

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})
004566740-01	OBS	No	4.973094	133.121675	18.1	16.357	9.1	4.6	2.45	6861	1.20	2661.05
004566740-02	OBS	No	2.486397	133.590068	33.4	10.361	10.1	8.9	2.45	6861	1.65	6705.96
004566740-03	OBS	No	76.219157	159.075847	211.1	5.534	9.3	8.3	2.45	6861	4.24	69.90
004566740-04	OBS	No	213.957349	243.898249	99.6	1.137	8.9	3.1	2.45	6861	2.76	17.65
004566740-05	OBS	No	213.953006	243.595682	3.4	0.512	8.9	0.1	2.45	6861	0.48	17.65
004566740-06	OBS	No	213.562988	245.133424	173.9	27.589	8.7	6.2	2.45	6861	3.47	17.70
004566740-07	OBS	No	52.951812	143.943002	200.3	9.663	7.9	7.7	2.45	6861	6.78	113.60
004566740-08	OBS	No	24.829527	148.789351	7.3	4.173	7.6	0.4	2.45	6861	0.71	311.84
004566740-09	OBS	No	17.811016	131.507027	152.8	3.000	7.4	-1.0	2.45	6861	3.06	485.63
004566740-10	OBS	No	57.698870	135.798867	148.7	3.447	7.4	7.8	2.45	6861	3.35	101.31

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004566740-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004566740-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_FEW_DIFFS
004566740-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
004566740-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
004566740-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—SAME_NTL_PERIOD—CENT_FEW_DIFFS
004566740-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
004566740-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004566740-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
004566740-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT—CENT_NOFITS
004566740-10	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

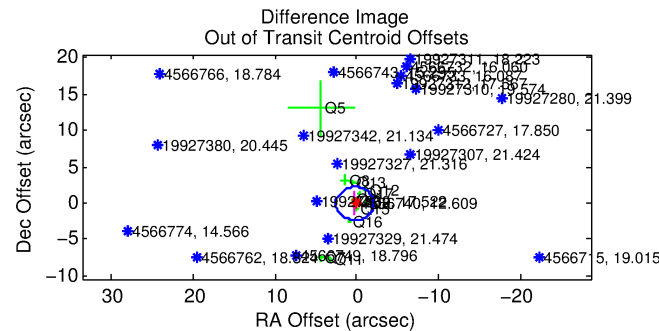
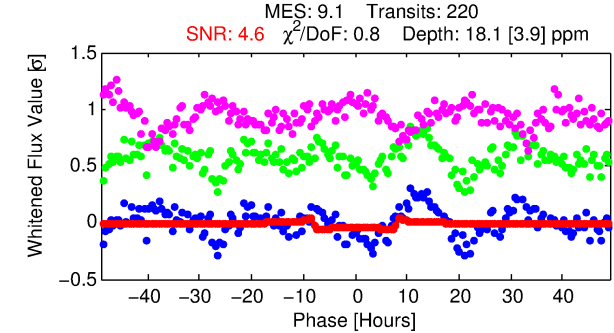
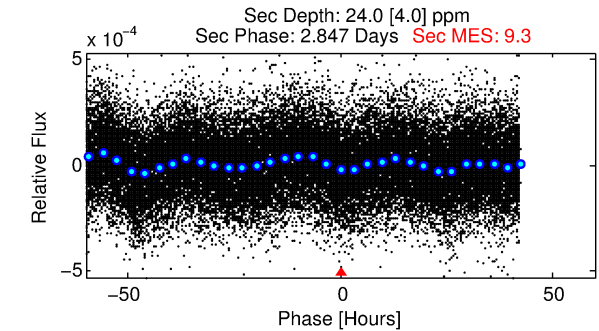
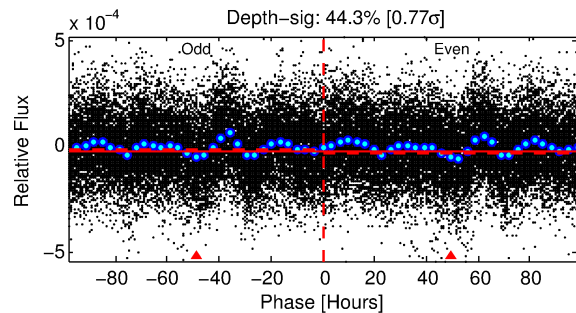
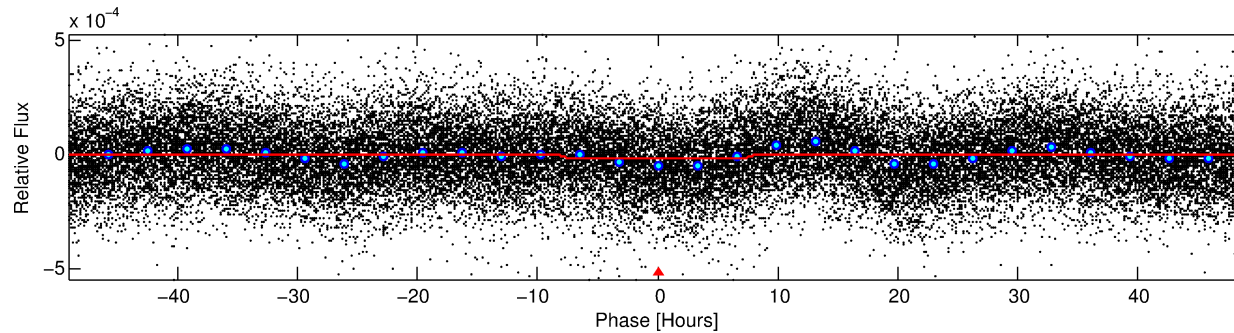
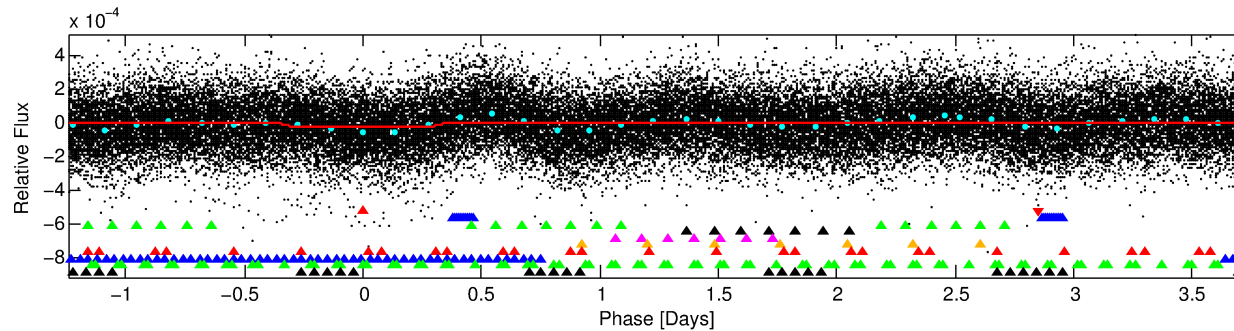
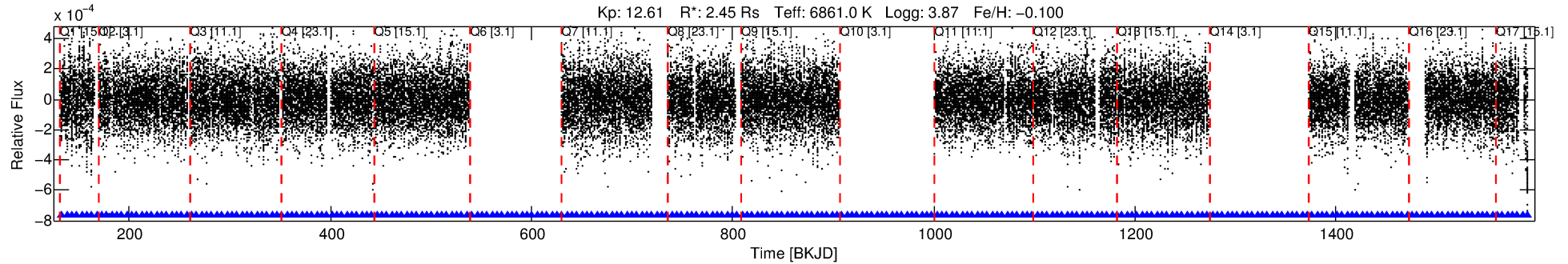
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004566740-01

No Significant Match Found

DV One-Page Summary

KIC: 4566740 Candidate: 1 of 10 Period: 4.973 d



DV Fit Results:

Period = 4.97309 [0.00011] d
Epoch = 133.1217 [0.0140] BKJD
Rp/R* = 0.0045 [0.0009]
a/R* = 1.44 [0.70]
b = 0.89 [0.23]
Seff = 2661.05 [1237.90]
Teq = 1831 [213] K
Rp = 1.20 [0.44] Re
a = 0.0669 [0.0192] AU
Ag = 40.96 [25.21] [1.58 σ]
Teffp = 7163 [788] K [6.53 σ]

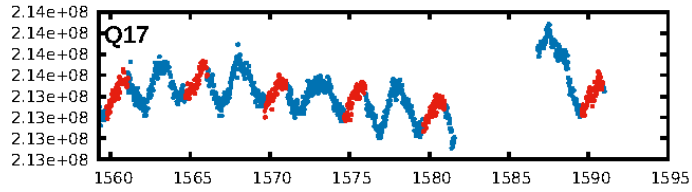
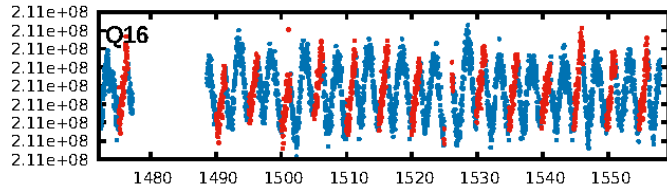
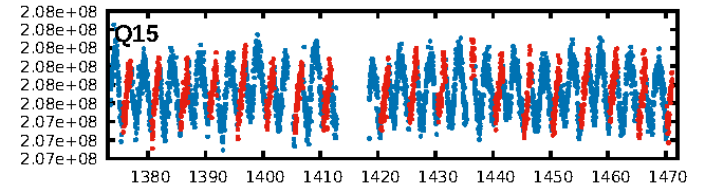
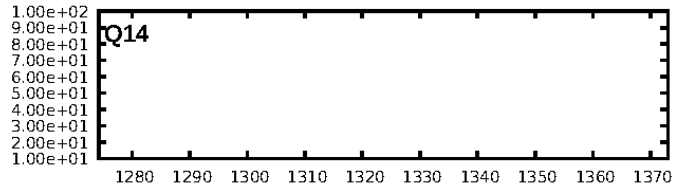
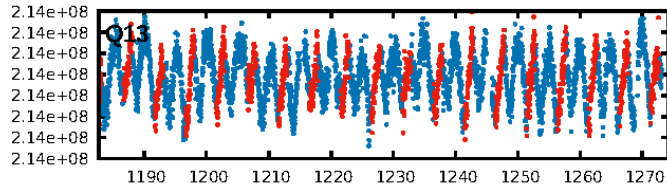
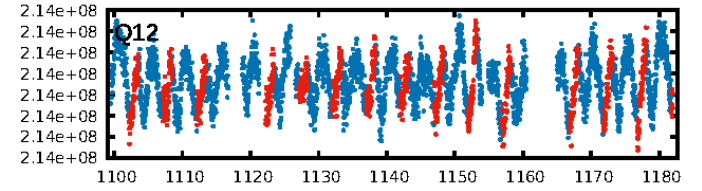
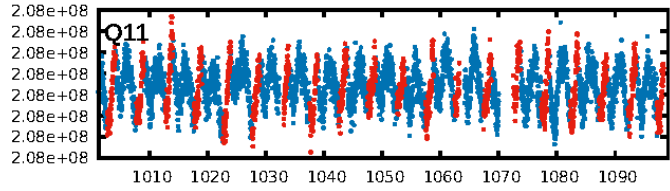
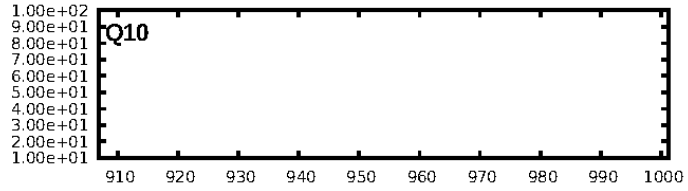
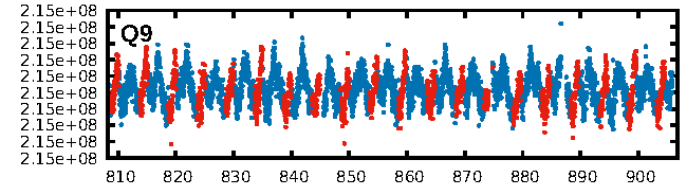
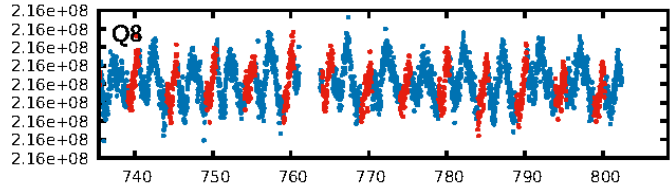
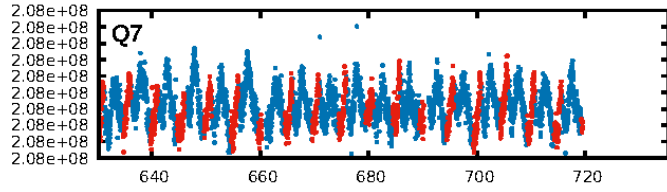
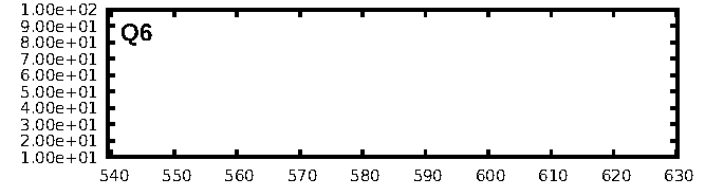
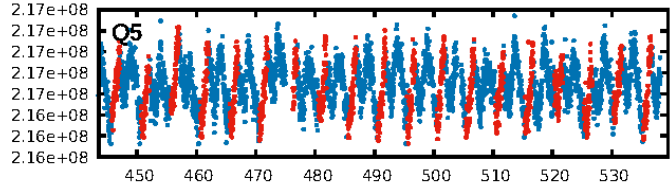
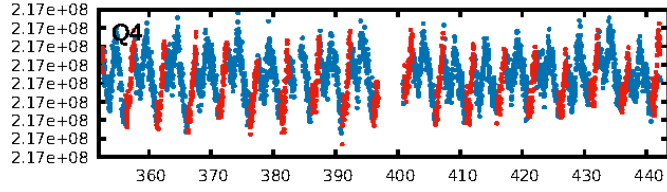
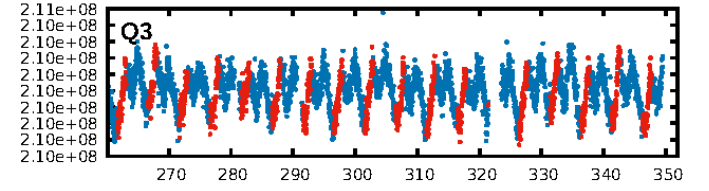
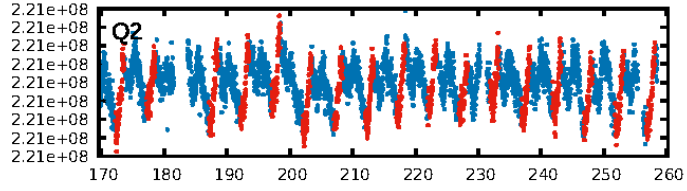
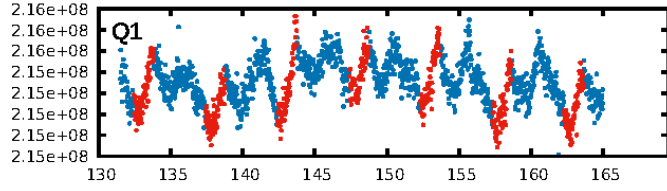
DV Diagnostic Results:

ShortPeriod-sig: 99.8% [3.08 σ]
LongPeriod-sig: 100.0% [18.53 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [207/207]
GhostDiagnostic-chr: 3.616
Centroid-sig: 13.5%
Centroid-so: 1.159 arcsec [1.14 σ]
OotOffset-rm: 0.294 arcsec [0.38 σ]
KicOffset-rm: 0.268 arcsec [0.34 σ]
OotOffset-st: 1/4/4/3 [12]
KicOffset-st: 1/4/4/3 [12]
DiffImageQuality-fgm: 0.33 [4/12]
DiffImageOverlap-fno: 0.00 [0/14]

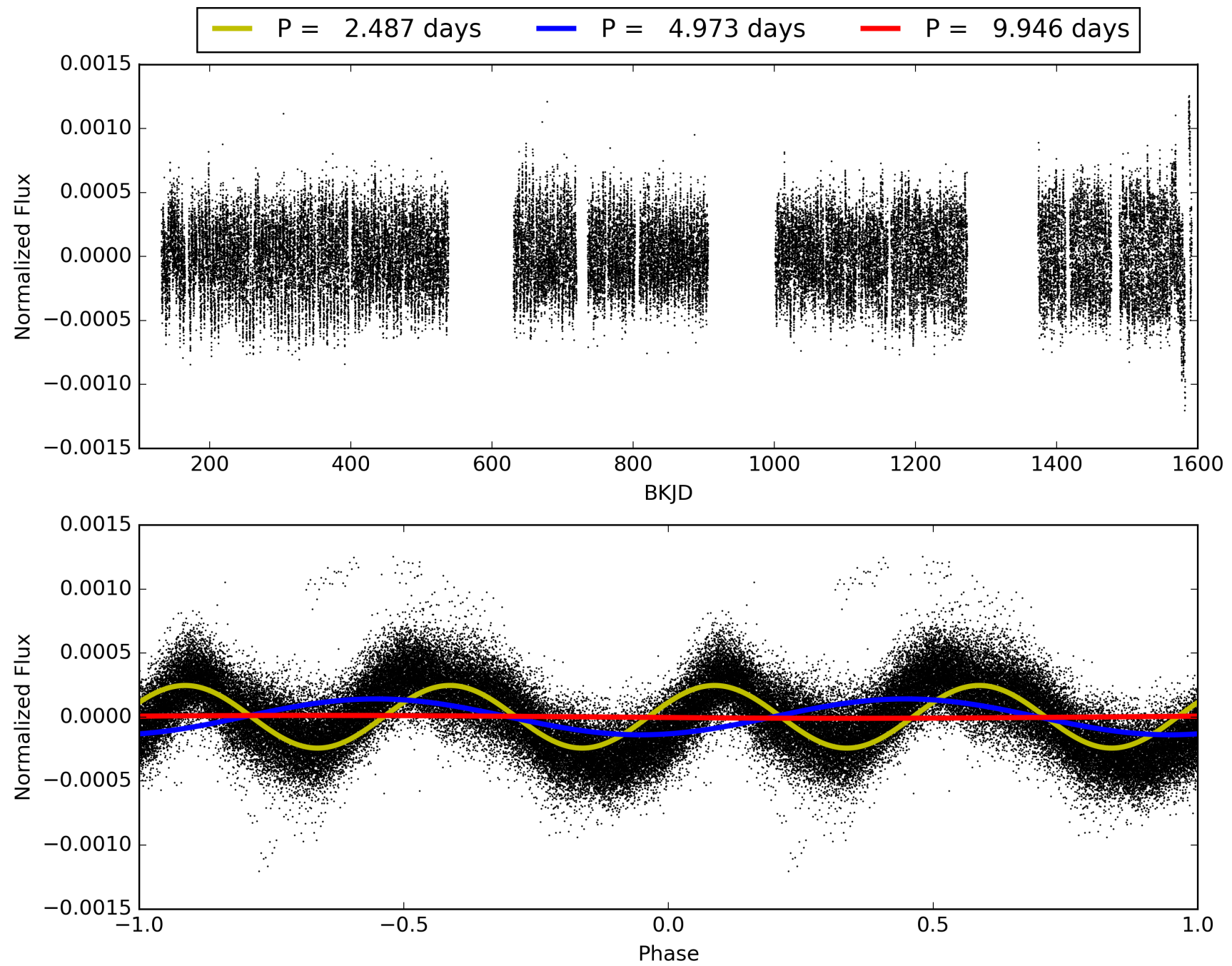
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 004566740-01, PDC Light Curves

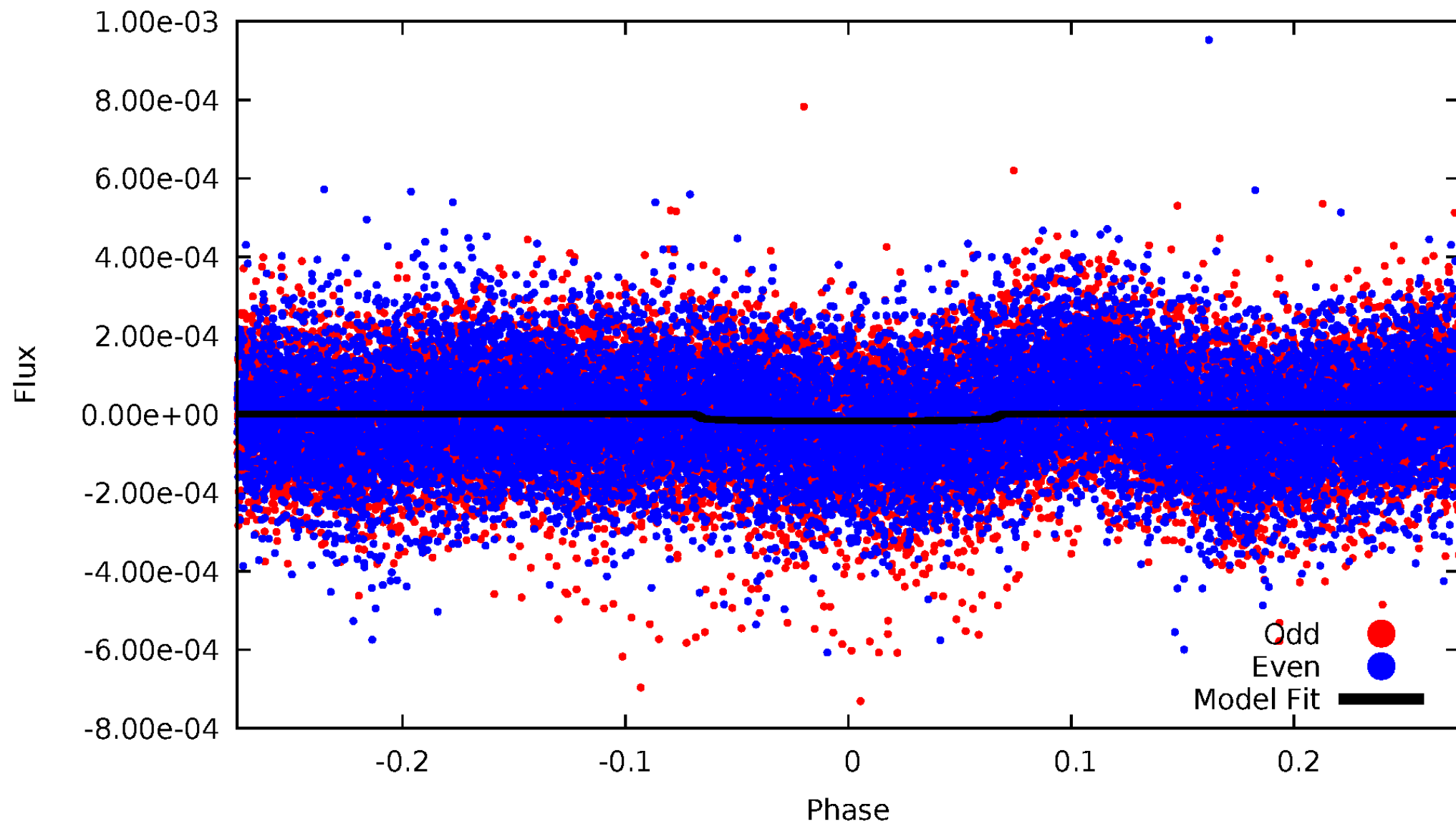


TCE 004566740-01



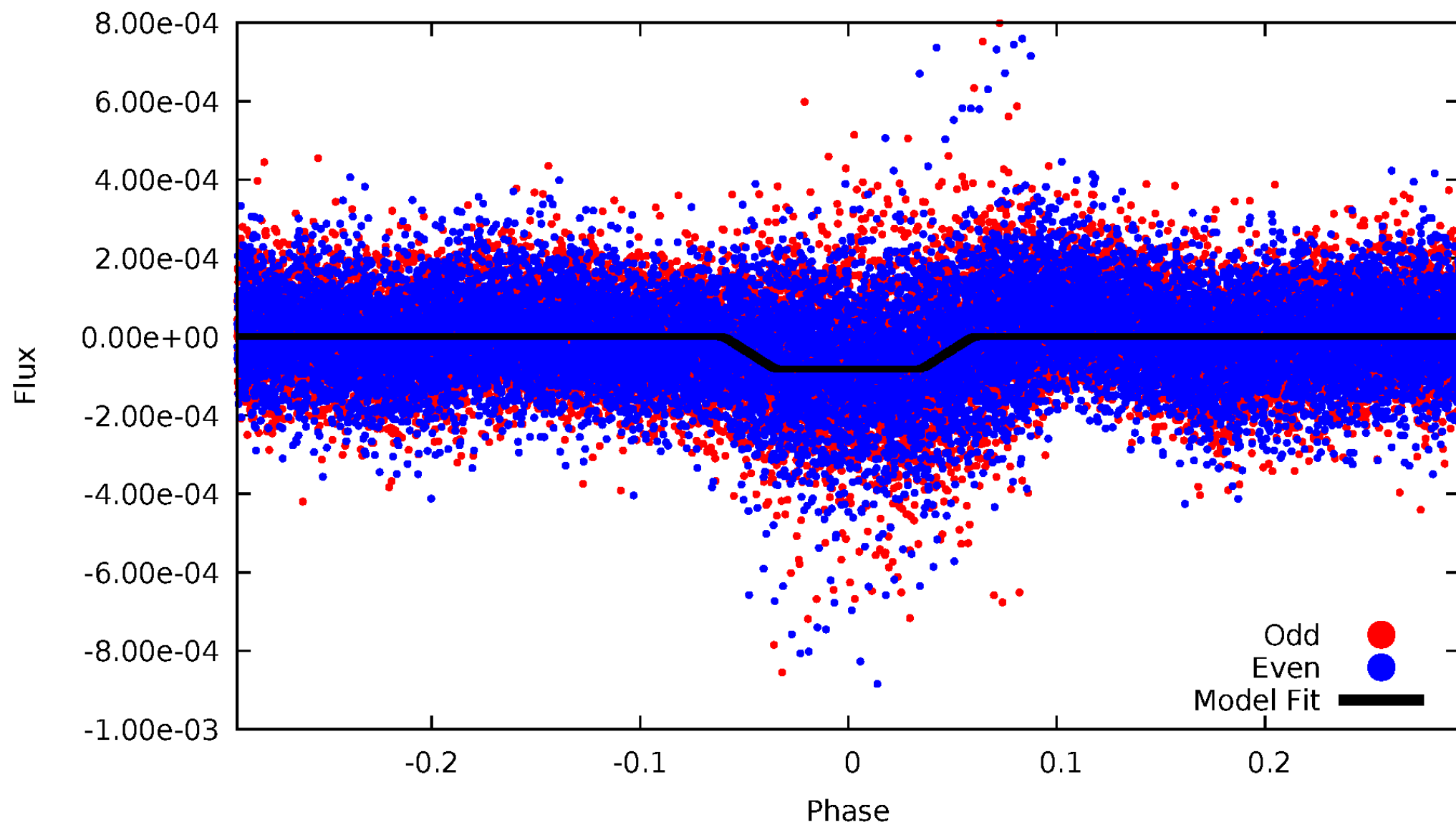
DV Odd/Even

TCE 004566740-01

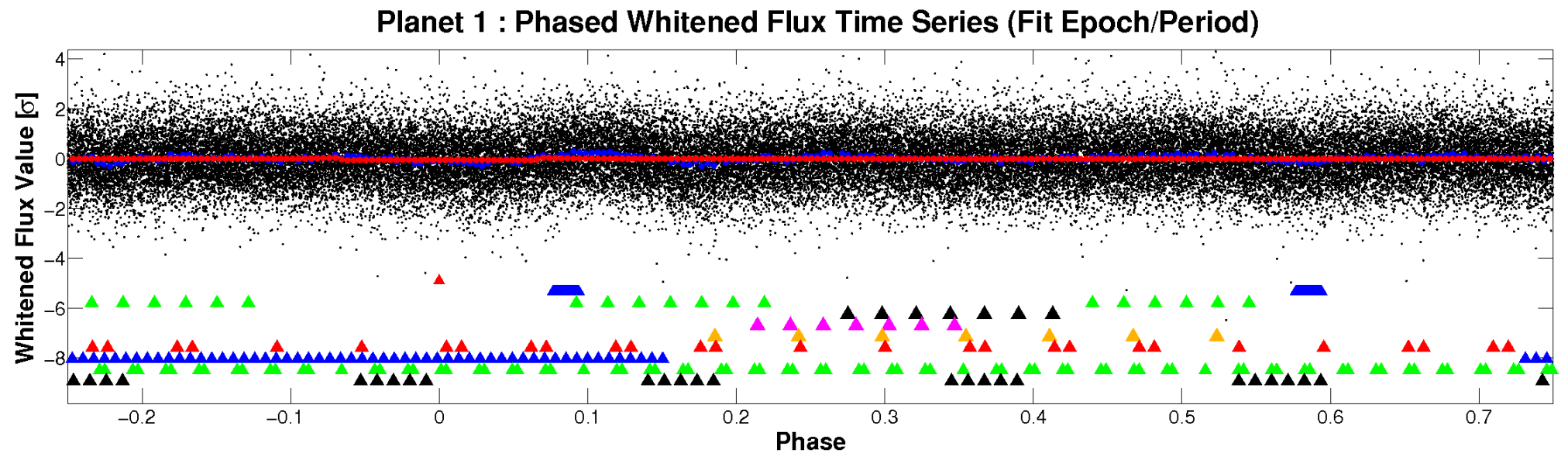
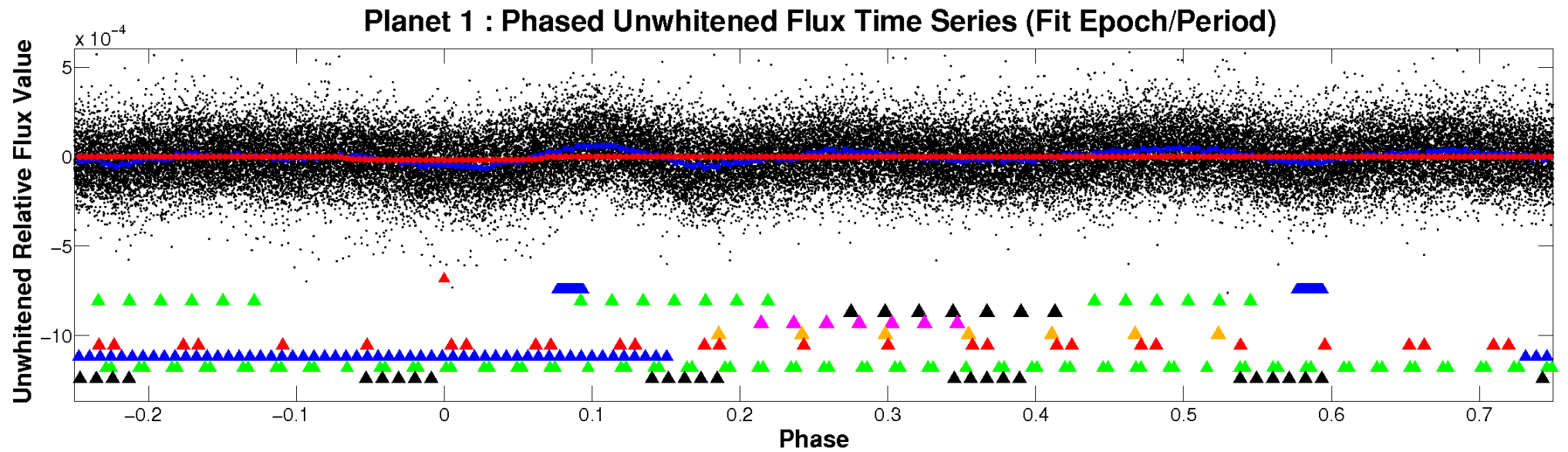


ALT Odd/Even

TCE 004566740-01

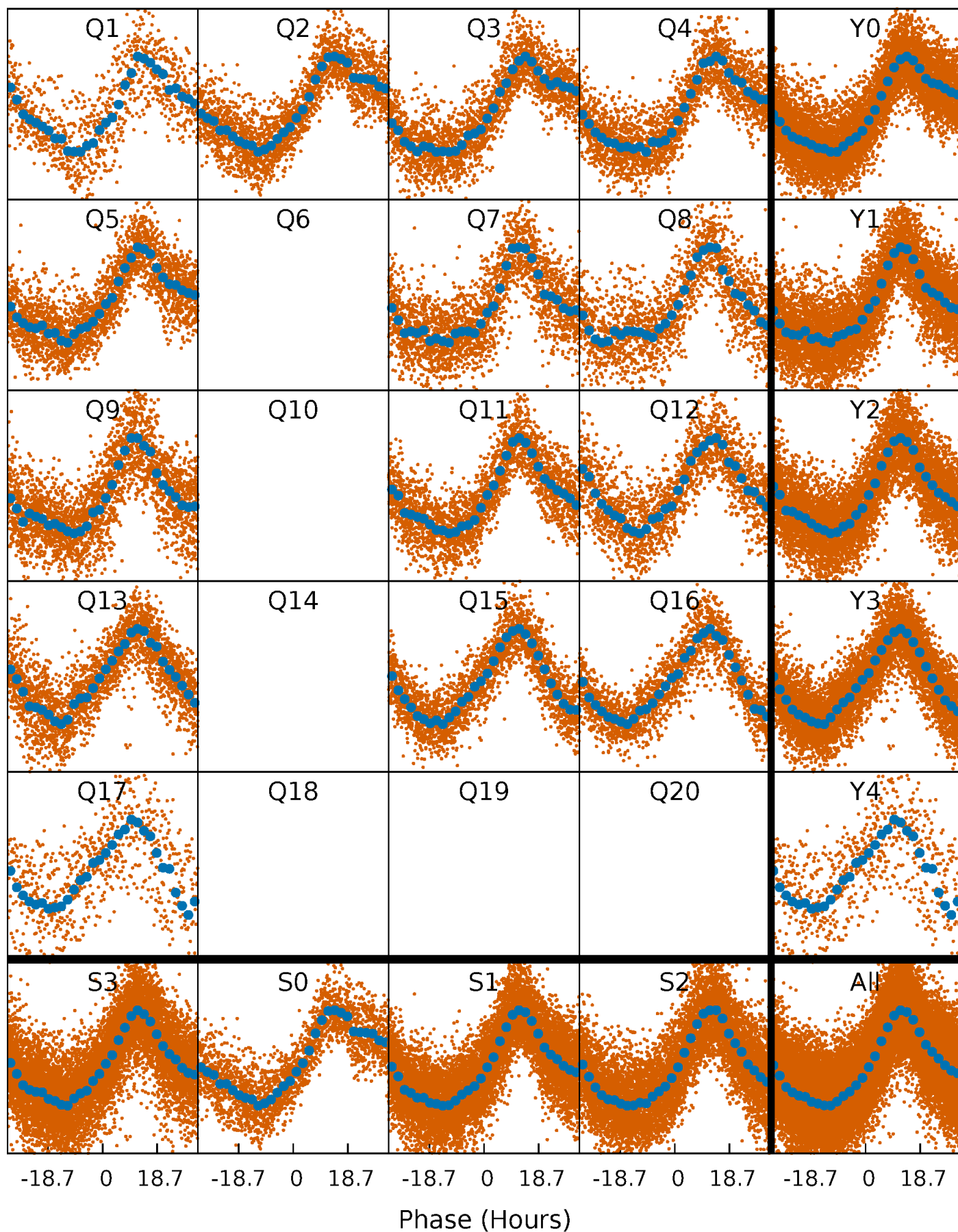


Non-Whitened Vs. Whitened Light Curve



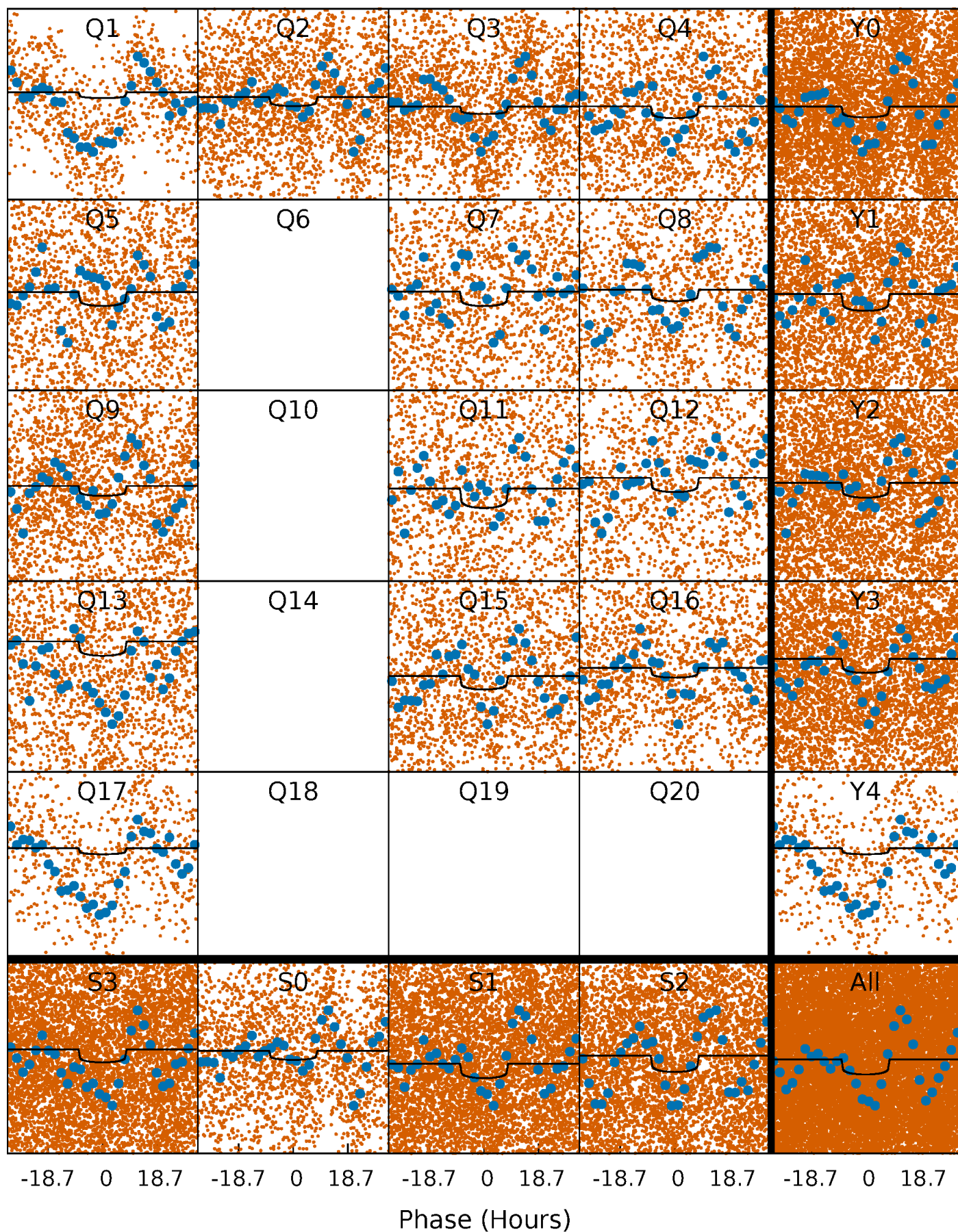
PDC Quarter-Phased Transit Curves

TCE 004566740-01 P= 4.973094 Days $T_0=133.121675$ (BKJD)



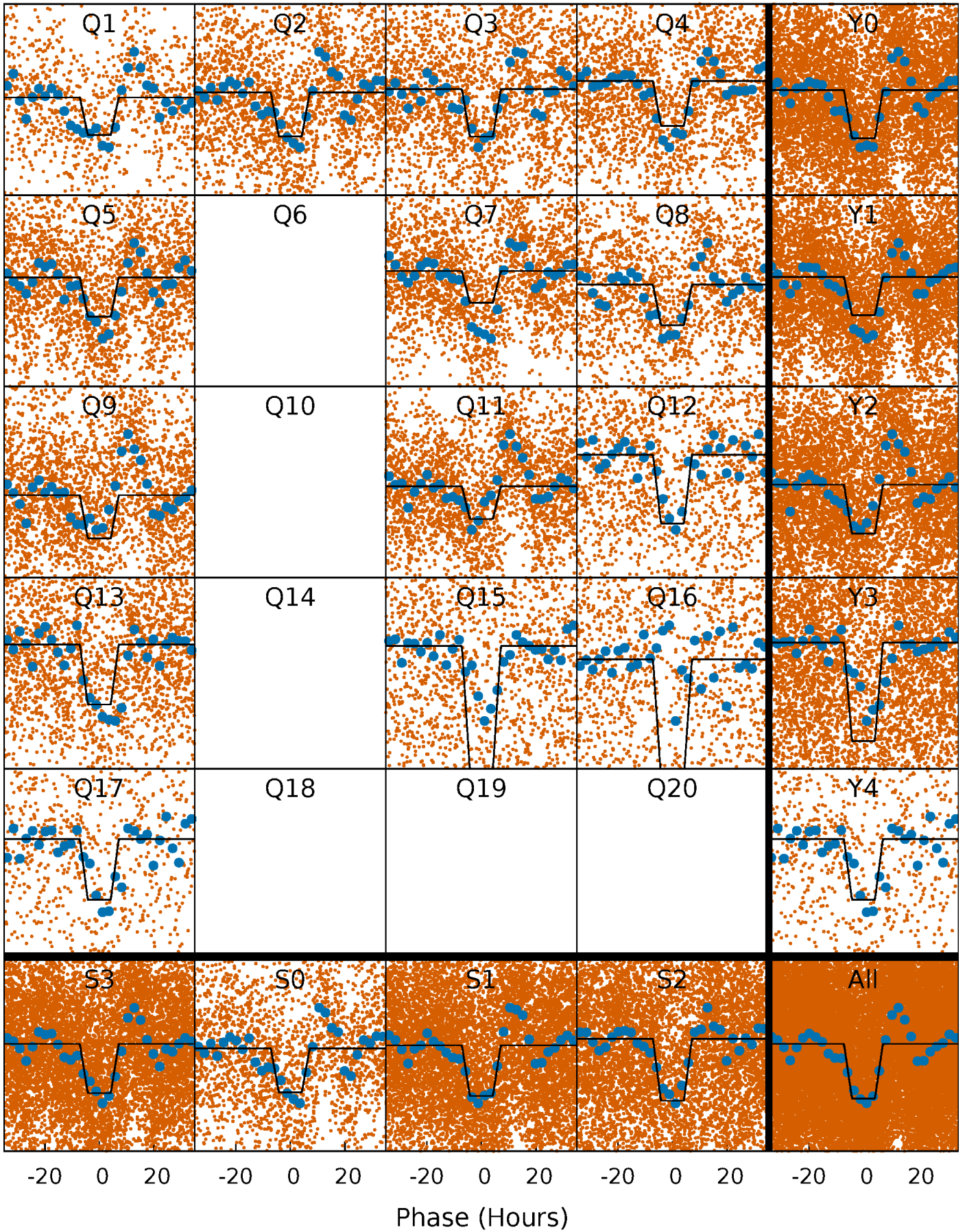
DV Quarter-Phased Transit Curves

TCE 004566740-01 P= 4.973094 Days $T_0=133.121675$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

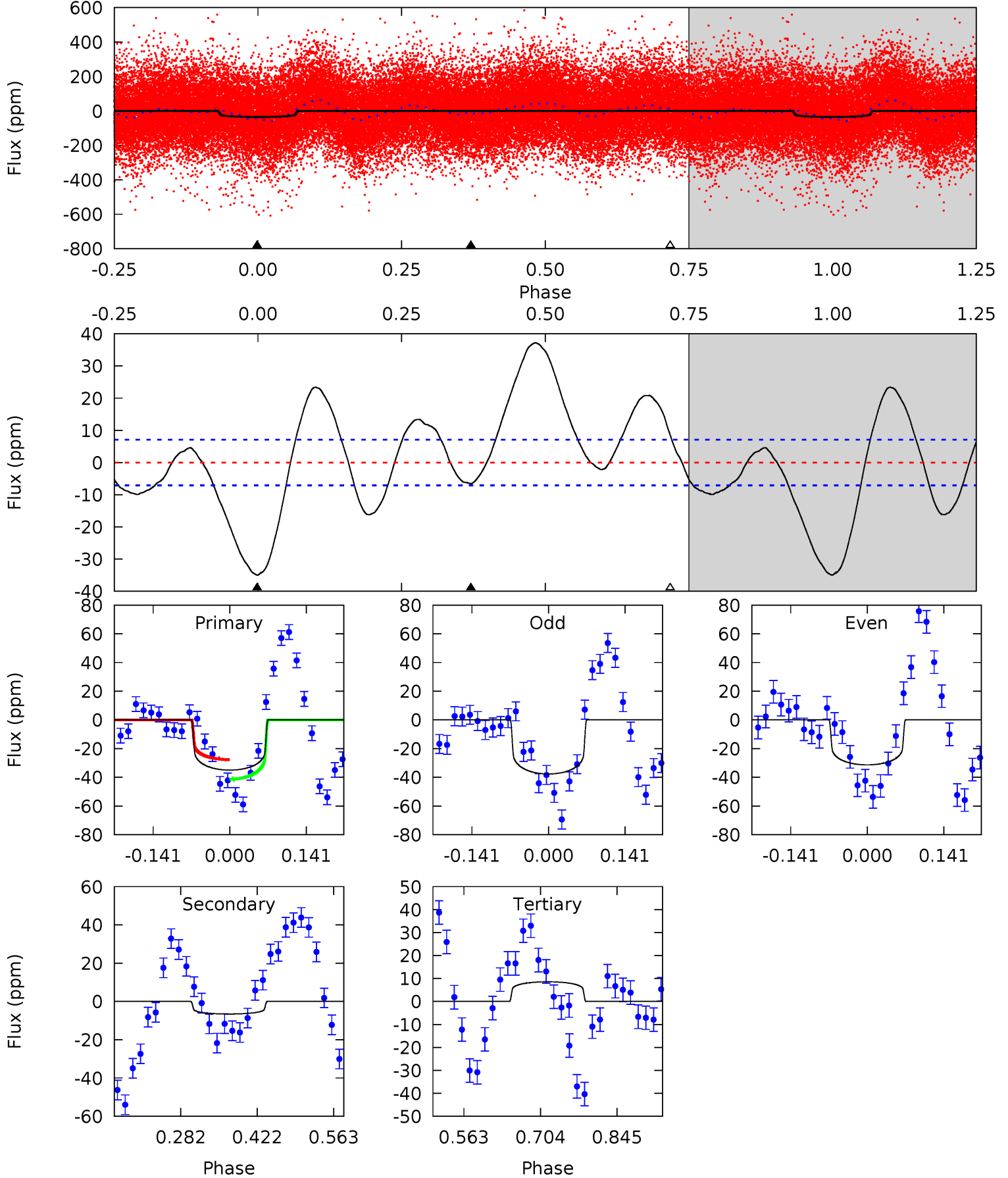
TCE 004566740-01 P= 4.972942 Days $T_0=133.138893$ (BKJD)



DV Model-Shift Uniqueness Test

004566740-01, P = 4.973094 Days, E = 128.148581 Days

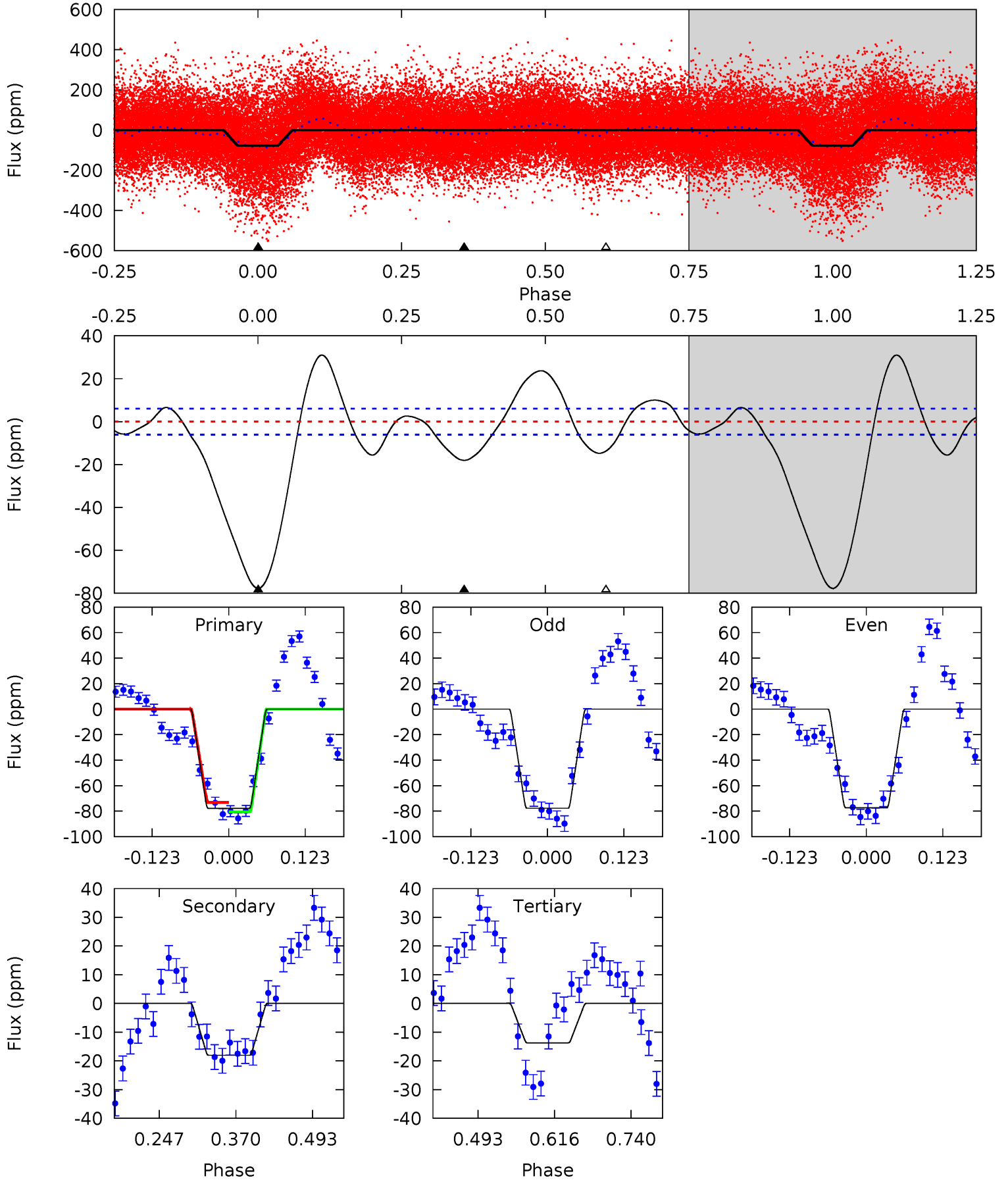
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.1	4.15	-5.42	0	4.49	1.47	7.25	27.5	22.1	9.57	4.15	2.00	1.15	0.52	4.39



Alt Model-Shift Uniqueness Test

004566740-01, P = 4.972942 Days, E = 128.165951 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
58.0	13.5	10.2	0	4.52	1.54	7.97	47.8	58.0	3.22	13.5	0.15	0.99	0.28	2.73



Stellar Parameters For KIC 004566740

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6861^{+190}_{-214}	$3.868^{+0.259}_{-0.111}$	$-0.100^{+0.300}_{-0.300}$	$2.450^{+0.507}_{-0.760}$	$1.614^{+0.194}_{-0.292}$	$0.154^{+0.251}_{-0.052}$
	+3%/-3%	+7%/-3%	+300%/-300%	+21%/-31%	+12%/-18%	+163%/-33%
Source	PHO1	FLK73	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 004566740-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-7 ± 2	$1.15^{+0.30}_{-0.28}$	2518^{+173}_{-224}	5148^{+598}_{-458}	12^{+10}_{-5}
Alt.	-18 ± 1	$2.31^{+0.40}_{-0.43}$	2504^{+177}_{-205}	4753^{+261}_{-215}	$8.265^{+3.652}_{-2.213}$

T_{max} = Theoretical Maximum Planetary Temperature

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

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

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

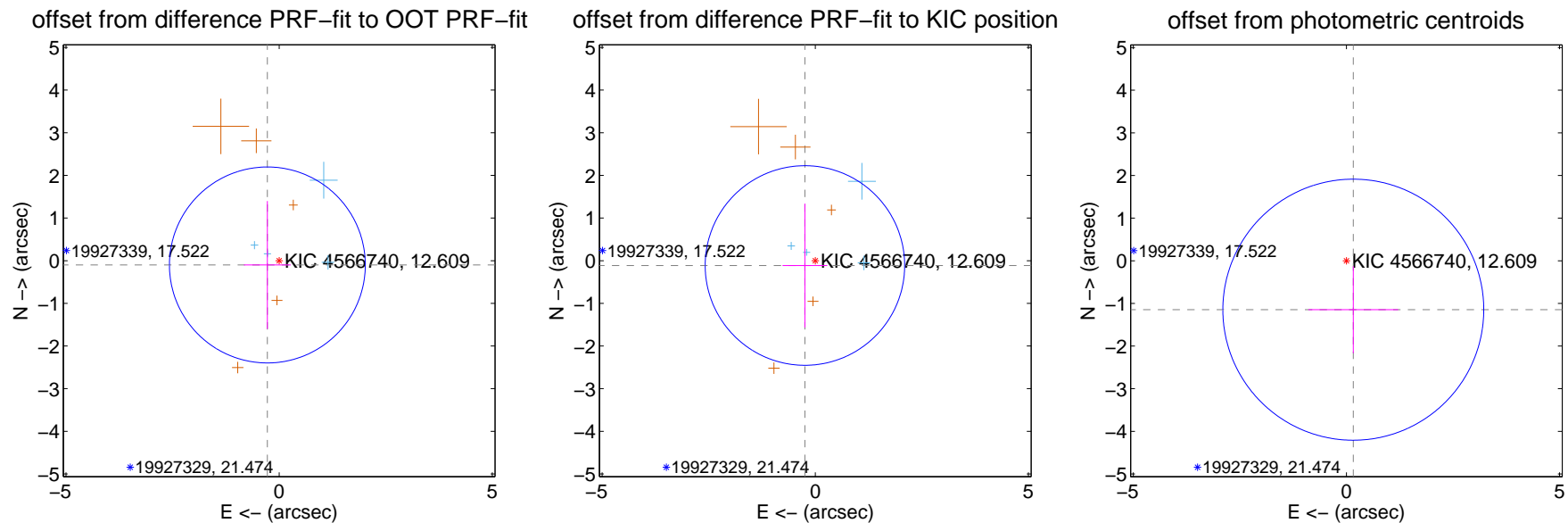
DV Centroid Data

Supplemental centroid analysis for 004566740-01. Kepler magnitude: 12.61. Transit SNR 4.58

There are 4 quarters with good PRF difference image offsets

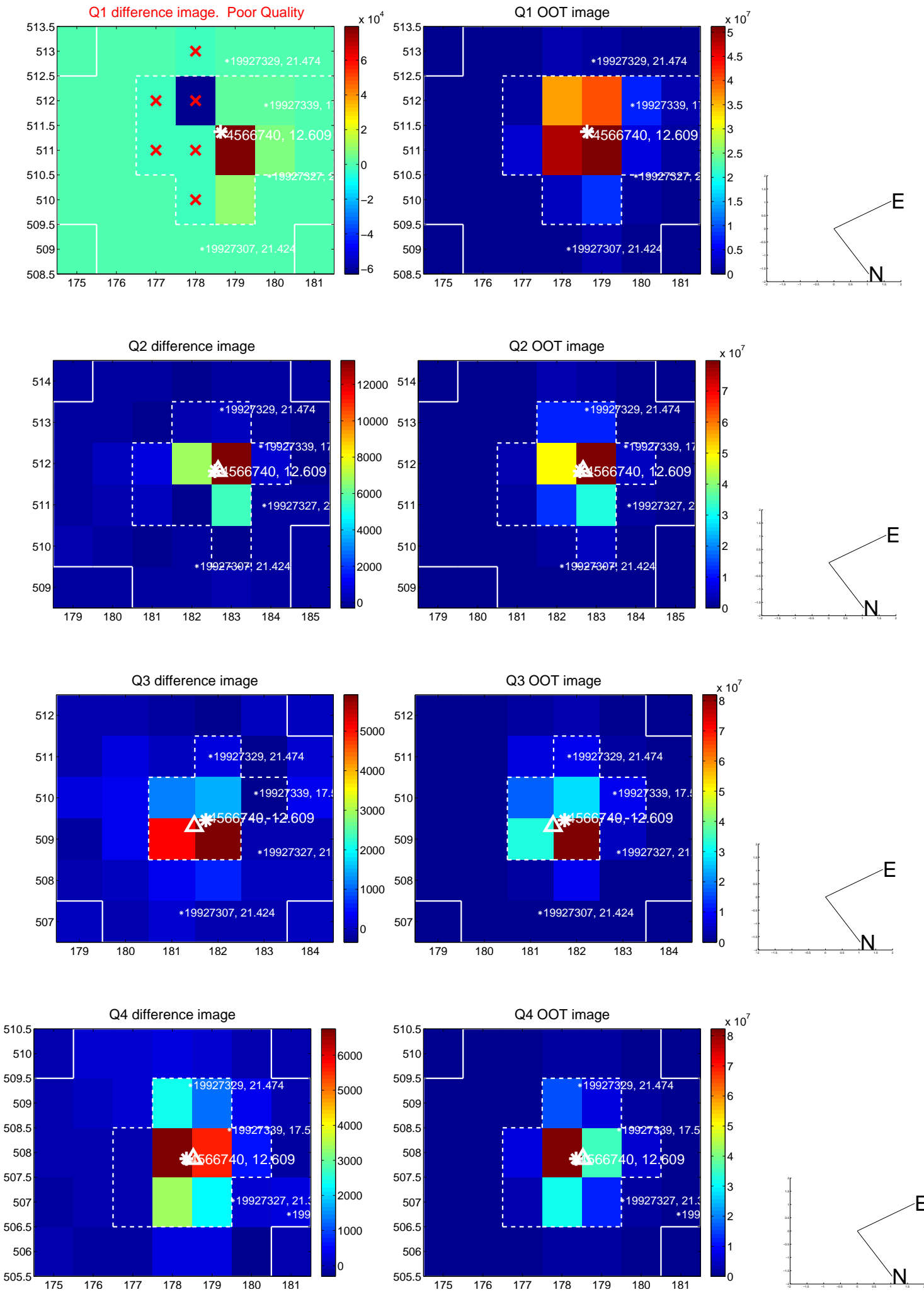
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.294 ± 0.766	0.38	0.276 ± 0.550	-0.100 ± 1.499
PRF-fit source offset from KIC position	0.268 ± 0.780	0.34	0.243 ± 0.525	-0.113 ± 1.452
photometric centroid source offset	1.16 ± 1.02	1.14	-0.16 ± 1.06	-1.15 ± 1.02

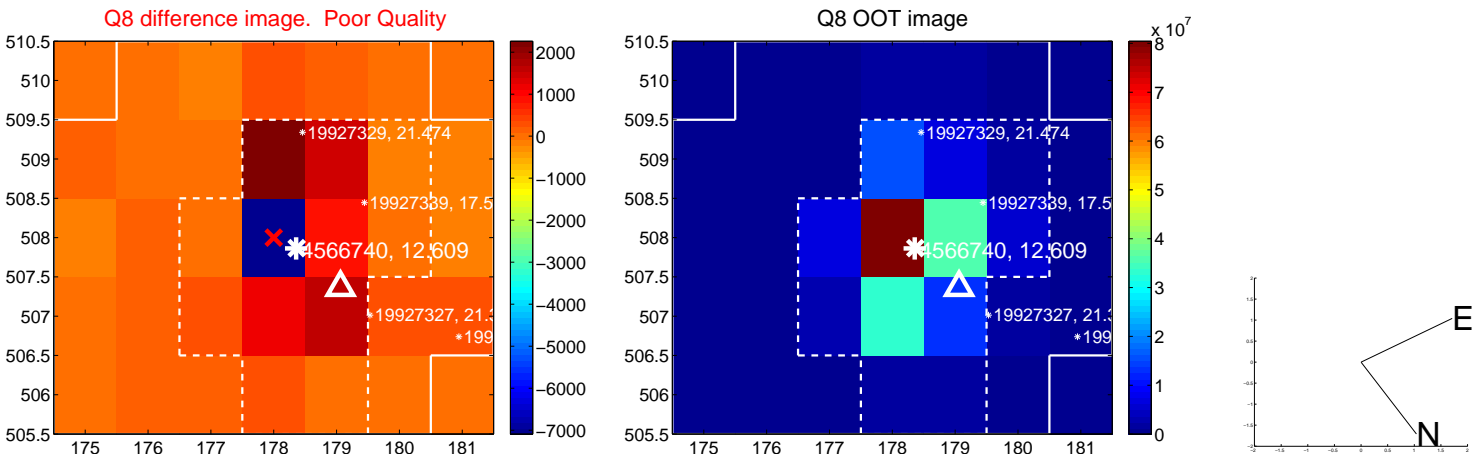
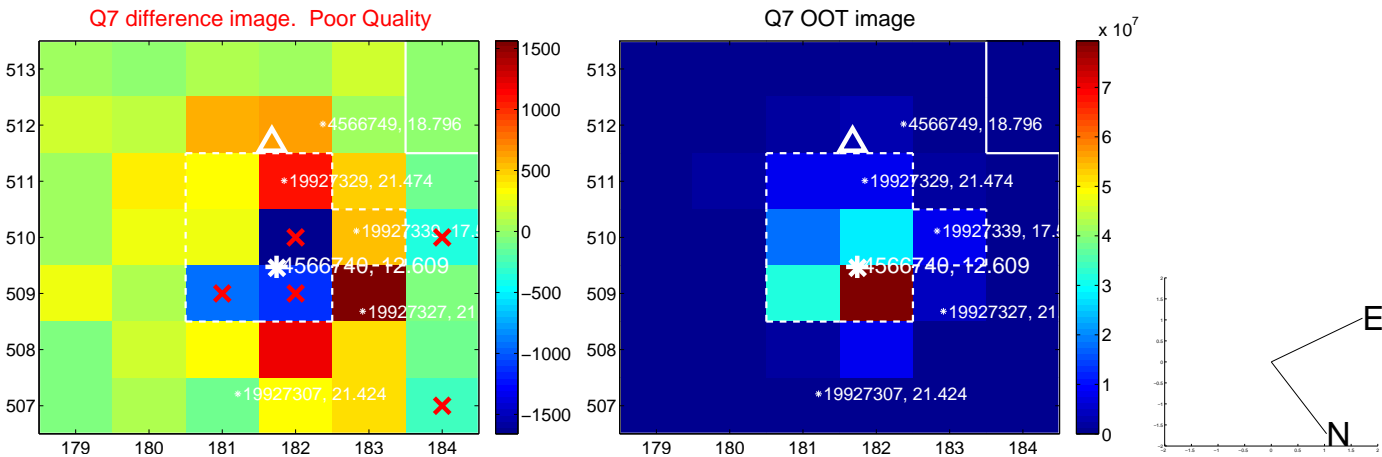
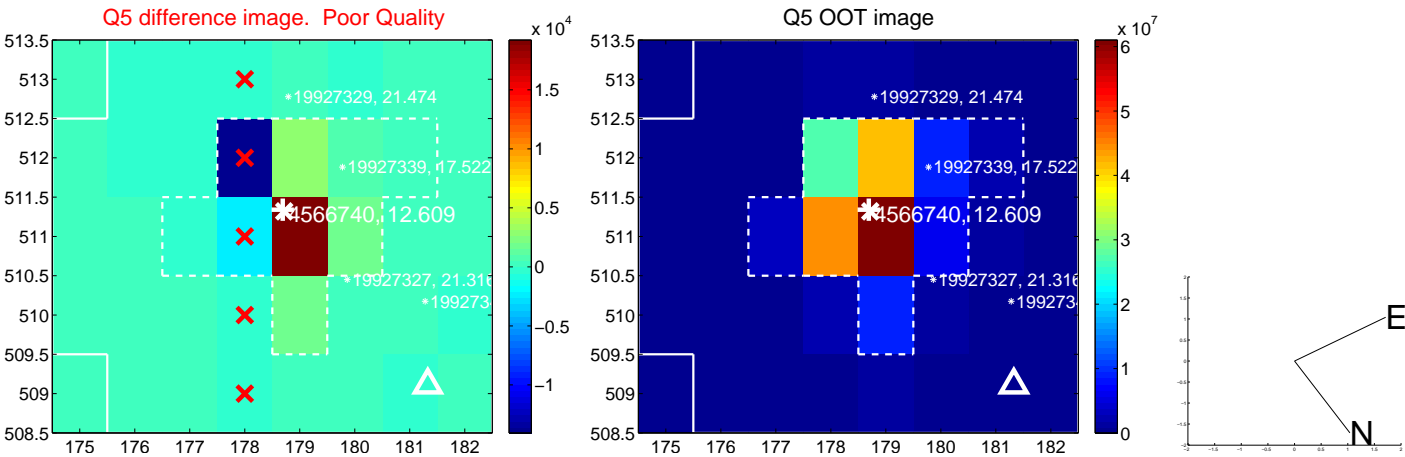


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

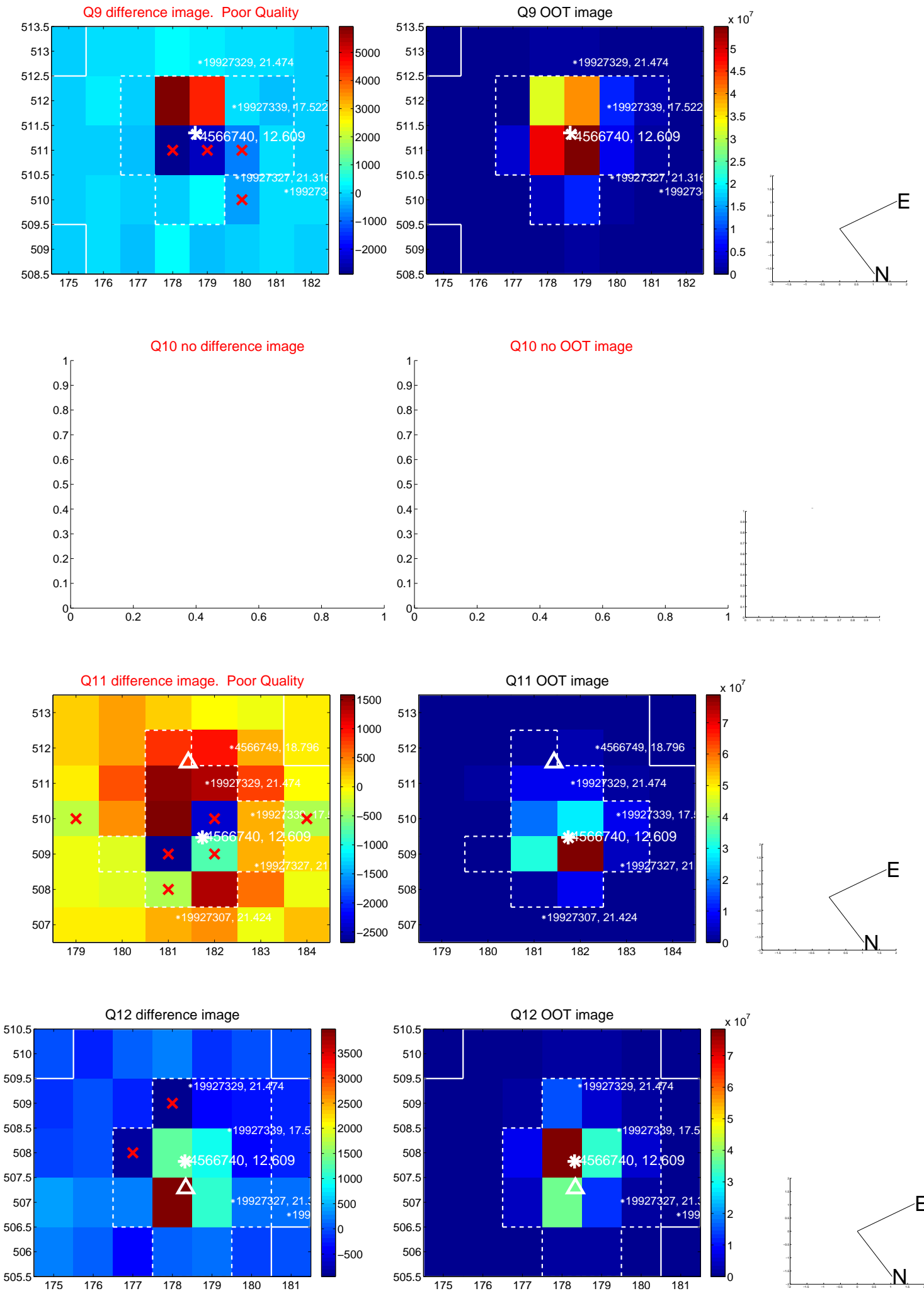
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



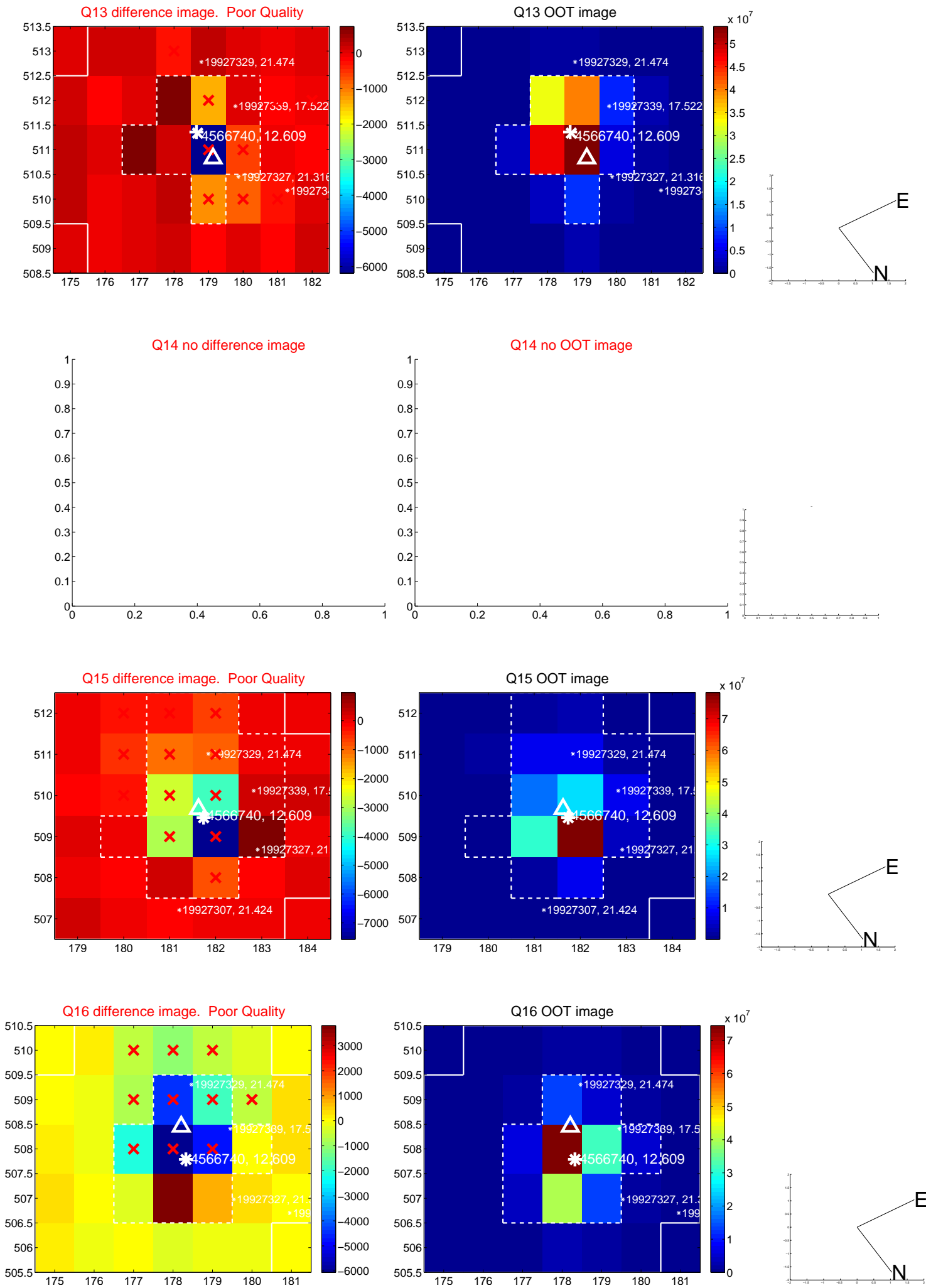
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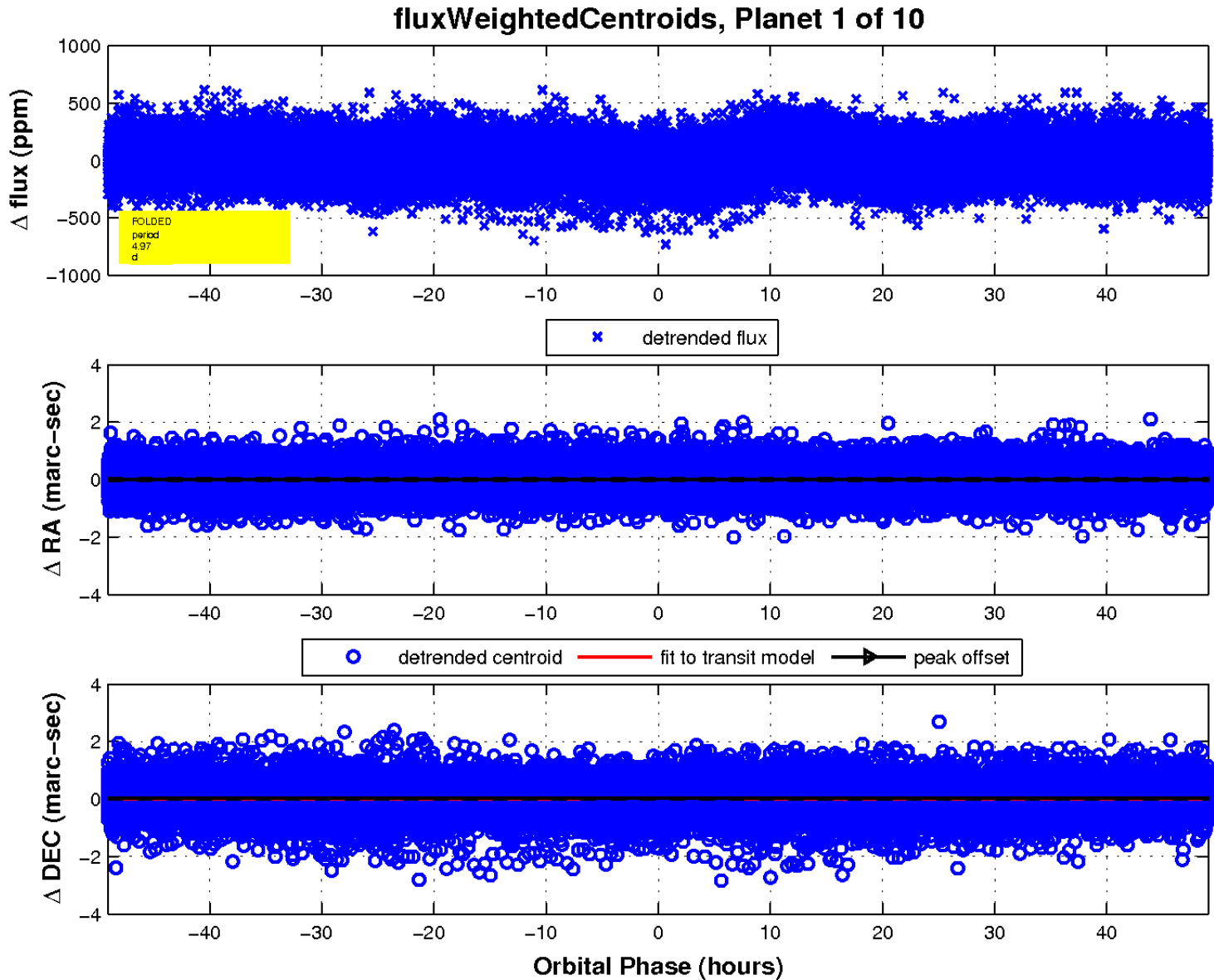
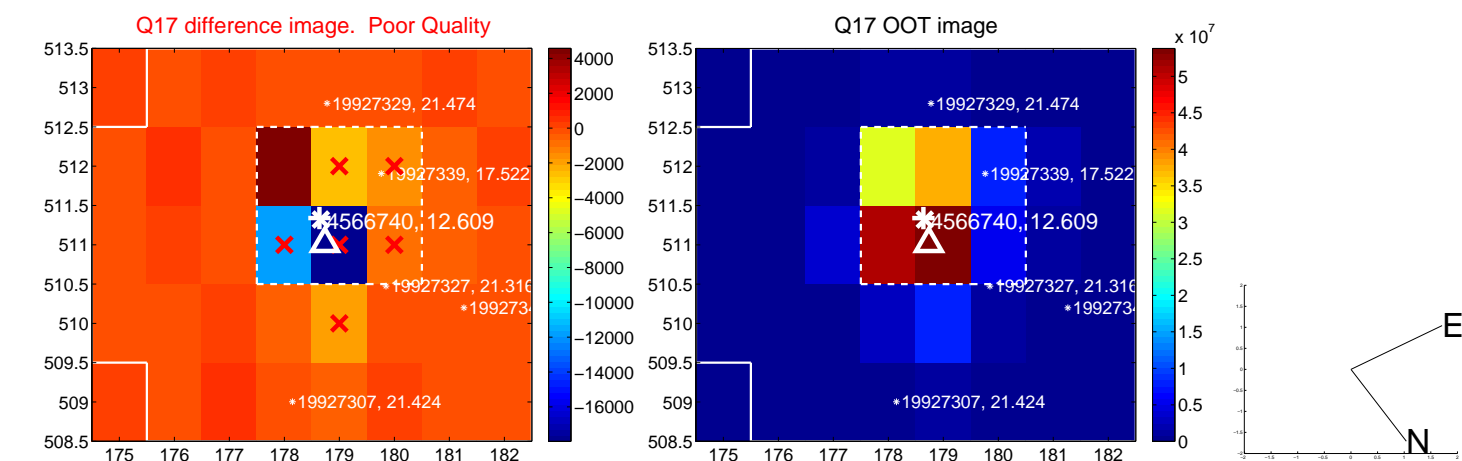
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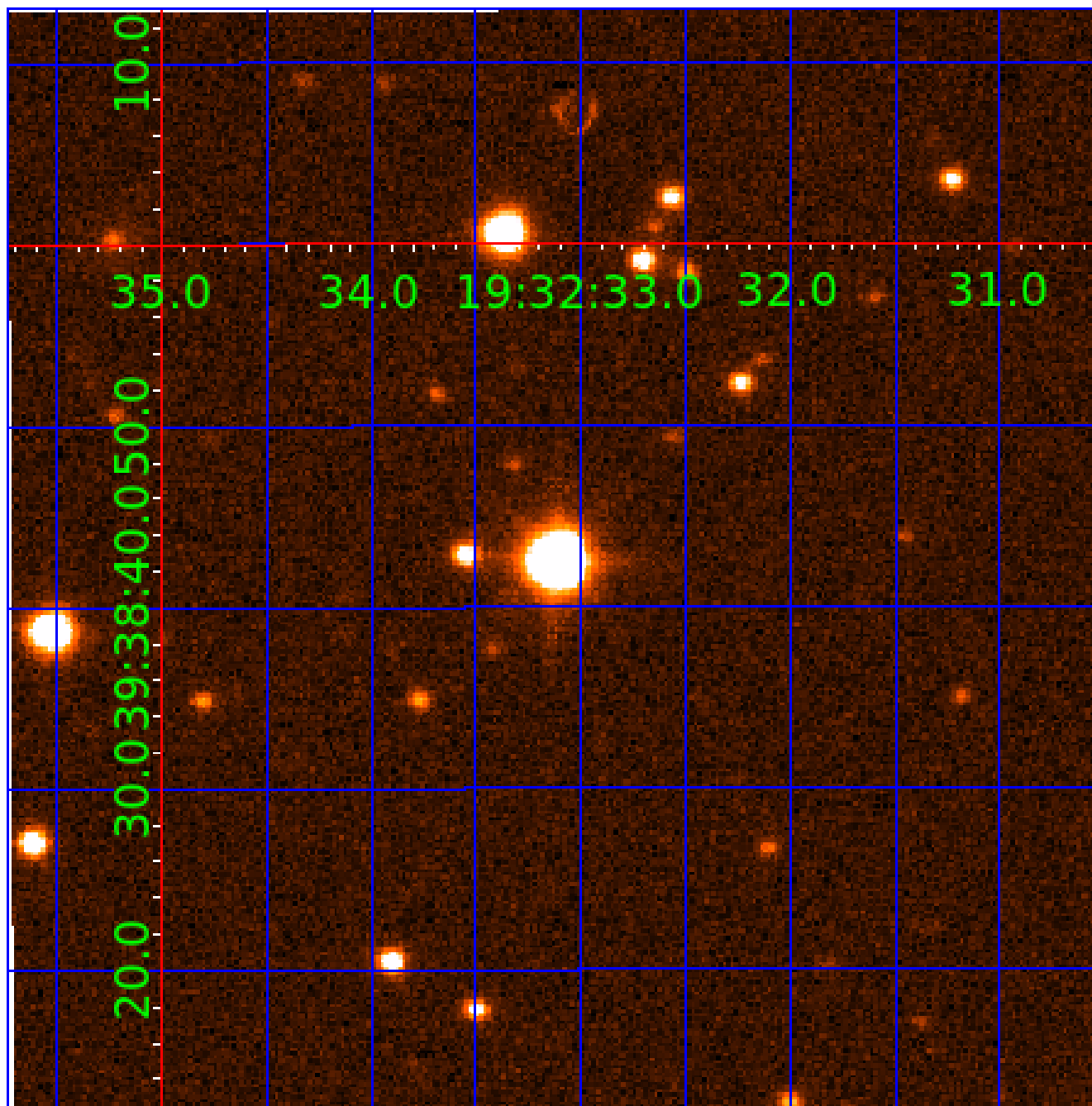


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UKIRT Image

Declination



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004566740-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_FEW_DIFFS
004566740-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
004566740-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
004566740-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—SAME_NTL_PERIOD—CENT_FEW_DIFFS
004566740-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
004566740-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004566740-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
004566740-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT—CENT_NOFITS
004566740-10	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

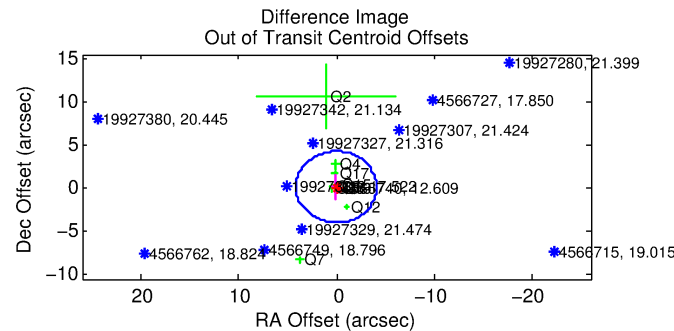
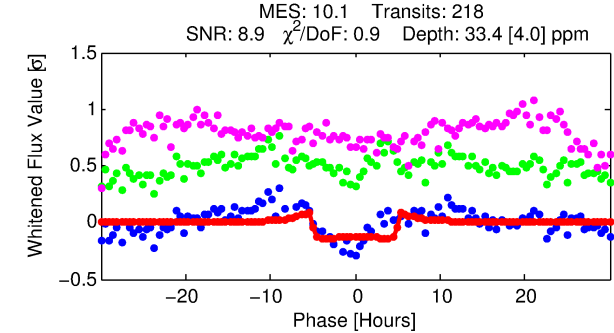
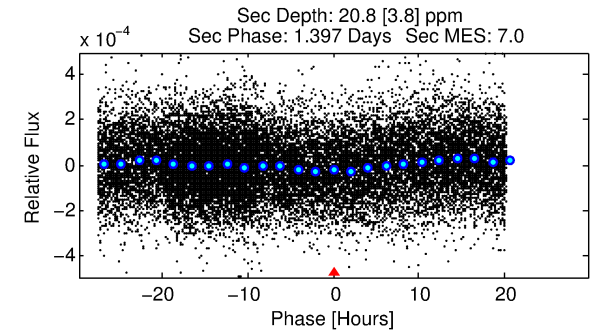
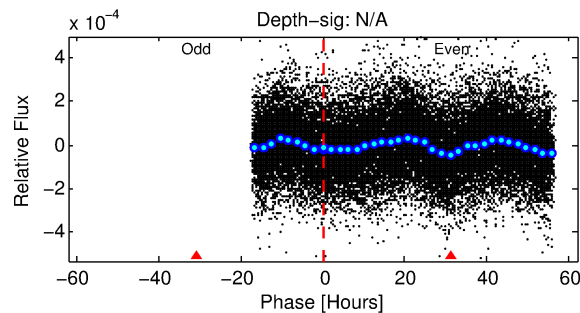
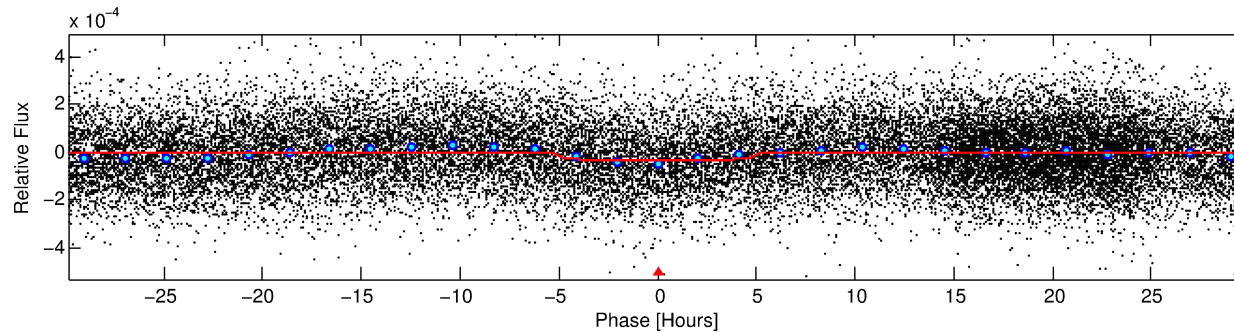
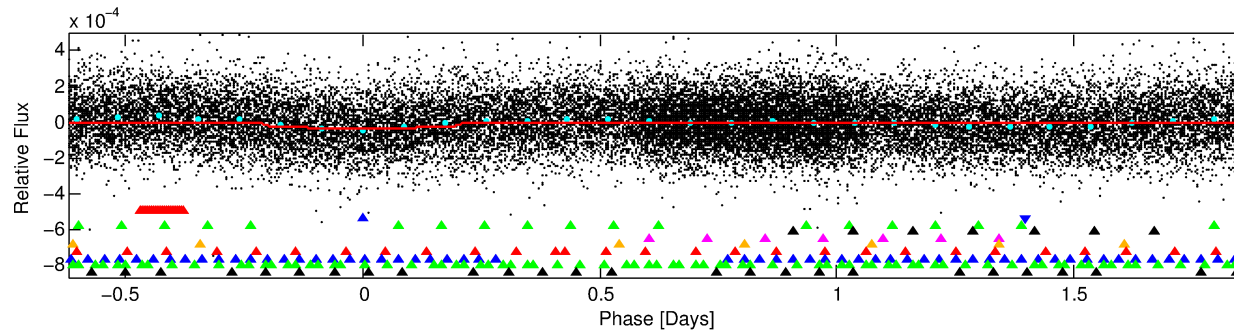
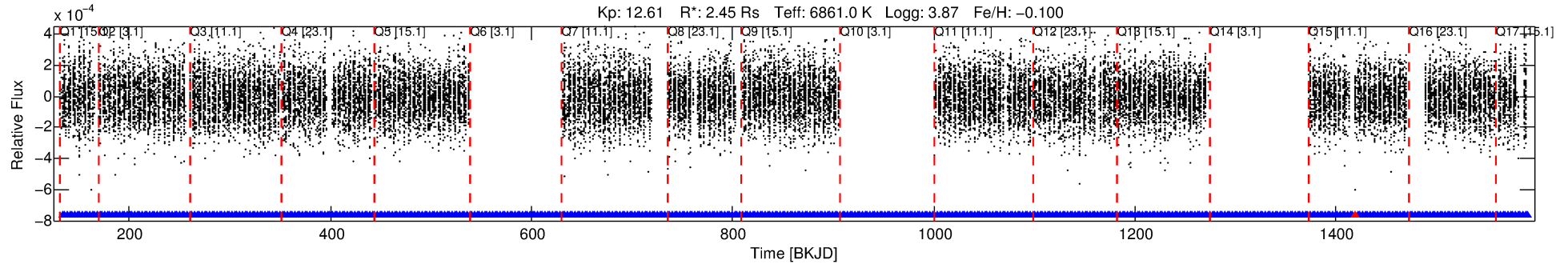
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004566740-02

No Significant Match Found

DV One-Page Summary

KIC: 4566740 Candidate: 2 of 10 Period: 2.486 d



DV Fit Results:

Period = 2.48640 [0.00003] d
Epoch = 133.5901 [0.0062] BKJD
Rp/R* = 0.0062 [0.0010]
a/R* = 1.25 [0.43]
b = 0.90 [0.20]
Seff = 6705.96 [3119.55]
Teq = 2307 [268] K
Rp = 1.65 [0.58] Re
a = 0.0422 [0.0121] AU
Ag = 7.51 [4.44] [1.47σ]
Teffp = 5907 [598] K [5.49σ]

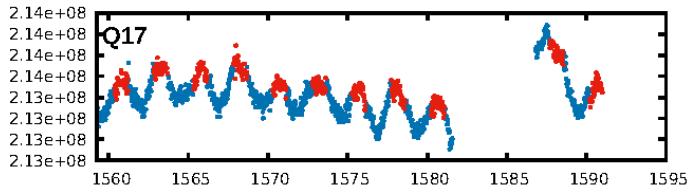
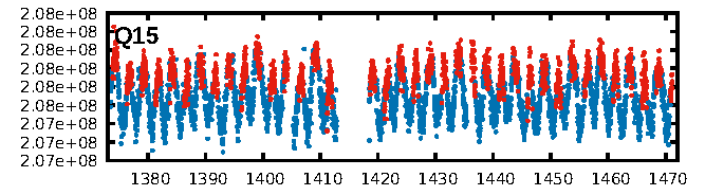
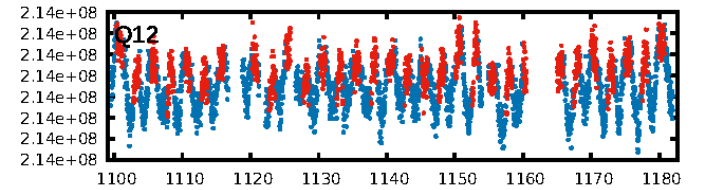
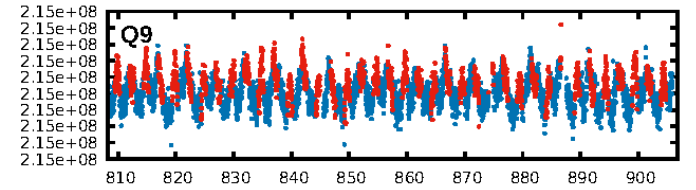
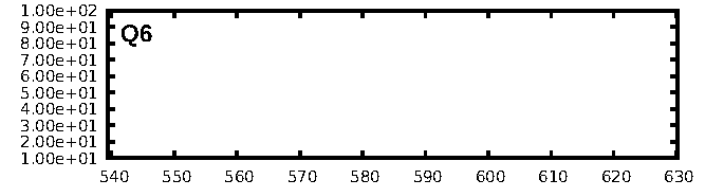
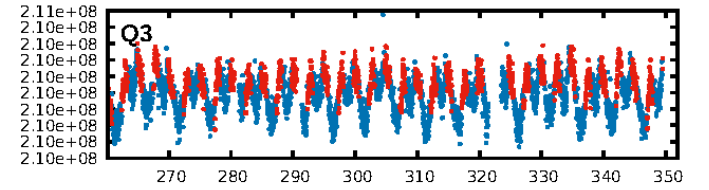
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 99.8% [3.08σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [206/207]
GhostDiagnostic-chr: -12.82
Centroid-sig: 34.8%
Centroid-so: 0.444 arcsec [0.93σ]
OotOffset-rm: 0.155 arcsec [0.11σ]
KicOffset-rm: 0.113 arcsec [0.08σ]
OotOffset-st: 1/3/4/2 [10]
KicOffset-st: 1/3/4/2 [10]
DiffImageQuality-fgm: 0.00 [0/10]
DiffImageOverlap-fno: 1.00 [14/14]

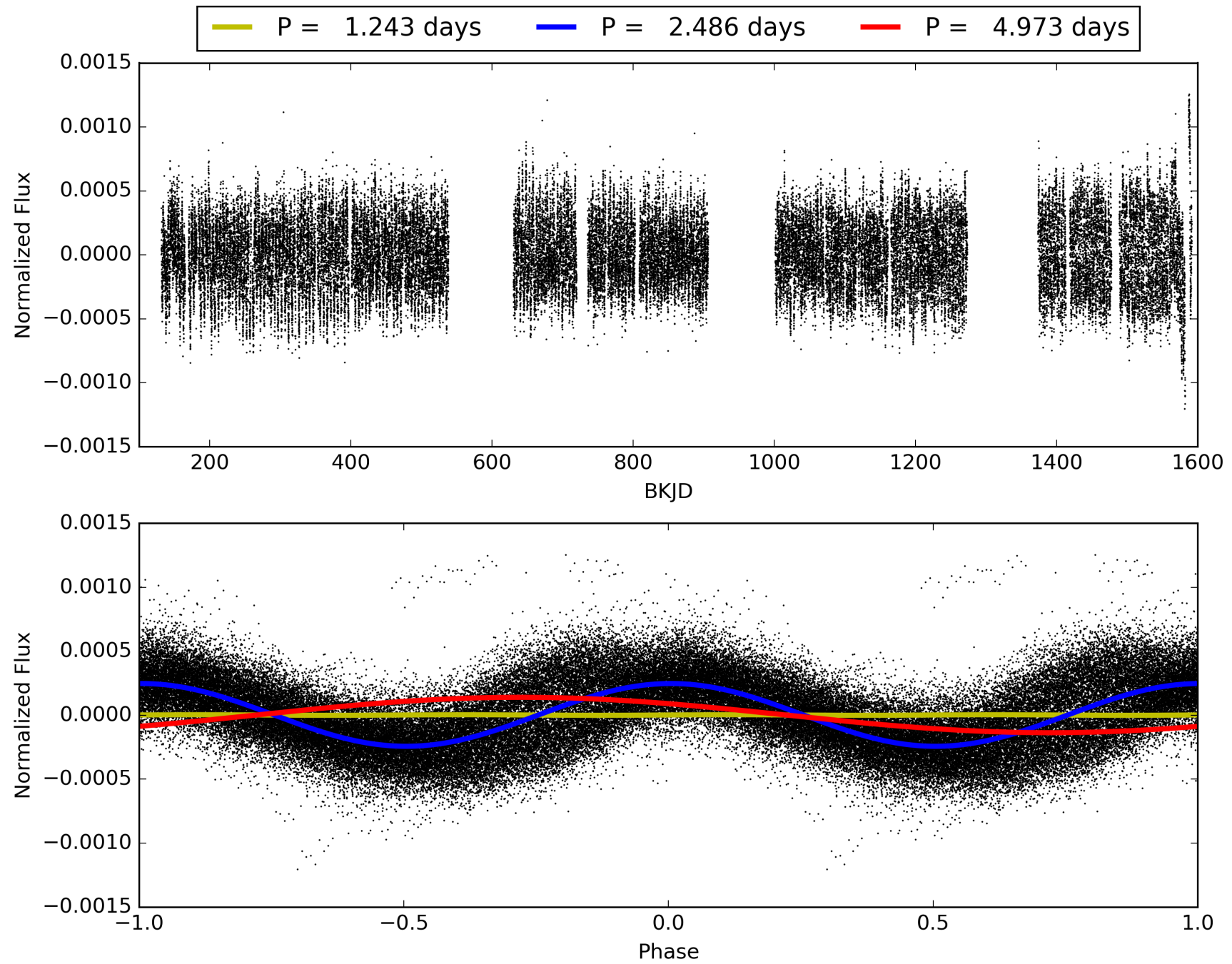
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 06:43:24 Z

