

KIC 005479842

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})
005479842-01	OBS	No	3.402539	134.318276	31.9	13.578	7.2	6.8	0.92	5866	0.61	453.01
005479842-02	OBS	No	199.416056	134.229957	231.6	21.255	9.4	6.3	0.92	5866	1.54	1.99

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005479842-01	OBS	FP	0.00	1	0	0	0	LPP_DV
005479842-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

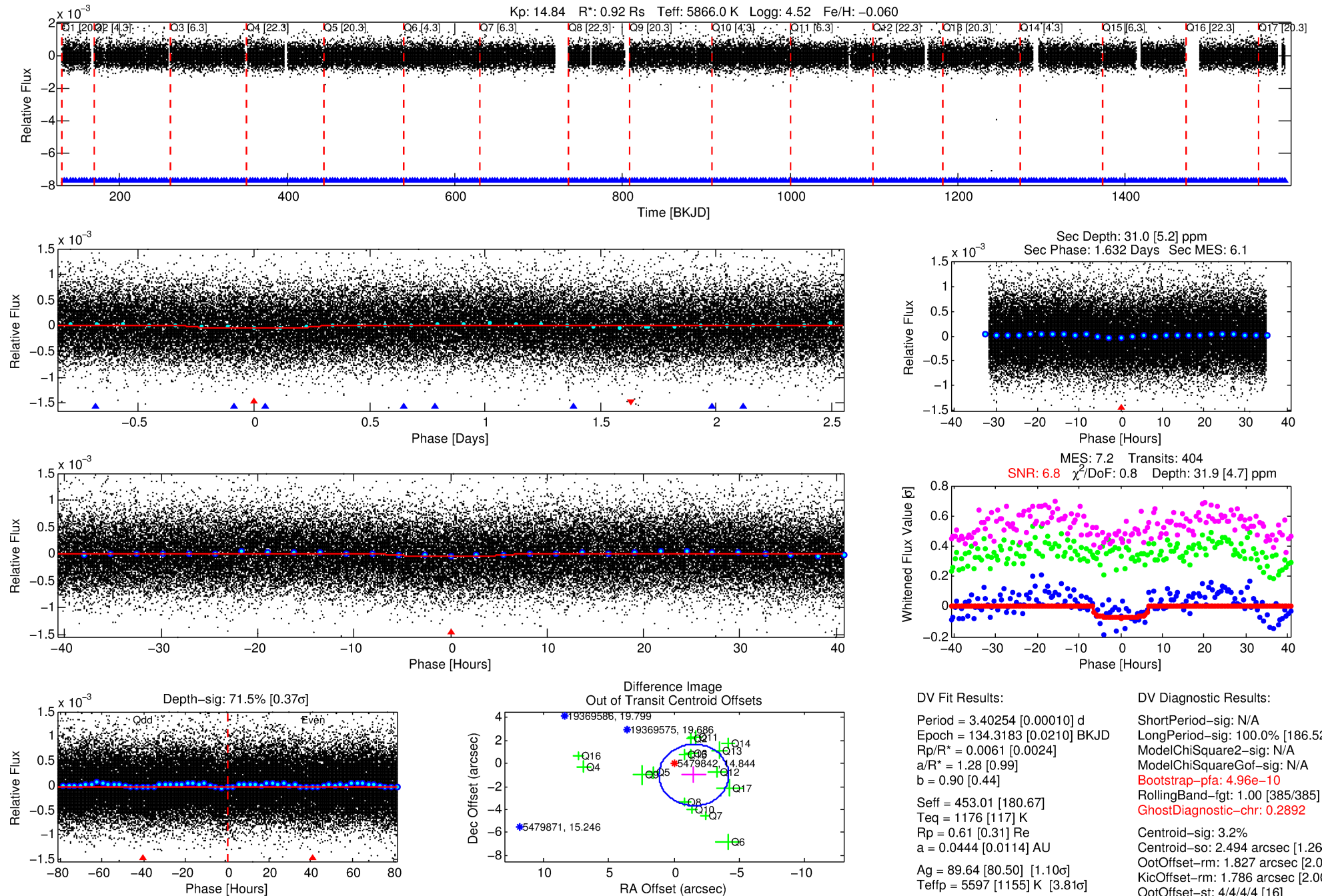
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005479842-01

No Significant Match Found

DV One-Page Summary

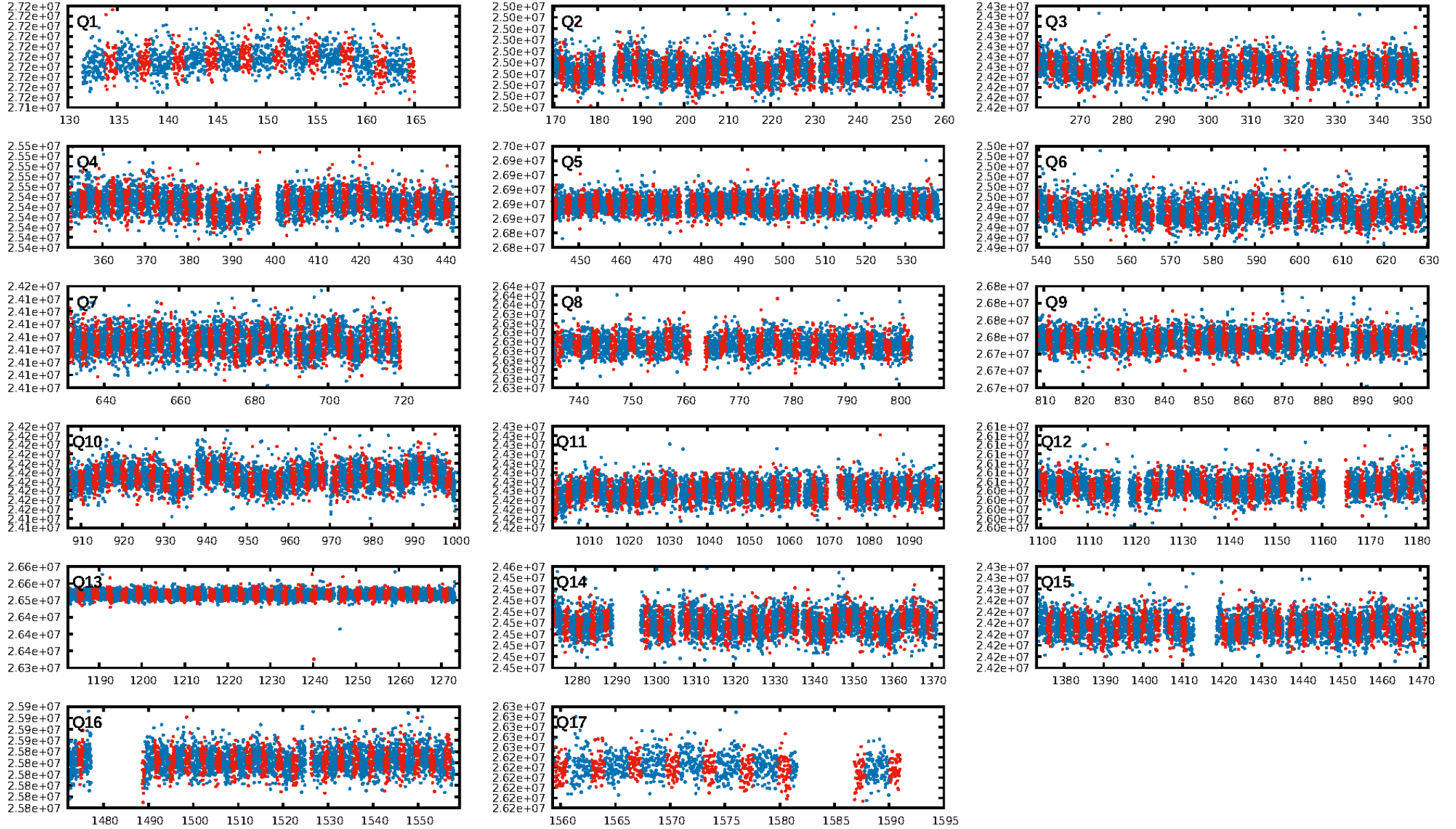
KIC: 5479842 Candidate: 1 of 2 Period: 3.403 d



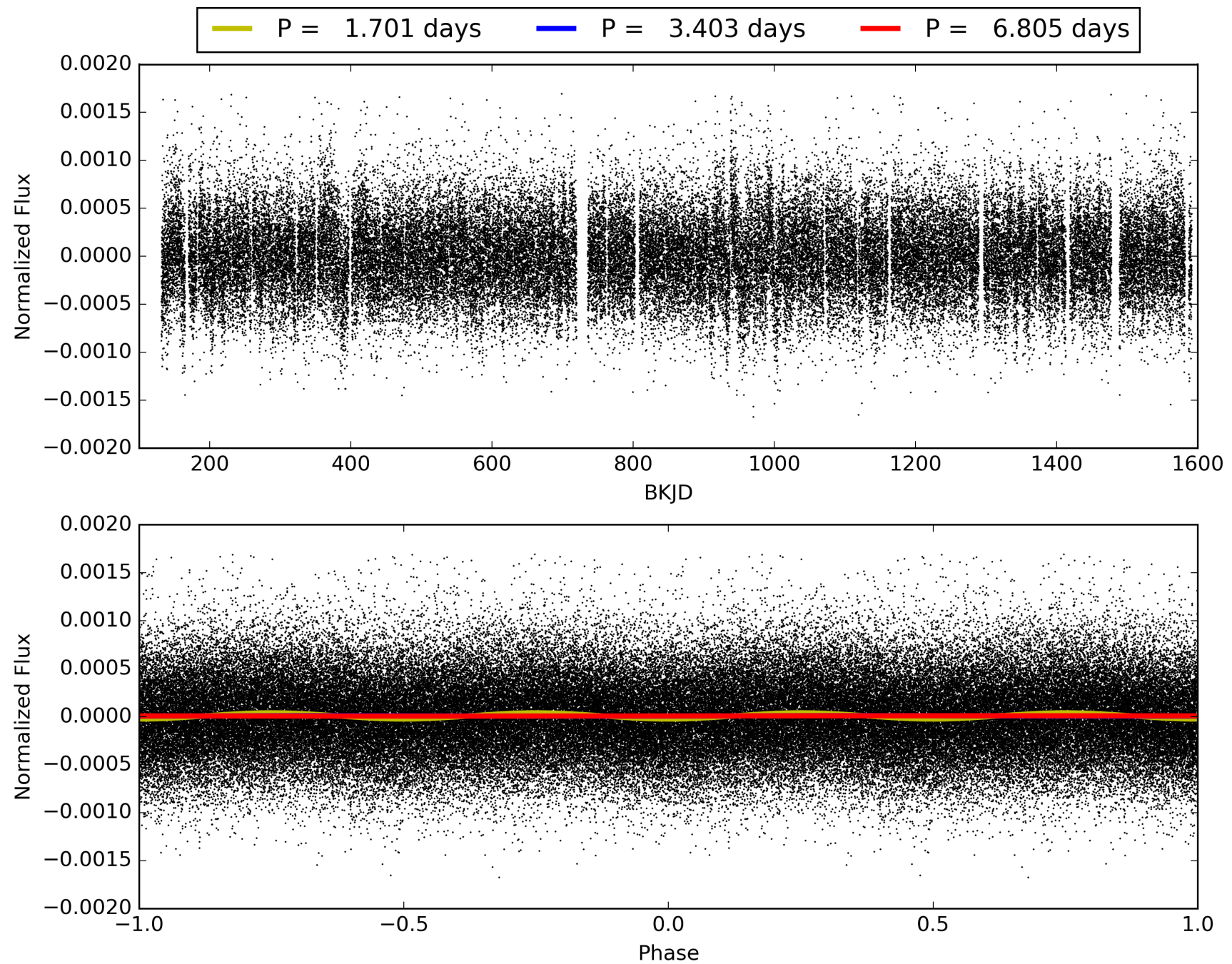
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 12:56:43 Z

