

Reference = YANG 14; PR D90 112008
Verifier code = BELLE

PLEASE READ NOW

*PLEASE
REPLY
WITHIN
ONE WEEK*

Normally we send all verifications for one experiment to one person, usually the spokesperson or data-analysis coordinator, who then distributes them to the appropriate people. Please tell us if we should send the verifications for your experiment to someone else.

Karim Trabelsi

EMAIL: karim.trabelsi@kek.jp

July 21, 2016

Dear Colleague,

- (1) Please check the results of your experiment carefully. They are marked.
- (2) Please reply within one week.
- (3) Please reply even if everything is correct.
- (4) IMPORTANT!! Please tell WHICH papers you are verifying. We have lots of requests out.
- (5) Feel free to make comments on our treatment of any of the results (not just yours) you see.

Thank you for helping us make the Review accurate and useful.

Sincerely,

Simon Eidelman
BINP, Budker Inst. of Nuclear Physics
Prospekt Lavrent'eva 11
RU-630090 Novosibirsk
Russian Federation

EMAIL: simon.eidelman@cern.ch

$b\bar{b}$ MESONS

$\gamma(1S)$

$$J^{PC} = 0^{-}(1^{-}-)$$

NODE=MXXX030

NODE=M049

$\gamma(1S)$ BRANCHING RATIOS

NODE=M049225

 $\Gamma(J/\psi(1S)\eta_c)/\Gamma_{\text{total}}$
 Γ_8/Γ

VALUE	CL%
$<2.2 \times 10^{-6}$	90

DOCUMENT ID

TECN

COMMENT

YOUR DATA

YANG

14

BELL

 $e^+e^- \rightarrow J/\psi X$ NODE=M049R85
NODE=M049R85
 $\Gamma(J/\psi(1S)\chi_{c0})/\Gamma_{\text{total}}$
 Γ_9/Γ

VALUE	CL%
$<3.4 \times 10^{-6}$	90

DOCUMENT ID

TECN

COMMENT

YOUR DATA

YANG

14

BELL

 $e^+e^- \rightarrow J/\psi X$ NODE=M049R86
NODE=M049R86
 $\Gamma(J/\psi(1S)\chi_{c1})/\Gamma_{\text{total}}$
 Γ_{10}/Γ

VALUE (units 10^{-6})	EVS
$3.90 \pm 1.21 \pm 0.23$	20

DOCUMENT ID

TECN

COMMENT

YOUR DATA

YANG

14

BELL

 $e^+e^- \rightarrow J/\psi X$ NODE=M049R87
NODE=M049R87
 $\Gamma(J/\psi(1S)\chi_{c2})/\Gamma_{\text{total}}$
 Γ_{11}/Γ

VALUE	CL%
$<1.4 \times 10^{-6}$	90

DOCUMENT ID

TECN

COMMENT

YOUR DATA

YANG

14

BELL

 $e^+e^- \rightarrow J/\psi X$ NODE=M049R88
NODE=M049R88
 $\Gamma(J/\psi(1S)\eta_c(2S))/\Gamma_{\text{total}}$
 Γ_{12}/Γ

VALUE	CL%
$<2.2 \times 10^{-6}$	90

DOCUMENT ID

TECN

COMMENT

YOUR DATA

YANG

14

BELL

 $e^+e^- \rightarrow J/\psi X$ NODE=M049R89
NODE=M049R89
 $\Gamma(J/\psi(1S)X(3940))/\Gamma_{\text{total}}$
 Γ_{13}/Γ

VALUE	CL%
$<5.4 \times 10^{-6}$	90

DOCUMENT ID

TECN

COMMENT

YOUR DATA

YANG

14

BELL

 $e^+e^- \rightarrow J/\psi X$ NODE=M049R90
NODE=M049R90
 $\Gamma(J/\psi(1S)X(4160))/\Gamma_{\text{total}}$
 Γ_{14}/Γ

