



THE UNIVERSITY OF MELBOURNE ARCHIVES

NAME OF COLLECTION	Bruce McKellar	
REFERENCE NO	2011.0037	
CATEGORY ACTIVITY	University, Individuals	
DATE RANGE	1958-2010	
SIZE OF COLLECTION	72 boxes	
HISTORICAL NOTE	<p>Dr Bruce McKellar has had an active career in both a teaching and research capacity in the area of theoretical and particle physics. He has been a Professor of Theoretical Physics since 1972, is a Fellow of the Australia Academy of Science and has won many awards for his research in a long and distinguished career.</p> <p>Prof McKellar was made Companion of the Order of Australia, 2014</p>	
DATE OF TRANSFER	25 March 2011	
ACCESS CONDITIONS	Open	
NOTE ON COLLECTIONS	Material is arranged chronologically and by project, except for box 46, which holds papers for work from 1975-1977.	
NOTE ON LISTING	List prepared by Bruce McKellar. Material not received by UMA has been noted under relevant items	
LISTED BY	Bruce McKellar,	reviewed by Stuart Moffat
DATE	18 March 2011,	February 2014

Archived Material

Bruce H J McKellar

21 June 2012

Box 1

A Undergraduate 1958 – 1961

1. 1958 Lecture notes on Messel's "Modern Physics" lectures
2. 1958 Solution to problem on the numero puzzle, set by Professor T G Room. Note his comment on the solution.
3. 1959 Second Year Notes on Thermodynamics
4. 1959 Second Year Notes on Electrostatics
5. 1959 "Classical Non-Euclidian Geometry" Nobeirt Quirk Prize essay (draft copy) — I shared the Nobeirt Quirk Prize
6. 1960 Third year mathematics and Physics lecture notes
7. 1960 Lecture Notes on Electromagnetic Theory, R Twiss
8. 1960 Information Theory, 3rd year physics essay
9. 1960 Hilbert Space, 3rd year Pure Mathematics essay
10. 1961 *Methods of Attack on the Quantum Mechanical Many Body Problem*, Physics Honours essay

Box 2

B Graduate 1962 – 1964

11. 1962 Velocity Dependent Potentials in Nuclear Matter, presentation to Butler, May, Buckingham, 19620601
12. 1962 *Ghost States in the Lee Model* Notes for a Seminar Sydney, 19621017
13. 1963 *Theory of Condensation* Seminar, Sydney
14. 1964 Notes on velocity dependent potentials with delta function forces

15. 1964 McKELLAR, B.H.J. — Velocity Dependent Potentials and the Shell Model of Oxygen 18.
Physical Review 134: B1190 – B1195 (1964).
16. 1964 *Velocity Dependent Potentials in Nuclear Physics* Seminar, Sydney
17. 1964 Abstracts for ANZAAS Congress, Canberra, 20-24 Jan, 1964. See p17
B H J McKellar and S.T. Butler, *Shell model Energy Levels from a Velocity Dependent Nuclear Interaction*
18. 1963-64 Shell Model Calculations
19. 1964 PhD Thesis *Velocity Dependent Potentials in Nuclear Physics*, submitted to University of Sydney, December 1964. Degree awarded 1966. (Not received by UMA)

C Sydney 1965-66

20. 1965 McKELLAR, B.H.J., and MAY, R.M. — Theory of Low Energy Scattering by Velocity Dependent Potentials.
Nuclear Physics 65: 289 – 293 (1965).
21. 1965 McKELLAR, B.H.J., and NAQVI, M.A. — A Hartree-Fock Type Calculation of the Surface Energy of Semi-Infinite Nuclear Matter.
Nuclear Physics 71: 161 – 191 (1965).
22. 1965 *Yet more order in Elementary Particles*, Colloquium, Sydney, 19650510
23. 1965 Notes on lectures on Kinetic Theory by Professor R M May
24. 1965 Papers for AINSE Conference on Nuclear Physics, Melbourne, 23-25 August 1965
See paper 10
B H J McKellar *Velocity Dependent Potentials: formal aspects and application to shell models*
25. 1966 *Deuteron Stripping Analysis*, Butler, Hewitt, McKellar, May
Copies of various versions of the paper 28, published 1967

Box 3

D Institute for Advanced Study, Princeton, 1966-1968

26. 1966-1968 Notes on Stripping Reactions
27. 1966 Notes on Field Theory Methods in Nuclear Physics
28. 1967 BUTLER, S.T., HEWITT, R.G.L., McKELLAR, B.H.J., and MAY, R.M. — Deuteron Stripping Analysis.
Annals of Physics (NY) 43: 282 – 321 (1967)
29. 1967 Notes on beta decay radiative corrections

30. 1967 Notes on Renormalisation of the Axial Vector Weak Interaction
31. 1967 Notes on Dipole Moments of Elementary Particles, 196703 to 196708
32. 1967 McKELLAR, B.H.J. — The One Pion Exchange Contribution to the Weak Parity Violating Nucleon-Nucleon Potential.
Physics Letters 26B: 107 – 108 (1967).
33. 1967 Notes on Parity Violation in Nuclei 196708 to 196712

Box 4

34. 1967-1968 Note Book
35. 1968 McKELLAR, B.H.J. — Polarisation Effects in (d,p) Reactions according to the Butler, Hewitt, McKellar, May Theory.
Physical Review 171: 1137 – 1141 (1968).
ms 15 February 1968
36. 1968 McKELLAR, B.H.J. — Parity Non-Conserving Nuclear Forces.
Physical Review Letters 20: 1542 – 1545 (1968).
ms 2 May 1968
37. 1968 McKELLAR, B. H. J. and TRUELOVE, J. S. — *Antisymmetrisation of the Theory of Stripping Reactions*,
ms submitted to Physical Review 23 May 1968, rejected 1 August 1968
38. 1968 GANAS, P.S. and McKELLAR, B.H.J. — Green's Velocity Dependent Potentials in the Shell Model of ^{210}Po , ^{210}Pb and ^{210}Be .
Physical Review 175: 1409 – 1412 (1968).
ms 24 May 1968
39. 1968 GANAS, P.S. and McKELLAR, B.H.J. — Velocity Dependent Potentials in the Shell Model of ^{18}O and ^{18}F .
Nuclear Physics A 120: 545 – 554 (1968).
ms June 1968
40. 1968 McKELLAR, B.H.J. and RAJARAMAN, R. — Three Body Forces in Nuclear Matter.
Physical Review Letters 21: 450 – 453 (1968).
ms 18 June 1968
41. 1968 McKELLAR, B.H.J. — Nuclear Evidence Against the D'Espagnat Theory of Non Leptonic Weak Interactions.
Physical Review 178: 2160 – 2162 (1969).
ms 24 July 1968
42. 1968 McKELLAR, B.H.J. — Antisymmetrisation of the Theory of Stripping Reactions.

