

KIC 003532510

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})
003532510-01	OBS	No	357.324034	416.141230	352.8	29.178	14.0	16.3	1.53	7183	2.97	4.74
003532510-02	OBS	No	0.635102	131.867130	16.4	1.478	8.8	7.7	1.53	7183	0.72	22013.45
003532510-03	OBS	No	2.167316	132.132298	24.8	5.509	7.6	9.0	1.53	7183	0.88	4284.66

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003532510-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_ZUMA—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003532510-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT
003532510-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT

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

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

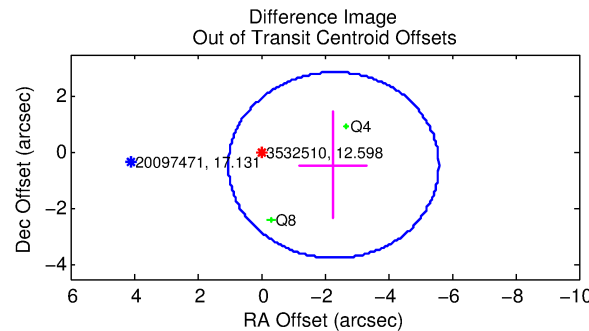
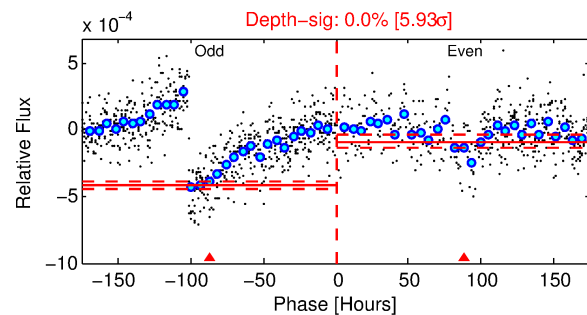
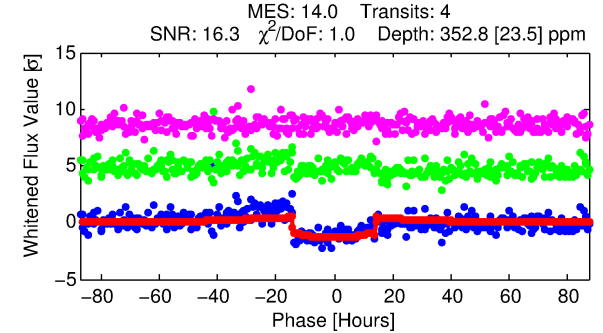
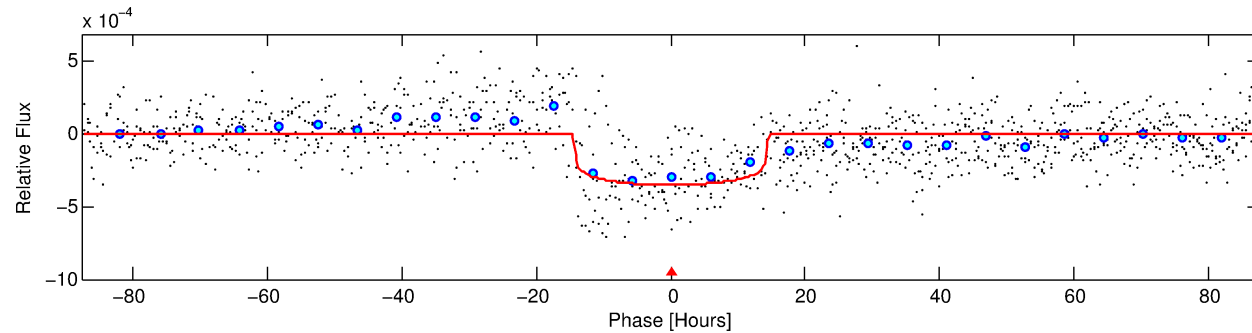
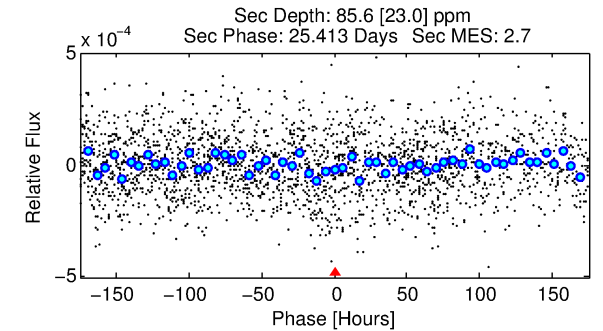
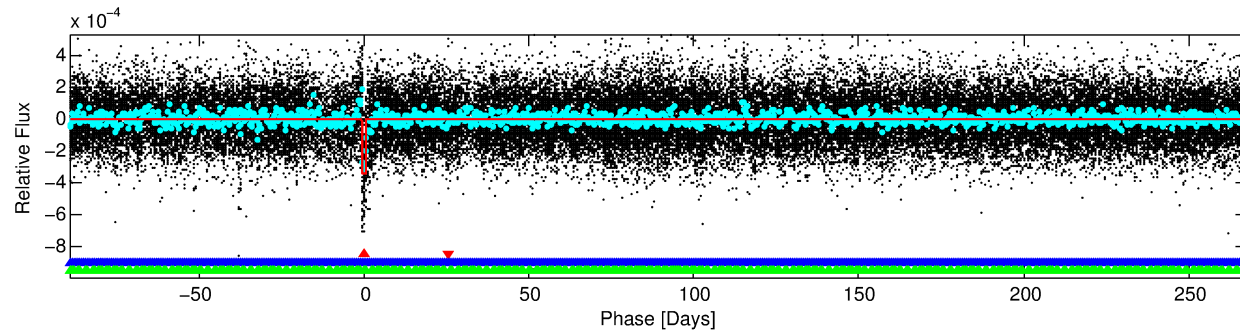
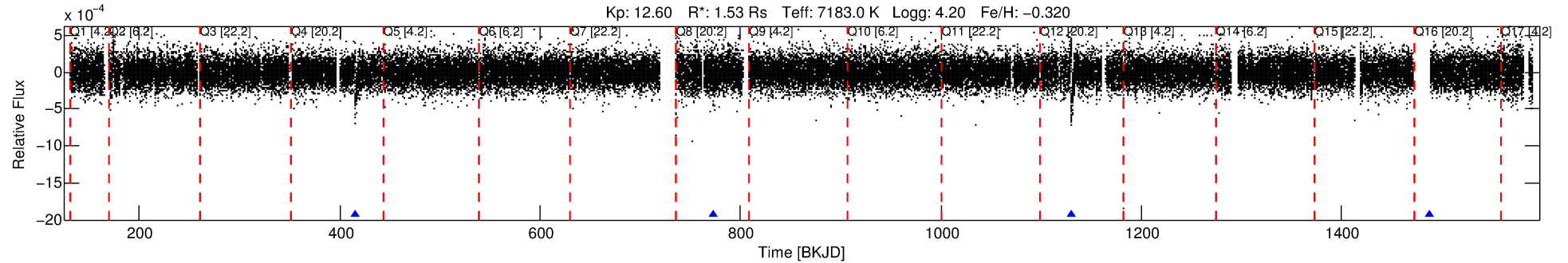
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003532510-01

No Significant Match Found

DV One-Page Summary

KIC: 3532510 Candidate: 1 of 3 Period: 357.324 d
KOI: K04985 Corr: No Ephemeris Match



DV Fit Results:

Period = 357.32403 [0.00644] d
Epoch = 416.1412 [0.0117] BKJD
Rp/R* = 0.0177 [0.0024]
a/R* = 86.09 [67.15]
b = 0.43 [1.46]
Seff = 4.74 [1.84]
Teq = 376 [36] K
Rp = 2.97 [0.98] Re
a = 1.0875 [0.2702] AU
Ag = 6322.16 [3307.23] [1.91σ]
Teffp = 5187 [535] K [8.98σ]

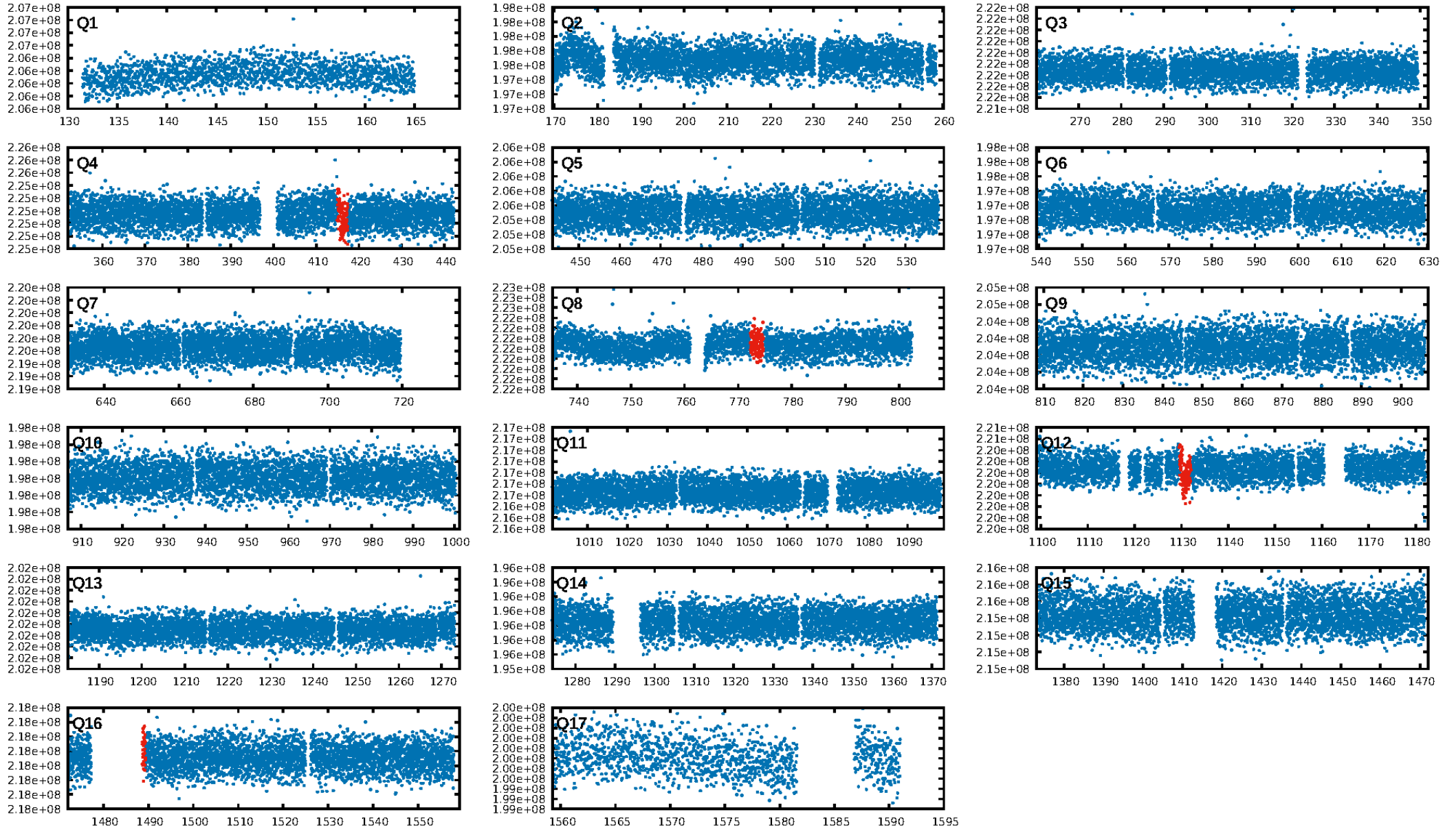
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [287.06σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 6.24e-20
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -5.083
Centroid-sig: 37.2%
Centroid-so: 0.711 arcsec [0.93σ]
OotOffset-rm: 2.329 arcsec [2.11σ]
KicOffset-rm: 2.311 arcsec [2.10σ]
OotOffset-st: 0/0/2/0 [2]
KicOffset-st: 0/0/2/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 0.00 [0/2]

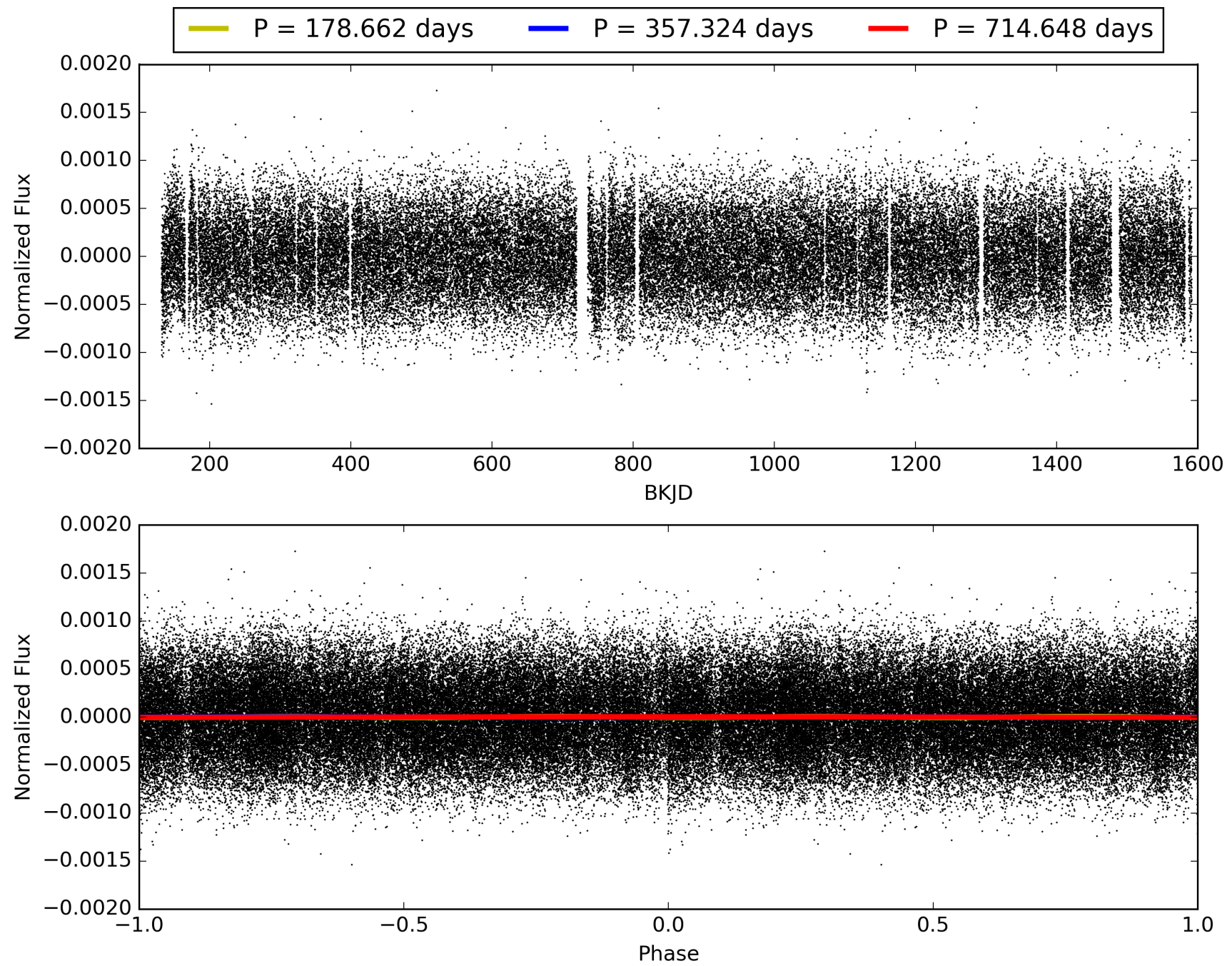
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 14:41:55 Z

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

TCE 003532510-01, PDC Light Curves

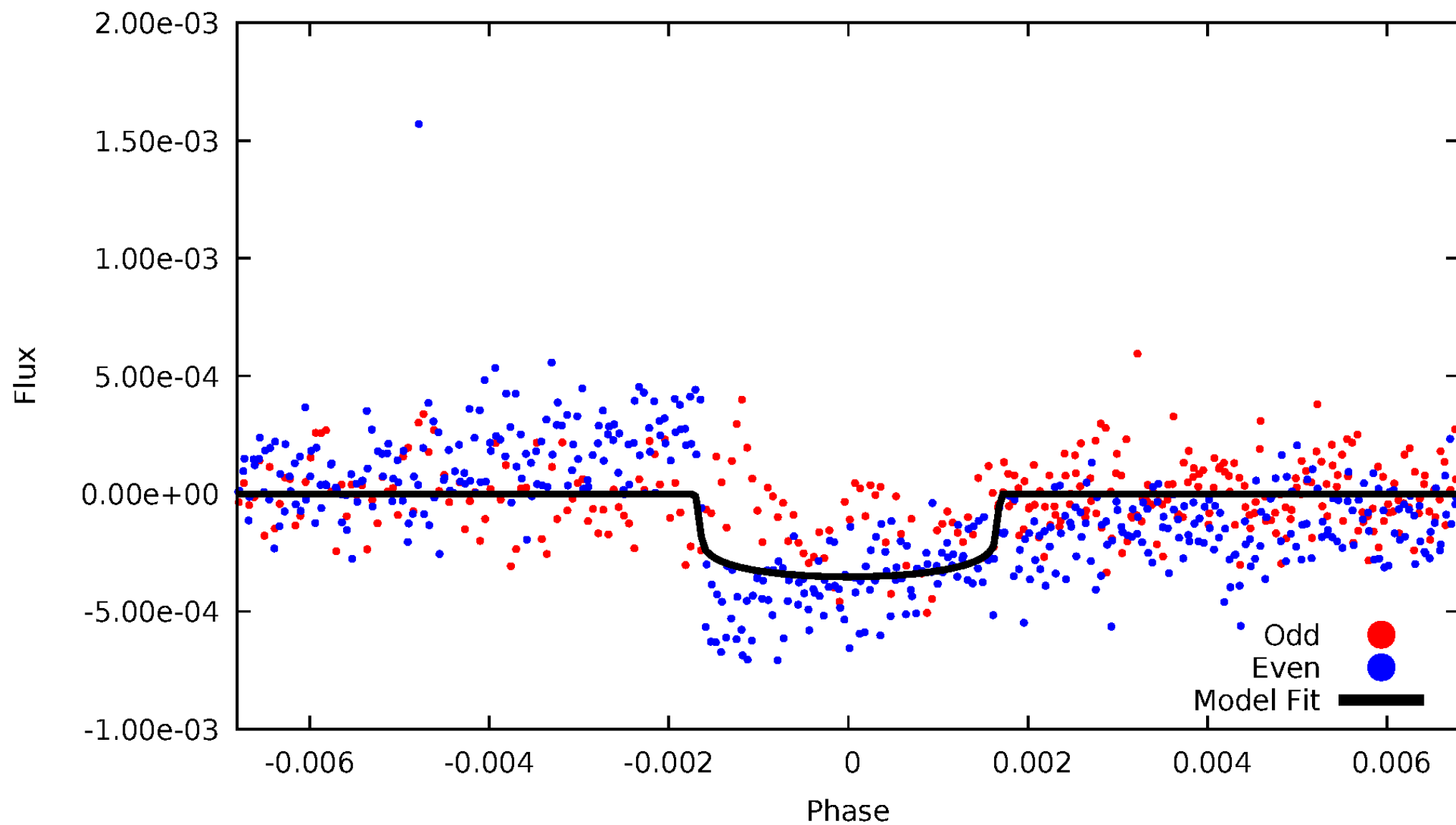


TCE 003532510-01



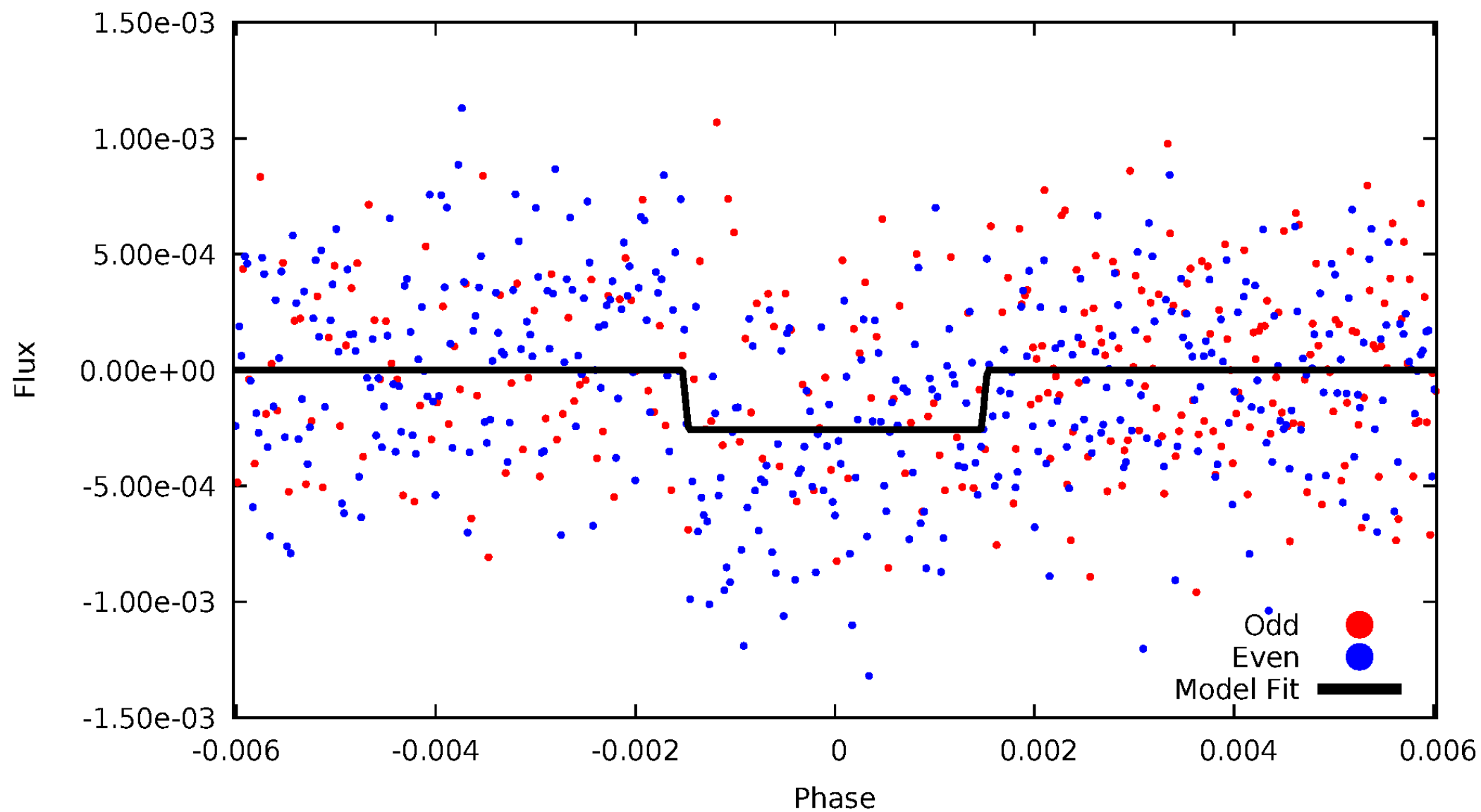
DV Odd/Even

TCE 003532510-01



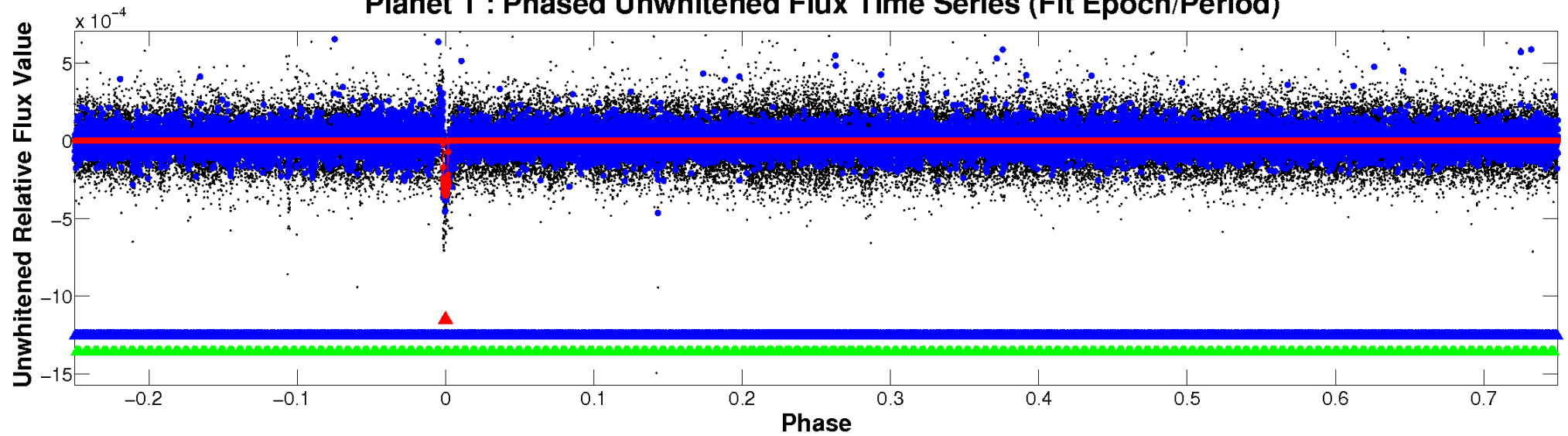
ALT Odd/Even

TCE 003532510-01

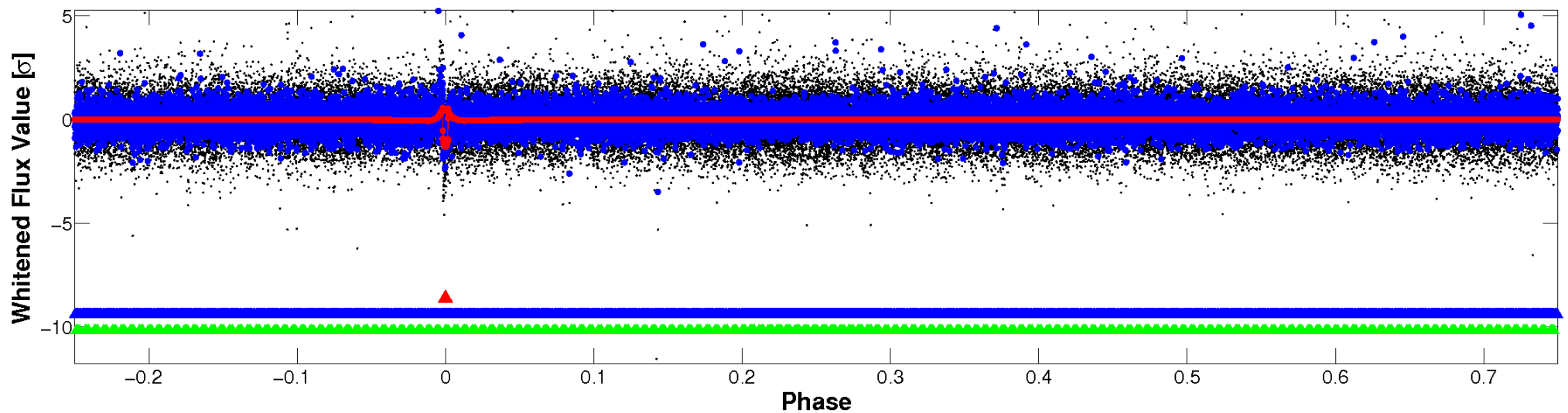


Non-Whitened Vs. Whitened Light Curve

Planet 1 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)



Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



PDC Quarter-Phased Transit Curves

TCE 003532510-01 P=357.324034 Days $T_0=416.141230$ (BKJD)



