

C O N T E N T S

	Page
CHAPTER I : Introduction	1
CHAPTER II : Sum-rule Photodisintegration	
Cross sections and total Muon	
capture rate for the Deuteron ..	15
Section I : Photodisintegration	
of the Deuteron	16
2.1 Integrated cross section(σ_{int})..	17
2.2 Bremsstrahlung-weighted	
cross section (σ_b)	21
2.3 Discussion	25
Section II : Total Muon capture	
rate in the Deuteron	27
2.4 Calculations	27
2.5 Discussion	31
CHAPTER III : Photodisintegration of the	
Trinucleons	34
General Introduction	35
Section I : Variational calculation	
of the binding energy of the	
Triton	36
3.1 Introduction ...	36

3.2	Potential and the trial wave function	....	36
3.3	Variational calculation	....	41
3.4	Coulomb energy of He^3	....	42
3.5	Discussion	....	43
Section II : σ_{int} and σ_b^- for the trinucleons			
3.6	Introduction	....	47
3.7	Calculation of σ_{int}}	....	48
3.8	Calculation of σ_b^-	....	50
3.9	Discussion	....	51
CHAPTER IV : Form factors of the Trinucleons			56
4.1	Calculation of the body form factor $F_1(q^2)$	....	59
4.2	Charge form factor of He^3	....	63
4.3	Magnetic form factor of He^3	....	64
4.4	Discussion	....	69
S U M M A R Y			76
APPENDICES			79
APPENDIX - A			80
APPENDIX - B			84
APPENDIX - C			89
APPENDIX - D			93
B I B L I O G R A P H Y			96
PUBLICATIONS			102
ERRATA			103