Physical Review 181: 1502 – 1505 (1969).
ms

E Sydney 1968 - 1971

43. 1968 BUTLER, S.T. and McKELLAR, B.H.J. — Spectroscopic Factors from (d,p) reactions.
Physical Review Letters 21: 1533 – 1535 (1968).
ms.
44. 1968 McKELLAR B.H.J. — The Oakes Theory of Weak Interactions and Parity Non-Conserving Nuclear Forces.
Physical Review Letters 21: 1822 – 1824 (1968).
ms 8 Novemebr 1968
45. 1968 *Currents and Conspiracies* Colloquium Sydney 19681014
46. 1968 *Parity Non-conservation in Nuclei* Colloquium Sydney 19681021
47. 1968 *On Leib's ice model* Seminar Sydney 1968
48. 1968 Notes on core excitation in (d,p) reactions (with Ken King)
49. 1968 GANAS, P.S. and McKELLAR, B.H.J. — Velocity Dependent Effective N-N Potential for Shell Model Calculations.
Physical Review 180: 953 – 956 (1969).
ms 1 October 1968, revised ms
50. 1969 *Non-leptonic $\Delta I = 1/2$ rule*, seminar, Melbourne 19690317
51. 1969 *Many Nucleon Forces* Colloquium Sydney 19690414
52. 1969 McKELLAR, B.H.J. — P and T Violation in Nuclear Physics. 3rd International Conference on High Energy Physics and Nuclear Structure, New York, September 1969. High Energy Physics and Nuclear Structure, edited by S. Devons (Plenum Press, New York, (1970), p. 682). (Includes notes and ms)
53. 1969 BUTLER, S.T., HEWITT, R.G.L., McKELLAR, B.H.J., NICHOLLS, I.R. and TRUELOVE, J.S. — Wave Functions for Nuclear Structure Calculations.
Physical Review 186: 963 – 965 (1969).
ms 19 May 1969
54. 1969 McKELLAR, B.H.J. — Theory of Stripping Reactions. A.N.Z.A.A.S. 41st Congress, Adelaide, August 1969. Austral. Journal of Science 32: 127 (1969).
Notes for invited paper, conference program.
55. 1969 McKELLAR, B.H.J. — The Oakes Theory of CP Violation. 3rd Topical Conference on Particle Physics, University of Hawaii, August 1969. University of Hawaii report UH-511-57-69, p.27.
notes and conference program

56. 1969 McKELLAR, B.H.J. — Low Energy Nuclear Physics as a Probe of the Weak Interaction. Conference on Nuclear and Elementary Particle Physics, University of Sussex, September 1969. (unpublished) (notes)
57. 1969 McKELLAR, B. H. J. — *Limit on the Induced Pseudotensor Form Factor of the Axial-Vector Current*, submitted to Physical Review 19600905, rejected in this form
58. 1969 *Renaissance of Reggeology*, Seminar Sydney 3 Nov 1969
59. 1969 KING, K. and McKELLAR, B.H.J. — *BHMM analysis of the $Pb^{208}(d,p)Pb^{209}g.s.$ Reaction*, Submitted to Physical Review, November 1969, accepted with modifications, Jan 1970.
60. 1969 McKELLAR, B.H.J. — *The ρ meson exchange contribution to the parity violating nucleon-nucleon potential*. Submitted to Physics Letters 19691212, rejected january 1970.
61. 1969-1972 Notebook Contains summary notes on work done and papers written in this period

Box 5

62. 1970 McKELLAR, B.H.J. — P and T Violation in Nuclear Physics. 1969. High Energy Physics and Nuclear Structure, edited by S. Devons (Plenum Press, New York, (1970), p. 682).
A paper presented at 3rd International Conference on High Energy Physics and Nuclear Structure, New York, September. See paper (56) for notes and typescript
63. 1970 Notes for Lectures on Electromagnetism, second year physics
64. 1970 Program and Abstracts for 3rd AINSE Nuclear Physics Conference, 16–19 February 1970, see pp2 and 7 of program.

Abstracts of the papers

McKELLAR, B. H. J. and STEKETEE, C. F. — (d,py) angular correlation calculations

McKELLAR, B. H. J. — Single Particle Strength in the Continuum

presented at the conference.
65. 1970 McKELLAR, B.H.J. — Limit on the Induced Pseudotensor Form Factor of the Axial Vector Current.
Physical Review D 1: 2183 (1970).
With ms of revised version submitted 9/1/1970 and accepted 20/2/1970
66. 1970 KING, K. and McKELLAR, B.H.J. — Analysis of (d,p) Reactions to the Ground States of ^{41}Ca and ^{49}Ca .
Australian Journal of Physics 23: 641 – 650 (1970).

- with ms submitted to Nuclear Physics A 29/1/1970, rejected 15/4/1970, submitted to Australian Journal of Physics 7/5/1970
67. 1970 EPSTEIN, G.N. and McKELLAR, B.H.J. — Form Factors and the Circular Polarisation of γ rays from Nuclear Reactions.
Australian Journal of Physics **23**: 601 – 603 (1970).
with ms submitted 2/2/1970
 68. 1970 KING, K. and McKELLAR, B.H.J. — Calculations for Stripping on Doubly Magic Nuclei.
Journal of Physics **23**: 453 – 463 (1970).
with ms submitted 2/2/1970, accepted 17/3/1970.
 69. 1970 Unpublished Manuscript
McKELLAR, B. H. J. — The ρ meson exchange contribution to the parity violating nucleon-nucleon potential
Submitted to Nuclear Physics B 12/2/1970. Rejected and withdrawn
 70. 1970 McKELLAR, B.H.J. and PICK, P. — Parity Violation in πN Scattering.
Nuclear Physics B **22**: 625 – 636 (1970).
Received by journal 31.3.1970, revised ms received 8/6/1970. Neither ms available.
 71. 1970 KING, K. and McKELLAR, B.H.J. — Analysis of the $^{208}\text{Pb}(d,p)^{209}\text{Pb}$ g.s. Reaction.
Physical Review C **1**: 1538 – 1547 (1970).
received by journal 16/10/1969.
 72. 1970 McKELLAR, B.H.J. — Single Particle Strength in the Continuum.
Physics Letters **32B**: 246 – 248 (1970).
received by journal 24/4/1970, ms not available
(Draft)
 73. 1970 The Weak Parity-Violating Nucleon-Nucleon Potential. International Conference on Angular Correlations in Nuclear Disintegration. Delft, August 1970. (Angular Correlations in Nuclear Disintegration. ed. H. van Krugten and B. van Novijen, Rotterdam University Press, 1971, p.354).
with typescript
(Draft)
 74. 1970 The Weak $NN\rho$ Vertex. XV International Conference on High Energy Physics. Kiev August 1970. (High Energy Physics, ed. V. Shelest, Naukova Dumka, 1972, p.737).
with typescript
(Draft)
 75. 1971 McKELLAR, B.H.J. — The Structure of Nuclei and Elementary Particles. Four lectures to the Australian Institute of Physics Summer School, Armidale, February 1971 (unpublished).

