Chapter 24.
Personnel and Responsibility

Revised February 1994

The organization of the collaboration is now rather complex, with the work divided among 10 teams. A number of coordinators oversee areas where the team responsibilities either overlap, or directly affect one another. The team structure and coordinators are listed below.

While the overall leadership comes from the Co-Spokesman, all major decisions are approved by the Parameters Committee, which consists of the Co-Spokesmen V. Hughes and L. Roberts, the Resident Spokesman W. Morse, the Project Manager G. Bunce, H.N. Brown (BNL), P. Cushman (Minnesota) (current chairman), D. Hertzog (Illinois), J. Miller (Boston), G. zu Putlitz (Heidelberg), and Y. Mizumachi (KEK).

The Parameters Committee has the authority to approve designs, key technical issues, and budgets, and is responsible for ensuring that the experimental goals are achieved. All conceptual and final designs proposed by the technical teams are submitted to the Parameters Committee for approval.

Most matters are referred to the Parameters Committee from the teams. Any change in scope from the approved design report must come before the Parameters Committee for approval. Issues can be brought to the attention of the Committee by the Spokesmen, or indeed any other concerned individual. The meetings of the Parameters Committee are open to any interested member of the collaboration, and the meetings are scheduled in conjunction with collaboration meetings, in as much as is possible, to encourage participation by the individual members of the collaboration.

The Parameters Committee also handles all matters regarding publications, conference submissions, invited talks, etc. where the work of the collaboration is presented to the external physics community.

24.1. Collaboration Management and Responsibilities

The Co-Spokesmen are Vernon W. Hughes and B. Lee Roberts. They are responsible for the overall experiment and for collaboration matters. These include, but are not limited to, making sure that adequate resources and manpower are available for carrying out the project, making sure that all teams are making adequate progress to meet the schedule for 1996 running, for calling and scheduling collaboration meetings, keeping the design report up to date, etc.

The Resident Spokesman is W. Morse. He is responsible for the overall construction and day to day management of the construction project. He has the authority to allocate the BNL capital funds specifically earmarked for the project, whether they are spent at BNL or elsewhere.

The Project Manager is Gerry Bunce. He is responsible for coordinating the project construction with the Accelerator department personnel, and working with the resident spokesman to manage the budget and schedule of the construction project.

24.2. Fraction of Collaborators' Time Committed to E821

The fraction of time each collaborator has committed to the experiment is listed below. The present time is April 1994. Future means 1995. Engineers and technicians are not listed. Individuals who serve in an advisory capacity to the collaboration are listed with a * rather than a time fraction. It is understood that for university faculty members, the fraction listed is fraction of research time. Those listed as * are in an Advisory Capacity only.

Institution	Experimenter	Present$^{10/94}$	Future
Boston	R. Carey	1.0	1.0
	E. Hazen	0.3	0.3
	F. Krienen	0.5	0.5
	J.P. Miller	0.5	0.7
	J. Ouyang	0.8	0.8
	B.L. Roberts	1.0	1.0
	L.R. Sulak	0.1	0.1
	W. Worstell	0.5	0.5
	G. Varner	0.3	0.3
BNL	H.N. Brown	0.5	0.5
	G. Bunce	0.5	0.5
	G.T. Danby	0.25	0.25
	D. Hseuh	0.5	0.5
	J.W. Jackson	0.25	0.25
	R. Larsen	1.0	1.0
	Y.Y. Lee	0.5	0.5
	W. Meng	0.5	0.5
	W.M. Morse	1.0	1.0
	A. Prodell	*	*
	Y. Semertzidis	.1	1.0
	R. Shutt	*	*
	A. Stillman	0.5	0.5
	K. Woodle	0.5	0.5
Cornell	T. Kinoshita	0.1	0.1
	Y. Orlov	0.1	0.1
Fairfield	D. Winn	0.5	0.5

Illinios	P.T. Debevec	0.67	0.9
	D.W. Hertzog	0.5	0.5
LANL	W.P. Lysenko	*	*
Minnesota	P. Cushman	0.7	0.7
	C. Timmermans	1.0	1.0
Yale	S.K. Dhawan	0.5	0.5
	F.J.M. Farley	0.25	0.25
	X. Fei	0.75	0.75
	V.W. Hughes	0.2	0.5
	R. Prigl	1.0	1.0

Non-U.S. Collaborators

Institution	**Experimenter**	**Present**	**Future**
Heidelberg	K. Jungmann	0.25	0.25
	G. zu Putlitz	0.25	0.25
MPI-Heidelberg	U. Haeberlen	0.25	0.25
KEK	K. Endo	0.15	0.15
	H. Hirabayashi	0.1	0.1
	S. Ichii	0.1	0.1
	S. Kurokawa	–	–
	Y. Mizumachi	0.2	0.2
	T. Sato	0.1	0.?
	A. Yamamoto	0.2	0.2
Riken	L. Ishida	0.1	0.?
Tokyo	M. Iwasaki	0.1	0.5
	K. Nagamine	0.15	0.15
Novosibirsk	L.M. Barkov	–	–
	B.I. Kazin	0.2	0.2
	D.N. Grigorev	–	0.2
	E.A. Kuraev	–	–
	Ya.M. Shatunov	0.1	0.1
	E. Solodov	0.2	0.2

