

# UNIVERSITY OF NORTH BENGAL

Department of Physics  
(Accredited by NAAC with Grade "A")

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ENLIGHTENMENT TO PERFECTION

## CERTIFICATE FROM THE SUPERVISOR

I certify that **Mr. Sandip Dam** has prepared his thesis entitled "**STUDIES ON THE MASS COMPOSITION OF COSMIC RAYS ABOVE  $10^{14}$  eV**", for the award of Ph.D. degree of the University of North Bengal, under my guidance. He has carried out the work at the Department of Physics, University of North Bengal.

Date: *29<sup>th</sup> May* 2019

*Rajat Kr. Dey*  
(Rajat K. Dey)

*Assistant Professor*  
Department of Physics  
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## Urkund Analysis Result

Analysed Document: Sandip Dam\_Physics.pdf (D51939743)  
Submitted: 5/13/2019 10:03:00 AM  
Submitted By: nbuplg@gmail.com  
Significance: 3 %

### Sources included in the report:

<https://link.springer.com/article/10.1007/BF02831491>  
<http://inspirehep.net/record/1495692/plots?ln=de>  
[https://gaeweb.hst.ucm.es/auger/PhDThesis/Thesis\\_Diego.pdf](https://gaeweb.hst.ucm.es/auger/PhDThesis/Thesis_Diego.pdf)  
<https://phn14.astro.princeton.edu/astroph-coffee/archive/201611042ecfe4b0-2a28-4fd8-8b31-ff49371b7bd0f1c67ea7-039e-40a2-82ad-2929eb60b3b7a5ed3b8c-423b-46ac-a6e2-0535f5b37dd9dc3e5a74-2ee6-4e9e-ad3d-41aa5d31539efb739da9-6eb0-4024-8f44-65efa957d049d3d9bab8-ee55-4f32-b190-8e9b17ab139f>

### Instances where selected sources appear:

45

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29/05/2019  
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