Operation of the Orphée Reactor and LLB facility in 2003-2004

The Orphée reactor is one of the most recent medium power reactors in Europe and has a very efficient operation. However, despite all its merit, Orphée-LLB suffers in the last years from severe budget cuts and will operate in a reduced mode for two years, in 2004-2005. In 2003, the LLB associates (CEA and CNRS) decided to reduce the operation of the Orphée reactor to 114 days per year (FPED, Full Power Equivalent Days) for the next two years due to budgetary problems. This reduction followed the 2001 agreement on the 180 days per year operation in 2001-2003, already for budgetary cuts. In former times, the agreement between the two associates (CEA and CNRS) had fixed this number of operating days to 210 days during the previous period, i.e. 1999-2000. In fact, the reactor operation has slightly exceeded these nominal numbers in the 2000-2002 years, leading to a real availability greater than 100% (see table 1). The normal operation mode of the Orphée reactor for its first eighteen (18) years in 1981-1998 was fixed to 245 days.

Year	1998	1999	2000	2001	2002	2003	2004
Reactor Days (EFPD)	218	205	213	186	183	163	118
% Availability	99,4	96,8	101,4	103,3	101,6	90.5	103,3

Table 1. Operation of the LLB-Orphée reactor for the last seven years, given in Equivalent Full Power Days (EFPD). The nominal operation mode was of 245 days up to 1997, of 210 days in 1998-2000, of 180 days in 2001-2003 and of 114 days in 2004. The low figure in 2003 is due to the extended summer stop to finish the refurbishment of the 8F-9F beam tubes feeding the cold neutron spectrometers in the guide hall.

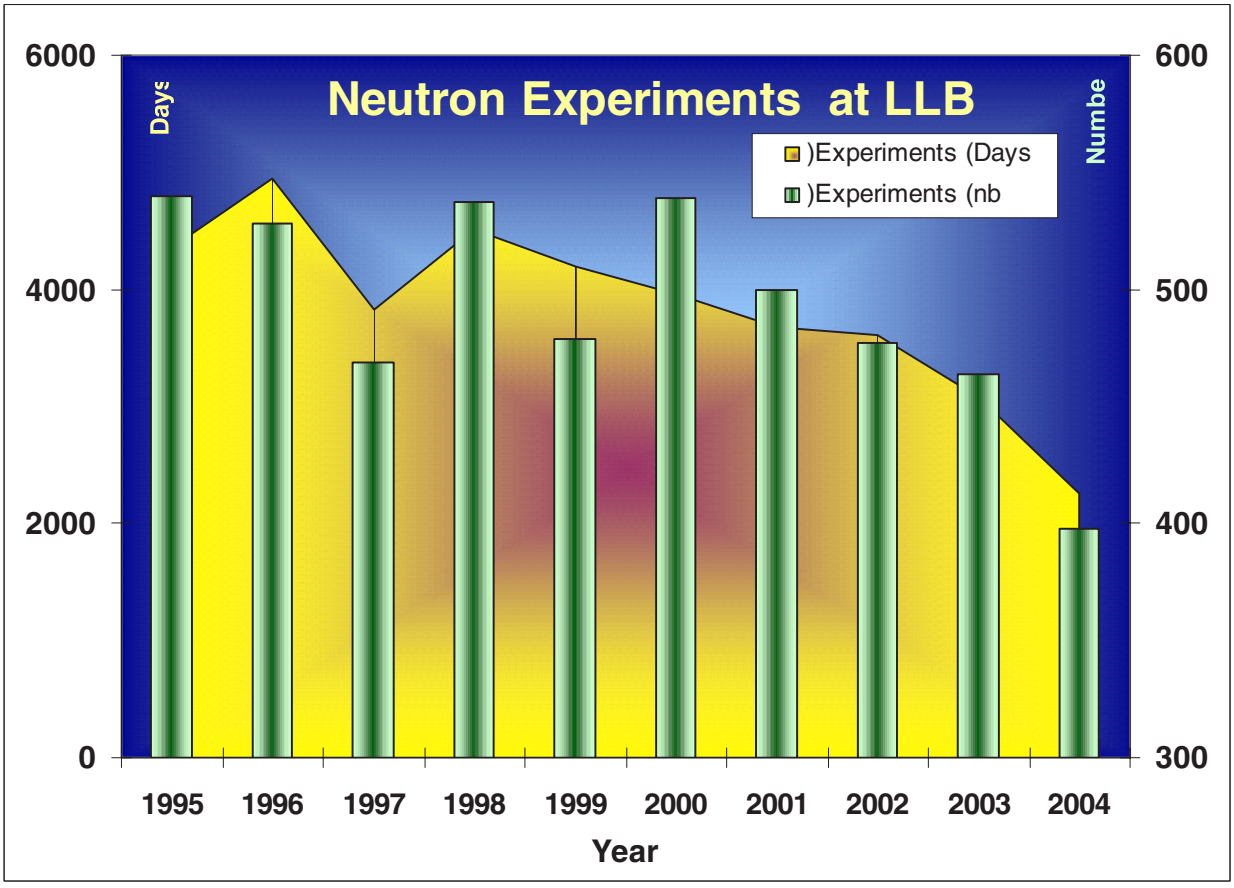

Figure 1. Graph of the number of experiments (green bars and right scale) and experiment days (yellow curve and left scale) performed at LLB-Orphée during the last ten years. The curves followed closely the number of operation days of the Orphée reactor (table 1).

The number of experiments and experiment days performed at LLB in 2003-2004 scaled closely with this **24% decrease of the available beam time**, compared to the previous two-year period: An average of **2670 experiment days per year in 2003-2004** (3080 exp. days in 2003 and 2260 exp. days in 2004) is to be compared with an average of 3400 experiment days per year in 2001-2002 (3340 exp. days in 2001 and 3440 exp. Days in 2002). The smoothed average over the last six years amounts to 3380 experiment days per year in 1999-2004.

The number of experiments decreased comparatively in a smaller proportion: an average of **431 experiments per year in 2003-2004** (464 experiments in 2003 and 398 in 2004) to compare with an average of 489 experiments in 2001-2002 (500 experiments in 2001 and 477 in 2002), leading to an 11% decrease only. The smoothed average over the last six years amounts to 476 experiments per year in 1999-2004.

Bibliometry of the LLB

The 2003-2004 period can be considered as record years for the LLB publications in high impact journals and reviews as it can be appreciated in the table 2 below.

