

KIC 005126627

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})
005126627-01	OBS	6529.01	1.009543	131.594485	45.5	4.729	7.6	8.5	1.00	5780	0.70	2576.95
005126627-02	OBS	No	47.459267	174.220481	429.7	1.594	7.8	8.3	1.00	5780	2.25	15.19

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005126627-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_KIC_POS
005126627-02	OBS	FP	0.01	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—MOD_NONUNIQ_ALT—CENT_KIC_POS

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.

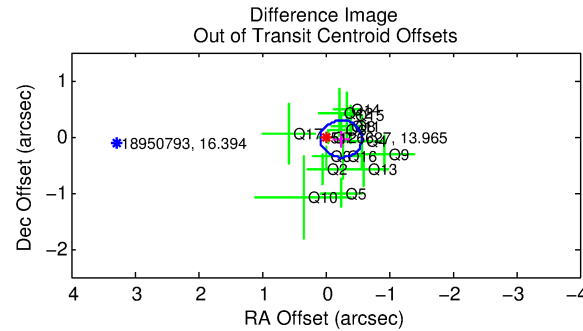
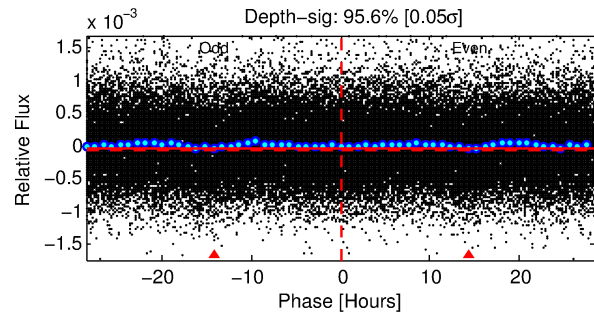
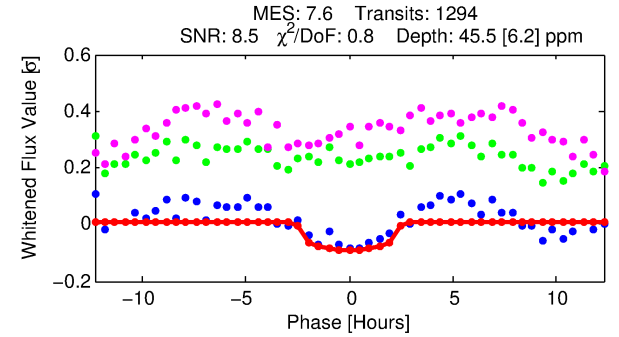
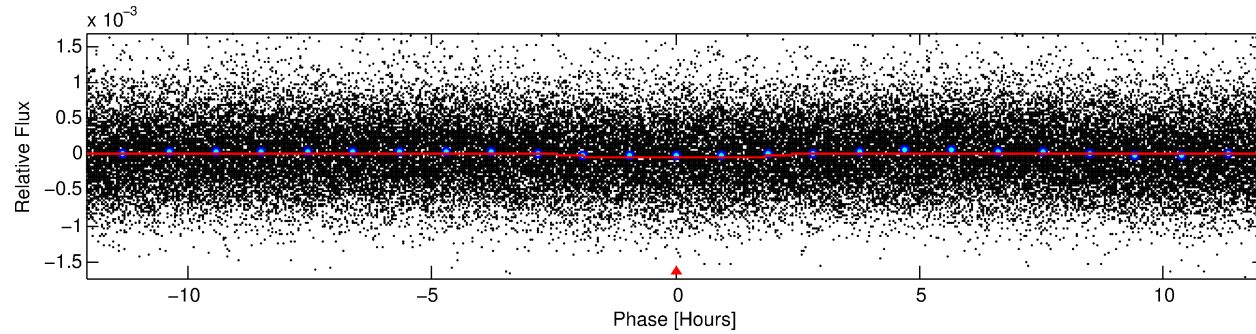
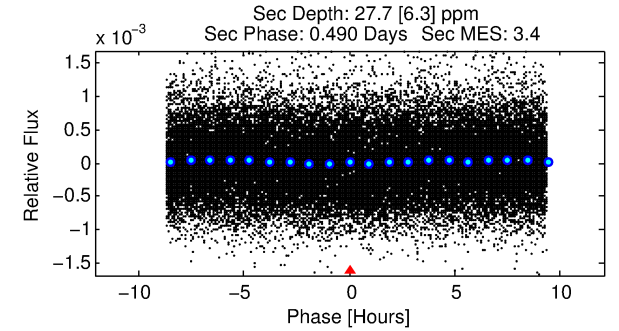
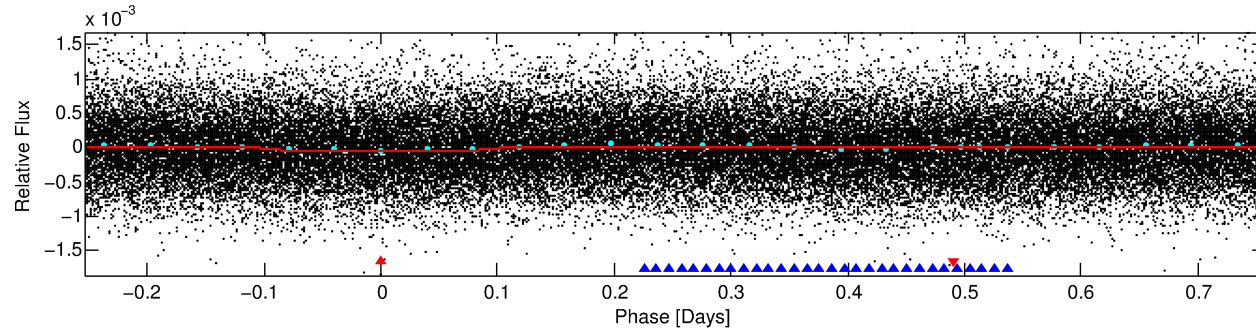
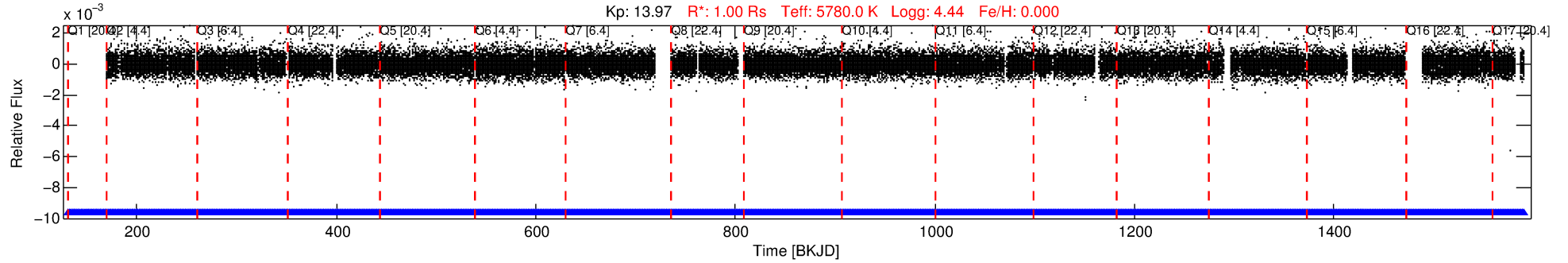
Ephemeris Match Information For 005126627-01

No Significant Match Found

DV One-Page Summary

KIC: 5126627 Candidate: 1 of 2 Period: 1.010 d

KOI: K06529.01 Corr: 0.877



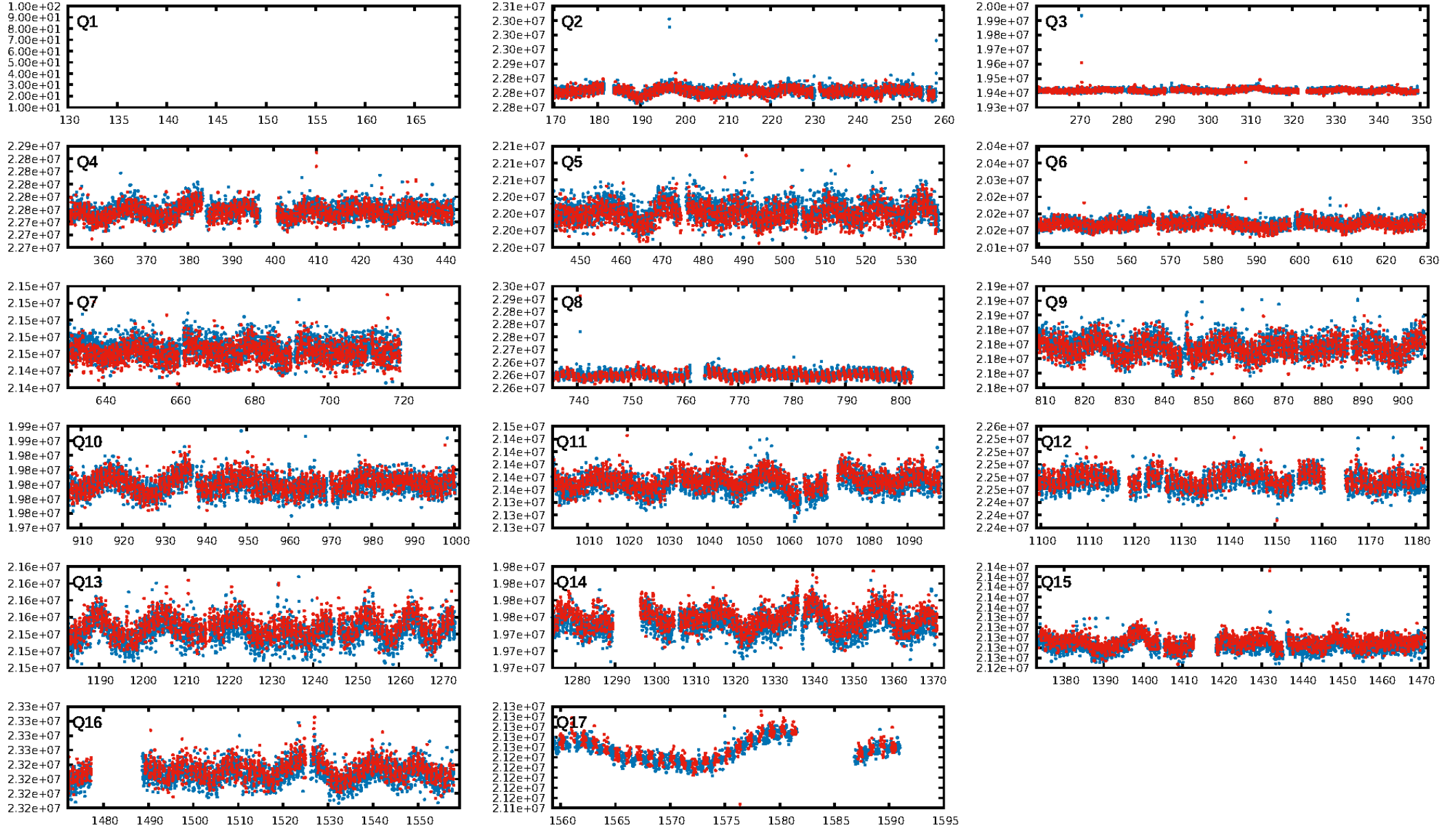
DV Fit Results:

Period = 1.00954 [0.00002] d
Epoch = 131.5945 [0.0061] BKJD
Rp/R* = 0.0064 [0.0063]
a/R* = 1.52 [3.71]
b = 0.61 [4.50]
Seff = 2576.95 [0.05]
Teq = 1817 [0] K
Rp = 0.70 [0.69] Re
a = 0.0197 [0.0000] AU
Ag = 11.96 [23.70] [0.46σ]
Teffp = 5223 [2588] K [1.32σ]

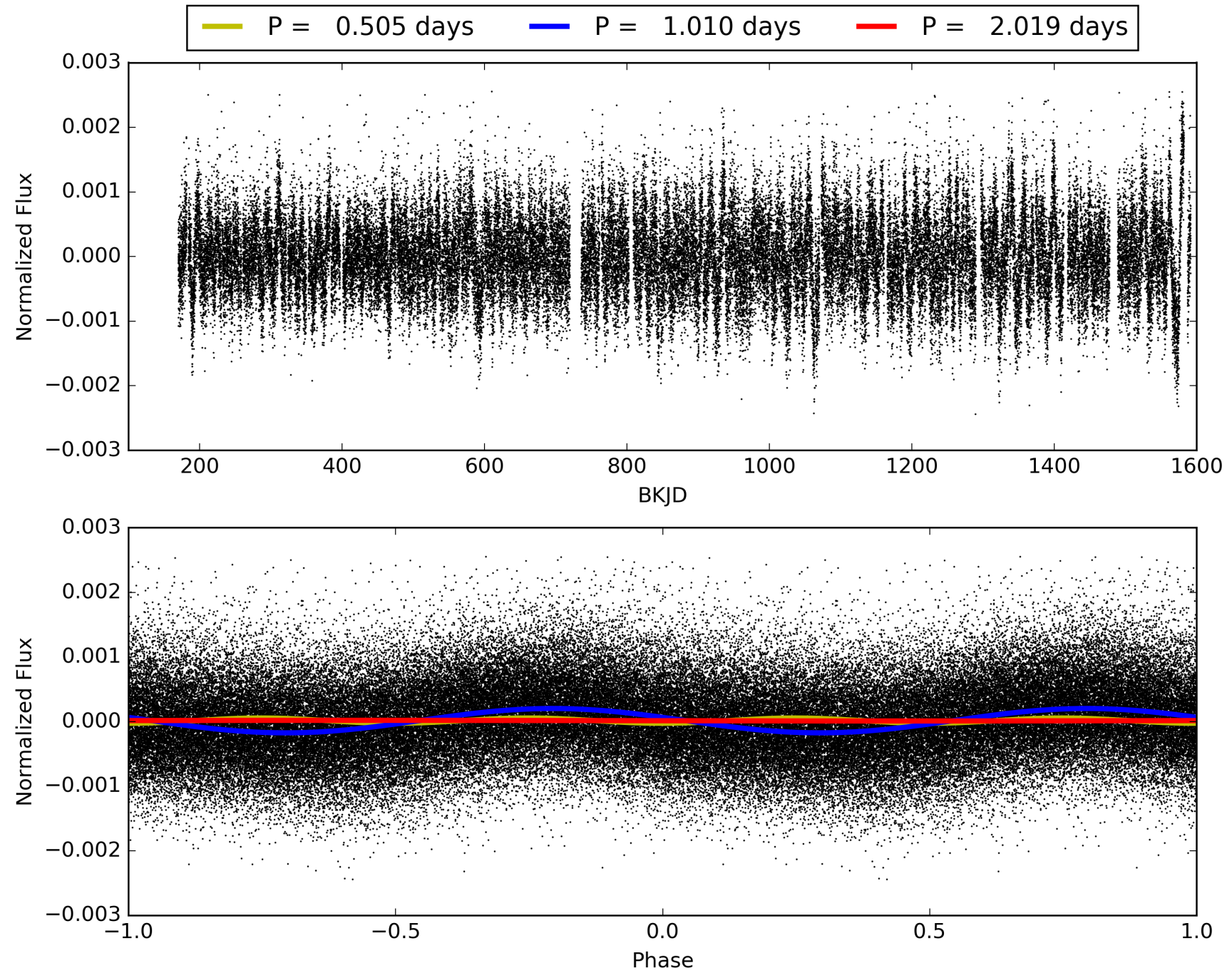
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [223.40σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 5.04e-15
RollingBand-fgt: 1.00 [1268/1268]
GhostDiagnostic-chr: -3.16
Centroid-sig: 0.7%
Centroid-so: 3.802 arcsec [2.53σ]
OotOffset-rm: 0.246 arcsec [2.25σ]
KicOffset-rm: 0.250 arcsec [1.69σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.50 [8/16]
DiffImageOverlap-fno: 1.00 [16/16]

