

# 武谷三男博士の業績リスト (第4.1版)

矢野 忠<sup>1</sup>

## 1 はじめに

すでにこの「素粒子論研究」に第1版 [1], 第2版 [2], 第3版 [3], 第4版 [4] を発表した。

最近になって武谷博士のご遺族から三本龍生氏に博士が所蔵していた書籍と文書が保存のために移管・譲渡された。その資料のごく一部の目録の作成に関与したときに、1964年にイタリアで開催された科学哲学の会議の別刷を発見した。それを追加して第5版を編集した。

この第5版の収録データは (1) 著者名, (2) 論文名, (3) 雑誌名または書名, (4) 巻号または号, 発行年月, 頁, である。収録データについて注記をしておきたい。掲載順は発行順を原則としたが, 学術雑誌は発行年または発行年月しか分からないものはその発行年または発行年月の末尾に加えた。

また, たとえば Prog. Theor. Phys. (P. T. P. と略す) に掲載された論文がその P. T. P. Supplement (Suppl. と略す) に再掲されているのも重複して載せている。また Suppl. No. 50 に日本語からの英訳として出ているもので, 狭い意味では物理の研究論文には入らないかもしれないものや Suppl. No. 105 のインタビュー等も載せている。

なお, 武谷の著作目録については [5], [6] を参照されたい。

(2017.7.5)

## 2 List of the Scientific Papers of Mituo Taketani

1936年

1. M. Taketani  
A Collection of Land Mollusca from Taiwan (Formosa)  
Transactions of the National History Society of Formosa, Vol. 26, No. 154 (1936) 271-278.

1938年

2. H. Yukawa, S. Sakata and M. Taketani  
On the Interaction of Elementary Particles. III  
Proc. Phys.-Math. Soc. Japan, 3rd Series Vol. 20, No. 3 (Mar. 1938) 319-340.
3. H. Yukawa, S. Sakata, M. Kobayasi and M. Taketani  
On the Interaction of Elementary Particles. IV  
Proc. Phys.-Math. Soc. Japan, 3rd Series Vol. 20, No. 8 (Aug. 1938) 720-745.
4. S. Sakata and M. Taketani  
Versuch einer Theorie des  $\beta$ -Zerfalls  
Proc. Phys.-Math. Soc. Japan, 3rd Series, Vol. 20, No. 10 (Oct. 1938) 962-963.

1940年

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<sup>1</sup>e-mail: yanotad@earth.ocn.ne.jp

5. M. Taketani and S. Sakata  
On the Wave Equation of Meson  
Proc. Phys.-Math. Soc. Japan, 3rd Series, Vol. 22, No. 8 (Aug. 1940) 757-770.
6. S. Sakata and M. Taketani  
Note on Casimir's Method of the Spin Summation in the Case of the Meson  
Sci. Pap. I. P. C. R., Vol. 38, No. 984 (Sep. 1940) 1-11.

## 1941 年

7. M. Taketani and S. Sakata  
On the Wave Equation of Meson, Errata  
Proc. Phys.-Math. Soc. Japan, 3rd Series, Vol. 23, No. 1 (Jan. 1941) 160.
8. H. Akabori, K. Husimi, I. Itoh, S. Kikuchi, M. Kobayashi, Y. Ko, T. Momota, H. Nagaoka, M. Okazaki, I. Suehiro, E. Takeda, M. Taketani, T. Utiyama, T. Wakatuki, Y. Watase, S. Yamaguchi, I. Yukawa  
Separation of Isotopes by Thermal Diffusion, I. Preliminary Test of the Separation Column  
Proc. Phys.-Math. Soc. Japan, 3rd Series, Vol. 23, (1941) 590-598.
9. H. Akabori, K. Husimi, S. Kikuchi, M. Kobayashi, Y. Ko, T. Momota, H. Nagaoka, M. Okazaki, I. Suehiro, E. Takeda, M. Taketani, T. Utiyama, T. Wakatuki, Y. Watase, S. Yamaguchi, I. Yukawa  
Separation of Isotopes by Thermal Diffusion, II. Separation of Chlorine Isotopes  
Proc. Phys.-Math. Soc. Japan, 3rd Series, Vol. 23, (1941) 599-604.