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

TCE 005479842-01, PDC Light Curves

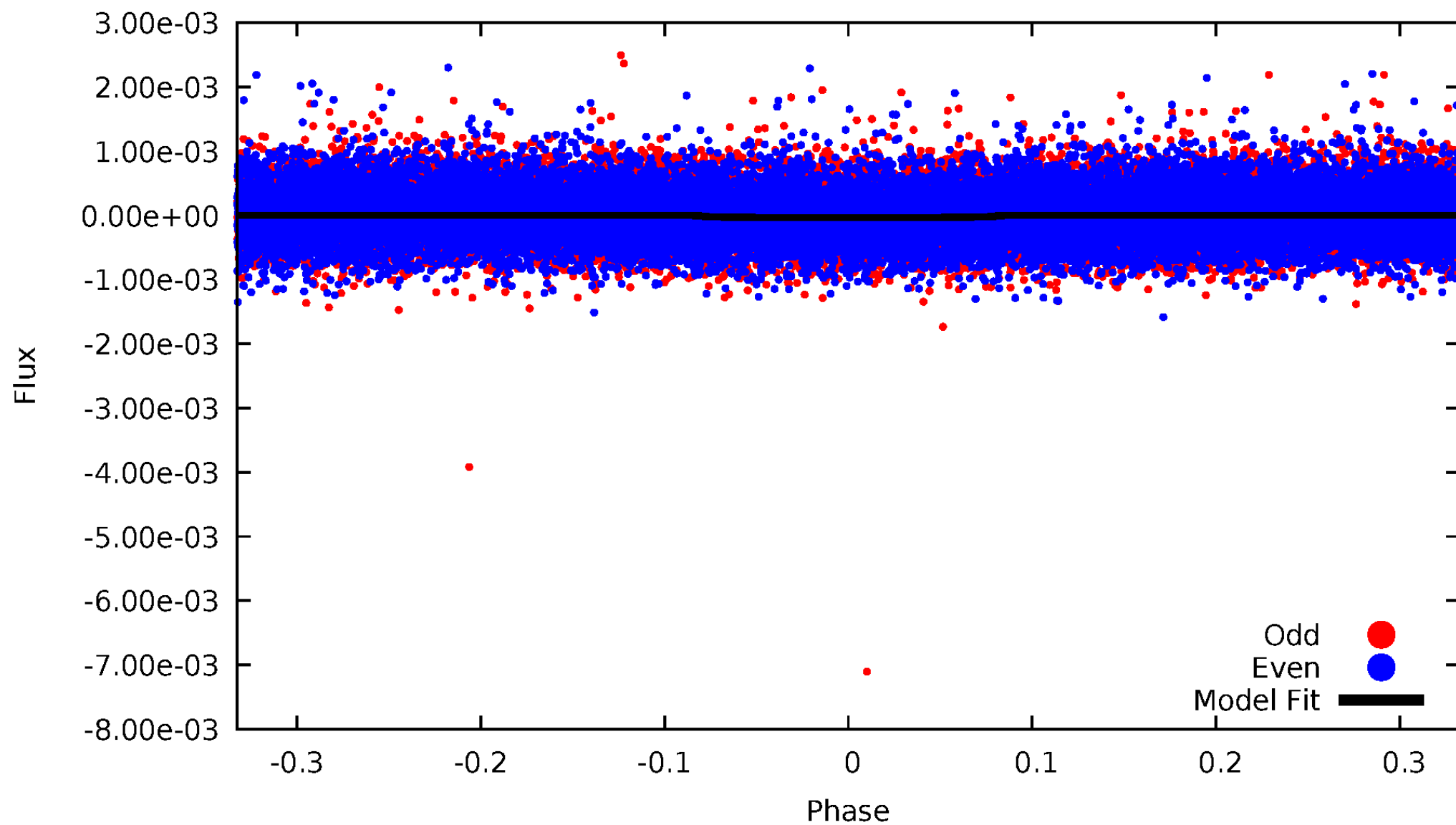


TCE 005479842-01



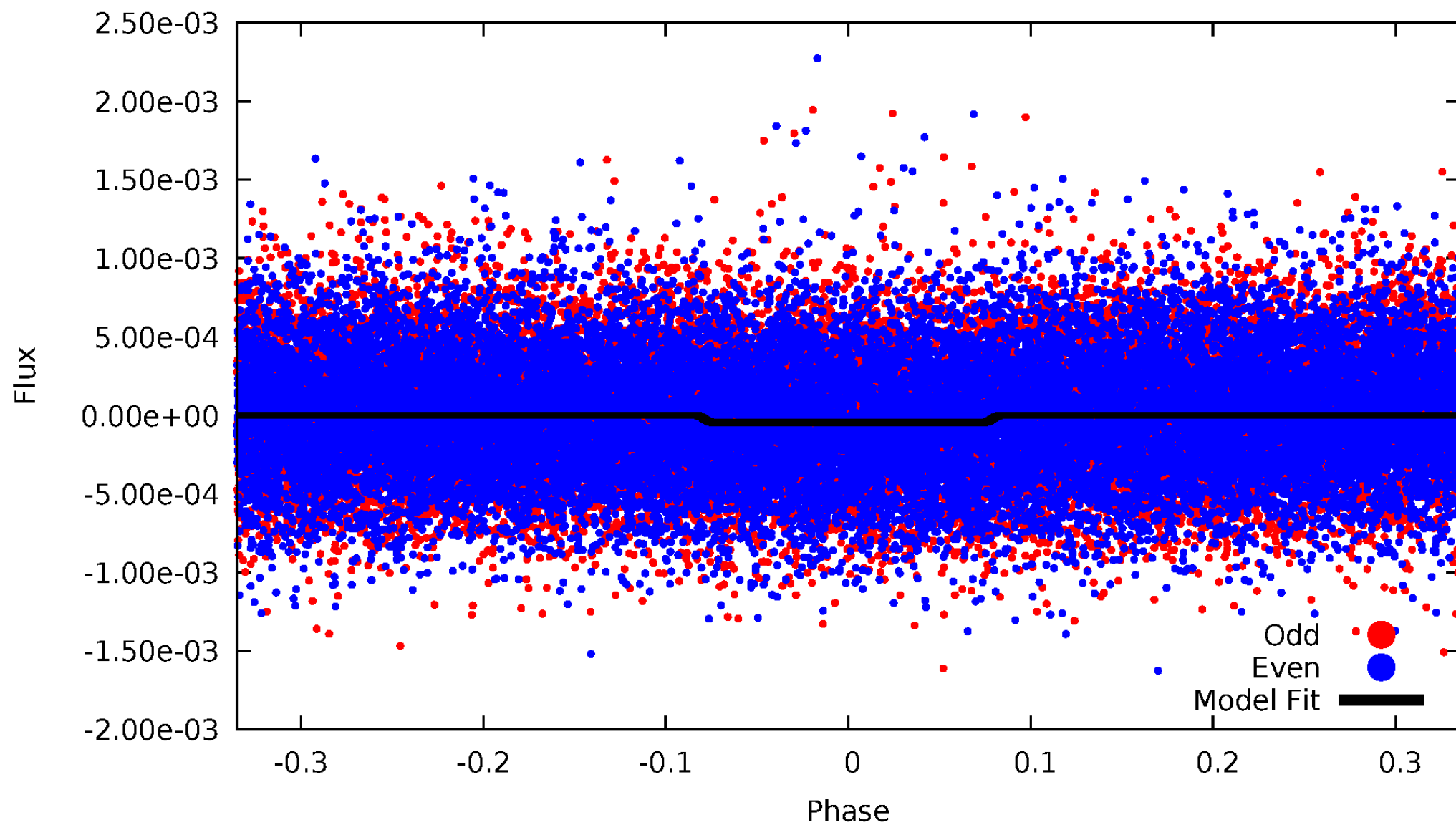
DV Odd/Even

TCE 005479842-01



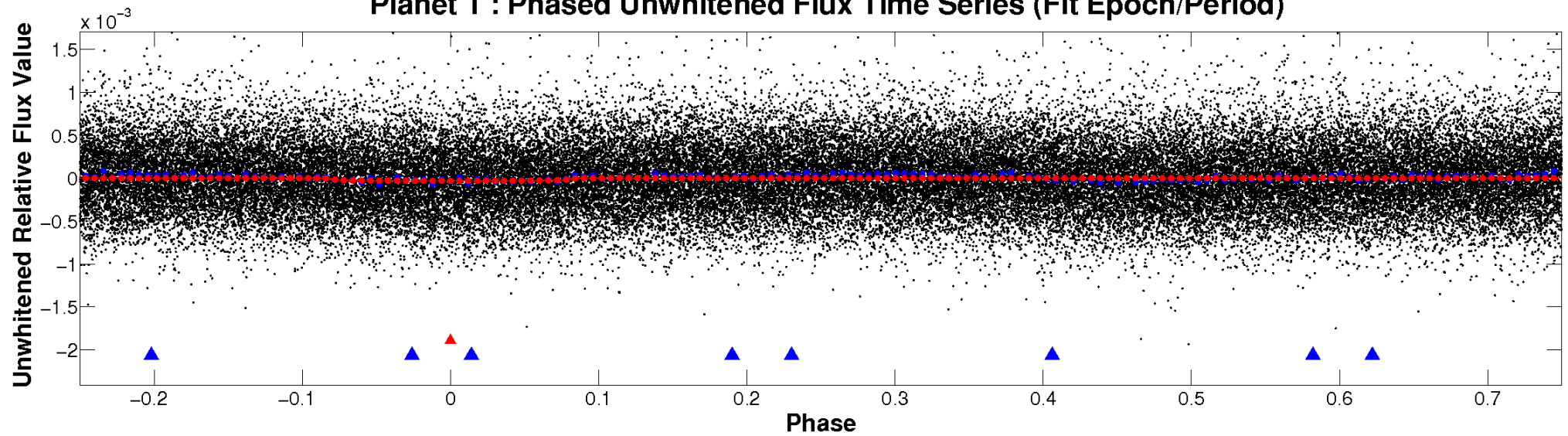
ALT Odd/Even

TCE 005479842-01

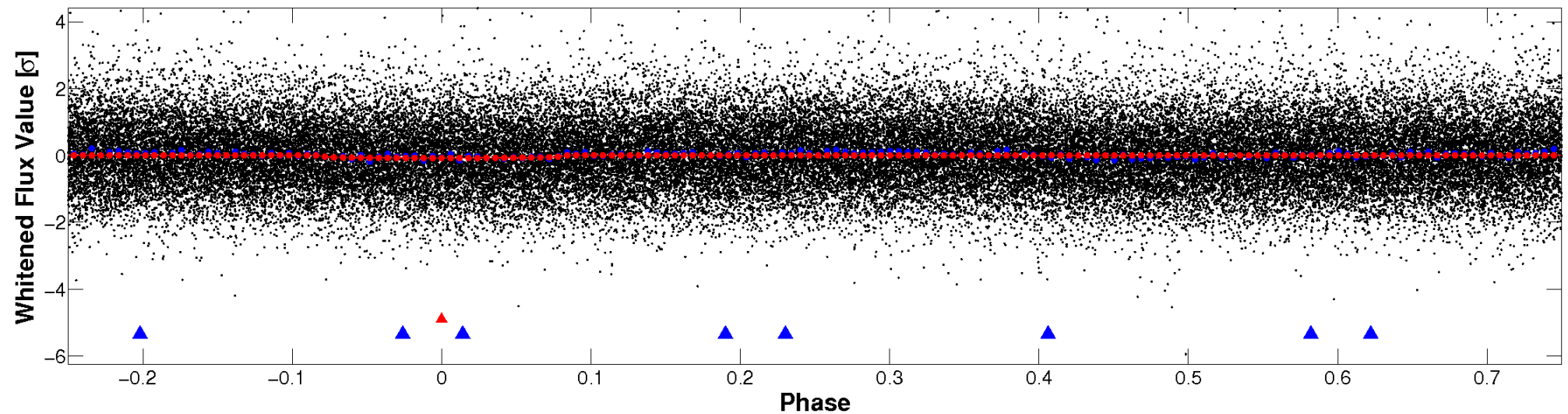


Non-Whitened Vs. Whitened Light Curve

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

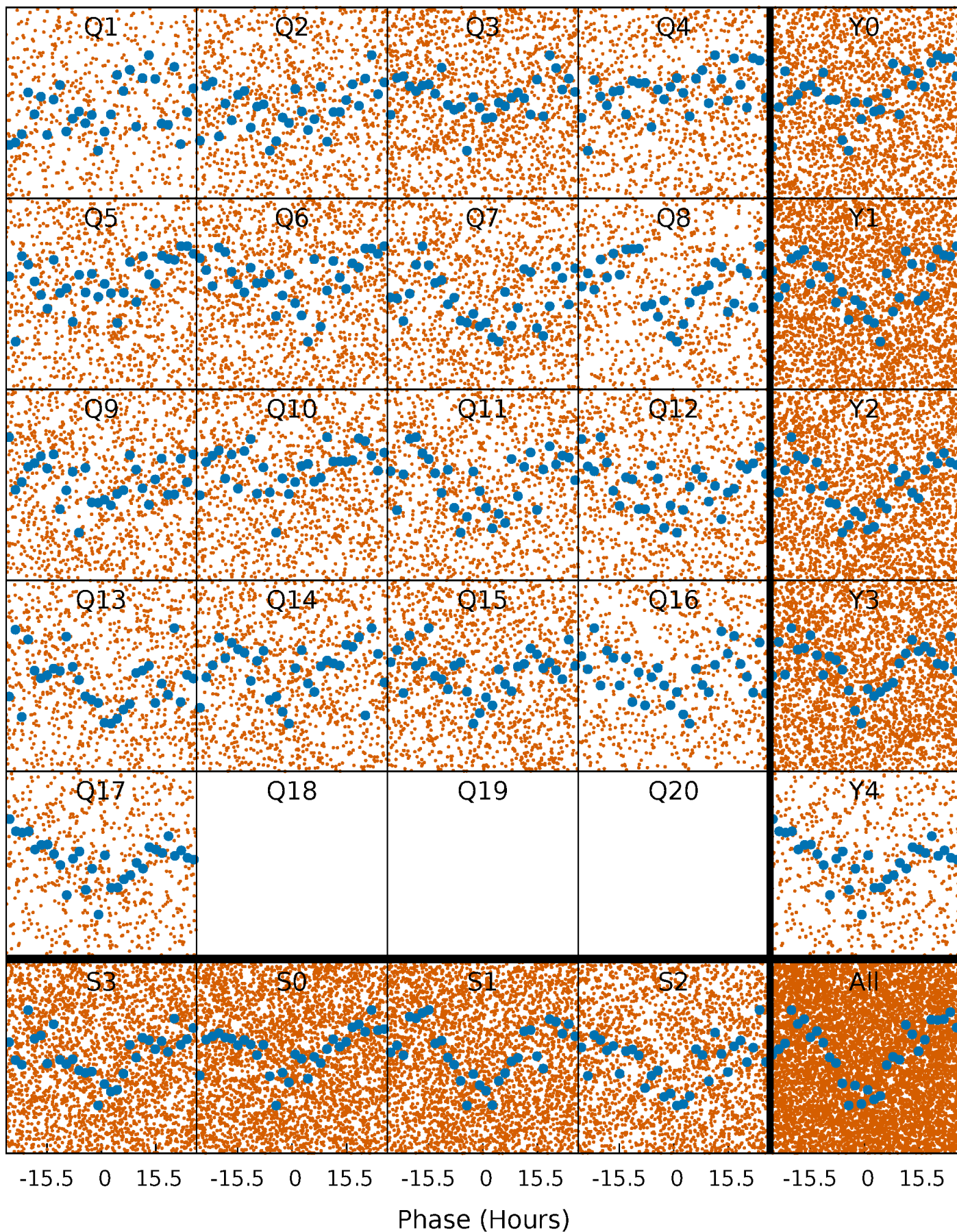


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



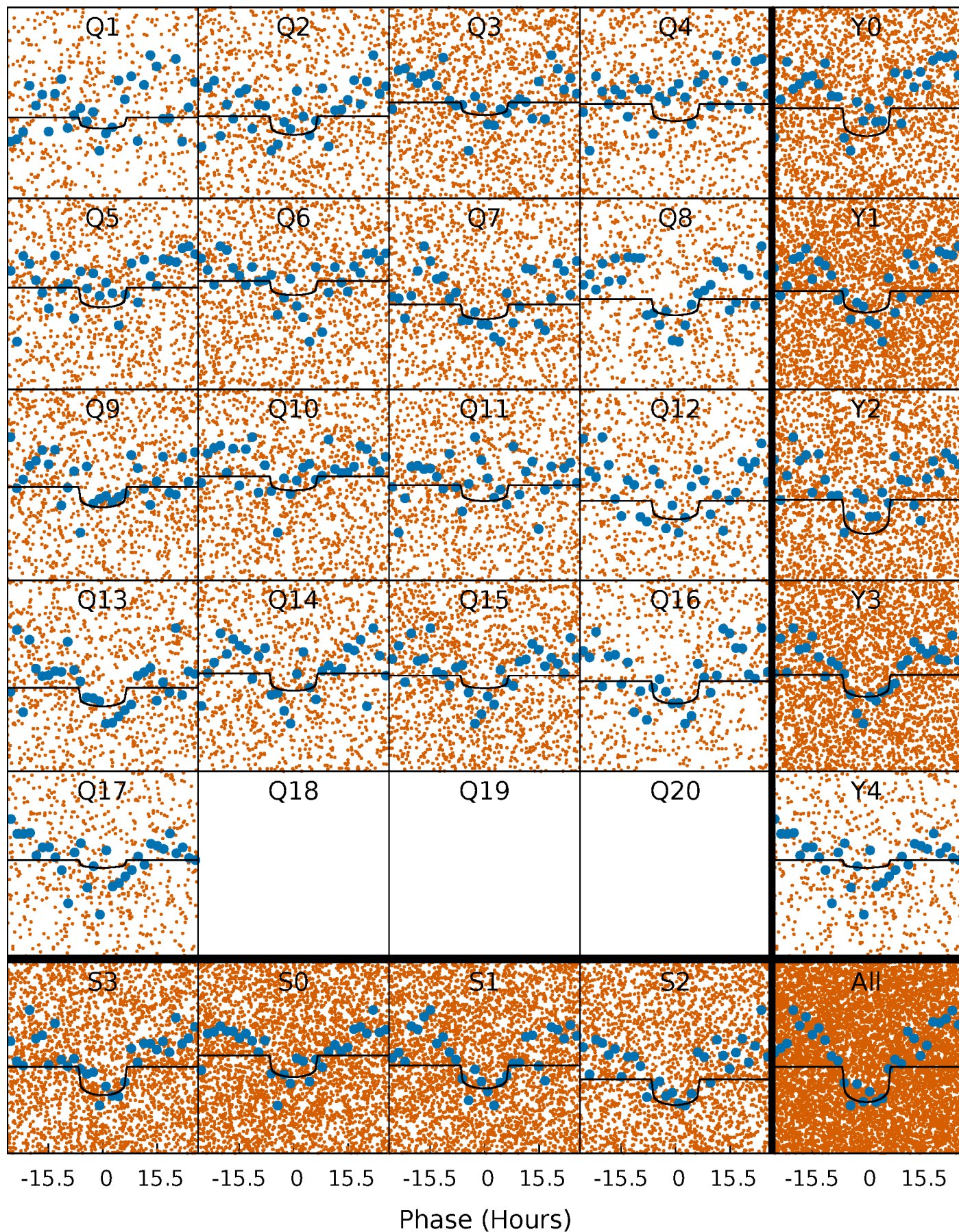
PDC Quarter-Phased Transit Curves

TCE 005479842-01 P= 3.402539 Days $T_0=134.318276$ (BKJD)



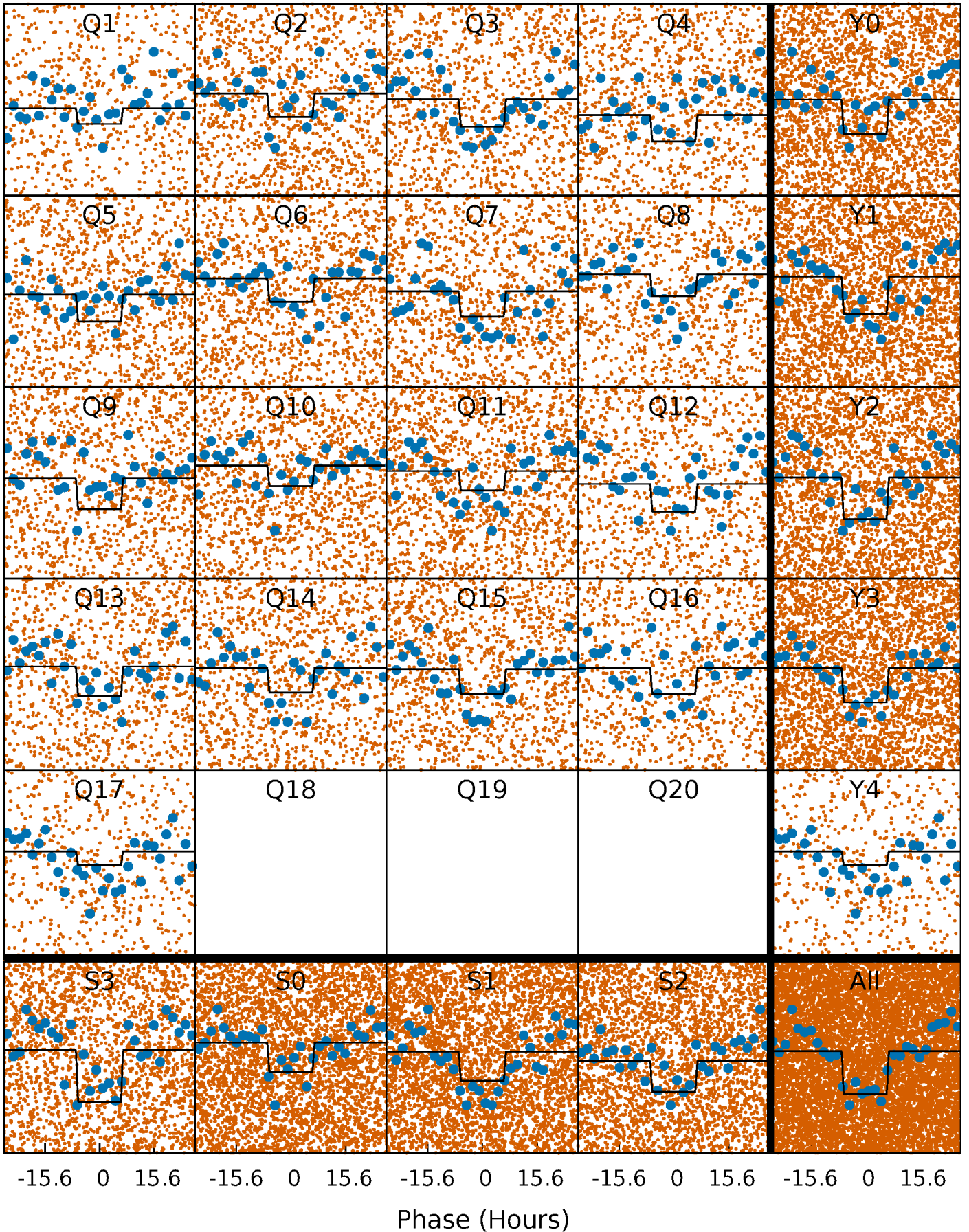
DV Quarter-Phased Transit Curves

TCE 005479842-01 P= 3.402539 Days $T_0=134.318276$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

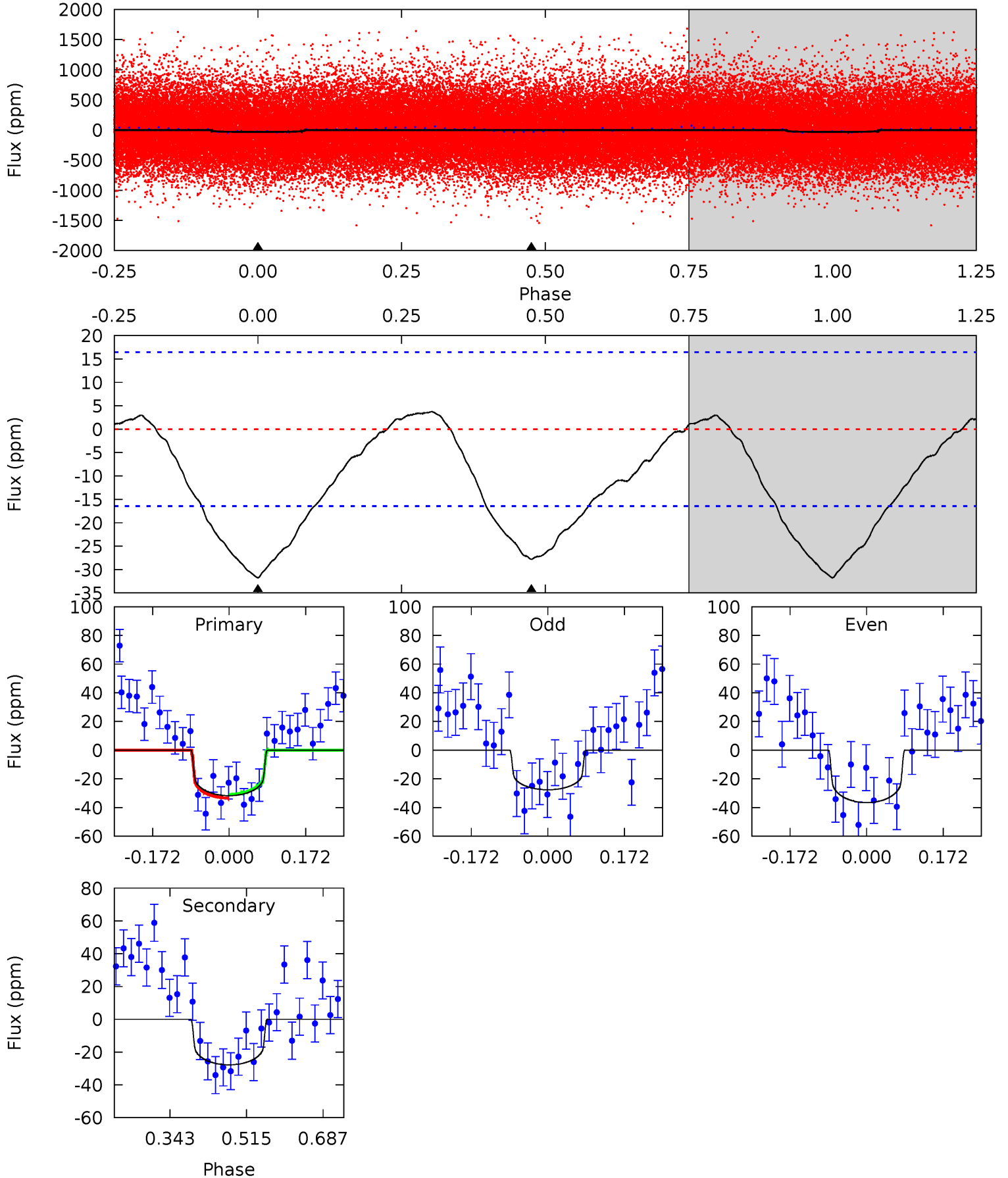
TCE 005479842-01 P= 3.402704 Days $T_0=134.282257$ (BKJD)