TCE 005126627-01, PDC Light Curves

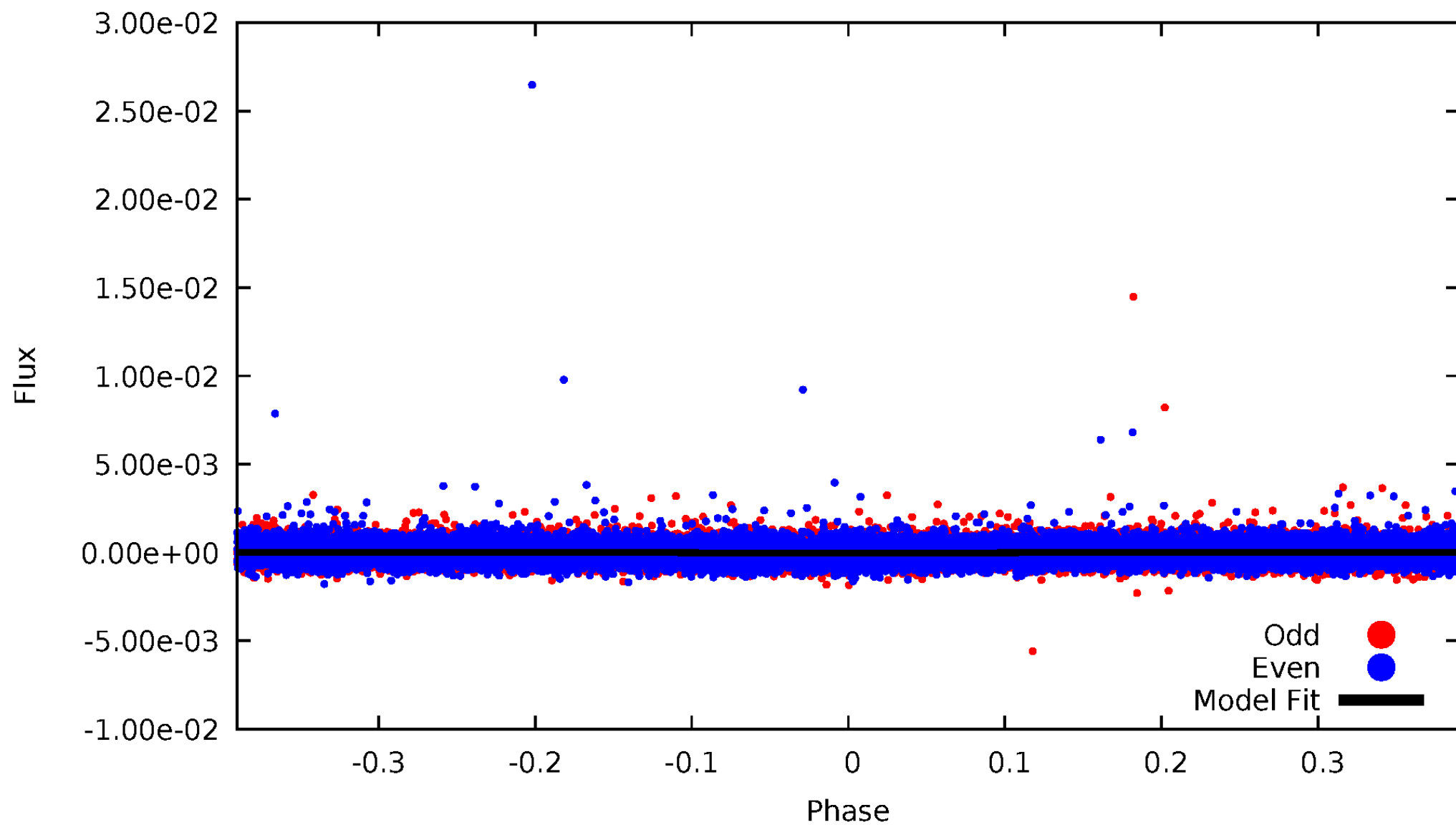


TCE 005126627-01



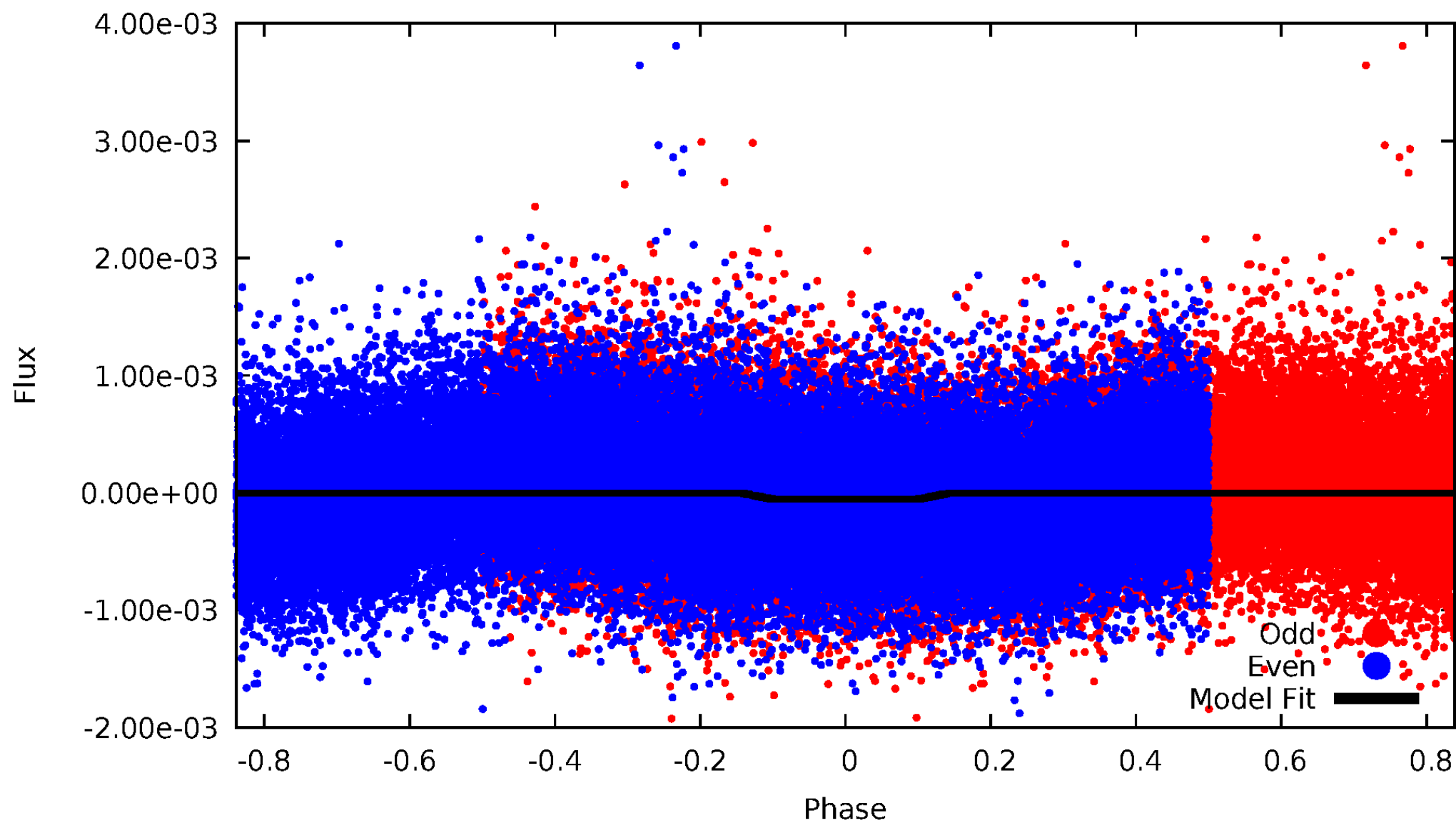
DV Odd/Even

TCE 005126627-01



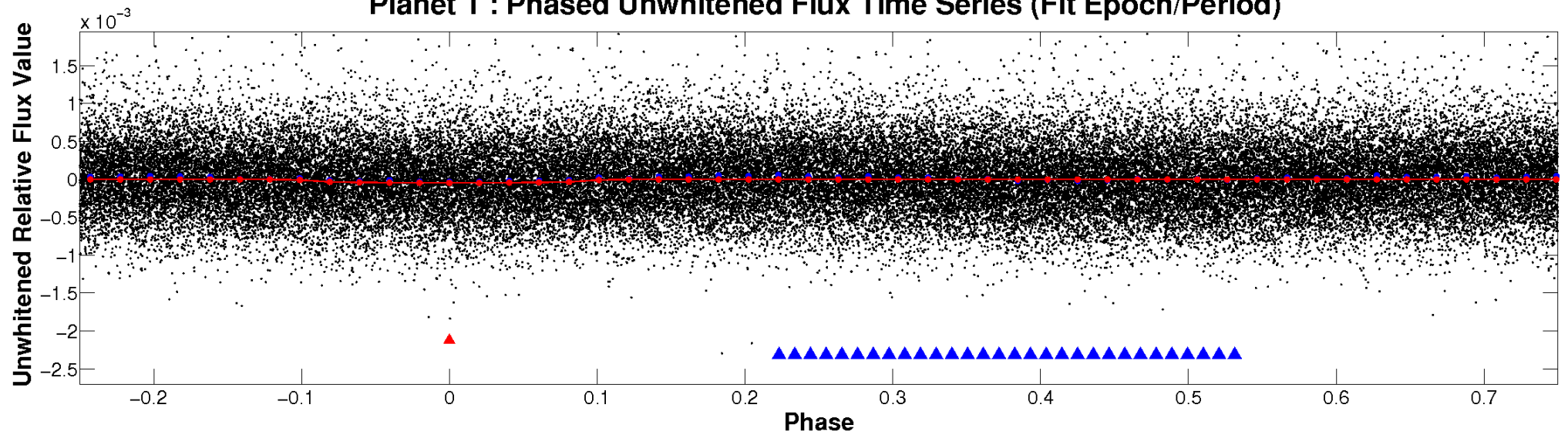
ALT Odd/Even

TCE 005126627-01

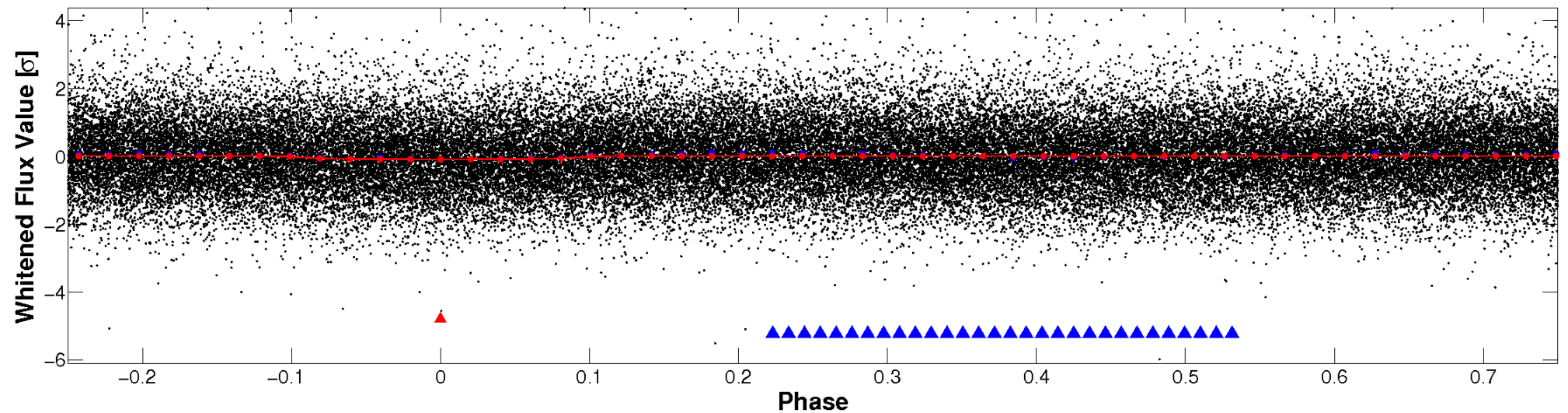


Non-Whitened Vs. Whitened Light Curve

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

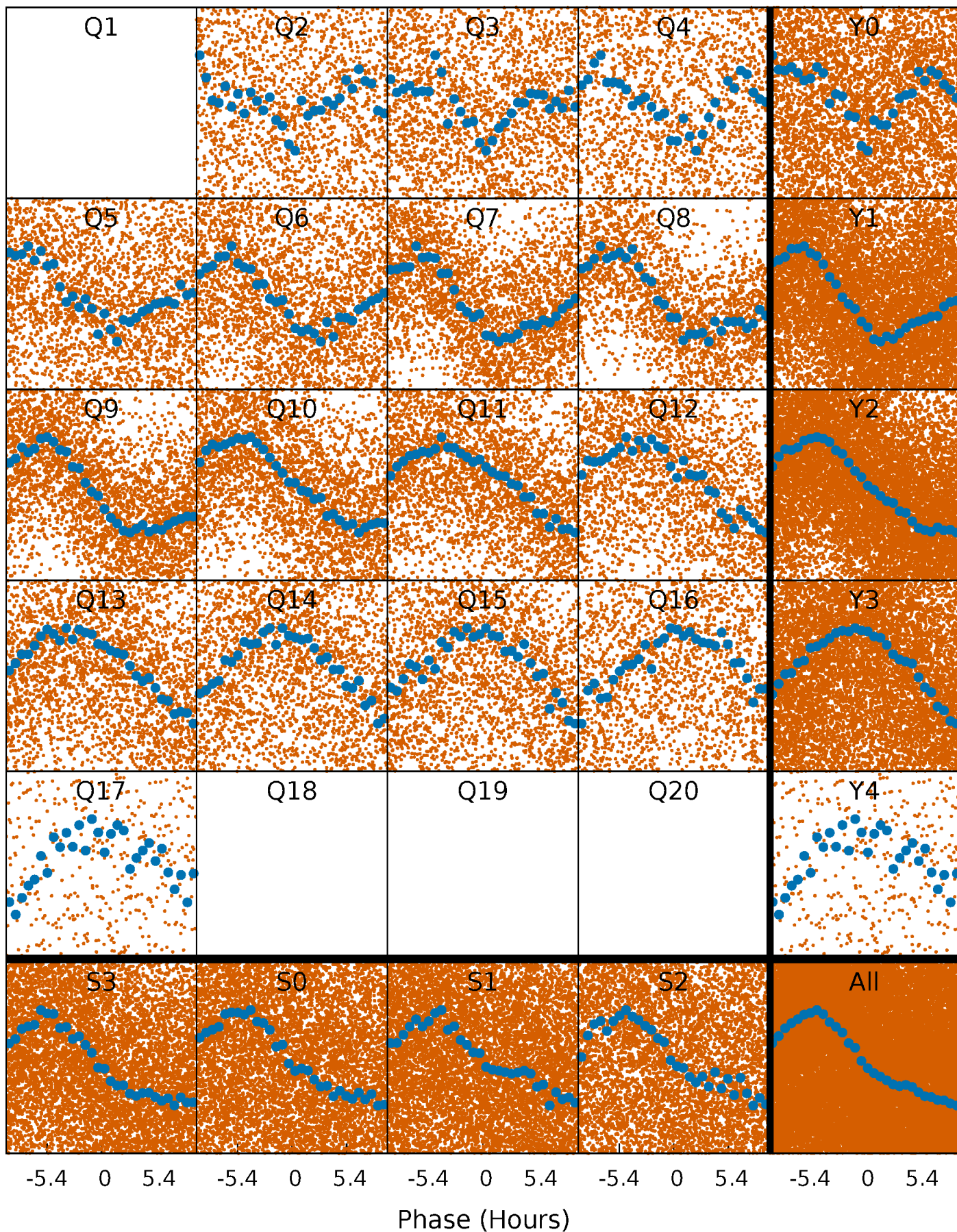


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



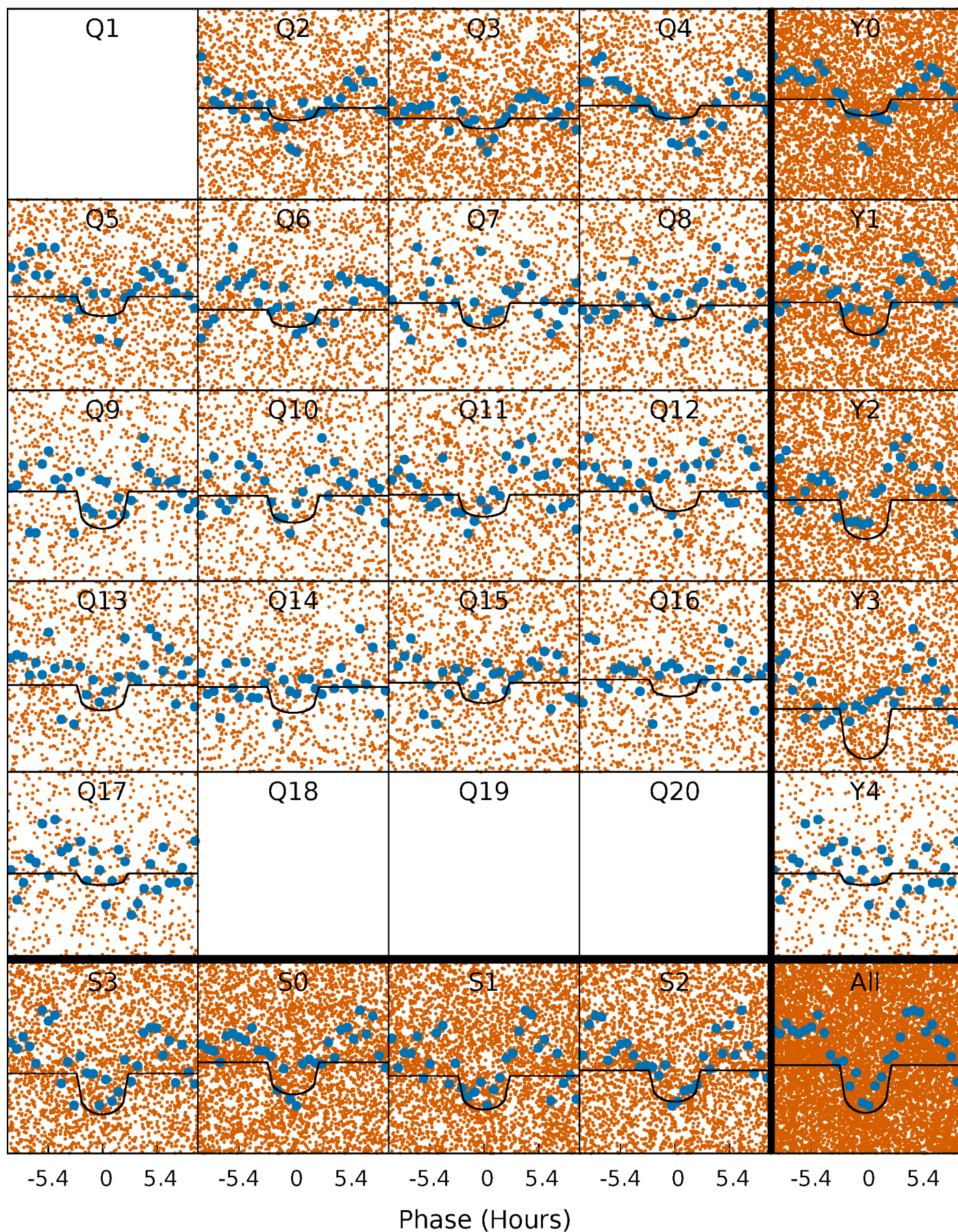
PDC Quarter-Phased Transit Curves

TCE 005126627-01 P= 1.009543 Days $T_0=131.594485$ (BKJD)



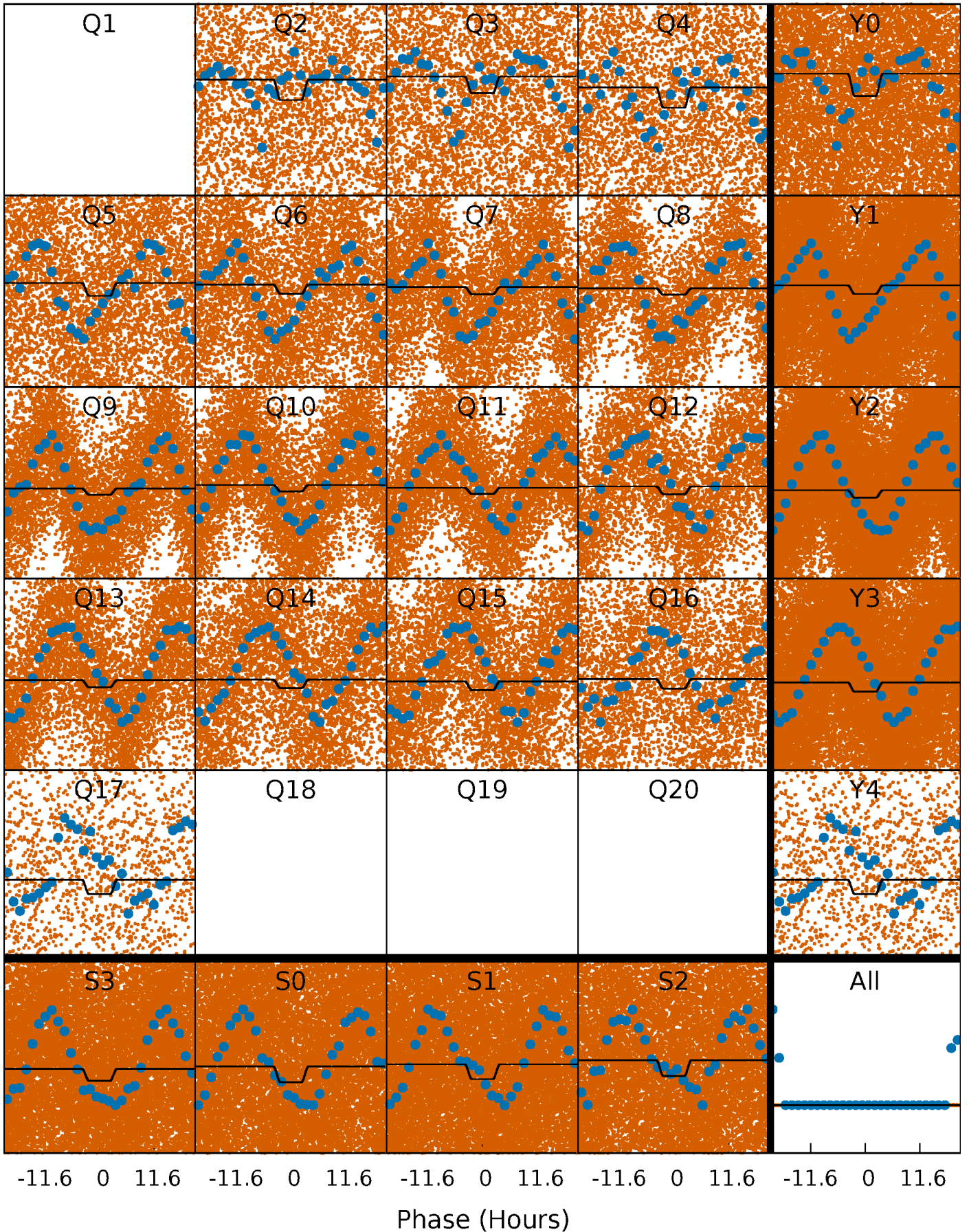
DV Quarter-Phased Transit Curves

TCE 005126627-01 P= 1.009543 Days $T_0=131.594485$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

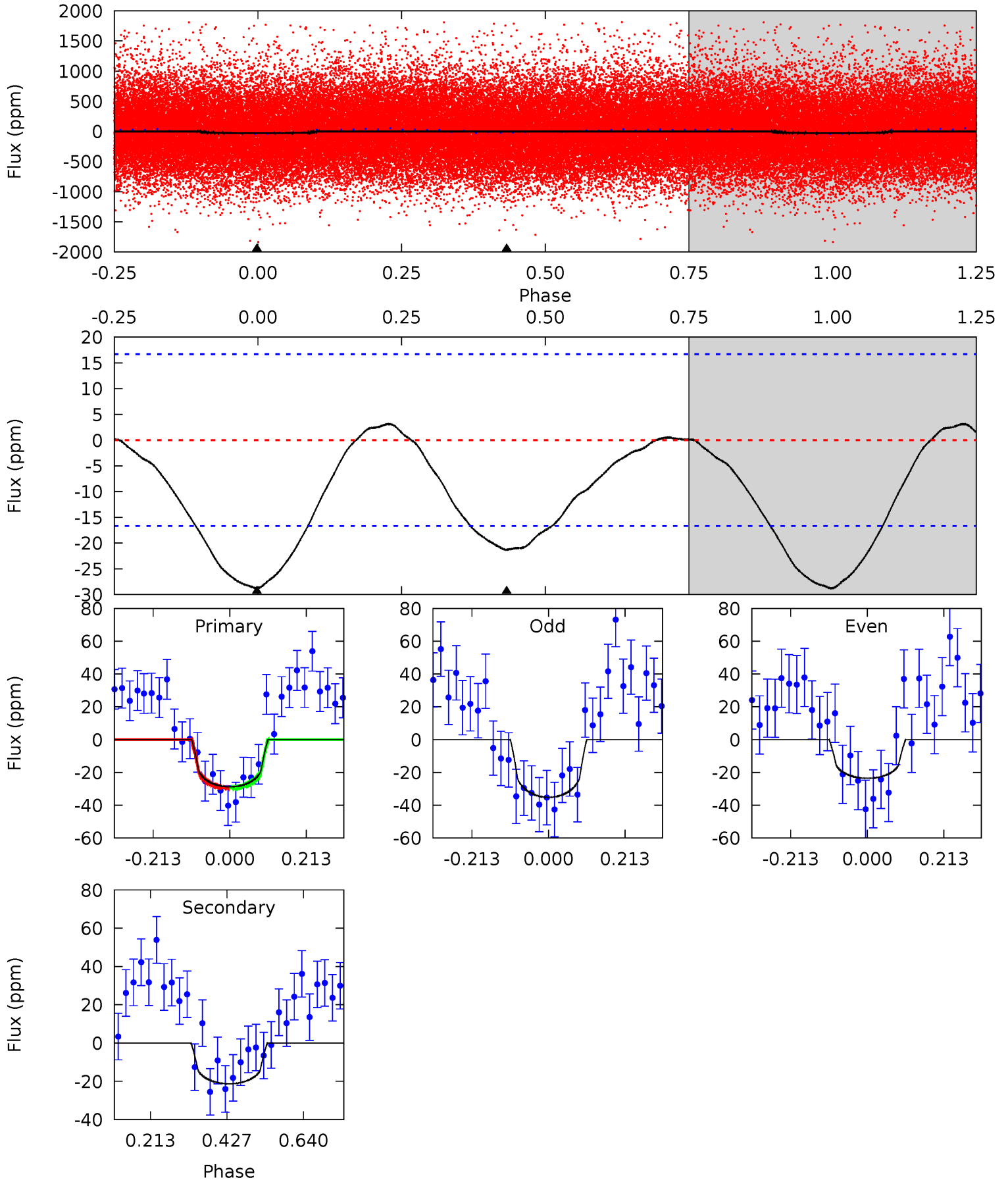
TCE 005126627-01 P= 1.009478 Days $T_0=131.850287$ (BKJD)



