European Synchrotron Radiation Facility

Reorganisation of the Beamtime Allocation Panels (BTAPs)

Previous review process:

On the proposal form, proposer selects

- scientific category (up to 2)
- beamline(s) (up to 4)

The beamline(s) selected are confirmed by the relevant beamline scientist

The scientific category is confirmed by

- Beamline scientist
- User Office
- ESRF local liaison scientist

Final scientific category assigned => proposal is seen by one of eleven scientific category-based review committees.

Scientific Categories / Review Committees

- CH : Chemistry-related Studies
- HE : Electronic & Magnetic Properties
- HS : Crystals & Ordered Systems, Structures
- HD : Disordered Systems & Liquids
- MA : Applied Materials & Engineering
- EC : Environment & Cultural Heritage Matters
- MX : Macromolecular Crystallography
- MD : Medicine
- MI : Methods & Instrumentation
- SC : Soft Condensed Matter & Biological Materials
- SI : Surfaces & Interfaces

Each Committee has :

- o average of 8 members
- o Chairperson
- o SAC representative
- o + local liaison scientist

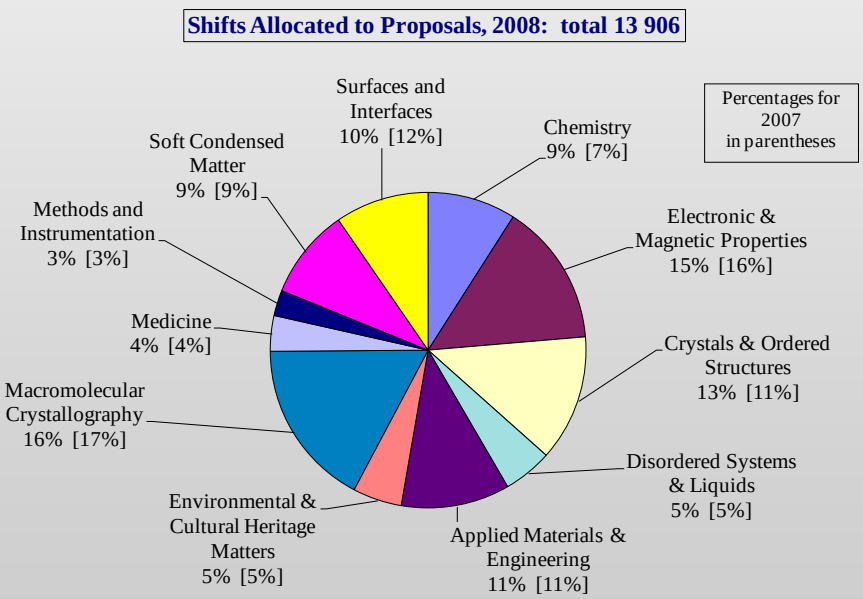
Pro rata Table

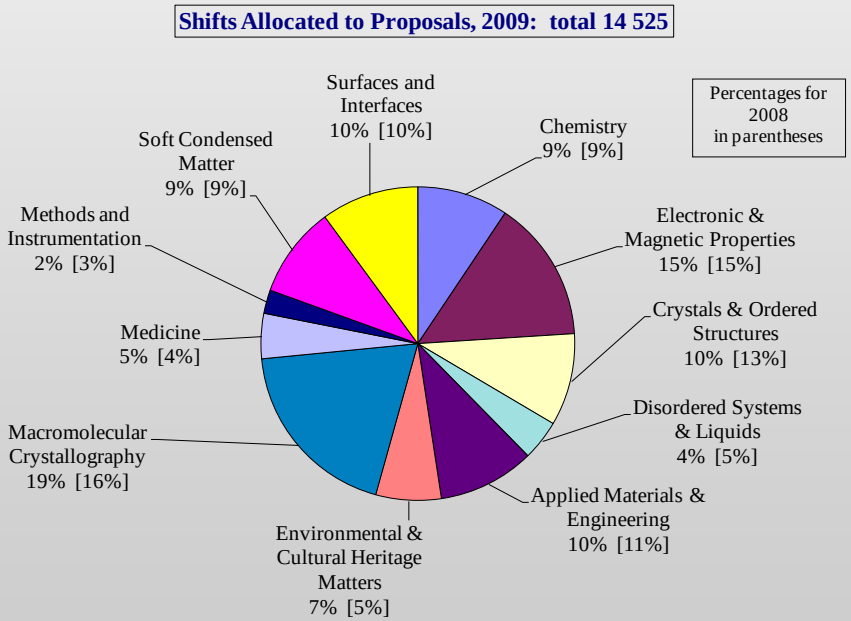
Beamline	CH			HE			HD			HS			EC			MA			MD			MI			MX			SC			SI			Total
	Req.	Avail.	Alloc.	*Req.*	Avail.	Alloc.	*Req.*	Avail.	Alloc.	*Req.*	Avail.	Alloc.	*Req.*	Avail.	Alloc.	*Req.*	Avail.	Alloc.	*Req.*	Avail.	Alloc.	*Req.*	Avail.	Alloc.	*Req.*	Avail.	Alloc.	*Req.*	Avail.	Alloc.	*Req.*	Avail.	Alloc.	Alloc.
ID01	■	■	■							■	■	■				■	■	■										■	■	■	■	■	■	5
BM01A	■	■	■	■	■	■										■	■	■																4
BM01B	■	■	■							■	■	■	■	■	■	■	■	■										■	■	■	■	■	■	6
ID02	■	■	■				■	■	■							■	■	■				■	■	■				■	■	■				5
BM02				■	■	■	■	■	■	■	■	■				■	■	■										■	■	■				5
ID03	■	■	■							■	■	■				■	■	■				■	■	■							■	■	■	5
BM05										■	■	■				■	■	■	■	■	■	■	■	■				■	■	■				5
ID08				■	■	■																												1
BM08	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■													■	■	■	7
ID09A (HP)				■	■	■				■	■	■																						2
ID09B (TR)	■	■	■				■	■	■	■	■	■				■	■	■				■	■	■	■	■	■	■	■	■				7
ID10A/ID10C										■	■	■																■	■	■				4
