





5-21-948	Multi-cation Double Ruddlesden-Popper Phases	WELLER Mark T.	SOUTHAMPTON
5-21-949	Structural studies of polymorphism in $\text{Li}_2\text{MnSiO}_4$ and $\text{Li}_2\text{FeSiO}_4$	WEST A.R.	SHEFFIELD
5-21-950	Structure-property relations in novel Sillenites	MCCABE Emma	SHEFFIELD
5-21-951	B-cation order in $\text{Ba}(\text{Mn/Ti})\text{O}_{3-x}$ phases	HAYWARD M.	OXFORD
5-22-642	Structure of adsorption complexes of D_2O in zeolites comprising 12-ring windows	BETA Ilir	MANCHESTER
5-22-643	Investigation of the martensitic phases and phase transitions in Mn-rich Ni_2MnGa	ZIEBECK Kurt	LOUGHBOROUGH
5-24-291	Structures and Magnetic Properties of a New Series of Defect Thiospinel Is	POWELL A.	EDINBURGH
5-24-300	The Jahn Teller distortion in $\text{Ba}_2\text{NdMoO}_6$	CUSSEN E.	GLASGOW
5-24-301	Structural studies of saline hydride solid solutions	IRVINE John T.S.	FIFE
5-24-303	Structures of the perovskite series potassium-sodium niobate	GLAZER Anthony	OXFORD
5-24-307	Martensitic phase transition in Shape Memory Materials $\text{Ti}_{50}\text{Pd}_{30}\text{Ni}_{20}$ and $\text{Ti}_{50}\text{Ni}_{30}\text{Zr}_{20}$	NEUMANN Klaus	LOUGHBOROUGH
5-31-1706	Structure-property relations in $\text{ACu}_3\text{Ti}_4\text{O}_{12}$	SINCLAIR Derek	SHEFFIELD
5-31-1707	Magnetic orderings in the frustrated spinels MAl_2O_4 (M= Fe, Co, Ni)	ATTFIELD Paul	EDINBURGH
5-31-1708	Magnetism and structure of $\text{BiCu}_3\text{Mn}_4\text{O}_{12}$	ATTFIELD Paul	EDINBURGH
5-31-1711	Structure and magnetism of mixed-cation $n = 1$ Ruddlesden-Popper phases	BATTLE Peter	OXFORD
5-31-1712	The magnetic properties of the θ -carbide phases $\text{CoNiGaMo}_3\text{N}$, $\text{FeNiGeMo}_3\text{N}$ and $\text{Co}_2\text{GeMo}_3\text{N}$	BATTLE Peter	OXFORD
5-31-1713	The magnetic and crystal structures of Mn_2TeO_6 and TM_3TeO_6 (TM =Mn,N i)	BOS Jan-Willem	EDINBURGH
5-31-1714	The crystal and magnetic structures of the $\text{Ln}_2\text{LiRuO}_6$ (Ln =Pr,Nd and Tb) double perovskites	MAKOWSKI S.	EDINBURGH
5-31-1715	Evolution of magnetic structure in layered manganese oxy chalcogenides $\text{Sr}_2\text{MnO}_2\text{Cu}_{1.5}(\text{Se}_{1-x}\text{S}_x)_2$	CLARKE Simon	OXFORD
5-31-1718	Cation ordered Hexagonal Perovskites	CLARK Joanna	OXFORD
5-31-1719	Topotactically reduced hexagonal perovskites	ADKIN Josephine	OXFORD
5-31-1720	Structural and Magnetic Characterisation of new Perovskite Related Oxides and Oxide Fluorides	GREAVES Colin	BIRMINGHAM
5-31-1721	Structural and magnetic characterisation of chemically modified hematophanites	GREAVES Colin	BIRMINGHAM
5-31-1724	The Magnetic and Crystallographic Structure of $\text{Ni}_{45}\text{Co}_5\text{Mn}_{36.7}\text{In}_{13.3}$ and $\text{Ni}_{43}\text{Co}_7\text{Mn}_{39}\text{Sn}_{11}$	NEUMANN Klaus	LOUGHBOROUGH

