The Joy of Watching Your BPS States Grow Up

N=2 SU(3) Super-Yang-Mills possesses a rather unexpected property: the number of BPS states of mass less than M grows exponentially with M; moreover, the states contributing to this large growth in the density of states represent bound states that become arbitrarily large in size. We will discuss the techniques used to derive this result (which may generalize far beyond N=2 SU(3) SYM) -- focusing on the machinery of spectral networks -- and some possible consequences.