DV Model-Shift Uniqueness Test

005479842-01, P = 3.402539 Days, E = 130.915737 Days

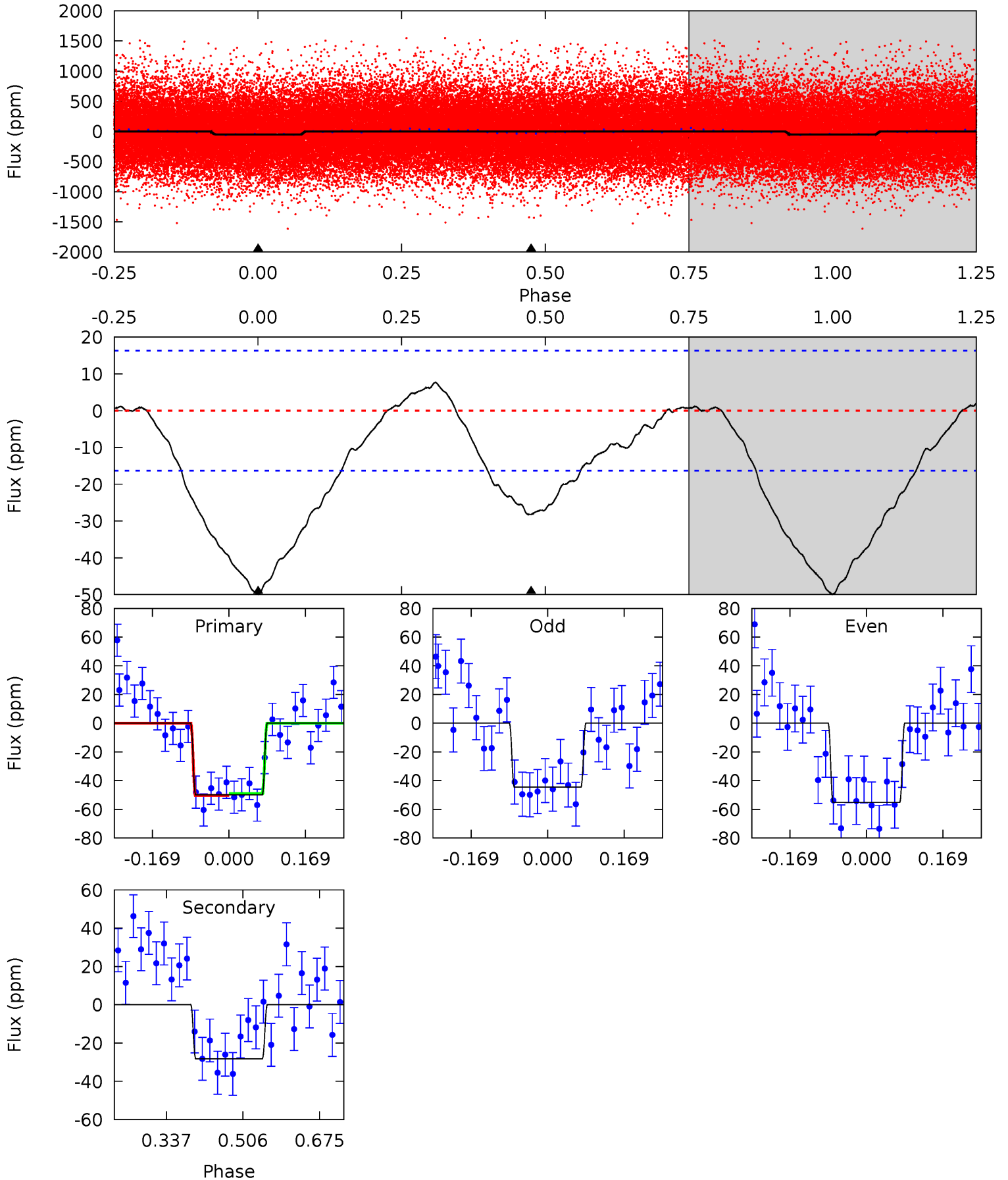
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.58	7.52	0	0	4.45	1.37	1.00	8.58	8.58	7.52	7.52	1.22	0.87	0.11	0.36



Alt Model-Shift Uniqueness Test

005479842-01, P = 3.402704 Days, E = 130.879553 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.6	7.70	0	0	4.45	1.38	1.16	13.6	13.6	7.70	7.70	1.45	1.11	0.13	0.17



Stellar Parameters For KIC 005479842

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5866^{+157}_{-192}	$4.516^{+0.052}_{-0.208}$	$-0.060^{+0.250}_{-0.300}$	$0.917^{+0.275}_{-0.092}$	$1.005^{+0.113}_{-0.126}$	$1.835^{+0.481}_{-0.958}$
	+3%/-3%	+1%/-5%	+417%/-500%	+30%/-10%	+11%/-13%	+26%/-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 005479842-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-28 ± 4	$0.62^{+0.30}_{-0.24}$	1678^{+122}_{-86}	5526^{+1588}_{-789}	75^{+123}_{-40}
Alt.	-28 ± 4	$0.72^{+0.30}_{-0.26}$	1678^{+120}_{-81}	5213^{+1232}_{-712}	57^{+89}_{-29}

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

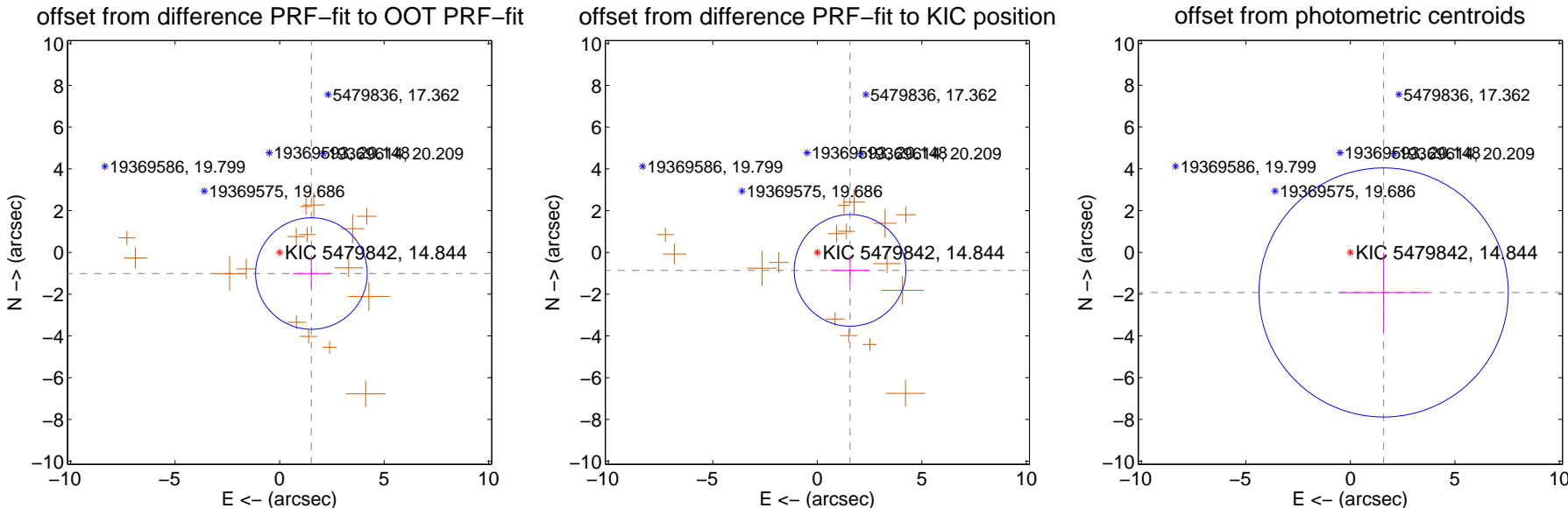
DV Centroid Data

Supplemental centroid analysis for 005479842-01. Kepler magnitude: 14.84. Transit SNR 6.75

There are 0 quarters with good PRF difference image offsets

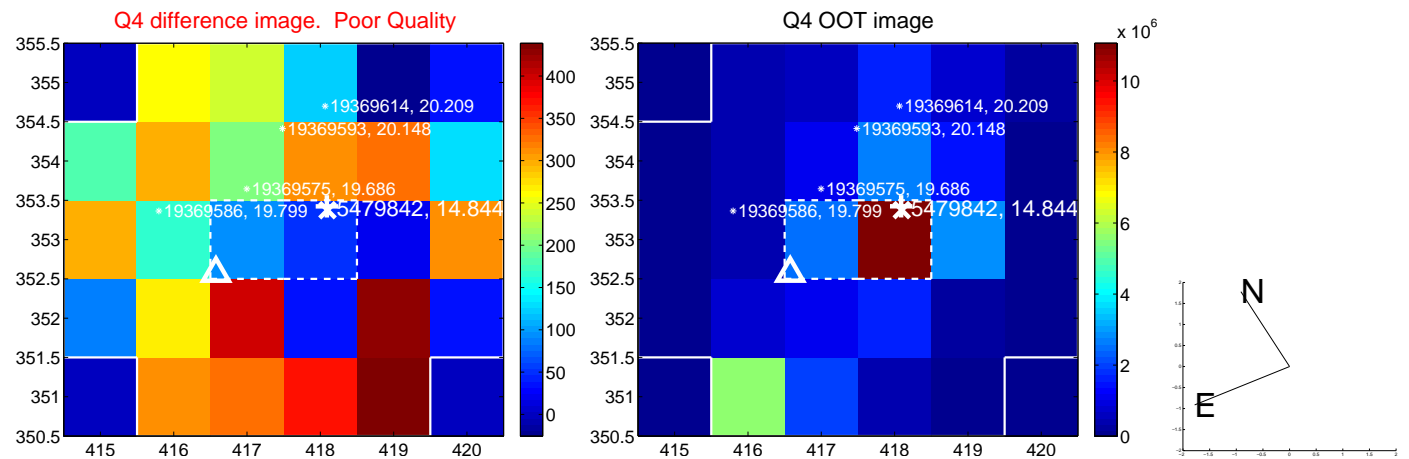
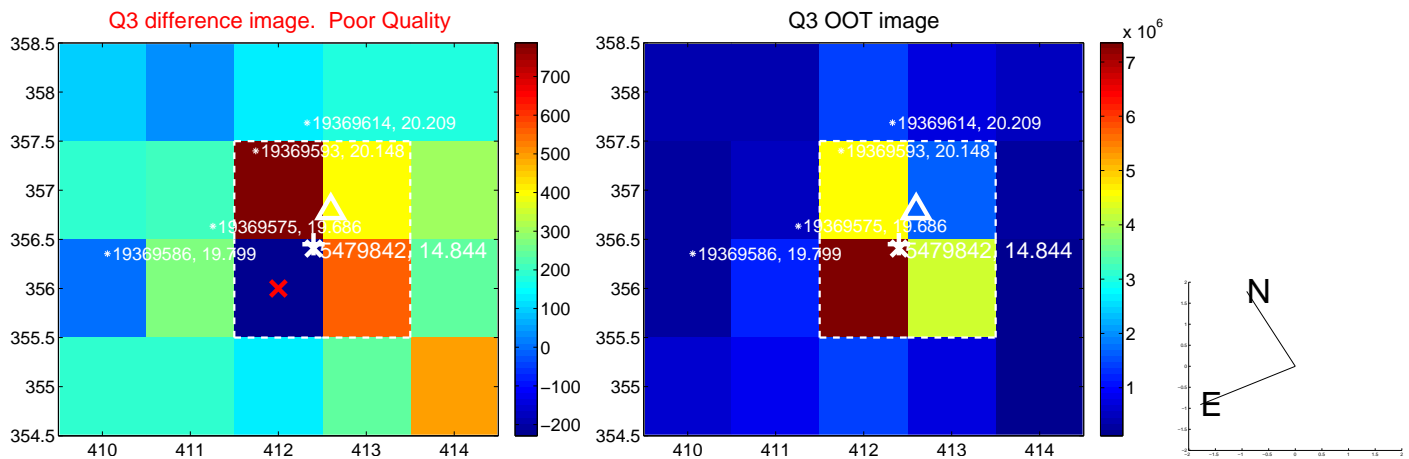
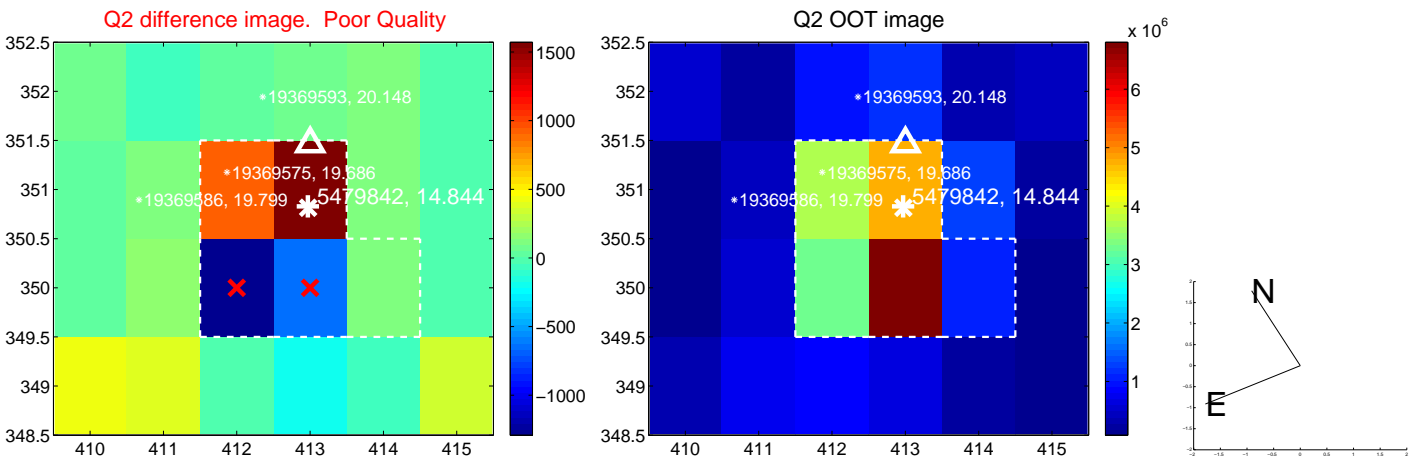
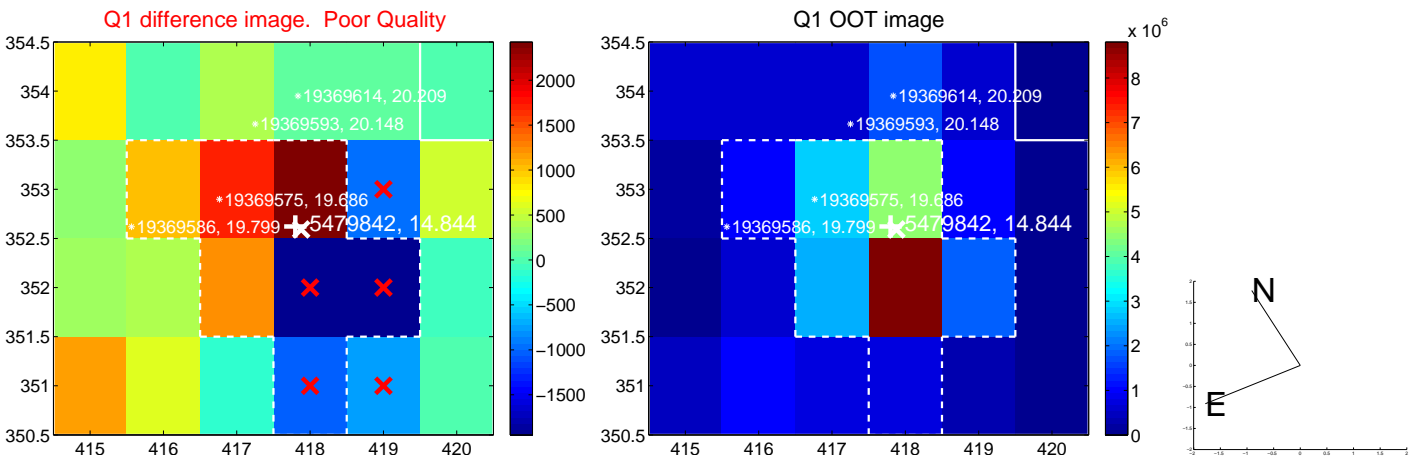
The direct PRF centroid is offset from the target star catalog position by about 0.36 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.827 ± 0.890	2.05	-1.522 ± 0.895	-1.011 ± 0.646
PRF-fit source offset from KIC position	1.786 ± 0.891	2.00	-1.565 ± 0.898	-0.861 ± 0.680
photometric centroid source offset	2.49 ± 1.99	1.26	-1.59 ± 2.10	-1.92 ± 1.91

