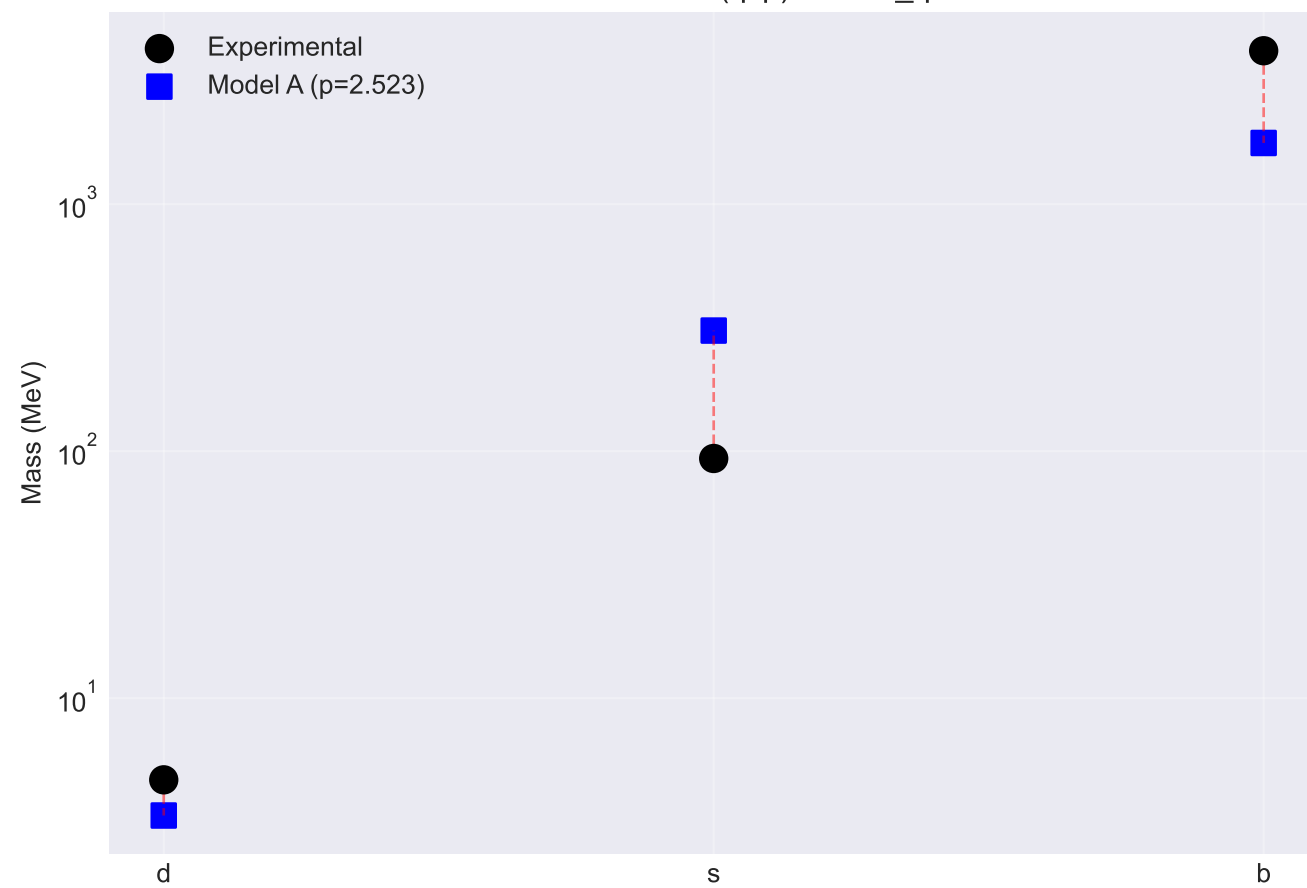
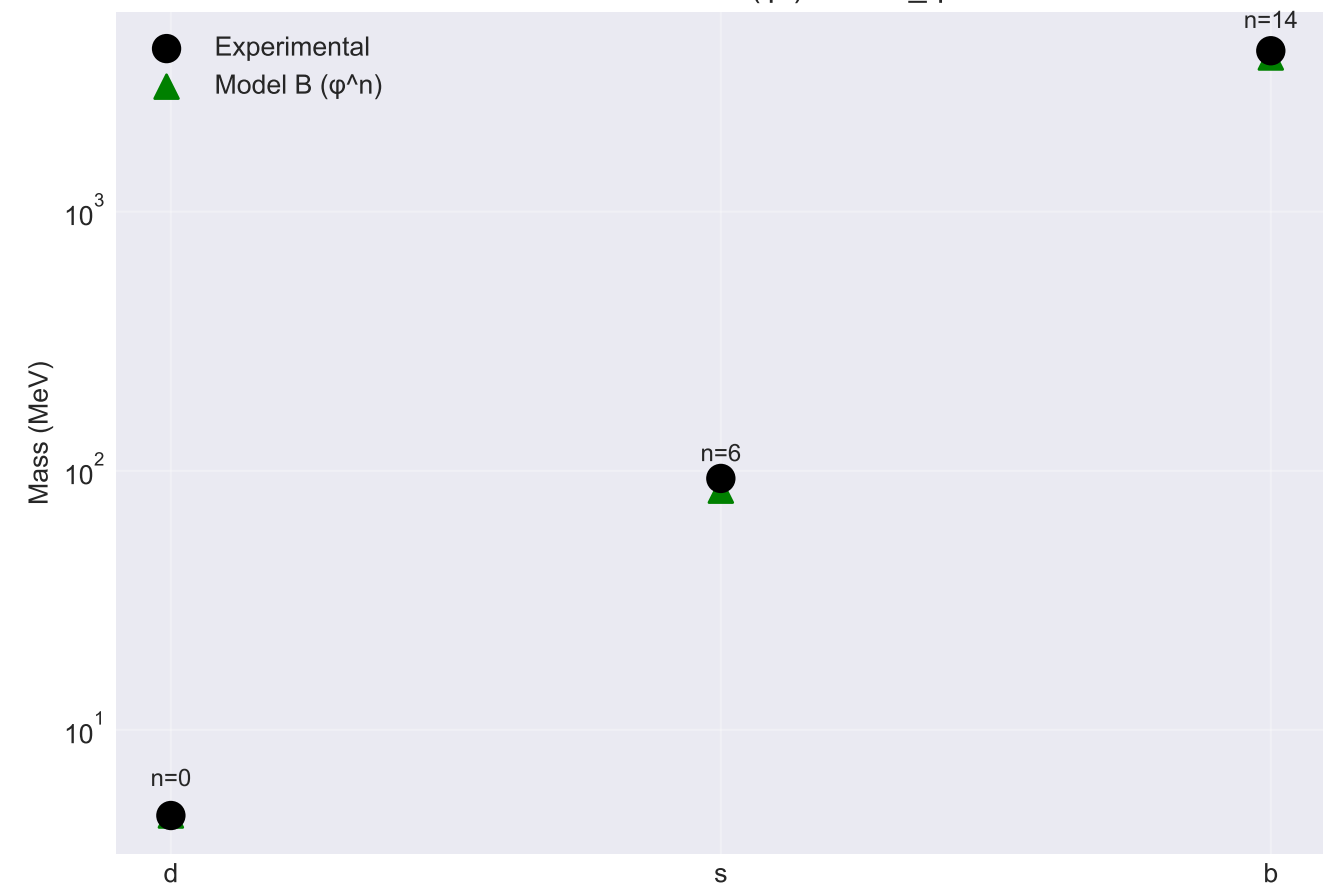
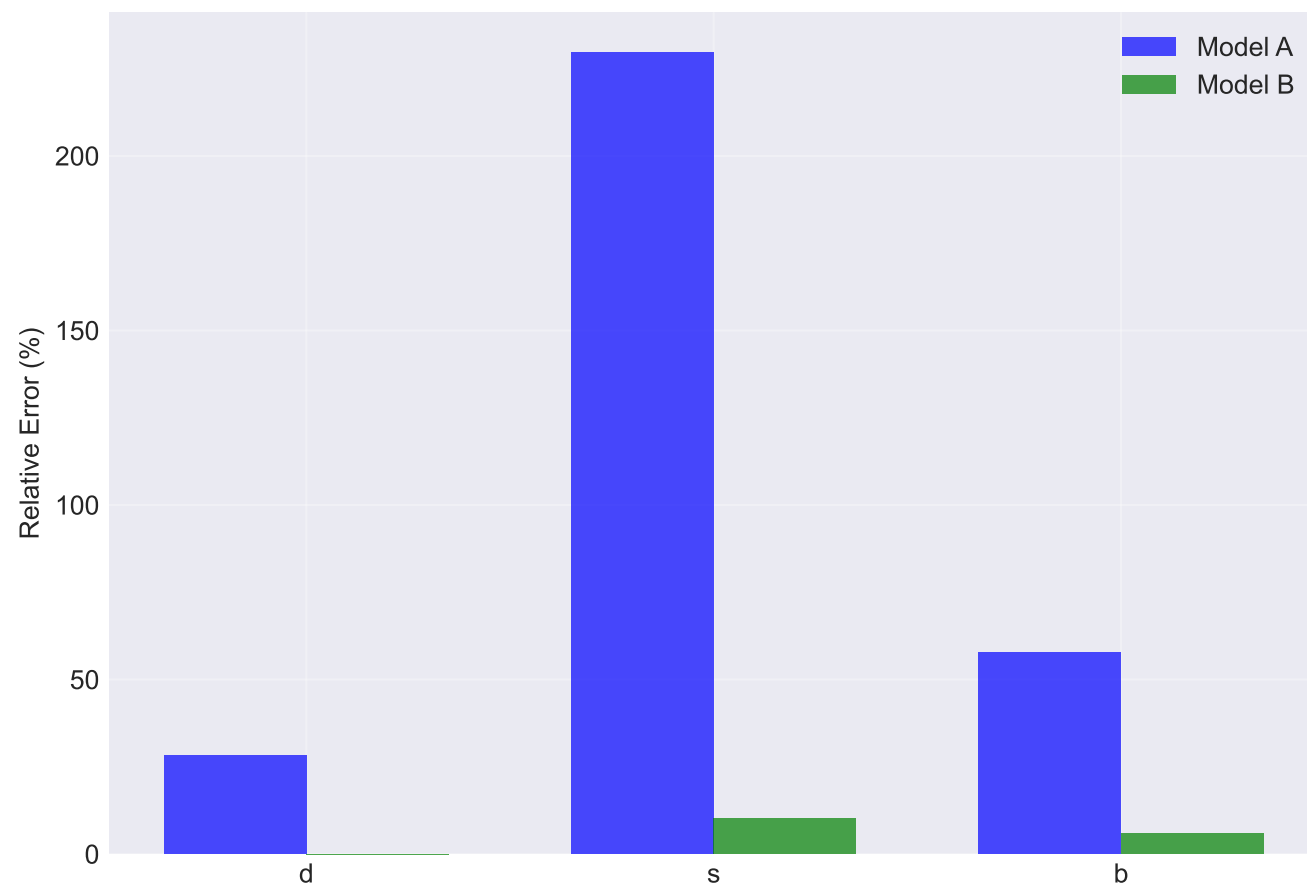


Model A: Power Law ( $q^p$ ) - down\_quarksModel B: Golden Ratio ( $\phi^n$ ) - down\_quarks

Prediction Errors



## Model Comparison: down\_quarks

## Model A (Power Law):

- Parameters:  $A=3.35e+00$ ,  $p=2.523$
- Mean Error: 105.16%
- RMS Error: 137.60%
- $\chi^2/\text{dof}$ : 5.681
- BIC: 7.88

## Model B (Golden Ratio):

- Parameters:  $m_0=4.6700$  MeV
- Mean Error: 5.37%
- RMS Error: 6.82%
- $\chi^2/\text{dof}$ : 0.007
- BIC: 1.11
- Max n deviation: 0.2254

$$\Delta\text{BIC} = 6.77$$

Strong preference for Model B