Journals and Reviews	Impact Factor	2003-2004	2001-2002	1999-2000	TOTAL
Acta Materialia	**2.65**	1	2	-	**3**
Advanced Materials	**5.57**	-	-	1	**1**
Angewandte Chemie -International Edition	**8.25**	1	-	1	**2**
Applied Physics Letters	**3.84**	2	-	-	**2**
Biophysical Journal	**4.63**	4	4	1	**9**
Chemistry of Materials	**3.69**	4	3	3	**10**
Faraday Discussion	**3.26**	1	-	-	**1**
Inorganic Chemistry	**2.94**	3	1	-	**4**
Journal of Applied Crystallography	**2.58**	6	1	1	**8**
Journal of Chemical Physics	**3.14**	6	6	9	**21**
Journal of Materials Chemistry	**2.74**	1	-	-	**1**
Journal of Physical Chemistry A	**2.53**	2	-	-	**2**
Journal of Physical Chemistry B	**3.38**	6	5	-	**11**
Journal of Rheology	**2.57**	1	-	-	**1**
Journal of the American Chemical Society	**6.07**	1	1	-	**2**
J. of the Chemical Society, Dalton Trans.	**2.82**	1	1	-	**2**
Langmuir	**2.97**	6	2	9	**17**
Macromolecules	**3.73**	6	12	9	**27**
Microporous and Mesoporous Materials	**2.50**	1	-	-	**1**
Nature	**27.96**	2	2	1	**5**
Physical Review B.	**3.19**	46	40	43	**129**
Physical Review Letters	**6.67**	29	18	29	**76**
Science	**23.33**	1	1	1	**3**
Publications	**Total**	**131**	**99**	**108**	**338**

Table 2. Publication records of the LLB in the last six years, in high impact journals (IF > 2.5)

The French and European LLB users have been extremely productive and have written more papers in Physical Review Letters than ever. The production in the various areas of expertise of the LLB, like crystallography, material science, soft condensed matter and biology, is very satisfactory. These bibliometric benchmarks prove that Science made at the LLB is very well appreciated on an international level and we will not enter any kind of arguing on budget-averaged or flux-averaged figures of merit of the neutron

sources in Europe or abroad. The LLB is a top-level neutron facility and a laboratory of excellence. The LLB can even play its role in the worst conditions and keep a very high level of quality production.

Beyond childish quarrels and short-sighted arguments, we would like to pinpoint that most of the educational tasks, like training schools, thesis and post-doc works are better done in medium-power installations where scientific and technical staff have less pressure on their shoulders and that these day-to-day "underground" tasks are often under-evaluated even if they are most important to prepare the medium-term future of science. There is a reservoir of a dozen thesis students working currently at the LLB and we can estimate that every year more than a dozen thesis works are defended all over Europe that have crucially depended on the neutron beamtime delivered on LLB spectrometers. It is plain obvious that these figures played a key role in the battle fought by the LLB to convince its ruling authorities that LLB played, plays and will play a role in science and education : Now, The LLB has a clear future in the French and European neutron landscape for the next ten years.

Beam time allocation, experimental programme and user activities

The four review committees of the selection panel of the LLB comprise fifty (50) international scientists (see table at the end of the section) who meet twice a year at the LLB and have the difficult job of assessing the scientific quality and timeliness of submitted proposals and to advise on the allocation of beam time. The four committees report to the LLB direction that regulates the beam time allocation.
The LLB is the French Neutron Facility. Therefore, the major part of experiments allocated at the LLB in 2003-2004 has been given to French teams coming from all over the country. The French experiments stand for nearly two-thirds (2/3) of the total beam time allocated during this two-year period.

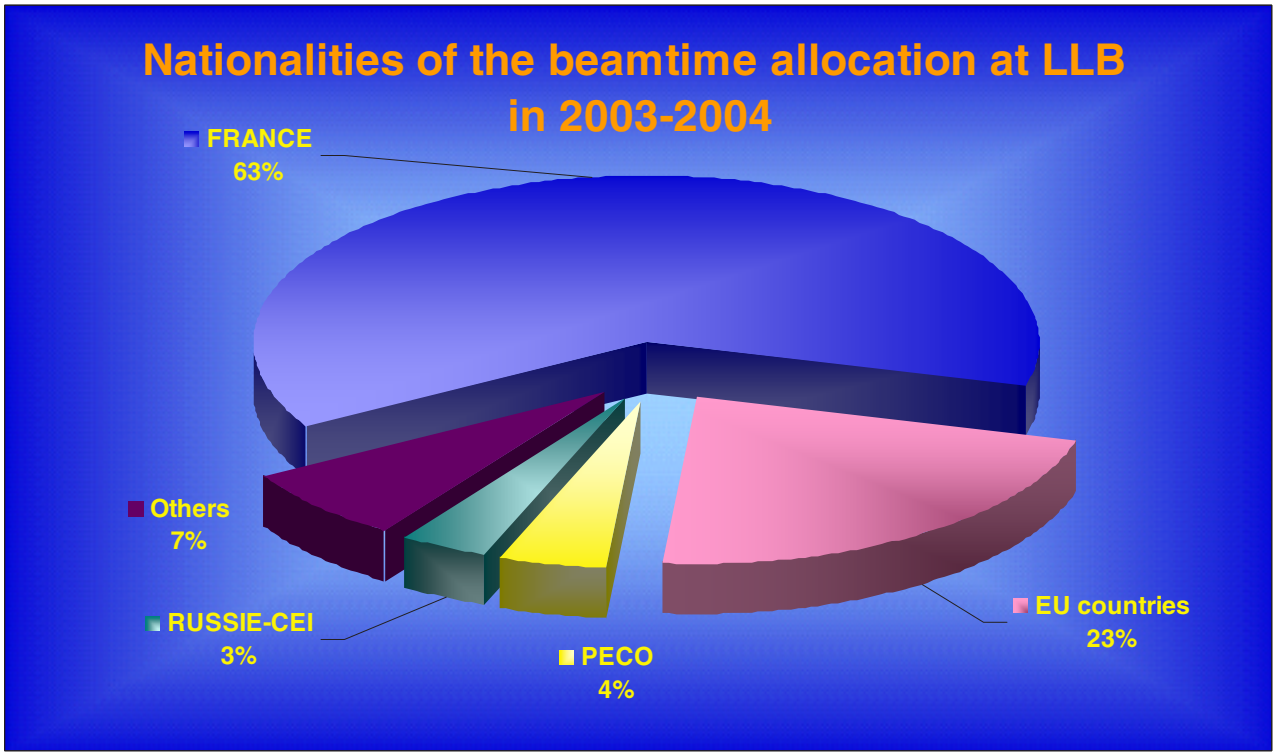

Figure 2. Beam time allocated at LLB-Orphée in 2003-2004 as a function of the nationality of the neutron teams involved in the accepted proposals .

