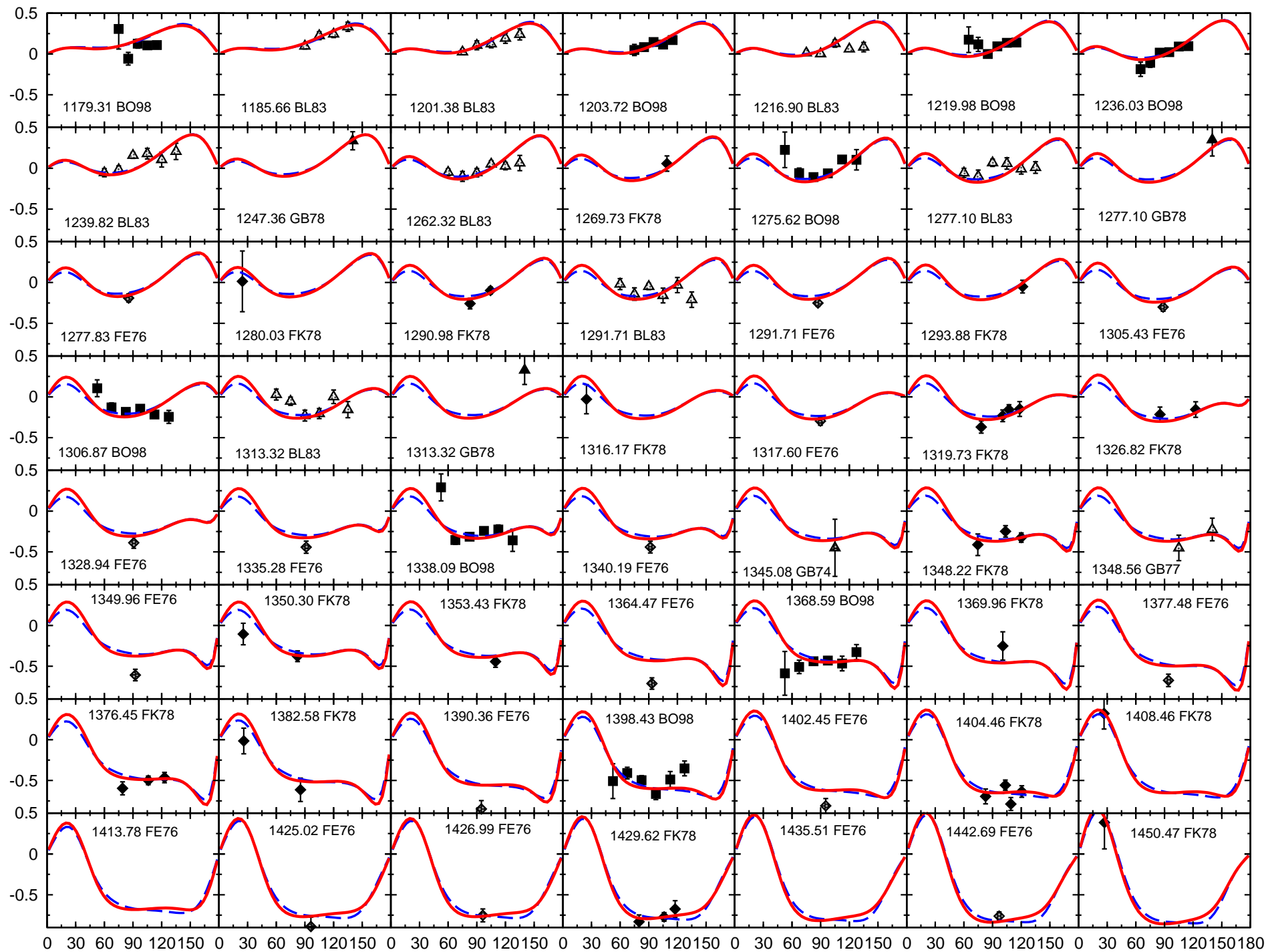
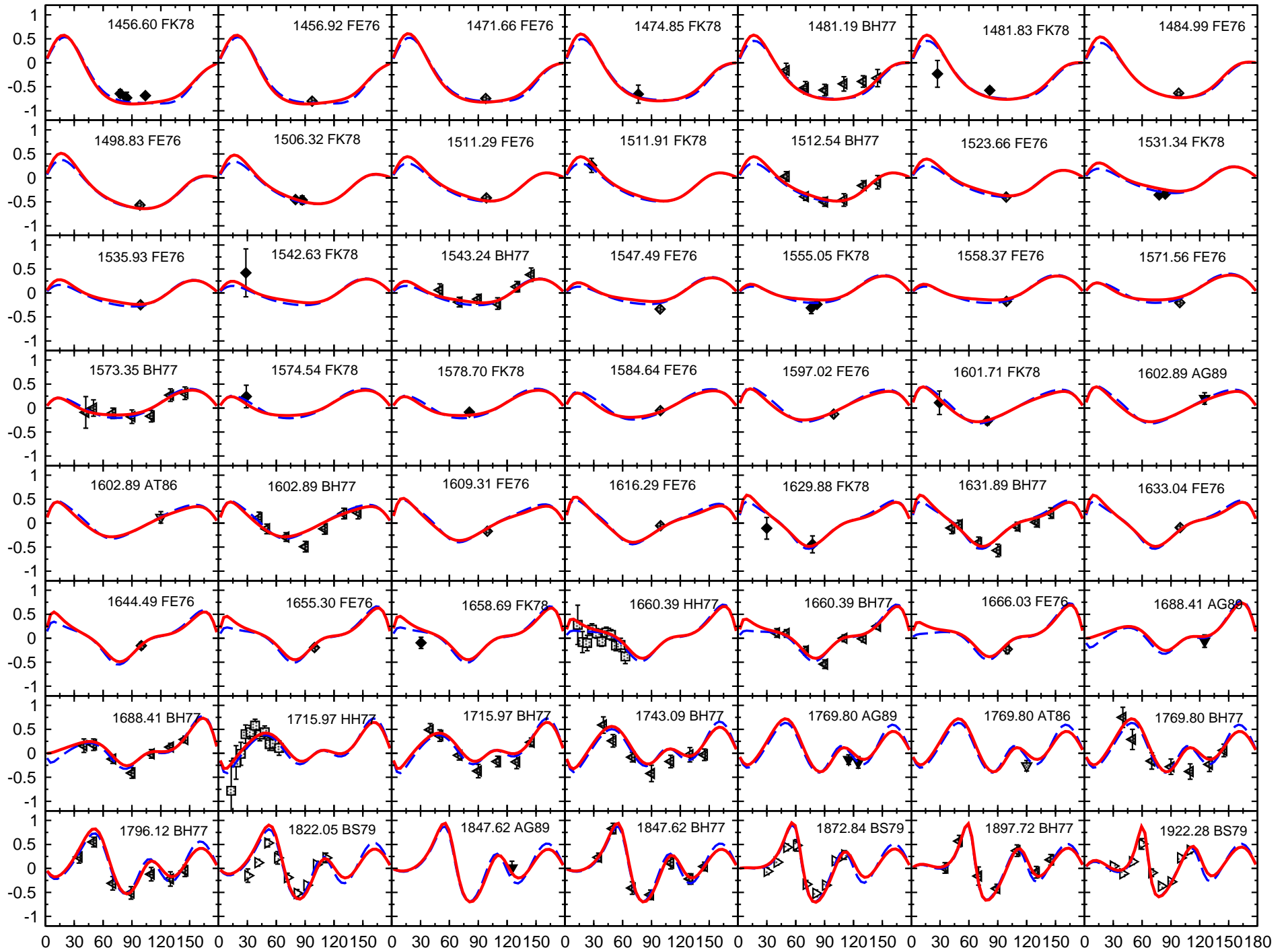