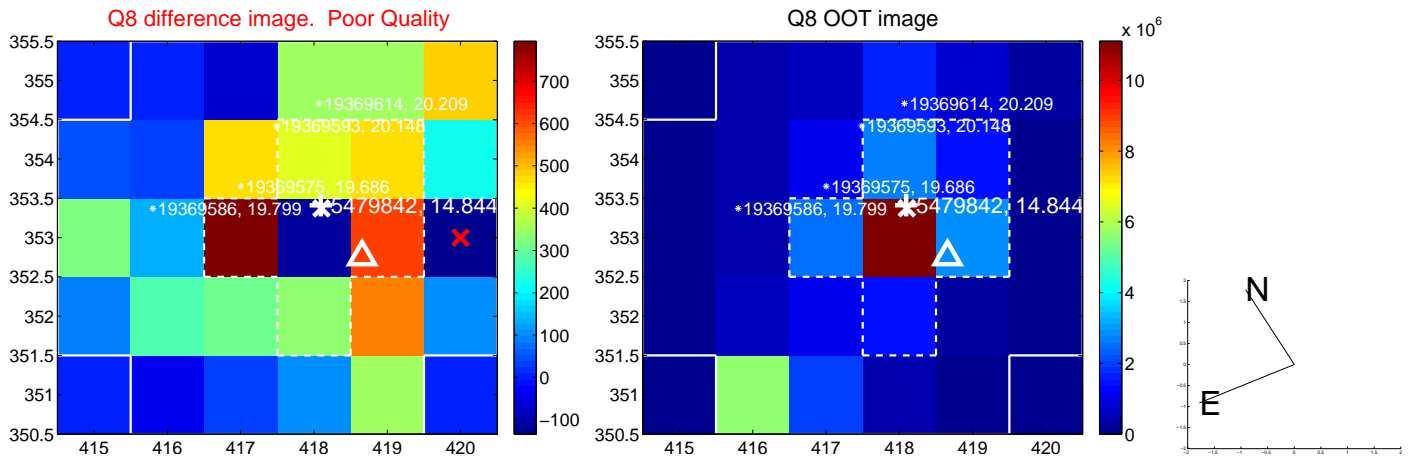
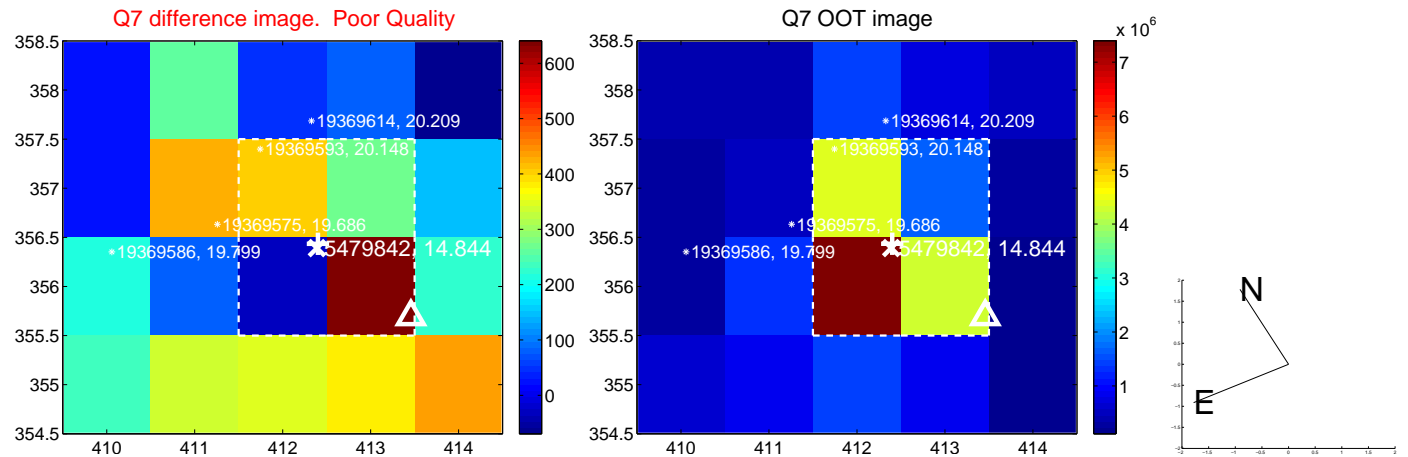
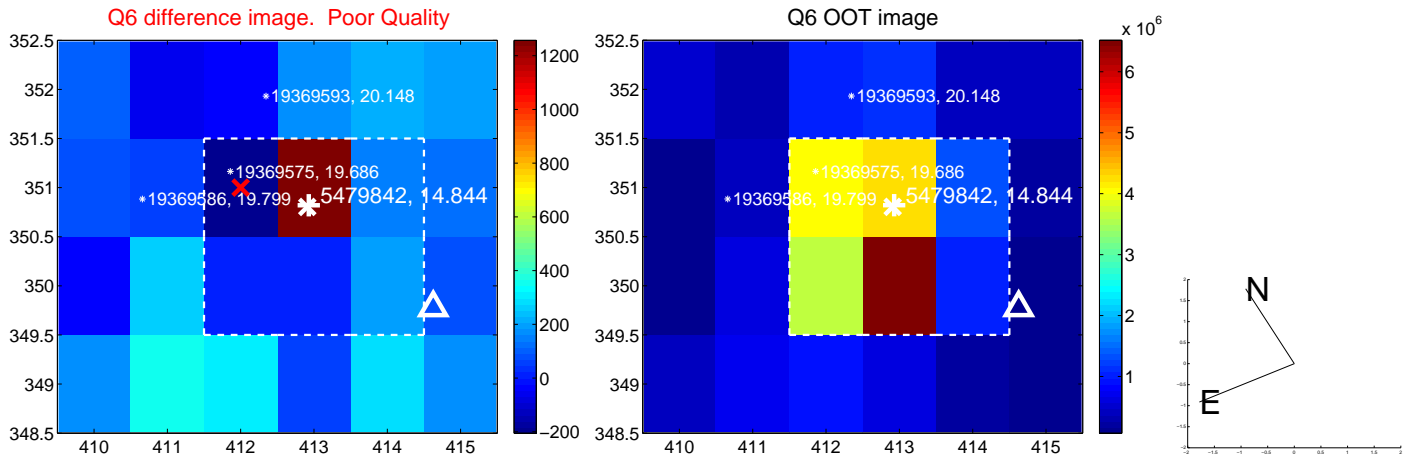
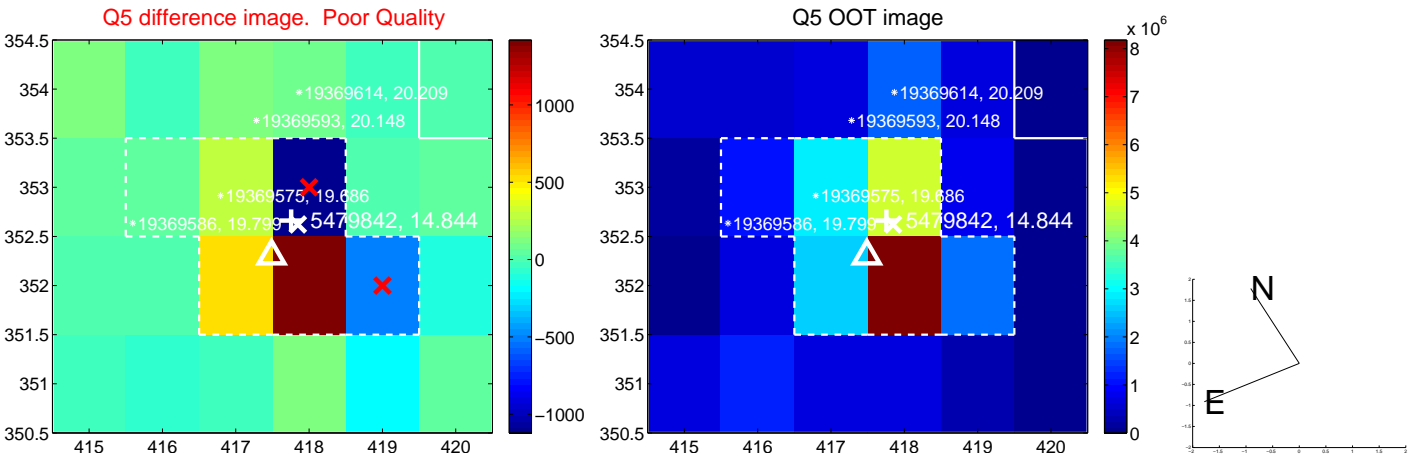


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

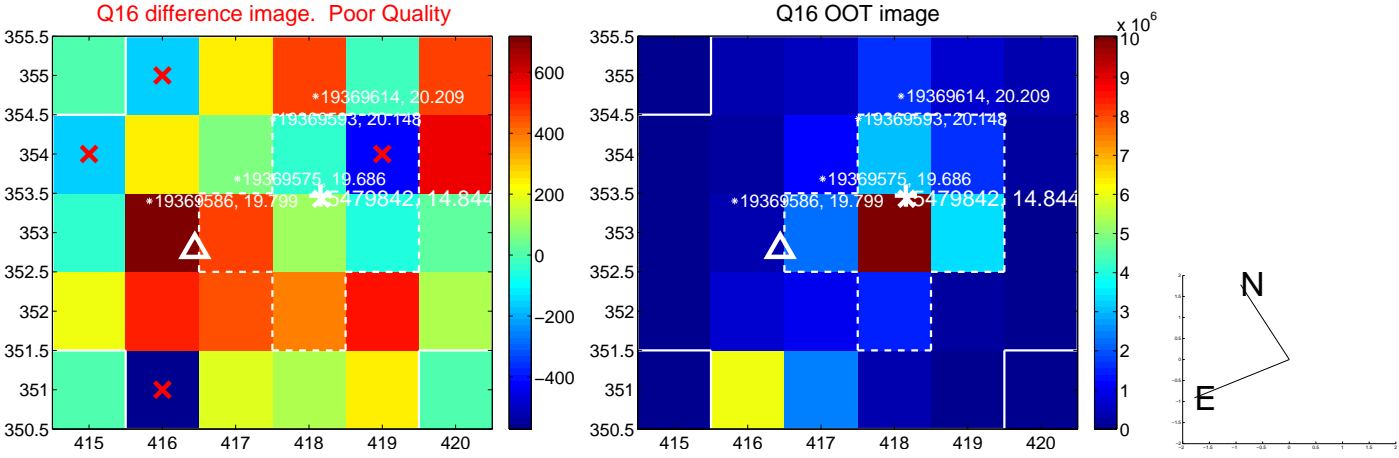
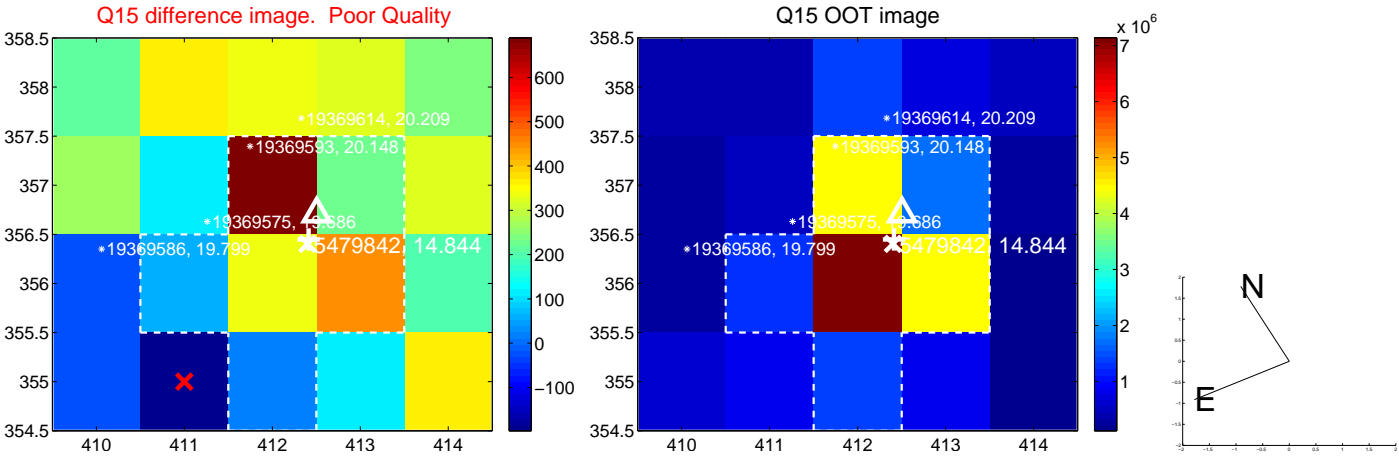
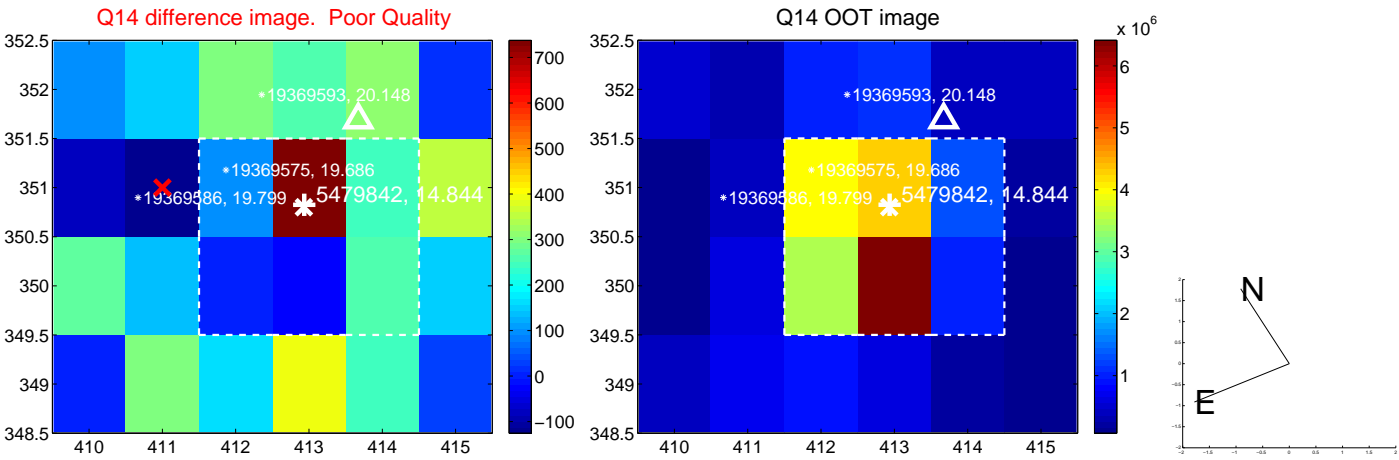
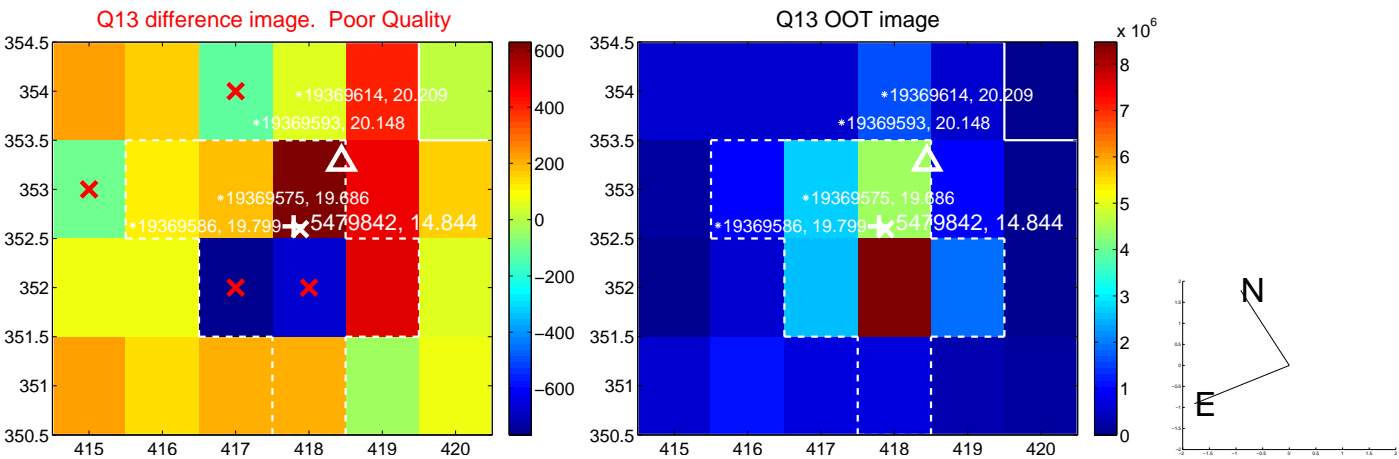
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



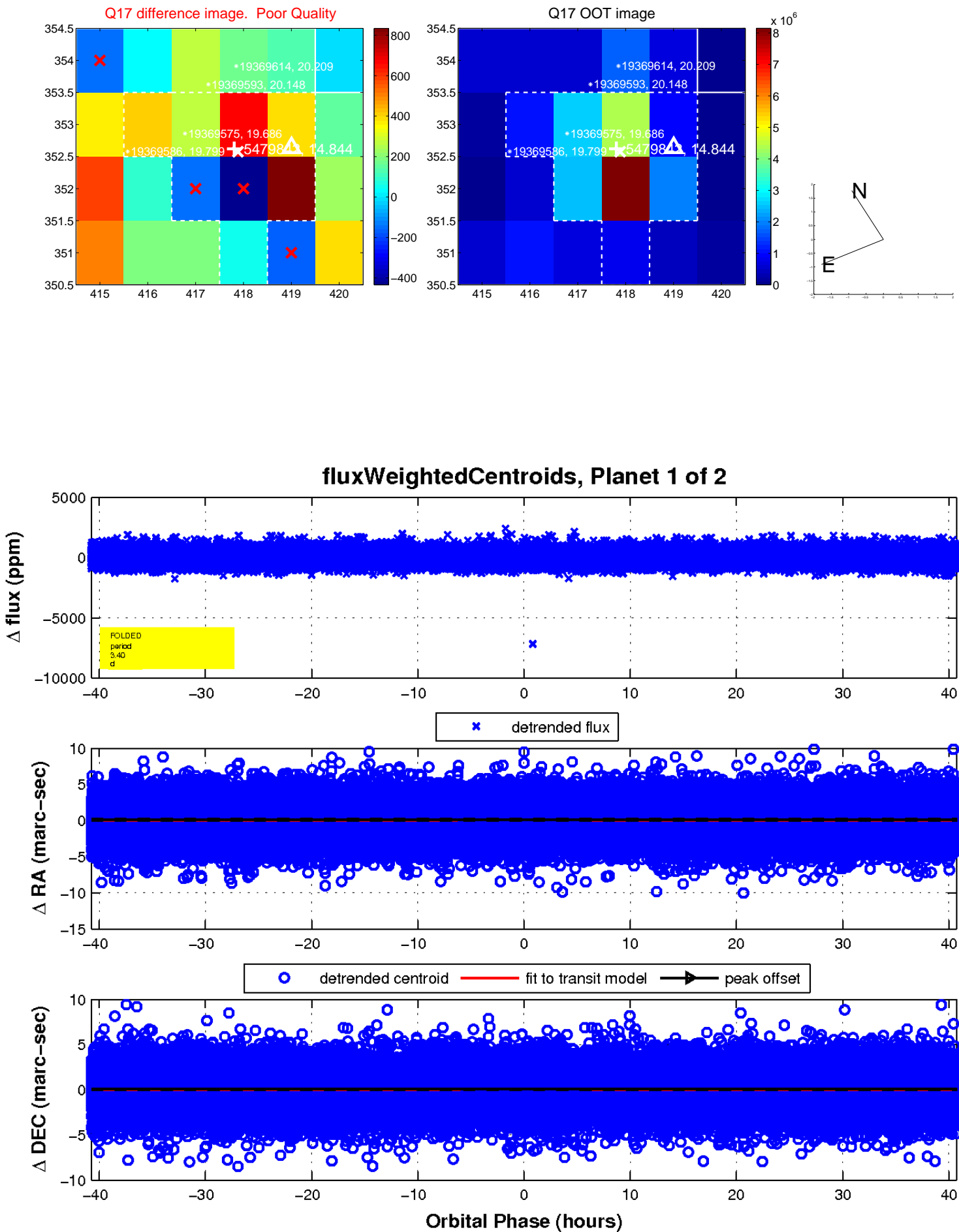
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

