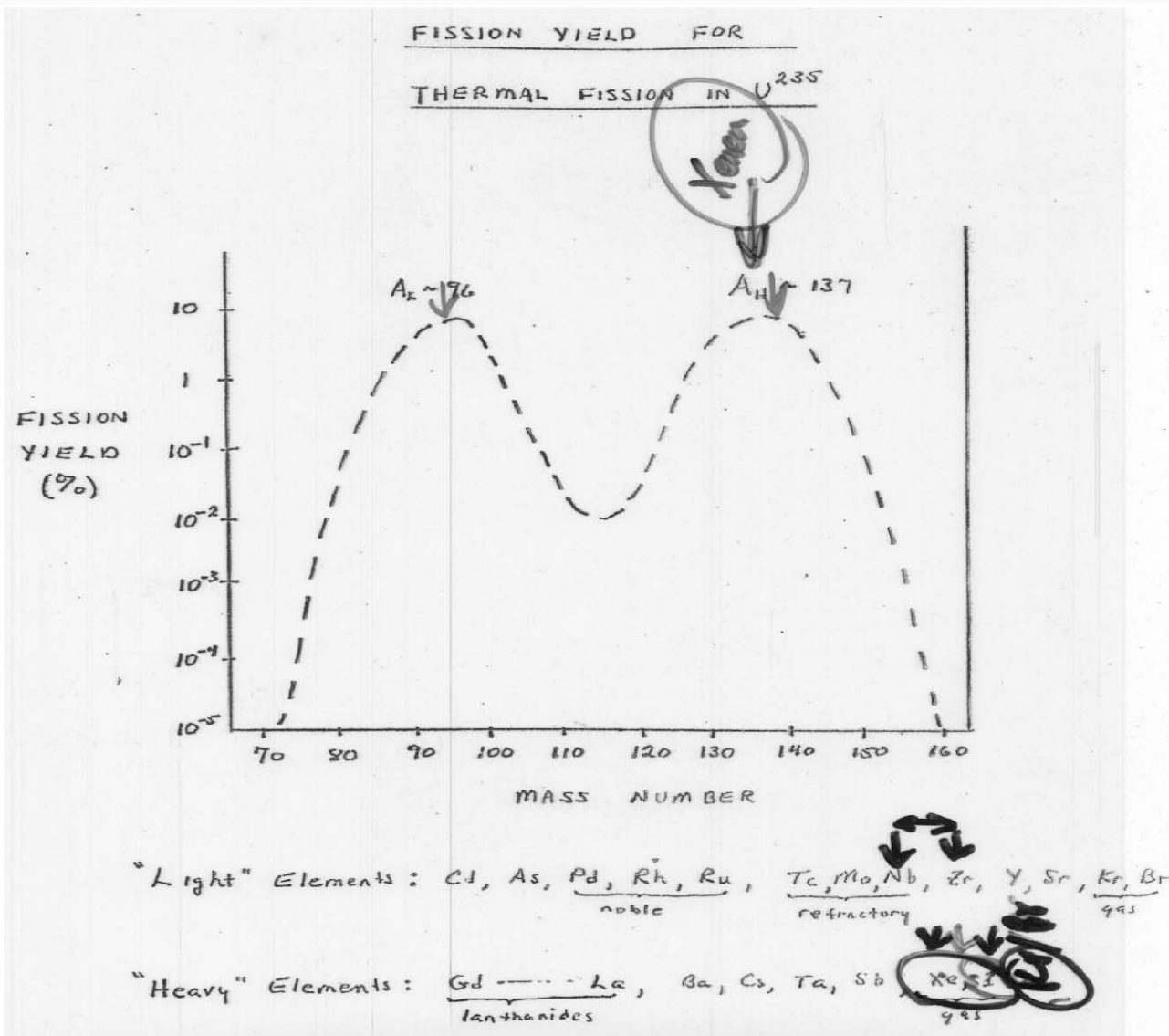