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

TCE 004566740-02, PDC Light Curves

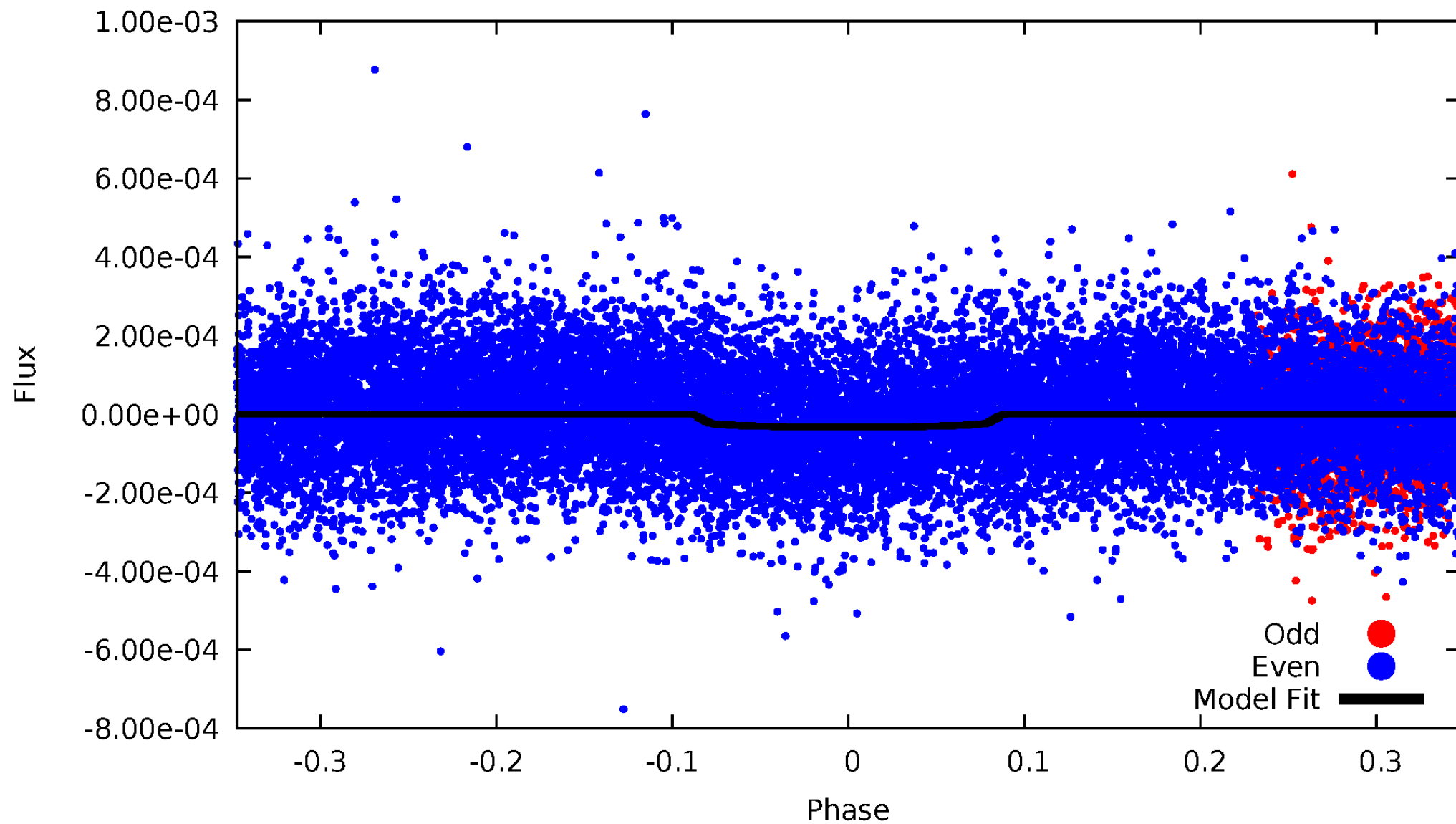


TCE 004566740-02



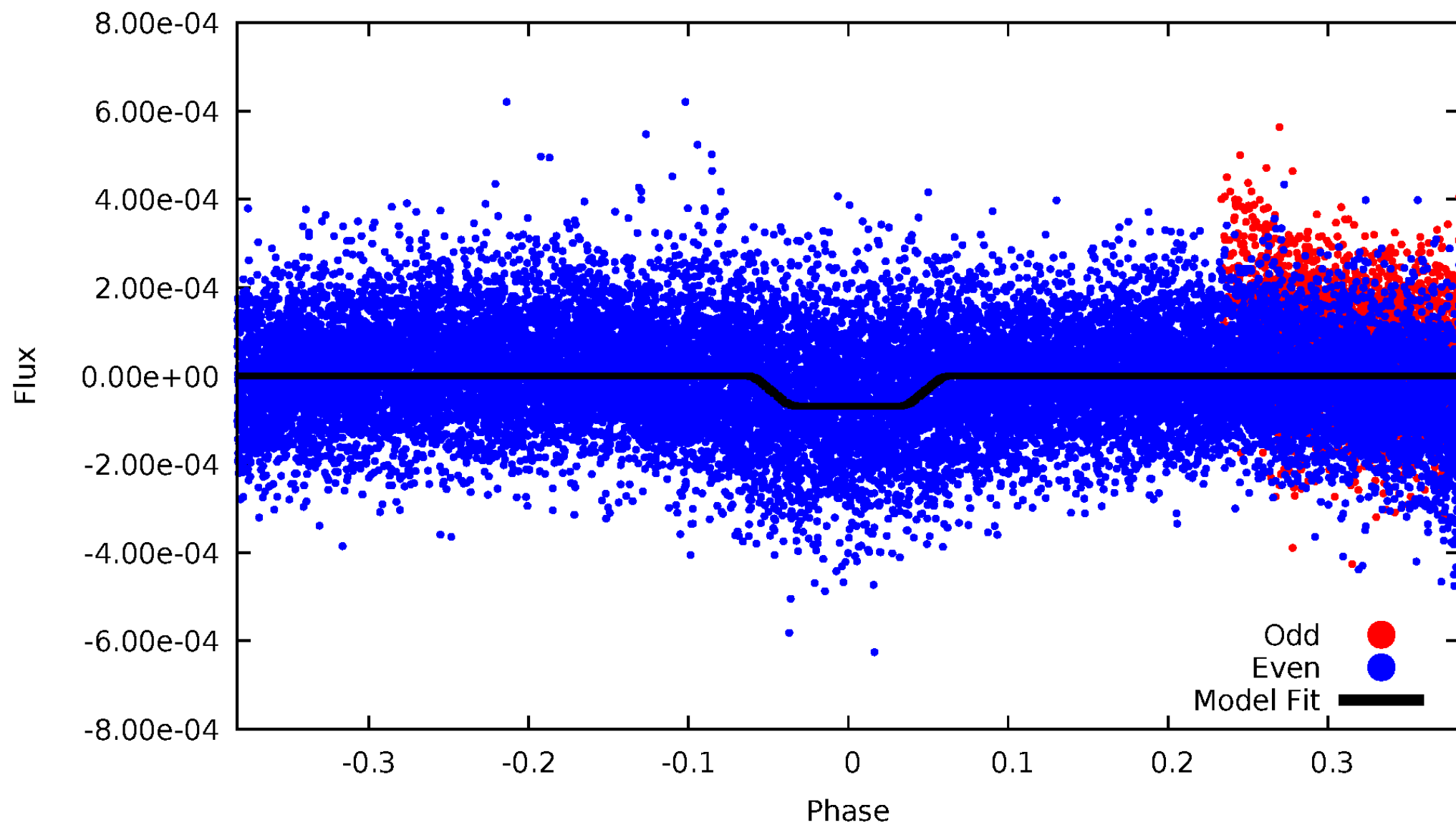
DV Odd/Even

TCE 004566740-02



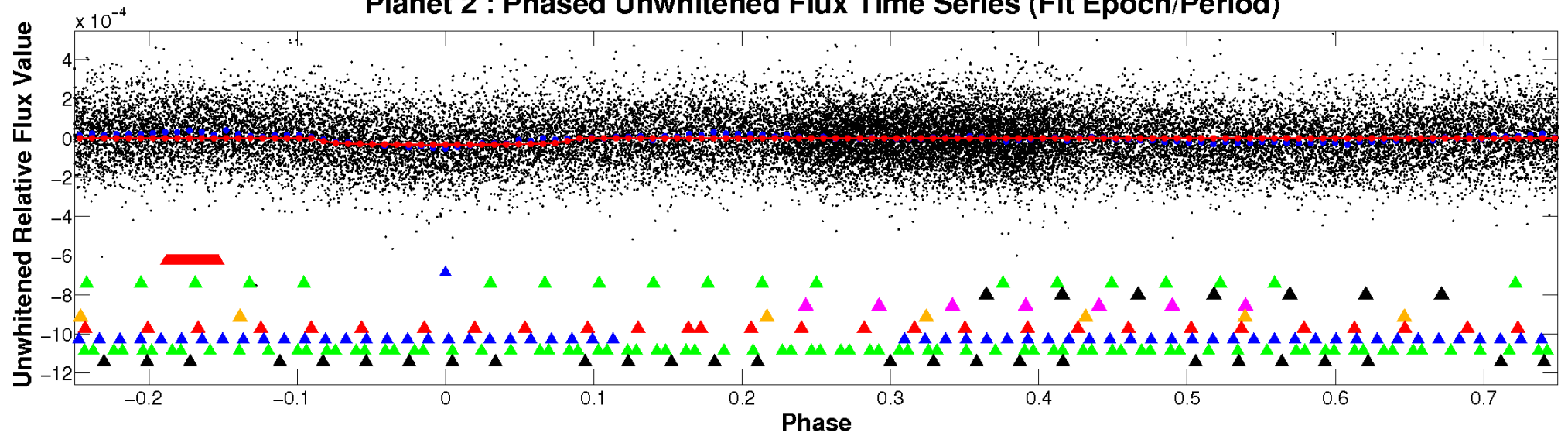
ALT Odd/Even

TCE 004566740-02

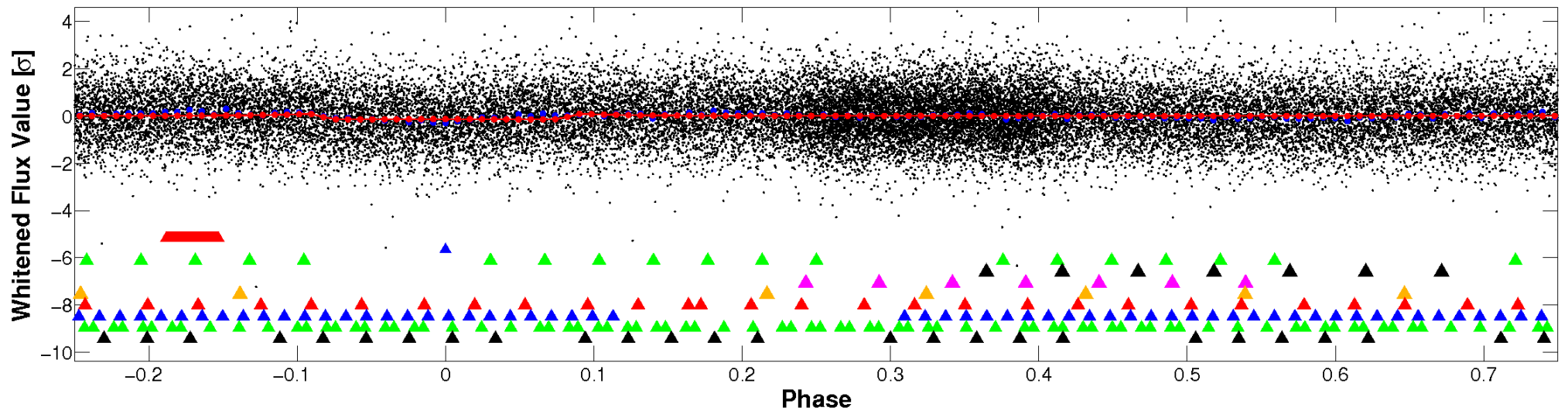


Non-Whitened Vs. Whitened Light Curve

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

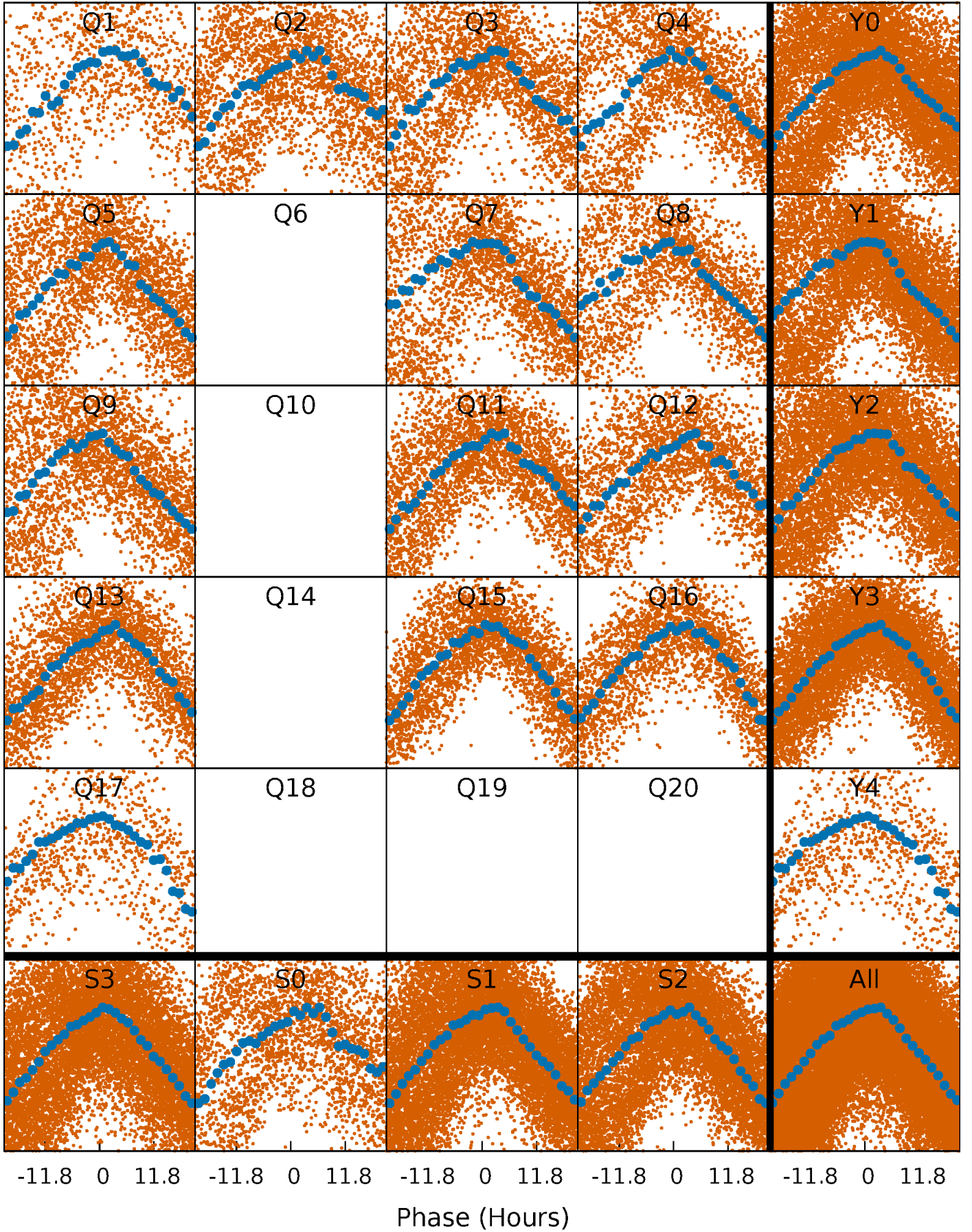


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



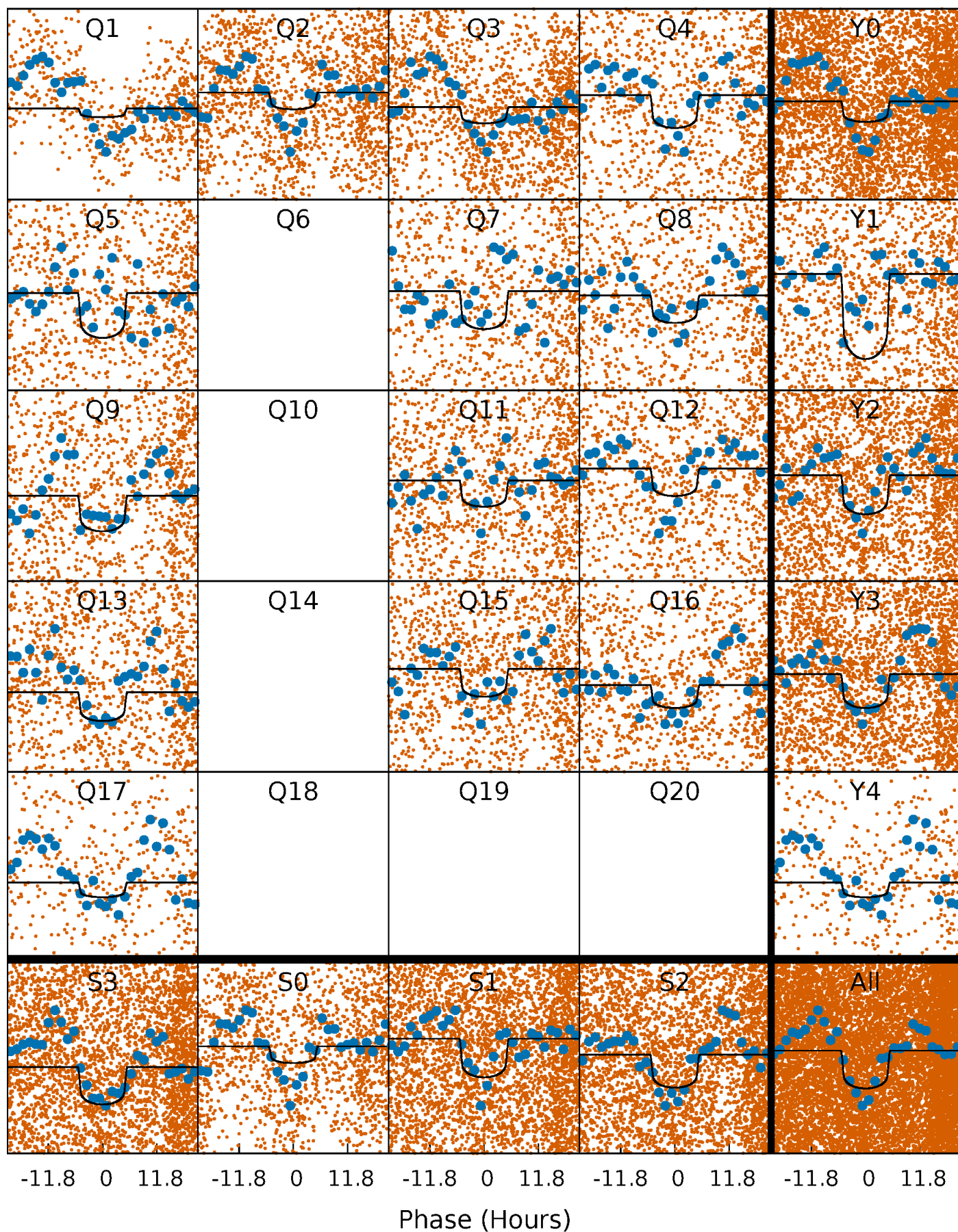
PDC Quarter-Phased Transit Curves

TCE 004566740-02 P= 2.486397 Days $T_0=133.590068$ (BKJD)



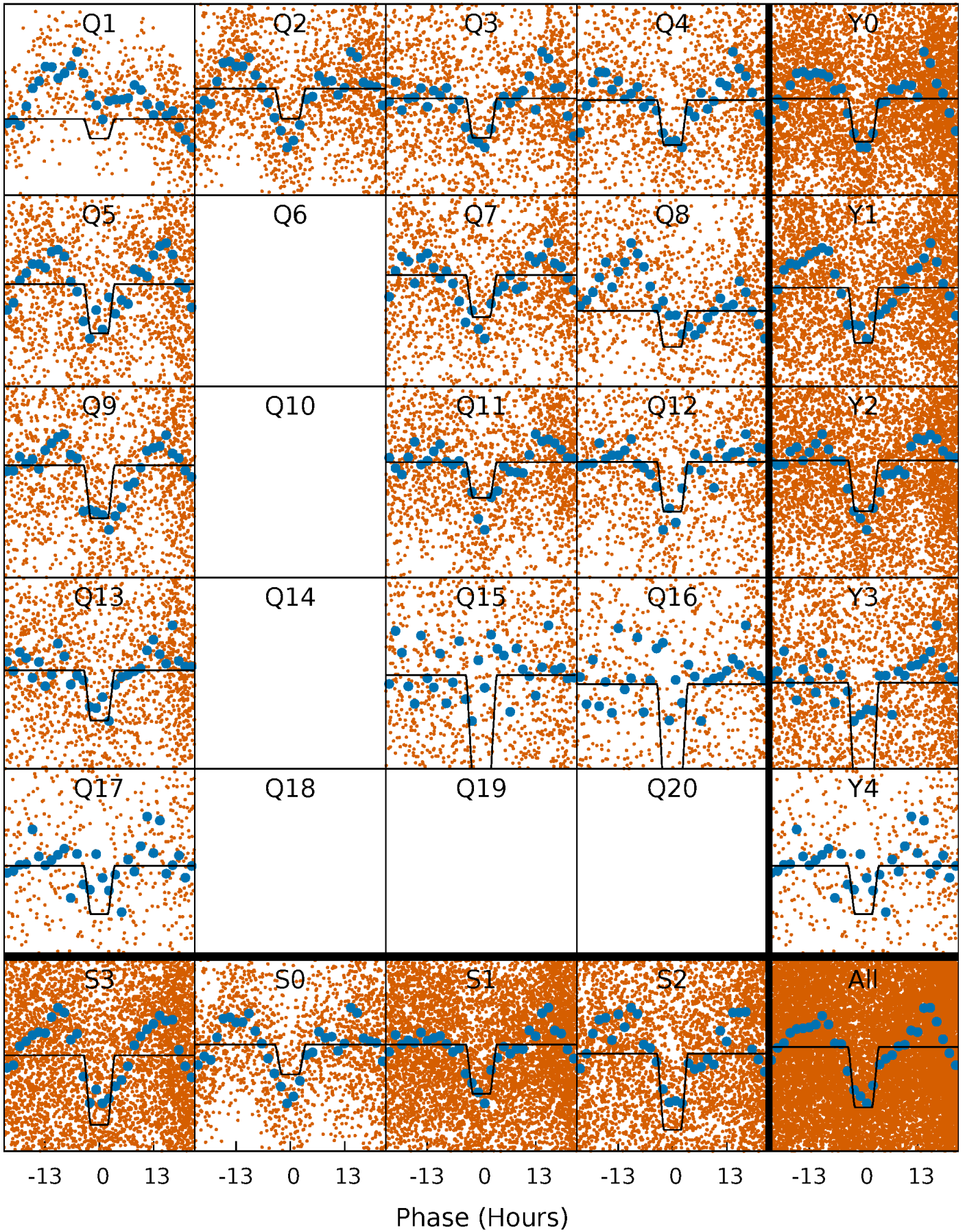
DV Quarter-Phased Transit Curves

TCE 004566740-02 P= 2.486397 Days $T_0=133.590068$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

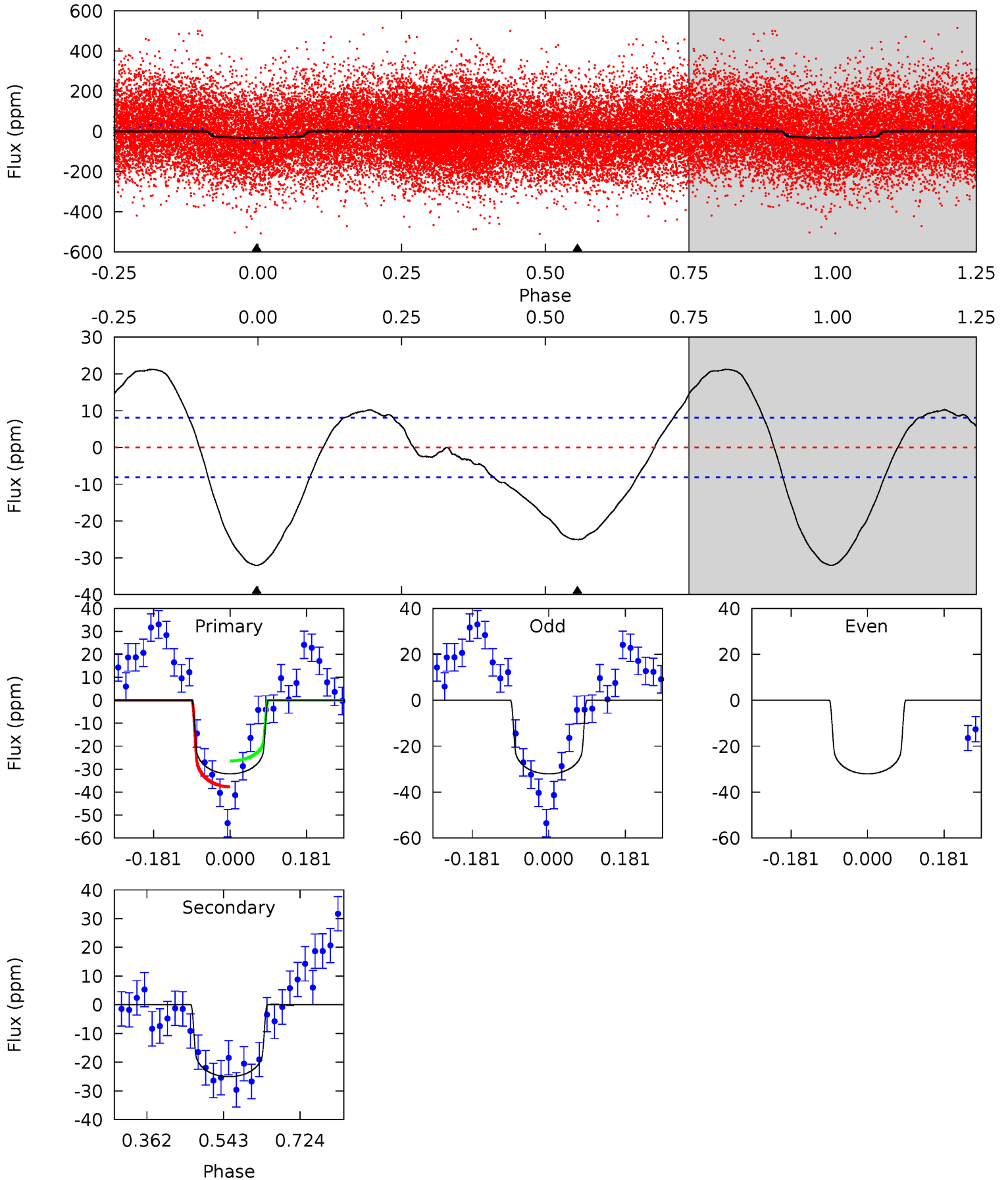
TCE 004566740-02 P= 2.486324 Days $T_0=133.583447$ (BKJD)



DV Model-Shift Uniqueness Test

004566740-02, P = 2.486397 Days, E = 131.103671 Days

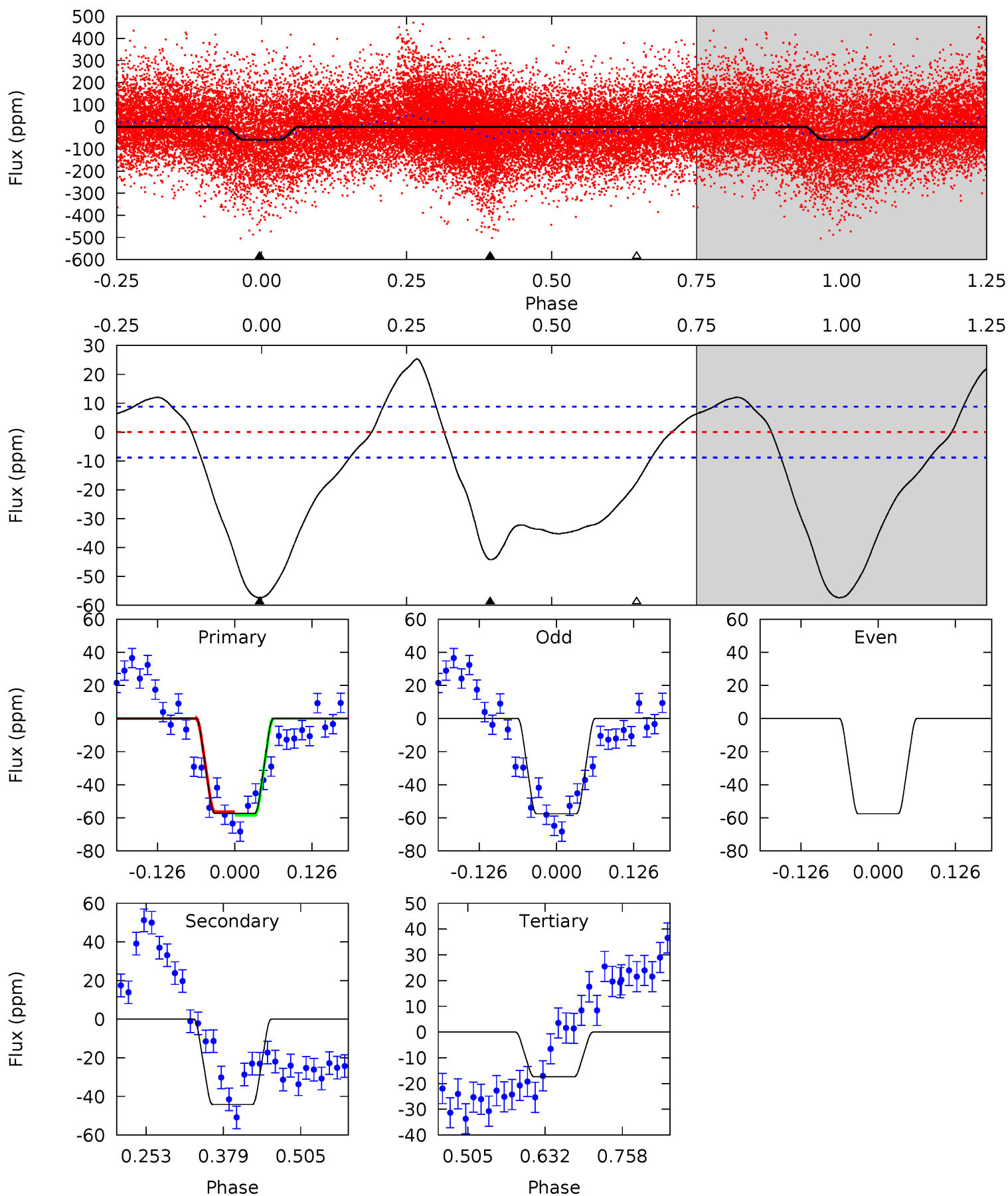
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.6	13.7	0	0	4.44	1.34	4.44	17.6	17.6	13.7	13.7	0	1.05	0.40	3.03



Alt Model-Shift Uniqueness Test

004566740-02, P = 2.486324 Days, E = 131.097123 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
29.3	22.6	8.90	0	4.52	1.53	8.95	20.4	29.3	13.7	22.6	0	0.99	0.31	0.51



Stellar Parameters For KIC 004566740

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6861^{+190}_{-214}	$3.868^{+0.259}_{-0.111}$	$-0.100^{+0.300}_{-0.300}$	$2.450^{+0.507}_{-0.760}$	$1.614^{+0.194}_{-0.292}$	$0.154^{+0.251}_{-0.052}$
	+3%/-3%	+7%/-3%	+300%/-300%	+21%/-31%	+12%/-18%	+163%/-33%
Source	PHO1	FLK73	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 004566740-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-25 ± 2	$1.57^{+0.39}_{-0.33}$	3175^{+197}_{-244}	6091^{+643}_{-509}	$9.848^{+5.921}_{-3.401}$
Alt.	-44 ± 2	$2.10^{+0.44}_{-0.43}$	3177^{+202}_{-260}	6102^{+492}_{-415}	$9.865^{+5.092}_{-3.044}$

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 $A_{obs} \gg 1.0$

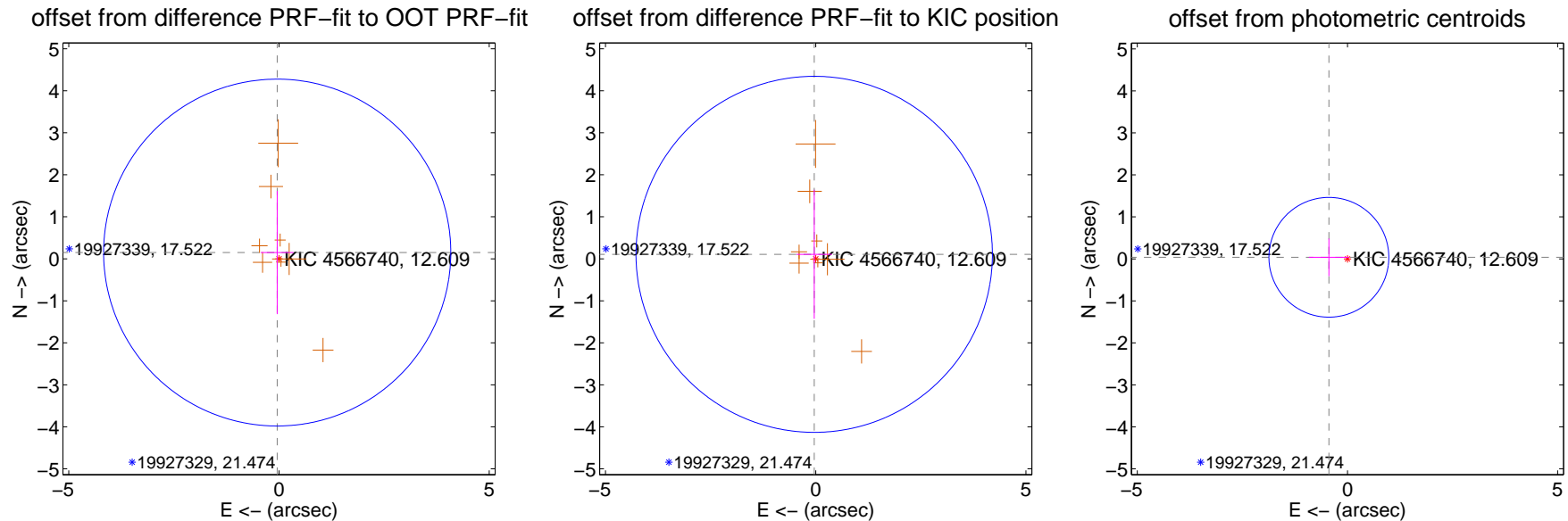
DV Centroid Data

Supplemental centroid analysis for 004566740-02. Kepler magnitude: 12.61. Transit SNR 8.94

There are 0 quarters with good PRF difference image offsets

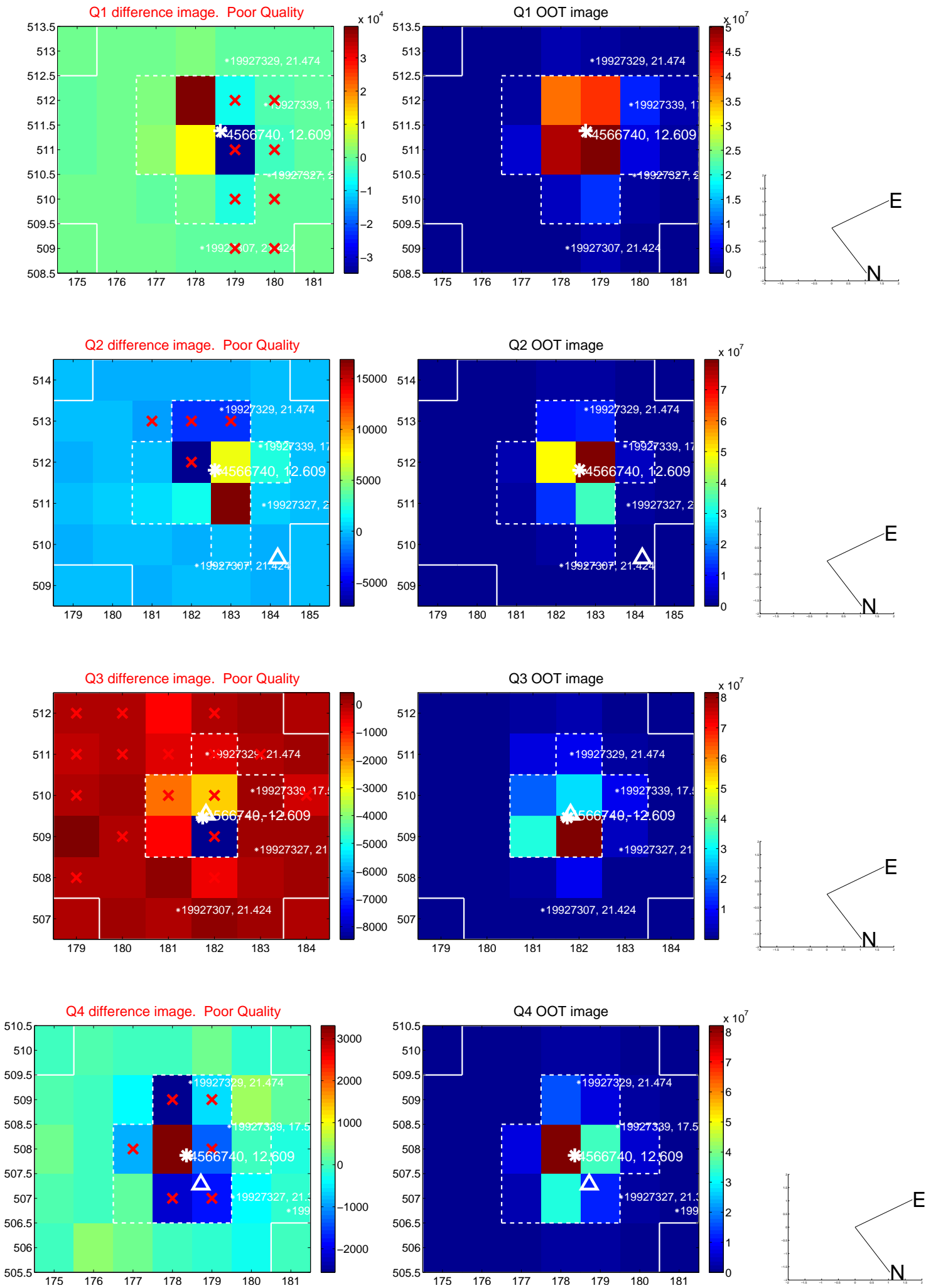
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.155 ± 1.376	0.11	0.043 ± 0.390	0.149 ± 1.466
PRF-fit source offset from KIC position	0.113 ± 1.413	0.08	0.036 ± 0.422	0.107 ± 1.537
photometric centroid source offset	0.44 ± 0.48	0.93	0.44 ± 0.48	0.04 ± 0.45

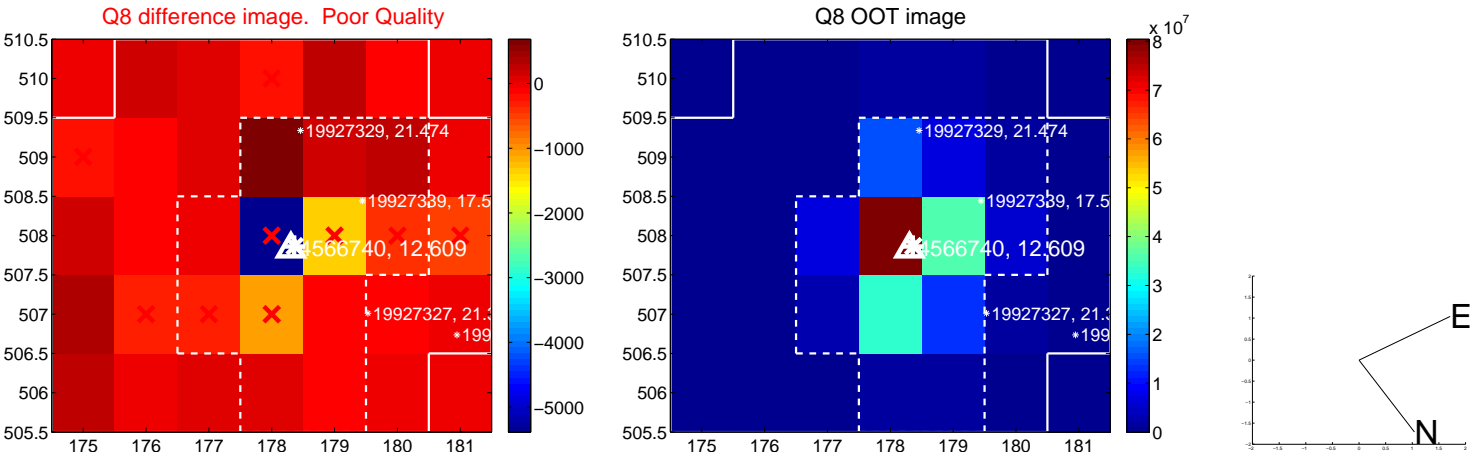
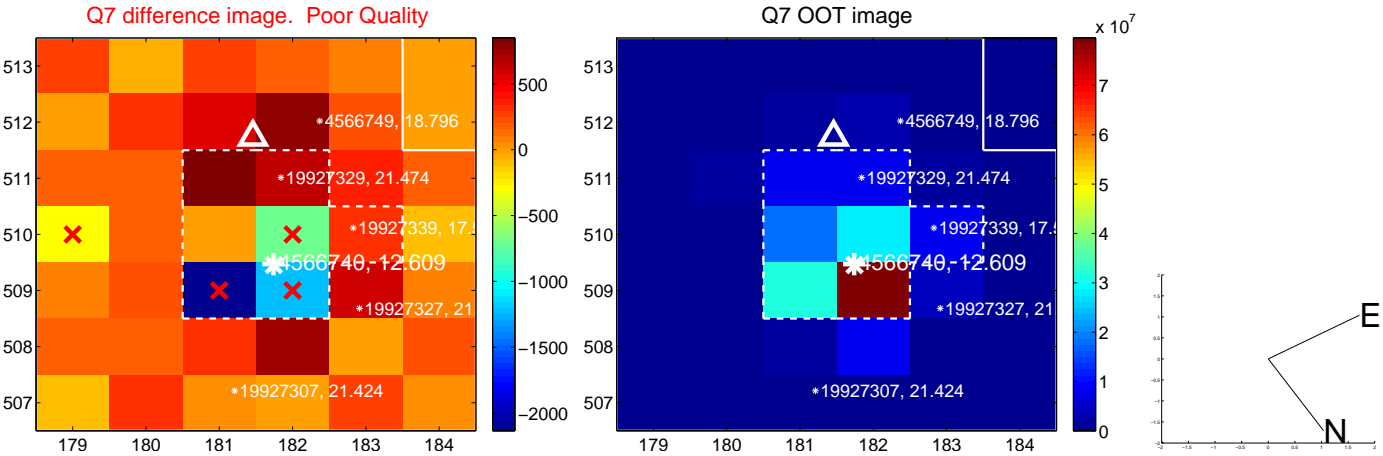
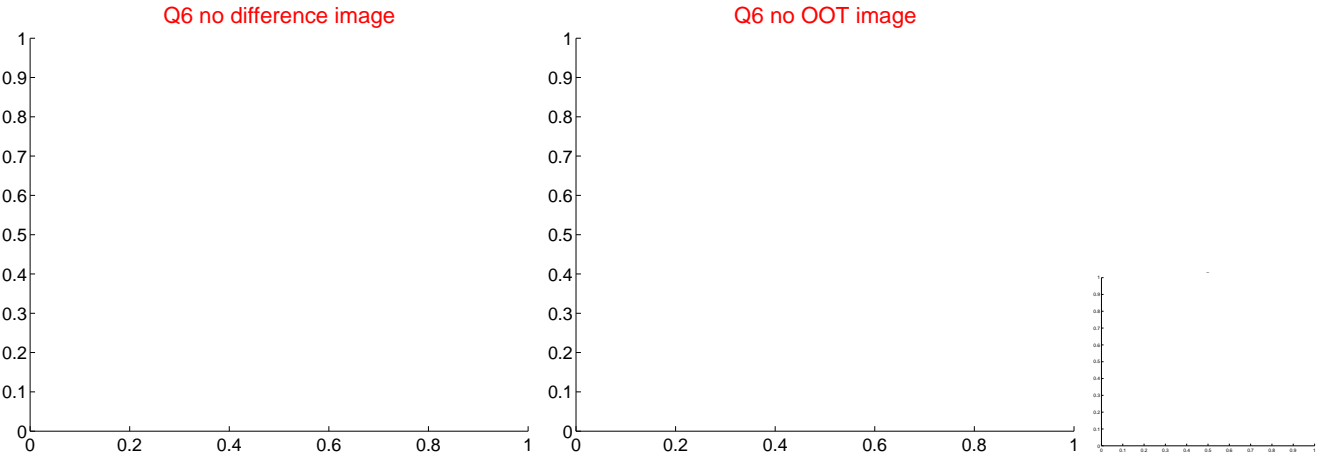
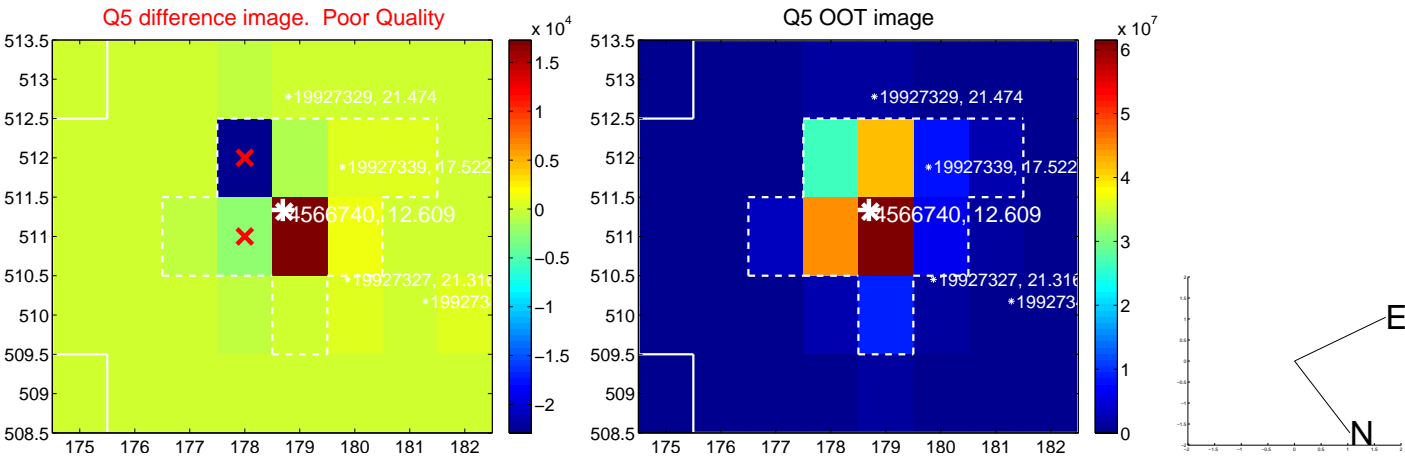


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

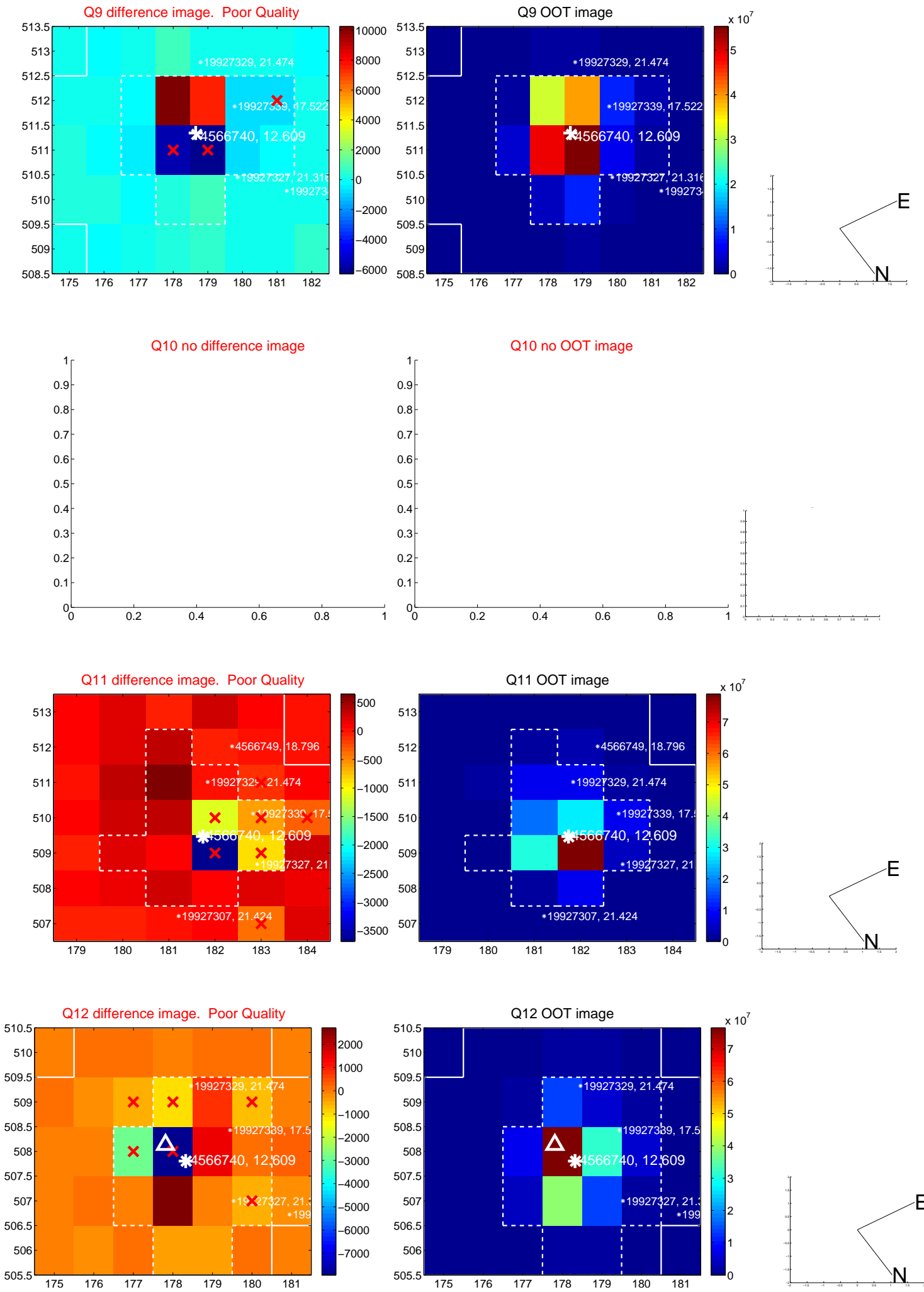
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



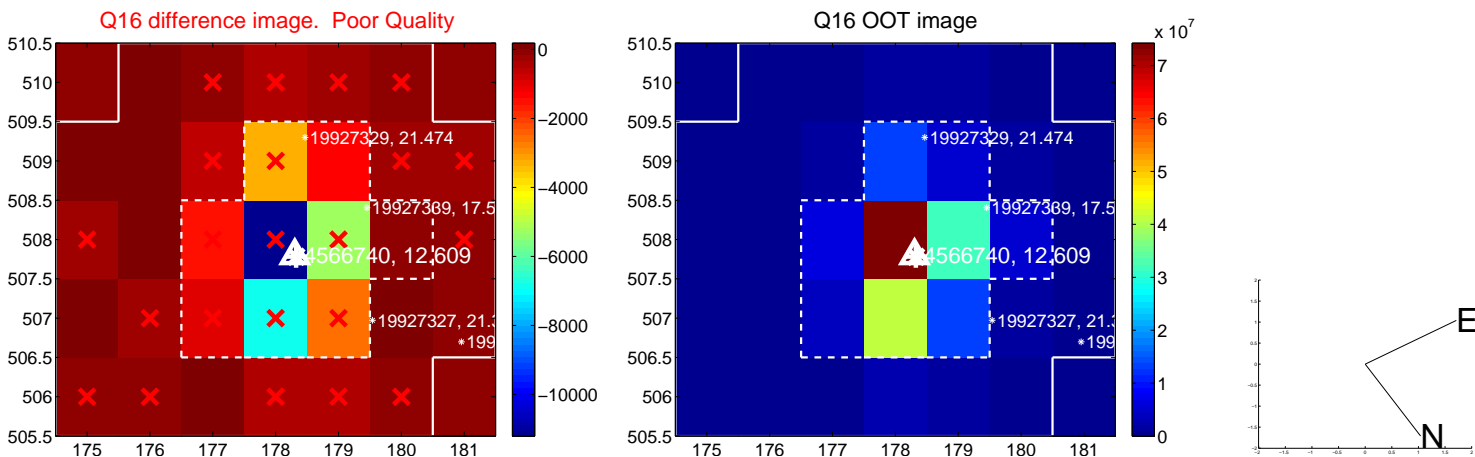
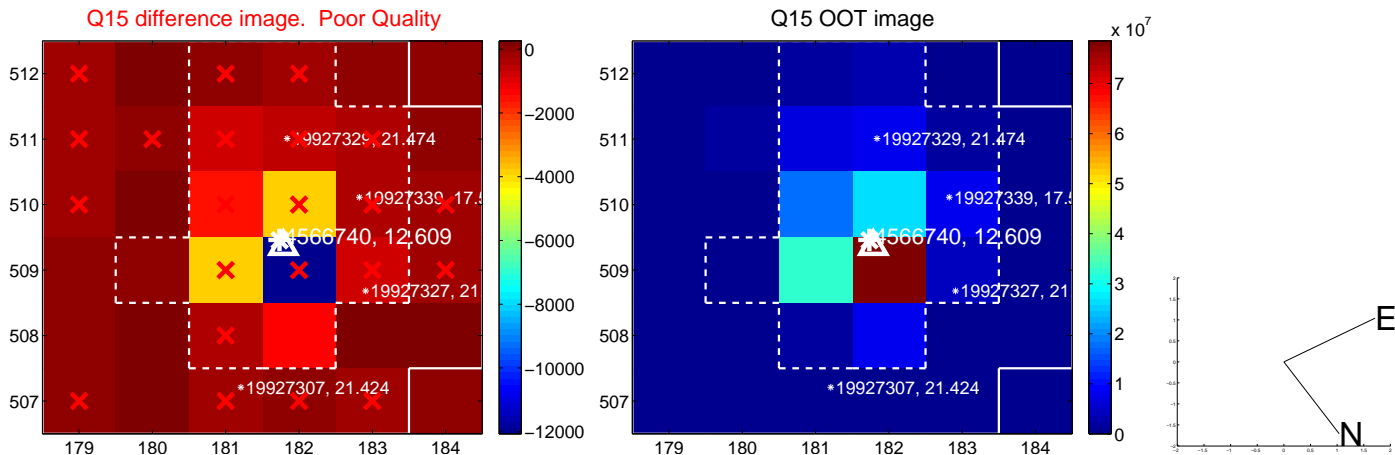
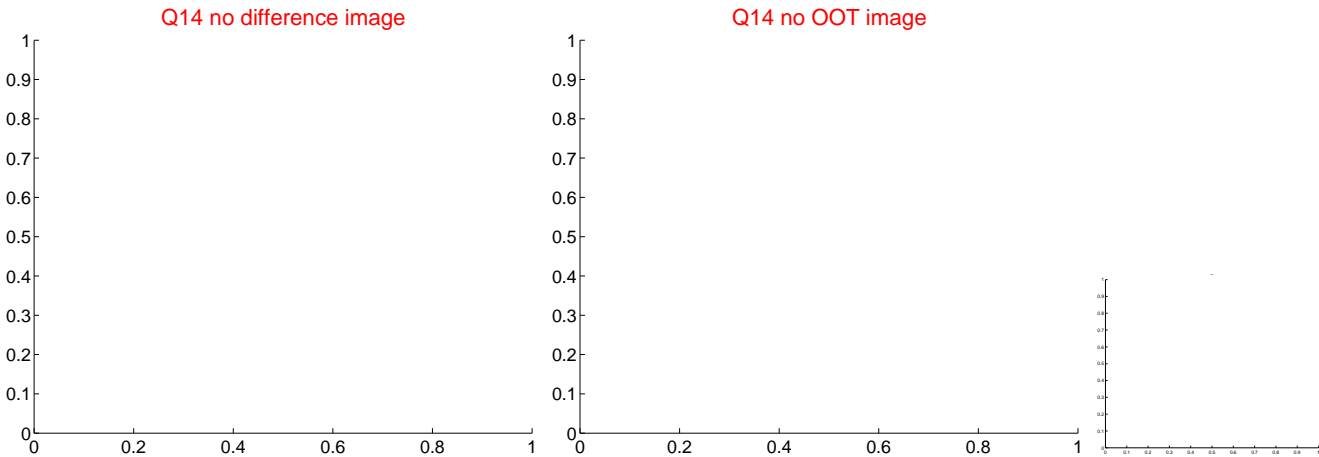
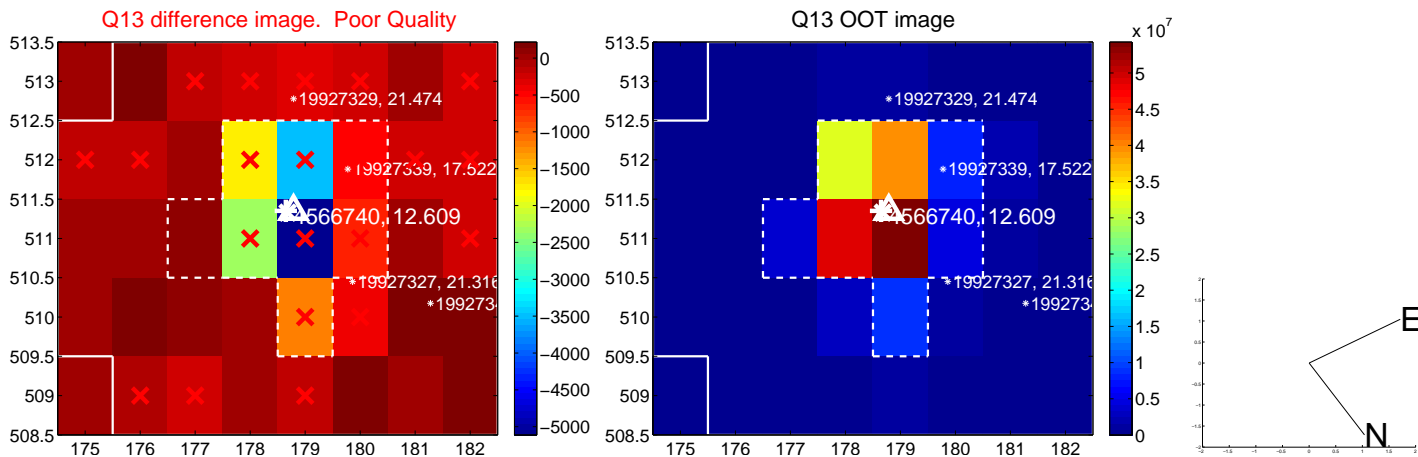
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



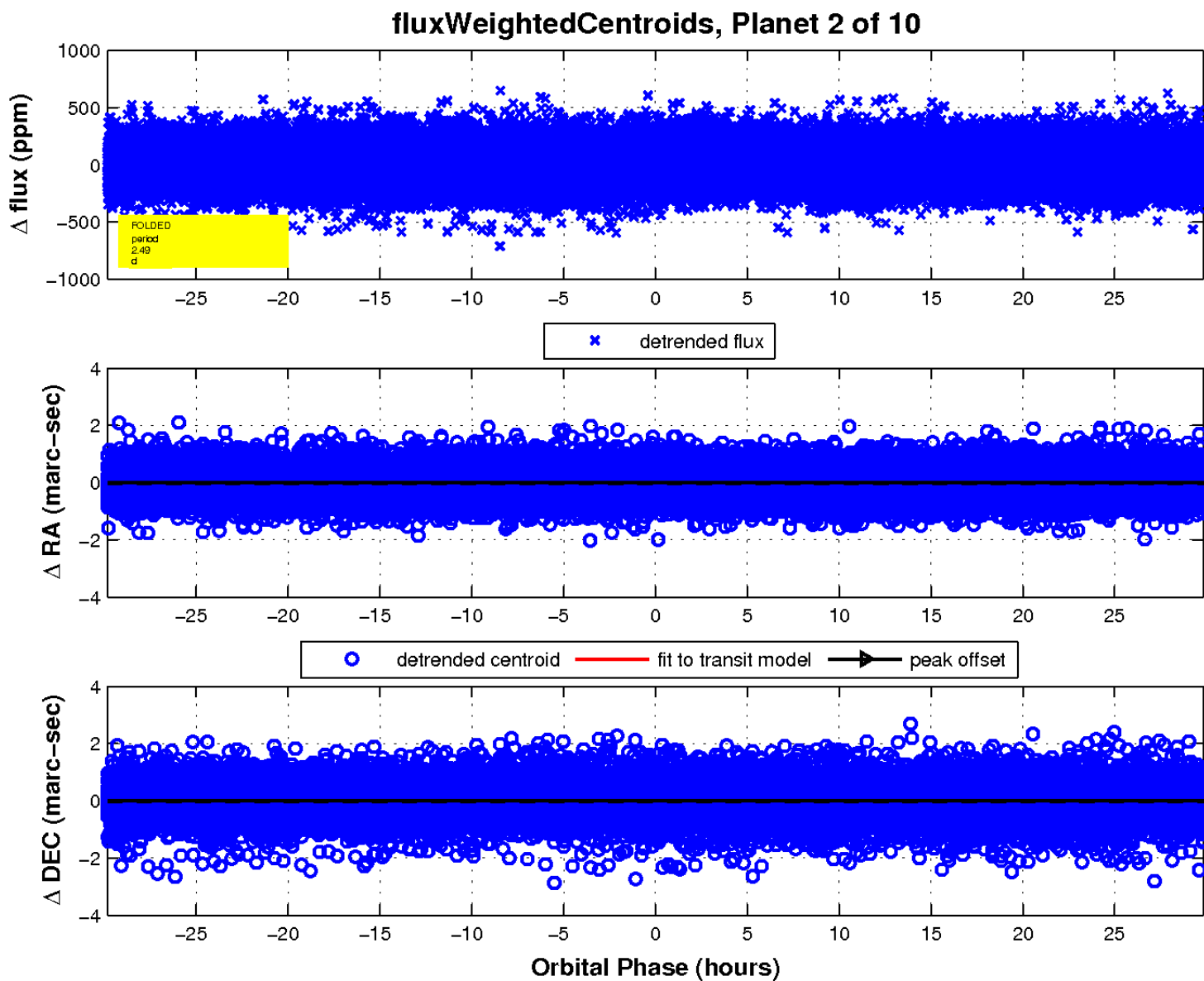
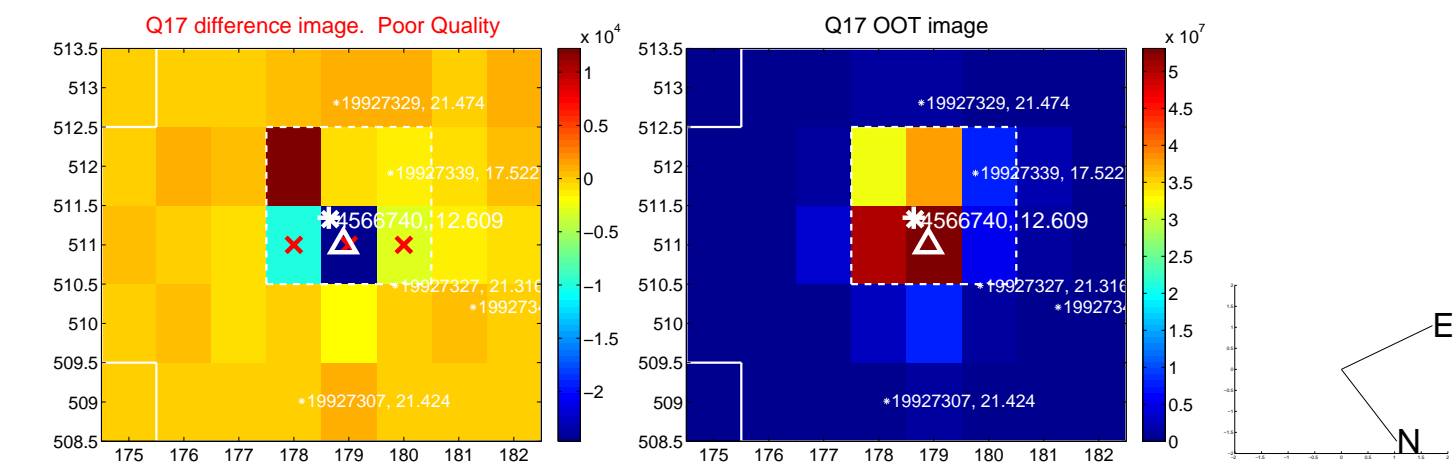
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

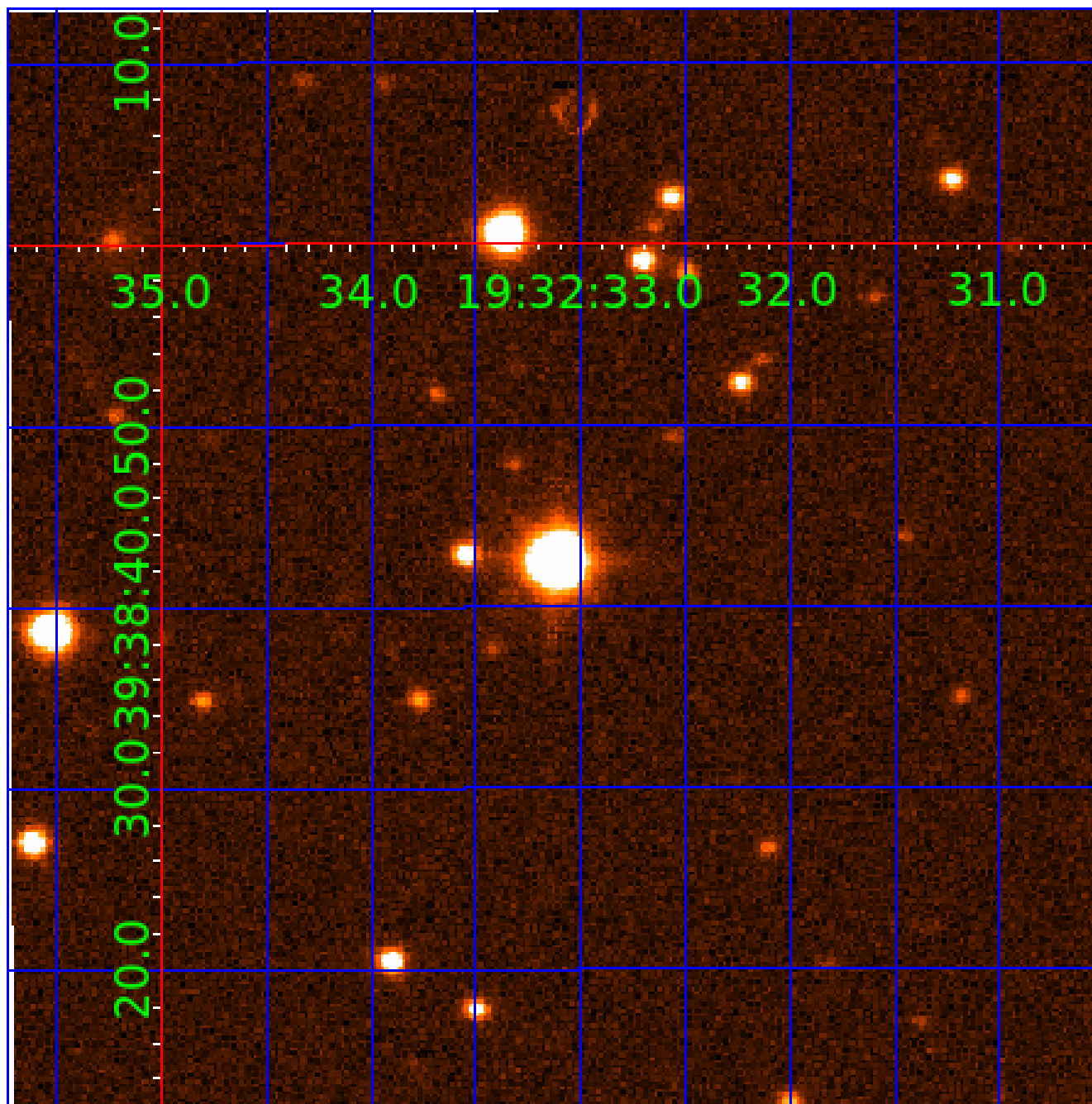


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



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})
004566740-01	OBS	No	4.973094	133.121675	18.1	16.357	9.1	4.6	2.45	6861	1.20	2661.05
004566740-02	OBS	No	2.486397	133.590068	33.4	10.361	10.1	8.9	2.45	6861	1.65	6705.96
004566740-03	OBS	No	76.219157	159.075847	211.1	5.534	9.3	8.3	2.45	6861	4.24	69.90
004566740-04	OBS	No	213.957349	243.898249	99.6	1.137	8.9	3.1	2.45	6861	2.76	17.65
004566740-05	OBS	No	213.953006	243.595682	3.4	0.512	8.9	0.1	2.45	6861	0.48	17.65
004566740-06	OBS	No	213.562988	245.133424	173.9	27.589	8.7	6.2	2.45	6861	3.47	17.70
004566740-07	OBS	No	52.951812	143.943002	200.3	9.663	7.9	7.7	2.45	6861	6.78	113.60
004566740-08	OBS	No	24.829527	148.789351	7.3	4.173	7.6	0.4	2.45	6861	0.71	311.84
004566740-09	OBS	No	17.811016	131.507027	152.8	3.000	7.4	-1.0	2.45	6861	3.06	485.63
004566740-10	OBS	No	57.698870	135.798867	148.7	3.447	7.4	7.8	2.45	6861	3.35	101.31

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004566740-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004566740-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_FEW_DIFFS
004566740-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
004566740-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
004566740-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—SAME_NTL_PERIOD—CENT_FEW_DIFFS
004566740-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
004566740-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004566740-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
004566740-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT—CENT_NOFITS
004566740-10	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

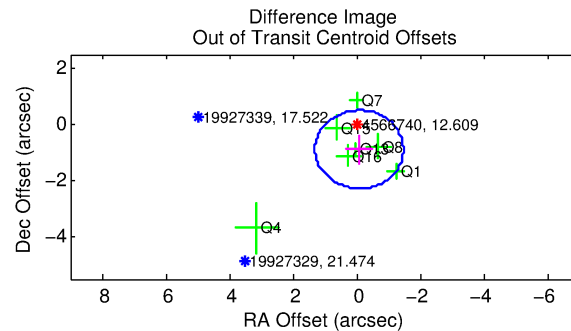
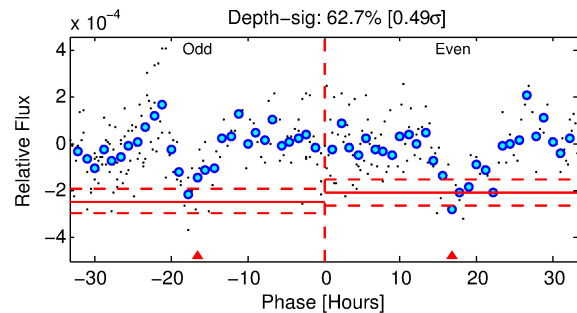
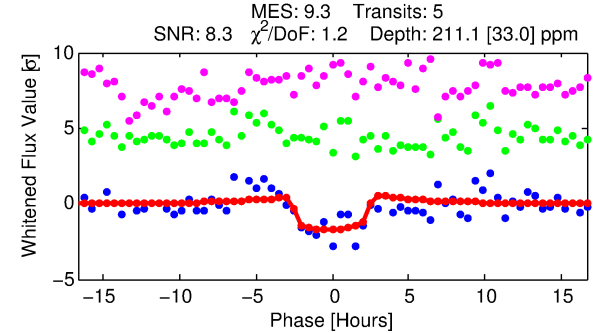
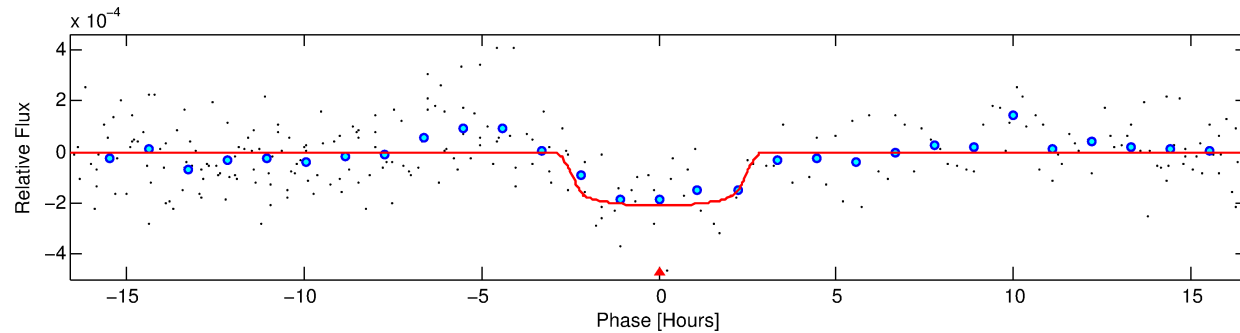
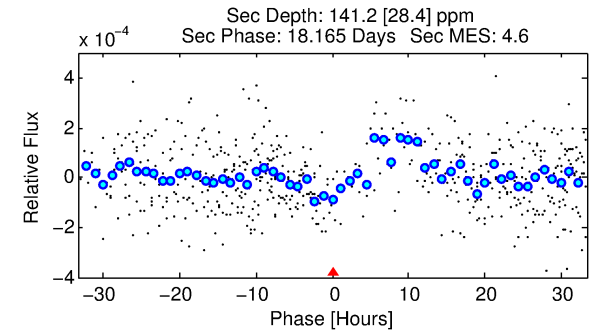
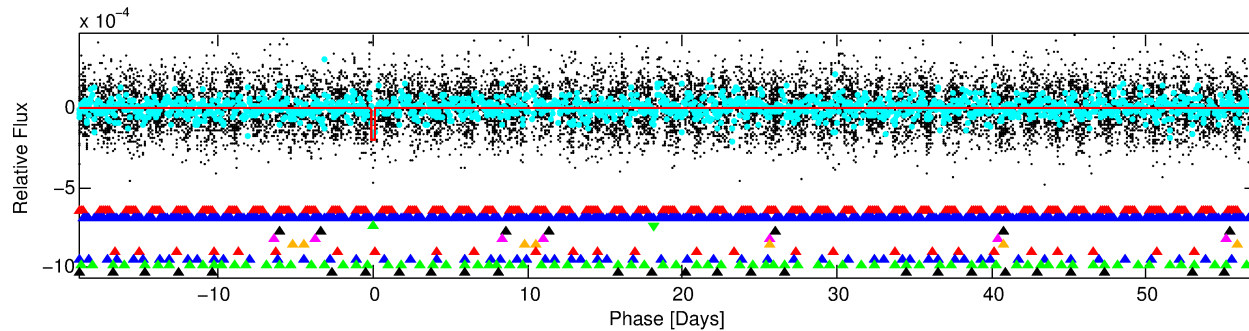
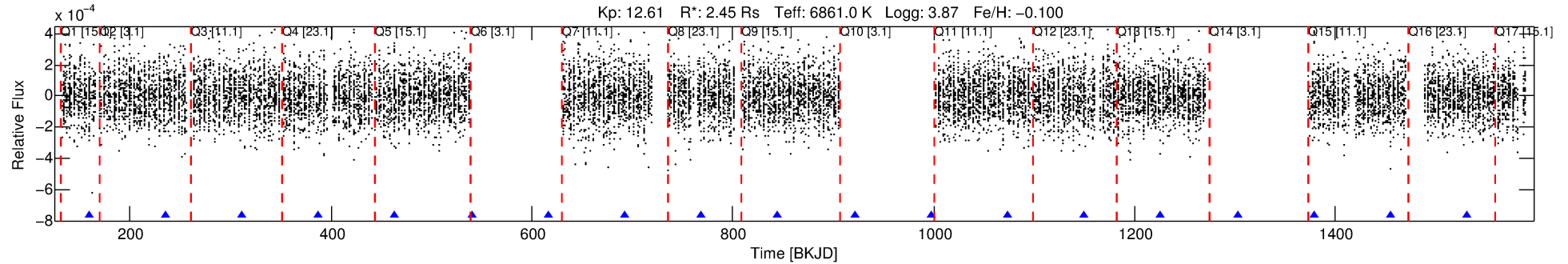
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004566740-03

No Significant Match Found

DV One-Page Summary

KIC: 4566740 Candidate: 3 of 10 Period: 76.219 d



DV Fit Results:

Period = 76.21916 [0.00148] d
Epoch = 159.0758 [0.0183] BKJD
Rp/R* = 0.0158 [0.0033]
a/R* = 44.02 [47.92]
b = 0.93 [0.17]
Seff = 69.90 [32.52]
Teq = 737 [86] K
Rp = 4.24 [1.59] Re
a = 0.4129 [0.1184] AU
Ag = 737.40 [477.37] [1.54σ]
Teffp = 5940 [718] K [7.19σ]

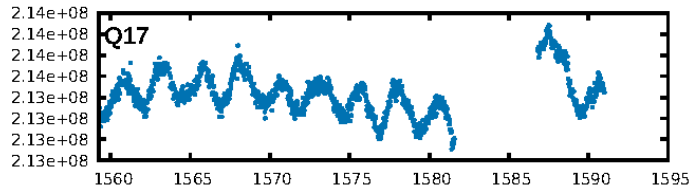
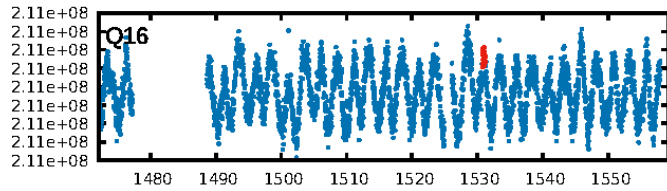
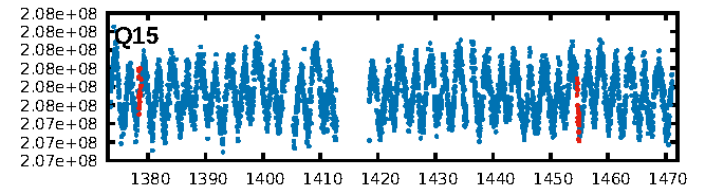
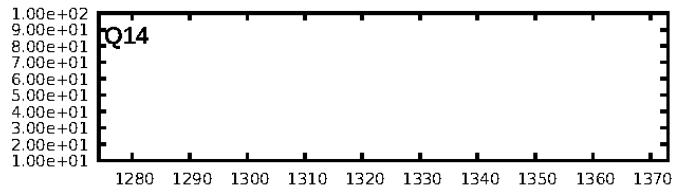
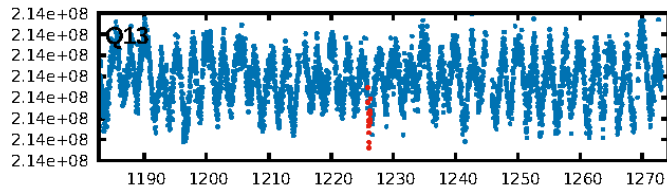
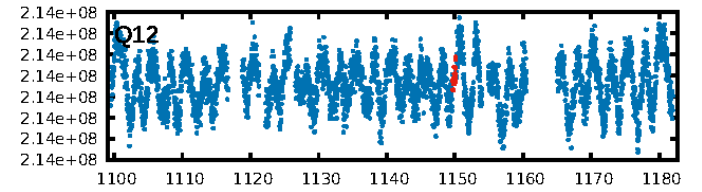
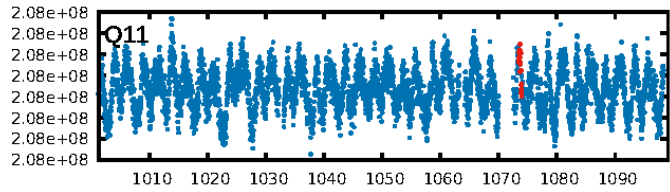
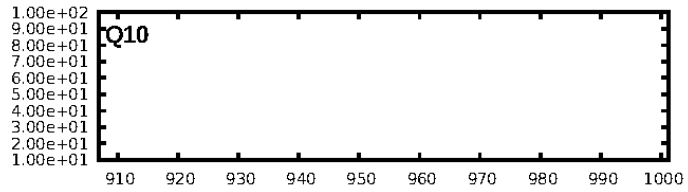
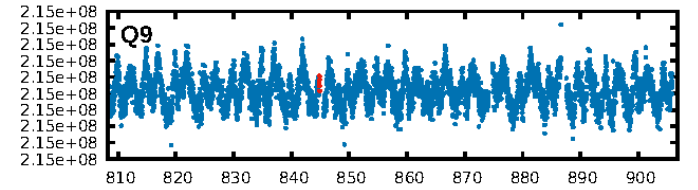
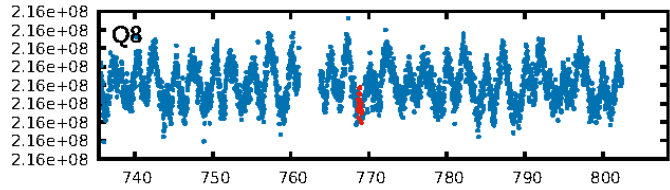
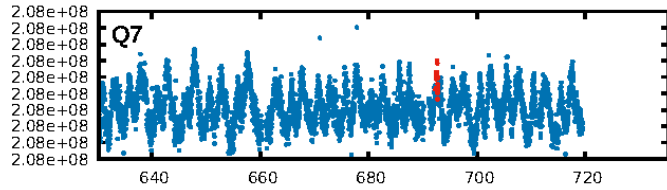
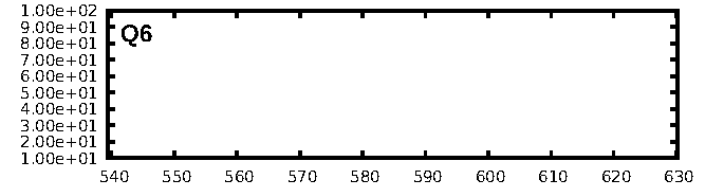
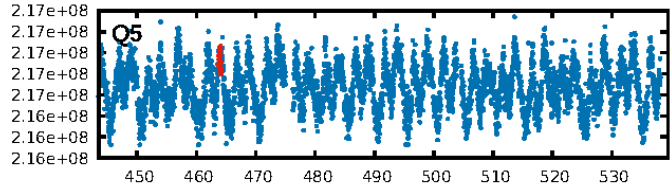
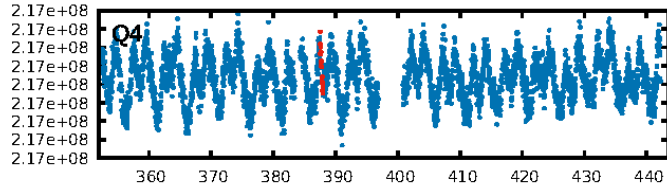
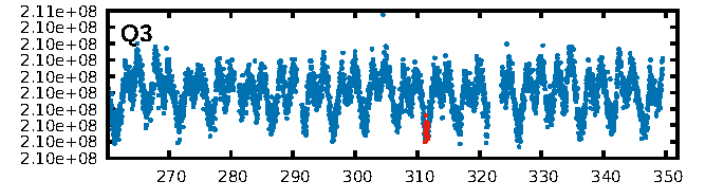
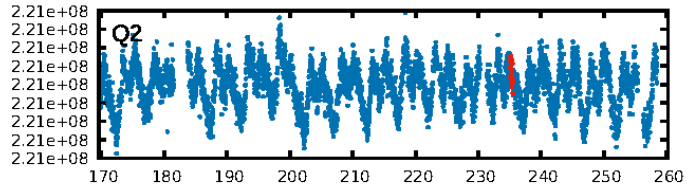
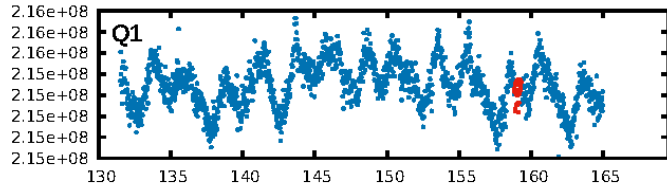
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [68.18σ]
LongPeriod-sig: 100.0% [117.14σ]
ModelChiSquare2-sig: 73.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -0.3017
Centroid-sig: 2.1%
Centroid-so: 1.008 arcsec [1.74σ]
OotOffset-rm: 0.890 arcsec [1.92σ]
OotOffset-st: 0.2/3/2 [7]
KicOffset-rm: 0.957 arcsec [2.29σ]
KicOffset-st: 0.2/3/2 [7]
DiffImageQuality-fgm: 0.43 [3/7]
DiffImageOverlap-fno: 0.27 [3/11]

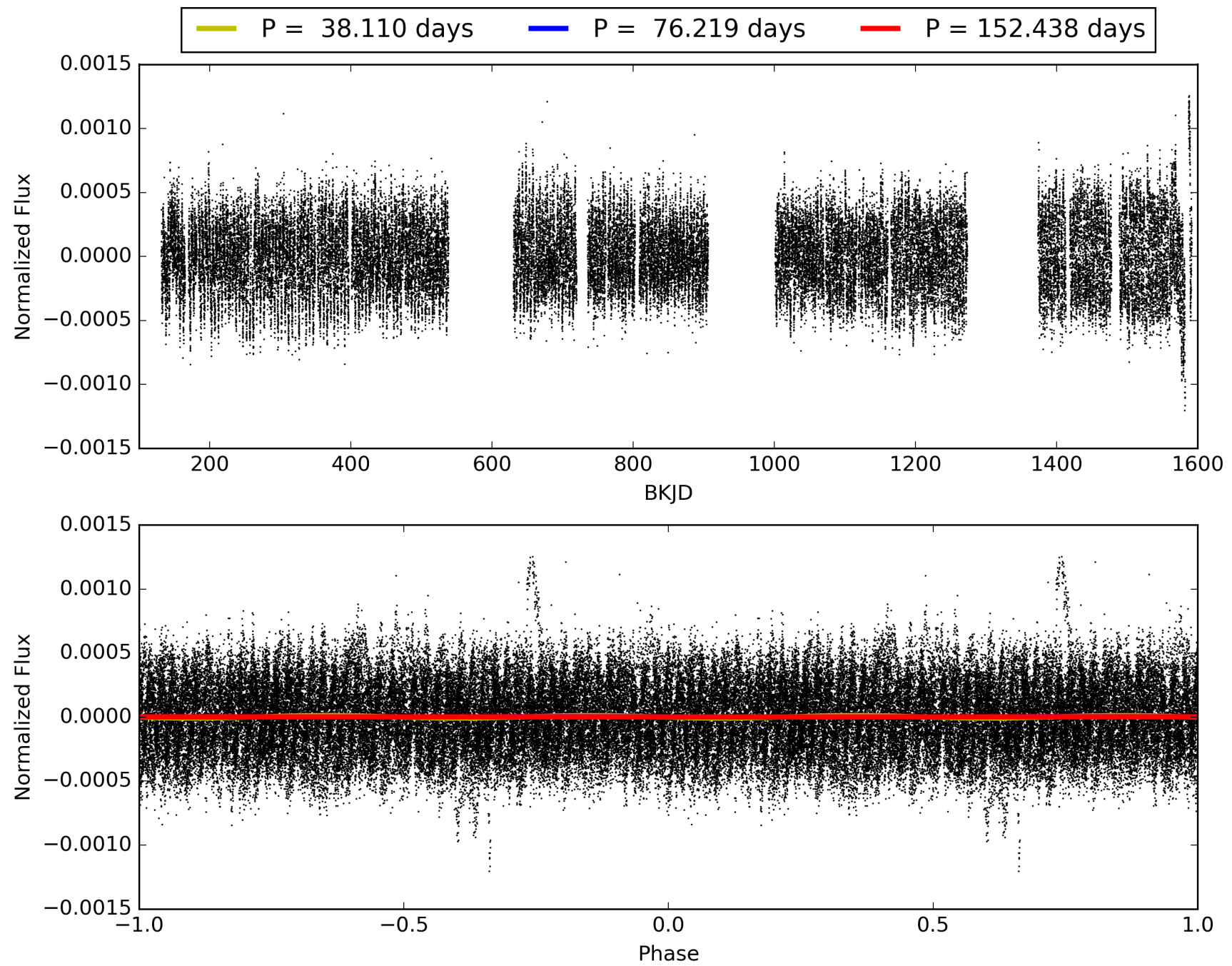
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 06:43:32 Z

