

## **Diffusive shock acceleration of dust grains**

Diffusive shock acceleration is a prominent mechanism for energizing charged particles up to very large rigidities at astrophysical collisionless shocks. In addition to ions and electrons, it has been proposed that interstellar dust grains could also be accelerated through diffusive shock acceleration, for instance, at supernova remnants. Building on previous work discussing the acceleration of dust grains, we illustrate that at young SNR shocks, dust grains can reach relativistic speeds and kinetic energy  $\sim 10^4$  GeV/nuc for the smaller grains. We discuss the potential implications of such acceleration of relativistic dust grains.