ID10B	■	■	■	■	■	■				■	■	■				■	■	■										■	■	■	■	■	■	6
ID11	■	■	■	■	■	■				■	■	■							■	■	■	■	■	■										6
ID12				■	■	■																■	■	■										2
ID13	■	■	■				■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	10
ID14-1																									■	■	■							1
ID14-2																									■	■	■							1
ID14-3																									■	■	■							1
ID14-4																									■	■	■							1
BM14																									■	■	■							1
ID15A				■	■	■				■	■	■	■	■	■	■	■	■	■	■	■	■	■	■				■	■	■	■	■	■	8
ID15B	■	■	■													■	■	■																3
ID16				■	■	■	■	■	■				■	■	■																			3
BM16																									■	■	■	■	■	■				2
ID17													■	■	■				■	■	■	■	■	■				■	■	■				4
ID18/ID22N	■	■	■	■	■	■				■	■	■				■	■	■										■	■	■	■	■	■	6
ID19													■	■	■	■	■	■	■	■	■	■	■	■				■	■	■				6
ID20				■	■	■																												1
BM20	■	■	■										■	■	■	■	■	■																3
ID21										■	■	■	■	■	■				■	■	■							■	■	■				5
ID22/ID18F	■	■	■							■	■	■	■	■	■	■	■	■	■	■	■	■	■	■				■	■	■				7
ID23-1																									■	■	■							1
ID23-2																									■	■	■							1
ID24	■	■	■	■	■	■	■	■	■	■	■	■				■	■	■				■	■	■										6
BM25A	■	■	■	■	■	■				■	■	■	■	■	■							■	■	■										5
BM25B	■	■	■	■	■	■										■	■	■													■	■	■	4
ID26	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■				■	■	■				9
BM26A	■	■	■							■	■	■																■	■	■				5
BM26B	■	■	■													■	■	■										■	■	■				3
ID27	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■																			5
ID28							■	■	■	■	■	■																						2
BM28				■	■	■																									■	■	■	2
ID29																									■	■	■							1
BM29	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■										■	■	■				7
BM30A																									■	■	■							1
BM30B	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■							■	■	■				8
ID31	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■				■	■	■							■	■	■	8
ID32	■	■	■	■	■	■				■	■	■				■	■	■										■	■	■	■	■	■	6
BM32																■	■	■				■	■	■				■	■	■	■	■	■	4
Totals	25			22			14			29			17			28			11			17			12			23			13			

