

## APPENDIX VI

### LIST OF PUBLICATIONS FOR THE PERIOD 1948-55

(Excluding Biophysics Division)

1948

1. B. M. BANERJEE: On the Variation of A. C. Permeability of Transformer Sheet Steel with D. C. Magnetisation. *India J. Phys.* 22, 265 (1948).
2. B. M. BANERJEE: Linear Time Base Using OA4G Tube. *Rev. Sci. Instrum.* 19, 84 (1948).
3. B. M. BANERJEE & S. K. SEN: Concerning the Use of a 920 Double Photocell in Current Amplifier and Stabiliser. *Indian J. Phys.* 22, 43 (1948).
4. P. C. BHATTACHARYYA: Experiments on the Separation of Low Energy Mesotrons from Electrons. *Phys. Rev.* 74, 38 (1948).
5. S. BISWAS & A. MUKHERJEE: Nuclear Energetics and  $\beta$ -activity (Part III). *Indian J. Phys.* 22, 80 (1948).
6. S. BISWAS & A. P. PATRO: Application of Gamow's Theory of  $\alpha$ -emission to  $(4n+1)$  Radioactive Series. *Indian J. Phys.* 22, 539 (1948).
7. S. DAS: Delayed Neutrons. *Nature.* 162, 853 (1948).
8. S. DAS & A. MUKHERJEE: Coincidence Experiments on  $^{60}\text{Co}$ . *Indian J. Phys.* 22, 311 (1948).
9. N. N. DAS GUPTA & A. K. CHAUDHURY: Study of RaE  $\beta$ -spectrum from Absorption Measurements. *Indian J. Phys.* 22, 27 (1948).
10. B. C. PURKAYASTHA: Fission of Atomic Nuclei (Part I). *Nucleonics.* 3, Nov. 2 (1948).
11. B. C. PURKAYASTHA: Complementary Series and Conjugate Fragments in U-Fission. *Sci. & Cult.* 13, 255 (1948).
12. B. C. PURKAYASTHA: Fission of Atomic Nuclei (Part II). *Nucleonics.* 3, Dec. 2, (1948).
13. A. K. SAHA, S. GHOSHAL & S. DAS: Nuclear Energetics and  $\beta$ -activity (Part II). *Trans. Nat. Inst. Sci. India.* 3, 1 (1948).

1949

1. S. BISWAS: On the Geiger-Nuttal Relationship. *Indian J. Phys.* 23, 51 (1949).
2. S. BISWAS & A. P. PATRO: Fission Cross-Section of  $^{235}\text{U}$ . *Indian J. Phys.* 23, 97 (1949).
3. U. C. GUHA: Analysis of Virtual Height-Frequency Records. *J. Geophys. Res.* 54, 355 (1949).

4. B. D. NAG, S. K. SEN & S. CHATTERJEE: A Short-Lived Metastable State in Titanium (46). *Nature*. 164, 1001 (1949).

### 1950

1. B. M. BANERJEE: Study of Switching Action of a Multi-Vibrator Circuit (Part I). *Indian J. Phys.* 24, 361 (1950).
2. B. M. BANERJEE & R. ROY: Time-base Circuit for a High-Precision Ionospheric Sounding Equipment. *Indian J. Phys.* 24, 411 (1950).
3. S. CHATTERJEE & S. DHAR: Scintillation Type  $\alpha$ -Counter and its Application in U- and Th-Estimation of Minerals. *Indian J. Phys.* 24, 346 (1950).
4. R. K. DAS: On the Automatic Pressure-Stabilising Device for a Diaphragm-Type Wilson Chamber. *Indian J. Phys.* 24, 465 (1950).
5. R. K. DAS: A Triggering Device for Arc Discharge Lamps in Cloud Chamber Photography. *Indian J. Phys.* 24, 497 (1950).
6. R. K. DAS: On  $\alpha$ -disintegration (Part I). *Indian J. Phys.* 24, 523 (1950).
7. R. K. DAS: On the Erratic Performance of Gas Filled Discharge lamps: a Device to Counteract its Effects in Cloud Chamber Photograph. *Sci. & Cult.* 16, 167 (1950).
8. S. DUTTA MAZUMDAR & D. C. CHOWDHURY: Wave-Function for the Ground State of Lithium. *Z. Phys.* 128, 455 (1950).
9. B. D. NAG, S. K. SEN & S. CHATTERJEE: Effect of Time-Lag in the Measurement of Delayed Coincidences with G. M. Counters. *Indian J. Phys.* 24, 261 (1950).
10. B. D. NAG, S. K. SEN & S. CHATTERJEE: On the Disintegration of Scandium (46) and the Method of Delayed Coincidence for the Study of Short-lived Metastable States in Isomeric Nuclei. *Indian J. Phys.* 24, 479 (1950).

