Quantum Physics 8.05

- Stationary solutions to Schrödinger Eqn
- Important Wave Mechanics Theorems
- Variational Principle
- Quick Note on Heisenberg Mechanics
- Stern-Gerlach Experiment
  - History
  - Setup
  - Operator Theorems on Vector-Space
- Stern-Gerlach Machine - from Thought Experiments
  - Spin ½ Spin Operators
  - Spin Basis States Pauli Matrices
  - Spin Algebra Prop of Pauli Operators
  - Vector Spaces Dimensionality
- Linear Operators Theorem
  - Finite-Dimensional Schur's Inequality
  - Dual-Space Operators on Infinite-Dimensional Spaces
  - Inner Product Spaces Orthogonal Projections
  - Adjoint Operators Theorems Involving Adjoint Operators
- Polarization Identity
- Parallelogram Law
- Unitary Operators - Properties

Dirac's Bracket Notation

Everything about it
Compatible observables - generalized uncertainty principle
Energy-time uncertainty principle
Position-momentum uncertainty
Geometric interpretation of uncertainty
Saturation condition - Ehrenfest's theorem for normal operators
Spectral theorem
Compatible observables
Heisenberg picture
Deriving Schrödinger's equation
Coherent states of the harmonic oscillator
Properties of coherent states
Squeezed states
Photon states
Time-ordering operator
Two-state systems
Winning
In B-field ammuno molecule
Bell's basis states
Quantum teleportation
Angular momentum algebra
EPR & Bell
Central potential properties
Hydrogen atom - huge stuff
Addition of angular momentum
Clebsch-Gordan coefficients
Addition of angular momentum
Kraepler