Nuclear structure studies around ^{68}Ni-^{78}Ni

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At ISOLDE several studies have been peformed over the last 4 years which have provided valuable information on the collectivity of excited states in isotopes around the N=40 and N=50 with few protons or proton holes around Z=28.

Coulomb excitation studies were performed on ^{80}Zn, ^{67,69,71,73}Cu, ^{68}Ni, ^{61,62,63}Mn and ^{61,62}Fe. Some of the experimental difficulties such as beam contamination and intensity limitations will be highlighted.

β-decay studies have been performed on $^{62-68}$Mn and new experimental level schemes are being created for the Fe daughters. Preliminary results will be shown for some selected cases.

All these results will be compared to available shell model calculations and it will be shown that some of the results have contributed significantly to a more accurate shell model description in this region of the nuclear chart.