

KIC 011519466

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})
011519466-01	OBS	No	1.447995	132.229674	13.9	5.948	8.3	7.8	2.11	5845	0.83	6990.87
011519466-02	OBS	No	214.841150	273.587800	143.7	12.547	8.3	6.3	2.11	5845	2.83	8.90

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011519466-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET
011519466-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_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.

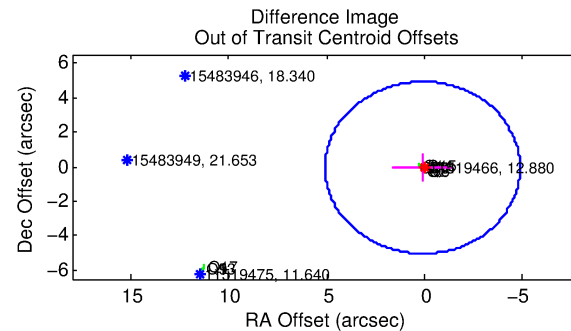
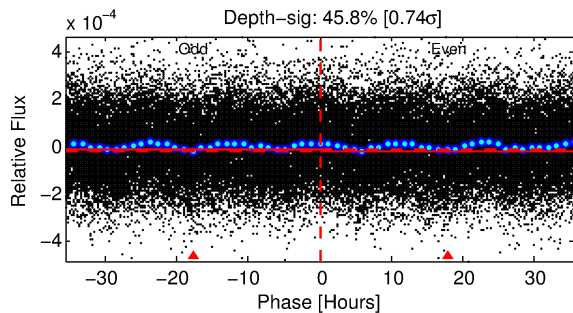
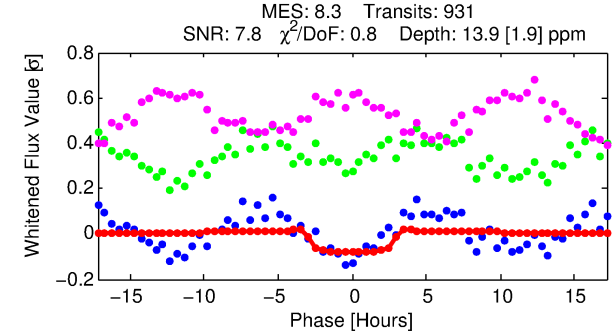
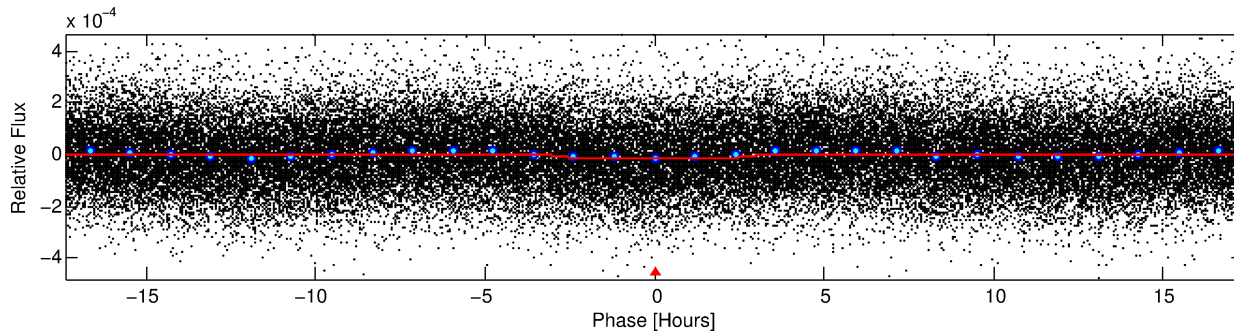
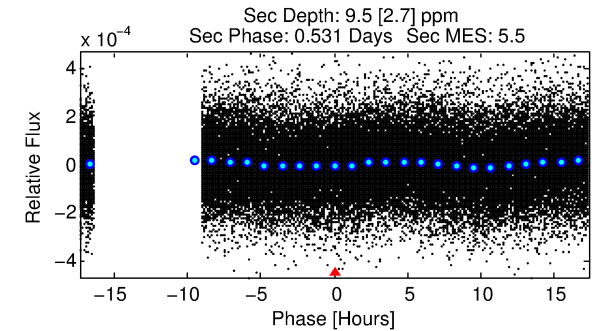
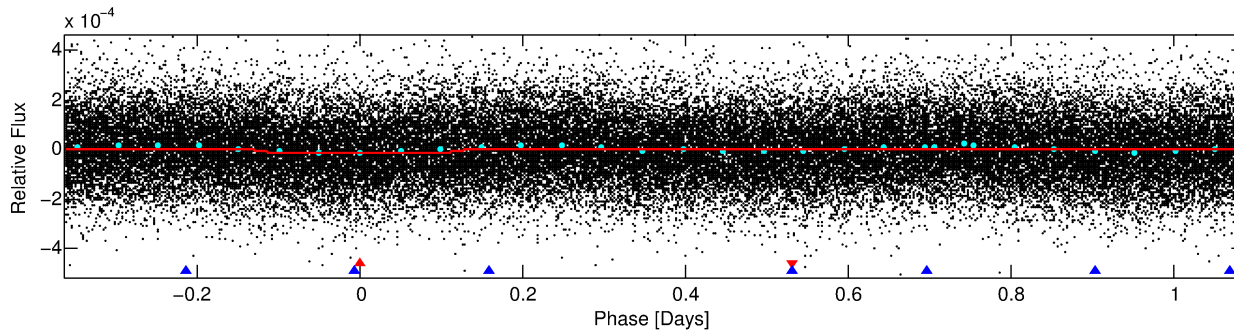
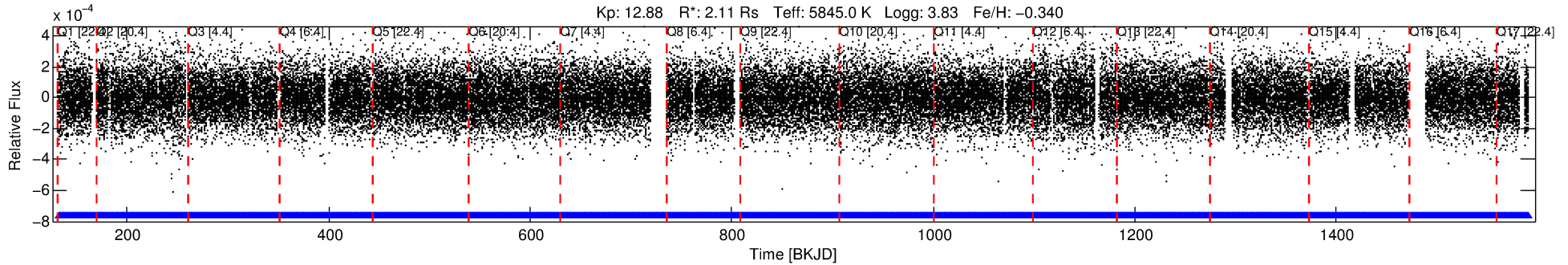
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011519466-01

No Significant Match Found

DV One-Page Summary

KIC: 11519466 Candidate: 1 of 2 Period: 1.448 d



DV Fit Results:

Period = 1.44800 [0.00002] d
Epoch = 132.2297 [0.0068] BKJD
Rp/R* = 0.0036 [0.0011]
a/R* = 1.62 [1.41]
b = 0.66 [1.23]
Seff = 6990.87 [3918.22]
Teq = 2332 [327] K
Rp = 0.83 [0.39] Re
a = 0.0258 [0.0089] AU
Ag = 5.02 [4.33] [0.93σ]
Teffp = 5395 [911] K [3.17σ]

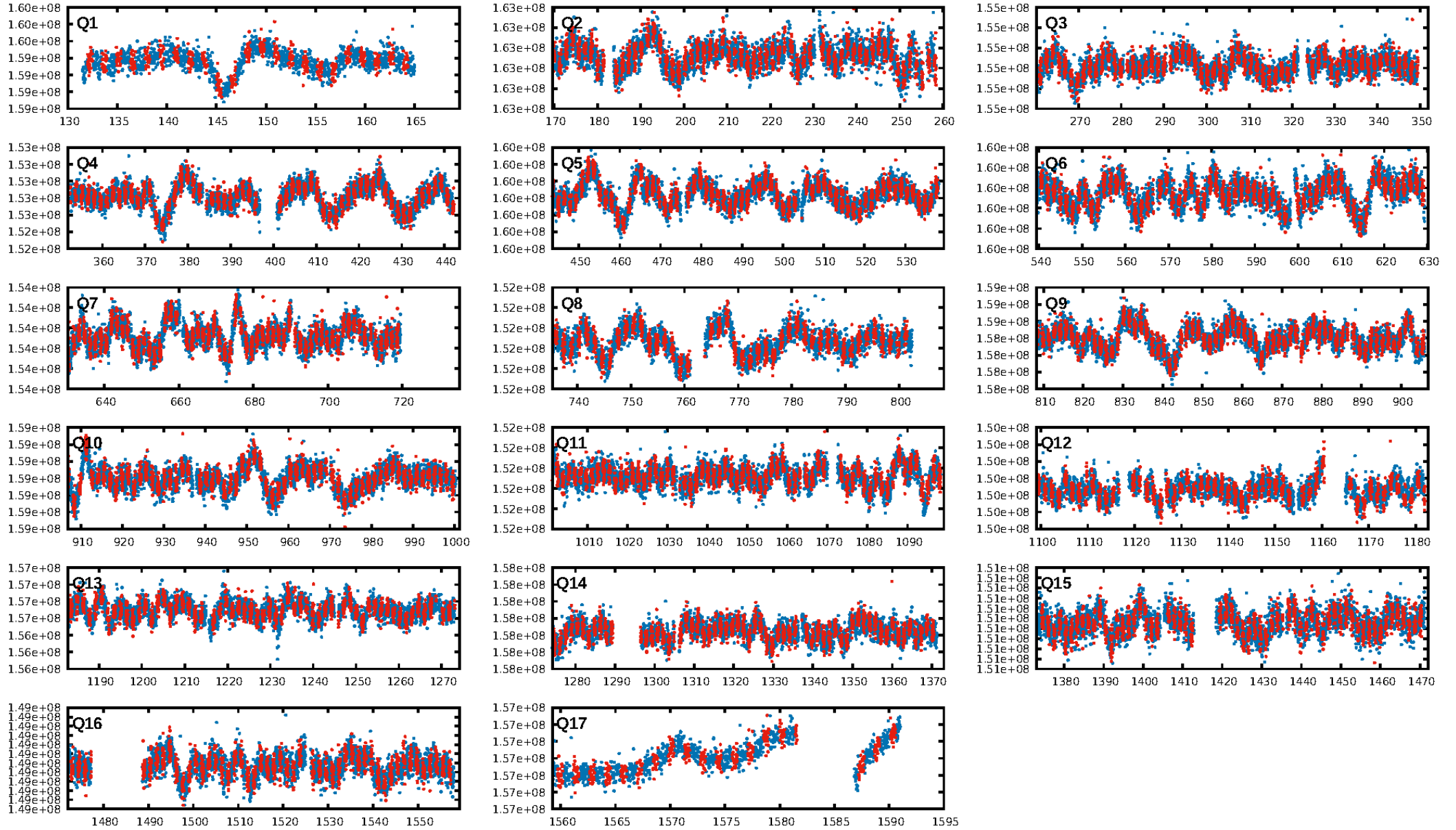
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [368.84σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 5.61e-13
RollingBand-fgt: 1.00 [889/889]
GhostDiagnostic-chr: -0.3503
Centroid-sig: 0.0%
Centroid-so: 8.538 arcsec [2.32σ]
OotOffset-rm: 0.106 arcsec [0.06σ]
KicOffset-rm: 12.904 arcsec [171.90σ]
OotOffset-st: 4/4/0/4 [12]
KicOffset-st: 4/4/0/4 [12]
DiffImageQuality-fgm: 1.00 [12/12]
DiffImageOverlap-fno: 1.00 [17/17]

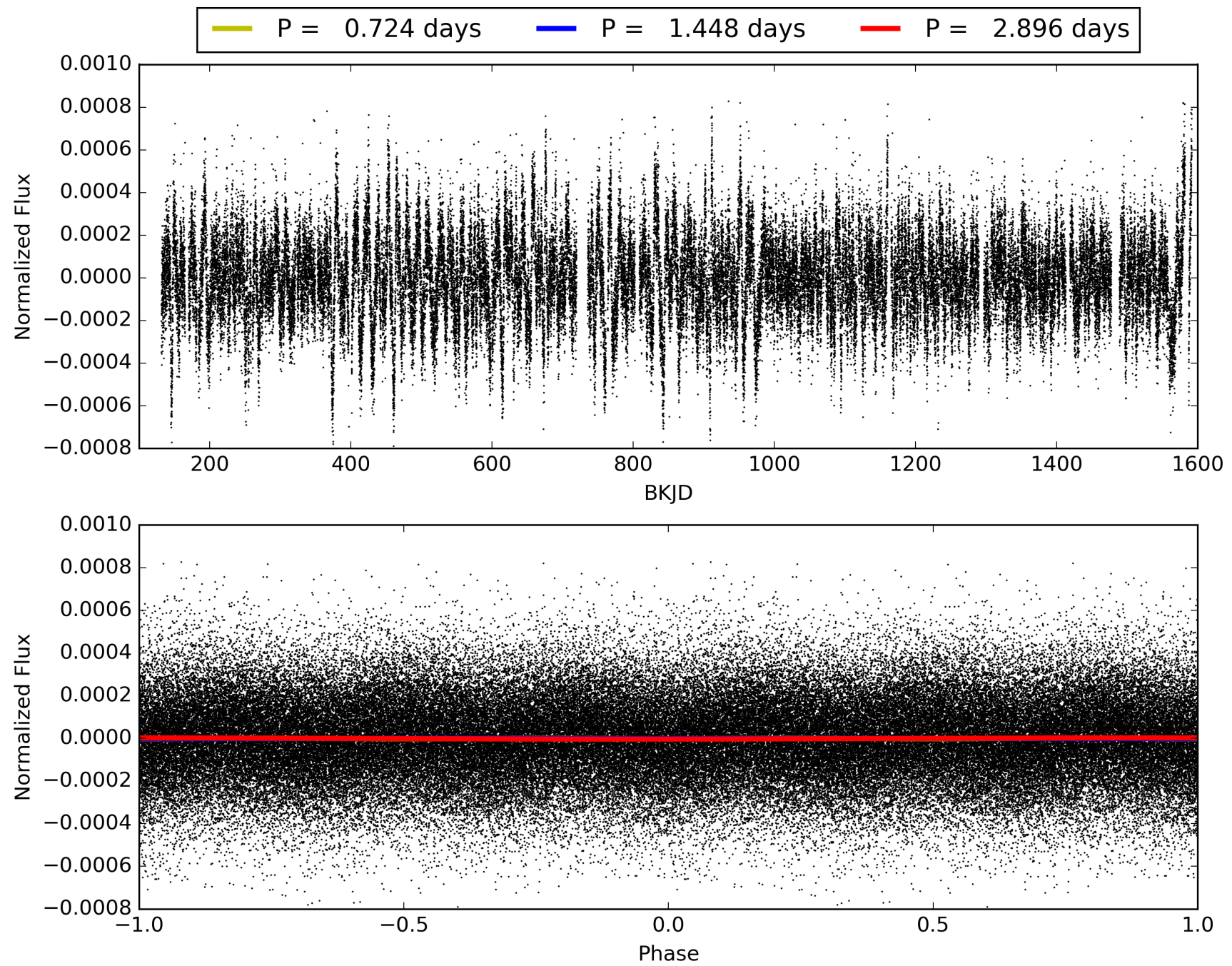
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 02:58:49 Z

