

PUBLICATIONS  
AND LECTURES

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## List of Publications

### JOURNAL ARTICLES

- 1 AHMED M., LOW J., ROLFE P. M., KARMAN O.  
Differential cross-sections, polarizations and proton-gamma angular correlations for  $\text{Fe}^{54}$ ,  $\text{Ni}^{60}$  ( $p, p$ ) and ( $p, p\gamma$ ) at 10 MeV.  
*Nucl. Phys.*, A147 (2) 273 (May 1970).
- 2 BAKER C. H., BATY C. J., BONNER B. E., FORD P., FRIEDMAN E., TSCHALAR C., WILLIAMS L. E., CLOUGH A. S., HUNT J. B.  
Medium energy neutron time-of-flight spectrometer, I. Instrumentation.  
*Nucl. Instrum. Meth.*, 85 (2) 259 (August 1970), preprinted as RPP/P27.
- 3 BAKER S. L., DORNAN P. J., GOPAL G. P., WEBSTER G. J., BULL V. A., MARCH P. V., TAYLER V., TOWNSEND D. W.  
Positive pion-proton elastic scattering at 895, 945, 995 and 1040 MeV/c.  
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- 4 BARBER P. C., BROOME T. A., DUFF B. G., HEYMANN F. F., IMRIE D. C., LUSH G. J., MARTIN B. R., POTTER K. M., RITSON D. M., ROBBINS L. A., ROSNER R. A., SHARRICK S. J., SMITH A. D., HANNA R. C., LEA A. T., SACHARIDES E. J.  
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- 6 BARGER V., PHILLIPS R. J. N.  
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- 7 BARGER V., PHILLIPS R. J. N.  
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*Phys. Rev. Lett.*, 24 (6) 291 (February 1970).
- 8 BARGER V., PHILLIPS R. J. N.  
Unconventional asymptotics.  
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- 9 BATTY C. J.  
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*Phys. Lett.*, 31B (3) 496 (April 1970).
- 10 BERTHON A., VRANA J., BUTTERWORTH I., LITCHFIELD P. J., SMITH J. R., MEYER J., PAULI E., TALLINI B.  
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- 11 BERTHON A., RANGAN L. K., VRANA J., BUTTERWORTH I., LITCHFIELD P. J., SEGAR A. M., SMITH J. R., MEYER J., PAULI E., TALLINI B.  
The reaction  $K^- p \rightarrow \Lambda \pi^\circ$  in the c.m. energy range 1915 to 2168 MeV.  
*Nucl. Phys.*, B20 (3) 476 (July 1970), preprinted as RPP/H60.
- 12 BOTTERILL D. R., BROWN R. M., CLEGG A. B., CORBETT I. F., CULLIGAN G., EMMERSON J. McL., FIELD R. C., GARVEY J., JONES P. B., MIDDLEMAS N., NEWTON D., QUIRK T. W., SALMON G. L., STEINBERG P. H., WILLIAMS W. S. C.  
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- 13 BUGG D. V., BUSSEY P. J., DANCE D. R., SMITH A. R., CARTER A. A., WILLIAMS J. R.  
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- 16 CARNE A., SCHNIZER B., LAPOSTOLLE P., PROMÉ M.  
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- 17 CARTER A. A., WILLIAMS J. R., BUGG D. V., BUSSEY P. J., DANCE D. R.  
The total cross-sections for pion-proton scattering between 70 MeV and 290 MeV.  
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## Lectures

### NIMROD LECTURES

A weekly series in which physicists active in high energy physics talk about their current or proposed research programmes, or on topics related to particle physics.

PHILLIPS R. J. N. (Rutherford Laboratory) (5 January): Serpukhov surprises and/or the asymptotic myth.

BRANDSTETTER A. (Tel Aviv and Rutherford Laboratory) (12 January): Phenomenology of neutral vector meson photoproduction.

DOWELL J. (Birmingham) (19 January): Possible evidence for a  $Z^*$  resonance. EDEN R. J. (Cambridge) (26 January): Pomeranchuk Theorem and the Serpukhov data on total cross-sections.

HUGHES I. S. (Glasgow) (2 February):  $K^+p$  interactions in the range 0.9-1.5 GeV/c and evidence for a  $K^*$  (2200) in  $K^+p$  interactions at 10 GeV/c.

BOWLER M. (Oxford) (9 February): Recent studies of the "Q" bump.