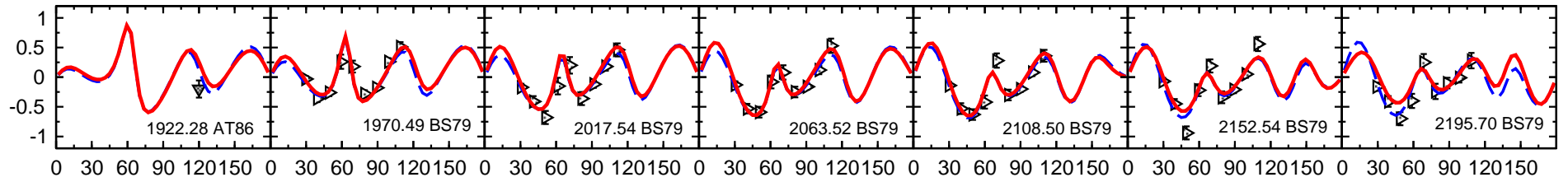


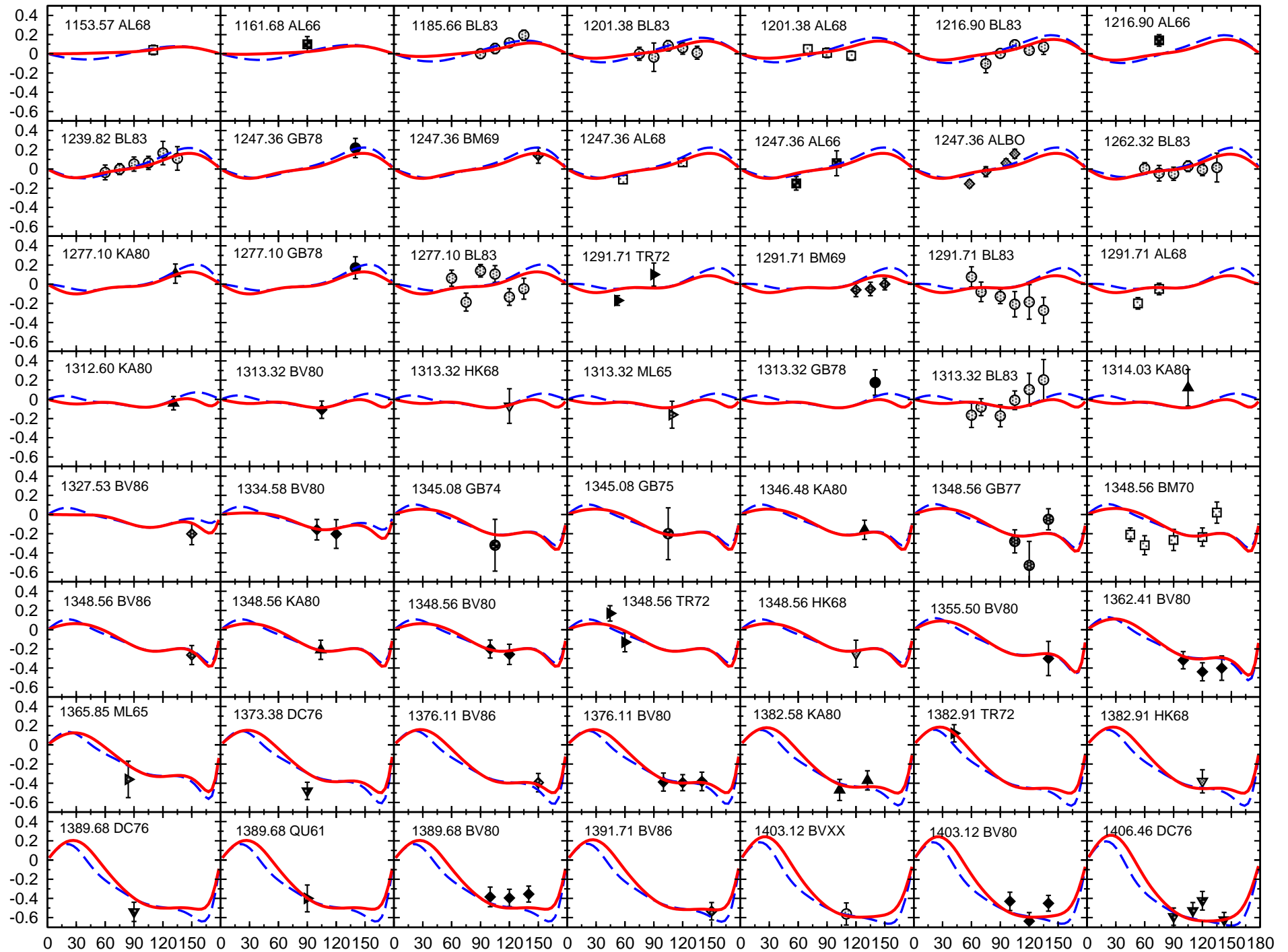
Figure 1: (Predicted) new CLAS data.

