

NON- $q\bar{q}$ CANDIDATES

We include here mini-reviews and reference lists on gluonium and other non- $q\bar{q}$ candidates. See also the section on Futher States for possible bound states.

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Non- $q\bar{q}$ Candidates

OMITTED FROM SUMMARY TABLE

NON- $q\bar{q}$ CANDIDATES REFERENCES

GELMAN	03	PL B551 296	B.A. Gelman, S. Nussinov
HOU	03	PR D67 034003	W.-S. Hou, G.-G. Wong
JIN	03	PR D67 014025	H.Y. Jin, J.G. Korener, T.G. Steele
ACHASOV	02I	PAN 65 546	N.N. Achasov
		Translated from YAF 65 573.	
ACHASOV	02K	PAN 65 1528	N.N. Achasov <i>et al.</i>
		Translated from YAF 65 1566.	
ALOISIO	02E	PL B541 45	A. Aloisio <i>et al.</i> (KLOE Collab.)
AMSLER	02	EPJ C23 29	C. Amsler <i>et al.</i>
AMSLER	02B	PL B541 22	C. Amsler
BASS	02	PR D65 057503	S.D. Bass, E. Marco
BLACK	02	PRL 88 181603	D. Black, M. Harada, J. Schechter
BOGLIONE	02	PR D65 114010	M. Boglione, M.R. Pennington
BRAMON	02	EPJ C26 253	A. Bramon <i>et al.</i>
CHUA	02	PL B544 139	C.-K. Chua, W.-S. Hou, S.U. Tsai
CLOSE	02	PR D65 092003	F.E. Close, A. Donnachie, Yu.S. Kalashnikova
FURMAN	02	PL B538 266	A. Furman, L. Lesniak
ISHIDA	02	PL B539 249	S. Ishida, M. Ishida
JIN	02	PR D66 057505	H. Jin, X. Zhang
KLEEFELD	02	PR D66 034007	F. Kleefeld, E. van Beveren, G. Rupp
LIU	02	PL B529 65	L.C. Liu
THOMAS	02	PL B526 72	A.W. Thomas, A.P. Szczepaniak
ZHANG	02	PR D65 096005	R. Zhang <i>et al.</i>
ABELE	01	EPJ C19 667	A. Abele <i>et al.</i> (Crystal Barrel Collab.)
ABELE	01B	EPJ C21 261	A. Abele <i>et al.</i> (Crystal Barrel Collab.)
ACCIARRI	01H	PL B501 173	M. Acciarri <i>et al.</i> (L3 Collab.)
AITALA	01A	PRL 86 765	E.M. Aitala <i>et al.</i> (FNAL E791 Collab.)
AMSLER	01	PL B520 175	C. Amsler <i>et al.</i> (Crystal Barrel Collab.)
ANISOVICH	01H	EPJ A12 103	A.V. Anisovich, V.V. Anisovich, V.A. Nikonov
CLOSE	01B	EPJ C21 531	F.E. Close, A. Kirk
IDDIR	01	PL B507 183	F. Iddir, A.S. Safir
IVANOV	01	PRL 86 3977	E.I. Ivanov <i>et al.</i>
ACHASOV	00E	NP B569 158	M.N. Achasov <i>et al.</i> (Novosibirsk SND Collab.)
ACHASOV	00F	PL B479 53	M.N. Achasov <i>et al.</i> (Novosibirsk SND Collab.)
ALFORD	00	NP B578 367	M. Alford, R.L. Jaffe
BARATE	00E	PL B472 189	R. Barate <i>et al.</i> (ALEPH Collab.)
BARBERIS	00C	PL B471 440	D. Barberis <i>et al.</i> (WA 102 Collab.)
BARBERIS	00E	PL B479 59	D. Barberis <i>et al.</i> (WA 102 Collab.)