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

TCE 011519466-01, PDC Light Curves

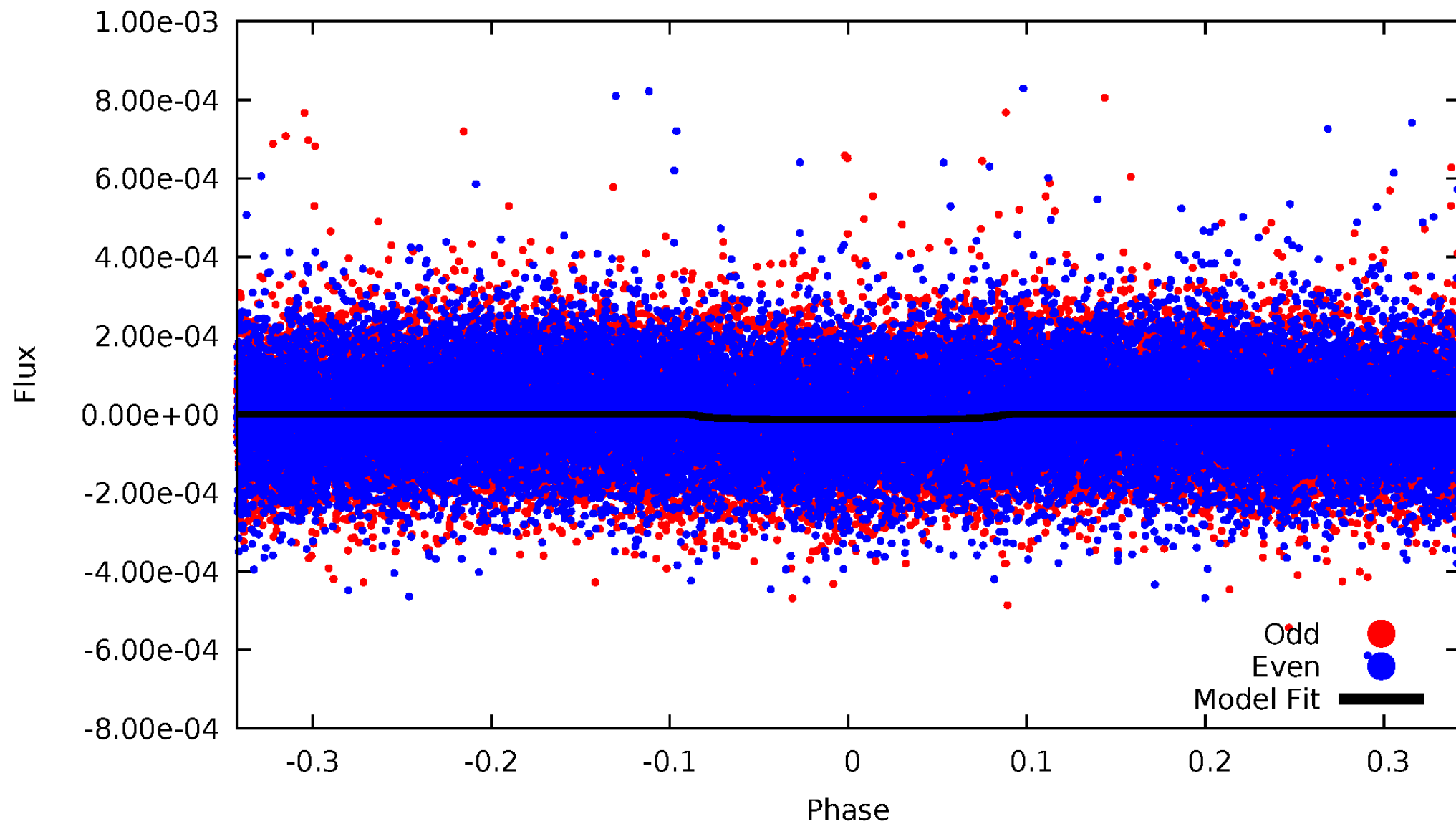


TCE 011519466-01



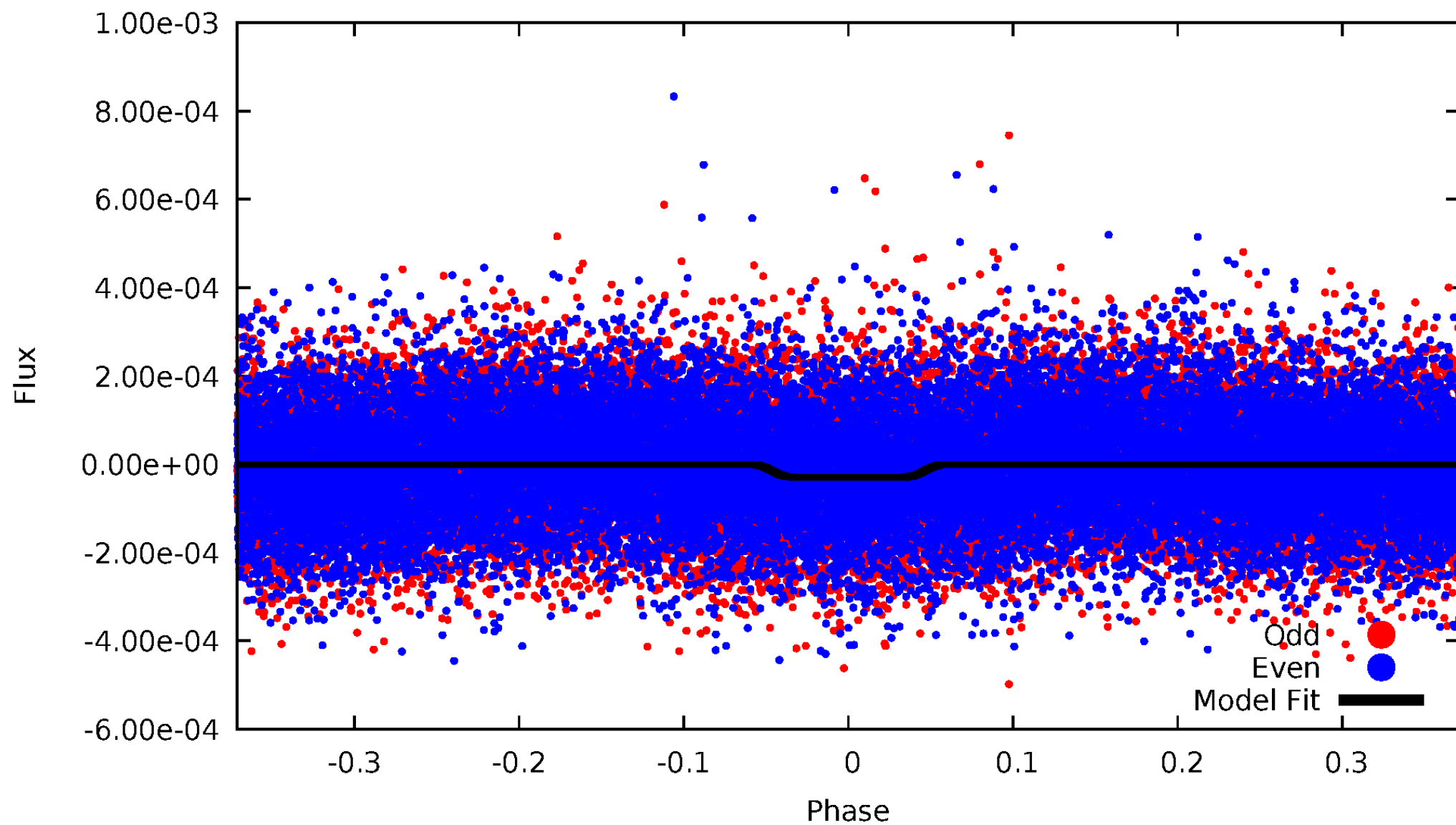
DV Odd/Even

TCE 011519466-01

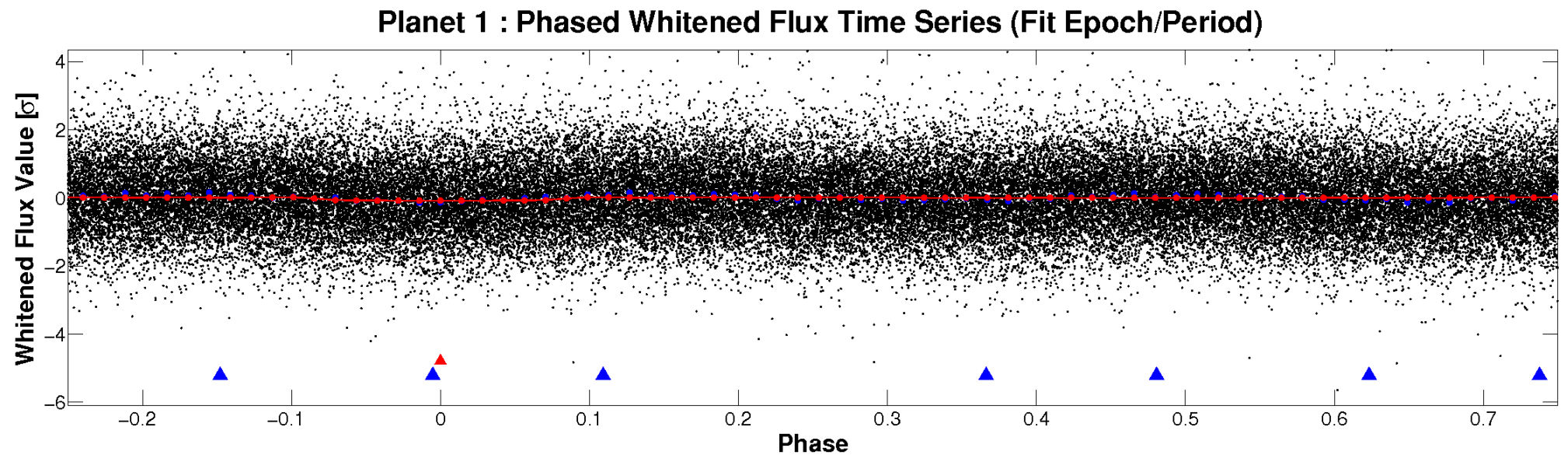
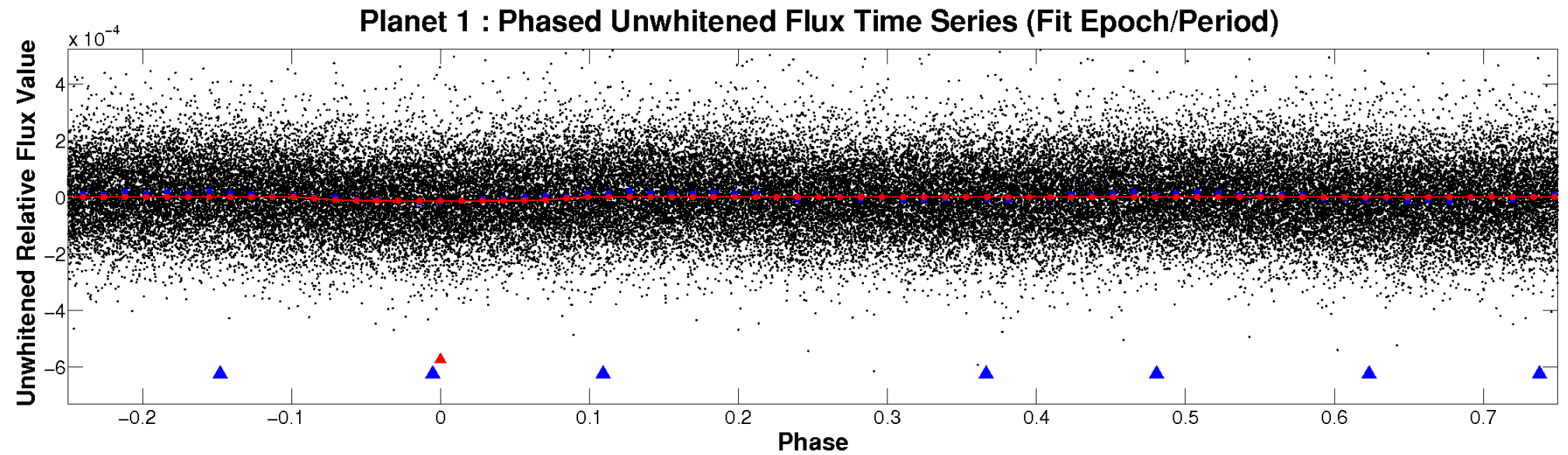


ALT Odd/Even

TCE 011519466-01

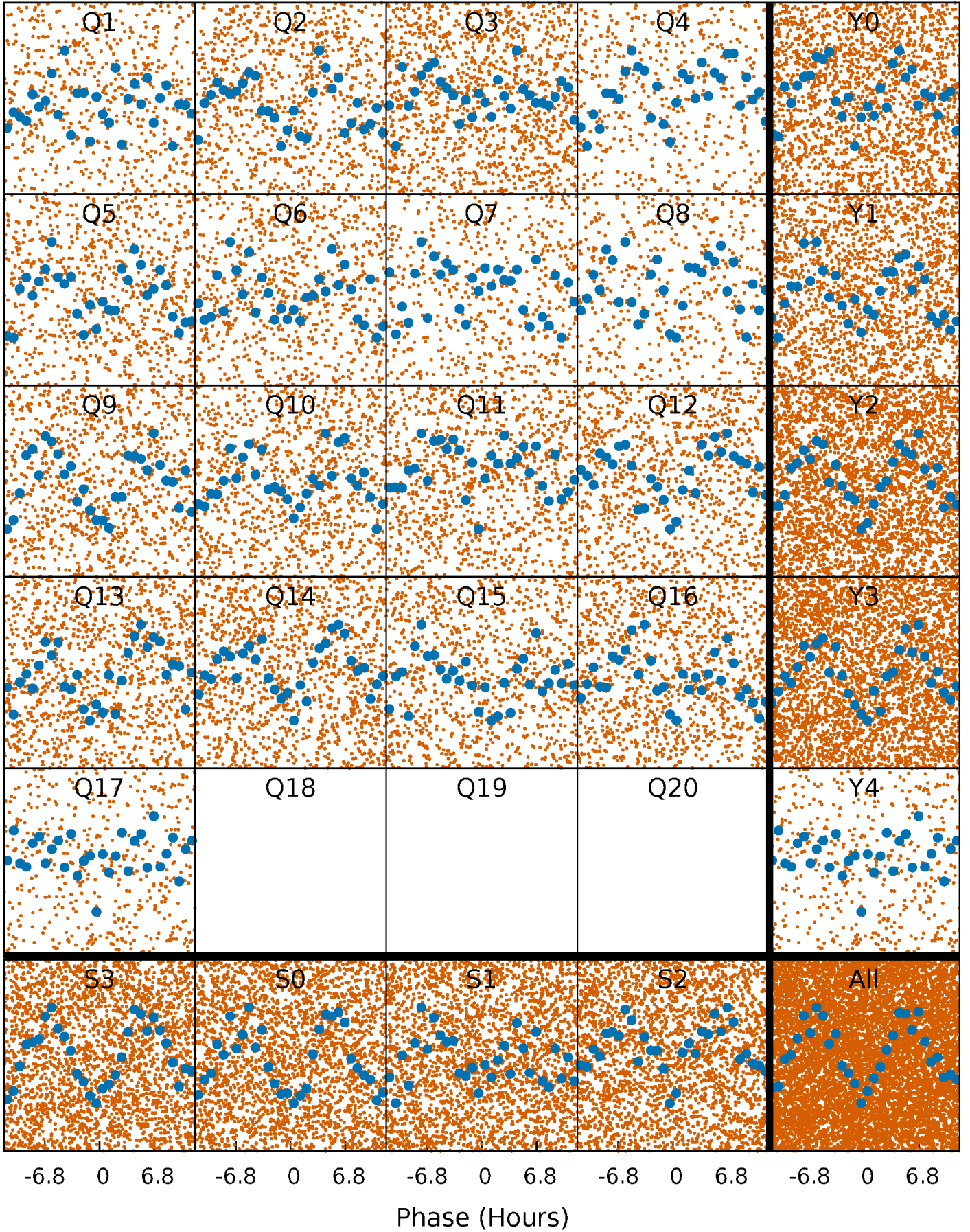


Non-Whitened Vs. Whitened Light Curve



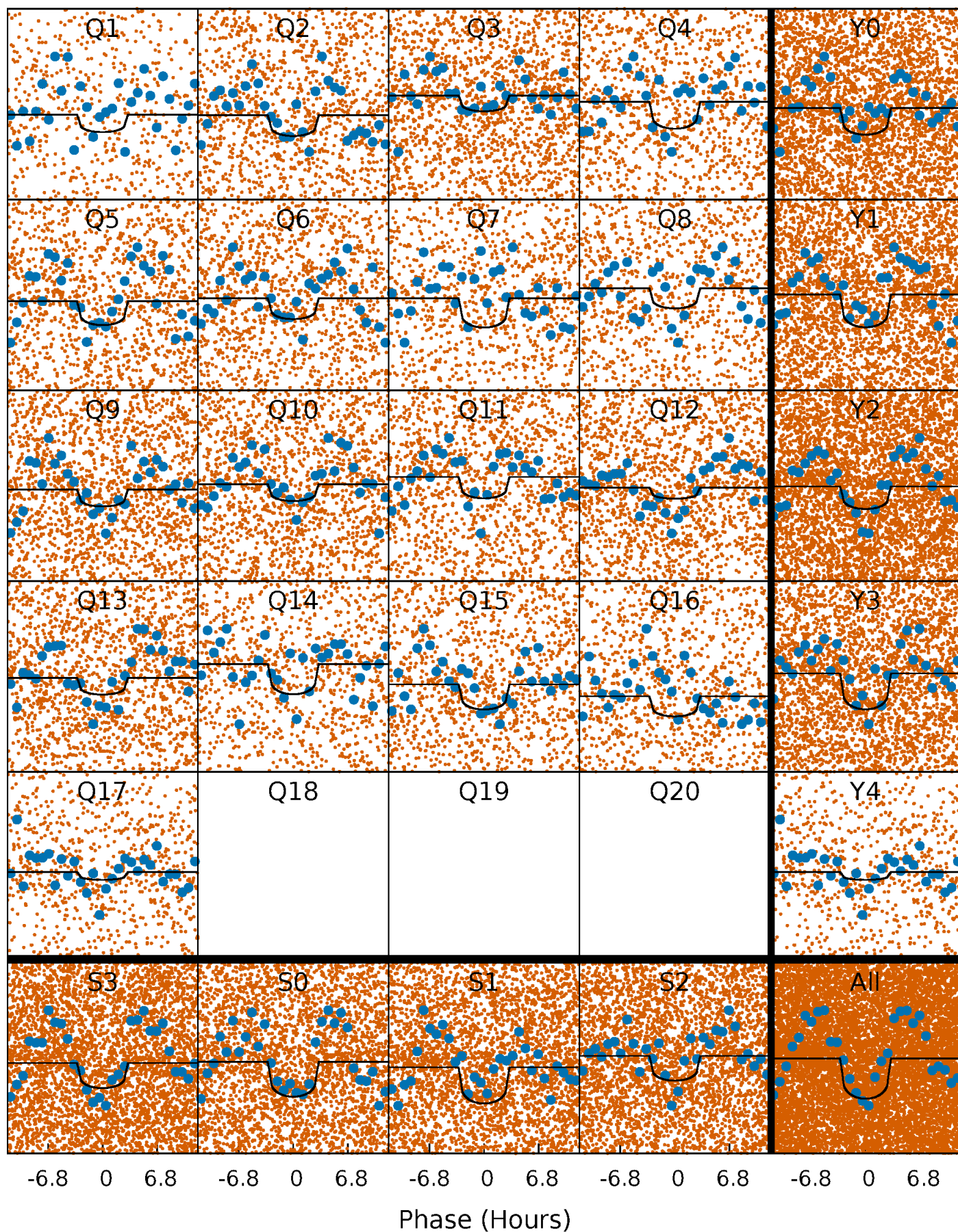
PDC Quarter-Phased Transit Curves

TCE 011519466-01 P= 1.447995 Days $T_0=132.229674$ (BKJD)



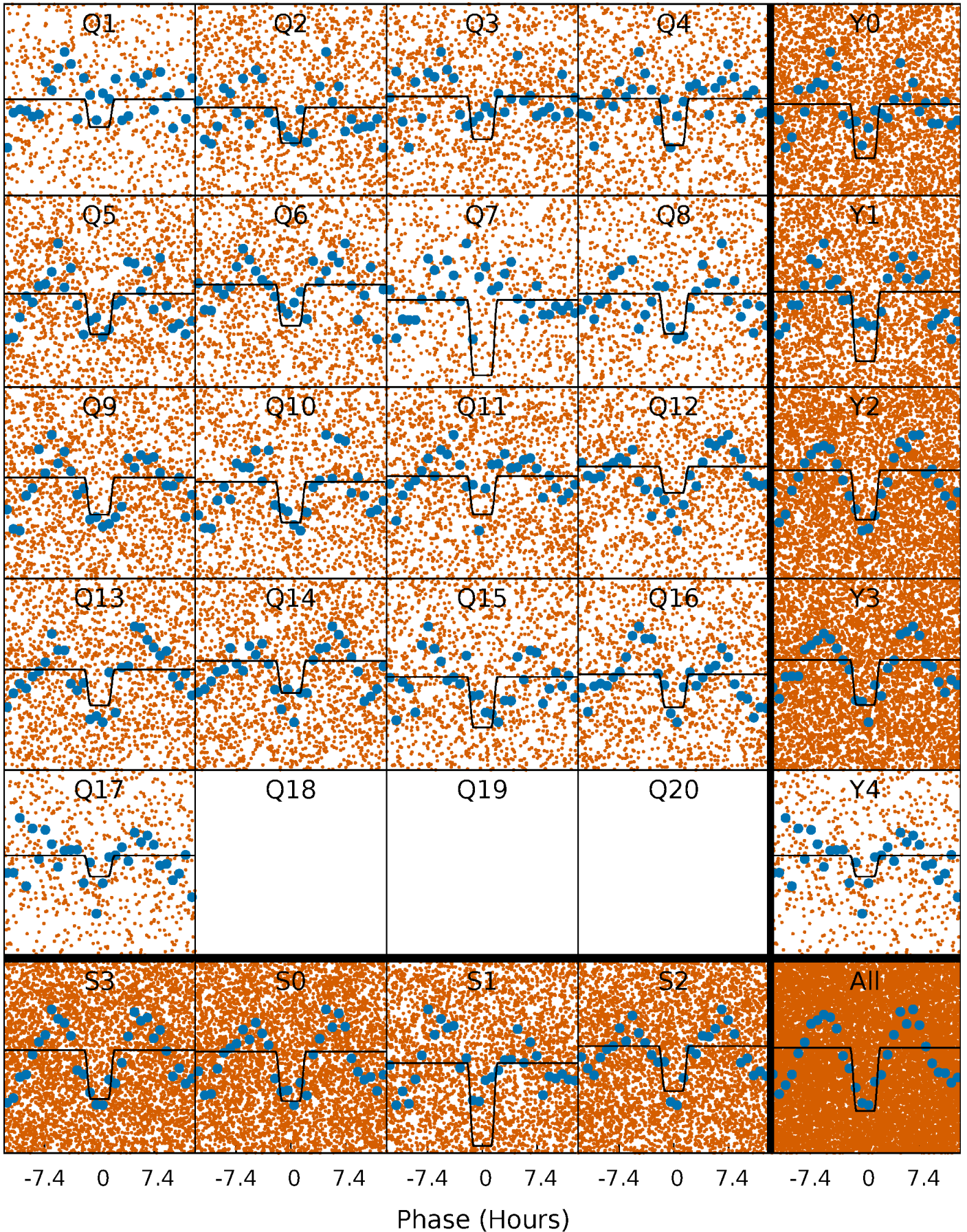
DV Quarter-Phased Transit Curves

TCE 011519466-01 P= 1.447995 Days $T_0=132.229674$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

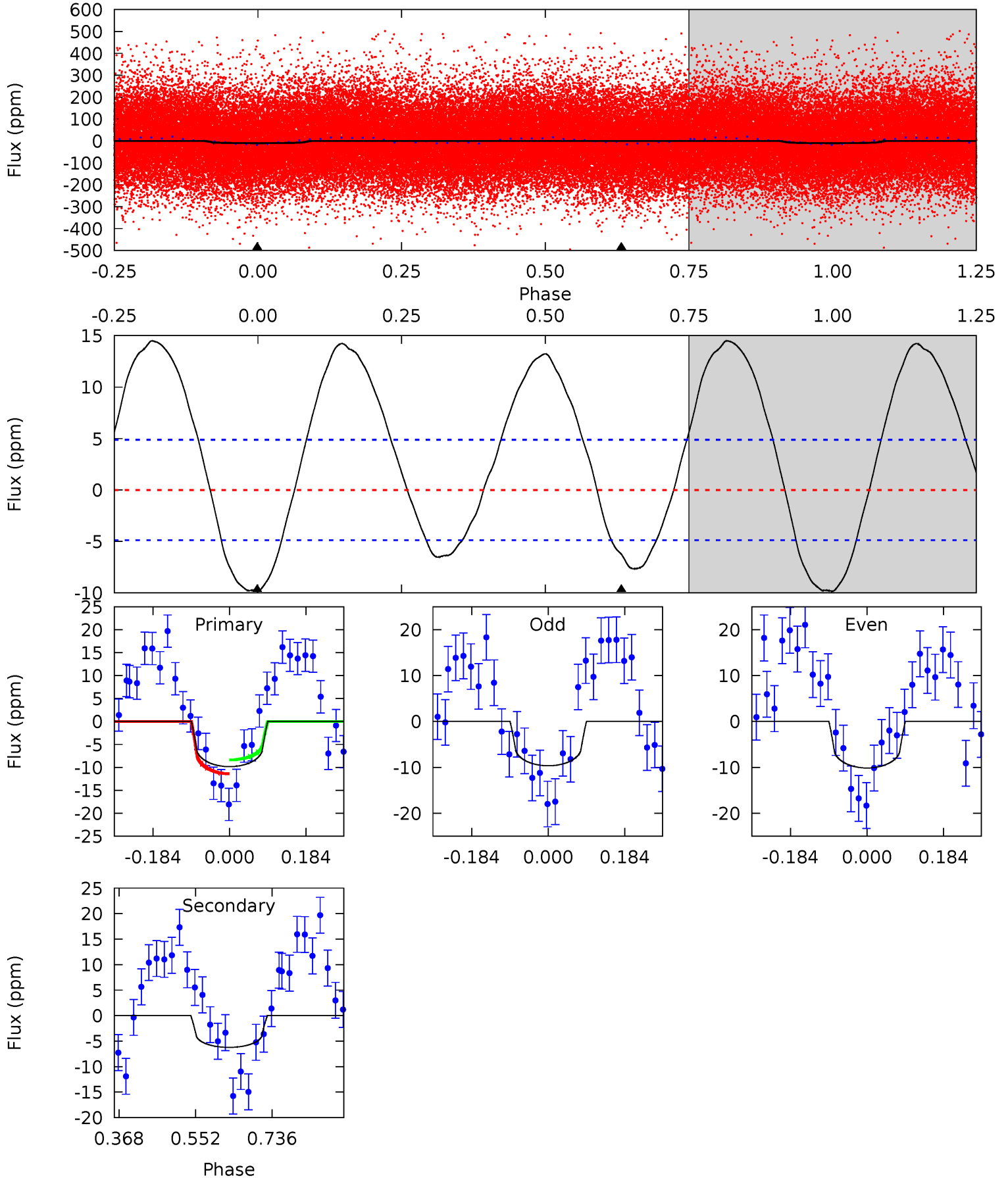
TCE 011519466-01 P= 1.448024 Days $T_0=132.200670$ (BKJD)



