

KIC 011125797

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})
011125797-01	OBS	3371.01	58.126145	163.119747	268.1	4.113	10.8	11.2	0.82	5413	1.55	6.29
011125797-02	OBS	3371.02	12.253897	143.703332	144.0	2.409	10.1	11.0	0.82	5413	1.18	50.14

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011125797-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT
011125797-02	OBS	PC	1.00	0	0	0	0	NO_COMMENT

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

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

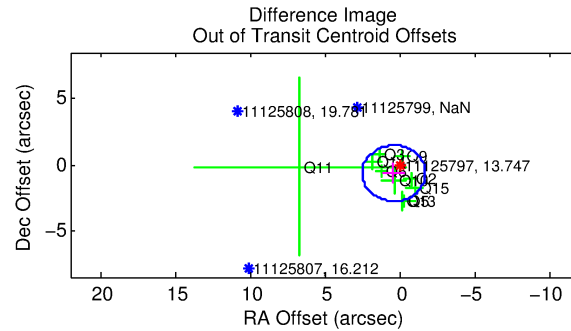
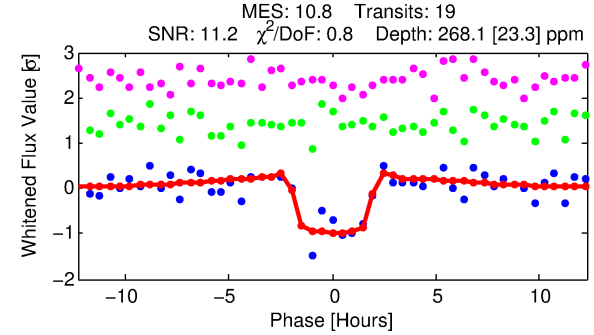
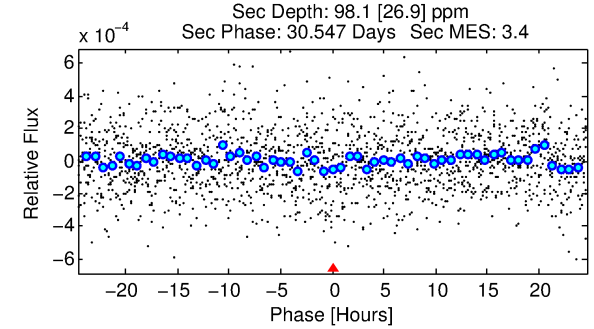
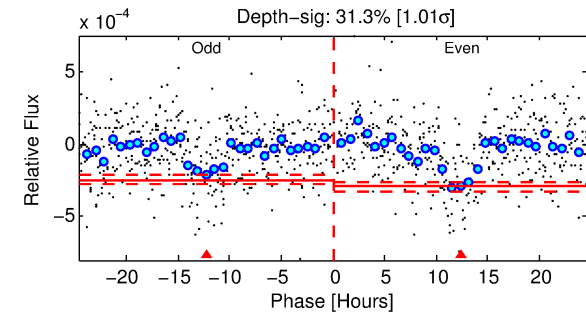
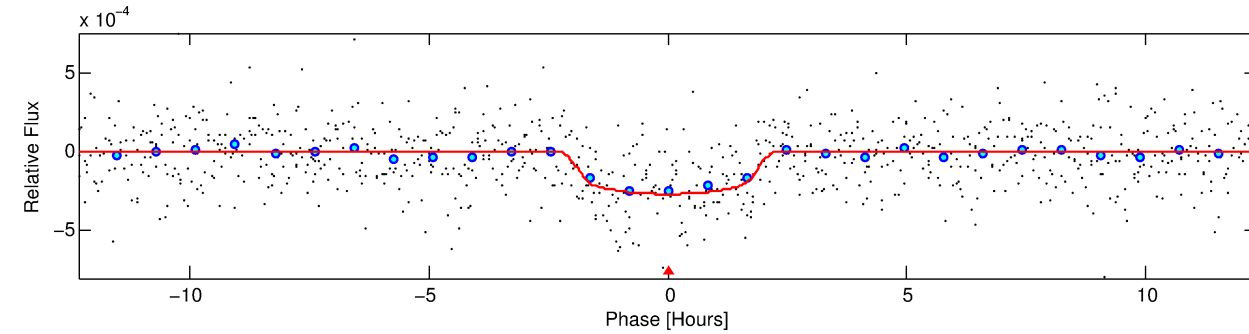
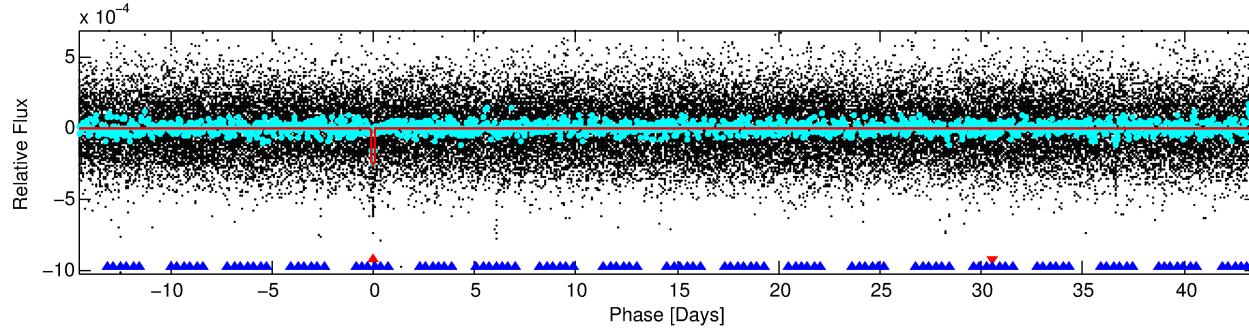
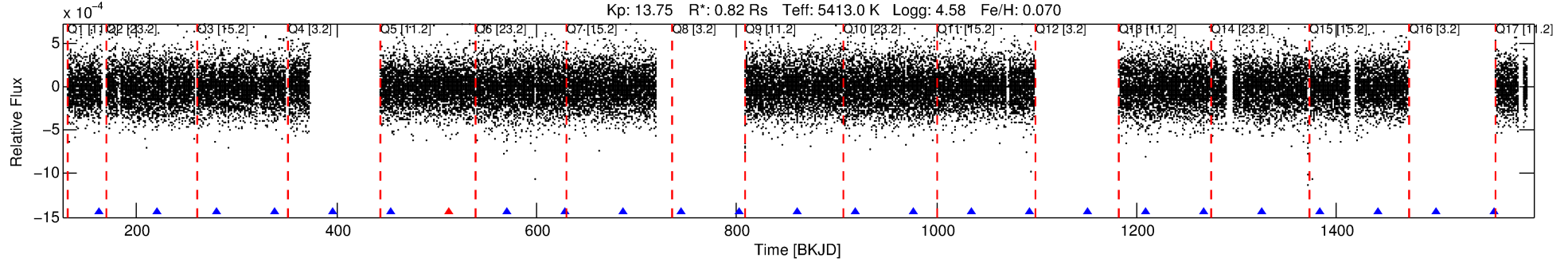
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011125797-01

No Significant Match Found

DV One-Page Summary

KIC: 11125797 Candidate: 1 of 2 Period: 58.126 d
KOI: K03371.01 Corr: 0.980



DV Fit Results:

Period = 58.12615 [0.00042] d
Epoch = 163.1197 [0.0055] BKJD
Rp/R* = 0.0173 [0.0081]
a/R* = 59.49 [116.18]
b = 0.86 [0.63]
Seff = 6.29 [1.20]
Teq = 404 [19] K
Rp = 1.55 [0.75] Re
a = 0.2867 [0.0328] AU
Ag = 1843.28 [1834.33] [1.00σ]
Teffp = 4091 [1003] K [3.68σ]