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

TCE 004566740-03, PDC Light Curves

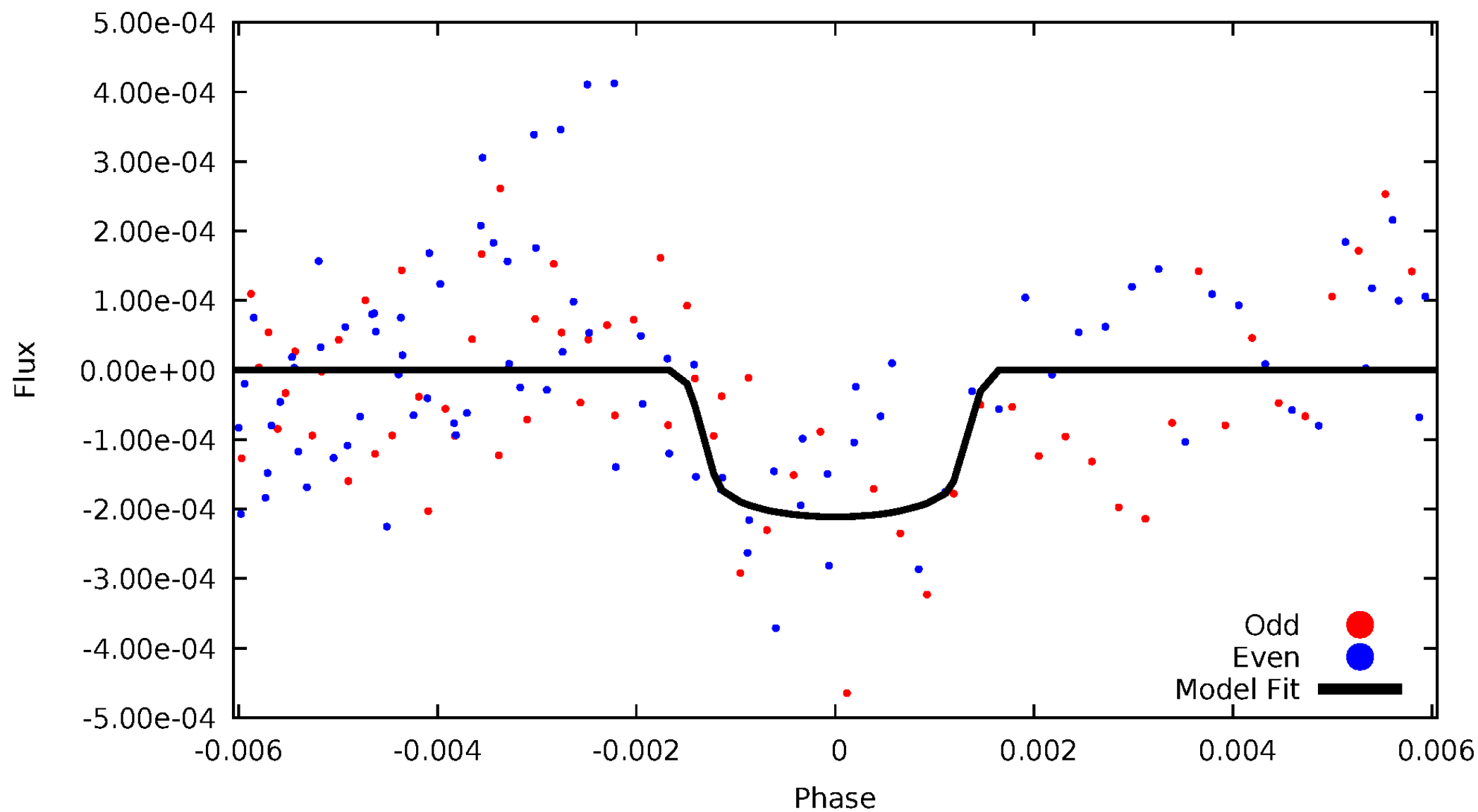


TCE 004566740-03



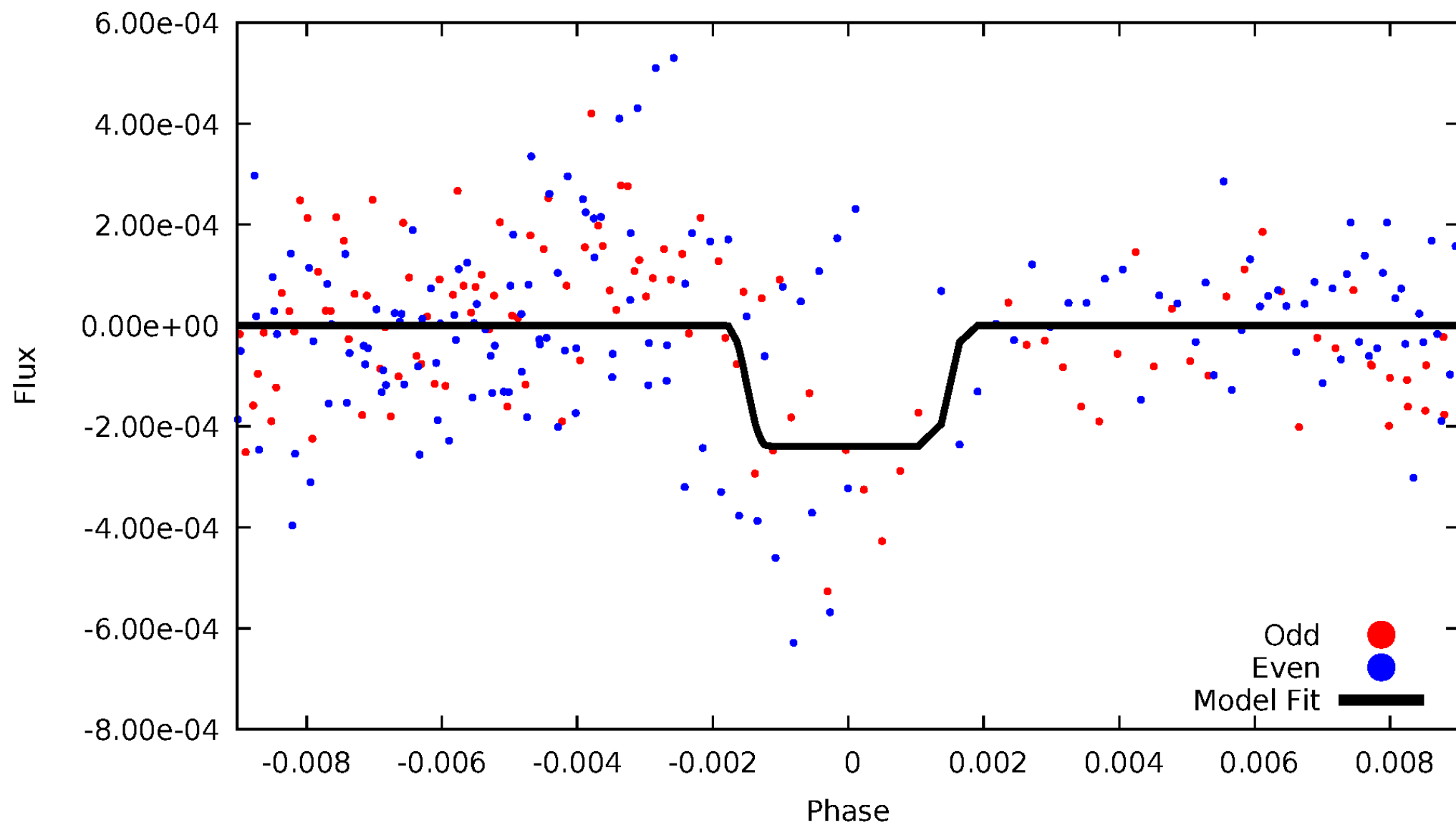
DV Odd/Even

TCE 004566740-03



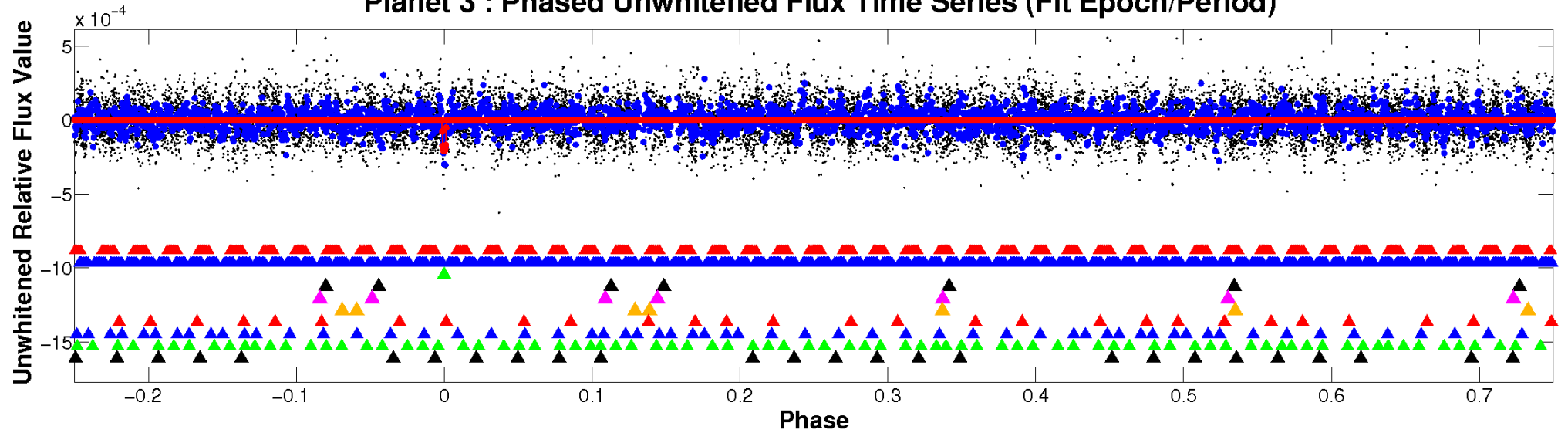
ALT Odd/Even

TCE 004566740-03

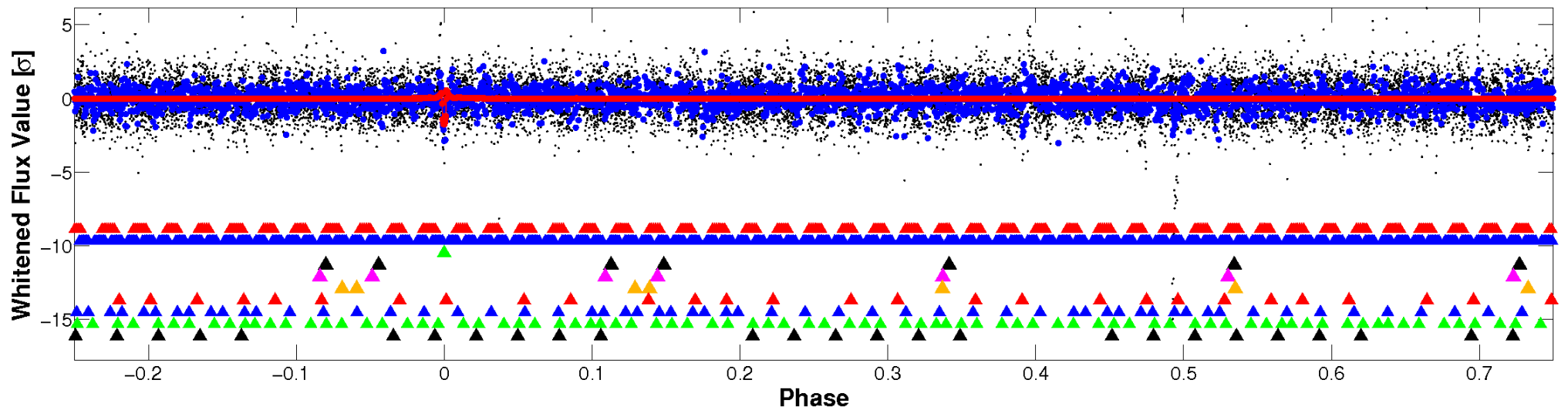


Non-Whitened Vs. Whitened Light Curve

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

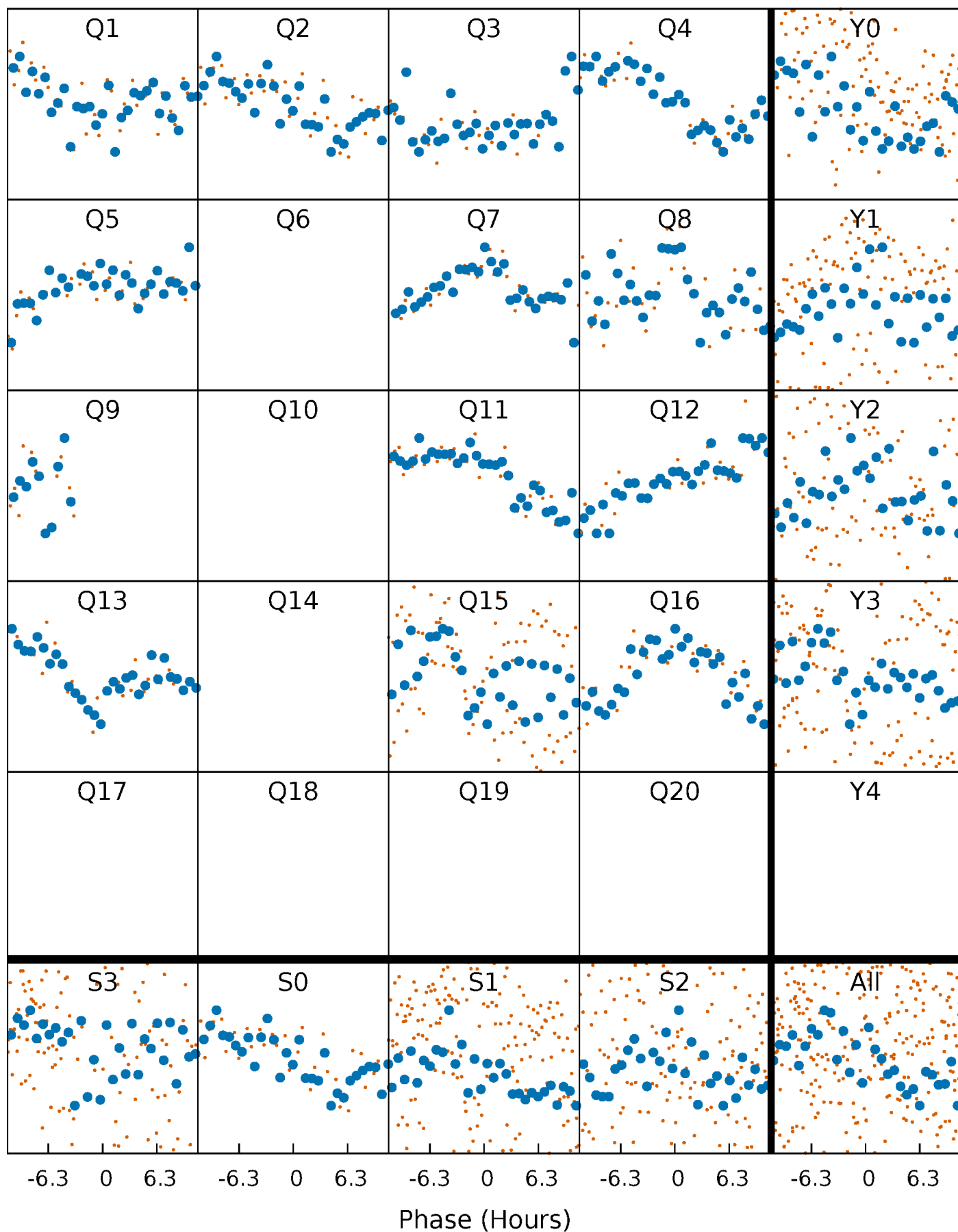


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



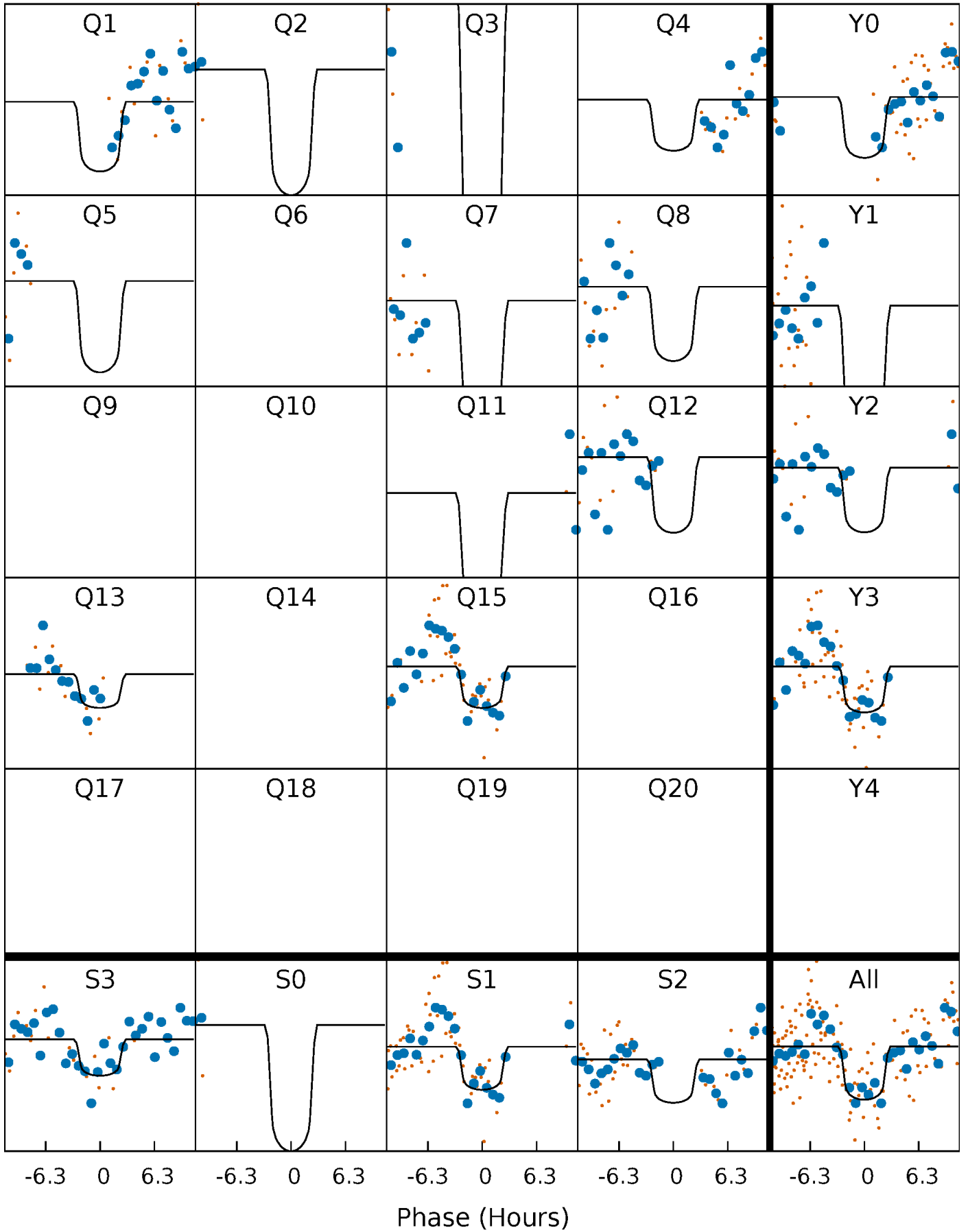
PDC Quarter-Phased Transit Curves

TCE 004566740-03 P= 76.219157 Days $T_0=159.075847$ (BKJD)



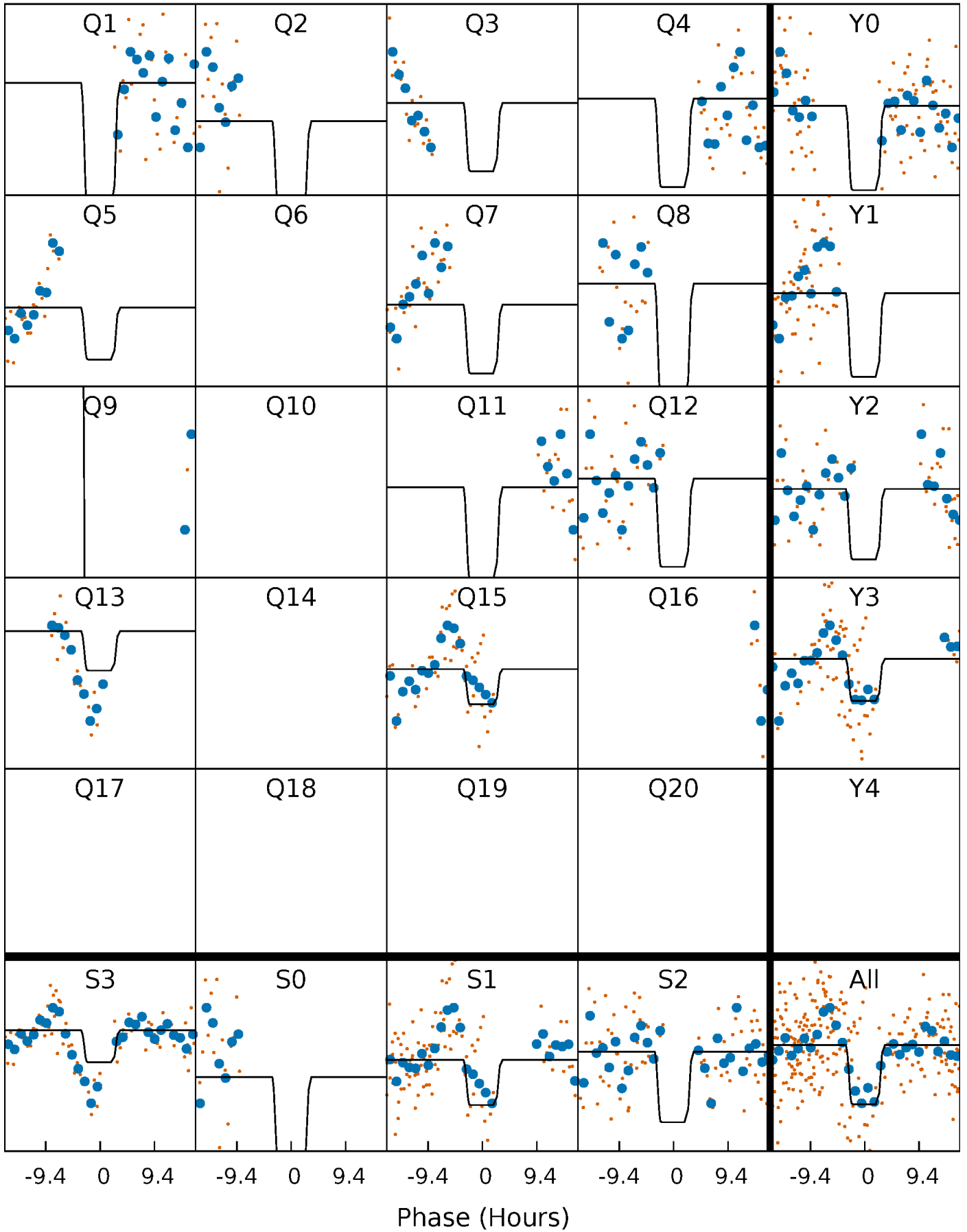
DV Quarter-Phased Transit Curves

TCE 004566740-03 P= 76.219157 Days $T_0=159.075847$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

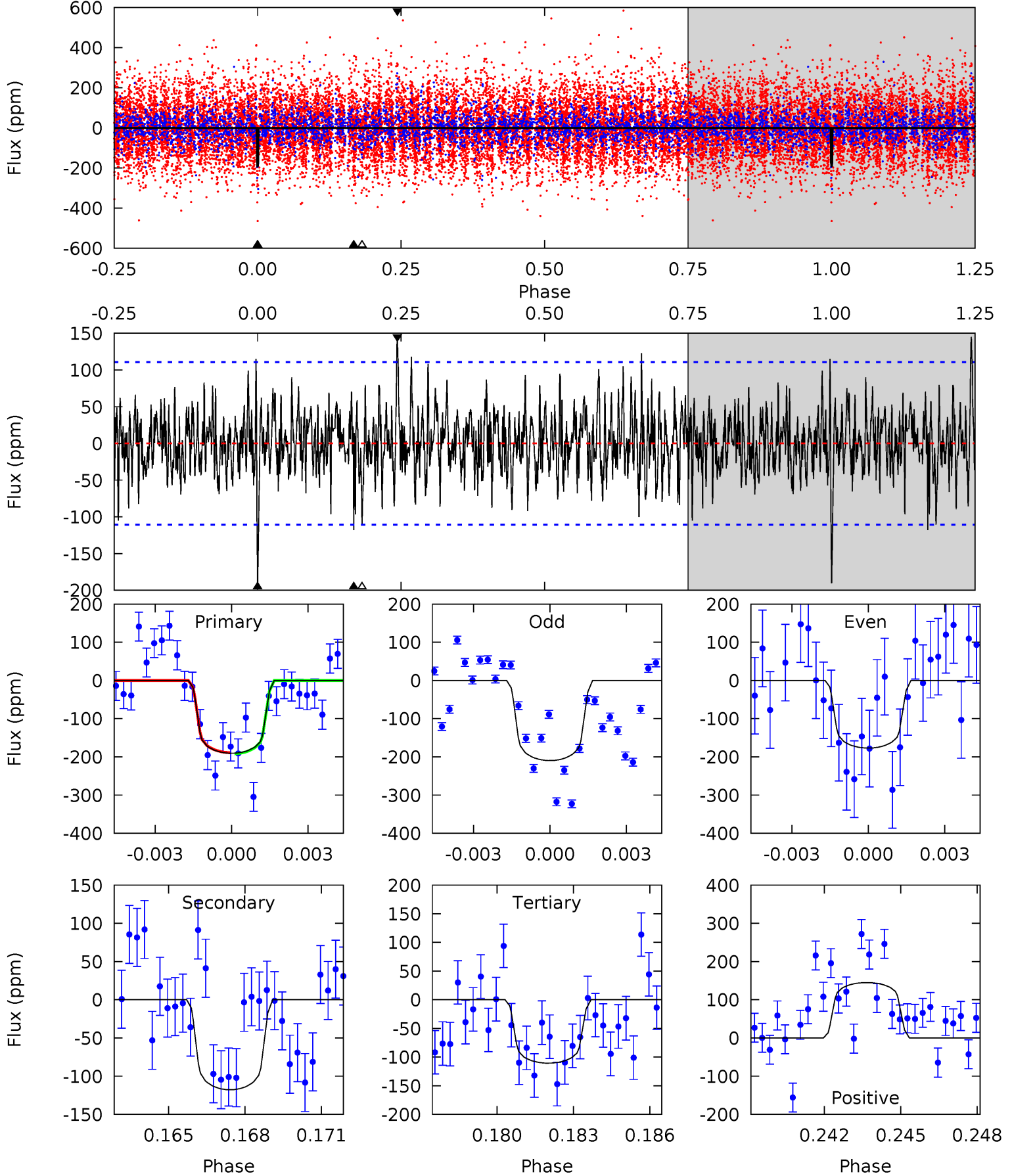
TCE 004566740-03 P= 76.224659 Days $T_0=159.014711$ (BKJD)



DV Model-Shift Uniqueness Test

004566740-03, P = 76.219157 Days, E = 82.856690 Days

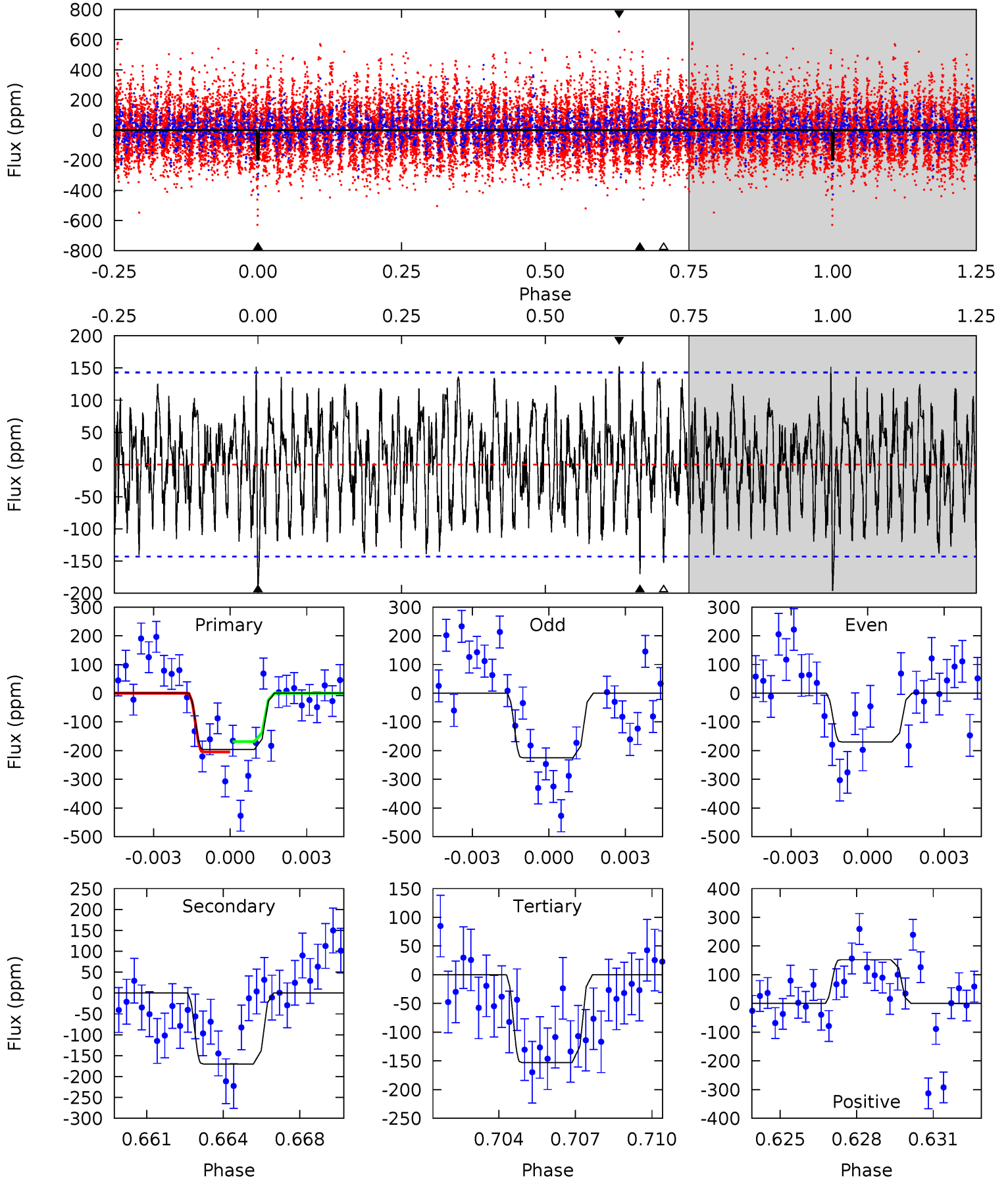
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.04	5.59	5.25	6.88	5.26	2.97	1.68	3.79	2.16	0.34	-1.29	0.76	0.99	0.43	0.07



Alt Model-Shift Uniqueness Test

004566740-03, P = 76.224659 Days, E = 82.790052 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.19	6.22	5.60	5.58	5.24	2.94	2.07	1.59	1.61	0.62	0.64	1.01	-3.32	0.45	0.54



Stellar Parameters For KIC 004566740

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6861^{+190}_{-214}	$3.868^{+0.259}_{-0.111}$	$-0.100^{+0.300}_{-0.300}$	$2.450^{+0.507}_{-0.760}$	$1.614^{+0.194}_{-0.292}$	$0.154^{+0.251}_{-0.052}$
	+3%/-3%	+7%/-3%	+300%/-300%	+21%/-31%	+12%/-18%	+163%/-33%
Source	PHO1	FLK73	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 004566740-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-118 ± 21	$4.00^{+1.08}_{-1.00}$	1012^{+68}_{-84}	5648^{+749}_{-553}	668^{+562}_{-258}
Alt.	-170 ± 27	$3.87^{+1.15}_{-1.00}$	1011^{+64}_{-83}	6259^{+1052}_{-663}	1071^{+867}_{-454}

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 $A_{obs} \gg 1.0$

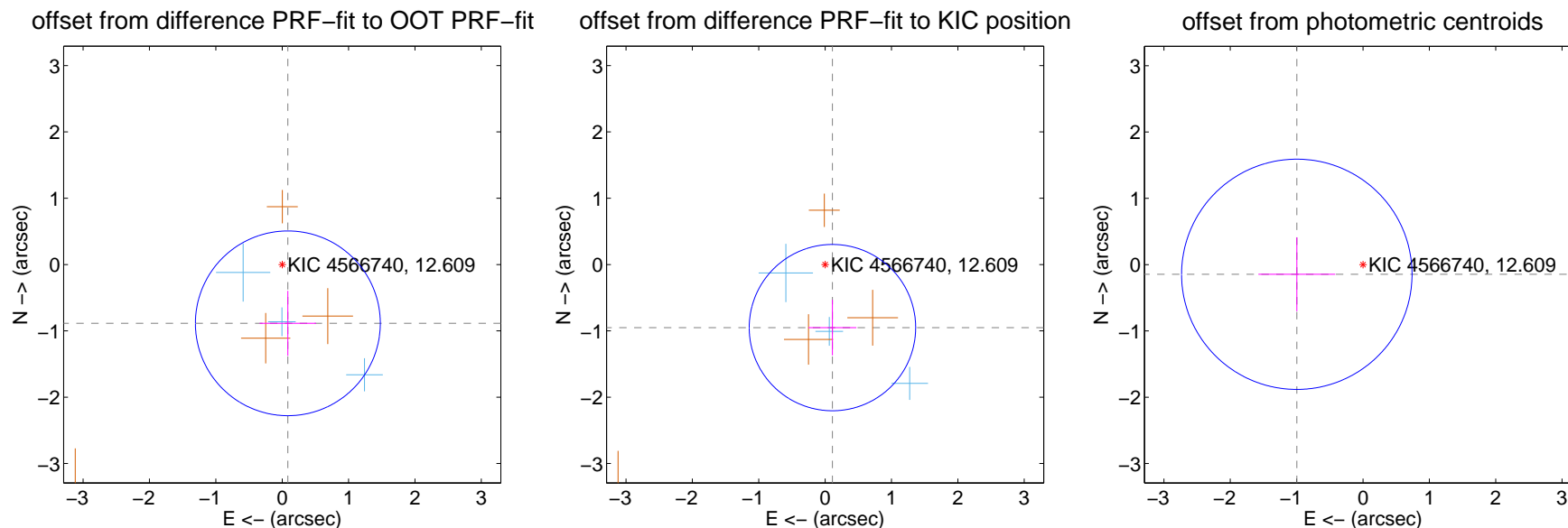
DV Centroid Data

Supplemental centroid analysis for 004566740-03. Kepler magnitude: 12.61. Transit SNR 8.35

There are 3 quarters with good PRF difference image offsets

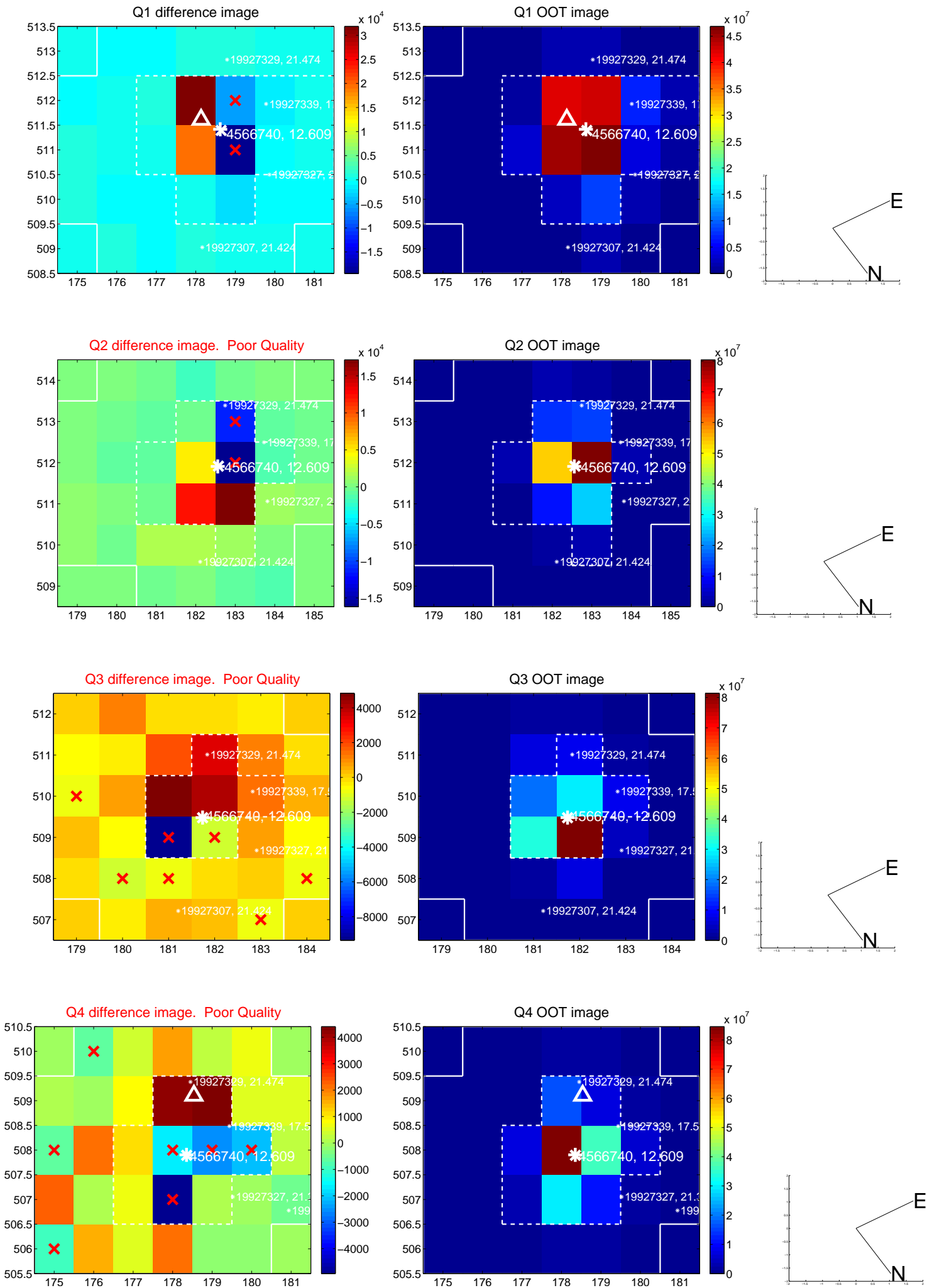
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.890 ± 0.464	1.92	-0.085 ± 0.426	-0.886 ± 0.490
PRF-fit source offset from KIC position	0.957 ± 0.418	2.29	-0.110 ± 0.362	-0.951 ± 0.419
photometric centroid source offset	1.01 ± 0.58	1.74	1.00 ± 0.58	-0.15 ± 0.56

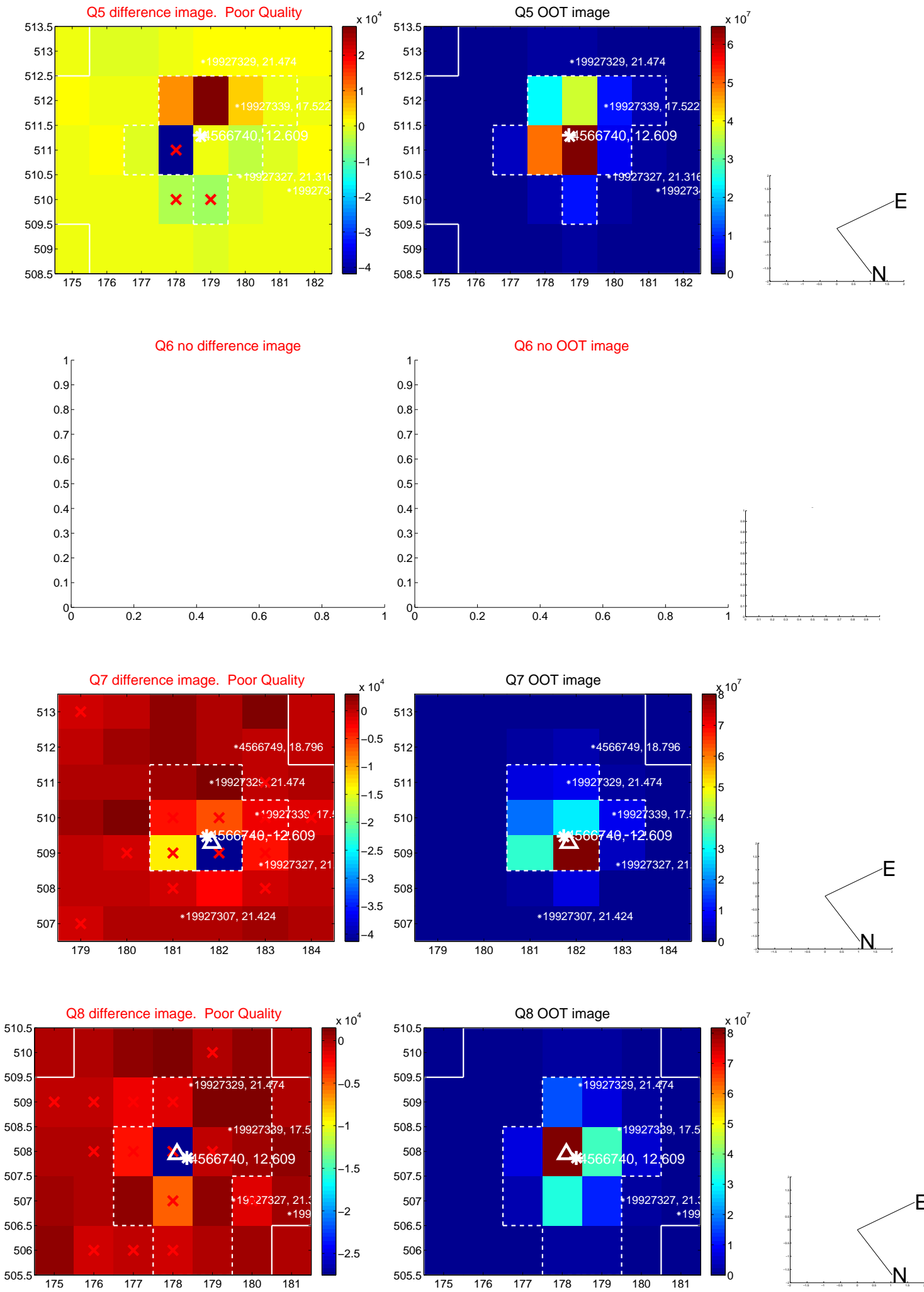


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . 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 ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.

Q9 no difference image



Q9 no OOT image



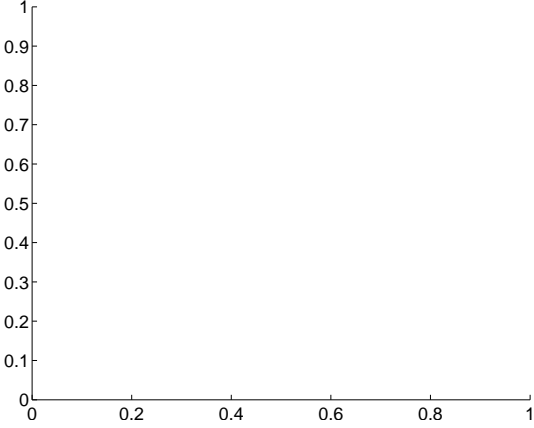
Q10 no difference image



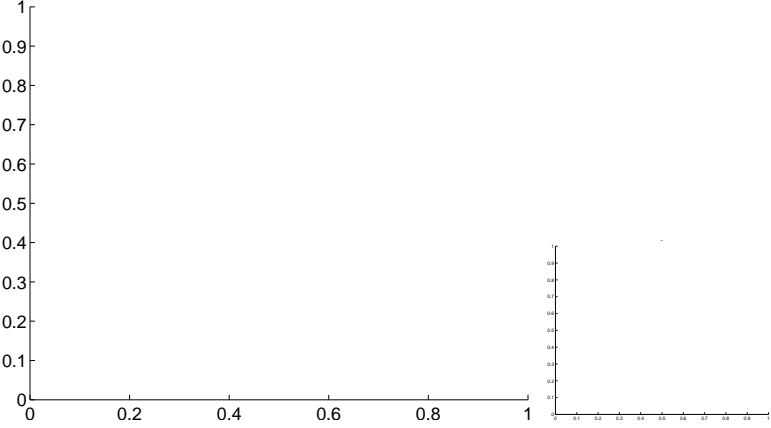
Q10 no OOT image



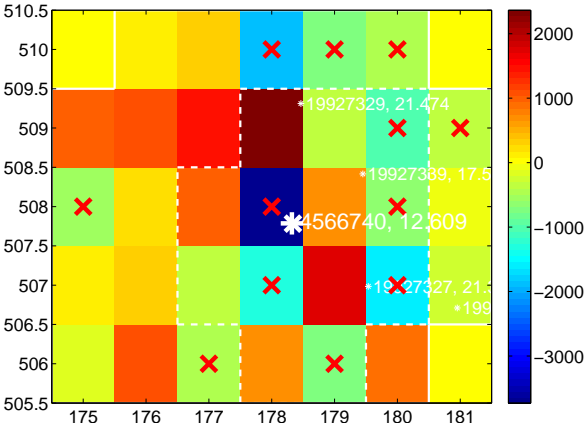
Q11 no difference image



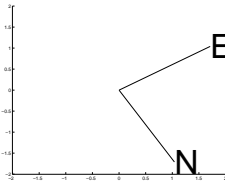
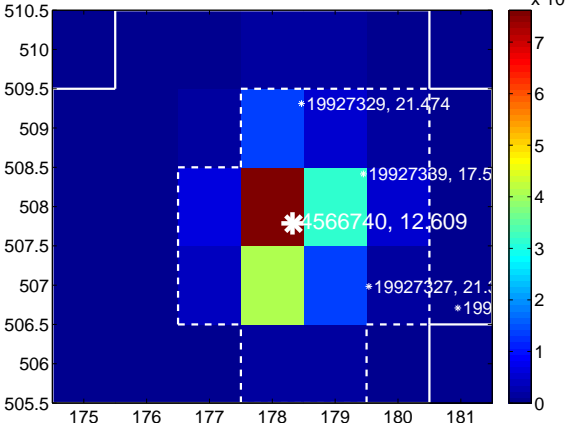
Q11 no OOT image



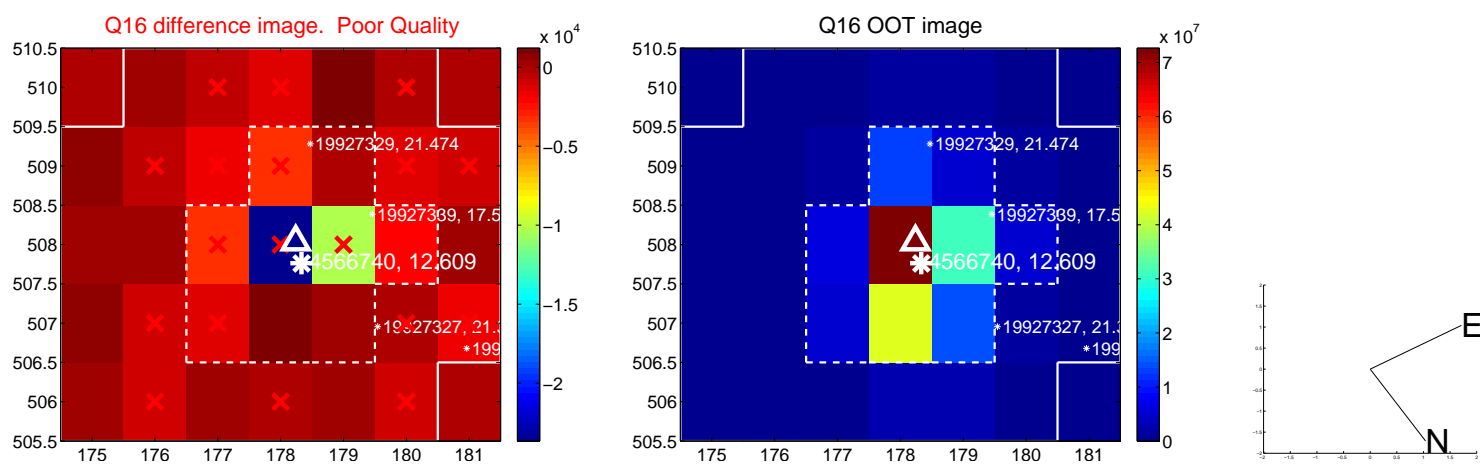
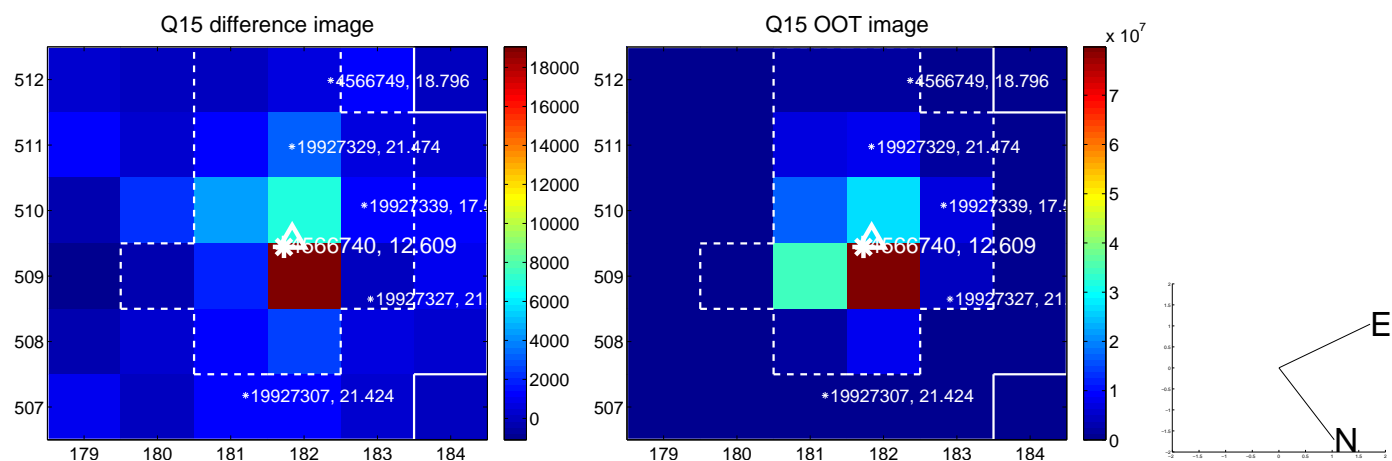
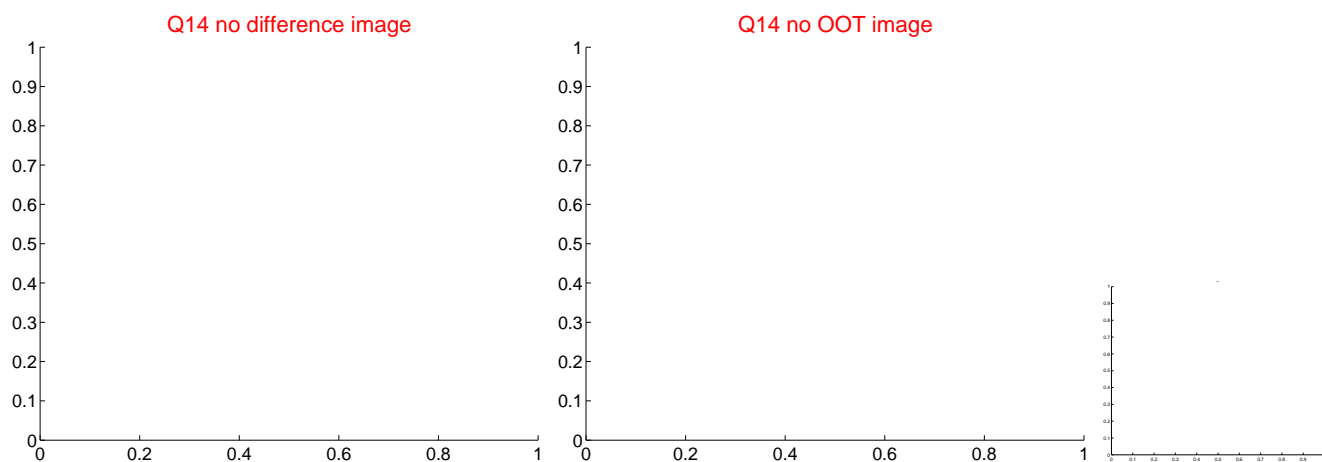
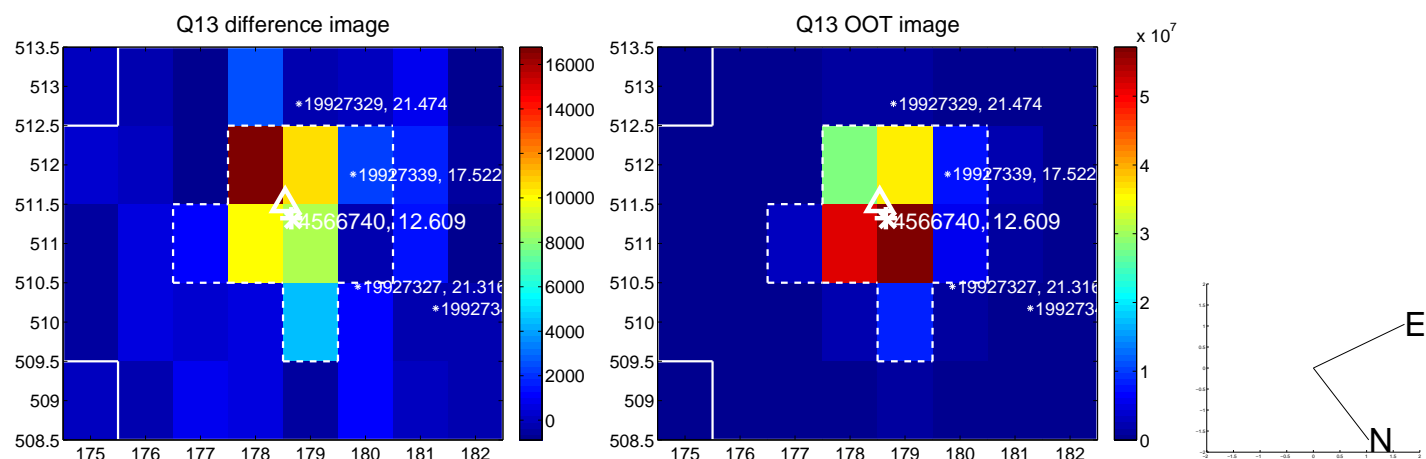
Q12 difference image. Poor Quality



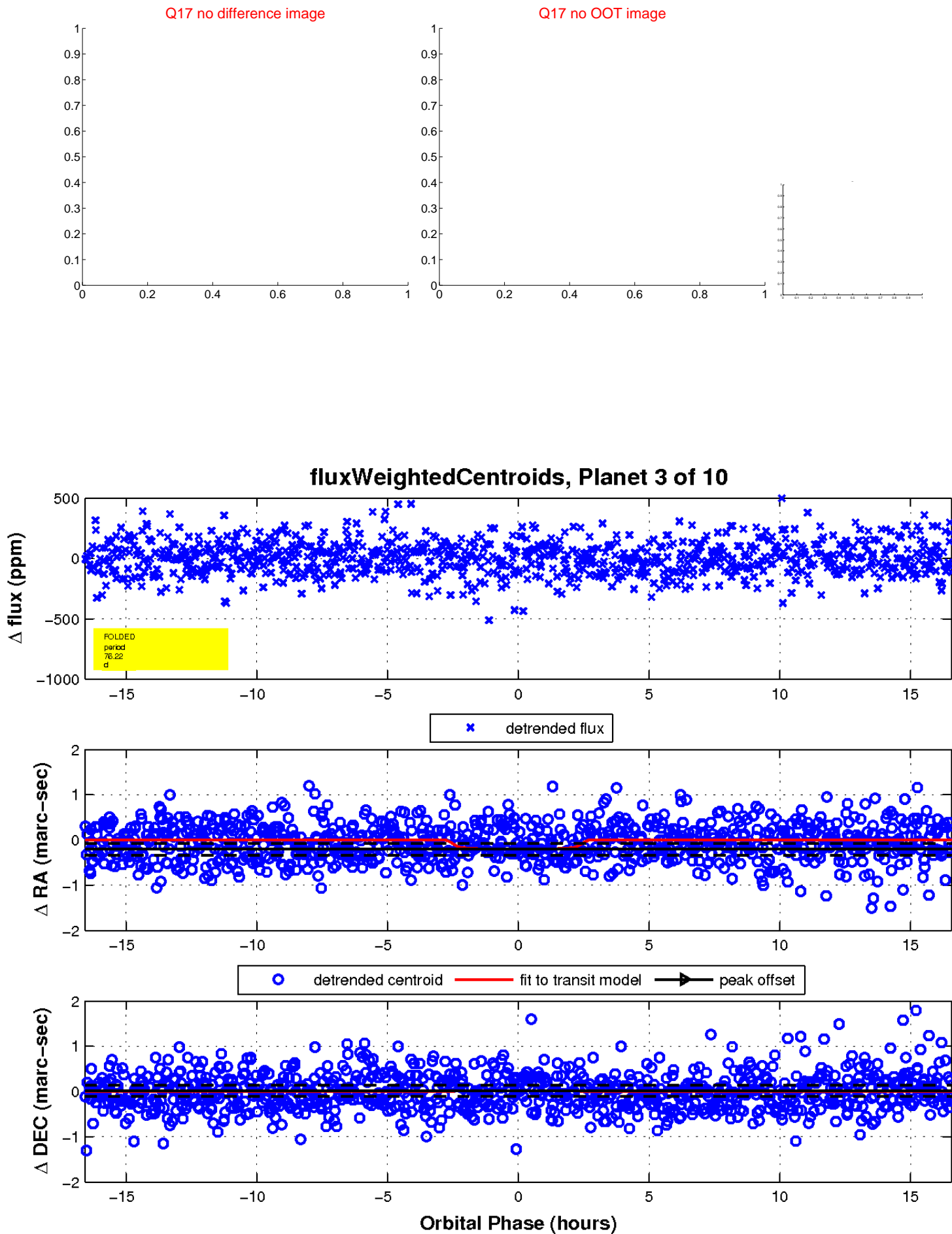
Q12 OOT image



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

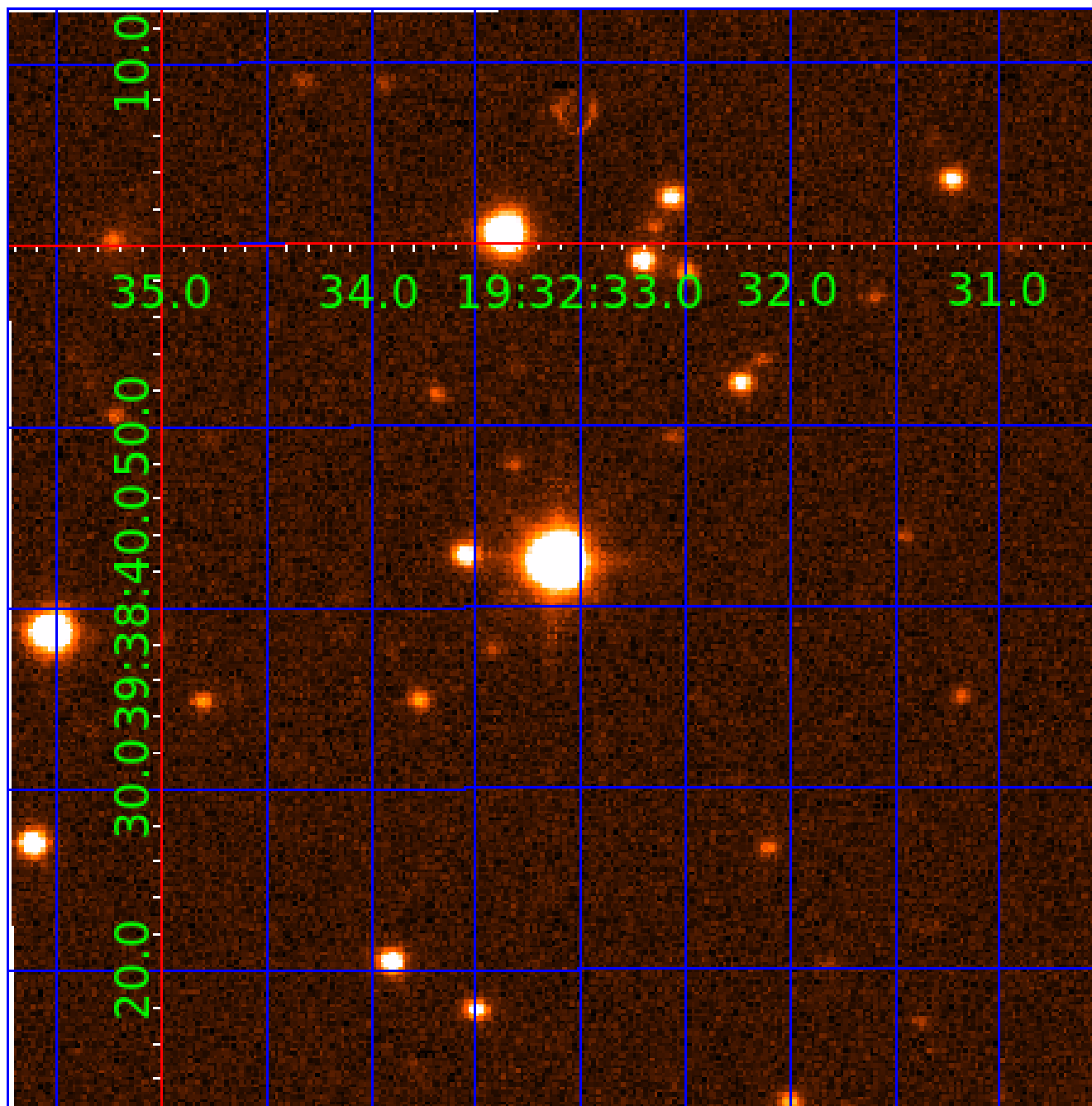


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



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})
004566740-01	OBS	No	4.973094	133.121675	18.1	16.357	9.1	4.6	2.45	6861	1.20	2661.05
004566740-02	OBS	No	2.486397	133.590068	33.4	10.361	10.1	8.9	2.45	6861	1.65	6705.96
004566740-03	OBS	No	76.219157	159.075847	211.1	5.534	9.3	8.3	2.45	6861	4.24	69.90
004566740-04	OBS	No	213.957349	243.898249	99.6	1.137	8.9	3.1	2.45	6861	2.76	17.65
004566740-05	OBS	No	213.953006	243.595682	3.4	0.512	8.9	0.1	2.45	6861	0.48	17.65
004566740-06	OBS	No	213.562988	245.133424	173.9	27.589	8.7	6.2	2.45	6861	3.47	17.70
004566740-07	OBS	No	52.951812	143.943002	200.3	9.663	7.9	7.7	2.45	6861	6.78	113.60
004566740-08	OBS	No	24.829527	148.789351	7.3	4.173	7.6	0.4	2.45	6861	0.71	311.84
004566740-09	OBS	No	17.811016	131.507027	152.8	3.000	7.4	-1.0	2.45	6861	3.06	485.63
004566740-10	OBS	No	57.698870	135.798867	148.7	3.447	7.4	7.8	2.45	6861	3.35	101.31

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004566740-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004566740-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_FEW_DIFFS
004566740-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
004566740-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
004566740-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—SAME_NTL_PERIOD—CENT_FEW_DIFFS
004566740-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
004566740-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004566740-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
004566740-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT—CENT_NOFITS
004566740-10	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

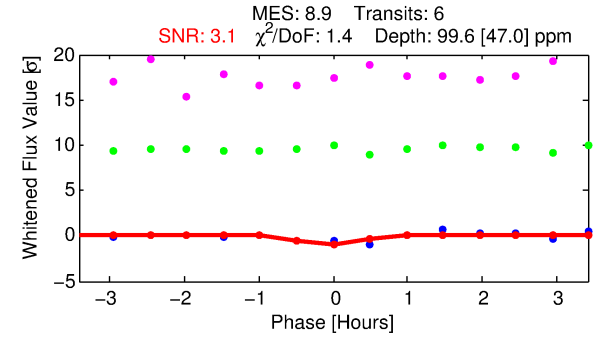
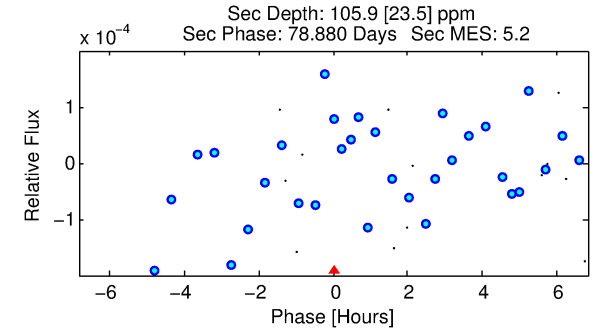
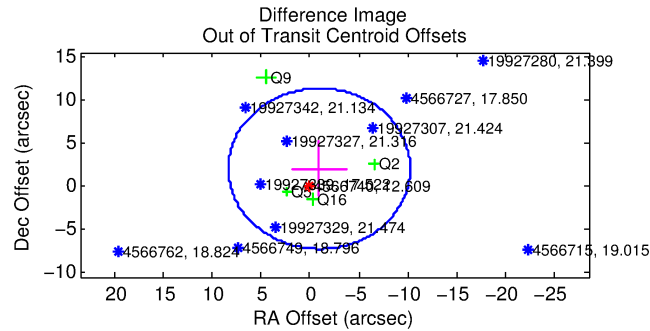
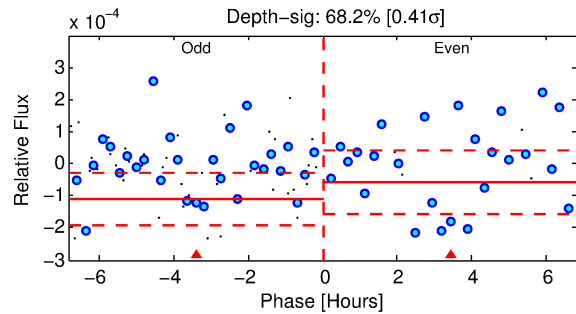
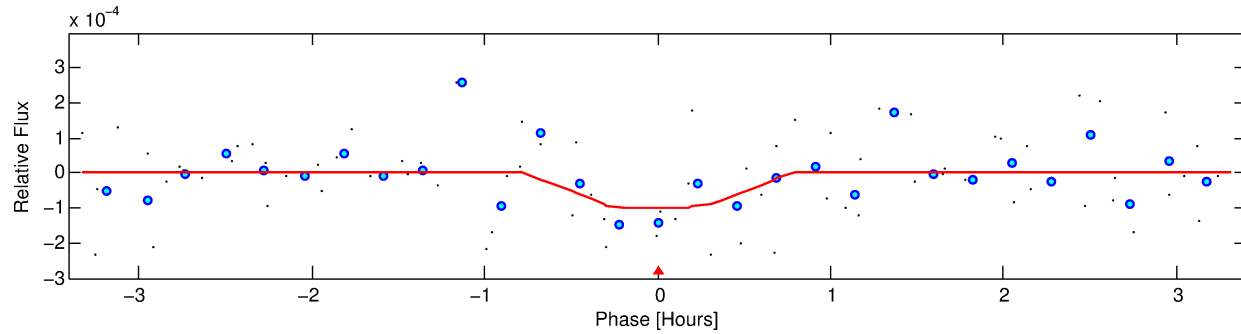
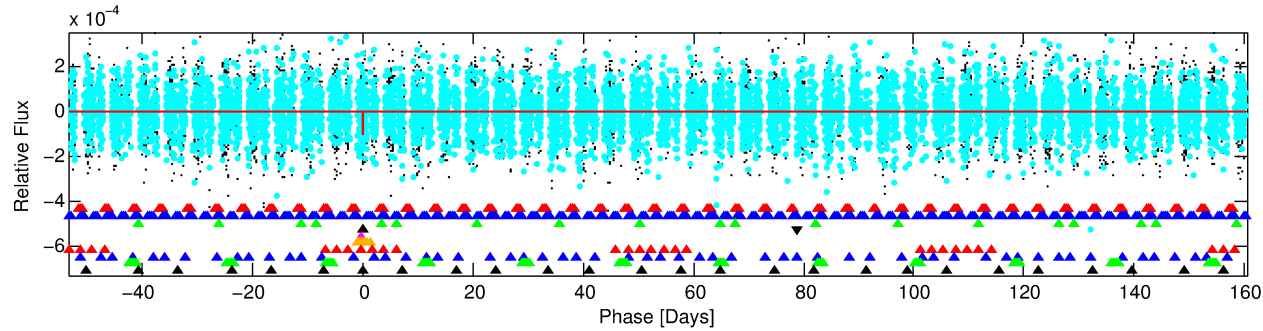
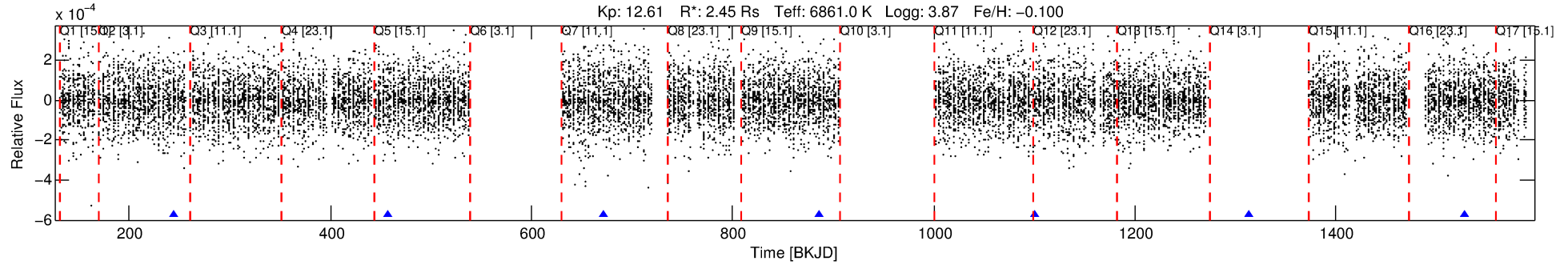
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004566740-04

No Significant Match Found

DV One-Page Summary

KIC: 4566740 Candidate: 4 of 10 Period: 213.957 d



DV Fit Results:

Period = 213.95735 [0.00374] d
Epoch = 243.8982 [0.0116] BKJD
Rp/R* = 0.0103 [0.0164]
a/R* = 806.60 [7405.54]
b = 0.84 [3.26]
Seff = 17.65 [8.21]
Teq = 523 [61] K
Rp = 2.76 [4.47] Re
a = 0.8217 [0.2357] AU
Ag = 5165.03 [16617.73] [0.31 σ]
Teffp = 6851 [5461] K [1.16 σ]

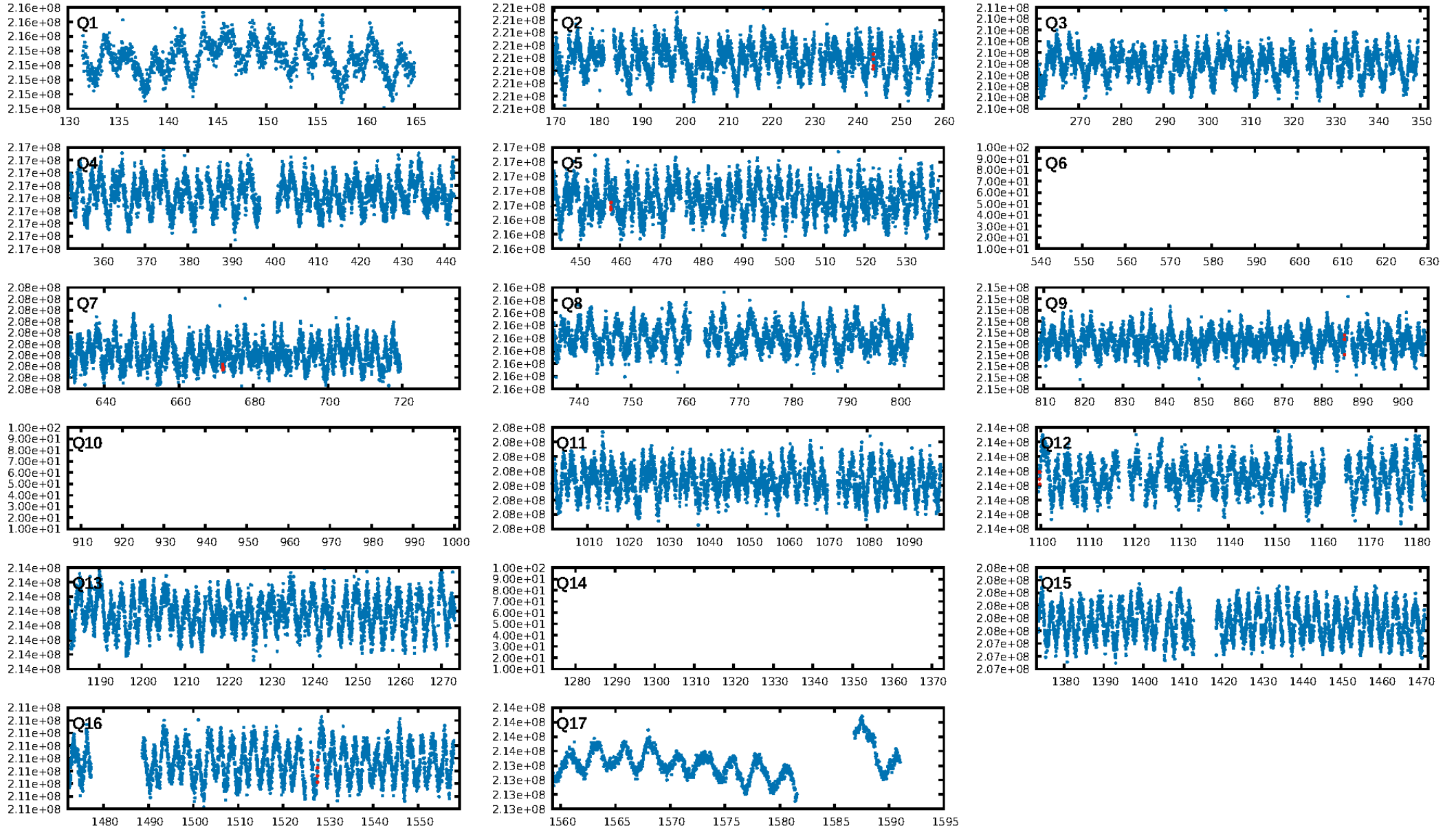
DV Diagnostic Results:

ShortPeriod-sig: 6.7% [0.08 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 65.3%
ModelChiSquareGof-sig: 71.8%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [6/6]
GhostDiagnostic-chr: 13.12
Centroid-sig: 48.8%
Centroid-so: 2.339 arcsec [0.63 σ]
OotOffset-rm: 2.238 arcsec [0.72 σ]
KicOffset-rm: 2.199 arcsec [0.72 σ]
OotOffset-st: 1/0/1/2 [4]
KicOffset-st: 1/0/1/2 [4]
DiffImageQuality-fgm: 0.25 [1/4]
DiffImageOverlap-fno: 0.60 [3/5]

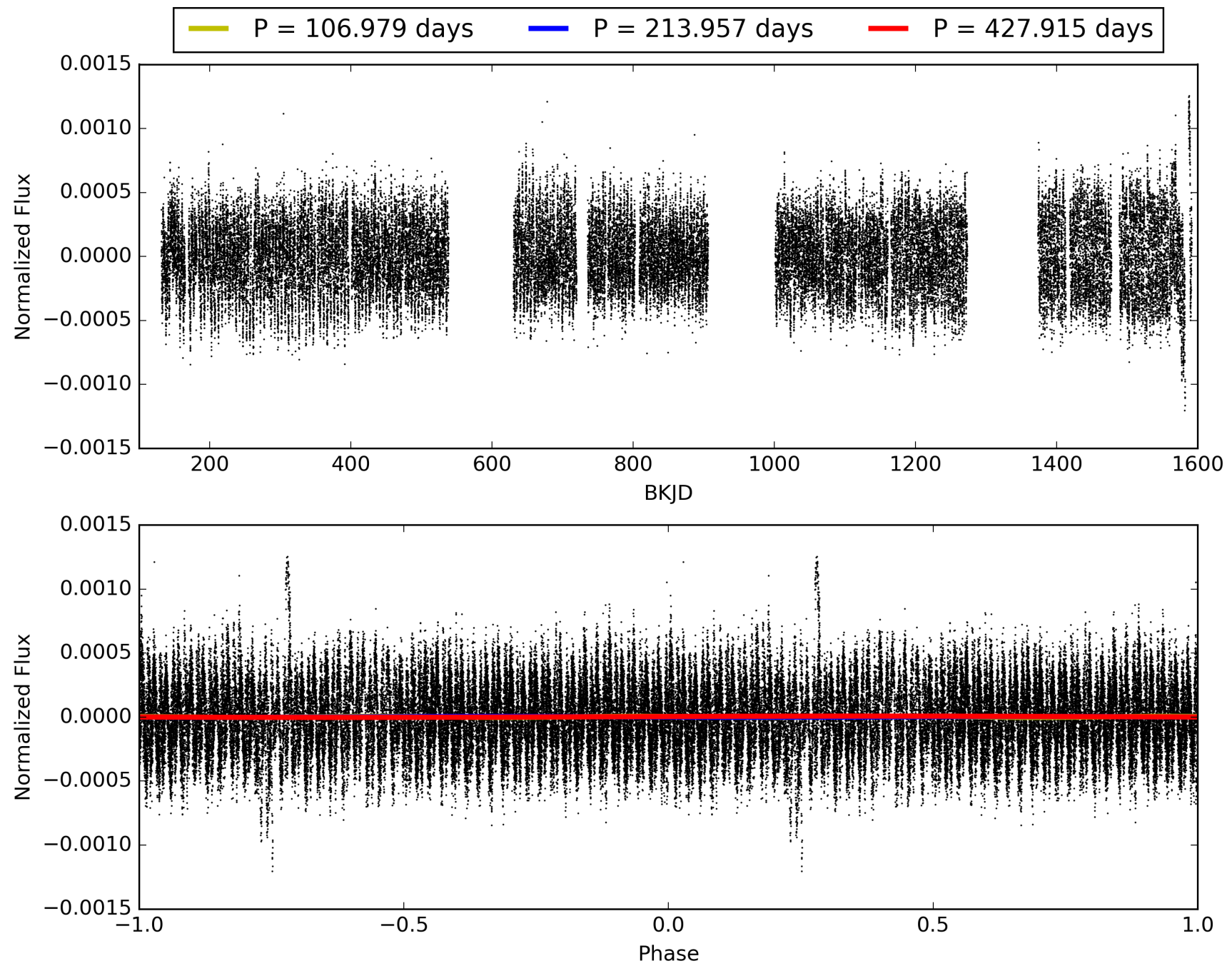
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 06:43:40 Z

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

TCE 004566740-04, PDC Light Curves

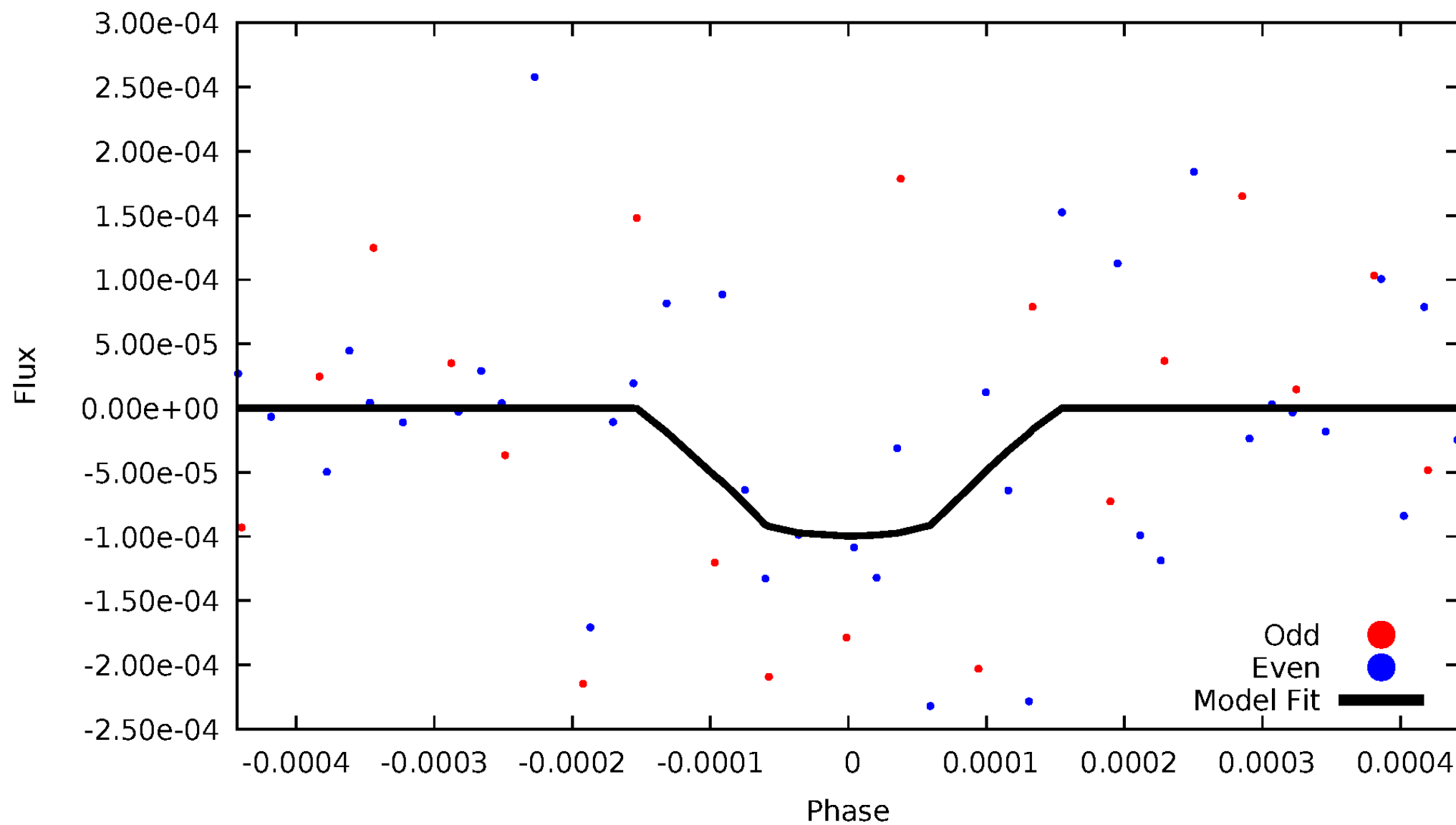


TCE 004566740-04



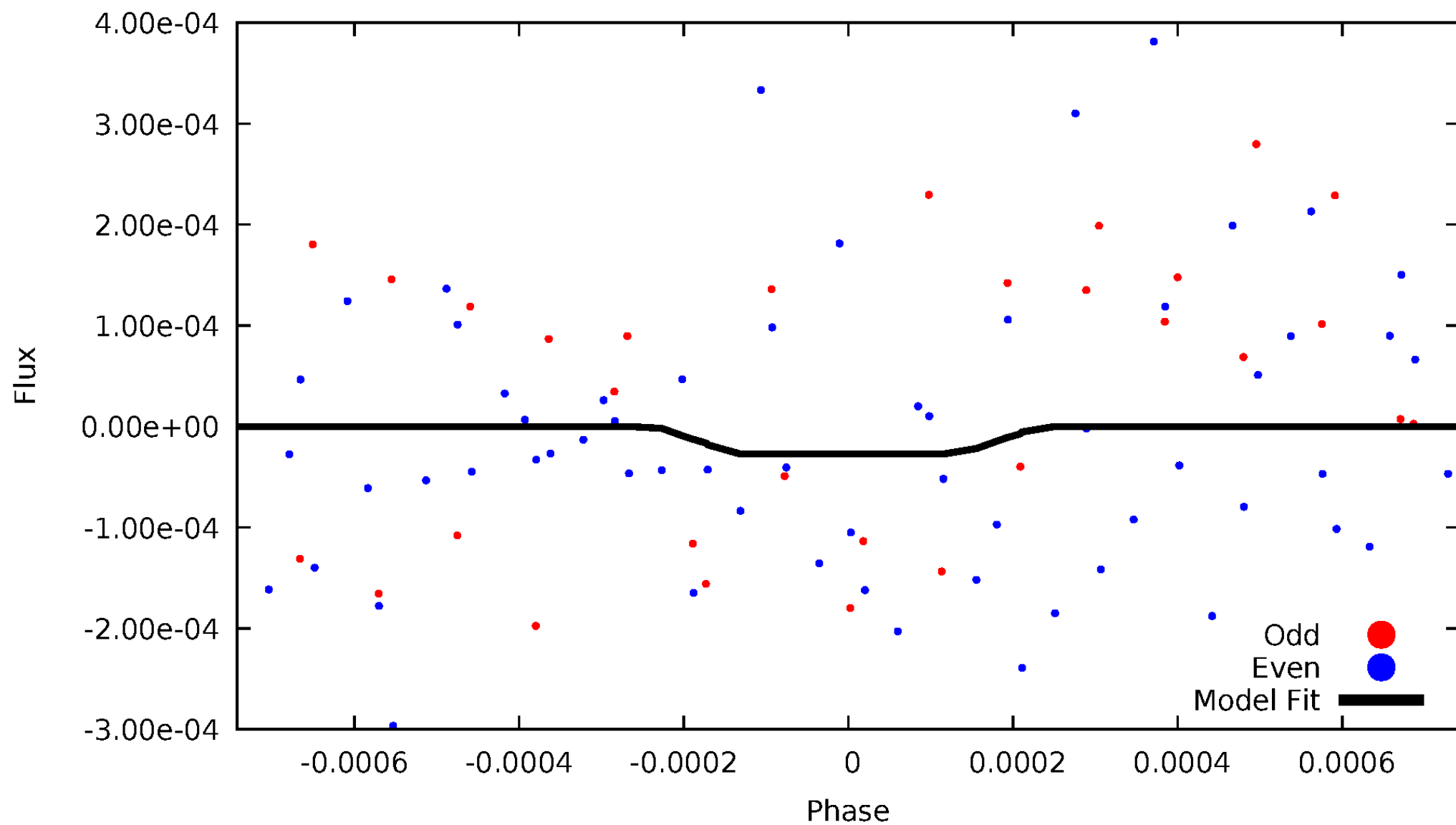
DV Odd/Even

TCE 004566740-04



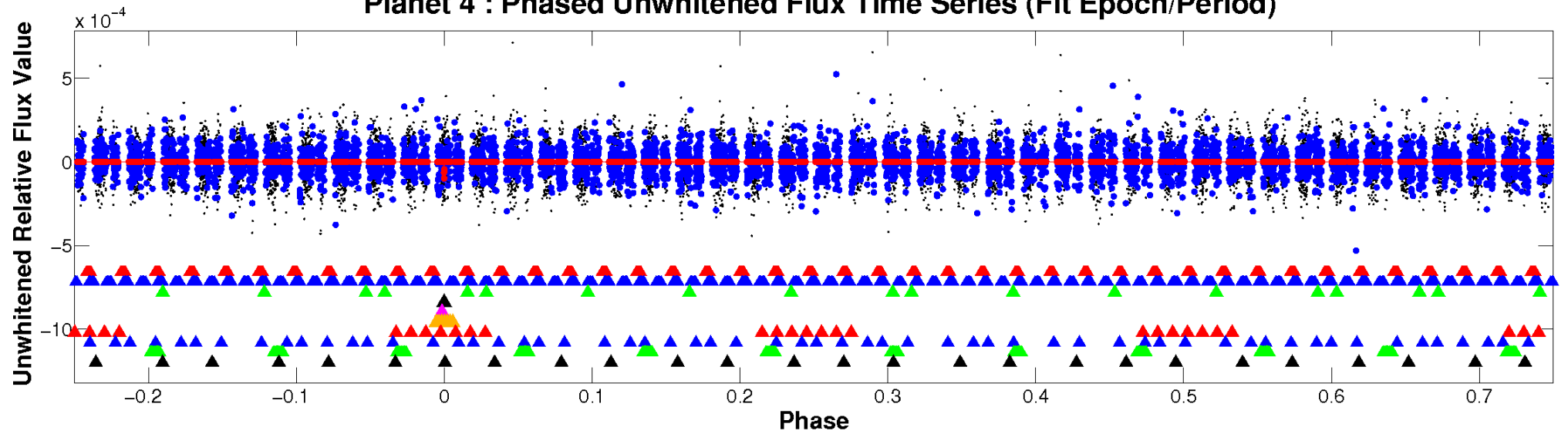
ALT Odd/Even

TCE 004566740-04

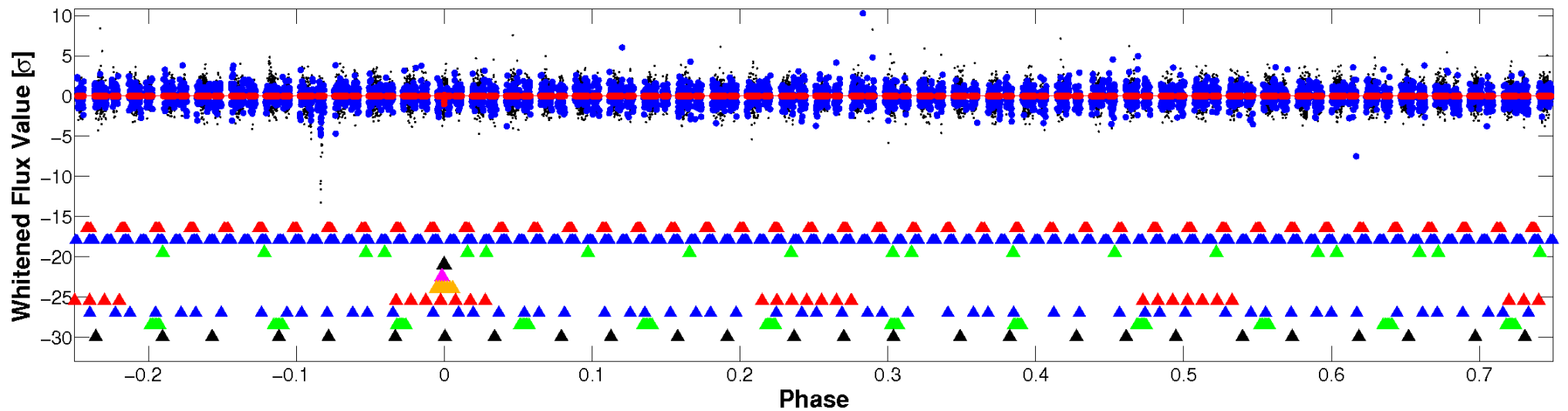


Non-Whitened Vs. Whitened Light Curve

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

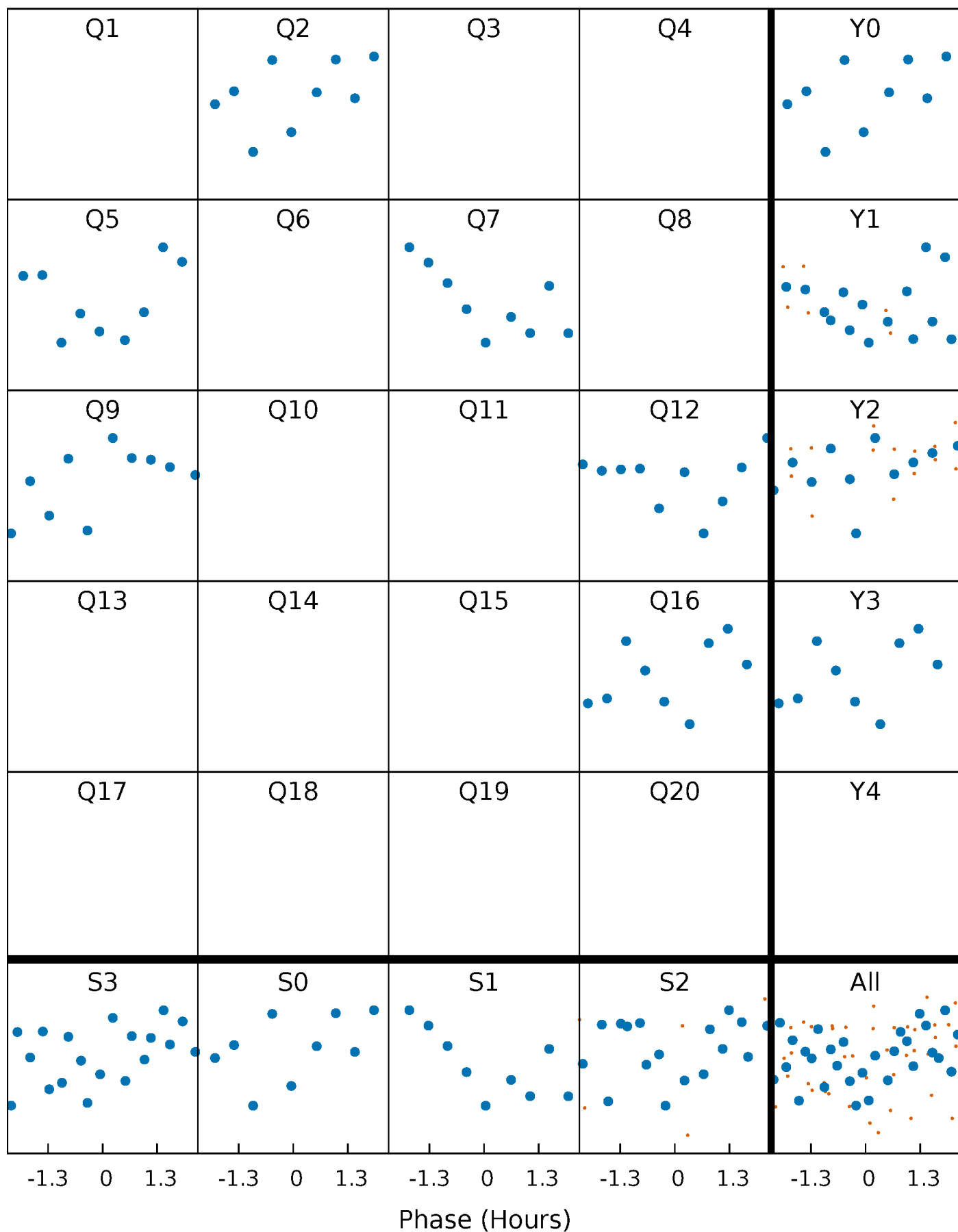


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



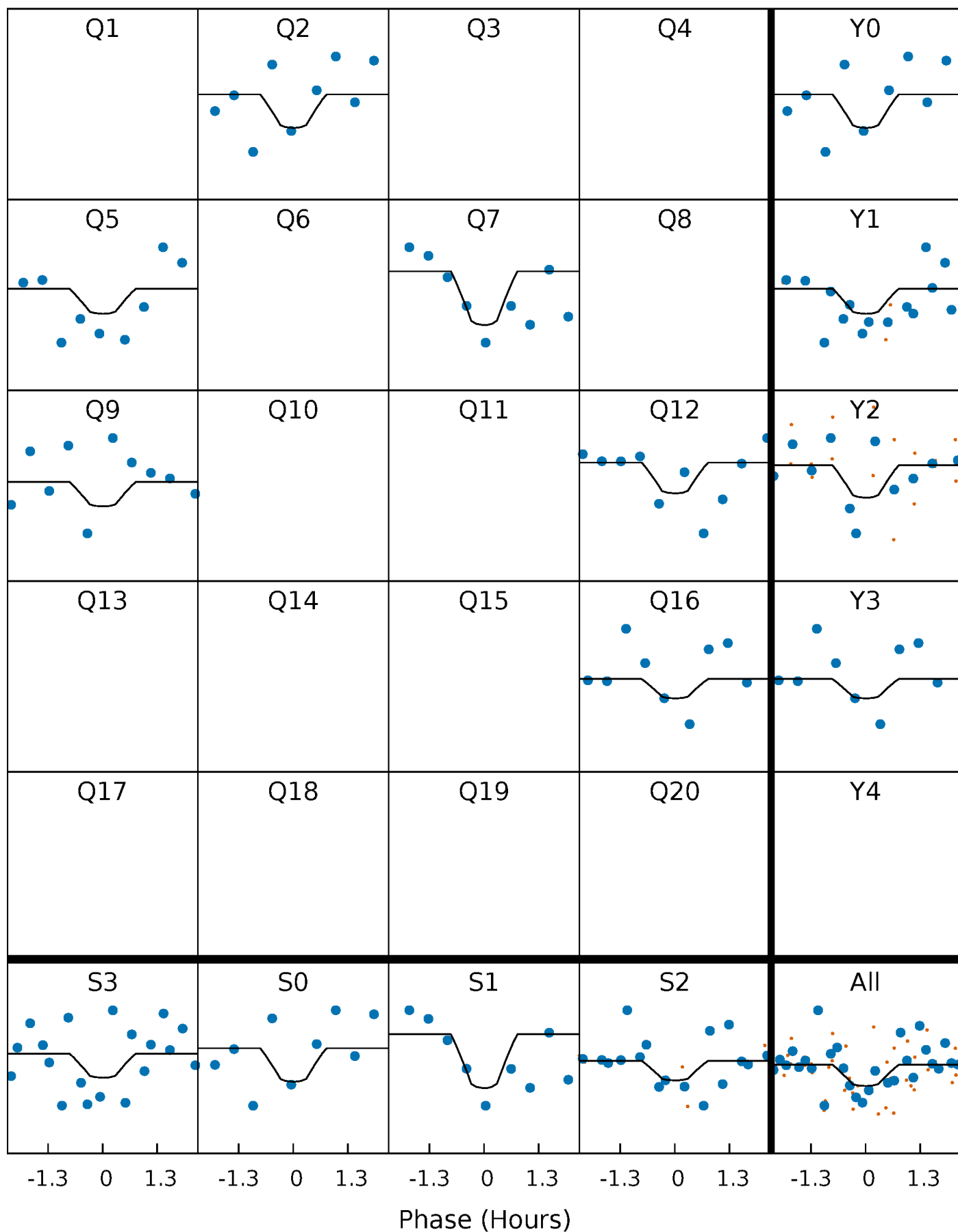
PDC Quarter-Phased Transit Curves

TCE 004566740-04 P=213.957349 Days $T_0=243.898249$ (BKJD)



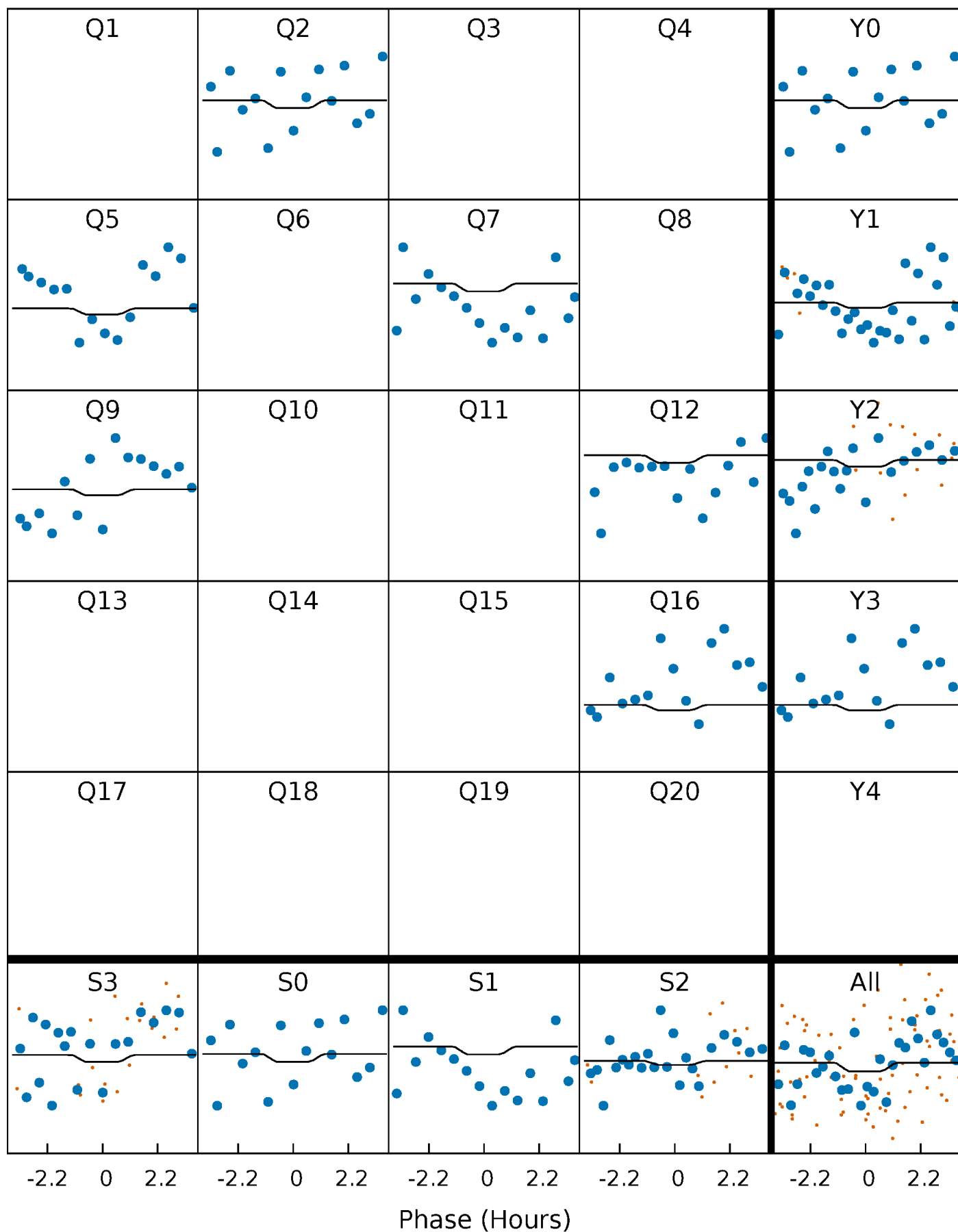
DV Quarter-Phased Transit Curves

TCE 004566740-04 $P=213.957349$ Days $T_0=243.898249$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

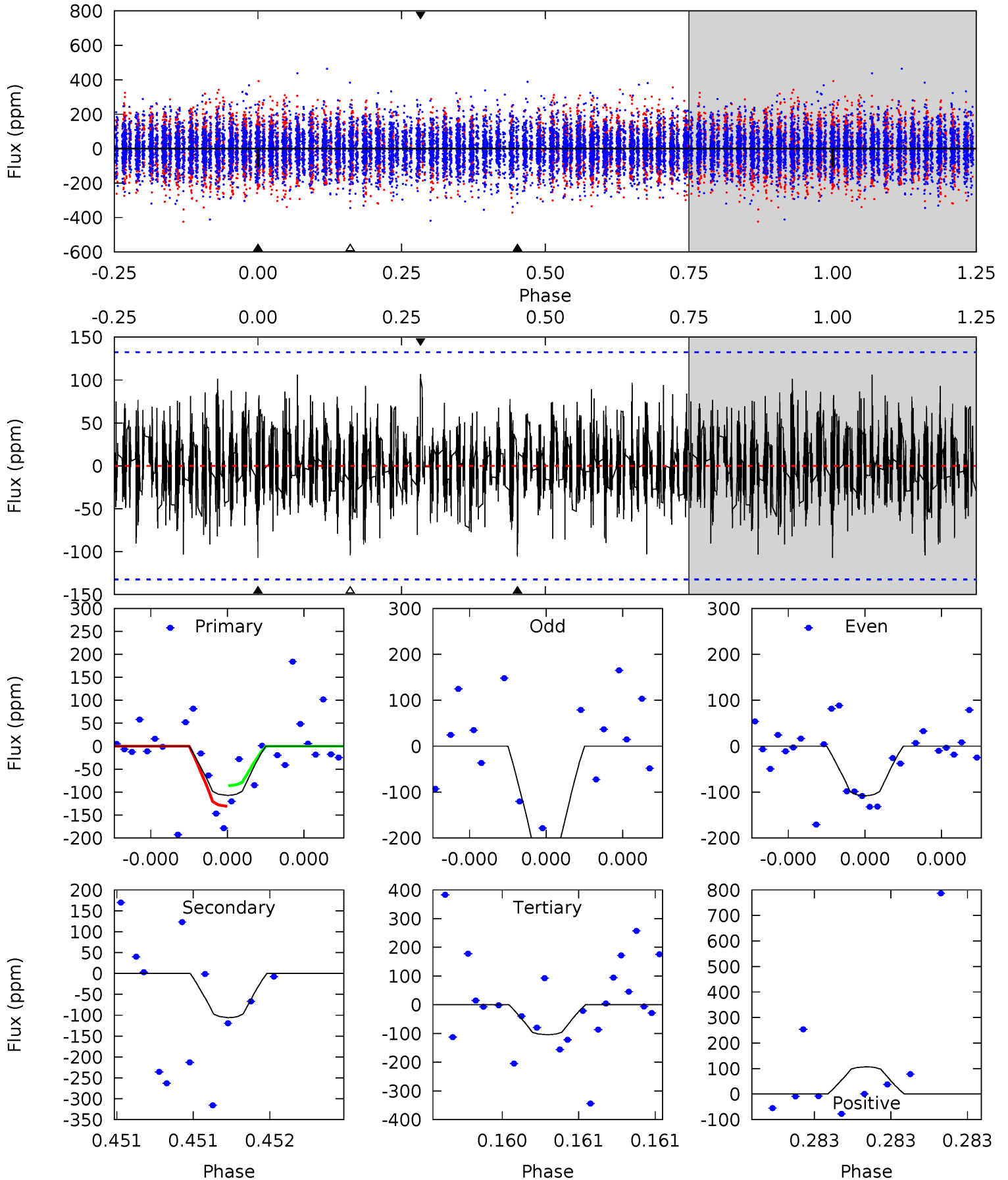
TCE 004566740-04 P=213.952996 Days $T_0=243.898496$ (BKJD)