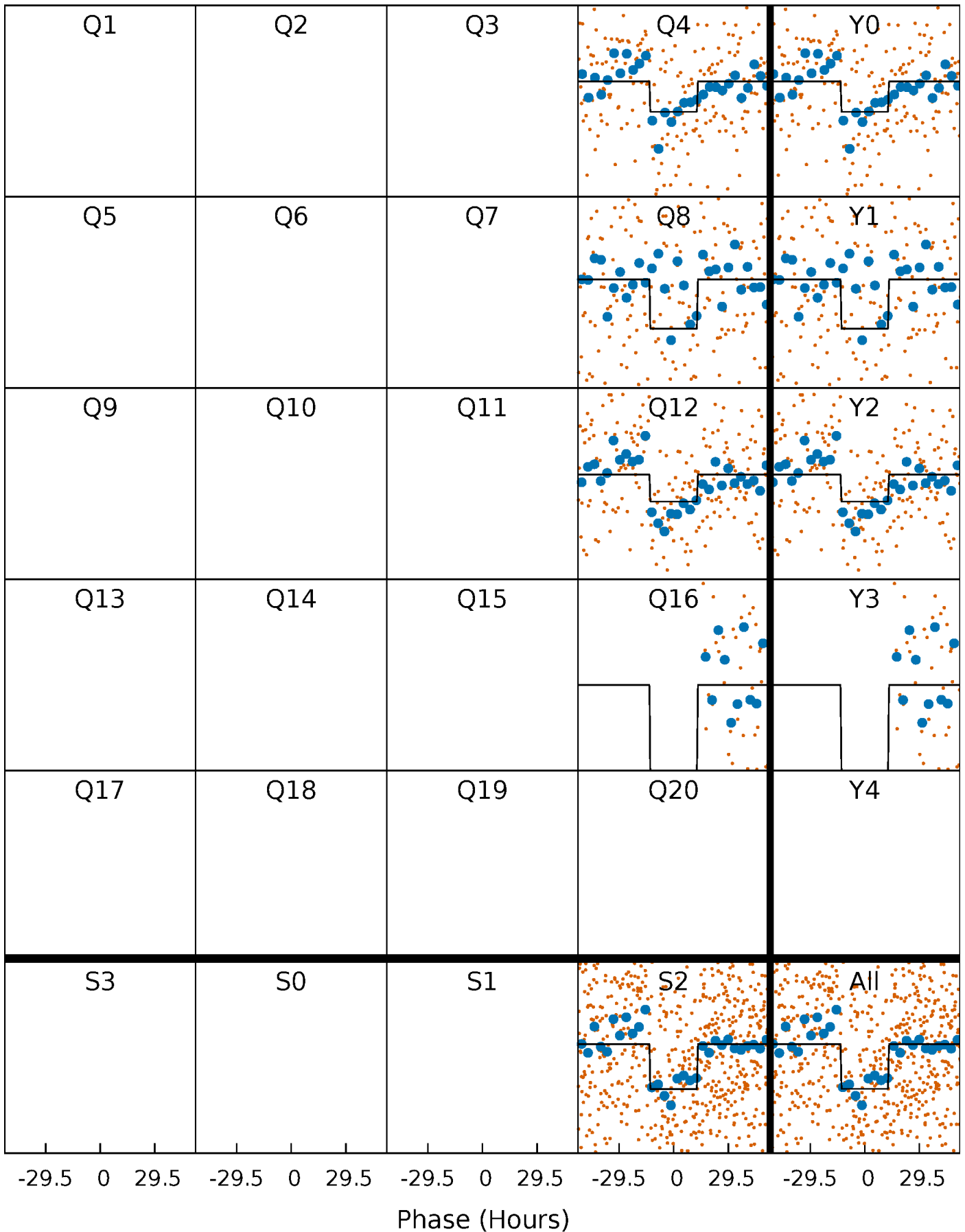
DV Quarter-Phased Transit Curves

TCE 003532510-01 P=357.324034 Days $T_0=416.141230$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

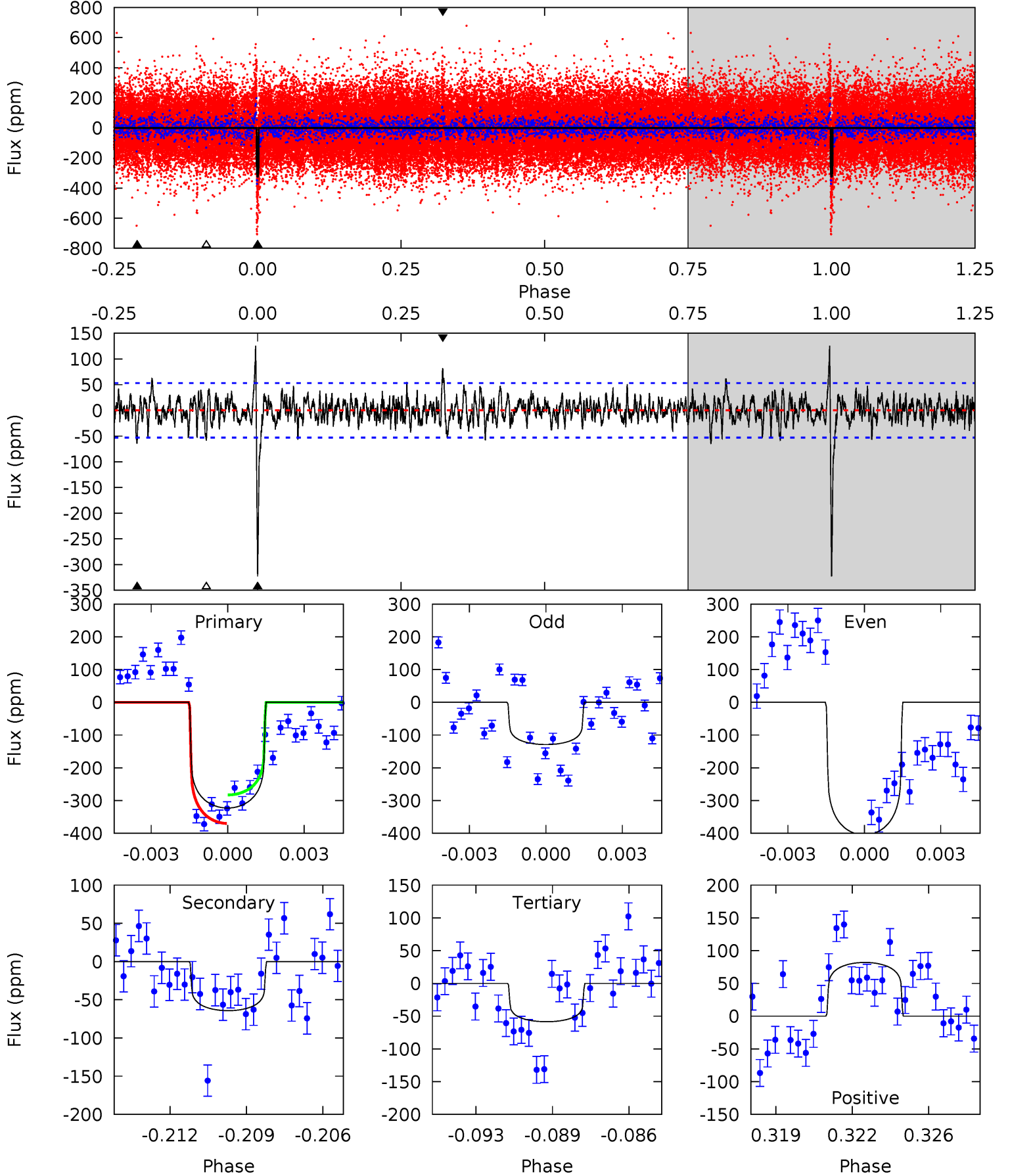
TCE 003532510-01 P=357.308041 Days $T_0=416.116210$ (BKJD)



DV Model-Shift Uniqueness Test

003532510-01, $P = 357.324034$ Days, $E = 58.817196$ Days

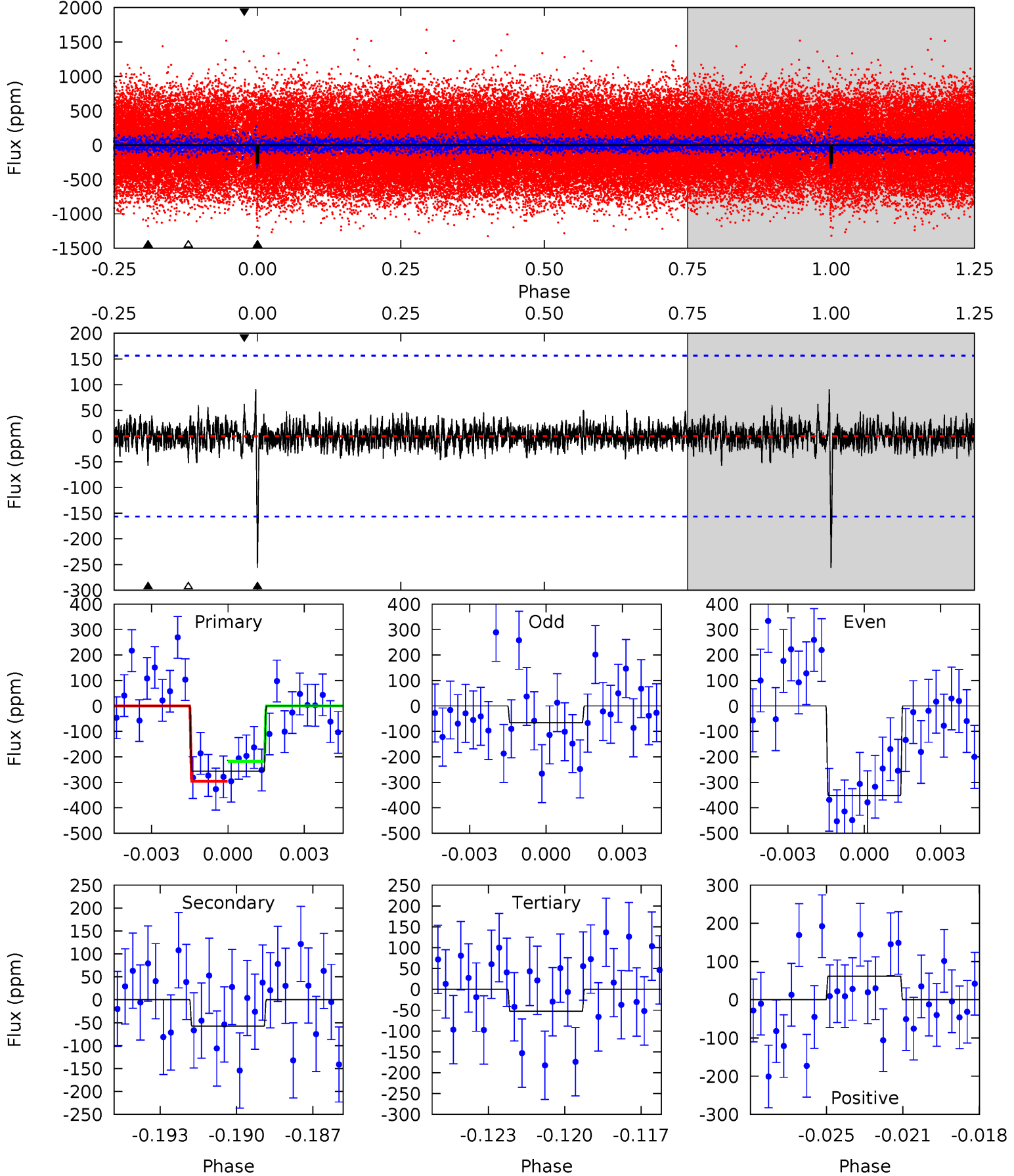
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
31.9	6.35	5.78	8.09	5.23	2.93	1.87	26.1	23.8	0.56	-1.75	12.9	1.00	0.28	4.30



Alt Model-Shift Uniqueness Test

003532510-01, $P = 357.308041$ Days, $E = 58.808169$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.60	1.92	1.77	2.08	5.25	2.96	0.50	6.83	6.52	0.15	-0.16	4.51	0.85	0.26	1.31



Stellar Parameters For KIC 003532510

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7183^{+199}_{-274}	$4.195^{+0.128}_{-0.192}$	$-0.320^{+0.250}_{-0.350}$	$1.533^{+0.460}_{-0.307}$	$1.345^{+0.220}_{-0.200}$	$0.526^{+0.342}_{-0.263}$
	+3%/-4%	+3%/-5%	+78%/-109%	+30%/-20%	+16%/-15%	+65%/-50%
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 003532510-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-64 ± 10	$3.04^{+0.61}_{-0.56}$	530^{+39}_{-34}	4882^{+359}_{-316}	4498^{+2259}_{-1443}
Alt.	-57 ± 30	$2.73^{+0.59}_{-0.52}$	529^{+38}_{-33}	4961^{+665}_{-686}	4853^{+4193}_{-2697}

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 $A_{obs} \gg 1.0$

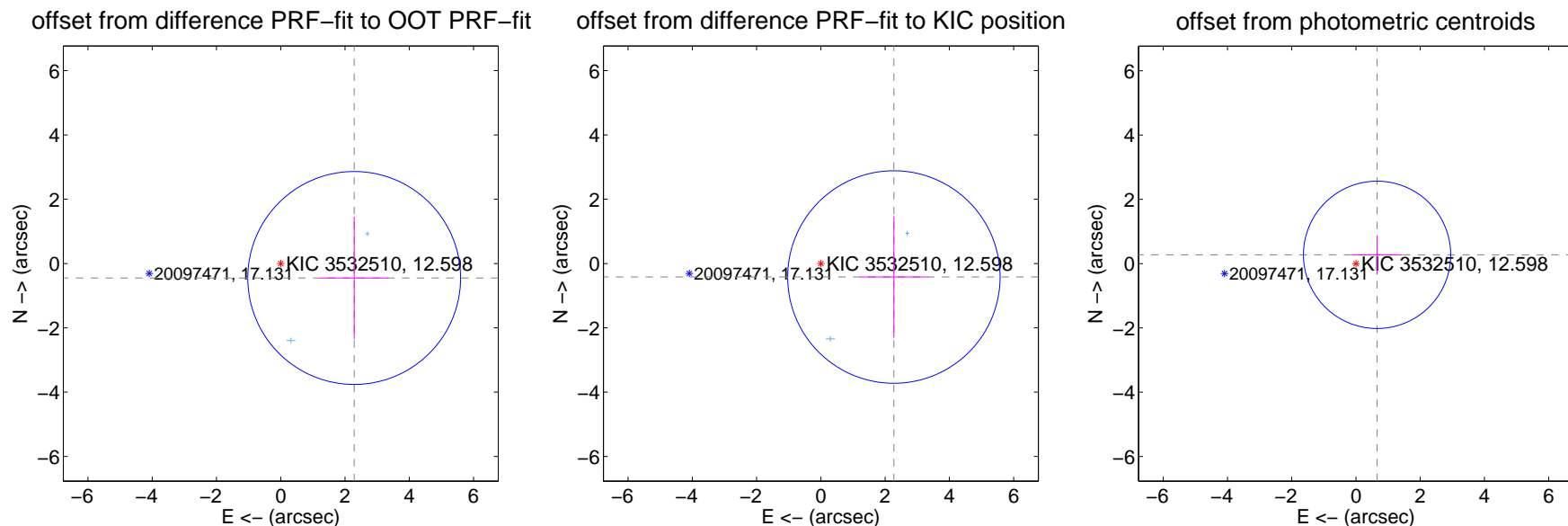
DV Centroid Data

Supplemental centroid analysis for 003532510-01. Kepler magnitude: 12.60. Transit SNR 16.27

There are 2 quarters with good PRF difference image offsets

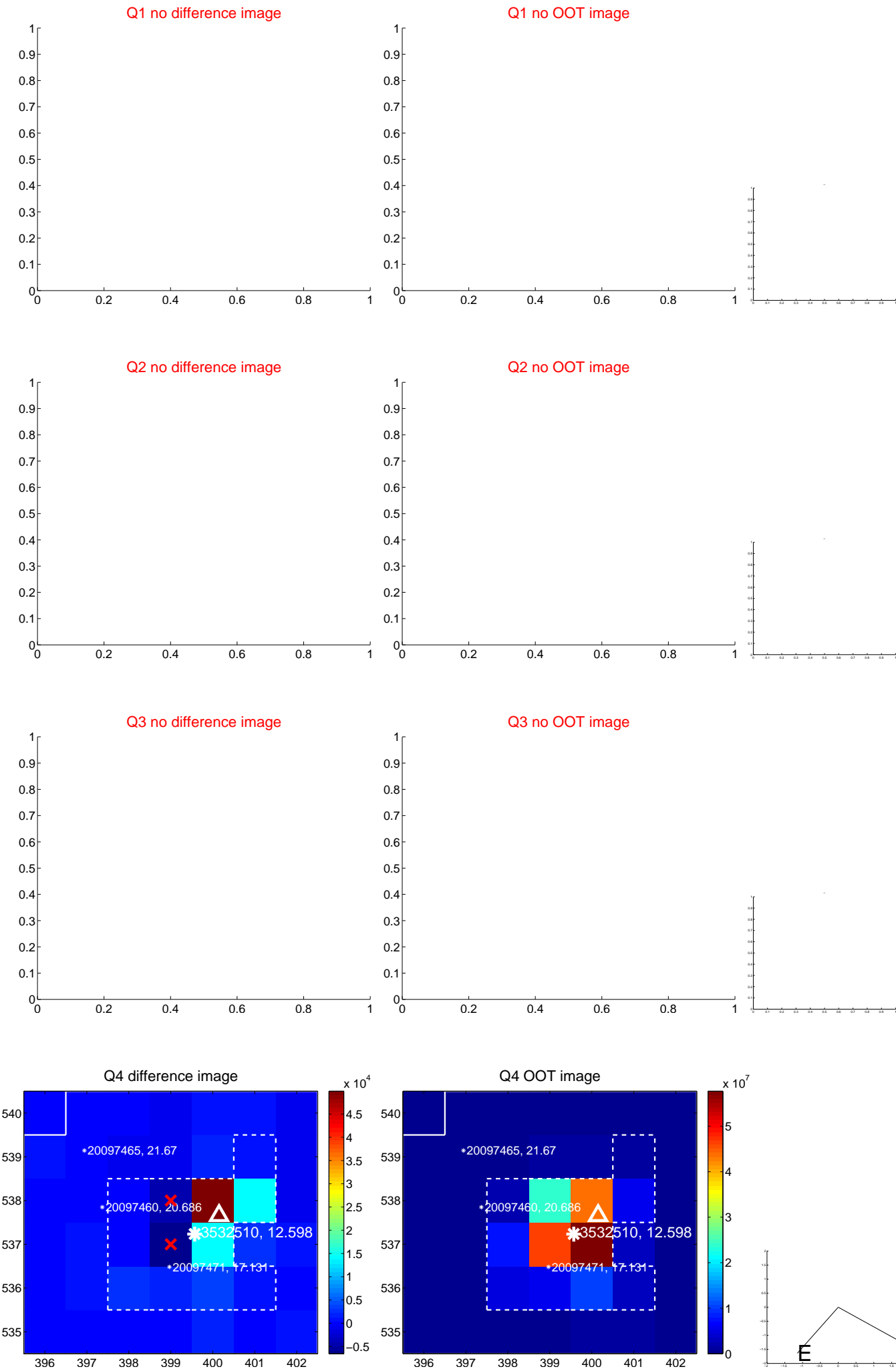
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.329 ± 1.104	2.11	-2.285 ± 1.060	-0.449 ± 1.910
PRF-fit source offset from KIC position	2.311 ± 1.102	2.10	-2.272 ± 1.065	-0.419 ± 1.890
photometric centroid source offset	0.71 ± 0.76	0.93	-0.66 ± 0.79	0.27 ± 0.61

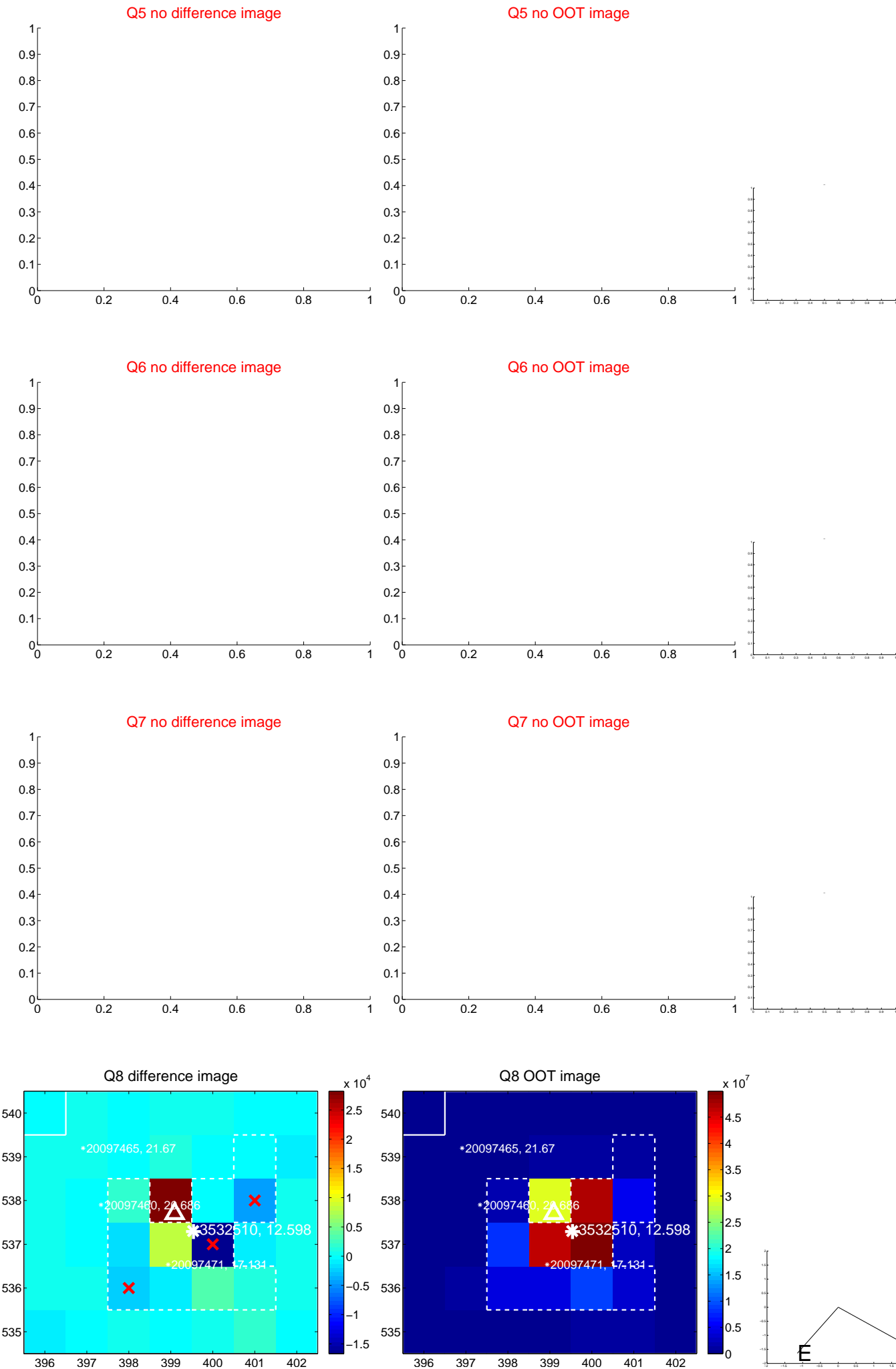


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



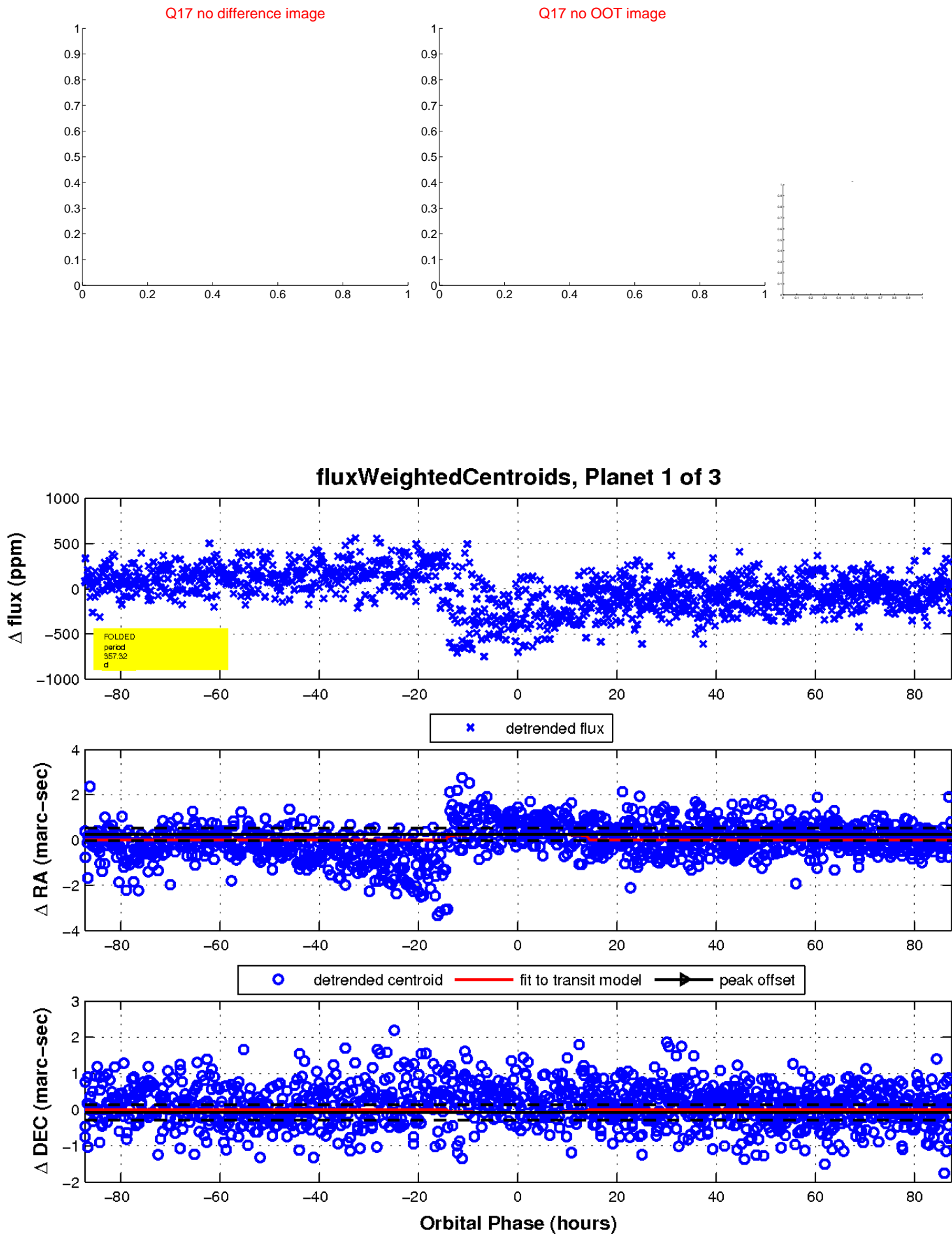
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