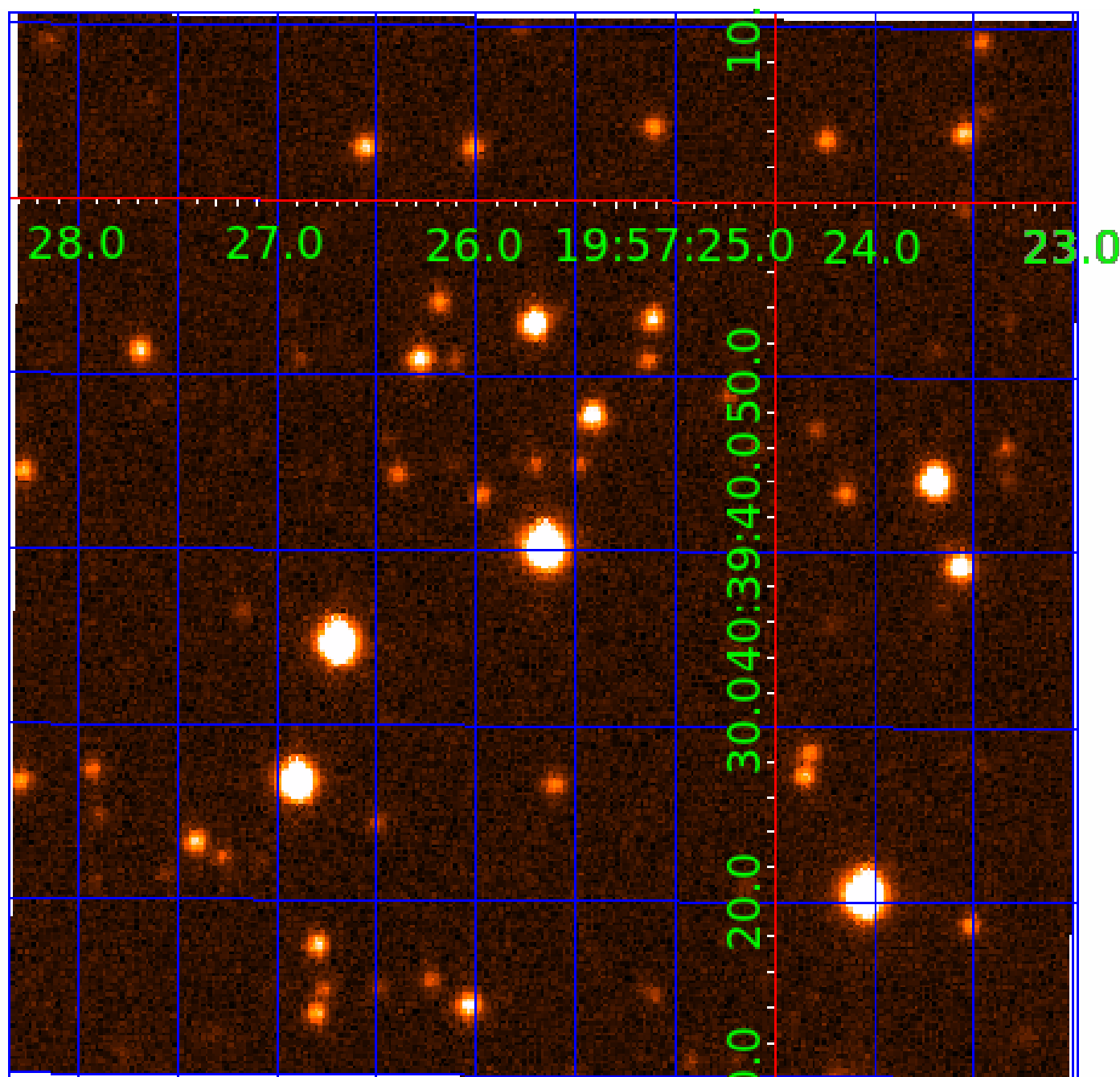


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005479842

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})
005479842-01	OBS	No	3.402539	134.318276	31.9	13.578	7.2	6.8	0.92	5866	0.61	453.01
005479842-02	OBS	No	199.416056	134.229957	231.6	21.255	9.4	6.3	0.92	5866	1.54	1.99

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005479842-01	OBS	FP	0.00	1	0	0	0	LPP_DV
005479842-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

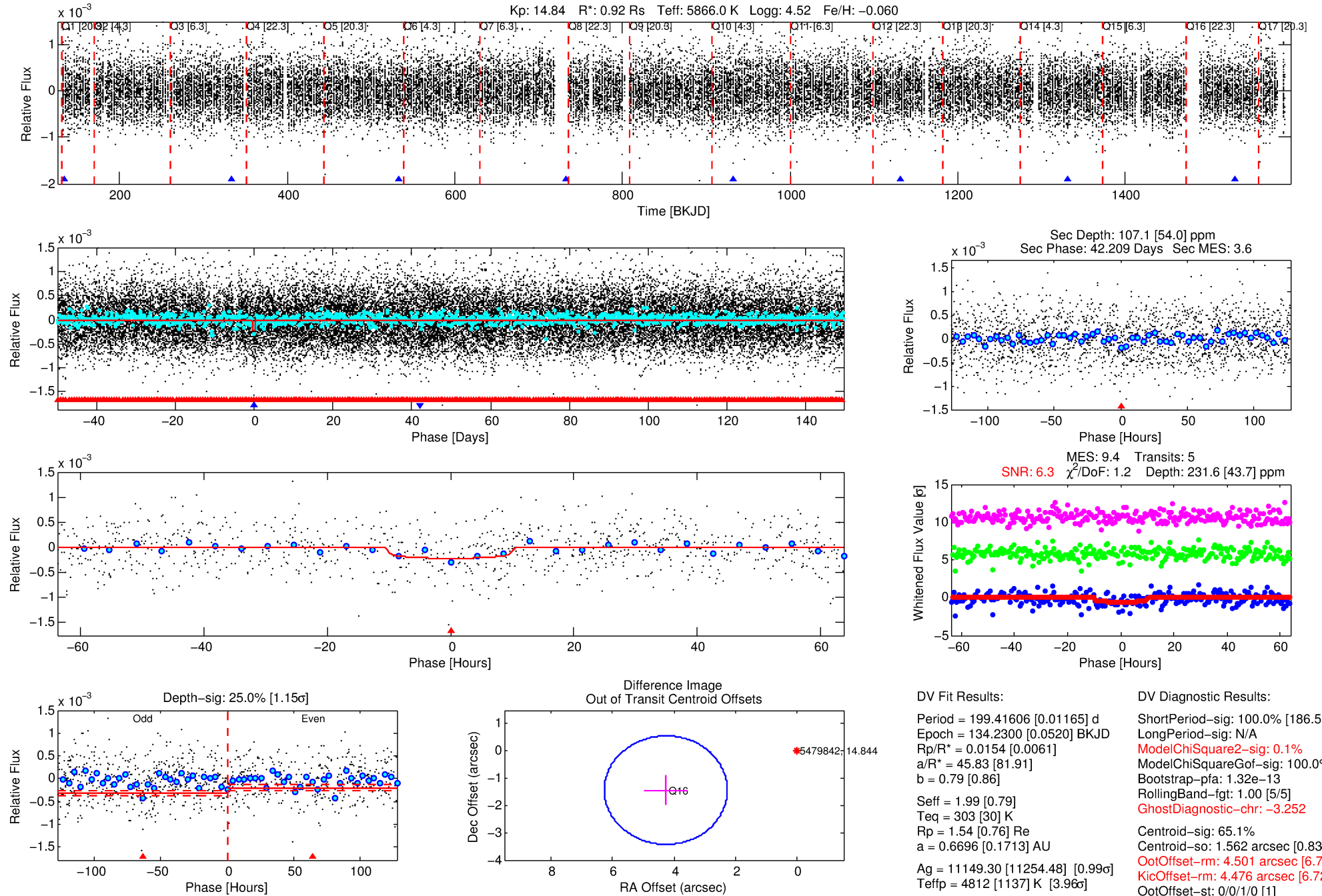
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005479842-02

No Significant Match Found

DV One-Page Summary

KIC: 5479842 Candidate: 2 of 2 Period: 199.416 d



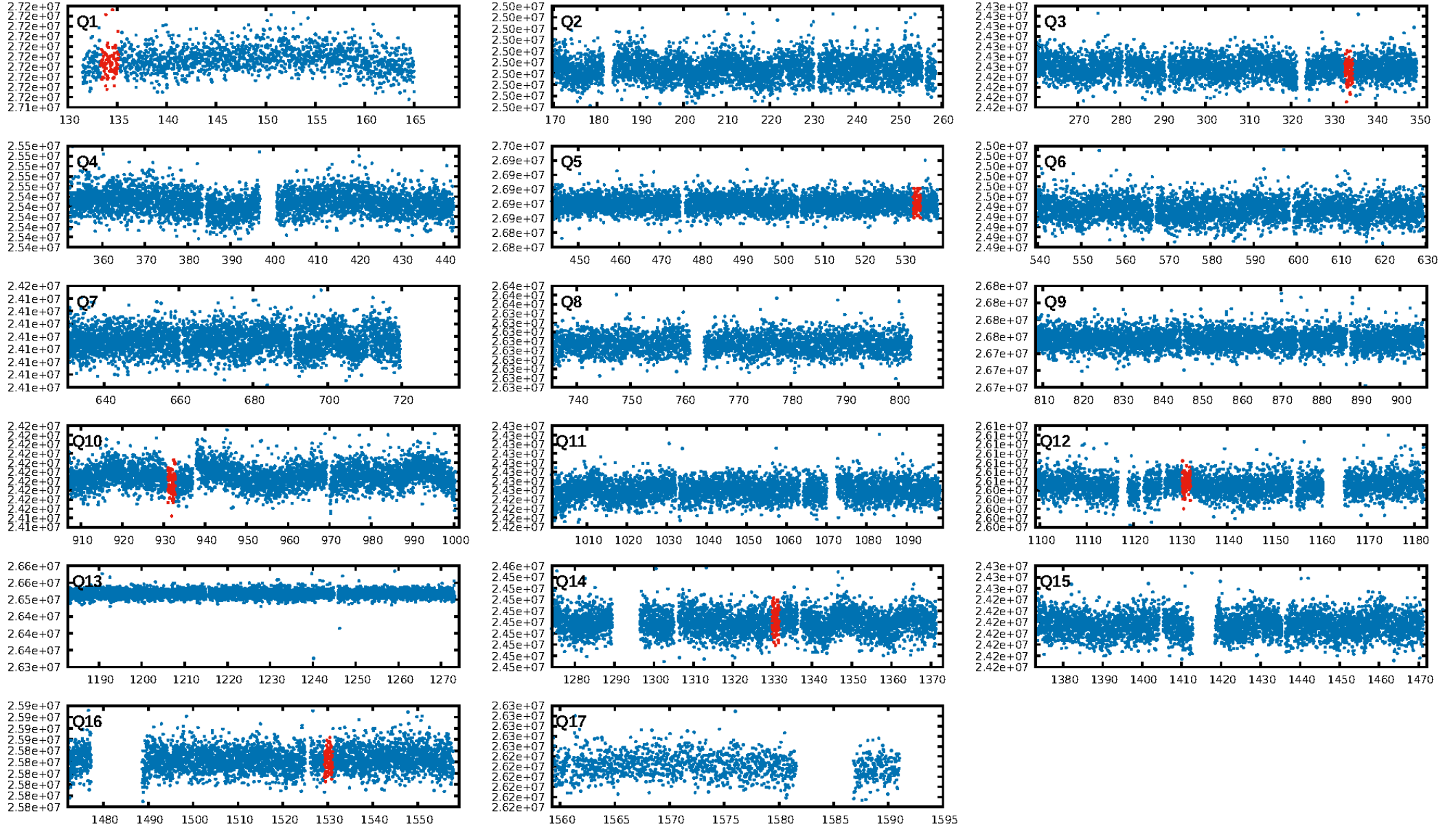
DV Fit Results:

Period = 199.41606 [0.01165] d
Epoch = 134.2300 [0.0520] BKJD
Rp/R* = 0.0154 [0.0061]
a/R* = 45.83 [81.91]
b = 0.79 [0.86]
Seff = 1.99 [0.79]
Teq = 303 [30] K
Rp = 1.54 [0.76] Re
a = 0.6696 [0.1713] AU
Ag = 11149.30 [11254.48] [0.99 σ]
Teffp = 4812 [1137] K [3.96 σ]

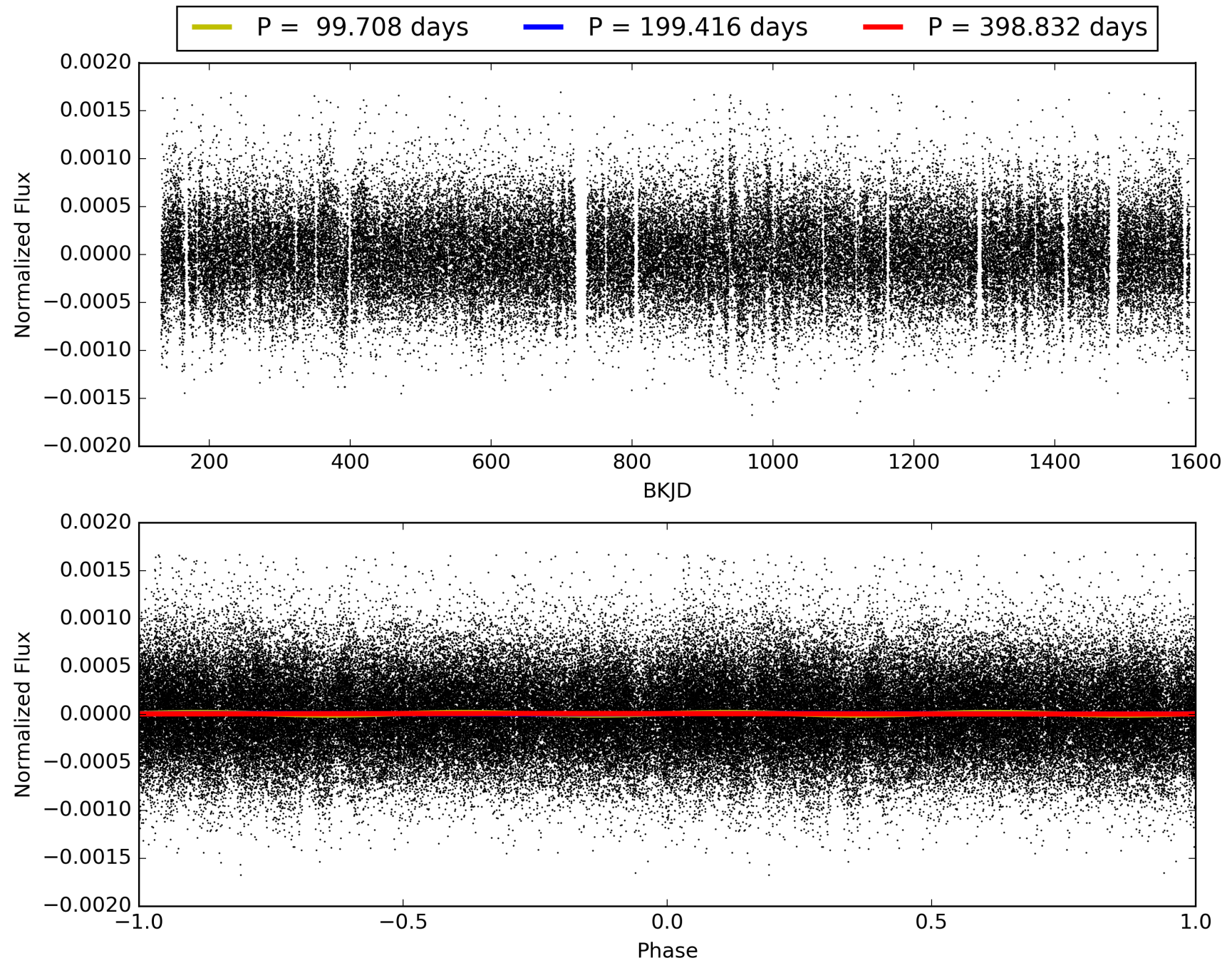
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [186.52 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.32e-13
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: -3.252
Centroid-sig: 65.1%
Centroid-so: 1.562 arcsec [0.83 σ]
OotOffset-rm: 4.501 arcsec [6.78 σ]
KicOffset-rm: 4.476 arcsec [6.72 σ]
OotOffset-st: 0/0/1/0 [1]
KicOffset-st: 0/0/1/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 0.00 [0/6]