DV Model-Shift Uniqueness Test

004566740-04, P = 213.957349 Days, E = 29.940900 Days

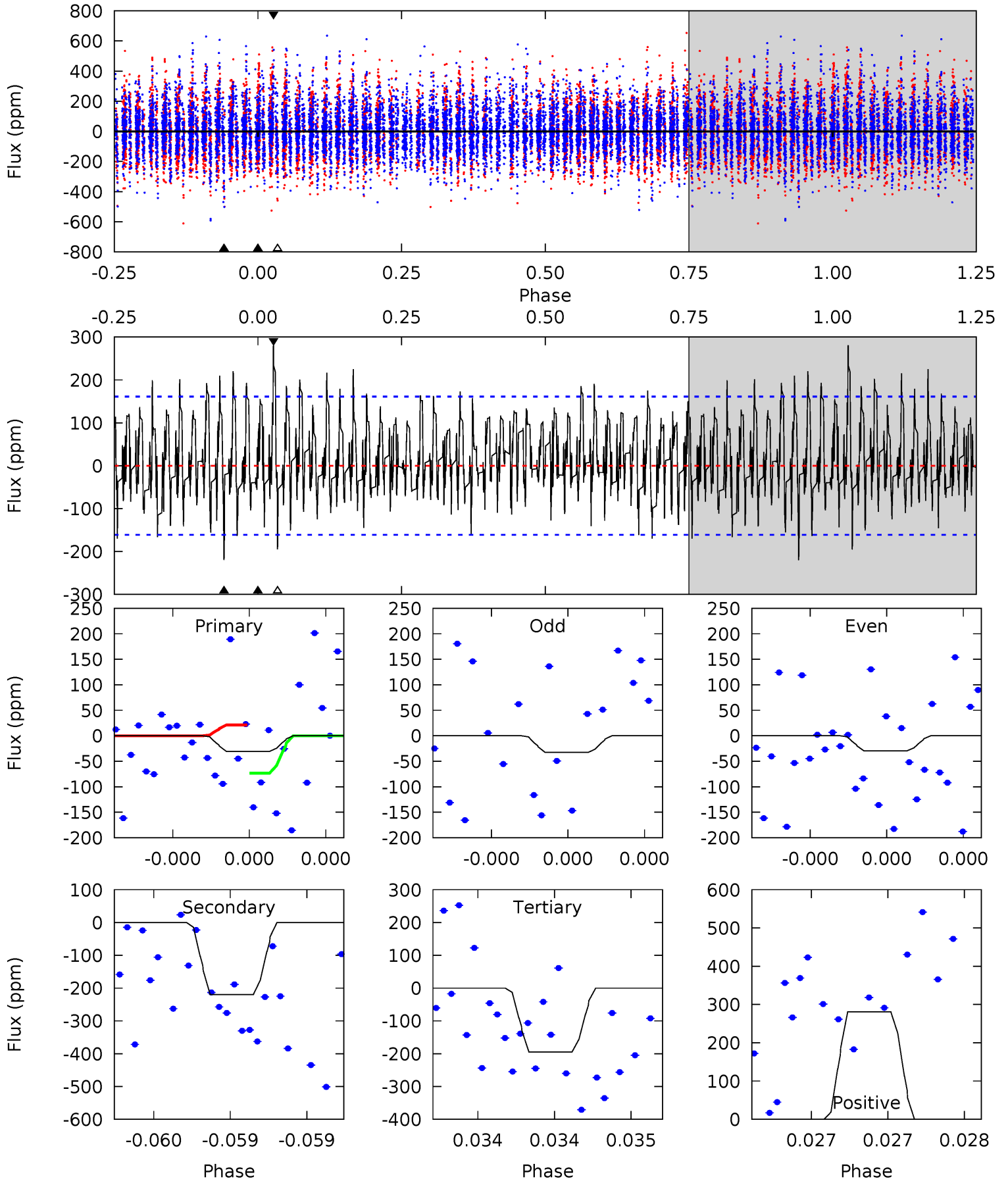
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.58	4.52	4.46	4.57	5.66	3.61	1.25	0.12	0.01	0.07	-0.04	2.09	0.95	0.50	0.96



Alt Model-Shift Uniqueness Test

004566740-04, P = 213.952996 Days, E = 29.945500 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.06	7.64	6.76	9.75	5.60	3.52	2.27	-5.70	-8.69	0.87	-2.12	0.05	0.55	0.56	0.90



Stellar Parameters For KIC 004566740

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6861^{+190}_{-214}	$3.868^{+0.259}_{-0.111}$	$-0.100^{+0.300}_{-0.300}$	$2.450^{+0.507}_{-0.760}$	$1.614^{+0.194}_{-0.292}$	$0.154^{+0.251}_{-0.052}$
	+3%/-3%	+7%/-3%	+300%/-300%	+21%/-31%	+12%/-18%	+163%/-33%
Source	PHO1	FLK73	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 004566740-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-106 ± 23	$3.94^{+3.69}_{-2.54}$	718^{+46}_{-57}	5497^{+4500}_{-1293}	2496^{+15843}_{-1864}
Alt.	-220 ± 29	$3.32^{+3.53}_{-2.34}$	719^{+46}_{-62}	7385^{+11537}_{-2288}	7355^{+71124}_{-5679}

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 $A_{obs} \gg 1.0$

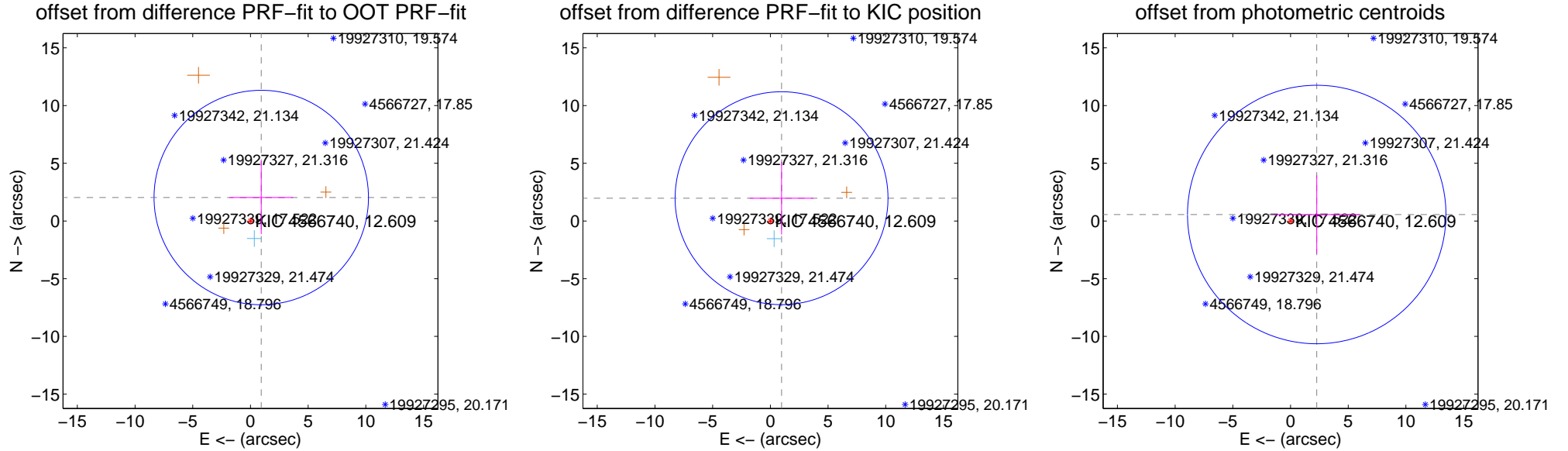
DV Centroid Data

Supplemental centroid analysis for 004566740-04. Kepler magnitude: 12.61. Transit SNR 3.12

There are 1 quarters with good PRF difference image offsets

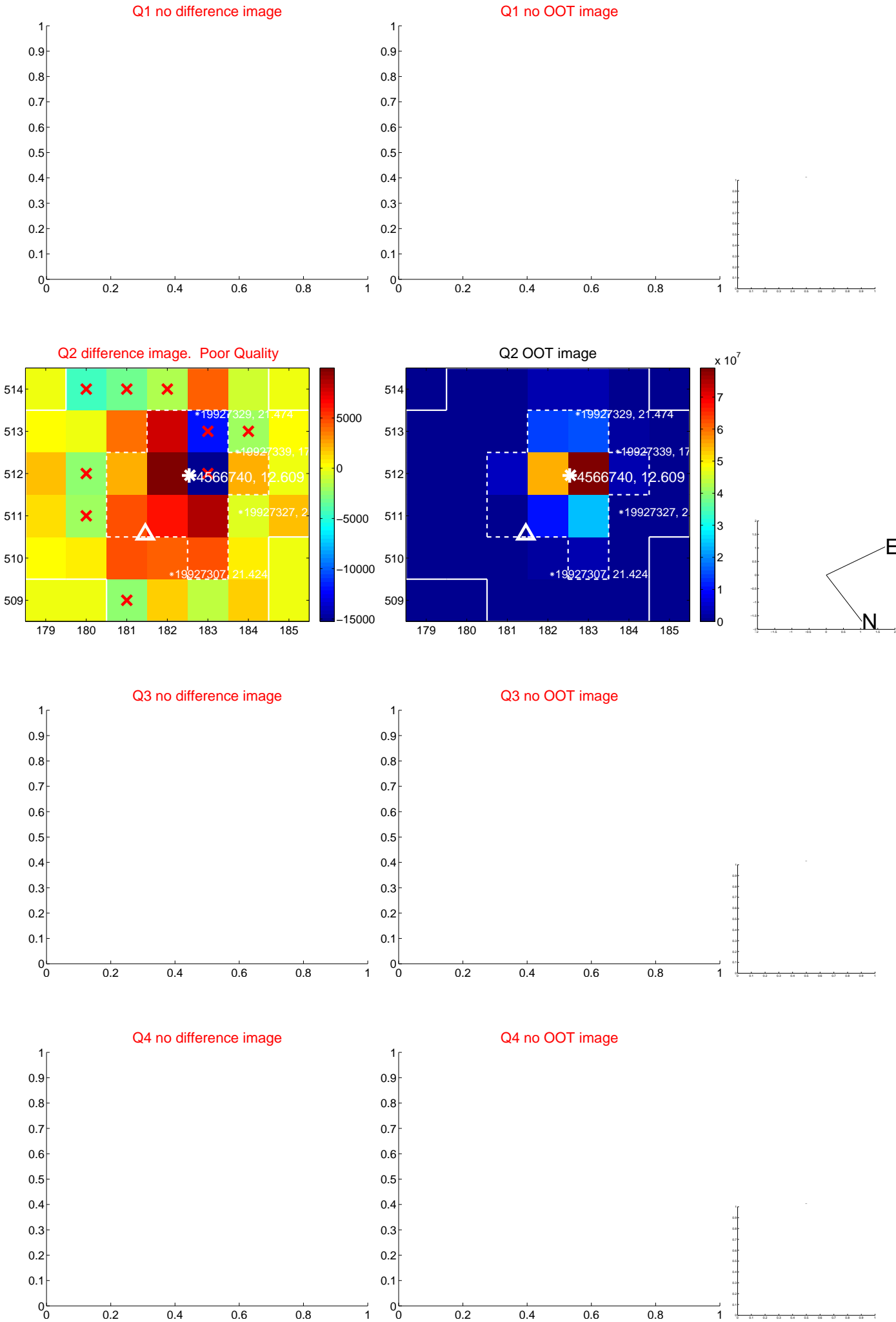
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.238 ± 3.097	0.72	-0.936 ± 2.756	2.033 ± 3.164
PRF-fit source offset from KIC position	2.199 ± 3.075	0.72	-0.971 ± 2.771	1.973 ± 3.144
photometric centroid source offset	2.34 ± 3.73	0.63	-2.27 ± 3.75	0.56 ± 3.39

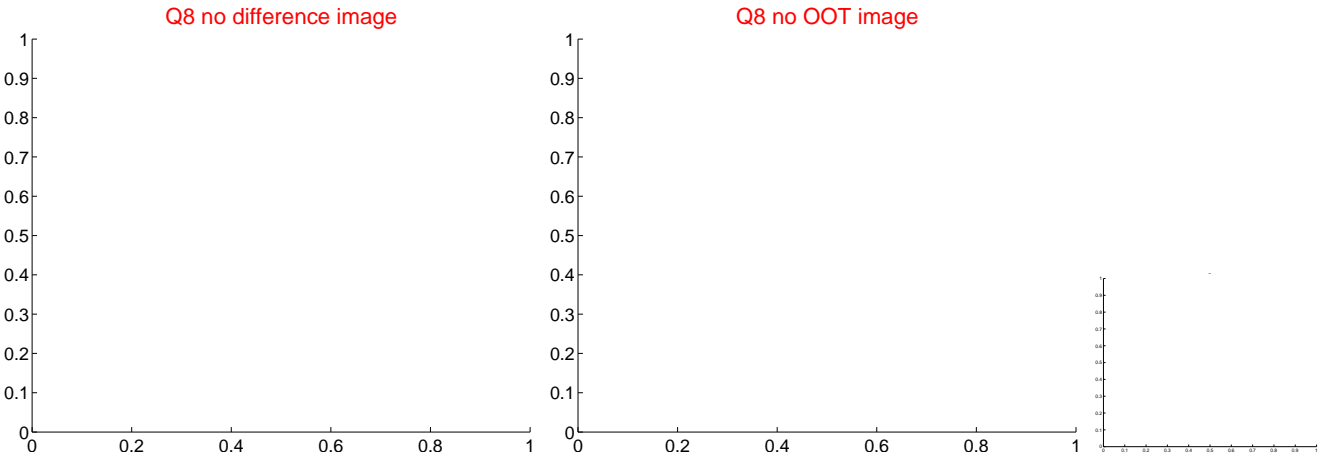
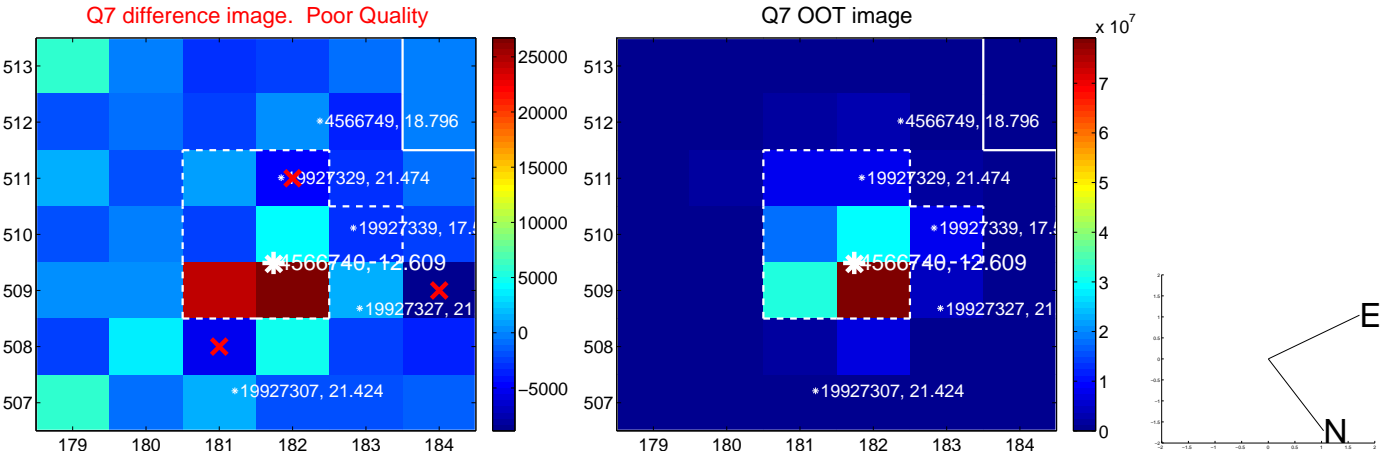
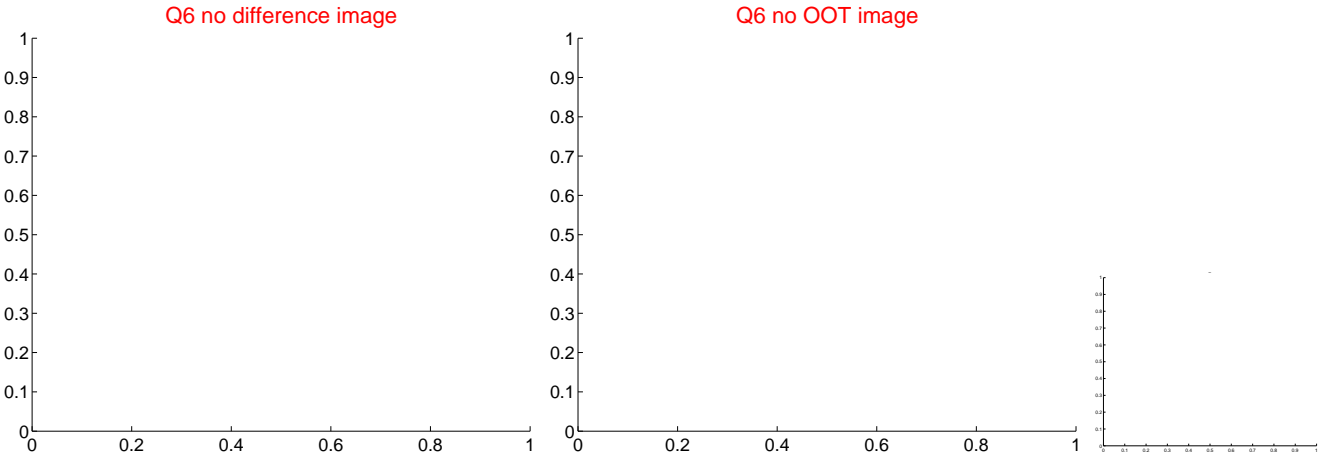
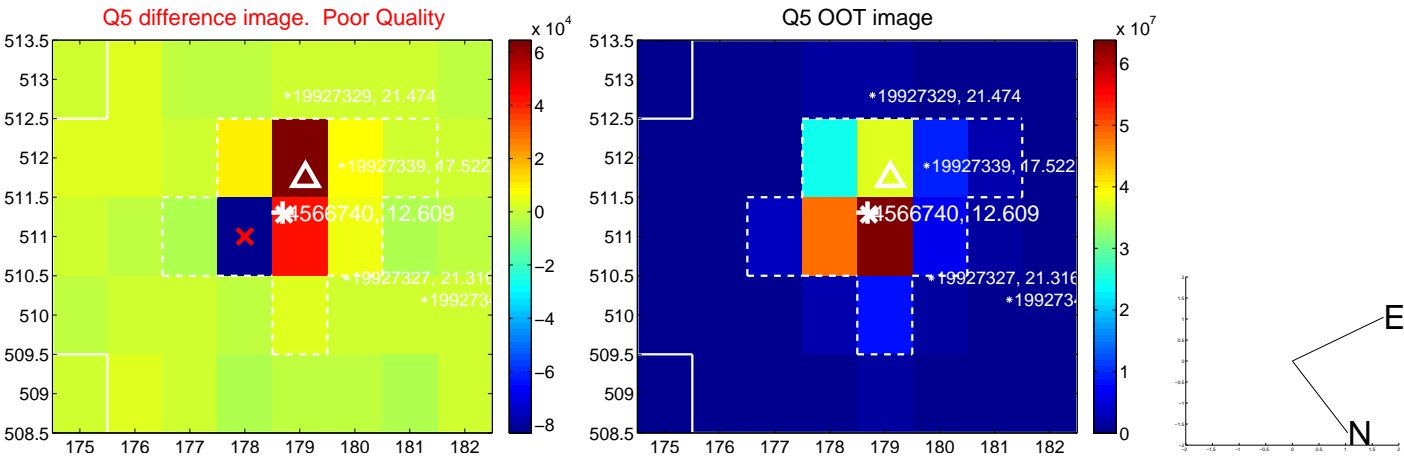


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

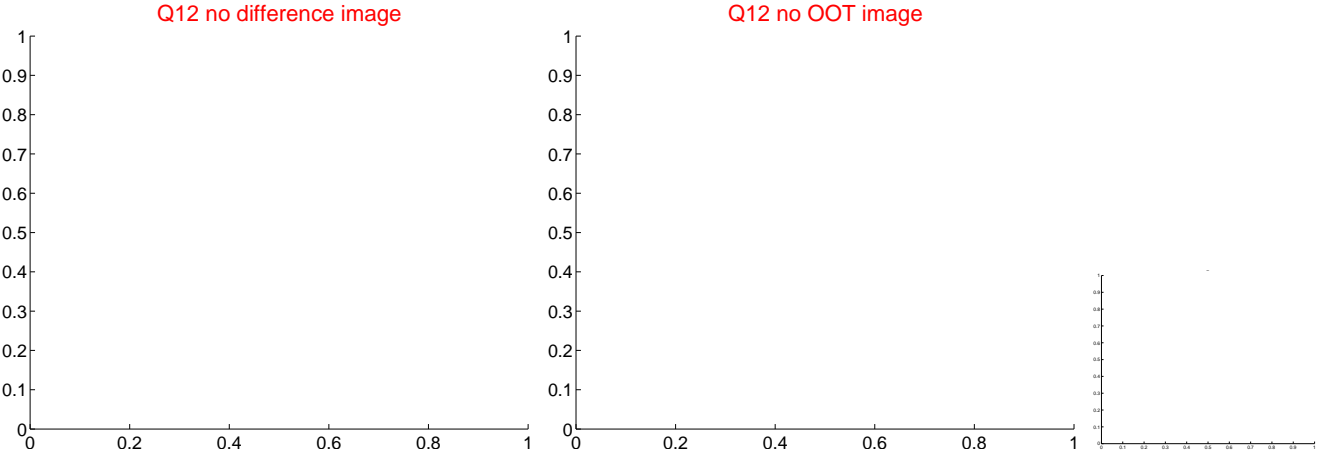
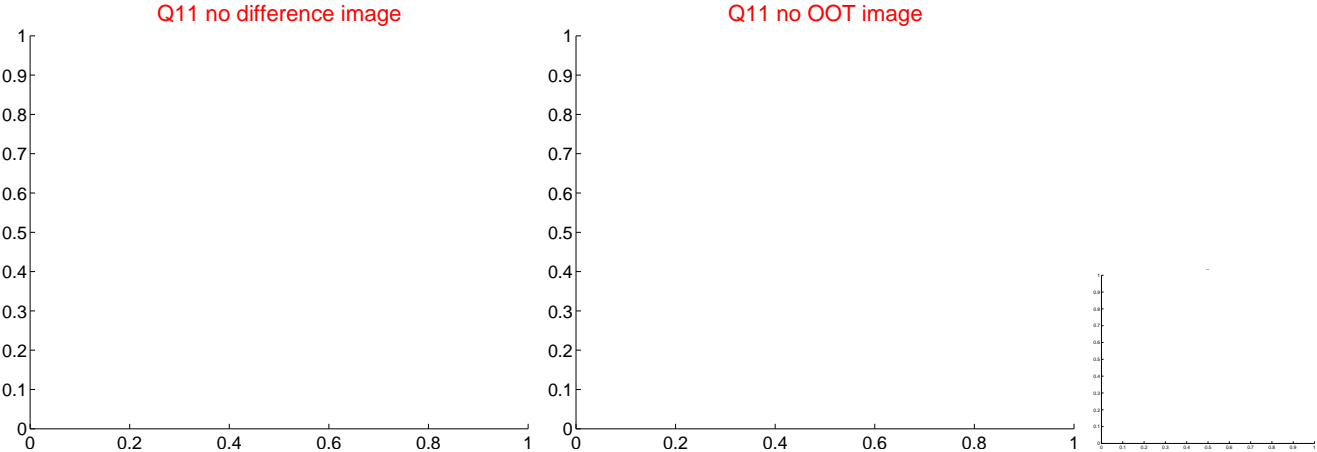
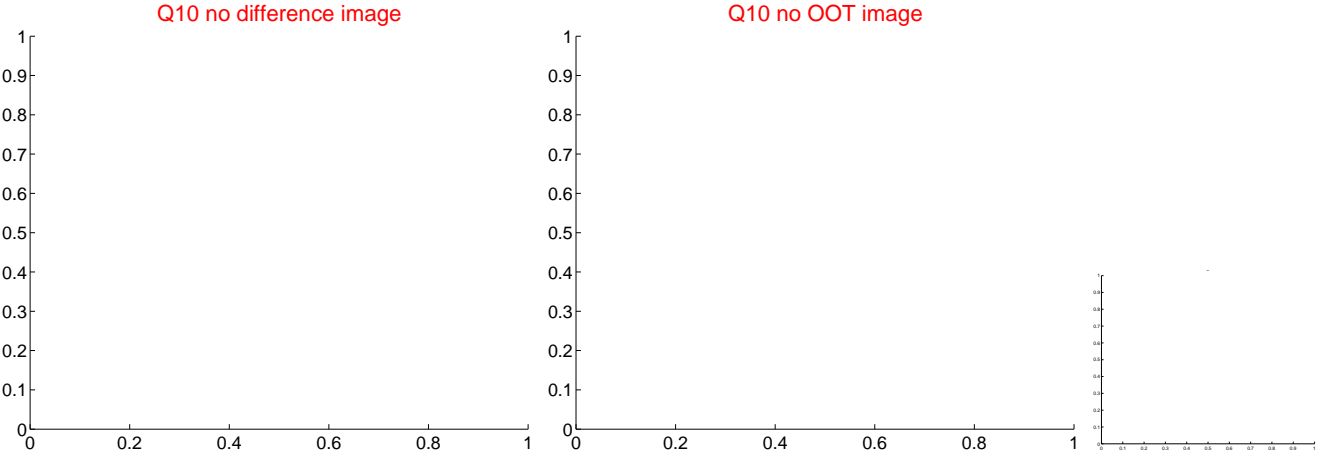
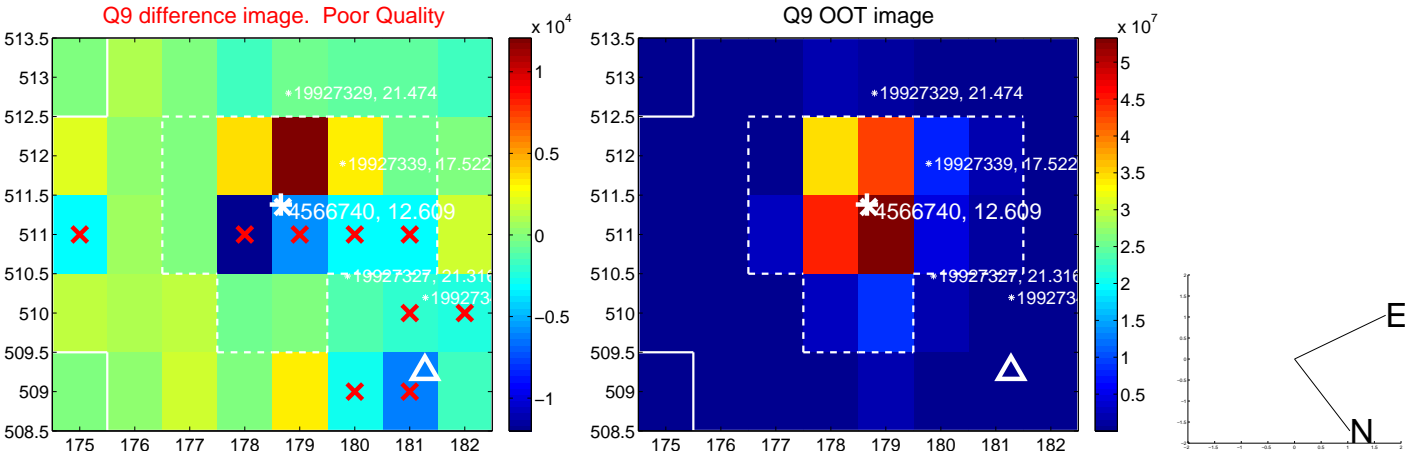
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

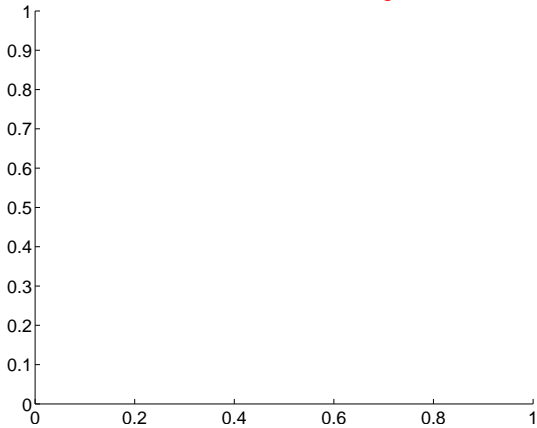


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

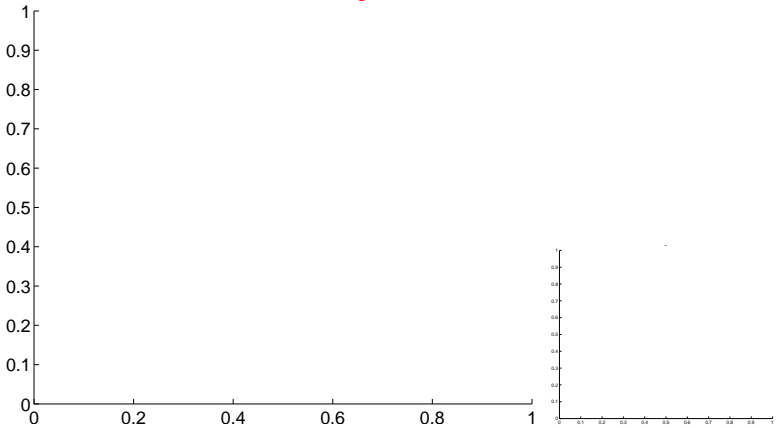


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

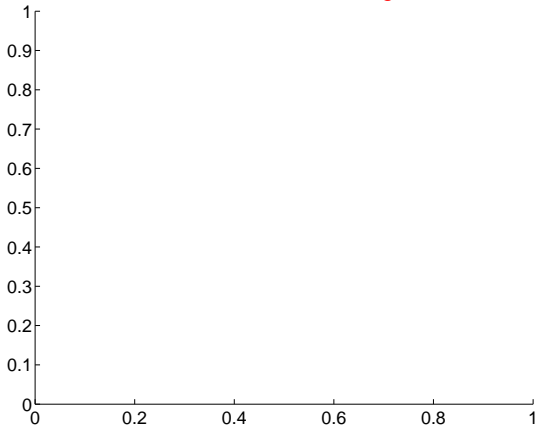
Q13 no difference image



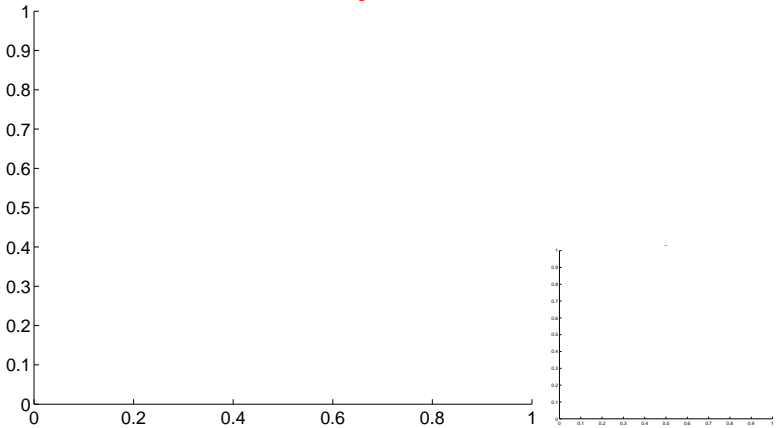
Q13 no OOT image



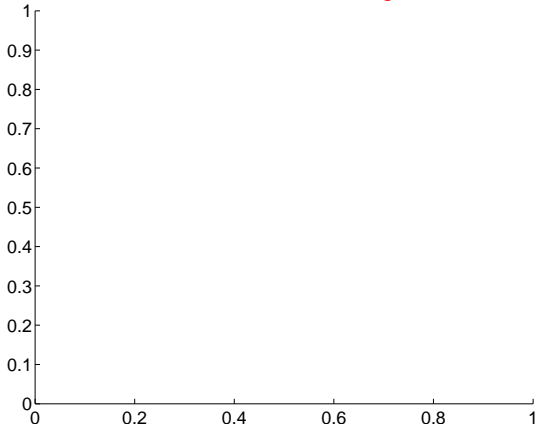
Q14 no difference image



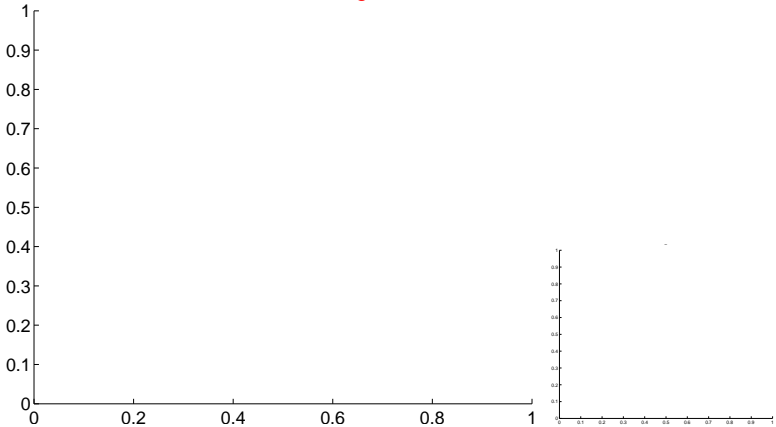
Q14 no OOT image



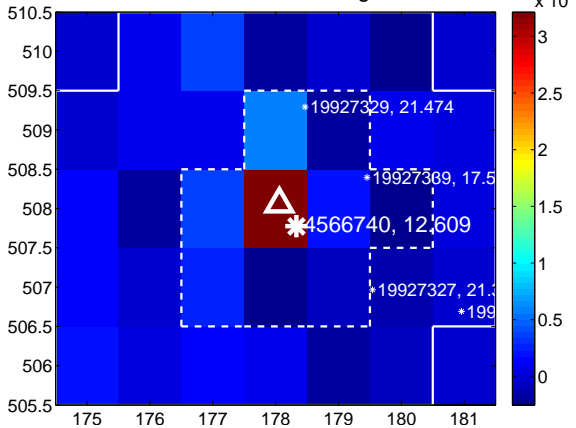
Q15 no difference image



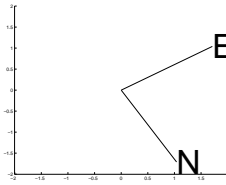
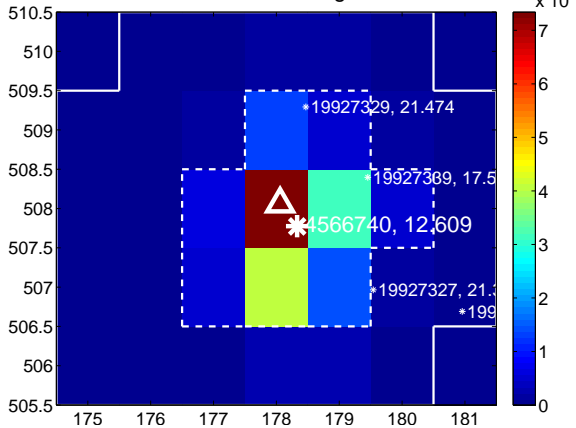
Q15 no OOT image



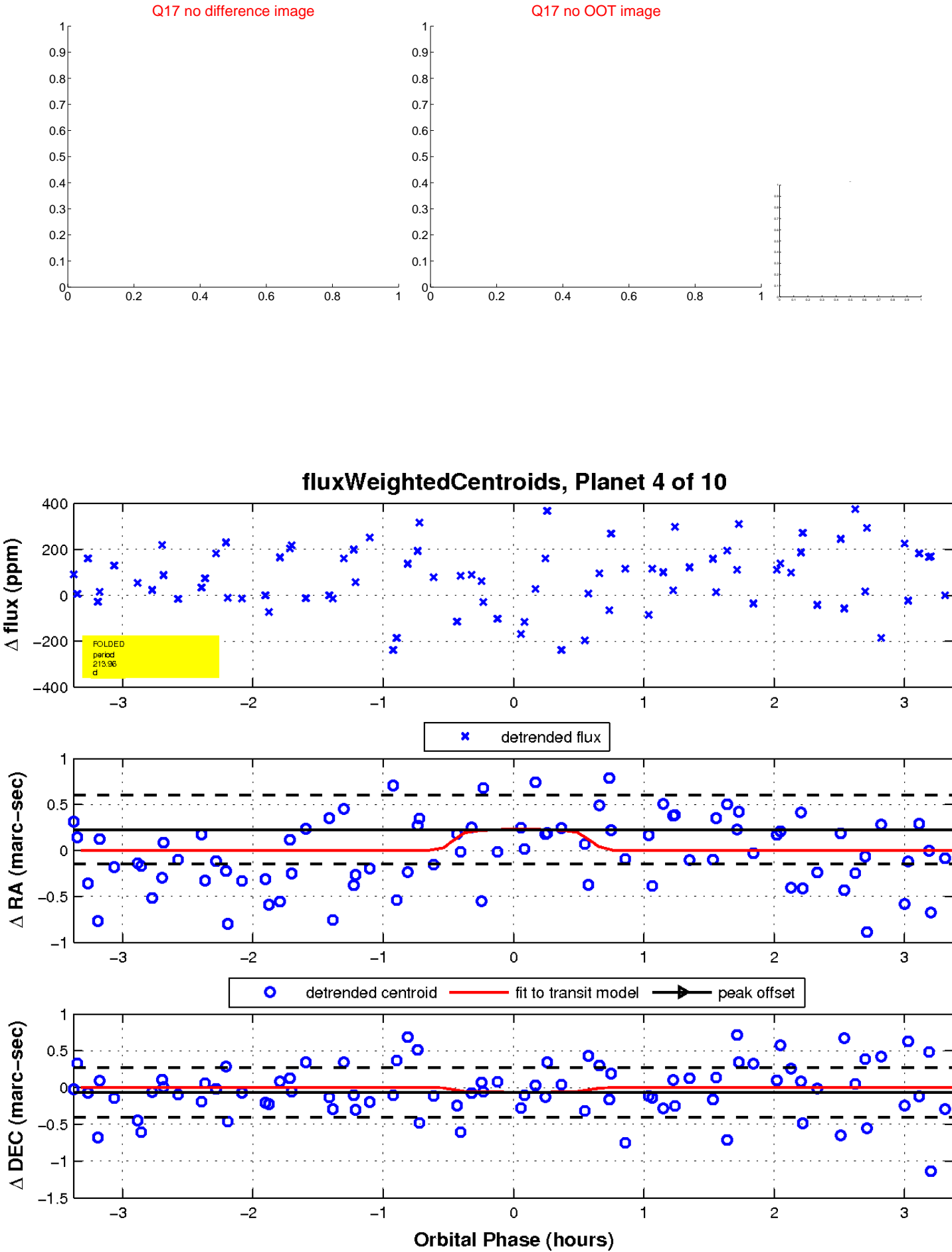
Q16 difference image



Q16 OOT image

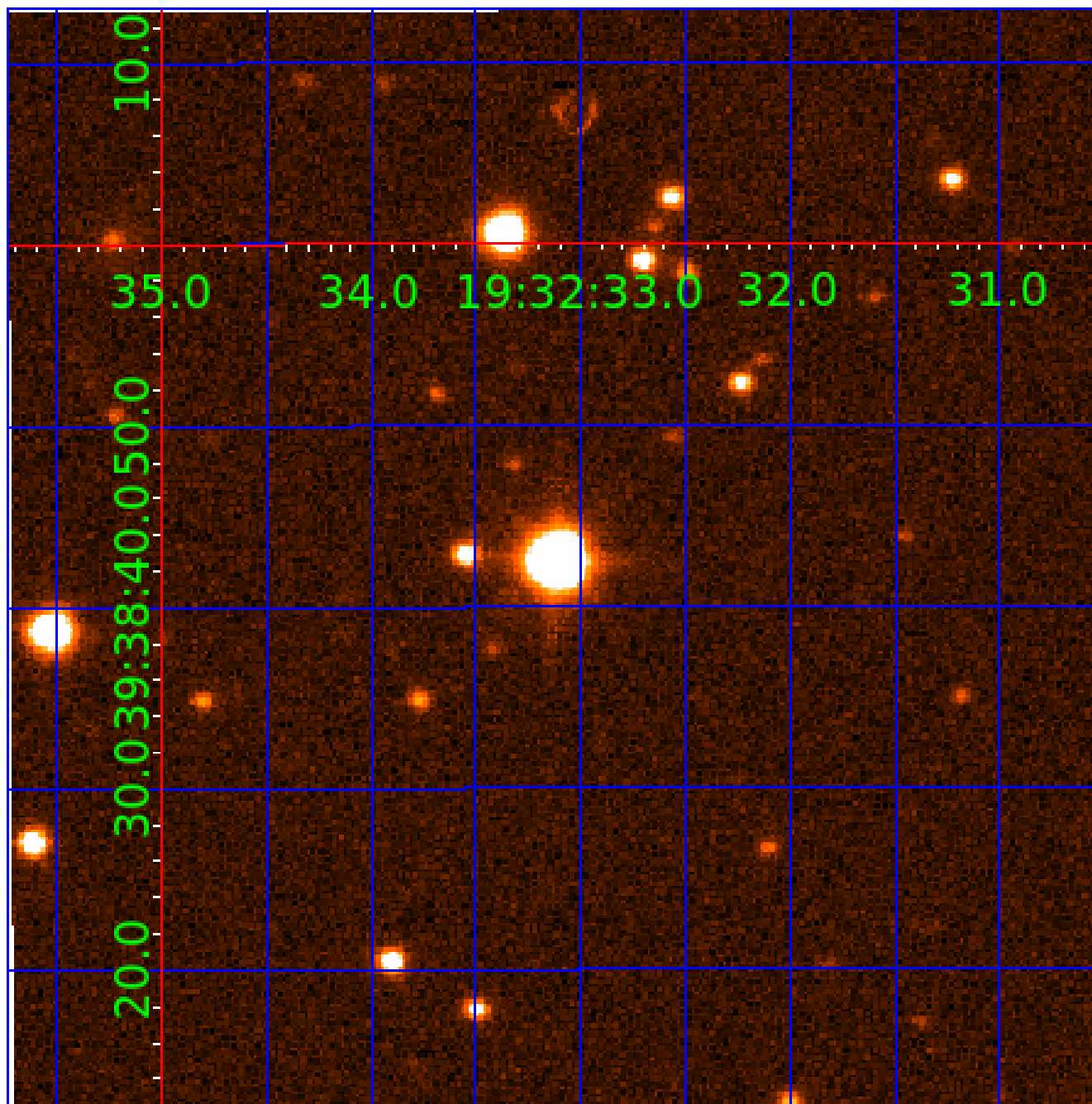


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



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})
004566740-01	OBS	No	4.973094	133.121675	18.1	16.357	9.1	4.6	2.45	6861	1.20	2661.05
004566740-02	OBS	No	2.486397	133.590068	33.4	10.361	10.1	8.9	2.45	6861	1.65	6705.96
004566740-03	OBS	No	76.219157	159.075847	211.1	5.534	9.3	8.3	2.45	6861	4.24	69.90
004566740-04	OBS	No	213.957349	243.898249	99.6	1.137	8.9	3.1	2.45	6861	2.76	17.65
004566740-05	OBS	No	213.953006	243.595682	3.4	0.512	8.9	0.1	2.45	6861	0.48	17.65
004566740-06	OBS	No	213.562988	245.133424	173.9	27.589	8.7	6.2	2.45	6861	3.47	17.70
004566740-07	OBS	No	52.951812	143.943002	200.3	9.663	7.9	7.7	2.45	6861	6.78	113.60
004566740-08	OBS	No	24.829527	148.789351	7.3	4.173	7.6	0.4	2.45	6861	0.71	311.84
004566740-09	OBS	No	17.811016	131.507027	152.8	3.000	7.4	-1.0	2.45	6861	3.06	485.63
004566740-10	OBS	No	57.698870	135.798867	148.7	3.447	7.4	7.8	2.45	6861	3.35	101.31

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004566740-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004566740-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_FEW_DIFFS
004566740-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
004566740-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
004566740-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—SAME_NTL_PERIOD—CENT_FEW_DIFFS
004566740-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
004566740-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004566740-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
004566740-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT—CENT_NOFITS
004566740-10	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

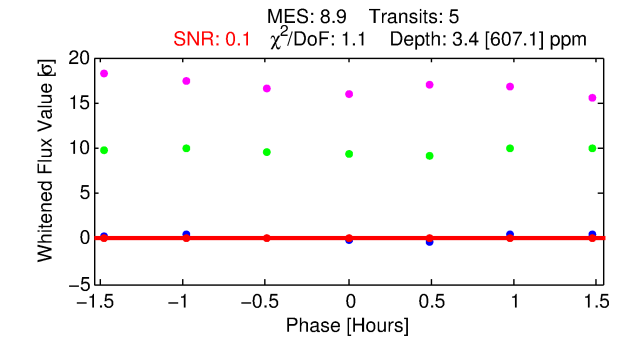
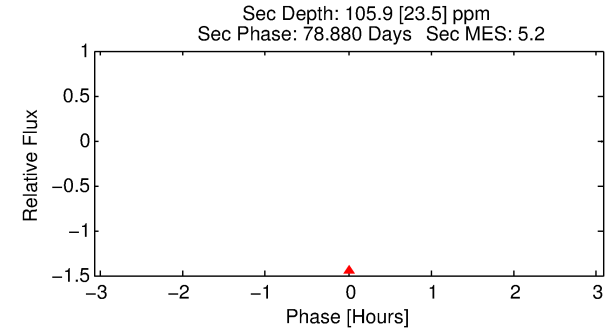
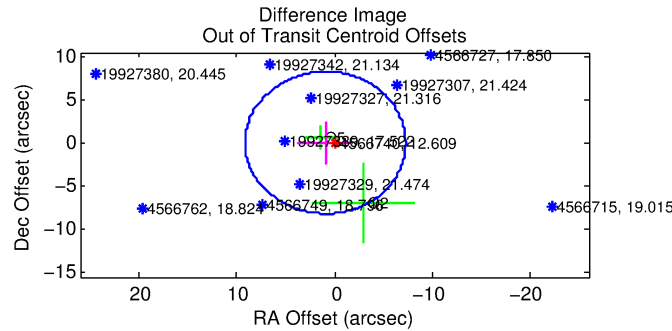
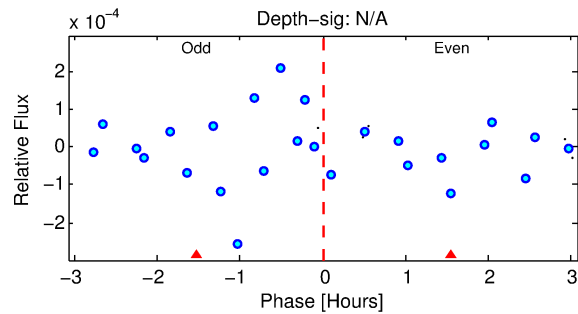
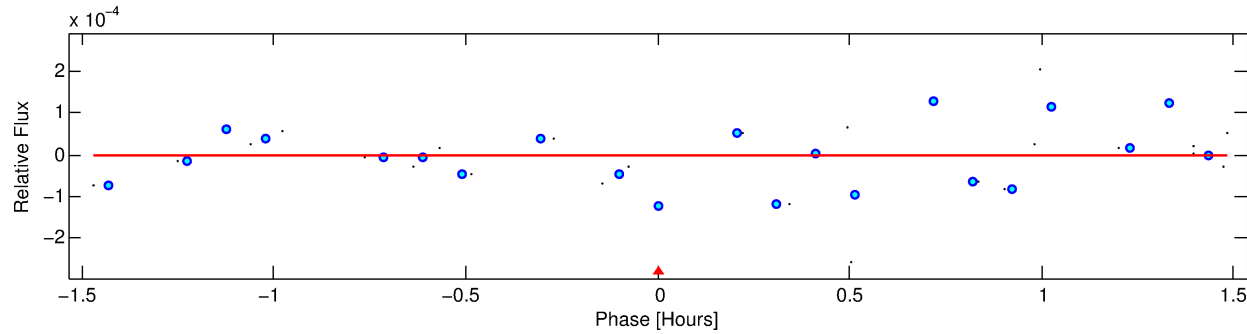
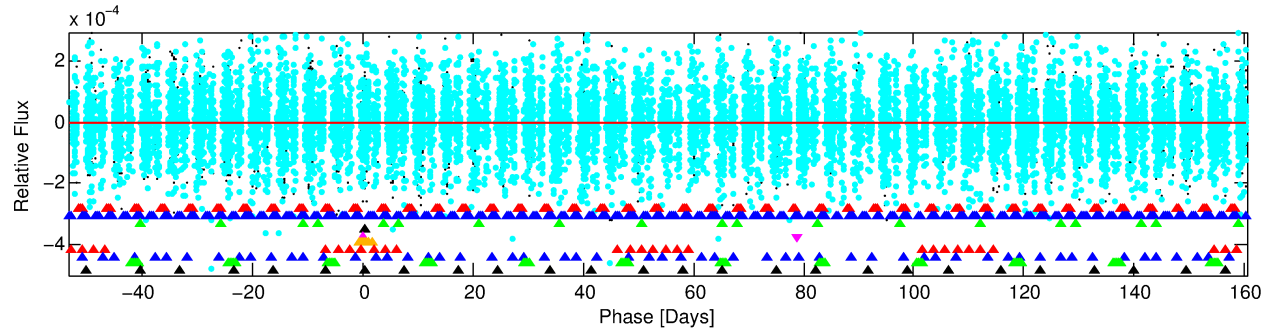
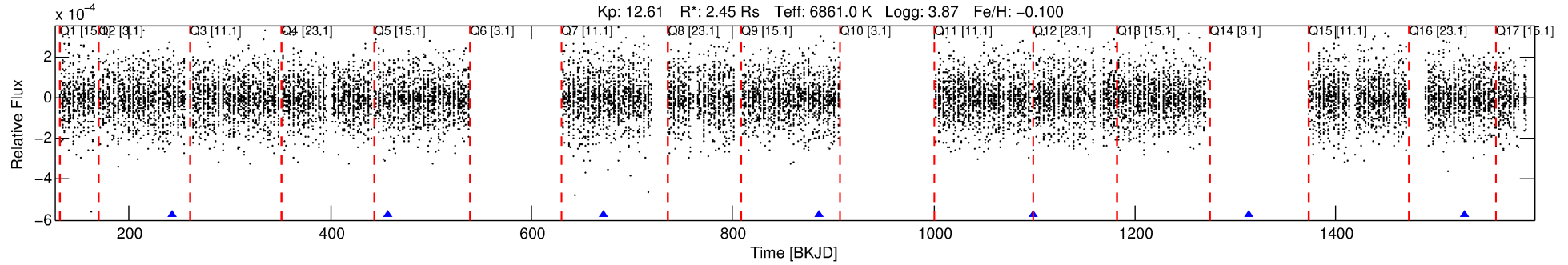
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004566740-05

No Significant Match Found

DV One-Page Summary

KIC: 4566740 Candidate: 5 of 10 Period: 213.953 d



DV Fit Results:

Period = 213.95301 [0.07533] d
Epoch = 243.5957 [0.3070] BKJD
Rp/R* = 0.0018 [6.9924]
a/R* = 3200.29 [66746534.66]
b = 0.01 [2245425.45]
Seff = 17.65 [8.21]
Teq = 523 [61] K
Rp = 0.48 [1869.43] Re
a = 0.8216 [0.2357] AU
Ag = 173114.12 [1357726018.92] [0.00σ]
Teff = 16483 [32319799] K [0.00σ]

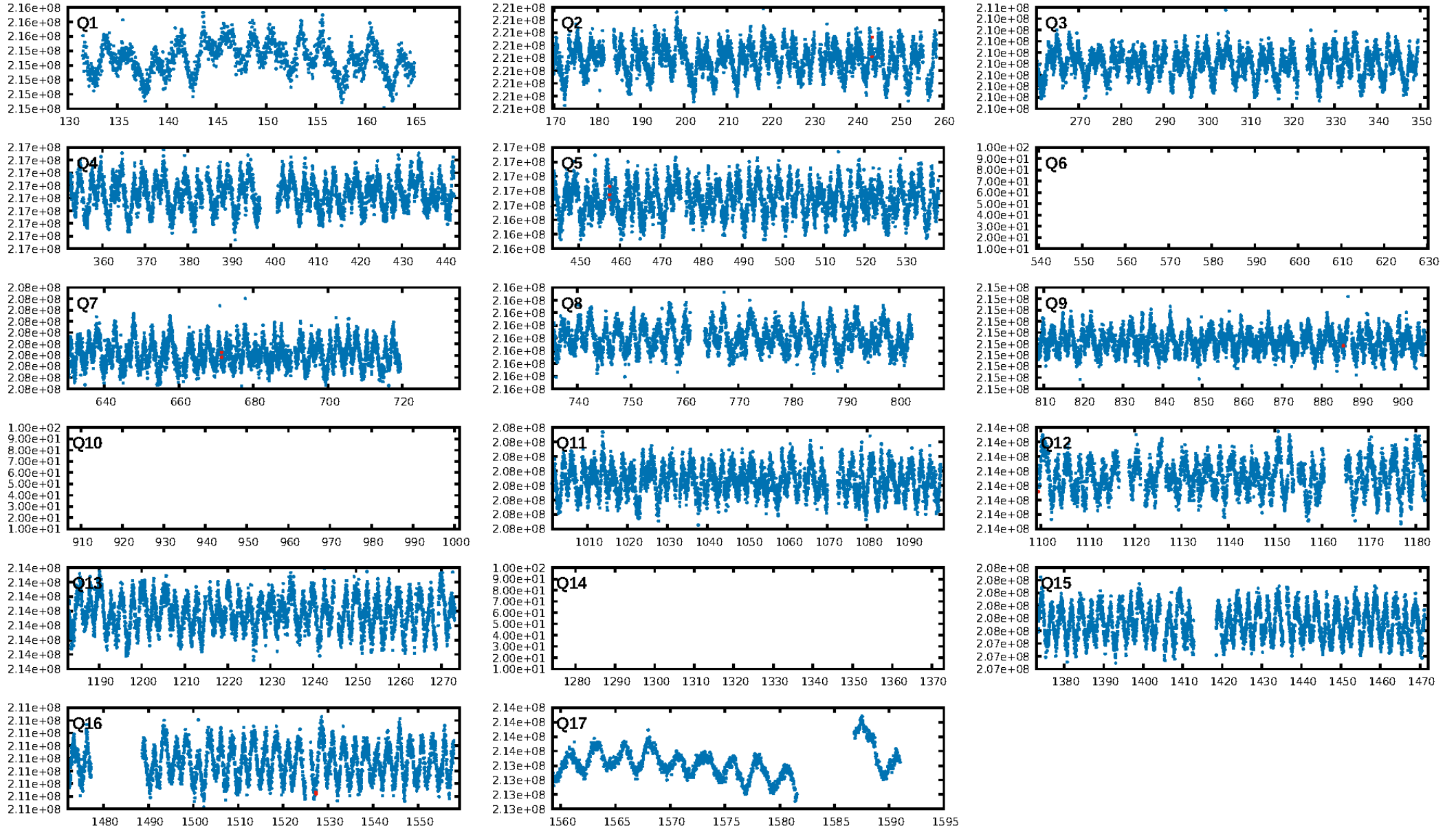
DV Diagnostic Results:

ShortPeriod-sig: 26.6% [0.34σ]
LongPeriod-sig: 6.7% [0.08σ]
ModelChiSquare2-sig: 16.2%
ModelChiSquareGof-sig: 62.9%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.941 arcsec [0.34σ]
KicOffset-rm: 0.905 arcsec [0.33σ]
OotOffset-st: 1/0/0/1 [2]
KicOffset-st: 1/0/0/1 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 0.67 [2/3]

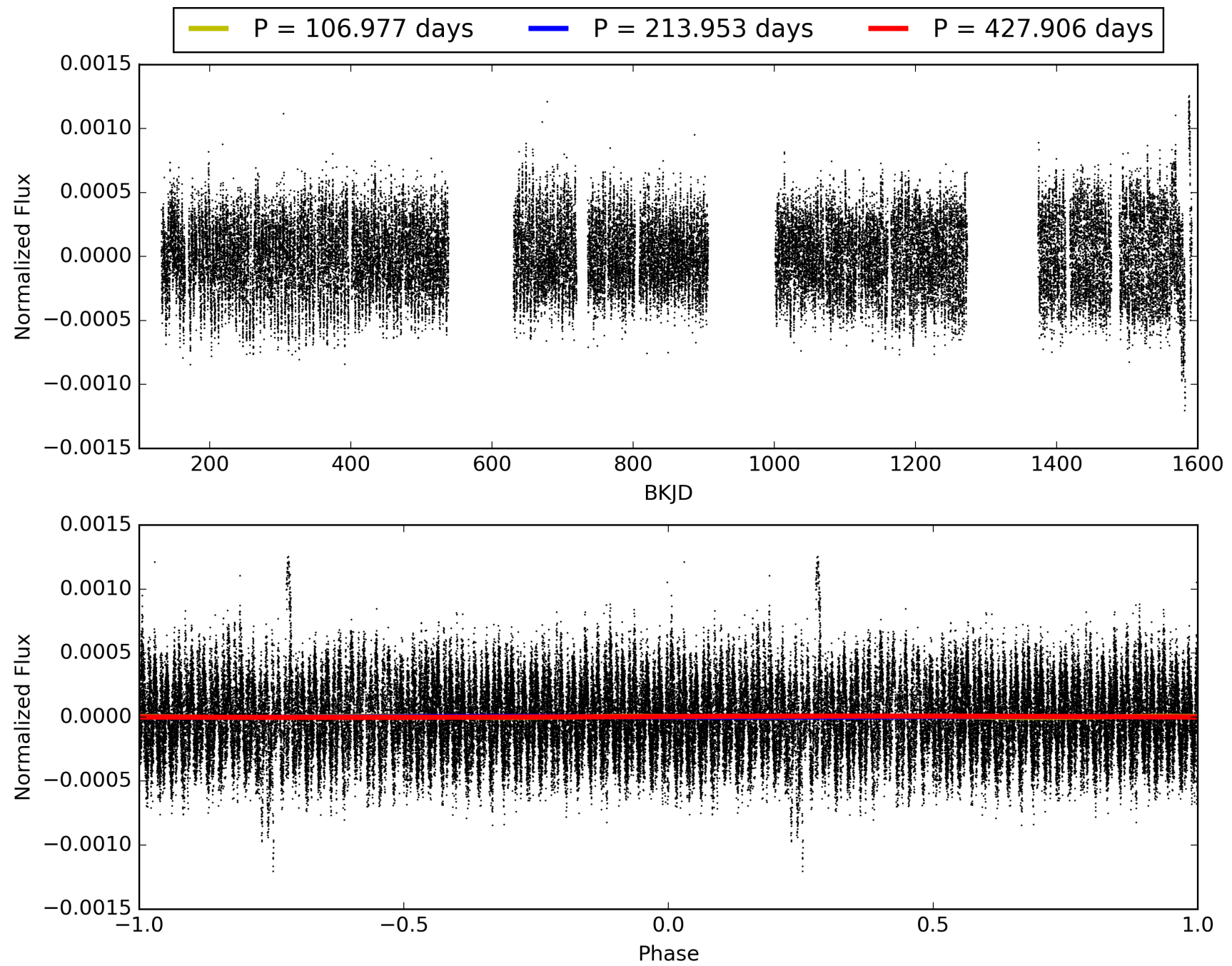
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 06:43:55 Z

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

TCE 004566740-05, PDC Light Curves

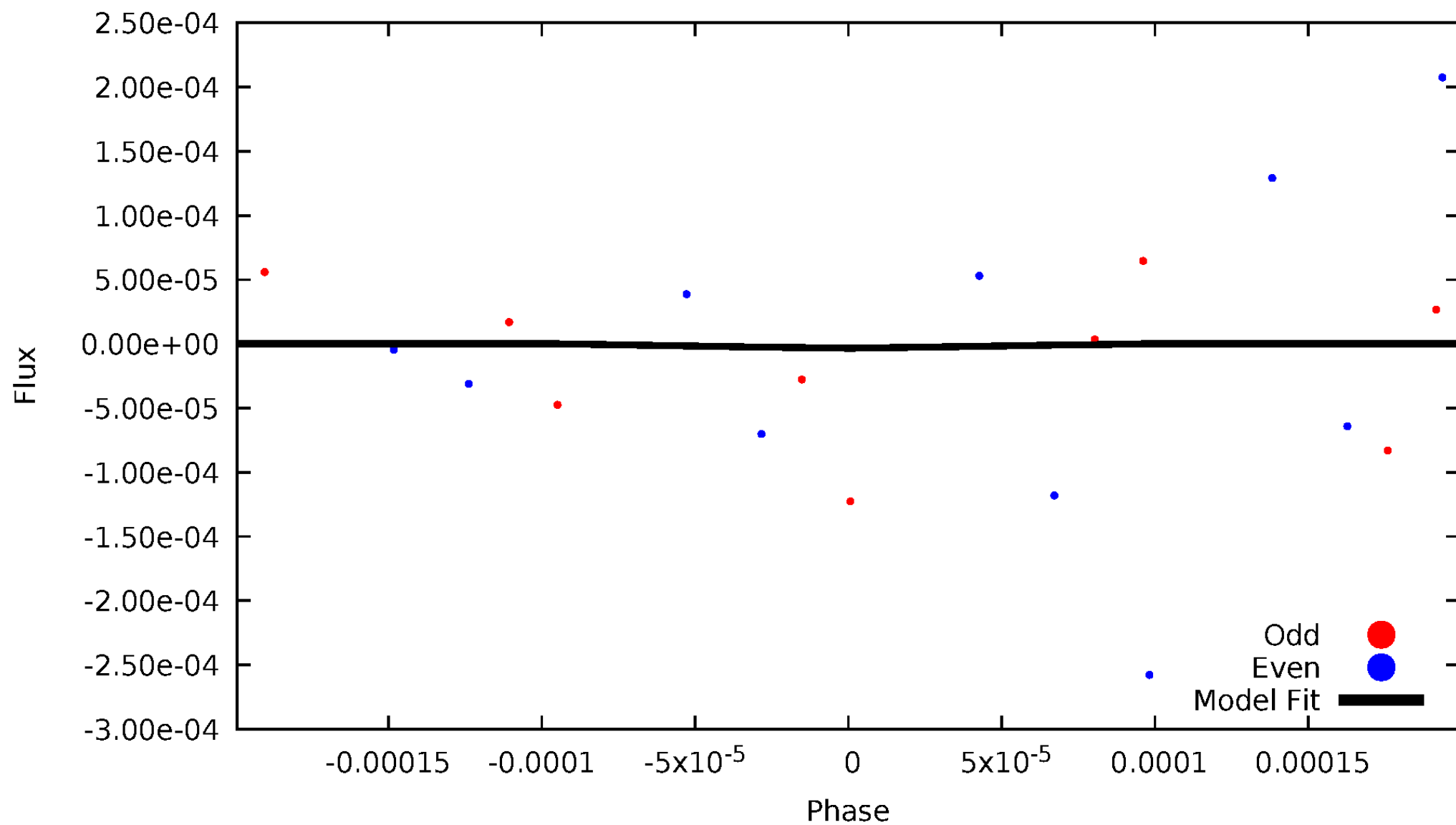


TCE 004566740-05



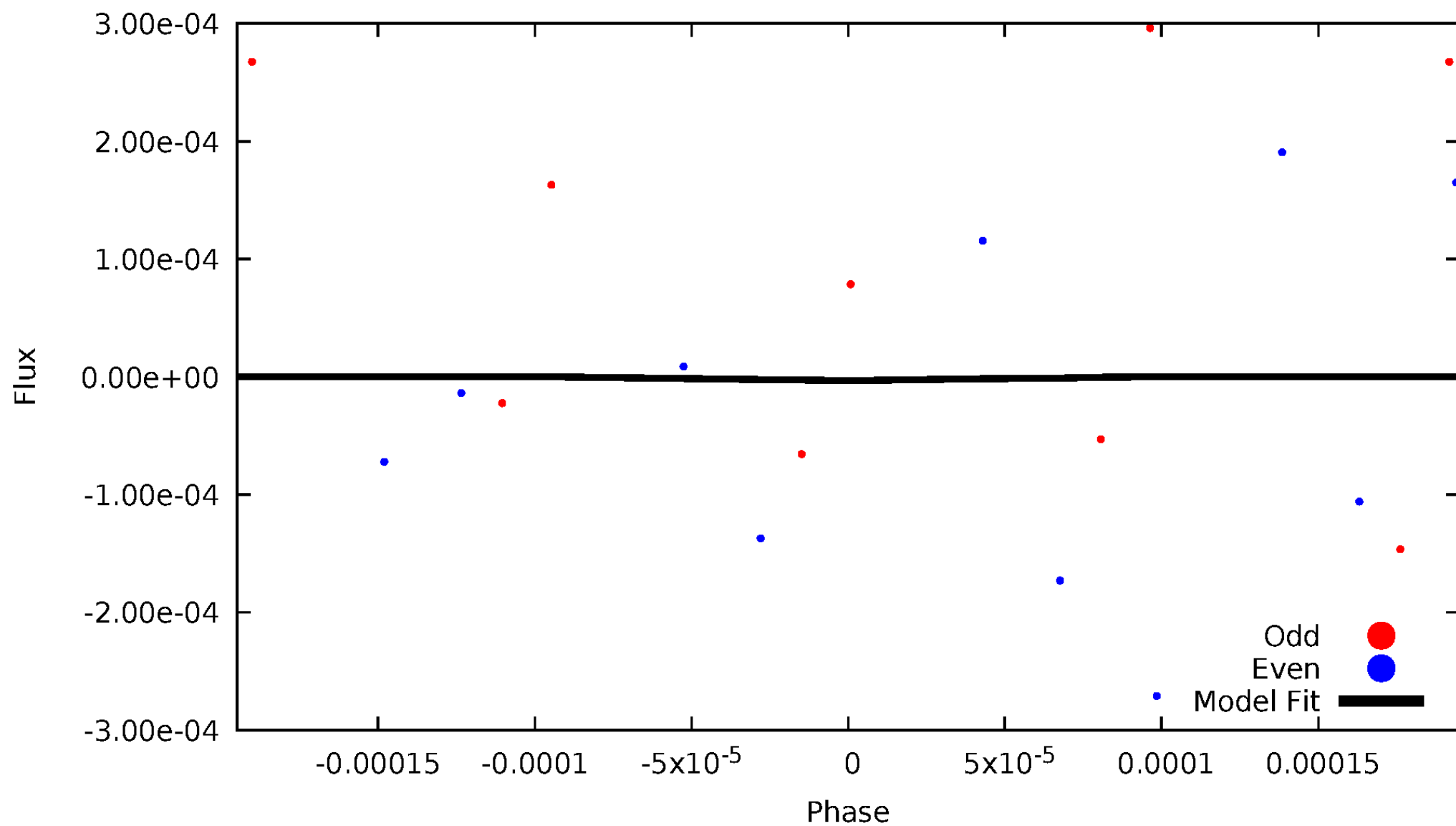
DV Odd/Even

TCE 004566740-05



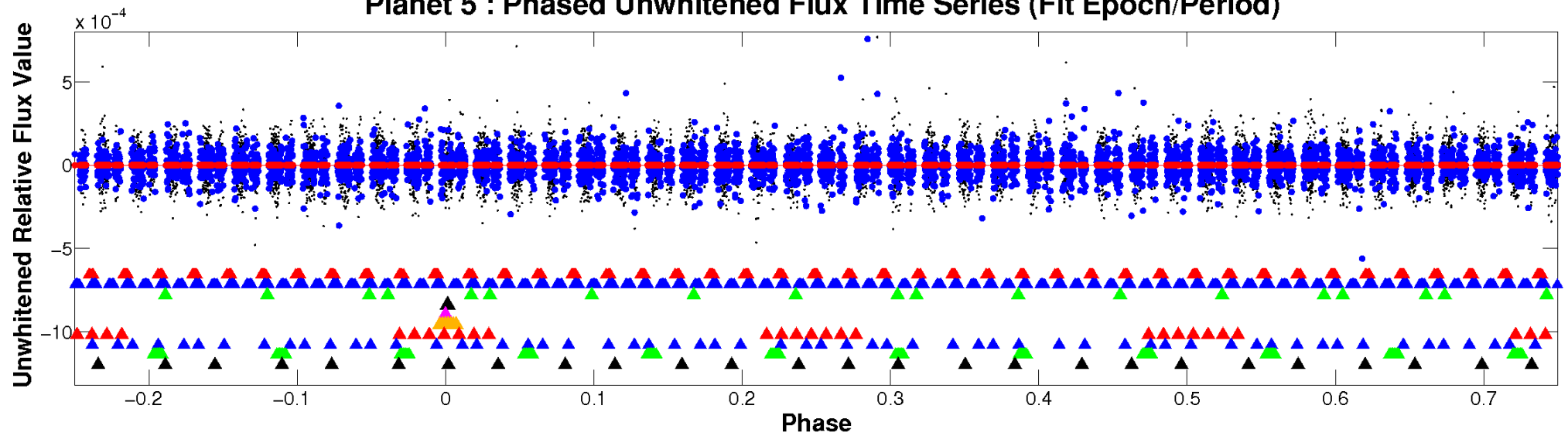
ALT Odd/Even

TCE 004566740-05

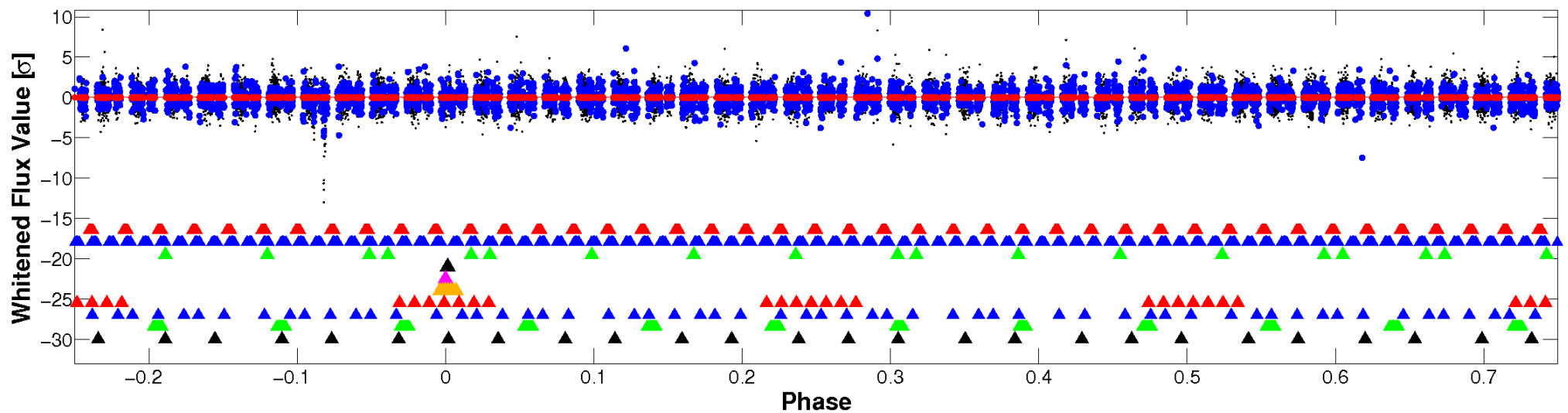


Non-Whitened Vs. Whitened Light Curve

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

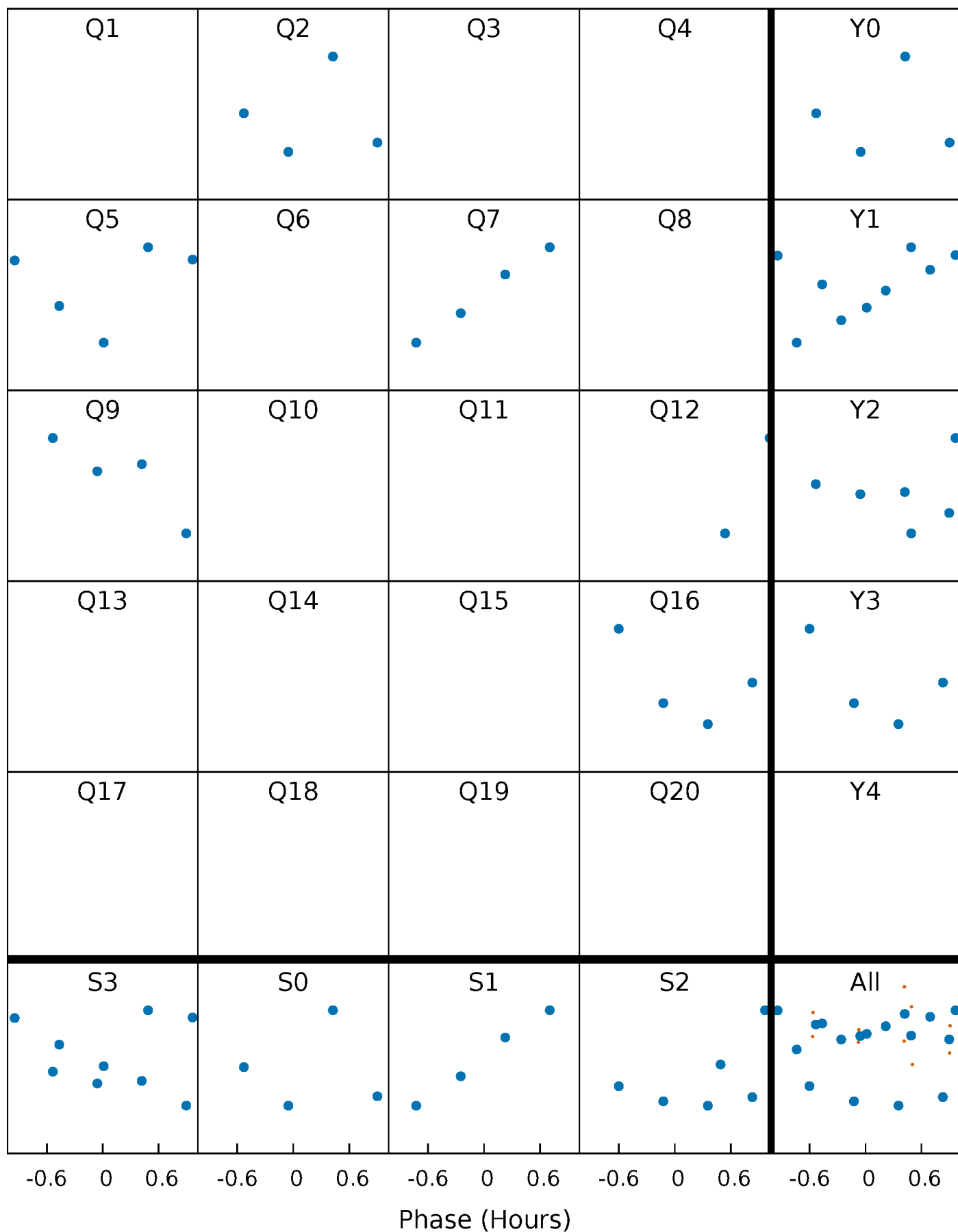


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



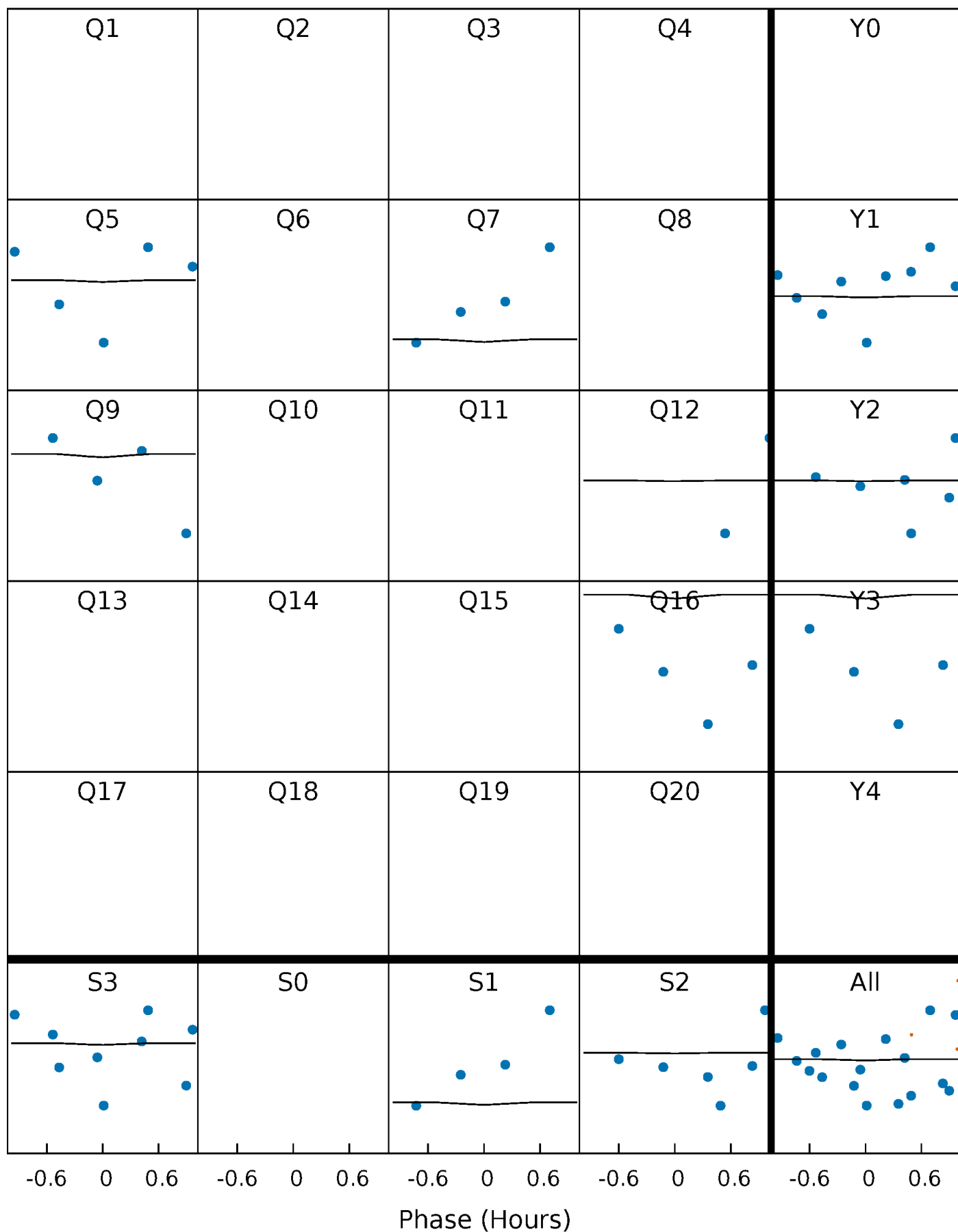
PDC Quarter-Phased Transit Curves

TCE 004566740-05 $P=213.953006$ Days $T_0=243.595682$ (BKJD)



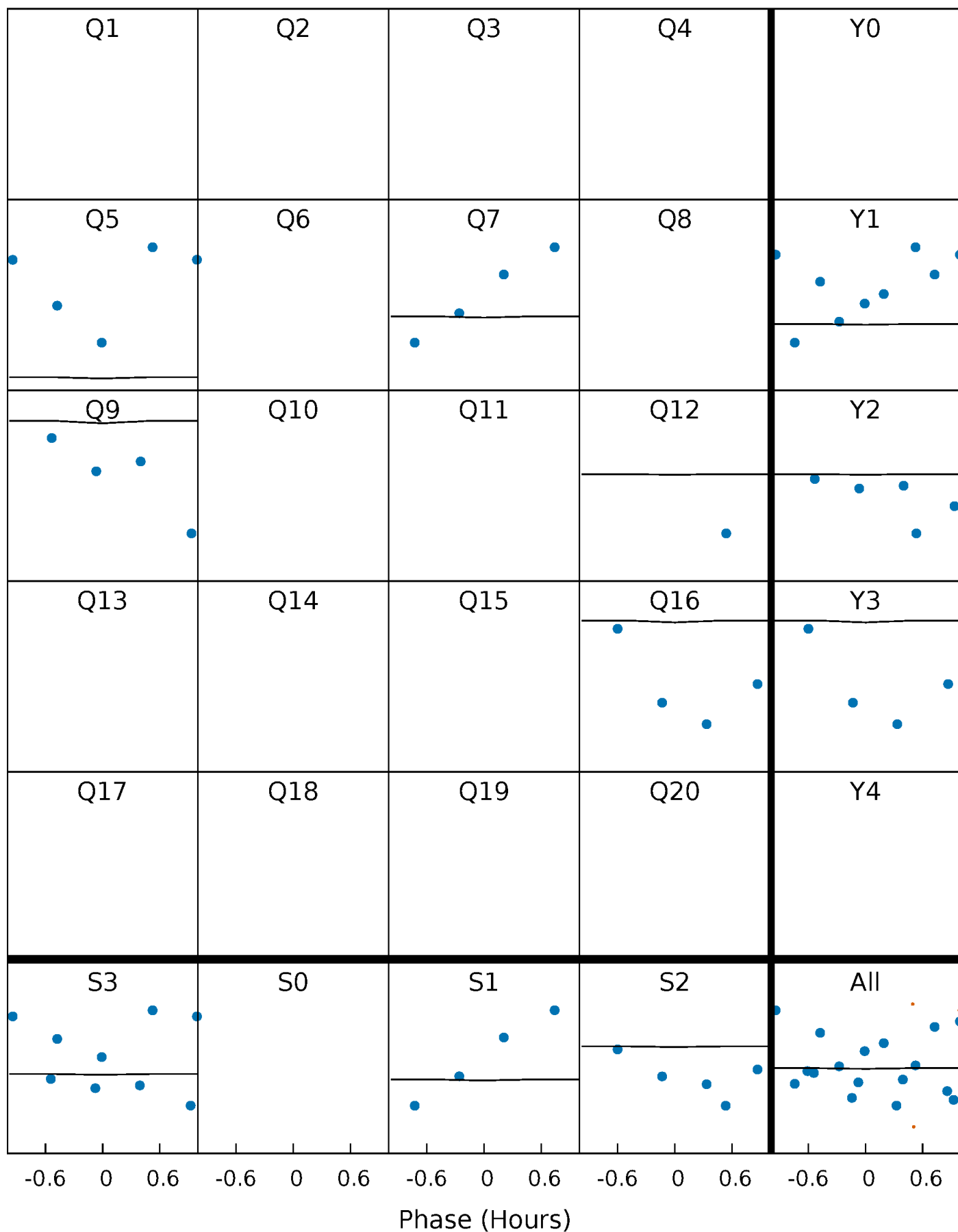
DV Quarter-Phased Transit Curves

TCE 004566740-05 $P=213.953006$ Days $T_0=243.595682$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

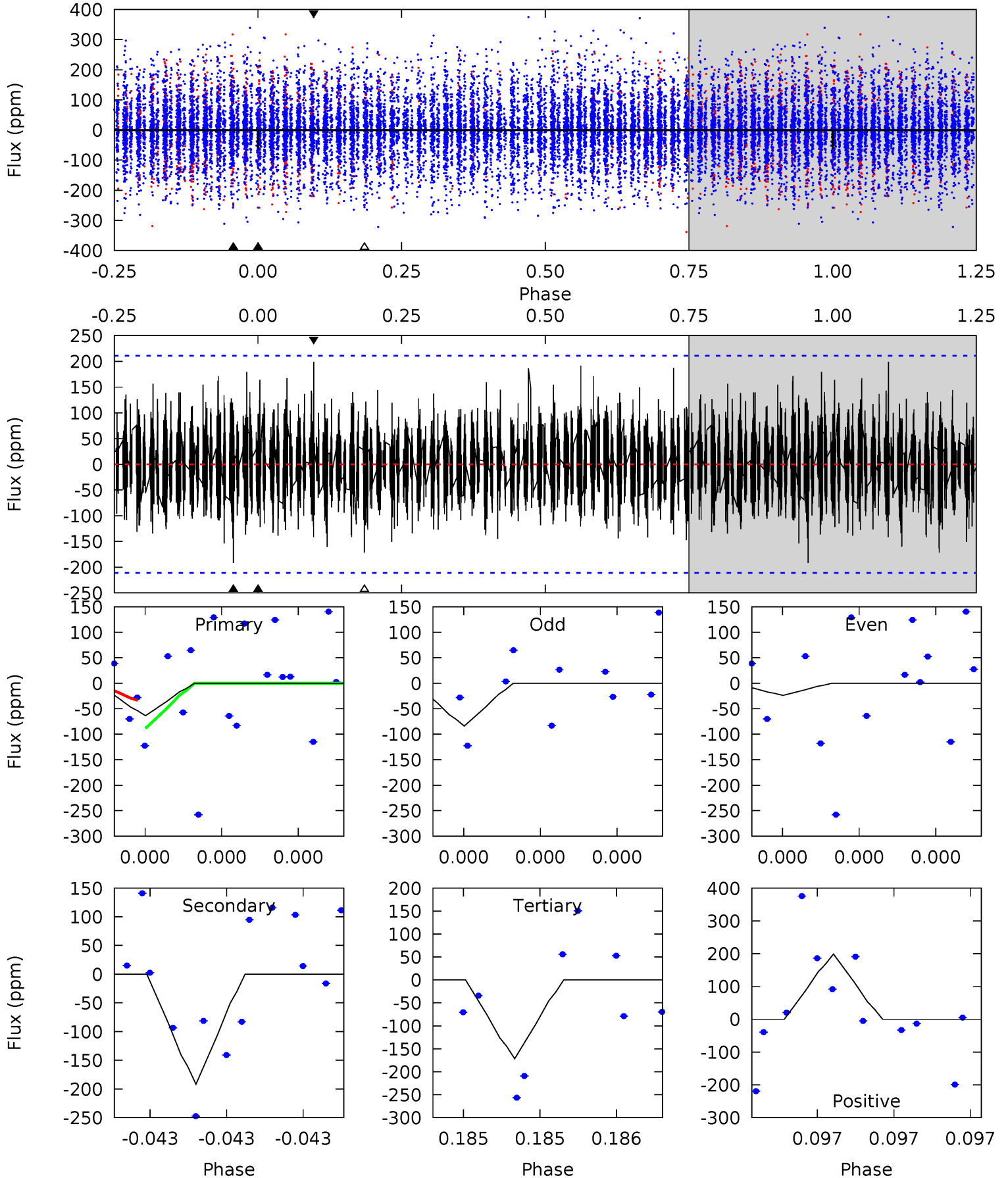
TCE 004566740-05 $P=213.952996$ Days $T_0=243.595670$ (BKJD)



DV Model-Shift Uniqueness Test

004566740-05, P = 213.953006 Days, E = 29.642676 Days

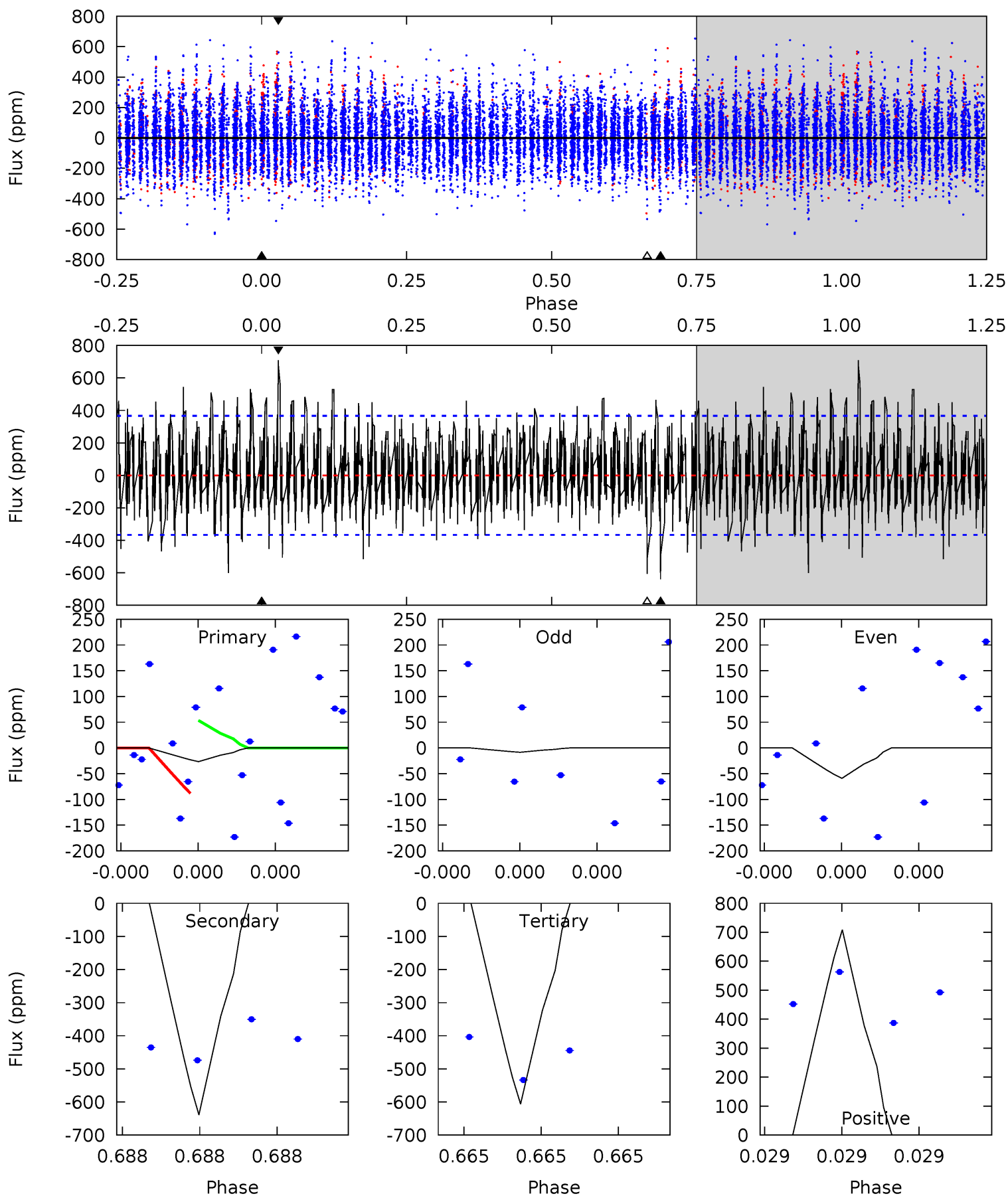
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.75	5.26	4.70	5.45	5.78	3.79	1.23	-2.96	-3.71	0.55	-0.20	0.83	0.80	0.51	0.72



Alt Model-Shift Uniqueness Test

004566740-05, P = 213.952996 Days, E = 29.642674 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.42	10.1	9.56	11.2	5.78	3.79	2.22	-9.14	-10.8	0.52	-1.10	0.43	0.79	0.53	0.26



Stellar Parameters For KIC 004566740

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6861^{+190}_{-214}	$3.868^{+0.259}_{-0.111}$	$-0.100^{+0.300}_{-0.300}$	$2.450^{+0.507}_{-0.760}$	$1.614^{+0.194}_{-0.292}$	$0.154^{+0.251}_{-0.052}$
	+3%/-3%	+7%/-3%	+300%/-300%	+21%/-31%	+12%/-18%	+163%/-33%
Source	PHO1	FLK73	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 004566740-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-192 ± 36	$1202.24^{+1323.75}_{-813.79}$	717^{+47}_{-62}	-1588^{+3141}_{-62}	$0.049^{+0.432}_{-0.038}$
Alt.	-639 ± 63	$1172.84^{+1276.47}_{-791.18}$	718^{+46}_{-56}	-1515^{+3379}_{-115}	$0.174^{+1.423}_{-0.135}$

T_{max} = Theoretical Maximum Planetary Temperature
 T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)
 A_{obs} = Observed Albedo (Assuming $T=0$)

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

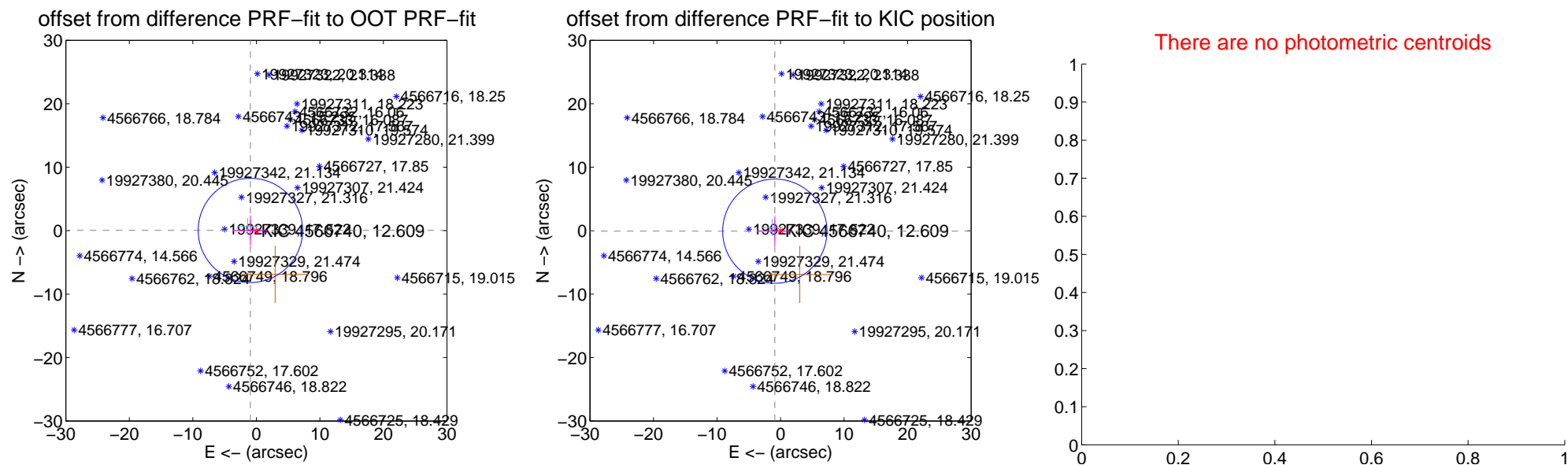
DV Centroid Data

Supplemental centroid analysis for 004566740-05. Kepler magnitude: 12.61. Transit SNR 0.05

There are 1 quarters with good PRF difference image offsets

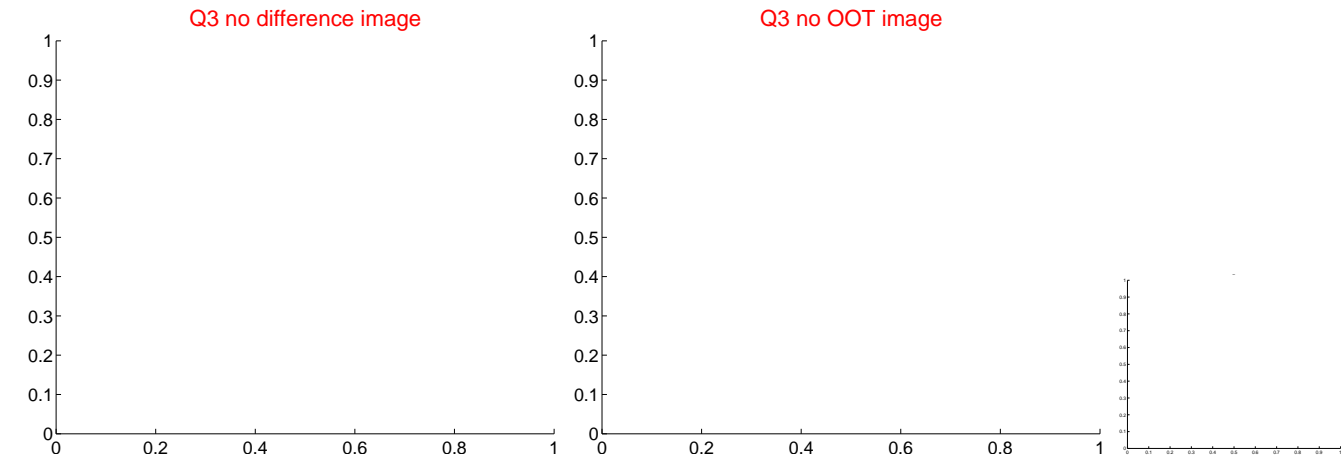
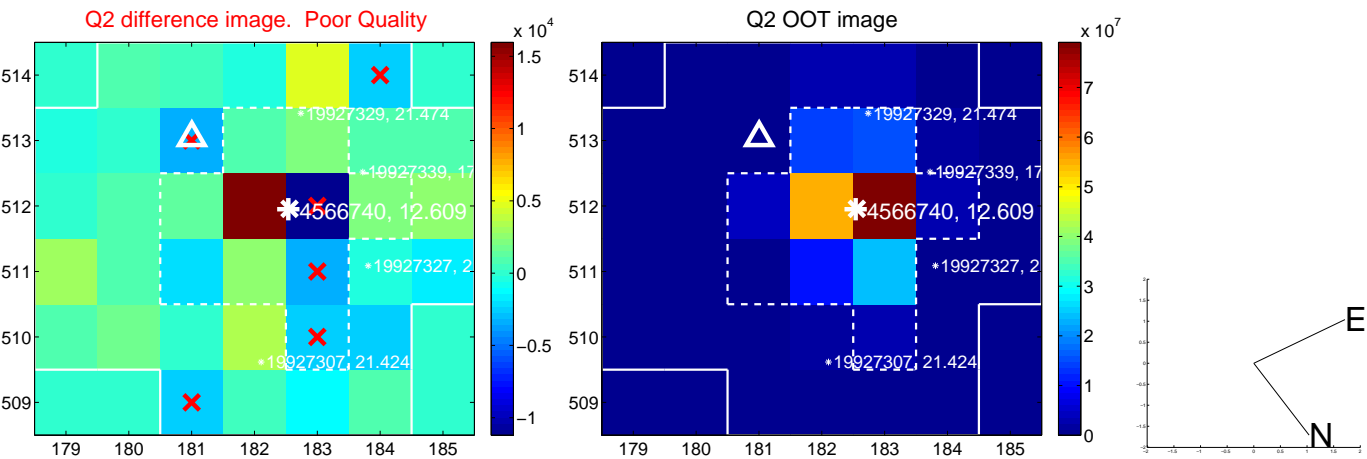
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.941 ± 2.739	0.34	0.940 ± 2.739	0.046 ± 2.353
PRF-fit source offset from KIC position	0.905 ± 2.737	0.33	0.902 ± 2.739	-0.077 ± 2.353
photometric centroid source offset	—	—	—	—

