

KIC 008332007

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})
008332007-01	OBS	No	0.934788	131.738201	76.8	4.058	8.0	8.7	0.98	6128	0.87	3384.11
008332007-02	OBS	No	265.394087	179.865712	391.6	0.823	9.3	1.6	0.98	6128	2.03	1.81
008332007-03	OBS	No	265.385665	180.031146	1991.0	5.170	11.6	9.1	0.98	6128	7.21	1.81
008332007-04	OBS	No	170.676286	175.075518	1500.9	7.561	9.0	7.4	0.98	6128	3.95	3.27
008332007-05	OBS	No	350.317803	173.199242	1598.5	4.367	8.0	7.2	0.98	6128	4.38	1.25
008332007-06	OBS	No	0.934854	132.171420	78.0	6.698	7.5	7.2	0.98	6128	0.87	3383.79

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008332007-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV
008332007-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_TRACKER—LPP_DV—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
008332007-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—SAME_NTL_PERIOD—HALO_GHOST
008332007-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
008332007-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_POS_DV
008332007-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—SAME_NTL_PERIOD—HALO_GHOST

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

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

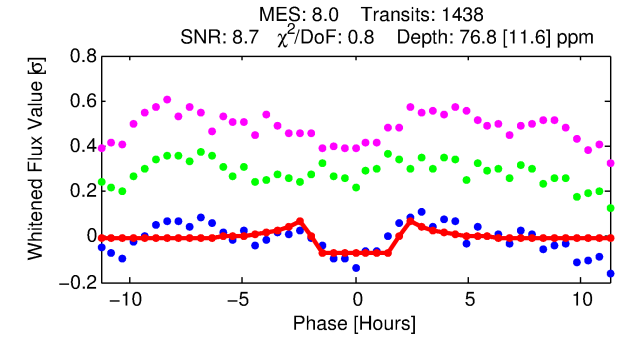
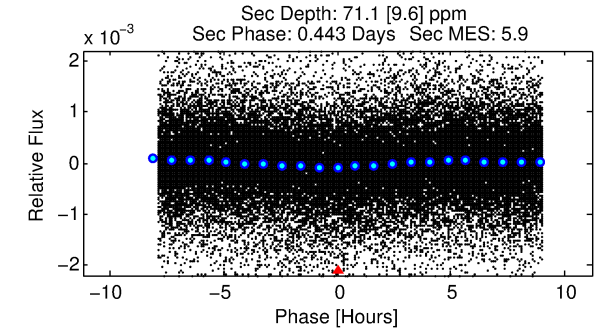
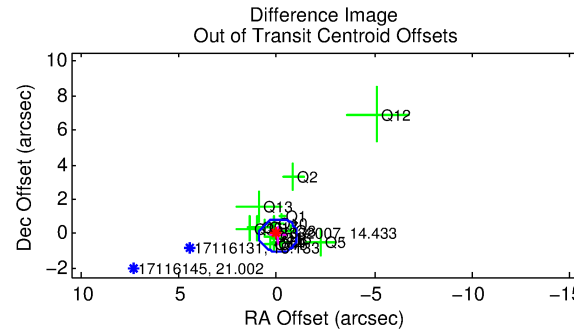
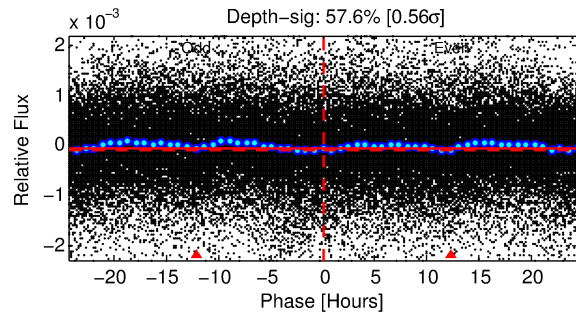
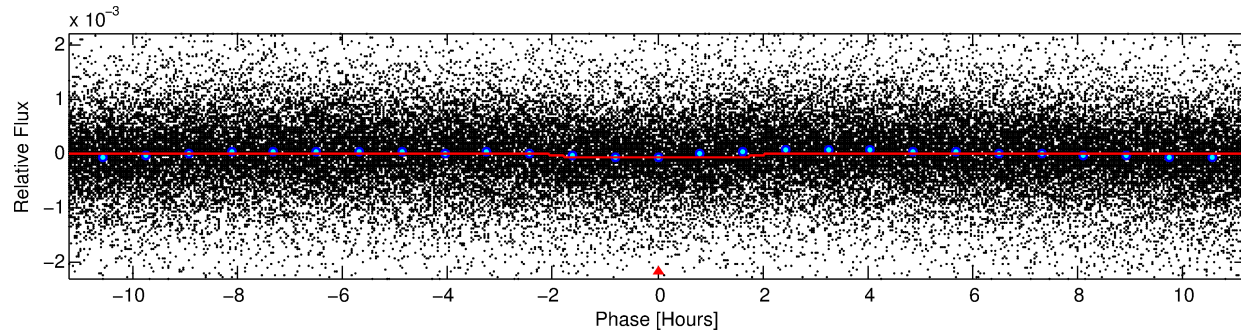
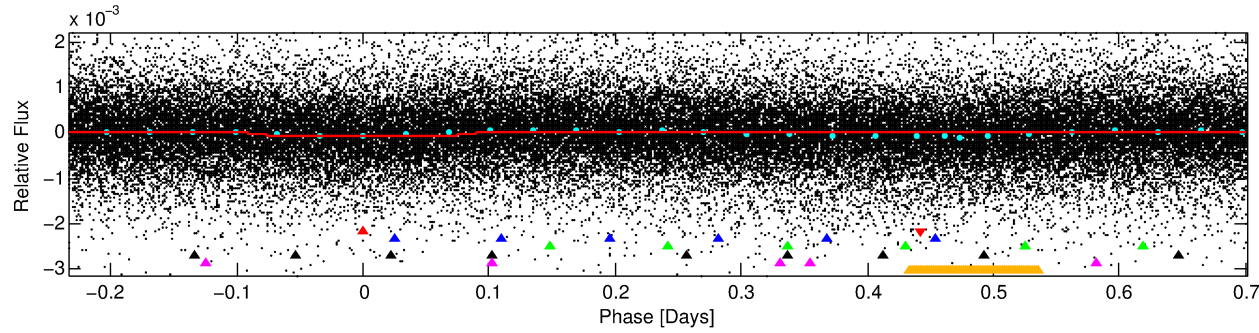
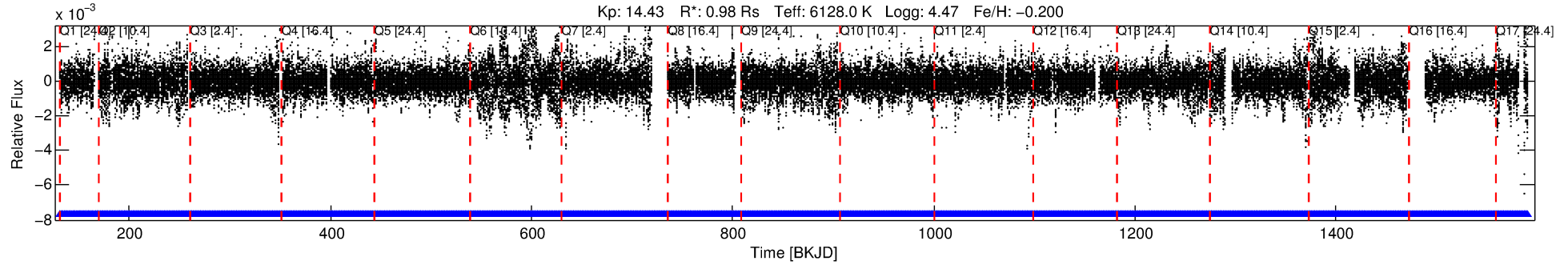
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008332007-01

No Significant Match Found

DV One-Page Summary

KIC: 8332007 Candidate: 1 of 6 Period: 0.935 d



DV Fit Results:

Period = 0.93479 [0.00001] d
Epoch = 131.7382 [0.0026] BKJD
Rp/R* = 0.0082 [0.0036]
a/R* = 1.75 [2.60]
b = 0.42 [4.37]
Seff = 3384.11 [1397.62]
Teff = 1945 [201] K
Rp = 0.87 [0.48] Re
a = 0.0189 [0.0051] AU
Ag = 18.29 [17.95] [0.96 σ]
Teffp = 6218 [1419] K [2.98 σ]

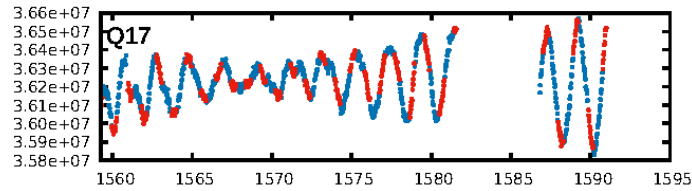
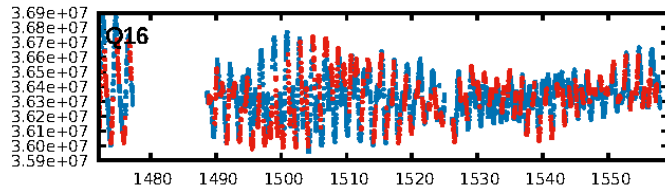
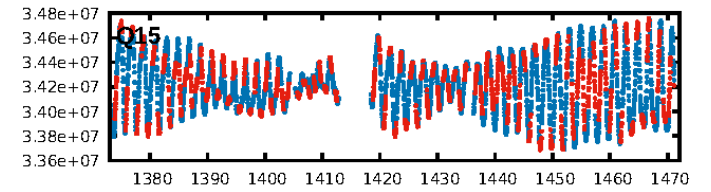
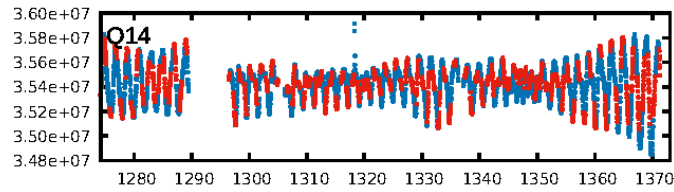
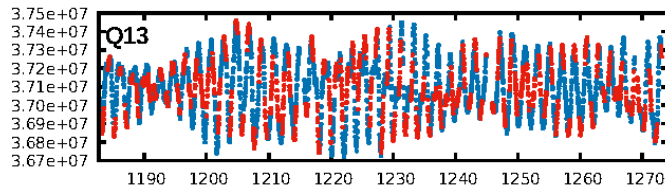
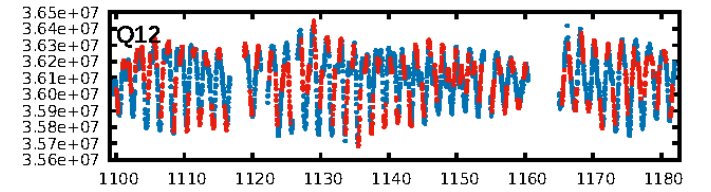
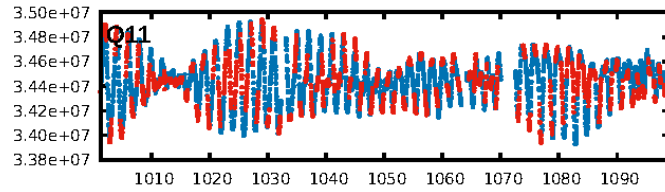
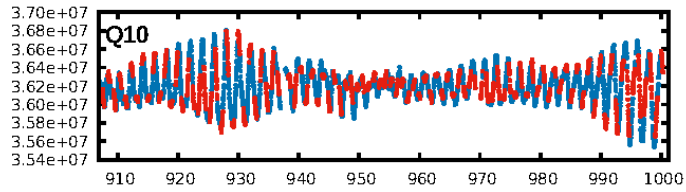
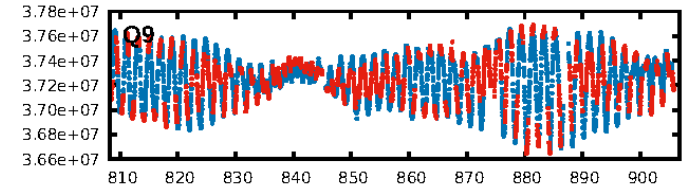
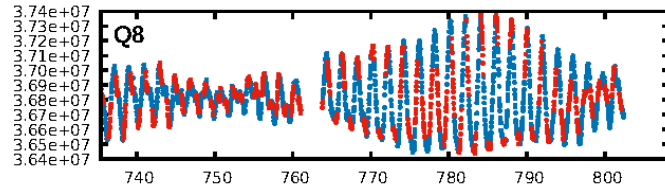
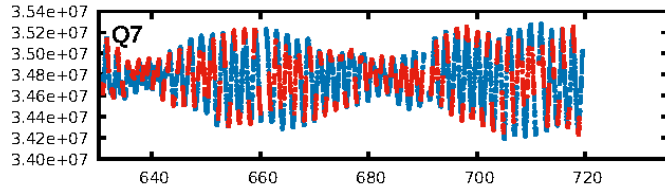
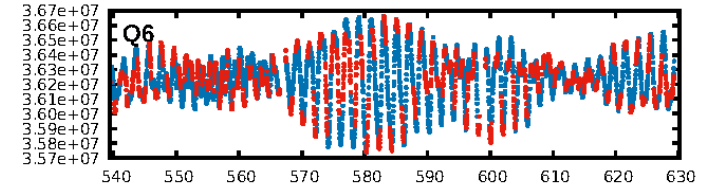
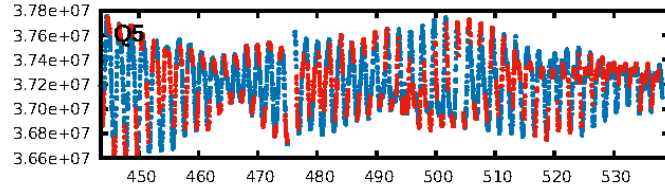
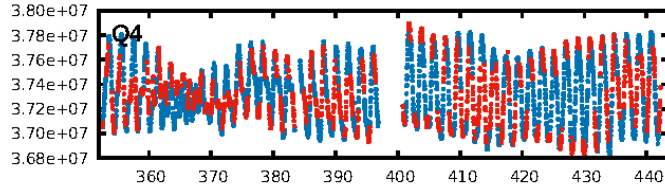
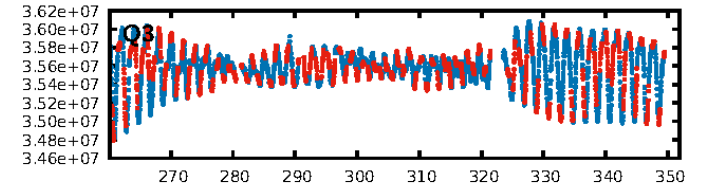
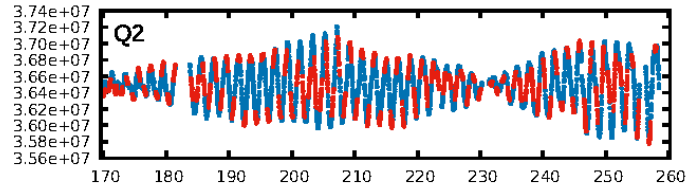
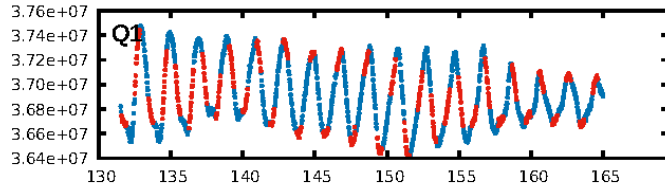
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1372/1372]
GhostDiagnostic-chr: -10.88
Centroid-sig: 0.3%
Centroid-so: 1.689 arcsec [2.26 σ]
OotOffset-rm: 0.136 arcsec [0.42 σ]
KicOffset-rm: 0.148 arcsec [0.24 σ]
OotOffset-st: 4/3/4/4 [15]
KicOffset-st: 4/3/4/4 [15]
DiffImageQuality-fgm: 0.73 [11/15]
DiffImageOverlap-fno: 0.00 [0/17]

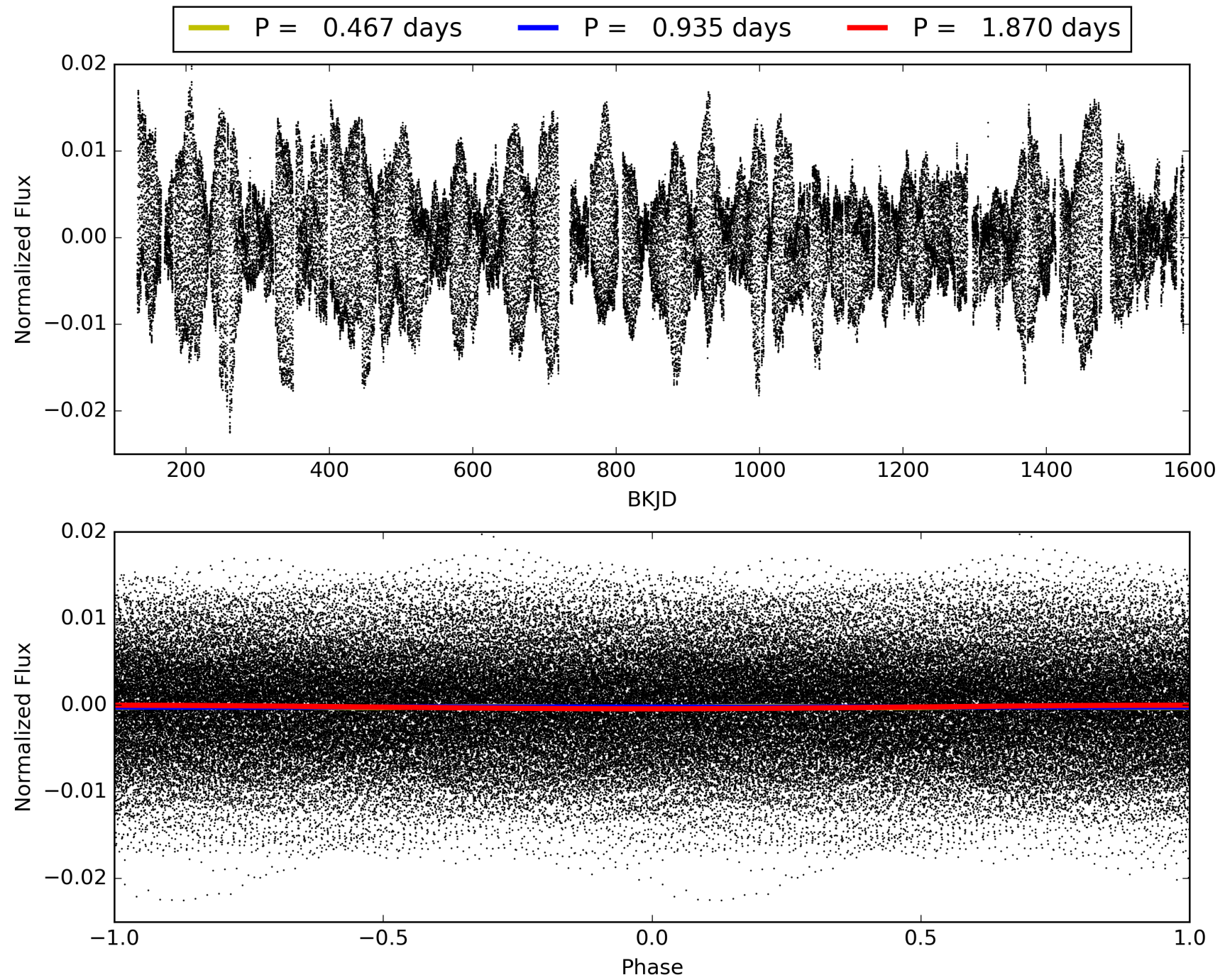
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 008332007-01, PDC Light Curves

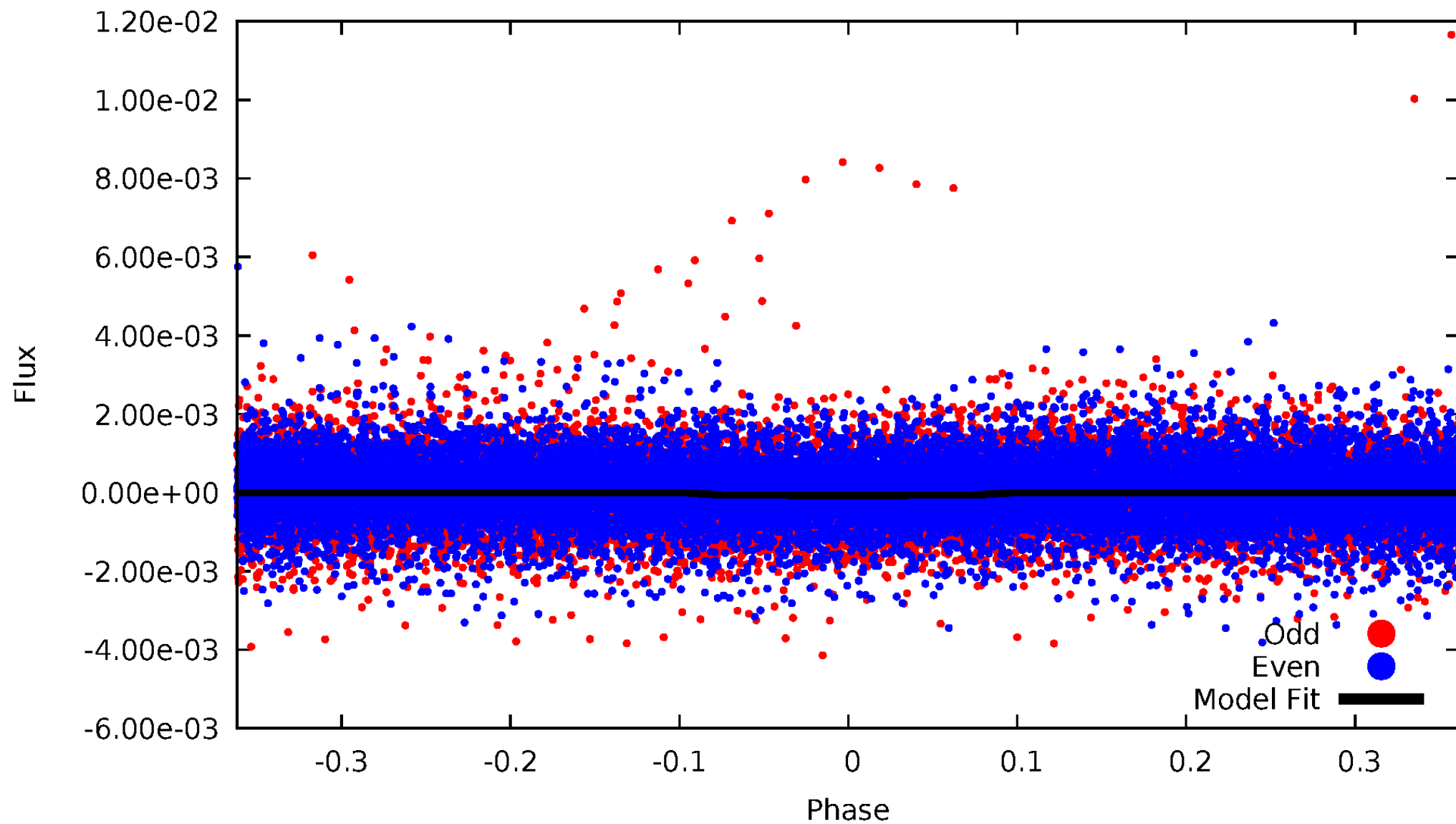


TCE 008332007-01



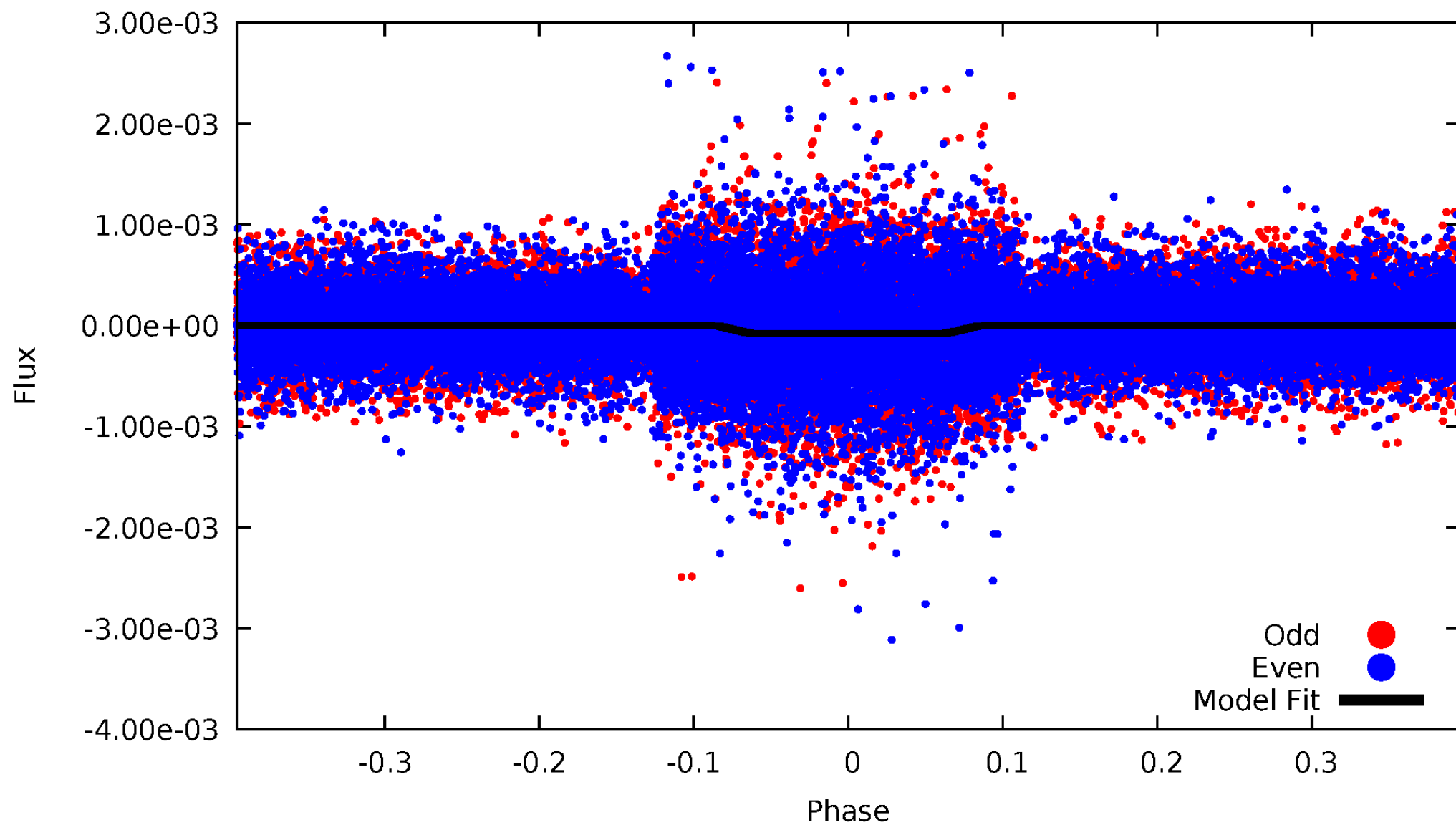
DV Odd/Even

TCE 008332007-01

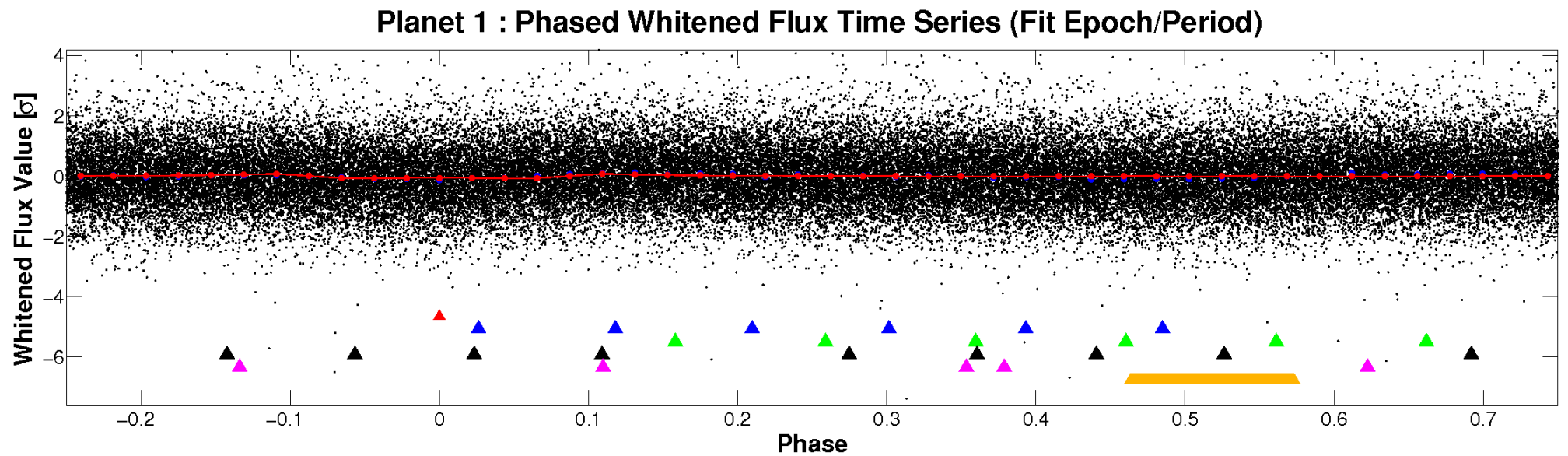
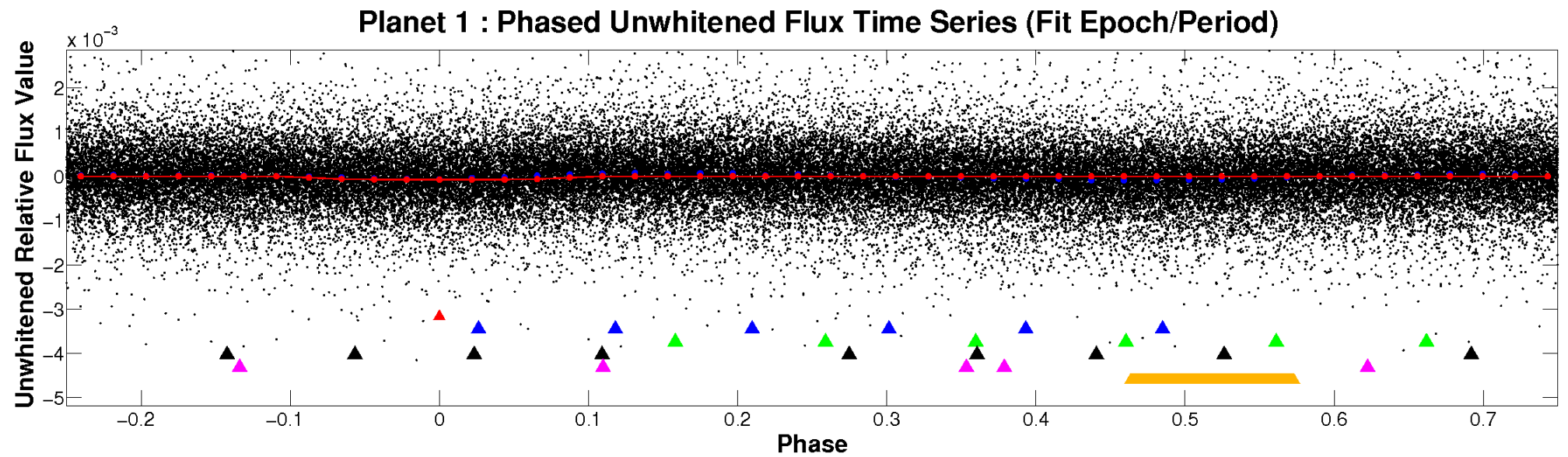


ALT Odd/Even

TCE 008332007-01

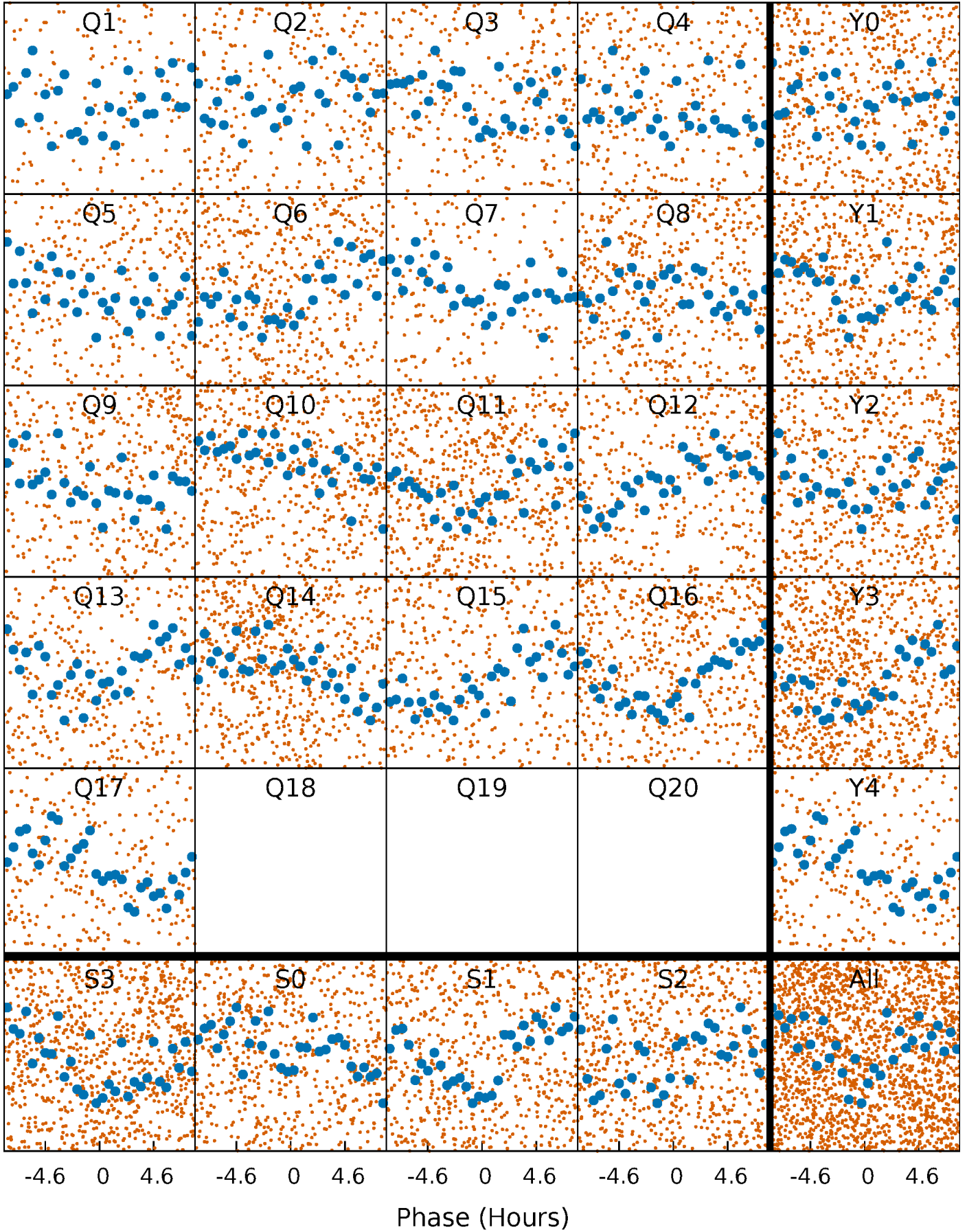


Non-Whitened Vs. Whitened Light Curve



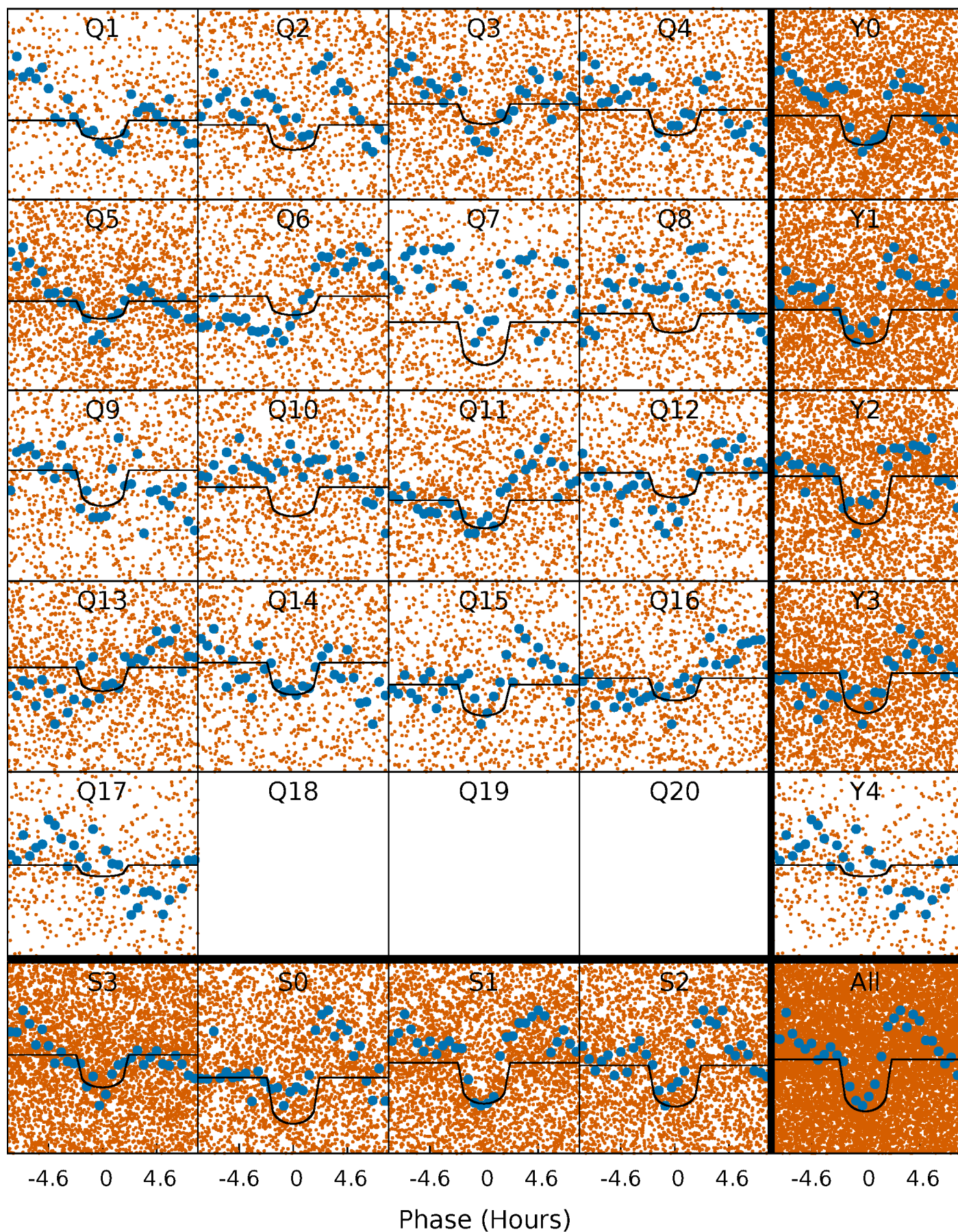
PDC Quarter-Phased Transit Curves

TCE 008332007-01 P= 0.934788 Days $T_0=131.738201$ (BKJD)



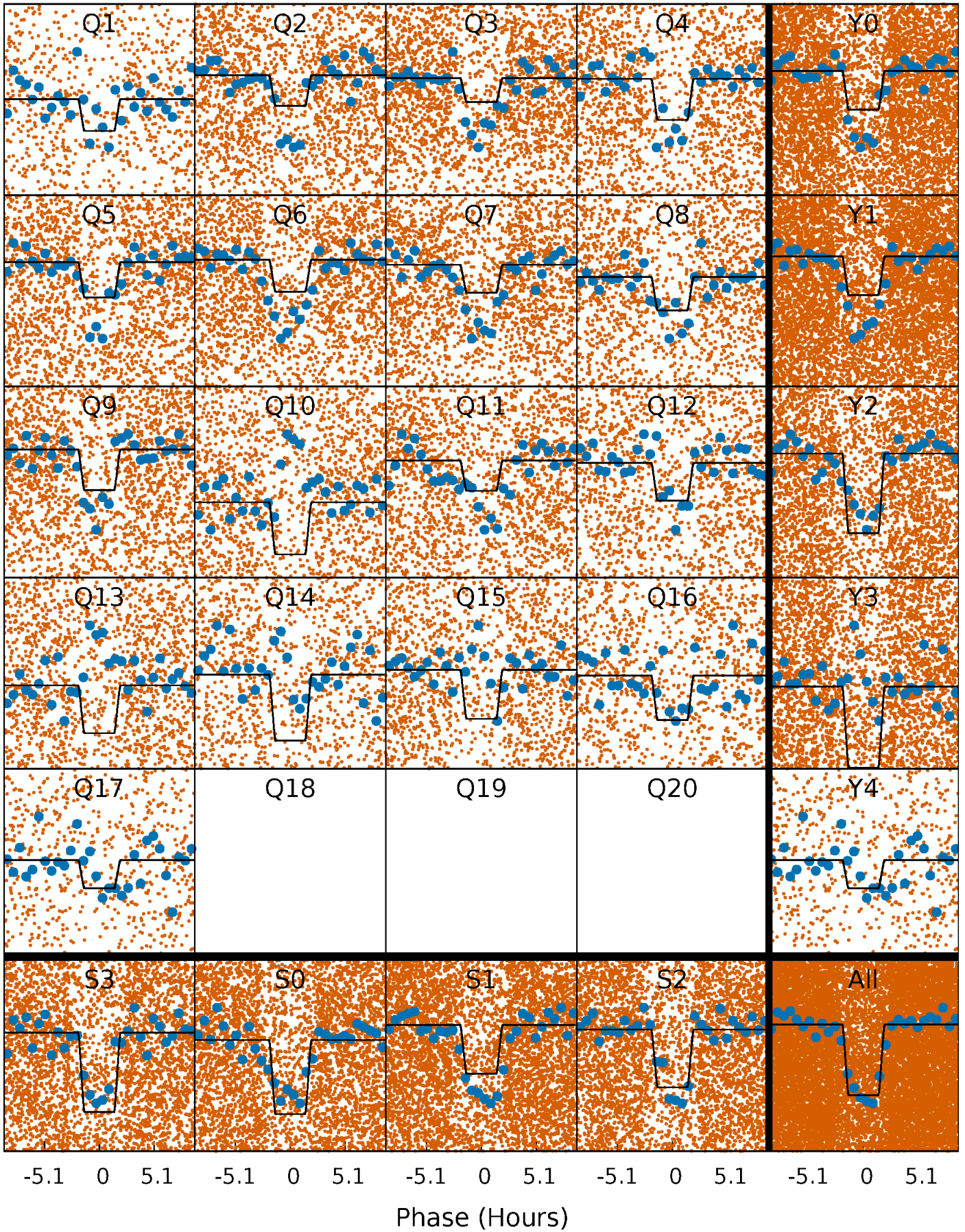
DV Quarter-Phased Transit Curves

TCE 008332007-01 P= 0.934788 Days $T_0=131.738201$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

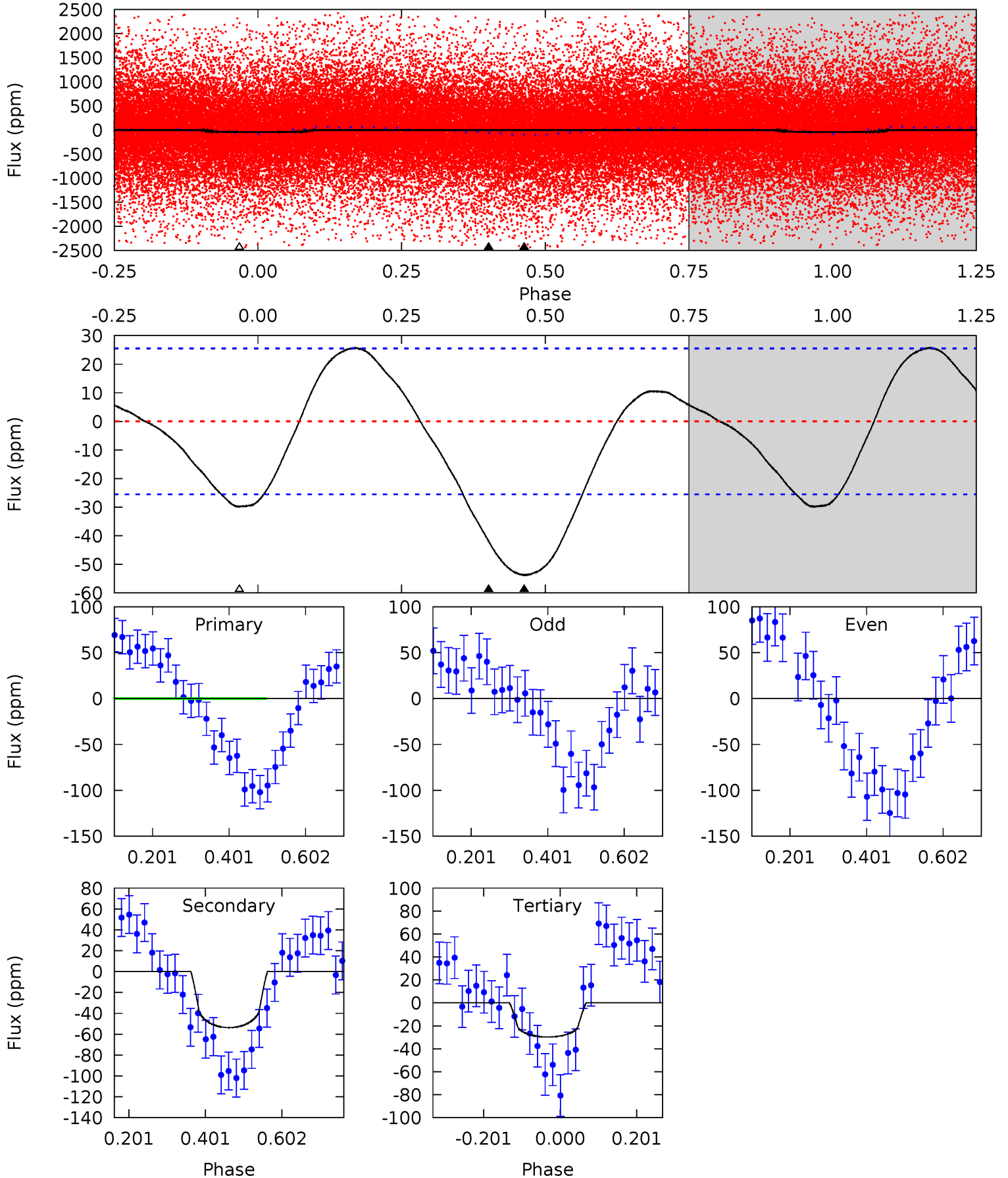
TCE 008332007-01 P= 0.934730 Days $T_0=131.764016$ (BKJD)



DV Model-Shift Uniqueness Test

008332007-01, P = 0.934788 Days, E = 130.803413 Days

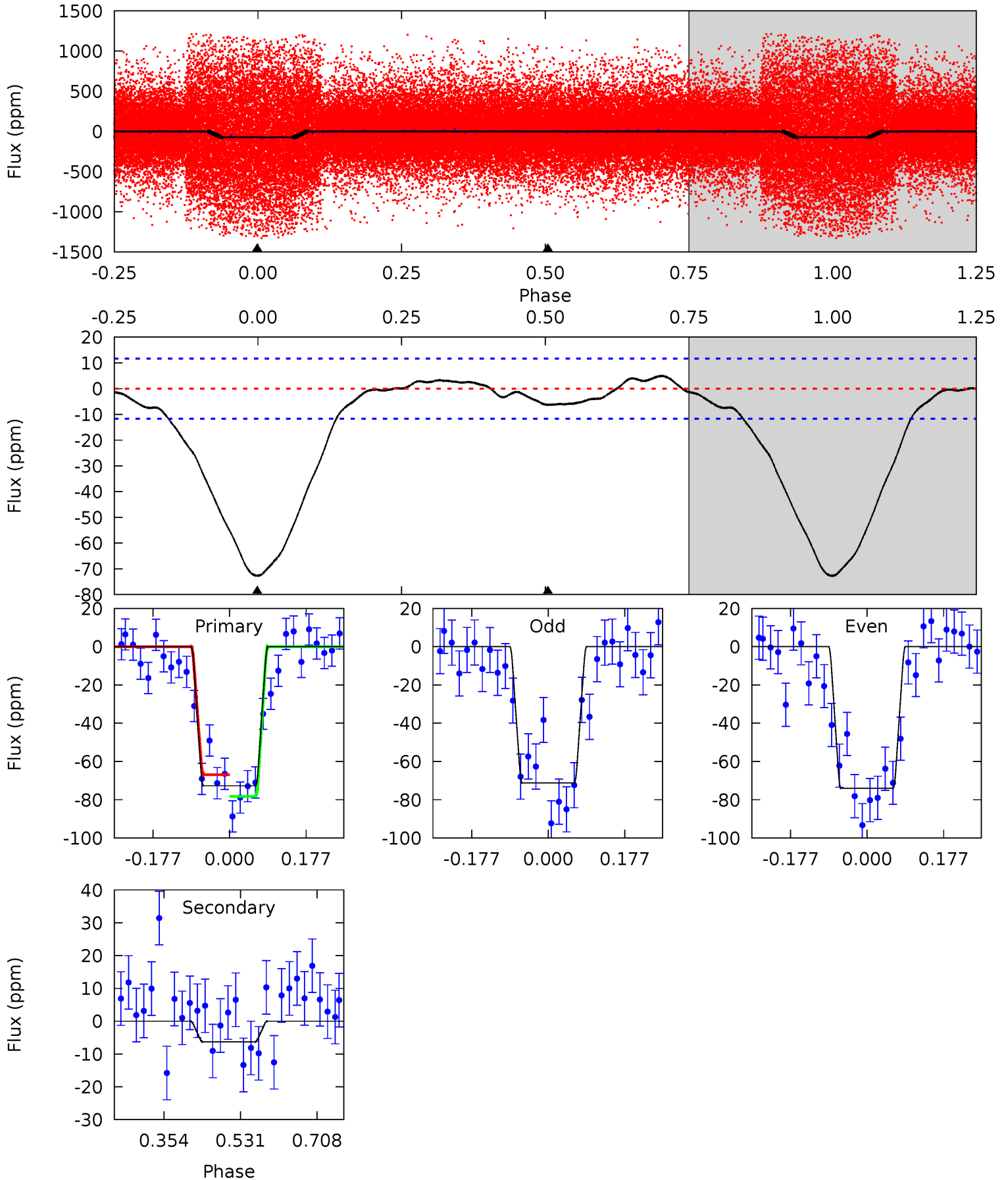
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.26	9.29	5.15	0	4.42	1.28	2.99	2.10	7.26	4.14	9.29	6.12	1.36	0.32	2.95



Alt Model-Shift Uniqueness Test

008332007-01, P = 0.934730 Days, E = 130.829286 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.6	2.40	0	0	4.44	1.35	1.29	27.6	27.6	2.40	2.40	0.54	1.17	0.06	2.16



Stellar Parameters For KIC 008332007

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6128^{+182}_{-218}	$4.470^{+0.056}_{-0.210}$	$-0.200^{+0.250}_{-0.300}$	$0.978^{+0.316}_{-0.105}$	$1.029^{+0.139}_{-0.139}$	$1.550^{+0.454}_{-0.837}$
	+3%/-4%	+1%/-5%	+125%/-150%	+32%/-11%	+14%/-14%	+29%/-54%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008332007-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-54 ± 6	$0.93^{+0.42}_{-0.42}$	2765^{+206}_{-139}	5690^{+2262}_{-848}	12^{+29}_{-6}
Alt.	-6 ± 3	$0.99^{+0.43}_{-0.39}$	2767^{+217}_{-133}	3487^{+933}_{-745}	$1.194^{+2.566}_{-0.724}$

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 $A_{obs} \gg 1.0$

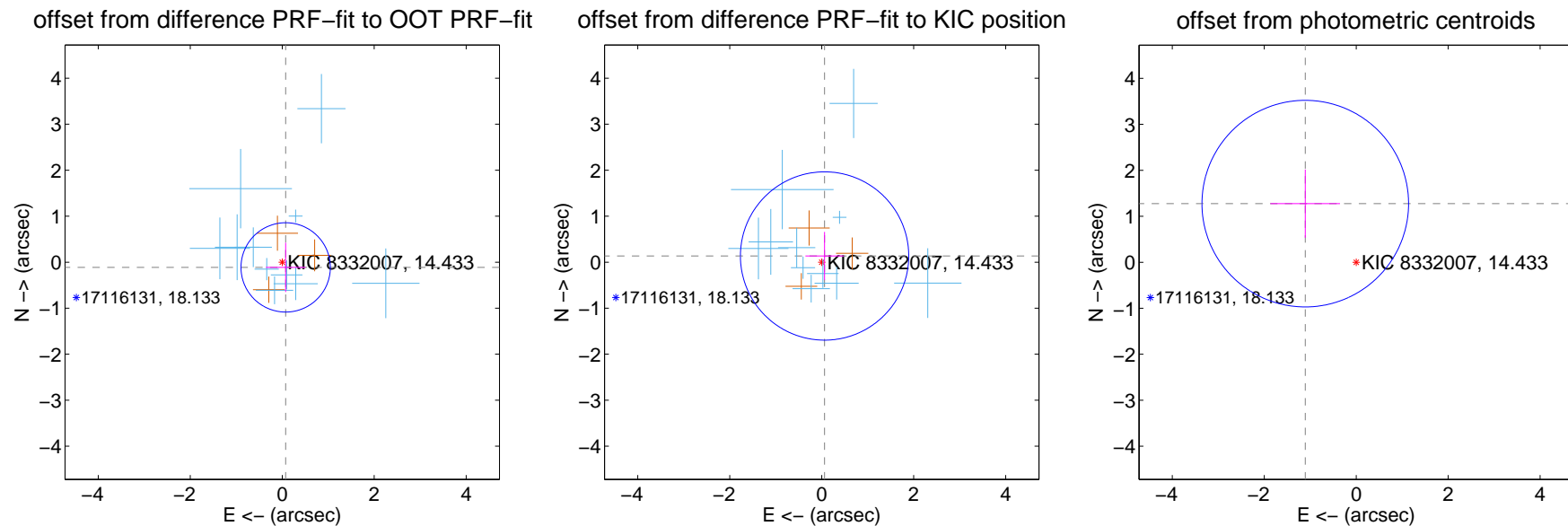
DV Centroid Data

Supplemental centroid analysis for 008332007-01. Kepler magnitude: 14.43. Transit SNR 8.74

There are 11 quarters with good PRF difference image offsets

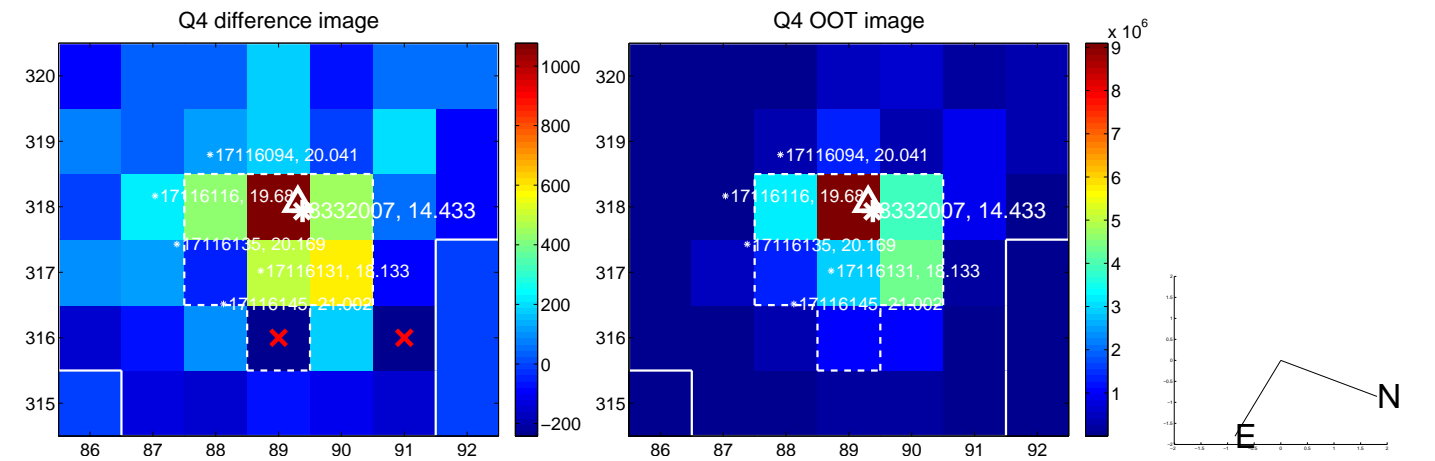
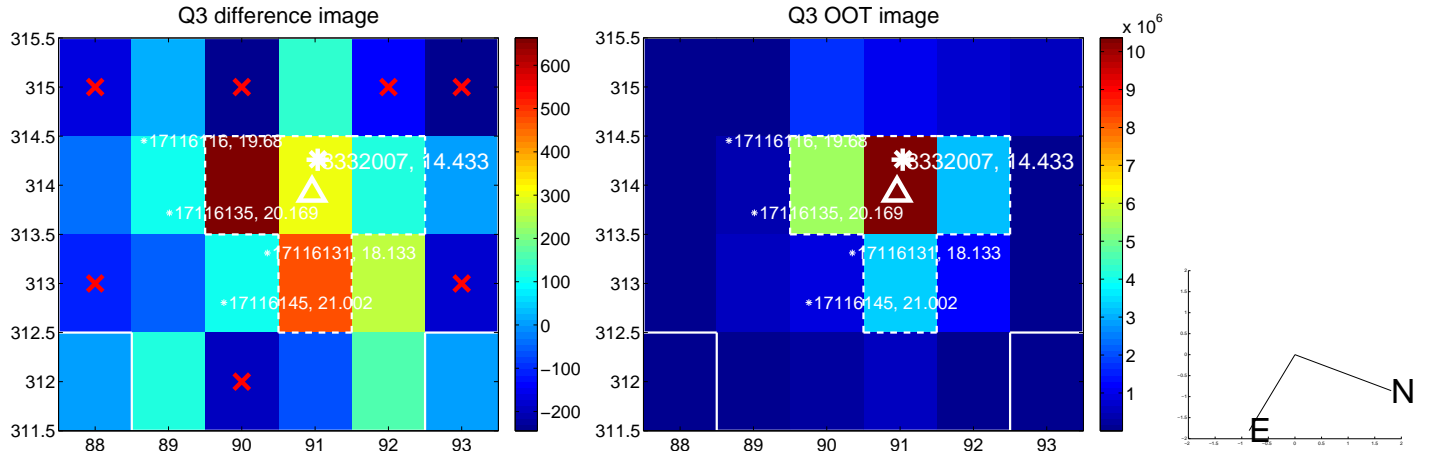
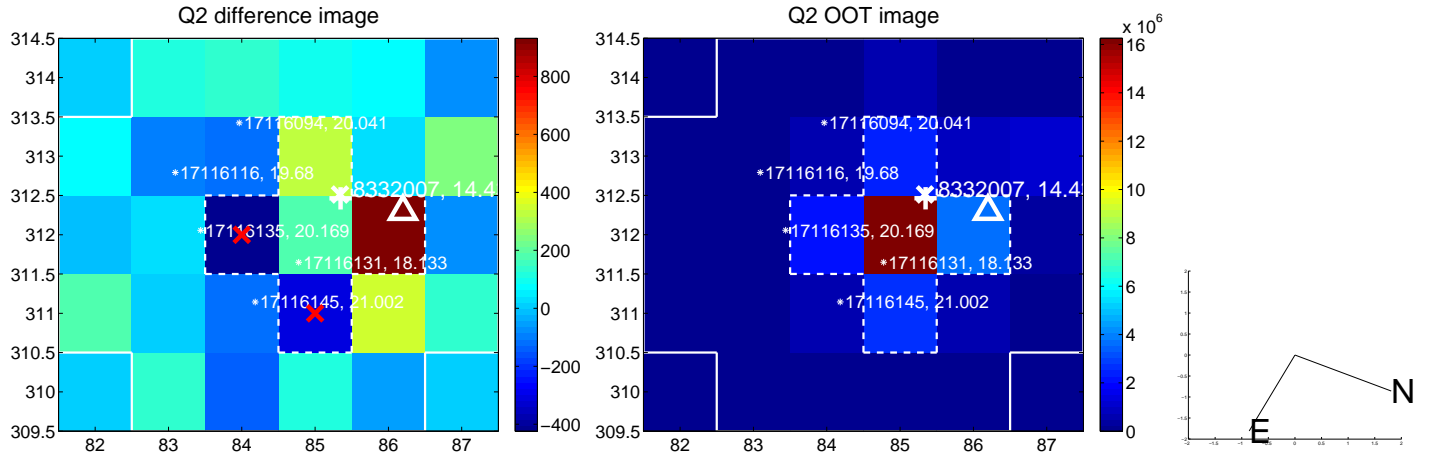
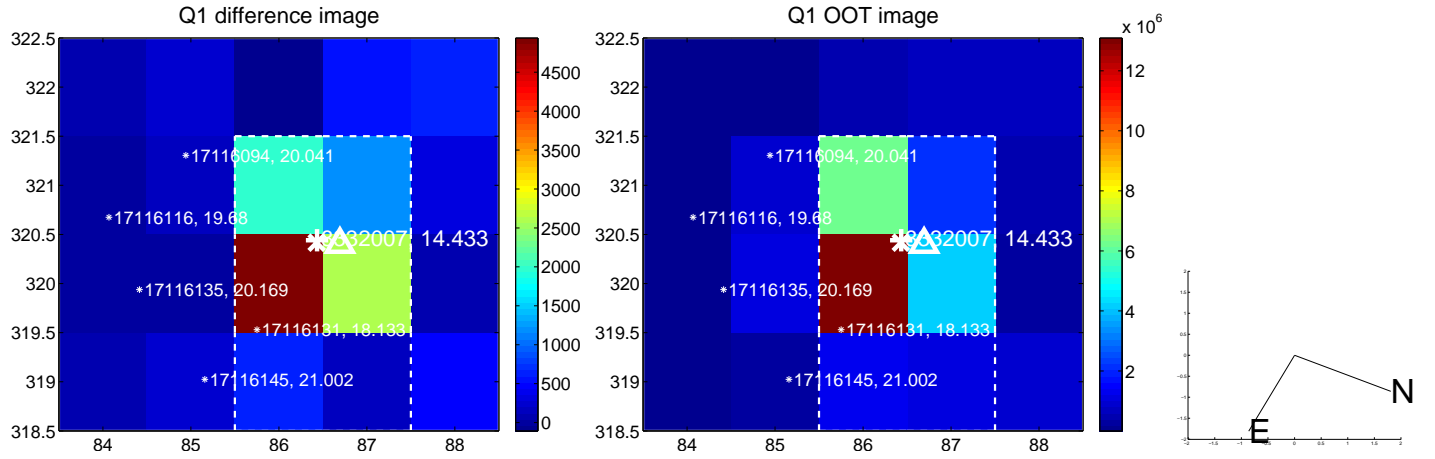
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.136 ± 0.324	0.42	-0.075 ± 0.430	-0.113 ± 0.537
PRF-fit source offset from KIC position	0.148 ± 0.610	0.24	-0.062 ± 0.417	0.135 ± 0.523
photometric centroid source offset	1.69 ± 0.75	2.26	1.11 ± 0.76	1.28 ± 0.74