Panels use pro-rata distribution of beamtime for guidance

entirely static distribution of beamtime

Beamtime Allocation per Committee





Proposal

Organise review such that beamlines and/or groups of beamlines are reviewed by a single panel

Proposal was endorsed by SAC in May 2010

- Re-shaping of the proposal review process (PRP)
- First proposal round with new structure in Sept 2012
- New software for handling the PRP within the User Portal

Proposal Review Process - Software

Submit proposal (MP) (TBD)
Define beamline staff, commenting staff and beamline responsibles (BR & UO)
Enter preliminary comments (BLS) (TBD)
View preliminary comments (UO) (TBD)
Enter category and measure(s) (UO) (TBD)
Enter Safety Comments (SAF) (TBD)
Advise on technical feasibility (BLS) (TBD)
Define ongoing LTP allocations (UO) (TBD)
Define interim BAG allocations (UO) (TBD)
Assign RC chairman to each category (UO)
Assign RC spokesperson to each proposal (RCC) (TBD)
Grade proposals (RCM) (TBD)
Normalize graders / Grading Overview (LS,UO,RCC)
Enter available shifts (UO) (TBD)
Calculate pro rata for nominal/provisional (UO) (TBD)
Calculate Juste Retour for requested/preliminary (UO) (TBD)
Take RC decisions (LS & RCC & RCM & UO) (TBD)
Enter ESRF/ILL/EMBL member contributions (UO) (TBD)
Review and correct RC decisions, improve/add RC comments for proposer (UO)
Run AFSRI (UO) (TBD)
Calculate pro rata for actual (UO)
Calculate Juste Retour for final (UO)
Modify decisions temporarily (UO together with DR and BLS) (TBD)
Finalize temporary decisions (UO)
Consult final decisions (BLS & LS) (TBD)
Break out BAG proposals to real beamlines (BLOM & UO) (TBD)
Publish final decisions (UO) (TBD)
Check review process completeness (UO) (TBD)
Send out decision mails/letters (UO)
Retrieve user operation summary (UO) (TBD)
Run different statistics and extractions on the database (UO) (TBD)
Get help and ask FAQs (all) (TBD)
Corrective measures (DIR) (TBD)

New proposal form is designed to provide information on:

Main scientific area:

- Hard Condensed Matter Physics
- Soft Condensed Matter Physics
- Chemistry
- Medicine
- Life Sciences
- Engineering
- Applied Material Science
- Earth Sciences
- Environment
- Cultural Heritage
- Methods & Instrumentation
- (Structural Biology)