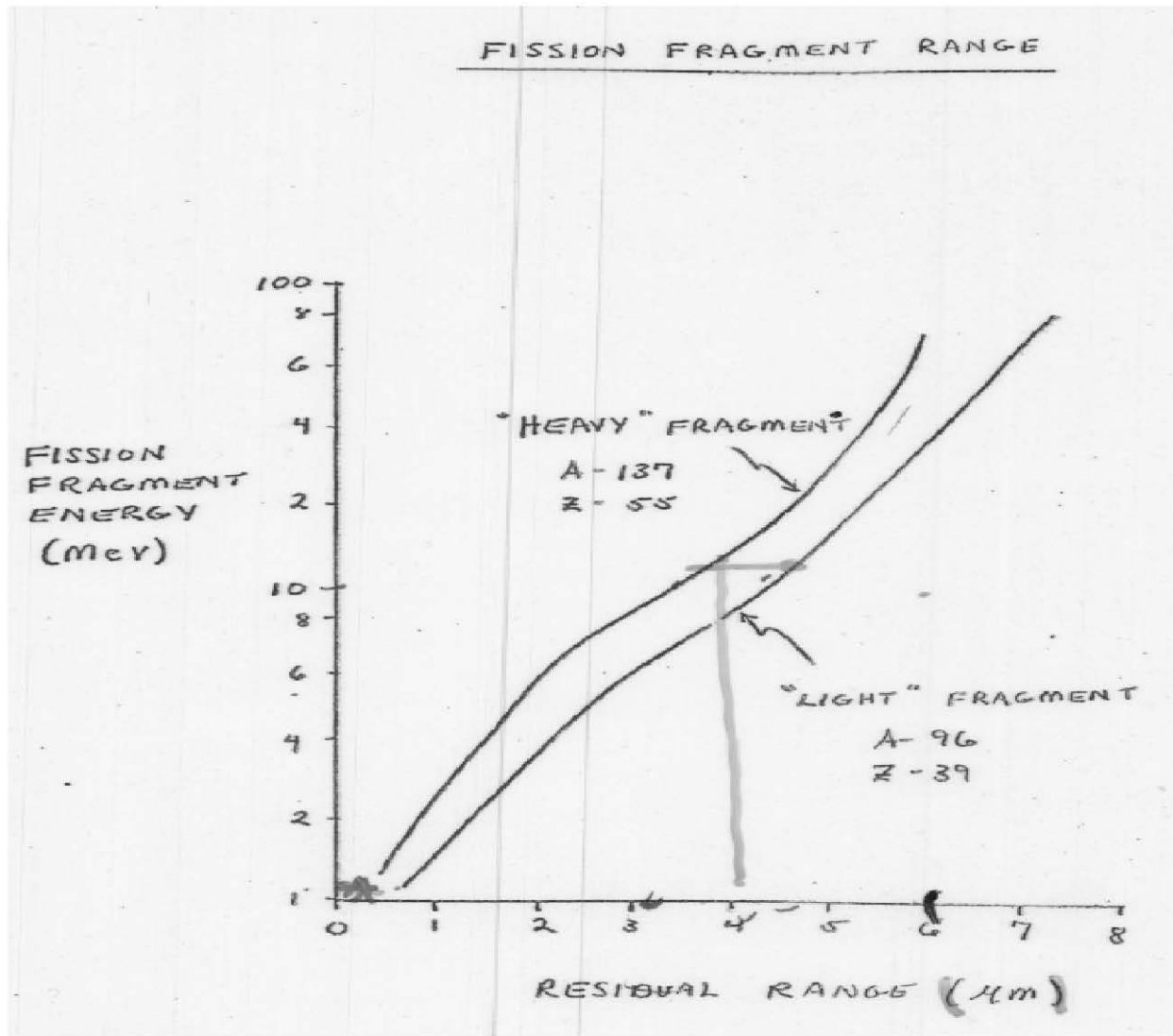


