

KIC 010934543

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R_{\star} (R_{\odot})	T_{\star} (K)	R_p (R_{\oplus})	S_p (S_{\oplus})
010934543-01	OBS	No	2.606003	132.468720	107.6	14.443	7.8	8.2	1.36	6336	1.94	1689.25
010934543-02	OBS	No	224.721391	224.932787	1103.3	12.351	10.2	9.6	1.36	6336	8.51	4.43
010934543-03	OBS	No	71.316636	187.247034	644.9	48.812	9.8	5.9	1.36	6336	4.08	20.48
010934543-04	OBS	No	81.197899	197.028040	619.5	13.080	9.9	7.5	1.36	6336	4.20	17.23
010934543-05	OBS	No	96.895340	177.368163	246.8	16.064	8.8	3.4	1.36	6336	2.29	13.61

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010934543-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV
010934543-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
010934543-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV
010934543-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT
010934543-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT— MOD_POS_ALT—CENT_NOFITS

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

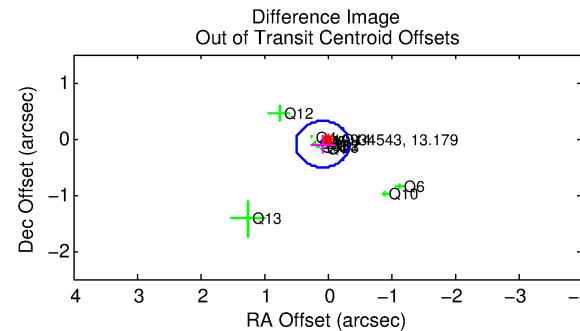
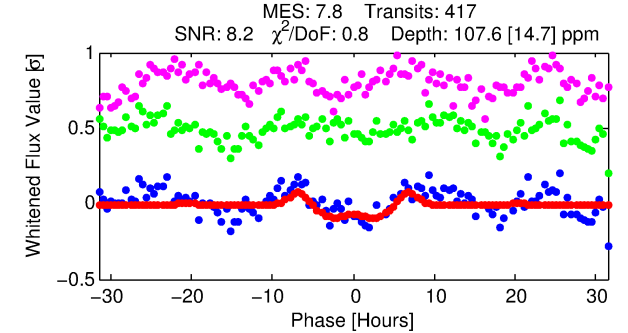
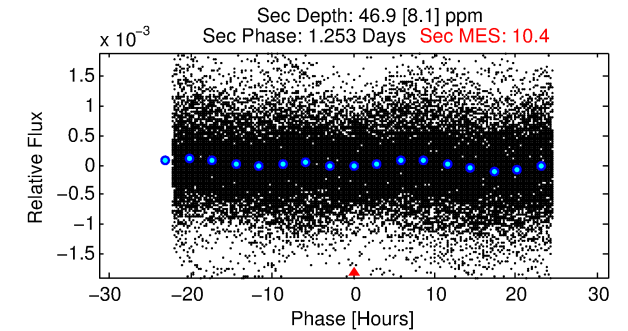
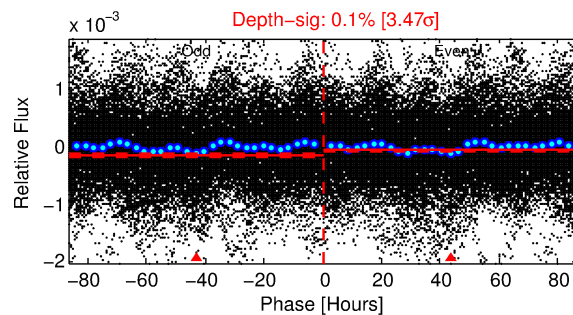
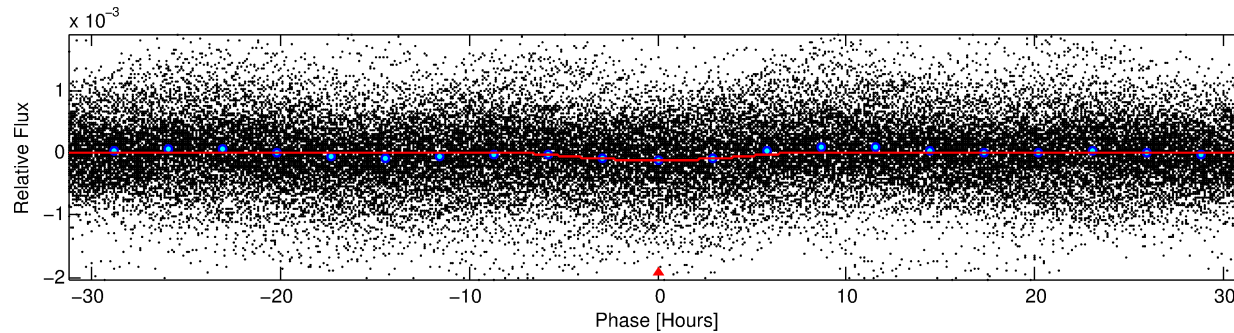
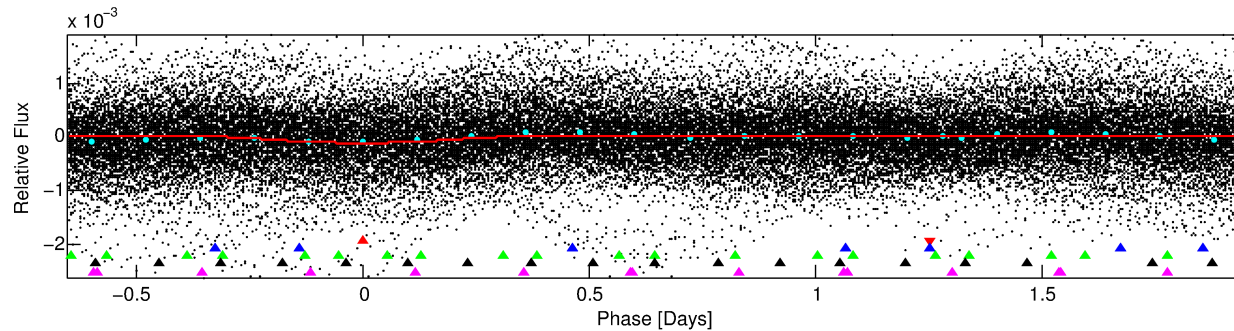
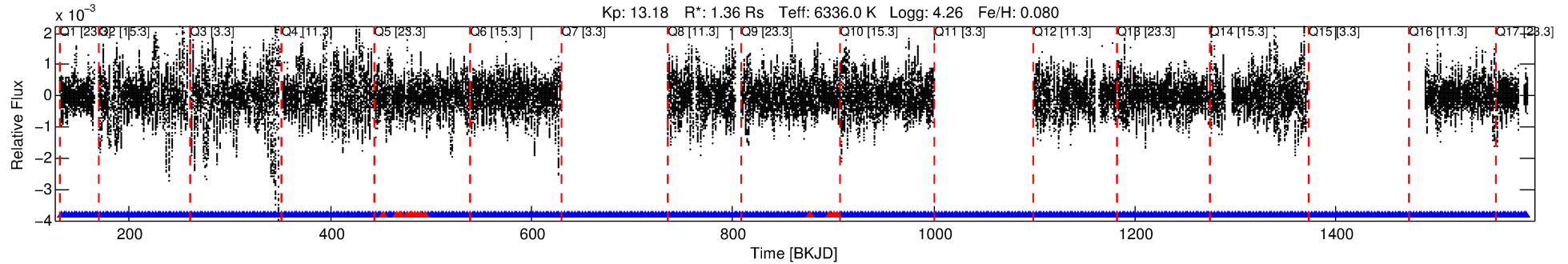
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010934543-01

No Significant Match Found

DV One-Page Summary

KIC: 10934543 Candidate: 1 of 5 Period: 2.606 d



DV Fit Results:

Period = 2.60600 [0.00005] d
Epoch = 132.4687 [0.0151] BKJD
Rp/R* = 0.0131 [0.0009]
a/R* = 1.05 [0.00]
b = 0.99 [0.00]
Seff = 1689.25 [684.99]
Teq = 1635 [166] K
Rp = 1.94 [0.66] Re
a = 0.0396 [0.0106] AU
Ag = 10.76 [4.70] [2.07σ]
Teffp = 4578 [311] K [8.36σ]

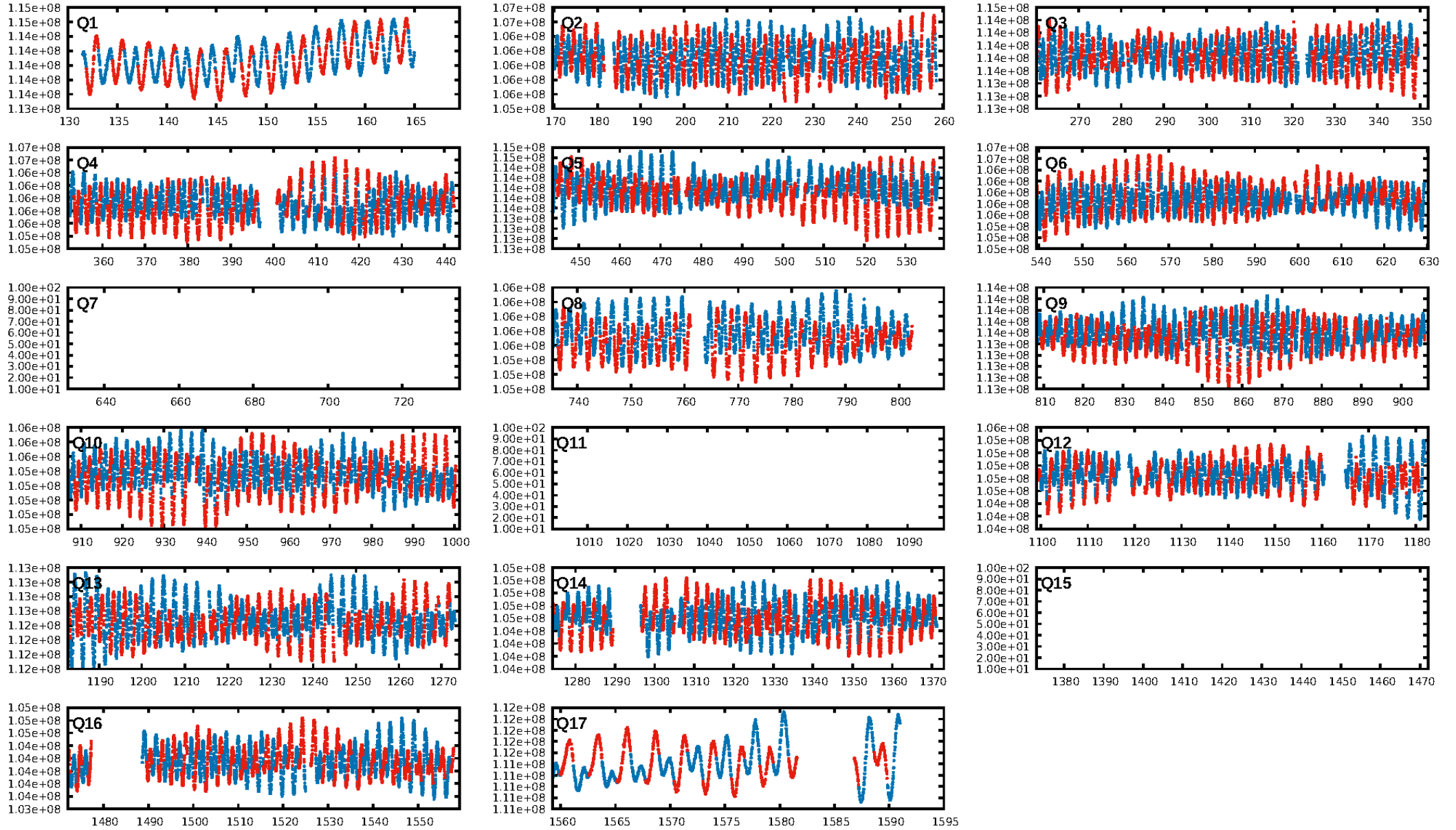
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [32.40σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.96 [378/393]
GhostDiagnostic-chr: 0.5315
Centroid-sig: 1.8%
Centroid-so: 0.500 arcsec [1.47σ]
OotOffset-rm: 0.128 arcsec [0.93σ]
OotOffset-st: 4/1/4/5 [14]
KicOffset-rm: 0.120 arcsec [0.82σ]
KicOffset-st: 4/1/4/5 [14]
DiffImageQuality-fgm: 0.64 [9/14]
DiffImageOverlap-fno: 1.00 [14/14]

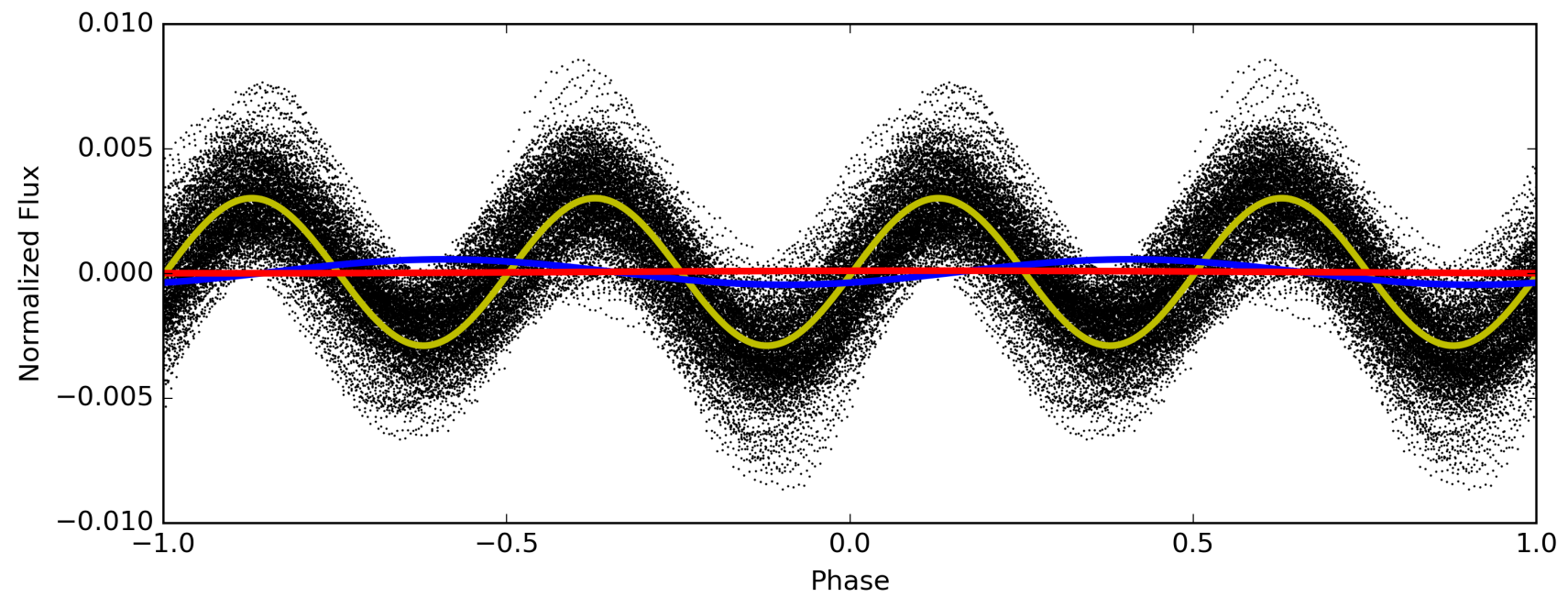
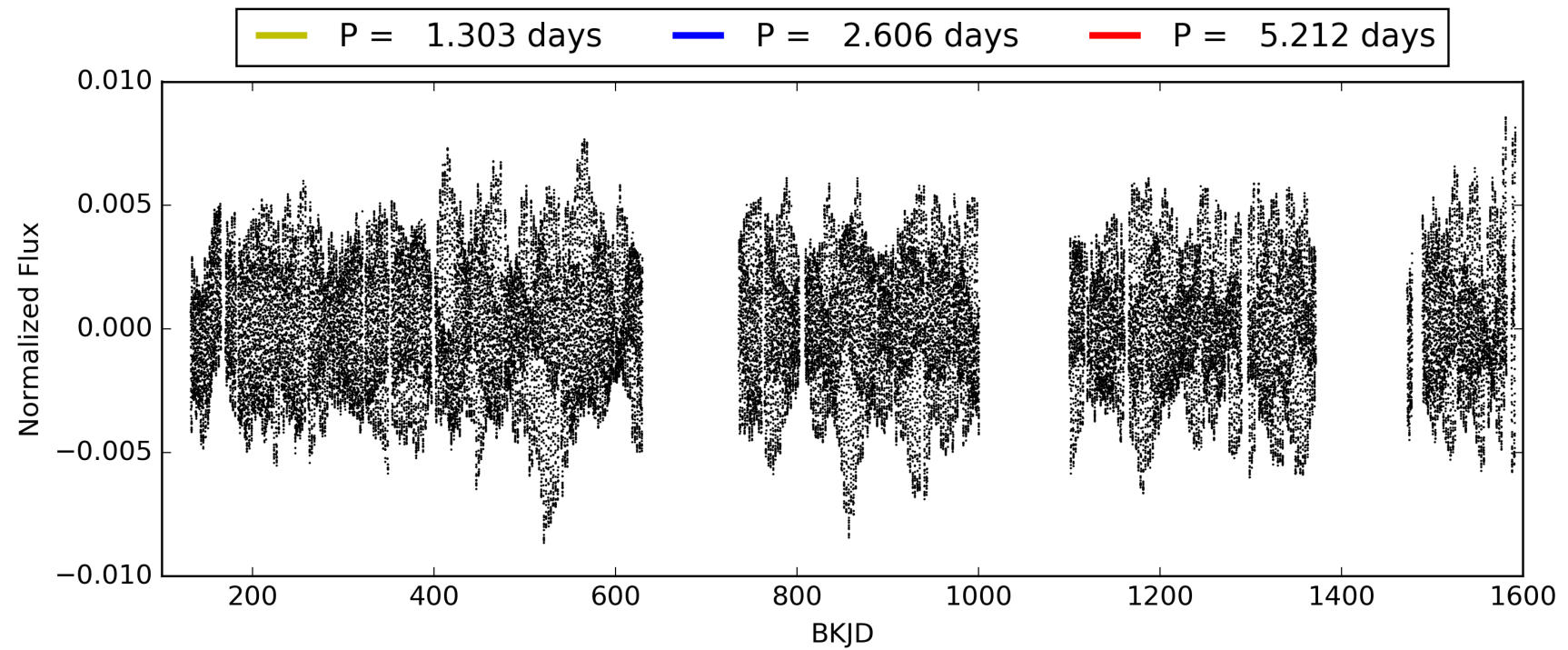
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 010934543-01, PDC Light Curves

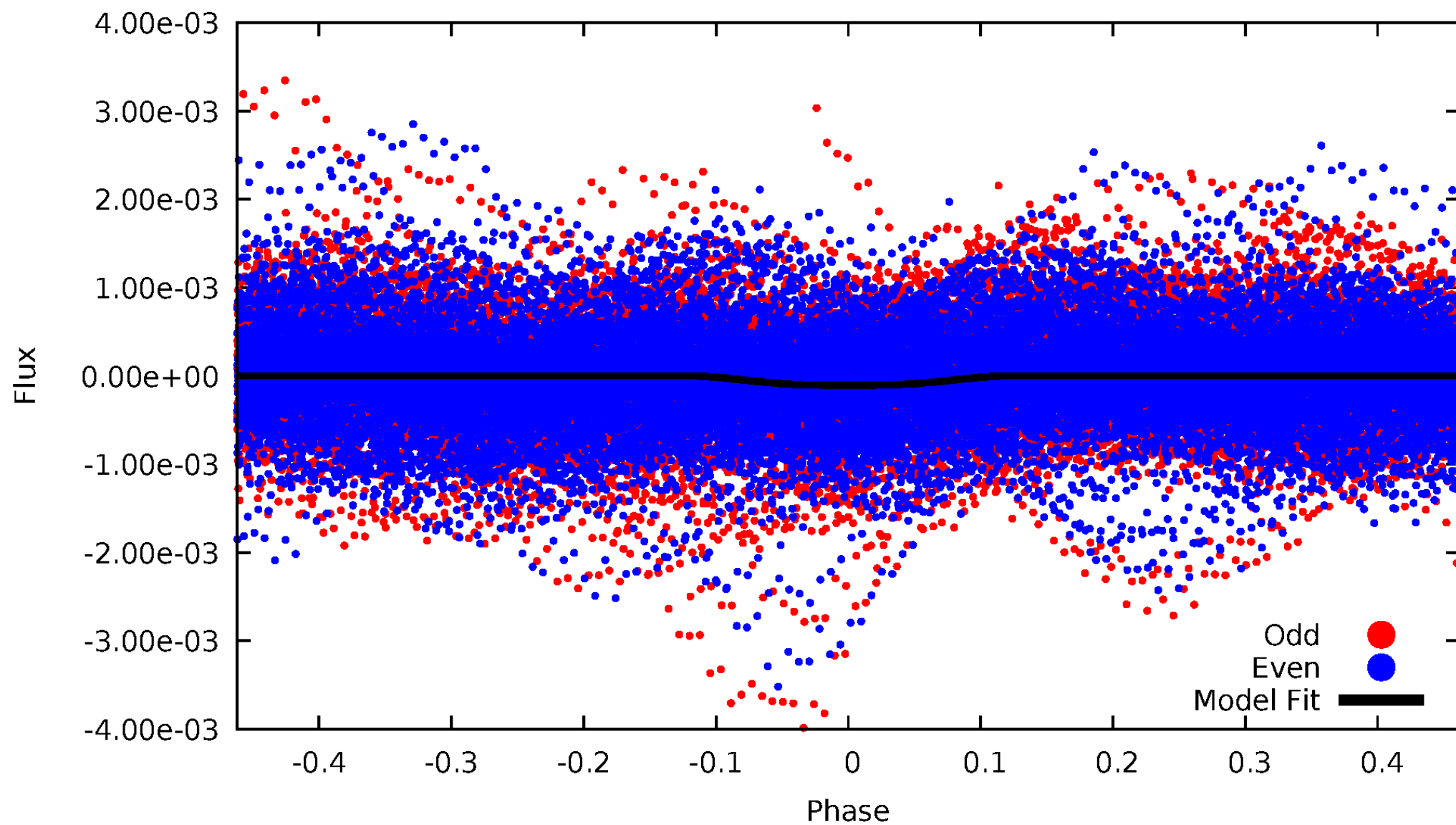


TCE 010934543-01



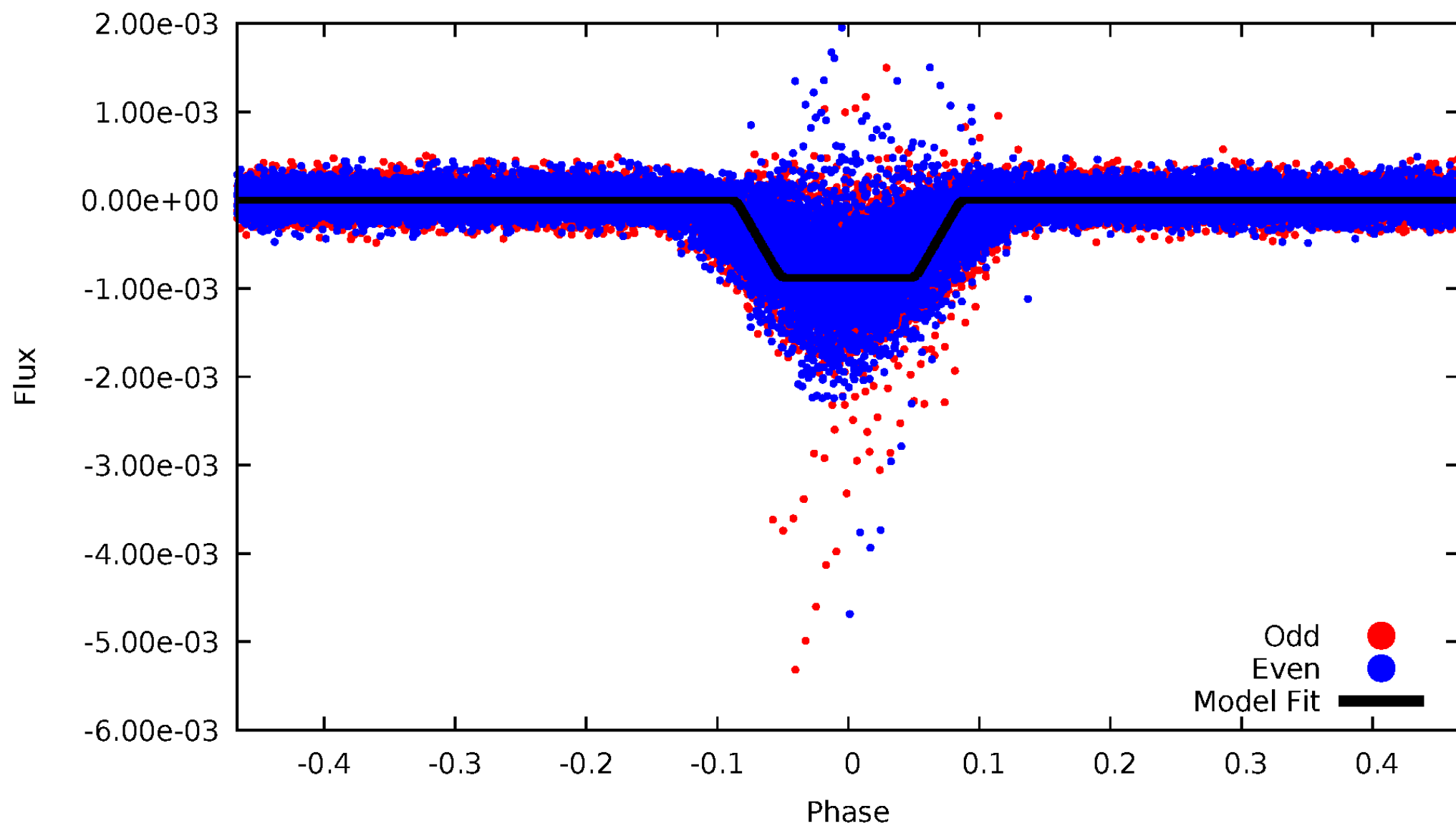
DV Odd/Even

TCE 010934543-01

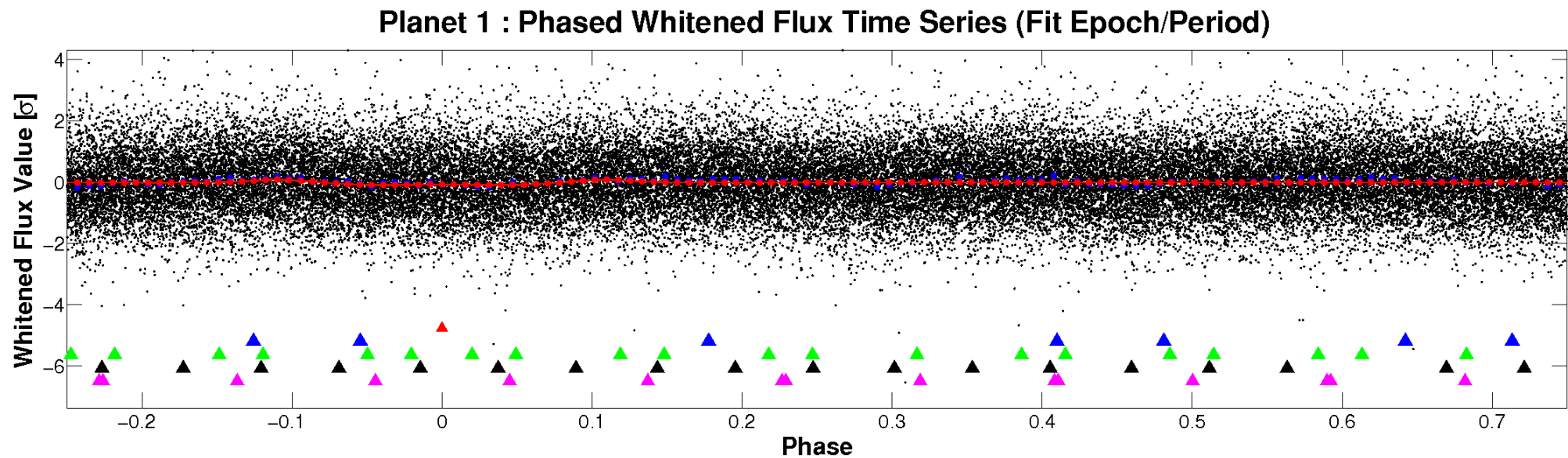
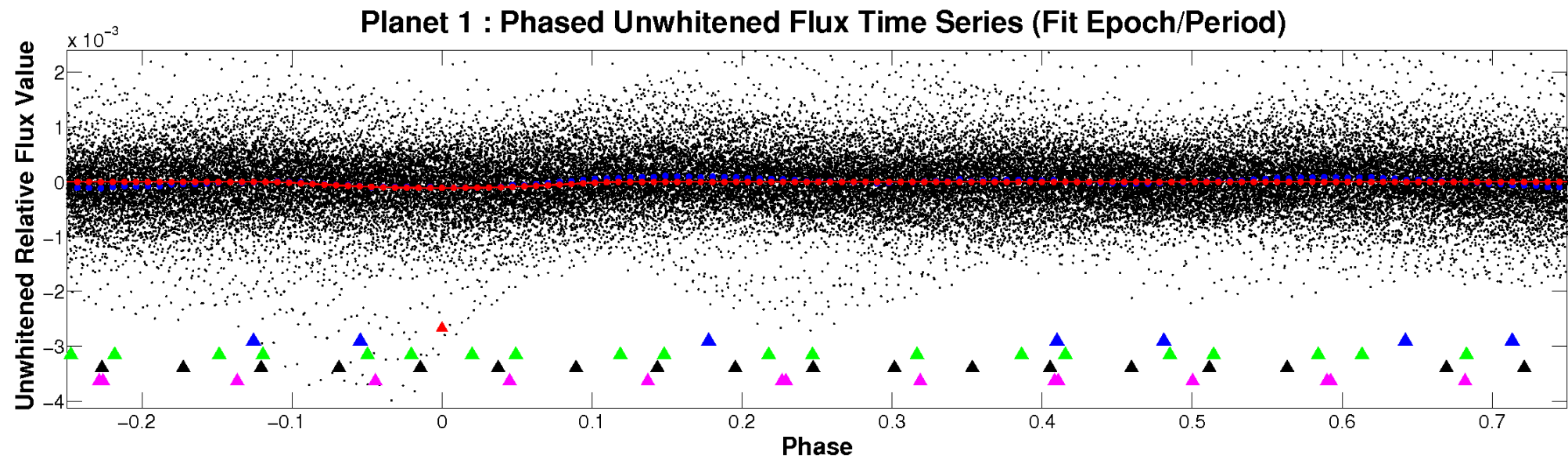


ALT Odd/Even

TCE 010934543-01

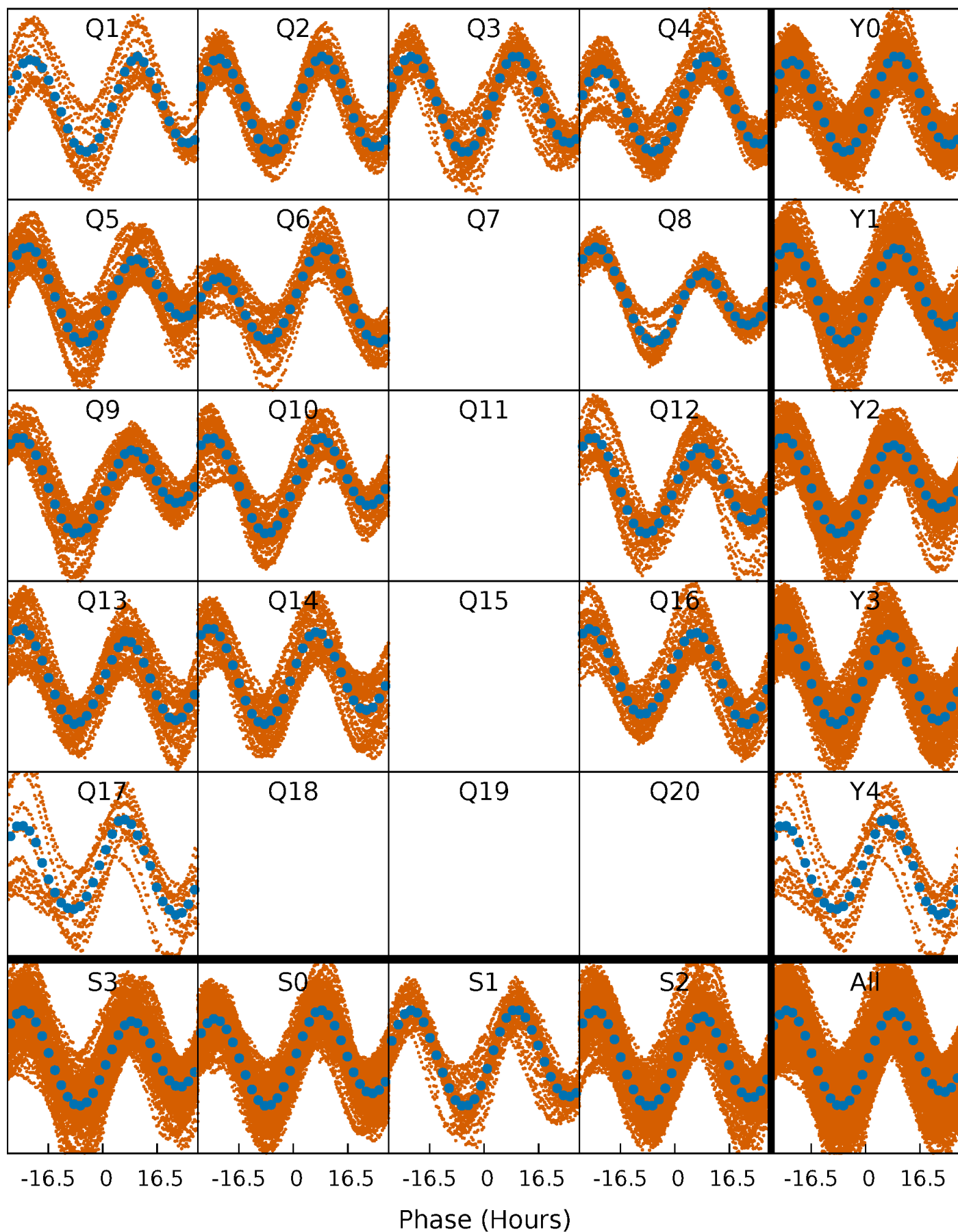


Non-Whitened Vs. Whitened Light Curve



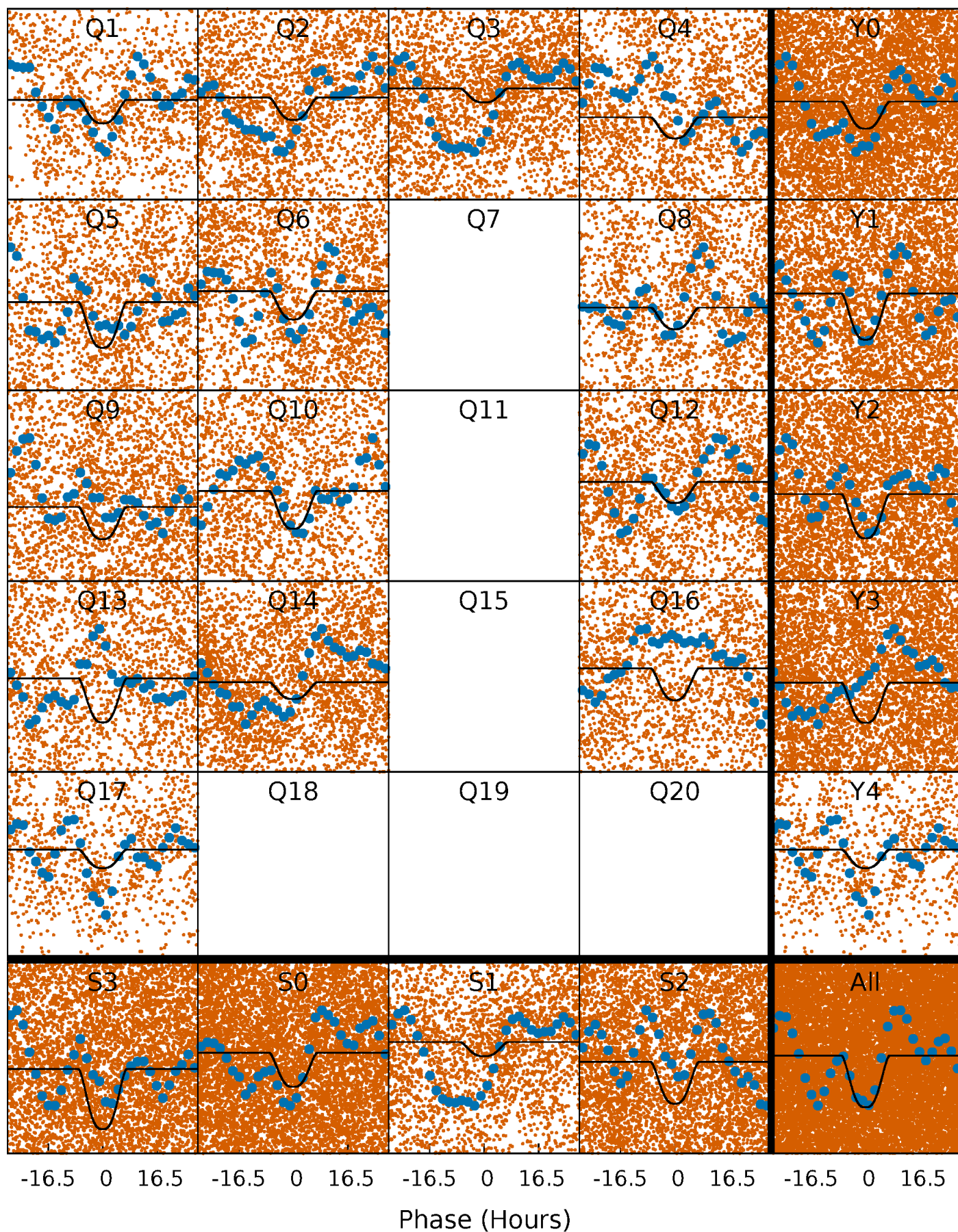
PDC Quarter-Phased Transit Curves

TCE 010934543-01 P= 2.606003 Days $T_0=132.468720$ (BKJD)



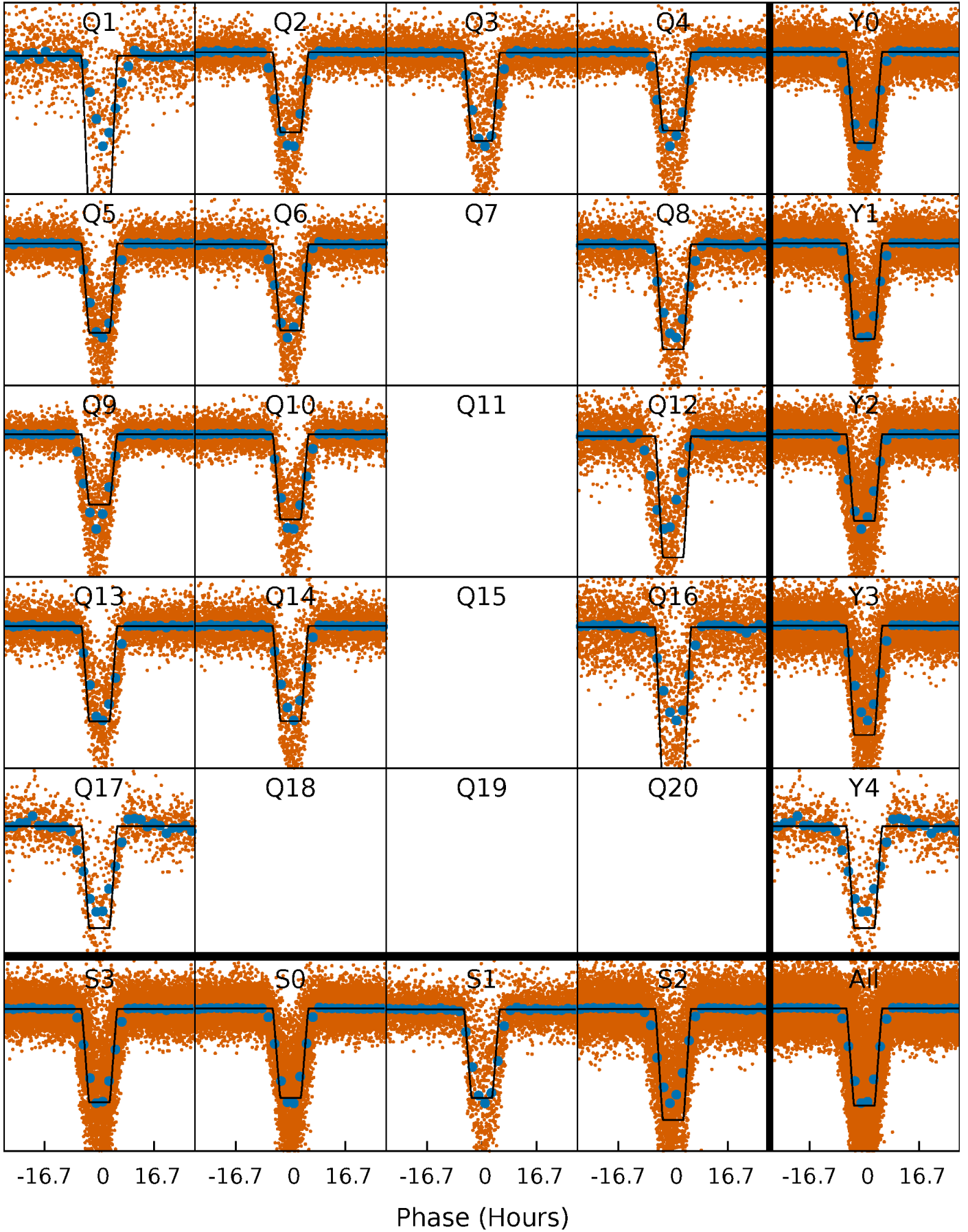
DV Quarter-Phased Transit Curves

TCE 010934543-01 P= 2.606003 Days $T_0=132.468720$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

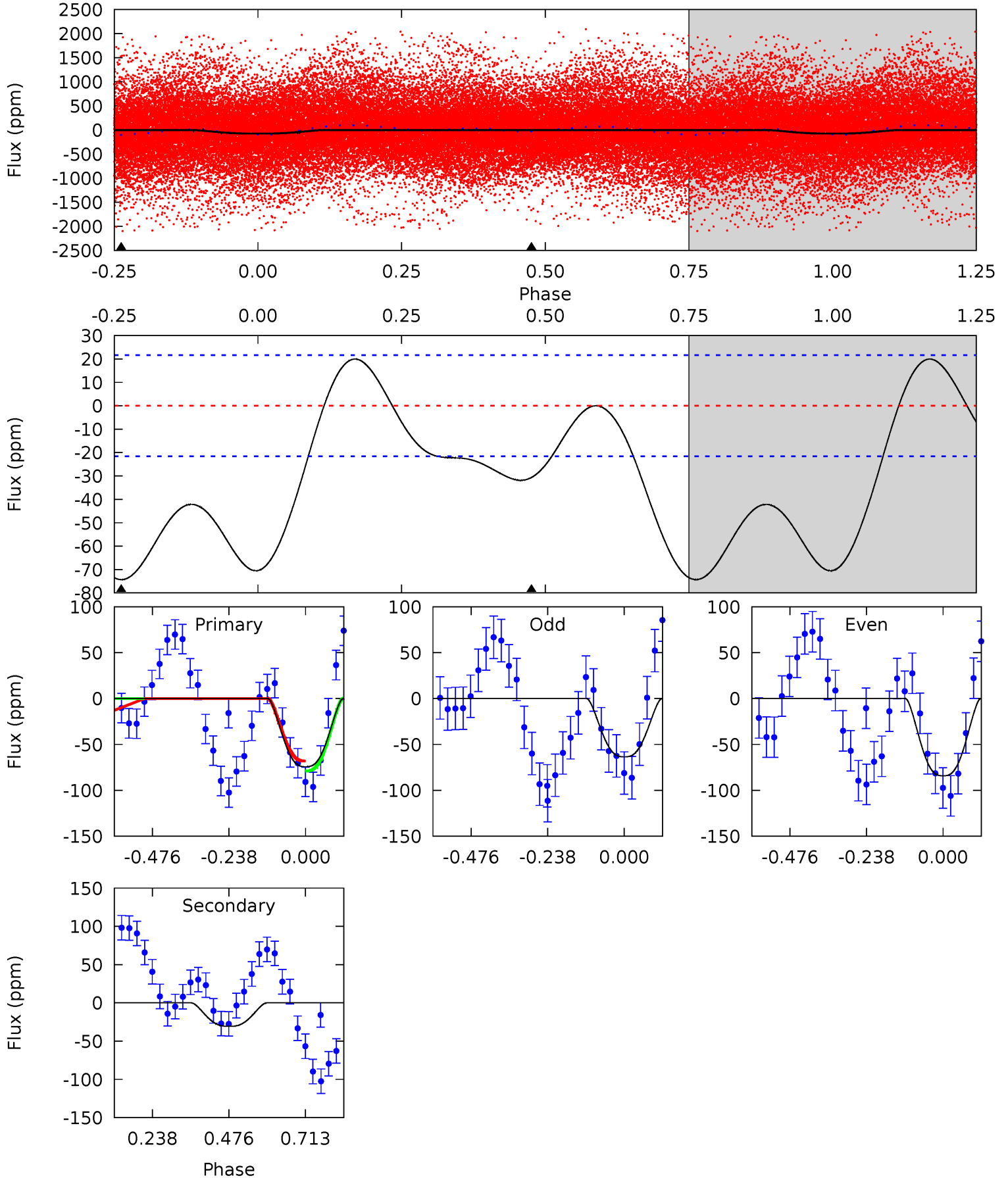
TCE 010934543-01 P= 2.605756 Days $T_0=132.432946$ (BKJD)



DV Model-Shift Uniqueness Test

010934543-01, P = 2.606003 Days, E = 129.862717 Days

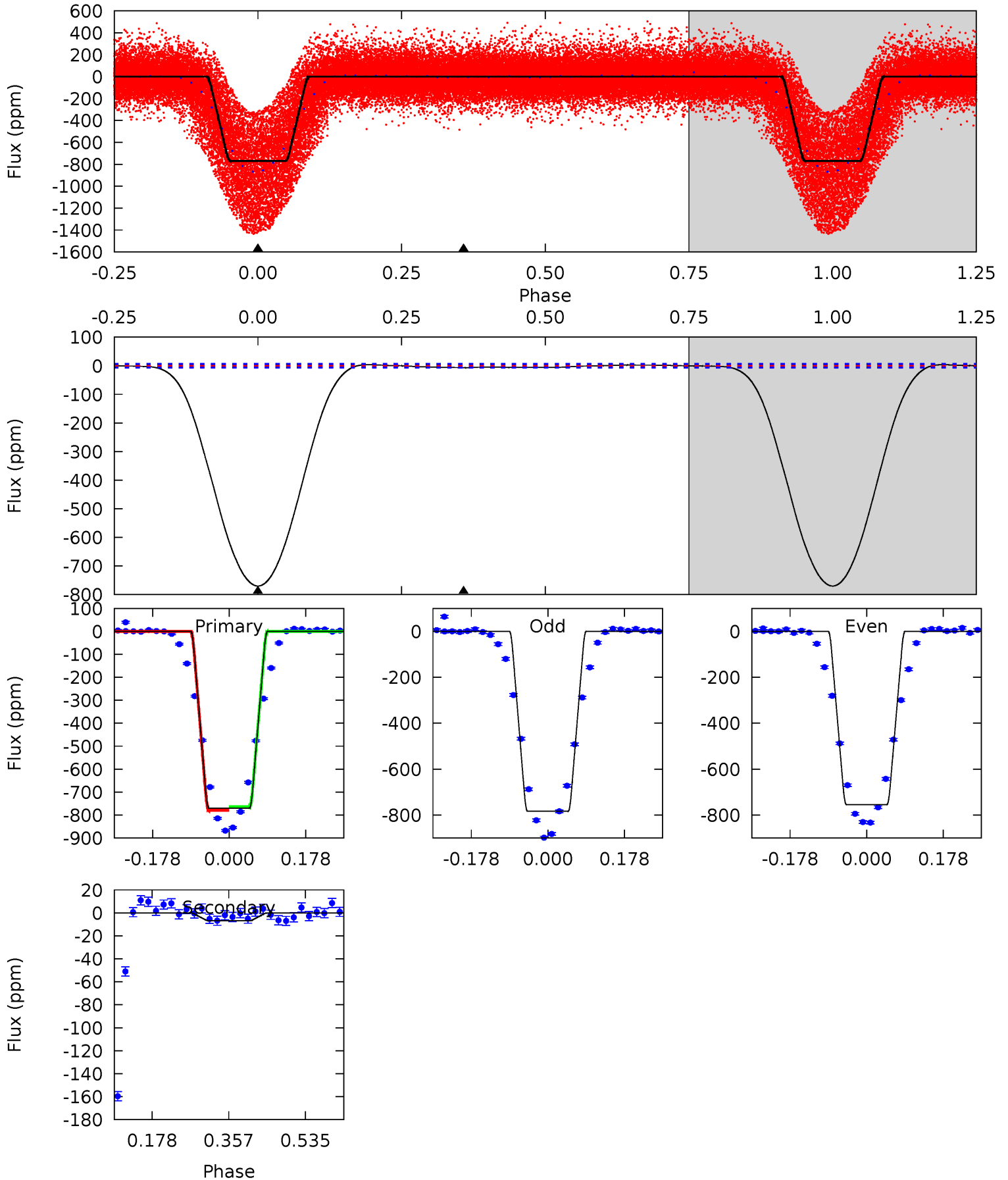
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.1	6.21	0	0	4.38	1.18	6.39	15.1	15.1	6.21	6.21	2.07	2.20	0.21	1.14