TCE 005479842-02, PDC Light Curves

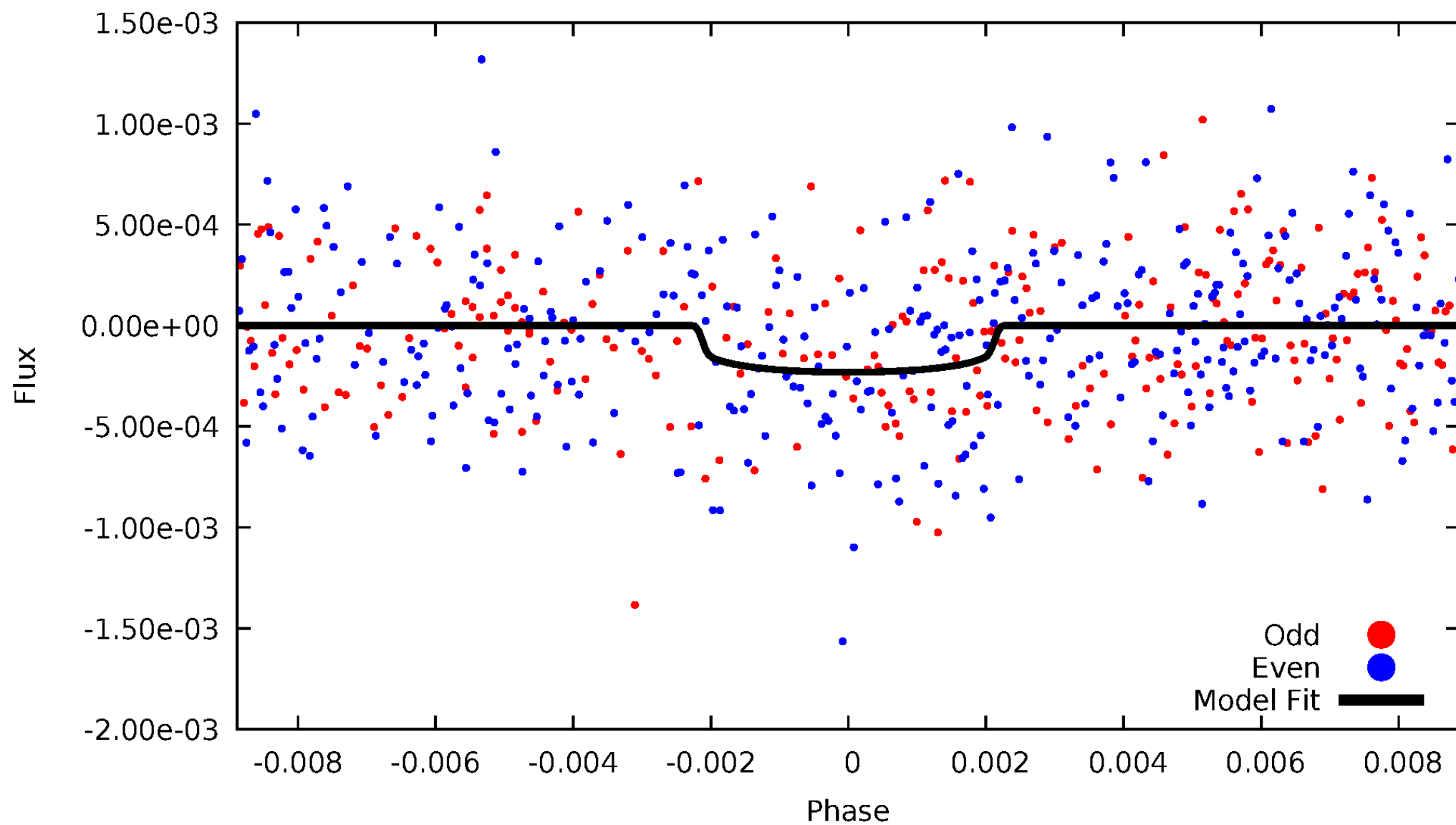


TCE 005479842-02



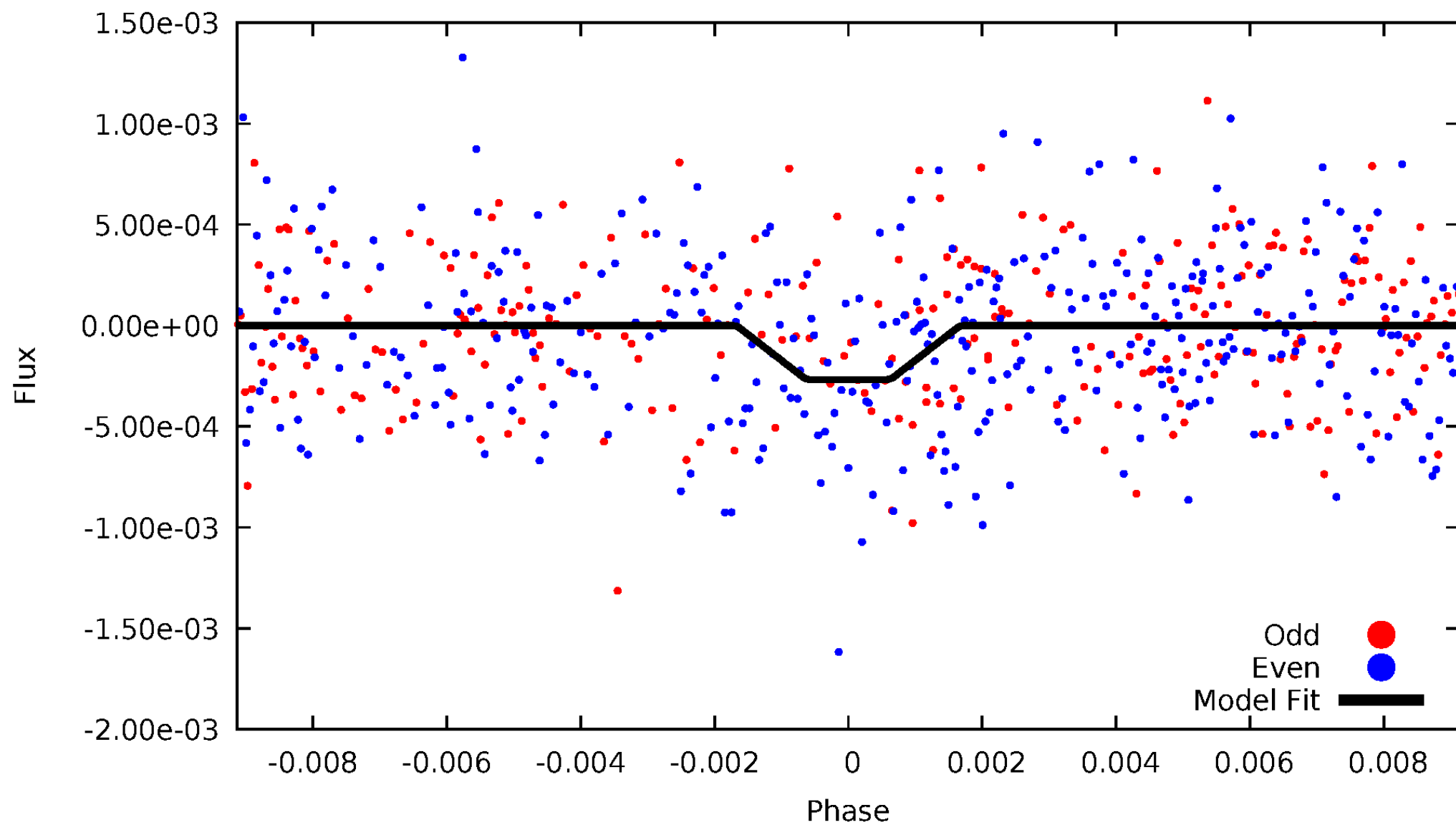
DV Odd/Even

TCE 005479842-02



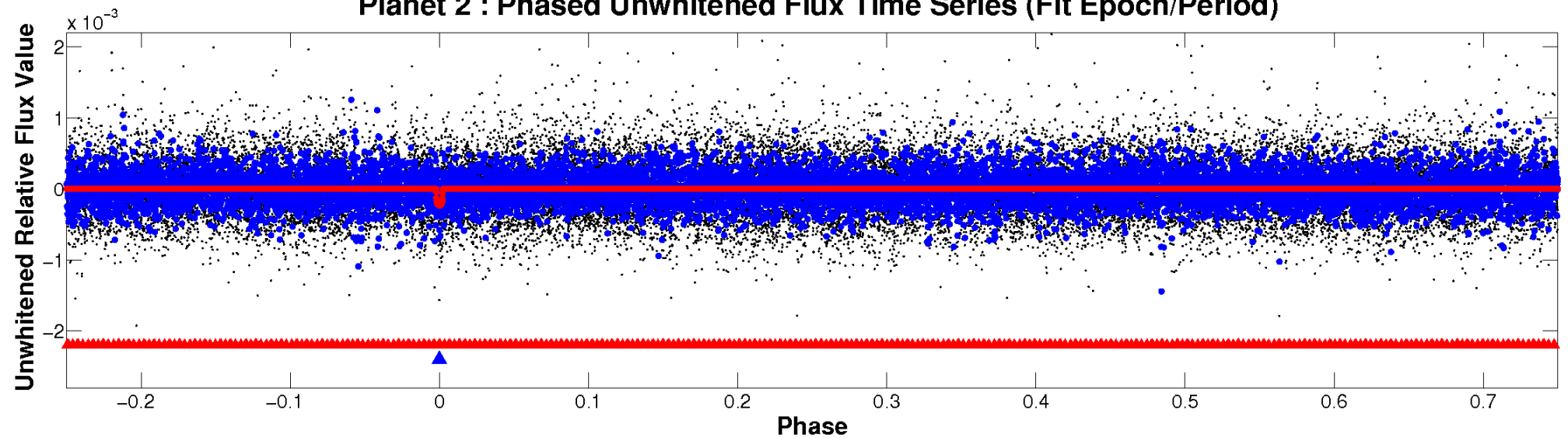
ALT Odd/Even

TCE 005479842-02

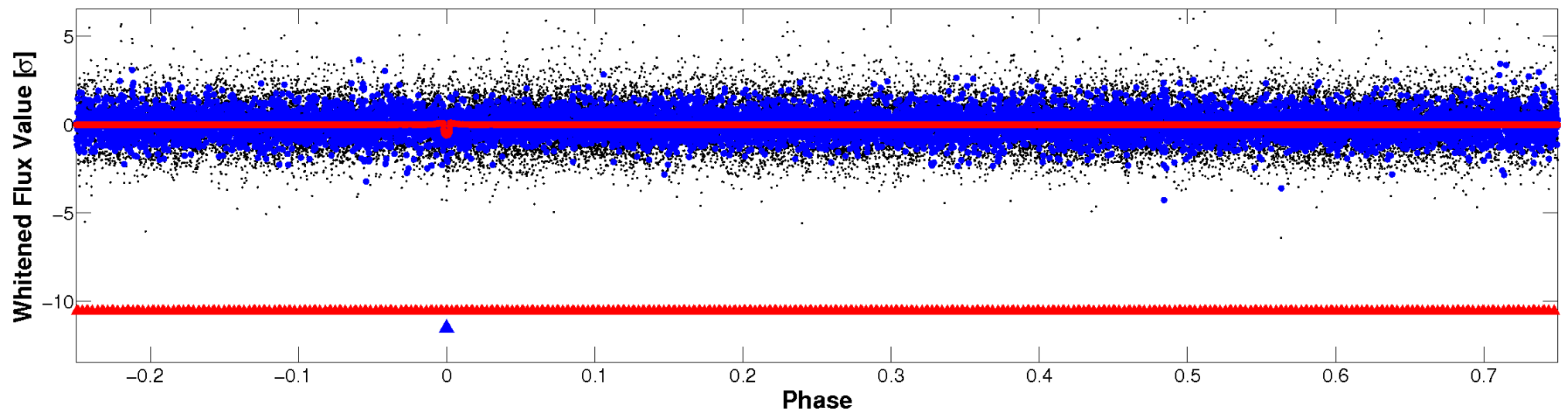


Non-Whitened Vs. Whitened Light Curve

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

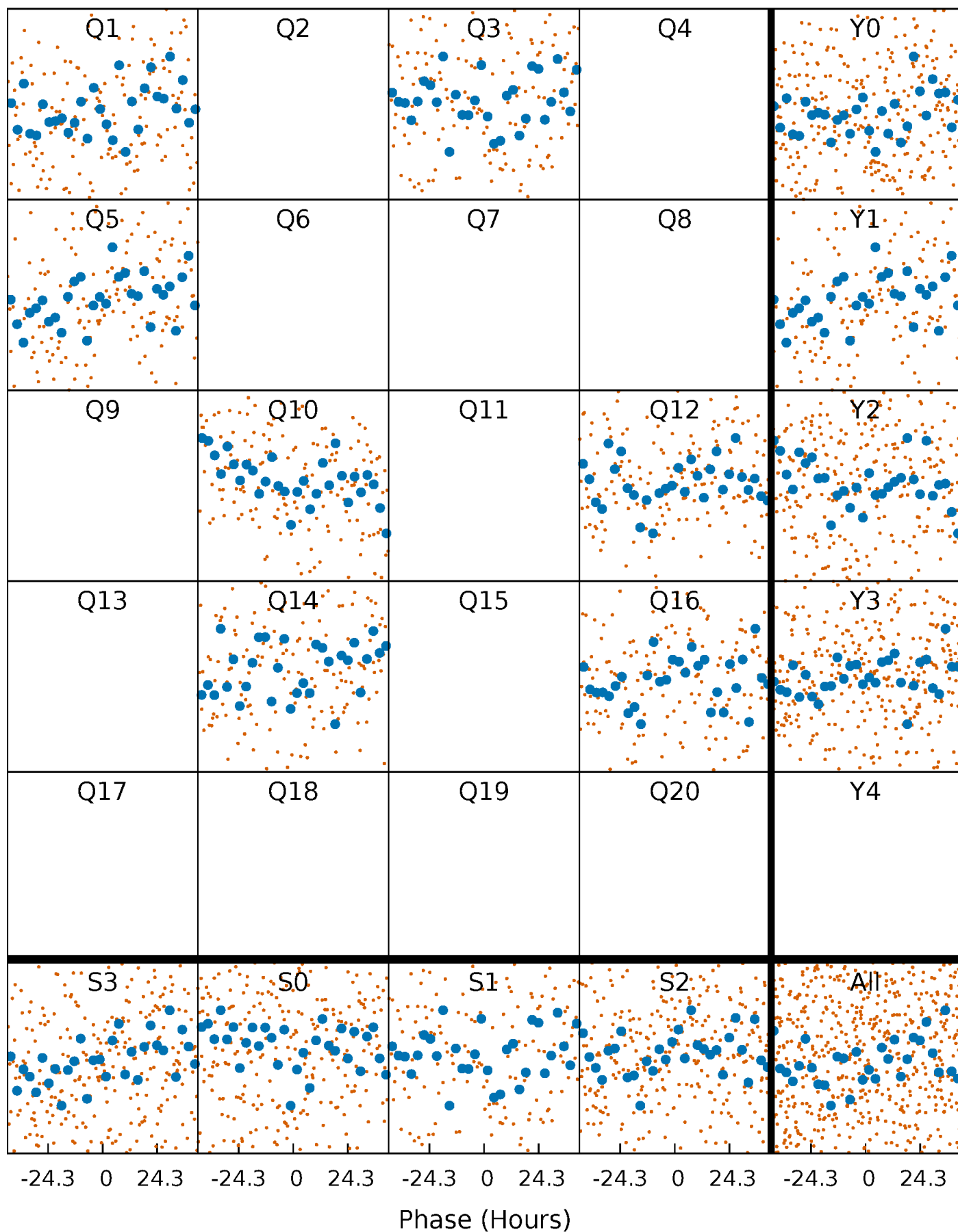


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



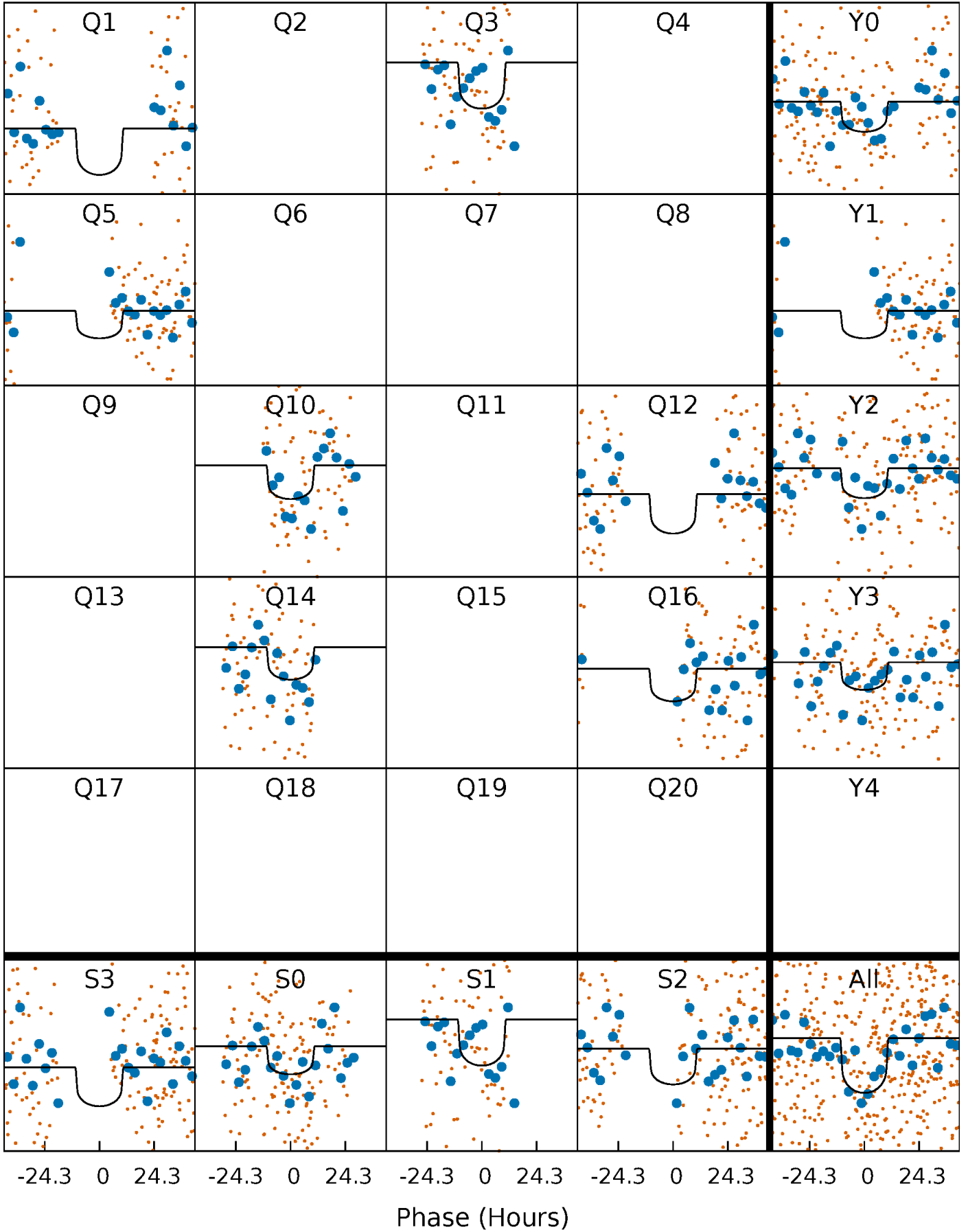
PDC Quarter-Phased Transit Curves

TCE 005479842-02 P=199.416056 Days $T_0=134.229957$ (BKJD)



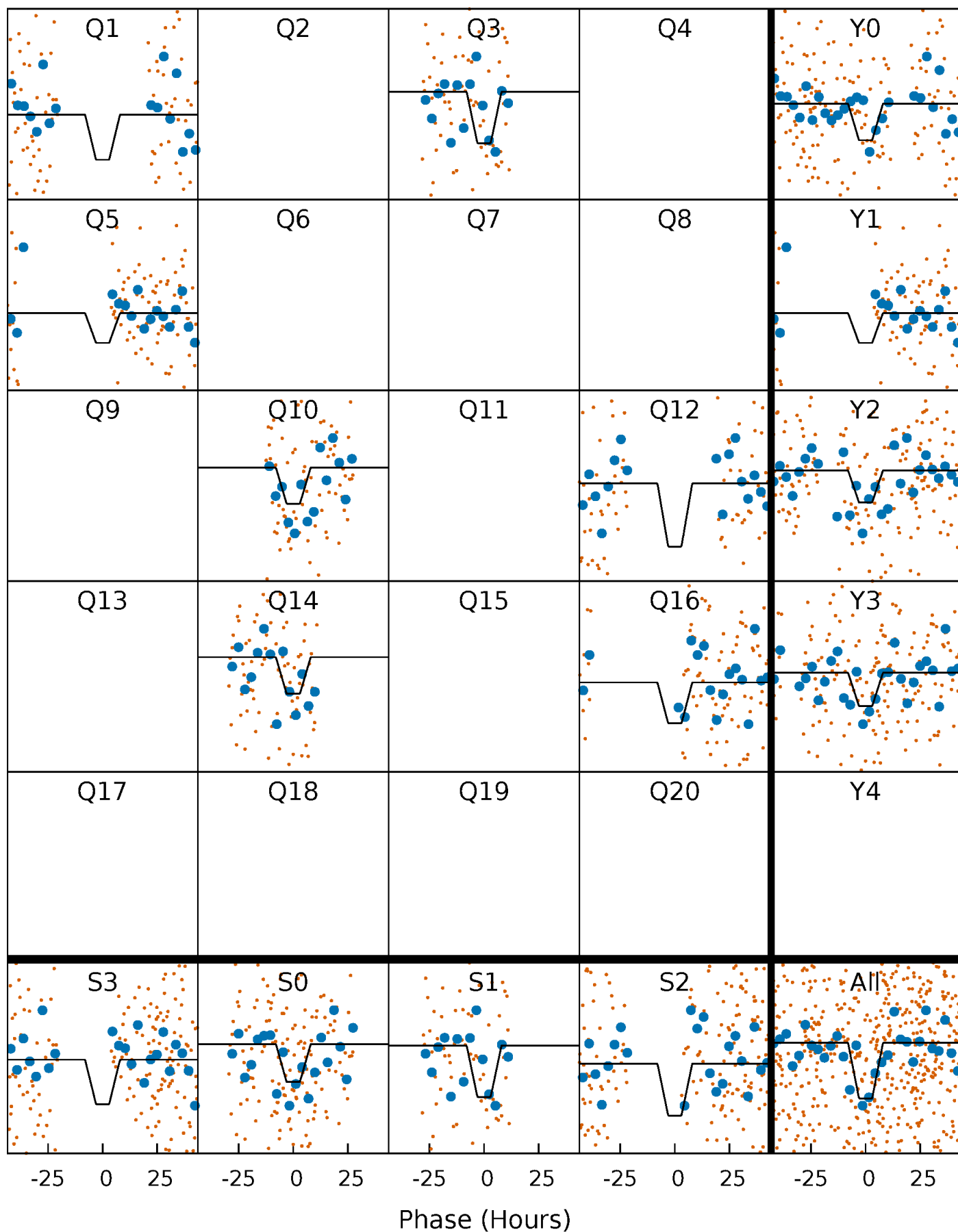
DV Quarter-Phased Transit Curves

TCE 005479842-02 P=199.416056 Days $T_0=134.229957$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

