

**CORRELATION BETWEEN THE RED AND BLUE MAGNITUDE OF
STARS IN THE GLOBULAR CLUSTER NGC 2419**

AINOLWADY BIN IDRIS

**BACHELOR OF SCIENCE (HONS.) PHYSICS
FACULTY OF APPLIED SCIENCE
UNIVERSITI TEKNOLOGI MARA
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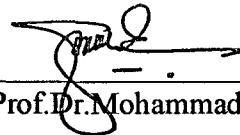
This Final Year Project Report entitled “**Correlation Between The Red and Blue Magnitude of Stars in the Globular Cluster NGC 2419**” was submitted by Ainolwady bin Idris, in partial fulfillment of the requirements for the Degree of Bachelor of Science (Hons) Physics, in the Faculty of Applied Sciences, and was approved by



Siti Jamiah Mohammad Yob
Supervisor
Faculty of Applied Sciences
Universiti Teknologi Mara



Dr. Muhd Zu Azhan Yahya
Head of Programme
B.Sc (Hons) Physics
Universiti Teknologi Mara



Assoc. Prof. Dr. Mohammad Kamal Hj Harun
Dean
Faculty of Applied Science
Universiti Teknologi Mara

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IN THE NAME OF ALLAH, (ALMIGHTY) THE GRACIOUS, THE MOST MERCIFUL

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TABLE OF CONTENT

	Page
ACKNOWLEDGEMENTS	iii
TABLE OF CONTENT	iv
LIST OF TABLES	vi
LIST OF FIGURES	vii
LIST OF ABBREVIATIONS	viii
ABSTRACT	ix
ABSTRAK	x
CHAPTER	
1 INTRODUCTION	1
1.1 Background	1
1.2 Problem Statement	3
1.3 Objectives of the Study	4
1.4 Significances of the Study	4
1.5 Limitation of the Study	5
2 LITERATURE REVIEW	6
2.1 Introduction	6
2.2 Blackbody Radiation	11
2.3 CCD Camera	13
2.4 Photon Flux	15

ABSTRACT

CORRELATION BETWEEN THE RED AND BLUE MAGNITUDE OF STARS IN THE GLOBULAR CLUSTER NGC 2419

Correlation between the red and blue magnitude of stars in the globular cluster NGC 2419 was analyzed. The image was obtained at Universiti Malaya and the best exposure time for imaging was 90 seconds whereby the 14" C14 Celestron telescope and ST-8XME CCD Camera were used. The signal to noise ratio and the magnitudes has been calculated by using aperture photometry from Astronomical Image Processing (AIP) software. The highest signal to noise ratio is in the blue filter which is 706.8495 while for red filter is 692.6696. The lowest signal to noise ratio is in the blue filter which is 18.50178 while for red is 21.44026. The result of the magnitudes shows that the red magnitudes are proportional to the blue magnitudes and the stars in red filter are brighter than that stars in blue filter. It leads to the fact that most of the stars in NGC 2419 consist of the old stars and the older the star is, the less temperature it has. In addition, it also shows that the globular cluster is one of the earliest objects existed in the formation of the universe.