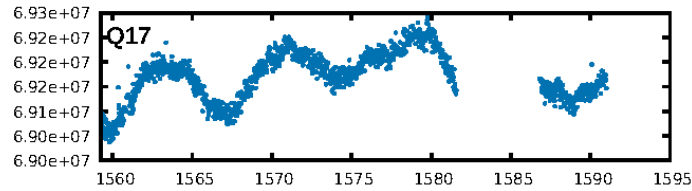
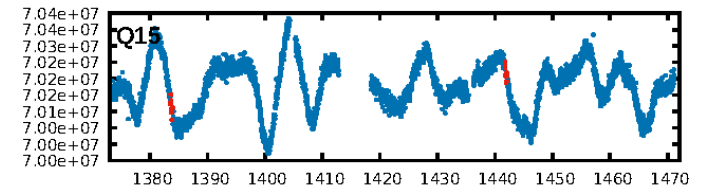
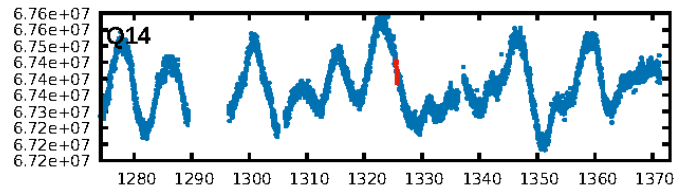
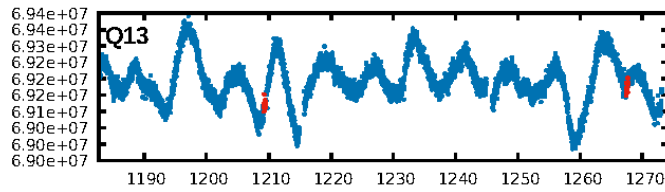
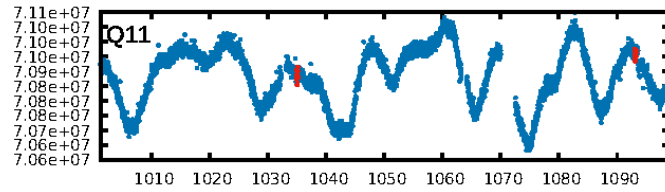
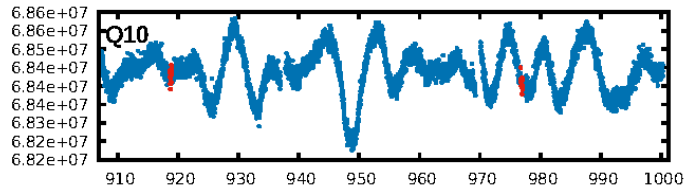
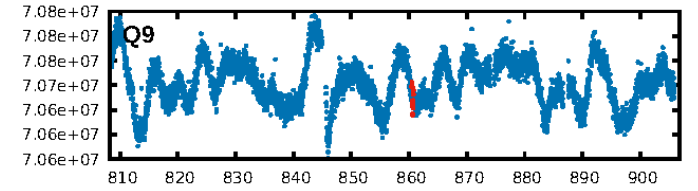
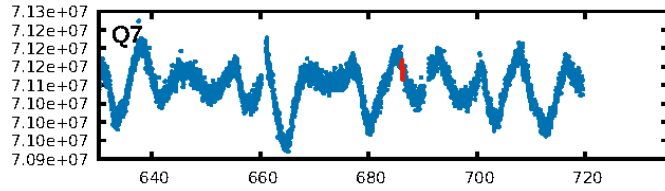
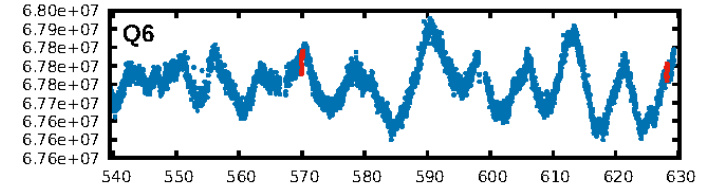
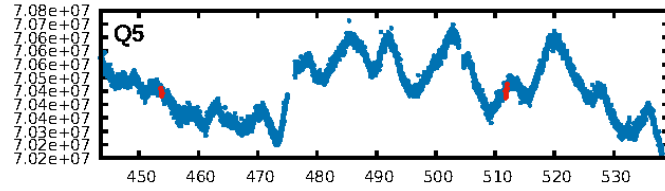
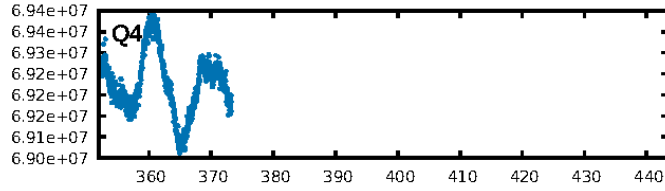
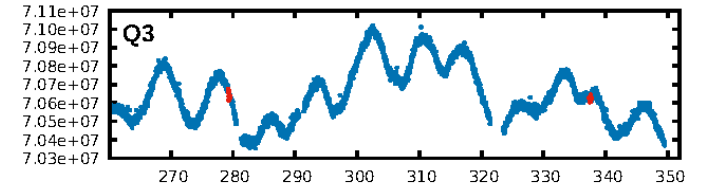
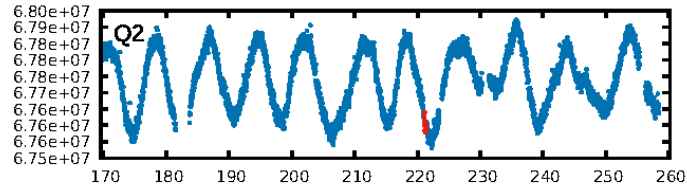
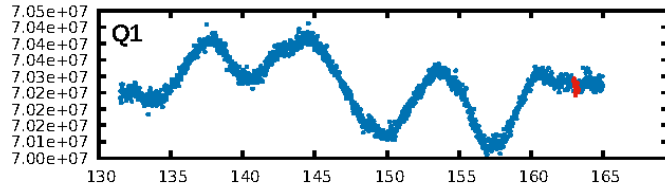
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [230.94σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 66.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.16e-25
RollingBand-fgt: 0.94 [17/18]
GhostDiagnostic-chr: 2.516
Centroid-sig: 6.2%
Centroid-so: 1.203 arcsec [1.35σ]
OotOffset-rm: 0.759 arcsec [1.08σ]
KicOffset-rm: 0.747 arcsec [1.05σ]
OotOffset-st: 4/3/0/3 [10]
KicOffset-st: 4/3/0/3 [10]
DiffImageQuality-fgm: 0.90 [9/10]
DiffImageOverlap-fno: 0.92 [11/12]

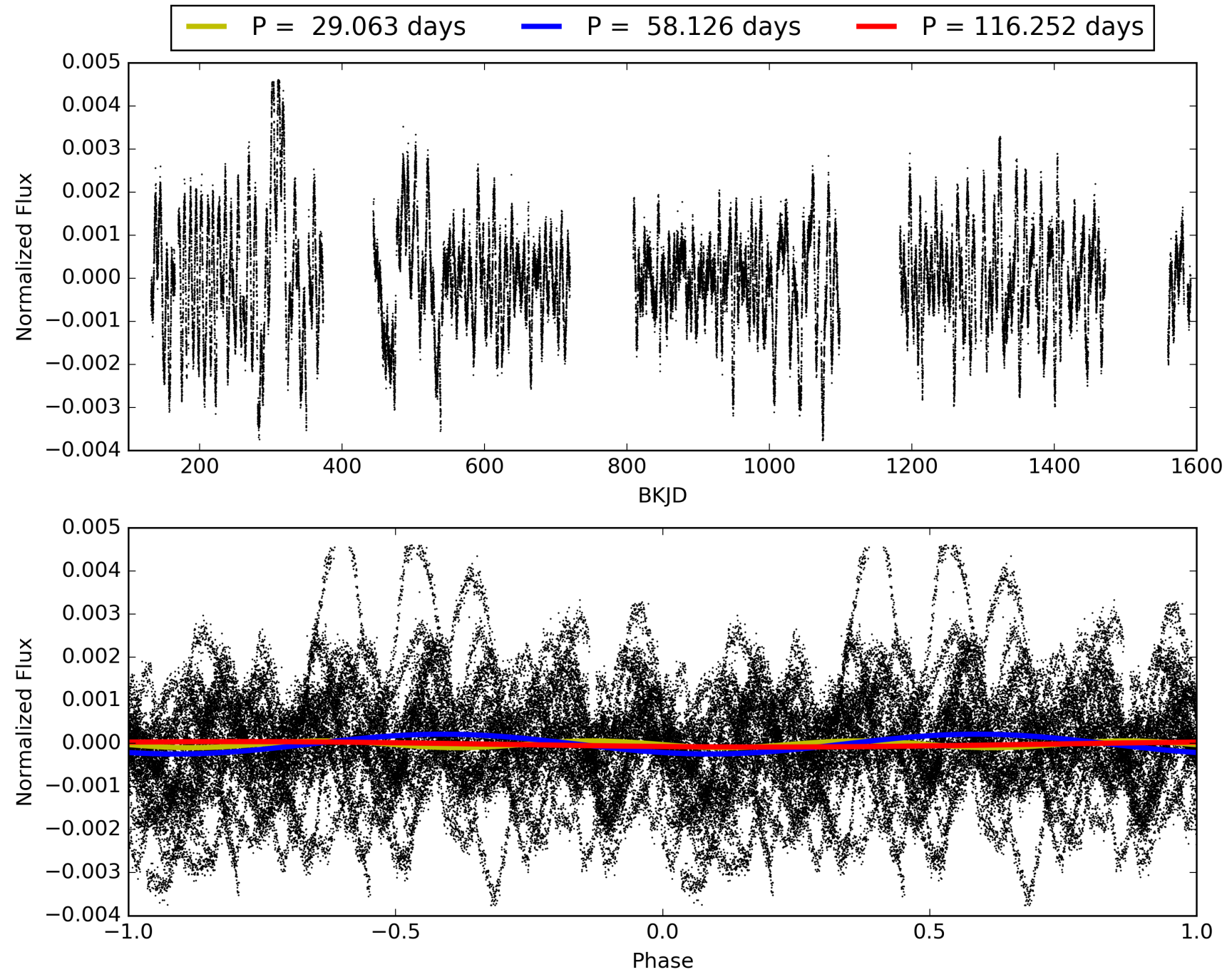
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 011125797-01, PDC Light Curves