DV Model-Shift Uniqueness Test

005126627-01, P = 1.009543 Days, E = 131.594485 Days

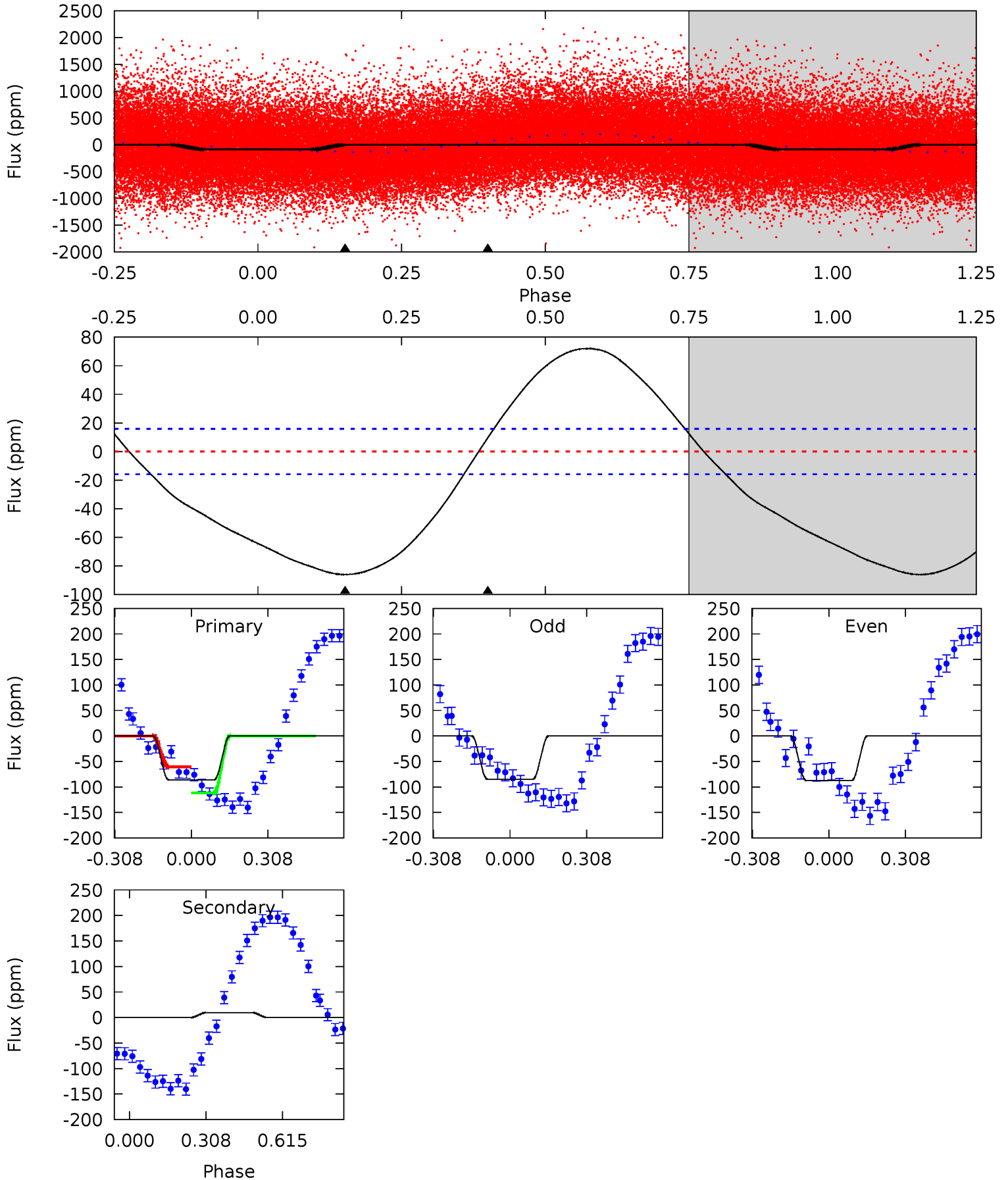
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.59	5.62	0	0	4.40	1.24	0.32	7.59	7.59	5.62	5.62	1.53	0.82	0.10	0.00



Alt Model-Shift Uniqueness Test

005126627-01, P = 1.009478 Days, E = 131.850287 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.5	-2.64	0	0	4.32	1.02	4.85	23.5	23.5	-2.64	-2.64	0.36	1.10	0.46	7.32



Stellar Parameters For KIC 005126627

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5780^{+1}_{-1}	$4.438^{+1.000}_{-1.000}$	$0.000^{+1.000}_{-1.000}$	$1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$
	+0%/-0%	+23%/-23%	+inf%/-inf%	+100%/-100%	+100%/-100%	+100%/-100%
Source	Solar	Solar	Solar	Solar		

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

Secondary Eclipse Parameters for KIC 005126627-01 / KOI 6529.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-21 ± 4	$0.86^{+0.64}_{-0.57}$	2533^{+117}_{-117}	4519^{+2960}_{-904}	$6.146^{+46.019}_{-4.217}$
Alt.	10 ± 4	$0.90^{+0.66}_{-0.60}$	2538^{+126}_{-124}	-3932^{+556}_{-2019}	$-2.326^{+1.571}_{-17.988}$

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

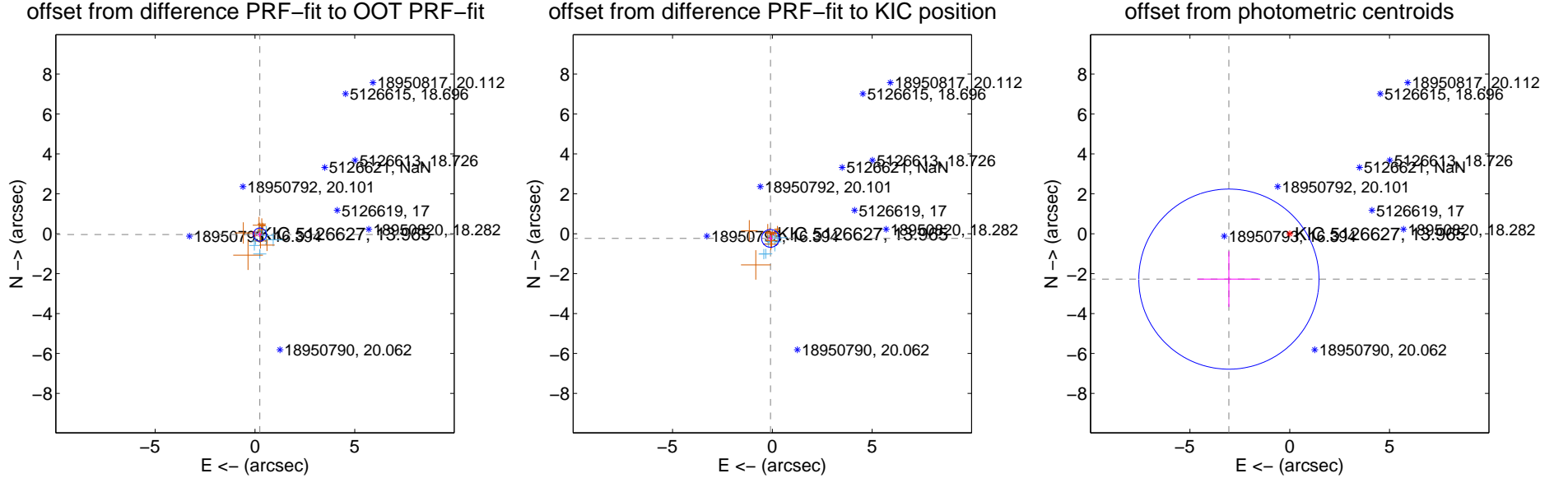
DV Centroid Data

Supplemental centroid analysis for 005126627-01. Kepler magnitude: 13.96. Transit SNR 8.52

There are 8 quarters with good PRF difference image offsets

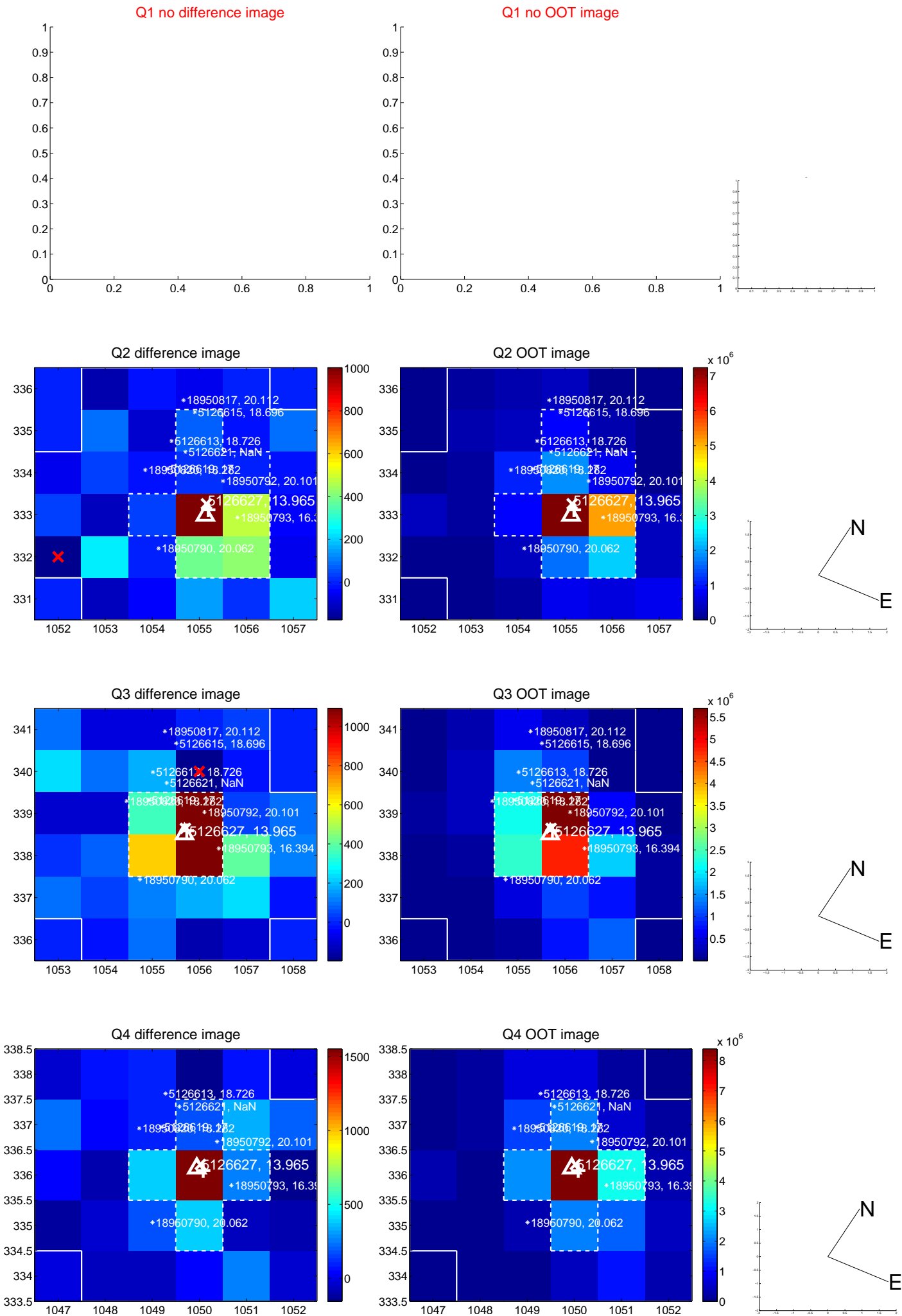
The direct PRF centroid is offset from the target star catalog position by about 0.58 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.246 ± 0.109	2.25	-0.243 ± 0.112	-0.042 ± 0.127
PRF-fit source offset from KIC position	0.250 ± 0.148	1.69	0.093 ± 0.119	-0.232 ± 0.138
photometric centroid source offset	3.80 ± 1.50	2.53	3.05 ± 1.56	-2.27 ± 1.39

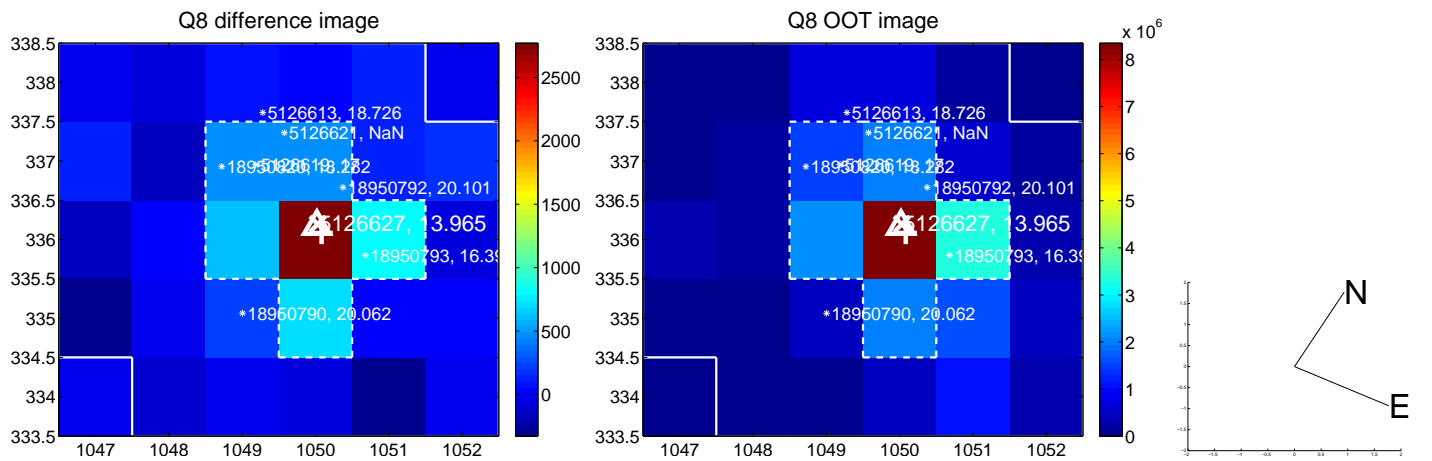
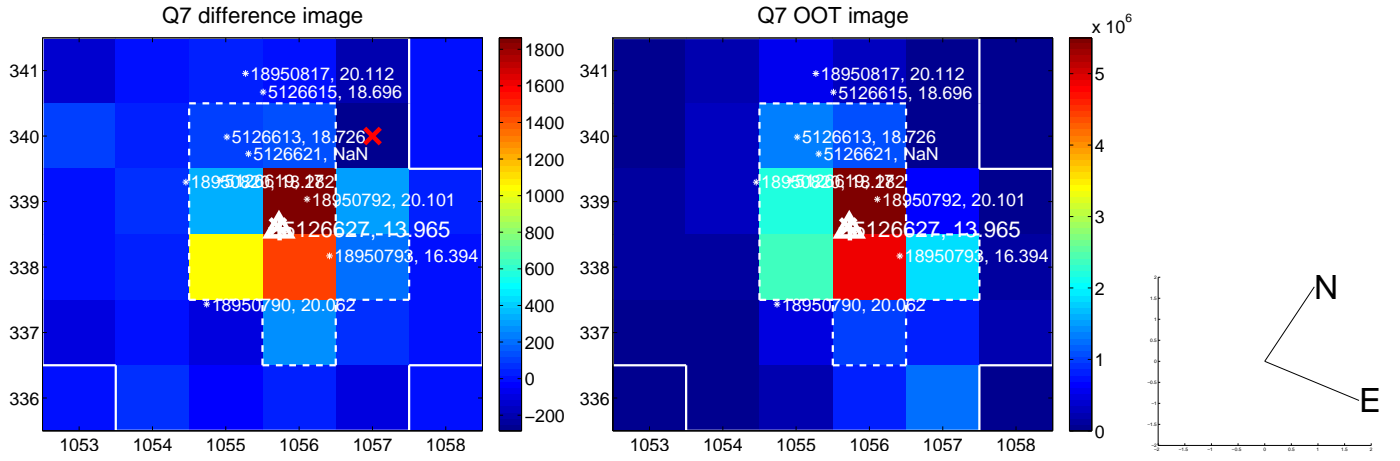
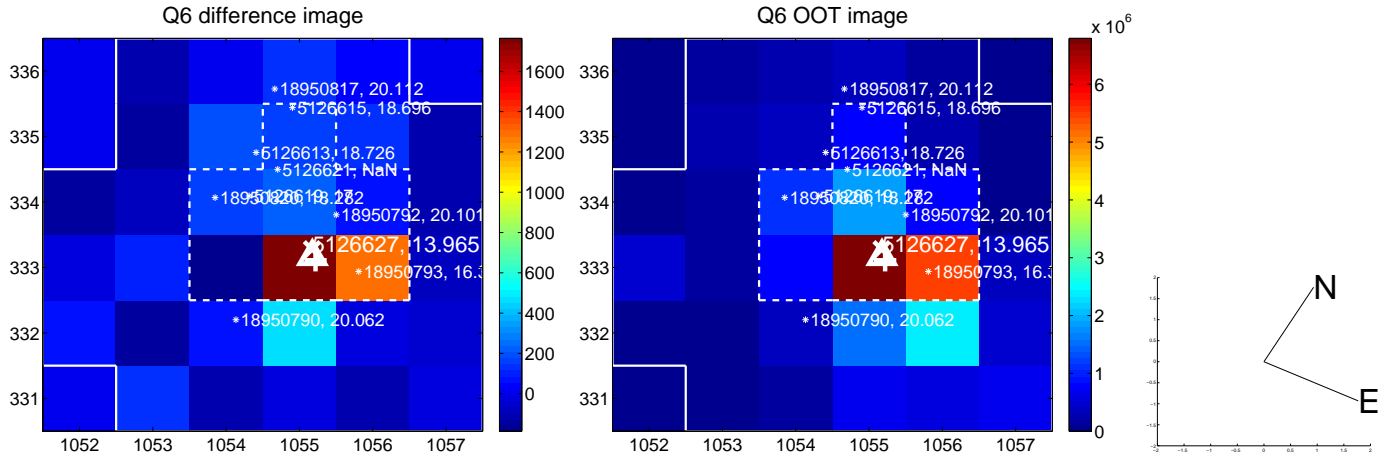
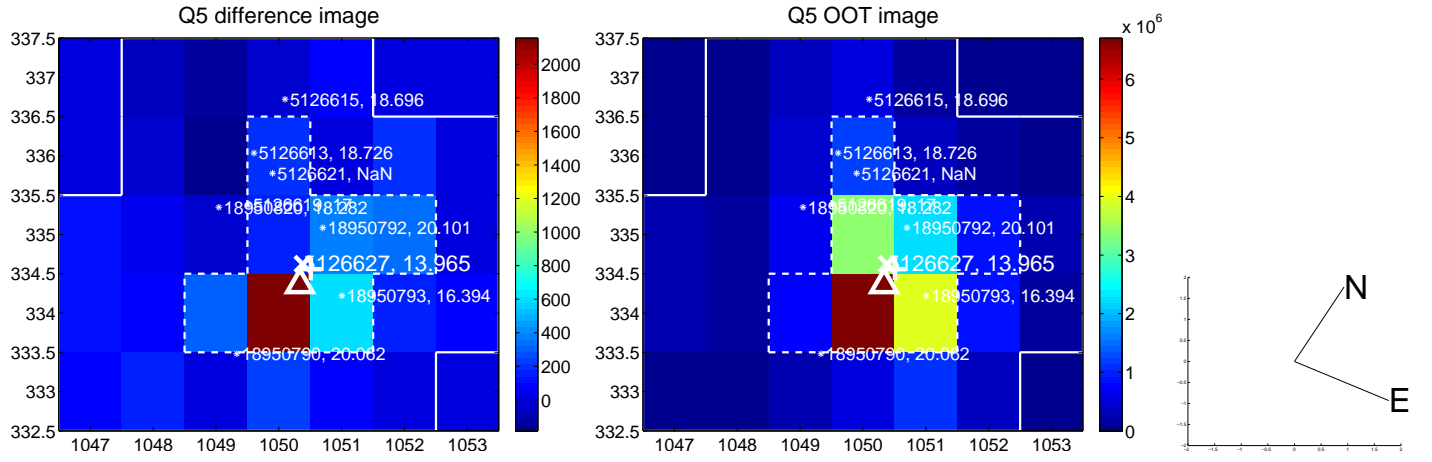


