

2.7.2.	Density detector calibration.	31
2.7.3.	Instrumental uncertainty in timing measurements.	33
2.8.	Discussion.	38

Chapter-3 : **DATA ANALYSIS, ERROR ESTIMATION AND PERFORMANCE OF THE TELESCOPE**

3.1.	Procedure of data analysis.	39
3.1.1.	Rejection of poor data.	39
3.1.2.	Estimation of shower parameters from density detector data..	40
3.1.3.	Timing data analysis procedure.	43
3.1.4.	Time offset of the time measuring instrument.	43
3.1.5.	Instrumental uncertainty in timing measurements.	44
3.1.6.	Estimation of arrival direction.	45
3.1.7.	Arrival direction in equatorial coordinate.	47
3.2.	Accuracy of measurements..	49
3.2.1.	Estimation of errors on shower parameters.	49
3.2.2.	Angular resolution of the NBU EAS telescope.	56
3.3.	Sensitivity of the EAS telescope.	60
3.3.1.	Detection efficiency of the EAS telescope.	60
3.3.2.	Triggering probability and effective area of the telescope.	63

Chapter-4 : **EXPERIMENTAL RESULTS**

4.1.	Fundamental properties of EAS.	73
4.1.1.	Lateral distribution of electrons.	73
4.1.2.	Shower size distribution and shower age distribution....	78
4.1.3.	Angular distribution of Observed EAS.	78
	Zenith angle distribution.	78
	Barometric coefficient from zenith angle distribution....	92
	Absorption length from zenith angle distribution.	95
	Azimuthal angle distribution.	96
4.1.4.	Shower size spectrum.	96
4.2.	Study on shower age parameter.	100

4.2.1.	Variation of shower age with shower size.	101
4.2.2.	Zenith angle dependence on shower age.	108
4.2.3.	Local age parameter.	113

Chapter-5: STUDY ON LOW AND HIGH ENERGY MUONS IN EAS

5.1.	Experiment.	117
5.2.	Muon data analysis.	117
5.2.1.	Estimation of muon momentum.	117
5.2.2.	Estimation of muon density.	122
5.3.	Results.	122

Chapter-6: SUMMARY **142**

	References.	144
--	------------------	-----