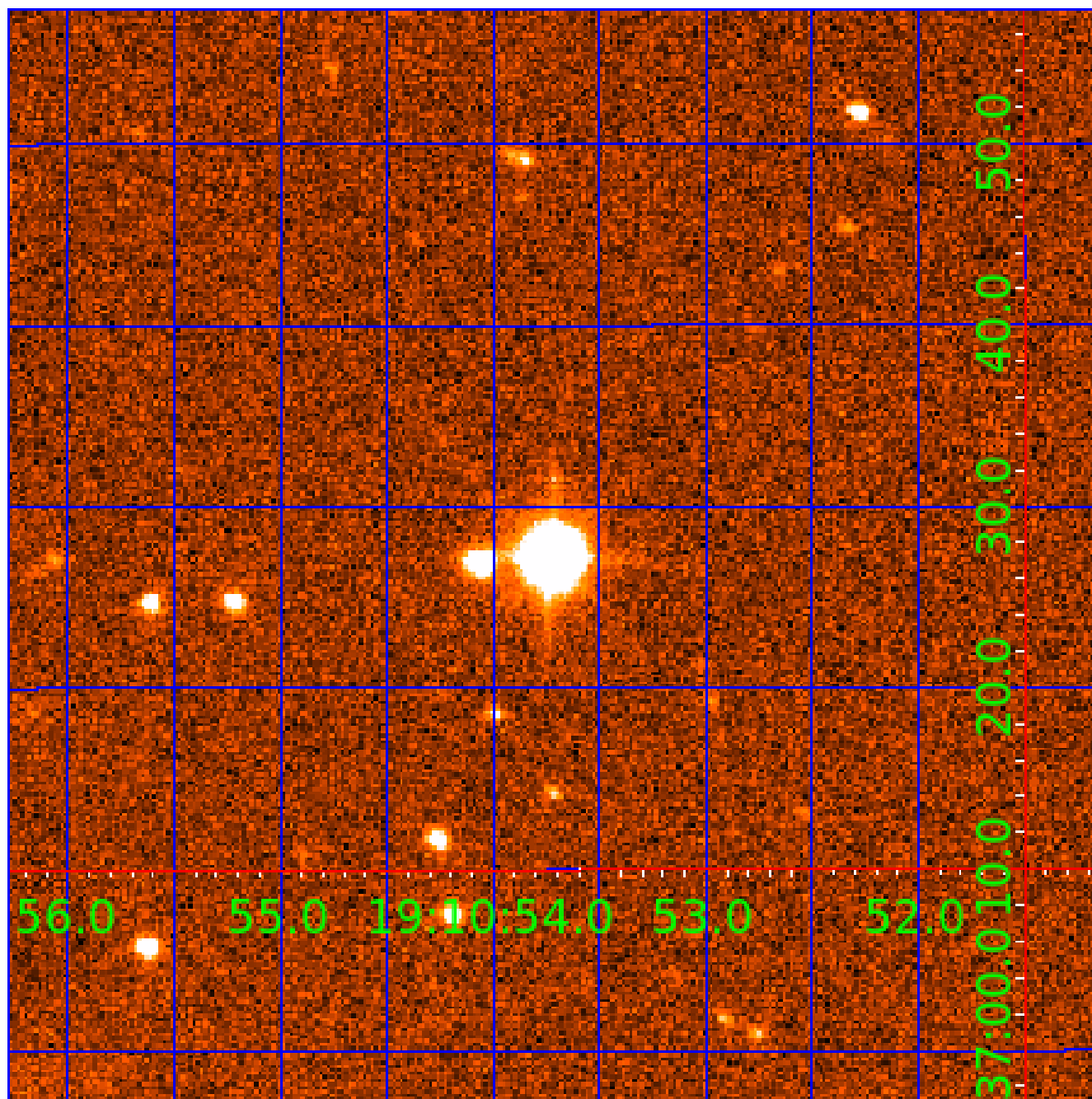


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003532510

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})
003532510-01	OBS	No	357.324034	416.141230	352.8	29.178	14.0	16.3	1.53	7183	2.97	4.74
003532510-02	OBS	No	0.635102	131.867130	16.4	1.478	8.8	7.7	1.53	7183	0.72	22013.45
003532510-03	OBS	No	2.167316	132.132298	24.8	5.509	7.6	9.0	1.53	7183	0.88	4284.66

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003532510-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_ZUMA—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003532510-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT
003532510-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT

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 003532510-02

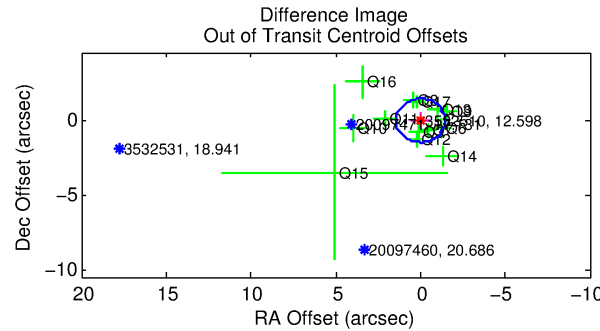
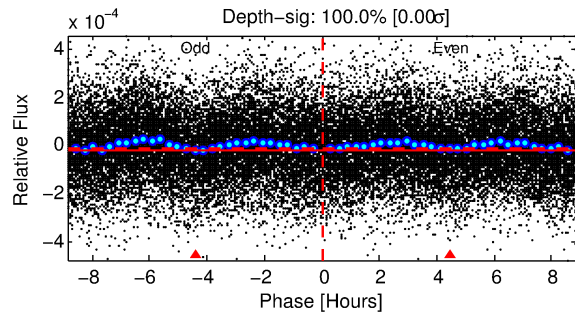
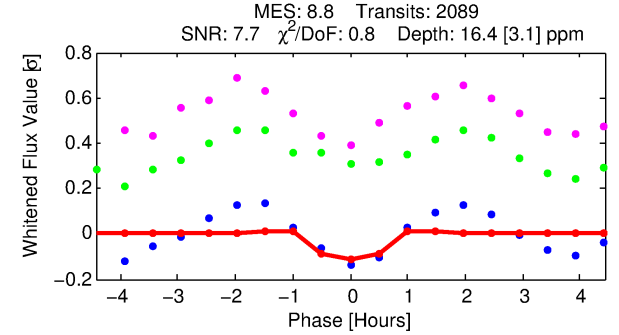
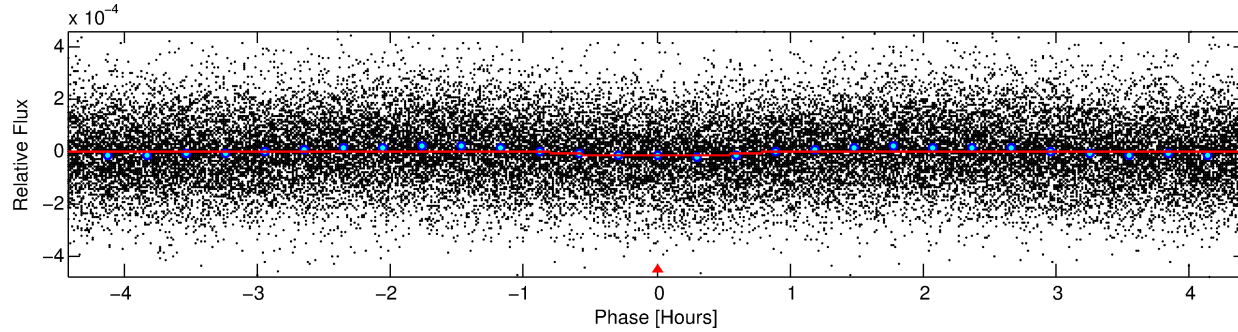
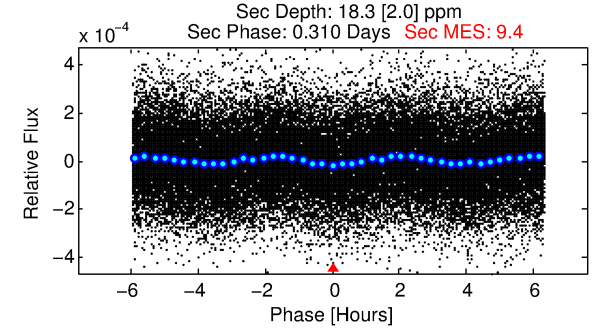
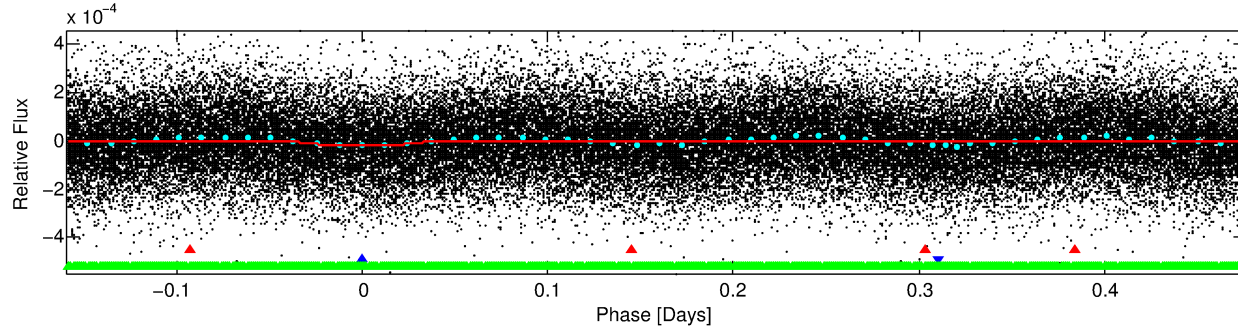
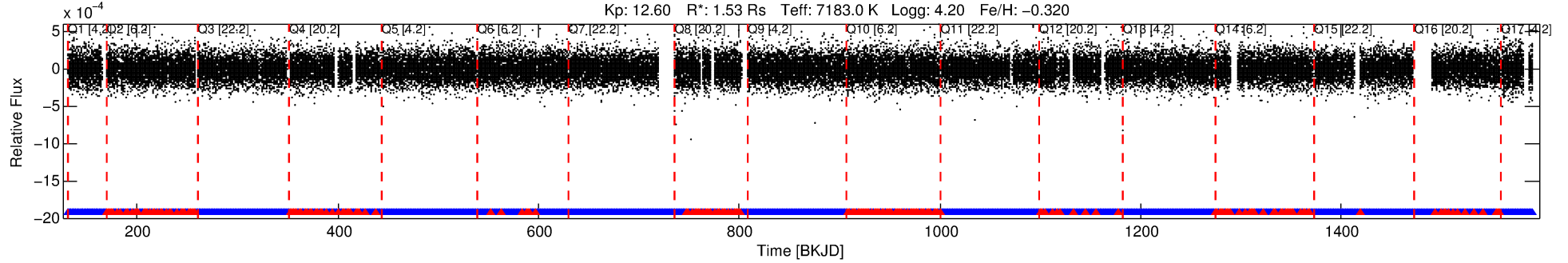
No Significant Match Found

DV One-Page Summary

KIC: 3532510 Candidate: 2 of 3 Period: 0.635 d

KOI: K04985 Corr: No Ephemeris Match

Kp: 12.60 R*: 1.53 Rs Teff: 7183.0 K Logg: 4.20 Fe/H: -0.320



DV Fit Results:

Period = 0.63510 [0.00001] d
Epoch = 131.8671 [0.0025] BKJD
Rp/R* = 0.0043 [0.0009]
a/R* = 1.74 [1.37]
b = 0.90 [0.25]
Seff = 22013.45 [8530.46]
Teq = 3106 [301] K
Rp = 0.72 [0.26] Re
a = 0.0160 [0.0040] AU
Ag = 4.90 [2.73] [1.43σ]
Teffp = 7145 [811] K [4.67σ]

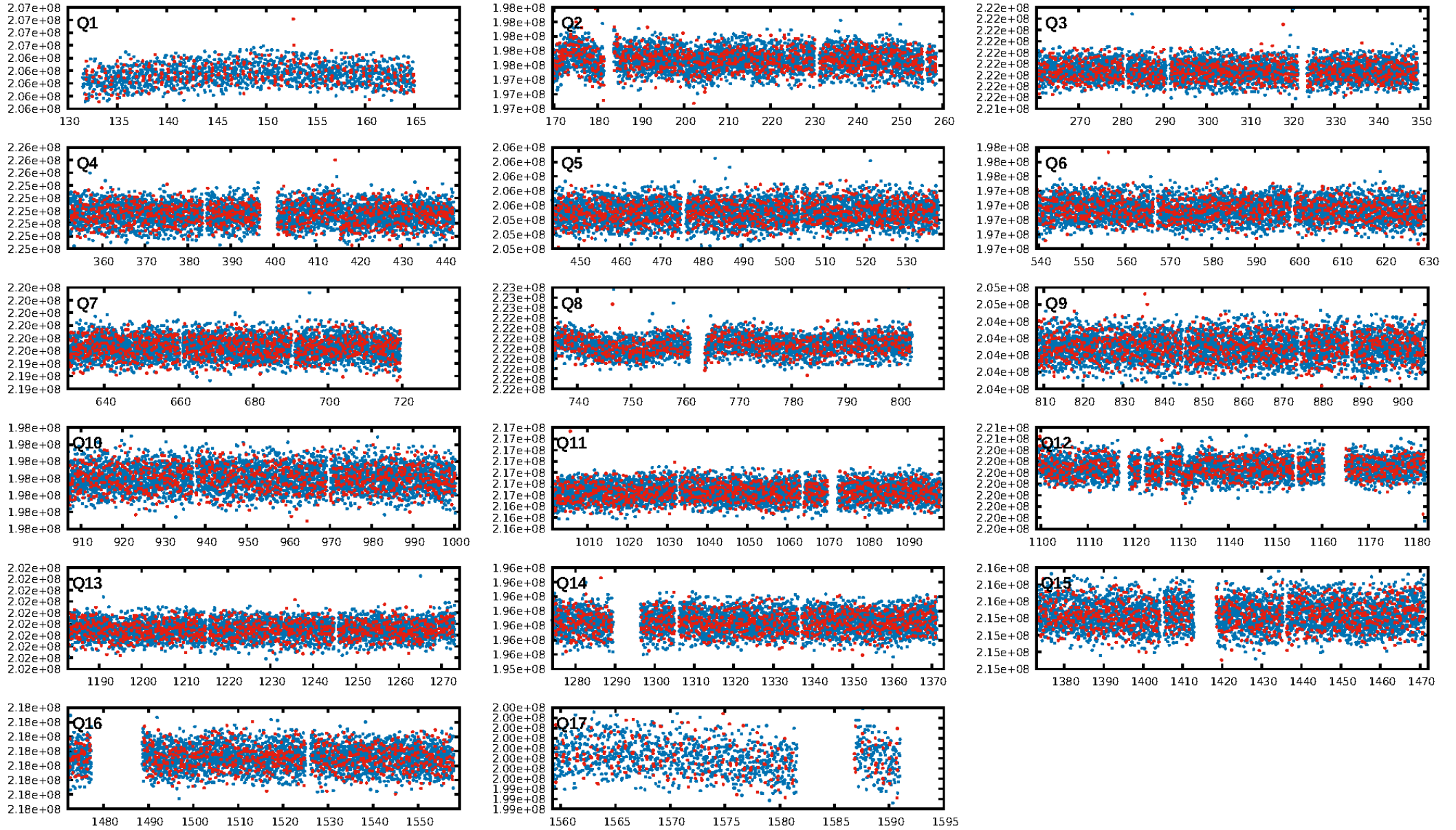
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [6.45σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 6.59e-15
RollingBand-fgt: 0.87 [1741/1994]
GhostDiagnostic-chr: -10.52
Centroid-sig: 4.3%
Centroid-so: 2.121 arcsec [1.55σ]
OotOffset-rm: 0.050 arcsec [0.10σ]
KicOffset-rm: 0.077 arcsec [0.14σ]
OotOffset-st: 3/4/3/3 [13]
KicOffset-st: 3/4/3/3 [13]
DiffImageQuality-fgm: 0.54 [7/13]
DiffImageOverlap-fno: 1.00 [17/17]

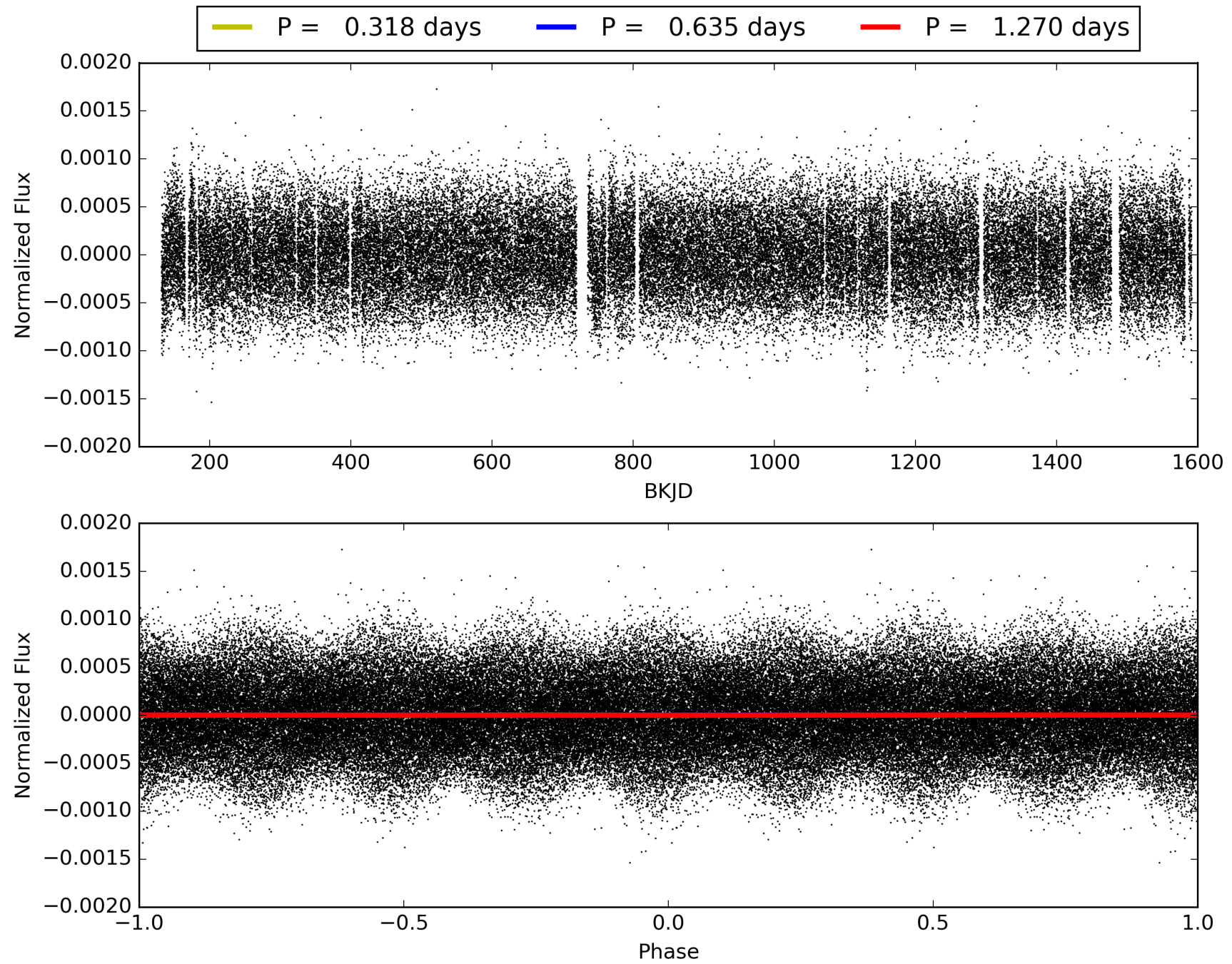
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 14:42:03 Z

