

KIC 005385269

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})
005385269-01	OBS	6002.01	12.425802	141.523214	121.6	21.663	14.6	17.6	1.05	5968	1.21	108.31
005385269-02	OBS	No	12.427741	133.791612	107.3	25.361	14.2	17.5	1.05	5968	1.33	108.29

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005385269-01	OBS	FP	0.00	1	0	1	1	LPP_DV—LPP_ALT—CENT_FEW_DIFFS—HALO_GHOST—EPHEM_MATCH
005385269-02	OBS	FP	0.00	1	0	1	0	LPP_DV—SAME_NTL_PERIOD—CENT_RESOLVED_OFFSET—HALO_GHOST

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

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

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

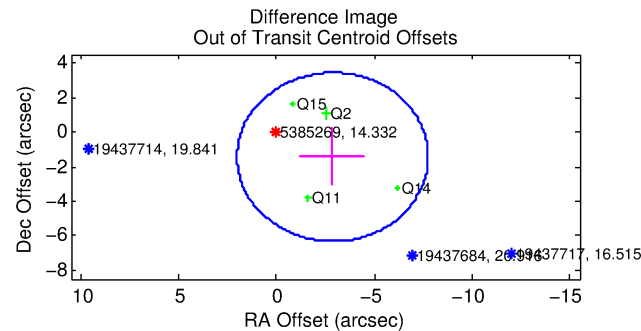
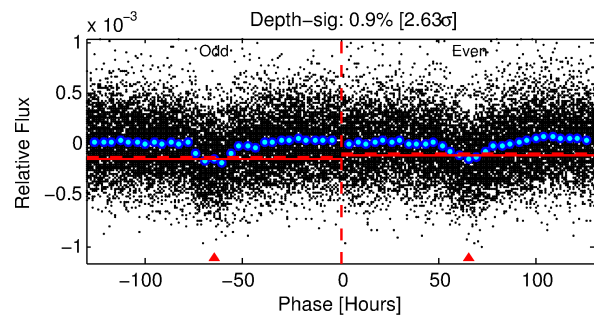
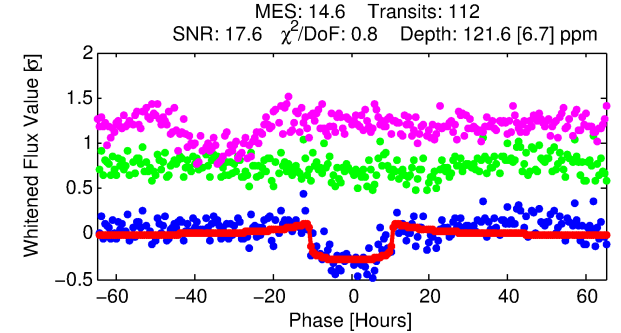
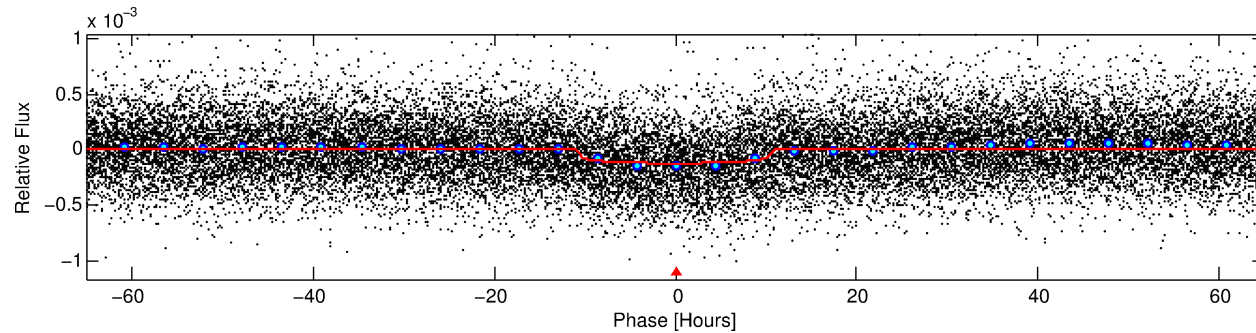
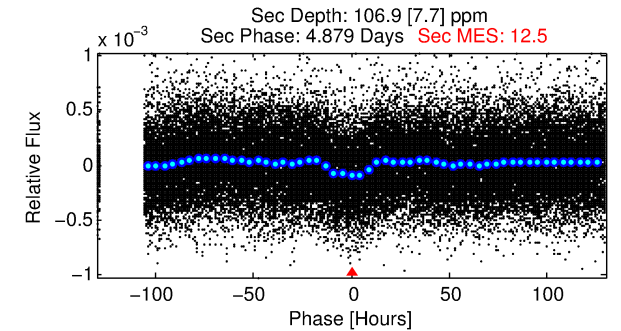
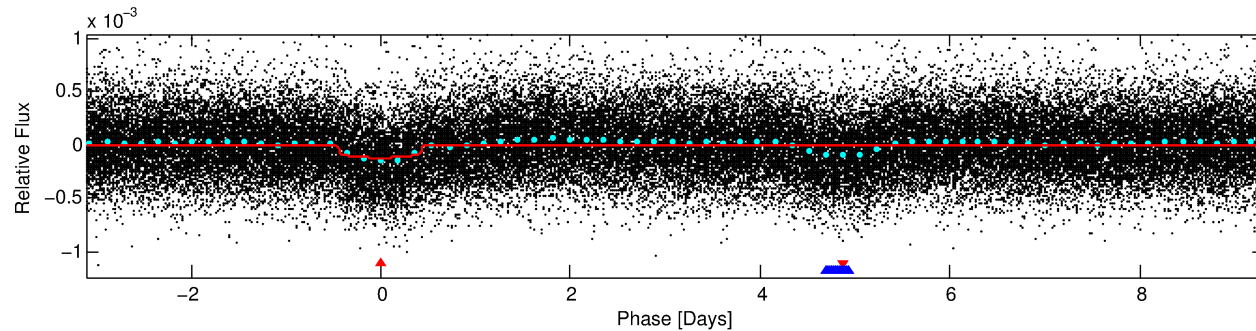
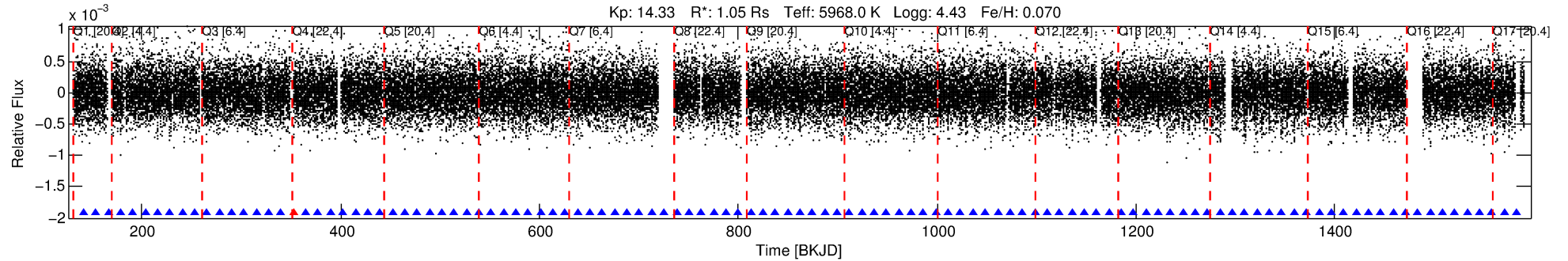
Ephemeris Match Information For 005385269-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
005385269-01	5385269	V380-Cyg-pri	5385723	1:1	323.9	0	-81	5.77	14.33	1188.00	Direct-PRF	0	0.23	0.58

Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 5385269 Candidate: 1 of 2 Period: 12.426 d
KOI: K06002.01 Corr: 0.997



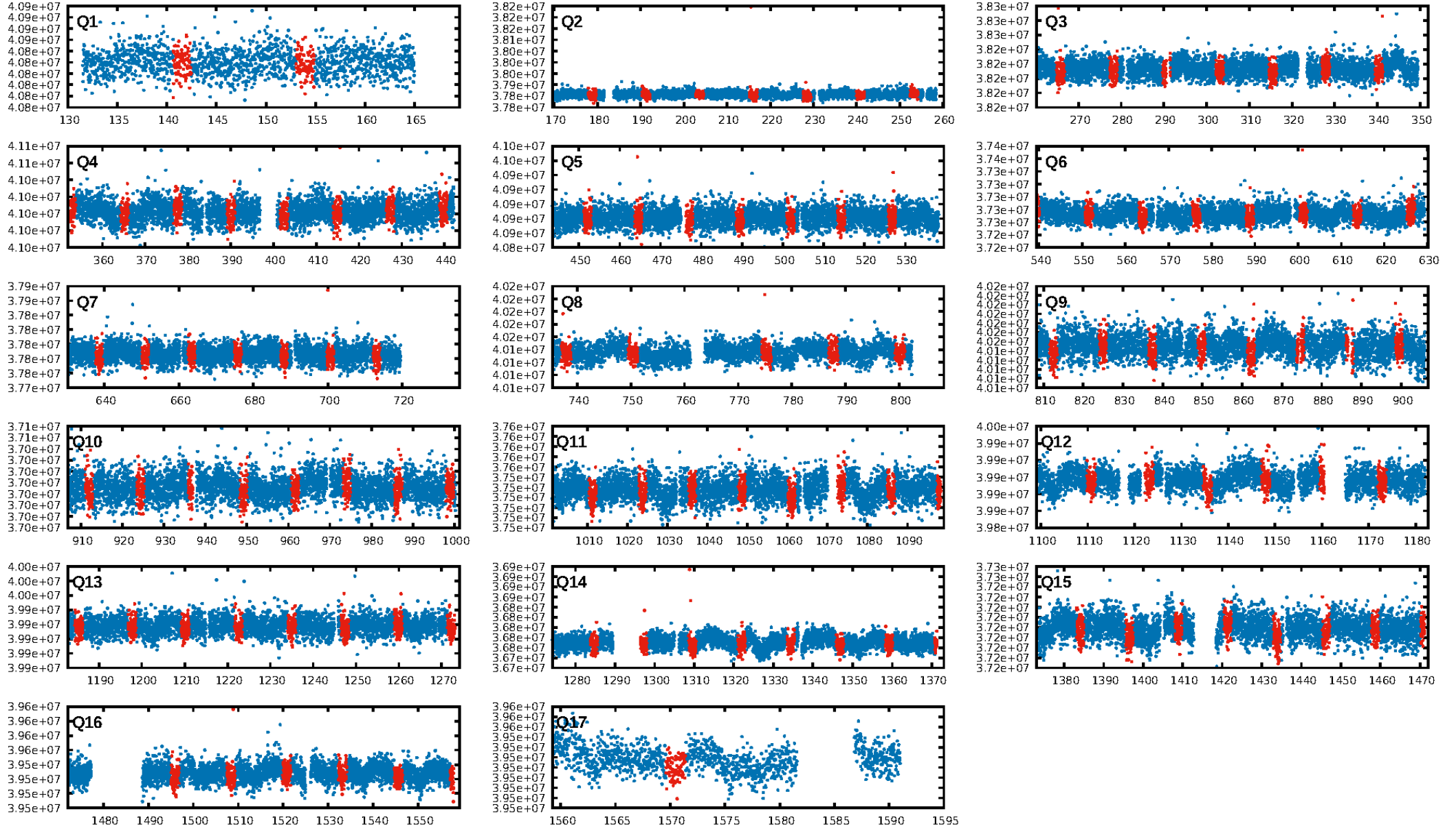
DV Fit Results:

Period = 12.42580 [0.00017] d
Epoch = 141.5232 [0.0113] BKJD
Rp/R* = 0.0106 [0.0021]
a/R* = 3.55 [2.99]
b = 0.63 [0.88]
Seff = 108.31 [43.99]
Teq = 823 [84] K
Rp = 1.21 [0.45] Re
a = 0.1074 [0.0282] AU
Ag = 461.75 [255.40] [1.80σ]
Teffp = 5896 [637] K [7.89σ]

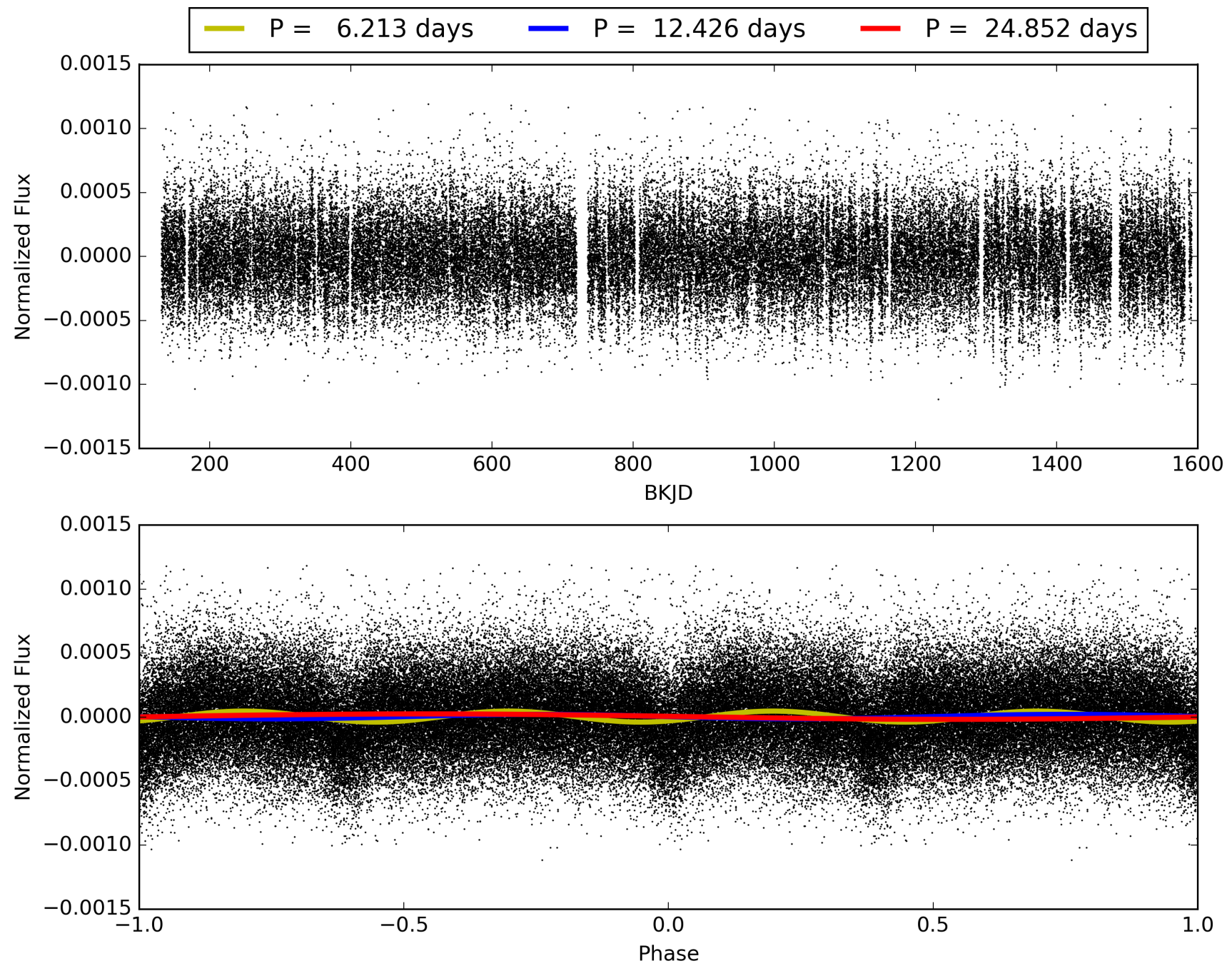
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.1% [0.00σ]
ModelChiSquare2-sig: 61.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.12e-50
RollingBand-fgt: 0.99 [108/109]
GhostDiagnostic-chr: 0.006236
Centroid-sig: 0.0%
Centroid-so: 2.205 arcsec [2.45σ]
OotOffset-rm: 3.207 arcsec [1.97σ]
KicOffset-rm: 1.832 arcsec [1.90σ]
OotOffset-st: 2/2/0/0 [4]
KicOffset-st: 2/2/2/0 [6]
DiffImageQuality-fgm: 0.00 [0/6]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 005385269-01, PDC Light Curves