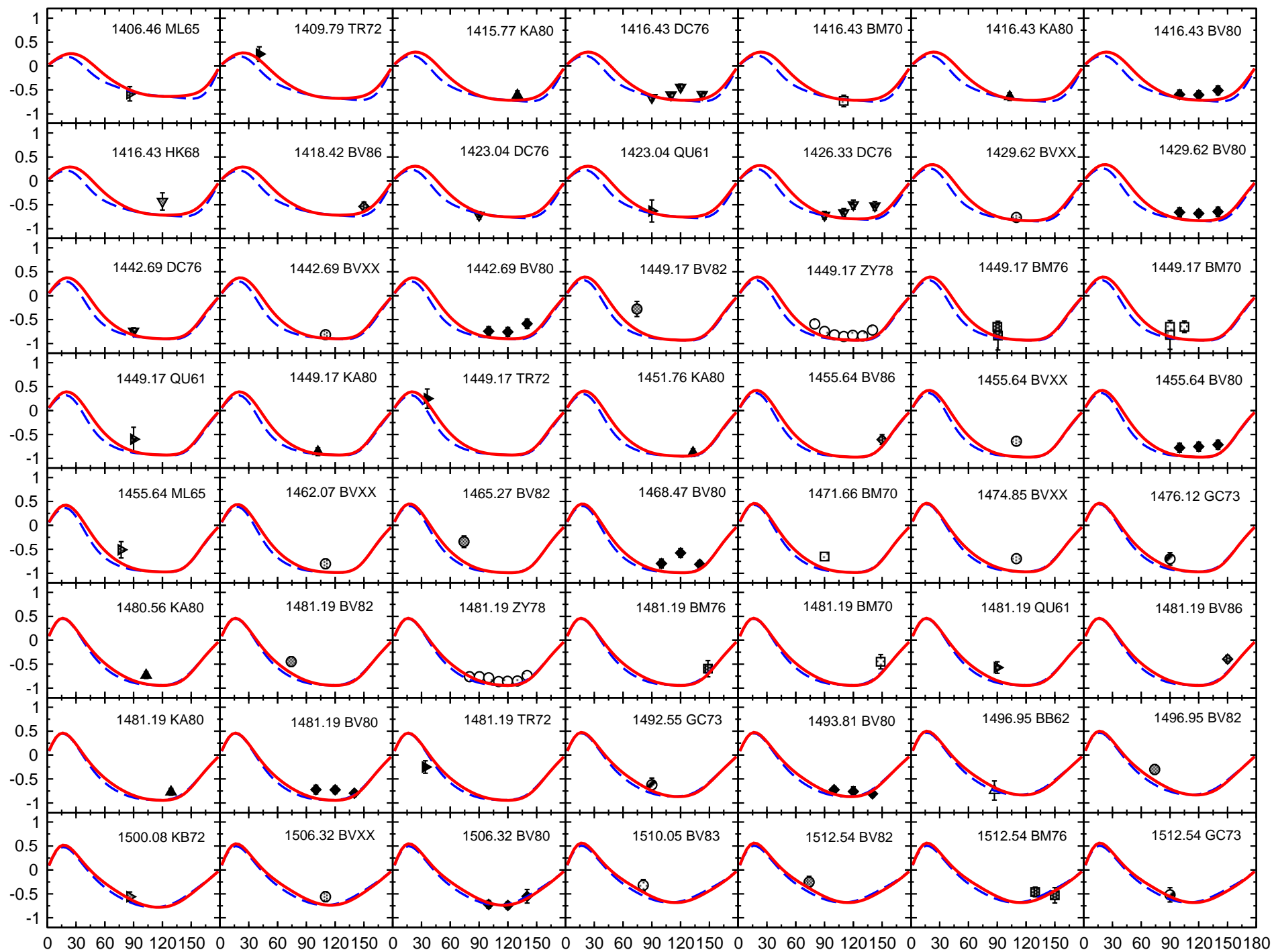


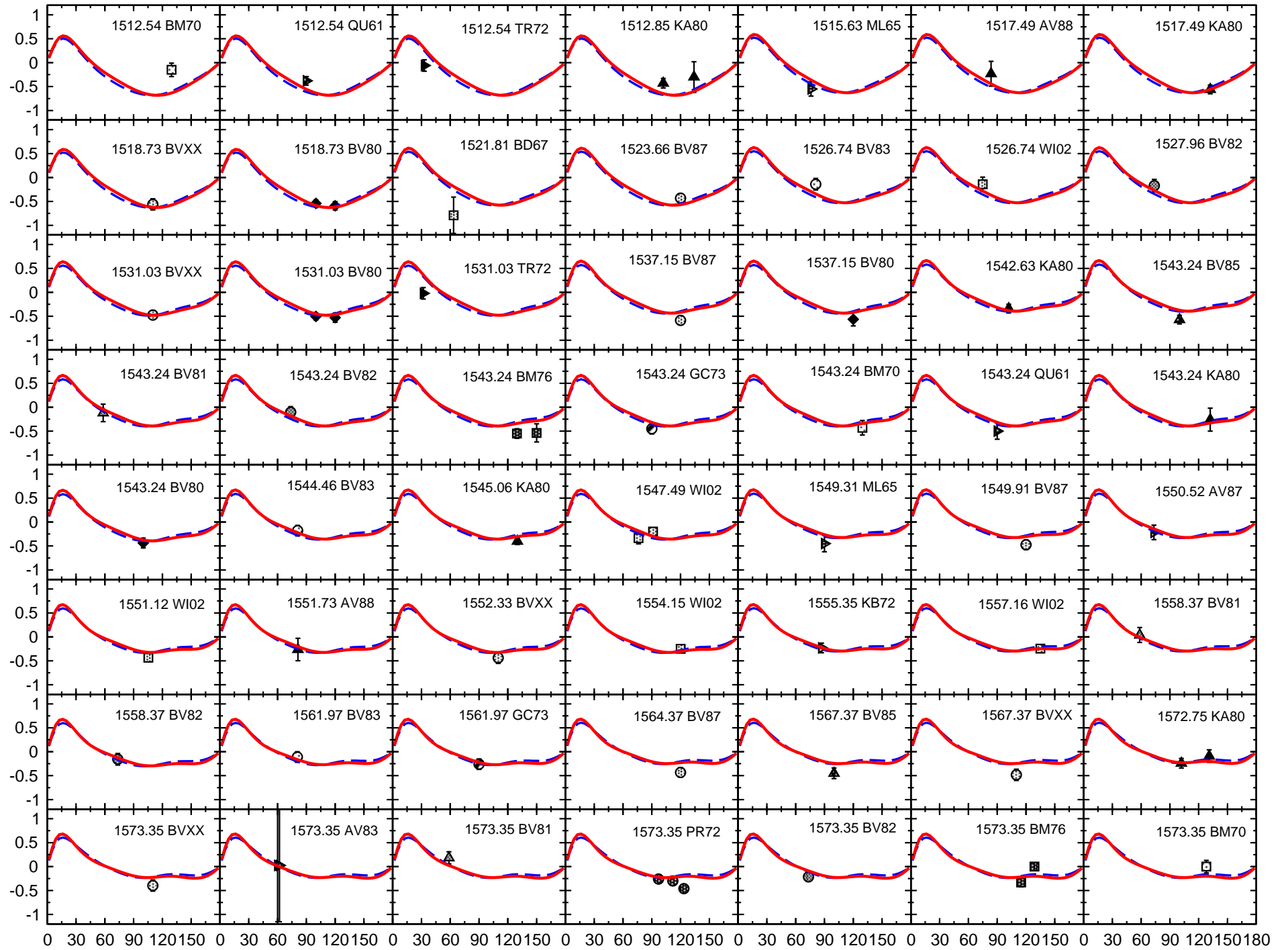


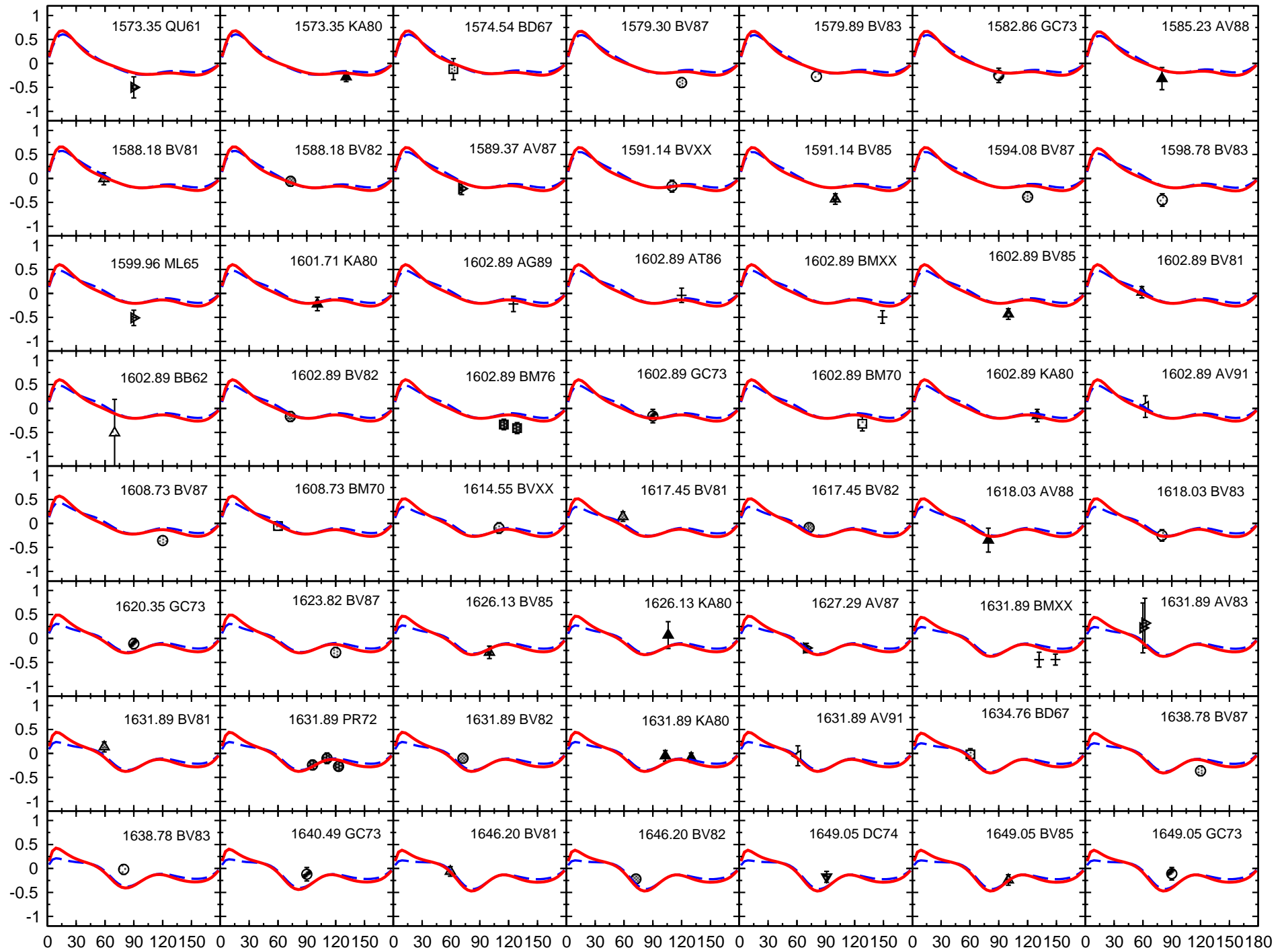


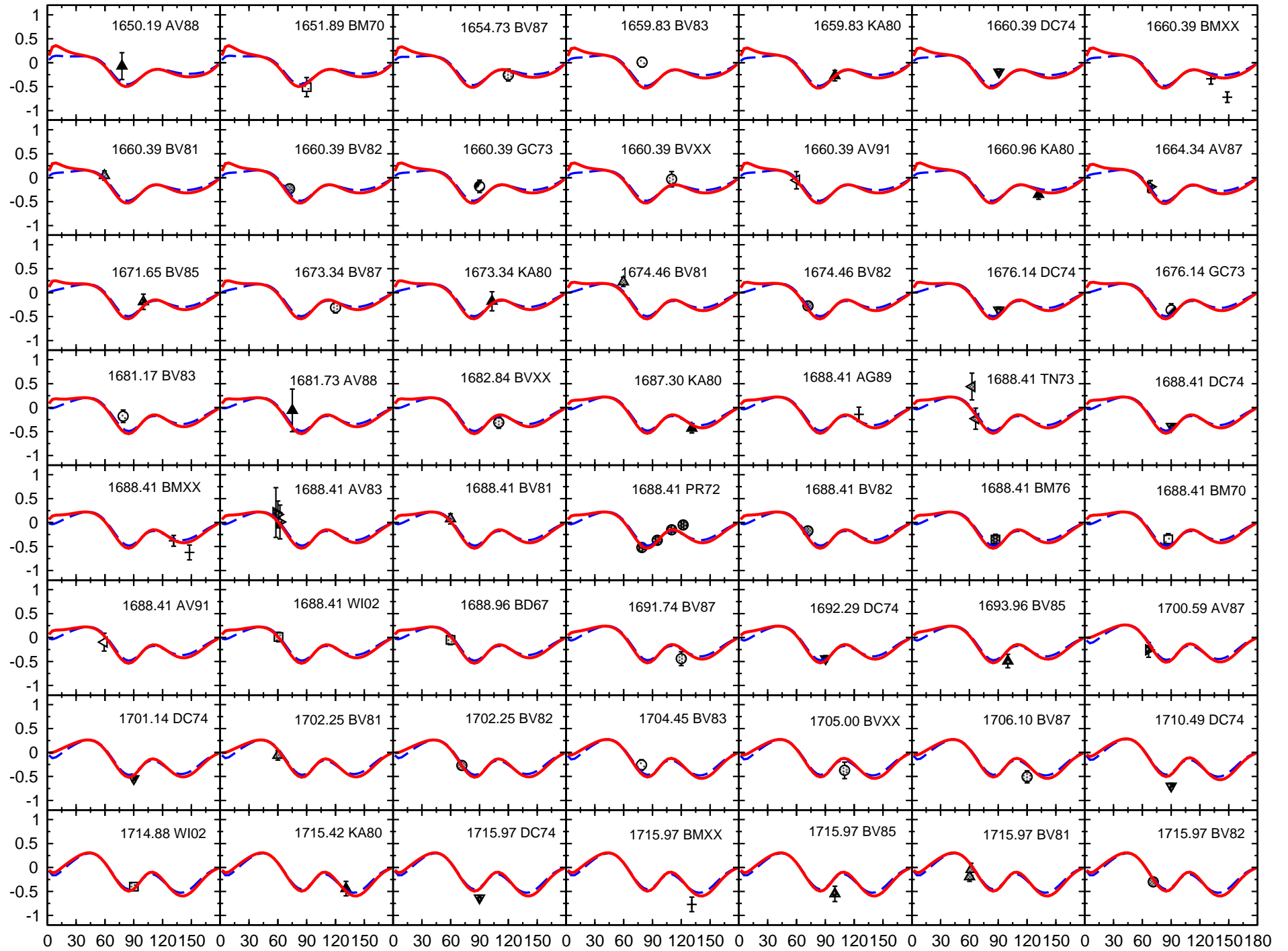


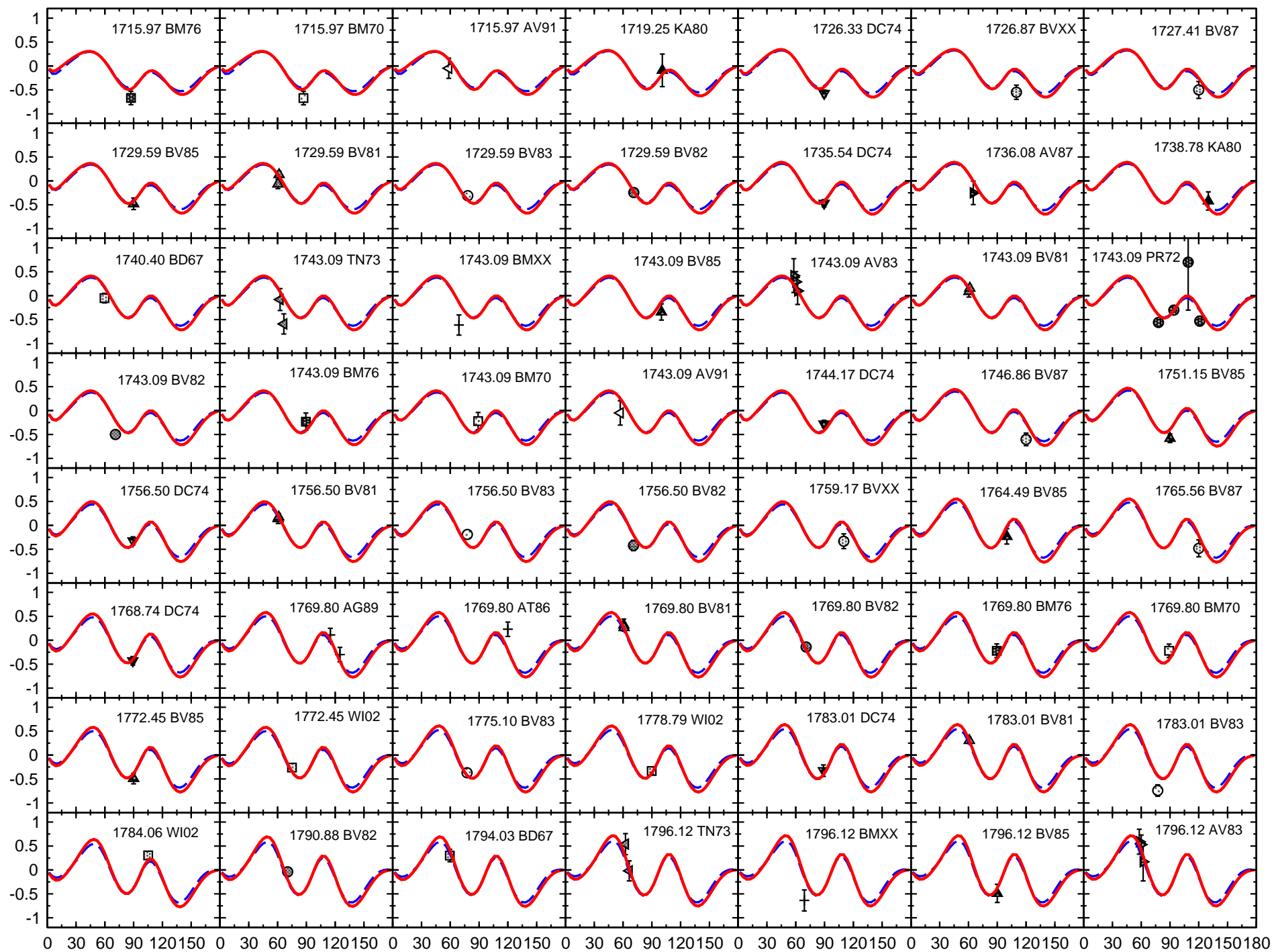


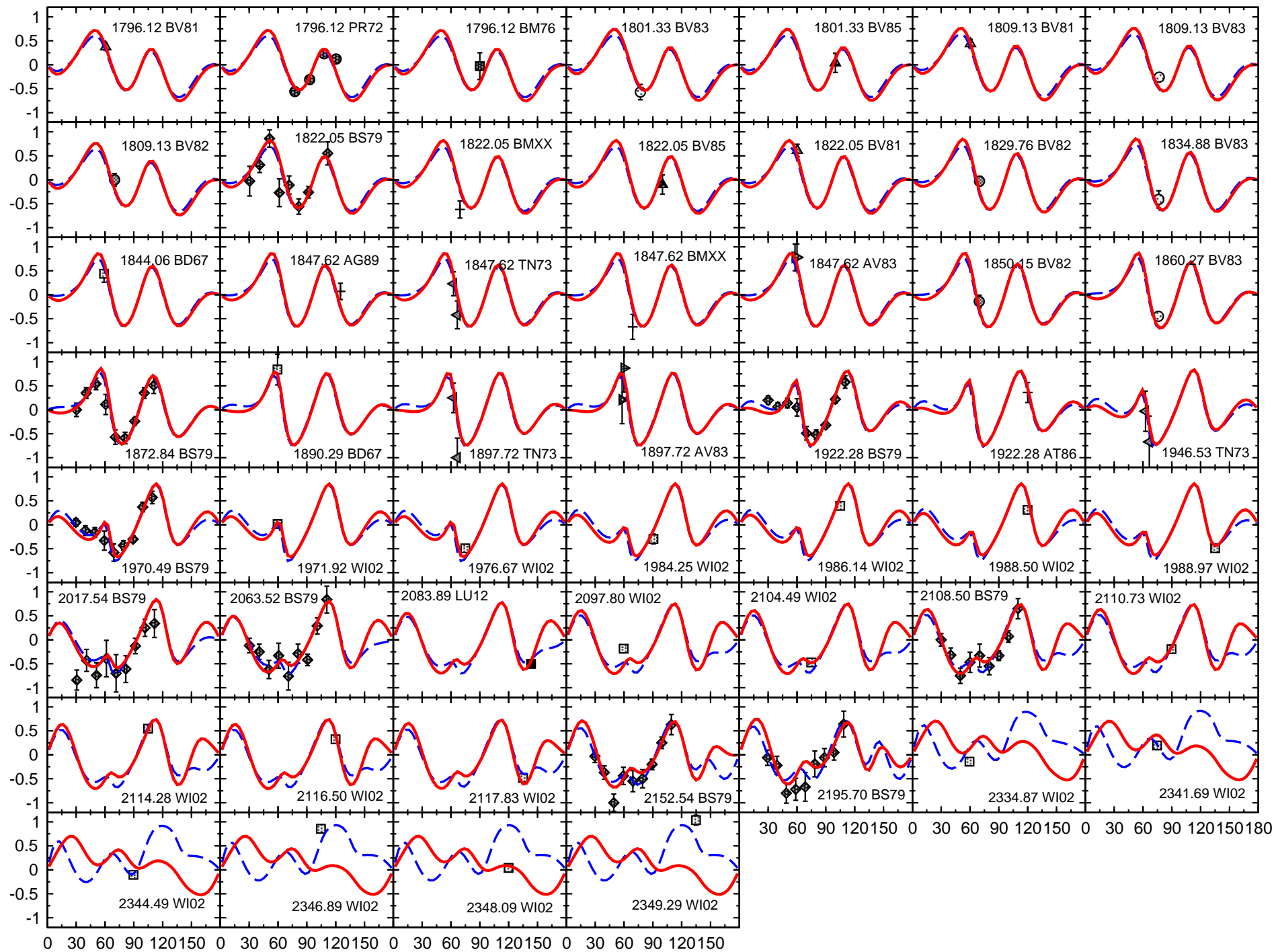


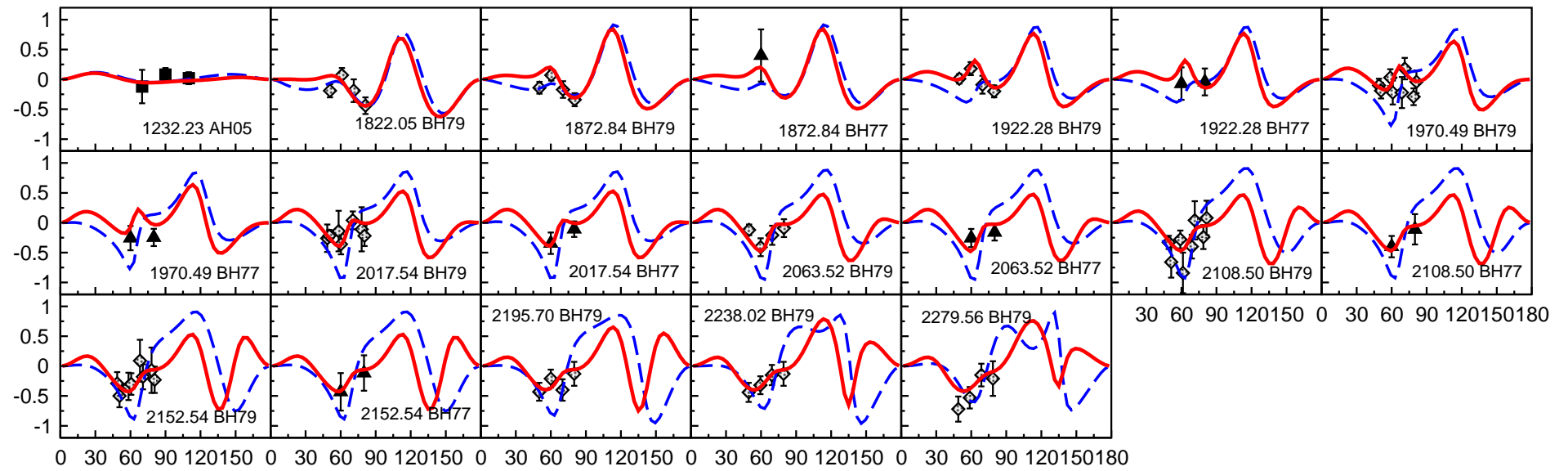




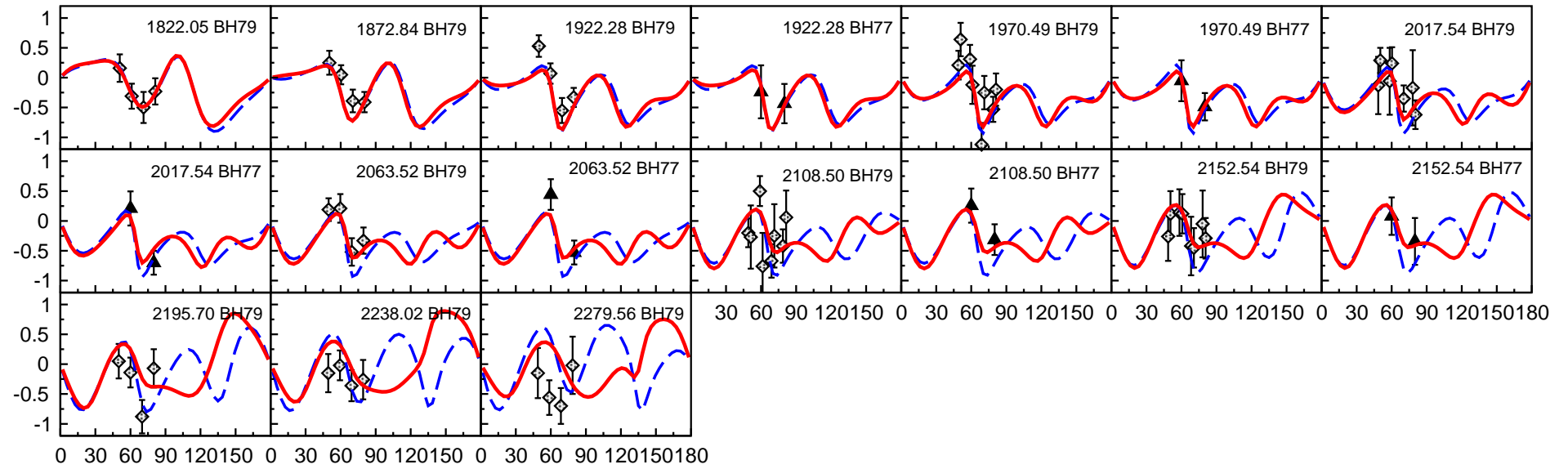


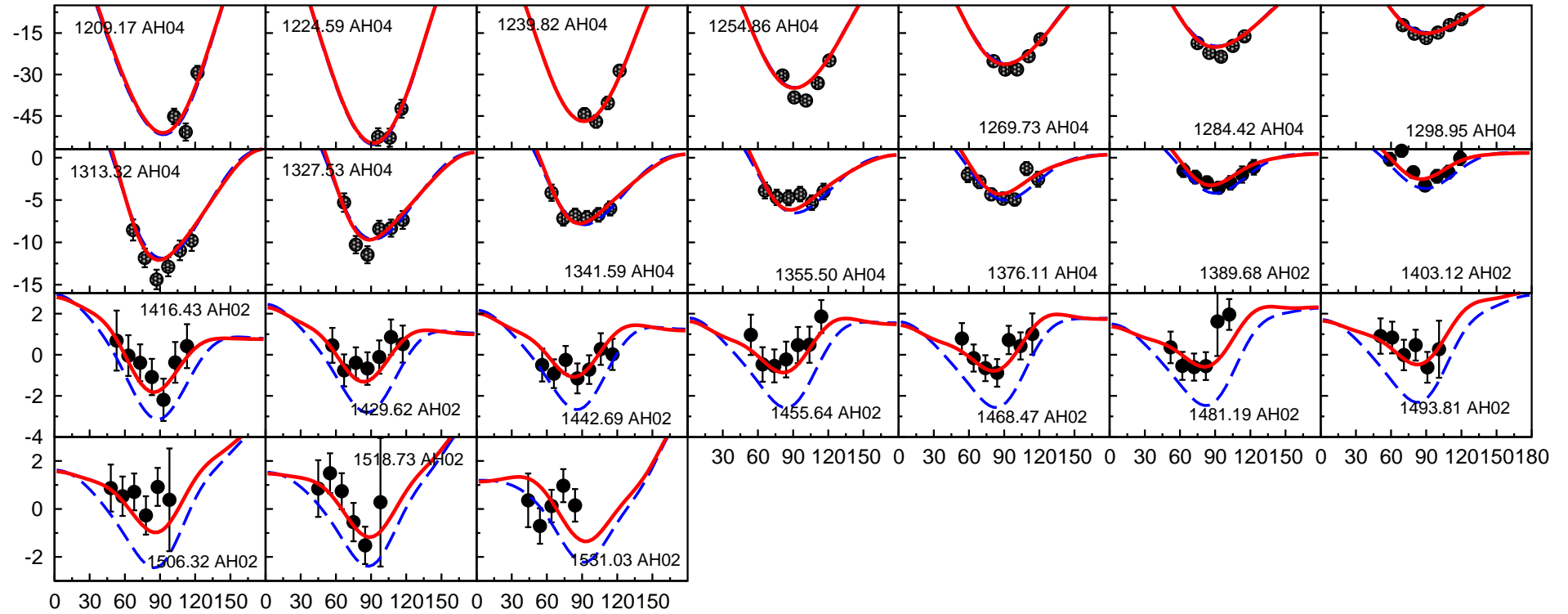












- Differential cross section  $\gamma p \rightarrow \pi^0 p$ :
  - SC(01) MAIN SCHMIT, PRL87, 232501(2001), BE
  - FU(96) MAIN FUCHS, PLB368, 20(96), AHRENS,
  - BE(90) MAIN BECK, PRL65, 1841(90) REVISED 7
  - HO(12)PMAIN HORNIDGE, ARXIV:1211.5495, PRAK
  - BG(97) SAL BERGSTROM, PRC55, 2016(97),
  - HI(69) BONN HITZEROTH, NCA60, 467(69)
  - GO(68) LEBE GOVORKOV, SJNP6, 370(68)
  - GZ(74)1BONN GENZEL, ZP268, 43(74)
  - BE(06) MAIN BECK, EPJA28S1, 173(2006)
  - SC(97)PMAIN SCHNEIDER, PHD THESIS, 1997, AH
  - HA(96)PMAIN HAERTER, PHD THESIS, 1996, AHRE
  - AG(75) SAACL ARGAN, NPA237, 447(75)
  - DO(77) LUND DOUGAN, ZPA280, 341(77)
  - BE(97) MAIN BECK, PRL78, 606(1997)
  - AK(78) LEBE ALEKSANDROV, SJNP28, 344(78)
  - AH(04) MAIN AHRENS, EPJA21, 323(2004)
  - AK(77) LEBE ALEKSANDROV, SJNP25, 43(77)
  - BA(05) BONN BARTHOLOMY, PRL94, 012003(2005)
  - HE(73) TOKY HEMMI, PLB43, 79(73)
  - JU(76) BONN M.JUNG, PRP HE-76-15 76