NEALE W., and RUSHBROOK J. (Cambridge) (16 February): Anomalies in electromagnetic processes.

MOORHOUSE R. G. (Glasgow) (23 February): High energy photoproduction.

FOX G. C. (Cambridge) (2 March): B5 God's gift to the bubble chamber.

CHARPAK G. (CERN) (3 March): Project of experiments with multi-wave proportional chambers.

HOMER R. J. (Rutherford Laboratory) (9 March): Report on the Chicago APS meeting and news from the Laboratories.

STENGER V. (Heidelberg) (16 March): Dominant processes in the reaction  $\pi^-p \rightarrow \pi^-\pi^+\pi^+p$  at 3.9 GeV/c.

KEMP A. (DNPL) (23 March): Phase shift analysis of  $\pi p$  and structure in differential cross-sections.

BOTTERILL D. (CERN) (13 April): Recent results of the CERN boson spectrometer.

COHEN-TAUNOURJI G. (Saclay) (20 April): Duality and unitarity.

BELLETINI G. (CERN and Pisa) (27 April): Polarization in high energy hadron scattering: also discussion of ISR experiment.

WINTER K. (CERN) (4 May): Experiments to test the validity of the  $\Delta S = \Delta Q$  rule.

WERBROUK A. (Turin) (11 May): Analysis of multi-body meson resonance decays.

BUTTERWORTH I. (Rutherford Laboratory) (18 May): Report on the APS and Philadelphia Meson Meeting.

KANE G. (Michigan and Rutherford Laboratory) (1 June): The structure of high energy scattering - experimental and theoretical.

ASTBURY A. (Rutherford Laboratory) (8 June):  $\Sigma$  Beta decay.

HEYMANN F. (UCL) and LEA A. T. (Rutherford Laboratory) (15 June): Elastic  $K^+p$  scattering from 1.4-2.4 GeV/c.

SCHMID C. (CERN) (22 June): Phenomenology of meson baryon scattering and the elimination of parity doublets.

WOLFENDALE A. W. (Durham) (29 June): The search for Quarks.

KUGLER M. (Weizmann Inst.) (30 June): Do we need exotics?

LUBELSMEYER K. (Bonn) (6 July): Recent results on pseudoscalar photo-production.

BIALAS A. (Krakow and Rutherford Laboratory) (13 July): Some recent results in the Quark Model of high energy scattering.

BROWN R. M. (Rutherford Laboratory) (20 July):  $\beta$ -decay of polarized  $\Lambda$ . WIPF S. L. (Atoms International, California) (28 July): Electromagnetic levitation and guidance of high speed vehicles.

DUKE P. J. (Rutherford Laboratory) (7 September): Review of the Kiev conference.

BURKHARDT H. (Birmingham) (14 September): The perils of phase shifting.

BUGG D. V. (QMC) (21 September):  $\pi p$  Scattering below 300 MeV. STEINBERGER J. (CERN) (28 September):  $K^\circ$  Detector using multiwave proportional chambers.

WEYERS J. (CERN) (12 October): Duality and the particle spectrum.

NEWTON D. (Lancaster) (19 October): A Berkeley experiment on  $K^+ \rightarrow e^+ + \nu_e$   $K_L \rightarrow K_S$  regeneration mystery.

KALMUS G. (LRL and CERN) (2 November): Strange particle production in  $\pi^+p$  interactions between 1 and 2 GeV/c.

LUNDHY A. (CERN) (9 November):  $\pi^\pm p$ ,  $K^\pm p$ , and  $\bar{p}p$  elastic and inelastic scattering at 5 GeV/c.

WHITE D. H. (Cornell and UCL) (16 November): Pion charge exchange in the backward direction at high energies at BNL.

GABATHULER E. (DNPL) (23 November): Present and future physics with Electron Storage Rings.

FIELDS T. (Birmingham) (30 November): Two-body states in  $\bar{p}p$  annihilation.

MORIARTY K. (Imp. Coll.) (7 December): The inclusion of spin in a phenomenological Veneziano model with applications to three particle production.

MURPHY P. (Manchester) (14 December):  $K_L^0 \rightarrow \pi^+\pi^-\pi^0$ .

### RUTHERFORD LABORATORY LECTURES

A series of lectures in which eminent people are invited to the Laboratory to address the staff on subjects of general scientific importance.