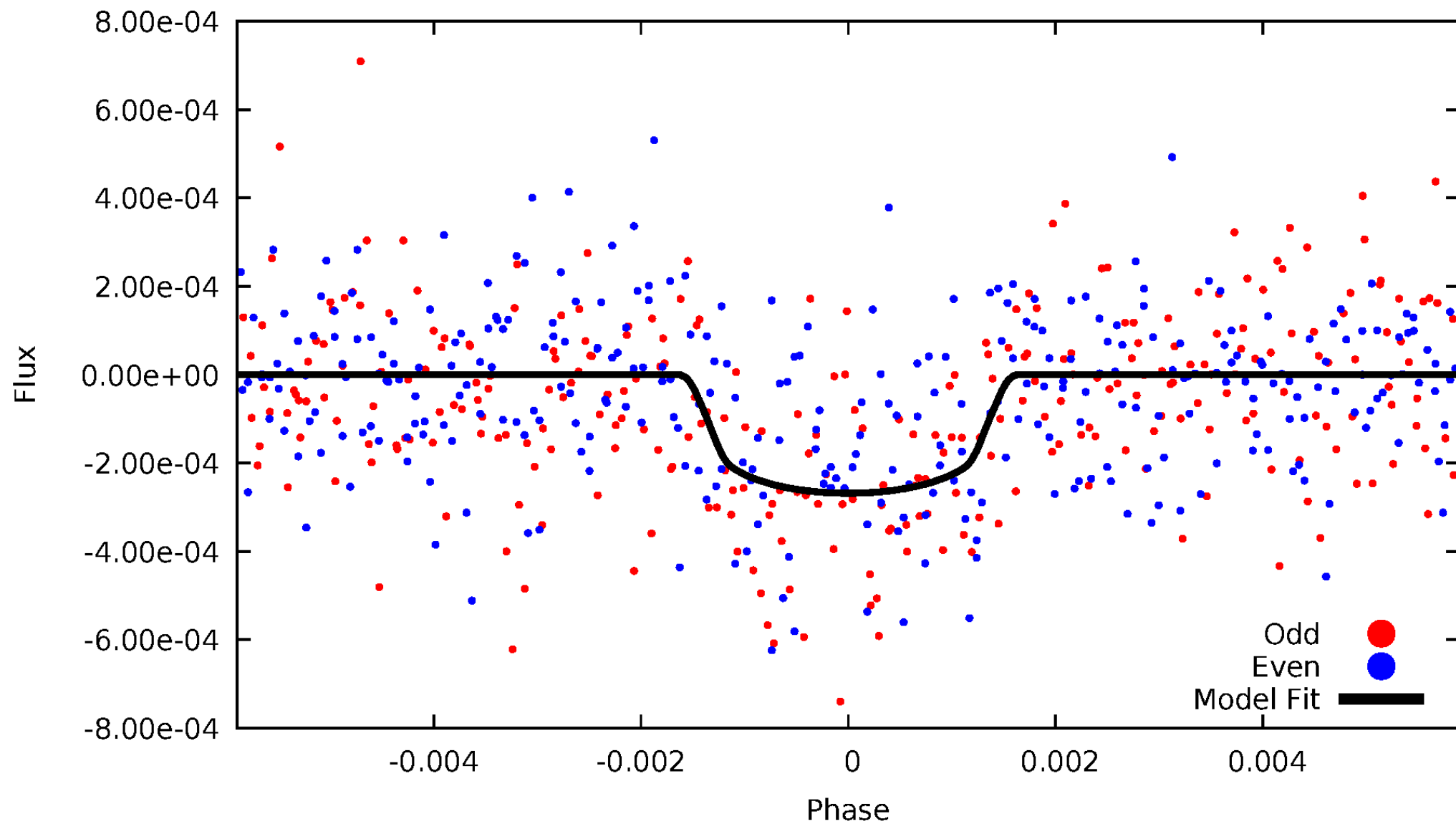


TCE 011125797-01



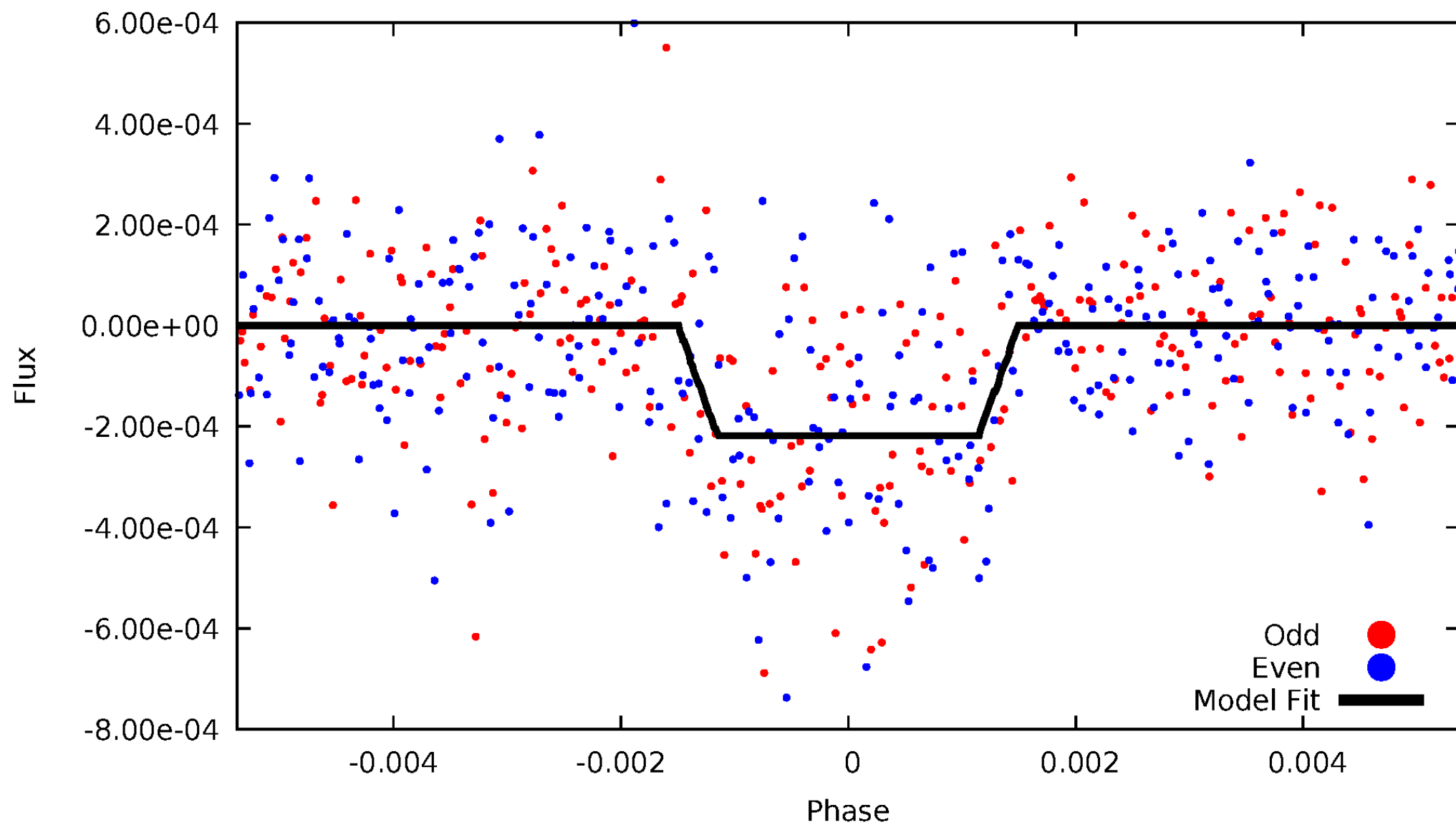
DV Odd/Even

TCE 011125797-01



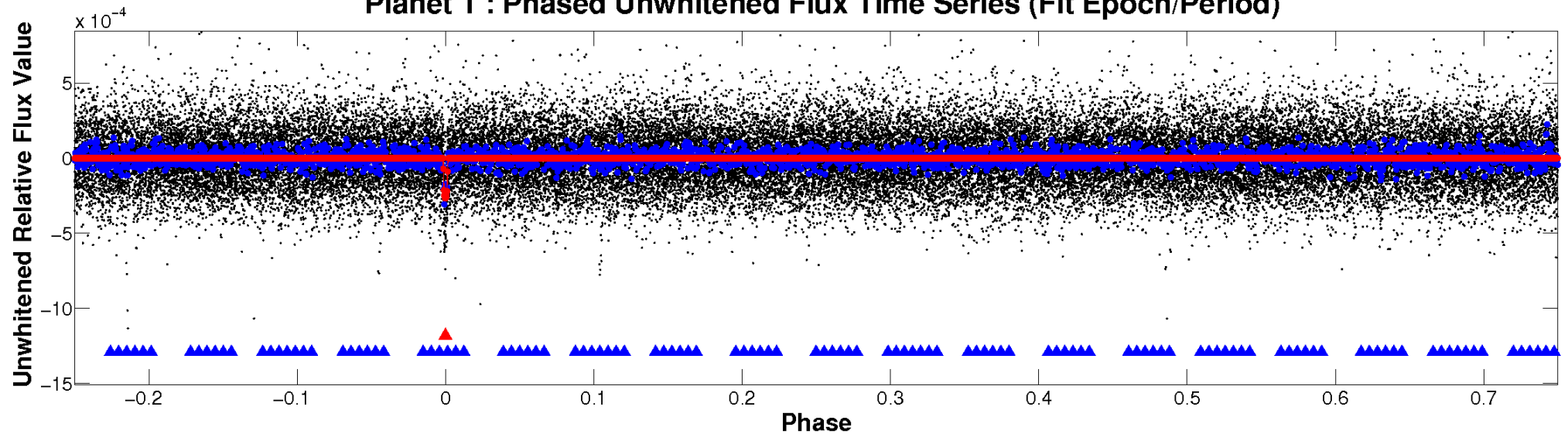
ALT Odd/Even

TCE 011125797-01

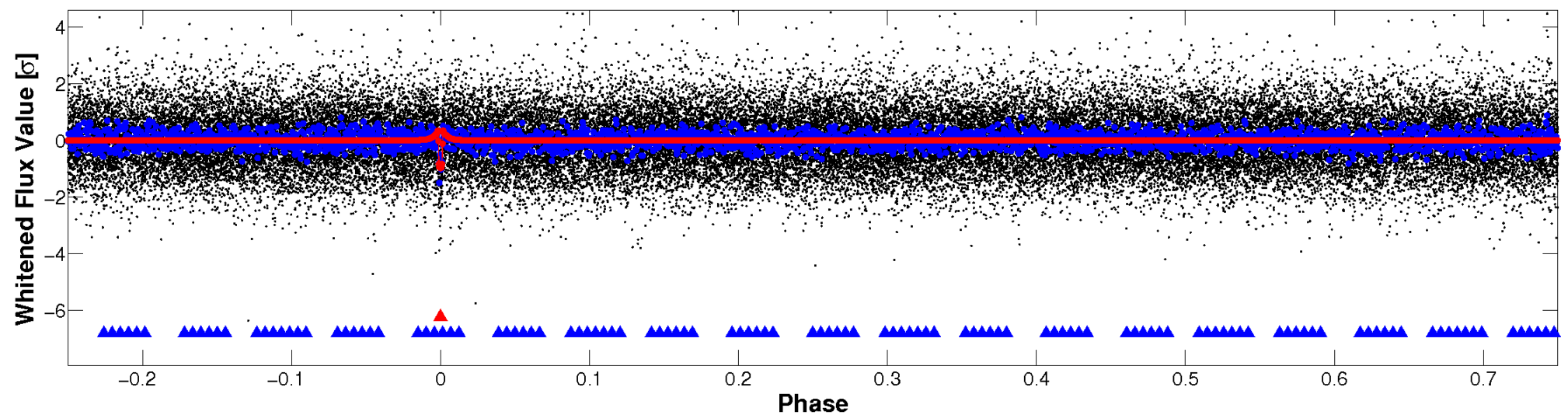


Non-Whitened Vs. Whitened Light Curve

