

KIC 005460434

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})
005460434-01	OBS	No	2.079770	132.550883	12.0	8.607	8.2	5.0	2.02	6759	0.74	5600.90
005460434-02	OBS	No	68.353104	166.499551	177.5	2.554	8.7	8.5	2.02	6759	2.96	53.20
005460434-03	OBS	No	189.815596	179.539702	253.5	5.593	8.6	8.6	2.02	6759	3.81	13.63
005460434-04	OBS	No	258.520391	157.635494	203.8	8.126	8.2	7.0	2.02	6759	3.20	9.03
005460434-05	OBS	7729.01	50.564437	145.860981	131.0	5.606	8.2	8.5	2.02	6759	2.65	79.52
005460434-06	OBS	No	210.087055	144.260167	176.3	4.007	7.6	7.4	2.02	6759	3.04	11.90

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005460434-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_SATURATED
005460434-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
005460434-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
005460434-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
005460434-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_ALT—CENT_SATURATED
005460434-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED

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

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

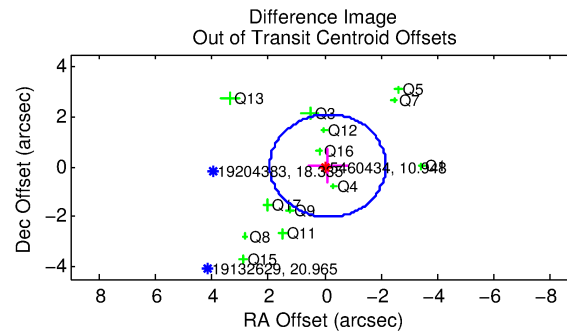
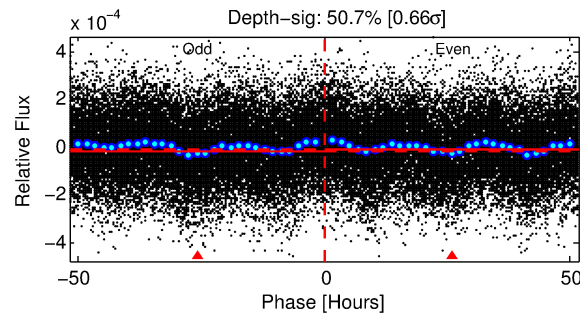
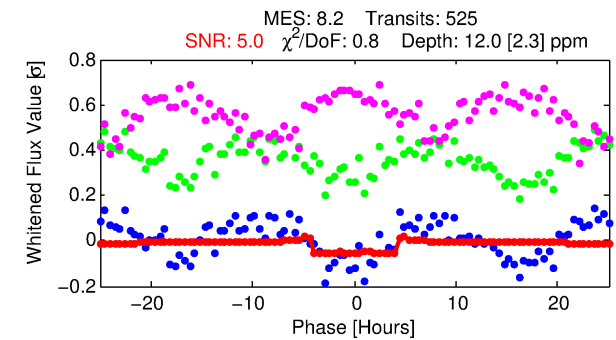
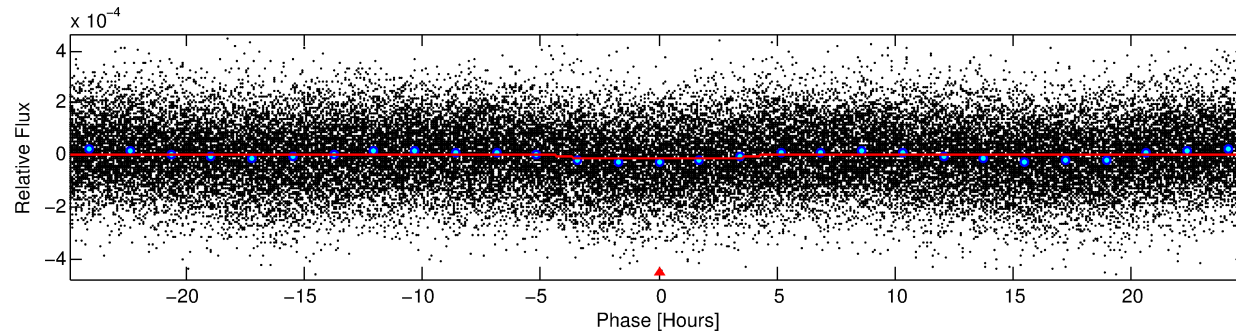
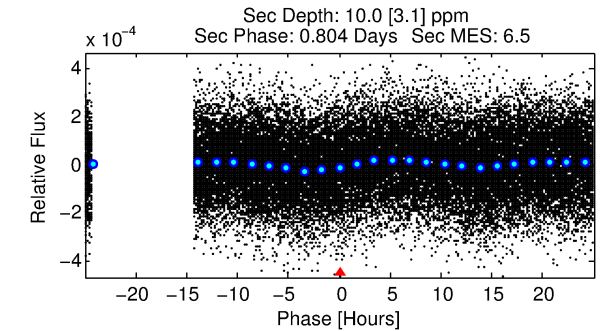
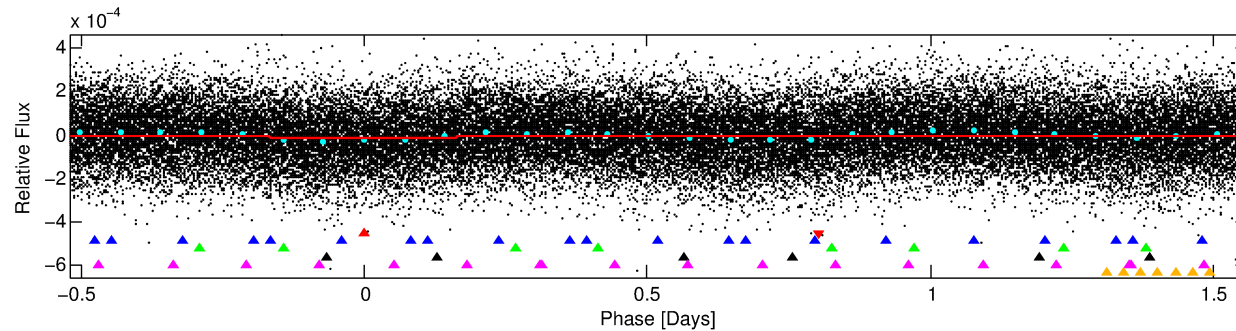
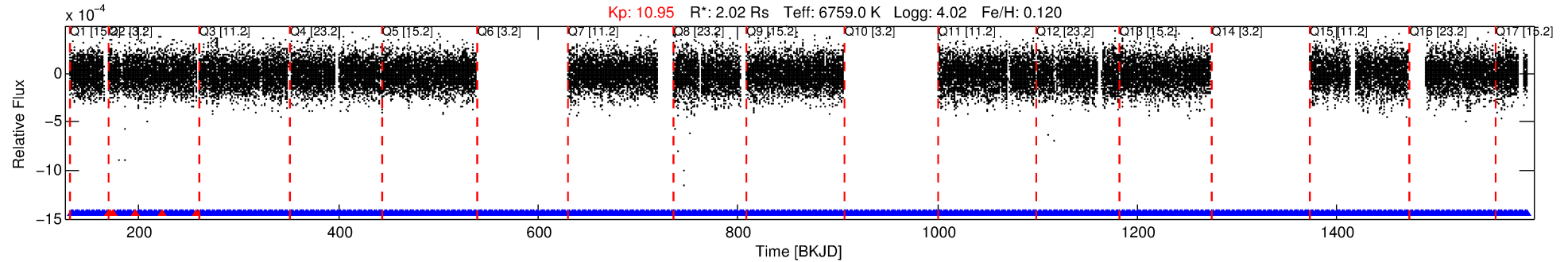
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005460434-01

No Significant Match Found

DV One-Page Summary

KIC: 5460434 Candidate: 1 of 6 Period: 2.080 d



DV Fit Results:

Period = 2.07977 [0.00004] d
Epoch = 132.5509 [0.0082] BKJD
Rp/R* = 0.0033 [0.0012]
a/R* = 1.65 [1.98]
b = 0.62 [1.89]
Seff = 5600.90 [1505.75]
Teq = 2206 [148] K
Rp = 0.74 [0.30] Re
a = 0.0369 [0.0065] AU
Ag = 13.87 [11.21] [1.15σ]
Teffp = 6581 [1259] K [3.45σ]

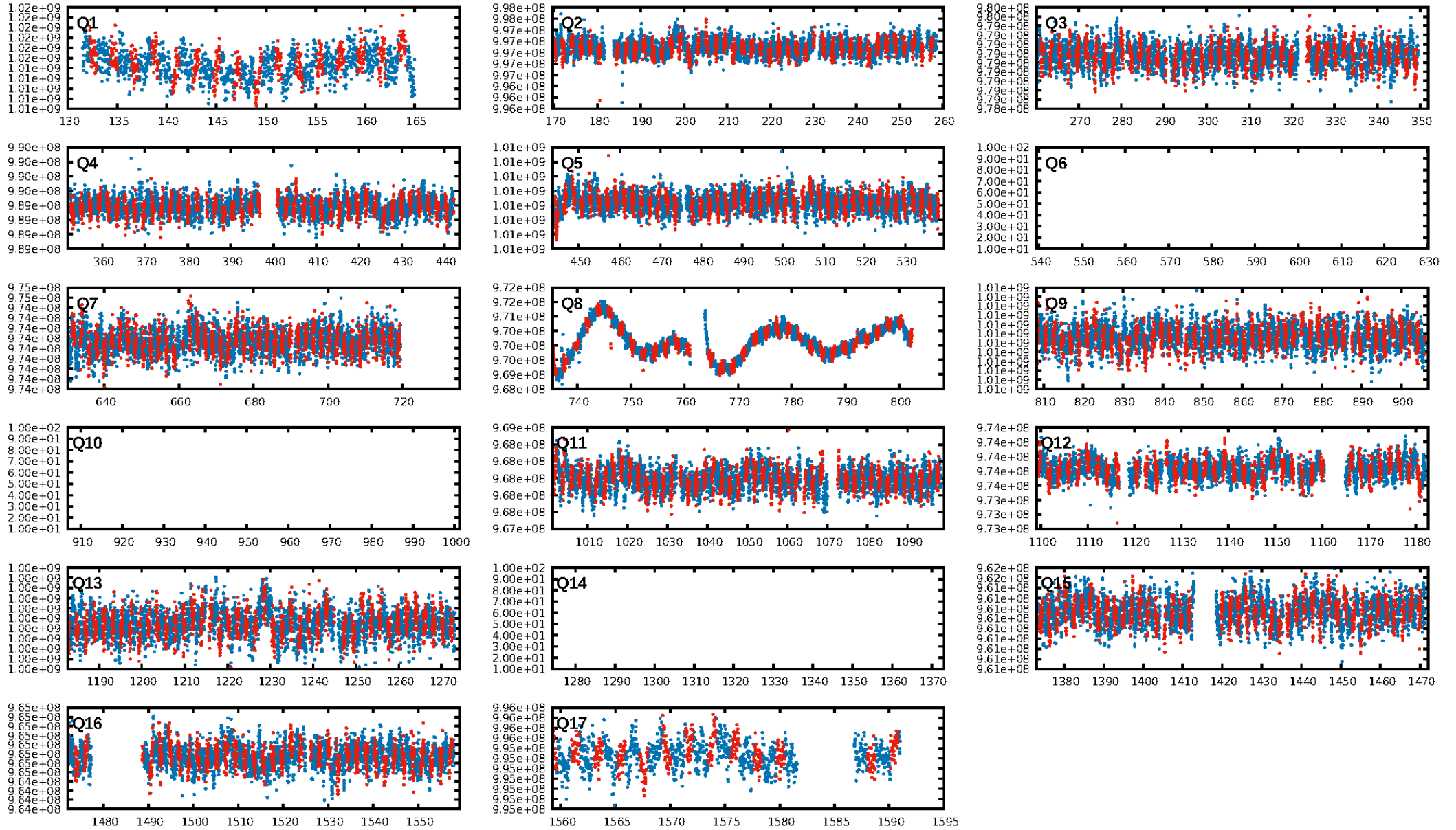
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [113.28σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 6.74e-09
RollingBand-fgt: 0.99 [490/496]
GhostDiagnostic-chr: 2.005
Centroid-sig: N/A
Centroid-so: 1.394 arcsec [1.53σ]
OotOffset-rm: 0.124 arcsec [0.18σ]
KicOffset-rm: 0.219 arcsec [0.32σ]
OotOffset-st: 0/4/4/5 [13]
KicOffset-st: 0/4/4/5 [13]
DiffImageQuality-fgm: 0.54 [7/13]
DiffImageOverlap-fno: 1.00 [14/14]

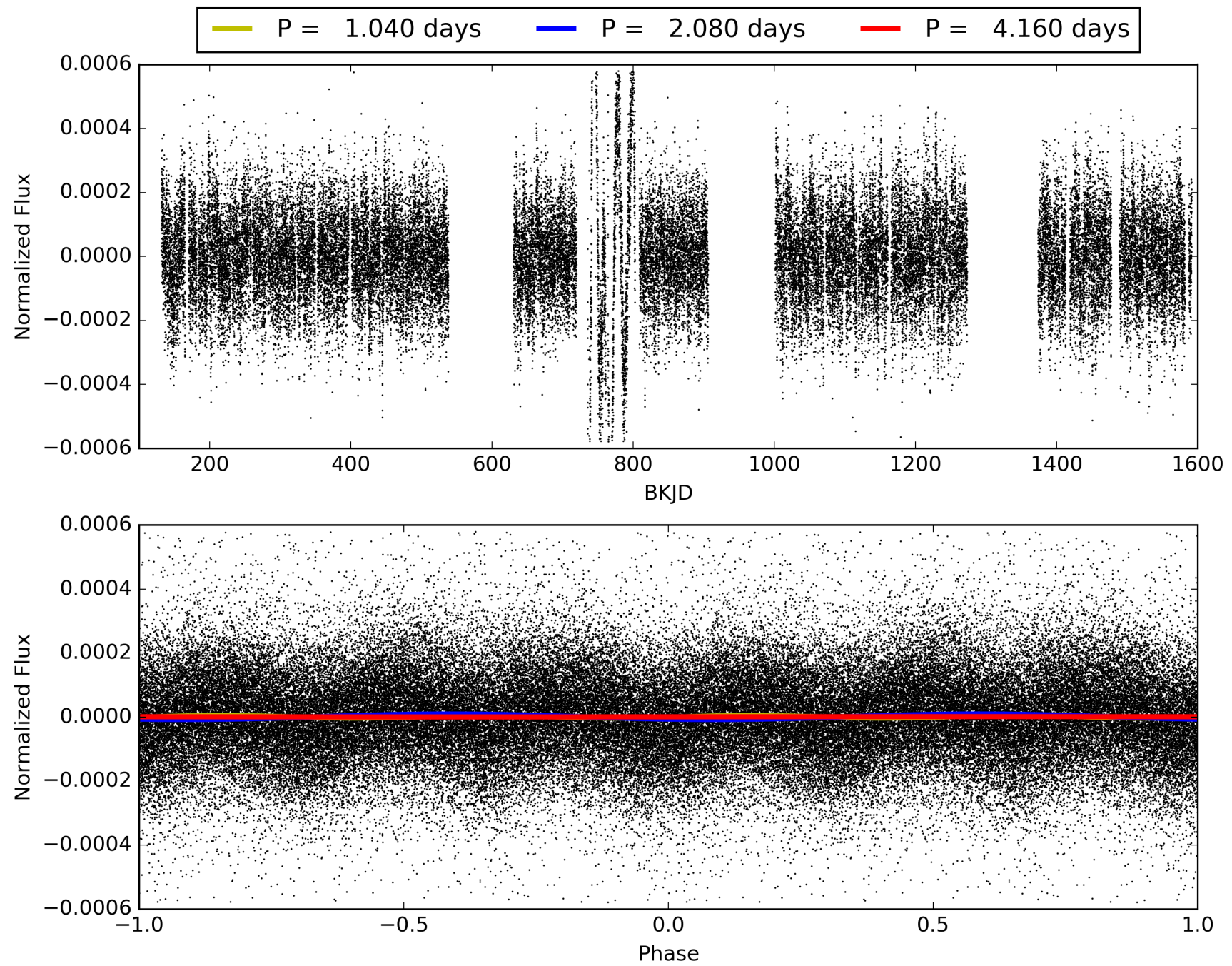
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 00:56:14 Z

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

TCE 005460434-01, PDC Light Curves

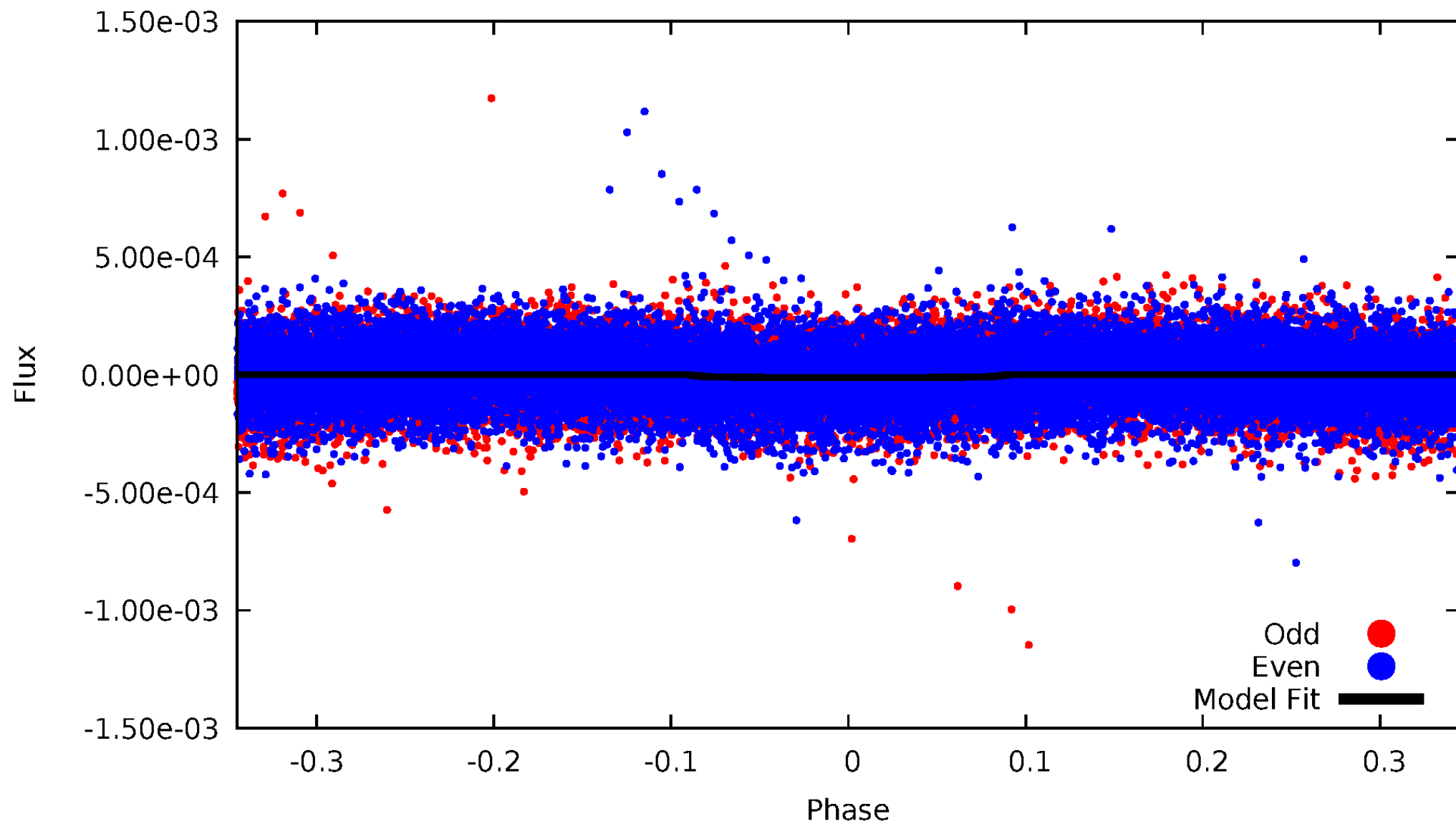


TCE 005460434-01



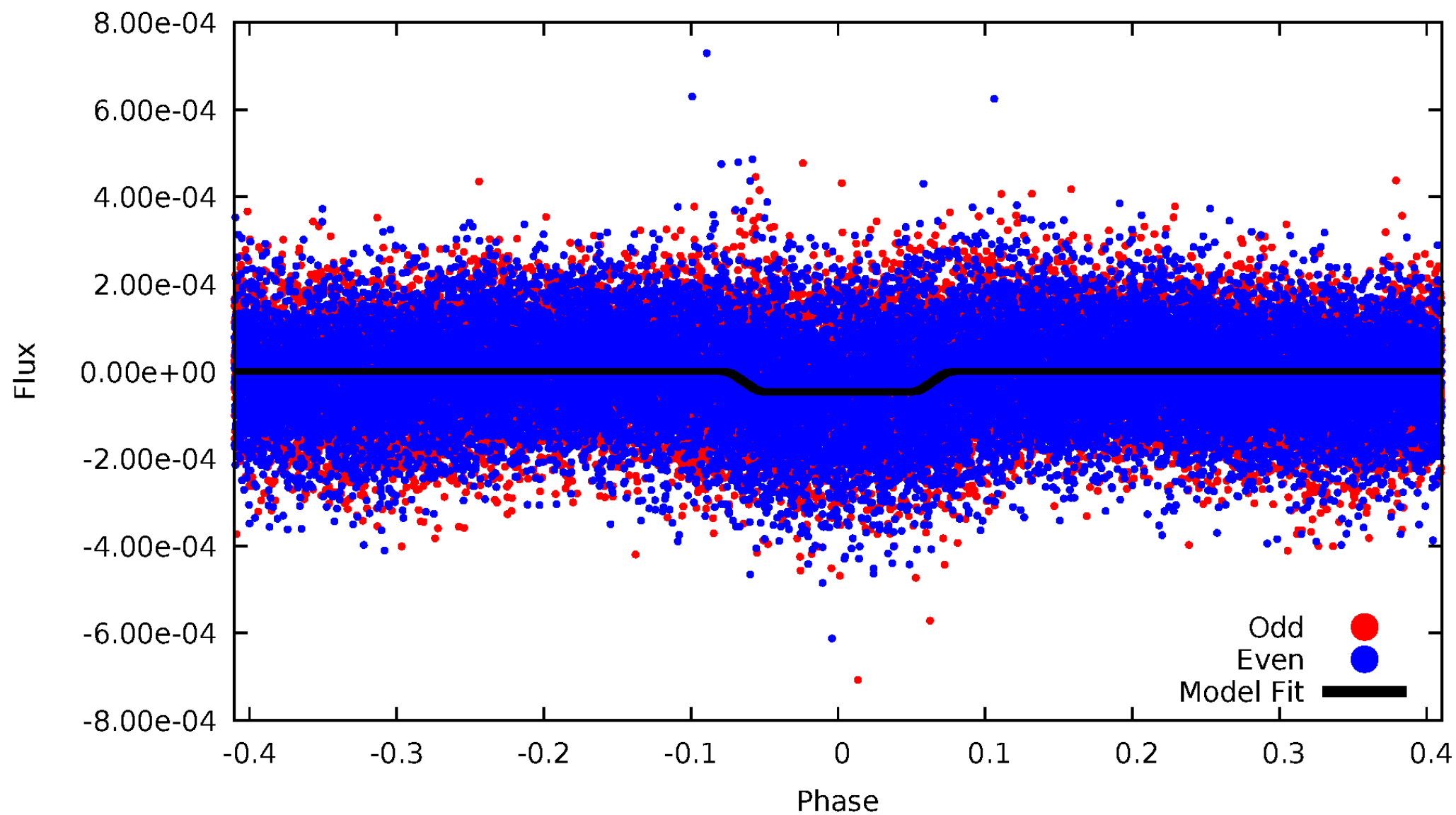
DV Odd/Even

TCE 005460434-01

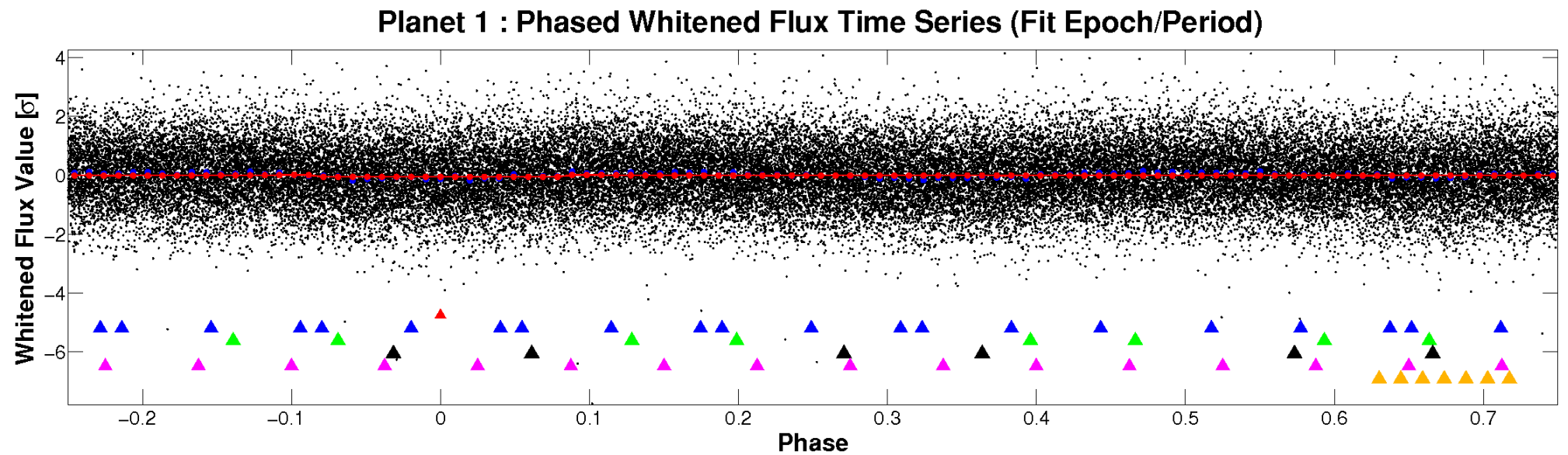
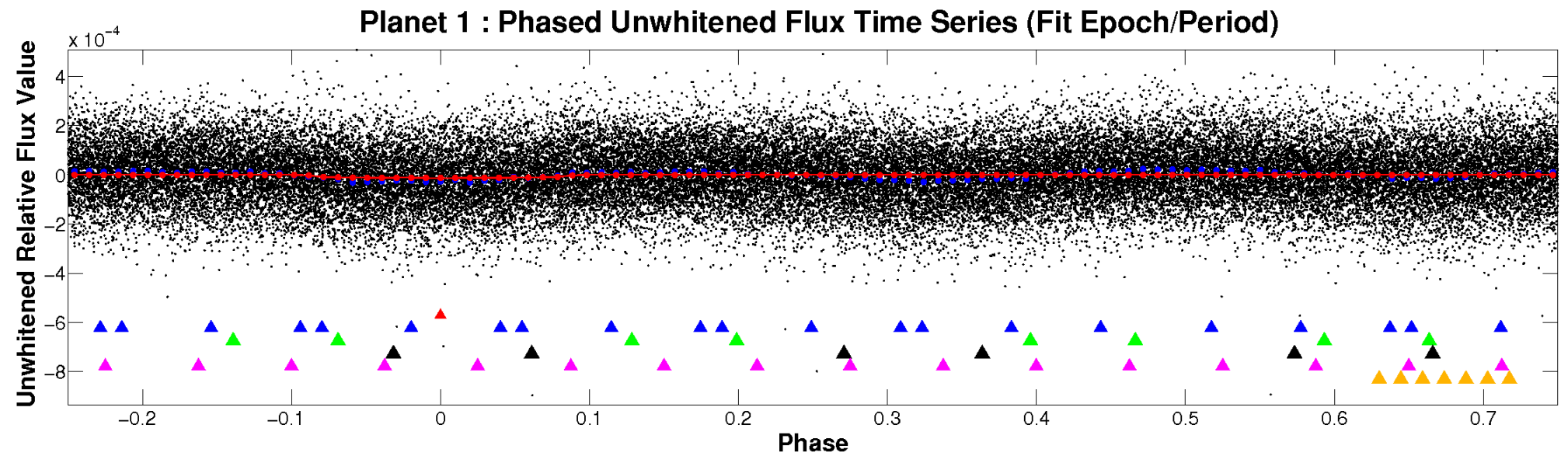


ALT Odd/Even

TCE 005460434-01

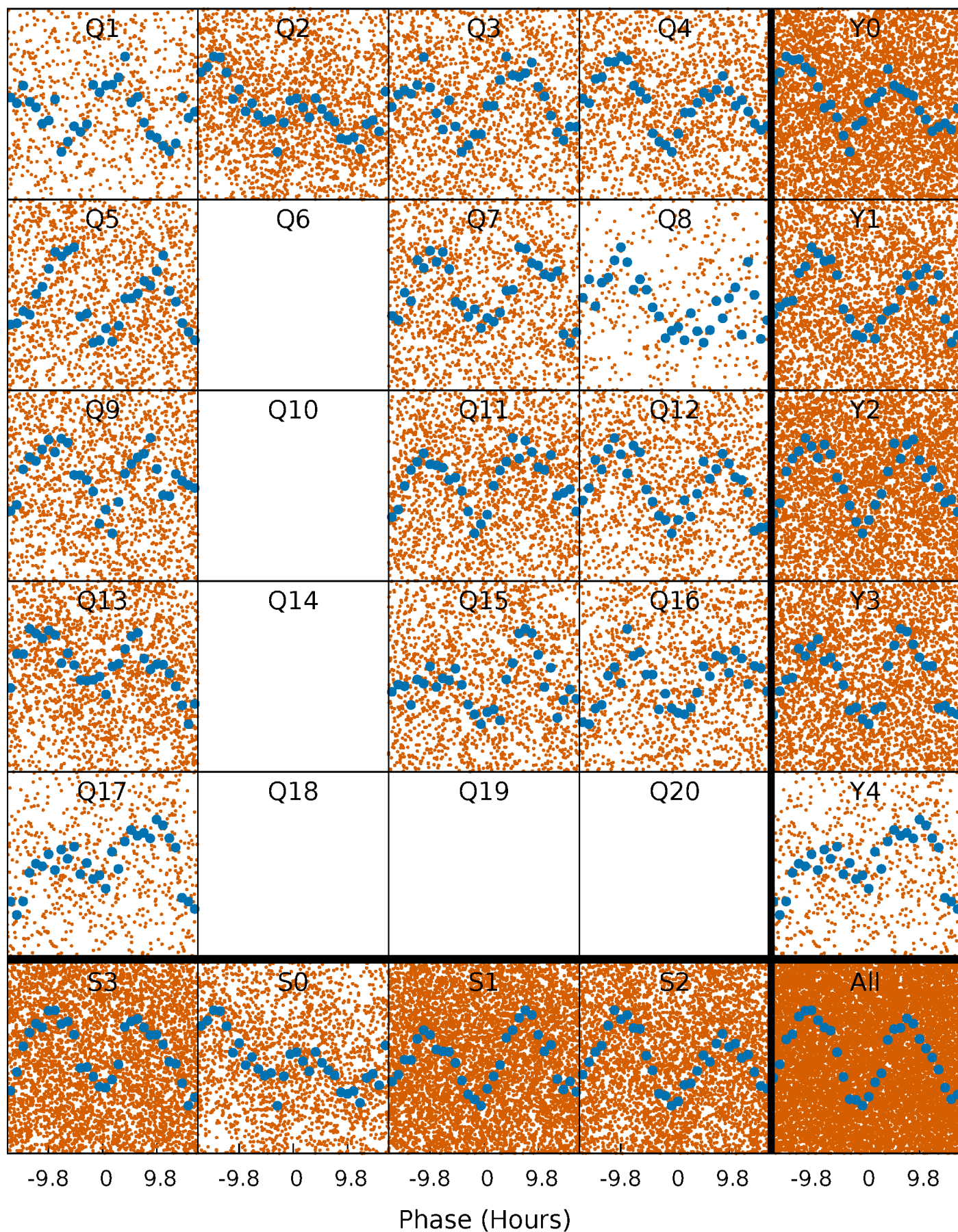


Non-Whitened Vs. Whitened Light Curve



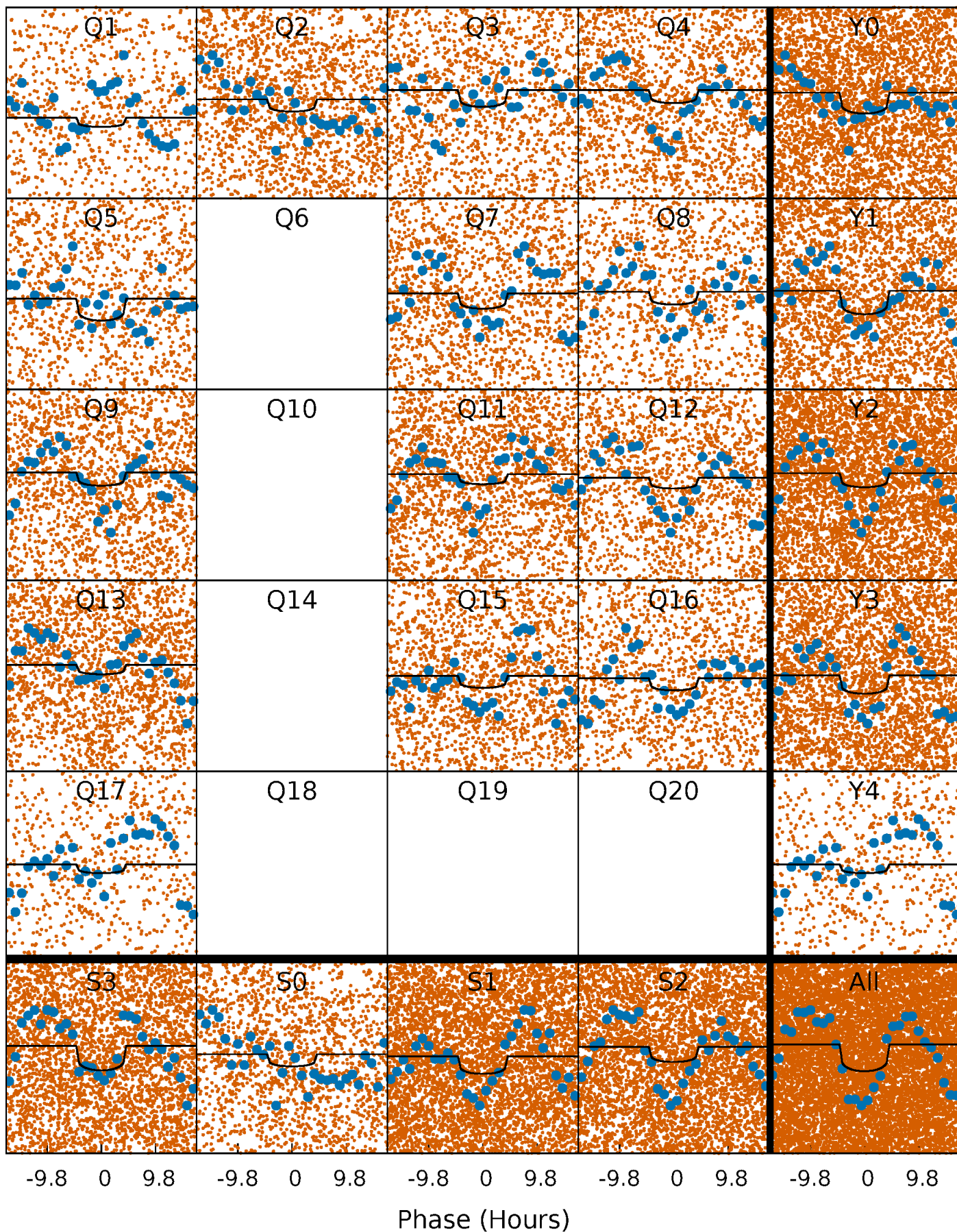
PDC Quarter-Phased Transit Curves

TCE 005460434-01 P= 2.079770 Days $T_0=132.550883$ (BKJD)



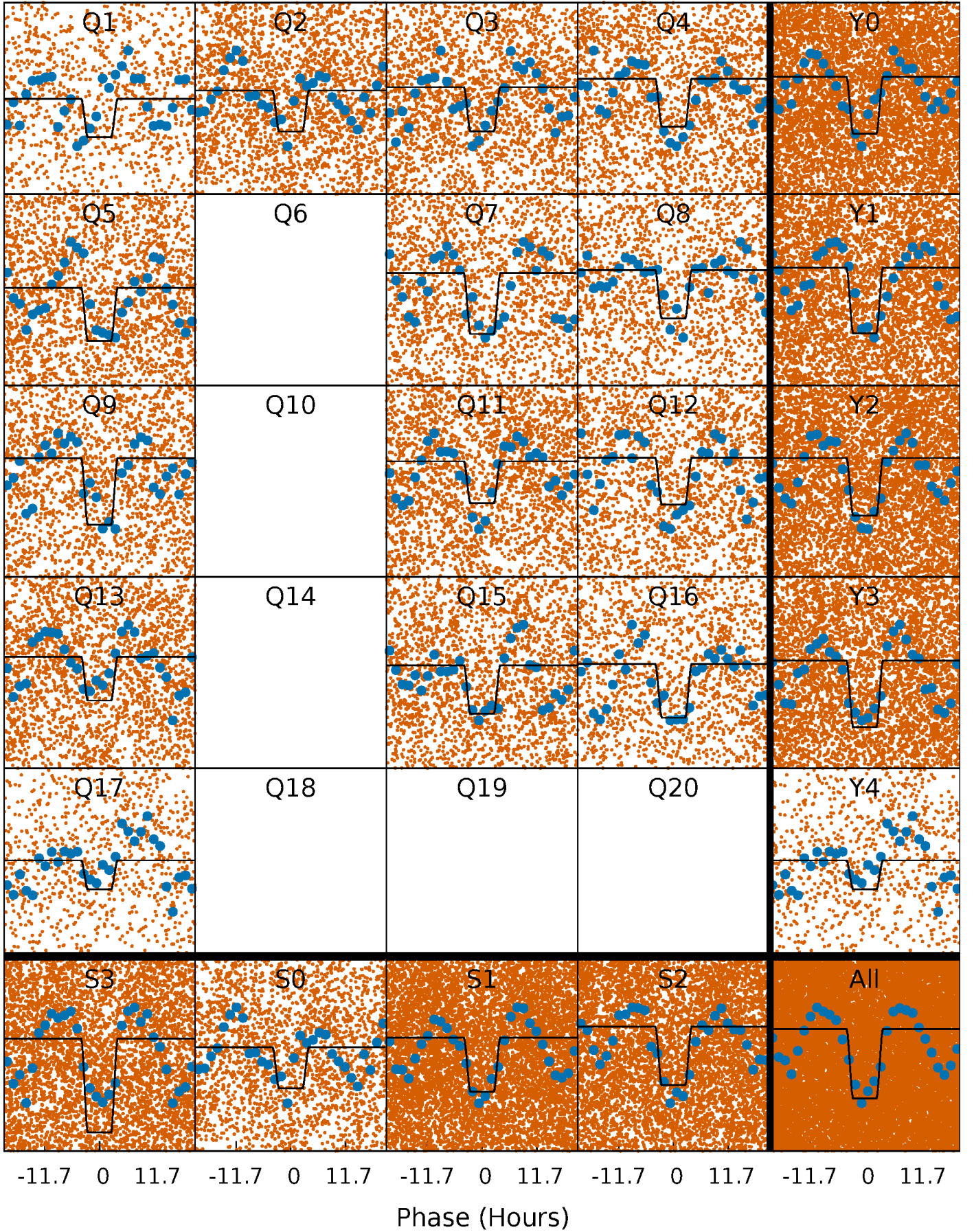
DV Quarter-Phased Transit Curves

TCE 005460434-01 P= 2.079770 Days $T_0=132.550883$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

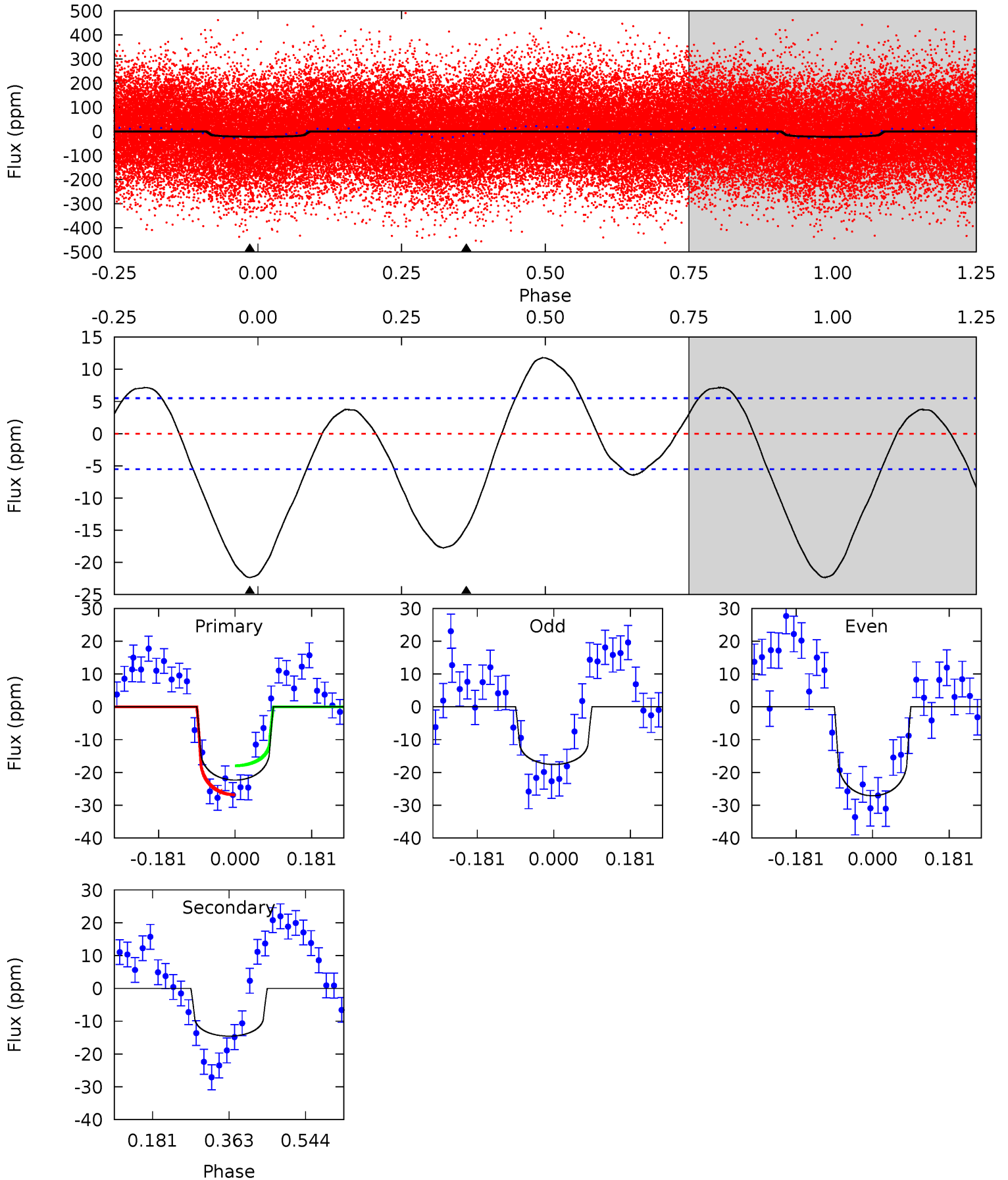
TCE 005460434-01 P= 2.079932 Days $T_0=132.450203$ (BKJD)



DV Model-Shift Uniqueness Test

005460434-01, P = 2.079770 Days, E = 130.471113 Days

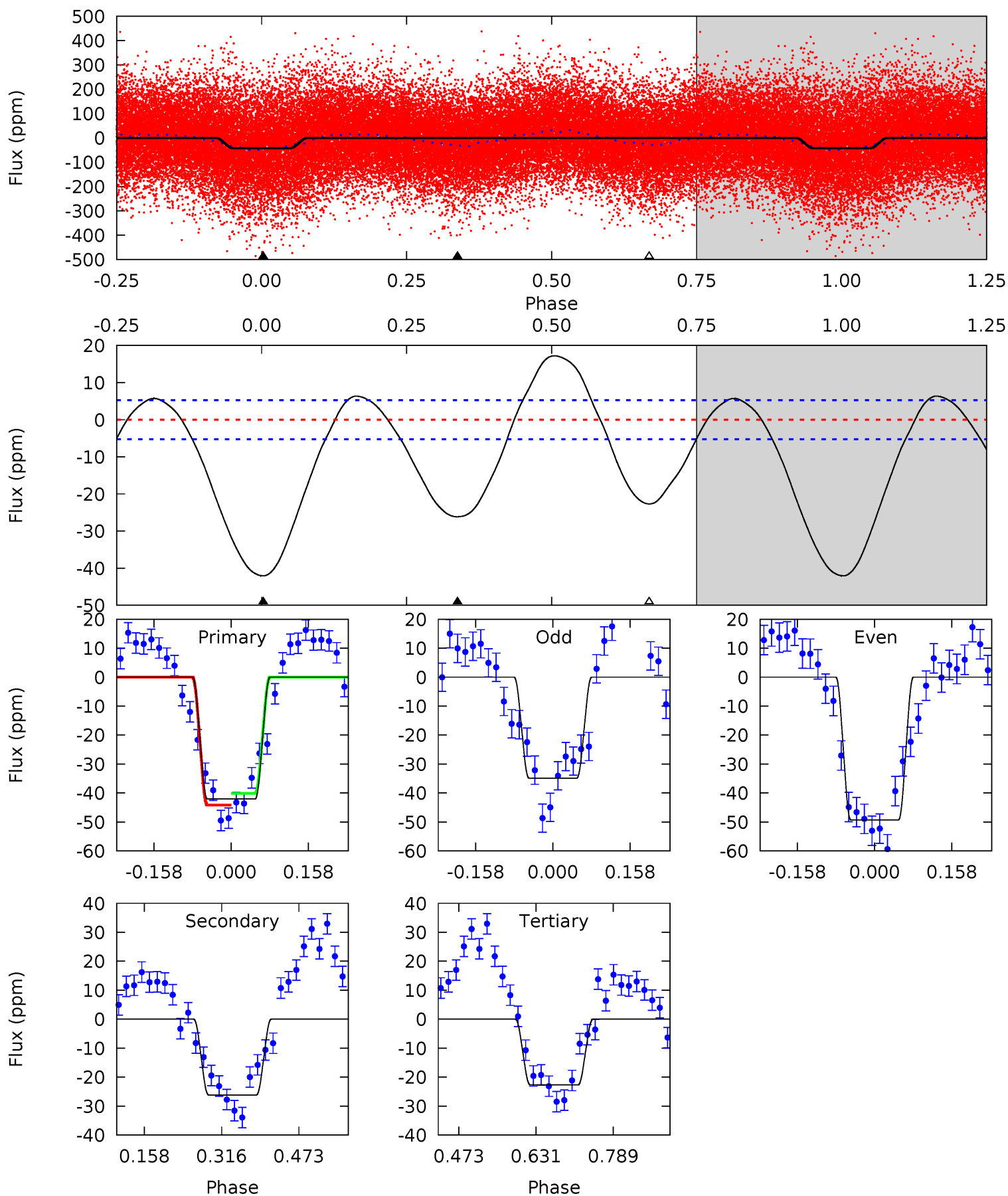
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.0	11.7	0	0	4.44	1.34	3.84	18.0	18.0	11.7	11.7	3.87	1.19	0.35	3.60



Alt Model-Shift Uniqueness Test

005460434-01, P = 2.079932 Days, E = 130.370271 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
35.6	22.2	19.2	0	4.47	1.41	10.7	16.4	35.6	2.93	22.2	6.09	0.96	0.29	1.72



Stellar Parameters For KIC 005460434

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6759^{+81}_{-81}	$4.018^{+0.148}_{-0.121}$	$0.120^{+0.150}_{-0.150}$	$2.022^{+0.411}_{-0.374}$	$1.552^{+0.149}_{-0.134}$	$0.264^{+0.192}_{-0.094}$
	+1%/-1%	+4%/-3%	+125%/-125%	+20%/-18%	+10%/-9%	+73%/-36%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 005460434-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-15 ± 1	$0.74^{+0.27}_{-0.25}$	3081^{+149}_{-164}	7153^{+2071}_{-1035}	20^{+25}_{-9}
Alt.	-26 ± 1	$1.52^{+0.29}_{-0.30}$	3079^{+143}_{-161}	5755^{+572}_{-440}	$8.552^{+4.661}_{-2.585}$

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 $A_{obs} \gg 1.0$

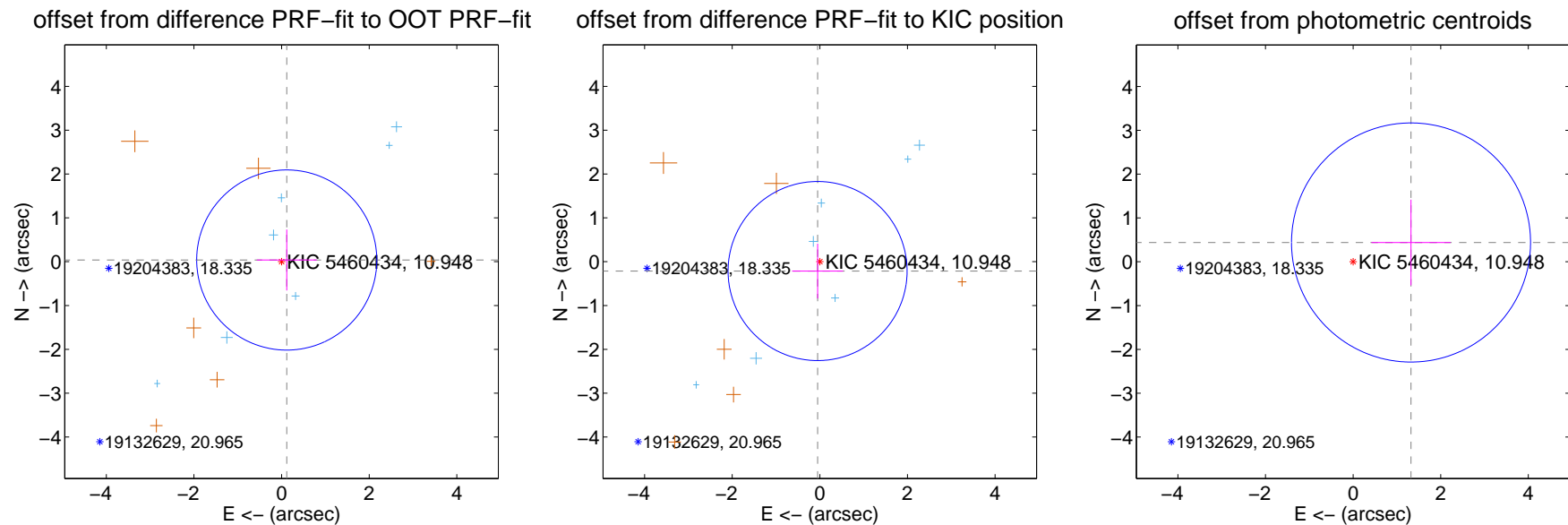
DV Centroid Data

Supplemental centroid analysis for 005460434-01. **Kepler magnitude: 10.95.** Transit SNR 4.97

There are 7 quarters with good PRF difference image offsets

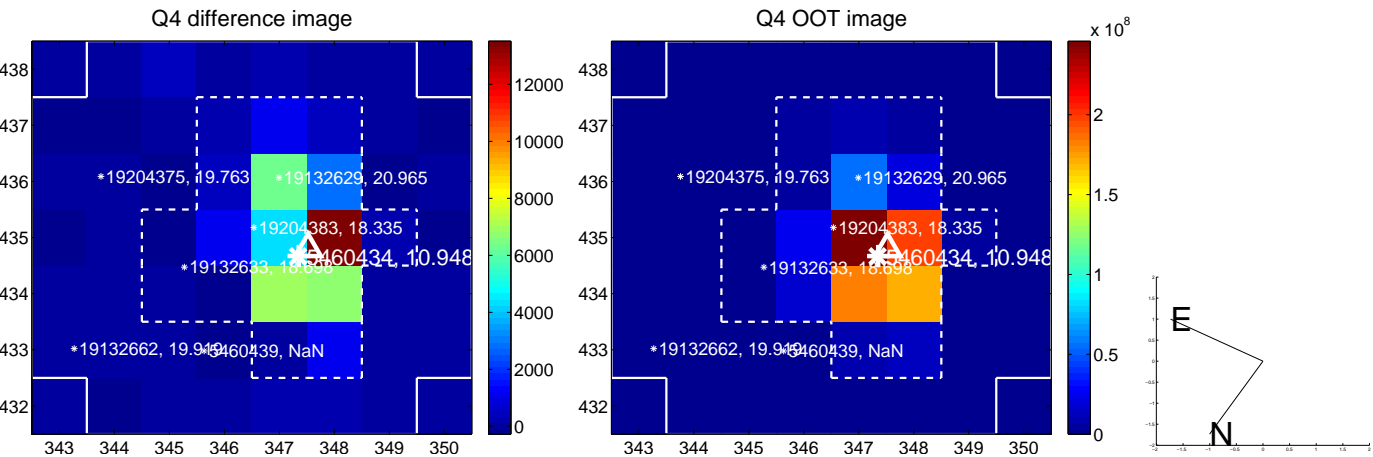
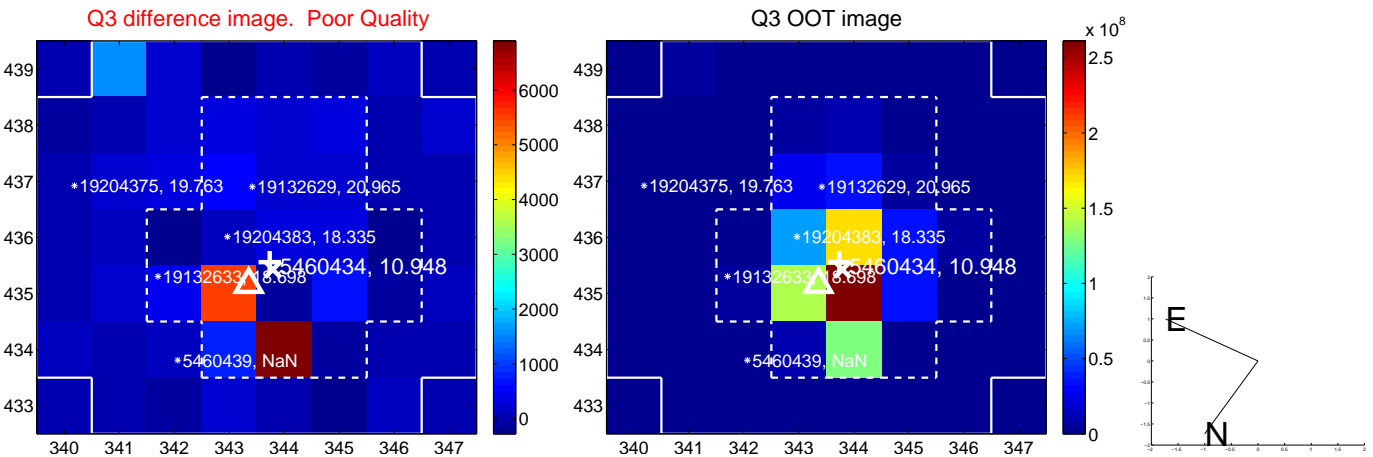
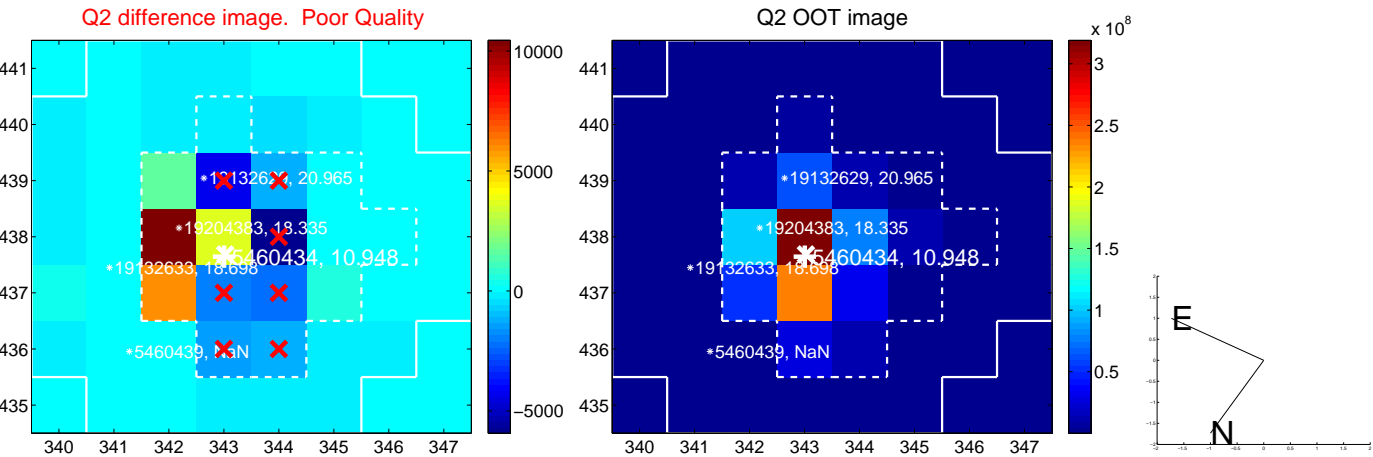
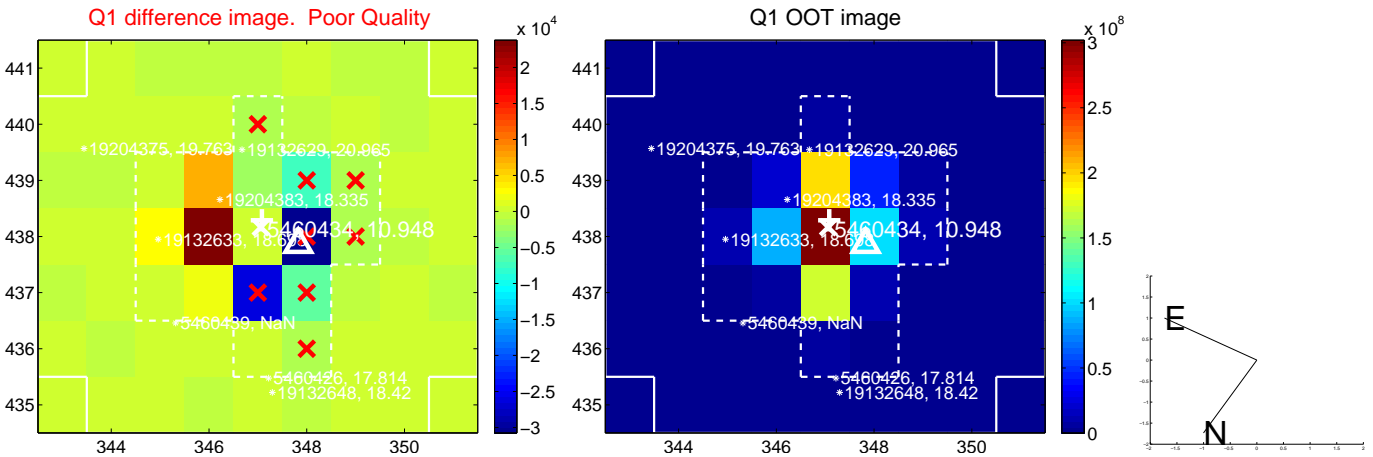
The direct PRF centroid is offset from the target star catalog position by about 0.52 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.124 ± 0.685	0.18	-0.118 ± 0.684	0.038 ± 0.695
PRF-fit source offset from KIC position	0.219 ± 0.681	0.32	0.051 ± 0.582	-0.213 ± 0.625
photometric centroid source offset	1.39 ± 0.91	1.53	-1.32 ± 0.90	0.44 ± 0.98