76. 1971 McKELLAR, B.H.J. and RAJARAMAN, R. — Effect of Correlations on the Contribution of Three Body Forces to the Binding Energy of Nuclear Matter. Physical Review C 3: 1877 – 1886 (1971).
Received 28/1/1971. with ms, submitted 22.1.1971, accepted 5.3.1971
77. 1971 McKELLAR, B. H. J. AND PICK, P. — $SU(6)_W$ prediction for the weak parity-violating $NN\rho$ vertex
Unpublished report, submitted to Physical Review Letters, rejected. June 1971, submitted to Physics Letters 14/7/1971, rejected.
78. 1971 McKELLAR, B. H. J. AND PICK, P. — Scalar meson pole model for weak parity violating baryon-baryon-meson vertices
Unpublished report, August 1971
79. 1971 McKELLAR, B.H.J. and PICK, P. — $SU(6)_W$ Model of $\Delta S = 0$ and $\Delta S = 1$ Non Leptonic Weak Interactions,
initial version submitted to Physical Review, rejected. Unpublished in this form
80. 1971 $SU(6)_W$ and the $\Delta S = 0$ Non Leptonic Weak Interaction. (With P. Pick).
4th Hawaii Topical Conference on Particle Physics, Honolulu, August 1971. (University of Hawaii Report UH-511-109-71 (1971), included, gives the abstracts, see p.81). Includes black and white photograph and identification list of conference attendees.
notes and typescript
(not received by UMA)
81. 1971 Calculations of $\Delta S = 0$ Non Leptonic Weak Interaction. (With P. Pick).
Divisional Meeting of the APS Division of Particles and Fields, Rochester, August 1971.
Abstract only. Unpublished.
82. 1971 The Two Pion Exchange Contribution to the Nucleon-Nucleon Potential. (with G.N. Epstein). Divisional Meeting of the APS Division of Particles and Fields, Rochester, August 1971.
Abstract only, unpublished.
83. 1971 The Two Pion Exchange Contribution to the Nucleon-Nucleon Potential. (with G.N. Epstein). Gull Lake Symposium on the Two Body Force in Nuclei, Gull Lake, Michigan, September 1971. (Michigan State University Cyclotron Laboratory Report MSUCL-39, p.10 and The Two Body Force in Nuclei ed. S. Austin and G. Crawley, Plenum NY, 1972, p.51).
typescript
(Draft)
84. 1971 Notes for seminar on *The parity violating nucleon-nucleon potential*
Los Alamos 17/8/1971, Stony Brook, 17/9/1971, Carnegie Mellon 24/11/1971.

85. 1971 Notes for Seminar *Parity Mixing in Nuclei*
Michigan State University 30/9/1971
86. 1971 Notes on the Ising Model, University of Michigan, Sept Oct 1971
87. 1971 Notes on Gauge Invariance and Potential Transformations, 1971
88. 1971 Notes on calculations with Peter Pick, 1971

Box 6

89. 1971 Notes on calculations with M Box, re ^{19}F
90. 1971 Notes on calculations with D W E Blatt
91. 1971 Notes for Seminar *Three body forces in Nuclear Matter*, McMaster University, 7/10/1971
92. 1971 The Two Pion Exchange Contribution to the Nucleon-Nucleon Potential. Divisional Meeting of the APS Division of Nuclear Physics, Tucson, 4 – 6 November 1971. (With G.N. Epstein). Bulletin of the American Physical Society, 16: 1150 (1971).
Notes for the unpublished talk
93. 1971 Notes for Seminar *A model for the Non-leptonic weak interaction*, Institute for Advanced Study, Princeton, 15/11/1971, University of Washington 5/12/1971.
94. 1971 Notes for Seminar *The 2π exchange contribution to the nucleon nucleon potential*, University of Pennsylvania 19/11/1971, University of Pittsburg, 24/11/1971, University of Washington 7/12/1971, Michigan State University, 9/12/1971.
95. 1971 Notes for seminar, *π exchange contributions to 2 and 3 Nucleon Potentials*, University of Michigan, 16th Deceber 1971
96. 1971 Notes on calculations of parity violating effects.

F Melbourne 1972 - 2010

97. 1972 McKELLAR, B.H.J. and PICK, P. — Scalar-Meson Pole Model for Weak Parity-Violating Baryon-Baryon-Meson Vertices.
submitted to Physical Review Letters 6/1/1972, and rejected. Resubmitted to Physical Review Nov 1972. Eventually published, see paper (118)
Versions of the paper and notes relating to this and the paper 114,
98. 1972 McKELLAR, B.H.J. — Exchange Currents in Parity Non-Conserving Electromagnetic Transitions.
Physics Letters 38B: 401 – 404 (1972).
received 7/1/1972

99. 1972 Program and Abstracts for the 4th AINSE Nuclear Physics Conference, 14–17 February, 1972.

See abstracts

- 1 KING, K. and McKELLAR, B. H. J. — Calculations based on a Soluble Model of Deuteron Stripping.
- 6 BOX, M. A. and McKELLAR, B. H. J. — Parity Violation in Heavy Nuclei
- 8 BLATT, D. W. E. and McKELLAR, B. H. J. — An approximation to the reaction matrix in nuclear matter
- 9 McKELLAR, B. H. J. — Weak interactions — progress and problems
- 52 EPSTEIN, G. N. and McKELLAR, B. H. J. — The two pion exchange contribution to the nucleon-nucleon potential

With typescript of report on the conference by B. H. J. McKellar, and G. J. F. Legge, and notes for the paper 9 above, which was a review paper.

100. 1972 McKELLAR, B.H.J. and PICK, P. — Pion Pole Dominance of the Divergence of the Weak Parity Non-Conserving $NN\pi$ Amplitude.
Physical Review D 6: 2184 – 2188 (1972).
Proof copy and final copy of paper
101. 1972 EPSTEIN, G.N. and McKELLAR, B.H.J. — The Two Pion Exchange Contribution to the Nucleon-Nucleon Potential.
Lettere al Nuovo Cimento 5: 807 – 813 (1972).
with ms submitted to Physical Review Letters 26/5/1972. Too long.
resubmitted to Lettere al Nuovo Cimento, 22/9/1972 and accepted
102. 1972 BLATT, D.W.E. and McKELLAR, B.H.J. — An Approximation to the Reaction Matrix in Nuclear Matter.
Australian Journal of Physics 25: 1 – 7 (1972).
ms received 8/7/1972
103. 1972 McKELLAR, B.H.J. and PICK, P. — $SU(6)_W$ Model of $\Delta S = 0$ and $\Delta S = 1$ Non Leptonic Weak Interactions.
revised ms received Nov 1972 published in 1973, see paper 114
104. 1972 EPSTEIN, G.N. and McKELLAR, B.H.J. — Consistency Conditions for $NN \rightarrow \pi\pi$ Helicity Amplitudes.
version submitted to Physics Letters 23/2/1972 and rejected.
105. 1972 STEKETEE, C.F. and McKELLAR, B.H.J. — Analysis of (d, py) Reactions.
Australian Journal of Physics 26: 25 – 41 (1973).
ms submitted 6/10/1972

106. 1972 *Are Nuclear β and γ transitions single particle?* notes for Seminar, Melbourne University 22/5/1972
107. 1972 *Soft Pions in Nuclear Physics* Notes for seminar, Flinders University 15/9/1972.
108. 1972 *(p, π) Reactions* Journal Club, Melbourne University 2/10/1972
109. 1972 *Review of Many Body Forces*, Notes for Colloquium, University of Sydney, 6/11/1972.
110. 1972 Possible result for self energy in a medium. Notes
111. 1972 Notes on parity violation in nuclei
112. 1972 KING, K. and McKELLAR, B.H.J. — Deuteron Stripping: A Study of the Sudden Approximation Theory within the context of a Soluble Model Containing Excitable Nuclear Core.
Preprint UMP-72/23, eventually published in Physical Review C, 1974; 148
113. 1972 Notes an work with D. W. E. Blatt