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

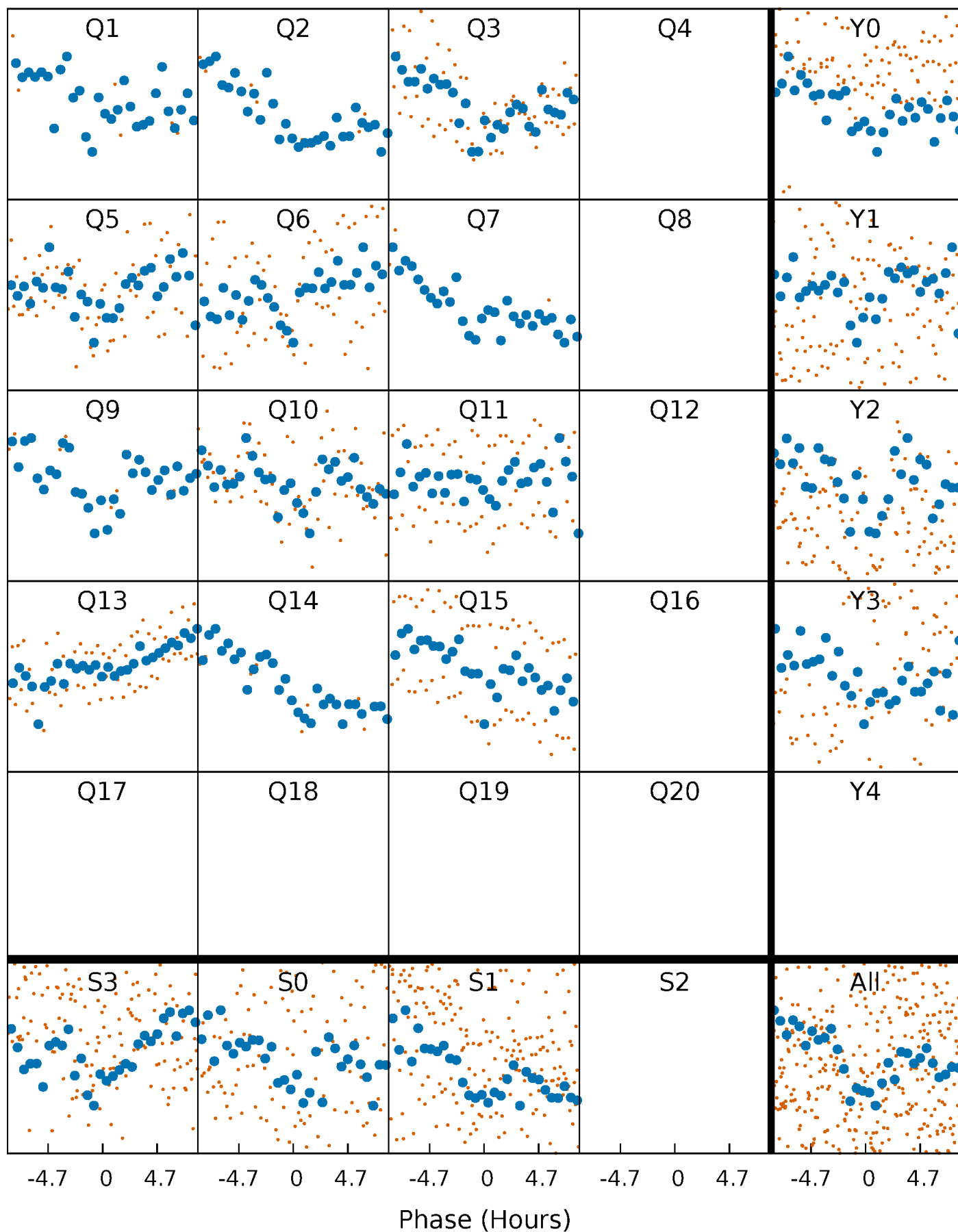


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



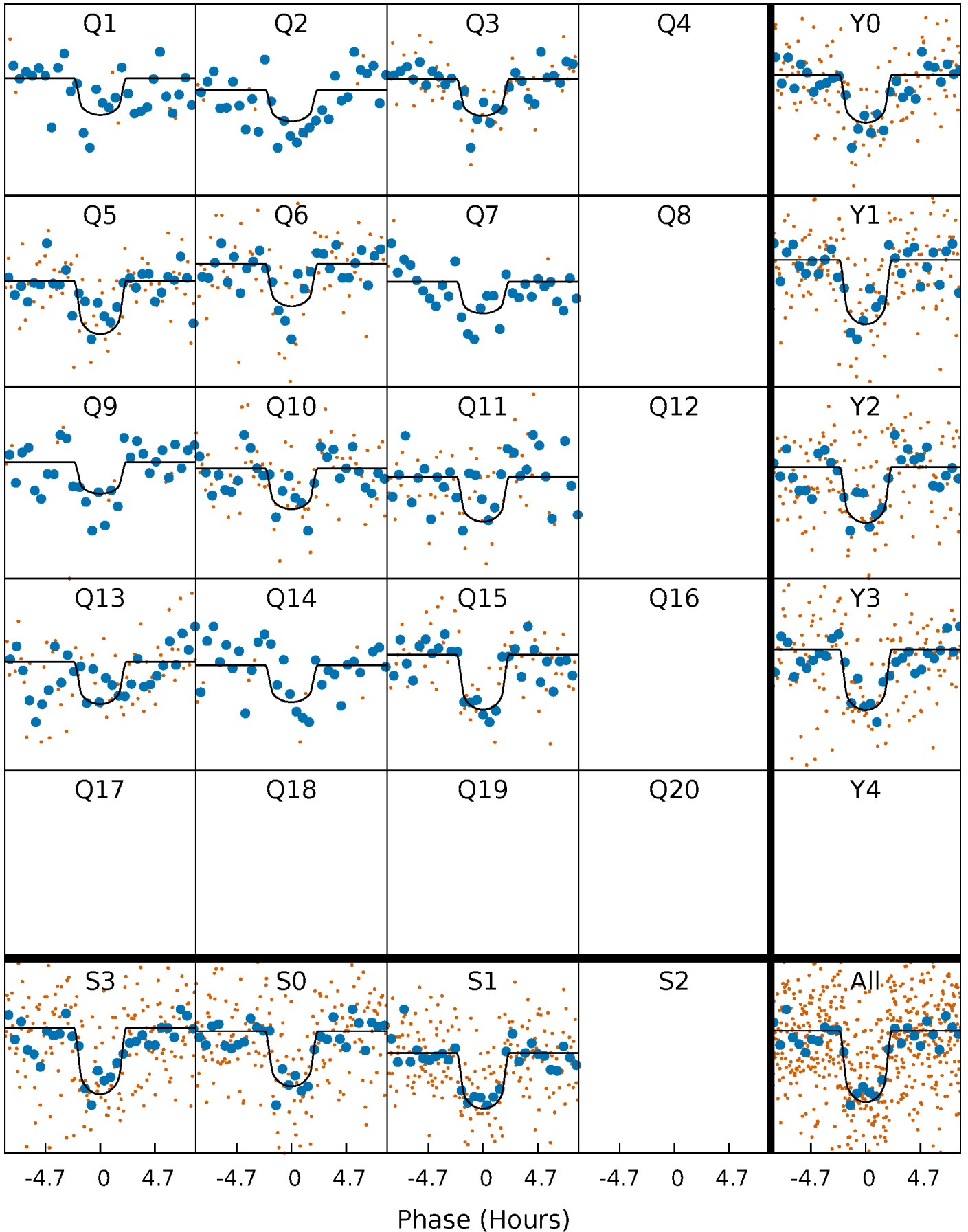
PDC Quarter-Phased Transit Curves

TCE 011125797-01 P= 58.126145 Days $T_0=163.119747$ (BKJD)



