## Coulomb excitation 1968An20,1977Li22

History

| Type | Author | Citation | Literature Cutoff Date |
|---|---|---|---|
| Full Evaluation | C. D. Nesaraja, E. A. Mccutchan | NDS 133, 1 (2016) | 30-Sep-2015 |

1968An20: ($^{20}$Ne,$^{20}$Ne′$\gamma$) with E($^{20}$Ne)=35 MeV. Measured E$\gamma$, I$\gamma$ using NaI(Tl) crystal; deduced B(E2) relative to B(E2) for g.s. to 1630-keV level in $^{20}$Ne.

1977Li22: ($^{16}$O,$^{16}$O′$\gamma$) with E($^{16}$O)=22, 24 MeV. Measured E$\gamma$, I$\gamma$ using Compton-suppressed Ge(Li) detector; deduced B(E2) relative to B(E2) for g.s. to 203 level in $^{127}$I.

### $^{41}$K Levels

| E(level)† | Jπ† | Comments |
|---|---|---|
| 0 | 3/2$^+$ | |
| 980.5 | 1/2$^+$ | B(E2)↑=0.0029 *10* (1968An20); B(E2)↑=0.0139 *20* (1977Li22)<br>B(E2)↑: values of 1968An20 and 1977Li20 have been adjusted by the evaluators to account for a change in the B(E2) value of the normalizing transitions. 1968An20 normalize to B(E2)(↑)=0.024 for the g.s. to 1630-keV level in $^{20}$Ne, the value is now known to be 0.033. 1977Li20 normalize to B(E2)(↑)=11.3 W.u. for the g.s. to 203 level in $^{127}$I, the value is now known to be 13.3.<br>B(E2)↑: value from 1977Li22 deduced from B(E2)(W.u.)(↑)=1.4 *2* (1977Li22). |

† From the Adopted Levels.

### $\gamma$($^{41}$K)

| E$\gamma$ | E$_i$(level) | J$_i^\pi$ | E$_f$ | J$_f^\pi$ | Mult. | $\delta$ | Comments |
|---|---|---|---|---|---|---|---|
| 980 | 980.5 | 1/2$^+$ | 0 | 3/2$^+$ | M1+E2 | 0.13 *2* | Mult.,$\delta$: from the Adopted Gammas.<br>$\delta$: other: 0.34 *5* is derived by 1977Li22 by combining their B(E2)(W.u.)(↓)=2.8 *4* value measured in a Coulex experiment with a half-life of 5.0 ps *15* measured in a Doppler Shift Attenuation method (DSAM) experiment. |

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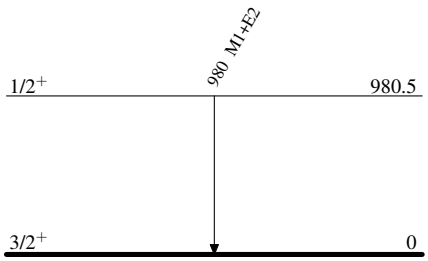
Level Scheme




$^{41}_{19}K_{22}$