61 Proposals for D2B, Spring 2007

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5-24-308	A-site substituted layered cobaltites $\text{YBa}_{1-x}(\text{Sr,Ca})_x\text{Co}_2\text{O}_{5+d}$	AURELIO G.	BARILOCHE
5-21-952	Clusters in $\text{LiK}_{0.35}\text{Rb}_{0.65}\text{SO}_4$ mixed crystal	RIGHI A.	GERAIS
1-04-04	Mn-BrownMillerite Phases $\text{Ca}_2(\text{Al,Mn,Fe})_2\text{O}_5$	STOEBER Stefan	MLU HALLE
5-21-953	High temperature barium zirconium phosphate $\text{BaZr}(\text{PO}_4)_2$	RAISON Ph.	KARLSRUHE
5-21-954	Brabantite $\text{CaTh}(\text{PO}_4)_2$	RAISON Ph.	KARLSRUHE
5-21-959	Magnesium Calcite forming sea urchin spines - symmetry reduction	HOCK R.	ERLANGEN
5-22-642	Adsorption complexes of D2O in zeolites comprising 12-ring windows	HUNGER Jens	MPI DRESDEN
5-24-299	Pyrochlore $\text{Ce}_2\text{Zr}_2\text{O}_7$ as a function of the temperature.	RAISON Ph.	KARLSRUHE
5-24-305	Low-temperature structure of hollandite $\text{K}_2\text{V}_8\text{O}_{16}$	KOMAREK A.	KOELN
5-31-1703	Atomic and magnetic structure of $\text{Pr}_{0.5}\text{La}_{0.5-x}\text{Sr}_x\text{CoO}_{3-d}$ & $\text{Pr}_{0.5}\text{Ba}_{0.5-x}\text{Sr}_x\text{CoO}_{3-d}$	PODLESNYAK A.i	BERLIN
5-31-1705	Atomic and magnetic structure of $\text{Pr}_{0.5}\text{Sr}(\text{Ba})_{0.5}\text{CoO}_{3-d}$ & $\text{PrBa}_{0.5}\text{Sr}_{0.5}\text{Co}_2\text{O}_{5+d}$	VOITEKHOVICH	HAMBURG
5-31-1726	Long-Range Magnetic Order in the Pyrochlore $\text{Y}_2\text{Mn}_2\text{O}_7$	KREMER R.	STUTTGART
8-01-281	Supramolecular Organization of DNA-aminoglycosides Complexes	ELKADY A.	CAIRO
1-01-33	Structural changes of the Ni-Mn-Ga shape memory alloys	SANCHEZ-ALARCOS	PAMPLONA
5-24-294	Structure-properties relationships in $\text{BaTi}_{1-x}\text{Co}_x\text{O}_{3-y}$	PARRAS M.	COMPLUTENSE
5-24-296	$7\text{H-BaCo}_{0.35}\text{Mn}_{0.65}\text{O}_{3-y}$ in the $\text{BaCo}_{1-x}\text{Mn}_x\text{O}_{3-y}$ system	PARRAS M.	COMPLUTENSE
5-24-298	Structural and magnetic study of $\text{BaFeO}_{2.5}$	PARRAS M.	COMPLUTENSE
5-24-302	Disordered hydrogen-bond network in quenched CsHSeO_4	LEON C.	MADRID
5-24-306	Superspace approach for structural description of the $\text{Bi}_2\text{O}_3\text{-MoO}_3$ system	ZUNIGA F.	LEIOA
5-31-1701	New manganese related brownmillerite: $\text{La}_{1-x}(\text{Sr,Ca})_x\text{MnO}_{2.5}$ system	ALONSO J.	MADRID

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5-31-1701	New manganese related brownmillerite: $\text{La}_{1-x}(\text{Sr,Ca})_x\text{MnO}_{2.5}$ system	ALONSO J.	MADRID
5-31-1716	First order ferromagnetic transition in CeIn_2	ROJAS PUPO D.	SANTANDER
5-31-1722	Solid-solution system $\text{Ca}_2\text{Fe}(1+x)\text{W}(1-x)\text{O}_6$ and oxygen-defective $\text{Ca}_3\text{Fe}_2\text{WO}_9$ -d	RETUERTO M.	MADRID
5-31-1723	Magnetic interactions of double perovskites: the new A_2SbMO_6 (A=Ba,Sr,Ca;M=Mn,Fe,Co)	RETUERTO M.	MADRID
5-21-955	Oxygen stoichiometry of substituted indium oxide based ceramics	BERARDAN D.	CAEN
5-21-956	$\text{Mn}_{1-x}(\text{Ti}_{0.5}\text{V}_{0.5})_x\text{As}$ magnetocaloric compounds	HLIL EI K.	CRISTALLOGRAPH
5-21-958	$\text{Ln}_{10}\text{W}_2\text{O}_{21}$ ($\text{Ln}=\text{La}, \text{La}_{1-x}\text{Y}_x$): a related pyrochlore structure ?.	GOUTENOIRE F.	UNIV DU MAINE
5-31-1725	Nanoporous Metal-Organic Framework MIL-53(Fe)	MILLANGE F.	VERSAILLES
5-23-577	Negative Thermal expansion in ReO_3	CHATTERJI T.	ILL
5-31-1709	Two-dimensional intercalated compound series $\text{Cu}_v\text{xCr}_{1-x}\text{S}_2$	RASCH J.	ILL
6-02-393	Polymorphism and polyamorphism in Decalin	EIBL S.	ILLE
7-01-214	Electron-phonon coupling of the high-frequency oxygen vibrations in MxWO_3 bronzes	SCHOBER H.	ILL
5-21-946	High resolution neutron diffraction study of $\text{HoBaCo}_2\text{O}_{5+\delta}$	MALAVASI L.	PAVIA
5-25-140	Proton conducting ortho-niobate $\text{La}_{0.99}\text{Ca}_{0.01}\text{NbO}_4$	MALAVASI L.	PAVIA
5-31-1710	Modulated martensitic phases of Ni-Mn-Ga magnetic shape memory alloys	RIGHI L.	PARMA
5-24-304	High-pressure phases in bis-thiourea pyridinium iodide inclusion compound	PAJZDERSKA A.	POZNAN
5-31-1741	Magnetic structures of $(\text{Tb},\text{Y})\text{Mn}_2\text{Ge}_2$ compounds.	GRANOVSKY S.	MOSCOW
5-21-957	Proton conductors $\text{Ba}_3\text{Ca}_{1+x}\text{Nb}_{2-x}\text{O}_9$ -d and acceptor doped $\text{La}_2\text{Zr}_2\text{O}_7$	KNEE Ch.	GOTHENBURG
5-31-1717	Ordering phenomena in $\text{Yb}_3\text{Ir}_4\text{Ge}_{13}$	STRYDOM A.	JOHANNESBURG