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

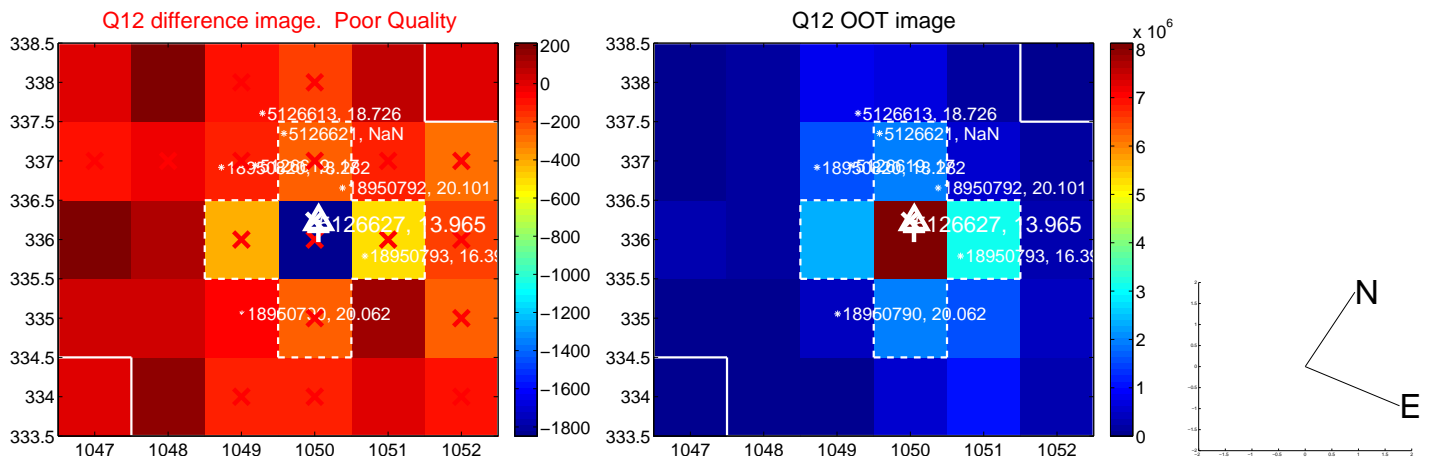
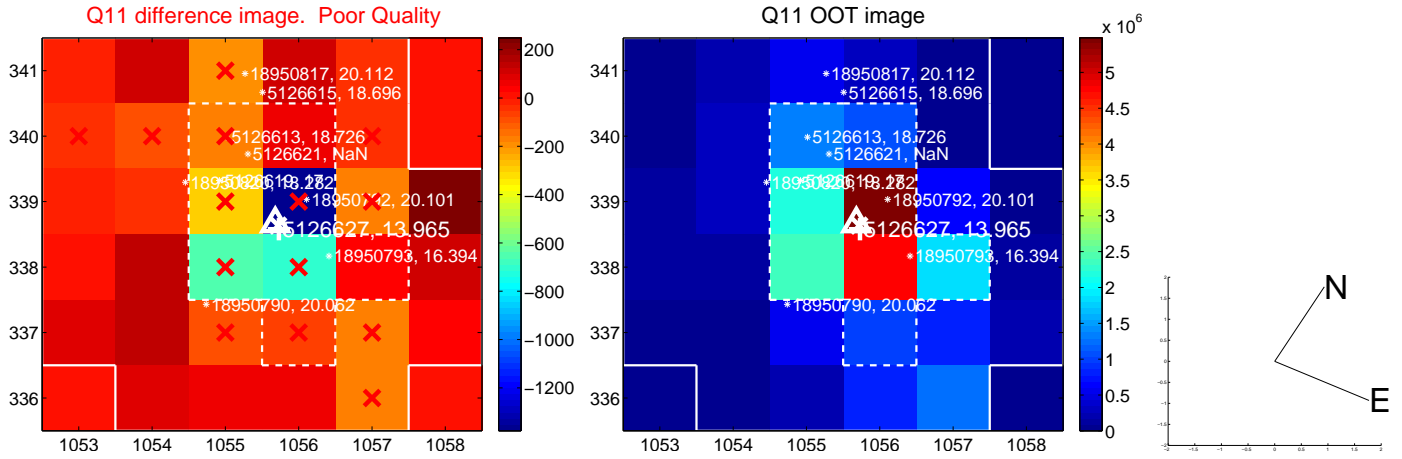
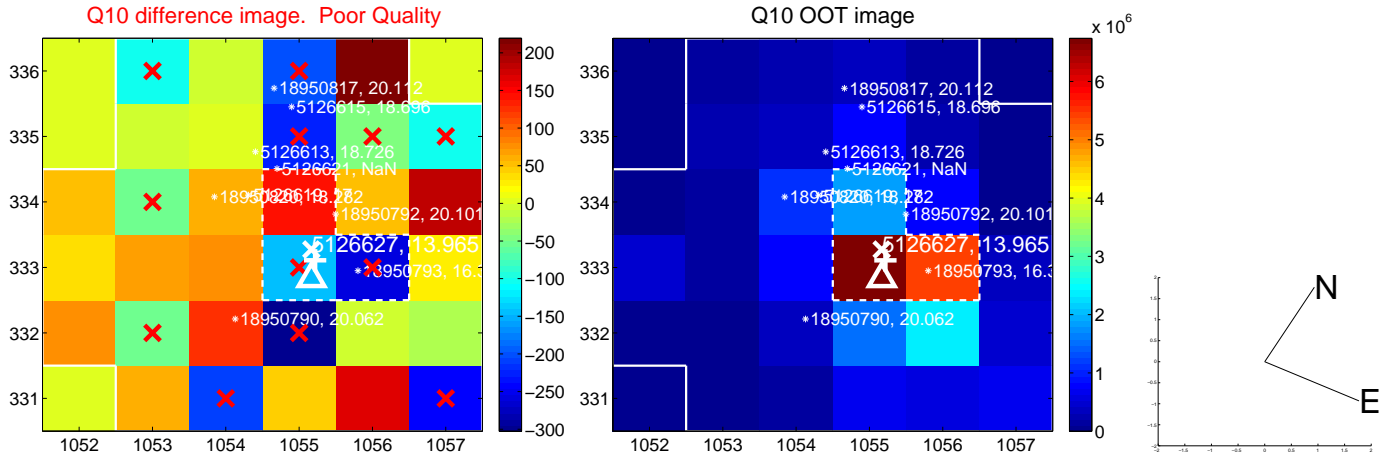
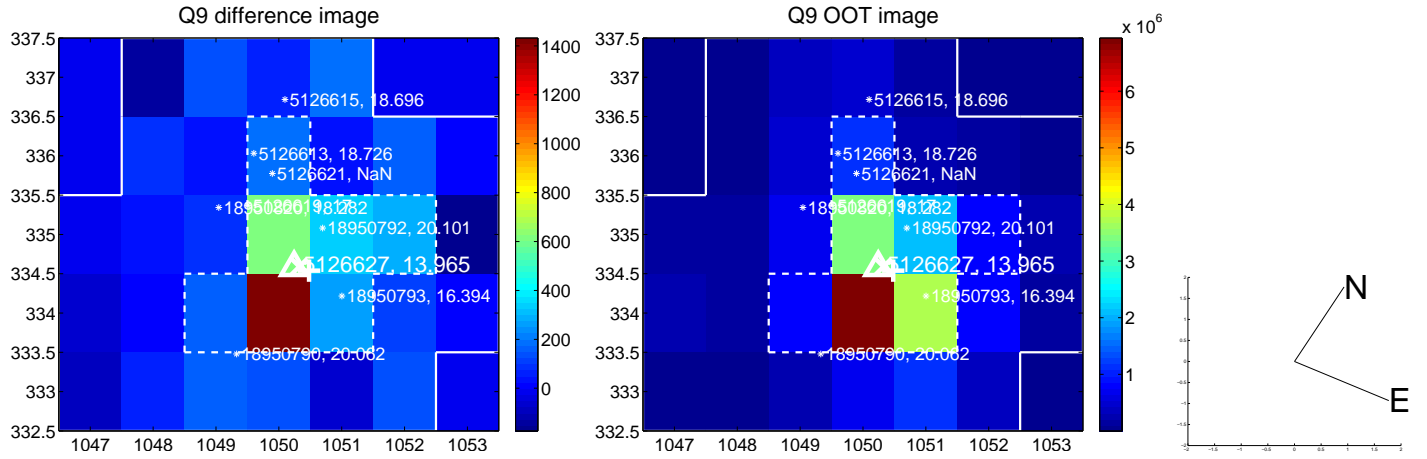
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



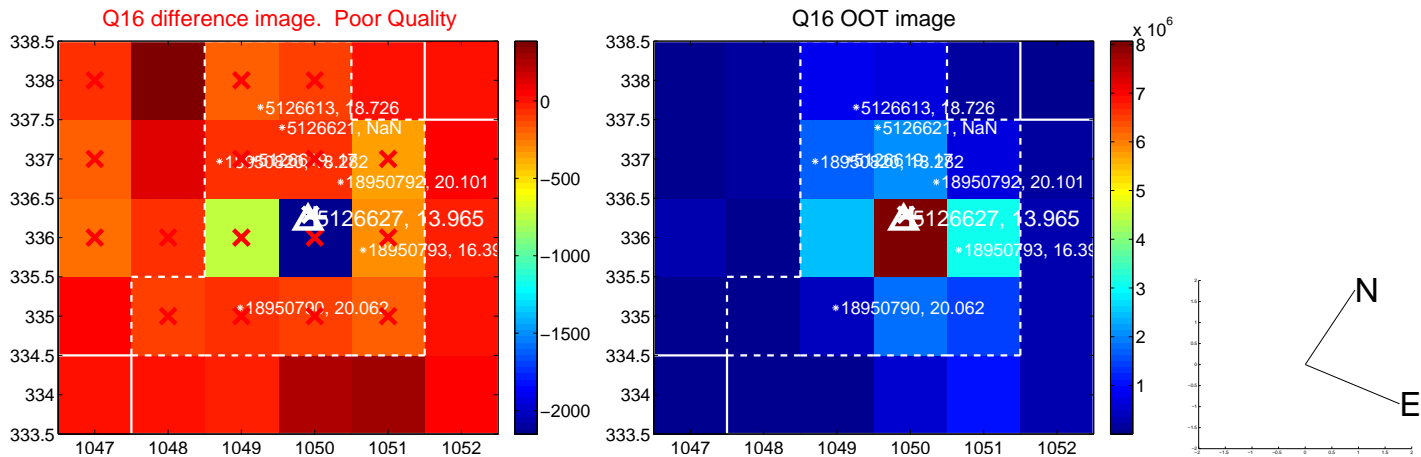
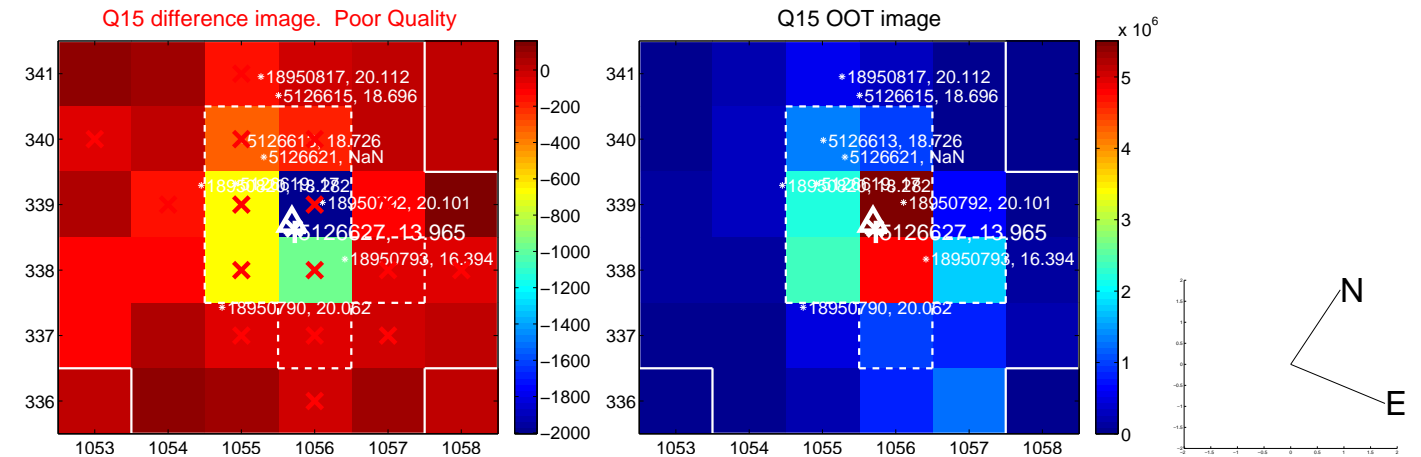
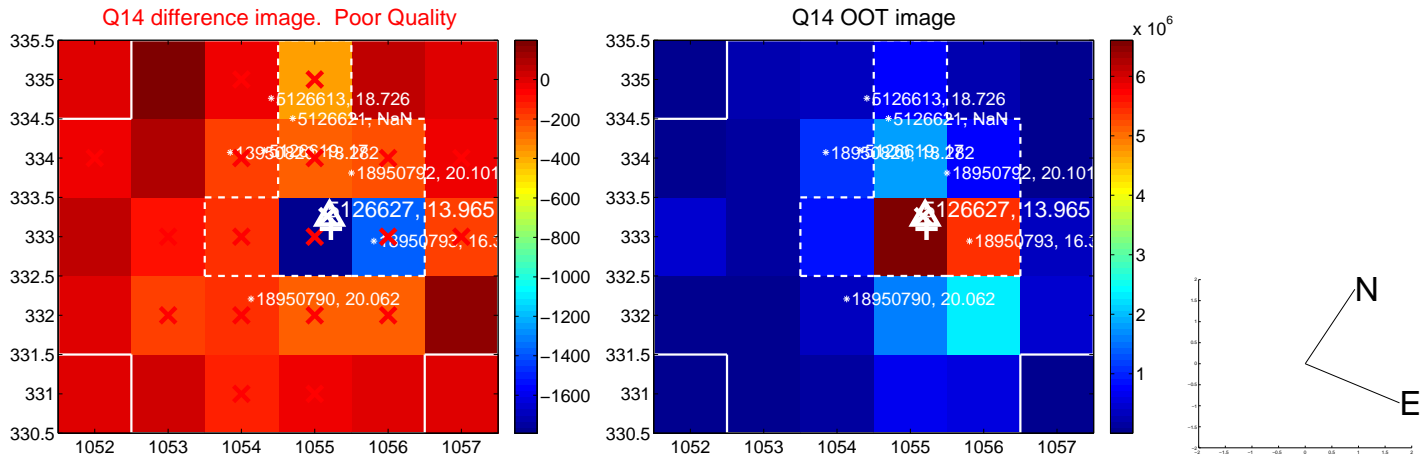
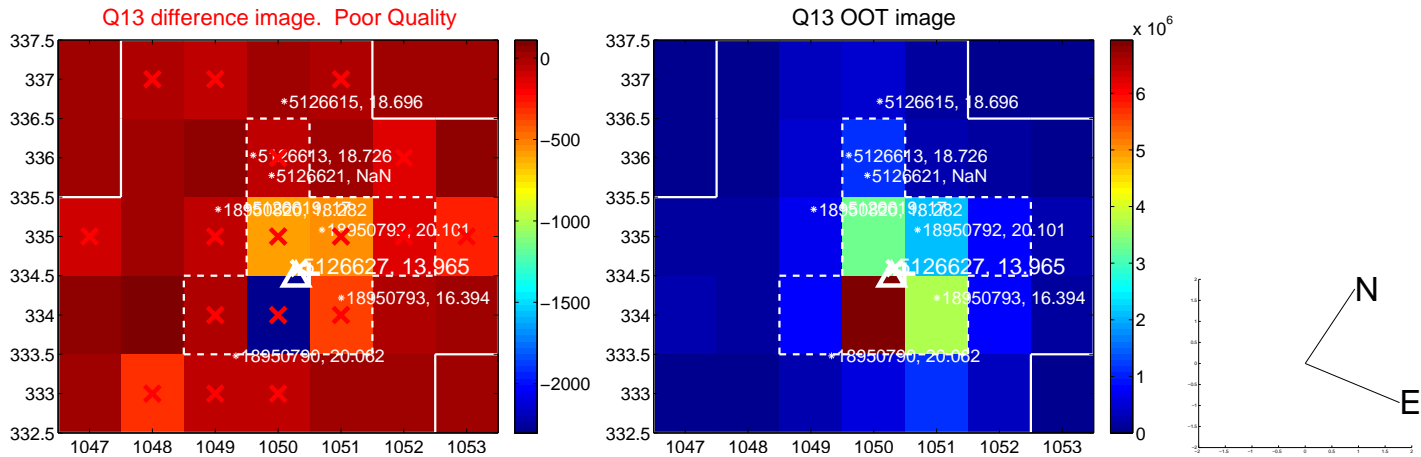
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



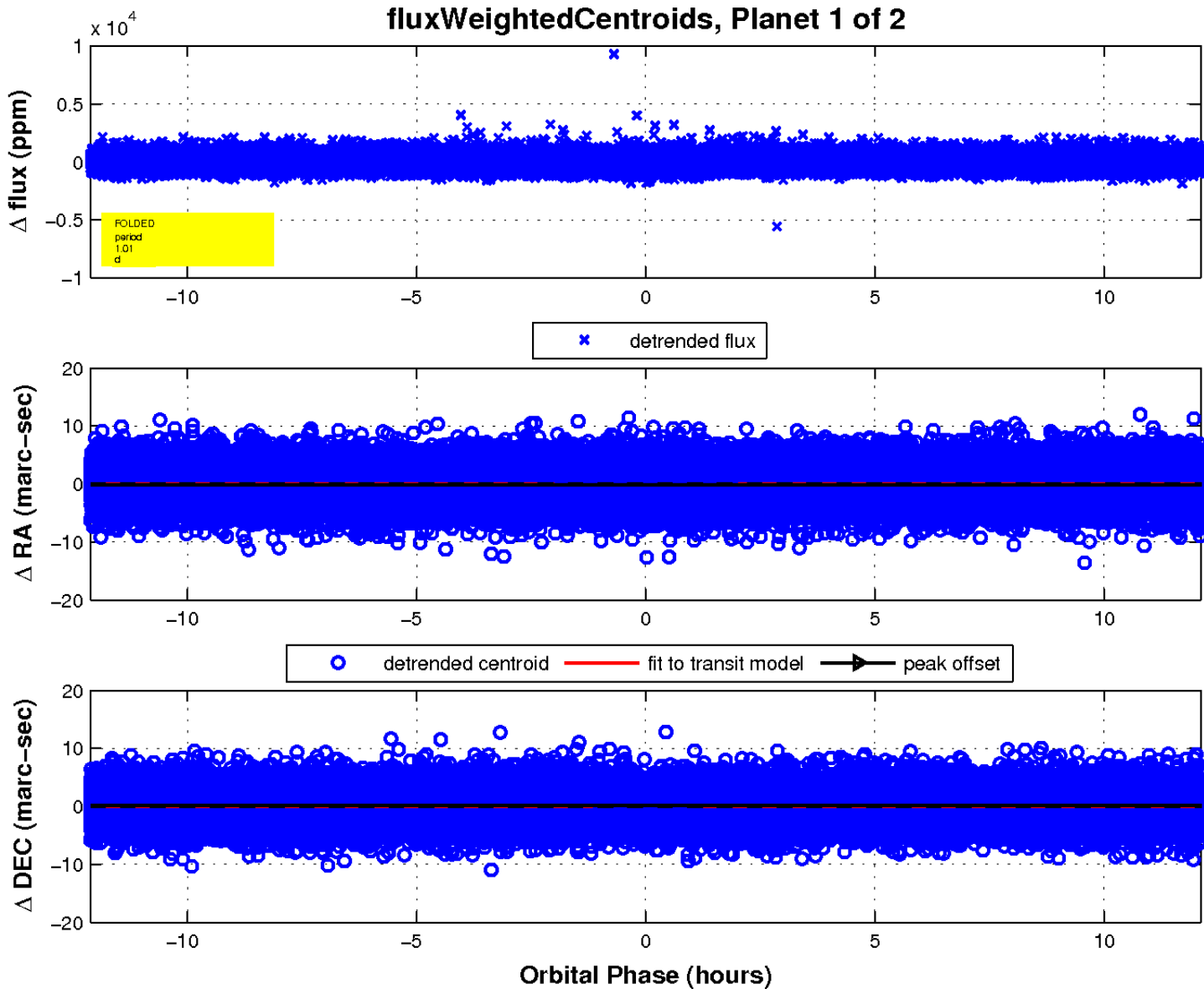
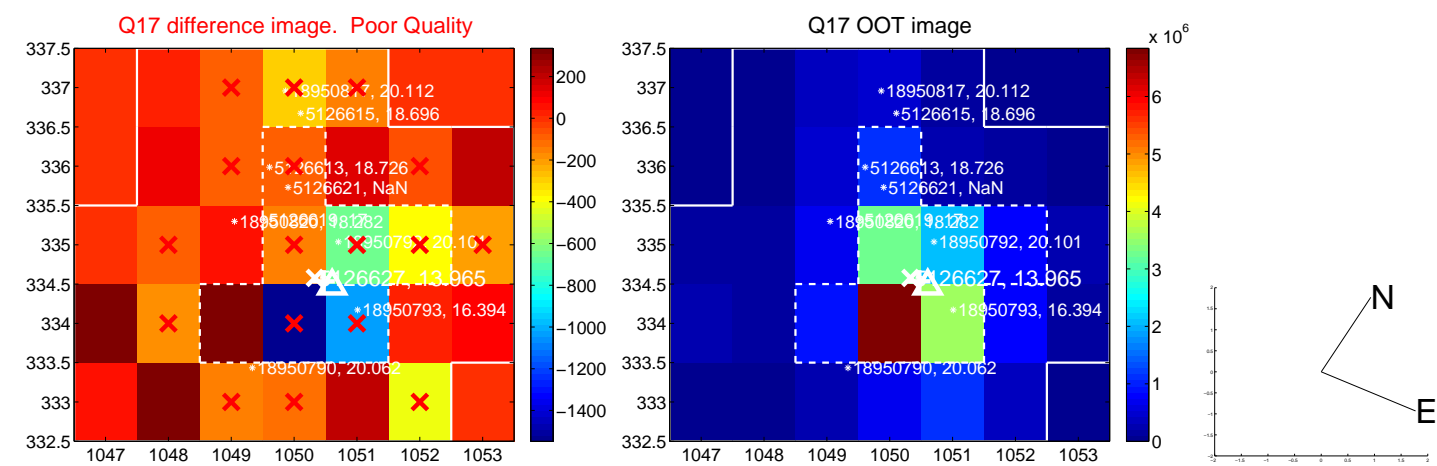
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

