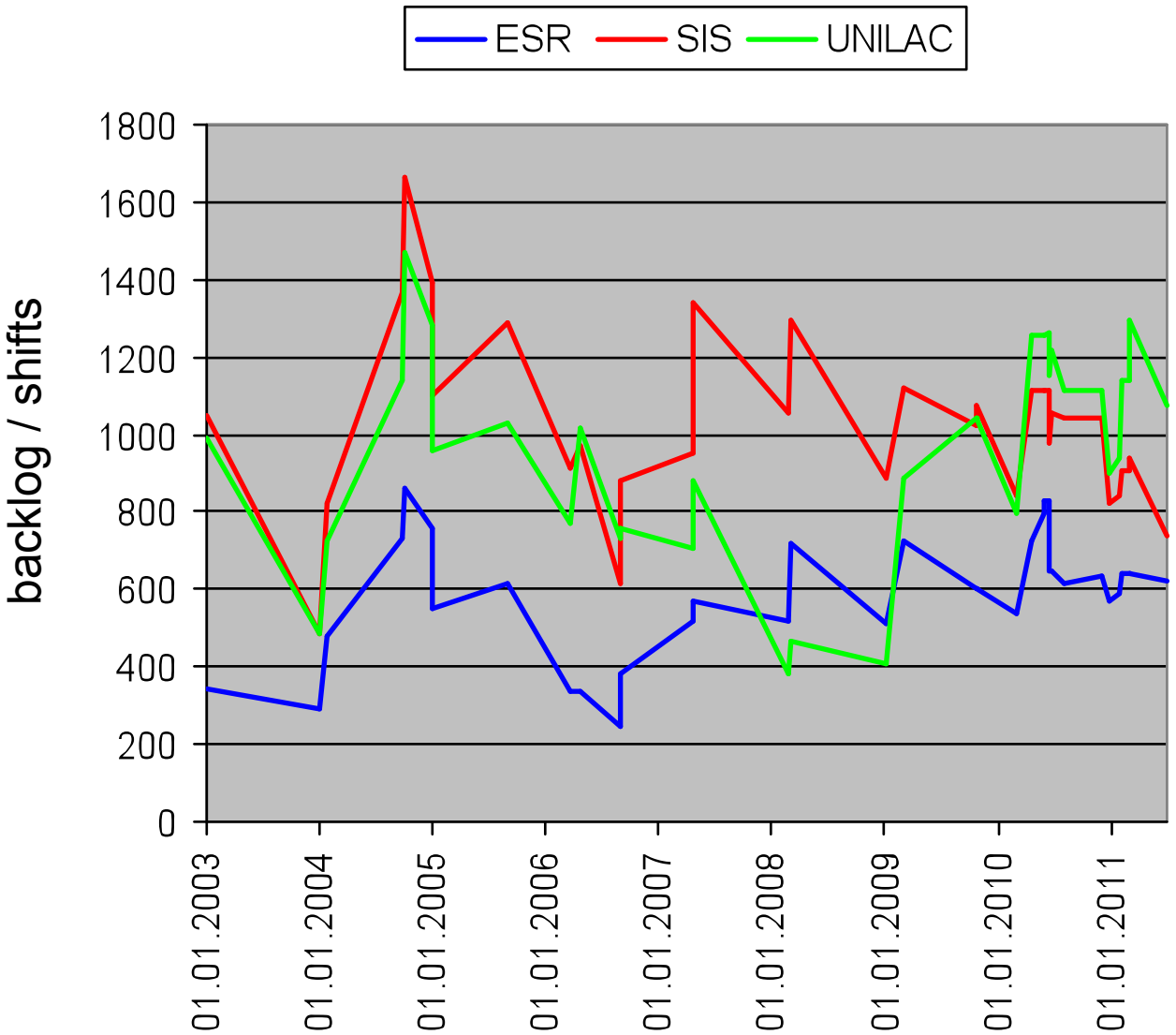
Estimated beam time availability per year in 8-hour shifts for experiments in the years 2012 and 2013. Additional 40 shifts/year at ESR are reserved for the commissioning of the ion trap facility HITRAP.

Backlog of Approved Beamtime

	total backlog (July 2010)	based on 2011-13 availabilities
UNILAC	**1076 shifts**	**2,7 years**
SIS	**738 shifts**	**2,6 years**
ESR	**624 shifts**	**3,9 years**
PHELIX	**175 shifts**	**0,7 years**

- The reduced availability of the facilities increases the average waiting time for experiments significantly
- Beam time quotas were reduced by 33% for the last round of PAC meetings (F-PAC, G-PAC, PPAC, Mat-PAC) in 2010
- New strategies for backlog reduction are necessary

Backlog Development



Classification of Proposals

Classification of Proposals in Categories

- A: 'must' be done;
- C: deferred;
- D: rejected

B-ranking (can be done if beamtime available) was abandoned in AII-PAC01 since B-proposals will not be scheduled due to the large backlog of A-rated experiments.

- Experiments which are dormant are re-evaluated after three years
- Experiments which have had significant beamtime are asked for reports on the PAC meetings
- Short annual status reports are requested from all active experiments

Summary / Outlook

- Program Advisory Committees for different research areas evaluate and follow progress of experiment proposals
- The beam time shares of the different PACs are adjusted each year in All-PAC meetings
- Strategy for cutting-down backlog is required due to beamtime reduction in preparation for FAIR