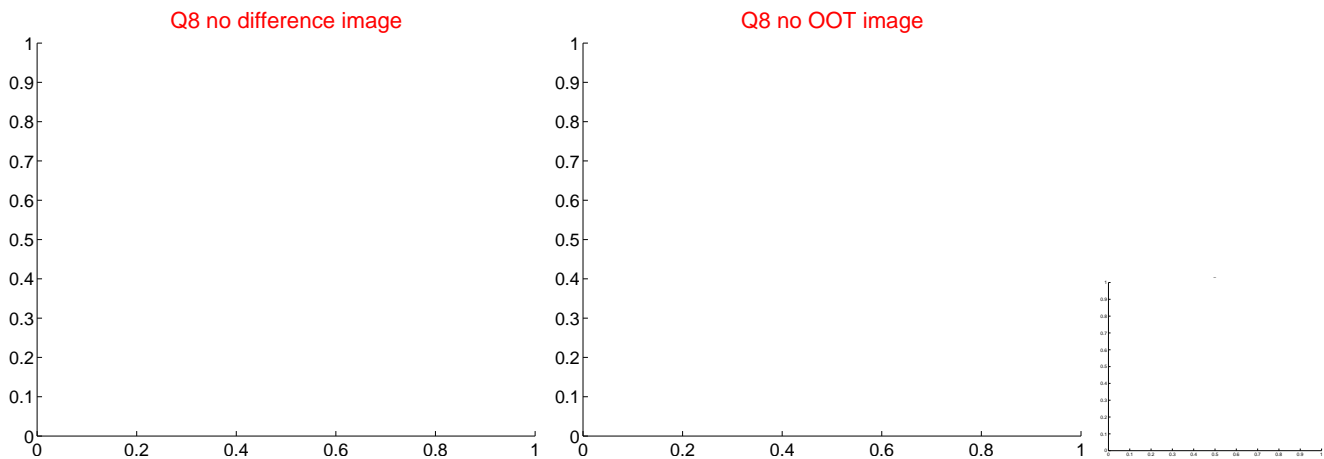
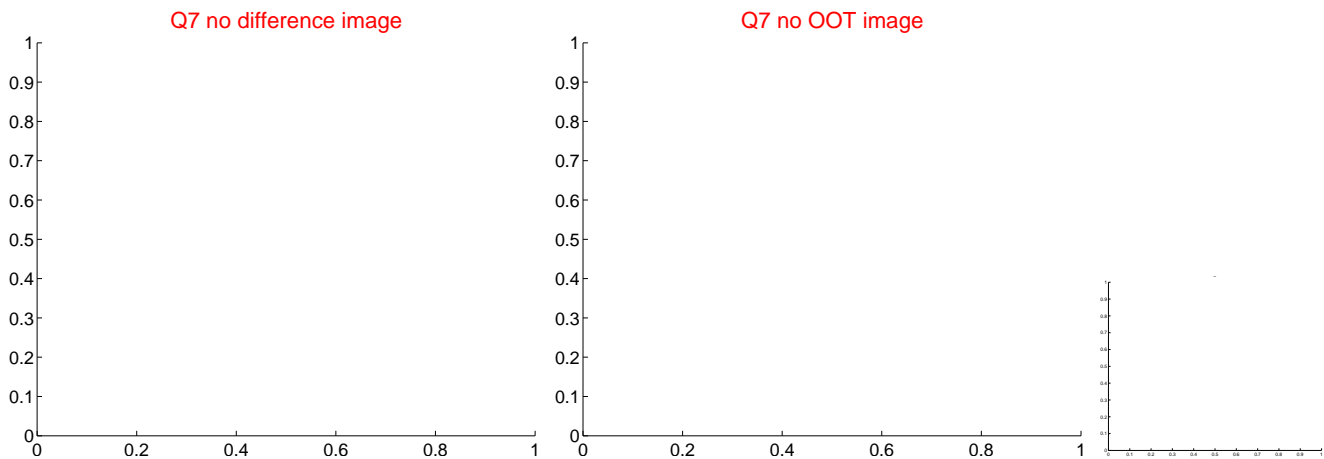
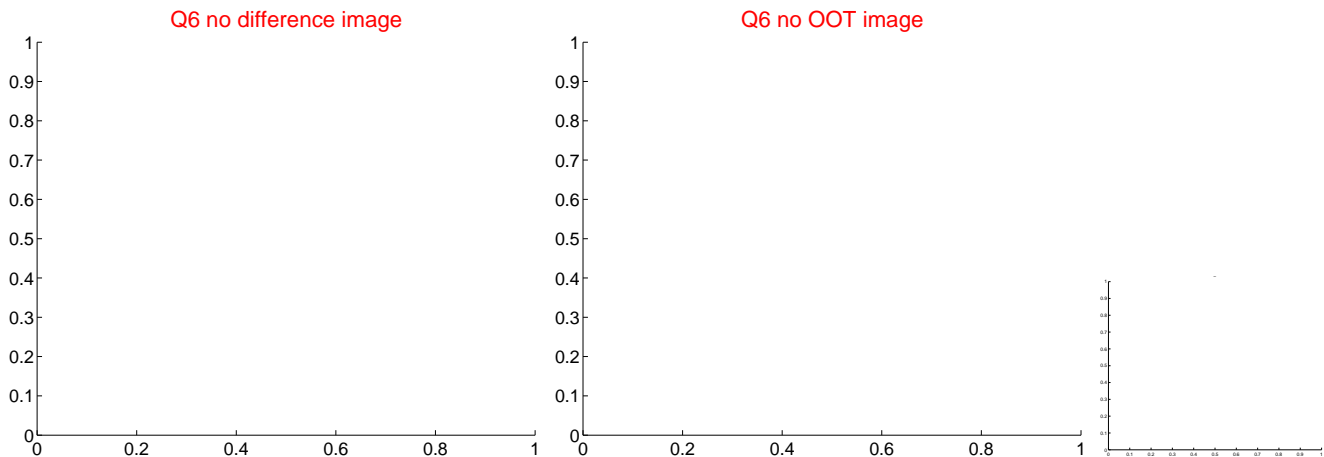
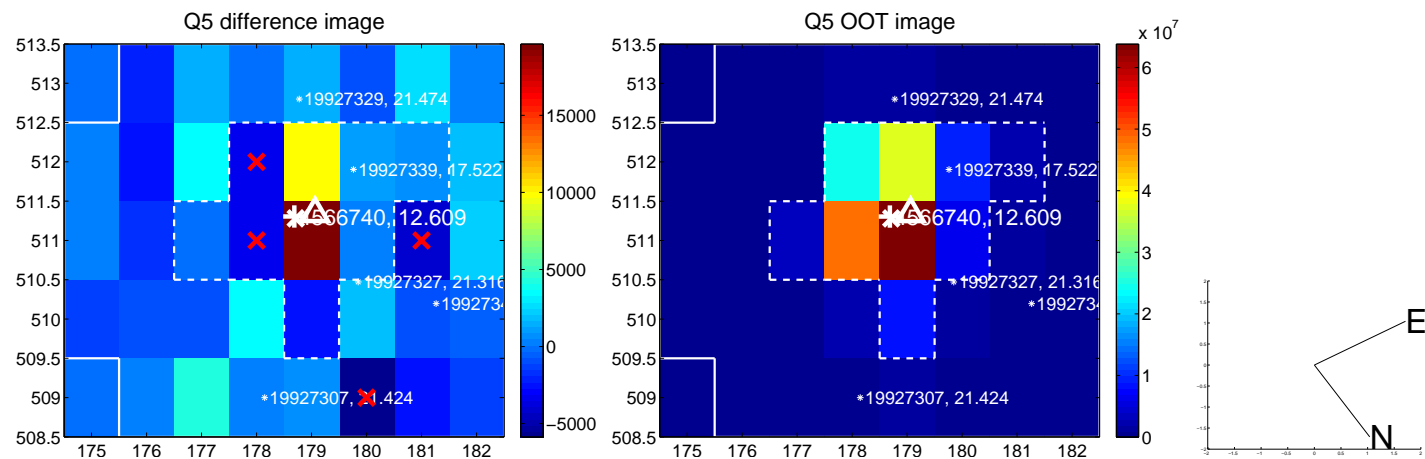


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

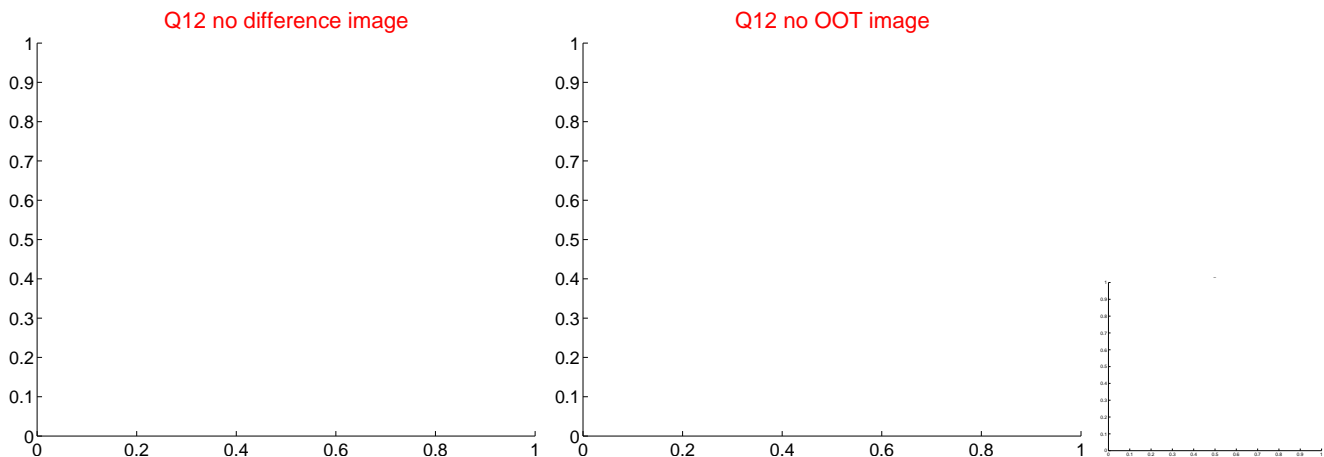
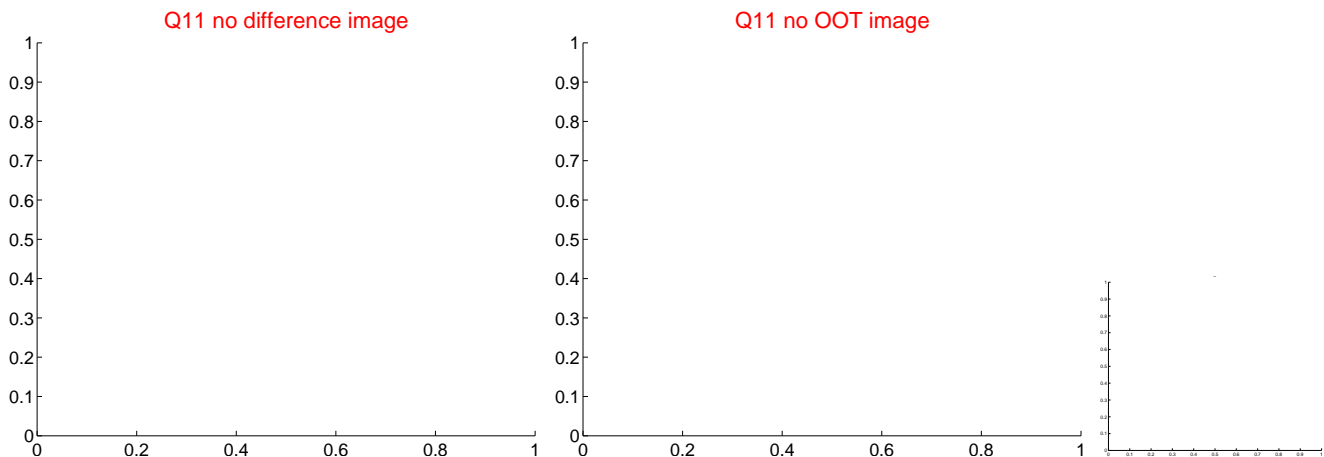
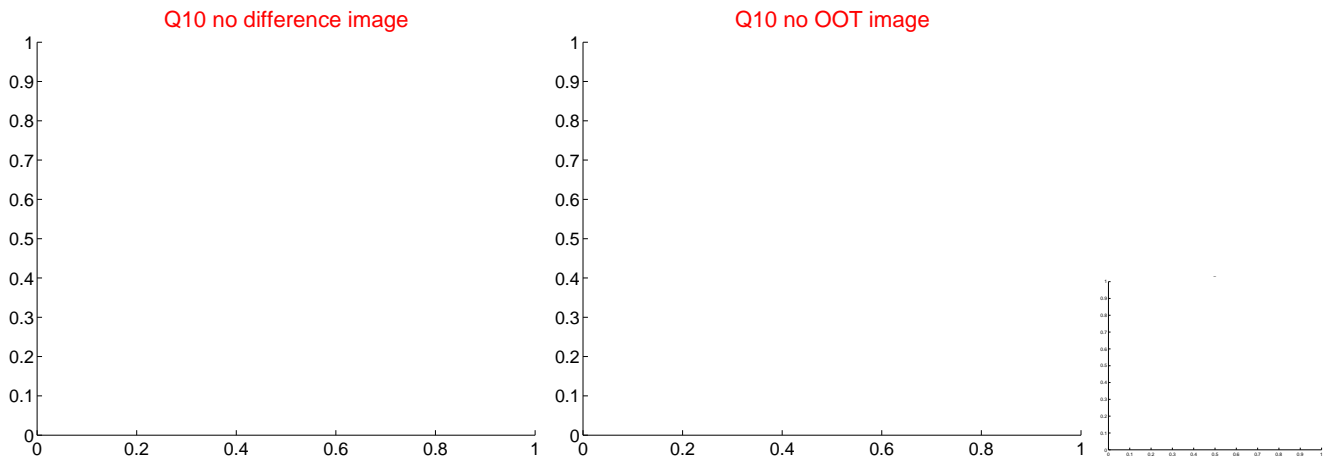
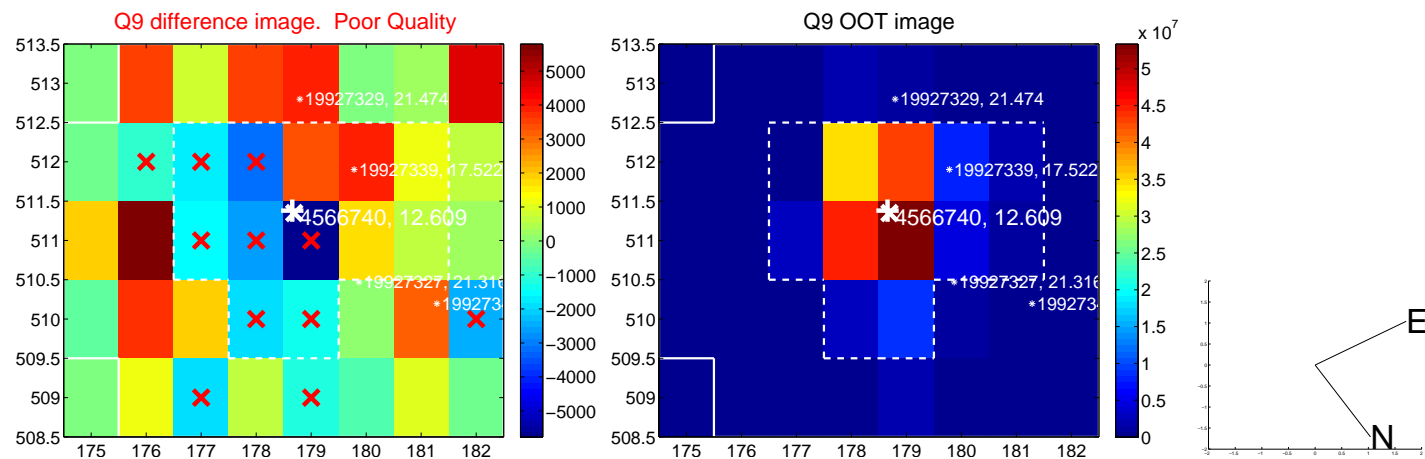
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



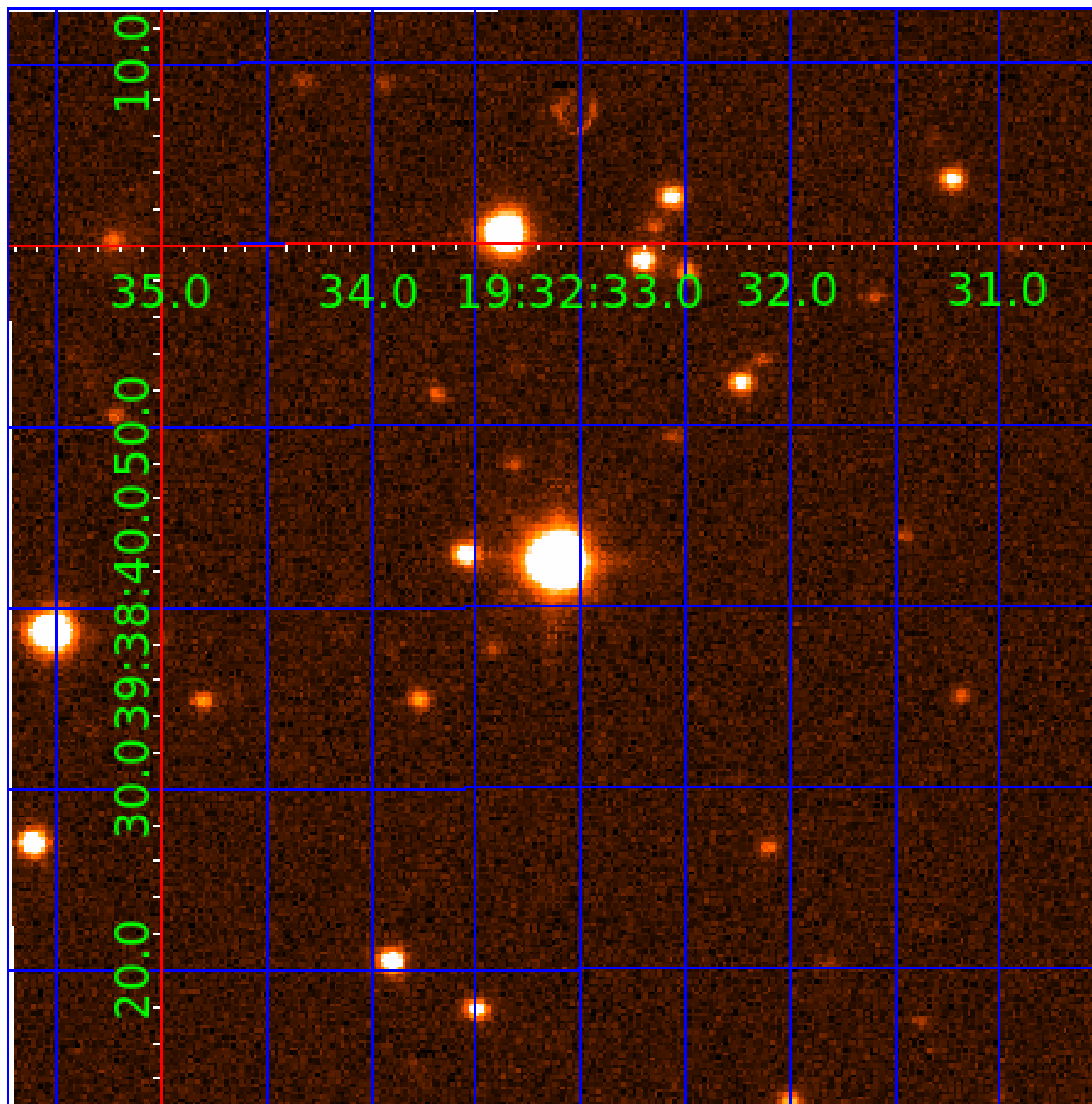
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



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})
004566740-01	OBS	No	4.973094	133.121675	18.1	16.357	9.1	4.6	2.45	6861	1.20	2661.05
004566740-02	OBS	No	2.486397	133.590068	33.4	10.361	10.1	8.9	2.45	6861	1.65	6705.96
004566740-03	OBS	No	76.219157	159.075847	211.1	5.534	9.3	8.3	2.45	6861	4.24	69.90
004566740-04	OBS	No	213.957349	243.898249	99.6	1.137	8.9	3.1	2.45	6861	2.76	17.65
004566740-05	OBS	No	213.953006	243.595682	3.4	0.512	8.9	0.1	2.45	6861	0.48	17.65
004566740-06	OBS	No	213.562988	245.133424	173.9	27.589	8.7	6.2	2.45	6861	3.47	17.70
004566740-07	OBS	No	52.951812	143.943002	200.3	9.663	7.9	7.7	2.45	6861	6.78	113.60
004566740-08	OBS	No	24.829527	148.789351	7.3	4.173	7.6	0.4	2.45	6861	0.71	311.84
004566740-09	OBS	No	17.811016	131.507027	152.8	3.000	7.4	-1.0	2.45	6861	3.06	485.63
004566740-10	OBS	No	57.698870	135.798867	148.7	3.447	7.4	7.8	2.45	6861	3.35	101.31

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004566740-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004566740-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_FEW_DIFFS
004566740-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
004566740-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
004566740-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—SAME_NTL_PERIOD—CENT_FEW_DIFFS
004566740-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
004566740-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004566740-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
004566740-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT—CENT_NOFITS
004566740-10	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

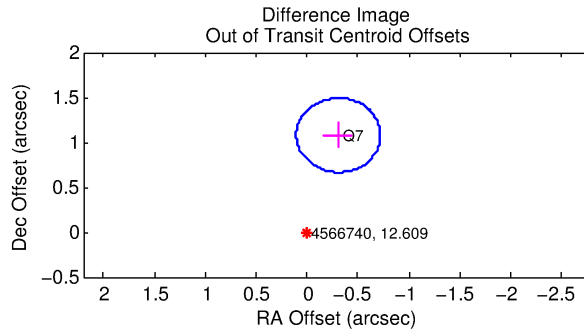
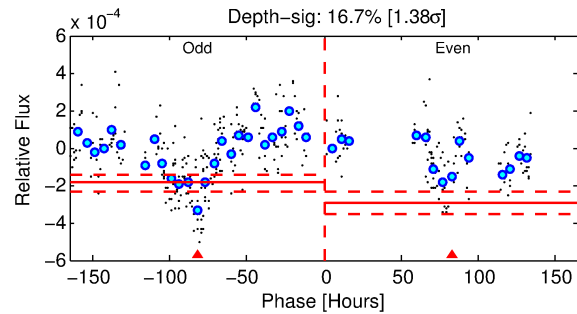
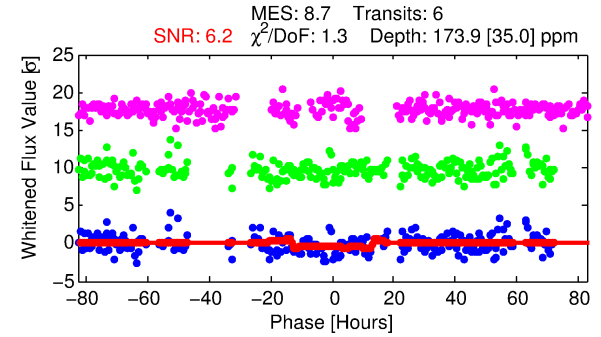
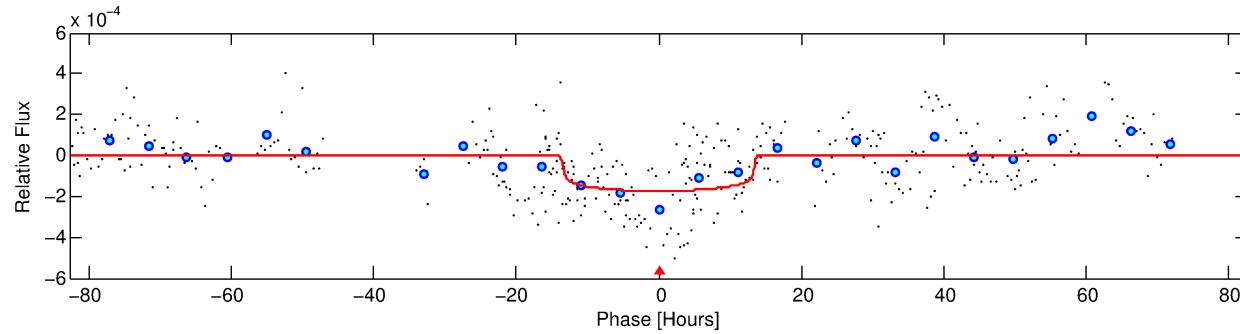
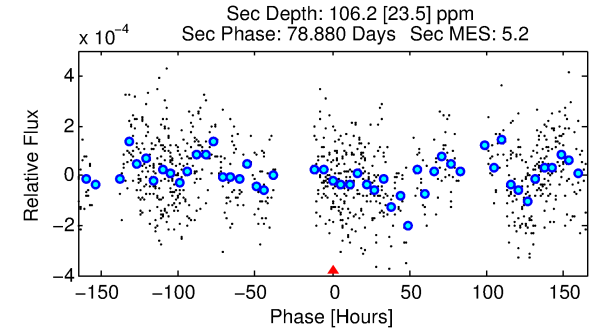
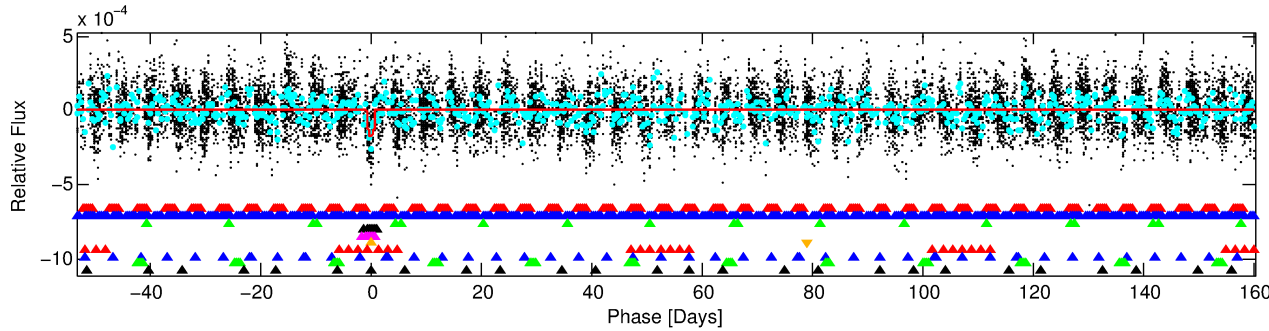
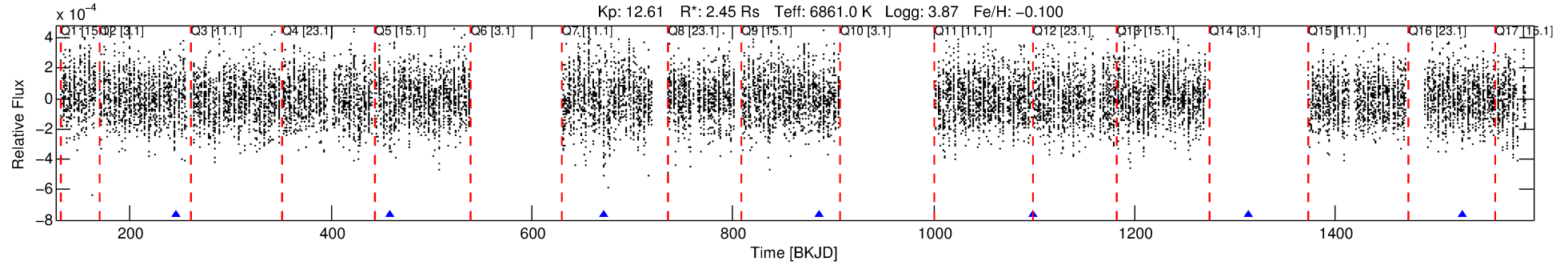
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004566740-06

No Significant Match Found

DV One-Page Summary

KIC: 4566740 Candidate: 6 of 10 Period: 213.563 d



DV Fit Results:

Period = 213.56299 [0.01047] d
Epoch = 245.1334 [0.0354] BKJD
Rp/R* = 0.0130 [0.0023]
a/R* = 42.38 [32.98]
b = 0.72 [0.53]
Seff = 17.70 [8.23]
Teq = 523 [61] K
Rp = 3.47 [1.24] Re
a = 0.8207 [0.2354] AU
Ag = 3260.03 [1994.04] [1.63σ]
Teffp = 6110 [664] K [8.38σ]

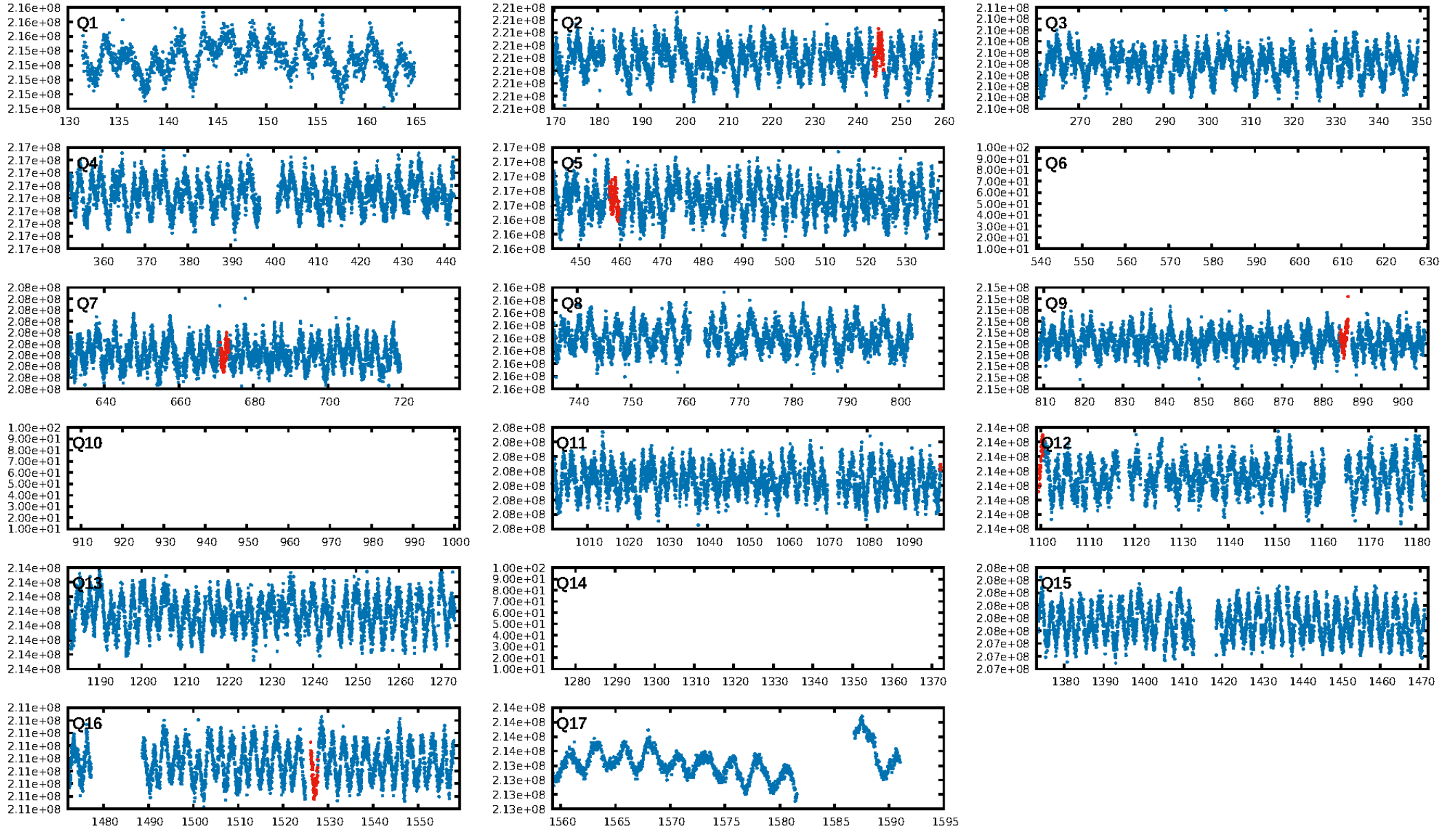
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [117.14σ]
LongPeriod-sig: 26.6% [0.34σ]
ModelChiSquare2-sig: 6.4%
ModelChiSquareGoF-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [6/6]
GhostDiagnostic-chr: -0.6487
Centroid-sig: 13.9%
Centroid-so: 0.839 arcsec [1.27σ]
OotOffset-rm: 1.120 arcsec [8.13σ]
KicOffset-rm: 1.051 arcsec [7.63σ]
OotOffset-st: 0/1/0/0 [1]
KicOffset-st: 0/1/0/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 0.00 [0/2]

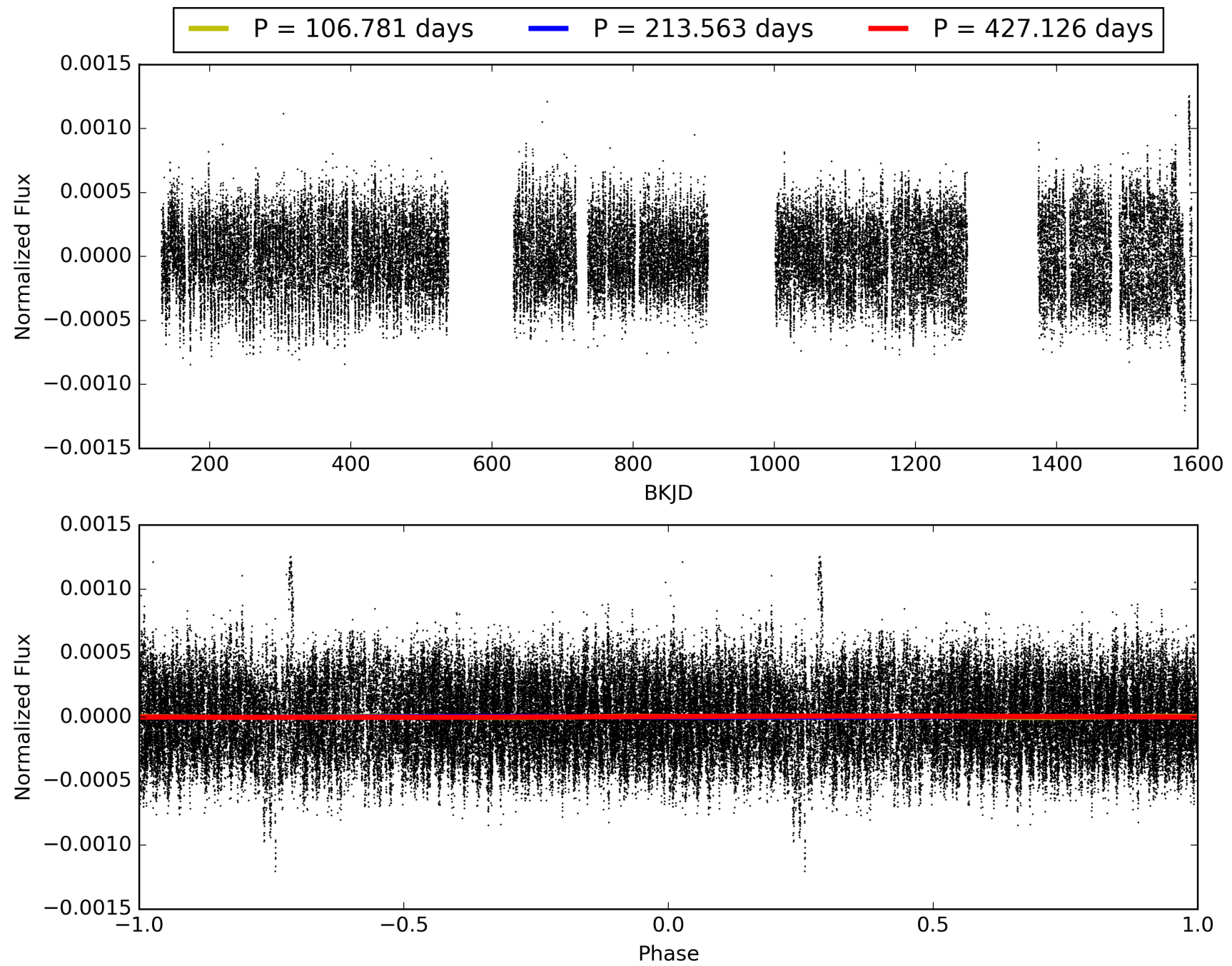
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 06:44:00 Z

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

TCE 004566740-06, PDC Light Curves

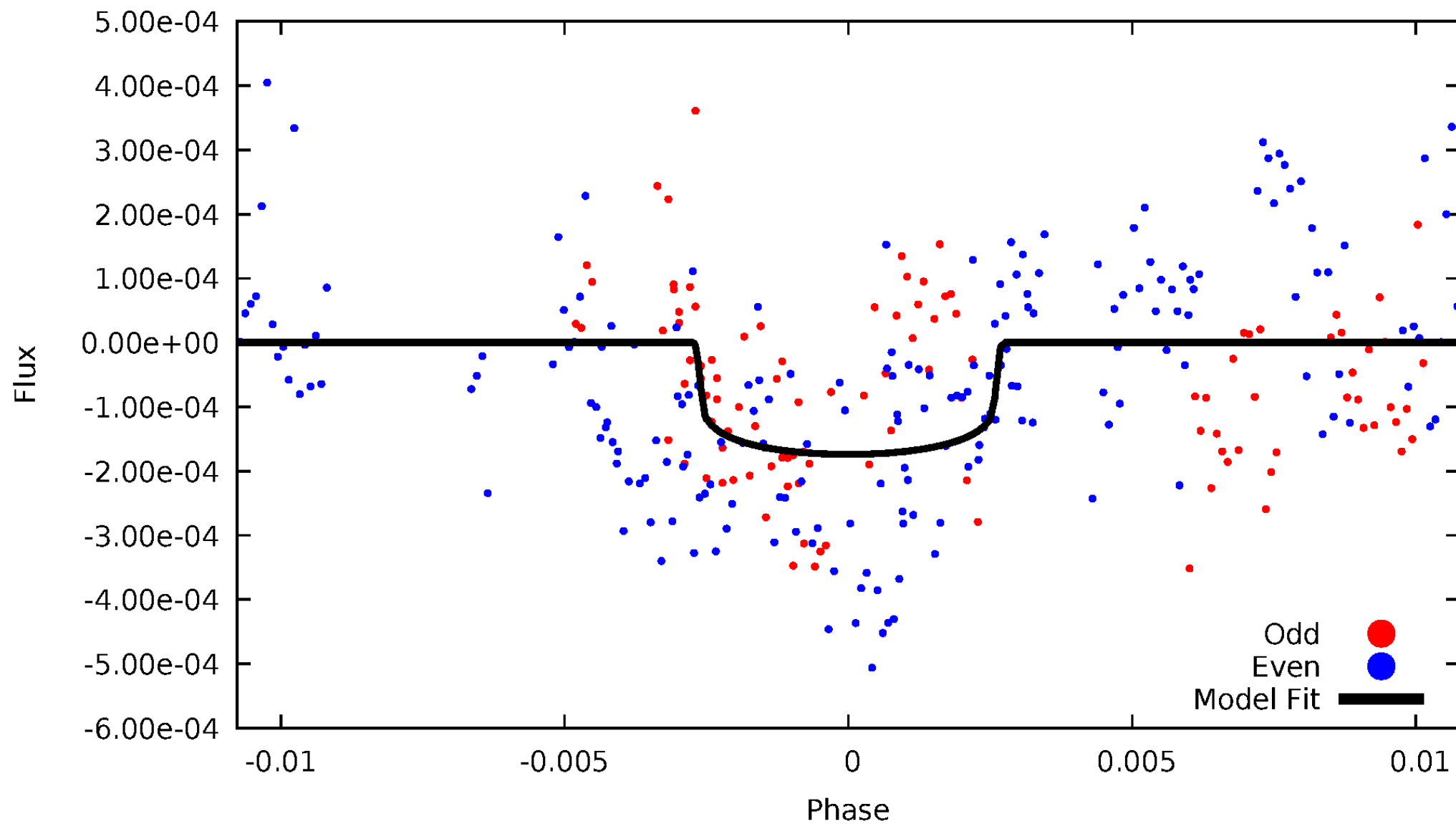


TCE 004566740-06



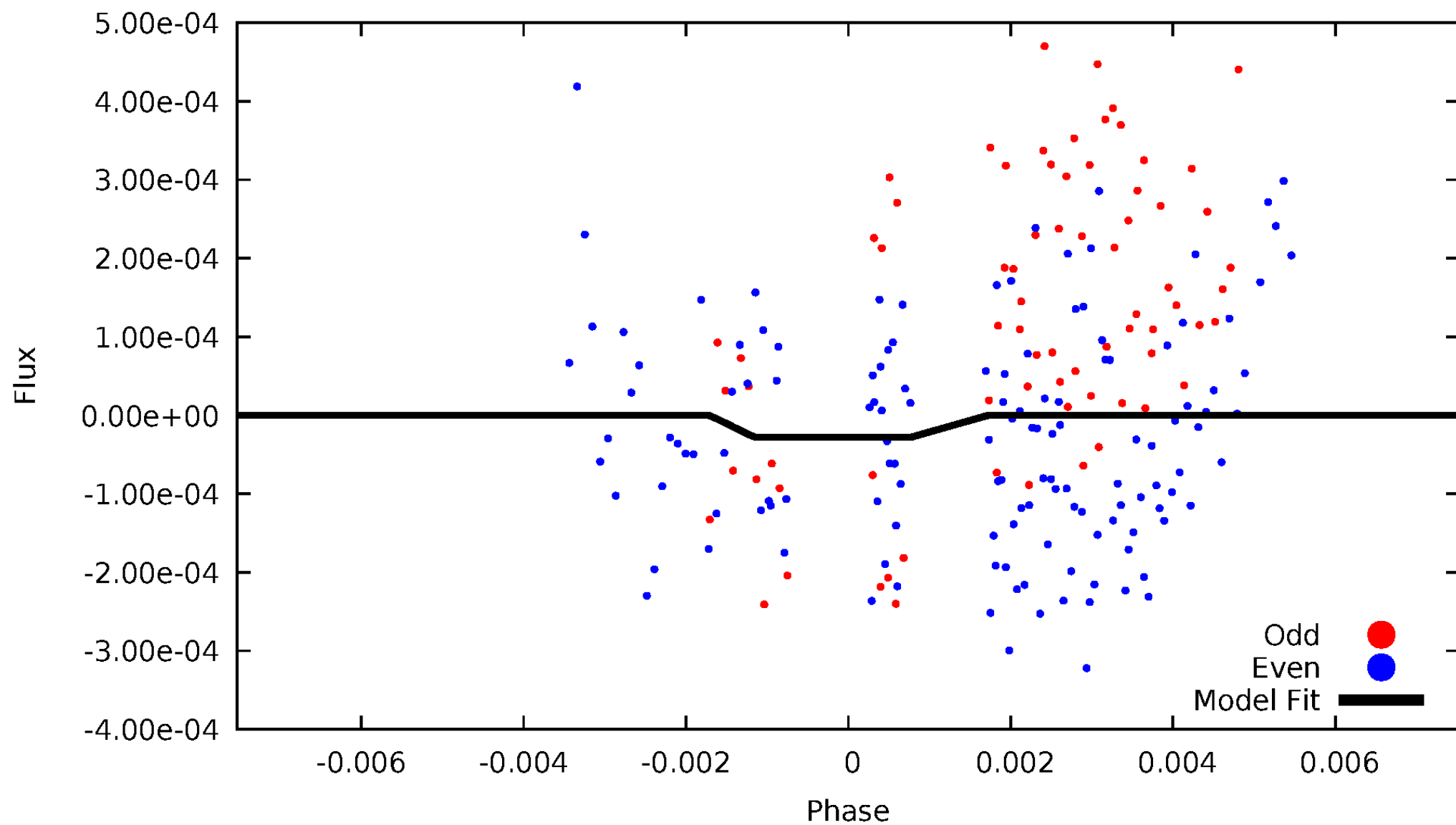
DV Odd/Even

TCE 004566740-06



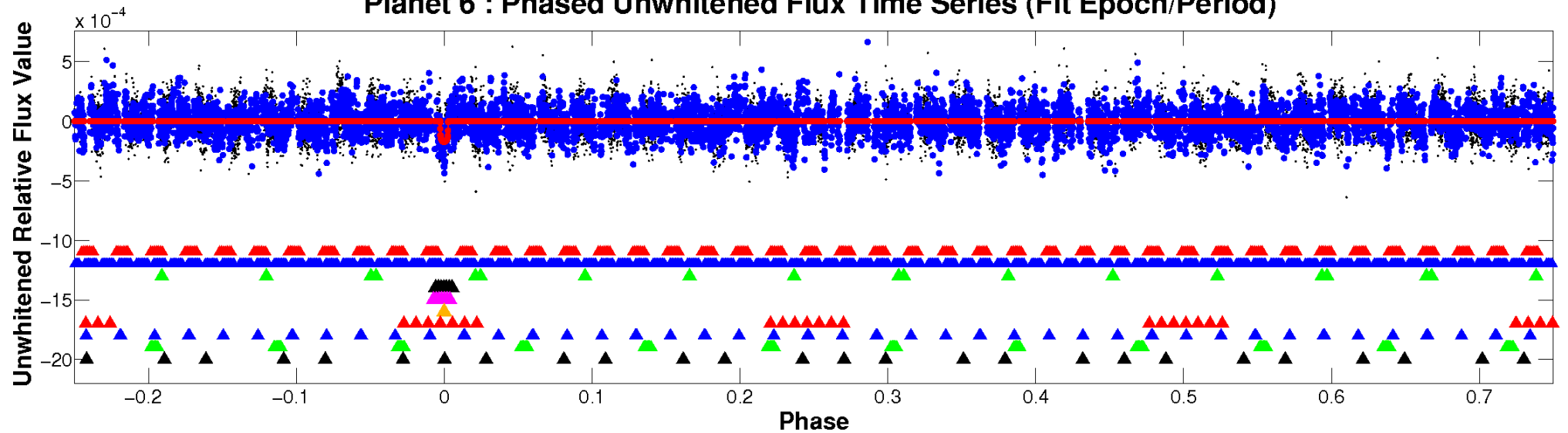
ALT Odd/Even

TCE 004566740-06

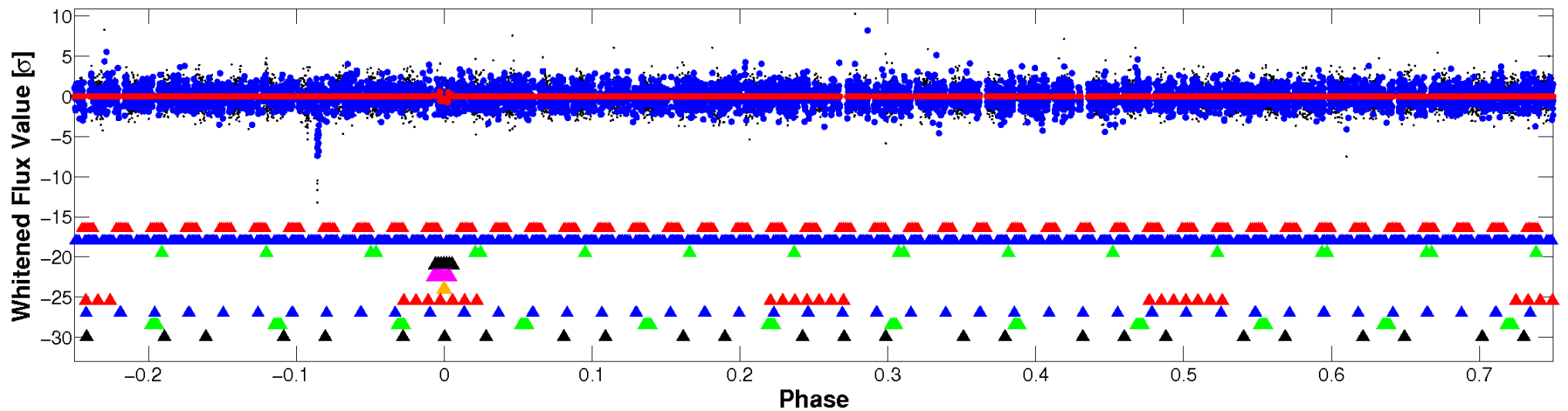


Non-Whitened Vs. Whitened Light Curve

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

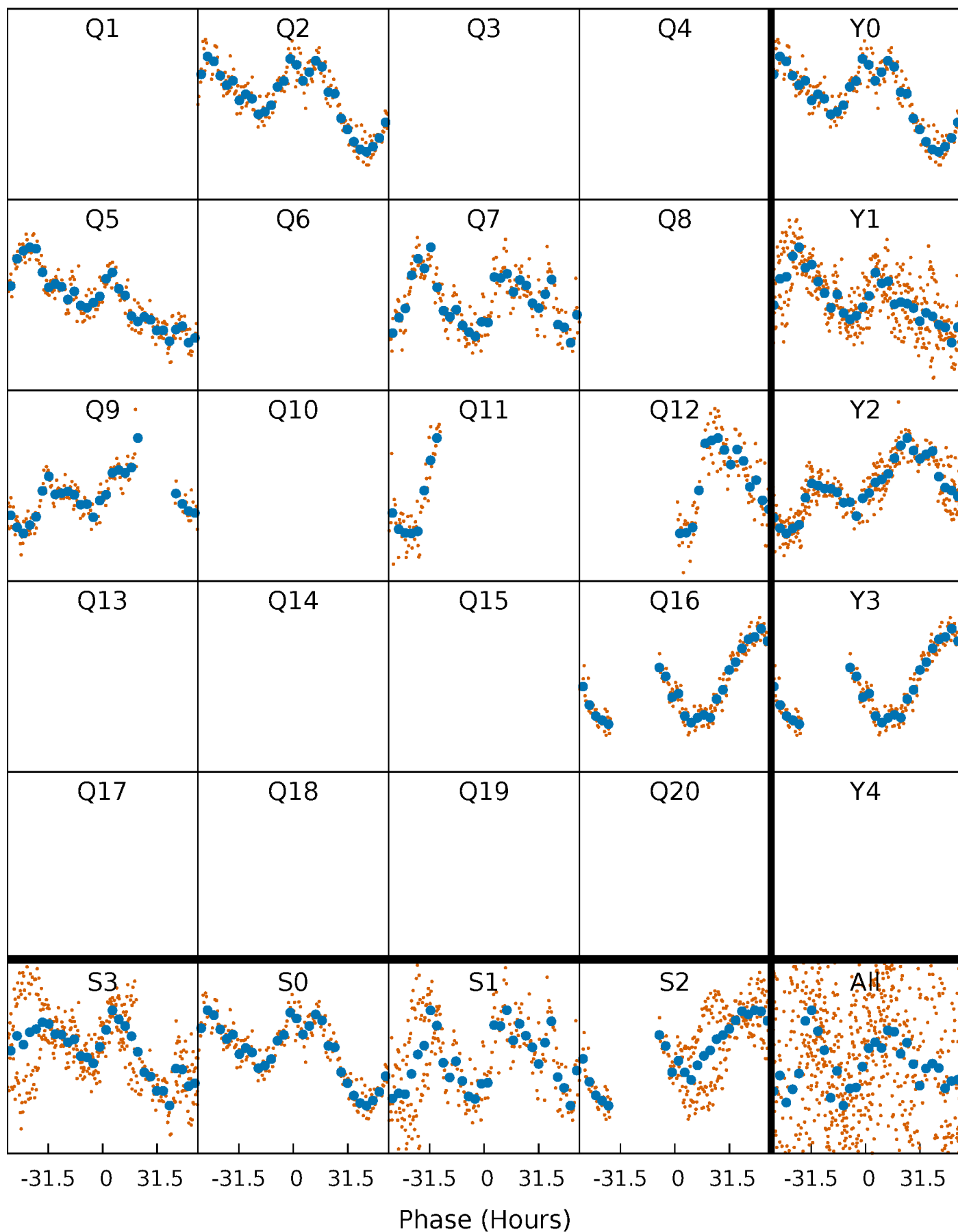


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



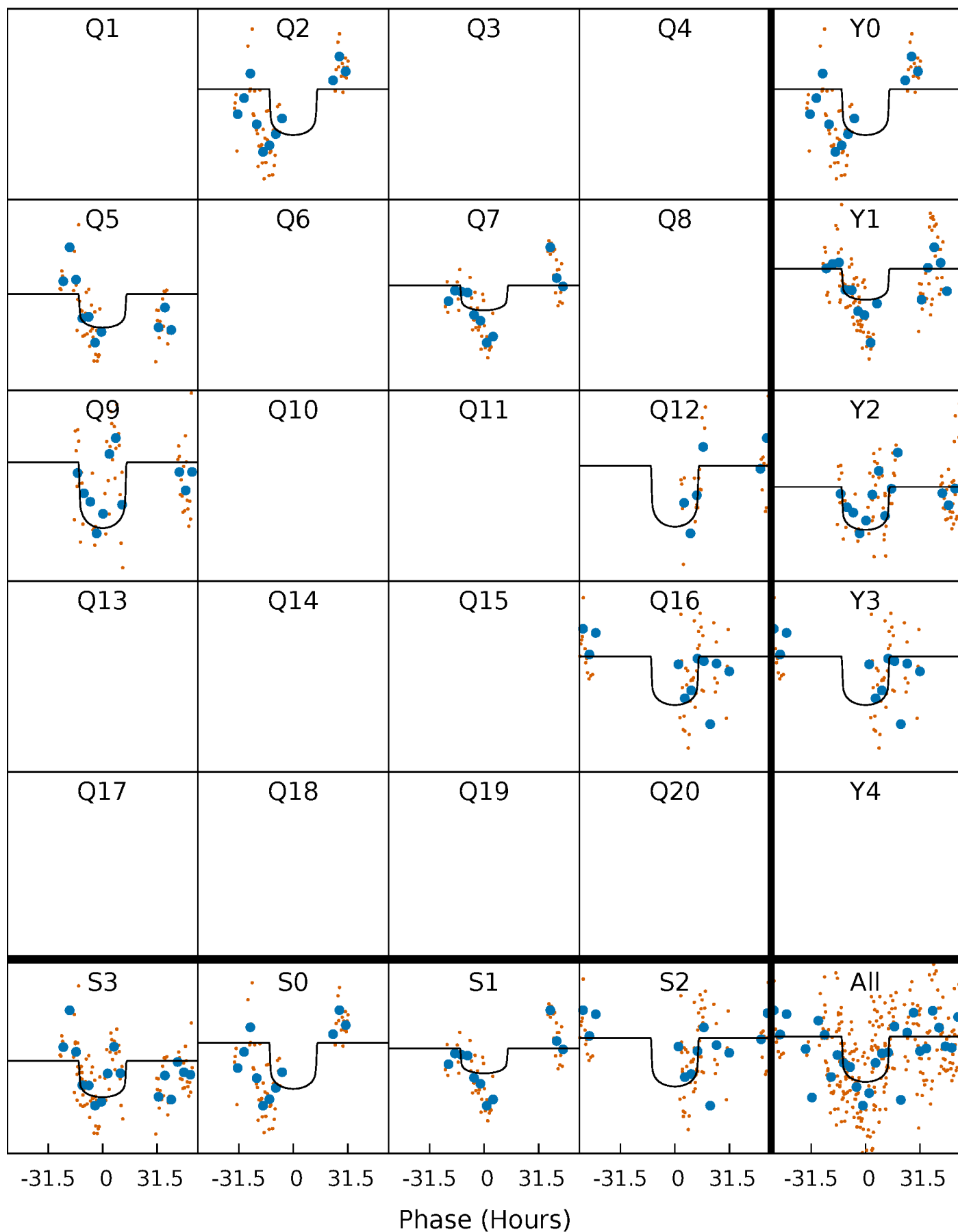
PDC Quarter-Phased Transit Curves

TCE 004566740-06 $P=213.562988$ Days $T_0=245.133424$ (BKJD)



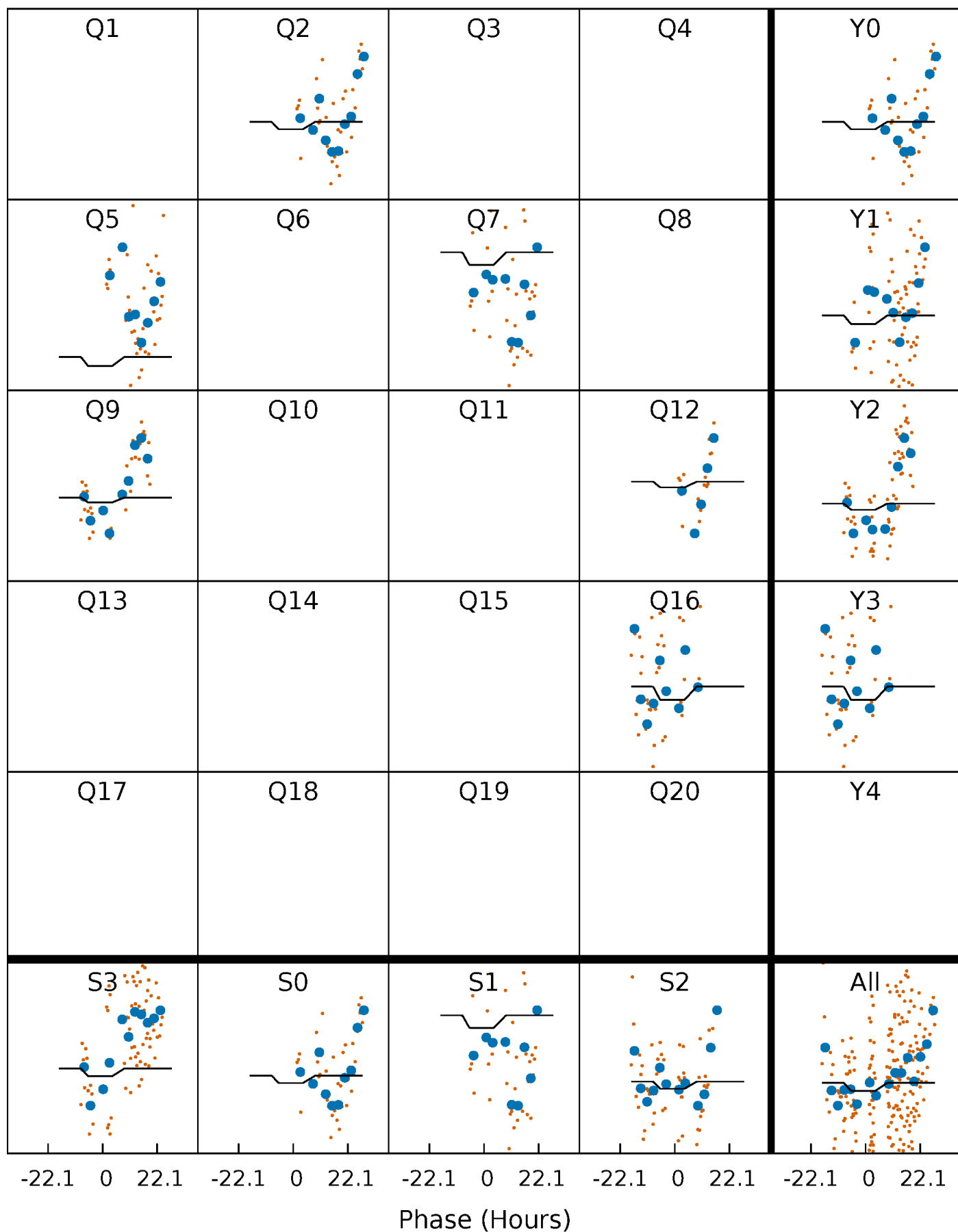
DV Quarter-Phased Transit Curves

TCE 004566740-06 P=213.562988 Days $T_0=245.133424$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

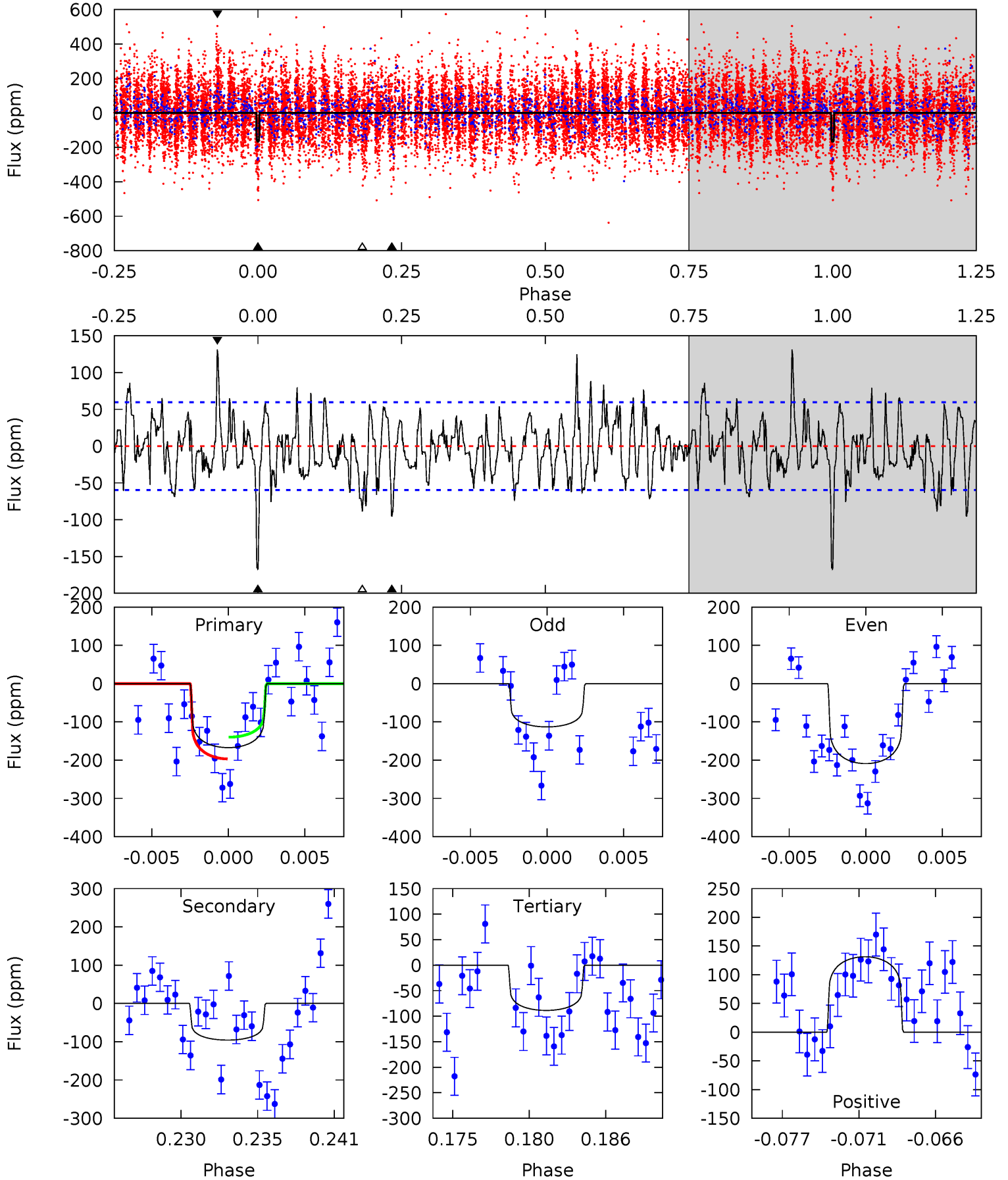
TCE 004566740-06 P=213.952996 Days $T_0=243.650933$ (BKJD)



DV Model-Shift Uniqueness Test

004566740-06, P = 213.562988 Days, E = 31.570436 Days

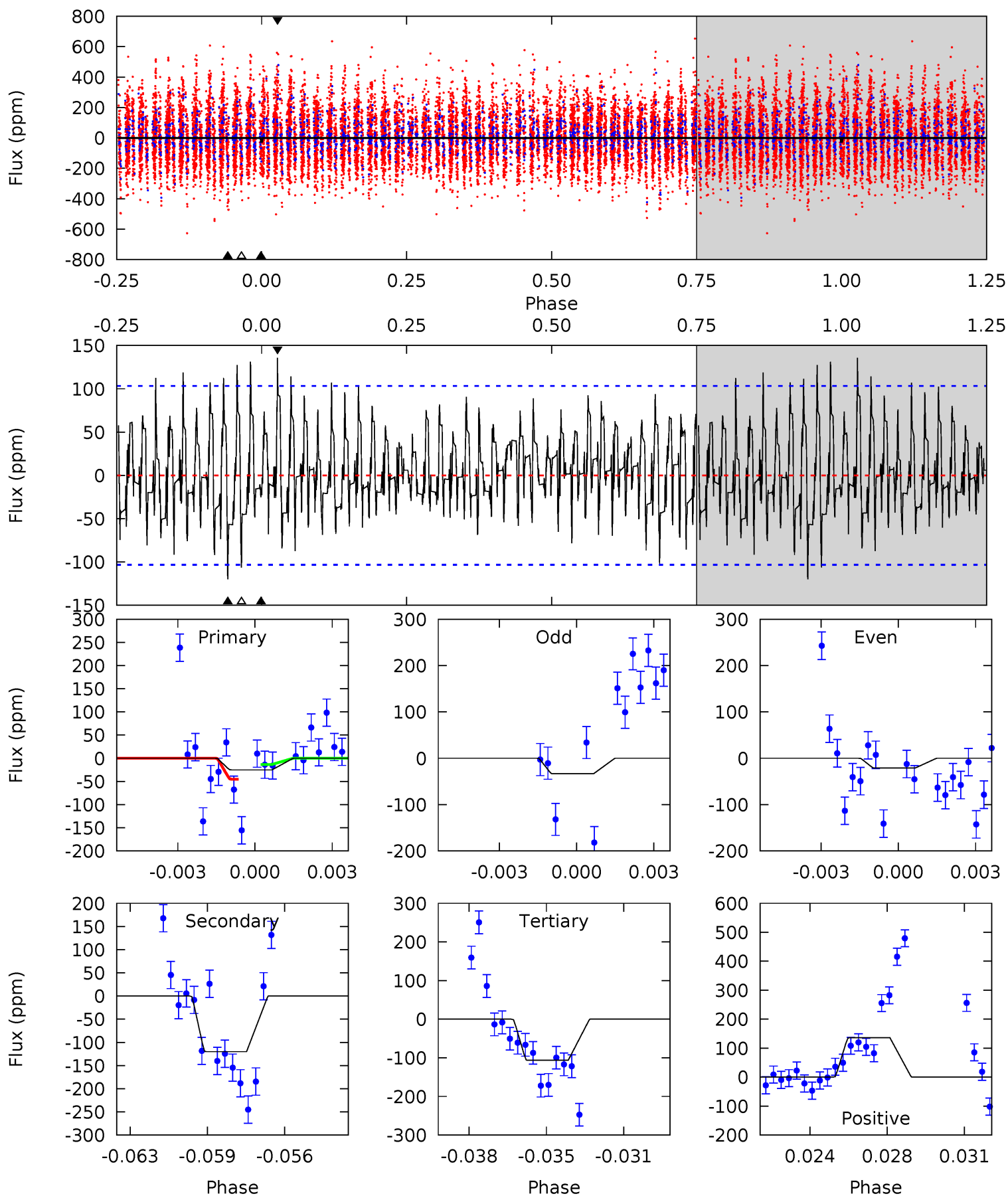
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.4	8.23	7.63	11.3	5.14	2.78	3.07	6.77	3.10	0.61	-3.06	4.10	1.03	0.44	2.45



Alt Model-Shift Uniqueness Test

004566740-06, P = 213.952996 Days, E = 29.697937 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.27	6.06	5.38	6.86	5.22	2.92	1.92	-4.11	-5.59	0.68	-0.80	0.31	-0.36	0.53	0.79



Stellar Parameters For KIC 004566740

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6861^{+190}_{-214}	$3.868^{+0.259}_{-0.111}$	$-0.100^{+0.300}_{-0.300}$	$2.450^{+0.507}_{-0.760}$	$1.614^{+0.194}_{-0.292}$	$0.154^{+0.251}_{-0.052}$
	+3%/-3%	+7%/-3%	+300%/-300%	+21%/-31%	+12%/-18%	+163%/-33%
Source	PHO1	FLK73	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 004566740-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-96 ± 12	$3.33^{+0.76}_{-0.77}$	721^{+43}_{-60}	5914^{+662}_{-494}	3174^{+2071}_{-1088}
Alt.	-120 ± 20	$1.30^{+0.69}_{-0.58}$	717^{+47}_{-59}	11222^{+7386}_{-2783}	26240^{+60325}_{-15187}

T_{max} = Theoretical Maximum Planetary Temperature
 T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)
 A_{obs} = Observed Albedo (Assuming $T=0$)

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

DV Centroid Data

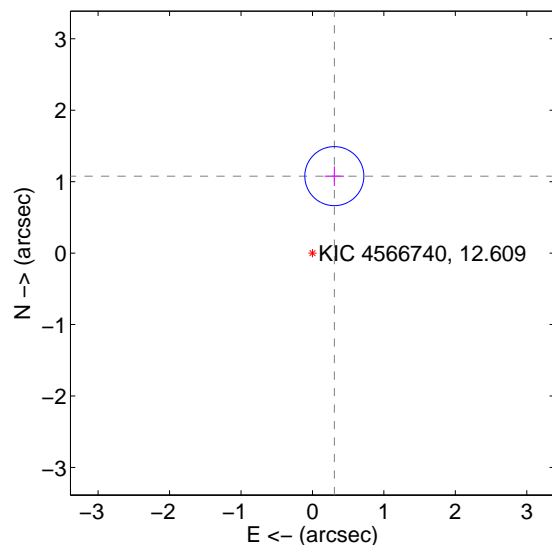
Supplemental centroid analysis for 004566740-06. Kepler magnitude: 12.61. Transit SNR 6.19

There are 1 quarters with good PRF difference image offsets

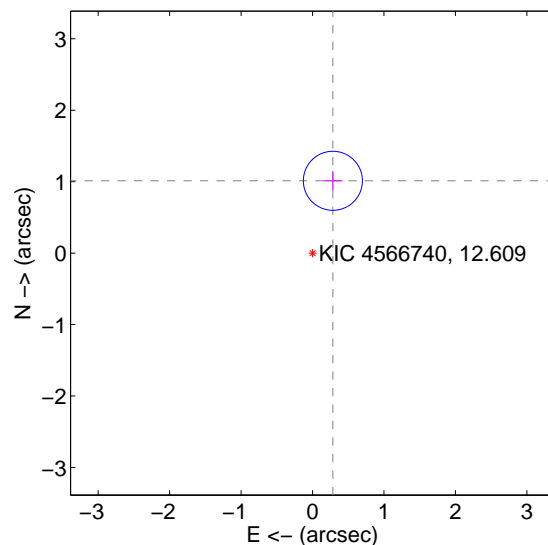
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.120 ± 0.138	8.13	-0.306 ± 0.136	1.077 ± 0.138
PRF-fit source offset from KIC position	1.051 ± 0.138	7.63	-0.285 ± 0.136	1.012 ± 0.138
photometric centroid source offset	0.84 ± 0.66	1.27	0.51 ± 0.67	-0.67 ± 0.66

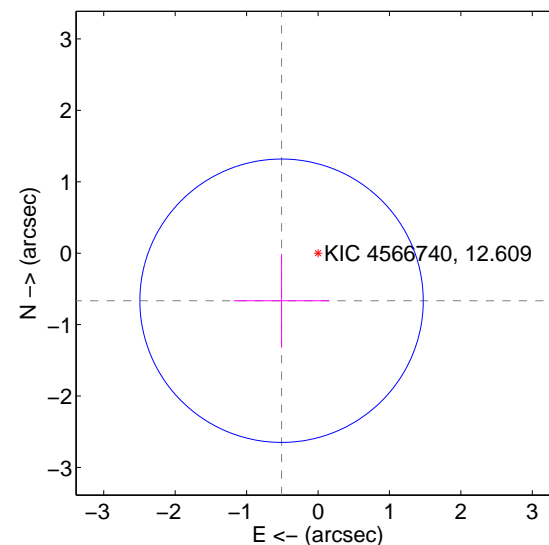
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

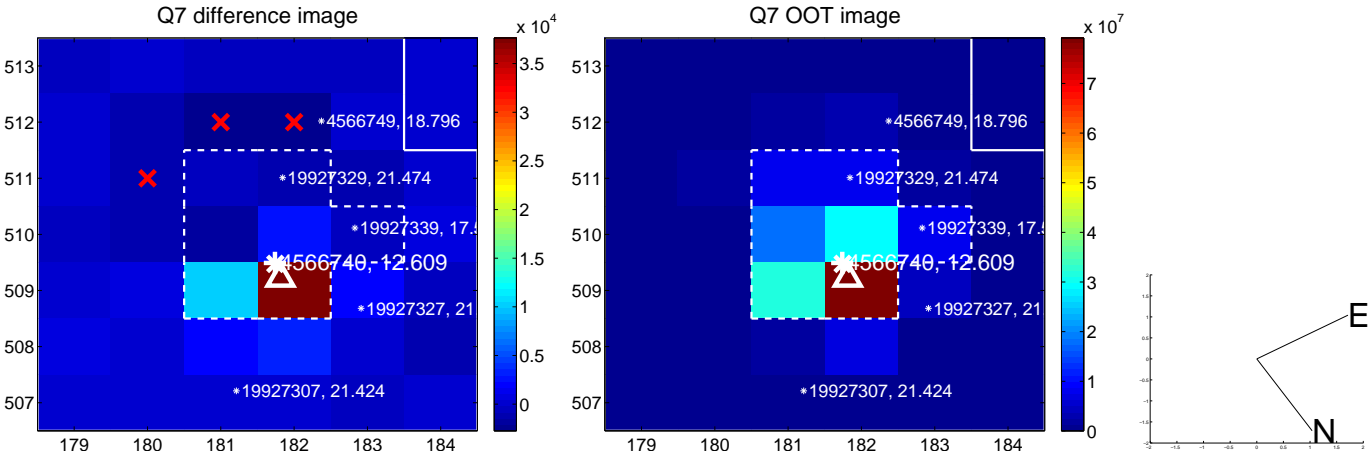
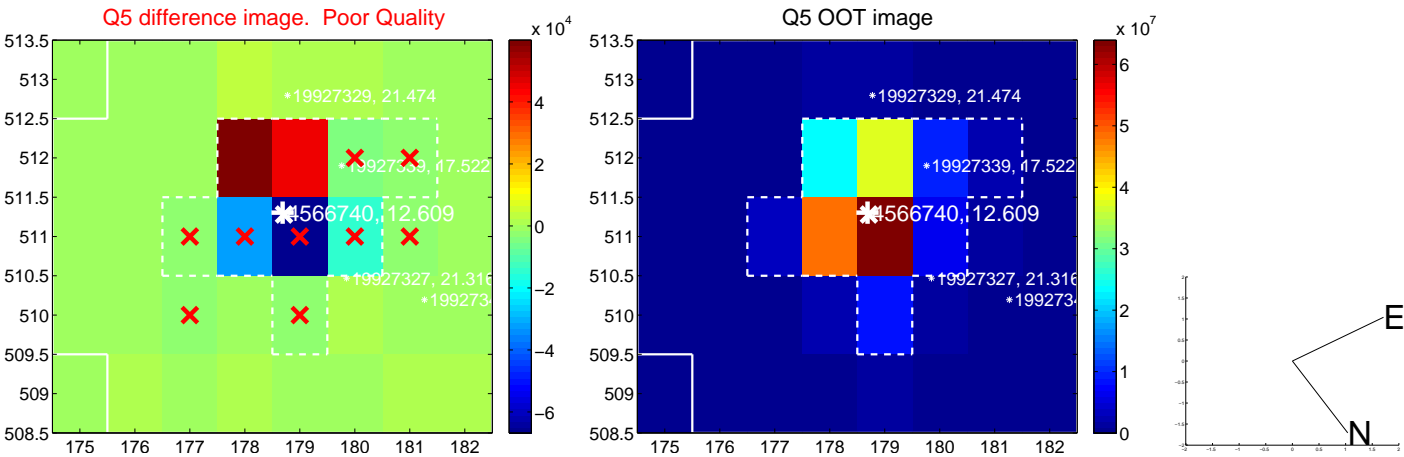


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



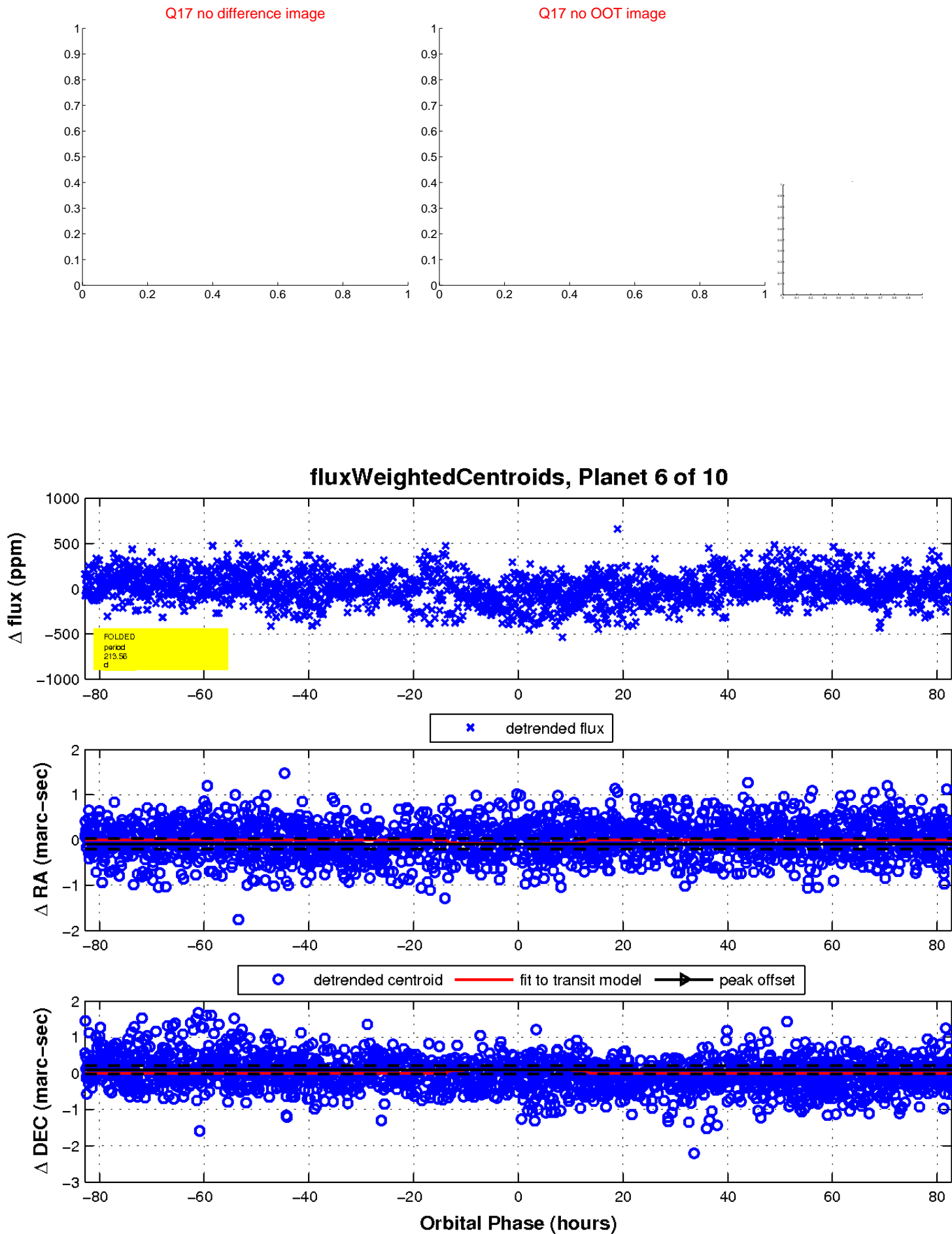
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

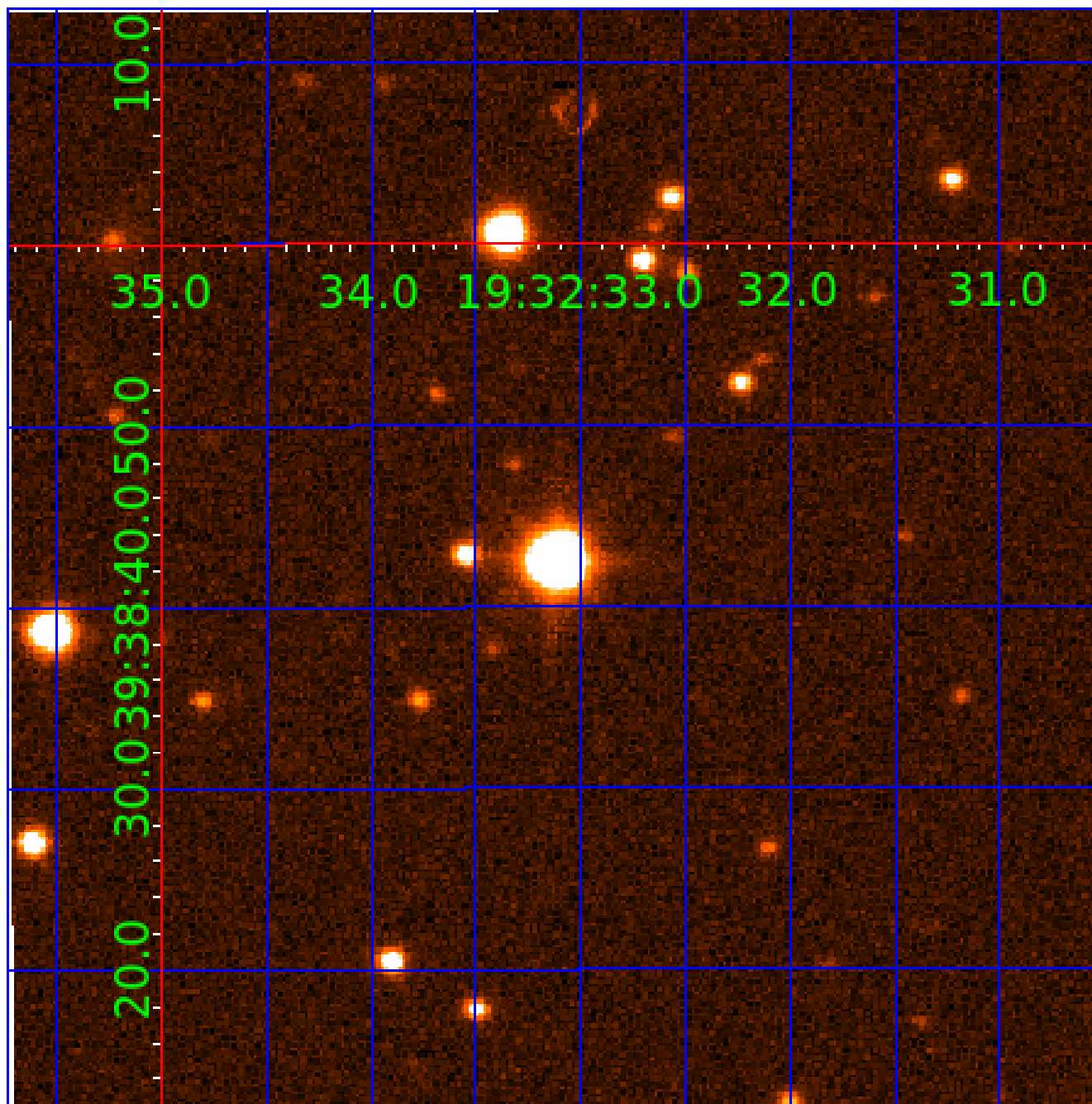


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



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})
004566740-01	OBS	No	4.973094	133.121675	18.1	16.357	9.1	4.6	2.45	6861	1.20	2661.05
004566740-02	OBS	No	2.486397	133.590068	33.4	10.361	10.1	8.9	2.45	6861	1.65	6705.96
004566740-03	OBS	No	76.219157	159.075847	211.1	5.534	9.3	8.3	2.45	6861	4.24	69.90
004566740-04	OBS	No	213.957349	243.898249	99.6	1.137	8.9	3.1	2.45	6861	2.76	17.65
004566740-05	OBS	No	213.953006	243.595682	3.4	0.512	8.9	0.1	2.45	6861	0.48	17.65
004566740-06	OBS	No	213.562988	245.133424	173.9	27.589	8.7	6.2	2.45	6861	3.47	17.70
004566740-07	OBS	No	52.951812	143.943002	200.3	9.663	7.9	7.7	2.45	6861	6.78	113.60
004566740-08	OBS	No	24.829527	148.789351	7.3	4.173	7.6	0.4	2.45	6861	0.71	311.84
004566740-09	OBS	No	17.811016	131.507027	152.8	3.000	7.4	-1.0	2.45	6861	3.06	485.63
004566740-10	OBS	No	57.698870	135.798867	148.7	3.447	7.4	7.8	2.45	6861	3.35	101.31

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004566740-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004566740-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_FEW_DIFFS
004566740-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
004566740-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
004566740-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—SAME_NTL_PERIOD—CENT_FEW_DIFFS
004566740-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
004566740-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004566740-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
004566740-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT—CENT_NOFITS
004566740-10	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

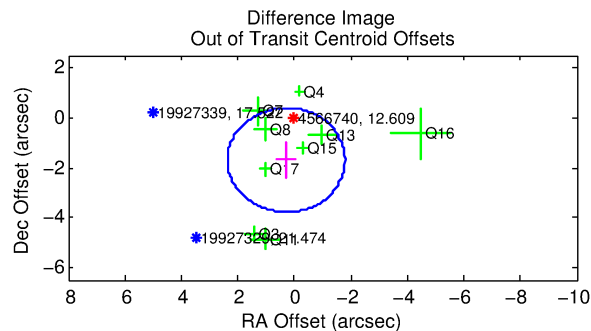
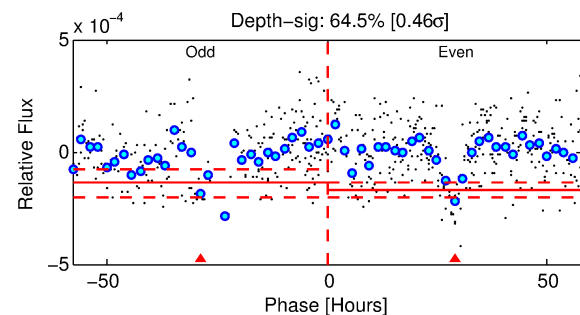
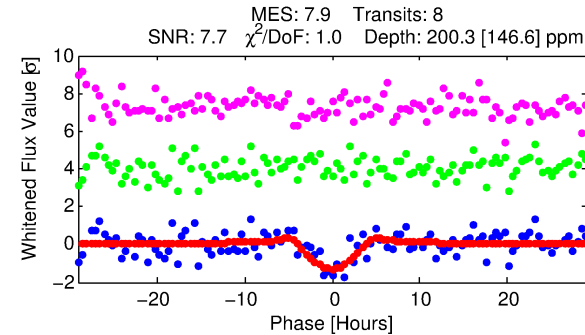
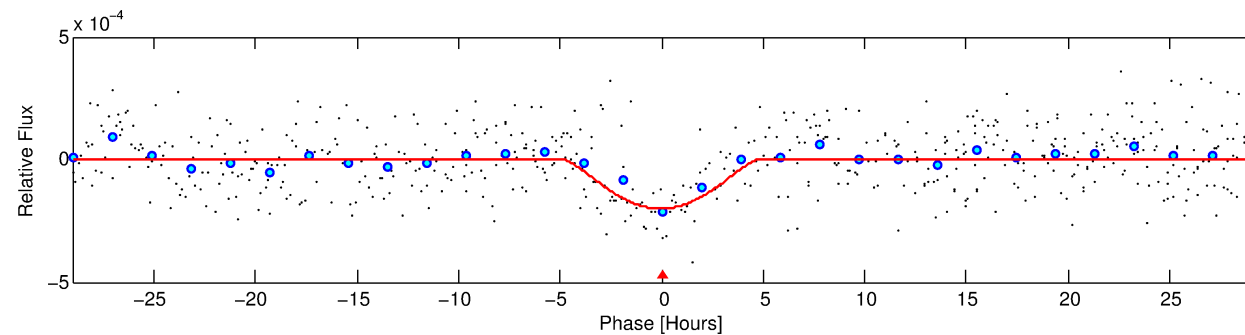
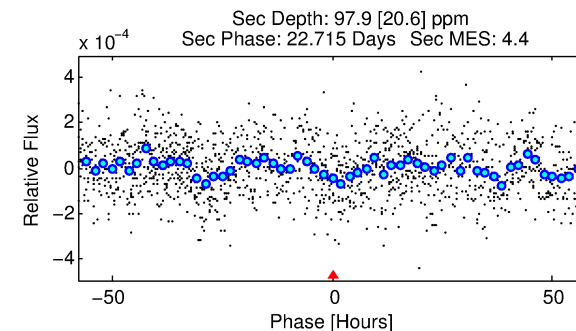
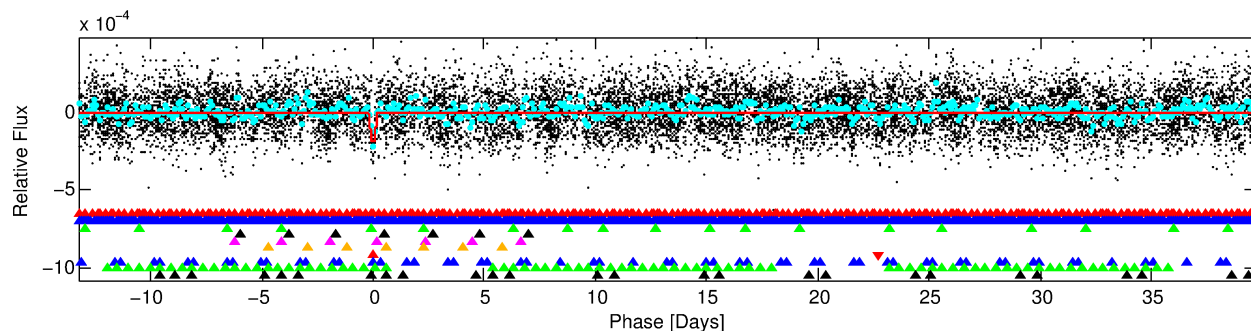
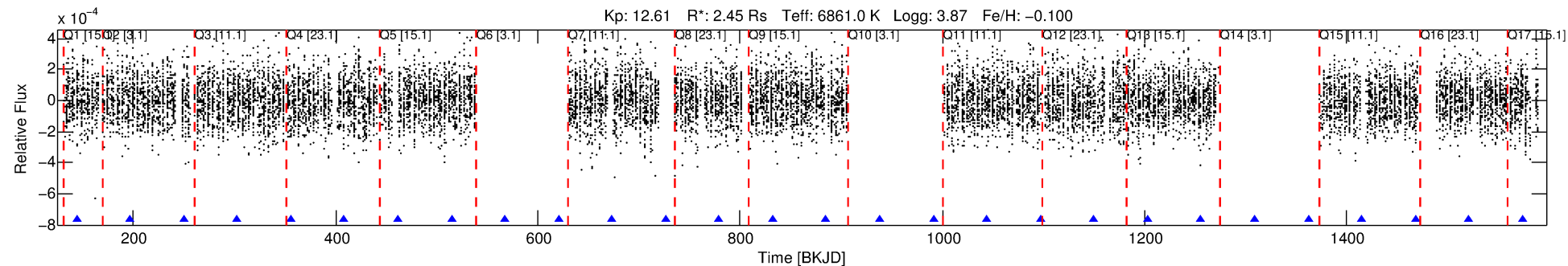
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004566740-07

No Significant Match Found

DV One-Page Summary

KIC: 4566740 Candidate: 7 of 10 Period: 52.952 d



DV Fit Results:

Period = 52.95181 [0.00136] d
Epoch = 143.9430 [0.0221] BKJD
Rp/R* = 0.0254 [0.0747]
a/R* = 9.55 [7.47]
b = 1.00 [0.12]
Seff = 113.60 [52.85]
Teq = 832 [97] K
Rp = 6.78 [20.07] Re
a = 0.3239 [0.0929] AU
Ag = 122.81 [725.51] [0.17σ]
Teffp = 4285 [6311] K [0.55σ]

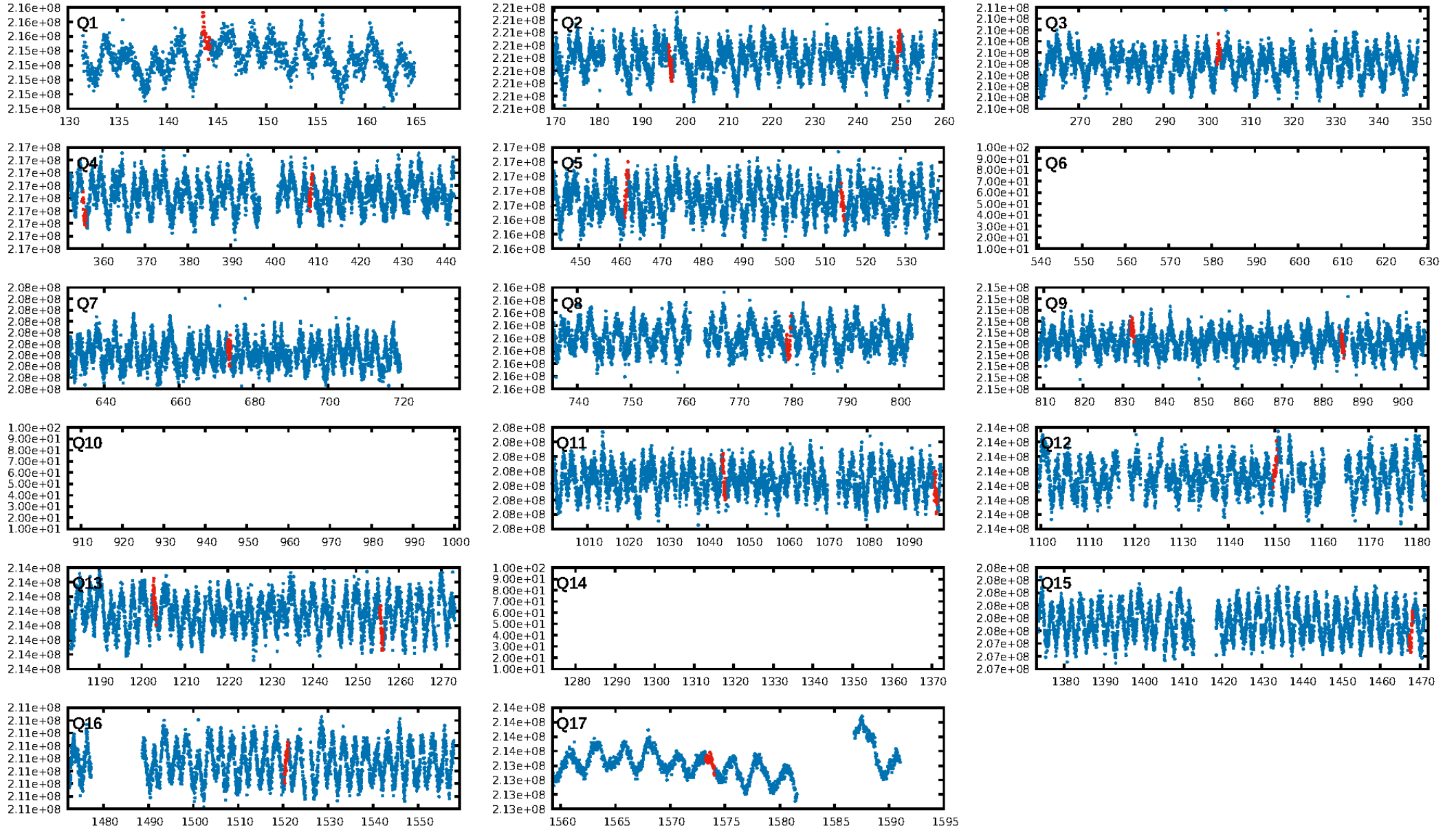
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [64.12σ]
LongPeriod-sig: 100.0% [11.10σ]
ModelChiSquare2-sig: 12.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [8/8]
GhostDiagnostic-chr: 1.324
Centroid-sig: 48.4%
Centroid-so: 0.368 arcsec [0.78σ]
OotOffset-rm: 1.721 arcsec [2.48σ]
OotOffset-st: 0/4/3/2 [9]
KicOffset-rm: 1.762 arcsec [2.50σ]
KicOffset-st: 0/4/3/2 [9]
DiffImageQuality-fgm: 0.56 [5/9]
DiffImageOverlap-fno: 0.07 [1/14]

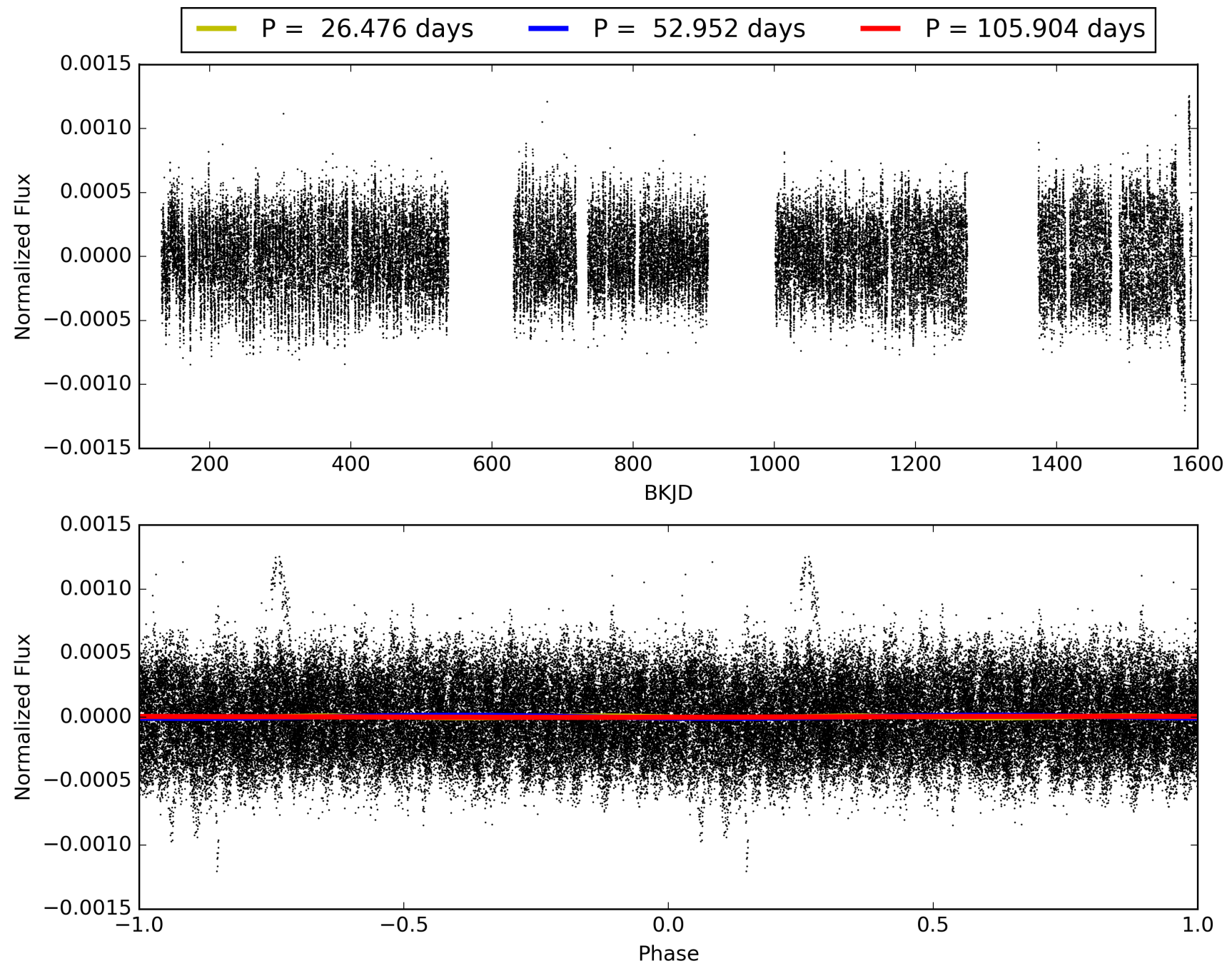
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 06:44:04 Z