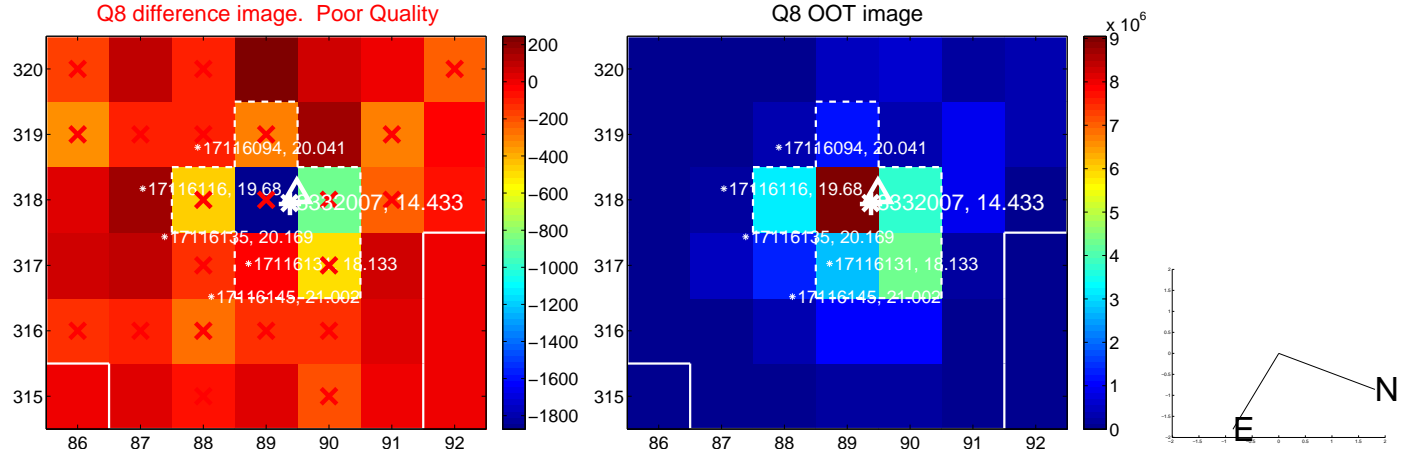
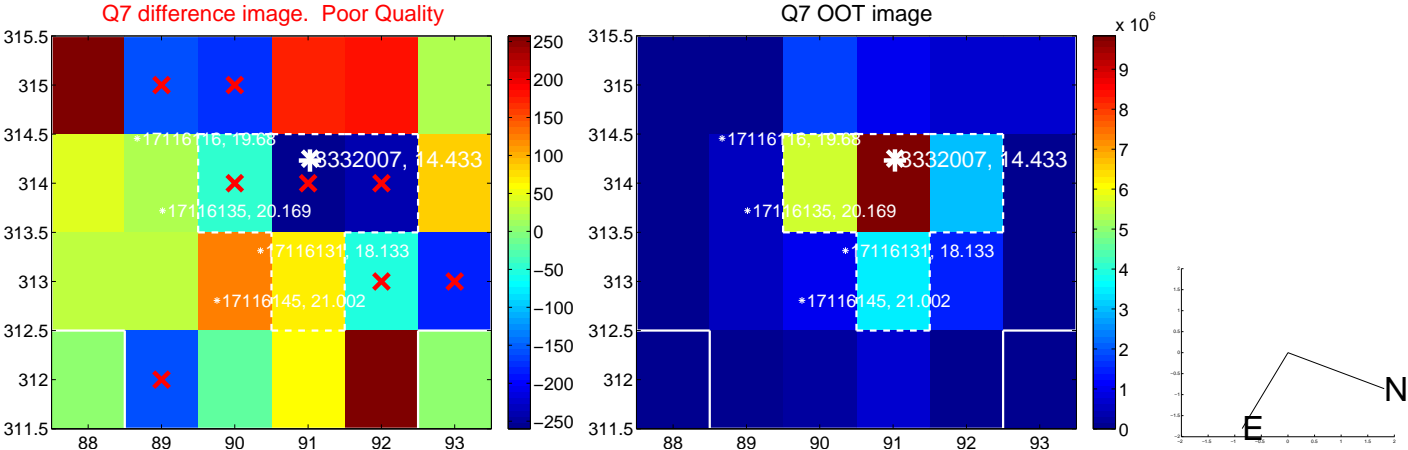
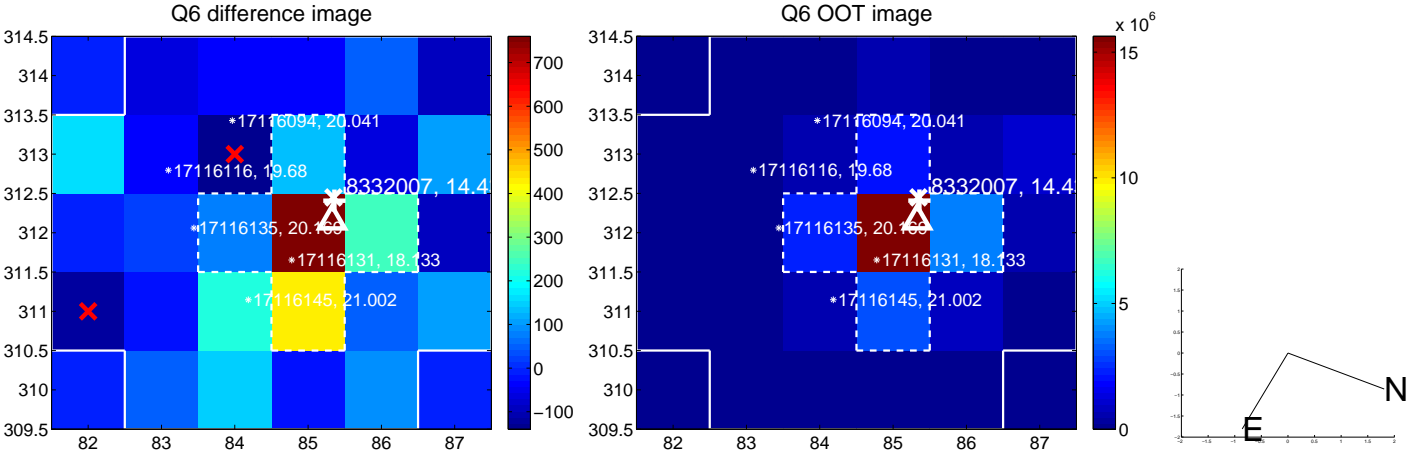
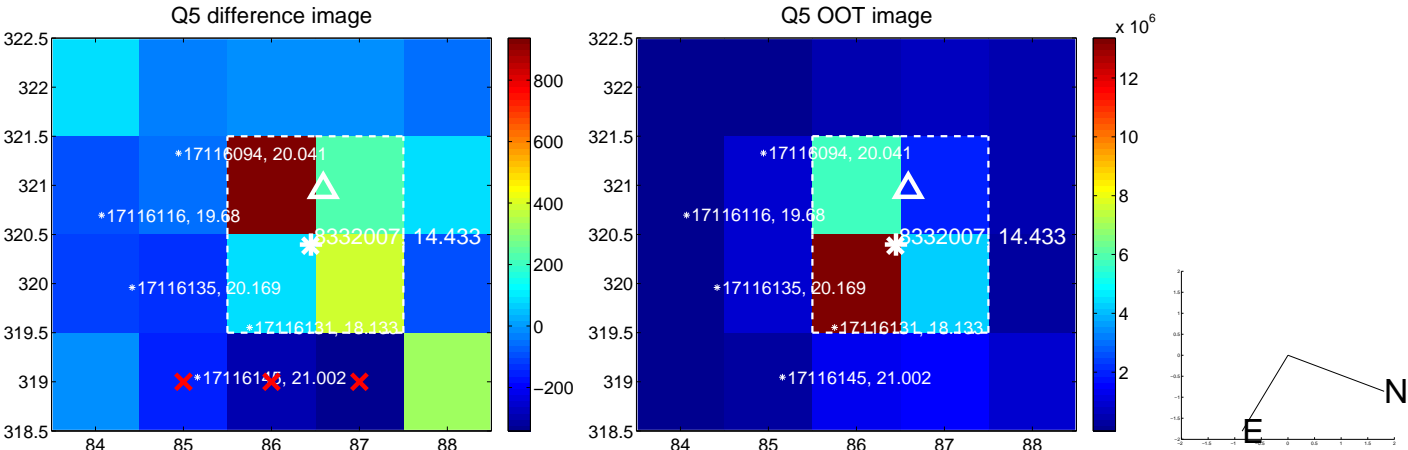


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- 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.

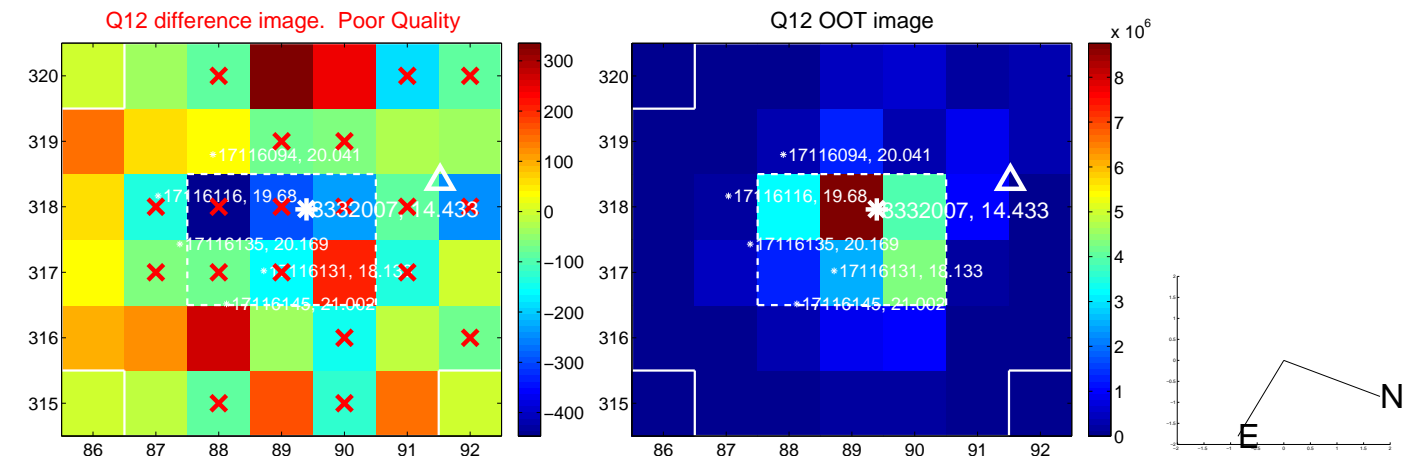
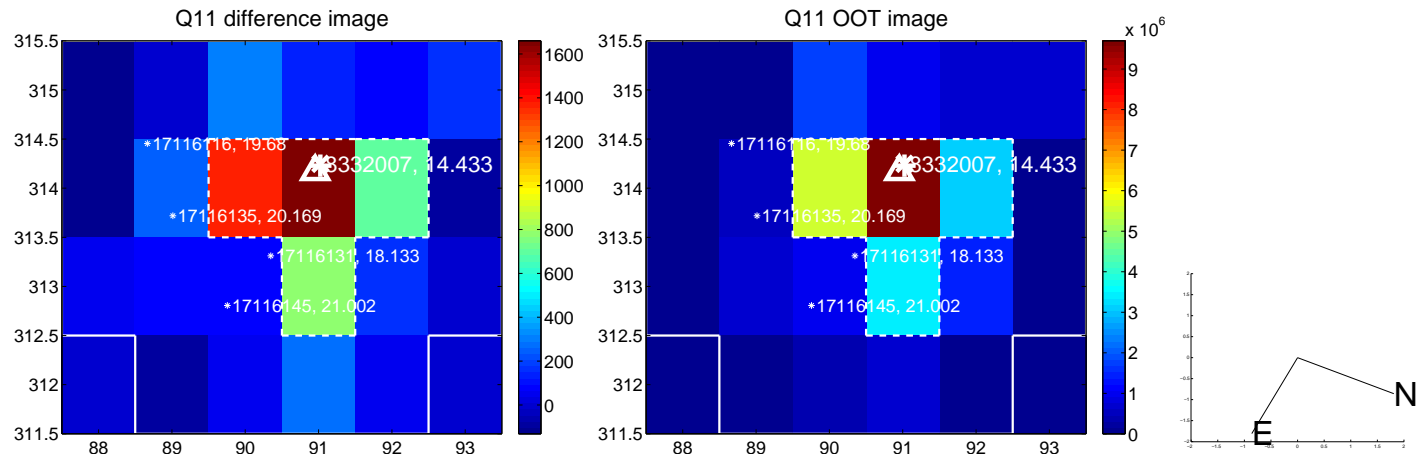
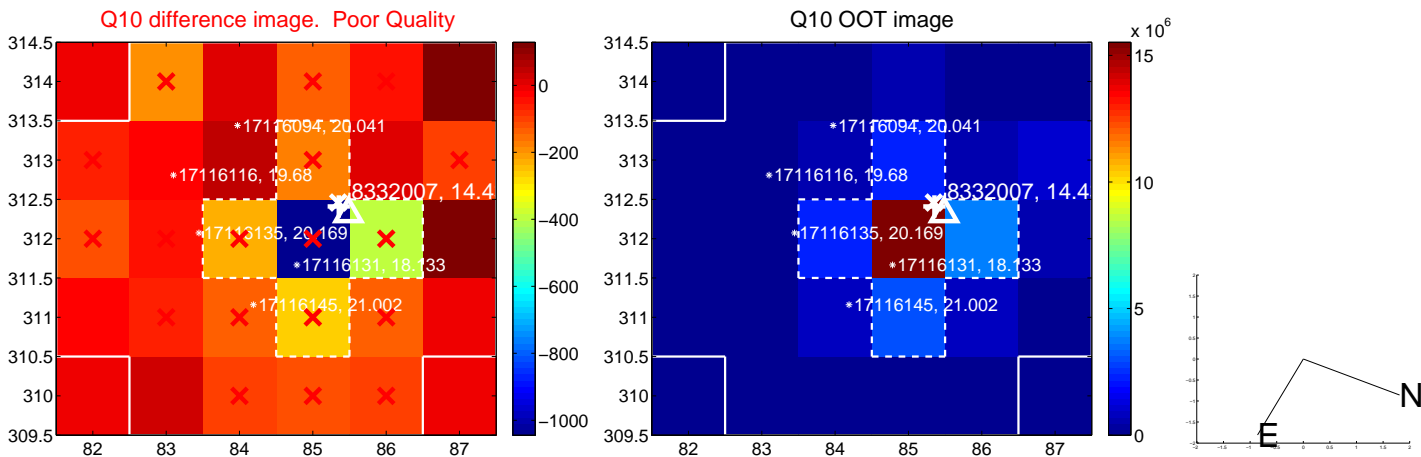
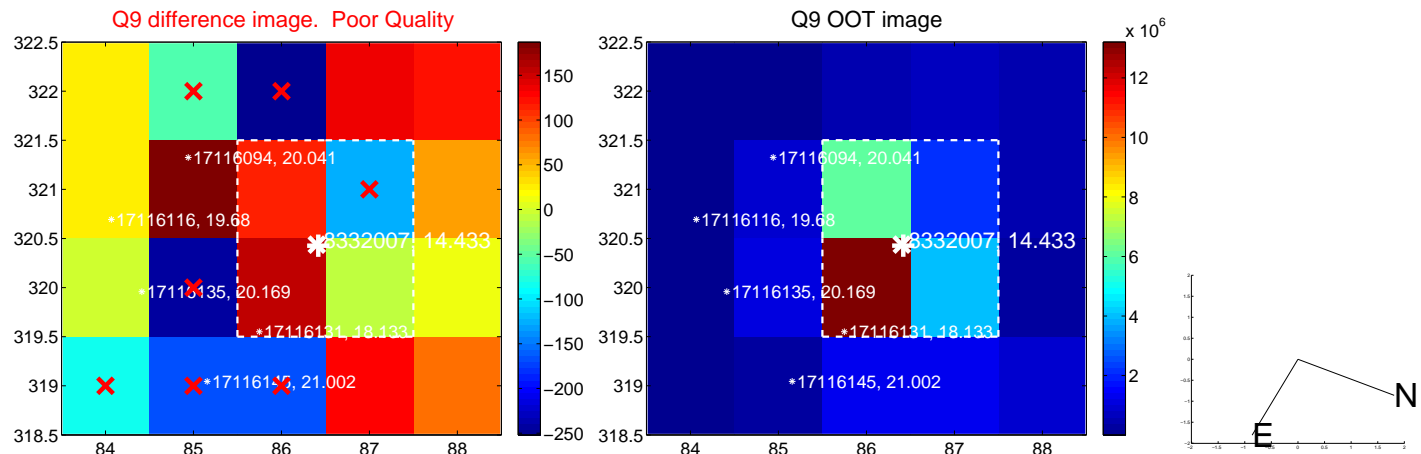
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



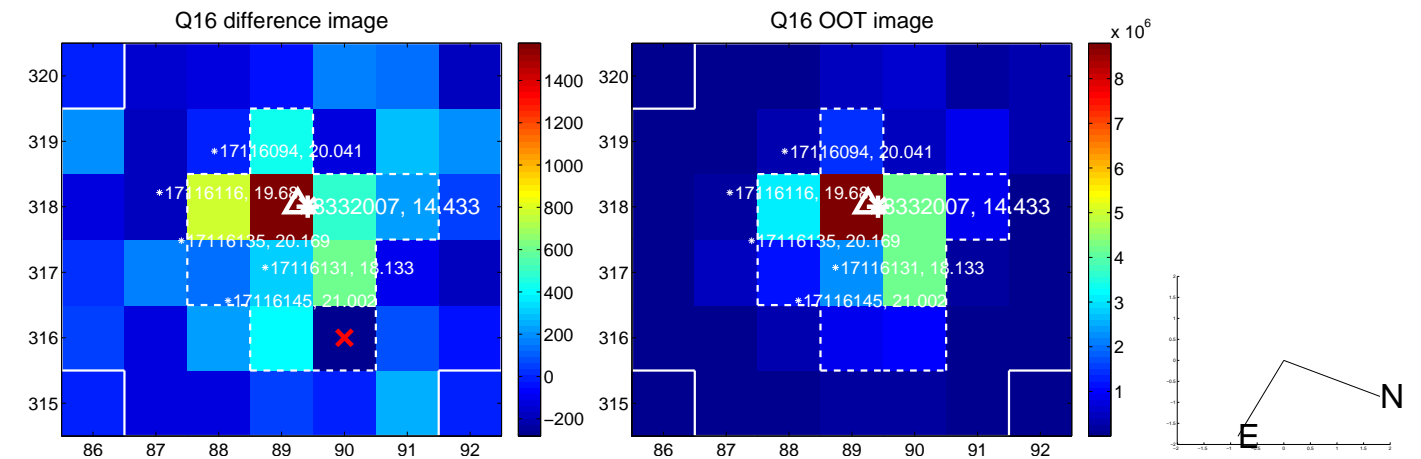
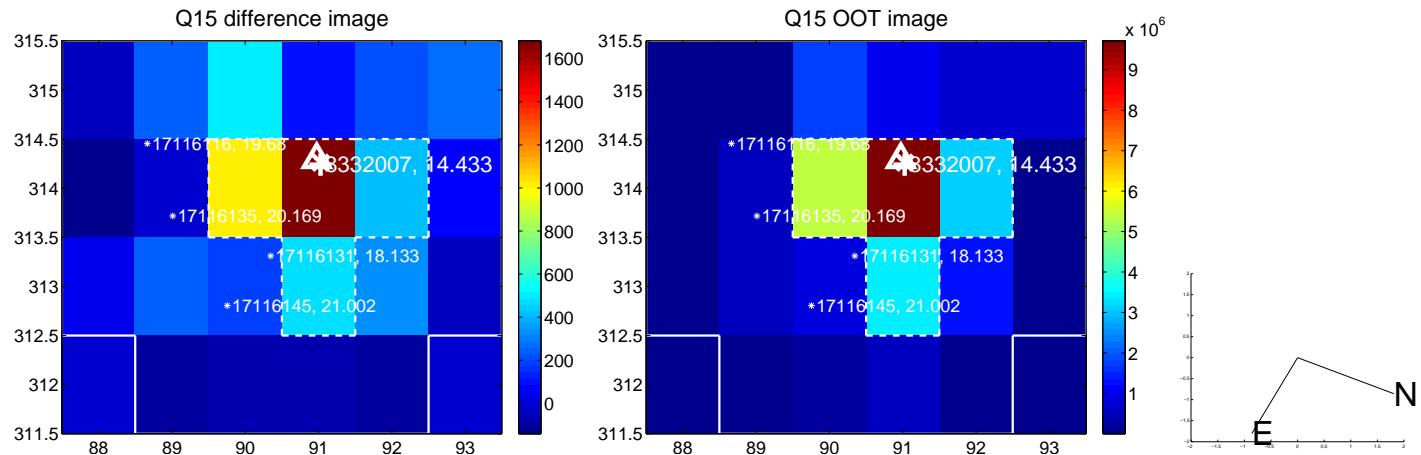
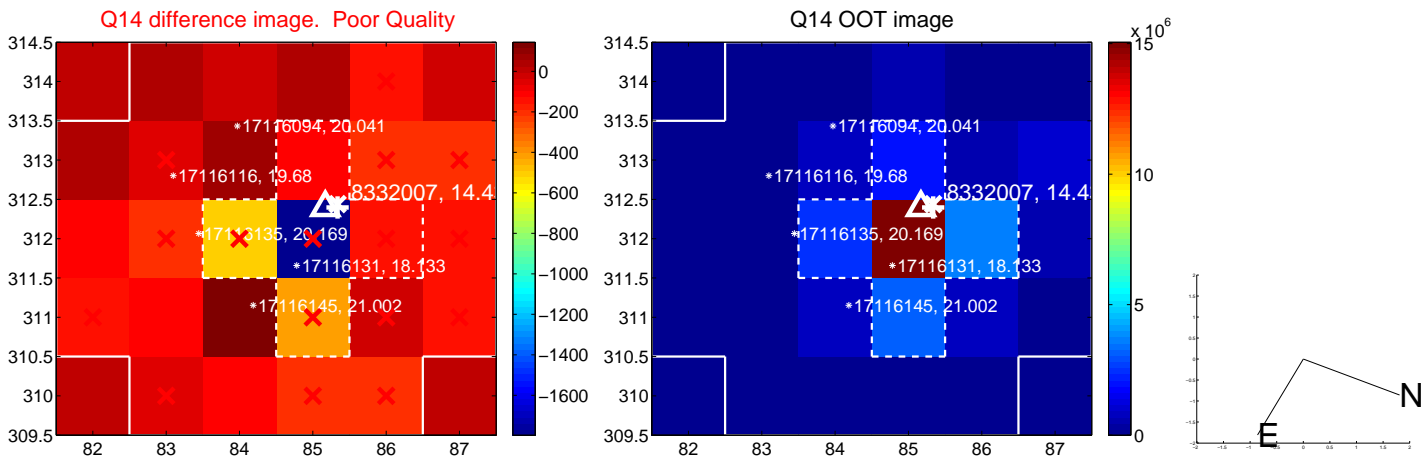
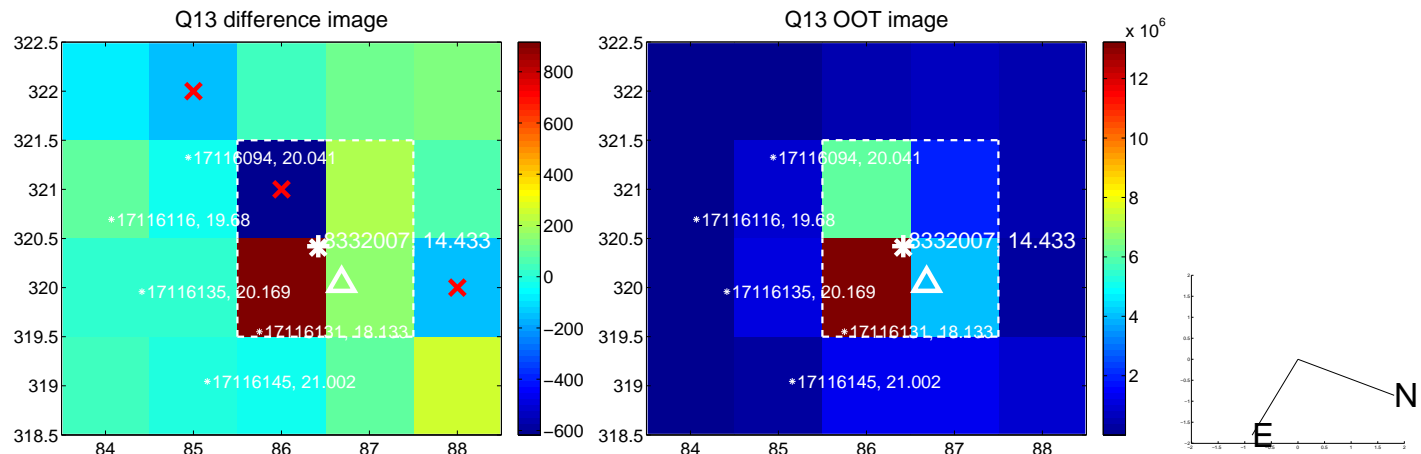
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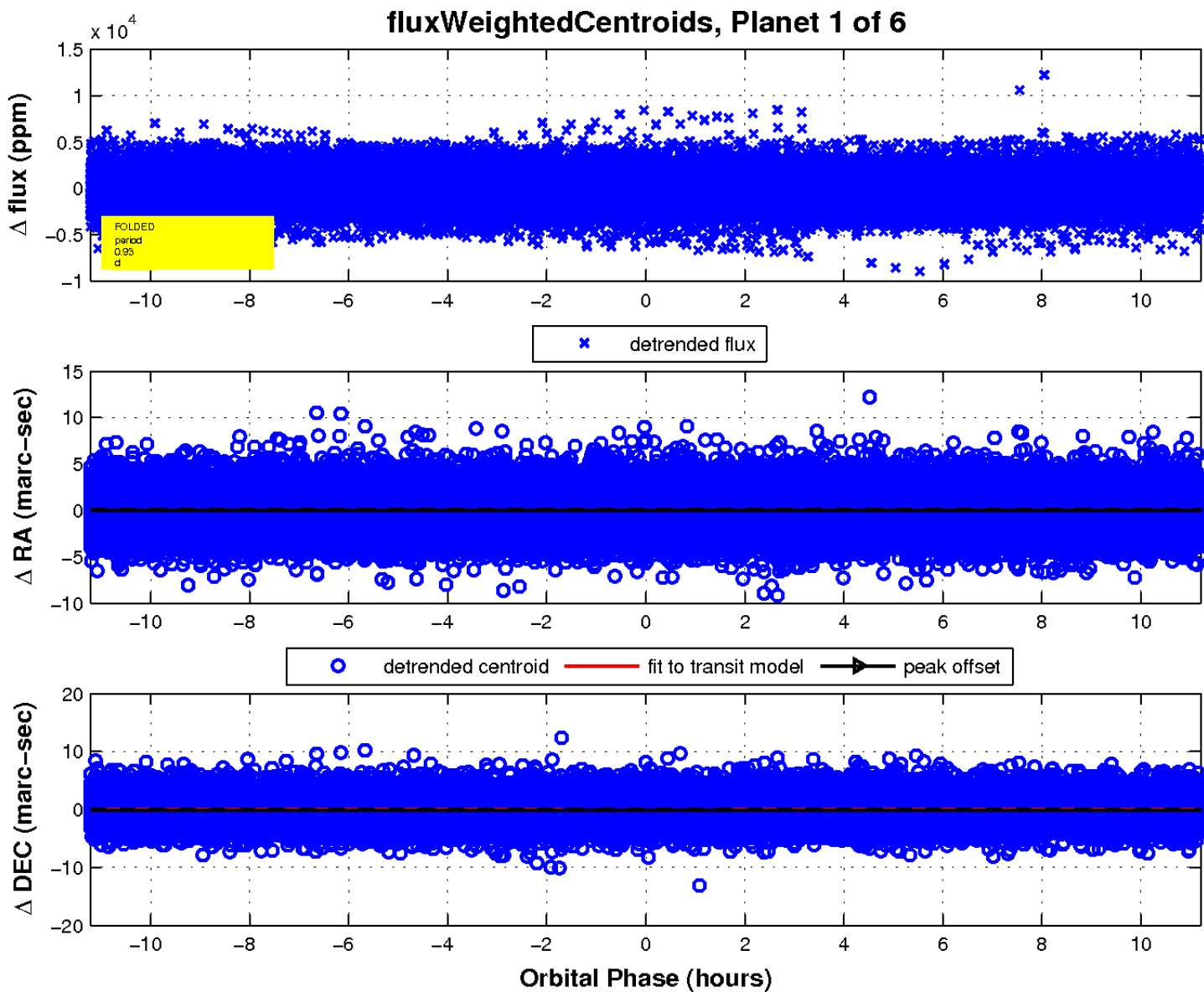
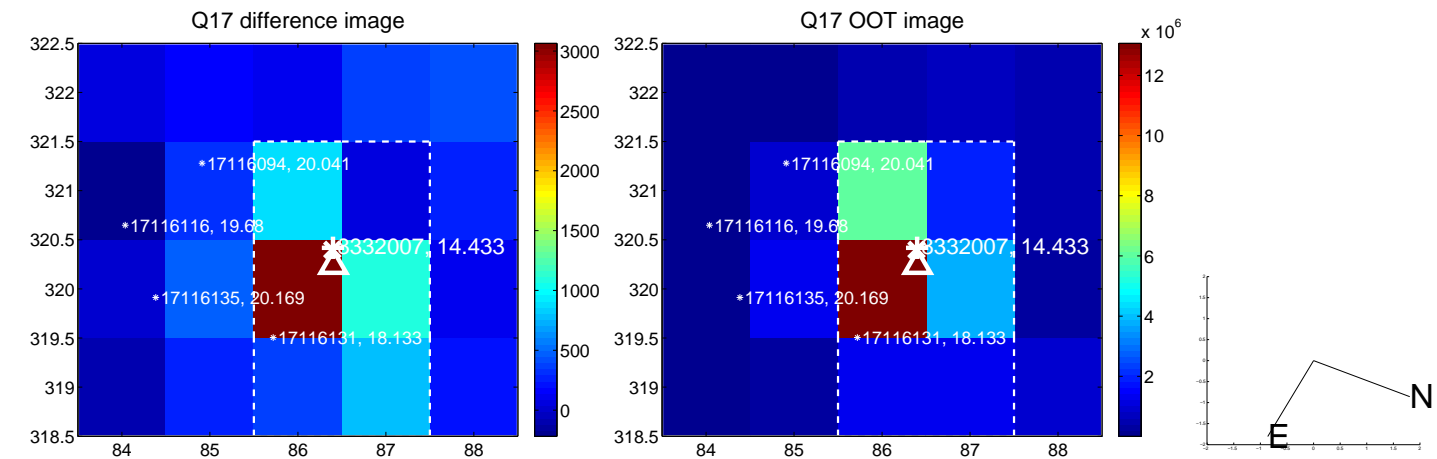
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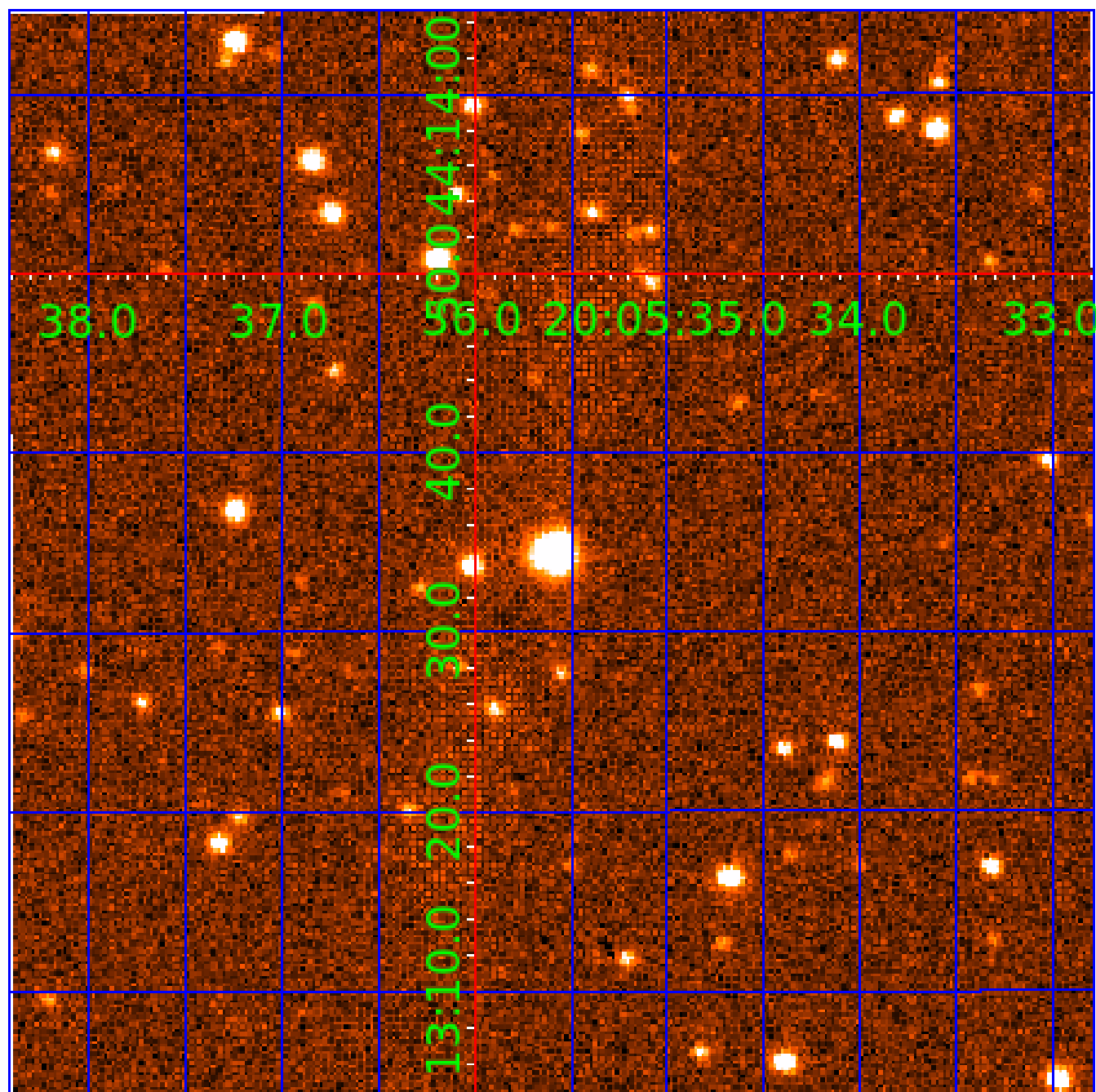


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008332007

Q1-17 DR25 TCE Parameters

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008332007-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_TRACKER—LPP_DV—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
008332007-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—SAME_NTL_PERIOD—HALO_GHOST
008332007-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
008332007-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_POS_DV
008332007-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—SAME_NTL_PERIOD—HALO_GHOST

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

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

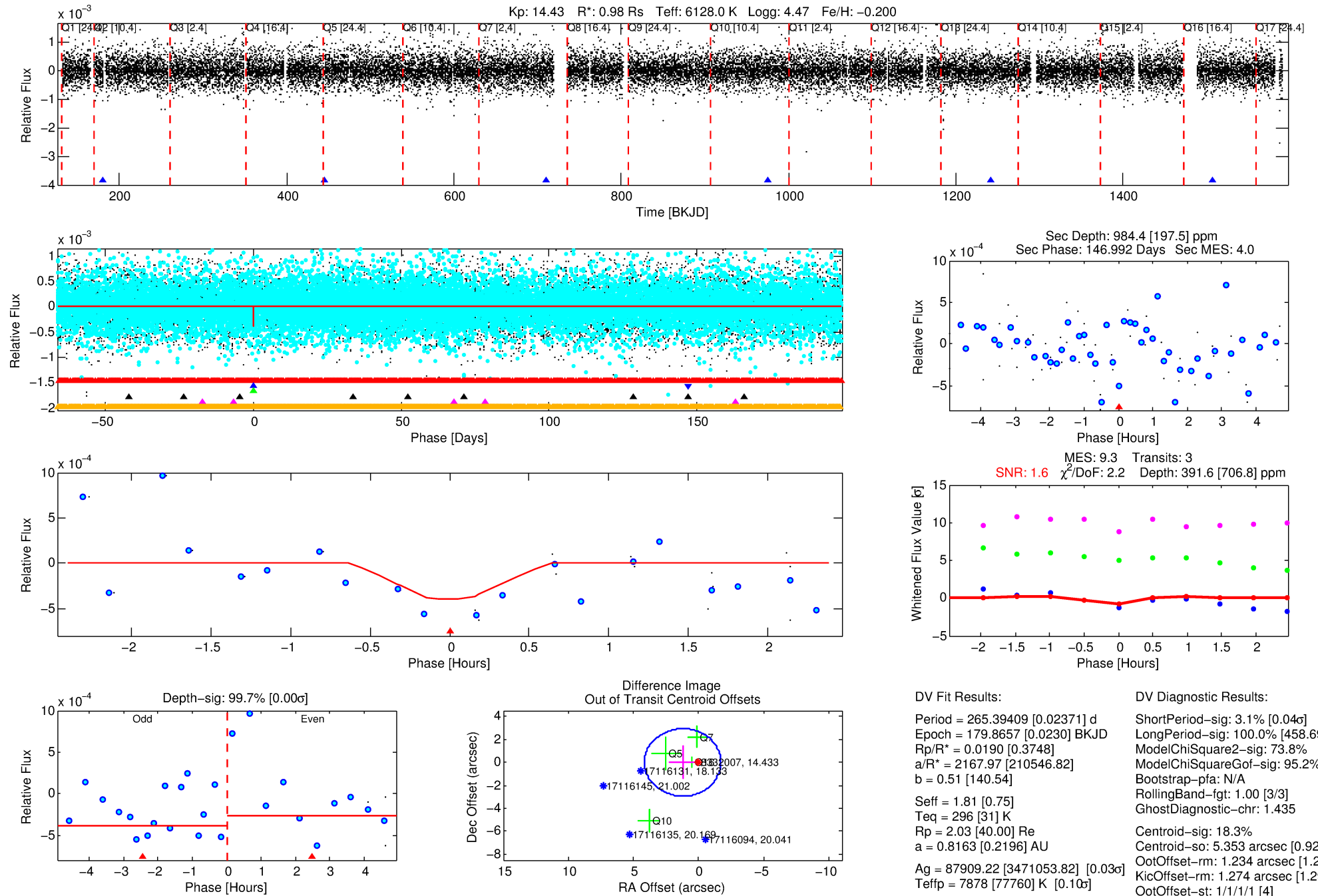
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008332007-02

No Significant Match Found

DV One-Page Summary

KIC: 8332007 Candidate: 2 of 6 Period: 265.394 d



DV Fit Results:

Period = 265.39409 [0.02371] d
Epoch = 179.8657 [0.0230] BKJD
Rp/R* = 0.0190 [0.3748]
a/R* = 2167.97 [210546.82]
b = 0.51 [140.54]
Seff = 1.81 [0.75]
Teq = 296 [31] K
Rp = 2.03 [40.00] Re
a = 0.8163 [0.2196] AU
Ag = 87909.22 [3471053.82] [0.03 σ]
Teff = 7878 [77760] K [0.10 σ]

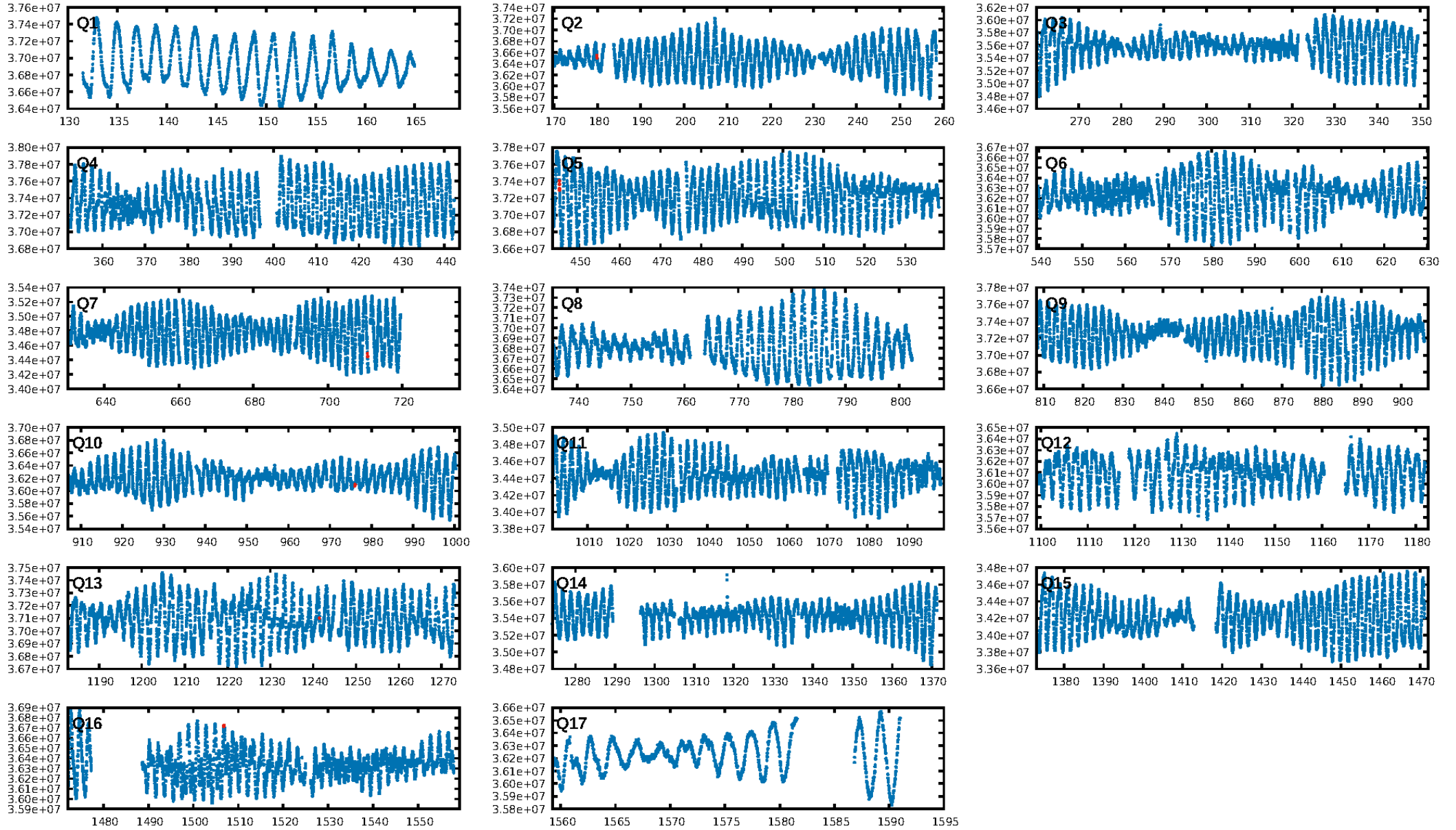
DV Diagnostic Results:

ShortPeriod-sig: 3.1% [0.04 σ]
LongPeriod-sig: 100.0% [458.69 σ]
ModelChiSquare2-sig: 73.8%
ModelChiSquareGof-sig: 95.2%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.435
Centroid-sig: 18.3%
Centroid-so: 5.353 arcsec [0.92 σ]
OotOffset-rm: 1.234 arcsec [1.26 σ]
KicOffset-rm: 1.274 arcsec [1.29 σ]
OotOffset-st: 1/1/1/1 [4]
KicOffset-st: 1/1/1/1 [4]
DiffImageQuality-fgm: 0.25 [1/4]
DiffImageOverlap-fno: 0.00 [0/5]

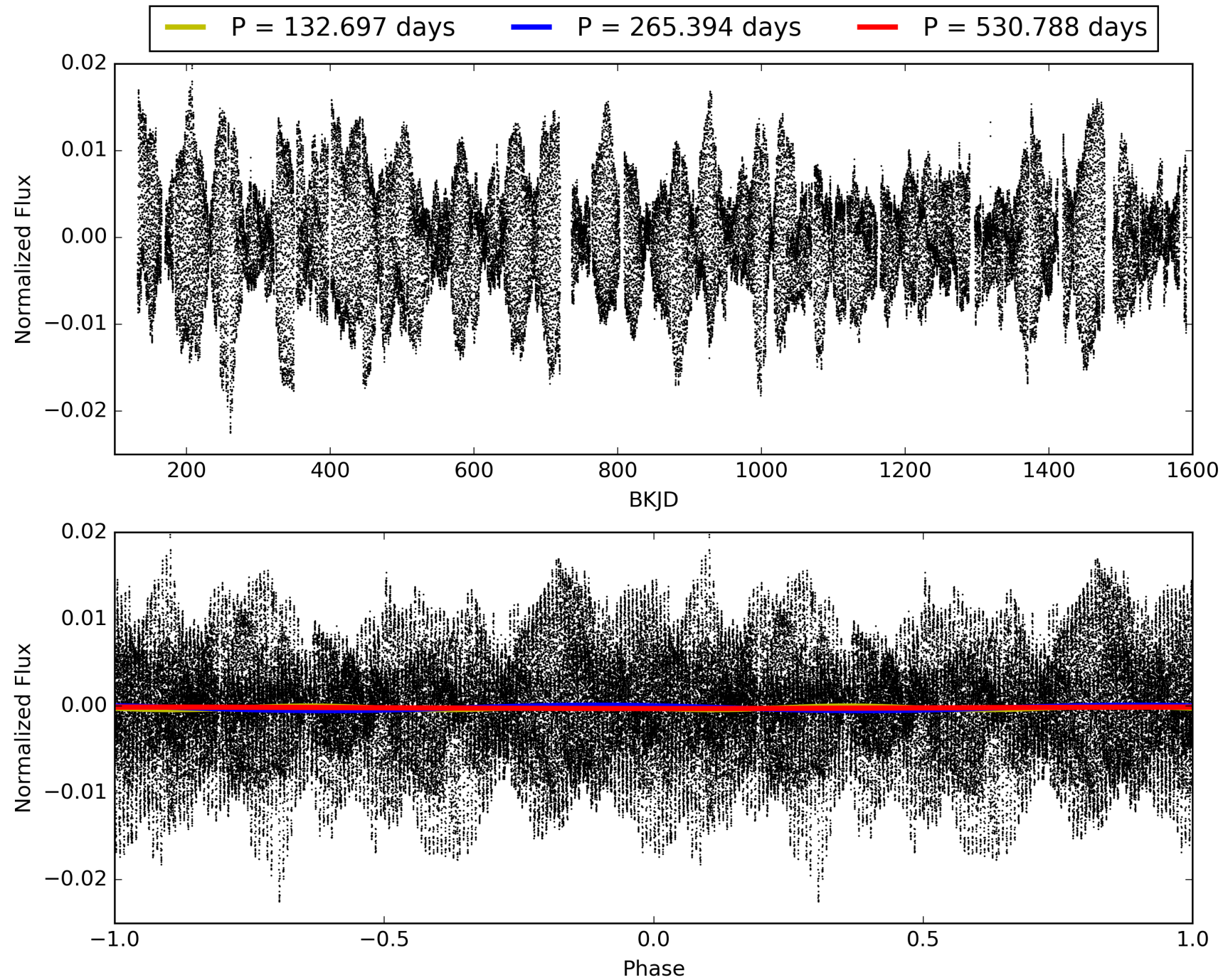
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 06:03:25 Z