Phase 1 - New 2D detector, x6 efficiency, high resolution often

Completed and tested according to timescale and cost

Phase 2 - Primary Spectrometer - Objectives

To rebuild the monochromator mechanics, primary collimation and filter to ensure greater stability and improved efficiency.

To rebuild the sample table mechanics
& provide a larger choice of wavelengths

Phase 3 - Sample Environment

To provide a larger choice of sample environments,
faster changes of samples and sample environments...



Objective 3 - To provide a larger choice of sample environments

- Almost all experiments need increasingly complex sample environments. (See the list of current UK commissioning experiments).
- New pulsed tube refrigerator (5K-300K) - working routinely.
- Temperature insert for refrigerator -> 300C -working routinely.
- New cryomagnet (7 Tesla) at low temperatures (arrived 20/7/2006)
- New high pressure cell at low temperatures (to be tested on D2B).
- Dilution refrigerator insert ~100 mK (1st test experiment 2/8/2006)
- New high temperature furnace, controller, controlled atmosphere.



Total EPSRC Resources Required for Project	Grand Total £	741 084
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Travel and Subsistence

Destination and purpose	Total £
10+10 commissioning expts over 3 years at £800 per experiment of 4x2 man days, £300 per return air fare plus £25/day/person	16 000
2x2-day meetings/year of 3 UK members for project management at ILL	6 300
1x2-day visit/year by 2 ILL responsables to prime UK contractors	2 400
Presentation of the project & results at 1 International conference/year, £500 travel + £250 subsistence for 2 scientists at each conference	4 500
Total £	29 200



Equipment (single items under £100,000)

N.B. VAT is included at the current French rate of 19.6%

Description of items and country of manufacture	Basic price £	Import duty £	VAT £	Total £
Collimator-detector shielding, EuroCollimators, Cheltenham UK	45 000	0	8 820	53 820
132 linear wire detectors, GE Reuter-Stokes at \$1105 each, USA	97 040	0	19 020	116 060
Linear wire detector positioning electronics from RAL, Didcot, UK	55 000	0	10 780	65 780
Modifications to D2B detector arm to support new detector, France.	10 000	0	1 960	11 960
Monochromator crystals, simulations and development, France	75 000	0	14 700	89 700
Monochromator Mechanics, Switzerland	65 000	0	12 740	77 740
Modifications to D2B monochromator protection, France	45 000	0	8 820	53 820
Modifications to D2B sample stage mechanics, France	55 000	0	10 780	65 780
			Total £	534 660



Large Capital (single items £100,000 and over)

Description of items and country of manufacture	Basic price £	Import duty £	VAT £	Total £
130 collimators & locating plates, EuroCollimators, Cheltenham UK	148 180	0	29 043	177 224
			Total £	177 224

Collaboration (ILL contribution)

Direct contribution to project	Description	Value £
b. equipment/materials	Materials	50 000
Sub-Total		50 000
Indirect contribution to project		
a. use of facilities/equipment	Commissioning beam time	320 000
b. staff time	Manpower	241 000
Sub-Total		561 000
Total Contribution		611 000