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

TCE 003532510-02, PDC Light Curves

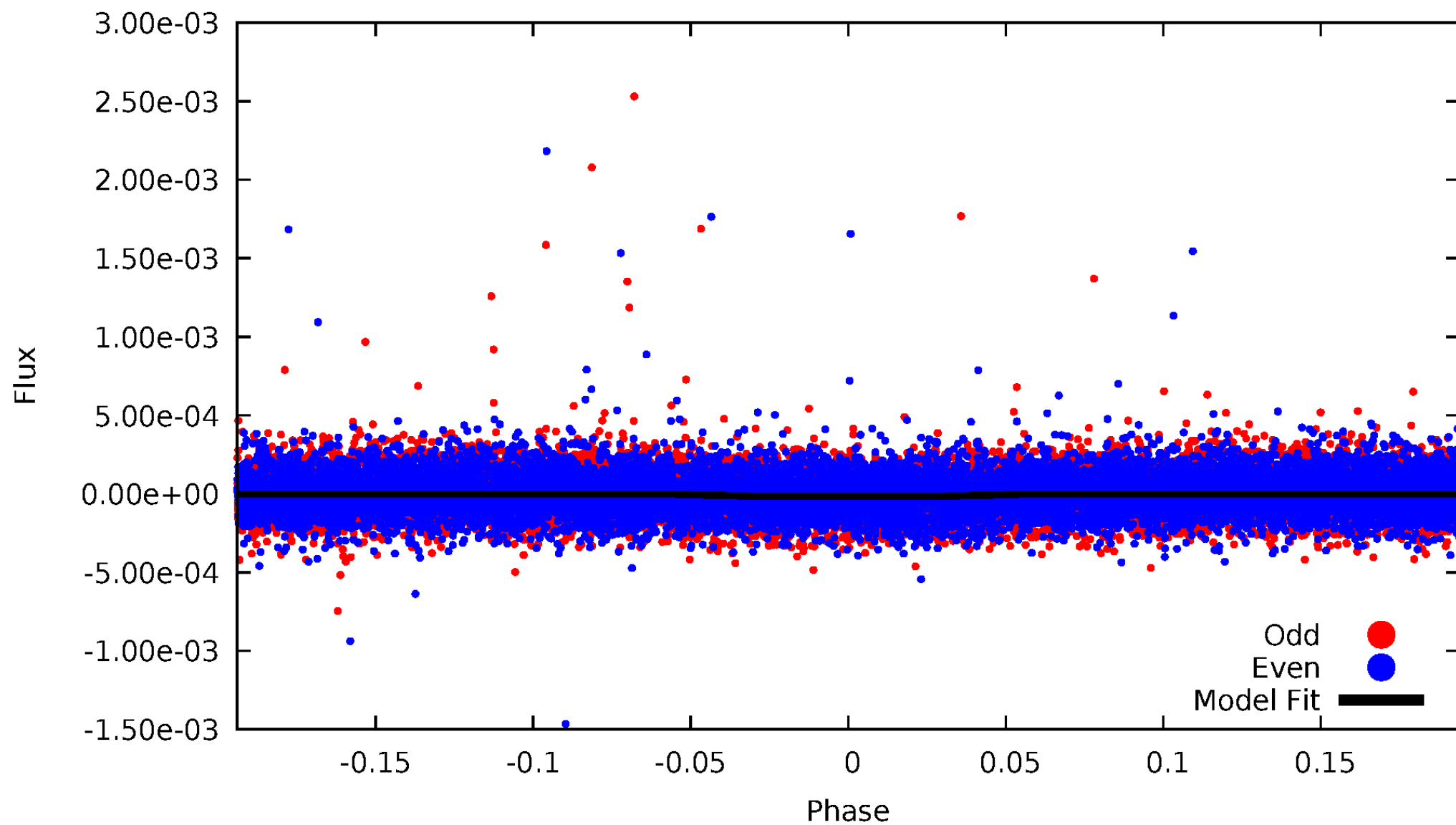


TCE 003532510-02



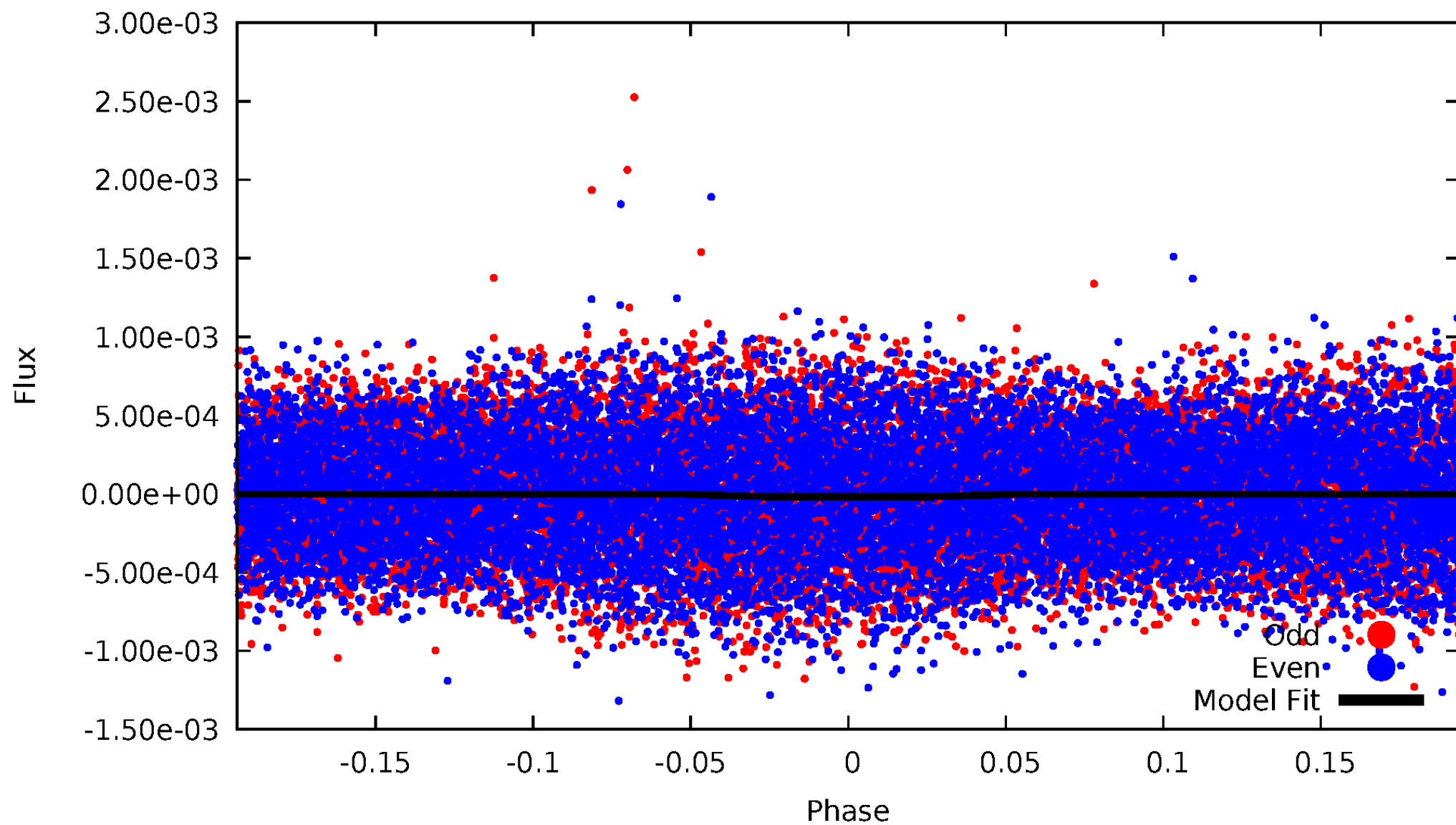
DV Odd/Even

TCE 003532510-02



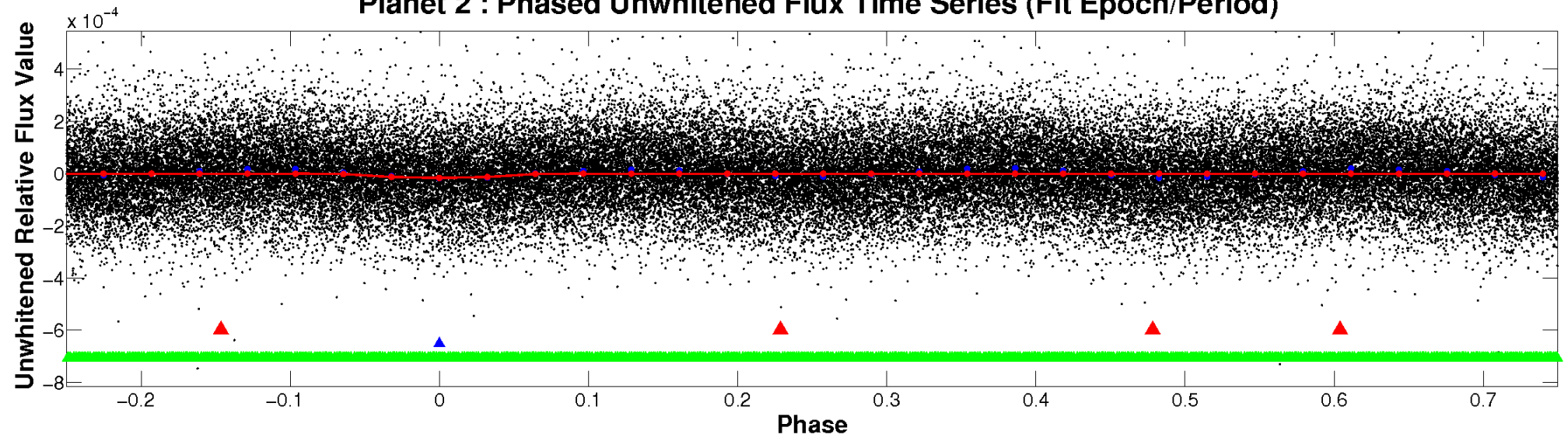
ALT Odd/Even

TCE 003532510-02

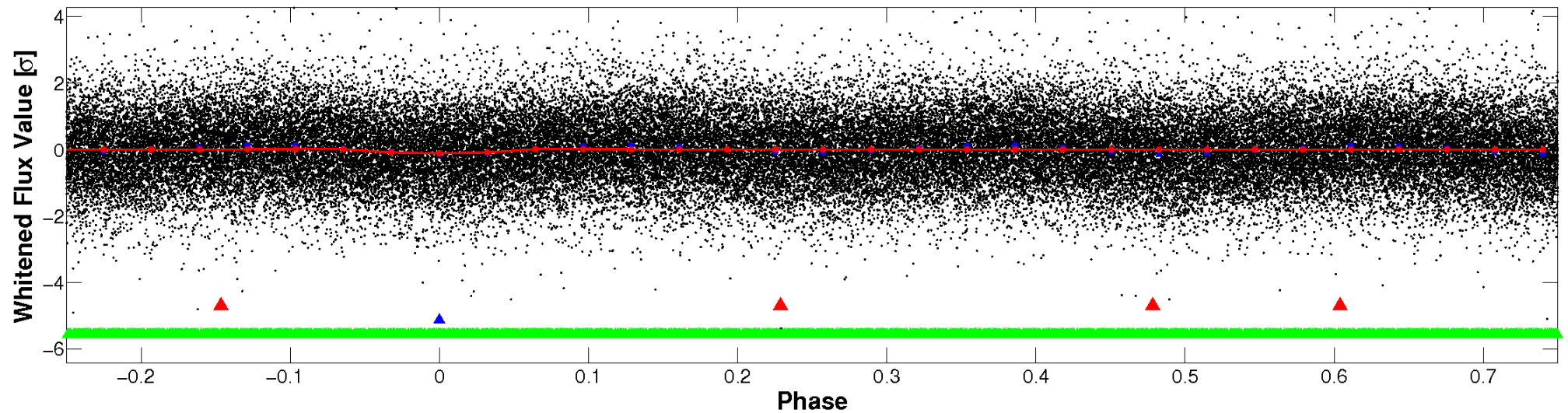


Non-Whitened Vs. Whitened Light Curve

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

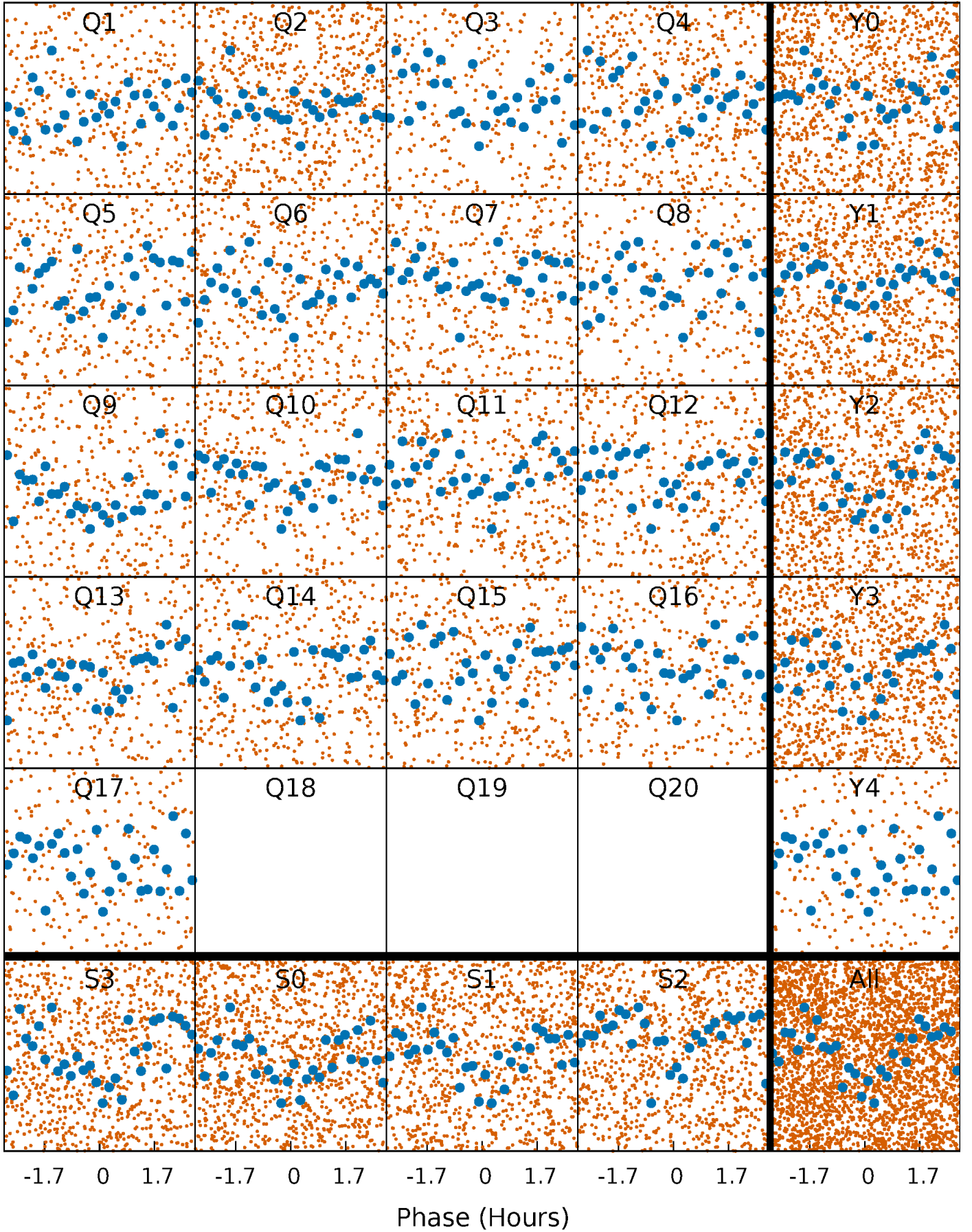


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



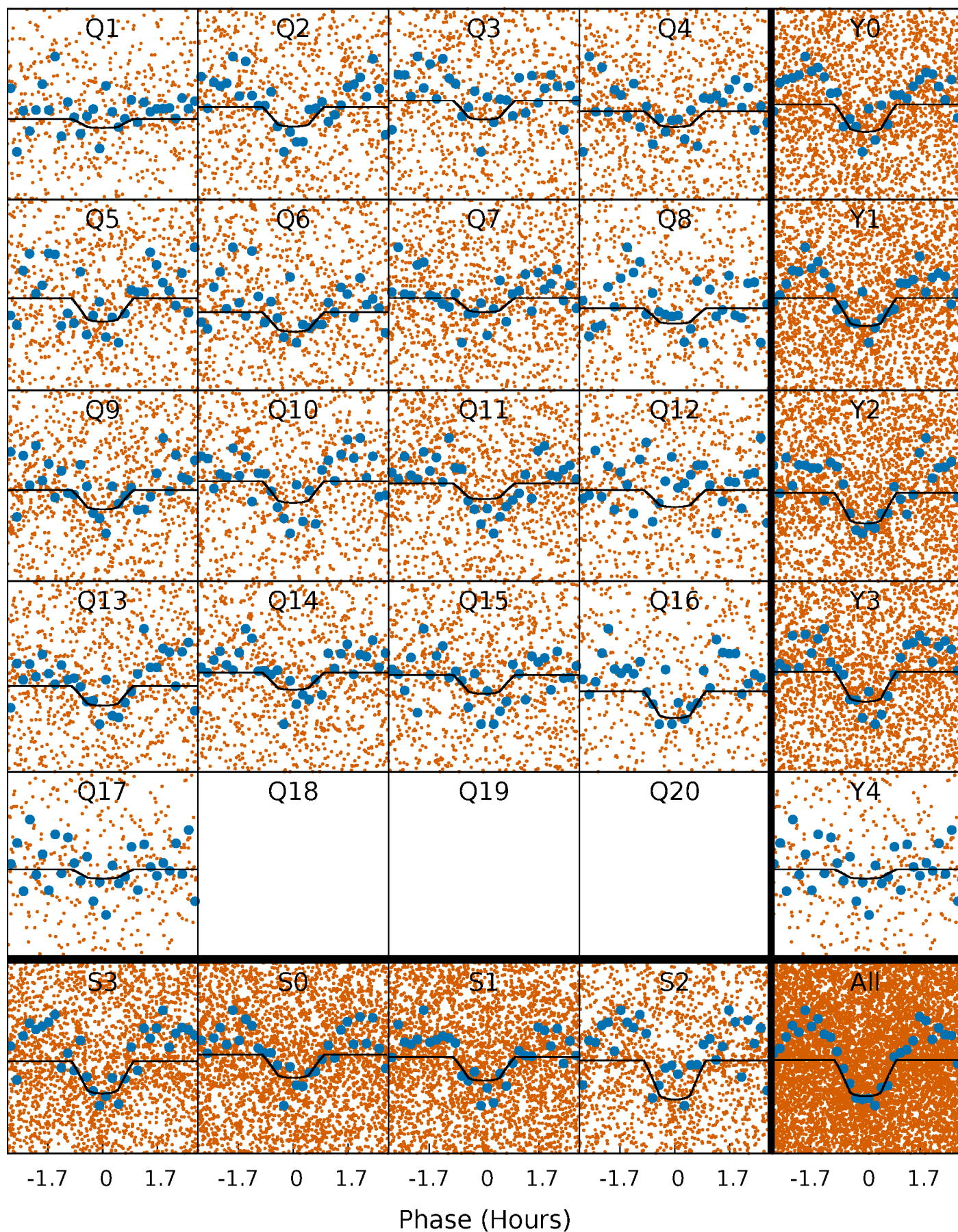
PDC Quarter-Phased Transit Curves

TCE 003532510-02 P= 0.635102 Days $T_0=131.867130$ (BKJD)



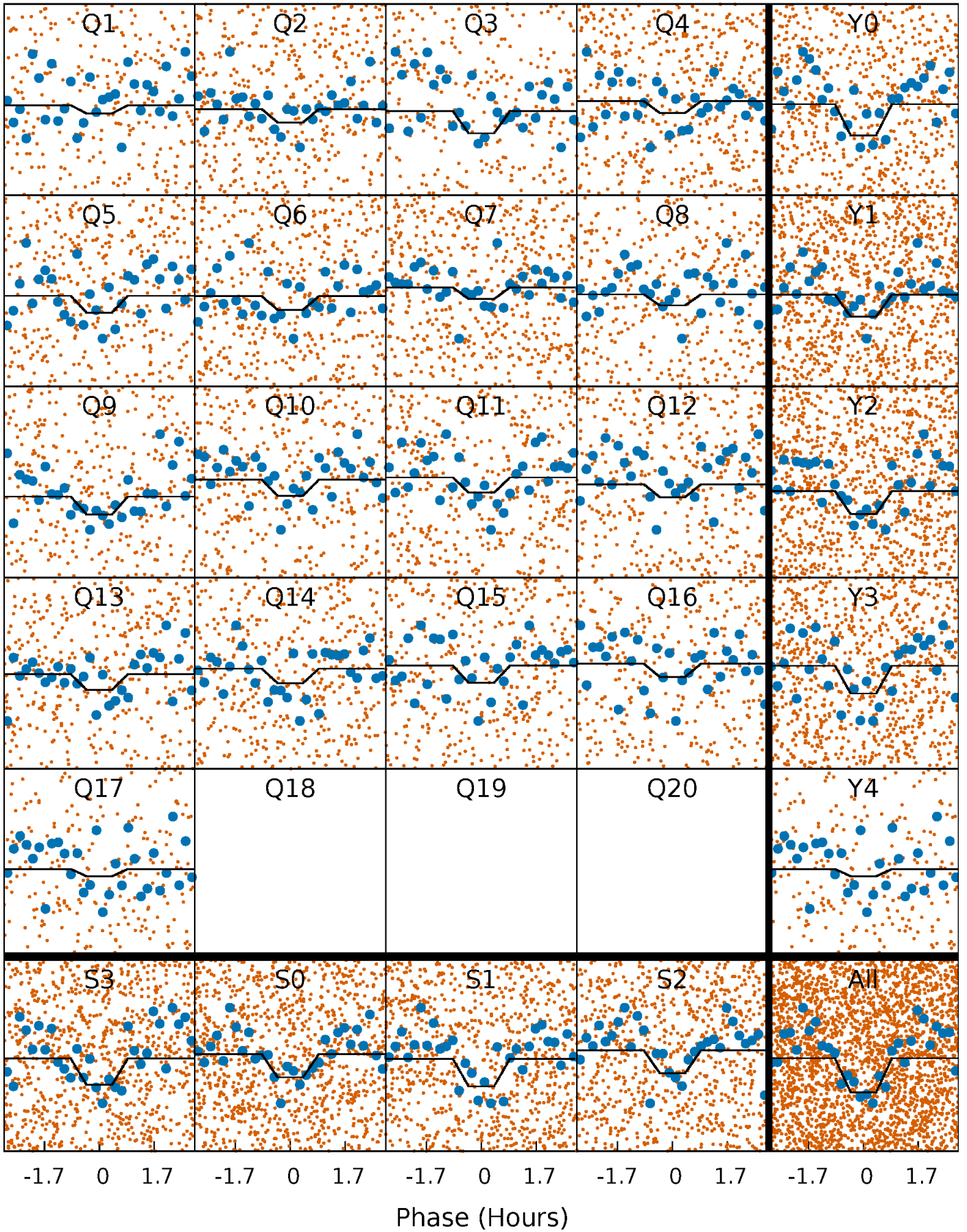
DV Quarter-Phased Transit Curves

TCE 003532510-02 P= 0.635102 Days $T_0=131.867130$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

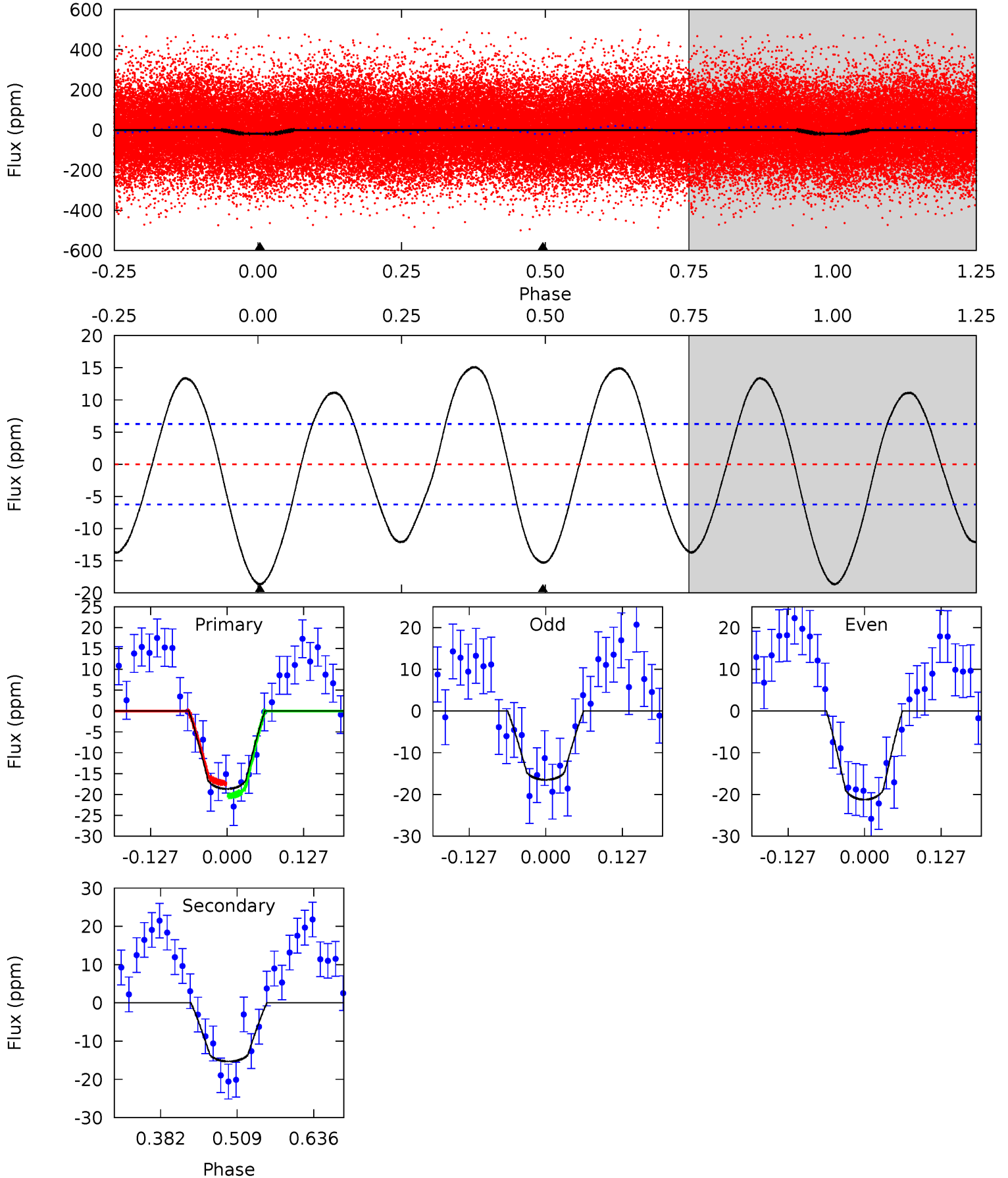
TCE 003532510-02 P= 0.635102 Days $T_0=131.867130$ (BKJD)



DV Model-Shift Uniqueness Test

003532510-02, P = 0.635102 Days, E = 131.232028 Days

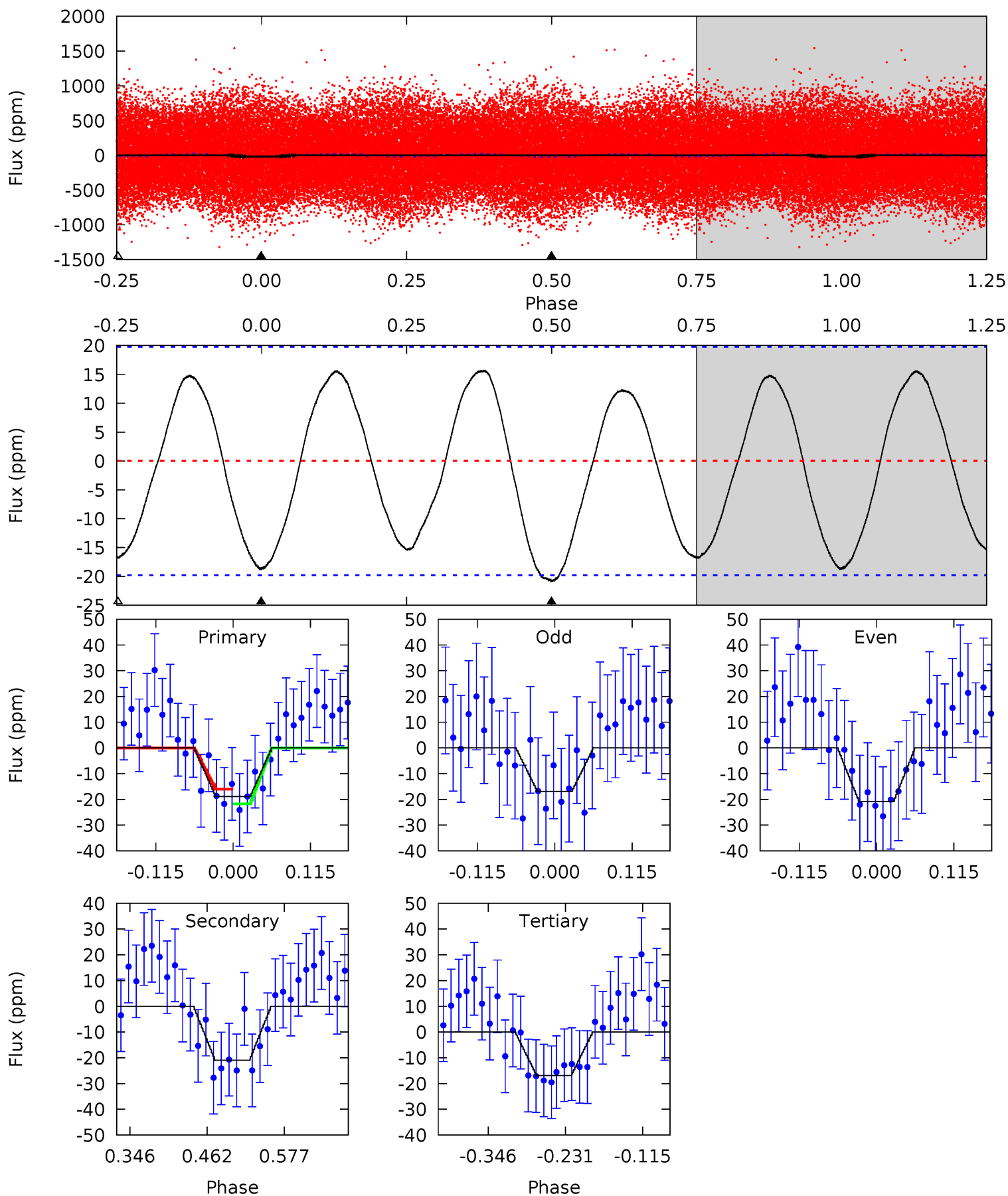
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.5	11.0	0	0	4.51	1.52	6.77	13.5	13.5	11.0	11.0	1.71	1.12	0.45	1.12



Alt Model-Shift Uniqueness Test

003532510-02, P = 0.635102 Days, E = 131.232028 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.32	4.80	3.88	0	4.53	1.57	2.54	0.45	4.32	0.92	4.80	0.46	0.87	0.43	0.66



Stellar Parameters For KIC 003532510

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7183^{+199}_{-274}	$4.195^{+0.128}_{-0.192}$	$-0.320^{+0.250}_{-0.350}$	$1.533^{+0.460}_{-0.307}$	$1.345^{+0.220}_{-0.200}$	$0.526^{+0.342}_{-0.263}$
	+3%/-4%	+3%/-5%	+78%/-109%	+30%/-20%	+16%/-15%	+65%/-50%
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 003532510-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-15 ± 1	$0.74^{+0.18}_{-0.18}$	4347^{+355}_{-272}	6620^{+1046}_{-729}	$3.899^{+2.799}_{-1.446}$
Alt.	-21 ± 4	$0.74^{+0.18}_{-0.17}$	4378^{+331}_{-275}	7282^{+1299}_{-953}	$5.403^{+3.700}_{-2.263}$

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 $A_{obs} \gg 1.0$

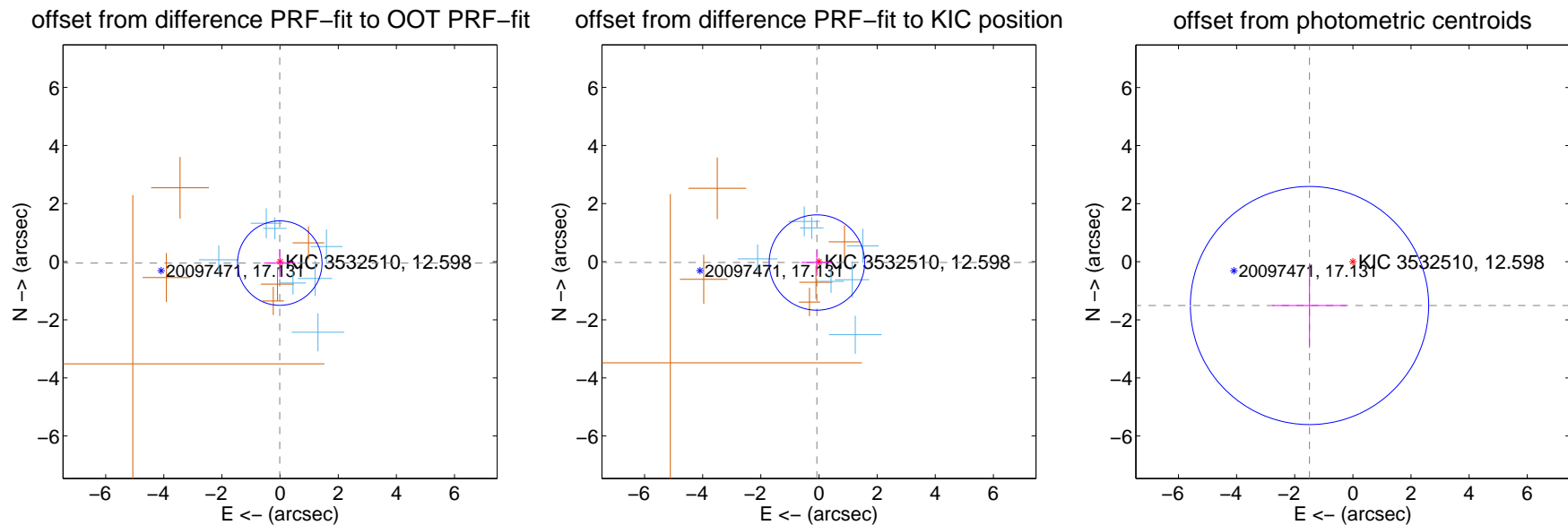
DV Centroid Data

Supplemental centroid analysis for 003532510-02. Kepler magnitude: 12.60. Transit SNR 7.70