### 1951

1. B. M. BANERJEE: Study of Switching Action of a Multivibrator Circuit (Part II). *Indian J. Phys.* 25, 329 (1951).
2. R. K. DAS: On an Automatic Wilson Cloud Chamber in a Magnetic Field and Some Associated Techniques. *Indian J. Phys.* 25, 481 (1951).
3. S. DAS & S. K. SEN: On the Angular Correlation between Successive  $\gamma$ -rays in  $\text{Co}^{60}$ — $\text{Ni}^{60}$  Transitions. *Indian J. Phys.* 25, 451 (1951).
4. U. C. GUHA: Reversal of Polarisation of Microwaves from Sun Spots. *Indian J. Phys.* 25, 9 (1951).
5. M. N. SAHA: Occurrence of Stripped Nuclei of Neon in Primary Cosmic Rays. *Nature*, 167, 476 (1951).
6. M. N. SAHA, B. K. BANERJEE & U. C. GUHA: Vertical Propagation of Electromagnetic Waves in the Ionosphere. *Proc. Nat. Inst. Sci. India.* 17, 205 (1951).

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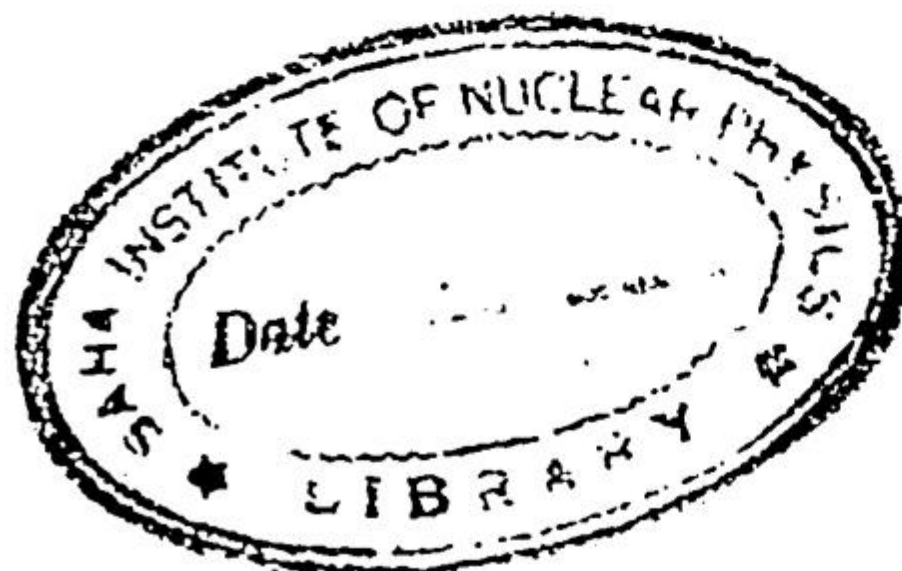
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2. B. M. BANERJEE & R. ROY: A High Precision Ionospheric Sounding Equipment. *Sci. & Cult.*, 17, 305 (1952).
3. B. K. BHATTACHARYYA: Admittance and Transfer Function of a Multi-mesh Resistance Capacitance Filter Network. *Indian J. Phys.* 26, 563 (1952).
4. SUNIL KUMAR SEN & BIMAL KRISHNA BHATTACHARYYA: A Study on the Triggering of a Plate Coupled Multivibrator by Negative Pulses. *Indian J. Phys.* 26, 597 (1952).