Box 7

114. 1973 McKELLAR, B.H.J. and PICK, P. — $SU(6)_W$ Model of $\Delta S = 0$ and $\Delta S = 1$ Non Leptonic Weak Interactions.
Physical Review D 7: 260 – 266 (1973).
Published form of 103; original paper received 15/11/1971, revised 26/6/1972.
115. 1973 STEKETEE, C.F. and McKELLAR, B.H.J. — Analysis of (d, py) Reactions.
Australian Journal of Physics 26: 25 – 41 (1973).
published form of 105 received 11/10/1972
116. 1973 KING, K. and McKELLAR, B.H.J. — A Solvable Model of Stripping Reactions with Variable Spectroscopic Factor.
Physical Review Letters 30: 562 – 564 (1973).
Preprint UP-P-73/2; received 22/1/93, accepted 19/3/1973.
Notes on calculations and computer code
117. 1973 Pawsey Medal Speech, Australian Academy of Science, 23/4/1973.
118. 1973 McKELLAR, B.H.J. and PICK, P. — Scalar-Meson Pole Model for Weak Parity-Violating Baryon-Baryon-Meson Vertices.
Physical Review D 7: 265 – 268 (1973).
see notes and ms under 97. Published 1 July 1973
119. 1973 EPSTEIN, G.N. and McKELLAR, B.H.J. — Consistency Conditions for $N\bar{N} \rightarrow \pi\pi$ Helicity Amplitudes.
Lettere al Nuovo Cimento 8: 177 – 181 (1973).
includes versions of the ms of 1972 (preprint UM-P-72/12), and submitted to

Physical Review Letters 28/3/1973 (preprint uM-P-73/10), rejected, and the ms submitted to Lettere al Nuovo Cimento

120. 1973 EPSTEIN, G.N. and McKELLAR, B.H.J. — The Intermediate Range Nucleon-Nucleon Potential.
preprint UM-P-73/16, a long version of the paper published in Physical Review D in 1974; 153;
The proofs of the 1974 paper.
121. 1973 *Current Problems in Theoretical Physics* Third Year Seminar, University of Melbourne, 17/7/1973
122. 1973 McKELLAR, B.H.J. and RAJARAMAN, R. — N Body Forces in High Density Nuclear Matter.
Physical Review Letters 31: 1063 – 1067 (1973).
UM-P-73/18, received 17/8/1973, published 22/10/1973
123. 1973 EPSTEIN, G.N. and McKELLAR, B.H.J. — Determination of the $N\bar{N} \rightarrow \pi\pi$ Helicity Amplitudes.
UM-P-73/29, published in Physical Review D, 157
124. 1973 Proceedings of the AIP Nuclear and Particle Physics Group Vacation School, 14-18 May 1973. The meeting was organised by Bruce McKellar.
125. 1973 *Theories of $\Delta S = 0$ Non Leptonic Weak Interactions*. APS Division of Particles and Fields Meeting, Berkeley, August 1973. (Proc. p.668).
ms as submitted, transparencies.
(Draft)
126. 1973 *Calculation of $N\bar{N} \rightarrow \pi\pi$ Helicity Amplitudes*. APS Division of Particles and Fields Meeting, Berkeley, August 1973. (with G.N. Epstein). (Unpublished).
ms as submitted
127. 1973 *The Nucleon-Nucleon Potential*, transparencies for a seminar at Los Alamos, August 1973.
128. 1973 *A Study of the Parity Non Conserving Nucleon-Nucleon Interaction*. International Conference on Nuclear Structure, Munich, August 1973. (with K.R. Lassey) (Proc. p.699).
typescript as submitted – (proceedings not received by UMA)
129. 1973 *Solvable Models of Stripping Reactions*. International Conference on Nuclear Structure, Munich, August 1973 (with K. King) (Proc. p.413).
typescript as submitted – (proceedings not received by UMA)

With transparencies for talk
Conference program
130. 1973 *p Wave pp Interactions and the Intermediate Range Nucleon- Nucleon Interaction*. International Conference on Nuclear Structure, Munich, August 1973

(with G.N. Epstein) (Proc. p.669).

typescript as submitted – (proceedings not received by UMA)

131. 1973 McKELLAR, B.H.J. — *Short Range Correlations and Parity Mixing in Nuclei*. Invited talk, International Symposium on Correlations in Nuclei, Balatonfured, Hungary, September 1973. (Proceedings Hungarian Physical Society, Budapest 1974, p.229).
transparencies for talk, and typescript of paper – (proceedings not received by UMA)
132. 1973 McKELLAR, B.H.J. — Analysis of the Parity Non Conserving Amplitudes of the Reactions $n + p \rightarrow d + \gamma$, and $n + d \rightarrow t + \gamma$.
UM-P-73/28, published in Physical Review C, see 150.
133. 1973 LASSEY, K.R. and McKELLAR, B.H.J. — Parity Non Conserving Effects in the Reaction $n + p \rightarrow d + \gamma$.
UM-P-73/26. Found to have errors and withdrawn, revised version published in 1974, see 151
134. 1973 KING, K. and McKELLAR, B.H.J. — Deuteron Stripping: A Study of the Sudden Approximation Theory within the context of a Soluble Model Containing Excitable Nuclear Core.
Preprint UMP-73/23, revised form of 112 eventually published in Physical Review C, 1974; 148
135. 1973 Notes on calculations with D W E Blatt

Box 8

136. 1973 Notebook 1973-I;
DNP Berkeley meeting; Munich Conference; Notes on the Weinberg Model; Scalar pole model of Hyperon Decays; $np \rightarrow d\gamma$
137. 1973 Notebook 1973-II;
Balatonfured Conference; Notes on Many Body Forces; Notes on Parity Violation.
138. 1974 Notes on light scattering by polydispersions
139. 1974 Notes and letters on parity violation in the reaction $n + p \rightarrow d + \gamma$, made in 1973 and 1974
140. 1974 Notes on the reaction $n + d \rightarrow t + \gamma$
141. 1974 Partial manuscript of the unpublished paper *Pion condensation and many body forces in neutron matter*, which contains some wrong ideas and was not submitted for publication.
142. 1974 McKELLAR, B.H.J — Many Body Forces in Dense Nuclear Systems. Australian Applied Mathematics Conference, Lorne, February 1974 (unpublished).
Program and abstracts for the conference, with transparencies.

143. 1974 McKELLAR, B.H.J. and RAJARAMAN, R. — Many Body Forces and the Binding Energy of High Density Nuclear Matter.
Physical Review C 10: 871 – 887 (1974).
 with preprint UM-P-74/4, and proofs. Paper received by journal 20/3/74, published 1/8/74
144. 1974 McKELLAR, B.H.J. — Neutron Stars. Invited paper, and key note address, 5th A.I.N.S.E. Conference on Nuclear Physics, Canberra, February 1974 (unpublished).
 Program and abstracts, (paper not received by UMA)
 See also abstract 77
 BLATT, D.W.E and McKELLAR, B.H.J. — 3, 4, and many body forces in nuclear matter. the paper was presented by Blatt.
145. 1974 LASSEY, K.R. and McKELLAR, B.H.J. — Parity Non Conserving Effects in n,p Capture at Thermal Energies.
Australian Journal of Physics 27: 637 – 655 (1974). Erratum: 28 477 (1975).
 with preprint UM-P-74/7
 received by journal 8/3/1974
 with typescript of erratum,
 (copy of erratum from journal not received by UMA)