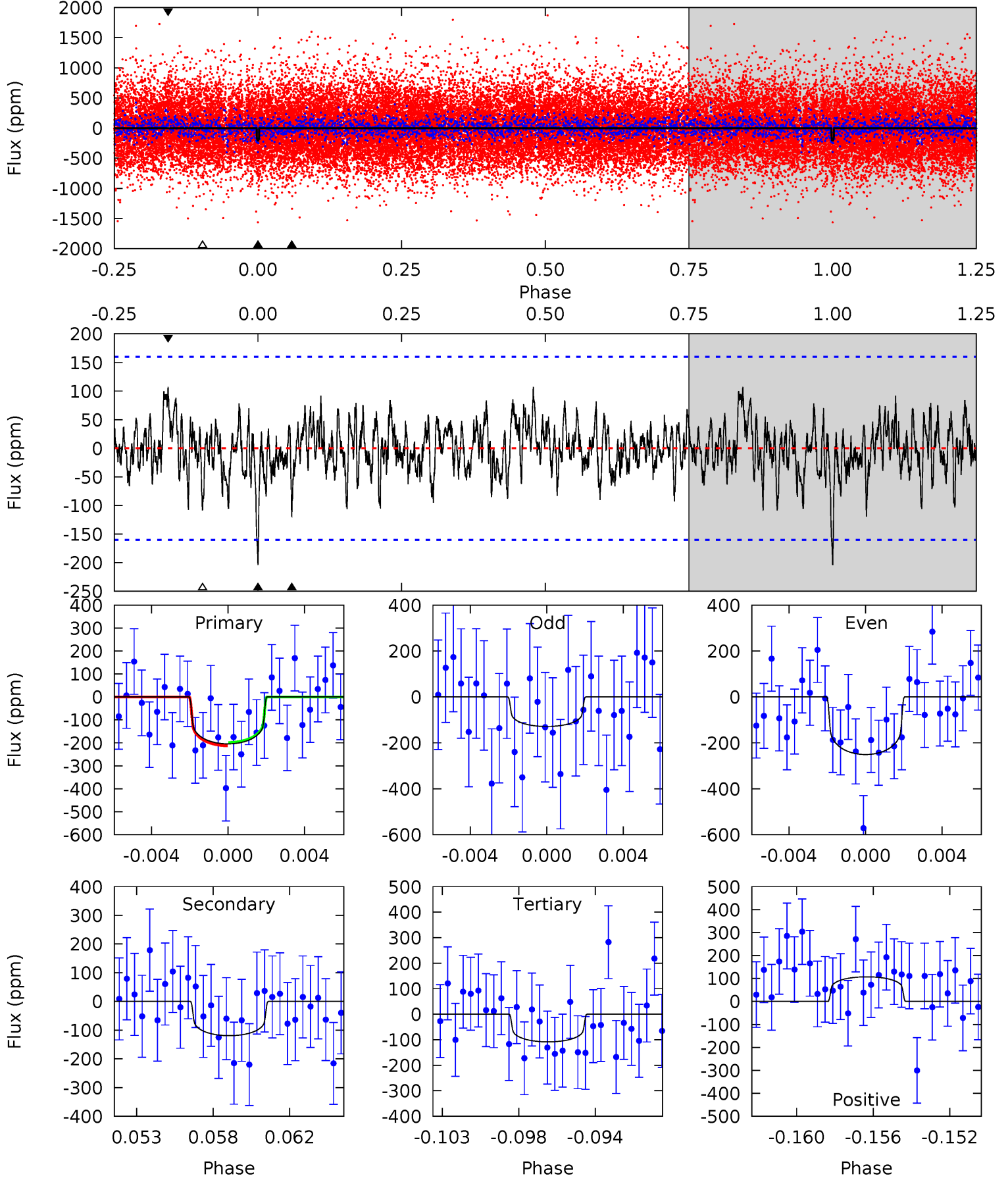
TCE 005479842-02 $P=199.397490$ Days $T_0=134.316666$ (BKJD)



DV Model-Shift Uniqueness Test

005479842-02, P = 199.416056 Days, E = 134.229957 Days

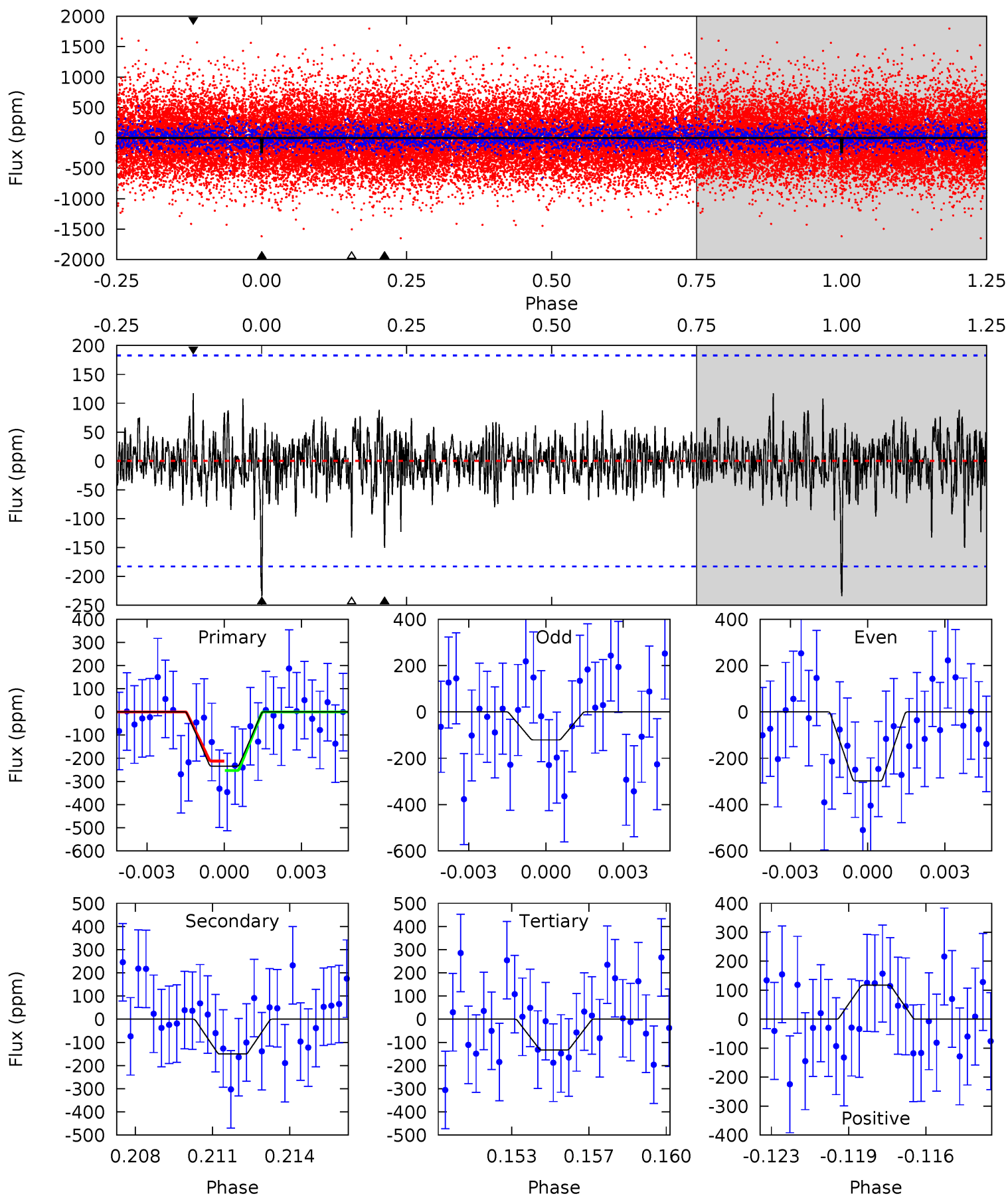
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.61	3.86	3.51	3.47	5.18	2.84	1.19	3.10	3.14	0.35	0.38	1.92	0.67	0.34	0.22



Alt Model-Shift Uniqueness Test

005479842-02, P = 199.397490 Days, E = 134.316666 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.70	4.30	3.79	3.36	5.23	2.93	0.89	2.91	3.34	0.51	0.94	2.45	0.73	0.33	0.58



Stellar Parameters For KIC 005479842

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5866^{+157}_{-192}	$4.516^{+0.052}_{-0.208}$	$-0.060^{+0.250}_{-0.300}$	$0.917^{+0.275}_{-0.092}$	$1.005^{+0.113}_{-0.126}$	$1.835^{+0.481}_{-0.958}$
	+3%/-3%	+1%/-5%	+417%/-500%	+30%/-10%	+11%/-13%	+26%/-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 005479842-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-119 ± 31	$1.65^{+0.66}_{-0.68}$	431^{+30}_{-20}	4971^{+1401}_{-669}	10657^{+20179}_{-5618}
Alt.	-150 ± 35	$1.72^{+0.70}_{-0.66}$	430^{+30}_{-20}	5116^{+1352}_{-692}	12380^{+19630}_{-6538}

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

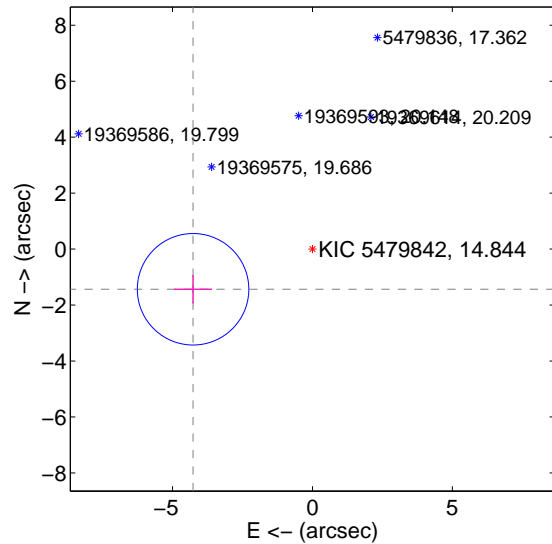
Supplemental centroid analysis for 005479842-02. Kepler magnitude: 14.84. Transit SNR 6.29

There are 0 quarters with good PRF difference image offsets

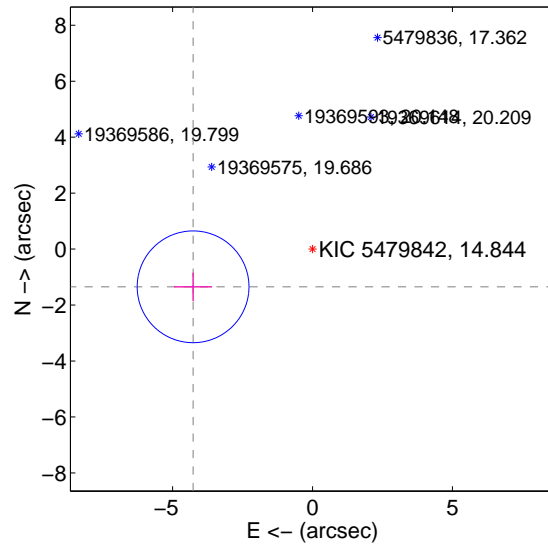
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.501 \pm 0.664	6.78	4.266 \pm 0.680	-1.436 \pm 0.507
PRF-fit source offset from KIC position	4.476 \pm 0.666	6.72	4.269 \pm 0.680	-1.347 \pm 0.507
photometric centroid source offset	1.56 \pm 1.88	0.83	1.47 \pm 1.90	0.52 \pm 1.72

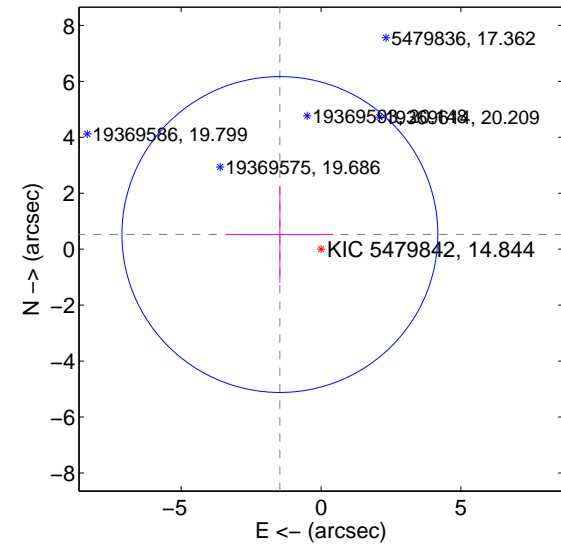
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

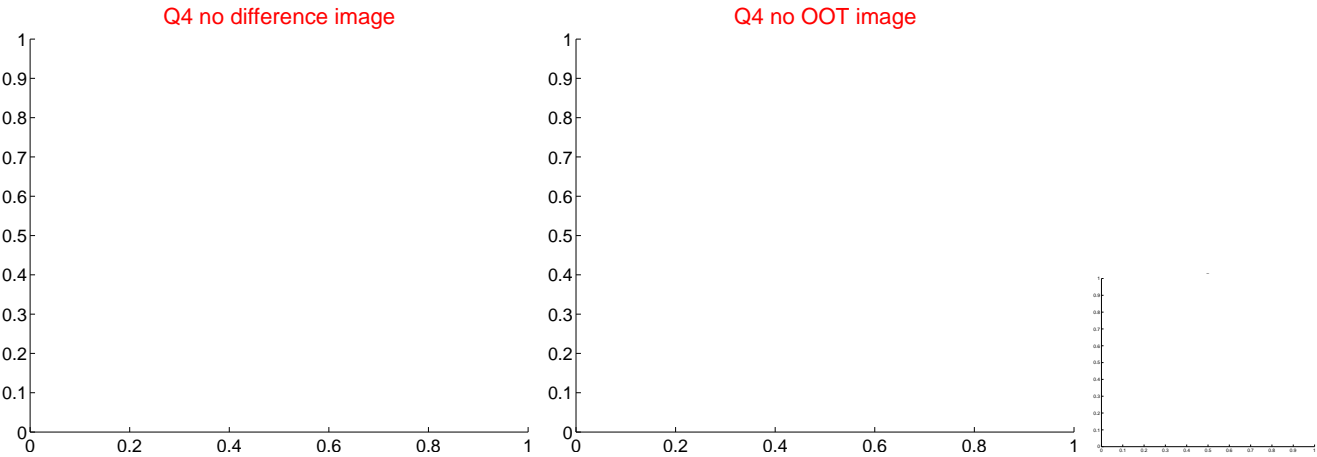
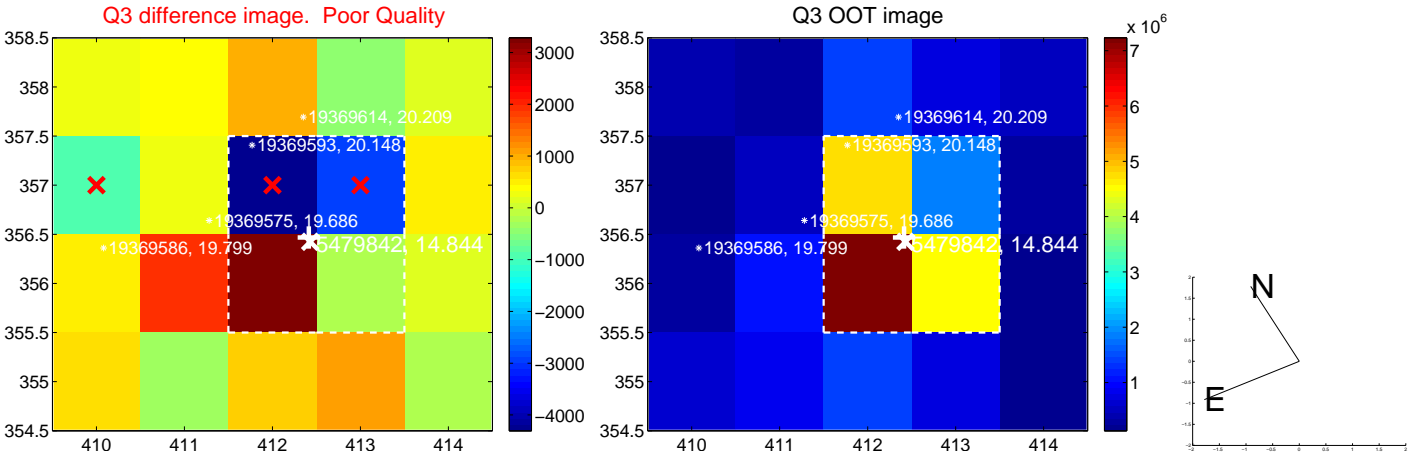
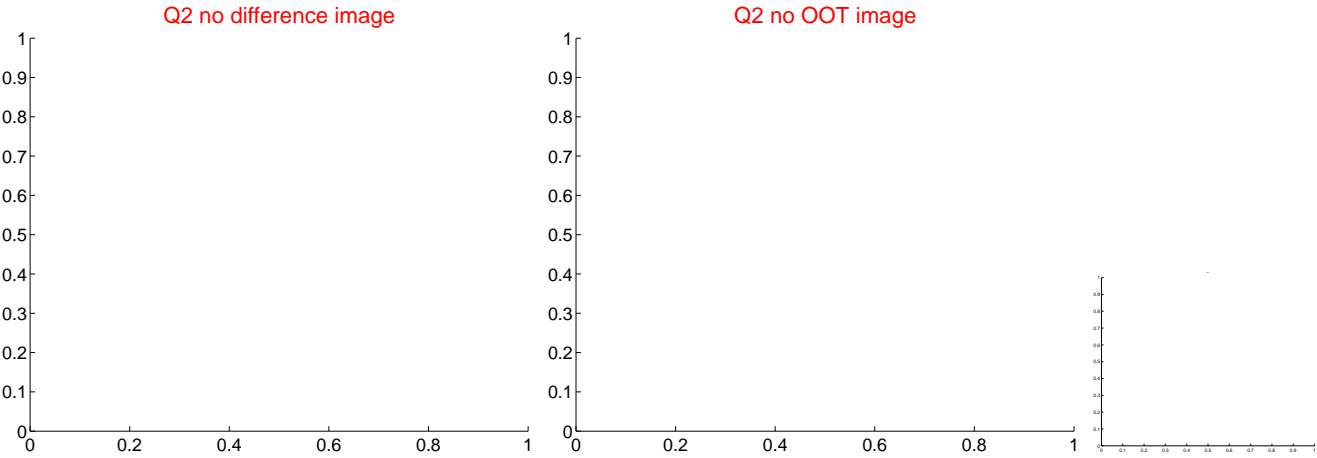
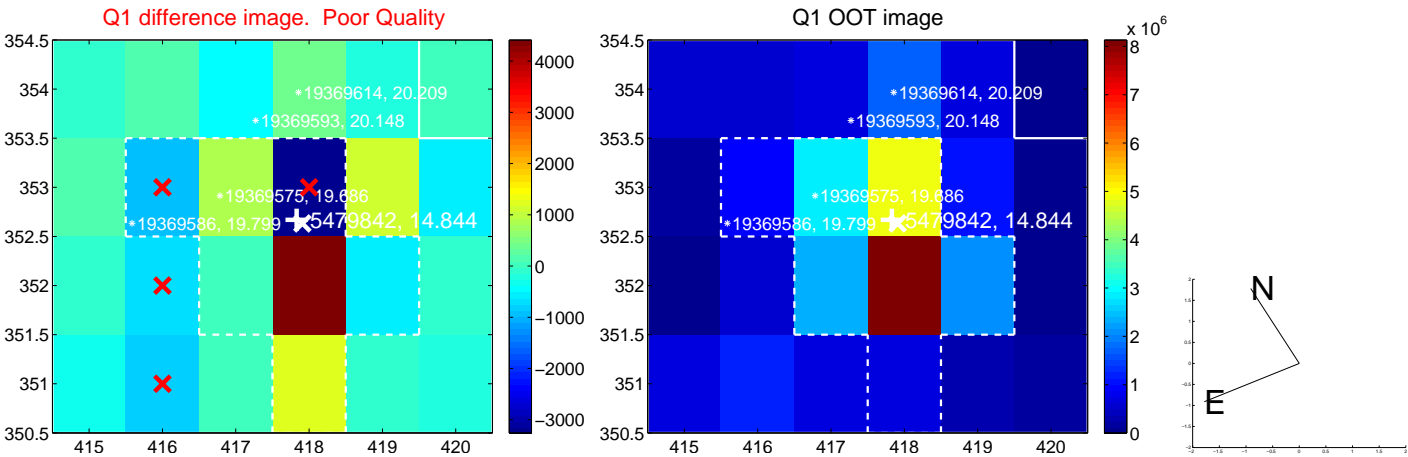