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

TCE 004566740-07, PDC Light Curves

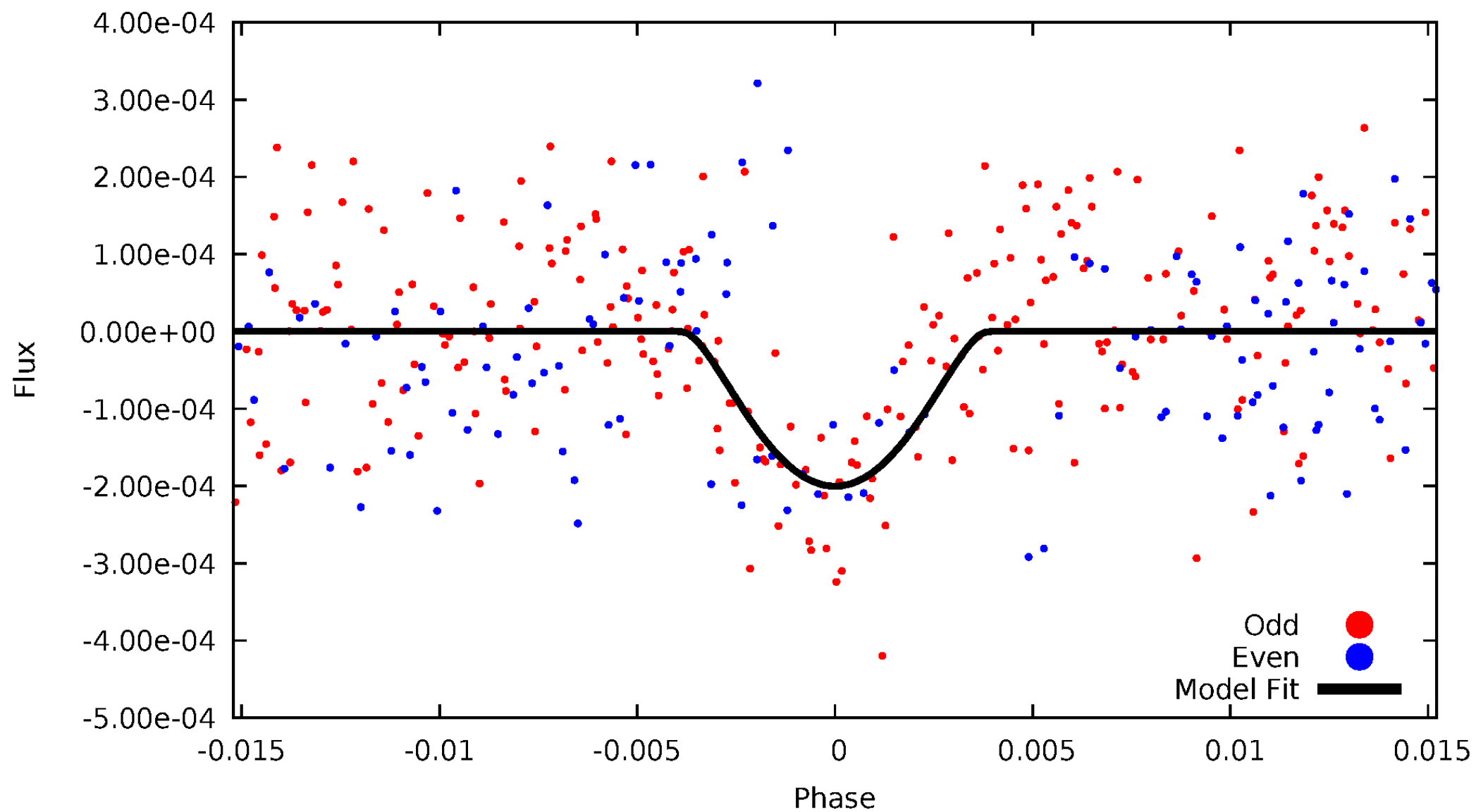


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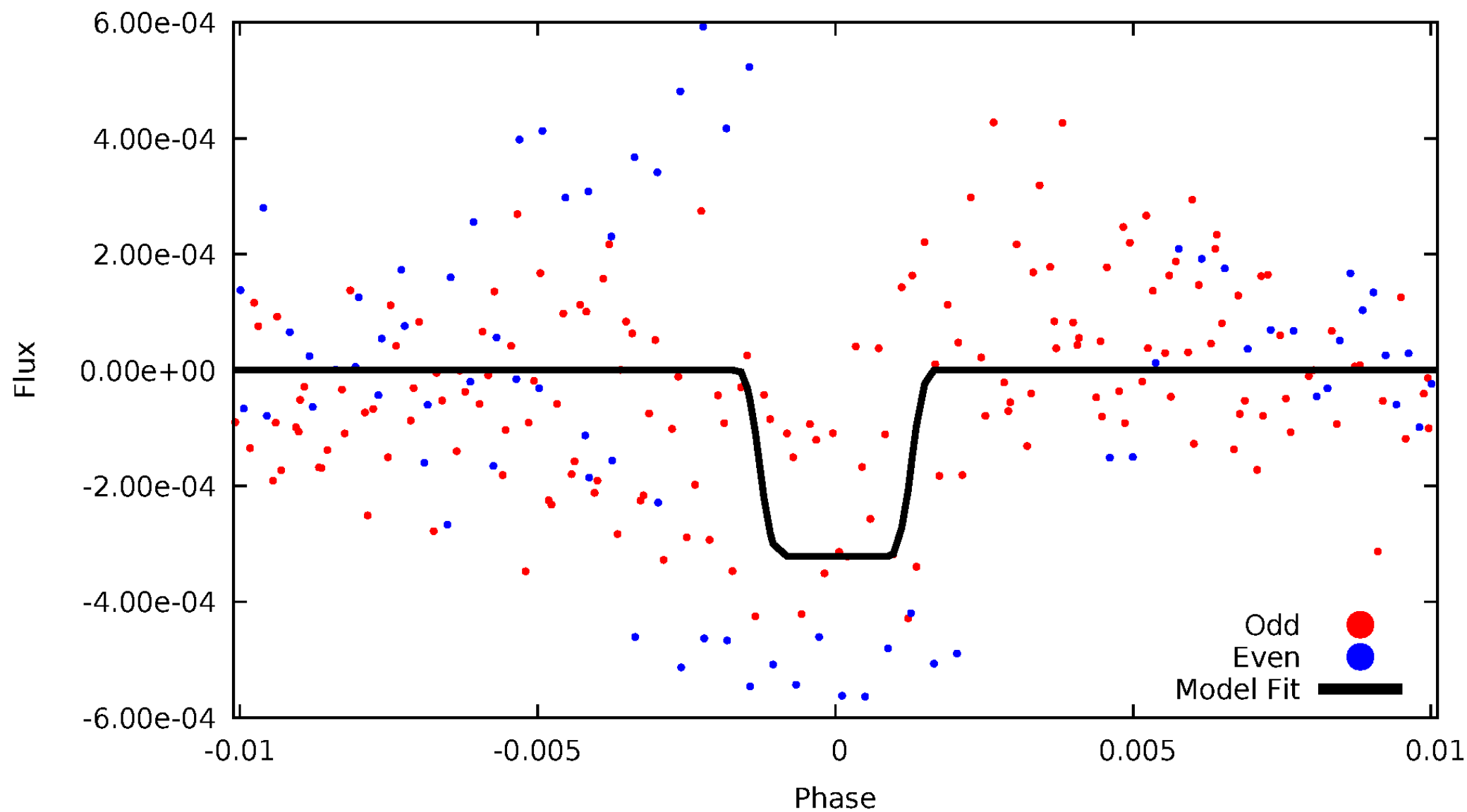
DV Odd/Even

TCE 004566740-07



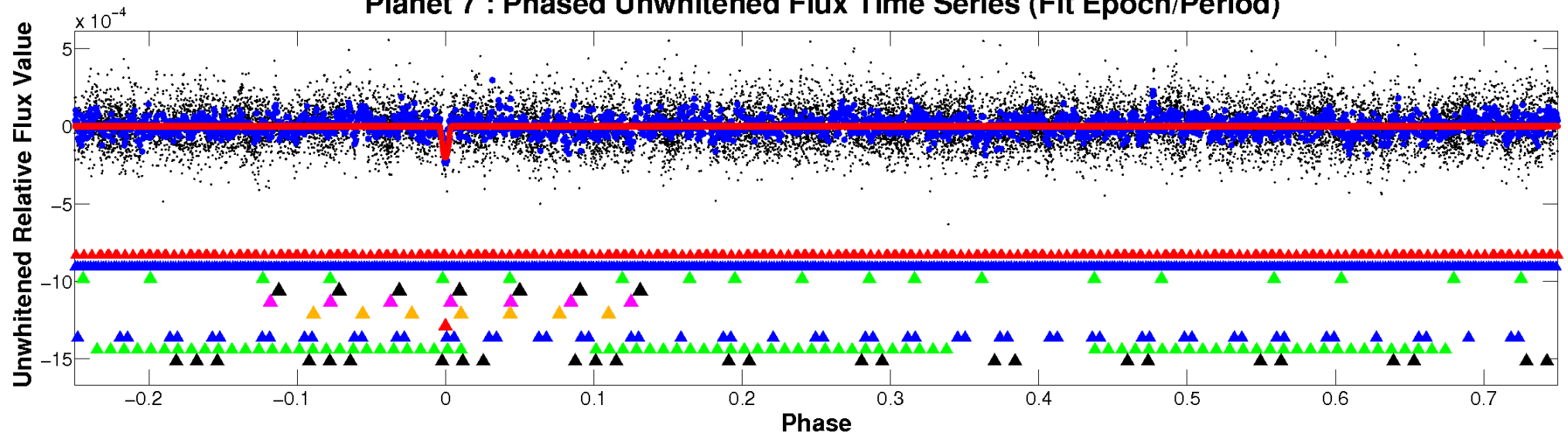
ALT Odd/Even

TCE 004566740-07

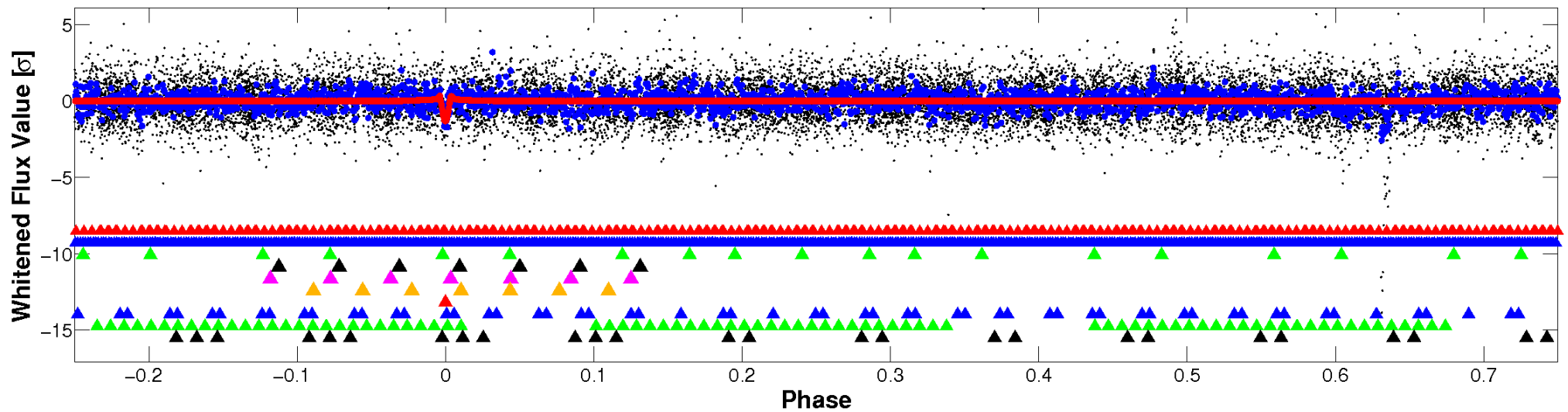


Non-Whitened Vs. Whitened Light Curve

Planet 7 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

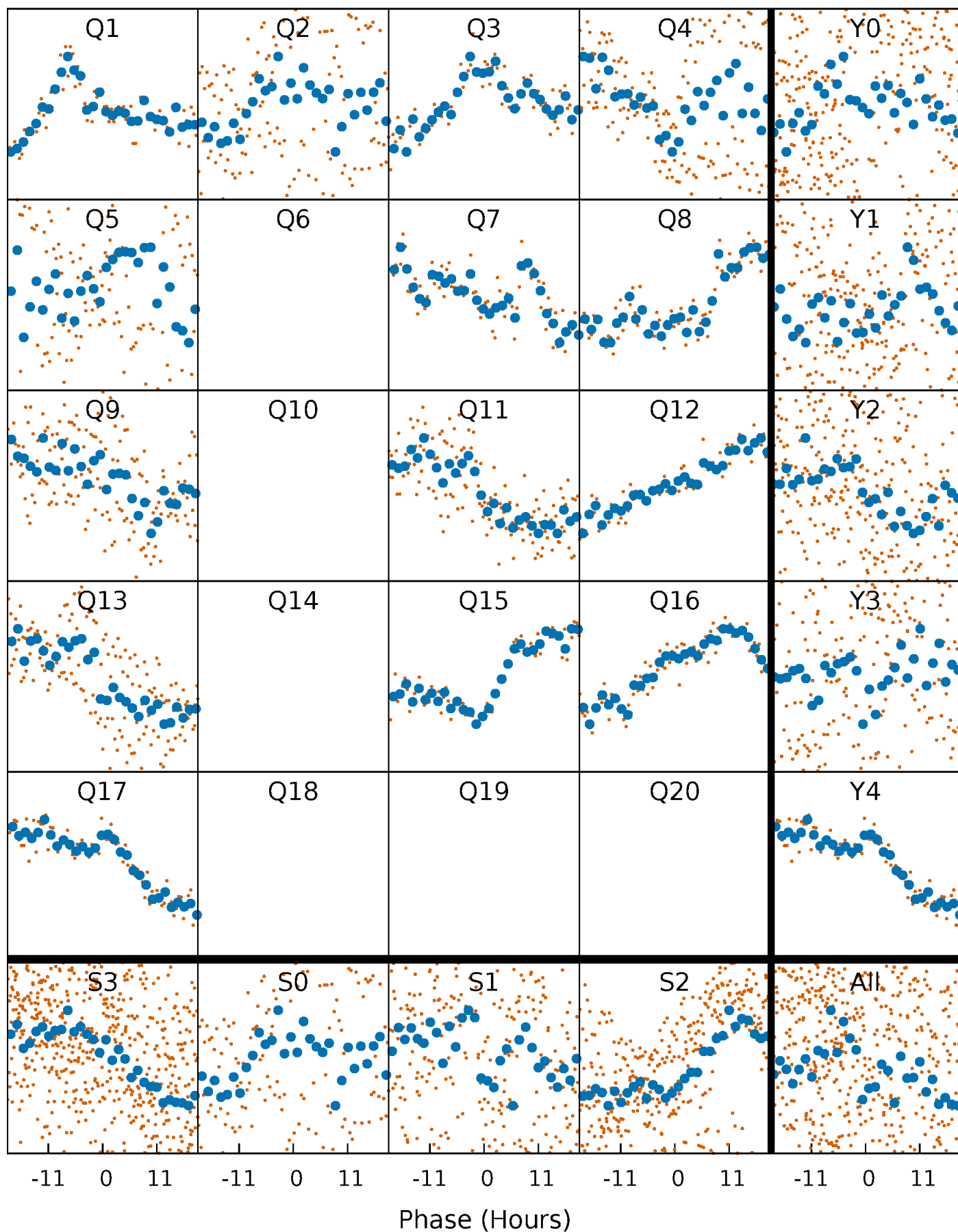


Planet 7 : Phased Whitened Flux Time Series (Fit Epoch/Period)



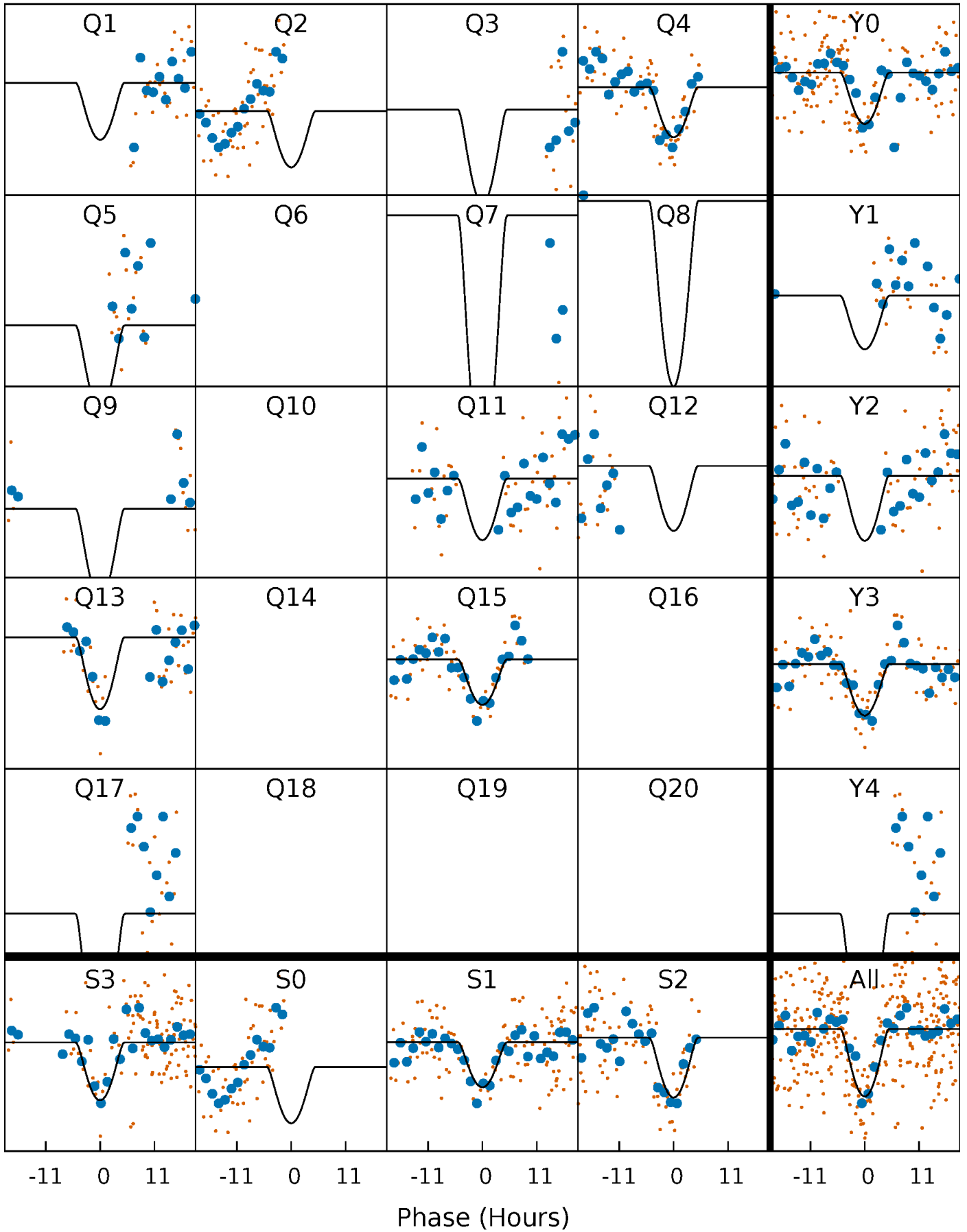
PDC Quarter-Phased Transit Curves

TCE 004566740-07 $P = 52.951812$ Days $T_0 = 143.943002$ (BKJD)



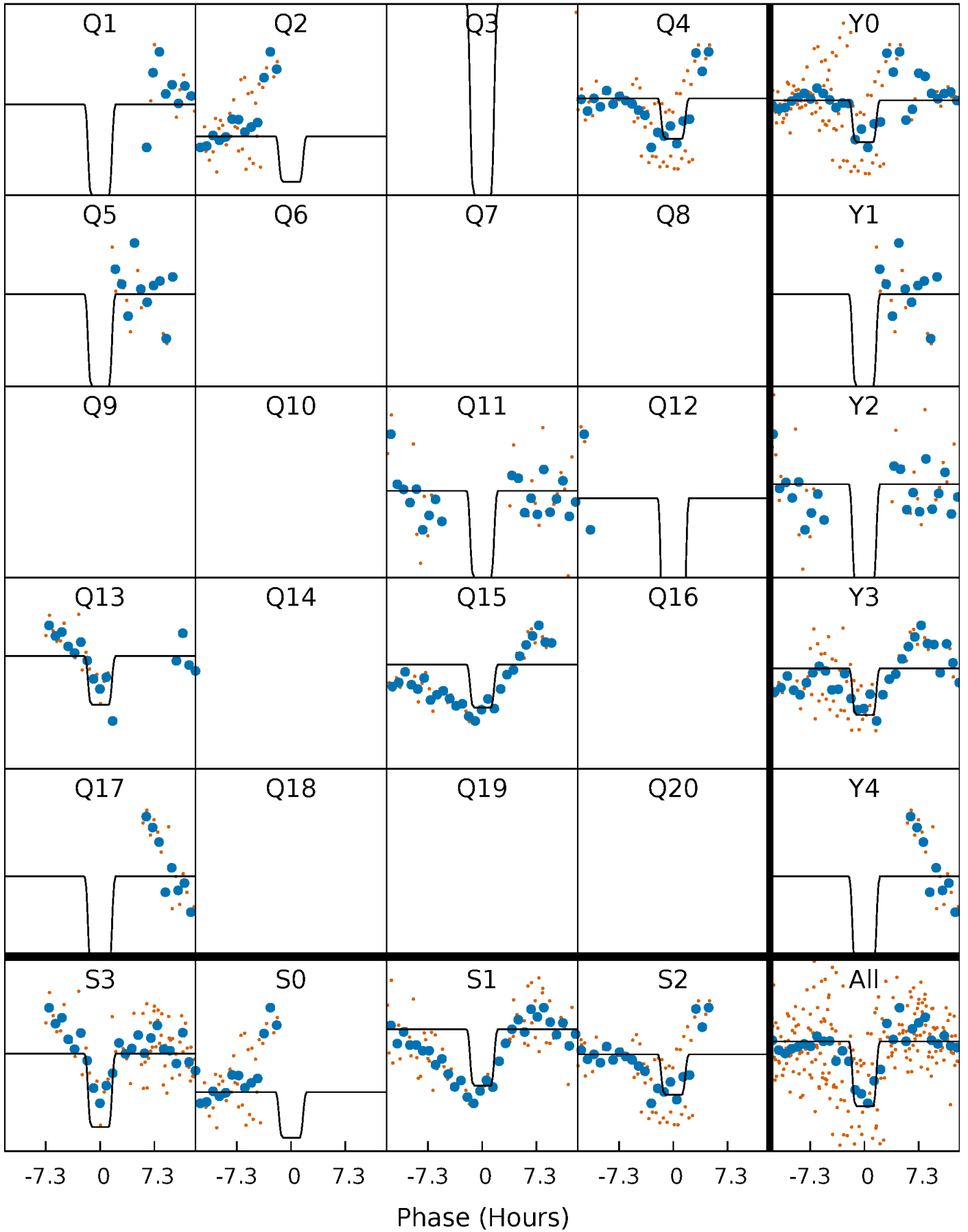
DV Quarter-Phased Transit Curves

TCE 004566740-07 P= 52.951812 Days $T_0=143.943002$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

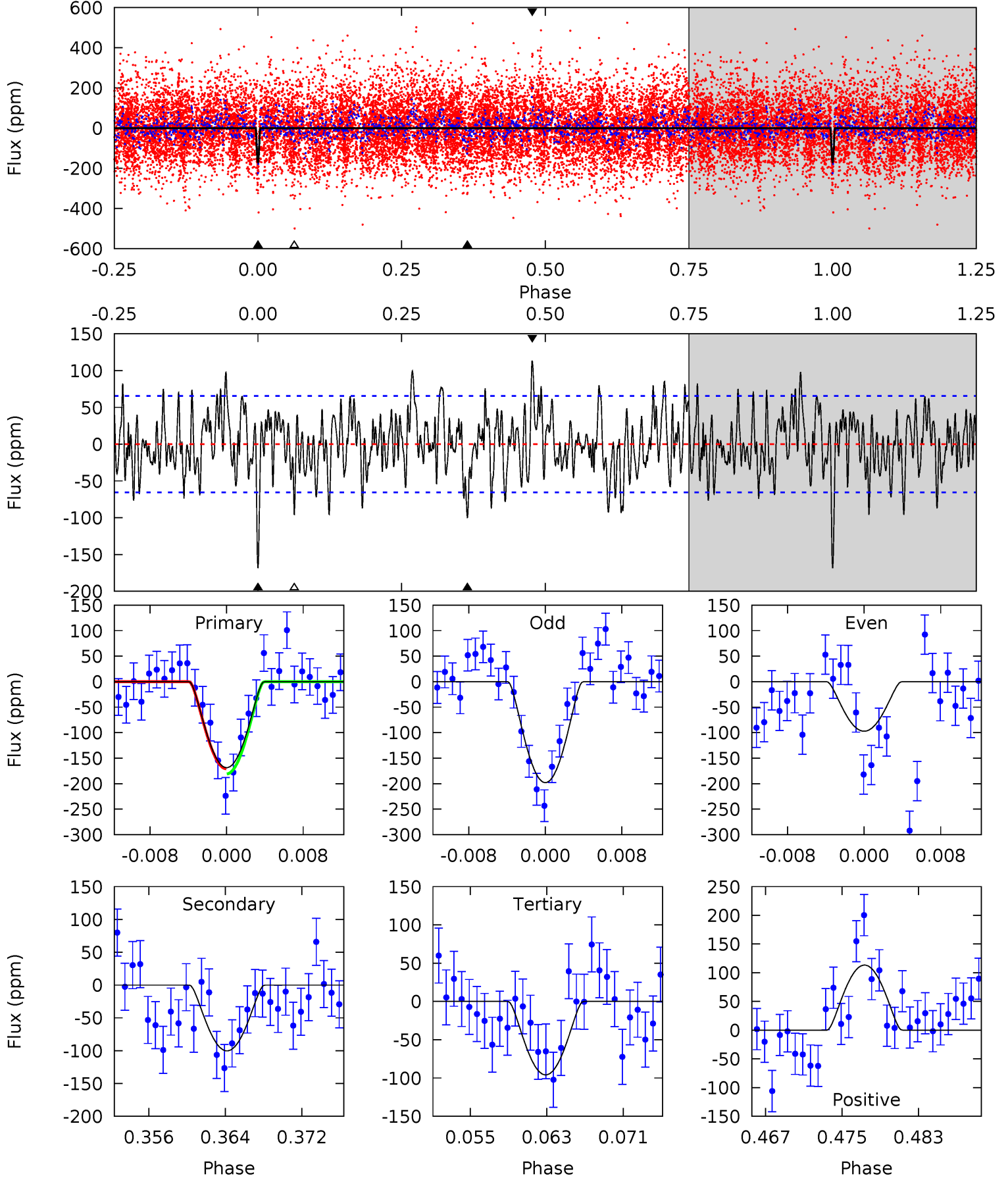
TCE 004566740-07 $P = 52.951017$ Days $T_0 = 143.958360$ (BKJD)



DV Model-Shift Uniqueness Test

004566740-07, P = 52.951812 Days, E = 90.991190 Days

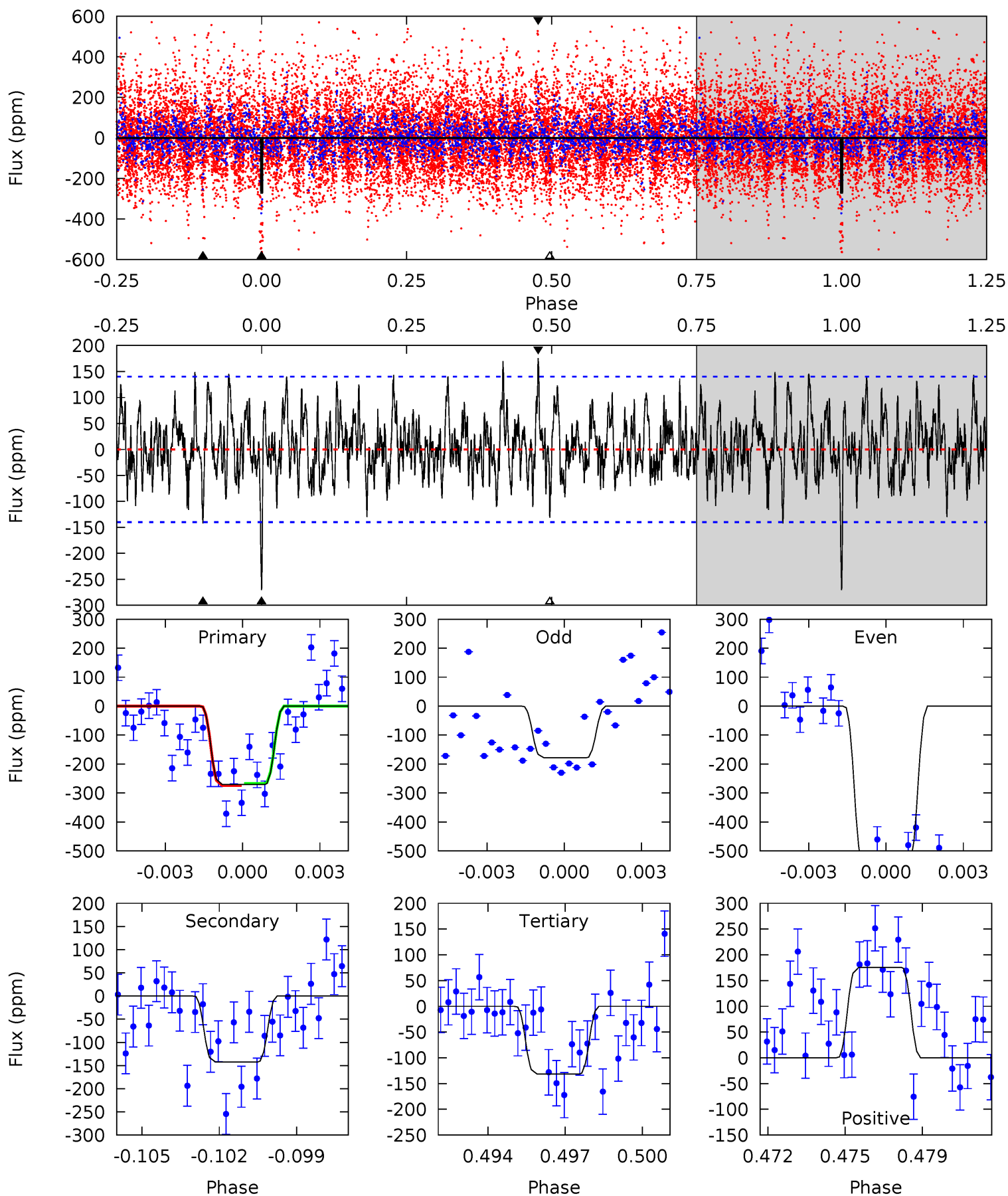
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.0	7.76	7.42	8.77	5.07	2.66	2.70	5.62	4.27	0.34	-1.01	3.42	0.45	0.40	0.38



Alt Model-Shift Uniqueness Test

004566740-07, P = 52.951017 Days, E = 91.007343 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.1	5.33	4.93	6.59	5.25	2.96	1.78	5.22	3.56	0.41	-1.26	5.94	1.00	0.39	0.13



Stellar Parameters For KIC 004566740

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6861^{+190}_{-214}	$3.868^{+0.259}_{-0.111}$	$-0.100^{+0.300}_{-0.300}$	$2.450^{+0.507}_{-0.760}$	$1.614^{+0.194}_{-0.292}$	$0.154^{+0.251}_{-0.052}$
	+3%/-3%	+7%/-3%	+300%/-300%	+21%/-31%	+12%/-18%	+163%/-33%
Source	PHO1	FLK73	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 004566740-07 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-100 ± 13	$14.61^{+15.25}_{-9.94}$	1145^{+71}_{-88}	3367^{+1695}_{-639}	26^{+220}_{-20}
Alt.	-142 ± 27	$15.14^{+15.26}_{-10.83}$	1151^{+71}_{-94}	3520^{+2088}_{-659}	35^{+362}_{-27}

T_{max} = Theoretical Maximum Planetary Temperature
 T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)
 A_{obs} = Observed Albedo (Assuming $T=0$)

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

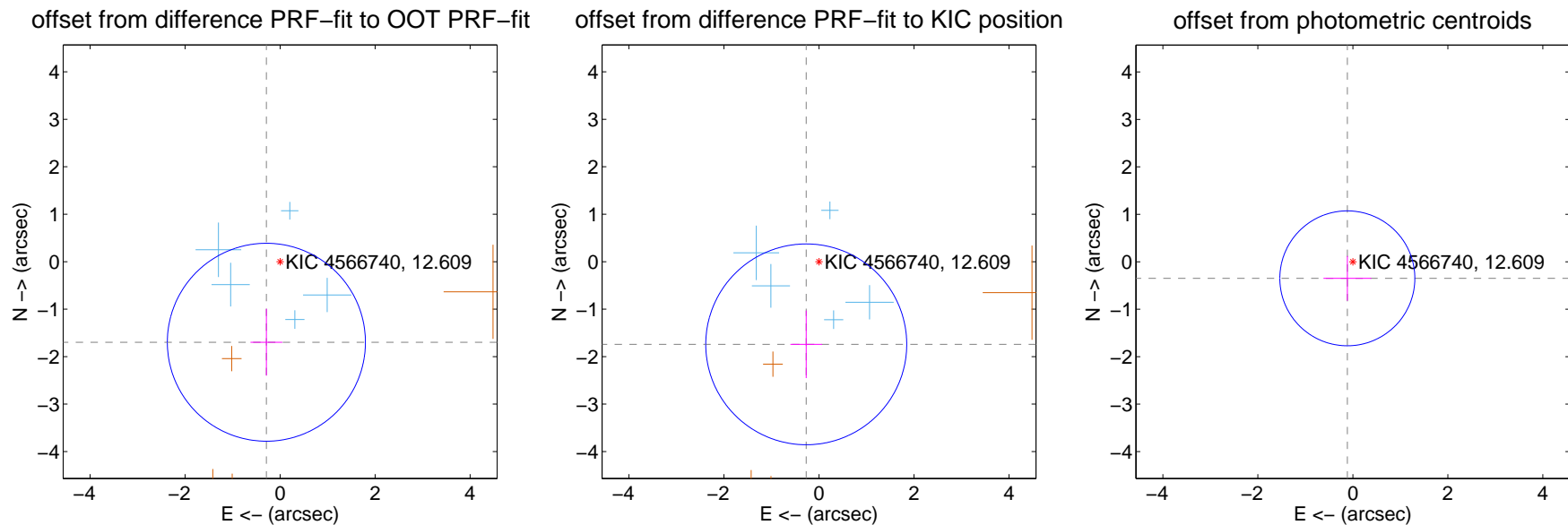
DV Centroid Data

Supplemental centroid analysis for 004566740-07. Kepler magnitude: 12.61. Transit SNR 7.66

There are 5 quarters with good PRF difference image offsets

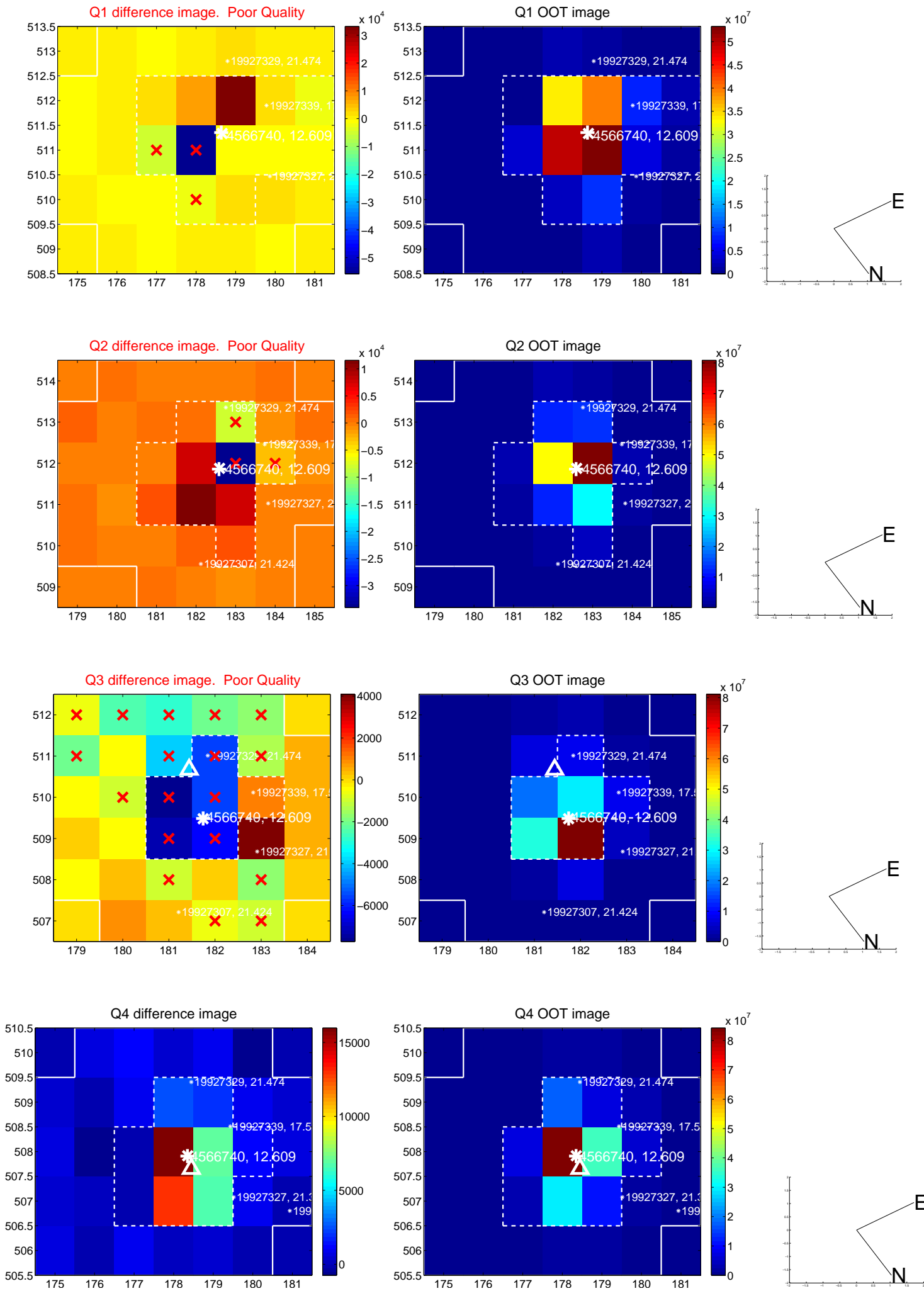
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.721 ± 0.695	2.48	0.289 ± 0.335	-1.697 ± 0.703
PRF-fit source offset from KIC position	1.762 ± 0.705	2.50	0.268 ± 0.334	-1.741 ± 0.712
photometric centroid source offset	0.37 ± 0.47	0.78	0.12 ± 0.50	-0.35 ± 0.47

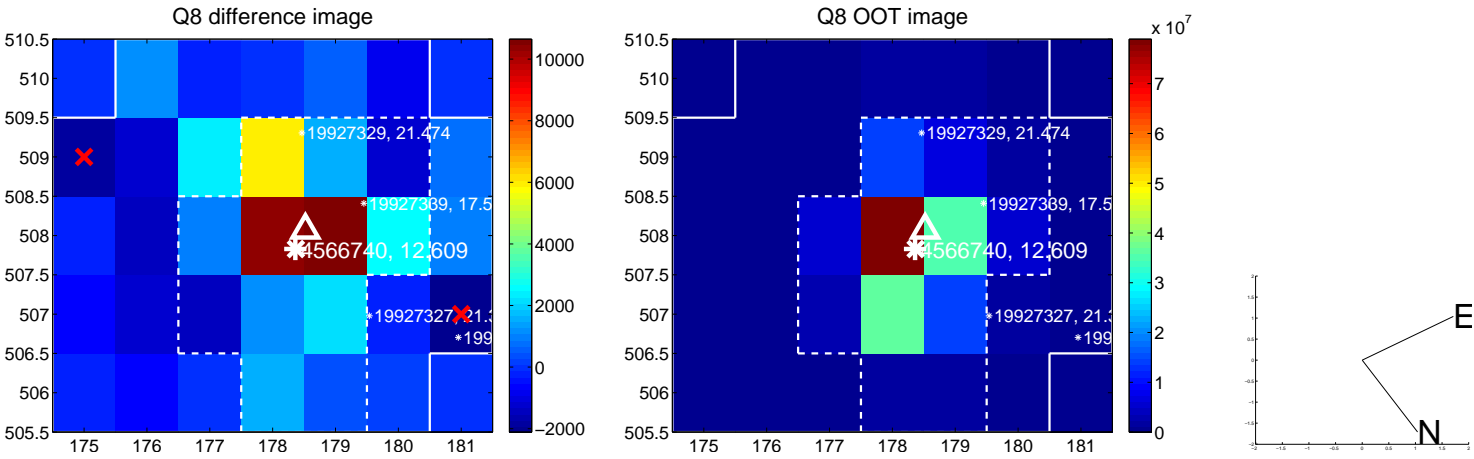
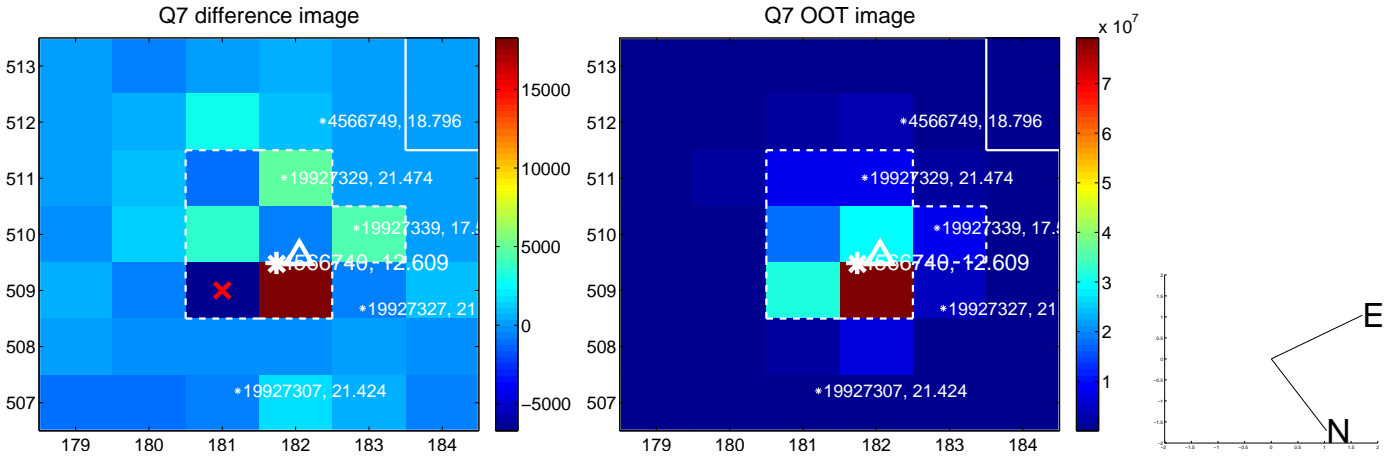
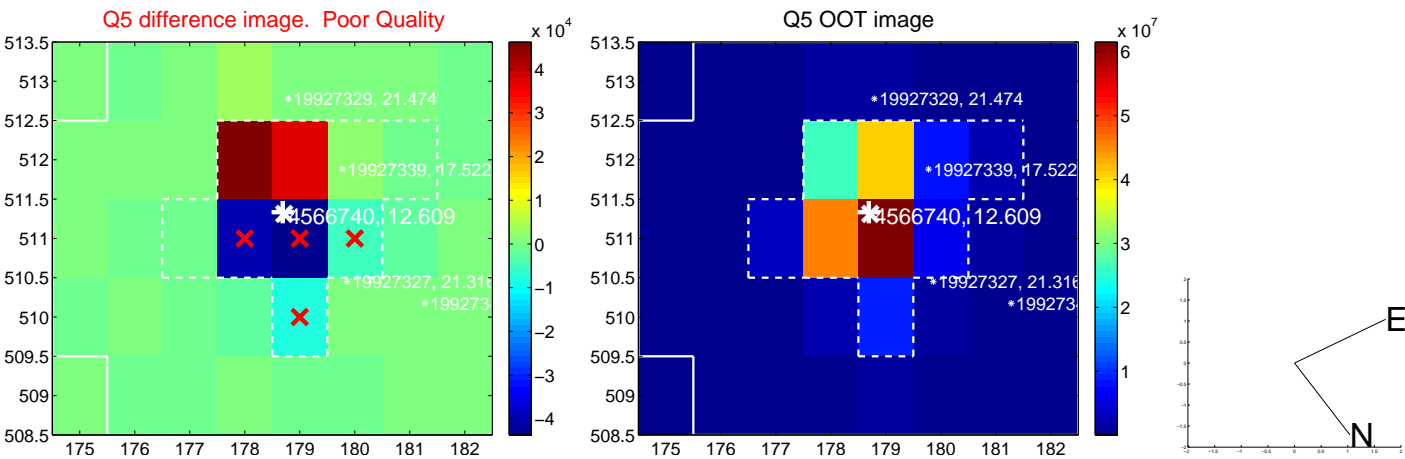


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

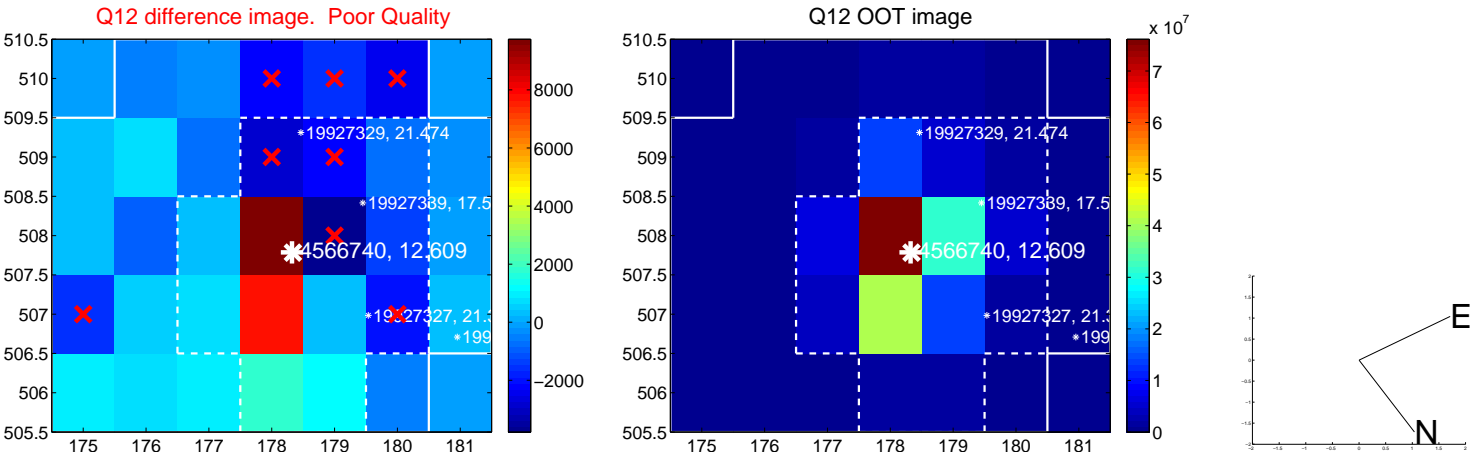
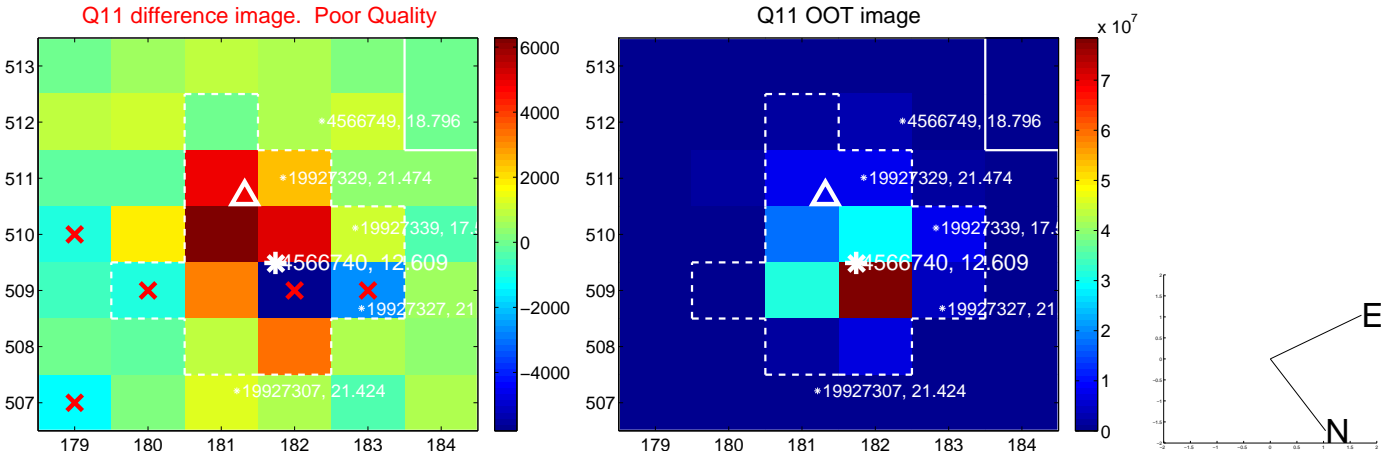
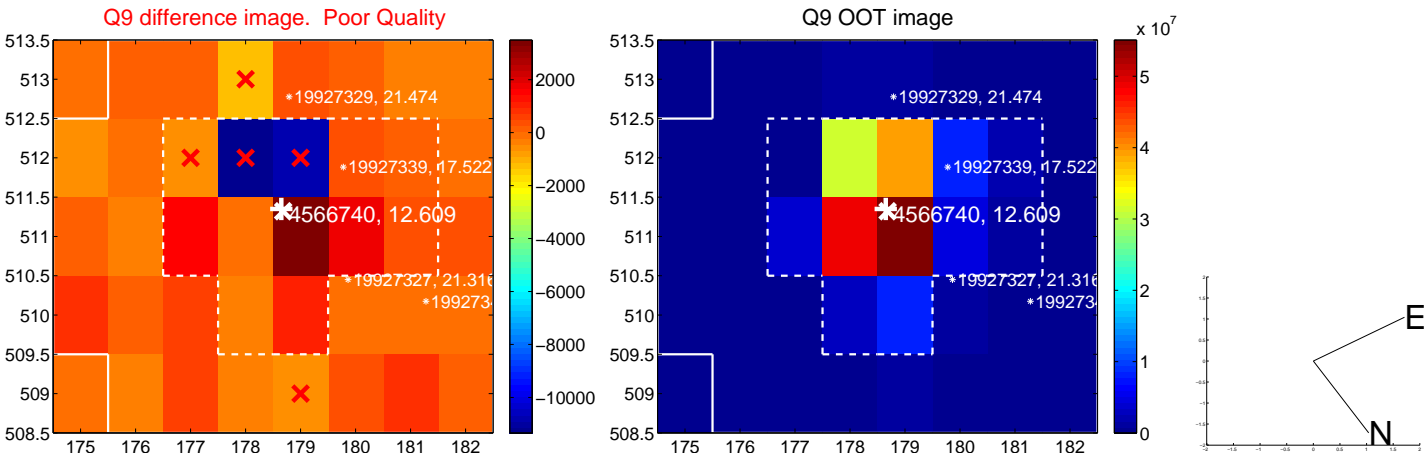
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



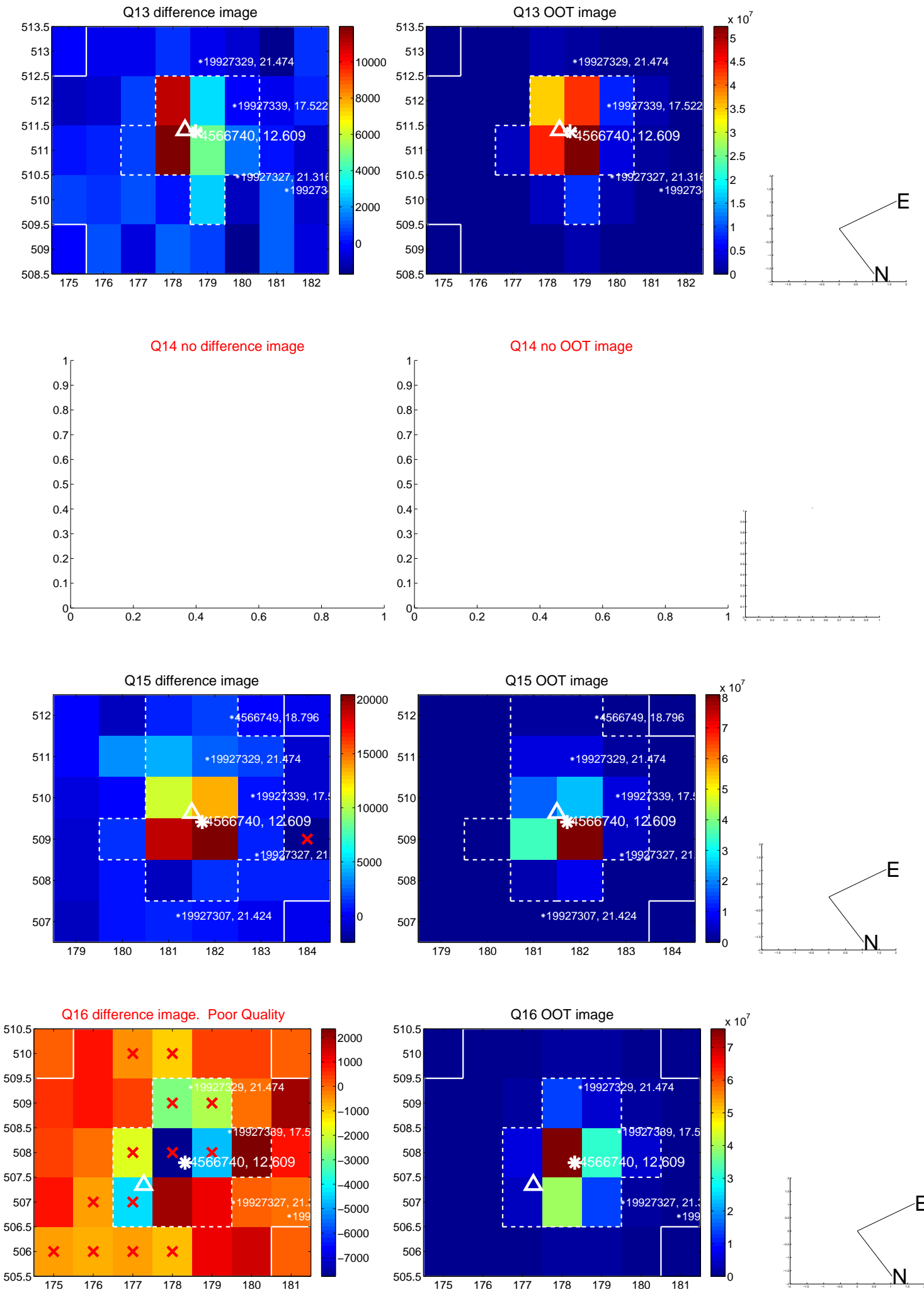
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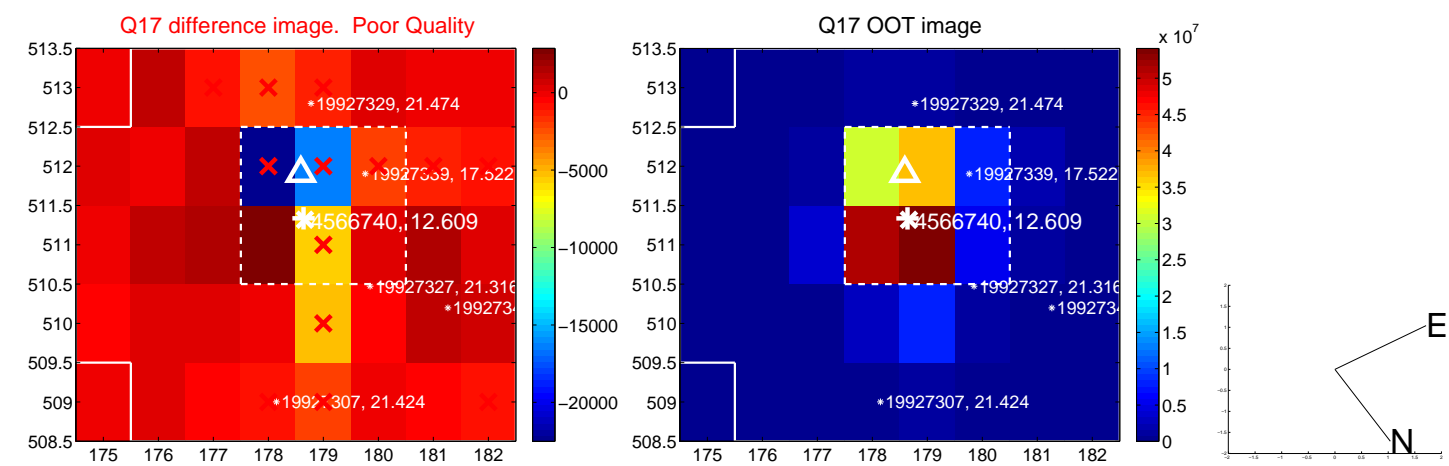
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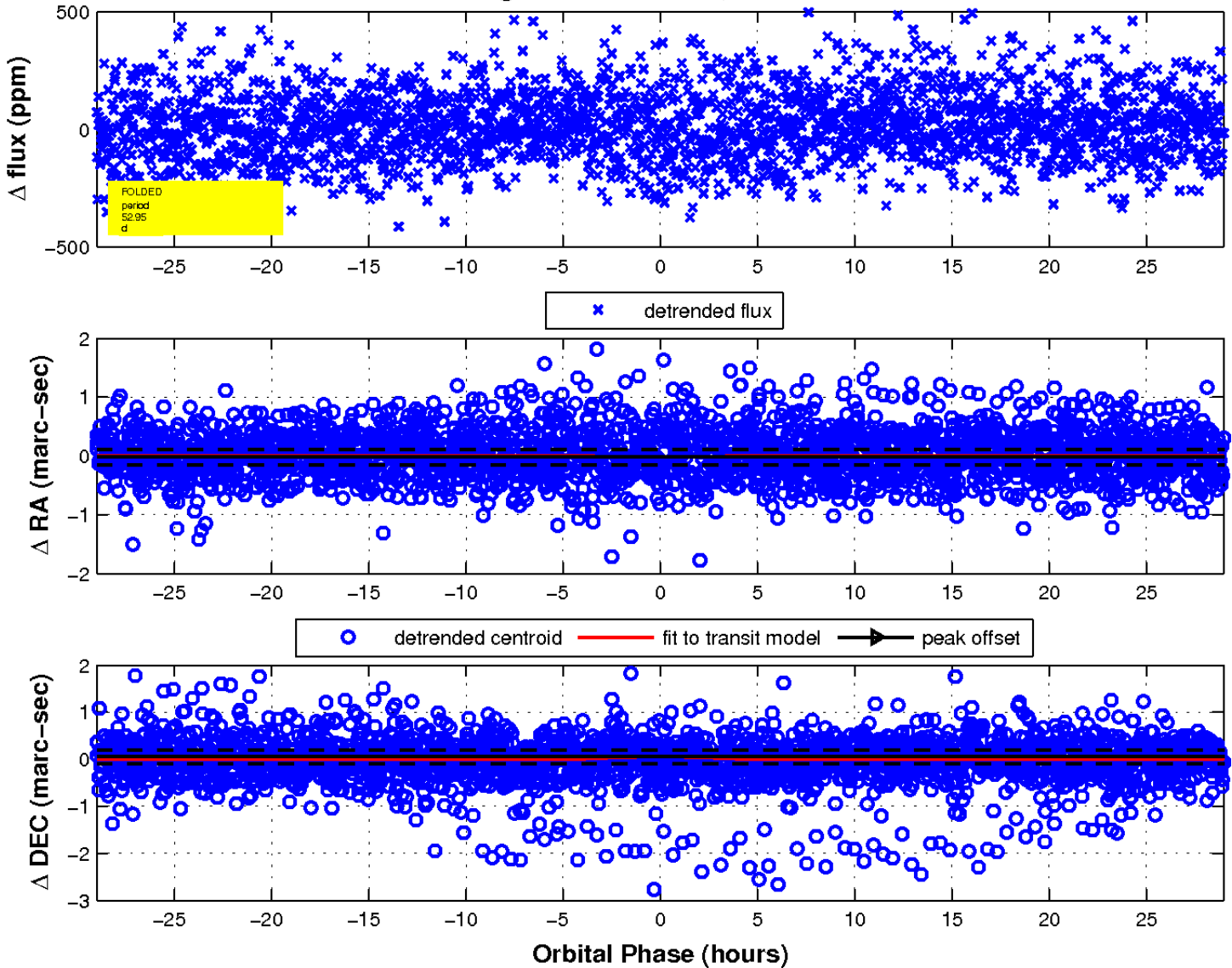
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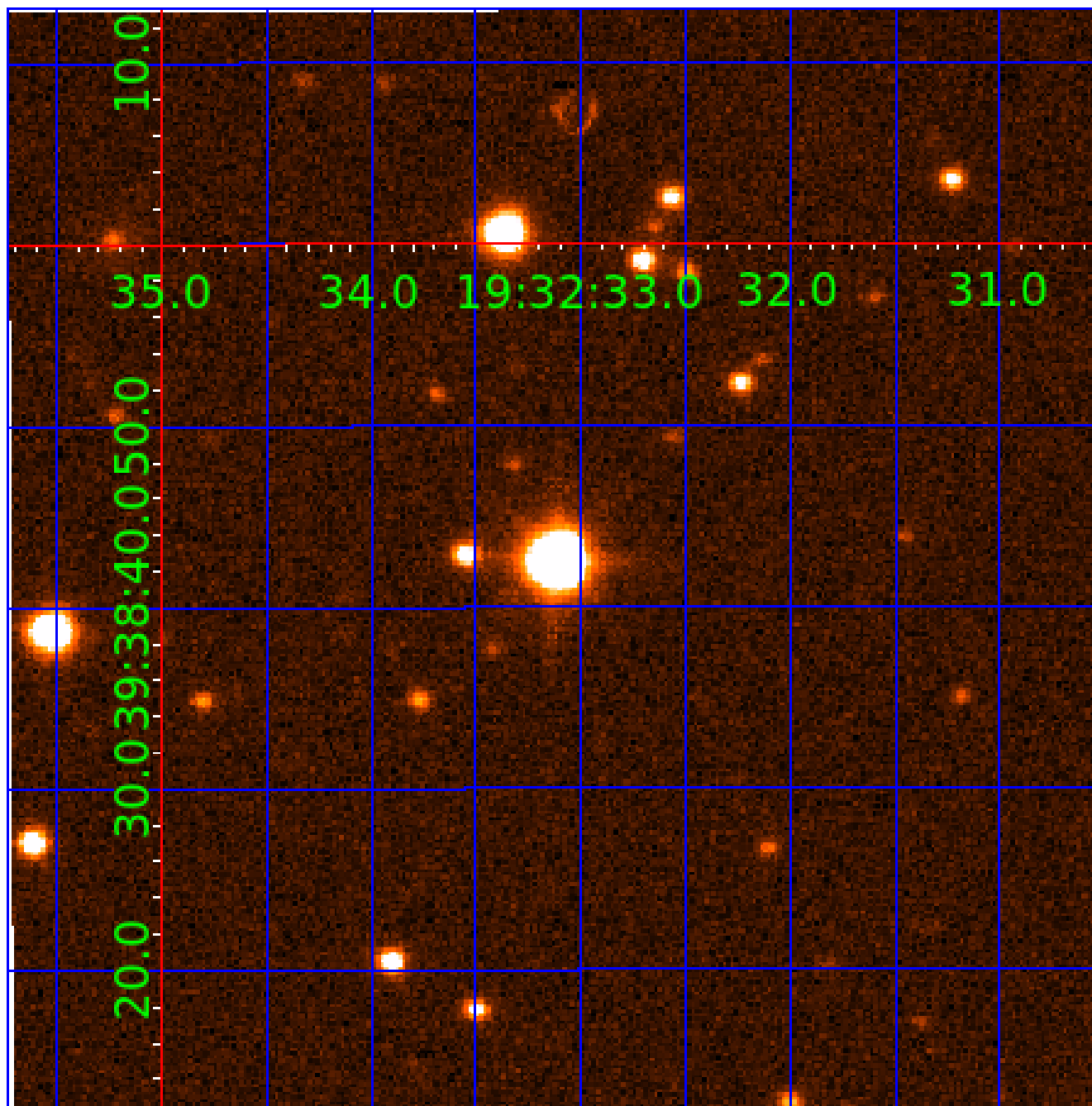


fluxWeightedCentroids, Planet 7 of 10



UKIRT Image

Declination



Q1-17 DR25 TCE Parameters

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004566740-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
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004566740-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—SAME_NTL_PERIOD—CENT_FEW_DIFFS
004566740-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
004566740-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004566740-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
004566740-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT—CENT_NOFITS
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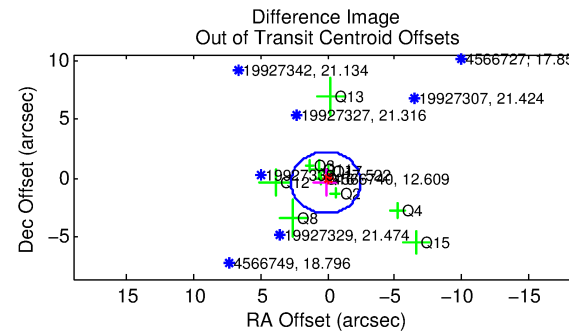
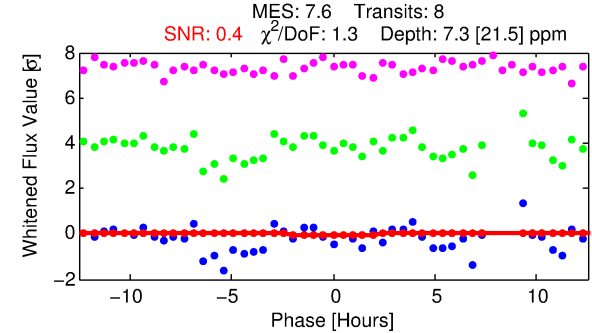
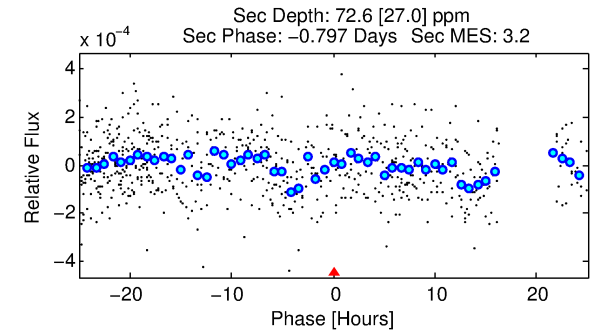
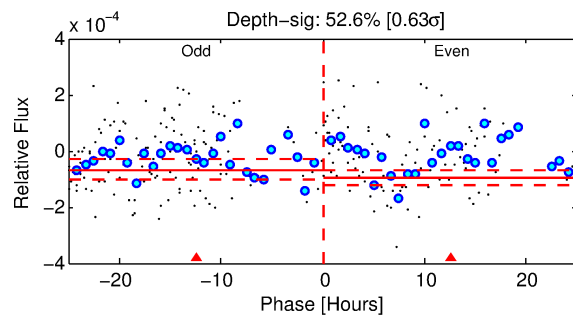
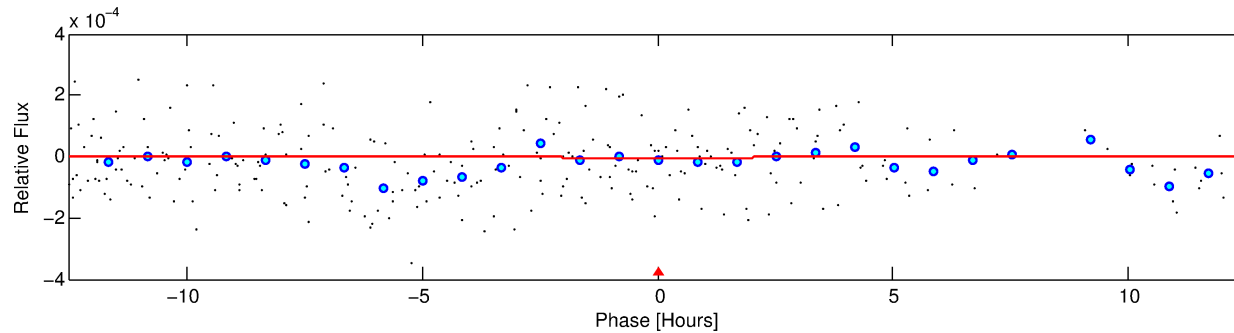
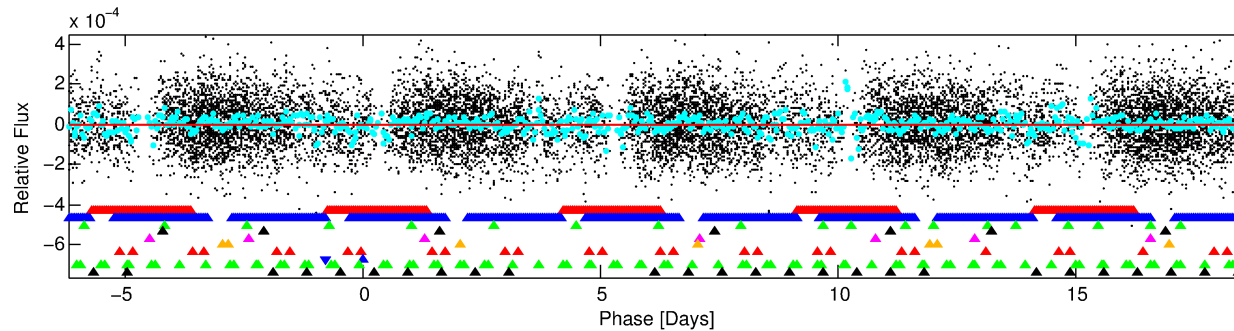
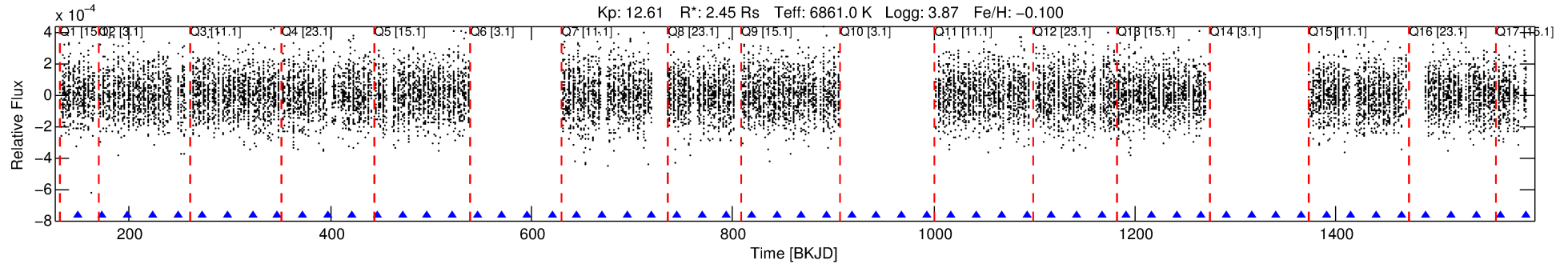
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004566740-08

No Significant Match Found

DV One-Page Summary

KIC: 4566740 Candidate: 8 of 10 Period: 24.830 d



DV Fit Results:

Period = 24.82953 [0.01445] d
Epoch = 148.7894 [0.7940] BKJD
Rp/R* = 0.0027 [0.0077]
a/R* = 31.60 [437.46]
b = 0.72 [9.28]
Seff = 311.84 [145.06]
Teq = 1072 [125] K
Rp = 0.71 [2.08] Re
a = 0.1955 [0.0561] AU
Ag = 2995.28 [17452.15] [0.17 σ]
Teffp = 12256 [17805] K [0.63 σ]

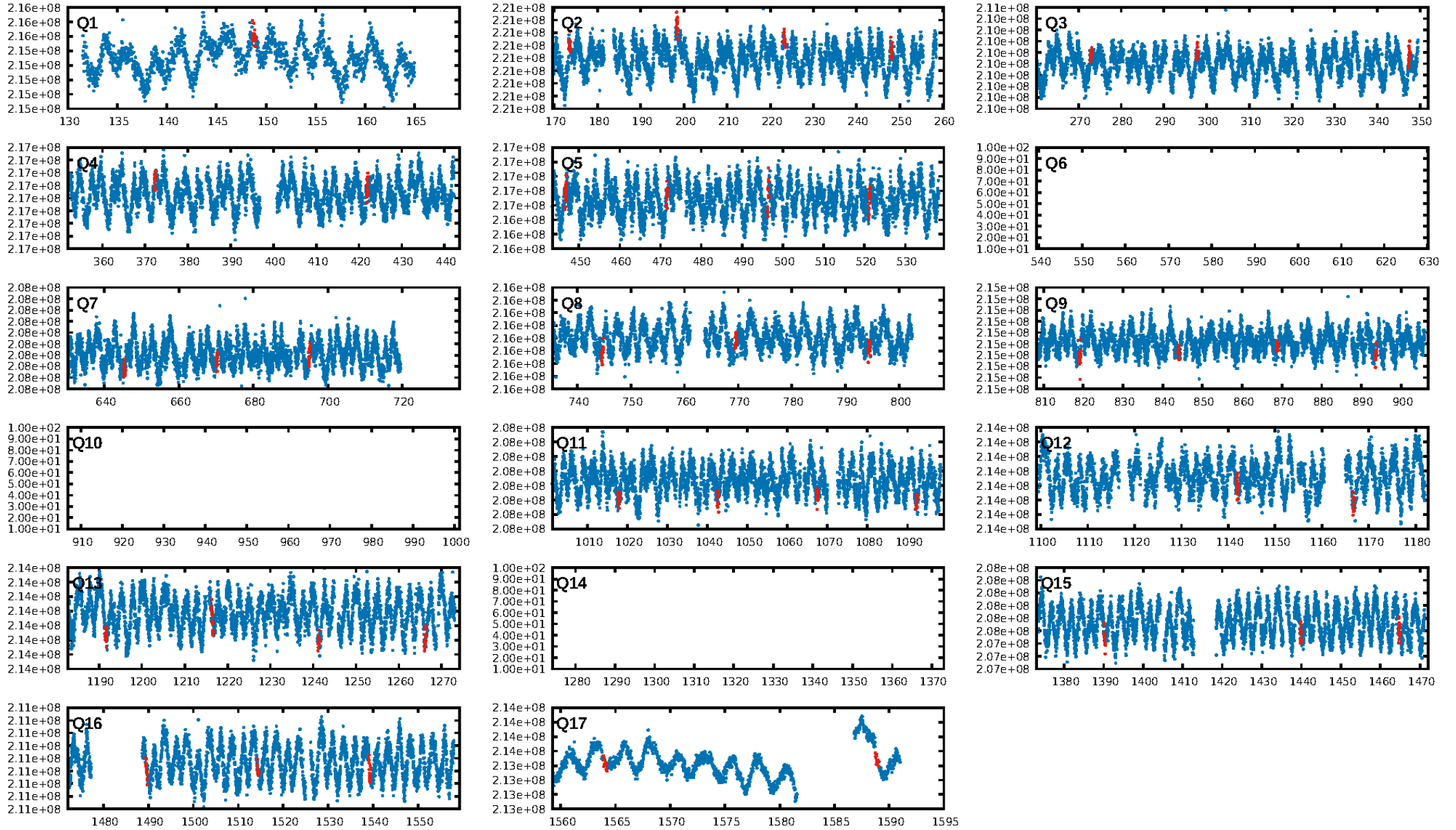
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [32.77 σ]
LongPeriod-sig: 100.0% [64.12 σ]
ModelChiSquare2-sig: 7.0%
ModelChiSquareGof-sig: 93.1%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [6/6]
GhostDiagnostic-chr: -0.6502
Centroid-sig: 80.3%
Centroid-so: 4.176 arcsec [0.42 σ]
OotOffset-rm: 0.369 arcsec [0.43 σ]
KicOffset-rm: 0.380 arcsec [0.41 σ]
OotOffset-st: 1/3/4/2 [10]
KicOffset-st: 1/3/4/2 [10]
DiffImageQuality-fgm: 0.30 [3/10]
DiffImageOverlap-fno: 0.29 [4/14]

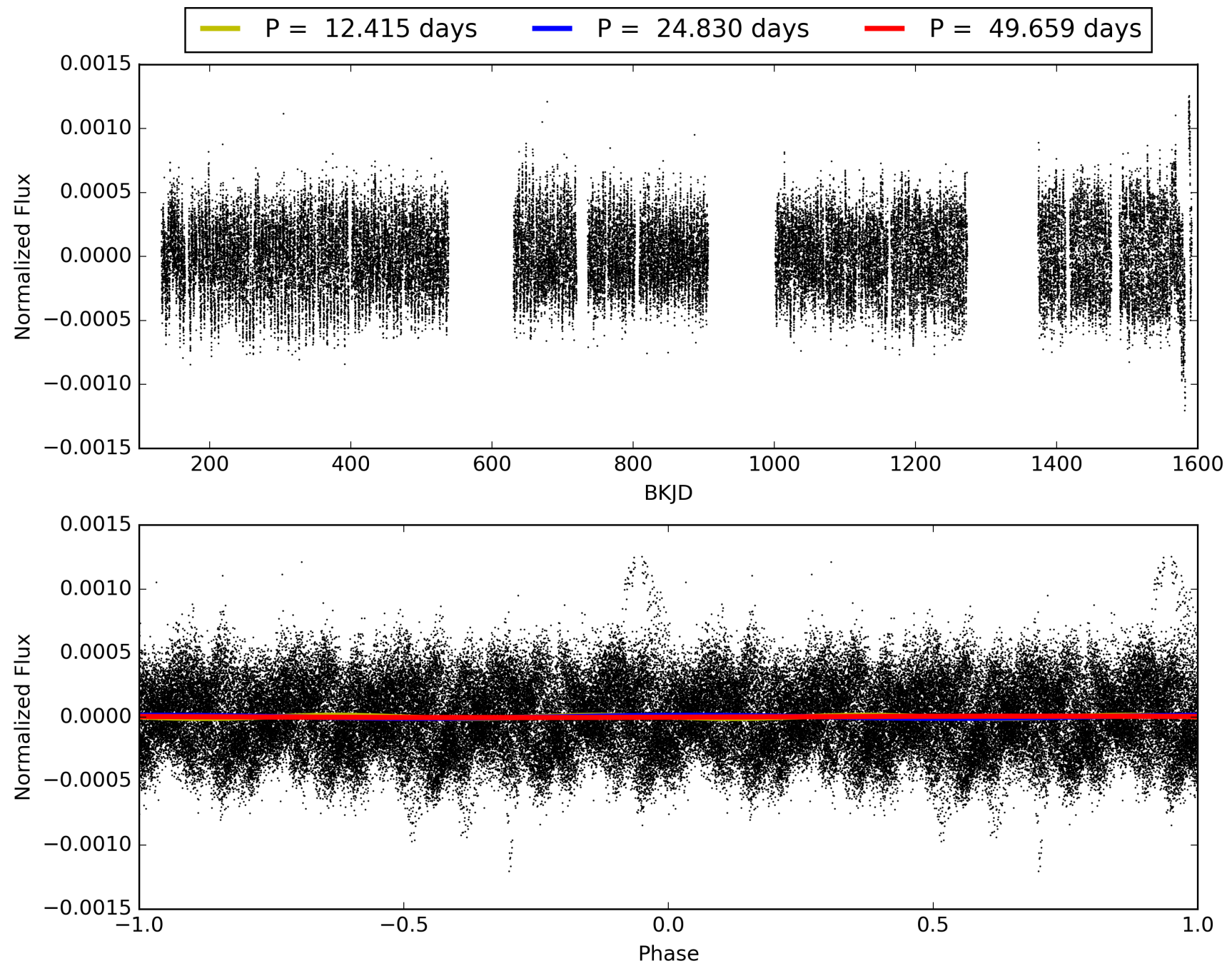
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 06:44:08 Z

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

TCE 004566740-08, PDC Light Curves

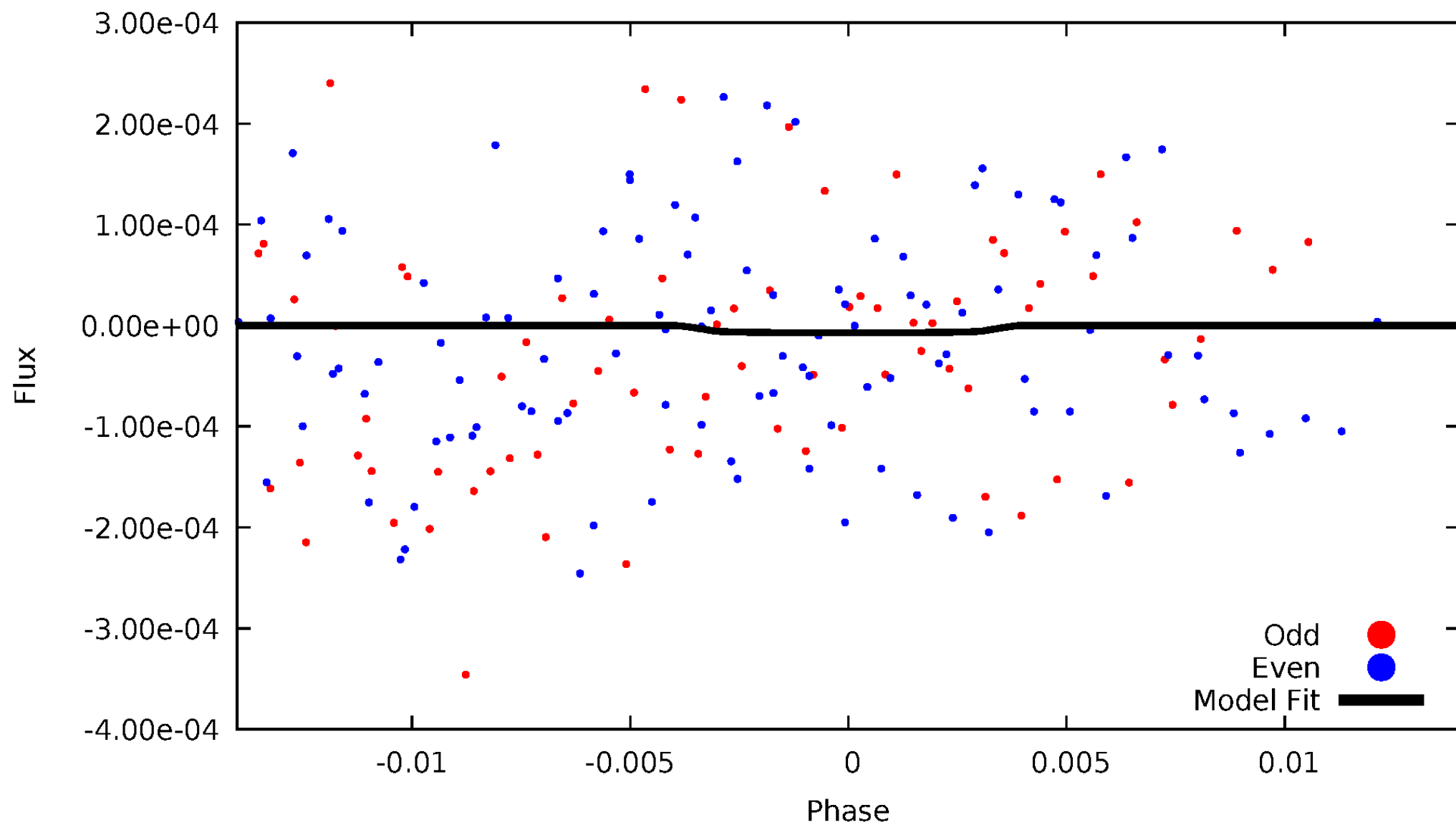


TCE 004566740-08



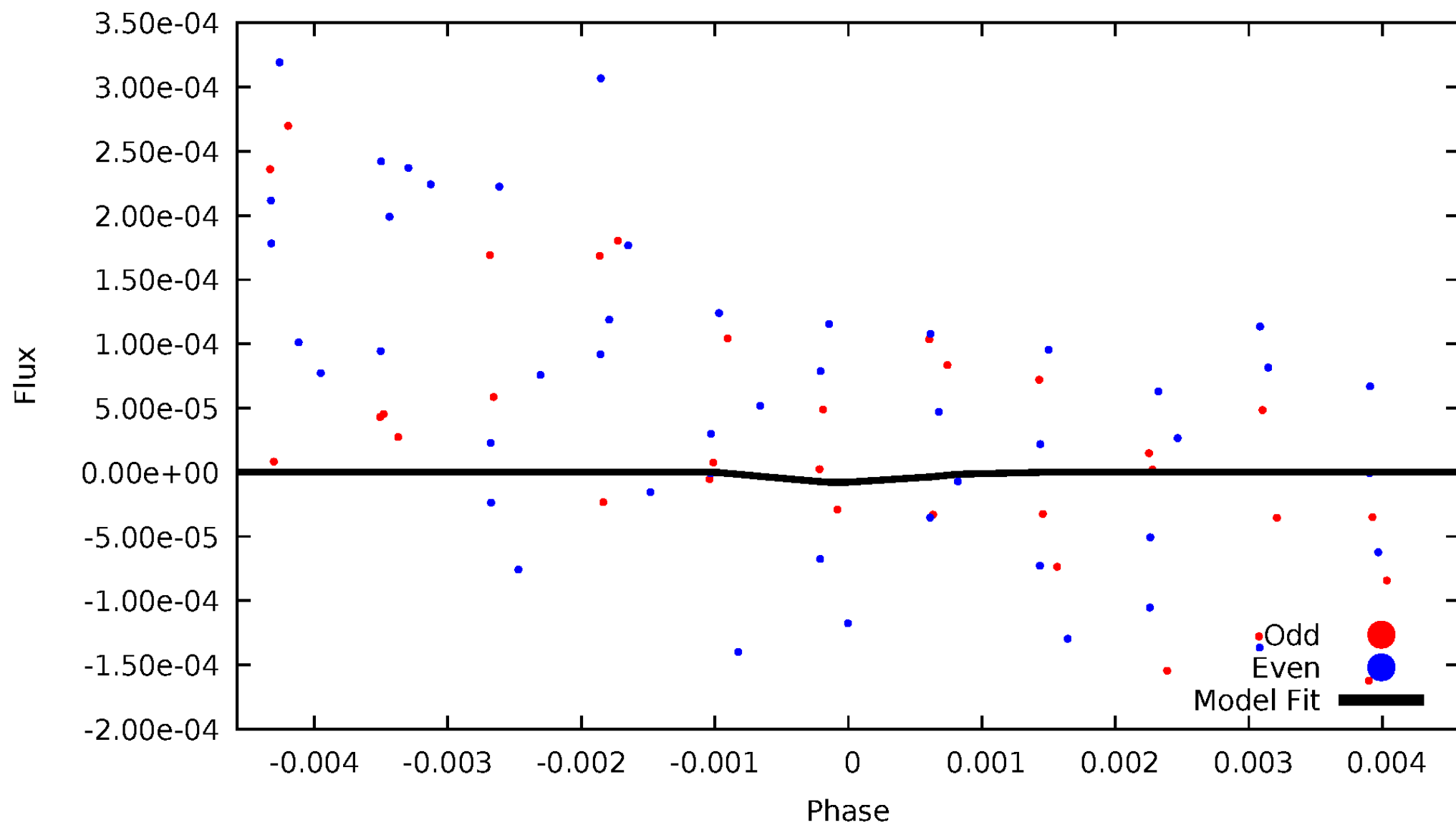
DV Odd/Even

TCE 004566740-08



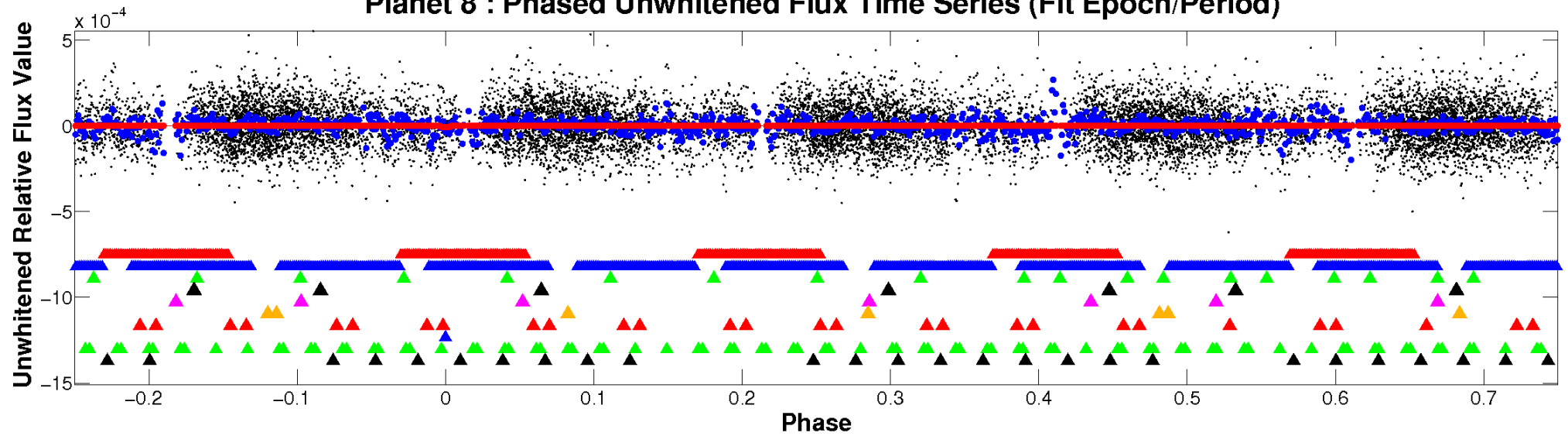
ALT Odd/Even

TCE 004566740-08

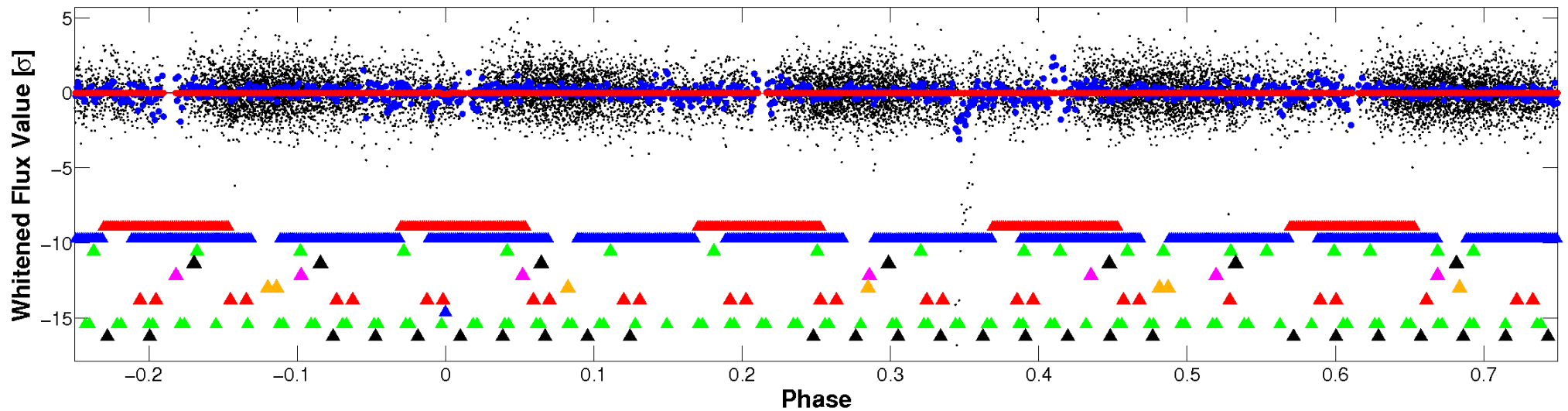


Non-Whitened Vs. Whitened Light Curve

Planet 8 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

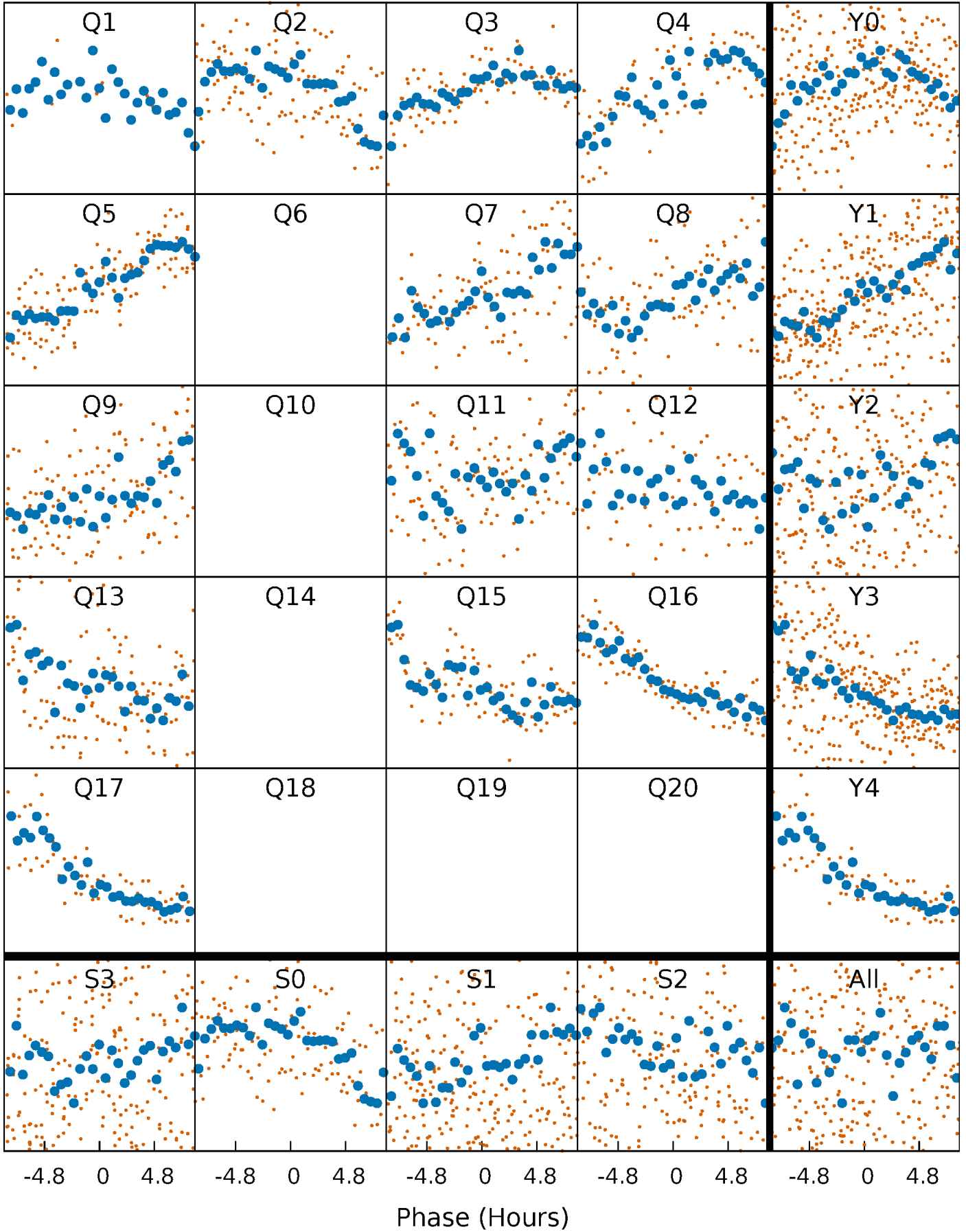


Planet 8 : Phased Whitened Flux Time Series (Fit Epoch/Period)