Self-evaluation to provide classification into societal themes

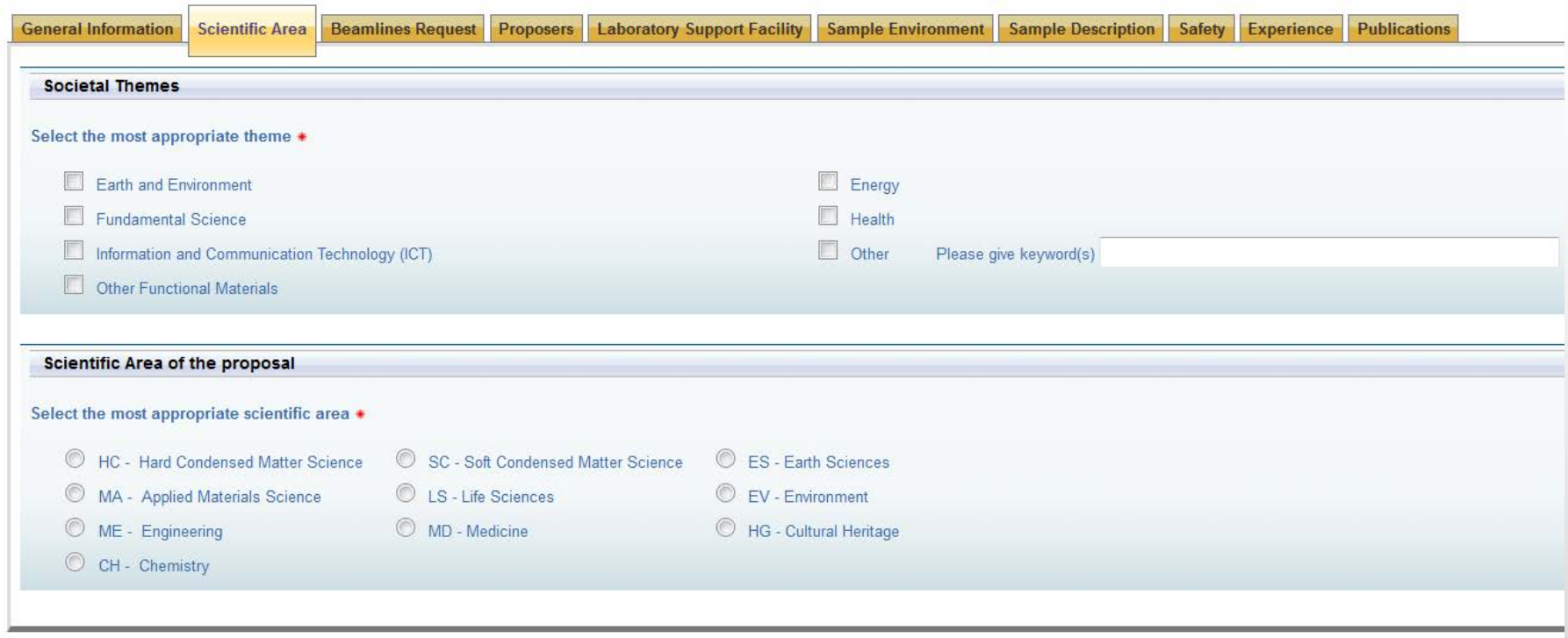
- Earth and Environment
- Energy
- Health
- Information and Communication Technology
- Other Functional Materials
- Fundamental Science (other than that included in themes given here)
- Other

(confirmed by committee)

Self-evaluation to provide classification as:

- Fundamental science
- Applied science
- Industrially relevant

Societal Themes & Scientific Areas



- Used ONLY for monitoring scientific use of ESRF
- NO influence on which Review Committee will assess proposal
- Scientific Area used for Proposal Number, as now. e.g. CH-123

Old Proposal Form - Beamlines

Beamline(s) requested:	BM23	and	ID15 B	**Number of shifts required**	*(1 shift is 8 hours)*	33
or	...	or	...	**Preferred starting time:**	*Please select the period*	February/March
					Unacceptable dates	