Box 9

146. 1974 McKELLAR, B.H.J. — The Inverse Scattering Problem for Spherical Polydispersion.
Australian Journal of Physics 27: 737 – 740 (1974).
 with preprint UM-P-74/9
147. 1974 McKELLAR, B.H.J. — What Property of a Haze is Determined by Light Scattering?
Quarterly Journal of the Royal Meteorological Society, 100: 687 – 691 (1974).
 with preprint UM-P-74/10, and the revised version as submitted to the journal.
148. 1974 KING, K. and McKELLAR, B.H.J. — Deuteron Stripping: A Study of the Sudden Approximation Theory within the context of a Soluble Model Containing Excitable Nuclear Core.
Physical Review C 9: 1309 – 1328 (1974).
 with proofs
149. 1974 McKELLAR, B.H.J. — Nuclear Theory: A Review. A.I.P. National Congress, Adelaide, May 1974. (Australian Physicist Supplement, April 1974, p.22).
 Notes and transparencies for the talk
150. 1974 McKELLAR, B.H.J. — Analysis of the Parity Non Conserving Amplitudes of the Reactions $n + p \rightarrow d + \gamma$, and $n + d \rightarrow t + \gamma$.
Physical Review C 9: 1790 – 1794 (1974).

with proofs. See file 132

151. 1974 LASSEY, K.R. and McKELLAR, B.H.J. — Parity Non Conserving Effects in the Reaction $n + p \rightarrow d + \gamma$.
Lettere al Nuovo Cimento 11: 161 – 165 (1974).
Erratum:13; 351 (1975).
with preprint 73/26 as revised April 1974, correspondence with editor, Physics Letters B, submitted to Lettere al Nuovo Cimento 1/7/1974.
with typescript of erratum,
152. 1974 BLATT, D.W.E. and McKELLAR, B.H.J. — Soft Core Correlations and Three Body Forces in Nuclear Matter.
Physics Letters 52B: 10 – 12 (1974).
with preprint UM-P-74/15, received 4/7/74, published 16/9/74.
with notes and correspondence
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Boxes 1 to 21, files 1 to 342 transferred to the University of Melbourne
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(Not received, empty file in box)
945. 2001 MCKELLAR, B. H. J., GARBUTT, M., STEPHENSON, G. J. Jr, and GOLDMAN, T. — Neutrino masses or new interactions,
Paper contributed to the Lepton-Photon 2001 conference - Rome , and to the International Europhysics Conference on High Energy Physics - Budapest, July 2001.
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presented as a contributed paper at the Budapest conference by BHJMcK.
Published in Proceedings of the EPS International Conference on High Energy Physics, Budapest, 2001 (D. Horvath, P. Levai, A. Patkos, eds.),
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946. 2001 MCKELLAR, B. H. J., GARBUTT, M., STEPHENSON, G. J. Jr, and GOLDMAN, T. — Neutrino clustering and the Z-burst model.

Paper contributed to the Lepton-Photon 2001 conference - Rome , and to the International Europhysics Conference on High Energy Physics - Budapest, July 2001.

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G. Domokos was assigned to report on this paper, and others, at the Budapest Conference in the parallel sessions. (Not received)

947. 2001 J. Carlsson, J. A. McIntosh, B. H. McKellar and L. C. Hollenberg, "Improved Hamiltonian Lattice Gauge Theory," contributed to Lattice 2001: [arXiv:hep-lat/0110086].
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949. 2001 Notes from S R Choudhury on Weak lensing
950. 2001 Notes on the NUTEV anomaly
951. 2001 Notes on various 2001 conferences
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 962. 2002 LEE. T. H. and MCKELLAR, B. H. J. — Neutrino clustering in the galaxy with a global monopole,
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 967. 2002 McKELLAR, B. H. J. — Unifying the forces of Nature

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968. 2002 Notes on coupled cluster methods
969. 2002 HE, X. G. and MCKELLAR, B. H. J. — Magnetic properties of scalar particles: The scalar Aharonov-Casher effect and supersymmetry, arXiv:quant-ph/0208005., University of Melbourne preprint UM-P-016-2012, with notes. Published in 2003, see 975

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Field theory of derivative interactions of vector fields
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972. 2002 Notebook 2002 - II
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980. 2003 CARLSSON, J., McINTOSH, J. A., MCKELLAR, B. H. J., and HOLLENBERG, L. C. L. — An analytic variational study of the mass spectrum in 2+1

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 984. 2003 Further notes for the erratum of the paper
 HE, X-G, McKELLAR, B. H. J., and STEPHENSON, G. J. Jr. — Interactions of a Neutrino with an Extremely Light Scalar.
Physics Letters B **444**, 75 – 80 (1998), see 878
 Corrections eventually published in 2004 [Erratum-ibid. B **581**, 270 (2004)]
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 To be published in the proceedings
 with presentation, abstracts, participants and information on the conference
 986. 2003 MCKELLAR, B. H. J., GARBUTT, M., GOLDMAN, T. and STEPHENSON, G. J. Jr — Terrestrial, astrophysical and cosmological implications of a background neutrino density,
 invited lecture by B H J McKellar at the Workshop on Cosmology and Particle Astrophysics, Taipei, 2003, published in the proceedings in 2004, see 1010
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 988. 2003 F Behan, *The keystone design perforator island flap in reconstructive surgery*, ANZ J Surgery 2003: **73**; 112–120 An article on which I provided mathematical advice
 989. 2003 Notes and correspondence on neutrino physics
 990. 2003 Notes and correspondence on boundary conditions in the Dirac equation.
 991. 2003 IGNATIEV, A. Y., JOSHI, G. C. and McKELLAR, B. H. J., — Spectator effects in the decay $B \rightarrow K\gamma\gamma$,

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992. 2003 Notes with S P Choudhury on little black holes
993. 2003 Visit to the Yukawa Institute, with presentation of the seminar “ SU(N) Hamiltonian Lattice Gauge Theory in 2+1 dimensions for $N \leq 25$ ”
994. 2003 G. J. Stephenson, Jr., J. T. Goldman, B. H. J. McKellar and M. Garbutt, “Large mixing from small: PseudoDirac neutrinos and the singular seesaw,” An early version of the paper, 1035, published in 2005
995. 2003 J Carlsson, draft of thesis, with comments

Box 62

996. 2003 ARC application and reports
997. 2003 Invited lectures at the 2003 Nuclear and Particle Physics Summer School, Victor Harbour, January 2003 on
- (a) Neutrino Mass
 - (b) Neutrino Oscillations
 - (c) Quark Mixing and B decays
 - (d) CP Violation
998. 2003 J. Carlsson and B. H. J. McKellar, “SU(N) lattice gauge theory on a single cube,” hep-lat/0303022.
999. 2003 J. Carlsson and B. H. J. McKellar, “The Large N glueball mass spectrum in (2+1)-dimensions,” hep-lat/0303018.
1000. 2003 CHOUDHURY, S. R., CORNELL, A. S., JOSHI, G. C., and MCKELLAR, B. H. J. — Signatures of quantized TeV scale Black holes in scattering processes, arXiv:hep-ph/0307275. published in 2004, see 1008
1001. 2003 Notes with S R Choudhury on Little Higgs
1002. 2003 Notebook 2003-I 20030109 to 20030325
1003. 2003 Notebook 2003-II 20030326 to 20030415
1004. 2003 Notebook 2003 - III 20030415 to 20030722
1005. 2003 Notebook 2003 - IV 20030722 to 20031007
1006. 2003 Notebook 2003 - V 20031007 to 20031115