There are 7 quarters with good PRF difference image offsets

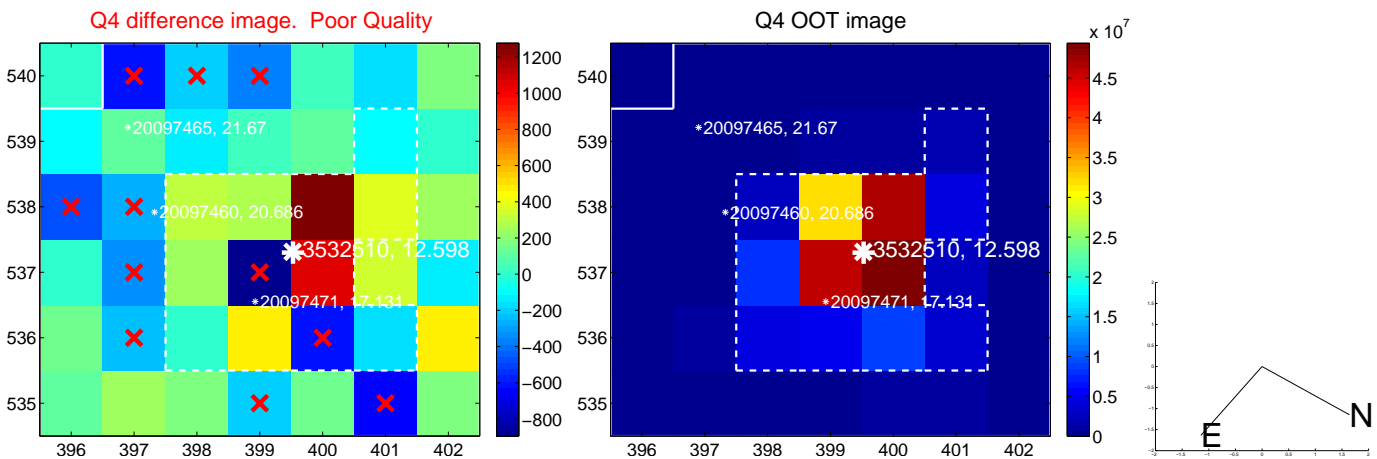
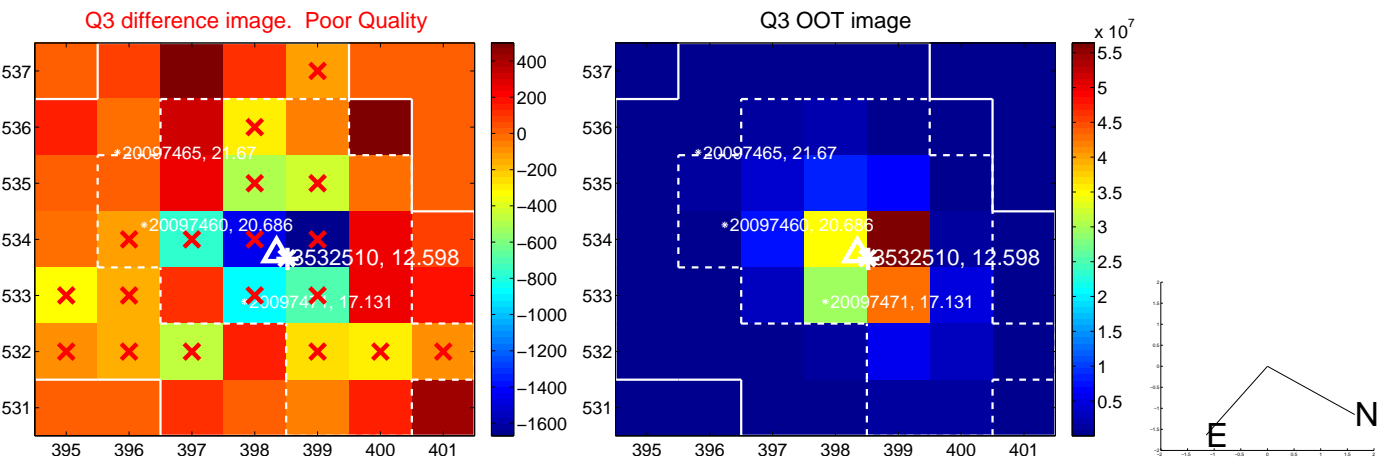
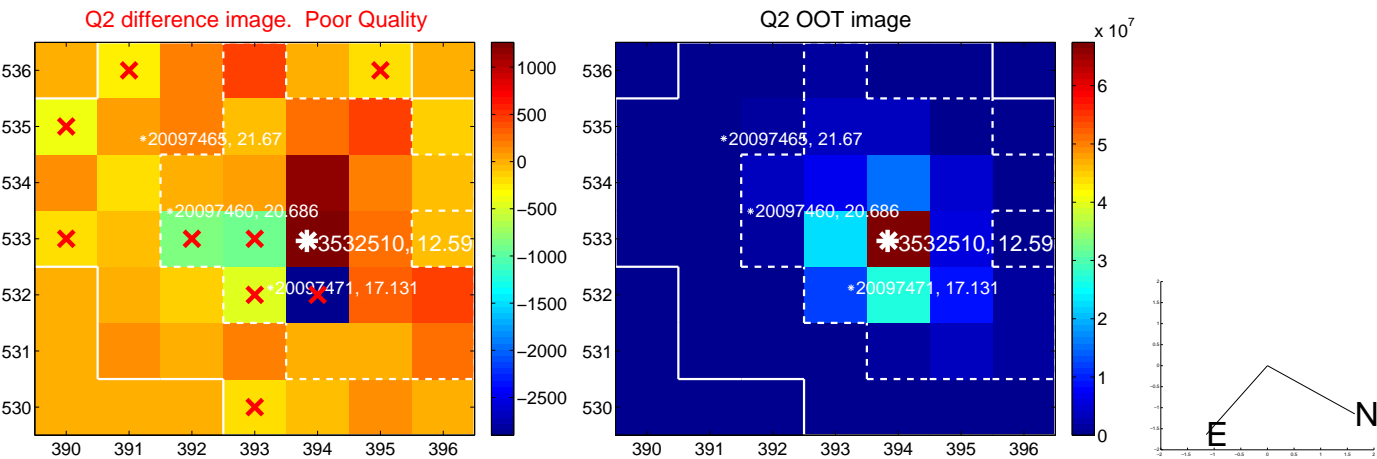
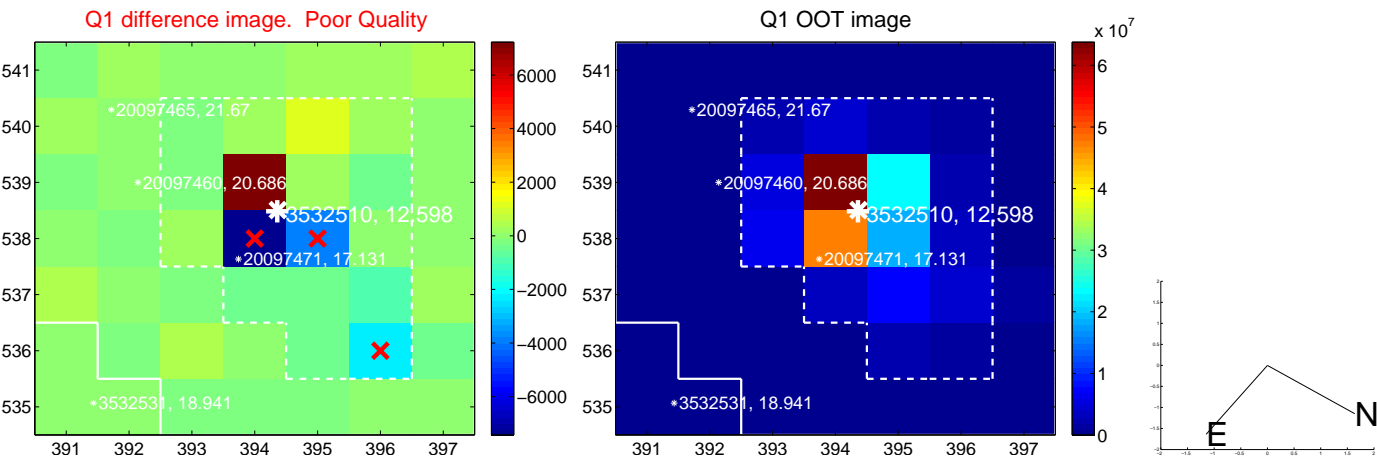
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.050 ± 0.485	0.10	0.012 ± 0.539	-0.049 ± 0.481
PRF-fit source offset from KIC position	0.077 ± 0.547	0.14	0.072 ± 0.535	-0.028 ± 0.459
photometric centroid source offset	2.12 ± 1.37	1.55	1.49 ± 1.27	-1.51 ± 1.45

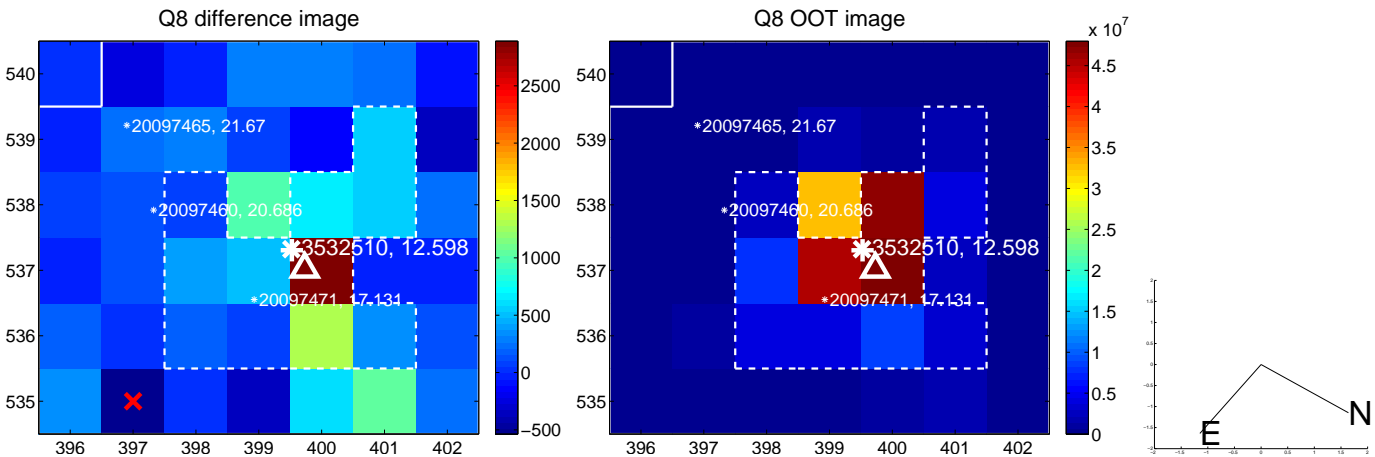
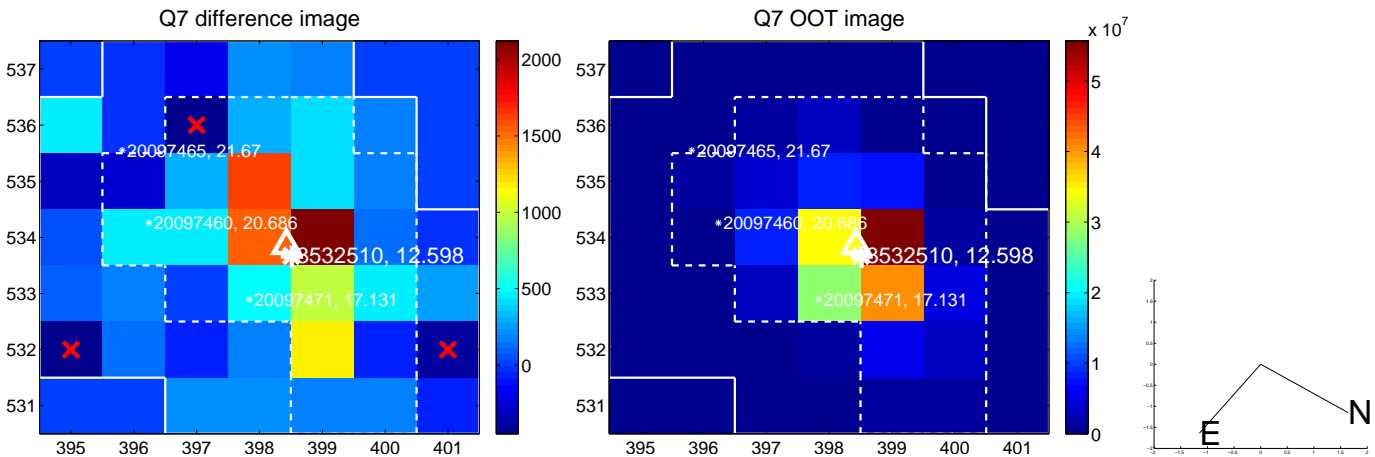
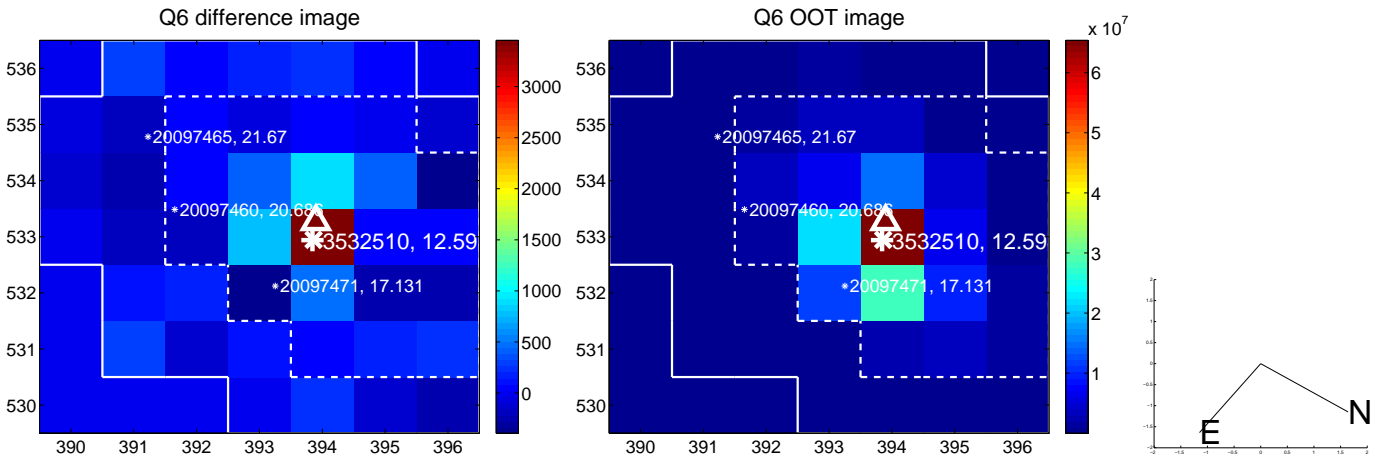
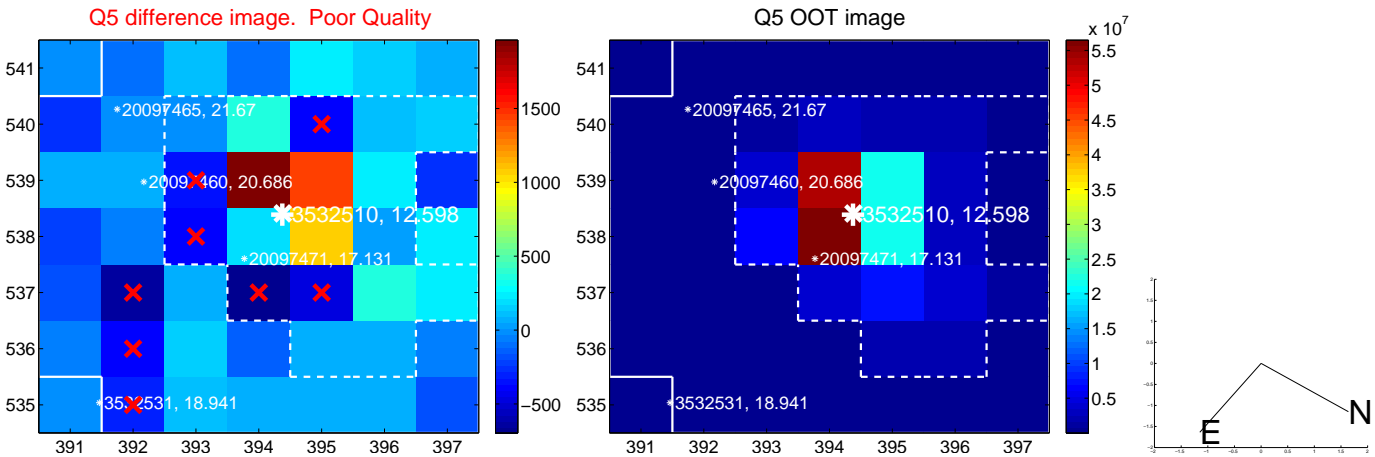


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

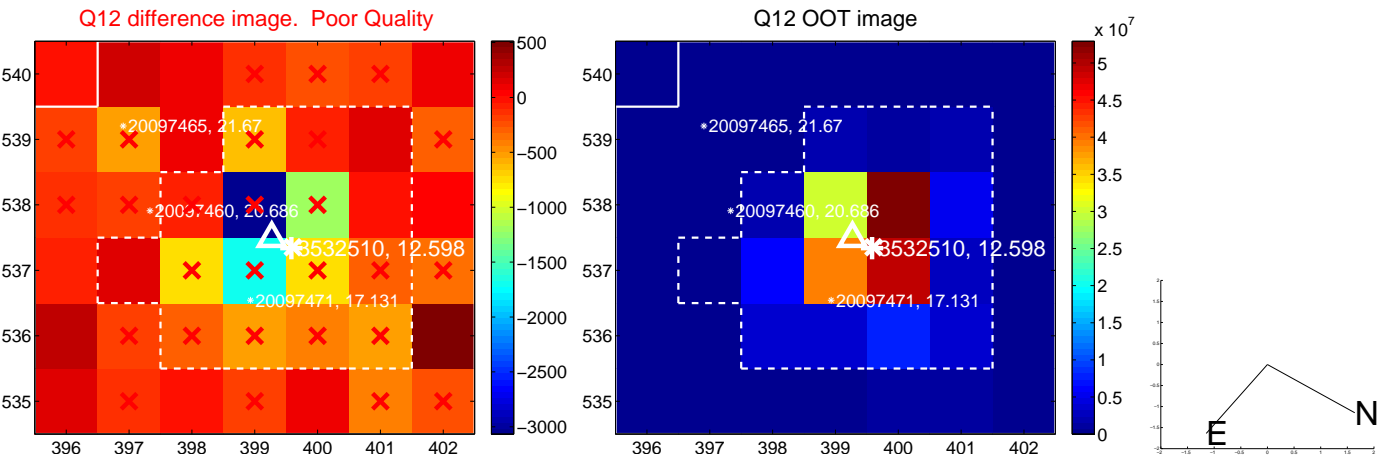
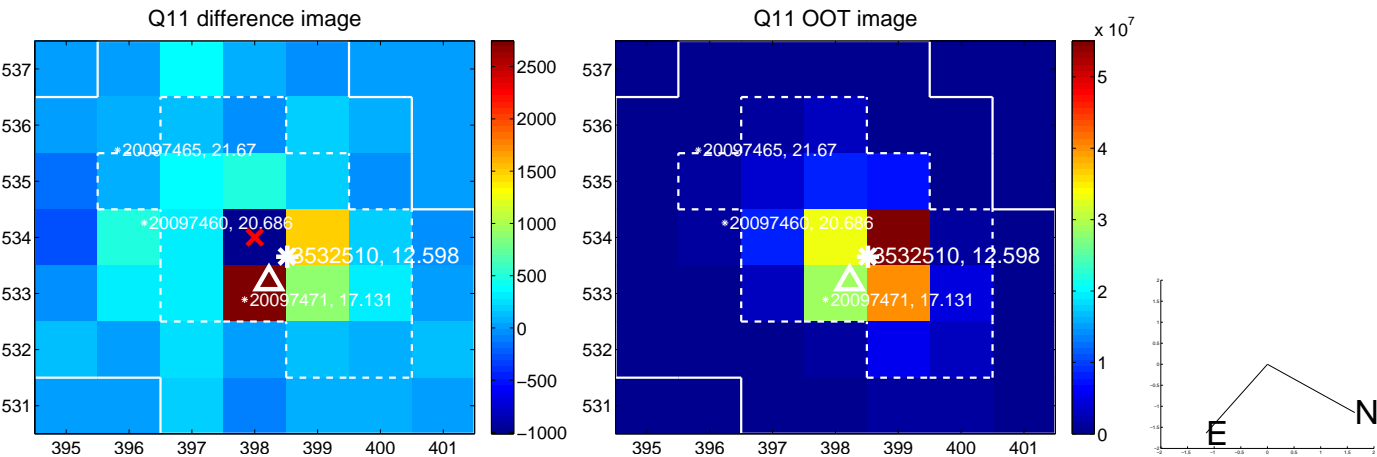
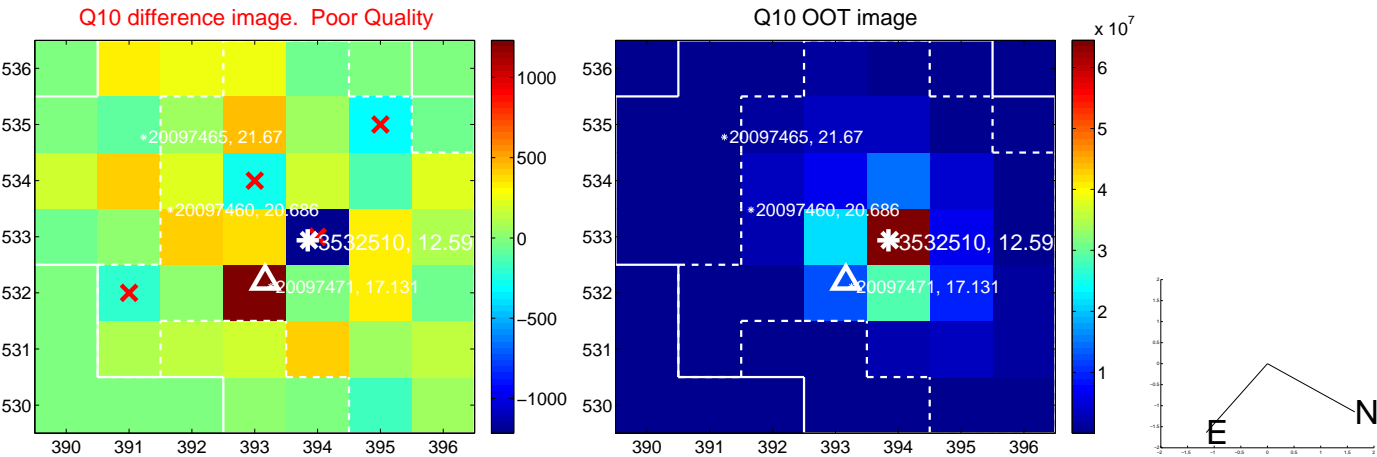
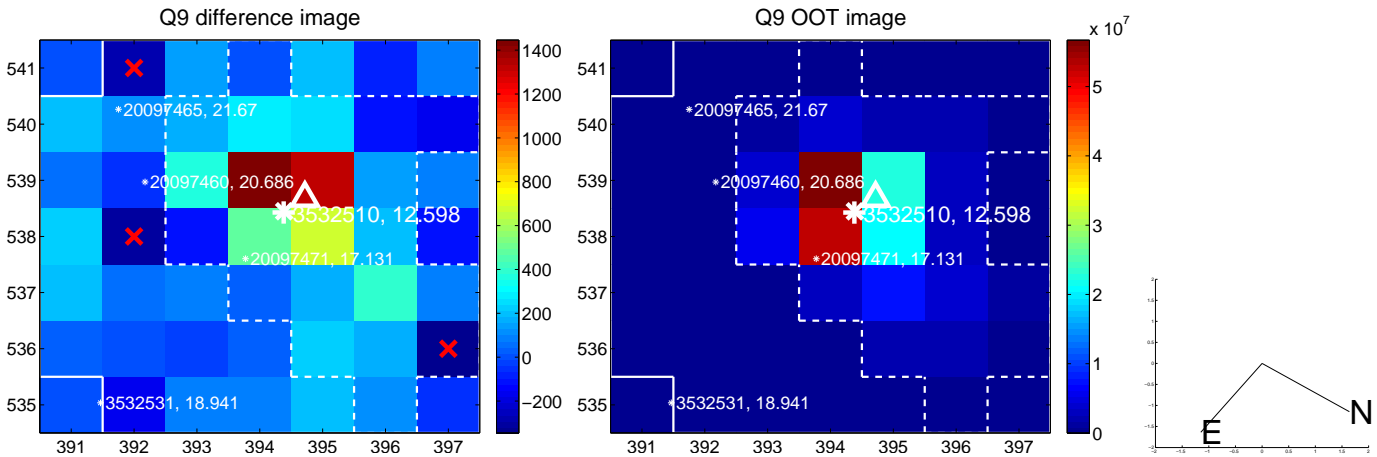
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



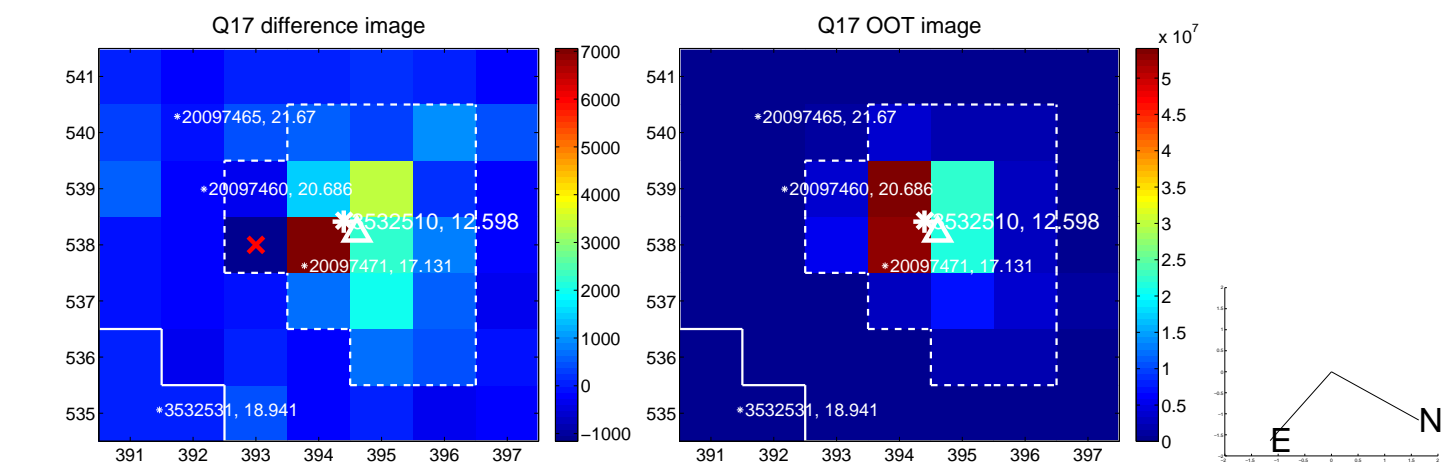
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



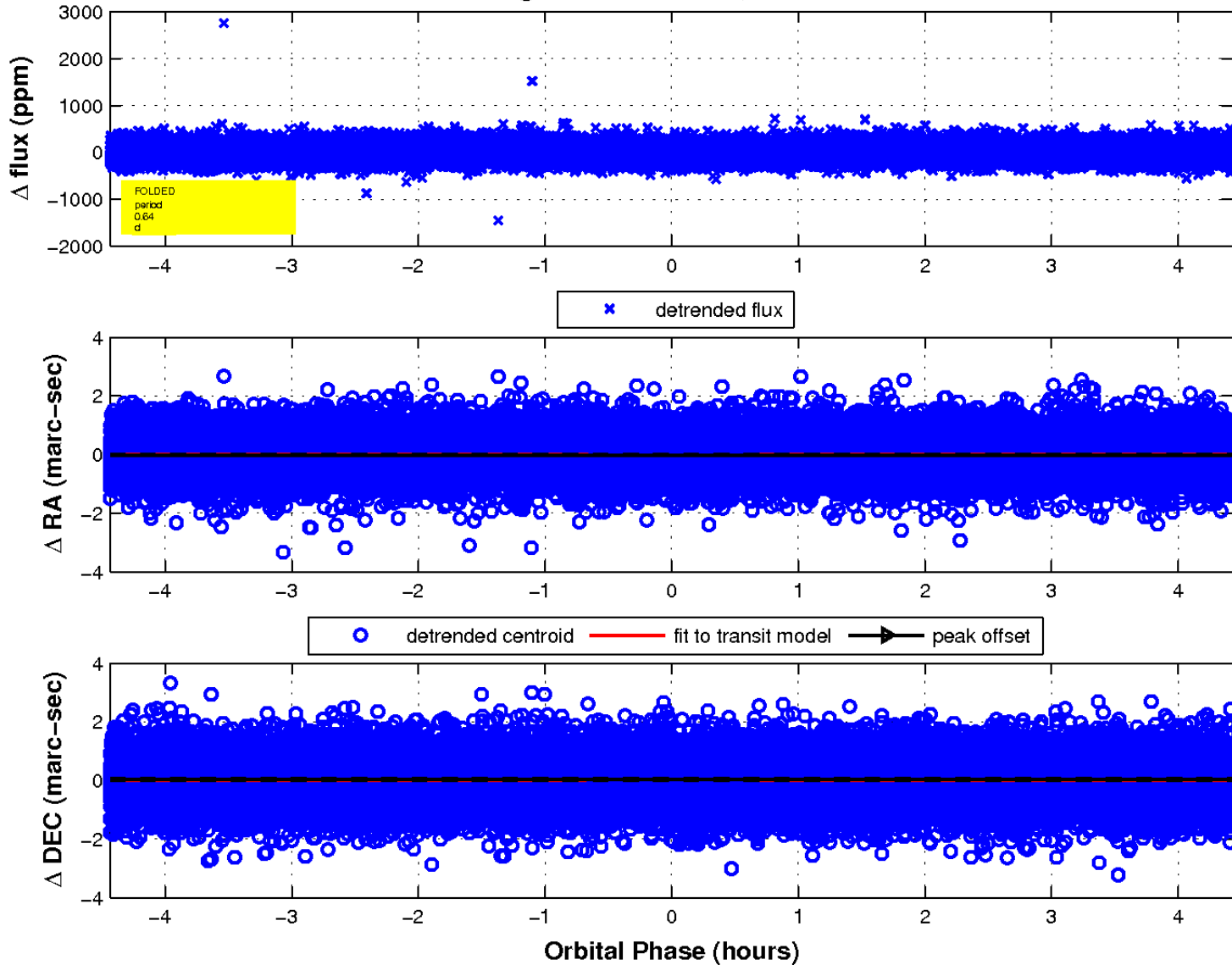
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

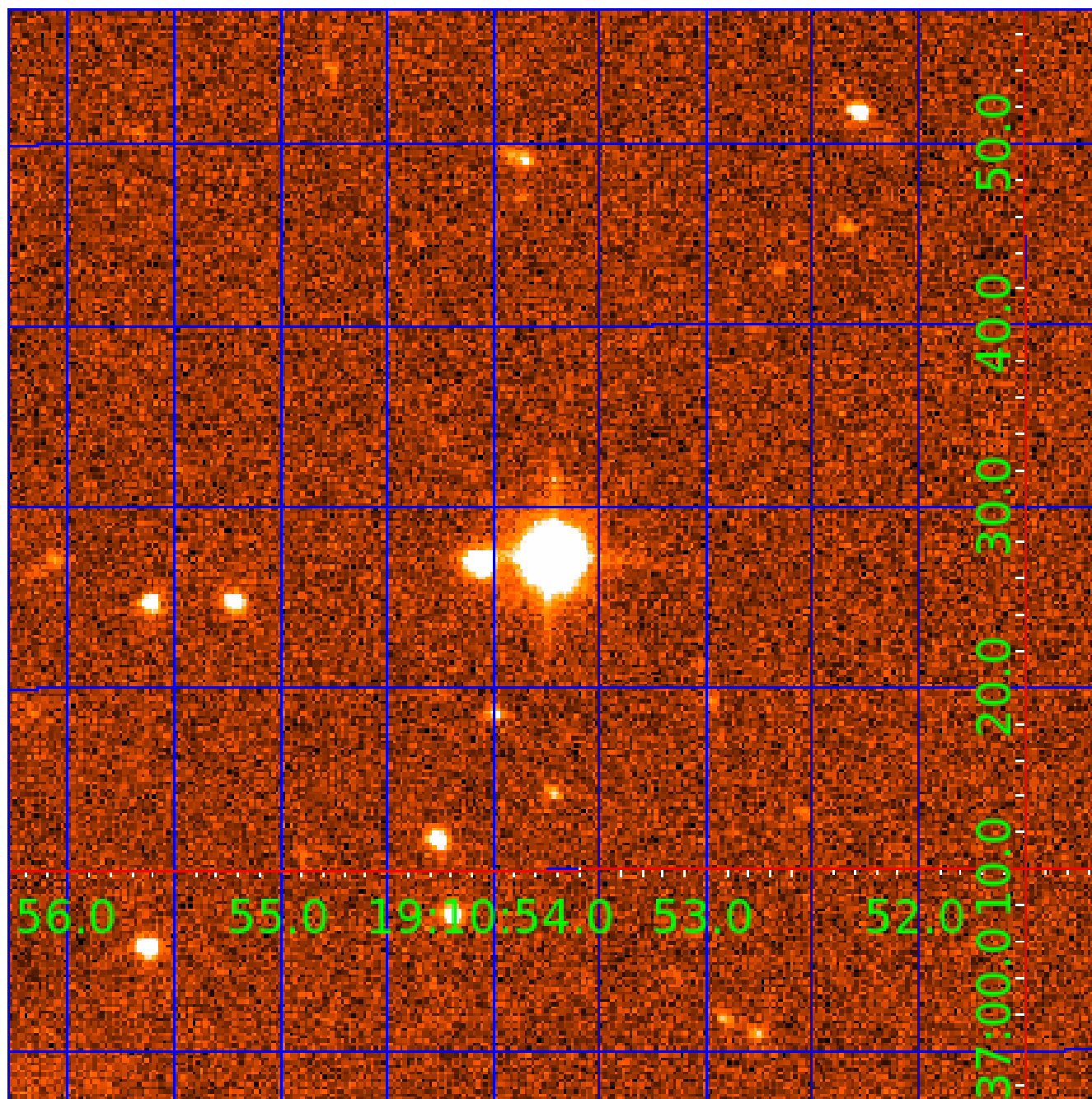


fluxWeightedCentroids, Planet 2 of 3



UKIRT Image

Declination



KIC 003532510

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})
003532510-01	OBS	No	357.324034	416.141230	352.8	29.178	14.0	16.3	1.53	7183	2.97	4.74
003532510-02	OBS	No	0.635102	131.867130	16.4	1.478	8.8	7.7	1.53	7183	0.72	22013.45
003532510-03	OBS	No	2.167316	132.132298	24.8	5.509	7.6	9.0	1.53	7183	0.88	4284.66

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003532510-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_ZUMA—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003532510-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT
003532510-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT

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.