### 1953

1. M. K. BANERJEE & A. K. SAHA: Investigations on a Short Magnetic Lens Spectrometer. *Proc. Phys. Soc. Lond. B* 66, 937 (1953).
2. B. K. BHATTACHARYYA: Effect of Steepness of Pulse Fronts on the Response of Differentiating and Integrating Circuits. *Indian J. Phys.* 27, 269 (1953).
3. B. K. BHATTACHARYYA: On the Faithful Reproduction of the Flat Top of a Pulse in a High Fidelity Pulse Amplifier (Part I). *Indian J. Phys.* 27, 39 (1953).
4. B. K. BHATTACHARYYA: On the Faithful Reproduction of the Flat Top of a Pulse in a High Fidelity Pulse Amplifier (Part II). *Indian J. Phys.* 27, 565 (1953).
5. SANTIMAY CHATTERJEE & AJIT KUMAR SAHA:  $\gamma$ - $\gamma$  Angular Correlation Measurements. *Phys. Rev.* 91, 200 (1953).
6. SANTIMAY CHATTERJEE & AJIT KUMAR SAHA: Eine Analyse des Winkel Korrelations experimentes mit einem Bericht derartiger Messungen am  $Ni^{60}$ . *Z. Phys.* 135, 141 (1953).
7. SOBHANA DHAR & SUNIL KUMAR SEN: On the Use of the Scintillation Counter as a Gamma ray Spectrometer, using Stilbene Crystal. *Indian J. Phys.* 27, 483 (1953).
8. S. K. MUKHERJEE & P. K. DUTT: On the Large-Load Characteristics of Vapour Pumps. *Indian J. Phys.* 27, 137 (1953).
9. R. ROY & J. K. D. VERMA: Irregularities in the Ionosphere. *J. Geophys. A*, 224, 472 (1954).

### 1954

1. B. M. BANERJEE: A Reactance Tube Controlled Oscillator of Unusually Wide Frequency Sweep. *Indian J. Phys.* 28, 67 (1954).
2. M. K. BANERJEE & A. K. SAHA: Shape Factor for Beta-decay. *Proc. Roy. Soc. A*, 224, 472 (1954).
3. M. K. BANERJEE, T. P. DAS & A. K. SAHA: Effect of Chemical Shift and J-coupling on Nuclear Resonance Line-shape. *Proc. Roy. Soc. A*, 226 490 (1954).



4. B. K. BHATTACHARYYA: Effect of Steepness of Rise and Fall of the Input Pulse on the Response of Pulse Amplifiers. (Part I). *Indian J. Phys.* 28, 31 (1954).
5. B. K. BHATTACHARYYA: Effect of Steepness of Rise and Fall of Input Pulse on Response of Pulse Amplifiers (Part II). *Indian J. Phys.* 28, 371 (1954).
6. SANTIMAY CHATTERJEE, A. P. PATRO, BINAYAK BASU, R. L. BHATTACHARYYA and FAZLE HOSAIN: Presence of Radioactive Dusts over Calcutta. *Sci. & Cult.* 19, 570 (1954).
7. T. P. DAS & D. K. ROY: Preliminary Results with Purcell's Bridge-technique of Nuclear Resonance. *Sci. & Cult.* 19, 464 (1954).
8. T. P. DAS & A. K. SAHA: Mathematical Analysis of the Hahn Spin-Echo Experiment. *Phys. Rev.* 93, 749 (1954).
9. P. K. DUTT: A Demountable All Metal Hot-cathode Vacuum Ionization Gauge. *Indian J. Phys.* 28, 1 (1954).
10. R. K. VERMA, G. N. SARKAR and S. CHATTERJEE: An Automatic Verneuil Furnace *J. Sci. Industr. Res.*, 13A, 516 (1954).

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1. T. P. DAS & D. K. ROY: Spin Echo with Four Pulses—an Extension to  $n$  Pulses. *Phys. Rev.* (In Press).
2. T. P. DAS & D. K. ROY: Spin Echo in Non-axially Symmetric Crystals. *Proc. Roy. Soc., A* (In Press).
3. T. P. DAS & A. K. SAHA: Spin-Echo with Quadrupole Interaction in Crystals. *Phys. Rev.* (In Press).
4. T. P. DAS & A. K. SAHA: Monograph on Nuclear Induction (In Press).
5. T. P. DAS, A. K. SAHA & D. K. ROY: Quantum Mechanical Analysis of Spin Echo Phenomena. *Proc. Roy. Soc., A.*, 227, 407 (1955).
6. S. CHATTERJEE: Radioactive Ashes over Calcutta and a Method of Dating a Nuclear Explosion (*Atomic Scient. Jour.* In Press).
7. SANTIMAY CHATTERJEE, A. P. PATRO, BINAYAK BASU, R. L. BHATTACHARYYA and FAZLE HOSAIN: Measurements on Radioactive Dusts over Calcutta. *Sci. & Cult.* 20, 399 (1955).
8. SANTIMAY CHATTERJEE, A. P. PATRO, BINAYAK BASU, R. L. BHATTACHARYYA and MANOJ KANTI BANERJEE: Dating a Nuclear Explosion. *Sci. & Cult.* 20, 403 (1955).
9. S. N. GHOSHAL & A. N. SAXENA: Beta Energetics and Nuclear Shell Structure. *Indian J. Phys.* (In Press).