The neutron teams from European and associated PECO ("Pays d'Europe Centrale et Orientale") countries have benefited of more than one fourth (1/4) of the total beam time allocation, part of this use being supported by the European support for large-scale facilities (see next sub-section). The rest of the beam time

has been given mainly to Russia and for a non-negligible fraction (7%) to the remaining countries (USA, Japan, Switzerland, see beam time allocation subsection for a detailed analysis by countries).
Overall, the four review committees of the selection panel examined nine hundred thirty-four (934) proposals requesting 7778.5 days of beam time for 2003-2004, out of which seven hundred sixteen (716) proposals received beam time, allocating 4297 days on the twenty-three (23) LLB instruments.
The distribution of beam time requested and allocated amongst the different European and other counties is shown in the table 3.
Nearly two-thirds of the allocated beam time goes to the French proposals covering all domains of science and nearly all regions of France. One fourth of the beam time is devoted to European proposals coming from the major "neutron-wise" countries, i.e. Germany, Great Britain, Spain, Austria and Italy. Half of this European beam time goes to German experiments in long term collaborations, initiated on all instruments and not only on the CRG ones.

Country	Proposals 2003-2004	Experiments 2003-2004	Beamtime asked (days)	Beam time all. (Days)	Beam time asked (%)	Beam time all. (%)
France	550	451	4,588.0	2,681.5	59.0%	62.4%
FRANCE	**550**	**451**	**4,588.0**	**2,681.5**	**59.0%**	**62.4%**
Germany	96	76	785.5	504.0	10.1%	11.7%
Austria	12	8	109.0	65.0	1.4%	1.5%
Italy	50	30	372.0	149.5	4.8%	3.5%
Great-Britain	16	8	93.0	40.5	1.2%	0.9%
Spain	16	14	121.0	69.0	1.6%	1.6%
Others	30	22	226.0	136.0	2.9%	3.2%
EU countries	**220**	**158**	**1,706.5**	**964.0**	**21.9%**	**22.4%**
Poland	31	19	325.5	147.0	4.2%	3.4%
Hungary	4	2	37.0	8.0	0.5%	0.2%
Czech Rep.	3	2	32.0	13.0	0.4%	0.3%
Others	6	5	40.0	21.0	0.5%	0.5%
PECO	**44**	**28**	**434.5**	**189.0**	**1.4%**	**1.0%**
Russia	35	30	259.0	140.0	3.3%	3.3%
Ukraine	10	2	134.0	9.0	1.7%	0.2%
RUSSIE-CEI	**45**	**32**	**393.0**	**149.0**	**5.1%**	**3.5%**
United-States	27	22	277.0	170.0	3.6%	4.0%
Japan	18	10	154.0	68.0	2.0%	1.6%
Switzerland	2	2	17.5	10.5	0.2%	0.2%
Magrheb	14	9	103.0	36.0	1.3%	0.8%
Others	14	4	105.0	29.0	1.3%	0.7%
Others	**75**	**47**	**656.5**	**313.5**	**8.4%**	**7.3%**
TOTAL	**934**	**716**	**7,778.5**	**4,297.0**	**100%**	**100%**

Table 3. Compilation of the proposed and accepted experiments at LLB by the four series of selection panels done in 2003-2004 with the corresponding beam time demand and allocation in days and percentage for France, the EC countries, PECO and Russia and the rest of the world. The main "neutron-wise" countries have been highlighted.

Collaborations with Austria and Italy suffered with the closedown of the corresponding CRG instruments. On the contrary, the collaborations with Russia and PECO countries are still very active and count for nearly five percent of the allocated beam time, comparable with the rest of the internationally allocated beam time. This is the last report where these PECO countries appear, as they have been integrated in the European Community in 2004. We have stick to this definition in this report for consistency and comparison with the previous report (See also next sections).

European access programme: Bye-Bye HPRI in the FP5 and Welcome to NMI^3 in the FP6

Since 1993, the LLB is a large-scale facility for the transnational access of European users in the framework of the Human Capital and Mobility (HCM, 1993-1997) and Training and Mobility of researchers (TMR, 1996-2000) programmes of the European Commission. In 1999, The LLB applied successfully in the FP5 scheme for the new HPRI European programme opened also to associated countries (e.g. central Europe). In 2003, the LLB has applied successfully in the FP6 scheme to continue in participating to the transnational access of European users to large-scale facilities in the Neutron-Muon Integrated Infrastructure Initiative, NMI^3 in the forthcoming years (http://neutron.neutron-eu.int/n_nmi3). The LLB is particularly keen to attract new user groups from EC or associated countries and those wishing to apply neutron techniques to novel scientific areas. Researchers wishing to apply under the EC programme can do so via the normal LLB proposal mechanism. The LLB will provide travel and subsistence cost for up to two researchers in an accepted experiment.

As for the FP5 access programme, the first contract HPRI-CT-1999-0032 started on 1 February 2000 for three years until 31 January 2003. The initial plan was to deliver five hundred and ten (510) days of beam time for seventy (70) projects involving one hundred (100) individual users. The LLB has signed a new overlapping contract in 2002, HPRI-CT-2001-0170 for two years until February 2004. This contract concerned one hundred and eighty-five (185) days of beam time for twenty-five (25) projects involving thirty-seven (37) individual users. This second contract has ended up the transnational access programme of the FP5 scheme. The total FP5 access programme was planned for 695 days of beam time.

The access really delivered by the LLB during the total four-year period amounted in fact up to seven hundred and thirty-five (735) days of beam time, delivered to one hundred and twenty-eight (128) projects and concerned one hundred and eighty-seven (187) individual users coming from EC countries or associated countries. Amongst the 128 projects, 88 projects came from EC countries, i.e. roughly two-thirds of the total and 40 projects from associated countries. Nationalities involved in the access programme reflect closely the ones active in the global access described in the preceding section, i.e. Germany, Italy, Spain and Greece for EC and Poland and Hungary for associated countries at the time of the contracts.