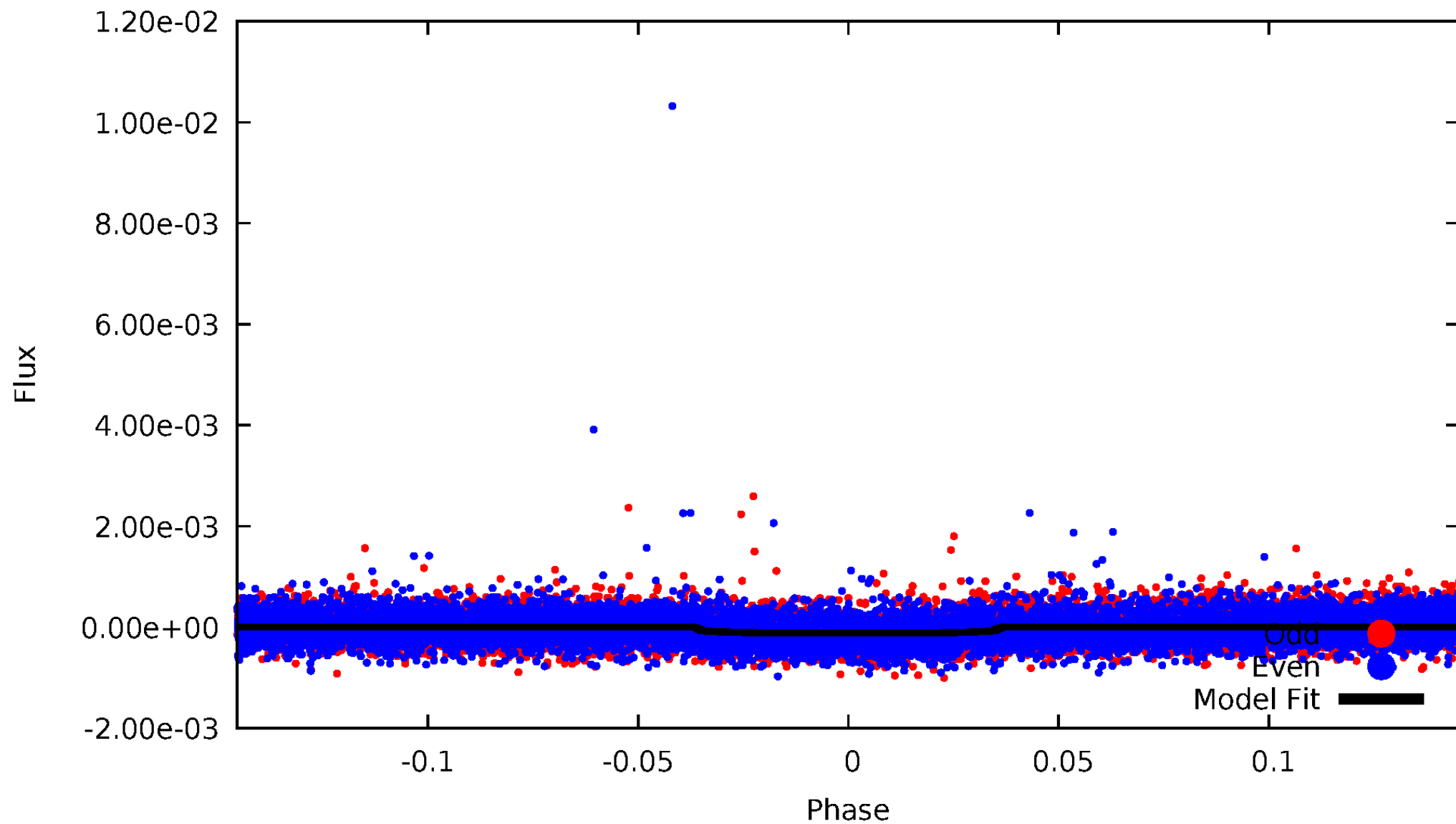


TCE 005385269-01



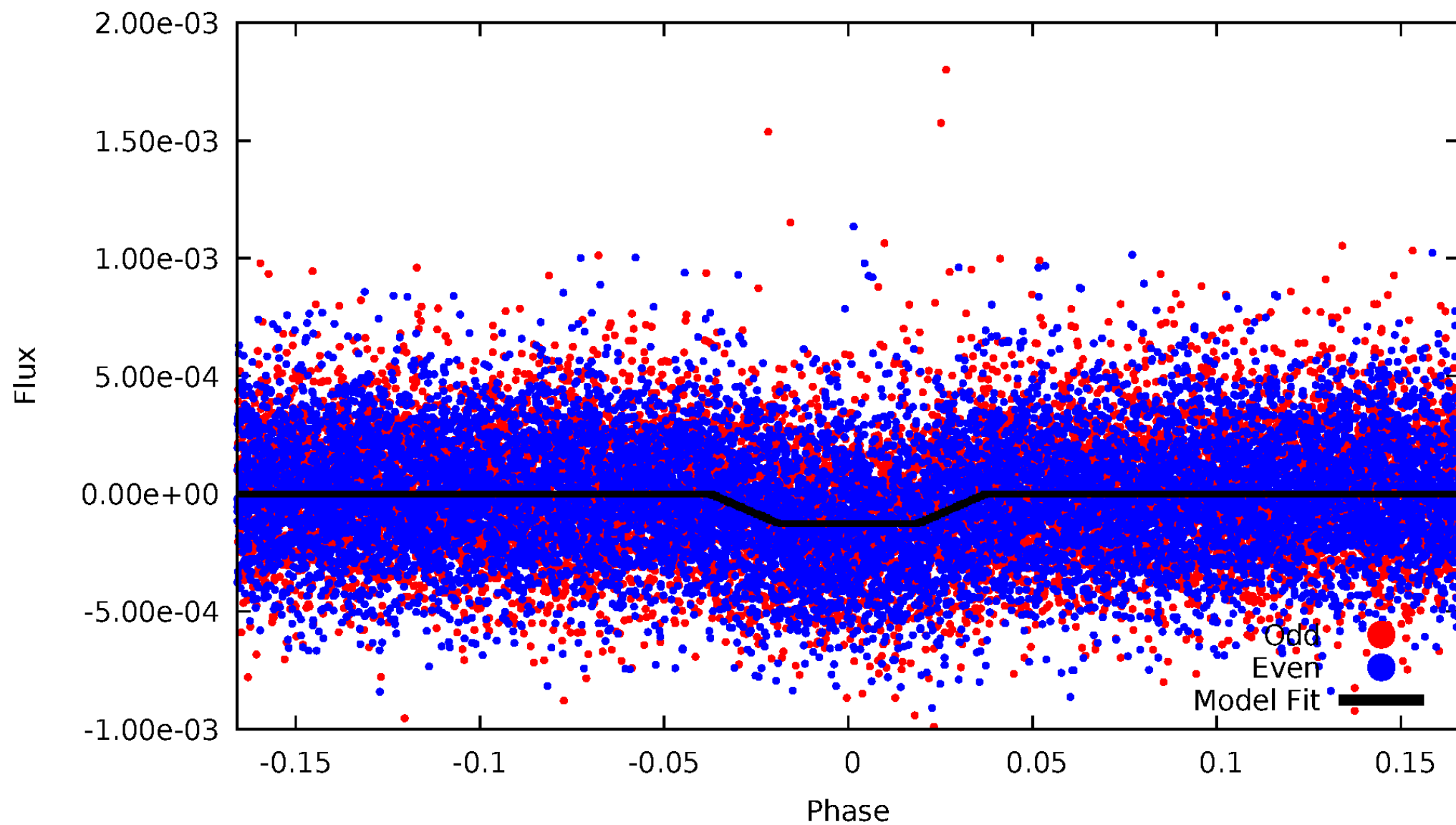
DV Odd/Even

TCE 005385269-01

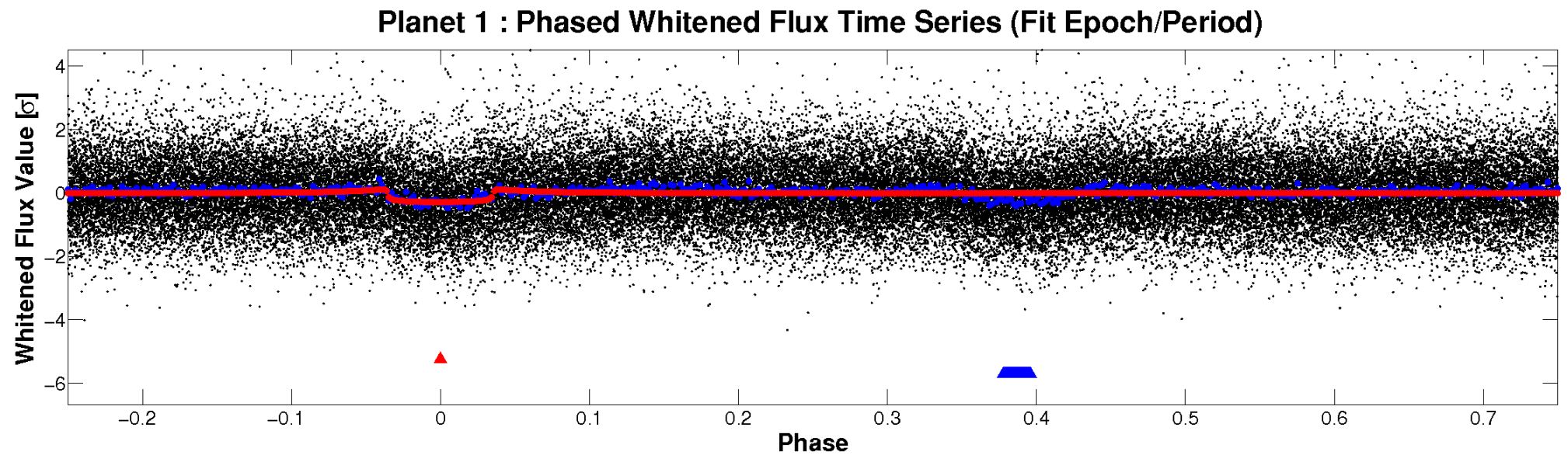
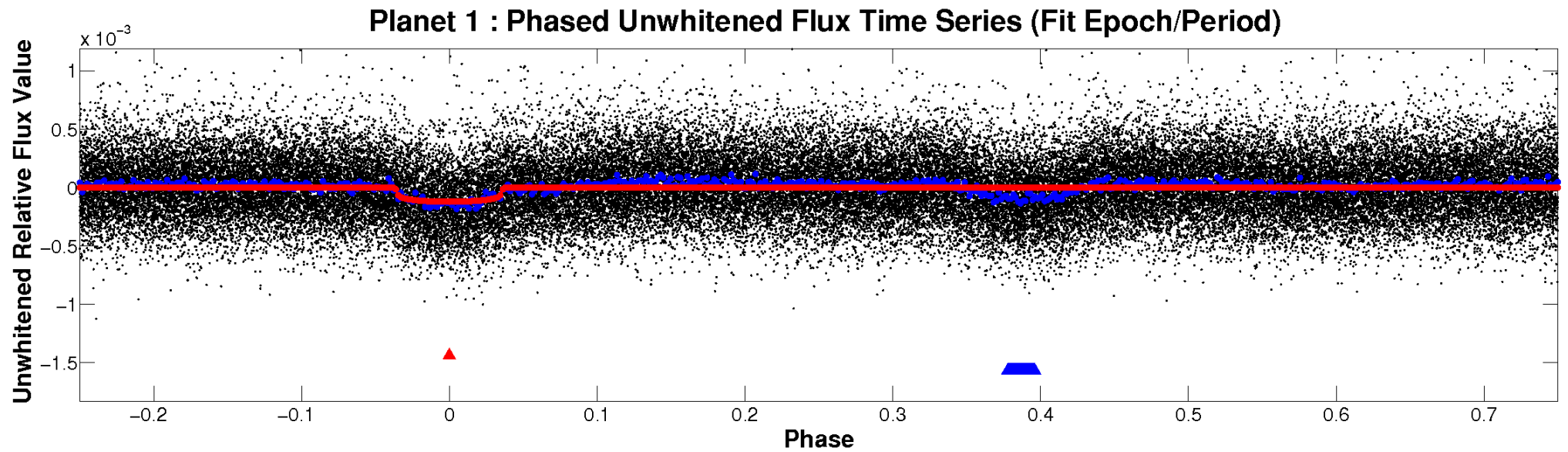


ALT Odd/Even

TCE 005385269-01

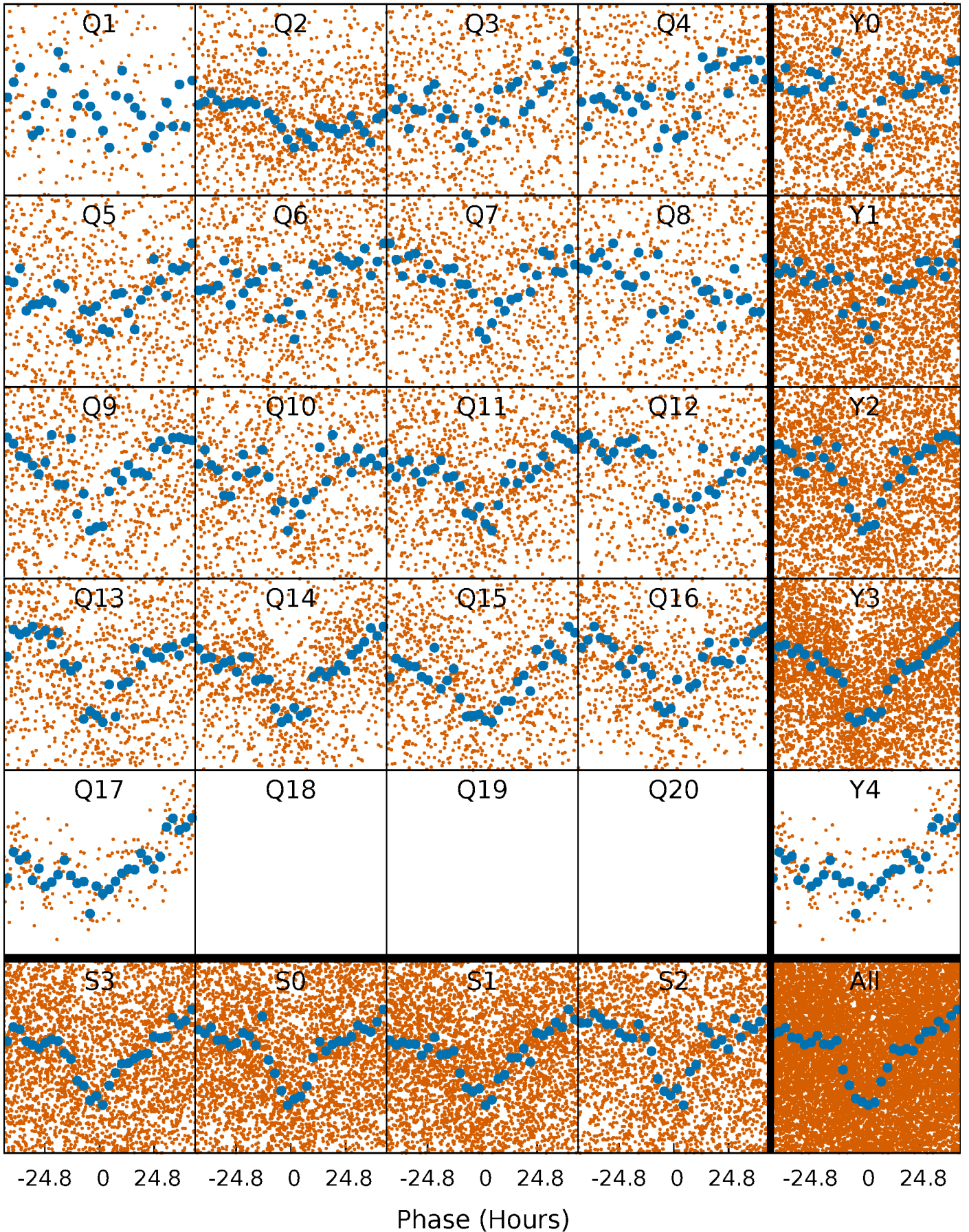


Non-Whitened Vs. Whitened Light Curve



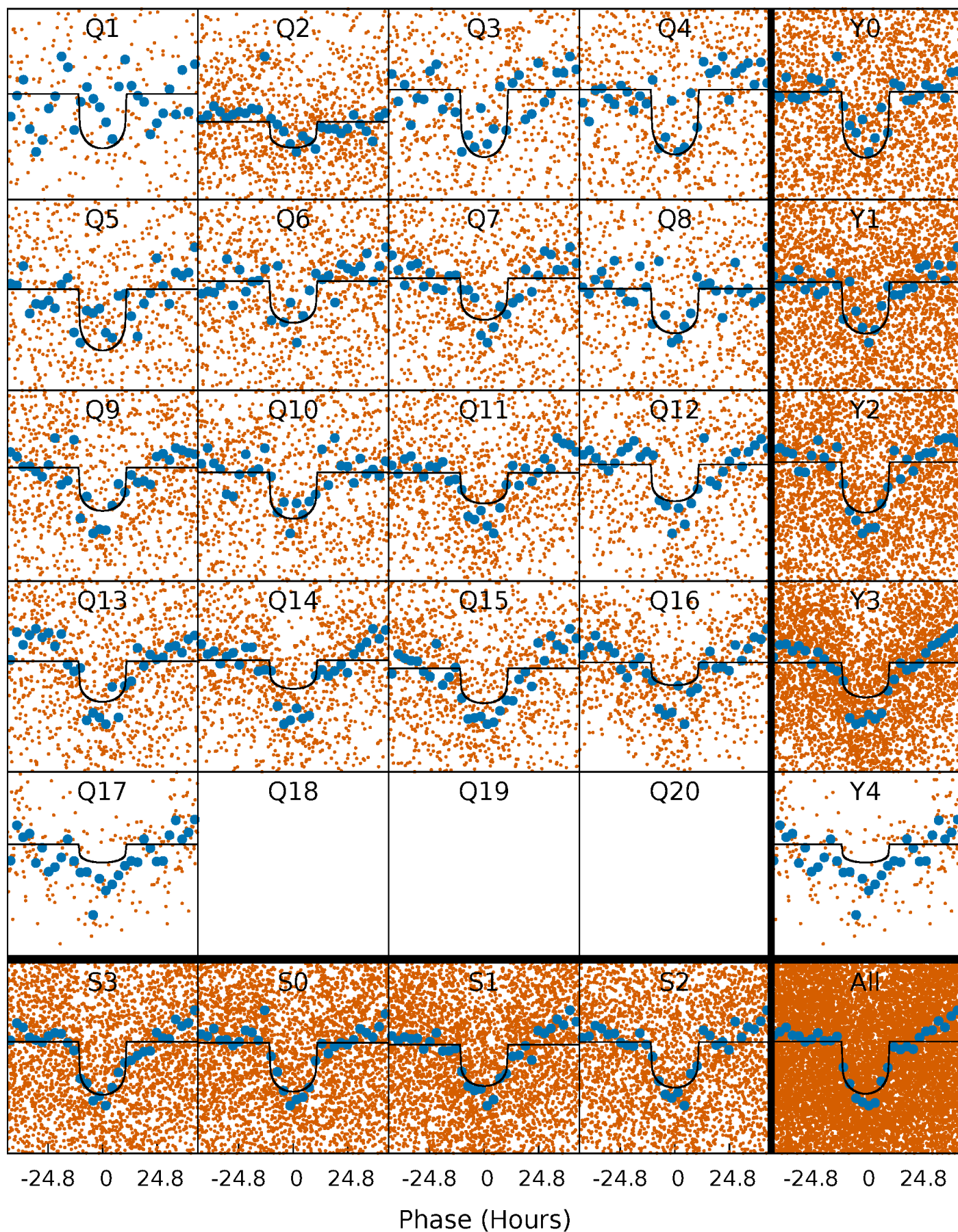
PDC Quarter-Phased Transit Curves

TCE 005385269-01 P= 12.425802 Days $T_0=141.523213$ (BKJD)



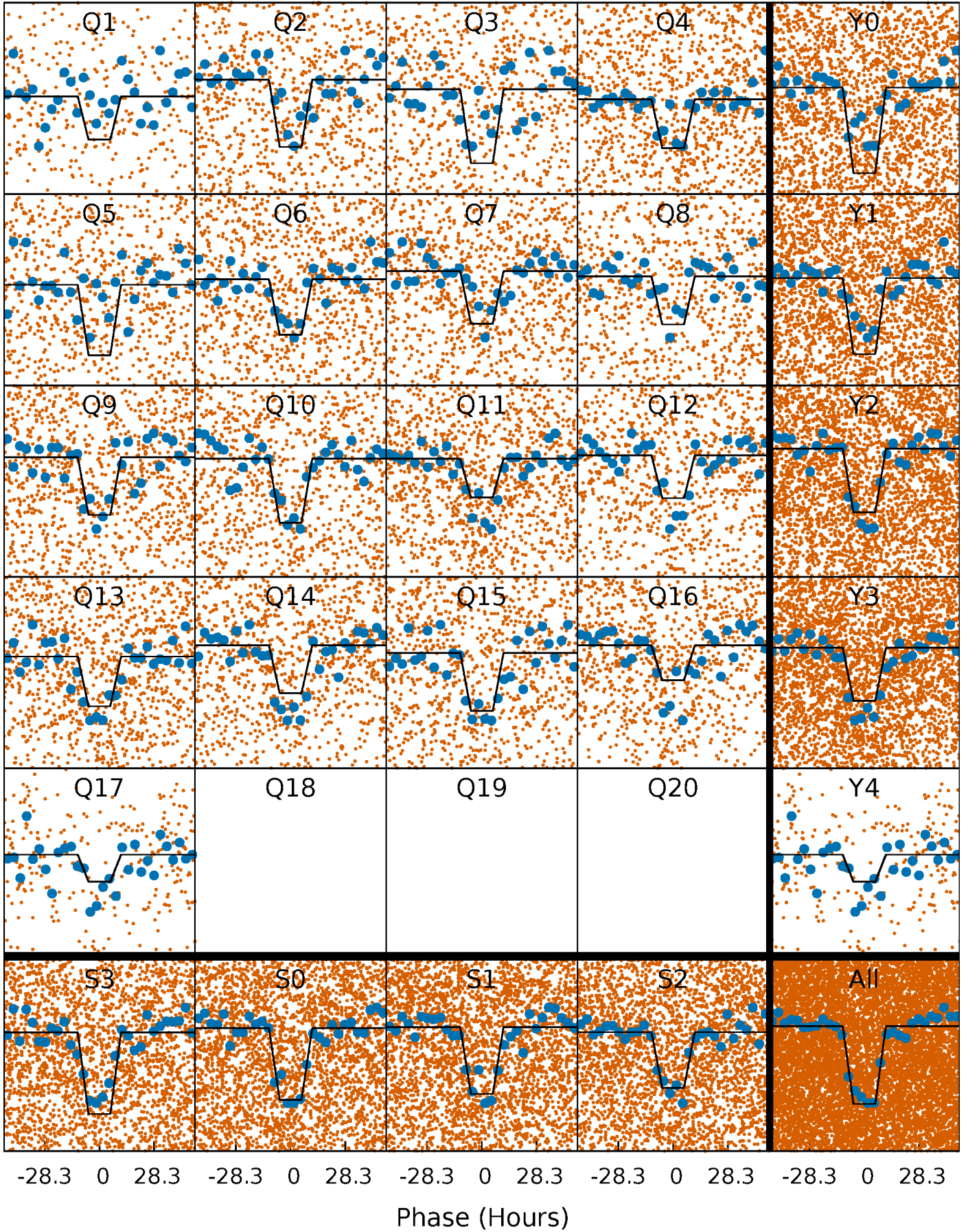
DV Quarter-Phased Transit Curves

TCE 005385269-01 P= 12.425802 Days $T_0=141.523213$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

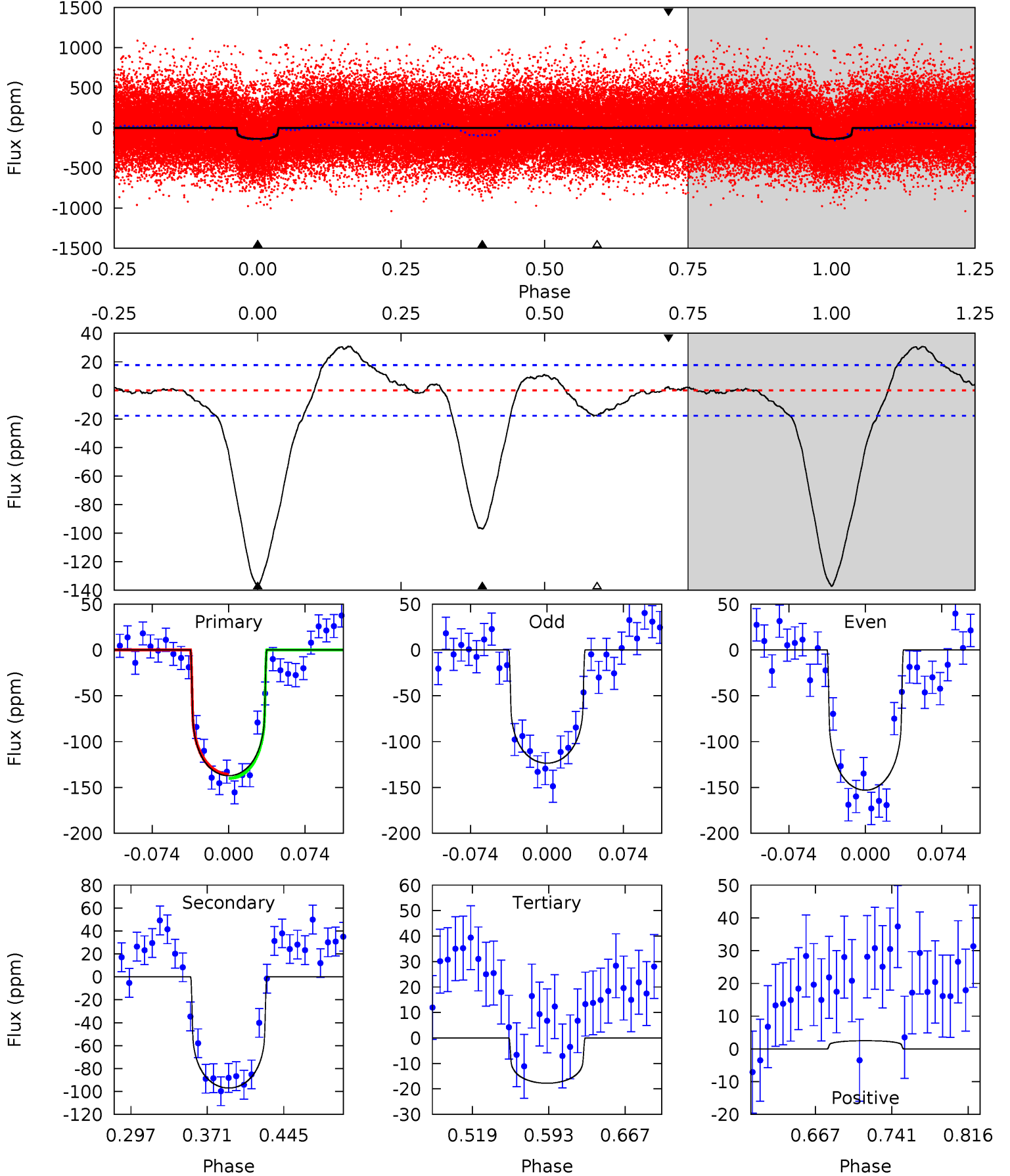
TCE 005385269-01 P= 12.425672 Days $T_0=141.517639$ (BKJD)



DV Model-Shift Uniqueness Test

005385269-01, P = 12.425802 Days, E = 129.097411 Days

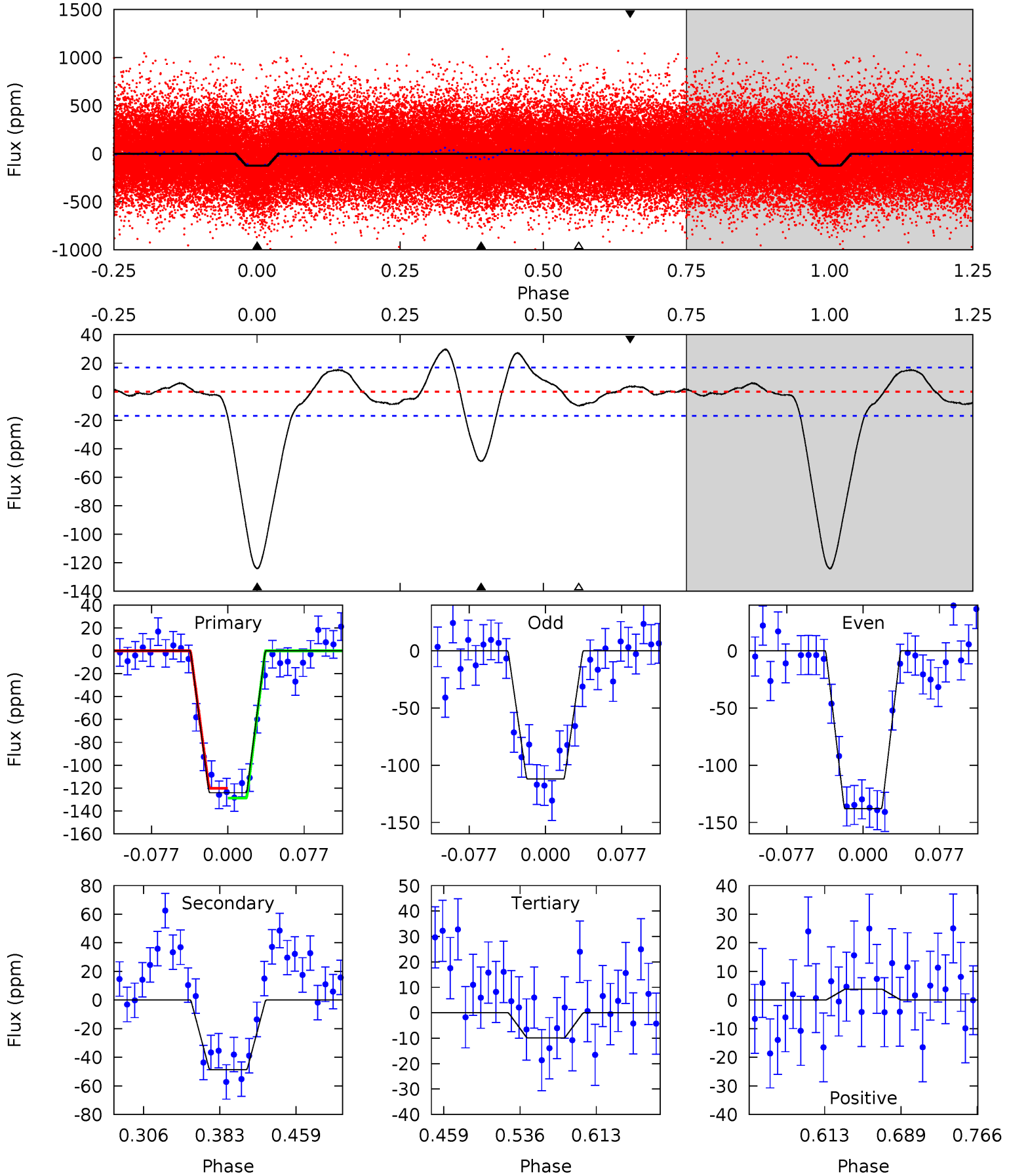
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
35.8	25.3	4.63	0.65	4.63	1.79	2.97	31.2	35.1	20.7	24.6	3.85	0.99	0.18	0.59



