$R_{c0}(4240)$

$I^G(J^{PC}) = 1^+(0^{--})$
I, G, C need confirmation.

OMITTED FROM SUMMARY TABLE
was $X(4240)^{\pm}$

Properties incompatible with a $q\overline{q}$ structure (exotic state). See the review on non-$q\overline{q}$ states.

Spin and parity assigment $J^P = 0^-$ is favored over 1^-, 2^-, and 2^+ by 8 σ and over 1^+ by 1 σ, according to the four-dimensional amplitude analysis of AAIJ 14AG.

$R_{c0}(4240)$ MASS

VALUE (MeV)	*DOCUMENT ID*		*TECN*	*COMMENT*
$4239 \pm 18^{+45}_{-10}$	[1] AAIJ	14AG	LHCB	$B^0 \to K^+\pi^-\psi(2S)$

[1] From a 4-dimensional analysis when a second, lower mass resonance is allowed in the $Z_c(4430)$ fit, with significance 6 σ including systematic variations.

$R_{c0}(4240)$ WIDTH

VALUE (MeV)	*DOCUMENT ID*		*TECN*	*COMMENT*
$220 \pm 47^{+108}_{-74}$	[1] AAIJ	14AG	LHCB	$B^0 \to K^+\pi^-\psi(2S)$

[1] From a 4-dimensional analysis when a second, lower mass resonance is allowed in the $Z_c(4430)$ fit, with significance 6 σ including systematic variations.

$R_{c0}(4240)$ DECAY MODES

	Mode	Fraction (Γ_i/Γ)
Γ_1	$\pi^-\psi(2S)$	seen

$R_{c0}(4240)$ BRANCHING RATIOS

$\Gamma(\pi^-\psi(2S))/\Gamma_{\text{total}}$ **Γ_1/Γ**

VALUE	*DOCUMENT ID*		*TECN*	*COMMENT*
seen	[1] AAIJ	14AG	LHCB	$B^0 \to K^+\pi^-\psi(2S)$

[1] From a 4-dimensional analysis when a second, lower mass resonance is allowed in the $Z_c(4430)$ fit. No partial branching fraction quoted.

$R_{c0}(4240)$ REFERENCES

AAIJ 14AG PRL 112 222002 R. Aaij *et al.* (LHCb Collab.)