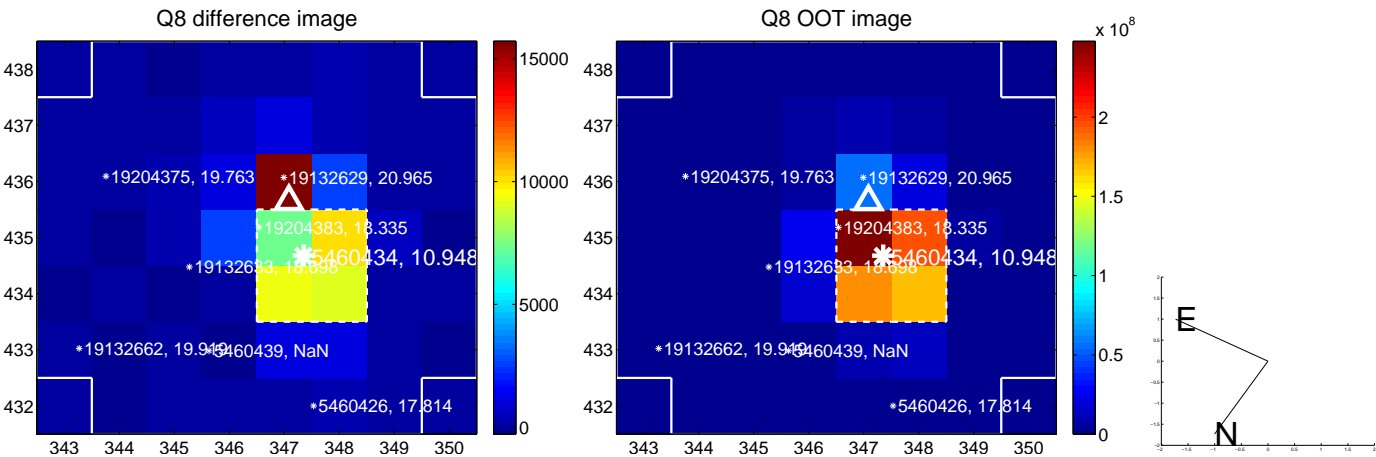
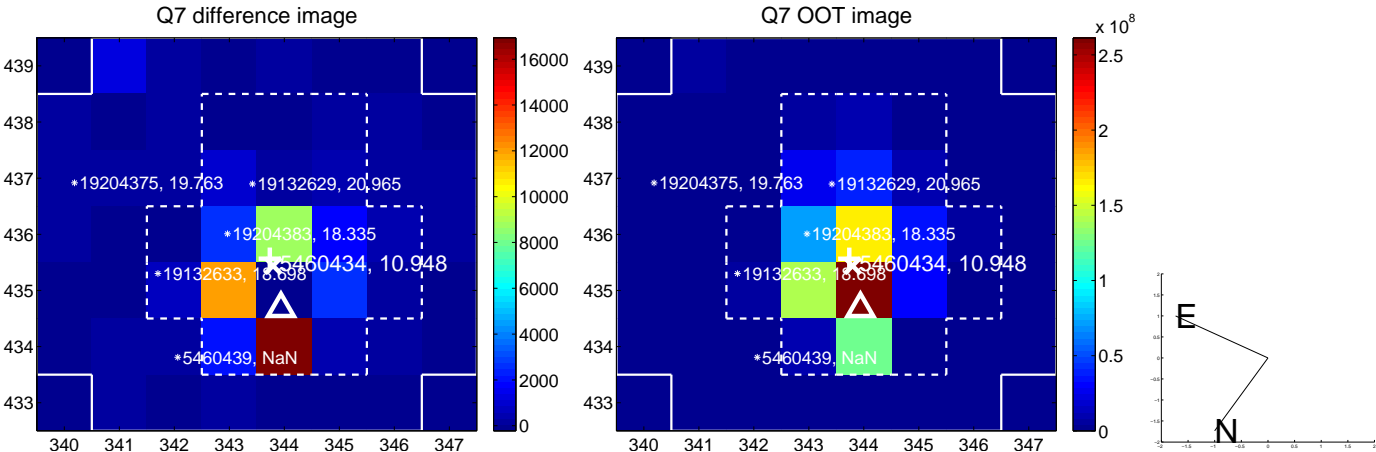
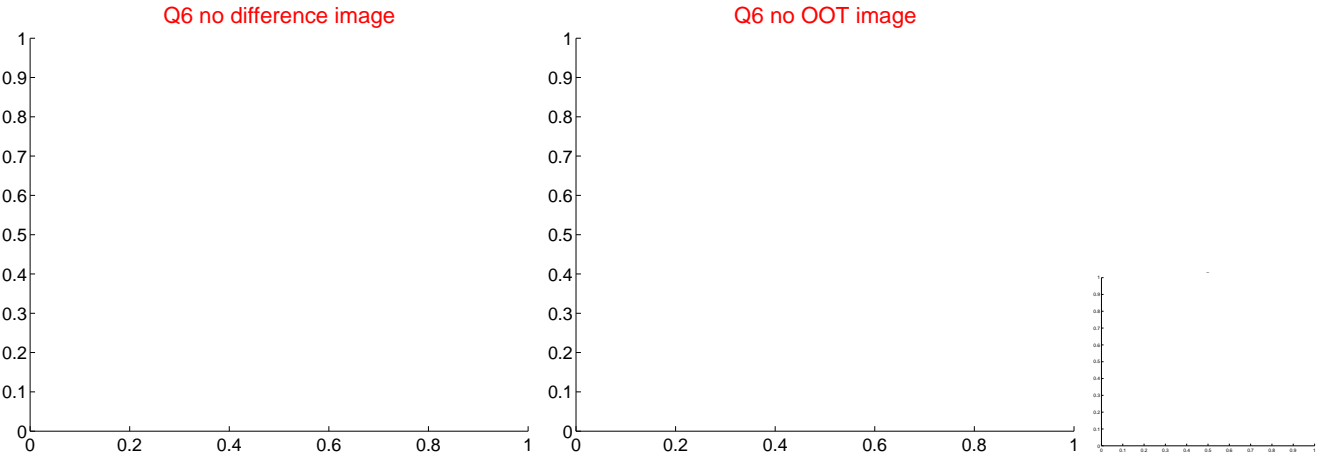
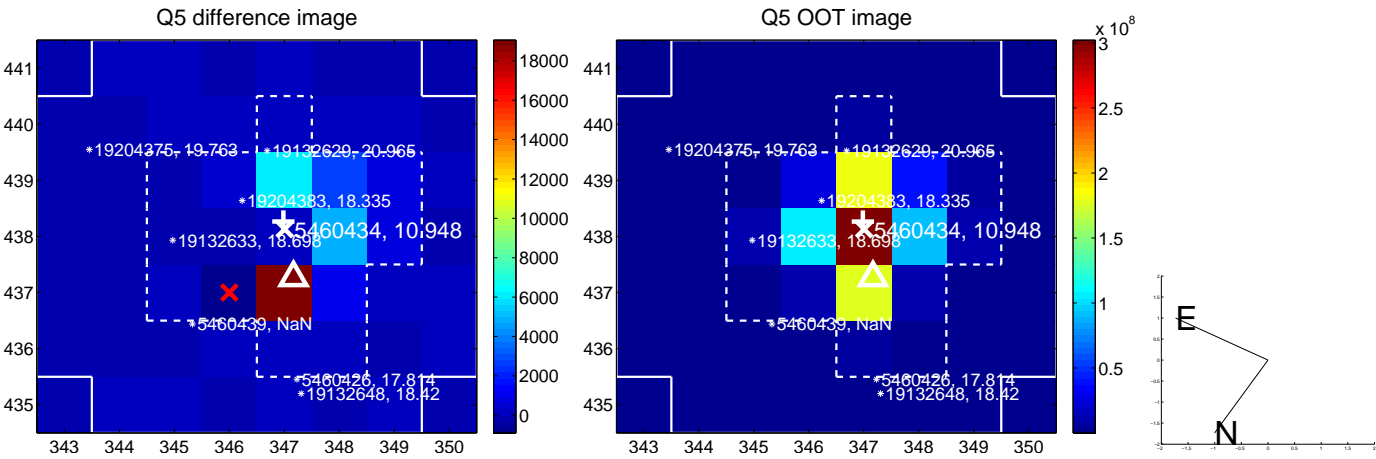


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

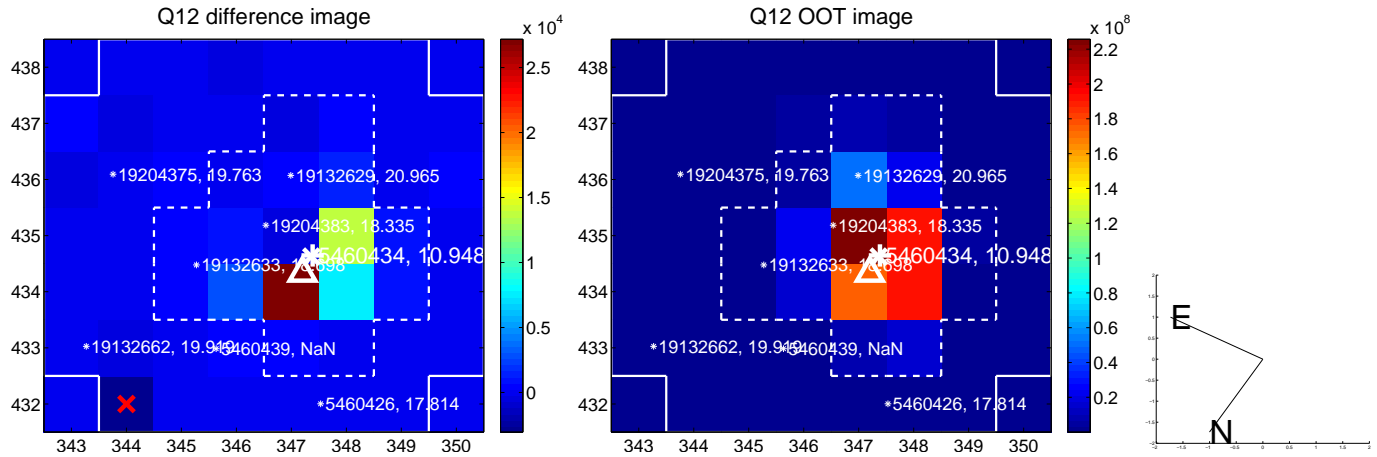
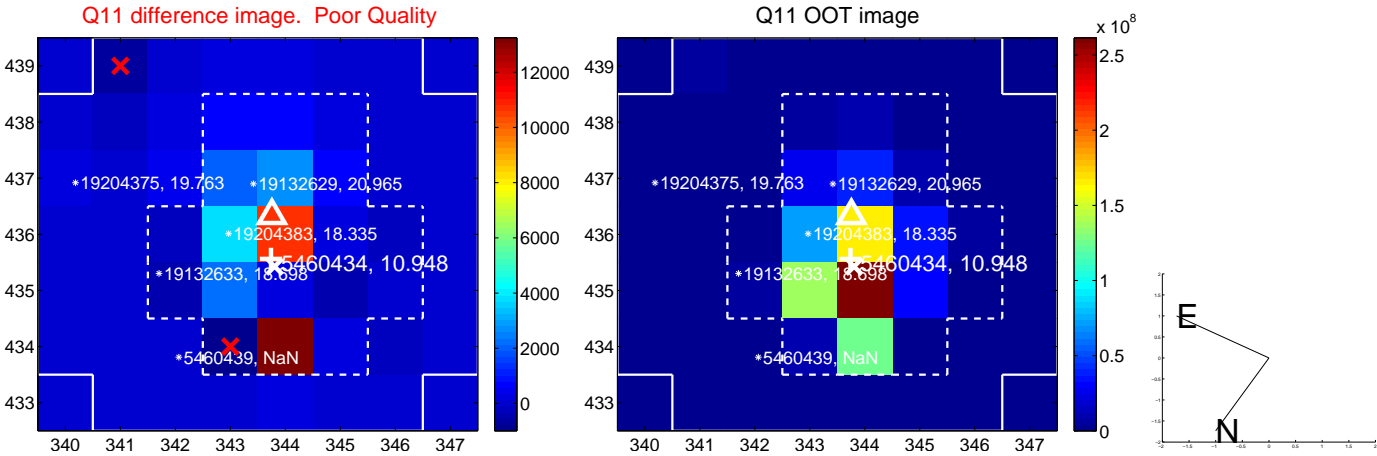
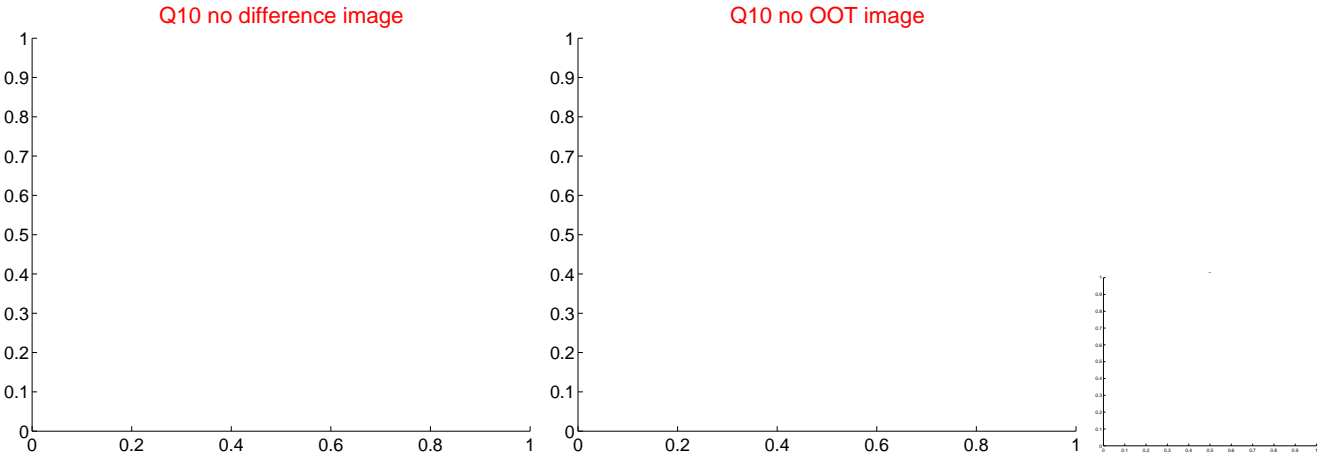
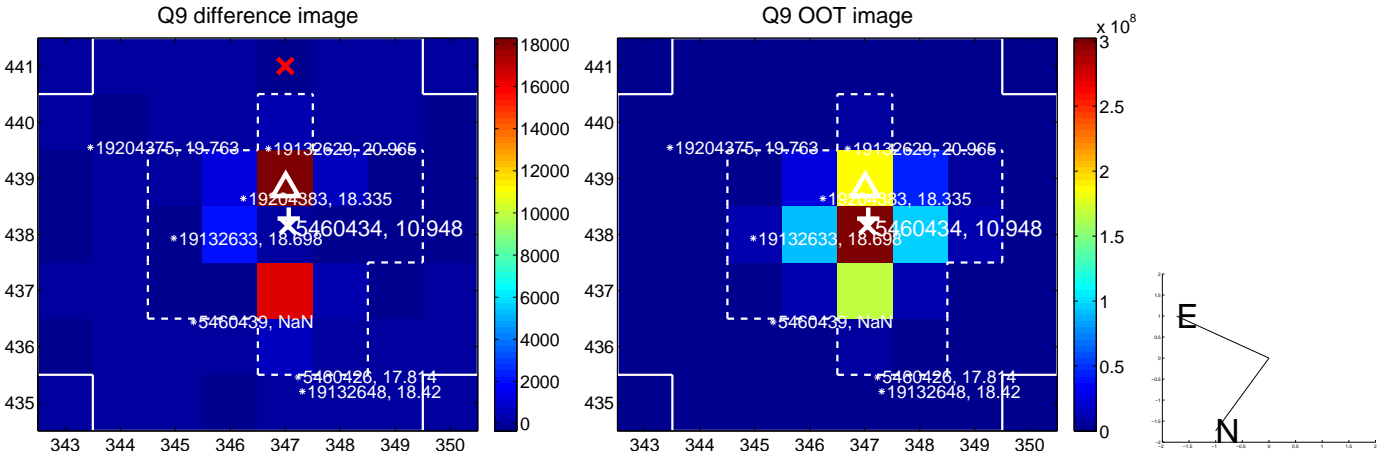
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



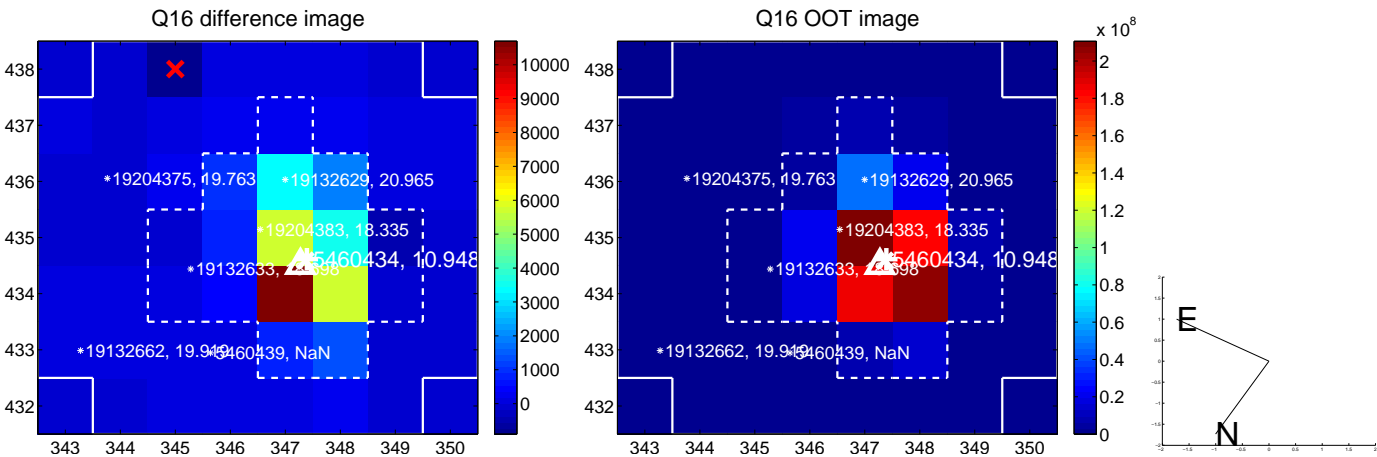
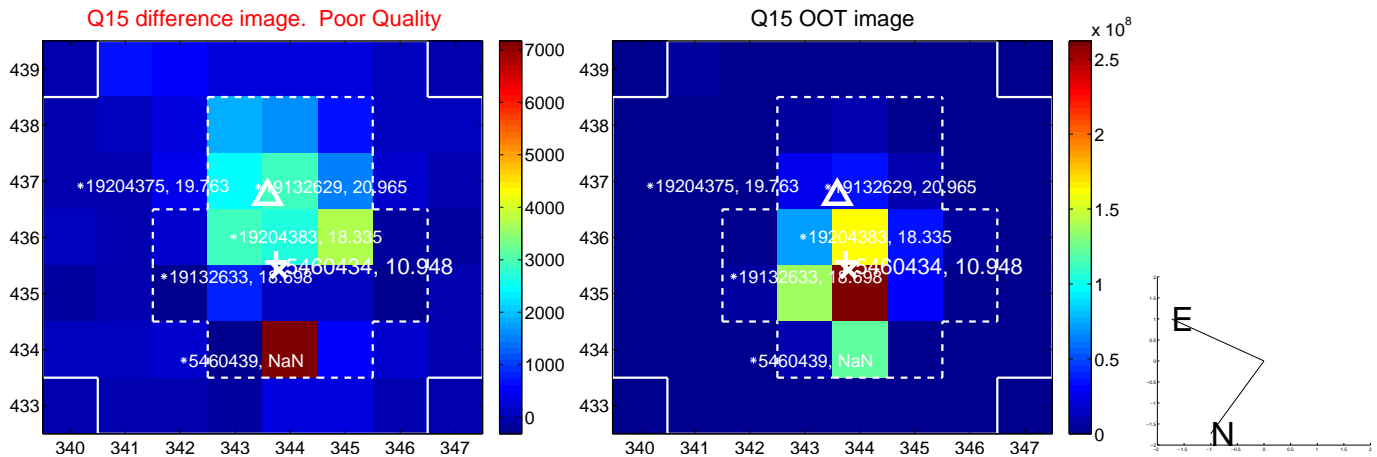
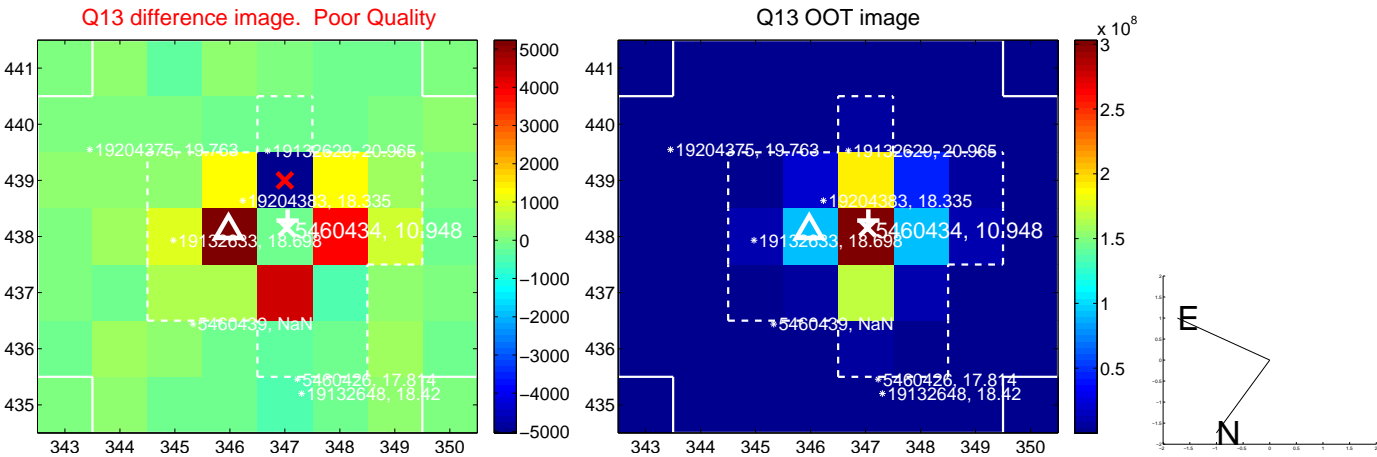
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



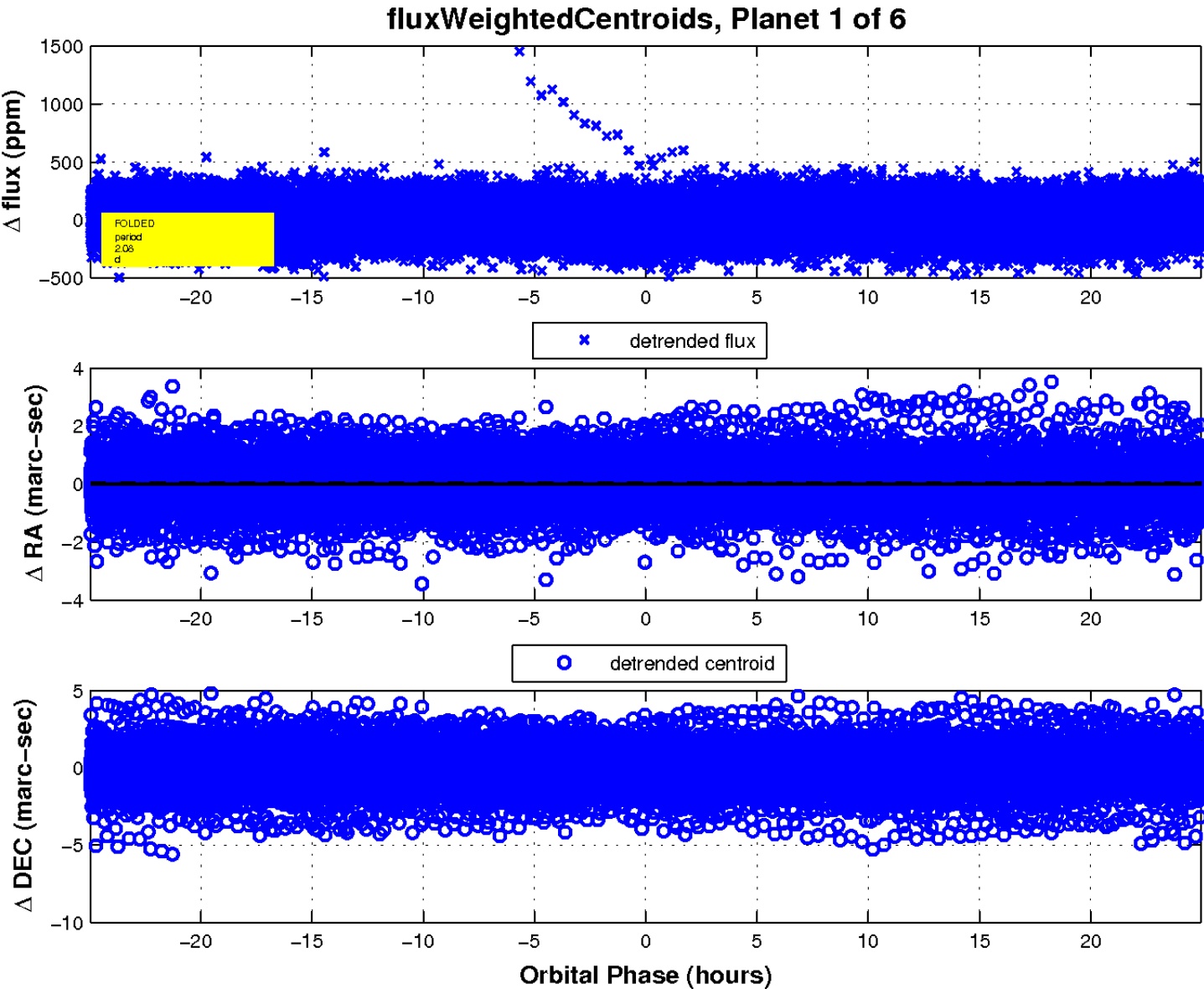
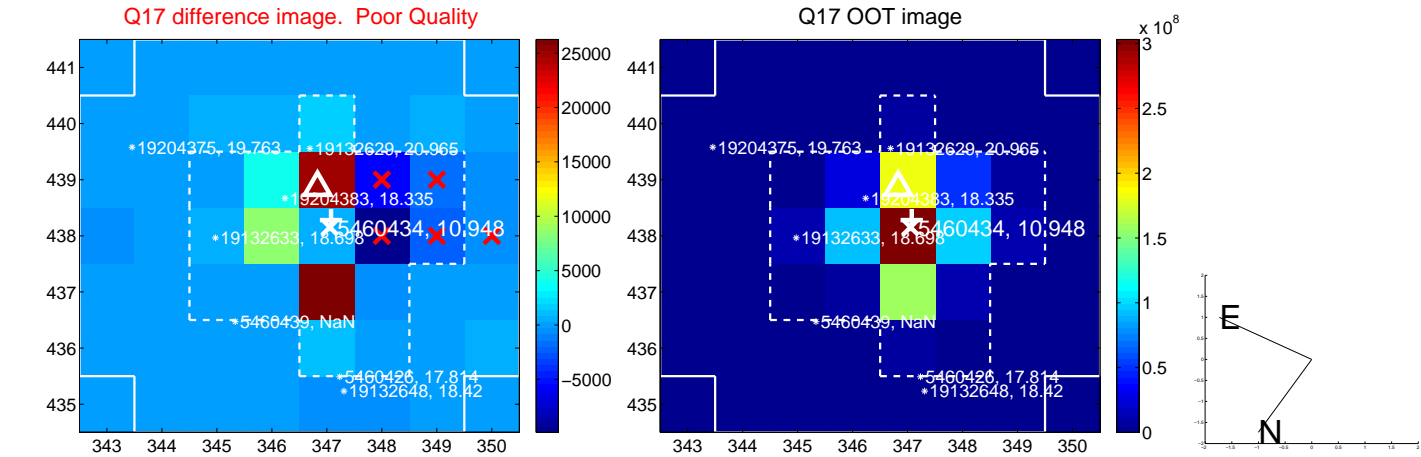
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



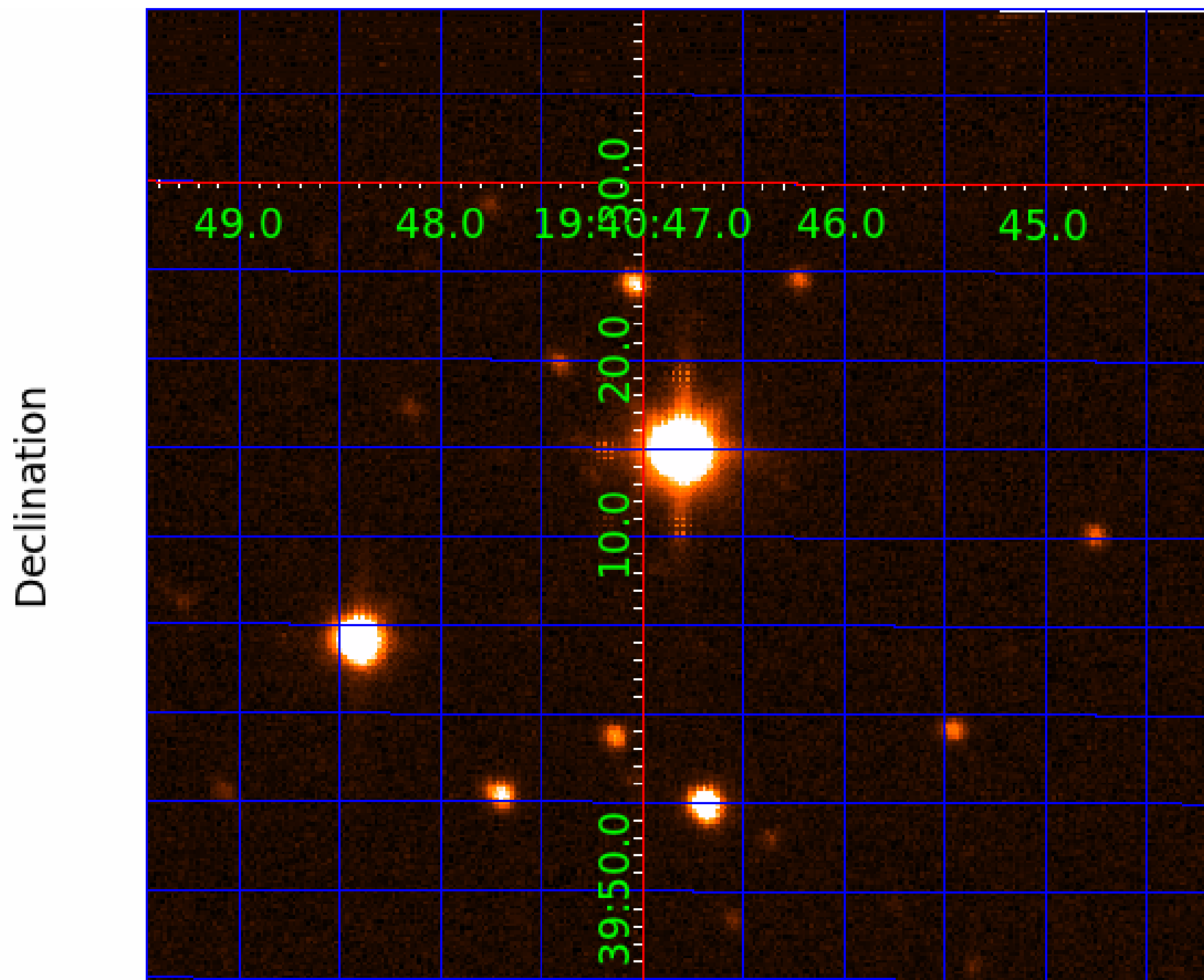
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 005460434

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})
005460434-01	OBS	No	2.079770	132.550883	12.0	8.607	8.2	5.0	2.02	6759	0.74	5600.90
005460434-02	OBS	No	68.353104	166.499551	177.5	2.554	8.7	8.5	2.02	6759	2.96	53.20
005460434-03	OBS	No	189.815596	179.539702	253.5	5.593	8.6	8.6	2.02	6759	3.81	13.63
005460434-04	OBS	No	258.520391	157.635494	203.8	8.126	8.2	7.0	2.02	6759	3.20	9.03
005460434-05	OBS	7729.01	50.564437	145.860981	131.0	5.606	8.2	8.5	2.02	6759	2.65	79.52
005460434-06	OBS	No	210.087055	144.260167	176.3	4.007	7.6	7.4	2.02	6759	3.04	11.90

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005460434-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_SATURATED
005460434-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
005460434-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
005460434-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
005460434-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_ALT—CENT_SATURATED
005460434-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED

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

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

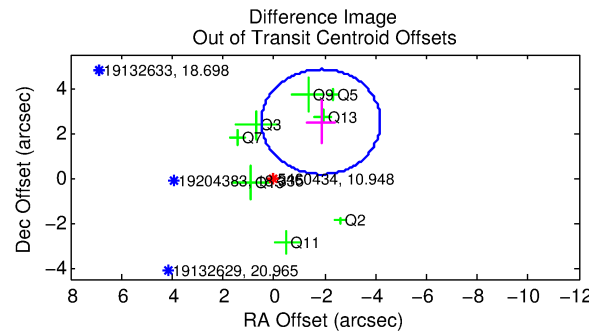
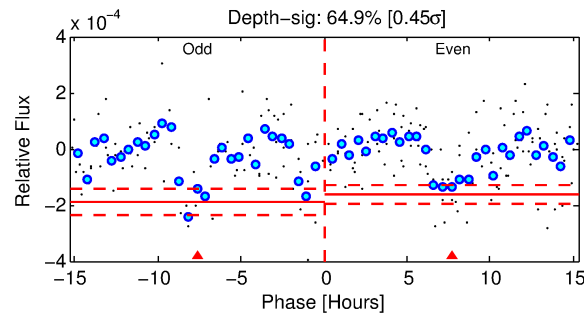
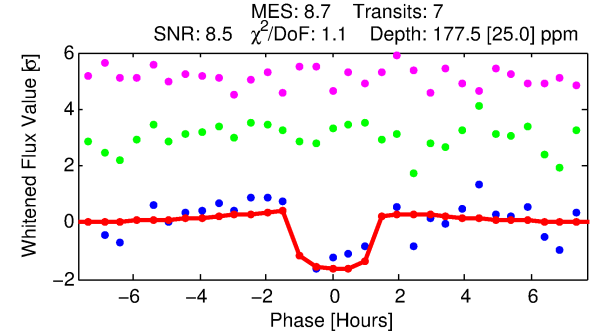
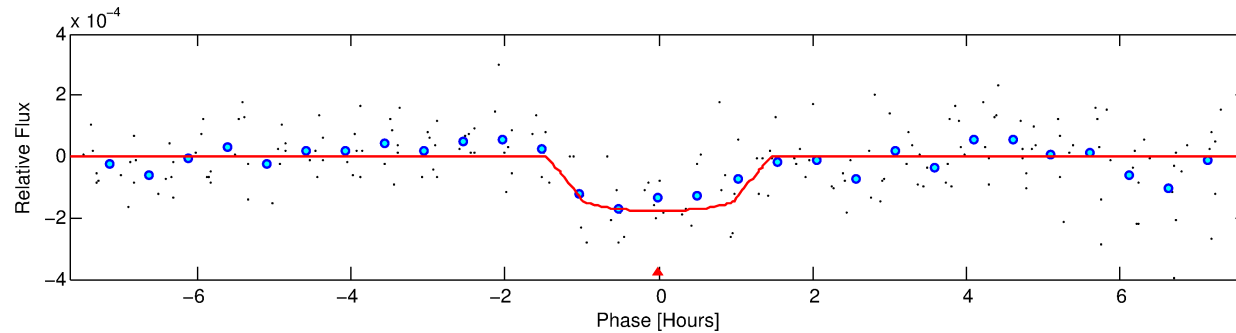
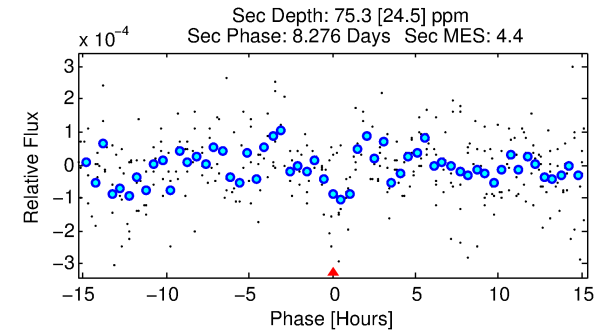
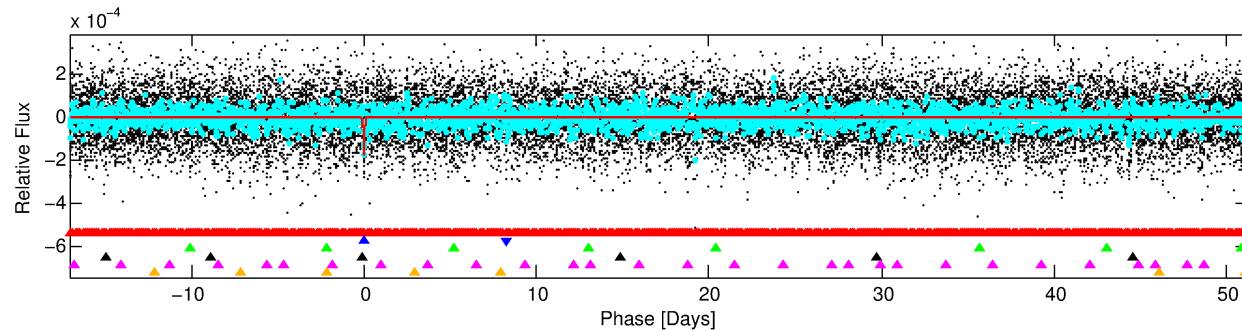
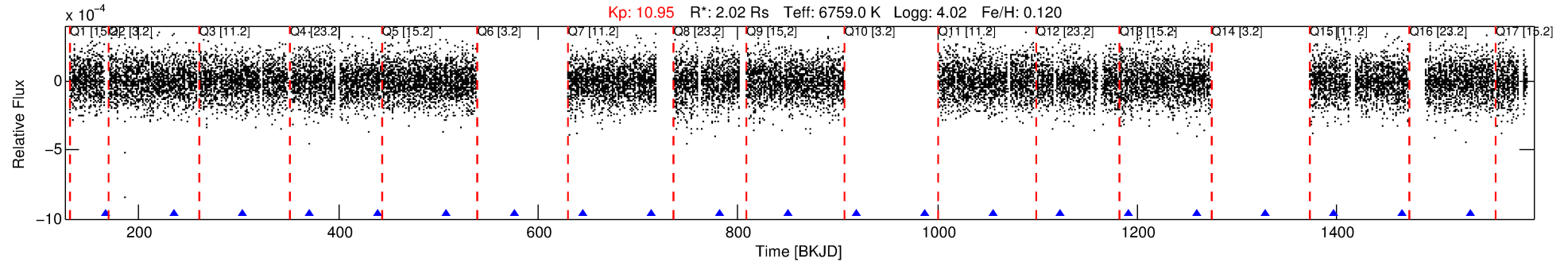
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005460434-02

No Significant Match Found

DV One-Page Summary

KIC: 5460434 Candidate: 2 of 6 Period: 68.353 d



DV Fit Results:

Period = 68.35310 [0.00069] d
Epoch = 166.4996 [0.0093] BKJD
Rp/R* = 0.0134 [0.0102]
a/R* = 130.56 [568.15]
b = 0.79 [2.12]
Seff = 53.20 [14.30]
Teq = 689 [46] K
Rp = 2.96 [2.34] Re
a = 0.3791 [0.0670] AU
Ag = 679.19 [1073.51] [0.63σ]
Teffp = 5436 [2119] K [2.24σ]

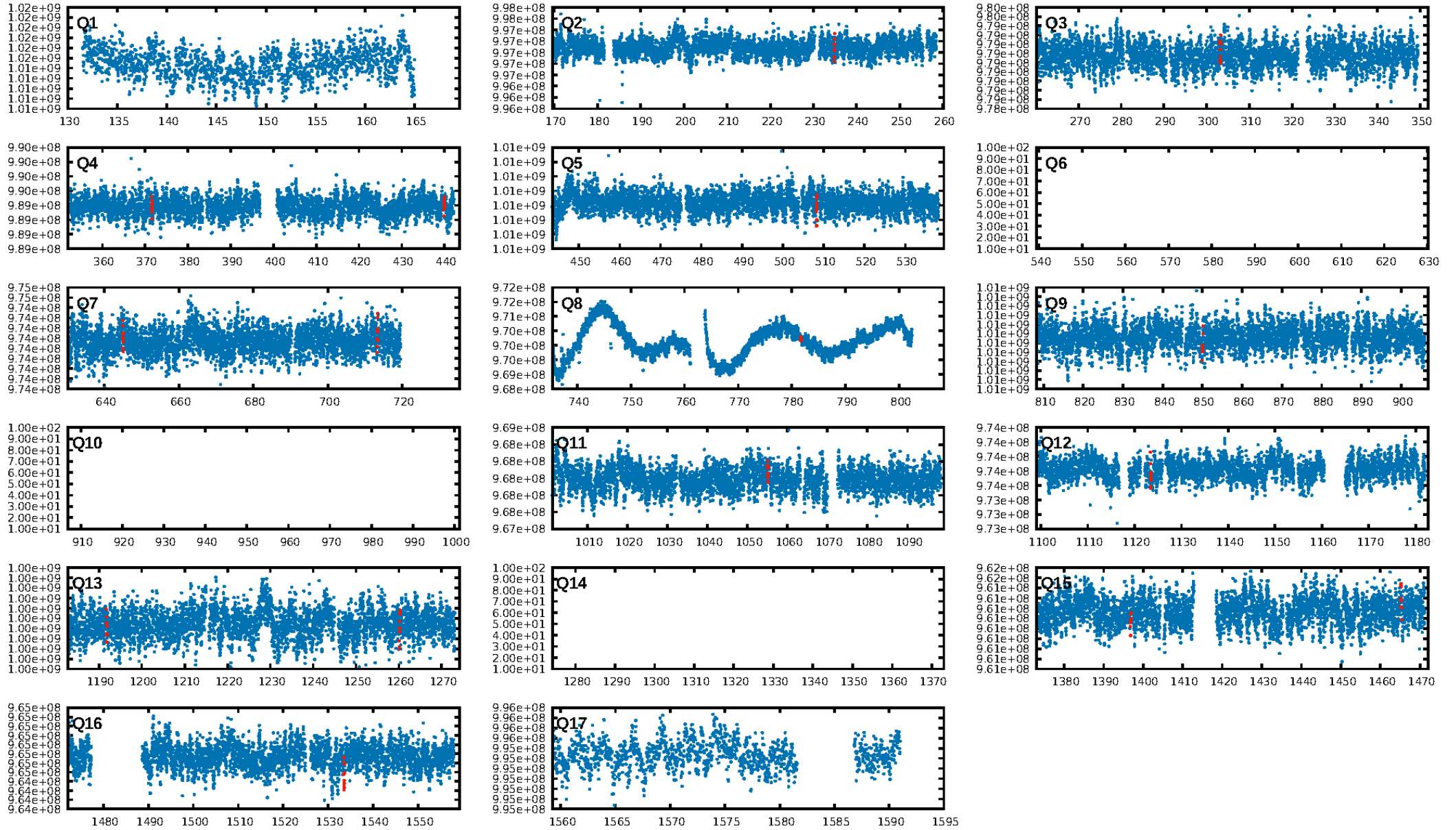
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [69.30σ]
LongPeriod-sig: 100.0% [474.06σ]
ModelChiSquare2-sig: 7.5%
ModelChiSquareGof-sig: 91.2%
Bootstrap-pfa: 8.11e-11
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: -2.273
Centroid-sig: N/A
Centroid-so: 0.484 arcsec [0.92σ]
OotOffset-rm: 3.112 arcsec [3.99σ]
KicOffset-rm: 2.631 arcsec [3.67σ]
OotOffset-st: 1/4/0/3 [8]
KicOffset-st: 1/4/0/3 [8]
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DiffImageOverlap-fno: 0.30 [3/10]

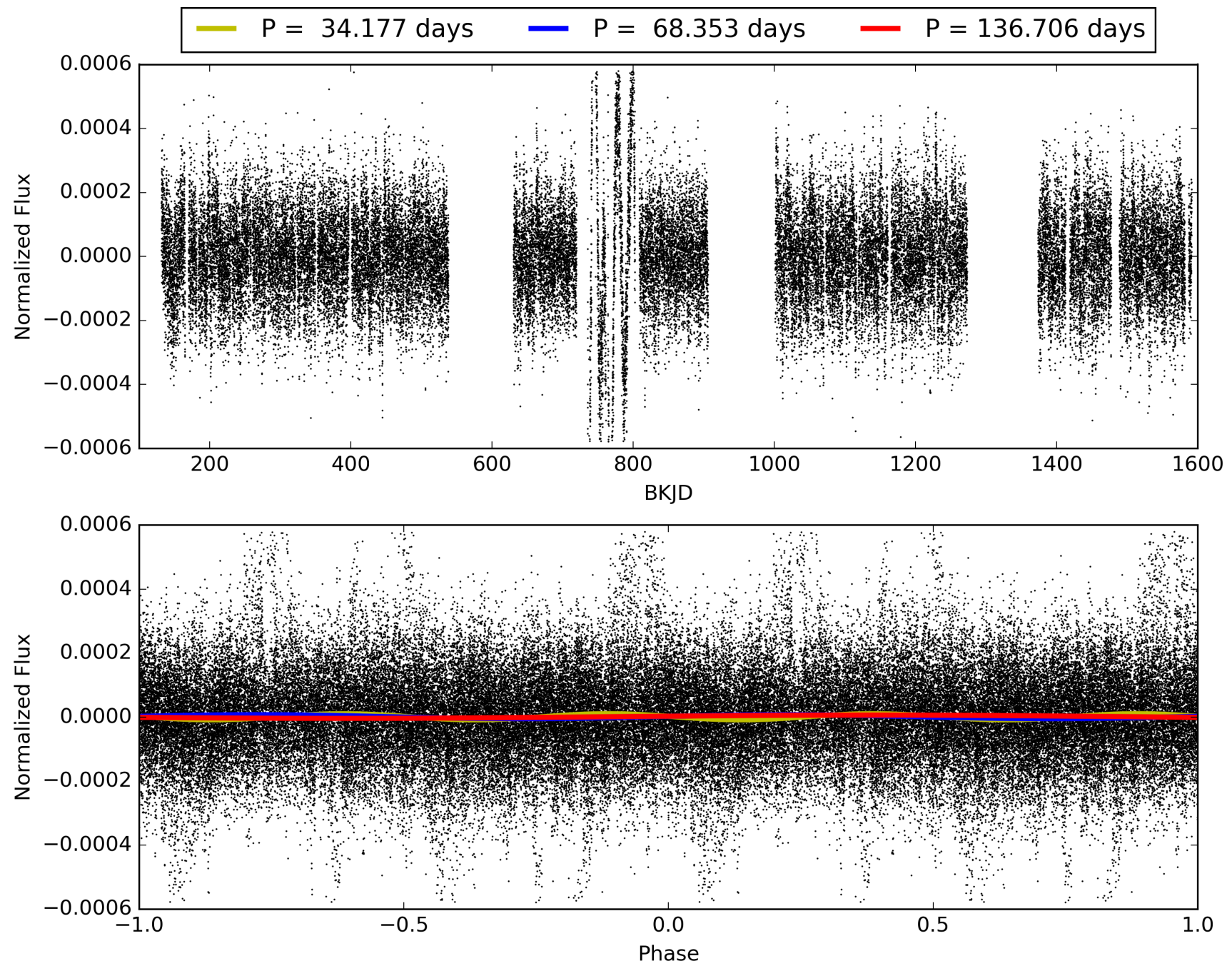
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 00:56:24 Z

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

TCE 005460434-02, PDC Light Curves

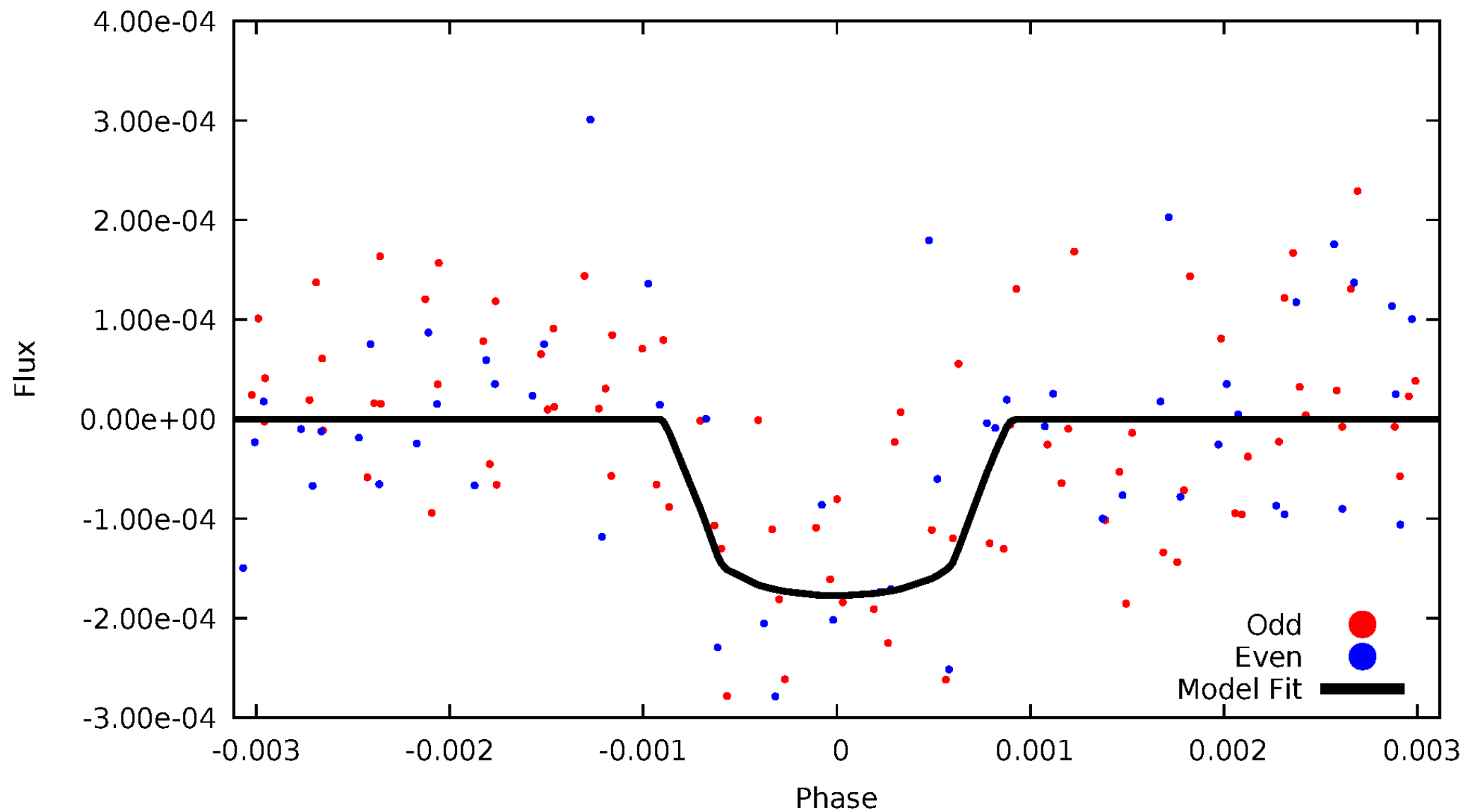


TCE 005460434-02



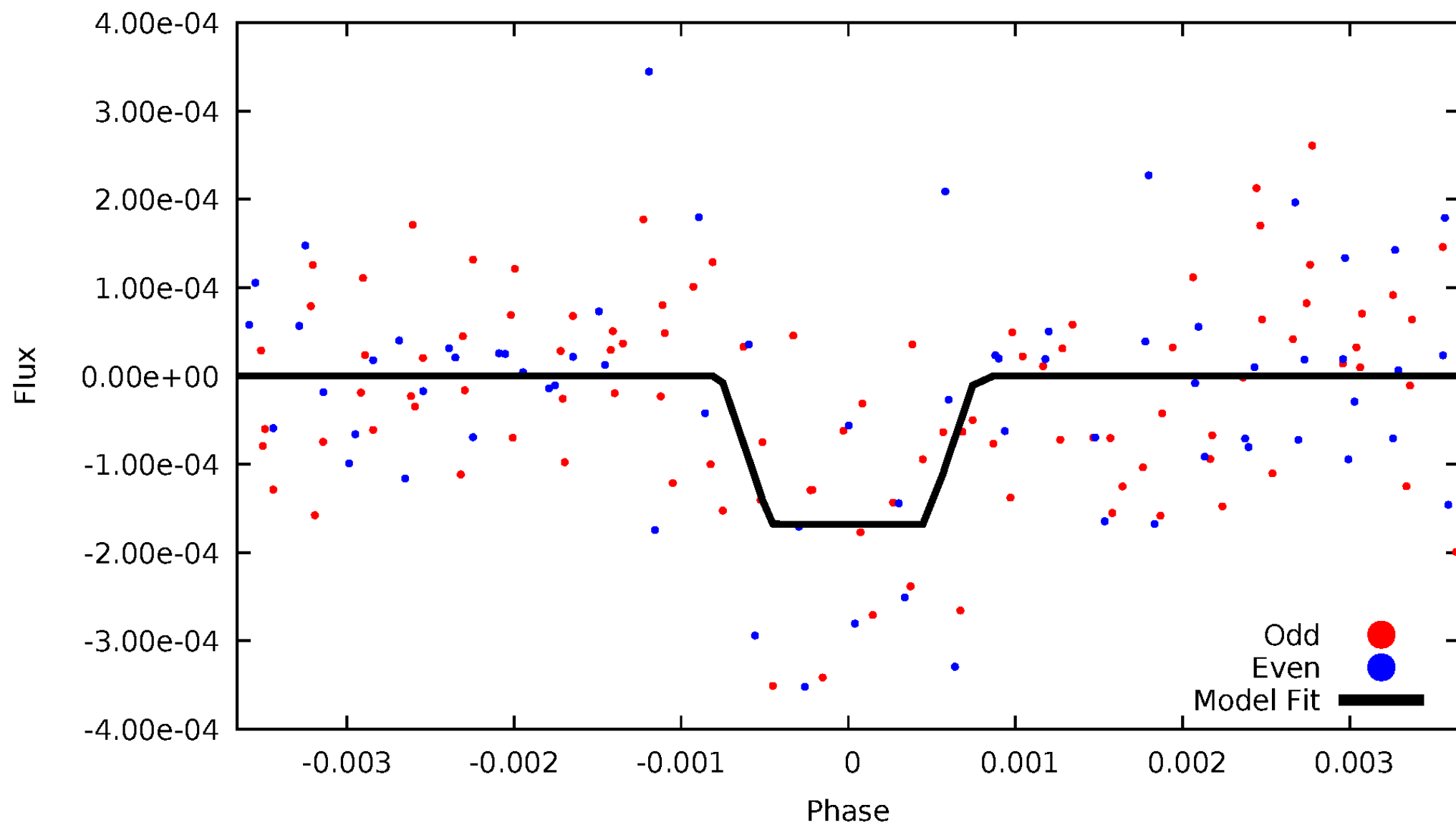
DV Odd/Even

TCE 005460434-02



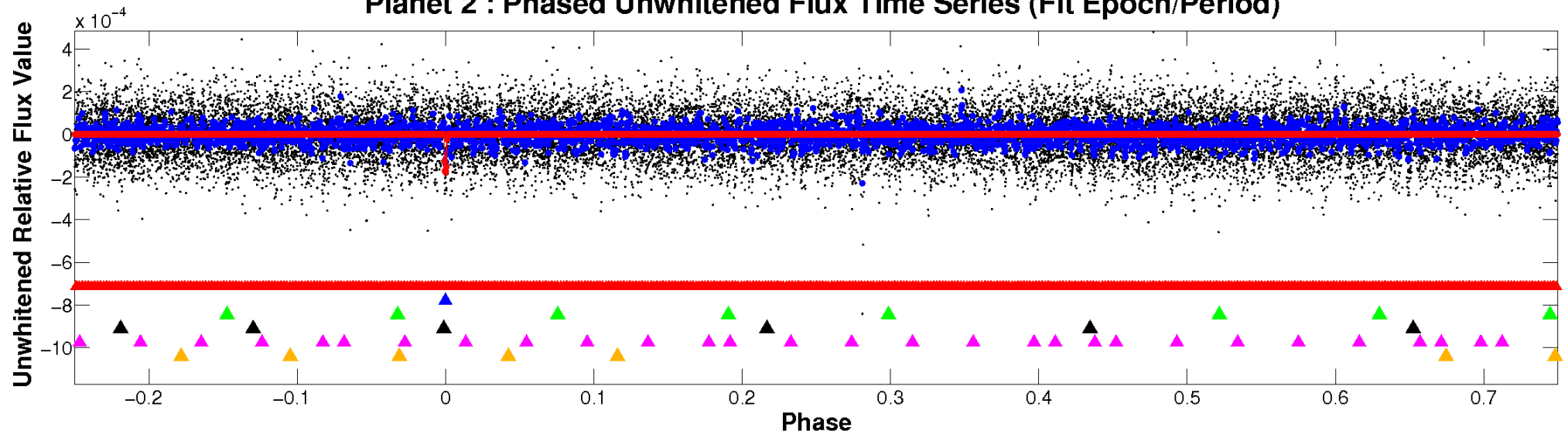
ALT Odd/Even

TCE 005460434-02

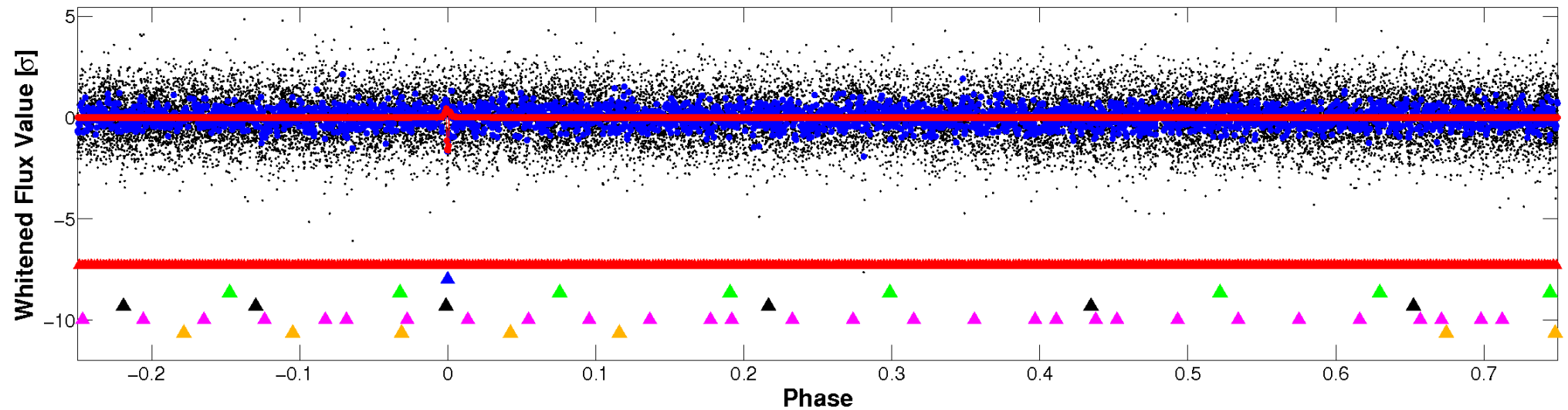


Non-Whitened Vs. Whitened Light Curve

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

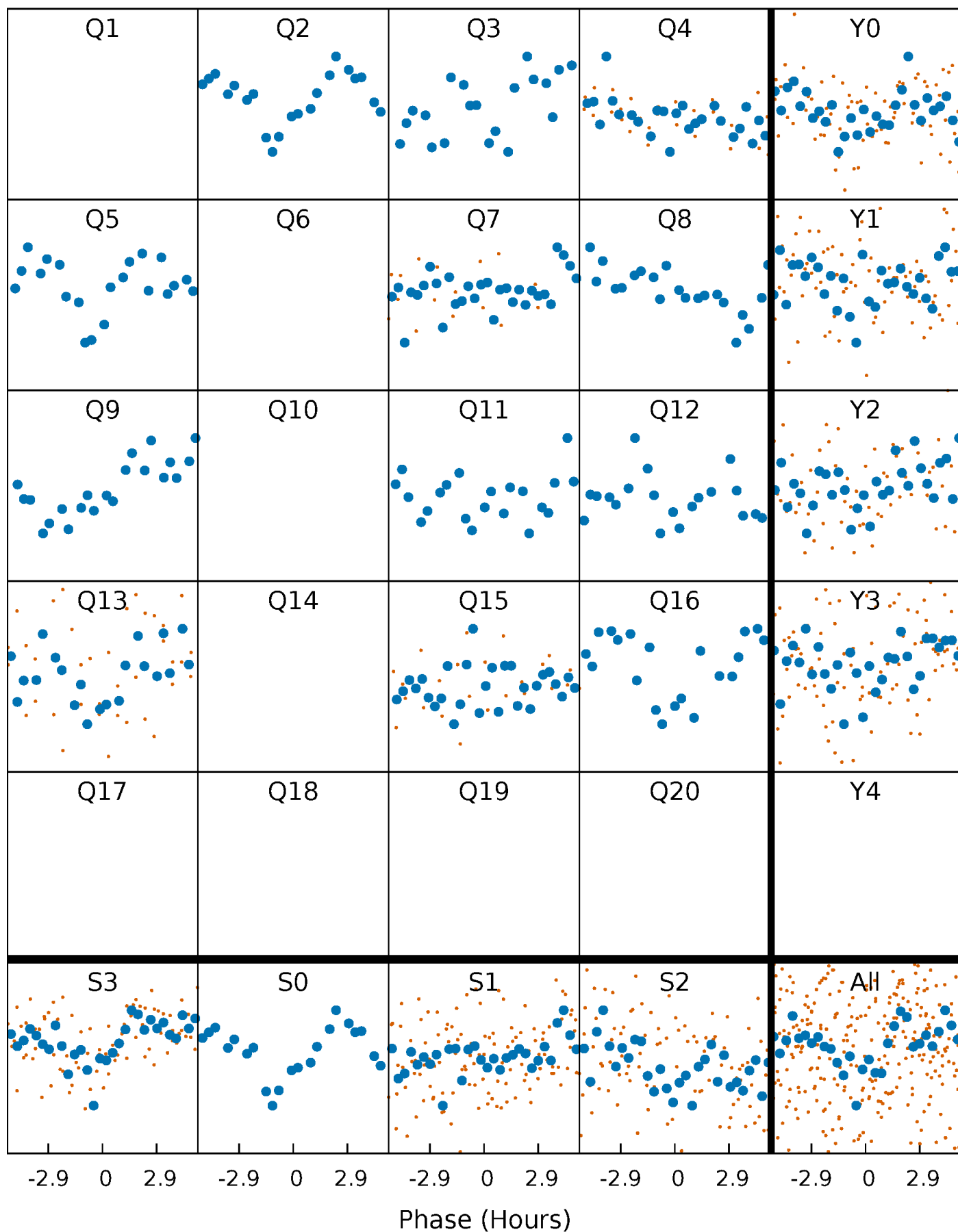


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



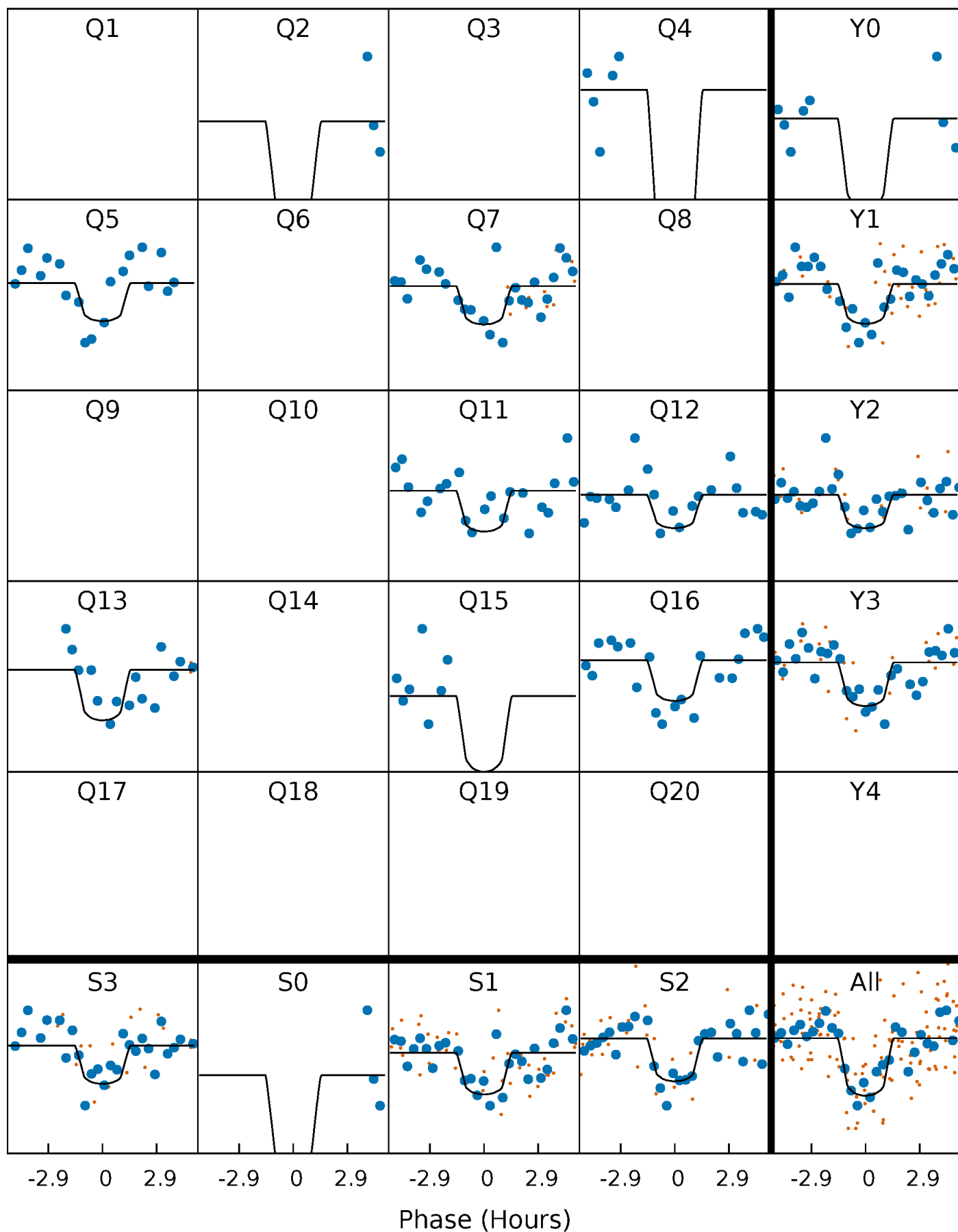
PDC Quarter-Phased Transit Curves

TCE 005460434-02 P= 68.353104 Days $T_0=166.499551$ (BKJD)