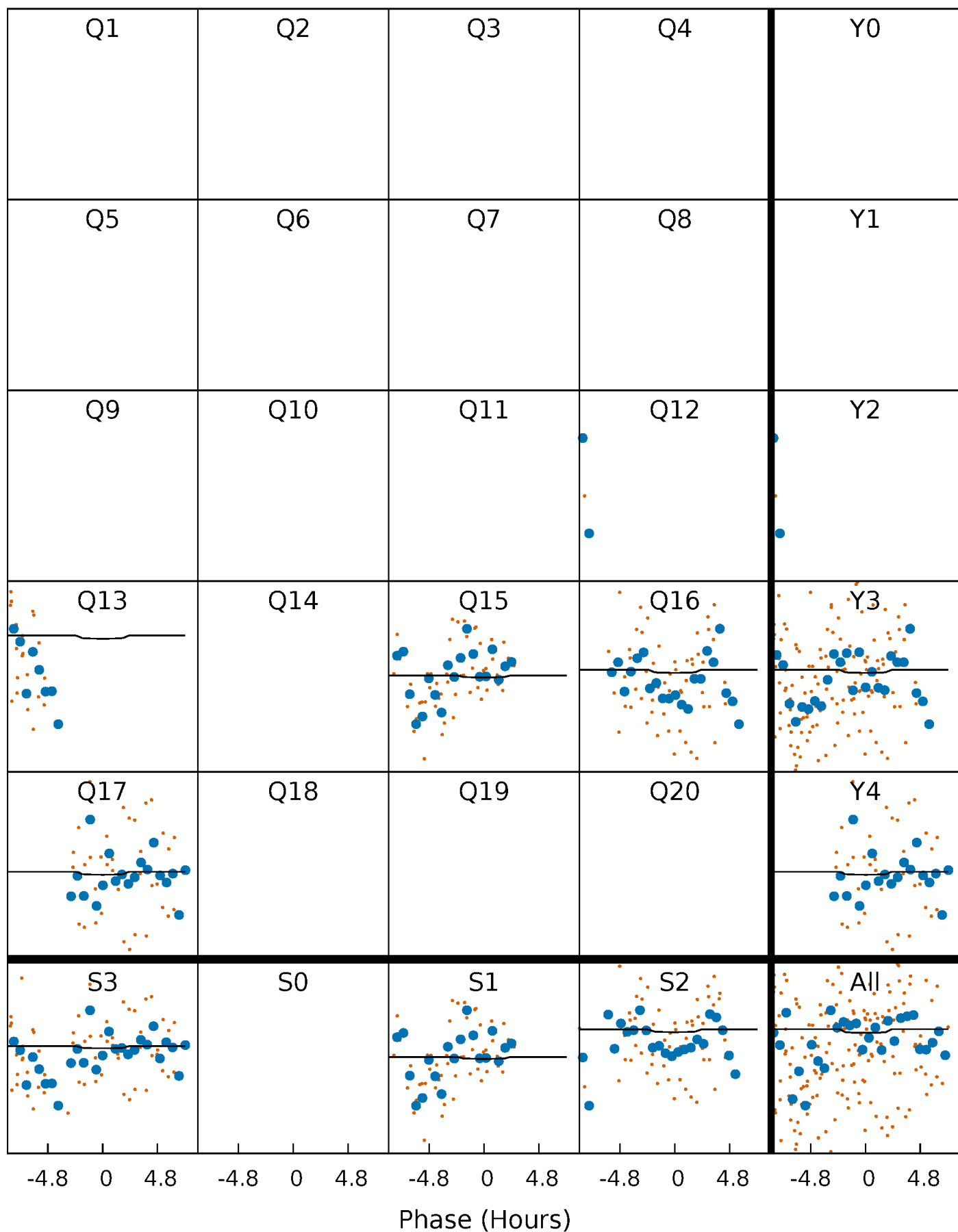
PDC Quarter-Phased Transit Curves

TCE 004566740-08 P= 24.829527 Days $T_0=148.789351$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 004566740-08 $P = 24.829527$ Days $T_0 = 148.789351$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

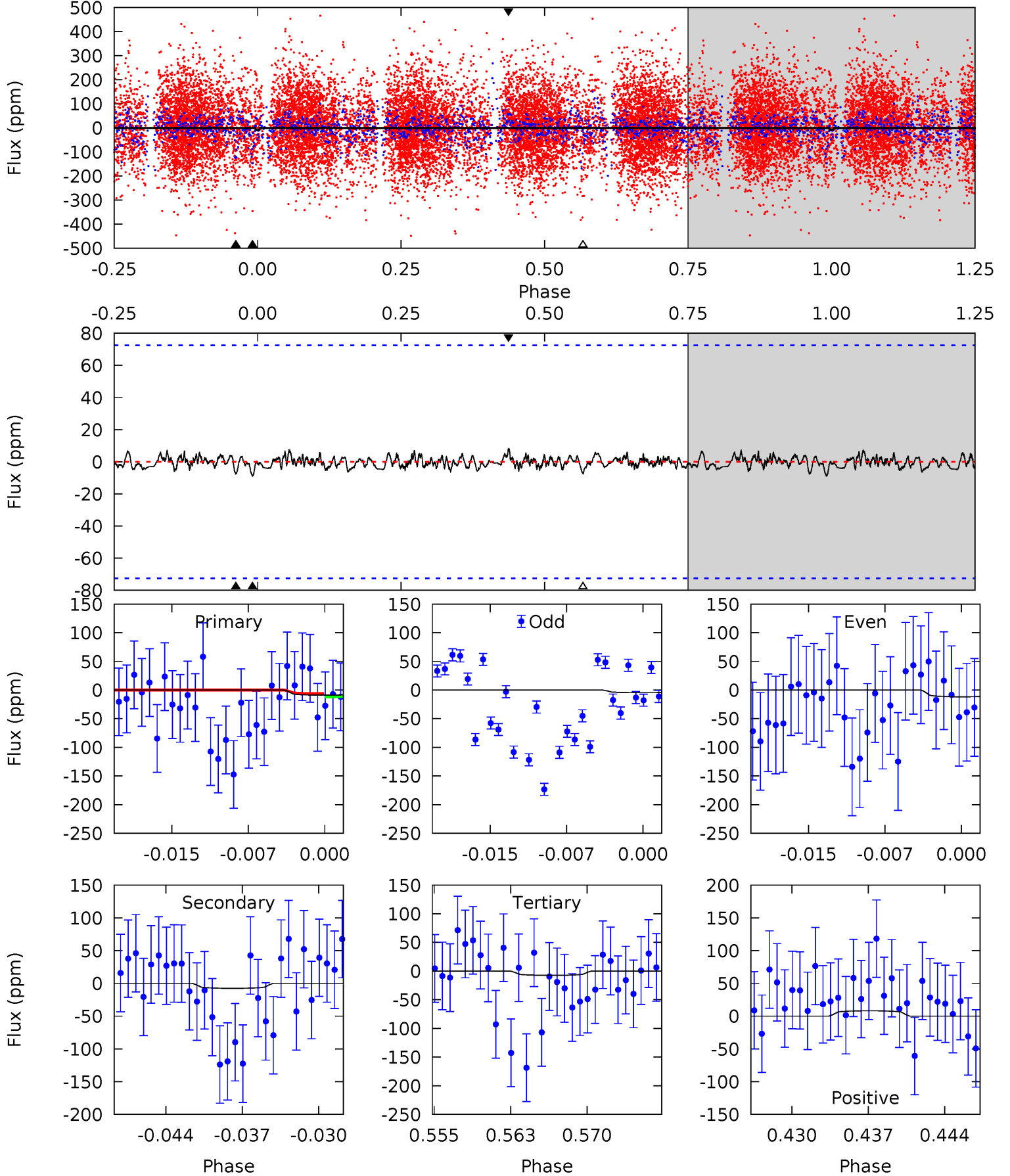
TCE 004566740-08 P= 24.827682 Days $T_0=148.896167$ (BKJD)



DV Model-Shift Uniqueness Test

004566740-08, P = 24.829527 Days, E = 123.959824 Days

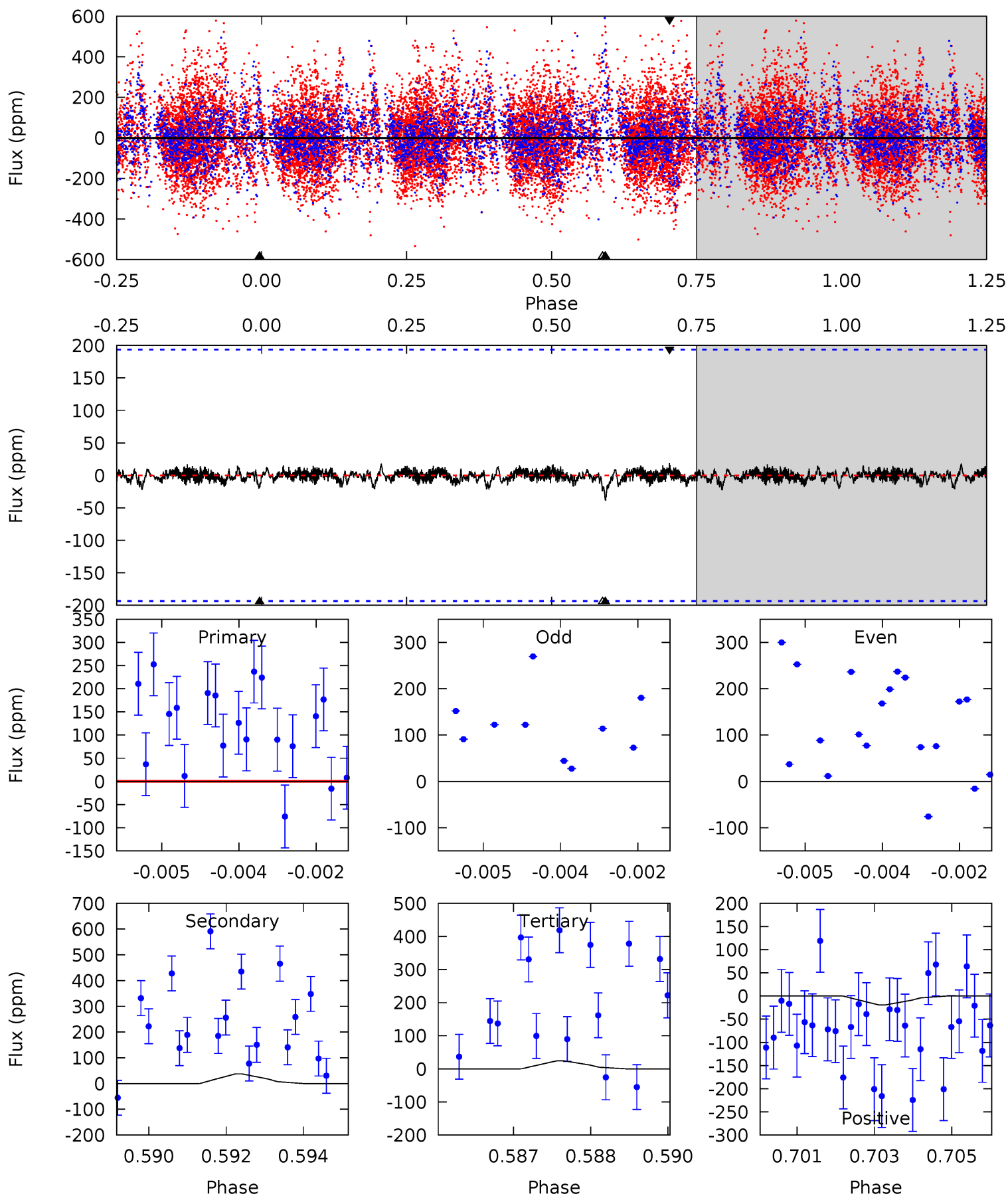
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.63	0.53	0.52	0.57	5.08	2.68	0.18	0.11	0.06	0.01	-0.04	0.25	-0.28	0.48	0.20



Alt Model-Shift Uniqueness Test

004566740-08, P = 24.827682 Days, E = 124.068485 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.50	1.03	0.67	0.53	5.35	3.12	0.17	-0.17	-0.03	0.36	0.50	0.22	0.50	0.34	0.56



Stellar Parameters For KIC 004566740

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6861^{+190}_{-214}	$3.868^{+0.259}_{-0.111}$	$-0.100^{+0.300}_{-0.300}$	$2.450^{+0.507}_{-0.760}$	$1.614^{+0.194}_{-0.292}$	$0.154^{+0.251}_{-0.052}$
	+3%/-3%	+7%/-3%	+300%/-300%	+21%/-31%	+12%/-18%	+163%/-33%
Source	PHO1	FLK73	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 004566740-08 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-8 ± 14	$1.63^{+1.59}_{-1.11}$	1476^{+89}_{-115}	4243^{+3291}_{-8573}	37^{+428}_{-80}
Alt.	-37 ± 36	$1.55^{+1.68}_{-1.05}$	1475^{+98}_{-117}	5990^{+8574}_{-9185}	204^{+2624}_{-211}

T_{max} = Theoretical Maximum Planetary Temperature
 T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)
 A_{obs} = Observed Albedo (Assuming $T=0$)

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

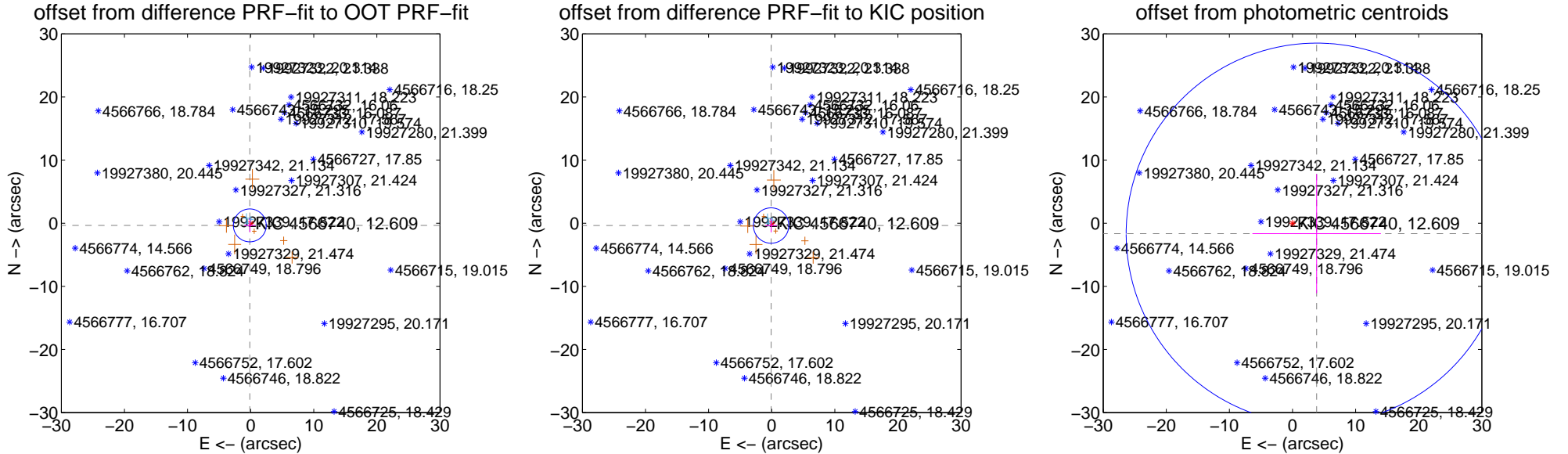
DV Centroid Data

Supplemental centroid analysis for 004566740-08. Kepler magnitude: 12.61. Transit SNR 0.41

There are 3 quarters with good PRF difference image offsets

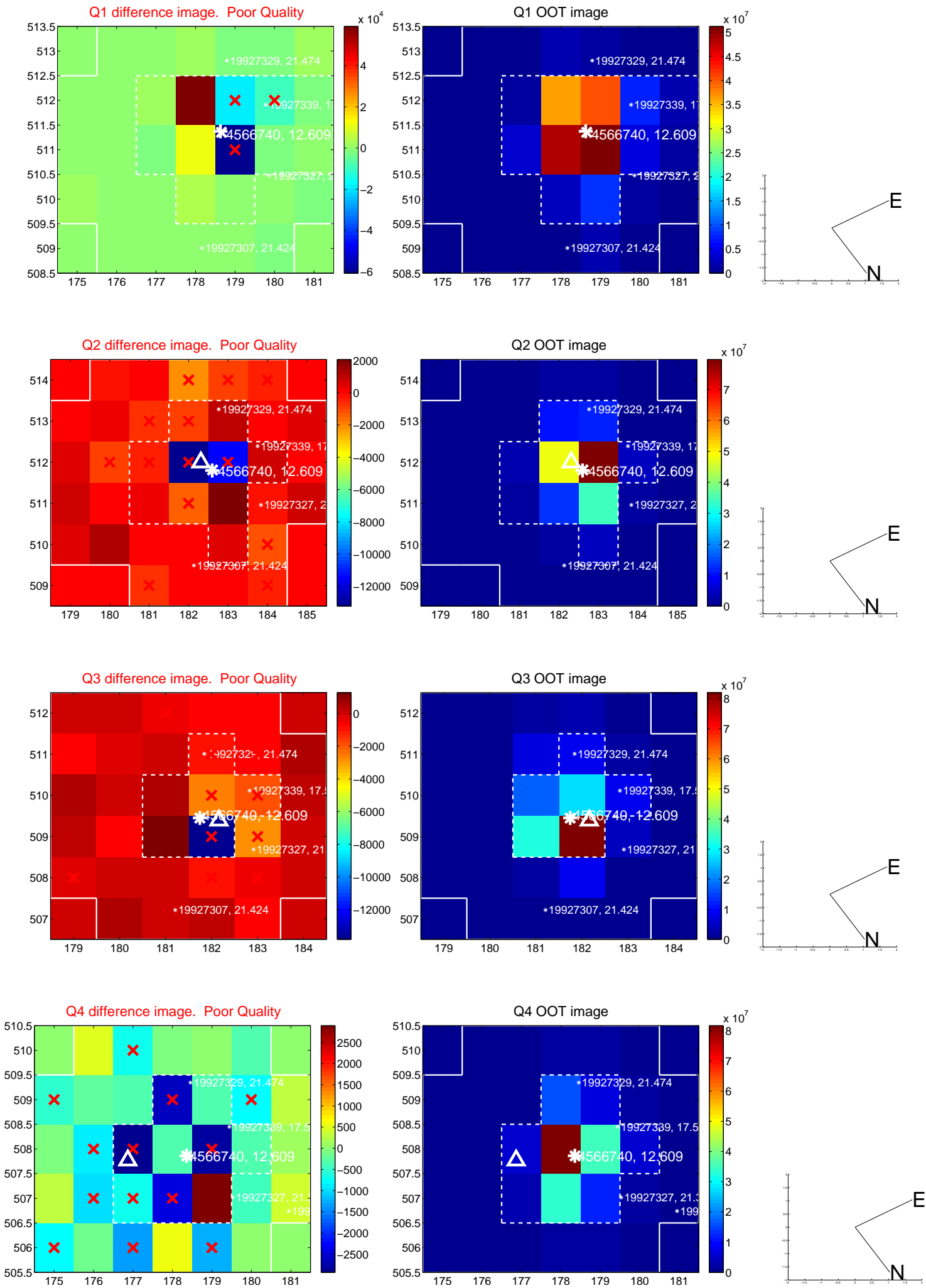
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.369 ± 0.869	0.43	0.136 ± 0.896	-0.343 ± 1.064
PRF-fit source offset from KIC position	0.380 ± 0.934	0.41	0.099 ± 0.934	-0.367 ± 1.063
photometric centroid source offset	4.18 ± 10.06	0.42	-3.83 ± 10.18	-1.66 ± 9.43

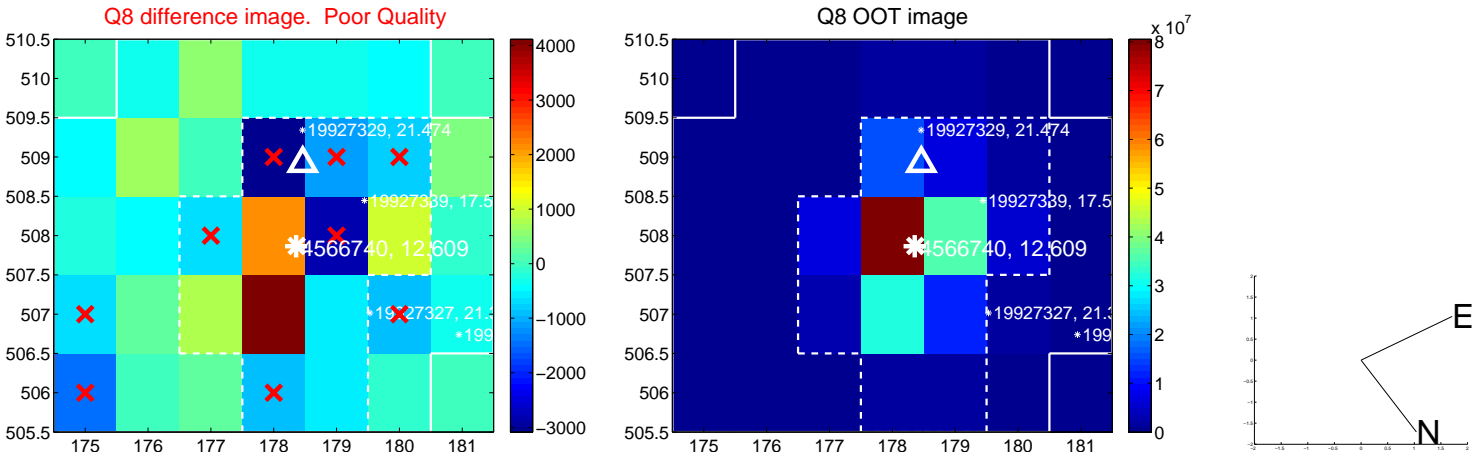
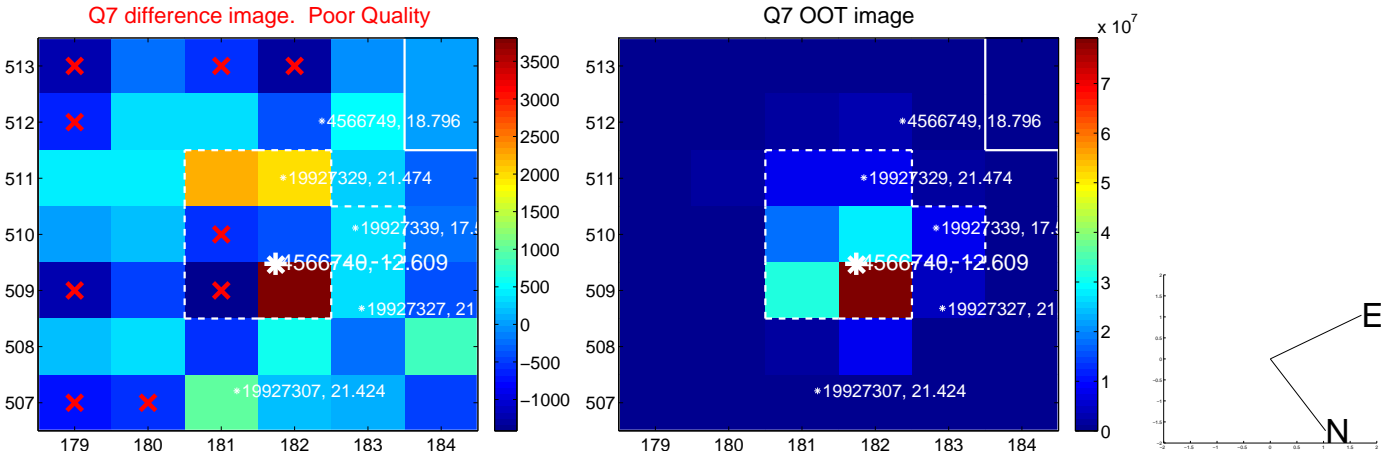
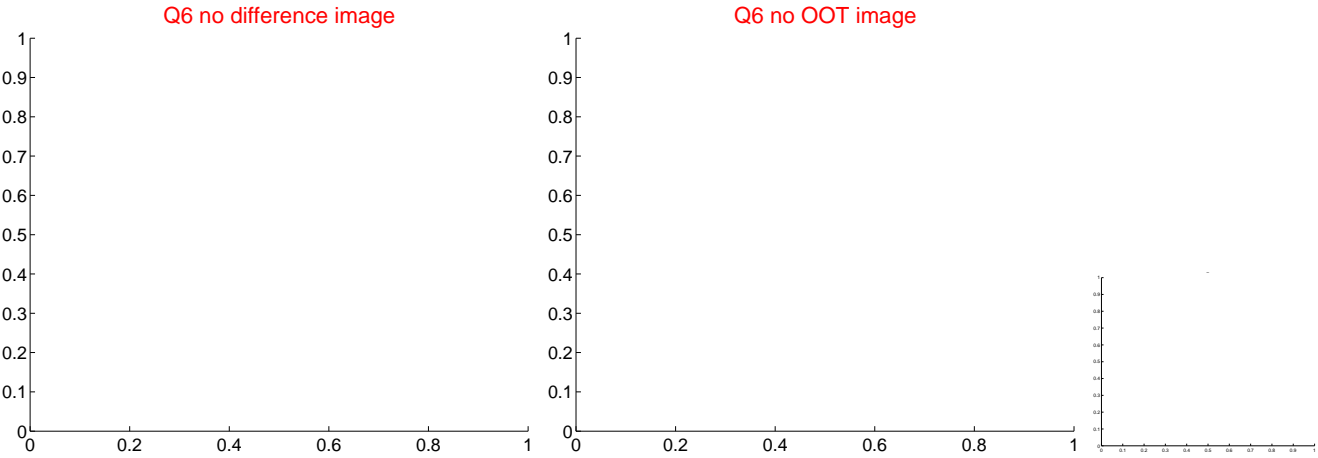
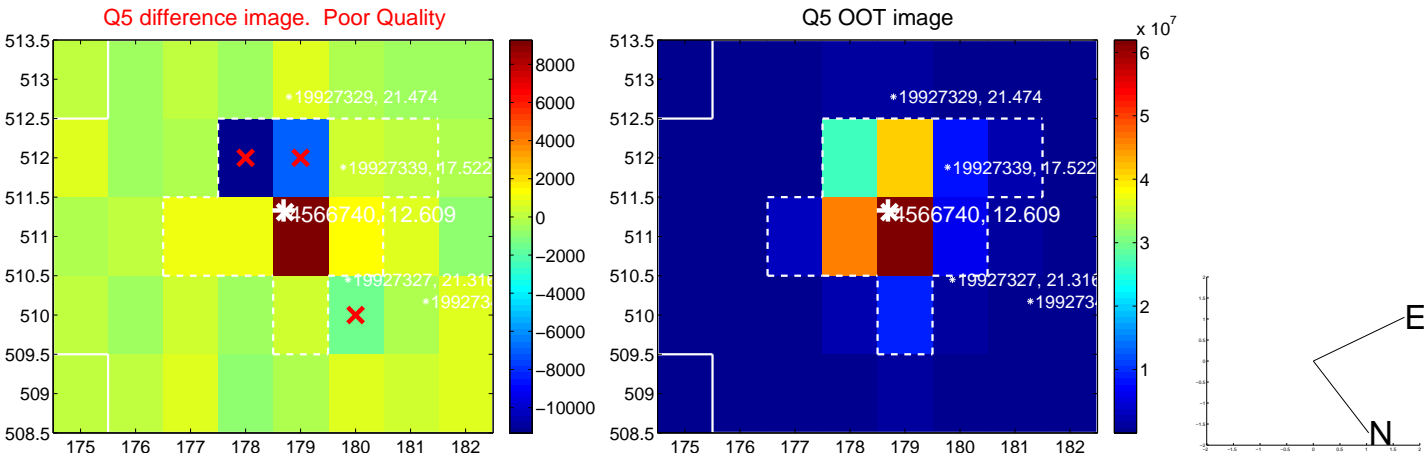


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

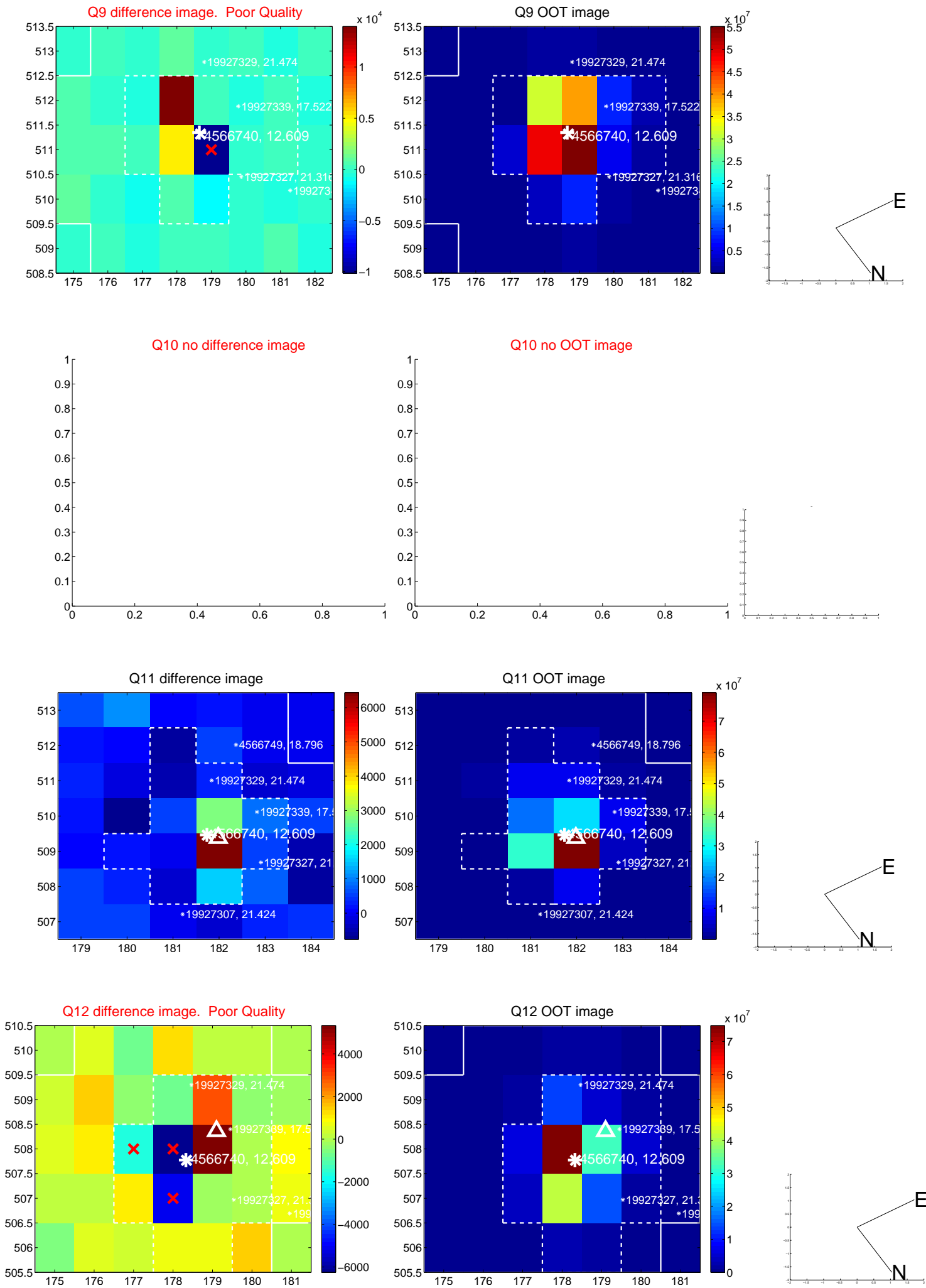
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



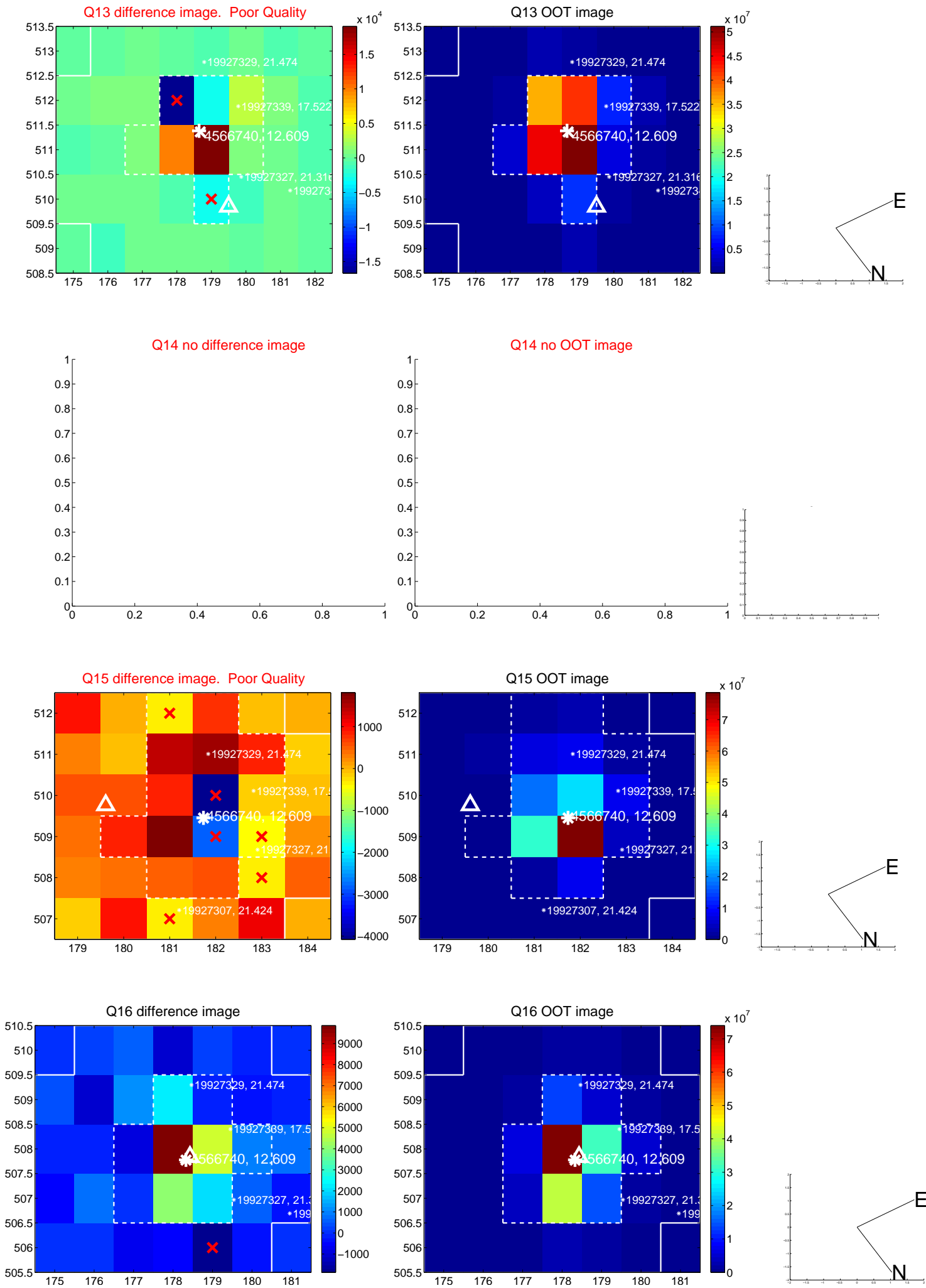
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



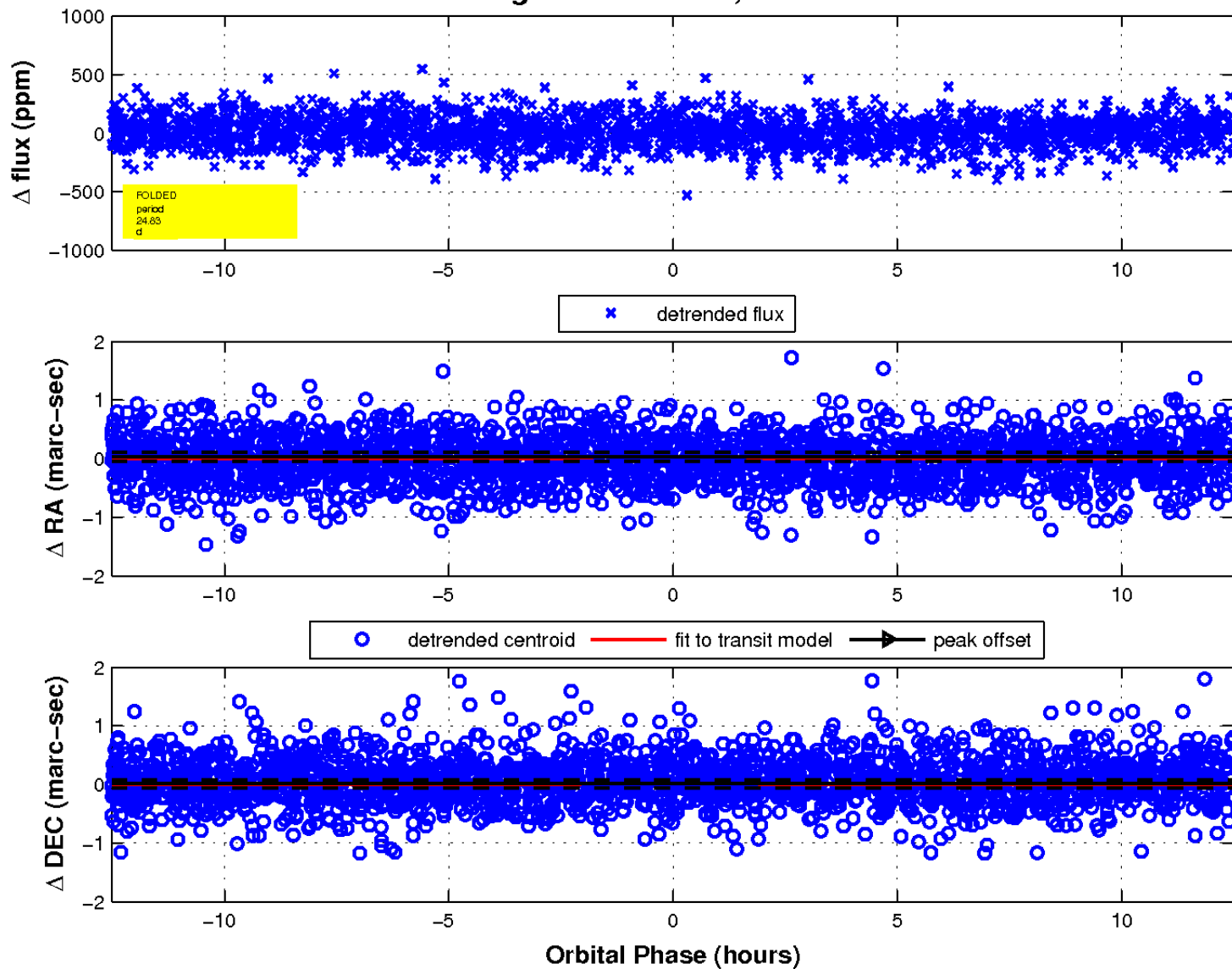
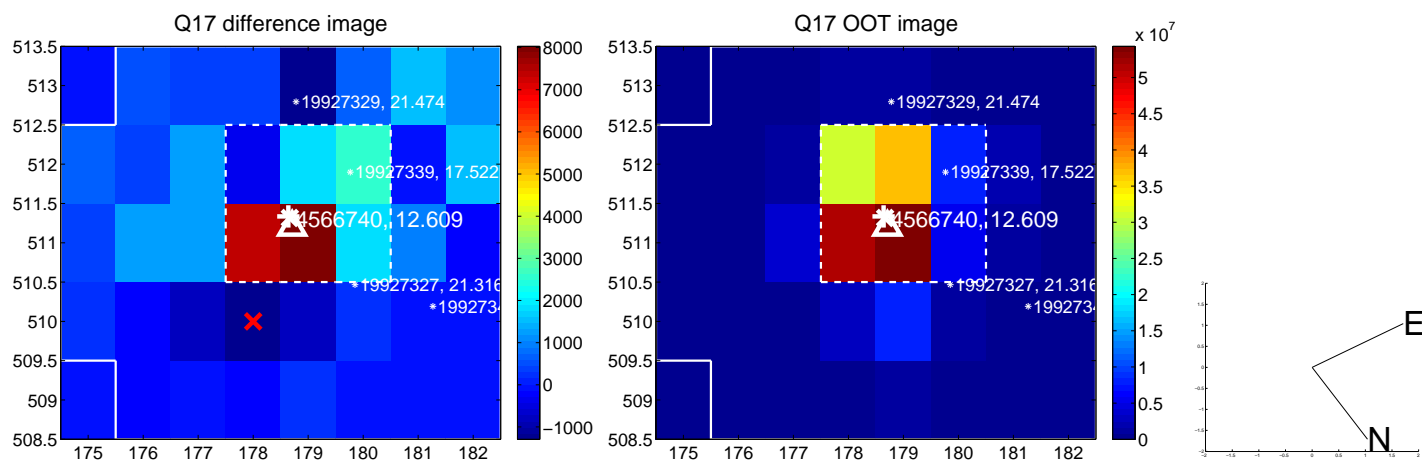
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

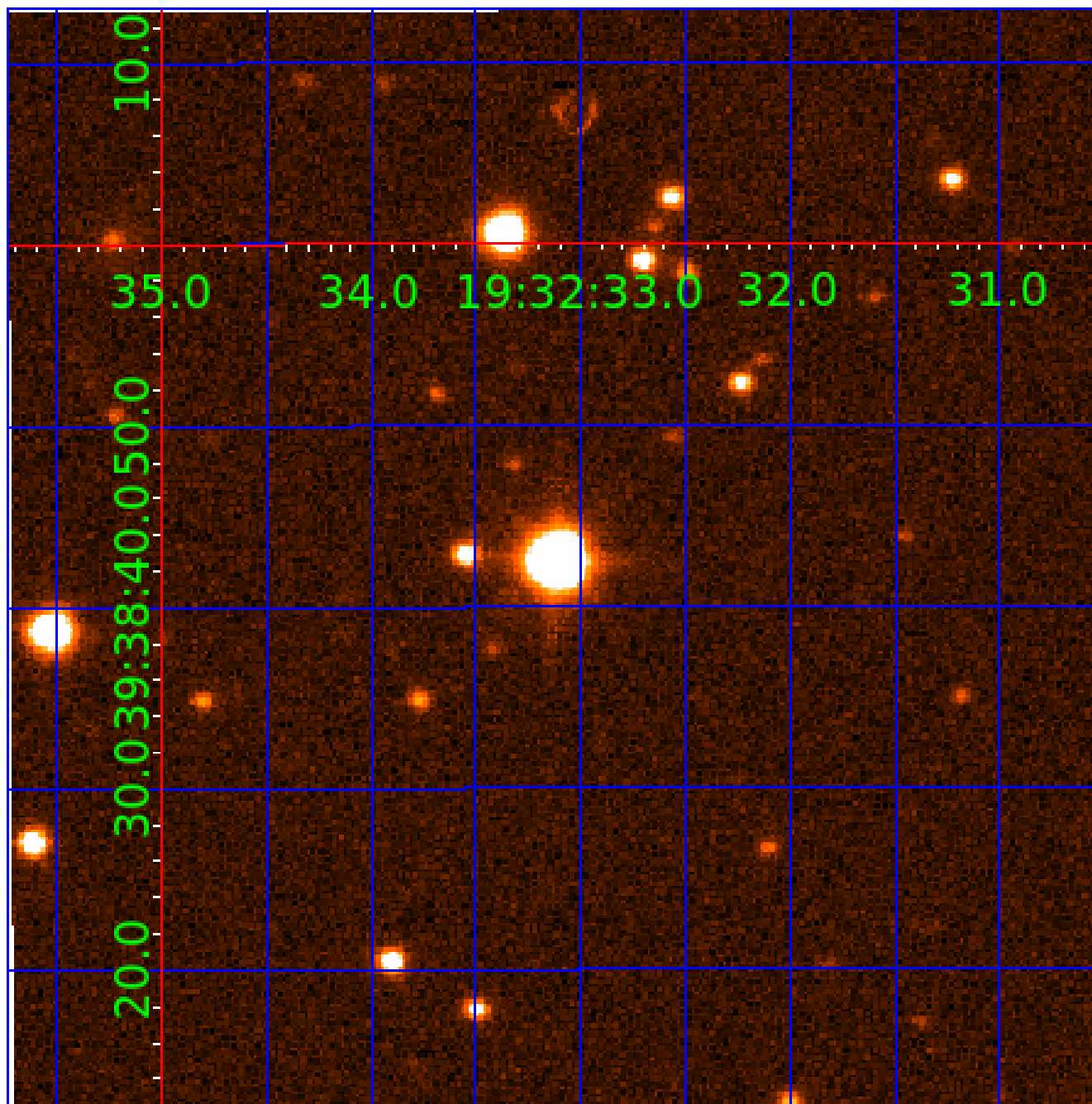


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



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})
004566740-01	OBS	No	4.973094	133.121675	18.1	16.357	9.1	4.6	2.45	6861	1.20	2661.05
004566740-02	OBS	No	2.486397	133.590068	33.4	10.361	10.1	8.9	2.45	6861	1.65	6705.96
004566740-03	OBS	No	76.219157	159.075847	211.1	5.534	9.3	8.3	2.45	6861	4.24	69.90
004566740-04	OBS	No	213.957349	243.898249	99.6	1.137	8.9	3.1	2.45	6861	2.76	17.65
004566740-05	OBS	No	213.953006	243.595682	3.4	0.512	8.9	0.1	2.45	6861	0.48	17.65
004566740-06	OBS	No	213.562988	245.133424	173.9	27.589	8.7	6.2	2.45	6861	3.47	17.70
004566740-07	OBS	No	52.951812	143.943002	200.3	9.663	7.9	7.7	2.45	6861	6.78	113.60
004566740-08	OBS	No	24.829527	148.789351	7.3	4.173	7.6	0.4	2.45	6861	0.71	311.84
004566740-09	OBS	No	17.811016	131.507027	152.8	3.000	7.4	-1.0	2.45	6861	3.06	485.63
004566740-10	OBS	No	57.698870	135.798867	148.7	3.447	7.4	7.8	2.45	6861	3.35	101.31

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004566740-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004566740-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_FEW_DIFFS
004566740-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
004566740-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
004566740-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—SAME_NTL_PERIOD—CENT_FEW_DIFFS
004566740-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
004566740-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004566740-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
004566740-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT—CENT_NOFITS
004566740-10	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

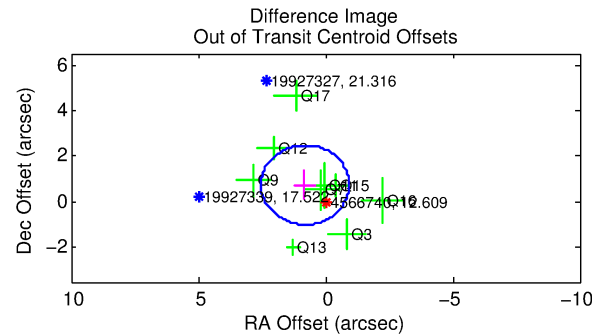
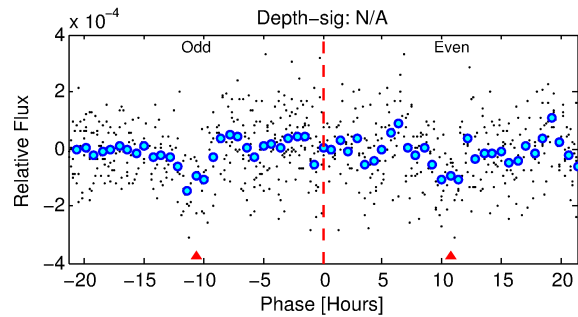
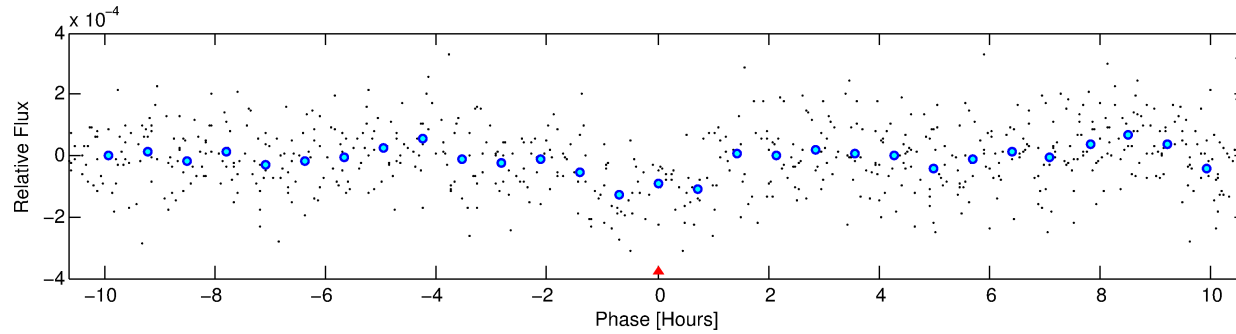
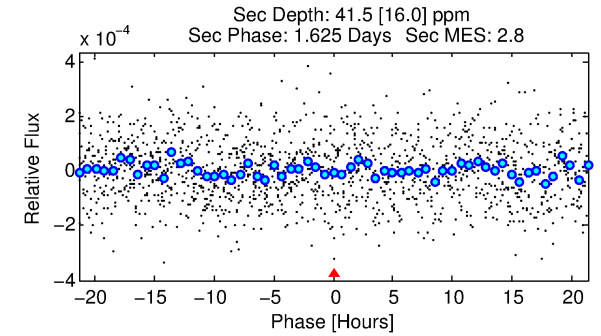
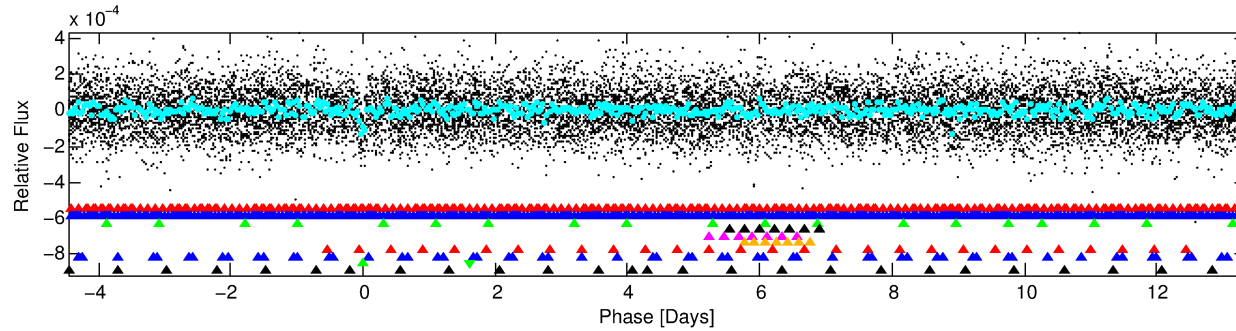
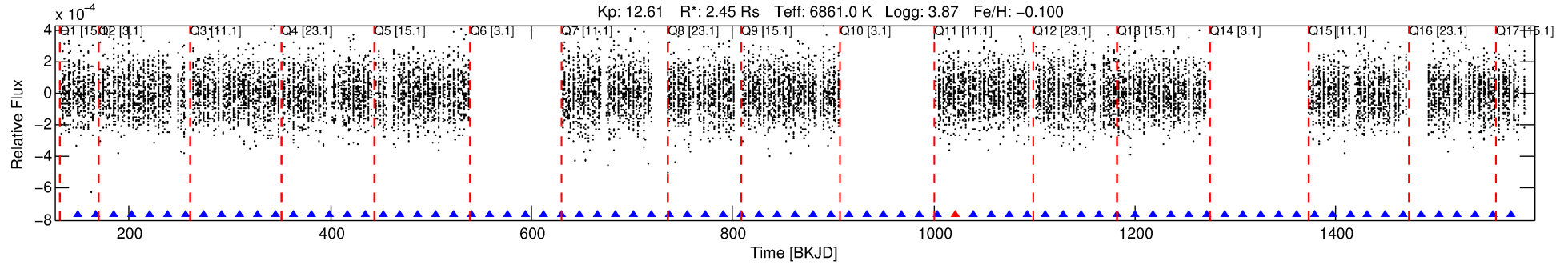
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004566740-09

No Significant Match Found

DV One-Page Summary

KIC: 4566740 Candidate: 9 of 10 Period: 17.811 d



TPS TCE Results:

Period = 17.81102 d
Epoch = 131.5070 BKJD

DV fit results are unavailable

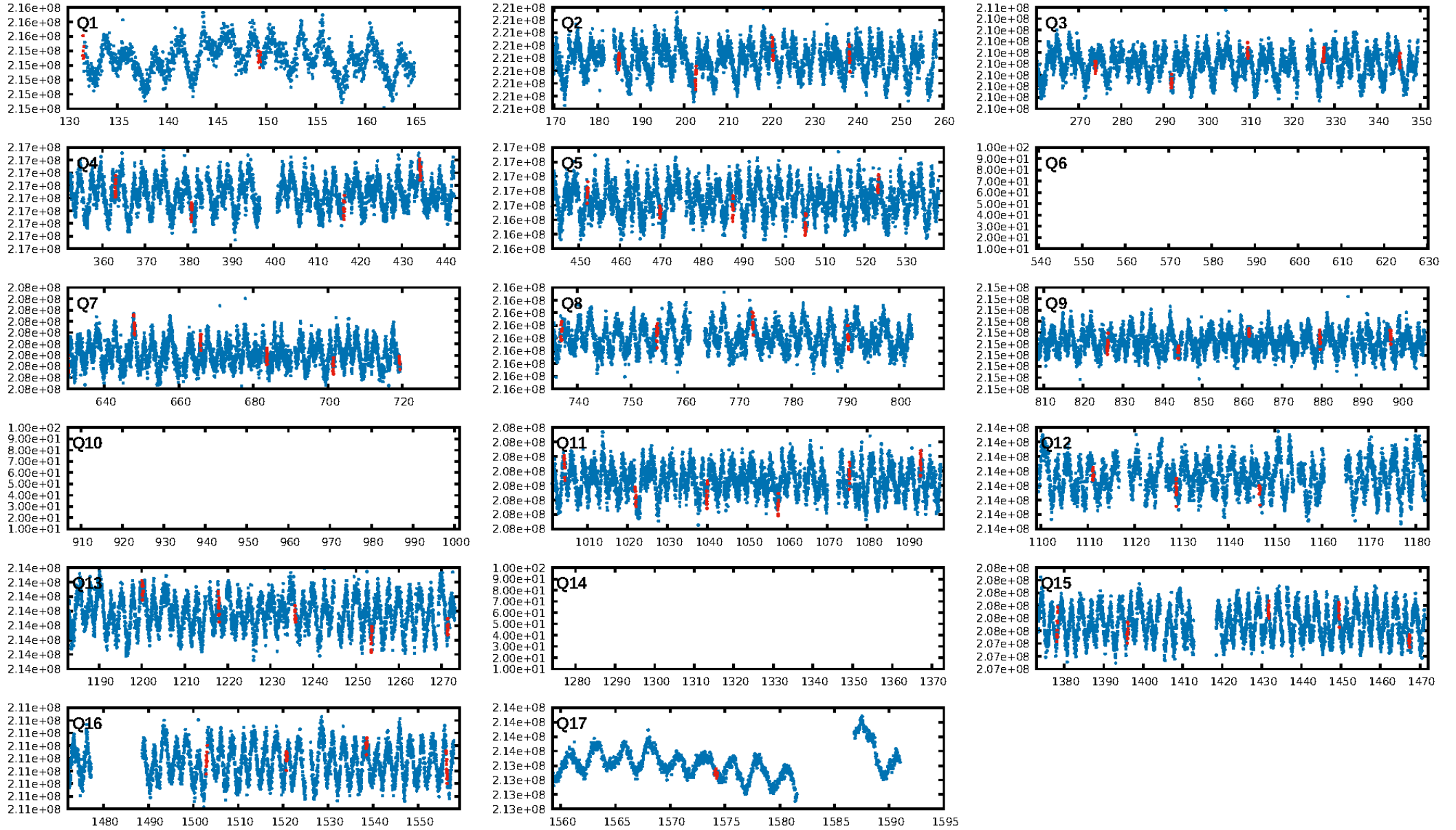
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [18.53 σ]
LongPeriod-sig: 100.0% [32.77 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.94 [16/17]
GhostDiagnostic-chr: 5.583
Centroid-sig: 2.2%
Centroid-so: 1.144 arcsec [1.84 σ]
OotOffset-rm: 1.101 arcsec [1.90 σ]
KicOffset-rm: 1.021 arcsec [1.66 σ]
OotOffset-st: 0/4/2/3 [9]
KicOffset-st: 0/4/2/3 [9]
DiffImageQuality-fgm: 0.33 [3/9]
DiffImageOverlap-fno: 0.86 [12/14]

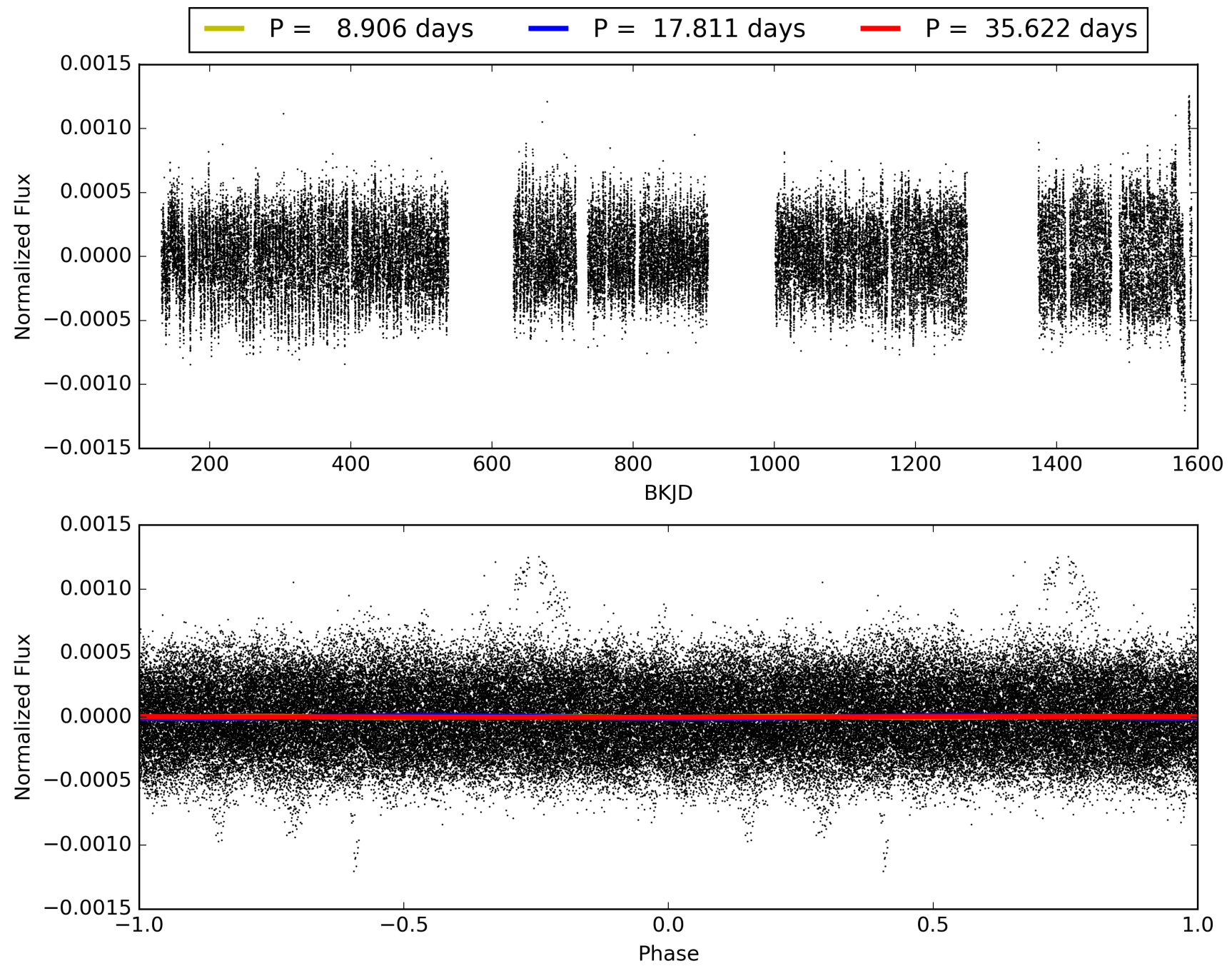
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 06:44:12 Z

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

TCE 004566740-09, PDC Light Curves

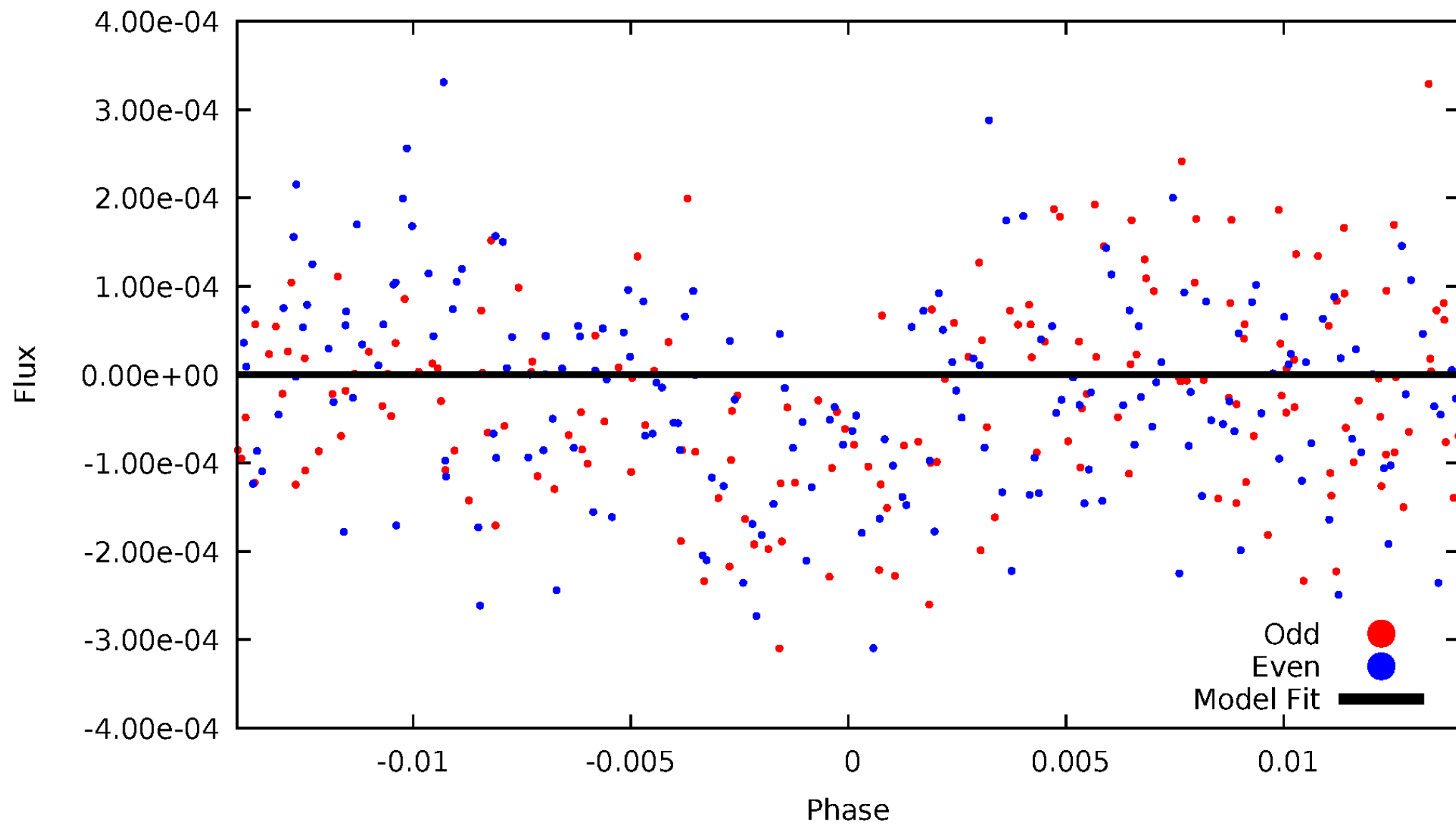


TCE 004566740-09



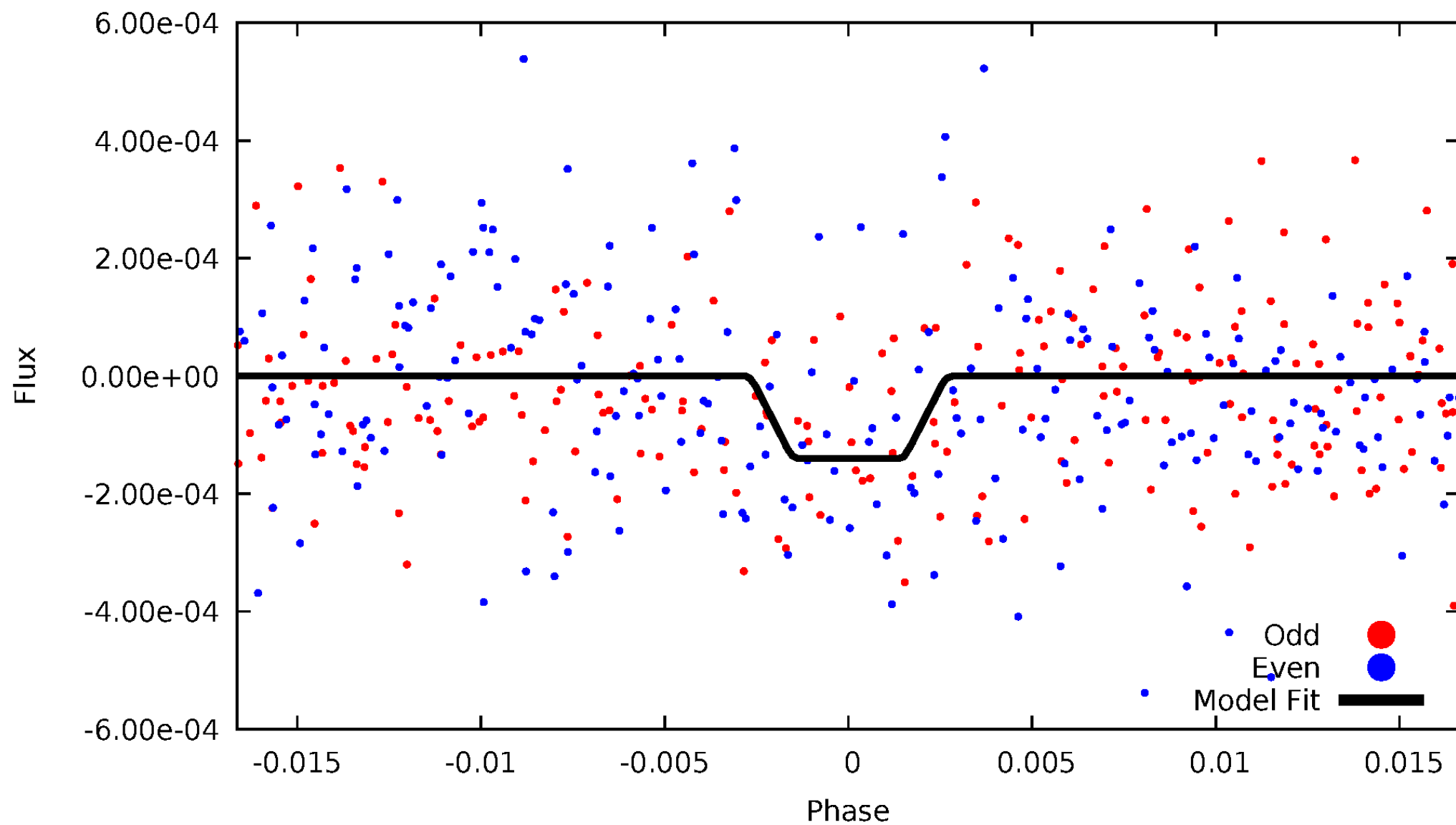
DV Odd/Even

TCE 004566740-09

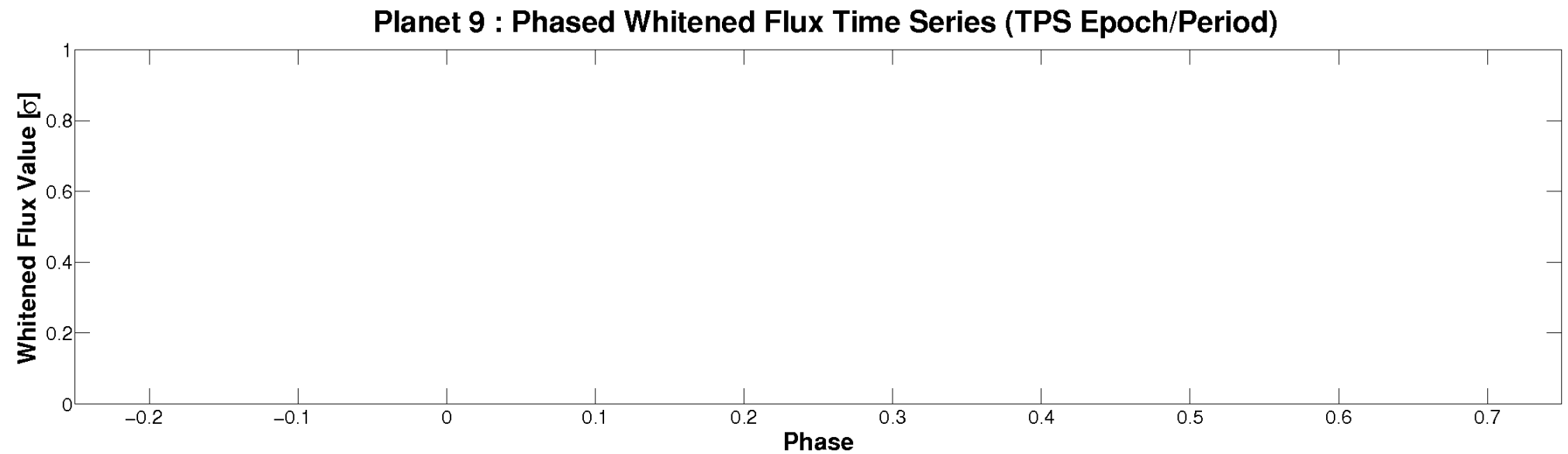
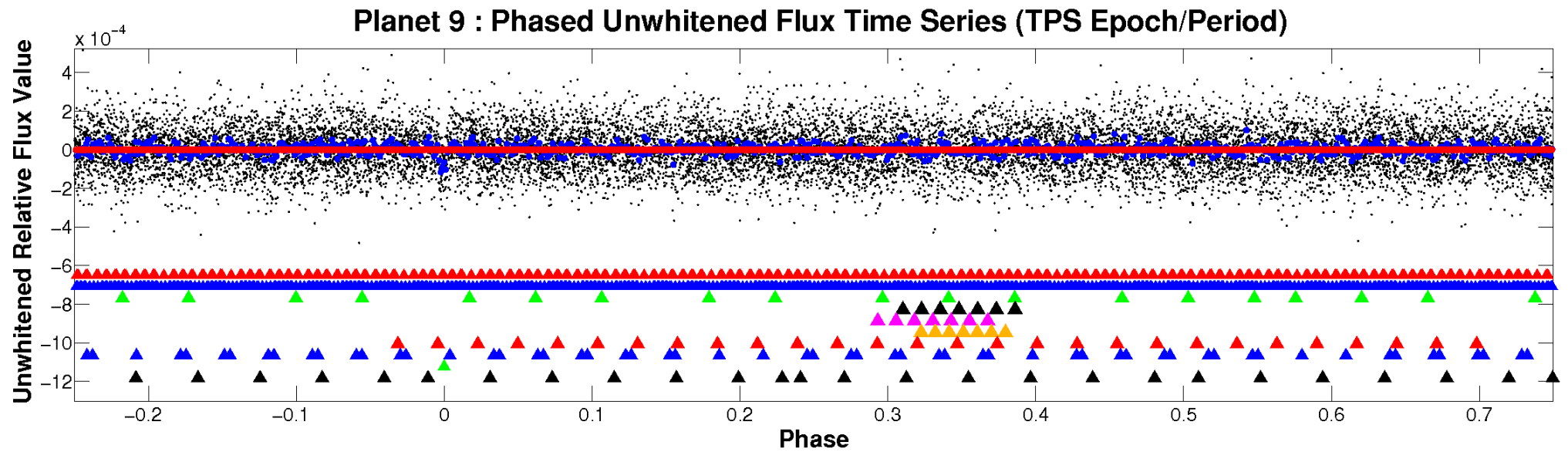


ALT Odd/Even

TCE 004566740-09

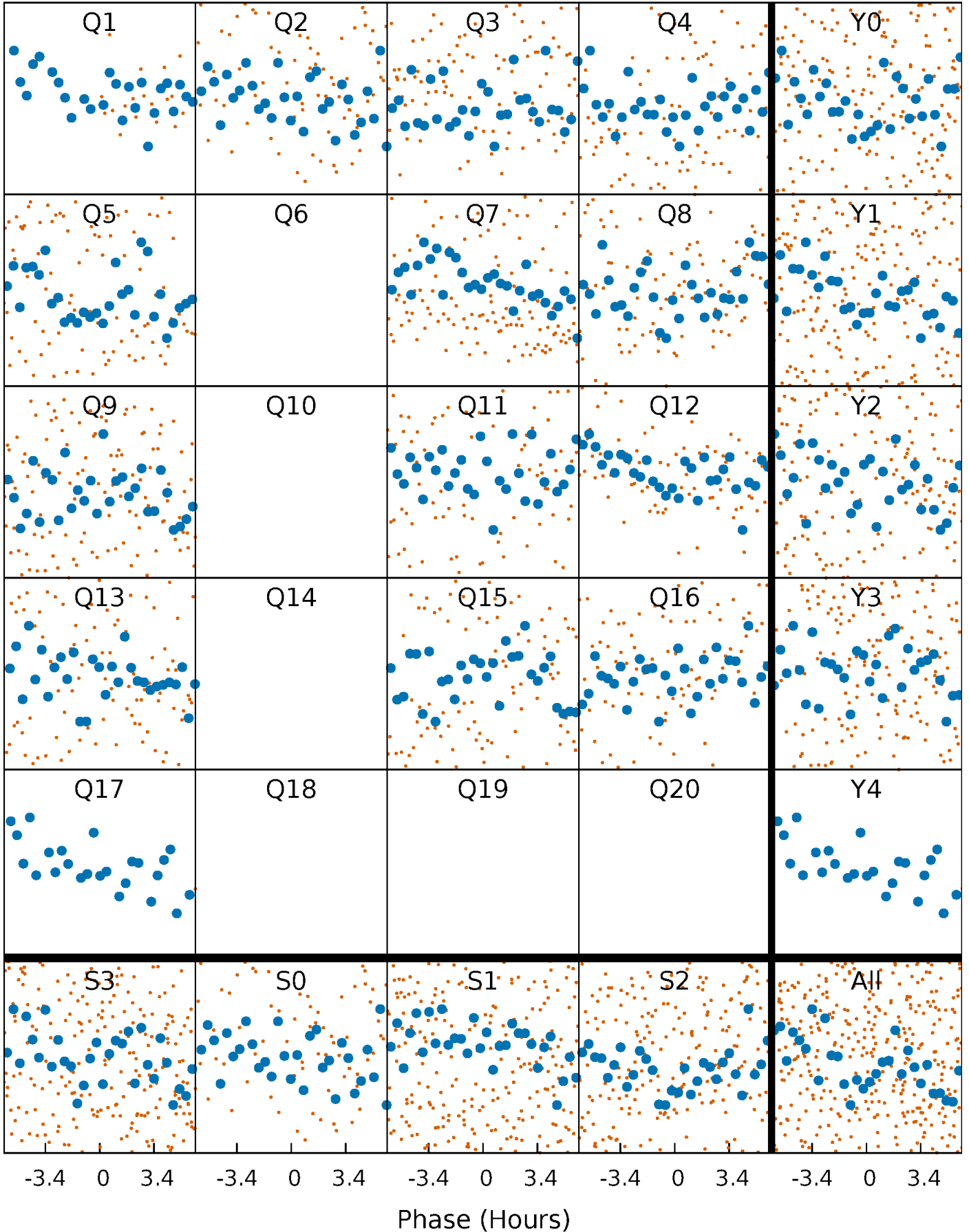


Non-Whitened Vs. Whitened Light Curve



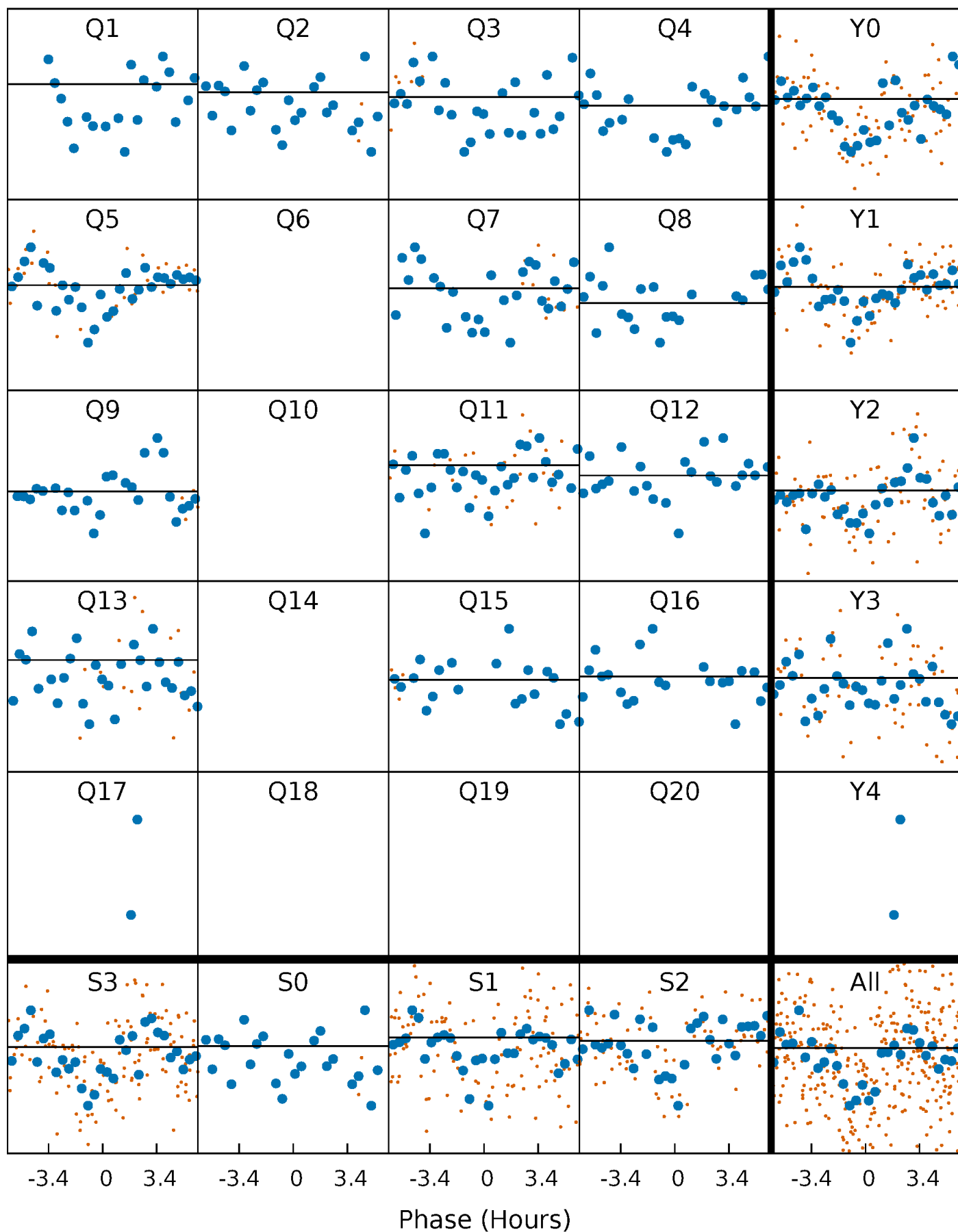
PDC Quarter-Phased Transit Curves

TCE 004566740-09 P= 17.811016 Days $T_0=131.507027$ (BKJD)



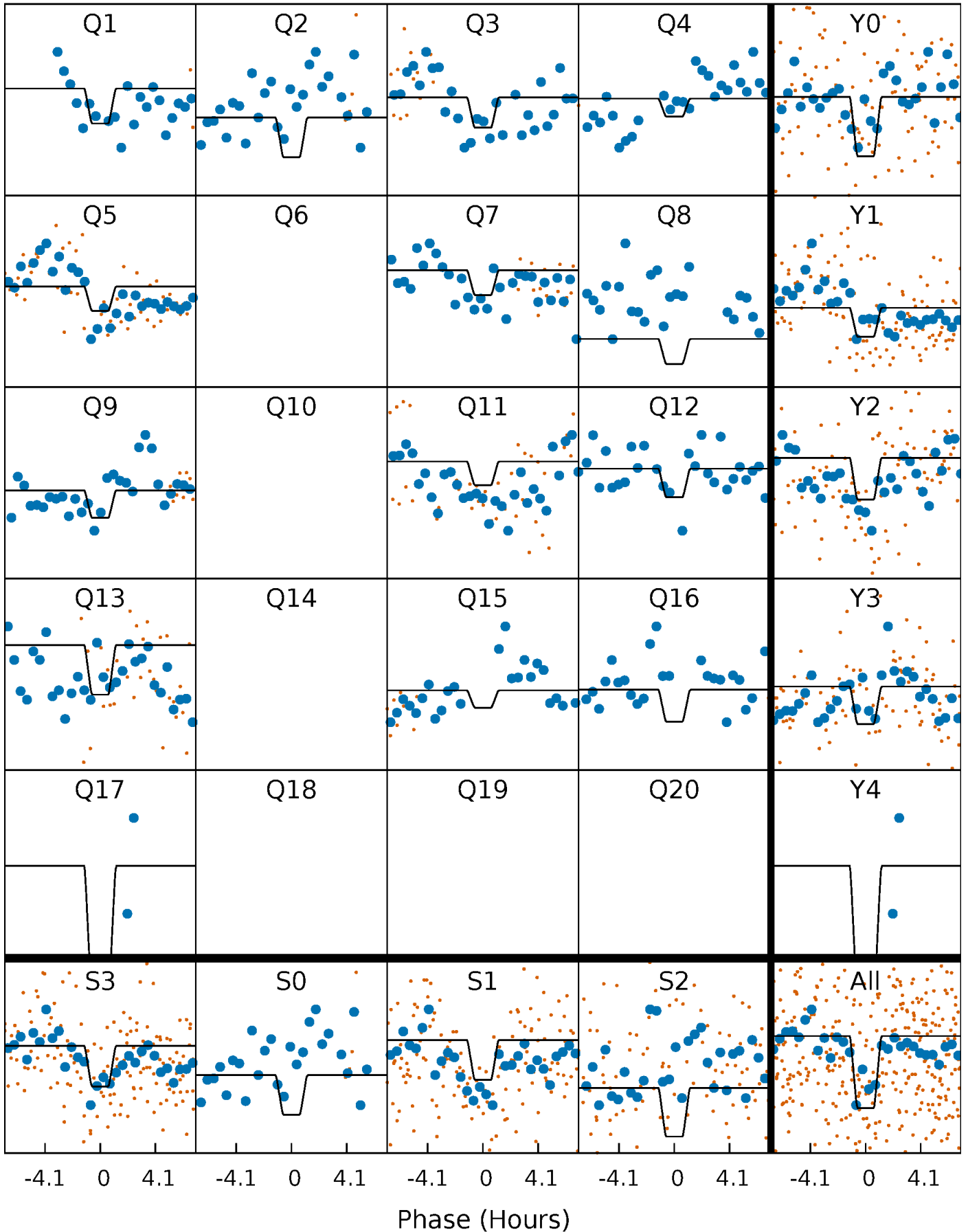
DV Quarter-Phased Transit Curves

TCE 004566740-09 P= 17.811016 Days $T_0=131.507027$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

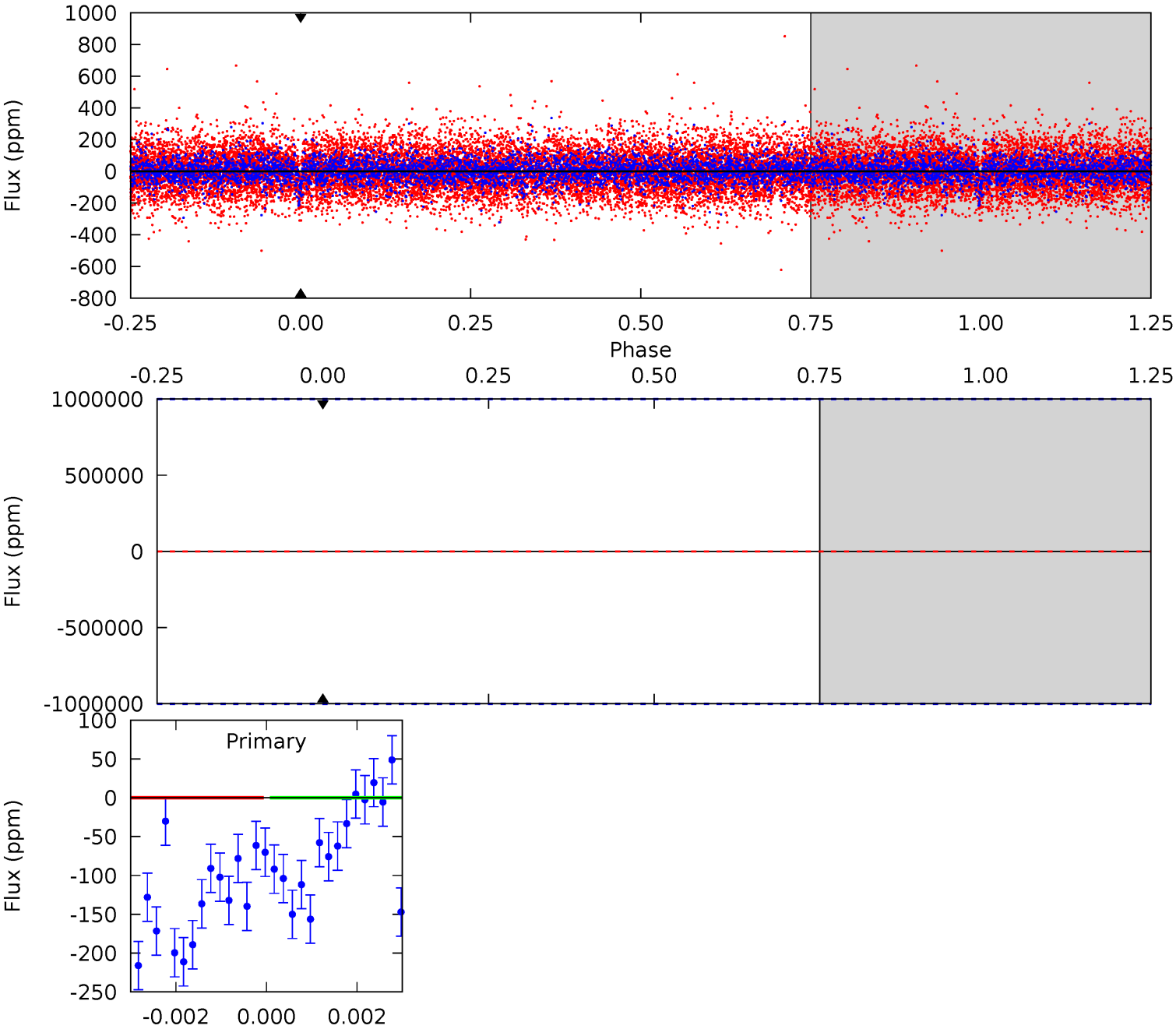
TCE 004566740-09 $P = 17.811016$ Days $T_0 = 149.309774$ (BKJD)



DV Model-Shift Uniqueness Test

004566740-09, P = 17.811016 Days, E = 131.507027 Days

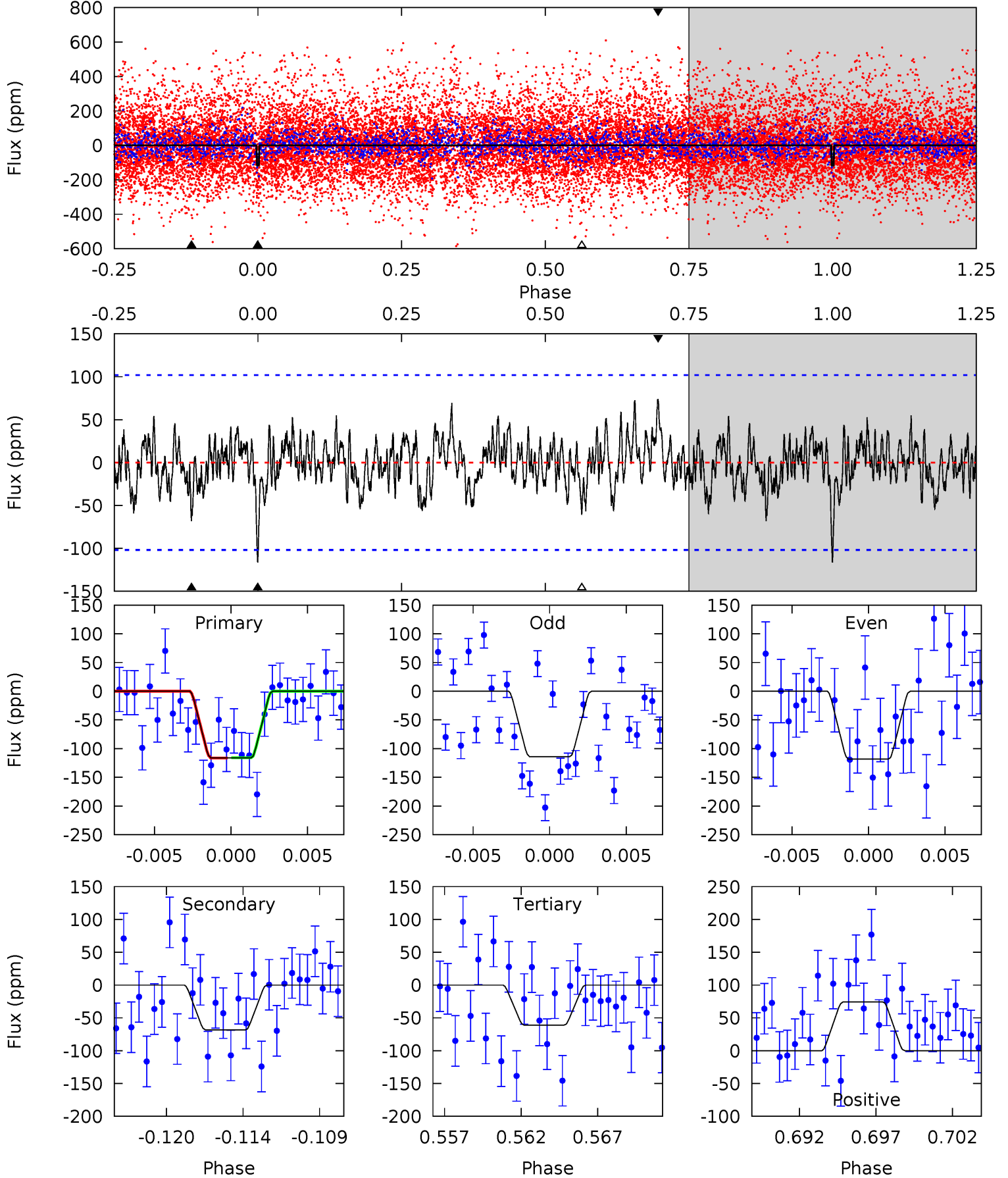
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

004566740-09, P = 17.811016 Days, E = 131.498758 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.87	3.45	3.08	3.74	5.15	2.79	1.19	2.79	2.13	0.37	-0.29	0.11	0.72	0.39	0.01



Stellar Parameters For KIC 004566740

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6861^{+190}_{-214}	$3.868^{+0.259}_{-0.111}$	$-0.100^{+0.300}_{-0.300}$	$2.450^{+0.507}_{-0.760}$	$1.614^{+0.194}_{-0.292}$	$0.154^{+0.251}_{-0.052}$
	+3%/-3%	+7%/-3%	+300%/-300%	+21%/-31%	+12%/-18%	+163%/-33%
Source	PHO1	FLK73	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 004566740-09 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$17.89^{+22.57}_{-12.11}$	1640^{+101}_{-138}	-5551^{+41049}_{-30738}	$-81.610^{+7819.874}_{-8626.598}$
Alt.	-68 ± 20	$17.04^{+22.27}_{-11.67}$	1642^{+103}_{-129}	2954^{+1394}_{-700}	$3.109^{+27.237}_{-2.556}$

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 $A_{obs} \gg 1.0$

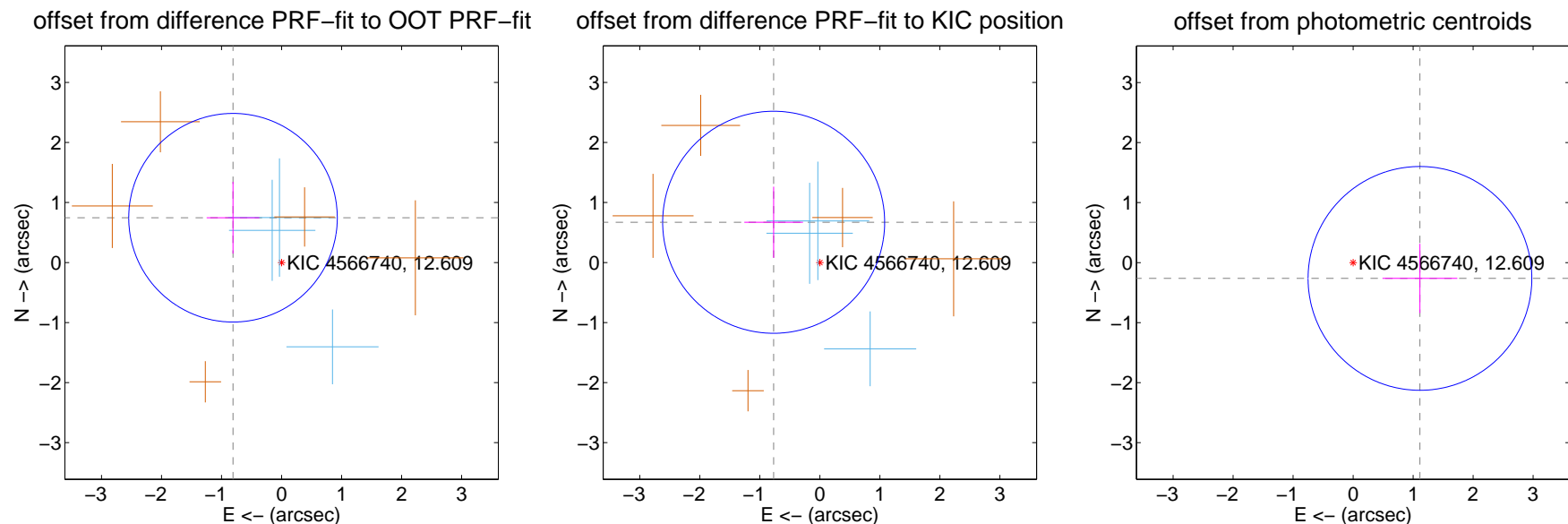
DV Centroid Data

Supplemental centroid analysis for 004566740-09. Kepler magnitude: 12.61. Transit SNR -1.00

There are 3 quarters with good PRF difference image offsets

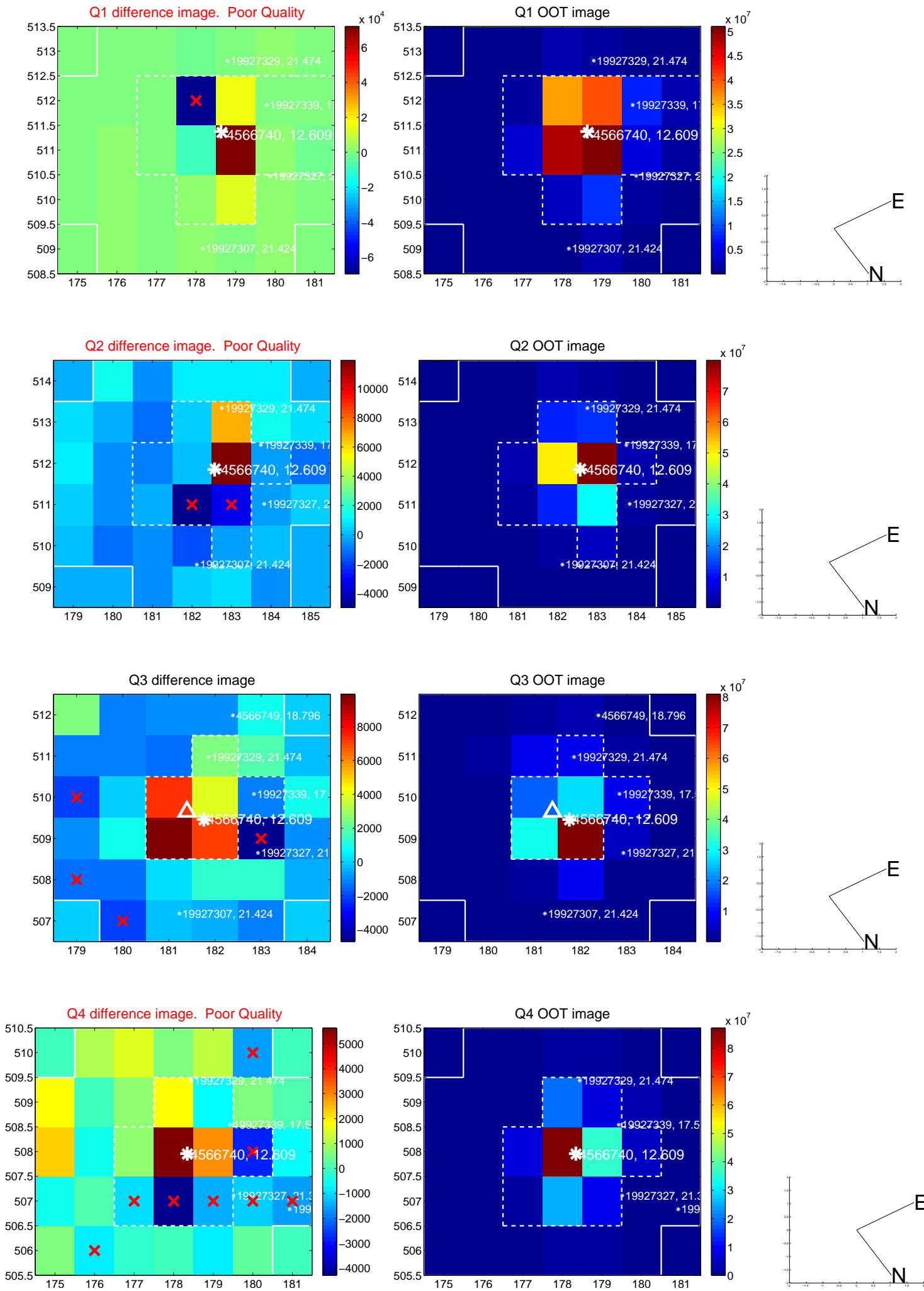
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.101 ± 0.579	1.90	0.809 ± 0.440	0.746 ± 0.597
PRF-fit source offset from KIC position	1.021 ± 0.616	1.66	0.769 ± 0.489	0.671 ± 0.592
photometric centroid source offset	1.14 ± 0.62	1.84	-1.11 ± 0.62	-0.26 ± 0.58