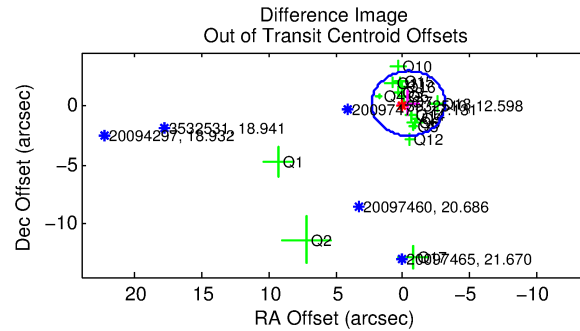
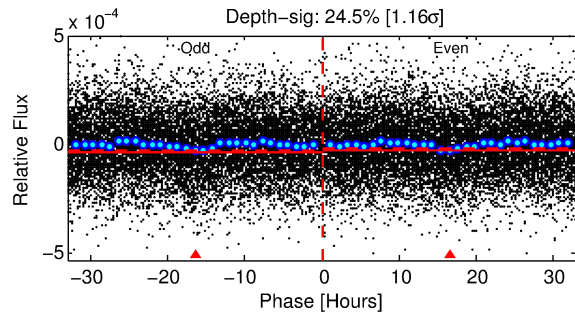
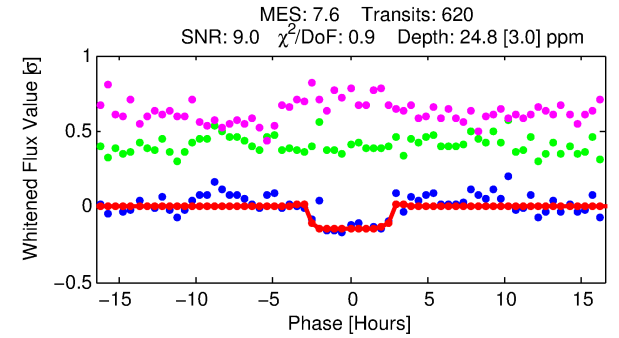
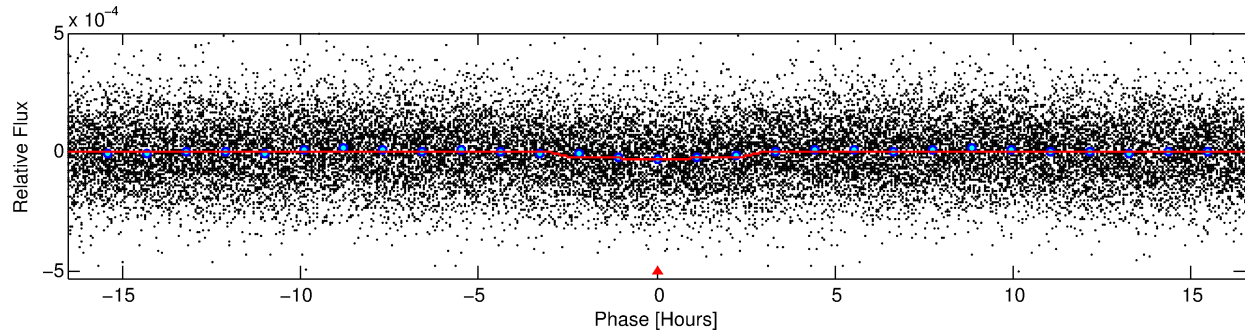
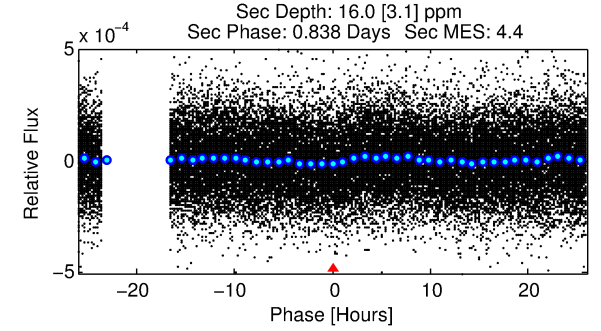
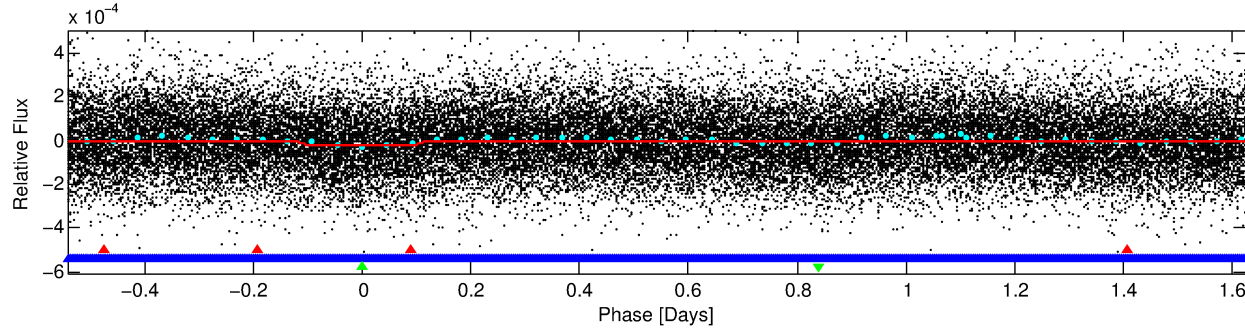
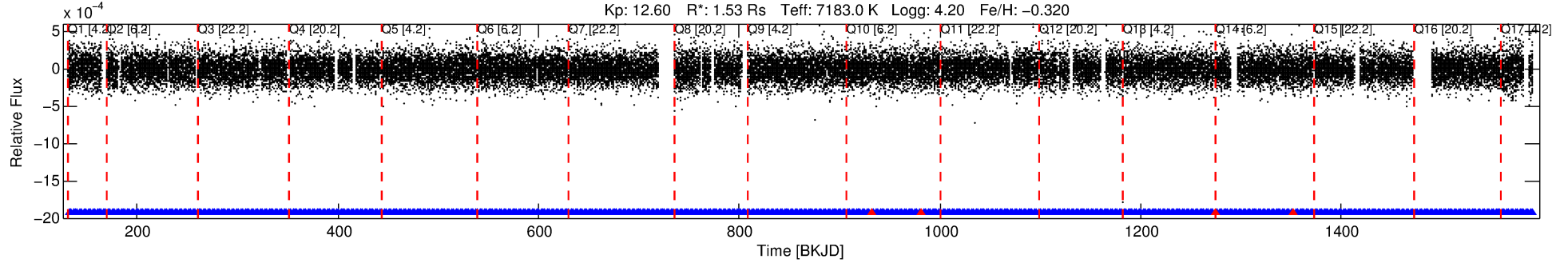
Ephemeris Match Information For 003532510-03

No Significant Match Found

DV One-Page Summary

KIC: 3532510 Candidate: 3 of 3 Period: 2.167 d

KOI: K04985 Corr: No Ephemeris Match



DV Fit Results:

Period = 2.16732 [0.00002] d
Epoch = 132.1323 [0.0056] BKJD
Rp/R* = 0.0053 [0.0016]
a/R* = 1.66 [2.03]
b = 0.90 [0.43]
Seff = 4284.66 [1660.35]
Teq = 2063 [200] K
Rp = 0.88 [0.38] Re
a = 0.0362 [0.0090] AU
Ag = 14.82 [10.89] [1.27σ]
Teffp = 6259 [1033] K [3.99σ]

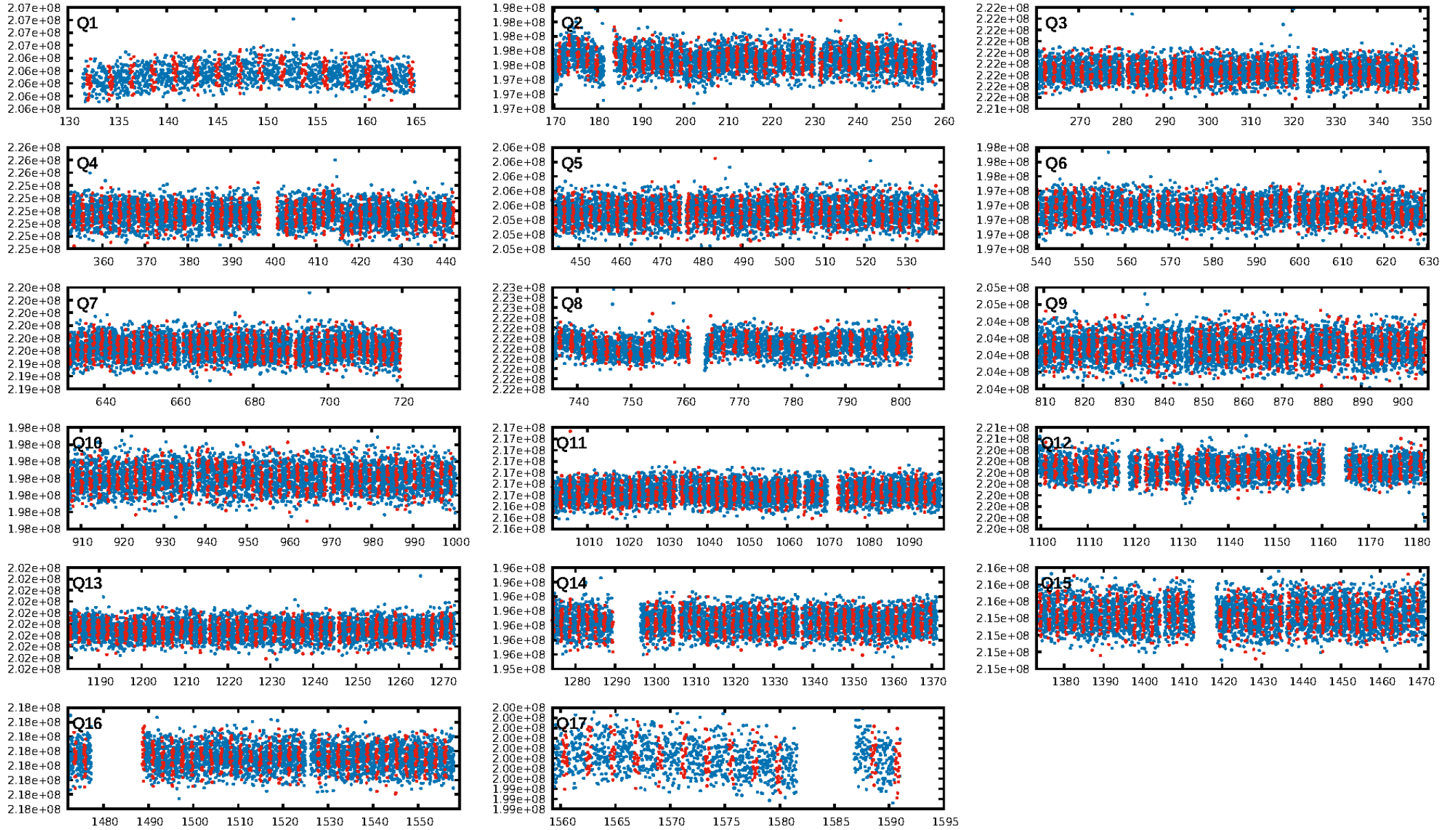
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [6.45σ]
LongPeriod-sig: 100.0% [287.06σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.89e-12
RollingBand-fgt: 0.99 [588/592]
GhostDiagnostic-chr: 1.687
Centroid-sig: 56.3%
Centroid-so: 0.574 arcsec [0.65σ]
OotOffset-rm: 0.470 arcsec [0.51σ]
KicOffset-rm: 0.430 arcsec [0.44σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.71 [12/17]
DiffImageOverlap-fno: 0.00 [0/17]

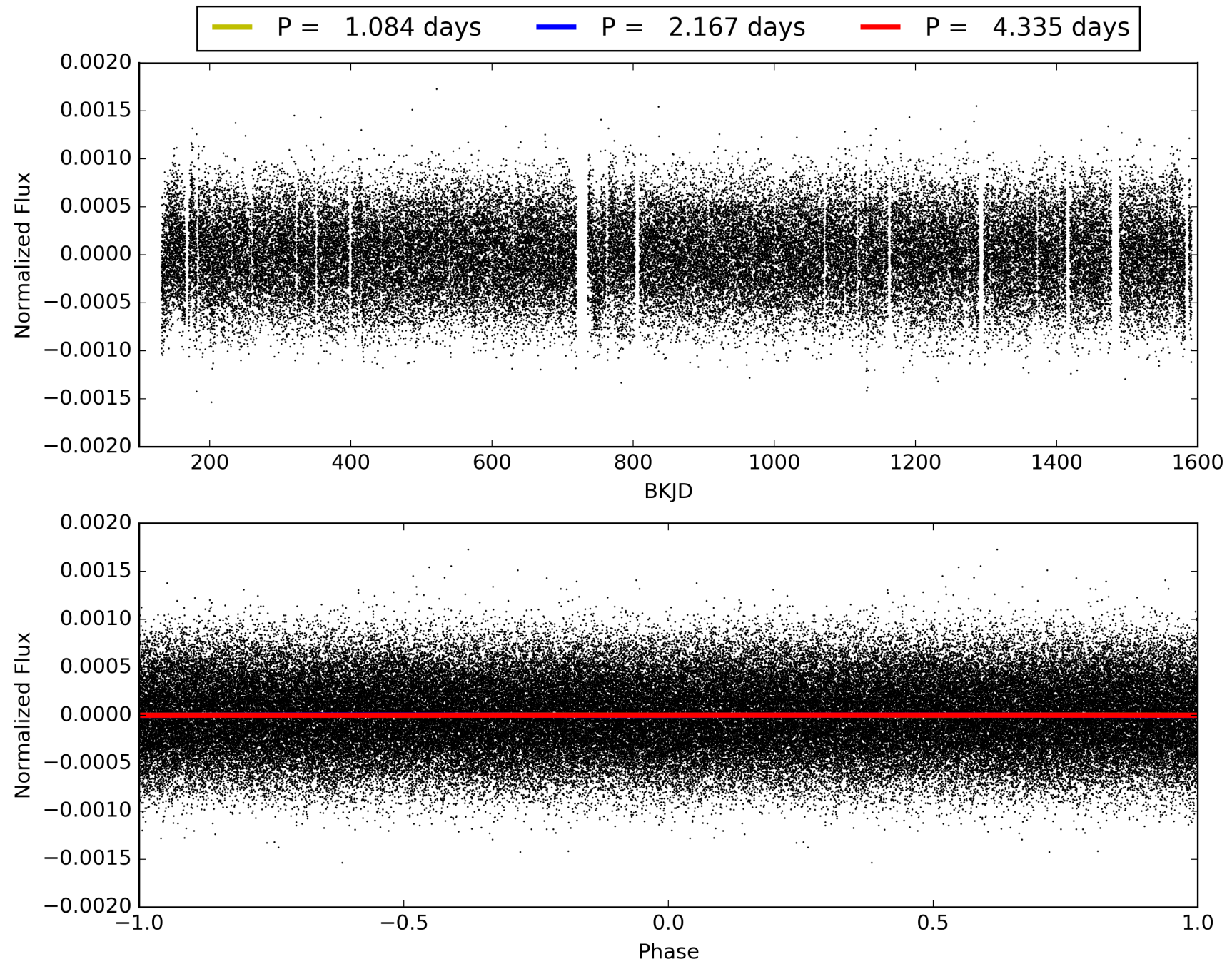
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 14:42:13 Z

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

TCE 003532510-03, PDC Light Curves

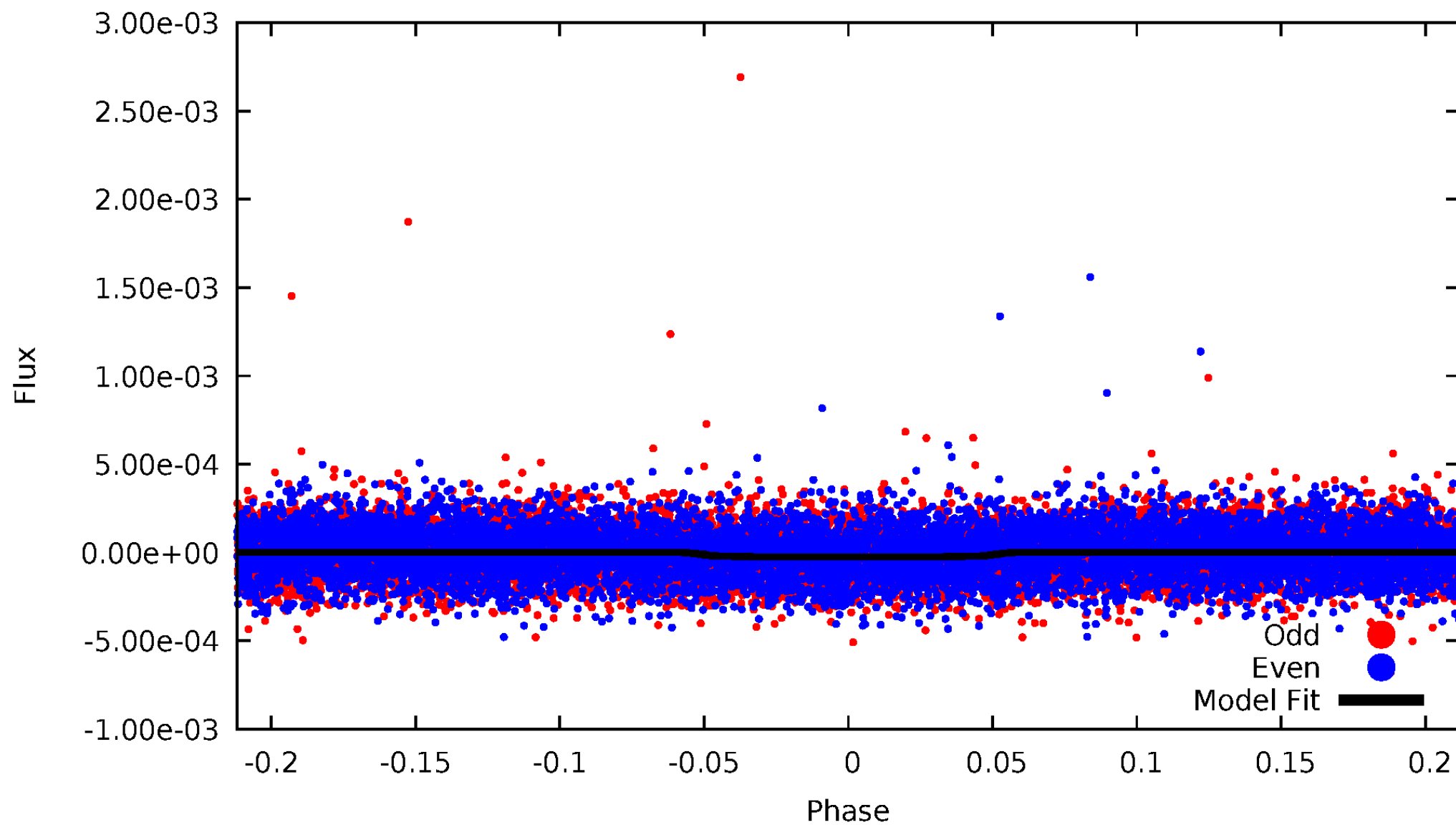


TCE 003532510-03



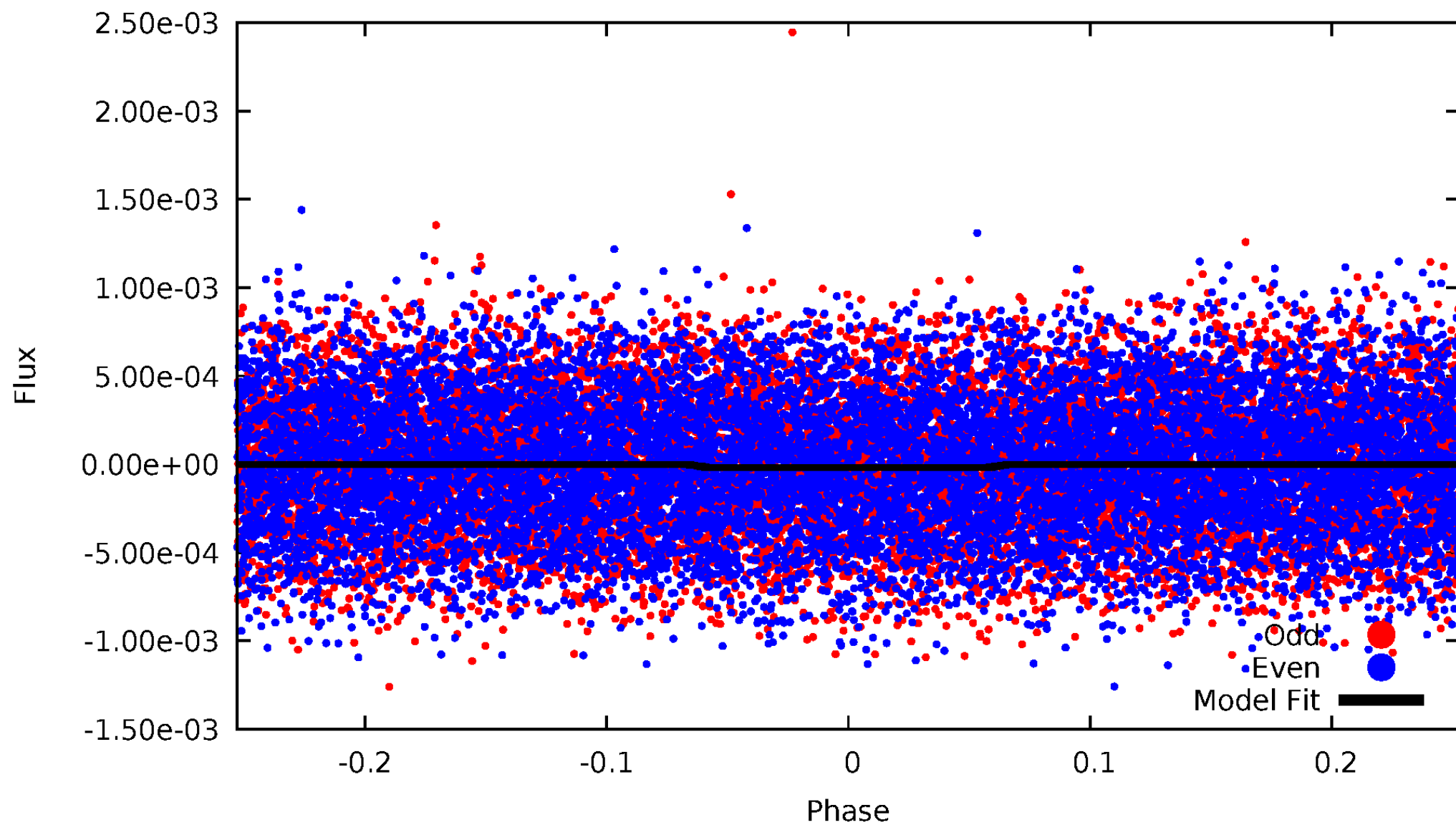
DV Odd/Even

TCE 003532510-03

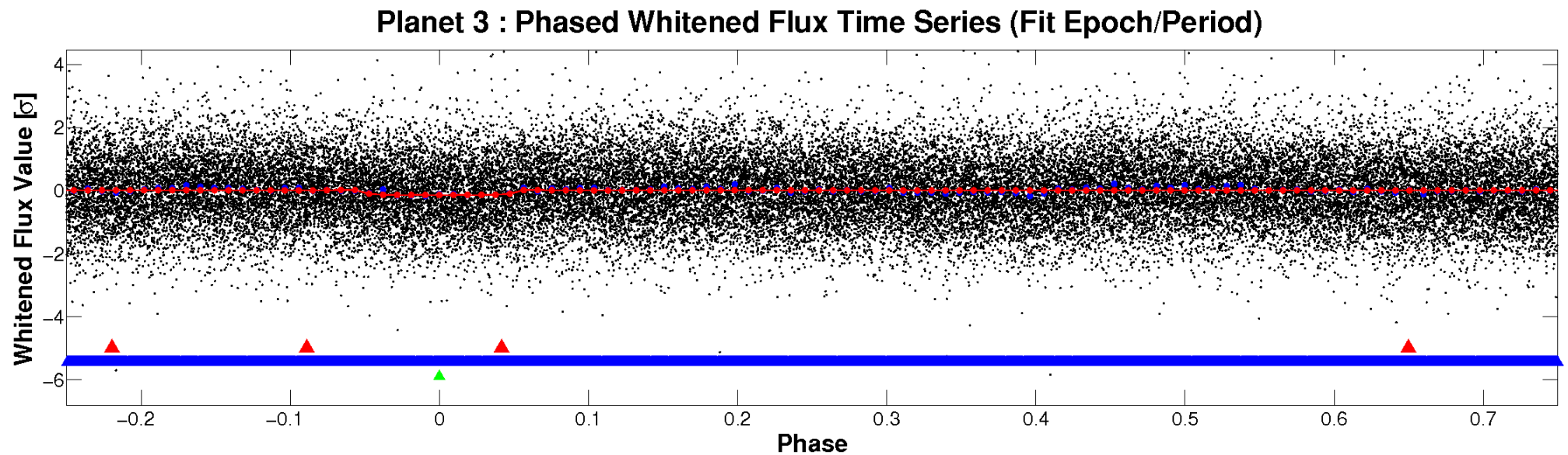
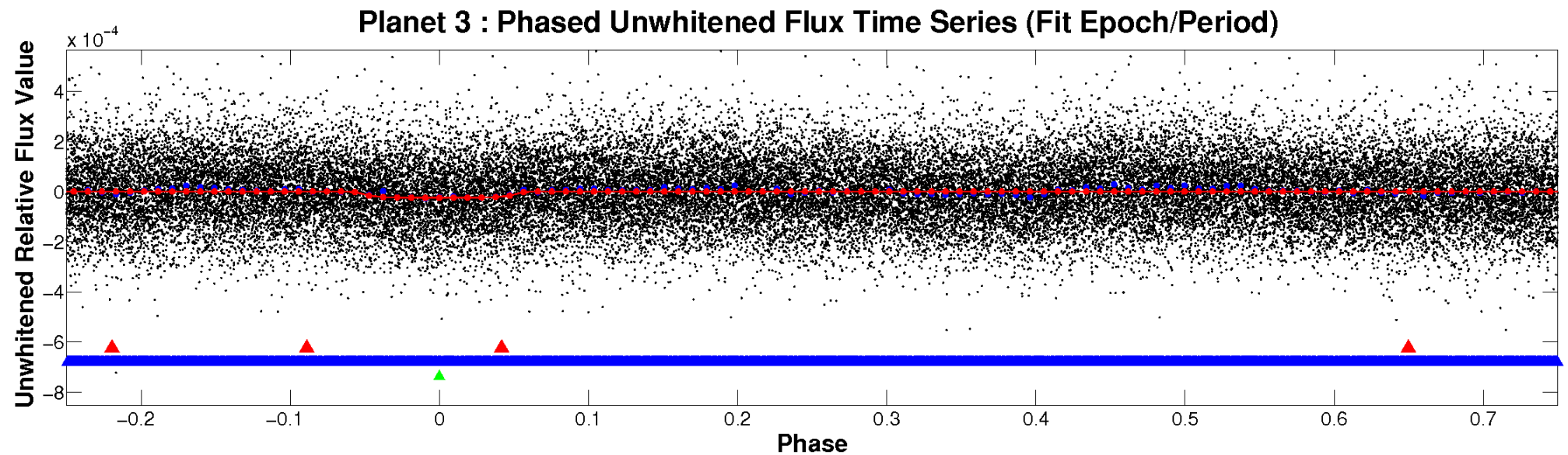