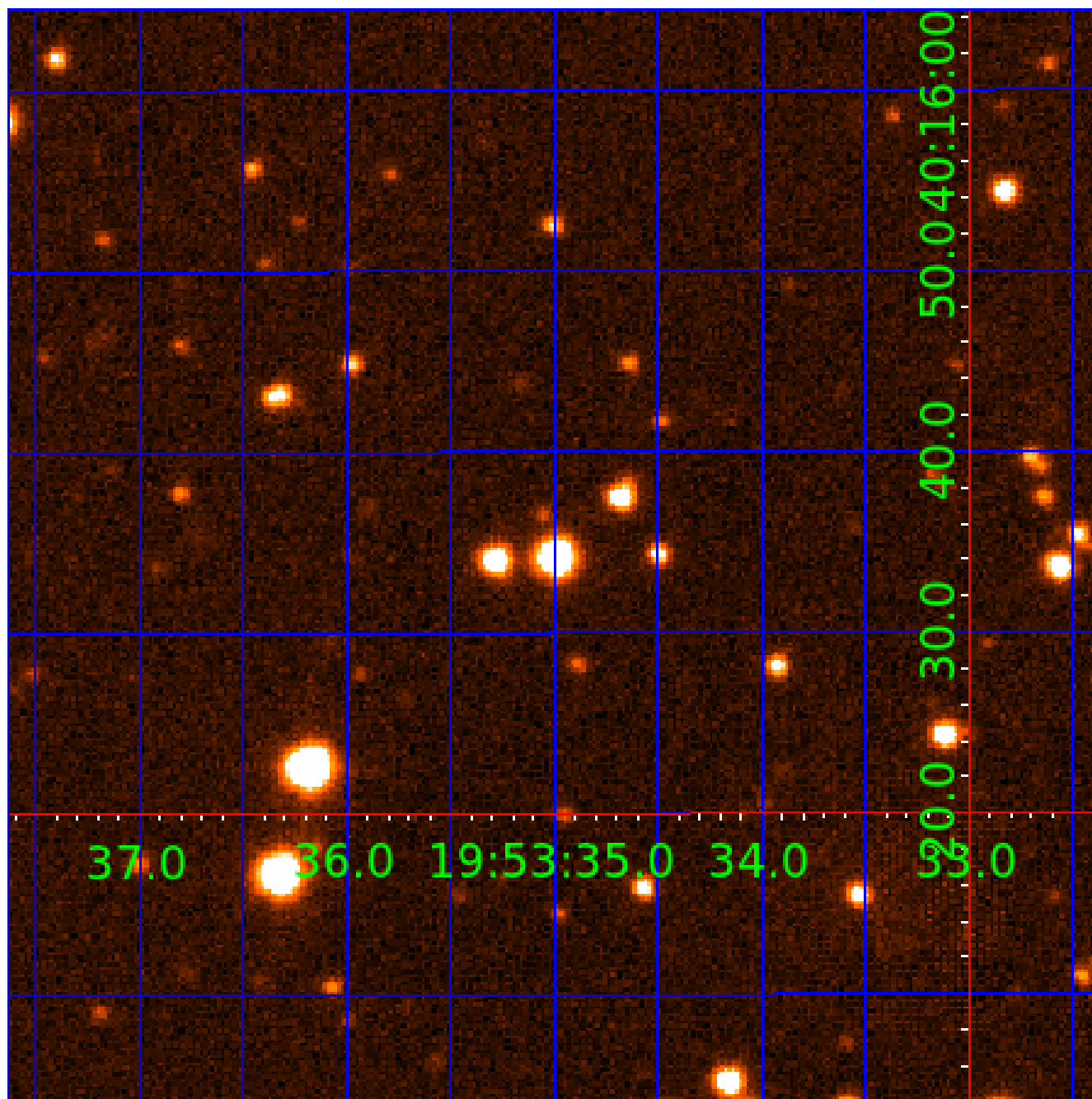


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005126627

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})
005126627-01	OBS	6529.01	1.009543	131.594485	45.5	4.729	7.6	8.5	1.00	5780	0.70	2576.95
005126627-02	OBS	No	47.459267	174.220481	429.7	1.594	7.8	8.3	1.00	5780	2.25	15.19

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005126627-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_KIC_POS
005126627-02	OBS	FP	0.01	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—MOD_NONUNIQ_ALT—CENT_KIC_POS

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.

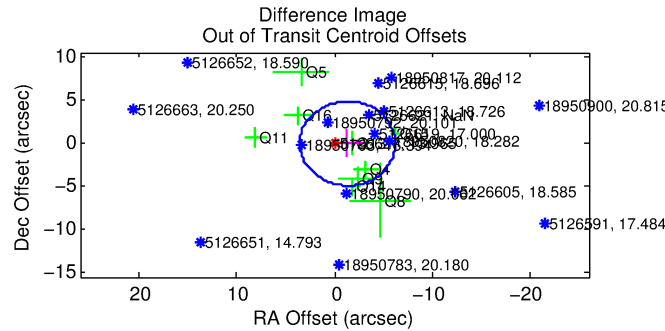
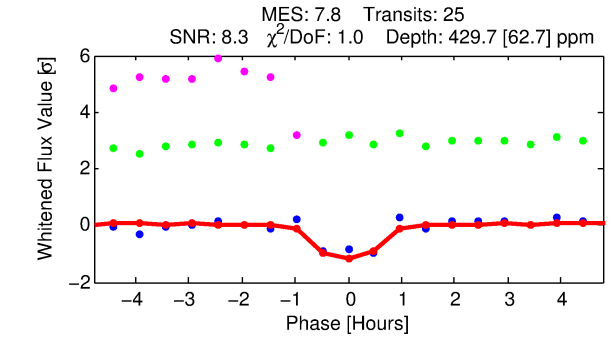
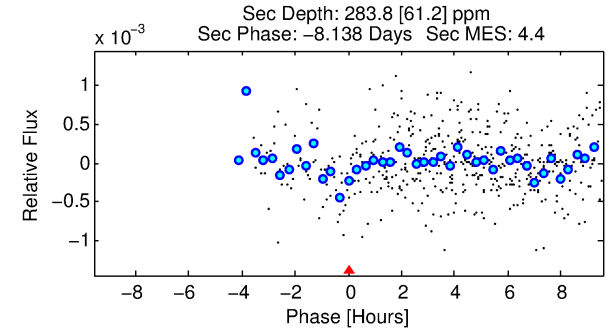
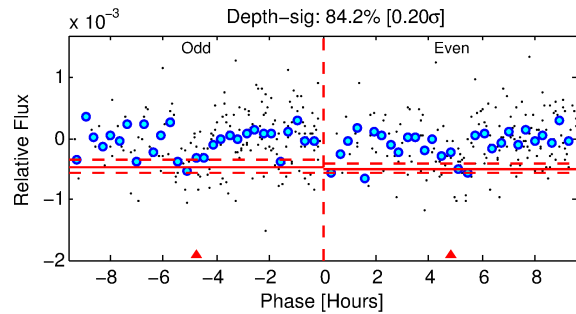
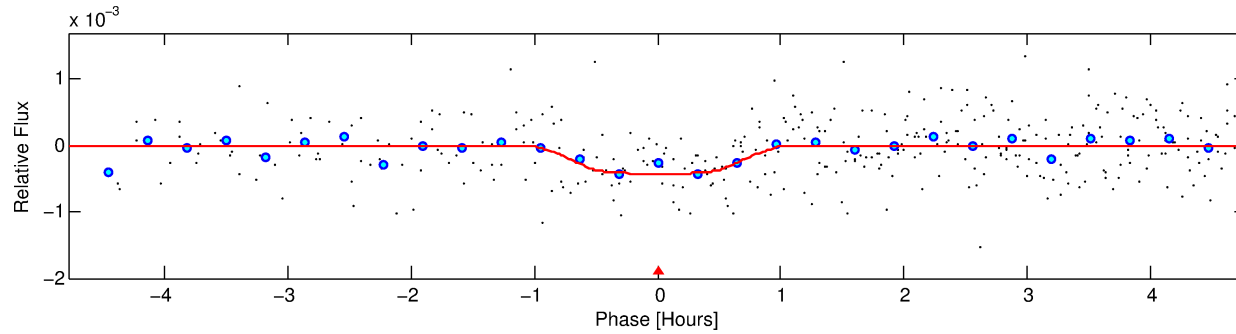
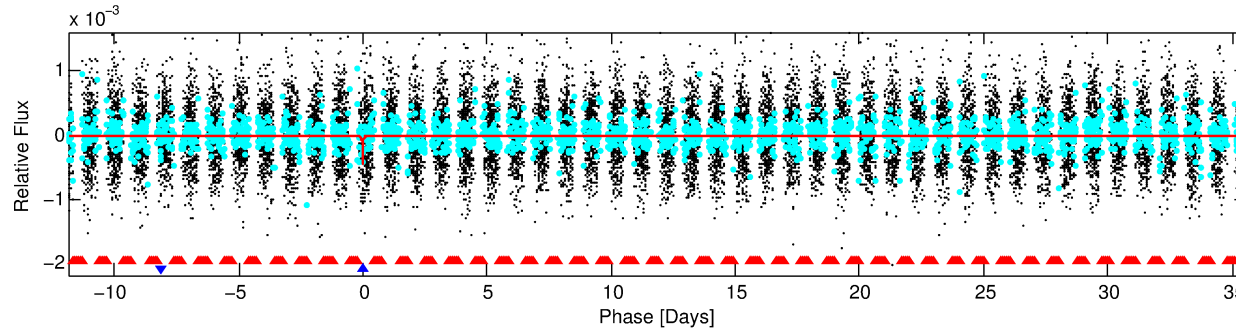
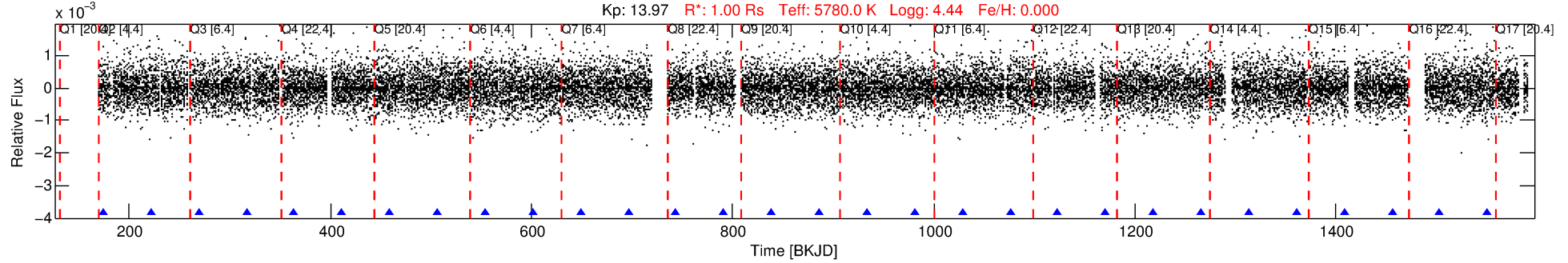
Ephemeris Match Information For 005126627-02

No Significant Match Found

DV One-Page Summary

KIC: 5126627 Candidate: 2 of 2 Period: 47.459 d
KOI: K06529 Corr: No Ephemeris Match

Kp: 13.97 R*: 1.00 Rs Teff: 5780.0 K Logg: 4.44 Fe/H: 0.000



DV Fit Results:

Period = 47.45927 [0.00051] d
Epoch = 174.2205 [0.0101] BKJD
Rp/R* = 0.0206 [0.0421]
a/R* = 161.03 [1455.20]
b = 0.74 [5.75]
Seff = 15.19 [0.00]
Teq = 503 [0] K
Rp = 2.25 [4.59] Re
a = 0.2566 [0.0000] AU
Ag = 2035.11 [8328.68] [0.24σ]
Teffp = 5227 [5348] K [0.88σ]

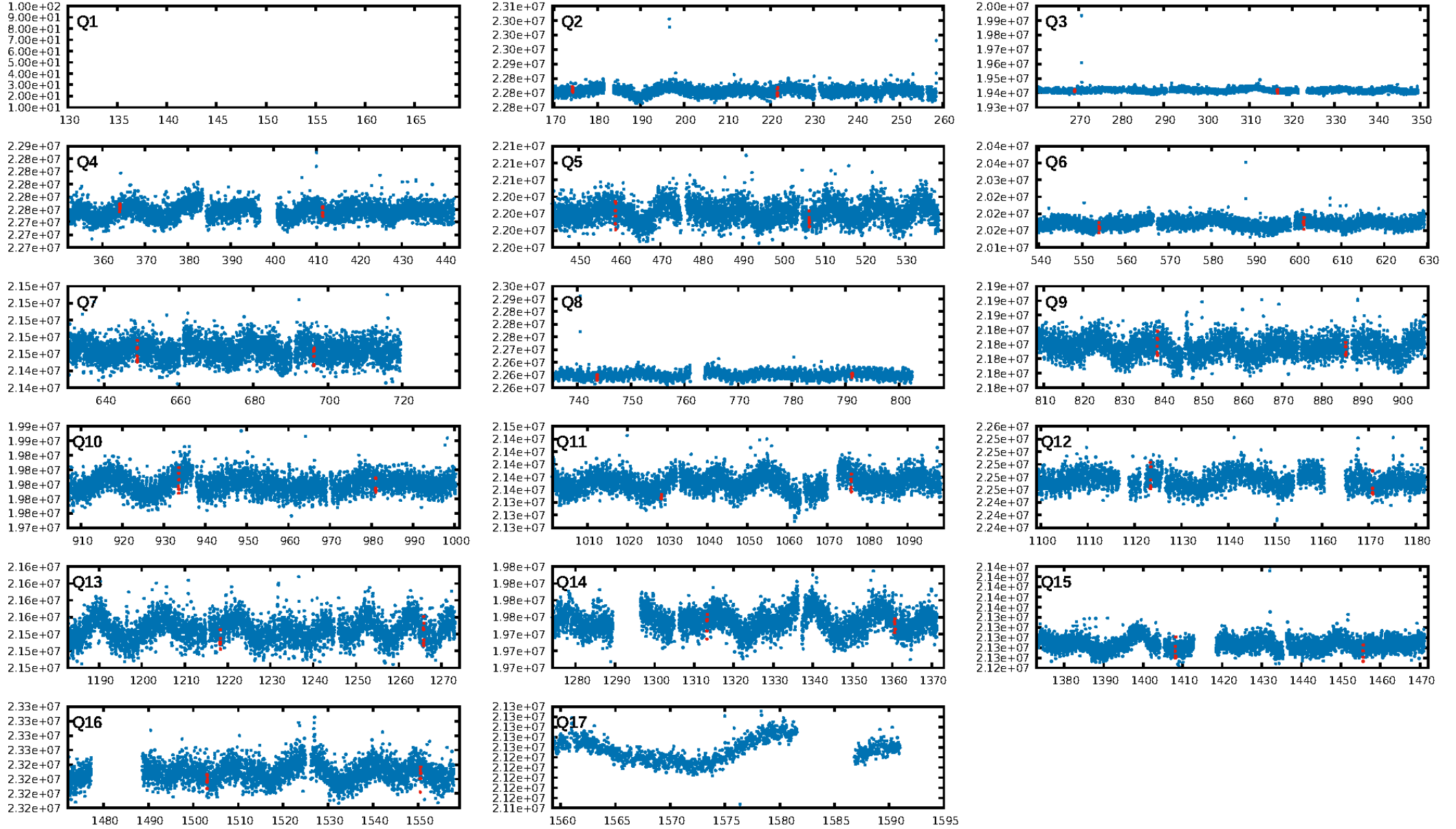
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [223.40σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 97.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.22e-12
RollingBand-fgt: 1.00 [25/25]
GhostDiagnostic-chr: 0.8851
Centroid-sig: 1.0%
Centroid-so: 3.473 arcsec [1.83σ]
OotOffset-rm: 1.321 arcsec [0.81σ]
KicOffset-rm: 0.601 arcsec [0.32σ]
OotOffset-st: 1/2/3/3 [9]
KicOffset-st: 1/2/3/3 [9]
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DiffImageOverlap-fno: 0.67 [10/15]

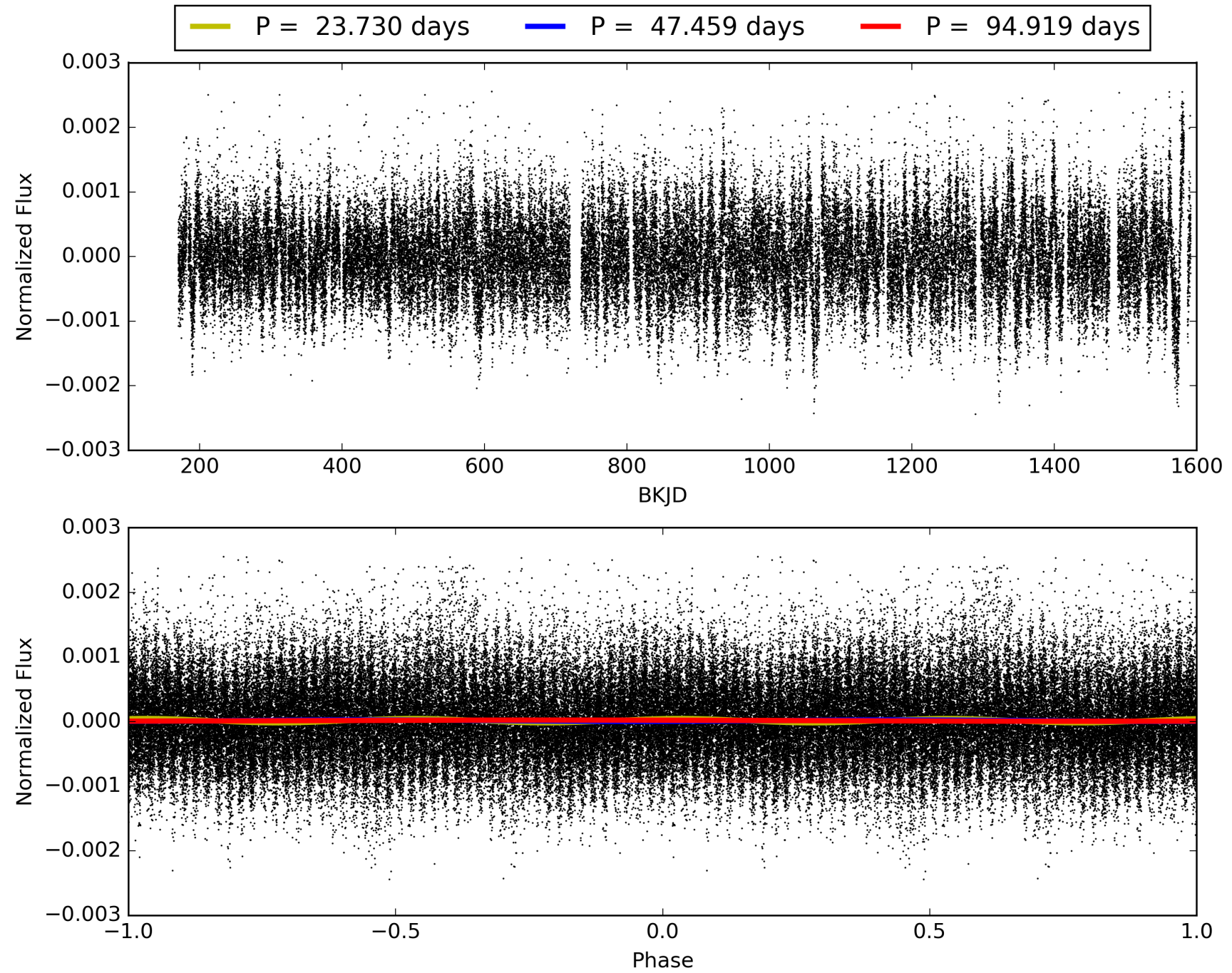
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 15:52:11 Z