Alt Model-Shift Uniqueness Test

005385269-01, P = 12.425672 Days, E = 129.091967 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
33.9	13.3	2.70	1.03	4.62	1.77	1.89	31.2	32.8	10.6	12.3	3.53	1.04	0.19	1.14



Stellar Parameters For KIC 005385269

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5968^{+184}_{-226}	$4.426^{+0.072}_{-0.203}$	$0.070^{+0.250}_{-0.300}$	$1.048^{+0.333}_{-0.143}$	$1.069^{+0.134}_{-0.148}$	$1.306^{+0.478}_{-0.677}$
	+3%/-4%	+2%/-5%	+357%/-429%	+32%/-14%	+13%/-14%	+37%/-52%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 005385269-01 / KOI 6002.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-97 ± 4	$1.25^{+0.31}_{-0.27}$	1170^{+84}_{-65}	5764^{+723}_{-523}	388^{+228}_{-142}
Alt.	-49 ± 4	$1.34^{+0.33}_{-0.27}$	1167^{+87}_{-62}	4787^{+462}_{-351}	166^{+95}_{-56}

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

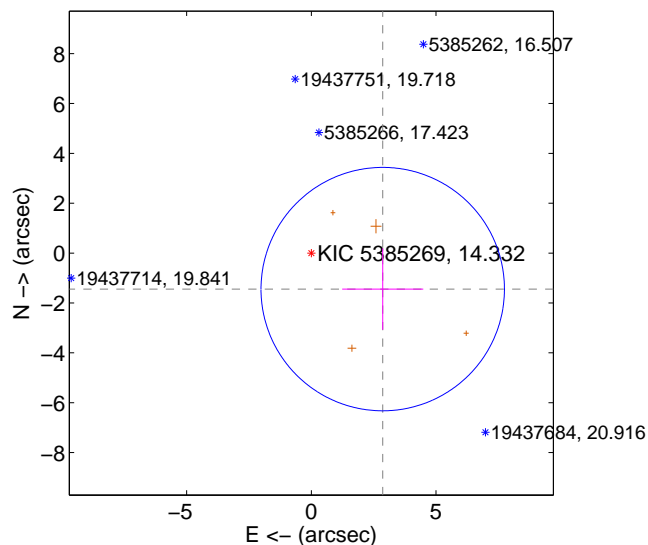
Supplemental centroid analysis for 005385269-01. Kepler magnitude: 14.33. Transit SNR 17.65

There are 0 quarters with good PRF difference image offsets

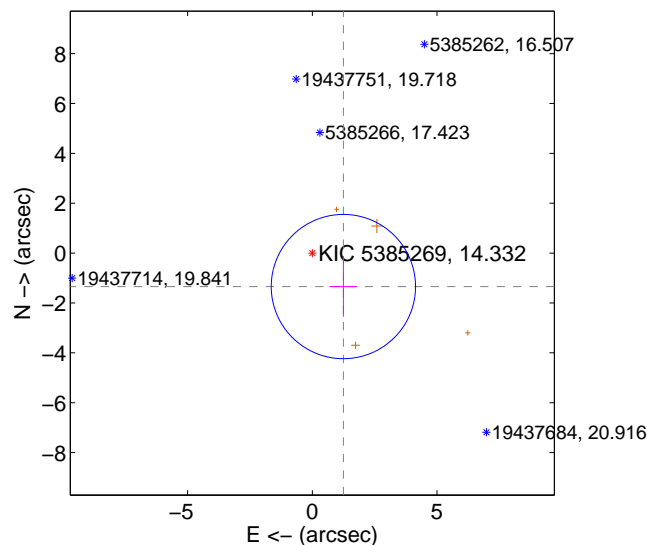
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.207 ± 1.627	1.97	-2.864 ± 1.626	-1.444 ± 1.633
PRF-fit source offset from KIC position	1.832 ± 0.964	1.90	-1.247 ± 0.562	-1.342 ± 1.208
photometric centroid source offset	2.20 ± 0.90	2.45	2.20 ± 0.90	0.05 ± 0.85

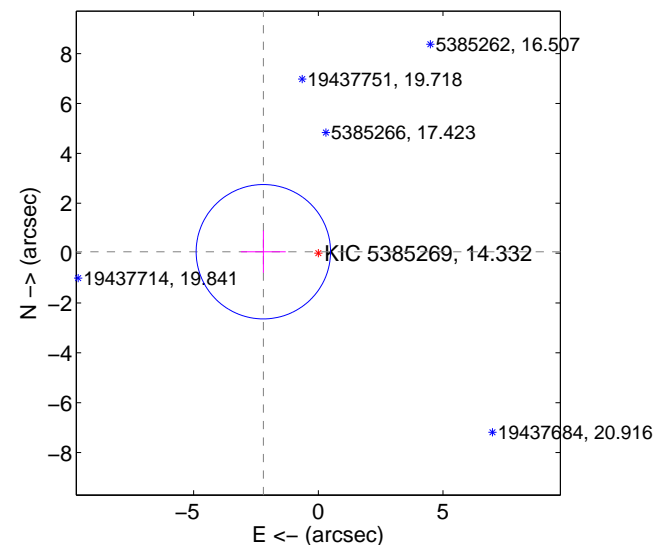
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

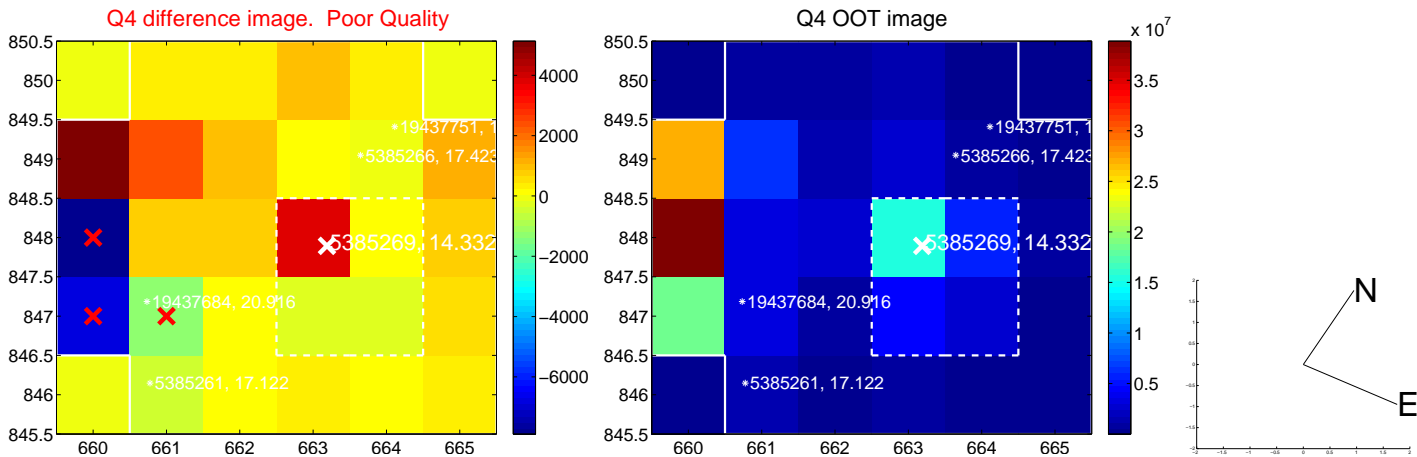
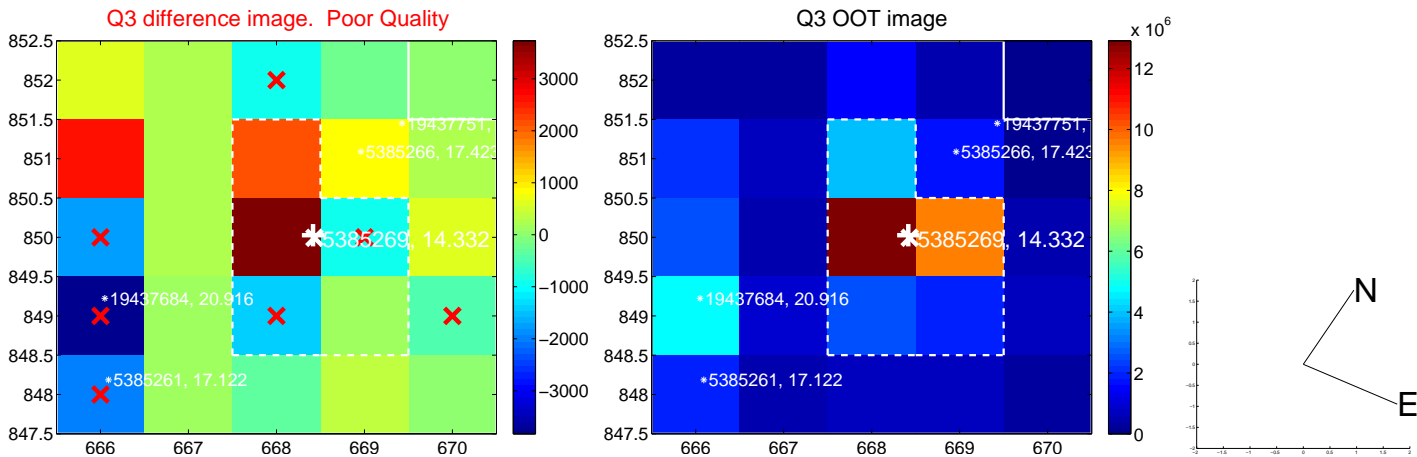
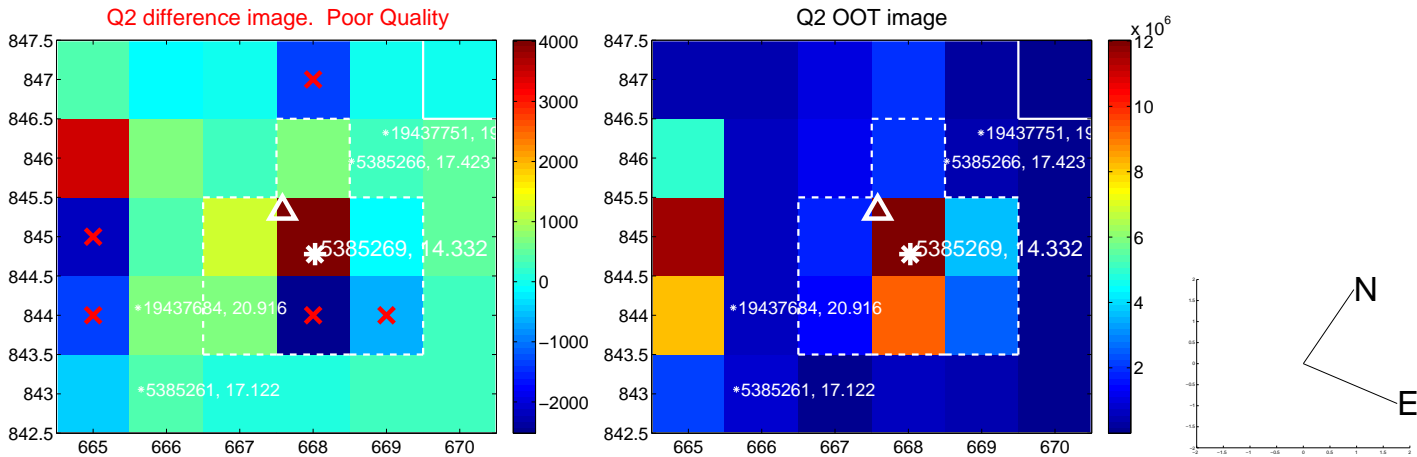
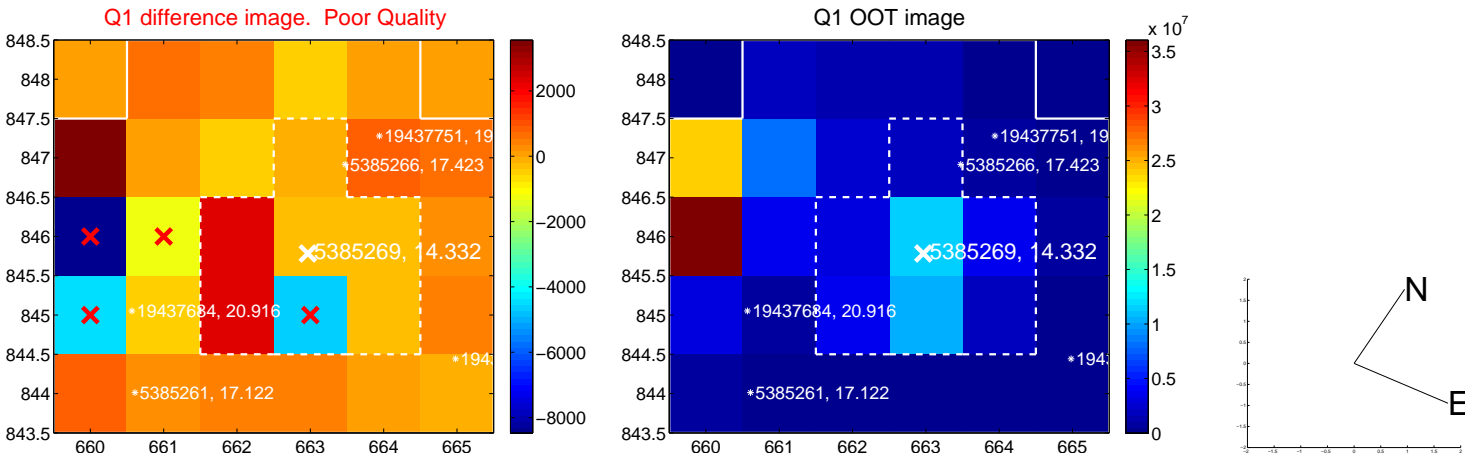


offset from photometric centroids

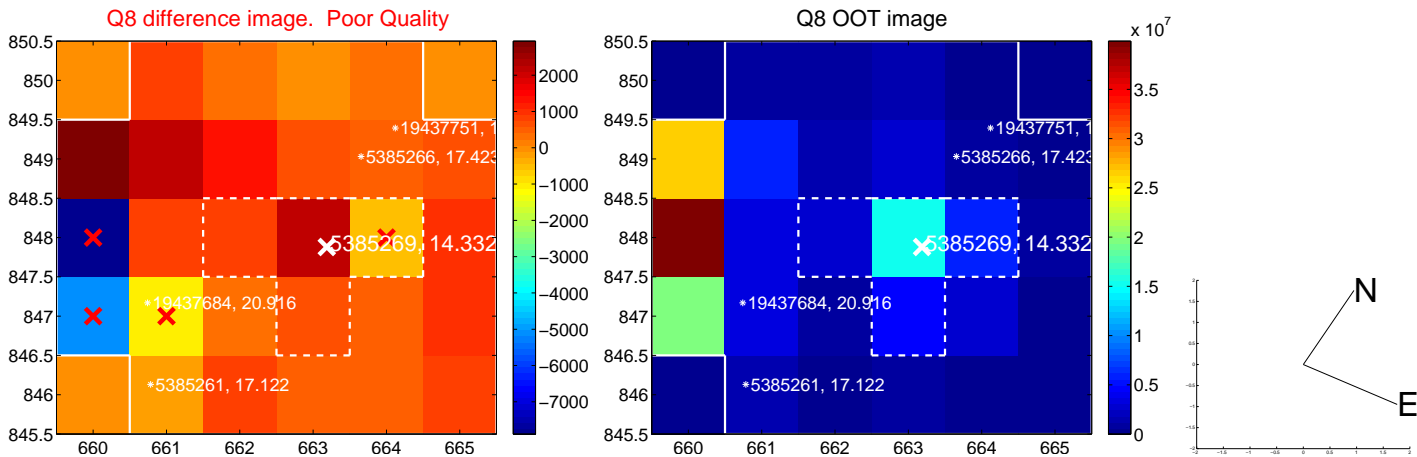
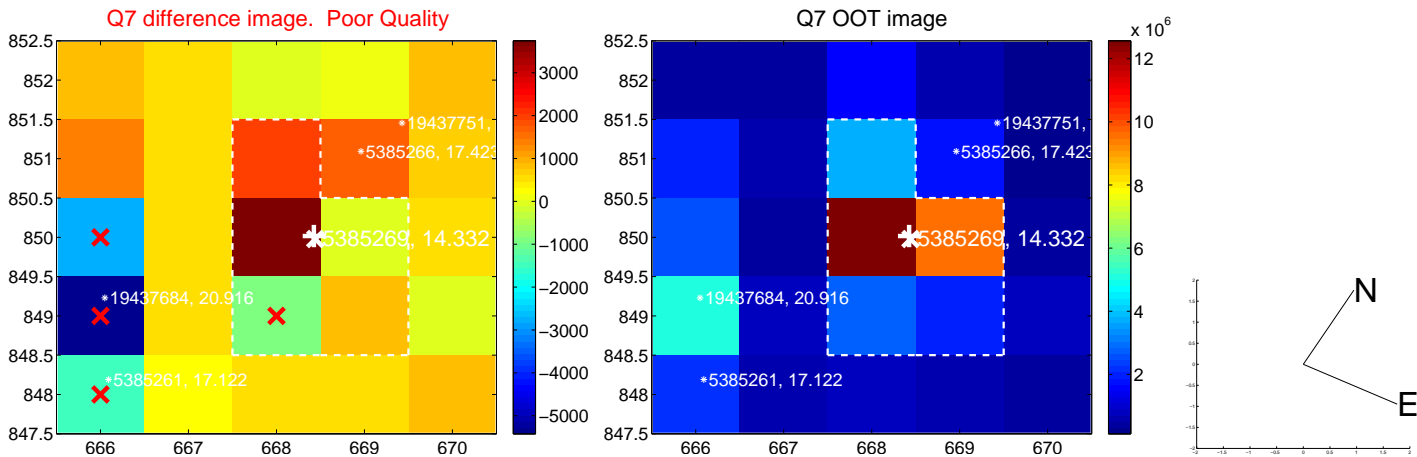
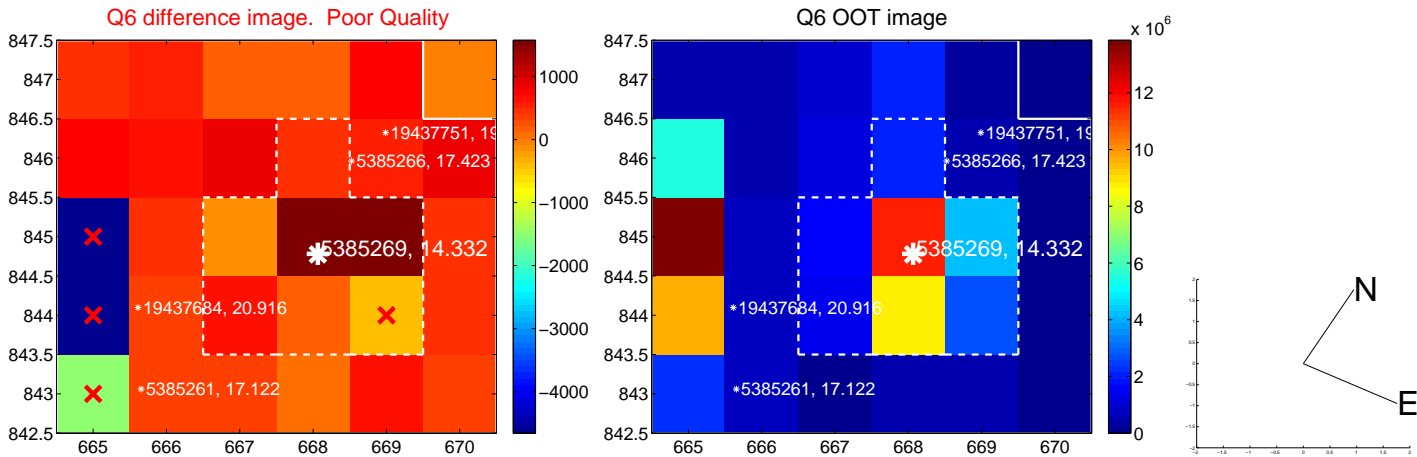
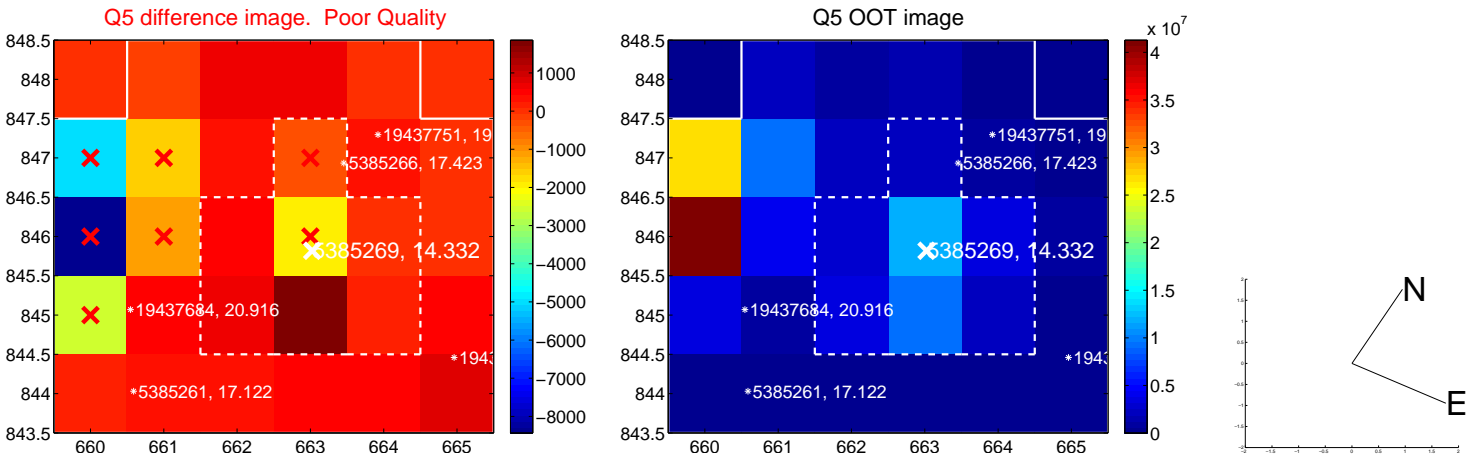