ALT Odd/Even

TCE 003532510-03

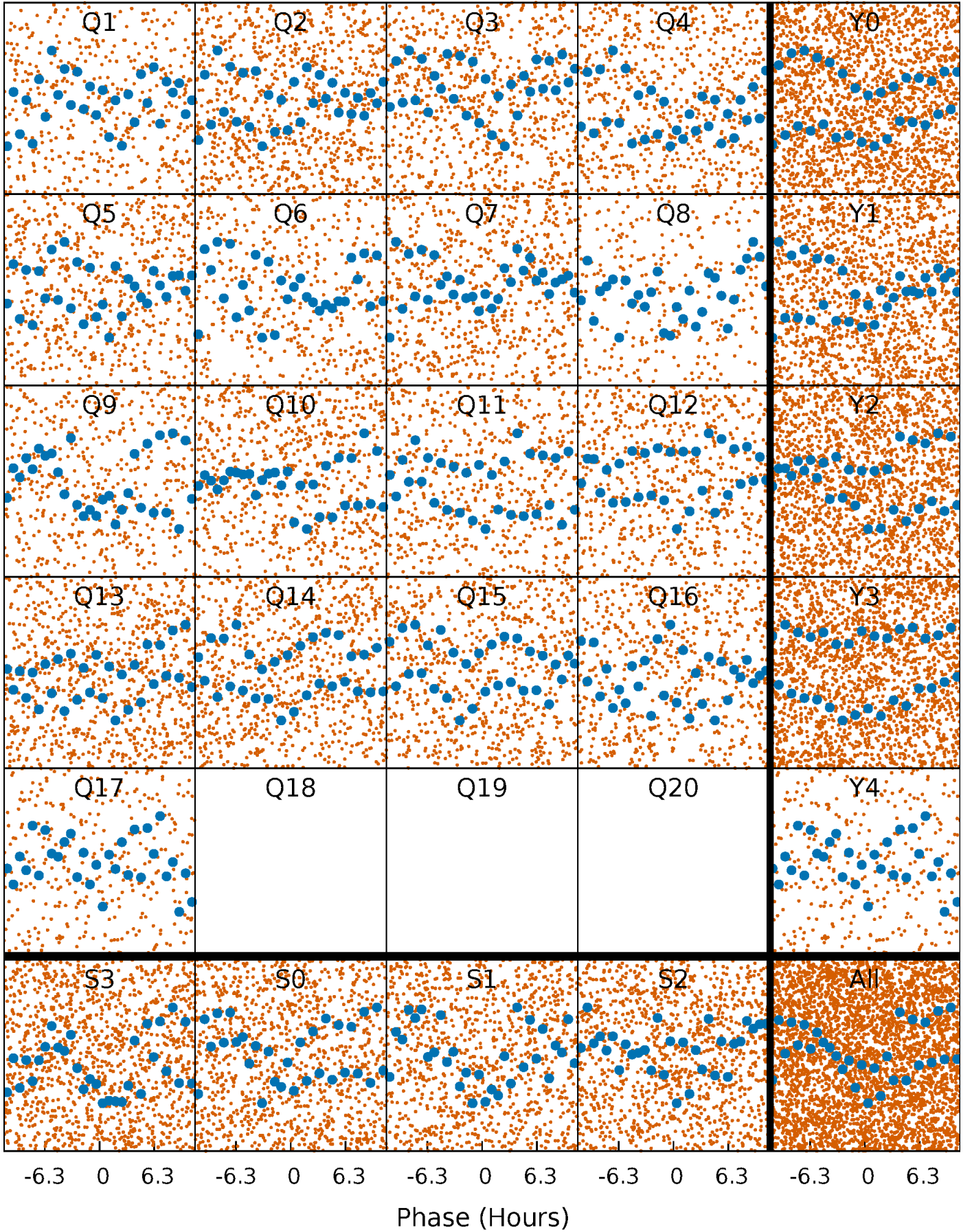


Non-Whitened Vs. Whitened Light Curve



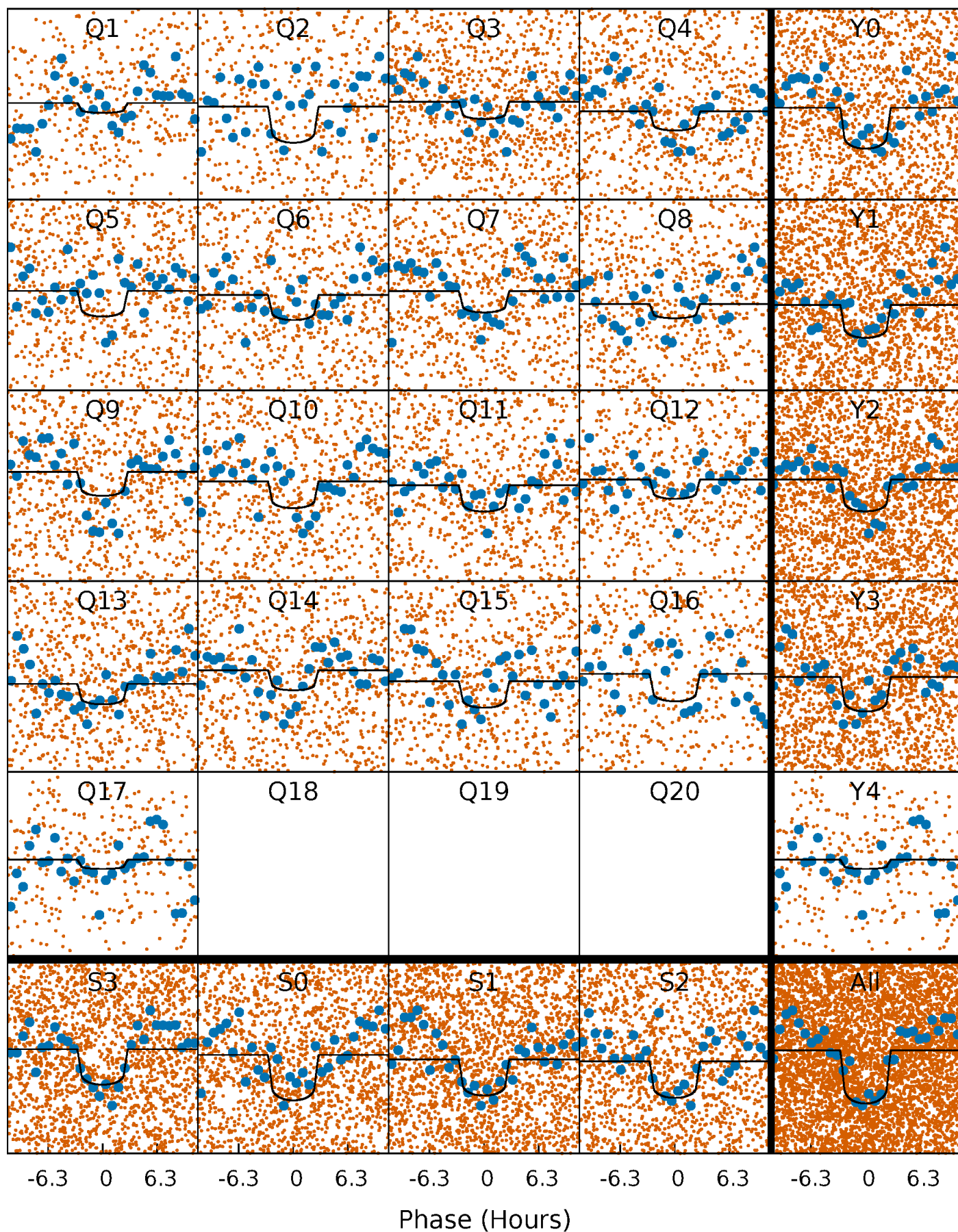
PDC Quarter-Phased Transit Curves

TCE 003532510-03 P= 2.167316 Days $T_0=132.132298$ (BKJD)



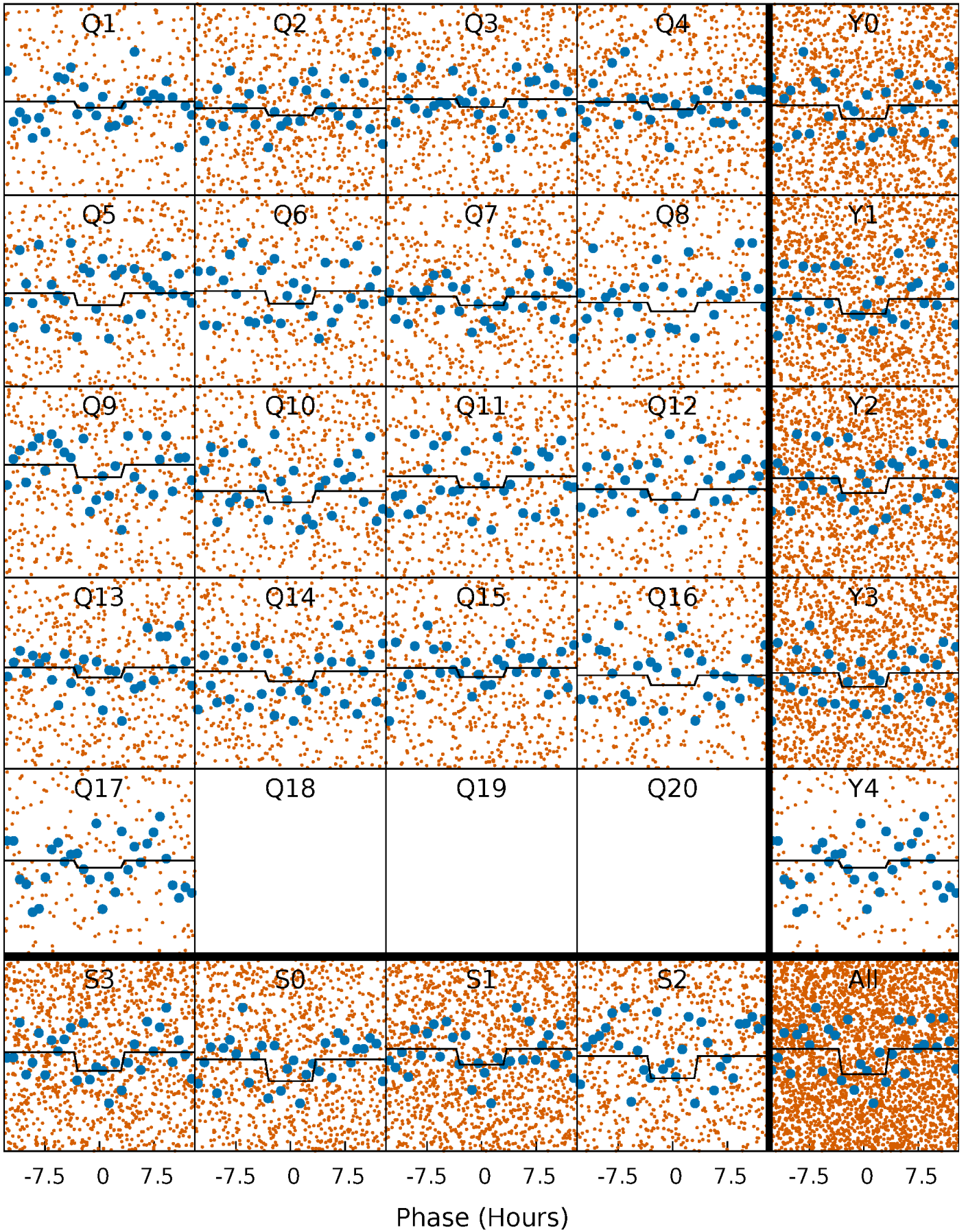
DV Quarter-Phased Transit Curves

TCE 003532510-03 P= 2.167316 Days $T_0=132.132298$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

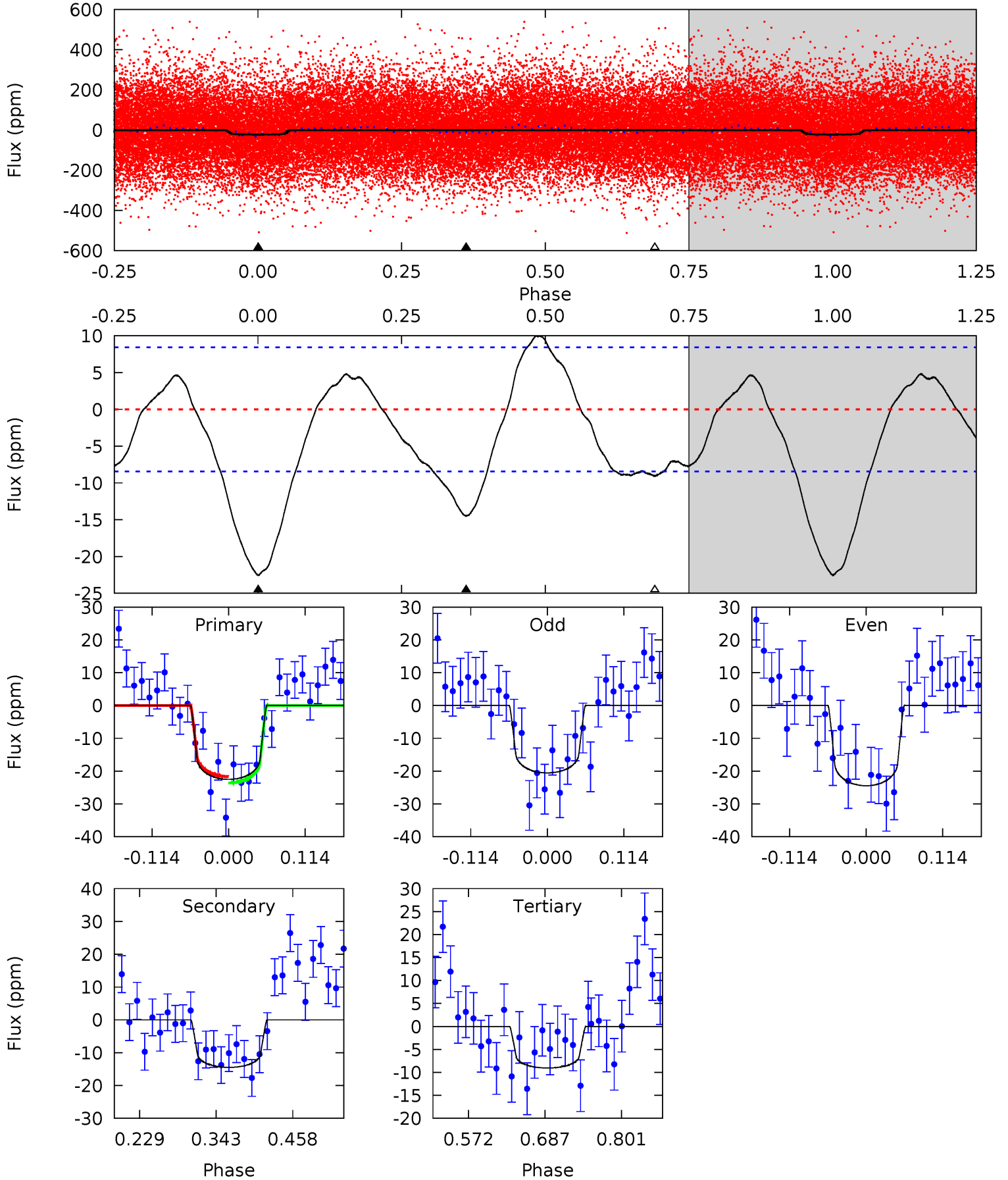
TCE 003532510-03 P= 2.167205 Days $T_0=132.135916$ (BKJD)



DV Model-Shift Uniqueness Test

003532510-03, P = 2.167316 Days, E = 129.964982 Days

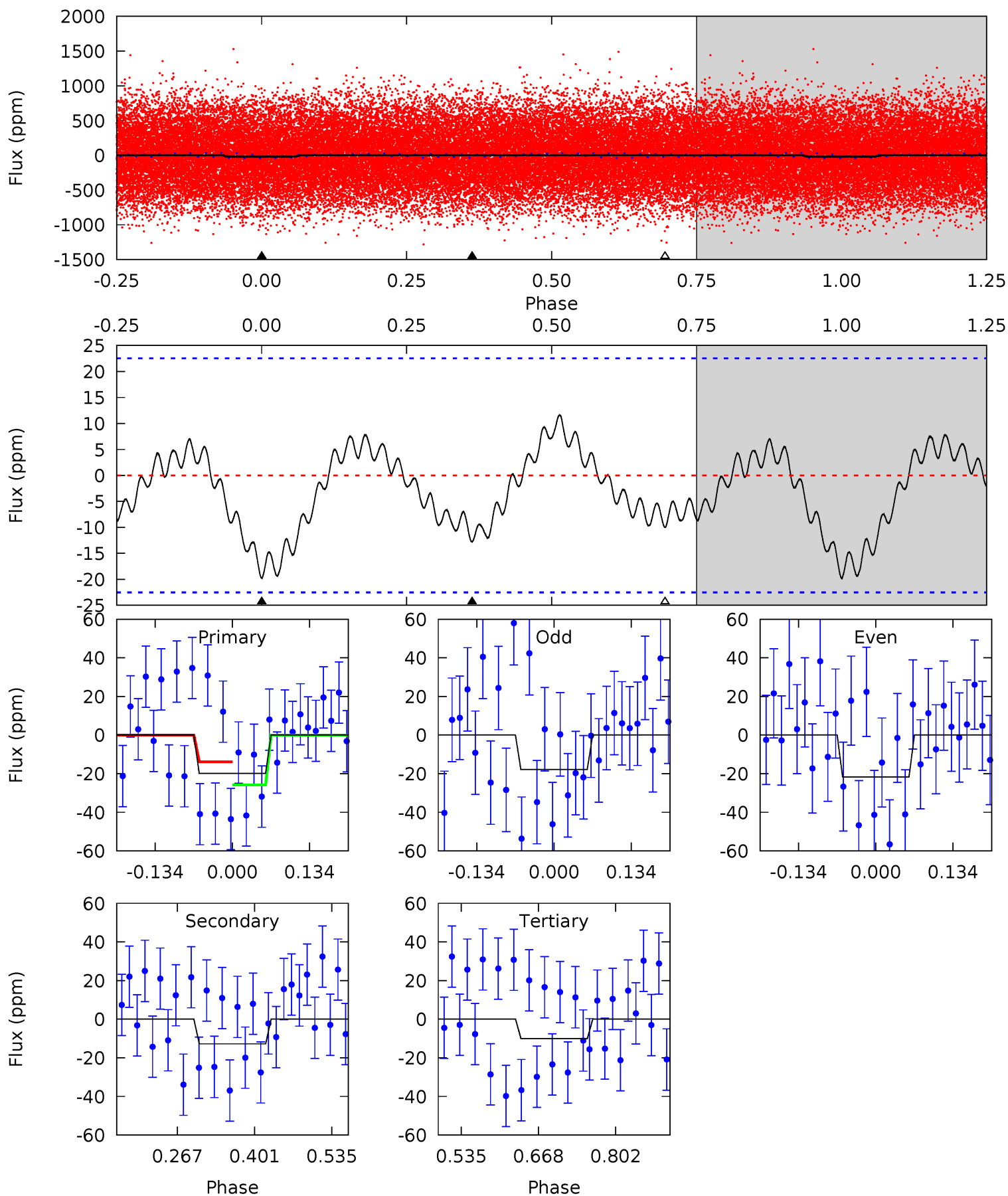
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.1	7.79	4.87	0	4.54	1.58	3.08	7.25	12.1	2.92	7.79	1.05	0.84	0.31	0.52



Alt Model-Shift Uniqueness Test

003532510-03, P = 2.167205 Days, E = 129.968711 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.96	2.55	2.00	0	4.50	1.50	1.13	1.95	3.96	0.55	2.55	0.39	1.05	0.37	1.20



Stellar Parameters For KIC 003532510

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7183^{+199}_{-274}	$4.195^{+0.128}_{-0.192}$	$-0.320^{+0.250}_{-0.350}$	$1.533^{+0.460}_{-0.307}$	$1.345^{+0.220}_{-0.200}$	$0.526^{+0.342}_{-0.263}$
	+3%/-4%	+3%/-5%	+78%/-109%	+30%/-20%	+16%/-15%	+65%/-50%
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 003532510-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-14 ± 2	$0.89^{+0.33}_{-0.28}$	2910^{+207}_{-202}	6015^{+1274}_{-783}	13^{+15}_{-6}
Alt.	-13 ± 5	$0.76^{+0.32}_{-0.30}$	2905^{+203}_{-171}	6322^{+2296}_{-1181}	15^{+30}_{-9}

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 $A_{obs} \gg 1.0$

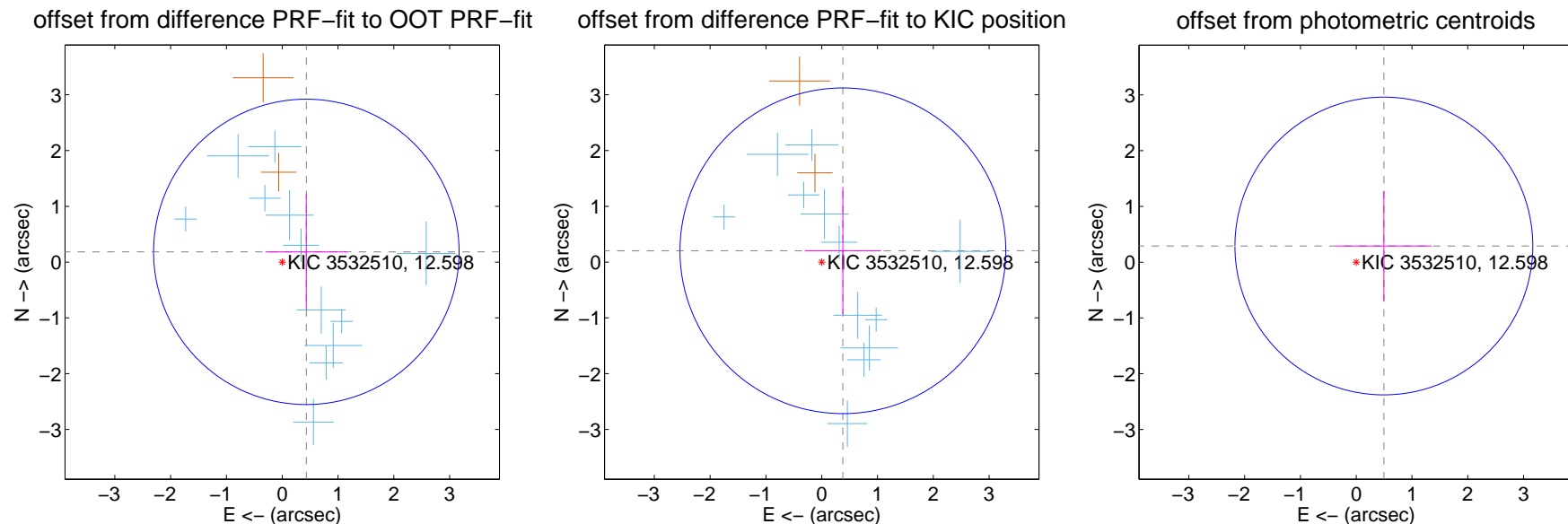
DV Centroid Data

Supplemental centroid analysis for 003532510-03. Kepler magnitude: 12.60. Transit SNR 8.98