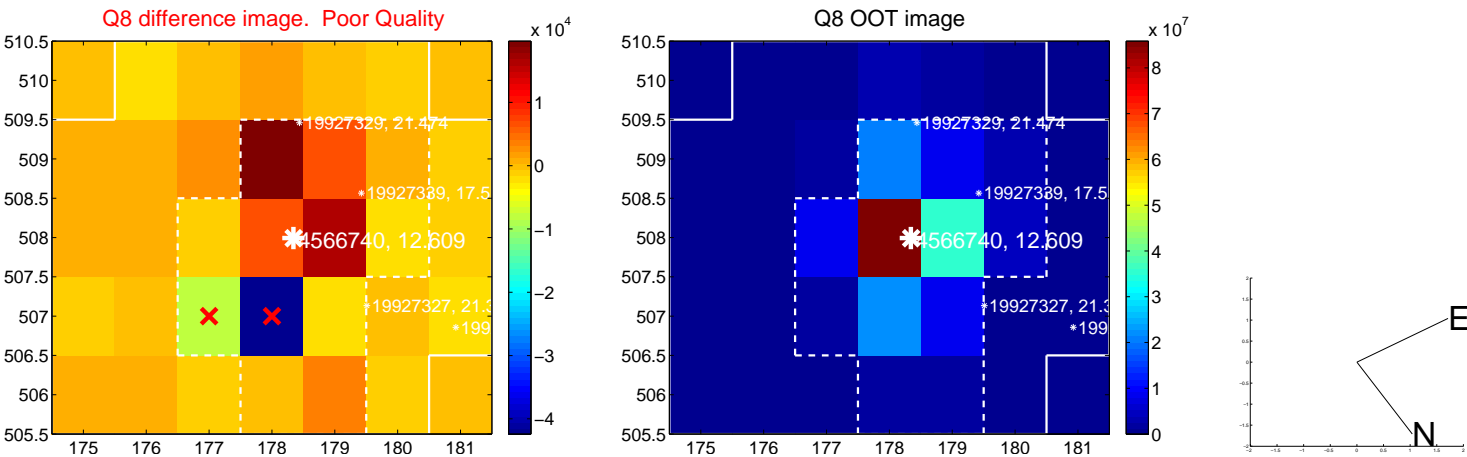
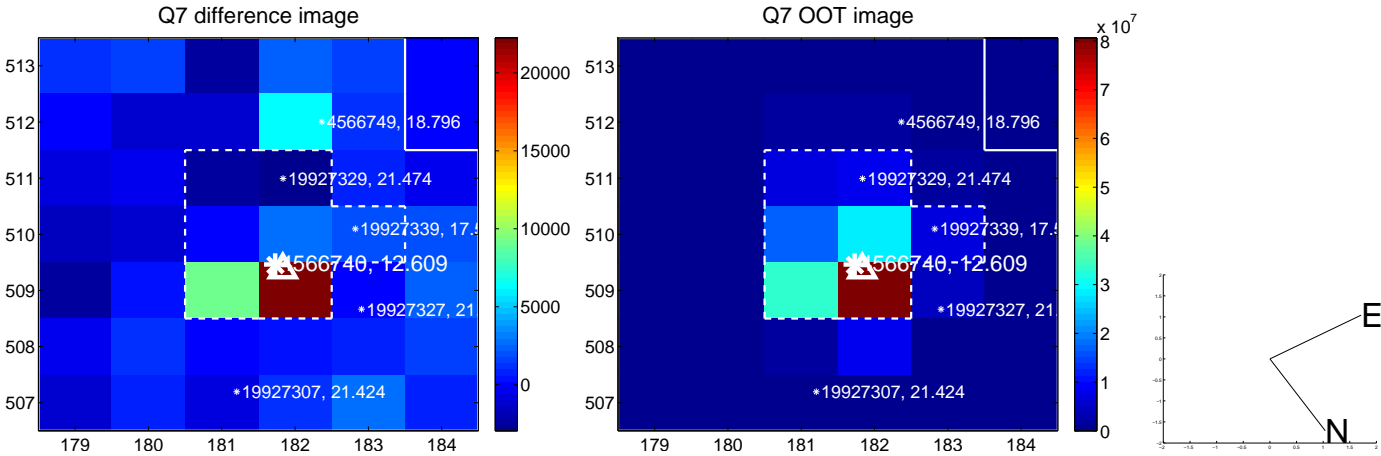
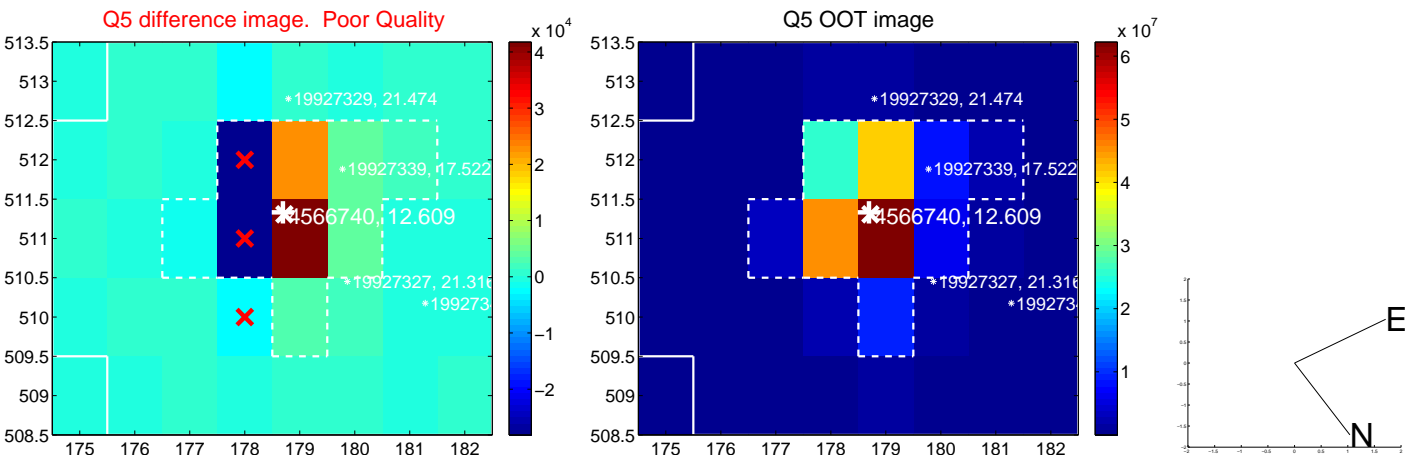


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

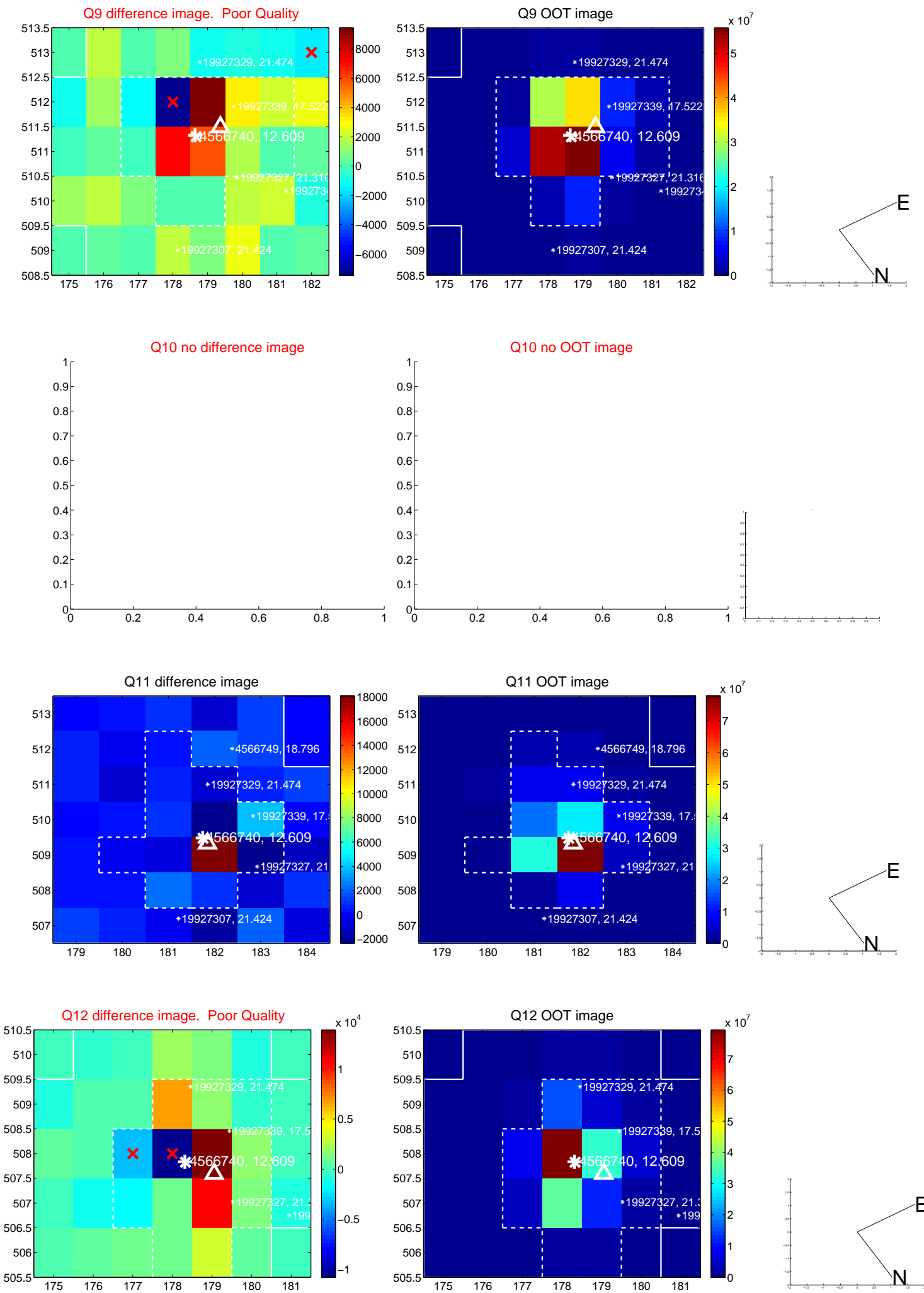
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



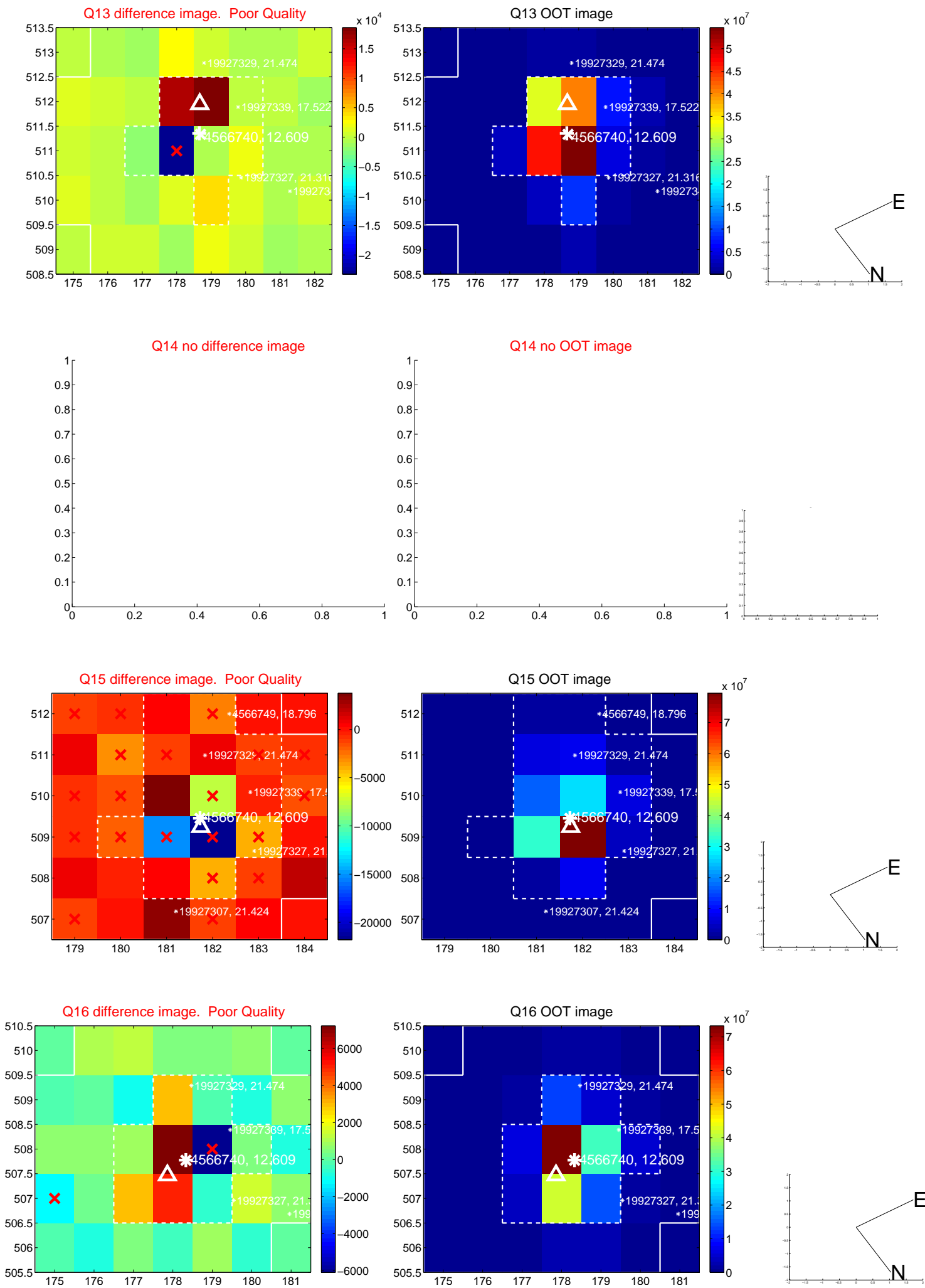
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



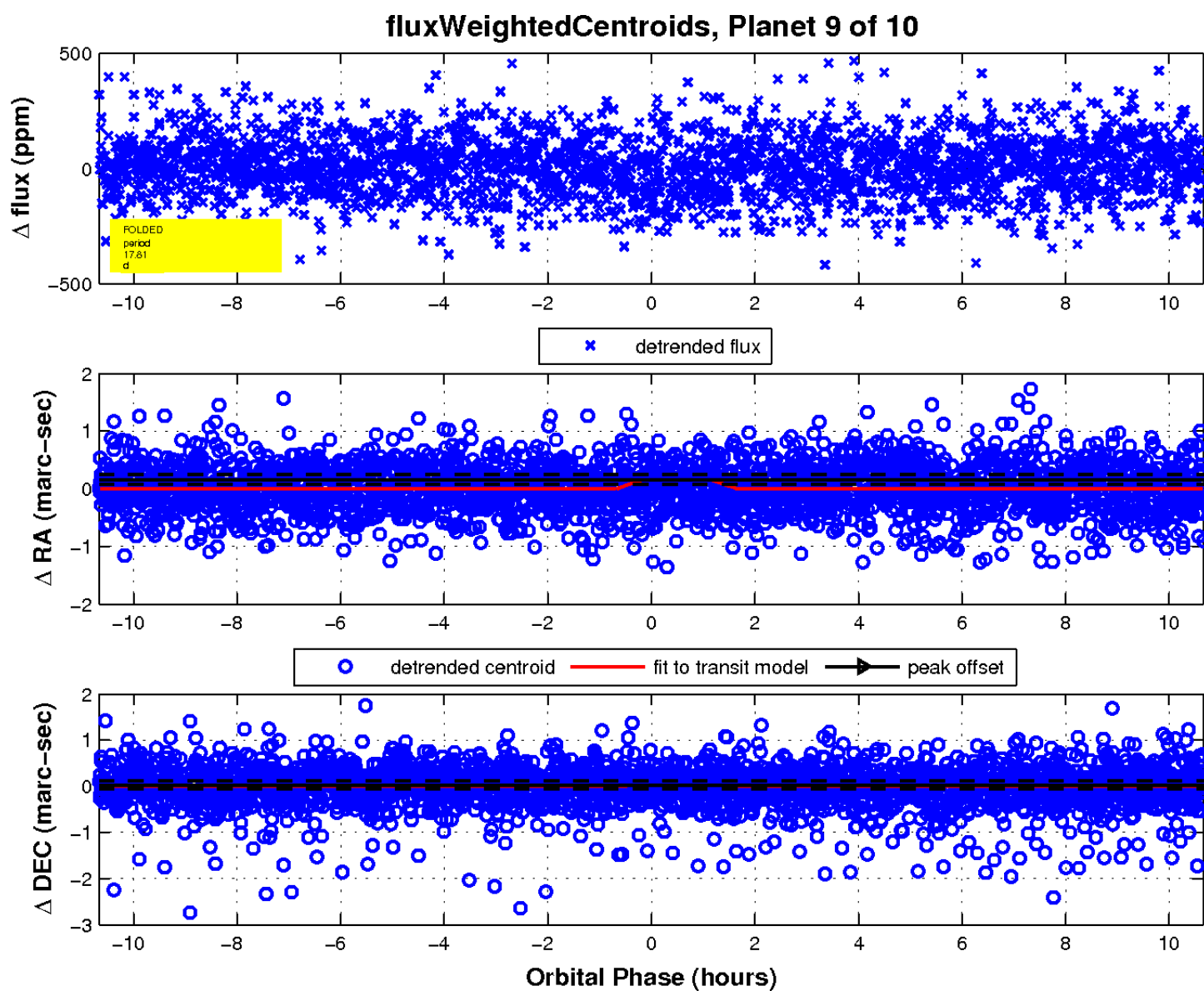
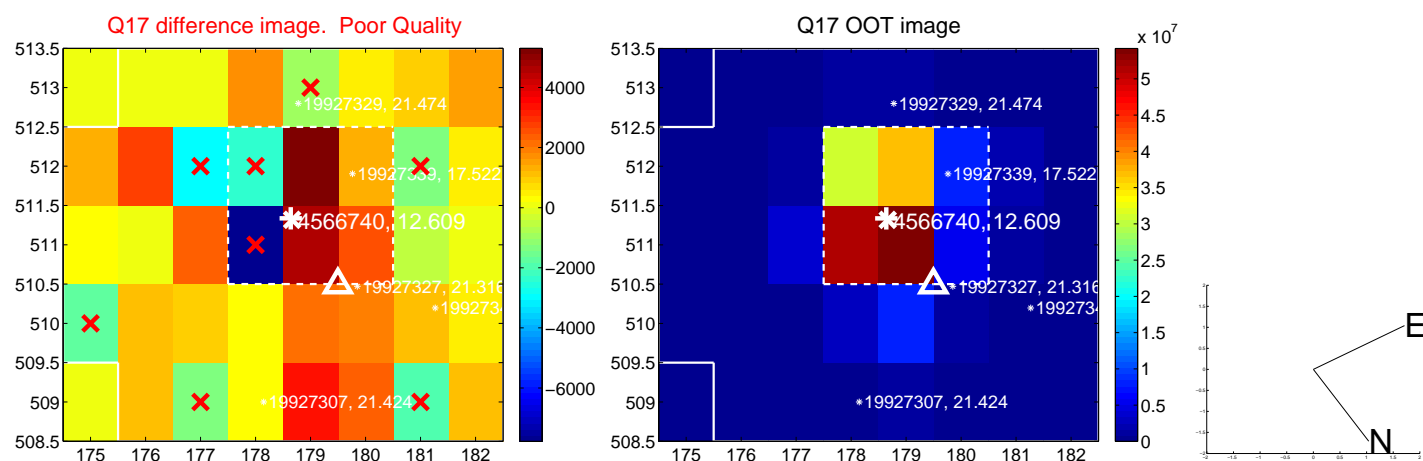
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

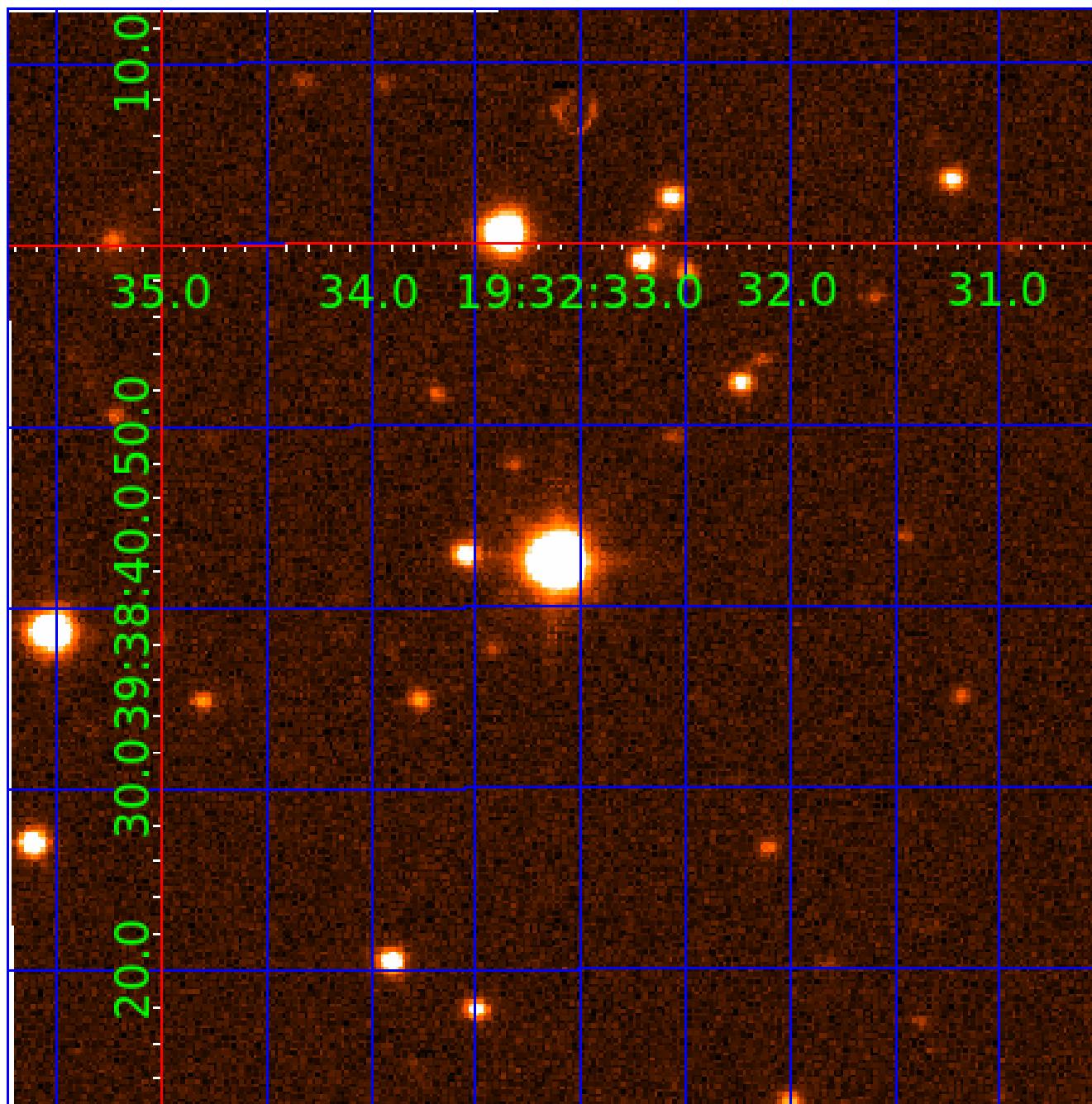


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



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})
004566740-01	OBS	No	4.973094	133.121675	18.1	16.357	9.1	4.6	2.45	6861	1.20	2661.05
004566740-02	OBS	No	2.486397	133.590068	33.4	10.361	10.1	8.9	2.45	6861	1.65	6705.96
004566740-03	OBS	No	76.219157	159.075847	211.1	5.534	9.3	8.3	2.45	6861	4.24	69.90
004566740-04	OBS	No	213.957349	243.898249	99.6	1.137	8.9	3.1	2.45	6861	2.76	17.65
004566740-05	OBS	No	213.953006	243.595682	3.4	0.512	8.9	0.1	2.45	6861	0.48	17.65
004566740-06	OBS	No	213.562988	245.133424	173.9	27.589	8.7	6.2	2.45	6861	3.47	17.70
004566740-07	OBS	No	52.951812	143.943002	200.3	9.663	7.9	7.7	2.45	6861	6.78	113.60
004566740-08	OBS	No	24.829527	148.789351	7.3	4.173	7.6	0.4	2.45	6861	0.71	311.84
004566740-09	OBS	No	17.811016	131.507027	152.8	3.000	7.4	-1.0	2.45	6861	3.06	485.63
004566740-10	OBS	No	57.698870	135.798867	148.7	3.447	7.4	7.8	2.45	6861	3.35	101.31

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004566740-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004566740-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_FEW_DIFFS
004566740-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
004566740-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
004566740-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—SAME_NTL_PERIOD—CENT_FEW_DIFFS
004566740-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
004566740-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004566740-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
004566740-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT—CENT_NOFITS
004566740-10	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

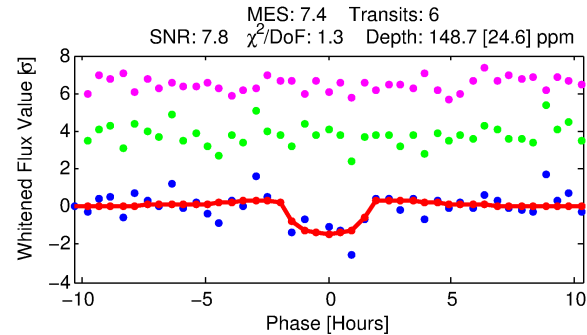
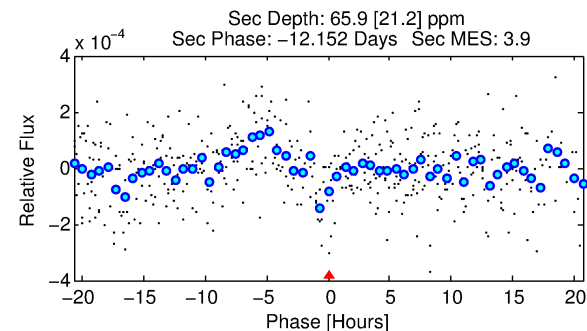
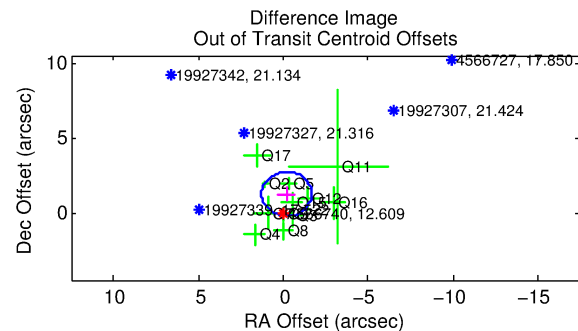
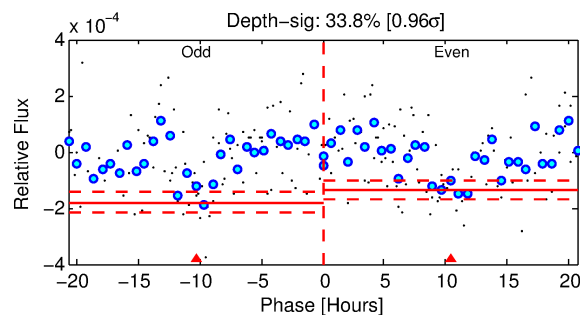
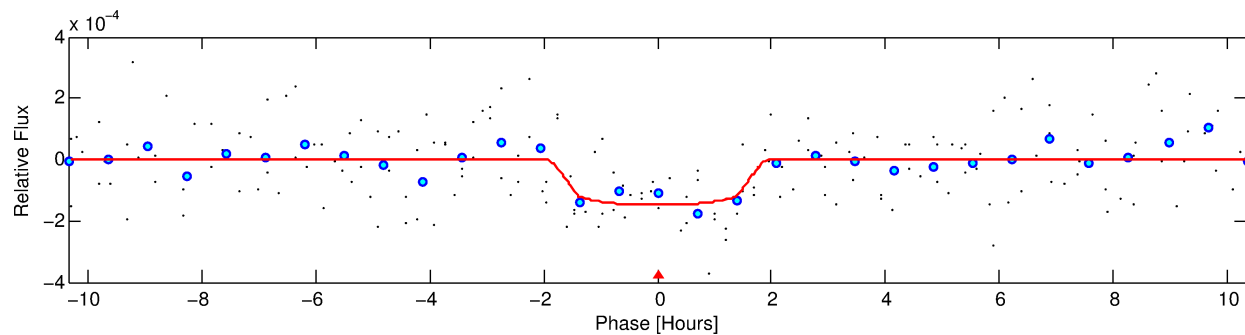
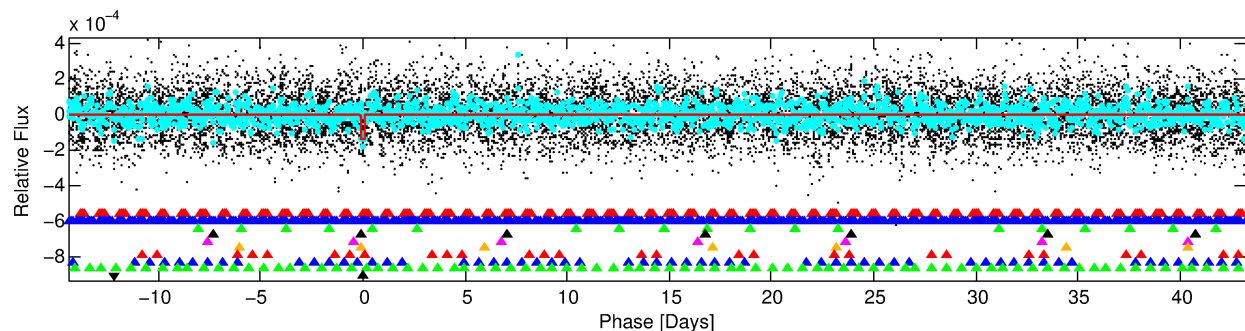
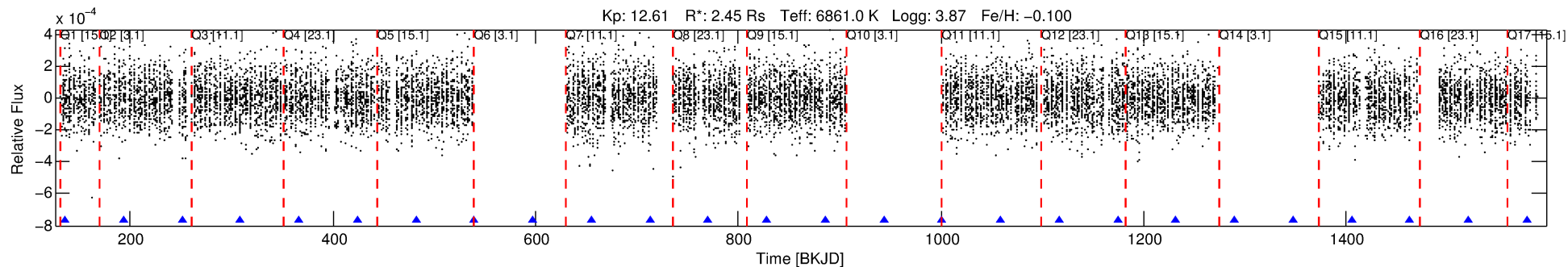
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004566740-10

No Significant Match Found

DV One-Page Summary

KIC: 4566740 Candidate: 10 of 10 Period: 57.699 d



DV Fit Results:

Period = 57.69887 [0.00069] d
Epoch = 135.7989 [0.0103] BKJD
Rp/R* = 0.0125 [0.0130]
a/R* = 73.37 [449.10]
b = 0.83 [2.26]
Seff = 101.31 [47.13]
Teq = 809 [94] K
Rp = 3.34 [3.62] Re
a = 0.3430 [0.0984] AU
Ag = 380.97 [817.62] [0.46 σ]
Teffp = 5526 [2905] K [1.62 σ]

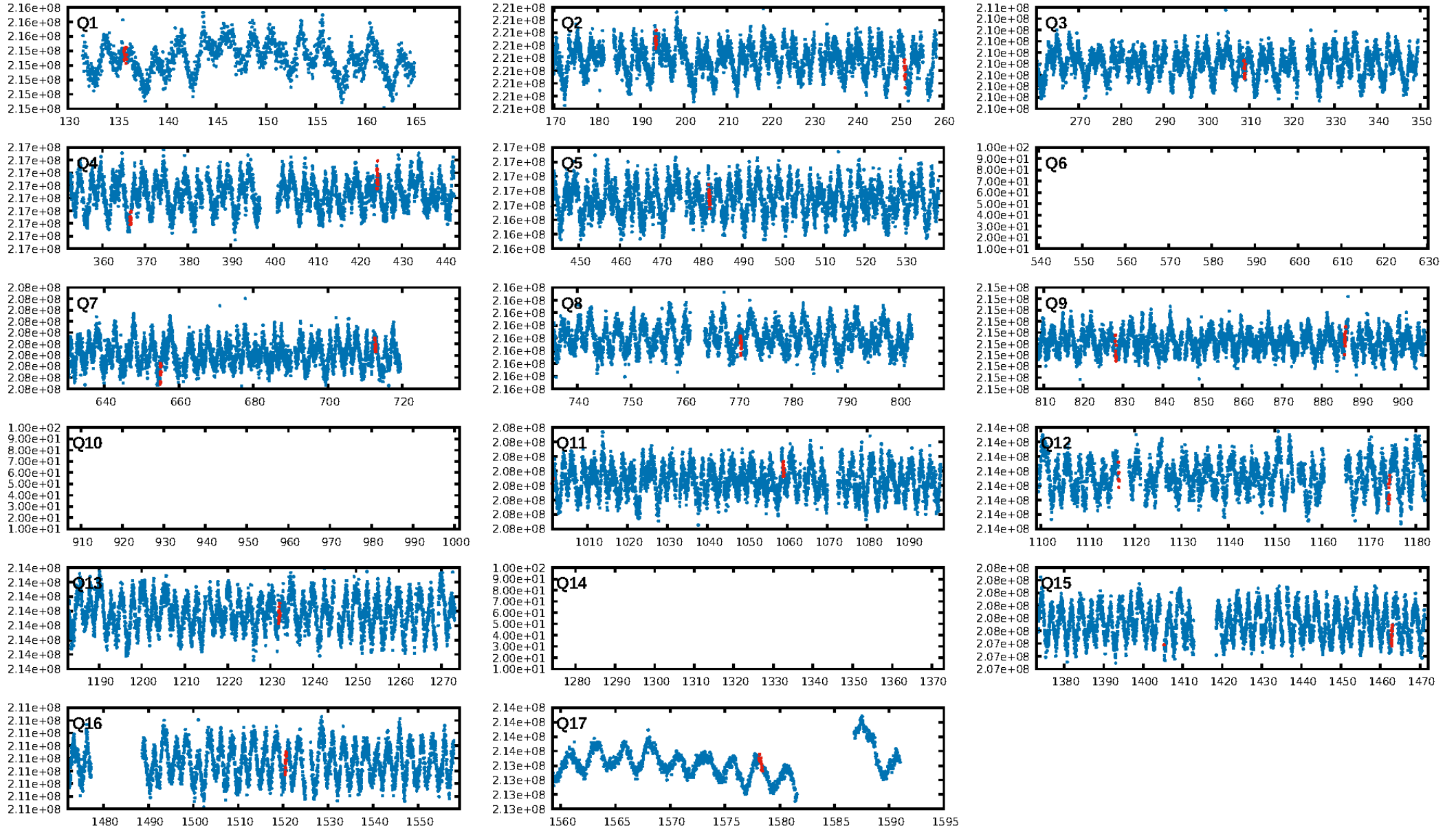
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [11.10 σ]
LongPeriod-sig: 100.0% [68.18 σ]
ModelChiSquare2-sig: 49.7%
ModelChiSquareGof-sig: 95.3%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [6/6]
GhostDiagnostic-chr: 2.185
Centroid-sig: 33.7%
Centroid-so: 0.794 arcsec [1.00 σ]
OotOffset-rm: 1.260 arcsec [2.56 σ]
KicOffset-rm: 1.190 arcsec [2.52 σ]
OotOffset-st: 1/4/4/3 [12]
KicOffset-st: 1/4/4/3 [12]
DiffImageQuality-fgm: 0.67 [8/12]
DiffImageOverlap-fno: 0.36 [5/14]

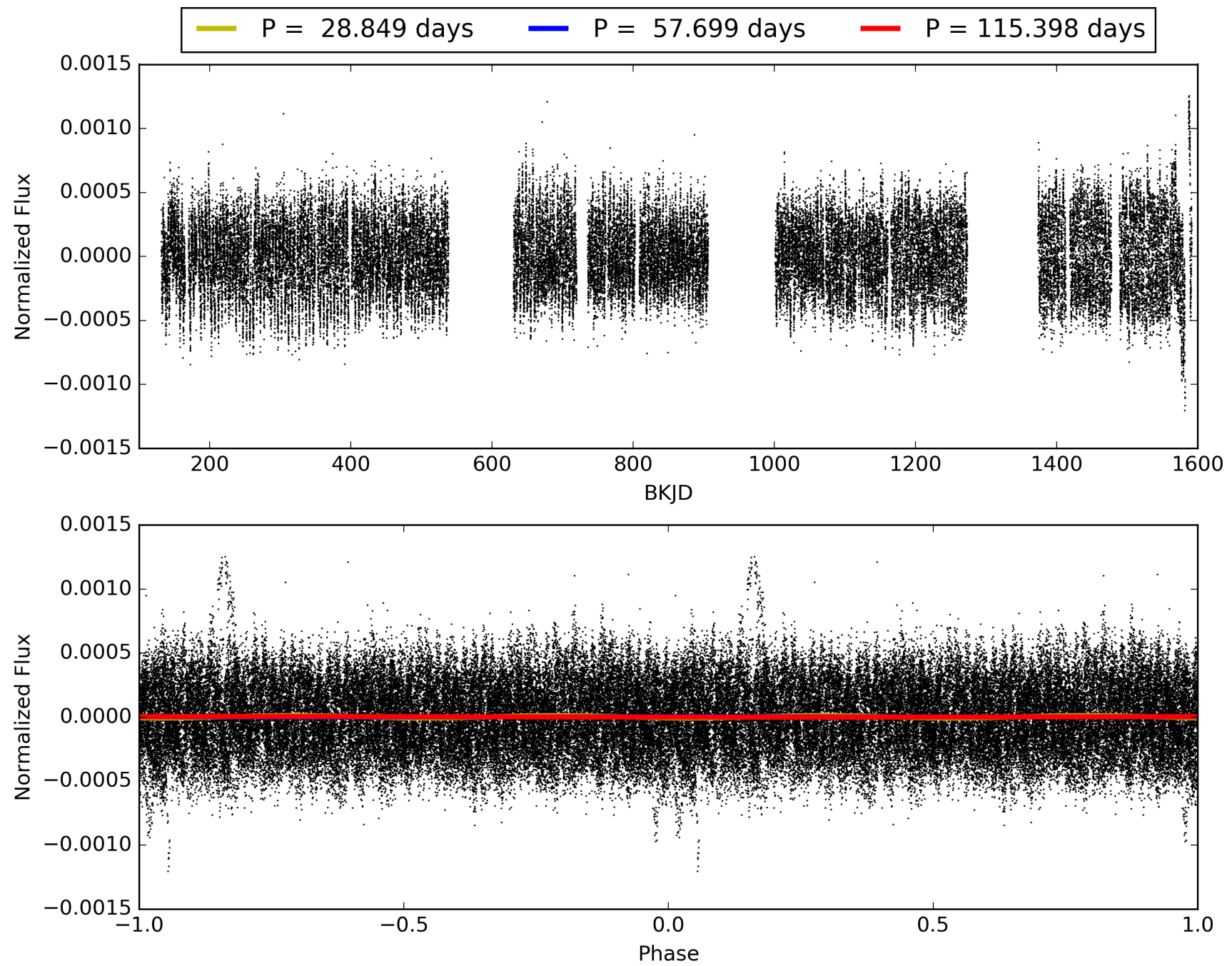
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 06:44:17 Z

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

TCE 004566740-10, PDC Light Curves

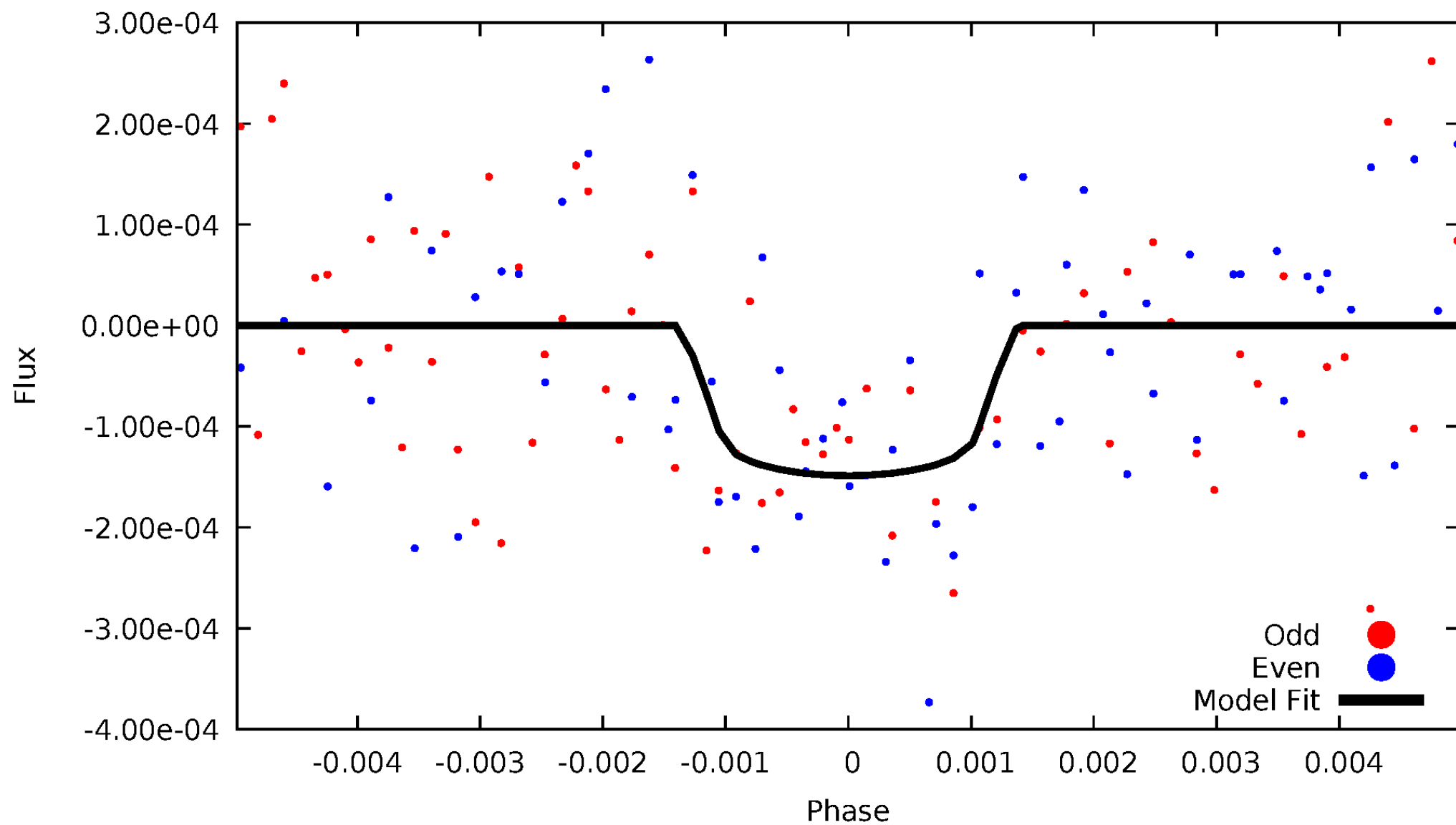


TCE 004566740-10



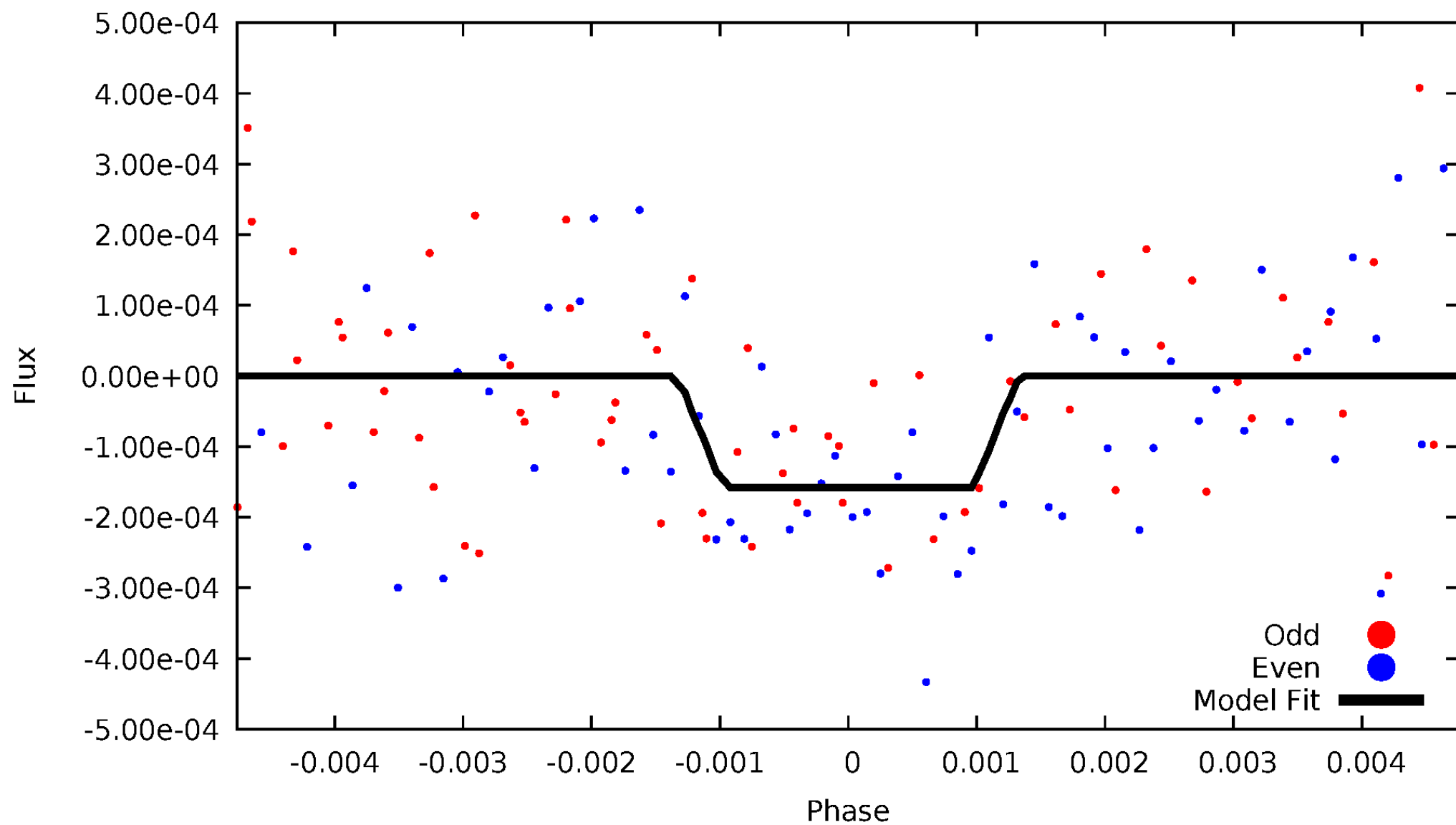
DV Odd/Even

TCE 004566740-10



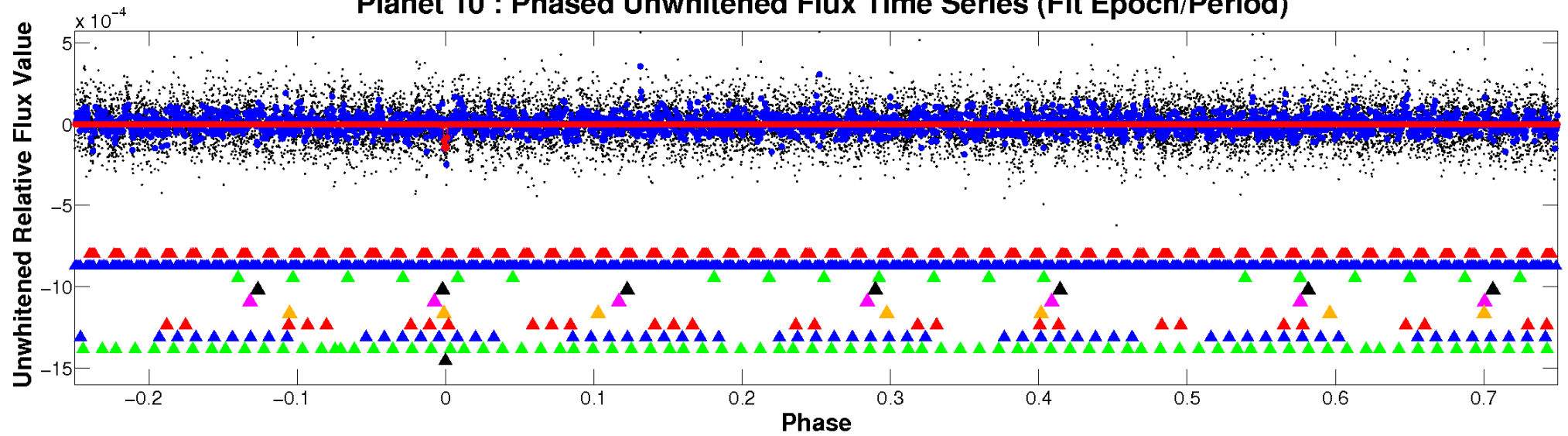
ALT Odd/Even

TCE 004566740-10

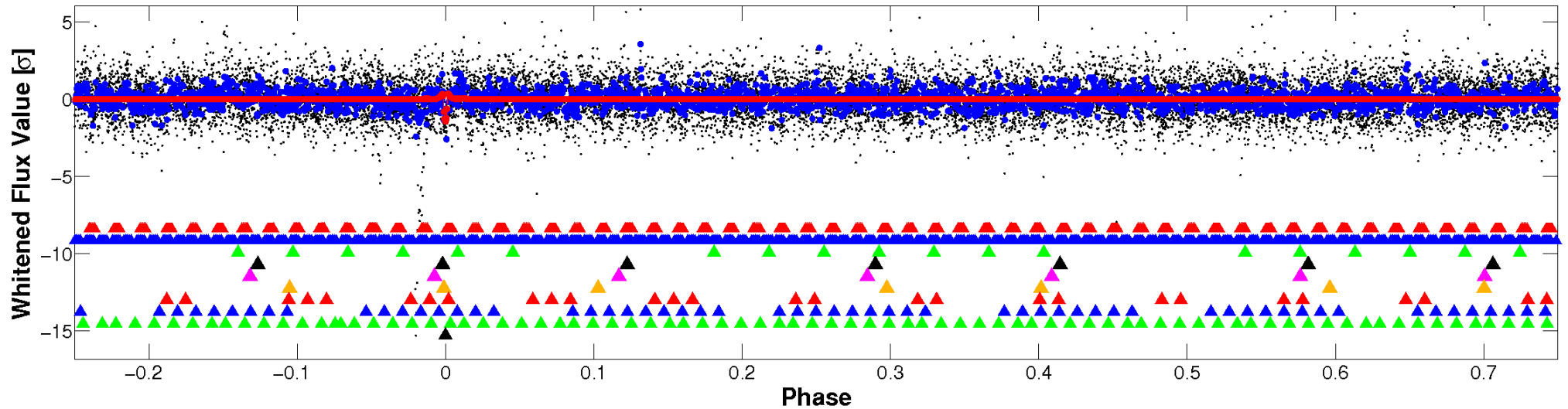


Non-Whitened Vs. Whitened Light Curve

Planet 10 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

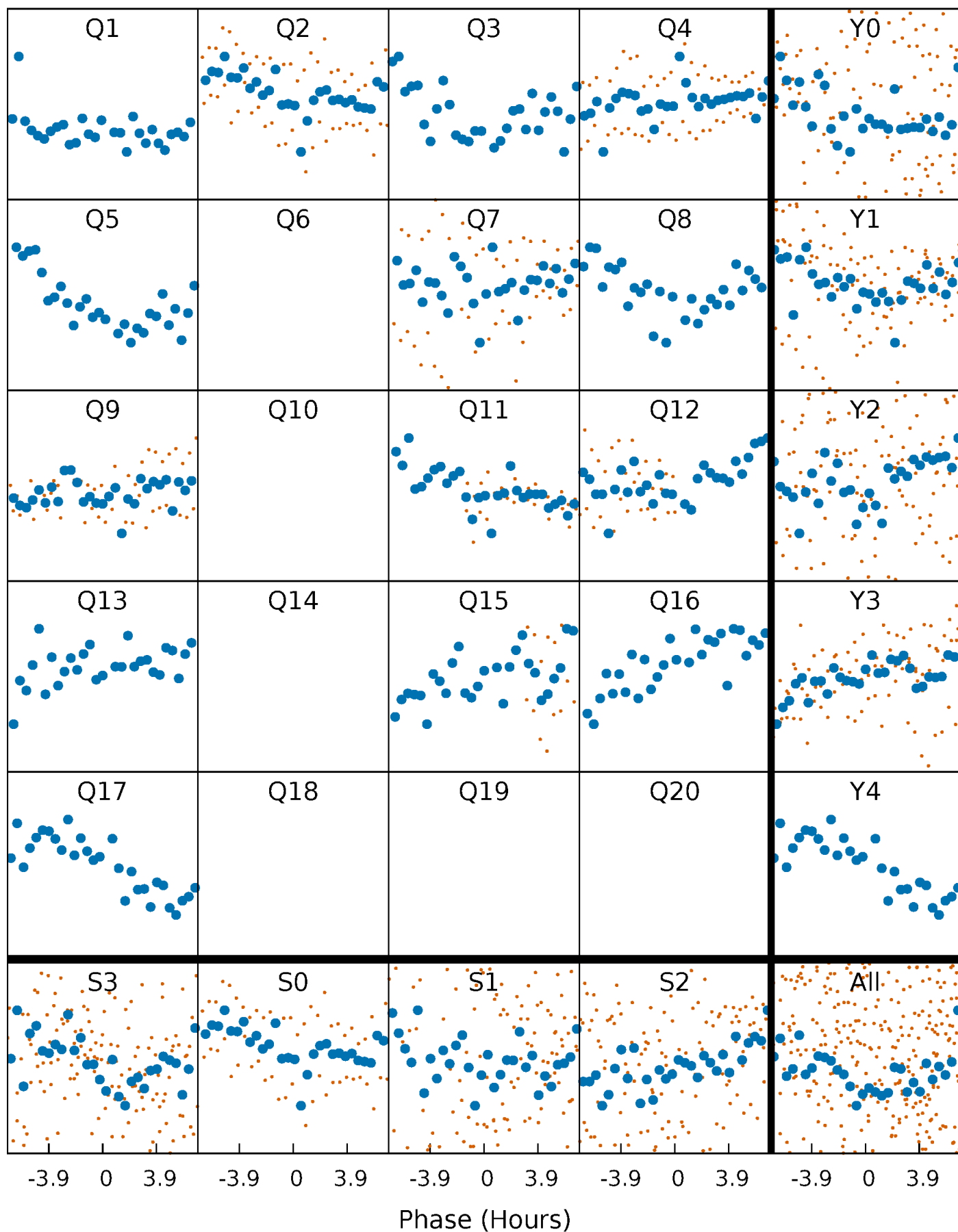


Planet 10 : Phased Whitened Flux Time Series (Fit Epoch/Period)



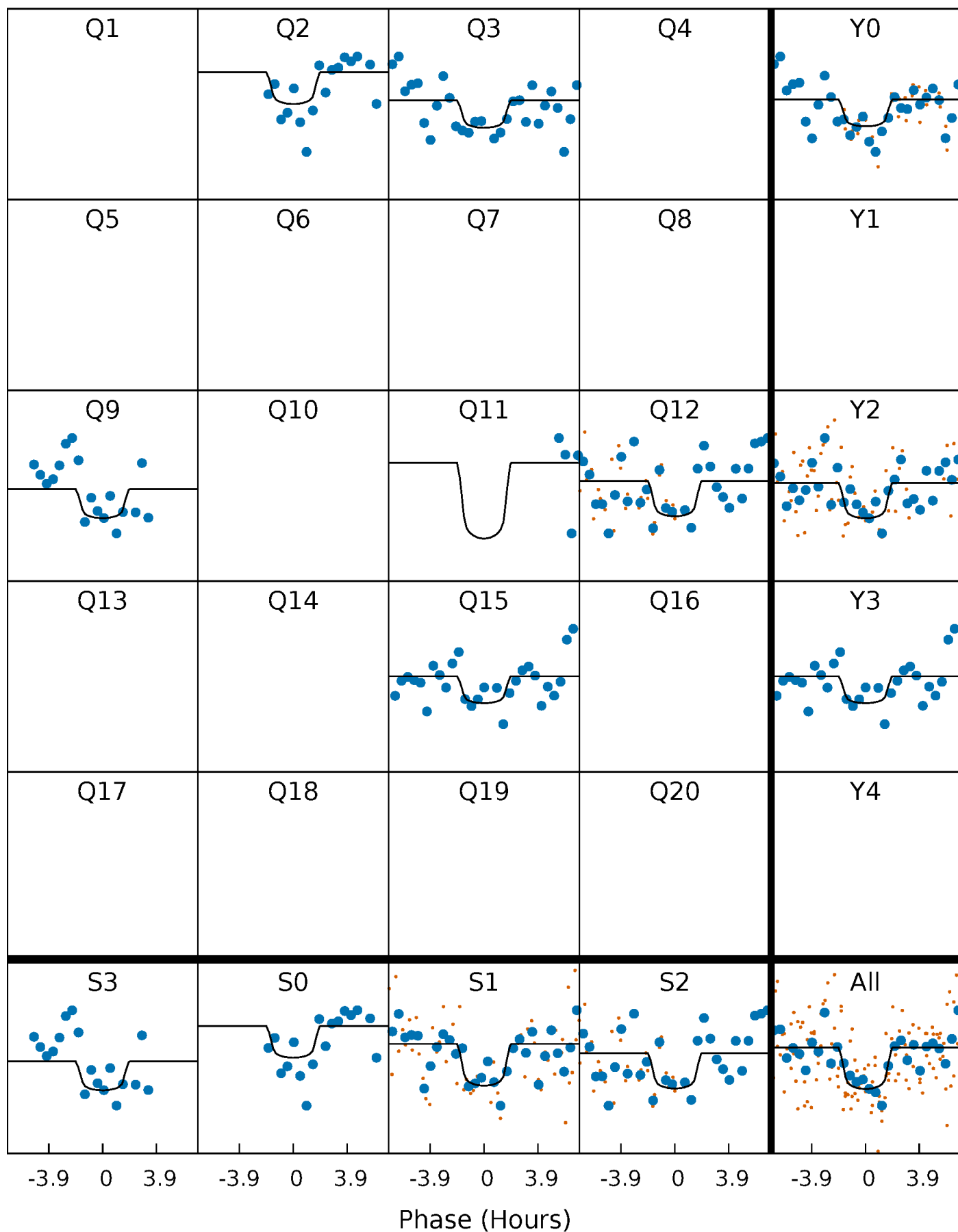
PDC Quarter-Phased Transit Curves

TCE 004566740-10 P= 57.698870 Days $T_0=135.798867$ (BKJD)



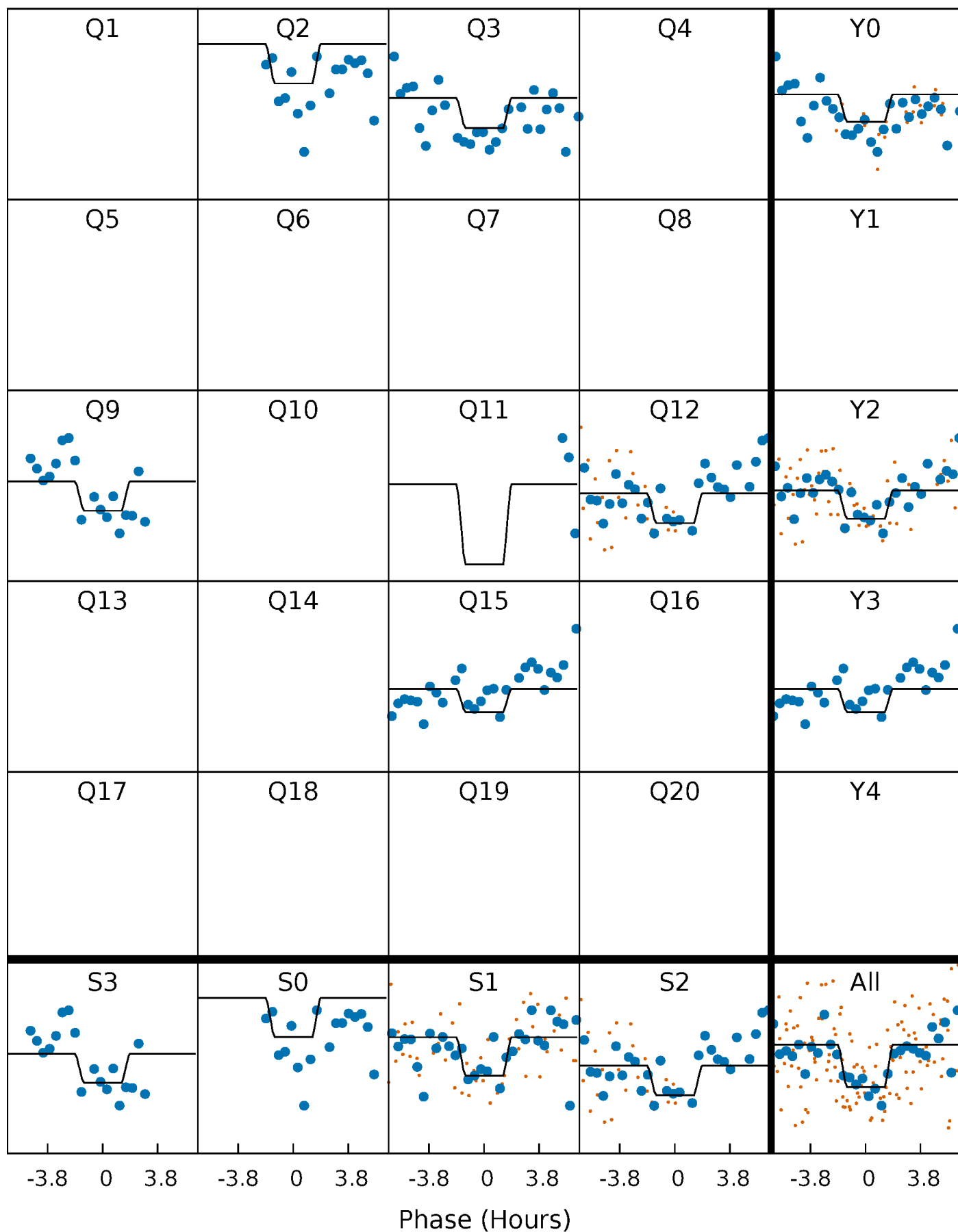
DV Quarter-Phased Transit Curves

TCE 004566740-10 P= 57.698870 Days $T_0=135.798867$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

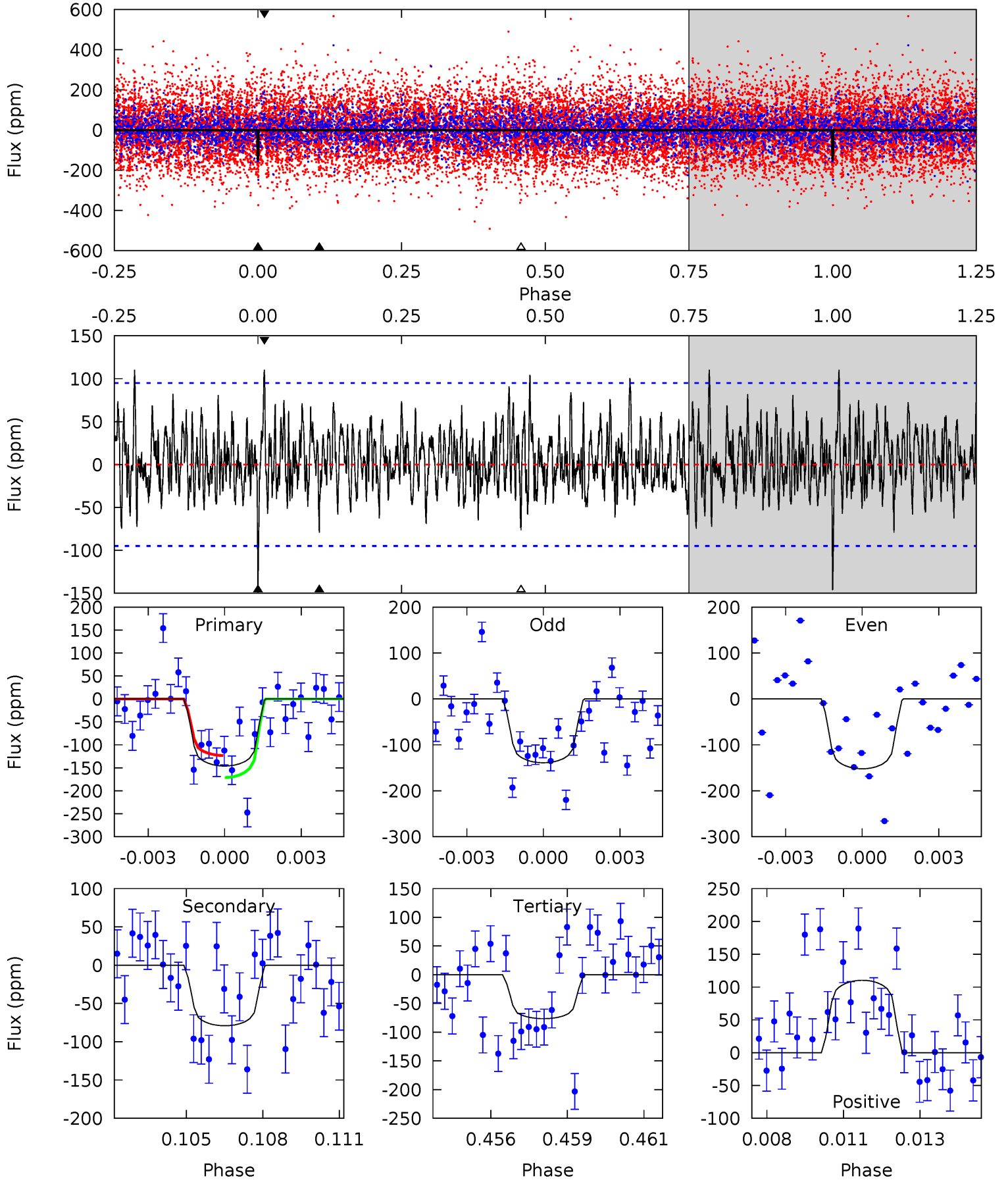
TCE 004566740-10 P= 57.698587 Days $T_0=135.802492$ (BKJD)



DV Model-Shift Uniqueness Test

004566740-10, P = 57.698870 Days, E = 78.099997 Days

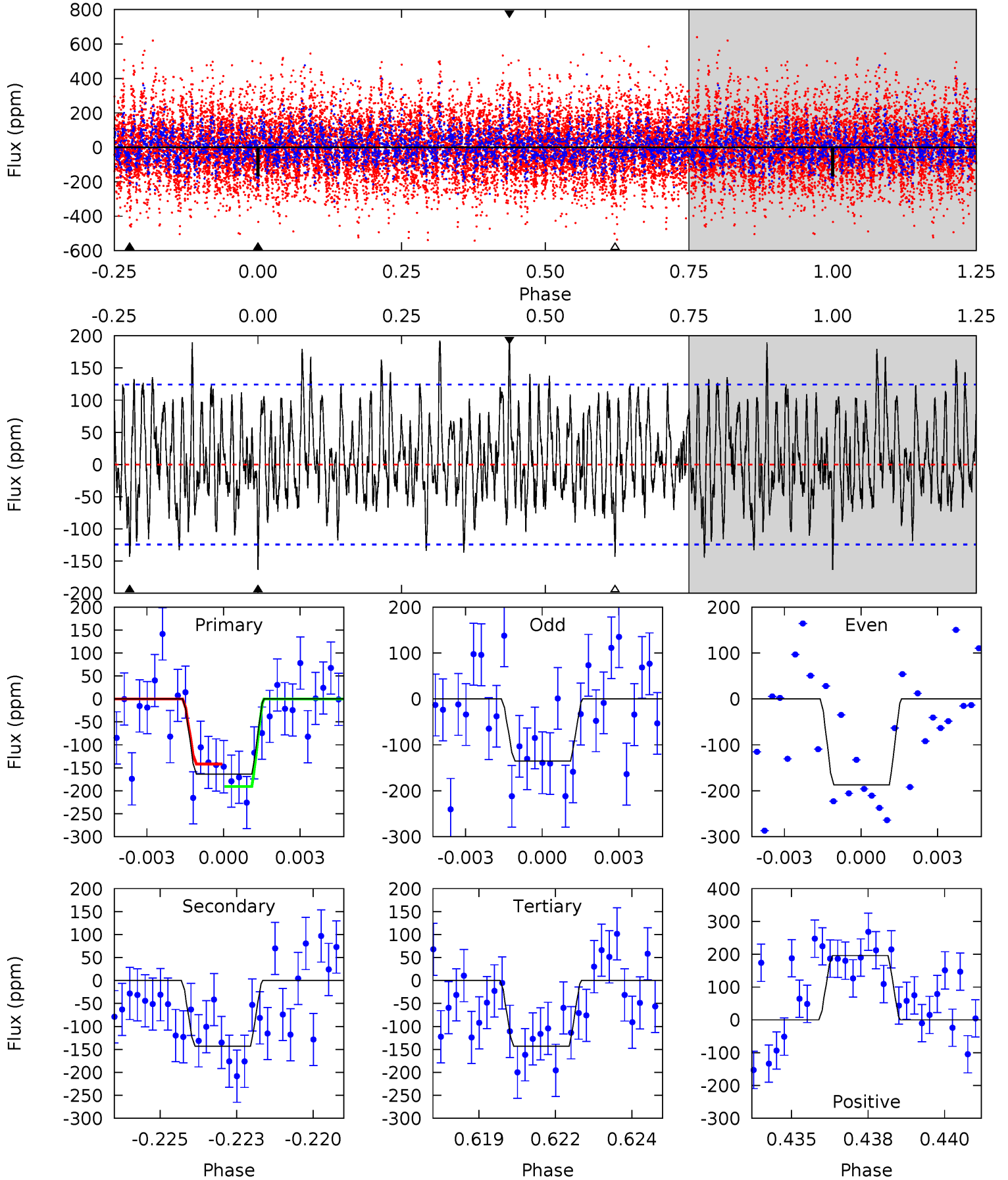
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.12	4.40	4.25	6.13	5.28	3.01	1.64	3.87	1.99	0.15	-1.73	0.37	1.08	0.43	1.33



Alt Model-Shift Uniqueness Test

004566740-10, P = 57.698587 Days, E = 78.103905 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.96	6.08	6.08	8.33	5.28	3.01	2.46	0.88	-1.37	0.00	-2.24	1.10	1.00	0.54	1.04



Stellar Parameters For KIC 004566740

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6861^{+190}_{-214}	$3.868^{+0.259}_{-0.111}$	$-0.100^{+0.300}_{-0.300}$	$2.450^{+0.507}_{-0.760}$	$1.614^{+0.194}_{-0.292}$	$0.154^{+0.251}_{-0.052}$
	+3%/-3%	+7%/-3%	+300%/-300%	+21%/-31%	+12%/-18%	+163%/-33%
Source	PHO1	FLK73	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 004566740-10 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-79 ± 18	$3.93^{+3.22}_{-2.49}$	1112^{+71}_{-98}	5200^{+3503}_{-1086}	326^{+2019}_{-232}
Alt.	-143 ± 24	$3.81^{+3.20}_{-2.36}$	1106^{+75}_{-91}	5973^{+5104}_{-1296}	626^{+4237}_{-437}

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 $A_{obs} \gg 1.0$

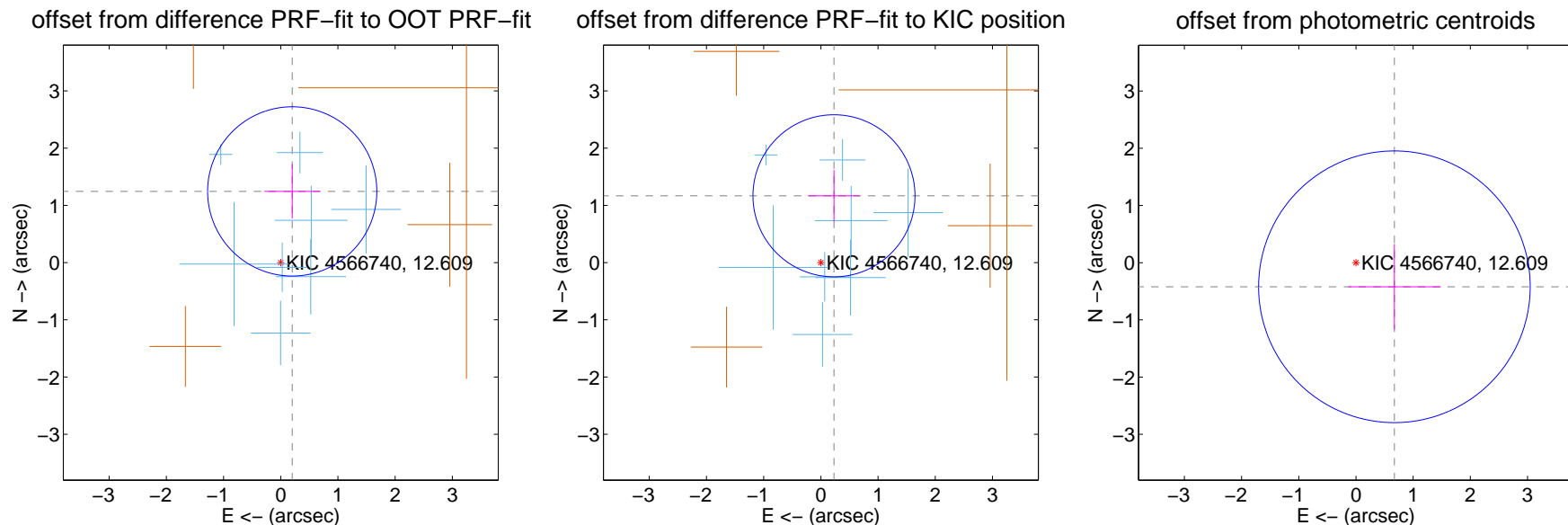
DV Centroid Data

Supplemental centroid analysis for 004566740-10. Kepler magnitude: 12.61. Transit SNR 7.78

There are 8 quarters with good PRF difference image offsets

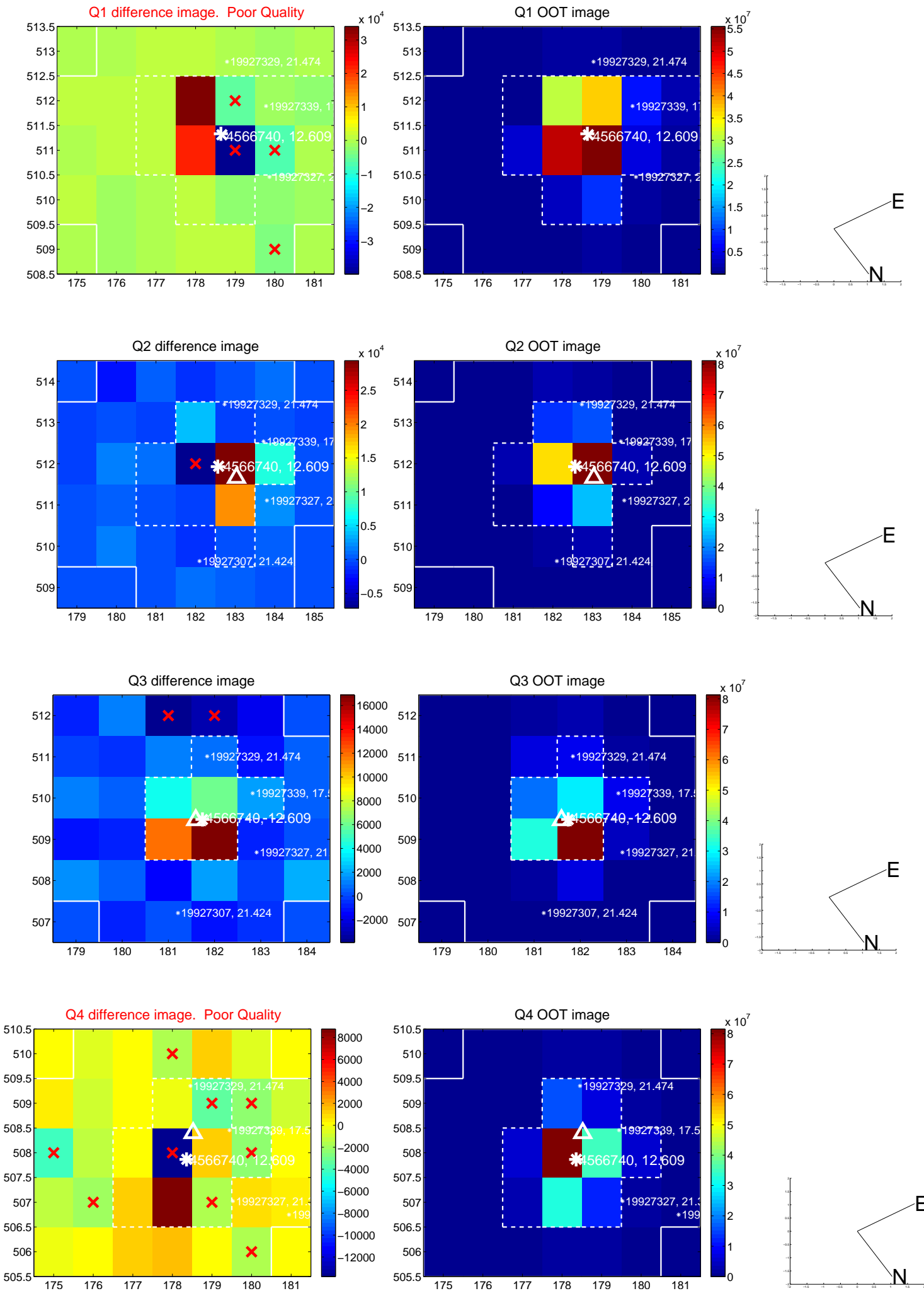
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.260 ± 0.493	2.56	-0.201 ± 0.488	1.244 ± 0.474
PRF-fit source offset from KIC position	1.190 ± 0.472	2.52	-0.229 ± 0.455	1.167 ± 0.450
photometric centroid source offset	0.79 ± 0.79	1.00	-0.67 ± 0.81	-0.42 ± 0.75

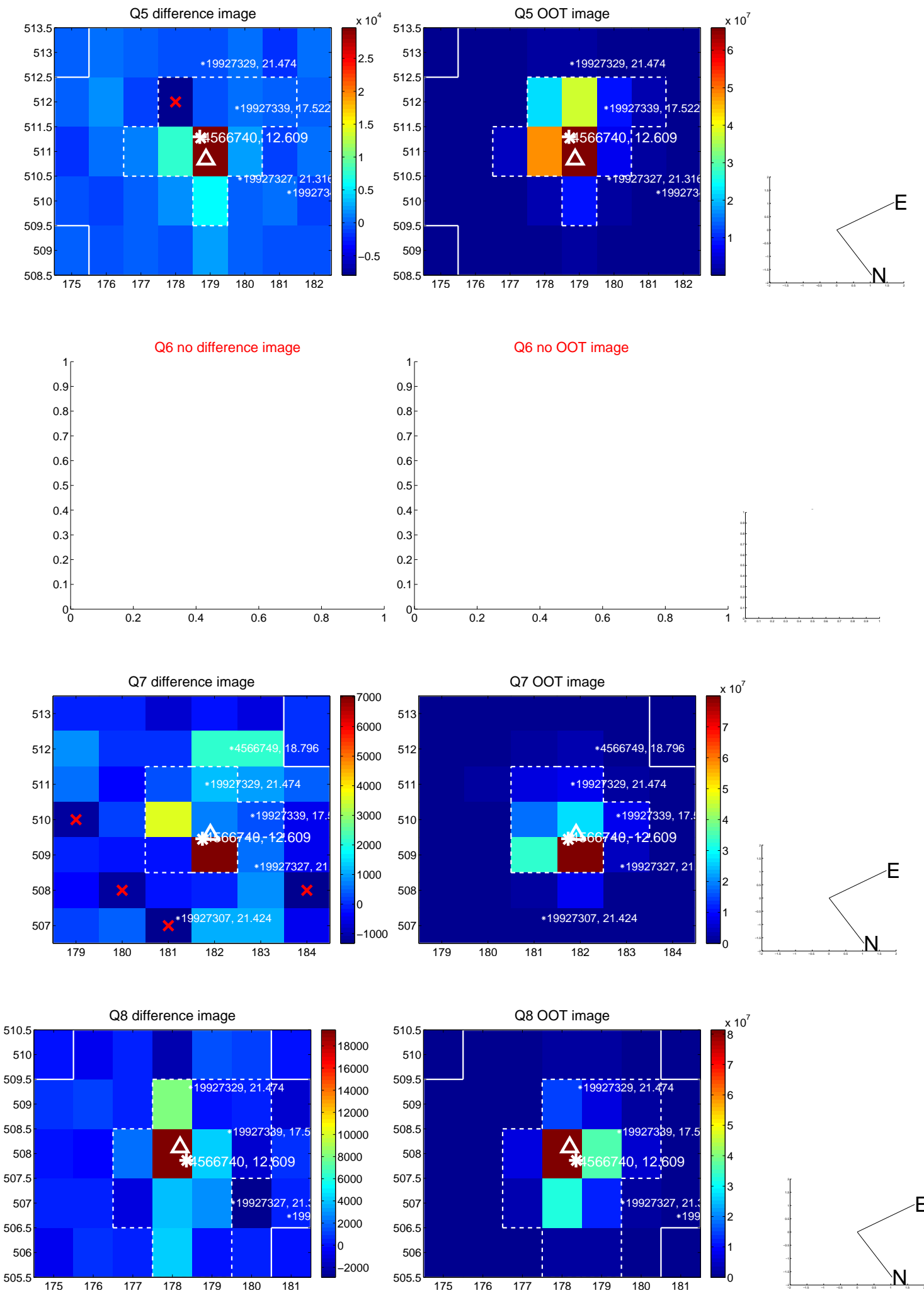


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

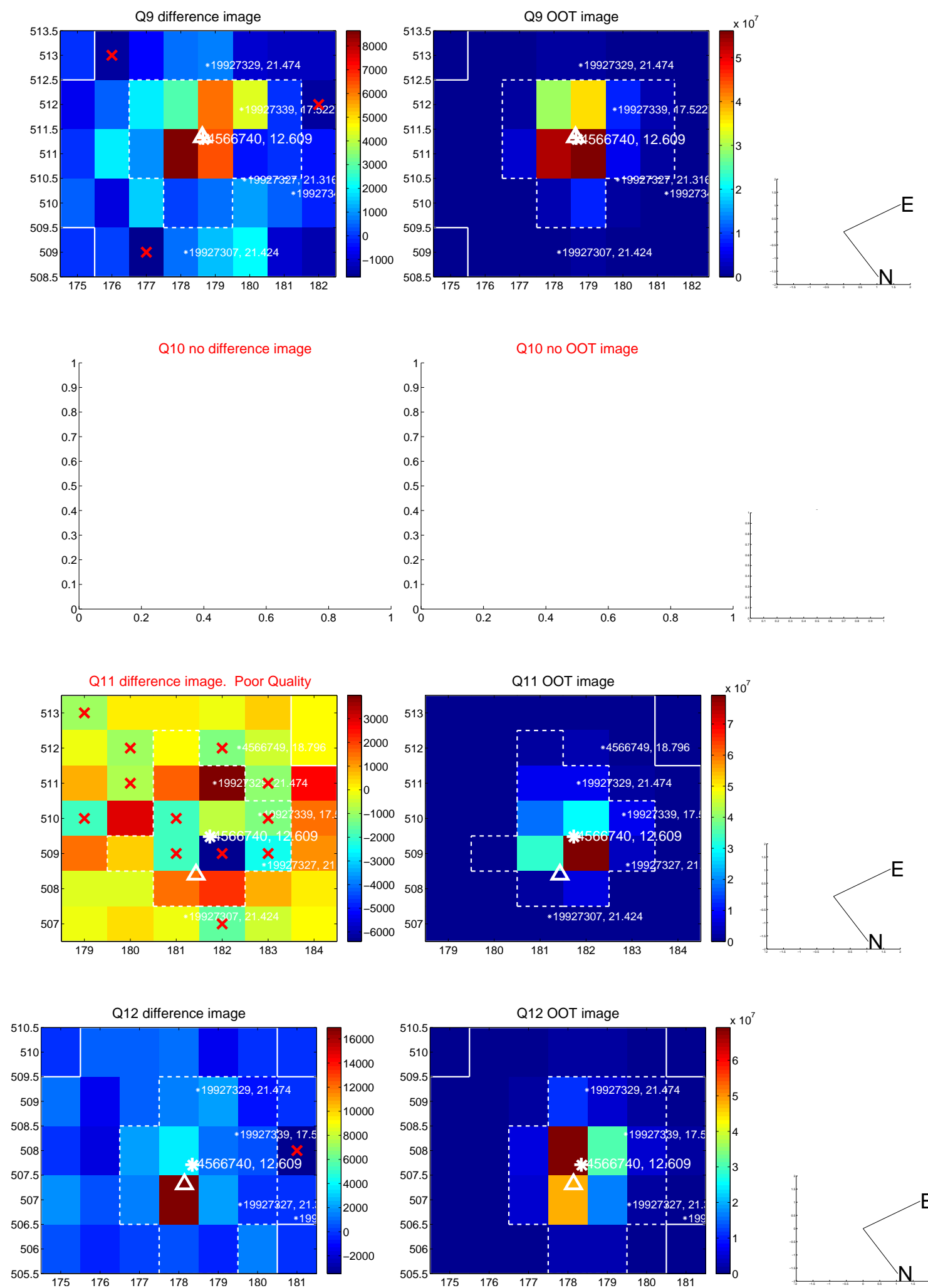
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



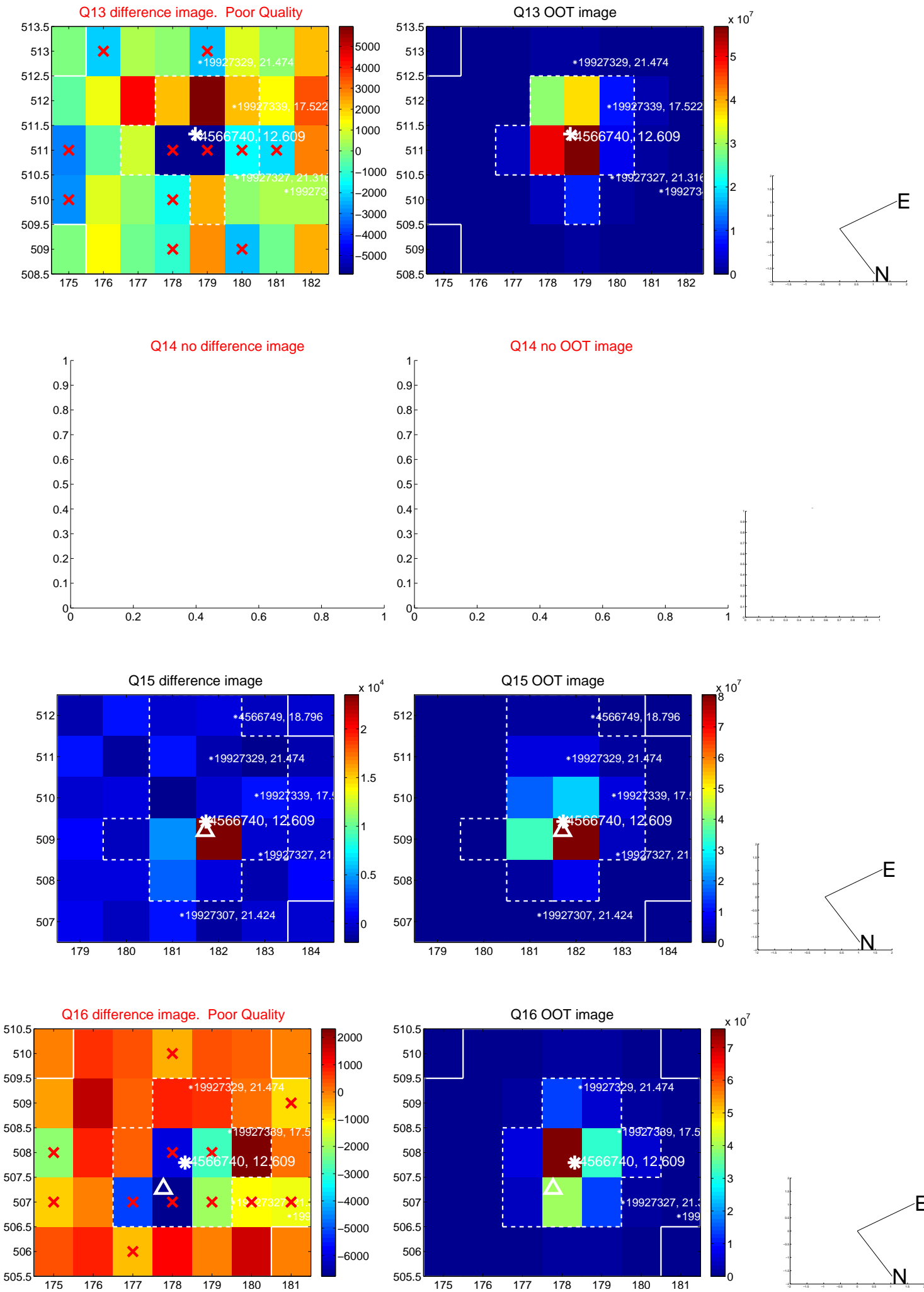
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



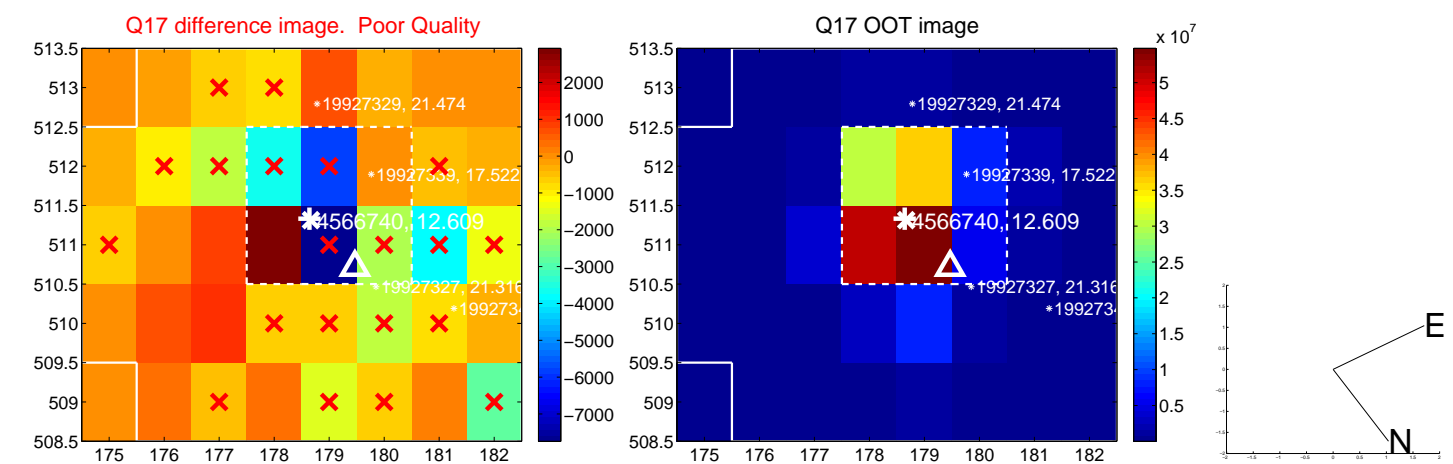
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



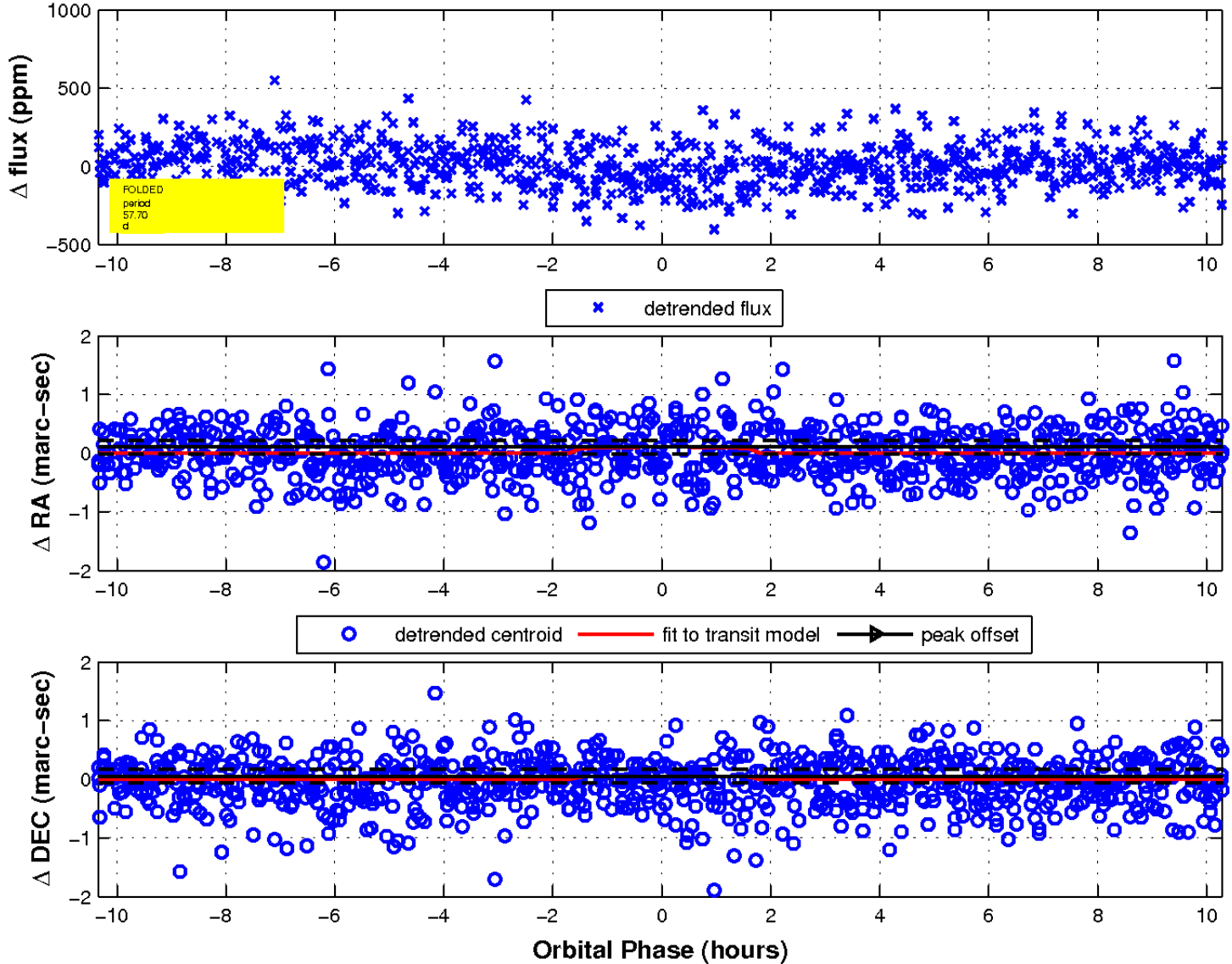
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 10 of 10



UKIRT Image

Declination

