

Hadronic models generally cover specific categories of interaction

- Inelastic scattering with projectile killed
- (Quasi)elastic scattering with projectile redirected
- Absorption (at rest) with projectile killed

What if model cannot generate desired interaction?

- Kill projectile? Violates E/p conservation, non-physical event
- Return projectile as “new” secondary?

Return original kinematics with no secondaries

G4HadFinalState*

```
NoInteraction(const G4HadProjectile& aTrack,  
              G4Nucleus& /* theNucleus */)
```

Configures **G4HadronicInteraction::theParticleChange** with kinematics of projectile, no secondaries, and returns

Called wherever model identifies inconsistent or impossible interaction

- Invalid projectile or target
- Below kinematic limit for single-pion production
- Too many iterations with no valid interaction
- Non-conserving interaction (if throwing exception disabled)

Bertini function has no code specific to package

Could be provided as **G4HadronicInteraction** function
(protected)

Would help ensure consistent response by models supplied
with invalid or inappropriate arguments