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

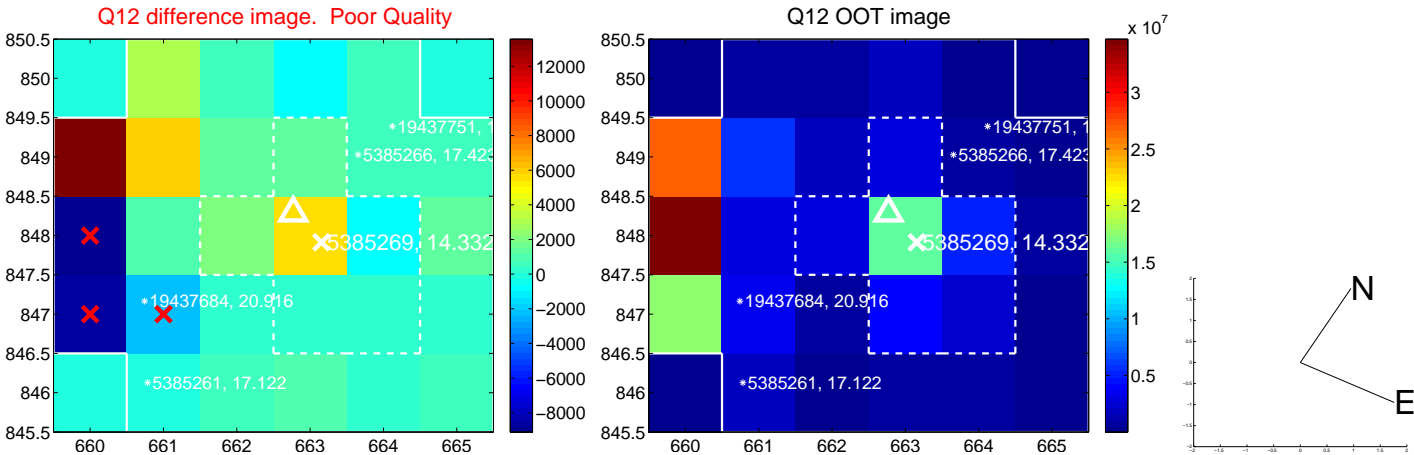
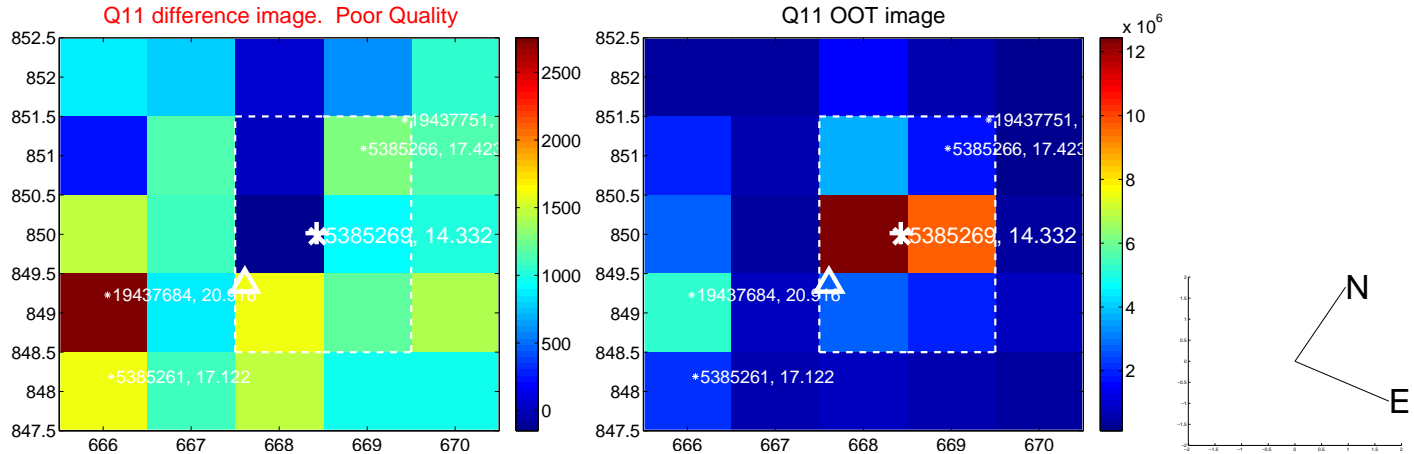
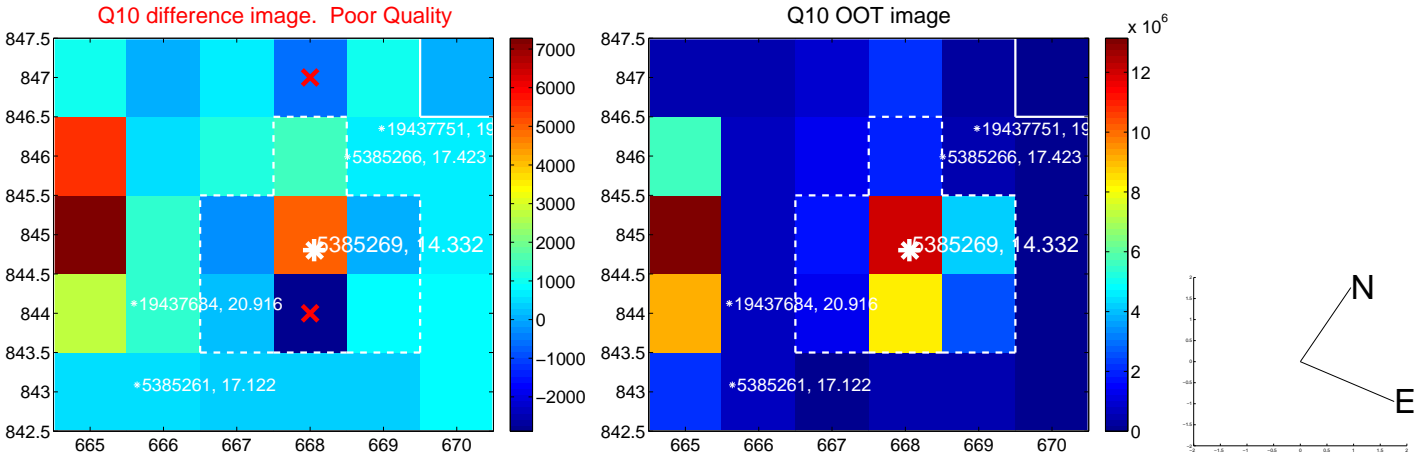
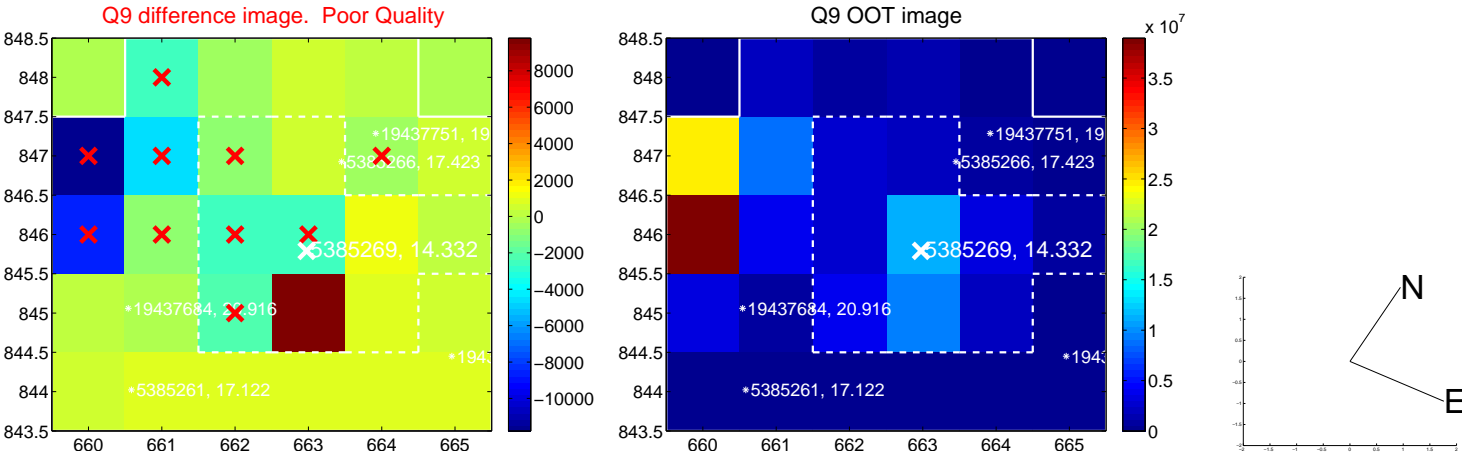
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



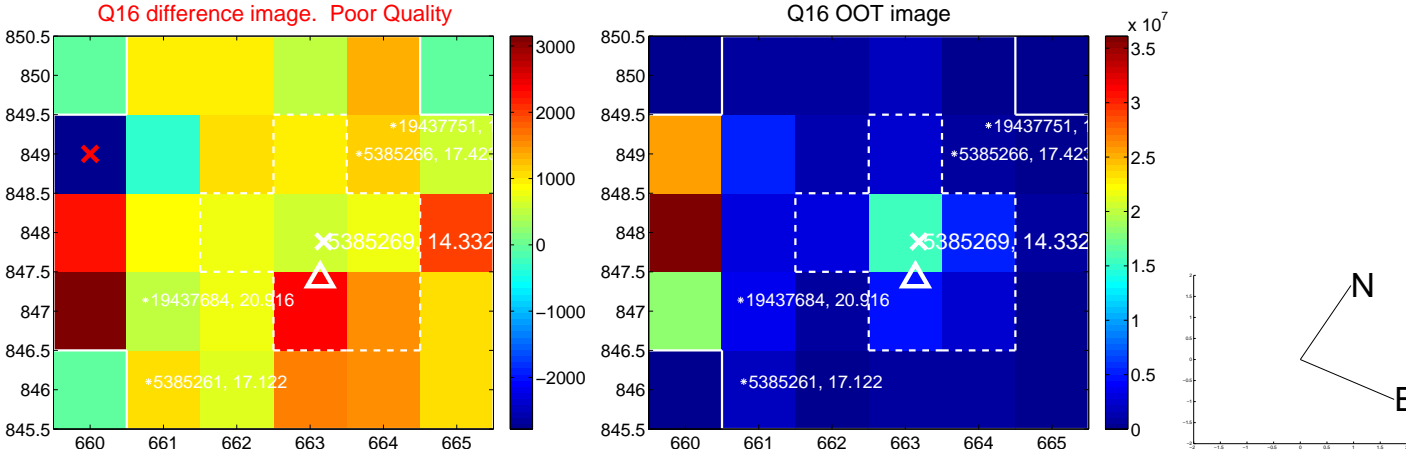
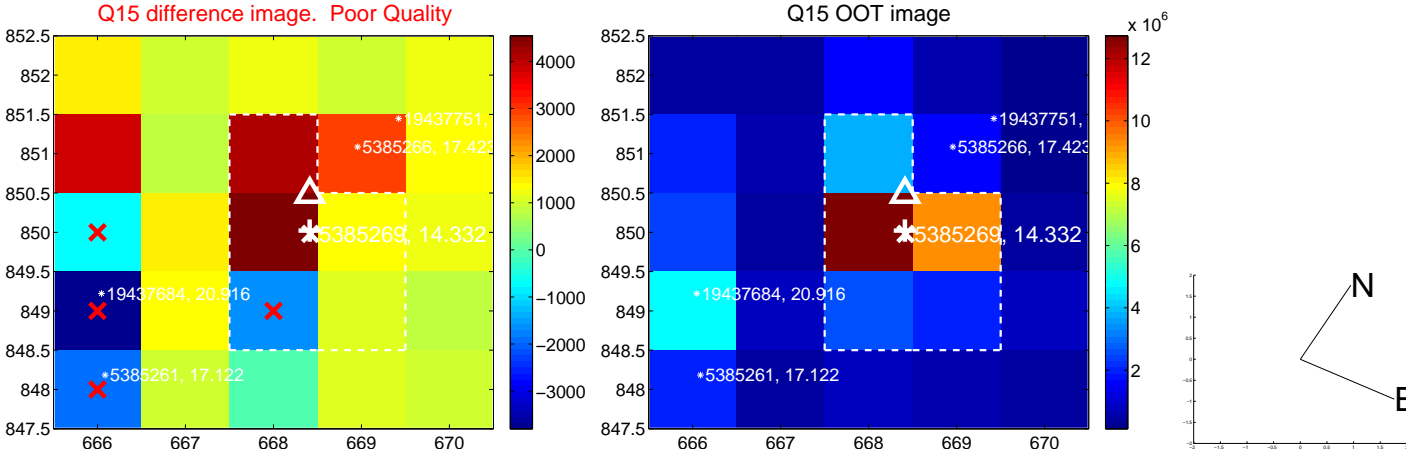
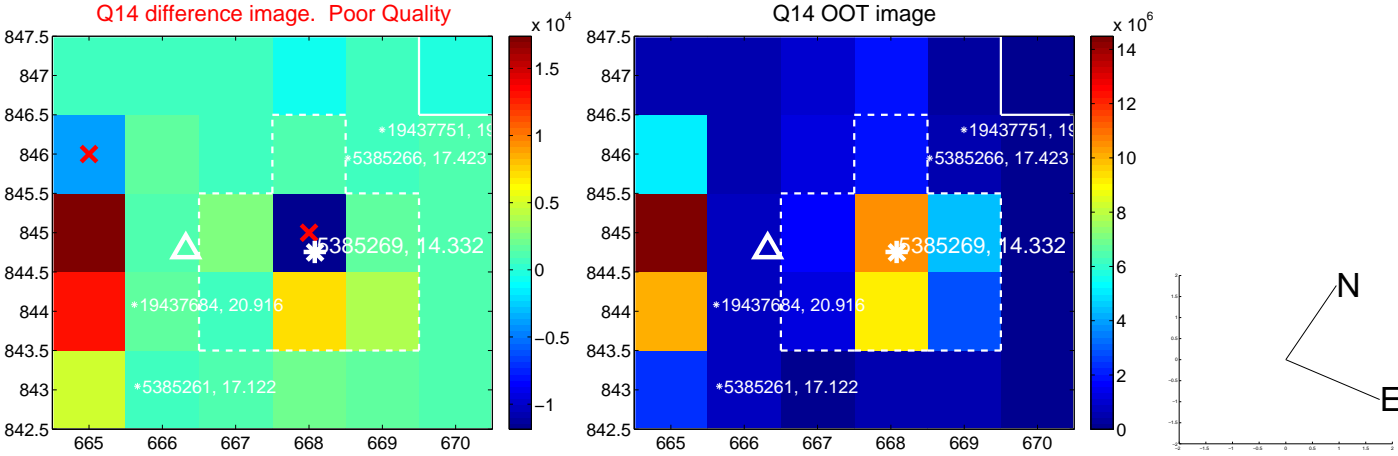
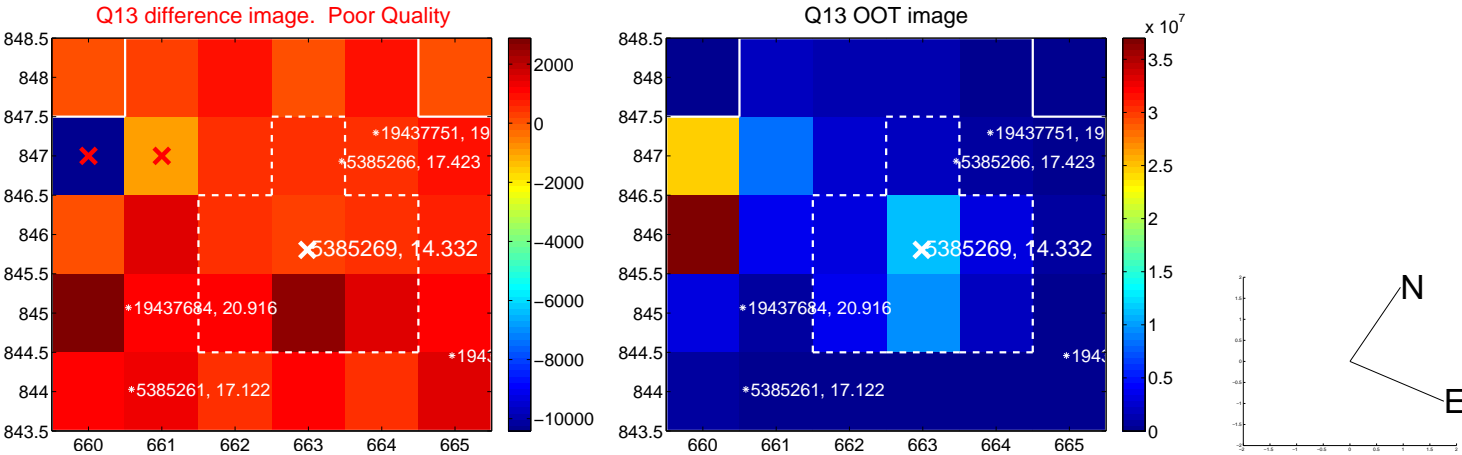
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



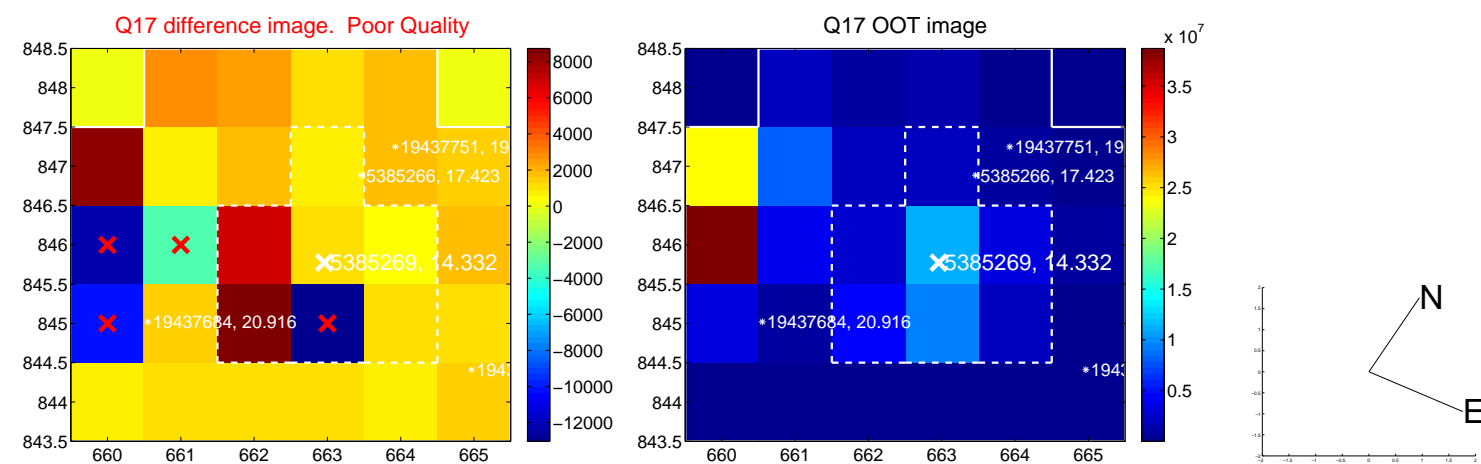
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



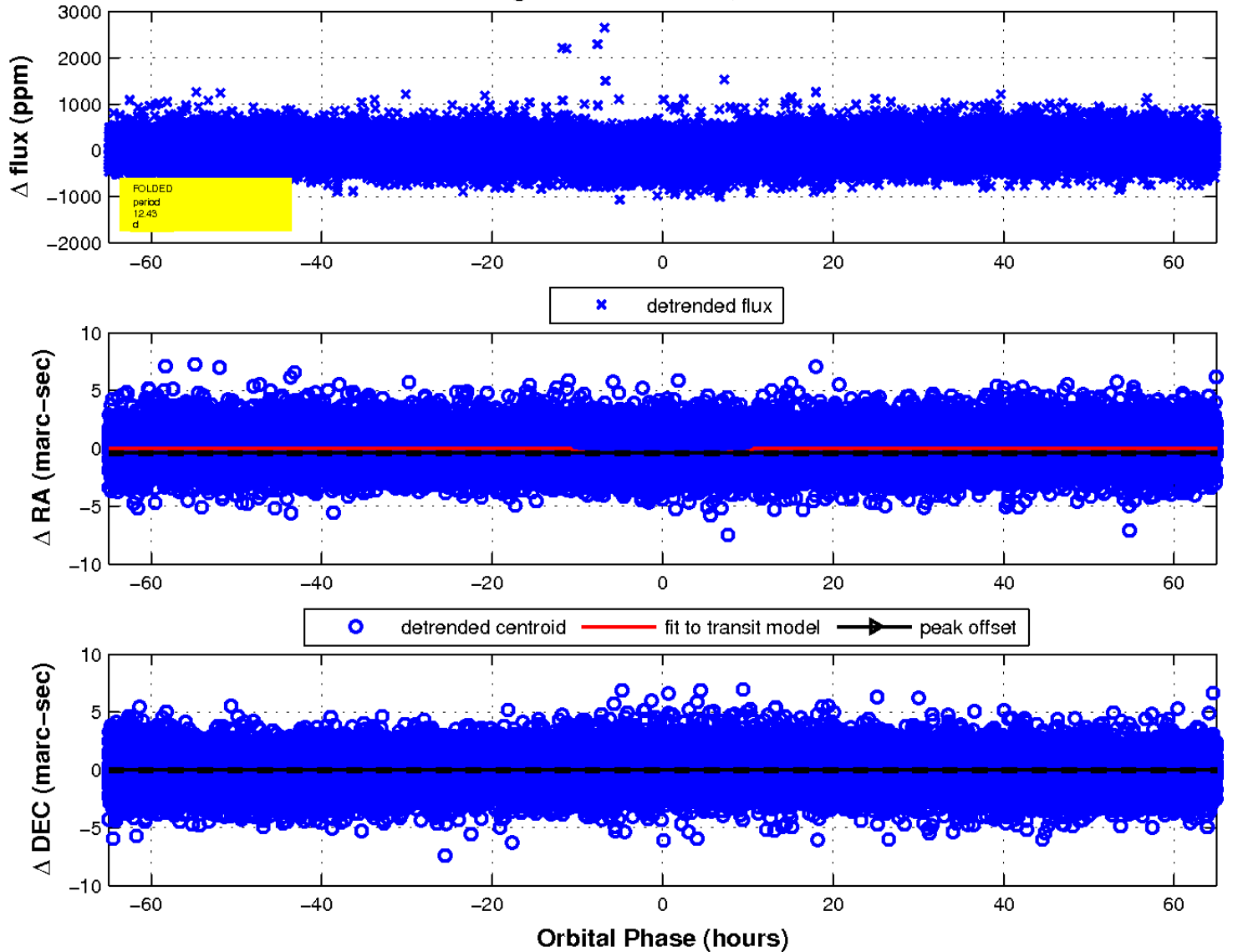
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

