

## TABLE OF CONTENTS

1. Introduction	1
2. Generic Minimal Multiplicity Quantum Eigenvalue Crossings	9
3. Technical Preliminaries	28
3A. Semiclassical Wave Packets	28
3B. Adiabatic Electronic States	32
3C. Rigorous Error Estimates from Formal Calculations	36
4. Born–Oppenheimer Propagation Away from Crossings	39
4A. The Multiplicity 1 Case	39
4B. The Multiplicity 2 Case	45
5. Codimension 1 Crossings	49
5A. Crossings of Types A and C	50
5B. Crossings of Types F and G	75
5C. Crossings of Types D, E, and H	78
6. Codimension 2 Crossings	80
7. Codimension 3 Crossings	113
8. Codimension 5 Crossings	121
References	127