

MINUTES of the first meeting of the Durham - RAL Database Committee held on Monday 16th January, 1984, at 2pm in room 325 of the Physics Department, University of Durham.

Present: Drs. P.D.B. Collins, R.C.E. Devenish, F.D. Gault, Ms. E.J. King, Prof. A.D. Martin (Chairman), Drs. M.R. Pennington, R.G. Roberts, D.B. Websdale and M.R. Whalley.

AGENDA (prepared by MRW):

1. Appointment of Secretary
2. Membership and Role of the Committee
3. Project History - Dr. Gault
4. Yearly Report - Dr. Whalley
5. Discussion of the proposed Forward Look
 - a) Data Coding
 - b) Quality of Service
 - c) Promotional Activities
 - d) International Collaboration
 - e) Data Reviews
6. Any other Business
7. Next Meeting

MINUTES:

ITEM 1: It was agreed that MRP should act as Secretary to the Committee.

ITEM 3: It was felt that it would be more appropriate to consider this item of the agenda first before the question of the role of this Committee. Consequently, FDG as the present Director reviewed the project's history. He reported how in 1969 Professor B.H. Branden had proposed, as part of a phenomenological programme, a compilation of two body and quasi-two body scattering data should be made with a view to fitting all these data in terms of Regge parametrisations. For the next 5 - 6 years the Durham Data Bank was built up by PDBC and FDG with the help of several research students and programmers.

In 1973/4 a proposal was made to the Science Research Council for a project based in Durham to compile data, with the task of evaluation left to users. A working party of the Theory Sub-committee investigated this proposal and suggested that the data bank should not be limited to just 2-2 scattering processes but should cover all elementary particle reaction data. Under a grant from the SRC Brian Read was appointed the first Data Base Manager on 1/10/76 with FDG as Project Director.

Despite the proposal made as early as 1972 by Professor G.C. Fox (now of Caltech) that the Durham Data Bank should amalgamate with the LBL Particle Data Group, which at the time was also compiling data on hadronic reactions, LBL failed to deliver the necessary database software and coding language. The first two years of the new grant were devoted to the construction of the requisite software and language by FDG. Compilation then began in 1977 and the data became accessible in January 1978. In 1980/81 the funding of the Durham database project was switched from the SRC Theory Sub-committee to the Nuclear Physics Board and now runs under a rolling three year grant from them.

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FDG reported that the Database Group had the capacity to compile roughly 300 experimental papers a year, the present number is however much smaller than this largely because the backlog of papers in the areas coded has been eliminated and the current production rate of present experiments is less. FDG further reported that a working Data Base now existed accessible to all users of the Rutherford computing facilities and that he felt that though the Data Base Language (BDMS) did need replacing this should be left for ten years and the emphasis of the group moved to evaluating data, for which various reports had asked, and to increasing the accessibility of the data themselves.

ITEM 2: The chairman (ADM) discussed the membership of the committee and its role. It was recognised that with the departure of the present Director FDG, this was an opportunity to broaden the base from which advice on the running of the Data Base project was sought. The chairman saw the purpose of this committee as twofold, to act as a forum firstly to advise ADM, as the grant-holder for this SERC funded project, of how it was running and of its future needs, and secondly to provide guidance to those charged with day-to-day running and management of the project, viz RGR, MRW, EJK.

ADM remarked that the addition of members of the experimental high energy physics community was a natural way to link the Data Base project with the needs of its users, who were not just phenomenologists. In this respect DBW as a member of the Particle Physics Experiments Selection Panel and RCED as a member of the Particle Physics Grant Sub-committee were ideal representatives. However, he (ADM) felt that they should not be duty bound to defend this project to their Committees and colleagues. The chairman remarked that he took full responsibility for the project and he delegated the responsibility to RGR and MRW to act as a Management Committee. It was reiterated that the role of the present committee was to give advice and informed opinion on the "Forward Look" for the project.