  - DO(75) LUND DOUGAN, ZPA274, 73(75)
  - YO(80) TOKY YOSHIOKA, NPB168, 222(80)
  - BC(73) BONN BECK, NPB60, 267(73)
  - SC(10) MAIN SCHUMANN, EPJA43, 269(2010)
  - HY(73) TOKY HEMMI, NPB55, 333(73)
  - AR(77) TOKY ARAI, JPSJ43, 363(77)
  - FL(74) BONN FELLER, PLB49, 197(74)
  - BA(05)1GRAA BARTALINI, EPJA26, 399(2005)
  - AM(73) LUND S.ALMEHED, CONF BONN 73
  - AH(02) MAIN AHRENS, PRL88, 232002(2002)
  - WO(68) CALT F.WOLVERTON, PH.D THESIS 68
  - AL(79) BONN ALTHOFF, ZPC1, 327(79)
  - WC(60) CALT WORLOCK, PR117, 537(60)
  - WO(68)PCALT F.WOLVERTON, PH.D THESIS 1968
  - KR(99) MAIN KRUSCHE, EPJA6, 309(1999)
  - SA(65) STAN DE.STAEBLER, PRB140, 336(65)
  - BN(75) DNPL BARTON, NPB84, 449(1975)
  - DU(07) JLAB DUGGER, PRC76, 025211(2007)
  - BH(71) DNPL P.S.L.BOOTH, PRP DNPL P95 71
  - DE(69) ORSA DELCOURT, PLB29, 70(69)
  - WR(67) CALT WARD, PR159, 1176(67)
  - TL(62) CALT TALMAN, PRL9, 177(1962)
  - BU(68) DESY BUSCHHORN, PRL20, 230(1968)
  - ZE(88)PBONN ZENZ, THESIS BONN-IR-88-12
  - BH(75) DNPL BOOTH, NPB84, 437(75)

- CR(11) BONN CREDE, PRC84, 055203(2011)
- HU(77) BONN HUSMANN, NPB126, 436(77)
- AB(76) YERE ABRAHAMIAN, JETPL23, 375(76)
- AB(74) YERE ABRAHAMIAN, PLB48, 463(1974)
- BF(75) BONN BREFELD, NPB100, 93(1975)
- BG(68) DESY BRAUNSCHWEIG, PLB26, 405(1968)
- AL(79)1BONN ALTHOFF, ZPC1, 257(79)