VALUE	CL%
$<5.4 \times 10^{-6}$	90

DOCUMENT ID

TECN

COMMENT

YOUR DATA

YANG

14

BELL

 $e^+e^- \rightarrow J/\psi X$ NODE=M049R91
NODE=M049R91
 $\Gamma(\psi(2S)\eta_c)/\Gamma_{\text{total}}$
 Γ_{19}/Γ

VALUE	CL%
$<3.6 \times 10^{-6}$	90

DOCUMENT ID

TECN

COMMENT

YOUR DATA

YANG

14

BELL

 $e^+e^- \rightarrow \psi(2S) X$ NODE=M049R92
NODE=M049R92
 $\Gamma(\psi(2S)\chi_{c0})/\Gamma_{\text{total}}$
 Γ_{20}/Γ

VALUE	CL%
$<6.5 \times 10^{-6}$	90

DOCUMENT ID

TECN

COMMENT

YOUR DATA

YANG

14

BELL

 $e^+e^- \rightarrow \psi(2S) X$ NODE=M049R93
NODE=M049R93
 $\Gamma(\psi(2S)\chi_{c1})/\Gamma_{\text{total}}$
 Γ_{21}/Γ

VALUE	CL%
$<4.5 \times 10^{-6}$	90

DOCUMENT ID

TECN

COMMENT

YOUR DATA

YANG

14

BELL

 $e^+e^- \rightarrow \psi(2S) X$ NODE=M049R94
NODE=M049R94
 $\Gamma(\psi(2S)\chi_{c2})/\Gamma_{\text{total}}$
 Γ_{22}/Γ

VALUE	CL%
$<2.1 \times 10^{-6}$	90

DOCUMENT ID

TECN

COMMENT

YOUR DATA

YANG

14

BELL

 $e^+e^- \rightarrow \psi(2S) X$ NODE=M049R95
NODE=M049R95
 $\Gamma(\psi(2S)\eta_c(2S))/\Gamma_{\text{total}}$
 Γ_{23}/Γ

VALUE	CL%
$<3.2 \times 10^{-6}$	90

DOCUMENT ID

TECN

COMMENT

YOUR DATA

YANG

14

BELL

 $e^+e^- \rightarrow \psi(2S) X$ NODE=M049R96
NODE=M049R96
 $\Gamma(\psi(2S)X(3940))/\Gamma_{\text{total}}$
 Γ_{24}/Γ

VALUE	CL%
$<2.9 \times 10^{-6}$	90

DOCUMENT ID

TECN

COMMENT

YOUR DATA

YANG

14

BELL

 $e^+e^- \rightarrow \psi(2S) X$ NODE=M049R97
NODE=M049R97

$\Gamma(\psi(2S)X(4160))/\Gamma_{\text{total}}$
 Γ_{25}/Γ

 NODE=M049R98
 NODE=M049R98

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
$<2.9 \times 10^{-6}$	90	YANG	14	BELL $e^+e^- \rightarrow \psi(2S)X$

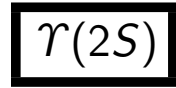
YOUR DATA

$\Upsilon(1S)$ REFERENCES

NODE=M049

YOUR PAPER

 YANG 14 PR D90 112008 S.D. Yang *et al.* (BELLE Collab.)

 REFID=56345
 NODE=M052


$$I^G(J^{PC}) = 0^-(1^{--})$$

$\Upsilon(2S)$ BRANCHING RATIOS

NODE=M052225

 $\Gamma(J/\psi(1S)\eta_c)/\Gamma_{\text{total}}$
 Γ_9/Γ

 NODE=M052R53
 NODE=M052R53

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
$<5.4 \times 10^{-6}$	90	YANG	14	BELL $e^+e^- \rightarrow J/\psi X$

YOUR DATA

 $\Gamma(J/\psi(1S)\chi_{c0})/\Gamma_{\text{total}}$
 Γ_{10}/Γ

 NODE=M052R54
 NODE=M052R54

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
$<3.4 \times 10^{-6}$	90	YANG	14	BELL $e^+e^- \rightarrow J/\psi X$

YOUR DATA

 $\Gamma(J/\psi(1S)\chi_{c1})/\Gamma_{\text{total}}$
 Γ_{11}/Γ

 NODE=M052R55
 NODE=M052R55

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
$<1.2 \times 10^{-6}$	90	YANG	14	BELL $e^+e^- \rightarrow J/\psi X$