MOLE R. H. (MRC Harwell) (12 February): The work of the Radiobiology Unit.

MARSHALL W. (AERE Harwell) (9 April): The Harwell Research Programme.

SCHUMACHER E. F. (NCCB) (13 May): Intermediate technology - the missing factor in overseas aid.

BOYD R. L. F. (UCL) (16 July): X-ray astronomy.

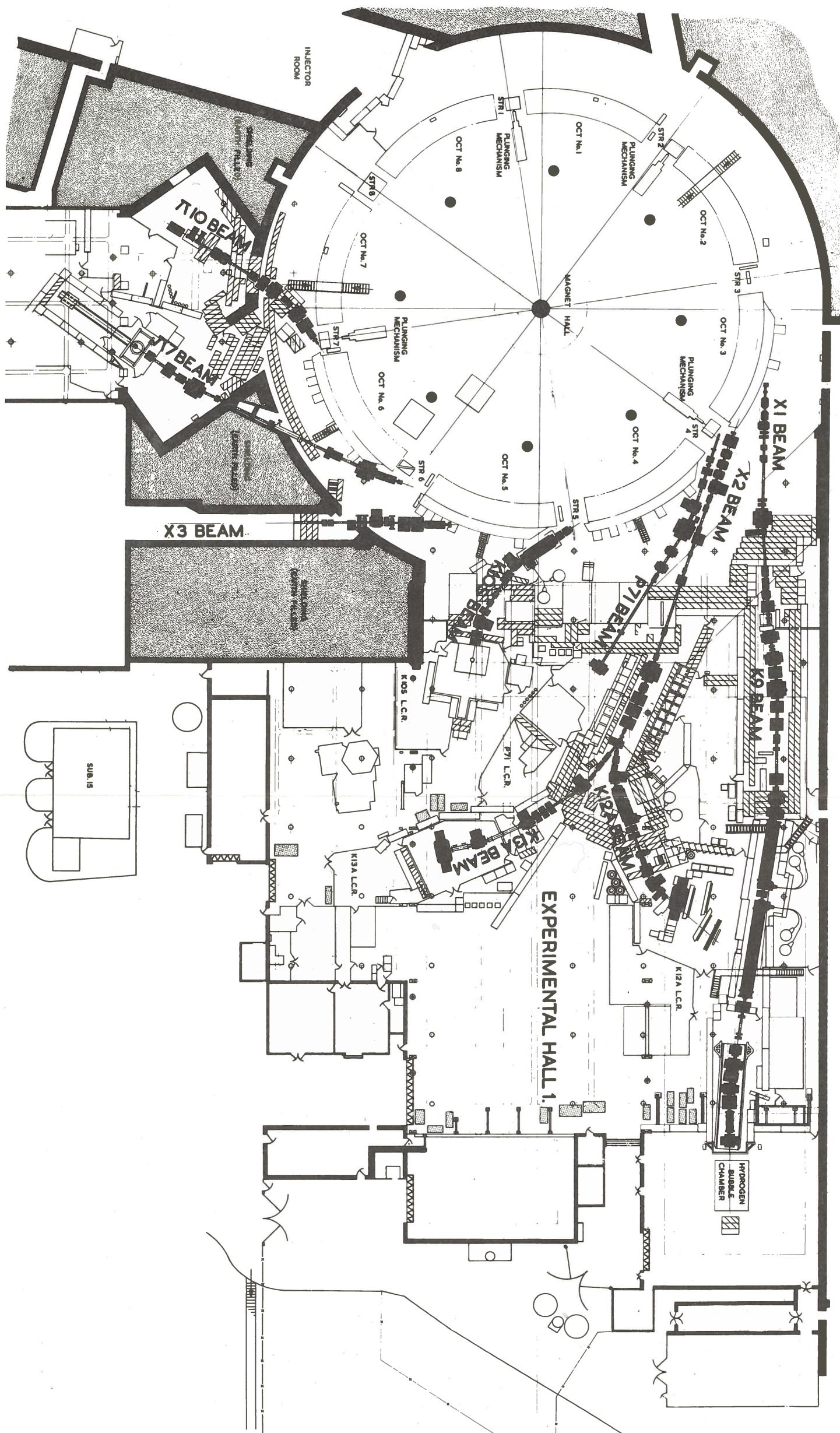
HARRISON E. R. (Amherst, USA) (3 September): The big bang cosmologies.