DV Model-Shift Uniqueness Test

011519466-01, P = 1.447995 Days, E = 130.781679 Days

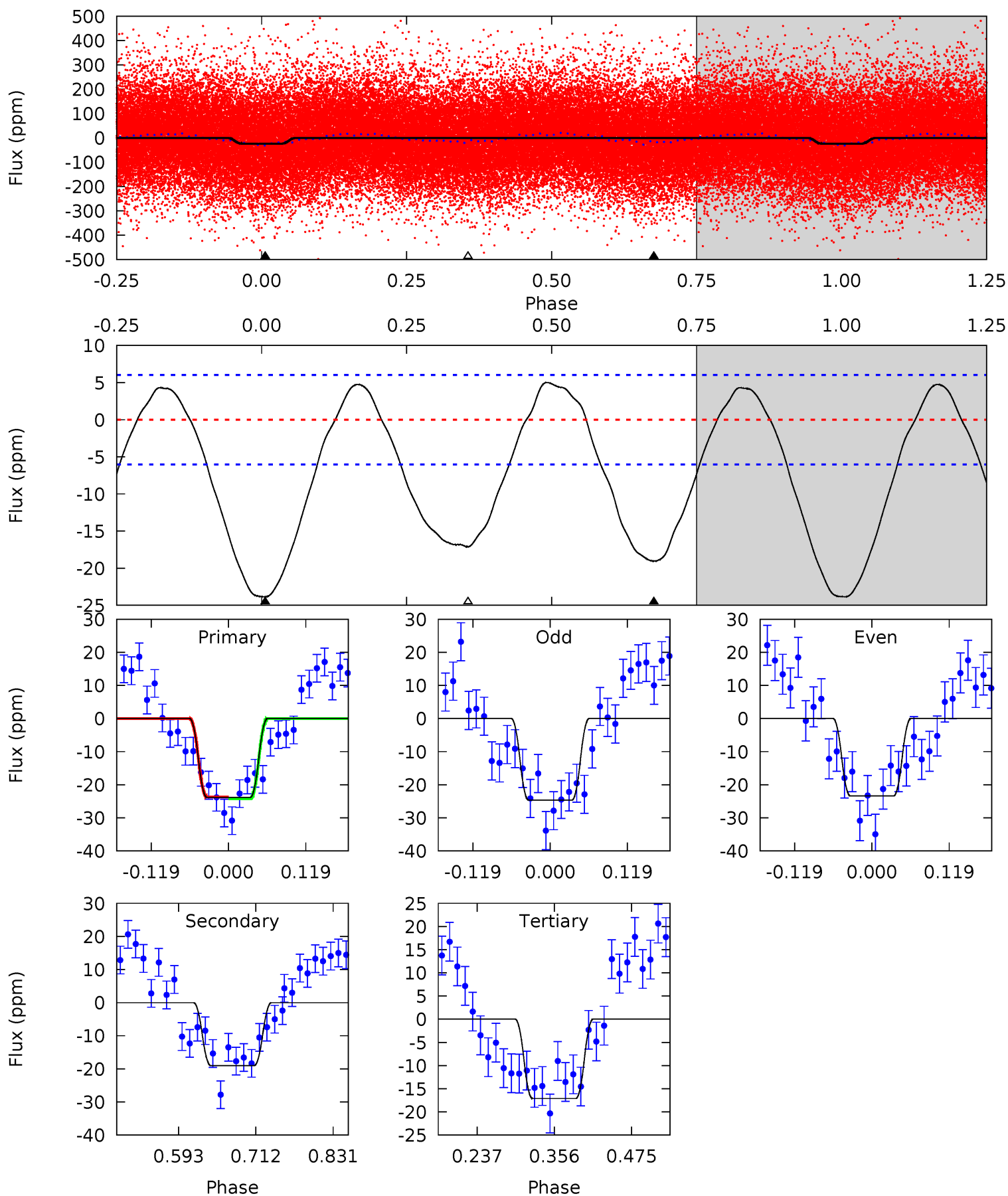
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.94	5.66	0	0	4.44	1.33	5.17	8.94	8.94	5.66	5.66	0.22	1.06	0.60	1.37



Alt Model-Shift Uniqueness Test

011519466-01, P = 1.448024 Days, E = 130.752646 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.9	14.3	12.9	0	4.53	1.56	5.95	5.04	17.9	1.44	14.3	0.47	0.91	0.17	0.20



Stellar Parameters For KIC 011519466

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5845^{+161}_{-147}	$3.828^{+0.323}_{-0.108}$	$-0.340^{+0.350}_{-0.250}$	$2.110^{+0.404}_{-0.750}$	$1.093^{+0.168}_{-0.187}$	$0.164^{+0.330}_{-0.062}$
	+3%/-3%	+8%/-3%	+103%/-74%	+19%/-36%	+15%/-17%	+202%/-38%
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 011519466-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-6 ± 1	$0.77^{+0.31}_{-0.27}$	3206^{+218}_{-310}	4893^{+1008}_{-602}	$3.906^{+5.076}_{-1.899}$
Alt.	-19 ± 1	$1.18^{+0.33}_{-0.32}$	3213^{+195}_{-322}	5224^{+611}_{-454}	$5.031^{+4.323}_{-1.936}$

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

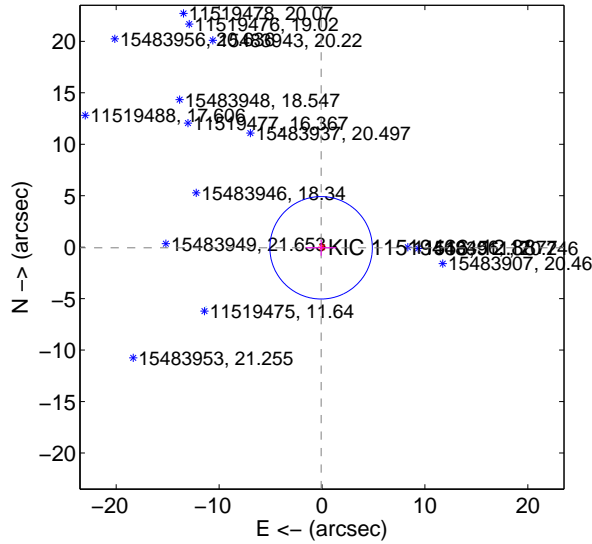
Supplemental centroid analysis for 011519466-01. Kepler magnitude: 12.88. Transit SNR 7.84

There are 12 quarters with good PRF difference image offsets

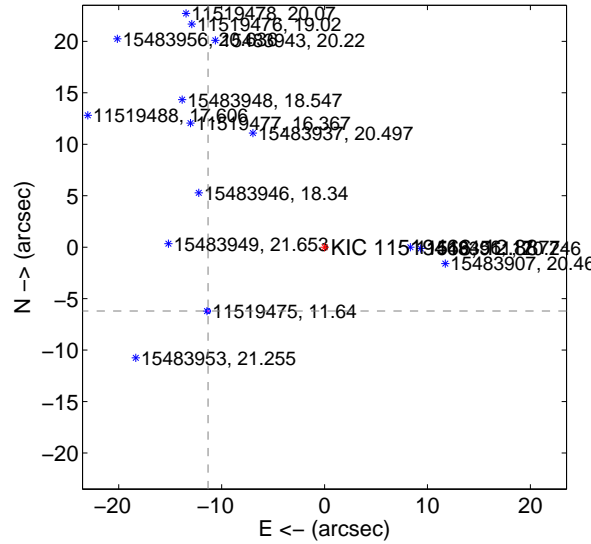
The direct PRF centroid is offset from the target star catalog position by about 0.26 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.106 ± 1.659	0.06	0.088 ± 1.484	-0.060 ± 0.771
PRF-fit source offset from KIC position	12.904 ± 0.075	171.90	11.315 ± 0.074	-6.204 ± 0.078
photometric centroid source offset	8.54 ± 3.68	2.32	-7.66 ± 3.90	3.78 ± 2.60

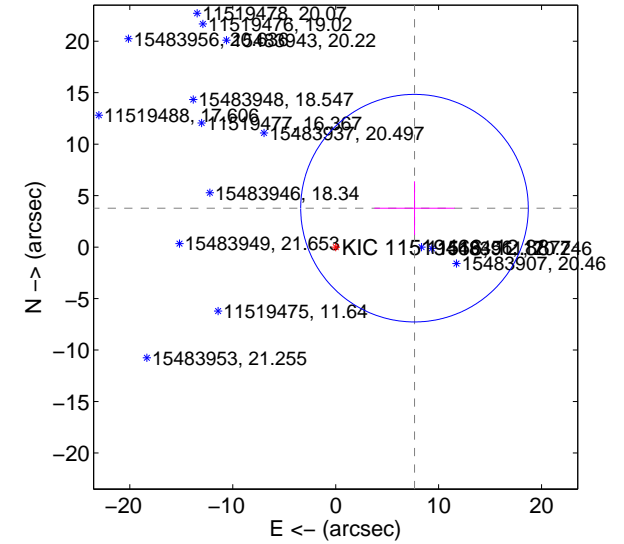
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

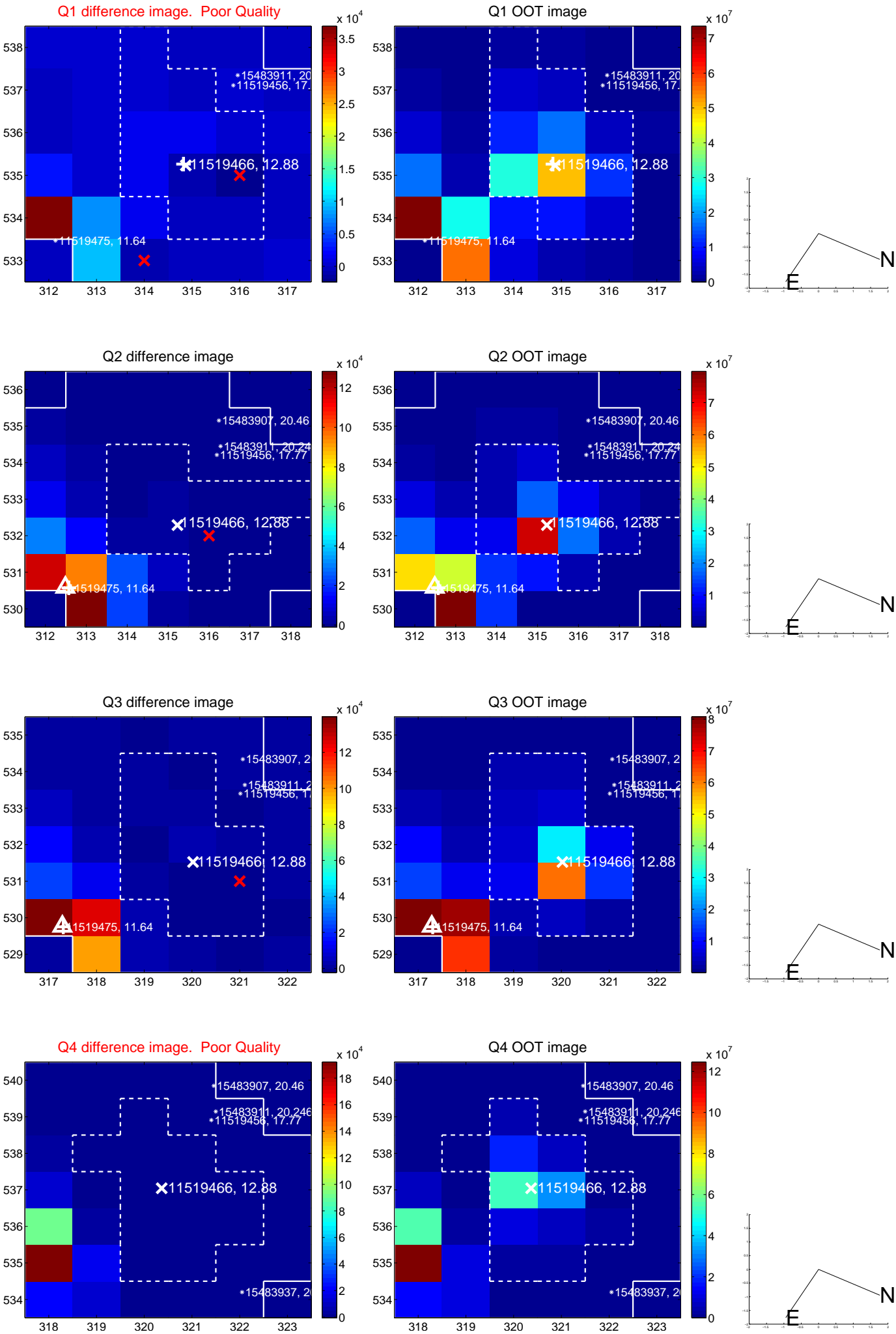


offset from photometric centroids

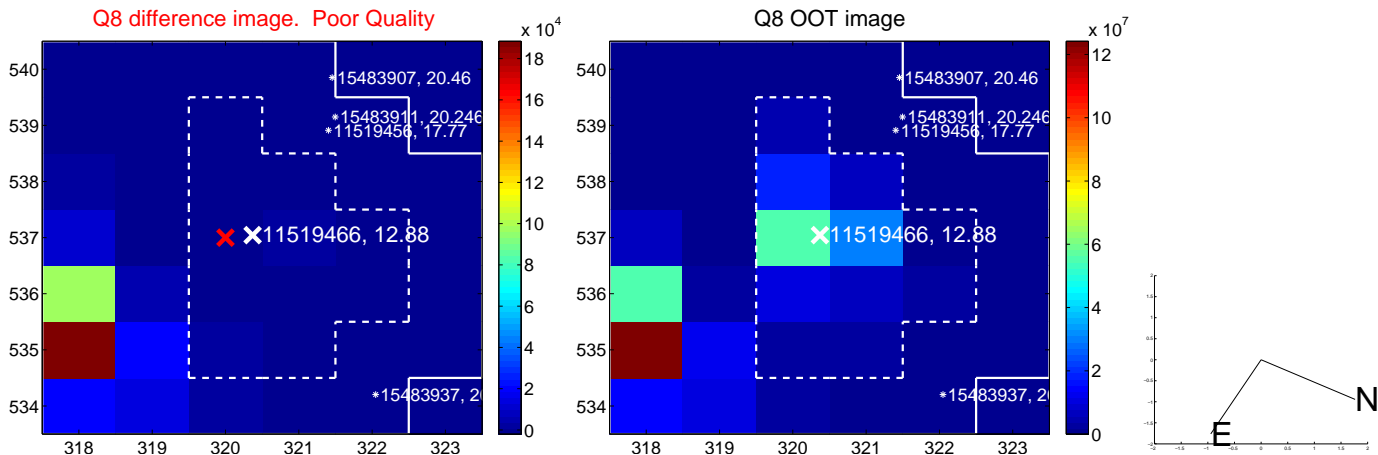
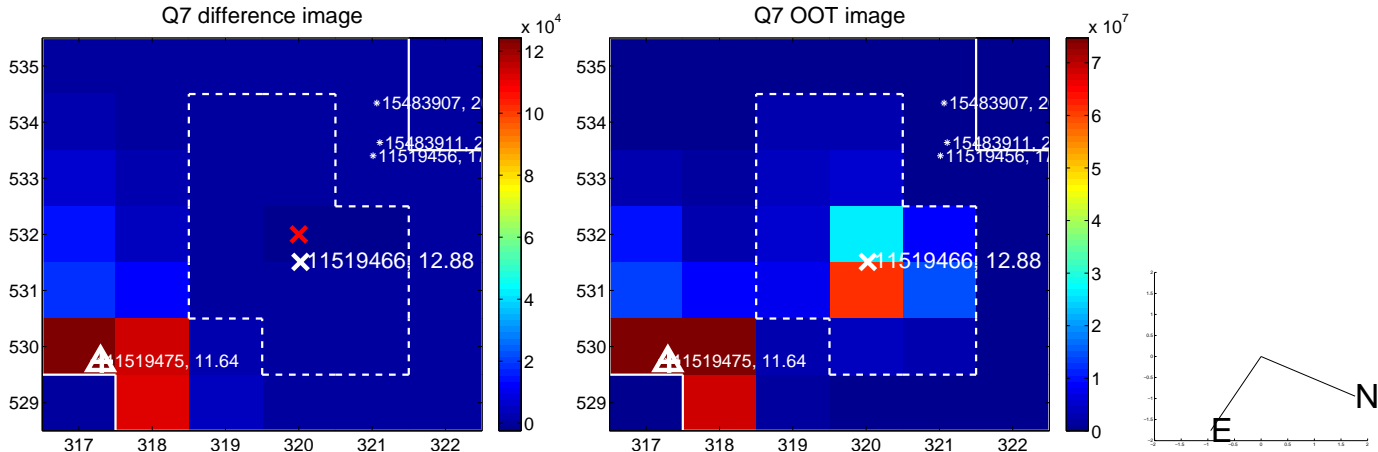
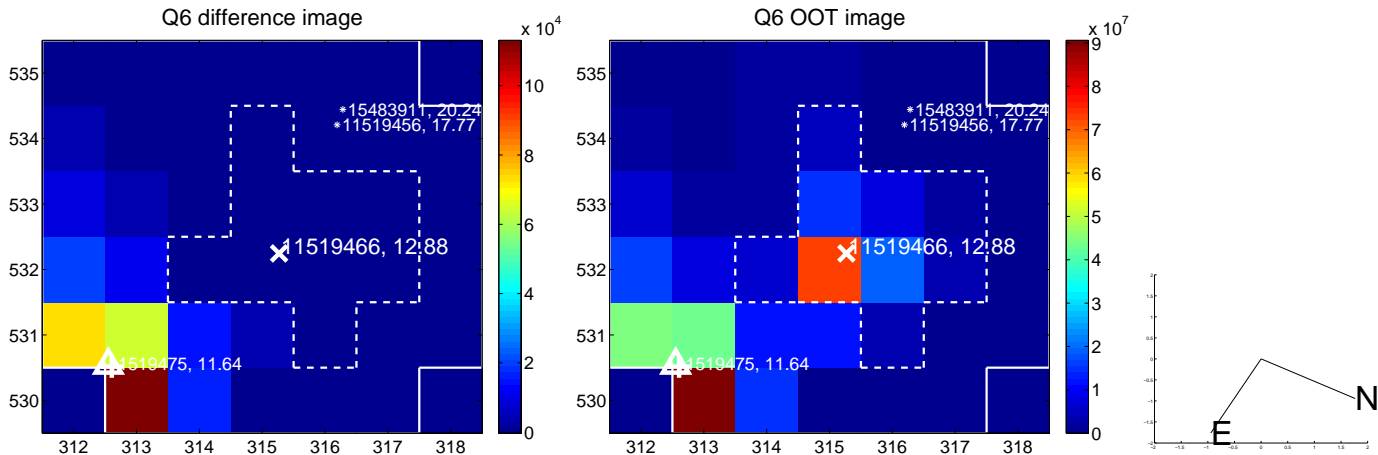
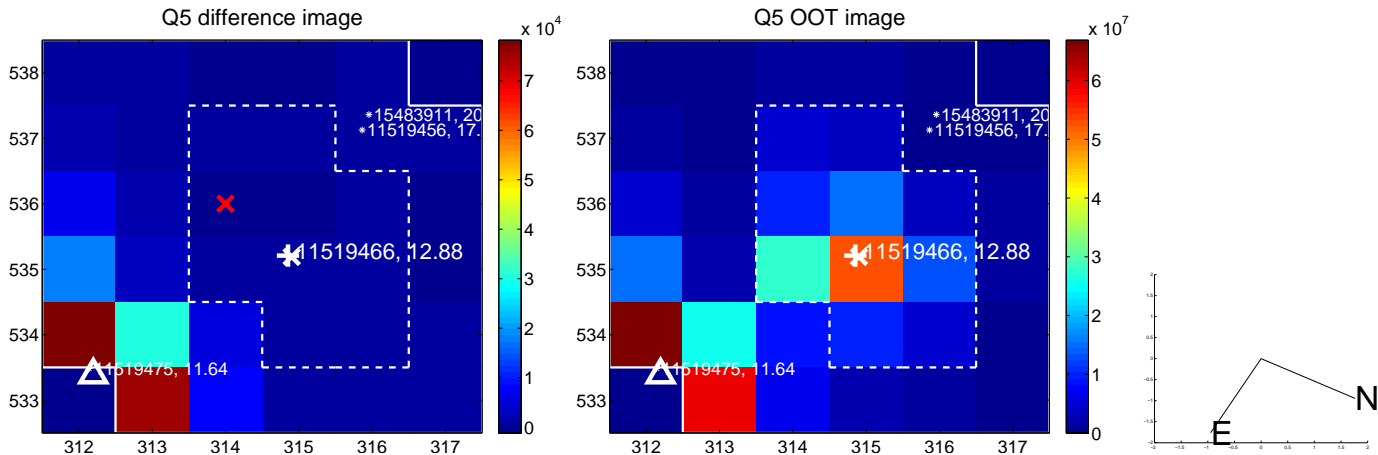