### APPENDIX 3

#### LIST OF PAPERS PUBLISHED FROM THE INSTITUTE

1955

1. Chatterjee, K. R., Das Gupta, N. N. and De, M. L.: Observations on the Morphology of *Mycobacterium Leprae*. (*Int. J. Leprosy*, **23**, 385, 1955).
2. Chatterjee, S.: Radioactive Ashes over Calcutta and a Method of Dating a Nuclear Explosion. (*Atomic Sci. Jour.*, **4**, 273, 1955).
3. Chatterjee, S., Patro, A. P., Basu, B., Bhattacharyya, R. L. and Hosain, F.: Measurements on Radioactive Dusts over Calcutta. (*Science and Culture*, **20**, 399, 1955).
4. Chatterjee, S., Patro, A. P., Basu, B., Bhattacharyya, R. L. and Banerjee, M. K.: Dating of Nuclear Explosion. (*Science and Culture*, **20**, 403, 1955).
5. Das, T. P. and Ghosh-Ray, S. K.: Spin-Echo Modulation due to Magnetic Dipole Interaction Between a Closely Interacting-Pair of Nuclei in Crystals. (*Ind. J. Phys.*, **23**, 272, 1955).
6. Das, T. P. and Roy, D. K.: Spin-echoes in the presence of Non-axially Symmetric Quadrupole Interaction in Crystals. (*Proc. Roy. Soc. A.*, **231**, 244, 1955).
7. Das, T. P. and Roy, D. K.: Spin Echoes with Four Pulses—An Extension to  $n$  Pulses. (*Phys. Rev.*, **98**, 525, 1955).
8. Das, T. P. and Saha, A. K.: Electric Quadrupole Interaction and Spin Echoes in Crystals. (*Phys. Rev.*, **98**, 516, 1955).
9. Das, T. P., Saha, A. K. and Roy, D. K.: Quantum-Mechanical Analysis of Spin-Echo Phenomena. (*Proc. Roy. Soc., A.*, **227**, 407, 1955).
10. Dhar, S.: On the Energy Response and Resolution of a Scintillation Counter. (*Ind. J. Phys.*, **23**, 329, 1955).
11. Ghoshal, S. N.: Research Reactors. (*Science and Culture*, **21**, 229, 1955).
12. Ghoshal, S. N. and Saxena, A. N.: Beta Energetics and Nuclear Shell Structure. (*Ind. J. Phys.*, **29**, 81, 1955).
13. Karmahapatro, S. B.: On two Directional Focussing Magnetic Analysers. (*Ind. J. Phys.*, **29**, 393, 1955).
14. Karmahapatro, S. B.: A Low Resolution Mass Spectrometer. (*Proc. Indian Science Congress, Agra*, 1955).
15. Poddar, R. K.: On the Quantitative Relation Between Isotopic Beta Radiation and its Photographic Response. (*Ind. J. Phys.*, **23**, 189, 1955).
16. Ray, H. N., Das Gupta, N. N., De, M. L. and Guha, A.: A New Structure observed in *Trypanosoma Evansi* (Indian Strain). (*Nature*, **175**, 392, 1955).

17. Ray-Chaudhuri, S. P. and Guha, A.: Supernumerary Chromosomes in Two Populations of the Grasshopper, *Aiolopus* Sp. B, and their Behaviour during Spermatogenesis. (*J. of Genetics*, **53**, 363, 1955).
18. Roy, R. N. and Verma, J. K. D.: Polarization of Electromagnetic Waves for Vertical Propagation on the Ionosphere. (*J. Geophys. Resh.*, **60**, 457, 1955).
19. Saha, M. N.: On the Choice and Design of Reactors. (*Trans. of the Bose Inst.*, **23**, 109, 1955).
20. Saxena, A. N.: A Term in the Mass Formula. (*Ind. J. Phys.*, **29**, 501, 1955).