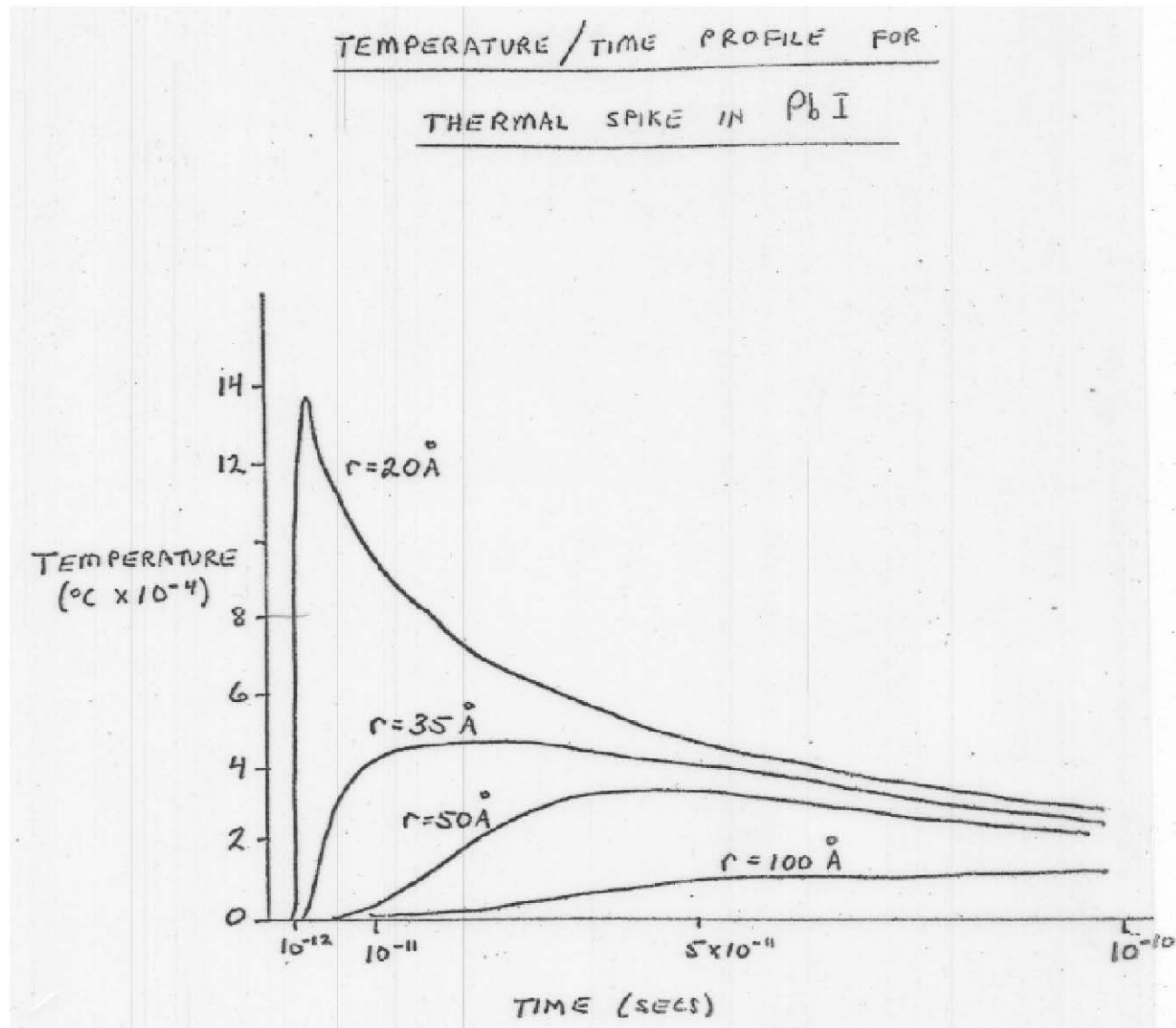
22.39 Reactor Design, Operation and Safety



