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

neutron pair halo

particle-vibration coupling vertex

particle-pair vibration coupling vertex

v_{np} proton-neutron int.

recoil mode

neutron
proton } bound

$_2\lessgtr$ ^9Li core quadr. vibr. mode

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

particle-recoil mode coupling vertex

deuteron continuum

proton continuum

.... pairing interaction