## 1956

1. Bhattacharyya, R. L., Basu Ray, U. and Chatterjee, S.: Growing of Organic Phosphors for Scintillation Counters. (*Ind. J. Phys.*, **30**, 585, 1956).
- X 2. Chatterjee, A. and Dutt, P. K.: Spectroscopic Measurements of the characteristics of the Calcutta Cyclotron Ion Source. (*Proc. Indian Science Congress*, 1956).
3. Chatterjee, K. R. and Poddar, R. K.: Preferential Uptake of Sulphone by Affected Skin Tissue of Leprosy Patients as Detected by a Tracer Method. (*Nature*, **178**, 799, 1956).
4. Chowdhury, S. and Banerjee, B. M.: Improved System of Dot on Film Records for Pulse Height Analysis. (*Rev. Sci. Instr.*, **27**, 1080, 1956).
5. Das, T. P.: Tunnelling Through High Periodic Barriers I. (*J. Chem. Phys.* **25**, 896, 1956).
6. Das, T. P. and Bersohn, R.: Variational Calculation of Magnetic Shielding of Protons in the Hydrogen Molecule. (*Phys. Rev.*, **104**, 849, 1956).
7. Das, T. P. and Bersohn, R.: Variational Approach to the Quadrupole Polarizability of Ions. (*Phys. Rev.*, **102**, 733, 1956).
8. Das, T. P., Roy, D. K. and Ghosh Ray, S. K.: Quadrupolar Nuclear Spin-Lattice Relaxation in Crystals with Body-Centered Cubic Lattice Structure. (*Phys. Rev.*, **104**, 1568, 1956).
- X 9. Dutt, P. K.: The Theory of an Electrostatic Time of Flight Mass Spectrometer. (*Proc. of the Indian Science Congress*, 1956).
- X 10. Dutt, P. K., Patro, A. P., Basu, B. and Chatterjee, A.: Characteristics of the Ion Source of the Calcutta Cyclotron. (*Proc. of the Indian Science Congress*, 1956).
11. Ghoshal, S. N. and Saxena, A. N.: On Neutron-Proton Pairing Interaction in Heavy Nuclei. (*Proc. Phys. Soc. A.*, **69**, 293, 1956).
12. Guha, A., Pyne, C. K. and Sen, B. B.: Cytochemical Studies of Mitochondria in Leptomonad form of *Leishmania donovani* the Kala-azar Parasite. (*J. Histo. & Cytochem.*, **4**, 212, 1956).

13. Karmahapatro, S. B. and Majumdar, S. K.: Measurement of Gradients of Inhomogeneous Magnetic Field. (*Science and Culture*, **21**, 621, 1956).
14. Nag, B. D. and Sayied, A. M.: Electrodynamics of Moving Media and the Theory of the Cerenkov Effect. (*Proc. Roy. Soc. A.*, **345**, 544, 1956).
15. Nandi, S., Poddar, R. K. and Pyne, C. K.: Total and Differential Concentration of Radioiodine in Thyroid tissue and its variation with Time as studied by autoradiography (*J. Endocrinology*, **13**, 125, 1956).
16. Nath, S. C. and Banerjee, B. M.: A search for a Pulsar of High Output Requiring Small Grid Drive. (*J. Sci. & Ind. Res.*, **15A**, 444, 1956).
17. Patro, A. P.: A Time of Flight Neutron Velocity Selector using scintillation counters. (*Ind. J. Phys.*, **30**, 99, 1956).
18. Patro, A. P., Basu, B. and Nag, B. D.: Studies with a New Design Neutron Velocity Spectrometer. (*Proc. of the Indian Science Congress*, 1956).
19. Saha, A. K., Banerjee, B. M., Das, T. P., Roy, D. K., Ghosh Ray, S. K. and Ghosh T.: A Nuclear Magnetic Resonance Apparatus. (*Ind. J. Phys.*, **30**, 211, 1956).
20. Verma, J. K. D. and Roy, R.: Polarization of the Echoes from the Ionosphere. (*Ind. J. Phys.*, **30**, 36, 1956).