- LO(70) BONN B.LOHR, PRP PII-98 70
- SU(07) LEPS SUMIHAMA, PLB657, 32(2007)
- BO(67) CEA BOLON, PRL18, 926(1967)
- SH(79) CORN SHUPE, PRD19, 1921(1979)
- BG(70) DESY BRAUNSCHWEIG, NPB20, 191(1970)
- Beam asymmetry  $\Sigma \gamma p \rightarrow \pi^0 p$ :
  - HO(12)PMAIN HORNIDGE, ARXIV:1211.5495
  - SC(01) MAIN SCHMIT, PRL87, 232501(2001)
  - BL(01) LEGS BLANPIED, PRC64, 025203(01)
  - BJ(69) FRAS BARBIELLINI, PR184, 1402(69)
  - DR(64) STAN DRICKEY, PRB136, 543(64)
  - BE(06) MAIN BECK, EPJA28S1, 173(2006)
  - BL(92) LEGS BLANPIED, PRL69, 1880(1992), SA
  - BE(97) MAIN BECK, PRL78, 606(1997), PC 02-2
  - BP(70) FRAS G.BOLOGNA, PRP LNF-70 39 70
  - BL(83) KHAR BELYAEV, NPB213, 201(83)
  - GB(78) KHAR GORBENKO, SJNP27, 638(78)
  - GB(77)1KHAR GORBENKO, VANT2, 36(1977)
  - GB(74) KHAR GORBENKO, JETPL19, 340(74)
  - GB(77) KHAR GORBENKO, SJNP26, 167(77)
  - AD(01) YERE ADAMIAN, PRC63, 054606(2001)
  - BA(05)1GRAA BARTALINI, EPJA26, 399(2005)
  - KE(74) SLAC KNIES, PRD10, 2778(74)
  - AV(83)2YERE R.O.AVAKYAN, PRP EPI-674-6 83
  - AV(83)1YERE AVAKYAN, SJNP38, 721(83)
  - AV(79) YERE AVAKYAN, SJNP29, 625(79)
  - EL(09) BONN ELSNER, EPJA39, 373(2009)
  - AV(84) YERE AVAKYAN, SJNP40, 588(84), GRAPH
  - AS(72) CEA ALSPECTOR, PRL28, 1403(72)
  - AV(77) YERE AVAKYAN, SJNP26, 537(77)
  - AG(89) YERE AGABABYAN, SJNP50, 834(89)