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

TCE 008332007-02, PDC Light Curves

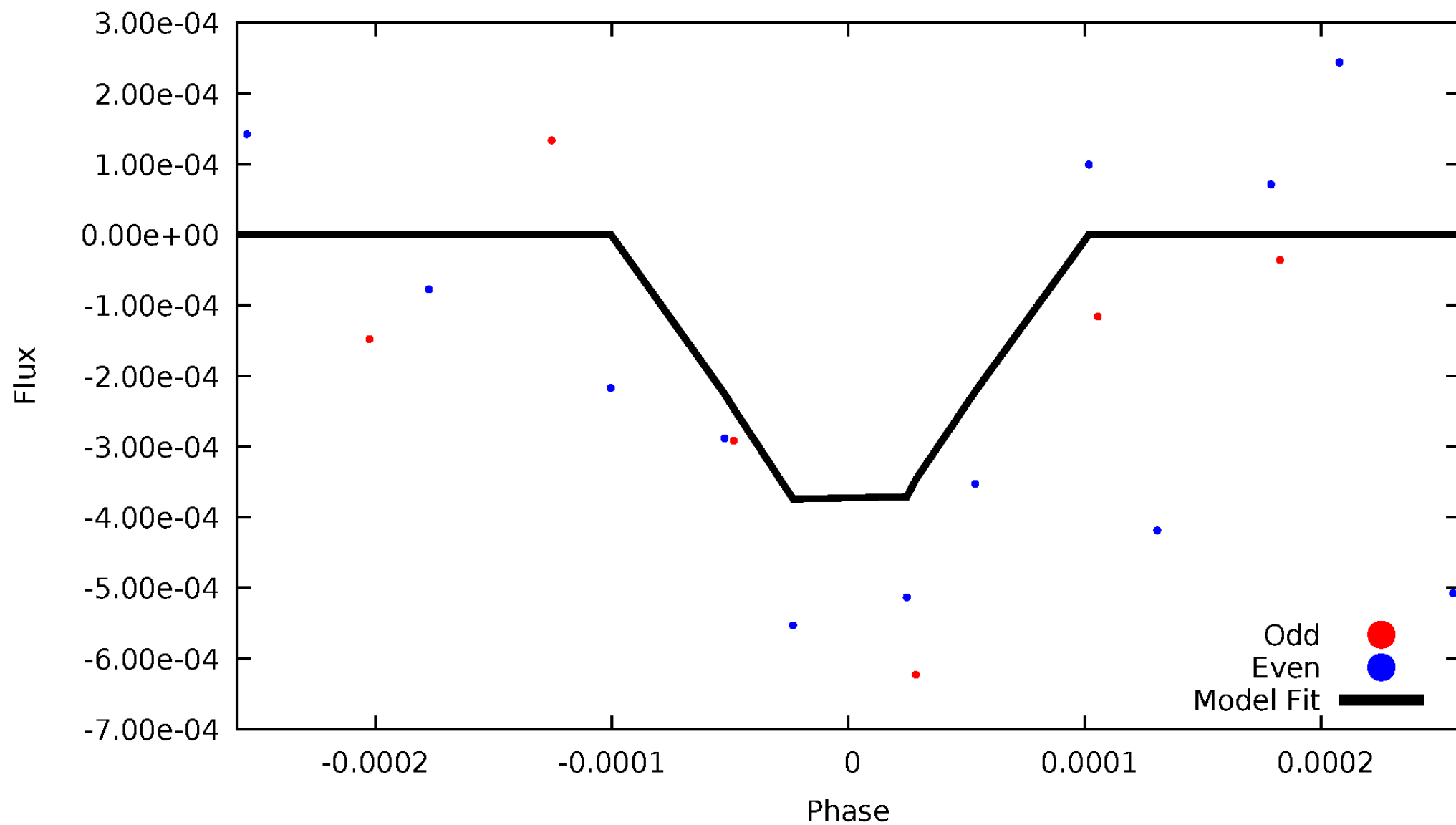


TCE 008332007-02



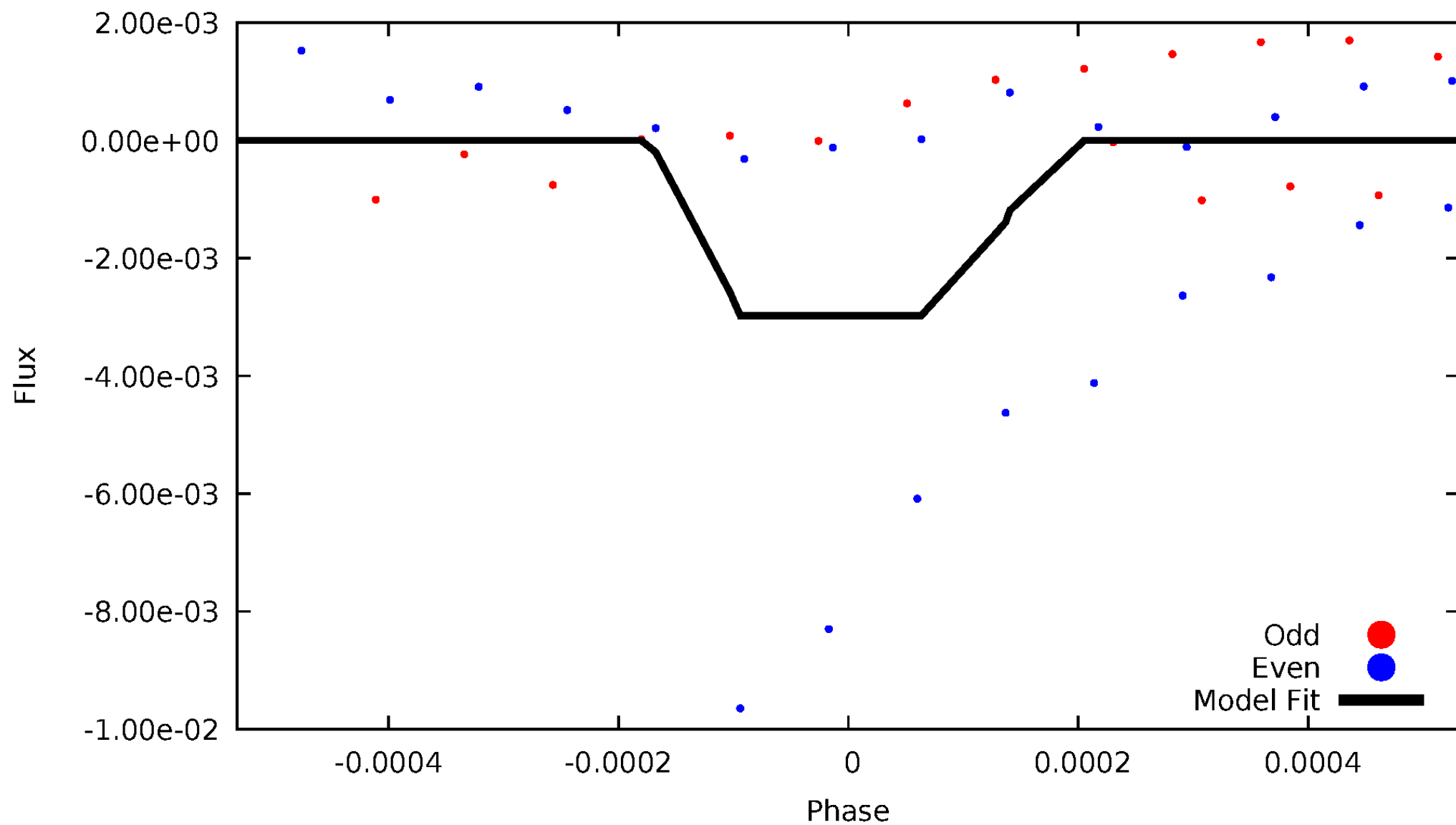
DV Odd/Even

TCE 008332007-02



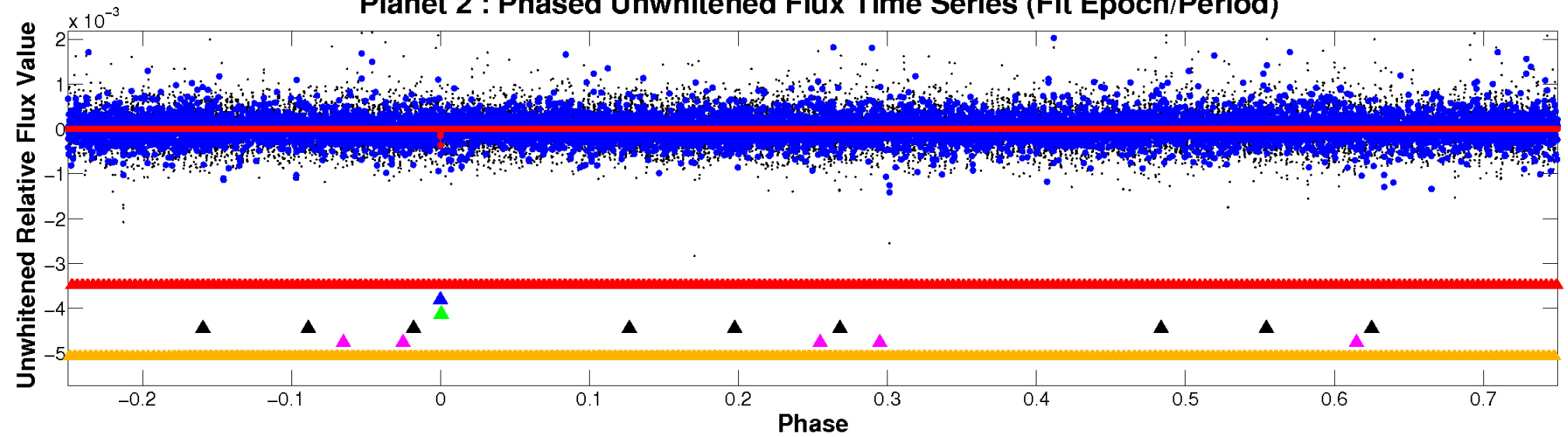
ALT Odd/Even

TCE 008332007-02

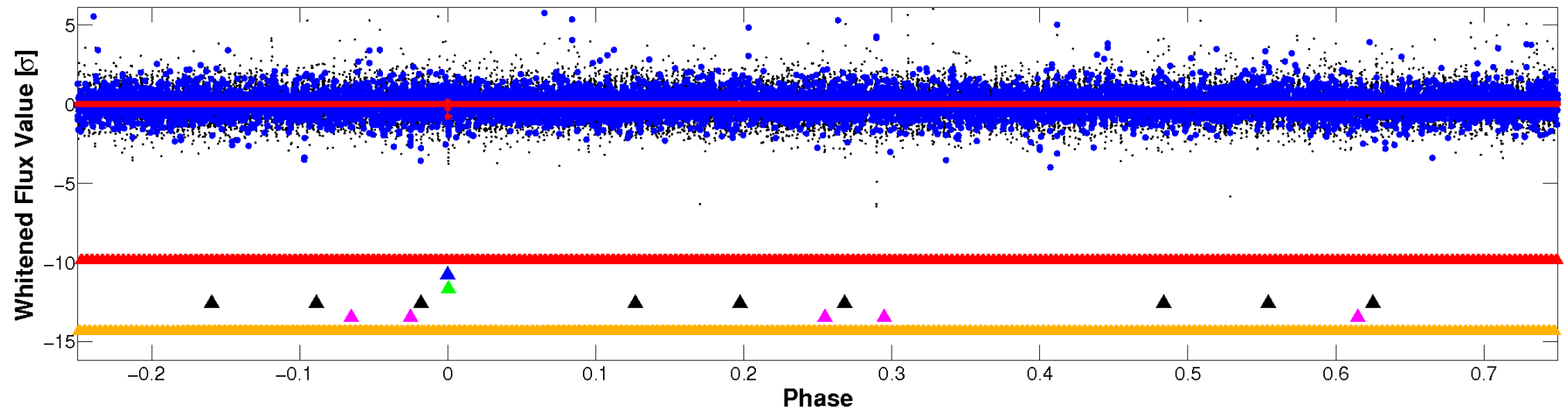


Non-Whitened Vs. Whitened Light Curve

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

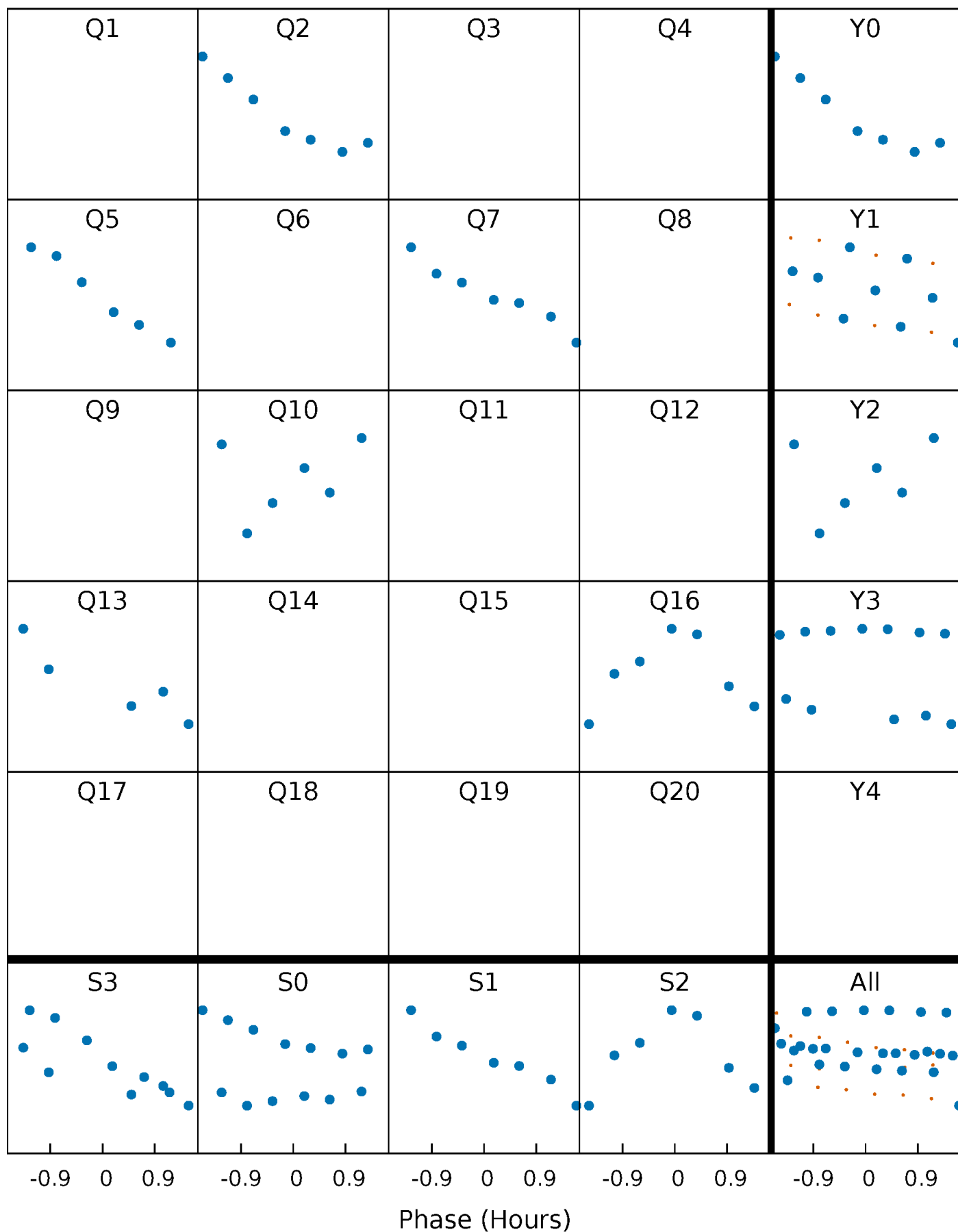


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



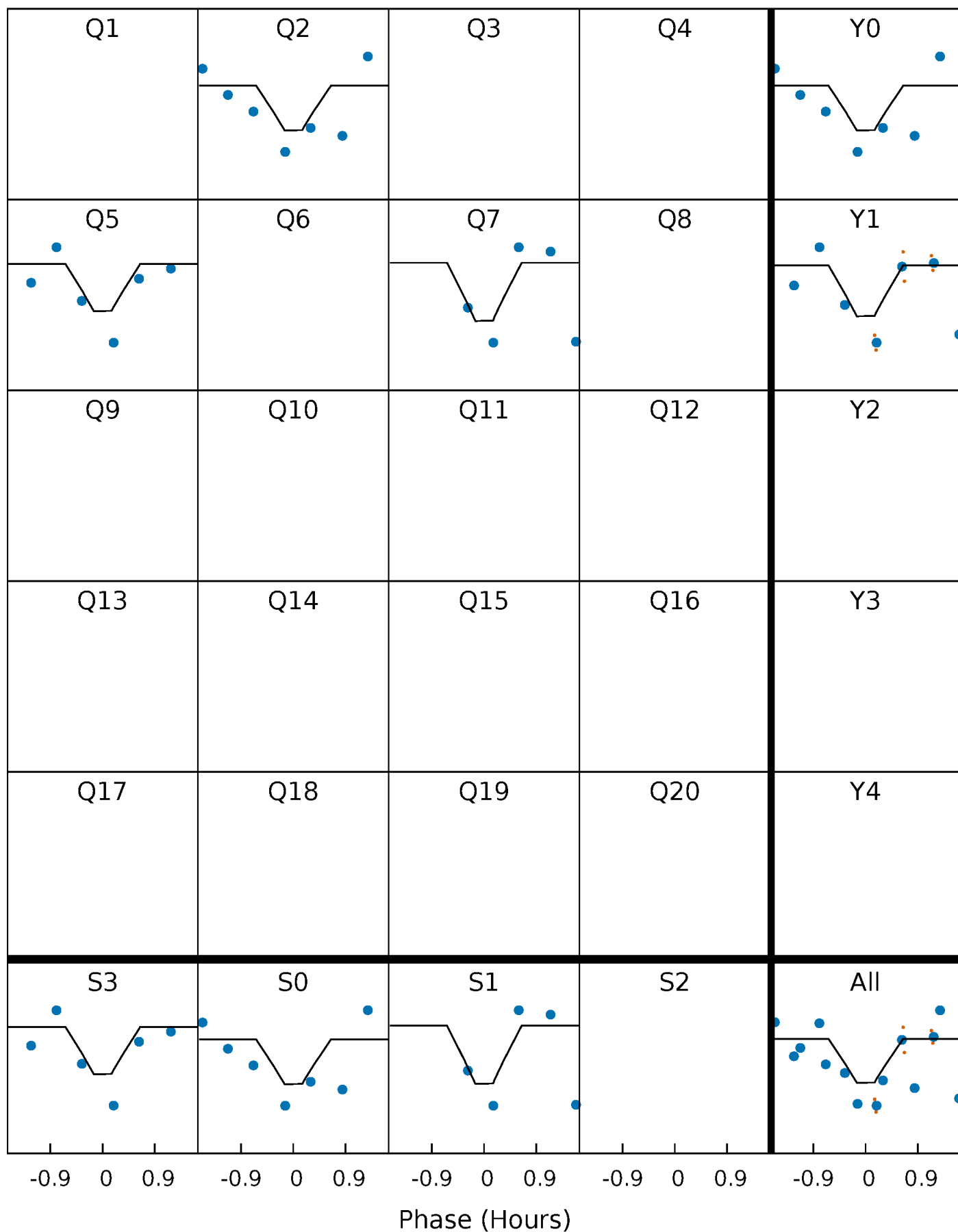
PDC Quarter-Phased Transit Curves

TCE 008332007-02 P=265.394087 Days $T_0=179.865712$ (BKJD)



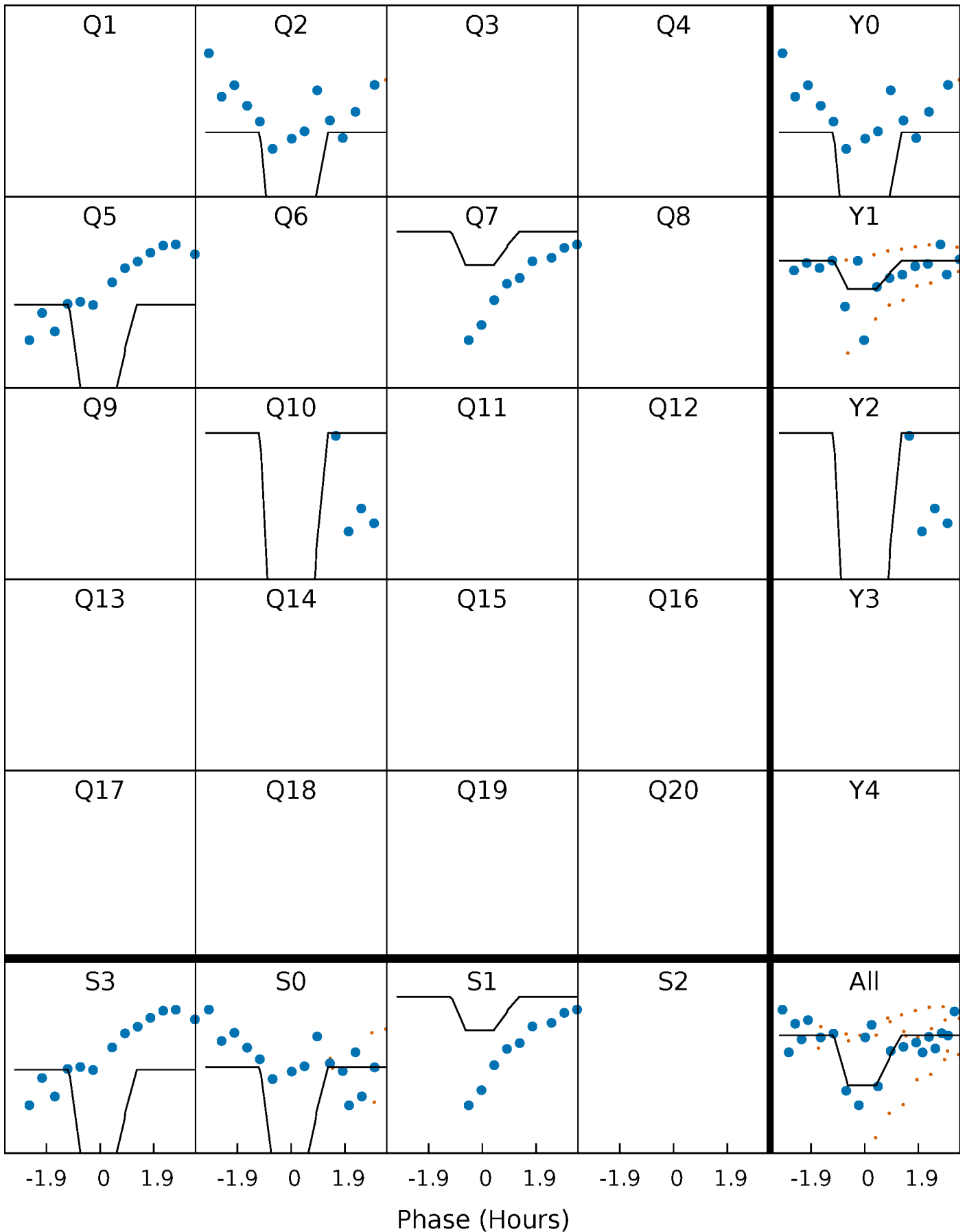
DV Quarter-Phased Transit Curves

TCE 008332007-02 P=265.394087 Days $T_0=179.865712$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

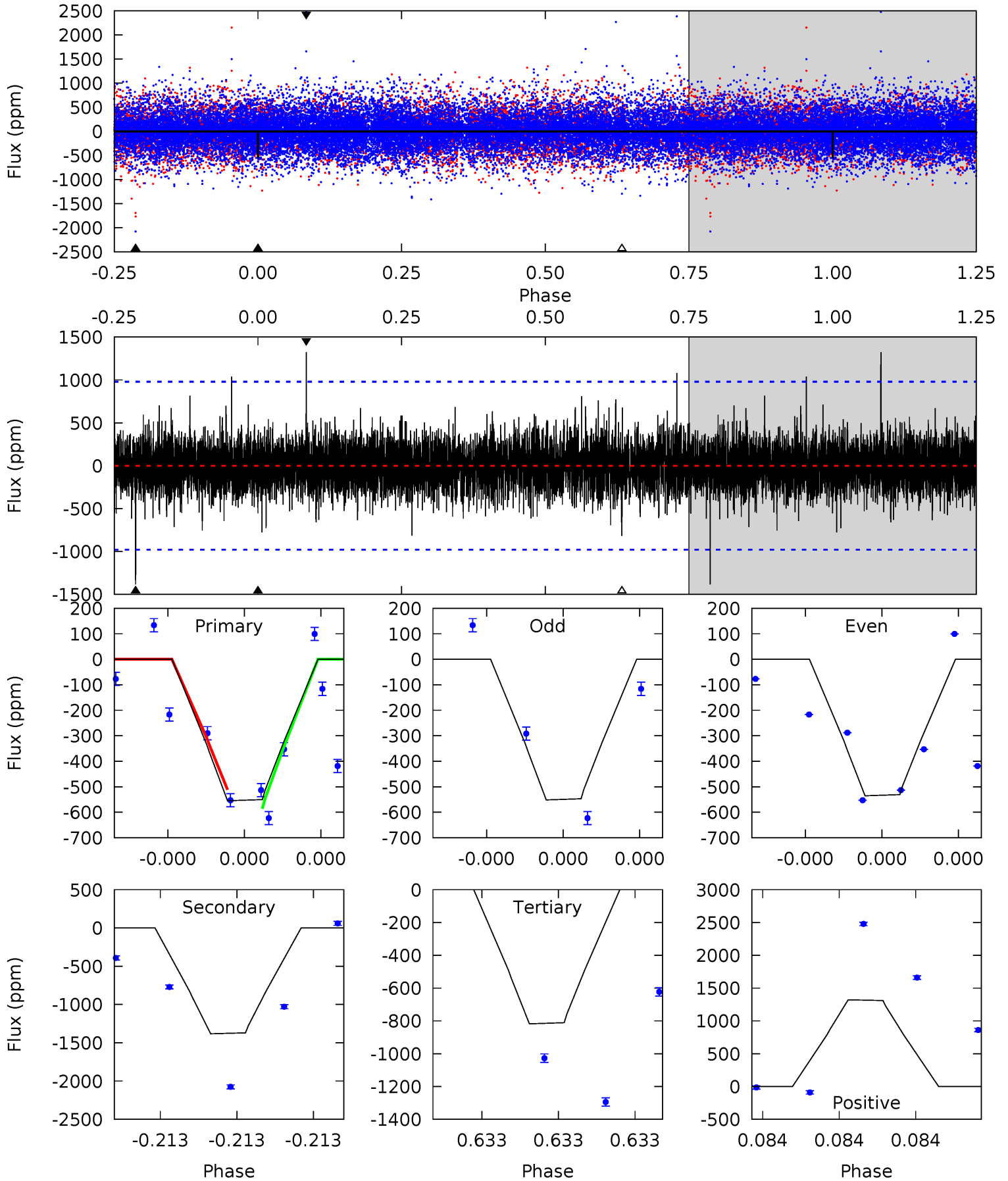
TCE 008332007-02 $P=265.390723$ Days $T_0=179.883543$ (BKJD)



DV Model-Shift Uniqueness Test

008332007-02, P = 265.394087 Days, E = 179.865712 Days

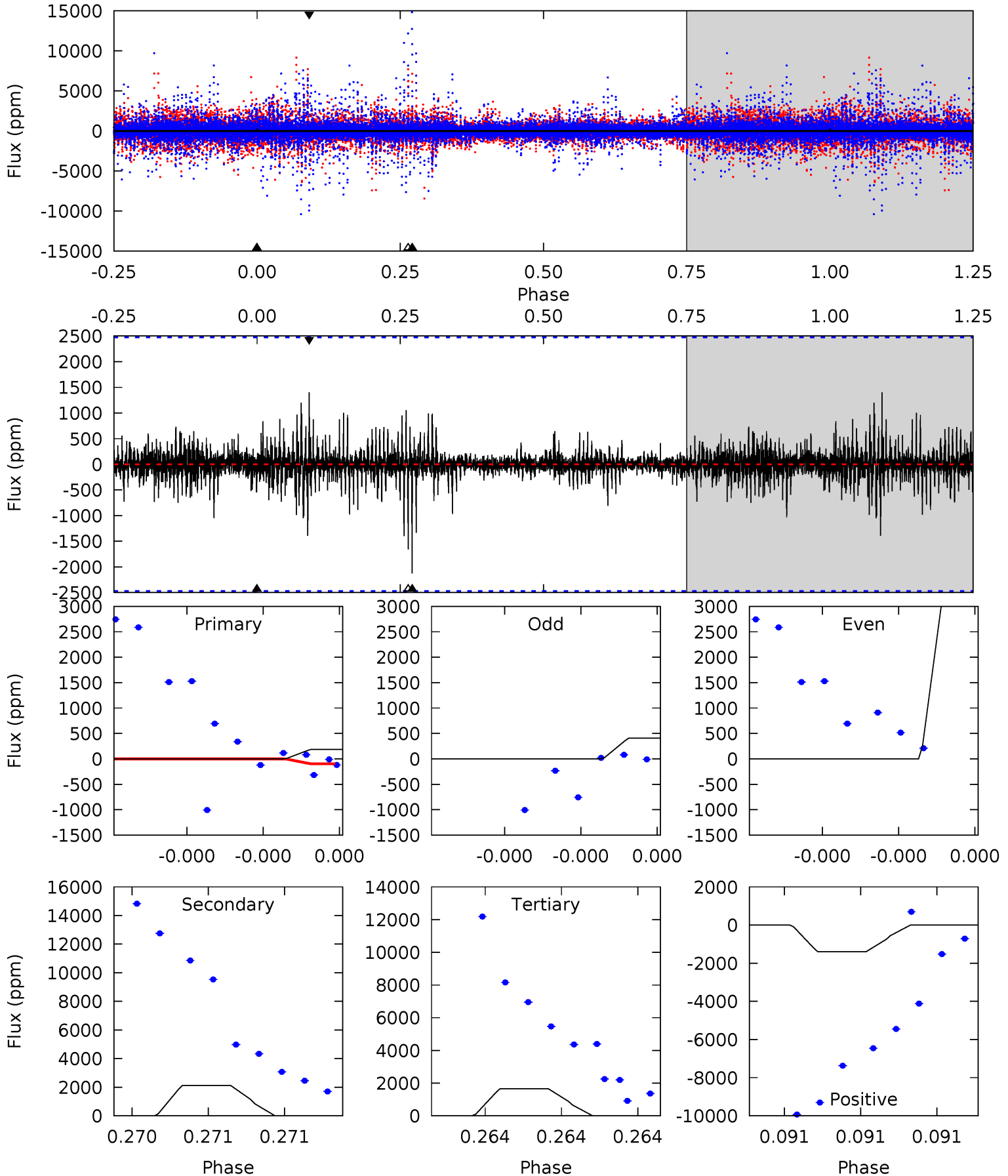
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.31	8.25	4.88	7.89	5.84	3.88	1.07	-1.57	-4.58	3.37	0.35	0.05	0.99	0.49	0.22



Alt Model-Shift Uniqueness Test

008332007-02, P = 265.390723 Days, E = 179.883543 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.43	4.89	3.82	3.22	5.70	3.67	0.35	-3.39	-2.79	1.07	1.67	3.41	106.5	0.40	0.62



Stellar Parameters For KIC 008332007

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6128^{+182}_{-218}	$4.470^{+0.056}_{-0.210}$	$-0.200^{+0.250}_{-0.300}$	$0.978^{+0.316}_{-0.105}$	$1.029^{+0.139}_{-0.139}$	$1.550^{+0.454}_{-0.837}$
	+3%/-4%	+1%/-5%	+125%/-150%	+32%/-11%	+14%/-14%	+29%/-54%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008332007-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1382±168	$30.91^{+31.25}_{-22.57}$	422^{+31}_{-21}	2945^{+1610}_{-491}	523^{+6835}_{-393}
Alt.	-2124±434	$29.98^{+30.71}_{-20.76}$	421^{+33}_{-21}	3159^{+1471}_{-570}	851^{+7251}_{-648}

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 $A_{obs} \gg 1.0$

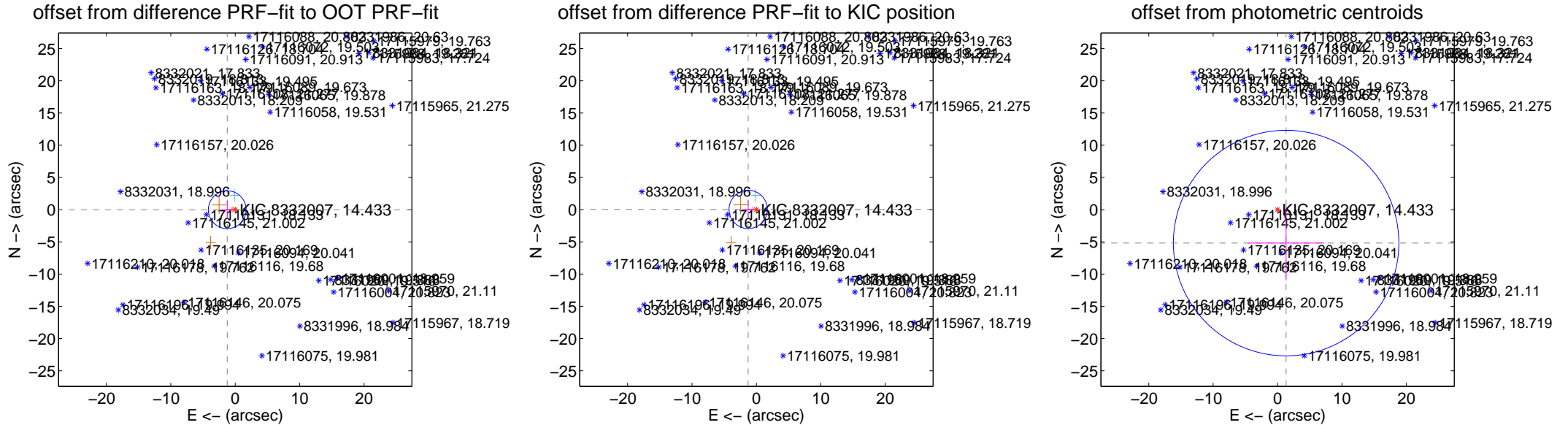
DV Centroid Data

Supplemental centroid analysis for 008332007-02. Kepler magnitude: 14.43. Transit SNR 1.62

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.234 ± 0.978	1.26	1.234 ± 0.978	-0.014 ± 1.394
PRF-fit source offset from KIC position	1.274 ± 0.991	1.29	1.274 ± 0.990	0.037 ± 1.398
photometric centroid source offset	5.35 ± 5.83	0.92	-1.32 ± 5.94	-5.19 ± 5.83



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.

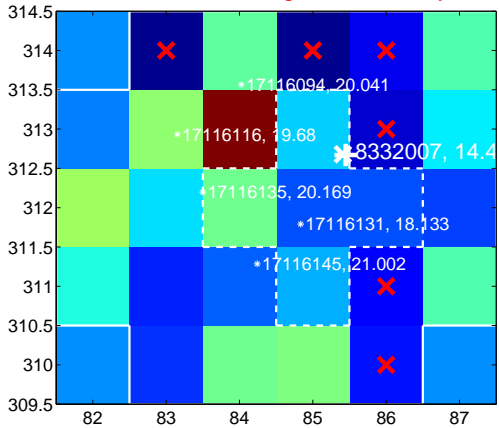
Q1 no difference image



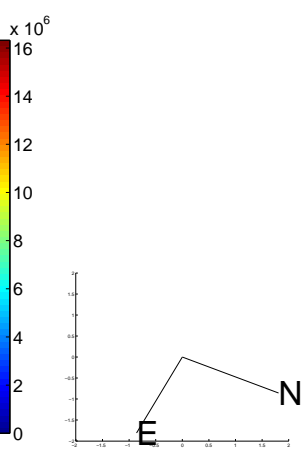
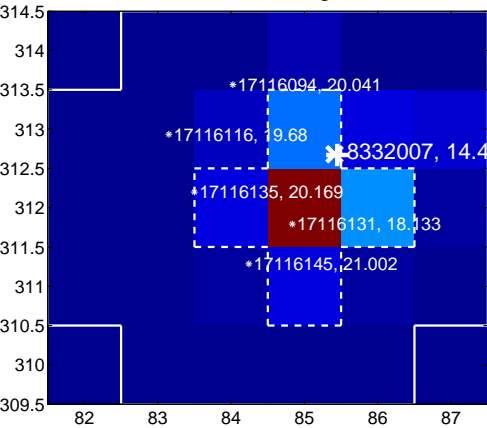
Q1 no OOT image



Q2 difference image. Poor Quality



Q2 OOT image



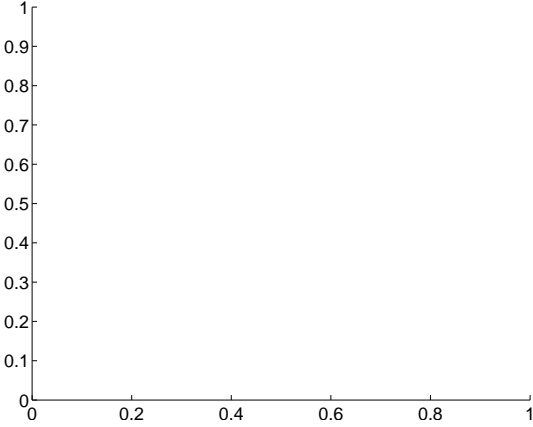
Q3 no difference image



Q3 no OOT image



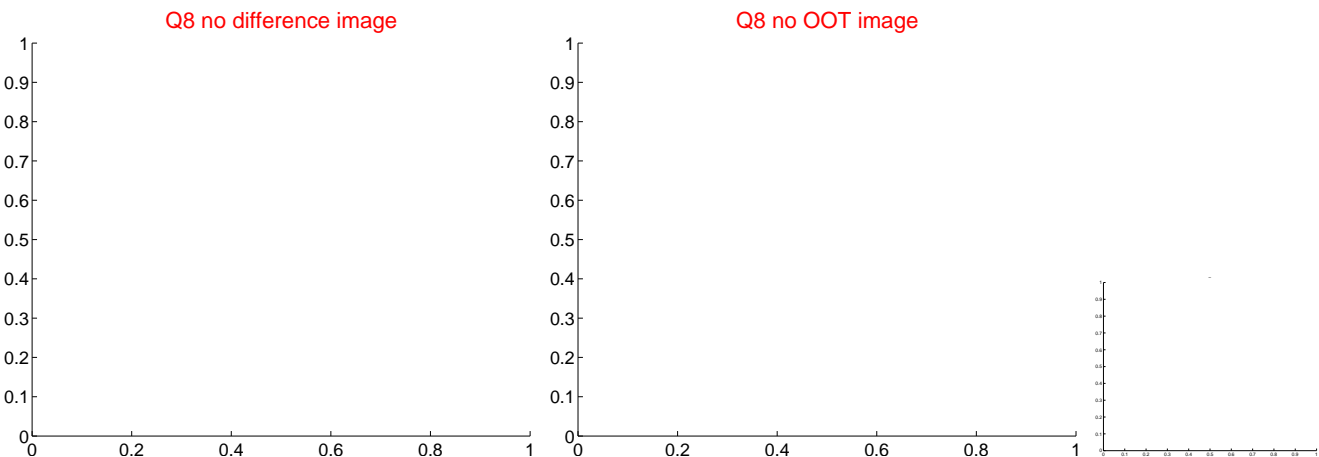
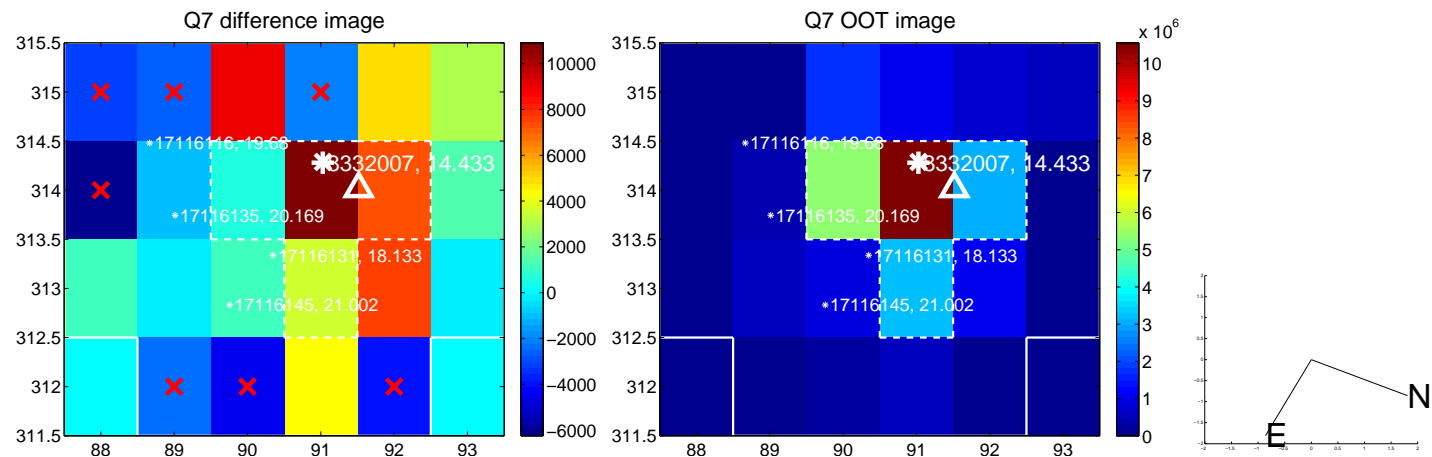
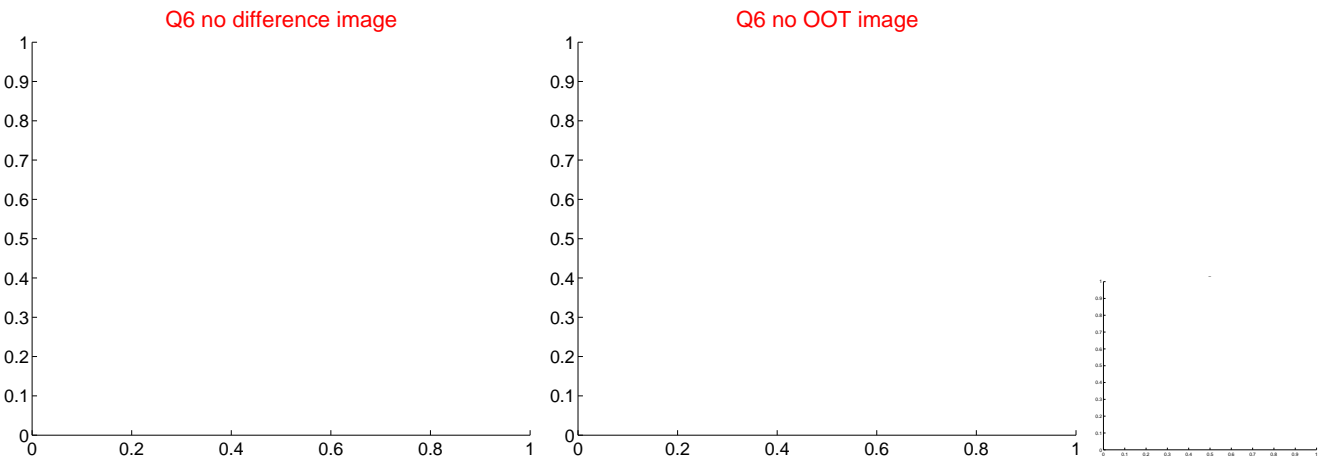
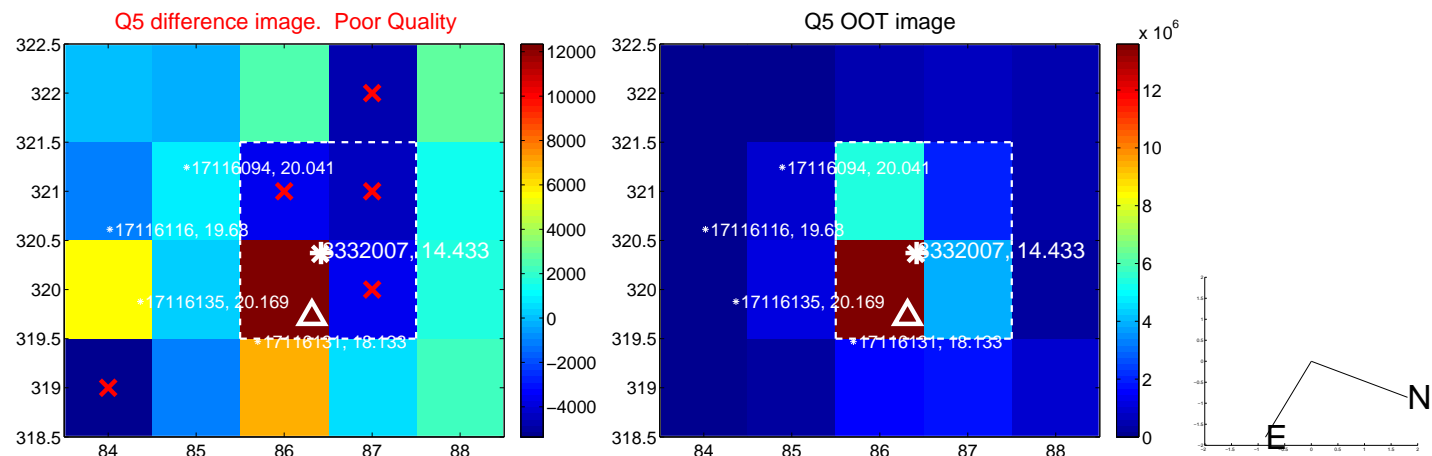
Q4 no difference image



Q4 no OOT image



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



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

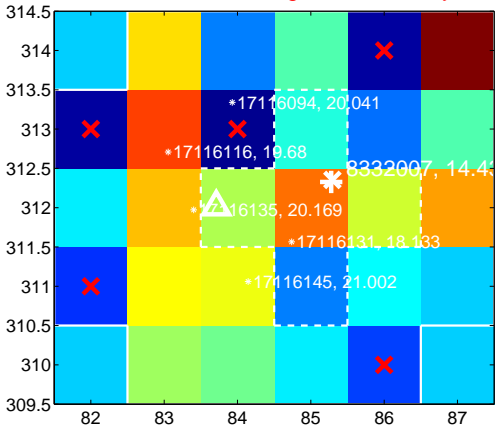
Q9 no difference image



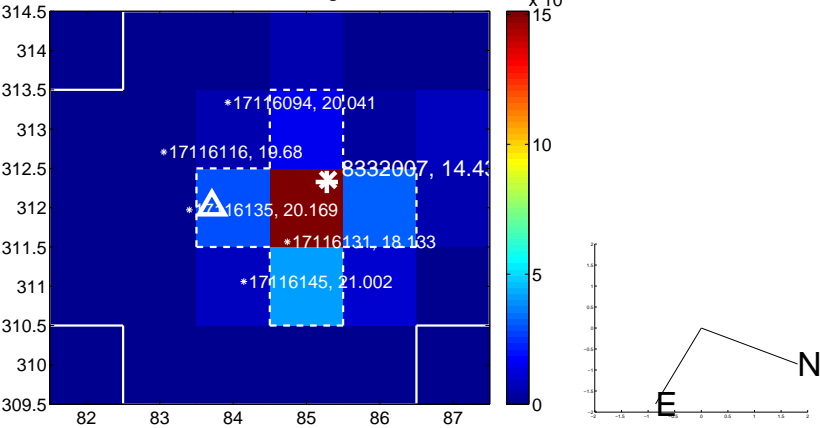
Q9 no OOT image



Q10 difference image. Poor Quality



Q10 OOT image



Q11 no difference image



Q11 no OOT image



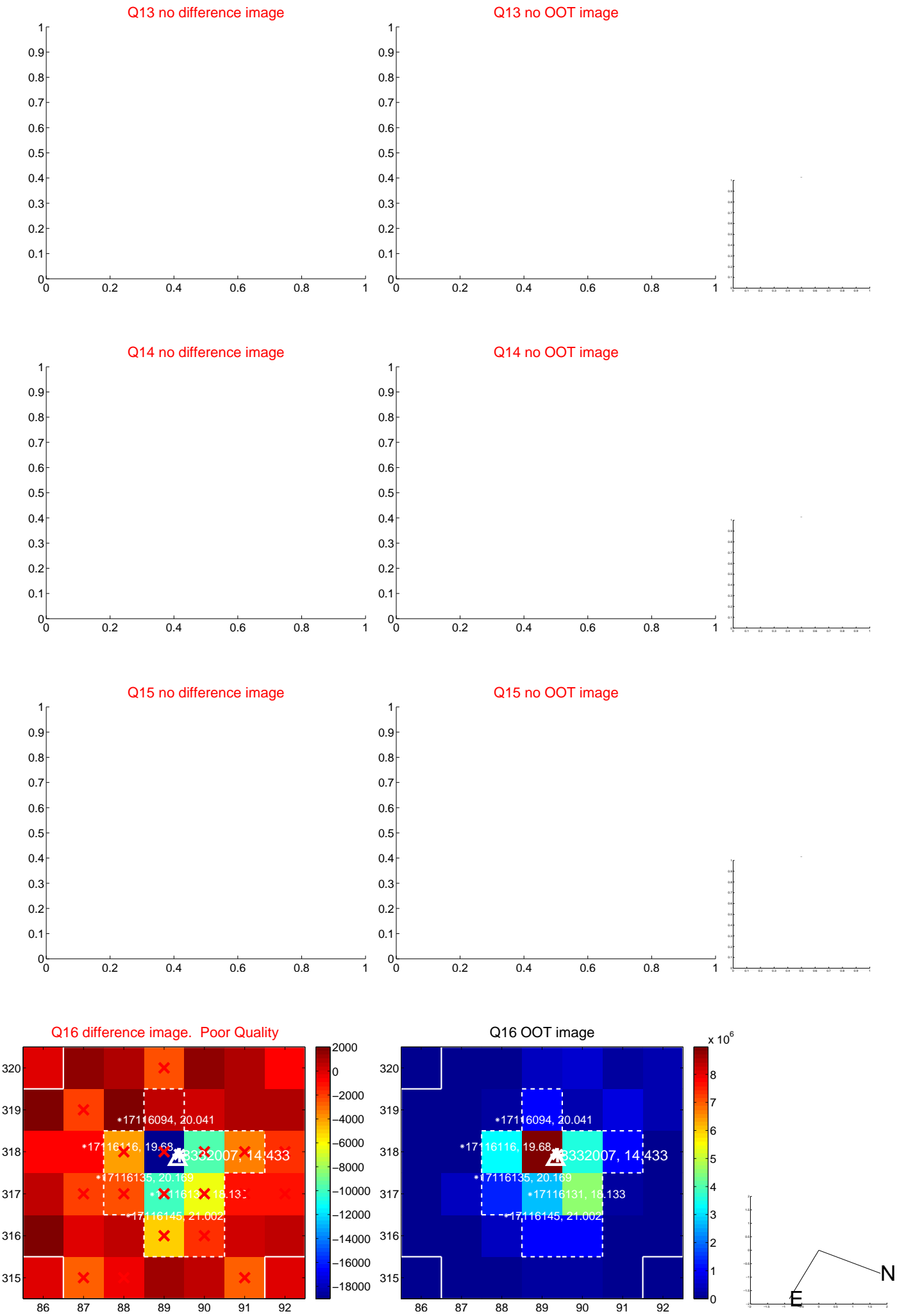
Q12 no difference image



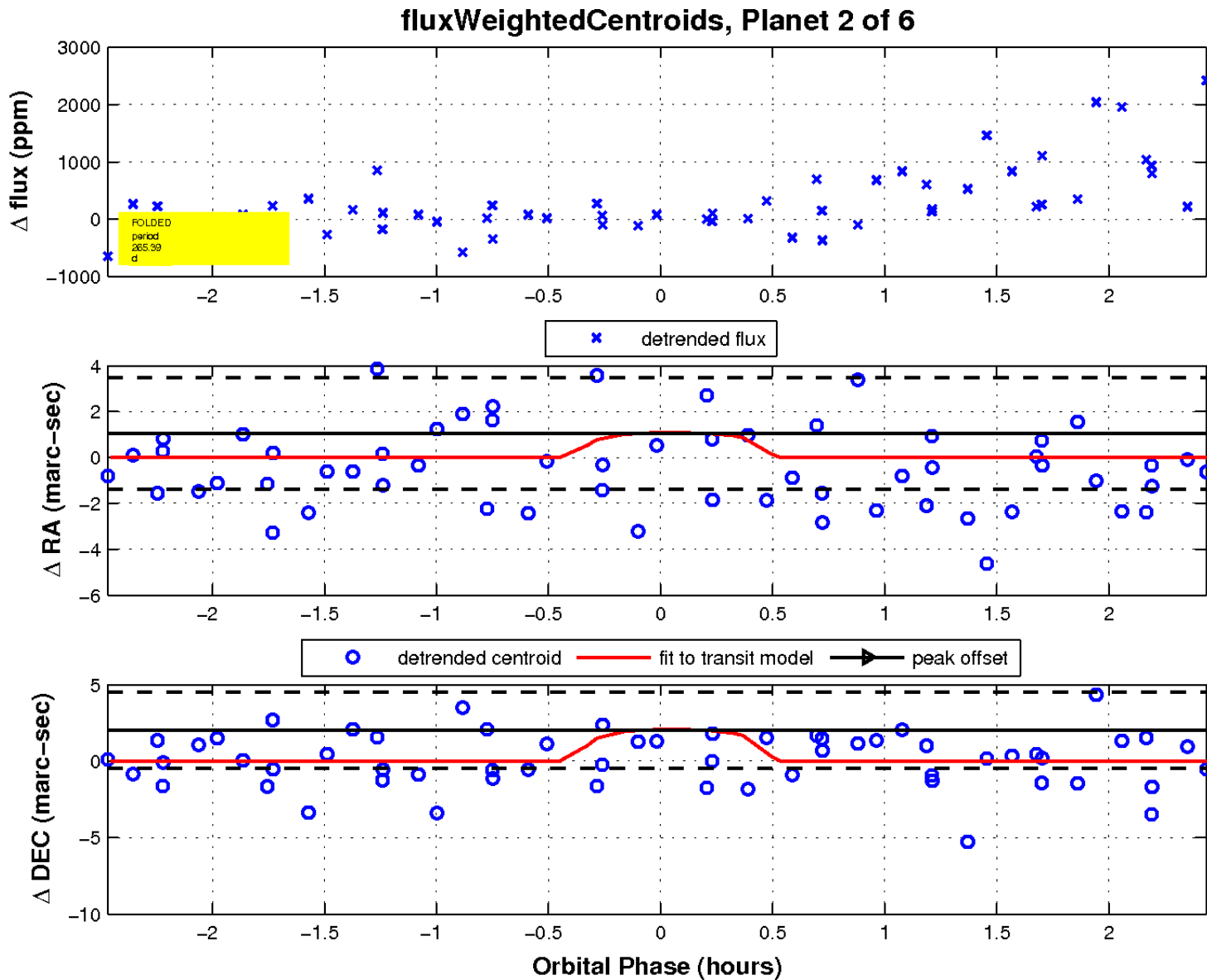
Q12 no OOT image



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

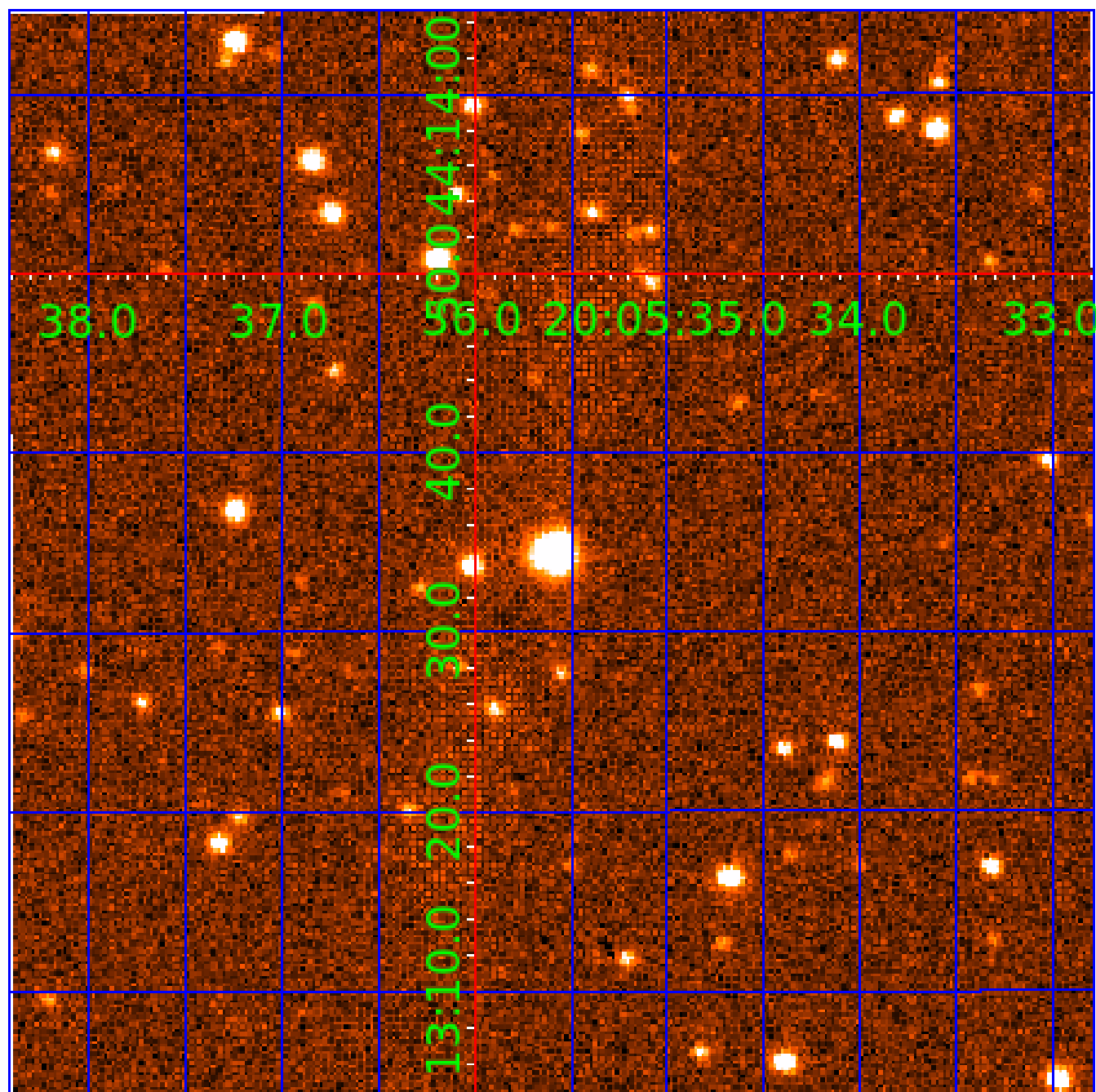


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008332007

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})
008332007-01	OBS	No	0.934788	131.738201	76.8	4.058	8.0	8.7	0.98	6128	0.87	3384.11
008332007-02	OBS	No	265.394087	179.865712	391.6	0.823	9.3	1.6	0.98	6128	2.03	1.81
008332007-03	OBS	No	265.385665	180.031146	1991.0	5.170	11.6	9.1	0.98	6128	7.21	1.81
008332007-04	OBS	No	170.676286	175.075518	1500.9	7.561	9.0	7.4	0.98	6128	3.95	3.27
008332007-05	OBS	No	350.317803	173.199242	1598.5	4.367	8.0	7.2	0.98	6128	4.38	1.25
008332007-06	OBS	No	0.934854	132.171420	78.0	6.698	7.5	7.2	0.98	6128	0.87	3383.79

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008332007-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV
008332007-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_TRACKER—LPP_DV—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
008332007-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT— INCONSISTENT_TRANS—SAME_NTL_PERIOD—HALO_GHOST
008332007-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
008332007-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_POS_DV
008332007-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—SAME_NTL_PERIOD—HALO_GHOST

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

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

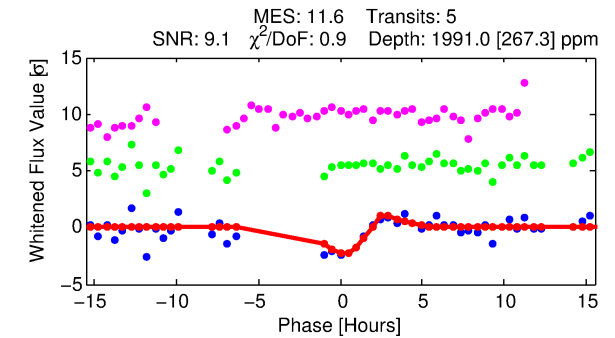
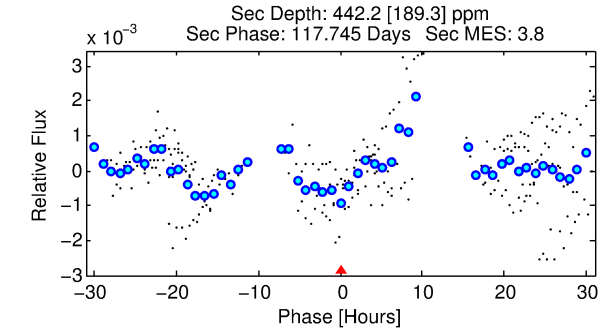
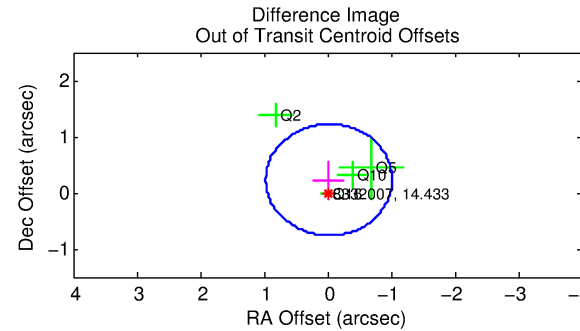
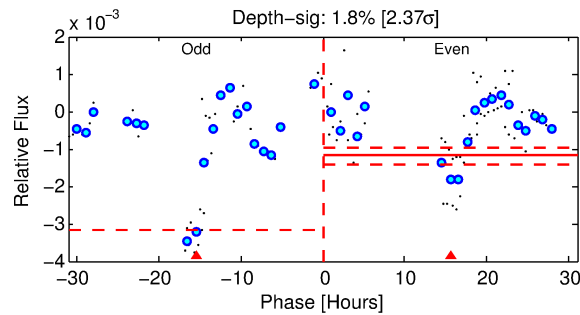
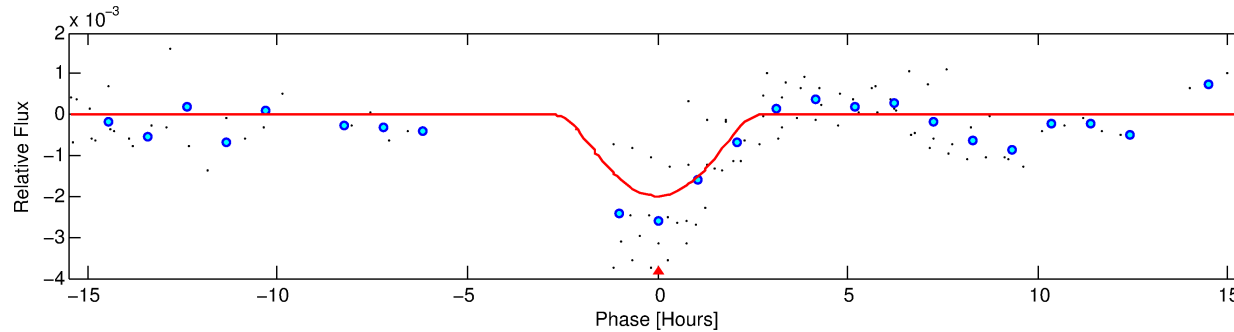
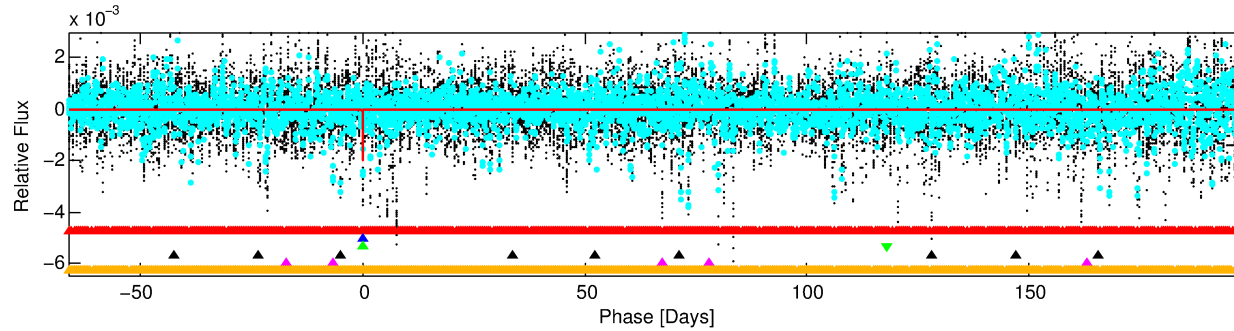
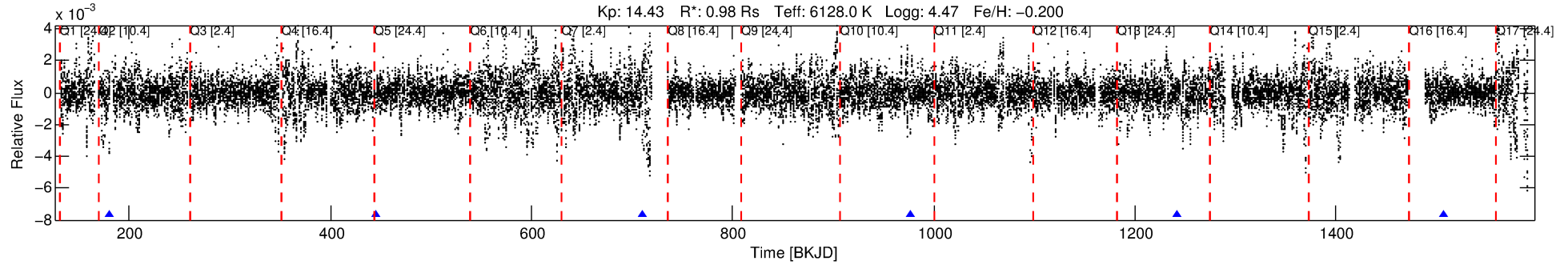
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008332007-03

No Significant Match Found

DV One-Page Summary

KIC: 8332007 Candidate: 3 of 6 Period: 265.386 d



DV Fit Results:

Period = 265.38566 [0.00499] d
Epoch = 180.0311 [0.0116] BKJD
Rp/R* = 0.0675 [0.1096]
a/R* = 160.55 [78.56]
b = 0.99 [0.18]
Seff = 1.81 [0.75]
Teq = 296 [31] K
Rp = 7.21 [11.92] Re
a = 0.8163 [0.2196] AU
Ag = 3119.49 [10279.86] [0.30 σ]
Teffp = 3419 [2800] K [1.12 σ]

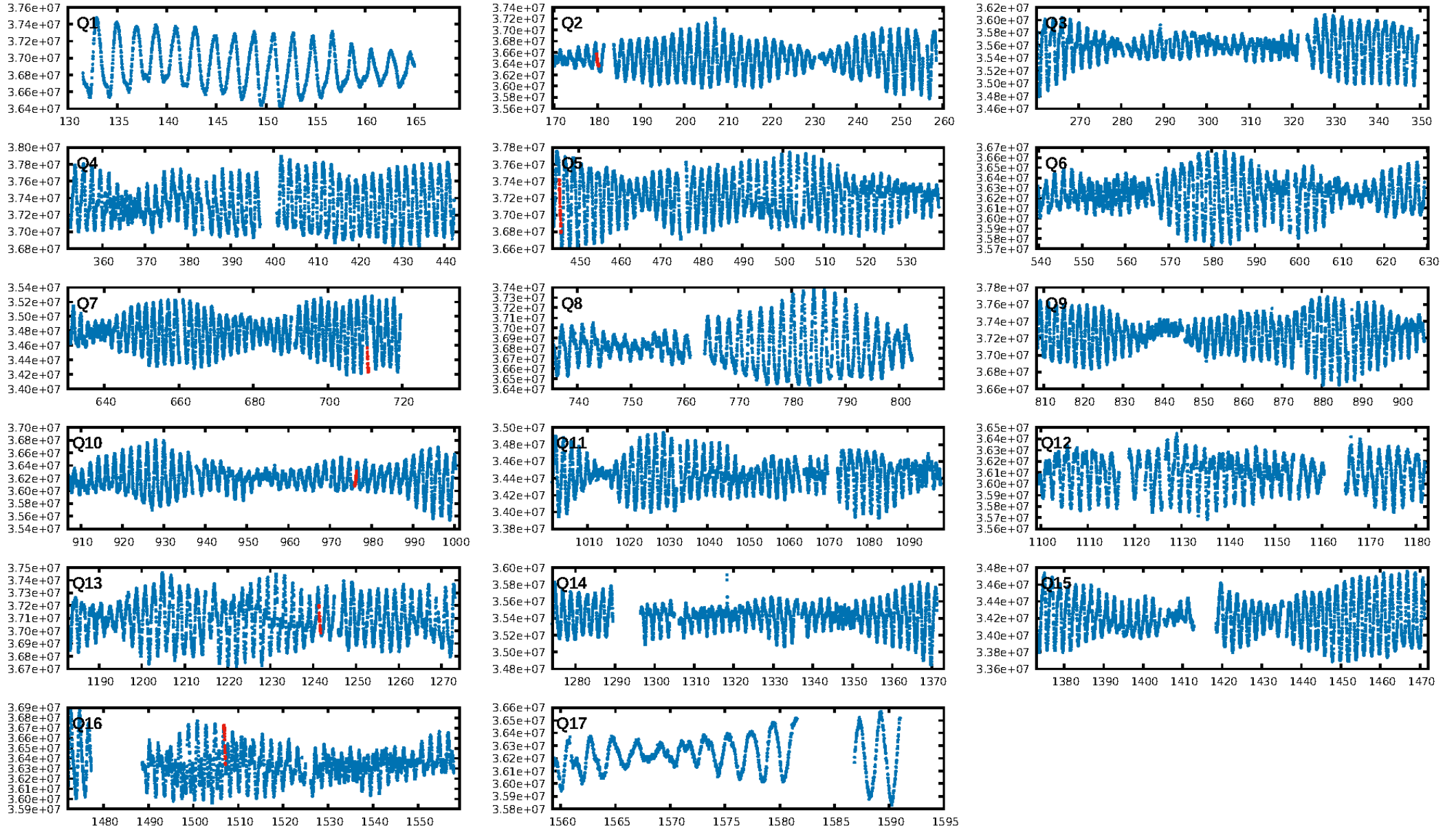
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [248.17 σ]
LongPeriod-sig: 3.1% [0.04 σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 0.2267
Centroid-sig: 22.2%
Centroid-so: 1.236 arcsec [2.28 σ]
OotOffset-rm: 0.230 arcsec [0.70 σ]
KicOffset-rm: 0.265 arcsec [0.74 σ]
OotOffset-st: 2/0/1/1 [4]
KicOffset-st: 2/0/1/1 [4]
DiffImageQuality-fgm: 0.75 [3/4]
DiffImageOverlap-fno: 0.00 [0/4]