MASSEY Sir Harry (UCL) (1 October): The present position in space science.

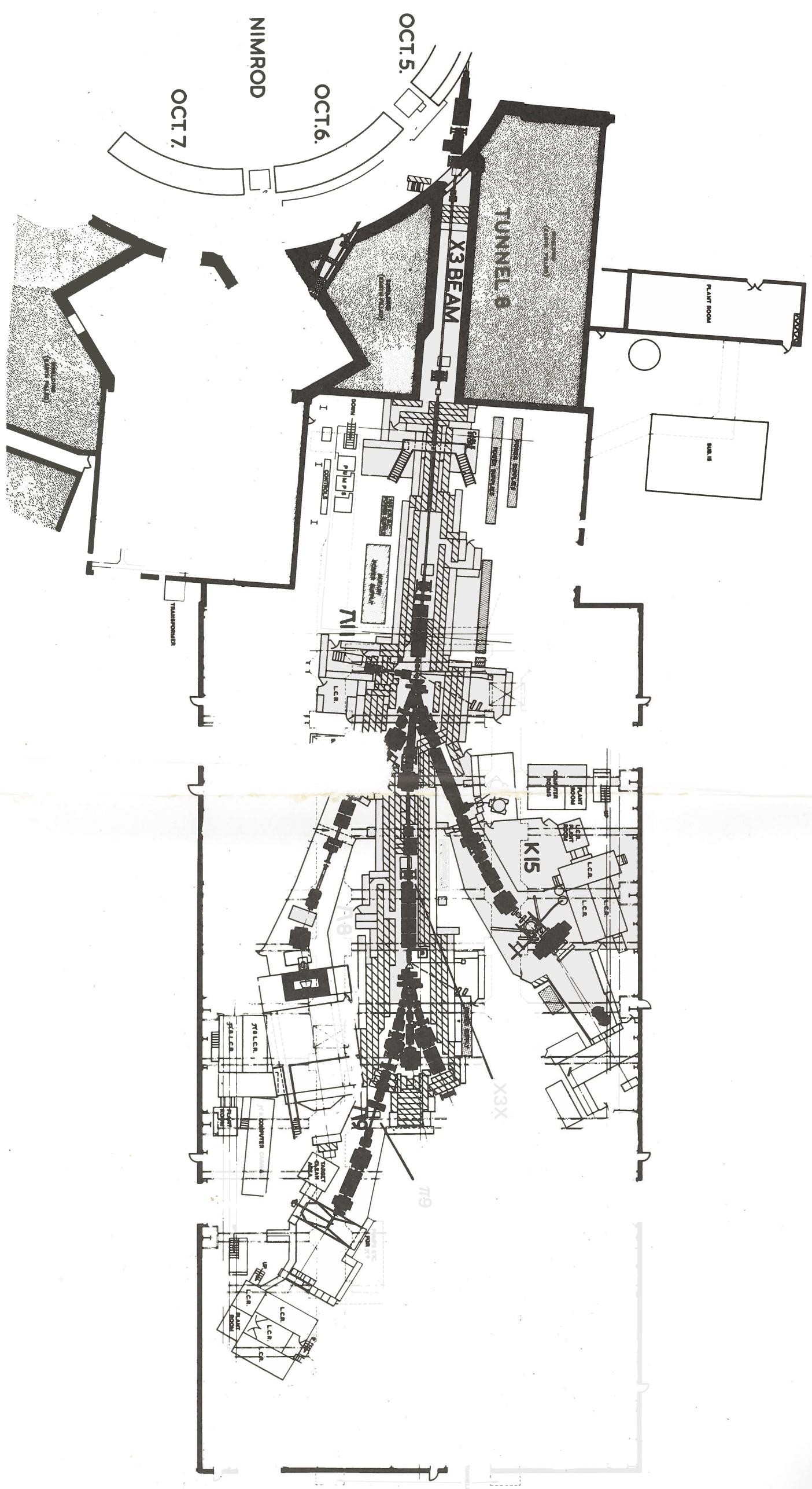
HIDE R. (Met. Office, GFDL) (29 October): Motions in planetary atmospheres.

STREET W. B. (US Military Academy) (17 November): The structures and motions of Jupiter's great red spot.

YOUNG J. Z. (UCL) (3 December): Memory.



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