Alt Model-Shift Uniqueness Test

010934543-01, P = 2.605756 Days, E = 129.827190 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
576.2	5.10	0	0	4.44	1.35	1.39	576.2	576.2	5.10	5.10	10.9	1.04	0.00	5.69



Stellar Parameters For KIC 010934543

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6336^{+177}_{-243}	$4.261^{+0.132}_{-0.198}$	$0.080^{+0.250}_{-0.300}$	$1.356^{+0.448}_{-0.276}$	$1.224^{+0.182}_{-0.182}$	$0.692^{+0.439}_{-0.358}$
	+3%/-4%	+3%/-5%	+312%/-375%	+33%/-20%	+15%/-15%	+63%/-52%
Source	PHO54	PHO54	PHO54	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 010934543-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-31 ± 5	$1.95^{+0.37}_{-0.28}$	2292^{+190}_{-154}	4291^{+207}_{-203}	$6.829^{+2.413}_{-2.120}$
Alt.	-7 ± 1	$4.42^{+0.78}_{-0.52}$	2299^{+161}_{-148}	-1791^{+4071}_{-578}	$0.293^{+0.108}_{-0.084}$

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)

A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

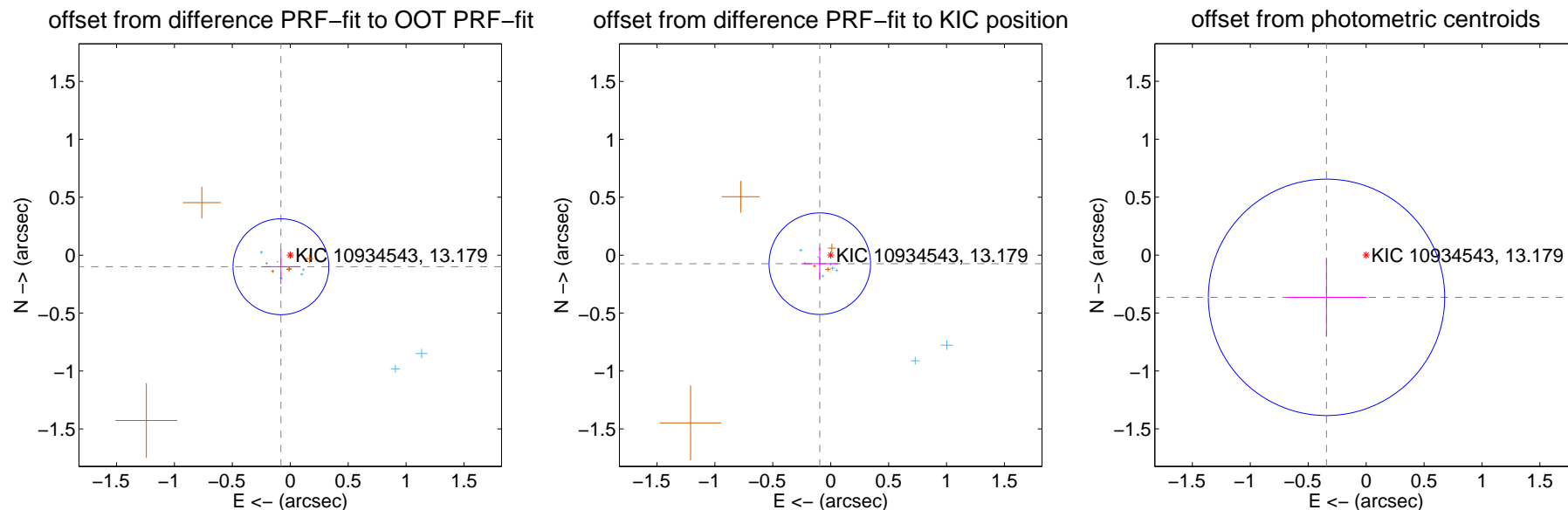
DV Centroid Data

Supplemental centroid analysis for 010934543-01. Kepler magnitude: 13.18. Transit SNR 8.15

There are 9 quarters with good PRF difference image offsets

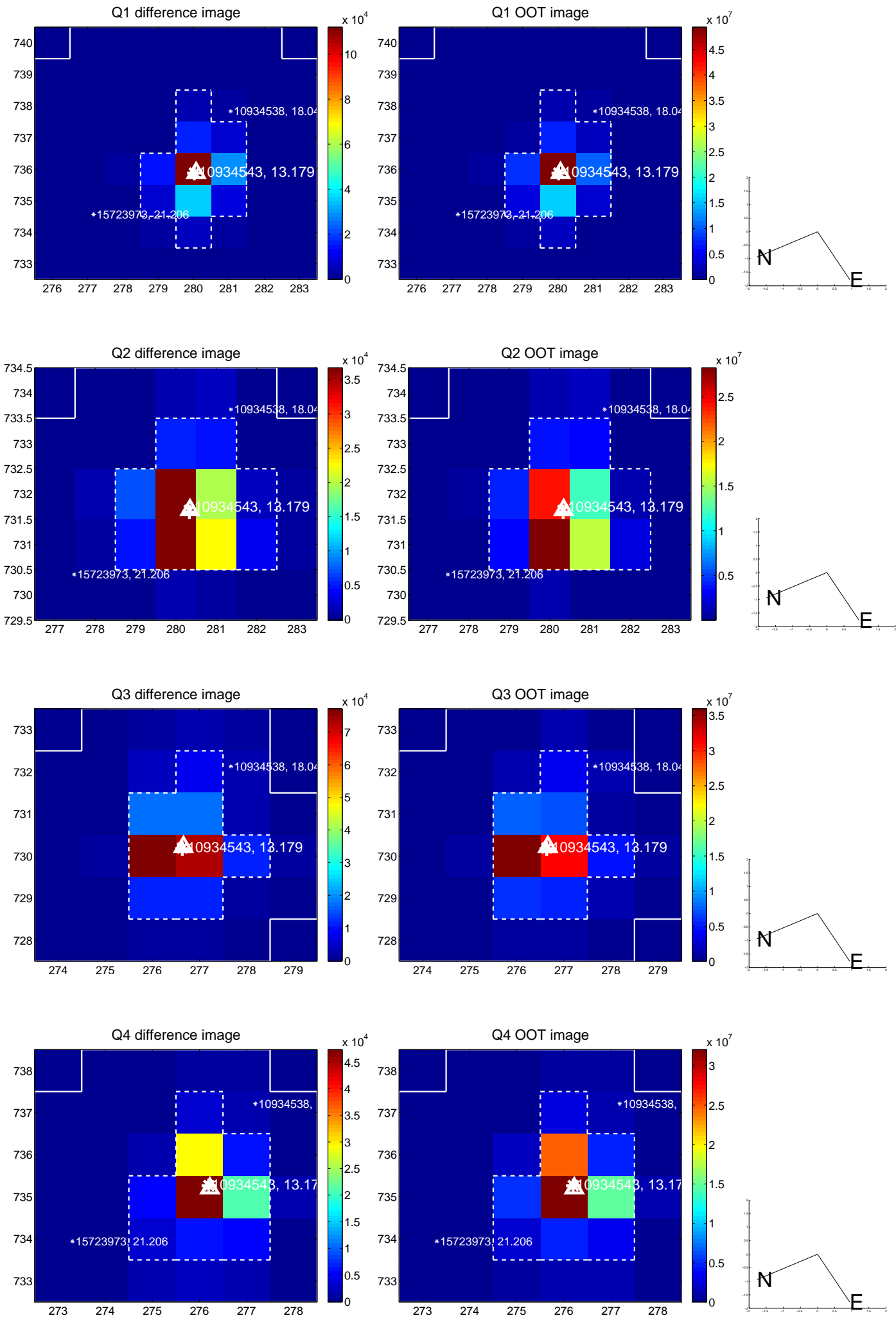
The direct PRF centroid is offset from the target star catalog position by about 0.01 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.128 ± 0.138	0.93	0.081 ± 0.170	-0.100 ± 0.149
PRF-fit source offset from KIC position	0.120 ± 0.146	0.82	0.094 ± 0.160	-0.074 ± 0.141
photometric centroid source offset	0.50 ± 0.34	1.47	0.34 ± 0.35	-0.36 ± 0.33

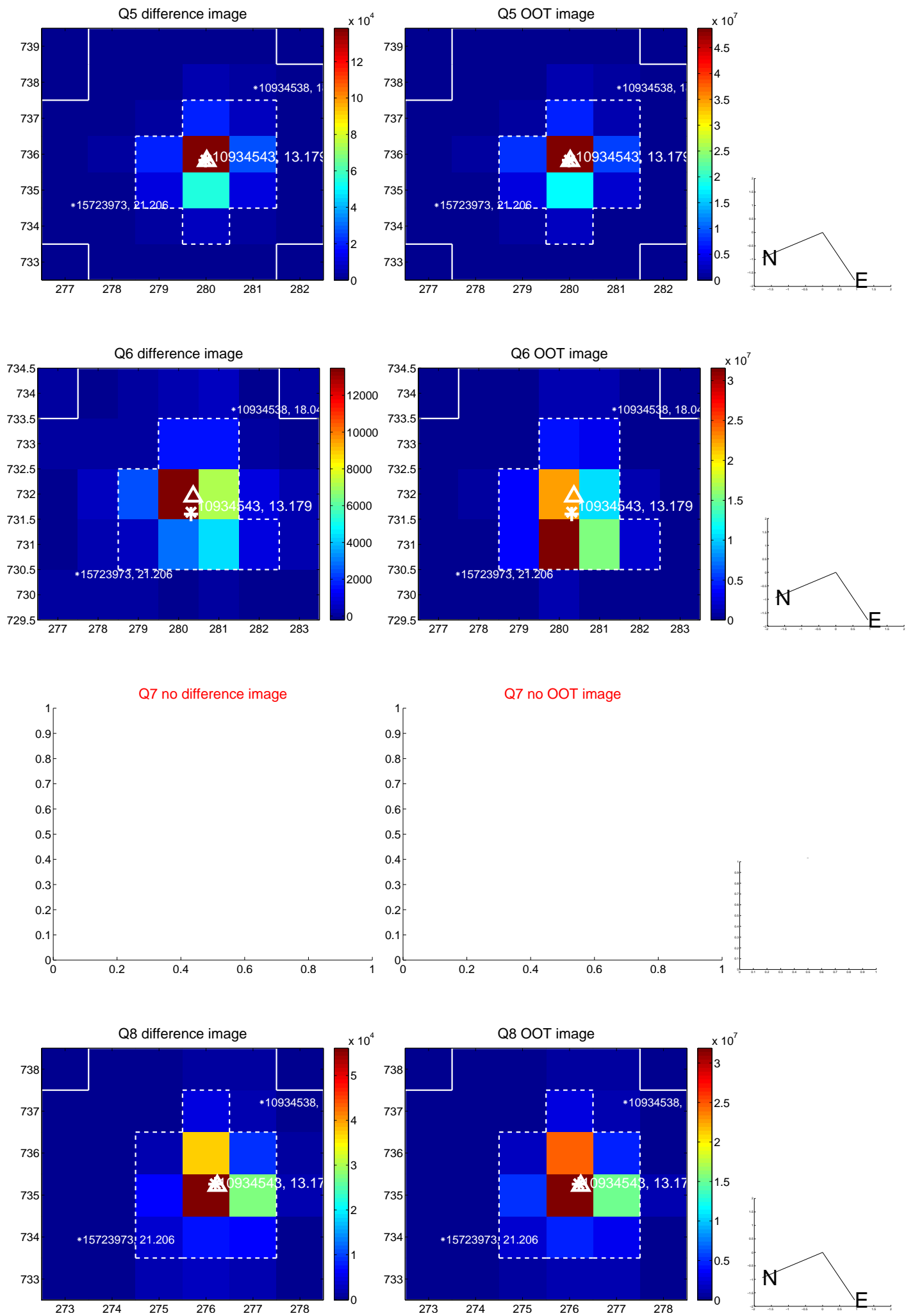


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

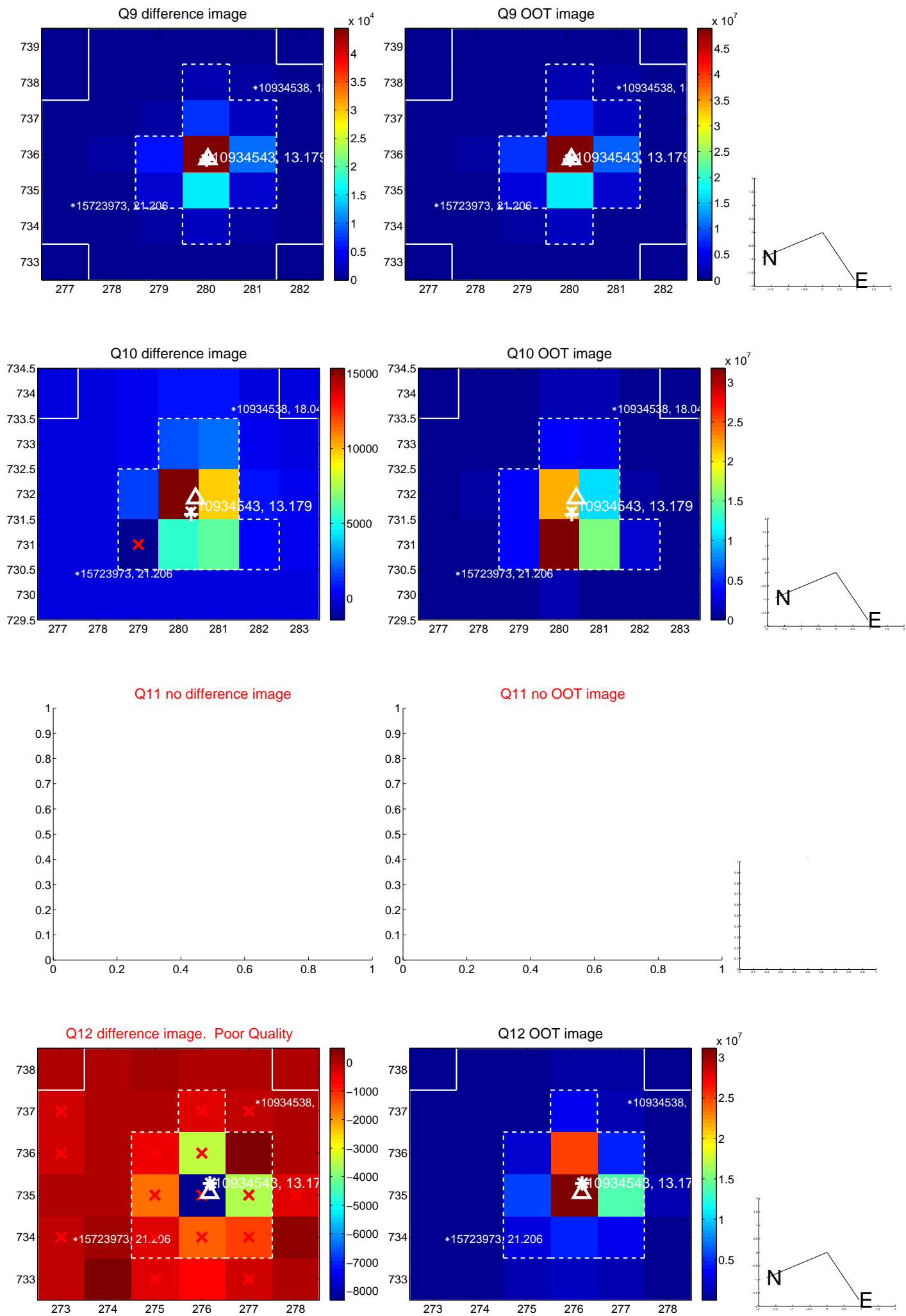
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



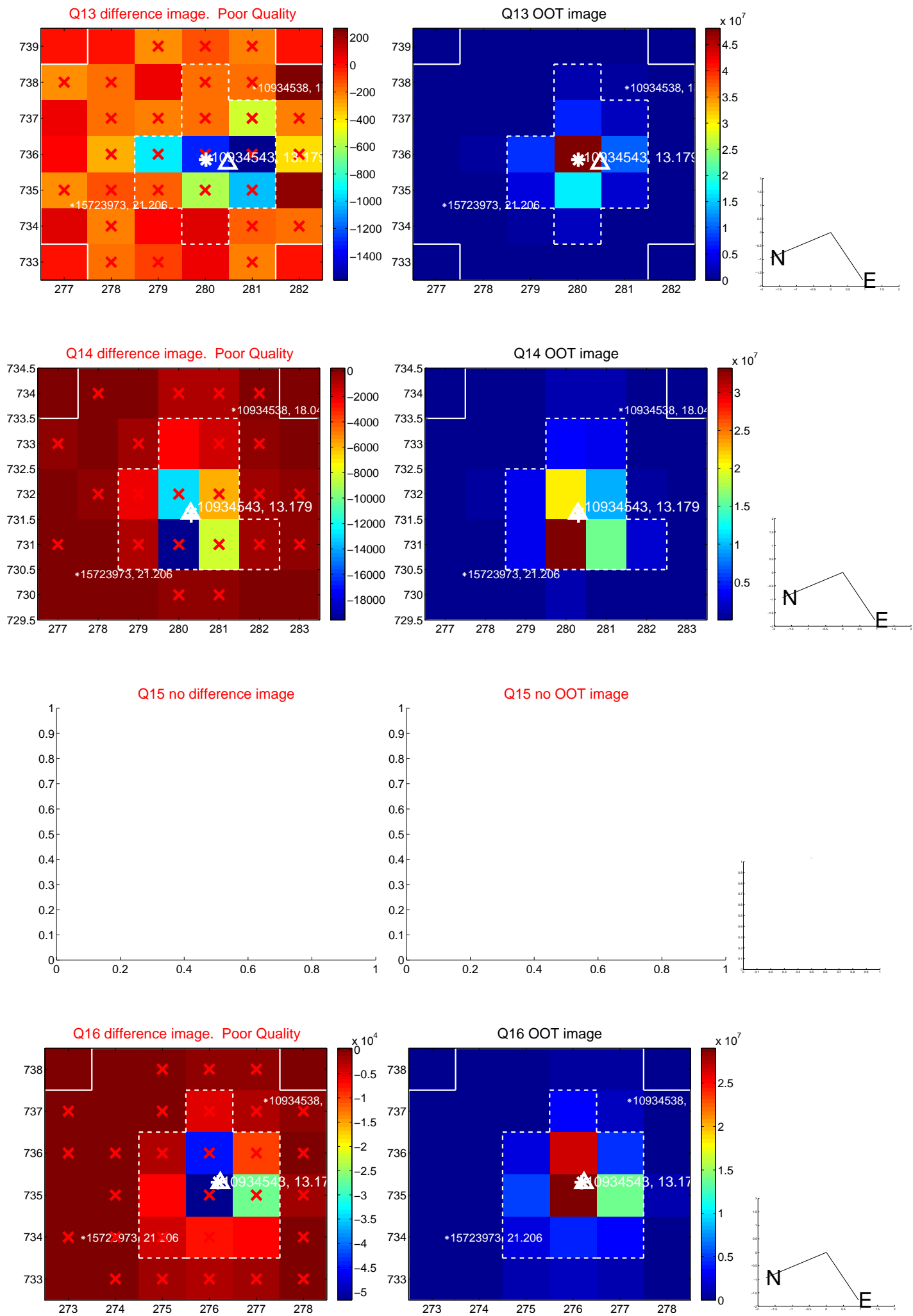
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



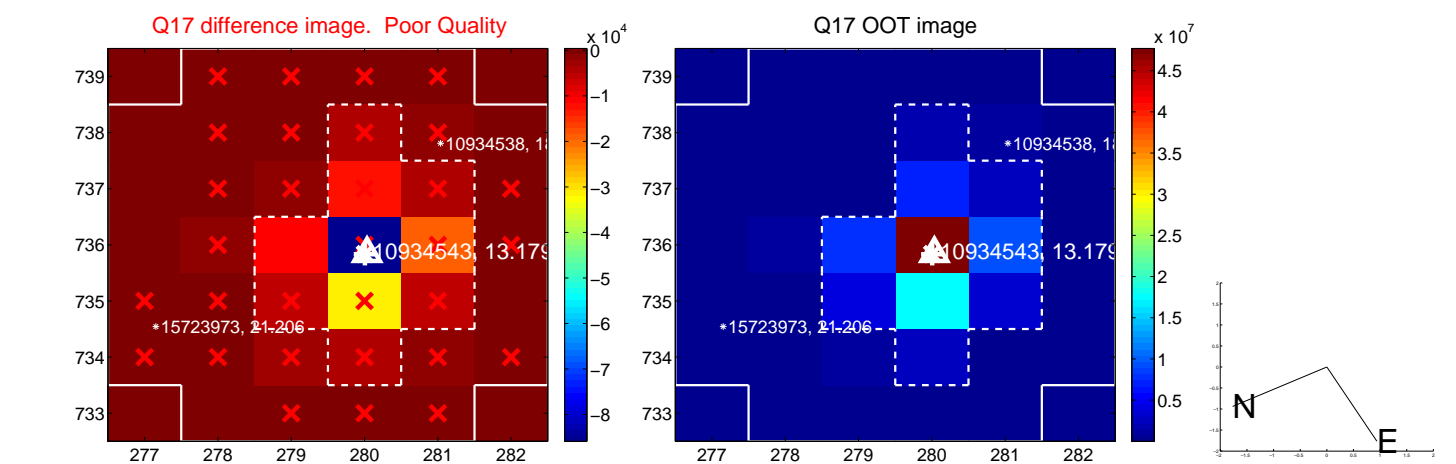
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



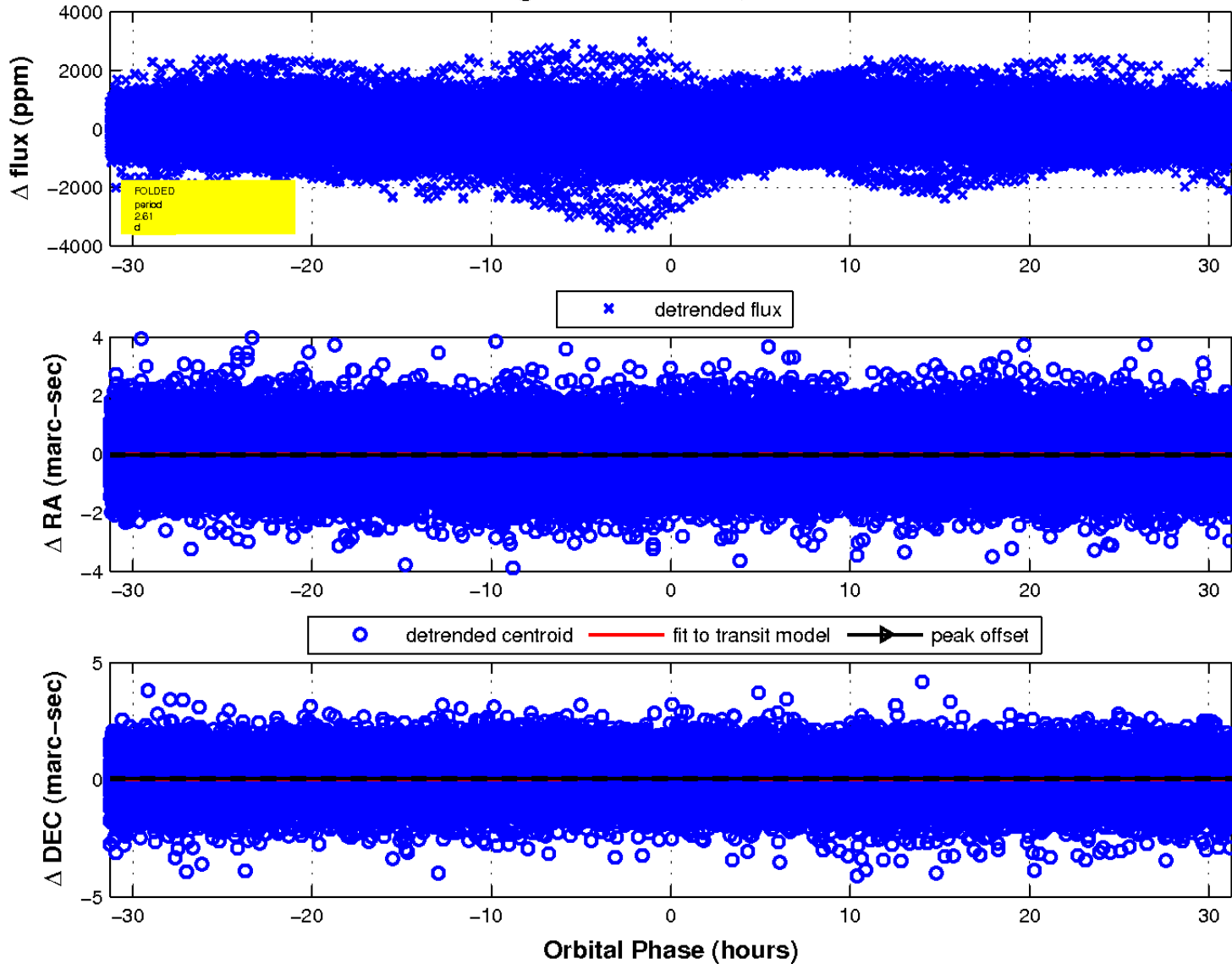
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

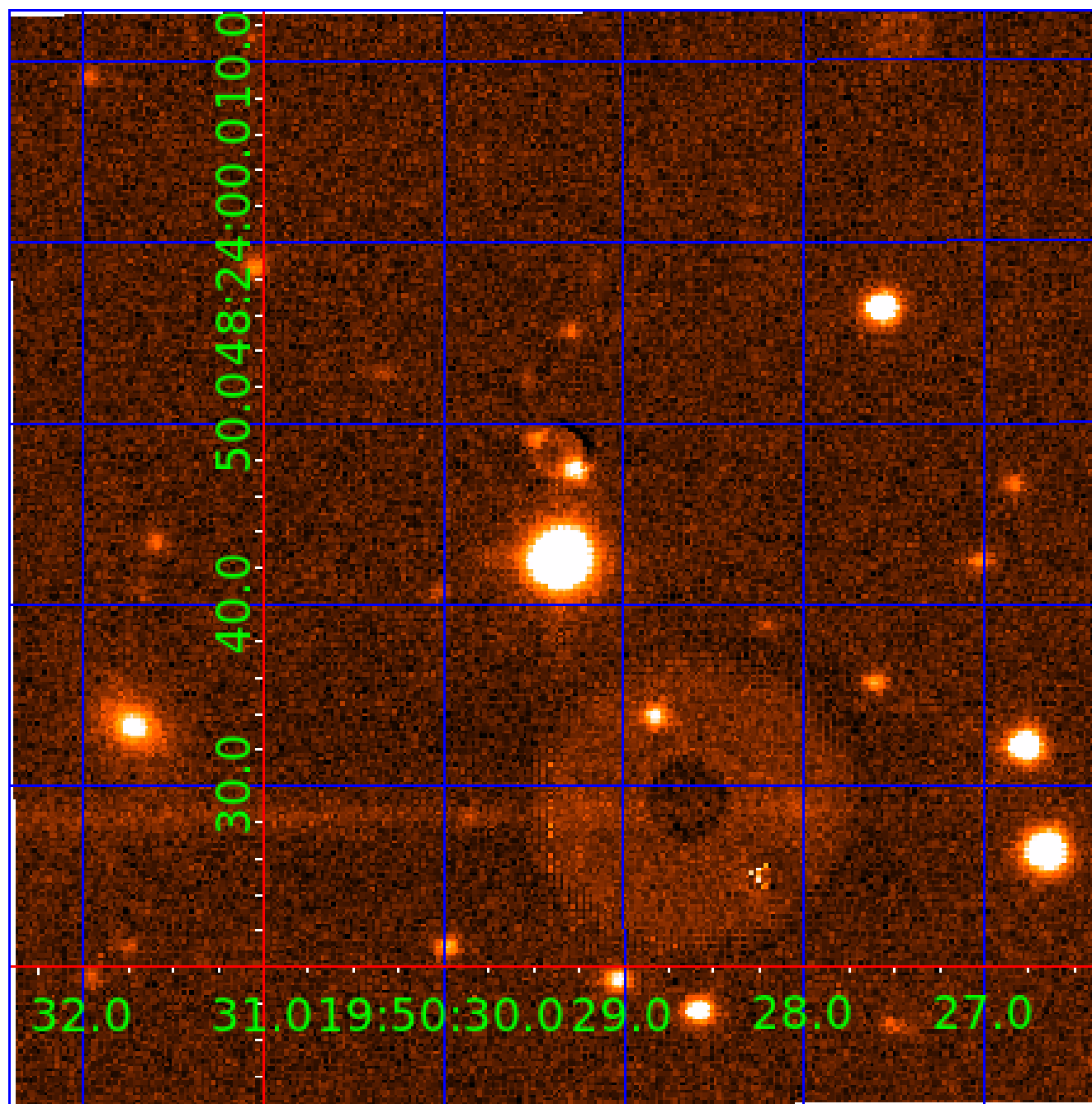


fluxWeightedCentroids, Planet 1 of 5



UKIRT Image

Declination



KIC 010934543

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R_{\star} (R_{\odot})	T_{\star} (K)	R_p (R_{\oplus})	S_p (S_{\oplus})
010934543-01	OBS	No	2.606003	132.468720	107.6	14.443	7.8	8.2	1.36	6336	1.94	1689.25
010934543-02	OBS	No	224.721391	224.932787	1103.3	12.351	10.2	9.6	1.36	6336	8.51	4.43
010934543-03	OBS	No	71.316636	187.247034	644.9	48.812	9.8	5.9	1.36	6336	4.08	20.48
010934543-04	OBS	No	81.197899	197.028040	619.5	13.080	9.9	7.5	1.36	6336	4.20	17.23
010934543-05	OBS	No	96.895340	177.368163	246.8	16.064	8.8	3.4	1.36	6336	2.29	13.61

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010934543-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV
010934543-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
010934543-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV
010934543-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT
010934543-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT— MOD_POS_ALT—CENT_NOFITS

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

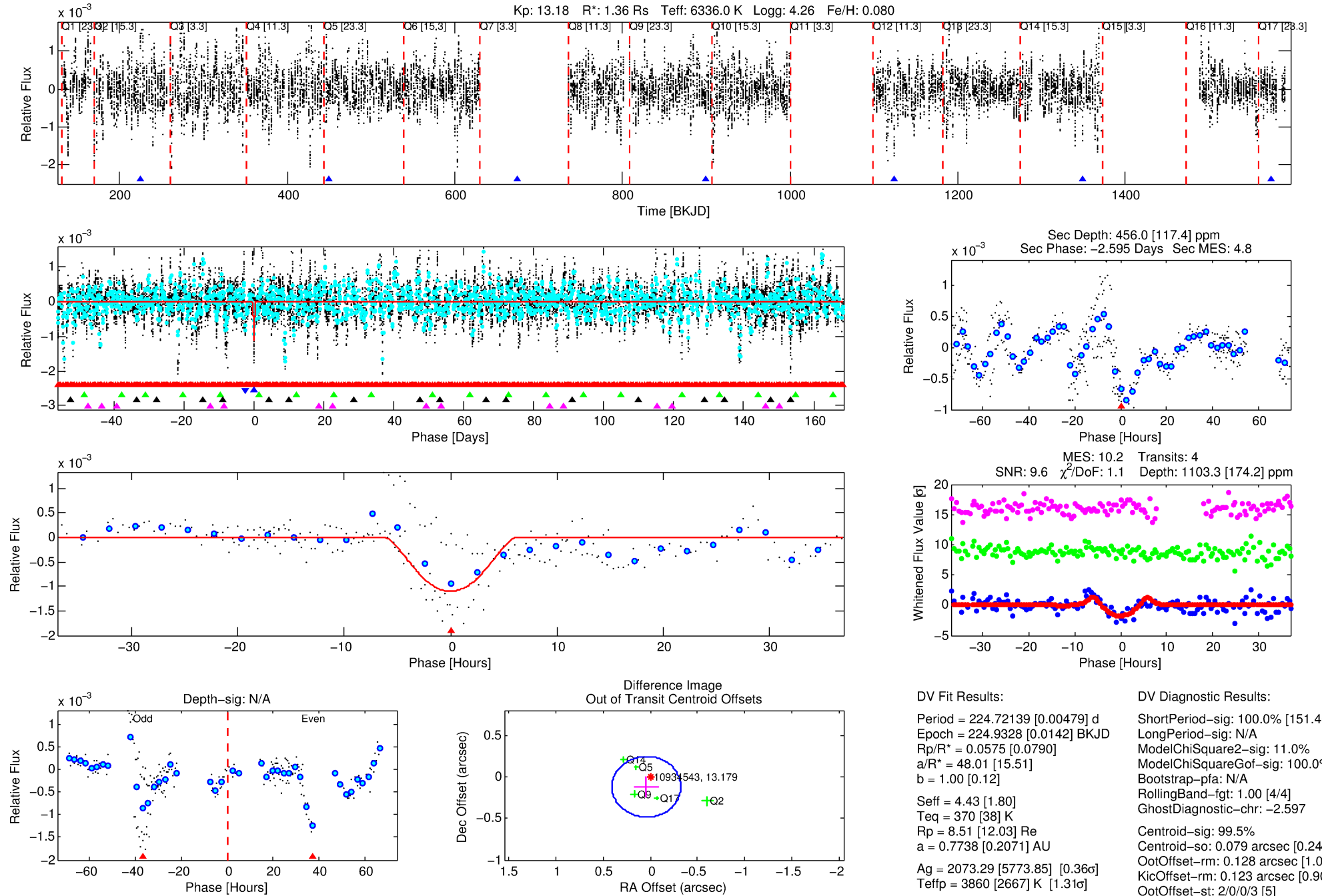
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010934543-02

No Significant Match Found

DV One-Page Summary

KIC: 10934543 Candidate: 2 of 5 Period: 224.721 d



DV Fit Results:

Period = 224.72139 [0.00479] d
Epoch = 224.9328 [0.0142] BKJD
Rp/R* = 0.0575 [0.0790]
a/R* = 48.01 [15.51]
b = 1.00 [0.12]
Seff = 4.43 [1.80]
Teff = 370 [38] K
Rp = 8.51 [12.03] Re
a = 0.7738 [0.2071] AU
Ag = 2073.29 [5773.85] [0.36σ]
Teffp = 3860 [2667] K [1.31σ]

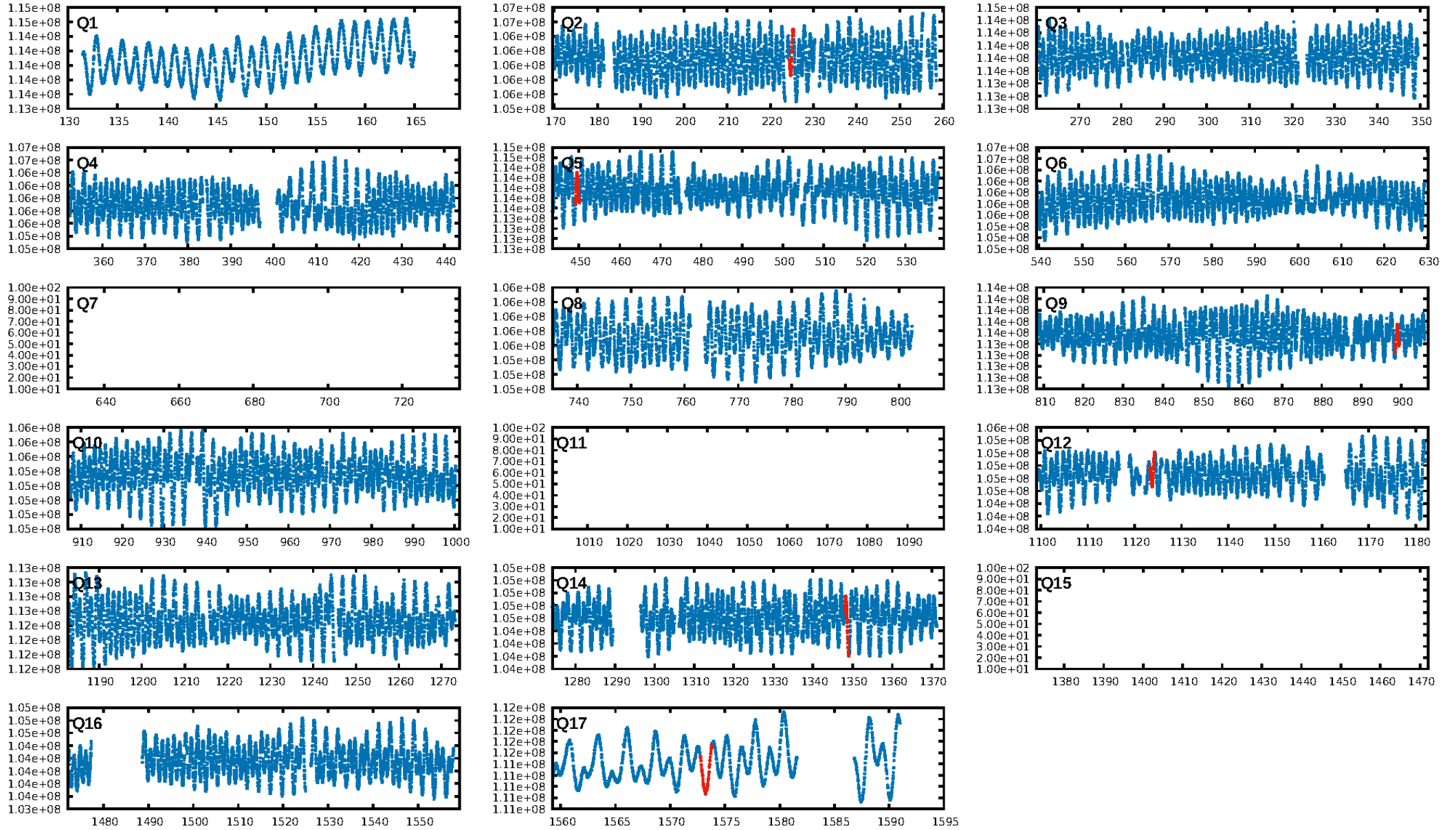
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [151.40σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 11.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -2.597
Centroid-sig: 99.5%
Centroid-so: 0.079 arcsec [0.24σ]
OotOffset-rm: 0.128 arcsec [1.05σ]
KicOffset-rm: 0.123 arcsec [0.90σ]
OotOffset-st: 2/0/0/3 [5]
KicOffset-st: 2/0/0/3 [5]
DiffImageQuality-fgm: 0.40 [2/5]
DiffImageOverlap-fno: 0.20 [1/5]

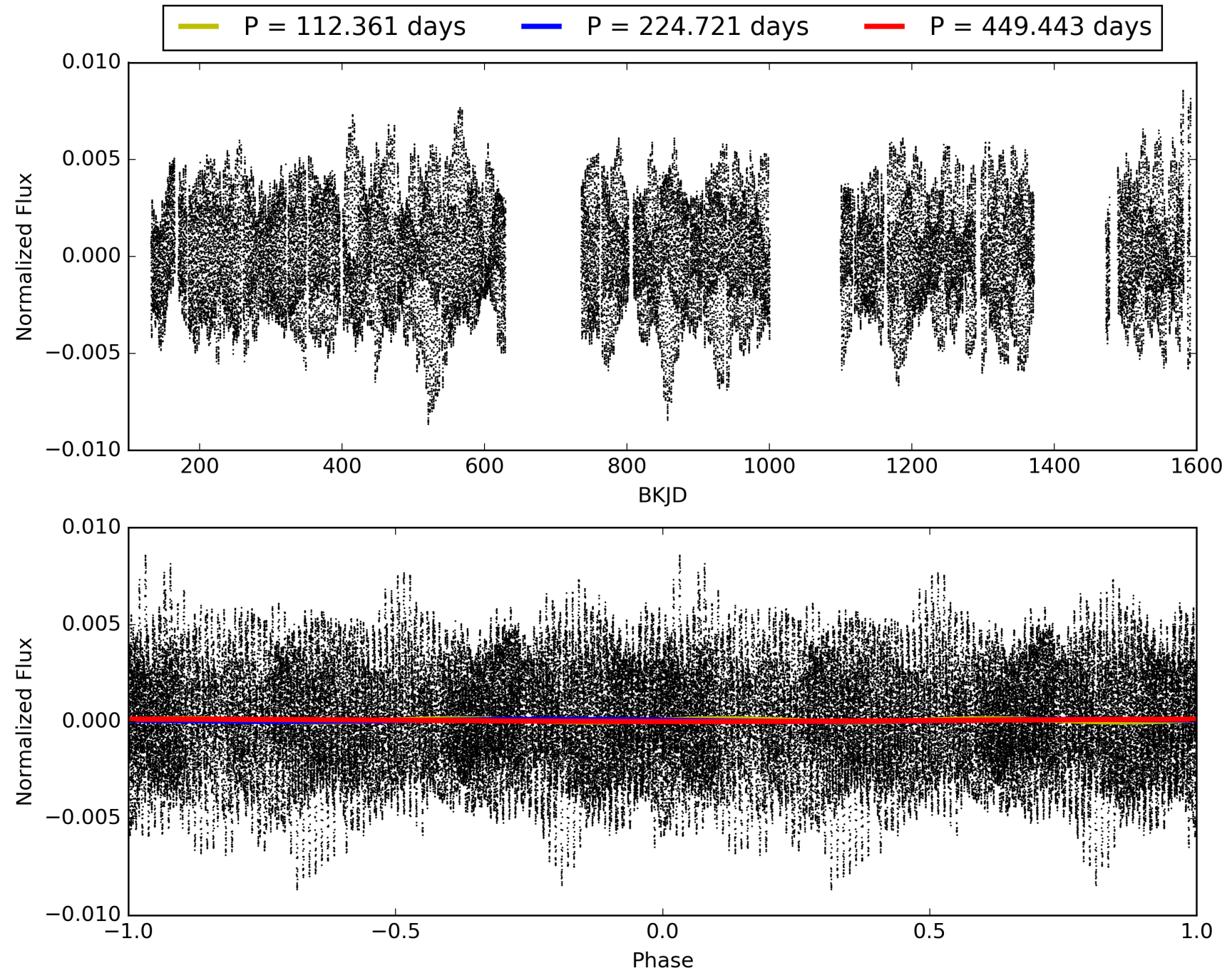
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 10:14:52 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 010934543-02, PDC Light Curves