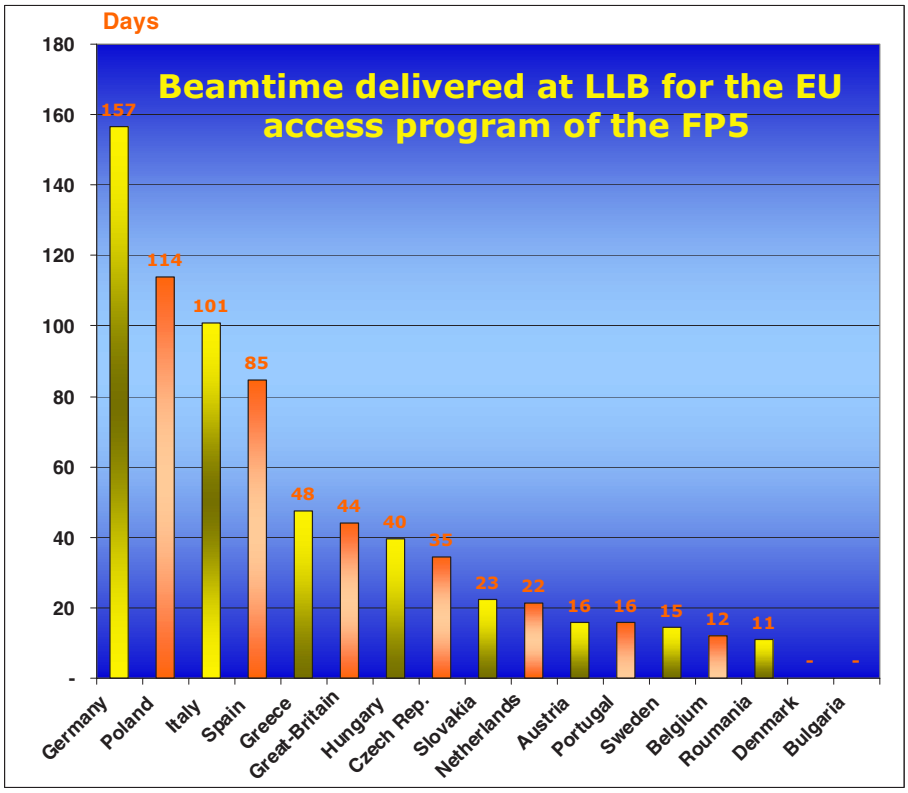

Figure 3. Beam time delivered at LLB-Orphée in 2003-2004 in the framework of the transnational access program supported by the European FP5 scheme for large scale facilities, as a function of the nationality of the neutron researchers invited by the LLB.

Selection panel and Beam time allocation

There are three different complementary ways of submitting a proposal to the LLB:

- Standard submission of a research proposal, twice a year in Spring and Fall
- Long term research project over three (3) years, twice a year in Spring and Fall
- Fast access procedure for short experiment or test, without time restriction.

Special access for proprietary research and industrial users and firms are considered separately.
More detailed information on applications for beam time and deadlines are given on the LLB web site at http://www-llb.cea.fr

Proposals for experiments are selected and beam time allocations are made through peer review. Review committees of specialists from France and the most parts of European countries have been set up in the following scientific areas:

Session A for physical chemistry and biology
Session B for structural studies and phase transitions
Session C for Magnetism and superconductivity
Session D for disordered systems and material science.

The relative importance of these four committees of the selection panel at LLB is depicted in the figure 4 below this paragraph. The largest committee of the LLB is the one dealing with magnetism and superconductivity, domain where the LLB expertise is acknowledged worldwide. The three other committees are roughly equivalent in importance and share the rest of the allocated beam time, each of them getting around 20% of the total beam time. Each session of the Selection Panel comprises typically nine (9) members (3 French members, 3 foreign members and 3 LLB members).
The list of the selection panel for Fall 2004 is given at the end of this section.
The review committee meet twice a year, some six weeks after the deadline for submission of proposals (1 April in spring and 1 October in fall). Accepted proposals submitted by April receive beam time in the second half of the year and those submitted by October, in the first half of the following year.

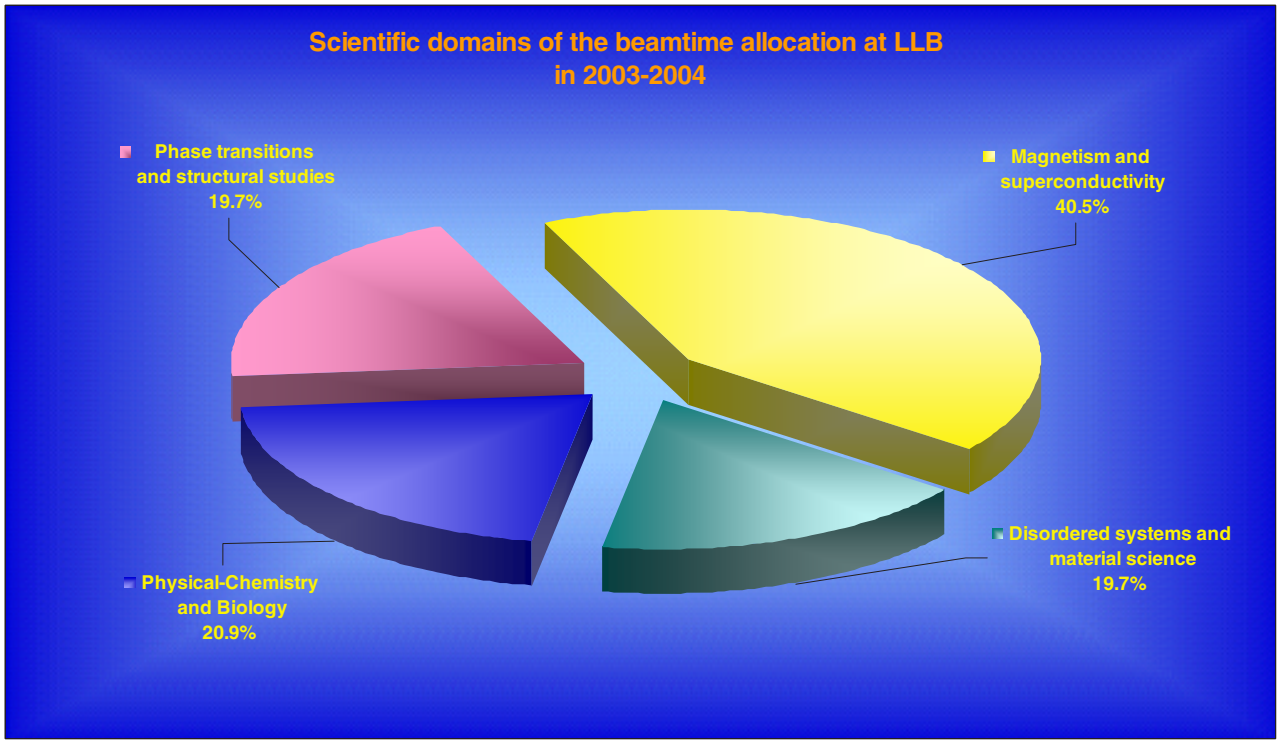

Figure 4. Repartition of the beam time delivered at LLB-Orphée in 2003-2004 amongst the four committees of the selection panel with the corresponding percentage.

The LLB has discontinued in 2003 the fall user meeting and the system of Round Tables and User Selection panels put in place in 1996. The "Tables Rondes du LLB" are splitted into a selection committee meeting (twice a year) and thematic workshops called "Rencontres de StAubin" organised in close collaboration with the new French synchrotron SOLEIL that will be soon in operation on the Saclay Plateau. These workshops will focus on the major scientific areas of the LLB and of SOLEIL and will emphasise the complementarity of the two scattering techniques.

The four selection committees allocated the neutron beam time on the 23 spectrometers of the LLB with an average overload factor of 1.81 in 2003-2004. The spectrometers are grouped in five major categories: structure determination (on powders or single crystals), dynamical studies, Small Angles Neutron Scattering (SANS), Materials science (including nanomaterials and metallurgy) and High Resolution (in time, energy or reciprocal space).