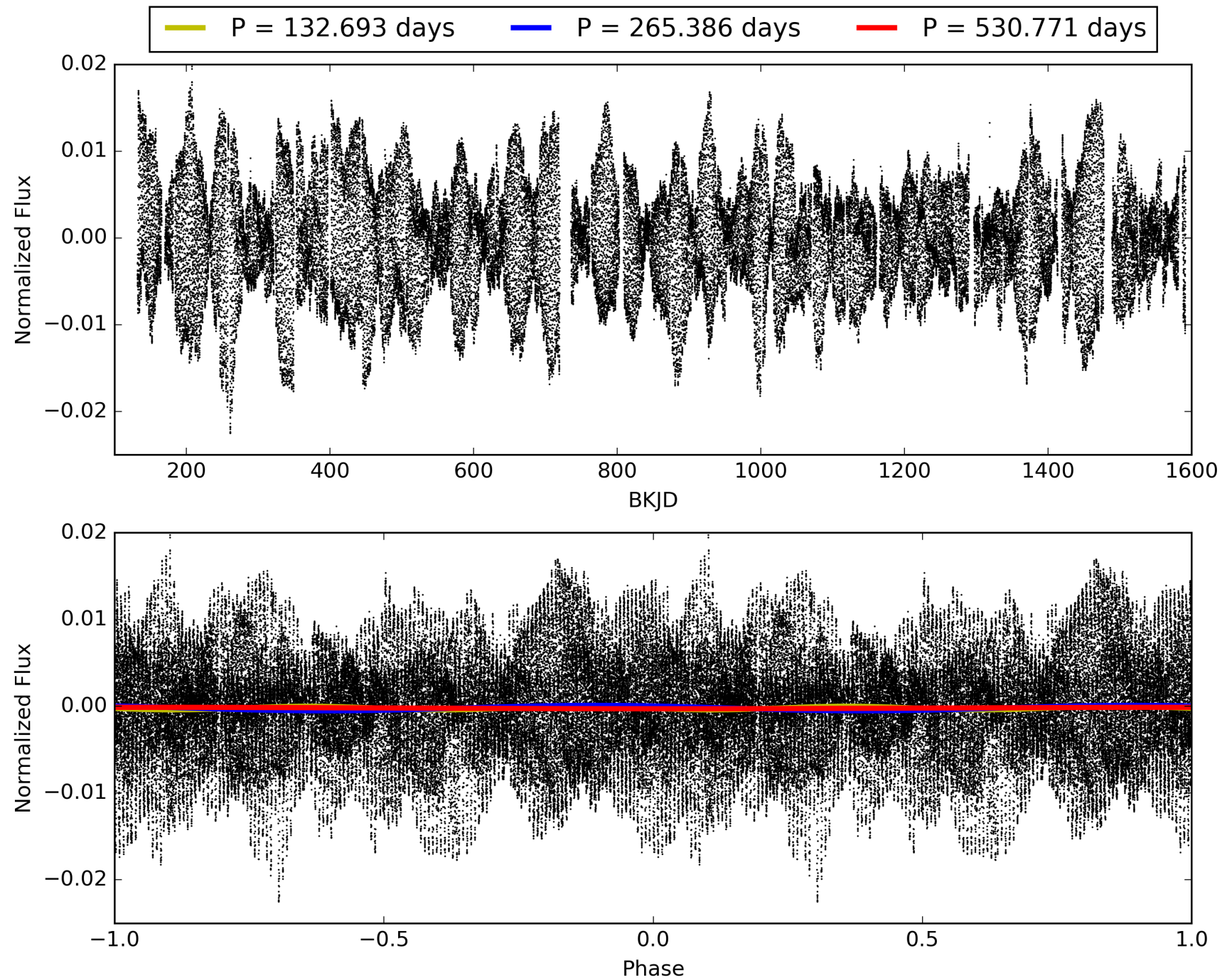
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 06:03:32 Z

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

TCE 008332007-03, PDC Light Curves

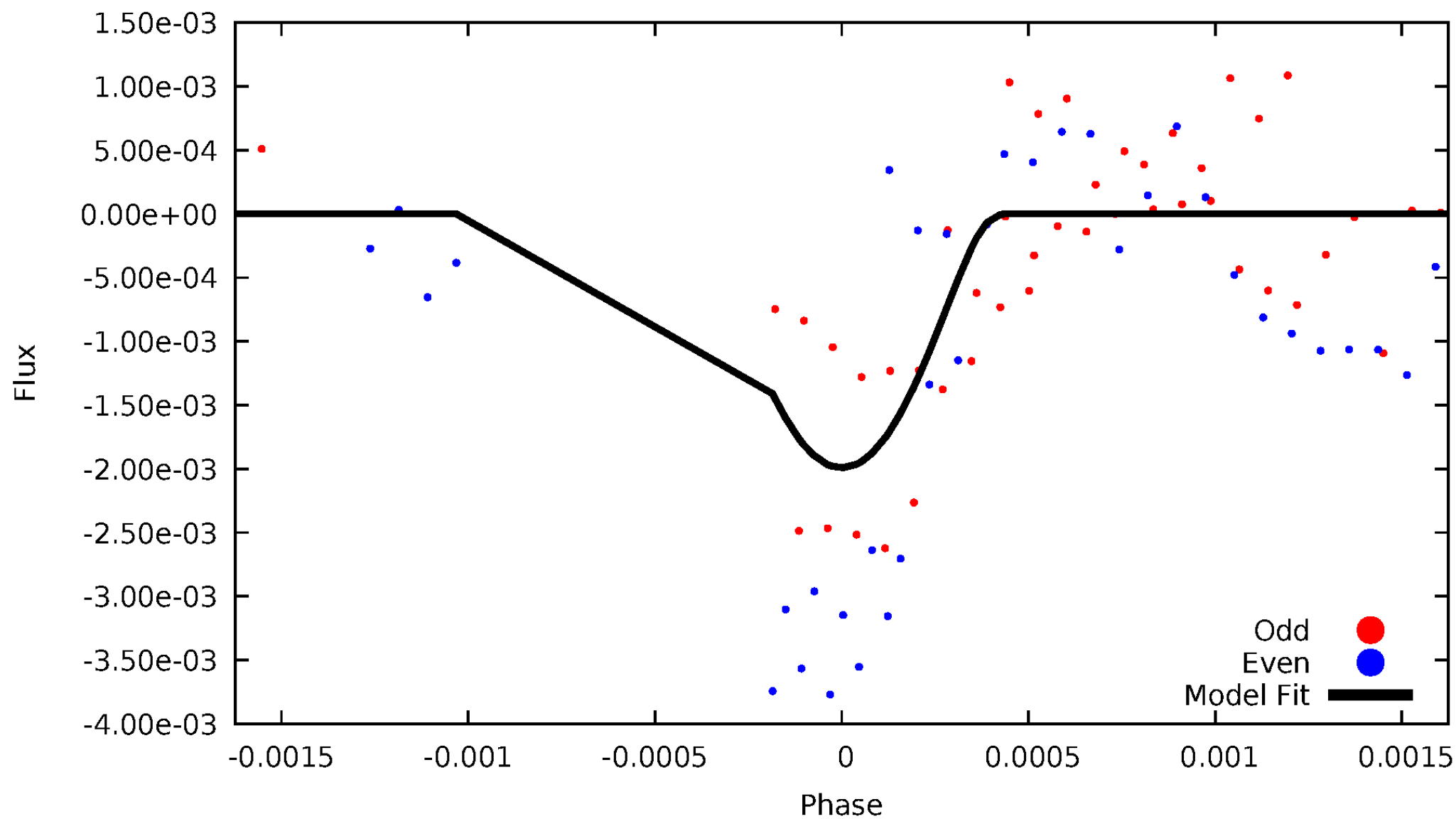


TCE 008332007-03



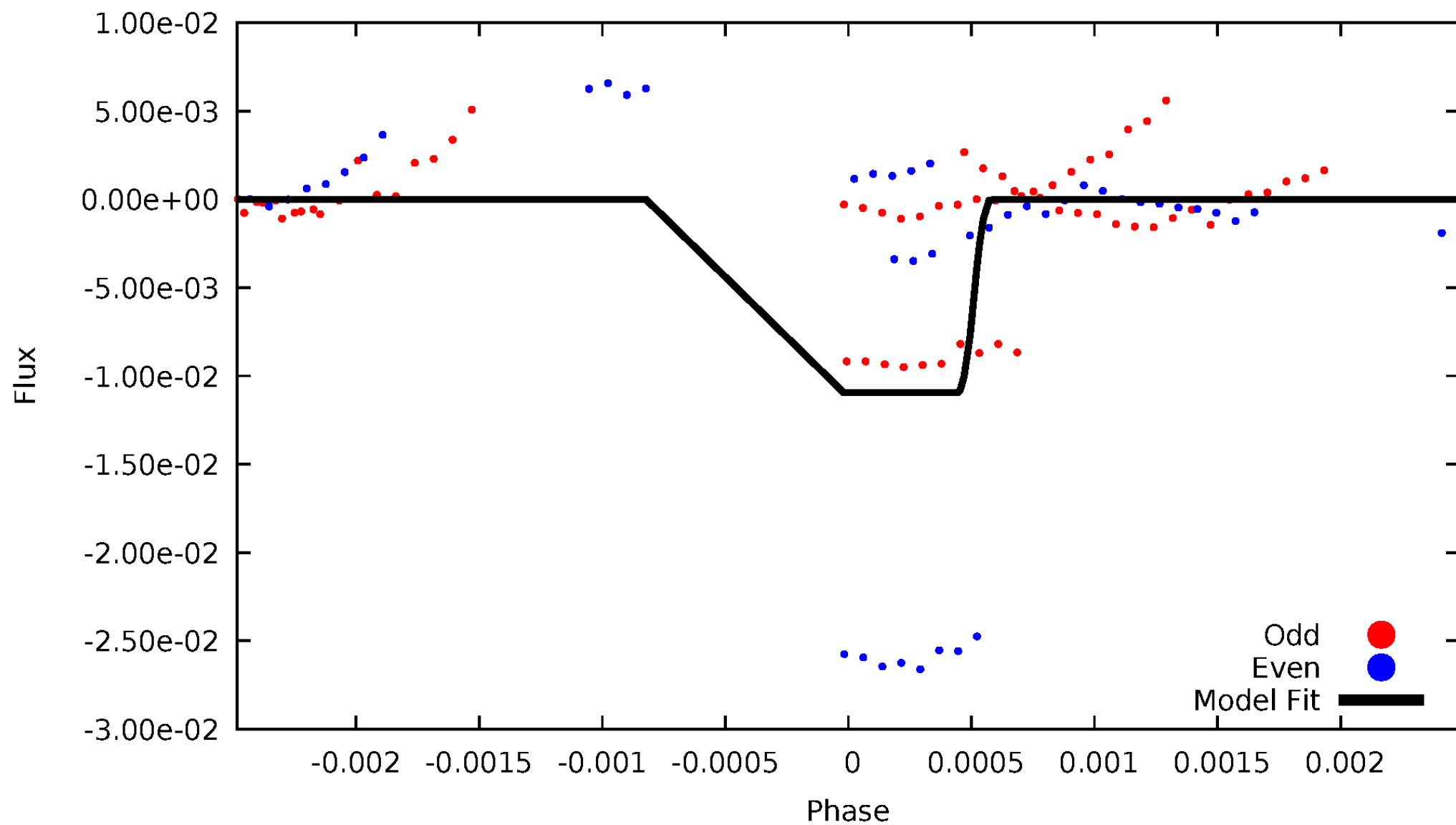
DV Odd/Even

TCE 008332007-03



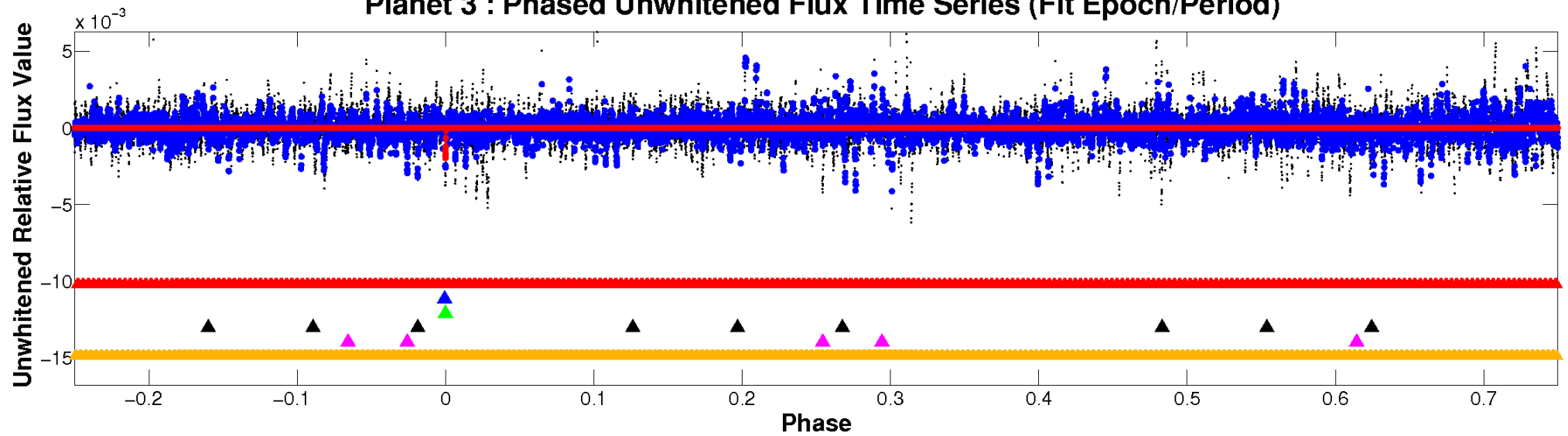
ALT Odd/Even

TCE 008332007-03

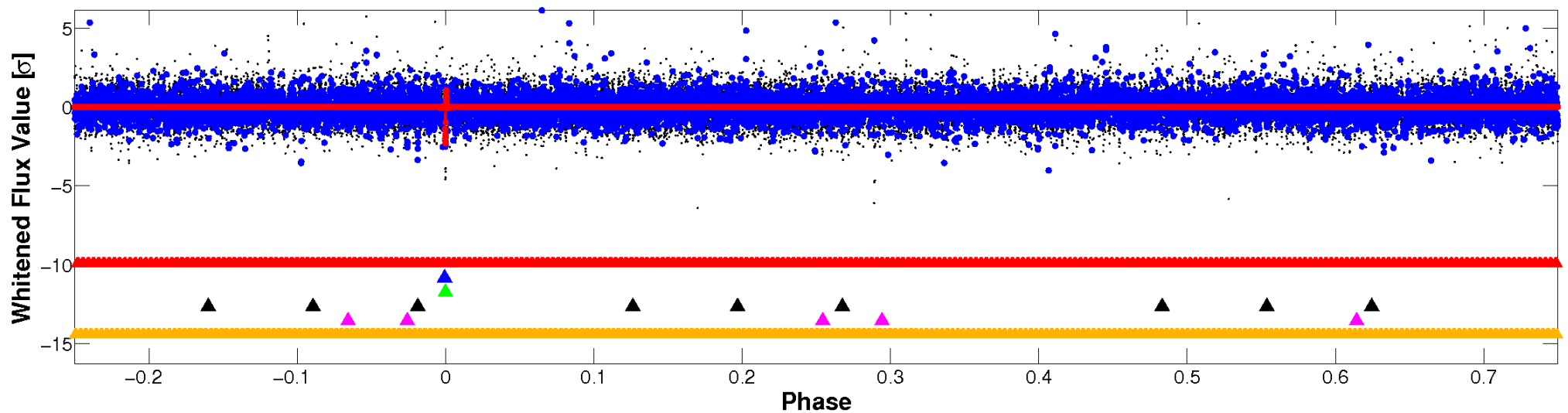


Non-Whitened Vs. Whitened Light Curve

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

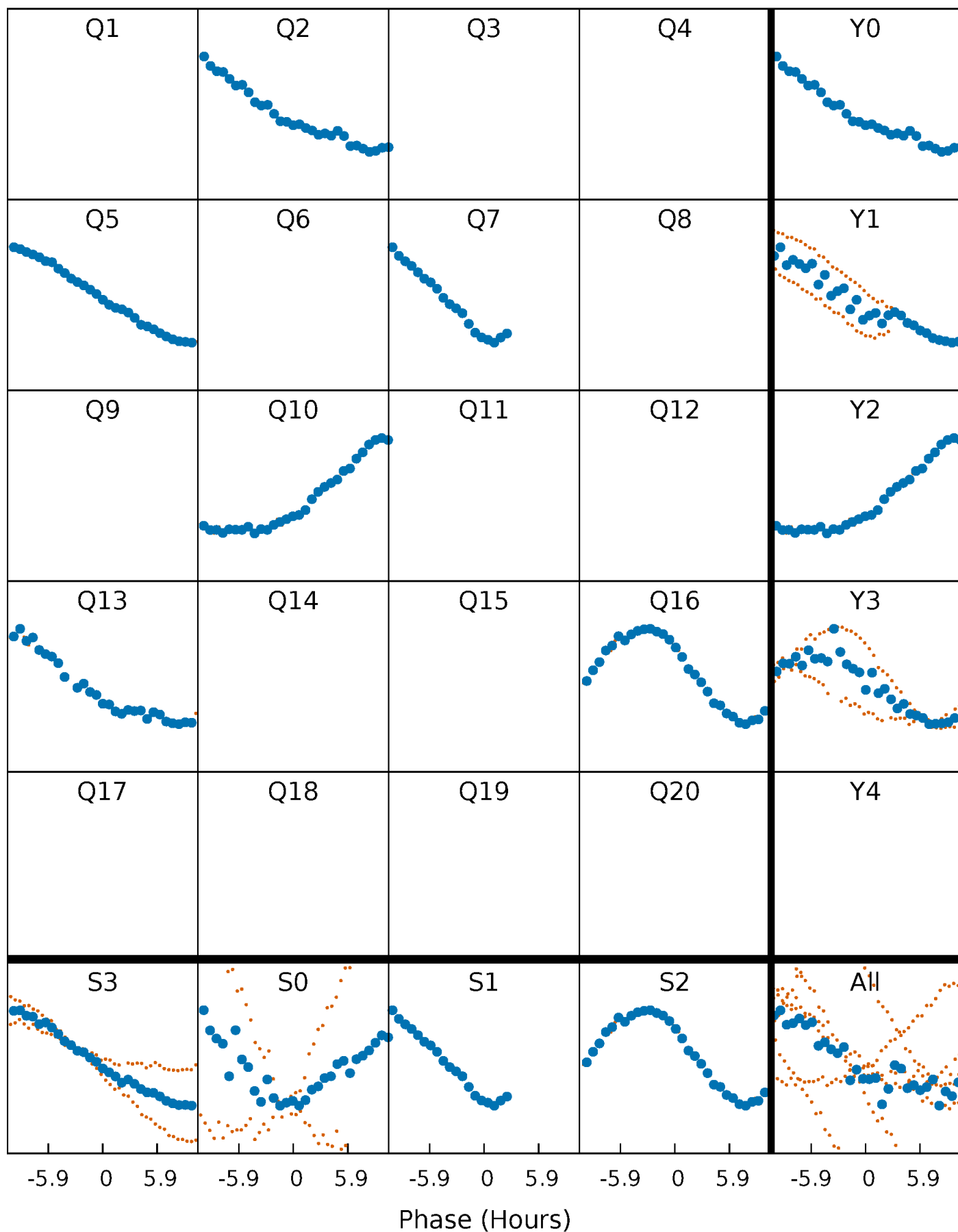


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



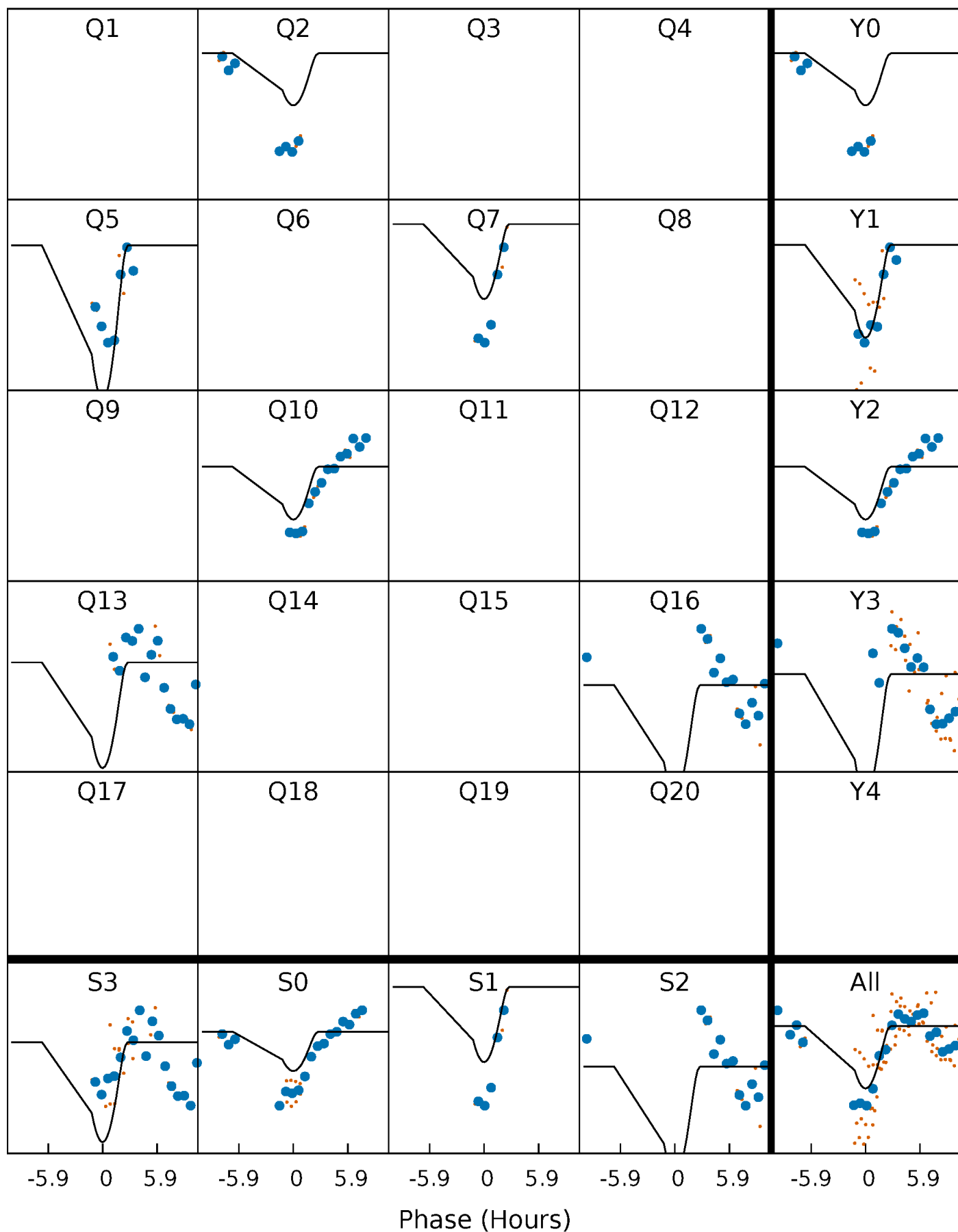
PDC Quarter-Phased Transit Curves

TCE 008332007-03 $P=265.385665$ Days $T_0=180.031146$ (BKJD)



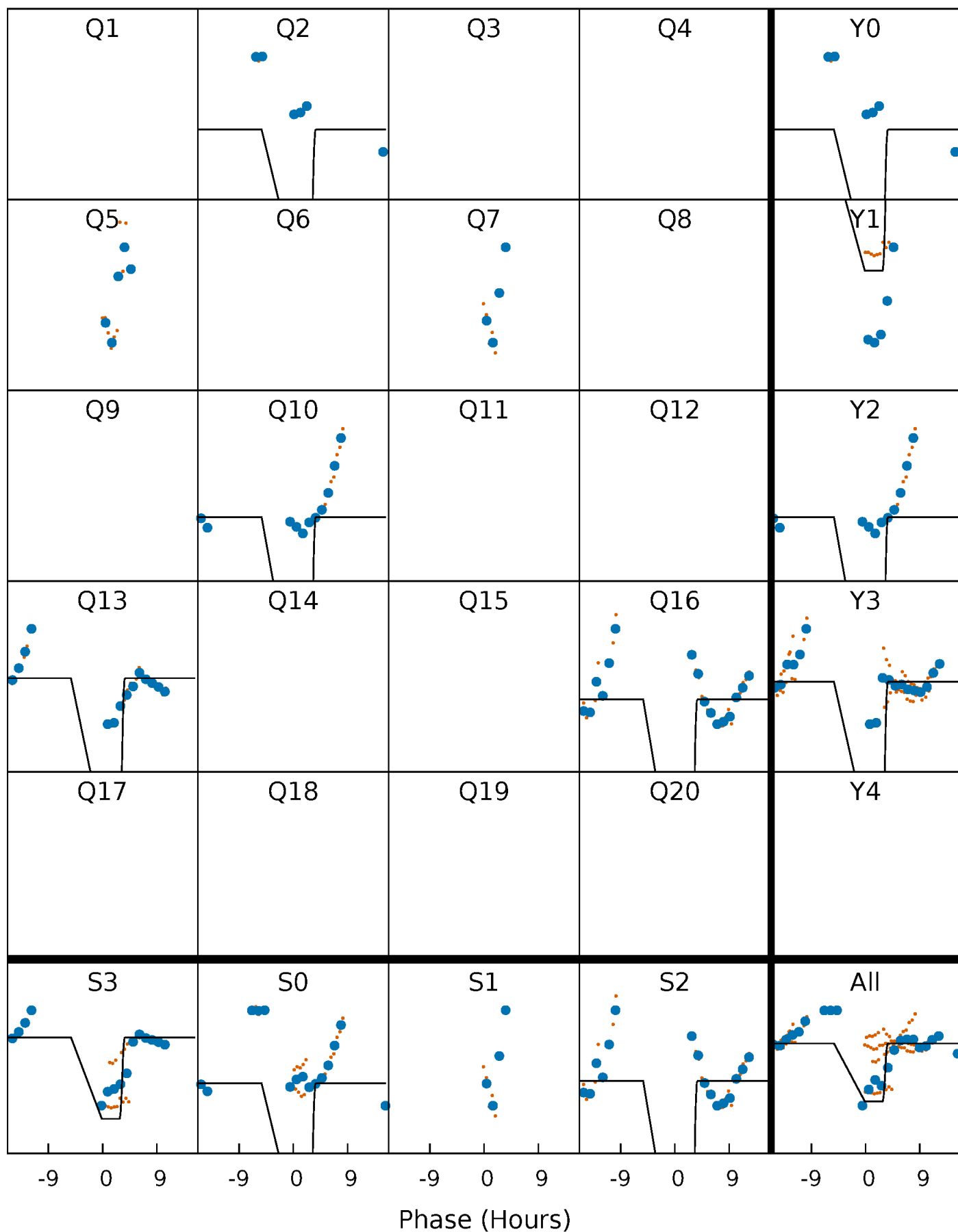
DV Quarter-Phased Transit Curves

TCE 008332007-03 $P=265.385665$ Days $T_0=180.031146$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

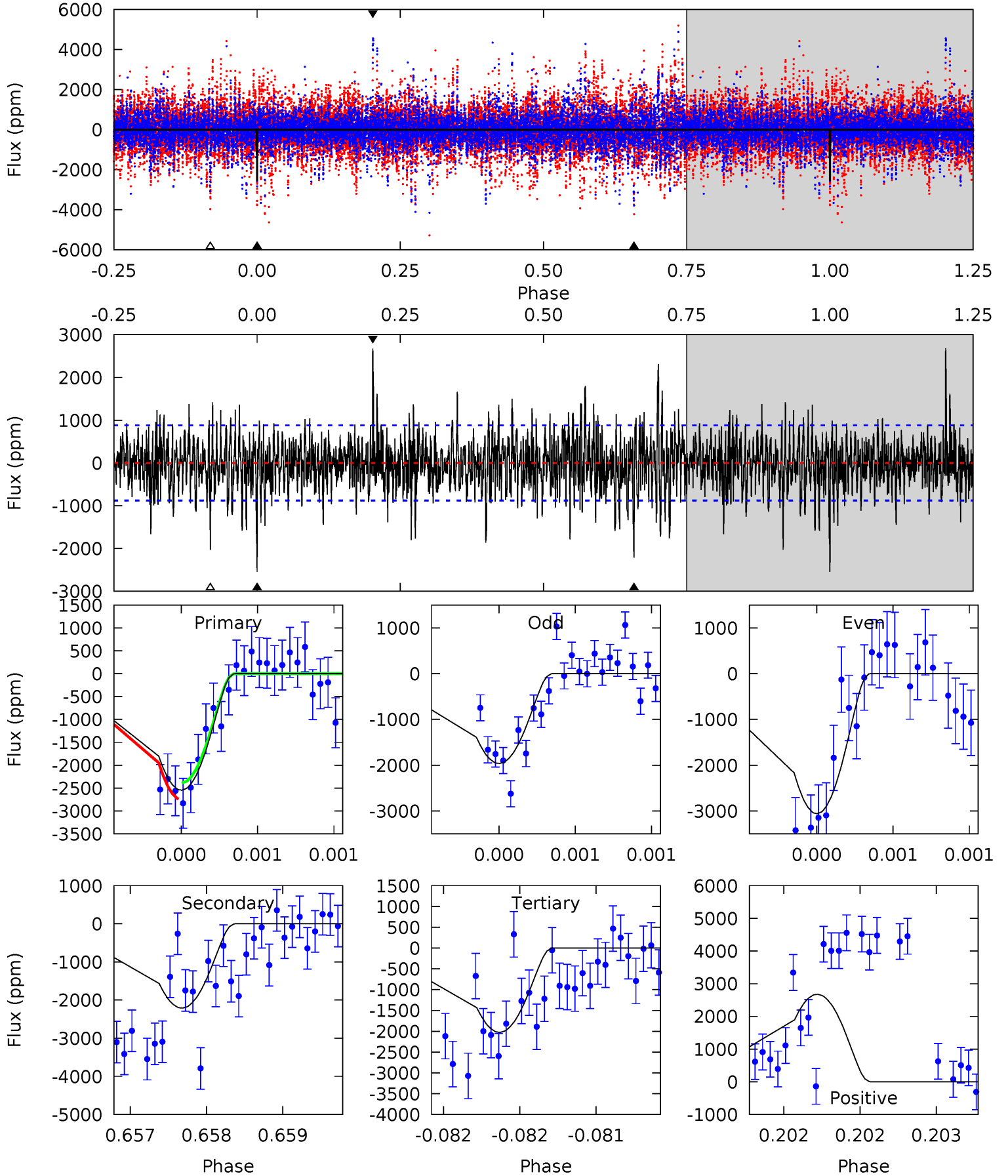
TCE 008332007-03 P=265.395584 Days $T_0=179.975680$ (BKJD)



DV Model-Shift Uniqueness Test

008332007-03, $P = 265.385665$ Days, $E = 180.031146$ Days

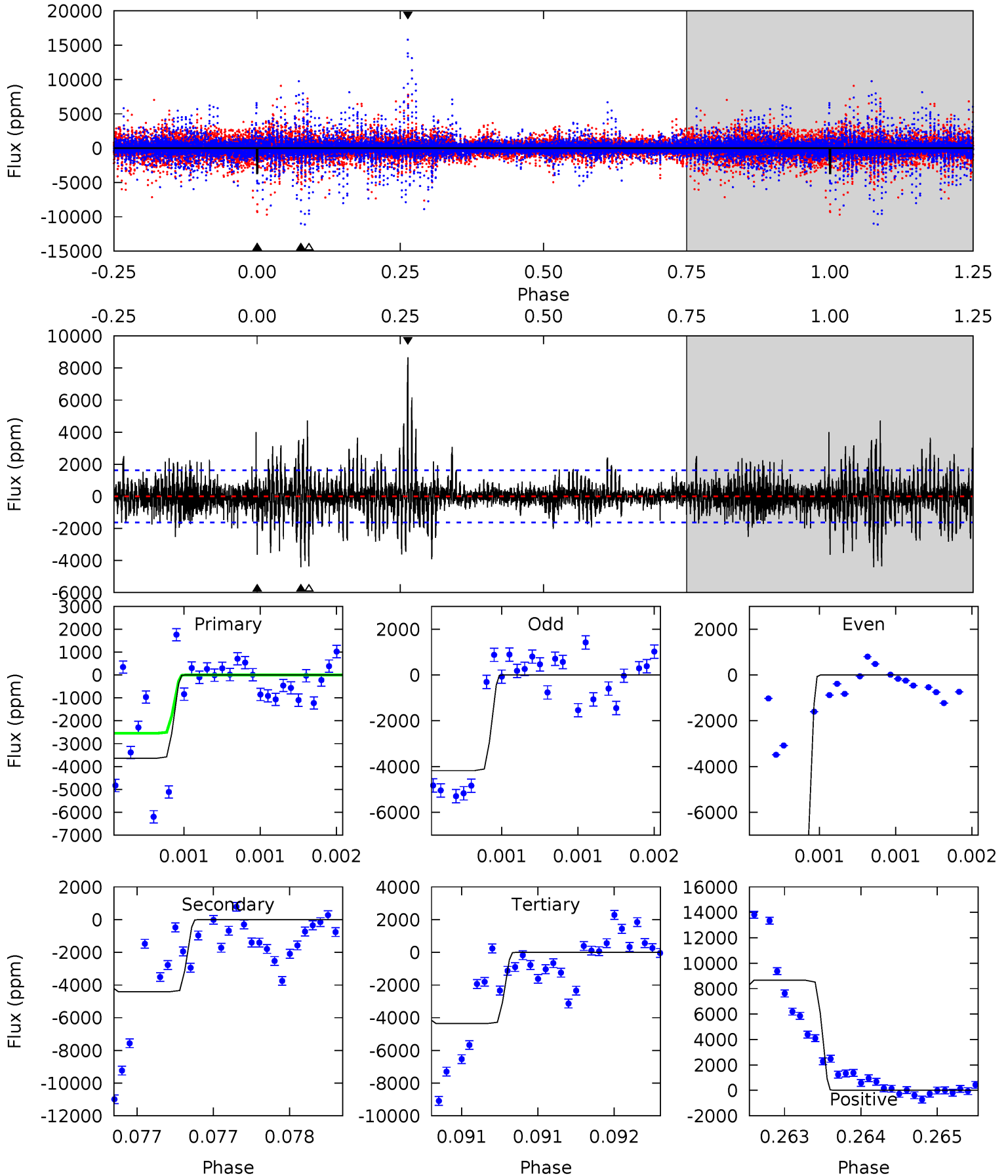
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.0	13.9	12.7	16.8	5.53	3.42	3.13	3.26	-0.82	1.16	-2.92	3.32	0.79	0.51	0.96



Alt Model-Shift Uniqueness Test

008332007-03, P = 265.395584 Days, E = 179.975680 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.4	15.0	14.8	29.5	5.54	3.44	2.09	-2.42	-17.1	0.18	-14.5	14.0	3.06	0.66	6.57



Stellar Parameters For KIC 008332007

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6128^{+182}_{-218}	$4.470^{+0.056}_{-0.210}$	$-0.200^{+0.250}_{-0.300}$	$0.978^{+0.316}_{-0.105}$	$1.029^{+0.139}_{-0.139}$	$1.550^{+0.454}_{-0.837}$
	+3%/-4%	+1%/-5%	+125%/-150%	+32%/-11%	+14%/-14%	+29%/-54%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008332007-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-2211 ± 159	$11.50^{+10.65}_{-7.84}$	421^{+29}_{-20}	4359^{+2935}_{-883}	6049^{+49428}_{-4420}
Alt.	-4409 ± 294	$14.36^{+11.27}_{-9.01}$	423^{+33}_{-23}	4564^{+2660}_{-830}	7539^{+44667}_{-5136}

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 $A_{obs} \gg 1.0$

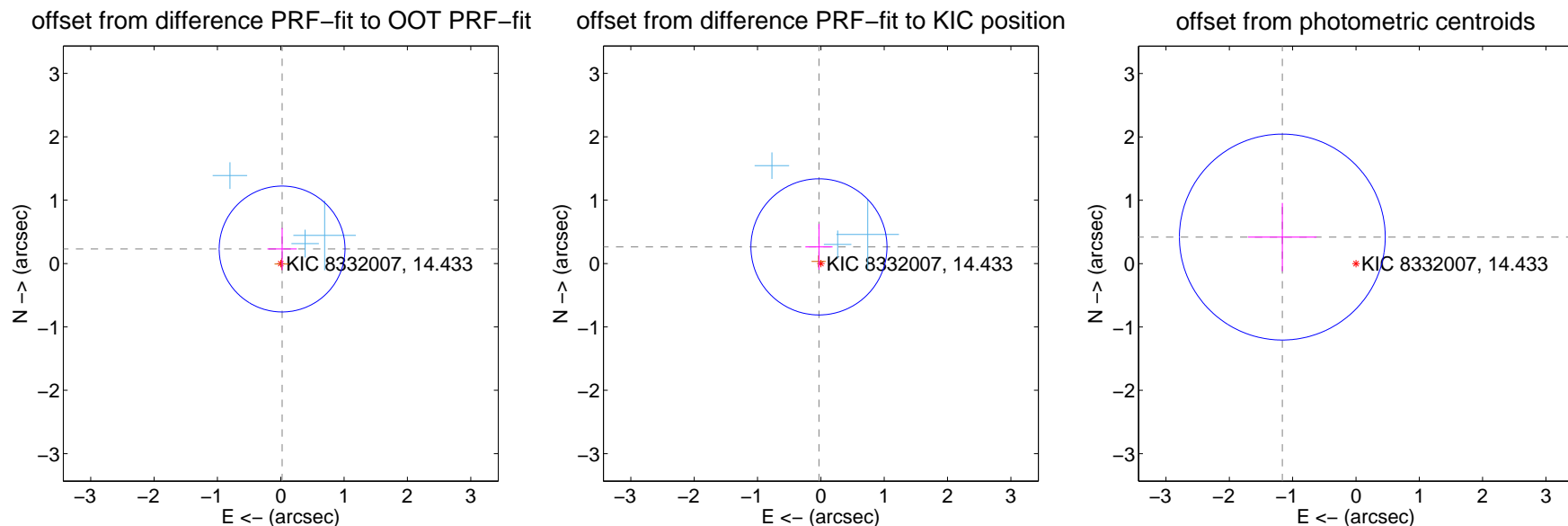
DV Centroid Data

Supplemental centroid analysis for 008332007-03. Kepler magnitude: 14.43. Transit SNR 9.14

There are 3 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.230 ± 0.331	0.70	-0.021 ± 0.232	0.229 ± 0.332
PRF-fit source offset from KIC position	0.265 ± 0.358	0.74	0.030 ± 0.215	0.263 ± 0.360
photometric centroid source offset	1.24 ± 0.54	2.28	1.16 ± 0.54	0.42 ± 0.54



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.

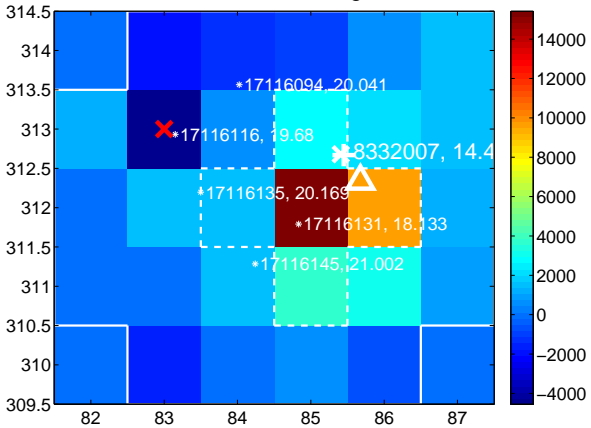
Q1 no difference image



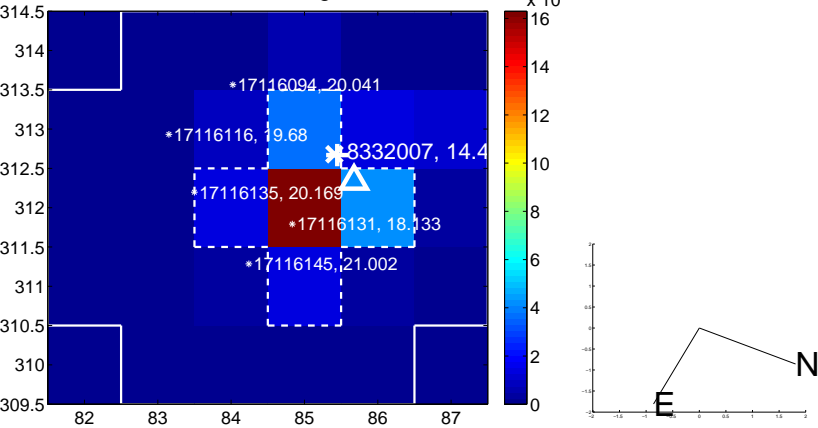
Q1 no OOT image



Q2 difference image



Q2 OOT image



Q3 no difference image



Q3 no OOT image



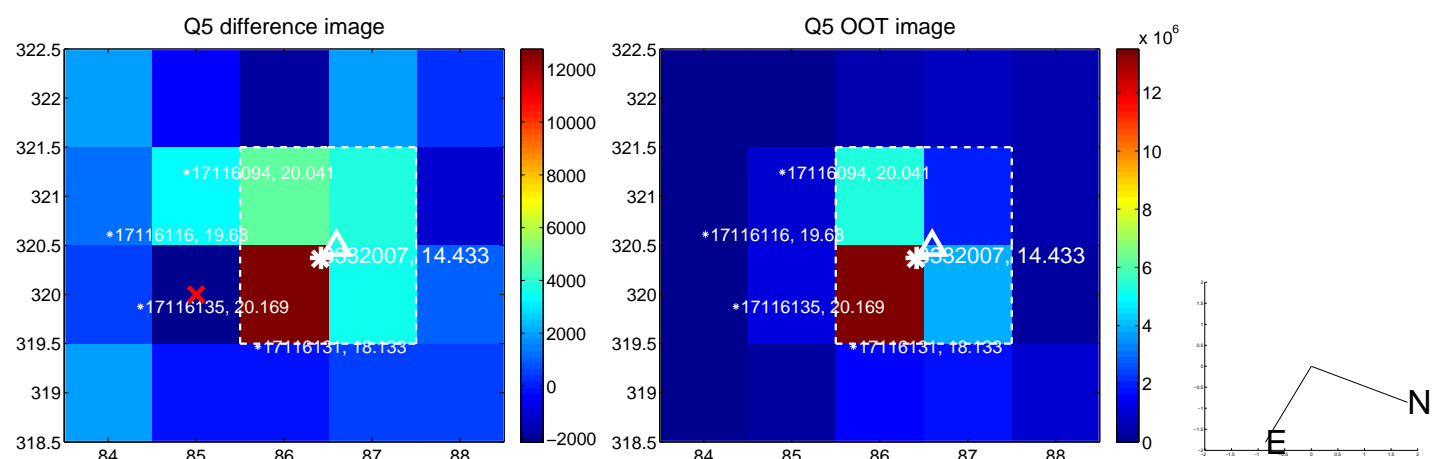
Q4 no difference image



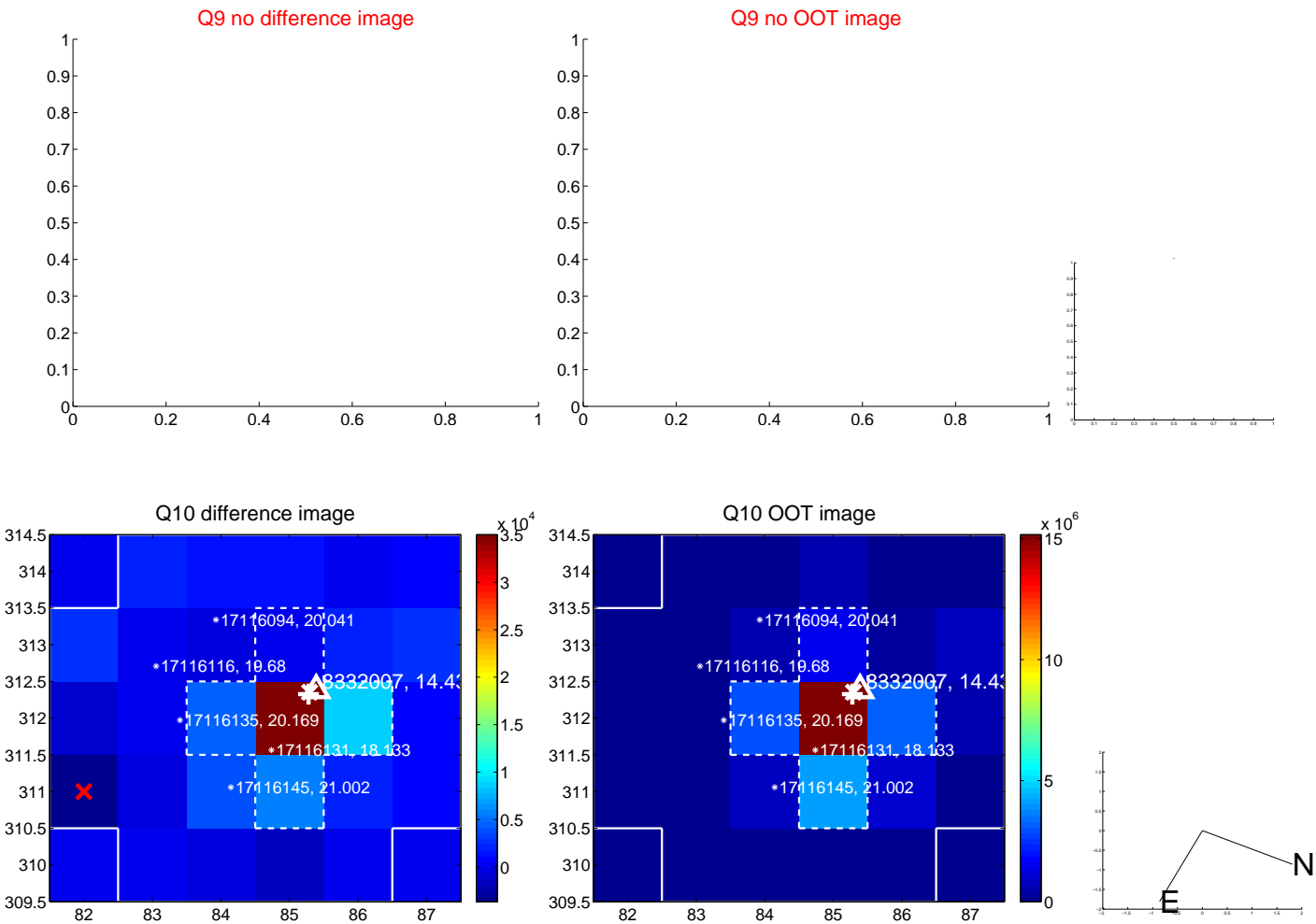
Q4 no OOT image



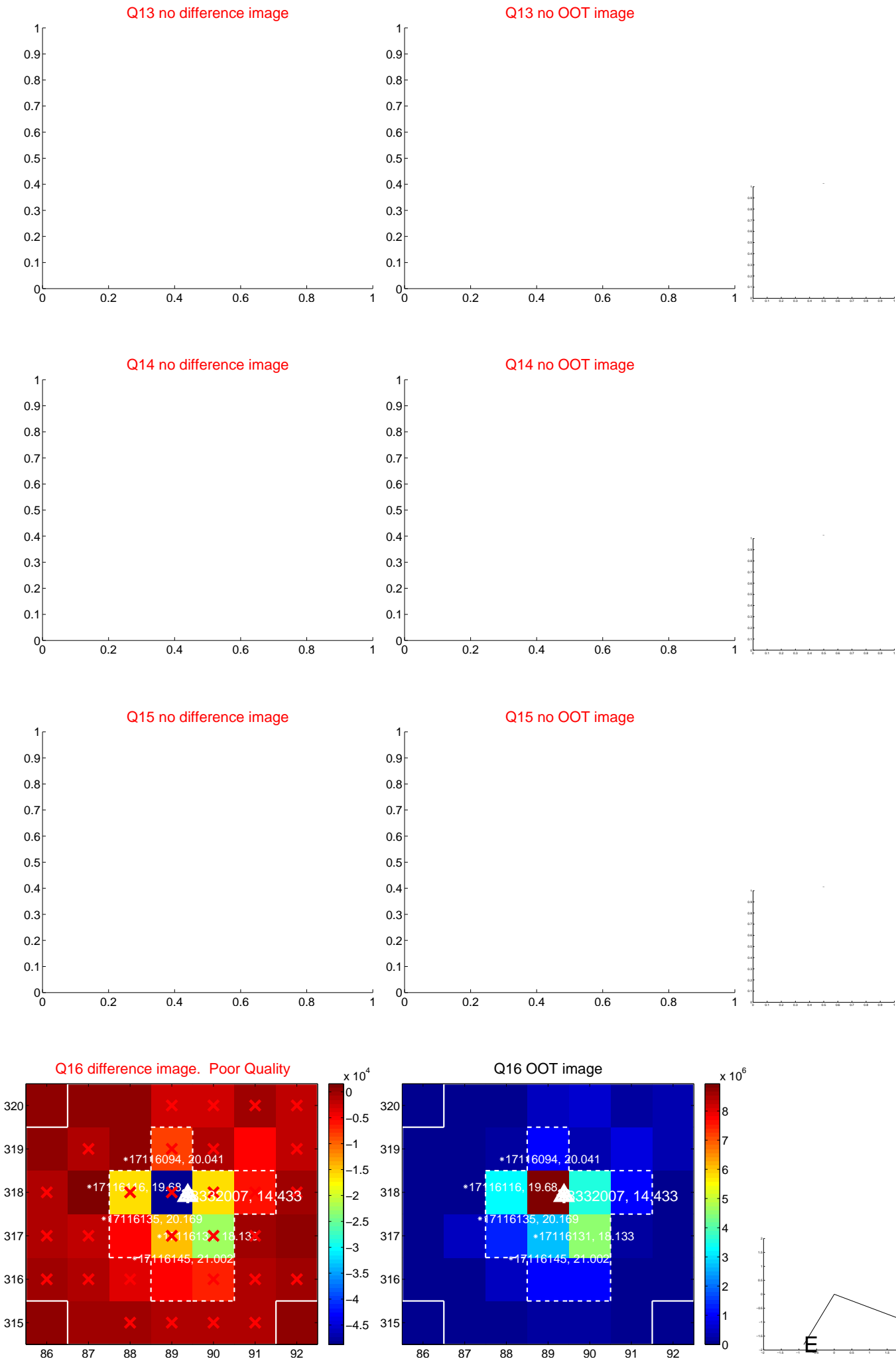
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



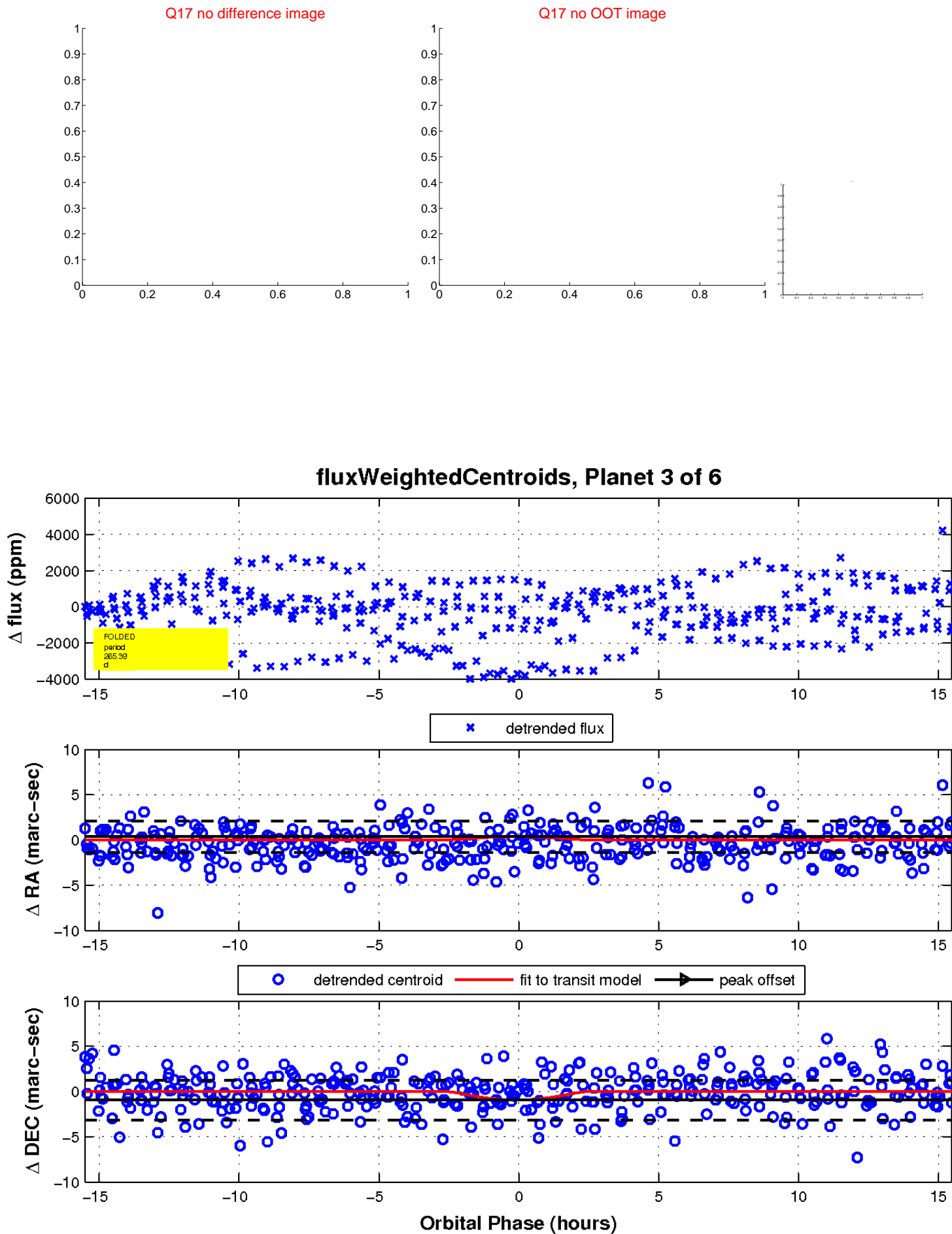
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

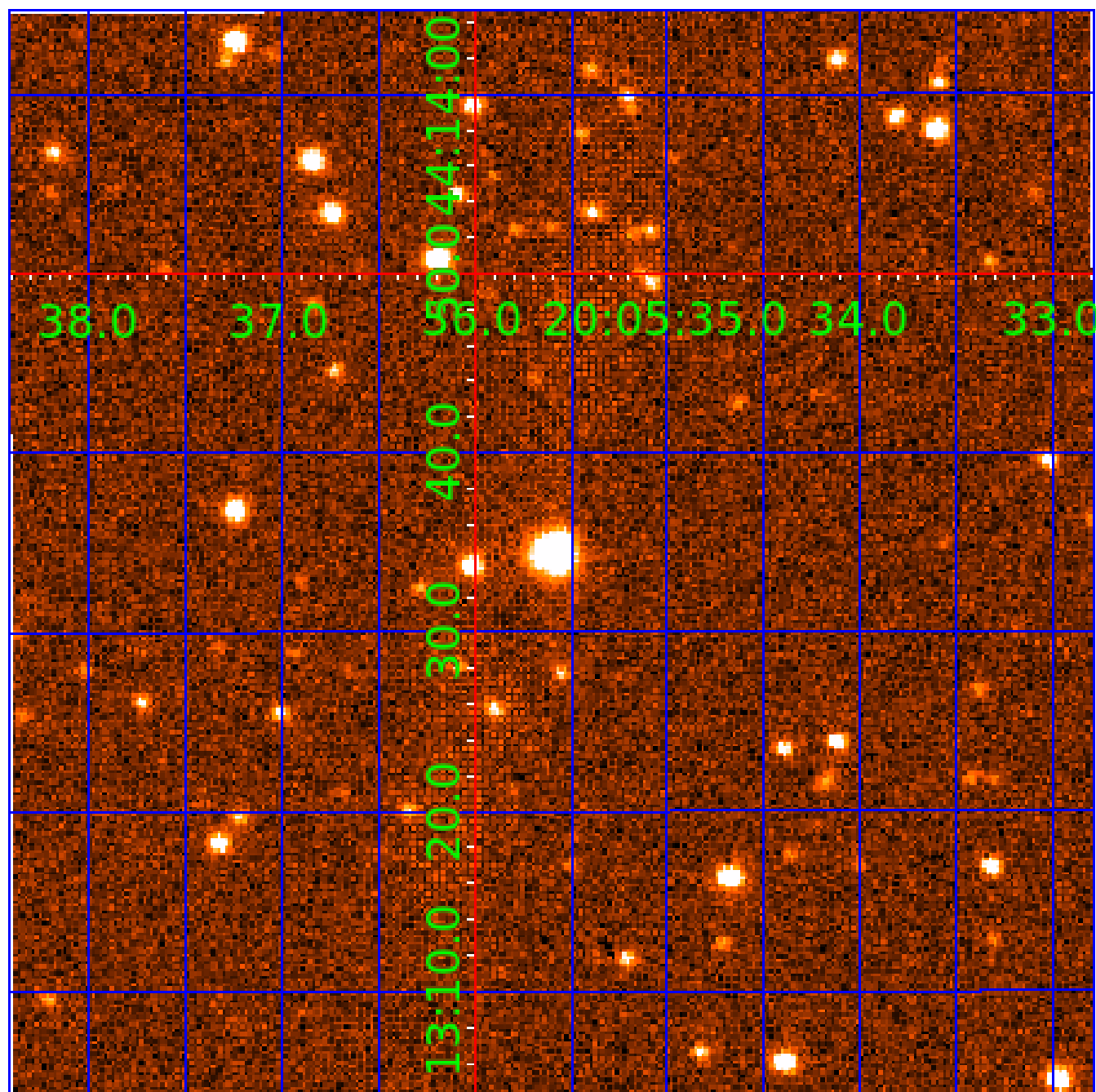


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008332007

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})
008332007-01	OBS	No	0.934788	131.738201	76.8	4.058	8.0	8.7	0.98	6128	0.87	3384.11
008332007-02	OBS	No	265.394087	179.865712	391.6	0.823	9.3	1.6	0.98	6128	2.03	1.81
008332007-03	OBS	No	265.385665	180.031146	1991.0	5.170	11.6	9.1	0.98	6128	7.21	1.81
008332007-04	OBS	No	170.676286	175.075518	1500.9	7.561	9.0	7.4	0.98	6128	3.95	3.27
008332007-05	OBS	No	350.317803	173.199242	1598.5	4.367	8.0	7.2	0.98	6128	4.38	1.25
008332007-06	OBS	No	0.934854	132.171420	78.0	6.698	7.5	7.2	0.98	6128	0.87	3383.79

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008332007-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV
008332007-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_TRACKER—LPP_DV—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
008332007-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT— INCONSISTENT_TRANS—SAME_NTL_PERIOD—HALO_GHOST
008332007-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
008332007-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_POS_DV
008332007-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—SAME_NTL_PERIOD—HALO_GHOST