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

TCE 005126627-02, PDC Light Curves

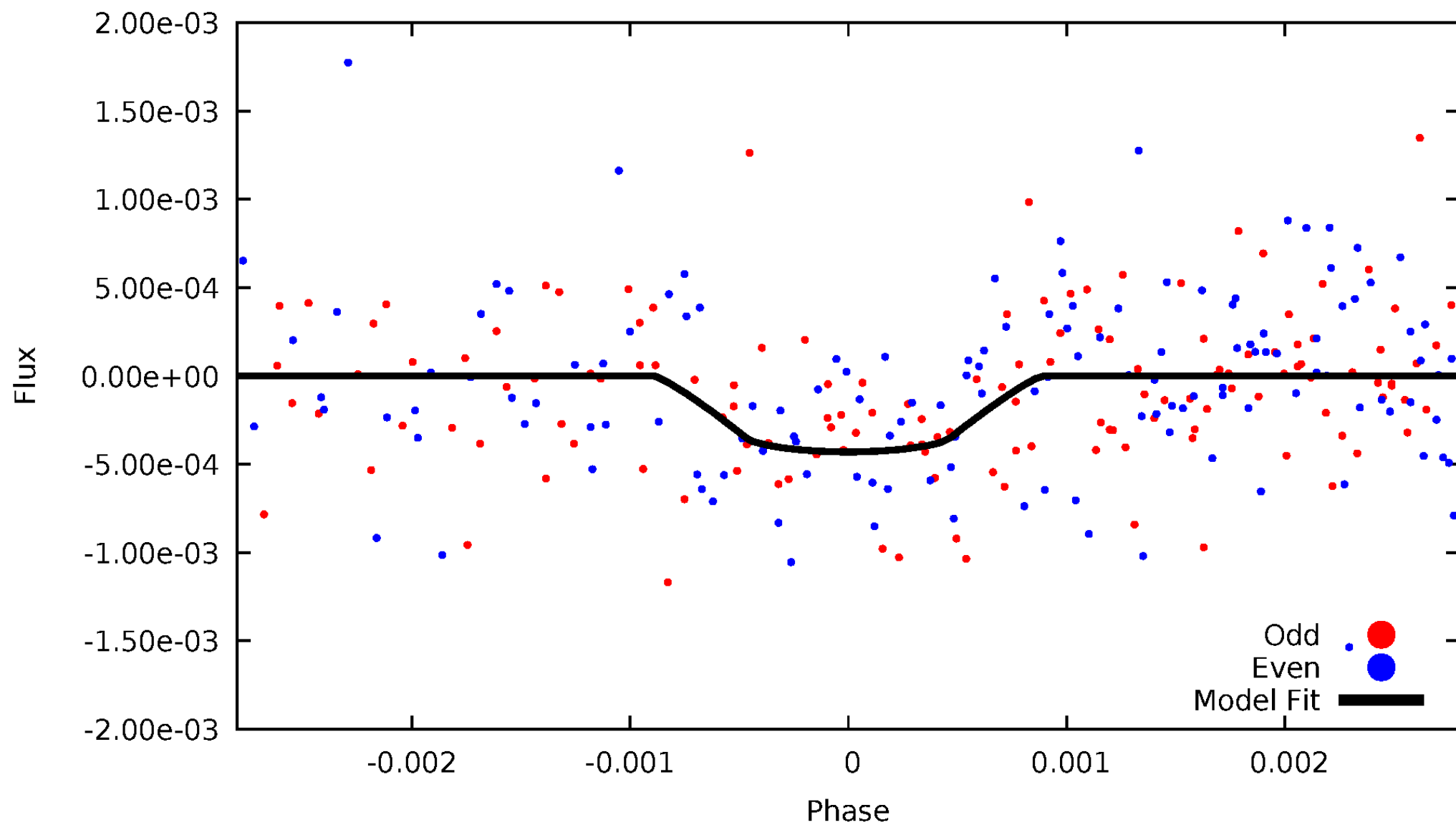


TCE 005126627-02



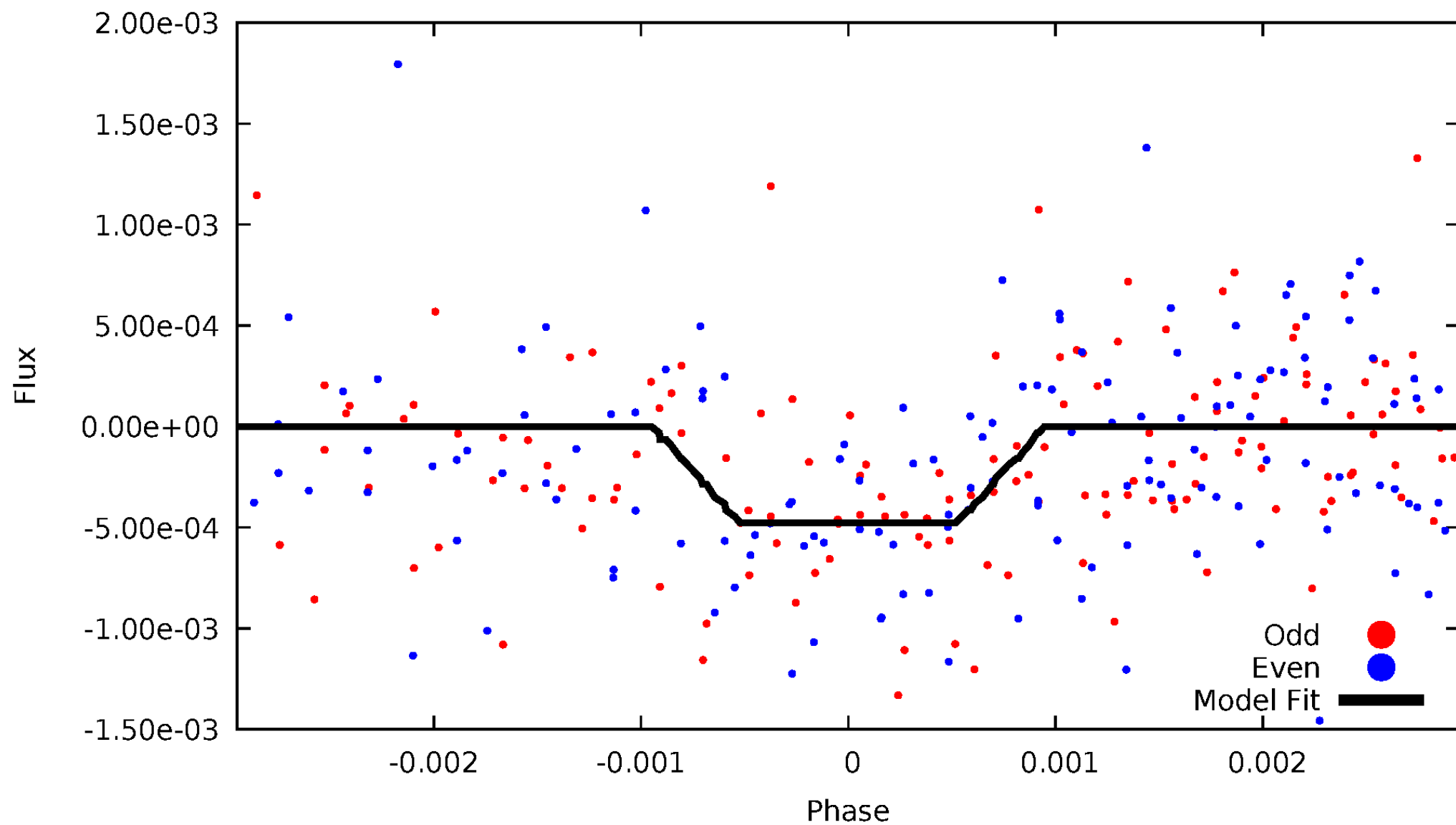
DV Odd/Even

TCE 005126627-02



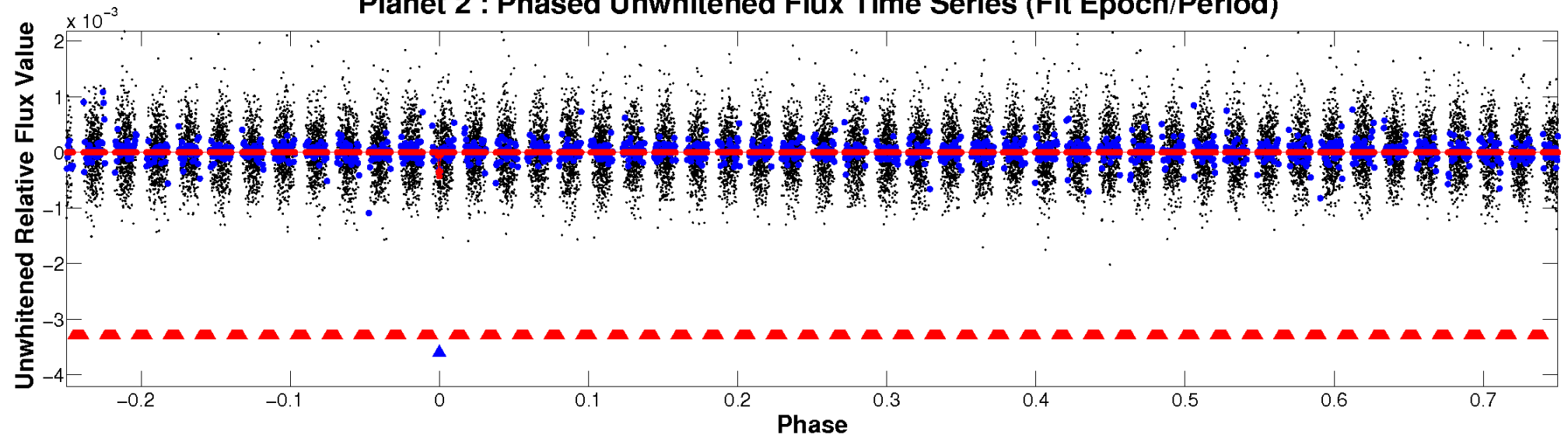
ALT Odd/Even

TCE 005126627-02

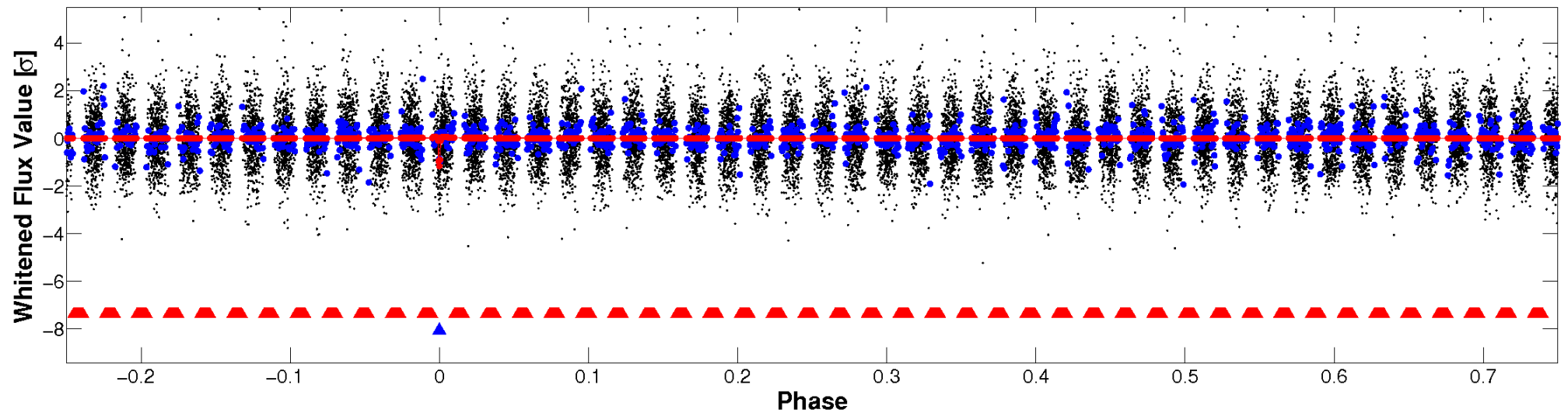


Non-Whitened Vs. Whitened Light Curve

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

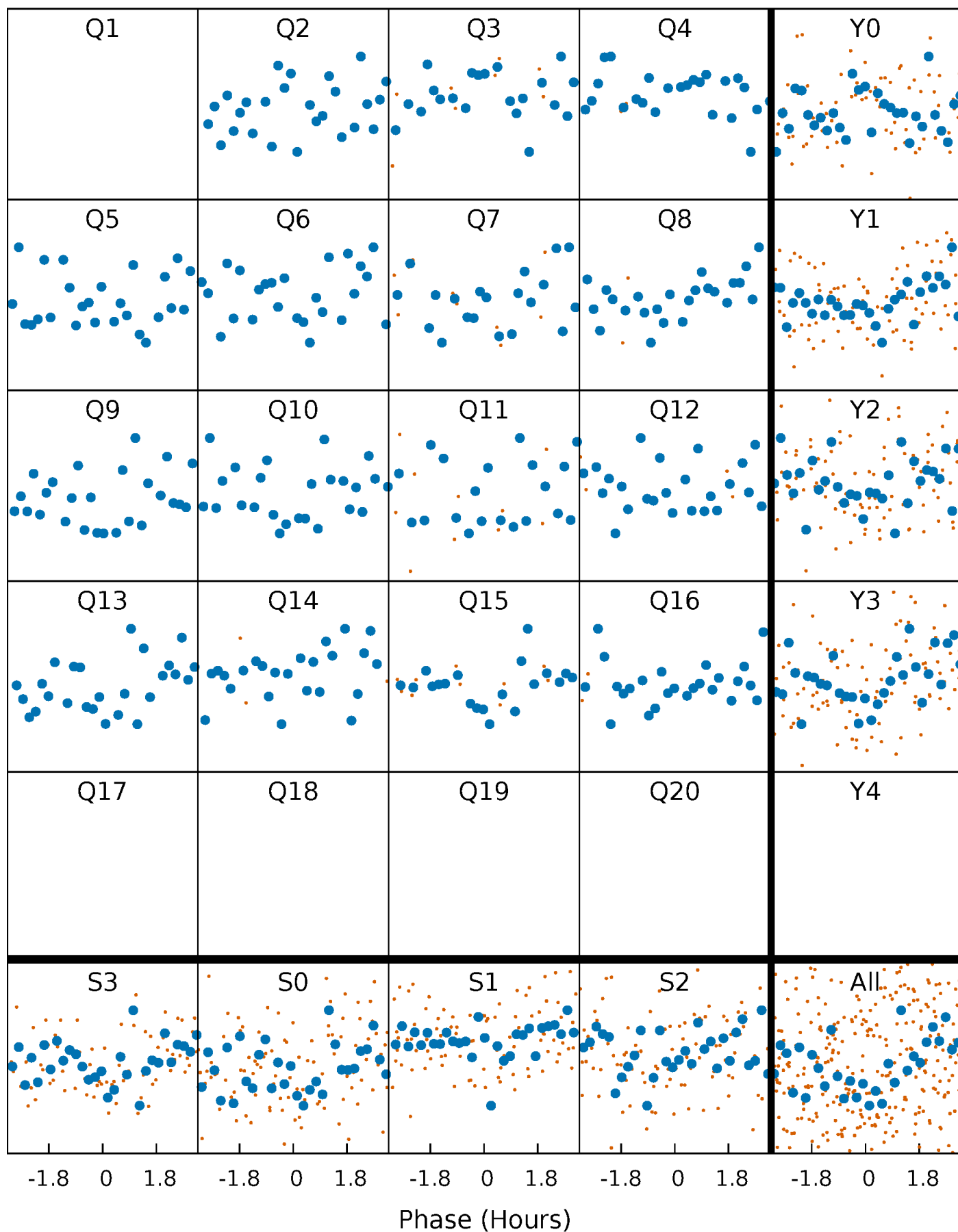


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



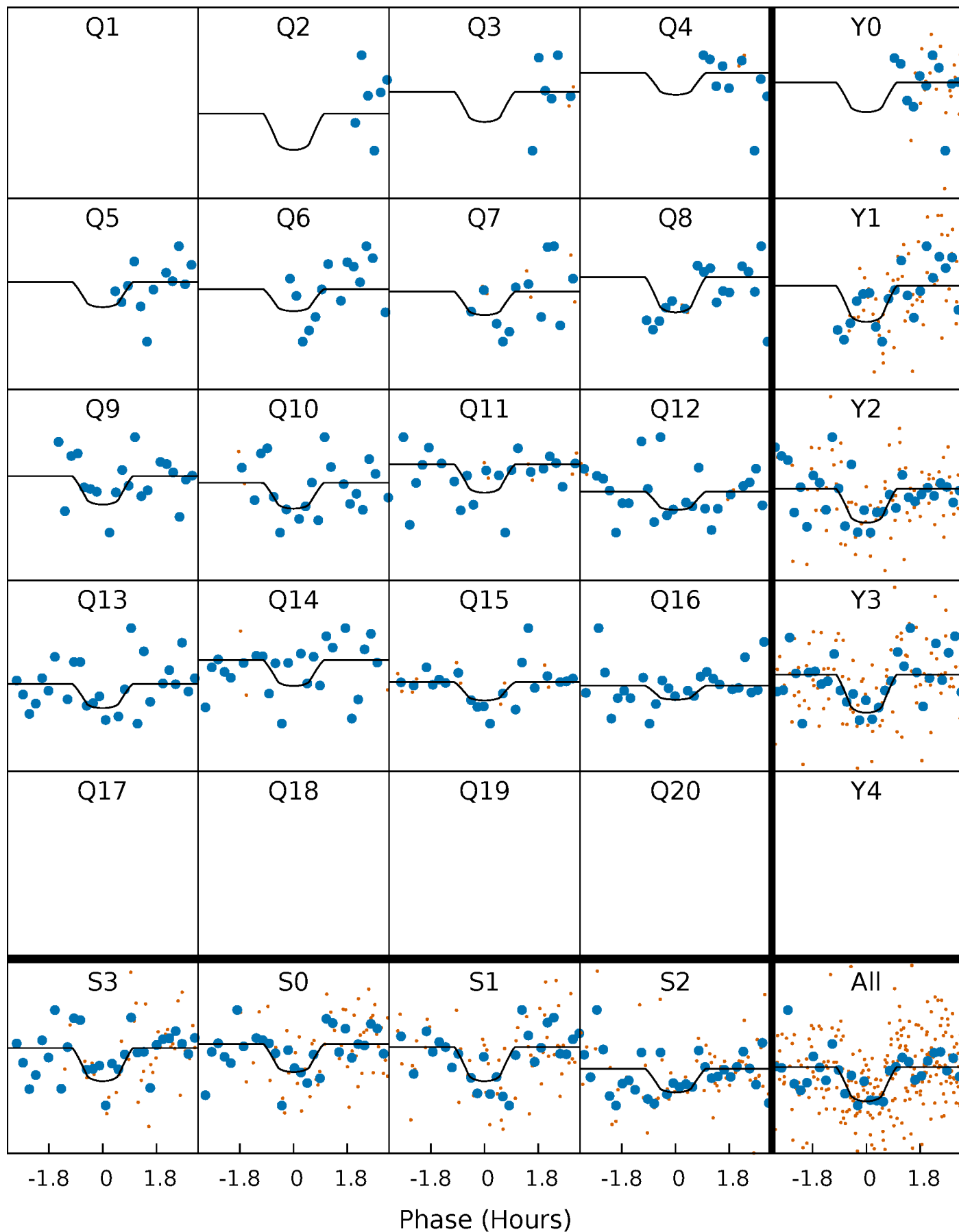
PDC Quarter-Phased Transit Curves

TCE 005126627-02 P= 47.459267 Days $T_0=174.220481$ (BKJD)



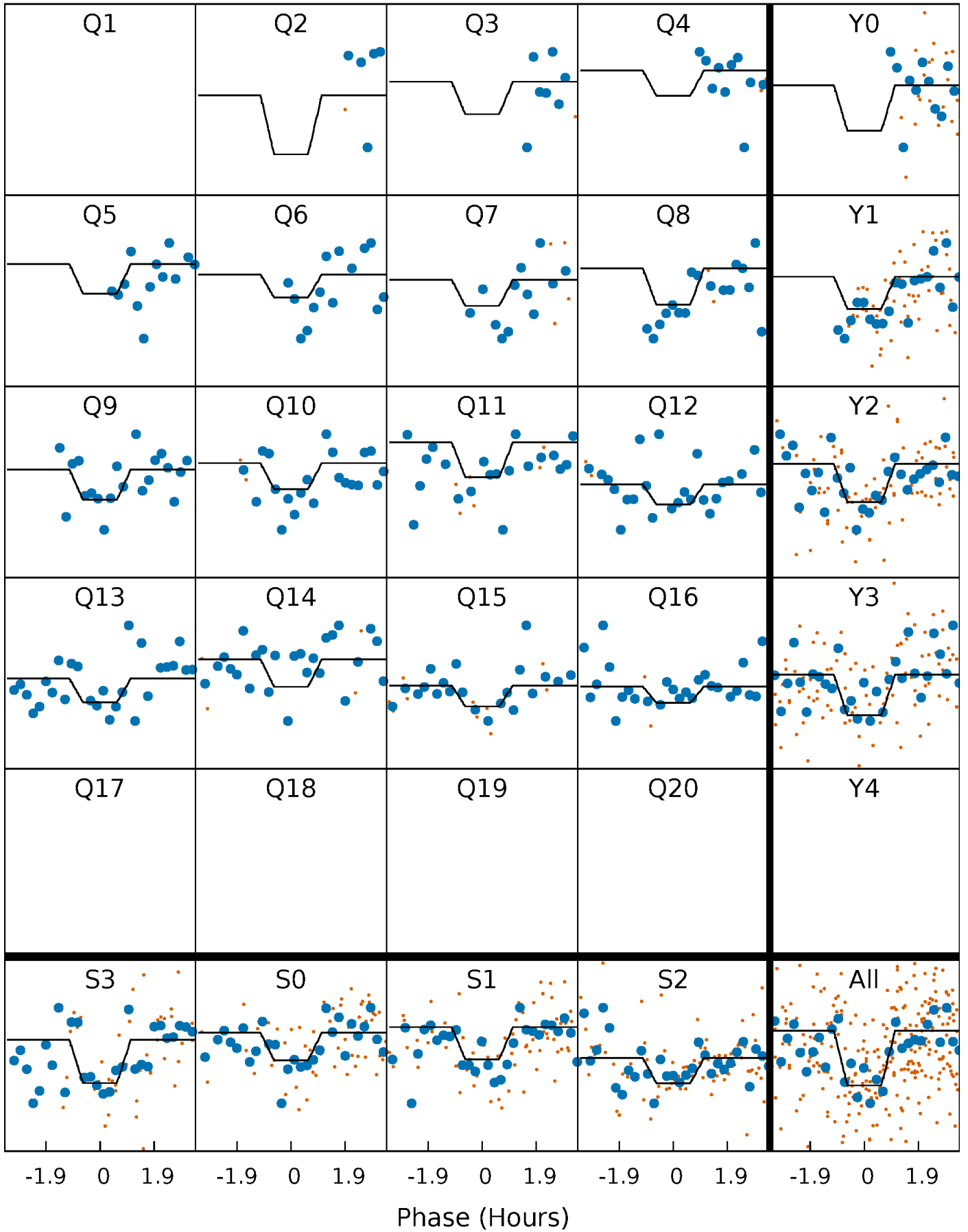
DV Quarter-Phased Transit Curves

TCE 005126627-02 P= 47.459267 Days $T_0=174.220481$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