22.39 Reactor Design, Operation and Safety



22.39 Reactor Design, Operation and Safety

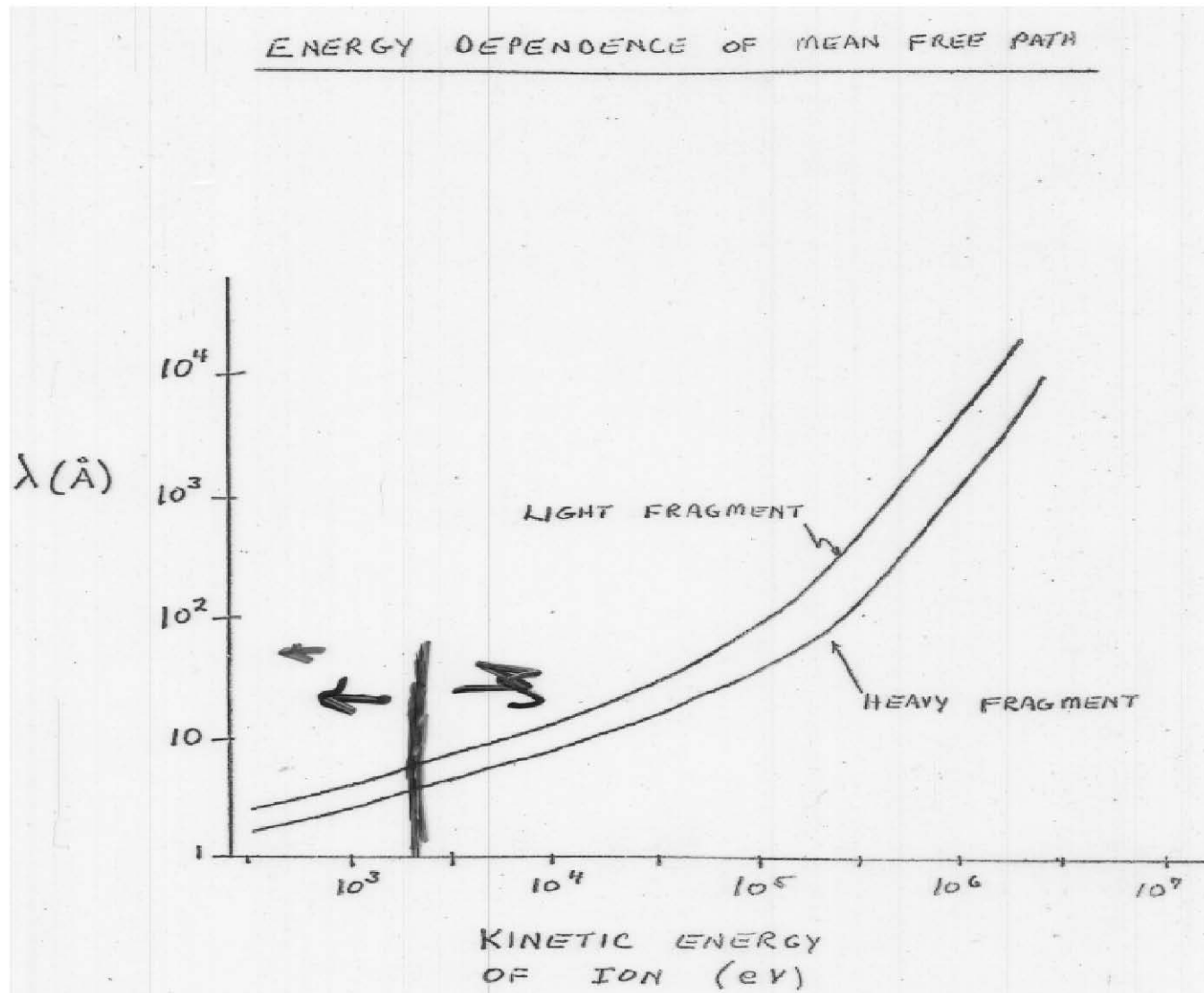


22.39 Reactor Design, Operation and Safety

DISTRIBUTION OF FISSION ENERGY

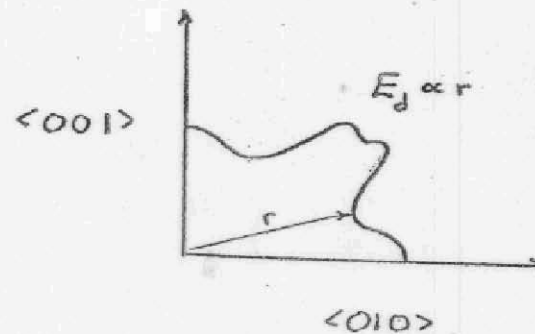
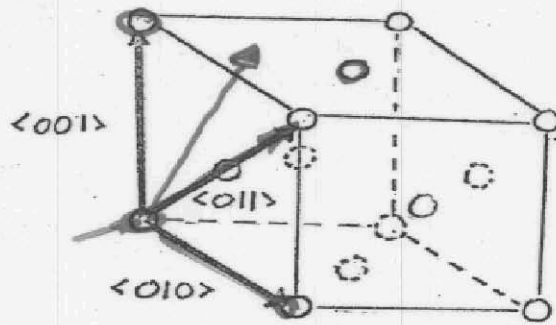
KINETIC ENERGY OF FISSION FRAGMENTS	162 MeV
BETA DECAY ENERGY	5
GAMMA DECAY ENERGY	5
NEUTRINO ENERGY	11
ENERGY OF FISSION NEUTRONS	6
INSTANTANEOUS GAMMA-RAY ENERGY	6
	<hr/>
TOTAL FISSION ENERGY	195 MeV