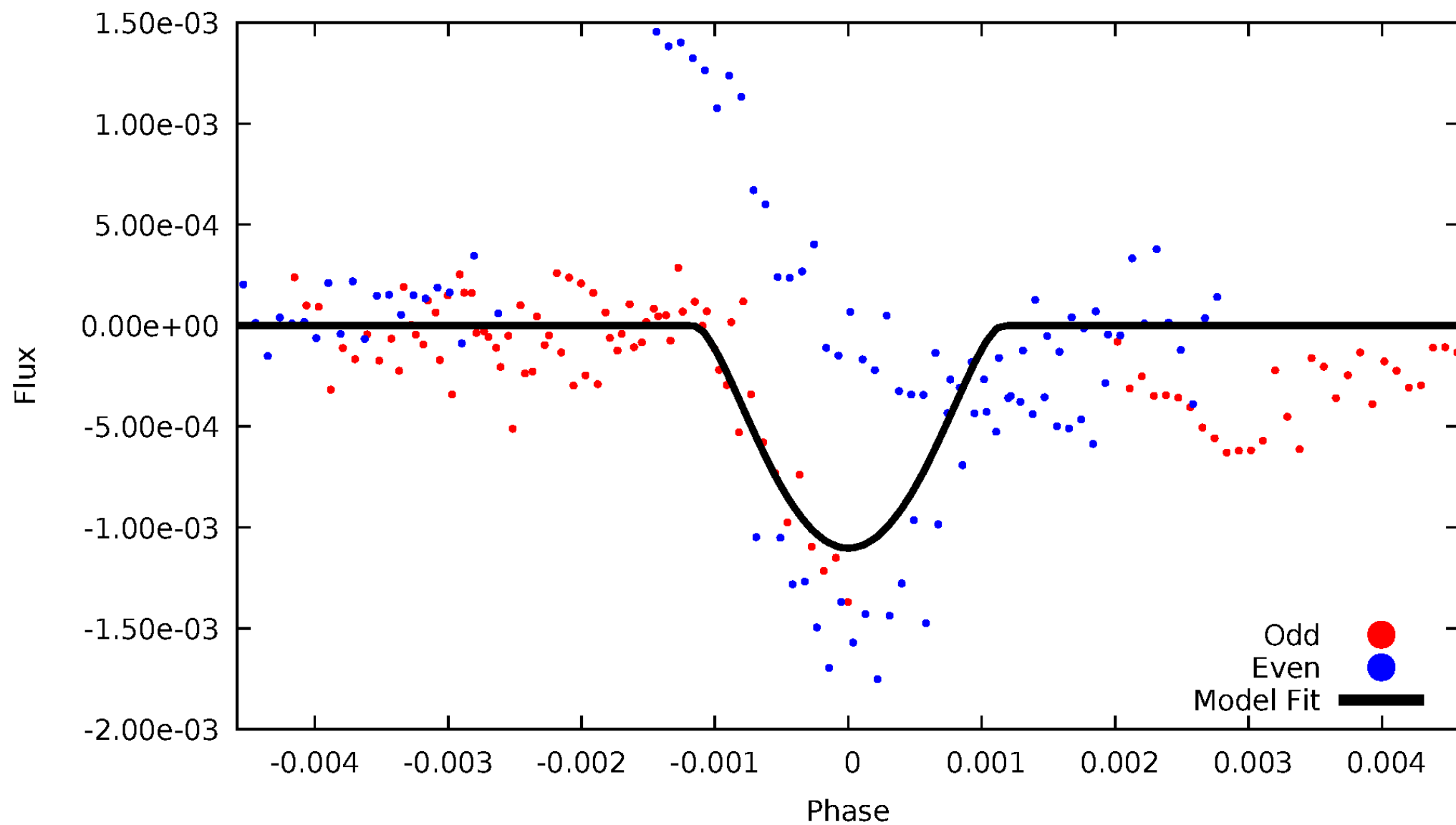


TCE 010934543-02



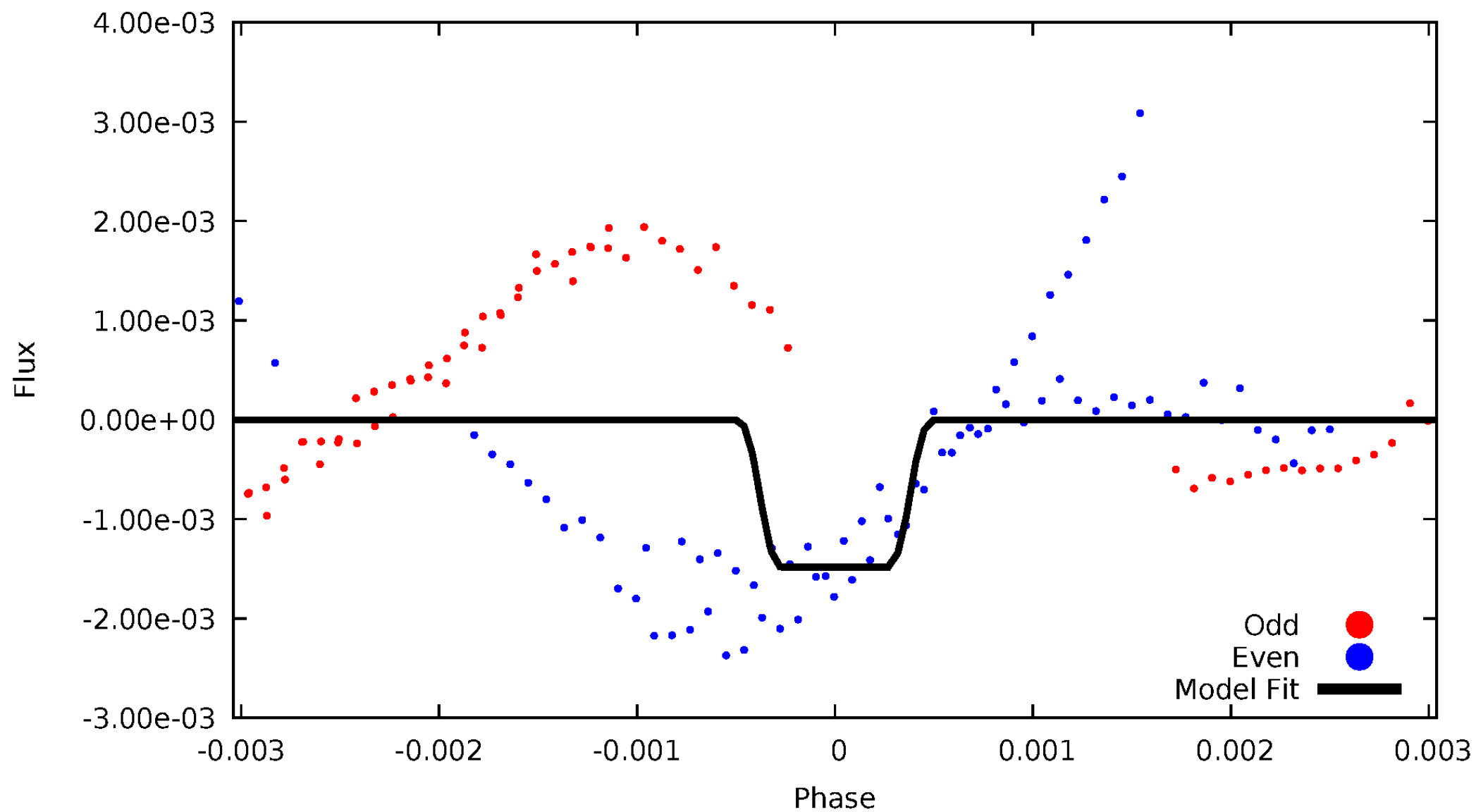
DV Odd/Even

TCE 010934543-02



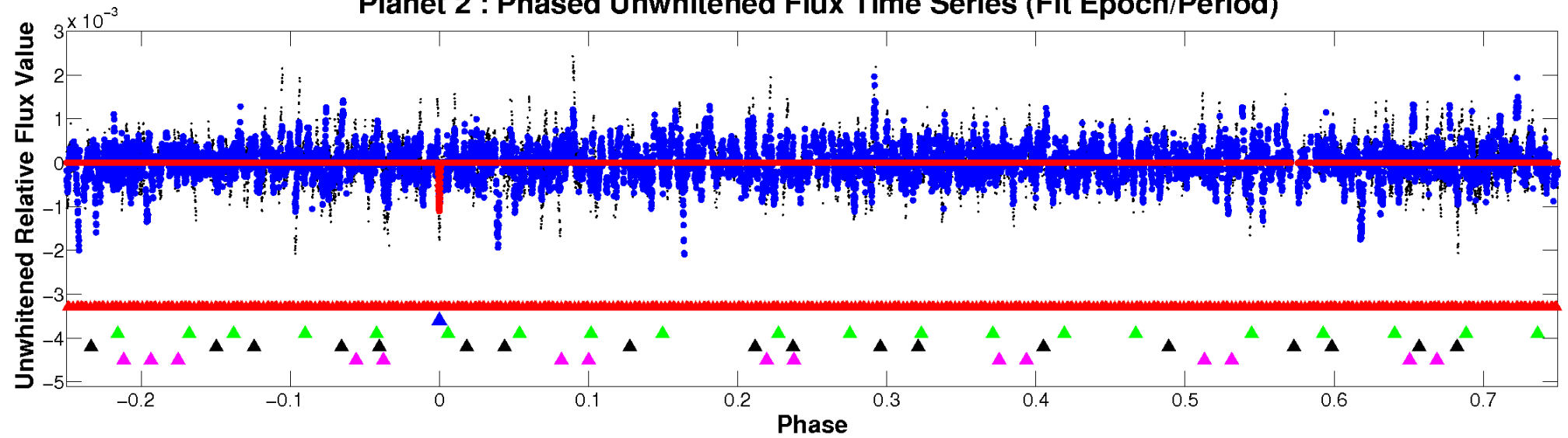
ALT Odd/Even

TCE 010934543-02

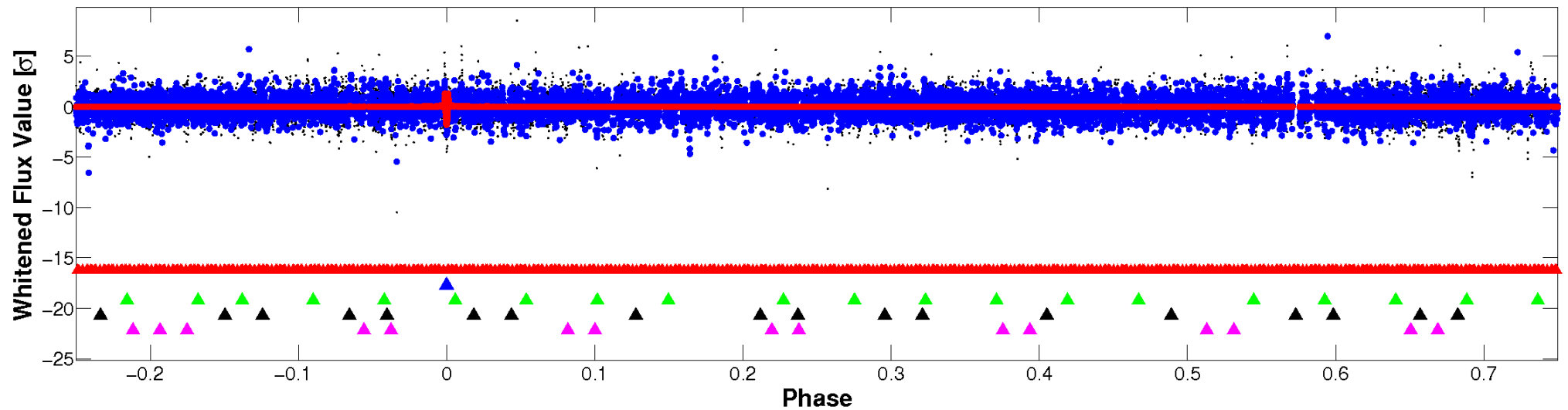


Non-Whitened Vs. Whitened Light Curve

Planet 2 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

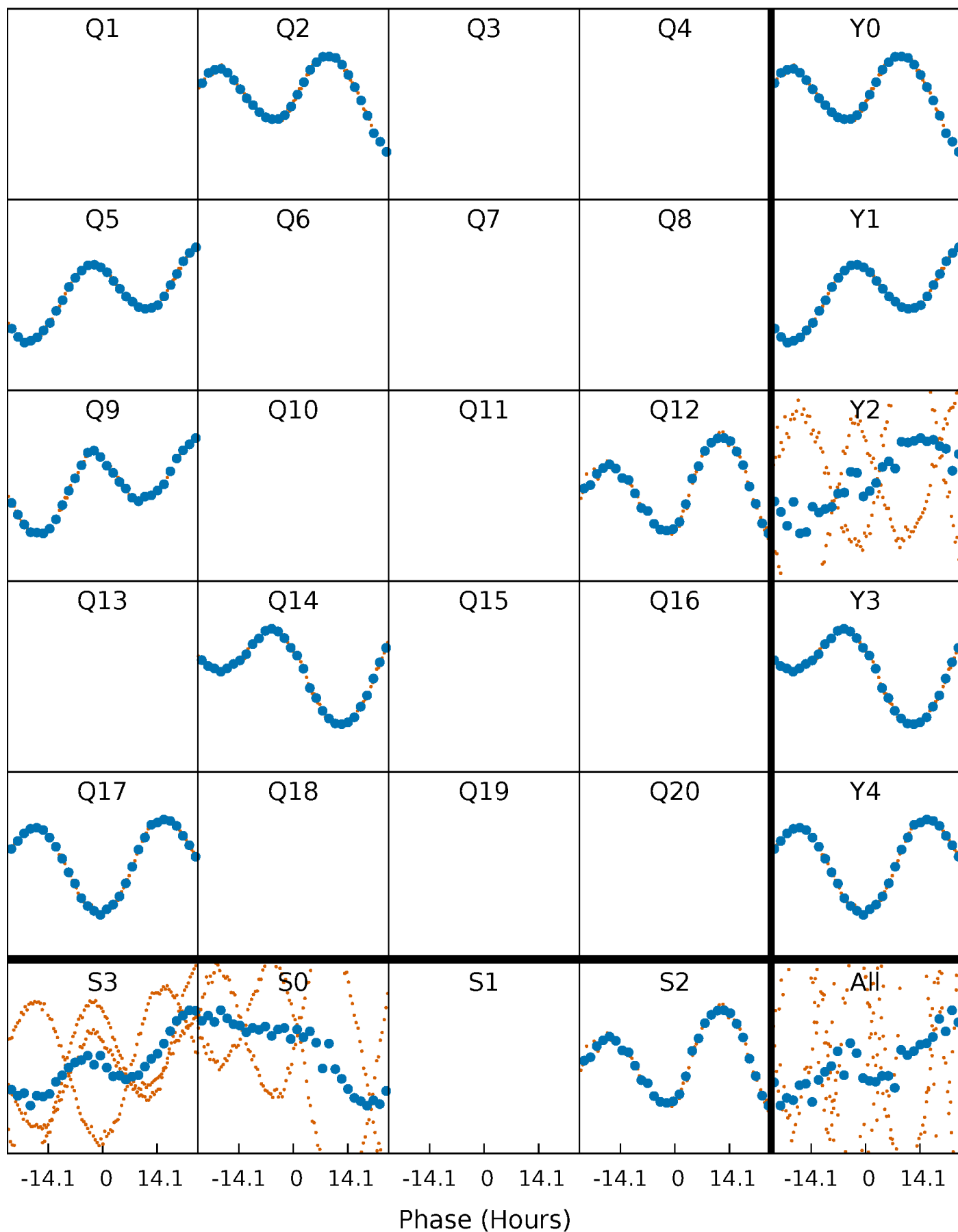


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



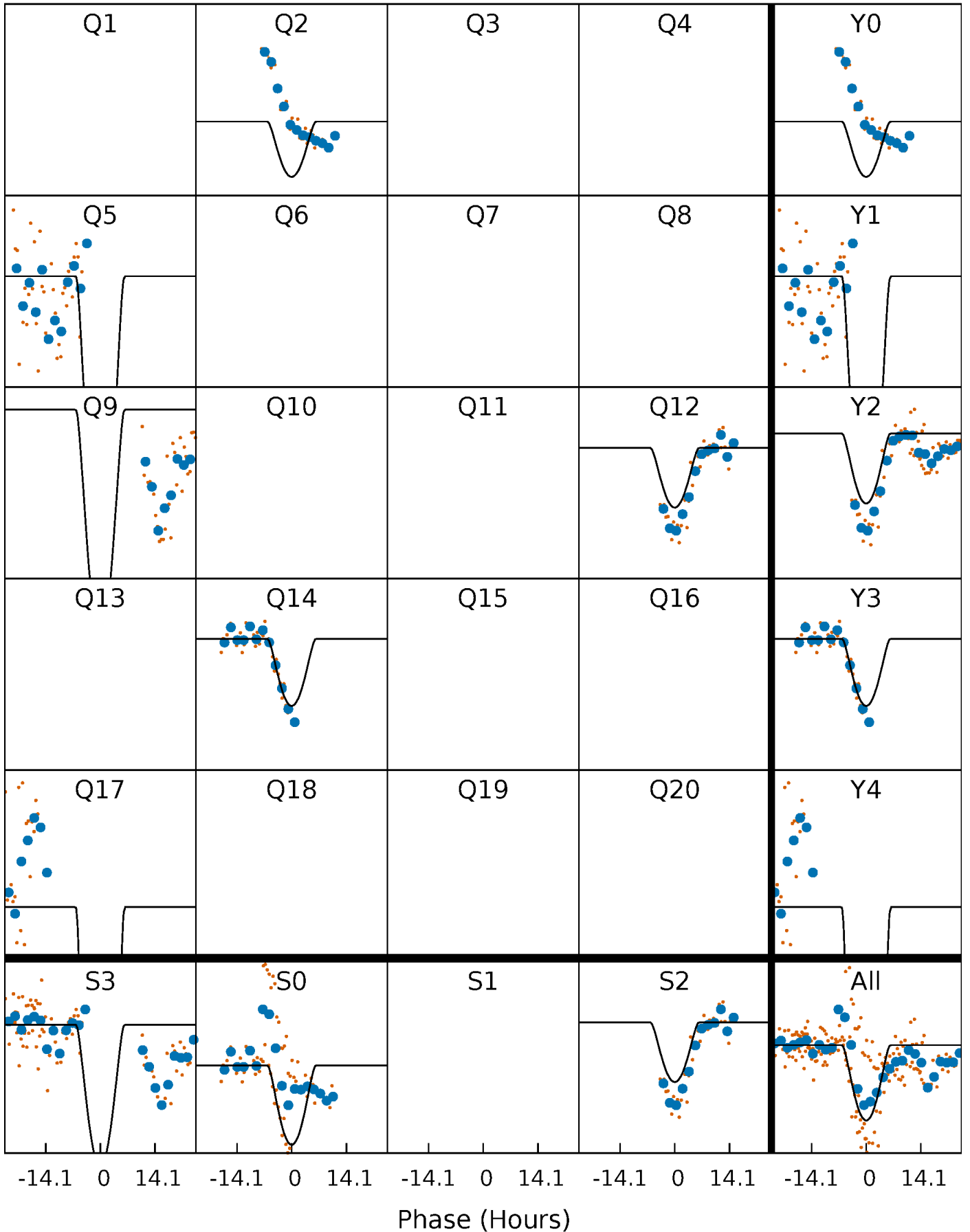
PDC Quarter-Phased Transit Curves

TCE 010934543-02 P=224.721391 Days $T_0=224.932787$ (BKJD)



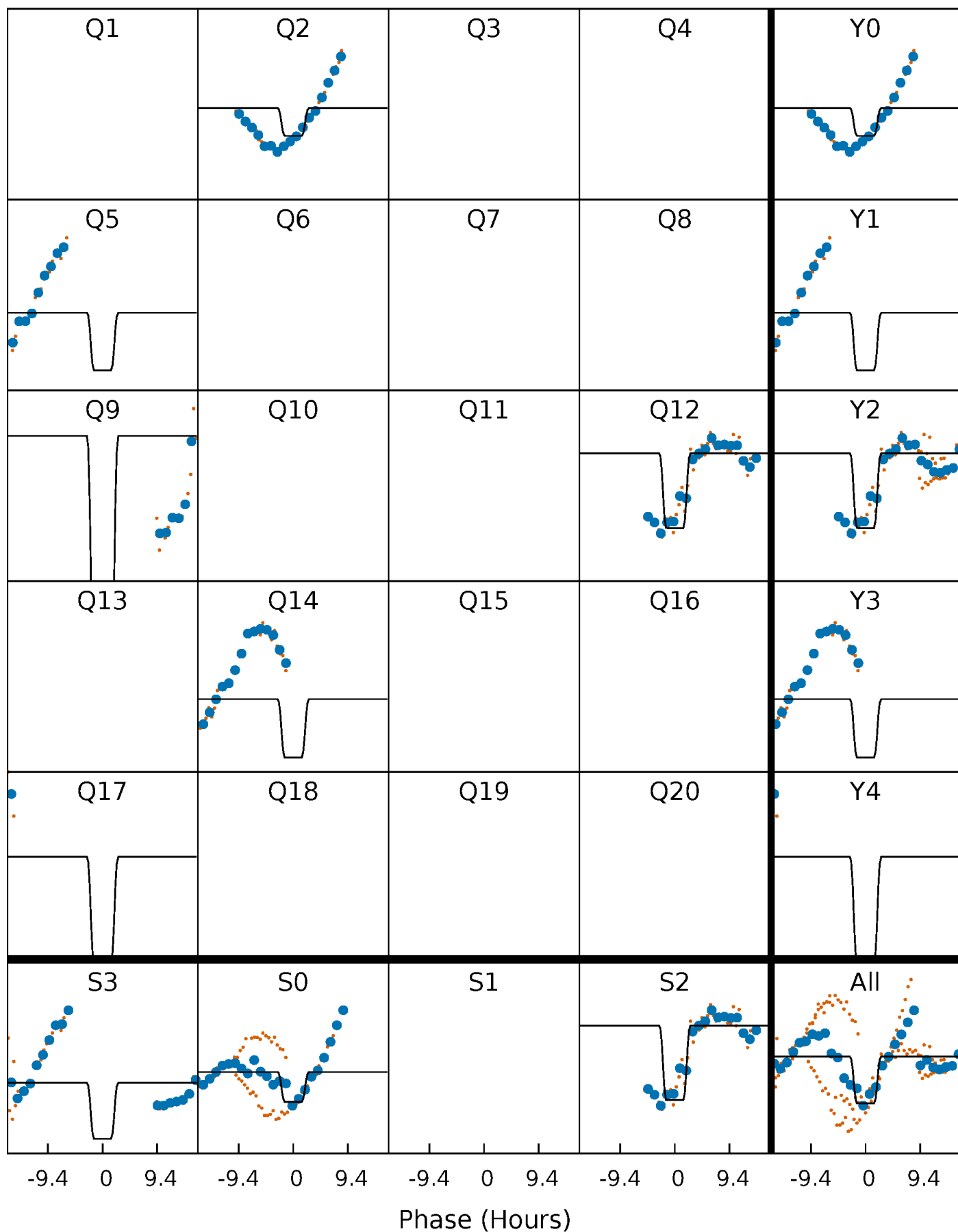
DV Quarter-Phased Transit Curves

TCE 010934543-02 $P=224.721391$ Days $T_0=224.932787$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

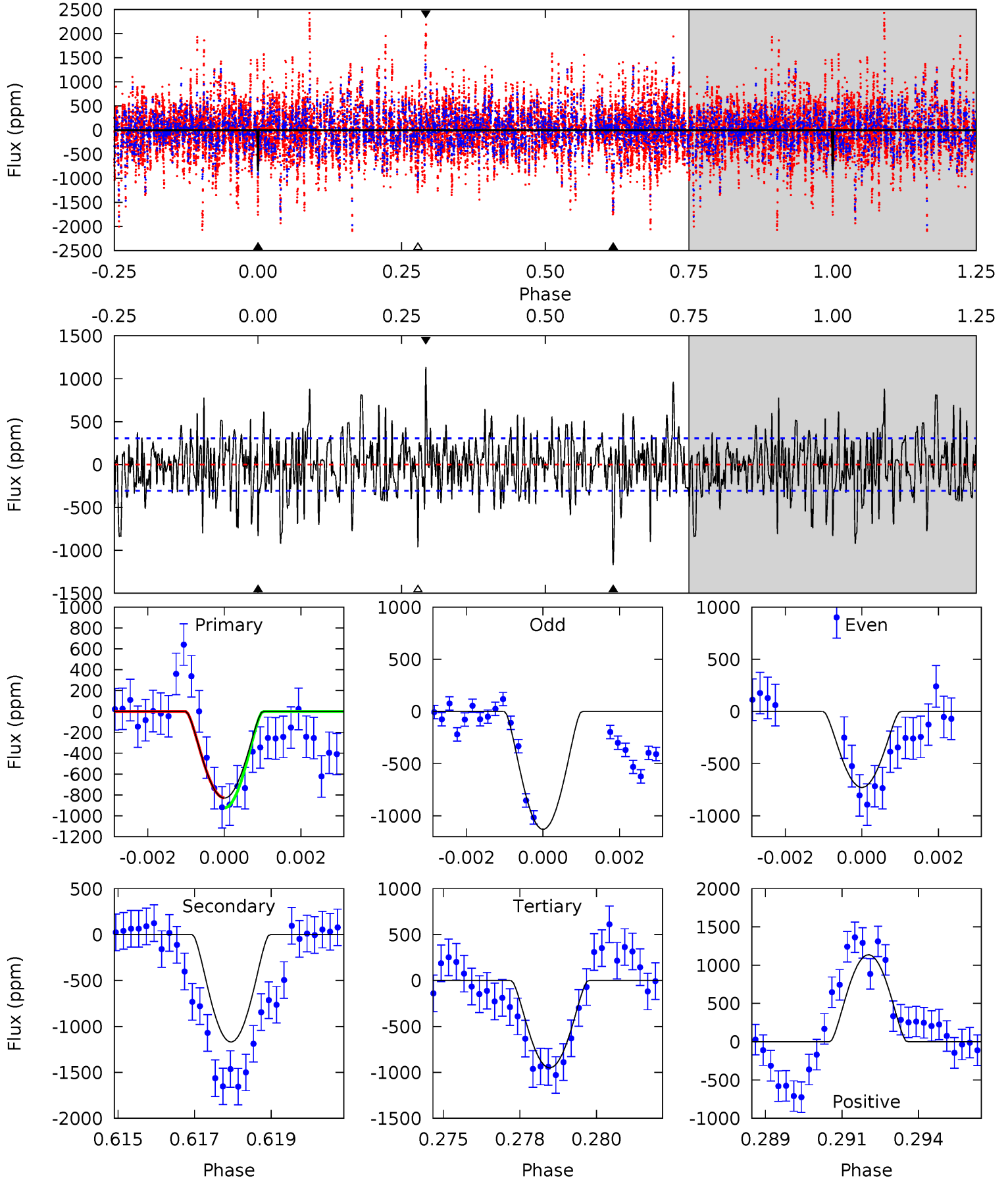
TCE 010934543-02 P=224.714671 Days $T_0=225.019117$ (BKJD)



DV Model-Shift Uniqueness Test

010934543-02, P = 224.721391 Days, E = 0.211396 Days

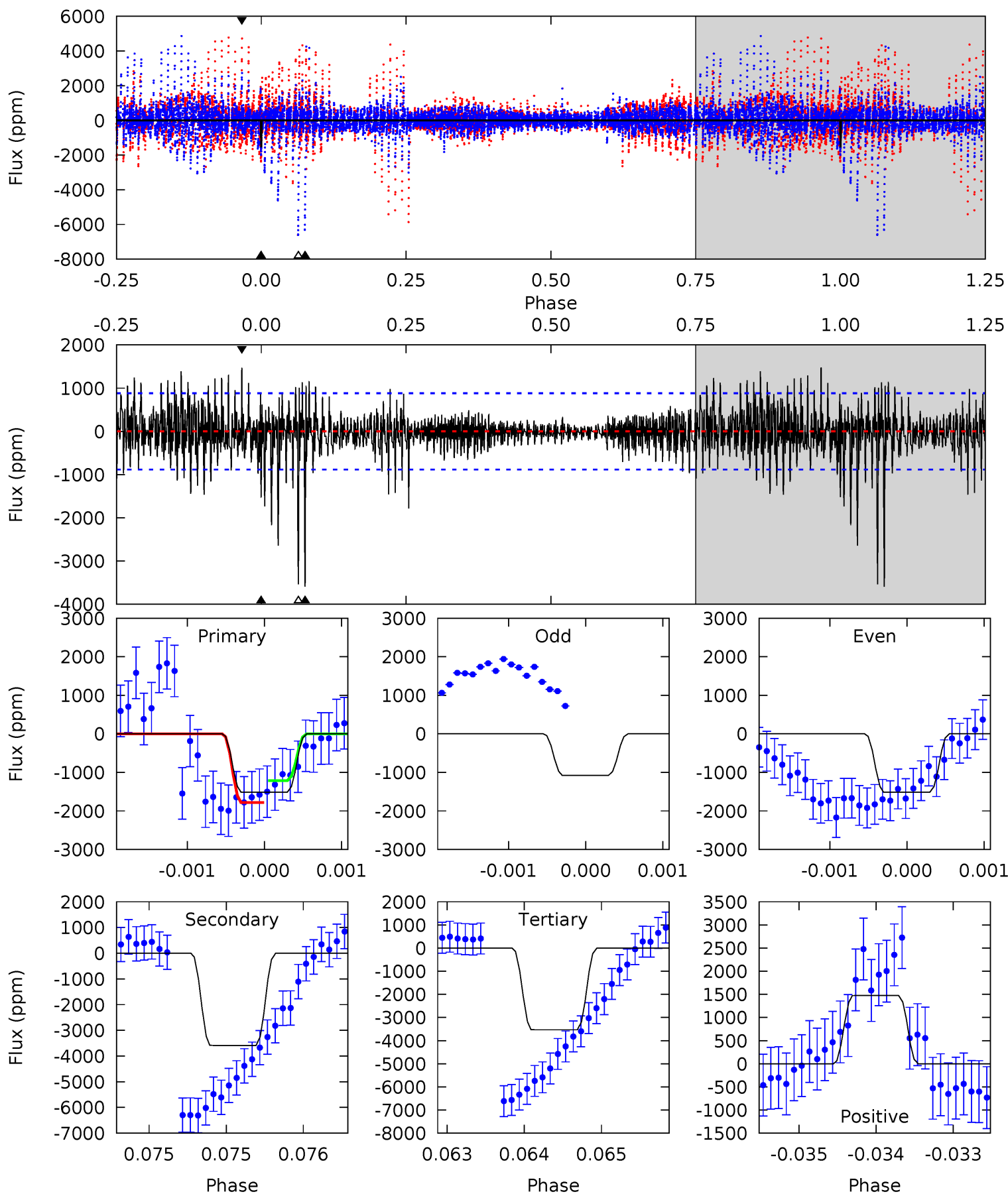
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.4	20.2	16.5	19.6	5.30	3.05	4.69	-2.09	-5.28	3.78	0.59	3.16	1.18	0.49	0.82



Alt Model-Shift Uniqueness Test

010934543-02, P = 224.714671 Days, E = 0.304446 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.40	22.2	21.9	9.14	5.47	3.32	2.20	-12.5	0.26	0.35	13.1	1.02	0.50	0.29	1.76



Stellar Parameters For KIC 010934543

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6336^{+177}_{-243}	$4.261^{+0.132}_{-0.198}$	$0.080^{+0.250}_{-0.300}$	$1.356^{+0.448}_{-0.276}$	$1.224^{+0.182}_{-0.182}$	$0.692^{+0.439}_{-0.358}$
	+3%/-4%	+3%/-5%	+312%/-375%	+33%/-20%	+15%/-15%	+63%/-52%
Source	PHO54	PHO54	PHO54	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 010934543-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1170 ± 58	$12.26^{+10.51}_{-7.91}$	519^{+38}_{-32}	4326^{+2598}_{-847}	2580^{+16290}_{-1846}
Alt.	-3590 ± 161	$10.54^{+10.51}_{-6.79}$	522^{+37}_{-34}	5879^{+5339}_{-1507}	10435^{+78243}_{-7806}

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)

A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

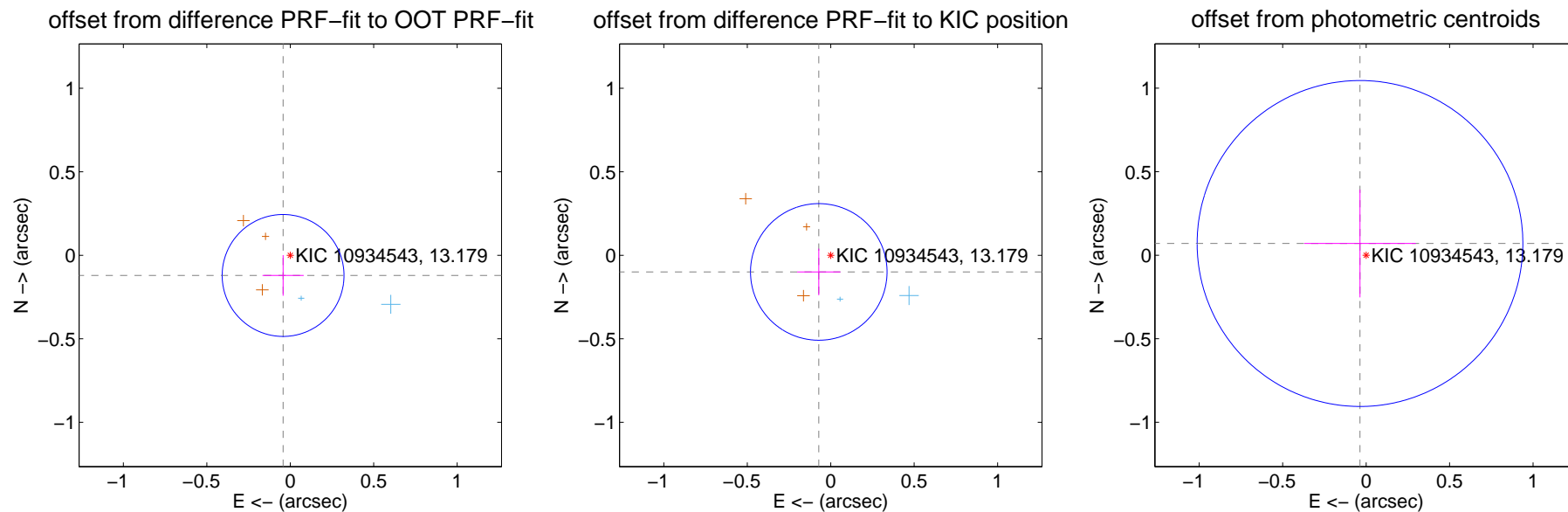
DV Centroid Data

Supplemental centroid analysis for 010934543-02. Kepler magnitude: 13.18. Transit SNR 9.59

There are 2 quarters with good PRF difference image offsets

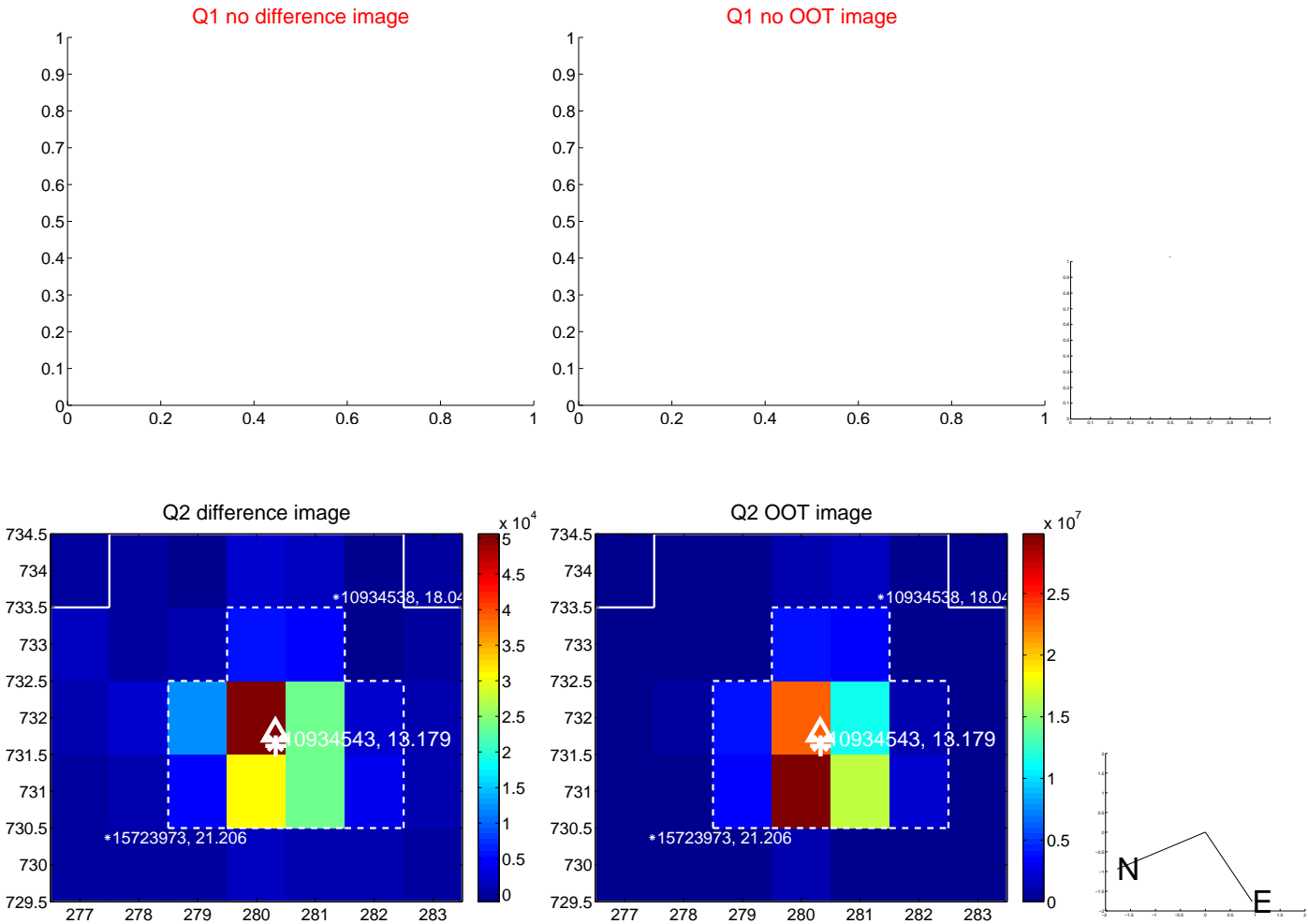
The direct PRF centroid is offset from the target star catalog position by about 0.01 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.128 ± 0.122	1.05	0.043 ± 0.123	-0.121 ± 0.121
PRF-fit source offset from KIC position	0.123 ± 0.136	0.90	0.072 ± 0.129	-0.100 ± 0.140
photometric centroid source offset	0.08 ± 0.33	0.24	0.04 ± 0.33	0.07 ± 0.32

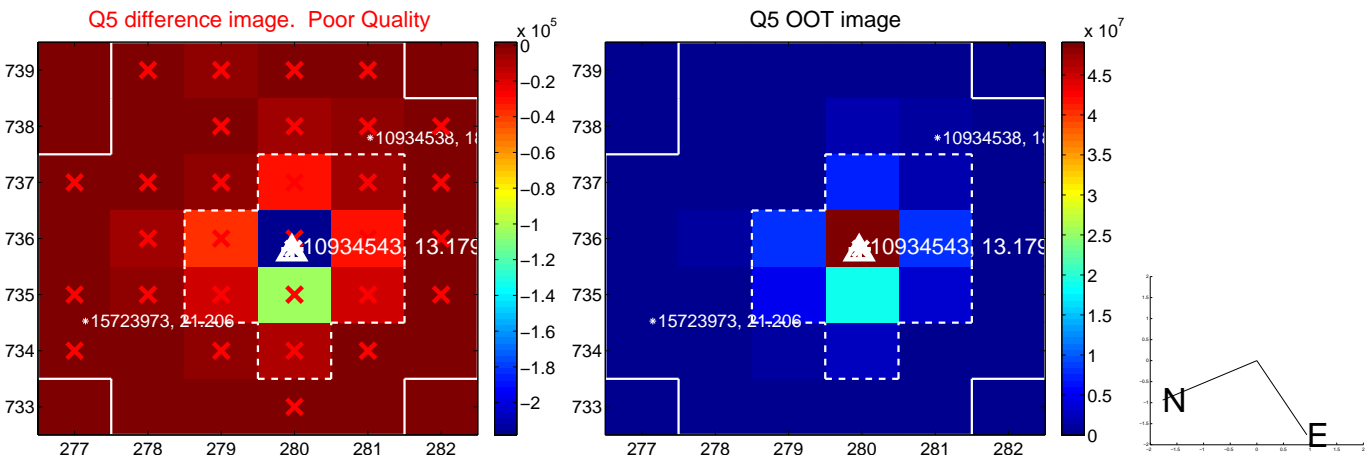


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

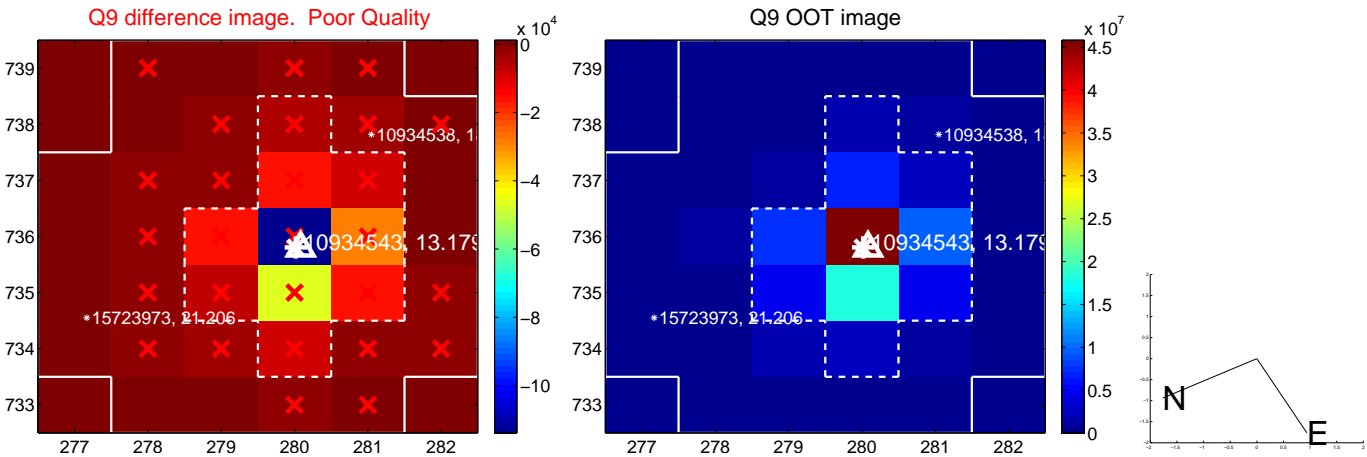
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



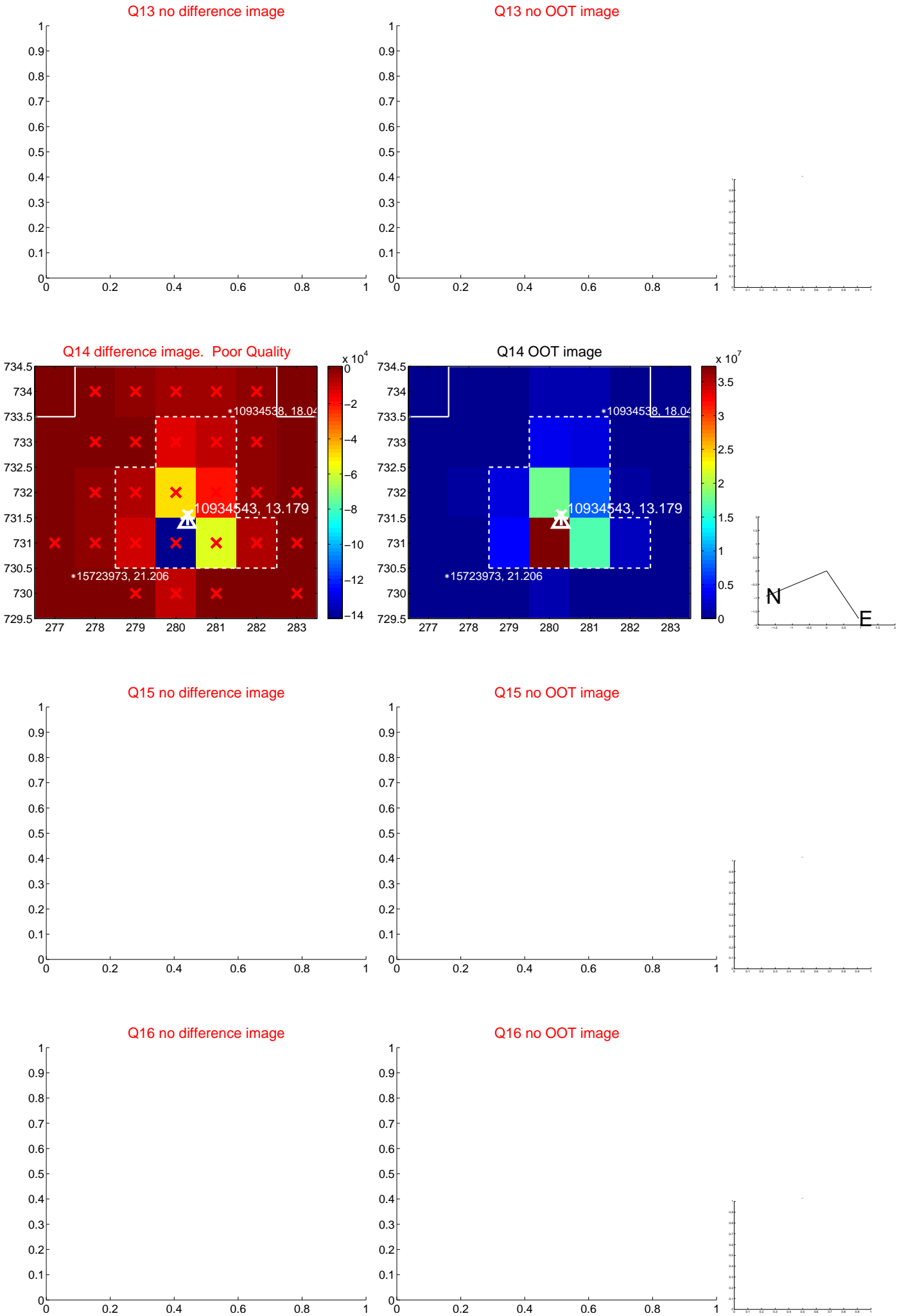
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



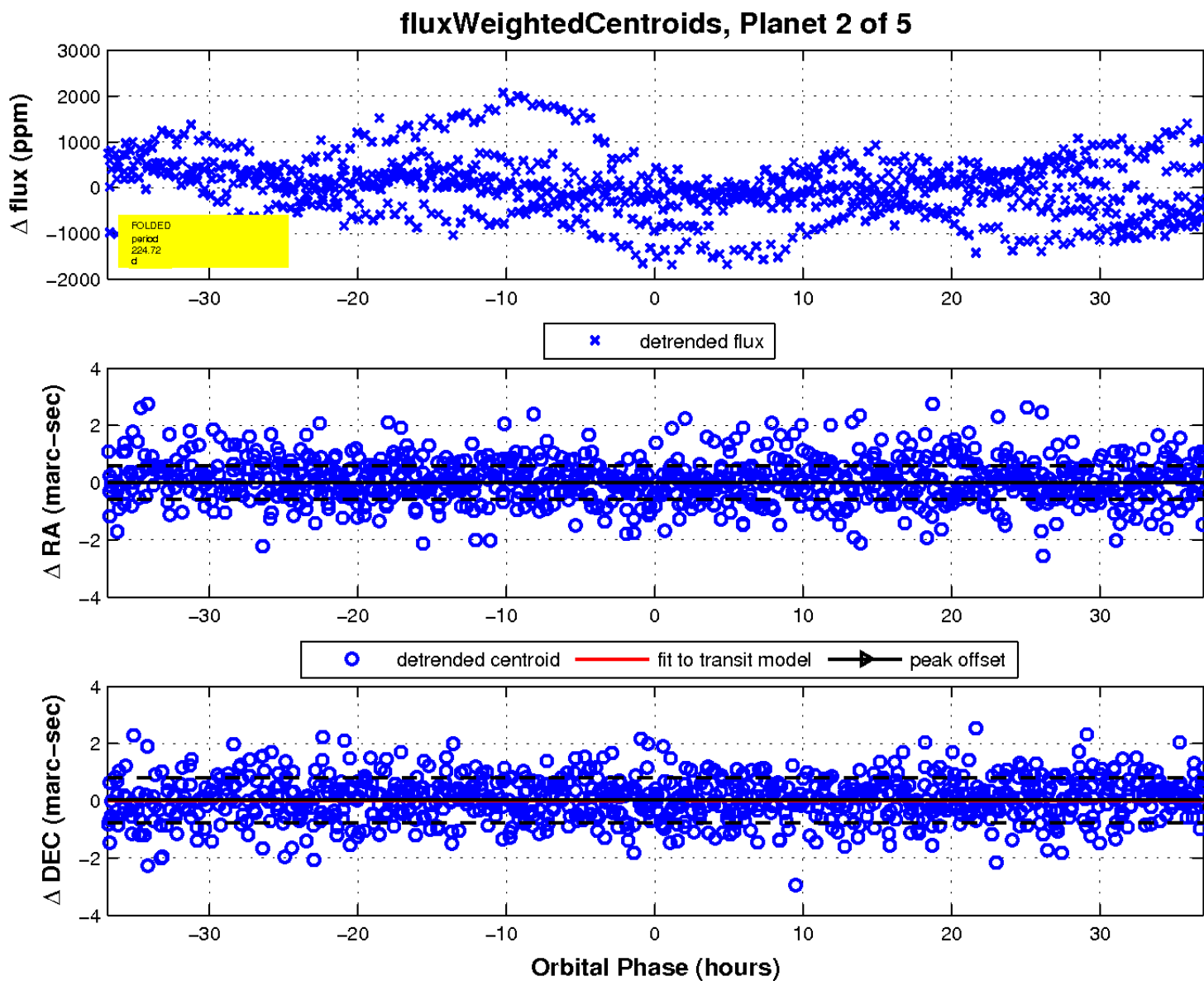
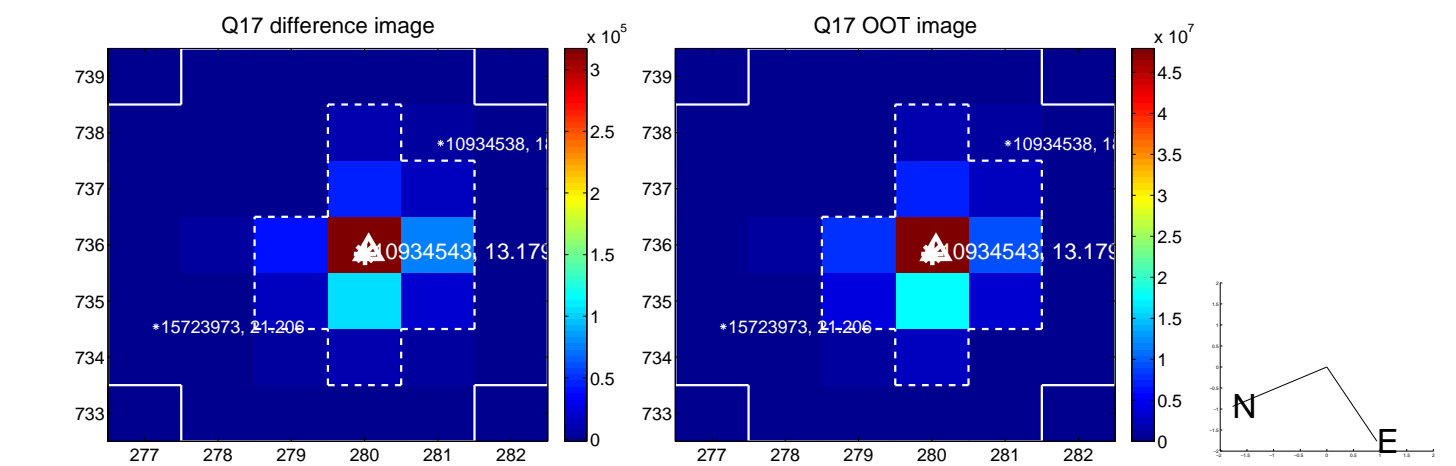
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

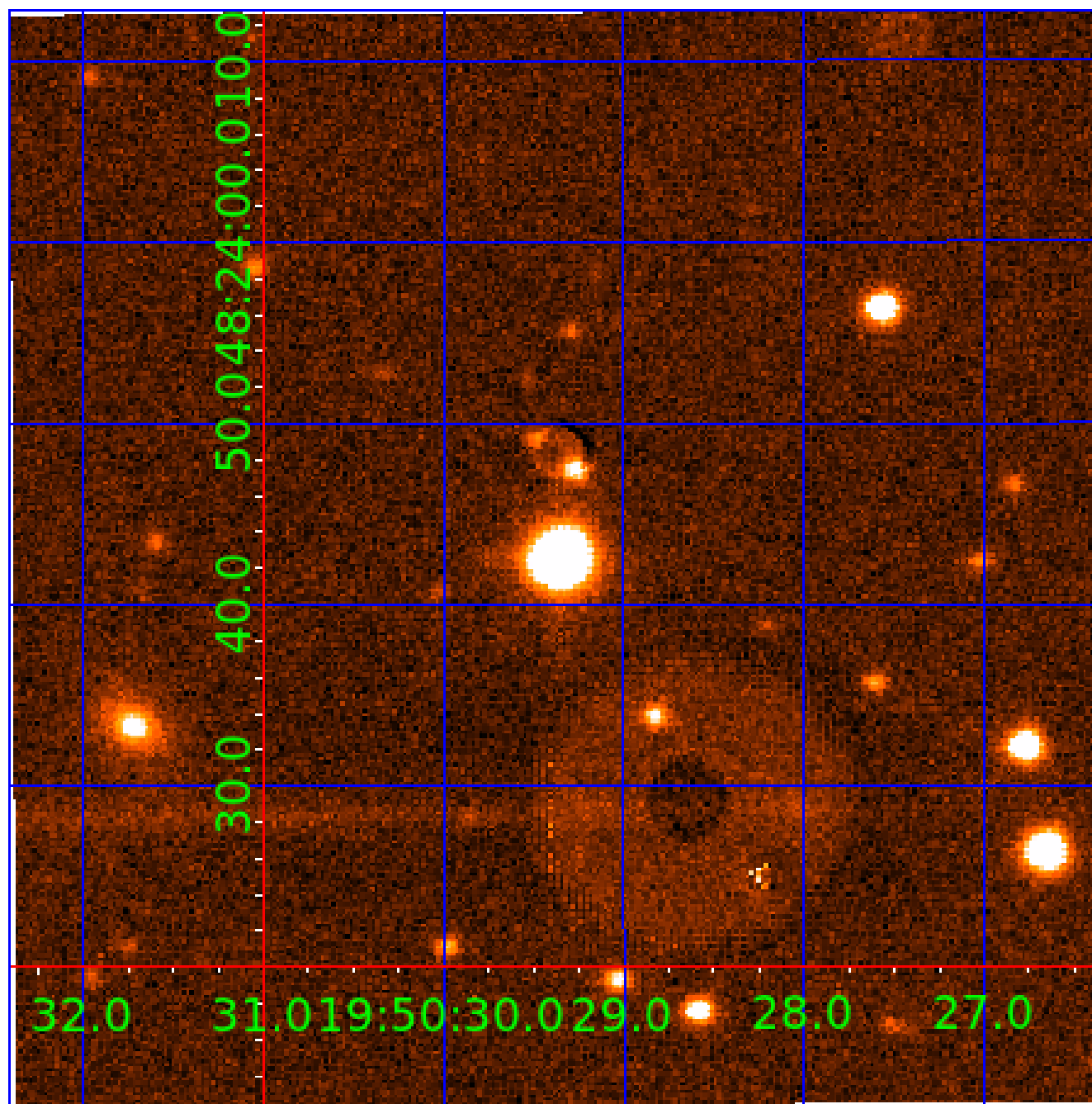


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010934543

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R_{\star} (R_{\odot})	T_{\star} (K)	R_p (R_{\oplus})	S_p (S_{\oplus})
010934543-01	OBS	No	2.606003	132.468720	107.6	14.443	7.8	8.2	1.36	6336	1.94	1689.25
010934543-02	OBS	No	224.721391	224.932787	1103.3	12.351	10.2	9.6	1.36	6336	8.51	4.43
010934543-03	OBS	No	71.316636	187.247034	644.9	48.812	9.8	5.9	1.36	6336	4.08	20.48
010934543-04	OBS	No	81.197899	197.028040	619.5	13.080	9.9	7.5	1.36	6336	4.20	17.23
010934543-05	OBS	No	96.895340	177.368163	246.8	16.064	8.8	3.4	1.36	6336	2.29	13.61