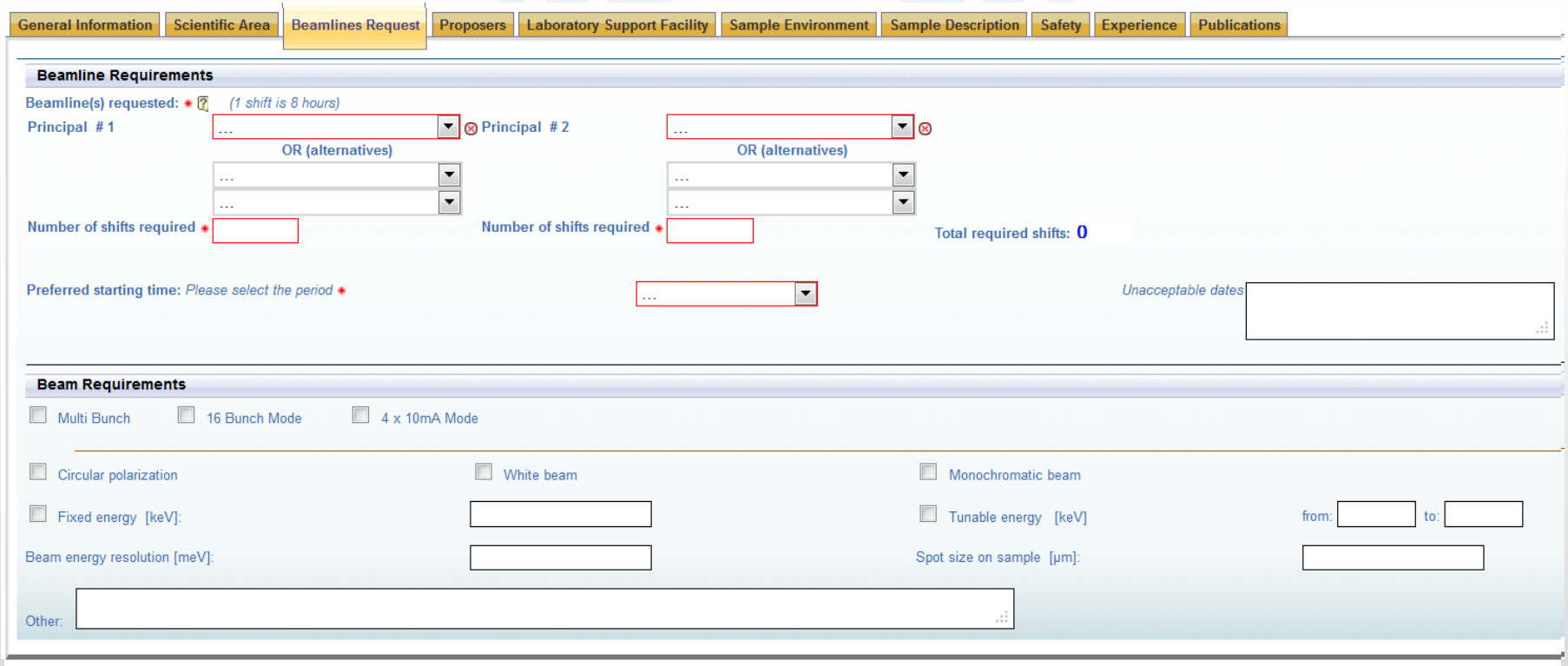
Beamline(s) requested:	BM01A	and	ID26	**Number of shifts required**	*(1 shift is 8 hours)*	1
or	BM01B	or	BM23	**Preferred starting time:**	*Please select the period*	April/May
					Unacceptable dates	

	A	C	E	F
1	**Proposal**	**Proposer**	**Req. Shifts**	**Req. BLs**
666	**SC 3544**	THURN-ALBRECHT	15	ID10,ID03,BM28,BM32

MULTIPLE BEAMLINES

- AND ?
- OR ?
- Shifts on each beamline ?
- How to ensure no double allocations ?
- How to ensure at least one BL given if deserved ?
- How to ensure recommendation of Committee is taken into account ?

New Proposal Form - Beamlines



- Clearly identify AND/OR
- Clearly identify shifts for each part in case of 2 beamlines required
- Maintain matrix through whole process – colour codes help identify allocations and TF=No for the Review Committees

New Proposal Form - Beamlines

Beamline(s) requested:

Principal # 1: ID13
OR (alternatives)
BM20
...

Number of shifts required: 9

Total required shifts: 9

Preferred starting time: *Please select the period* April/May

Unacceptable dates

Beamline(s) requested:

Principal # 1: ID21
OR (alternatives)
...
...

Number of shifts required: 9

Principal # 2: ID13
OR (alternatives)
BM26B
...