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

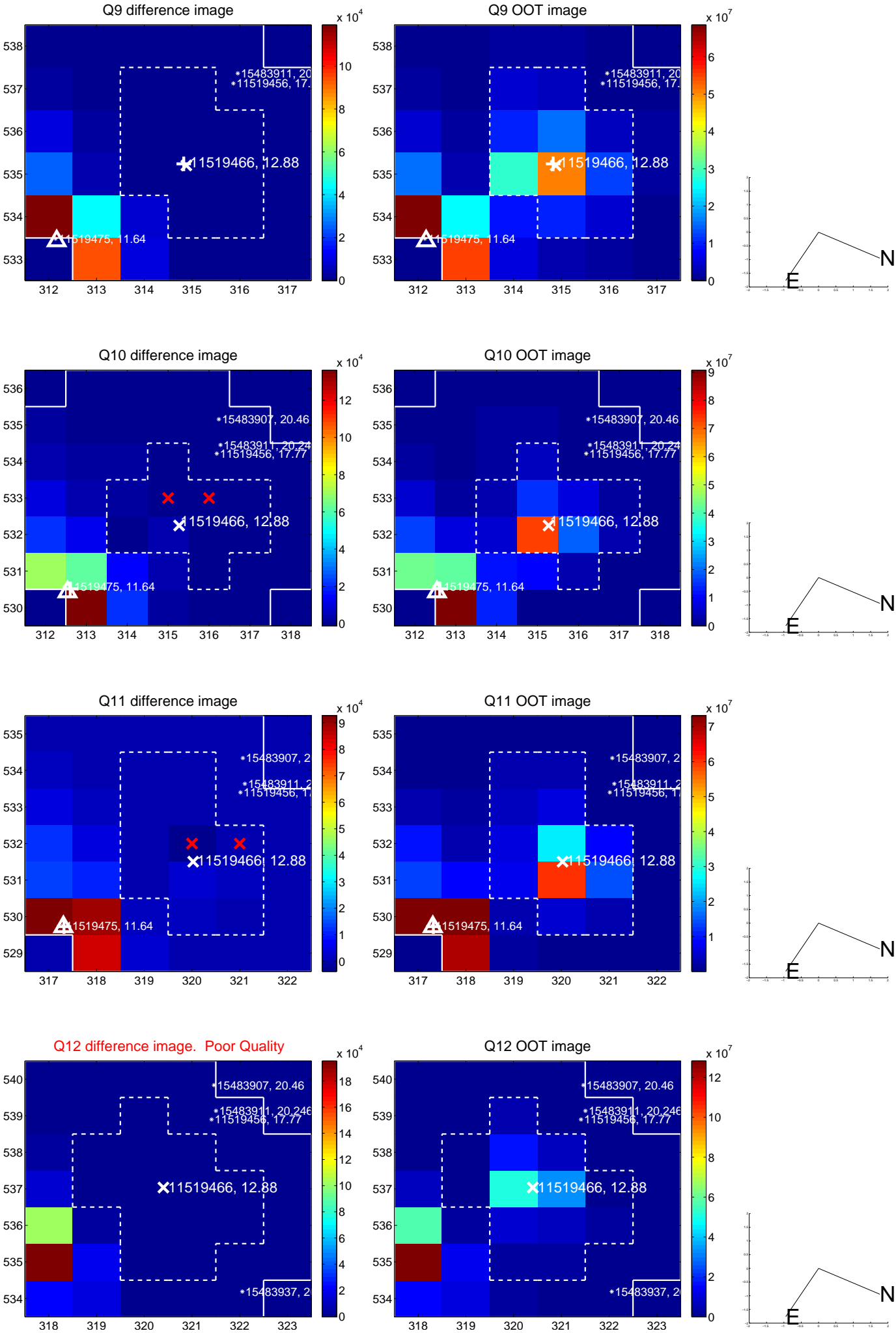
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



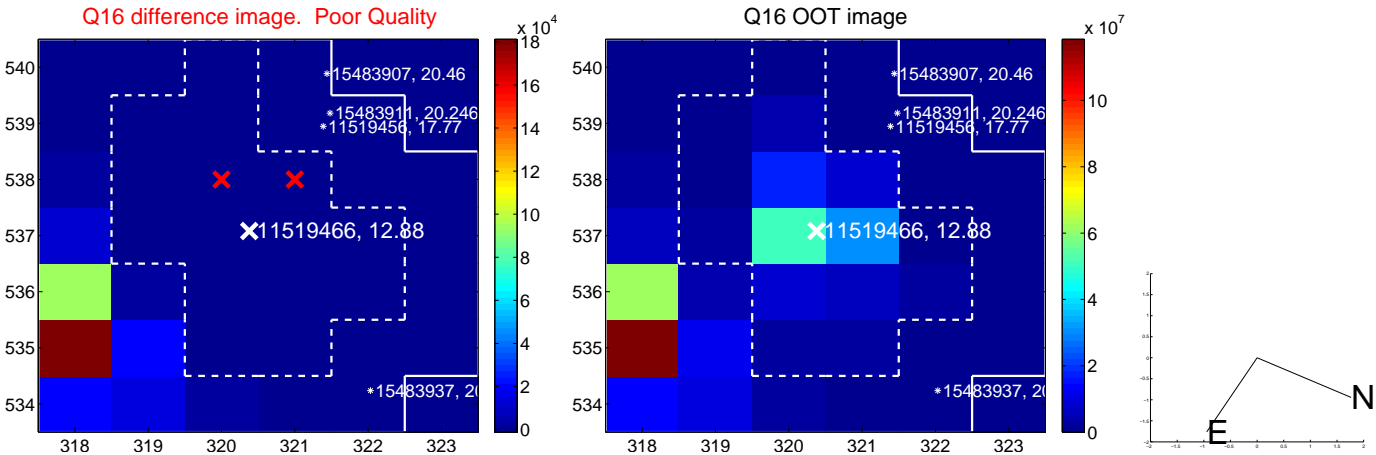
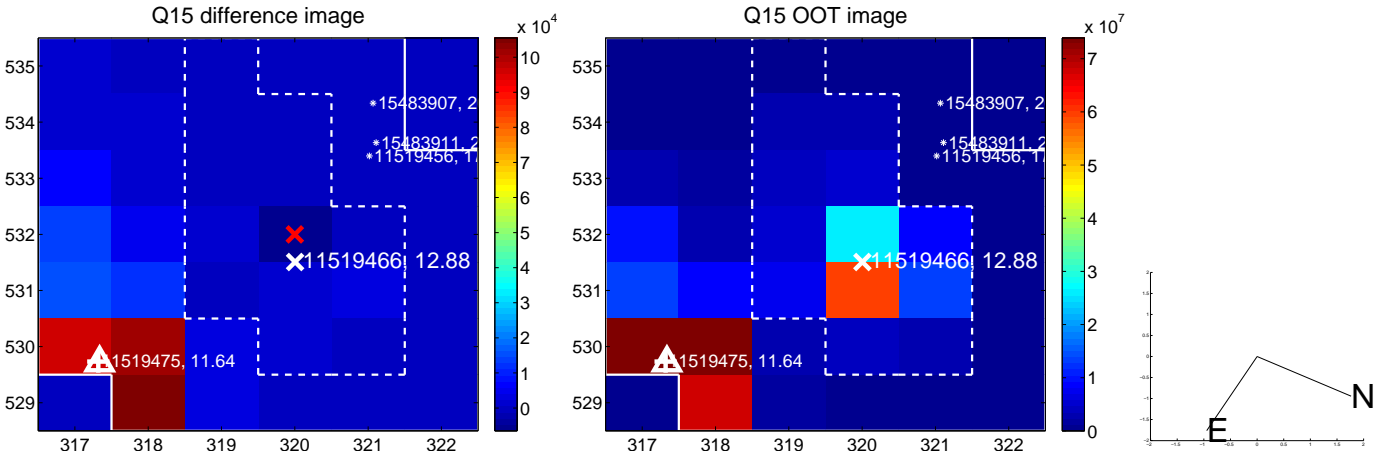
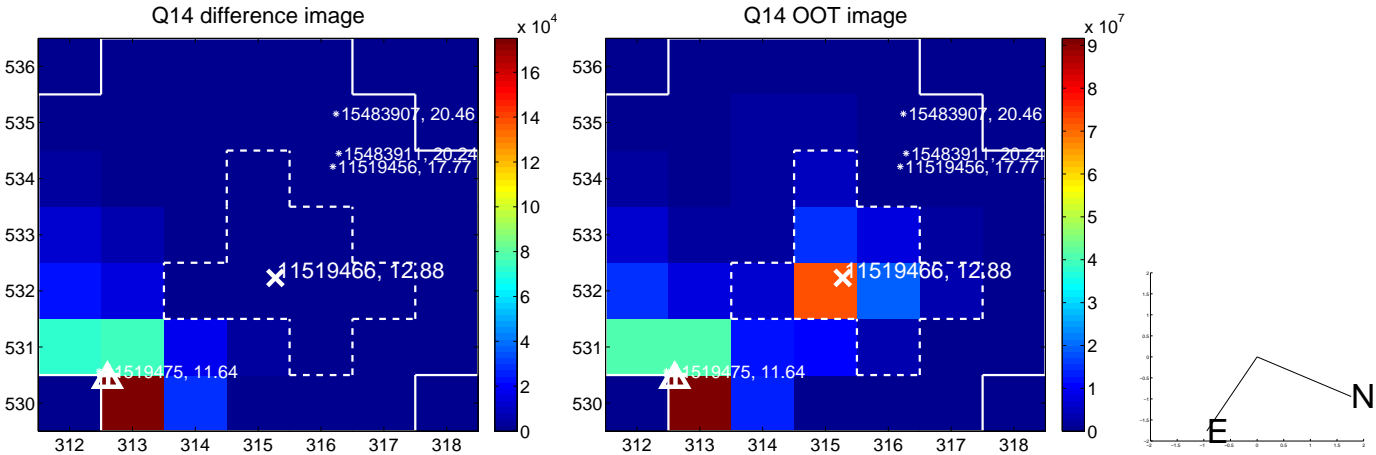
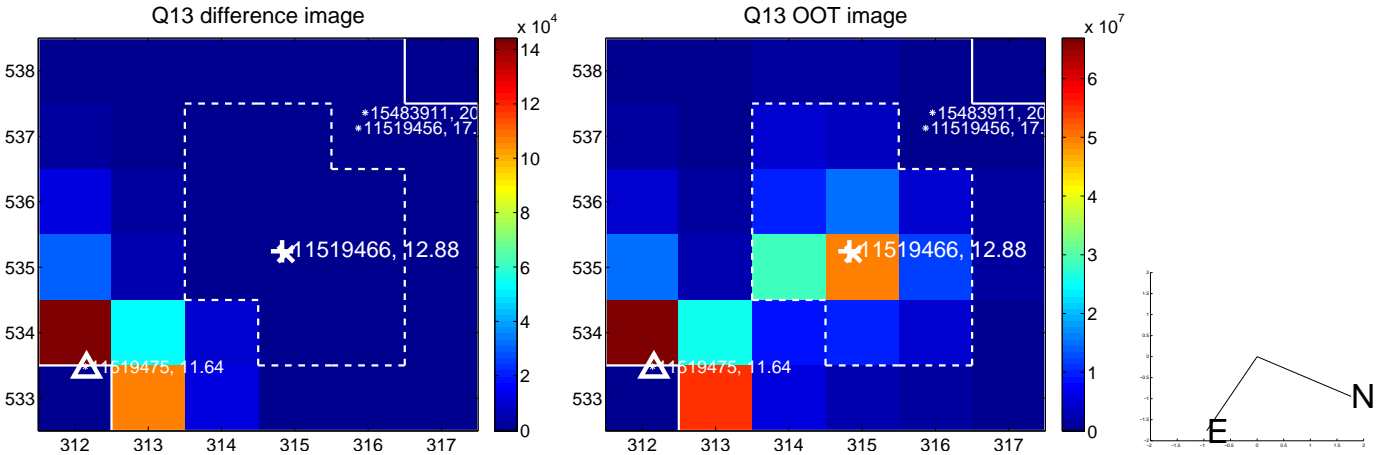
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



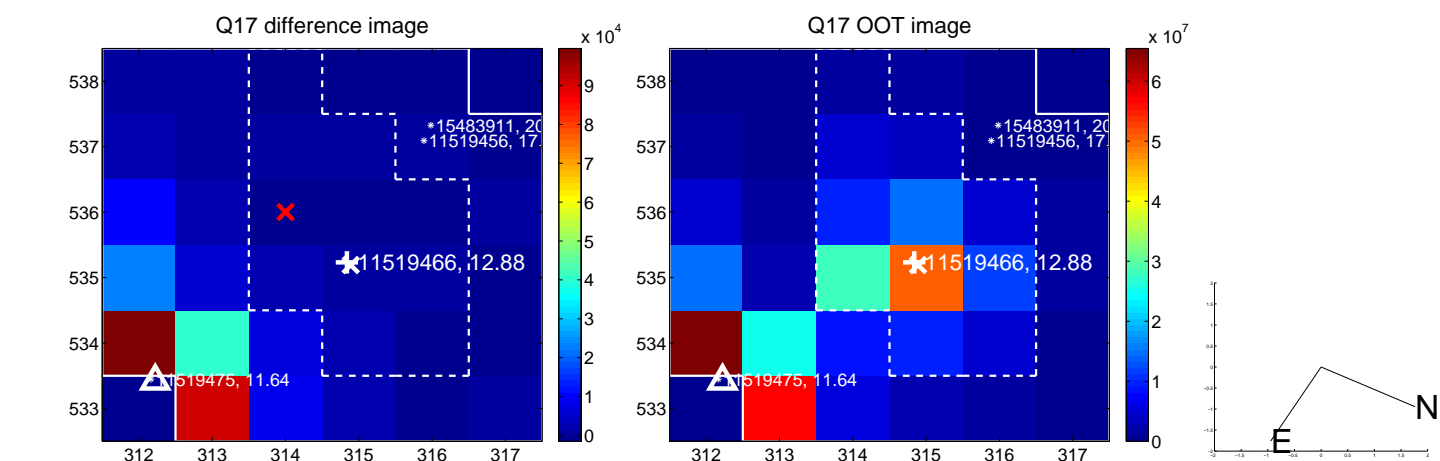
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



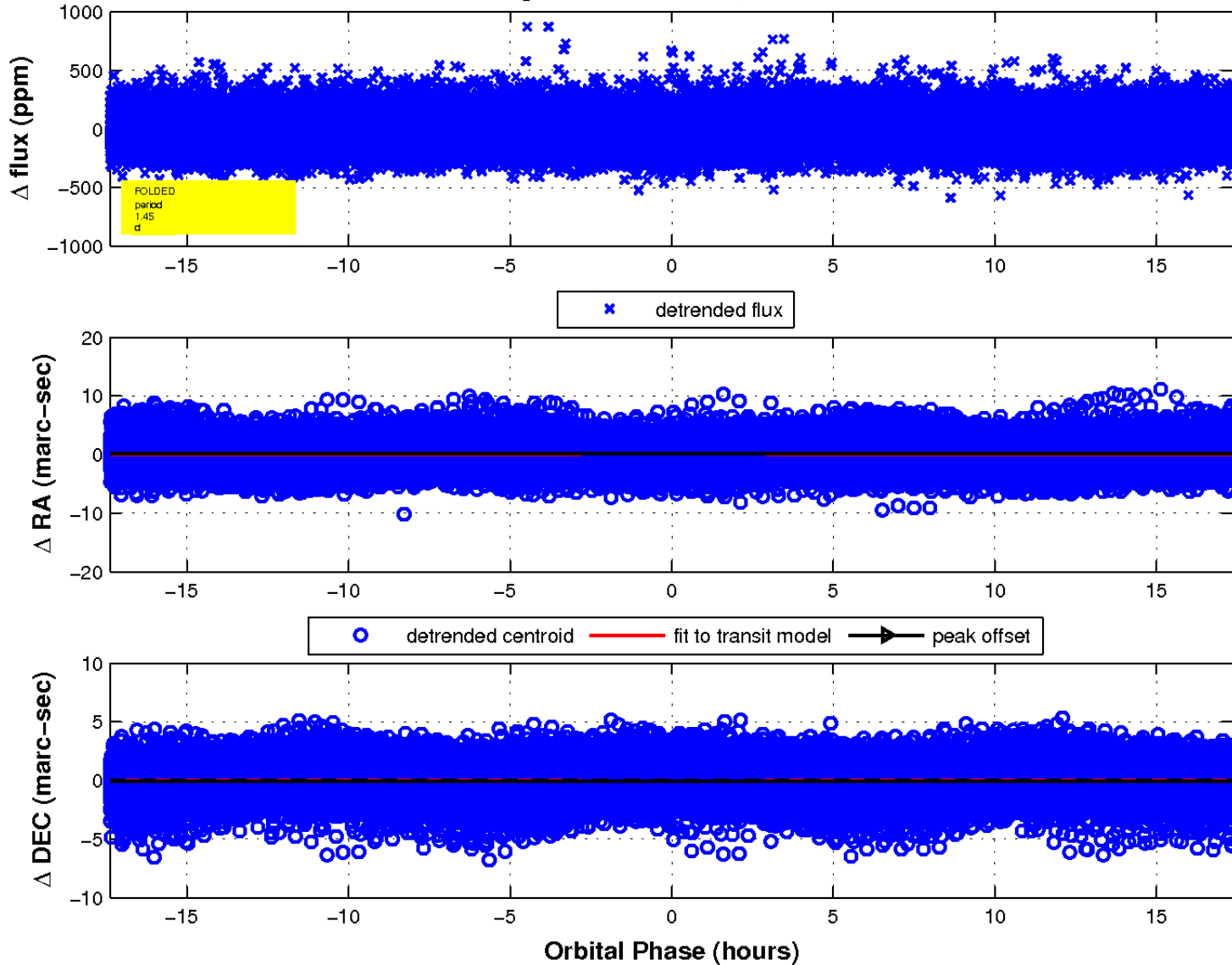
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