## 1947 年

10. M. Taketani  
Conflict between Matter and Field  
*- An Analysis of the Difficulties of the Theory of Elementary Particles -*  
Prog. Theor. Phys., Vol. 2, No. 4 (Nov.-Dec. 1947) 187-197.

## 1948 年

11. M. Taketani  
On the Neutral Meson  
Prog. Theor. Phys., Vol. 3, No. 4 (Oct.-Dec. 1948) 349-355.

## 1949 年

12. M. Taketani, S. Nakamura, K. Ono and M. Sasaki  
On the Two-Meson Theory  
Phys. Rev., 2nd Series, Vol. 76, No. 1 (Jul. 1949) 60-63.
13. M. Taketani, S. Nakamura and M. Sasaki  
On the  $\mu$ -Meson Capture  
Phys. Rev., 2nd Series, Vol. 76, No. 6 (Sep. 1949) 852.
14. M. Taketani, M. Sasaki and S. Nakamura  
On the mu-Meson Capture  
Prog. Theor. Phys., Vol. 4, No. 4 (Oct.-Dec. 1949) 552-556.

## 1950 年

15. M. Taketani, S. Machida and T. Tamura  
On the Electromagnetic Properties of Nucleons  
Prog. Theor. Phys., Vol. 5, No. 1 (Jan.- Feb. 1950) 150-152.
16. M. Taketani, S. Nakamura and M. Sasaki  
On the Method of the Theory of Elementary Particles  
Prog. Theor. Phys., Vol. 5, No. 4 (Jul.-Aug. 1950) 730-734.
17. S. Nakamura, H. Fukuda, K. Ono, M. Sasaki and M. Taketani  
Analysis on the Two Meson Theory  
Prog. Theor. Phys., Vol. 5, No. 4 (Jul.-Aug. 1950) 740-747.

## 1951 年

18. M. Taketani, S. Nakamura, M. Umezawa, K. Ono and Y. Yamaguchi  
*ft*-Values of  $\beta$ -Decay and the Shell Models  
Phys. Rev., Vol. 82, No. 3 (Mar. 1951) 441-442.
19. M. Taketani, S. Nakamura, K. Ono and M. Umezawa  
On the Matrix Elements of the Beta Decay  
Prog. Theor. Phys., Vol. 6, No. 3 (May-Jun. 1951) 286-294.
20. M. Umezawa, S. Nakamura, Y. Yamaguchi and M. Taketani  
Nuclear Shell Model and the  $\beta$ -Decay Schemes, I  
Prog. Theor. Phys., Vol. 6, No. 3 (May-Jun. 1951) 408-425.
21. M. Taketani and S. Machida  
On the Production of Negative Protons  
Prog. Theor. Phys., Vol. 6, No. 4 (Jul.-Aug. 1951) 559-571.
22. M. Taketani, S. Nakamura and M. Sasaki  
On the Method of the Theory of Nuclear Forces  
Prog. Theor. Phys., Vol. 6, No. 4 (Jul.-Aug. 1951) 581-586.
23. M. Taketani, S. Onuma and S. Koide  
On the Nuclear Forces and the Ground State of Deuteron  
Prog. Theor. Phys., Vol. 6, No. 4 (Jul.-Aug. 1951) 635-637.
24. M. Taketani, S. Machida and S. Onuma  
Meson Theory of Nuclear Forces  
Prog. Theor. Phys., Vol. 6, No. 4 (Jul.-Aug. 1951) 638-639.
25. S. Machida, S. Onuma and M. Taketani  
On the Fourth-Order Nuclear Potential  
Prog. Theor. Phys., Vol. 6, No. 5 (Sep.-Oct. 1951) 904-905.

## 1952 年

26. M. Taketani, S. Machida and S. Onuma  
The Meson Theory of Nuclear Forces, I  
- *The Deuteron Ground State and Low Energy Neutron-Proton Scattering* -  
Prog. Theor. Phys., Vol. 7, No. 1 (Jan. 1952) 45-56.

## 1953 年

27. S. Fujii, J. Iwadare, S. Otsuki, M. Taketani, S. Tani and W. Watari  
Note on the Meson Theory of Nuclear Force  
Prog. Theor. Phys., Vol. 10, No. 4 (Oct. 1953) 478-480.
28. M. Taketani  
Studies on Nuclear Forces in Japan  
*Proceedings of the International Conference of Theoretical Physics*, (Sep. 1953),  
Kyoto and Tokyo, 241-244.