Group	Proposals 2003-2004	Beamtime 2003-2004	Session A	Session B	Session C	Session D	TOTAL Alloc.	F_over
Structure	310	2,570	19	436	872	39	1,366	1.88
Dynamics	157	1,691	7	341	626	31	1,005	1.68
SANS	238	1,303	466	12	49	124	650	2.00
Materials	104	1,152	154	-	209	313	676	1.71
High Res.	125	1,063	253	58	43	248	601	1.77
TOTAL	**934**	**7,778.5**	**898.0**	**846.5**	**1,798.5**	**754.0**	**4,297**	**1.81**

Table 4. Compilation of the proposed experiments at LLB by the four series of selection panels done in 2003-2004 with the corresponding beam time demand and allocation in days by the four committees: Session A stands for physical chemistry and biology, Session B for structural studies and phase transitions, Session C for Magnetism and superconductivity, Session D for disordered systems and material science.

Last column displays the overload factor in the five instrument categories and the global overload factor calculated on the beam time allocation.

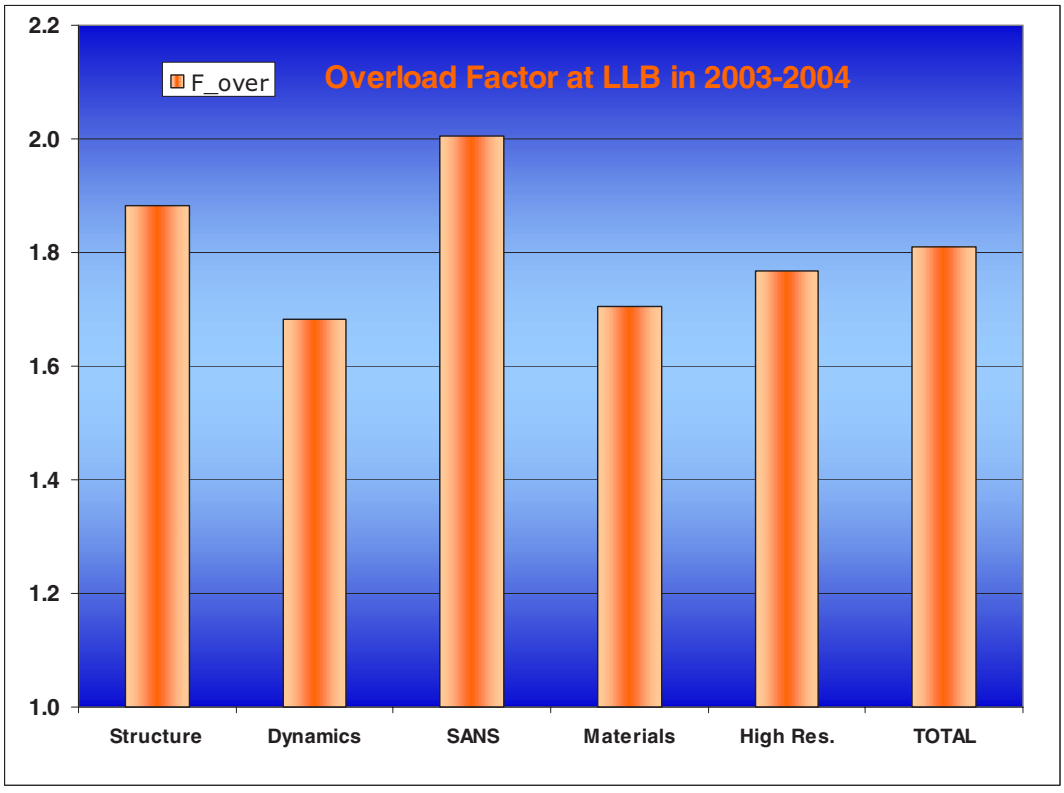

Figure 5. Overload factor of the various instrument groups at LLB 2003-2004 calculated on the beam time demand and allocation.

Experiments at LLB are performed on various types of spectrometers. The five main groups are concerned with structure determination (on powders or single crystals), dynamical studies, Small Angles Neutron Scattering (SANS), Materials science (including nanomaterials and metallurgy) and High Resolution (in time, energy or reciprocal space).
The structural and dynamical studies have an allocated beam time of more than one thousands experimental days per two years. The three smaller groups of instruments deal with SANS, material science and High Resolution. They get an allocation of around six hundreds experimental days per two years.

LLB 2003-2004	Proposal number	Beamtime Asked (days)	Allocated Session A	Allocated Session B	Allocated Session C	Allocated Session D	TOTAL Allocated
5C1	29	409	-	-	188	-	188
5C2	30	521	-	205	38	-	243
6T2	40	456	-	58	156	-	214
3T2	78	353	-	107	94	5	206
G4.1	73	357	5	34	169	11	219
G4.2*	19	114	4	23	51	-	78
G6.1	41	360	10	9	176	23	218
Structures	**310**	**2 570**	**19**	**436**	**872**	**39**	**1 366**
1T1*	38	379	7	64	113	-	184
2T1	46	528	-	40	201	24	265
4F1/4F2	68	708	-	160	312	7	479
G4.3*	5	76	-	77	-	-	77
G4.5	-	-	-	-	-	-	-
Dynamics	**157**	**1 691**	**7**	**341**	**626**	**31**	**1 005**
PACE	94	553	232	-	-	19	251
PAXE	76	386	96	8	7	75	185
PAXY	68	364	139	4	42	31	215
SANS	**238**	**1 303**	**466**	**12**	**49**	**124**	**650**
6T1	17	314	-	-	-	201	201
G5.2*	20	225	-	-	-	97	97
G2.4	25	222	6	-	151	-	157
G3.Bis	31	228	133	-	26	10	169
G5.5	11	163	15	-	32	5	52
Materials	**104**	**1 152**	**154**	**-**	**209**	**313**	**676**
7C2	45	317	25	14	10	148	197
G4.4	1	3	-	-	-	-	-
G1.Bis*	27	295	91	7	14	64	176
Spin Echo	2	35	21	-	-	-	21
TV	50	413	116	37	19	36	208
High Res.	**125**	**1 063**	**253**	**58**	**43**	**248**	**601**
TOTAL	**934**	**7 779**	**898**	**847**	**1 799**	**754**	**4 297**

Table 5. Compilation of the proposed and accepted experiments at LLB by the four series of selection panels done in 2003-2004 with the corresponding beam time demand and allocation in days and percentage for the five groups of dedicated spectrometers for Structure, Dynamics, SANS, Materials science and High Resolution spectroscopy.

