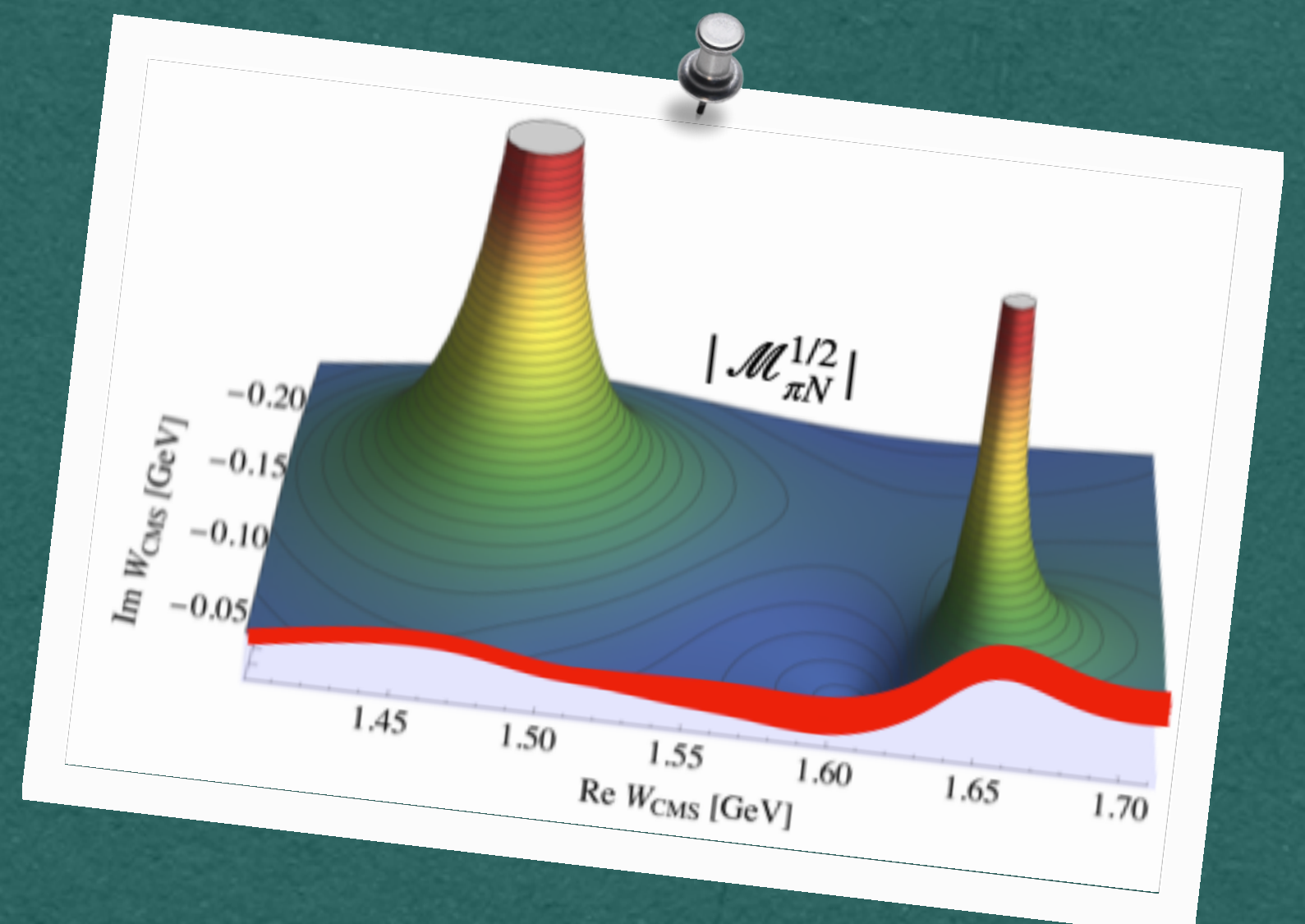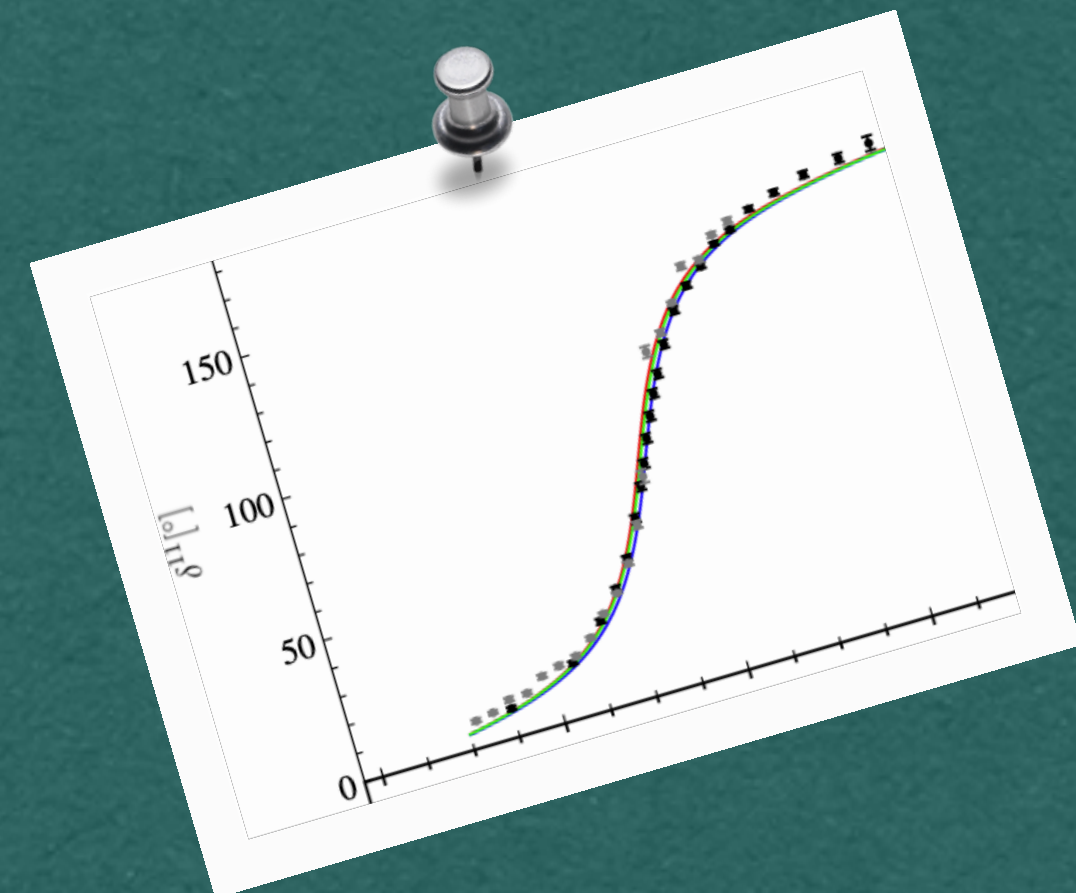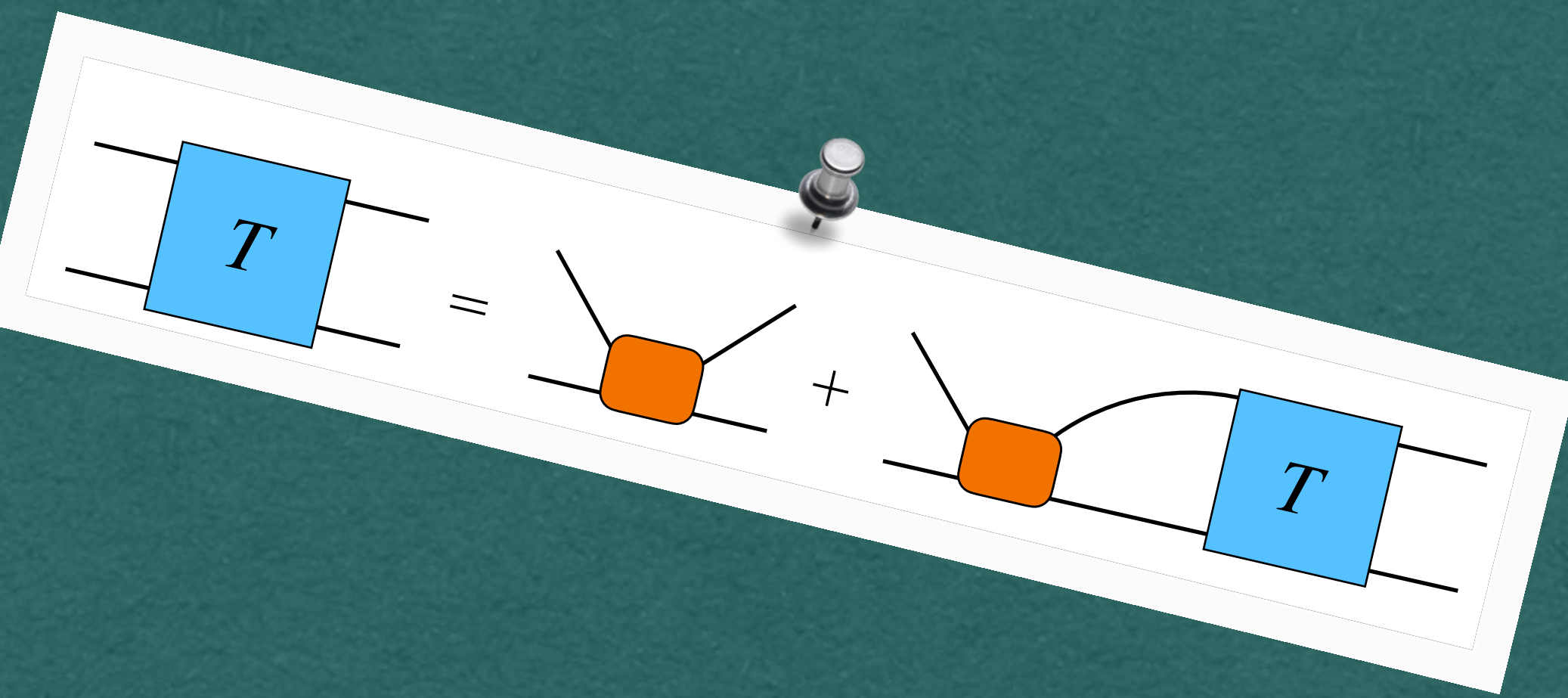# PROJECT 28

## model building and fits for particle scattering

# GOALS

1. **Concept of a particle as a resonance**

   - mass, width, experimental observations…

   <span style="color:red">1 week</span>

2. **Concept of a <u>scattering amplitude (T)</u>**

   - Mathematical/physical constraints

   <span style="color:red">1-2 weeks</span>

   - Resonances from scattering amplitudes — Riemann sheets

3. **Hands-on application**

   - 2-pion scattering data, degrees of freedom, partial waves, isospin.

   <span style="color:red">1-2 weeks</span>

   - Modeling of scattering amplitude (parametrisation, chi$^2$ test, …)

   - Fits to data — resonance parameter estimation