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010934543-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV
010934543-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
010934543-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV
010934543-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT
010934543-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT— MOD_POS_ALT—CENT_NOFITS

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

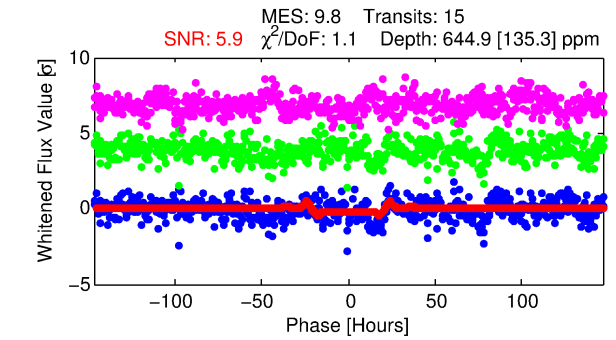
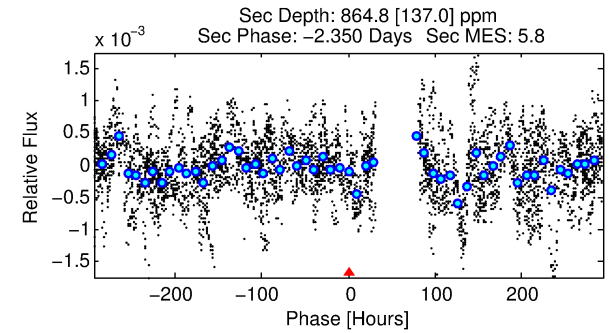
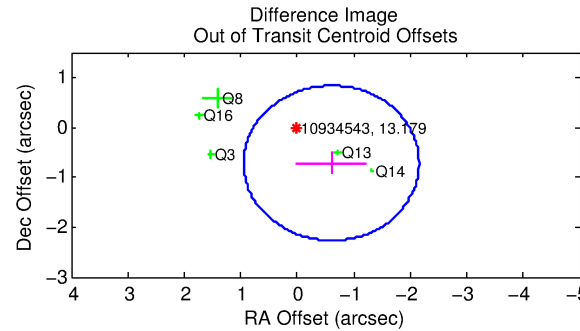
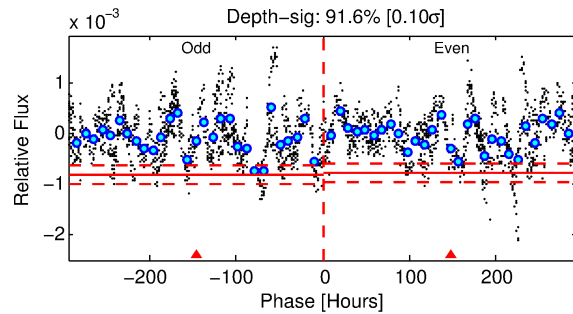
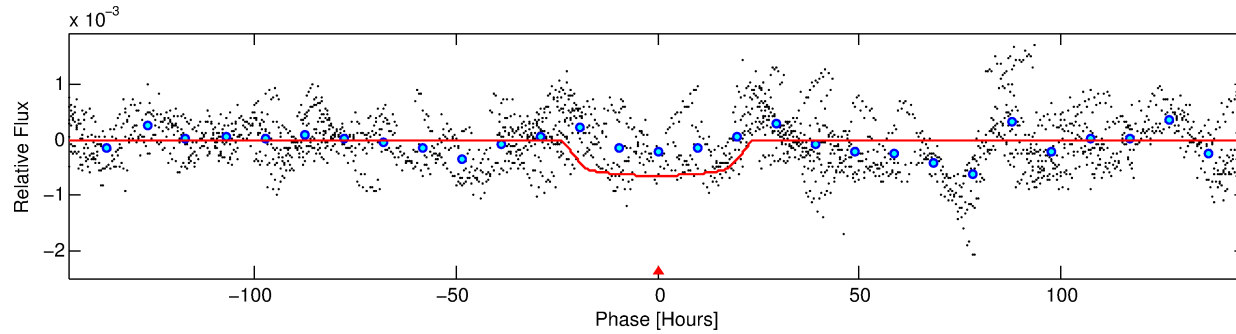
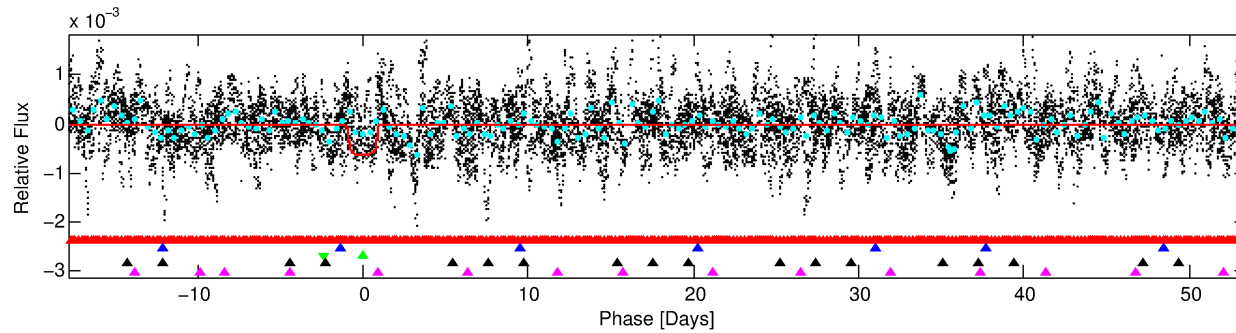
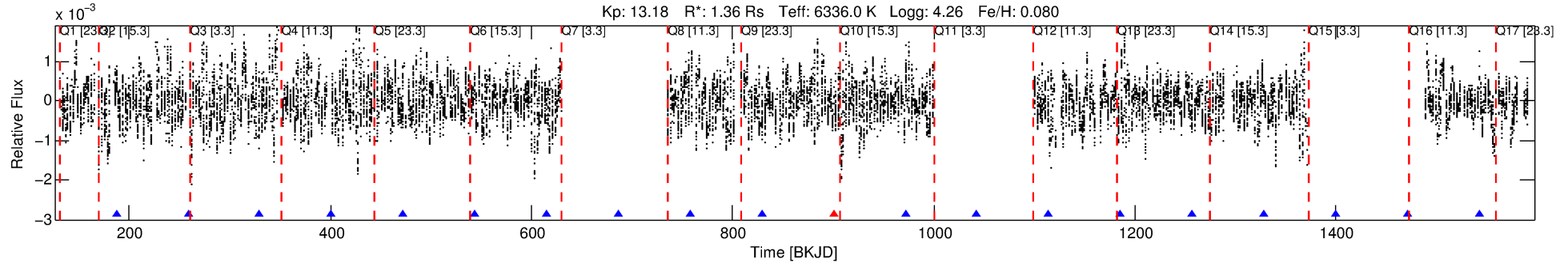
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010934543-03

No Significant Match Found

DV One-Page Summary

KIC: 10934543 Candidate: 3 of 5 Period: 71.317 d



DV Fit Results:

Period = 71.31664 [0.00381] d
Epoch = 187.2470 [0.0425] BKJD
Rp/R* = 0.0275 [0.0029]
a/R* = 5.42 [0.48]
b = 0.91 [0.02]
Seff = 20.48 [8.31]
Teq = 542 [55] K
Rp = 4.08 [1.42] Re
a = 0.3600 [0.0963] AU
Ag = 3711.15 [1707.69] [2.17 σ]
Teffp = 6546 [503] K [11.87 σ]

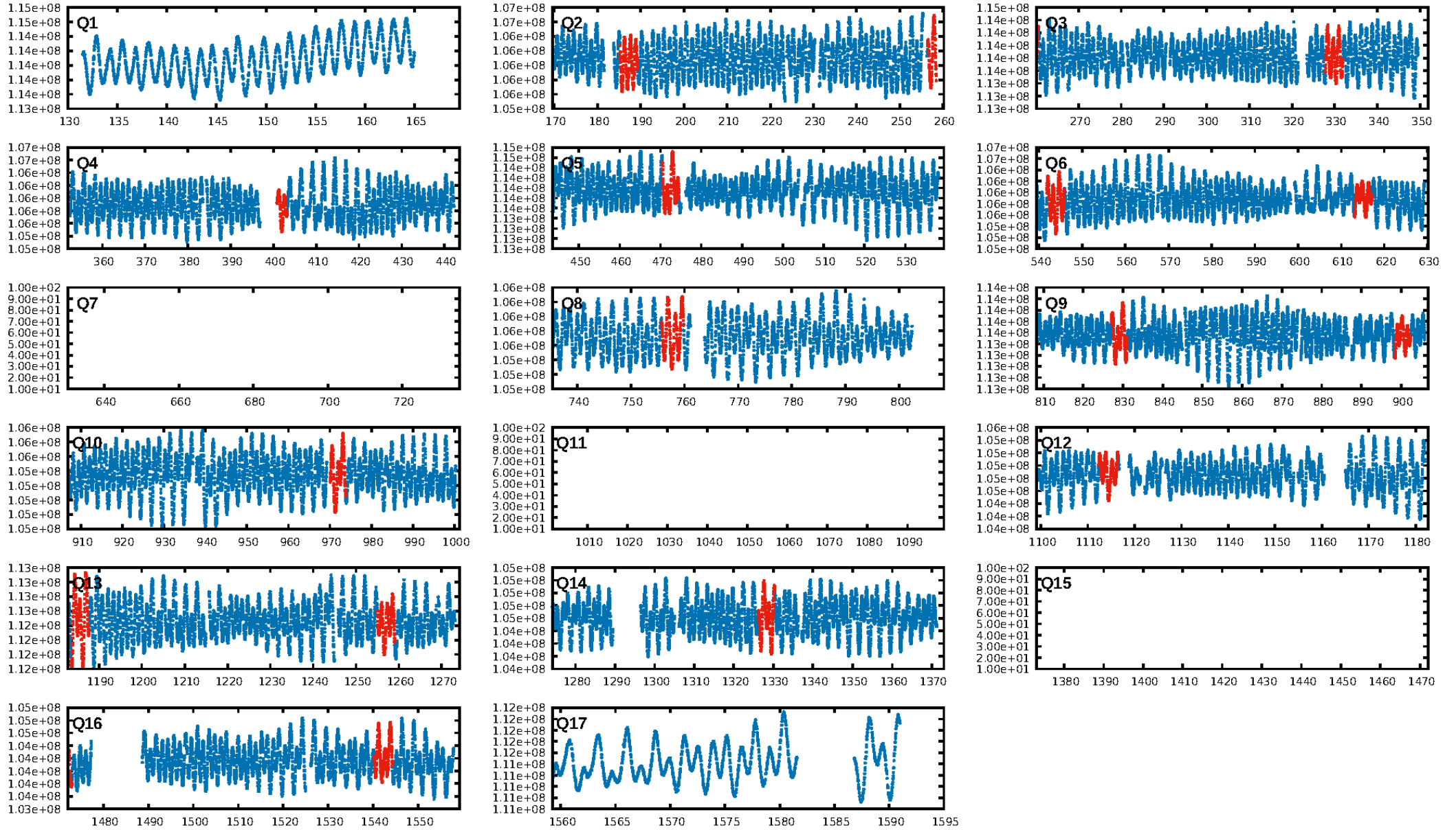
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [32.40 σ]
LongPeriod-sig: 100.0% [4.69 σ]
ModelChiSquare2-sig: 0.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 0.93 [14/15]
GhostDiagnostic-chr: -12.87
Centroid-sig: 3.0%
Centroid-so: 0.448 arcsec [2.35 σ]
OotOffset-rm: 0.939 arcsec [1.82 σ]
KicOffset-rm: 0.822 arcsec [1.95 σ]
OotOffset-st: 1/1/2/1 [5]
KicOffset-st: 1/1/2/1 [5]
DiffImageQuality-fgm: 0.60 [3/5]
DiffImageOverlap-fno: 0.00 [0/7]

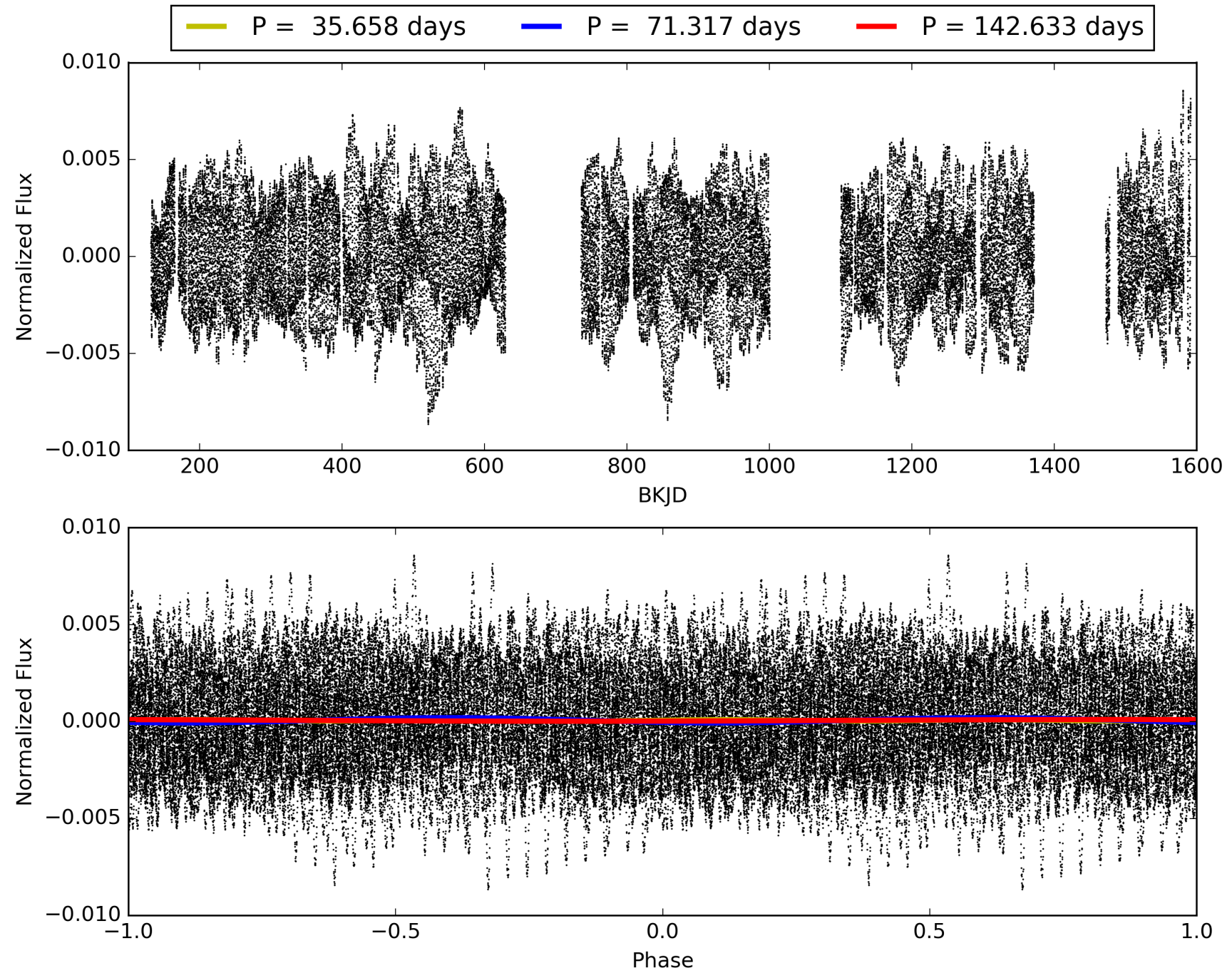
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 10:14:58 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 010934543-03, PDC Light Curves

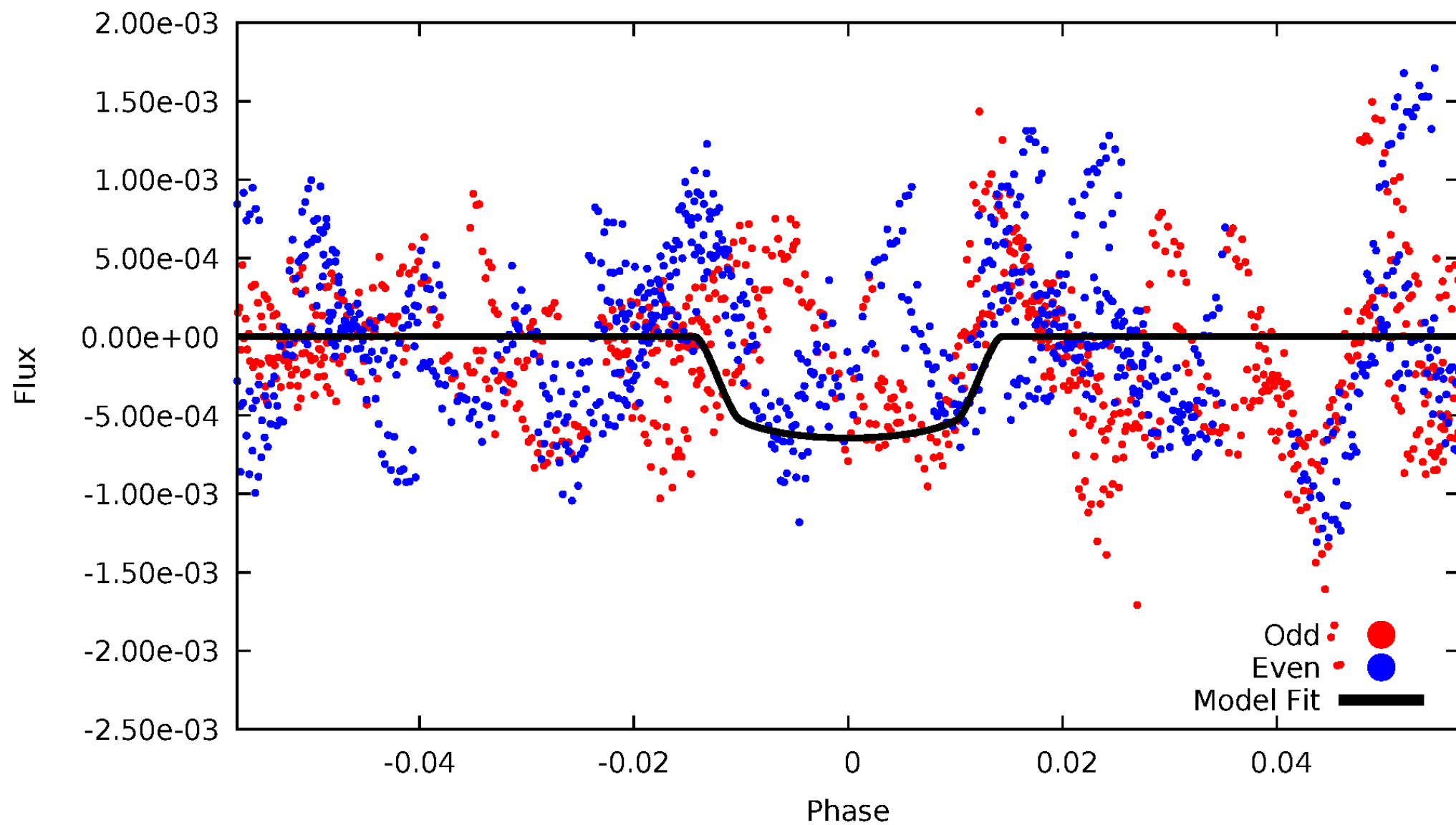


TCE 010934543-03



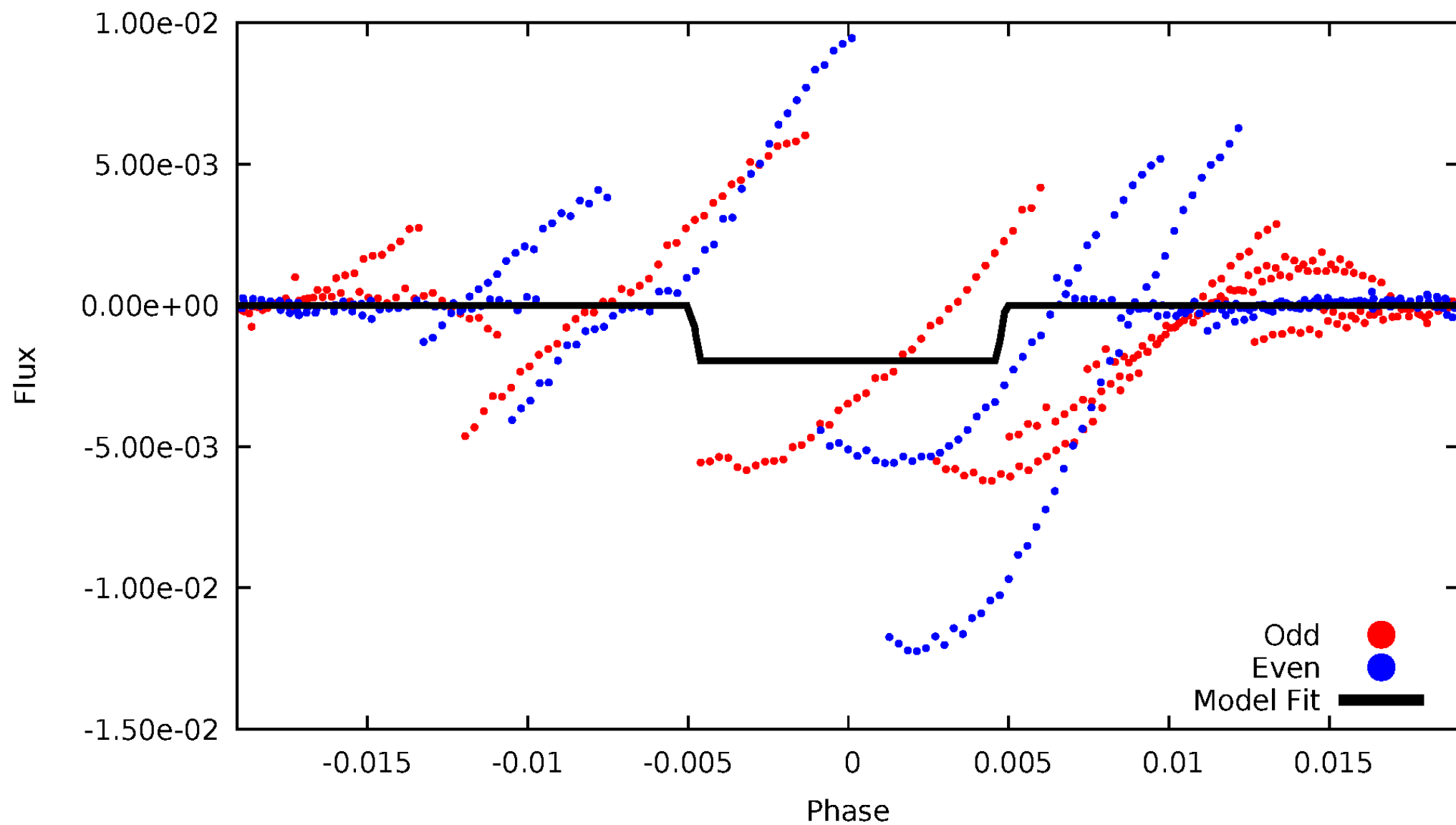
DV Odd/Even

TCE 010934543-03



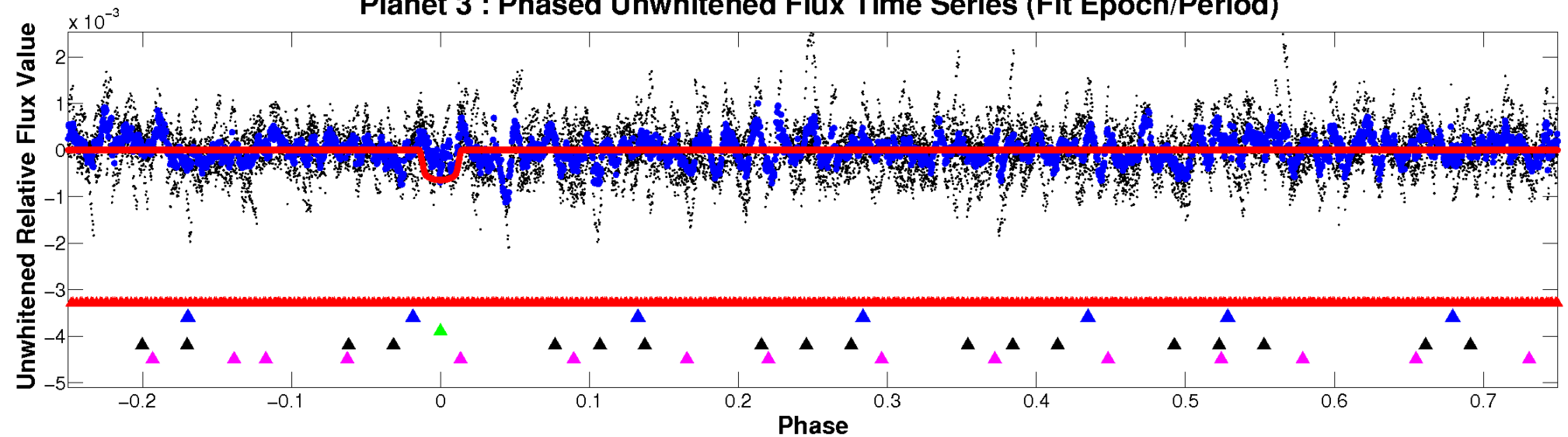
ALT Odd/Even

TCE 010934543-03

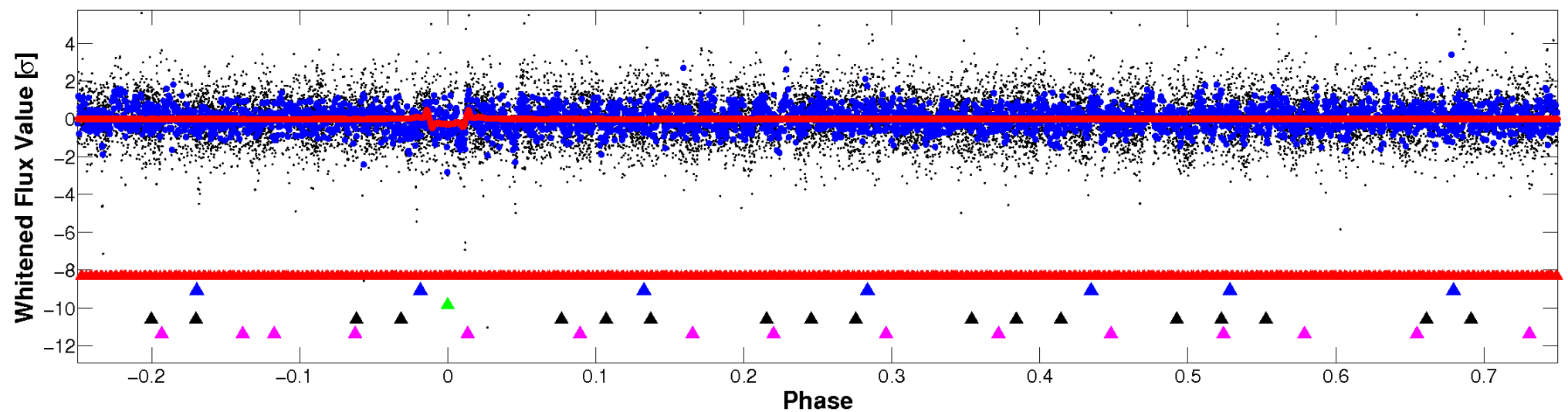


Non-Whitened Vs. Whitened Light Curve

Planet 3 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

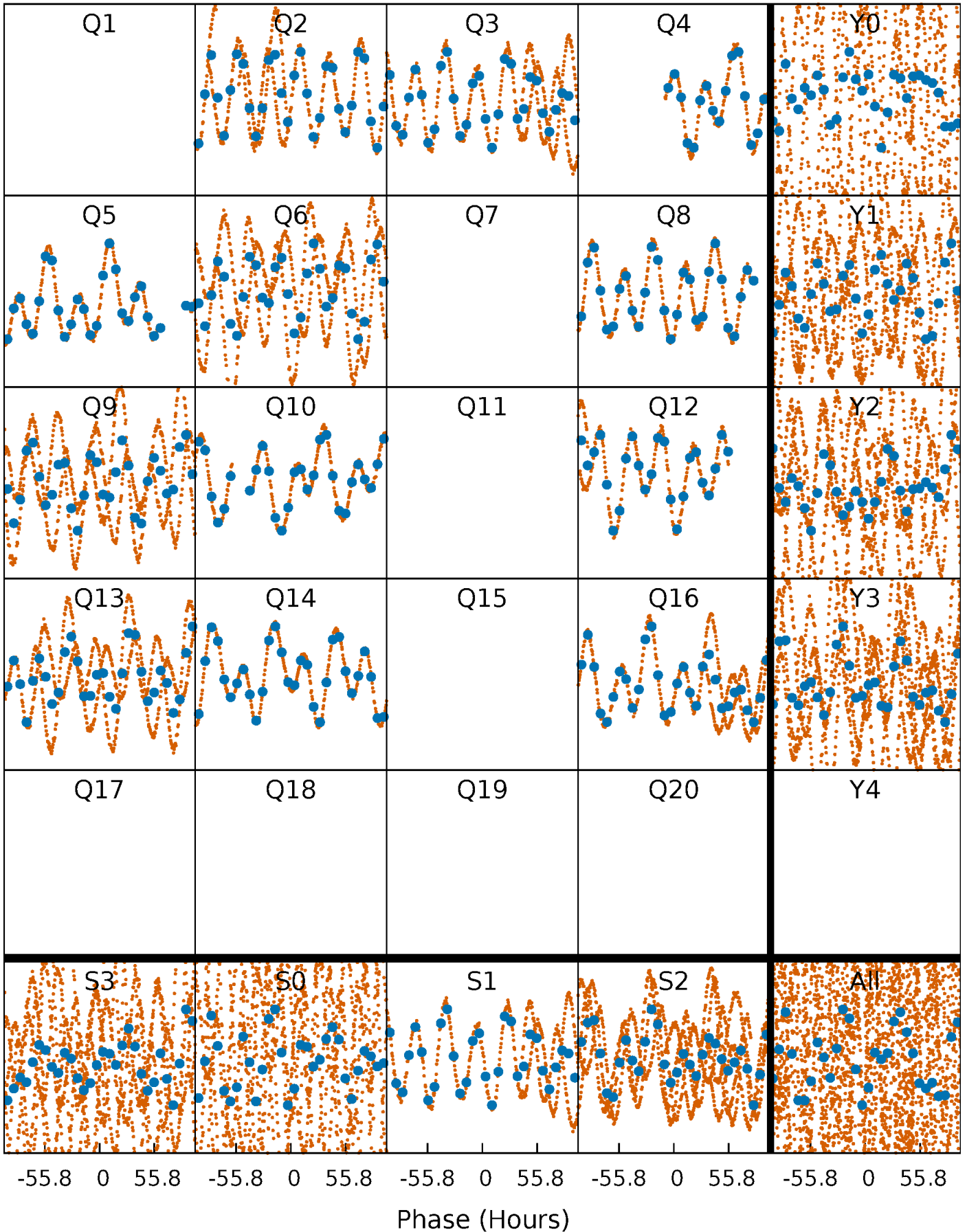


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



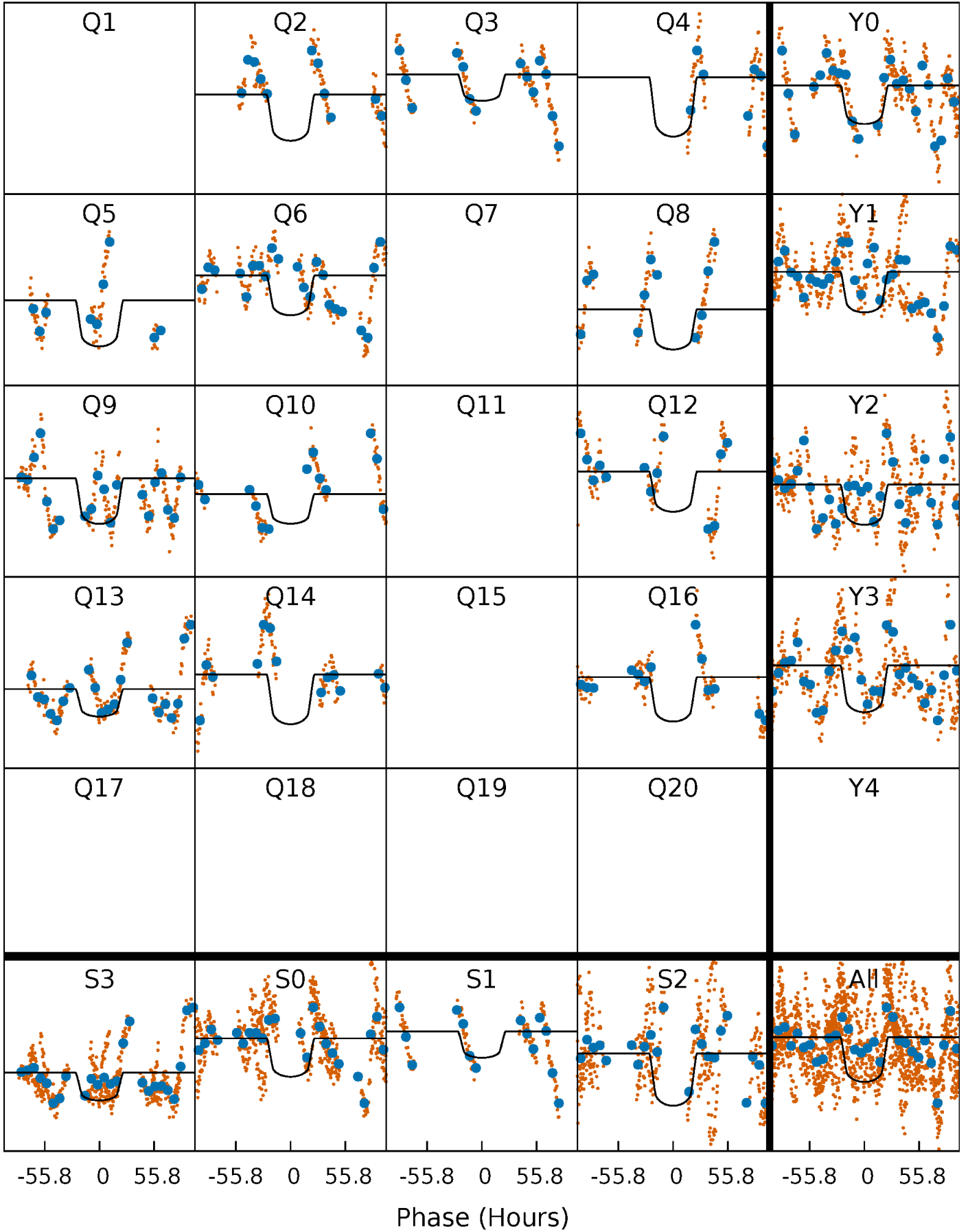
PDC Quarter-Phased Transit Curves

TCE 010934543-03 $P = 71.316636$ Days $T_0 = 187.247034$ (BKJD)



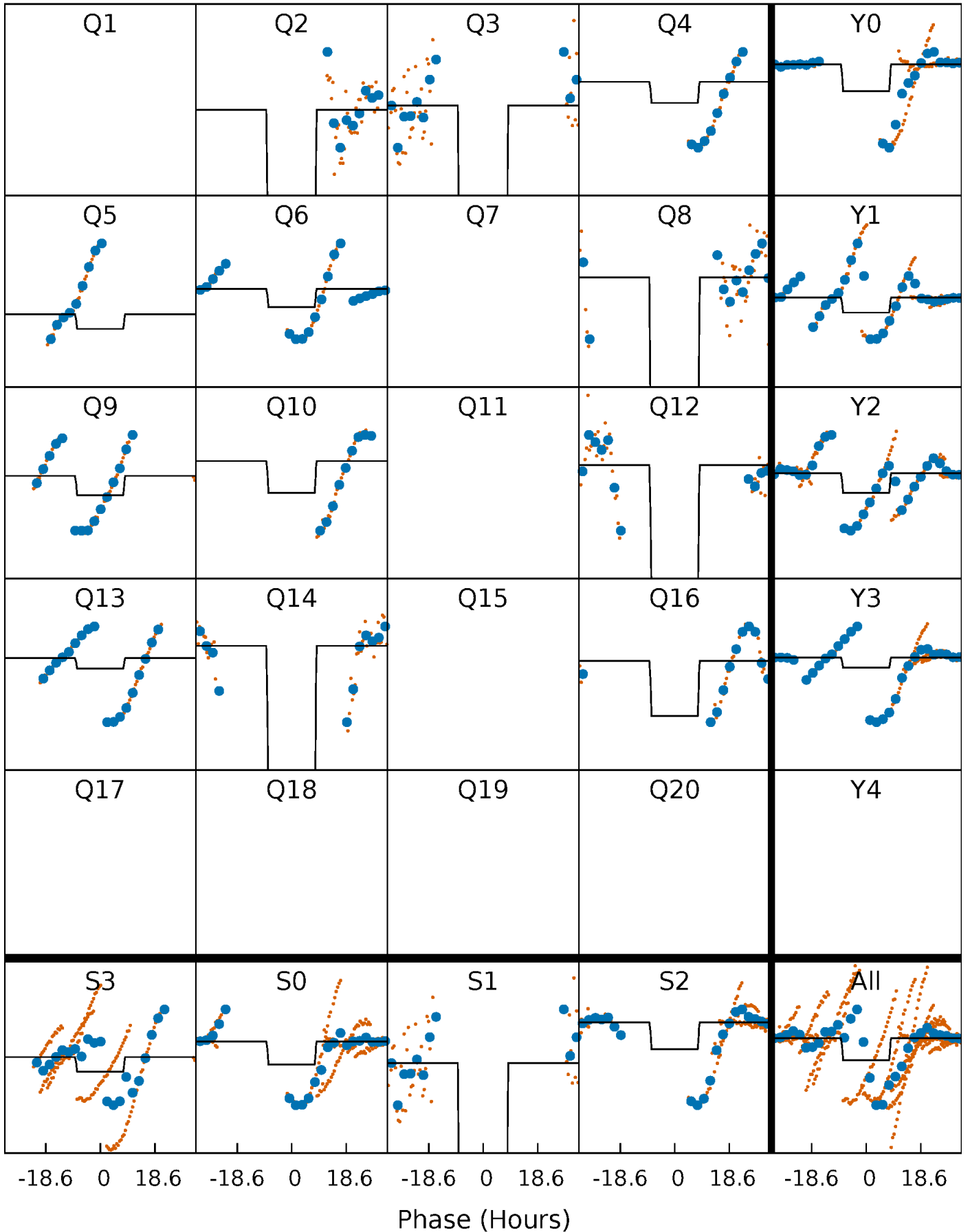
DV Quarter-Phased Transit Curves

TCE 010934543-03 P= 71.316636 Days $T_0=187.247034$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

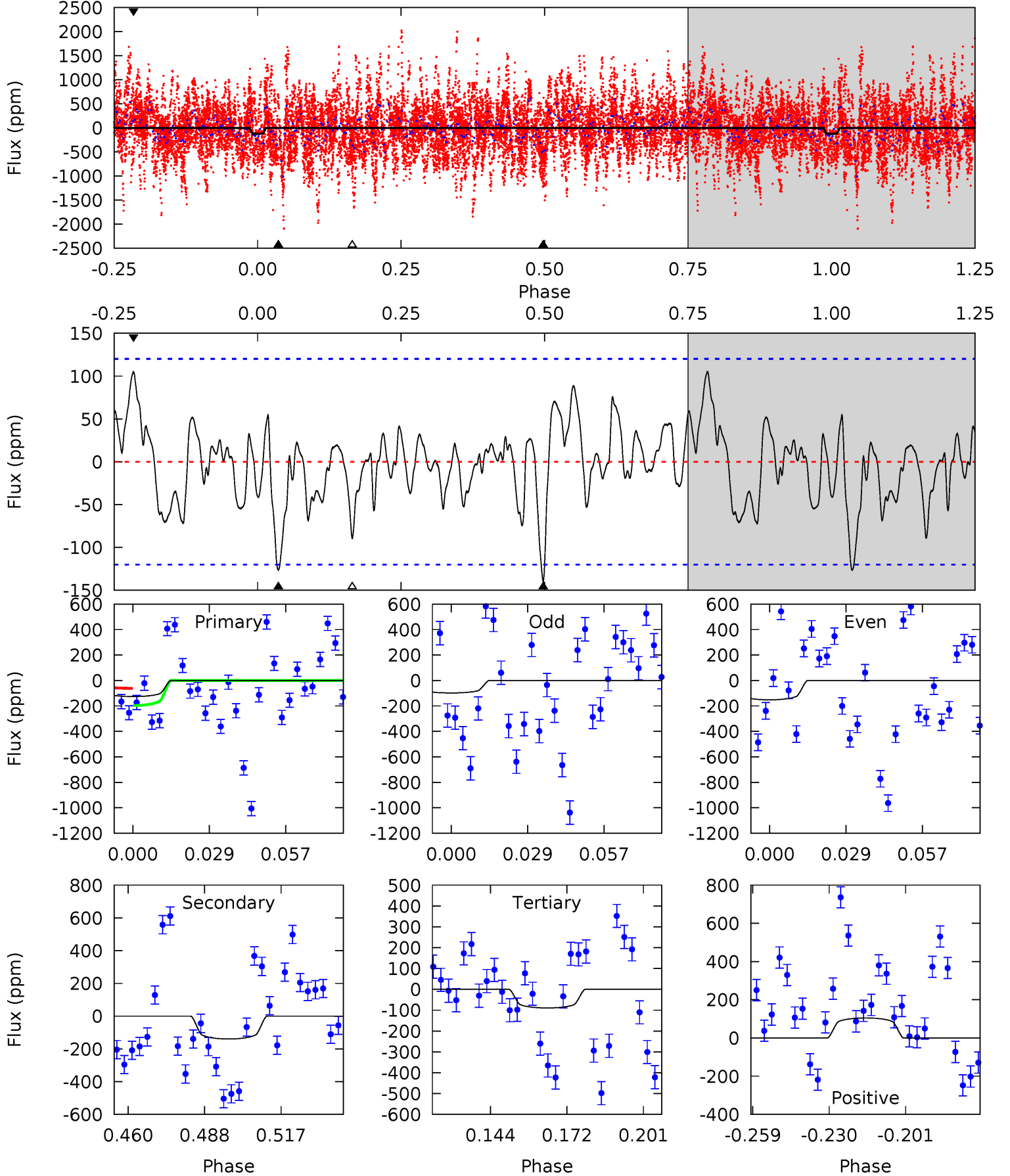
TCE 010934543-03 P= 71.319136 Days $T_0=187.651151$ (BKJD)



DV Model-Shift Uniqueness Test

010934543-03, P = 71.316636 Days, E = 115.930398 Days

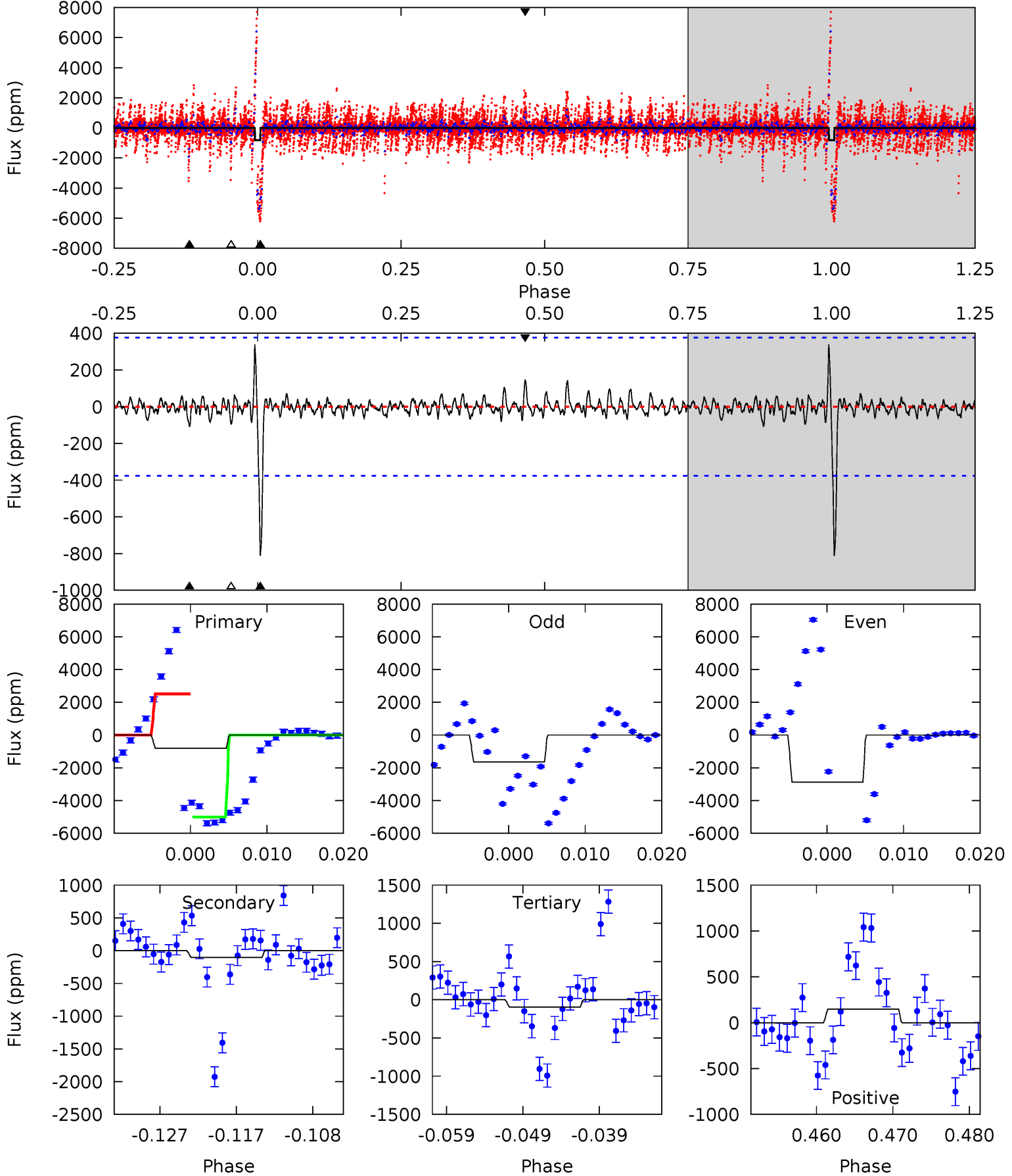
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.06	5.60	3.58	4.20	4.82	2.19	1.44	1.48	0.86	2.02	1.40	1.08	5.45	0.43	2.70



Alt Model-Shift Uniqueness Test

010934543-03, P = 71.319136 Days, E = 116.332015 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.9	1.40	1.27	1.97	5.03	2.58	0.45	9.58	8.89	0.13	-0.57	7.46	0.63	0.29	16.6



Stellar Parameters For KIC 010934543

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6336^{+177}_{-243}	$4.261^{+0.132}_{-0.198}$	$0.080^{+0.250}_{-0.300}$	$1.356^{+0.448}_{-0.276}$	$1.224^{+0.182}_{-0.182}$	$0.692^{+0.439}_{-0.358}$
	+3%/-4%	+3%/-5%	+312%/-375%	+33%/-20%	+15%/-15%	+63%/-52%
Source	PHO54	PHO54	PHO54	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 010934543-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-140 ± 25	$4.13^{+0.82}_{-0.68}$	762^{+59}_{-48}	4349^{+261}_{-261}	564^{+255}_{-190}
Alt.	-105 ± 75	$6.70^{+1.21}_{-0.94}$	763^{+60}_{-47}	3516^{+363}_{-620}	160^{+137}_{-120}

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming A=0.3)

A_{obs} = Observed Albedo (Assuming T=0)

If a secondary eclipse is present, the system is likely an EB if $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

DV Centroid Data

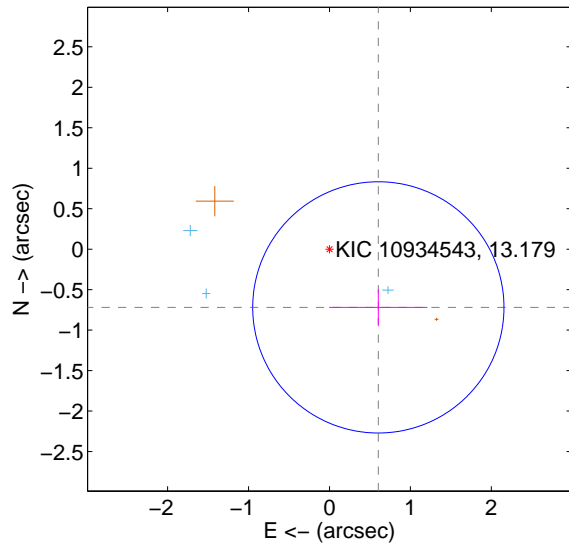
Supplemental centroid analysis for 010934543-03. Kepler magnitude: 13.18. Transit SNR 5.88