  - AT(86) YERE ASATURYAN, JETPL44, 341(86)
  - AB(74) YERE ABRAHAMIAN, PLB48, 463(1974)
  - SP(10) BONN SPARKS, PRC81, 065210(2010)
  - BS(76) DNPL BUSSEY, NPB104, 253(76)
  - BS(79)1DNPL BUSSEY, NPB154, 492(79)
  - SU(07) LEPS SUMIHAMA, PLB657, 32(2007)
  - DU13 Dugger *et al.* (CLAS Collaboration) PRC88, 065203, PRC89, 029901 (2014)

- Recoil Polarization  $\gamma p \rightarrow \pi^0 p$ :
  - AL(68) BONN ALTHOFF, PLB26, 677(68)
  - AL(66) BONN ALTHOFF, ZP194, 135(66)
  - BL(83) KHAR BELYAEV, NPB213, 201(83)
  - GB(78) KHAR GORBENKO, SJNP27, 638(78)
  - BM(69) BONN P.BLUEM, CONF DARES 69
  - AL(66)1BONN ALTHOFF, ZP194, 144(66)
  - KA(80) TOKY KATO, NPB168, 1(80)
  - TR(72) BONN D.TRINES, PRP PI1-160 72
  - BV(80) KHAR BRATASHEVSKI, NPB166, 525(80),
  - HK(68) TOKY HAYAKAWA, JPSJ25, 307(68)
  - ML(65) STAN MALOY, PRB139, 733(65)
  - BV(86) KHAR BRATASHEVSKI, UFJ31, 1306(1986)
  - GB(74) KHAR GORBENKO, JETPL19, 340(74)
  - GB(75) KHAR GORBENKO, JETPL22, 186(75)
  - GB(77) KHAR GORBENKO, SJNP26, 167(77)
  - BM(70) BONN P.BLUEM, PRP PI1-105 70
  - DC(76) KHAR DERECHINSKI, JETP43, 218(76)
  - QU(61) FRAS QUERZOLI, NC19, 53(61)
  - BV(85)1KHAR BRATASHEVSKI, SJNP42, 417(85)
  - BV(82) KHAR BRATASHEVSKI, SJNP35, 33(82)
  - ZY(78) KHAR ZYBALOV, SJNP28, 52(78)
  - BM(76) BONN BLUEM, ZPA277, 311(76)
  - GC(73) KHAR GONCHAROV, JETP37, 205(73)
