

GASP

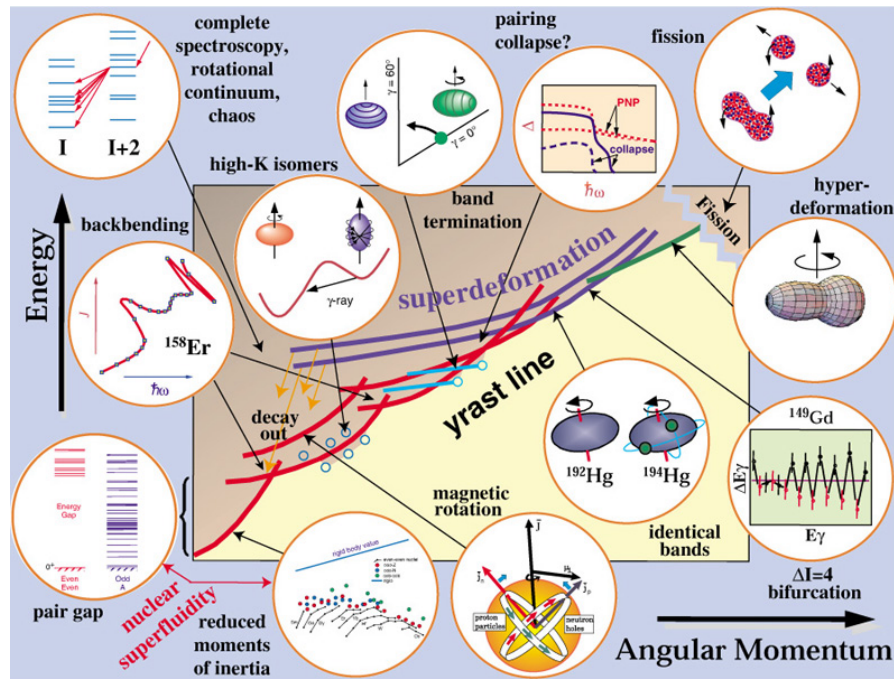
**Gamma-ray SPectrometer to study the structure of the atomic nucleus
at high spin and far from β -stability using heavy-ions beams
from the Tandem-ALPI accelerator of Legnaro**

GASP is an instrument built by a collaboration of INFN Padova, Legnaro and Firenze.
It is a facility located in Legnaro used by italian and foreign research institutions.
In the period 1999-2000 experiments have been performed in collaboration with Koeln,
Rossendorf, Berlin, Copenhagen, Bucarest, Goettingen, Strasbourg, Uppsala, Valencia, Kracow

20 italian physicists involved

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The figure represents schematically some of the new phenomena, particularly those related to **high angular momentum structures**, which are studied with the GASP array by detecting long cascades of γ -ray transitions emitted from a highly excited nucleus. The high efficiency of the spectrometer allows also to investigate **rare decay channels far from the valley of β -stability**, close to the proton drip-line or with a large neutron excess.