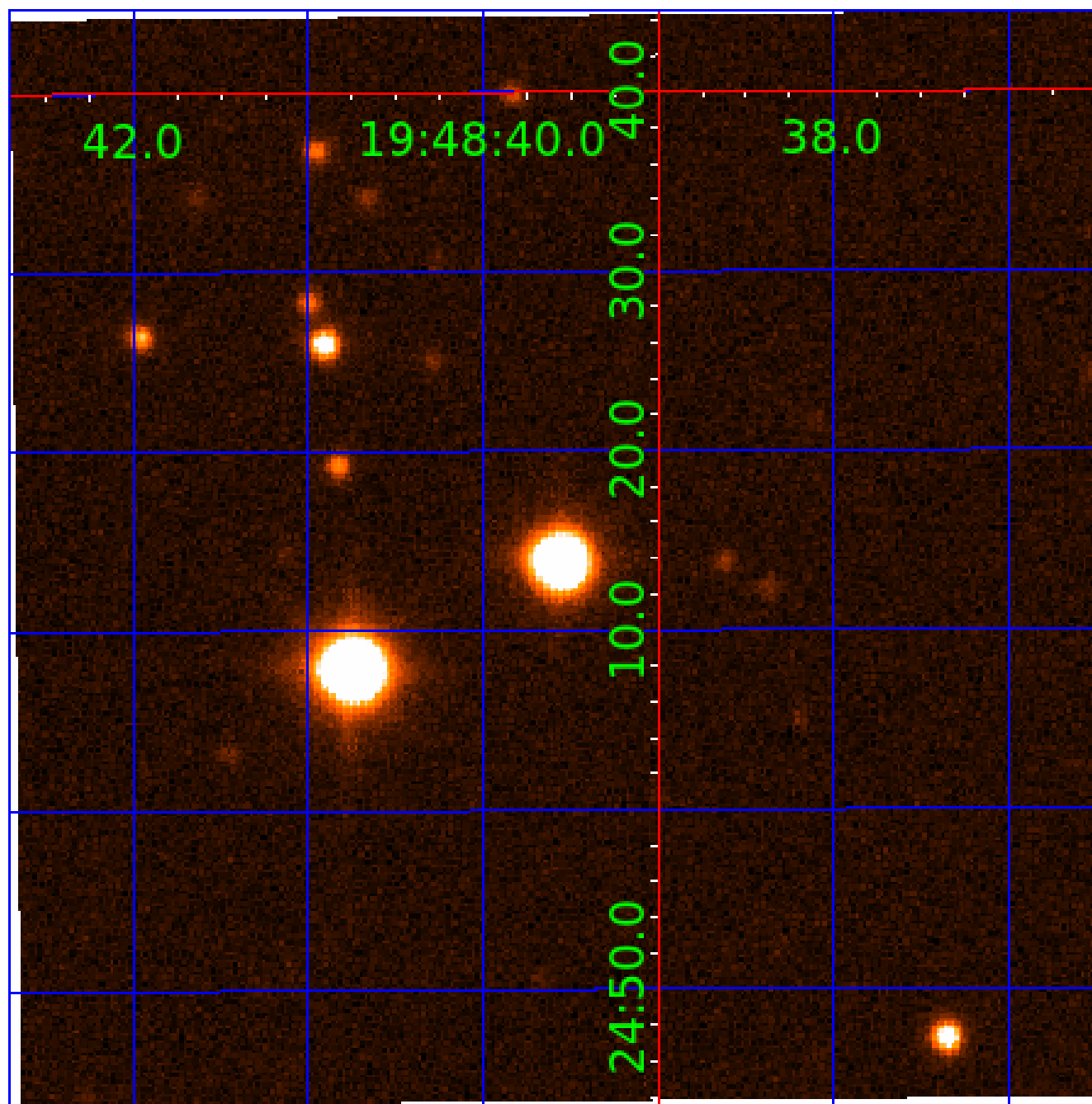


fluxWeightedCentroids, Planet 1 of 2



UKIRT Image

Declination



KIC 011519466

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})
011519466-01	OBS	No	1.447995	132.229674	13.9	5.948	8.3	7.8	2.11	5845	0.83	6990.87
011519466-02	OBS	No	214.841150	273.587800	143.7	12.547	8.3	6.3	2.11	5845	2.83	8.90

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011519466-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET
011519466-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_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.

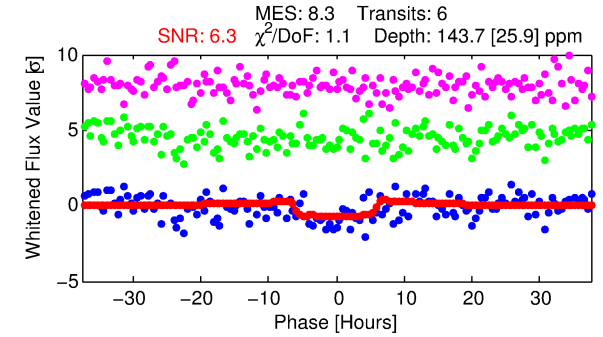
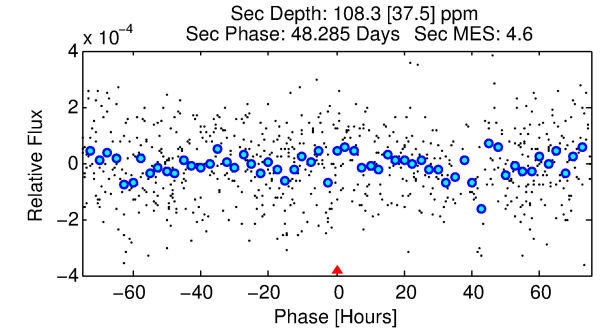
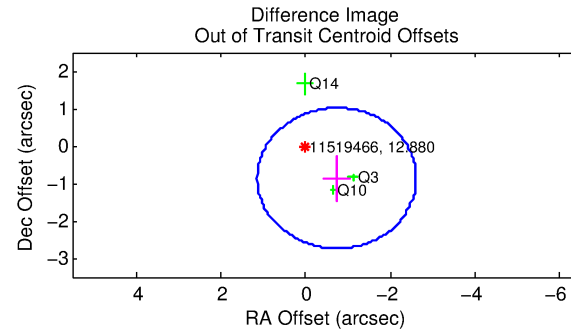
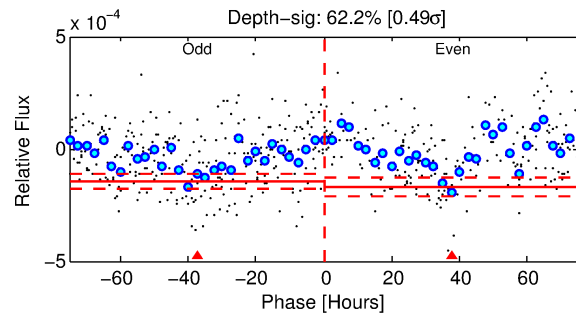
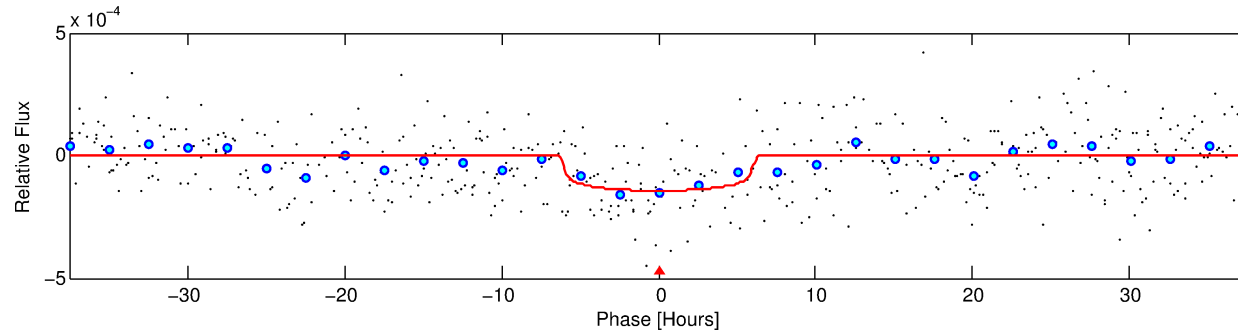
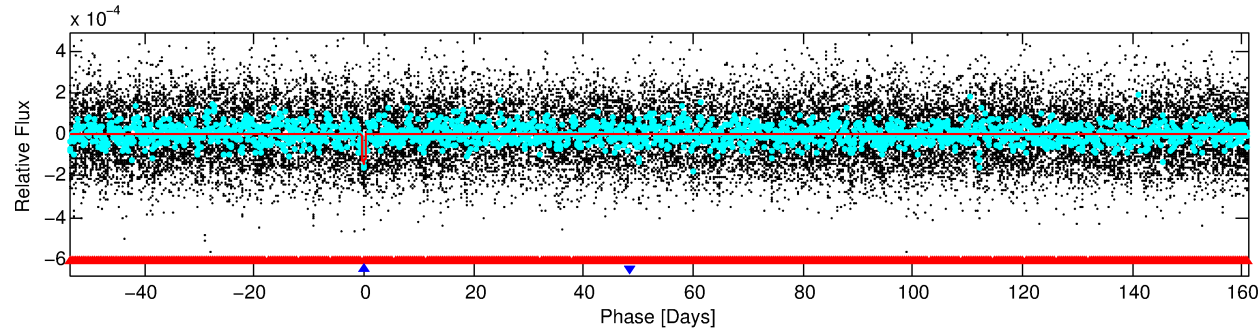
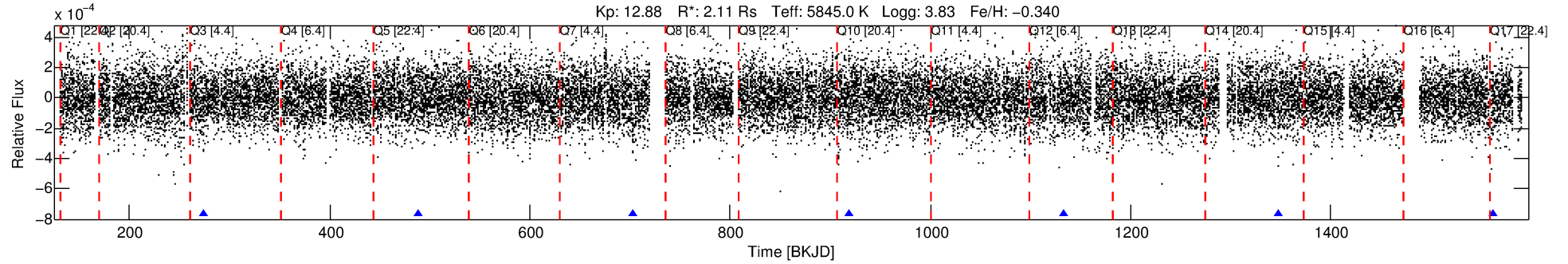
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011519466-02

No Significant Match Found

DV One-Page Summary

KIC: 11519466 Candidate: 2 of 2 Period: 214.841 d



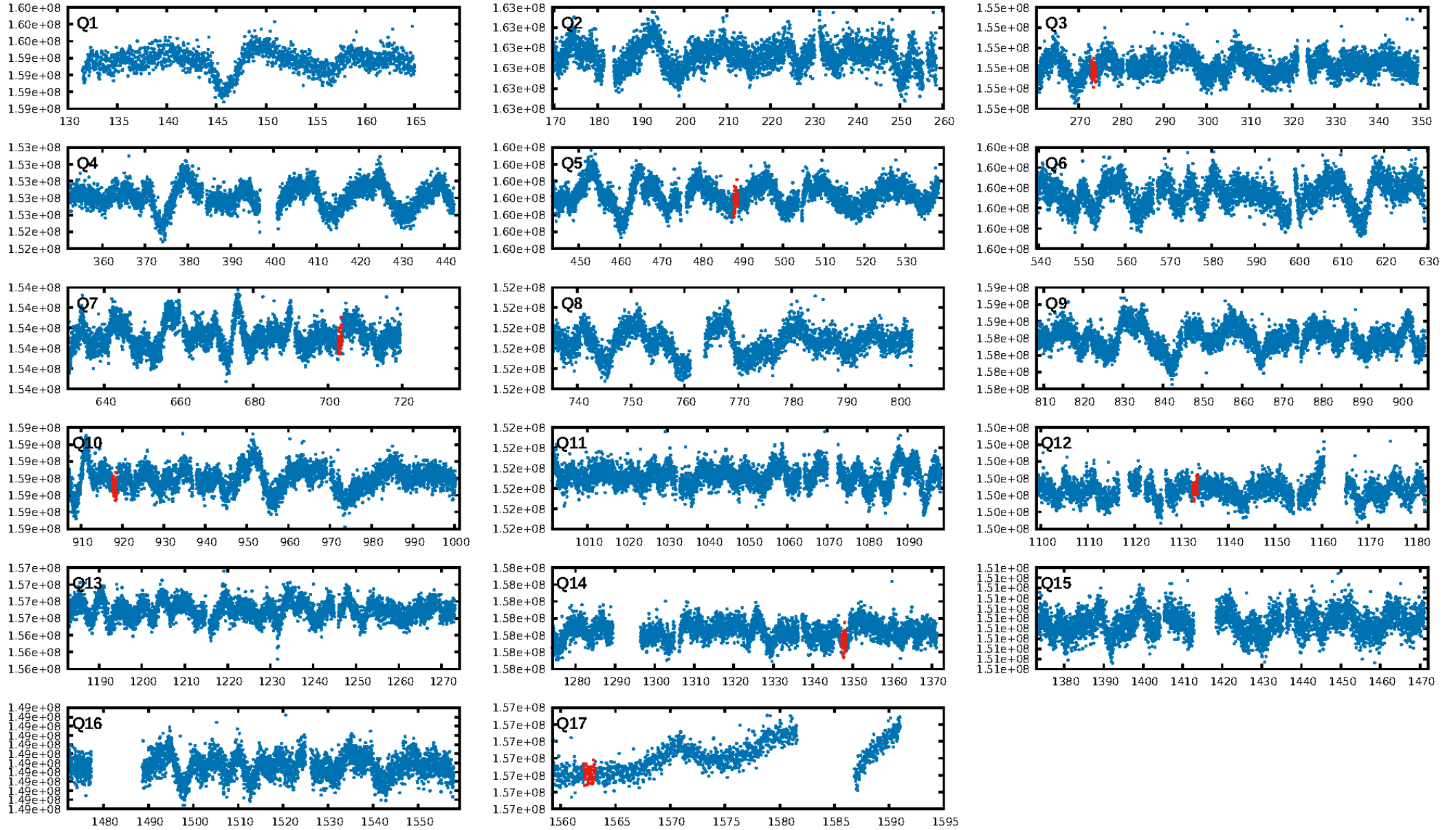
DV Fit Results:

Period = 214.84115 [0.00706] d
Epoch = 273.5878 [0.0292] BKJD
Rp/R* = 0.0123 [0.0057]
a/R* = 77.31 [170.85]
b = 0.82 [0.89]
Seff = 8.90 [4.99]
Teq = 440 [62] K
Rp = 2.83 [1.66] Re
a = 0.7233 [0.2480] AU
Ag = 3889.15 [4421.96] [0.88σ]
Teff = 5377 [1346] K [3.66σ]

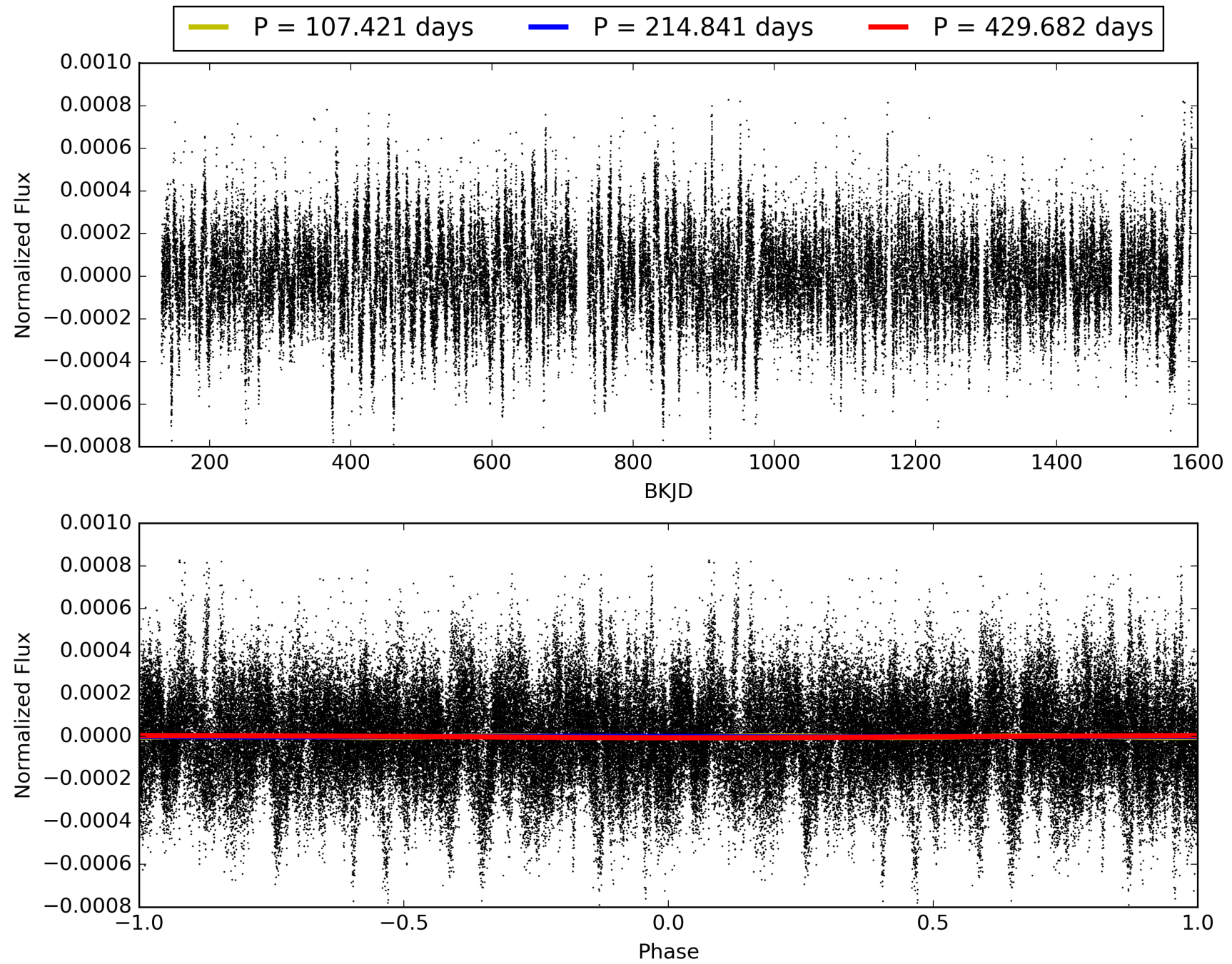
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [368.84σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 7.44e-12
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: -0.3751
Centroid-sig: 1.7%
Centroid-so: 2.321 arcsec [0.83σ]
OotOffset-rm: 1.135 arcsec [1.81σ]
OotOffset-st: 2/1/0/0 [3]
KicOffset-st: 2/1/0/0 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 0.00 [0/7]