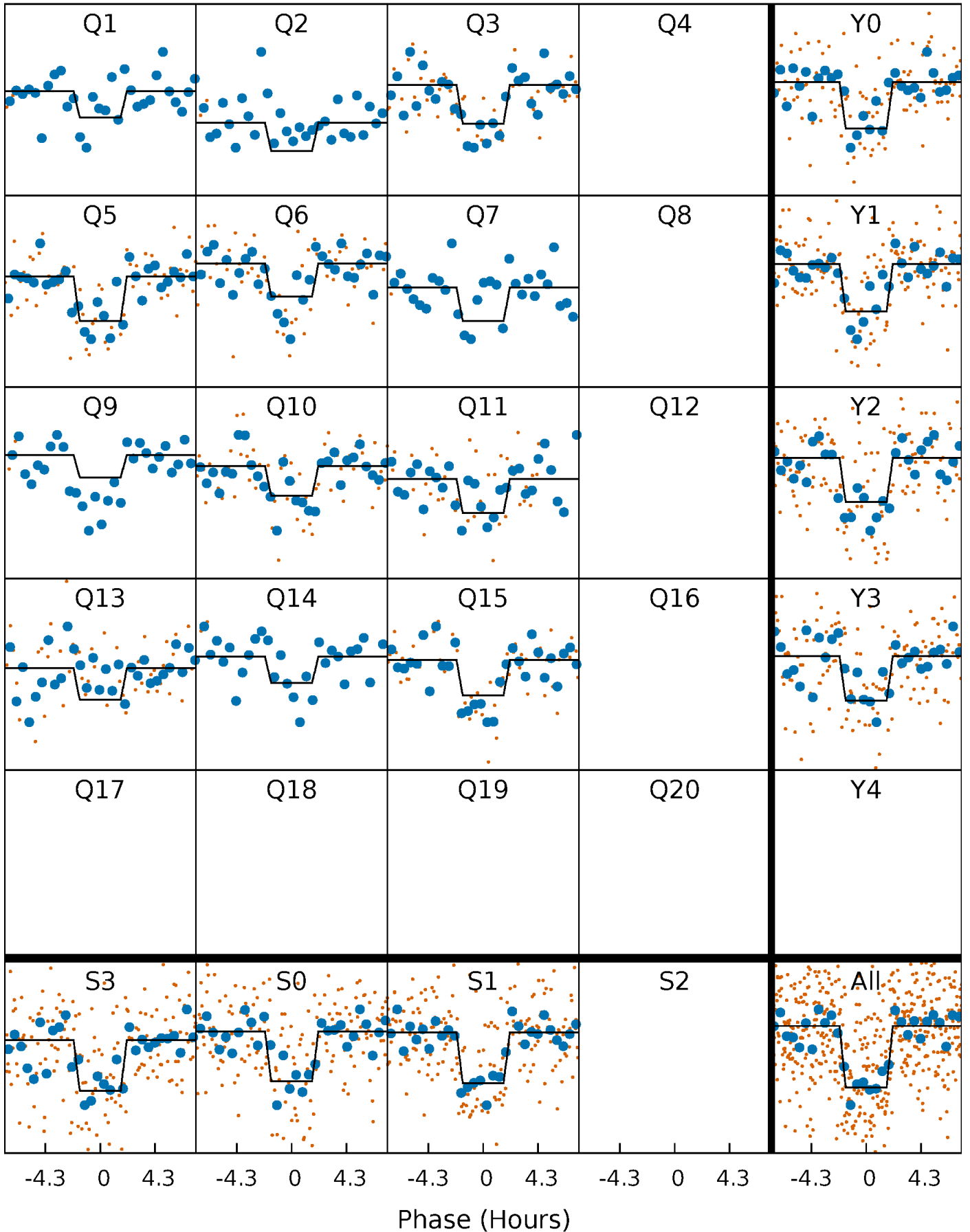
DV Quarter-Phased Transit Curves

TCE 011125797-01 P= 58.126145 Days $T_0=163.119747$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

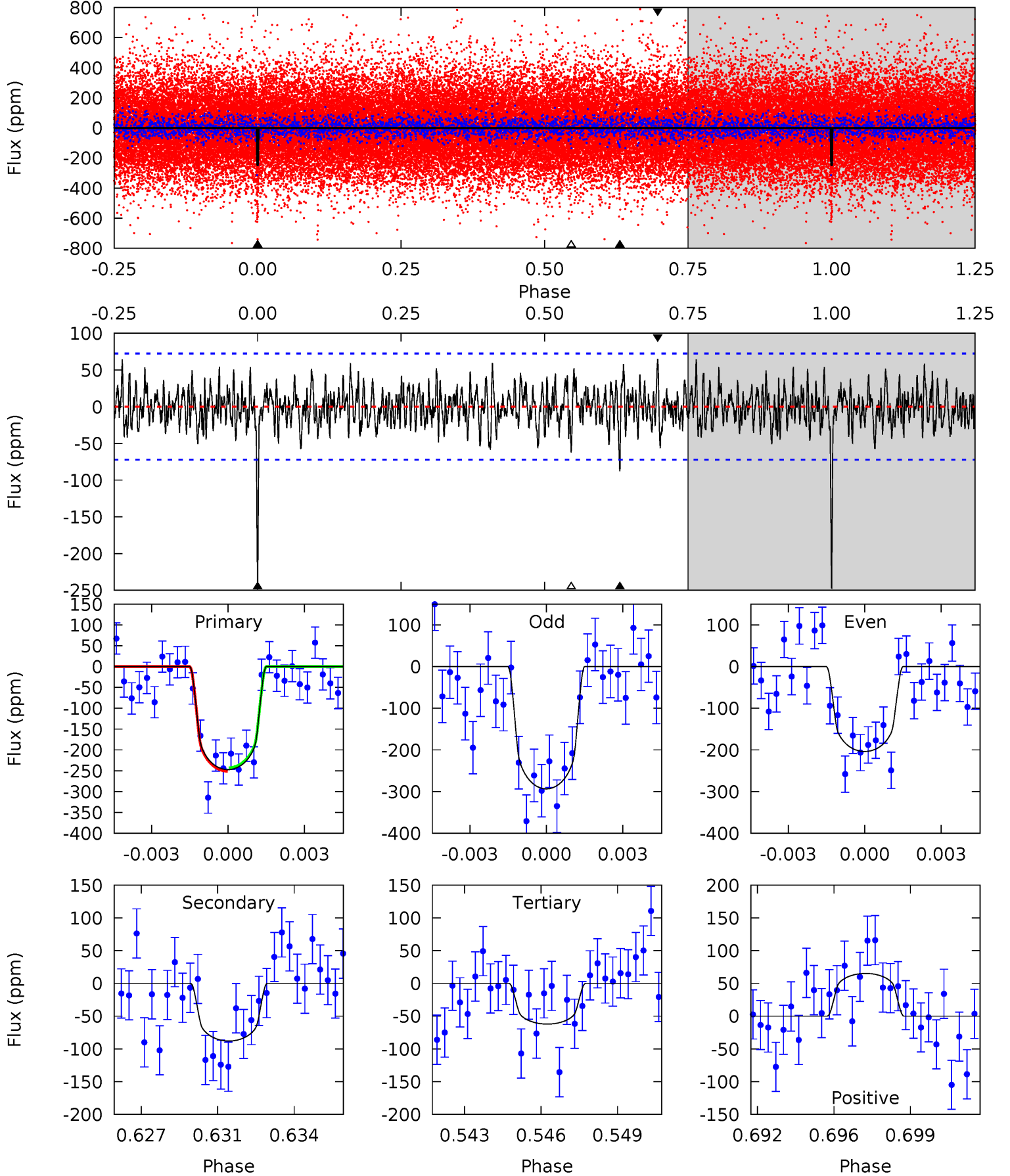
TCE 011125797-01 P= 58.125991 Days $T_0=163.122993$ (BKJD)



DV Model-Shift Uniqueness Test

011125797-01, $P = 58.126145$ Days, $E = 104.993602$ Days

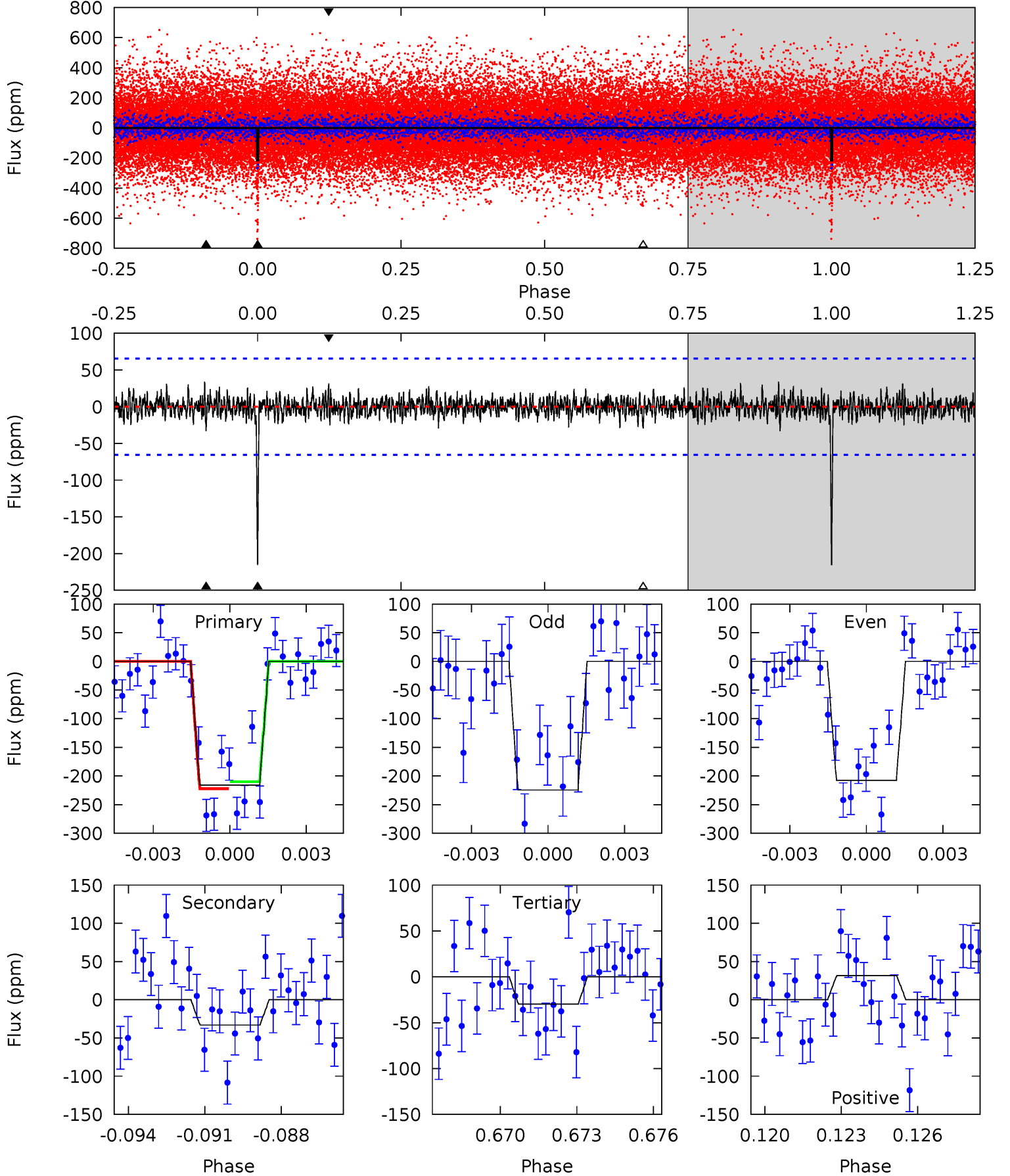
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.9	6.37	4.50	4.72	5.24	2.94	1.53	13.4	13.2	1.87	1.65	3.25	1.01	0.21	0.29