offset from photometric centroids

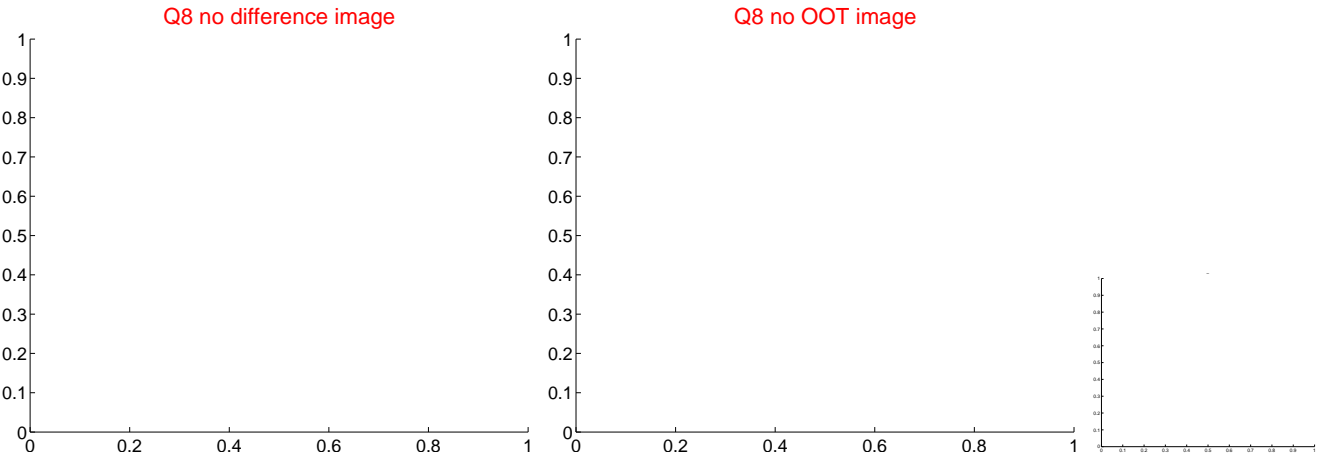
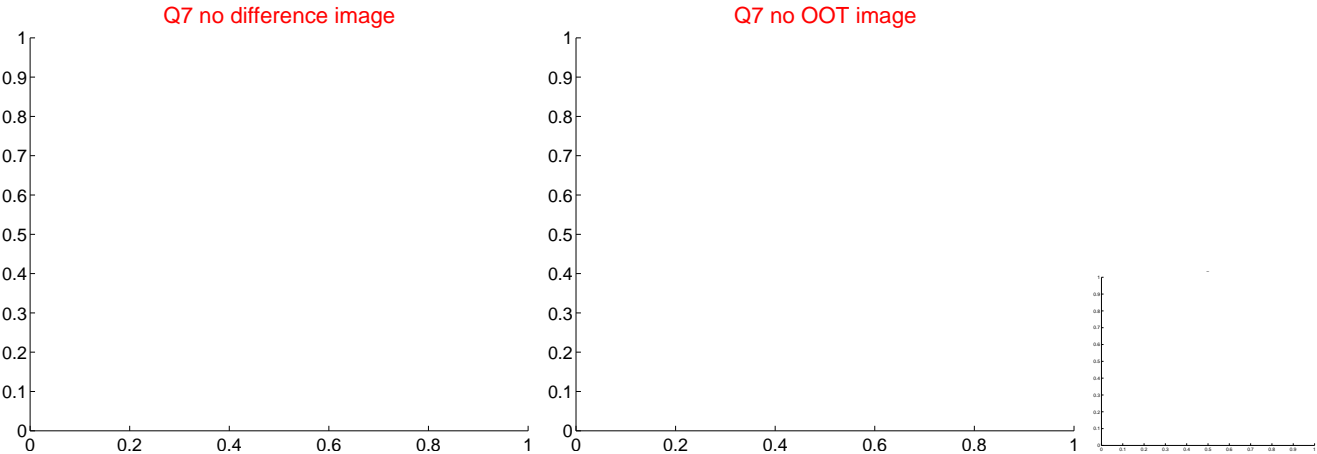
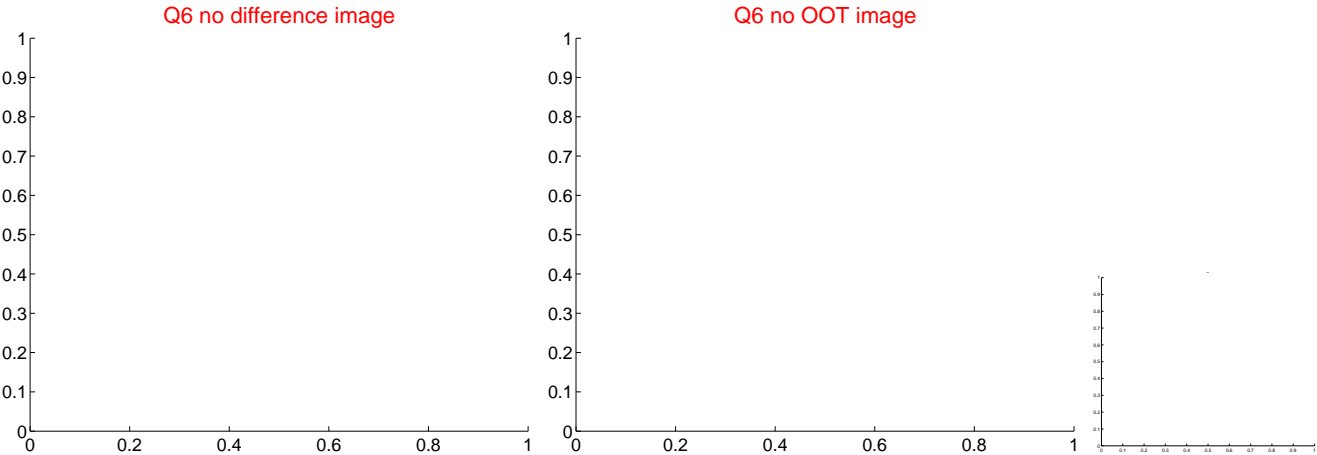
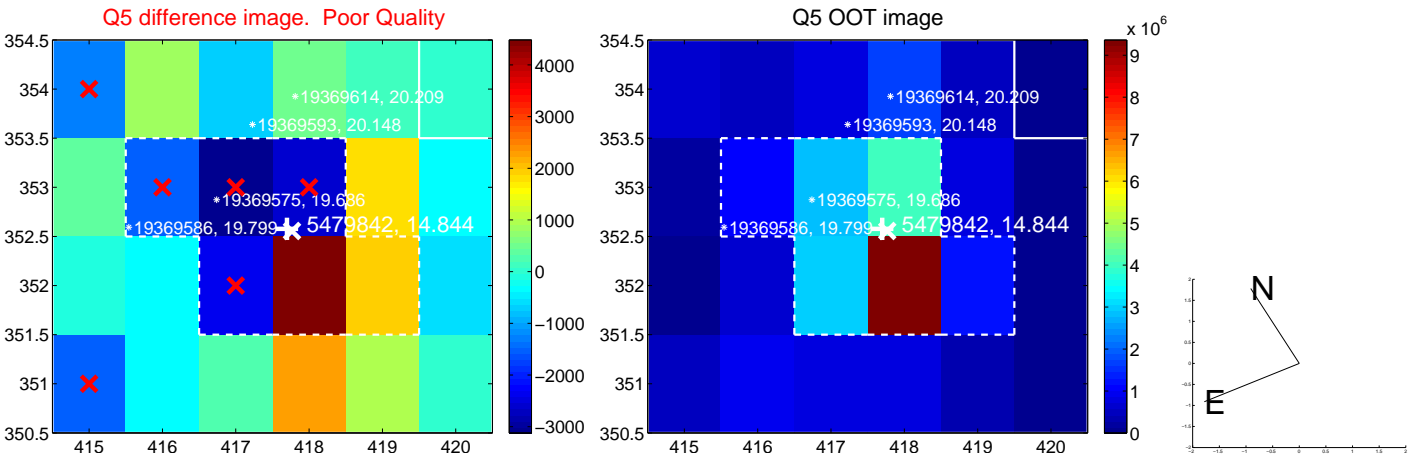


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

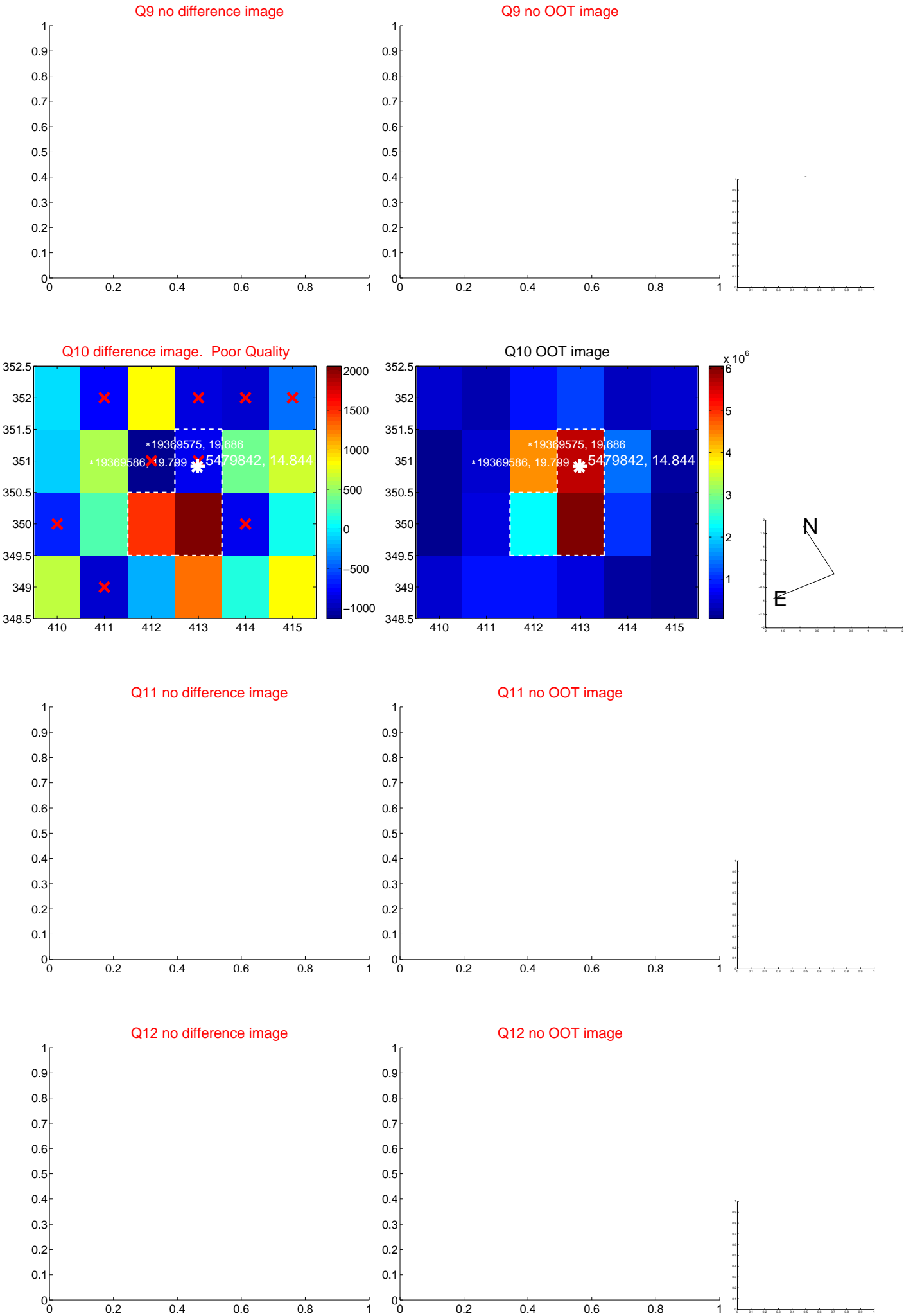
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



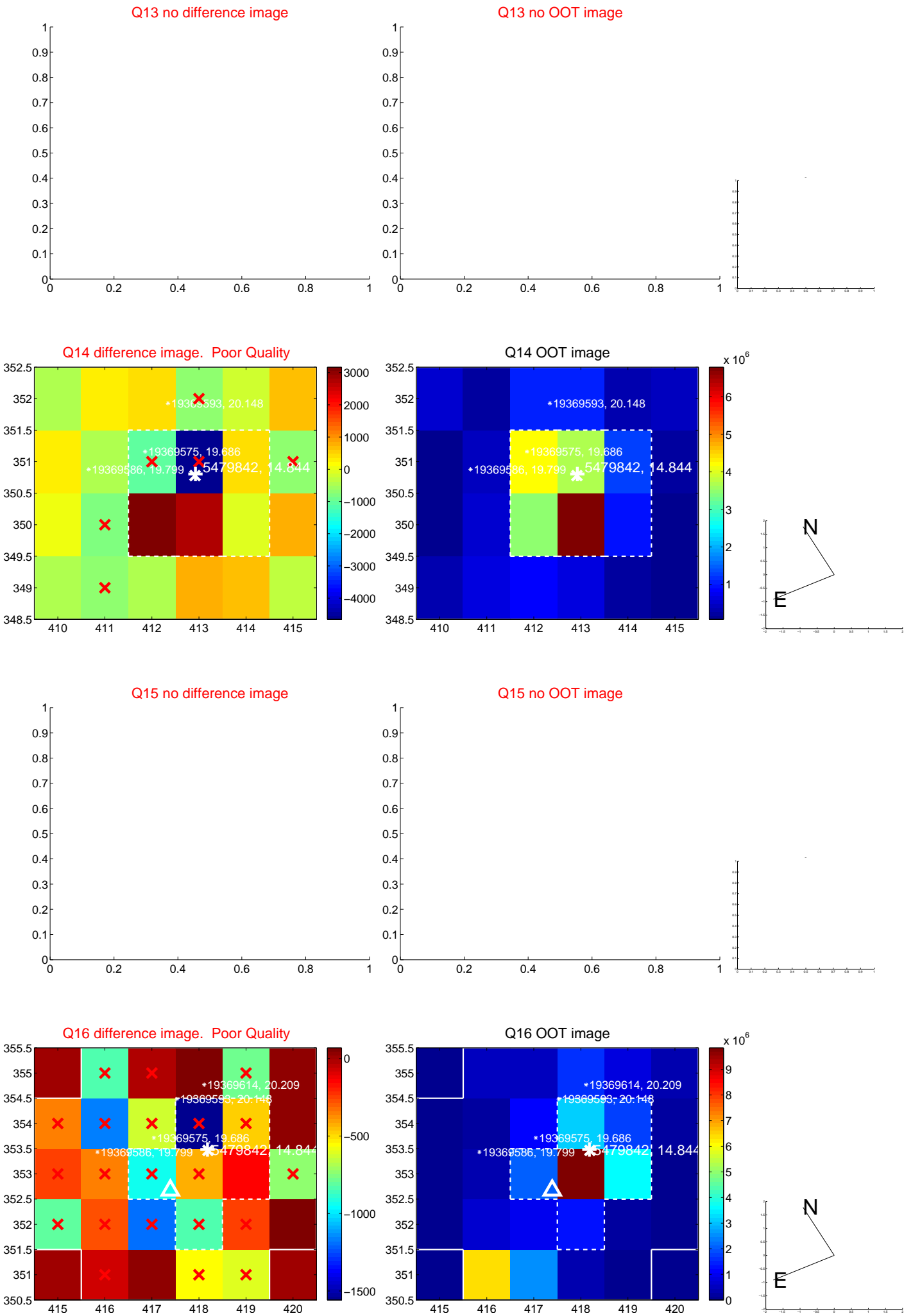
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



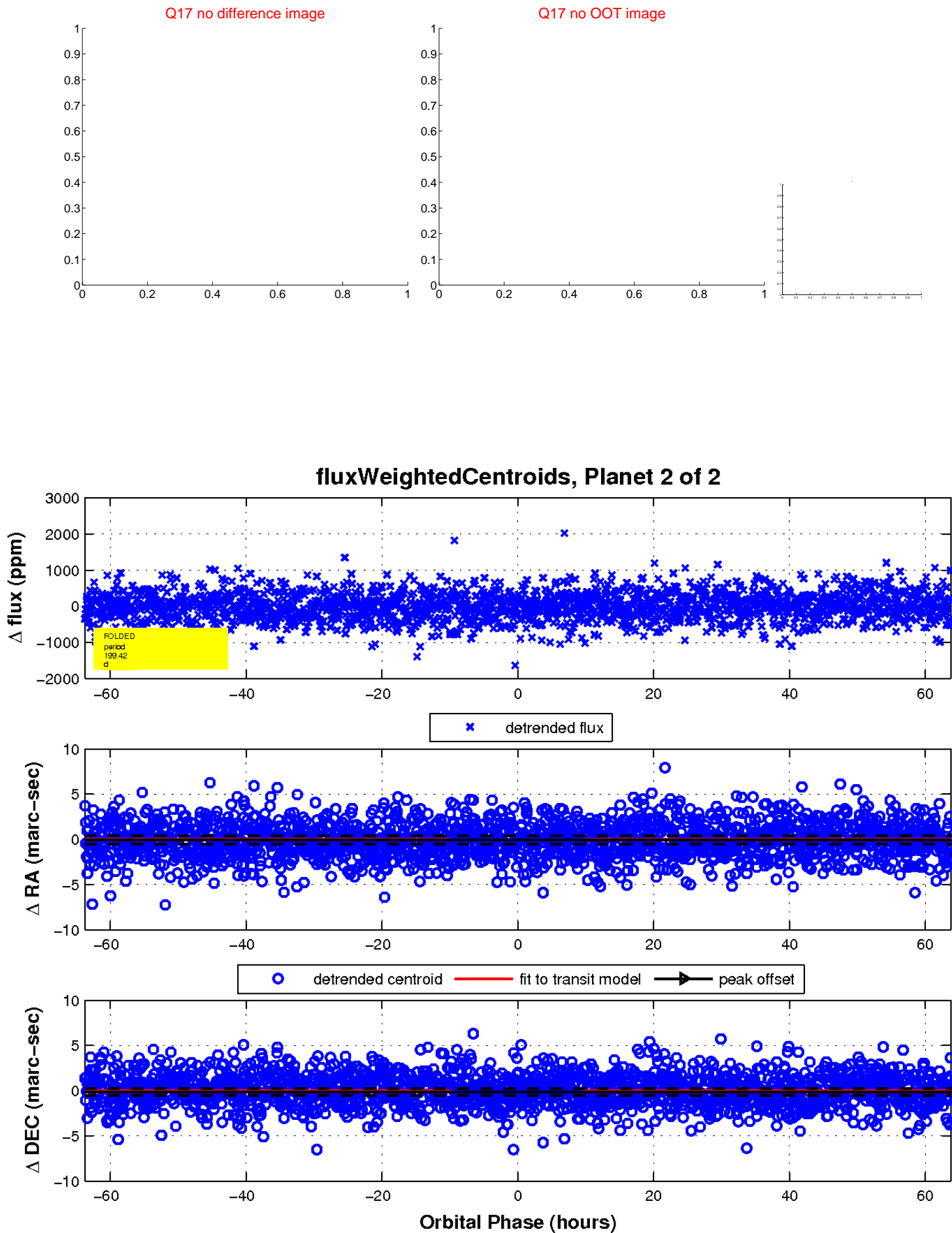
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