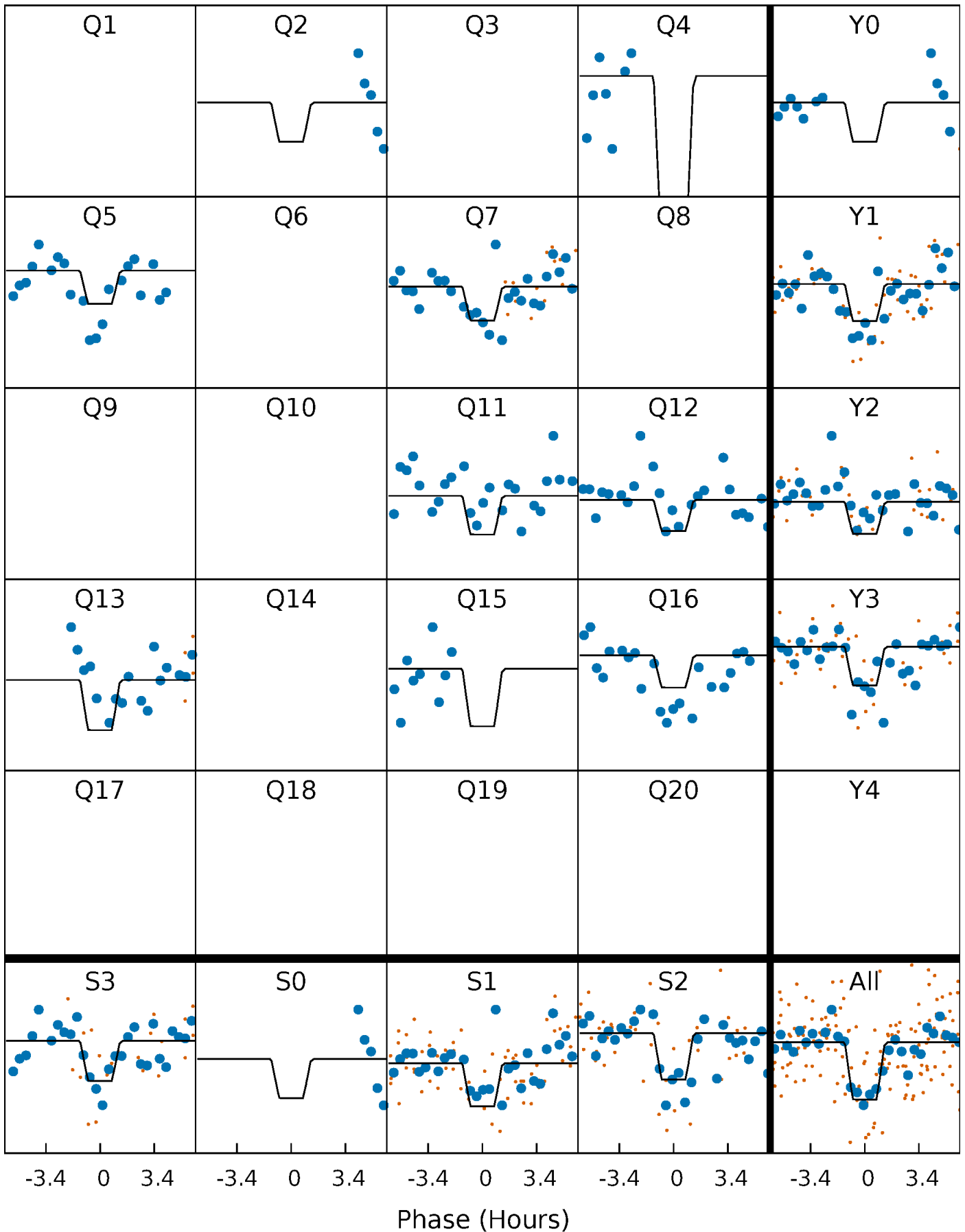
DV Quarter-Phased Transit Curves

TCE 005460434-02 P= 68.353104 Days $T_0=166.499551$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

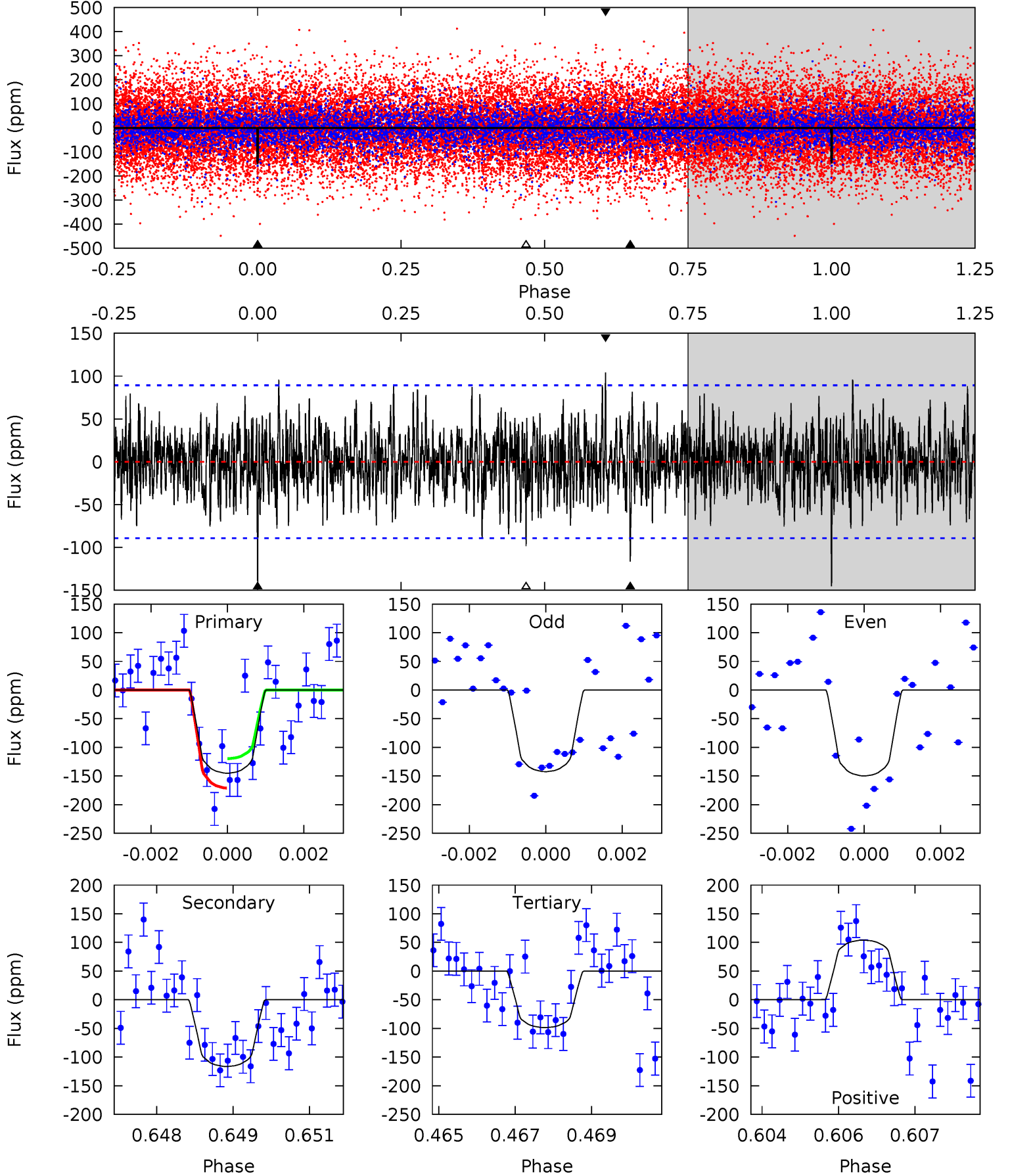
TCE 005460434-02 P= 68.353365 Days $T_0=166.490415$ (BKJD)



DV Model-Shift Uniqueness Test

005460434-02, P = 68.353104 Days, E = 98.146447 Days

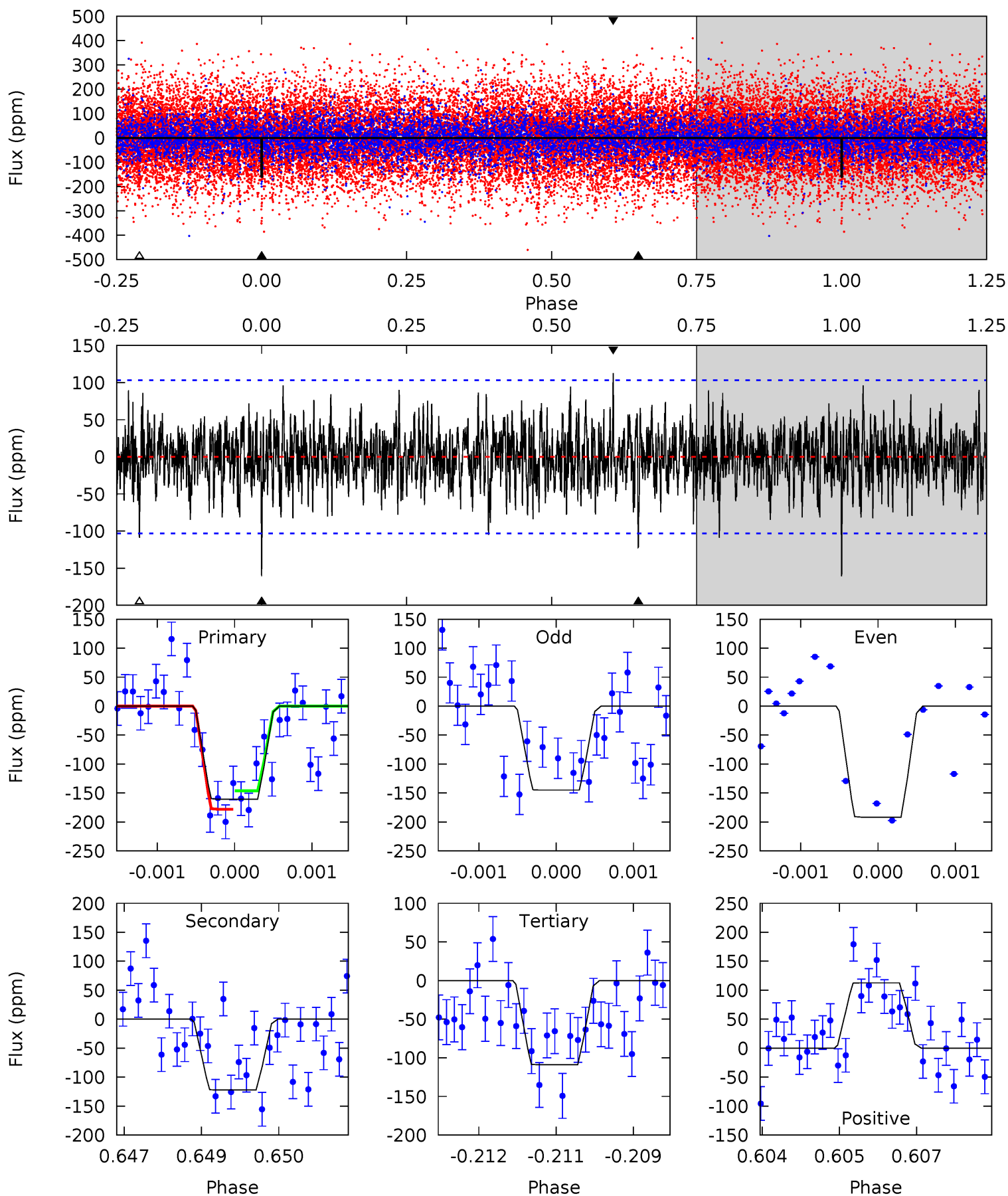
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.70	6.97	5.90	6.23	5.34	3.12	1.71	2.79	2.46	1.07	0.74	0.21	0.87	0.42	1.53



Alt Model-Shift Uniqueness Test

005460434-02, P = 68.353365 Days, E = 98.137050 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.37	6.37	5.68	5.87	5.38	3.18	1.58	2.69	2.50	0.69	0.50	1.16	1.12	0.41	0.82



Stellar Parameters For KIC 005460434

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6759^{+81}_{-81}	$4.018^{+0.148}_{-0.121}$	$0.120^{+0.150}_{-0.150}$	$2.022^{+0.411}_{-0.374}$	$1.552^{+0.149}_{-0.134}$	$0.264^{+0.192}_{-0.094}$
	+1%/-1%	+4%/-3%	+125%/-125%	+20%/-18%	+10%/-9%	+73%/-36%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 005460434-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-116 ± 17	$3.03^{+2.21}_{-1.72}$	962^{+49}_{-50}	5911^{+3772}_{-1236}	947^{+4095}_{-628}
Alt.	-122 ± 19	$3.05^{+2.30}_{-1.75}$	962^{+47}_{-46}	5963^{+4086}_{-1242}	1031^{+4731}_{-694}

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

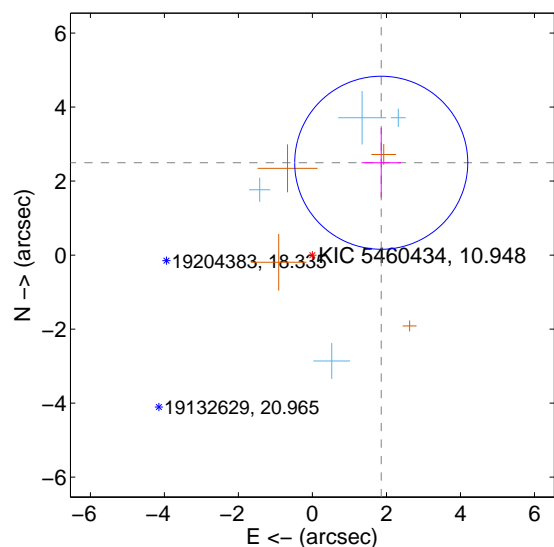
Supplemental centroid analysis for 005460434-02. **Kepler magnitude: 10.95.** Transit SNR 8.49

There are 4 quarters with good PRF difference image offsets

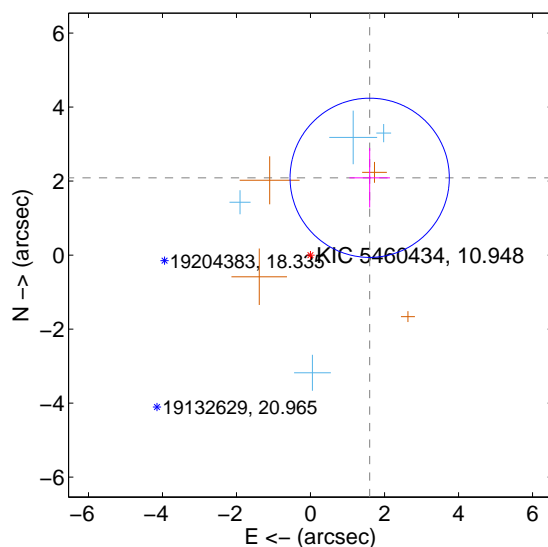
The direct PRF centroid is offset from the target star catalog position by about 0.62 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.112 ± 0.779	3.99	-1.859 ± 0.534	2.496 ± 0.940
PRF-fit source offset from KIC position	2.631 ± 0.717	3.67	-1.599 ± 0.549	2.089 ± 0.804
photometric centroid source offset	0.48 ± 0.52	0.92	-0.26 ± 0.46	0.41 ± 0.55

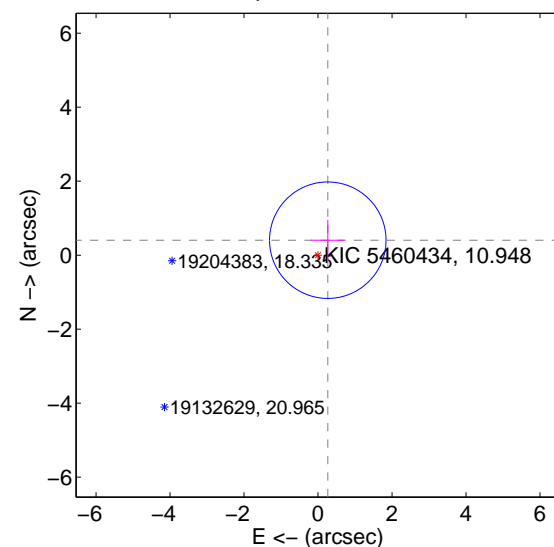
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

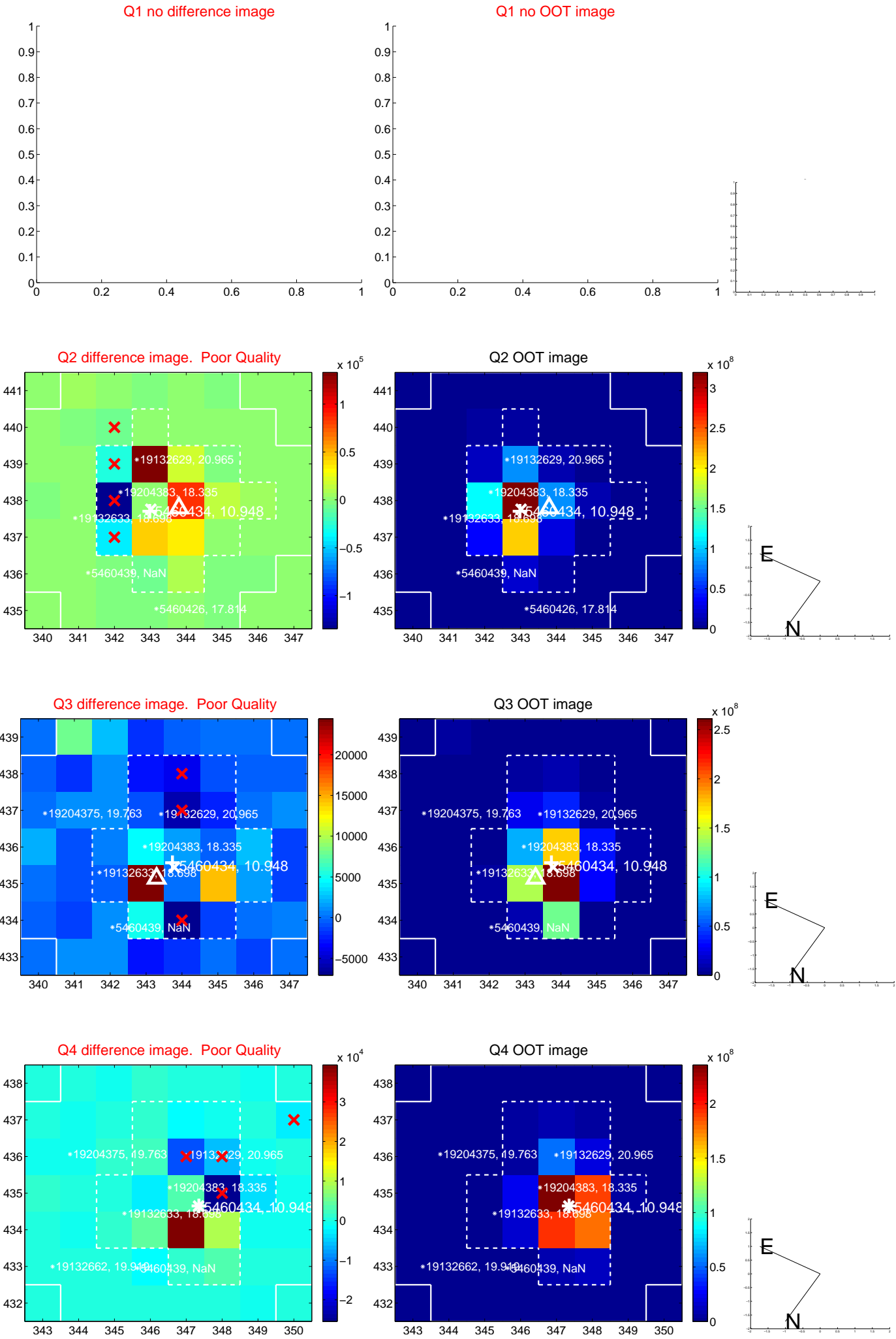


offset from photometric centroids

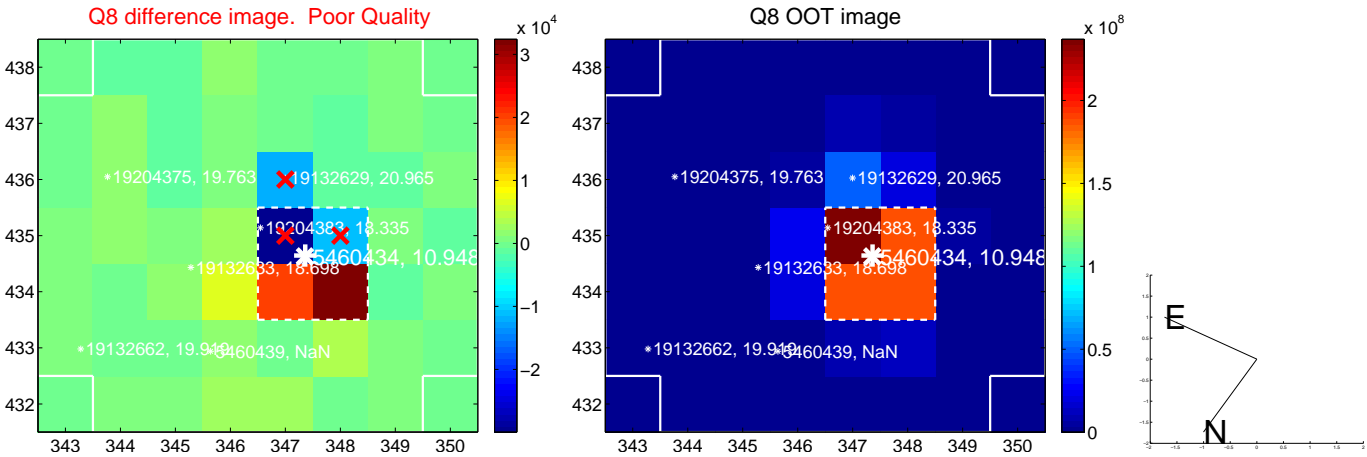
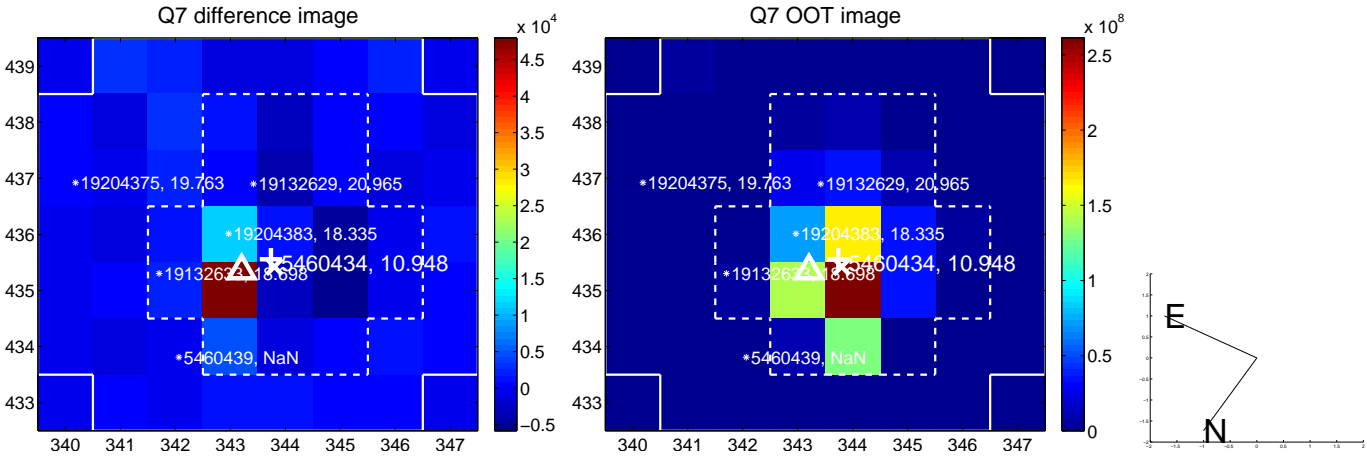
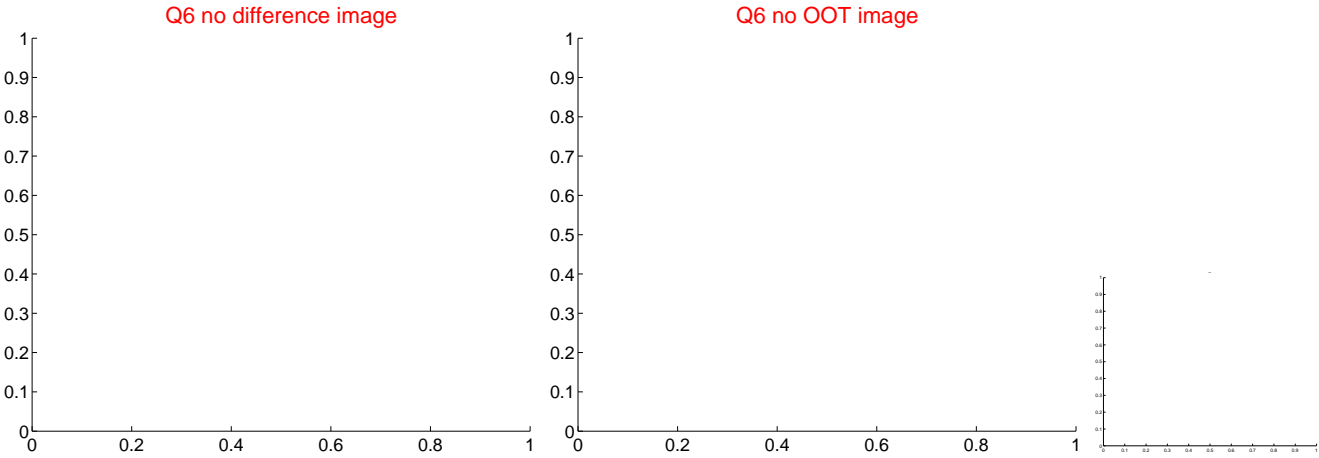
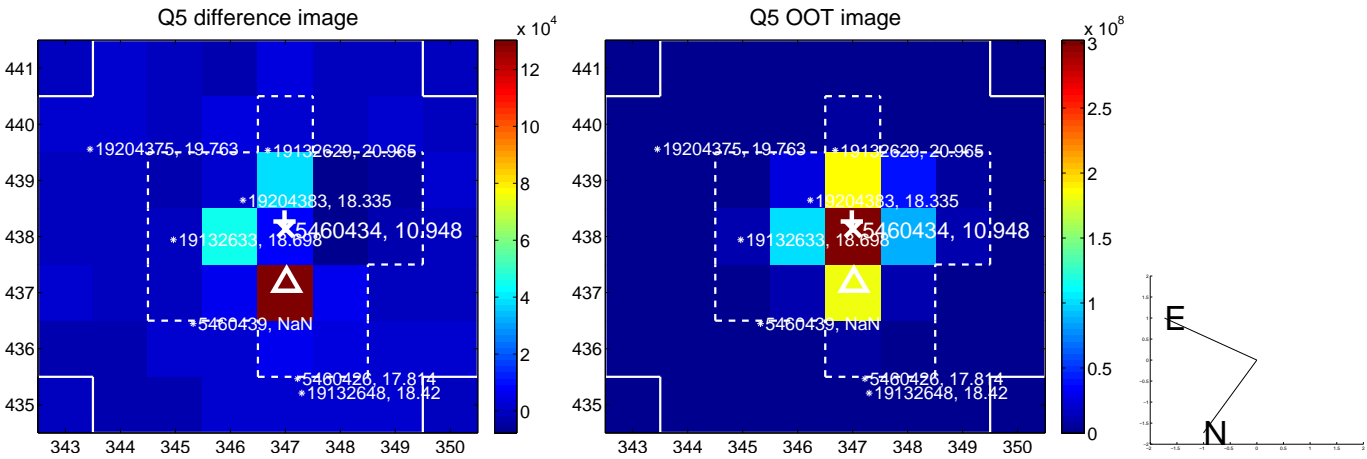


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

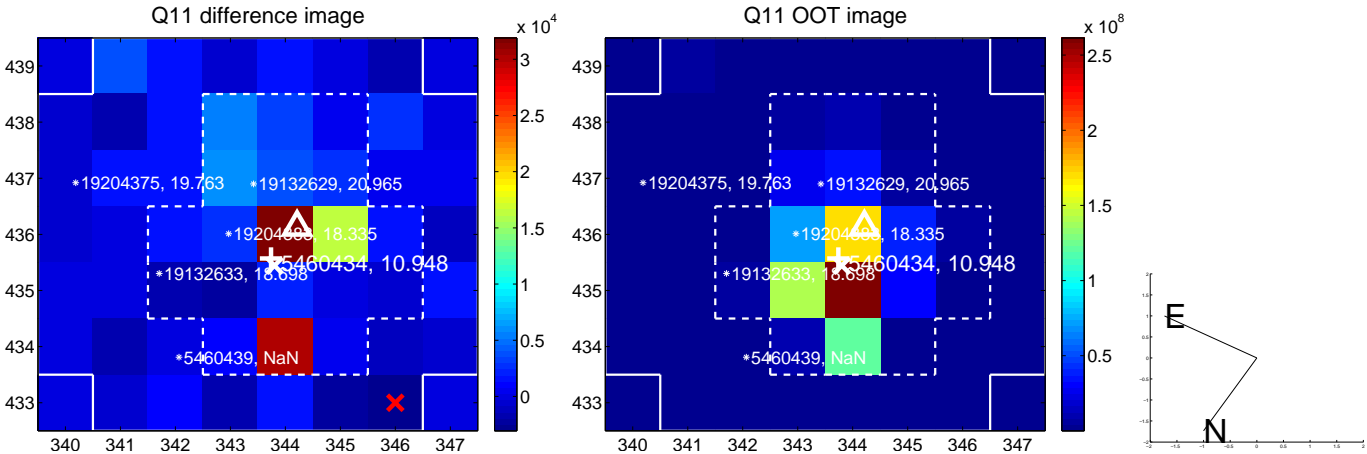
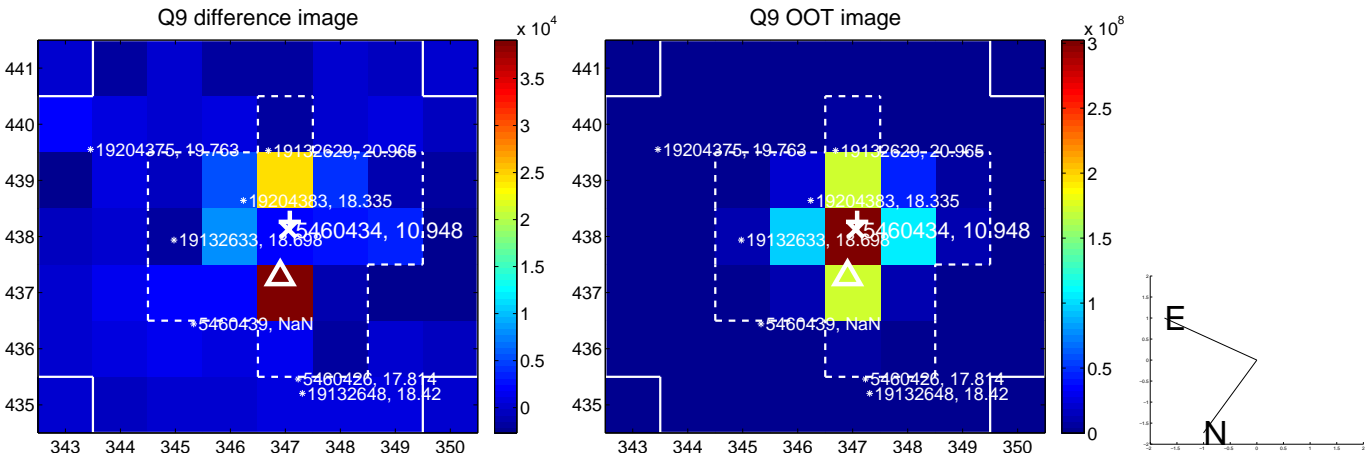
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



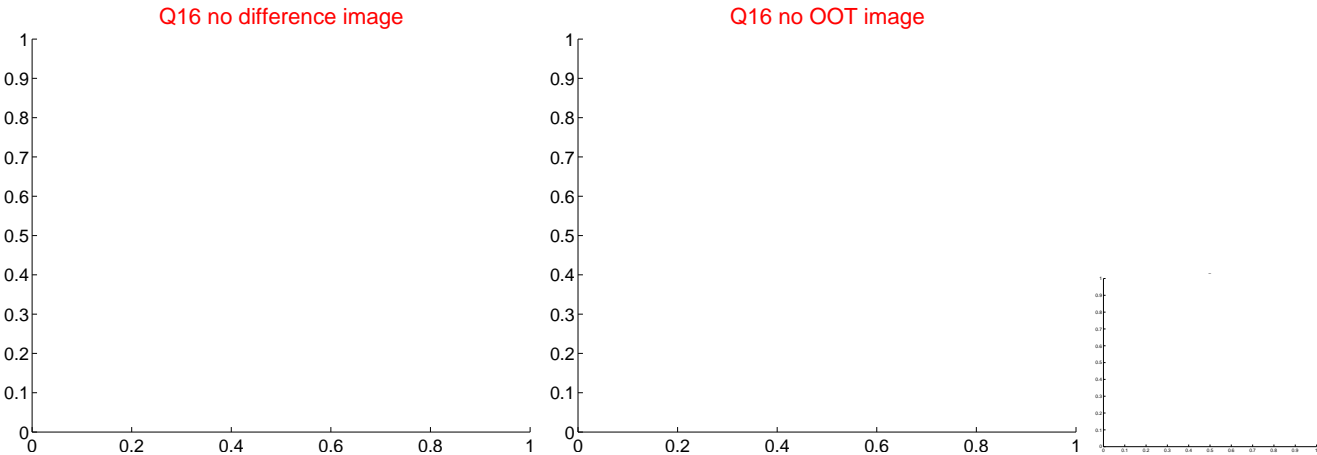
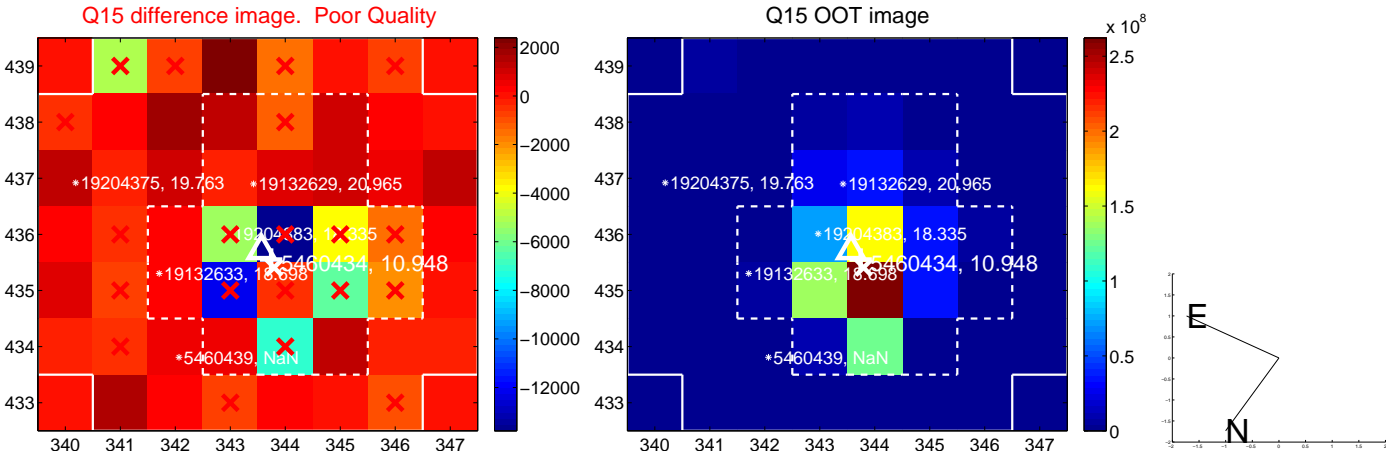
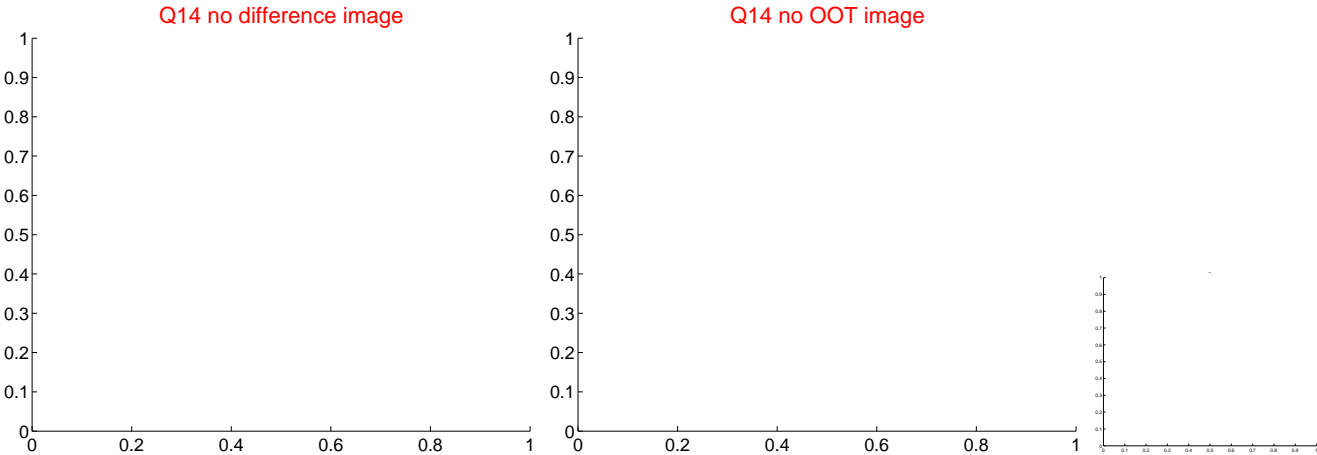
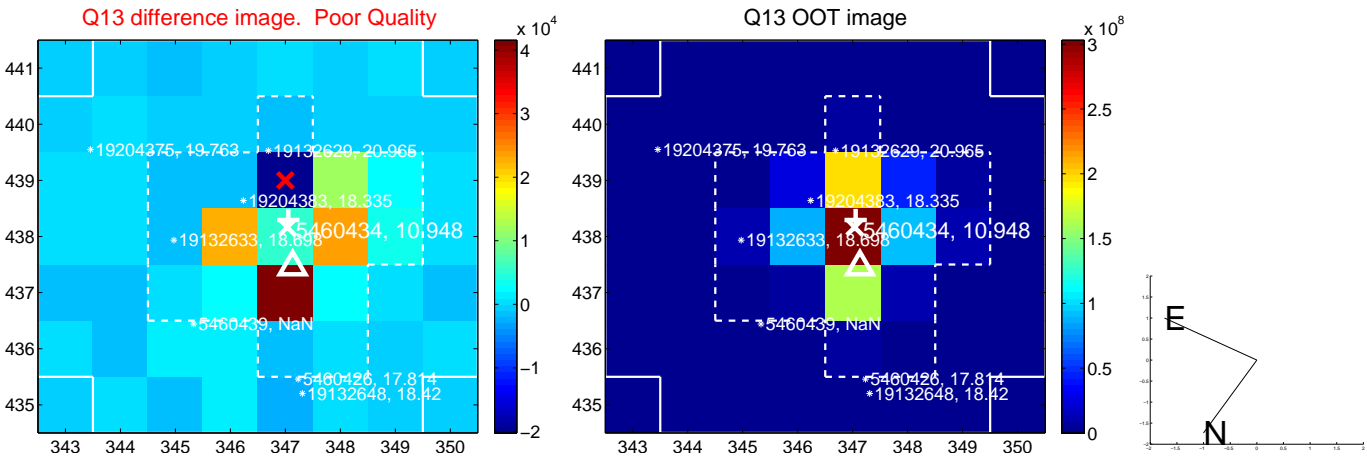
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



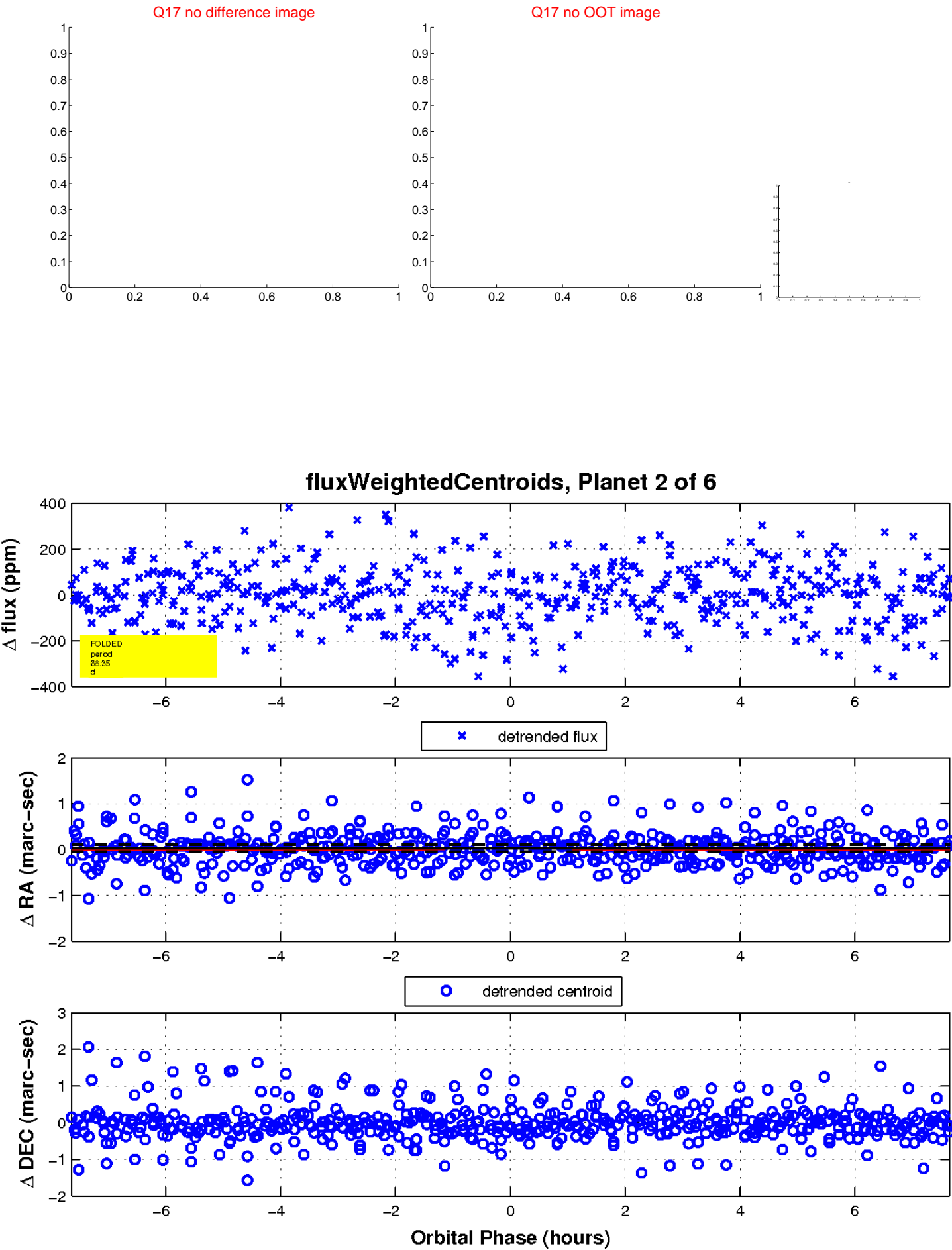
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



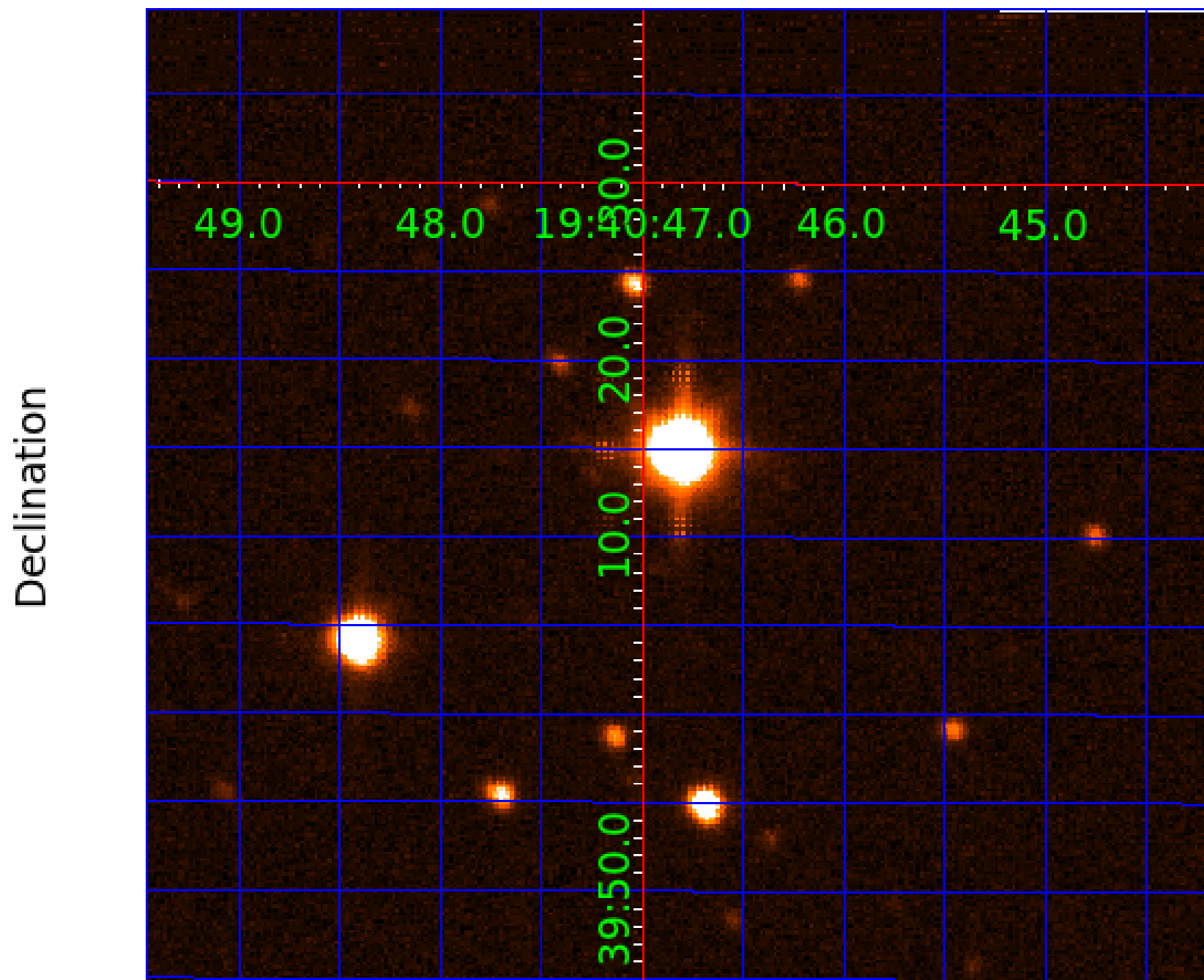
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 005460434

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})
005460434-01	OBS	No	2.079770	132.550883	12.0	8.607	8.2	5.0	2.02	6759	0.74	5600.90
005460434-02	OBS	No	68.353104	166.499551	177.5	2.554	8.7	8.5	2.02	6759	2.96	53.20
005460434-03	OBS	No	189.815596	179.539702	253.5	5.593	8.6	8.6	2.02	6759	3.81	13.63
005460434-04	OBS	No	258.520391	157.635494	203.8	8.126	8.2	7.0	2.02	6759	3.20	9.03
005460434-05	OBS	7729.01	50.564437	145.860981	131.0	5.606	8.2	8.5	2.02	6759	2.65	79.52
005460434-06	OBS	No	210.087055	144.260167	176.3	4.007	7.6	7.4	2.02	6759	3.04	11.90

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005460434-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_SATURATED
005460434-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
005460434-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
005460434-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
005460434-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_ALT—CENT_SATURATED
005460434-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED

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

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

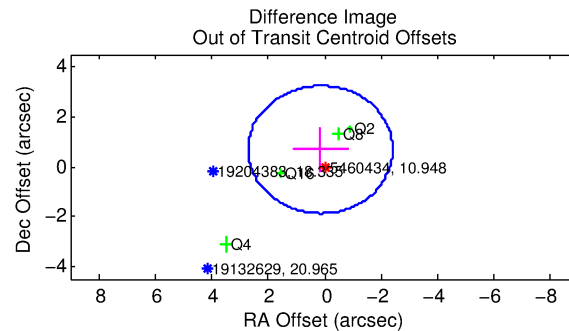
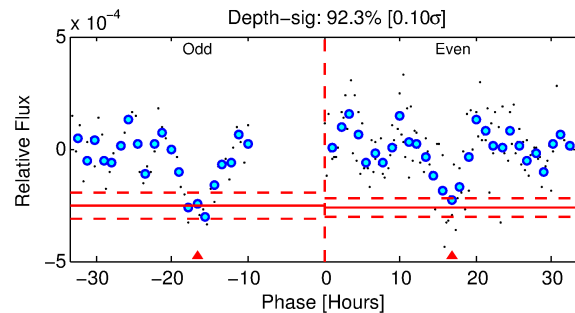
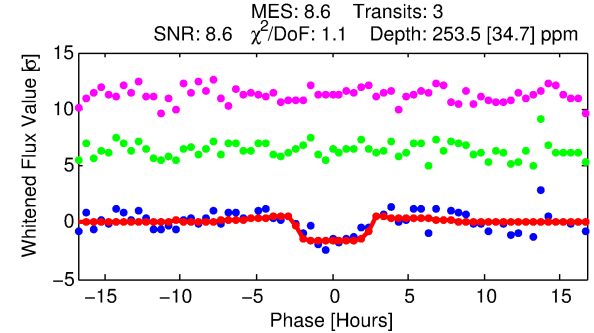
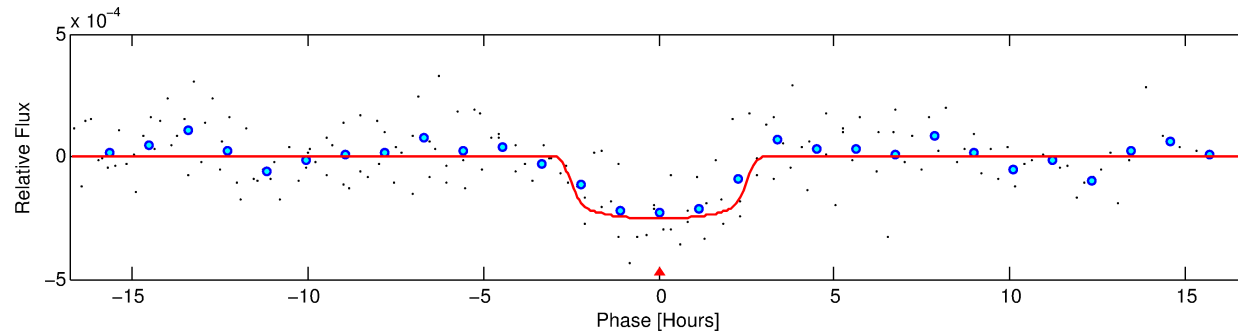
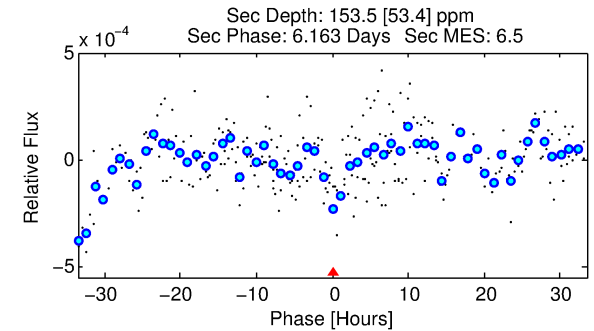
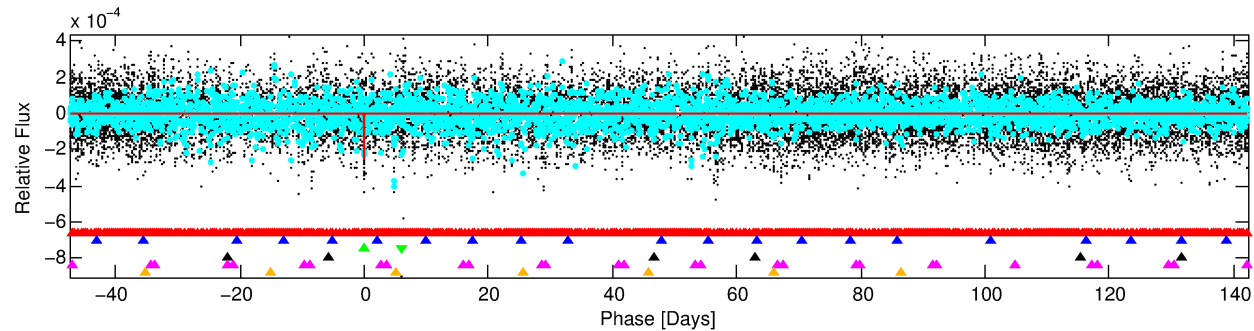
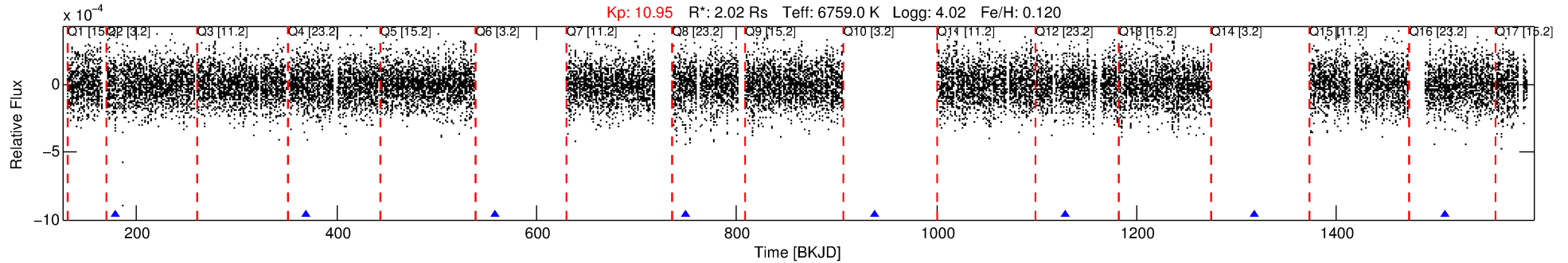
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005460434-03

No Significant Match Found

DV One-Page Summary

KIC: 5460434 Candidate: 3 of 6 Period: 189.816 d



DV Fit Results:

Period = 189.81560 [0.00193] d
Epoch = 179.5397 [0.0088] BKJD
Rp/R* = 0.0173 [0.0026]
a/R* = 114.60 [84.19]
b = 0.92 [0.13]
Seff = 13.63 [3.66]
Teq = 490 [33] K
Rp = 3.81 [0.97] Re
a = 0.7489 [0.1324] AU
Ag = 3269.72 [1746.73] [1.87σ]
Teff = 5728 [668] K [7.83σ]

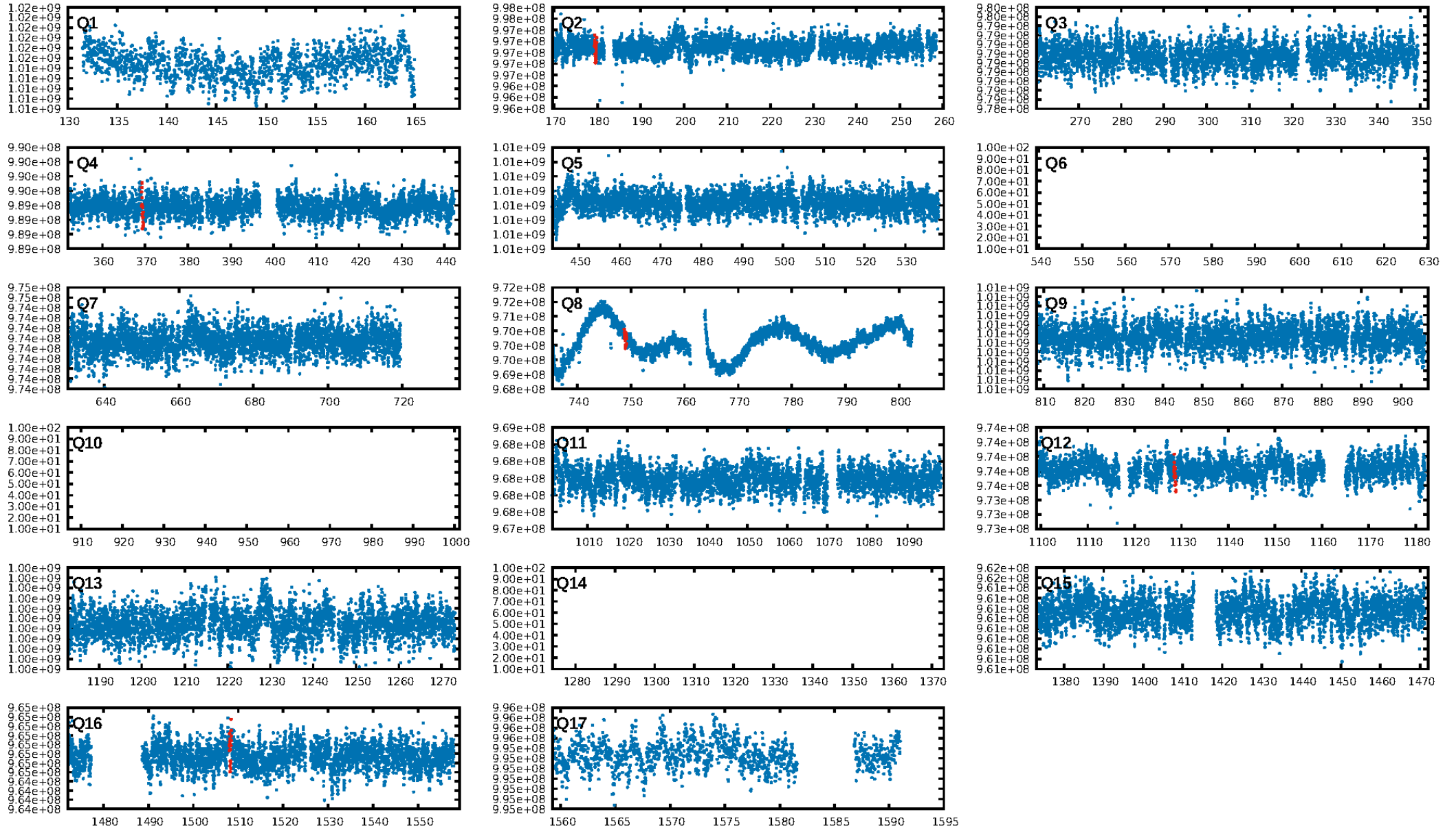
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [474.06σ]
LongPeriod-sig: 100.0% [70.71σ]
ModelChiSquare2-sig: 83.8%
ModelChiSquareGof-sig: 61.9%
Bootstrap-pfa: 2.41e-10
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 5.231
Centroid-sig: N/A
Centroid-so: 0.409 arcsec [0.66σ]
OotOffset-rm: 0.698 arcsec [0.82σ]
KicOffset-rm: 0.656 arcsec [0.76σ]
OotOffset-st: 1/0/3/0 [4]
KicOffset-st: 1/0/3/0 [4]
DiffImageQuality-fgm: 1.00 [4/4]
DiffImageOverlap-fno: 0.60 [3/5]