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

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

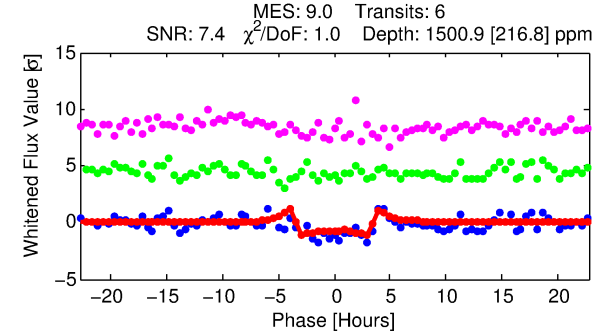
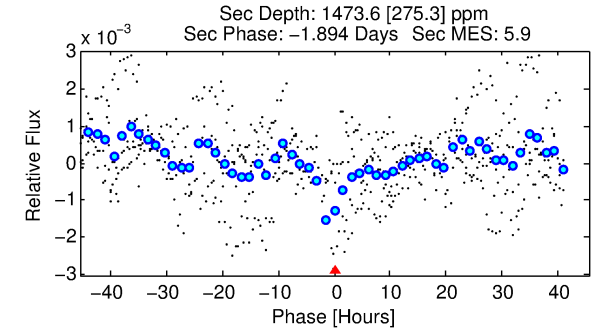
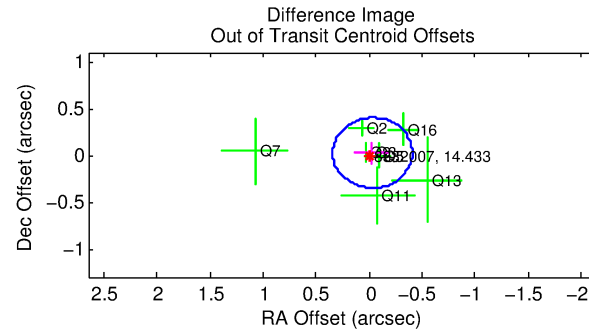
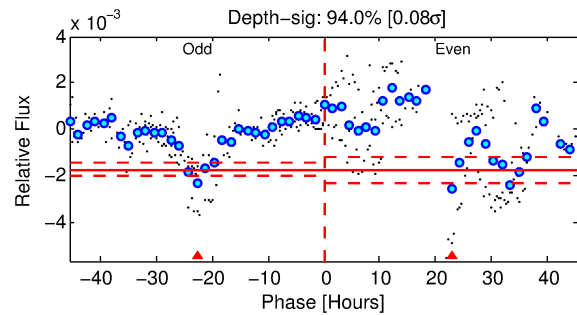
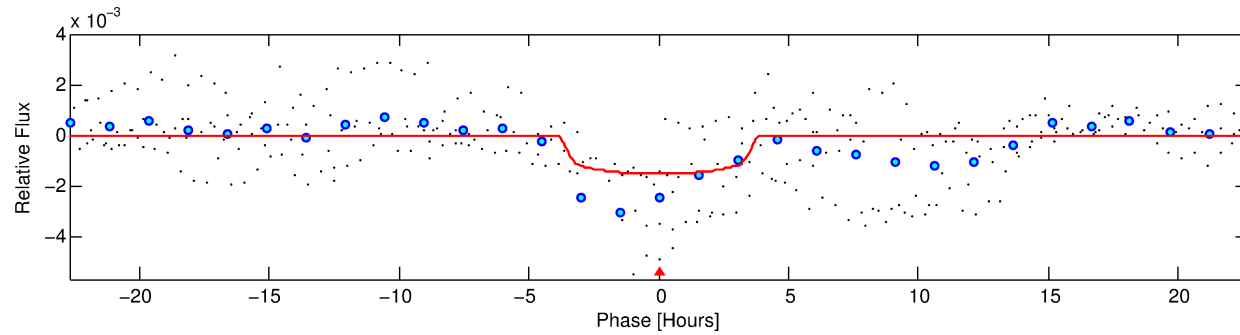
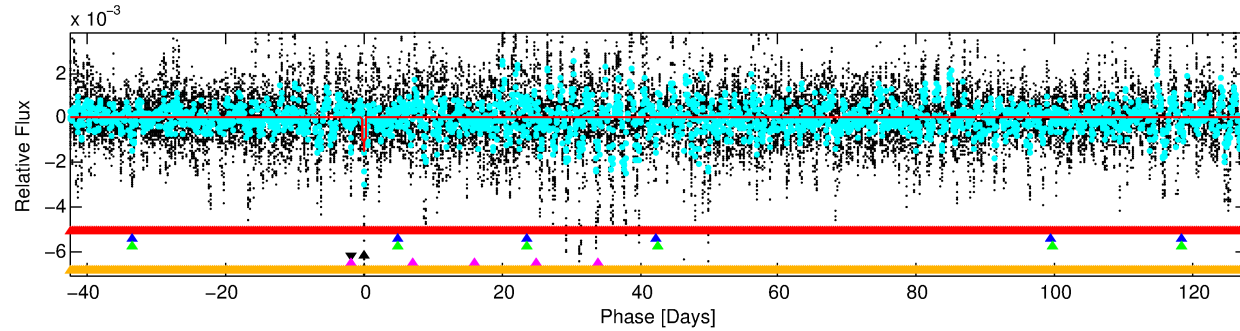
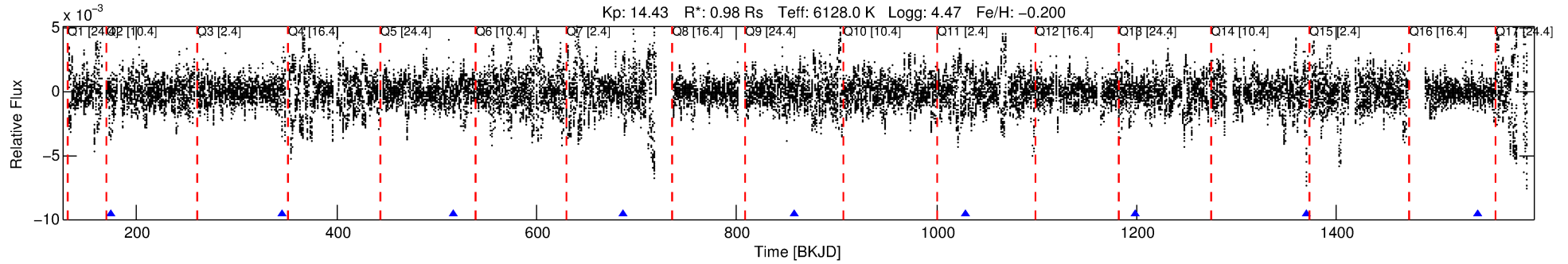
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008332007-04

No Significant Match Found

DV One-Page Summary

KIC: 8332007 Candidate: 4 of 6 Period: 170.676 d



DV Fit Results:

Period = 170.67629 [0.00165] d
Epoch = 175.0755 [0.0075] BKJD
Rp/R* = 0.0370 [0.0109]
a/R* = 147.50 [195.04]
b = 0.59 [1.49]
Seff = 3.27 [1.35]
Teq = 343 [35] K
Rp = 3.95 [1.72] Re
a = 0.6082 [0.1636] AU
Ag = 19219.05 [13988.43] [1.37 σ]
Teffp = 6241 [986] K [5.98 σ]

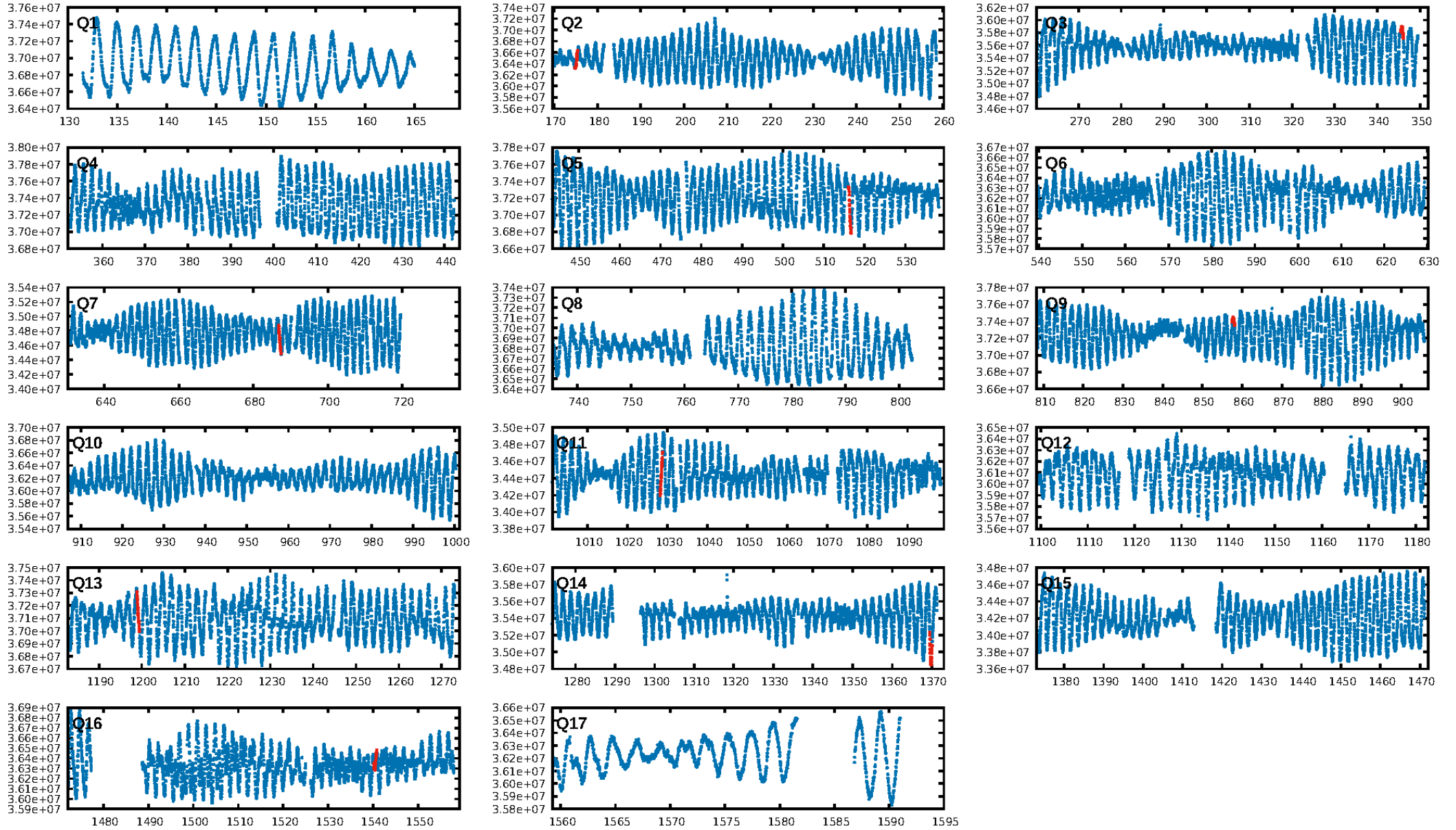
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [403.30 σ]
LongPeriod-sig: 100.0% [248.17 σ]
ModelChiSquare2-sig: 0.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [6/6]
GhostDiagnostic-chr: 0.2731
Centroid-sig: 9.9%
Centroid-so: 1.088 arcsec [2.59 σ]
OotOffset-rm: 0.041 arcsec [0.33 σ]
KicOffset-rm: 0.055 arcsec [0.36 σ]
OotOffset-st: 1/3/1/3 [8]
KicOffset-st: 1/3/1/3 [8]
DiffImageQuality-fgm: 0.62 [5/8]
DiffImageOverlap-fno: 0.00 [0/8]

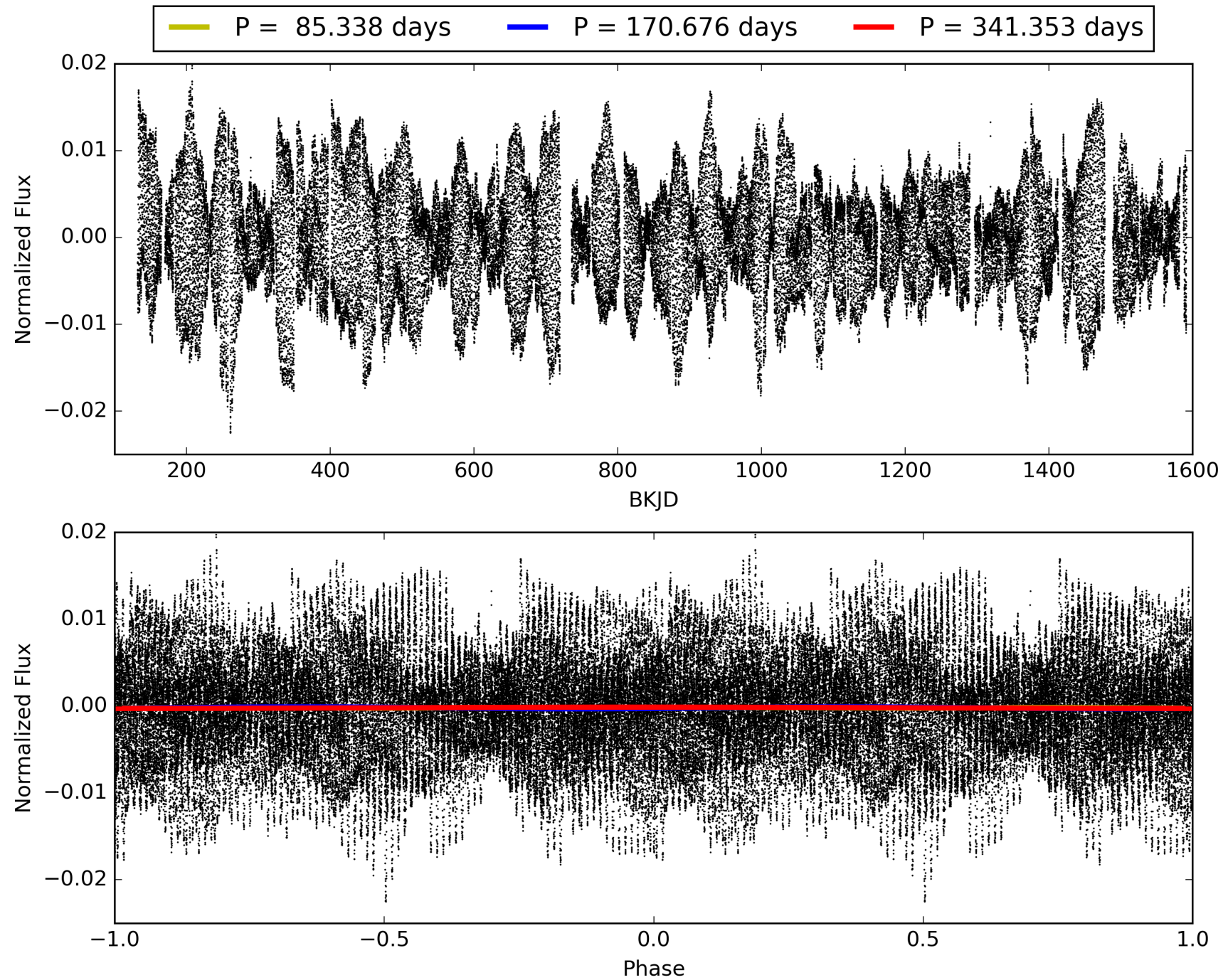
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 06:03:38 Z

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

TCE 008332007-04, PDC Light Curves

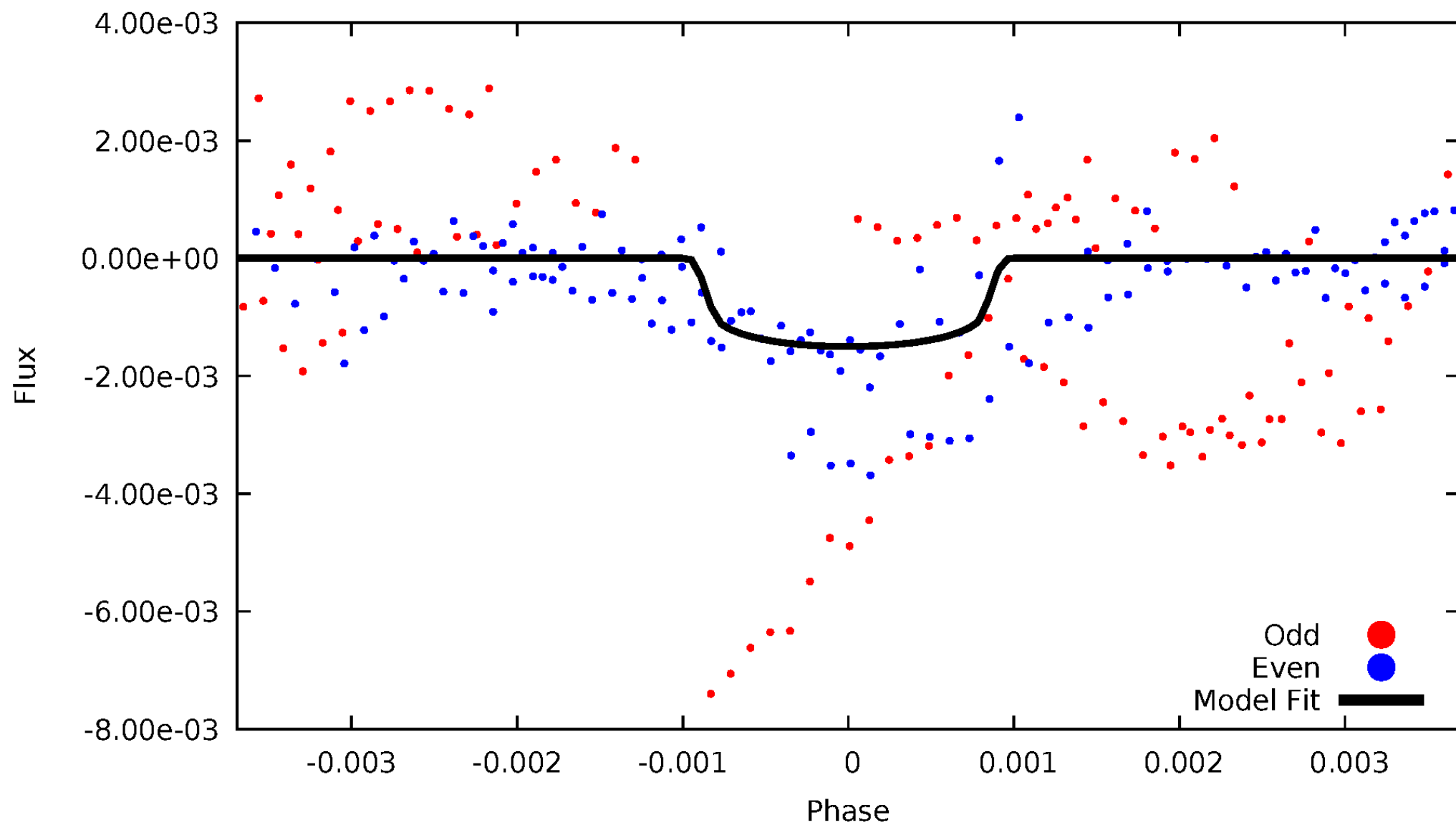


TCE 008332007-04



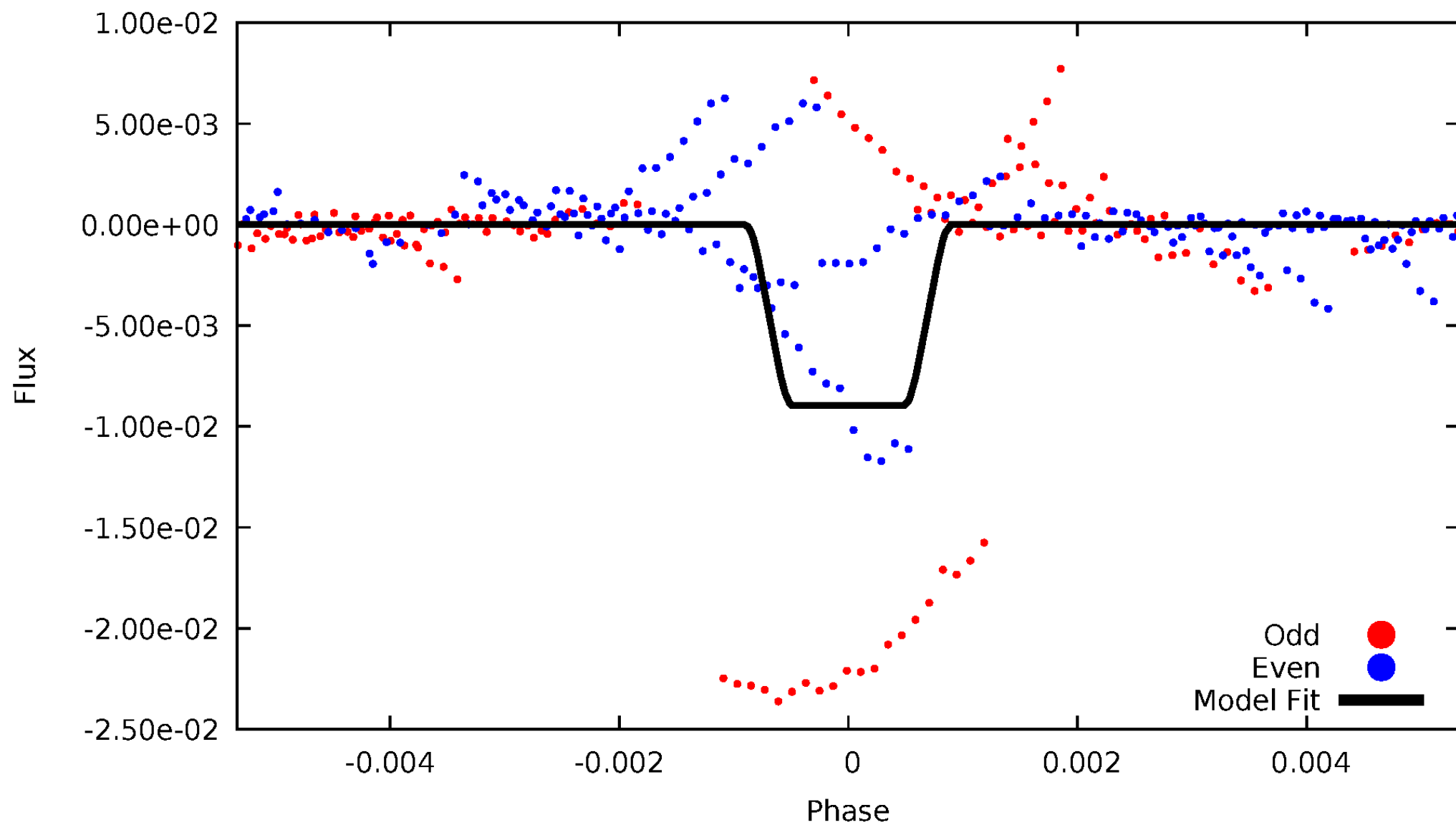
DV Odd/Even

TCE 008332007-04



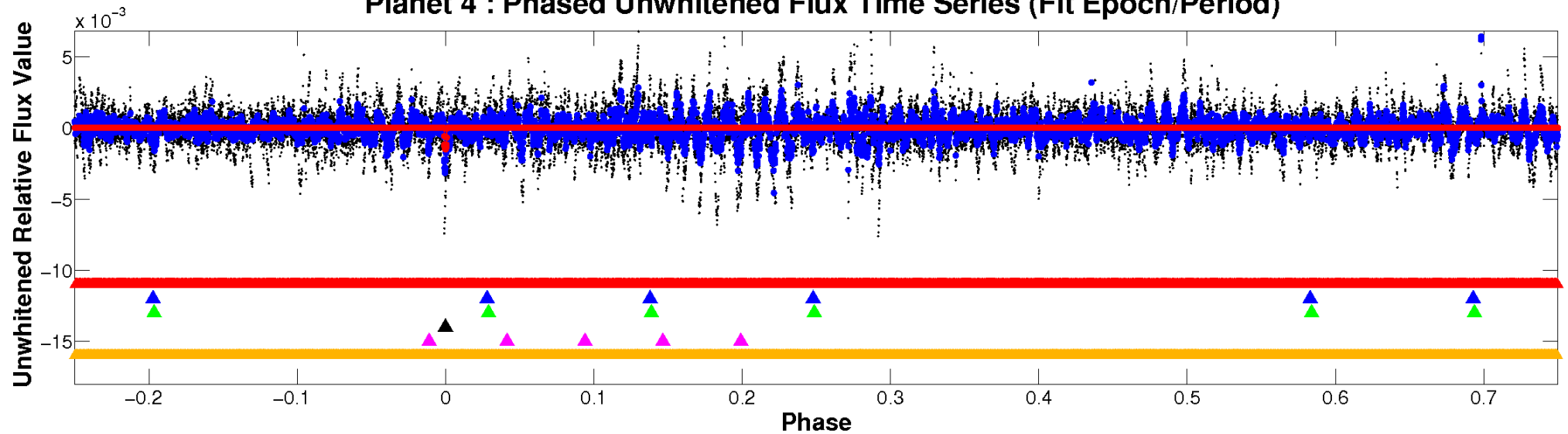
ALT Odd/Even

TCE 008332007-04

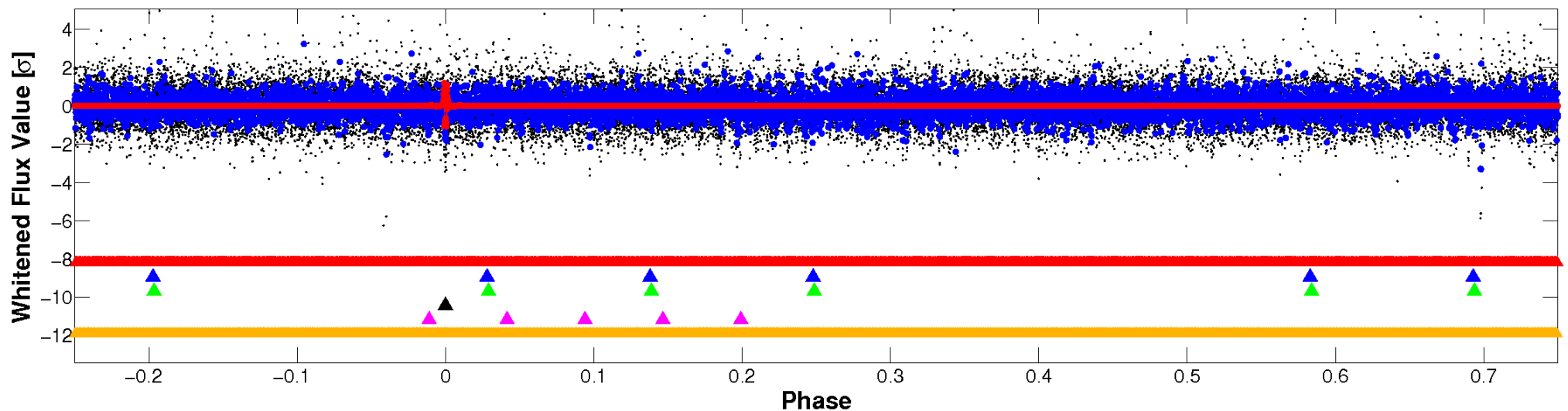


Non-Whitened Vs. Whitened Light Curve

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

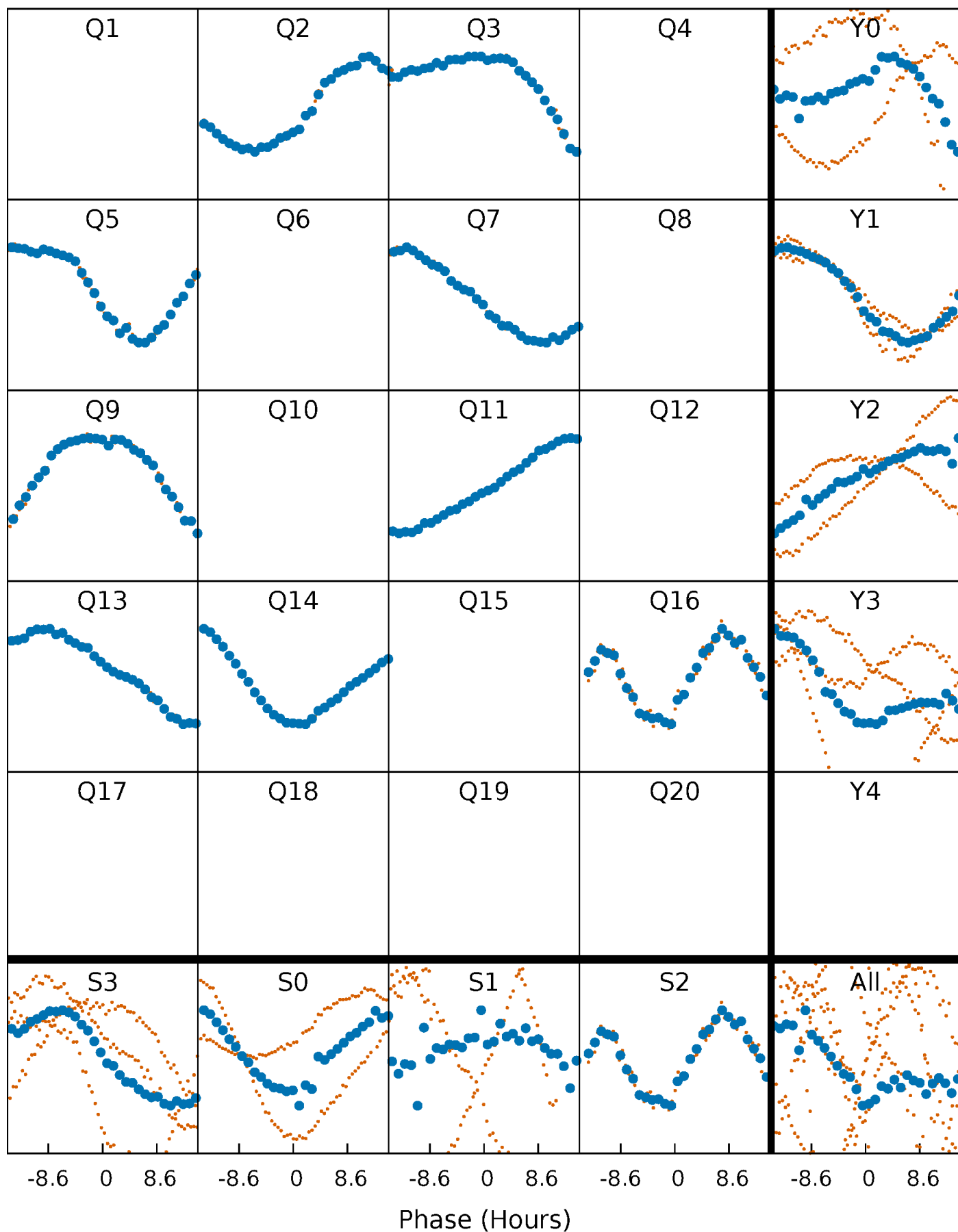


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



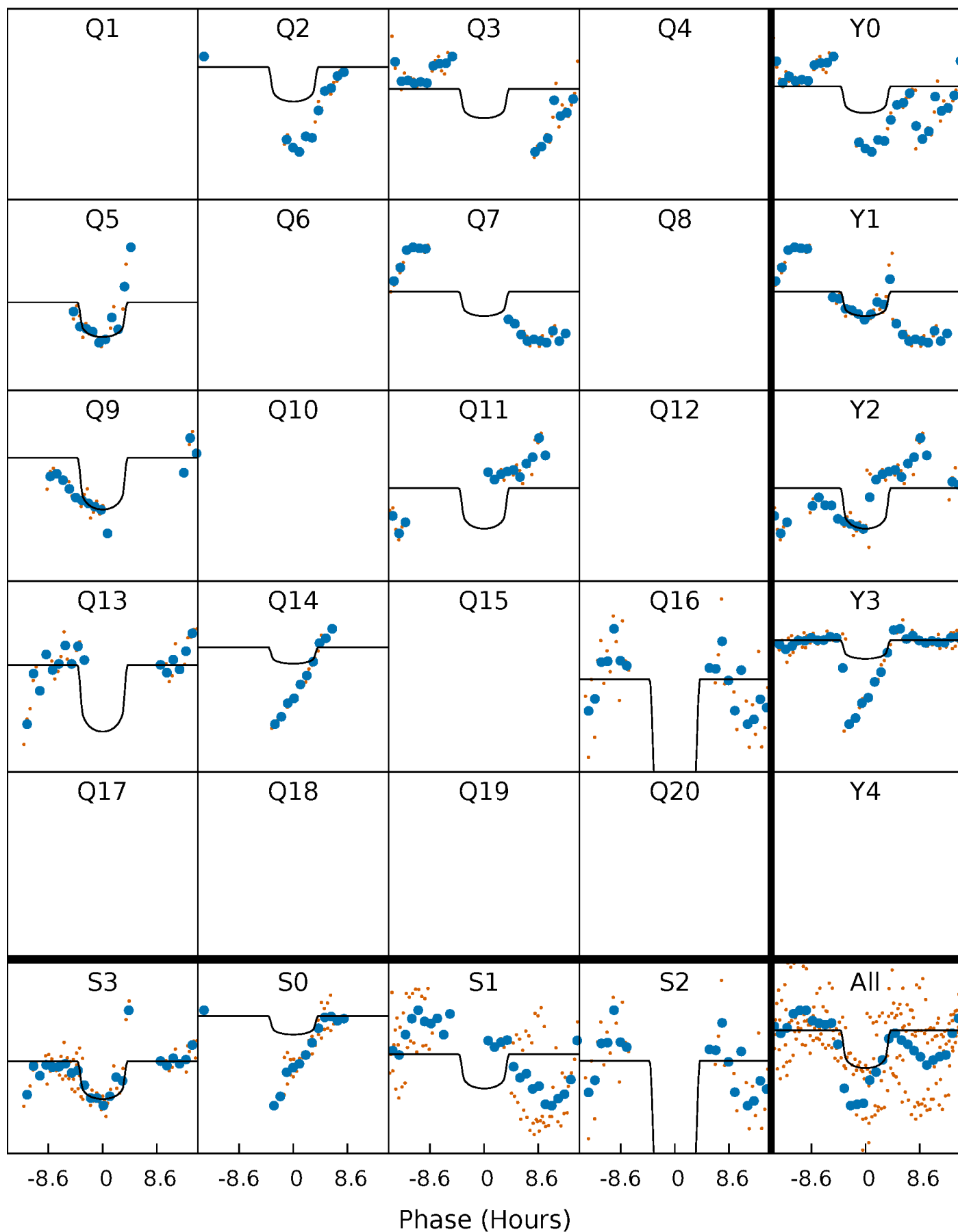
PDC Quarter-Phased Transit Curves

TCE 008332007-04 P=170.676286 Days $T_0=175.075518$ (BKJD)



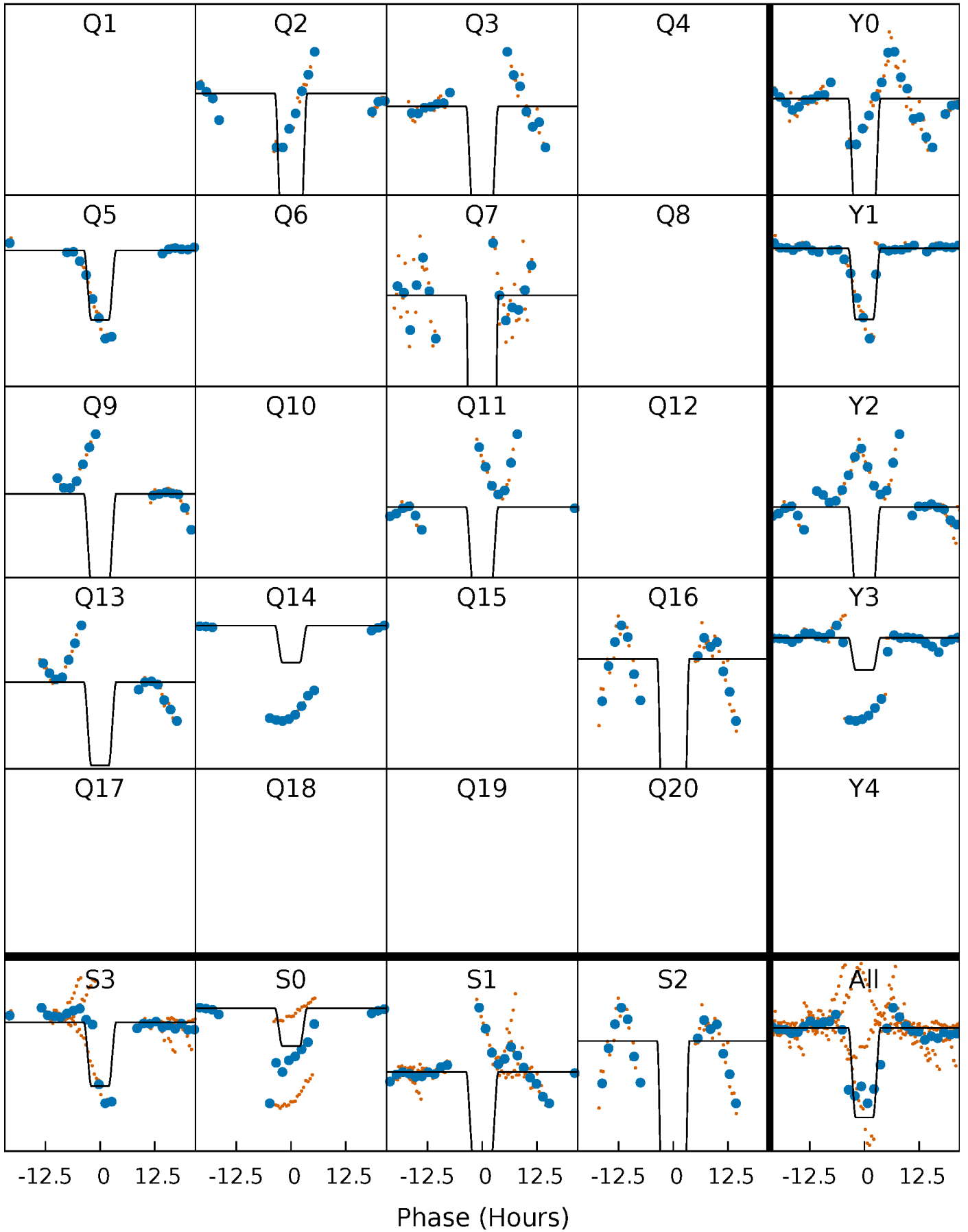
DV Quarter-Phased Transit Curves

TCE 008332007-04 P=170.676286 Days $T_0=175.075518$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

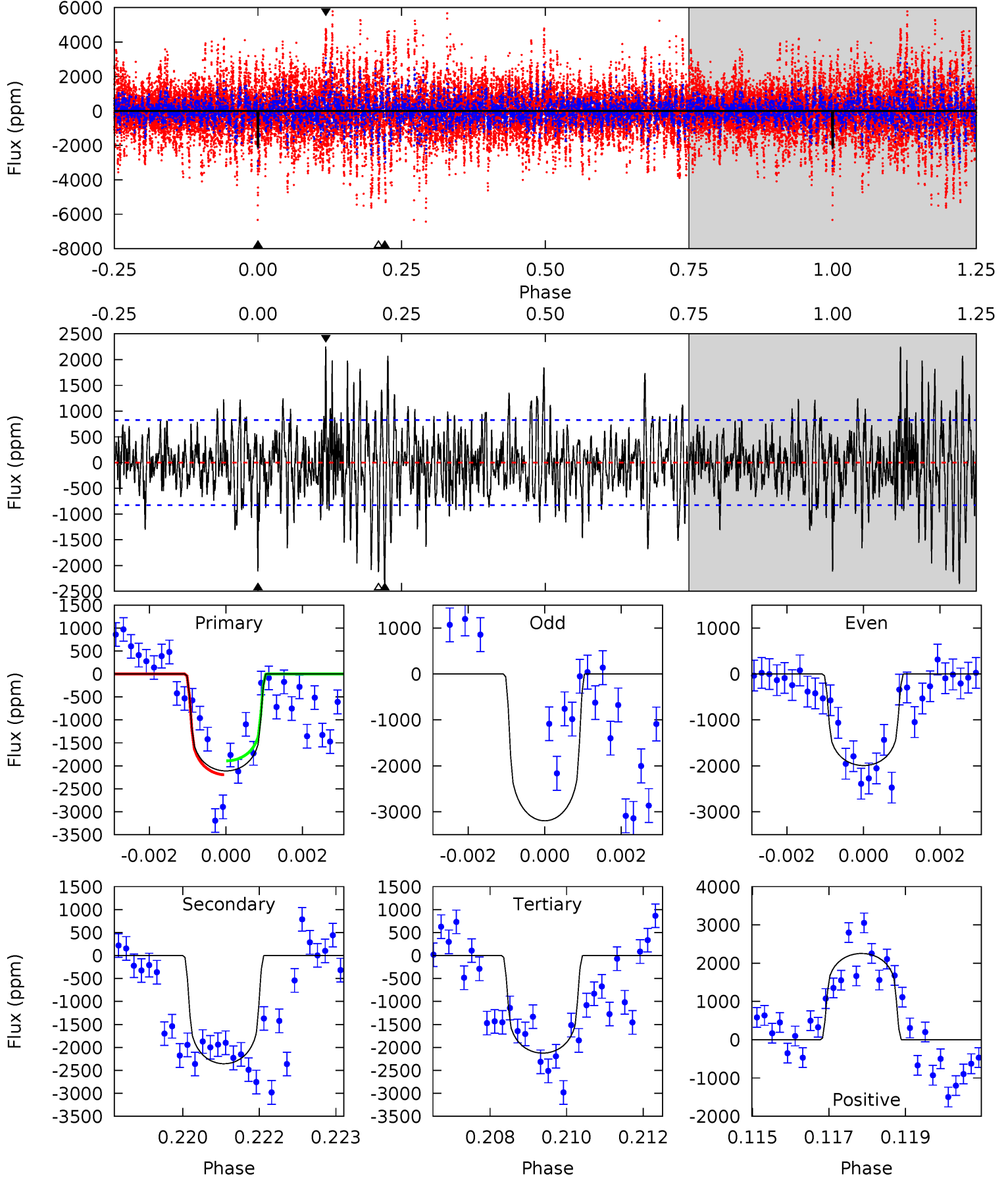
TCE 008332007-04 P=170.667904 Days $T_0=175.178422$ (BKJD)



DV Model-Shift Uniqueness Test

008332007-04, P = 170.676286 Days, E = 4.399232 Days

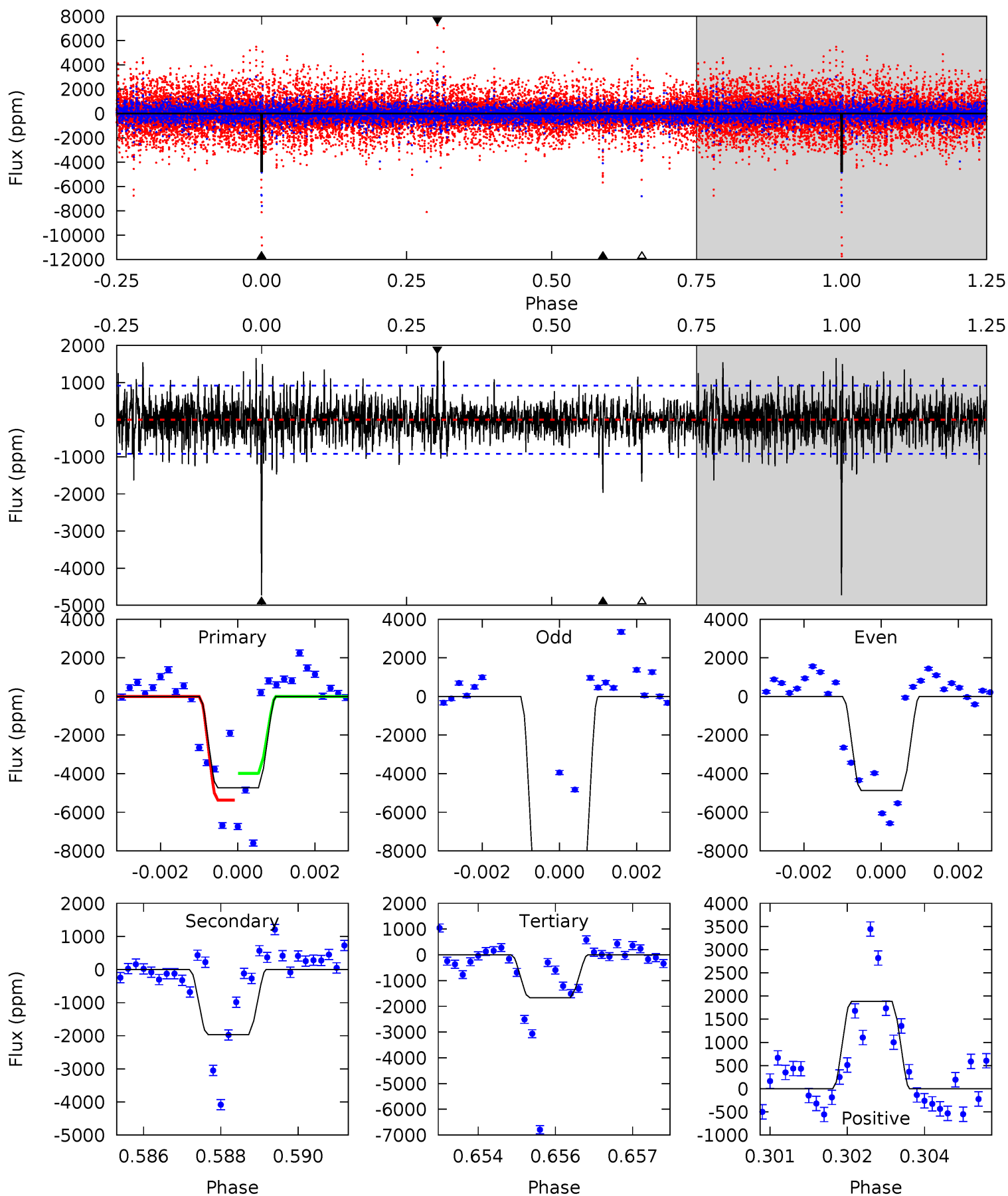
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.6	15.2	13.7	14.6	5.34	3.11	3.57	-0.09	-0.91	1.49	0.67	3.83	1.21	0.49	0.97



Alt Model-Shift Uniqueness Test

008332007-04, P = 170.667904 Days, E = 4.510518 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.5	11.4	9.69	11.0	5.34	3.12	2.16	17.8	16.6	1.75	0.48	21.5	12.9	0.28	0



Stellar Parameters For KIC 008332007

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6128^{+182}_{-218}	$4.470^{+0.056}_{-0.210}$	$-0.200^{+0.250}_{-0.300}$	$0.978^{+0.316}_{-0.105}$	$1.029^{+0.139}_{-0.139}$	$1.550^{+0.454}_{-0.837}$
	+3%/-4%	+1%/-5%	+125%/-150%	+32%/-11%	+14%/-14%	+29%/-54%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008332007-04 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-2356 ± 155	$4.14^{+1.36}_{-1.25}$	488^{+34}_{-24}	7025^{+1591}_{-928}	26984^{+28417}_{-11819}
Alt.	-1967 ± 172	$10.58^{+1.94}_{-1.56}$	490^{+36}_{-26}	4380^{+270}_{-220}	3473^{+1302}_{-933}

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 $A_{\text{obs}} \gg 1.0$

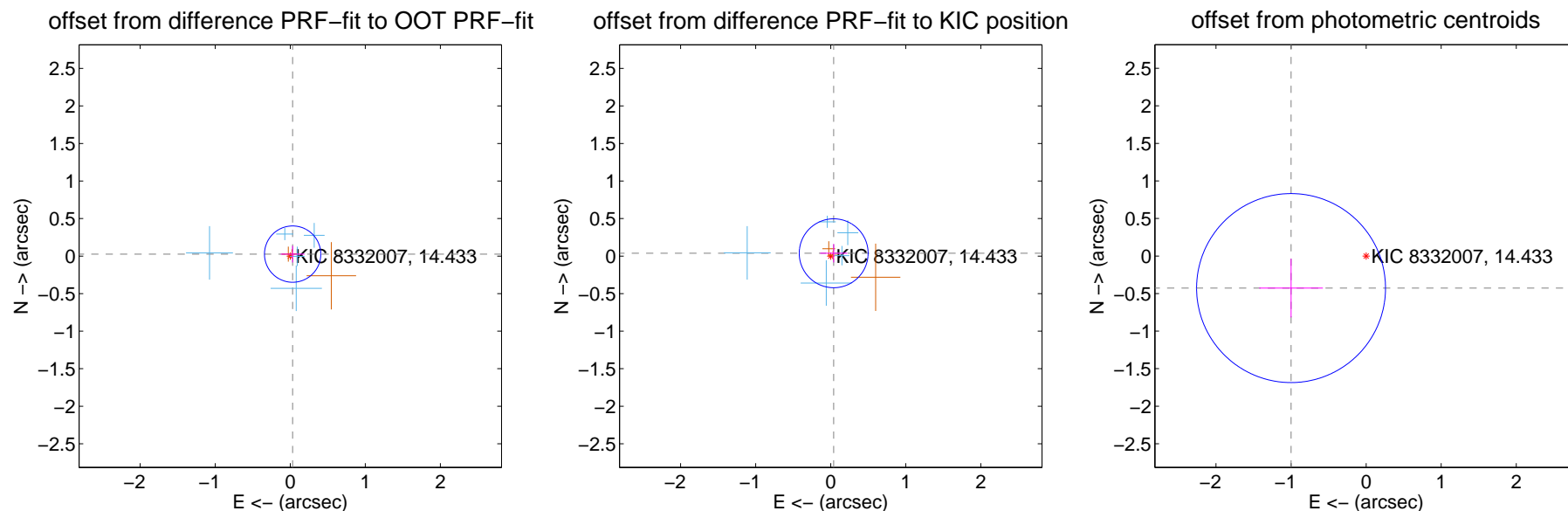
DV Centroid Data

Supplemental centroid analysis for 008332007-04. Kepler magnitude: 14.43. Transit SNR 7.44

There are 5 quarters with good PRF difference image offsets

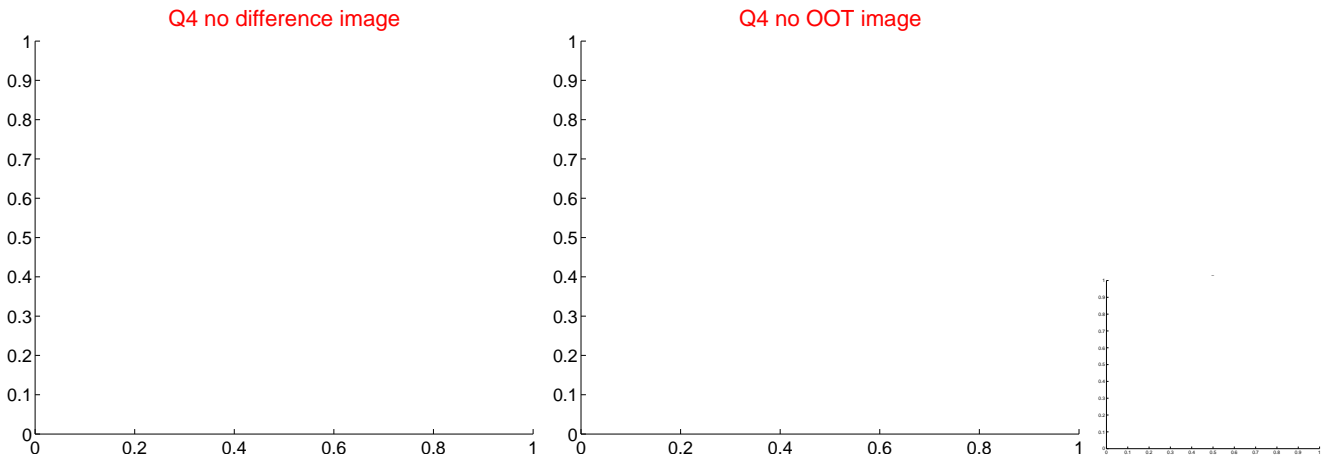
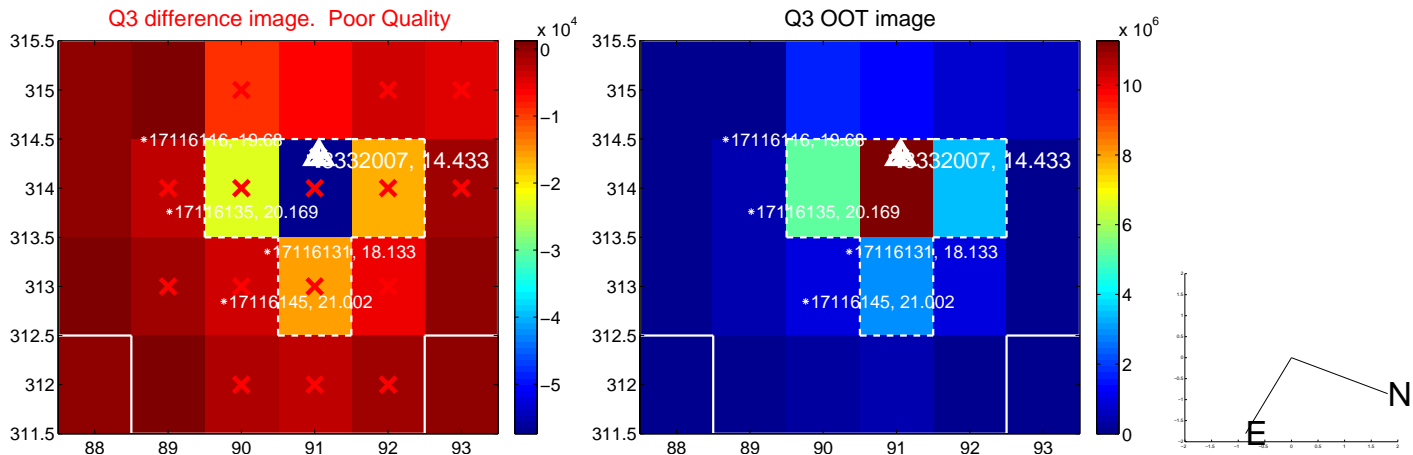
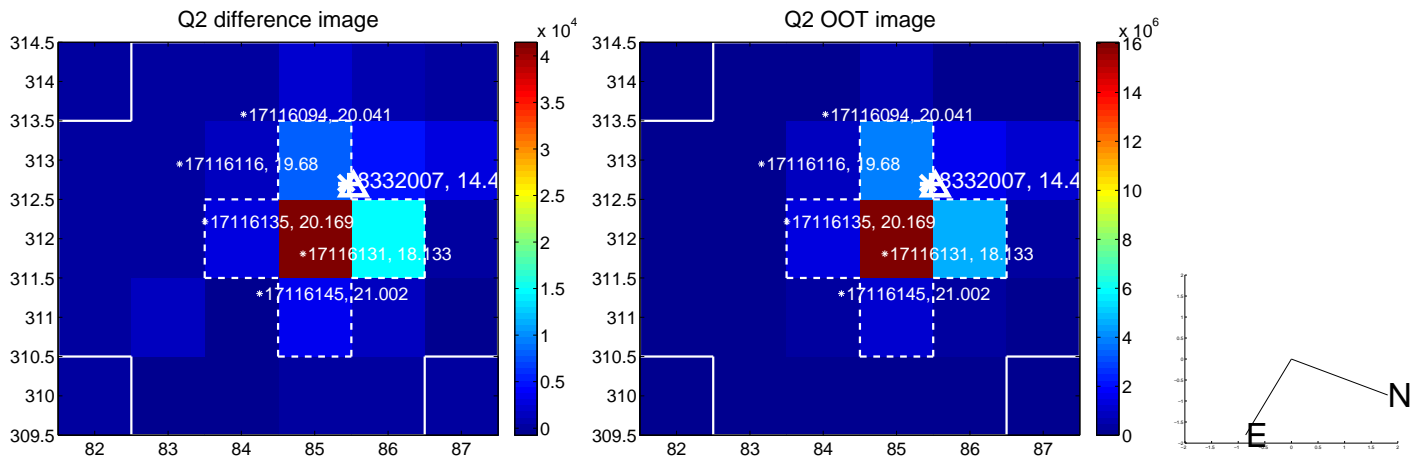
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.041 ± 0.125	0.33	-0.031 ± 0.159	0.026 ± 0.111
PRF-fit source offset from KIC position	0.055 ± 0.153	0.36	-0.040 ± 0.181	0.038 ± 0.122
photometric centroid source offset	1.09 ± 0.42	2.59	1.00 ± 0.42	-0.43 ± 0.39

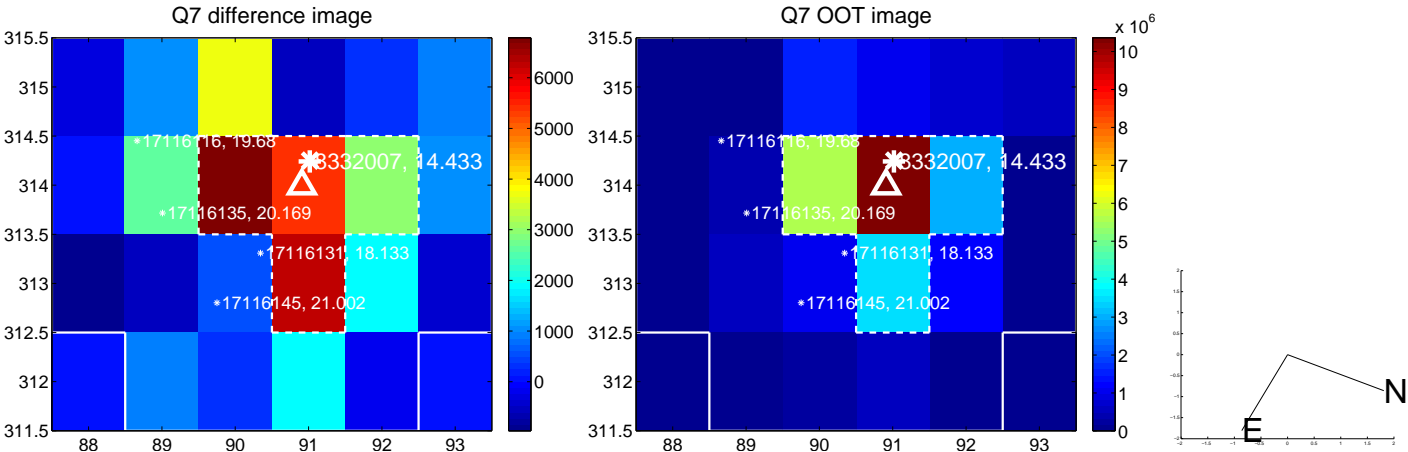
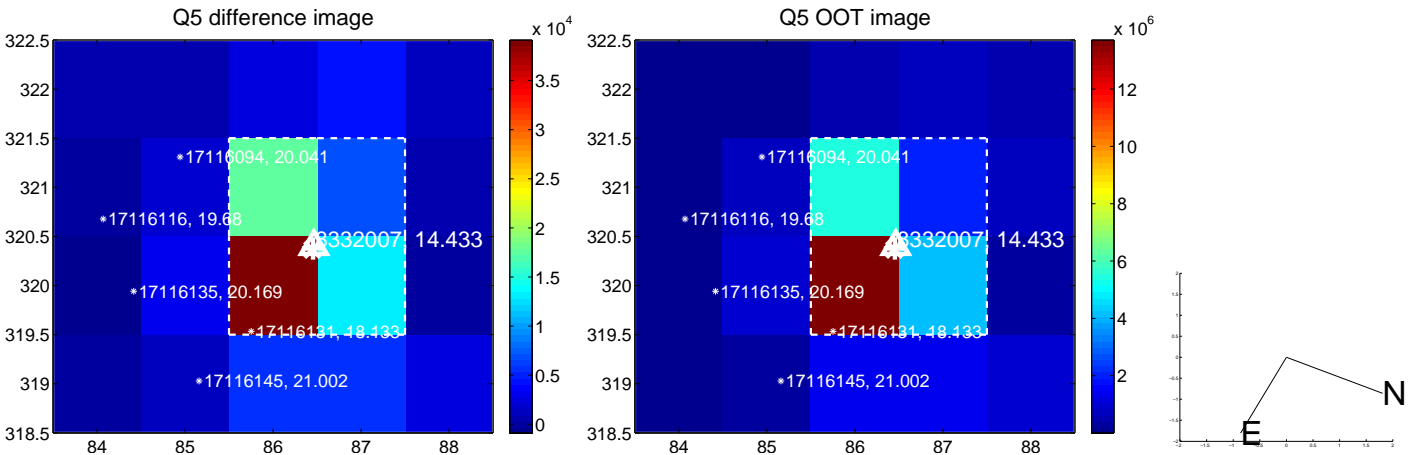


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- 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.