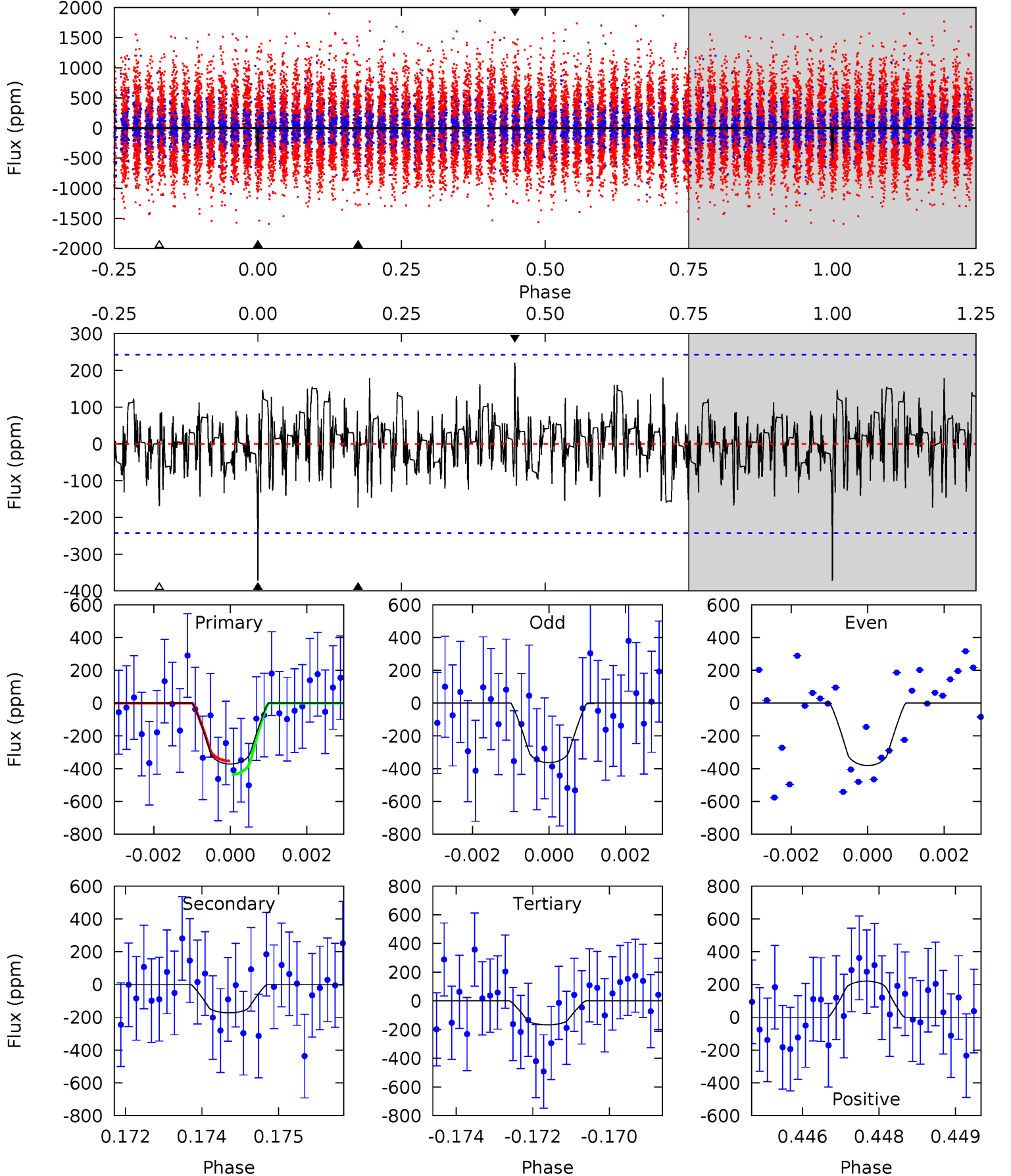
TCE 005126627-02 P= 47.458989 Days $T_0=174.222586$ (BKJD)



DV Model-Shift Uniqueness Test

005126627-02, P = 47.459267 Days, E = 126.761214 Days

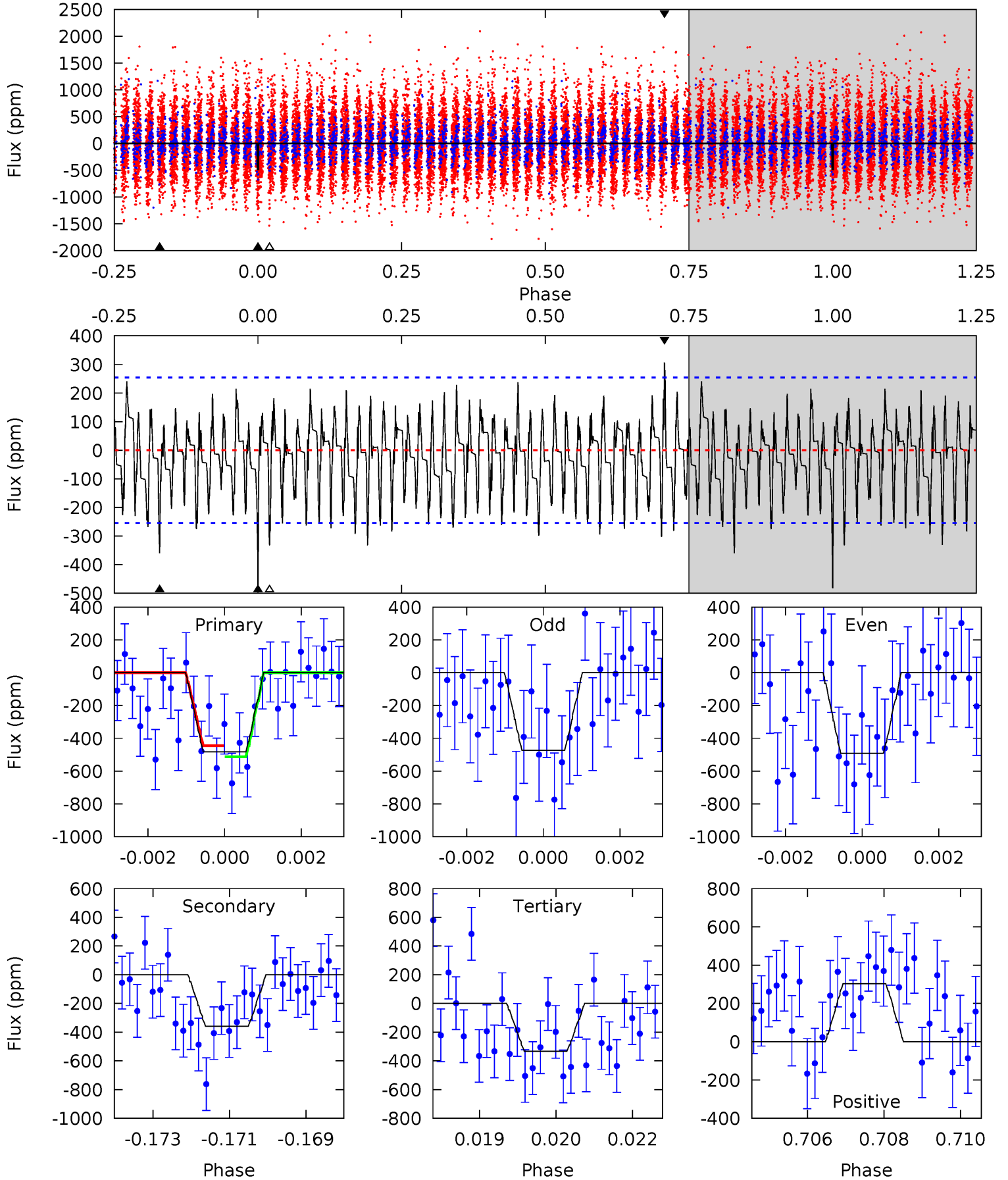
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.19	3.80	3.67	4.85	5.35	3.12	1.26	4.52	3.34	0.13	-1.05	0.19	0.95	0.37	0.92



Alt Model-Shift Uniqueness Test

005126627-02, $P = 47.458989$ Days, $E = 126.763597$ 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	7.56	6.99	6.38	5.34	3.11	2.60	3.15	3.76	0.57	1.17	0.19	1.05	0.39	0.70



Stellar Parameters For KIC 005126627

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5780^{+1}_{-1}	$4.438^{+1.000}_{-1.000}$	$0.000^{+1.000}_{-1.000}$	$1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$
	+0%/-0%	+23%/-23%	+inf%/-inf%	+100%/-100%	+100%/-100%	+100%/-100%
Source	Solar	Solar	Solar	Solar		

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

Secondary Eclipse Parameters for KIC 005126627-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-173 ± 45	$4.12^{+3.83}_{-2.86}$	703^{+36}_{-31}	3800^{+2425}_{-712}	361^{+3879}_{-264}
Alt.	-360 ± 48	$4.30^{+3.90}_{-2.89}$	704^{+34}_{-32}	4263^{+2733}_{-834}	706^{+5653}_{-513}

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

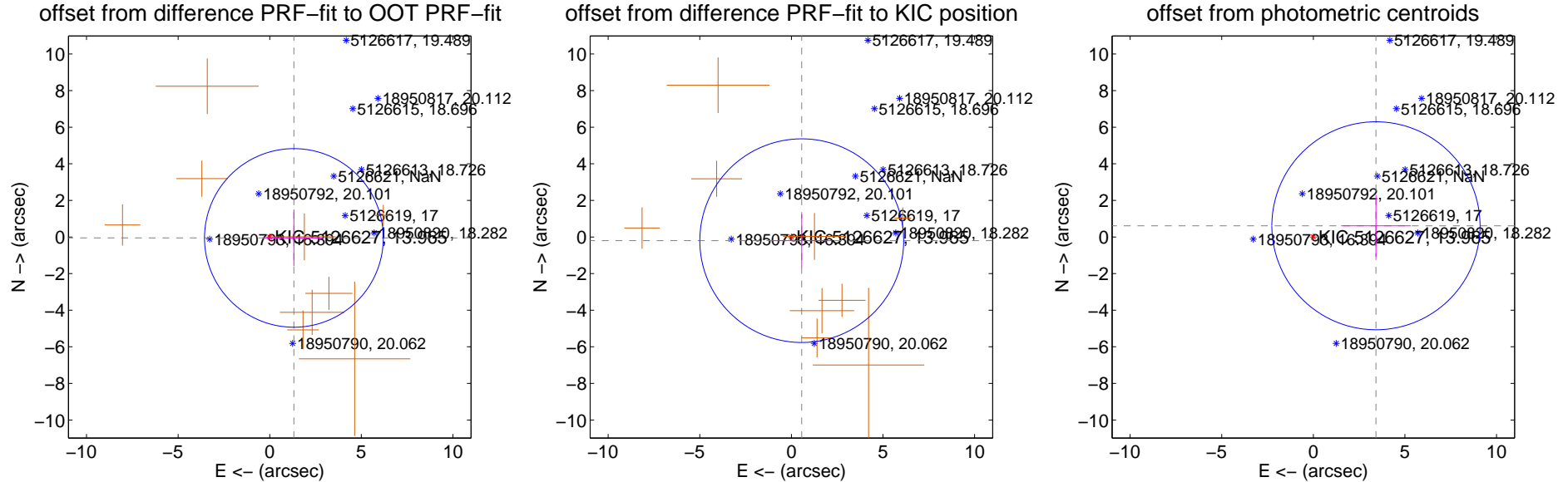
DV Centroid Data

Supplemental centroid analysis for 005126627-02. Kepler magnitude: 13.96. Transit SNR 8.32

There are 0 quarters with good PRF difference image offsets

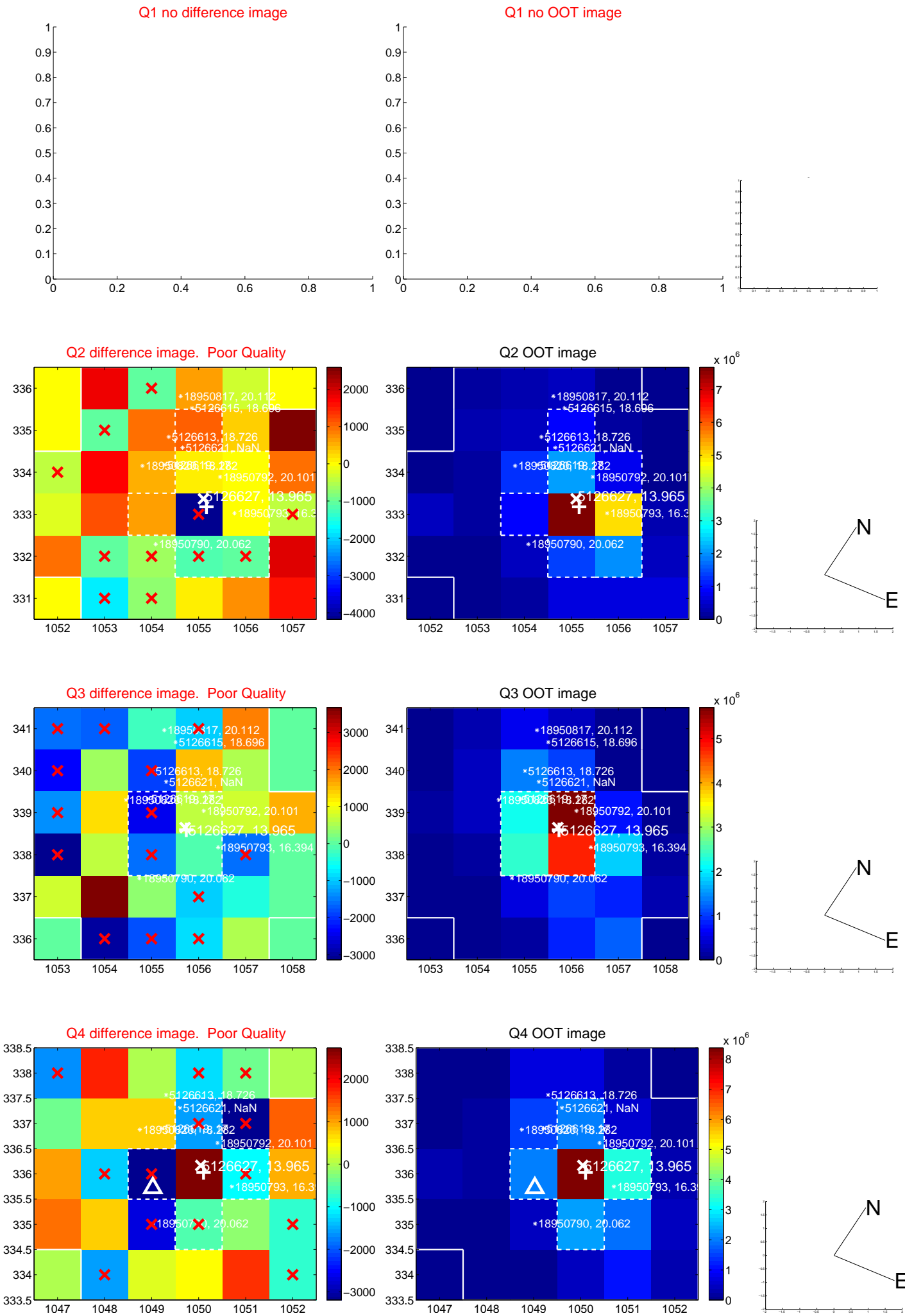
The direct PRF centroid is offset from the target star catalog position by about 0.37 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.321 ± 1.626	0.81	-1.320 ± 1.592	-0.051 ± 1.549
PRF-fit source offset from KIC position	0.601 ± 1.854	0.32	-0.566 ± 1.640	-0.200 ± 1.453
photometric centroid source offset	3.47 ± 1.89	1.83	-3.42 ± 1.90	0.61 ± 1.69

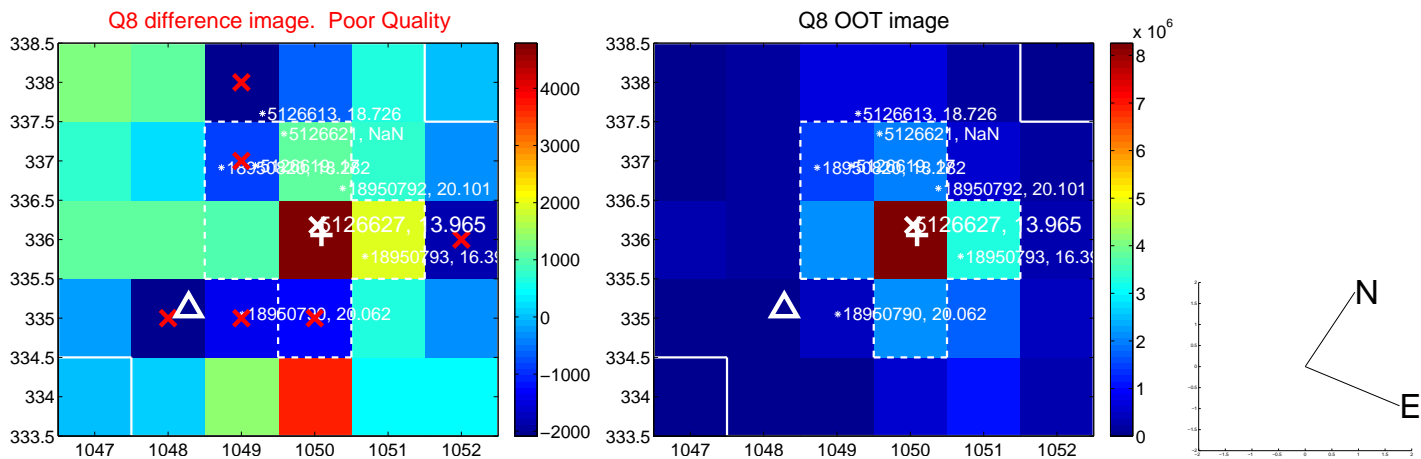
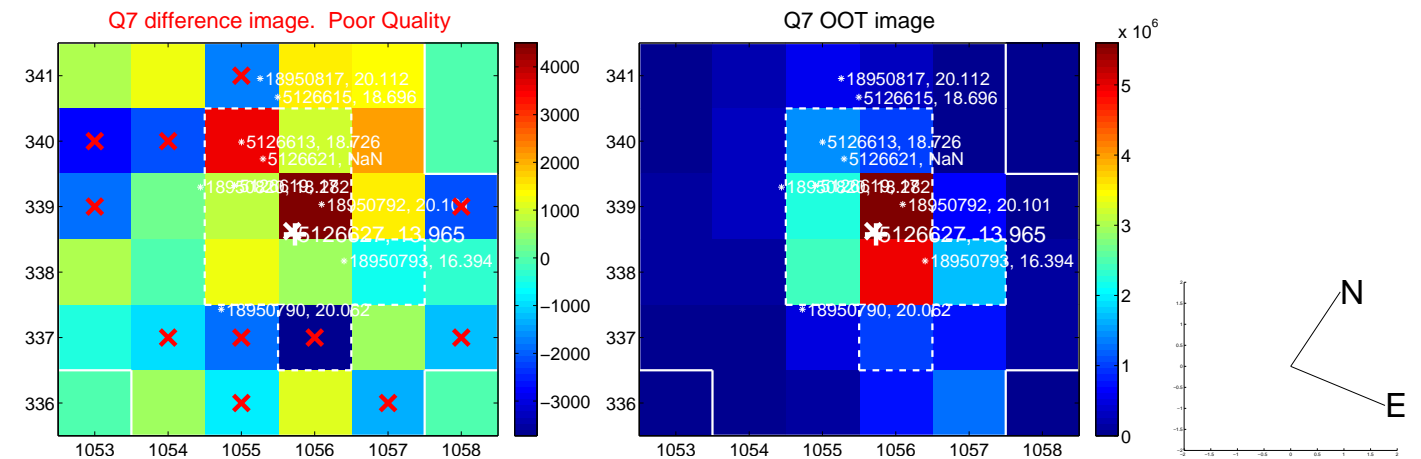
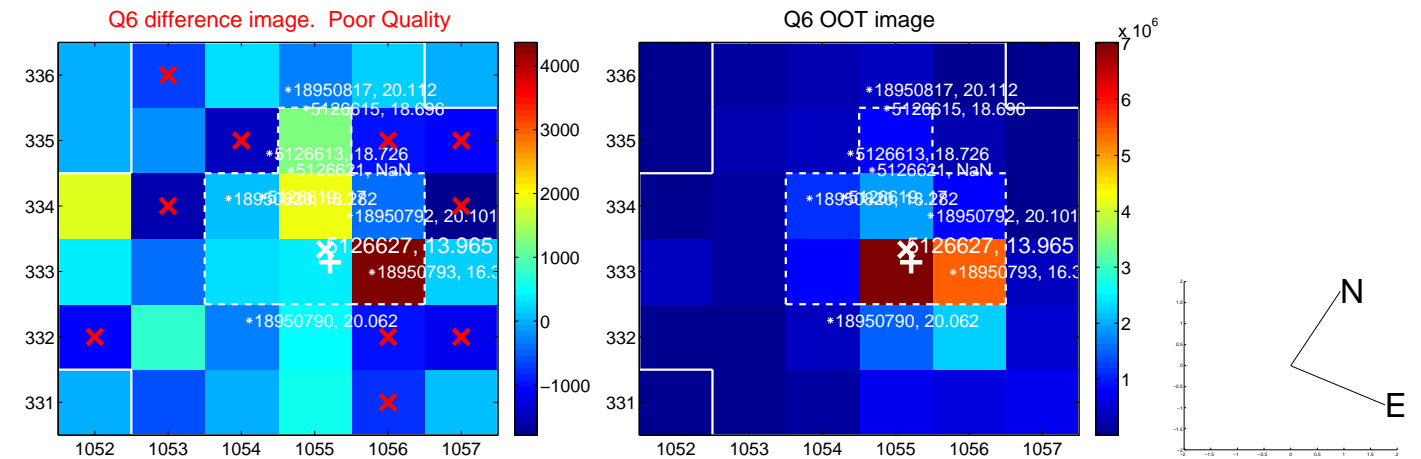
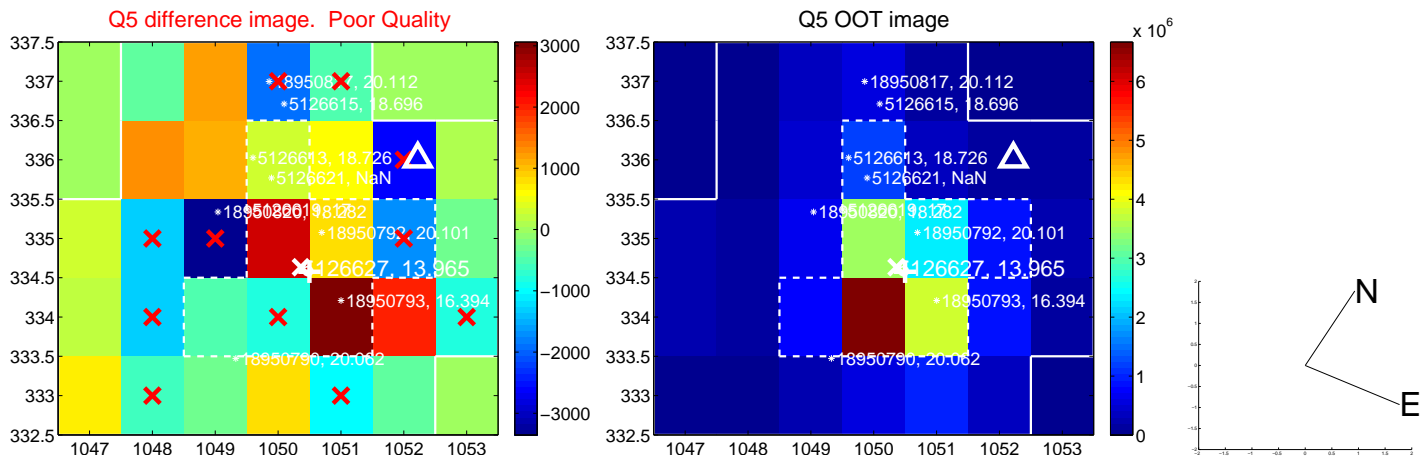


