$$^{11}\text{Li}(p,p)^{11}\text{Li}$$

(a)

(b)

neutron pair halo

° particle-vibration coupling vertex

⊙ particle-pair vibration coupling vertex

v_{np} proton-neutron int.

≷ recoil mode

↑ neutron ⎫
↓ proton ⎬ bound
        ⎭

$_2$≷ ^{9}Li core quadr. vibr. mode

$_1$≷ ^{11}Li giant dipole pygmy resonance mode

▭ particle-recoil mode coupling vertex

⋒ deuteron continuum

↑ proton continuum

···· monopole interaction