## 1954 年

29. S. Fujii, J. Iwadare, S. Otsuki, M. Taketani, S. Tani and W. Watari  
Meson Theory of Nuclear Forces, II - *High Energy Nucleon-Nucleon Scattering* -  
Prog. Theor. Phys., Vol. 11, No. 1 (Jan. 1954) 11-19.
30. N. Fukuda, K. Sawada and M. Taketani  
On the Construction of Potential in Field Theory  
Prog. Theor. Phys., Vol. 12, No. 2 (Aug. 1954) 156-166.

## 1955 年

31. H. Takebe, S. Nakamura and M. Taketani  
 $\beta$ -Ray Spectrum of RaE  
Prog. Theor. Phys., Vol. 14, No. 4 (Oct. 1955) 317-336.
32. H. Yukawa, S. Sakata and M. Taketani  
On the Interaction of Elementary Particles. III  
(*Reprinted from Proc. Phys.-Math. Soc. Japan* 20 (1938), 319-340)  
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Prog. Theor. Phys. Suppl., No. 1 (1955) 24-45.
33. H. Yukawa, S. Sakata, M. Kobayasi and M. Taketani  
On the Interaction of Elementary Particles. IV  
(*Reprinted from Proc. Phys.-Math. Soc. Japan* 20 (1938), 720-745)  
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Prog. Theor. Phys. Suppl., No. 1 (1955) 46-71.
34. M. Taketani and S. Sakata  
On the Wave Equation of Meson  
(*Reprinted from Proc. Phys.-Math. Soc. Japan* 22 (1940), 757-770)  
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Prog. Theor. Phys. Suppl., No. 1 (1955) 84-97.
35. S. Sakata and M. Taketani  
Note on Casimir's Method of the Spin Summation in the Case of the Meson  
(*Reprinted from Sci. Pap. I. P. C. R.* 38 (1940), 1-11)  
Collected Papers on Meson Theory I (*Formalism and Models*)  
Prog. Theor. Phys. Suppl., No. 1 (1955) 98-108.

36. M. Taketani  
 On the Neutral Meson  
 (*Reprinted from* Prog. Theor. Phys. 3 (1948), 349-355)  
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37. M. Taketani, M. Sasaki and S. Nakamura  
 On the mu-Meson Capture  
 (*Reprinted from* Prog. Theor. Phys. 4 (1949), 552-556)  
 Collected Papers on Meson Theory I (*Formalism and Models*)  
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38. M. Taketani, S. Nakamura, K. Ono and M. Sasaki  
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 (*Reprinted from* Phys. Rev. 76 (1949), 60-63.)  
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39. S. Nakamura, H. Fukuda, K. Ono, S. Sasaki and M. Taketani  
 Analysis on the Two Meson Theory  
 (*Reprinted from* Prog. Theor. Phys. 5 (1950), 740-747)  
 Collected Papers on Meson Theory I (*Formalism and Models*)  
 Prog. Theor. Phys. Suppl., No. 1 (1955) 244-251.

## 1956年

40. M. Taketani, T. Hatanaka and S. Obi  
 Populations and Evolution of Stars  
 Prog. Theor. Phys. Vol. 15, No. 2 (Feb. 1956) 89-94.
41. K. Inoue, S. Machida, M. Taketani and T. Toyoda  
 Pion Theory of Nuclear Forces  
 Prog. Theor. Phys., Vol. 15, No. 2 (Feb. 1956) 122-136.
42. M. Taketani  
 Introduction. Nuclear Forces and Meson Theory  
 Meson Theory III. Nuclear Forces  
 Prog. Theor. Phys. Suppl., No. 3 (1956) 1-12.
43. M. Taketani, S. Nakamura and M. Sasaki  
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 (*reprinted from* Prog. Theor. Phys. 6 (1951), 581-586)  
 Meson Theory III. Nuclear Forces  
 Prog. Theor. Phys. Suppl., No. 3 (1956) 169-174.