Institution	**Present Students**	**+6 Months**
Boston	0	+2
Illinois	2	2
Minnesota	3	3
Yale	1	1

Institution	**Student**	**Present**	**Future**

Boston		1.0	thesis
Illinois	B. Bunker	1.0	thesis
	W. Deninger	1.0	thesis
	K. McCormick	1.0	
Minnesota	D. Miller	1.0	thesis
	J. Kindem	1	thesis
	S. Giron	1	
Yale	S. Redin	1	1

24.3. Team Structure

The various tasks necessary to complete the construction, commissioning, data collection, and analysis have been assigned to working groups which have been given the title of teams by the Resident Spokesman. Below we list the teams, their responsibilities and the individuals responsible for the leadership of the teams.

1. Detector Team: Responsible for electron detectors and first level electronics design and construction. Ultimately responsible for measuring ω_a with systematic errors less than $0.1ppm$. Team Leader: J. Miller, Deputy: D. Hertzog
2. Beam Dynamics Team: Responsible for calculations and simulations of beam behavior from injection to decay. Ultimately responsible for beam stability and monitoring. Team Leader: L. Roberts.
3. Magnetic Field Shimming Team: Responsible for Magnet Shimming Plan. Ultimately responsible for shimming the field seen by the muons to a uniformity of $1ppm$ with iron and current shims. Team Leader: K. Woodle.
4. Field Measurement and Control Team: Responsible for the Magnetic Field Measurement Systems design and construction. Ultimately responsible for knowledge of the field to $0.1ppm$. Team Leader: V. Hughes, Deputy: X. Fei.
5. Storage Ring Team: Responsible for engineering and construction of beam line, storage ring magnet, and vacuum chamber. Project Manager: G. Bunce, Deputy: J. Cullen.
6. DAQ and Controls Team: Responsible for data acquisition system (hardware and software) and coordination of controls efforts. Team Leader: P. Cushman, Deputy: A. Stillman.
7. Vacuum Systems Team: Responsible for attainment of $10^{-7}Torr$ vacuum. This includes specification, purchase, and testing of vacuum pumps, specification of vacuum controls, control of materials and procedures in vacuum chamber. Team Leader: D. Hseuh.
8. Electrostatic Quadrupole Team: Responsible for design, testing, and performance of electrostatic quadrupoles with field index $n = 0.135$. Team Leader: Y. Semertzidis, Deputy: G. Bennett.

9. Muon Kicker Team: Responsible for the design and construction of the muon full aperture kicker. Team Leader: Y.Y. Lee.
10. Inflector Team: Responsible for the design and construction of the inflector magnet. This includes the testing program and interfacing with the magnetic field shimming team on reduction of the fringe field of the inflector. Team Leader: W. Meng.

24.4. Coordinators

A number of coordinators have been appointed to oversee critical parts of the construction, and to make sure that issues which stretch across team boundaries are dealt with appropriately. These coordinators and their job descriptions are listed below.

1. Magnetic Susceptibility Sheriff - K. Woodle

   Approves and logs the use of materials and electrical currents in or near the storage ring to assure that the magnetic field shimming tolerances are not exceeded.

2. Vacuum Policeman - D. Hseuh

   Approves and logs the use of materials in the beam tube vacuum chamber to assure that the vacuum tolerances are not exceeded.

3. Clock Coordinator - S. Dhawan

   Assures that NMR and muon clock frequencies are known to better than 30*ppb*.

4. Storage Ring Coil Test Coordinator - G. Bunce

   Approves and schedules storage ring coil tests and logs results.

5. BNL Inflector Coil Test Coordinator - W. Meng

   Approves and schedules inflector coil tests at BNL and logs results.

6. KEK Inflector Coil Test Coordinator - A. Yamamoto

   Approves and schedules inflector coil tests in Japan and logs results.

7. Survey Coordinator - W. Morse

   Compiles survey requirements and positional tolerances and logs survey results.

8. Space in the Ring Coordinator - G. Bunce

   a) Deputies - J. Powers and R. Larsen

   Allocates space in the experimental hall.

9. Groundskeeper - A. Stillman.

   Responsibilities of the Groundskeeper are to write rules for distribution of electrical power to ring systems and for connection of the shielding leads for instrumentation.

A secondary responsibility is to write rules for the cabling runs and the contents of cable trays. The cabling rules are to ensure conformance of wiring with the National Electric Code. There will be no enforcement of these rules other than by compliance of the various teams.

10. Vacuum Interface Coordinator - W. Morse

    Coordinates the integration of the vacuum chamber, NMR trolley, fixed and plunging NMR probes, electrostatic quadrupoles, muon kicker, and beam monitoring instrumentation designs.