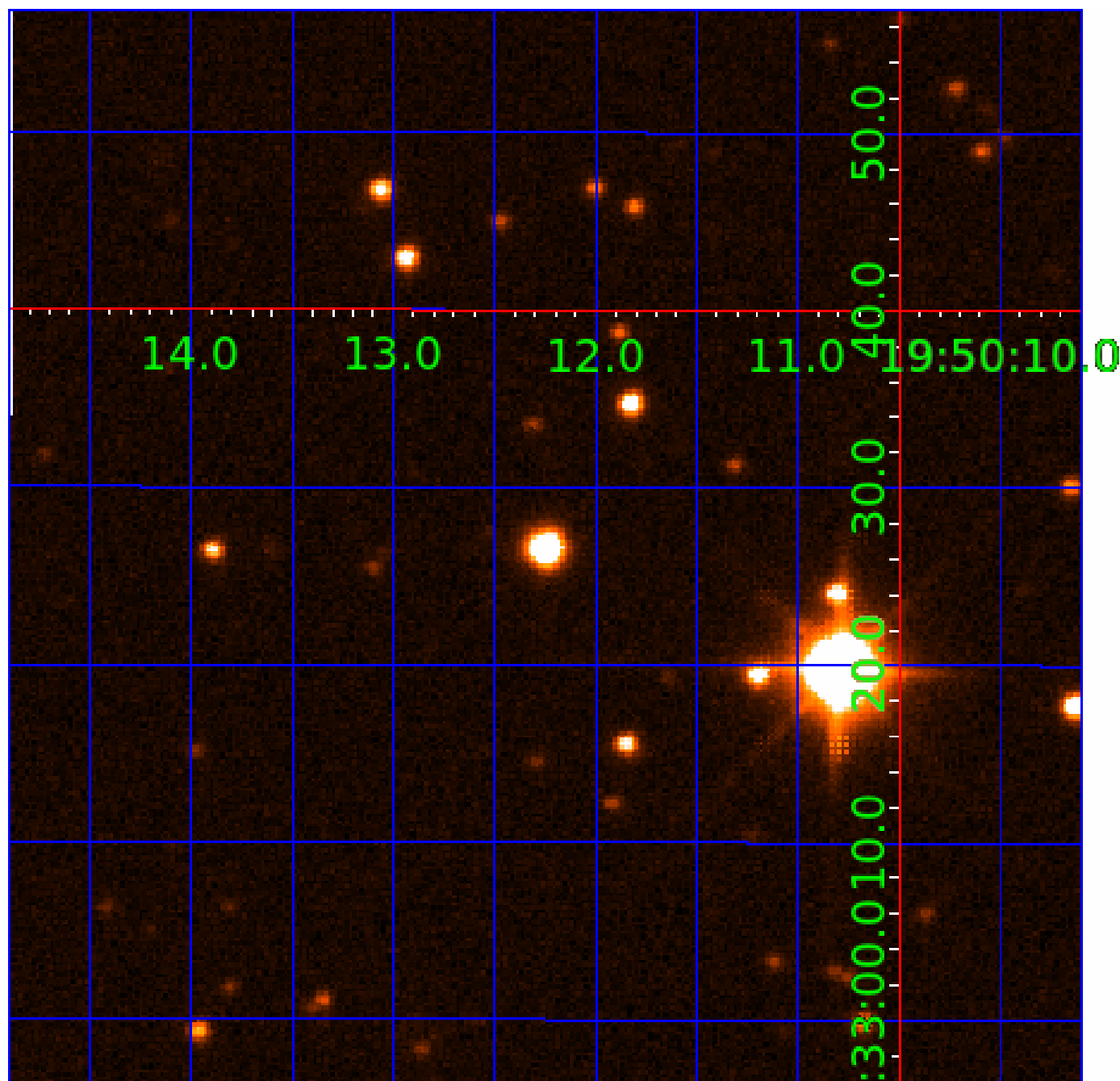


fluxWeightedCentroids, Planet 1 of 2



UKIRT Image

Declination



KIC 005385269

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})
005385269-01	OBS	6002.01	12.425802	141.523214	121.6	21.663	14.6	17.6	1.05	5968	1.21	108.31
005385269-02	OBS	No	12.427741	133.791612	107.3	25.361	14.2	17.5	1.05	5968	1.33	108.29

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005385269-01	OBS	FP	0.00	1	0	1	1	LPP_DV—LPP_ALT—CENT_FEW_DIFFS—HALO_GHOST—EPHEM_MATCH
005385269-02	OBS	FP	0.00	1	0	1	0	LPP_DV—SAME_NTL_PERIOD—CENT_RESOLVED_OFFSET—HALO_GHOST

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

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

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

Ephemeris Match Information For 005385269-02

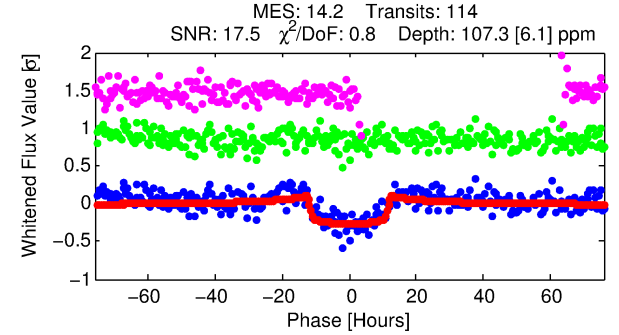
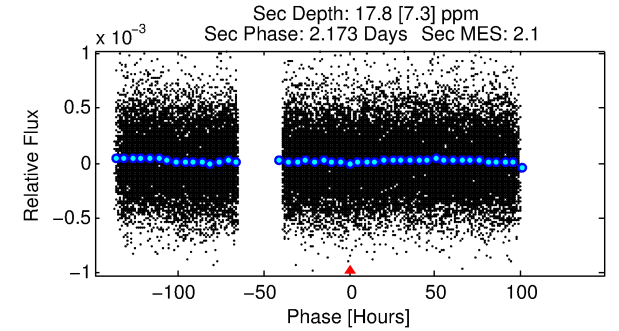
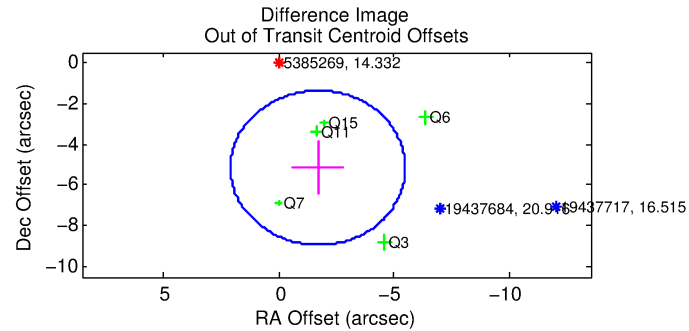
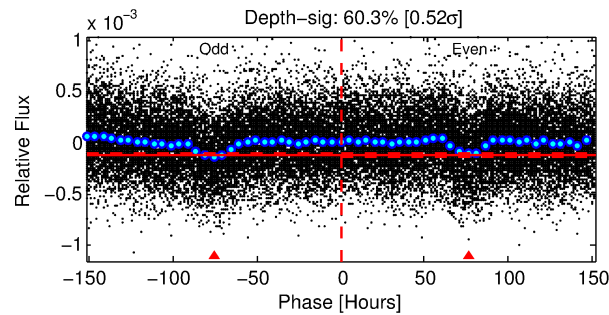
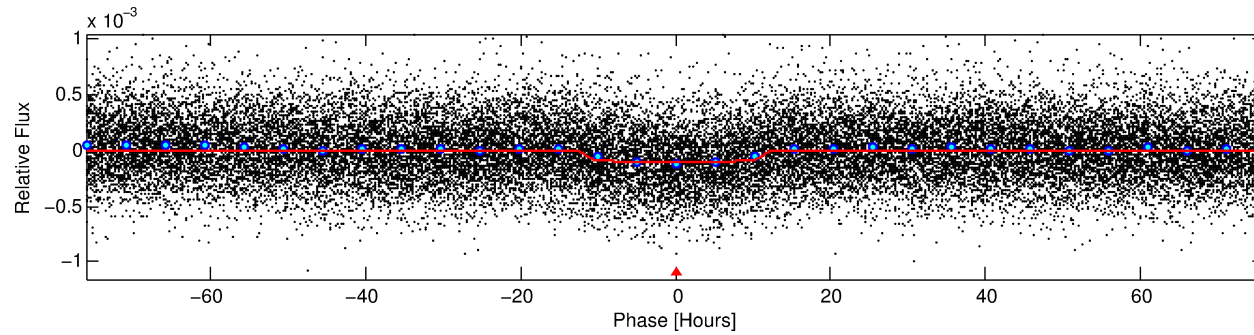
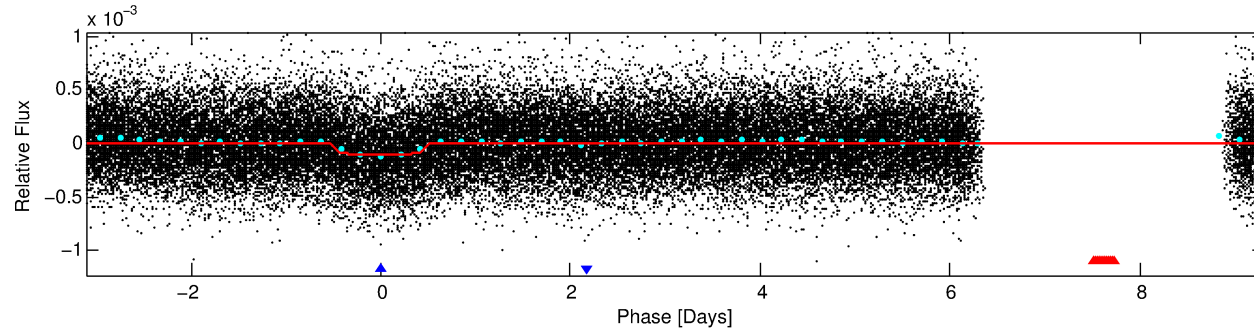
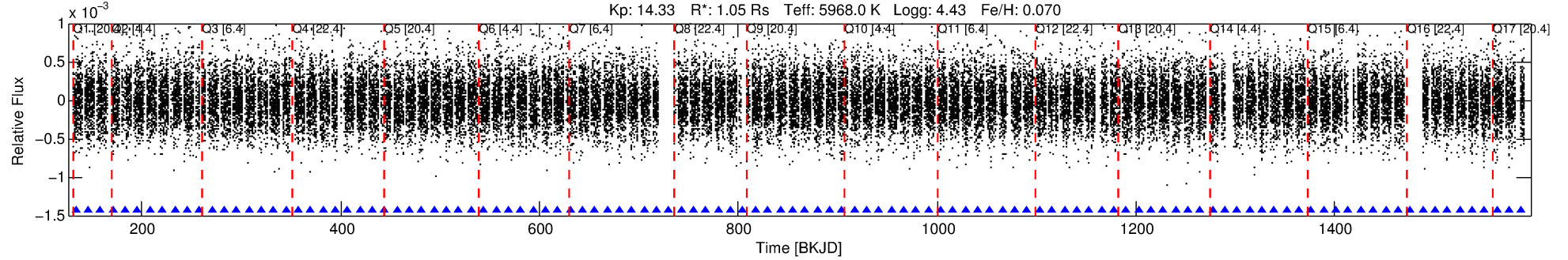
No Significant Match Found

DV One-Page Summary

KIC: 5385269 Candidate: 2 of 2 Period: 12.428 d

KOI: K06002 Corr: No Ephemeris Match

Kp: 14.33 R*: 1.05 Rs Teff: 5968.0 K Logg: 4.43 Fe/H: 0.070



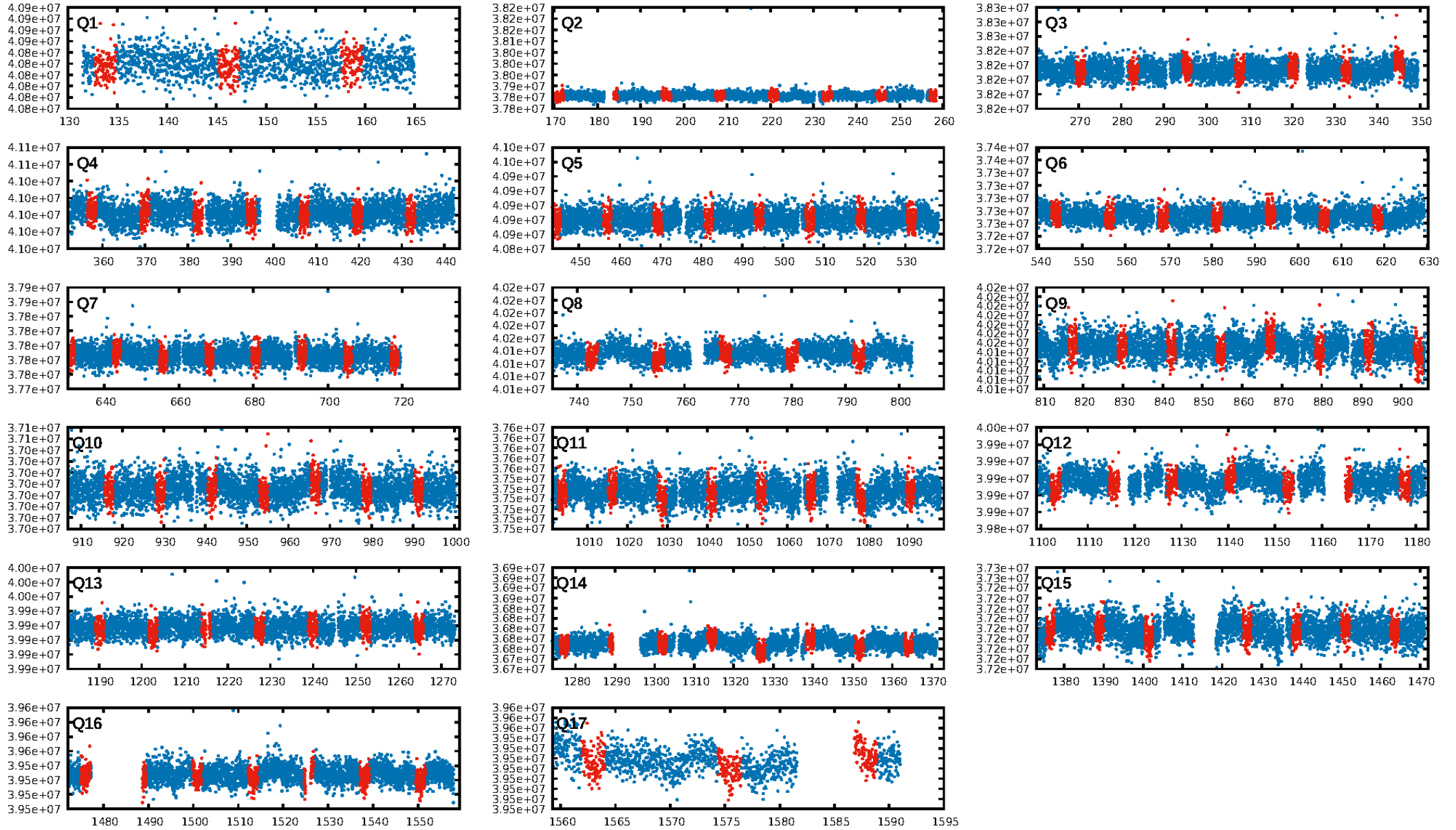
DV Fit Results:

Period = 12.42774 [0.00029] d
Epoch = 133.7916 [0.0191] BKJD
Rp/R* = 0.0117 [0.0006]
a/R* = 1.75 [0.27]
b = 0.93 [0.03]
Seff = 108.29 [43.98]
Teff = 823 [84] K
Rp = 1.33 [0.43] Re
a = 0.1074 [0.0282] AU
Ag = 63.37 [36.05] [1.73σ]
Teffp = 3588 [406] K [6.68σ]

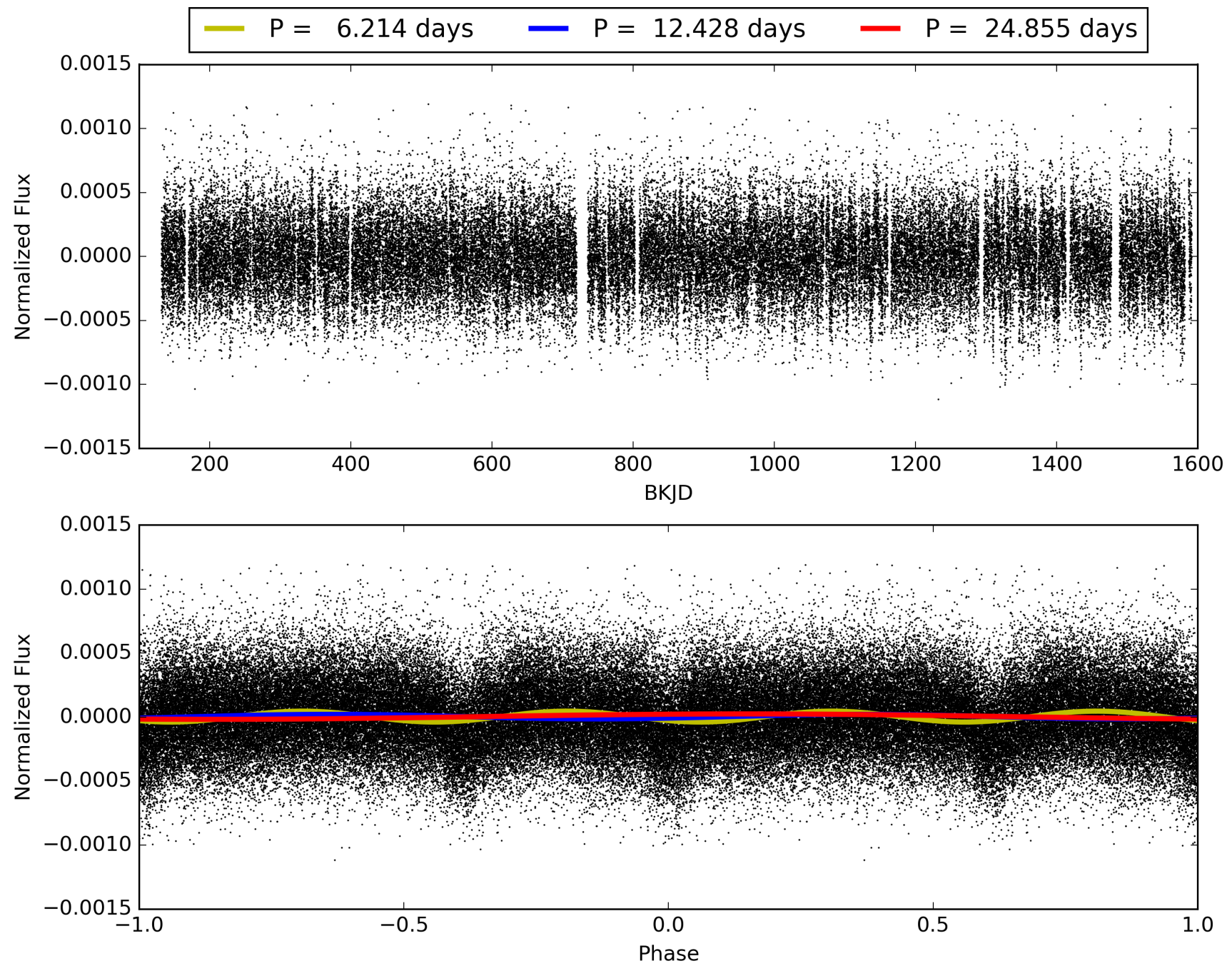
DV Diagnostic Results:

ShortPeriod-sig: 0.1% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 71.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.79e-48
RollingBand-fgt: 1.00 [108/108]
GhostDiagnostic-chr: 0.1736
Centroid-sig: 0.0%
Centroid-so: 2.286 arcsec [2.39σ]
OotOffset-rm: 5.428 arcsec [4.31σ]
KicOffset-rm: 3.976 arcsec [4.08σ]
OotOffset-st: 1/4/0/0 [5]
KicOffset-st: 1/4/0/3 [8]
DiffImageQuality-fgm: 0.00 [0/8]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 005385269-02, PDC Light Curves