Number of shifts required: 5

Total required shifts: 14

Preferred starting time: *Please select the period* April/May

Unacceptable dates

Beamline(s) requested:

Principal # 1: ID01
OR (alternatives)
ID02
ID03

Number of shifts required: 9

Principal # 2: ID11
OR (alternatives)
ID12
ID13

Number of shifts required: 2

Total required shifts: 11

Preferred starting time: *Please select the period* April/May

Unacceptable dates

New Proposal Form - Beamlines

Matrix of Beamlines Requested

Principle Beamline 1	Principle Beamline 2
1st Alternative to PB1	1st Alternative to PB2
2nd Alternative to PB1	2nd Alternative to PB2

Resulting matrix has same format throughout the review process (for BL scientists, Committee members, UOff…)

Same structure as on proposal form

Panel will see a proposal if one of its BLs is requested in this matrix : “duplicates”

Final Panel structure for the beamtime allocation 2013

C01	C02	C03	C04	C05	C06	C07	C08	C09	C10
Surfaces & Interfaces Science	Chemistry	Spectroscopy	Structure of Materials (atomic)	Diffraction	Biomedical Research	Nanomaterials	SAXS	Soft Condensed Matter	Structural Biology
Diffraction	Structure of Materials (atomic)	Magnetism	Structure of Materials (electronic)	Extreme Conditions	Imaging	Environmental Science	Soft Condensed Matter	Spectroscopy	
Spectoscopy	Engineering Materials Science	Chemistry	EXAFS	Spectroscopy	Engineering Materials Science	Spectroscopy		Diffraction	
	Diffraction	Structure of Materials (electronic)	Powder Diffraction	Dynamics					
			Magnetism						
			Chemistry						
ID01 ID03 BM25B BM32	ID11 ID15A ID15B ID31	(ID08) ID12 ID20 ID26 ID32 BM28	ID24 BM01B BM08 BM20 BM23 BM25A BM26A BM30B	ID06-LVP ID09A ID18 ID27 ID28 BM01A	ID17 ID19	ID13 ID16B-NA ID21 (ID22)	(ID02) BM26B	ID09B ID10 BM02	ID14-4 ID23-1 ID23-2 ID29 ID30A-1 BM29 BM14U BM30A
9	8	11	12	10	11	10	7	7	7
J. Zegenhagen	A. Fitch	N. Brookes	S. Pascarelli	M. Krisch	A. Bravin	M. Cotte	D. Pontoni	Narayan	S. McSweeney/D. Flot

Aim to group like beamlines together

- Good scientific overview for Panels
- Reasonable number of proposals
- Reduce number of duplicates
- Simulations done over 4 proposal rounds

Results of proposals submission for the 2013-I session

	C01	C02	C03	C04	C05	C06	C07	C08	C09	C10	
Proposals to review	85	120	169	177	130	60	72	68	81	82	1044
Cross-committee proposals	9	21	16	14	4	4	5	4	11	0	88
Proposals as 1st committee	76	99	153	163	126	56	67	64	70	82	956

Results of proposals submission for the 2013-II session

	C01	C02	C03	C04	C05	C06	C07	C08	C09	C10	
Proposals to review	106	136	139	198	152	78	107	22	98	79	1115
Cross-committee proposals	19	20	11	17	8	2	12	2	13	0	104
Proposals as 1st committee	87	116	128	181	144	76	95	20	85	79	1011

Distribution of Proposals per Beamline

		Proposals Received Total
C01	ID01	35
	ID03	51
	BM25B	18
	BM32	33
		137
C02	ID11	49
	ID15A	34
	ID15B	29
	ID31	55
		167
C03	ID08	0
	ID12	74
	ID20	20
	ID26	43
	ID32	2
	BM28	10
		149
C04	ID24	25
	BM01B	30
	BM08	30
	BM20	19
	BM23	80
	BM25A	32
	BM26A	22
	BM30B	29
		267

		Proposals Received Total
C05	ID06-LVP	15
	ID09A	42
	ID18	30
	ID27	47
	ID28	21
	BM01A	30
		185
C06	ID17	37
	ID19	52
		89
C07	ID13	62
	ID16B-NA	18
	ID21	44
	ID22	0
		124
C08	ID02	0
	BM26B	22
		22
C09	ID09B	12
	ID10	59
	BM02	27
		98
C10	MX BL	79
		79
FULL TOTALS		**1317**

