Reference = MATVIENKO 15; PR D92 012013
Verifier code = SAKAI

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

PLEASE READ NOW

PLEASE REPLY WITHIN ONE WEEK

Yoshihide Sakai

EMAIL: yoshihide.sakai@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

LIGHT UNFLAVORED MESONS
($S = C = B = 0$)

NODE=MXXX005

For $I = 1$ (π, b, ρ, a): $u\overline{d}$, $(u\overline{u}-d\overline{d})/\sqrt{2}$, $d\overline{u}$;
for $I = 0$ (η, η', h, h', ω, ϕ, f, f'): $c_1(u\overline{u} + d\overline{d}) + c_2(s\overline{s})$

NODE=MXXX005

NODE=M105

$\rho(1450)$

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

See our mini-review under the $\rho(1450)$.

NODE=M105

$\rho(1450)$ MASS

NODE=M105205

$\omega\pi$ MODE

NODE=M105M3
NODE=M105M3

	VALUE (MeV)	EVTS	DOCUMENT ID		TECN	COMMENT
	• • • We do not use the following data for averages, fits, limits, etc. • • •					
YOUR DATA	$1544 \pm 22^{+11}_{-46}$	821	[1] MATVIENKO	15	BELL	$\overline{B}^0 \to D^{*0}\omega\pi^-$
	1491 ± 19	7815	[2] ACHASOV	13	SND	1.05–2.00 $e^+e^- \to \pi^0\pi^0\gamma$
	$1582 \pm 17 \pm 25$	2382	[3] AKHMETSHIN	03B	CMD2	$e^+e \to \pi^0\pi^0\gamma$
	$1349 \pm 25^{+10}_{-5}$	341	[4] ALEXANDER	01B	CLE2	$B \to D^{(*)}\omega\pi^-$
	1523 ± 10		[5] EDWARDS	00A	CLE2	$\tau^- \to \omega\pi^-\nu_\tau$
	1463 ± 25		[6] CLEGG	94	RVUE	
	1250		[7] ASTON	80C	OMEG	20–70 $\gamma p \to \omega\pi^0 p$
	1290 ± 40		[7] BARBER	80C	SPEC	3–5 $\gamma p \to \omega\pi^0 p$

YOUR NOTE

[1] Using Breit-Wigner parameterization of the $\rho(1450)$ and assuming equal probabilities of the $\rho(1450) \to \pi\pi$ and $\rho(1450) \to \omega\pi$ decays. NODE=M105M3;LINKAGE=C

[2] From a phenomenological model based on vector meson dominance with the interfering $\rho(1450)$ and $\rho(1700)$ and their widths fixed at 400 and 250 MeV, respectively. Systematic uncertainty not estimated. NODE=M105M3;LINKAGE=AC

[3] Using the data of AKHMETSHIN 03B and BISELLO 91B assuming the $\omega\pi^0$ and $\pi^+\pi^-$ mass dependence of the total width. $\rho(1700)$ mass and width fixed at 1700 MeV and 240 MeV, respectively. NODE=M105M3;LINKAGE=HK

[4] Using Breit-Wigner parameterization of the $\rho(1450)$ and assuming the $\omega\pi^-$ mass dependence for the total width. NODE=M105M3;LINKAGE=3Z

[5] Mass-independent width parameterization. $\rho(1700)$ mass and width fixed at 1700 MeV and 235 MeV respectively. NODE=M105M;LINKAGE=E1

[6] Using data from BISELLO 91B, DOLINSKY 86 and ALBRECHT 87L. NODE=M105M3;LINKAGE=B

[7] Not separated from $b_1(1235)$, not pure $J^P = 1^-$ effect. NODE=M105M3;LINKAGE=A

$\rho(1450)$ WIDTH

NODE=M105210

$\omega\pi$ MODE

NODE=M105W3
NODE=M105W3

	VALUE (MeV)	EVTS	DOCUMENT ID		TECN	COMMENT
	• • • We do not use the following data for averages, fits, limits, etc. • • •					
YOUR DATA	$303^{+31}_{-52} {}^{+69}_{-7}$	821	[1] MATVIENKO	15	BELL	$\overline{B}^0 \to D^{*0}\omega\pi^-$
	$429 \pm 42 \pm 10$	2382	[2] AKHMETSHIN	03B	CMD2	$e^+e \to \pi^0\pi^0\gamma$
	$547 \pm 86^{+46}_{-45}$	341	[3] ALEXANDER	01B	CLE2	$B \to D^{(*)}\omega\pi^-$
	400 ± 35		[4] EDWARDS	00A	CLE2	$\tau^- \to \omega\pi^-\nu_\tau$
	311 ± 62		[5] CLEGG	94	RVUE	
	300		[6] ASTON	80C	OMEG	20–70 $\gamma p \to \omega\pi^0 p$
	320 ± 100		[6] BARBER	80C	SPEC	3–5 $\gamma p \to \omega\pi^0 p$