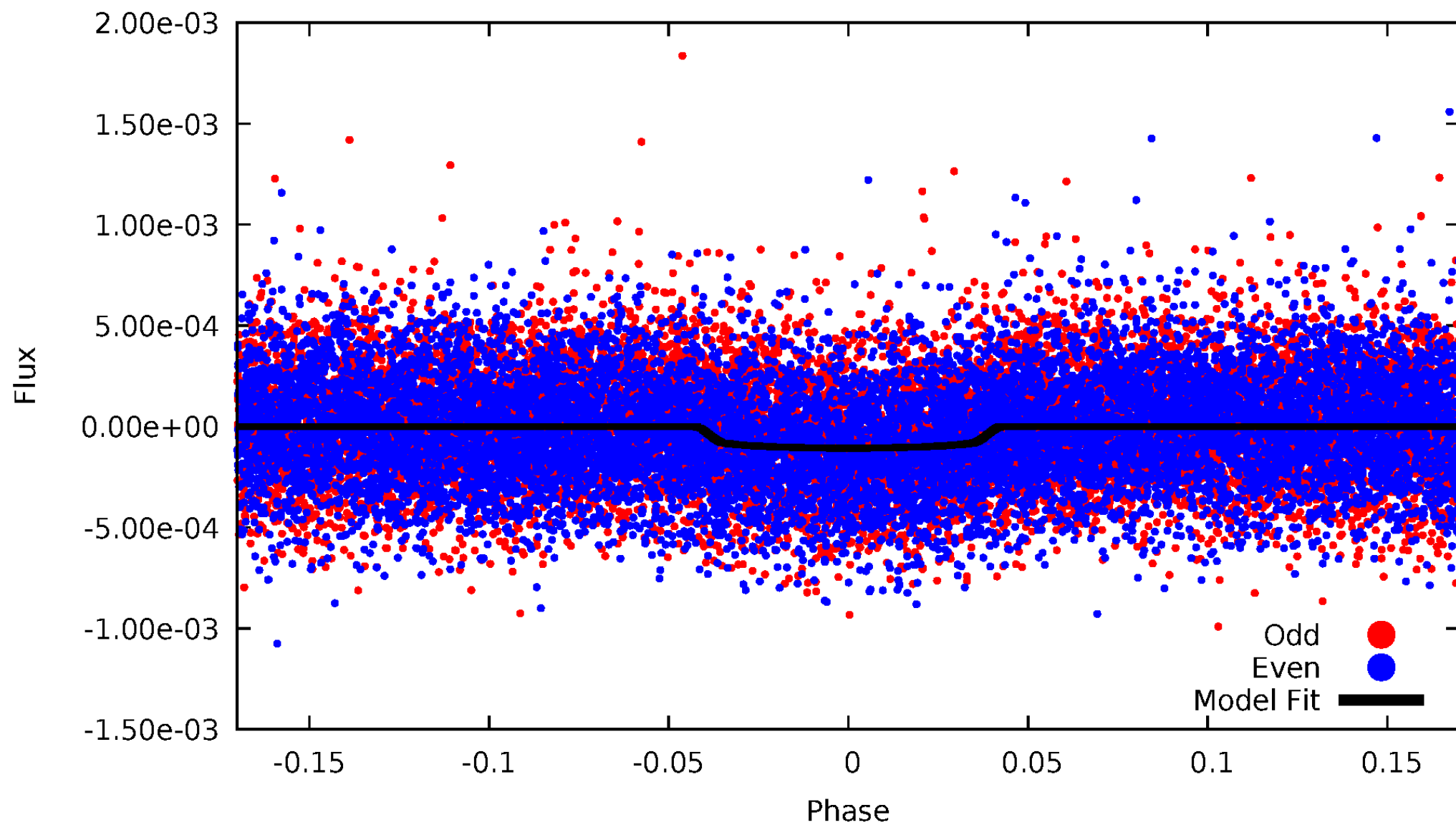


TCE 005385269-02



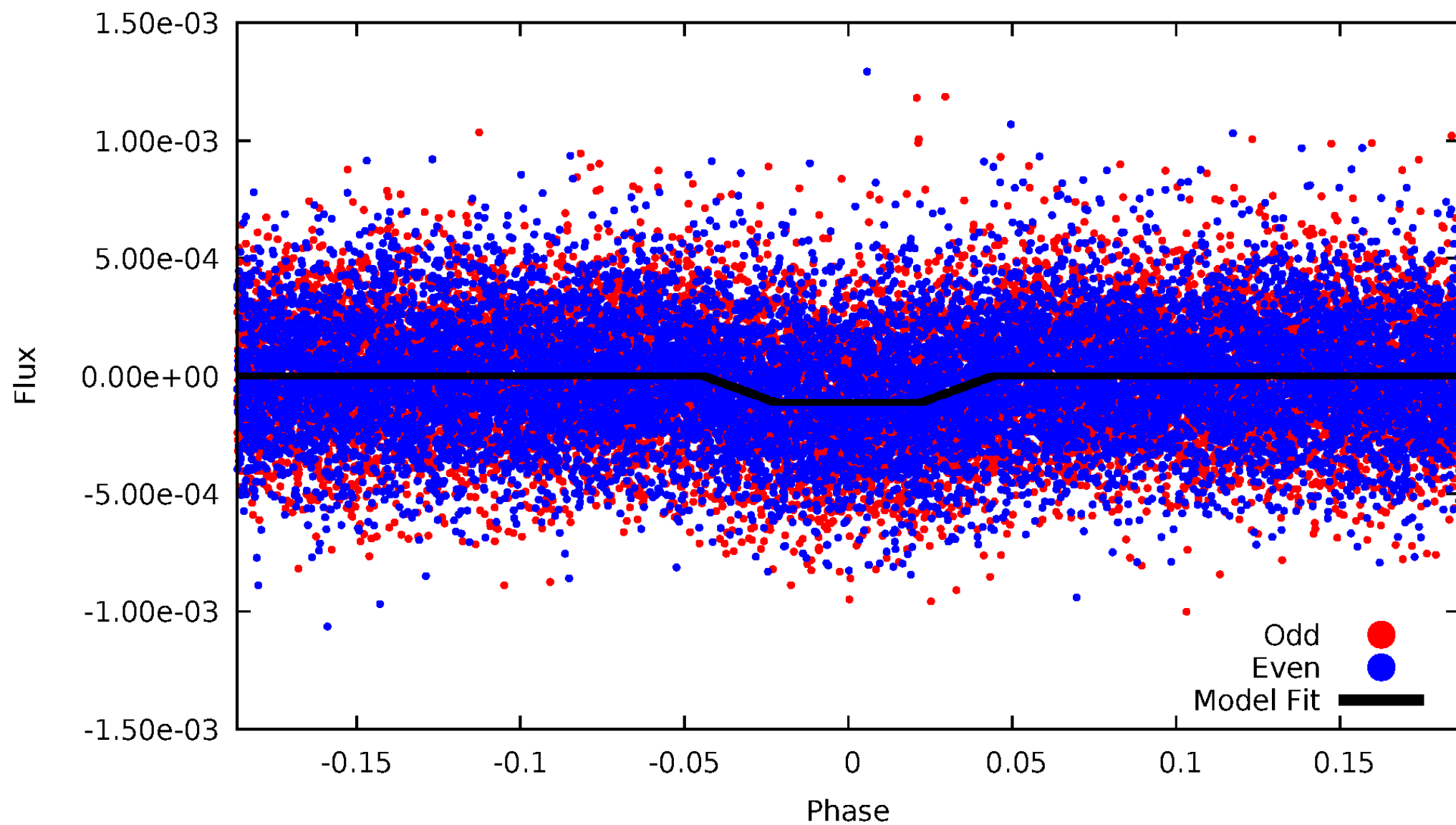
DV Odd/Even

TCE 005385269-02



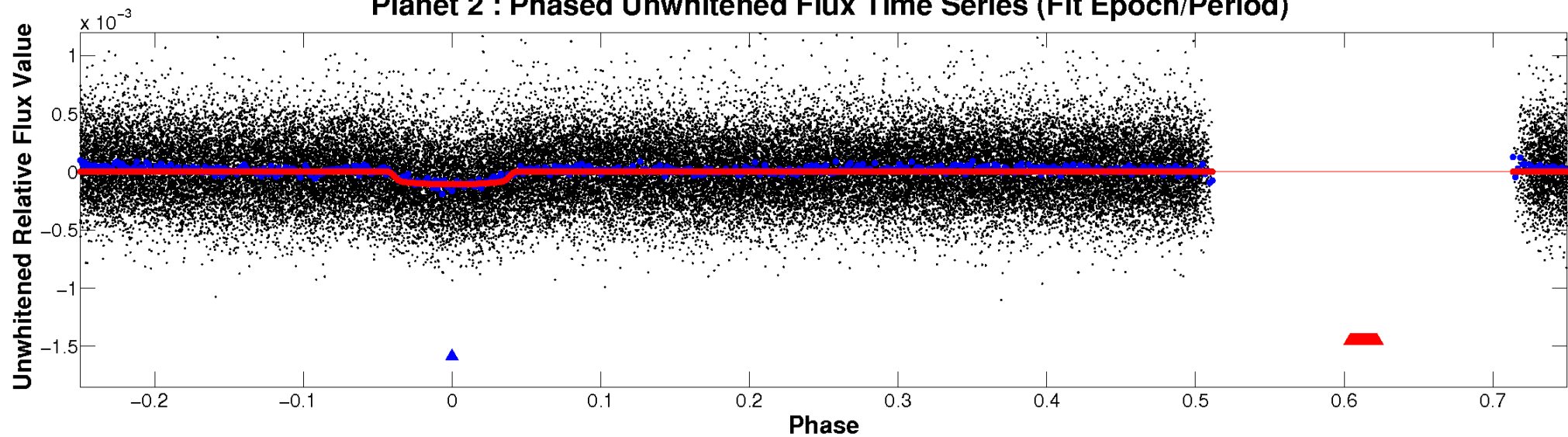
ALT Odd/Even

TCE 005385269-02

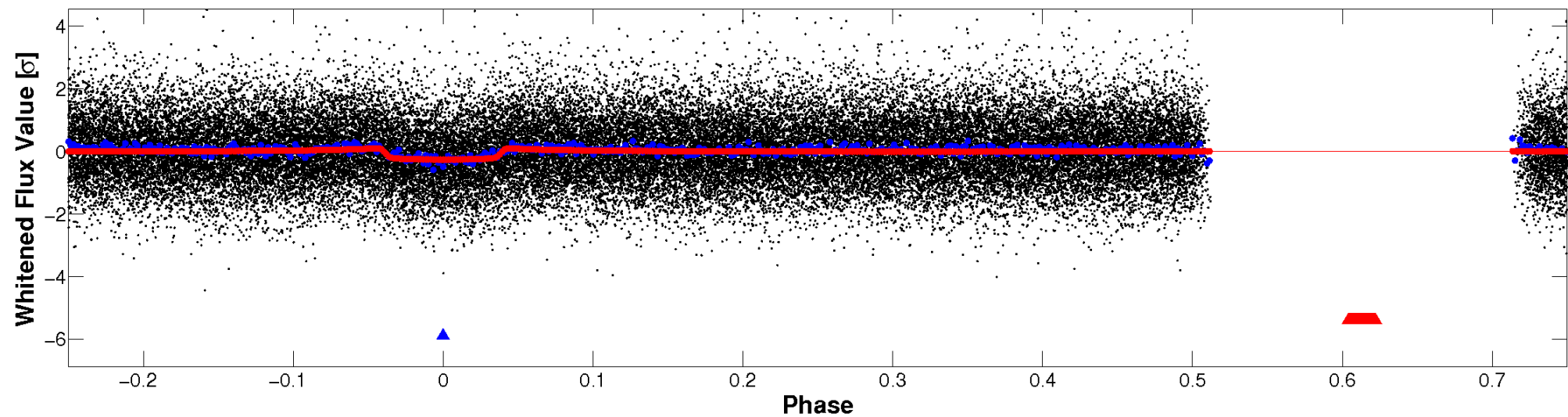


Non-Whitened Vs. Whitened Light Curve

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

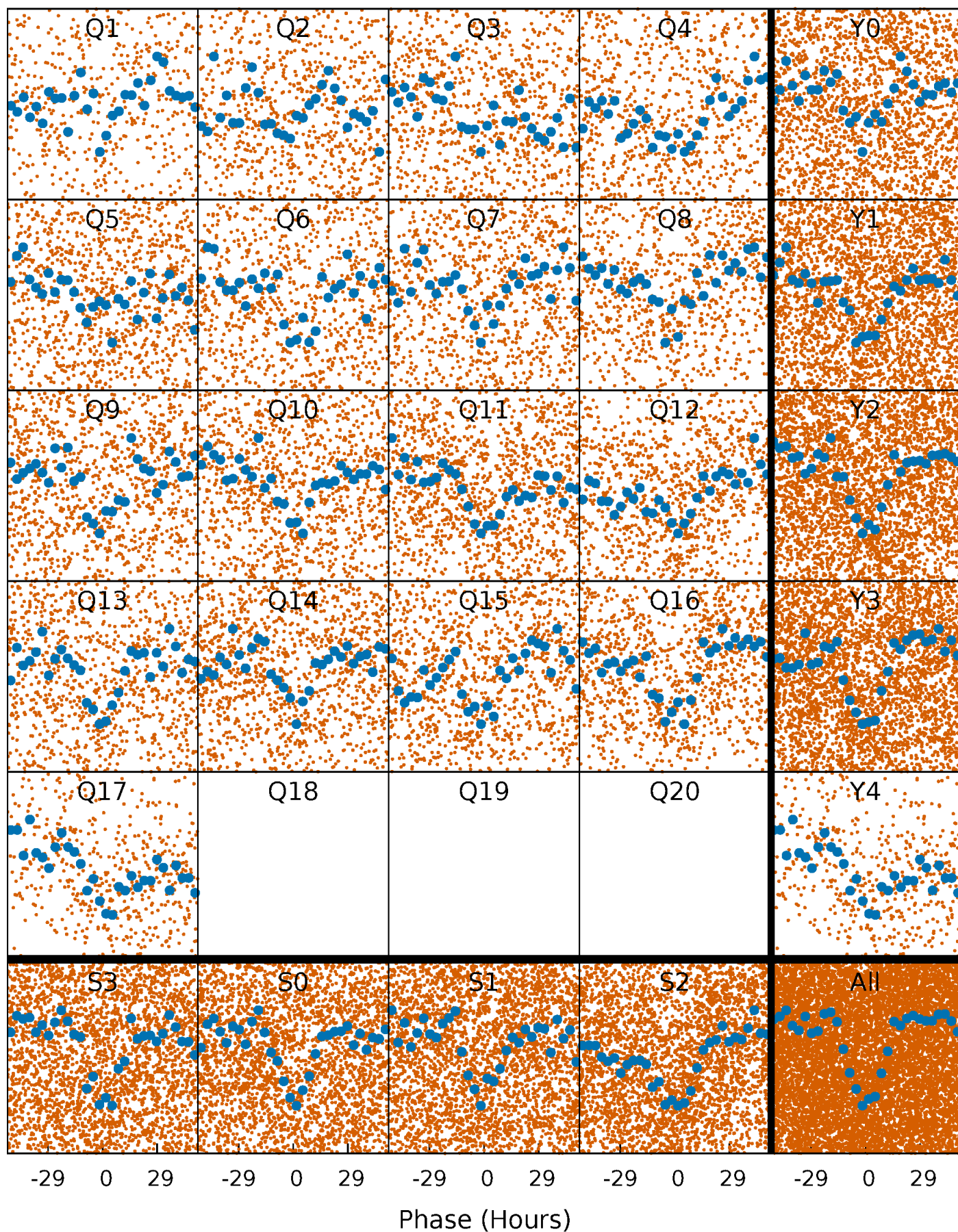


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



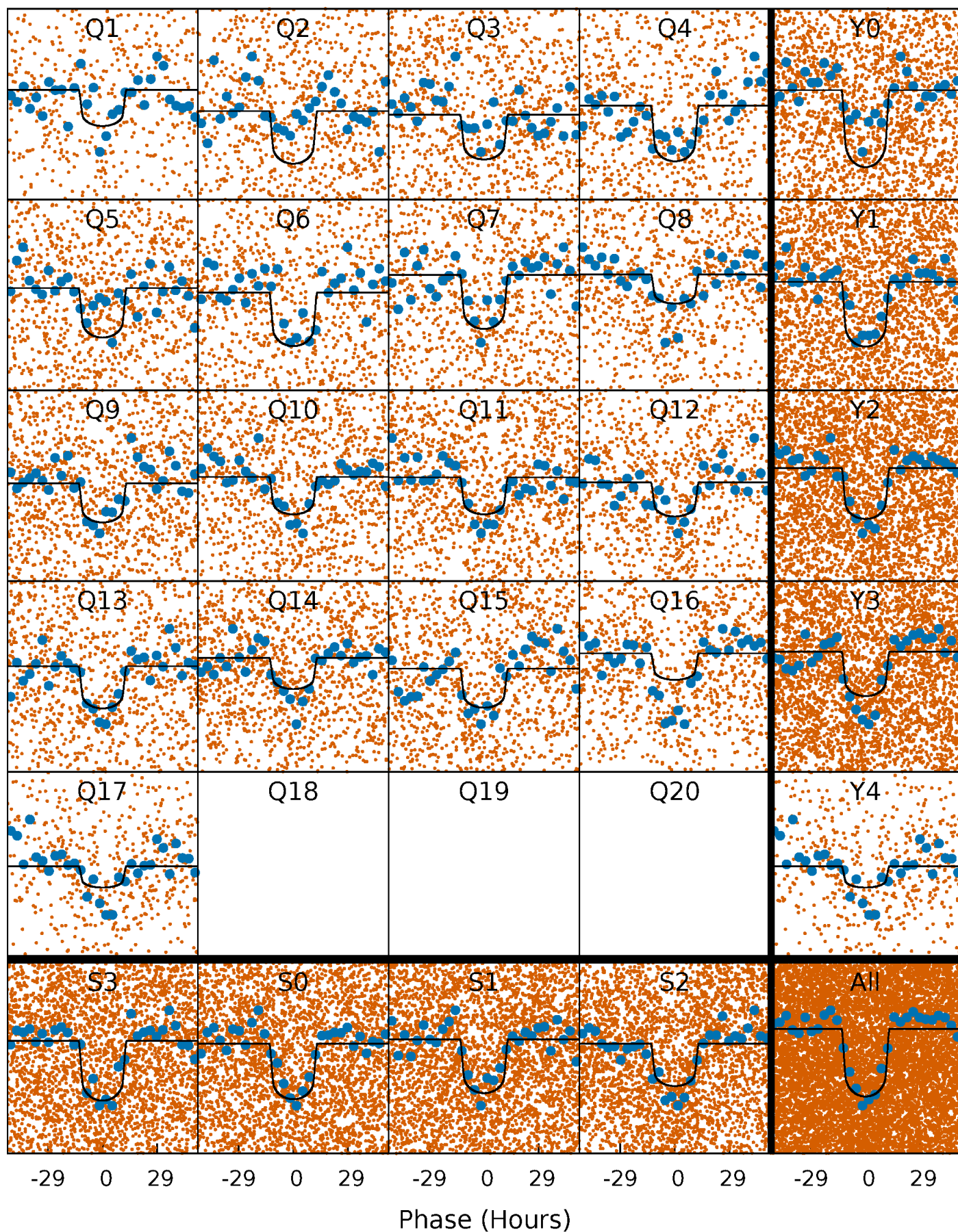
PDC Quarter-Phased Transit Curves

TCE 005385269-02 P= 12.427741 Days $T_0=133.791612$ (BKJD)



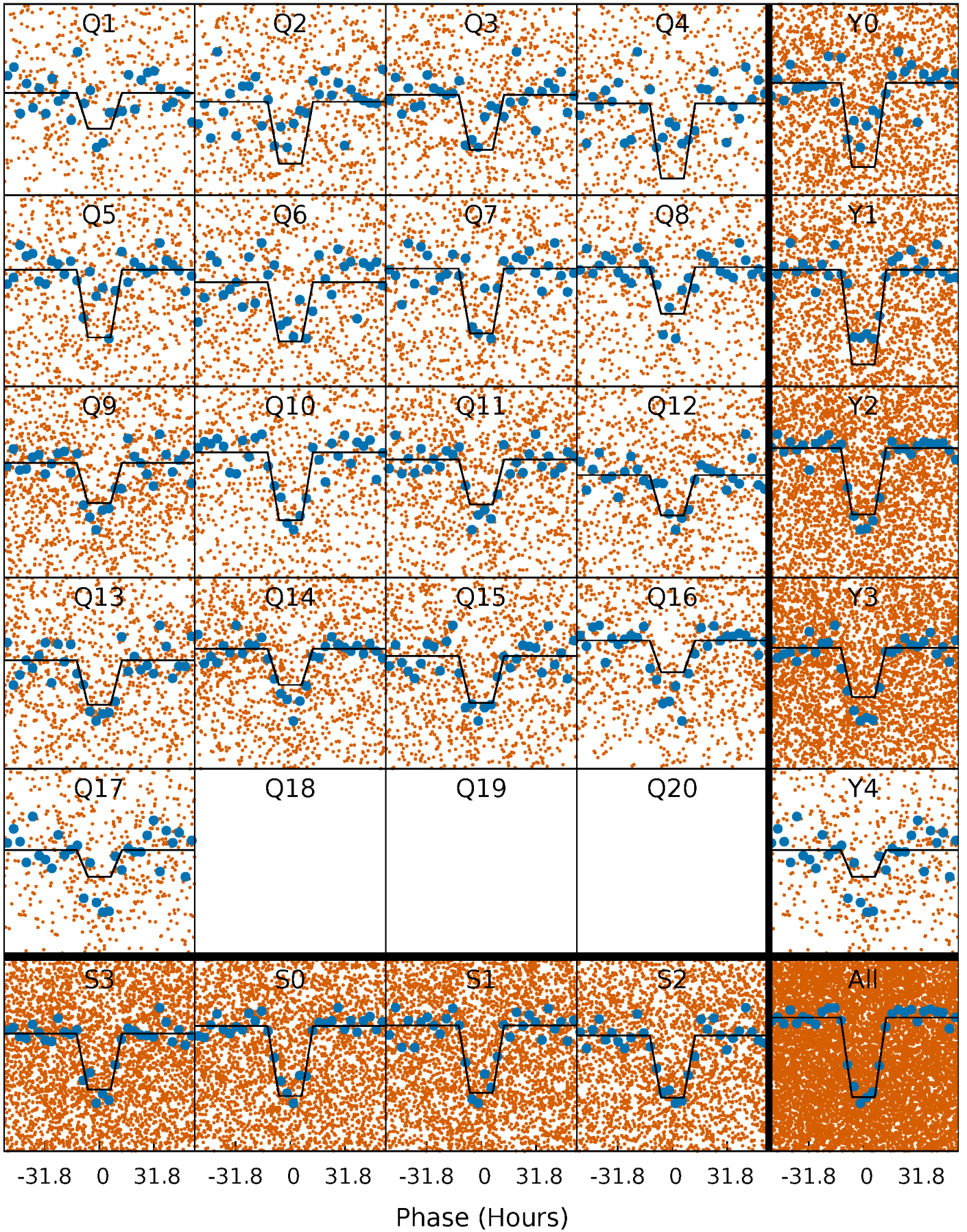
DV Quarter-Phased Transit Curves

TCE 005385269-02 P= 12.427741 Days $T_0=133.791612$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

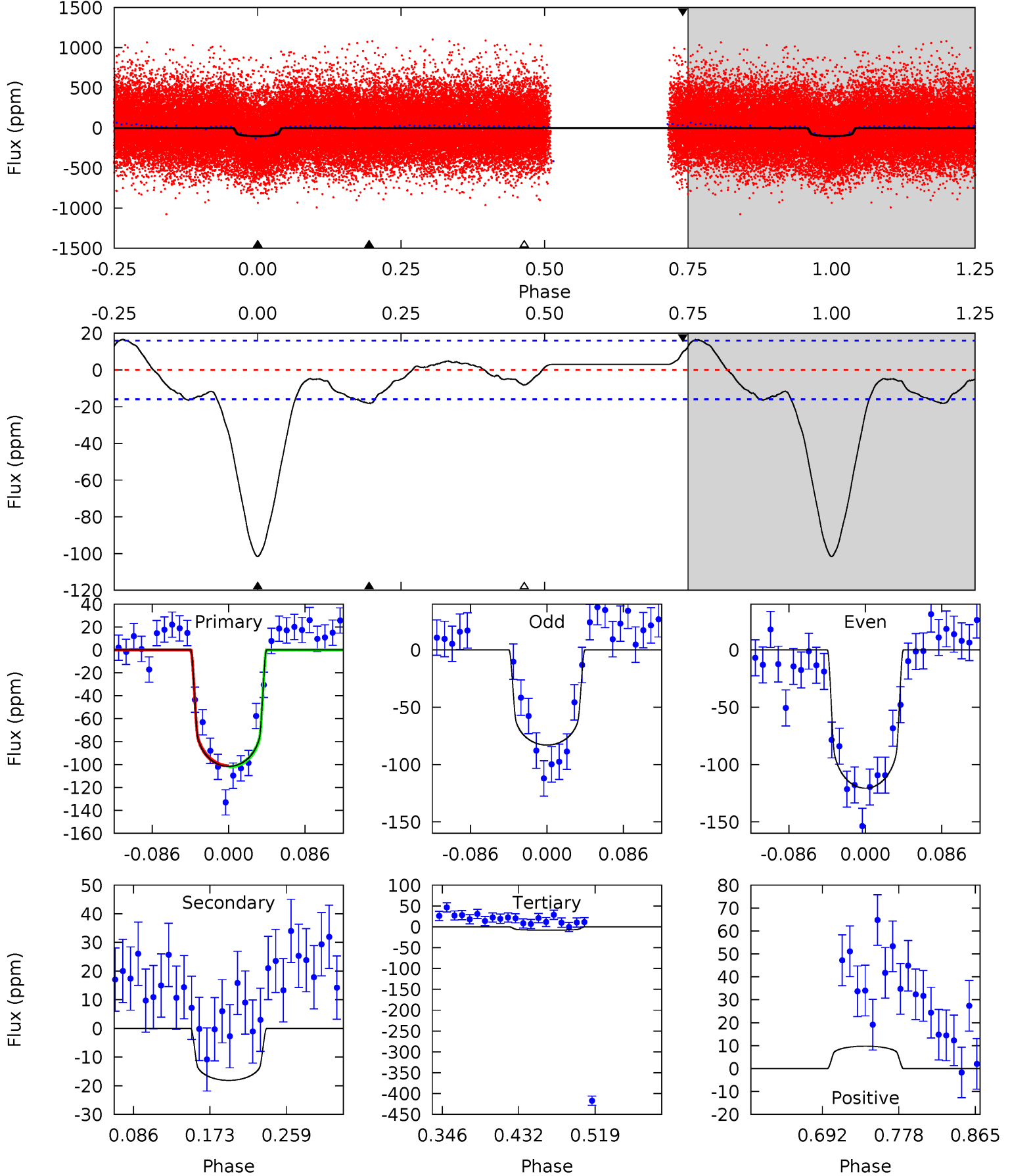
TCE 005385269-02 P= 12.427791 Days $T_0=133.786914$ (BKJD)