22.39 Reactor Design, Operation and Safety

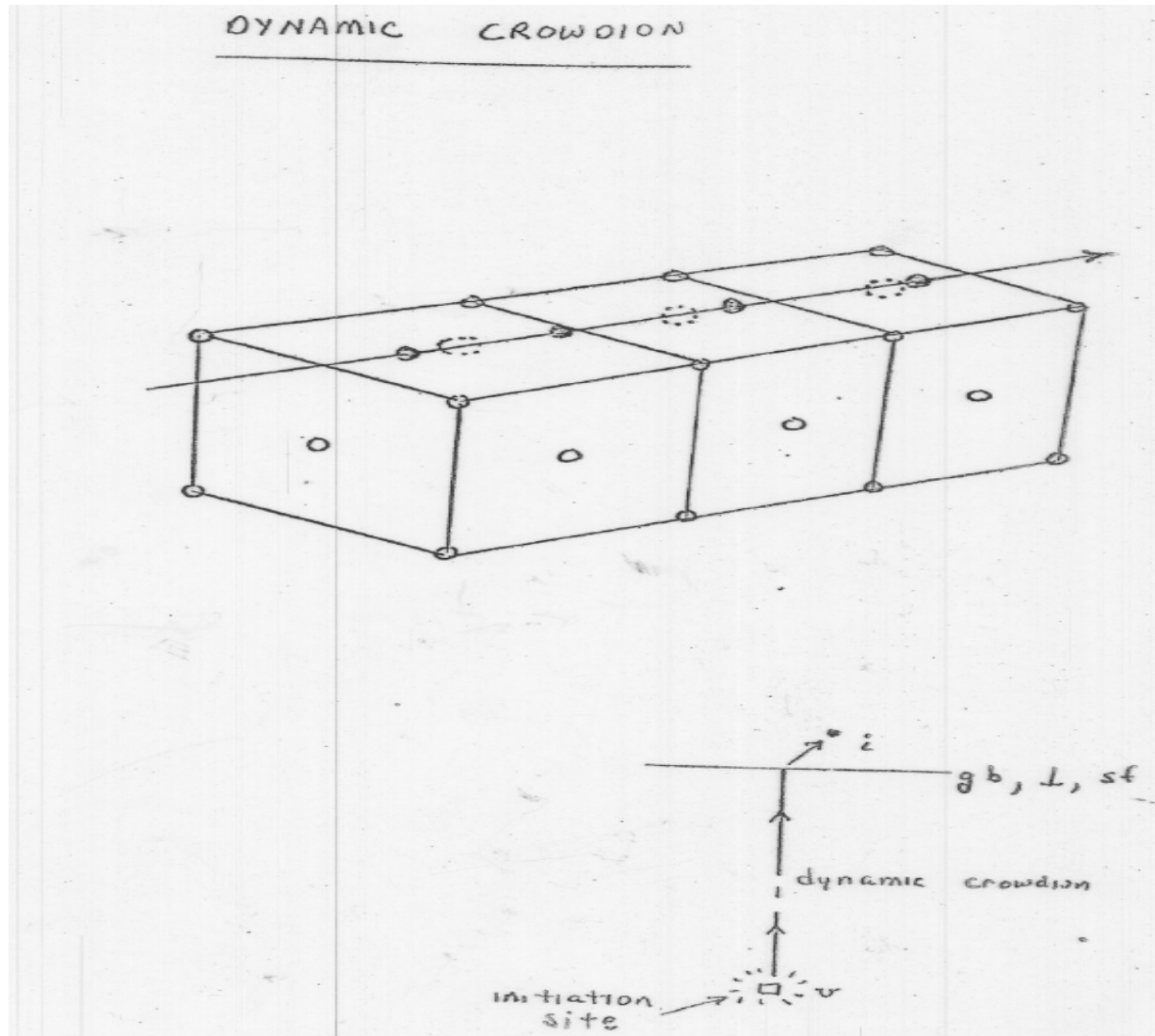


22.39 Reactor Design, Operation and Safety

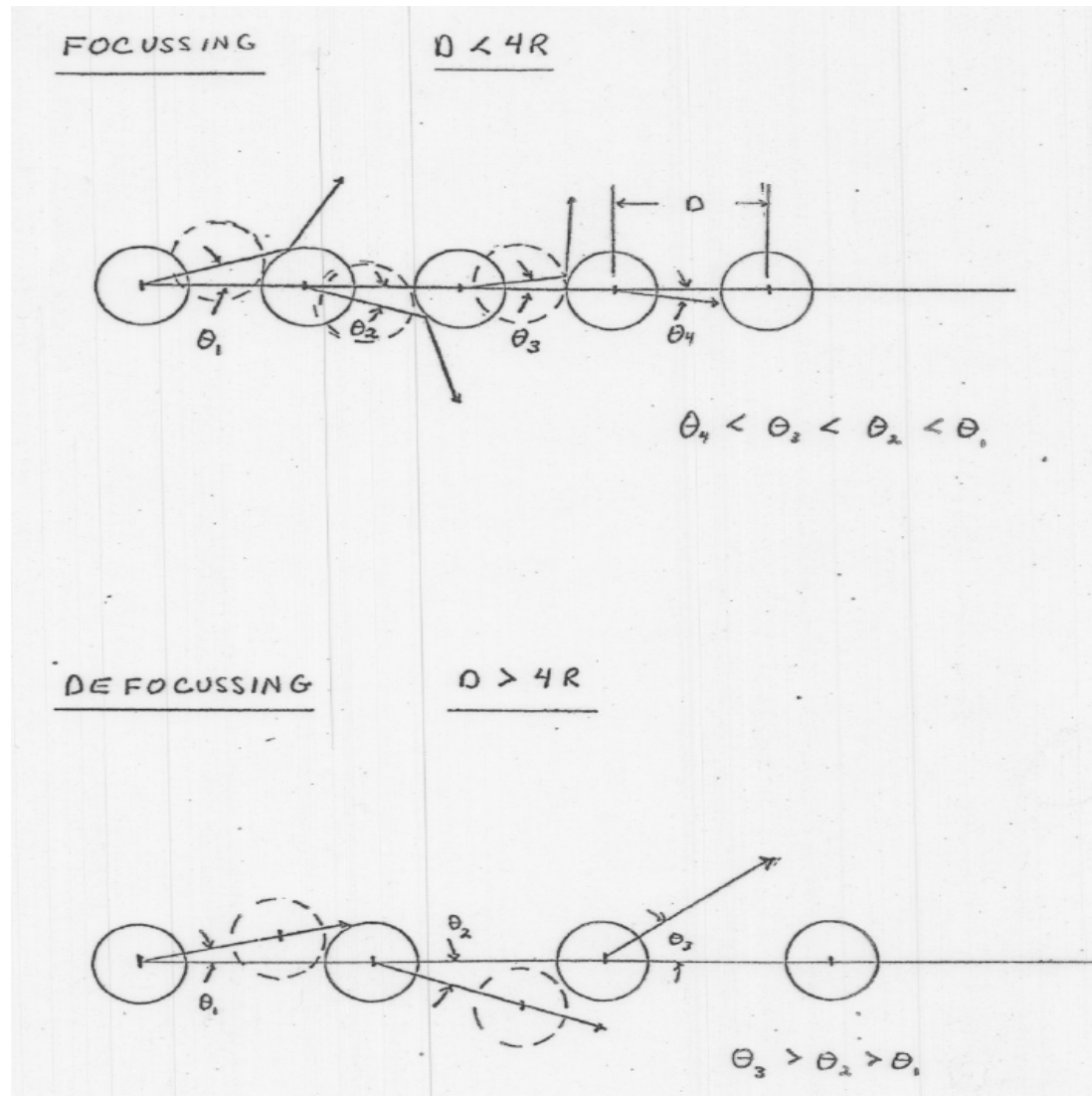
DIRECTIONAL DEPENDENCE OF DISPLACEMENT ENERGY



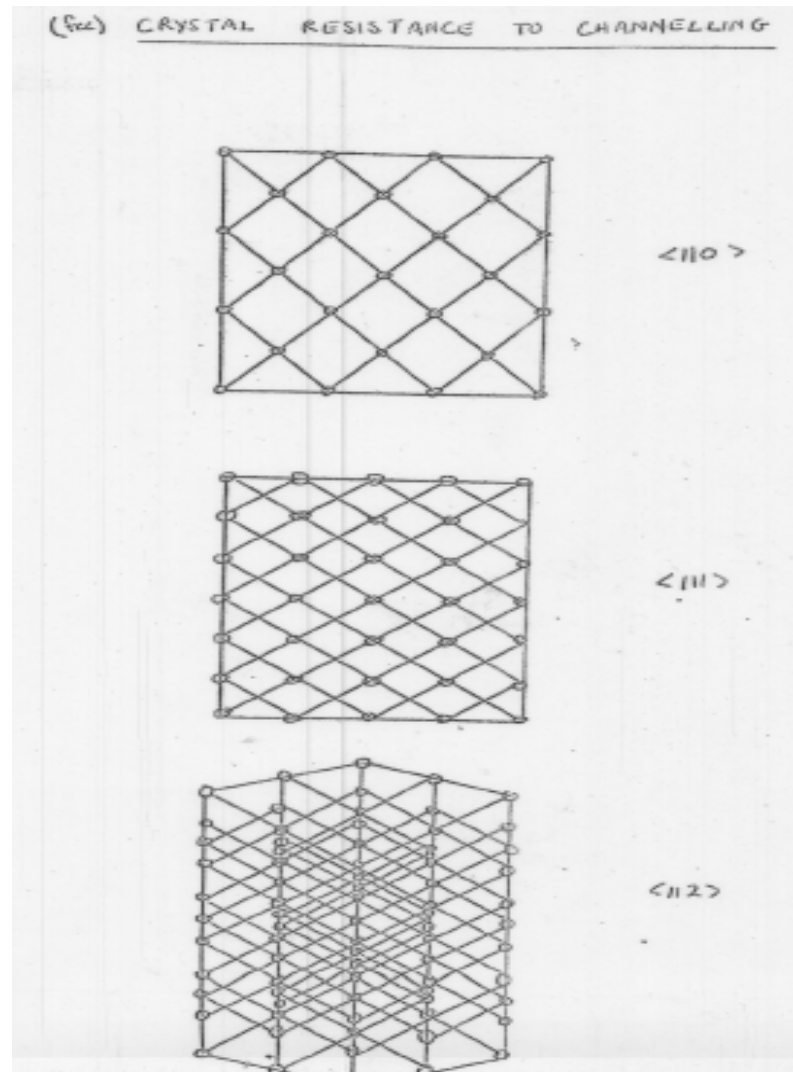
22.39 Reactor Design, Operation and Safety



22.39 Reactor Design, Operation and Safety



22.39 Reactor Design, Operation and Safety



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ATOMIC DISPLACEMENTS PER FISSION
EVENT IN URANIUM

T_1 - Threshold Spike Energy = 400 eV
 T_2 - Maximum Spike Energy = 53,000 eV

	<u>LIGHT FISSION FRAGMENT (N_L)</u>	<u>HEAVY FISSION FRAGMENT (N_H)</u>	<u>TOTAL (N_T)</u>
Number of spikes of maximum size (T_2)	20	55	75
Number of spikes of minimum size (T_1)	530	800	1330
Total displaced atoms	15,000	39,000	54,000

22.39 Reactor Design, Operation and Safety