TCE 011519466-02, PDC Light Curves

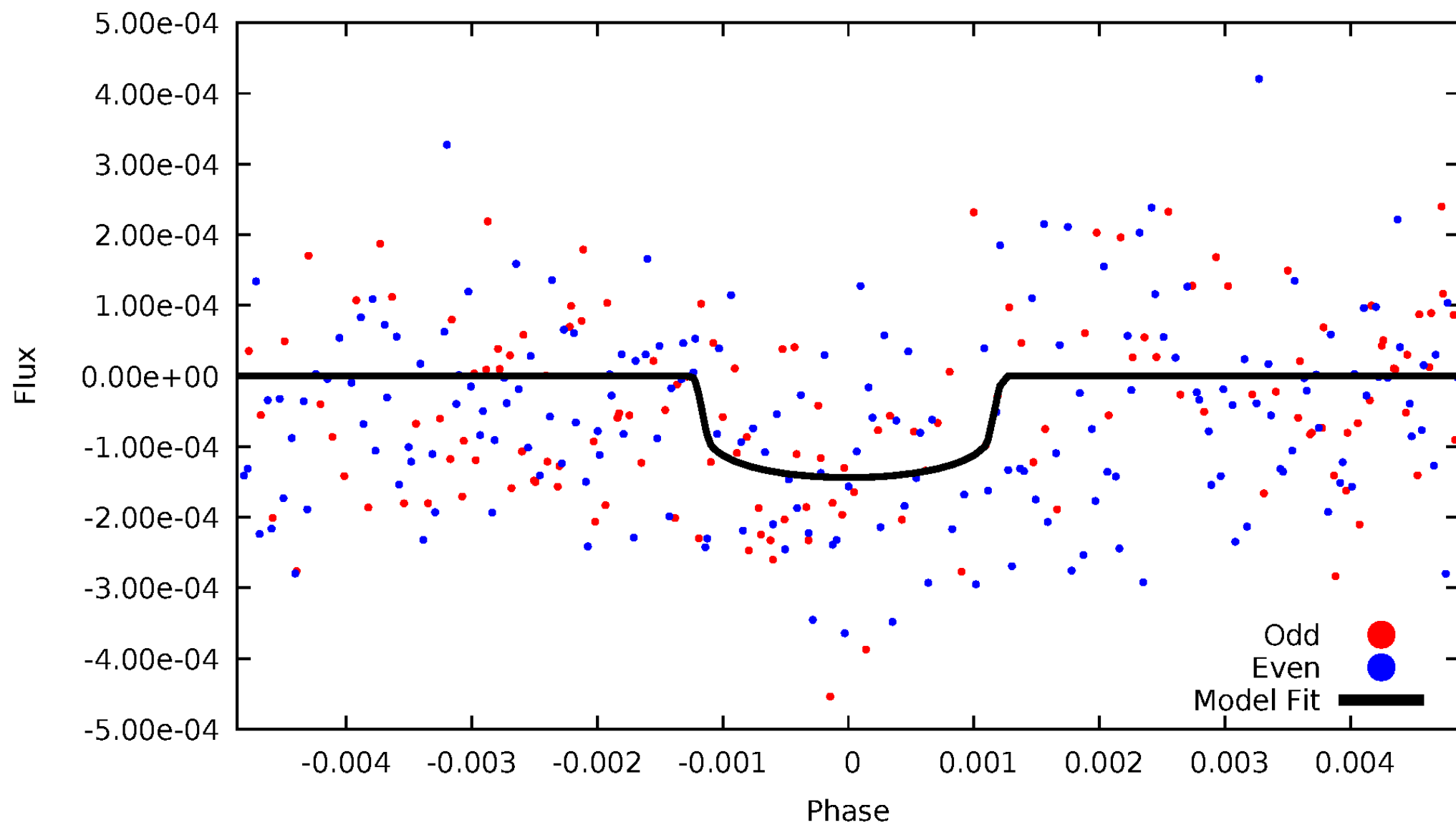


TCE 011519466-02



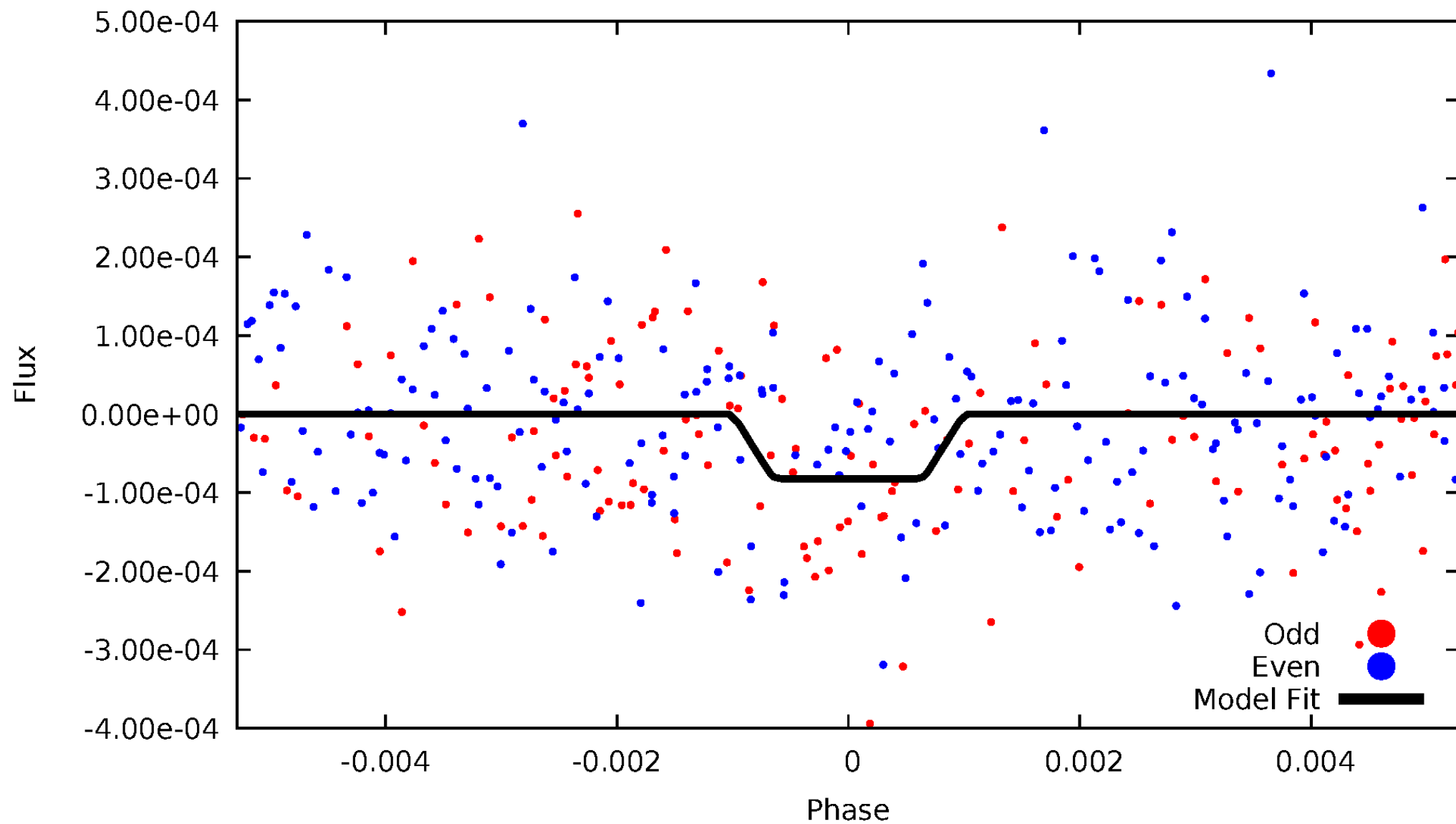
DV Odd/Even

TCE 011519466-02



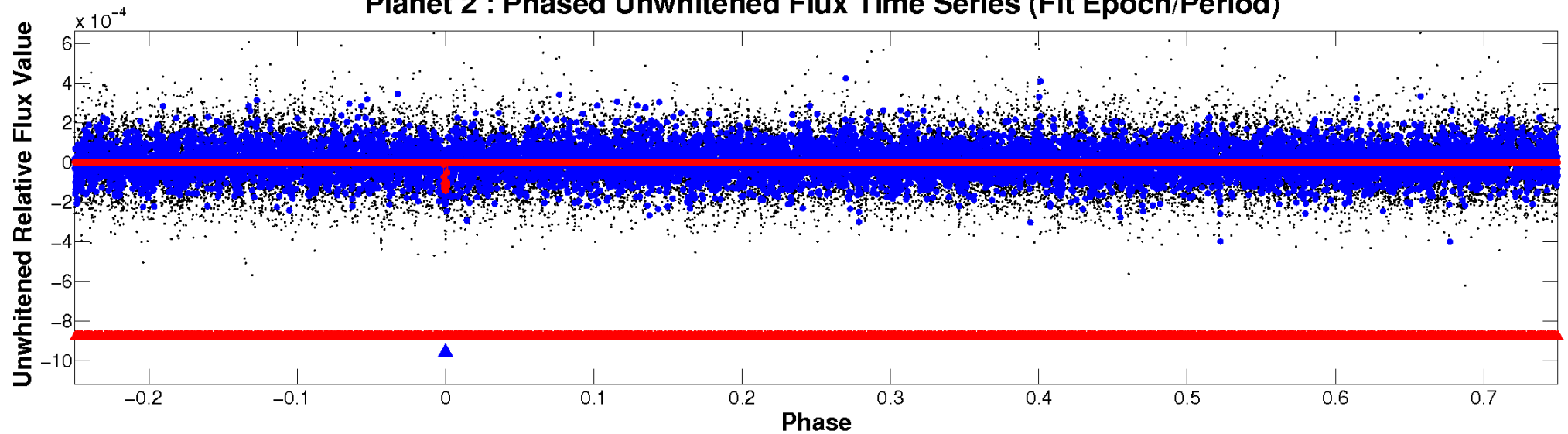
ALT Odd/Even

TCE 011519466-02

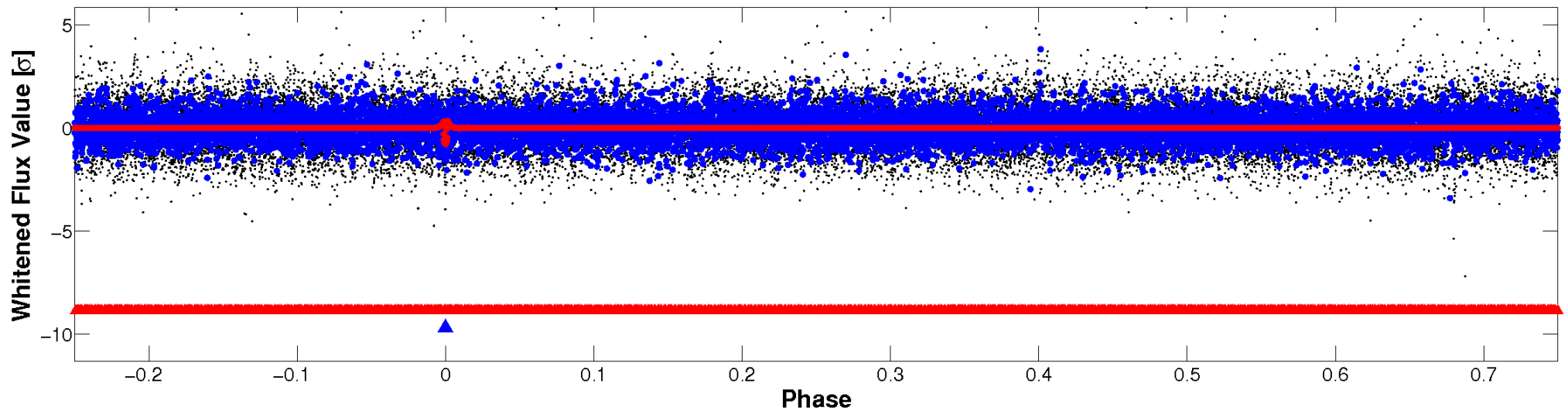


Non-Whitened Vs. Whitened Light Curve

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

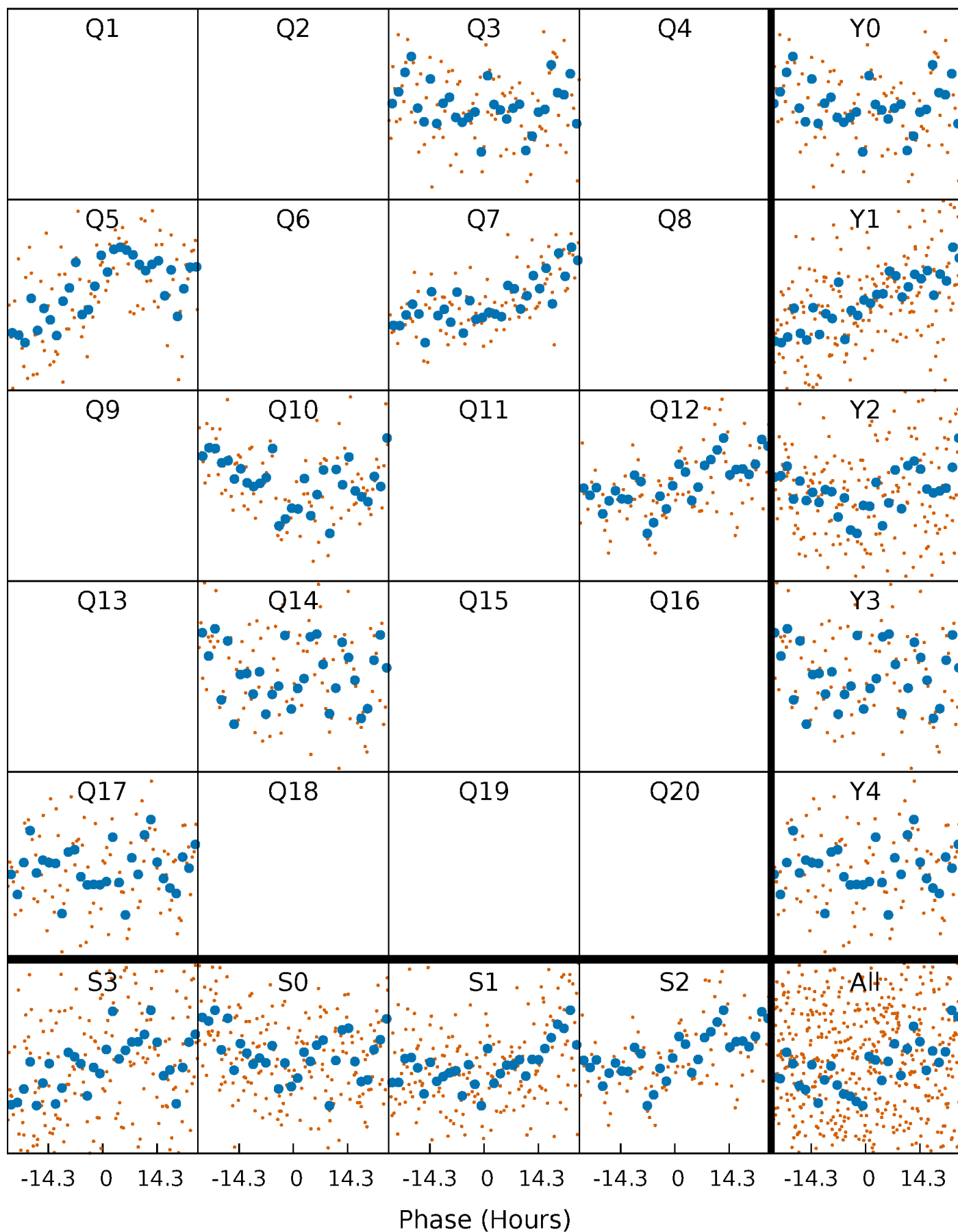


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



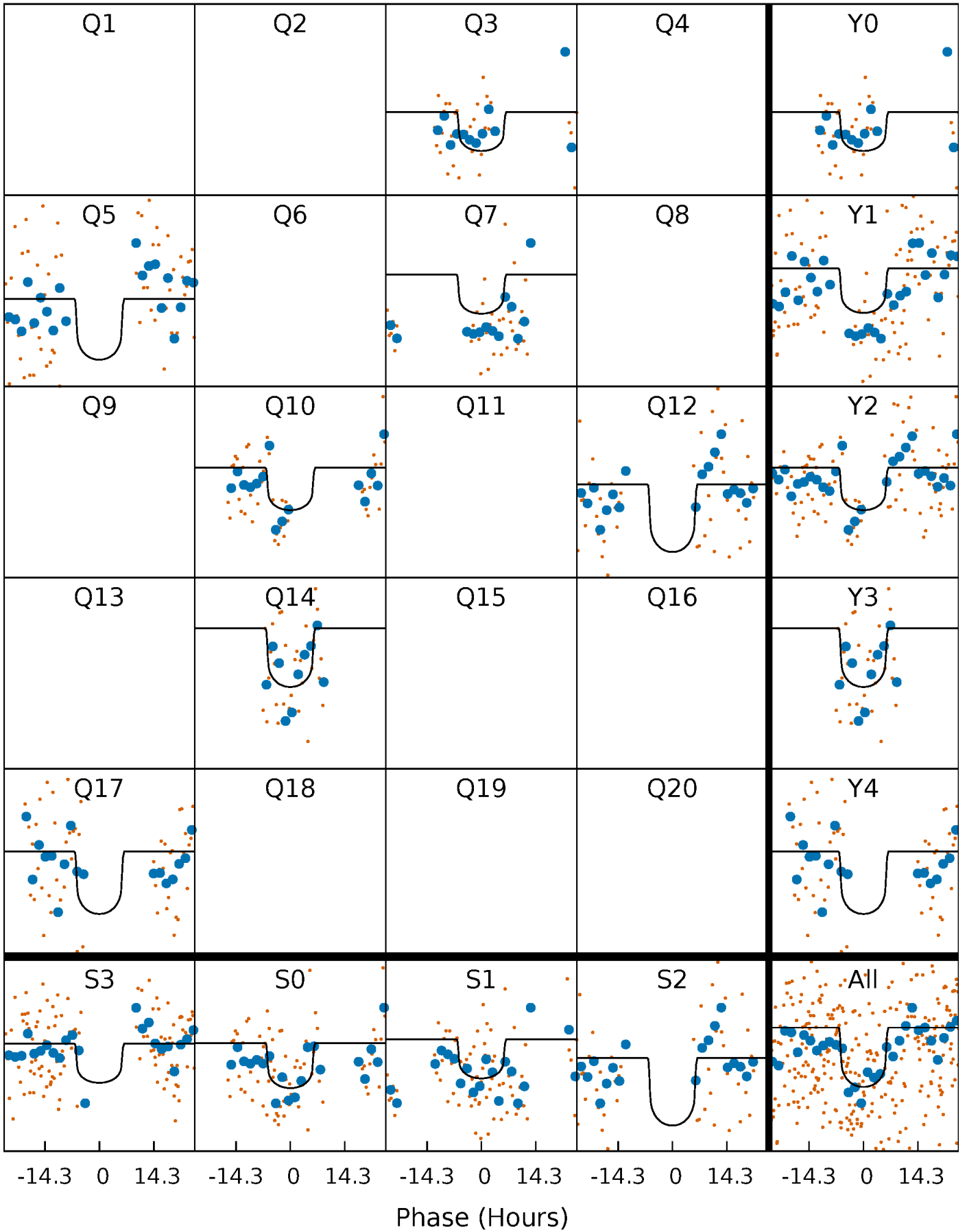
PDC Quarter-Phased Transit Curves

TCE 011519466-02 P=214.841150 Days $T_0=273.587800$ (BKJD)



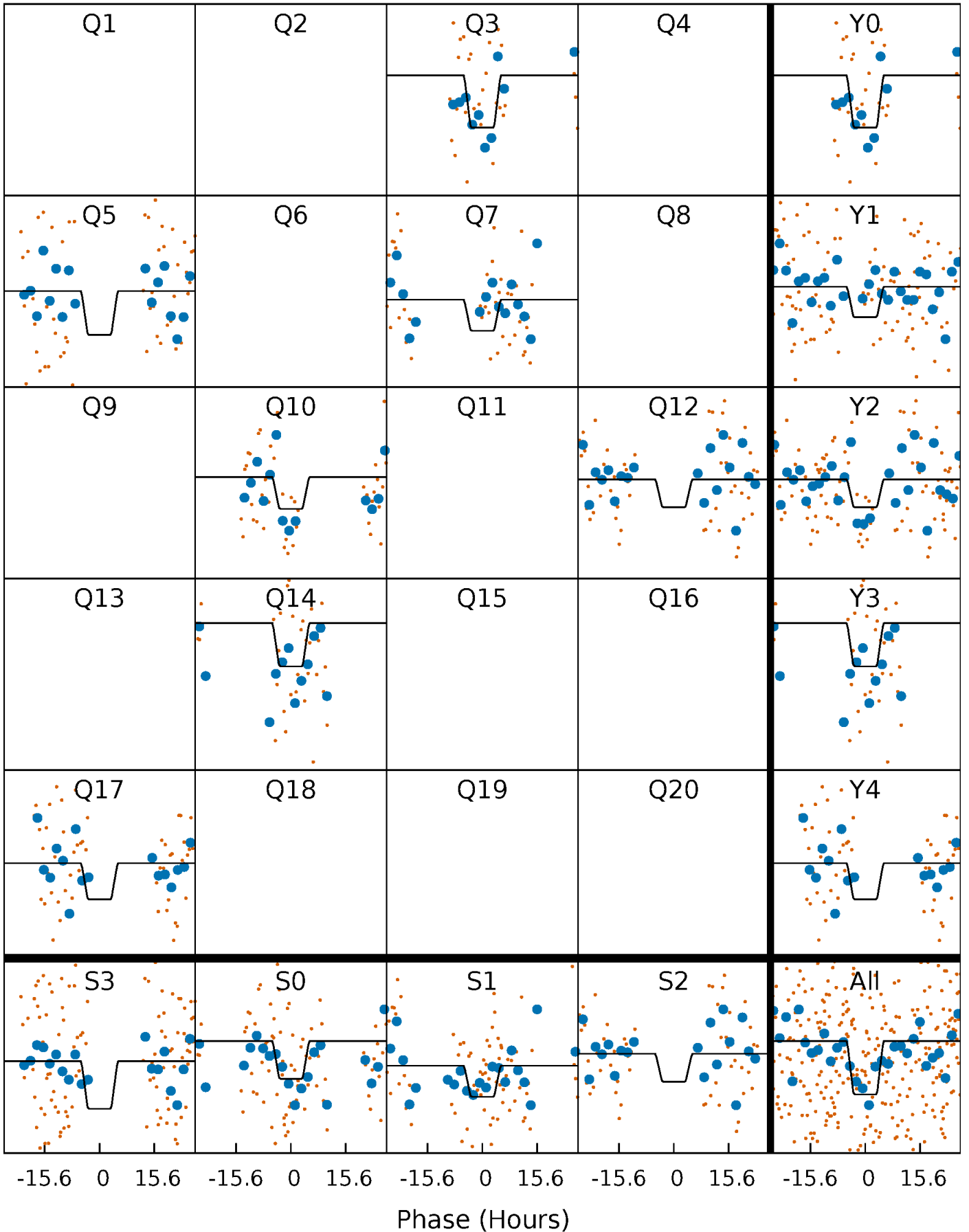
DV Quarter-Phased Transit Curves

TCE 011519466-02 $P=214.841150$ Days $T_0=273.587800$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