Alt Model-Shift Uniqueness Test

011125797-01, $P = 58.125991$ Days, $E = 104.997002$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.3	2.66	2.38	2.54	5.26	2.98	0.74	15.0	14.8	0.28	0.11	0.68	0.97	0.14	0.50



Stellar Parameters For KIC 011125797

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5413^{+73}_{-81}	$4.579^{+0.011}_{-0.105}$	$0.070^{+0.150}_{-0.150}$	$0.820^{+0.100}_{-0.027}$	$0.931^{+0.033}_{-0.066}$	$2.383^{+0.153}_{-0.710}$
	+1%/-1%	+0%/-2%	+214%/-214%	+12%/-3%	+4%/-7%	+6%/-30%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 011125797-01 / KOI 3371.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-88 ± 14	$1.61^{+0.81}_{-0.70}$	572^{+18}_{-12}	4200^{+1090}_{-558}	1523^{+3215}_{-873}
Alt.	-33 ± 12	$1.40^{+0.76}_{-0.73}$	573^{+17}_{-12}	3700^{+1240}_{-527}	718^{+2717}_{-442}

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

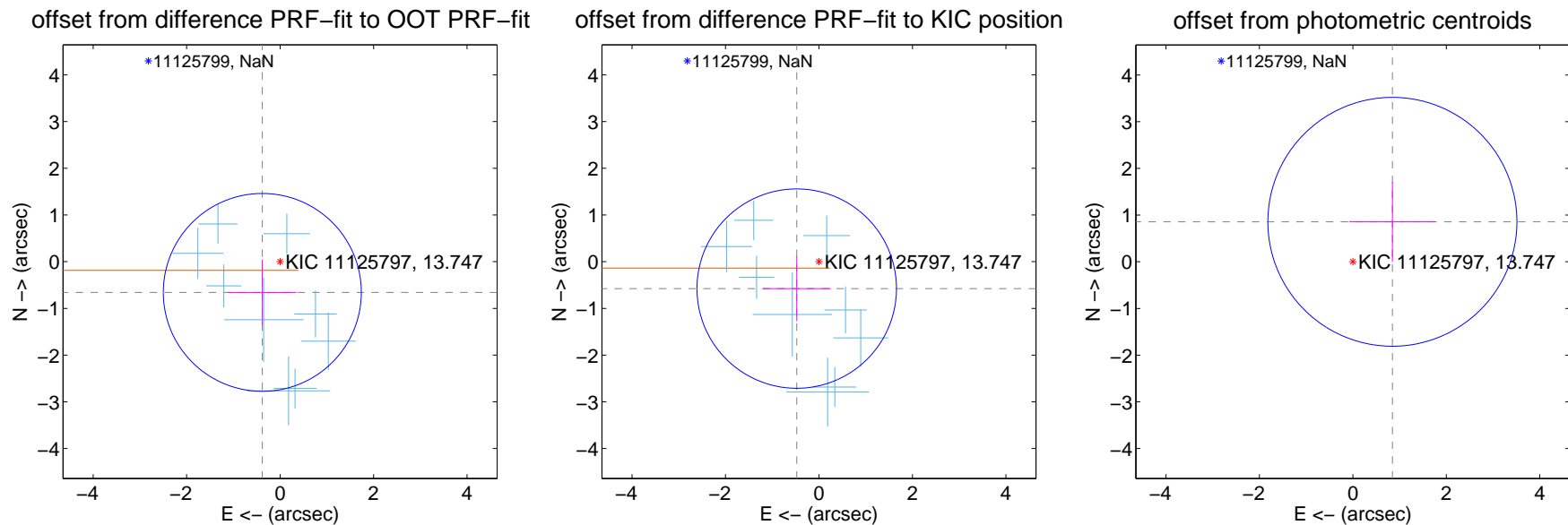
DV Centroid Data

Supplemental centroid analysis for 011125797-01. Kepler magnitude: 13.75. Transit SNR 11.16

There are 9 quarters with good PRF difference image offsets

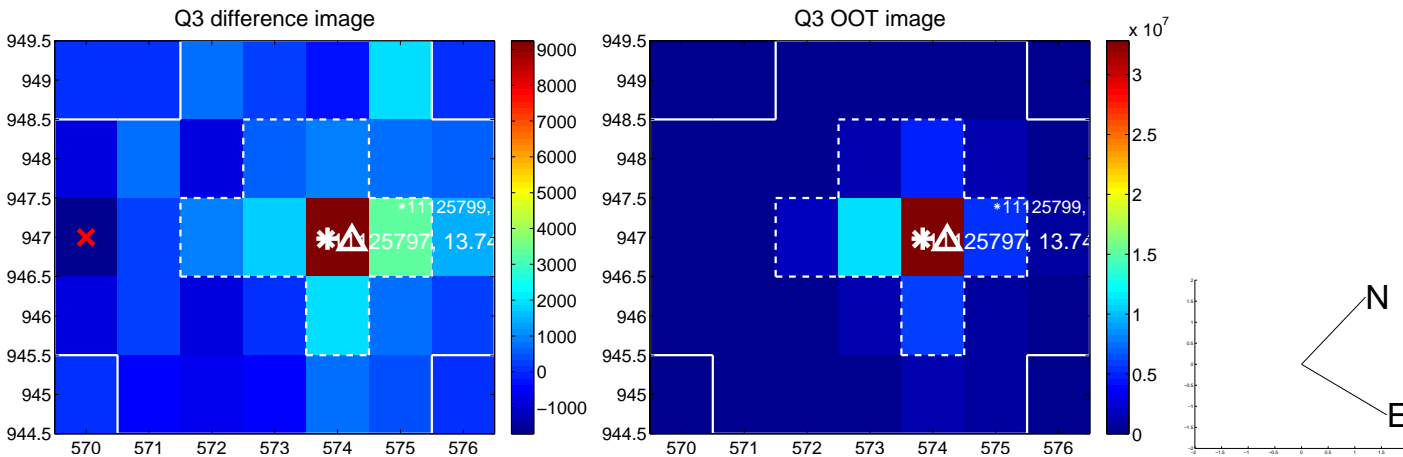
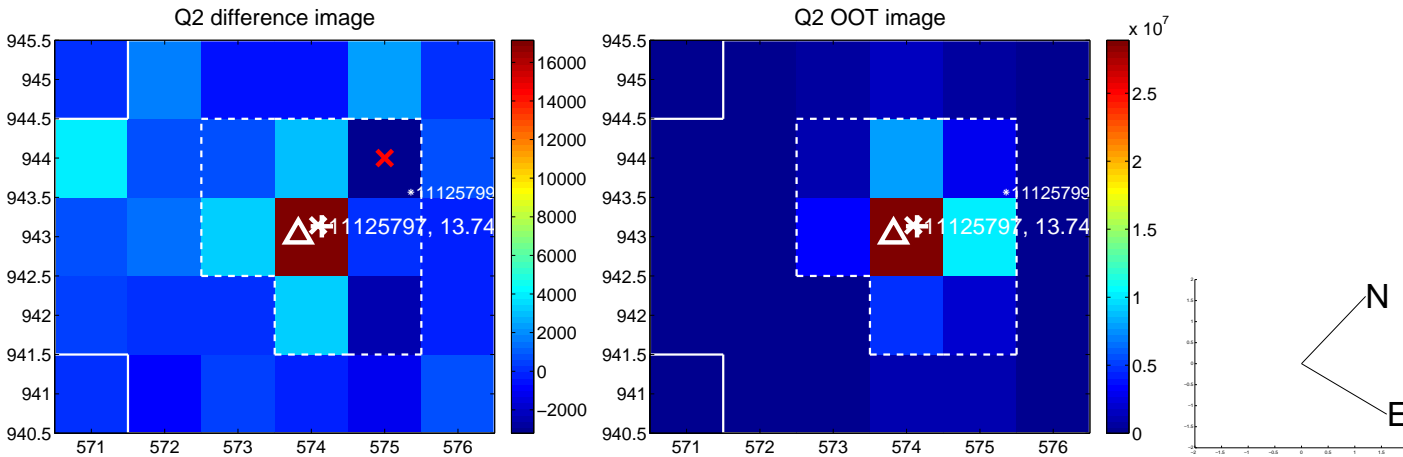
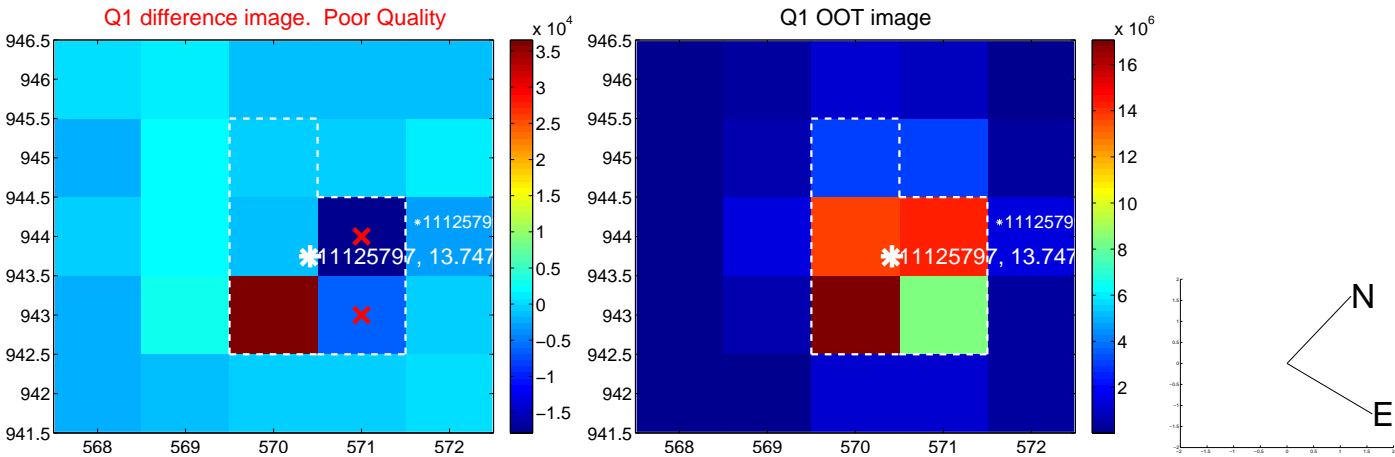
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.759 ± 0.706	1.08	0.381 ± 0.731	-0.657 ± 0.697
PRF-fit source offset from KIC position	0.747 ± 0.711	1.05	0.476 ± 0.731	-0.576 ± 0.697
photometric centroid source offset	1.20 ± 0.89	1.35	-0.85 ± 0.92	0.86 ± 0.85