D2B Millennium Project Spending SE

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Order Number	Description	Basic Price €	VAT €	Total €
IM3400537	AS-Sci Oxford 6Tesla cryomagnet	42,003.00	8,232.59	50,235.59
IM3401517	AS-Sci Oxford 6Tesla power supply	13,260.00	2,598.96	15,858.96
IM3401591	Cryoforum 6Tesla temperature sensor	2,688.00	526.85	3,214.85
NO1020098	Pulse Tube He4 refrigerator	46,860.00	9,184.56	56,044.56
IM3402259	V cans vanadium tubes MTI	9,792.00	1,919.23	11,711.23
NO1034884	V-cans welding Harwell	8,023.00	1,572.51	9,595.51
IM3402854	V cans flanges Harwell	4,416.00	865.54	5,281.54
IM3402531	Detector cover	1,115.00	218.54	1,333.54
IM3402328	Pulse Tube refrigerator maintenance	3,400.00	666.40	4,066.40
NO1032287	Sample scales	1,555.00	304.78	1,859.78
NO1034204	Platform	1,115.00	218.54	1,333.54
NO1041209	Germanium monochromator crystals	19,500.00	3,822.00	23,322.00

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Order Number	Description	Basic Price €	VAT €	Total €
NO1034204	Work Platform	1,115.00	218.54	1,333.54
NO1036033	Vanadium sheet	14,935.00	2,927.26	17,862.26
IM3401337	Protection OS-D2B	3,798.00	744.41	4,542.41
IM3401591	Temperature measure	2,688.00	526.85	3,214.85
IM3401660	Pressure valve	909.00	178.16	1,087.16
IM3401714	Temperature measure furnace	785.00	153.86	938.86
NO1030859	Revision pulse tube	1,132.00	221.87	1,353.87
IM3400955	Control computer	3,834.00	751.46	4,585.46
NO1027909	Analysis computer	1,808.00	354.37	2,162.37
IM3400757	Remote video surveillance	1,675.00	328.30	2,003.30
NO1028215	Heidenhain encoders	3,269.00	640.72	3,909.72
Total		188,560.00 €	36,957.76 €	225,517.76 € £ 152,877.94

D2B Millennium Project Spending 2006

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Order Number	Description	Basic Price €	VAT €	Total €
IM3403173	PRIMARY COLLIMATOR		1,776.18	1,776.18
IM3403848	SUPPORT CONNECTEUR	4,120.56	807.63	4,928.19
IM3403856	VEYRET INOX	3,185.90	624.44	3,810.34
NO1038575	CHARIOT	544.77	106.77	651.54
NO1039093	four D2B Vanadium	4,965.00	973.14	5,938.14
NO1039560	four D2B	884.00	173.26	1,057.26
NO1039721	Thermomètres four D2B	257.00	50.37	307.37
NO1040034	Codeurs IVO pour D2B	685.32	134.32	819.64
RE3002766	MISE EPAISSEUR PLAQUES	569.16	111.56	680.72
REEMPLACMTFOUR	MAT FABR FOUR D2B+2 PORTES ECH	3,272.00	641.31	3,913.31
Total		18,483.71 €	5,398.98 €	23,882.69 € £ 16,190.31

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Order Number	Description	Basic Price €	VAT €	Total €
ACHCAISS	TOLES ALU SELON PLAN	112.00	21.95	133.95
IM3403959	four Vana D2B	4,520.00	885.92	5,405.92
IM3404037	Table de rotation D2B	6,640.00	1,301.44	7,941.44
IM3404112	ENSEMBLE CHANGEUR	5,334.00	1,045.46	6,379.46
IM3404114	ENSEMBLE ELEVATEUR	16,163.00	3,167.95	19,330.95
NO1039377	Four D2B	5,348.00	1,048.21	6,396.21
NO1039382	four D2B vanadium	4,573.00	896.31	5,469.31
NO1040035	Moteurs pas à pas D2B	2,463.35	482.81	2,946.16
NO1040036	plateforme He / groupe de pomp	974.36	190.96	1,165.32
NO1040454	collier serflex	43.73	8.57	52.03
NO1040610	Offre de prix et délai MINIMOT	679.70	133.22	812.92
NO1040657	achat laser chez optoprim suiv	594.00	116.42	710.42
V521600	EXT2006-UNIV OF EDINBURGH	18,483.71	3,622.81	22,106.52
		65,928.85 €	12,922.03 €	78,850.88 € £ 53,459.33

D2B Millennium Project Report Spending

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	Equipment > £100K	Equipment < £100K	Travel
Allocation	177,224	534,660	29,759
Claimed	177,224	304,784	17,091
Pending	0	152,877.94 +16,190.31 +53,459.33	
Total Pending	0	222,527.58	
Balance	0	534,660.00 -304,784.00 -222,527.58	
Not Spent	0	7,348.42	12,668