There are 3 quarters with good PRF difference image offsets

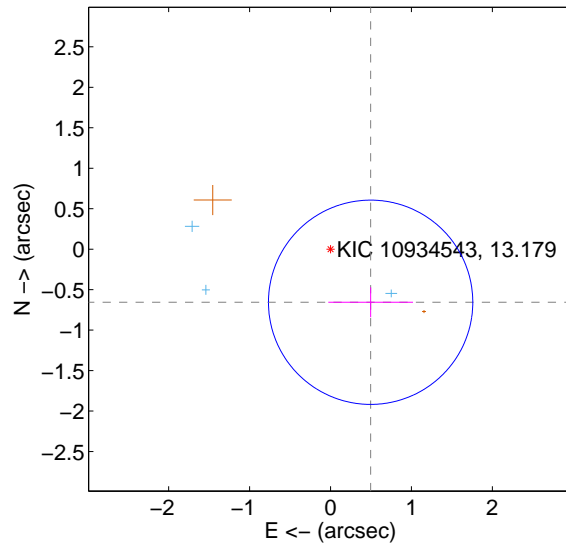
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.939 ± 0.517	1.82	-0.604 ± 0.607	-0.719 ± 0.218
PRF-fit source offset from KIC position	0.822 ± 0.421	1.95	-0.496 ± 0.524	-0.656 ± 0.184
photometric centroid source offset	0.45 ± 0.19	2.35	0.43 ± 0.19	0.12 ± 0.18

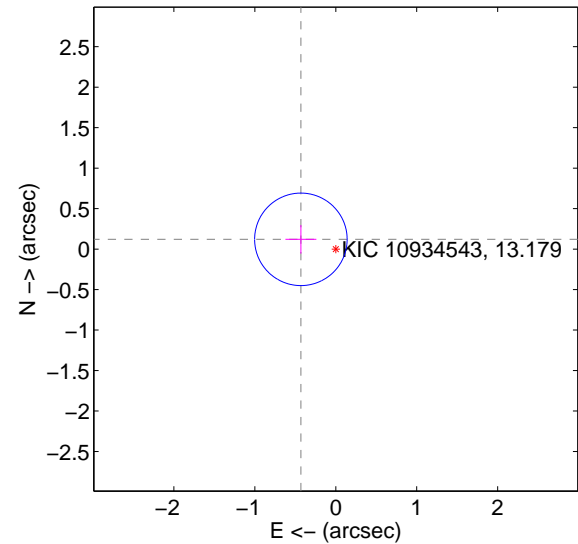
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids



Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

Q1 no difference image



Q1 no OOT image



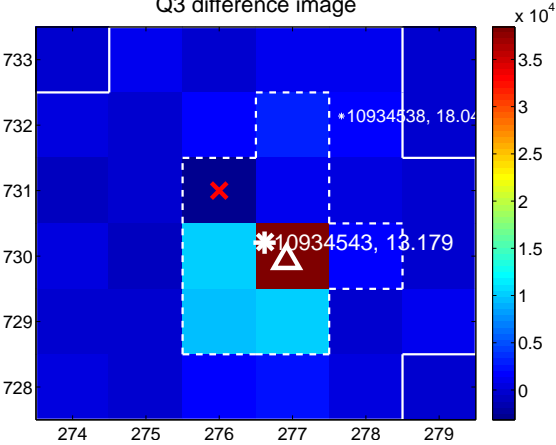
Q2 no difference image



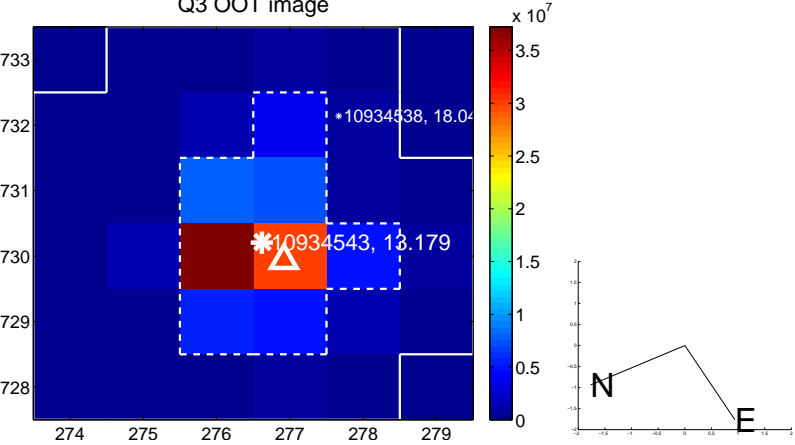
Q2 no OOT image



Q3 difference image



Q3 OOT image



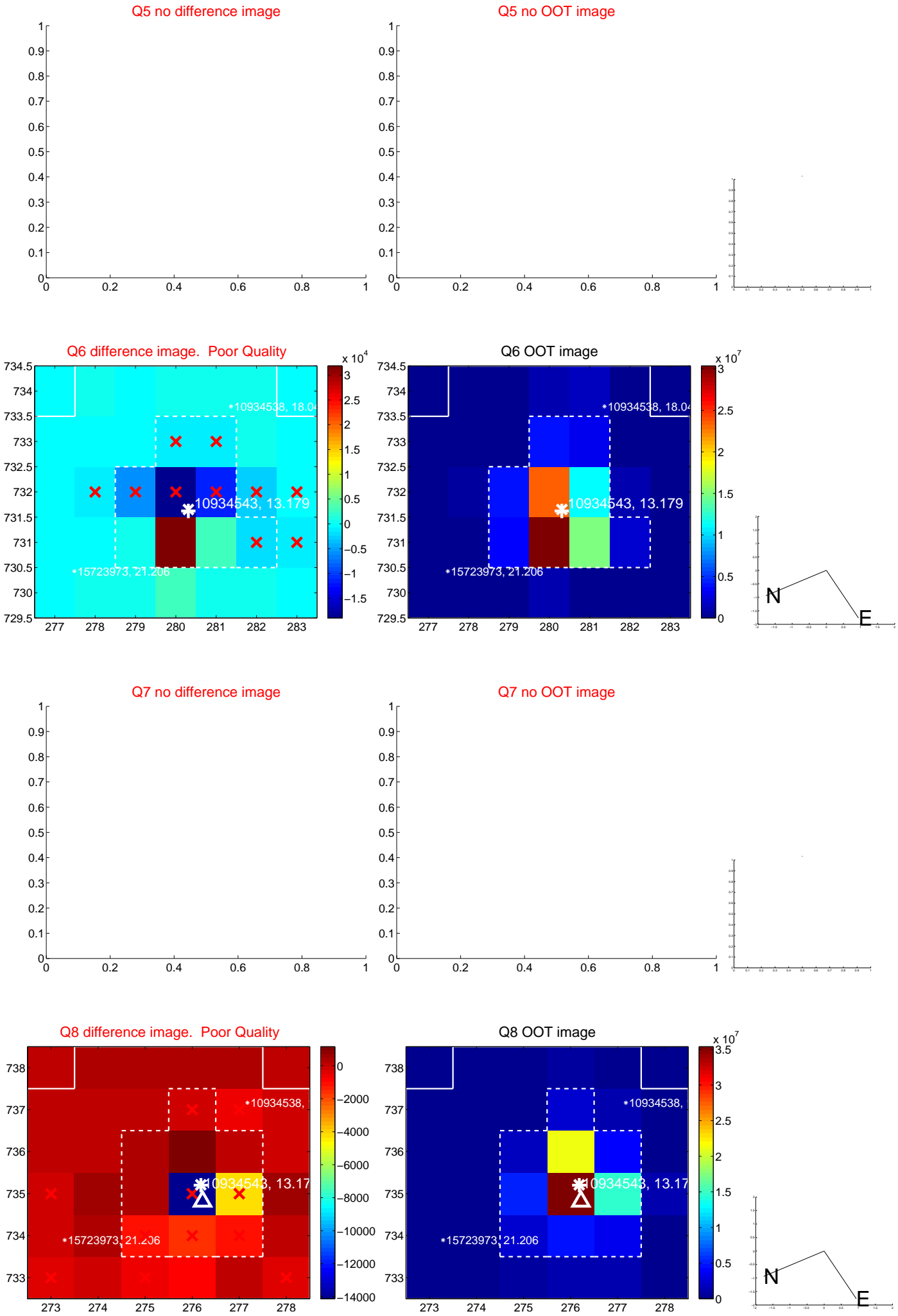
Q4 no difference image



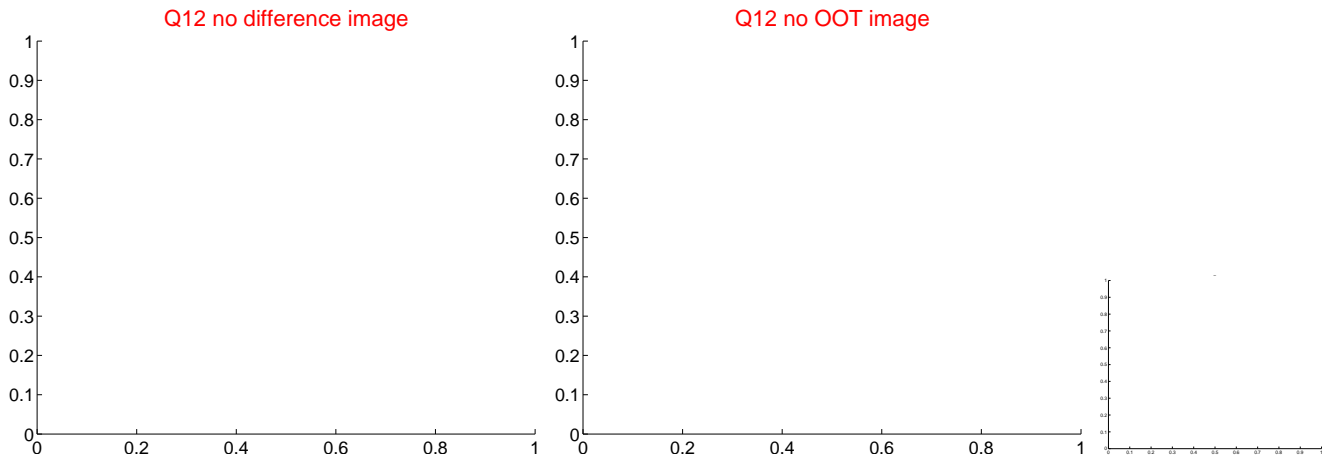
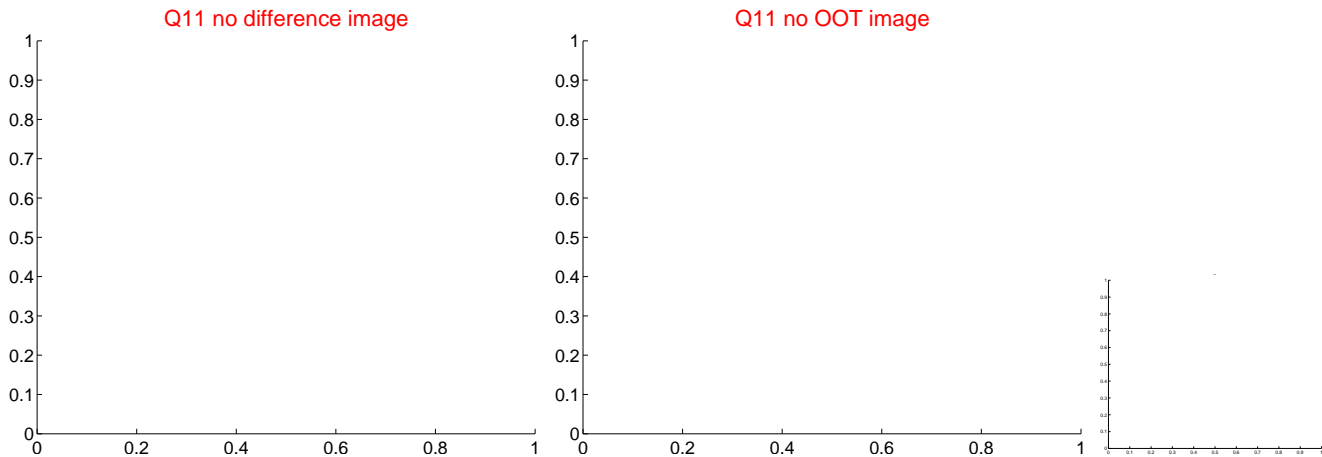
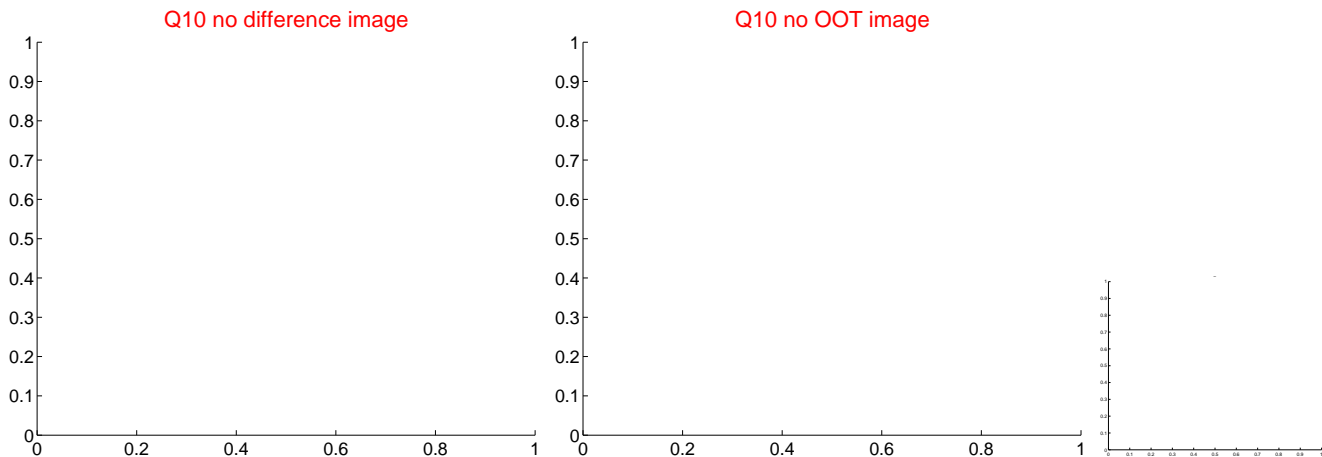
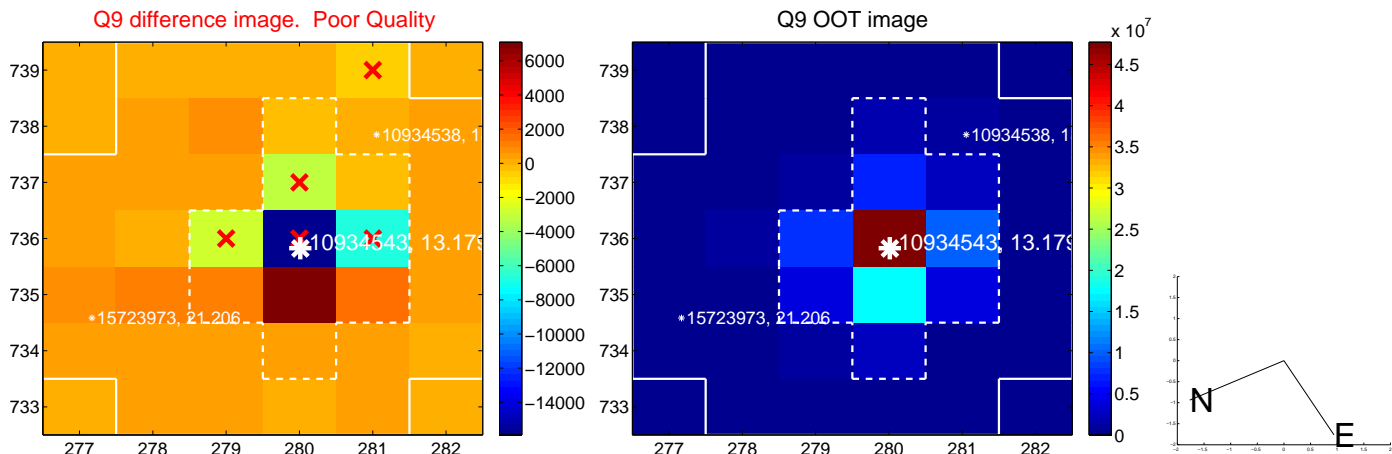
Q4 no OOT image



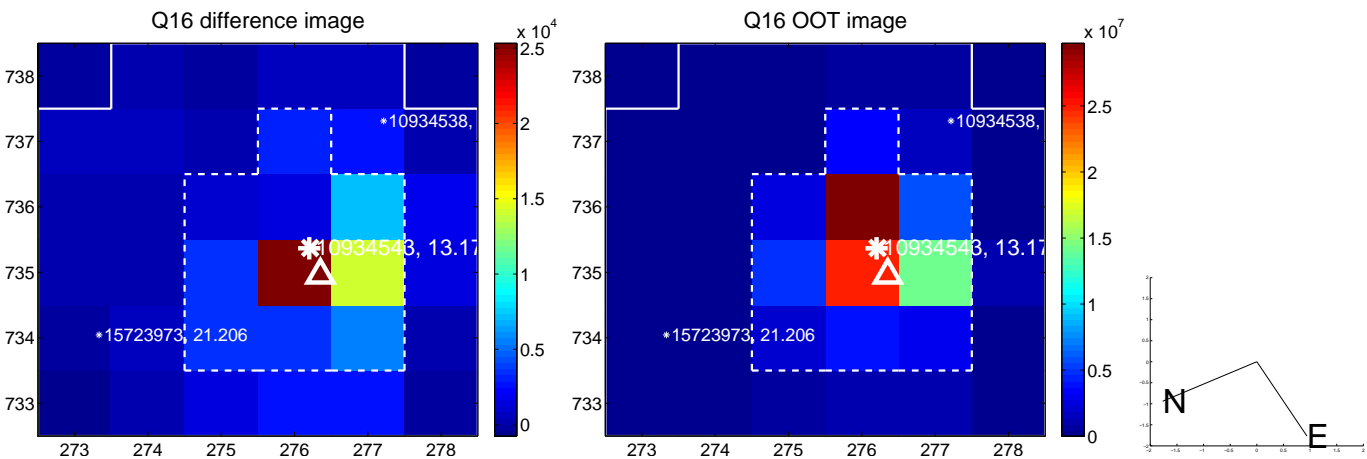
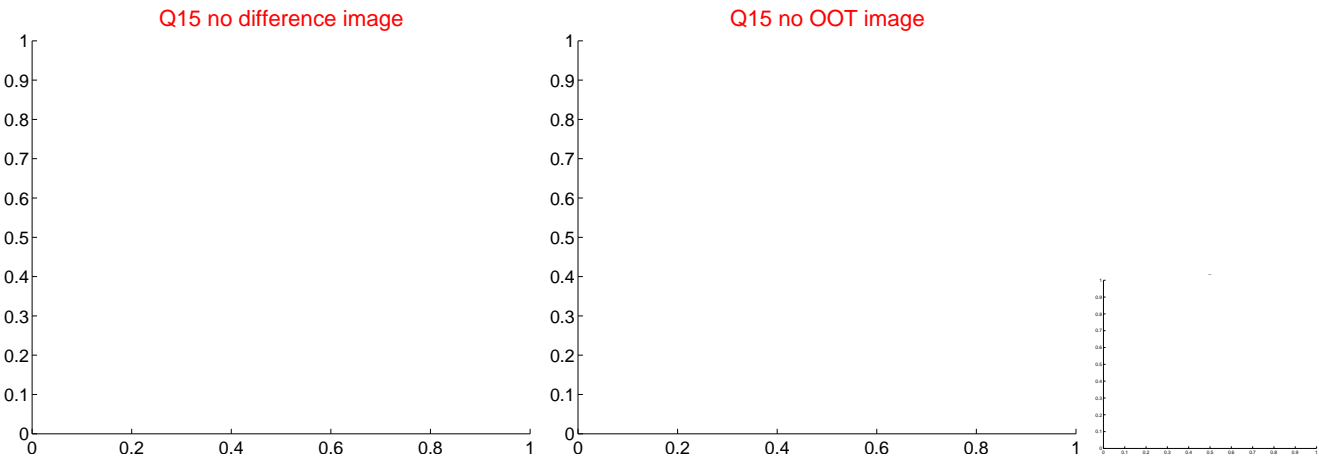
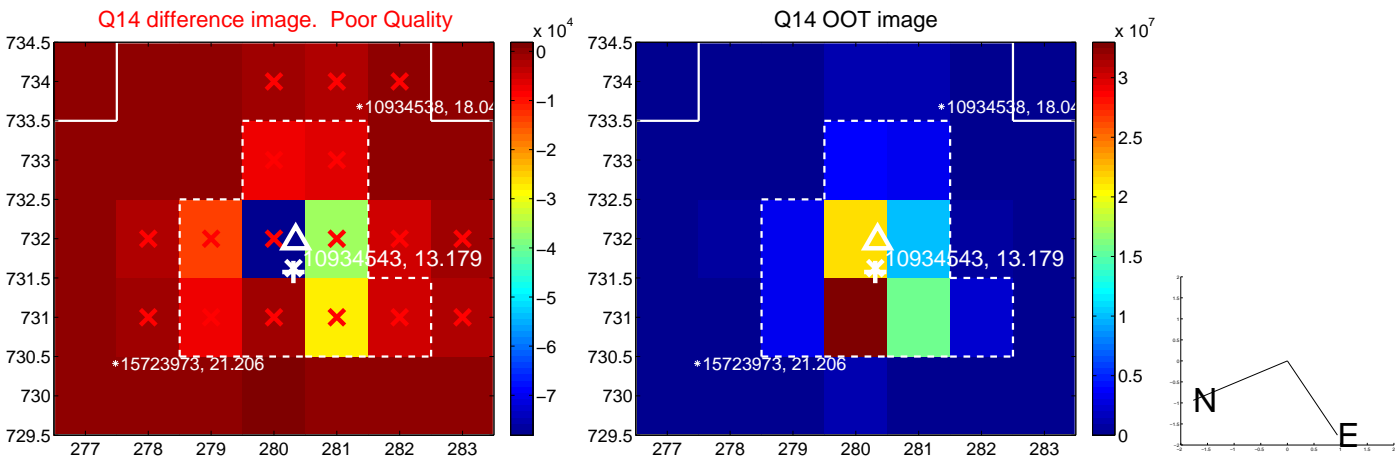
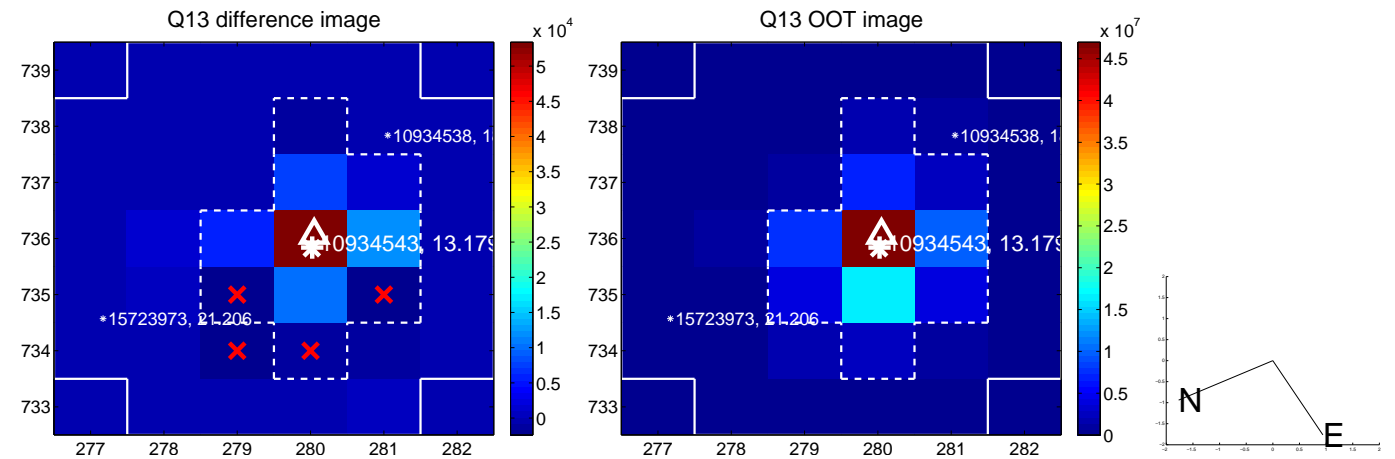
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



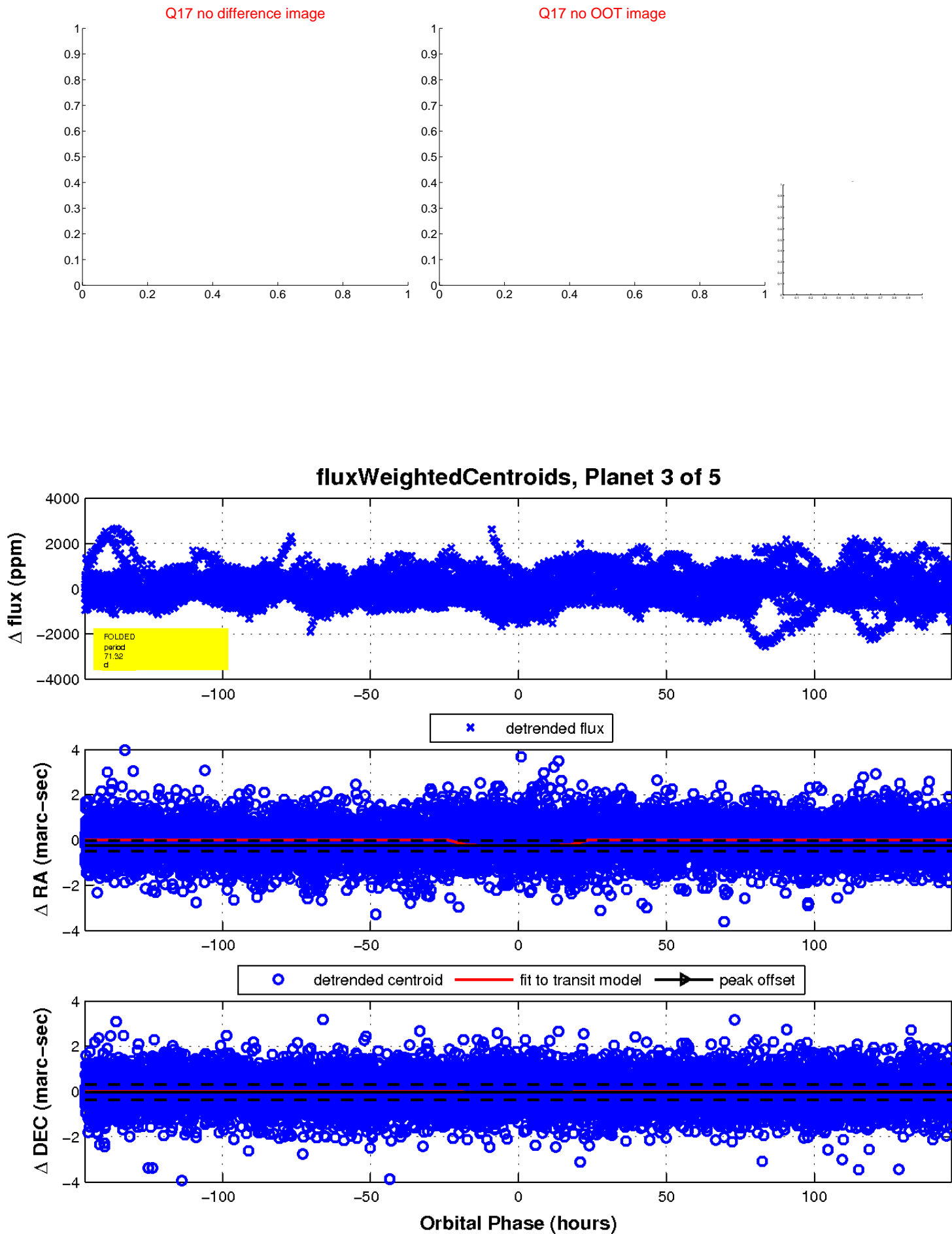
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

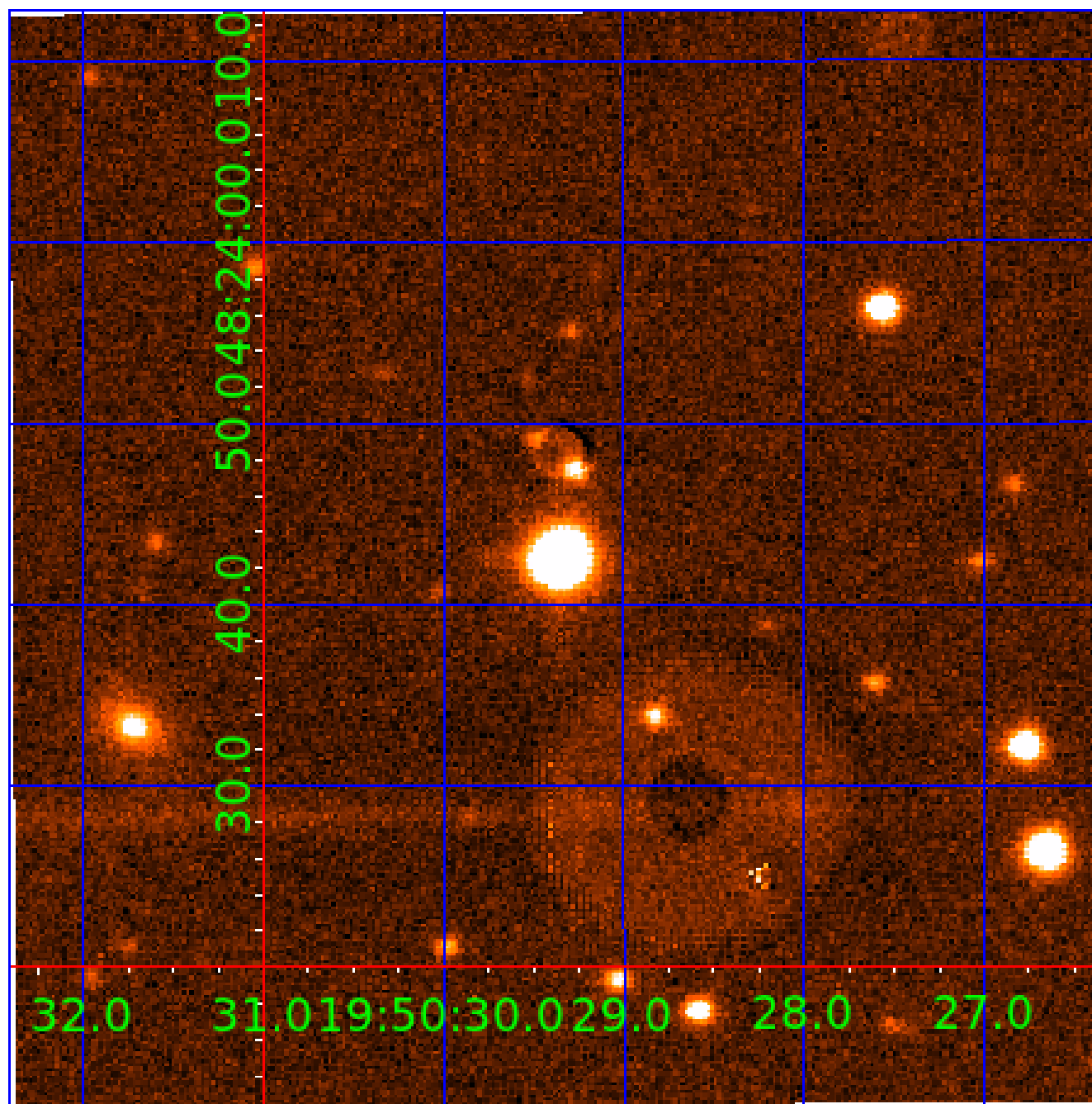


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010934543

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R_{\star} (R_{\odot})	T_{\star} (K)	R_p (R_{\oplus})	S_p (S_{\oplus})
010934543-01	OBS	No	2.606003	132.468720	107.6	14.443	7.8	8.2	1.36	6336	1.94	1689.25
010934543-02	OBS	No	224.721391	224.932787	1103.3	12.351	10.2	9.6	1.36	6336	8.51	4.43
010934543-03	OBS	No	71.316636	187.247034	644.9	48.812	9.8	5.9	1.36	6336	4.08	20.48
010934543-04	OBS	No	81.197899	197.028040	619.5	13.080	9.9	7.5	1.36	6336	4.20	17.23
010934543-05	OBS	No	96.895340	177.368163	246.8	16.064	8.8	3.4	1.36	6336	2.29	13.61

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010934543-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV
010934543-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
010934543-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV
010934543-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT
010934543-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT— MOD_POS_ALT—CENT_NOFITS

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

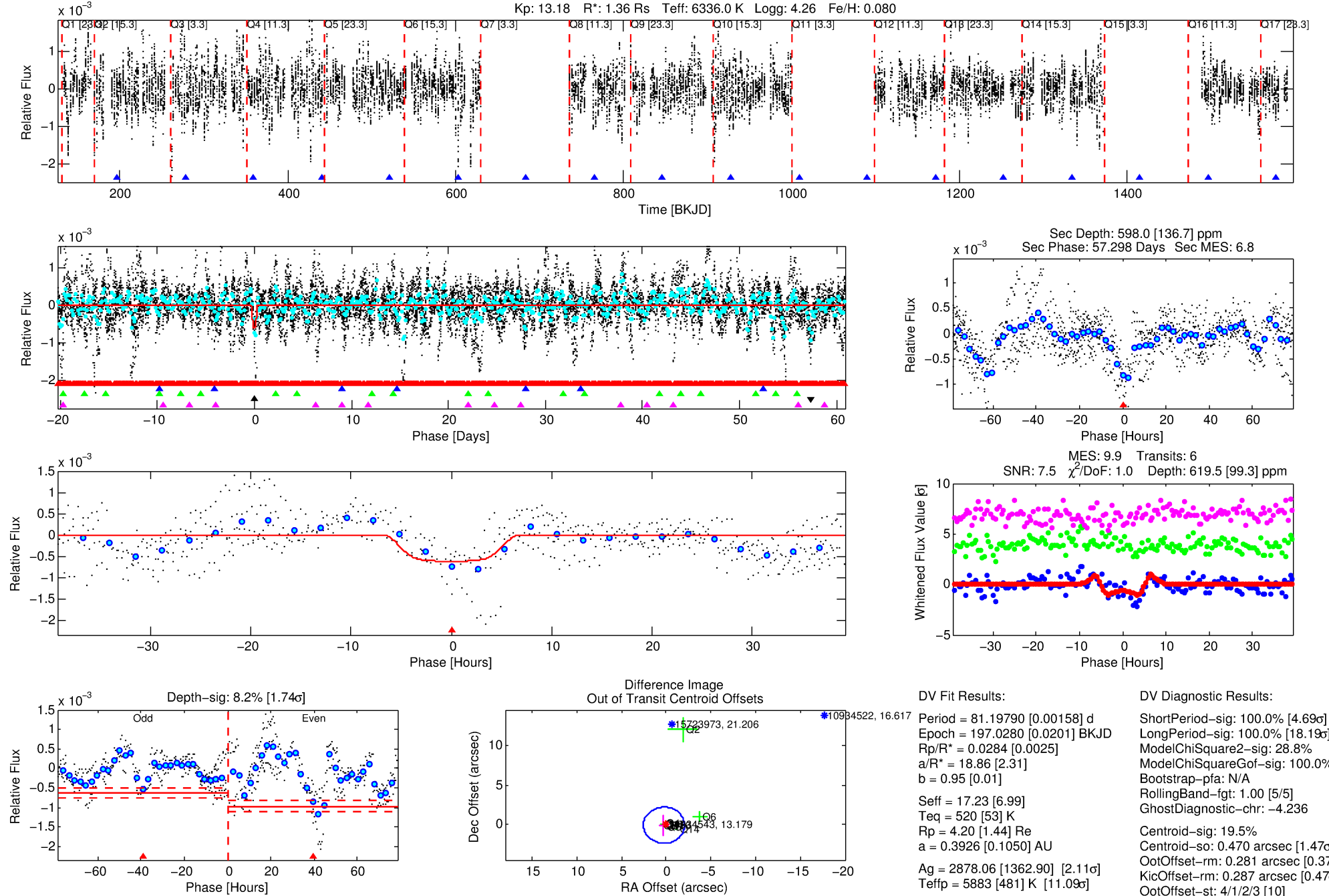
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010934543-04

No Significant Match Found

DV One-Page Summary

KIC: 10934543 Candidate: 4 of 5 Period: 81.198 d



DV Fit Results:

Period = 81.19790 [0.00158] d
Epoch = 197.0280 [0.0201] BKJD
Rp/R* = 0.0284 [0.0025]
a/R* = 18.86 [2.31]
b = 0.95 [0.01]
Seff = 17.23 [6.99]
Teff = 520 [53] K
Rp = 4.20 [1.44] Re
a = 0.3926 [0.1050] AU
Ag = 2878.06 [1362.90] [2.11 σ]
Teffp = 5883 [481] K [11.09 σ]

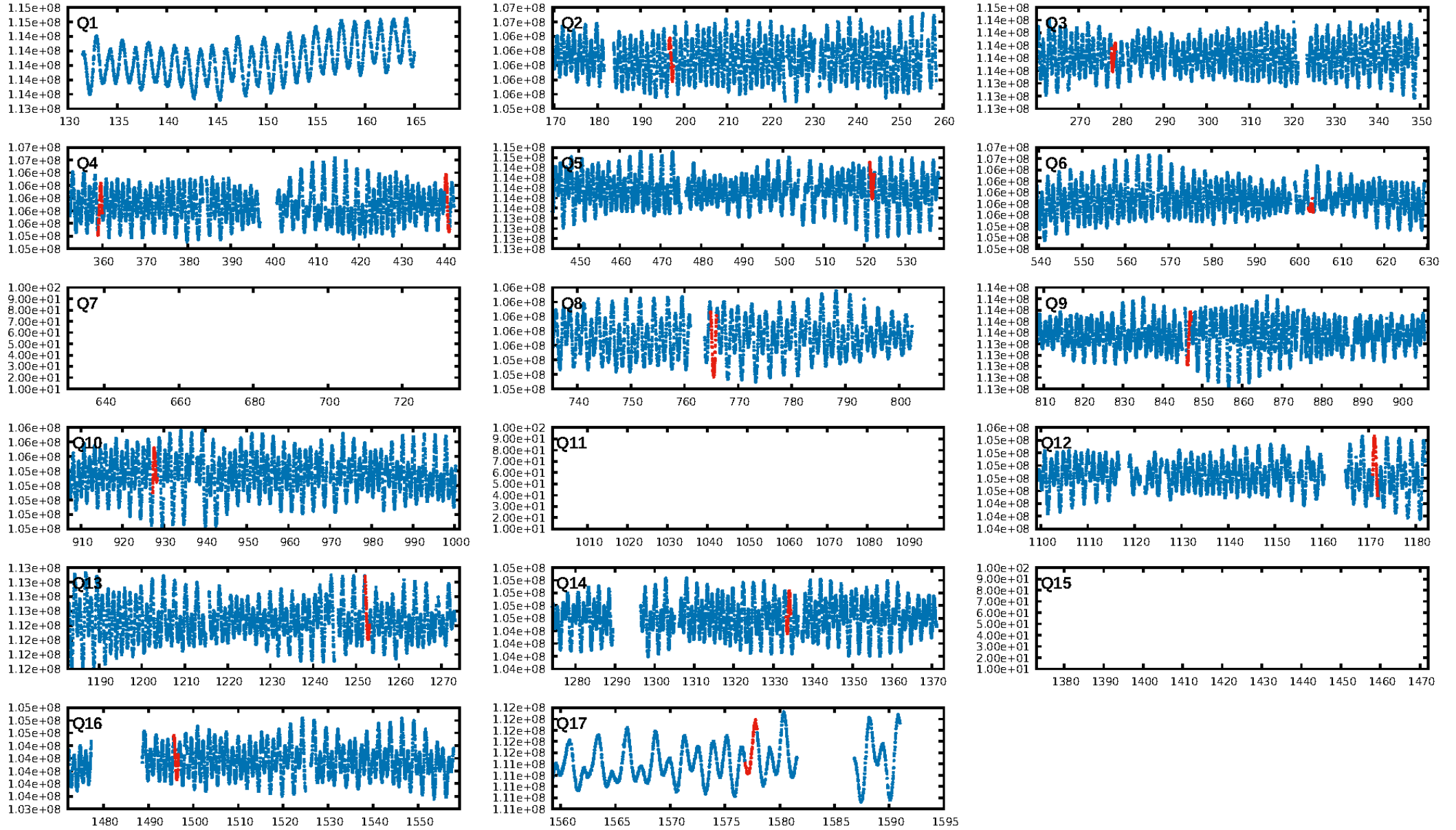
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [4.69 σ]
LongPeriod-sig: 100.0% [18.19 σ]
ModelChiSquare2-sig: 28.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: -4.236
Centroid-sig: 19.5%
Centroid-so: 0.470 arcsec [1.47 σ]
OotOffset-rm: 0.281 arcsec [0.37 σ]
KicOffset-rm: 0.287 arcsec [0.47 σ]
OotOffset-st: 4/1/2/3 [10]
KicOffset-st: 4/1/2/3 [10]
DiffImageQuality-fgm: 0.50 [5/10]
DiffImageOverlap-fno: 0.00 [0/10]

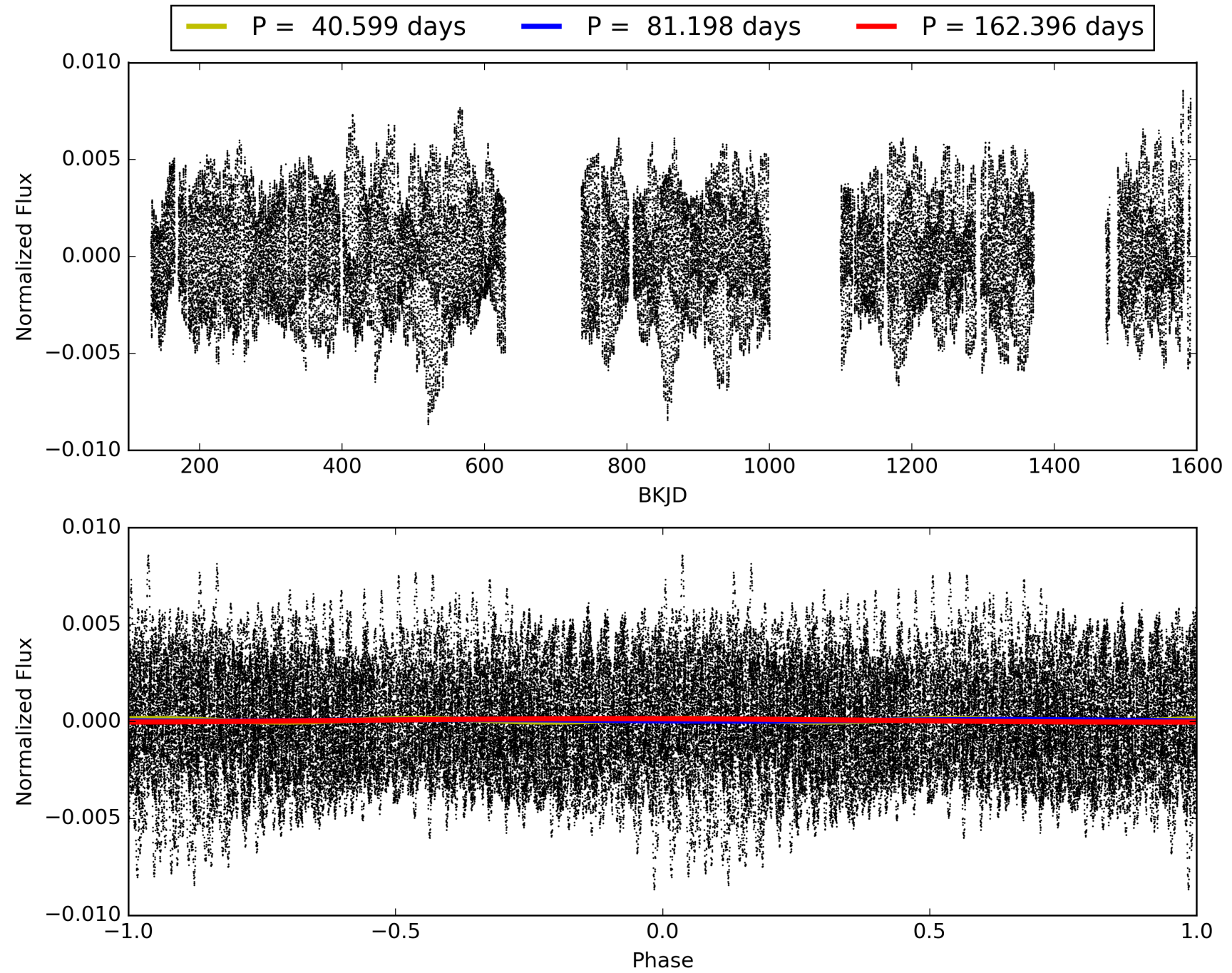
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 10:15:02 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 010934543-04, PDC Light Curves