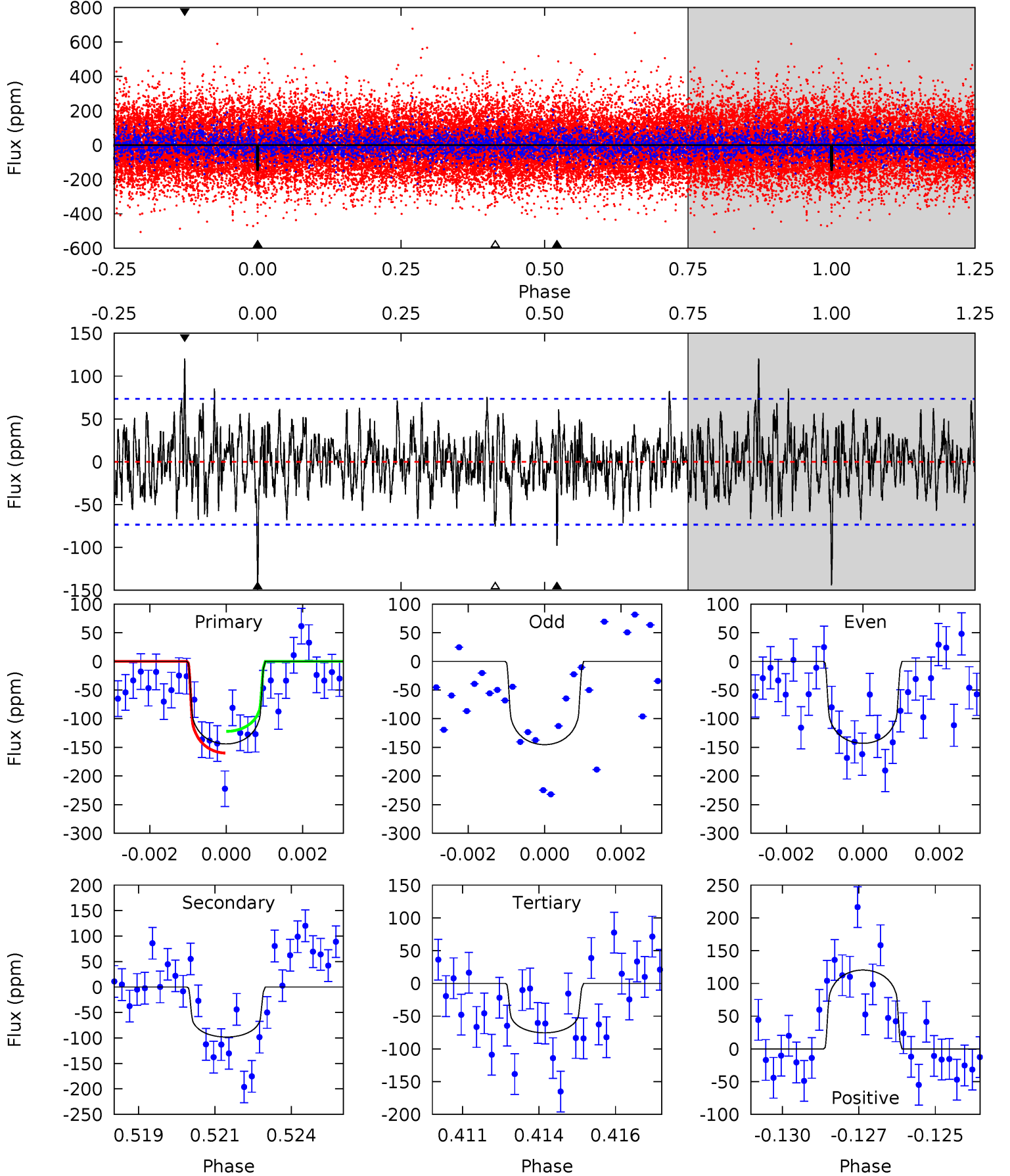
TCE 011519466-02 $P=214.852072$ Days $T_0=273.461908$ (BKJD)



DV Model-Shift Uniqueness Test

011519466-02, P = 214.841150 Days, E = 58.746650 Days

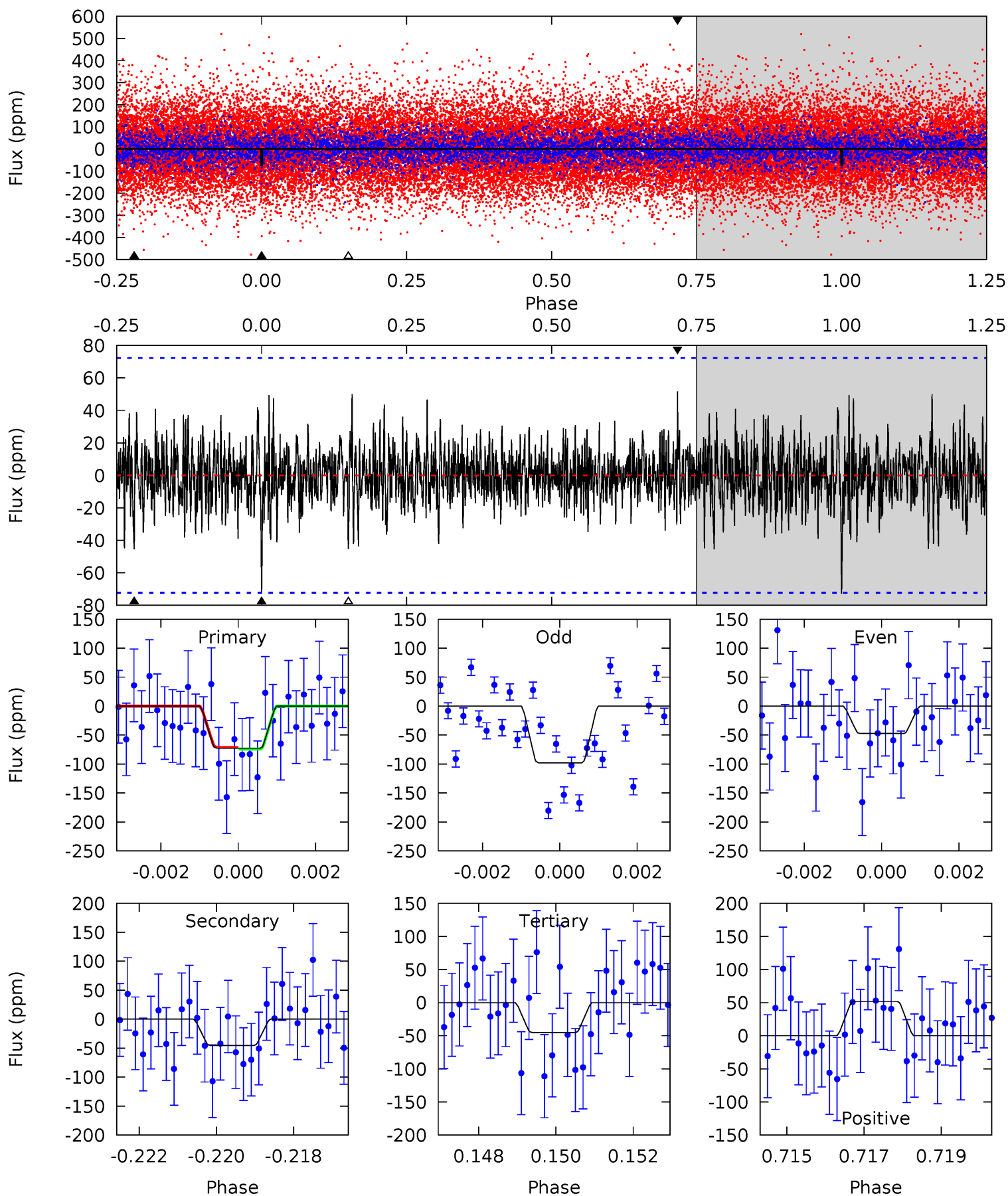
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.4	7.06	5.42	8.65	5.29	3.02	1.90	4.94	1.71	1.64	-1.59	0.08	1.02	0.46	1.35



Alt Model-Shift Uniqueness Test

011519466-02, P = 214.852072 Days, E = 58.609836 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.36	3.35	3.32	3.80	5.32	3.08	1.00	2.03	1.55	0.02	-0.46	1.87	0.88	0.42	0.11



Stellar Parameters For KIC 011519466

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5845^{+161}_{-147}	$3.828^{+0.323}_{-0.108}$	$-0.340^{+0.350}_{-0.250}$	$2.110^{+0.404}_{-0.750}$	$1.093^{+0.168}_{-0.187}$	$0.164^{+0.330}_{-0.062}$
	+3%/-3%	+8%/-3%	+103%/-74%	+19%/-36%	+15%/-17%	+202%/-38%
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 011519466-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-98 ± 14	$2.76^{+1.27}_{-1.29}$	606^{+39}_{-57}	5266^{+1760}_{-738}	3778^{+9687}_{-2003}
Alt.	-45 ± 14	$2.02^{+1.29}_{-1.08}$	604^{+37}_{-60}	4996^{+2210}_{-856}	3055^{+11062}_{-1927}

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 $A_{obs} \gg 1.0$

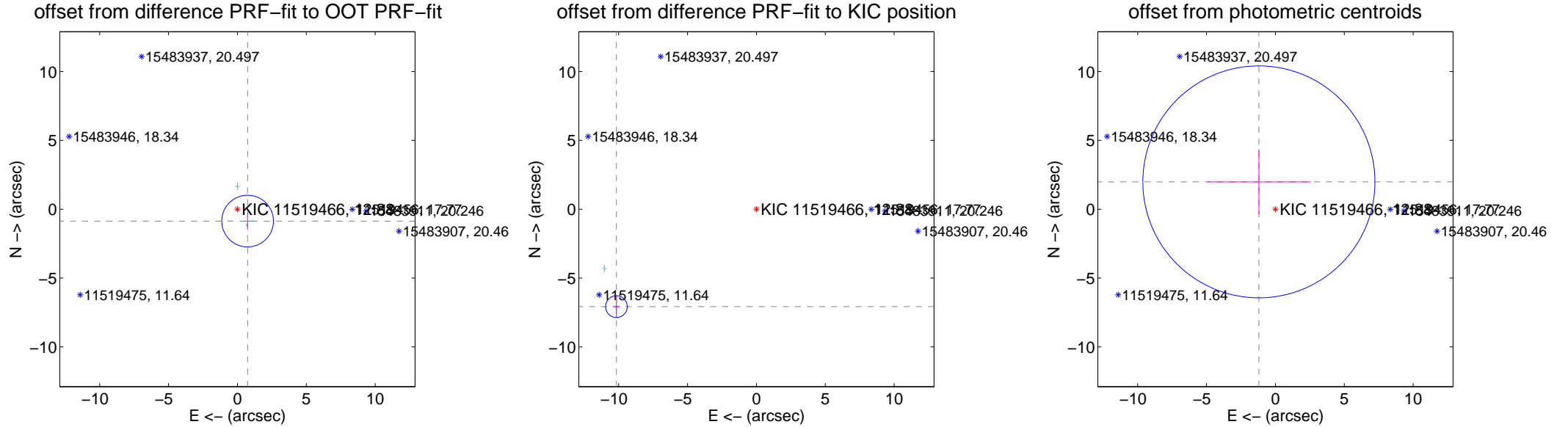
DV Centroid Data

Supplemental centroid analysis for 011519466-02. Kepler magnitude: 12.88. Transit SNR 6.25

There are 3 quarters with good PRF difference image offsets

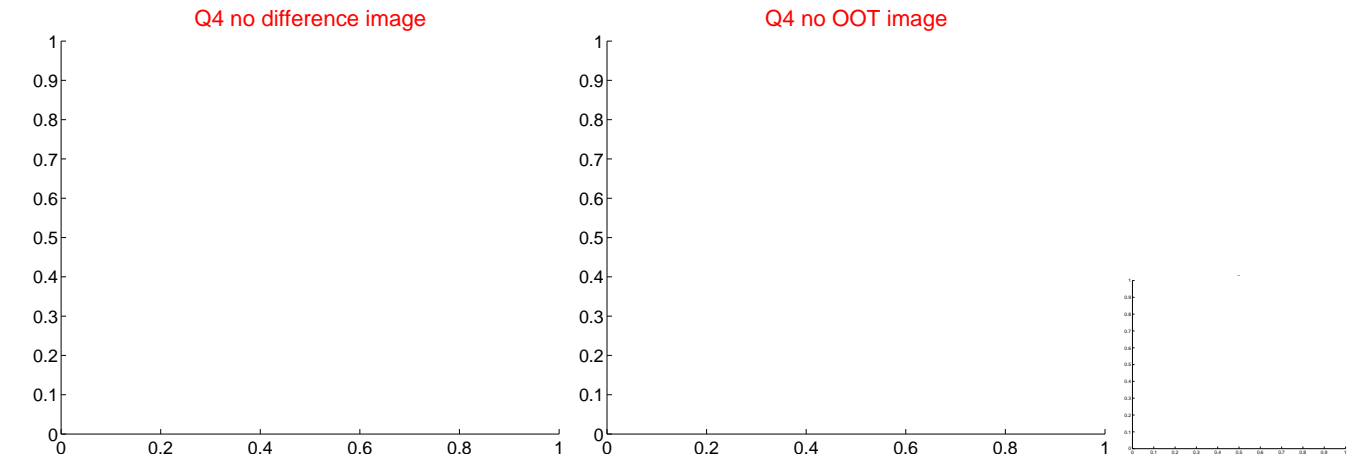
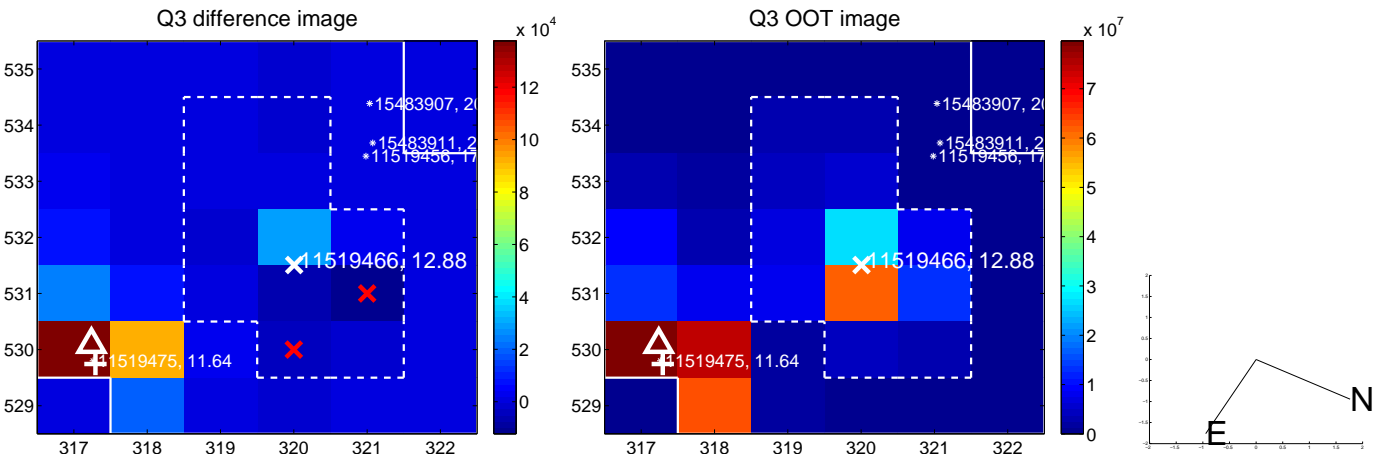
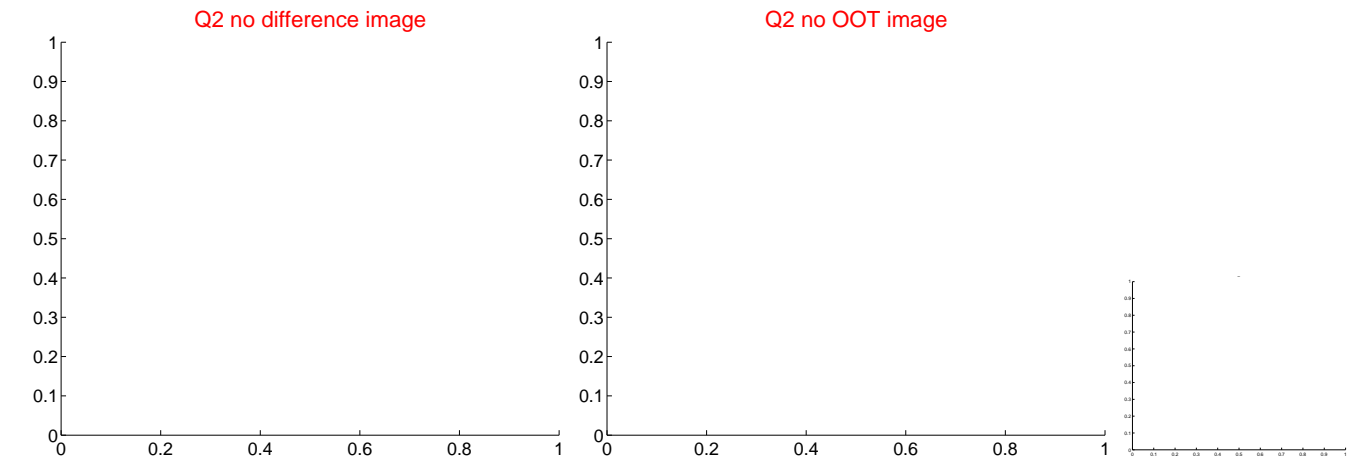
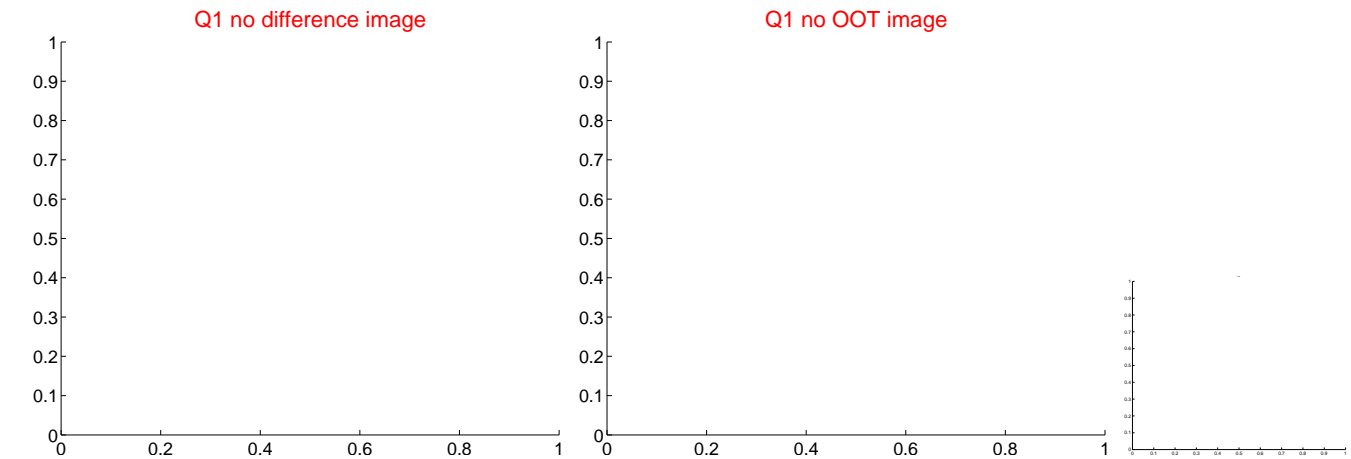
The OOT PRF centroid is offset from the target star catalog position by about 12.55 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.135 ± 0.625	1.81	-0.739 ± 0.292	-0.861 ± 0.600
PRF-fit source offset from KIC position	12.385 ± 0.263	47.15	10.164 ± 0.262	-7.077 ± 0.810
photometric centroid source offset	2.32 ± 2.81	0.83	1.20 ± 3.77	1.99 ± 2.36