  - BB(62) FRAS BERTANZA, NC24, 734(62)
  - KB(72) TOKY KABE, NPB50, 17(72)
  - BV(83) KHAR BRATASHEVSKI, SJNP38, 233(83)
  - AV(88) YERE AVAKYAN, SJNP48, 1030(88)
  - BD(67) CALT BLOOM, PRL19, 671(67)
  - BV(87) KHAR BRATASHEVSKI, SJNP46, 635(87)
  - WI(02) JLAB WIJESORIYA, PRC66, 034614(2002)
  - BV(85) KHAR BRATASHEVSKI, SJNP41, 960(85)
  - BV(81) KHAR BRATASHEVSKI, SJNP33, 538(81)
  - AV(87) YERE AVAKYAN, SJNP46, 853(87)
  - AV(83) YERE AVAKYAN, SJNP37, 199(83)
  - PR(72) DNPL PRENTICE, NPB41, 353(72)
  - AG(89) YERE AGABABYAN, SJNP50, 834(89)
  - AT(86) YERE ASATURYAN, JETPL44, 341(86)
  - BM(76)1BONN BLUEM, ZPA278, 275(76)
  - AV(91) YERE AVAKYAN, SJNP53, 448(91)
  - DC(74) KHAR DERECHINSKI, JETP39, 30(74)
  - TN(73) CEA TANAKA, PRD8, 1(73)
  - BS(79)1DNPL BUSSEY, NPB154, 492(79)
  - LU(12) JLAB LUO, PRL108, 222004(2012)
  - Hartmann *et al.* (CBELSA/TAPS Collaboration) PRL 113, 062001 (2014)

- Target asymmetry  $T \gamma p \rightarrow \pi^0 p$ :
  - BO(98) BONN BOCK, PRL81, 534(1998)
  - BL(83) KHAR BELYAEV, NPB213, 201(83)
  - GB(78) KHAR GORBENKO, SJNP27, 638(78)
  - FK(78) TOKY FUKUSHIMA, NPB136, 189(78)
  - FE(76)1TOKY FELLER, NPB110, 397(76)
  - GB(74) KHAR GORBENKO, JETPL19, 340(74)
  - GB(77) KHAR GORBENKO, SJNP26, 167(77)
  - BH(77) DNPL BOOTH, NPB121, 45(77)
  - AG(89) YERE AGABABYAN, SJNP50, 834(89)