BEVEREN	00	PL B495 300	E. van Beveren, G. Rupp, M.D. Scadron
Also	01	PL B509 365 (erratum)	E. van Beveren, G. Rupp, M.D. Scadron
FILIPPI	00	PL B495 284	A. Filippi <i>et al.</i> (OBELIX Experiment)
KIRK	00	PL B489 29	A. Kirk
NOYA	00A	PL B479 163	H. Noya, T. Sanaki
VLADIMIRSKII	00	JETPL 26 486	V.V. Vladimirkii <i>et al.</i>
		Translated from ZETFP 72 698.	

ABELE	99	PL B446 349	A. Abele <i>et al.</i>	(Crystal Barrel Collab.)
ABELE	99B	EPJ C8 67	A. Abele <i>et al.</i>	(Crystal Barrel Collab.)
AKHMETSHIN	99C	PL B462 380	R.R. Akhmetshin <i>et al.</i>	(Novosibirsk CMD-2 Collab.)
AMSLER	99	NP A663 and 664 93C	C. Amsler	
Proceedings XV Particle and Nucle Int. Conf., Uppsala				
BAKER	99	PL B449 114	C.A. Baker <i>et al.</i>	
BARBERIS	99	PL B453 305	D. Barberis <i>et al.</i>	(Omega Expt.)
BARBERIS	99B	PL B453 316	D. Barberis <i>et al.</i>	(Omega Expt.)
BARBERIS	99D	PL B462 462	D. Barberis <i>et al.</i>	(Omega Expt.)
BELLAZZINI	99	PL B467 296	R. Bellazzini <i>et al.</i>	
BRACCINI	99	Hadron Spectroscopy 53	S. Braccini	
Frascati Physics Series XV (1999) 53, Proceedings Workshop on Hadron Spectroscopy				
BUGG	99	PL B458 511	D.V. Bugg <i>et al.</i>	
CHUNG	99	PR D60 092001	S.U. Chung <i>et al.</i>	(BNL E852 Collab.)
DELBOURGO	99	PL B446 332	R. Delbourgo, D. Liu, M. Scadron	
DONNACHIE	99	PR D60 114011	A. Donnachie, Yu.S. Kalashnikova	
DUENNWEBER	99	NP A 663 + 664, 592C	W. Duennweber	
Proc. XV Particles and Nuclei Int. Conf., Uppsala				
FRENCH	99	PL B460 213	B. French <i>et al.</i>	(WA76 Collab.)
GODFREY	99	RMP 71 1411	S. Godfrey, J. Napolitano	
KISIEL	99	Hadron Spectroscopy	J. Kisiel	
Frascati Physics Series XV 357, Proceedings Workshop				
LANDSBERG	99	SPU 42 871	L.G. Landsberg	
Translated from UFN 42 961.				
MALTMAN	99B	PL B462 14	K. Maltman	
MINKOWSKI	99	EPJ C9 283	P. Minkowski, W. Ochs	
MORNINGSTAR	99	PR D60 034509	C.J. Morningstar, M. Peardon	
PAGE	99	PR D59 034016	P.R. Page, E.S. Swanson, A.P. Szczepaniak	
PALANO	99	Hadron Spectroscopy 363	A. Palano	
Frascati Physics Series XV 363, Proceedings Workshop on Hadron Spectroscopy				
THOMA	99	Hadron Spectroscopy 45	U. Thoma	
Frascati Physics Series XV 45, Proceedings Workshop on Hadron Spectroscopy				
TORNQVIST	99	EPJ C11 359	N. Tornqvist	
ABELE	98	PR D57 3860	A. Abele <i>et al.</i>	(Crystal Barrel Collab.)
ABELE	98B	PL B423 175	A. Abele <i>et al.</i>	(Crystal Barrel Collab.)
ACHASOV	98B	PL B438 441	M.N. Achasov <i>et al.</i>	(Novosibirsk SND Collab.)