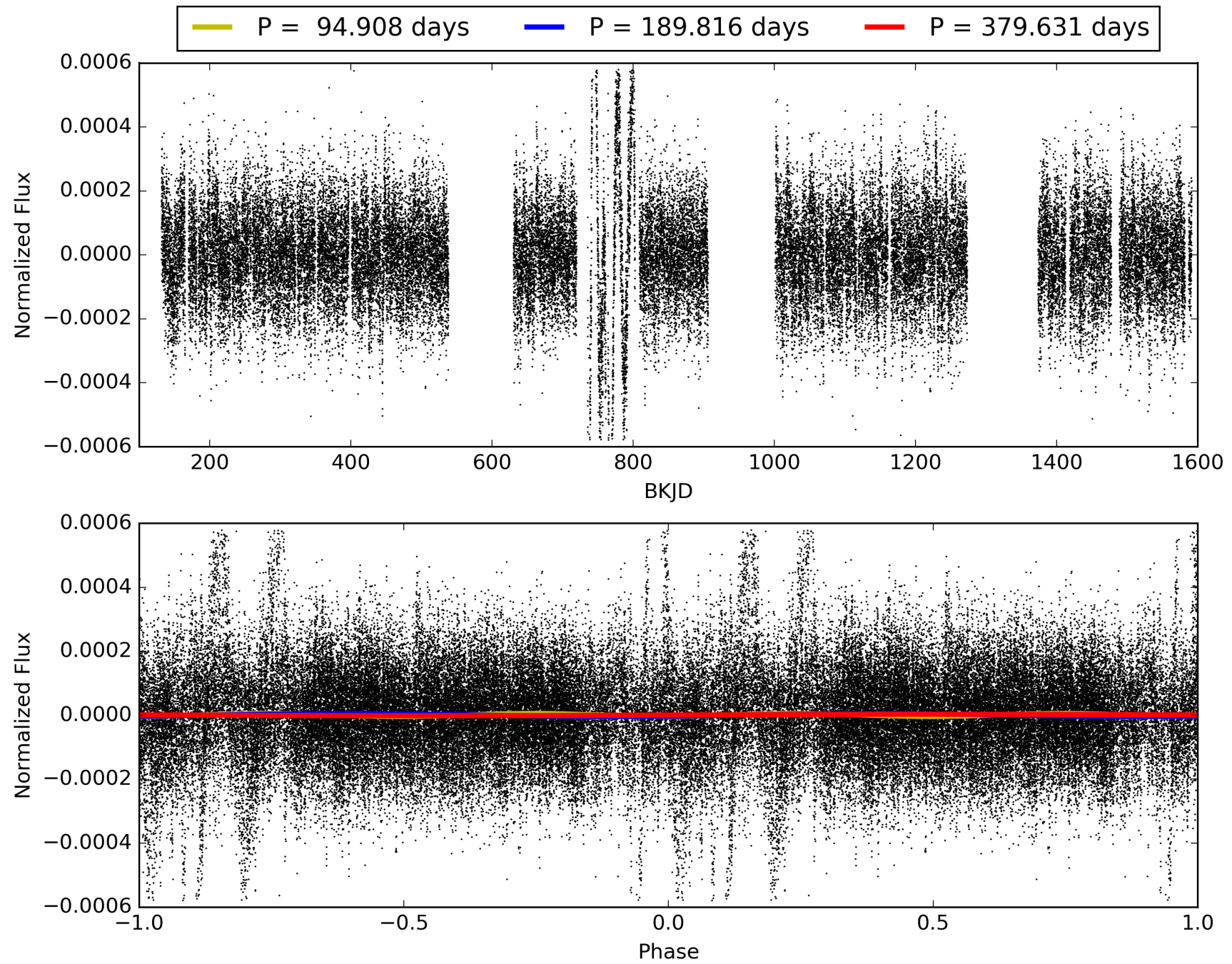
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 00:56:30 Z

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TCE 005460434-03, PDC Light Curves

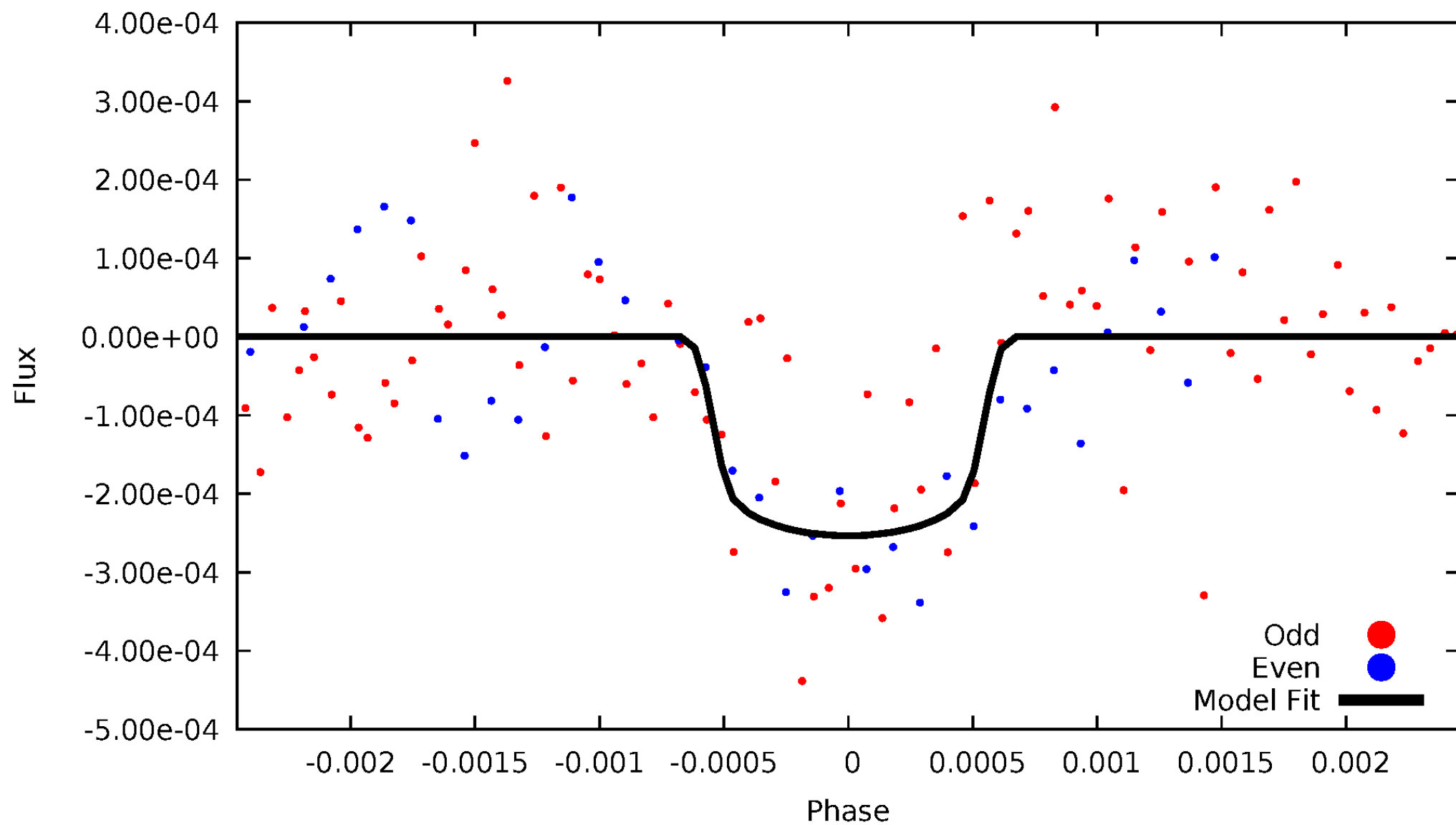


TCE 005460434-03



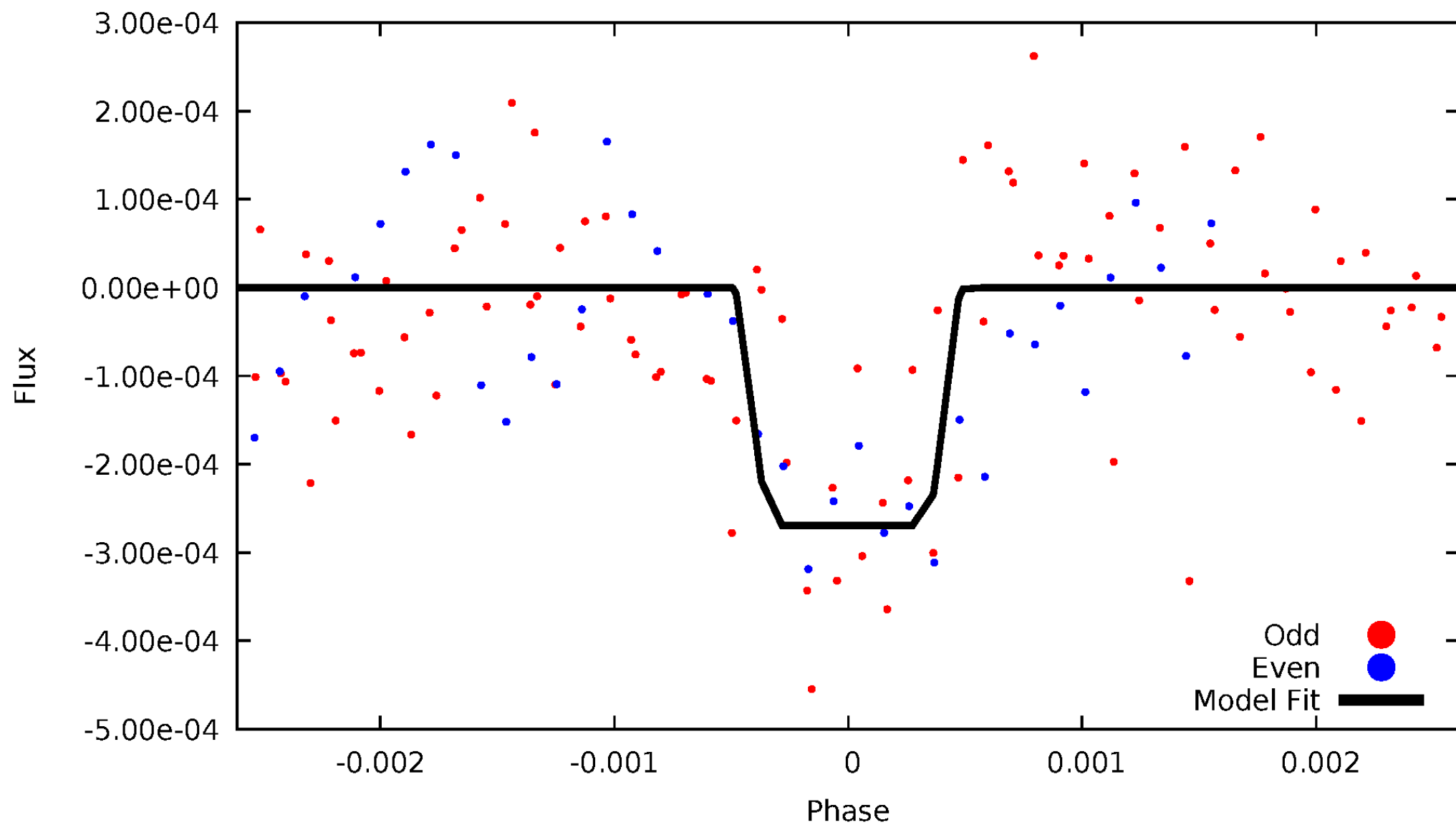
DV Odd/Even

TCE 005460434-03



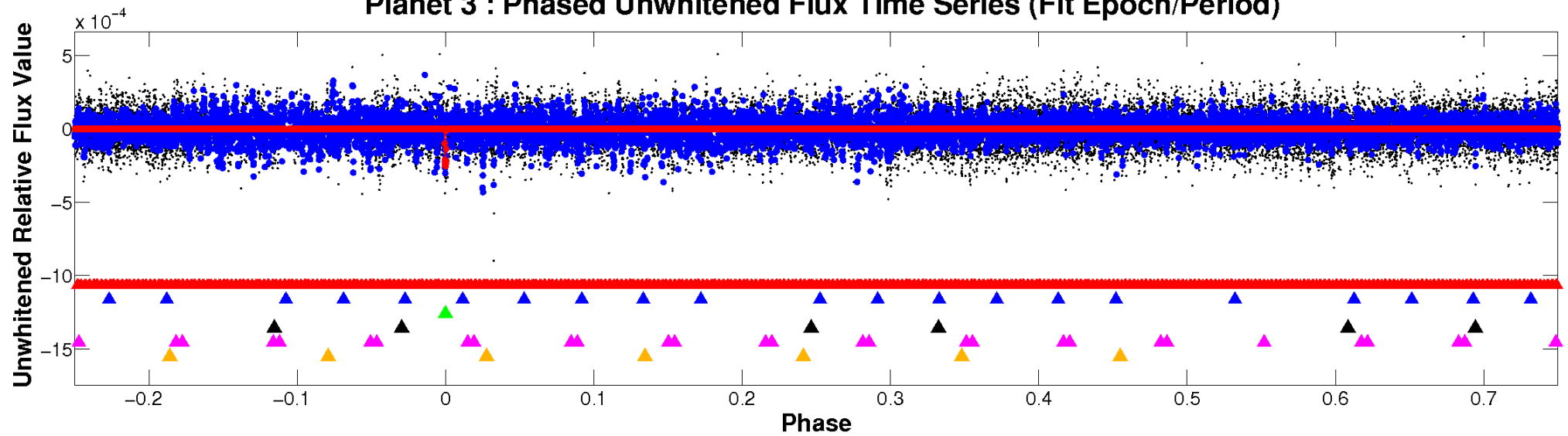
ALT Odd/Even

TCE 005460434-03

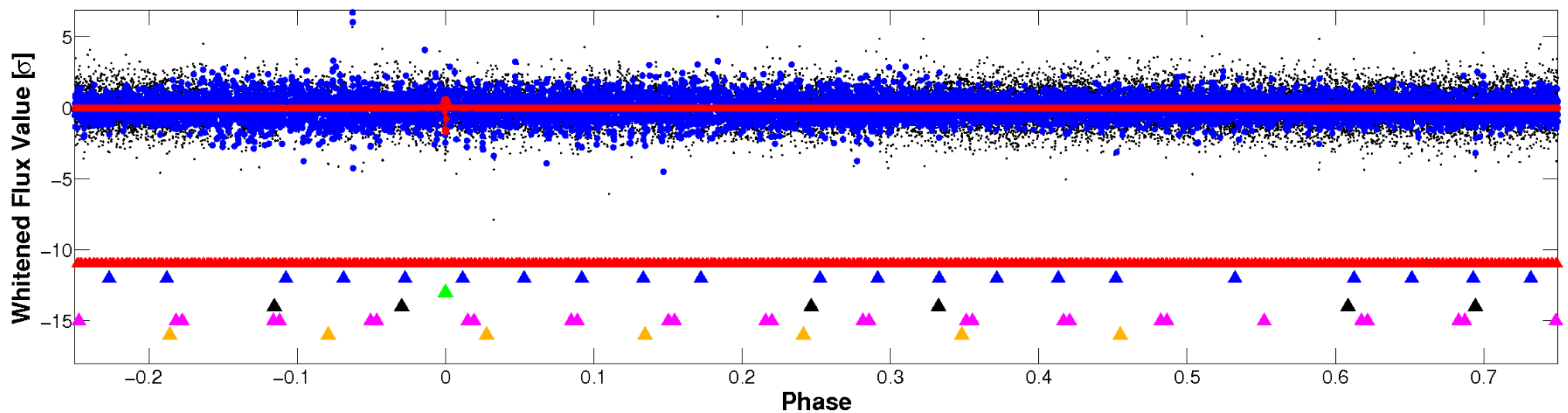


Non-Whitened Vs. Whitened Light Curve

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

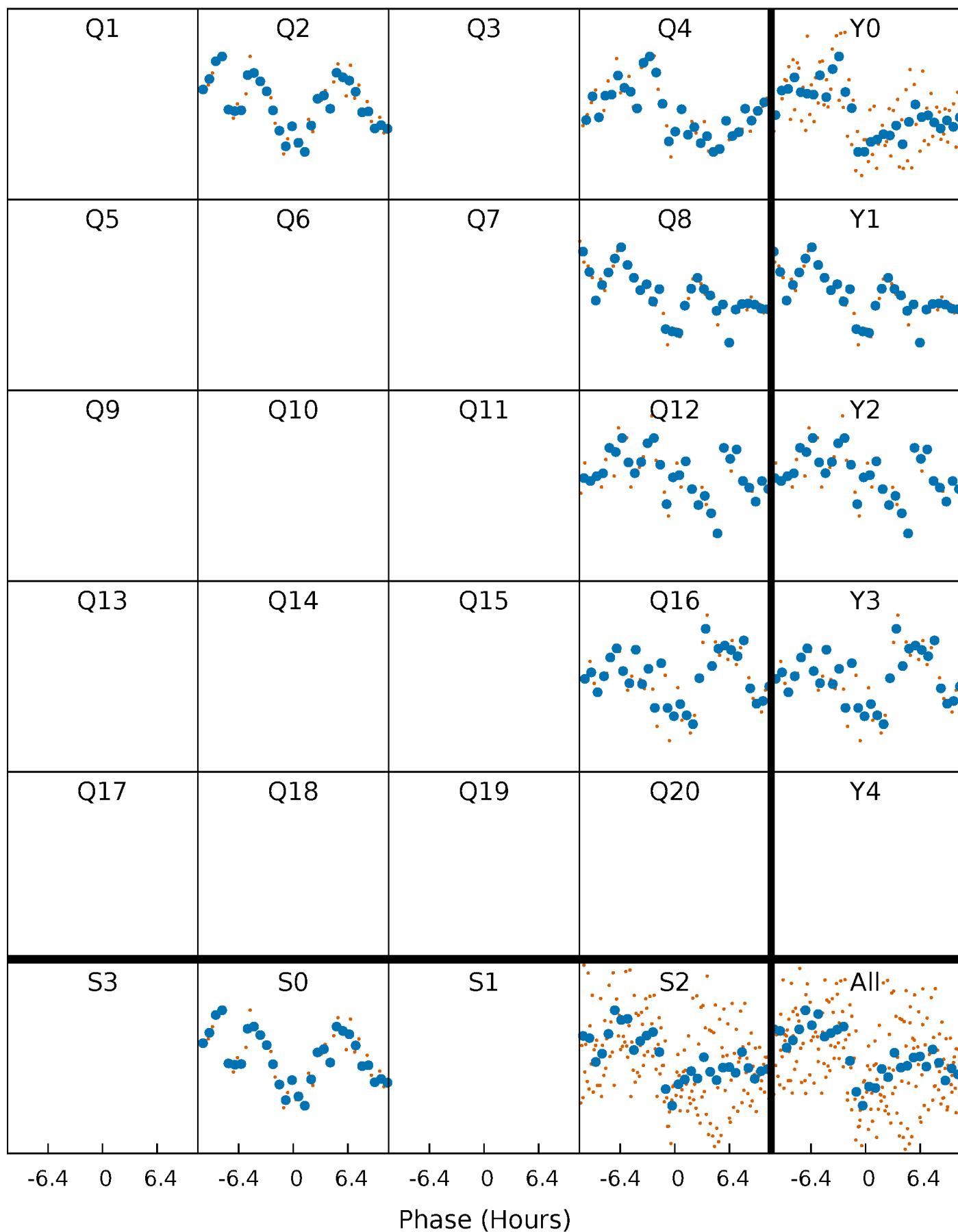


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



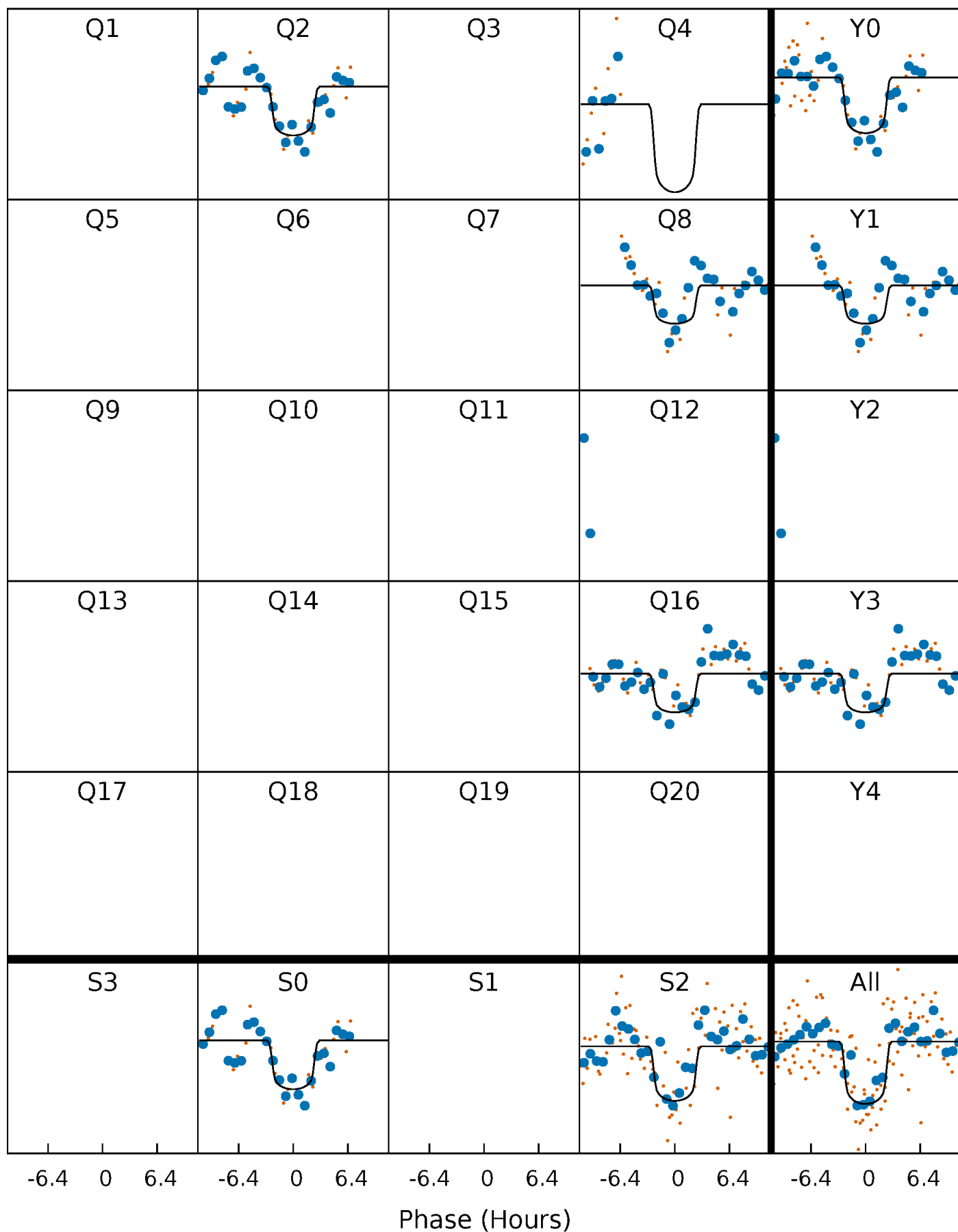
PDC Quarter-Phased Transit Curves

TCE 005460434-03 P=189.815596 Days $T_0=179.539702$ (BKJD)



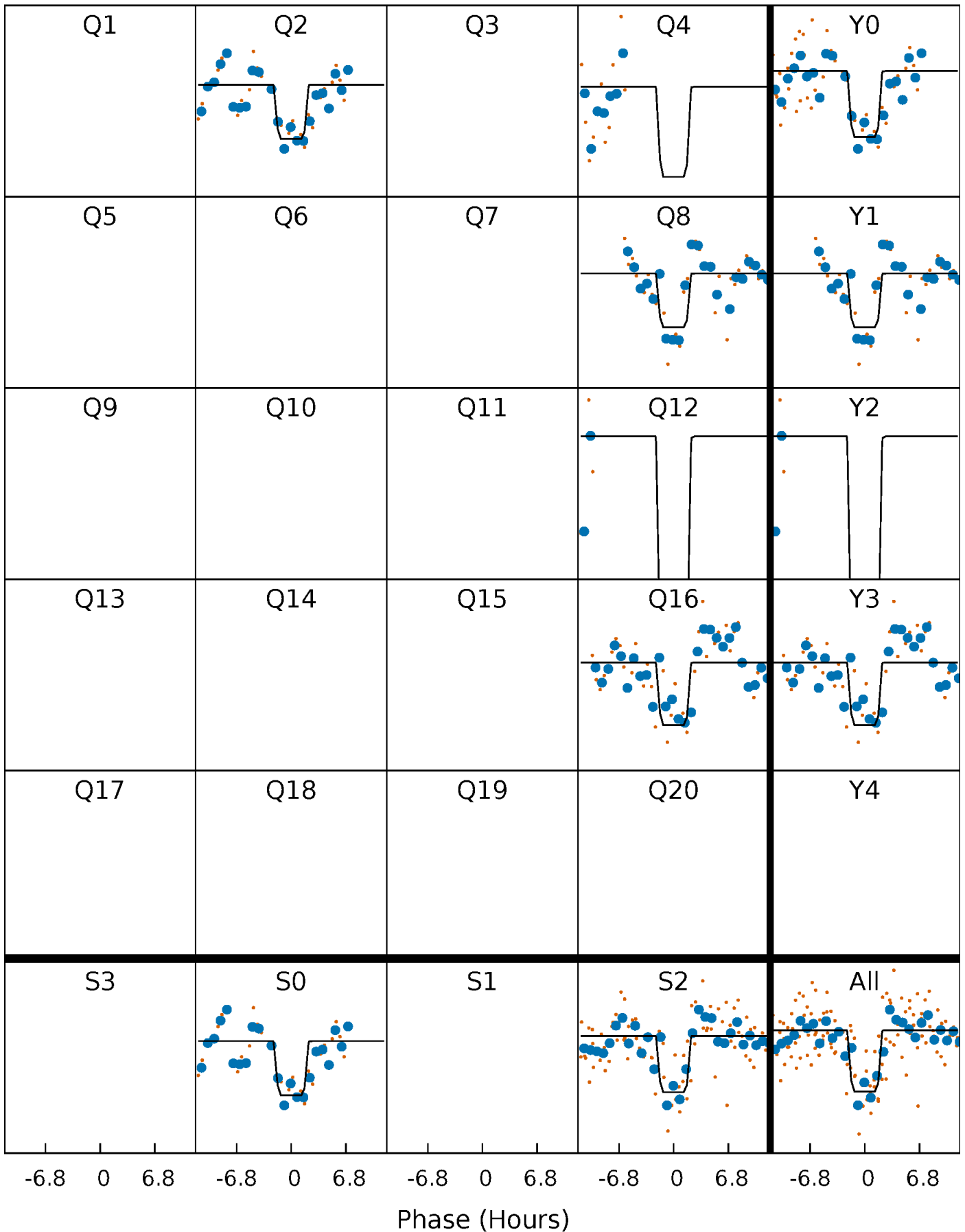
DV Quarter-Phased Transit Curves

TCE 005460434-03 $P=189.815596$ Days $T_0=179.539702$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

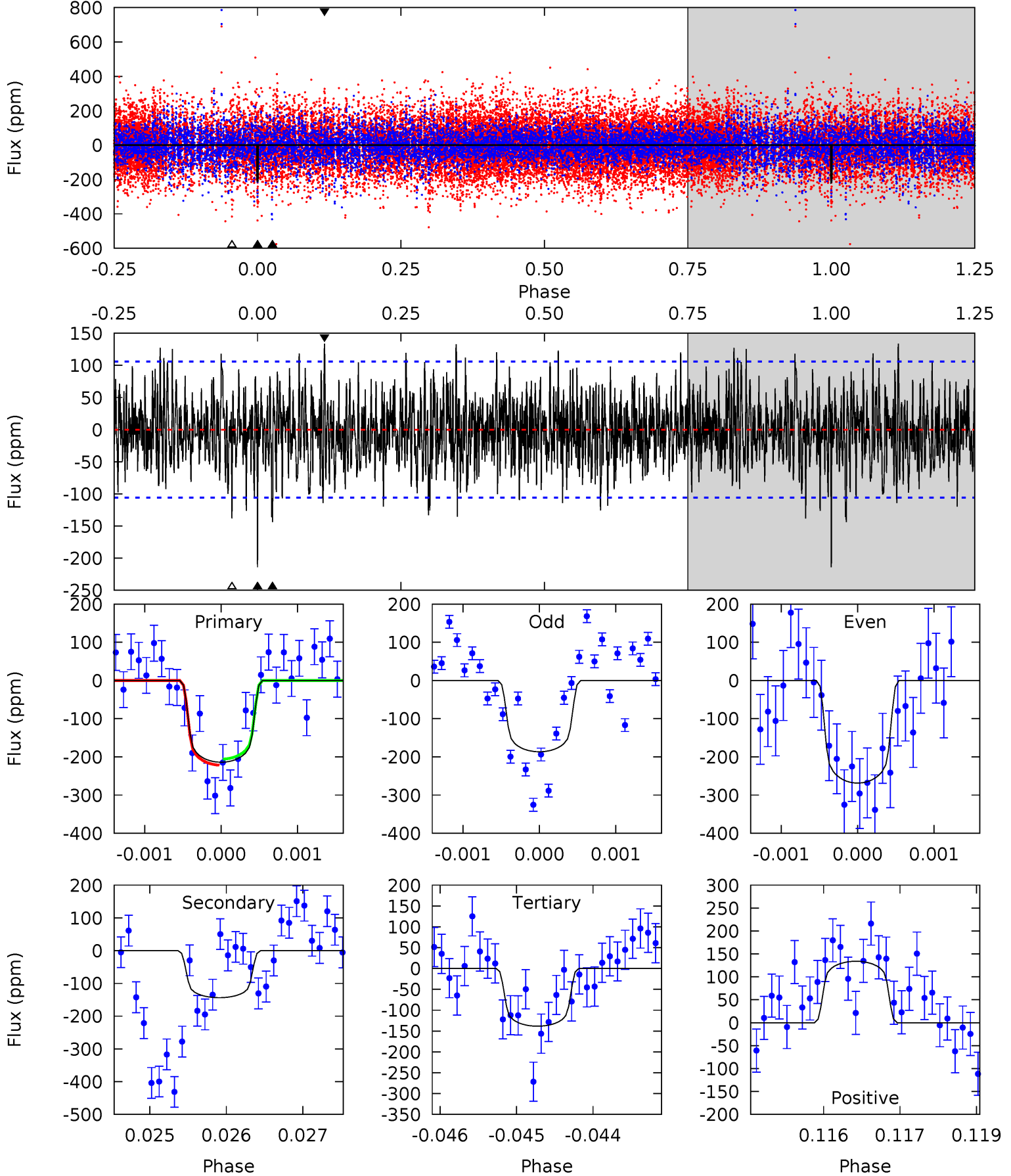
TCE 005460434-03 P=189.818770 Days $T_0=179.524563$ (BKJD)



DV Model-Shift Uniqueness Test

005460434-03, P = 189.815596 Days, E = 179.539702 Days

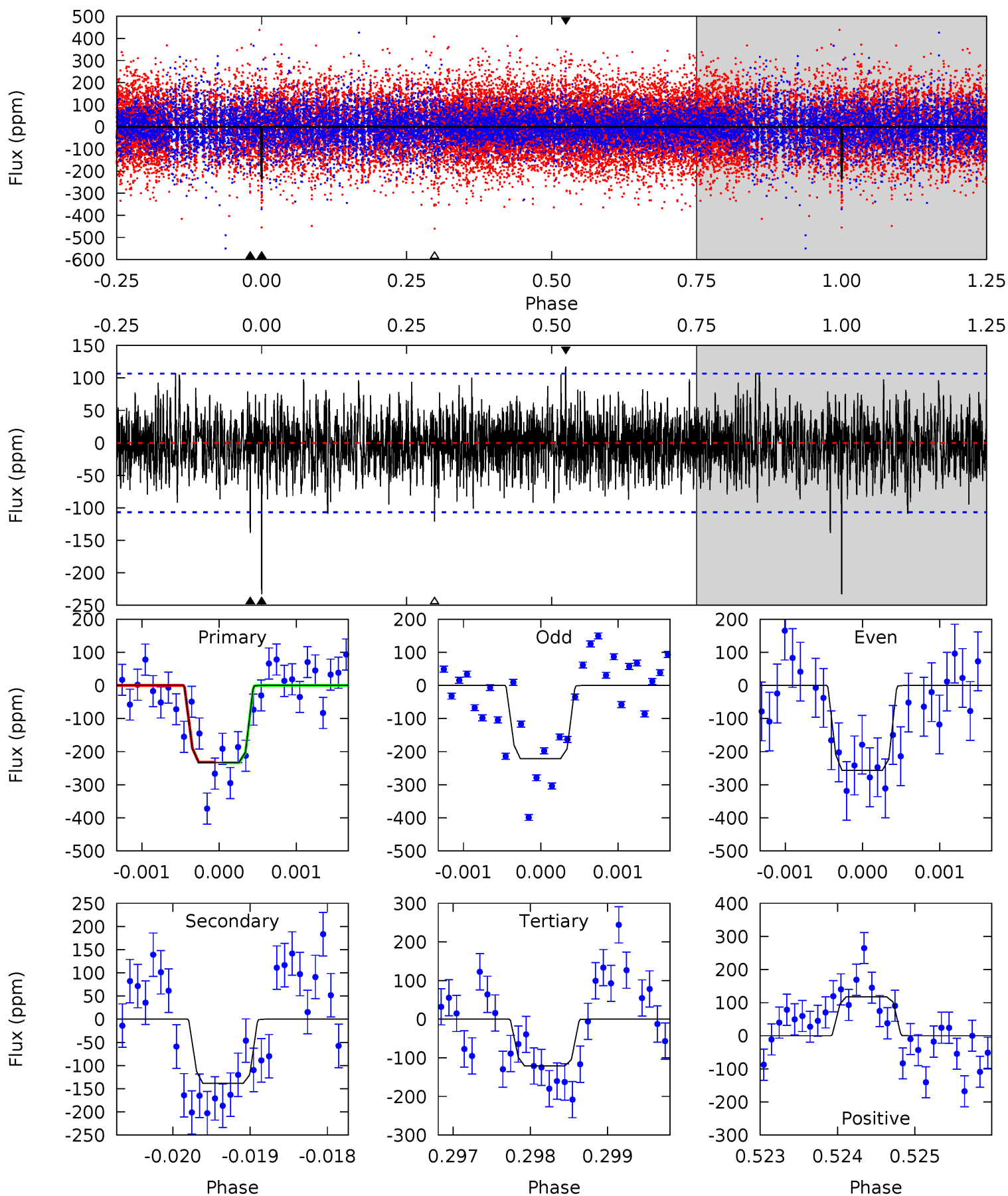
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.9	7.34	7.07	6.84	5.41	3.23	2.12	3.86	4.09	0.27	0.50	1.96	1.12	0.38	0.40



Alt Model-Shift Uniqueness Test

005460434-03, P = 189.818770 Days, E = 179.524563 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.9	7.07	6.16	6.01	5.44	3.27	1.64	5.72	5.88	0.90	1.06	0.86	0.95	0.34	0.04



Stellar Parameters For KIC 005460434

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6759^{+81}_{-81}	$4.018^{+0.148}_{-0.121}$	$0.120^{+0.150}_{-0.150}$	$2.022^{+0.411}_{-0.374}$	$1.552^{+0.149}_{-0.134}$	$0.264^{+0.192}_{-0.094}$
	+1%/-1%	+4%/-3%	+125%/-125%	+20%/-18%	+10%/-9%	+73%/-36%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 005460434-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-144 ± 20	$3.76^{+0.81}_{-0.72}$	683^{+33}_{-32}	5645^{+497}_{-394}	3126^{+1576}_{-1041}
Alt.	-139 ± 20	$3.58^{+0.75}_{-0.67}$	682^{+36}_{-35}	5691^{+617}_{-427}	3298^{+1961}_{-1081}

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 $A_{obs} \gg 1.0$

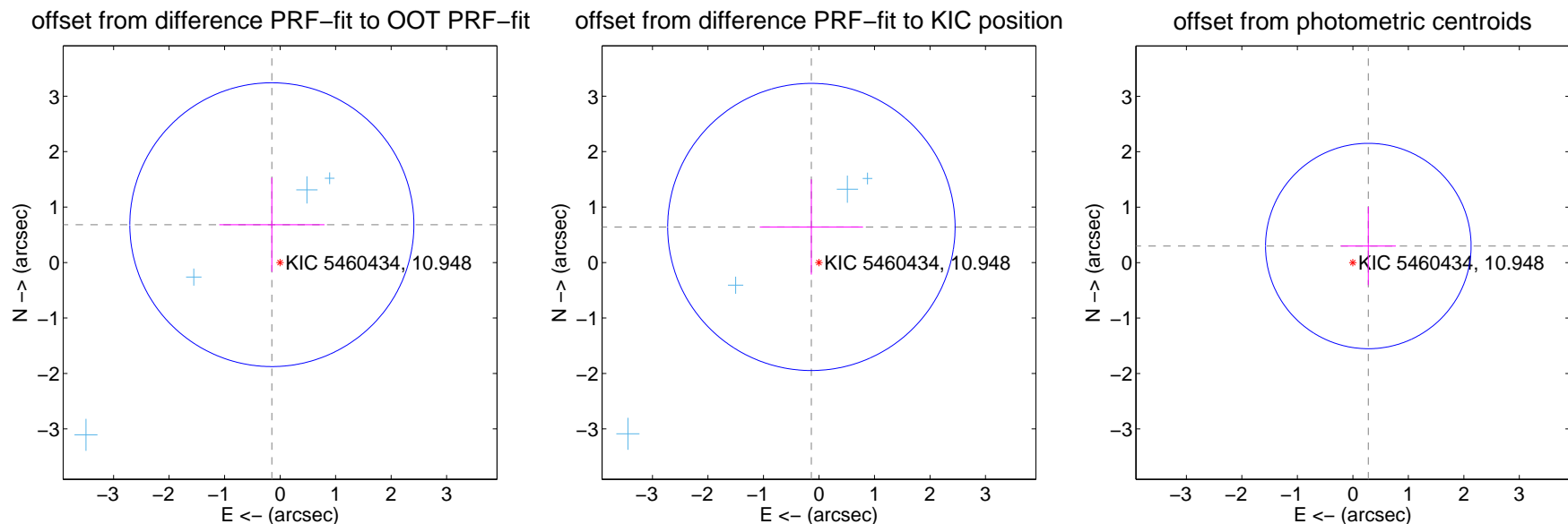
DV Centroid Data

Supplemental centroid analysis for 005460434-03. **Kepler magnitude: 10.95.** Transit SNR 8.64

There are 4 quarters with good PRF difference image offsets

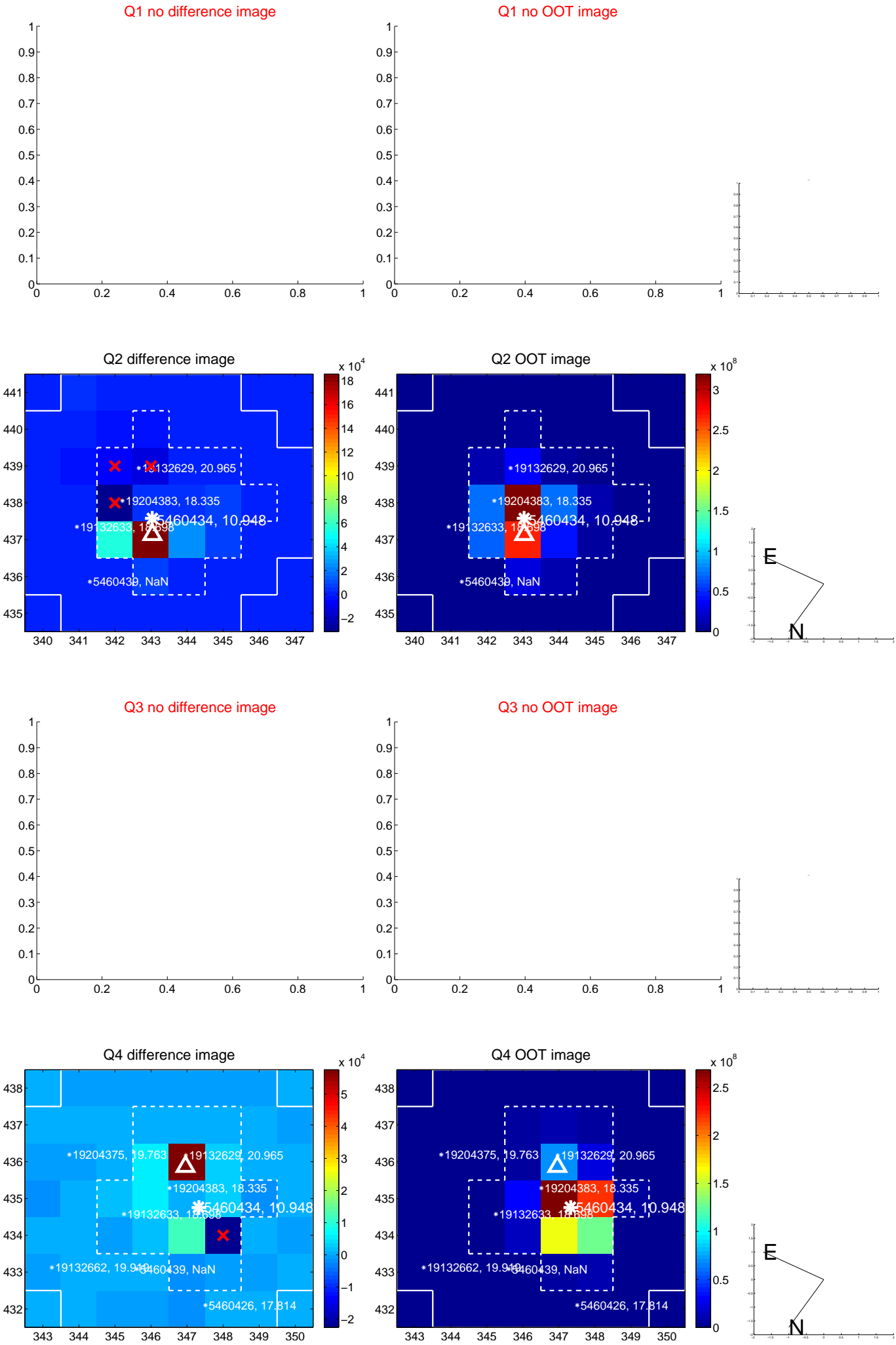
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.698 ± 0.853	0.82	0.149 ± 0.948	0.682 ± 0.848
PRF-fit source offset from KIC position	0.656 ± 0.863	0.76	0.137 ± 0.929	0.642 ± 0.860
photometric centroid source offset	0.41 ± 0.62	0.66	-0.28 ± 0.50	0.30 ± 0.71

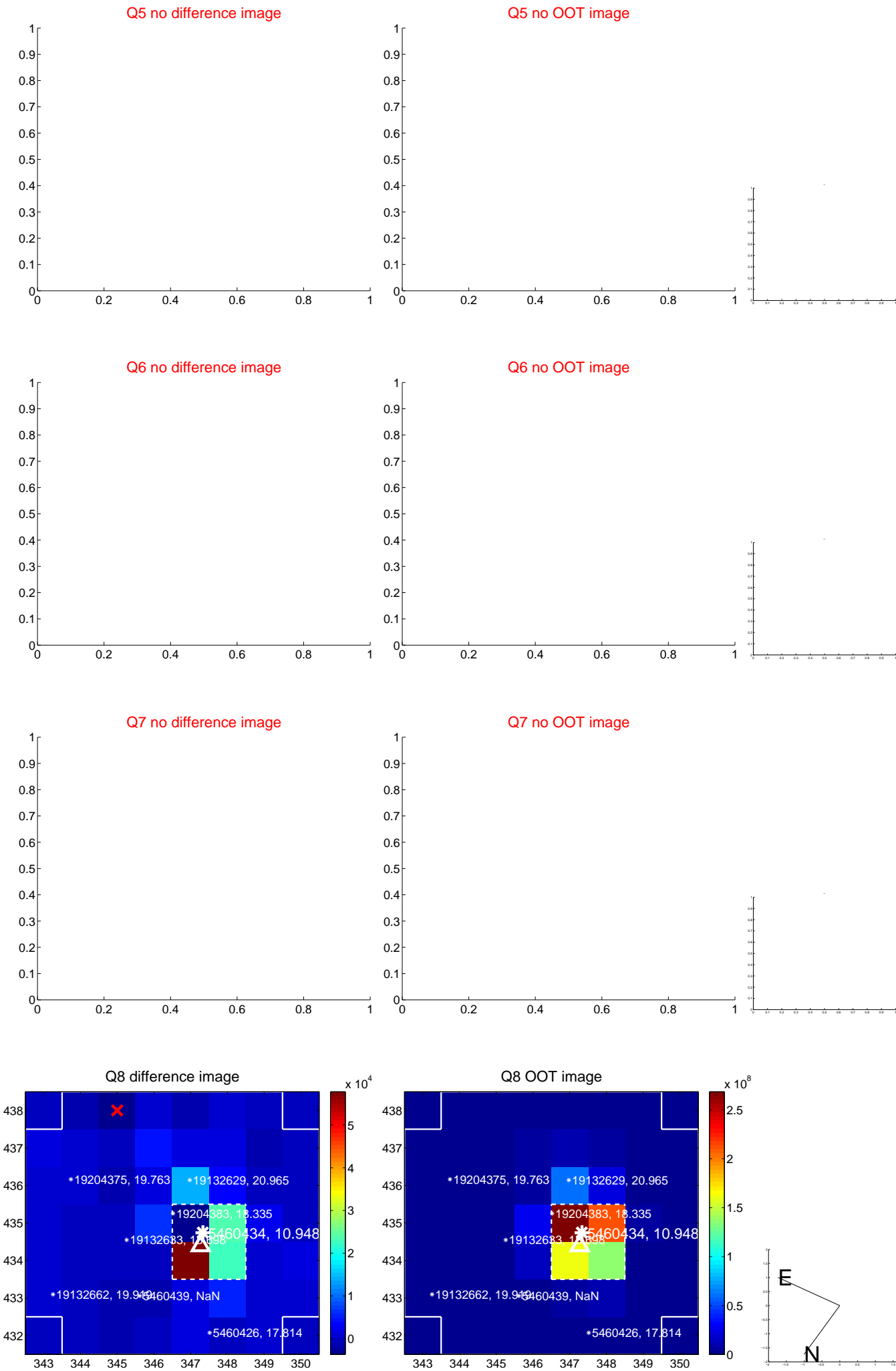


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

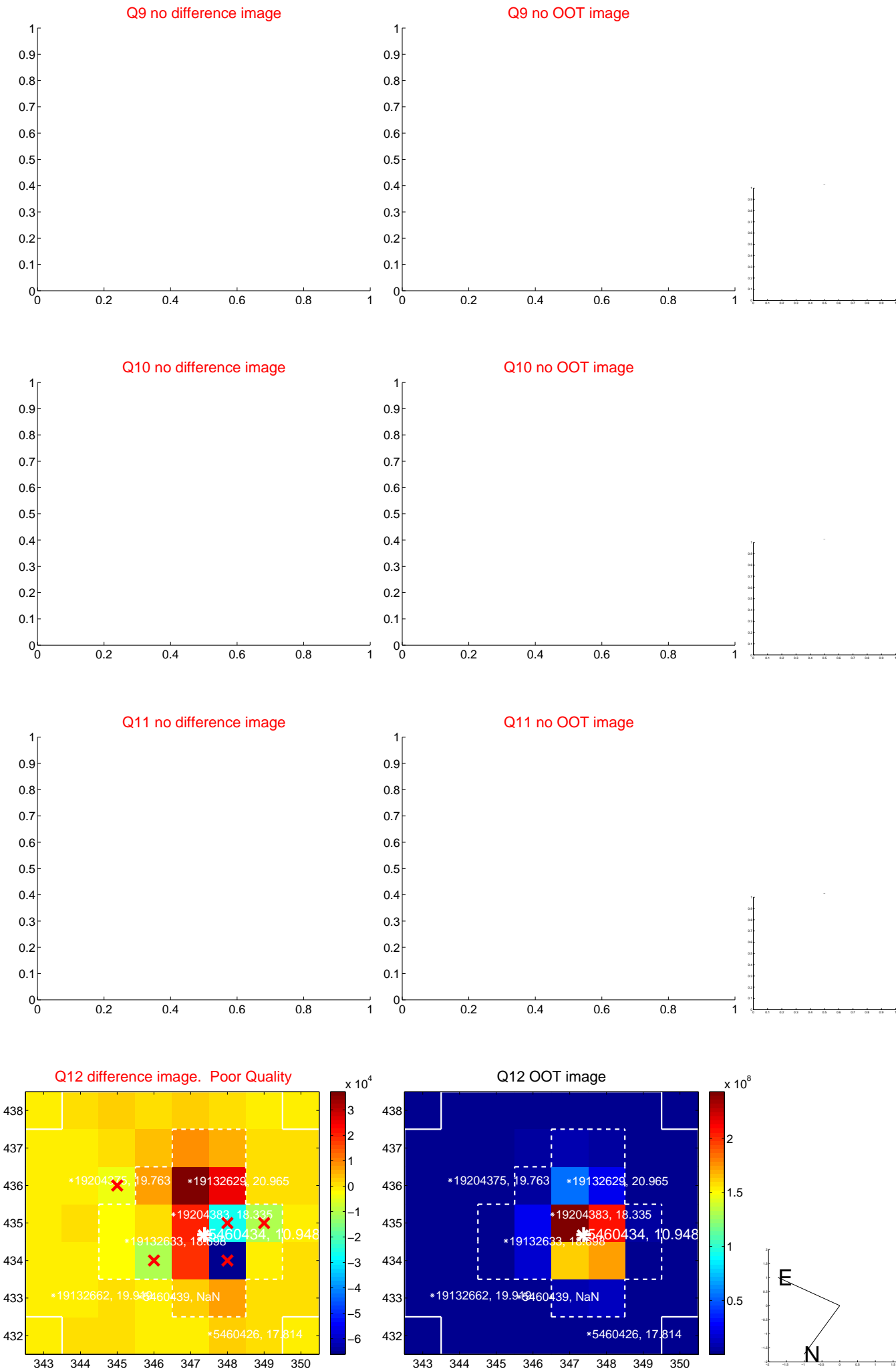
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



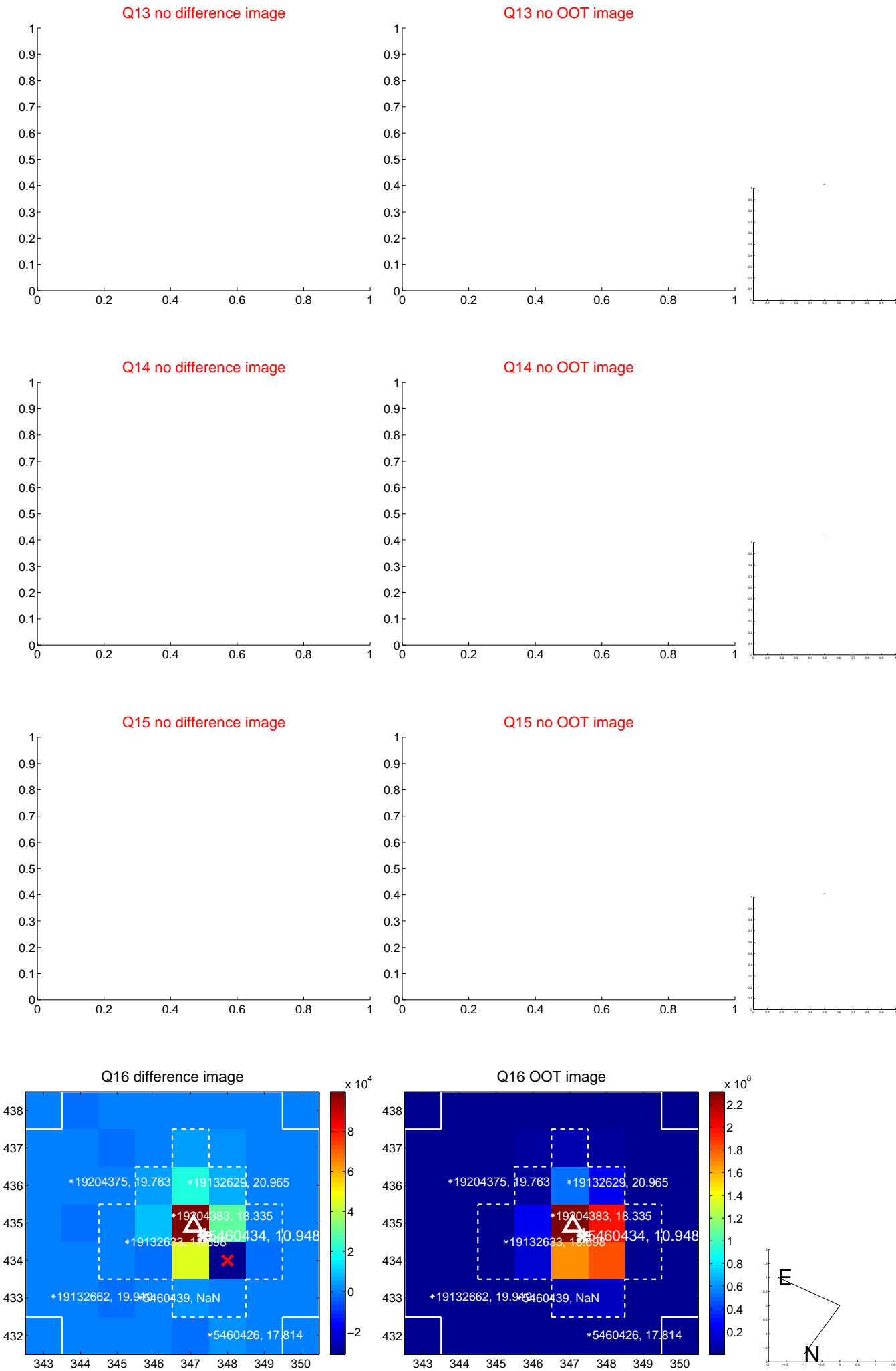
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



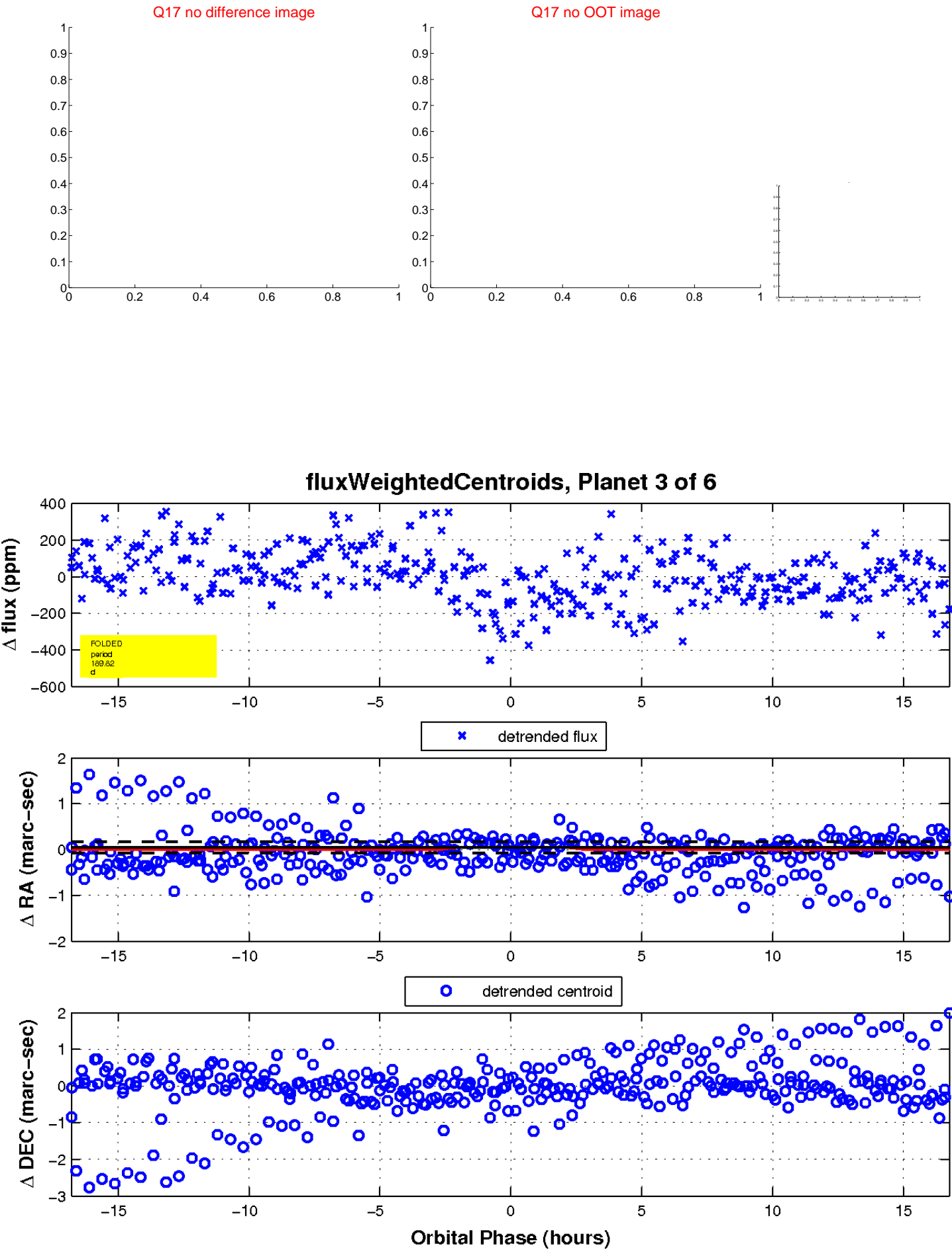
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