Proposals received = 1011 (956)

Possible duplicates = 306 (250)

Duplicates Apr 2013 = 104 (88)

Defining characteristics of the new committee structure:

Advantages

- Clear structure 
- More responsibility to the panels/members 
- Remove competition between panels (pro-rata problem) 
- Transparent assessment of LTPs 
- Feedback on proposals is more coherent 
- Final results available very rapidly  (approx. 2 weeks faster than 2012)
- Much more homogeneous distribution of workload 
- Installation of a new classification scheme in thematic areas:

  energy, health, environment..... 

Defining characteristics of the new committee structure:

Possible problems

- initially more duplicates 
  - this is minimised and doesn‘t seem to be a problem for BTAPs or processing
  - strongly influenced by BTAP structure
  - must follow this with time
- a small number of panels have a very broad range of fields to cover 
  - positive feedback from BTAPs
  - not entirely a new problem
  - ensure correct profile of new BTAP members
- ensure that small fields do not disappear 
  - several smaller fields now explicit as not linked to Cttee (e.g. ES, EV, HG, ME...)
  - Panels more willing to promote smaller fields or take a risk on some proposals now that more time is available

Summary of Feedback after 2 proposal rounds

The new structure was very well received :

- ✓ Greater responsibility for Panel
- ✓ Much better overview of beamline activities and interests
- ✓ Possibility to try more exotic or different experiments
- ✓ Possibility to choose best selection of proposals over suite of beamlines
- ✓ Proposal distribution homogeneous over majority of Panels
- ✓ Expertise required generally covered – suggestions made
- ✓ New software tools appreciated :
  - ✓ More information available electronically
  - ✓ Information available faster
  - ✓ Allow to track progress of allocations, update scores, renormalise...
- ✓ ...

Summary of Feedback after 2 proposal rounds

- Number of proposals high for some Committees (esp. C03 and C04)
  - C03 : >70 proposals for one beamline (ID12)
  - C04 : Desire (by ESRF and Panel) to keep all EXAFS beamlines together
    Overall view of demand in EXAFS and optimum distribution over beamlines
    Most CRGs have EXAFS capabilities so 8 beamlines in this Panel
    Other EXAFS beamlines in Europe recently closed
  - Premature to shuffle now as beamline portfolio not stable due to Upgrade Programme
- Clarification of Type of Science (Fund. / Applied / Industrial)
- Selection of Societal Theme, esp. Fundamental Science
  - Many proposers not filling these in correctly

Summary of Feedback after 2 proposal rounds

- Chairpersons‘ Reports include more specific beamline feedback
  - useful for Directors of Research for monitoring growth or changes in direction
  - can be fed back by Liaison Scientist to Beamline Scientist

- Panels can move some proposals to unrequested beamlines
  - within their committee, if appropriate
  - ensure best proposals get beamtime
  - technical feasibility check

- Panels generally happy with expertise covered
  - absent experts more critical; evaluation comments required

New Software Tools for BTAP :

- Assign graders tool for Chairpersons
  - Online assignment, linked with Grading sheet
  - Proposer info
  - Counter per member and per proposal
- Grading sheet
  - access to all proposals, pdfs, relevant reports, related proposals (continuation, resubmission)
  - real time indication of proposals to grade (Spokesperson/Grader)
- Grading Overview for Chairpersons
  - real time status of grades per proposal and per member
  - earlier preparation of meeting
  - possibility to renormalise full sets of grades (on agreement of Panel)
- Review Committee Results tool
  - working directly in database
  - can modify individual scores during meeting, real time updates
  - real time updates showing proposals allocated and on what beamline
  - sorting and display tools
  - automatic ranking, auto-fill tools, auto-generation of statistics
  - and more...
- Post review processing of results and visualisation of results for BL scientists

Conclusion

- Successful second round with new organization
- Several issues from October 2012 solved or improved
- Long Term Projects successfully integrated (MX still to be done)
- 2013 will be a transition year – fine tuning
- Real statistics from new structure from 2014