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1011. 2004 McDONALD, K. L., MCKELLAR, B. H. J. and MASTRANO, A., — (3+2) neutrino scheme from a singular double see-saw mechanism, Physical Review D **70**, 053012 (2004)
1012. 2004 McCRAW, J. M., and MCKELLAR, B. H. J., — Pure point spectrum for the time evolution of a periodically rank-N kicked Hamiltonian, Journal of Mathematical Physics **46**, 032108 (2005)
1013. 2004 HE, X. G., LI, X. Q. J., MCKELLAR, B. H. J. and ZHANG, Y., — Berry phase in neutrino oscillations,
Notes draft and preprint arXiv:hep-ph/0412374. Published in 2005, see 1034
1014. 2004 STEPHENSON, G. J., Jr., GOLDMAN, T., MCKELLAR, B. H. J. and GARBUTT, M., — Large mixing from small: Pseudo-Dirac neutrinos and the singular seesaw,
draft and preprint arXiv:hep-ph/0404015.
1015. MCKELLAR, B. H. J. and CARLSSON, J. — Harmonic Oscillator spectrum for glueball states in 2+1 D in large N limit
Presentation of Invited paper at the Workshop "QCD DOWN UNDER", Adelaide, 2004.
Published in 2005, see 1030
1016. 2004 S.R. Choudhury, N. Gaur, G. C. Joshi and B. H. J. McKellar, — " $K_L \rightarrow \pi^0 \nu \bar{\nu}$ in little Higgs model,"
preprint hep-ph/0408125.
1017. 2004 *Varying mass neutrinos, dark matter and dark energy*, poster for a seminar at Institute for Theoretical Physics, Beijing, 20040719
No notes available – (not received by UMA)

- 1018. 2004 T. Carruthers and B. H. J. McKellar, “Implications of B meson decay data: A Graphical approach,”
notes and preprint hep-ph/0412202. Unpublished
with the 4th year report of Tim Carruthers
- 1019. 2004 Notes with G J Stephenson on neutrinos
- 1020. 2004 J Paul Goldby, *SU(N) Lattice Hamiltonian Models*
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- 1021. 2004 IGNATIEV, A. Y. and McKELLAR, B. H. J., — Possible new interactions
of neutrino and the KATRIN experiment,
notes and early drafts leading to preprint arXiv:hep-ph/0506246 and publication
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- 1022. 2004 B. H. J. McKellar and J. Carlsson, — “SU(N) for large N in the Hamiltonian
formalism in 2+1 dimensions,” Nucl. Phys. Proc. Suppl. **129**, 420 (2004).
- 1023. 2004 X. -G. He and B. H. J. McKellar, — “Hadron decay amplitudes from $B \rightarrow K\pi$
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- 1024. 2004 T Carruthers, X-G He and B H J McKellar — “Implications of branching
ratios and CP asymmetries in $B \rightarrow K\pi$
unpublished typescript

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- 1025. 2004 Notebook 3003-VI
20031115 to 20040209
- 1026. 2004 Notebook 2004-I
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- 1027. 2004 Notebook 2004-II
20040422 to 20040721
- 1028. 2004 Notebook 2004-III
20040722 to 20041120
- 1029. 2005 X. -G. He and B. H. J. McKellar, — “Hadron decay amplitudes from $B \rightarrow K\pi$
and $B \rightarrow \pi\pi$ decays,”
further notes, drafts and the preprint hep-ph/0410098 v3 of 10/06/05.
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- 1030. 2005 McKELLAR, B. H. J. and J. Carlsson, Harmonic Oscillator Spectrum For
Glueball States In 2+1 Dimensions In The Large N Limit
Nucl. Phys. Proc. Suppl. **141**, 179 (2005).

1031. 2005 IGNATIEV, A. Y., JOSHI, G. C. and McKELLAR, B. H. J., — Spectator effects in the decay $B \rightarrow K\gamma\gamma$,
International Journal of Modern Physics A **20**, 4079 (2005)
1032. 2005 McCaw, J. M., and McKELLAR, B. H. J., — Pure point spectrum for the time evolution of a periodically rank-N kicked Hamiltonian,
Journal of Mathematical Physics **46**, 032108 (2005)
1033. 2005 TERASAKI, K and McKELLAR, B. H. J., — Charmed scalar resonances: Conventional and four-quark mesons,
Progress in Theoretical Physics **114**, 205 (2005)
Yukawa Institute for Theoretical Physics preprint YITP-05-01 and [arXiv:hep-ph/0501188], in various forms
1034. 2005 HE, X. G., LI, X. Q. J., McKELLAR, B. H. J. and ZHANG, Y., — Berry phase in neutrino oscillations,
Physical Review D **72**, 053012 (2005)
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International Journal of Modern Physics A **20**, 6373-6390 (2005)
1036. 2005 McCaw, J. M., and McKELLAR, B. H. J., — On the continuous spectral component of the Floquet operator for a periodically kicked quantum system,
Journal of Mathematical Physics **46**, 103503 (2005)
1037. 2005 IGNATIEV, A. Y. and McKELLAR, B. H. J., — Possible new interactions of neutrino and the KATRIN experiment,
preprint arXiv:hep-ph/0506246, publication in 2006, see 1049
1038. 2005 Notes with Ivona Okuniewicz and Alex Friedland relevant to the 2006 publication, see file 1052
1039. 2005 Notes and Correspondence with Jerry Stephenson
1040. 2005 James McCaw, graduation
1041. 2005 Notes with Kristian McDonald re papers written in subsequent years
1042. 2005 AIP Congress notes
1043. 2005 Singapore meeting on 100 years in Physics. I participated in the discussion group on Regional Cooperation in the 3rd day
1044. 2005 Proofs of Hansard report on my appearance before the Joint Standing Committee on Foreign Affairs regarding Australia Korea relations, 1 Sept 2005
1045. 2005 Notebook 2005-I, Jan to May 2005

- 1046. 2005 Notebook 2005-II, May to September 2005
- 1047. 2005 Notebook 2005-III, June to November, 2005
- 1048. 2005 Notebook 2005-IV, November 2004 to February 2005
- 1049. 2006 IGNATIEV, A. Y. and McKELLAR, B. H. J., — Possible new interactions of neutrino and the KATRIN experiment,
Physics Letters B **633**, 89 (2006)
- 1050. 2006 Notes, draft papers and draft thesis — work with Kristian McDonald
- 1051. 2006 McDONALD, K. L. and McKELLAR, B. H. J., — Systematic study of leptonic mixing in a class of SU(H)(2) models,
Physical Review D **73**, 073004 (2006)
- 1052. 2006 FRIEDLAND, A., McKELLAR, B. H. J. and OKUNIEWICZ, I., — Construction and analysis of a simplified many-body neutrino model,
Physical Review D **73**, 093002 (2006)
Notes and drafts of paper
- 1053. 2006 CHOUDHURY, S. R., CORNELL, A. S., JOSHI, G. C. and McKELLAR, B. H. J., — Analysis of the $B \rightarrow K_2^*(\rightarrow K\pi)^+\Gamma$ decay,
Physical Review D **74**, 054031 (2006)
- 1054. 2006 McDONALD, K. L. and McKELLAR, B. H. J., — Orbifold reduction of the quark-lepton symmetric model,
Physical Review D **74**, 056005 (2006)
- 1055. 2006 COULTHURST, A., McDONALD, K. L. and McKELLAR, B. H. J., — Suppressing proton decay by separating quarks and leptons,
Physical Review D **74**, 127701 (2006)
- 1056. 2006 Notes and correspondence with G J Stephenson Jr, 2006
- 1057. 2006 G. J. Stephenson, T. J. Goldman and McKELLAR, B. H. J., — Neutrino oscillation parameters in a six-channel reduced rank see-saw,
AIP Conf. Proc. **842**, 880 (2006).
(Not received by UMA, empty file in box)
- 1058. 2006 Notes on the Boltzmann Equation
- 1059. 2006 ARC Reports
- 1060. 2006 Paul Goldby
Supervision notes 2006
- 1061. 2006 B H J McKellar — *Experimental Dark Matter Searches, Signatures of Supersymmetry, and the Interface to the Large Hadron Collider*,