## 1957

1. Banerjee, B. M. and Chowdhury, S.: Tolerance Limit of Resistors in Binary Sealing Units. (*Elec. Eng. May*, 1957).
2. Banerjee, B. M., Ghosh, S. K. and Saha, A. K.: A Nuclear Induction Spin-Echo Apparatus. (*Ind. J. Phys.*, **31**, 211, 1957).
3. Banerjee, M. K.: Evidence on Coupling Schemes from Nuclear Reactions. (*Proc. Int. Conf. on Nuclear Structure, Rehovoth*, 1957).
4. Banerjee, M. K. and Levinson, C. A.: Direct Interaction Theory of Inelastic Scattering II. Angular Correlation of Gamma Rays following Inelastic Scattering. (*Ann. of Phys.*, **2**, 499, 1957).
5. Bardhan, U. C.: Values of  $\pi$  Obtained and Calculated by Ancient Indians. (*Science and Culture*, **22**, 664, 1957).
6. Bhattacharyya, R. L. and Chatterjee, S.: Fast Coincidence with Fast Discriminators. (*Ind. J. Phys.*, **31**, 53, 1957).
7. Chatterjee, K. R. and Poddar, R. K.: Radioactive Tracer Studies on Uptake of Diamino-diphenyl-Sulphone by Leprosy Patients. (*Prog. Soc. Exp. Biol. & Med.*, **94**, 122, 1957).
8. Chatterjee, S. N.: Variation in Lattice Constant in Thin Film of Gold. (*Ind. J. Phys.*, **31**, 110, 1957).
9. Chatteraj, D. K., Roy, K. C. and De, M. L.: Electron Microscopic Investigation of a few Inorganic Colloids. (*Die Natur.*, **44**, 113, 1957).

10. Das, T. P.: Nuclear Quadrupole Interaction in Boron Compounds. (*J. Chem. Phys.*, **27**, 1, 1957).
11. Das, T. P.: Tunneling through High Periodic Barriers II. Application to Nuclear Magnetic Resonance in Solids. (*J. Chem. Phys.*, **27**, 763, 1957).
12. Ghosh, T., Ghosh, S. K. and Roy, D. K.: A Method for Measuring the Relaxation Time  $T_1$ . (*Nuovo Cimento Sr. X.*, **6**, 1771, 1957).
13. Ghosh, T., Ghosh, S. K. and Roy, D. K.: Spin-Echoes with four and more Pulses. (*Ind. J. Phys.*, **31**, 265, 1957).
14. Ghosh, T., Ghosh, S. K. and Roy, D. K.: A study on the Effects off-Resonance on the Spin-Echo Signals. (*J. Phys. Soc. Japan.*, **12**, 816, 1957).
15. Ghosh, T., Ghosh, S. K. and Roy, D. K.: Spin-Echoes with any Number of Pulses. (*Nuovo Cimento, Sr. X.* **5**, 751, 1957).
16. Ghoshal, S. N. and Baliga, B. B.: On the Elastic Scattering of Charged Particles by Nuclei in the Intermediate Energy Region. (*Prog. Theo. Phys.*, **17**, 556, 1957).
17. Ghoshal, S. N. and Baliga, B. B.: Elastic Scattering of 32 Mev Protons from Gold. (*Proc. Phys. Soc. A.* <sup>(London)</sup> **69**, 324, 1957).
18. Guha, A.: A New Technique for the Viable Count of Bacteria. (*Nature*, **179**, 1360, 1957).
19. Levinson, C. A. and Banerjee, M. K.: Direct Interaction Theory of Inelastic Scattering I. (*Ann. Phys.*, **2**, 471, 1957).
20. Mukherjee, P. N., Pal, M. K., Banerjee, M. K. and Saha, A. K.: Design of Continuous Baffle in a short Lens Beta-Ray Spectrometer. (*Ind. J. Phys.*, **31**, 531, 1957).
21. Mukherjee, S. and Pal, M. K.:  $n-p$  and  $p-p$  Scattering for Case-Pais Model in the Energy Range 91 Mev to 437 Mev. (*Ind. J. Phys.*, **31** 415, 1957).
22. Nath, S. C. and Banerjee, B. M.: An Equipment for Adjustment of Delay Lines in Distributed Amplifiers. (*Electro-Technology*, **1**, 269, 1957).
23. Pal, M. K. and Mukherjee, S.: Elastic and Inelastic Scattering of High Energy Electrons by some ( $2p$ )-shell Nuclei on the Intermediate-Coupling Model. (*Phys. Rev.*, **106**, 811, 1957).
- X24. Pal, M. K., Mukherjee, S. and Saha, A. K.: Elastic and Inelastic Scattering of High Energy Electrons by some  $2p$  shell Nuclei on the Intermediate Coupling Model. (*Ind. J. Phys.*, **31**, 56, 1957).
25. Pal, M. K. and Nagarajan, M. A.: Scattering of High Energy Electrons from  $C^{12}$  on the Intermediate Coupling Model. (*Phys. Rev.* **108**, 1577, 1957).
26. Poddar, R. K.: Quantitative Measurement of  $S^{35}$  in Biological Samples. (*Nucleonics*, **15**, 82, 1957).
27. Poddar, R. K. and Chatterjee, K. R.: Autoradiographic Detection of Sulphone in the Affected Tissues of Leprosy Patients. (*Nature*, **180**, 854, 1957.)