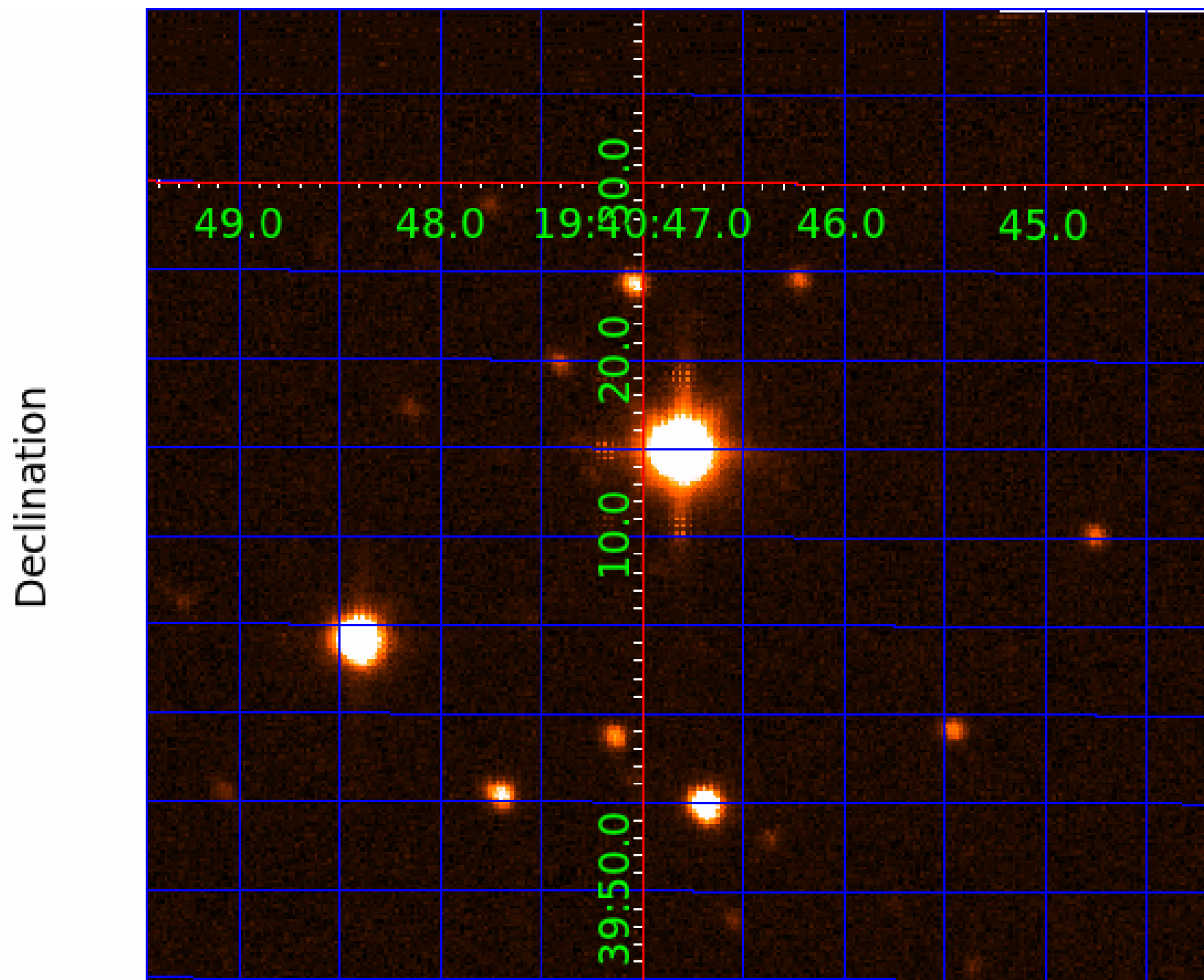
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 005460434

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})
005460434-01	OBS	No	2.079770	132.550883	12.0	8.607	8.2	5.0	2.02	6759	0.74	5600.90
005460434-02	OBS	No	68.353104	166.499551	177.5	2.554	8.7	8.5	2.02	6759	2.96	53.20
005460434-03	OBS	No	189.815596	179.539702	253.5	5.593	8.6	8.6	2.02	6759	3.81	13.63
005460434-04	OBS	No	258.520391	157.635494	203.8	8.126	8.2	7.0	2.02	6759	3.20	9.03
005460434-05	OBS	7729.01	50.564437	145.860981	131.0	5.606	8.2	8.5	2.02	6759	2.65	79.52
005460434-06	OBS	No	210.087055	144.260167	176.3	4.007	7.6	7.4	2.02	6759	3.04	11.90

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005460434-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_SATURATED
005460434-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
005460434-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
005460434-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
005460434-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_ALT—CENT_SATURATED
005460434-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED

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

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

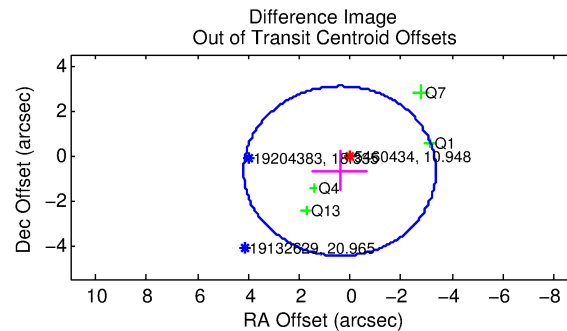
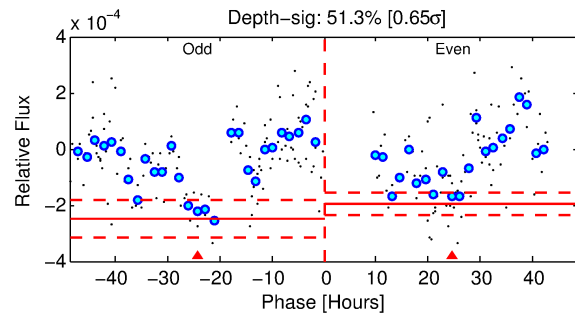
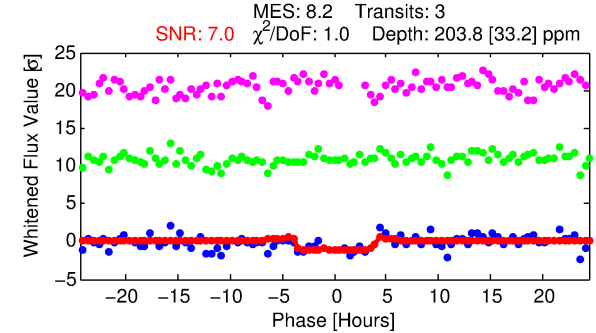
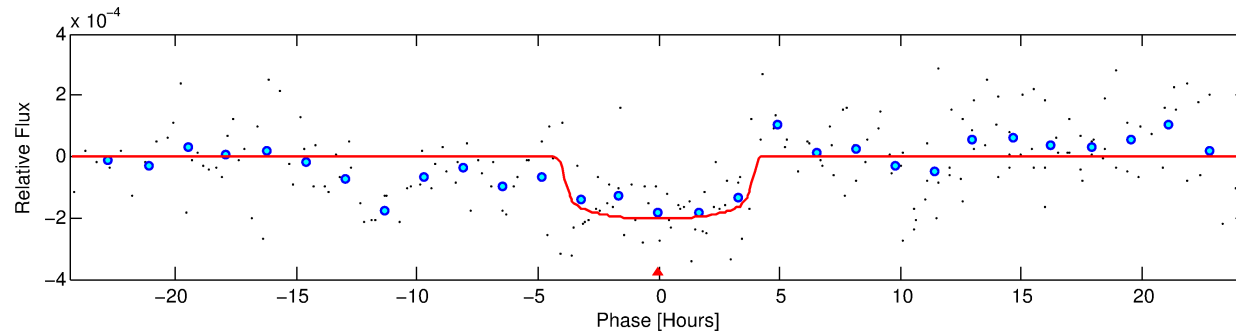
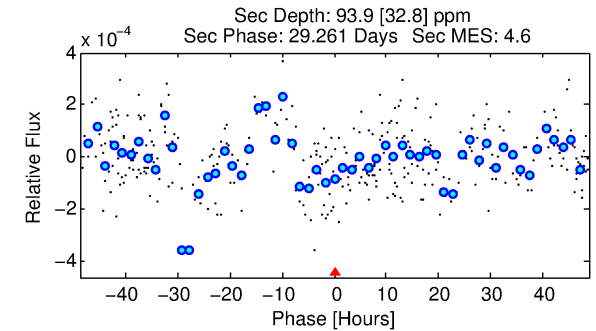
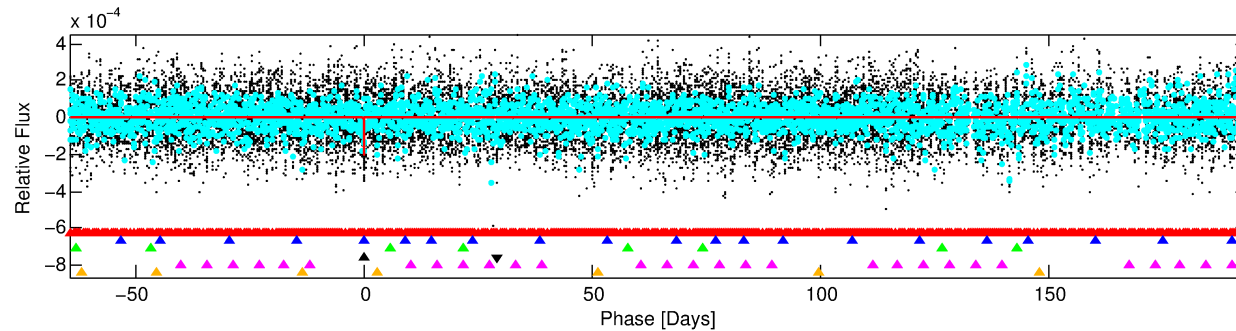
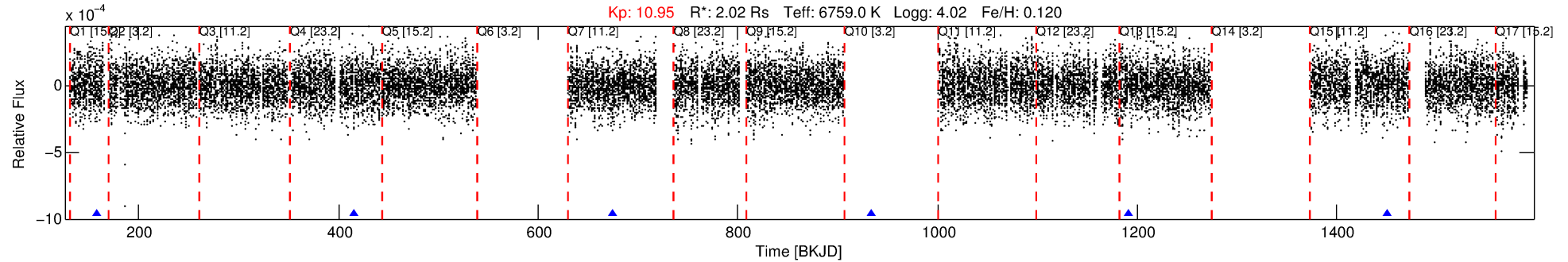
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005460434-04

No Significant Match Found

DV One-Page Summary

KIC: 5460434 Candidate: 4 of 6 Period: 258.520 d



DV Fit Results:

Period = 258.52039 [0.00393] d
Epoch = 157.6355 [0.0136] BKJD
Rp/R* = 0.0145 [0.0047]
a/R* = 147.69 [254.87]
b = 0.81 [0.73]
Seff = 9.03 [2.43]
Teq = 442 [30] K
Rp = 3.20 [1.22] Re
a = 0.9202 [0.1627] AU
Ag = 4267.82 [3324.39] [1.28σ]
Teff = 5524 [1014] K [5.01σ]

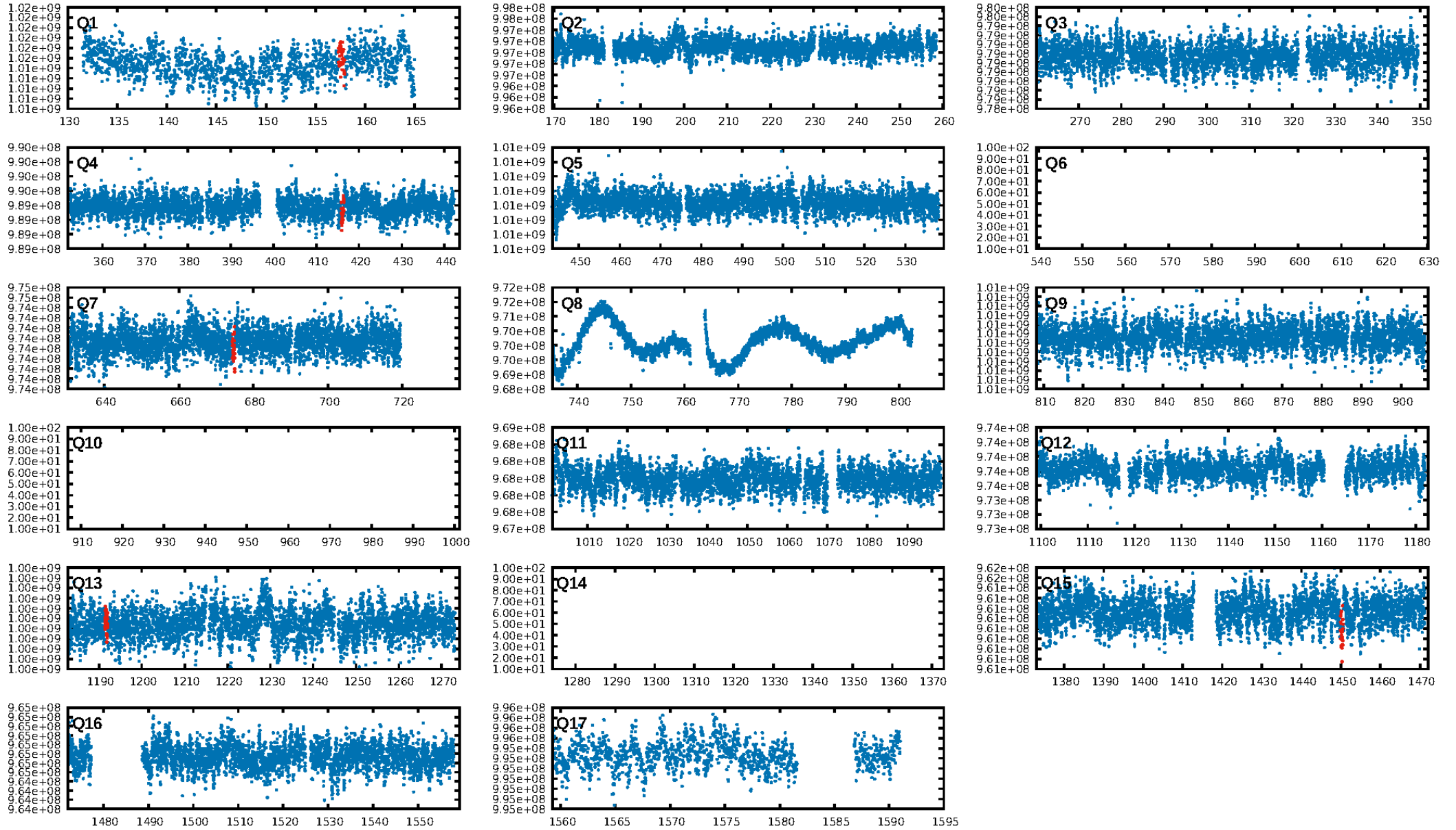
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [128.29σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 18.5%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 1.57e-08
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -1.549
Centroid-sig: N/A
Centroid-so: 0.829 arcsec [1.28σ]
OotOffset-rm: 0.800 arcsec [0.64σ]
KicOffset-rm: 1.157 arcsec [0.77σ]
OotOffset-st: 0/1/1/2 [4]
KicOffset-st: 0/1/1/2 [4]
DiffImageQuality-fgm: 0.50 [2/4]
DiffImageOverlap-fno: 0.00 [0/4]

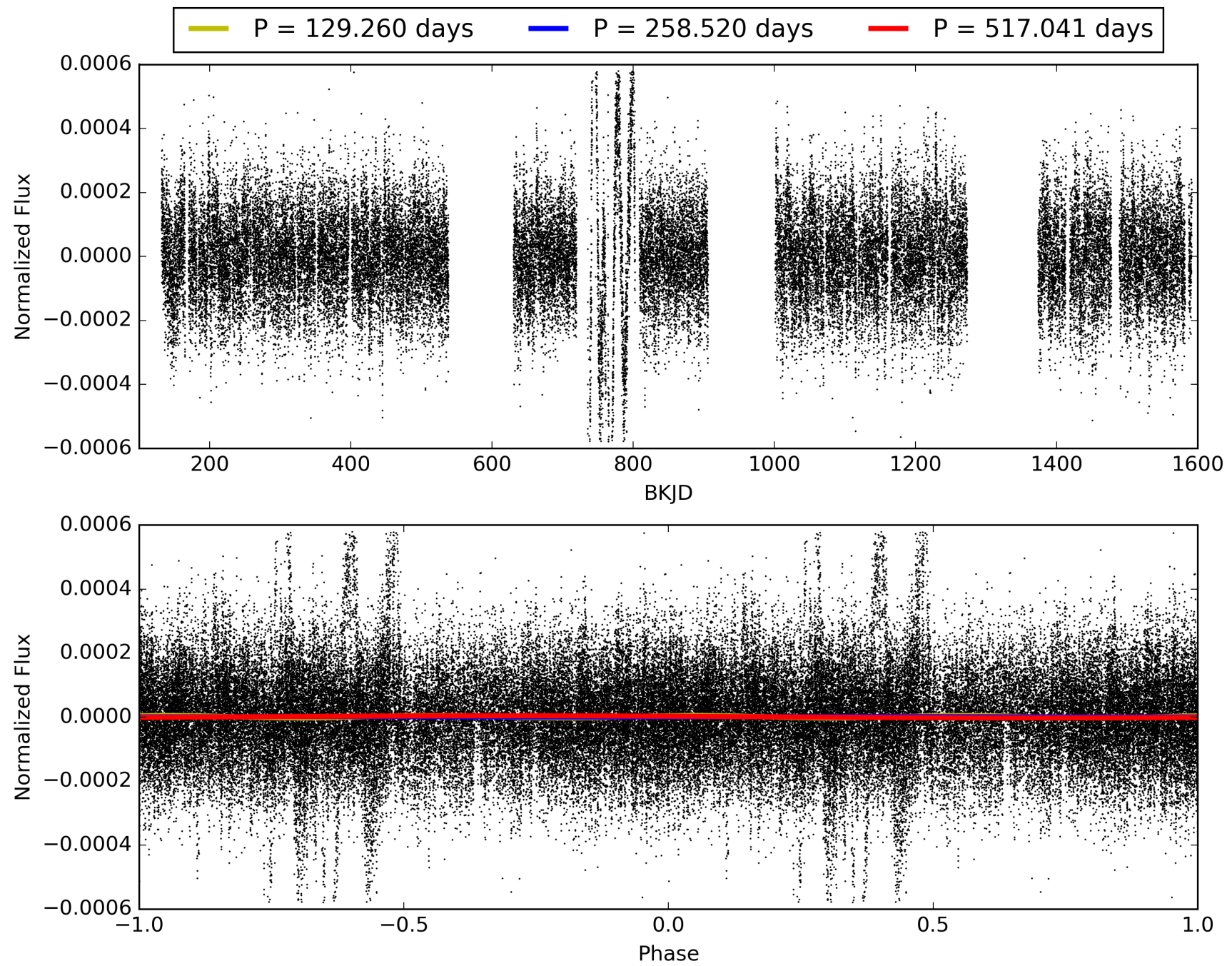
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 00:56:35 Z

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

TCE 005460434-04, PDC Light Curves

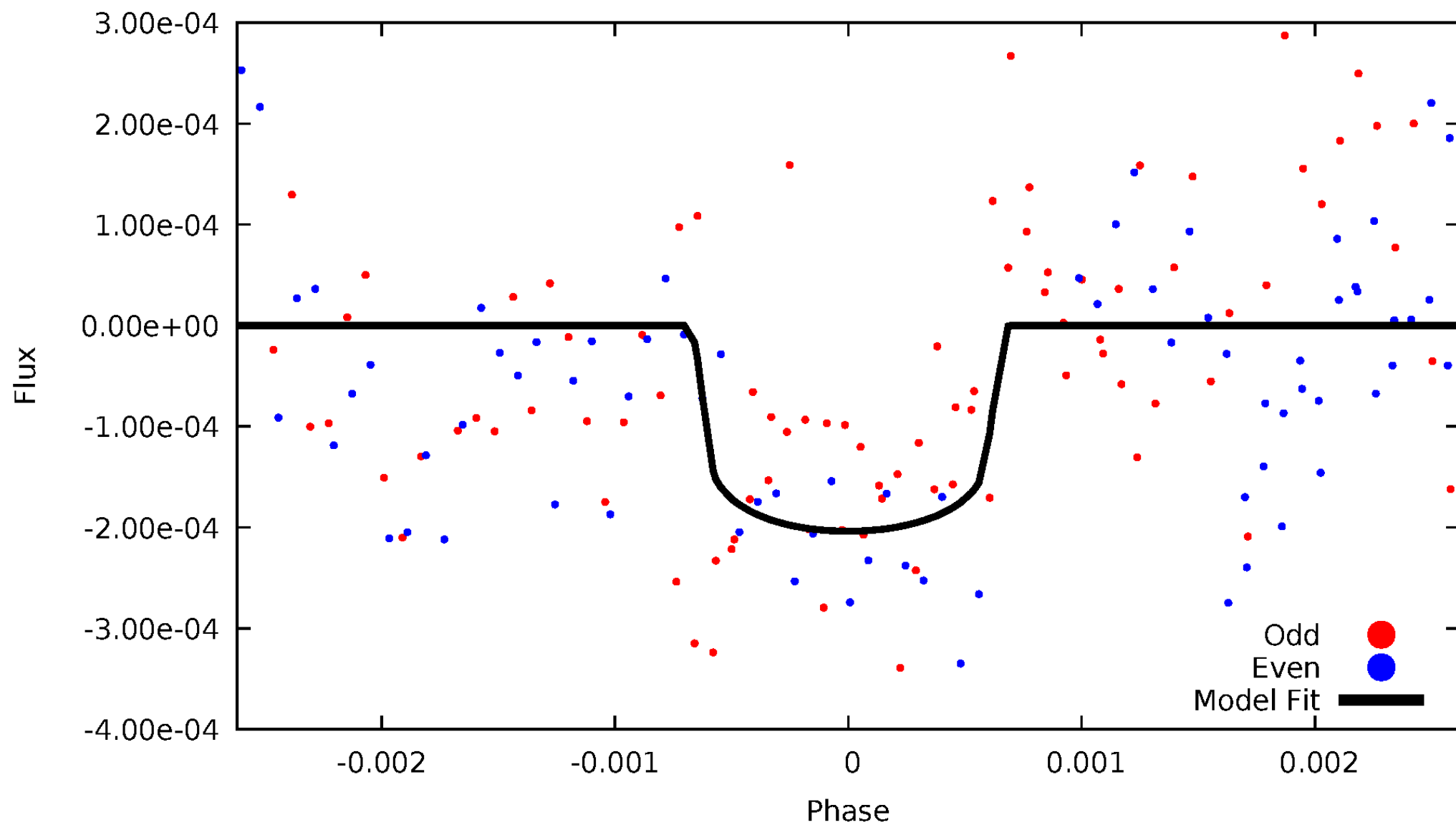


TCE 005460434-04



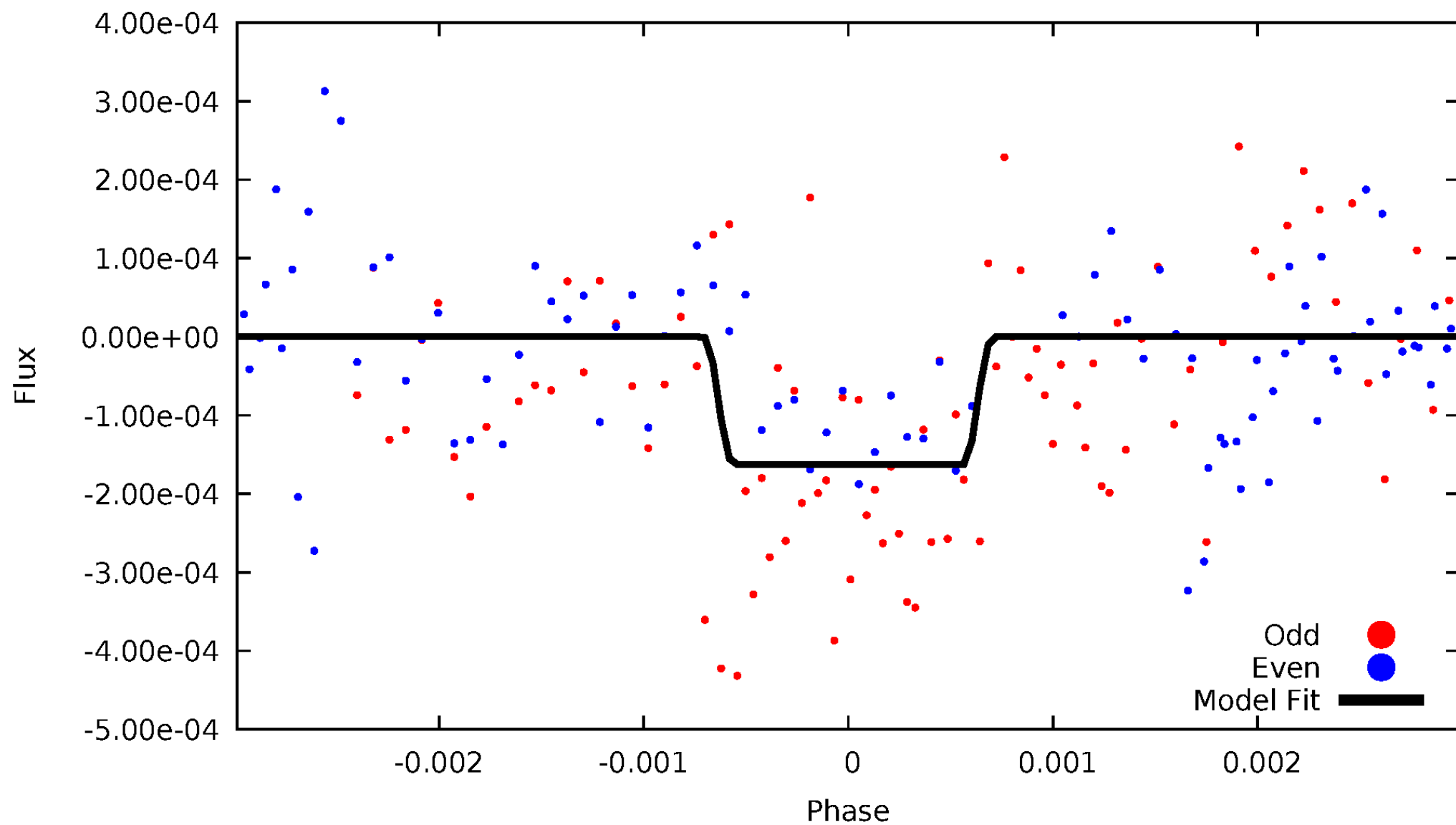
DV Odd/Even

TCE 005460434-04



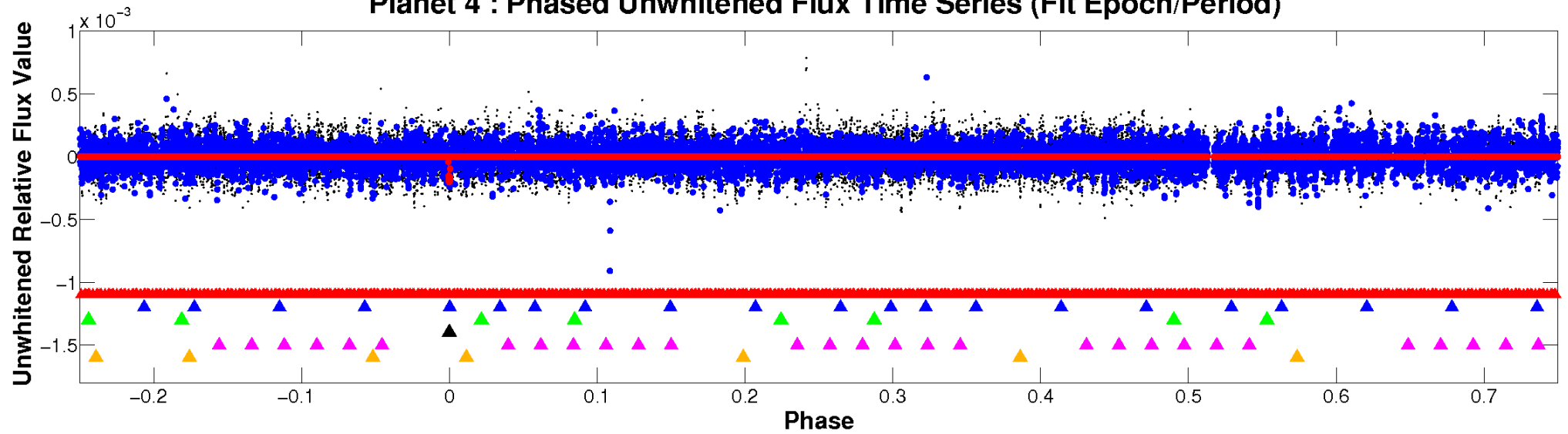
ALT Odd/Even

TCE 005460434-04

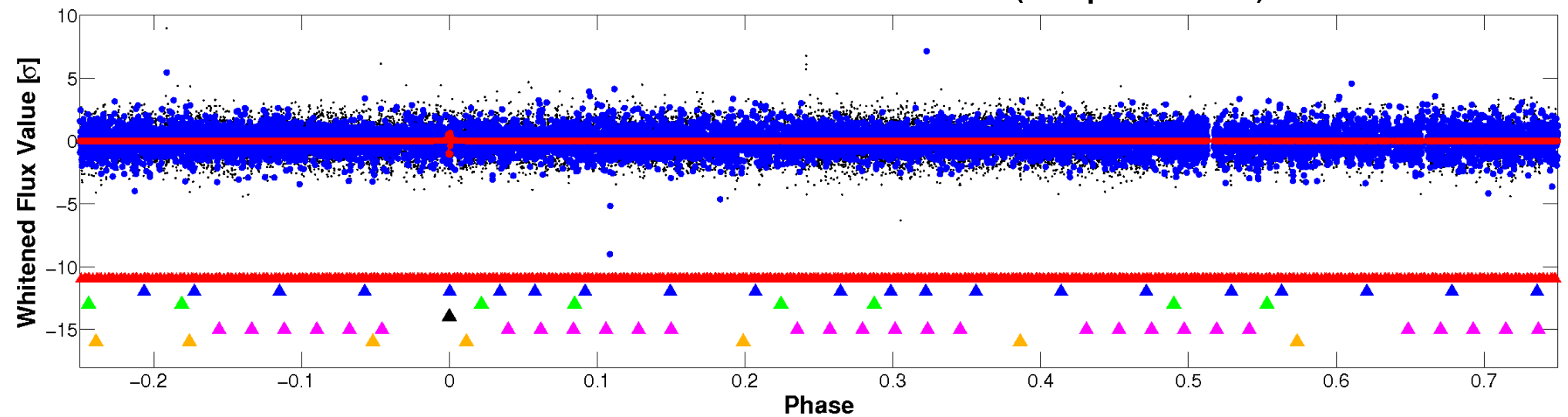


Non-Whitened Vs. Whitened Light Curve

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

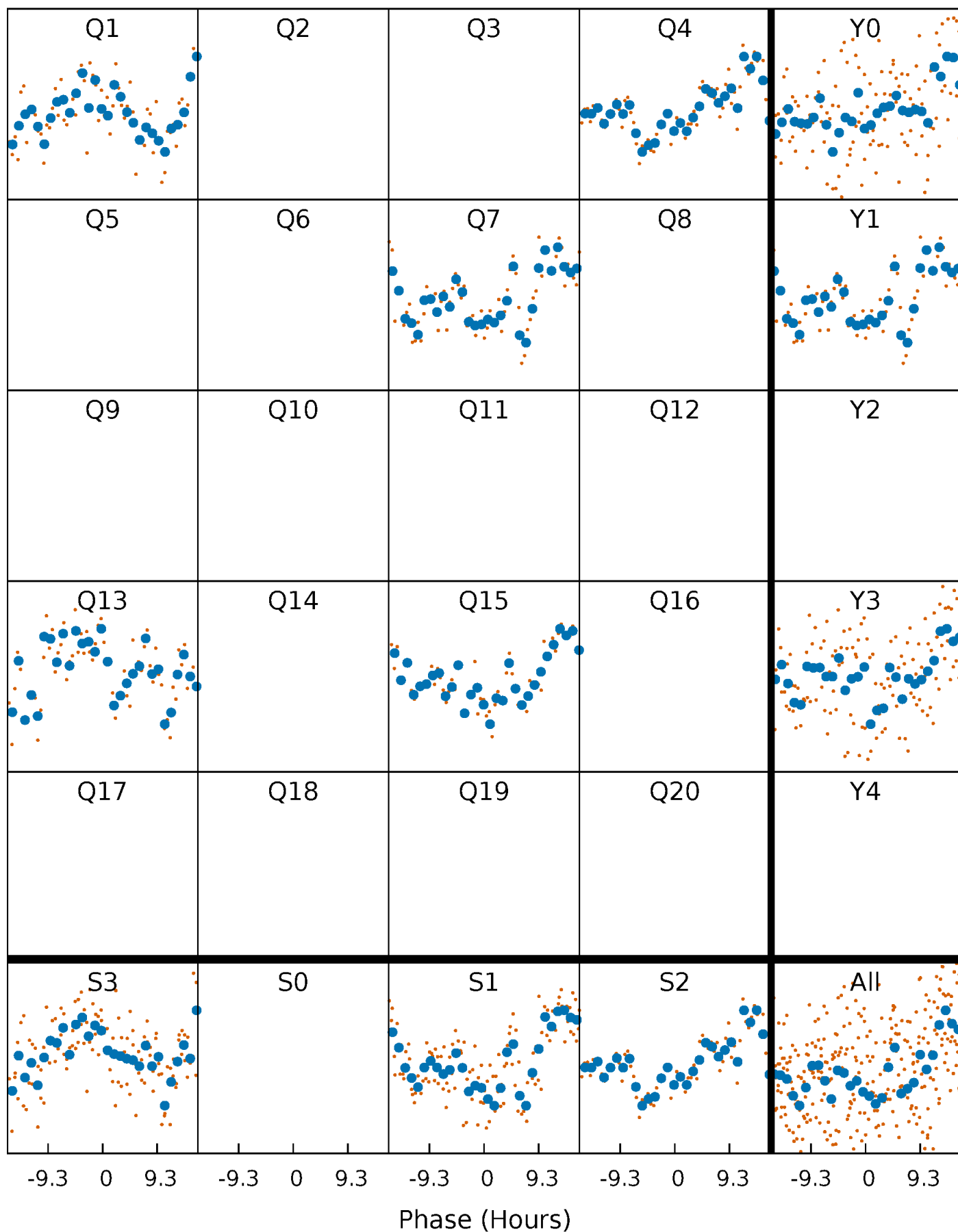


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



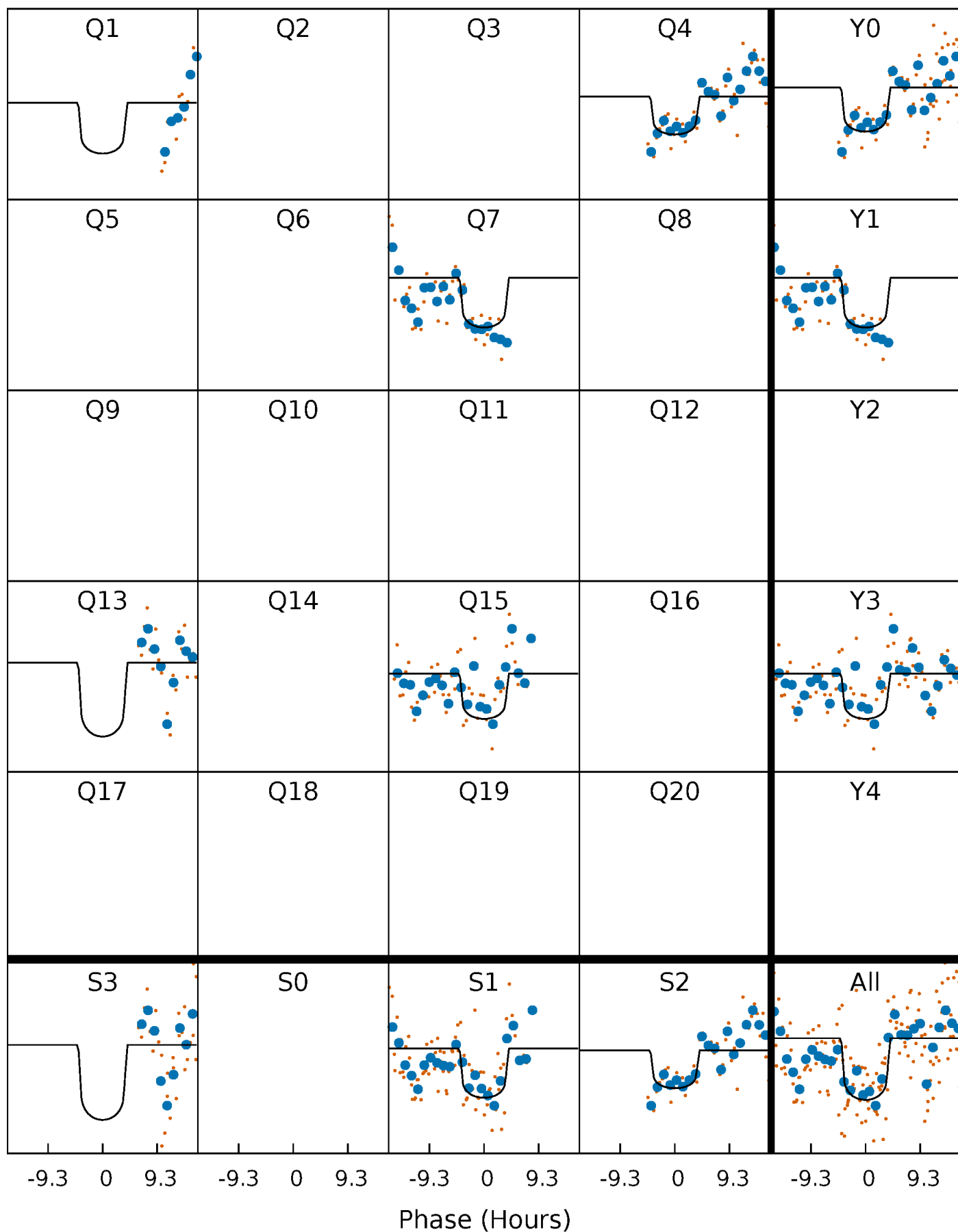
PDC Quarter-Phased Transit Curves

TCE 005460434-04 P=258.520391 Days $T_0=157.635494$ (BKJD)



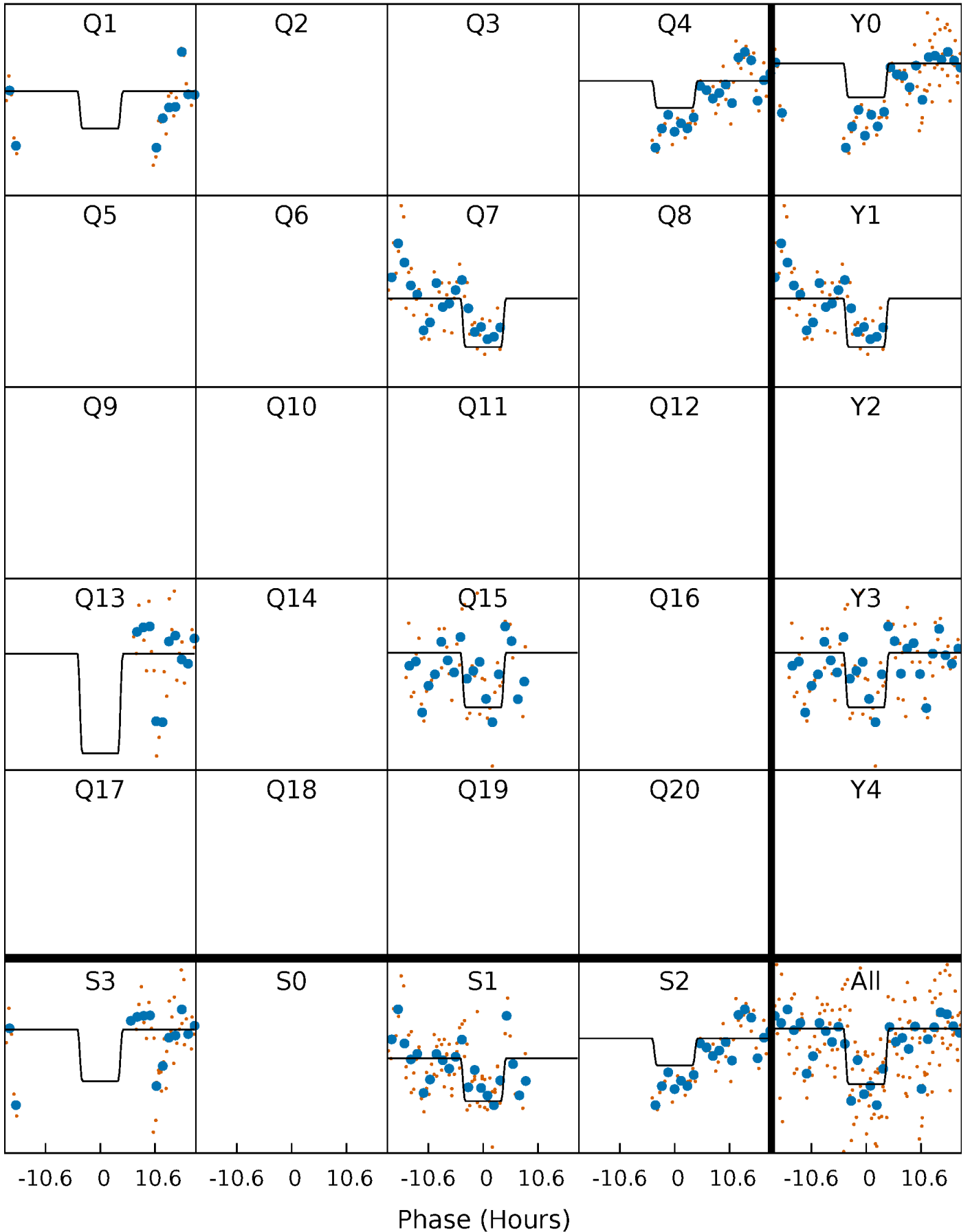
DV Quarter-Phased Transit Curves

TCE 005460434-04 $P=258.520391$ Days $T_0=157.635494$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

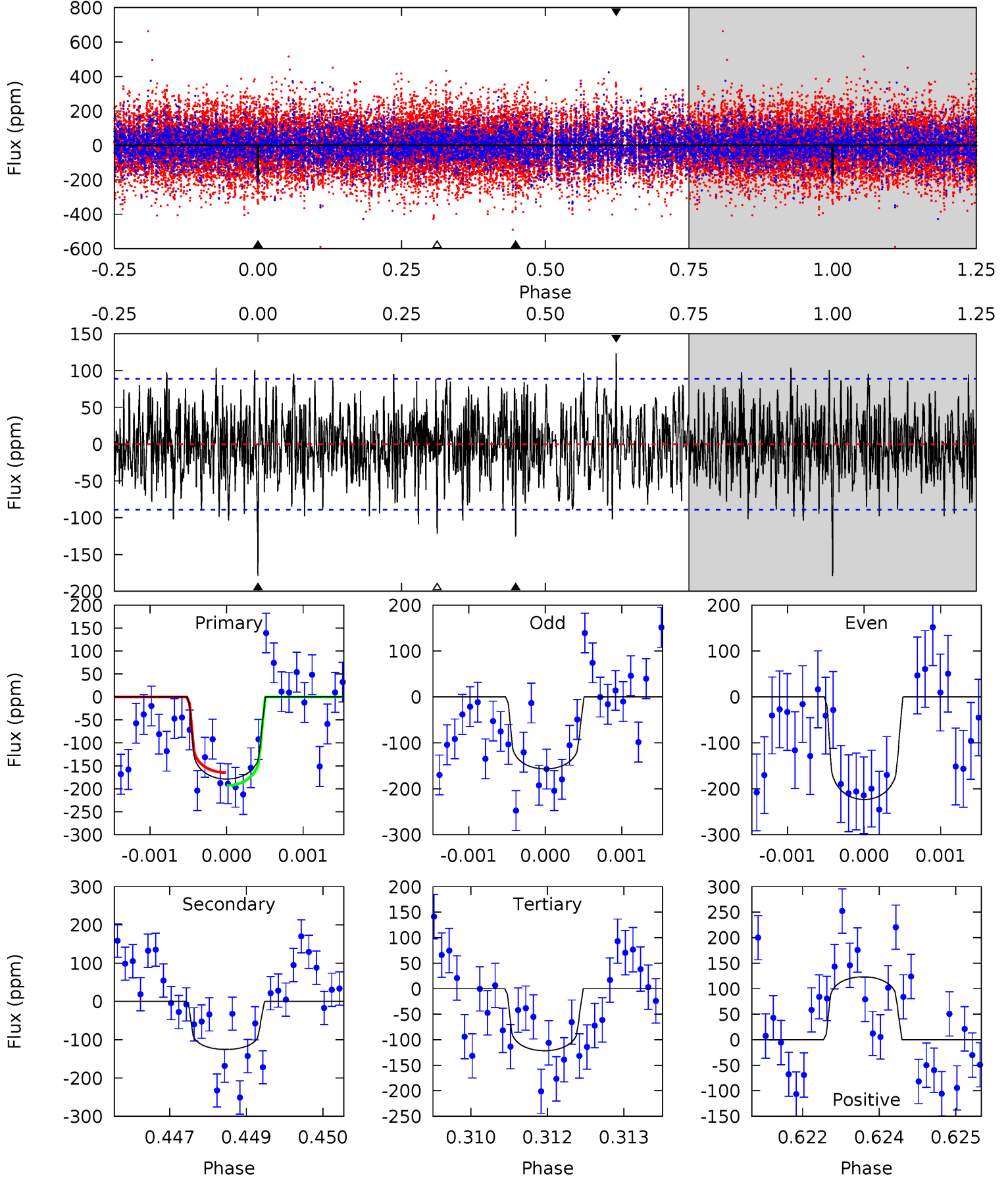
TCE 005460434-04 $P=258.518590$ Days $T_0=157.627728$ (BKJD)



DV Model-Shift Uniqueness Test

005460434-04, P = 258.520391 Days, E = 157.635494 Days

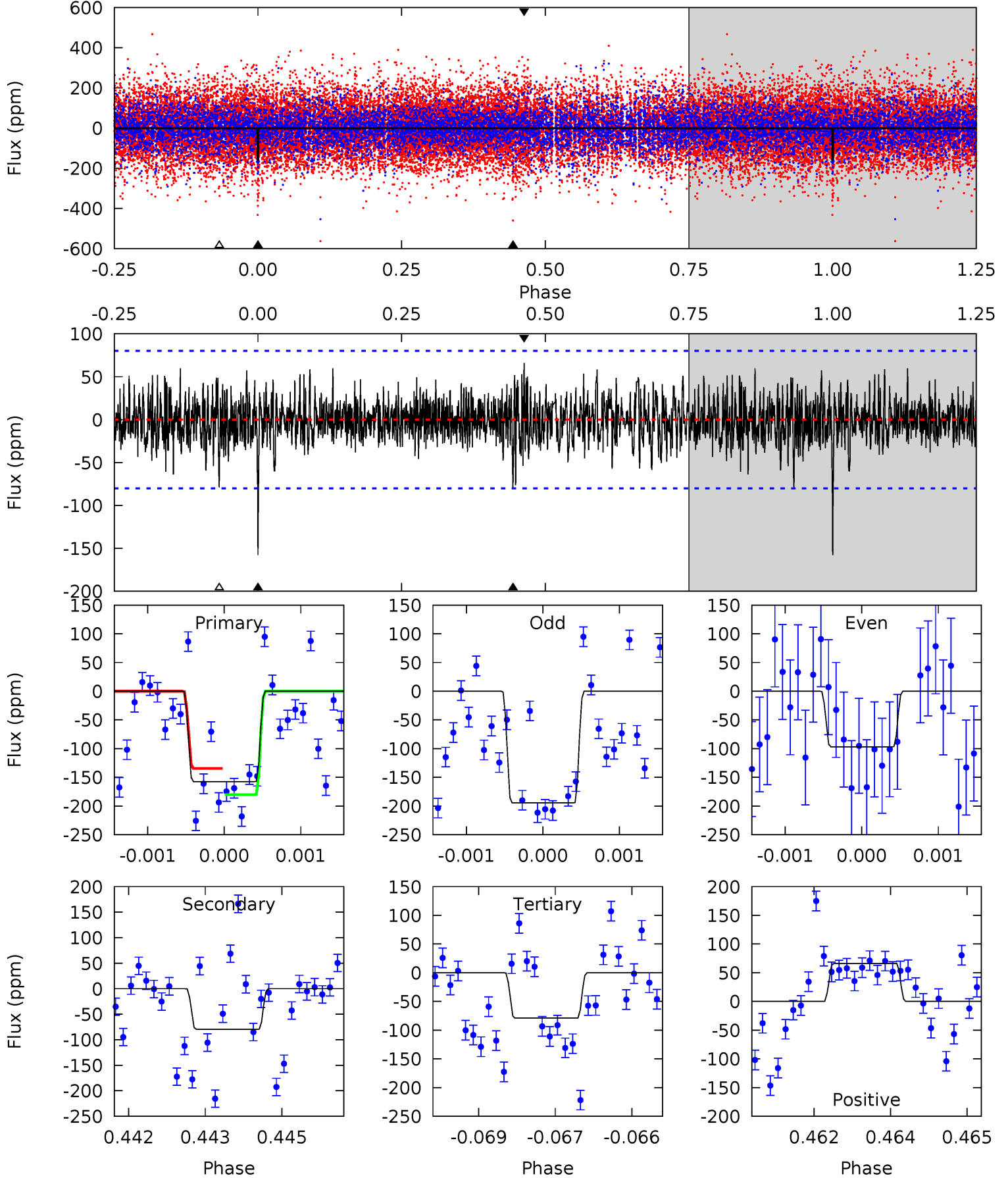
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.8	7.60	7.36	7.47	5.40	3.20	2.20	3.47	3.37	0.24	0.13	1.88	0.94	0.41	0.85



Alt Model-Shift Uniqueness Test

005460434-04, P = 258.518590 Days, E = 157.627728 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.6	5.36	5.32	4.45	5.40	3.21	1.32	5.30	6.16	0.04	0.91	3.17	1.67	0.30	1.54



Stellar Parameters For KIC 005460434

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6759^{+81}_{-81}	$4.018^{+0.148}_{-0.121}$	$0.120^{+0.150}_{-0.150}$	$2.022^{+0.411}_{-0.374}$	$1.552^{+0.149}_{-0.134}$	$0.264^{+0.192}_{-0.094}$
	+1%/-1%	+4%/-3%	+125%/-125%	+20%/-18%	+10%/-9%	+73%/-36%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 005460434-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-125 ± 17	$3.17^{+1.09}_{-1.04}$	617^{+28}_{-33}	5921^{+1315}_{-738}	5919^{+7105}_{-2753}
Alt.	-80 ± 15	$2.78^{+1.13}_{-1.04}$	616^{+30}_{-28}	5667^{+1534}_{-826}	4694^{+7752}_{-2358}

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 $A_{obs} \gg 1.0$

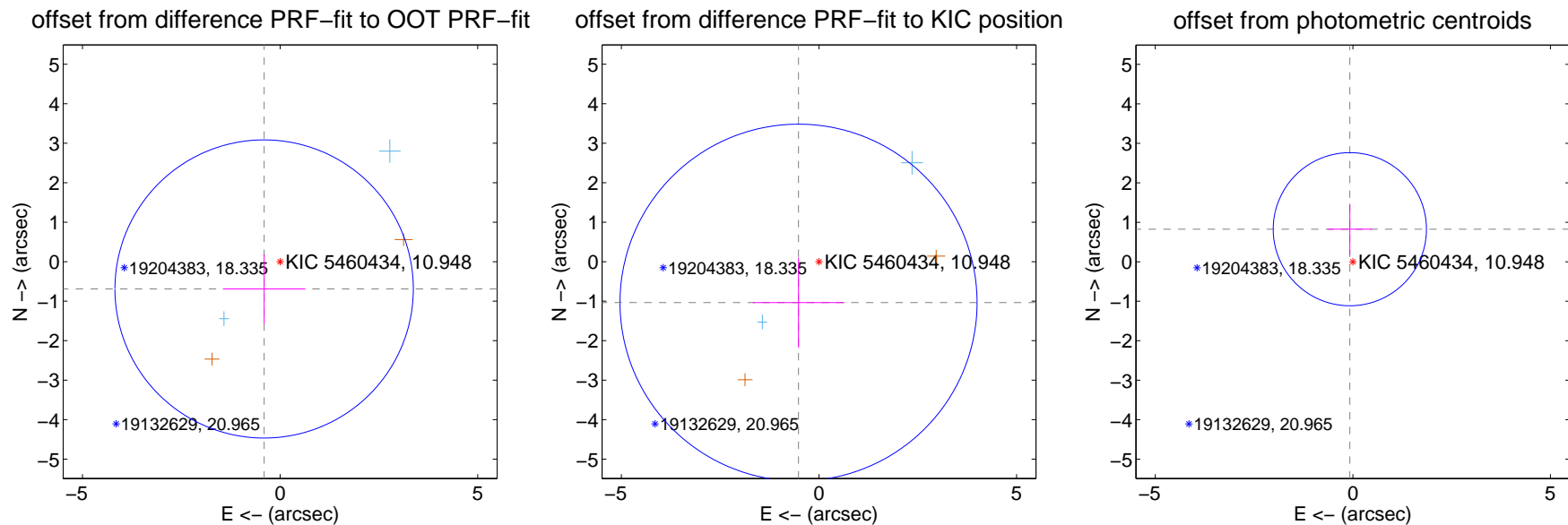
DV Centroid Data

Supplemental centroid analysis for 005460434-04. **Kepler magnitude: 10.95.** Transit SNR 7.01

There are 2 quarters with good PRF difference image offsets

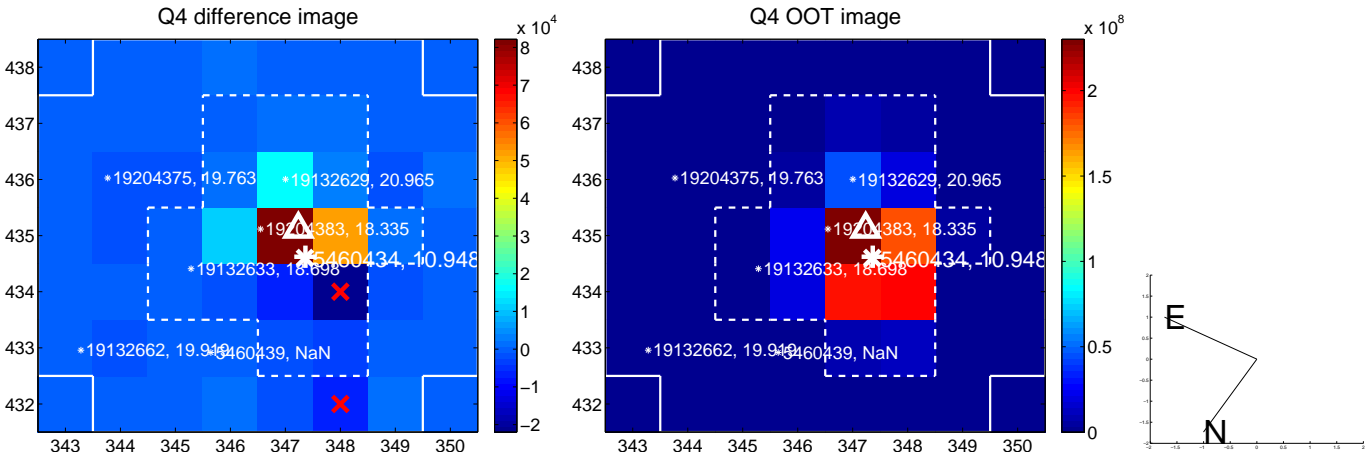
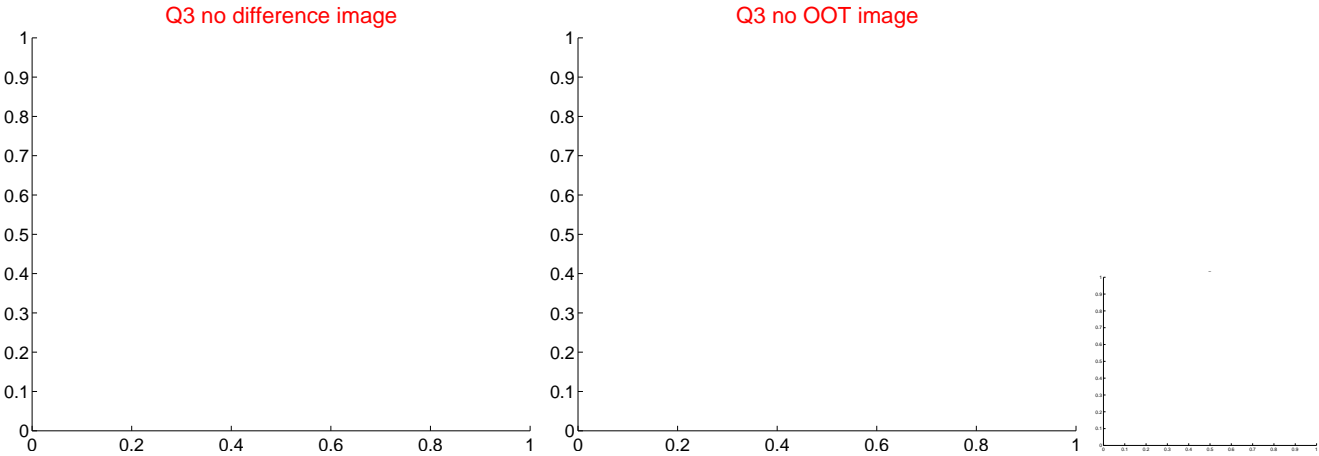
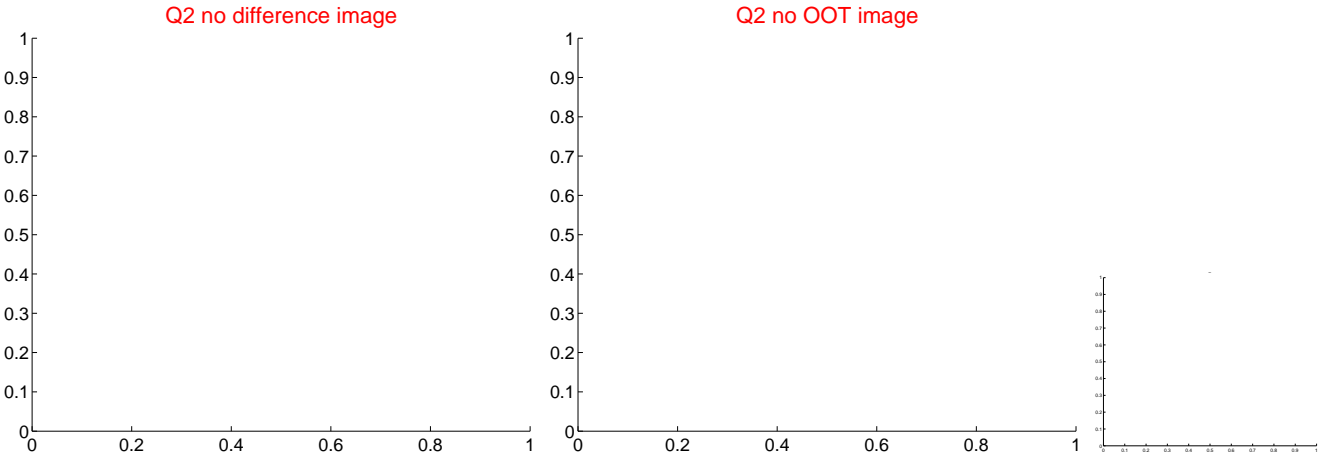
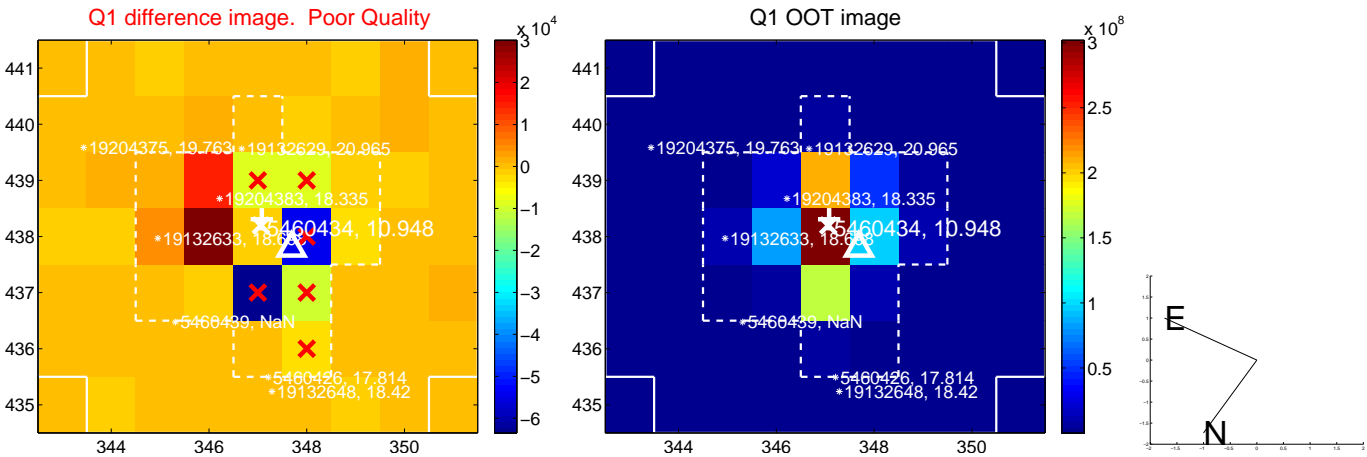
The direct PRF centroid is offset from the target star catalog position by about 0.54 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.800 ± 1.258	0.64	0.404 ± 1.042	-0.691 ± 0.885
PRF-fit source offset from KIC position	1.157 ± 1.506	0.77	0.518 ± 1.160	-1.035 ± 1.141
photometric centroid source offset	0.83 ± 0.65	1.28	0.08 ± 0.57	0.83 ± 0.65