Invited talk to the 2006 Texas Symposium, Melbourne December 2006
Presentation, with program of Symposium

1062. 2006 Massey Medal presentation at the National Congress of the Australian Institute of Physics, December 2006
Presentation and Program
Presentation required (not received by UMA)

Box 65

1063. 2006 Colloquium *Neutrino Oscillations of MSW type against a neutrino background*
Bologna University, 25 May 2006
1064. 2006 Invited paper at the Symposium “Perspectives in Particle Physics”, Brown University 6 July 2006 in memorium for Kyung-sik Kang
A solvable model for neutrino dynamics
1065. 2006 Lecture notes for the 4th year subject 640-402 — *Quantum Mechanics B*
1066. 2006 Lecture notes for the 3rd year subject 640-354 *Subatomic Physics* in various forms, but still incomplete, with copies of the presentation for the lectures
1067. 2006 Lecture notes for the 2nd year subject 640-225 — *Electromagnetism*
1068. 2006 Festschrift for Bruce McKellar and Girish Joshi, 29 and 30 November 2006
Including the proceedings
1069. 2006 Academy of Science items involving Bruce McKellar in 2006
1070. 2006 Notebook 2006-I — 20051121 to 20060204, including notes on the 2006 NUPP Summer School organised by BMck
1071. 2006 Notebook 2006-II — 20060206 to 20060330, including notes on the 2006 NUPP Summer School organised by BMck
1072. 2006 Notebook 2006-III — 20060401 to 20060719
1073. 2006 Notebook 2006-IV — 20060720 to 20061120
1074. 2006 Notebook 2006-V — Notes on the APS meeting in Hawaii October 2006
1075. 2007 McDONALD, K. L. and McKELLAR, B. H. J., — The Type-II Singular See-Saw Mechanism,
International Journal of Modern Physics A **22**, 2211 (2007)
1076. 2007 COULTHURST, A., McDONALD, K. L. and McKELLAR, B. H. J., — Quark-lepton symmetry in five dimensions,
Physical Review D **75**, 045018 (2007) [arXiv:hep-ph/0611164].

1077. 2007 GOLDMAN, T., STEPHENSON, G. J., Jr. and McKELLAR, B. H. J., — Multichannel oscillations and relations between LSND, KARMEN and Mini-BooNE, with and without CP violation, Physical Review D **75**, 091301 (2007)
1078. 2007 KOBAKHIDZE, A. and McKELLAR, B. H. J., — Particle interference as a test of Lorentz-violating electrodynamics, Physical Review D **76**, 093004 (2007) preprint [arXiv:0707.0343 [hep-ph]].
1079. 2007 Notes with Herb Fried on pair production by crossed lasers
1080. 2007 Reports on the joint ARC proposal
1081. 2007 Notes with Jerry Stephenson on possible analytic solutions of the relativistic H^\pm ion
1082. 2007 Notes with Jerry Stephenson on chirality in biological molecules
1083. 2007 Notes on consultancy with Portland House Research Group
1084. 2007 Notes on work with James Quach
1085. 2007 Notes on supervision of Masum Raab
1086. 2007 Notes on work on neutrino physics with Jerry Stephenson and Terry Goldman

Box 66

1087. 2008 **“(De)quantization of black hole charges”**
A. Kobakhidze and B. H. J. McKellar
Class. Quant. Grav. **25**, 195002 (2008)
[arXiv:0803.3680 [hep-th]]
1088. 2008 GOLDMAN, T., STEPHENSON, G. J., Jr. and McKELLAR, B.H.J. — All fundamental fermion masses are vile.
Contributed to XXIII International Conference on Neutrino Physics and Astrophysics:
Published in the Proceedings. Edited by Jenni Adams, Francis Halzen, Stephen Parke. Bristol, UK, IOP Publishing, 2008. (Journal of Physics Conference Series, Vol. 136 (2008) 042023)
Various forms of the preprint, with other notes
(published paper not received by UMA)
1089. 2008 H. Burkhardt, J. Lowe, G. J. Stephenson, Jr., T. Goldman and B. H. J. McKellar, — “Oscillations in the GSI electron capture experiment,”
preprint arXiv:0804.1099 [hep-ph], and earlier form
unpublished
1090. 2008 Participants at the ICSU General Assembly Maputo, October 2008

1091. 2008 Seminar at Aichi University, Japan, 24 September 2008, presentation with Japanese translation of the slides.
with B&W photocopies of PowerPoint slides of a physics seminar *non-Boltzmann model of kinetic equations*
1092. 2009 “**Non-Boltzmann behaviour in models of interacting neutrinos**”
B. H. J. McKellar, I. Okuniewicz and J. Quach
Phys. Rev. D **80**, 013011 (2009)
eprint [arXiv:0903.3139 [hep-ph]]
with notes and early drafts
1093. 2009 “**Solvable model kinetic equations with non-Boltzmann properties**”
B. H. J. McKellar, I. Okuniewicz and J. Quach
Int. J. Mod. Phys. A **24**, 1087 (2009)
1094. 2009 McKELLAR, B.H.J., GOLDMAN, T., STEPHENSON, G. J., Jr. and ALSING, P., — Epoch Dependent Dark Energy.
Invited talk at 5th International Workshop On The Dark Side Of The Universe (DSU09) 1-5 Jun 2009, Melbourne,
Published in AIP Conf.Proc. 1178 (2009) 118-124 e-
Print: arXiv:0908.0969 [hep-ph]
with notes on preparation of talk
(published paper not received by
UMA)
1095. 2009 GOLDMAN, T., STEPHENSON, G. J., Jr., ALSING, P, and McKELLAR, B.H.J. —A Possible Connection Between Massive Fermions and Dark Energy.
contributed to 7th International Heidelberg Conference On Dark Matter In Astro And Particle Physics (DARK 2009) 18-24 Jan 2009, Christchurch, New Zealand,
Published in the Proceedings, DARK 2009, (World Scientific Publishers, 2009, Singapore), pp 180-193, H. V. Klapdor-Kleingrothaus and I. V. Krivosheina, Editors,
e-Print: arXiv:0905.4308 [hep-ph]
(published paper not received by UMA)
1096. 2009 International Symposium on Cosmology and Particle Astrophysics, Melbourne November 2009. Note that I chaired a session and was on the International Advisory Committee
1097. 2009 Notes on work with Stephenson, Goldman and Alsing on Dark Energy
1098. 2009 Contract for editing of the book "In Memory of Ken Hines", with draft of my chapter and notes on the book
1099. 2009 Flinders Medal and Lecture, Australian Academy of Science, 6 May 2009
Presentation
1100. 2009 General Correspondence, 2009
1101. 2009 International Council of Science (ICSU), Regional Office for Asia and the Pacific (ROAP), 2009