PDBC raised the question of the future membership of this committee recognising that it was largely self-appointed and perhaps self-perpetuating. The chairman felt that membership should be flexible and that anyone from the UK HEP community who had an interest in data bases and/or in compiling data should be encouraged to join the committee. Inevitably the membership of the outside committees (presently represented by DBW and RCED) will change. DBW and RCED may then feel that their role on this advisory committee was consequently fulfilled. RCED observed that their replacement in the future by others would help in disseminating views about the project and may be most beneficial.

The question of how often this committee should meet was left to Item 6 - any other business.

ITEM 4: MRW reported on the year's work of the data group. The major change has been the implementation of access to the database from CMS, now that ELECTRIC is being phased out. This new system has the aim of 'user friendliness'. At the same time the group was called upon to account to SERC once again for its activities. This resulted in a survey conducted by Peter Litchfield (Rutherford Appleton Laboratory - RAL) of users of the database. Their response was most positive, commending the easy use of the system and the availability of the data requested; however, the publicity and documentation were remarked on as poor. It is therefore a continuing

aim to improve on this. In the past year a "HELP" facility has been included, using "HELP PINK". However, RCED emphasised the need for other aliases like "HELP DATABASE" and these MRW indicated would be implemented. A graphics package was now working on CMS thanks to the assistance of Alan Lotts (Durham) freely given. A stable particle properties tape from the Particle Data Group (PDG) was also now available through the Durham-Rutherford Database. This has the advantage of being updated each year, while the Review of Particle Properties handbook is only revised biannually. These improvements notwithstanding, MRW said that the production of a user manual was a priority for the coming year.

Though, as FDG had indicated already, the group has a capacity to code 300 papers a year, a capacity which was essential for eliminating the backlog since the PDG stopped compiling in 1972, last year only 86 papers were encoded. This rate was sufficient to keep up with papers as they presently appear.

MRW reported on his extensive range of promotional visits to Universities and RAL and found particular interest among university groups. A desk at the Brighton Conference in July 1983 increased awareness among potential foreign users. On the subject of foreign collaboration, MRW reported that the COMPAS group of the Soviet Union encode all data in Soviet journals, which is made available on an exchange basis to the Durham-Rutherford Database. However, their aims were somewhat different in that they compiled data so that these could be evaluated using rather specific models. During the coming year MRW is to set up the Durham-Rutherford Database at LBL and he emphasised that this was in no way a duplication of effort with the PDG as they did not compile scattering data any longer. Lastly MRW discussed his report to the European Compilers's meeting at CERN of the group's activities. Agreement at this meeting for the initiation of a Compilers' Newsletter was achieved.

ITEM 5 "Forward Look":

(a) The meeting received the appended "Forward Look for 1984/85". MRW summarised some of the salient aspects of this report. With the departure of FDG day-to-day administration for the project devolved to MRW with weekly contact with the chairman, ADM. ADM commented that he did not see his role as a fund raiser, but rather as the grant holder.

Attention then turned to the manpower requirements of the project. In the past the Youth Opportunities Project (YOP) Scheme had allowed assistants to work for one year at a time with the group, and with EJK in particular, but now with its replacement by the Youth Training Scheme (YTS) the shorter three to six months experience made the group's participation in such schemes impractical. It was proposed that MRW's post should henceforth be called "Project Manager" and the role of RGR that of "Project Co-ordinator". The Forward Look again proposed the appointment of a Data Officer, a post seen as akin to that of a Research Assistant, which has in the past received 'in principle' approval from SERC. The Forward Look outlines what the Group can achieve both with and without the Data Officer. Thus, for example, without the Data Officer the databases can be maintained as at present. In the past the complement of the group has been two with expertise called in for specific needs. FDG for the pioneering database development, Alan Lotts for 14 months for graphics. The Data Officer would allow new areas of physics to be opened up, for example, electroweak results, which are not presently included.