Instrument operation in 2003-2004

The instrumental operation at LLB in 2003-2004 was smooth and efficient. Despite all the pressure on its future, The LLB has continued in 2003-2004 to upgrade its instrument park, especially on the material science spectrometer 6T1 for textures and the cold neutron triple-axis spectrometer 4F2. The LLB has progressed in the development of the Very small angle spectrometer TPA and finished the definition of the spectrometer (see instrumentation section). The spectrometer will be finished in the forthcoming years. The high-resolution powder diffractometer 3T2 will be completely rebuilt and upgraded by the end of 2005. Upgrade of the time of flight reflectometer G3.Bis "Eros" has also started and will be rapidly evolving in the next years before the transfer of the spectrometer on the Mibemol position.
The two graphs below show the beam time really delivered and the experiments performed over the last two years on the different types of spectrometers.

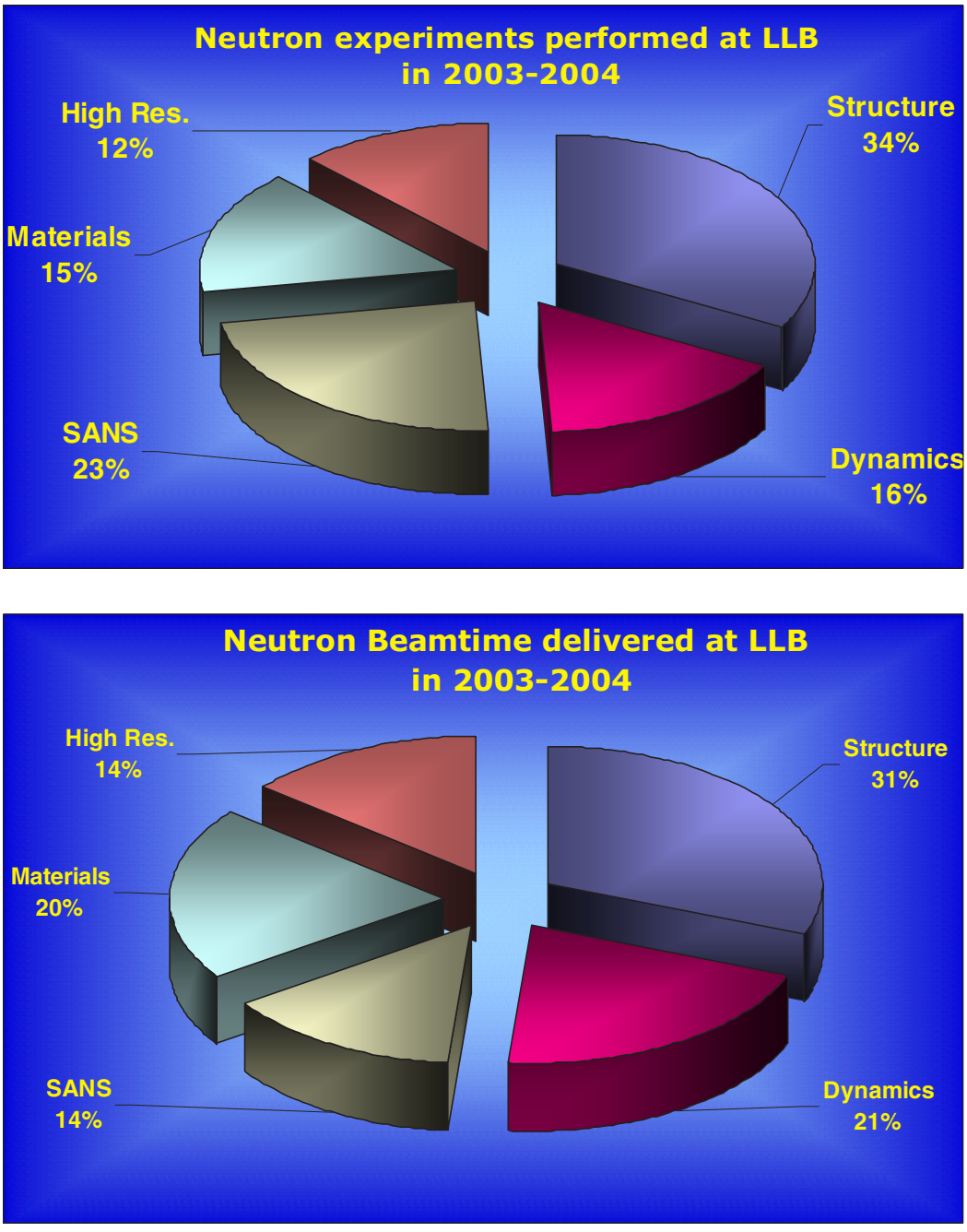

Figure 6. Repartition of the experiments performed and of the beam time delivered at LLB-Orphée in 2003-2004 amongst the five instrumental groups of spectrometers with the corresponding percentage.

The LLB spectrometers are grouped in five major categories: structure determination (on powders or single crystals), dynamical studies, Small Angles Neutron Scattering (SANS), Materials science (including nanomaterials and metallurgy) and High Resolution (in time, energy or reciprocal space).
The two graphs below show the beam time really delivered and the experiments performed over the last four years on the different types of spectrometers. An average plot serves as a reference.