DV Model-Shift Uniqueness Test

005385269-02, P = 12.427741 Days, E = 121.363871 Days

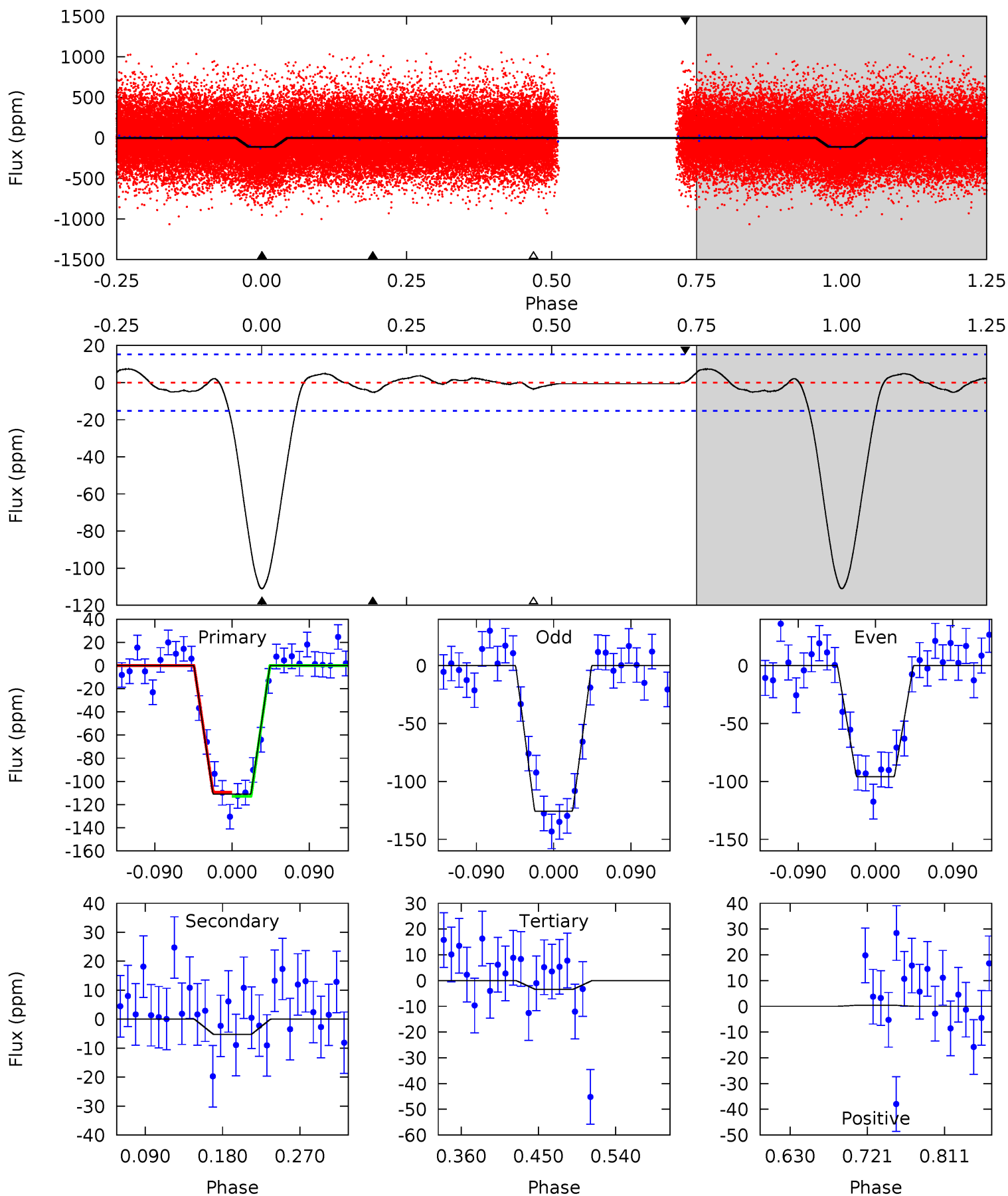
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
29.2	5.21	2.35	2.81	4.60	1.71	2.41	26.9	26.4	2.86	2.41	5.42	1.08	0.14	0.15



Alt Model-Shift Uniqueness Test

005385269-02, $P = 12.427791$ Days, $E = 121.359123$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
33.5	1.58	1.03	0.12	4.59	1.70	0.97	32.5	33.4	0.55	1.46	4.51	1.14	0.06	0.55



Stellar Parameters For KIC 005385269

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5968^{+184}_{-226}	$4.426^{+0.072}_{-0.203}$	$0.070^{+0.250}_{-0.300}$	$1.048^{+0.333}_{-0.143}$	$1.069^{+0.134}_{-0.148}$	$1.306^{+0.478}_{-0.677}$
	+3%/-4%	+2%/-5%	+357%/-429%	+32%/-14%	+13%/-14%	+37%/-52%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 005385269-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-18 ± 3	$1.36^{+0.22}_{-0.14}$	1165^{+86}_{-63}	3951^{+170}_{-185}	61^{+20}_{-17}
Alt.	-5 ± 3	$1.26^{+0.20}_{-0.15}$	1167^{+89}_{-62}	3289^{+287}_{-465}	19^{+15}_{-12}

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 $A_{obs} \gg 1.0$

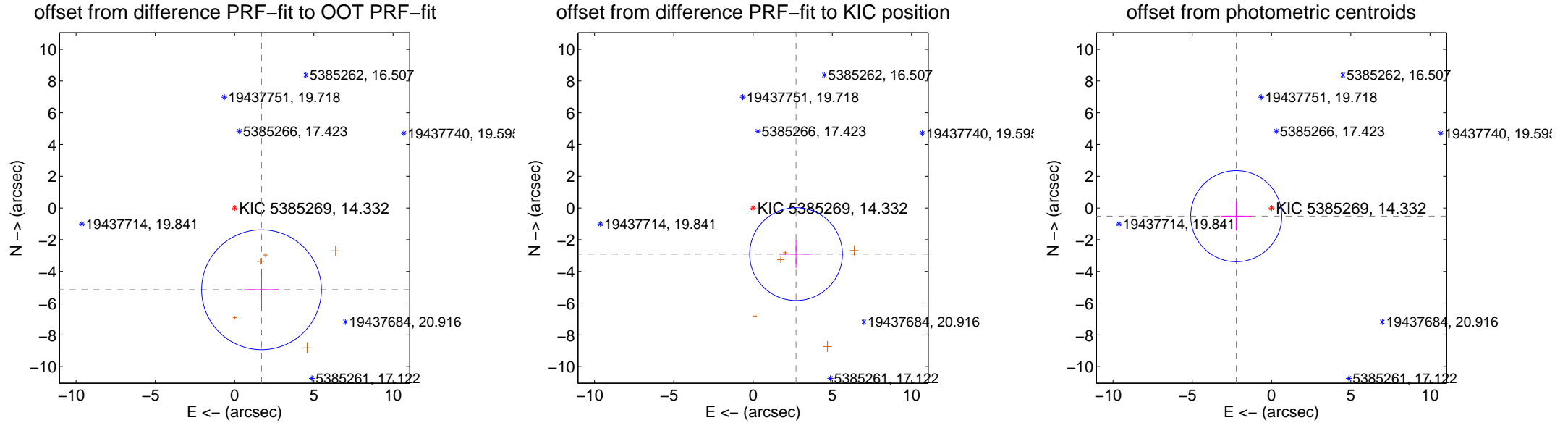
DV Centroid Data

Supplemental centroid analysis for 005385269-02. Kepler magnitude: 14.33. Transit SNR 17.51

There are 0 quarters with good PRF difference image offsets

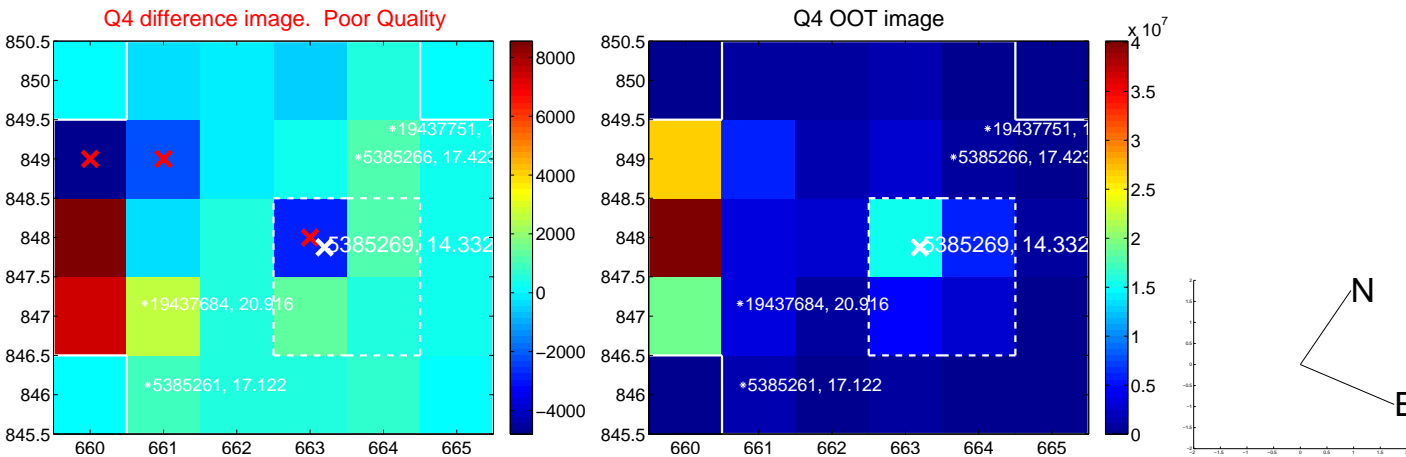
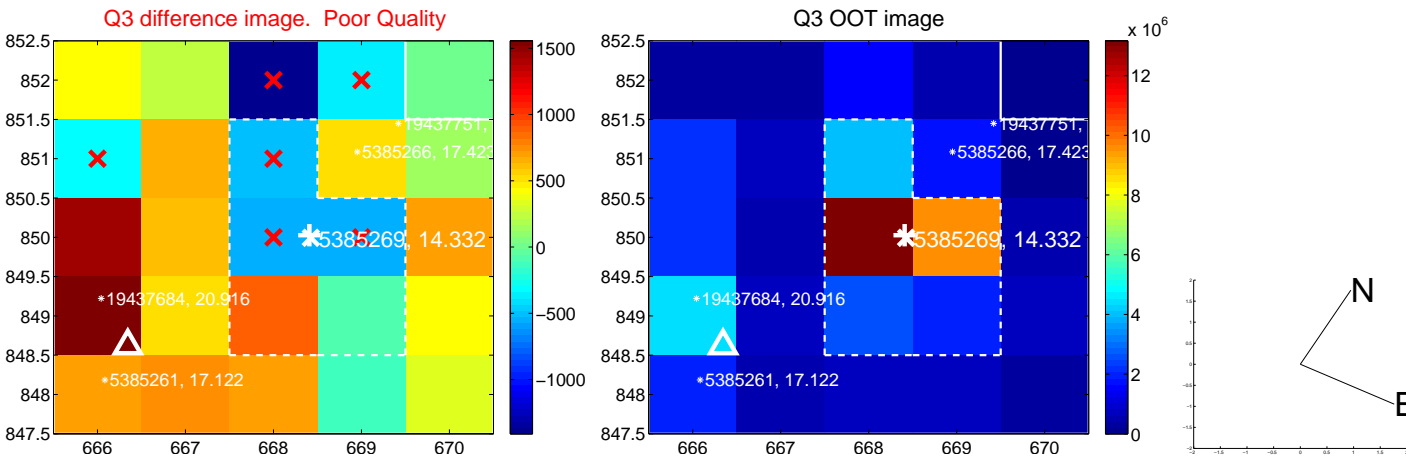
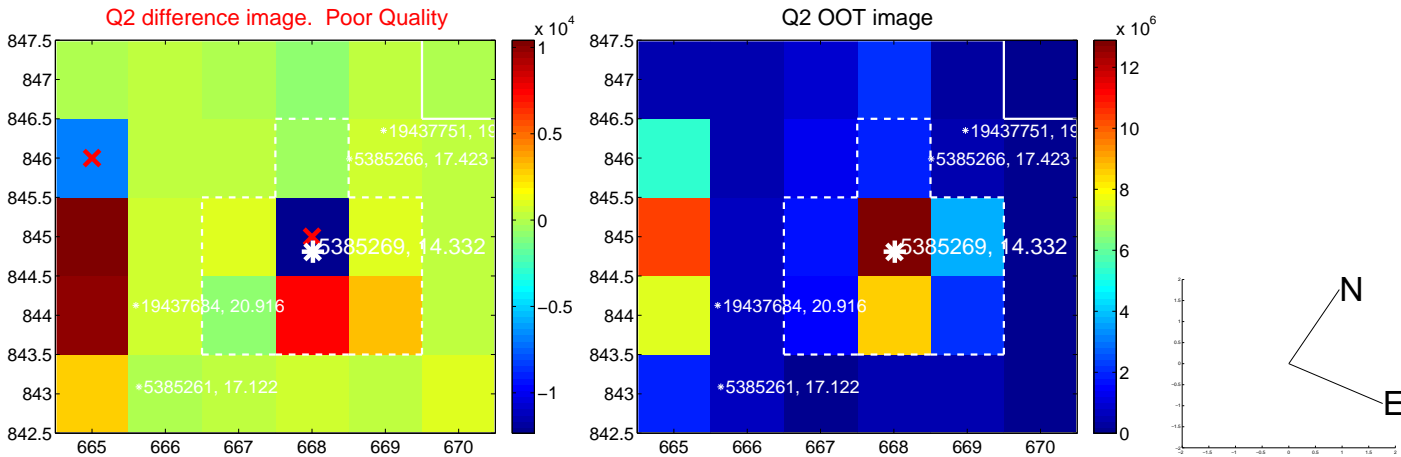
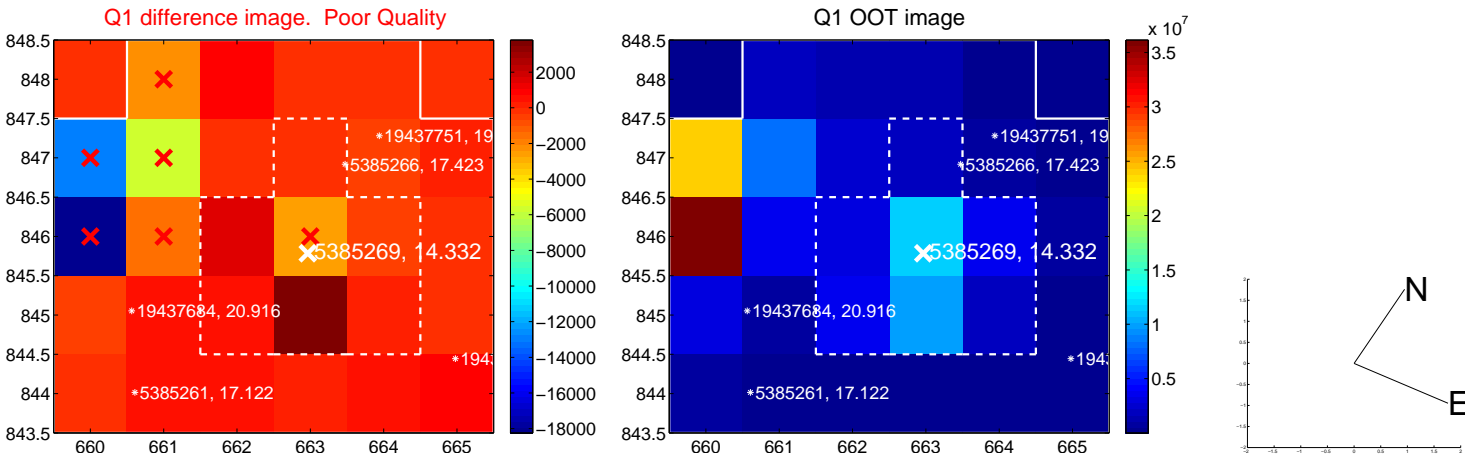
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.428 ± 1.259	4.31	-1.699 ± 1.098	-5.155 ± 1.276
PRF-fit source offset from KIC position	3.976 ± 0.975	4.08	-2.712 ± 1.085	-2.908 ± 0.868
photometric centroid source offset	2.29 ± 0.96	2.39	2.23 ± 0.96	-0.52 ± 0.90

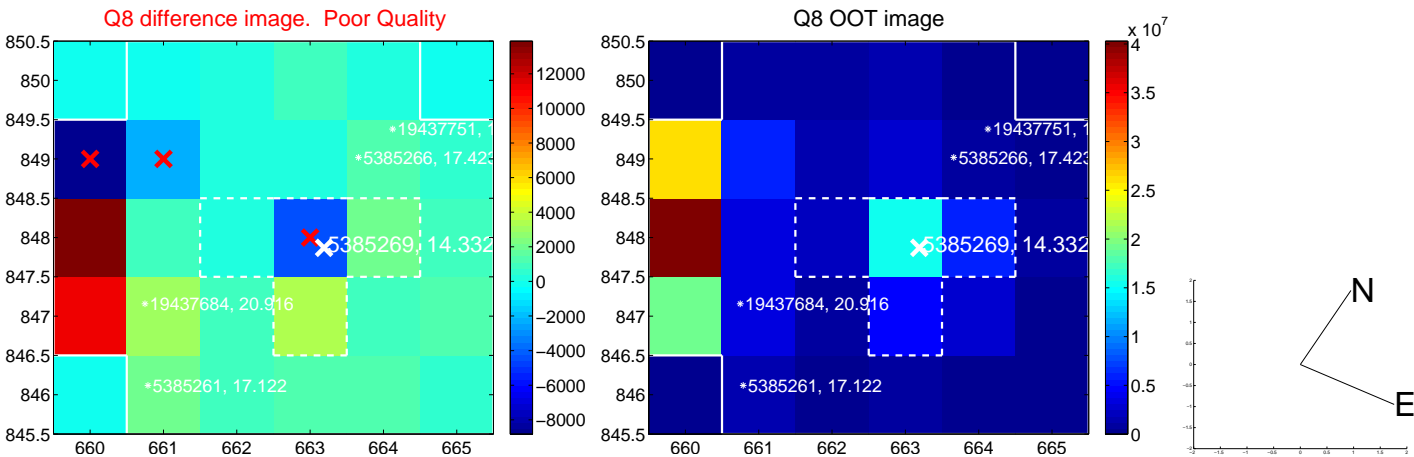
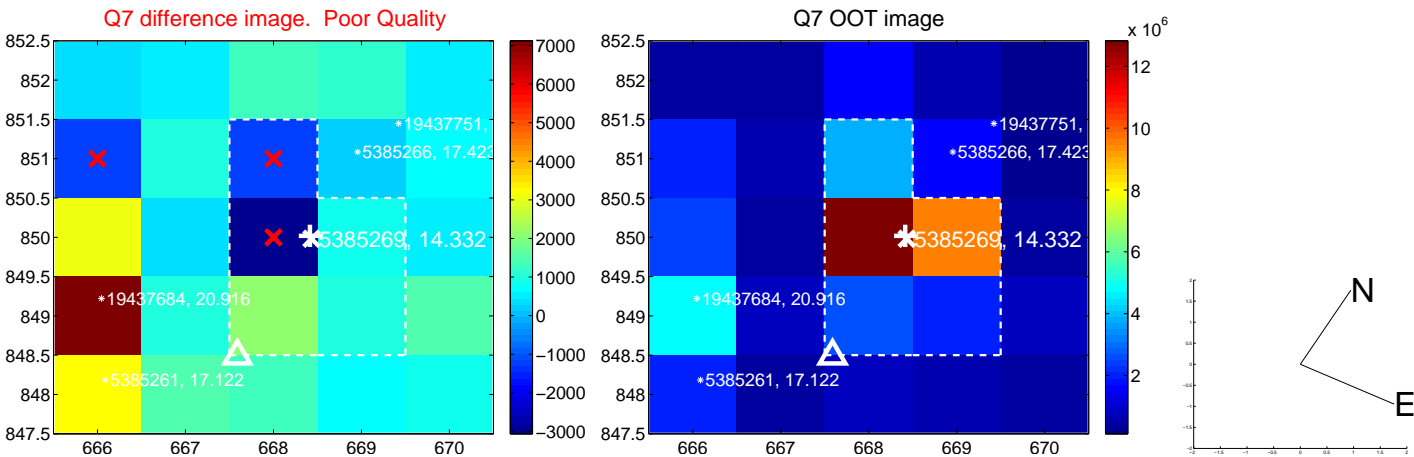
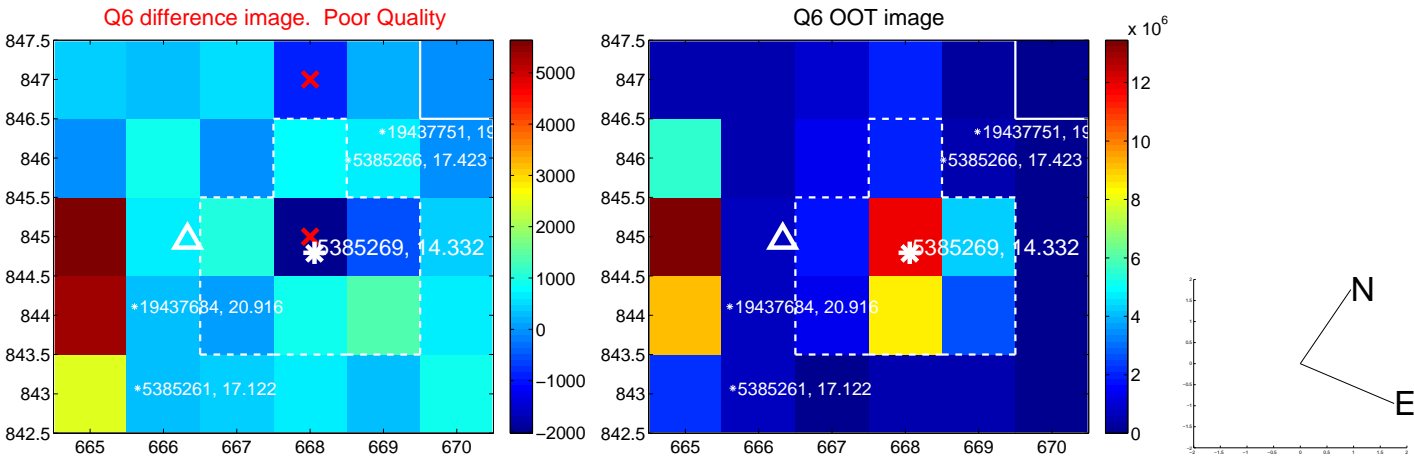
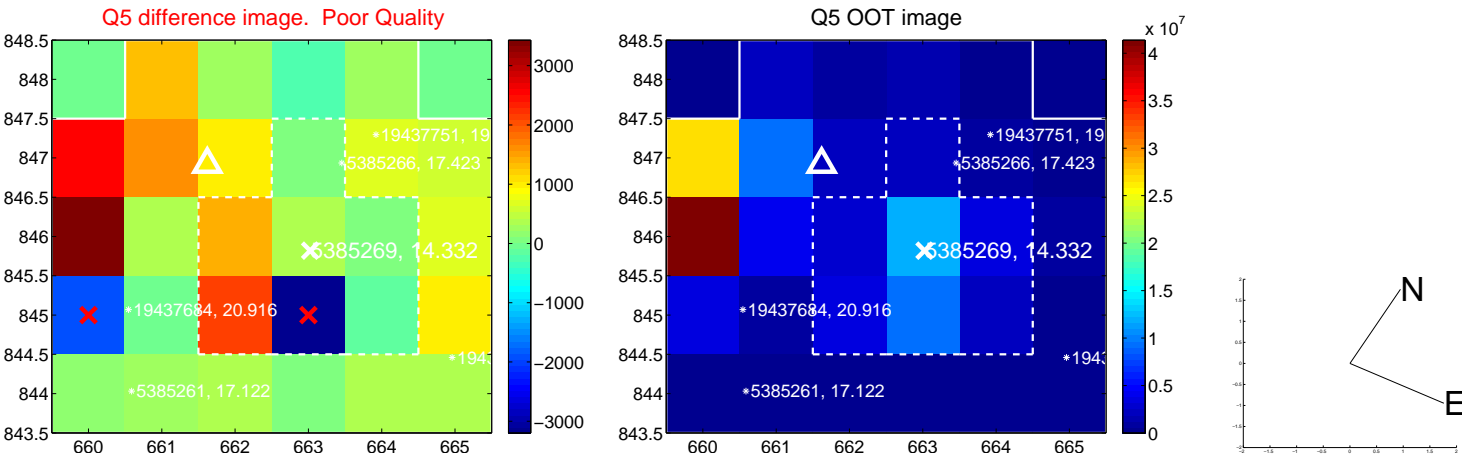