ACHASOV	98I	PL B440 442	M.N. Achasov <i>et al.</i>	
ACKERSTAFF	98Q	EPJ C4 19	K. Ackerstaff <i>et al.</i>	(OPAL Collab.)
ADAMS	98B	PRL 81 5760	G.S. Adams <i>et al.</i>	(MPS Collab.)
AMSLER	98	RMP 70 1293	C. Amsler	
BARBERIS	98	PL B432 436	D. Barberis <i>et al.</i>	(Omega Expt.)
BERTIN	98	PR D57 55	A. Bertin <i>et al.</i>	(OBELIX Collab.)
CLOSE	98B	PL B419 387	F.E. Close	
DONNACHIE	98	PR D58 114012	A. Donnachie <i>et al.</i>	
EVANGELISTA	98	PR D57 5370	C. Evangelista <i>et al.</i>	(JETSET Collab.)
LOCHER	98	EPJ C4 317	M.P. Locher <i>et al.</i>	(PSI)
REYES	98	PRL 81 4079	M.A. Reyes <i>et al.</i>	
ACHASOV	97C	PR D56 4084	N.N. Achasov <i>et al.</i>	
ACHASOV	97D	PR D56 203	N.N. Achasov <i>et al.</i>	
ACHASOV	97E	IJMP A12 5019	N.N. Achasov <i>et al.</i>	
ANISOVICH	97	PL B395 123	A.V. Anisovich, A.V. Sarantsev	(PNPI)
ANISOVICH	97B	ZPHY A357 123	A.V. Anisovich <i>et al.</i>	(PNPI)
ANISOVICH	97C	PL B413 137	A.V. Anisovich, A.V. Sarantsev	
ANISOVICH	97E	PAN 60 1892	A.V. Anisovich <i>et al.</i>	(PNPI)
Translated from YAF 60 2065.				
BARBERIS	97	PL B397 339	D. Barberis <i>et al.</i>	(WA 102 Collab.)
BARBERIS	97B	PL B413 217	D. Barberis <i>et al.</i>	(WA 102 Collab.)
BARBERIS	97C	PL B413 225	D. Barberis <i>et al.</i>	(WA 102 Collab.)
BARNES	97	PR D55 4157	T. Barnes <i>et al.</i>	(ORNL, RAL, MCHS)
BERNARD	97	PR D56 7039	C. Bernard <i>et al.</i>	(MILC Collab.)
BERTIN	97	PL B400 226	A. Bertin <i>et al.</i>	(OBELIX Collab.)
BERTIN	97C	PL B408 476	A. Bertin <i>et al.</i>	(OBELIX Collab.)
BOGLIONE	97	PRL 79 1998	M. Boglione <i>et al.</i>	
BUGG	97	PL B396 295	D.V. Bugg <i>et al.</i>	
CLOSE	97	PL B397 333	F. Close <i>et al.</i>	(RAL, BIRM)
CLOSE	97B	PR D55 5749	F. Close <i>et al.</i>	(RAL, RUTG, BEIJT)
DUNWOODIE	97	Hadron 97 Conf.	W. Dunwoodie	(SLAC)
FRABETTI	97D	PL B407 79	P.L. Frabetti <i>et al.</i>	(FNAL E687 Collab.)
GERASYUTA	97	ZPHY C74 325	S.M. Gerasyuta <i>et al.</i>	
HOU	97	PR D55 6952	W.-S. Hou	
KISSLINGER	97	PL B410 1	L.S. Kisslinger <i>et al.</i>	
LACOCK	97	PL B401 308	P. Lacock <i>et al.</i>	(EDIN, LIVP)

MICHAEL	97	Hadron 97 Conf.	C. Michael	
		AIP Conf. Proc. 432 657		
OLLER	97	NP A620 438	J.A. Oller <i>et al.</i>	(VALE)
OLLER	97B	Hadron 97 Conf.	J.A. Oller, E. Oset	
		AIP Conf. Proc. 432 413		
PAGE	97	PL B402 183	P.R. Page	
PAGE	97B	NP B495 268	P.R. Page	
PAGE	97C	PL B415 205	P.R. Page	(CEBAF)
SWANSON	97	Hadron 97 Conf.	E.S. Swanson	
		AIP Conf. Proc. 432 471		
THOMPSON	97	PRL 79 1630	D.R. Thompson <i>et al.</i>	(E852 Collab.)