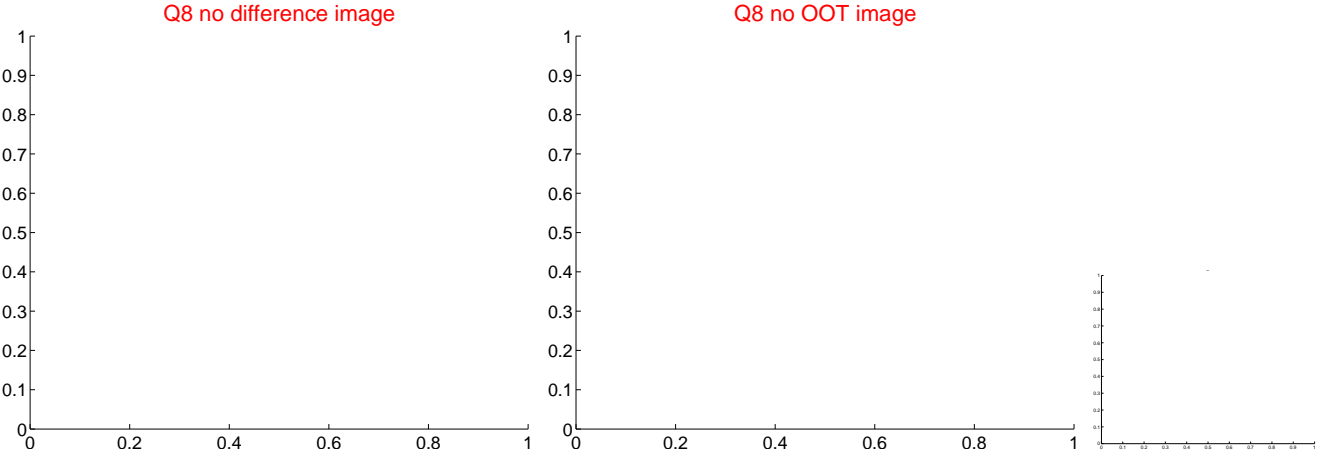
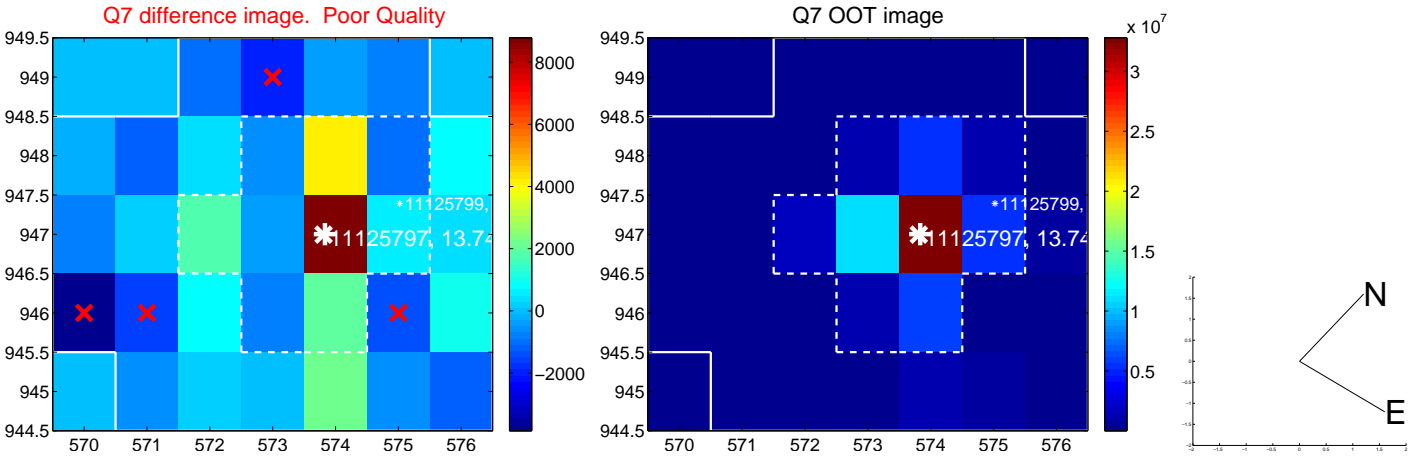
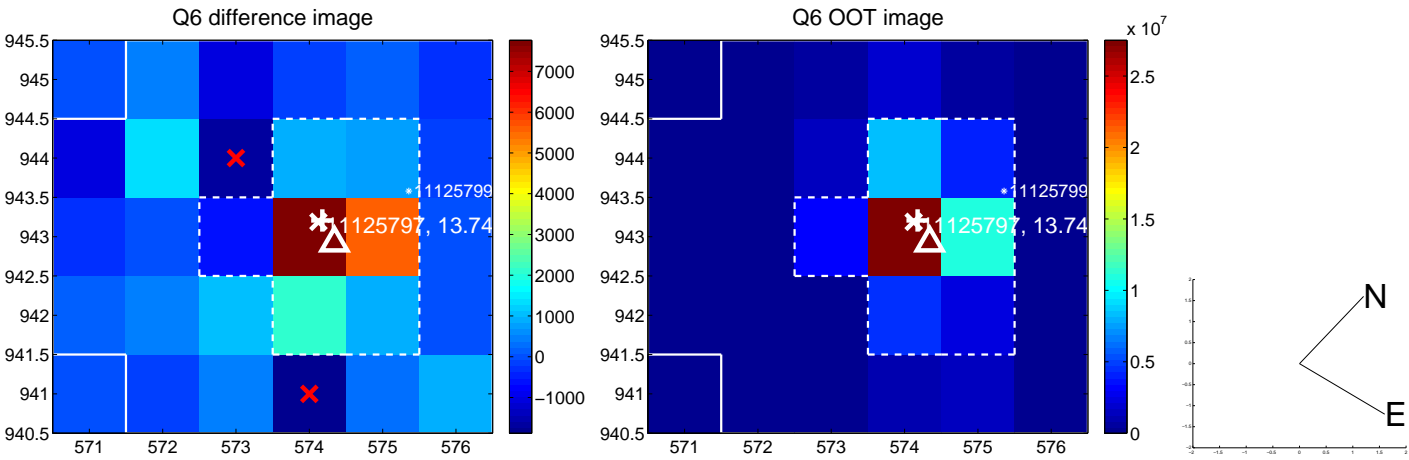
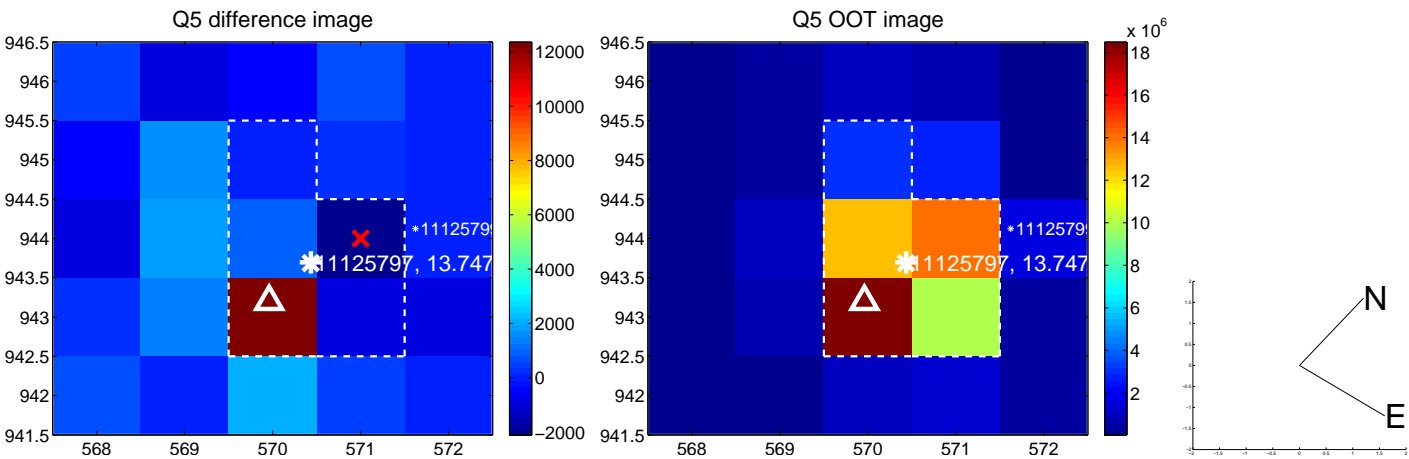