  - AT(86) YERE ASATURYAN, JETPL44, 341(86)
  - HH(77) BONN HERR, NPB125, 157(77)
  - BS(79)1DNPL BUSSEY, NPB154, 492(79)
  - Hartmann *et al.* (CBELSA/TAPS Collaboration) PRL 113, 062001 (2014)
- $G \gamma p \rightarrow \pi^0 p$ :
  - AH(05) MAIN AHRENS, EJPA26, 135(2005)
  - BH(79) DNPL BUSSEY, NPB159, 383(79)
  - BH(77)1DNPL P.S.L.BOOTH, ANNUAL REPORT 77
- $H \gamma p \rightarrow \pi^0 p$ :
  - BH(79) DNPL BUSSEY, NPB159, 383(79)
  - BH(77)1DNPL P.S.L.BOOTH, ANNUAL REPORT 77
  - Hartmann *et al.* (CBELSA/TAPS Collaboration) PRL 113, 062001 (2014)
- $\Delta_{13} \gamma p \rightarrow \pi^0 p$ :
  - AH(04) MAIN AHRENS, EPJA21, 323(2004), PEDR
  - AH(02) MAIN AHRENS, PRL88, 232002(2002), PR
- $E \gamma p \rightarrow \pi^0 p$ :
  - GO(13): Gottschall *et al.* (CBELSA/TAPS Collaboration) PRL 112, 012003 (2014)
- $C_x \gamma p \rightarrow \pi^0 p$ :
  - SI13 Sikora *et al.* (A2 Collaboration at MAMI) PRL 112, 022501 (2013)
  - WI02 Wijesooriya *et al.* (JLab Hall A Collaboration) PRC 66, 034614 (2002)
  - LU12 *et al.* [GEp-III and GEp2 $\gamma$  Collaborations], Phys. Rev. Lett. 108, 222004 (2012)
- $C_z \gamma p \rightarrow \pi^0 p$ :
  - WI02 Wijesooriya *et al.* (JLab Hall A Collaboration) PRC 66, 034614 (2002)
  - LU12 *et al.* [GEp-III and GEp2 $\gamma$  Collaborations], Phys. Rev. Lett. 108, 222004 (2012)