WEINGARTEN	97	NPPS 53 232	D. Weingarten	
YAN	97	JPG 23 L33	Y. Yan <i>et al.</i>	
ZAITSEV	97	Hadron 97 Conf.	A. Zaitsev	
		AIP Conf. Proc. 432 461		
ABELE	96	PL B380 453	A. Abele <i>et al.</i>	(Crystal Barrel Collab.)
ABELE	96B	PL B385 425	A. Abele <i>et al.</i>	(Crystal Barrel Collab.)
ADOMEIT	96	ZPHY C71 227	J. Adomeit <i>et al.</i>	(Crystal Barrel Collab.)
AMELIN	96B	PAN 59 976	D.V. Amelin <i>et al.</i>	(SERP, TBIL)
		Translated from YAF 59 1021.		
AMSLER	96	PR D53 295	C. Amsler, F.E. Close	(ZURI, RAL)
AMSLER	96B	ZPHY C70 219	C. Amsler <i>et al.</i>	(Crystal Barrel Collab.)
AMSLER	96C	Third Paper	C. Amsler <i>et al.</i>	(Crystal Barrel Collab.)
BAI	96B	PRL 76 3502	J.Z. Bai <i>et al.</i>	(BES Collab.)
BAI	96C	PRL 77 3959	J.Z. Bai <i>et al.</i>	(BES Collab.)
BAJC	96	ZPHY A356 187	B. Bajc <i>et al.</i>	
CLOSE	96	PL B366 323	F.E. Close, P.R. Page	(RAL)
SZCZEPANIAK	96	PRL 76 2011	A. Szczepaniak <i>et al.</i>	(NCARO)
TORNQVIST	96	PRL 76 1575	N.A. Tornqvist, M. Roos	(HELS)
AMELIN	95B	PL B356 595	D.V. Amelin <i>et al.</i>	(SERP, TBIL)
AMSLER	95B	PL B342 433	C. Amsler <i>et al.</i>	(Crystal Barrel Collab.)
AMSLER	95C	PL B353 571	C. Amsler <i>et al.</i>	(Crystal Barrel Collab.)
AMSLER	95D	PL B355 425	C. Amsler <i>et al.</i>	(Crystal Barrel Collab.)
AMSLER	95E	PL B353 385	C. Amsler, F.E. Close	(ZURI, RAL)
AMSLER	95F	PL B358 389	C. Amsler <i>et al.</i>	(Crystal Barrel Collab.)
BERTIN	95	PL B361 187	A. Bertin <i>et al.</i>	(OBELIX Collab.)
BUGG	95	PL B353 378	D.V. Bugg <i>et al.</i>	(LOQM, PNPI, WASH)
CLOSE	95	NP B443 233	F.E. Close, P.R. Page	(RAL)
PROKOSHKIN	95B	PAN 58 606	Y.D. Prokoshkin, S.A. Sadovsky	(SERP)
		Translated from YAF 58 662.		
PROKOSHKIN	95C	PAN 58 853	Y.D. Prokoshkin, S.A. Sadovsky	(SERP)
		Translated from YAF 58 921.		
SEXTON	95	PRL 75 4563	J. Sexton <i>et al.</i>	(IBM)
ALBRECHT	94Z	PL B332 451	H. Albrecht <i>et al.</i>	(ARGUS Collab.)
AMSLER	94D	PL B333 277	C. Amsler <i>et al.</i>	(Crystal Barrel Collab.)
ANISOVICH	94	PL B323 233	V.V. Anisovich <i>et al.</i>	(Crystal Barrel Collab.)