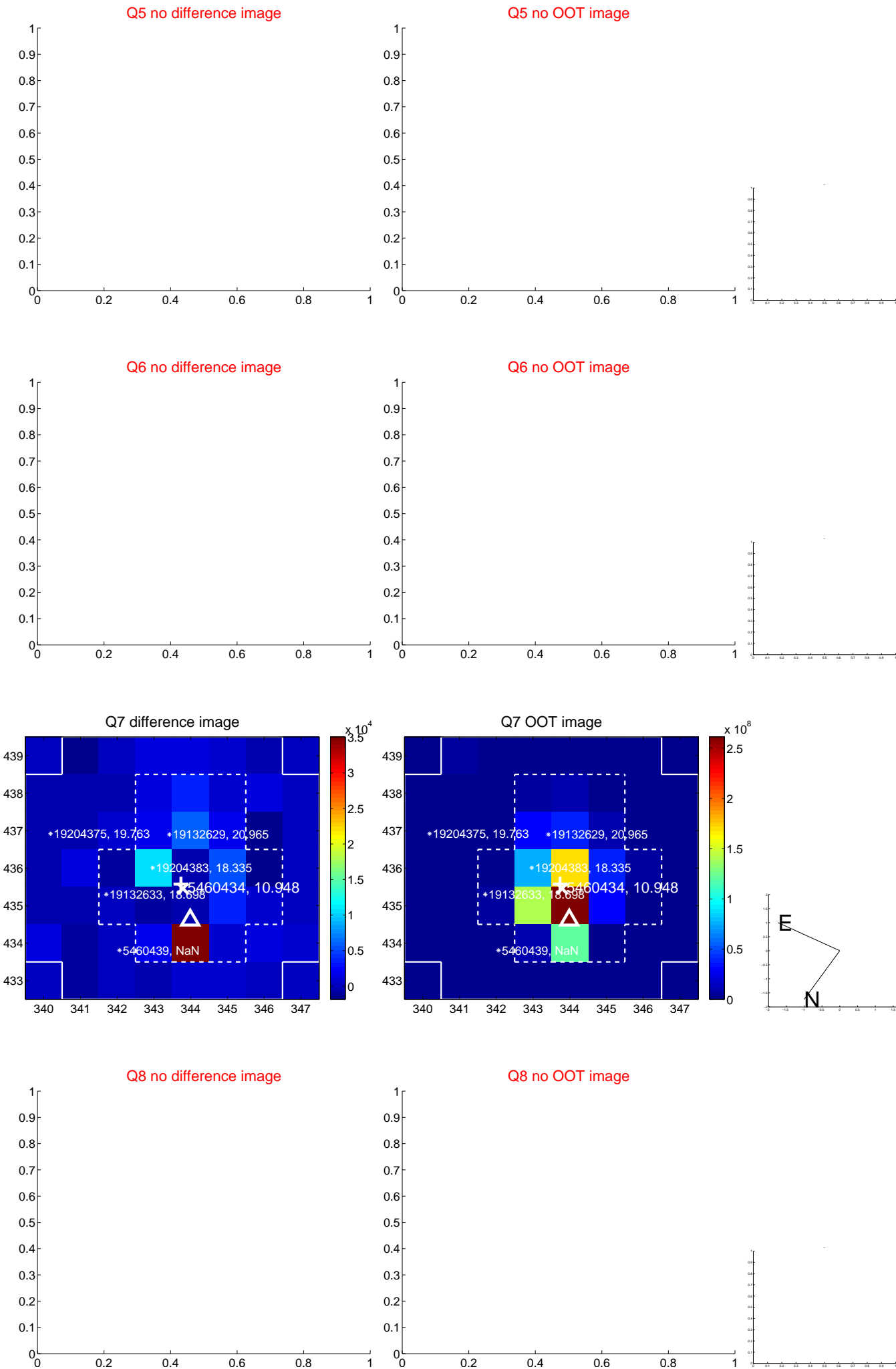


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

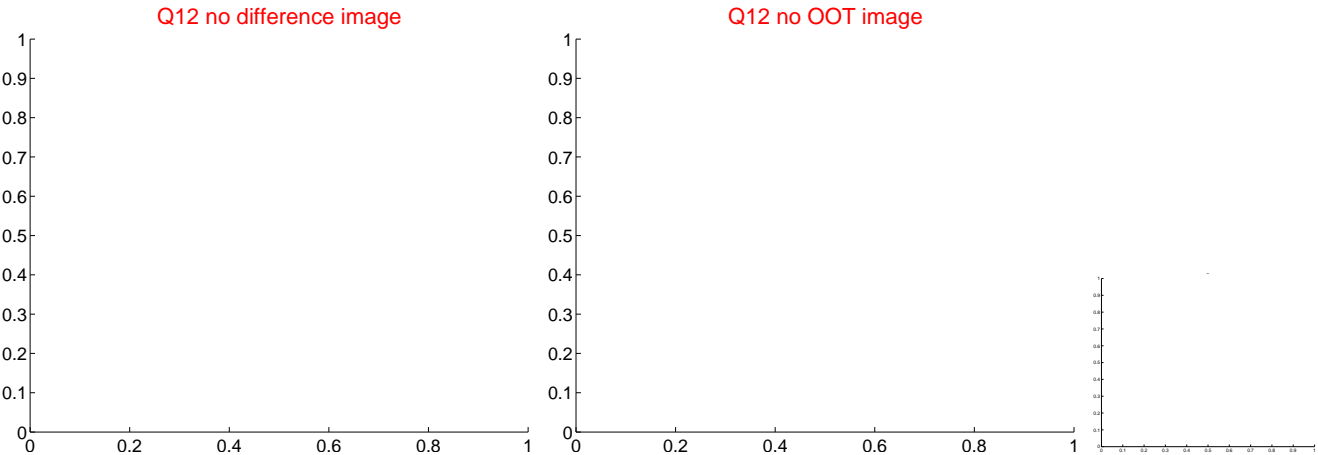
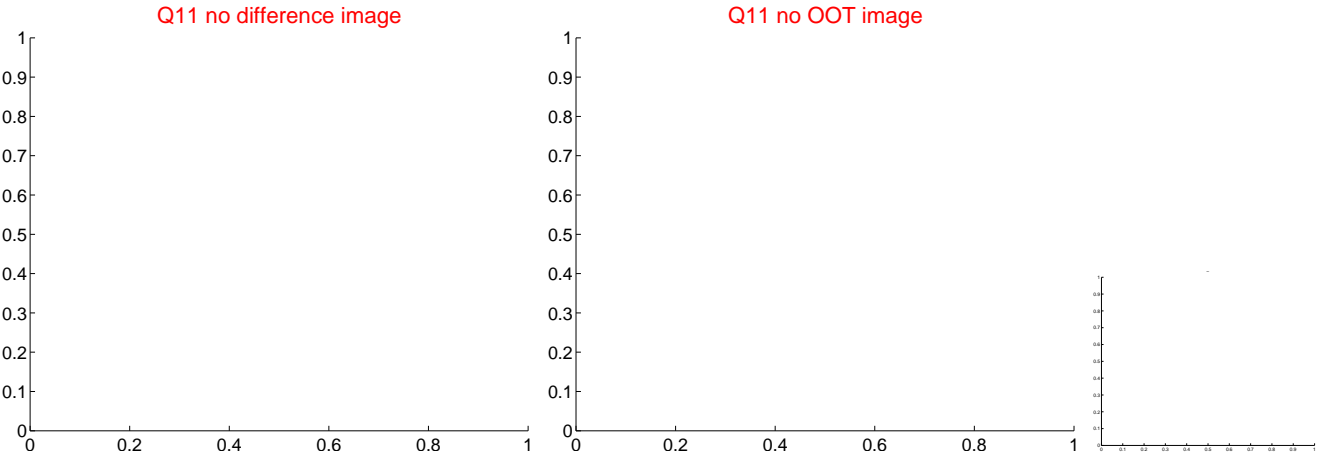
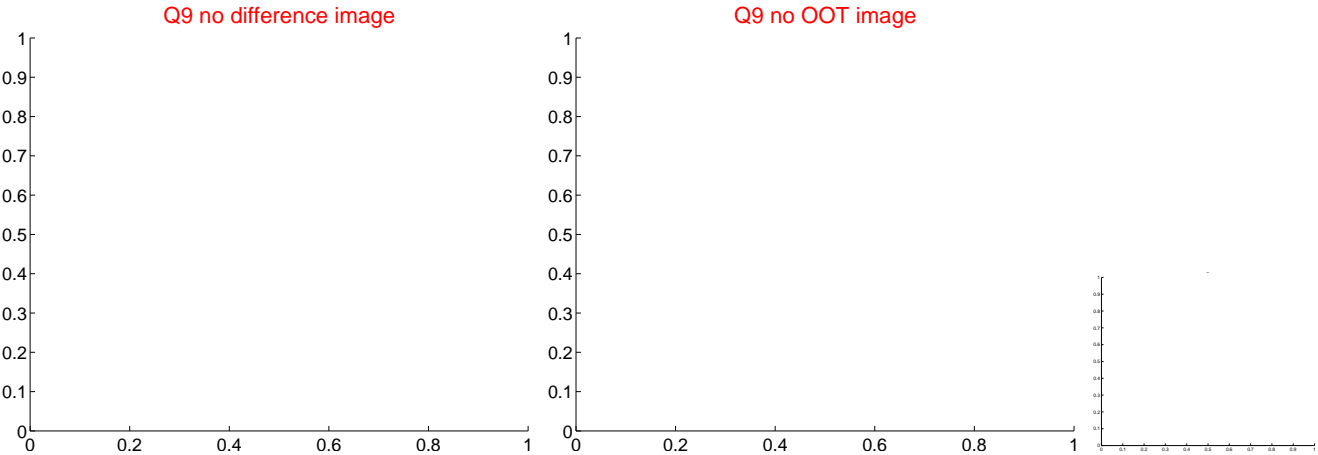
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



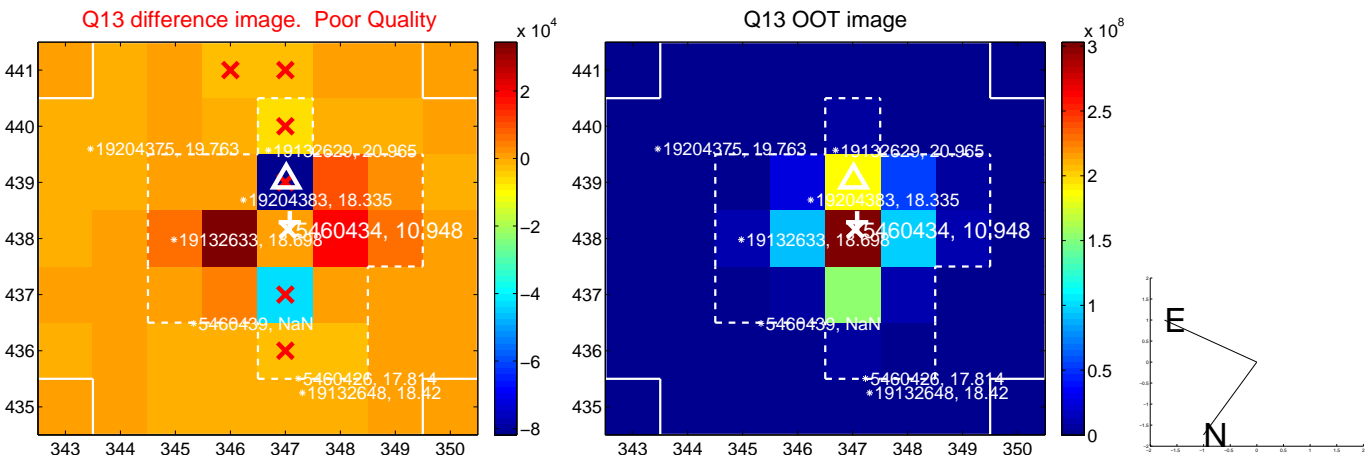
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



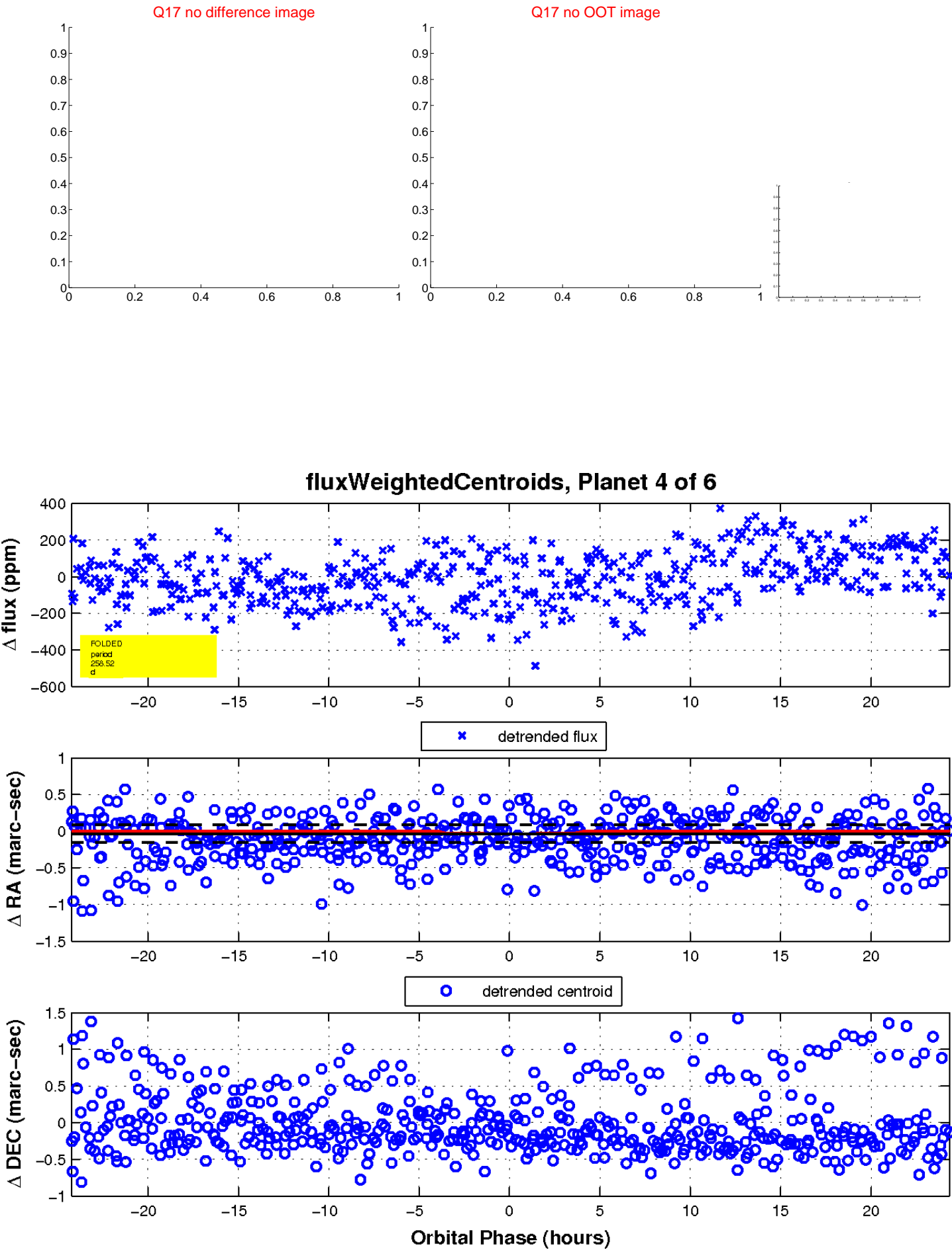
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



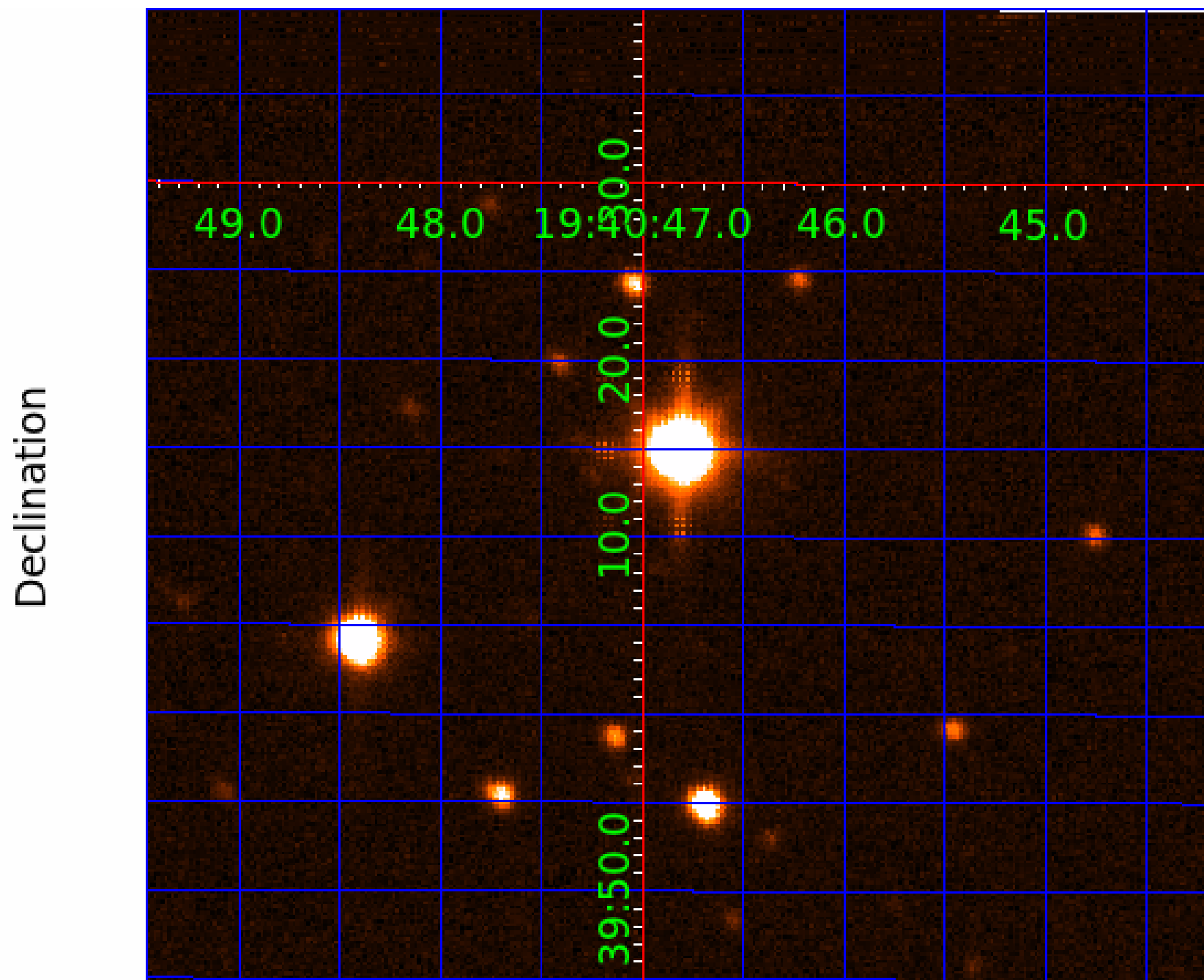
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 005460434

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})
005460434-01	OBS	No	2.079770	132.550883	12.0	8.607	8.2	5.0	2.02	6759	0.74	5600.90
005460434-02	OBS	No	68.353104	166.499551	177.5	2.554	8.7	8.5	2.02	6759	2.96	53.20
005460434-03	OBS	No	189.815596	179.539702	253.5	5.593	8.6	8.6	2.02	6759	3.81	13.63
005460434-04	OBS	No	258.520391	157.635494	203.8	8.126	8.2	7.0	2.02	6759	3.20	9.03
005460434-05	OBS	7729.01	50.564437	145.860981	131.0	5.606	8.2	8.5	2.02	6759	2.65	79.52
005460434-06	OBS	No	210.087055	144.260167	176.3	4.007	7.6	7.4	2.02	6759	3.04	11.90

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005460434-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_SATURATED
005460434-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
005460434-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
005460434-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
005460434-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_ALT—CENT_SATURATED
005460434-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED

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

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

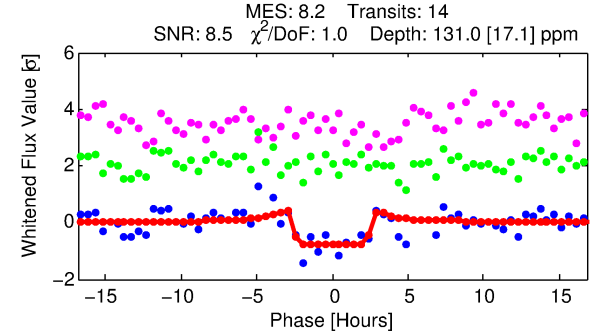
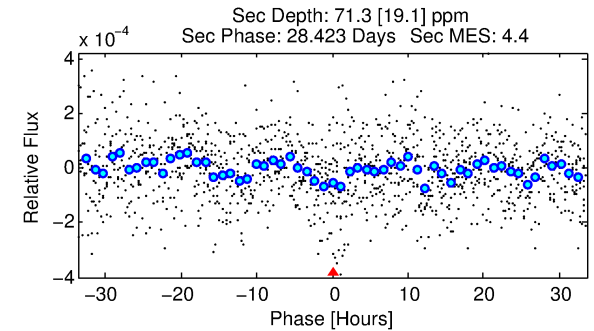
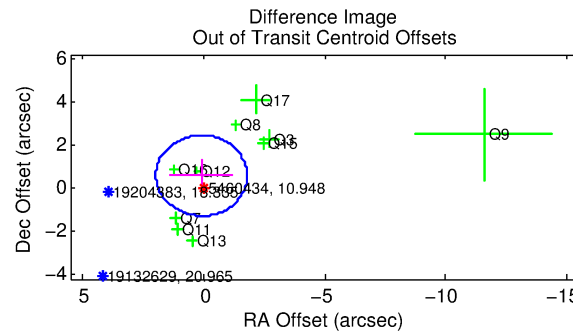
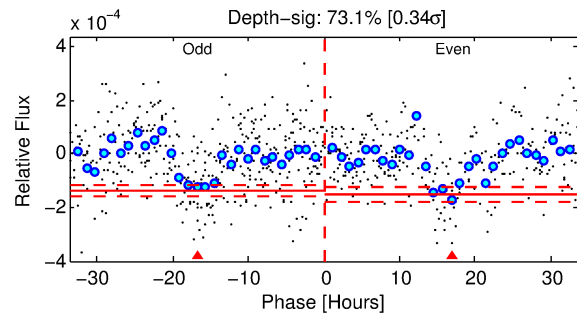
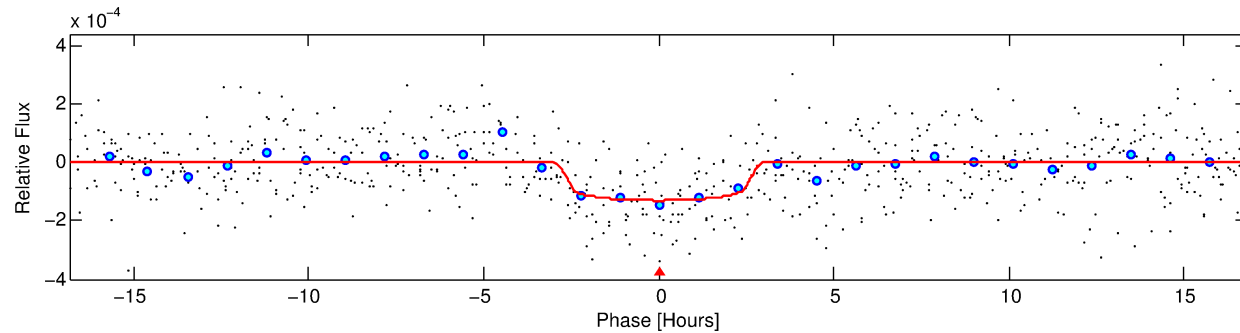
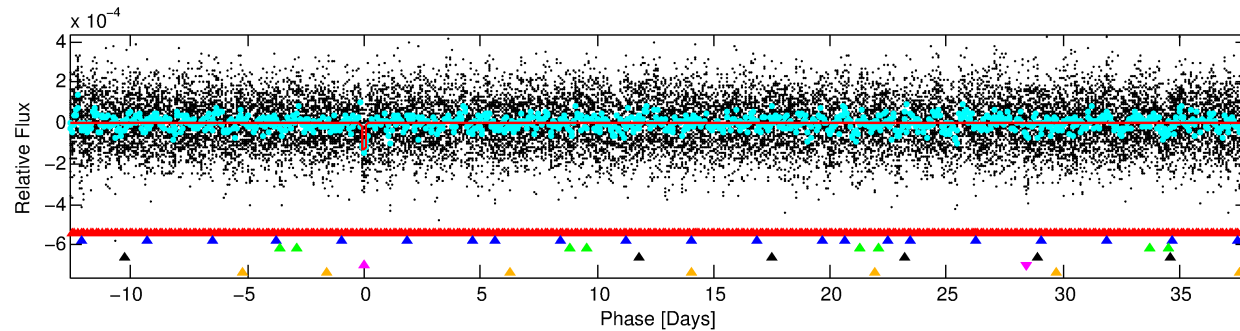
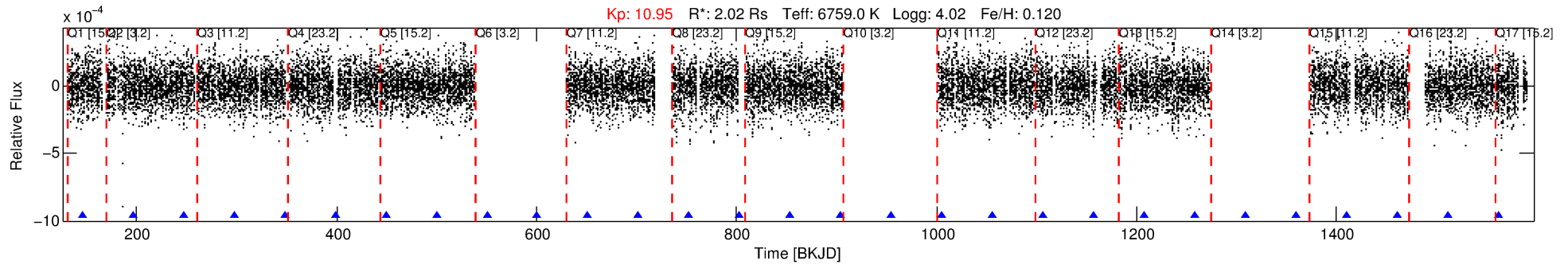
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005460434-05

No Significant Match Found

DV One-Page Summary

KIC: 5460434 Candidate: 5 of 6 Period: 50.564 d



DV Fit Results:

Period = 50.56444 [0.00049] d
Epoch = 145.8610 [0.0075] BKJD
Rp/R* = 0.0120 [0.0033]
a/R* = 34.78 [52.51]
b = 0.88 [0.40]
Seff = 79.52 [21.38]
Teff = 761 [51] K
Rp = 2.65 [0.91] Re
a = 0.3101 [0.0548] AU
Ag = 535.42 [358.69] [1.49 σ]
Teffp = 5663 [874] K [5.60 σ]

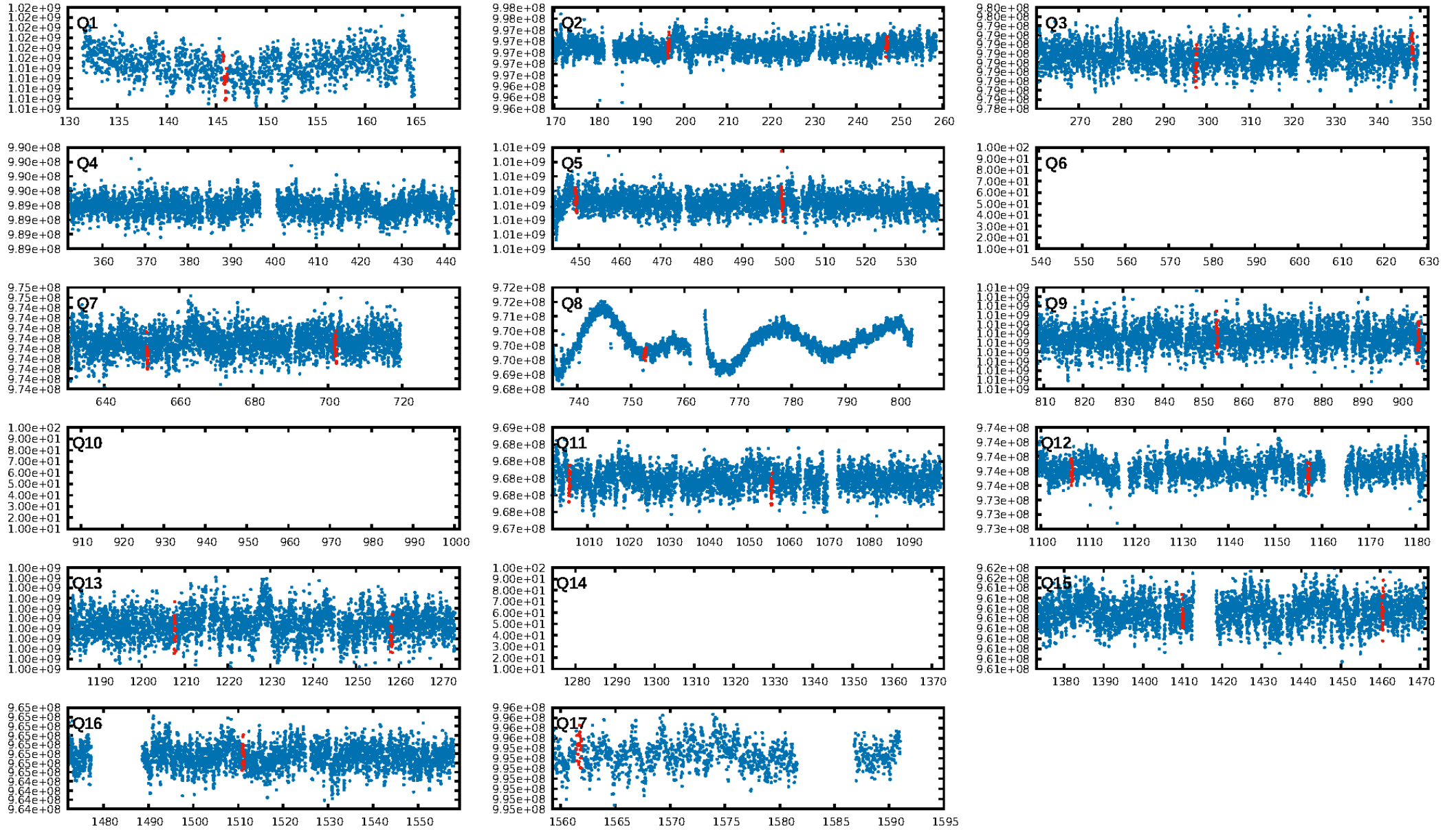
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [113.28 σ]
LongPeriod-sig: 100.0% [69.30 σ]
ModelChiSquare2-sig: 32.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.22e-09
RollingBand-fgt: 1.00 [13/13]
GhostDiagnostic-chr: 1.105
Centroid-sig: N/A
Centroid-so: 0.639 arcsec [1.28 σ]
OotOffset-rm: 0.588 arcsec [0.94 σ]
OotOffset-st: 0/4/3/3 [10]
KicOffset-rm: 0.564 arcsec [0.93 σ]
KicOffset-st: 0/4/3/3 [10]
DiffImageQuality-fgm: 0.30 [3/10]
DiffImageOverlap-fno: 0.46 [6/13]

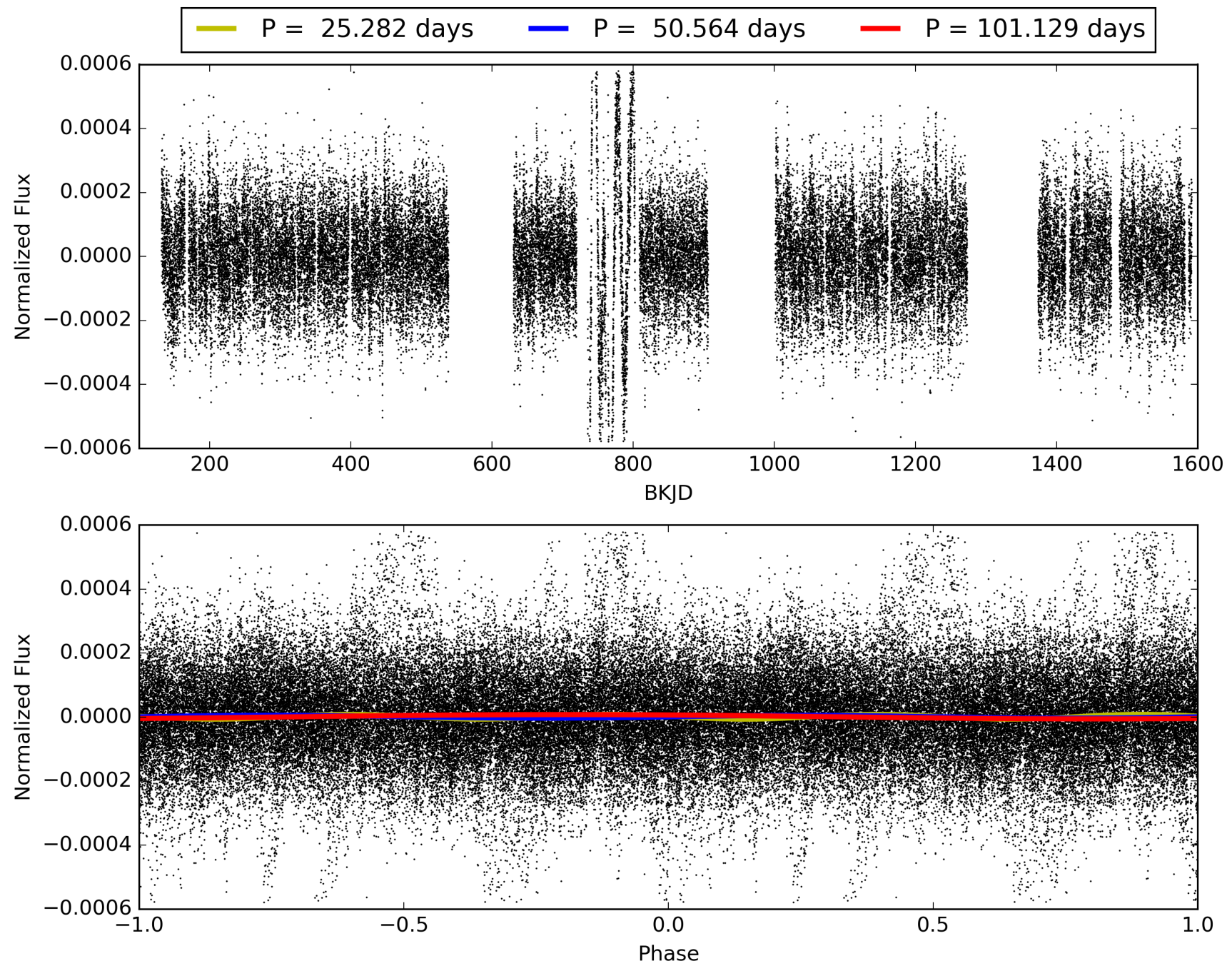
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 00:56:40 Z

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

TCE 005460434-05, PDC Light Curves

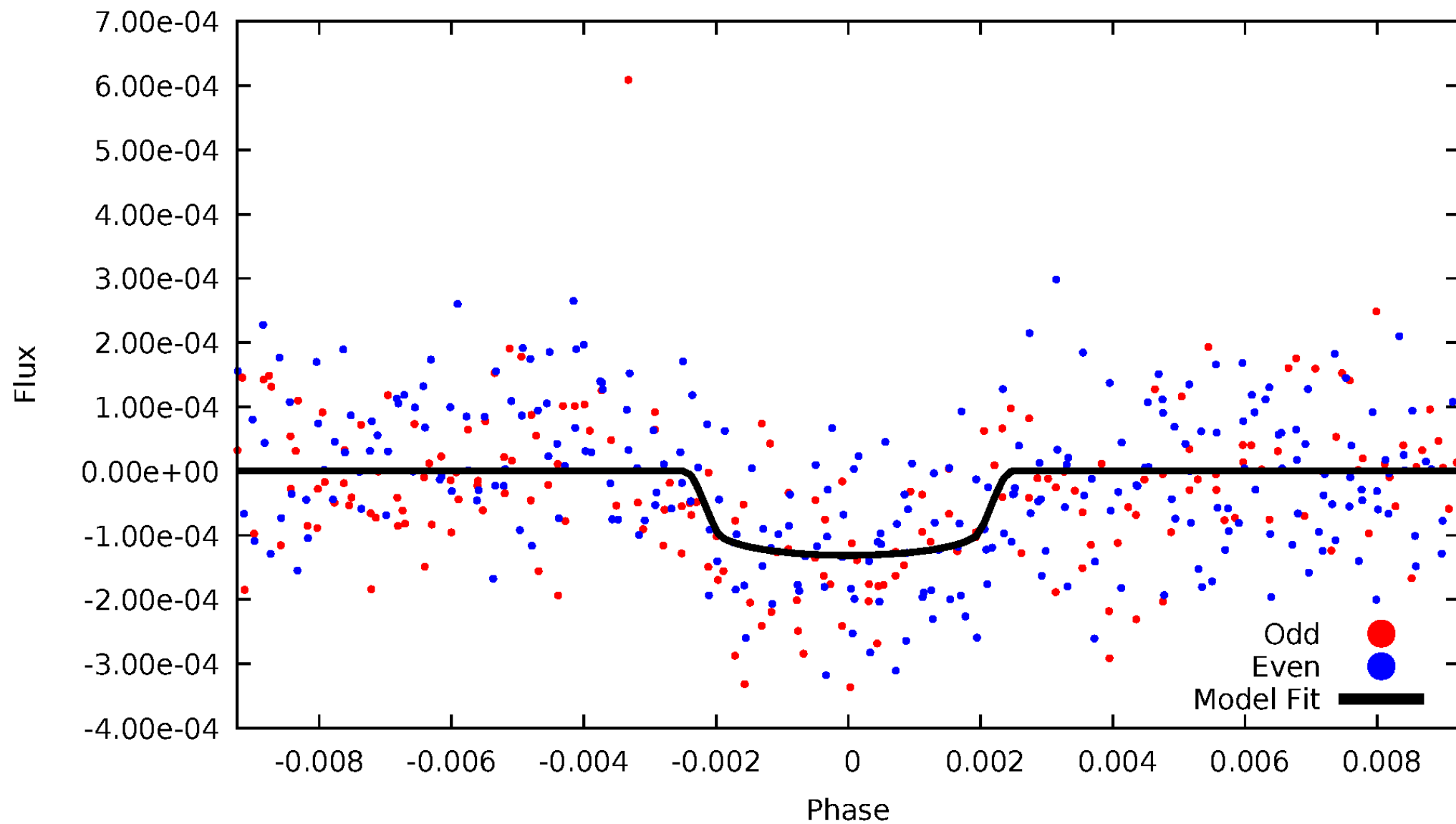


TCE 005460434-05



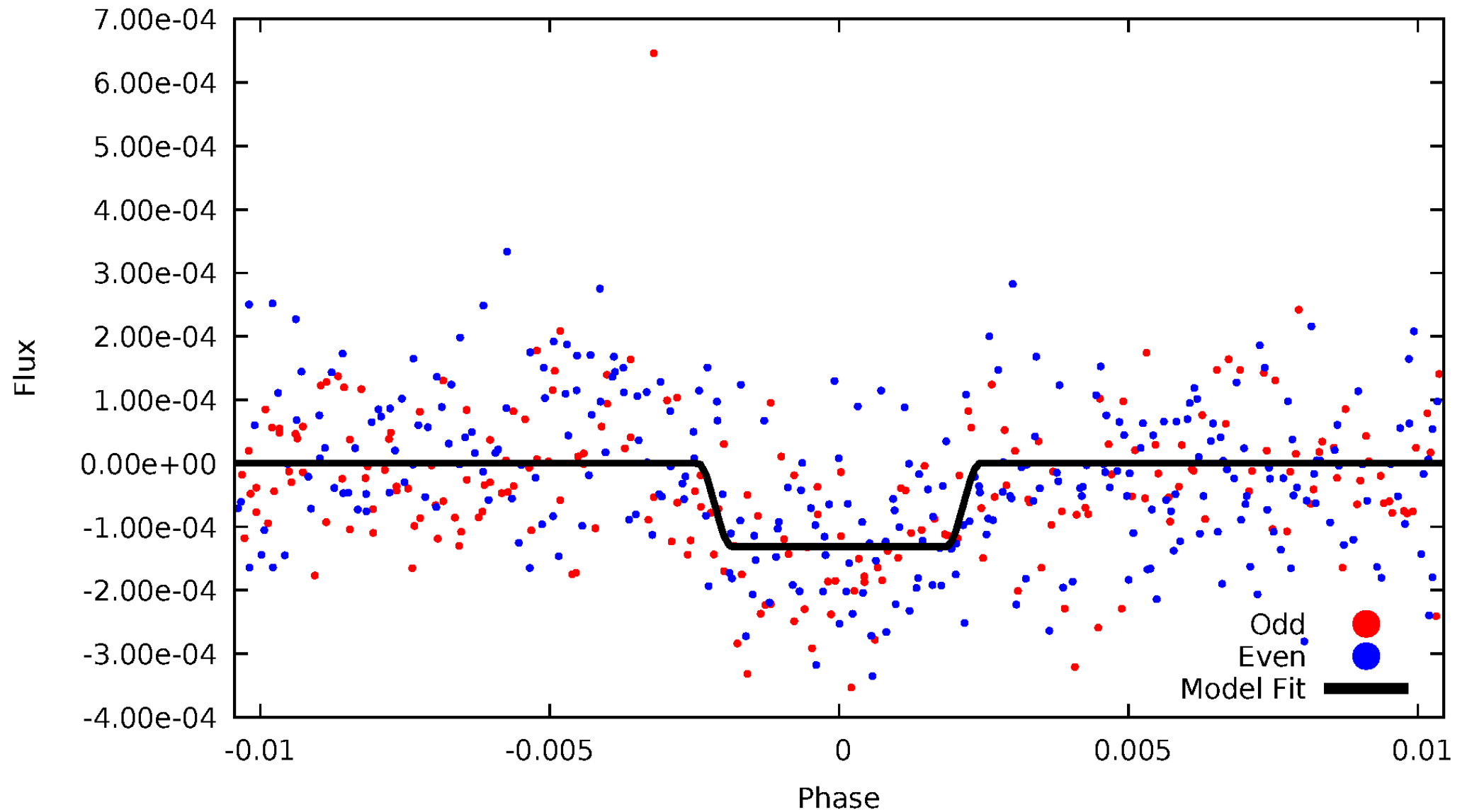
DV Odd/Even

TCE 005460434-05



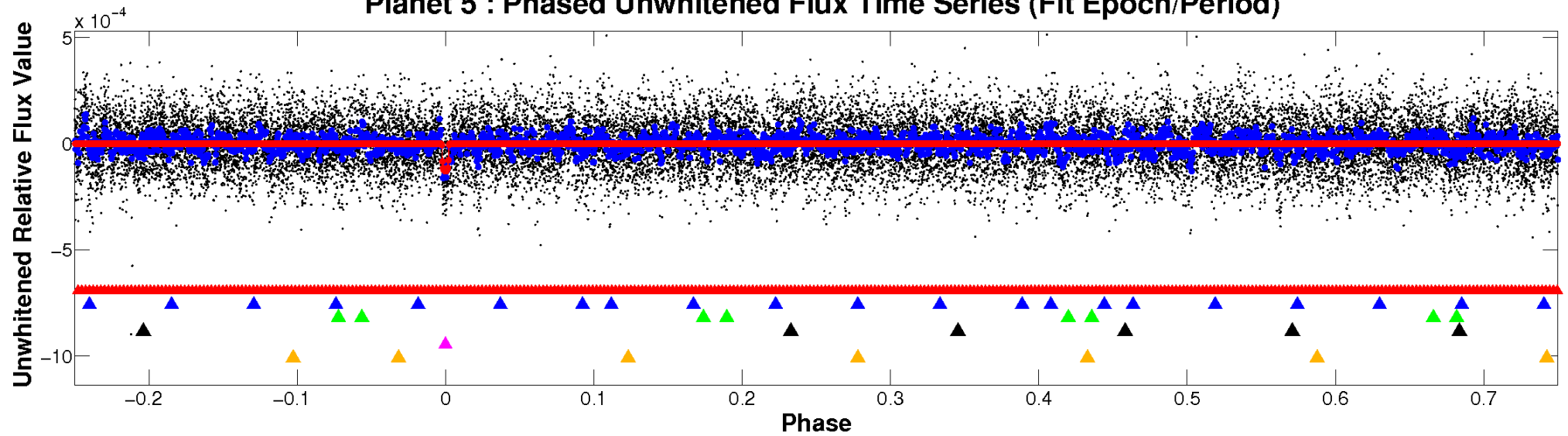
ALT Odd/Even

TCE 005460434-05

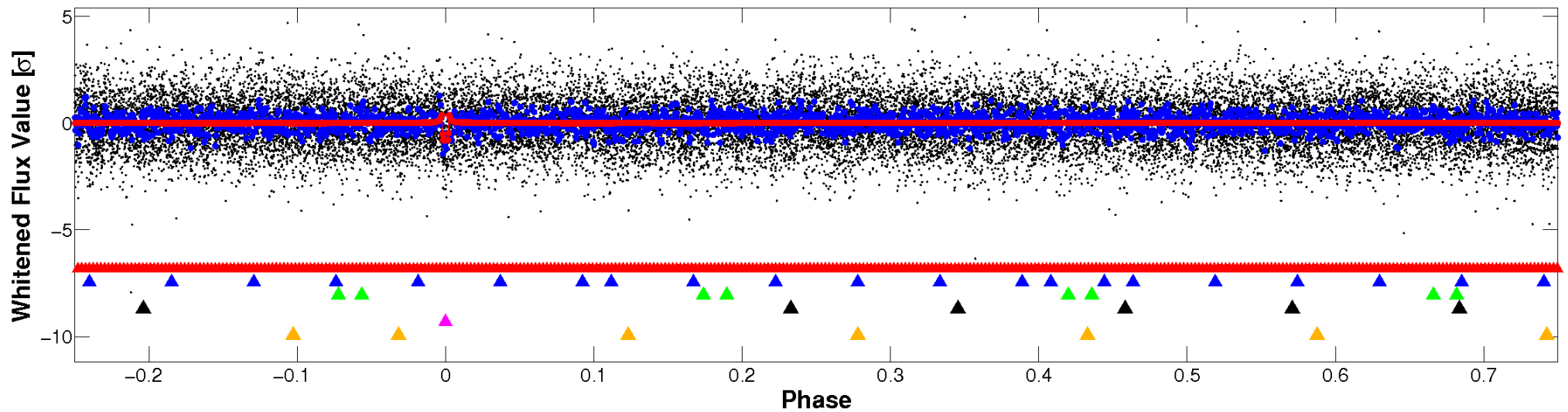


Non-Whitened Vs. Whitened Light Curve

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

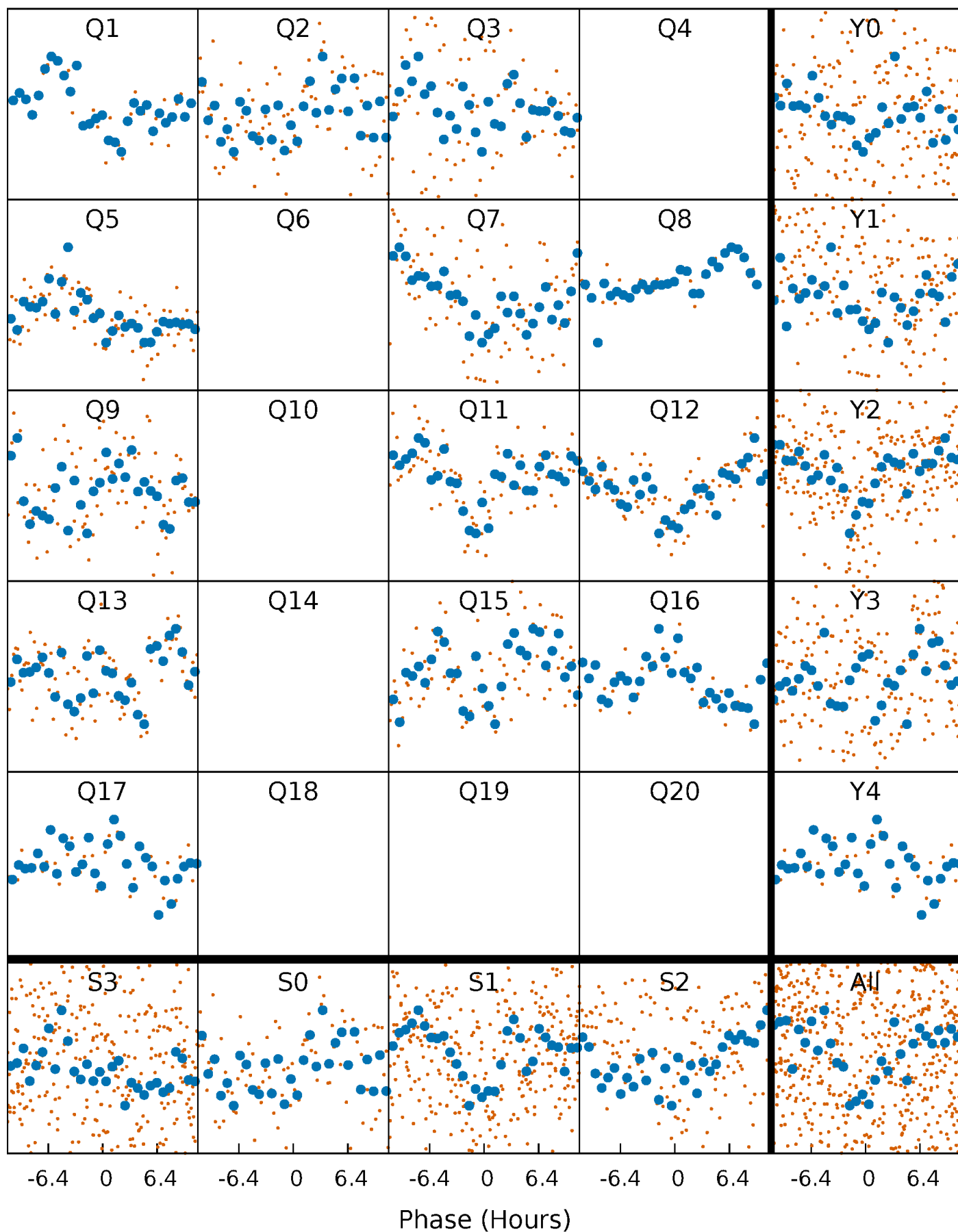


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



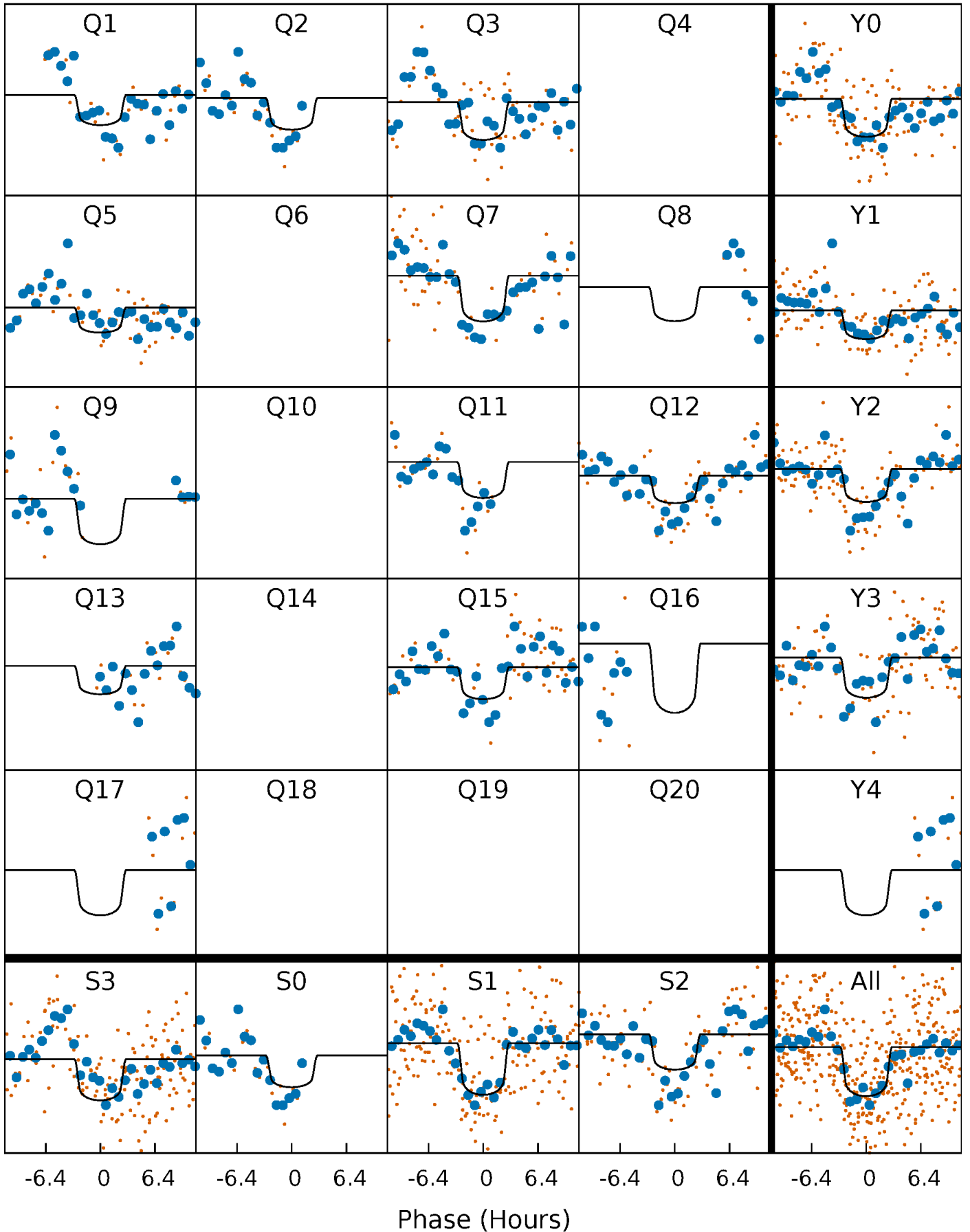
PDC Quarter-Phased Transit Curves

TCE 005460434-05 P= 50.564437 Days $T_0=145.860981$ (BKJD)



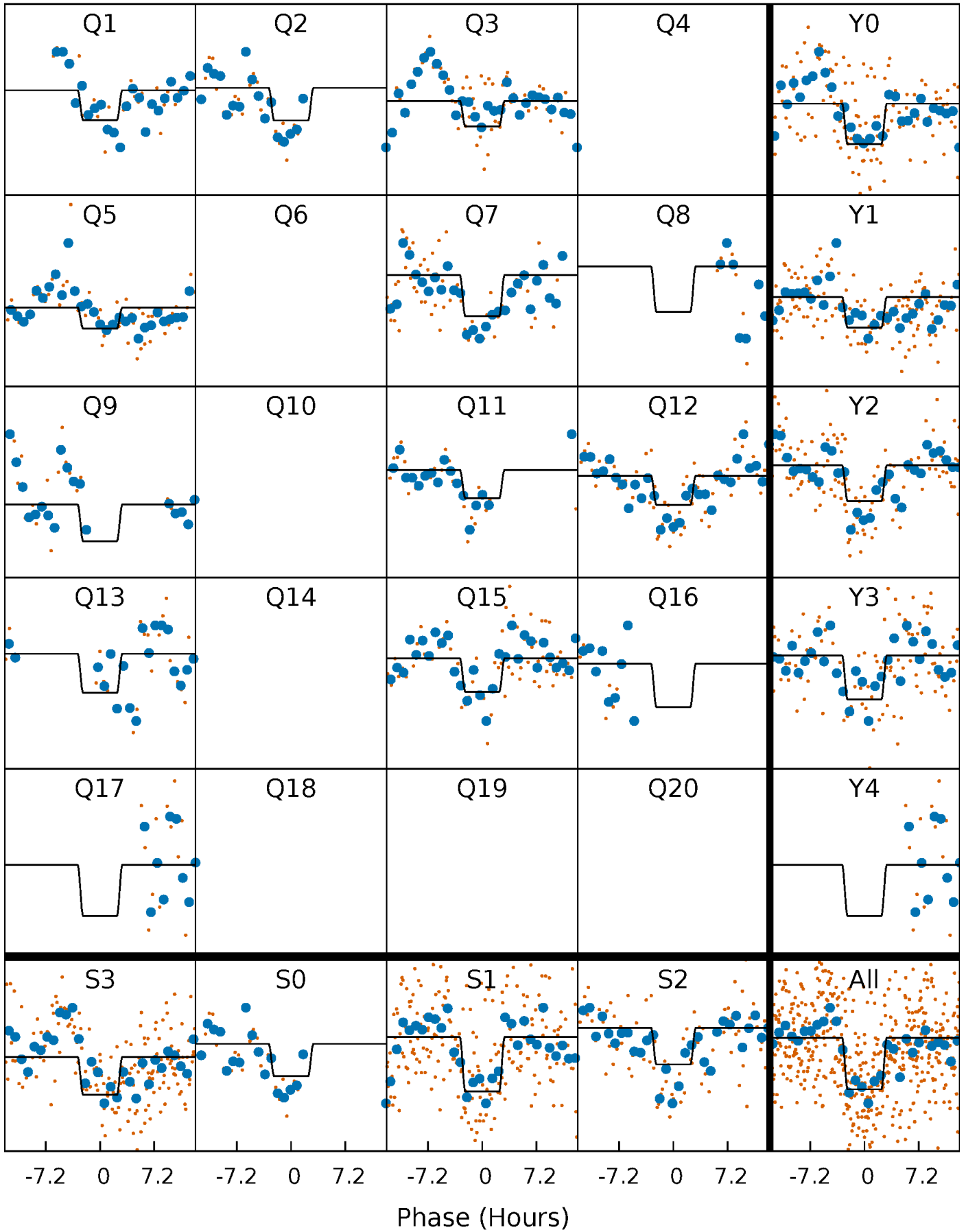
DV Quarter-Phased Transit Curves

TCE 005460434-05 P= 50.564437 Days $T_0=145.860981$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

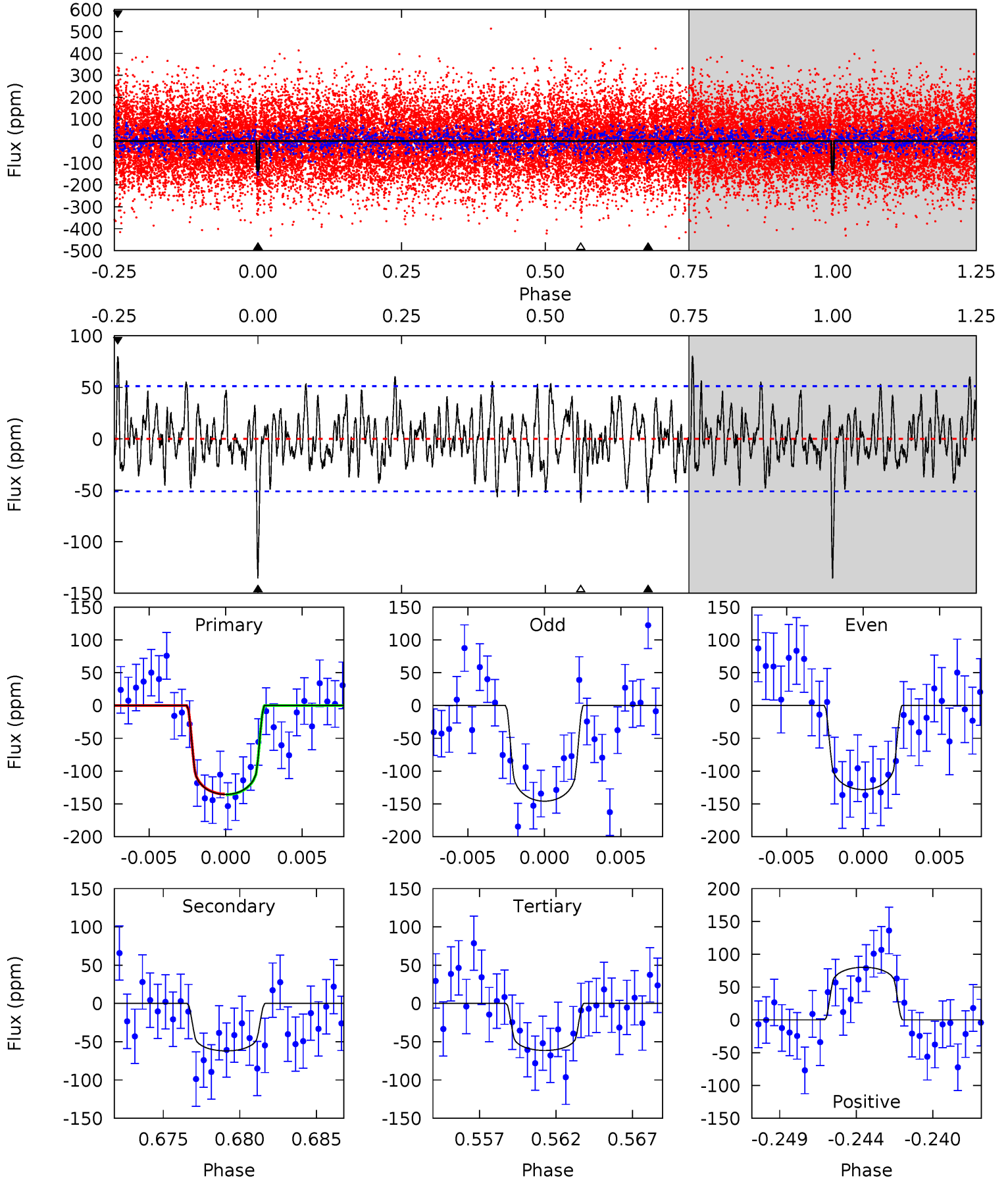
TCE 005460434-05 $P = 50.565153$ Days $T_0 = 145.849628$ (BKJD)



