

Study of ^{19}Na at SPIRAL *

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The excitation function for the elastic-scattering reaction $p(^{18}\text{Ne},p)^{18}\text{Ne}$ was measured with the first radioactive beam from the SPIRAL facility at the GANIL laboratory and with a solid cryogenic hydrogen target. Several broad resonances have been observed, corresponding to new excited states in the unbound nucleus ^{19}Na . In addition, two-proton emission events have been identified. The observed two-proton transitions connect states in ^{19}Na with states in ^{17}F through known states in ^{18}Ne .

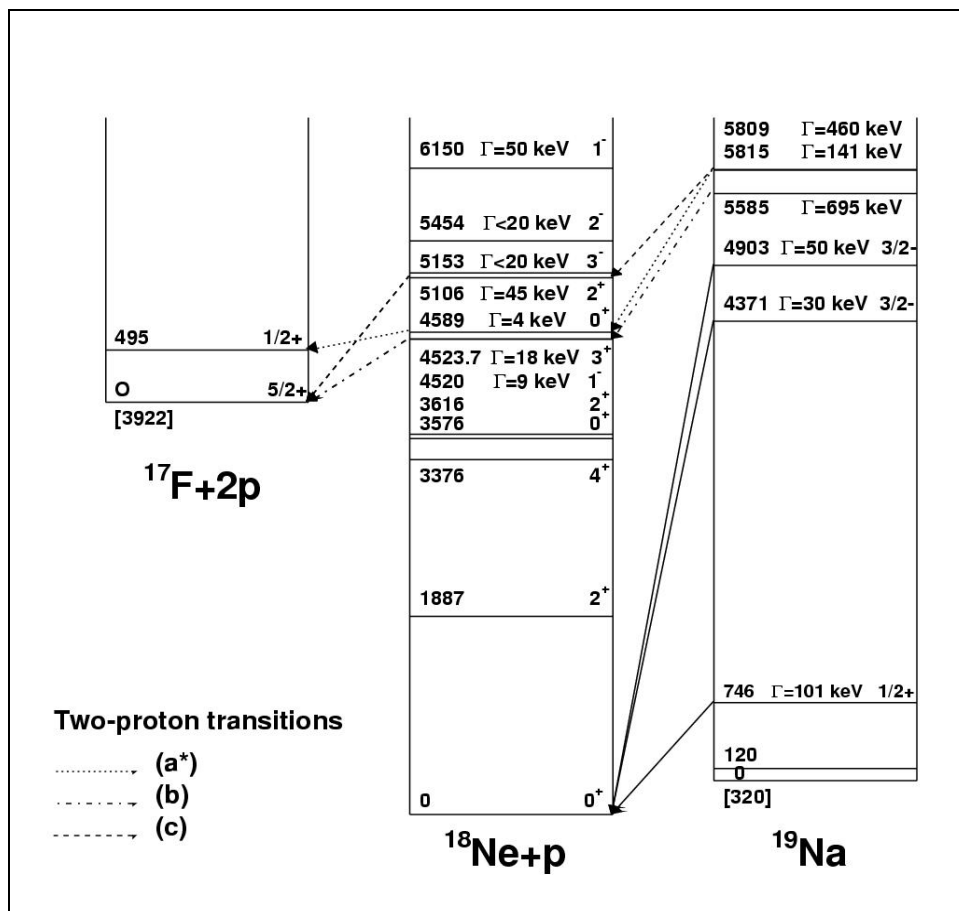


Figure 1: Level scheme. The observed two-proton transitions are shown with dashed lines.

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[1] F. de Oliveira Santos *et al.*, Eur. Phys J. A24, 237 (2005)