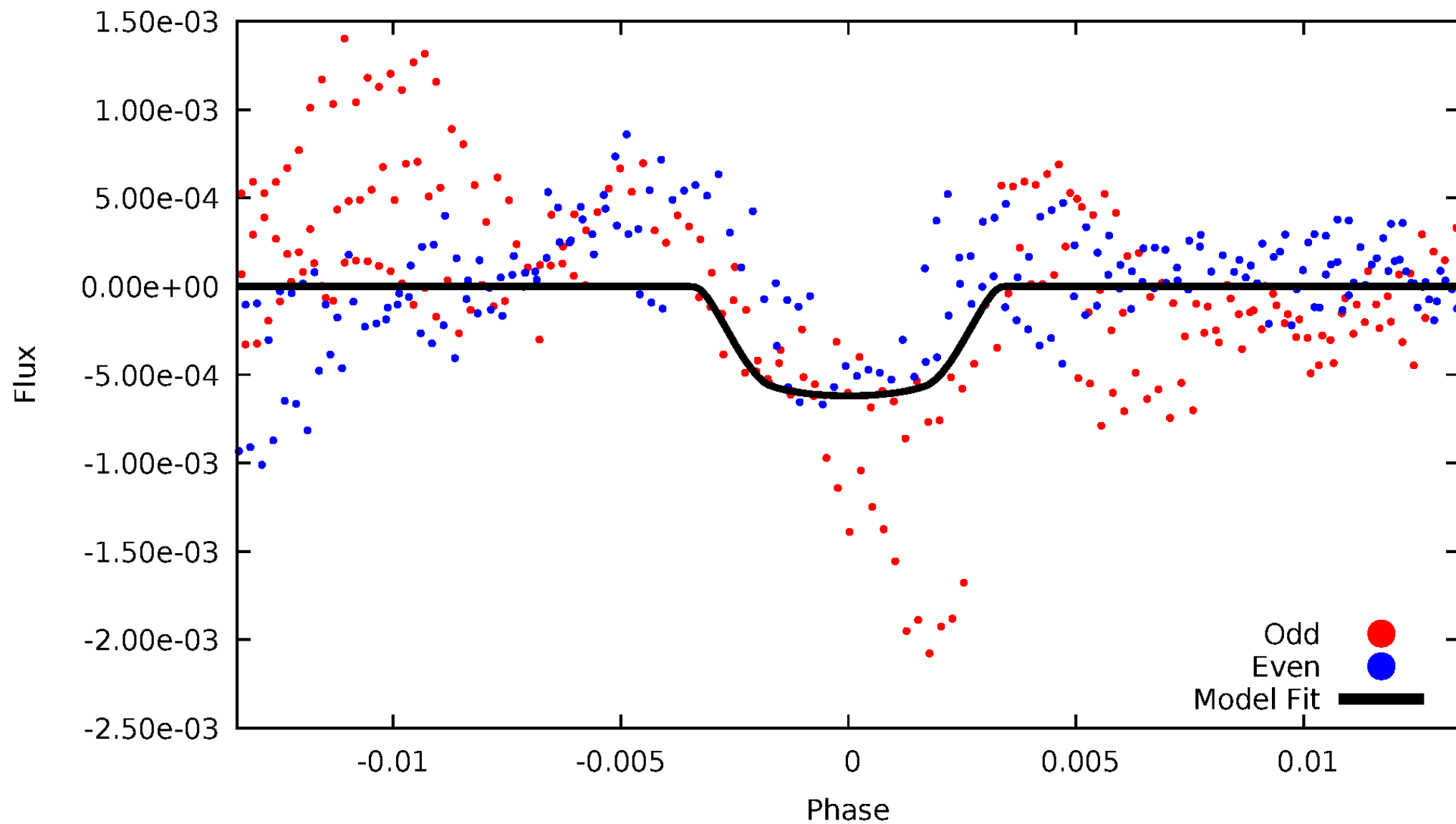


TCE 010934543-04



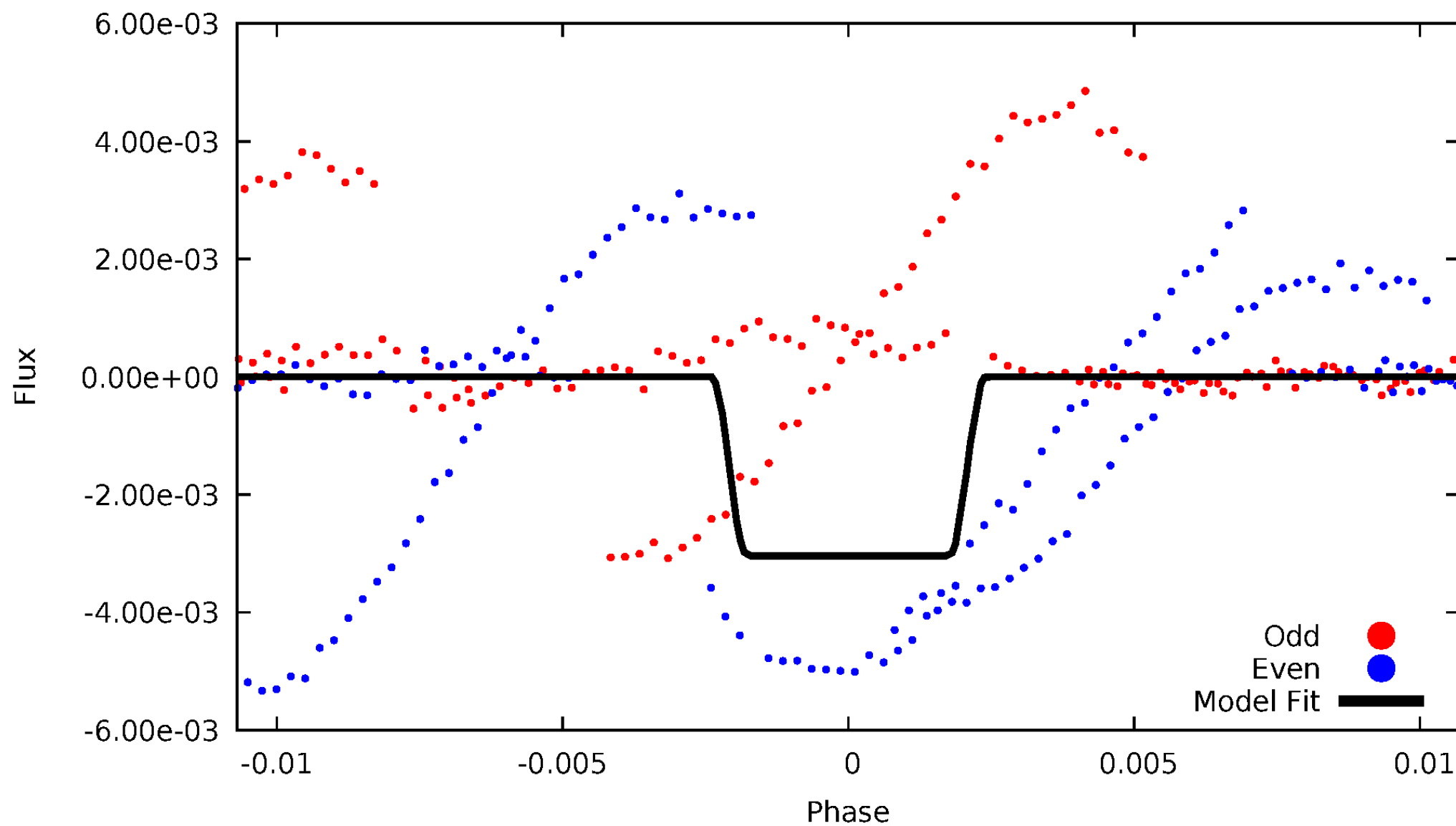
DV Odd/Even

TCE 010934543-04



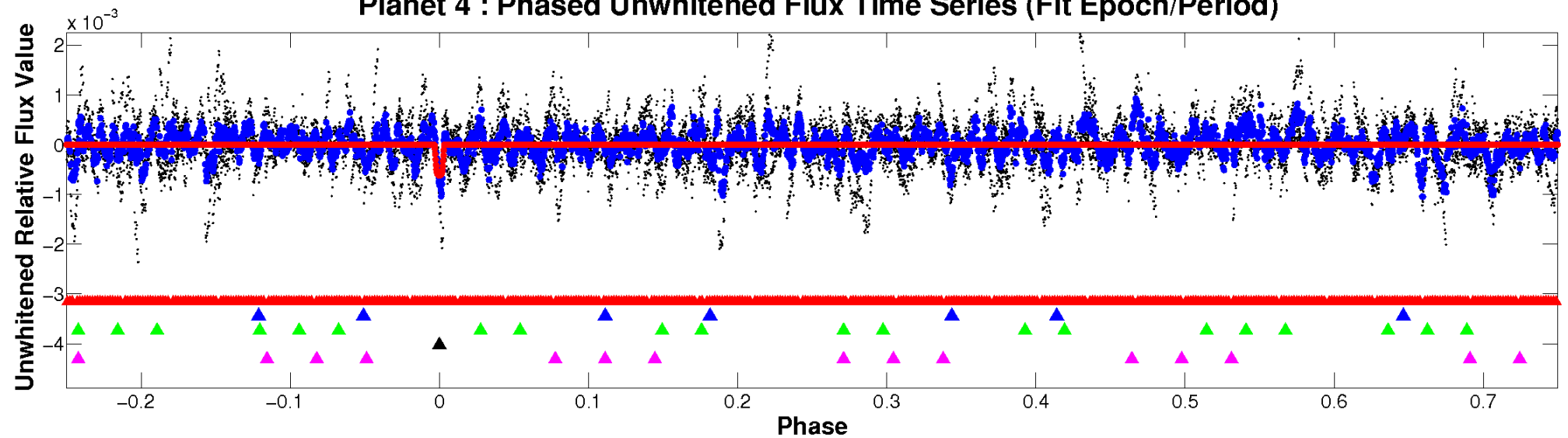
ALT Odd/Even

TCE 010934543-04

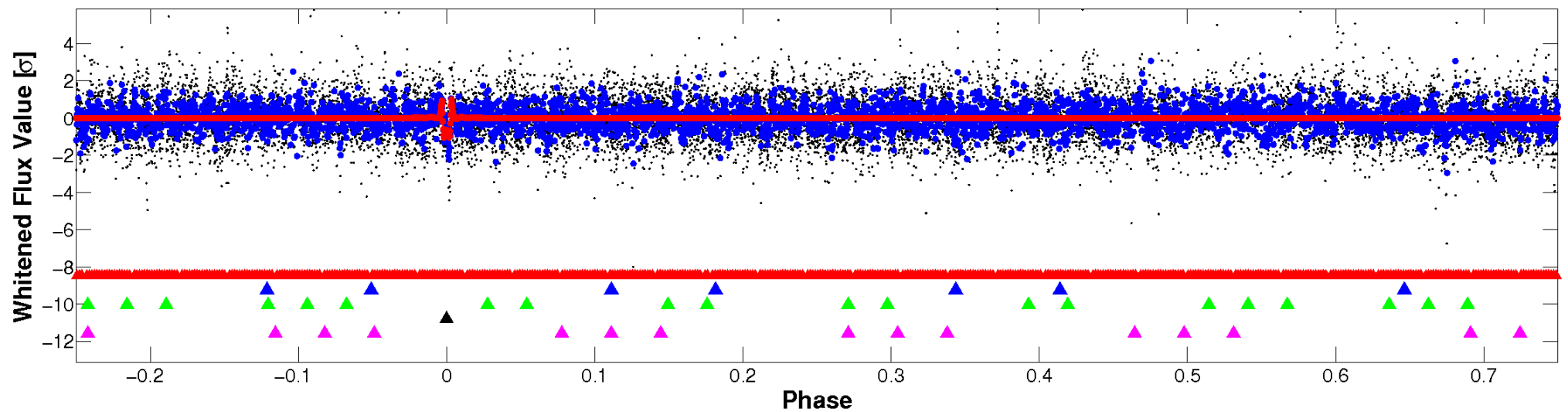


Non-Whitened Vs. Whitened Light Curve

Planet 4 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

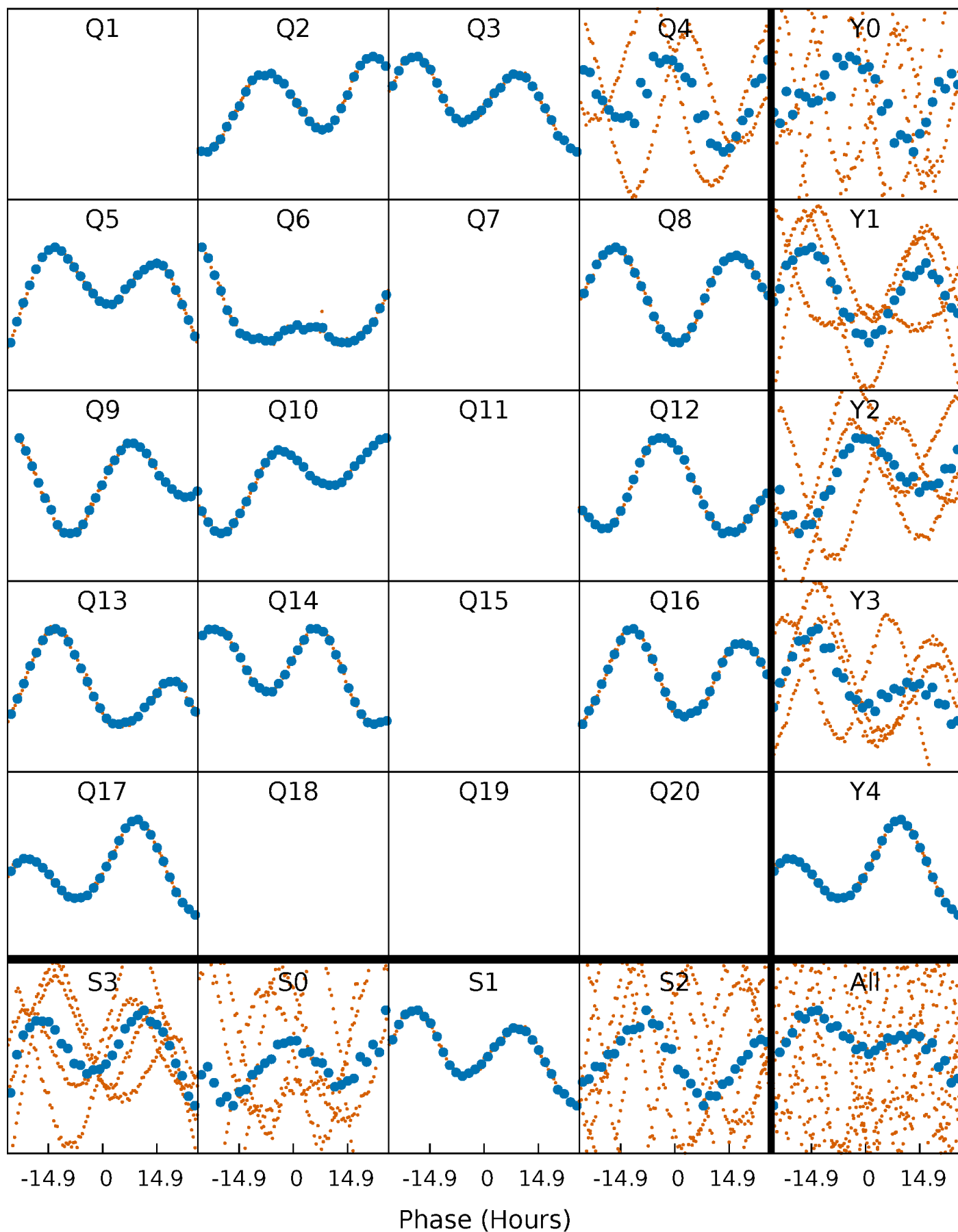


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



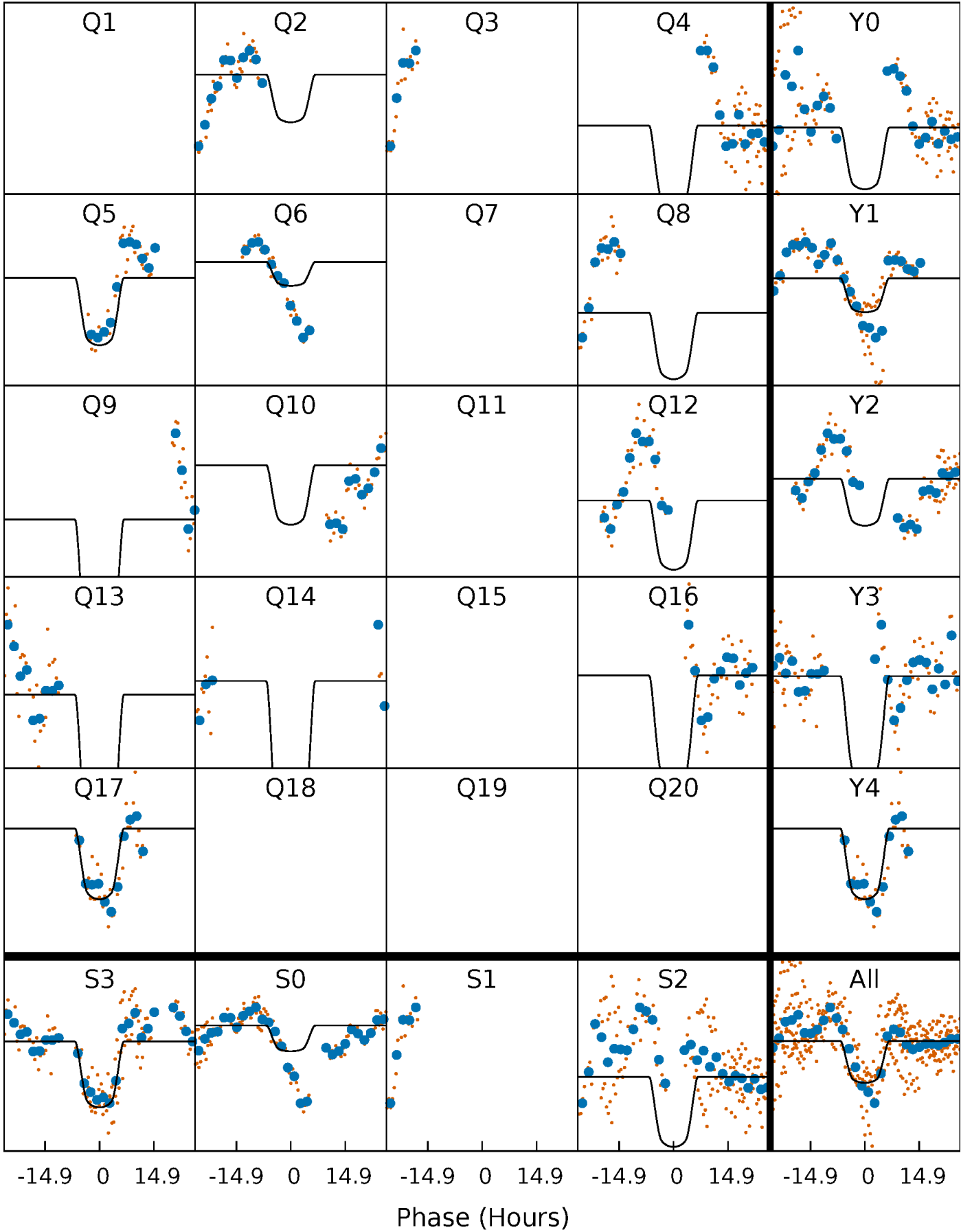
PDC Quarter-Phased Transit Curves

TCE 010934543-04 P= 81.197899 Days $T_0=197.028040$ (BKJD)



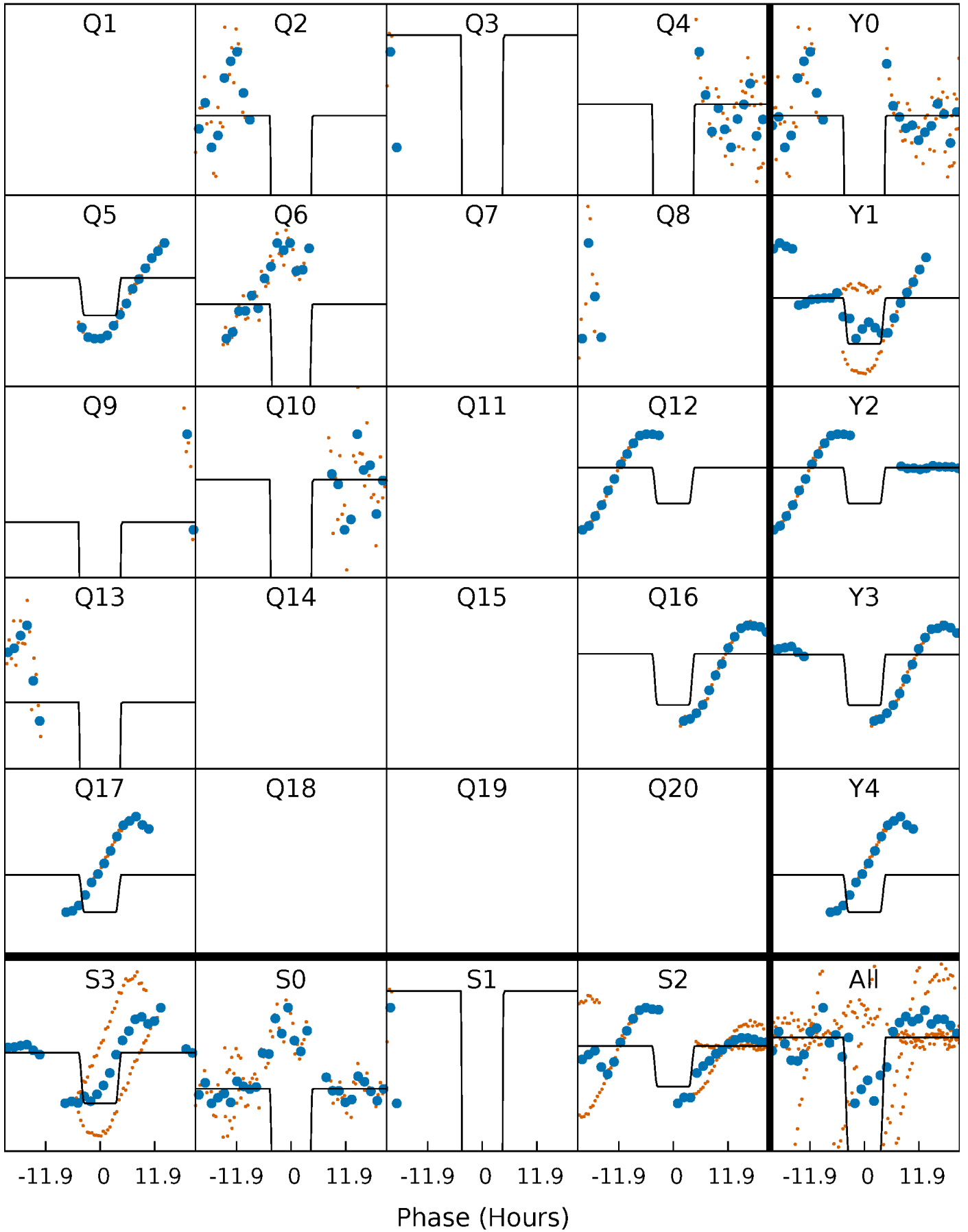
DV Quarter-Phased Transit Curves

TCE 010934543-04 P= 81.197899 Days $T_0=197.028040$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

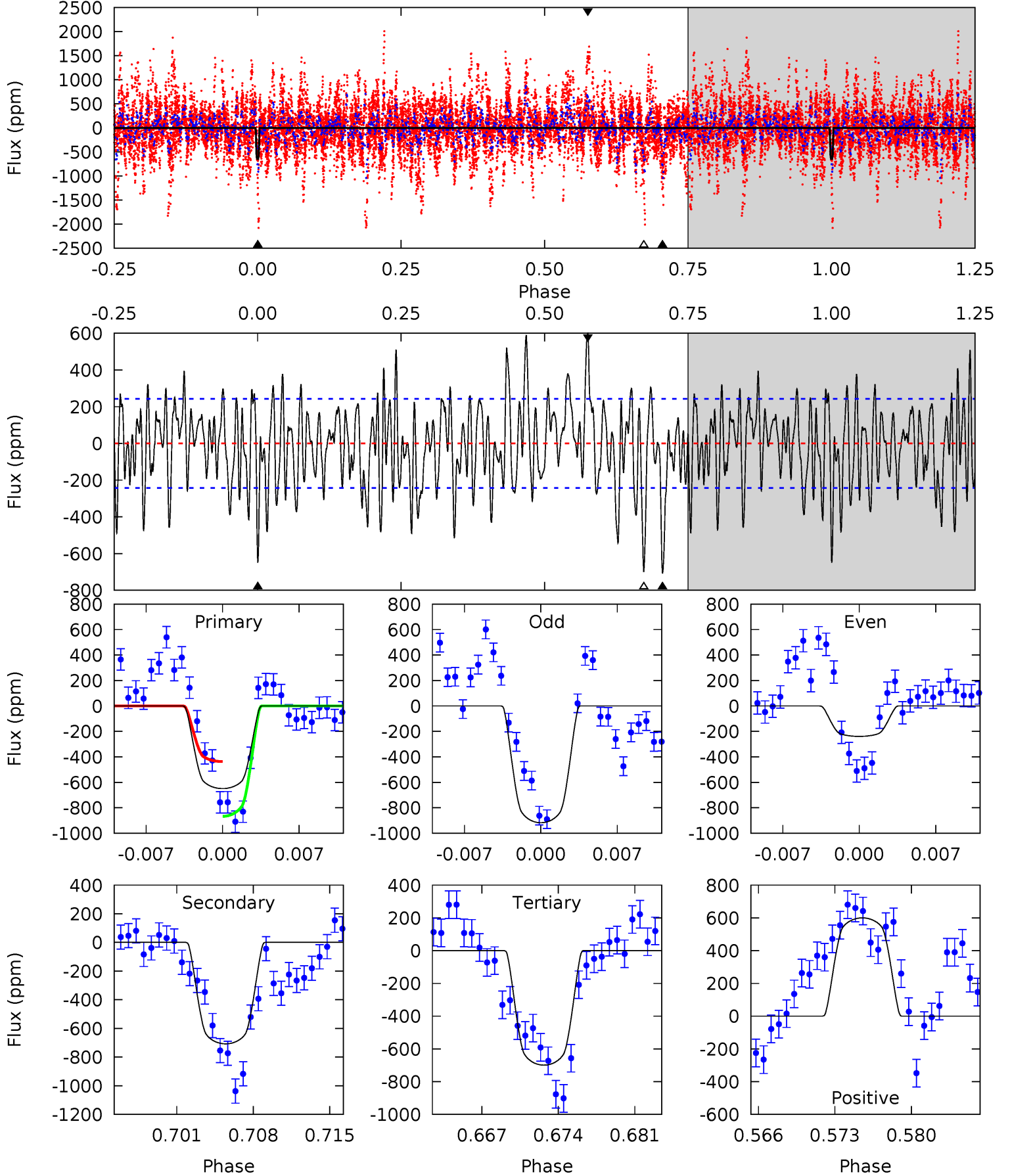
TCE 010934543-04 P= 81.198195 Days $T_0=197.094375$ (BKJD)



DV Model-Shift Uniqueness Test

010934543-04, P = 81.197899 Days, E = 115.830141 Days

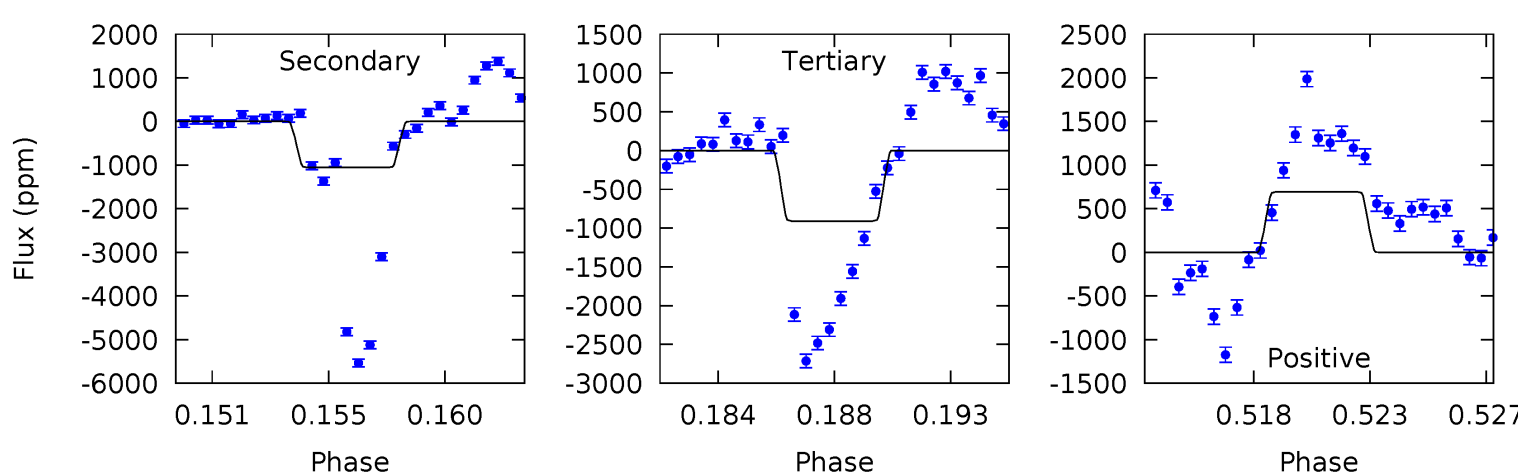
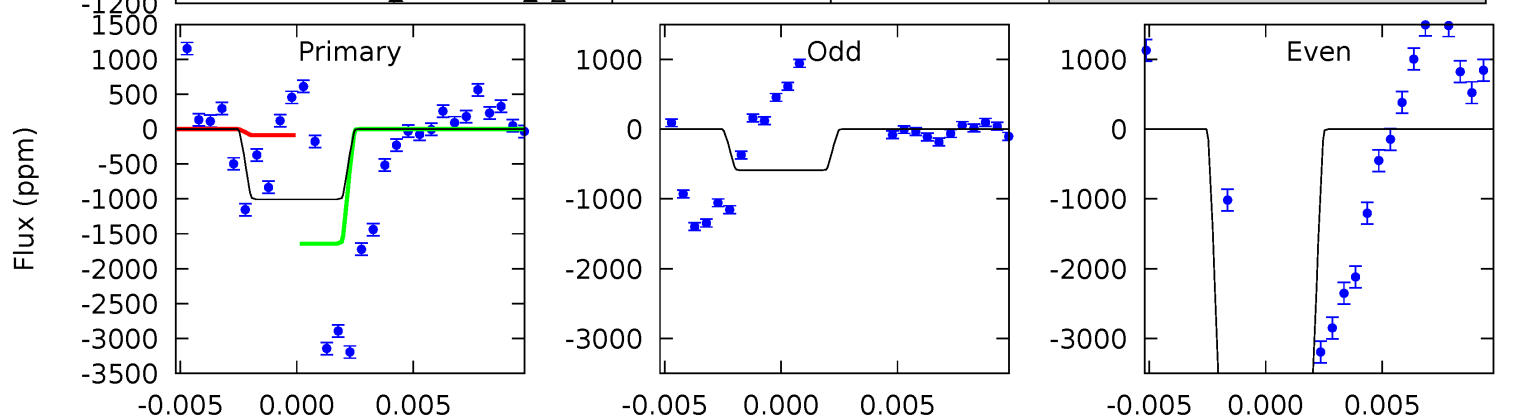
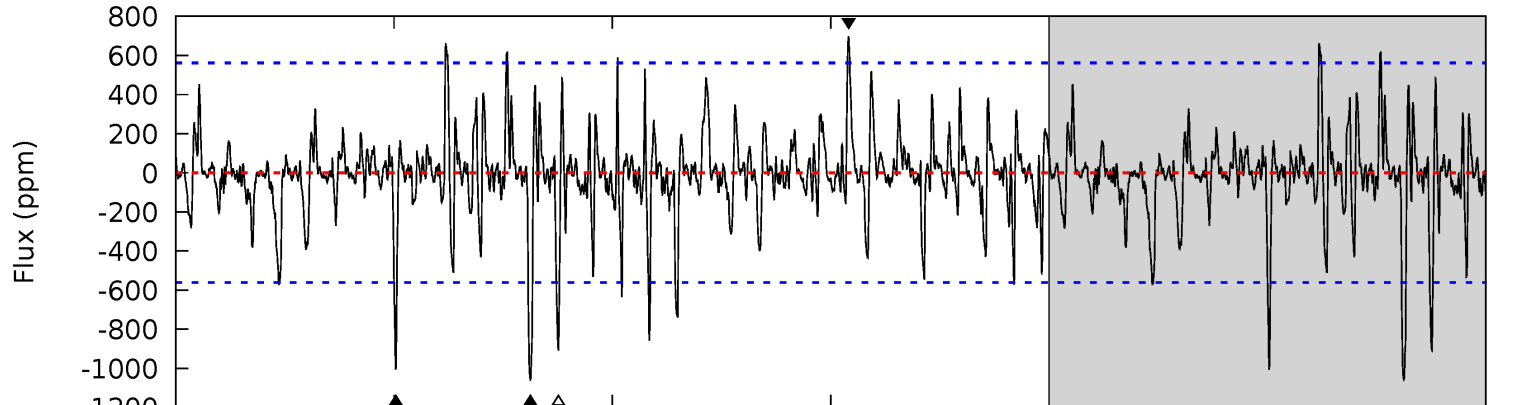
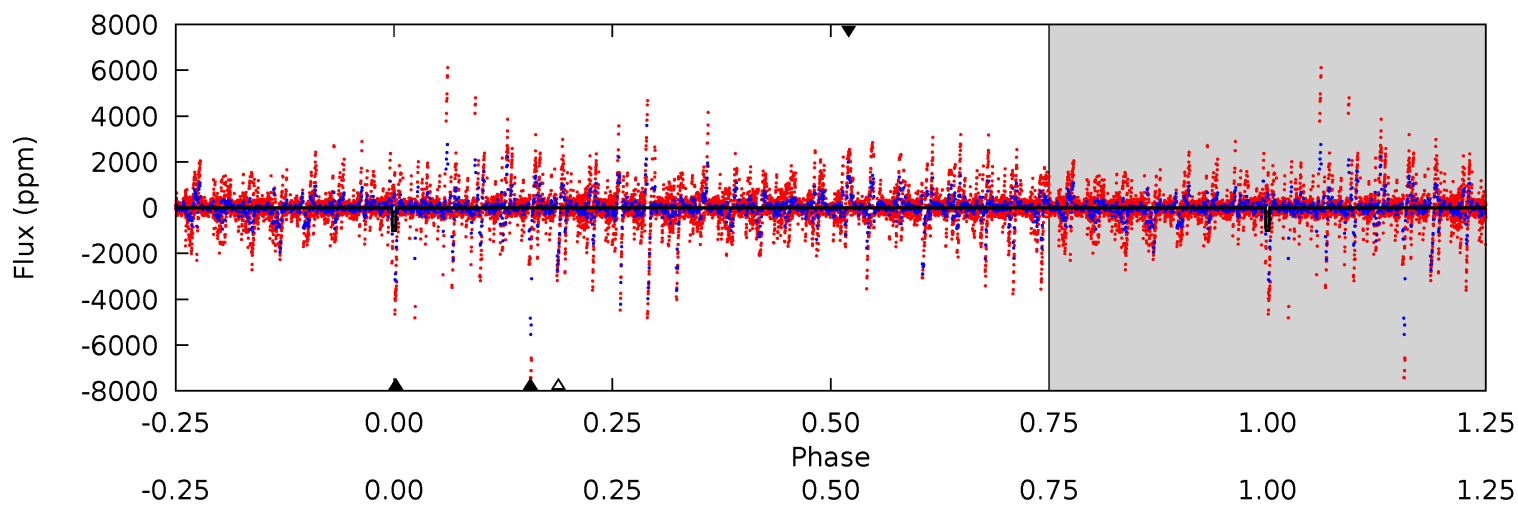
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.6	14.9	14.7	12.6	5.10	2.71	4.32	-1.06	1.03	0.18	2.27	6.95	0.78	0.46	4.59



Alt Model-Shift Uniqueness Test

010934543-04, P = 81.198195 Days, E = 115.896180 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.28	9.74	8.39	6.40	5.17	2.83	1.46	0.89	2.87	1.35	3.33	11.6	-1.75	0.40	7.21



Stellar Parameters For KIC 010934543

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6336^{+177}_{-243}	$4.261^{+0.132}_{-0.198}$	$0.080^{+0.250}_{-0.300}$	$1.356^{+0.448}_{-0.276}$	$1.224^{+0.182}_{-0.182}$	$0.692^{+0.439}_{-0.358}$
	+3%/-4%	+3%/-5%	+312%/-375%	+33%/-20%	+15%/-15%	+63%/-52%
Source	PHO54	PHO54	PHO54	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 010934543-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-708 ± 48	$4.27^{+0.81}_{-0.60}$	732^{+59}_{-49}	6104^{+374}_{-331}	3249^{+1122}_{-900}
Alt.	-1057 ± 109	$8.33^{+1.38}_{-1.09}$	732^{+57}_{-51}	4947^{+199}_{-192}	1284^{+413}_{-349}

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming A=0.3)

A_{obs} = Observed Albedo (Assuming T=0)

If a secondary eclipse is present, the system is likely an EB if $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

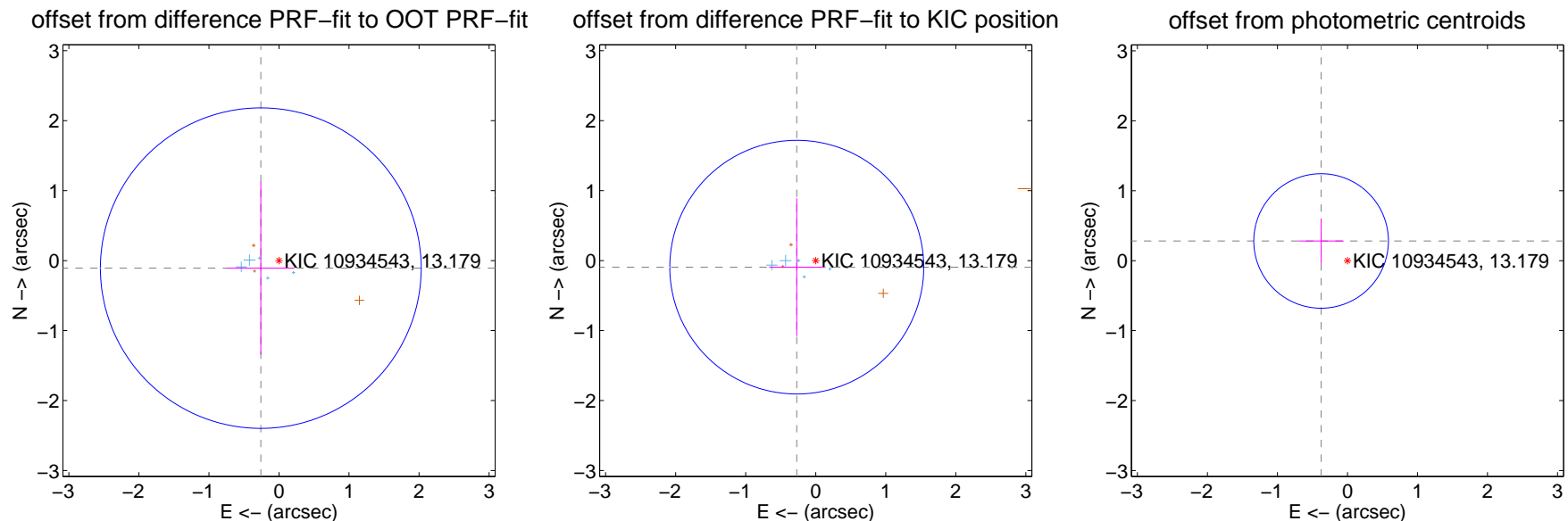
DV Centroid Data

Supplemental centroid analysis for 010934543-04. Kepler magnitude: 13.18. Transit SNR 7.52

There are 5 quarters with good PRF difference image offsets

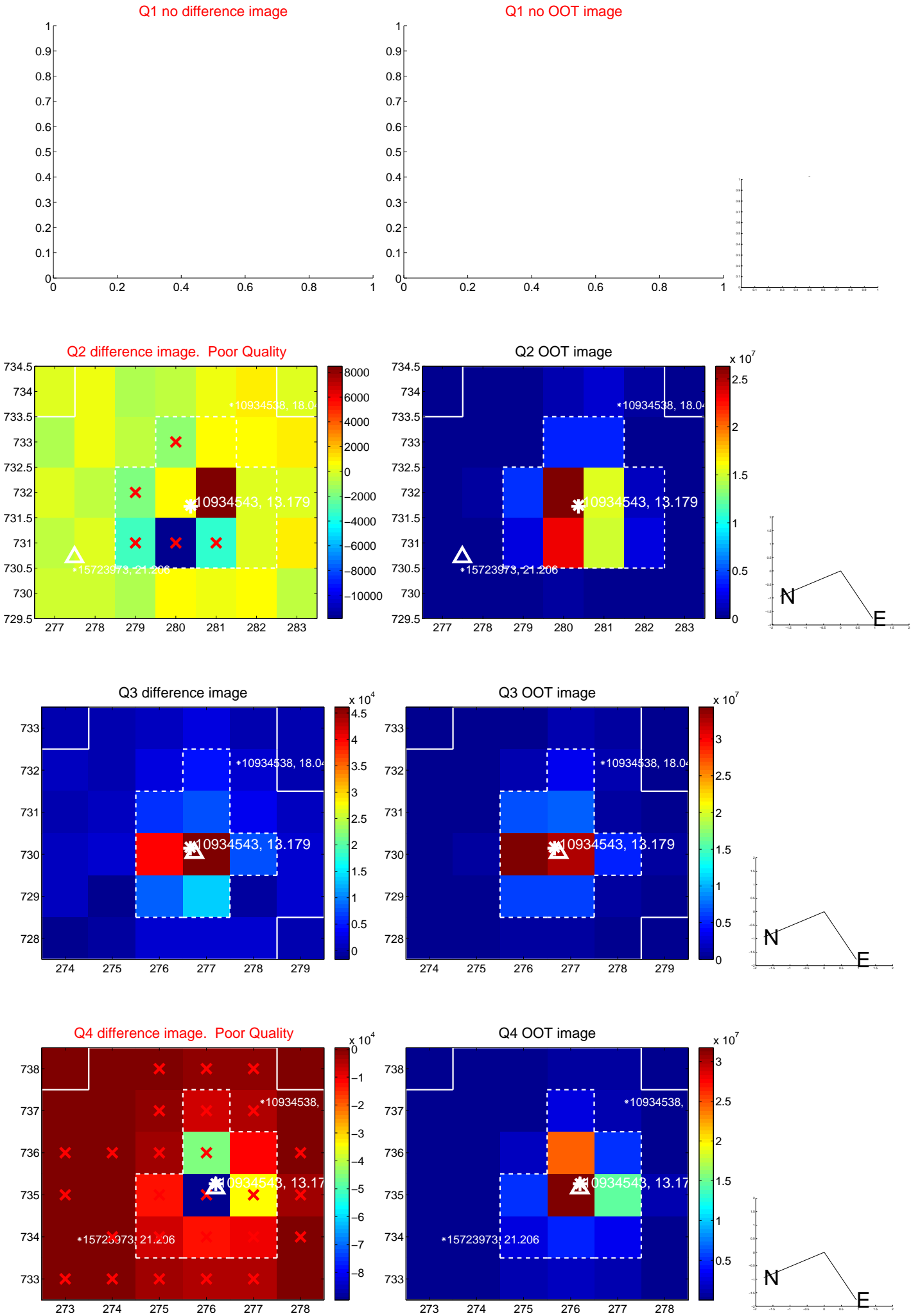
The direct PRF centroid is offset from the target star catalog position by about 0.01 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.281 ± 0.763	0.37	0.260 ± 0.481	-0.108 ± 1.235
PRF-fit source offset from KIC position	0.287 ± 0.604	0.47	0.271 ± 0.395	-0.094 ± 0.984
photometric centroid source offset	0.47 ± 0.32	1.47	0.38 ± 0.32	0.28 ± 0.32

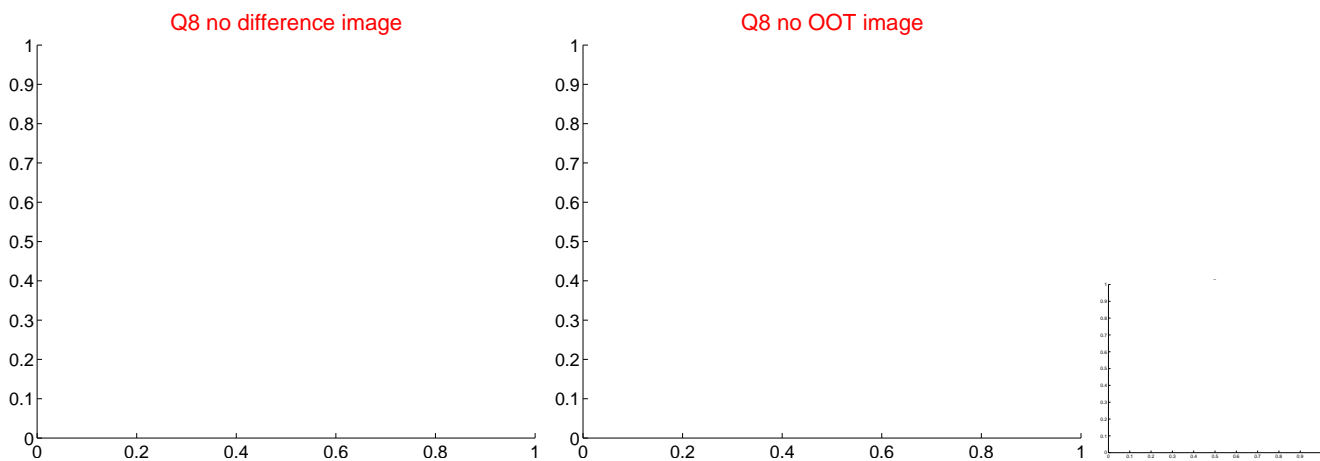
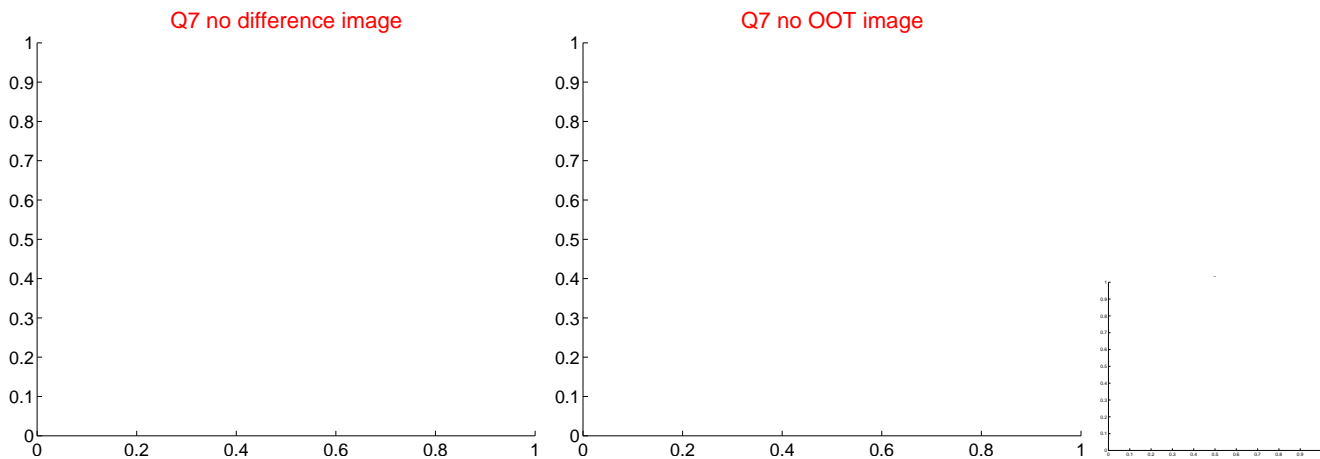
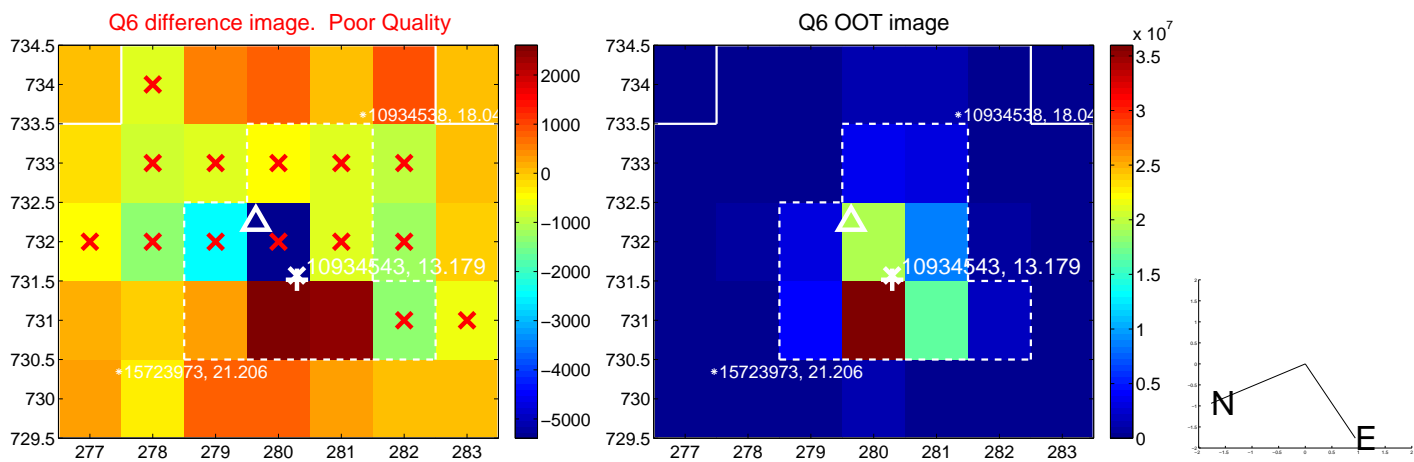
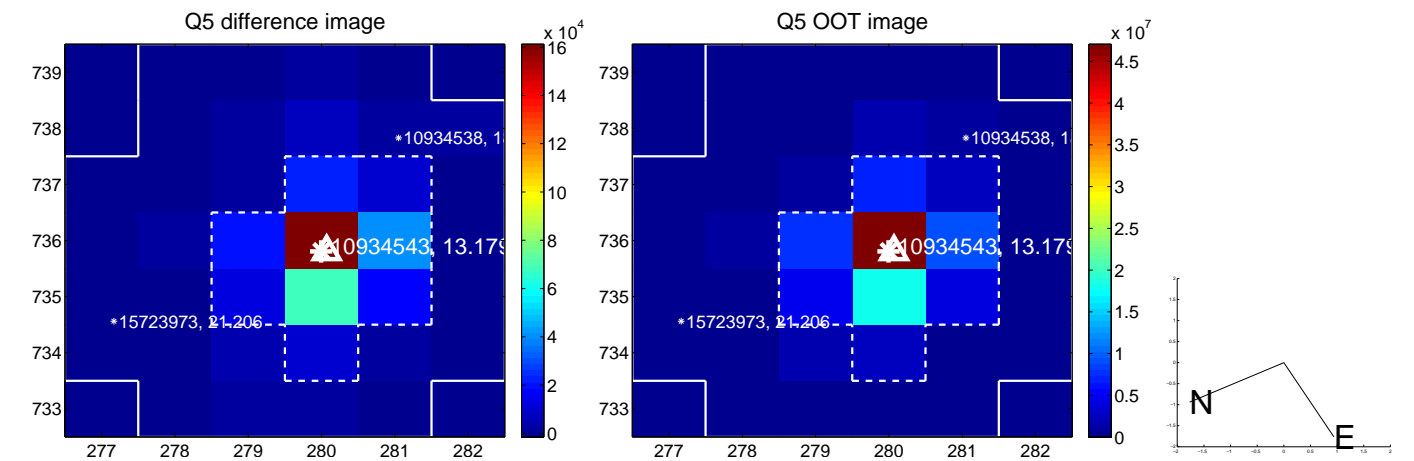


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

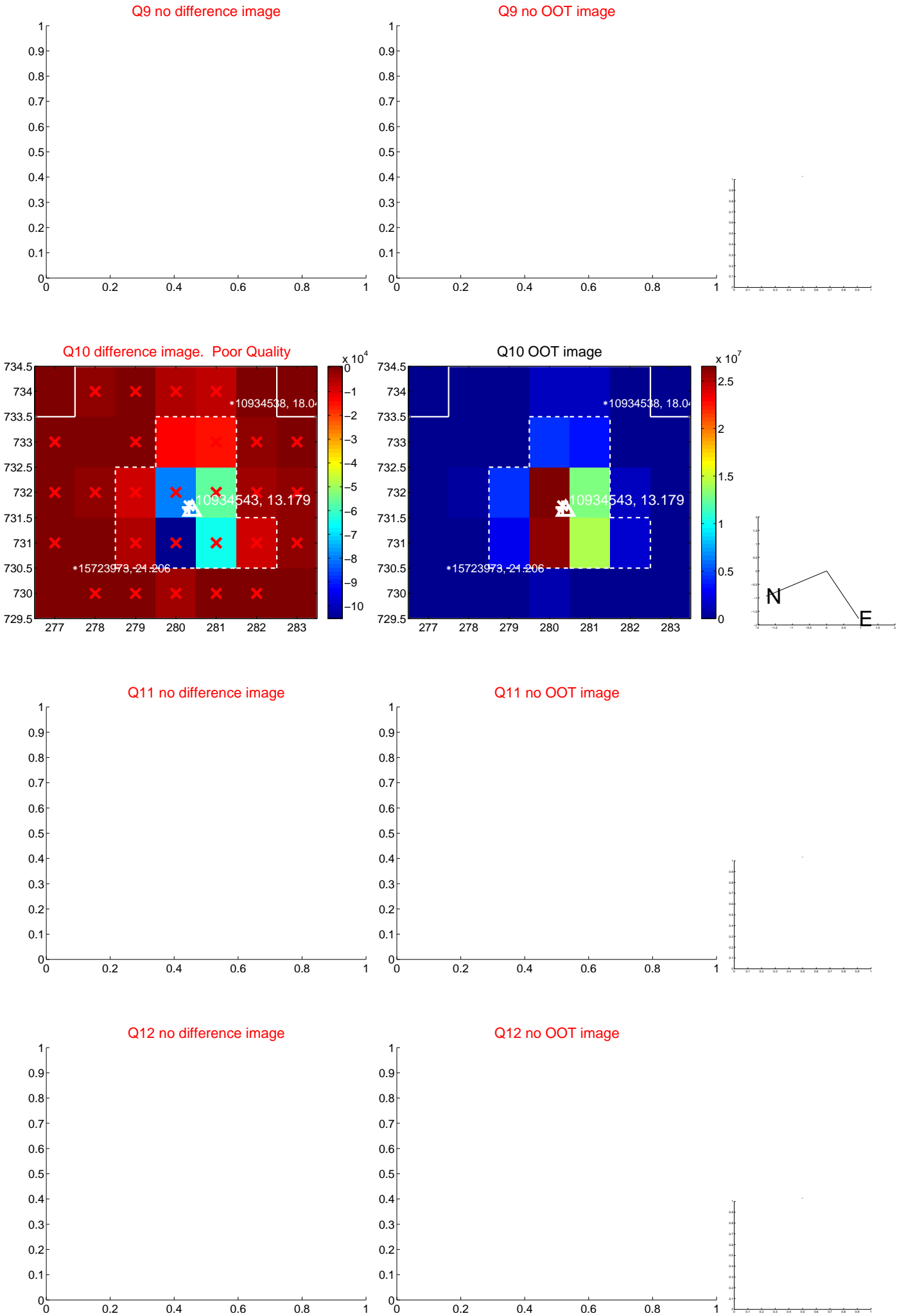
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