28. Purkayastha, B. C. and Bhattacharyya, S. N.: On the study of the Use of Calcium Oxalate Monohydrate in the Investigation of Rare Earth and Thorium Activities. (*J. Ind. Chem. Soc.*, **34**, 427, 1957).
29. Purkayastha, B. C. and Pai-Vernekre V. R.: On the study of Indirect Application of Radioactive Nuclei in Analytical Chemistry. (*J. Ind. Chem. Soc.*, **34**, 487, 1957).
30. Roy, R. N.: The Artificial Satellite. (*Science and Culture*, **23**, 209, 1957).
31. Wikner, E. G. and Das T. P.: Variational Calculations of Dipole Polarizabilities of Helium-Like Ions. (*Phys. Rev.*, **107**, 497, 1957).

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1. Banerjee, M. K.: Exchange Effects in Inelastic Scattering. (*Proc. Int. Conf. Nuclear Reactions*, Paris, 1958).
2. Banerjee, M. K. and Nagarajan, M. A.: Exchange Effects in Stripping Reactions. (*Proc. Int. Conf. Nuclear Reactions*, Paris, 1958).
3. Chakraborty, J. and Das Gupta, N. N.: Ultrastructure of the Pellicle and the Nucleus of *Leishmania Donovanii*. (*Fourth Int. Conf. on Electron Microscopy, Berlin*, **2**, 1510, 1958).
4. Chatterjee, S. N.: The Fine Structure of the Films of a Number of Shadowing Metals observed under a High Resolution Electron Microscope. (*Naturwissenschaften*, **45**, 106, 1958).
5. Chatterjee, S. N.: Electron Microscopic and Diffraction Studies of the Aged AgI Sol. (*Fourth Int. Conf. on Electron Microscopy, Berlin*, **1**, 453, 1958).
6. Chatterjee, S. N.: On the Structure of Uranium in Thin Films. (*Acta Crystallographica*, **11**, 679, 1958).
7. Chatterjee, S. N.: On the Structure of Tungstic Oxide in the Colloidal State. (*J. Co. Sci.*, **13**, 61, 1958).
8. De, M. L. and Sadhukhan, P.: Determination of the Mass Thickness of Cell Membranes from their Electron Micrographs. (*Nature*, **182**, 1008, 1958).
9. Guha, A.: Demonstration of Chromosome—like Organisation in the Head of *Escherichia Coli* Communion Phage. (*Naturwissenschaften*, **45**, 425, 1958).
10. Guha, A.: Electron Microscopy of Bacterial Viruses. (*Science and Culture*, **23**, 571, 1958).
11. Hosain, F.: Low Level Low Energy Low Quantity Sample Counting in Tracer Work. (*Naturwissenschaften*, **45**, 107, 1958).
12. Hosain, F.: Use of Rihsa in Differentiating Ascites due to Nephrities and Cirrhosis. (*Int. J. App. Rad. Isotopes*, **4**, 108, 1958).
13. Karmahapatro, S. B.: Improved Transmission of Ions with Inhomogeneous Magnetic Fields. (*Ind. J. Phys.*, **32**, 26, 1958).