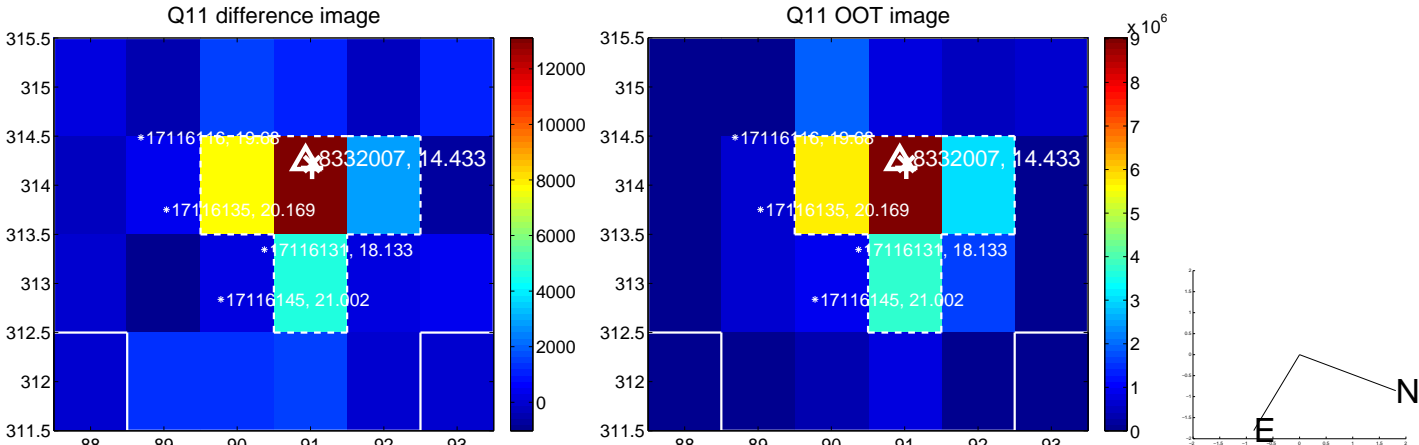
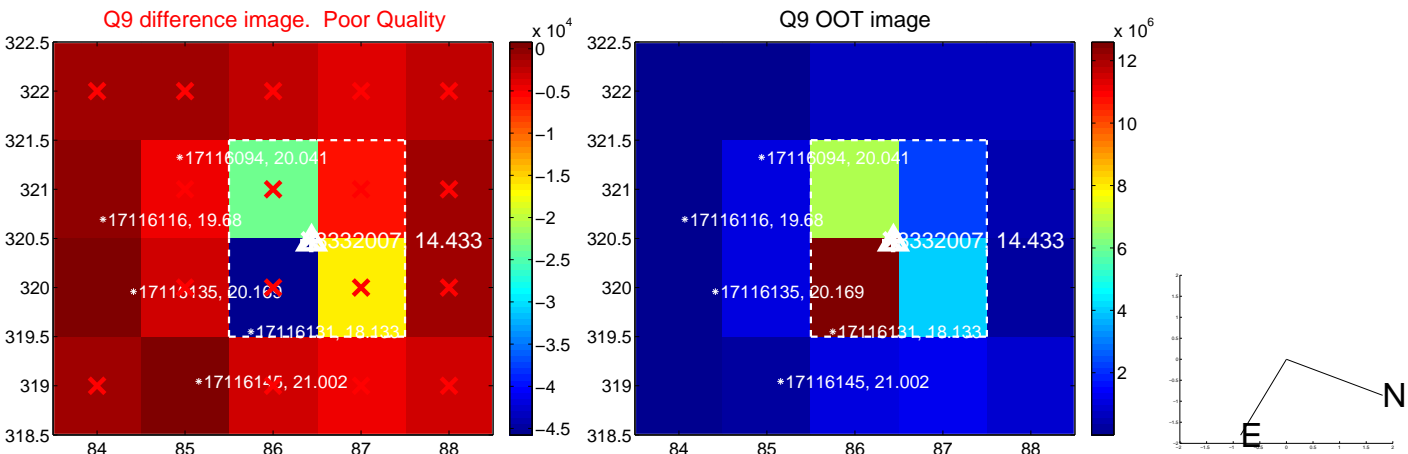
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



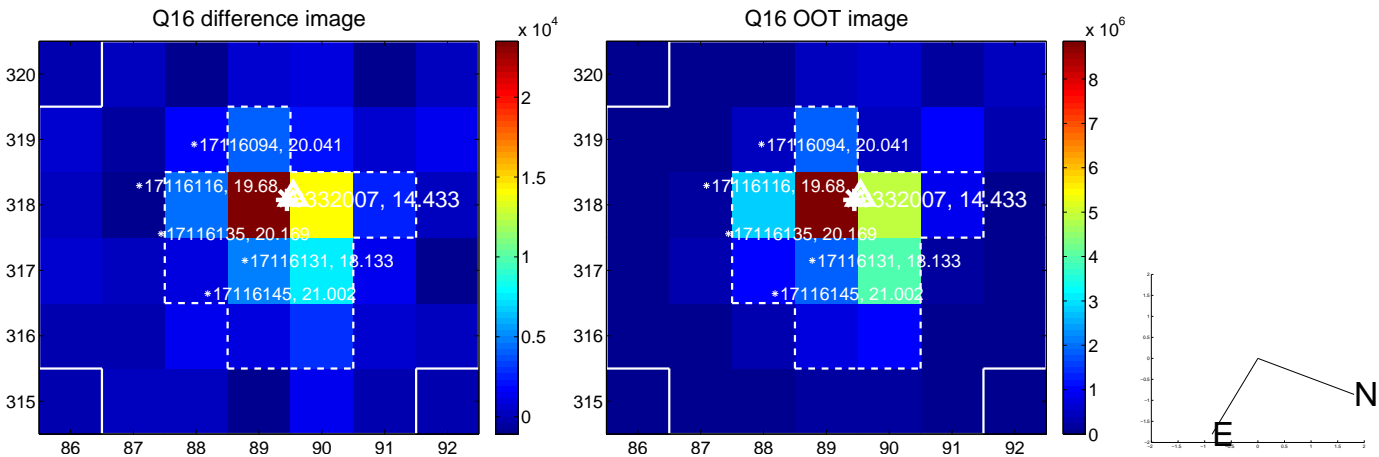
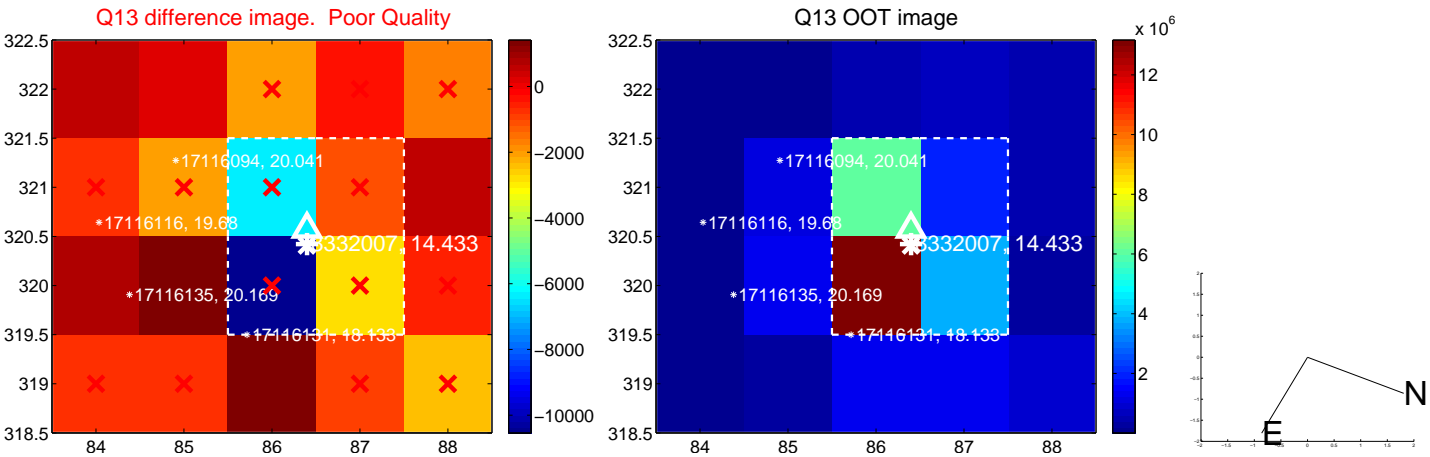
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



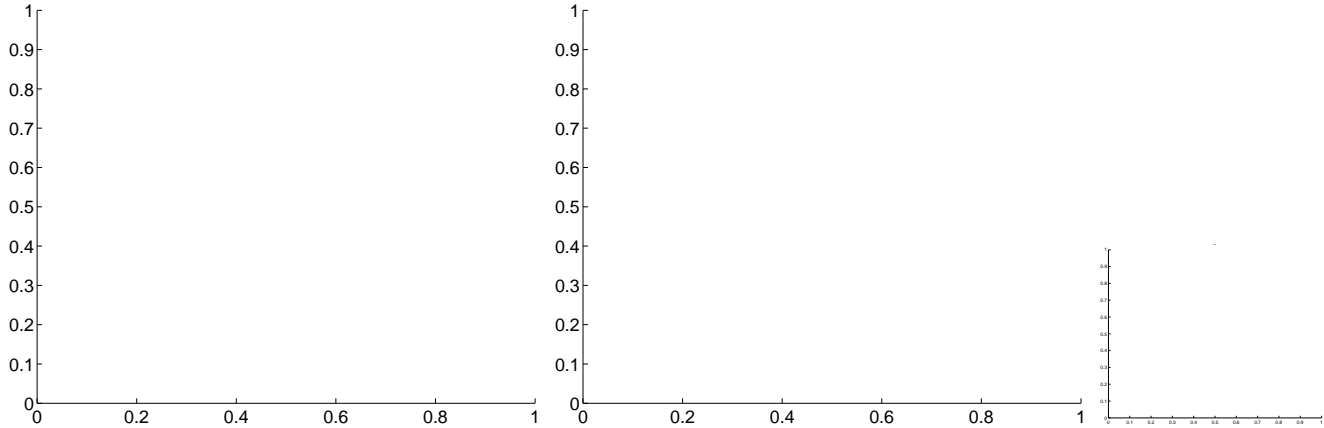
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



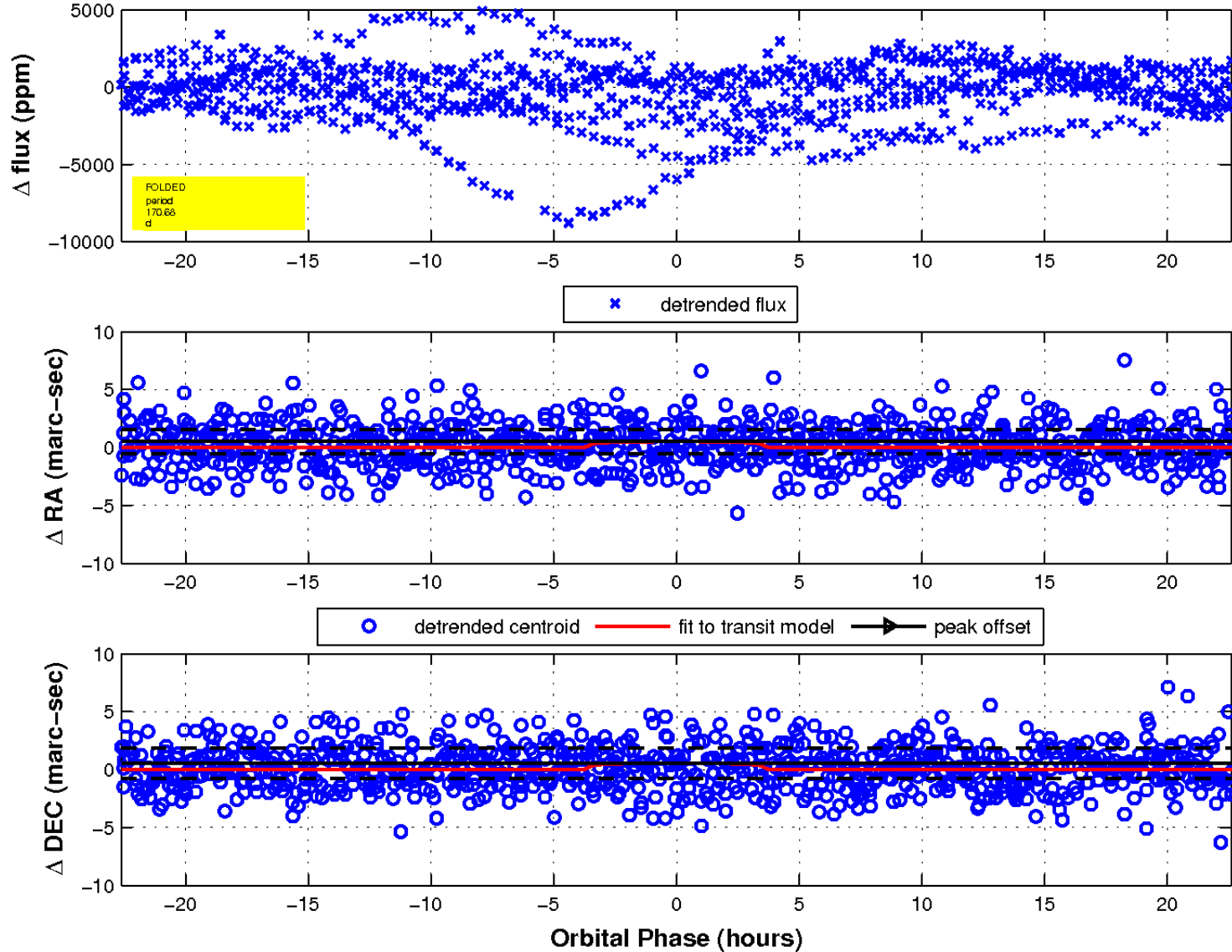
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

Q17 no difference image

Q17 no OOT image

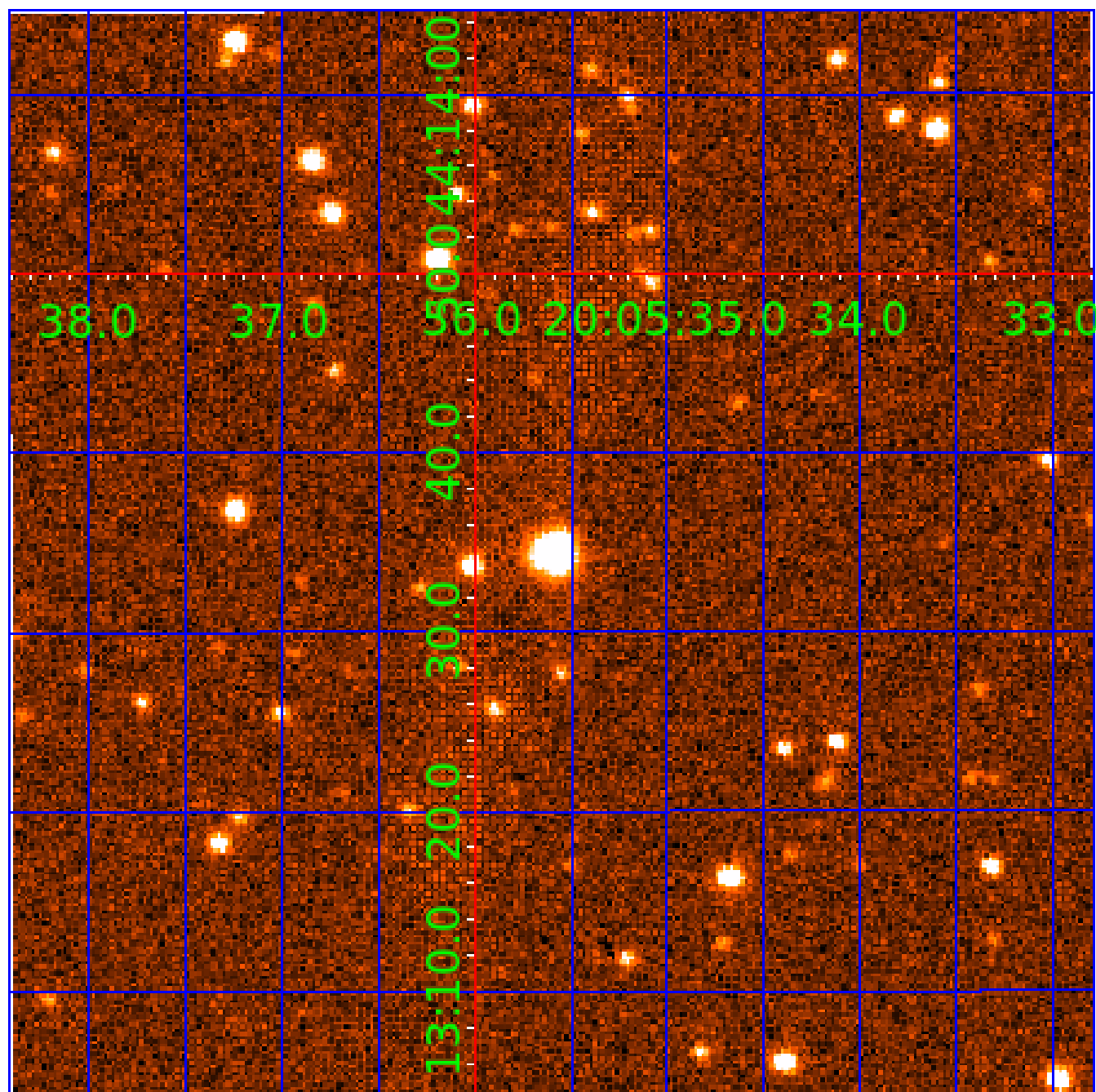


fluxWeightedCentroids, Planet 4 of 6



UKIRT Image

Declination



KIC 008332007

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})
008332007-01	OBS	No	0.934788	131.738201	76.8	4.058	8.0	8.7	0.98	6128	0.87	3384.11
008332007-02	OBS	No	265.394087	179.865712	391.6	0.823	9.3	1.6	0.98	6128	2.03	1.81
008332007-03	OBS	No	265.385665	180.031146	1991.0	5.170	11.6	9.1	0.98	6128	7.21	1.81
008332007-04	OBS	No	170.676286	175.075518	1500.9	7.561	9.0	7.4	0.98	6128	3.95	3.27
008332007-05	OBS	No	350.317803	173.199242	1598.5	4.367	8.0	7.2	0.98	6128	4.38	1.25
008332007-06	OBS	No	0.934854	132.171420	78.0	6.698	7.5	7.2	0.98	6128	0.87	3383.79

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008332007-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV
008332007-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_TRACKER—LPP_DV—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
008332007-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT— INCONSISTENT_TRANS—SAME_NTL_PERIOD—HALO_GHOST
008332007-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
008332007-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_POS_DV
008332007-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—SAME_NTL_PERIOD—HALO_GHOST

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

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

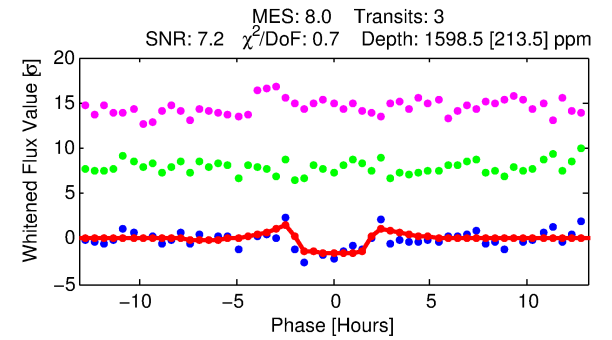
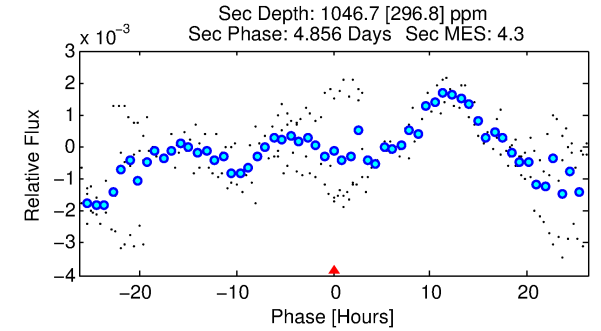
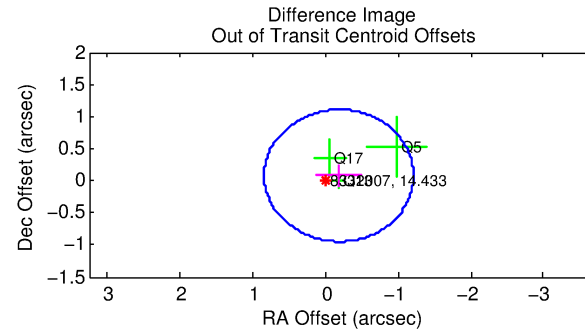
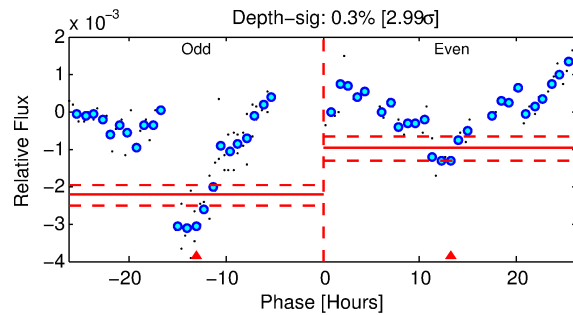
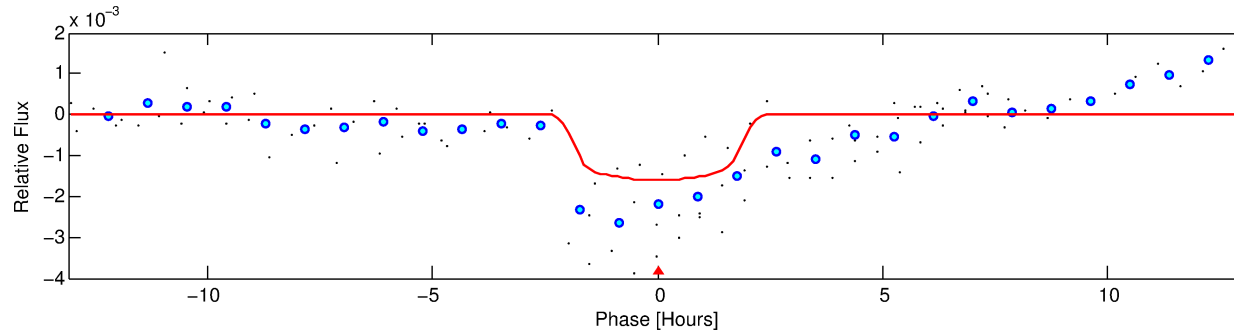
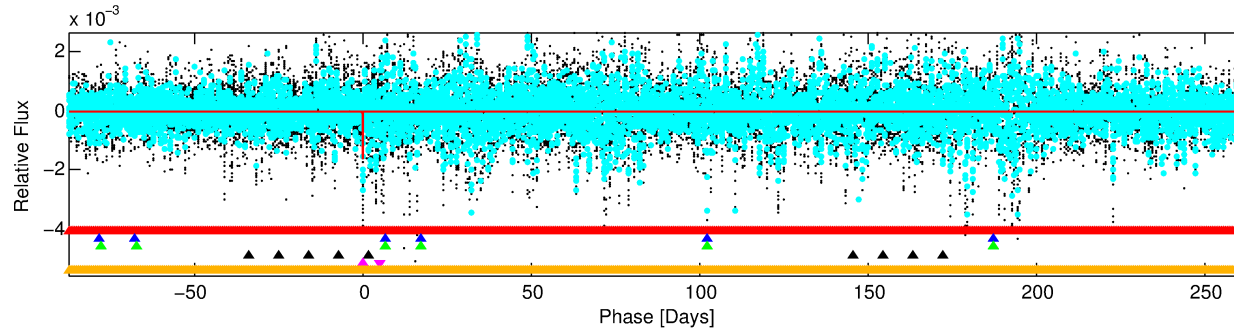
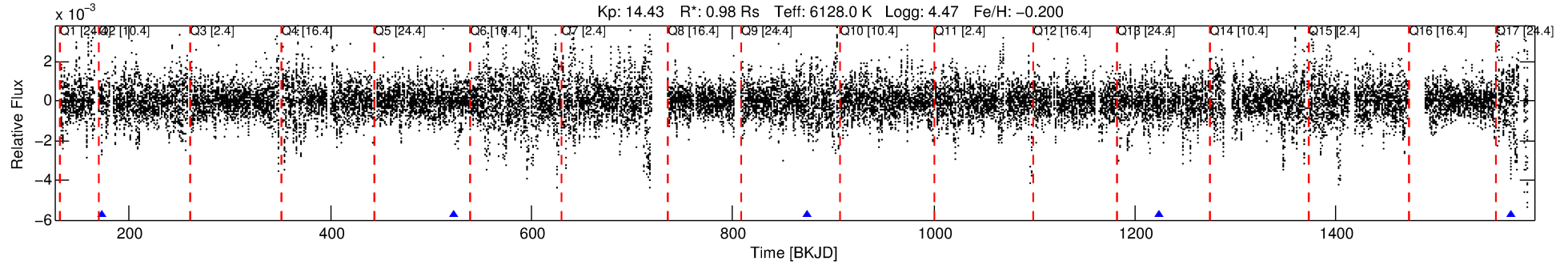
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008332007-05

No Significant Match Found

DV One-Page Summary

KIC: 8332007 Candidate: 5 of 6 Period: 350.318 d



DV Fit Results:

Period = 350.31780 [0.00236] d
Epoch = 173.1992 [0.0076] BKJD
Rp/R* = 0.0410 [0.0112]
a/R* = 390.61 [487.60]
b = 0.82 [0.50]
Seff = 1.25 [0.52]
Teq = 270 [28] K
Rp = 4.38 [1.85] Re
a = 0.9823 [0.2643] AU
Ag = 29017.02 [21143.09] [1.37 σ]
Teffp = 5443 [862] K [6.00 σ]

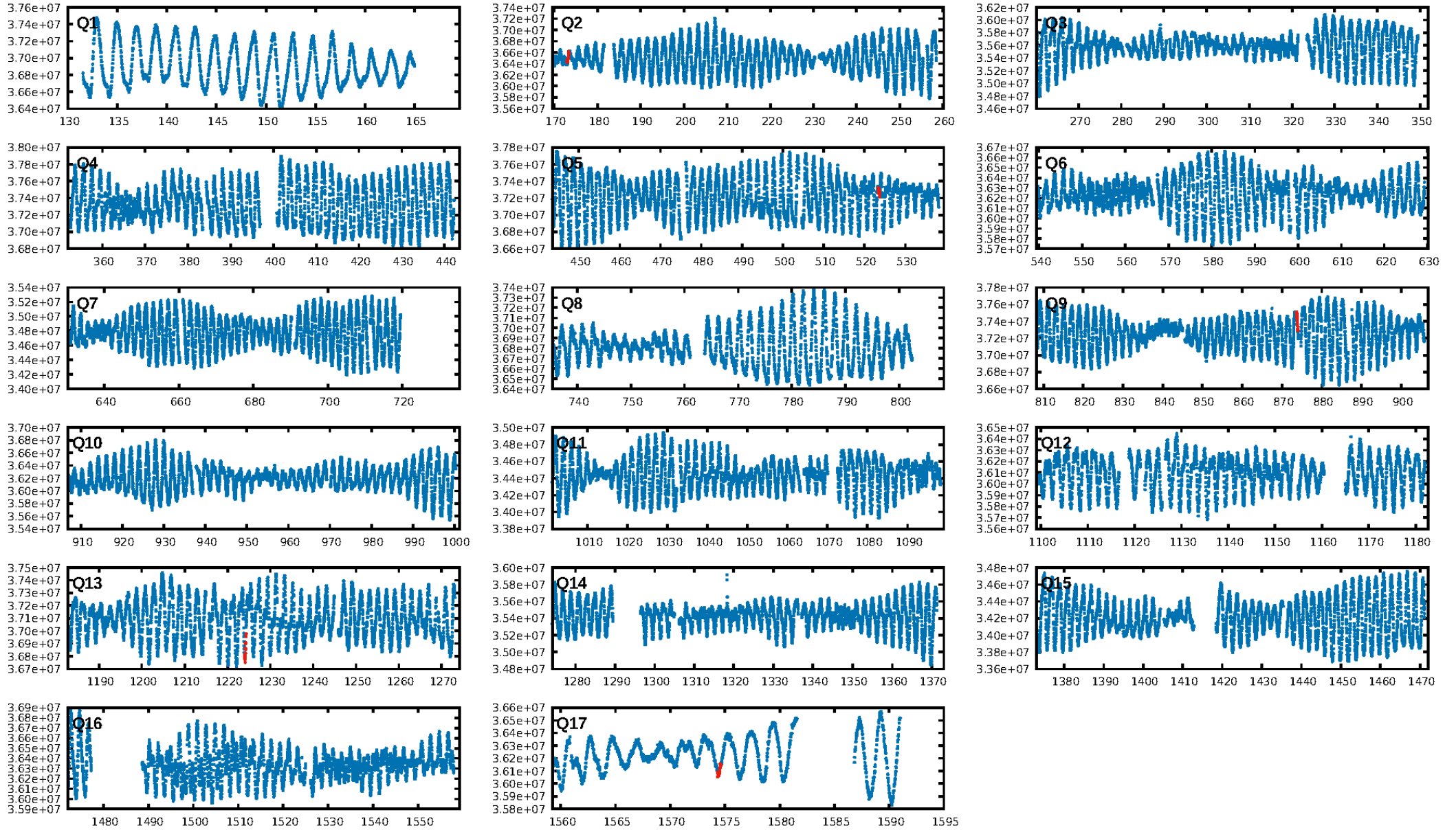
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [458.69 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 21.3%
ModelChiSquareGof-sig: 99.3%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: -1.577
Centroid-sig: 20.8%
Centroid-so: 1.283 arcsec [2.21 σ]
OotOffset-rm: 0.202 arcsec [0.59 σ]
OotOffset-st: 0/0/0/3 [3]
KicOffset-rm: 0.246 arcsec [0.86 σ]
KicOffset-st: 0/0/0/3 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 0.00 [0/4]

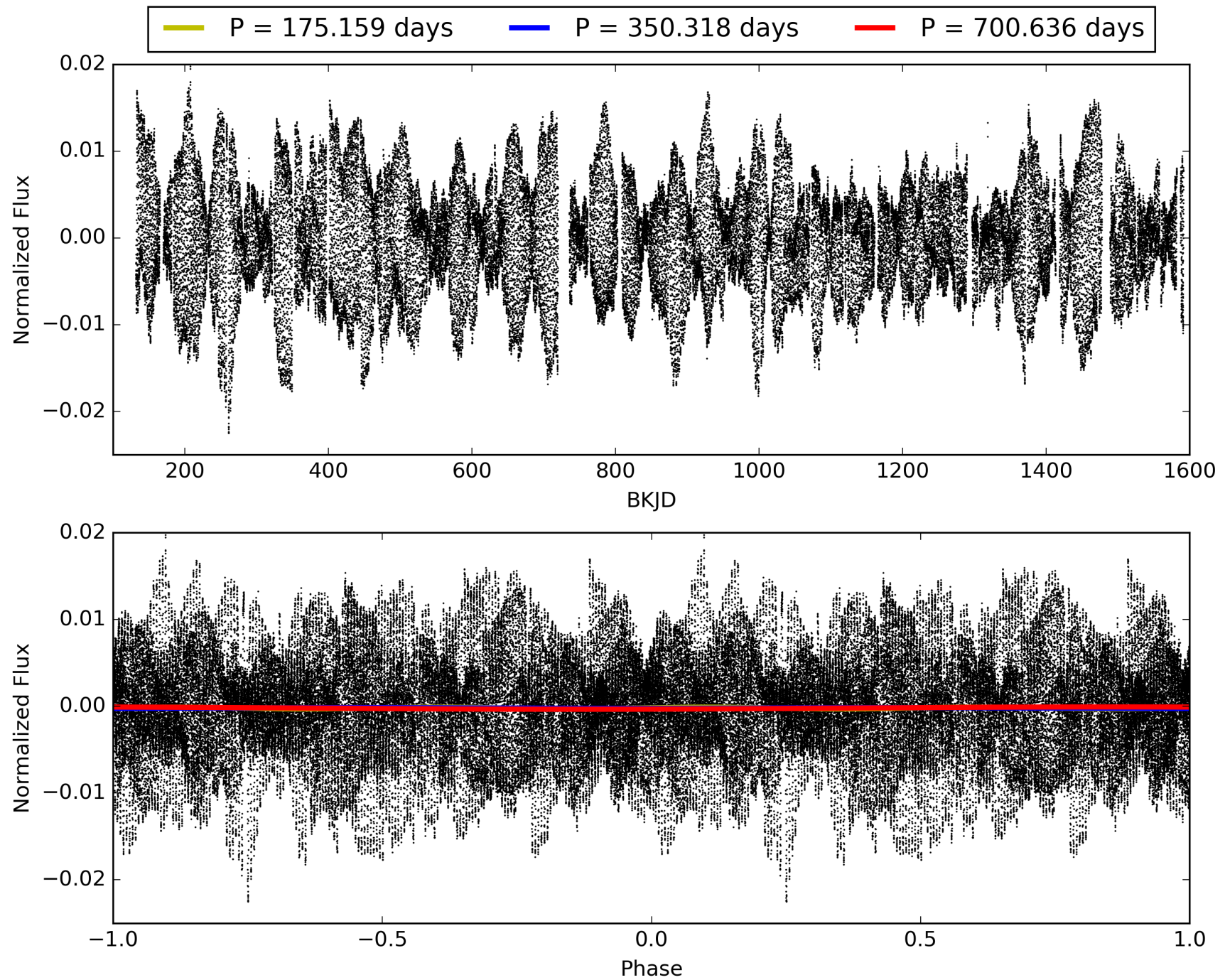
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 06:03:46 Z

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

TCE 008332007-05, PDC Light Curves

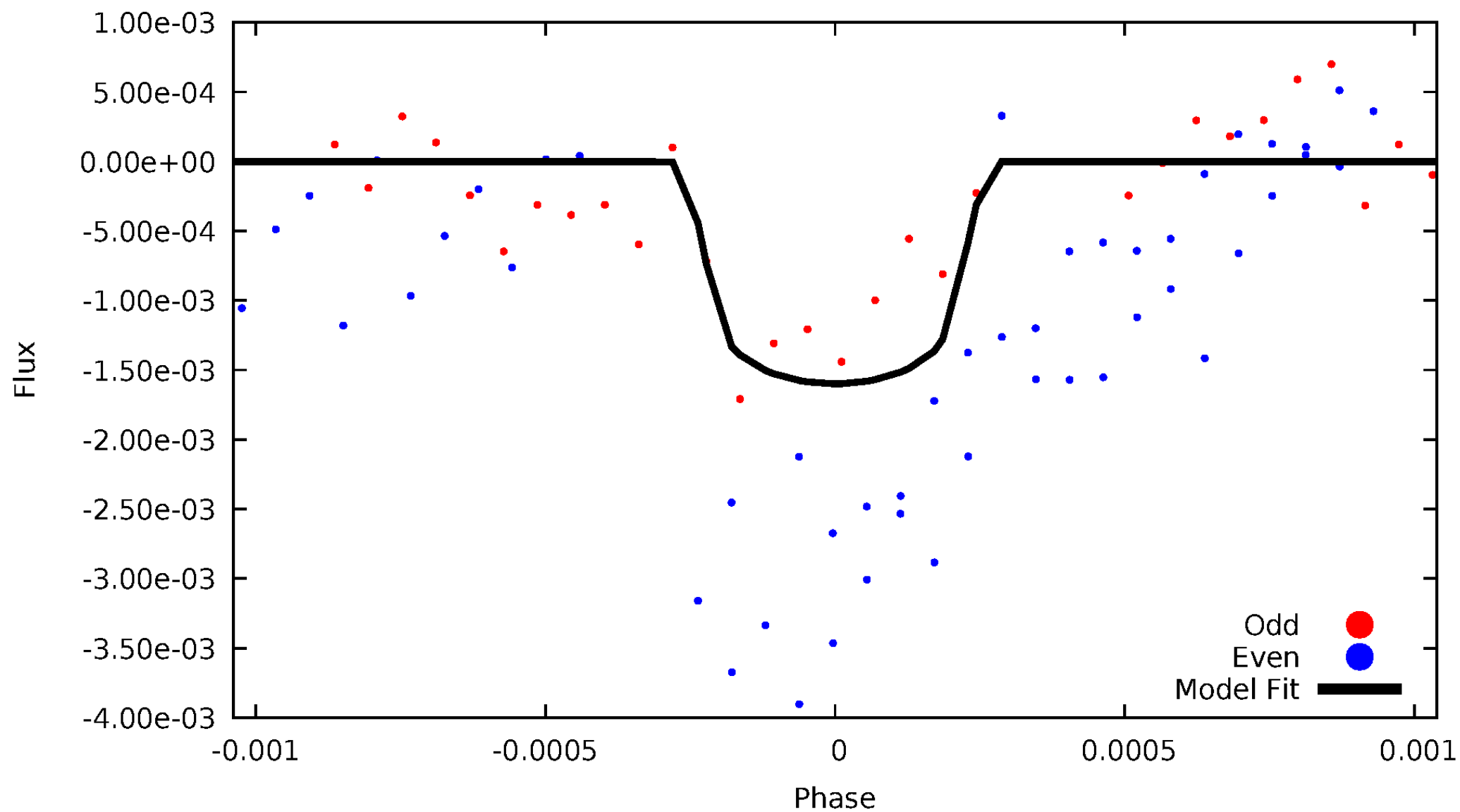


TCE 008332007-05



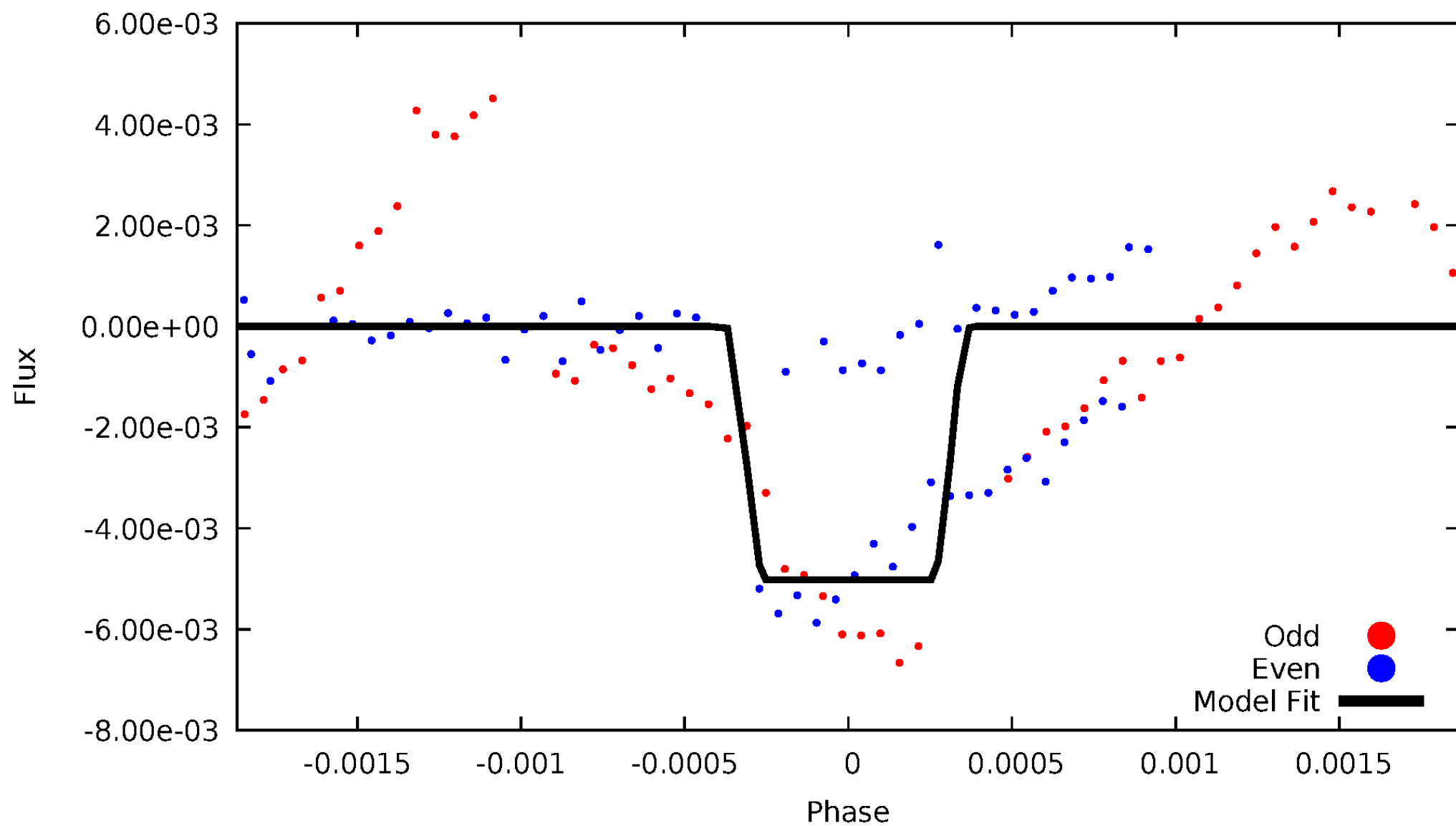
DV Odd/Even

TCE 008332007-05



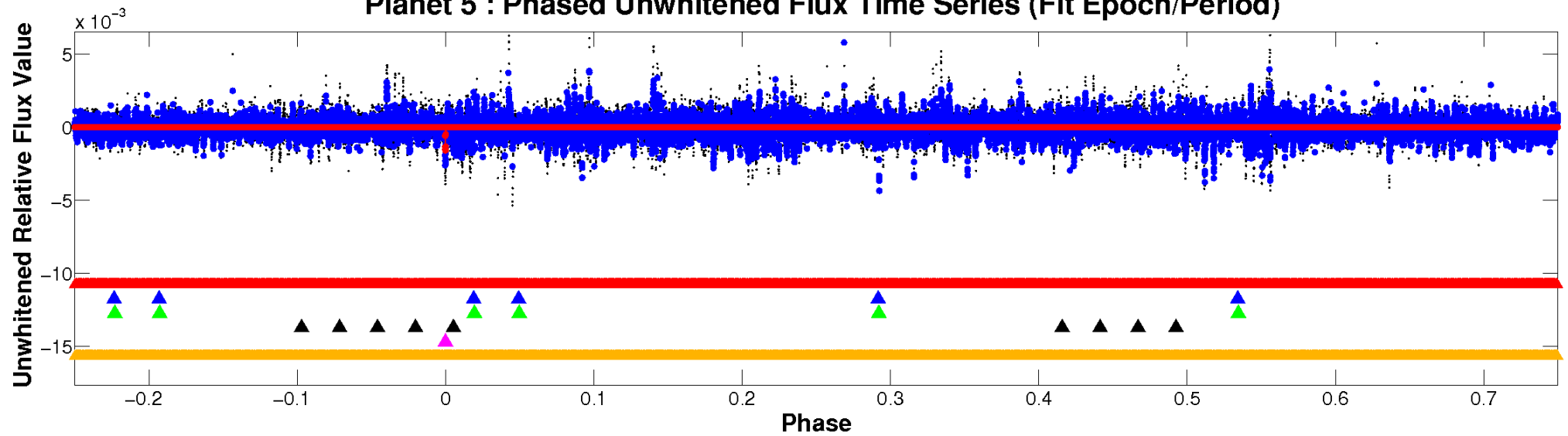
ALT Odd/Even

TCE 008332007-05

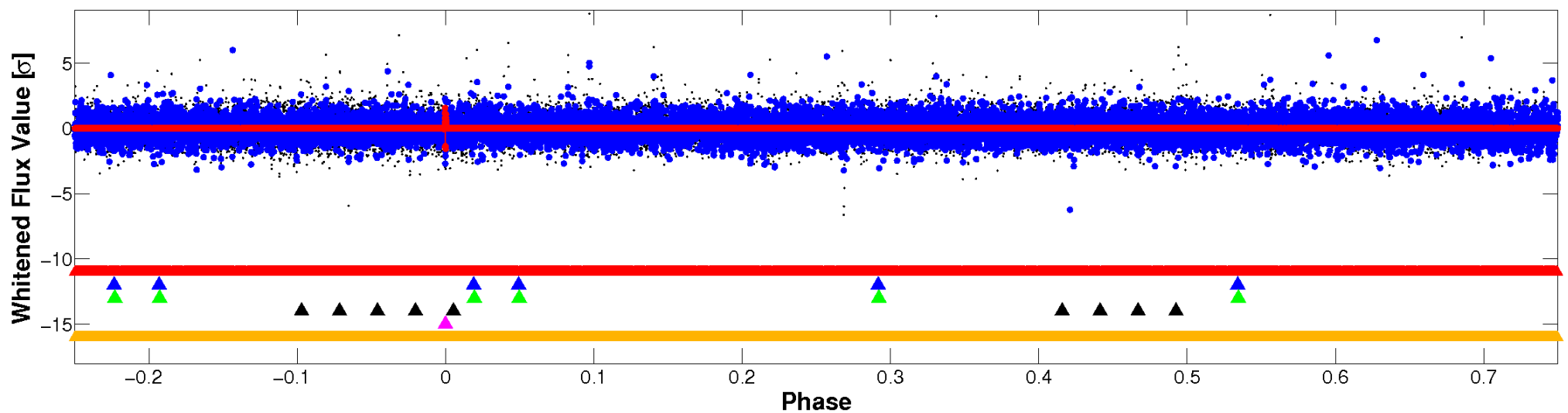


Non-Whitened Vs. Whitened Light Curve

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

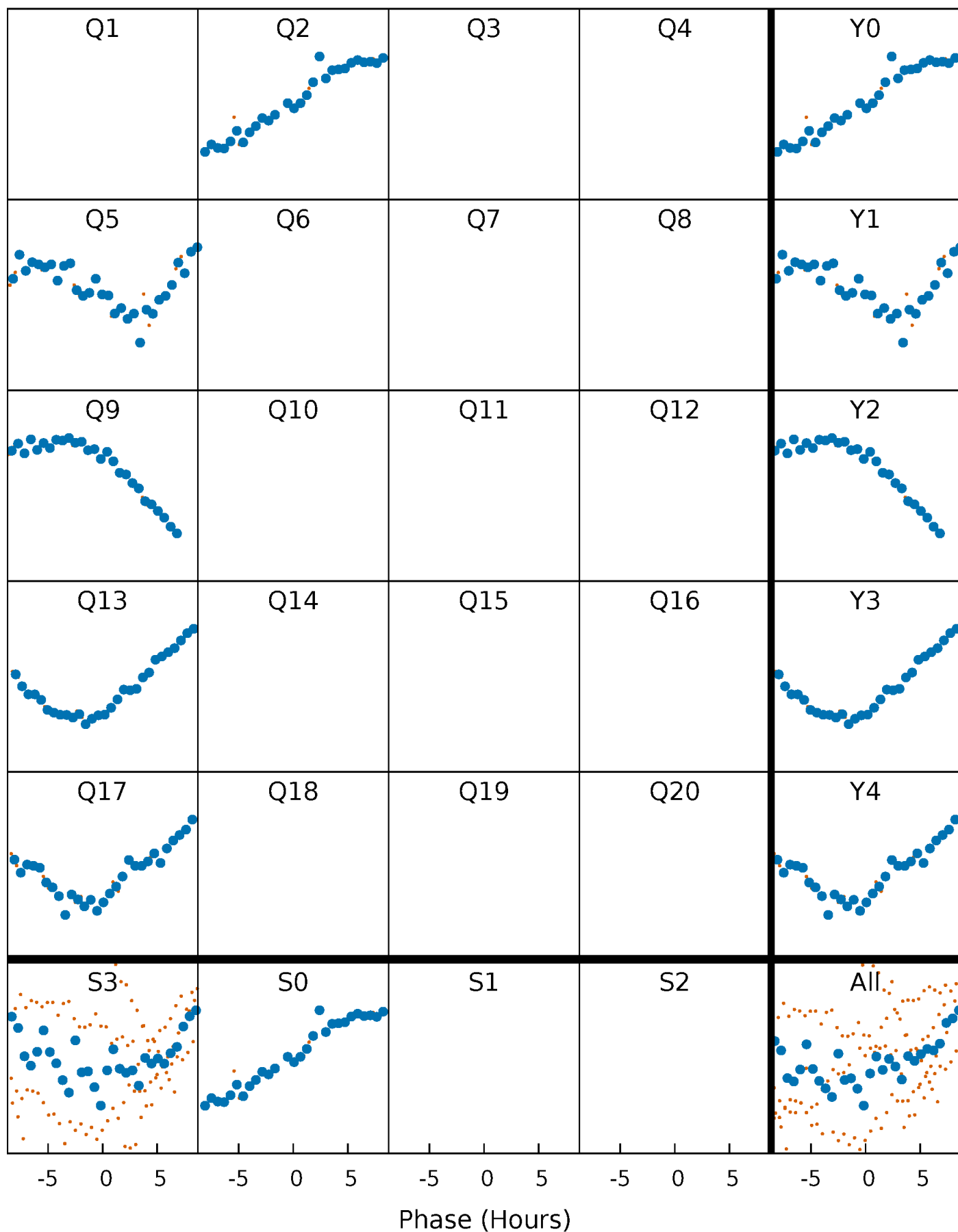


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



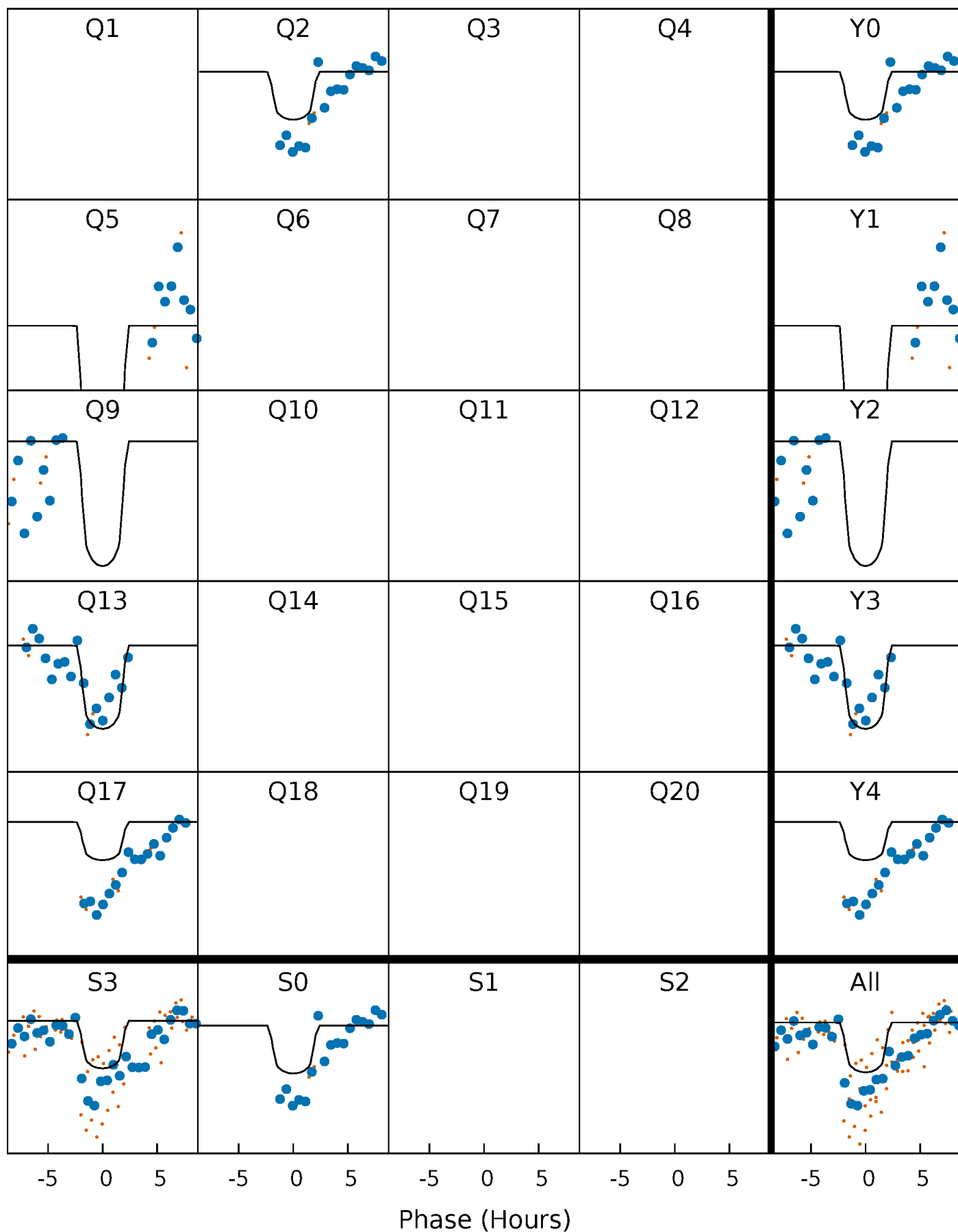
PDC Quarter-Phased Transit Curves

TCE 008332007-05 $P=350.317803$ Days $T_0=173.199242$ (BKJD)



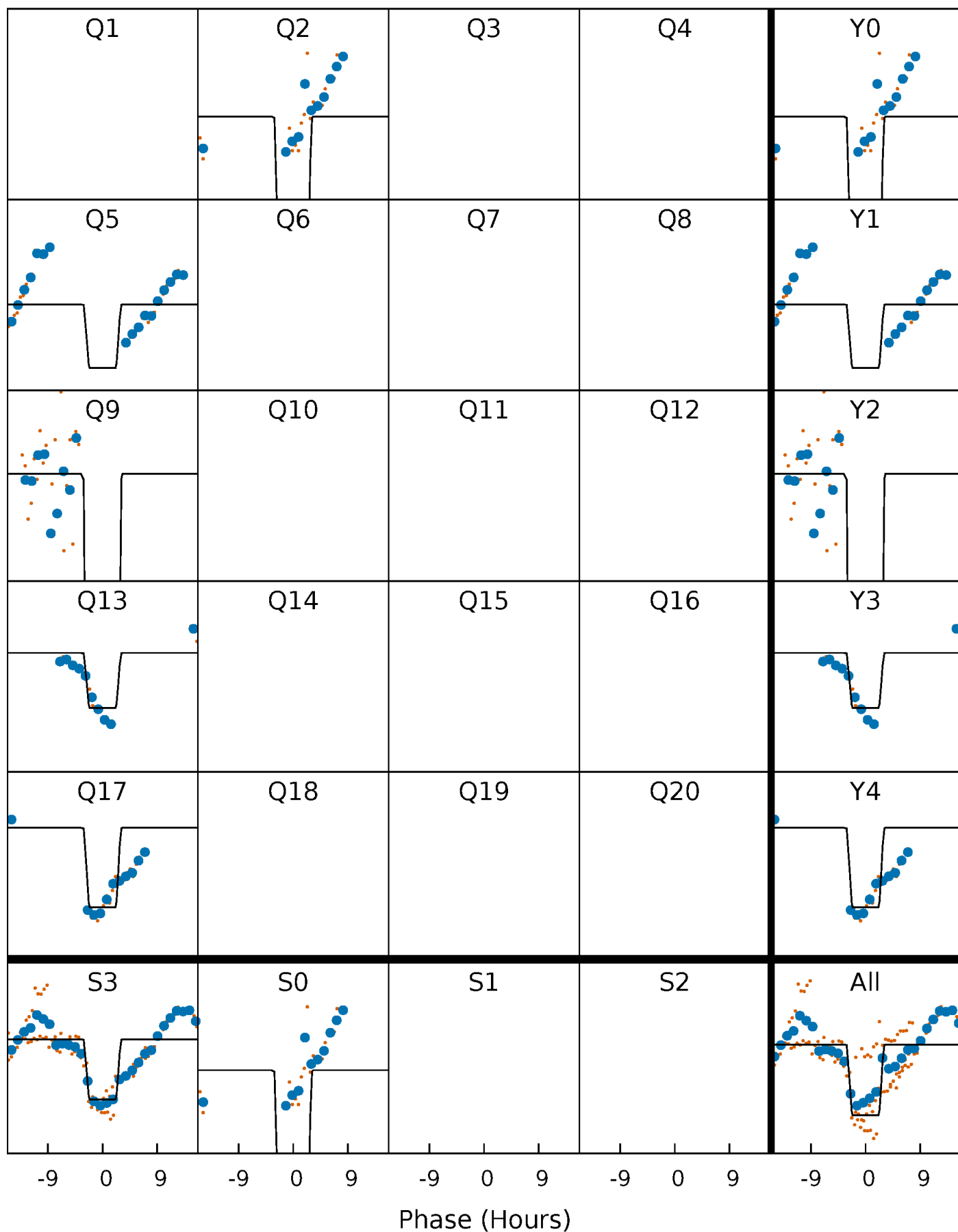
DV Quarter-Phased Transit Curves

TCE 008332007-05 $P=350.317803$ Days $T_0=173.199242$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

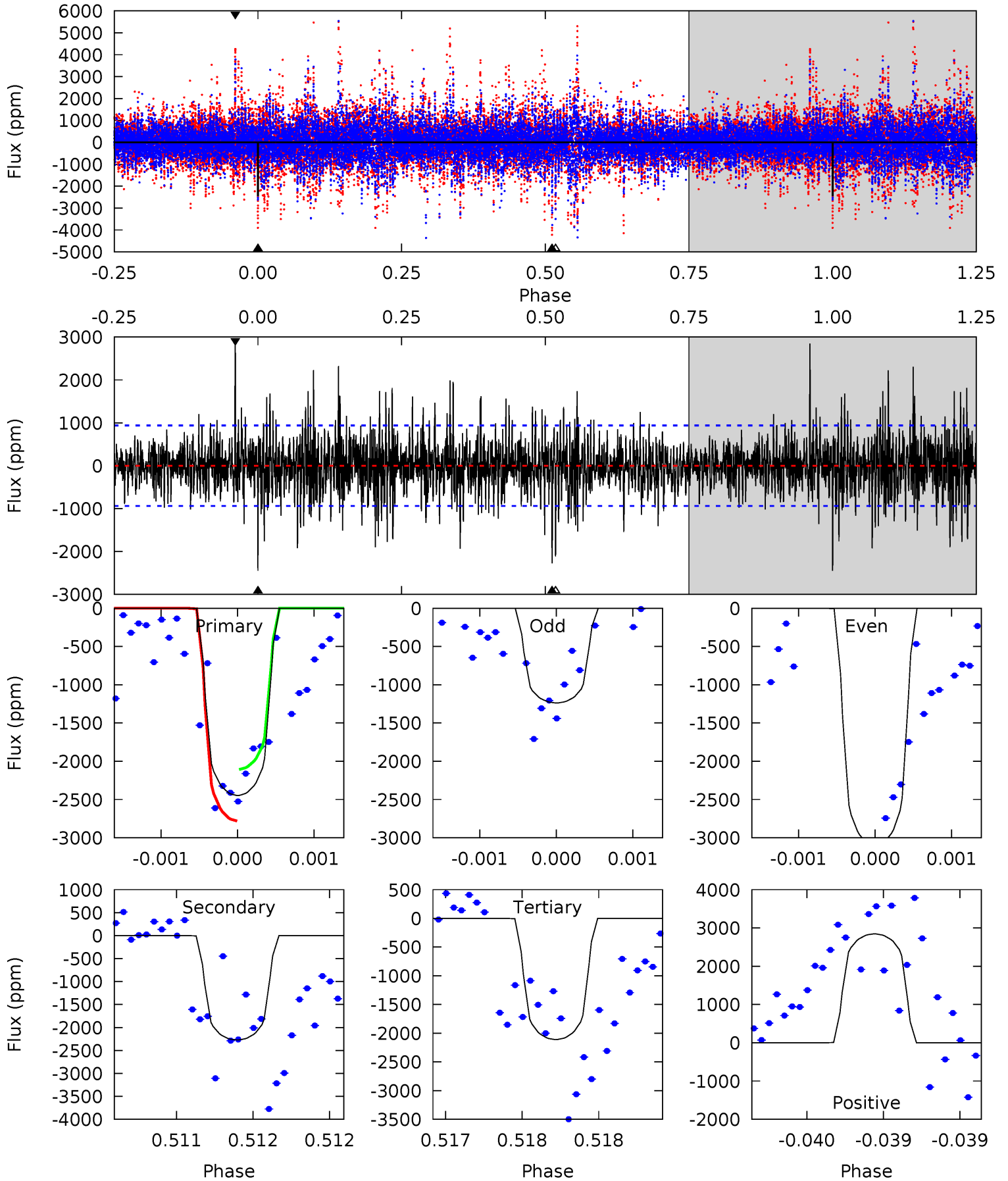
TCE 008332007-05 $P=350.319764$ Days $T_0=173.203798$ (BKJD)



DV Model-Shift Uniqueness Test

008332007-05, P = 350.317803 Days, E = 173.199242 Days

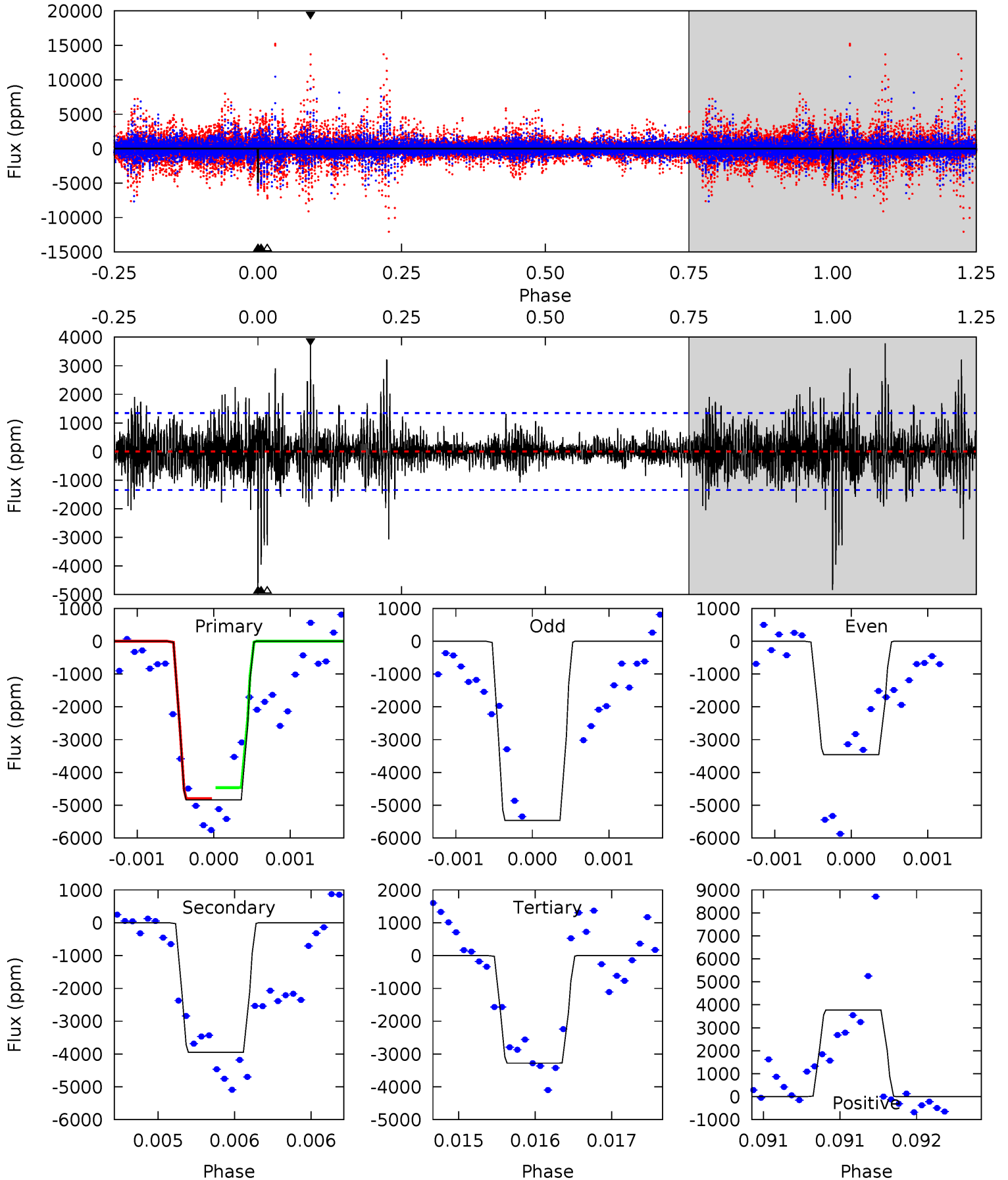
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.5	13.5	12.5	16.9	5.56	3.47	2.84	2.00	-2.36	0.96	-3.40	5.04	0.97	0.54	2.00



Alt Model-Shift Uniqueness Test

008332007-05, P = 350.319764 Days, E = 173.203798 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.8	16.1	13.4	15.4	5.51	3.39	2.11	6.38	4.34	2.74	0.70	3.85	0.72	0.44	0.70



Stellar Parameters For KIC 008332007

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6128^{+182}_{-218}	$4.470^{+0.056}_{-0.210}$	$-0.200^{+0.250}_{-0.300}$	$0.978^{+0.316}_{-0.105}$	$1.029^{+0.139}_{-0.139}$	$1.550^{+0.454}_{-0.837}$
	+3%/-4%	+1%/-5%	+125%/-150%	+32%/-11%	+14%/-14%	+29%/-54%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008332007-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-2273 ± 168	$4.59^{+1.46}_{-1.34}$	385^{+28}_{-19}	6606^{+1325}_{-805}	56412^{+53239}_{-24029}
Alt.	-3949 ± 245	$7.94^{+1.80}_{-1.46}$	385^{+29}_{-20}	5763^{+548}_{-448}	32504^{+15675}_{-10275}

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 $A_{obs} \gg 1.0$

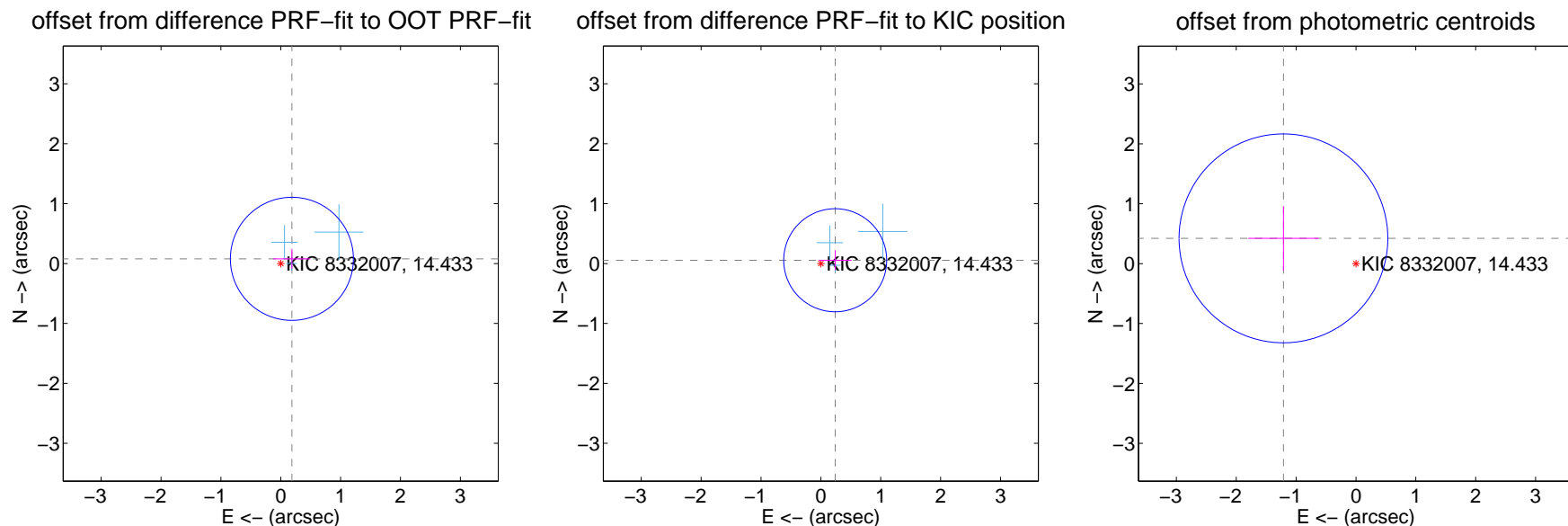
DV Centroid Data

Supplemental centroid analysis for 008332007-05. Kepler magnitude: 14.43. Transit SNR 7.17

There are 3 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.202 ± 0.342	0.59	-0.186 ± 0.310	0.079 ± 0.165
PRF-fit source offset from KIC position	0.246 ± 0.287	0.86	-0.239 ± 0.275	0.055 ± 0.166
photometric centroid source offset	1.28 ± 0.58	2.21	1.21 ± 0.59	0.42 ± 0.54



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.

