
KINEMATICS

KINEMATICS FOR PARTICLE PHYSICS

Hannah Michelle Ellis

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Contents

1	Energy And Momentum of a particle	2
2	Two Body Decay	3
2.1	Parent at Rest	3
2.2	Parent in Motion	3
3	Three Body Decay	3
3.1	Parent at Rest	3
3.2	Parent in Motion	3
4	Three Body Decay With Intermediate	3

List of Tables

List of Figures

1 Energy And Momentum of a particle

2 Two Body Decay

2.1 Parent at Rest

2.2 Parent in Motion

3 Three Body Decay

3.1 Parent at Rest

$$\begin{aligned}P &= P_1 + P_2 + P_3 \\P^2 &= (P_1 + P_2 + P_3)^2 \\P^2 &= P_1^2 + P_2^2 + P_3^2 + 2P_1 \cdot P_2 + 2P_1 \cdot P_3 + 2P_2 \cdot P_3\end{aligned}\tag{3.1a}$$

3.2 Parent in Motion

4 Three Body Decay With Intermediate