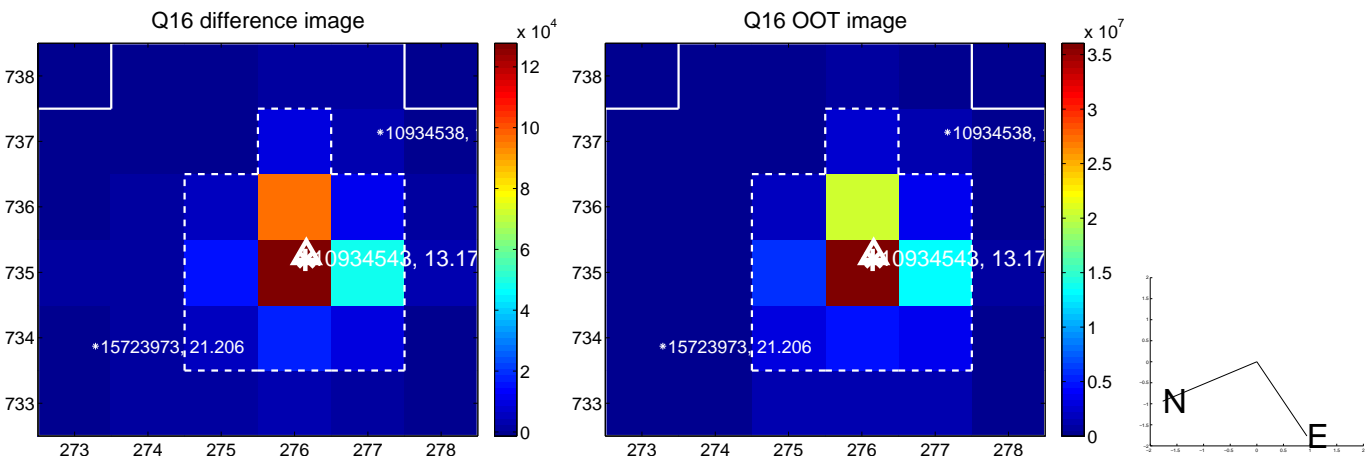
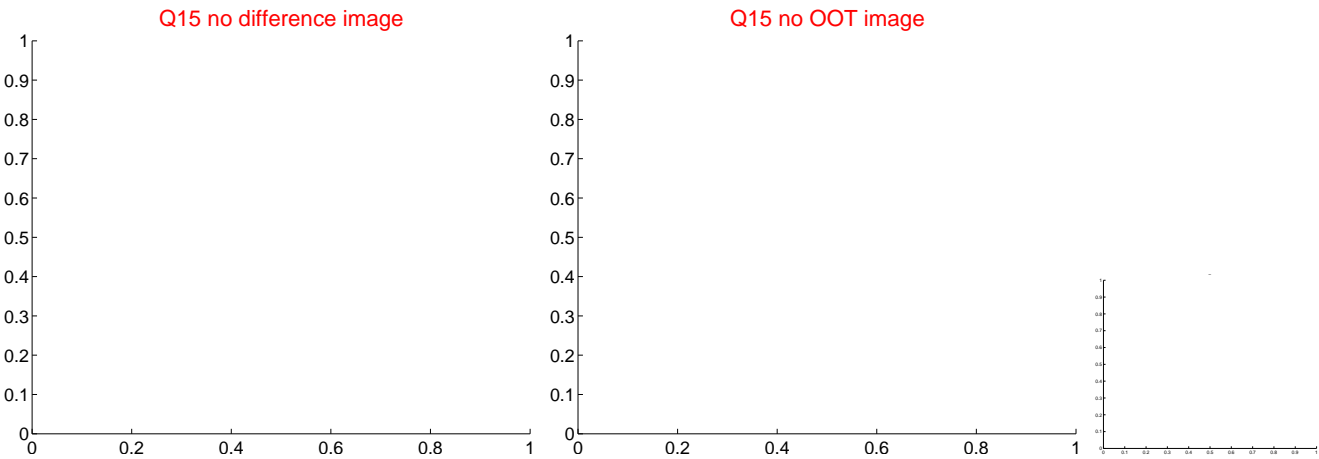
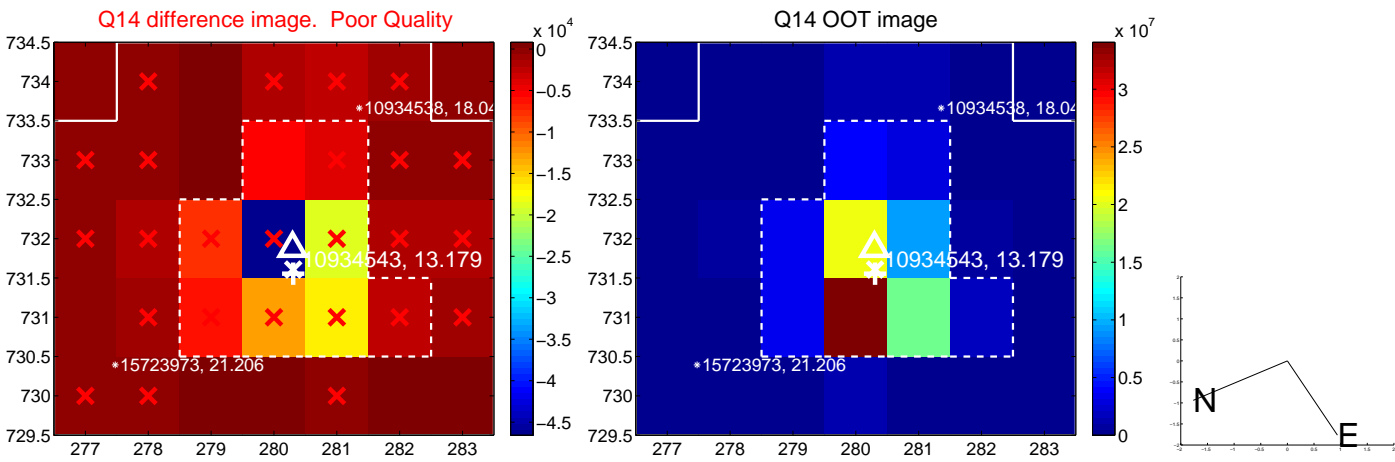
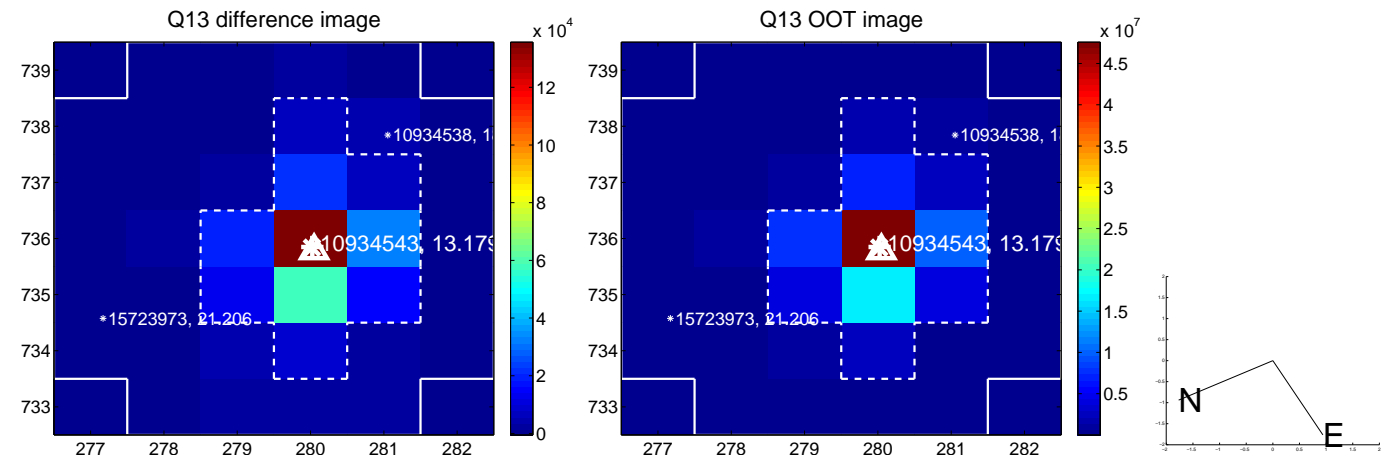
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



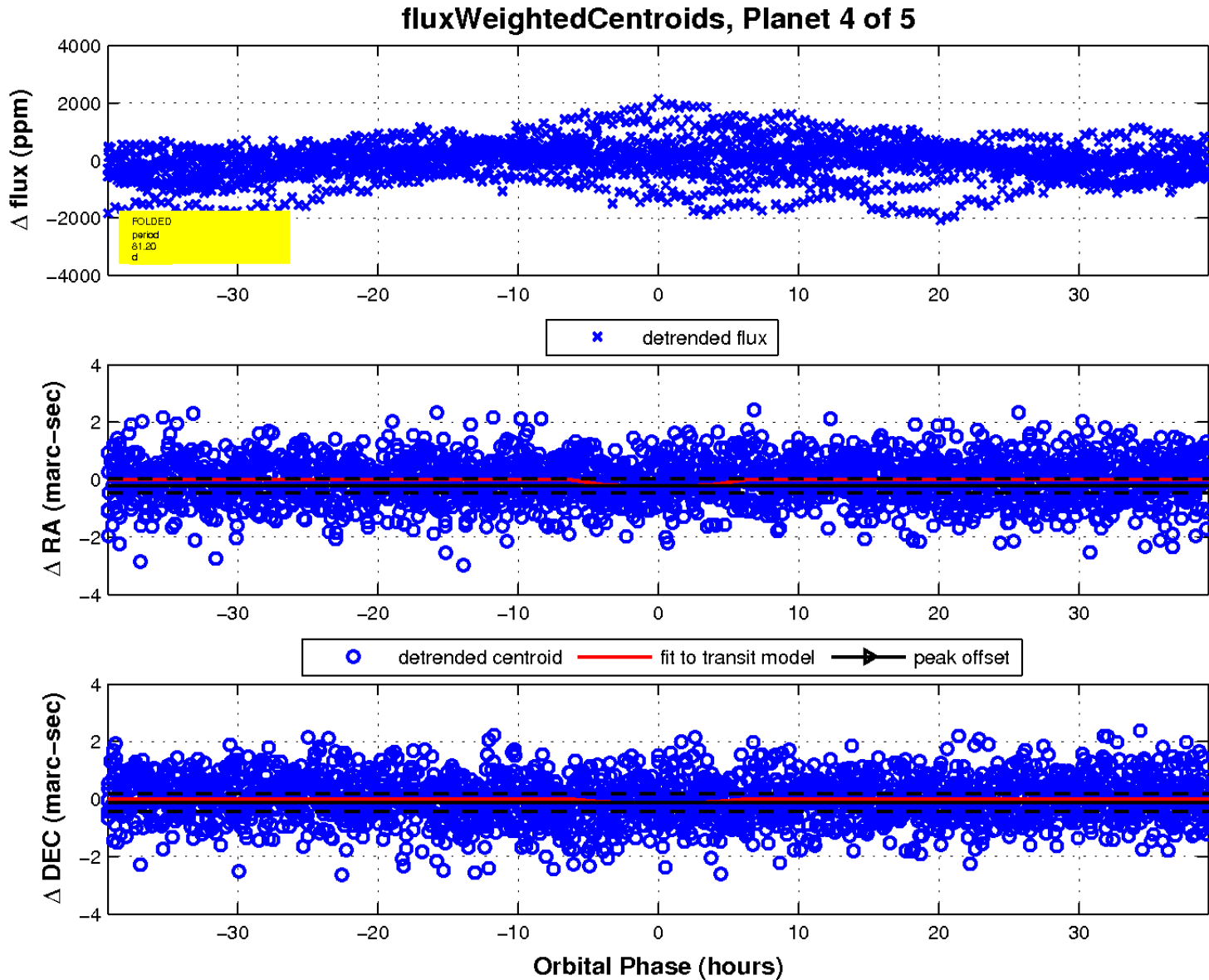
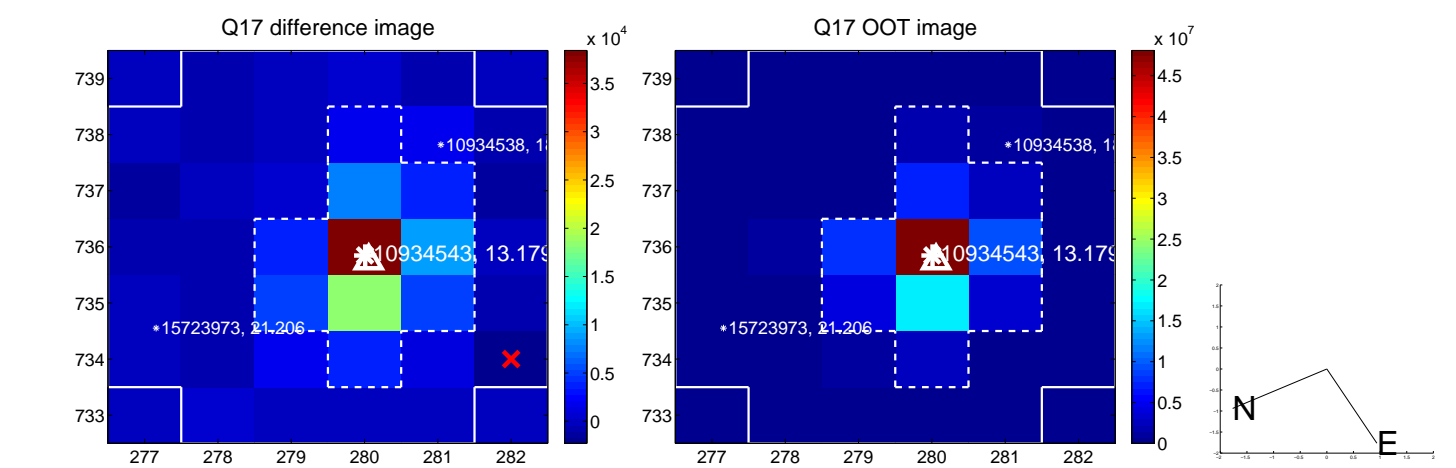
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

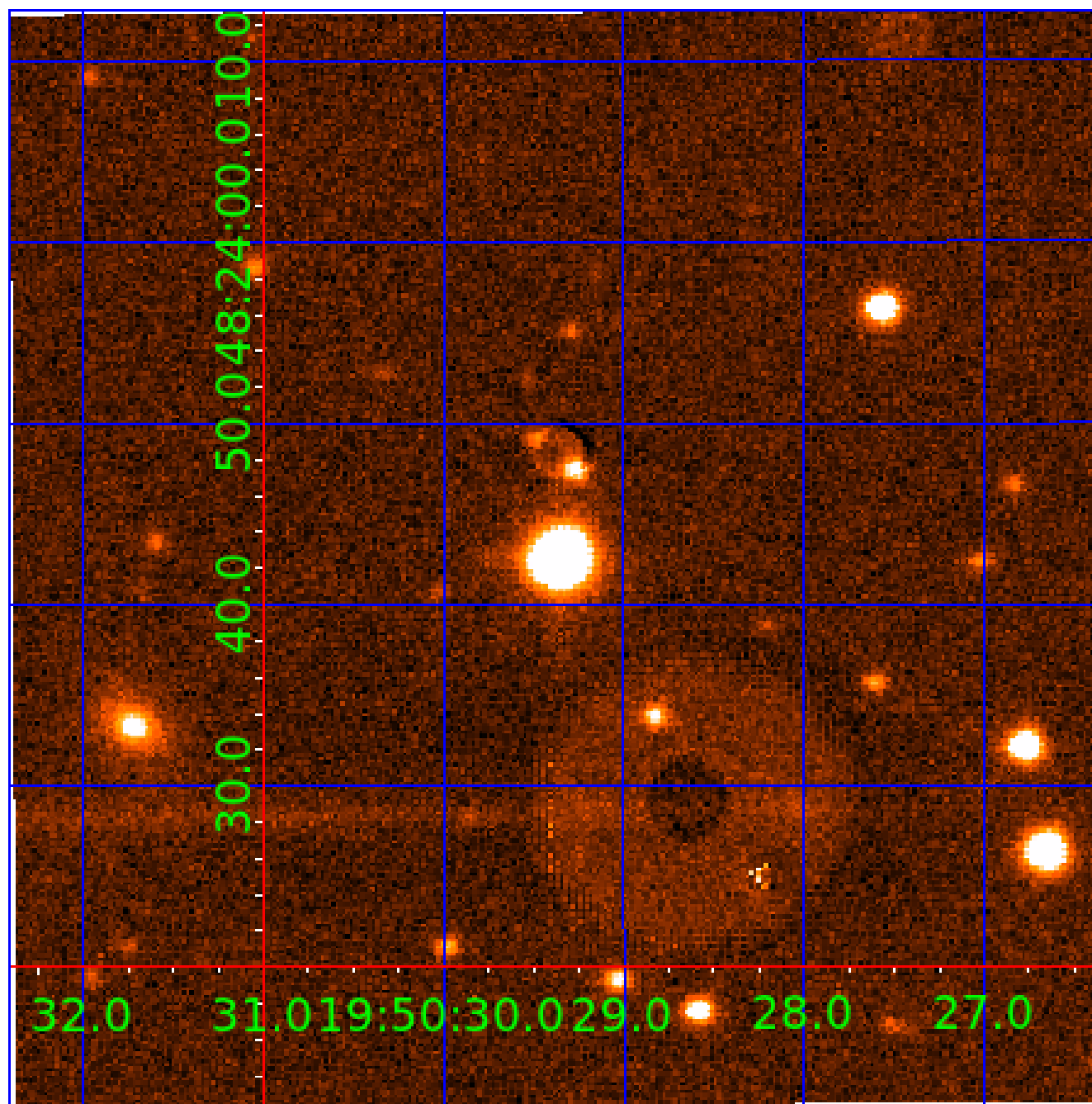


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010934543

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R_{\star} (R_{\odot})	T_{\star} (K)	R_p (R_{\oplus})	S_p (S_{\oplus})
010934543-01	OBS	No	2.606003	132.468720	107.6	14.443	7.8	8.2	1.36	6336	1.94	1689.25
010934543-02	OBS	No	224.721391	224.932787	1103.3	12.351	10.2	9.6	1.36	6336	8.51	4.43
010934543-03	OBS	No	71.316636	187.247034	644.9	48.812	9.8	5.9	1.36	6336	4.08	20.48
010934543-04	OBS	No	81.197899	197.028040	619.5	13.080	9.9	7.5	1.36	6336	4.20	17.23
010934543-05	OBS	No	96.895340	177.368163	246.8	16.064	8.8	3.4	1.36	6336	2.29	13.61

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010934543-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV
010934543-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
010934543-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV
010934543-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT
010934543-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT— MOD_POS_ALT—CENT_NOFITS

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

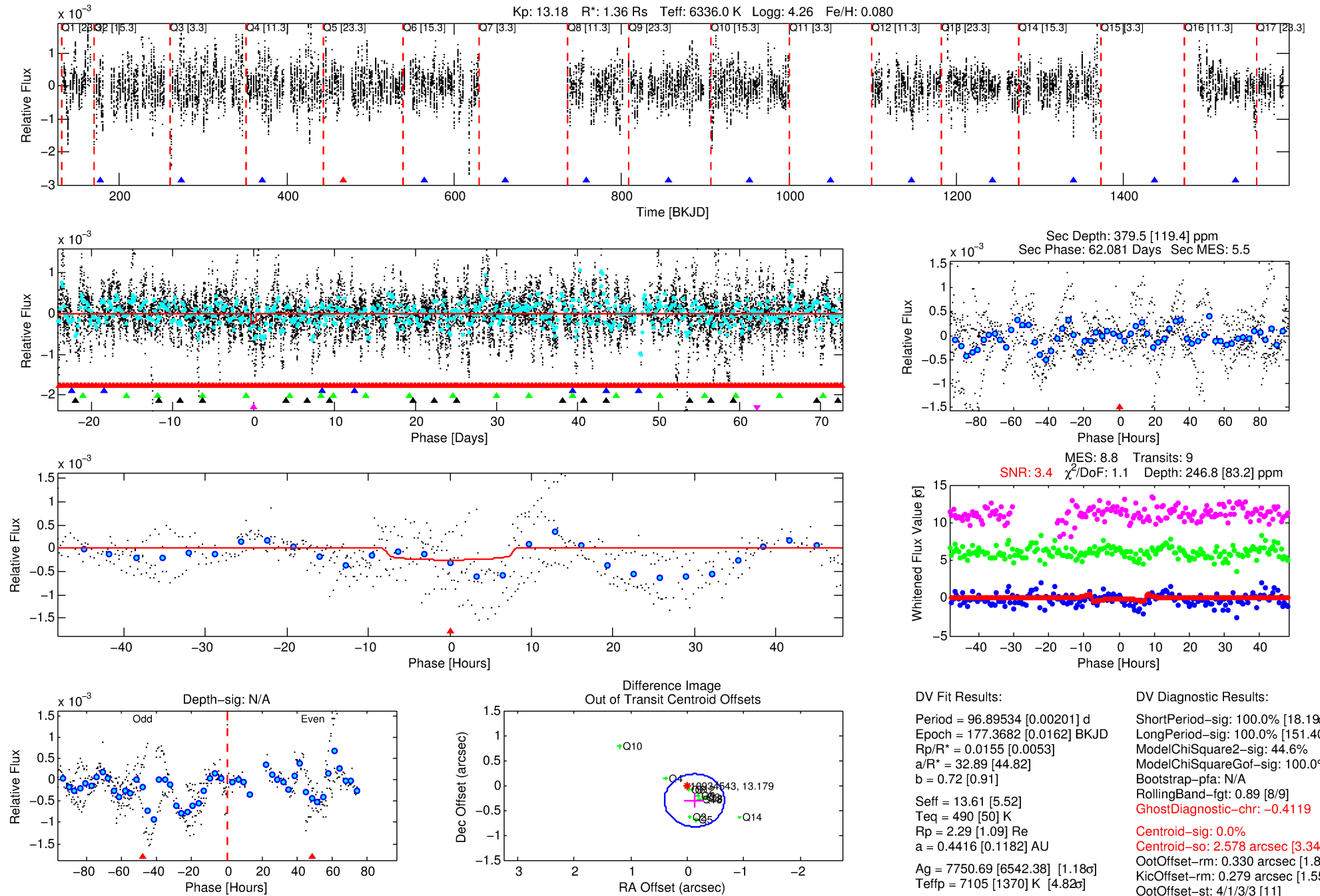
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010934543-05

No Significant Match Found

DV One-Page Summary

KIC: 10934543 Candidate: 5 of 5 Period: 96.895 d



DV Fit Results:

Period = 96.89534 [0.00201] d
Epoch = 177.3682 [0.0162] BKJD
Rp/R* = 0.0155 [0.0053]
a/R* = 32.89 [44.82]
b = 0.72 [0.91]
Seff = 13.61 [5.52]
Teff = 490 [50] K
Rp = 2.29 [1.09] Re
a = 0.4416 [0.1182] AU
Ag = 7750.69 [6542.38] [1.18 σ]
Teffp = 7105 [1370] K [4.82 σ]

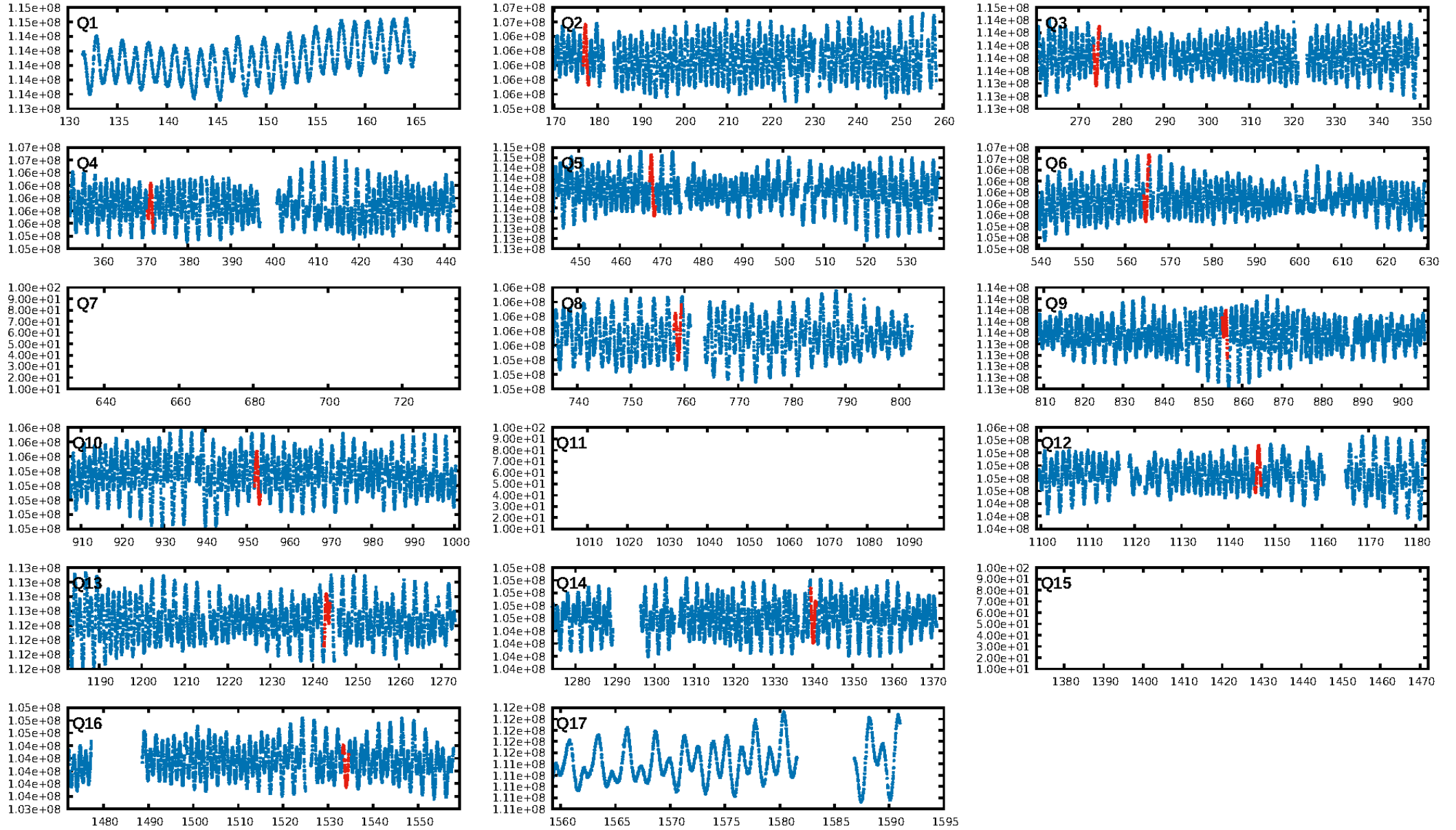
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [18.19 σ]
LongPeriod-sig: 100.0% [151.40 σ]
ModelChiSquare2-sig: 44.6%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 0.89 [8/9]
GhostDiagnostic-chr: -0.4119
Centroid-sig: 0.0%
Centroid-so: 2.578 arcsec [3.34 σ]
OotOffset-rm: 0.330 arcsec [1.87 σ]
KicOffset-rm: 0.279 arcsec [1.55 σ]
OotOffset-st: 4/1/3/3 [11]
KicOffset-st: 4/1/3/3 [11]
DiffImageQuality-fgm: 0.36 [4/11]
DiffImageOverlap-fno: 0.00 [0/11]

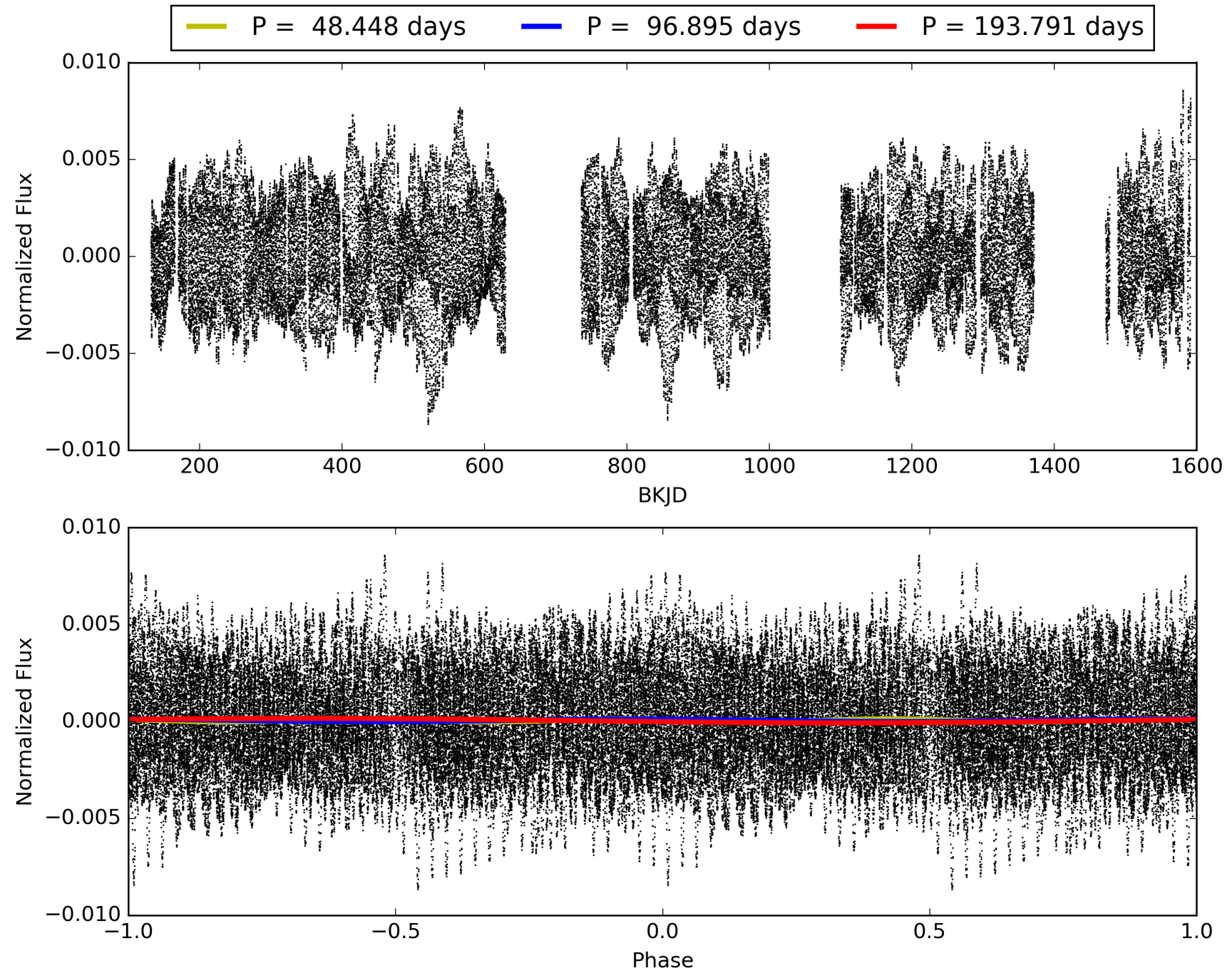
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 10:15:06 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 010934543-05, PDC Light Curves

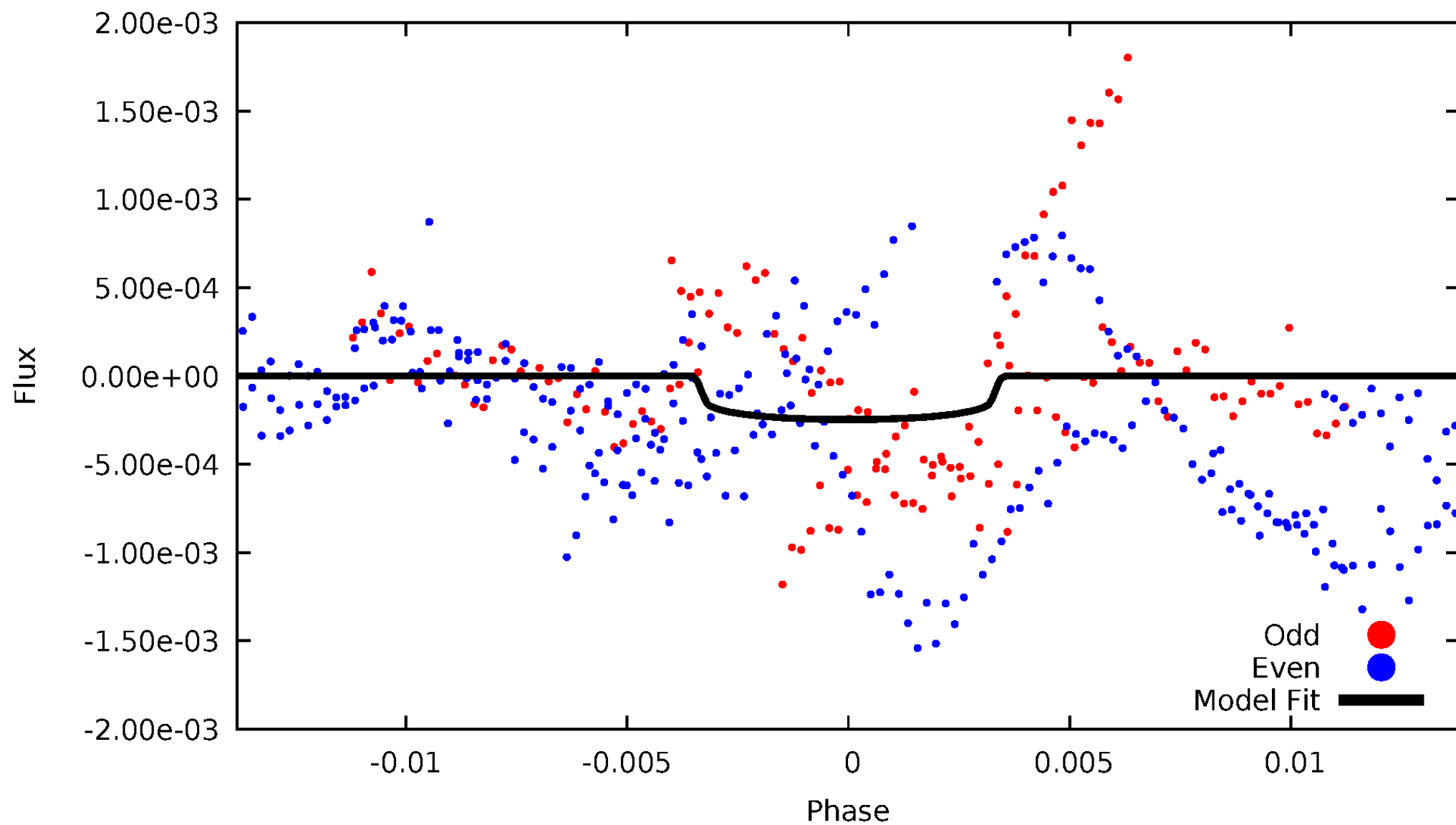


TCE 010934543-05



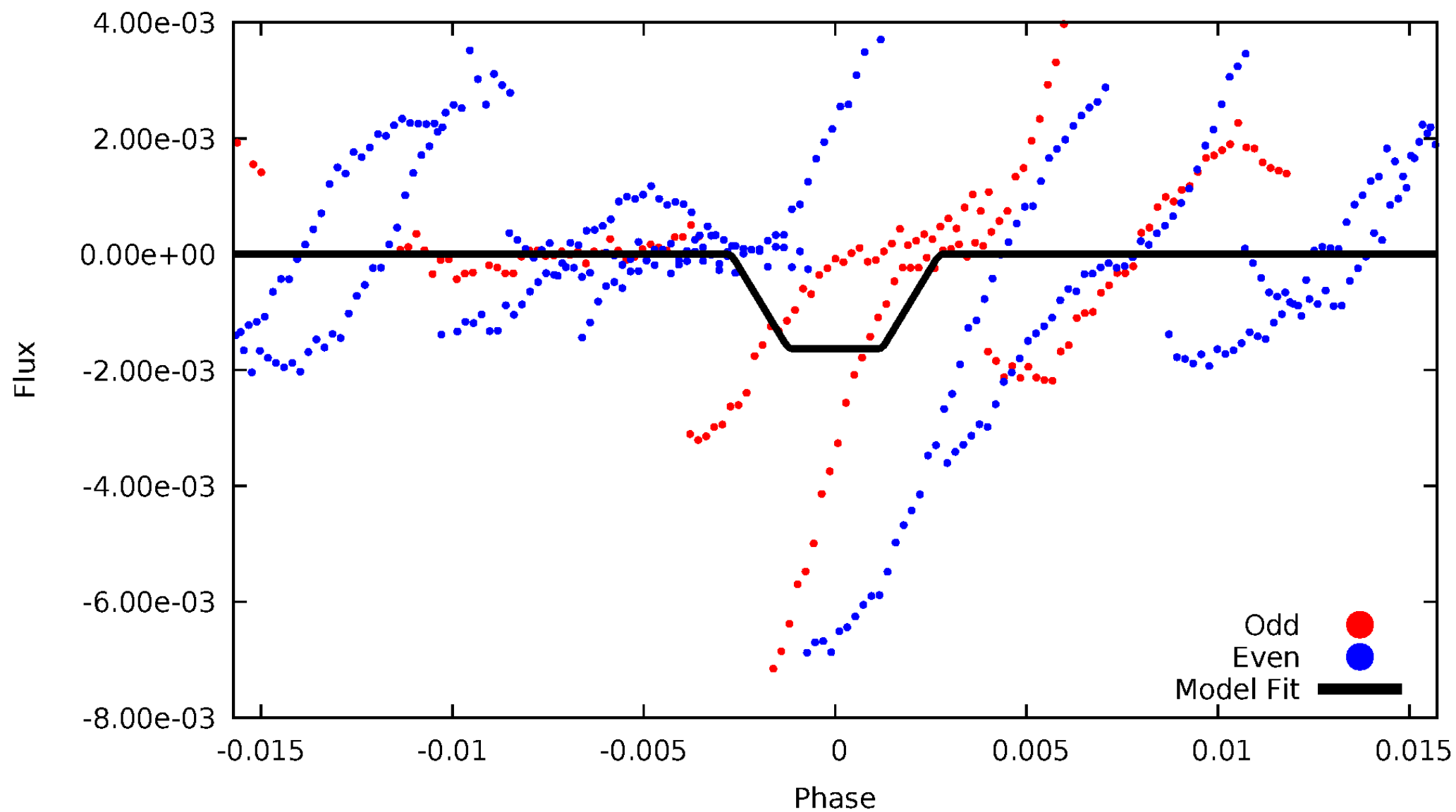
DV Odd/Even

TCE 010934543-05



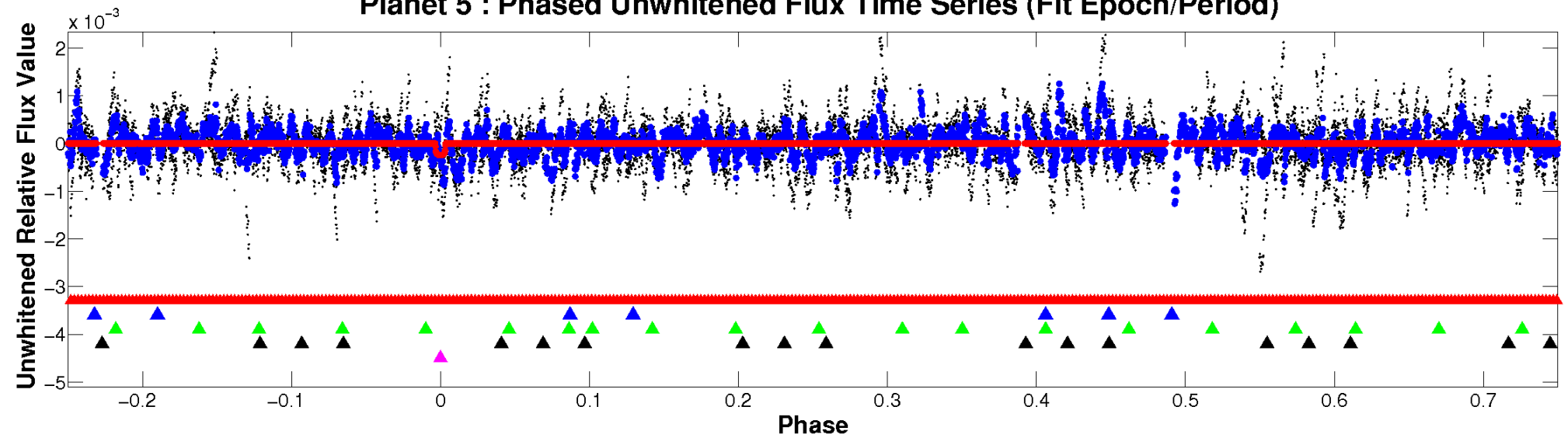
ALT Odd/Even

TCE 010934543-05

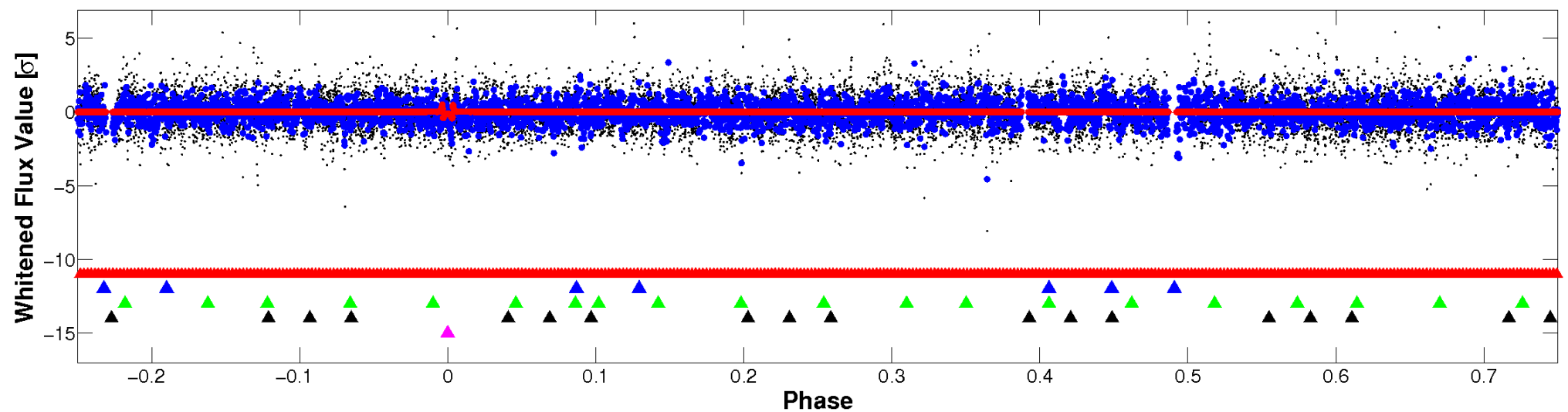


Non-Whitened Vs. Whitened Light Curve

Planet 5 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

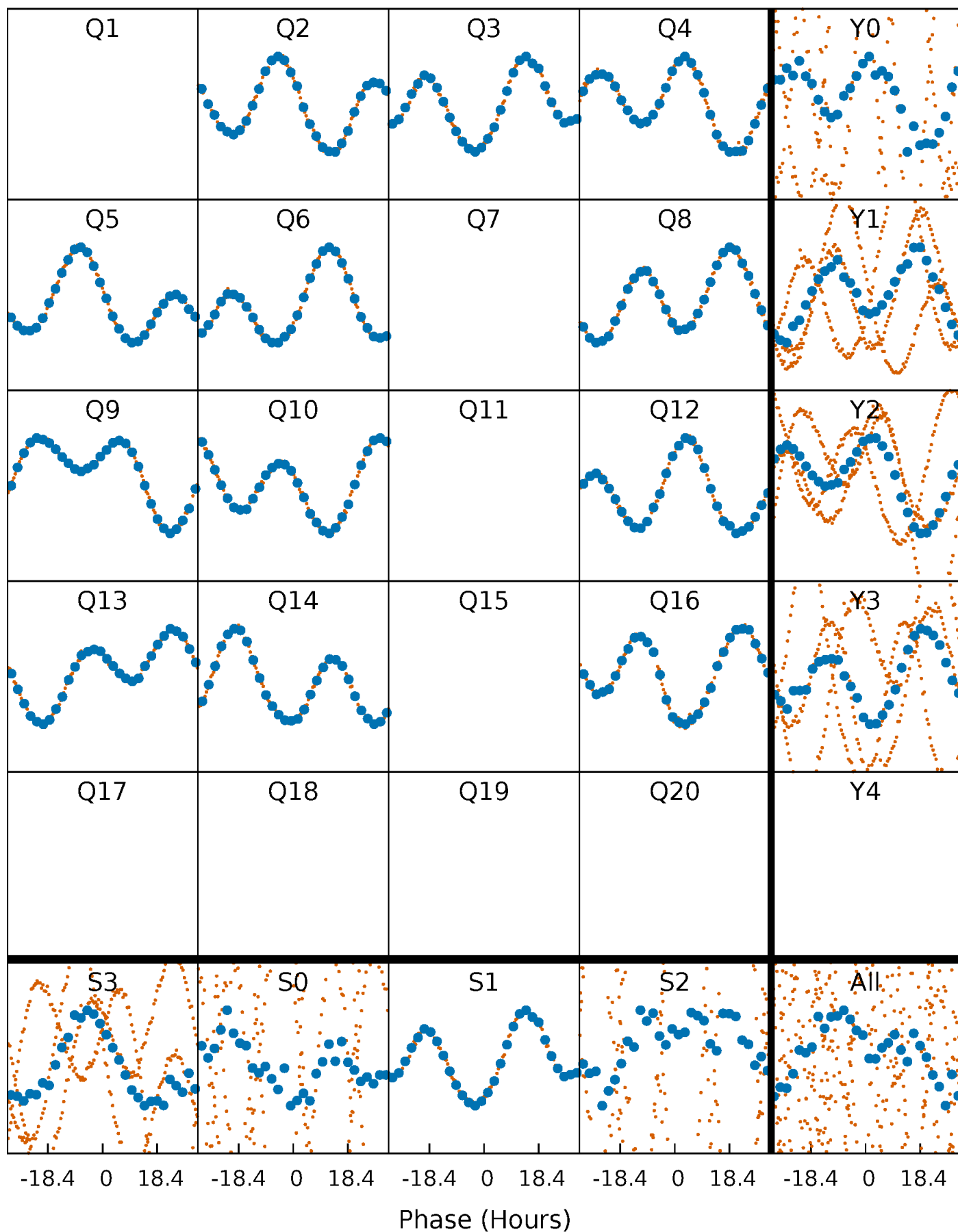


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



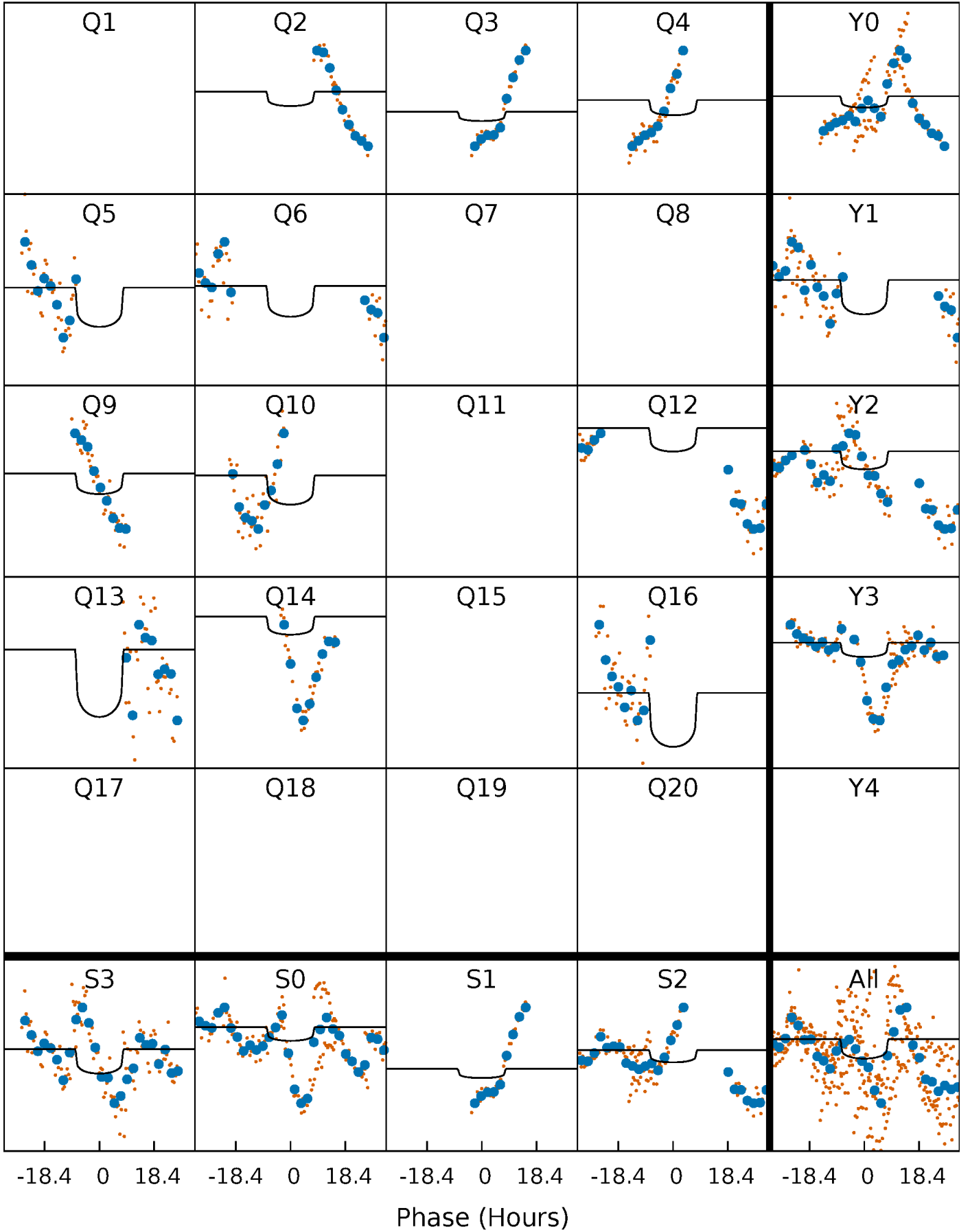
PDC Quarter-Phased Transit Curves

TCE 010934543-05 $P = 96.895340$ Days $T_0 = 177.368163$ (BKJD)