BERDNIKOV	94	PL B337 219	E.B. Berdnikov <i>et al.</i>	(SERP, TBIL)
LEE	94	PL B323 227	J.H. Lee <i>et al.</i>	(BNL, IND, KYUN, MASD+)
TORNQVIST	94	ZPHY C61 525	N.A. Tornqvist	(HELS)
ALEEV	93	PAN 56 1358	A.N. Aleev <i>et al.</i>	(BIS-2 Collab.)
		Translated from YAF 56 100.		
AOYAGI	93	PL B314 246	H. Aoyagi <i>et al.</i>	(BKEI Collab.)
BALI	93	PL B309 378	G.S. Bali <i>et al.</i>	(LIVP)
BARNES	93	PL B309 469	P.D. Barnes, P. Birien, W.H. Breunlich	
BELADIDZE	93	PL B313 276	G.M. Beladidze <i>et al.</i>	(VES Collab.)
DONNACHIE	93	ZP C60 187	A. Donnachie, Yu.S. Kalashnikova, A.B. Clegg	(BNL)
ERICSON	93	PL B309 426	T.E.O. Ericson, G. Karl	(CERN)
MANOHAR	93	NP B399 17	A.V. Manohar, M.B. Wise	(MIT)
ADAMO	92	PL B287 368	A. Adamo <i>et al.</i>	(OBELIX Collab.)
AMSLER	92	PL B291 347	C. Amsler <i>et al.</i>	(Crystal Barrel Collab.)
BARNES	92	PR D46 131	T. Barnes, E.S. Swanson	(ORNL)
DOOLEY	92	PL B275 478	K. Dooley, E.S. Swanson, T. Barnes	(ORNL)
GOUZ	92	Dallas HEP 92, p. 572	Yu.P. Gouz <i>et al.</i>	(VES Collab.)
		Proceedings XXVI Int. Conf. on High Energy Physics		
KARCH	92	ZPHY C54 33	K. Karch <i>et al.</i>	(Crystal Ball Collab.)
ALBRECHT	91F	ZPHY C50 1	H. Albrecht <i>et al.</i>	(ARGUS Collab.)
DOVER	91	PR C43 379	C.B. Dover, T. Gutsche, A. Faessler	(BNL)
FUKUI	91	PL B257 241	S. Fukui <i>et al.</i>	(SUGI, NAGO, KEK, KYOT+)
TORNQVIST	91	PRL 67 556	N.A. Tornqvist	(HELS)
ACHASOV	90	TF 20 (178)	N.N. Achasov, G.N. Shestakov	(NOVM)
ALDE	90	PL B241 600	D.M. Alde <i>et al.</i>	(SERP, BELG, LANL, LAPP+)

BREAKSTONE	90	ZPHY C48 569	A.M. Breakstone <i>et al.</i>	(ISU, BGNA, CERN+)
BURNETT	90	ARNPS 46 332	T.H. Burnett, S.R. Sharpe	(RAL)
LONGACRE	90	PR D42 874	R.S. Longacre	(BNL)
MAY	90	ZPHY C46 203	B. May <i>et al.</i>	(ASTERIX Collab.)
WEINSTEIN	90	PR D41 2236	J. Weinstein, N. Isgur	(TNTO)
ALDE	89	PL B216 447	D.M. Alde <i>et al.</i>	(SERP, BELG, LANL, LAPP)
ARMSTRONG	89B	PL B221 221	T.A. Armstrong <i>et al.</i>	(CERN, CDEF, BIRM+)
ARMSTRONG	89D	PL B227 186	T.A. Armstrong, M. Benayoun	(ATHU, BARI, BIRM+)
MAY	89	PL B225 450	B. May <i>et al.</i>	(ASTERIX Collab.)
ACHASOV	88	PL B207 199	N.N. Achasov, A.A. Kozhevnikov	(NOVM)
AIHARA	88	PR D37 28	H. Aihara <i>et al.</i>	(TPC-2 γ Collab.)