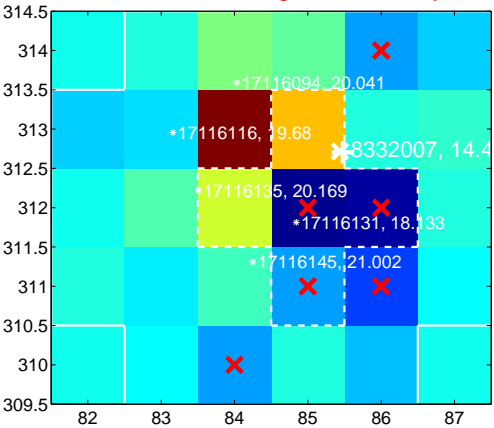
Q1 no difference image



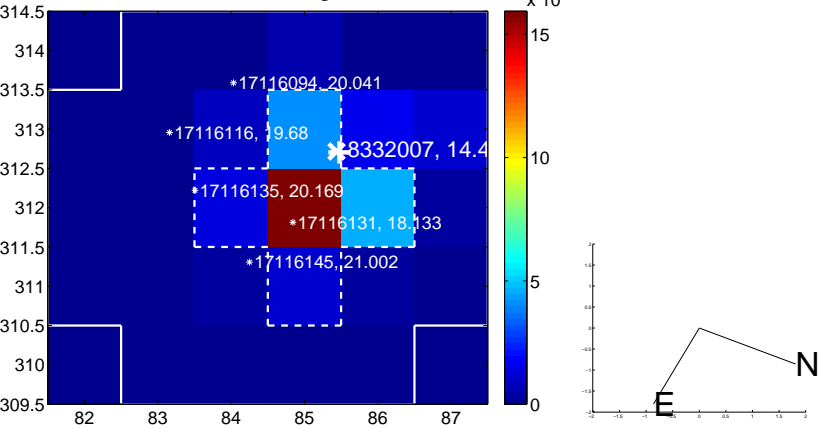
Q1 no OOT image



Q2 difference image. Poor Quality



Q2 OOT image



Q3 no difference image



Q3 no OOT image



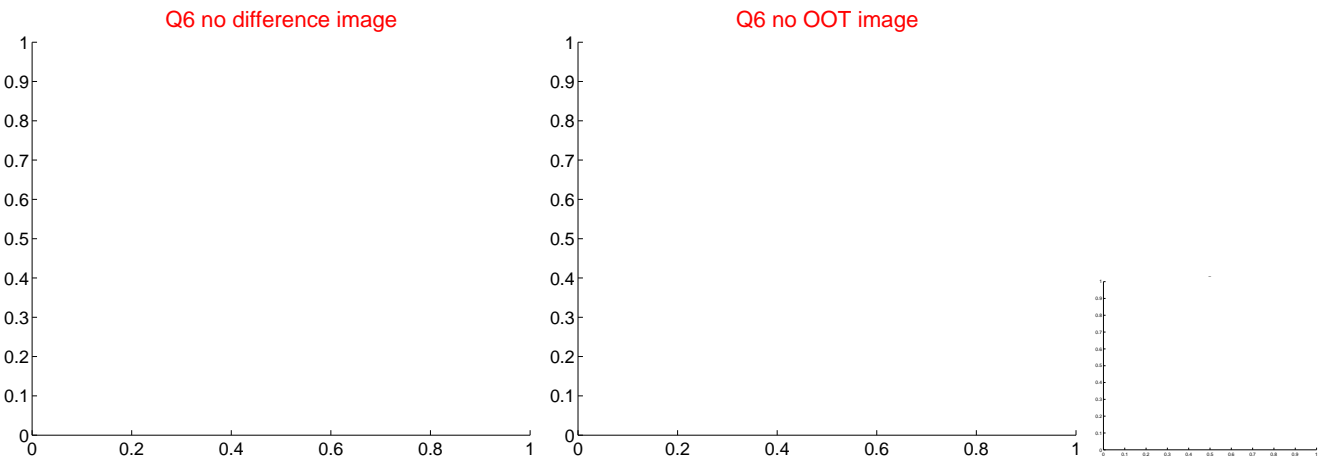
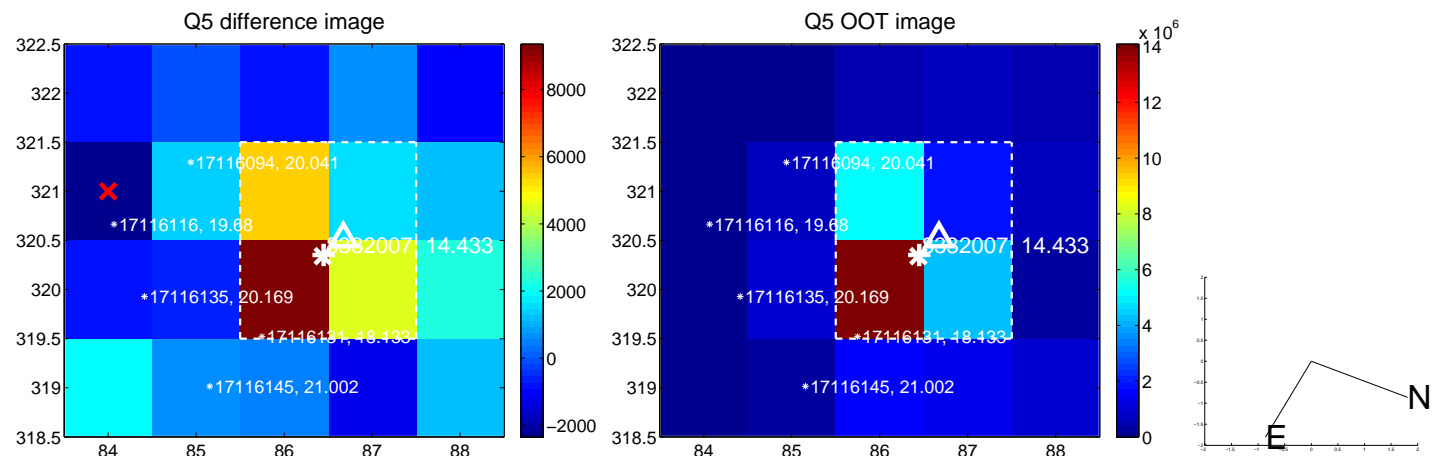
Q4 no difference image



Q4 no OOT image



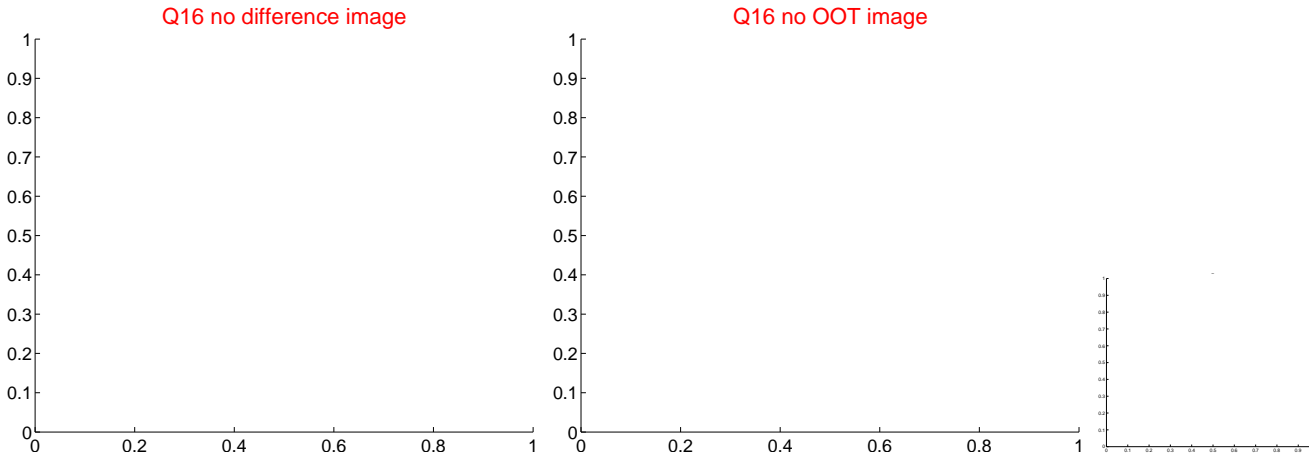
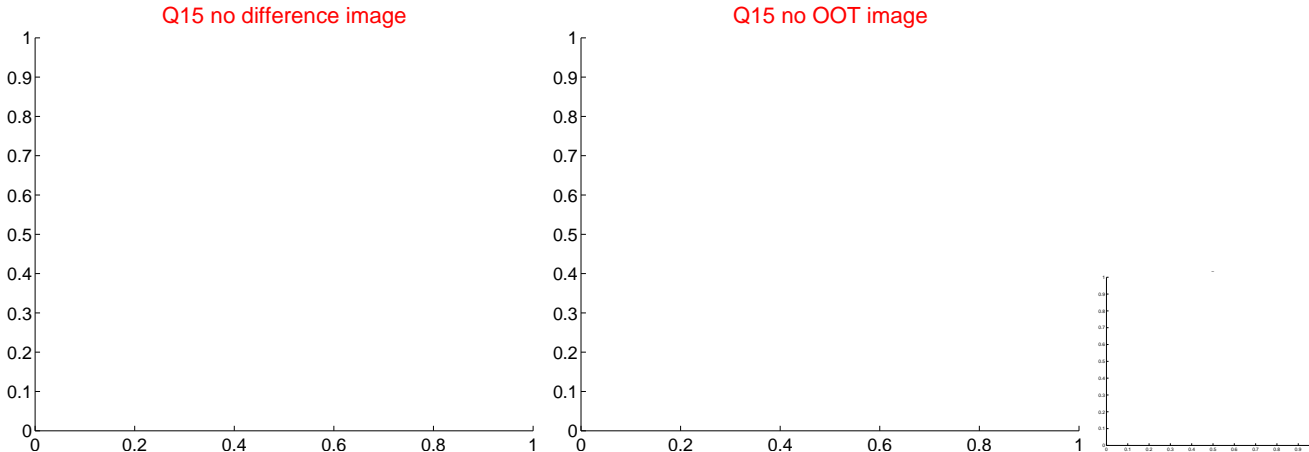
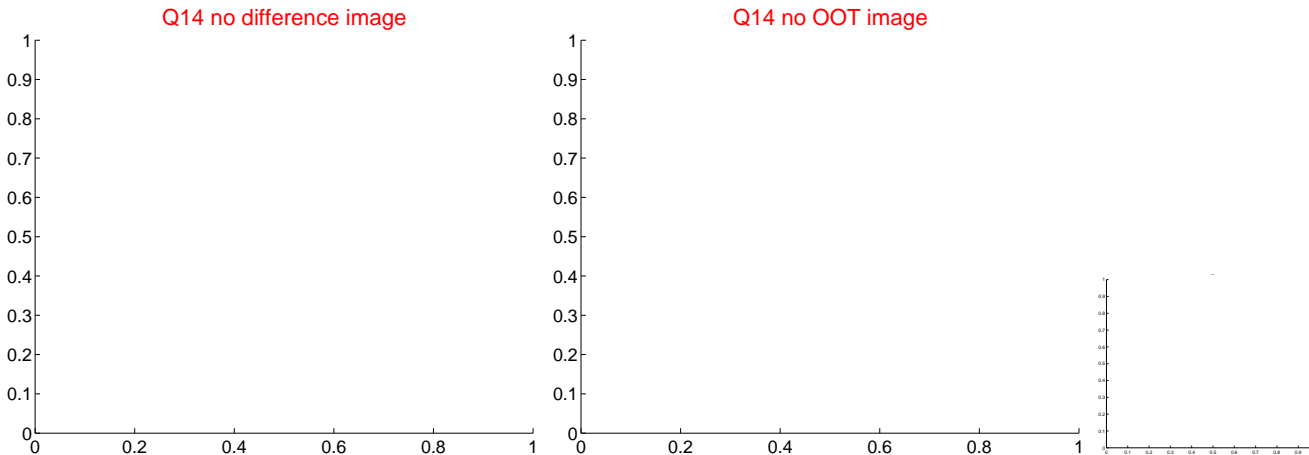
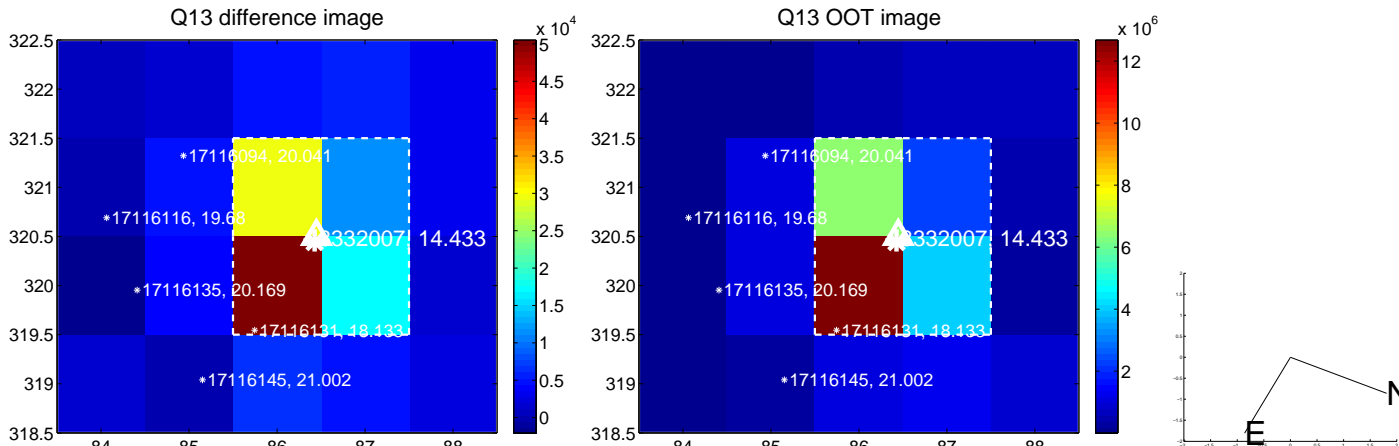
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



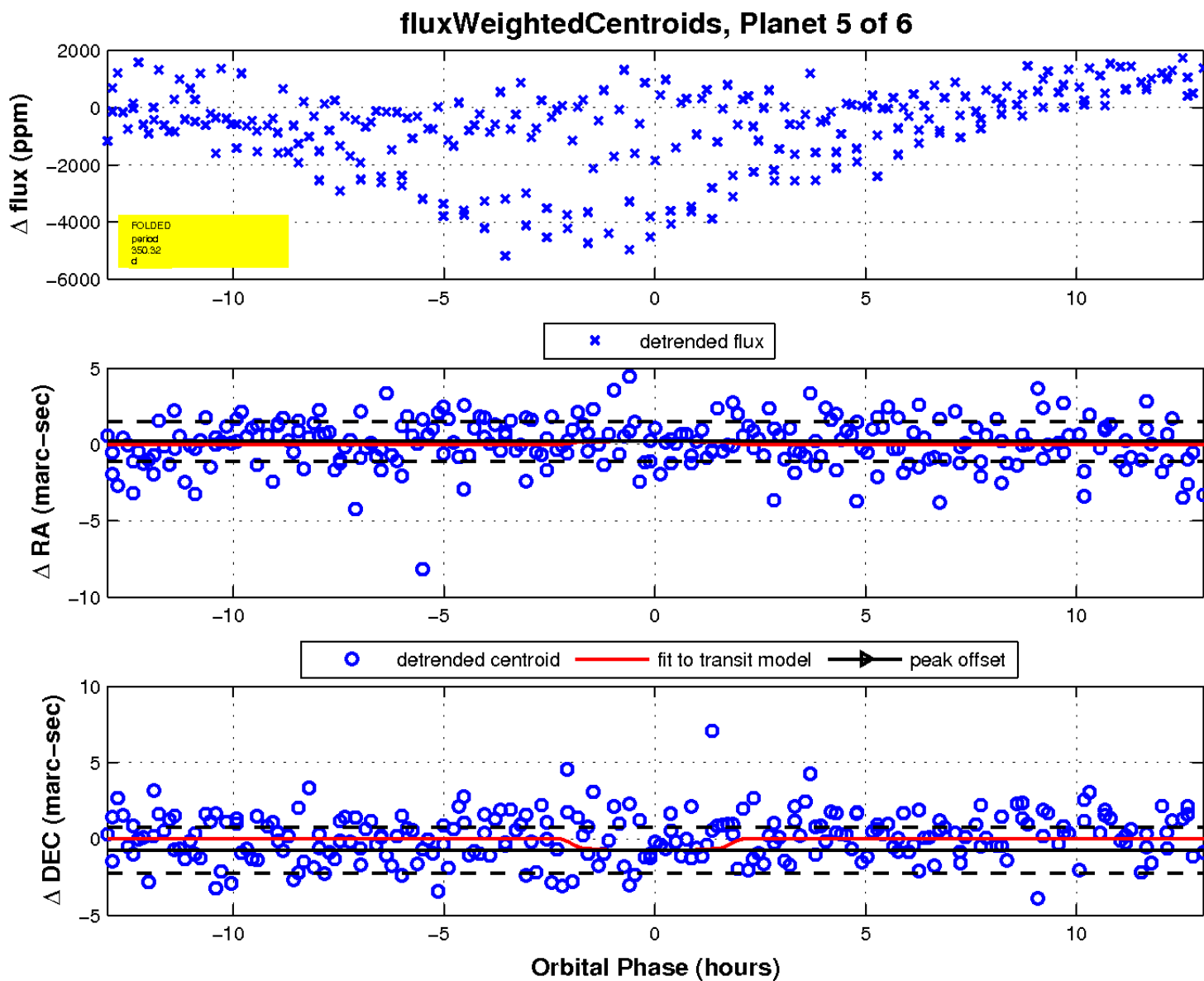
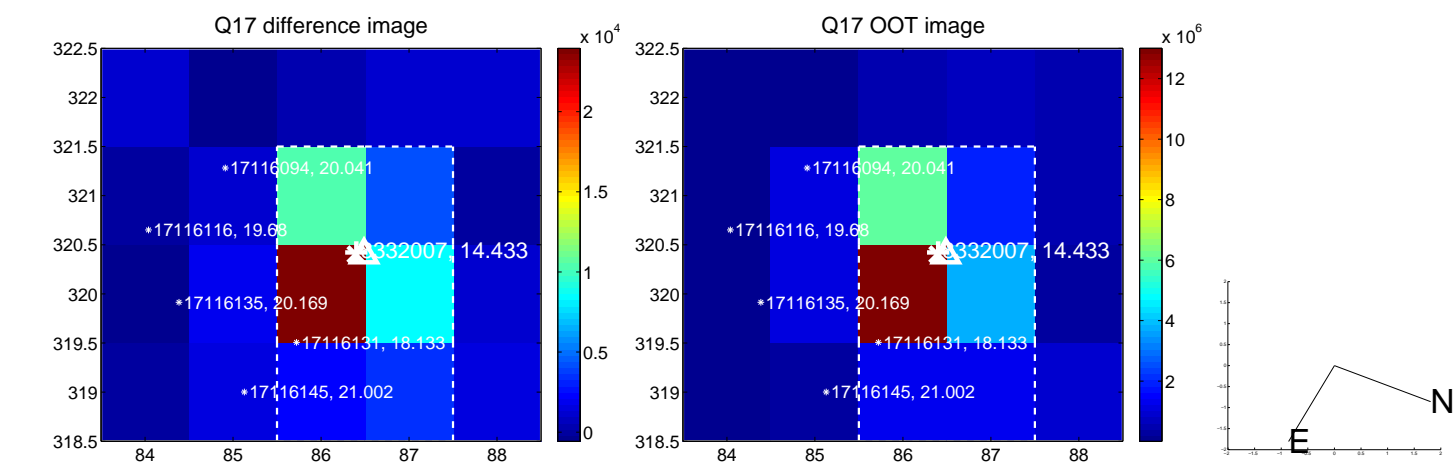
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

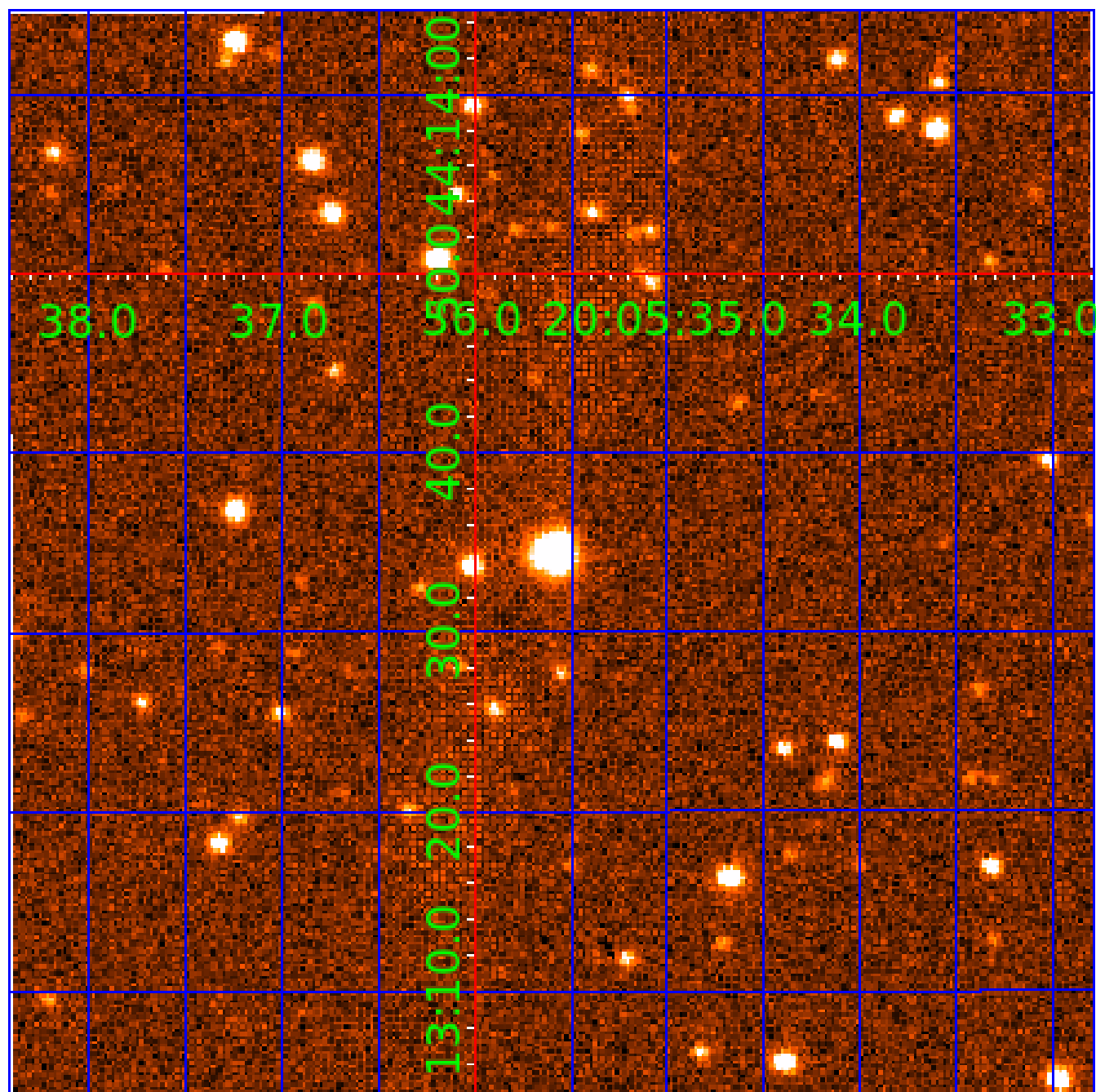


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008332007

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})
008332007-01	OBS	No	0.934788	131.738201	76.8	4.058	8.0	8.7	0.98	6128	0.87	3384.11
008332007-02	OBS	No	265.394087	179.865712	391.6	0.823	9.3	1.6	0.98	6128	2.03	1.81
008332007-03	OBS	No	265.385665	180.031146	1991.0	5.170	11.6	9.1	0.98	6128	7.21	1.81
008332007-04	OBS	No	170.676286	175.075518	1500.9	7.561	9.0	7.4	0.98	6128	3.95	3.27
008332007-05	OBS	No	350.317803	173.199242	1598.5	4.367	8.0	7.2	0.98	6128	4.38	1.25
008332007-06	OBS	No	0.934854	132.171420	78.0	6.698	7.5	7.2	0.98	6128	0.87	3383.79

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008332007-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV
008332007-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_TRACKER—LPP_DV—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
008332007-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—SAME_NTL_PERIOD—HALO_GHOST
008332007-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
008332007-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_POS_DV
008332007-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—SAME_NTL_PERIOD—HALO_GHOST

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

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

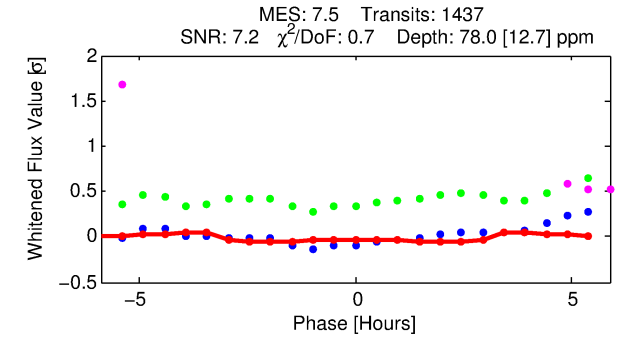
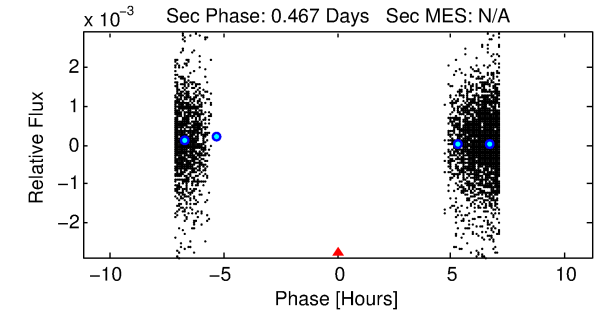
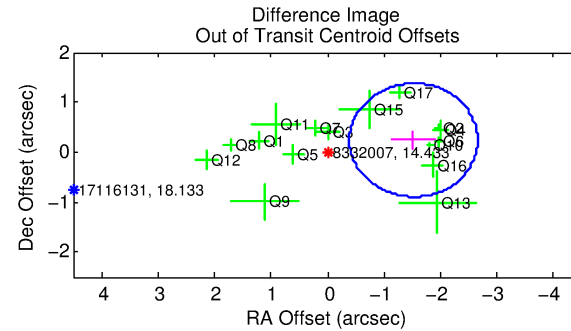
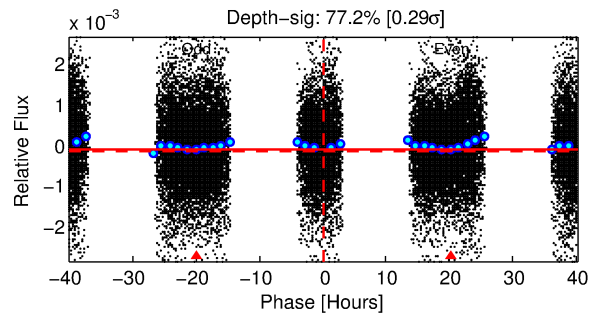
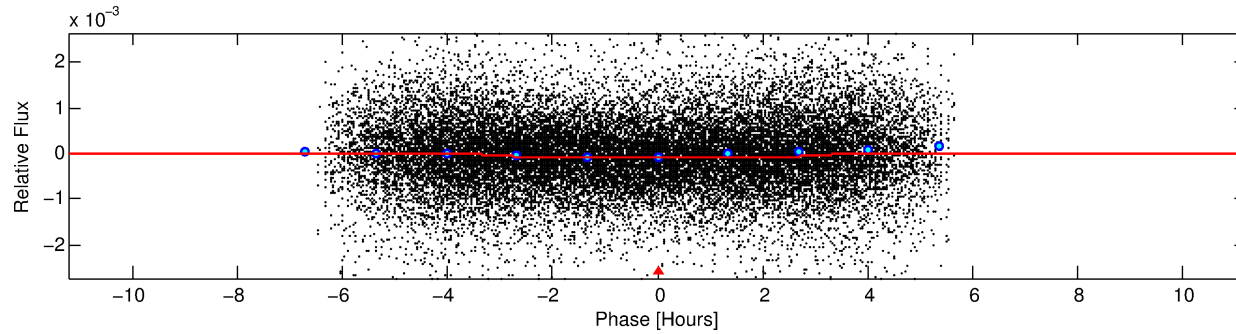
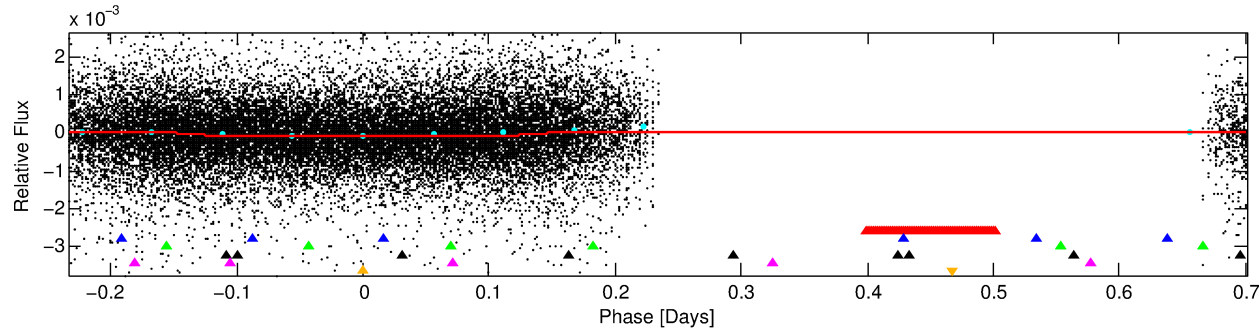
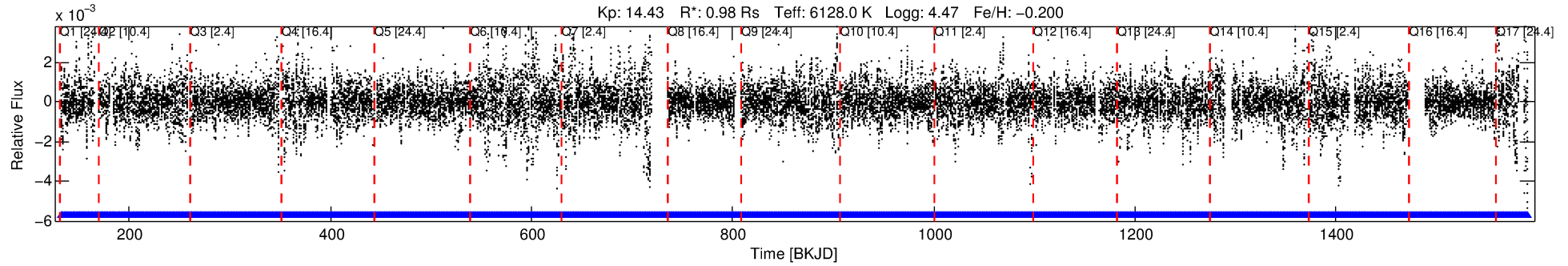
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008332007-06

No Significant Match Found

DV One-Page Summary

KIC: 8332007 Candidate: 6 of 6 Period: 0.935 d



DV Fit Results:

Period = 0.93485 [0.00002] d
Epoch = 132.1714 [0.0034] BKJD
Rp/R* = 0.0081 [0.0072]
a/R* = 1.24 [1.91]
b = 0.21 [19.94]
Seff = 3383.79 [1397.49]
Teq = 1945 [201] K
Rp = 0.87 [0.82] Re
a = 0.0189 [0.0051] AU

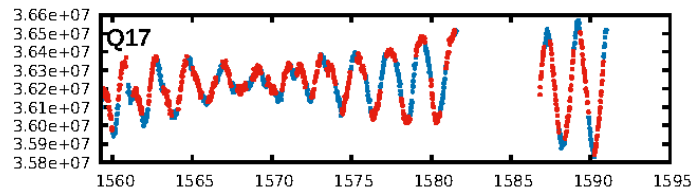
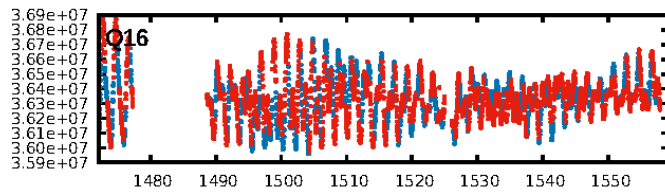
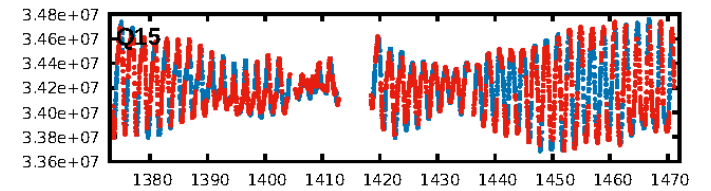
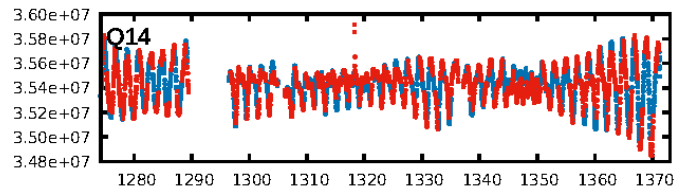
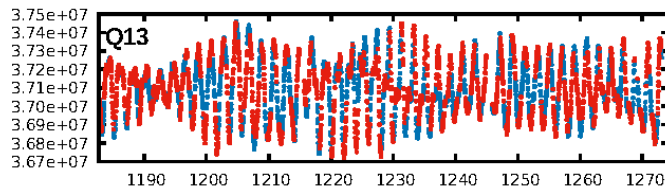
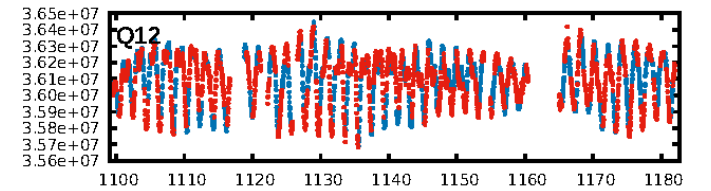
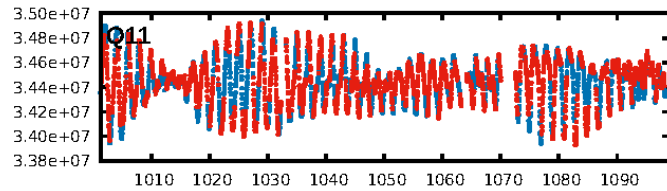
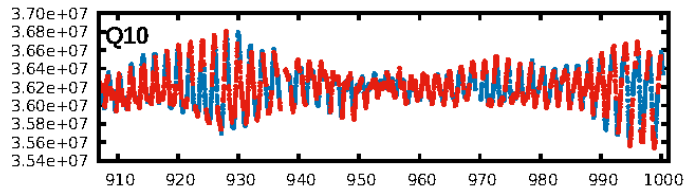
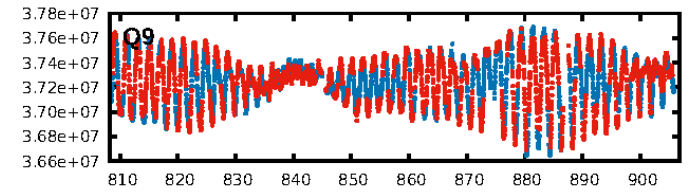
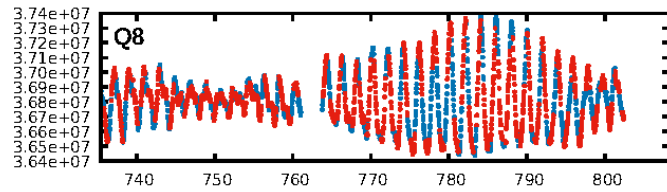
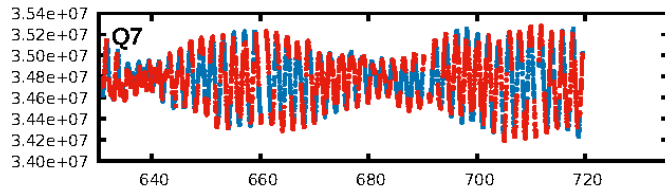
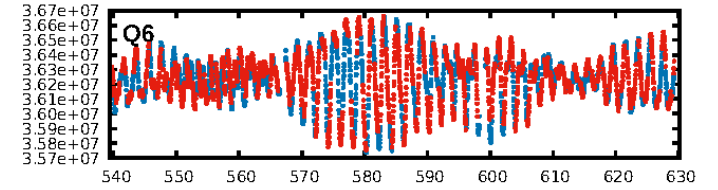
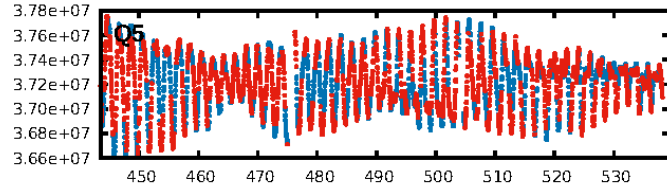
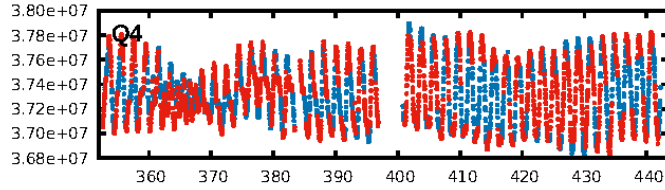
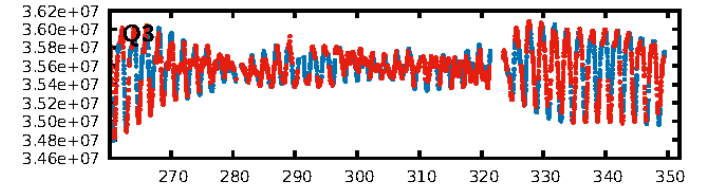
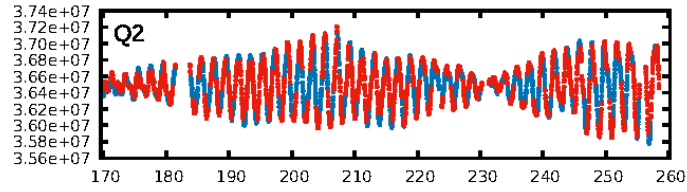
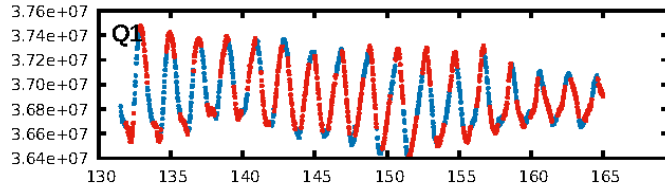
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00 σ]
LongPeriod-sig: 100.0% [403.30 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1372/1372]
GhostDiagnostic-chr: 0.2314
Centroid-sig: 1.0%
Centroid-so: 1.466 arcsec [2.45 σ]
OotOffset-rm: 1.540 arcsec [4.07 σ]
KicOffset-rm: 1.466 arcsec [4.32 σ]
OotOffset-st: 3/4/4/5 [16]
KicOffset-st: 3/4/4/5 [16]
DiffImageQuality-fgm: 0.62 [10/16]
DiffImageOverlap-fno: 0.00 [0/17]

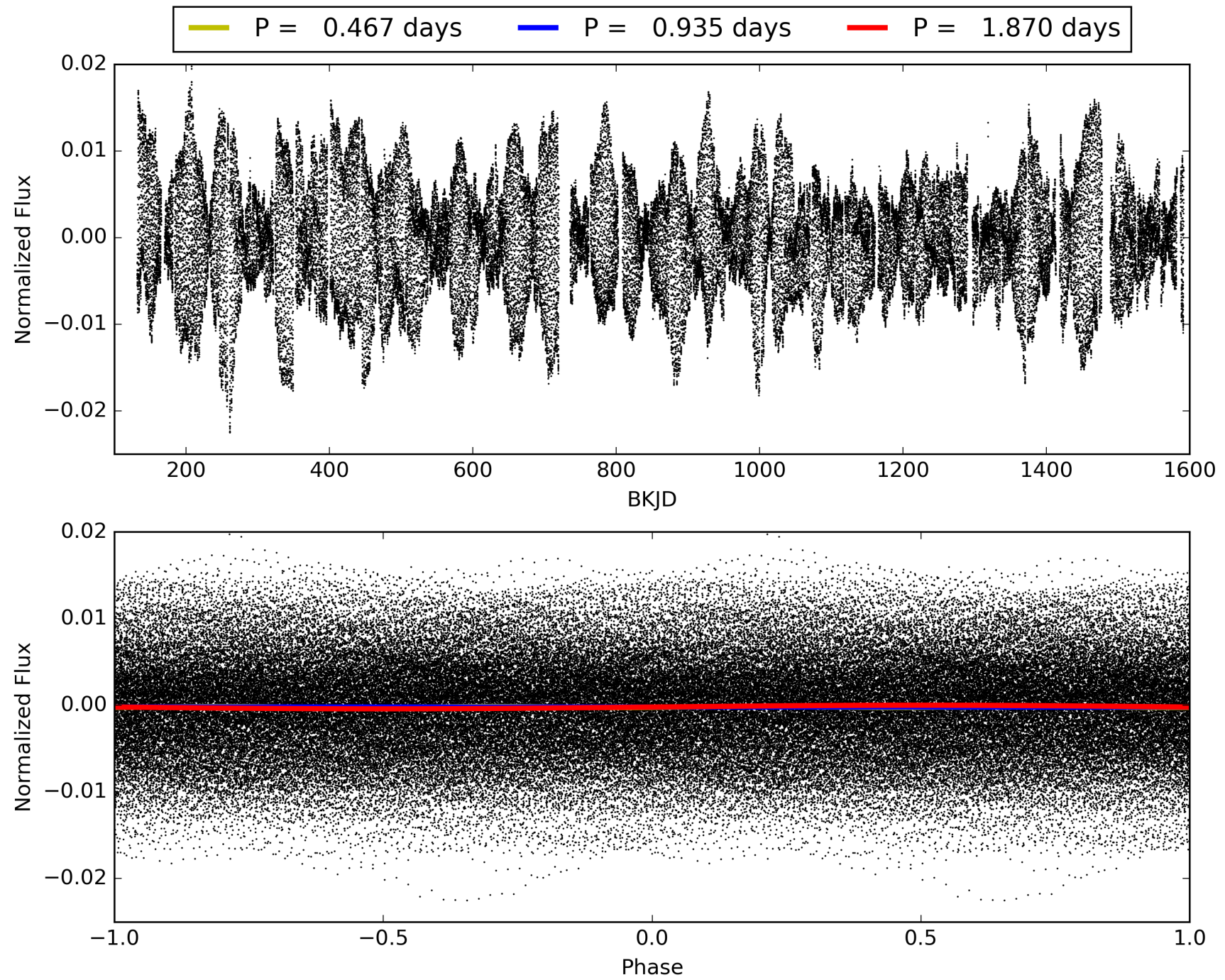
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 06:03:55 Z