YOUR NOTE

[1] Using Breit-Wigner parameterization of the $\rho(1450)$ and assuming equal probabilities of the $\rho(1450) \to \pi\pi$ and $\rho(1450) \to \omega\pi$ decays. NODE=M105W3;LINKAGE=C

[2] Using the data of AKHMETSHIN 03B and BISELLO 91B assuming the $\omega\pi^0$ and $\pi^+\pi^-$ mass dependence of the total width. $\rho(1700)$ mass and width fixed at 1700 MeV and 240 MeV, respectively. NODE=M105W3;LINKAGE=HK

[3] Using Breit-Wigner parameterization of the $\rho(1450)$ and assuming the $\omega\pi^-$ mass dependence for the total width. NODE=M105W3;LINKAGE=3Z

[4] Mass-independent width parameterization. $\rho(1700)$ mass and width fixed at 1700 MeV and 235 MeV respectively. NODE=M105W;LINKAGE=E1

[5] Using data from BISELLO 91B, DOLINSKY 86 and ALBRECHT 87L. NODE=M105W3;LINKAGE=B
[6] Not separated from $b_1(1235)$, not pure $J^P = 1^-$ effect. NODE=M105W3;LINKAGE=A

$\rho(1450)$ BRANCHING RATIOS

NODE=M105225

$\Gamma(\omega\pi)/\Gamma_{total}$ — Γ_3/Γ

NODE=M105R5
NODE=M105R5

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •					
YOUR DATA seen	821	[1] MATVIENKO	15	BELL	$\overline{B}^0 \to D^{*0}\omega\pi^-$
seen	1.6k	ACHASOV	12	SND	$e^+e^- \to \pi^0\pi^0\gamma$
~ 0.21		CLEGG	94	RVUE	

YOUR NOTE [1] Using Breit-Wigner parameterization of the $\rho(1450)$ and assuming equal probabilities of the $\rho(1450) \to \pi\pi$ and $\rho(1450) \to \omega\pi$ decays. NODE=M105R5;LINKAGE=A

$\rho(1450)$ REFERENCES

NODE=M105

YOUR PAPER MATVIENKO	15	PR D92 012013	D. Matvienko *et al.*	(BELLE Collab.)	REFID=56601
ACHASOV	13	PR D88 054013	M.N. Achasov *et al.*	(SND Collab.)	REFID=55584
ACHASOV	12	JETPL 94 734	M.N. Achasov *et al.*		REFID=54275
		Translated from ZETFP 94 796.			
AKHMETSHIN	03B	PL B562 173	R.R. Akhmetshin *et al.*	(Novosibirsk CMD-2 Collab.)	REFID=49406
ALEXANDER	01B	PR D64 092001	J.P. Alexander *et al.*	(CLEO Collab.)	REFID=48391
EDWARDS	00A	PR D61 072003	K.W. Edwards *et al.*	(CLEO Collab.)	REFID=47465
CLEGG	94	ZPHY C62 455	A.B. Clegg, A. Donnachie	(LANC, MCHS)	REFID=44081
BISELLO	91B	NPBPS B21 111	D. Bisello	(DM2 Collab.)	REFID=41752
ALBRECHT	87L	PL B185 223	H. Albrecht *et al.*	(ARGUS Collab.)	REFID=40418
DOLINSKY	86	PL B174 453	S.I. Dolinsky *et al.*	(NOVO)	REFID=20246
ASTON	80C	PL 92B 211	D. Aston	(BONN, CERN, EPOL, GLAS, LANC+)	REFID=20652
BARBER	80C	ZPHY C4 169	D.P. Barber *et al.*	(DARE, LANC, SHEF)	REFID=20653

NODE=M065

$\rho(1700)$

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

$\rho(1700)$ BRANCHING RATIOS

NODE=M065230

$\Gamma(\pi^0\omega)/\Gamma_{total}$ — Γ_{18}/Γ

NODE=M065R13
NODE=M065R13

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •					
YOUR DATA not seen		MATVIENKO	15	BELL	$\overline{B}^0 \to D^{*0}\omega\pi^-$
seen	1.6k	ACHASOV	12	SND	$e^+e^- \to \pi^0\pi^0\gamma$
not seen	2382	AKHMETSHIN	03B	CMD2	$e^+e \to \pi^0\pi^0\gamma$
seen		ACHASOV	97	RVUE	$e^+e^- \to \omega\pi^0$

$\rho(1700)$ REFERENCES

NODE=M065

YOUR PAPER MATVIENKO	15	PR D92 012013	D. Matvienko *et al.*	(BELLE Collab.)	REFID=56601
ACHASOV	12	JETPL 94 734	M.N. Achasov *et al.*		REFID=54275
		Translated from ZETFP 94 796.			
AKHMETSHIN	03B	PL B562 173	R.R. Akhmetshin *et al.*	(Novosibirsk CMD-2 Collab.)	REFID=49406
ACHASOV	97	PR D55 2663	N.N. Achasov *et al.*	(NOVM)	REFID=45382