## 1959年

44. S. Nakamura, T. Ohmura and M. Taketani  
 A Note on the Nuclear Reactions in Stars  
 Prog. Theor. Phys., Vol. 21, No. 1 (Jan. 1959) 18-28.

45. M. Taketani, Y. Katayama, P. L. Ferreira, G. W. Bund and P. R. de Paula e Silva  
Meson Decays and Structure of Muon  
Prog. Theor. Phys., Vol. 21, No. 6 (Jun. 1959) 799-817.
46. Y. Katayama, M. Taketani and J. L. Ferreira  
On the Origin of the Electron Mass  
Prog. Theor. Phys., Vol. 21, No. 6 (Jun. 1959) 818-826.

## 1960年

47. Y. Katayama, M. Taketani, S. Ragusa and D. R. de Oliveira  
On the Electromagnetic Structure of Nucleons and Their Mass Difference  
Prog. Theor. Phys., Vol. 23, No. 2 (Feb. 1960) 328-352.
48. M. Taketani and Y. Katayama  
On a Unified Description of Elementary Particles  
Prog. Theor. Phys., Vol. 24, No. 3 (Sep. 1960) 661-678.
49. M. Taketani and S. Machida  
On the Method of the Theory of Nuclear Forces  
Prog. Theor. Phys., Vol. 24, No. 6 (Dec. 1960) 1317-1324.

## 1961年

50. S. Otuki, M. Taketani, R. Tamagaki and W. Watari  
Pion Theory of Nuclear Forces and Low Energy  $P$ -Wave Phase Shifts  
Prog. Theor. Phys., Vol. 25, No. 3 (Mar. 1961) 427-435.
51. M. Taketani  
Chapter 2. A New Stage of Elementary Particle Theory  
Part I. Introduction  
Structure of Elementary Particles  
Prog. Theor. Phys. Suppl., No. 19 (1961) 10-22 (pub. date: Mar. 1962).
52. Y. Katayama and M. Taketani  
Chapter 4. On the Structure of Lepton  
Part III. Further Outlook for the Theory of Elementary Particles  
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Prog. Theor. Phys. Suppl., No. 19 (1961) 178-188 (pub. date: Mar. 1962).
53. M. Taketani and Y. Katayama  
On the Neutrino Unified Model for Elementary Particles  
Part III. Further Outlook for the Theory of Elementary Particles  
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Prog. Theor. Phys. Suppl., No. 19 (1961) 189-202 (pub. date: Mar. 1962).

## 1962年

54. Y. Hama, J. Osada and M. Taketani  
Ghost Scatterings  
Nuovo Cim., Vol. 25, No. 5 (Sep. 1962) 1054-1060.

55. M. Taketani and M. Sawamura  
On the Existence of a Boson  $\mu^0$   
Prog. Theor. Phys., Vol. 27, No. 4 (Oct. 1962) 1287-1289.
56. M. Taketani and T. Tati  
 $\Delta S/\Delta Q = -1$  Decay and "Induced Transition"  
Prog. Theor. Phys., Vol. 28, No. 4 (Oct. 1962) 757-759.
57. M. Taketani, Y. Fujimoto and K. Yokoi  
*Proceedings of the Fifth Interamerican Seminar on Cosmic Rays*,  
La Paz, Bolivia, Vol. II (1962), LIV.

## 1963年

58. M. Taketani and T. Tati  
Neutrino Unified Model Based on Two Kinds of Neutrinos  
Prog. Theor. Phys., Vol. 30, No. 1 (Jul. 1963) 134-136.

