

# Nuclear Experimental Programs @ HKU



## Correlation Effect on a Nucleon (Direct Reactions)

- One-nucleon knockout at 250 MeV/u (**RIKEN**)
- Knockout of  $^{14}\text{O}$  at 60 MeV/u (**RCNP**)
- $(p,d)$  Transfer of  $^{34,46}\text{Ar}$  at 70 MeV/u (**MSU**)

## Neutron-Proton Correlations (Direct Reactions)

- Systematic  $np$ - &  $nn$ - transfer reactions on  $sd$ -shell nuclei (**RCNP**)
- Exclusive  $np$ -knockout of  $^{12}\text{C}$  at 200 MeV/u (**RIKEN**)
- $(p,pNN)$  at GeV (**Lanzhou**)

## Alpha-cluster Correlations (Direct Reactions)

- $(p,p\alpha)$  of neutron-rich Be (**RIKEN**)

## Nuclear Structure (in-beam gamma spectroscopy)

- $^{30}\text{Ne}$  (**RIKEN**)
- $^{53,55,56}\text{Ca}$  (**RIKEN**)
- $^{77}\text{Ni}$ ,  $^{69,71,73}\text{Co}$  (**RIKEN**)
- $^{100}\text{Sn}$  (**RIKEN**)

## Nuclear Structure ( $\beta$ -decay spectroscopy)

- $^{173,174}\text{Er}$  (**RIKEN**)

**Detectors: DALI2 upgrade**