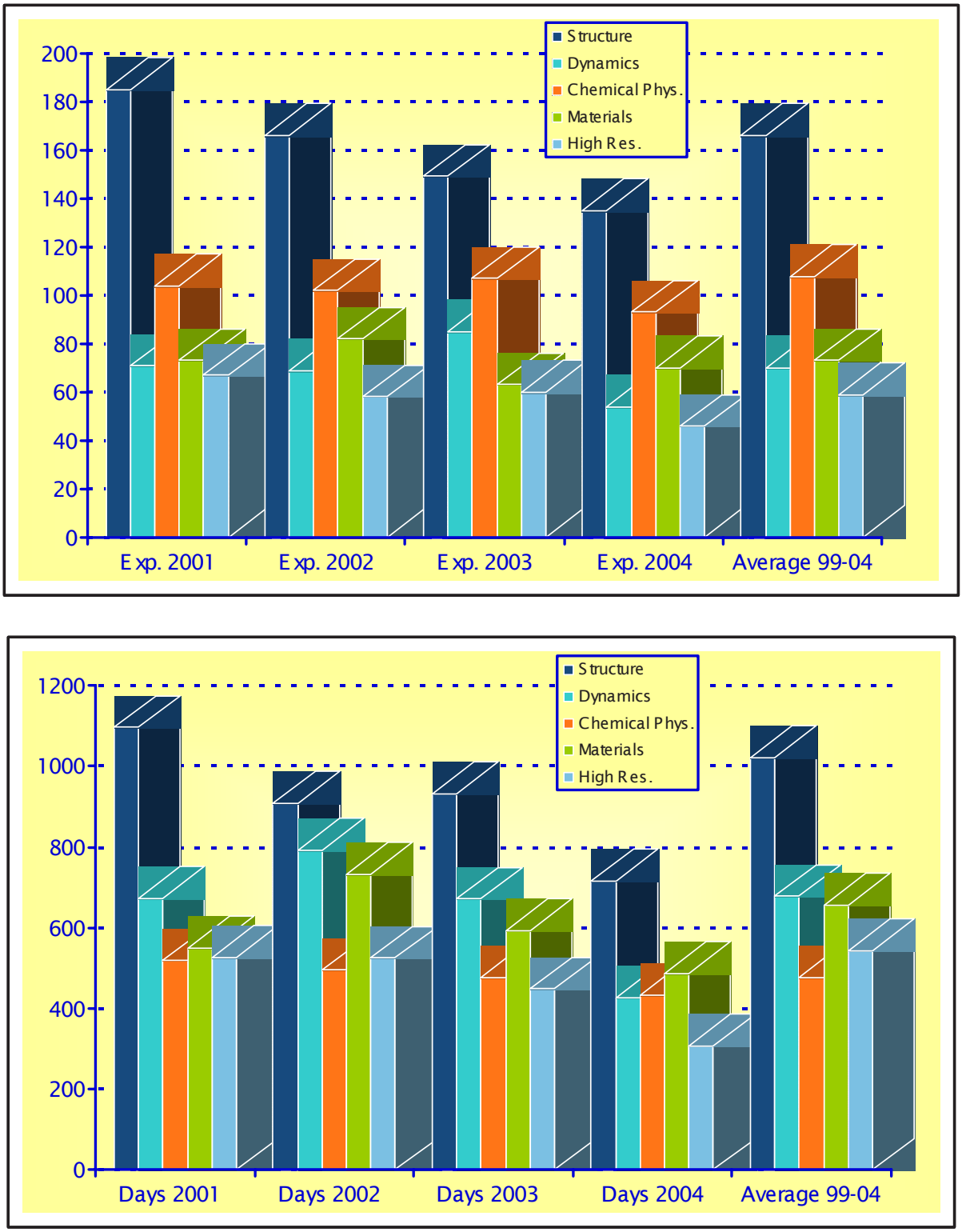

Figure 7. Graphs of the beam time (lower figure) delivered at LLB-Orphée over the last four (4) years and of experiments (upper figure) done in the same period as a function of the instrumental group (listing at the section end). The last data show the average over the last six years.

The two tables below show the beam time really delivered and the experiments performed over the last four years on the different types of spectrometers. The beam time percentage serves as a reference.

LLB Spectrometer	Experiments 2001-2002	Exp. Days 2001-2002	Beamtime 2001-2002	Experiments 2003-2004	Exp. Days 2003-2004	Beamtime 2003-2004
5C1	24	313	4.3%	28	246	4.6%
5C2	38	342	4.7%	31	259	4.9%
6T2	31	332	4.6%	29	264	4.9%
3T2	69	309	4.2%	66	235	4.4%
G4.1	77	328	4.5%	73	238	4.5%
G4.2*	67	224	3.1%	20	169	3.2%
G6.1	45	336	4.6%	37	237	4.4%
Structure	**351**	**2 184**	**30.0%**	**284**	**1 648**	**30.9%**
1T1*	26	218	3.0%	22	154	2.9%
2T1	31	328	4.5%	31	273	5.1%
4F1/4F2	59	670	9.2%	75	568	10.6%
G4.3*	20	214	2.9%	10	101	1.9%
G4.5	4	36	0.5%	1	3	0.1%
Dynamics	**140**	**1 466**	**20.1%**	**139**	**1 099**	**20.6%**
PACE	64	316	4.3%	63	240	4.5%
PAXE	66	306	4.2%	75	255	4.8%
PAXY	76	351	4.8%	62	257	4.8%
SANS	**206**	**973**	**13.4%**	**200**	**752**	**14.1%**
6T1	21	351	4.8%	16	242	4.5%
G5.2*	40	325	4.5%	25	256	4.8%
G2.4	37	252	3.5%	33	217	4.1%
G3.Bis	44	360	4.9%	28	173	3.2%
G5.5	13	146	2.0%	31	193	3.6%
Materials	**155**	**1 434**	**19.7%**	**133**	**1 081**	**20.3%**
7C2	45	340	4.7%	39	208	3.9%
G4.4	7	279	3.8%	1	7	0.1%
G1.Bis*	25	192	2.6%	24	207	3.9%
Spin Echo	7	118	1.6%	5	83	1.6%
TV	41	301	4.1%	37	251	4.7%
High Res.	**125**	**1 230**	**16.9%**	**106**	**756**	**14.2%**
TOTAL	**977**	**7 286**	**100%**	**862**	**5 336**	**100%**

Table 6. Compilation of performed experiments at LLB in 2003-2004 : comparison with the corresponding beam time use and performed experiments in 2001-2002 for the five instrumental groups of spectrometers with the corresponding percentage.

The Graph and the table below show the beam time really delivered and the experiments actually performed over the last two and the last four years for the various countries. The beam time percentage serves as a reference.

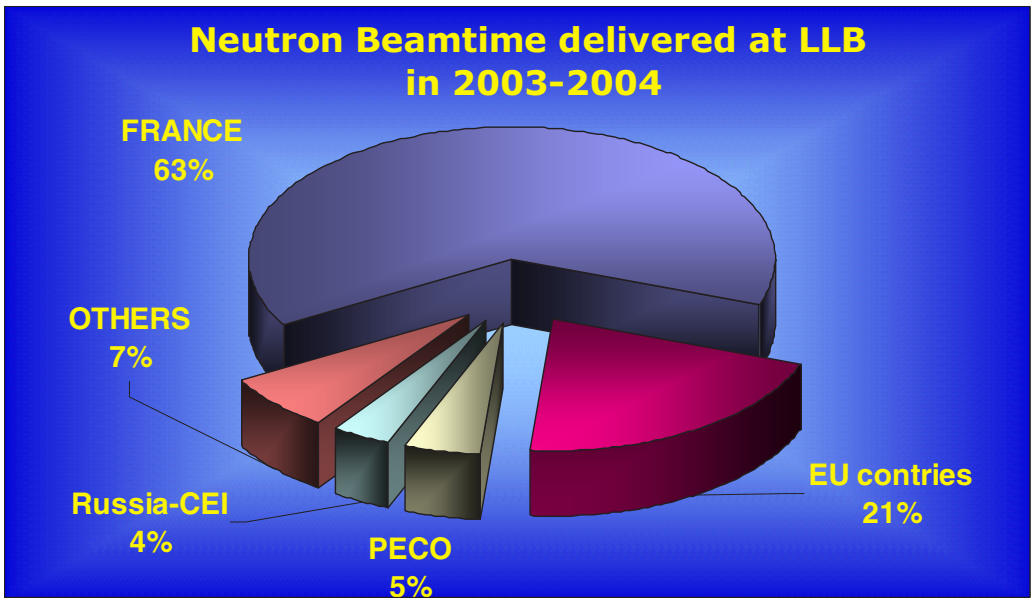

Figure 8. Repartition of the experiments performed and of the beam time delivered at LLB-Orphée in 2003-2004 amongst the five instrumental groups of spectrometers with the corresponding percentage.