## 1964年

59. K. Aizu, Y. Fujimoto, H. Hasegawa, S. Hayakawa and M. Taketani  
A Model of Star-like Objects  
Prog. Theor. Phys., Vol. 32, No. 6 (Dec. 1964) 971-973.
60. K. Aizu, Y. Fujimoto, H. Hasegawa, K. Kawabata and M. Taketani  
A New Diagram Representing the Evolution of Galaxies  
Prog. Theor. Phys., Vol. 32, No. 6 (Dec. 1964) 973-975.
61. Y. Fujimoto, H. Hasegawa and M. Taketani  
Extra-Galactic Cosmic Rays  
Prog. Theor. Phys., Vol. 32, No. 6 (Dec. 1964) 975-977.
62. M. Taketani  
Preface  
Origin of Cosmic Rays  
Prog. Theor. Phys. Suppl., No. 30 (1964) 1 (pub. date: Apr. 1965).
63. K. Aizu, Y. Fujimoto, H. Hasegawa and M. Taketani  
Introduction and General Review  
Origin of Cosmic Rays  
Prog. Theor. Phys. Suppl., No. 30 (1964) 2-31 (pub. date: Apr. 1965).
64. Y. Fujimoto, H. Hasegawa and M. Taketani  
Part 1. Cosmic Rays in Galactic and Extragalactic Space  
Origin of Cosmic Rays  
Prog. Theor. Phys. Suppl., No. 30 (1964) 32-85 (pub. date: Apr. 1965).
65. M. Taketani, Y. Fujimoto and K. Yokoi  
Appendices. Evolution of Galaxies and Its Relation to Origin of Cosmic Rays  
(reprinted from *Proc. Fifth Interamerican Seminars on Cosmic Rays*,  
La Paz (Bolivia), 1962, Vol. II)

## Origin of Cosmic Rays

Prog. Theor. Phys. Suppl., No. 30 (1964) 244-249 (pub. date: Apr. 1965).

## 66. M. Taketani

Preface

Structure and Evolution of Galaxies

Prog. Theor. Phys. Suppl., No. 31 (1964) 1 (pub. date: Mar. 1965).

## 67. T. Hatanaka, S. Hayakawa, K. Ishida and M. Taketani

Part I. Evolution of Galaxies - *Development of Its Research in Japan* -

Structure and Evolution of Galaxies

Prog. Theor. Phys. Suppl., No. 31 (1964) 2-34 (pub. date: Mar. 1965).

## 68. K. Aizu, Y. Fujimoto, H. Hasegawa, K. Kawabata and M. Taketani

Part II. Radio Galaxies

Structure and Evolution of Galaxies

Prog. Theor. Phys. Suppl., No. 31 (1964) 35-76 (pub. date: Mar. 1965).

## 69. M. Taketani, T. Hatanaka and S. Obi

Part VI. Appendix. Populations and Evolution of Stars

Structure and Evolution of Galaxies

(reprinted from Prog. Theor. Phys., Vol. 15 (1956) 89-94)

Structure and Evolution of Galaxies

Prog. Theor. Phys. Suppl., No. 31 (1964) 156-161 (pub. date: Mar. 1965).

## 70. M. Taketani

Relationship between force and motion in Galileo's work

Tratto da Atti del Simposio su << Galileo Galilei nella storia e nella filosofia della scienza >> (Firenze-Pisa, 14-16 Settembre 1964).

## 1965 年

## 71. K. Aizu, Y. Fujimoto, H. Hasegawa and M. Taketani

An Evolutional Track of Galaxies in  $L - (L/V)$  Diagram

Prog. Theor. Phys., Vol. 33, No. 5 (May 1965) 996-997.

## 72. Y. Katayama and M. Taketani

Neutrino Unified Model for Elementary Particles

Prog. Theor. Phys., Vol. 33, No. 6 (Jun. 1965) 1141-1143.

## 73. M. Taketani and Y. Fujimoto

High Energy Nuclear Interactions and Structure of Elementary Particles

Commemoration Issue for the Thirtieth Anniversary of the Meson Theory by Dr. H. Yukawa

Prog. Theor. Phys. Suppl., Extra No. (Sep. 1965) 651-660.

## 74. M. Taketani

On the Meson Theory of Nuclear Forces

*Proceedings of the International Conference on Elementary Particles,*

Kyoto (1965) 170-181 (pub. date: 1966).



## 1966 年

75. M. Taketani, S. Nakamura and Y. Fujimoto  
On the Fundamental Concepts in the Theory of Elementary Particles. I  
- *History of the Tomonaga Theory of Fields* -  
Dedicated to Professor Sin-itiro Tomonaga on the Occasion of his Sixtieth Birthday  
Prog. Theor. Phys. Suppl., No. 37 & 38 (Dec. 1966) 433-439.
76. M. Taketani, S. Nakamura, Y. Fujimoto, M. Nagasaki, S. Furuichi and S. Sato  
On the Fundamental Concepts in the Theory of Elementary Particles. II  
- *Present Problems* -  
Dedicated to Professor Sin-itiro Tomonaga on the Occasion of his Sixtieth Birthday  
Prog. Theor. Phys. Suppl., No. 37 & 38 (Dec. 1966) 440-450.

