Ingrid Pelisoli:

Searching for magnetic fields in merger products

Stellar mergers are a proposed mechanism to explain the occurrence of strong magnetic fields, in particular in white dwarf stars where fields as high as 109 G have been observed. Indeed mergers offer ideal conditions for a dynamo and, in theory, a magnetic field is an expected outcome. In contrast with this expectation, hot subdwarf stars – which can only be formed by binary interaction – display a surprisingly low rate of magnetism. About ⅓ of hot subdwarfs are expected to form from mergers, but their magnetic fraction is less than 0.5%. In this talk, I will summarise observational efforts in uncovering magnetic fields in hot subdwarfs and present preliminary evidence that only a small fraction of stellar mergers results in strong magnetism.