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

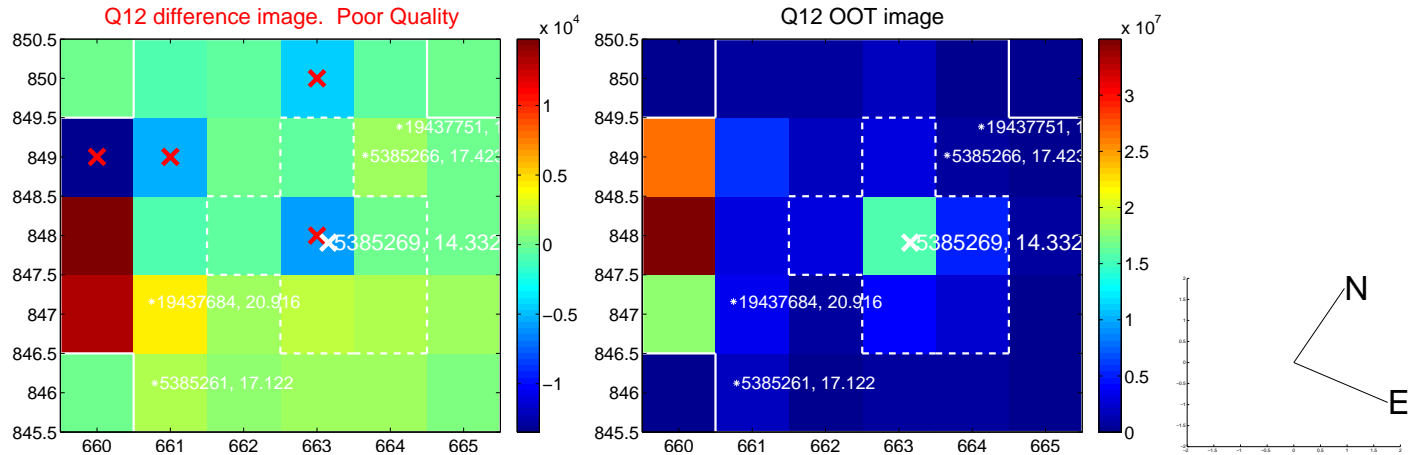
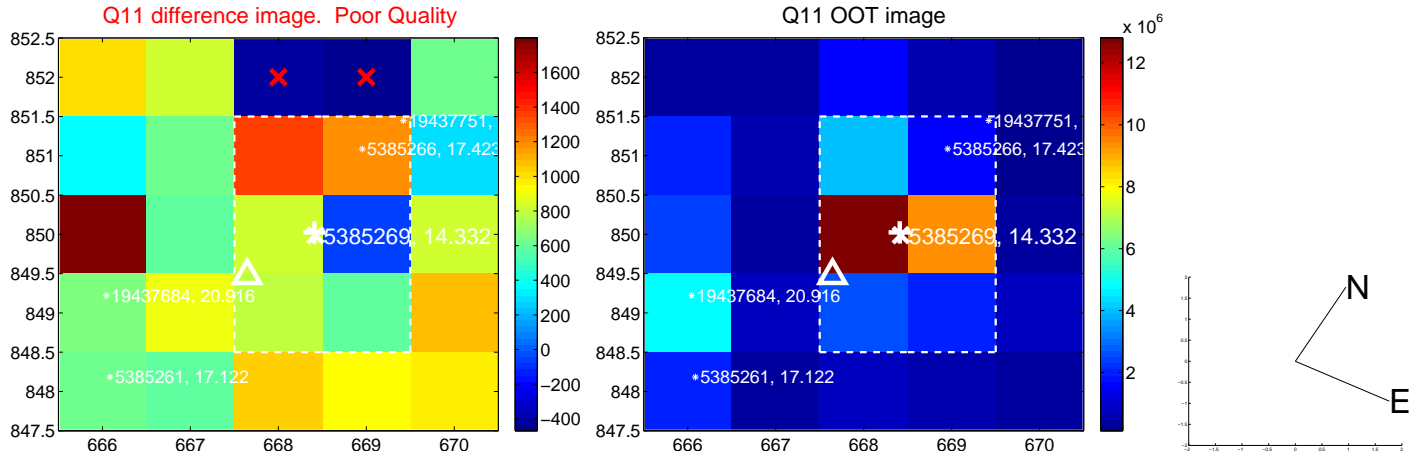
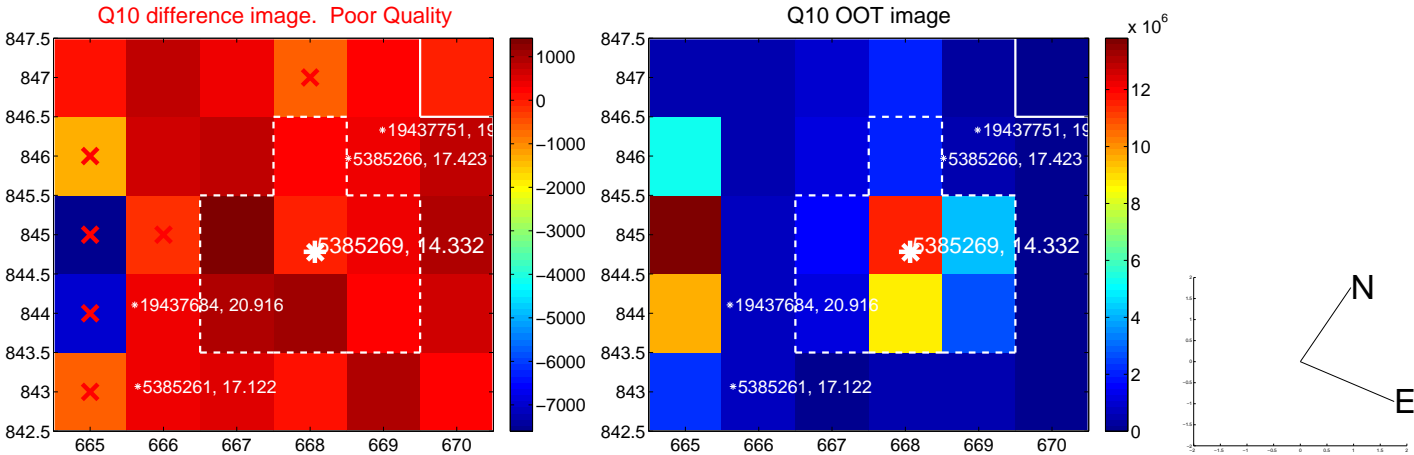
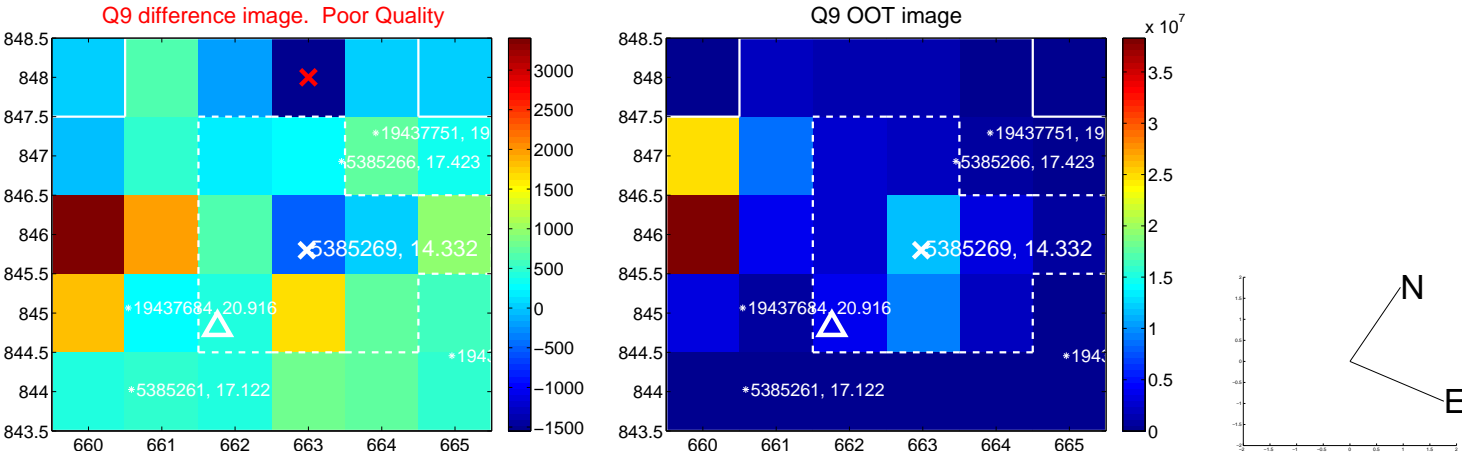
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



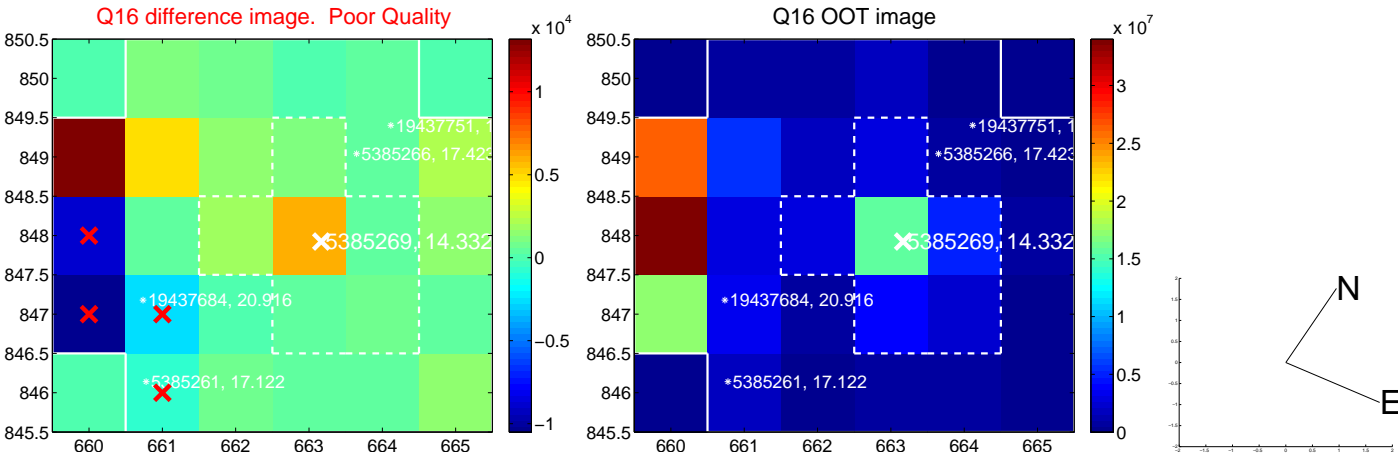
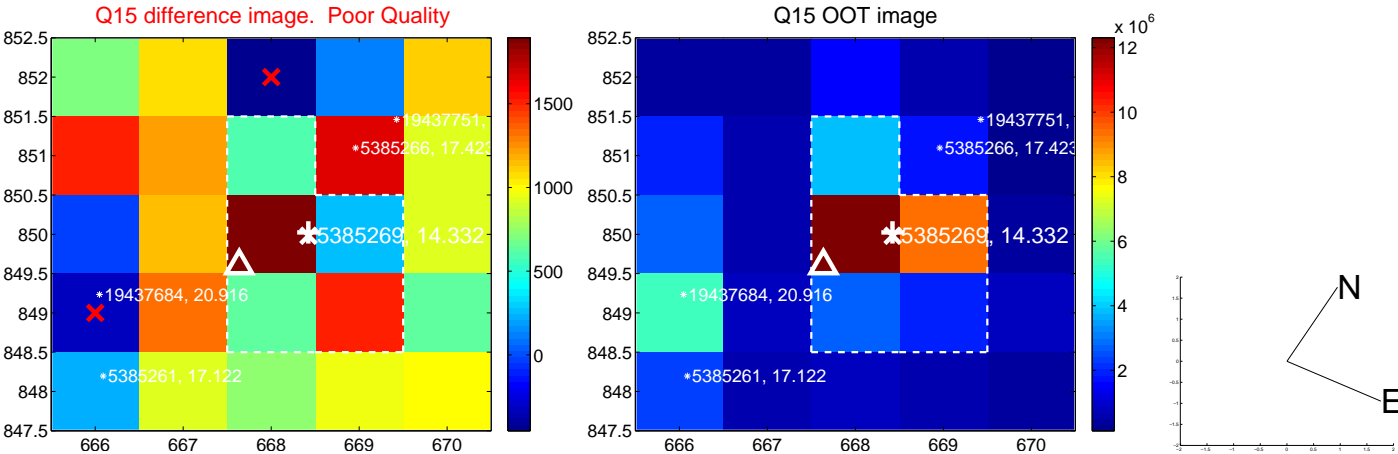
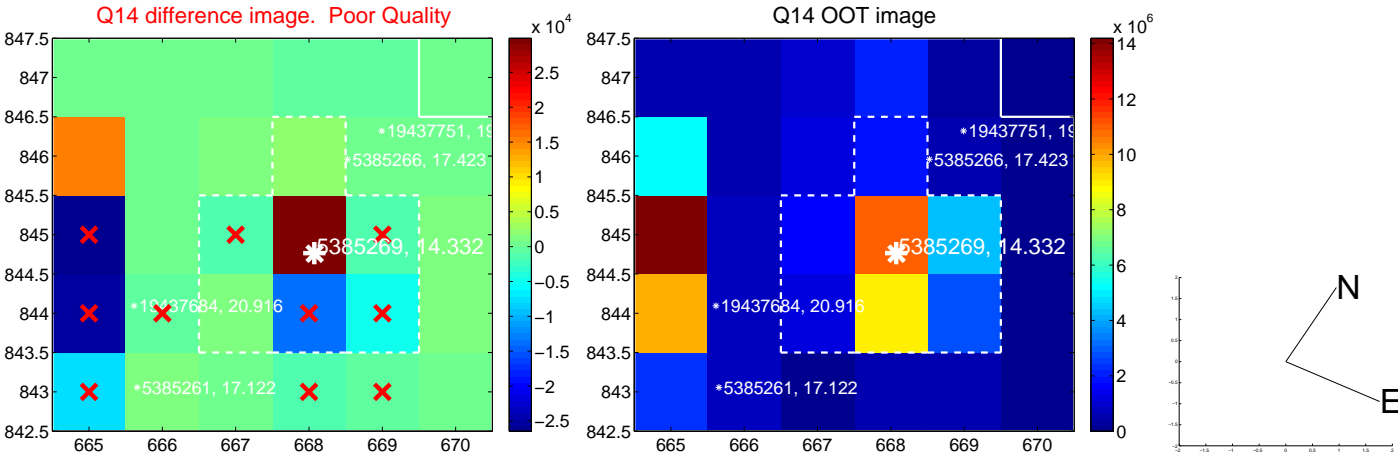
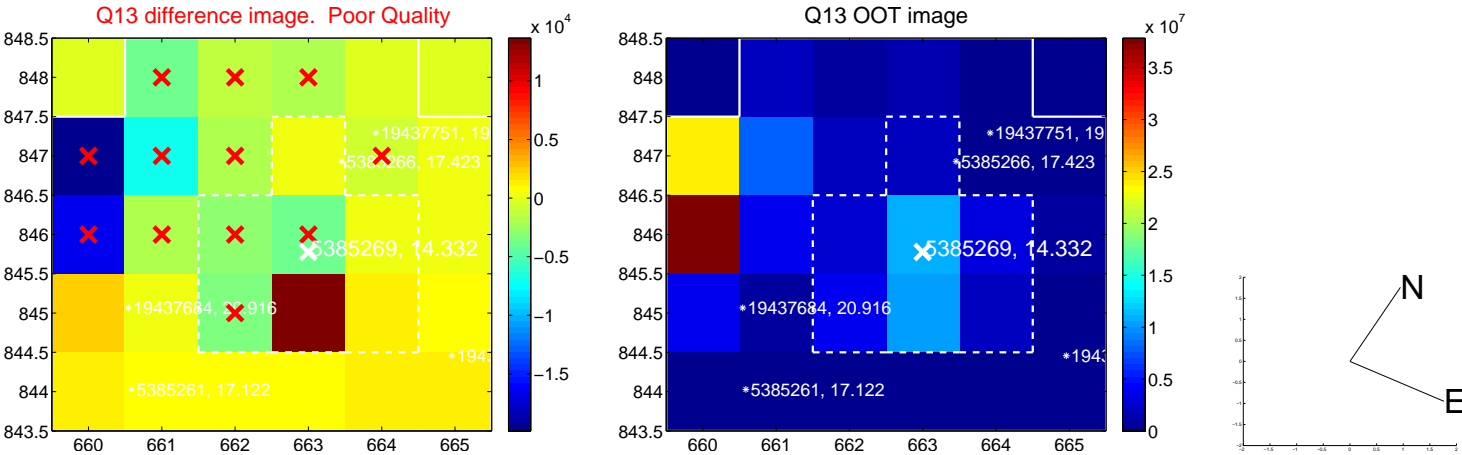
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



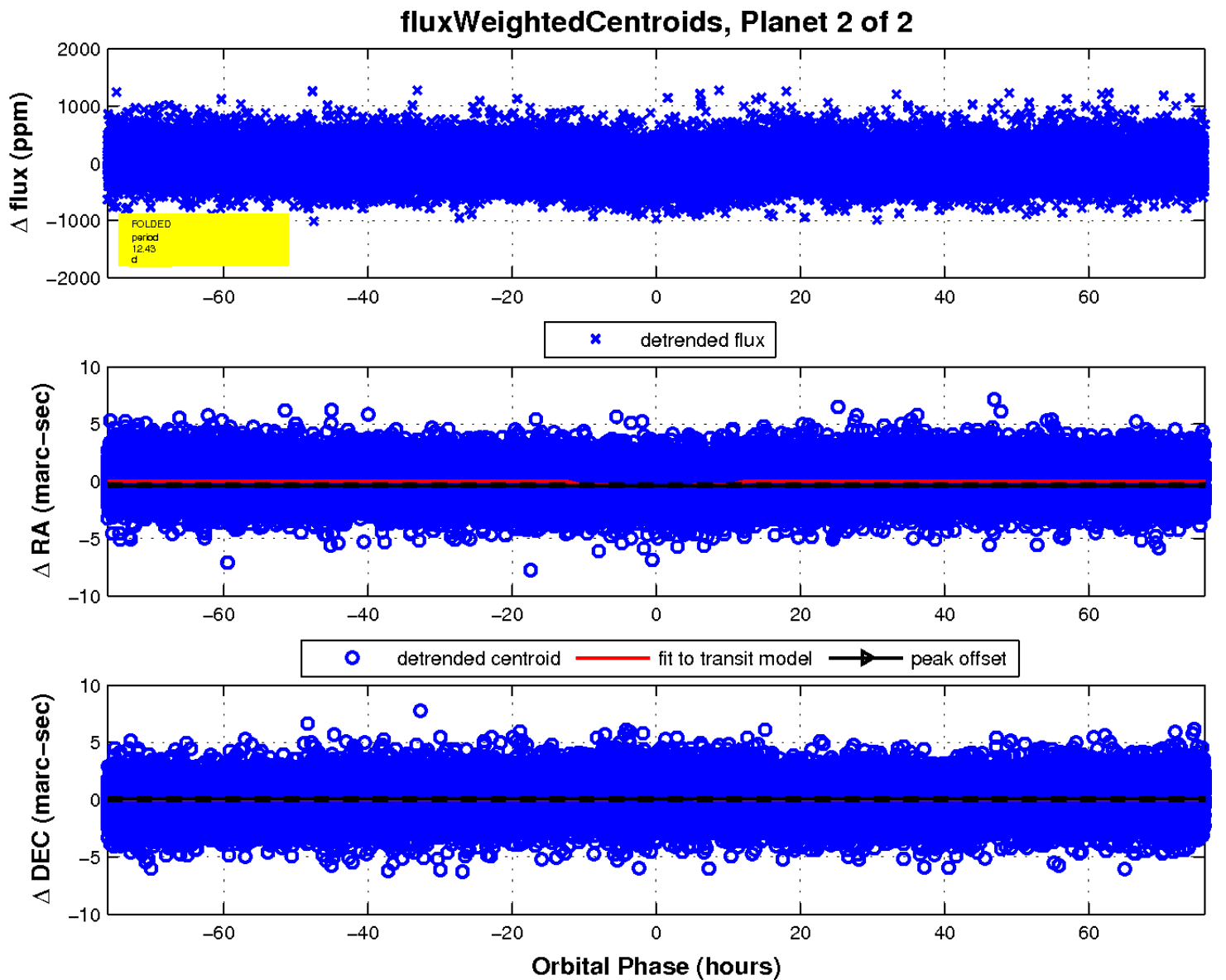
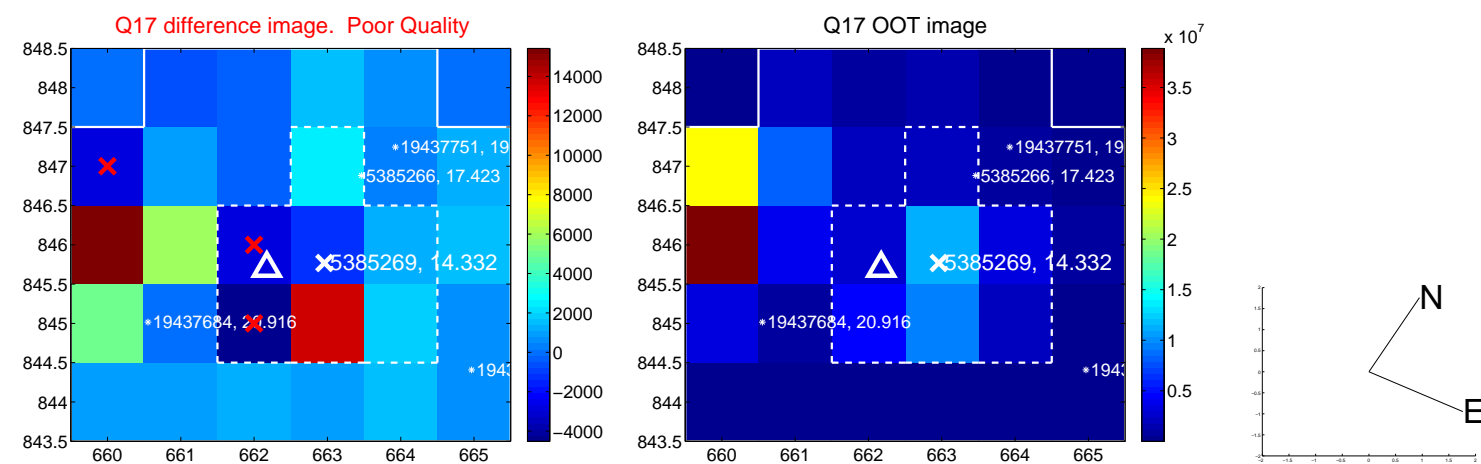
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

