CORRELATION ANALYSIS BETWEEN MAGDAS DATA AND IONOSPHERIC PARAMETER

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ABSRACT

Numerous ways to predict the changes that are happening in the ionosphere that can effect satellite communication are being developed. This research project will correlate the data between ground stations and ionospheric parameters. This research will be referred to the variation of Kp Index 0 and 4. Magnetic Data acquisition System (MAGDAS) data were obtained from Manado, Indonesia and the Global positioning System (GPS) data were obtained from Arau, Perlis, Malaysia. Both data will be analyzed at the same date and time which is on 13 and 14th July 2006 at time 1830 UTC (0230 if changed to LTC) for Kp 0 and 4 respectively. The date of 15th July 2006 at time 1830 UTC will also be studied to analyze the effect after a geomagnetic disturbance of Kp 4. By studying the relationship between these two variables, space weathers can be forecasted more accurately. The results of this research can also be used to optimize satellite communication.

TABLE OF CONTENTS

CHAPTER	CONTENTS	PAGE
1	**INTRODUCTION**	
	1.1 PROBLEM STATEMENT	1
	1.2 PROJECT BACKGROUND	1-2
	1.3 A REVIEW ON MAGDAS AND GPS	2
	1.4 OBJECTIVES	3
	1.5 SCOPE OF THE PROJECT	3
	1.6 SIGNIFICANCE OF THE PROJECT	4
	1.7 ORGANIZATION OF THE THESIS	4
2	**LITERATURE REVIEW**	
	2.1 SEISMO-IONOSPHERIC COUPLING	5
	2.1.1 INTRODUCTION	5-6
	2.1.2 SEISMO-IONOSPHERIC COUPLING PHENOMENA	6-7
	2.2 MAGNETIC DATA ACQUISITION SYSTEM(MAGDAS)	8
	2.2.1 INTRODUCTION	8
	2.2.2 MAGDAS/CPMN SYSTEM	9-11
	2.2.3 SCIENTIFIC OBJECTIVES AND PRELIMINARY RESULTS	11-12
	2.3 EARTH'S MAGNETIC FIELD	13
	2.3.1 INTRODUCTION	13
	2.3.2 THE EARTH AS A DYNAMO	13
	2.3.3 COMPONENTS OF THE MAGNETIC FIELD	14-15
	2.3.4 VARIATIONS IN THE EARTH'S MAGNETIC FIELD	15-16

	2.3.5 INFLUENCE OF THE SUN	16
2.4	GLOBAL POSITIONING SYSTEM (GPS)	17
	2.4.1 INTRODUCTION	17
	2.4.2 OVERVIEW OF GPS	17-18
	2.4.3 GPS FUNDAMENTALS	18-21
	2.4.4 SATELLITE SIGNAL	21-23
	2.4.5 GPS: THE BASIC IDEA	23-25
	2.4.6 AN OVERVIEW OF NAVIGATION SATELLITE SYSTEM	25-26
	2.4.7 DUAL FREQUENCY GPS SYSTEM	27
	2.4.8 EXPLANATION OF GPS RECEIVER STATION IN MALAYSIA	27-28
	2.4.9 RECEIVER INDEPENDENT EXCHANGE FORMAT (RINEX)	29
	2.4.9.1 INTRODUCTION	29
	2.4.9.2 RECEIVER INDEPENDENT EXCHANGE (RINEX)	30-32
2.5	TOTAL ELECTRON CONTENT (TEC)	33
	2.5.1 INTRODUCTION	33
	2.5.2 TOTAL ELECTRON CONTENT (TEC)	33-34
	2.5.3 IONOSPHERIC DELAY AND TEC	34-35
	2.5.4 CALCULATION OF SLANT AND VERTICAL TEC	35-37
	2.5.5 TEC MAPPING FUNCTION	37-39
2.6	GEOMAGNETIC KP INDEX	40
	2.6.1 INTRODUCTION	40
	2.6.2 GEOMAGNETIC KP INDEX	40-42
3	**PROJECT METHODOLOGY**	43-57
4	**RESULTS AND DISCUSSIONS**	58
	4.1 PROJECT RESULTS	58-65