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

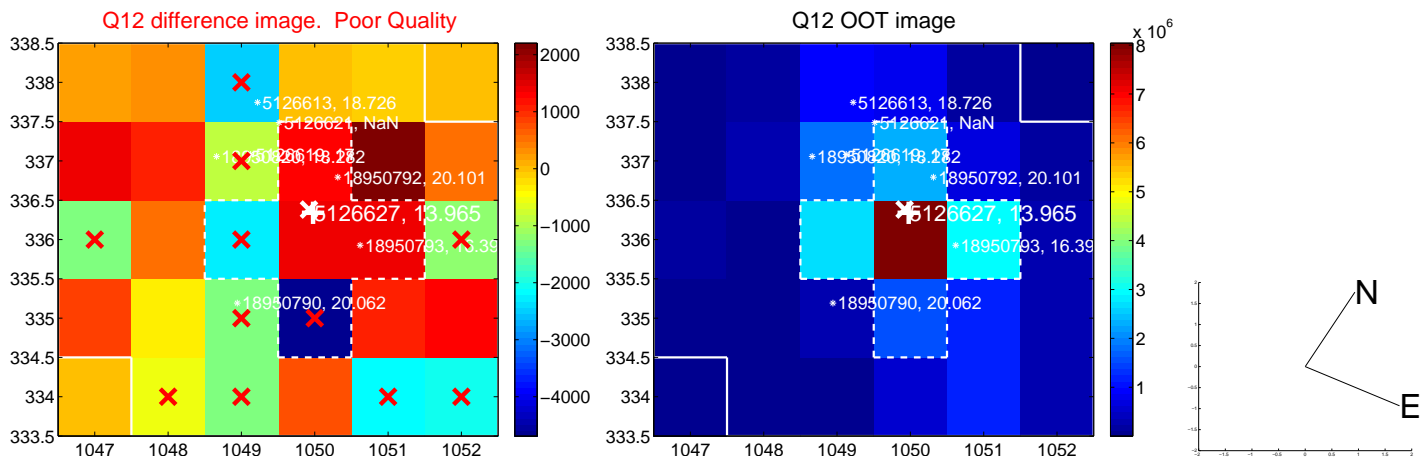
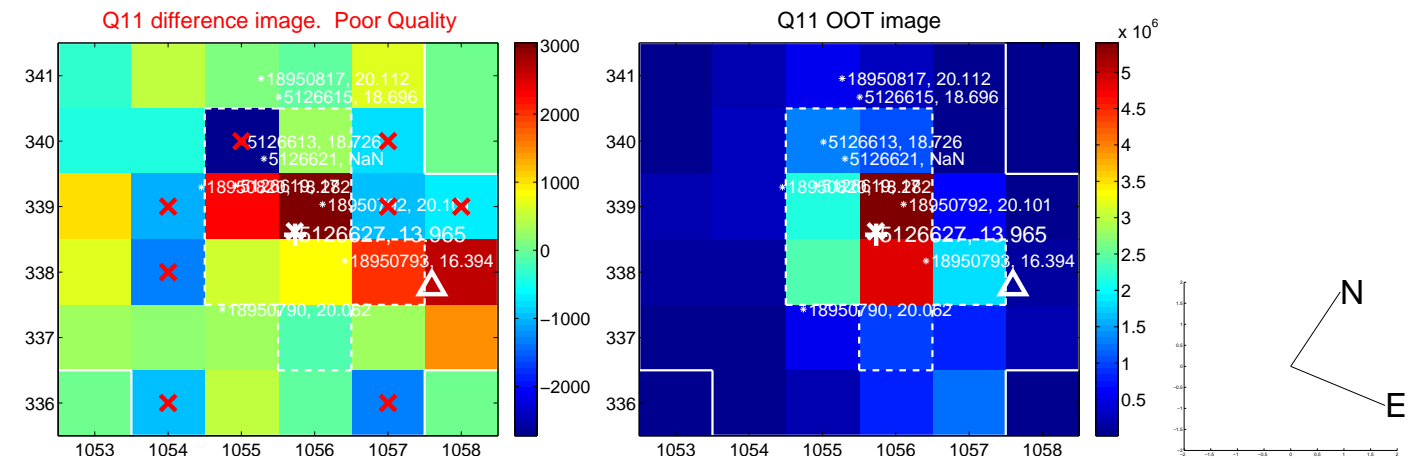
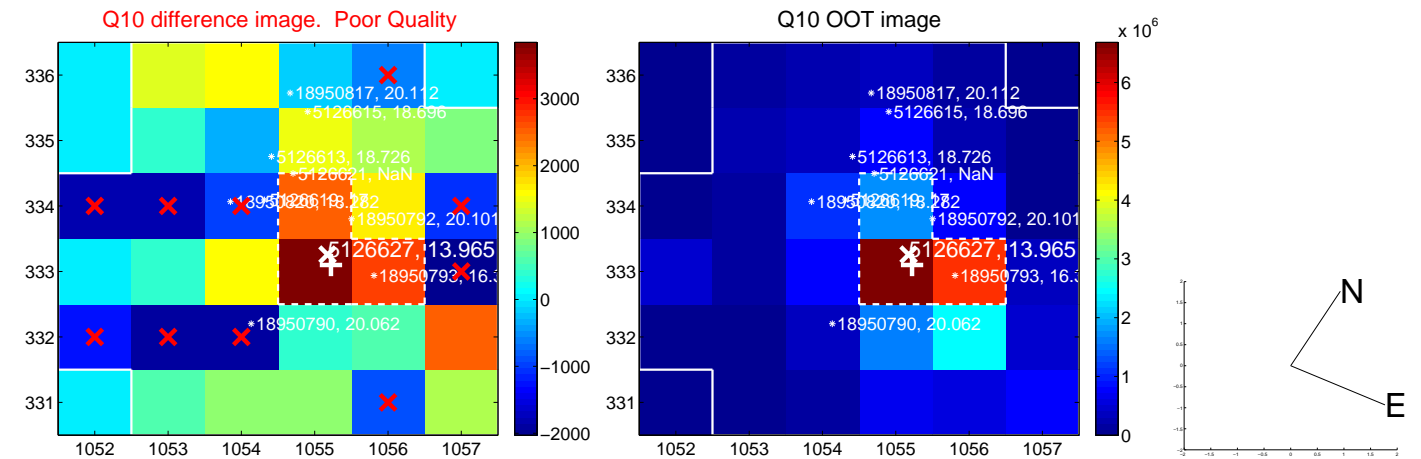
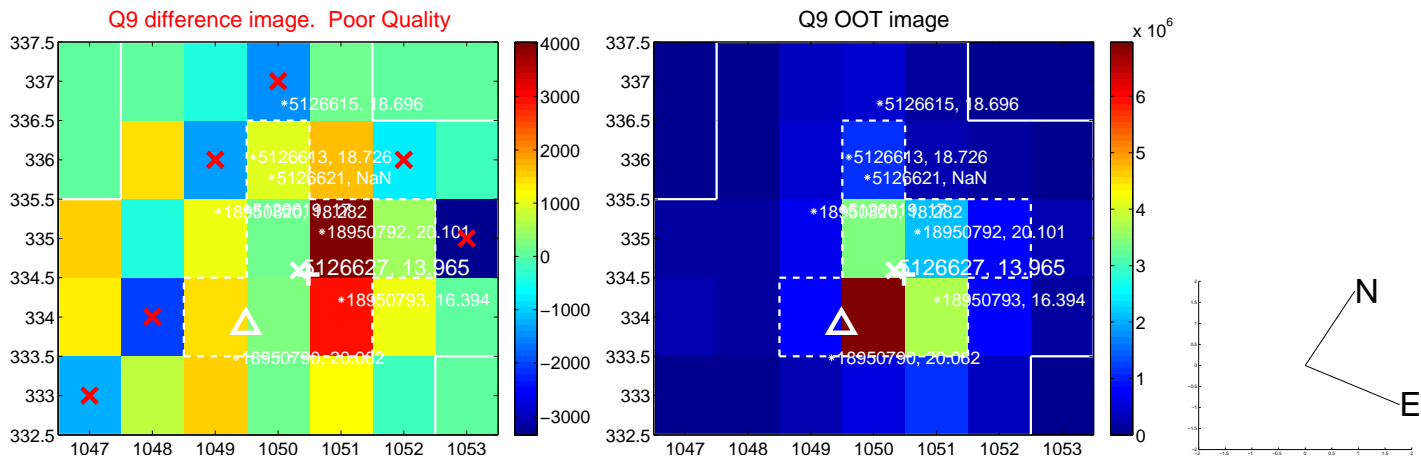
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



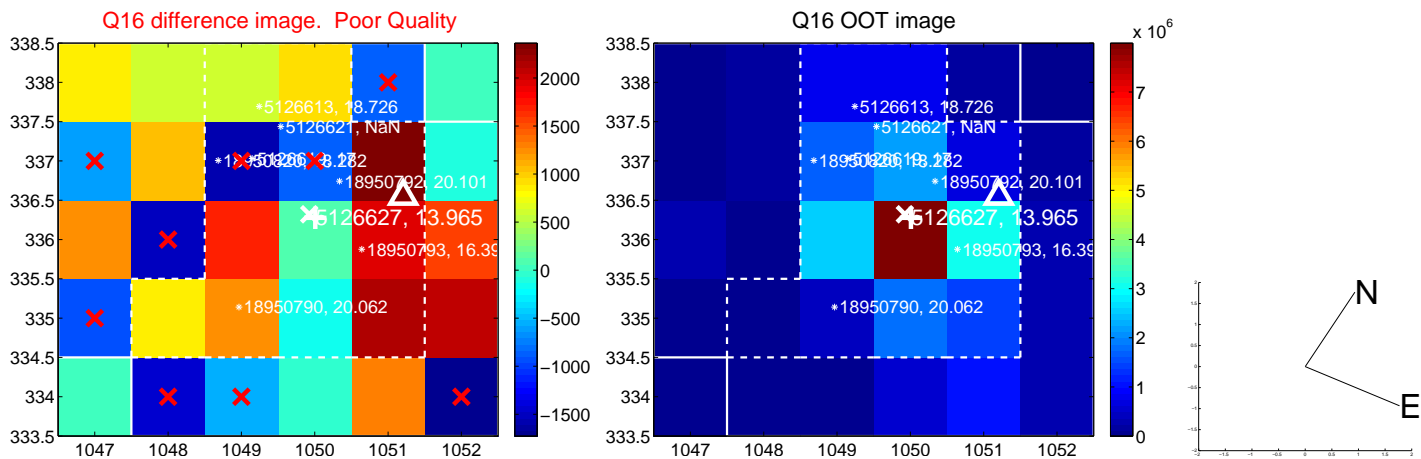
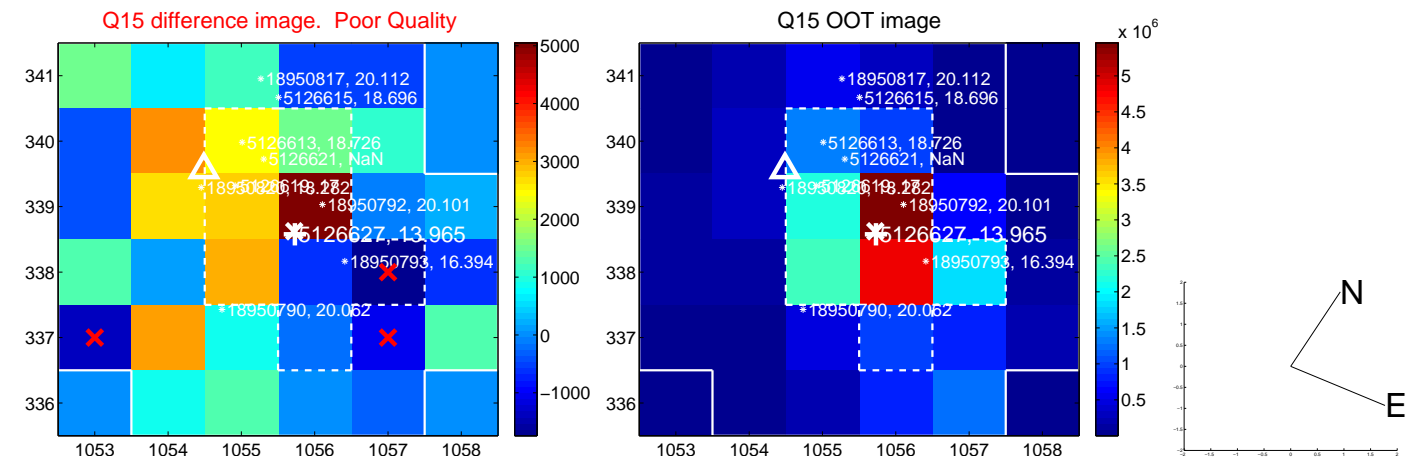
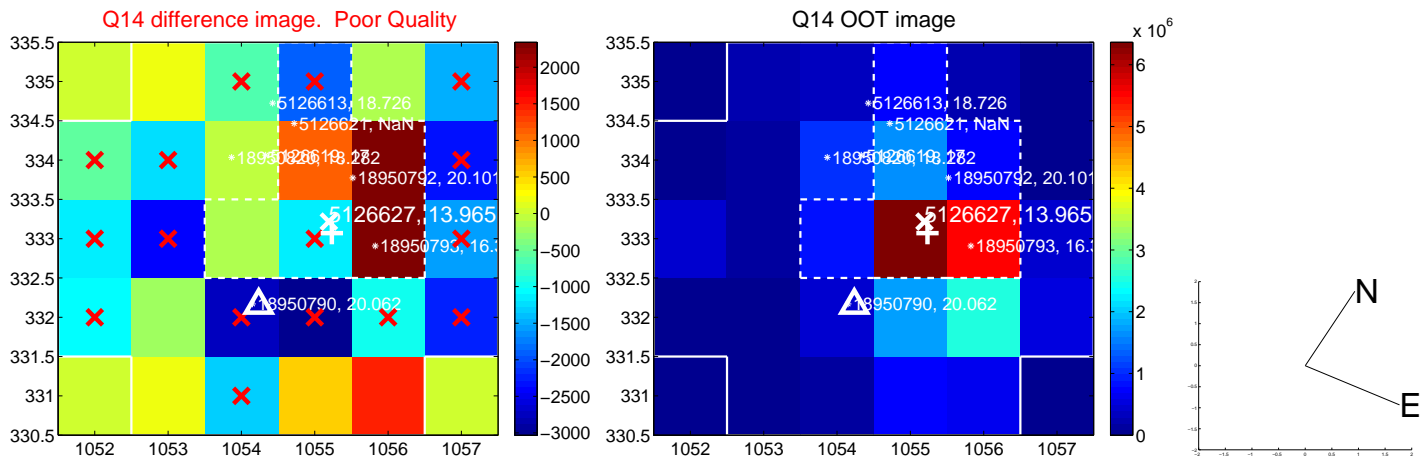
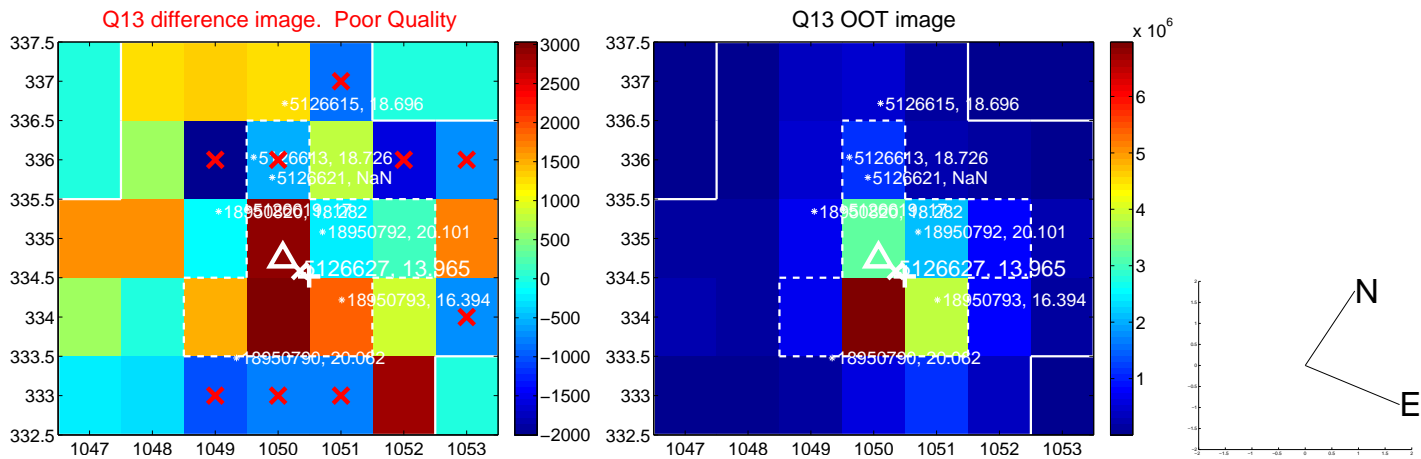
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



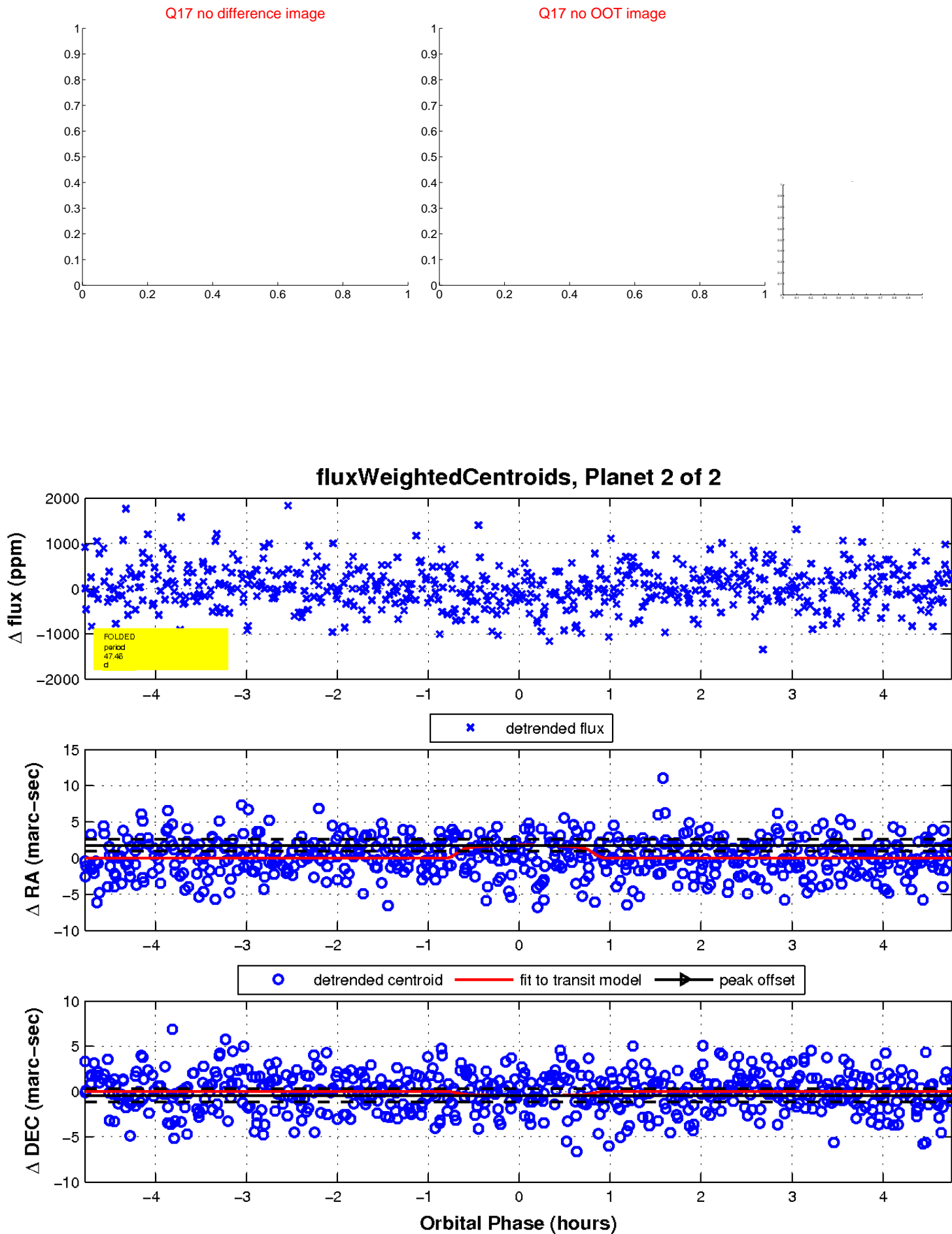
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