DV Model-Shift Uniqueness Test

005460434-05, P = 50.564437 Days, E = 95.296544 Days

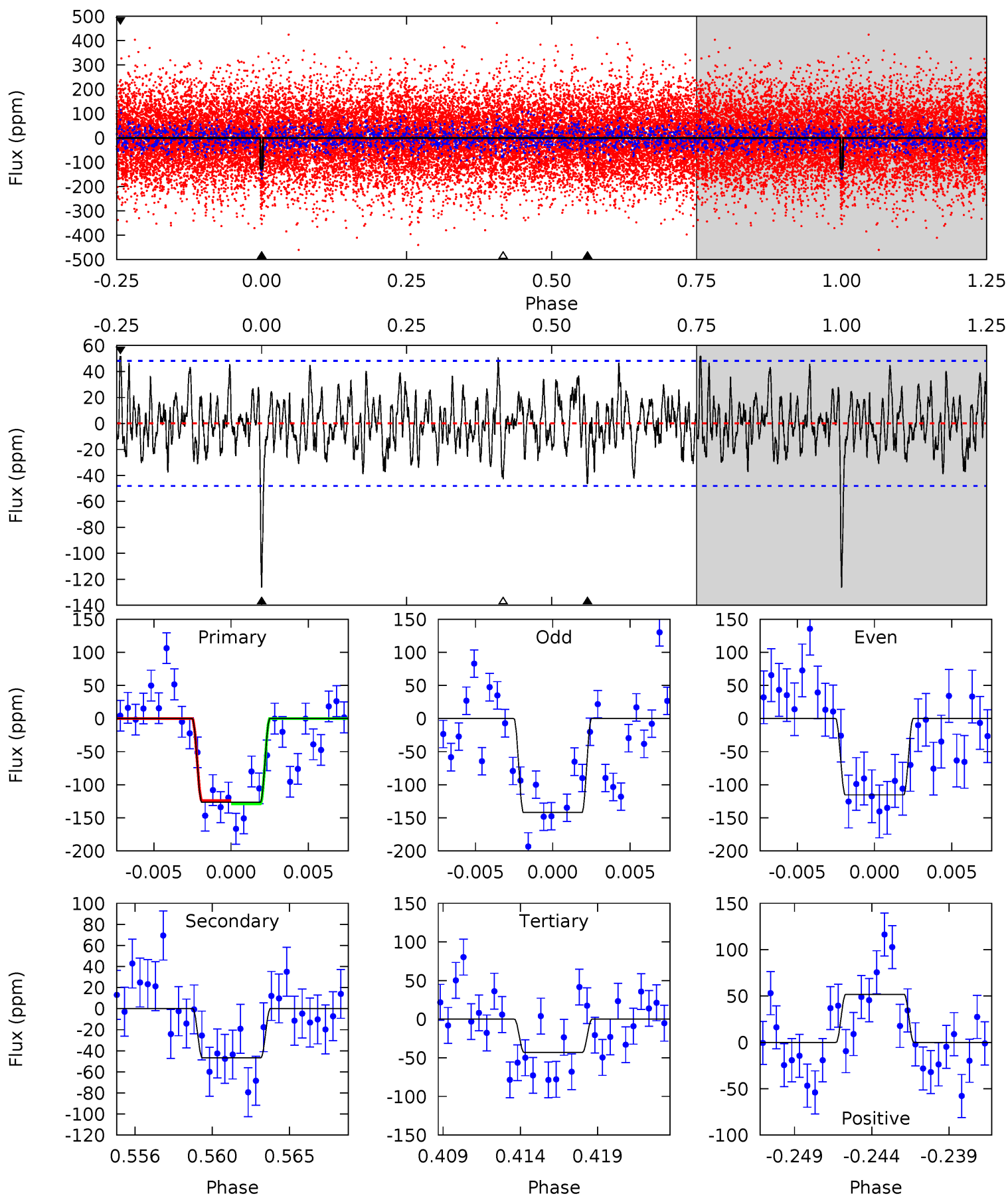
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.7	6.27	6.21	8.10	5.16	2.81	2.13	7.50	5.61	0.06	-1.83	0.88	0.87	0.37	0.04



Alt Model-Shift Uniqueness Test

005460434-05, P = 50.565153 Days, E = 95.284475 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	4.99	4.59	5.55	5.16	2.82	1.76	8.97	8.01	0.40	-0.56	1.41	0.91	0.29	0.27



Stellar Parameters For KIC 005460434

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6759^{+81}_{-81}	$4.018^{+0.148}_{-0.121}$	$0.120^{+0.150}_{-0.150}$	$2.022^{+0.411}_{-0.374}$	$1.552^{+0.149}_{-0.134}$	$0.264^{+0.192}_{-0.094}$
	+1%/-1%	+4%/-3%	+125%/-125%	+20%/-18%	+10%/-9%	+73%/-36%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 005460434-05 / KOI 7729.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-62 ± 10	$2.60^{+0.89}_{-0.73}$	1062^{+53}_{-54}	5472^{+942}_{-618}	479^{+501}_{-217}
Alt.	-47 ± 9	$2.52^{+0.77}_{-0.73}$	1062^{+55}_{-55}	5245^{+925}_{-564}	387^{+405}_{-171}

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 $A_{obs} \gg 1.0$

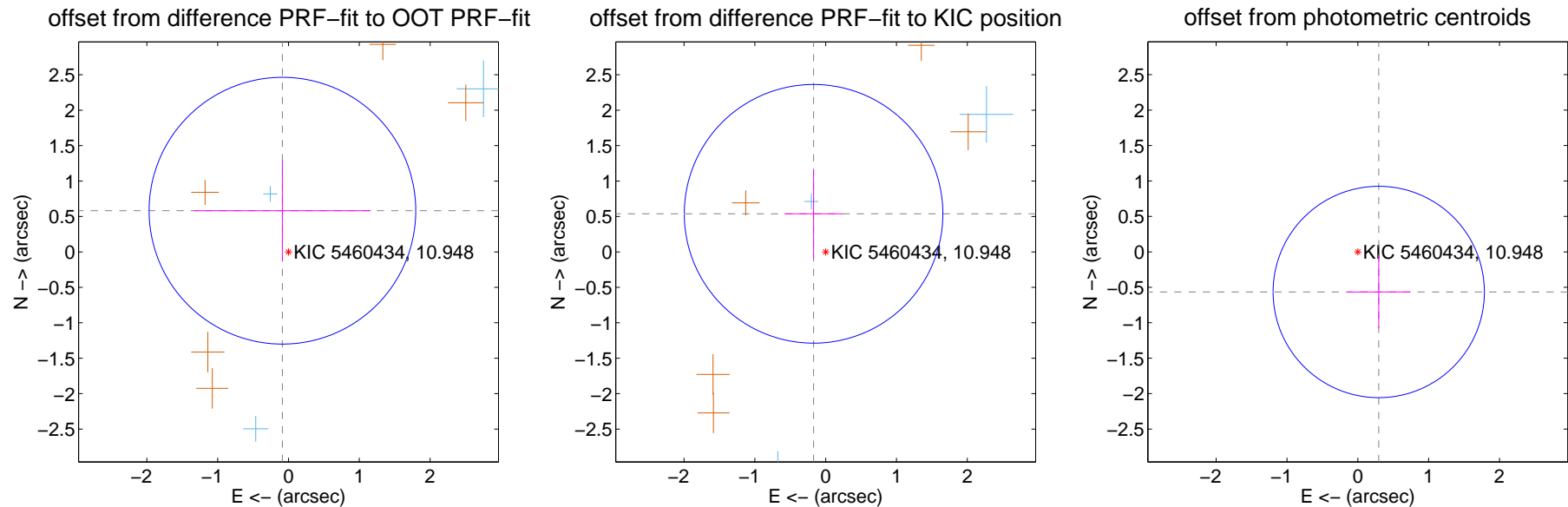
DV Centroid Data

Supplemental centroid analysis for 005460434-05. **Kepler magnitude: 10.95.** Transit SNR 8.54

There are 3 quarters with good PRF difference image offsets

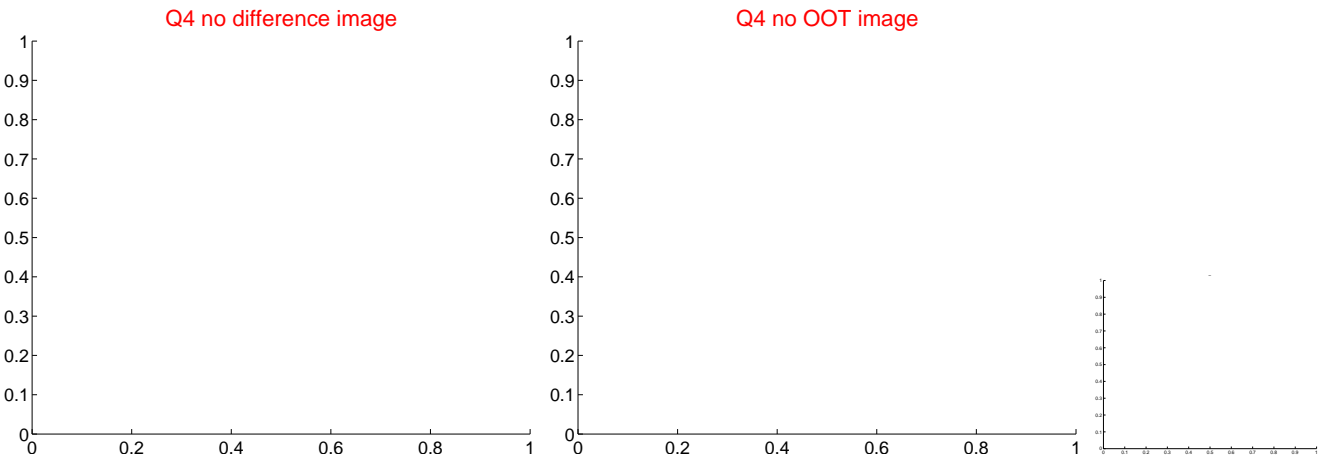
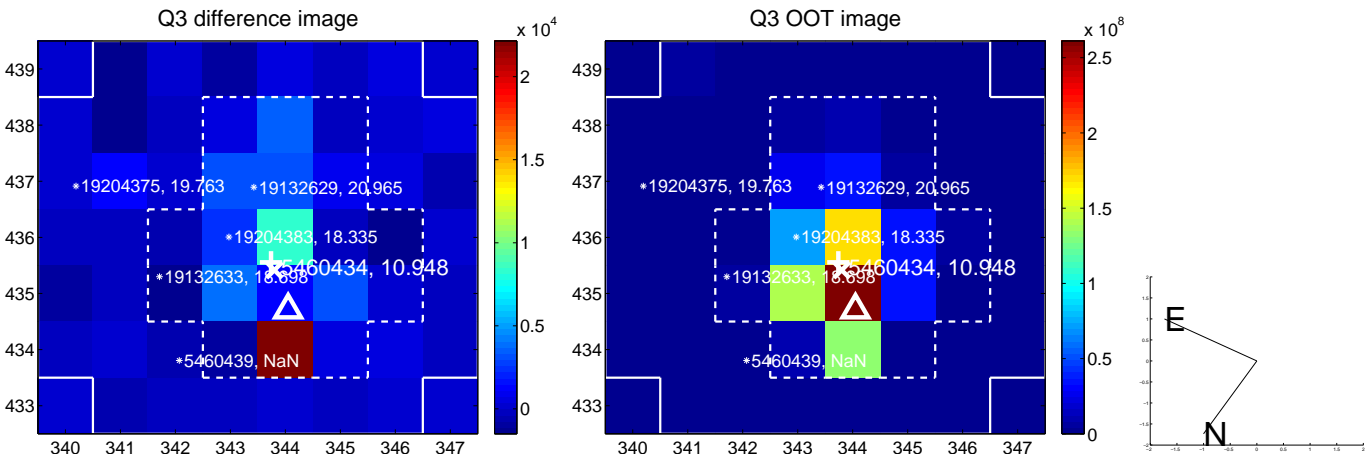
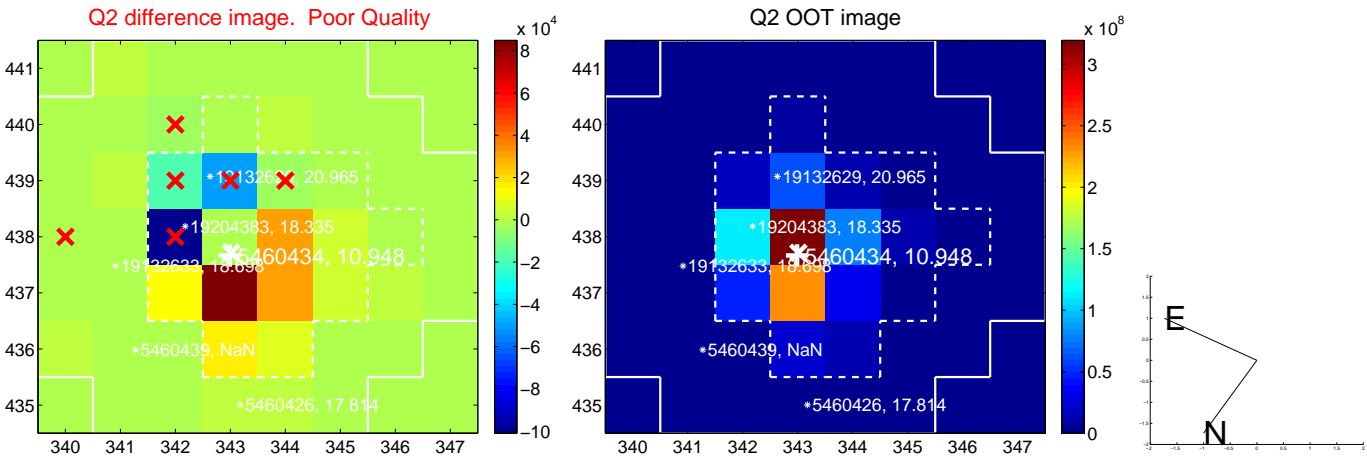
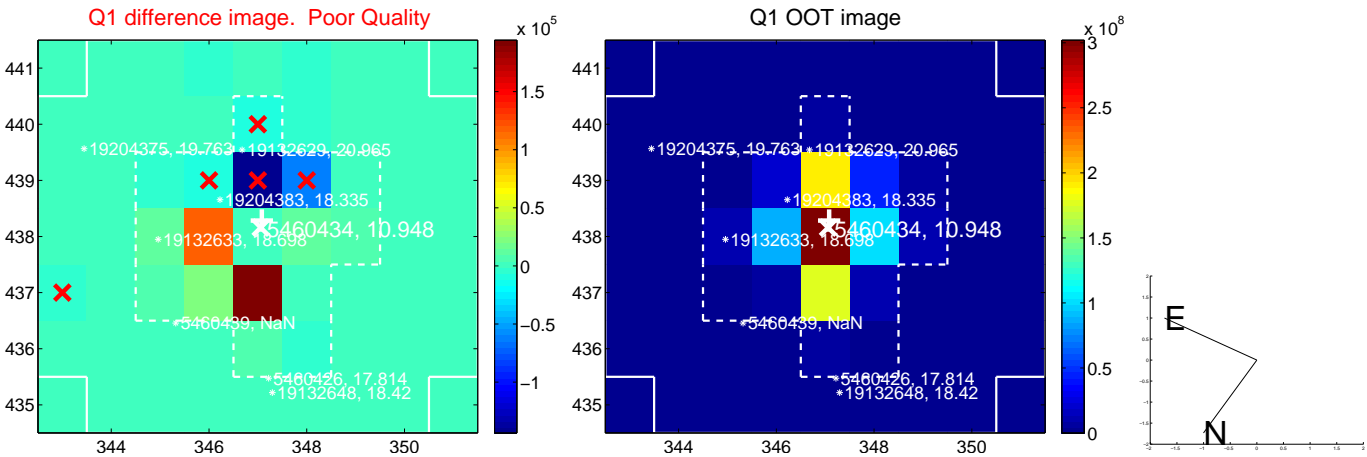
The direct PRF centroid is offset from the target star catalog position by about 0.49 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.588 ± 0.627	0.94	0.086 ± 1.247	0.582 ± 0.712
PRF-fit source offset from KIC position	0.564 ± 0.608	0.93	0.171 ± 0.413	0.538 ± 0.625
photometric centroid source offset	0.64 ± 0.50	1.28	-0.30 ± 0.45	-0.57 ± 0.51

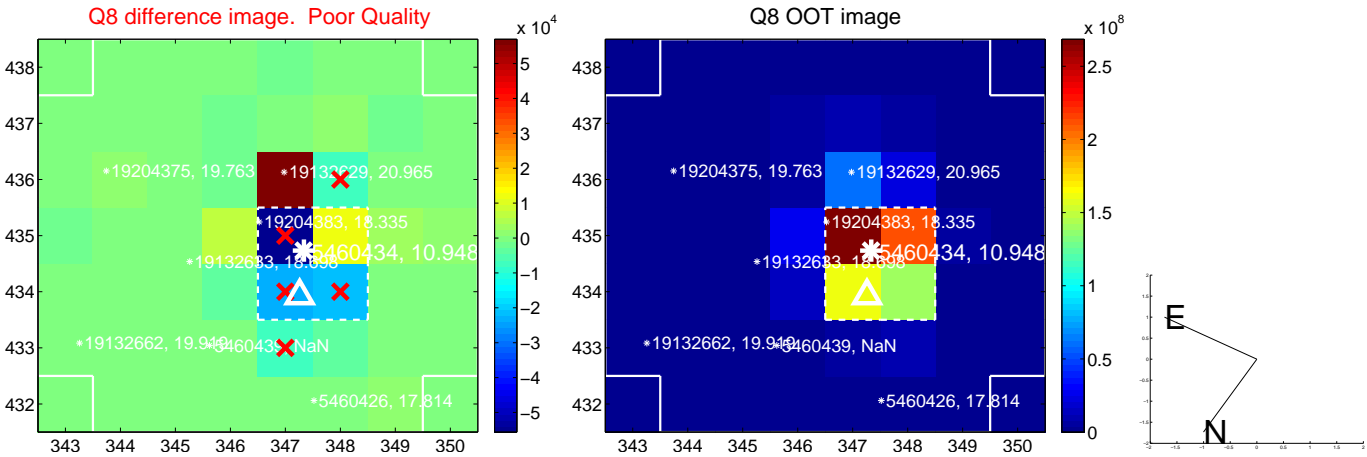
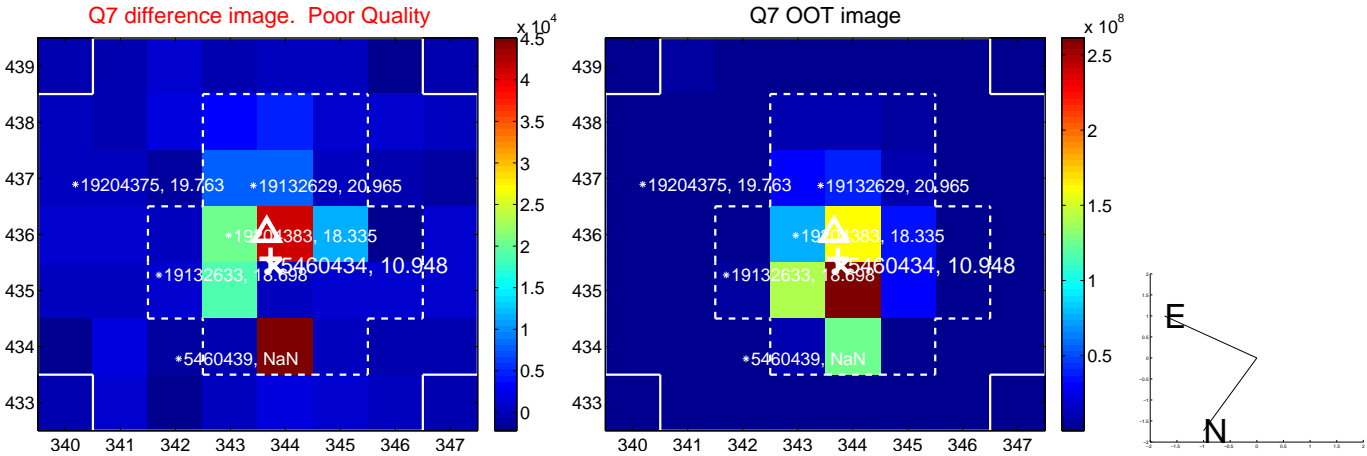
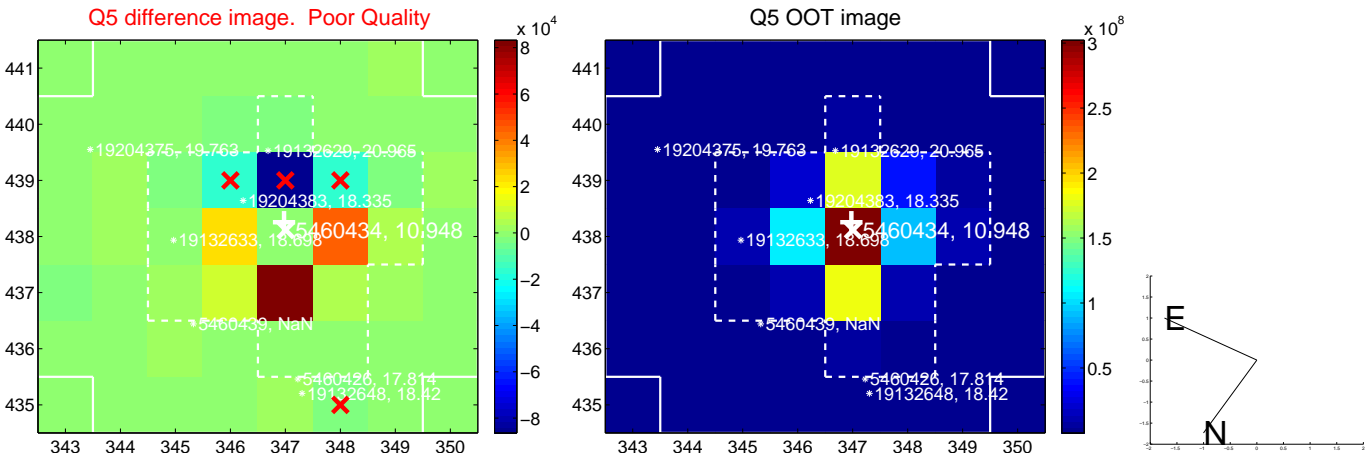


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

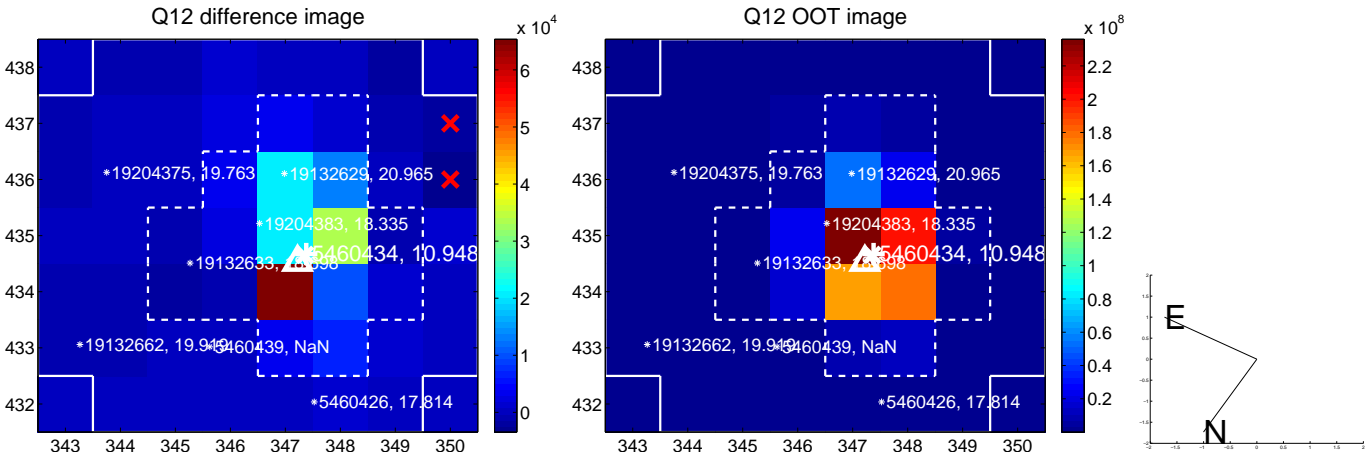
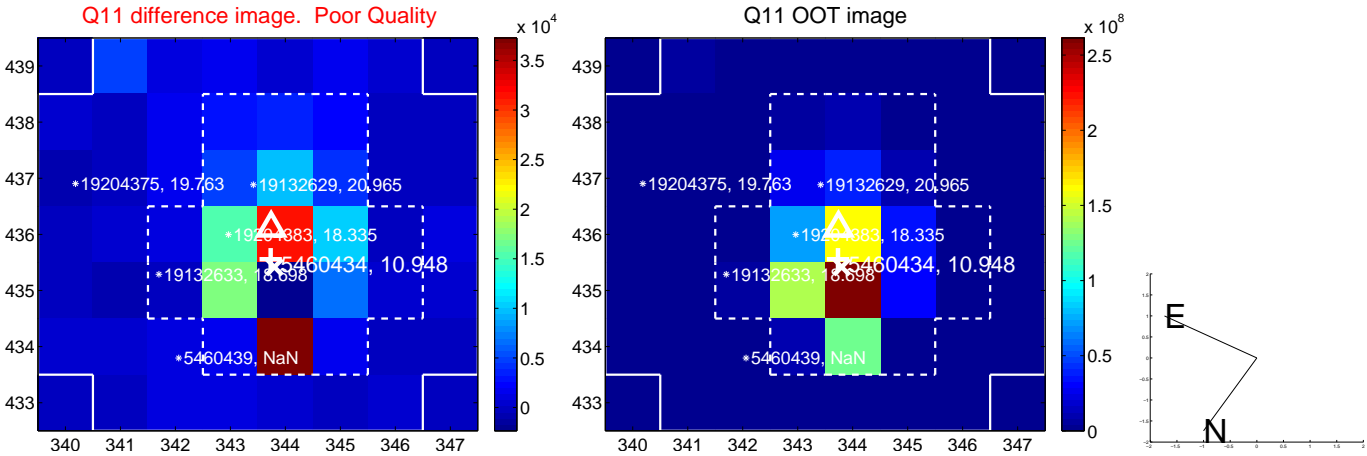
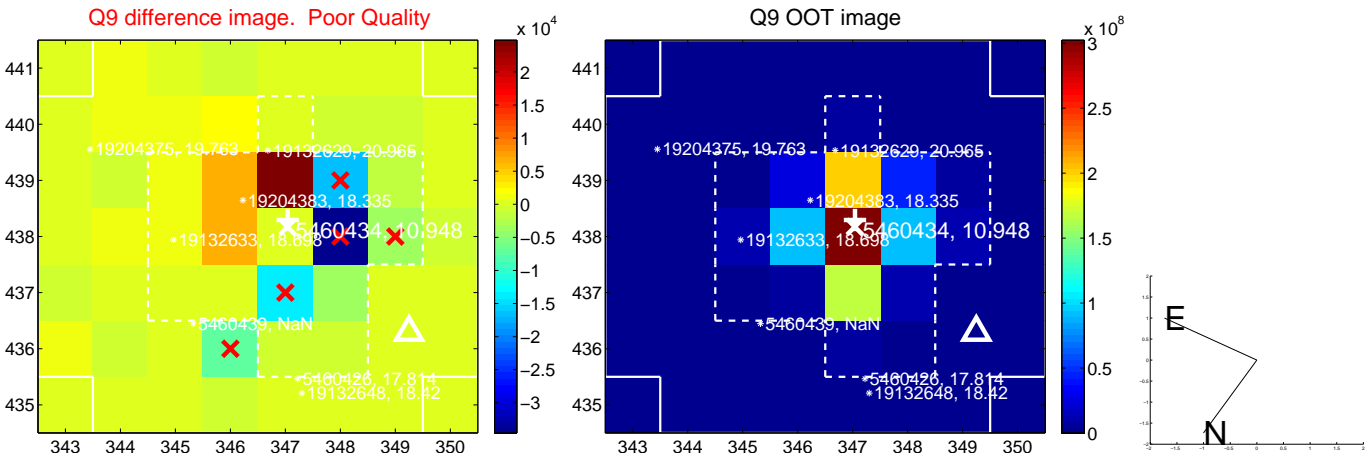
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



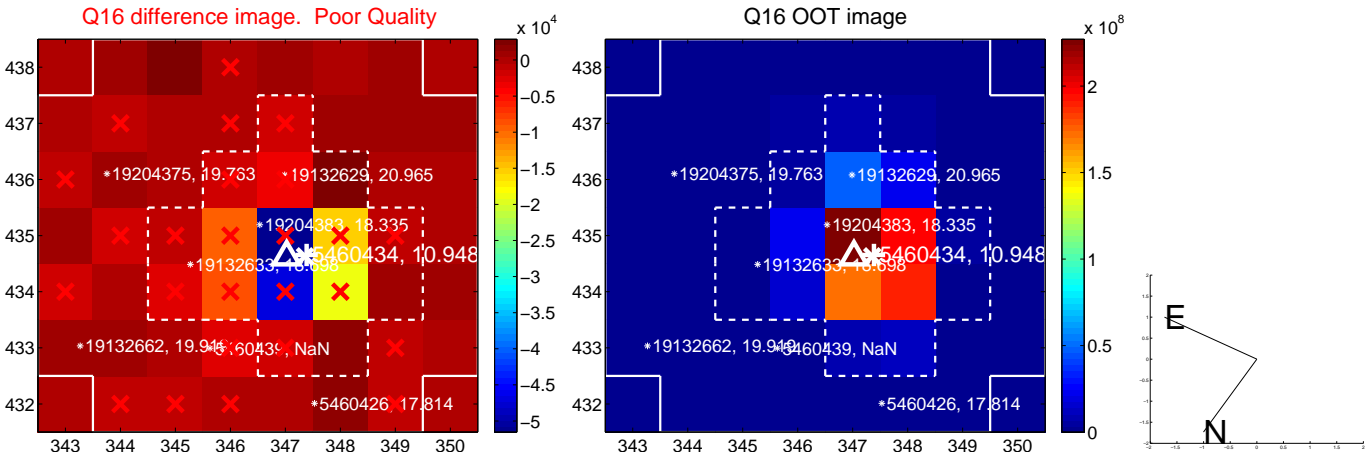
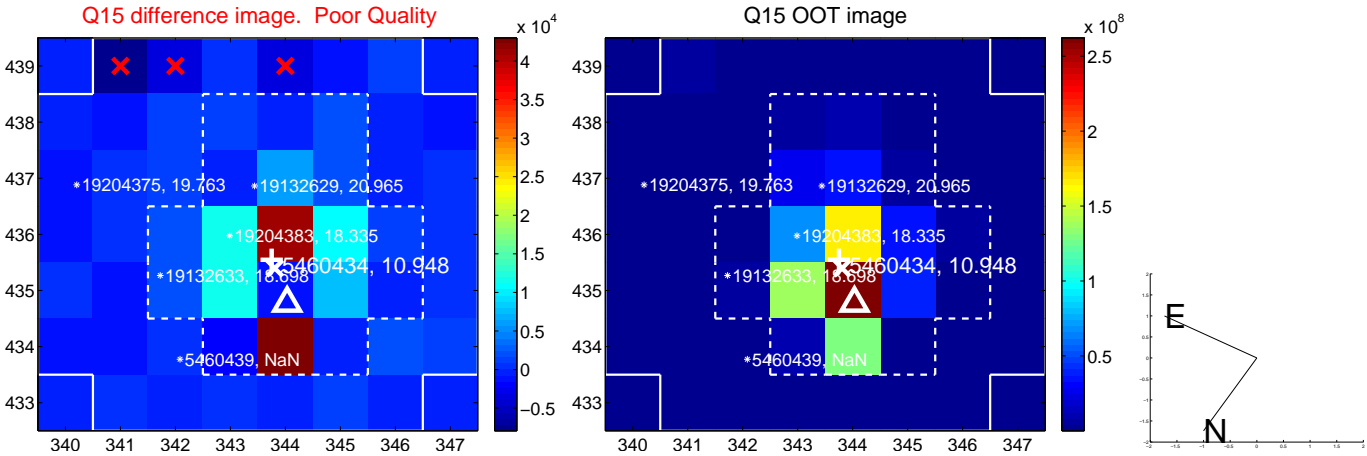
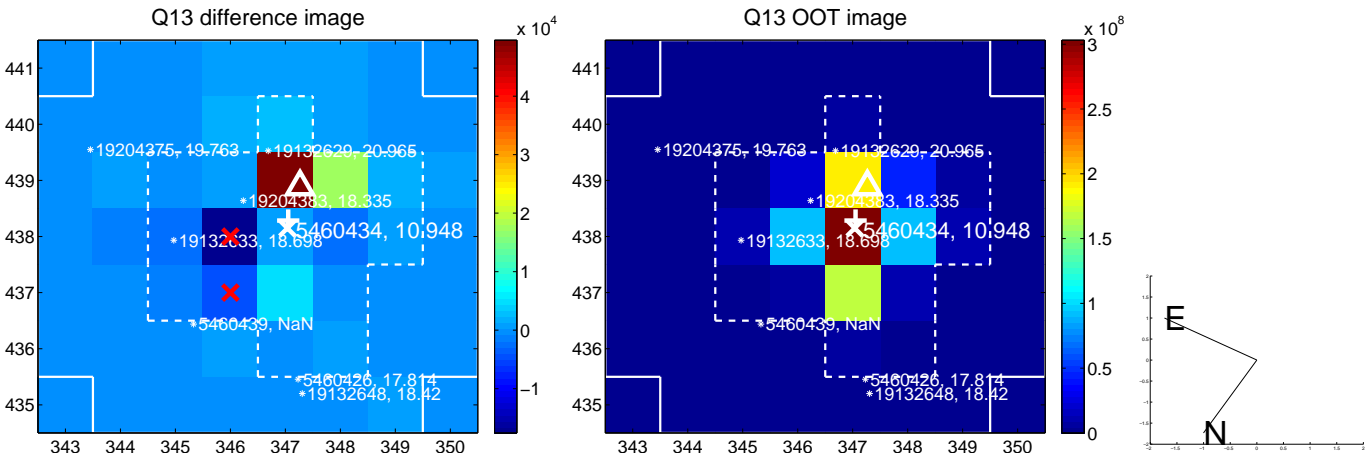
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



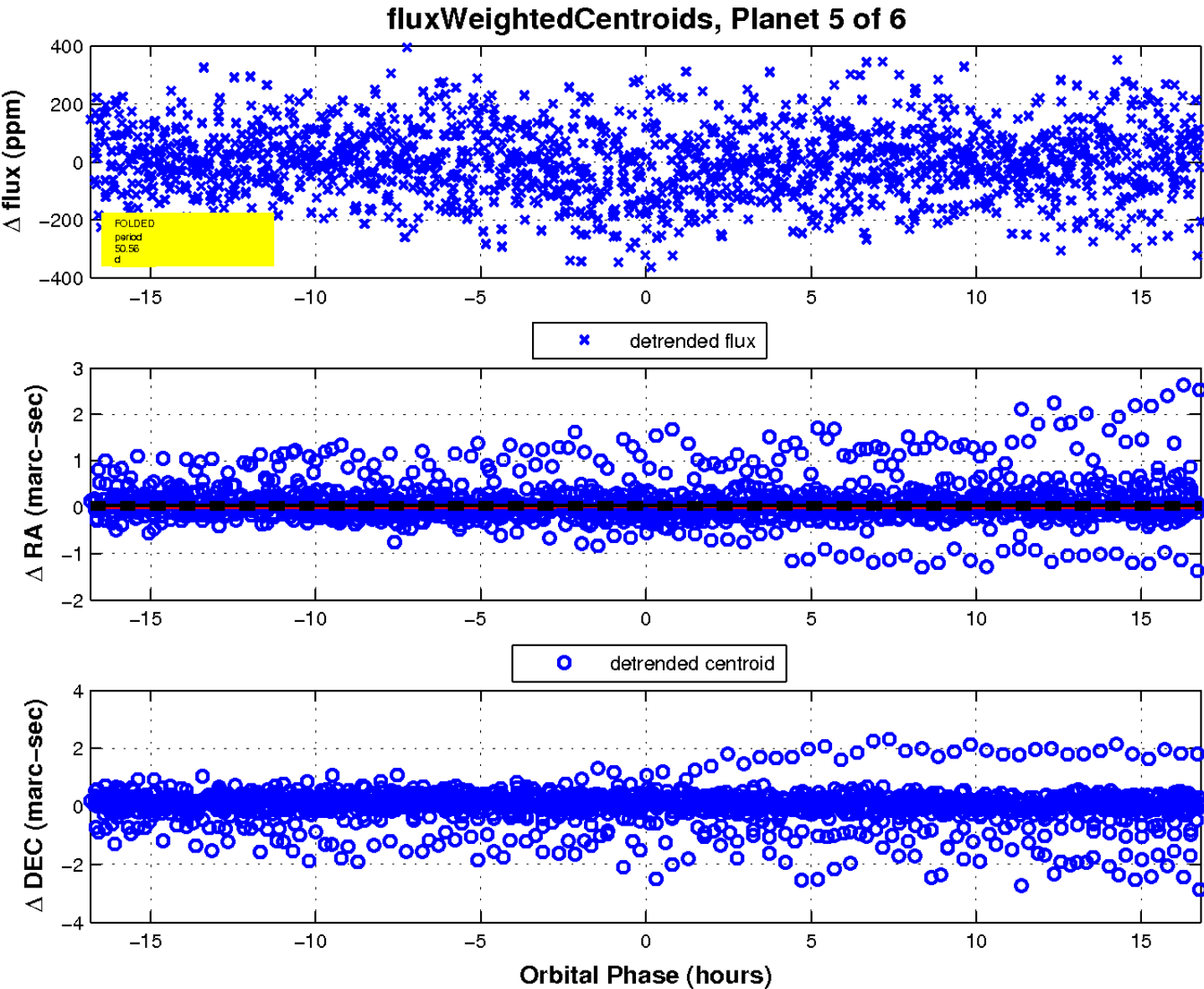
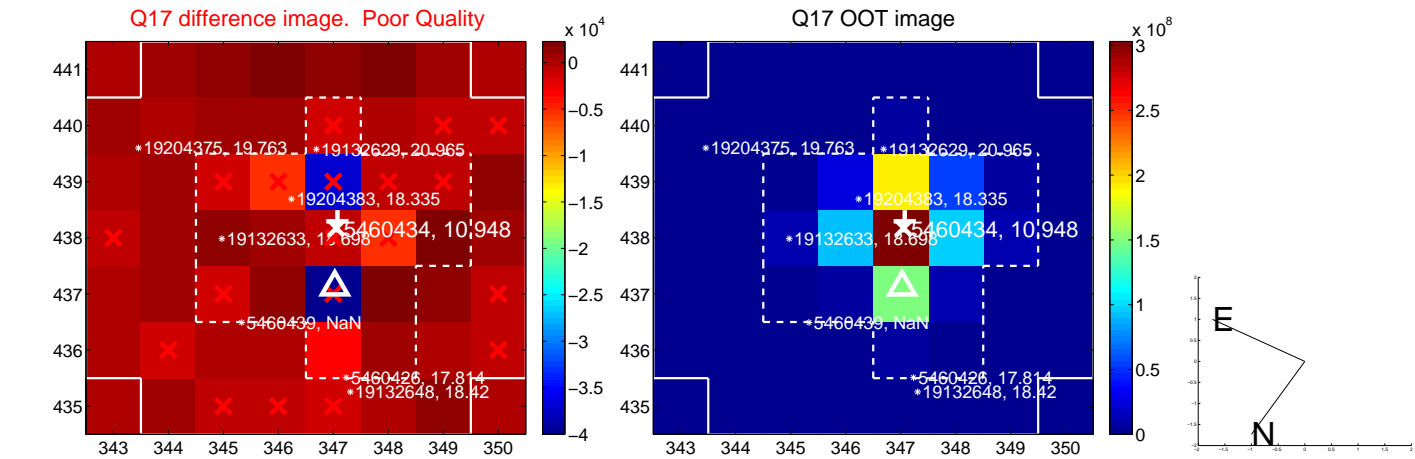
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



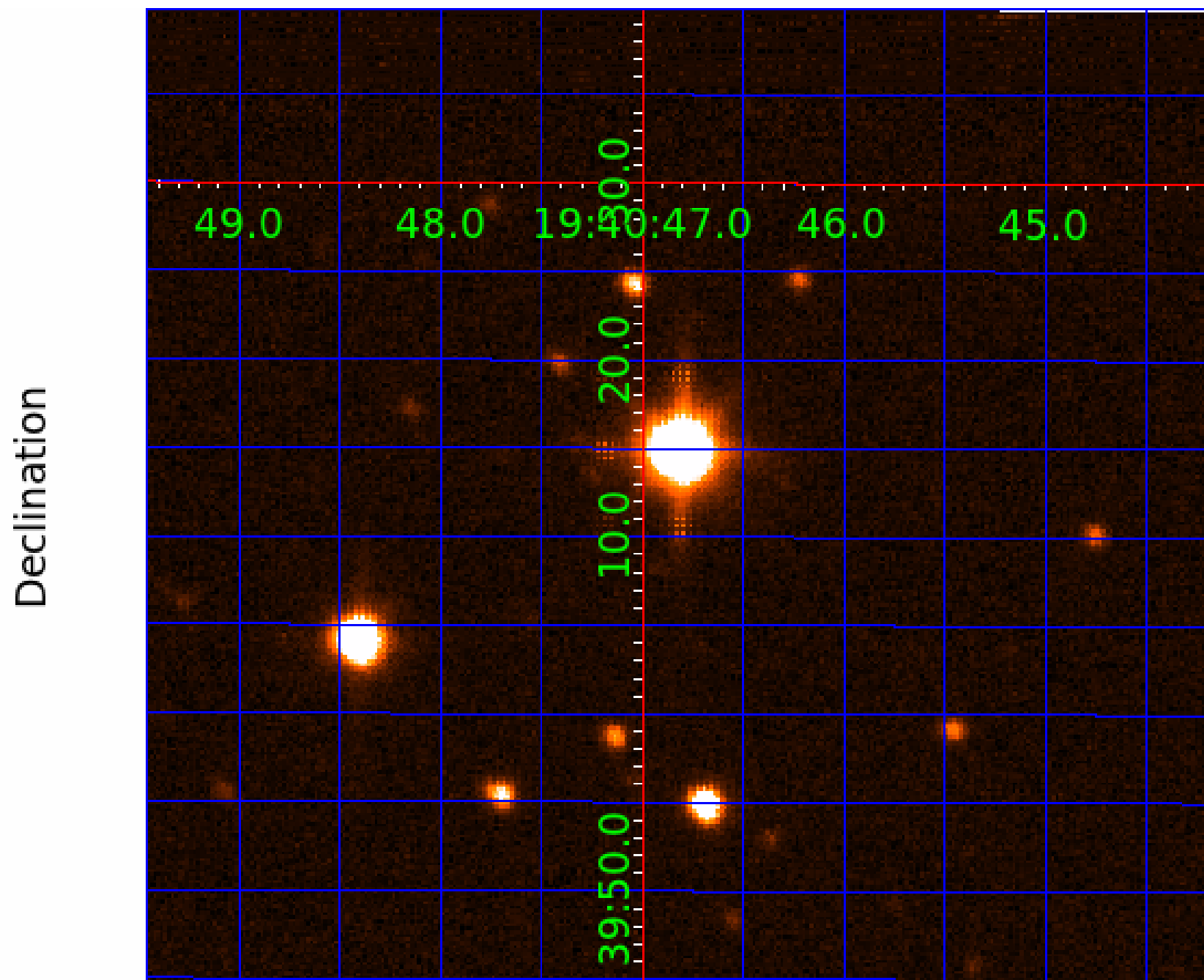
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 005460434

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})
005460434-01	OBS	No	2.079770	132.550883	12.0	8.607	8.2	5.0	2.02	6759	0.74	5600.90
005460434-02	OBS	No	68.353104	166.499551	177.5	2.554	8.7	8.5	2.02	6759	2.96	53.20
005460434-03	OBS	No	189.815596	179.539702	253.5	5.593	8.6	8.6	2.02	6759	3.81	13.63
005460434-04	OBS	No	258.520391	157.635494	203.8	8.126	8.2	7.0	2.02	6759	3.20	9.03
005460434-05	OBS	7729.01	50.564437	145.860981	131.0	5.606	8.2	8.5	2.02	6759	2.65	79.52
005460434-06	OBS	No	210.087055	144.260167	176.3	4.007	7.6	7.4	2.02	6759	3.04	11.90

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005460434-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_SATURATED
005460434-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
005460434-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
005460434-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
005460434-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_ALT—CENT_SATURATED
005460434-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED

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

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

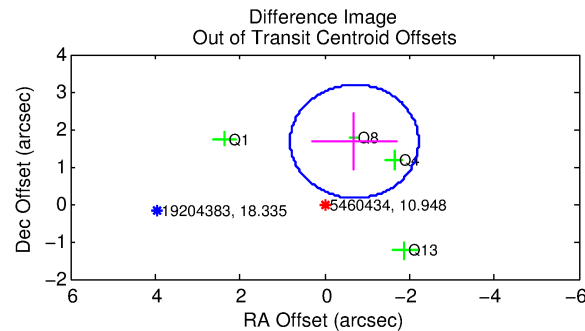
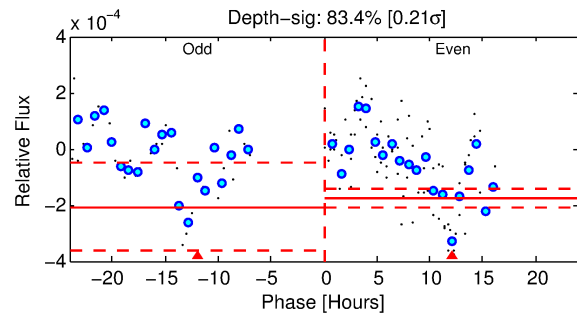
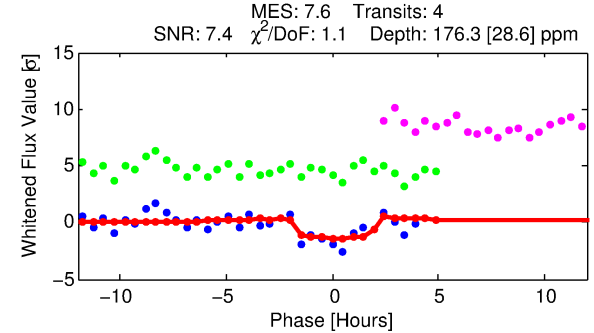
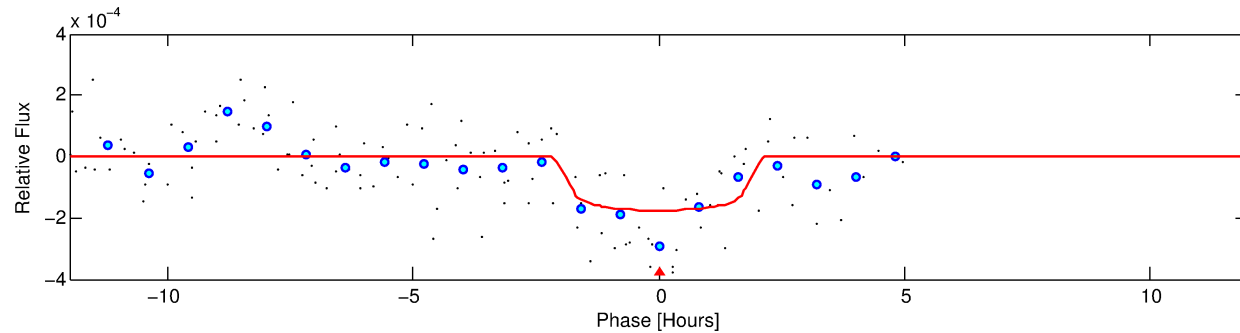
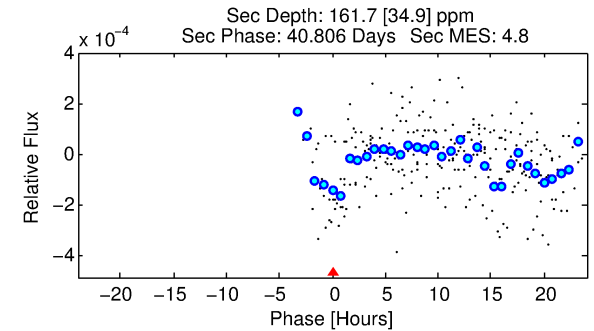
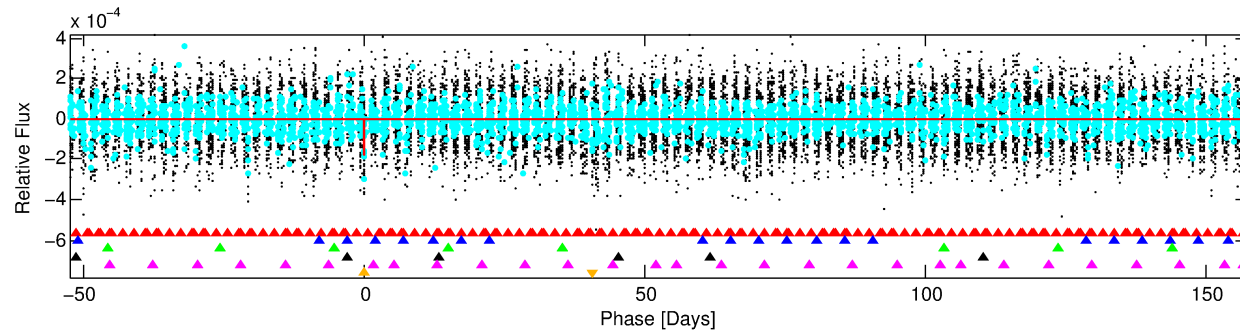
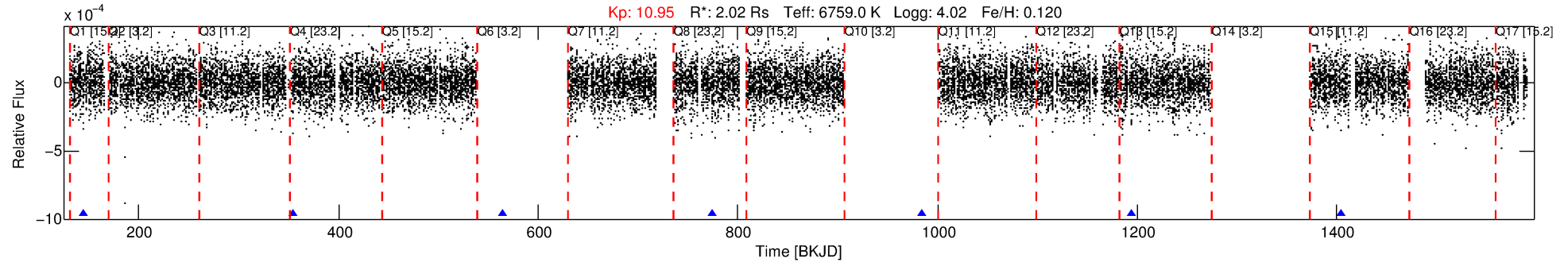
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005460434-06

No Significant Match Found

DV One-Page Summary

KIC: 5460434 Candidate: 6 of 6 Period: 210.087 d



DV Fit Results:

Period = 210.08705 [0.00382] d
Epoch = 144.2602 [0.0080] BKJD
Rp/R* = 0.0138 [0.0064]
a/R* = 219.52 [575.55]
b = 0.85 [0.84]
Seff = 11.91 [3.20]
Teq = 474 [32] K
Rp = 3.04 [1.54] Re
a = 0.8013 [0.1417] AU
Ag = 6195.99 [6133.04] [1.01σ]
Teffp = 6497 [1551] K [3.88σ]

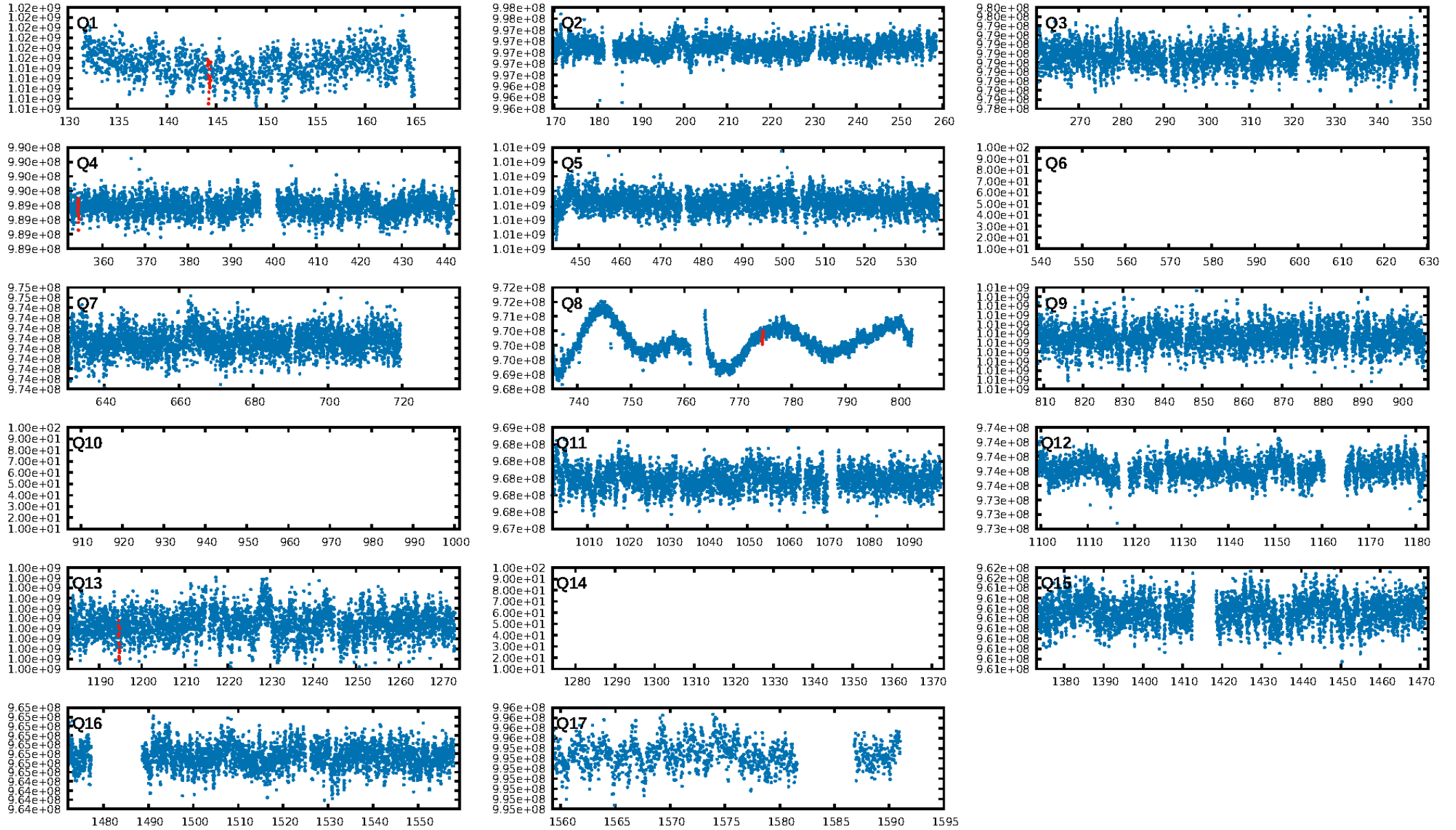
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [70.71σ]
LongPeriod-sig: 100.0% [128.29σ]
ModelChiSquare2-sig: 41.9%
ModelChiSquareGof-sig: 52.0%
Bootstrap-pfa: 1.57e-08
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -9.027
Centroid-sig: N/A
Centroid-so: 1.211 arcsec [1.23σ]
OotOffset-rm: 1.814 arcsec [3.59σ]
KicOffset-rm: 1.663 arcsec [3.20σ]
OotOffset-st: 0/0/2 [4]
KicOffset-st: 0/0/2 [4]
DiffImageQuality-fgm: 0.50 [2/4]
DiffImageOverlap-fno: 1.00 [4/4]

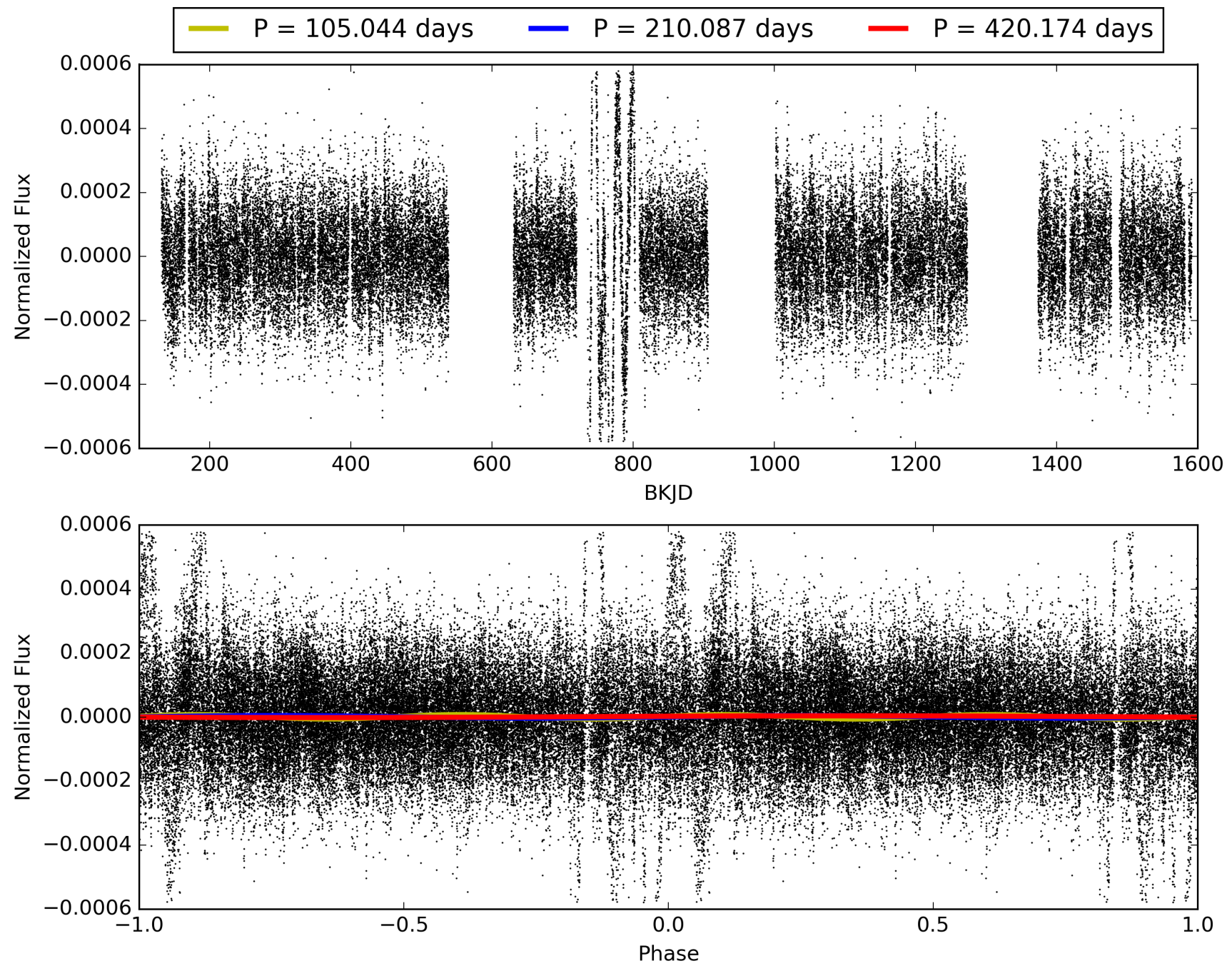
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 00:56:46 Z