YOUR DATA

 $\Gamma(J/\psi(1S)\chi_{c2})/\Gamma_{\text{total}}$
 Γ_{12}/Γ

 NODE=M052R56
 NODE=M052R56

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
$<2.0 \times 10^{-6}$	90	YANG	14	BELL $e^+e^- \rightarrow J/\psi X$

YOUR DATA

 $\Gamma(J/\psi(1S)\eta_c(2S))/\Gamma_{\text{total}}$
 Γ_{13}/Γ

 NODE=M052R57
 NODE=M052R57

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
$<2.5 \times 10^{-6}$	90	YANG	14	BELL $e^+e^- \rightarrow J/\psi X$

YOUR DATA

 $\Gamma(J/\psi(1S)X(3940))/\Gamma_{\text{total}}$
 Γ_{14}/Γ

 NODE=M052R58
 NODE=M052R58

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
$<2.0 \times 10^{-6}$	90	YANG	14	BELL $e^+e^- \rightarrow J/\psi X$

YOUR DATA

 $\Gamma(J/\psi(1S)X(4160))/\Gamma_{\text{total}}$
 Γ_{15}/Γ

 NODE=M052R59
 NODE=M052R59

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
$<2.0 \times 10^{-6}$	90	YANG	14	BELL $e^+e^- \rightarrow J/\psi X$

YOUR DATA

 $\Gamma(\psi(2S)\eta_c)/\Gamma_{\text{total}}$
 Γ_{16}/Γ

 NODE=M052R60
 NODE=M052R60

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
$<5.1 \times 10^{-6}$	90	YANG	14	BELL $e^+e^- \rightarrow \psi(2S)X$

YOUR DATA

 $\Gamma(\psi(2S)\chi_{c0})/\Gamma_{\text{total}}$
 Γ_{17}/Γ

 NODE=M052R61
 NODE=M052R61

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
$<4.7 \times 10^{-6}$	90	YANG	14	BELL $e^+e^- \rightarrow \psi(2S)X$

YOUR DATA

 $\Gamma(\psi(2S)\chi_{c1})/\Gamma_{\text{total}}$
 Γ_{18}/Γ

 NODE=M052R62
 NODE=M052R62

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
$<2.5 \times 10^{-6}$	90	YANG	14	BELL $e^+e^- \rightarrow \psi(2S)X$

YOUR DATA

 $\Gamma(\psi(2S)\chi_{c2})/\Gamma_{\text{total}}$
 Γ_{19}/Γ

 NODE=M052R63
 NODE=M052R63

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
$<1.9 \times 10^{-6}$	90	YANG	14	BELL $e^+e^- \rightarrow \psi(2S)X$

YOUR DATA

 $\Gamma(\psi(2S)\eta_c(2S))/\Gamma_{\text{total}}$
 Γ_{20}/Γ

 NODE=M052R64
 NODE=M052R64

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
$<3.3 \times 10^{-6}$	90	YANG	14	BELL $e^+e^- \rightarrow \psi(2S)X$

YOUR DATA

 $\Gamma(\psi(2S)X(3940))/\Gamma_{\text{total}}$
 Γ_{21}/Γ

 NODE=M052R65
 NODE=M052R65

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
$<3.9 \times 10^{-6}$	90	YANG	14	BELL $e^+e^- \rightarrow \psi(2S)X$

YOUR DATA

$\Gamma(\psi(2S)X(4160))/\Gamma_{\text{total}}$

Γ_{22}/Γ

VALUE

CL%

DOCUMENT ID

TECN

COMMENT

YOUR DATA

$<3.9 \times 10^{-6}$

90

YANG

14

BELL

$e^+e^- \rightarrow \psi(2S)X$

I

NODE=M052R66
NODE=M052R66

$\Upsilon(2S)$ REFERENCES

YOUR PAPER

YANG

14

PR D90 112008

S.D. Yang *et al.*

(BELLE Collab.)

NODE=M052
REFID=56345