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14. Karmahapatro, S. B. and Das, T. P.: Asymmetric-charge Exchange Reactions. (*J. Chem. Phys.* **29**, 240, 1958).
15. Levinson, C. A. & Banerjee, M. K.: Direct Interaction Theory of Inelastic Scattering Part III. Numerical Calculations. (*Ann. Phys.* **3**, 67, 1958).
16. Mahapatra, S.: Coaxial Transmission Lines. (*Elec. & Radio Eng.* **35**, 63, 1958).
17. Mukherjee, A. and Das, T. P.:  $F^{19}$  Hyperfine Interaction in the Paramagnetic Resonance Spectrum of  $M^{++}$  Ions in  $ZnF_2$ . *Phys. Rev.*, **III**, 1479, 1958).
18. Mukherjee, P. N. and Dutta, I.: Quadrupole Vibrations and the Electric Quadrupole Moment of Some Closed Shell Plus (or Minus) a Single Nucleon Nuclei. (*Ind. J. Phys.*, **32**, 149, 1958).
19. Mukherjee, P. N. and Dutt, I.: On the Axial Stability of a Deformed Nucleus. (*Ind. J. Phys.*, **32**, 165, 1958).
20. Mukherjee, S. and Gupta, A.: On Core-Particle Interaction from Classical Point of View. (*Ind. J. Phys.*, **32**, 330, 1958).
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22. Pyne, C. K.: Electron Microscopic Investigations on the Leptomonad Form of *Leishmania Donovanii*. (*Exp. Cell. Res.* **14** 388, 1958).
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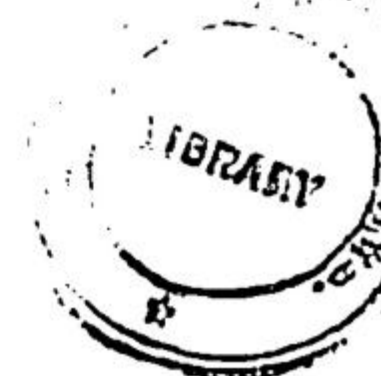
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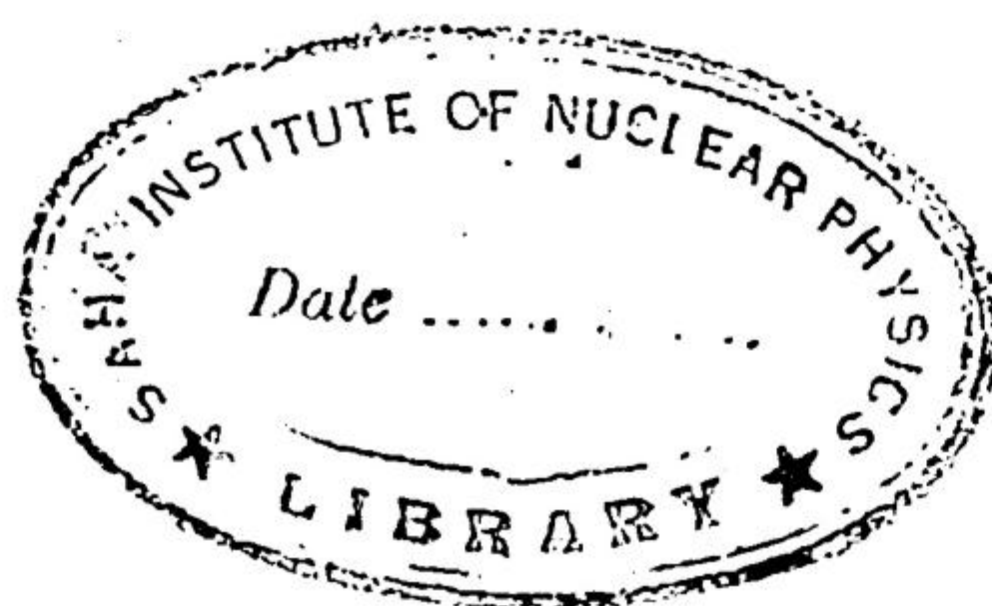
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Although it is mentioned in the Introduction by the Director that the number of publications from the Institute in 1967 was 64, a few more publications have been brought to our notice while this Report has been in press. These publications are also included in the above list.—Editors

## LIST OF PUBLICATIONS, 1968

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## APPENDIX I

### I.A. *List of Publications in 1969*

1. Bagchi, B., Misra, D. N., Basu, S. and Dasgupta, N. N., "Linkages in Denatured DNA", *Biochim. et Biophys. Acta*, **182**, 551, 1969.

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