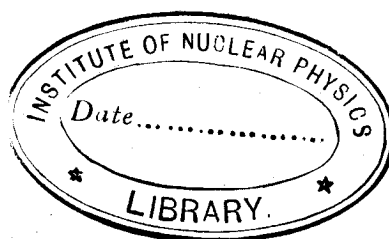


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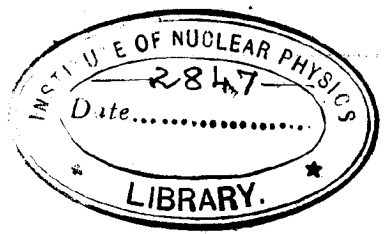
FOR THE DEGREE OF DOCTOR OF PHILOSOPHY (SCIENCE)

OF THE UNIVERSITY OF CALCUTTA:



.. BY

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