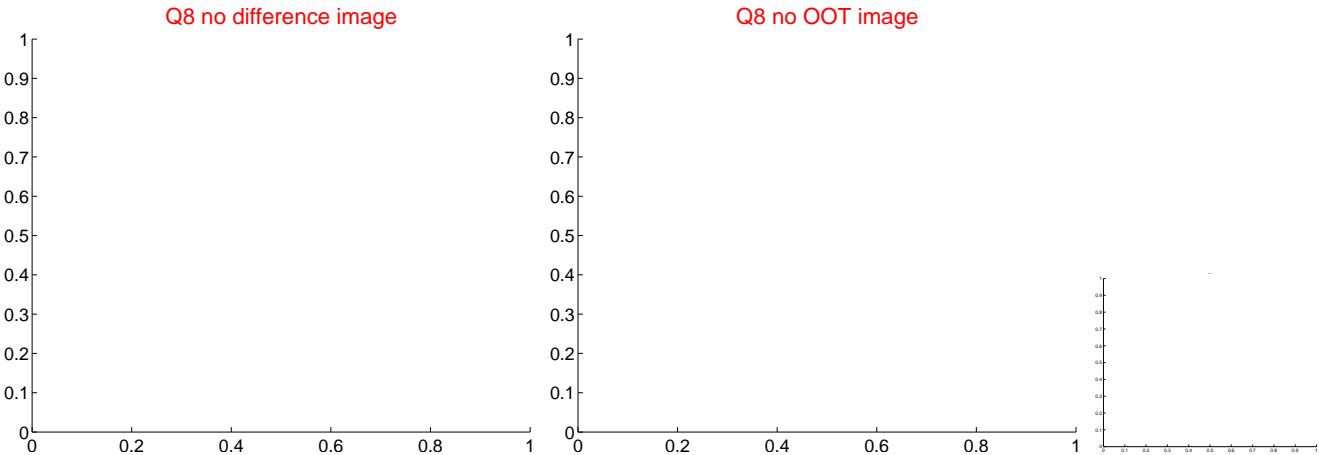
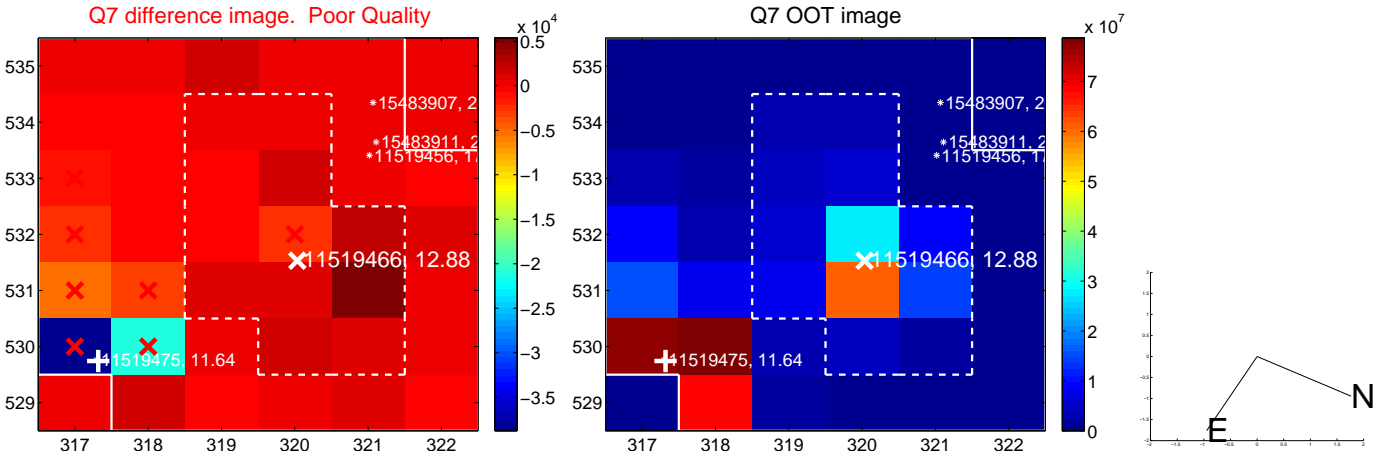
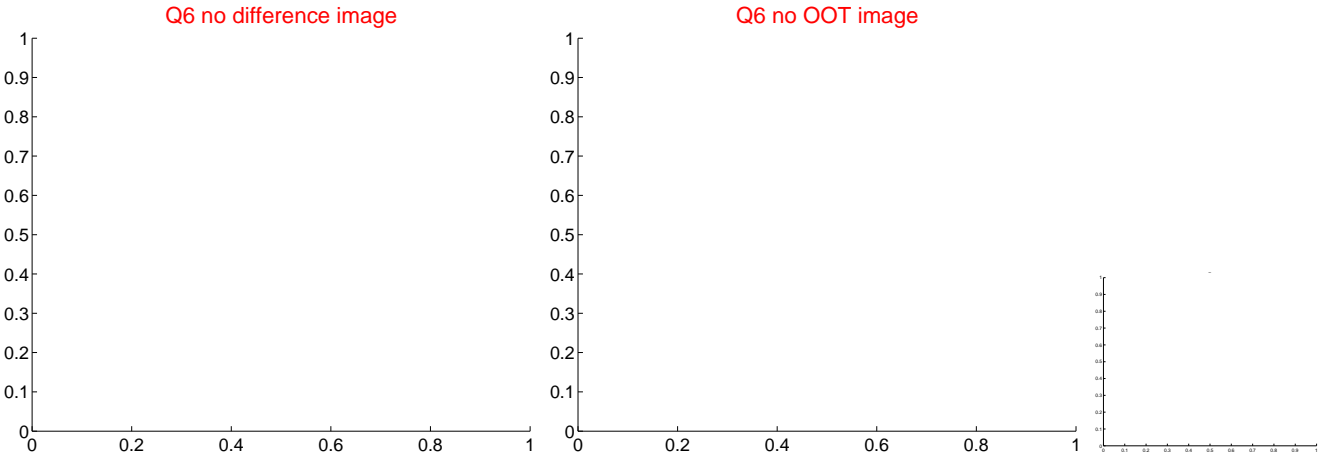
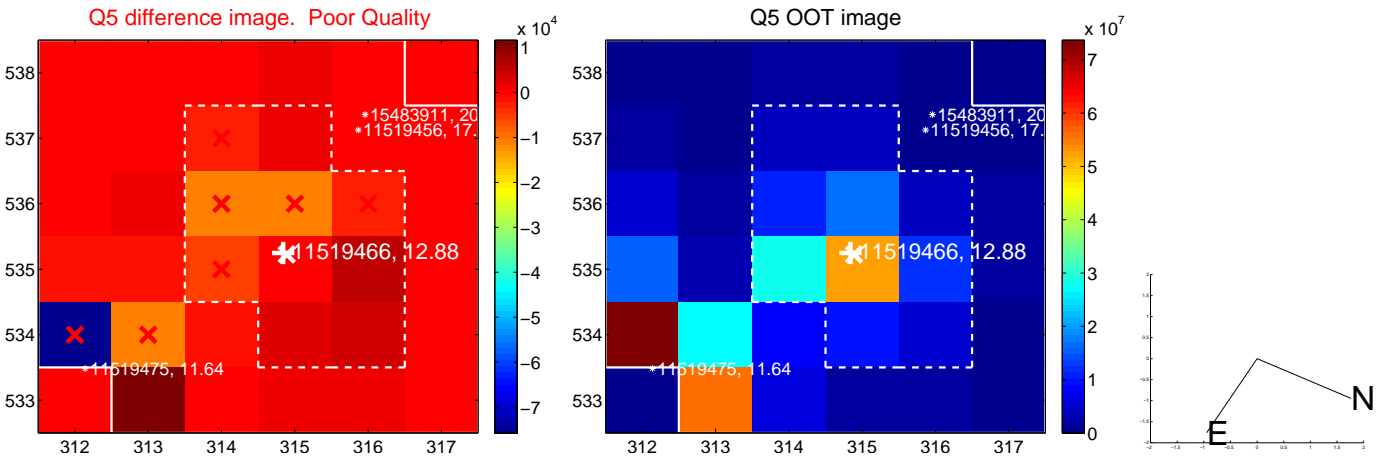


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

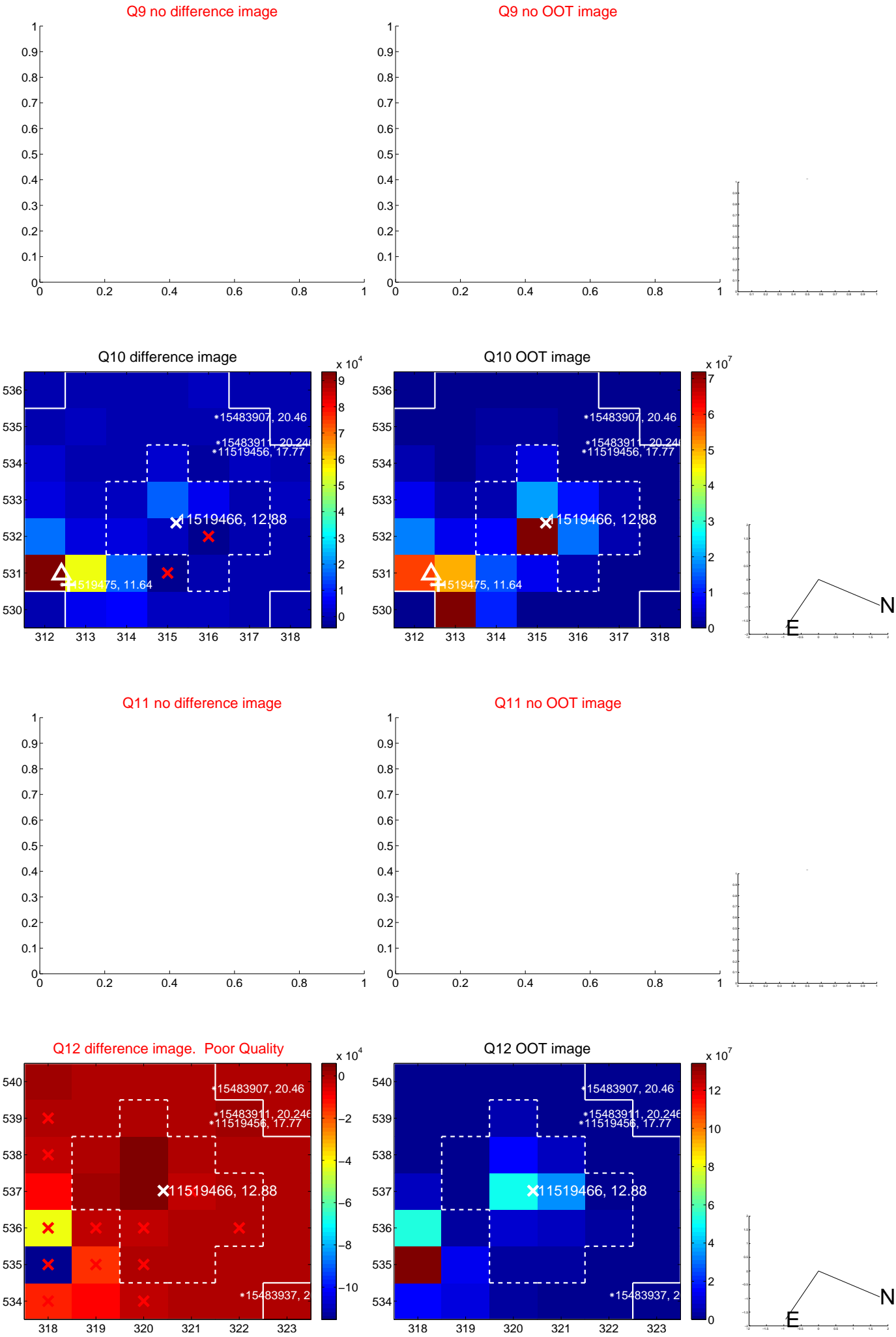
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



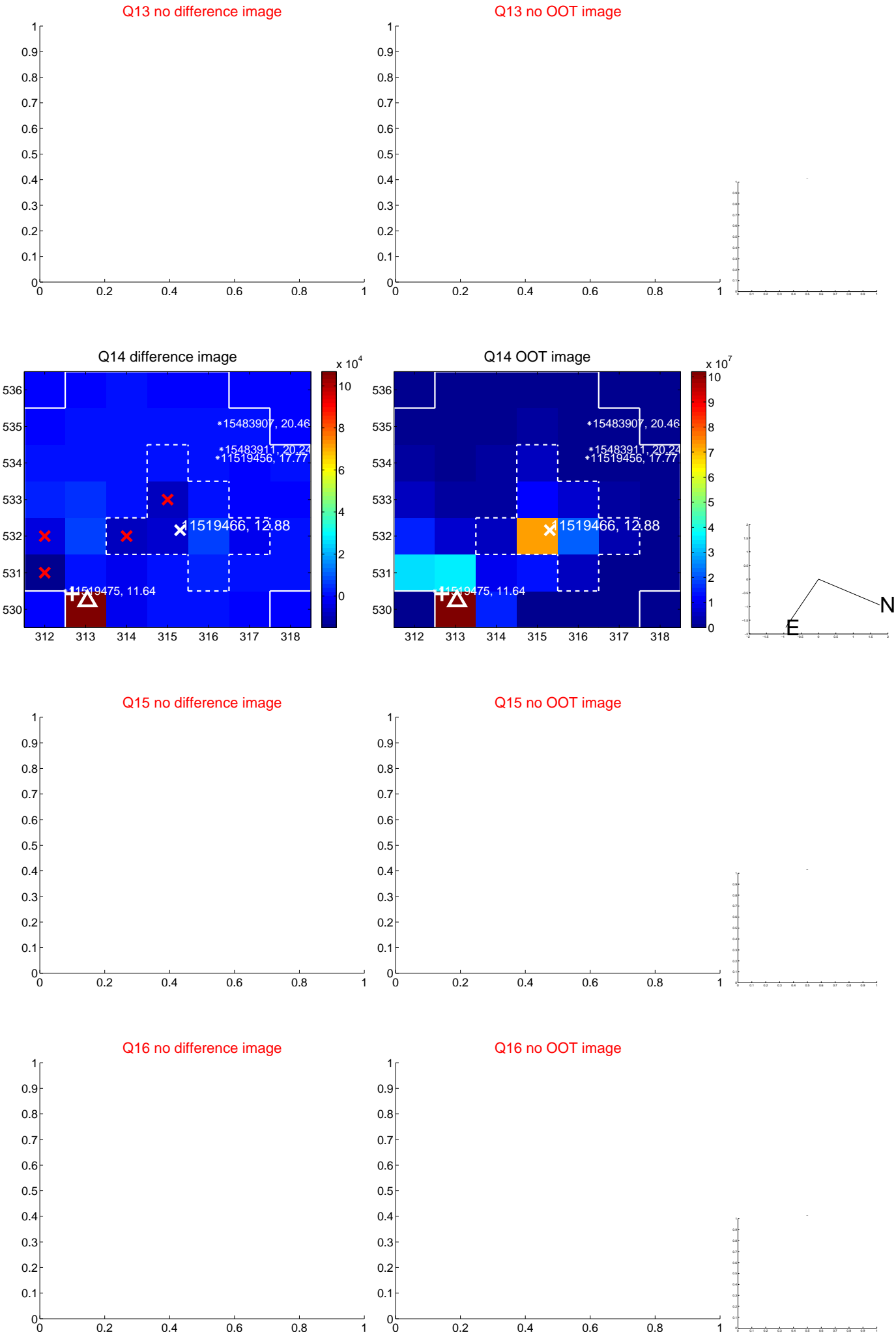
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



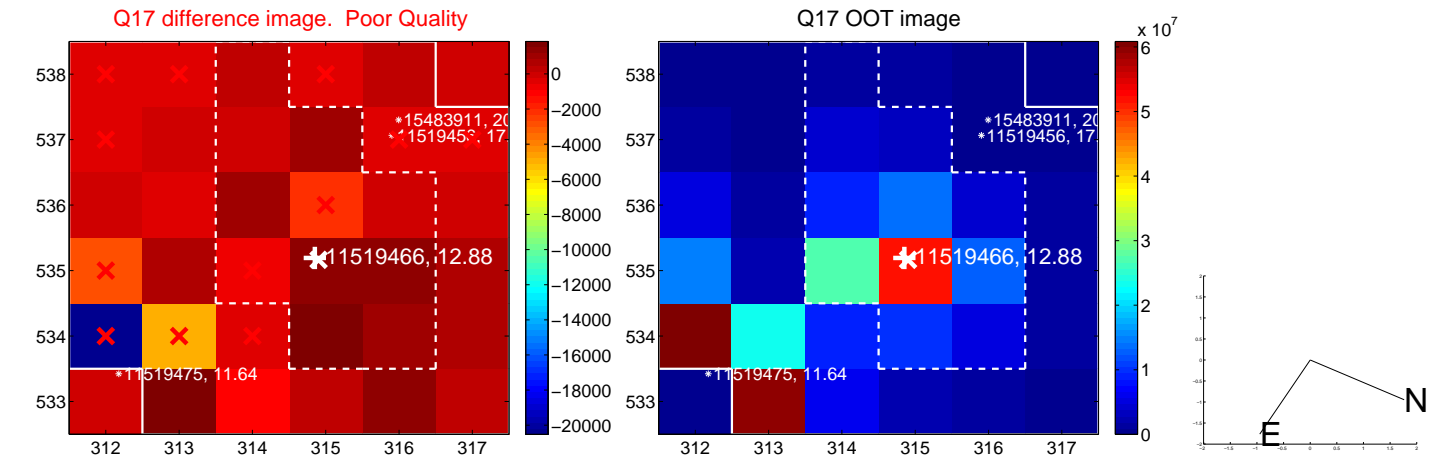
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



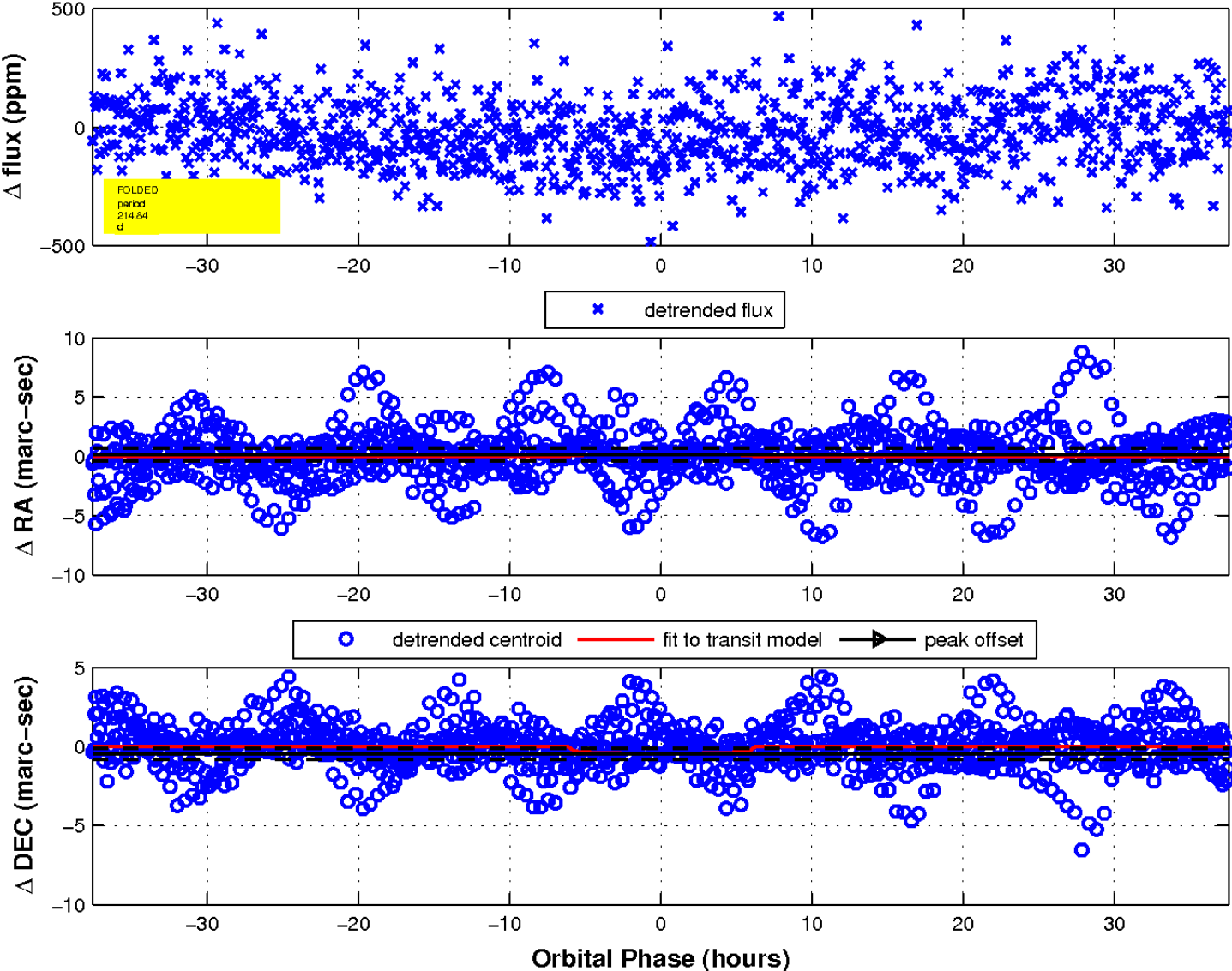
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 2 of 2



UKIRT Image

Declination