It was proposed that consultants should be called upon to look at specific areas of physics, e.g. electron-positron annihilation, to see what data are in the database and whether there are any obvious gaps. It was suggested that the names of these consultants should appear in the PDG(UK) Newsletter planned for early this year, 1984. In a free-ranging discussion it was suggested that the spokesperson for each experiment should be asked to nominate someone responsible for contributing data to the Database. It was remarked that it was once a requirement of UK funding for experiments that the Database should receive data. It was suggested that RAL should be asked to send a reminder of this obligation to each budget holder each year. It was emphasised that the credibility of the Durham-Rutherford Database requires data on new topics to be accessible while these are still of interest and that preprinted data must be the source of this to maintain topicality. The problems of obtaining data direct from experimental groups was discussed as were the difficulties of reading numbers from minute published graphs.

Certain areas of physics data immediately identified as missing from the Database are jets, sphericity, thrust, antiproton collider results, charm production cross-sections, neutrino total cross-sections, neutrino-electron cross-sections etc. The urgency of plugging these gaps strengthens the case for the Data Officer and it was proposed that this should be added to the Forward Look.

(b) The quality of the service will be improved by making access easier and by the provision of a printed user guide now that the database is in a stable state. This would allow by a question and answer system the different needs of the regular and inexperienced user to be catered for. There was some general discussion of the possibility of purchasing a commercial Data Base Management system at some stage to replace the existing BDMS.

(c) It is planned that both MRW and RGR will continue the promotional tour begun by MRW and that the first issue of the PDG(UK) Newsletter will be mailed out shortly. This will be issued by Durham and will be aimed at all European experimentalists and not just those of the UK. The CERN Information Service will be enlisted to help with this. Information beneficial to physicists not able to access the RAL and hence the Database will be included in the form of a bibliography.

(d) On the question of international co-operation, progress is likely on several fronts. SLAC/LBL wish to put up the Database under SPIRES, rather than BDMS. FDG expressed lack of optimism that they will do this, but he hoped Trippe of LBL will be persuaded to convert and market "this commodity" under SPIRES. MRW will visit SLAC, LBL, Fermilab and BNL in April and May 1984. The COMPAS group of the Soviet Union will continue to co-operate and exchange data. They have 13 people coding data from all Russian publications and are able to include information on quantities, like multiplicities, not covered at present by the Durham-Rutherford Database. At DESY access is presently possible only through the RAL workstation and this is usually used just by UK people. RCED proposed that the possibility of placing a terminal in the DESY library for access through RAL to the databases should be investigated. KEK, the Japanese High Energy Physics Laboratory, has offered an exchange agreement, but this has not yet been implemented in that Durham has not received any coded data.

(e) The question of the group entering the area of reviews of data, much as the Karlsruhe group is doing with their much more specific 'Pion-Nucleon Newsletter' was discussed. It was proposed that RGR should attempt a pilot project and he offered to prepare a comparison of structure function data. This would be circulated with the newsletter and would also be accessible by computer. DBW asked (and it was confirmed) that the author of such reviews must accept responsibility for the data included and not the Group as a whole. RCED proposed that such reviews should be more comprehensive than those in conference reports and that the newsletter might highlight certain areas of data giving comparisons and recent references. In the light of these discussions it was agreed that their aim is not so much critical evaluation of data but rather the highlighting of areas of topical interest, promoting comparisons of available datasets, pointing out any inconsistencies in these where these arise and indicating kinematic regions not yet covered by present experiments as a guide to future research.

ITEM 6: The chairman, ADM, proposed and it was agreed that this committee should meet twice yearly. Once in December/January to handle the grant application and its Forward Look, and then in June/July for a freer discussion about the future role of the Durham-Rutherford Database.

ITEM 7: The data of the next meeting was provisionally decided to be Thursday, July 5th, 1984.

The meeting ended at 4.10 pm.

MRP
April 22nd, 1984