## 1967 年

77. M. Nagasaki, T. Hirasawa and M. Taketani  
On the Analysis of Nucleon-Nucleon Scattering with Large Momentum Transfers  
Prog. Theor. Phys. Vol. 38, No. 2 (Aug. 1967) 514-516.
78. M. Taketani  
Introduction - *Our History and the Underlying Philosophy* -  
Part I. *Nuclear Force in Dynamical Region*  
Nuclear Forces  
Prog. Theor. Phys. Suppl., No. 39 (Aug. 1967) 1-22.

## 1969 年

79. T. Hirasawa, K. Aizu and M. Taketani  
Formation of Galaxies from Hydrogen Gas  
Prog. Theor. Phys., Vol. 41, No. 3 (Mar. 1969) 835-838.

## 1970 年

80. K. Aizu and M. Taketani  
Radio Evolution of Pulsars  
Prog. Theor. Phys., Vol. 44, No. 2 (Aug. 1970) 363-374.
81. M. Nagasaki and M. Taketani  
Level Structure of Hadrons  
Prog. Theor. Phys., Vol. 44, No. 4 (Oct. 1970) 1112-1114.

## 1971 年

82. K. Aizu, S. Hayakawa, H. Sato and M. Taketani  
Chapter I. General Review and Summary - *Astrophysical Cosmology* -  
Evolution of the Universe and Formulation of Galaxies  
Prog. Theor. Phys. Suppl., No. 49 (1971) 1-10 (pub. date: Feb. 1972).
83. K. Aizu, H. Tabara and M. Taketani  
Chapter VII. Quasistellar Objects

- Evolution of the Universe and Formulation of Galaxies  
 Prog. Theor. Phys. Suppl., No. 49 (1971) 228-247 (pub. date: Feb. 1972).
84. M. Taketani  
 Methodological Approaches in the Development of the Meson Theory  
 of Yukawa in Japan  
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 Philosophical and Methodological Problems in Physics  
 Prog. Theor. Phys. Suppl., No. 50 (1971) 12-24 (pub. date: Mar. 1972).
85. M. Taketani  
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 Prog. Theor. Phys. Suppl., No. 50 (1971) 27-36 (pub. date: Mar. 1972).
86. M. Taketani  
 A New Stage in the Development of Modern Physics  
 - *On Research Contribution of Nobelians, the Joliot-Curie's* -  
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 Philosophical and Methodological Problems in Physics  
 Prog. Theor. Phys. Suppl., No. 50 (1971) 37-48 (pub. date: Mar. 1972).
87. M. Taketani  
 On Research Contribution of Niels Bohr  
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88. M. Taketani  
 On Formation of the Newton Mechanics  
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 Philosophical and Methodological Problems in Physics  
 Prog. Theor. Phys. Suppl., No. 50 (1971) 53-64 (pub. date: Mar. 1972).
89. M. Taketani  
 Observation Problem of Quantum Mechanics  
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91. M. Taketani  
 Appendix. (2) Substance and Essence

- Part I  
 Philosophical and Methodological Problems in Physics  
 Prog. Theor. Phys. Suppl., 50 (1971) 77-80 (pub. date: Mar. 1972).
92. M. Taketani  
 Conflict between Matter and Field  
 - *An Analysis of the Difficulties of the Theory of Elementary Particles* -  
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 Prog. Theor. Phys. Suppl., No. 50 (1971) 89-97 (pub. date: Mar. 1972).
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 New Development of Theory of Elementary Particles  
 - *Theory of Shoichi Sakata and Related Problems* -  
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 Prog. Theor. Phys. Suppl., No. 50 (1971) 127-139 (pub. date: Mar. 1972).
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95. M. Taketani and S. Nakamura  
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 - *From THO Theory to Star-like Problem* -  
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 Prog. Theor. Phys. Suppl., No. 50 (1971) 220-230 (pub. date: Mar. 1972).

99. M. Taketani and S. Nakamura  
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1973 年

100. M. Nagasaki and M. Taketani  
 Excitation of Hadronic Matter and  $H$ -Quantum  
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