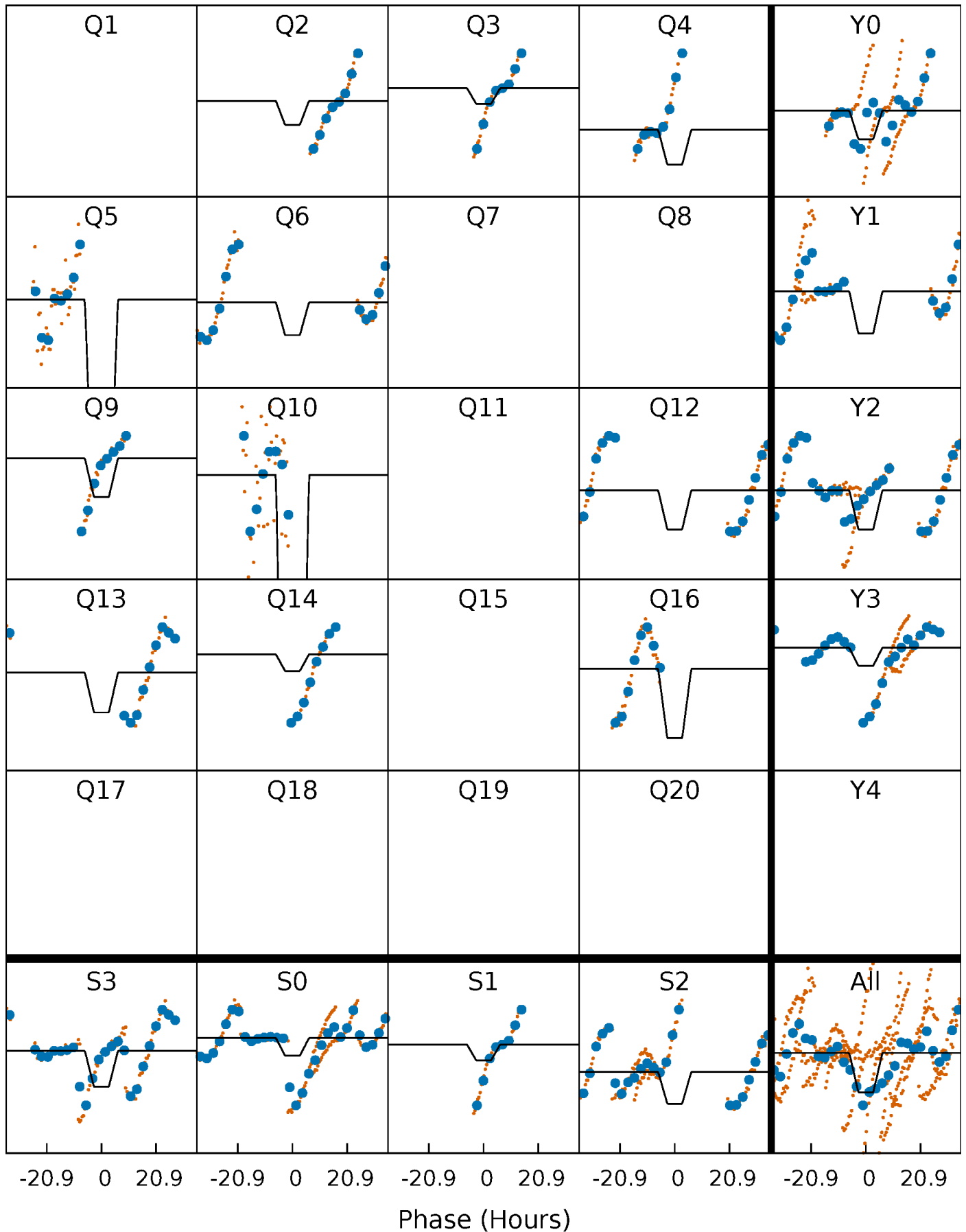
DV Quarter-Phased Transit Curves

TCE 010934543-05 $P = 96.895340$ Days $T_0 = 177.368163$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

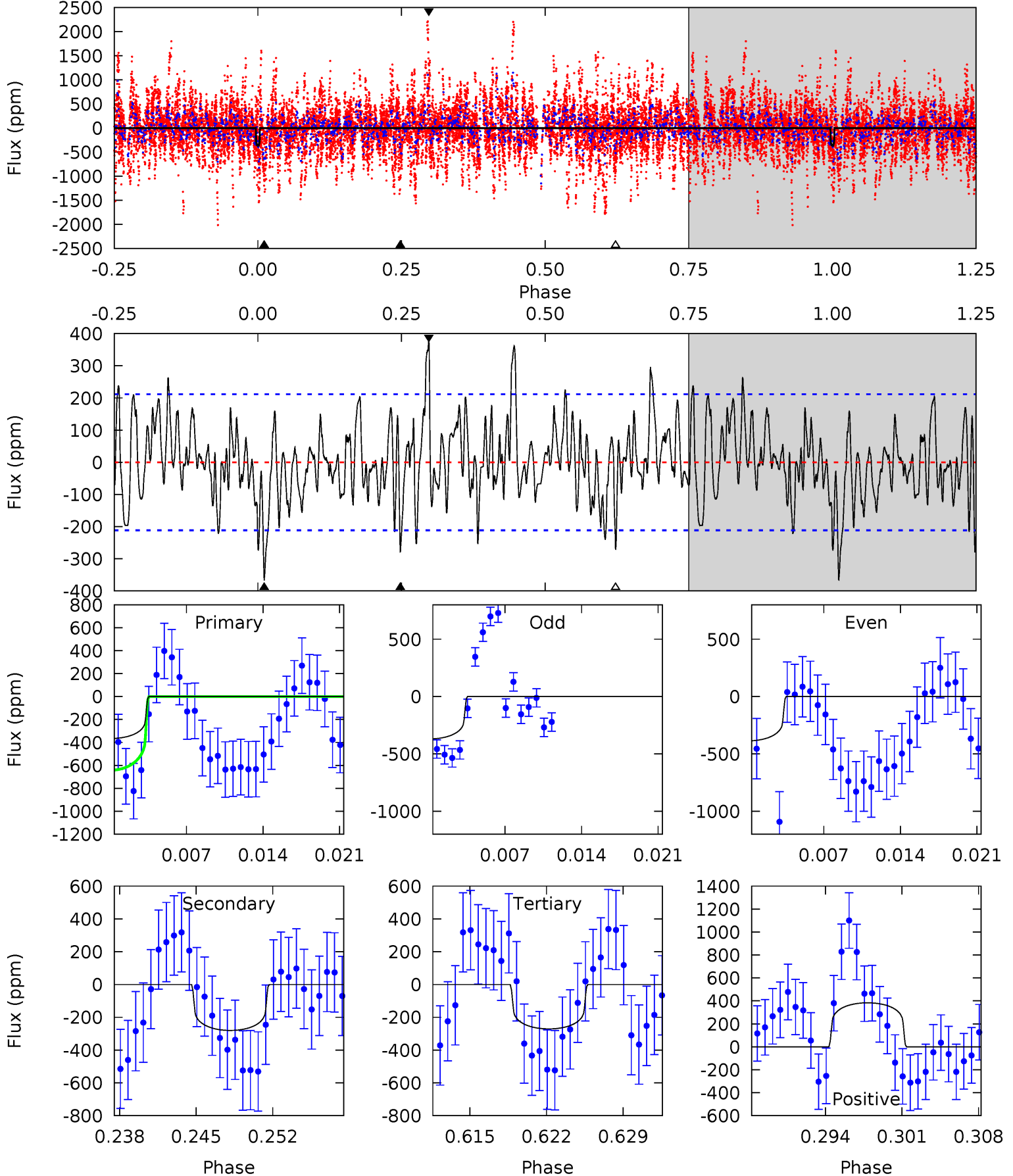
TCE 010934543-05 $P = 96.886588$ Days $T_0 = 177.409976$ (BKJD)



DV Model-Shift Uniqueness Test

010934543-05, P = 96.895340 Days, E = 80.472823 Days

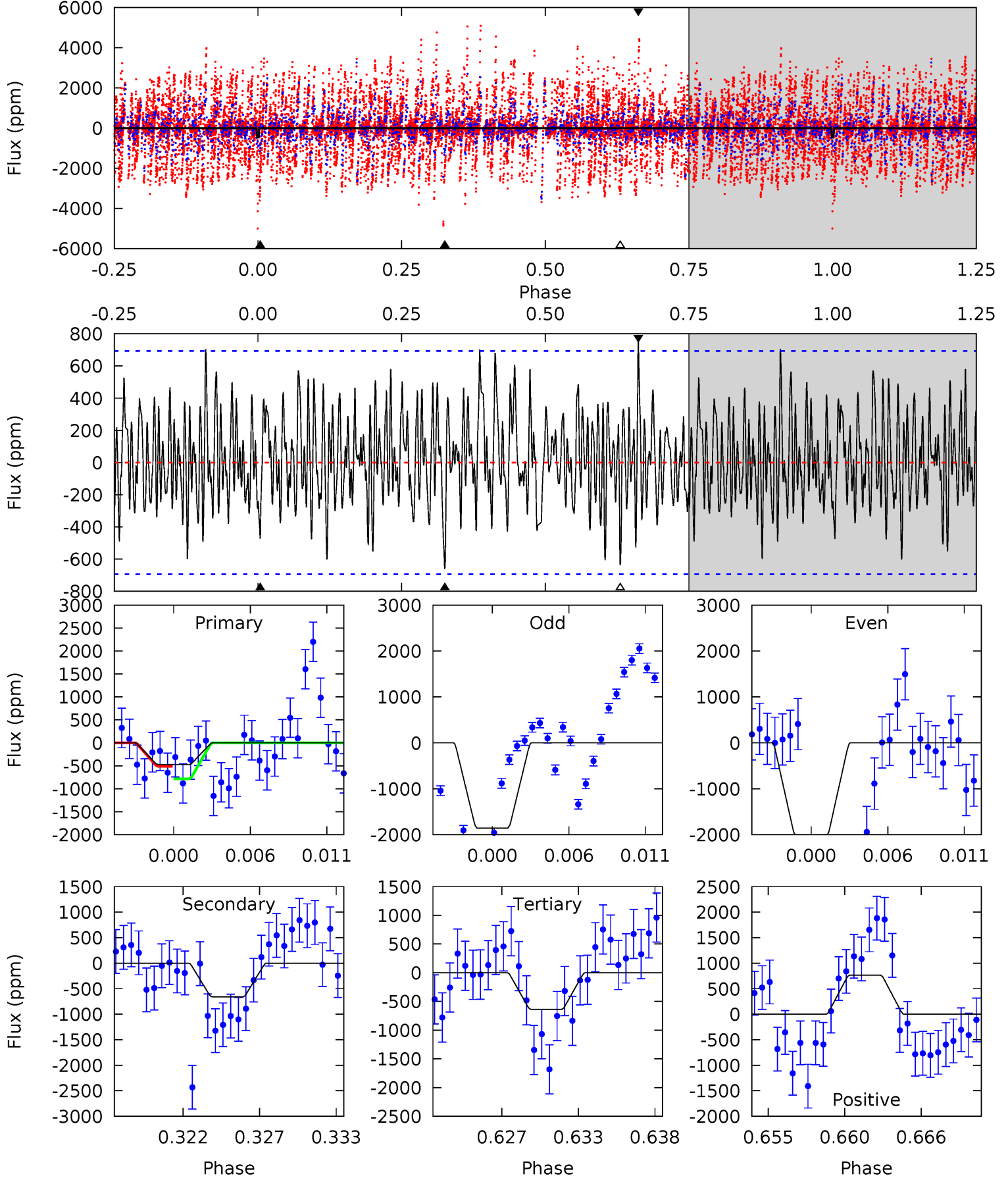
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.81	6.74	6.52	9.22	5.09	2.70	2.56	2.29	-0.41	0.22	-2.47	0.20	4.04	0.51	6.00



Alt Model-Shift Uniqueness Test

010934543-05, P = 96.886588 Days, E = 80.523388 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.51	4.89	4.71	5.66	5.14	2.77	1.70	-1.20	-2.15	0.18	-0.77	0.60	1.54	0.54	1.00



Stellar Parameters For KIC 010934543

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6336^{+177}_{-243}	$4.261^{+0.132}_{-0.198}$	$0.080^{+0.250}_{-0.300}$	$1.356^{+0.448}_{-0.276}$	$1.224^{+0.182}_{-0.182}$	$0.692^{+0.439}_{-0.358}$
	+3%/-4%	+3%/-5%	+312%/-375%	+33%/-20%	+15%/-15%	+63%/-52%
Source	PHO54	PHO54	PHO54	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 010934543-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-280 ± 42	$2.36^{+0.87}_{-0.83}$	687^{+55}_{-44}	6529^{+1725}_{-901}	5414^{+7440}_{-2623}
Alt.	-660 ± 135	$6.06^{+1.39}_{-1.06}$	687^{+57}_{-42}	5079^{+470}_{-403}	1860^{+1008}_{-675}

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming A=0.3)

A_{obs} = Observed Albedo (Assuming T=0)

If a secondary eclipse is present, the system is likely an EB if $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

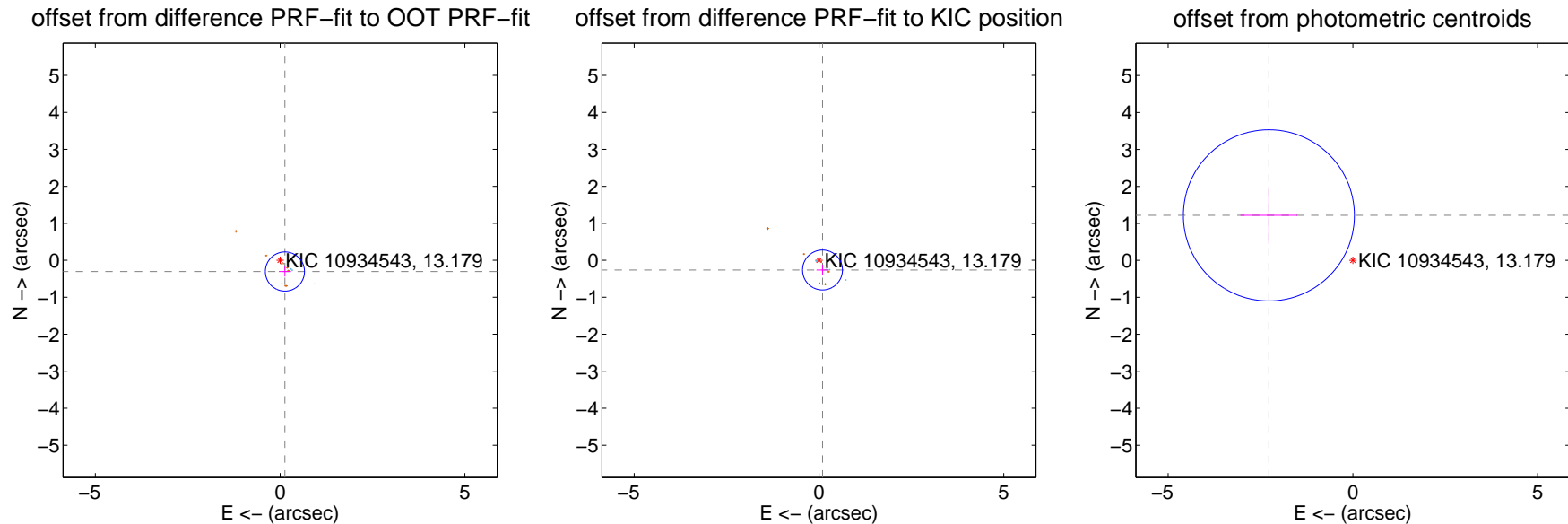
DV Centroid Data

Supplemental centroid analysis for 010934543-05. Kepler magnitude: 13.18. Transit SNR 3.39

There are 4 quarters with good PRF difference image offsets

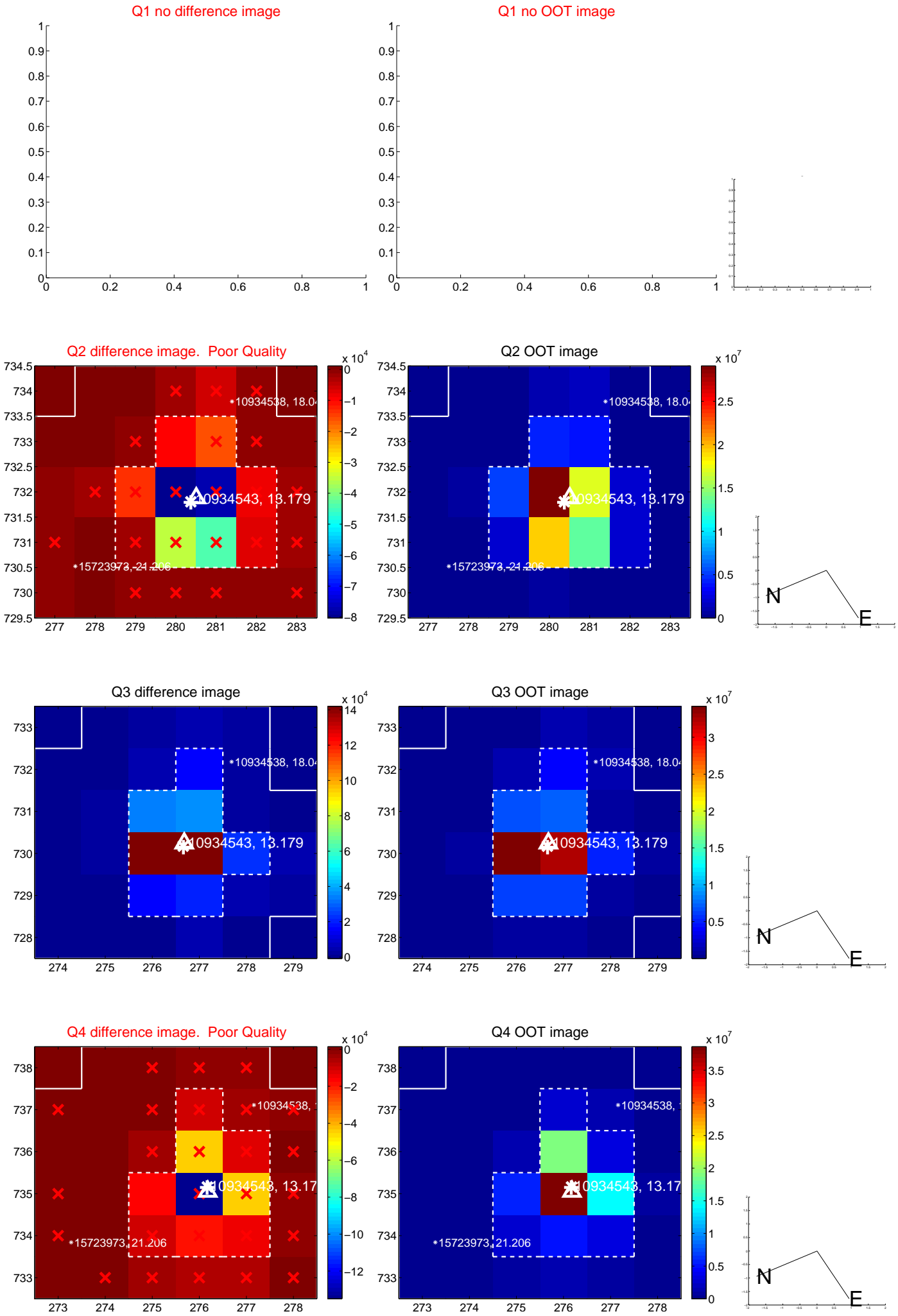
The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.330 ± 0.176	1.87	-0.130 ± 0.164	-0.304 ± 0.137
PRF-fit source offset from KIC position	0.279 ± 0.180	1.55	-0.095 ± 0.162	-0.262 ± 0.145
photometric centroid source offset	2.58 ± 0.77	3.34	2.27 ± 0.77	1.22 ± 0.77

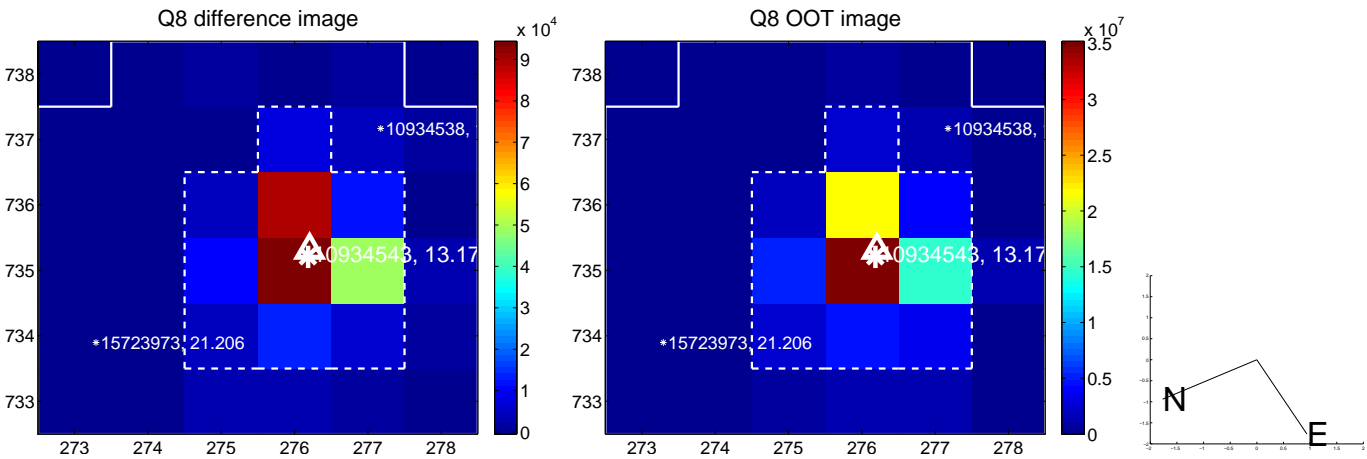
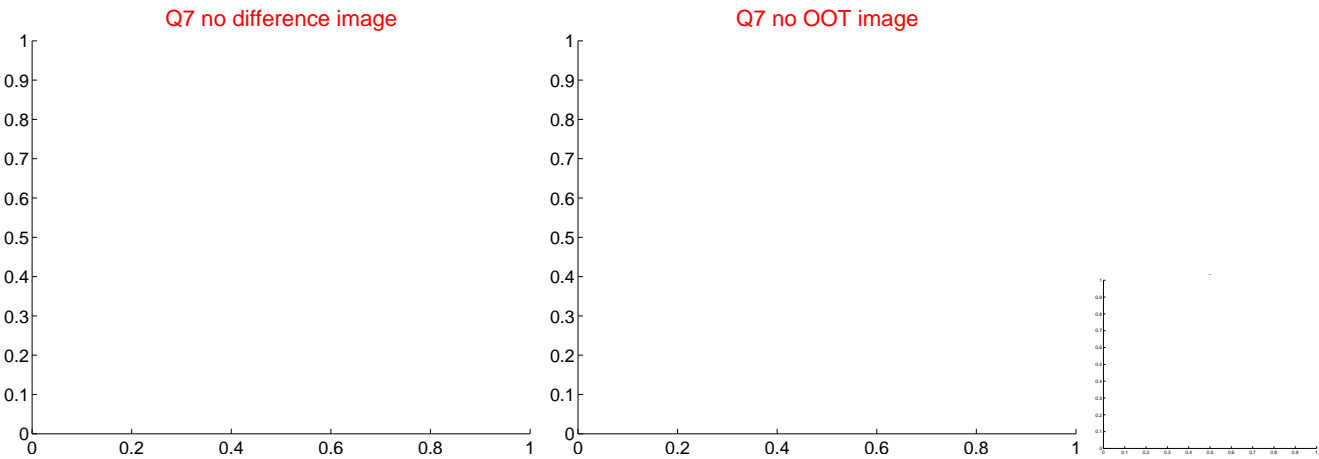
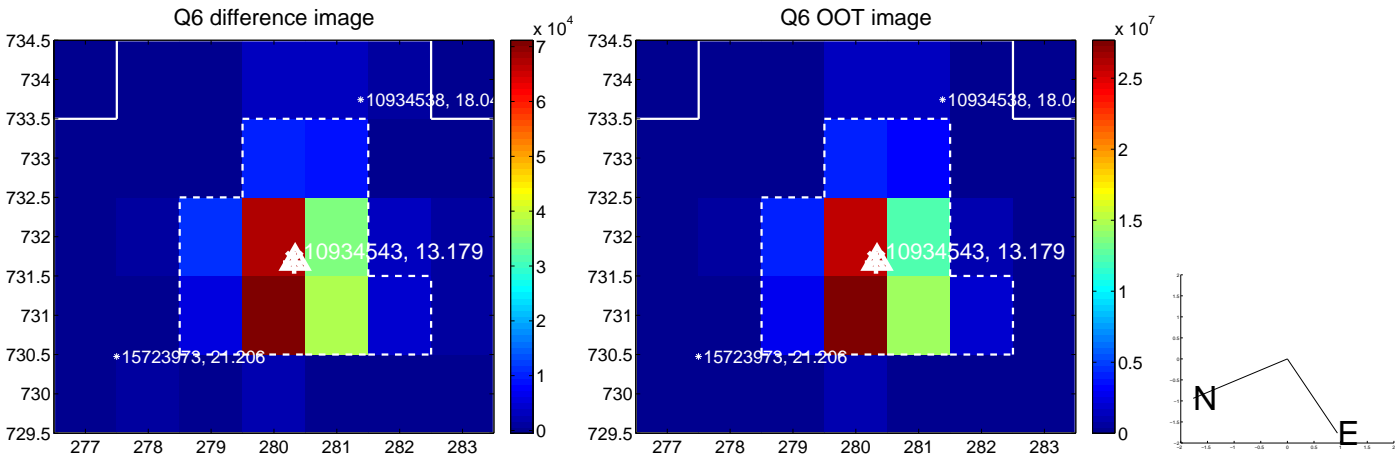
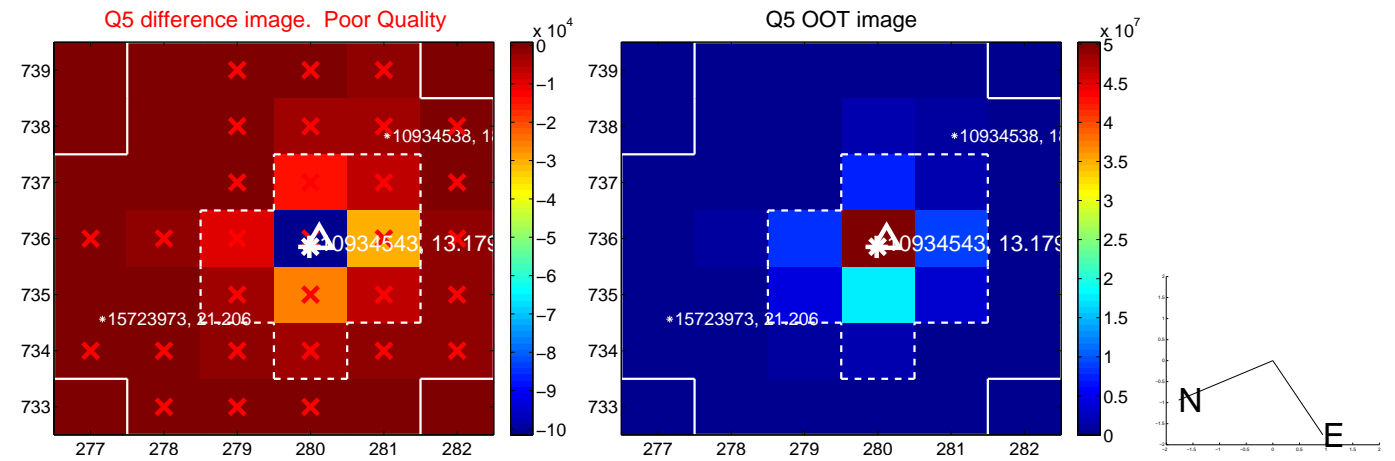


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

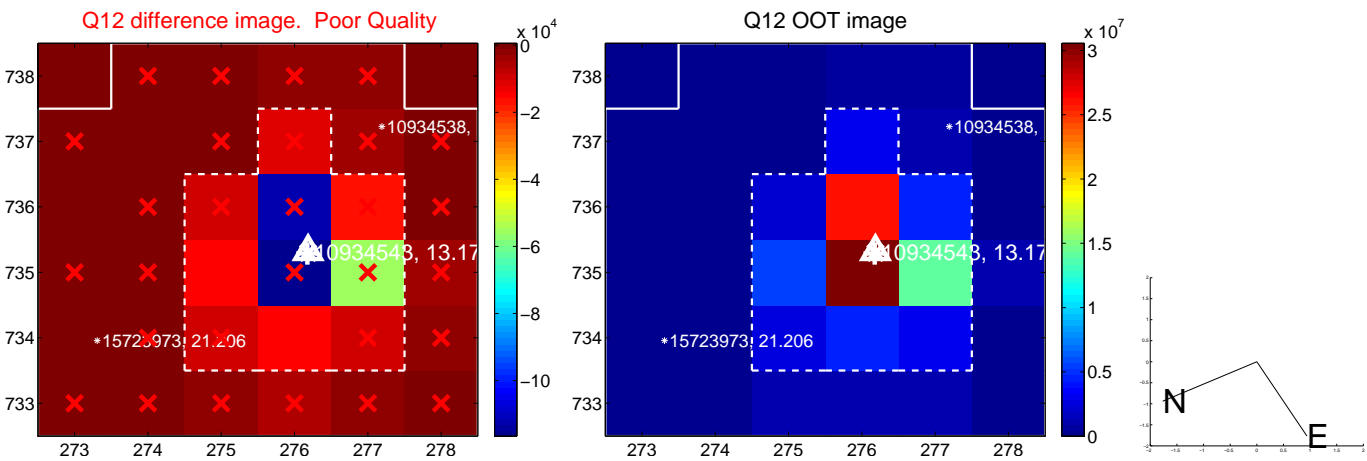
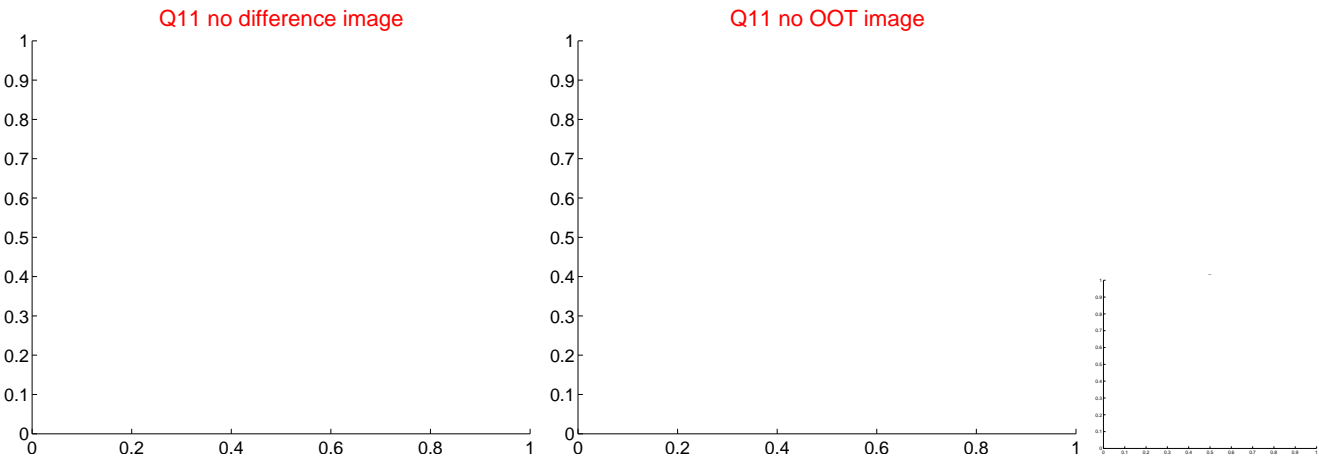
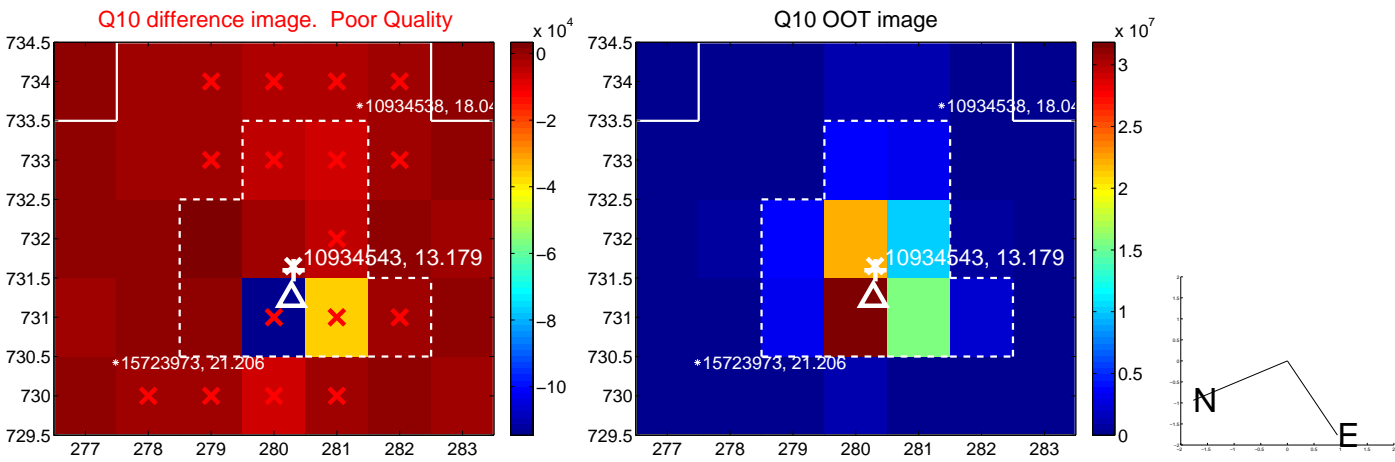
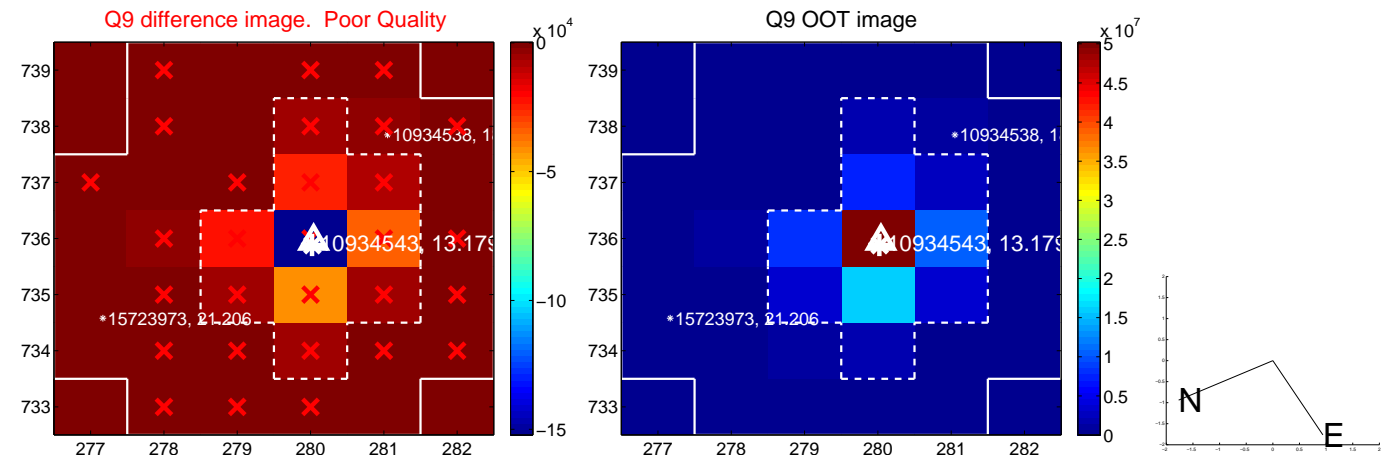
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



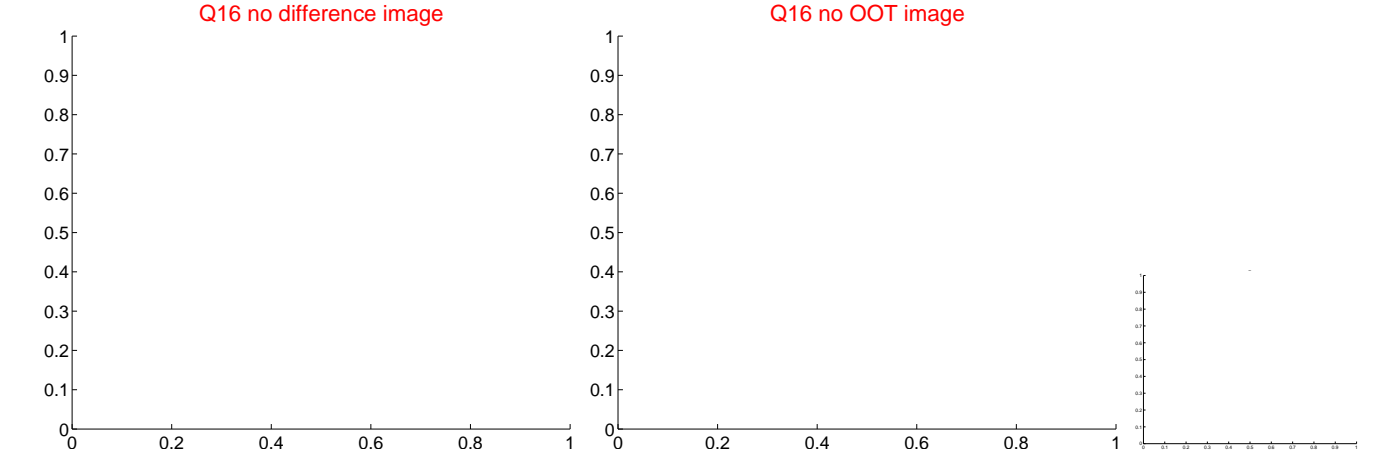
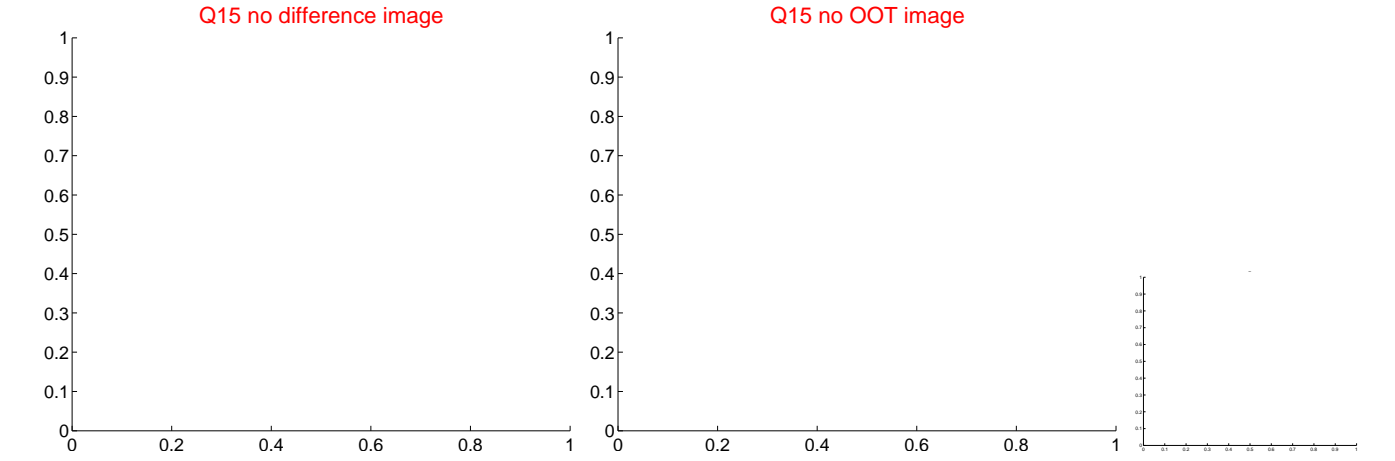
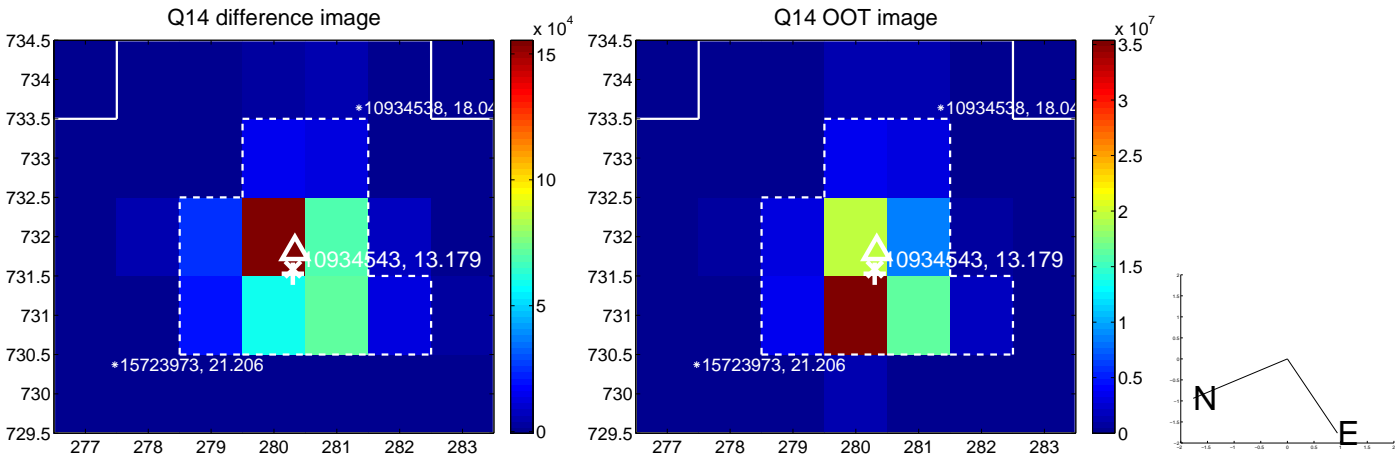
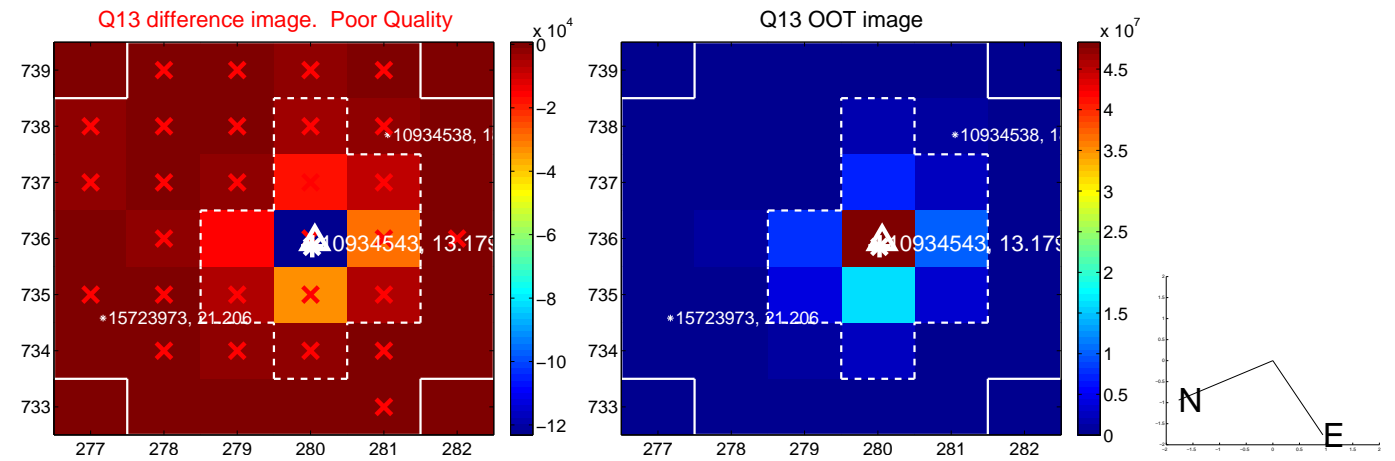
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



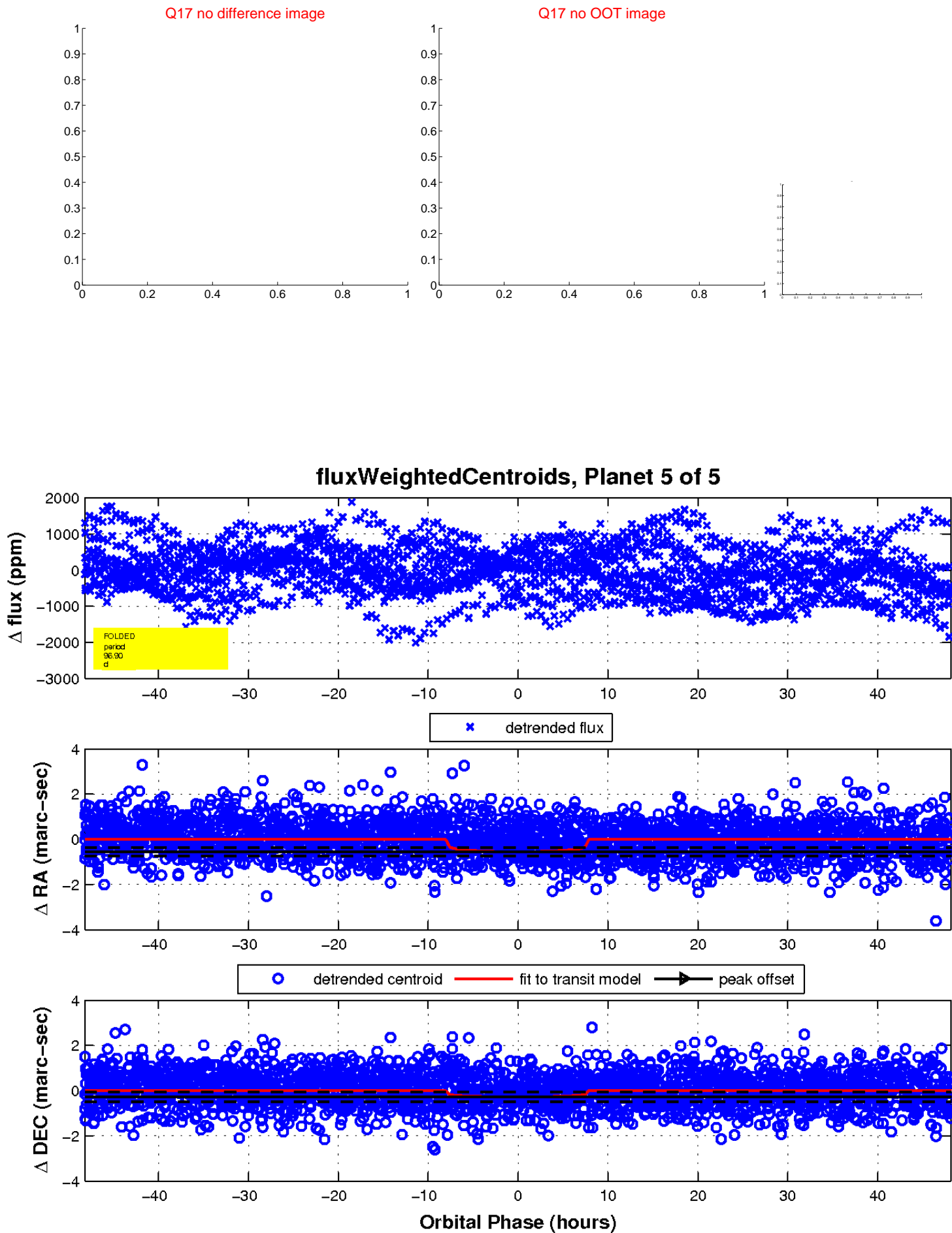
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

