# $K_1(1650)$

$I(J^P) = \frac{1}{2}(1^+)$

This entry contains various peaks in strange meson systems ($K^+\phi$, $K\pi\pi$) reported in partial-wave analysis in the 1600–1900 mass region.

## $K_1(1650)$ MASS

| *VALUE* (MeV) | *EVTS* | *DOCUMENT ID* | | *TECN* | *CHG* | *COMMENT* |
|---|---|---|---|---|---|---|
| **1650±50** | | FRAME | 86 | OMEG | + | 13 $K^+ p \to \phi K^+ p$ |
| • • • We do not use the following data for averages, fits, limits, etc. • • • | | | | | | |
| $1861 \pm 10^{+\ 16}_{-\ 46}$ | 24k | [1] AAIJ | 21E | LHCB | | $B^+ \to J/\psi\phi K^+$ |
| $1911 \pm 37^{+124}_{-\ 48}$ | 24k | [1] AAIJ | 21E | LHCB | | $B^+ \to J/\psi\phi K^+$ |
| $1793 \pm 59^{+153}_{-101}$ | 4289 | [2,3] AAIJ | 17C | LHCB | | $B^+ \to J/\psi\phi K^+$ |
| $\sim 1840$ | | ARMSTRONG | 83 | OMEG | − | 18.5 $K^- p \to 3K p$ |
| $\sim 1800$ | | DAUM | 81C | CNTR | − | 63 $K^- p \to K^- 2\pi p$ |

[1] One of two $K_1$ states reported by AAIJ 21E. From an amplitude analysis of the decay $B^+ \to J/\psi\phi K^+$ with a significance of 4.5 $\sigma$.
[2] From an amplitude analysis of the decay $B^+ \to J/\psi\phi K^+$ with a significance of 7.6 $\sigma$.
[3] Superseded by AAIJ 21E.

## $K_1(1650)$ WIDTH

| *VALUE* (MeV) | *EVTS* | *DOCUMENT ID* | | *TECN* | *CHG* | *COMMENT* |
|---|---|---|---|---|---|---|
| **150± 50** | | FRAME | 86 | OMEG | + | 13 $K^+ p \to \phi K^+ p$ |
| • • • We do not use the following data for averages, fits, limits, etc. • • • | | | | | | |
| $149 \pm 41^{+231}_{-\ 23}$ | 24k | [1] AAIJ | 21E | LHCB | | $B^+ \to J/\psi\phi K^+$ |
| $276 \pm 50^{+319}_{-159}$ | 24k | [1] AAIJ | 21E | LHCB | | $B^+ \to J/\psi\phi K^+$ |
| $365 \pm 157^{+138}_{-215}$ | 4289 | [2,3] AAIJ | 17C | LHCB | | $B^+ \to J/\psi\phi K^+$ |
| $\sim 250$ | | DAUM | 81C | CNTR | − | 63 $K^- p \to K^- 2\pi p$ |

[1] One of two $K_1$ states reported by AAIJ 21E. From an amplitude analysis of the decay $B^+ \to J/\psi\phi K^+$ with a significance of 4.5 $\sigma$.
[2] From an amplitude analysis of the decay $B^+ \to J/\psi\phi K^+$ with a significance of 7.6 $\sigma$.
[3] Superseded by AAIJ 21E.

## $K_1(1650)$ DECAY MODES

| | Mode |
|---|---|
| $\Gamma_1$ | $K\pi\pi$ |
| $\Gamma_2$ | $K\phi$ |

# $K_1(1650)$ REFERENCES


| | | | | |
|---|---|---|---|---|
| AAIJ | 21E | PRL 127 082001 | R. Aaij *et al.* | (LHCb Collab.) |
| AAIJ | 17C | PRL 118 022003 | R. Aaij *et al.* | (LHCb Collab.) |
| Also | | PR D95 012002 | R. Aaij *et al.* | (LHCb Collab.) |
| FRAME | 86 | NP B276 667 | D. Frame *et al.* | (GLAS) |
| ARMSTRONG | 83 | NP B221 1 | T.A. Armstrong *et al.* | (BARI, BIRM, CERN+) |
| DAUM | 81C | NP B187 1 | C. Daum *et al.* | (AMST, CERN, CRAC, MPIM+) |