There are 12 quarters with good PRF difference image offsets

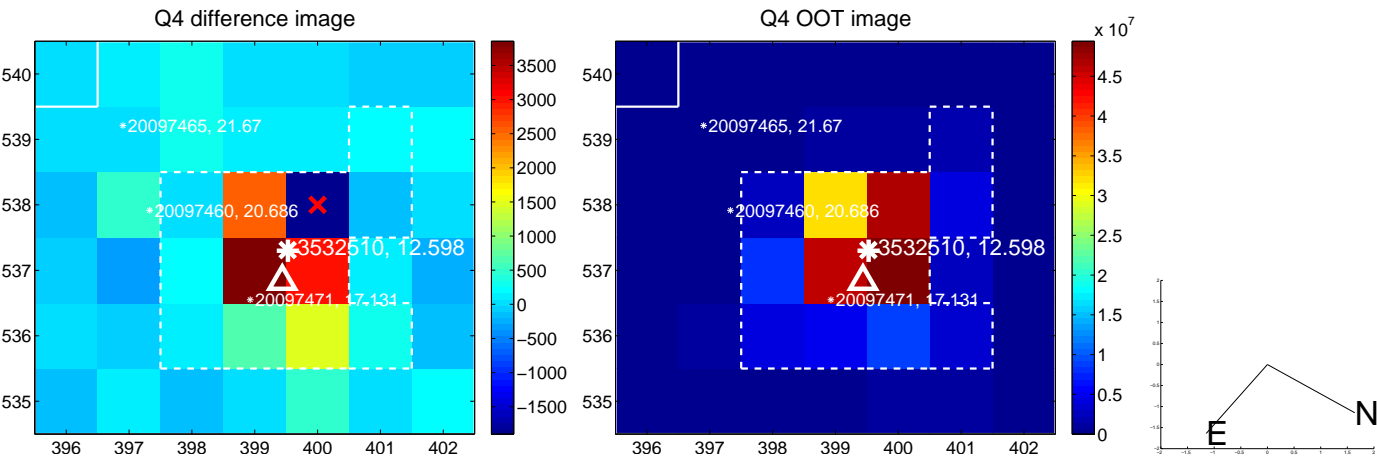
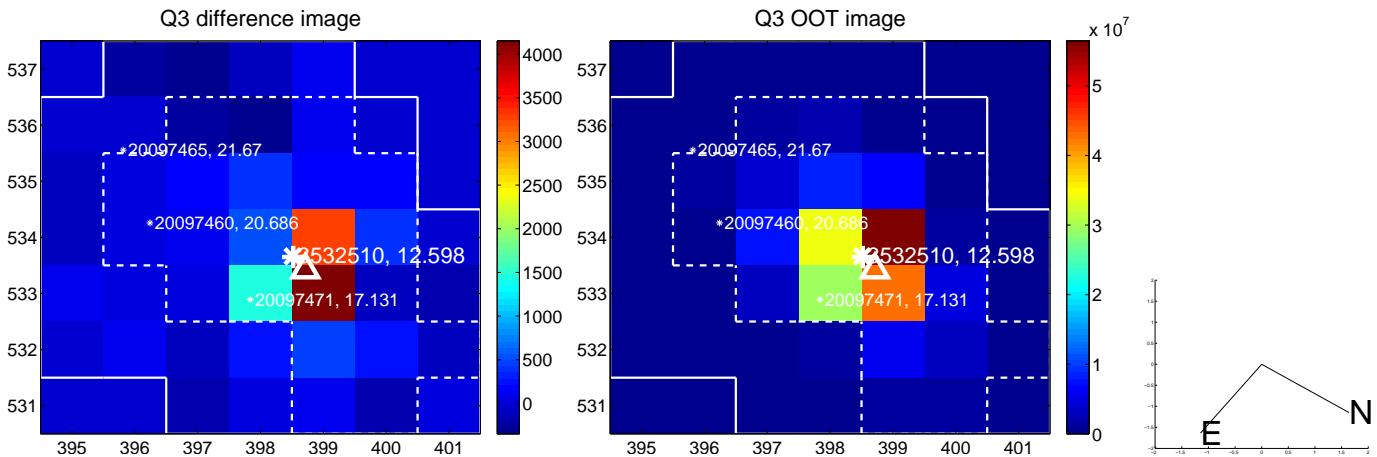
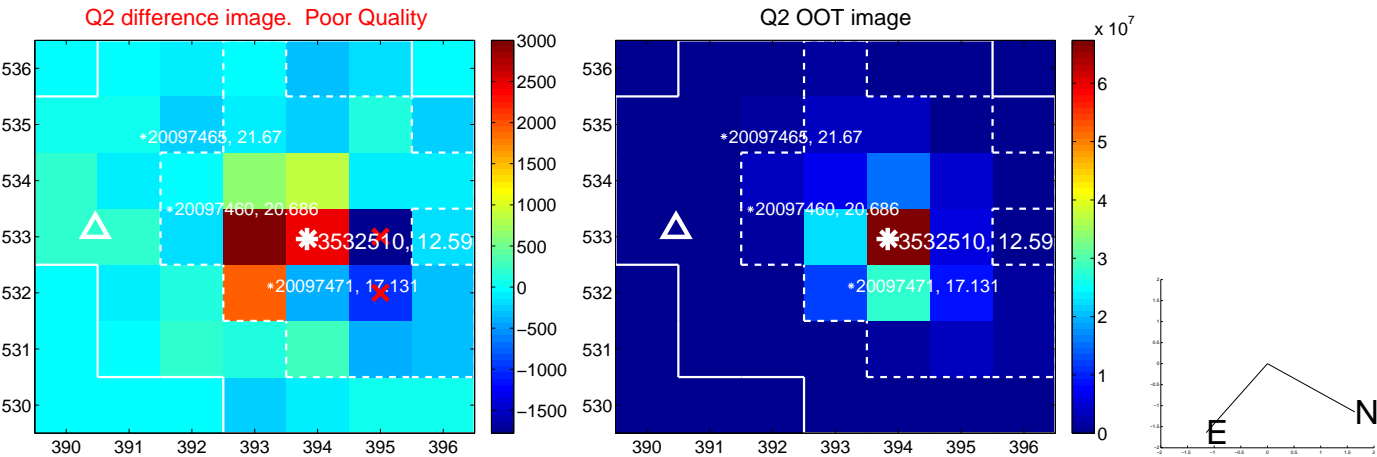
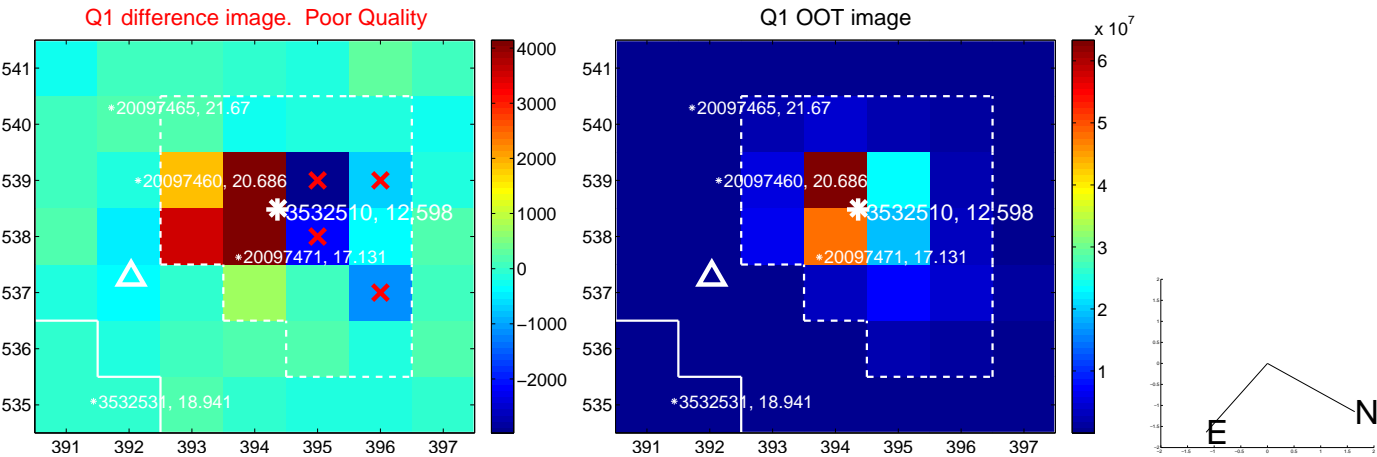
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.470 ± 0.912	0.51	-0.432 ± 0.733	0.184 ± 1.034
PRF-fit source offset from KIC position	0.430 ± 0.973	0.44	-0.379 ± 0.684	0.203 ± 1.142
photometric centroid source offset	0.57 ± 0.89	0.65	-0.50 ± 0.85	0.29 ± 0.99

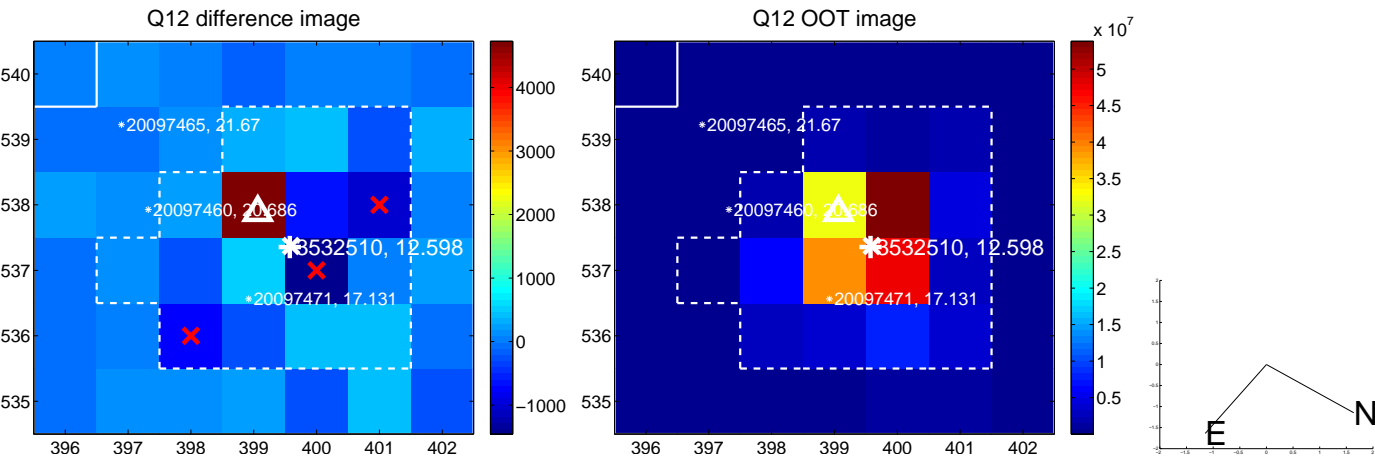
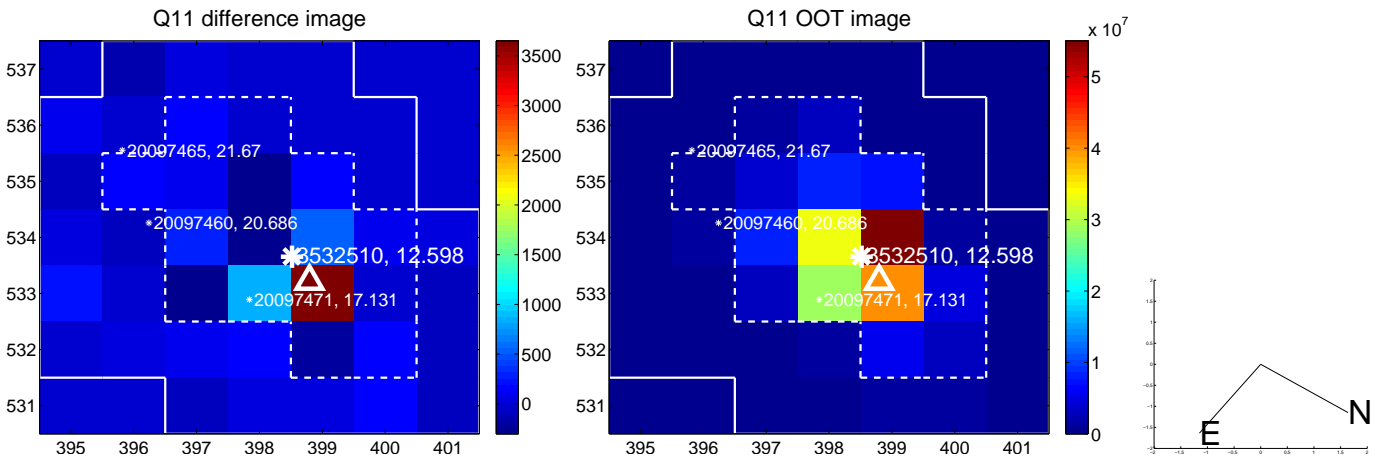
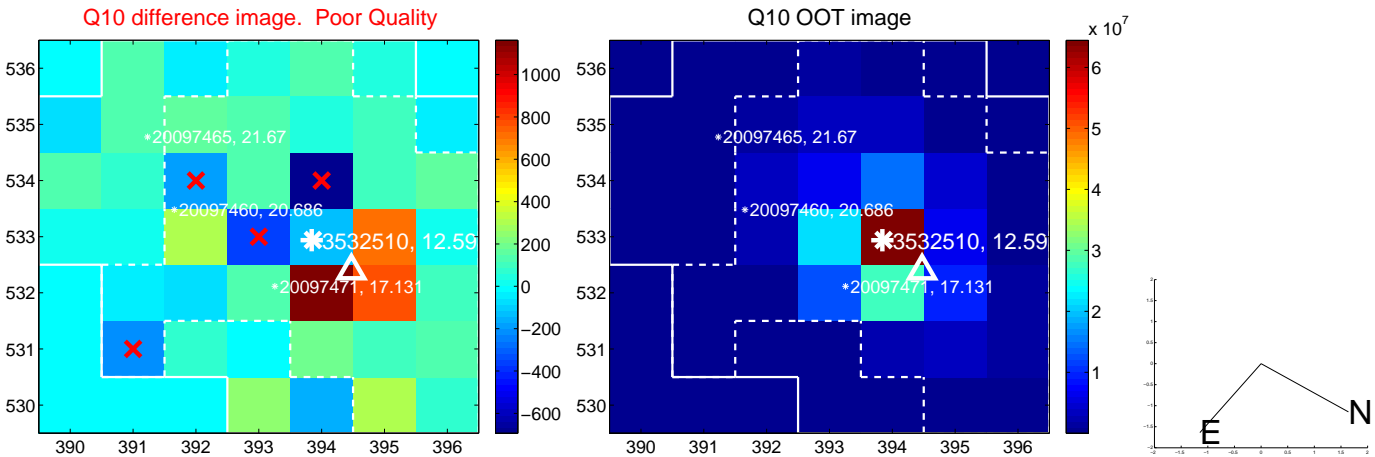
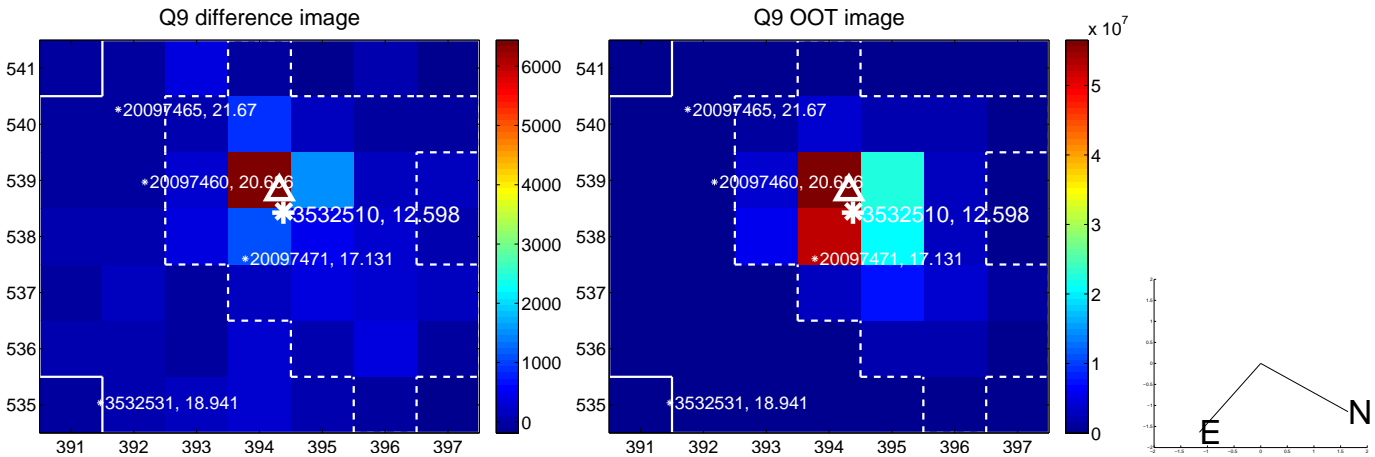


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

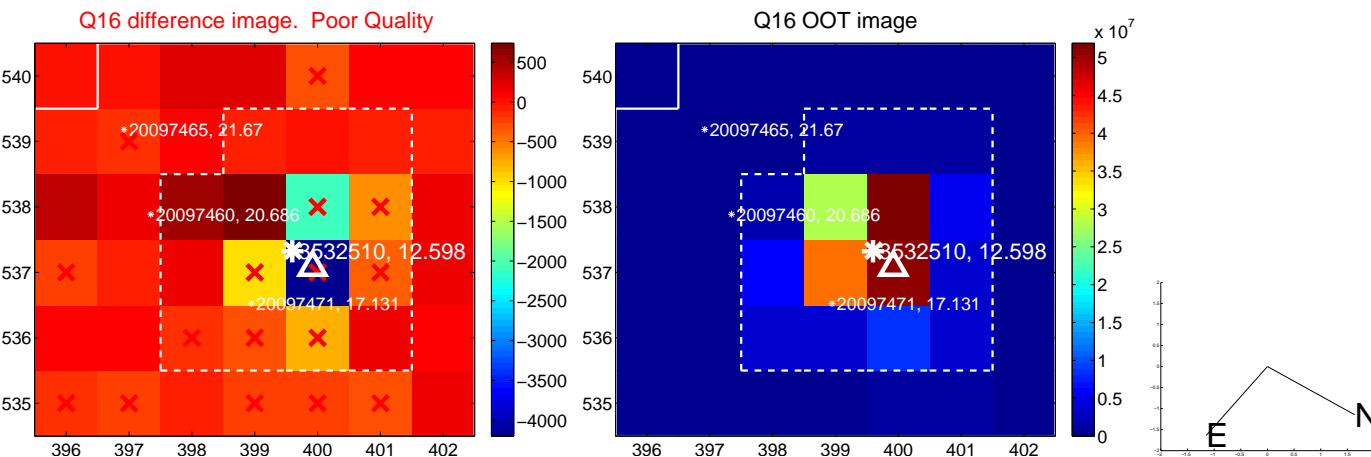
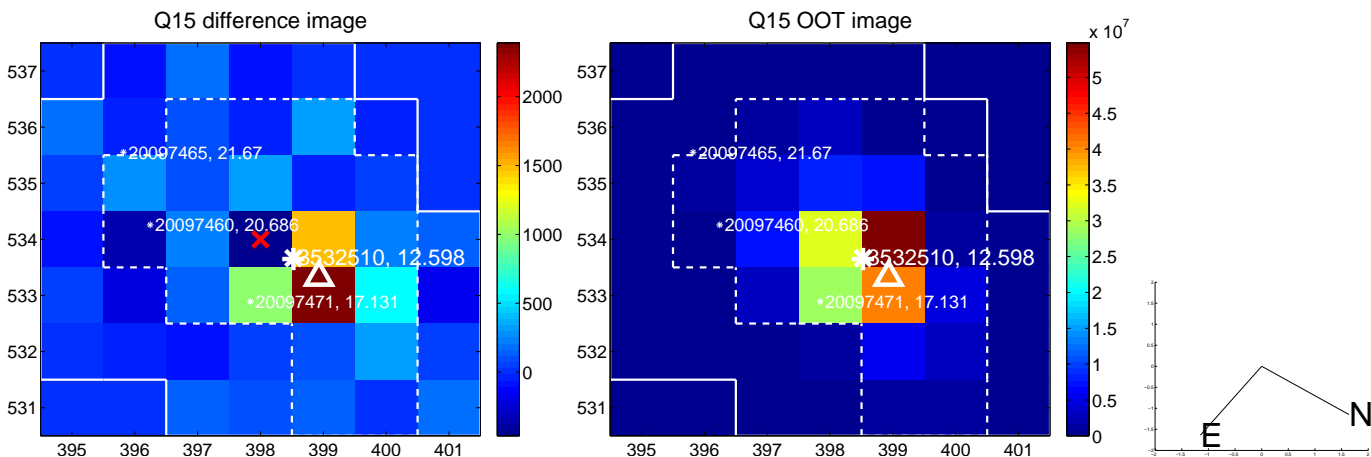
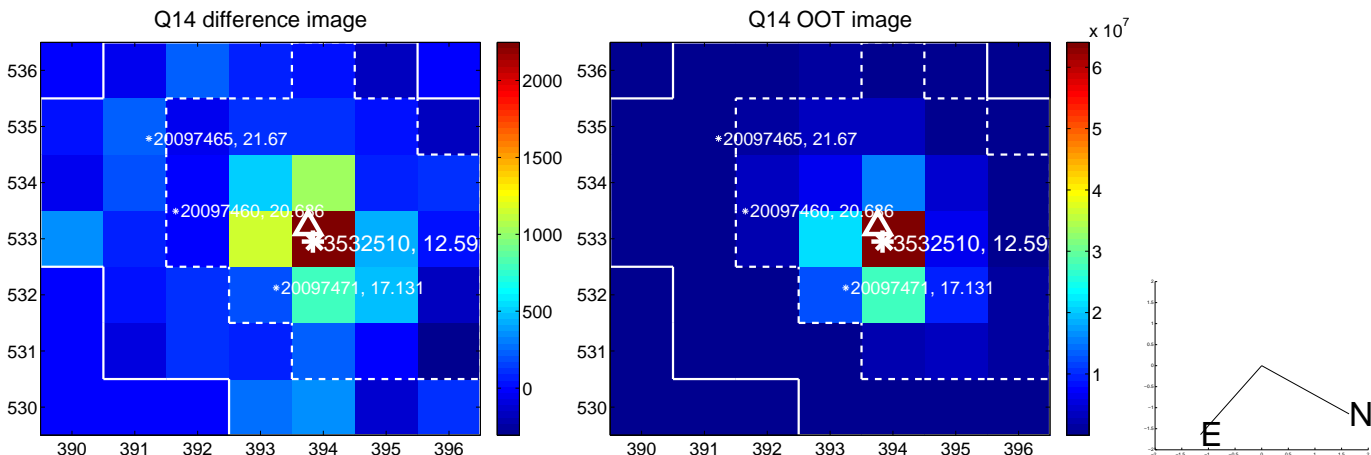
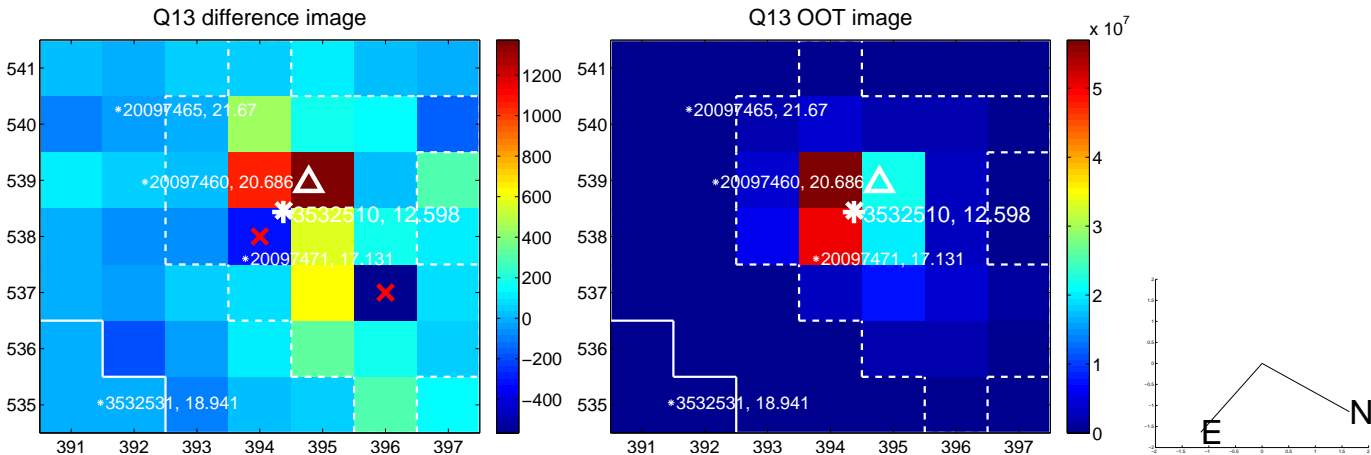
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



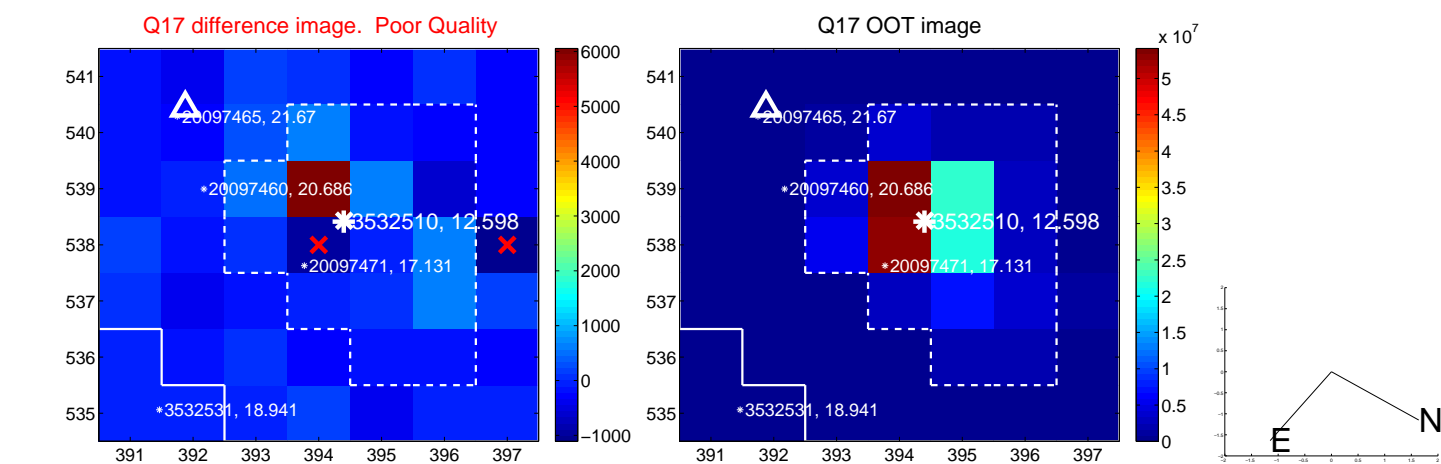
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



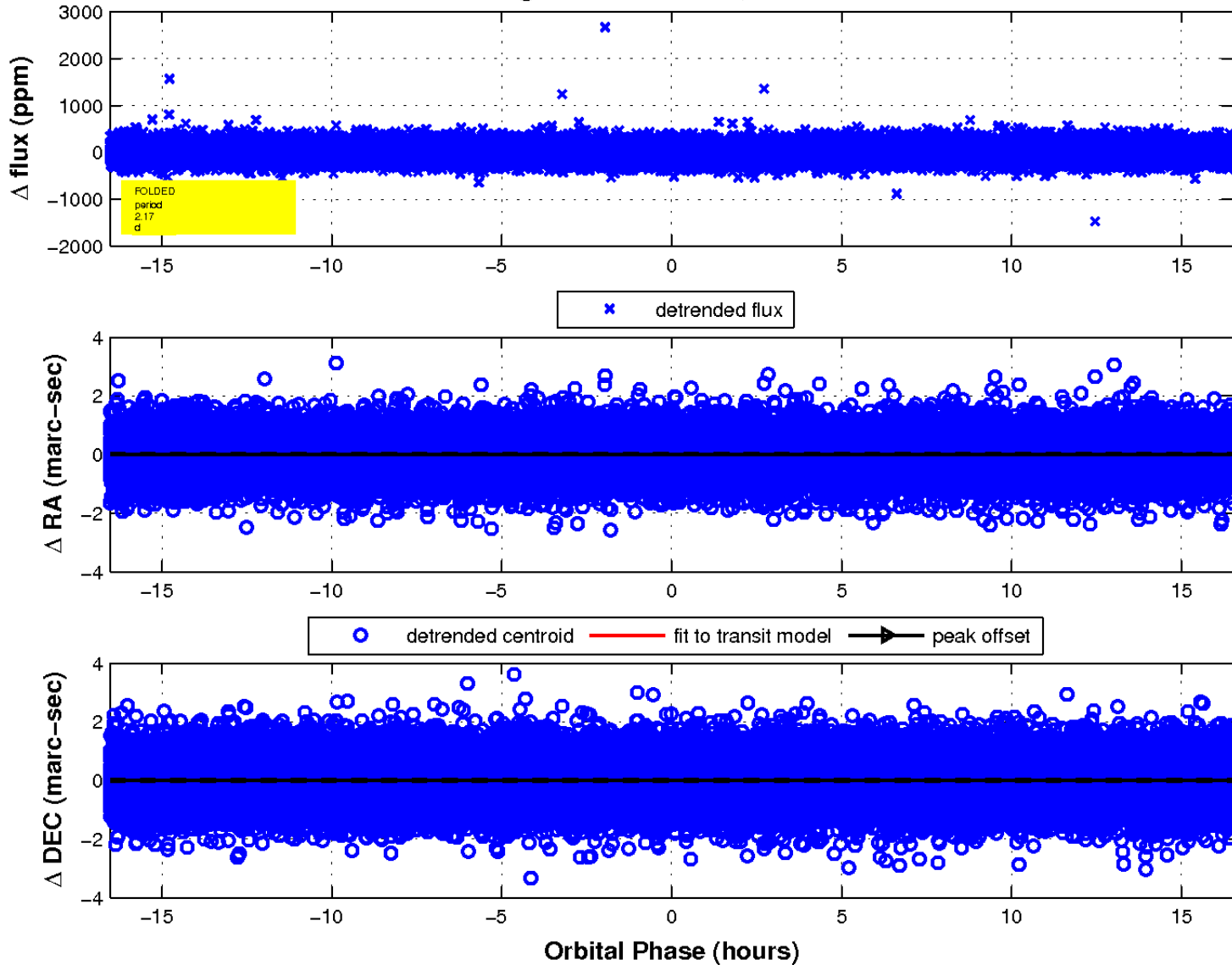
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 3 of 3



UKIRT Image

Declination