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

TCE 005460434-06, PDC Light Curves

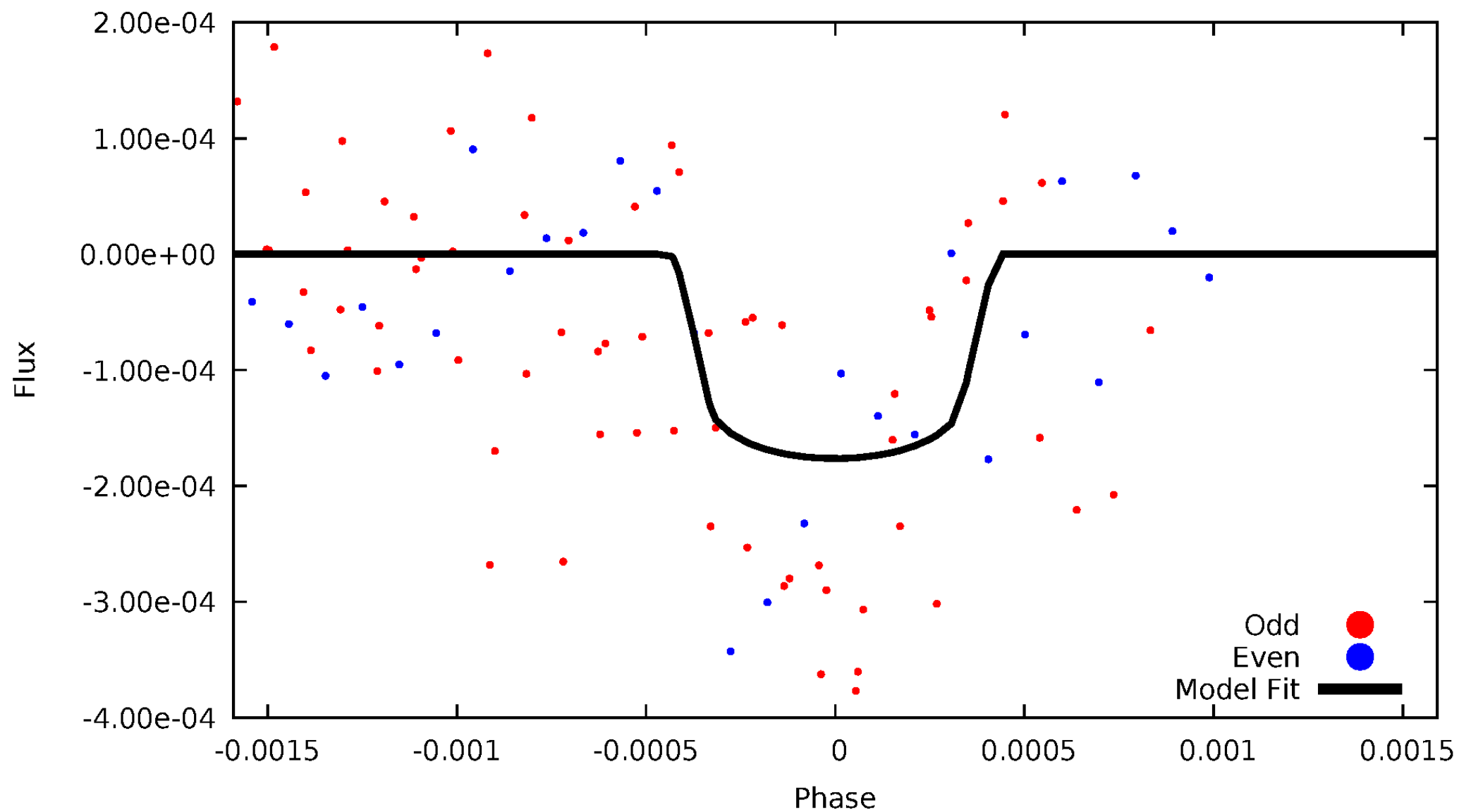


TCE 005460434-06



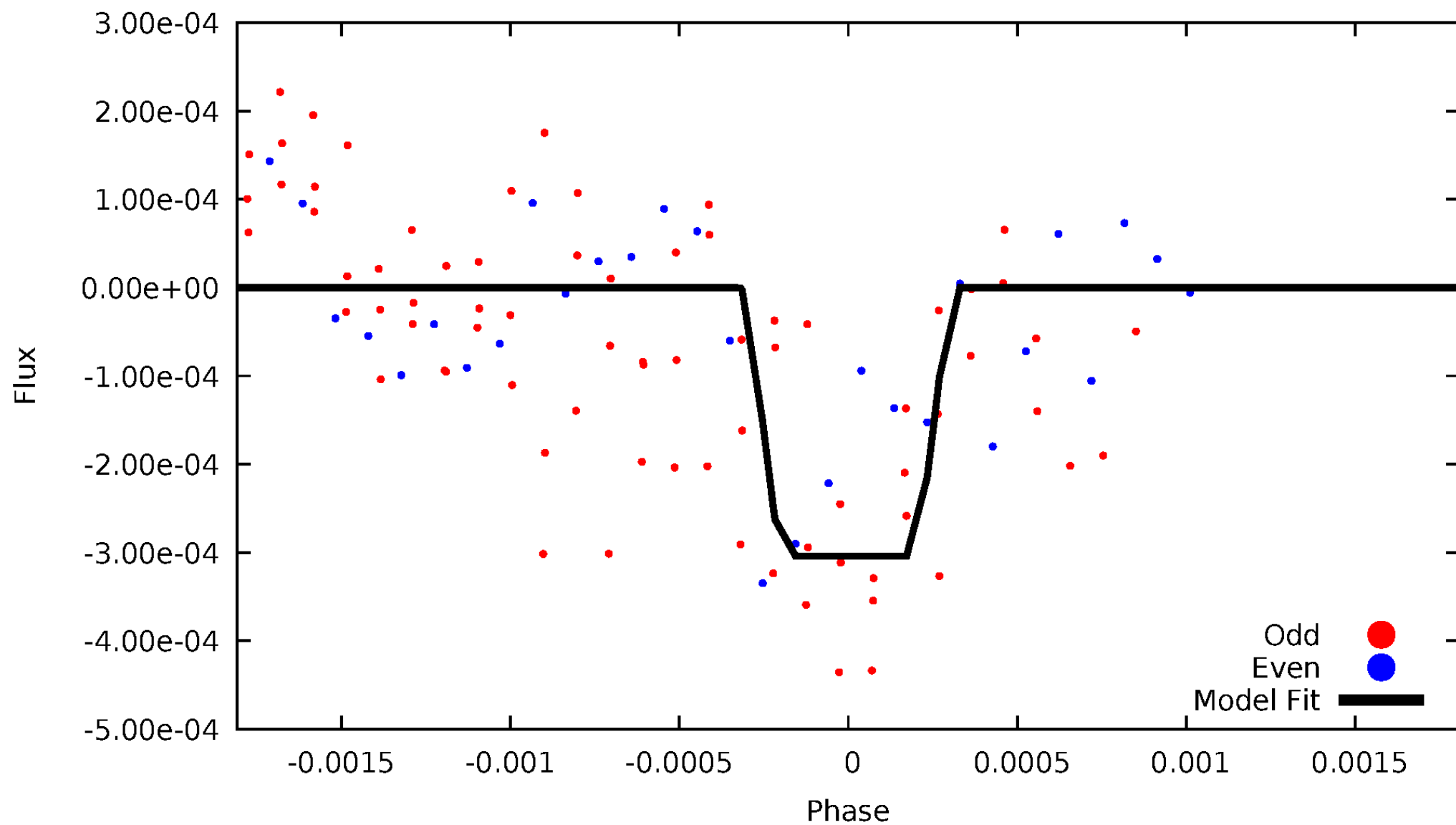
DV Odd/Even

TCE 005460434-06



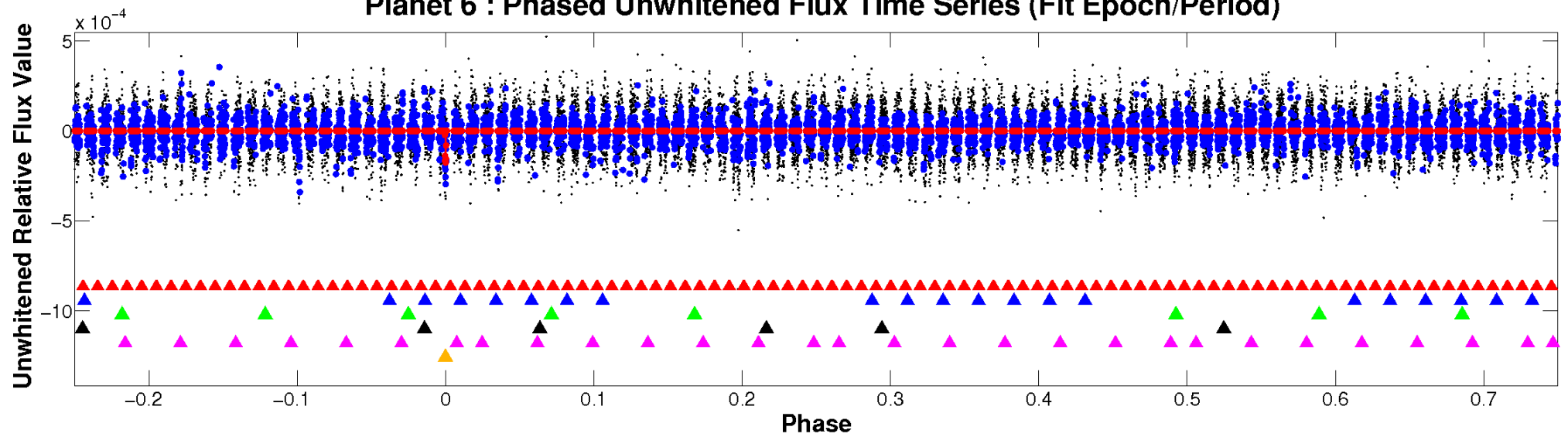
ALT Odd/Even

TCE 005460434-06

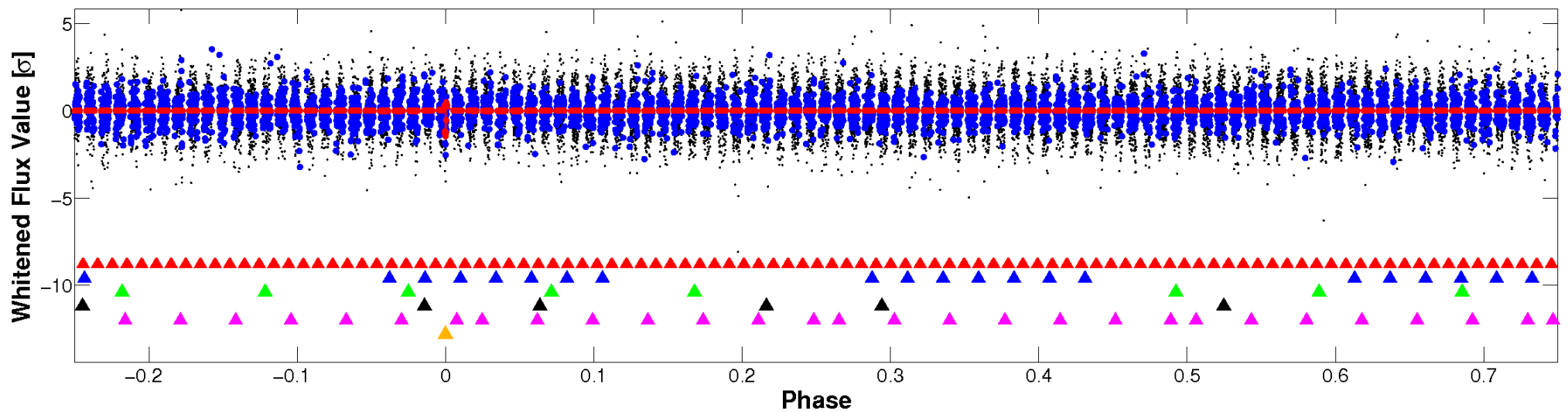


Non-Whitened Vs. Whitened Light Curve

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

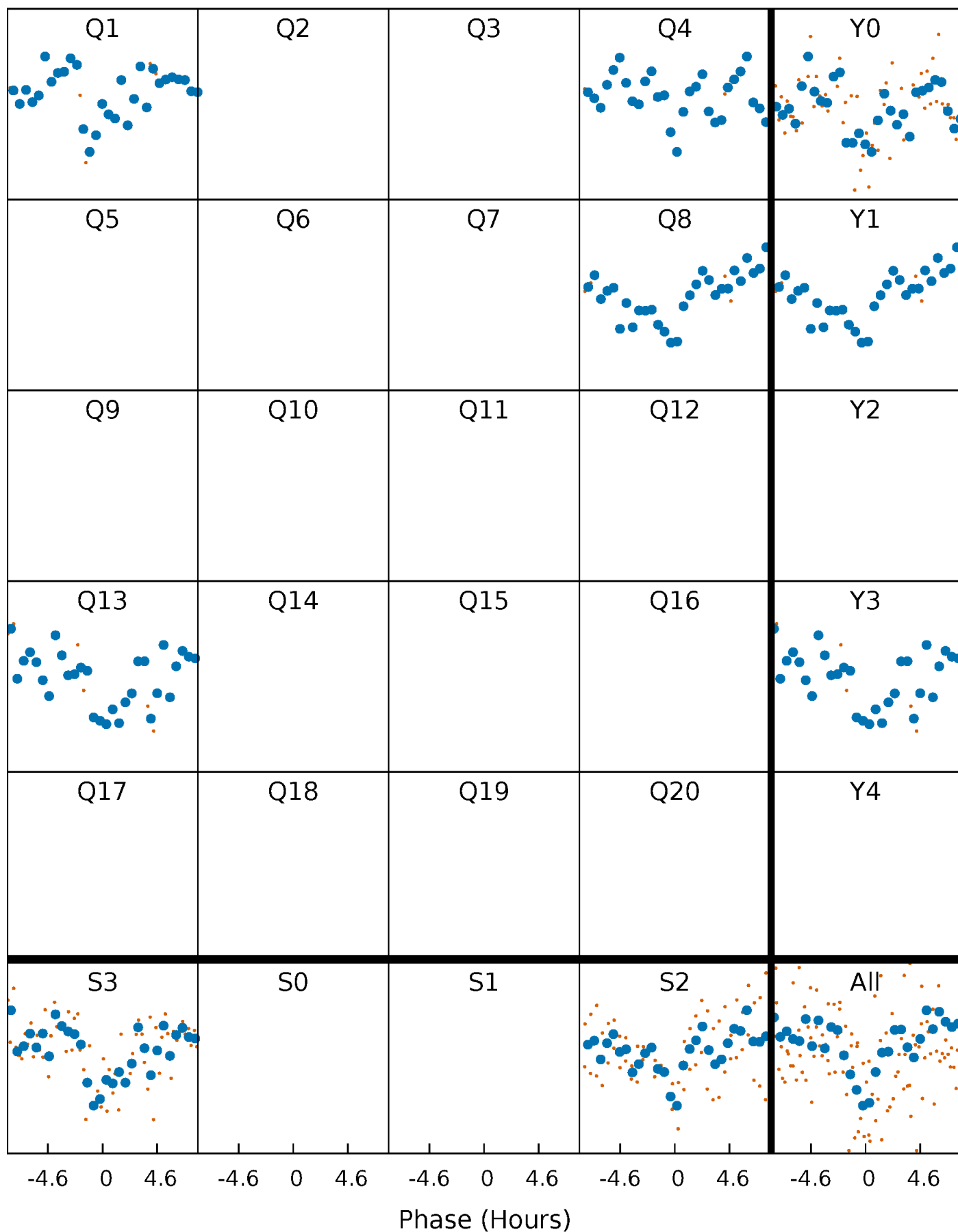


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



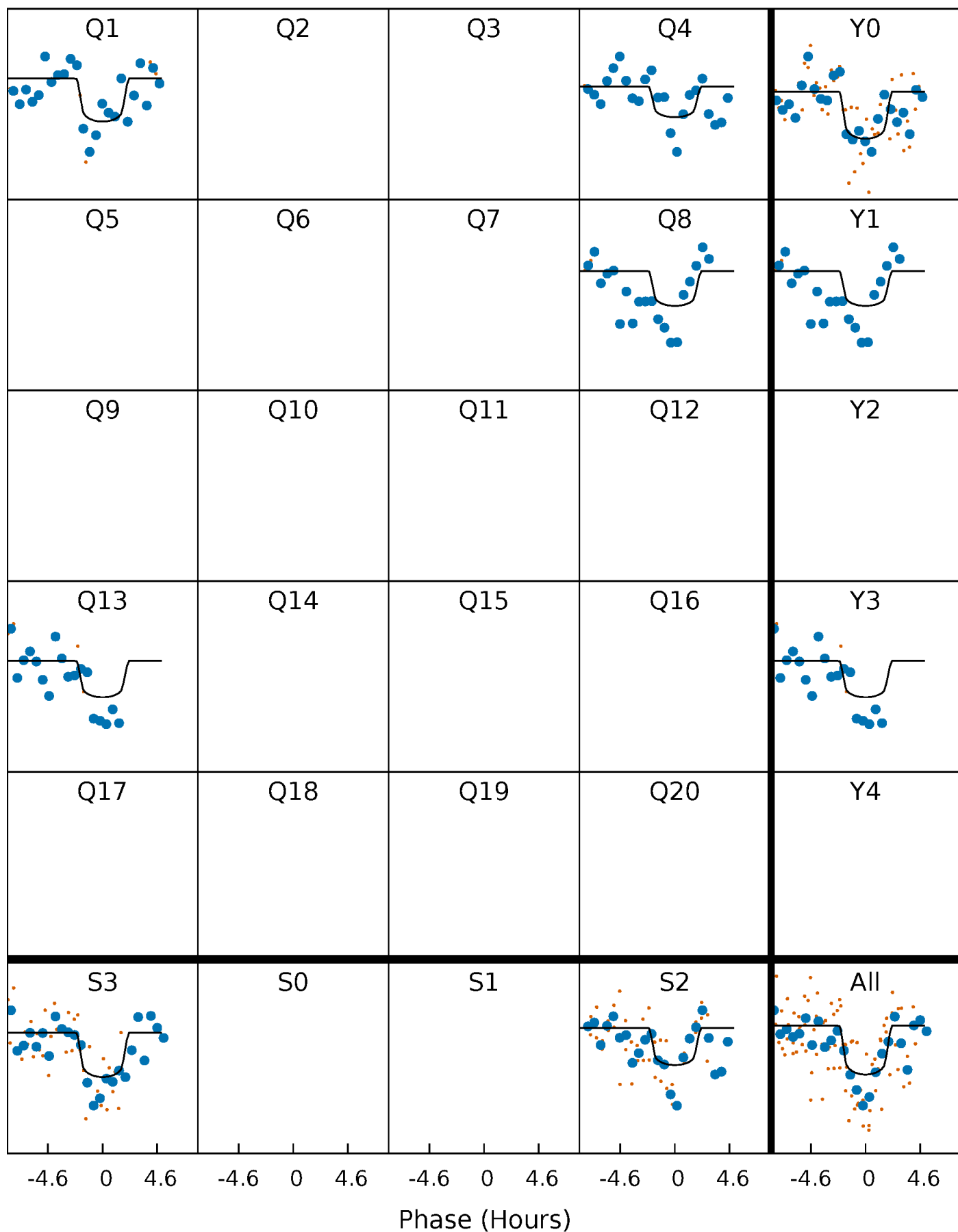
PDC Quarter-Phased Transit Curves

TCE 005460434-06 P=210.087054 Days $T_0=144.260167$ (BKJD)



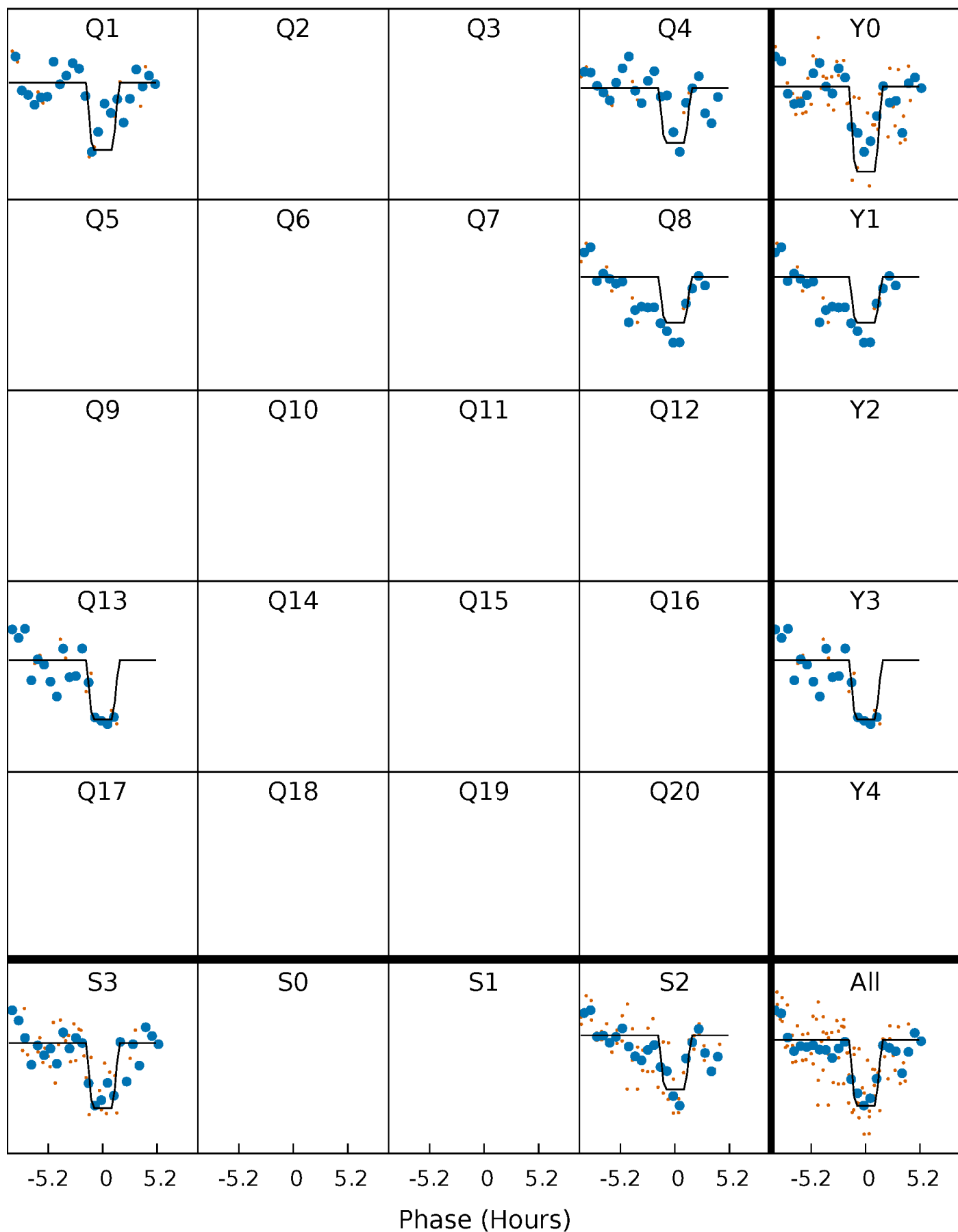
DV Quarter-Phased Transit Curves

TCE 005460434-06 $P=210.087054$ Days $T_0=144.260167$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

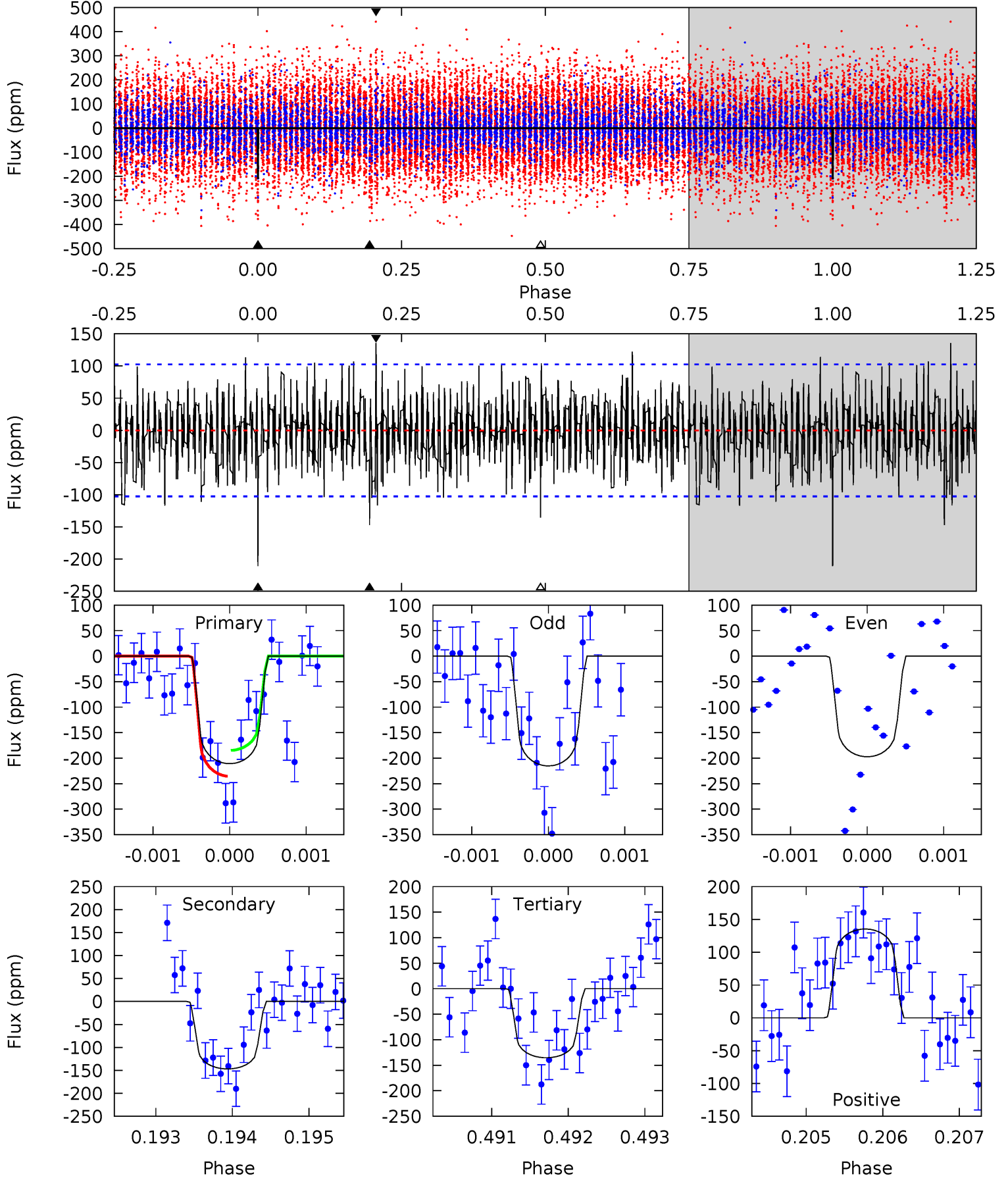
TCE 005460434-06 P=210.087982 Days $T_0=144.255263$ (BKJD)



DV Model-Shift Uniqueness Test

005460434-06, P = 210.087054 Days, E = 144.260167 Days

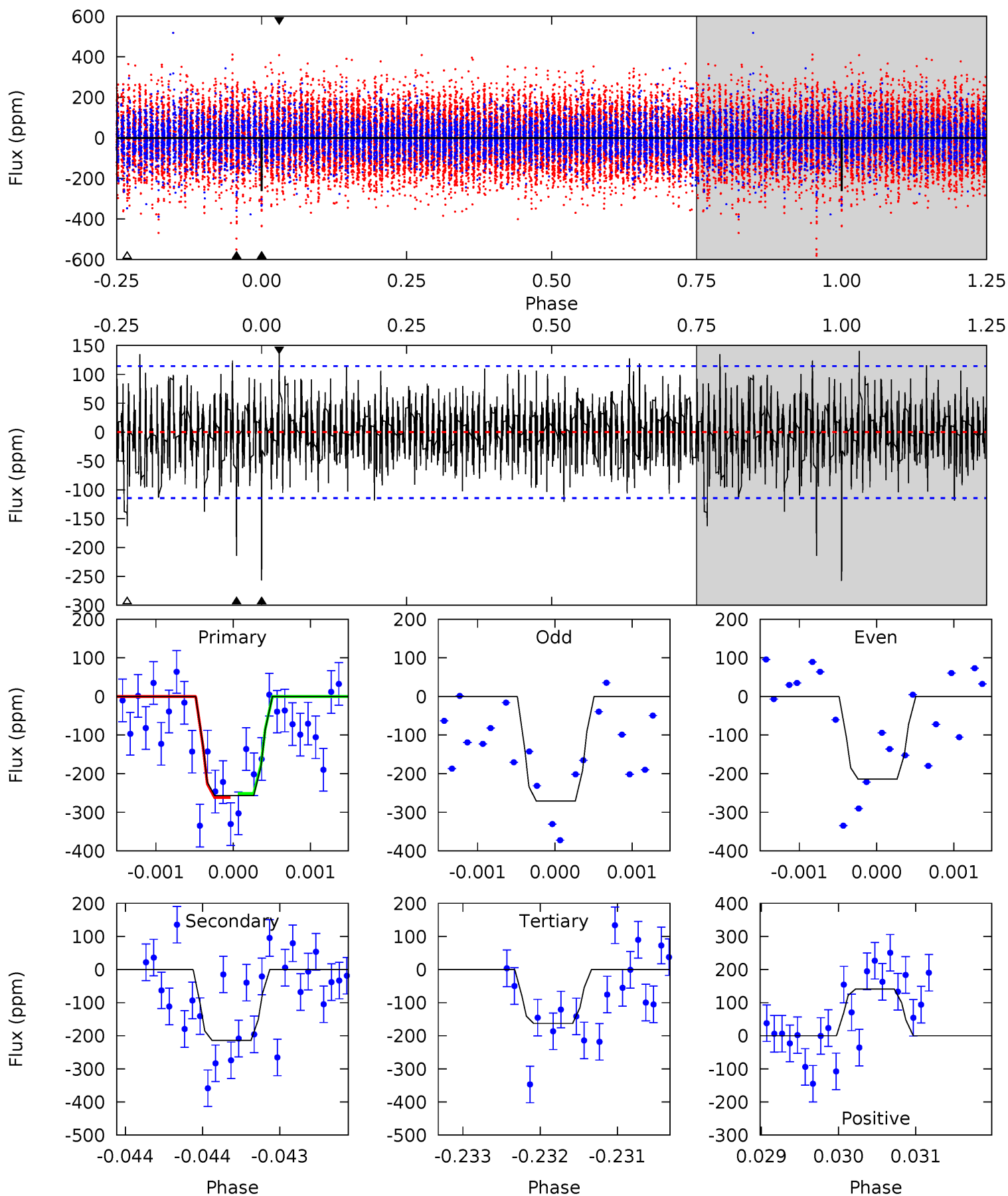
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.3	7.84	7.23	7.23	5.47	3.33	1.98	4.03	4.02	0.62	0.61	0.43	0.96	0.39	1.35



Alt Model-Shift Uniqueness Test

005460434-06, P = 210.087982 Days, E = 144.255263 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	10.4	7.87	6.81	5.53	3.41	1.87	4.56	5.62	2.48	3.55	1.20	1.04	0.35	0.26



Stellar Parameters For KIC 005460434

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6759^{+81}_{-81}	$4.018^{+0.148}_{-0.121}$	$0.120^{+0.150}_{-0.150}$	$2.022^{+0.411}_{-0.374}$	$1.552^{+0.149}_{-0.134}$	$0.264^{+0.192}_{-0.094}$
	+1%/-1%	+4%/-3%	+125%/-125%	+20%/-18%	+10%/-9%	+73%/-36%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 005460434-06 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-147 ± 19	$3.00^{+1.51}_{-1.40}$	661^{+35}_{-33}	6338^{+2862}_{-1113}	5770^{+14336}_{-3269}
Alt.	-214 ± 21	$3.72^{+1.43}_{-1.38}$	660^{+34}_{-35}	6221^{+1751}_{-851}	5440^{+8583}_{-2598}

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

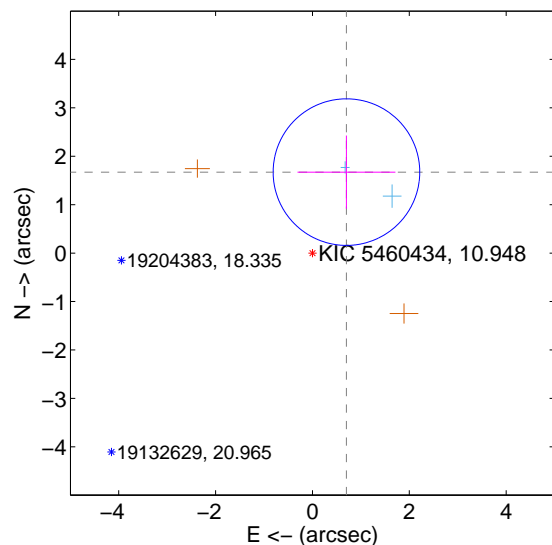
Supplemental centroid analysis for 005460434-06. **Kepler magnitude: 10.95.** Transit SNR 7.37

There are 2 quarters with good PRF difference image offsets

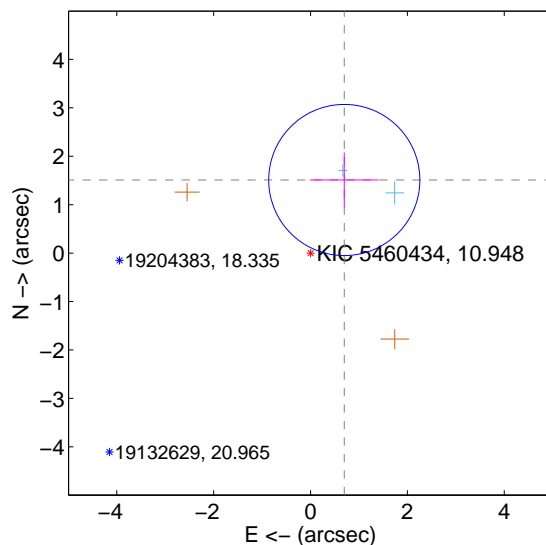
The direct PRF centroid is offset from the target star catalog position by about 0.55 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.814 ± 0.505	3.59	-0.702 ± 1.011	1.672 ± 0.755
PRF-fit source offset from KIC position	1.663 ± 0.520	3.20	-0.697 ± 0.712	1.510 ± 0.569
photometric centroid source offset	1.21 ± 0.98	1.23	-0.34 ± 0.76	1.16 ± 1.00

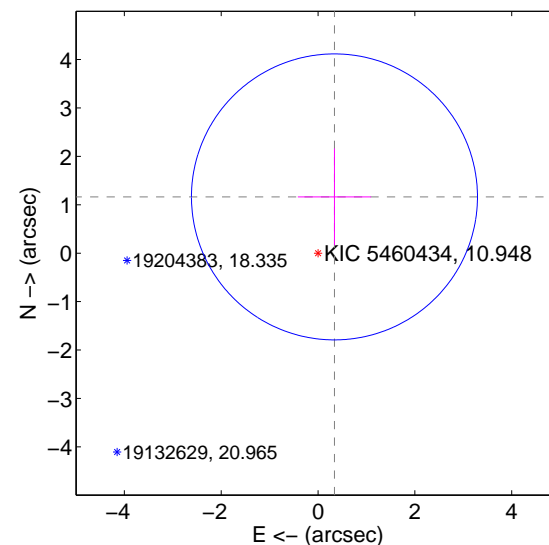
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

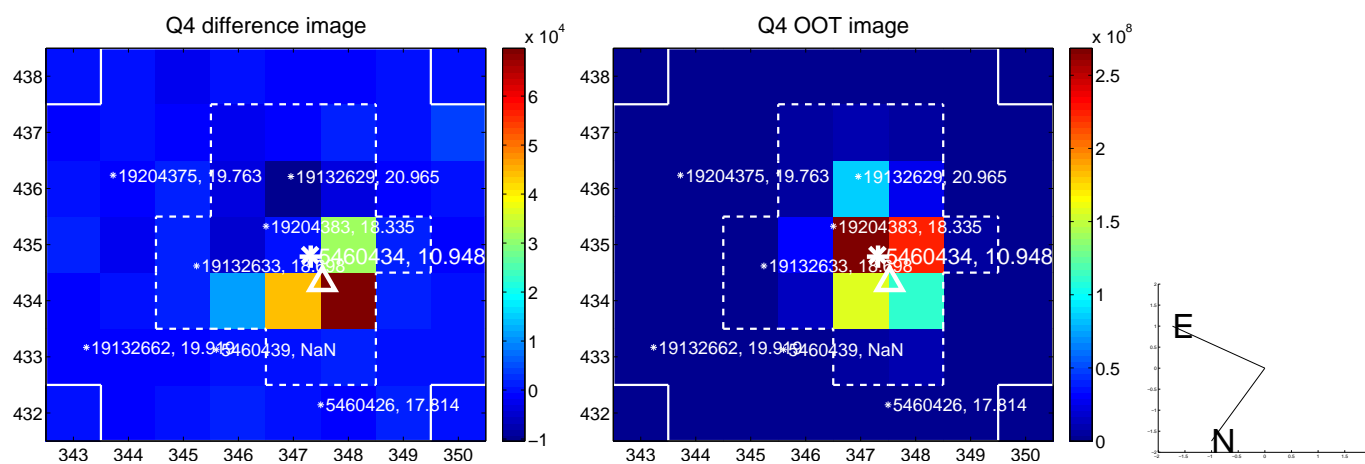
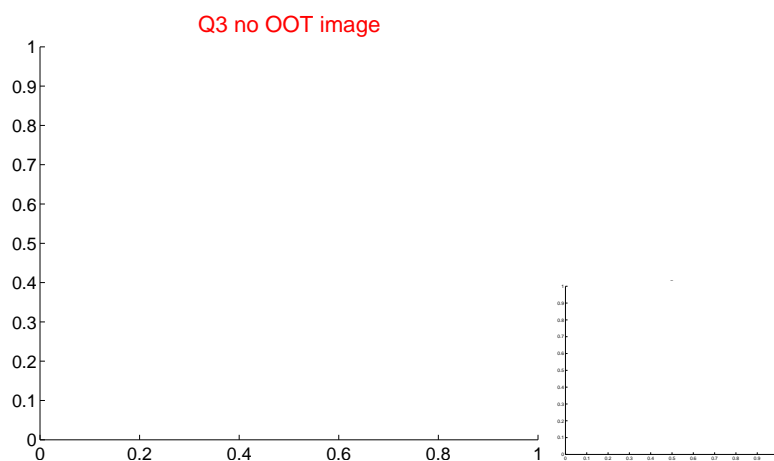
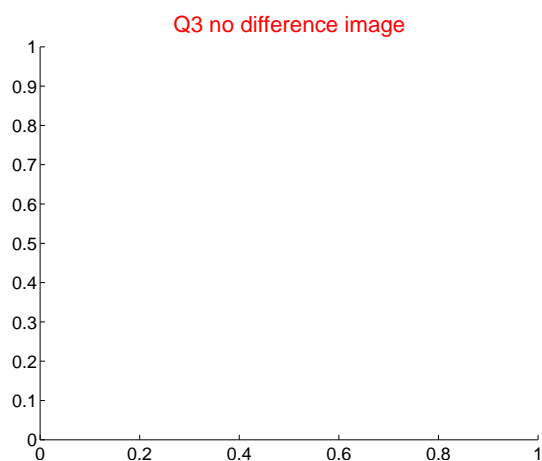
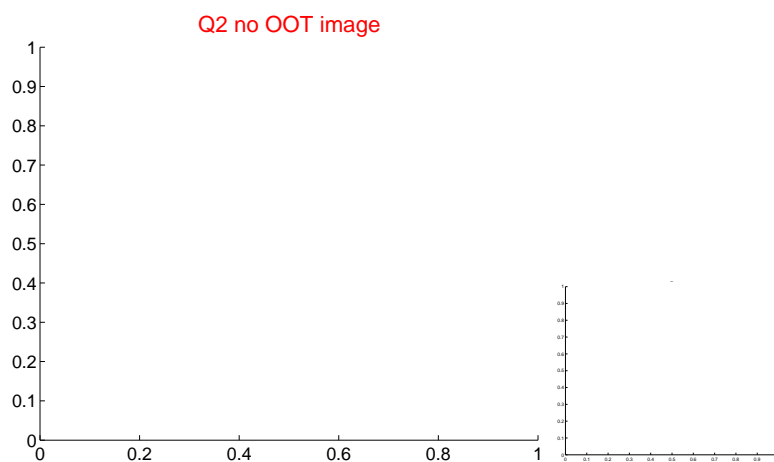
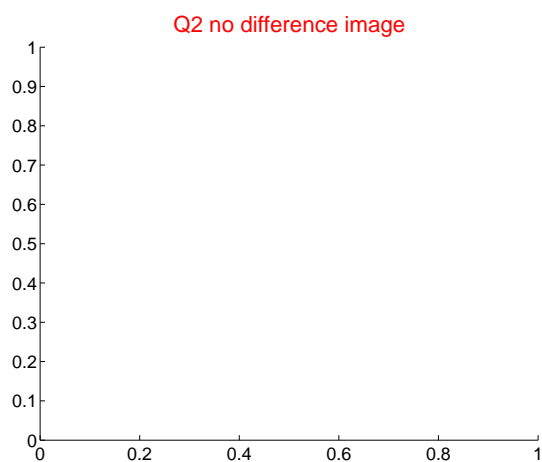
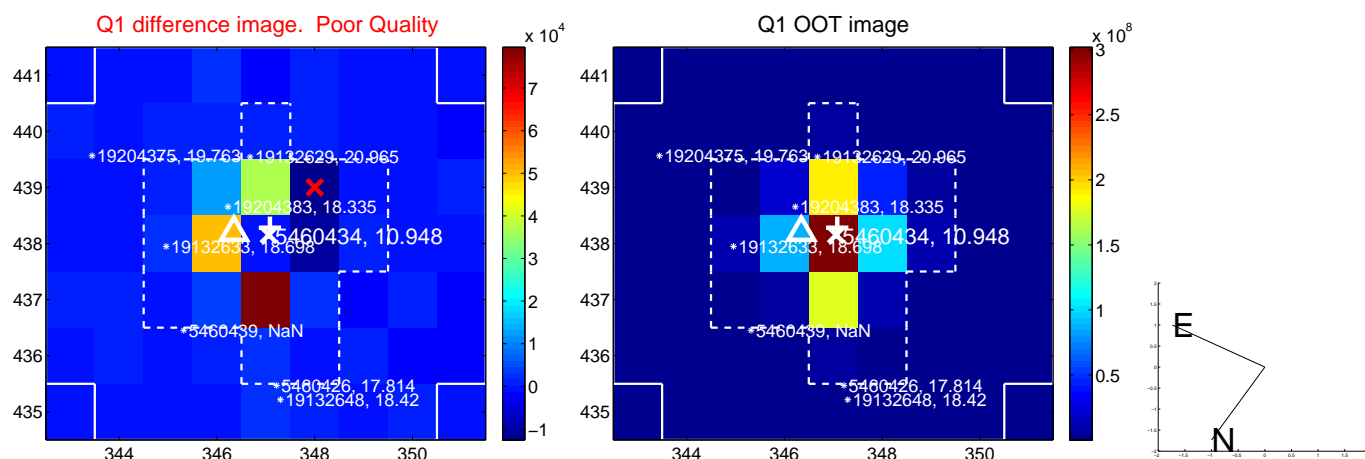


offset from photometric centroids

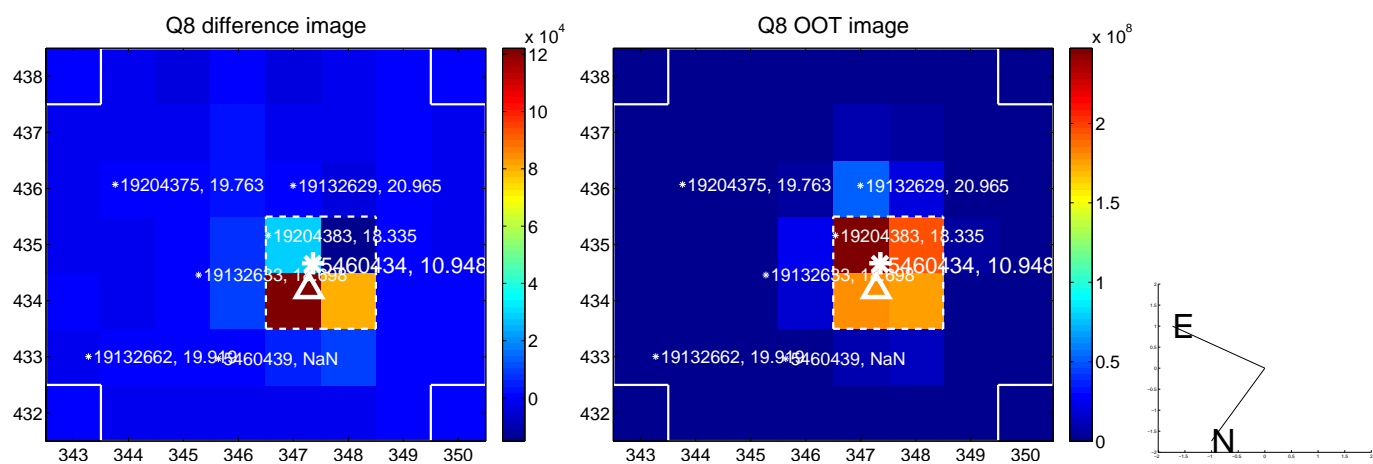
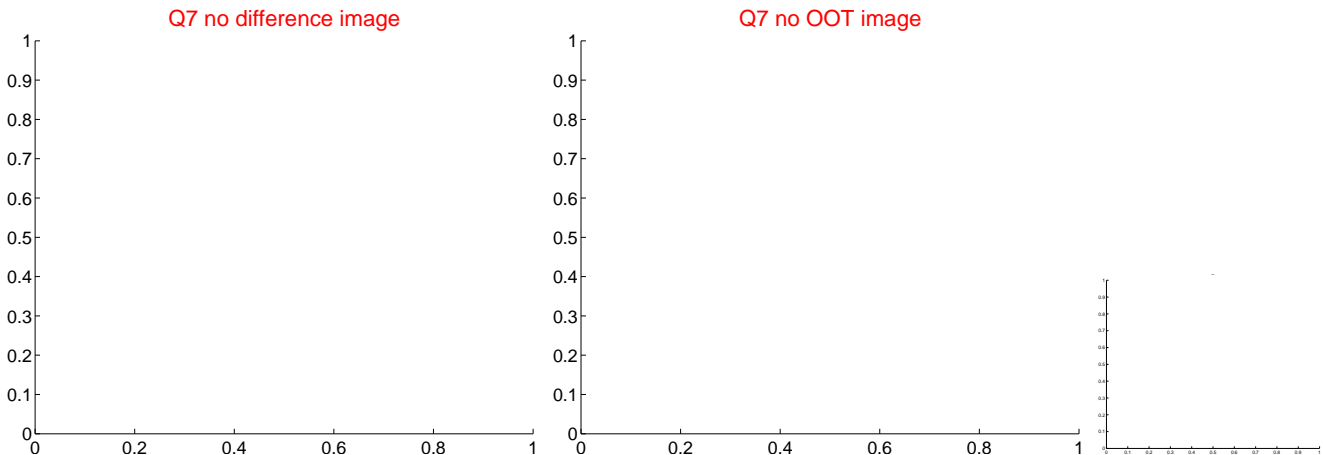
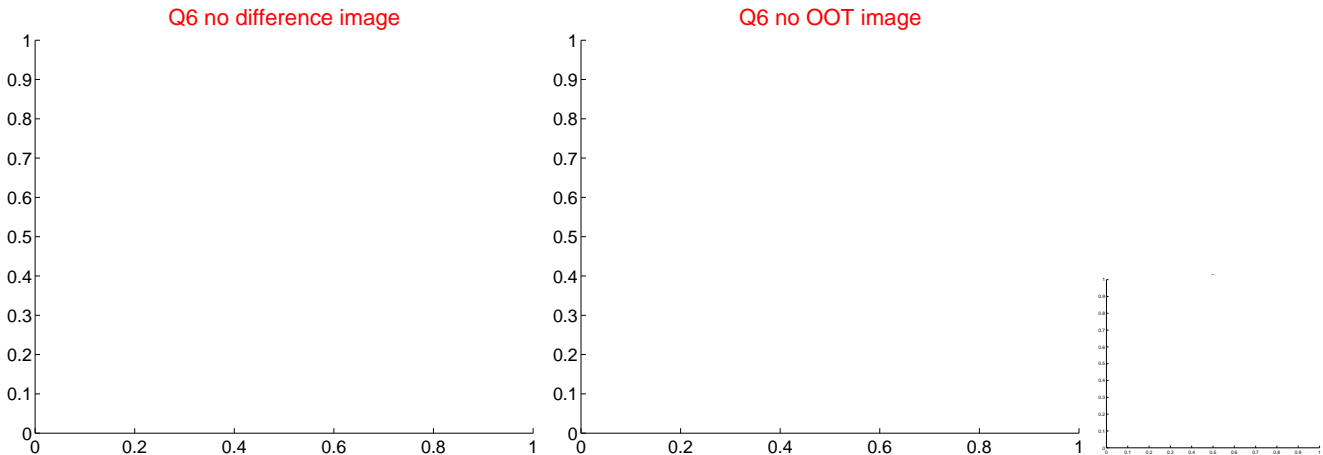
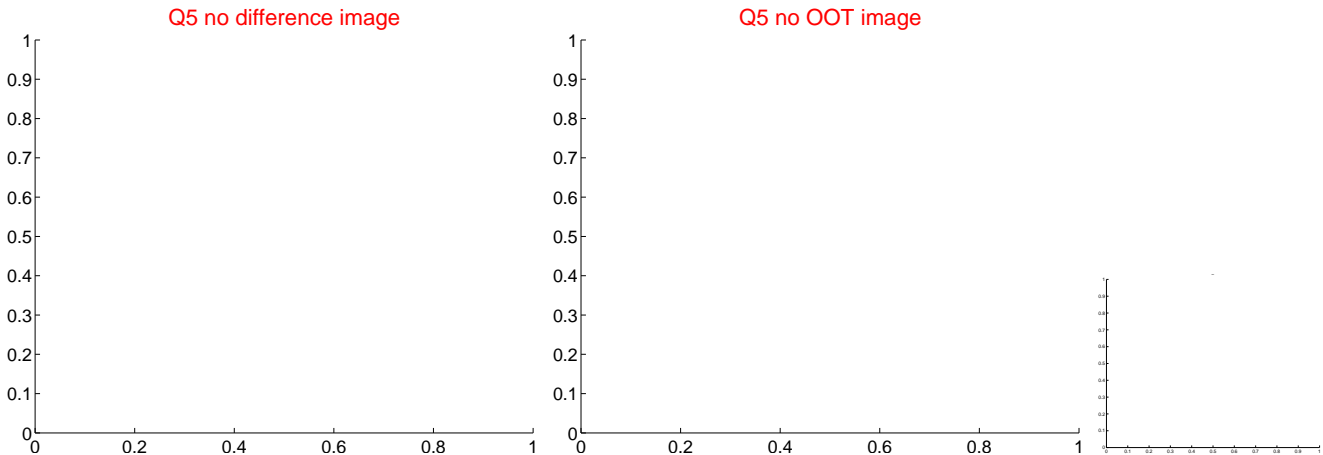


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

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



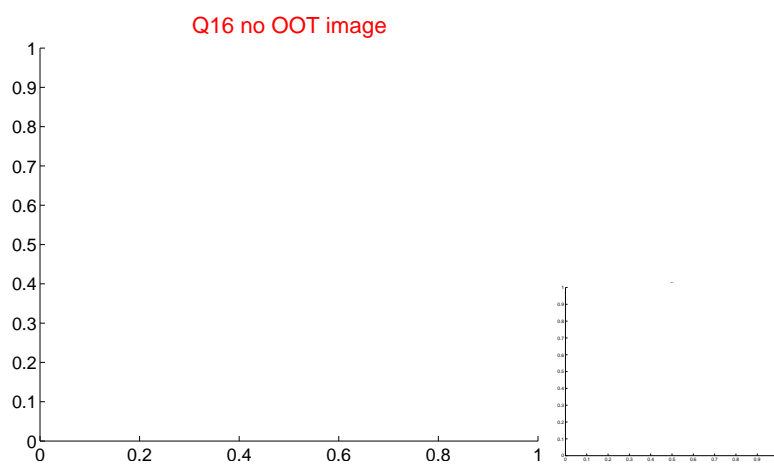
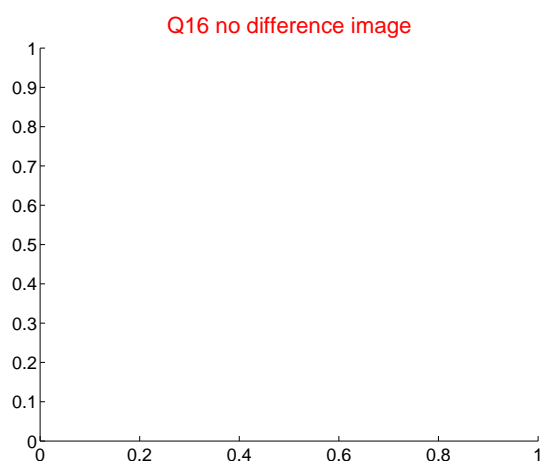
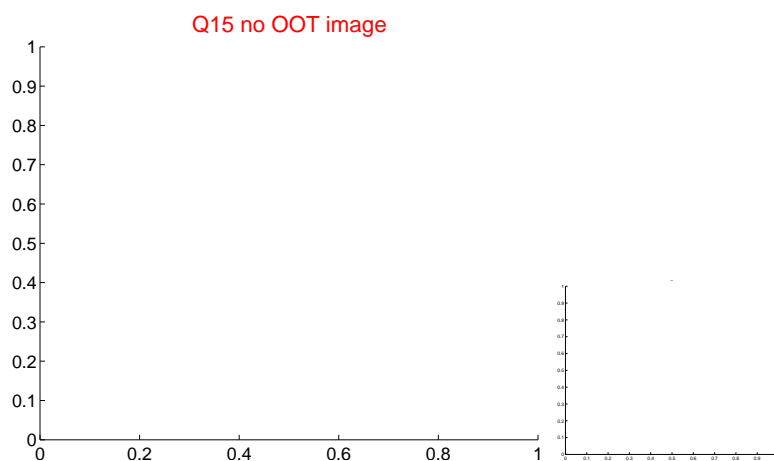
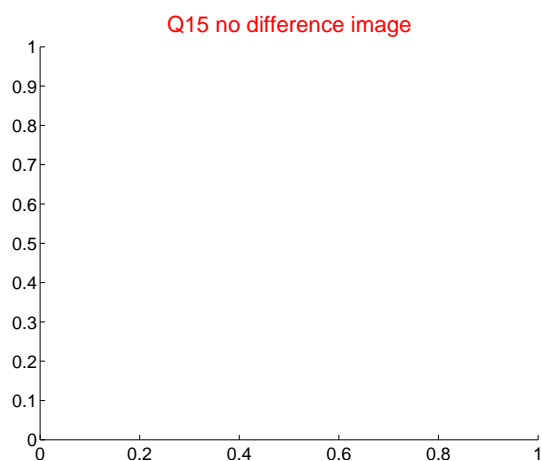
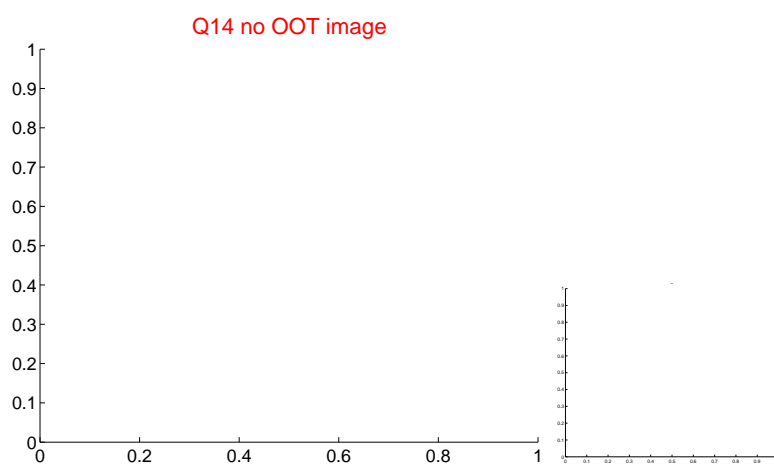
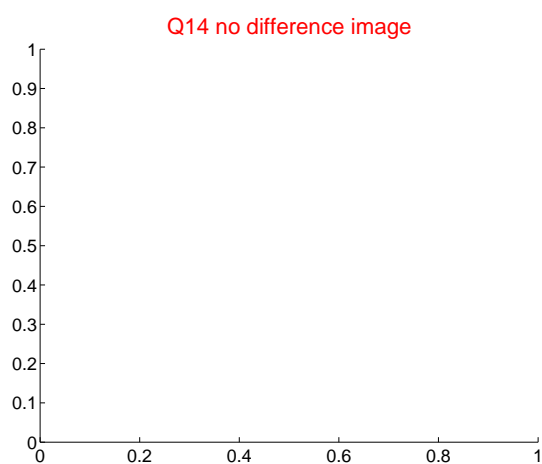
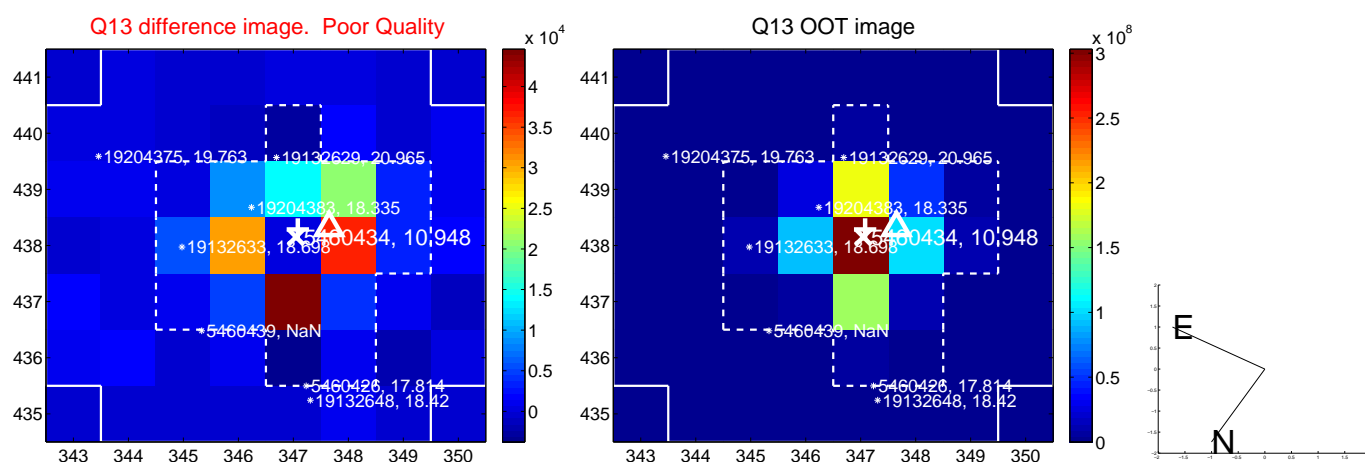
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



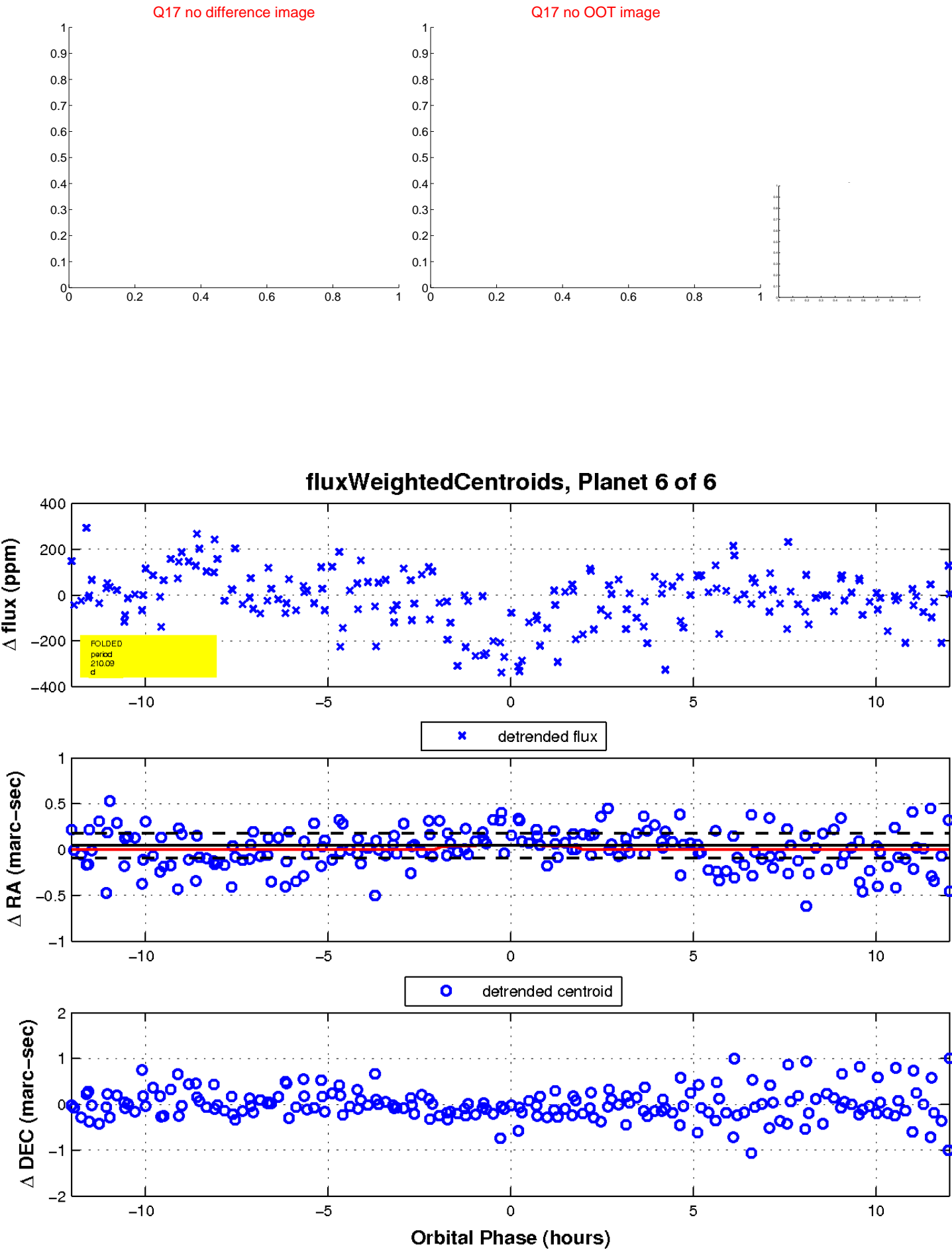
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

