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Title: **Structure of N=Z nuclei from studies with GASP and Euroball**
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The nuclei close to the N=Z line up to mass 90 constitute one of the regions of actual interest and a continuos effort is being devoted to study their structure in a systematic manner. With increasing Z such nuclei are very close to the proton drip line, being therefore hardly accessible with the available (stable) target-projectile combinations. The lighter ones are close to the stability line but the study of their high spin states has become feasible, due to variuos reasons, only with the advent of large γ-detector arrays coupled with powerful ancillary detectors.

A major research program in the last 3-4 years both at GASP and Euroball has been the study of N=Z nuclei in their low and high spin behaviour. Experiments, making use of 4π charge particle detectors and neutron detectors, have been performed for a series of nuclei ranging from mass 30 (^{32}S and neighbours) to mass 90. The most recent result is the first identification of excited states (up to 8^+) in ^{88}Ru making it the heaviest N=Z nucleus where such states are known [1]. Unlike the neighbouring nuclei, showing an alignment in their ground state rotational bands at $I^\pi=8^+$, ^{88}Ru does not, which confirm a trend of lighter N=Z nuclei. Results will also be presented on $1f_{7/2}$ and $A\approx60$ nuclei related to isospin mixing and isospin symmetry in nuclei. [2, 3].

The most recent experiment performed at GASP in the more "classical" high spin field had the goal to search for highly-deformed, superdeformed and stable triaxial structures in ^{138,139}Nd. The status of the analysis of this experiment will also be presented.

References

[1] N. Marginean et al., Phys. Rev. **C**, Rapid Communication, in press.

[2] S. Lenzi et al., Proceedings of the international workshop on N=Z nuclei, Lund 2000.

[3] E. Farnea et al., Proceedings of the international workshop on N=Z nuclei, Lund 2000.

Invited talk.