1102. 2009 World Science Forum and meeting of ICSU Officers with the Directors and Chairs of the Regional Offices, November 2009

Box 67

1103. 2009 8th meeting of the ICSU Regional Committee for Asia and the Pacific, Shonan Center, Hayama Japan, November 2009
1104. 2009 3rd ICSU Regional Consultation, Penang, 13 and 14 October 2009
1105. 2009 ISCU Earth System Science Visioning
1106. 2010 McKELLAR, B.H.J., ALSING, P., GOLDMAN, T., and STEPHENSON, G. J., Jr. — Fermions, scalars and dark energy.
Invited paper at Achievements And New Directions In Subatomic Physics: Workshop In Honour Of Tony Thomas' 60th Birthday, 15-19 Feb 2010, Adelaide, Australia
Published in AIP Conf.Proc. 1261 (2010) 191-196
(published paper not received by UMA)
1107. 2010 McKELLAR, B.H.J., ALSING, P., GOLDMAN, T., and STEPHENSON, G. J., Jr. — Neutrinos, Scalars and Dark Energy
Invited paper at the 35th Vietnam National Conference on Theoretical Physics, Ho Chi Minh City, 2 August 2010
unpublished
1108. 2010 G. J. Stephenson, Jr., P. M. Alsing, T. Goldman and B. H. J. McKellar, "Interacting Majorana fermions and cosmic acceleration,"
paper contributed to the conference BEYOND 2010 Beyond the standard models of particle physics, cosmology and astrophysics 1-6 Feb 2010: Cape Town, South Africa
published in the proceedings
(published paper not received by UMA)
1109. 2010 Science Council of Asia meeting, Manilla, 14 June 2010
1110. 2010 McKELLAR, B H J — Use of case studies in training students and practitioners in responsible research practice
Contributed paper to the 2nd world conference on research integrity, Singapore 21-24 July 2010
with conference program
published in 2012, as
Use of case studies in training students and practitioners in responsible research practice
Chapter 35 in the book *Promoting Research Integrity in a Global Environment*, edited by Toy Meyer and Nicholas Steneck, World Scientific Publishing Company, Singapore, 2012

- 1111. 2010 MCKELLAR, B H J — Matter, anti-matter and our existence as star dust
Part of the workshop on Science in the Asia Pacific Region, Malaysian Academy
of Science, Kuala Lumpur, 27 April 2010
- 1112. 2010 McKELLAR, B.H.J. — Broken Symmetries and the existence of matter,
Seminar at National University of Singapore, 27 July 2010
- 1113. 2010 McKELLAR, B.H.J. — A Review of Estimates of the Neutron Electric Dipole
Moment
invited paper at International Workshop on Particles' EDM and Implications, June
14-16th 2010, Jai-Tong University, Shanghai 2010
- 1114. 2010 South East Asia visit, July-August 2010, for ICSU RCAP
- 1115. 2010 Review of the School of Chemistry and Physics, University of Adelaide, Au-
gust 2010
- 1116. 2010 Hines book accounts, 2010
- 1117. 2010 ICSU Health and wellbeing in a changing urban environment, RCAP science
planning group, 2010
- 1118. 2010 ICSU report on ecosystem change and human wellbeing, 2010
- 1119. 2010 correspondence 2010

Box 68

- 1120. 2010 AAS report on climate change
- 1121. 2010 Asia Link 2010 National Forum *Mapping our future in the Asian Century*
- 1122. 2010 ICSU 2010 — papers
- 1123. 2010 Review of the ICSU Regional Office for Asia and the Pacific
- 1124. 2010 Meeting of ICSU Officers, and Directors of Regional Offices and Chairs of
Regional Committees, October 2010
- 1125. 2010 10th meeting of the ICSU Regional Committee for Asia and the Pacific,
Canberra, November 2010
- 1126. 2010 MOU between ICSU and AASSREC, November 2010
- 1127. 2010 Australian Academy of Science ICSU Committee, meetings 2010

Box 69

Boxes 69 to 73 (files 1128 to 1171) relate to an unpublished book, "*The theory of Nuclear Matter*", planned and written by R Rajaraman and Bruce McKellar. Work continued over the period 1982 to 1994, but the book was never completed. The book will be referred to as TNM below.

The files for this section are organised by chapter, with some general files, and not chronologically

Many relevant files were lost at the ANU in 1993, after a visit there.

Chapter numbers changed as the book developed, the numbering here is the final form, and so some of the papers have a different chapter number to that of the file they are saved in.

- 1128. TNM Correspondence regarding TNM, 1982-1985
- 1129. TNM Notes 1983-1984
- 1130. TNM General notes, 1989-1990
- 1131. TNM Early form of introduction and preface, 1989
- 1132. TNM Early typescript of Chapter 1, Introduction
- 1133. TNM Revision of Chapter 1
- 1134. TNM Chapter 1 with manuscript notes, March 1990
- 1135. TNM Chapter 1 with working notes, Nov 1990
- 1136. TNM Chapter 1, and references, version of Nov 1991
- 1137. TNM Early forms of Chapter 2, The Goldstone Expansion
- 1138. TNM Chapter 2, March 1990
- 1139. TNM Chapter 2, June 1990

Box 70

- 1140. TNM Chapter 3, The Brueckner-Bether method, I Evaluation of the g Matrix. early version
- 1141. TNM Chapter 3, March 1990
- 1142. TNM Chapter 3, June 1991
- 1143. TNM Chapter 3, late version
- 1144. TNM Chapter 4 The Brueckner-Bether method, II — the hole line expansion First draft
- 1145. TNM Chapter 4, early versions

- 1146. TNM Chapter 4 June 1991
- 1147. TNM Chapter 4 1992
- 1148. TNM Chapter 5, The Variational Method
early version
- 1149. TNM Chapter 5, 1990 version
- 1150. TNM Chapter 6, Correlated basis perturbation theory,
1989 version with some notes
- 1151. TNM Chapter 6, Correlated basis perturbation theory,
Version of March 1991
all other notes relevant to this chapter have been lost.

Box 71

- 1152. TNM Chapter 7, Coupled cluster methods
Notes, 1989
- 1153. TNM Chapter 7, manuscript
- 1154. TNM Chapter 7, typescript, many corrections
- 1155. TNM Chapter 7, early typescript
- 1156. TNM Chapter 7, 1992
- 1157. TNM Chapter 8, Three Nucleon Forces
Notes
- 1158. TNM Chapter 8, early drafts
- 1159. TNM Chapter 8, early typescript
- 1160. TNM Chapter 8, typescript
- 1161. TNM Chapter 9, finite nuclei
manuscript, when called Chapter 7
- 1162. TNM Chapter 9, early typescript

Box 72

- 1163. TNM Chapter 9, notes on coupled cluster methods for finite nuclei
- 1164. TNM Chapter 9, old version, superseded
- 1165. TNM Chapter 9, references
- 1166. TNM Chapter 9, 1991
- 1167. TNM Chapter 9, 1992

- 1168. TNM Chapter 10, Dense Nuclear Matter
Early forms
- 1169. TNM Typescript of 1991
- 1170. TNM Figures, good copy
- 1171. TNM Figures, final collection
(Not received)
- 1172. Book Diagrams and Figures