Country	Experiments 2001-2002	Exp. Days 2001-2002	Beamtime 2001-2002	Experiments 2003-2004	Exp. Days 2003-2004	Beamtime 2003-2004
FRANCE	648	4 722	64.8%	564	3 414	64.0%
FRANCE	648	4 722	64.8%	564	3 414	64.0%
Germany	76	600	8.2%	85	544	10.2%
Austria	19	229	3.1%	11	75	1.4%
Italy	30	215	2.9%	33	180	3.4%
Great-Britain	22	185	2.5%	7	46	0.9%
Spain	17	112	1.5%	16	107	2.0%
Others	47	274	3.8%	25	156	2.9%
EU contries	211	1 615	22.2%	177	1 106	20.7%
Poland	19	214	2.9%	25	205	3.8%
Hungary	10	74	1.0%	5	29	0.5%
Czech Rep.	8	57	0.8%	3	21	0.4%
PECO	37	345	4.7%	33	255	4.8%
Russia	37	272	3.7%	36	187	3.5%
Russia-CEI	37	272	3.7%	36	187	3.5%
United States	12	89	1.2%	17	129	2.4%
Switzerland	6	66	0.9%	1	8	0.1%
Japan	11	76	1.0%	12	99	1.9%
Other countries	15	100	1.4%	23	138	2.6%
OTHERS	44	331	4.5%	53	374	7.0%
TOTAL	**977**	**7 284**	**100%**	**862**	**5 335**	**100%**

Table 7. Compilation of the proposed and accepted experiments at LLB by the four series of selection panels done in 2003-2004 with the corresponding beam time demand and allocation in days and percentage for France, the EC countries, PECO and Russia and the rest of the world. The main "neutron-wise" countries have been highlighted.

Listing of the selection panel Fall 2004

TABLE RONDE A : Physico-chimie, Biologie *Organisateurs : L. Noirez*				
Représentants LLB	**Représentants français**		**Représentants européens**	
F. Boué	J. Combet	ICS Strasbourg	M. Geoghegan	Université de Sheffield
J.-M. Zanotti	O. Diat (Président)	CENG Grenoble	T. Hellweg	Technische Univ. Berlin
	M. Ferrand	CENG Grenoble	P. Mariani	Université d'Ancone
	I. Grillo	ILL Grenoble	P. Stepanek	IMC, Prague
	S. Lecommandoux	LCPO Pessac		

TABLE RONDE B : Etudes Structurales, Transitions de Phase *Organisateurs : F. Bourée, H. Moudden*				
Représentants LLB	**Représentants français**		**Représentants européens**	
J.-M. Kiat	T. Fernandez-Diaz	ILL, Grenoble	F. Frey	Université Munich
	S. Klotz	Université P. et M. Curie, Paris	M. Braden (Président)	Université Cologne
	M. Latroche	CNRS, Thiais	J.-M. Perez-Mato	Université Bilbao

TABLE RONDE C : Magnétisme, Supraconductivité *Organisateurs : P. Bourges, G. Chaboussant*				
Représentants LLB	**Représentants français**		**Représentants européens**	
A. Goukassov	M. D'astuto	Université Paris VI	J.-L. Garcia-Munoz	ICMAB, Barcelone
M. Hennion	C. Dufour	Université Nancy I	G. Mc Intyre (Président)	I.L.L., Grenoble
	A. Ivanov	I.L.L., Grenoble	P.G. Radaelli	ISIS, Oxforshire
	C. Martin	CRISMAT Caen		

TABLE RONDE D : Systèmes désordonnés, Matériaux *Organisateurs : B. Beuneu, C.-H. de Novion*				
Représentants LLB	**Représentants français**		**Représentants européens**	
G. Pepy	M. Bée	Univ. Joseph Fourier, Grenoble	I. Cabaco-Fialho (Pdte)	CFAUL, Lisbonne
	O. Castelnau	LPMTM, Villetaneuse	H.-G. Priesmeyer	Université de Kiel
	P. Vajda	Ecole Polytechnique, Palaiseau		

Table 8. Table of the members of the four selection committees of LLB in Fall 2004

The LLB instrument suite of scheduled neutron spectrometers for external users

STRUCTURE	TYPE	SPECTRUM	DOMAIN
3T2	High resolution 2-axis	Thermal	**Powder**
G4.1	Multidetector 2-axis-	Cold	**Powder**
G4.2	High resolution 2-axis	Cold	**Powder**
G6.1	Multidetector 2-axis	Cold	**High pressure**
5C1	2-axis	Hot, polarised	**Magnetism**
5C2	4-cercles	Hot	**Single crystal**
6T2	4-cercles and 2-axis	Thermal	**Single crystal**
DYNAMICS	**TYPE**	**SPECTRUM**	**DOMAIN**
1T1	3-axis	Thermal	**Excitations**
2T1	3-axis	Thermal, polarised	**Excitations**
4F1	3-axis	Cold, (pol. opt.)	**Excitations**
4F2	3-axis	Cold	**Excitations**
G4.3	3-axis	Cold	**Excitations**
G4.5 Neutronography	(HPRI users only)	Cold	**Imaging**
SMALL ANGLE	**TYPE**	**SPECTRUM**	**DOMAIN**
G1.2 PACE	Annular Detector	Cold	**Large scale**
G2.3 PAXY	XY Detector	Cold	**Large scale**
G5.4 PAXE	XY Detector	Cold	**Large scale**
MATERIAL SCIENCE	**TYPE**	**SPECTRUM**	**DOMAIN**
6T1	4-cercles for textures	Thermal	**Material science**
G5.2 DIANE	2-axis	Cold	**Material science**
G3 bis EROS	XY Detector (TOF)	Cold	**Soft matter**
G2.4. PRISM	2-axis	Cold, polarised	**Magnetism**
G5.5 PAPOL	XY Detector	Cold, polarised	**Large scale**
HIGH RESOLUTION	**TYPE**	**SPECTRUM**	**DOMAIN**
7C2	Multidetector 2-axis	Hot	**Liquids & disorder**
G4.4	2-axis TOF	Cold	**Diffuse scattering**
G1 bis MUSES	High flux Spin Echo	Cold, polarised	**Quasi-elastic**
G3.2 MESS	Spin Echo	Cold, polarised	**Quasi-elastic**
G6.2 MIBEMOL	Time of flight (TOF)	Cold	**Quasi-elastic**

Table 9. The details of the five main categories of the LLB instrument suite.