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

TCE 008332007-06, PDC Light Curves

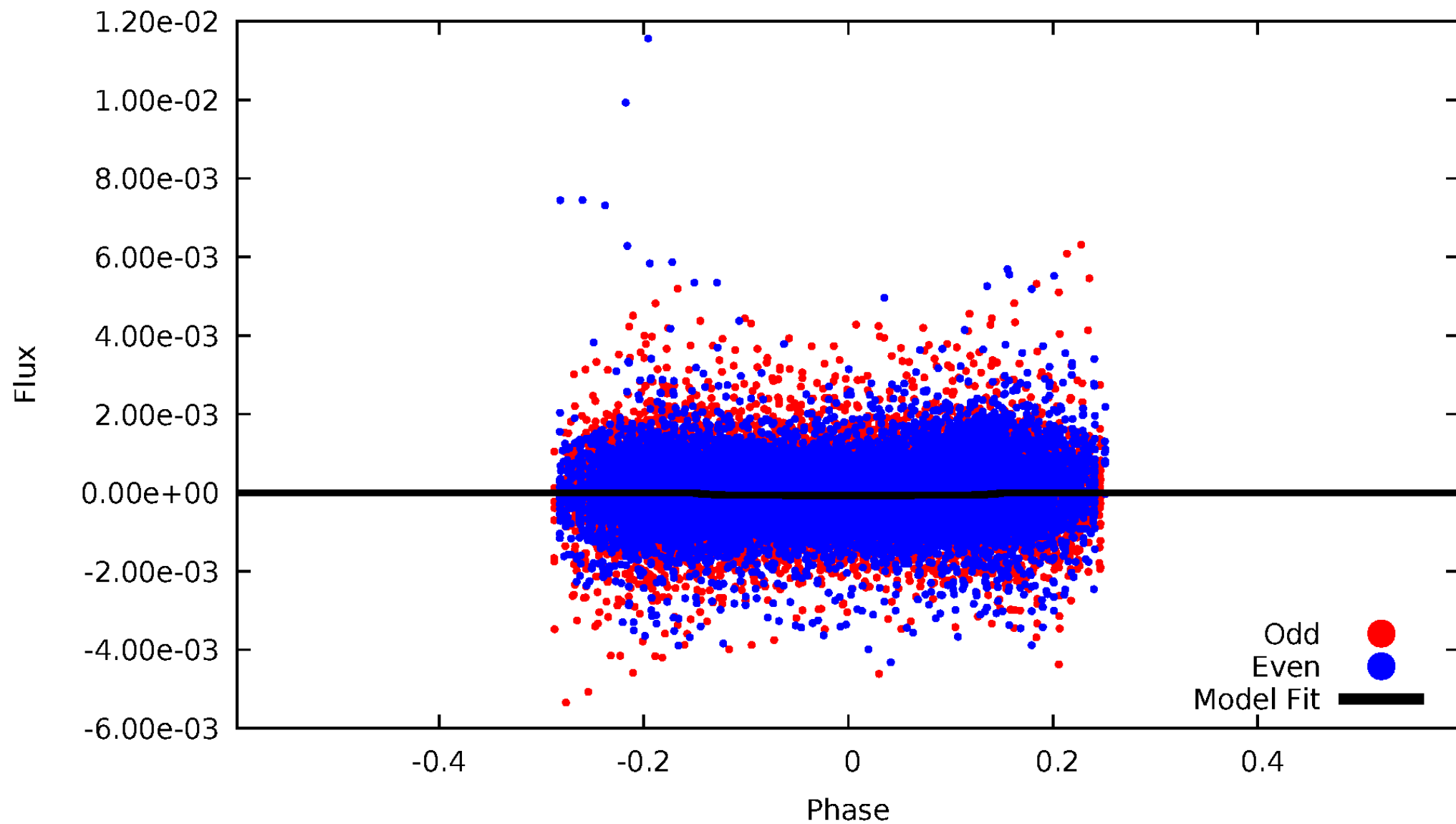


TCE 008332007-06



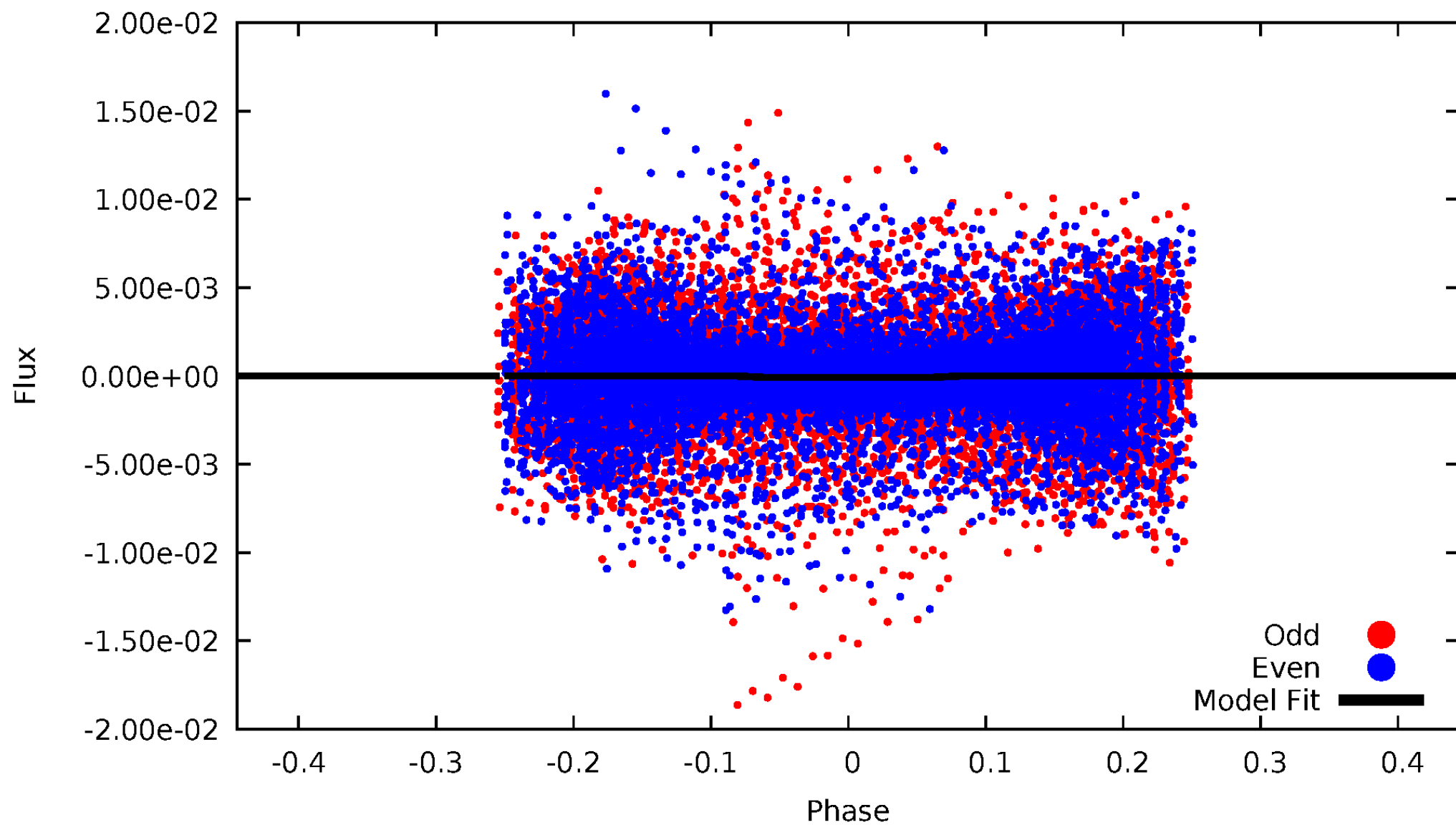
DV Odd/Even

TCE 008332007-06



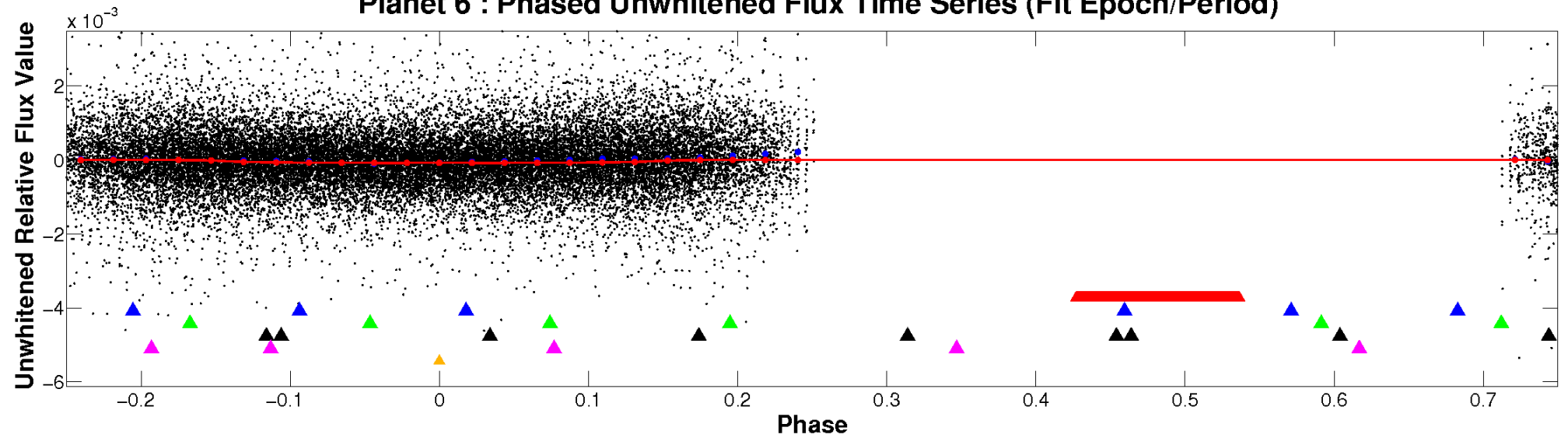
ALT Odd/Even

TCE 008332007-06

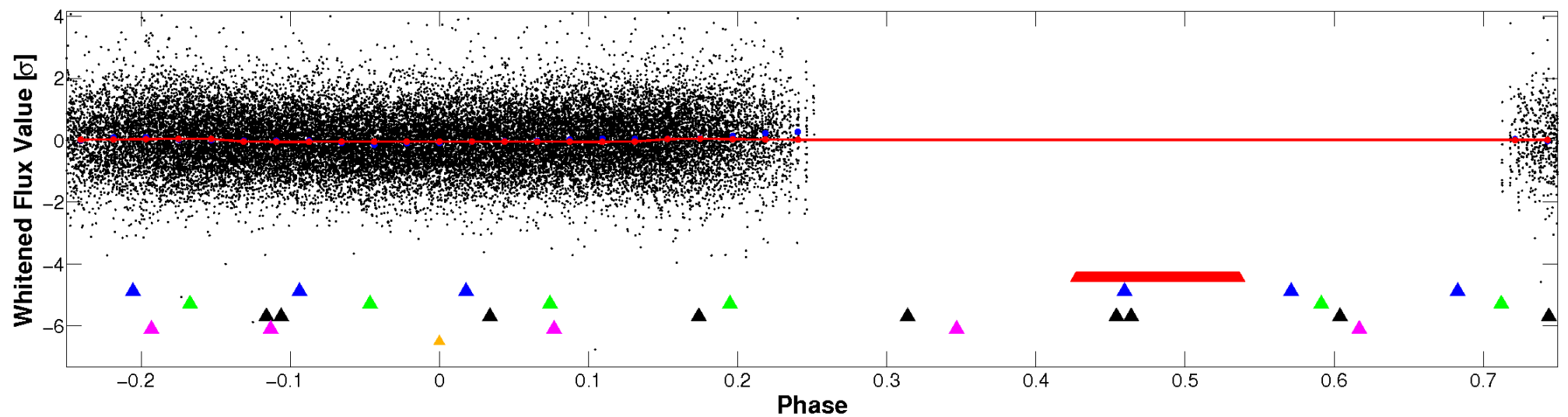


Non-Whitened Vs. Whitened Light Curve

Planet 6 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

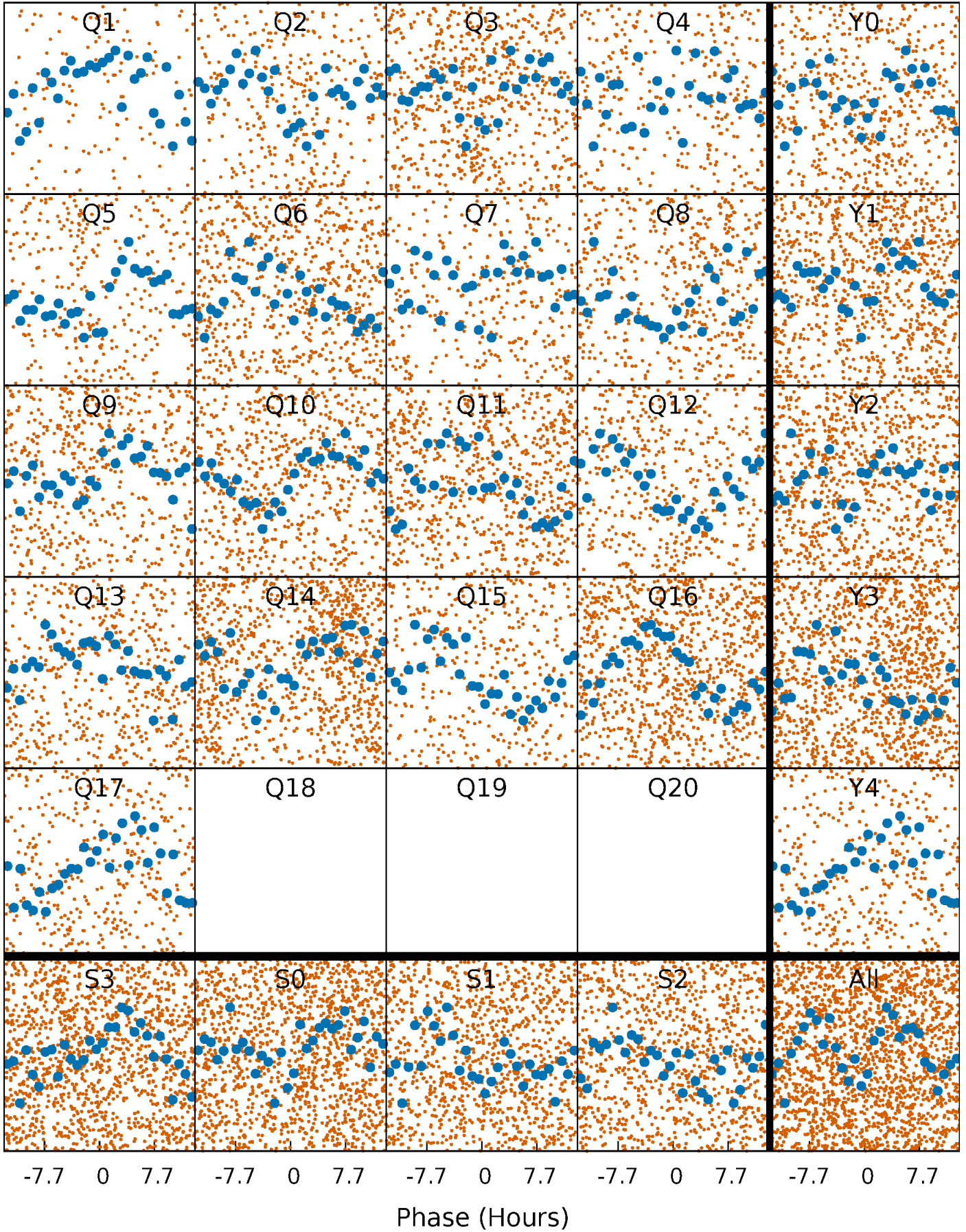


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



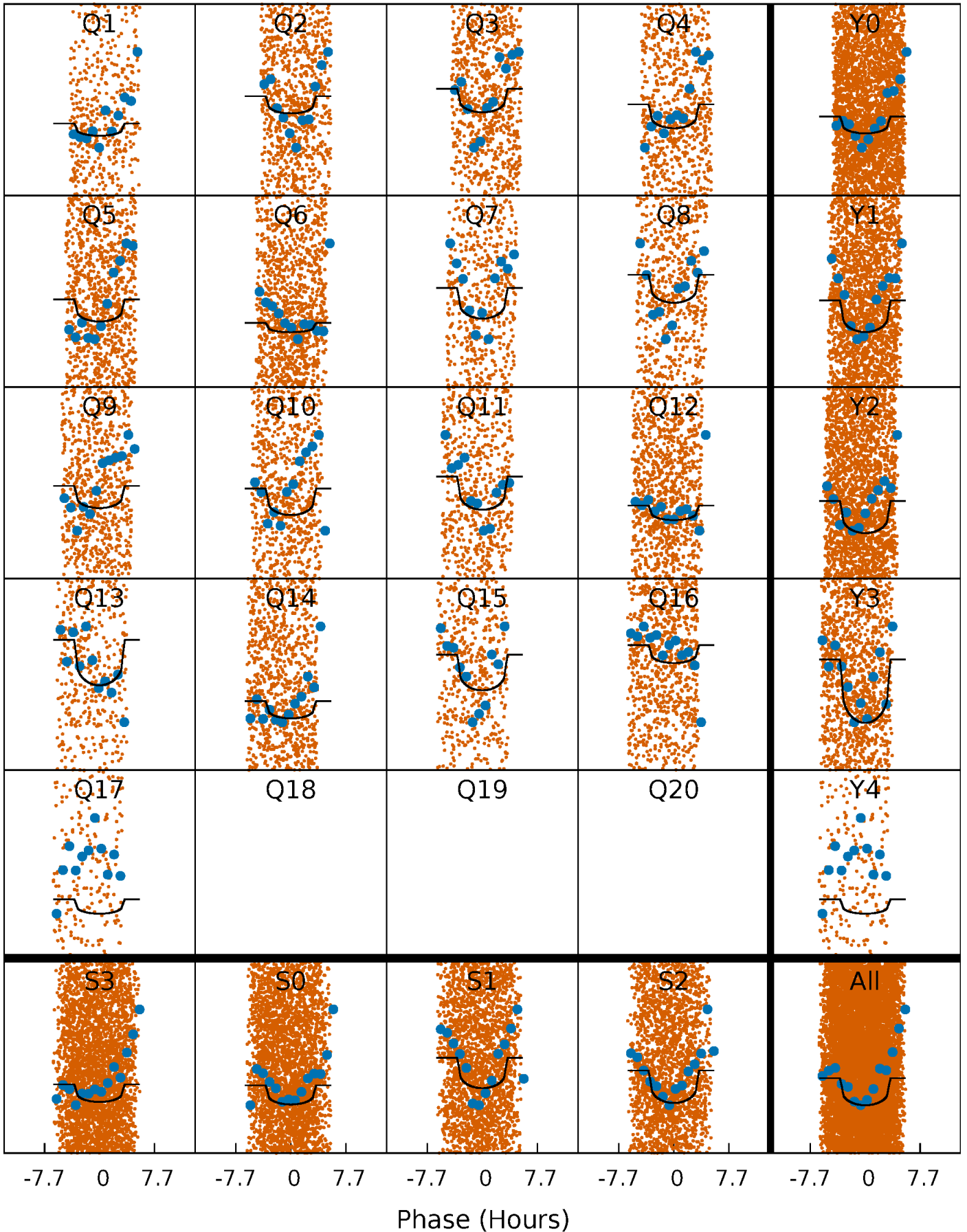
PDC Quarter-Phased Transit Curves

TCE 008332007-06 P= 0.934854 Days $T_0=132.171420$ (BKJD)



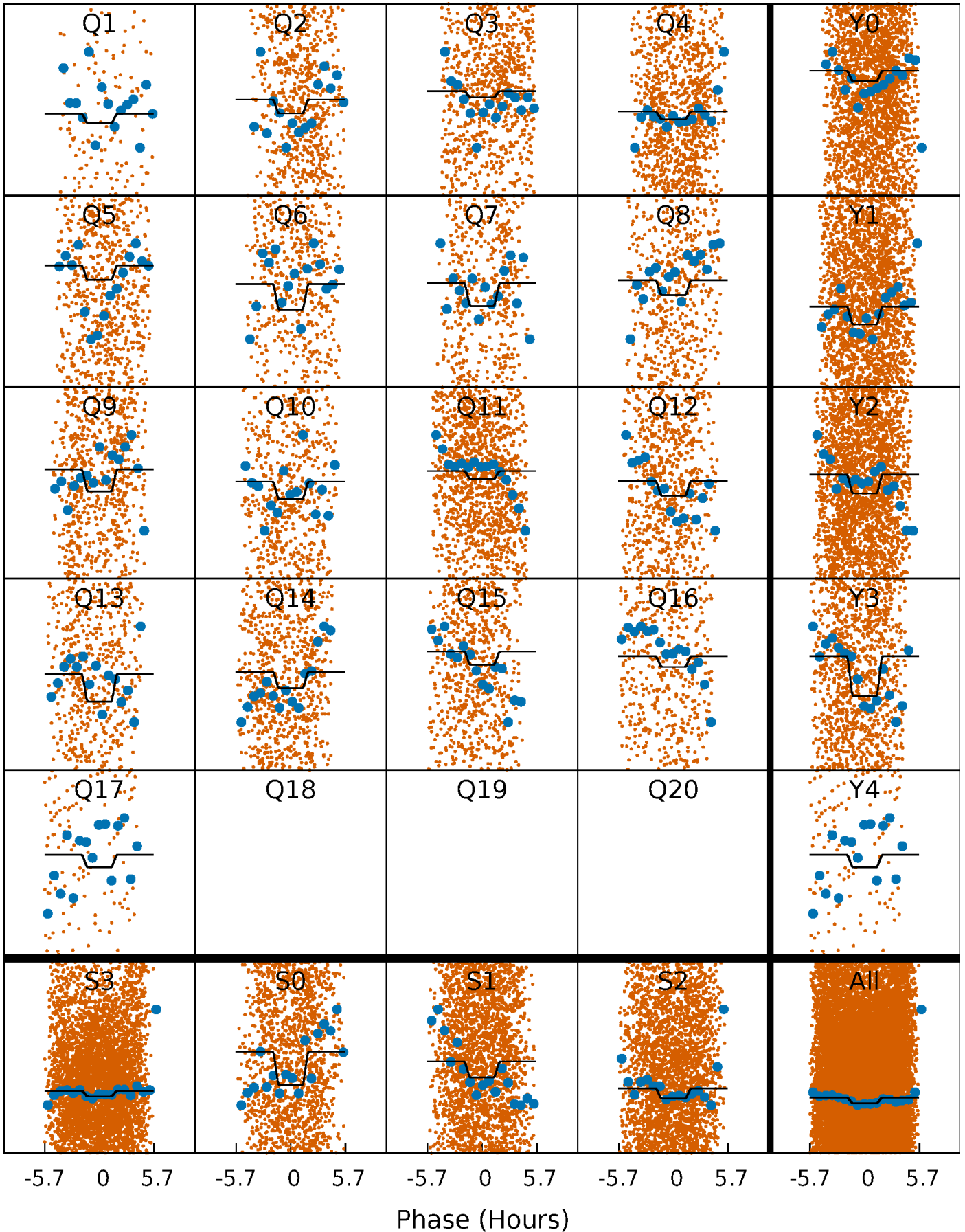
DV Quarter-Phased Transit Curves

TCE 008332007-06 $P = 0.934854$ Days $T_0 = 132.171420$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

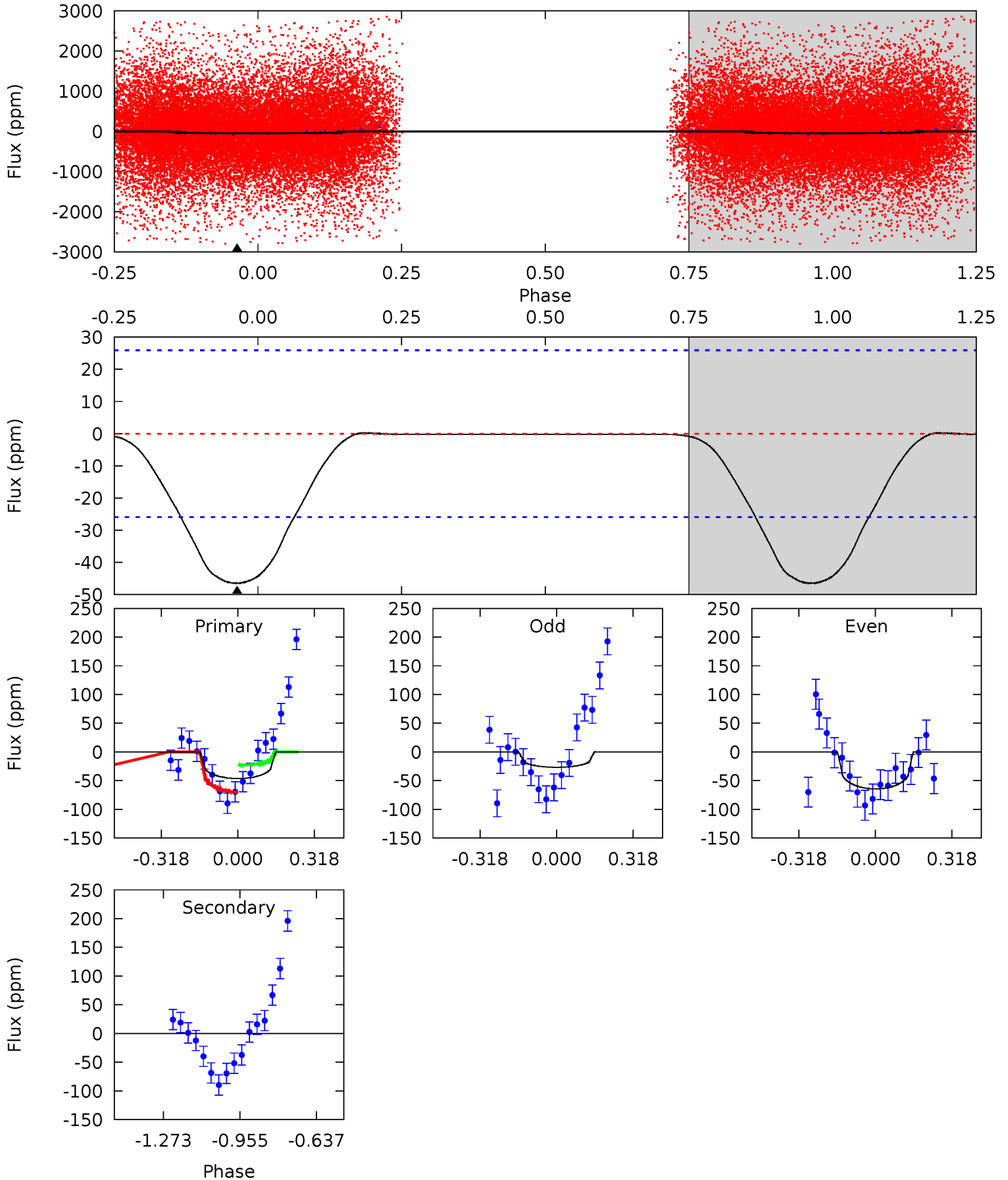
TCE 008332007-06 P= 0.934833 Days $T_0=132.172315$ (BKJD)



DV Model-Shift Uniqueness Test

008332007-06, P = 0.934854 Days, E = 131.236566 Days

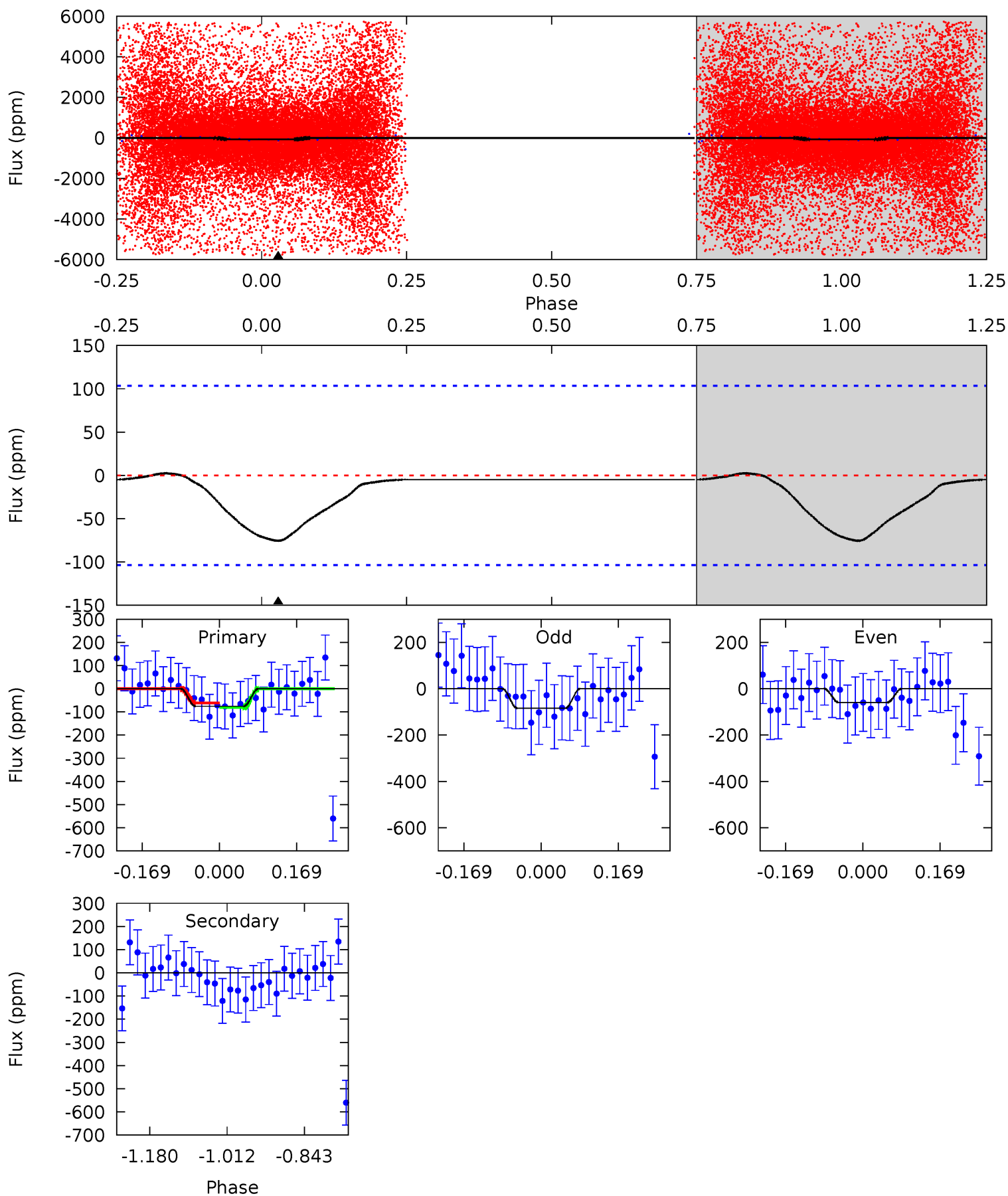
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.75	0	0	0	4.32	1.00	0.06	7.75	7.75	0	0	3.21	0.87	0.00	4.07



Alt Model-Shift Uniqueness Test

008332007-06, P = 0.934833 Days, E = 131.237482 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.25	0	0	0	4.45	1.38	0.14	3.25	3.25	0	0	0.54	1.26	0.03	0.64



Stellar Parameters For KIC 008332007

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6128^{+182}_{-218}	$4.470^{+0.056}_{-0.210}$	$-0.200^{+0.250}_{-0.300}$	$0.978^{+0.316}_{-0.105}$	$1.029^{+0.139}_{-0.139}$	$1.550^{+0.454}_{-0.837}$
	+3%/-4%	+1%/-5%	+125%/-150%	+32%/-11%	+14%/-14%	+29%/-54%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008332007-06 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 6	$1.04^{+0.80}_{-0.63}$	2779^{+184}_{-148}	-2982^{+6592}_{-932}	$0.002^{+1.418}_{-1.473}$
Alt.	0 ± 23	$1.18^{+0.79}_{-0.70}$	2769^{+211}_{-134}	-3117^{+7695}_{-1768}	$-0.130^{+4.412}_{-4.836}$

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 $A_{obs} \gg 1.0$

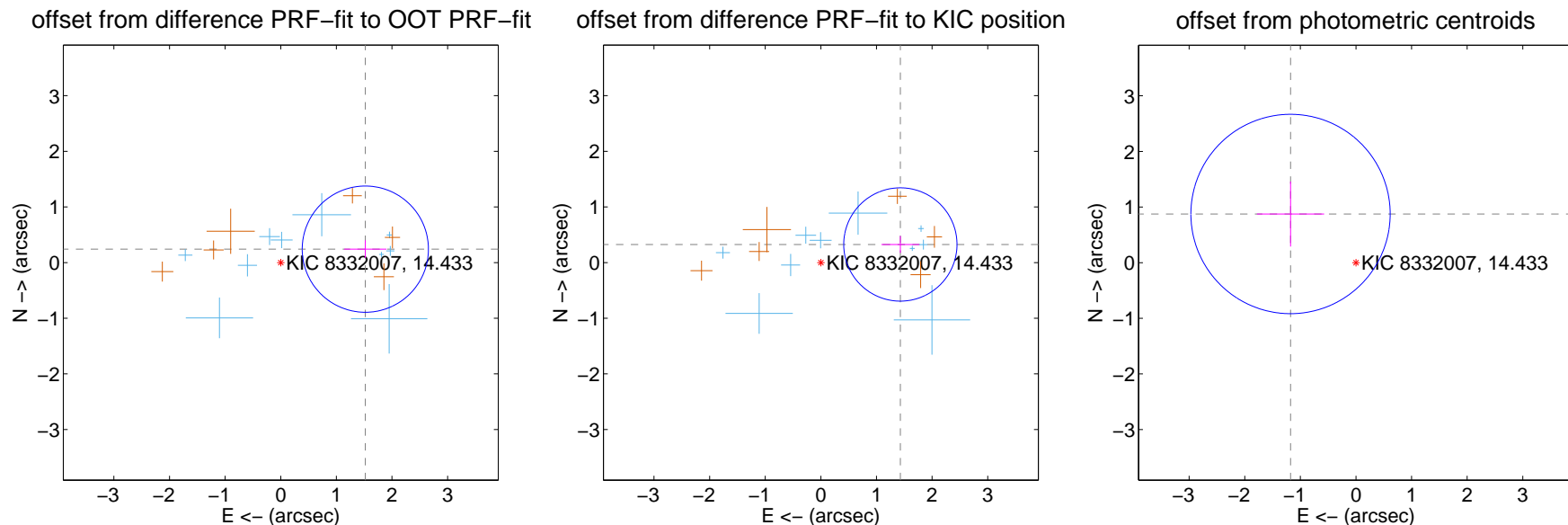
DV Centroid Data

Supplemental centroid analysis for 008332007-06. Kepler magnitude: 14.43. Transit SNR 7.24

There are 10 quarters with good PRF difference image offsets

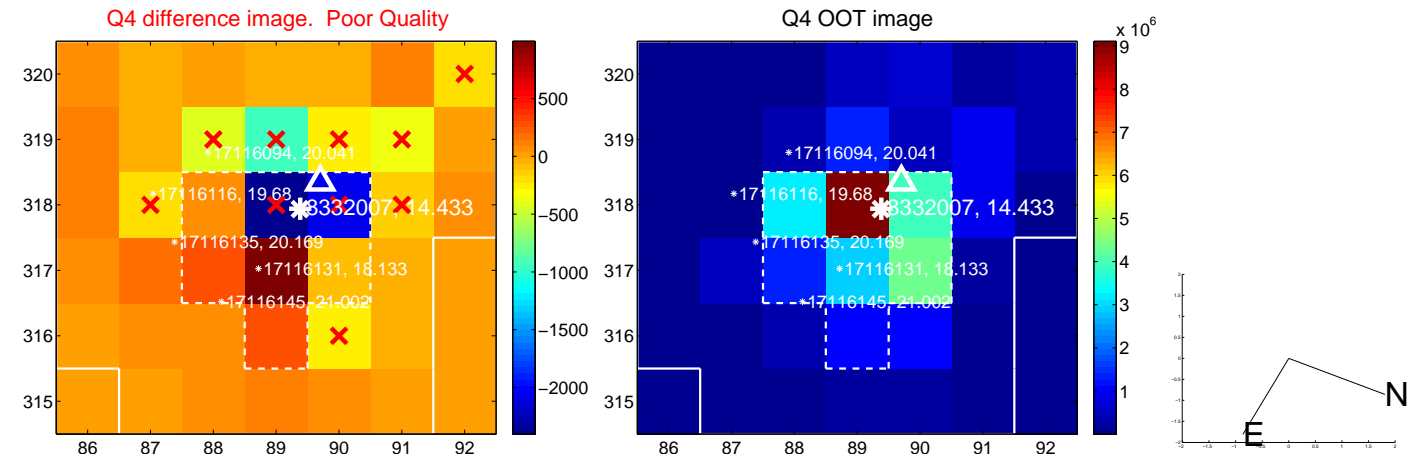
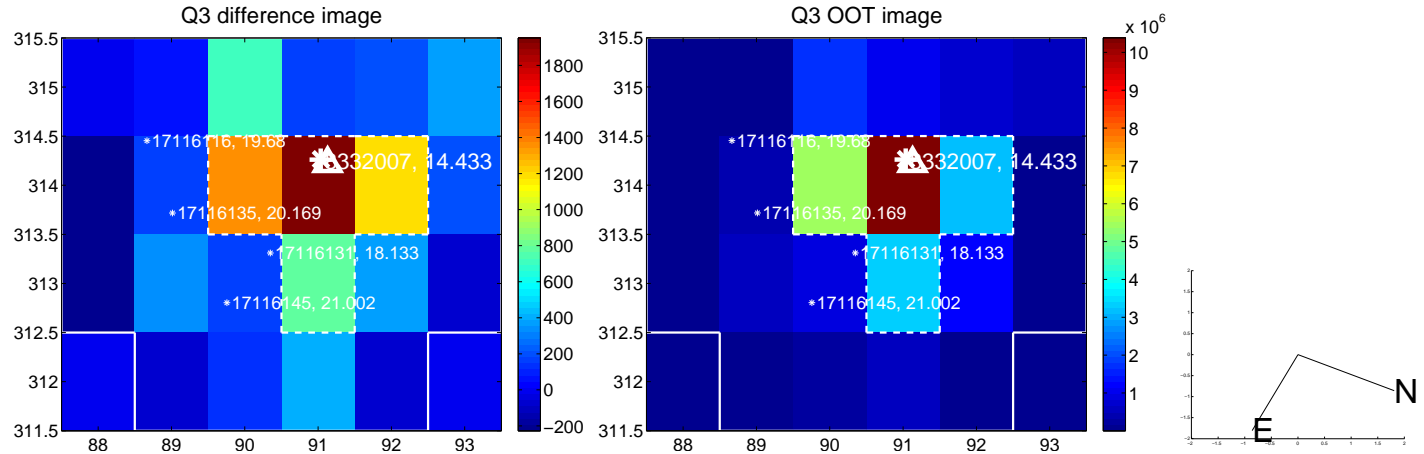
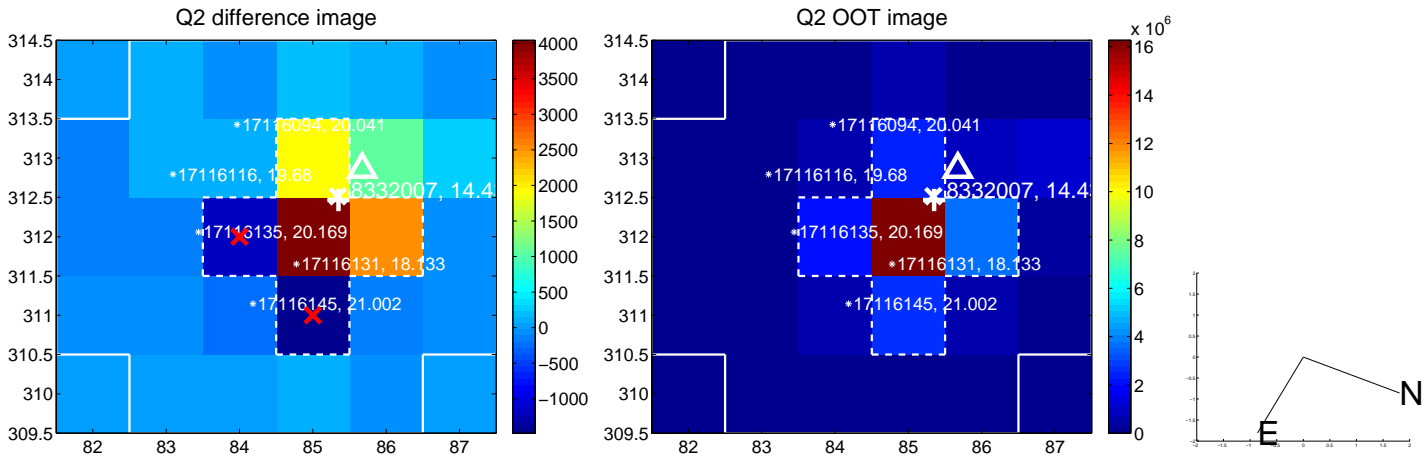
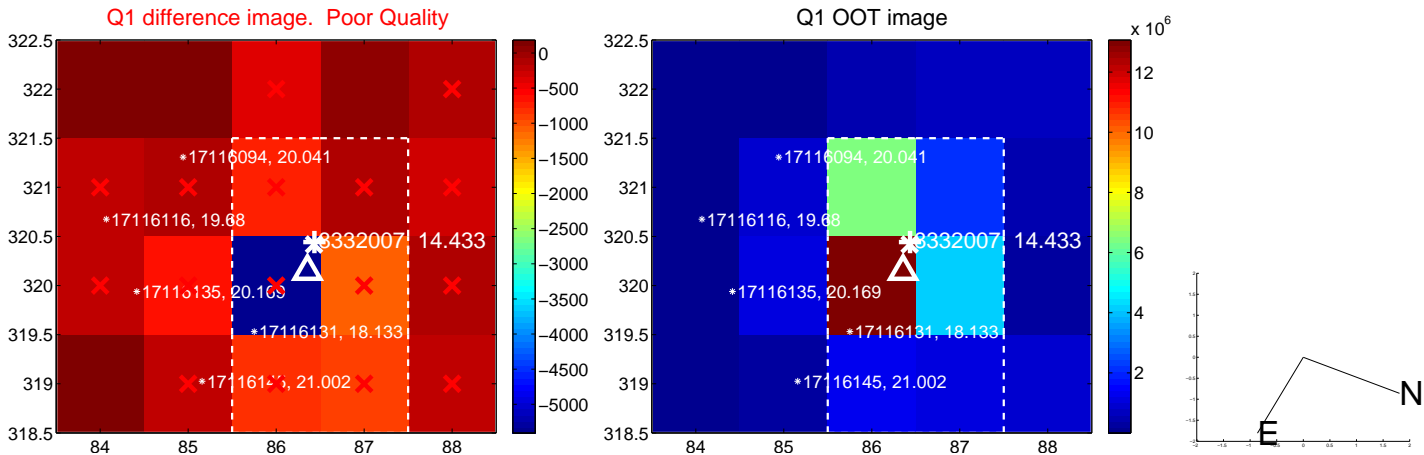
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.540 ± 0.378	4.07	-1.521 ± 0.380	0.242 ± 0.160
PRF-fit source offset from KIC position	1.466 ± 0.339	4.32	-1.429 ± 0.341	0.326 ± 0.153
photometric centroid source offset	1.47 ± 0.60	2.45	1.18 ± 0.60	0.87 ± 0.58

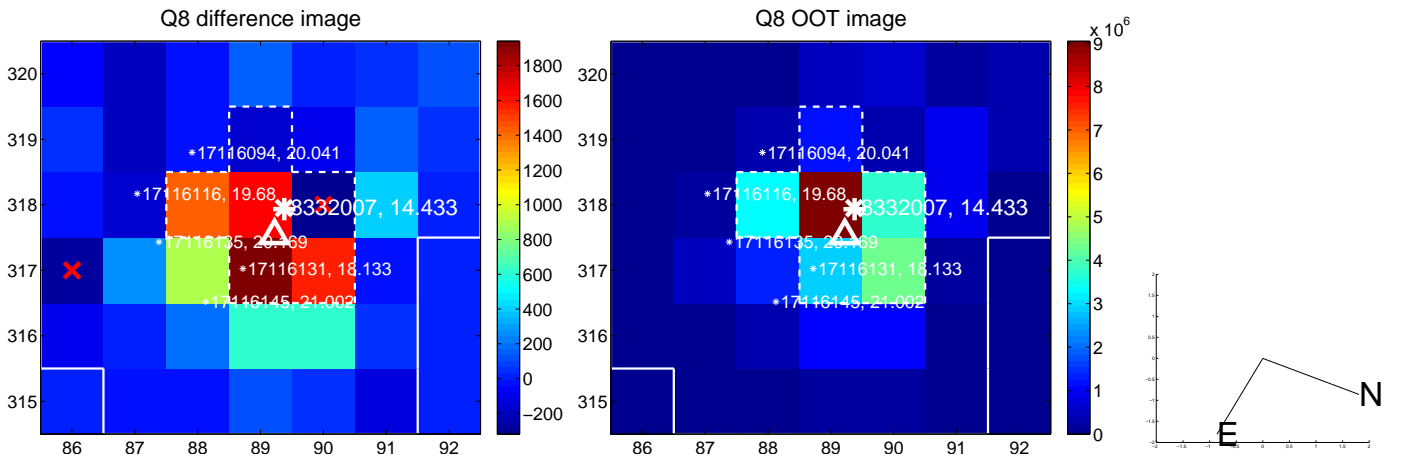
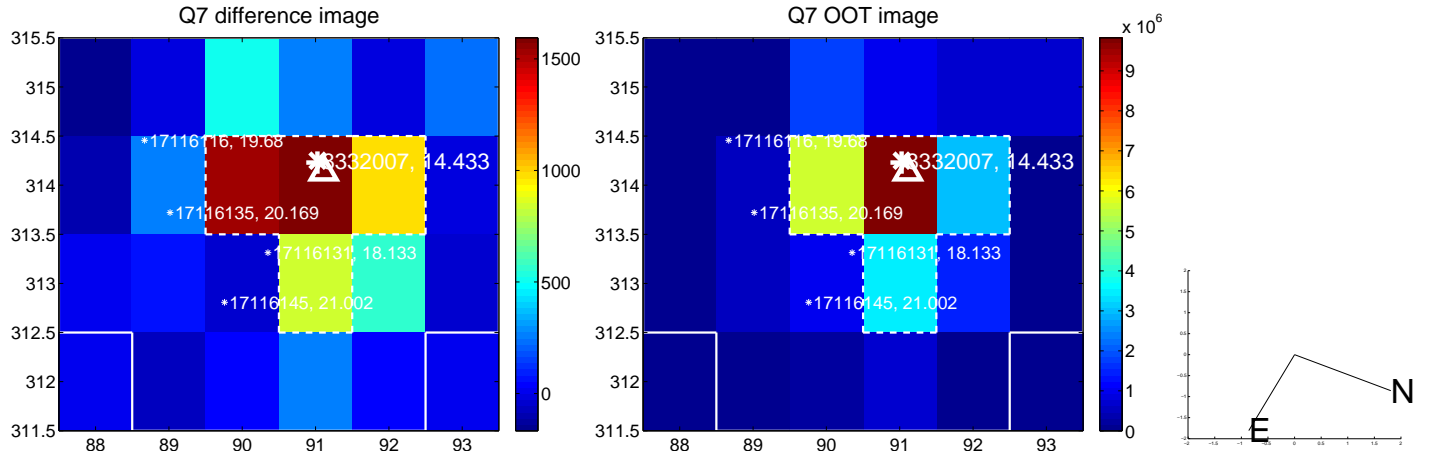
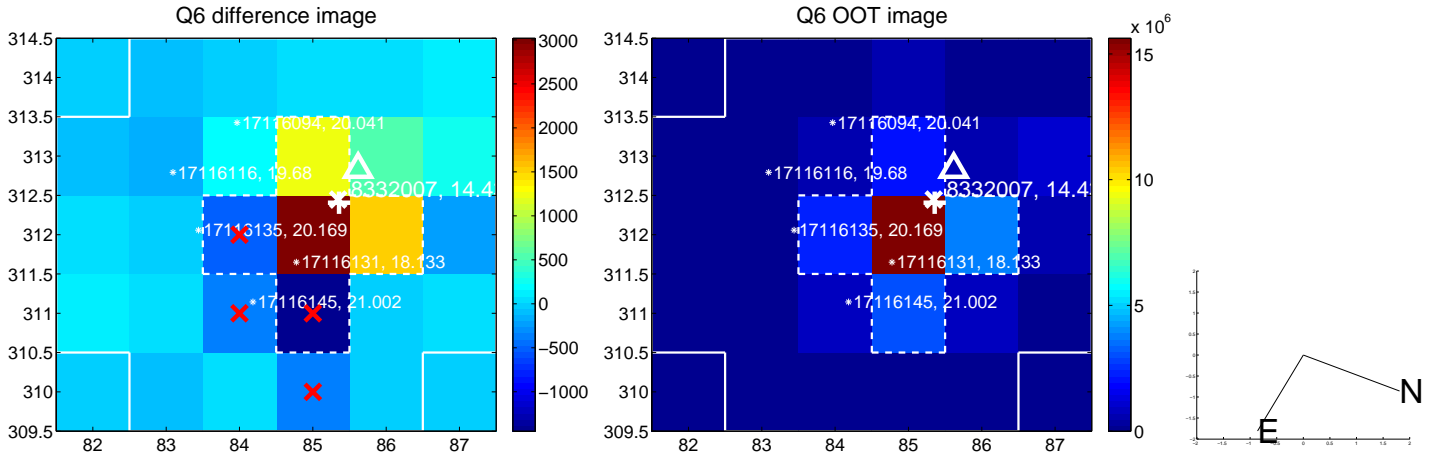
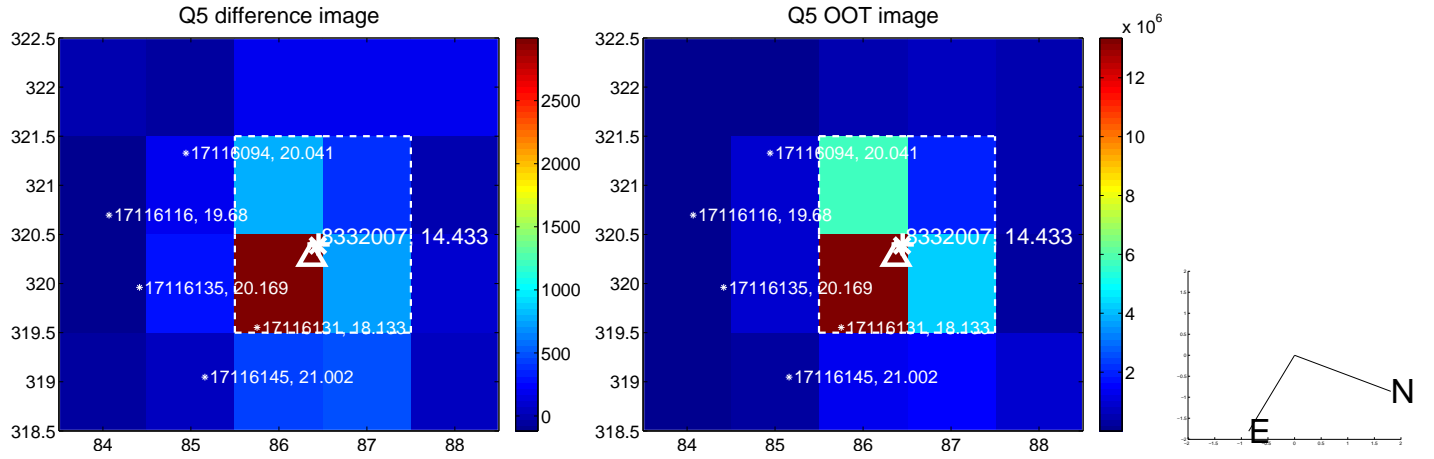


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- 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.

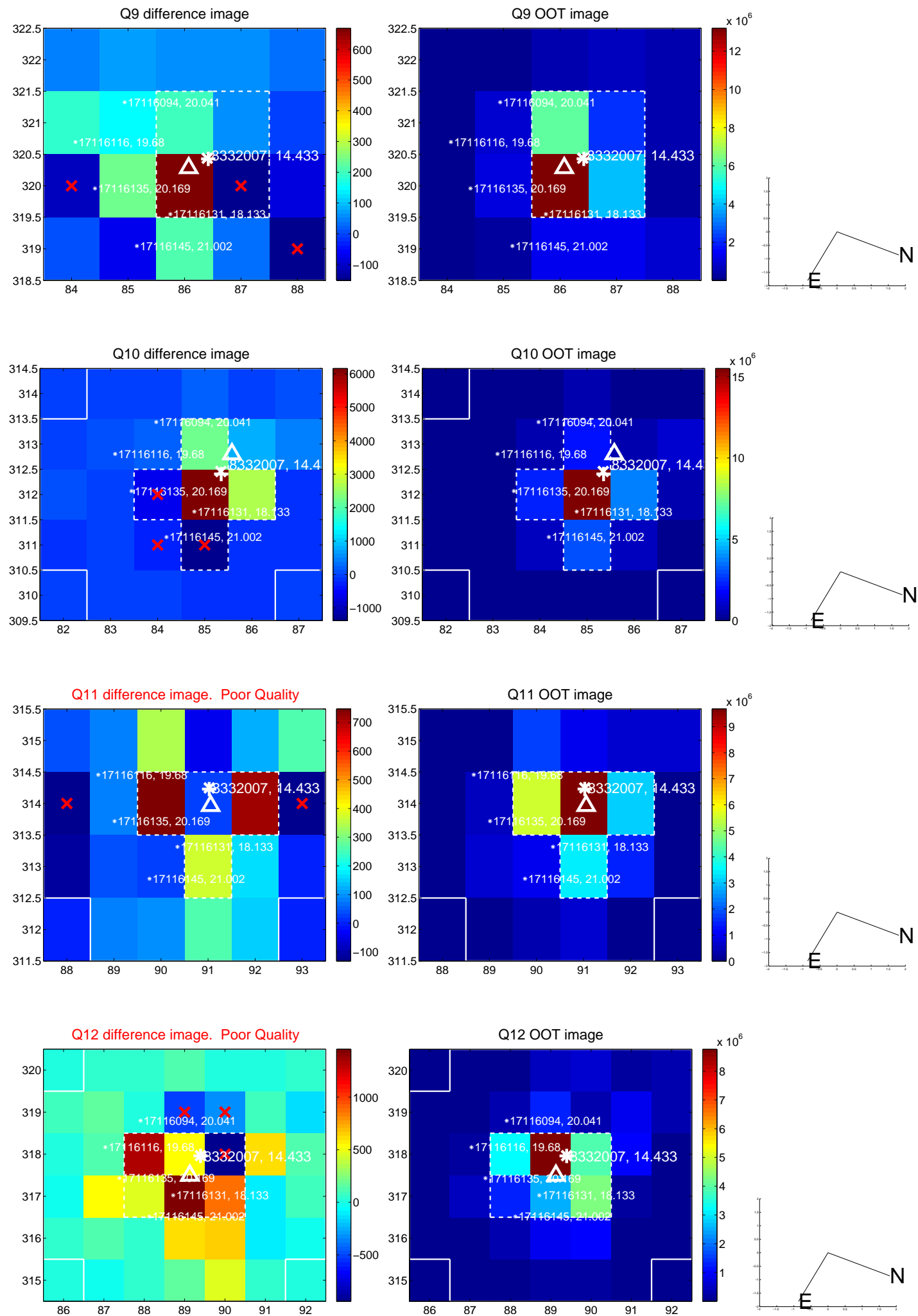
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



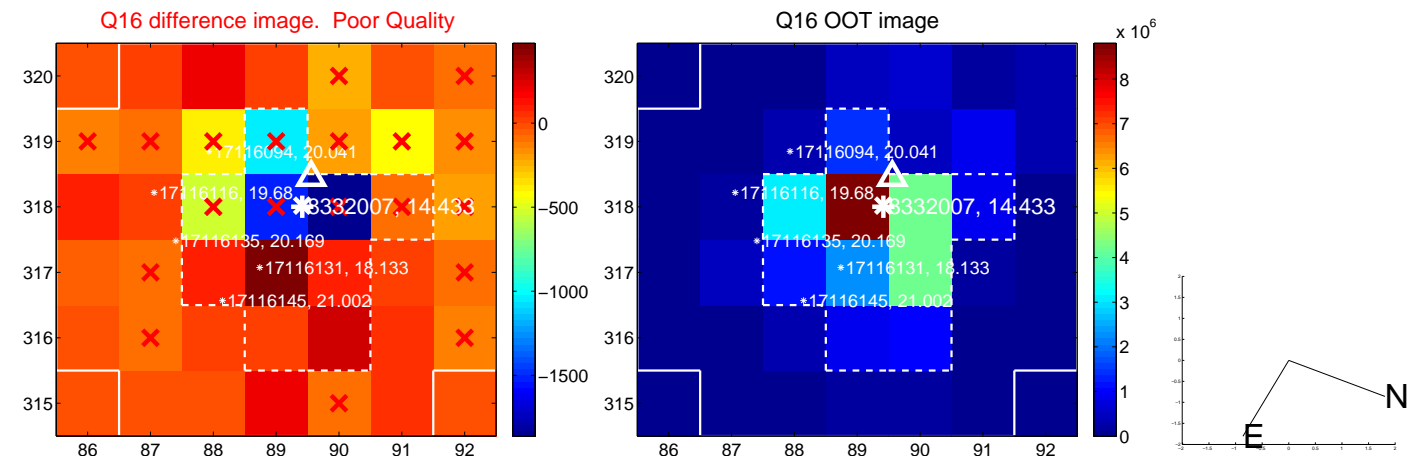
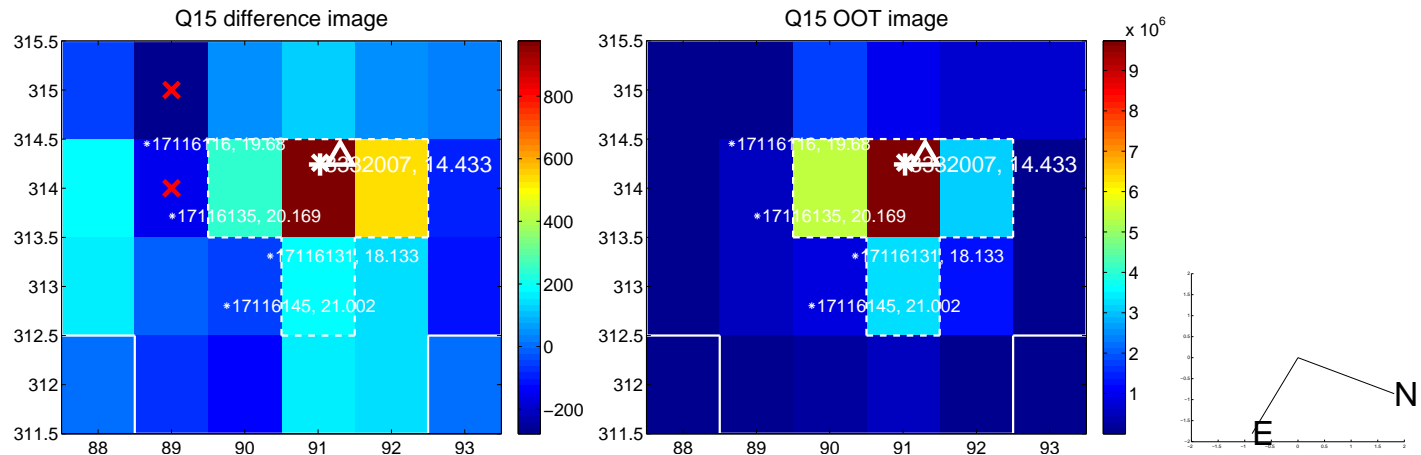
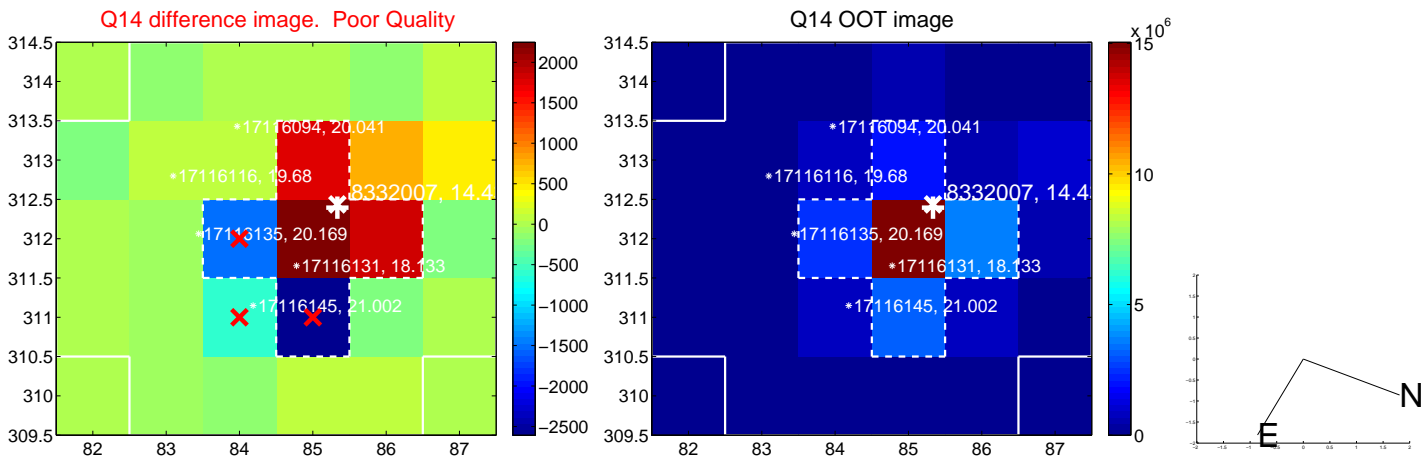
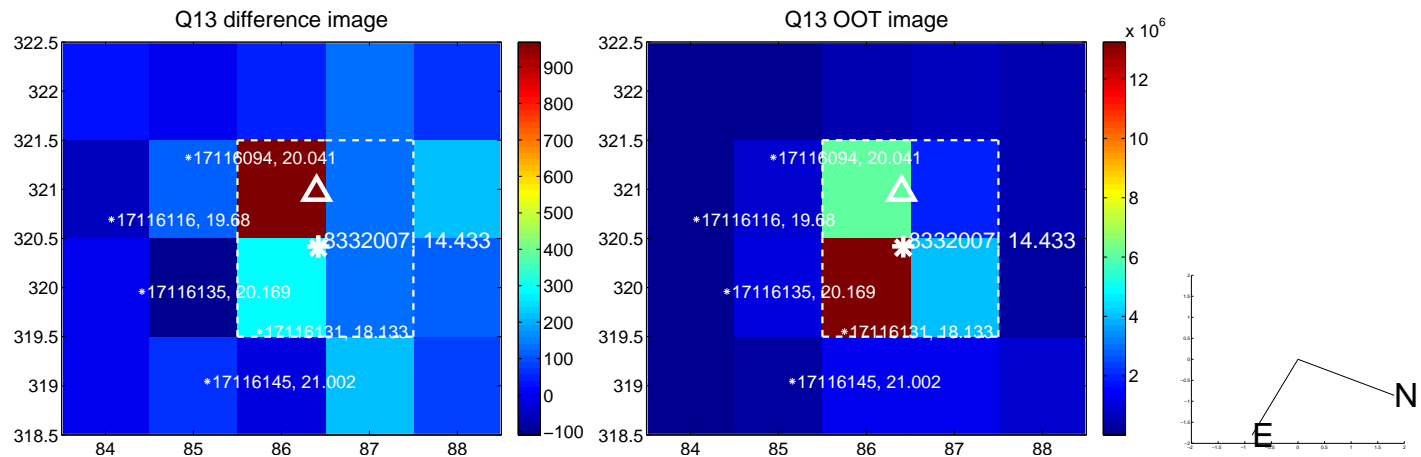
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



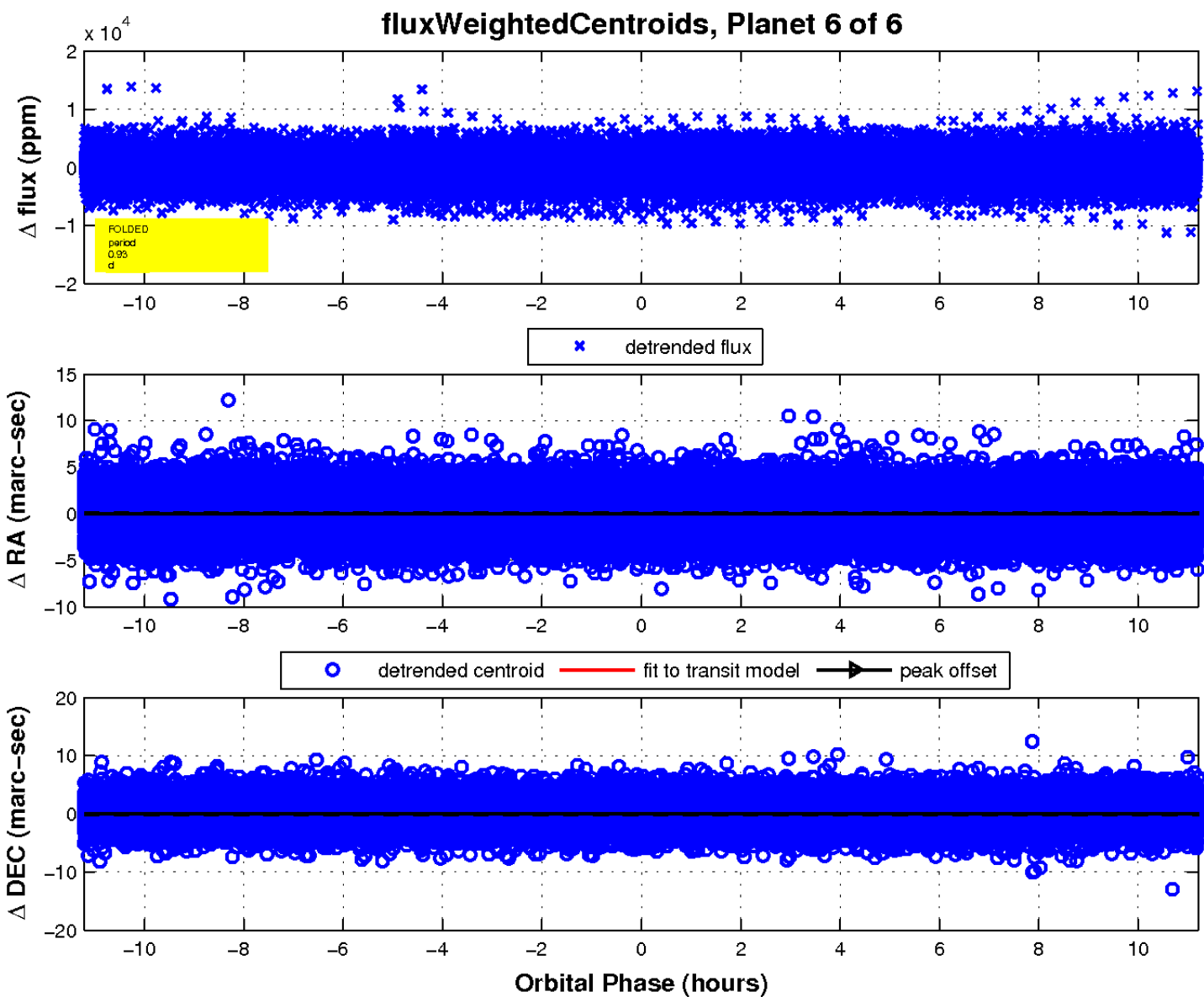
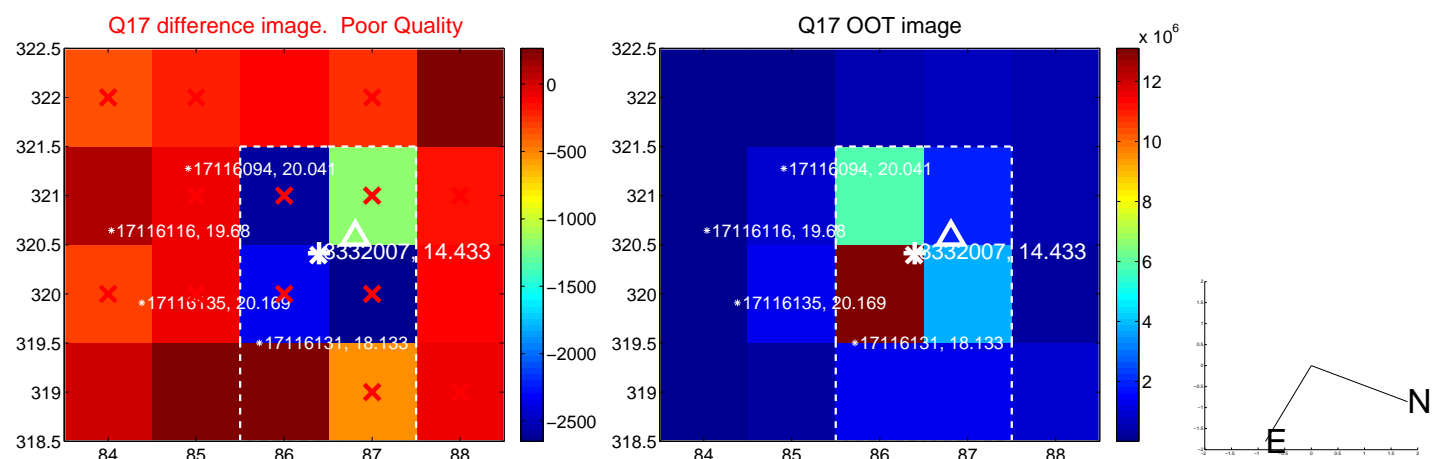
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