ALDE	88	PL B201 160	D.M. Alde <i>et al.</i>	(SERP, BELG, LANL, LAPP+)
ALDE	88B	PL B205 397	D.M. Alde <i>et al.</i>	(SERP, BELG, LANL, LAPP)
ASTON	88D	NP B301 525	D. Aston <i>et al.</i>	(SLAC, NAGO, CINC, INUS)
BERGER	88B	ZPHY C38 521	C. Berger <i>et al.</i>	(PLUTO Collab.)
BIRMAN	88	PRL 61 1557	A. Birman <i>et al.</i>	(BNL, FSU, IND, MASD)
CLEGG	88	ZPHY C40 313	A.B. Clegg, A. Donnachie	(MCHS, LANC)
ETKIN	88	PL B201 568	A. Etkin <i>et al.</i>	(BNL, CUNY)
IDDIR	88	PL B205 564	F. Iddir <i>et al.</i>	(ORSAY, TOKY)
ACHASOV	87	ZPHY C36 661	N.N. Achasov, V.A. Karnakov, G.N. Shestakov	(NOVM)
ASTON	87	NP B292 693	D. Aston <i>et al.</i>	(SLAC, NAGO, CINC, INUS)
BITYUKOV	87	PL B188 383	S.I. Bitjukov <i>et al.</i>	(SERP)
CLOSE	87	RPP 51 833	F.E. Close	(RHEL)
ANDO	86	PRL 57 1296	A. Ando <i>et al.</i>	(KEK, KYOT, NIRS, SAGA+)
BOOTH	86	NP B273 677	P.S.L. Booth <i>et al.</i>	(LIVP, GLAS, CERN)
BOURQUIN	86	PL B172 113	M.H. Bourquin <i>et al.</i>	(GEVA, RAL, HEIDP+)
LONGACRE	86	PL B177 223	R.S. Longacre <i>et al.</i>	(BNL, BRAN, CUNY+)
BARNES	85	PL B165 434	T. Barnes	
CHUNG	85	PRL 55 779	S.U. Chung <i>et al.</i>	(BNL, FLOR, IND+)
ISGUR	85	PRL 54 869	N. Isgur, R. Kokoski, J. Paton	(TNTO)
LEYAOUANC	85	ZPHY C28 309	A. Le Yaouanc <i>et al.</i>	(ORSAY)
BEHREND	84E	ZPHY C21 205	H.J. Behrend <i>et al.</i>	(CELLO Collab.)
BARNES	83	NP B224 241	T. Barnes <i>et al.</i>	(RAL, LOUV)
BINON	83	NC 78A 313	F.G. Binon <i>et al.</i>	(BELG, LAPP, SERP+)
WEINSTEIN	83B	PR D27 588	J. Weinstein, N. Isgur	(TNTO)
AIHARA	82	PR D37 28	H. Aihara <i>et al.</i>	(TPC Collab.)
ALTHOFF	82	ZPHY C16 13	M. Althoff <i>et al.</i>	(TASSO Collab.)
BARNES	82	PL B116 365	T. Barnes, F.E. Close	(RHEL)
BURKE	81	PL B103 153	D.L. Burke <i>et al.</i>	(Mark II Collab.)
BRANDELIK	80B	PL B97 448	R. Brandelik <i>et al.</i>	(TASSO Collab.)
GUTBROD	79	ZP C1 391	F. Gutbrod, G. Kramer, C. Rumpf	(DESY)
JAFFE	77	PR D15 267,281	R. Jaffe	(MIT)
VOLOSHIN	76	JETPL 23 333	M.B. Voloshin, L.B. Okun	(ITEP)
		Translated from ZETFP 23 369.		
BAILLON	67	NC 50A 393	P.H. Baillon <i>et al.</i>	(CERN, CDEF, IRAD)