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

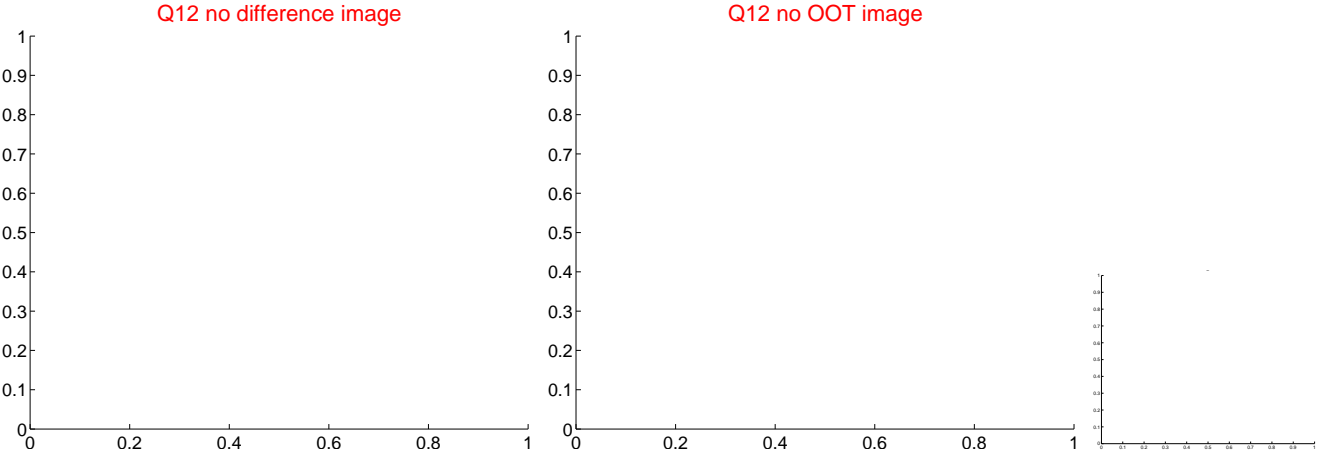
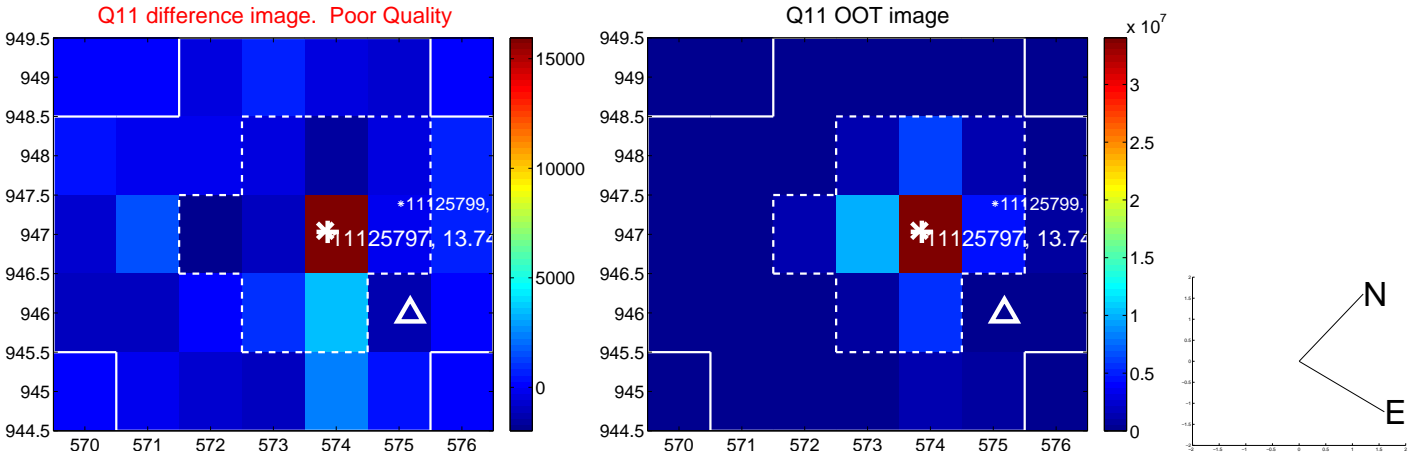
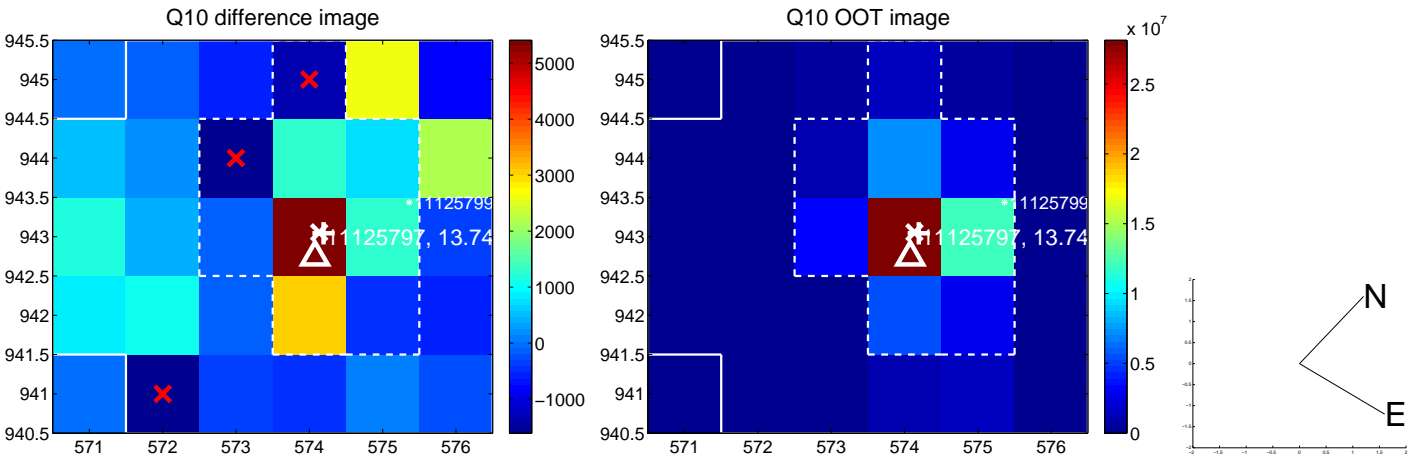
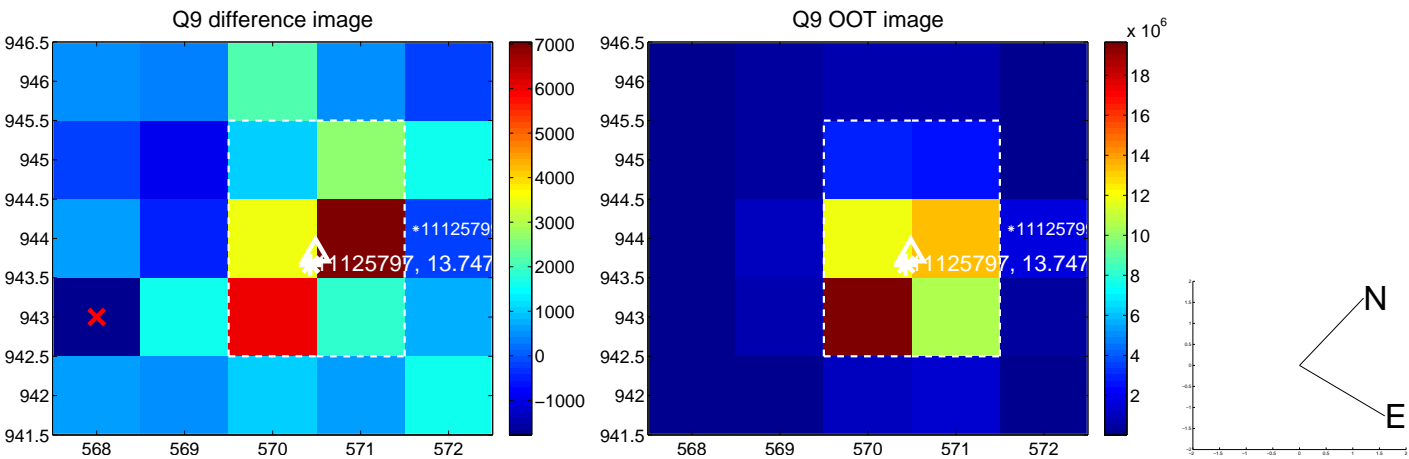
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



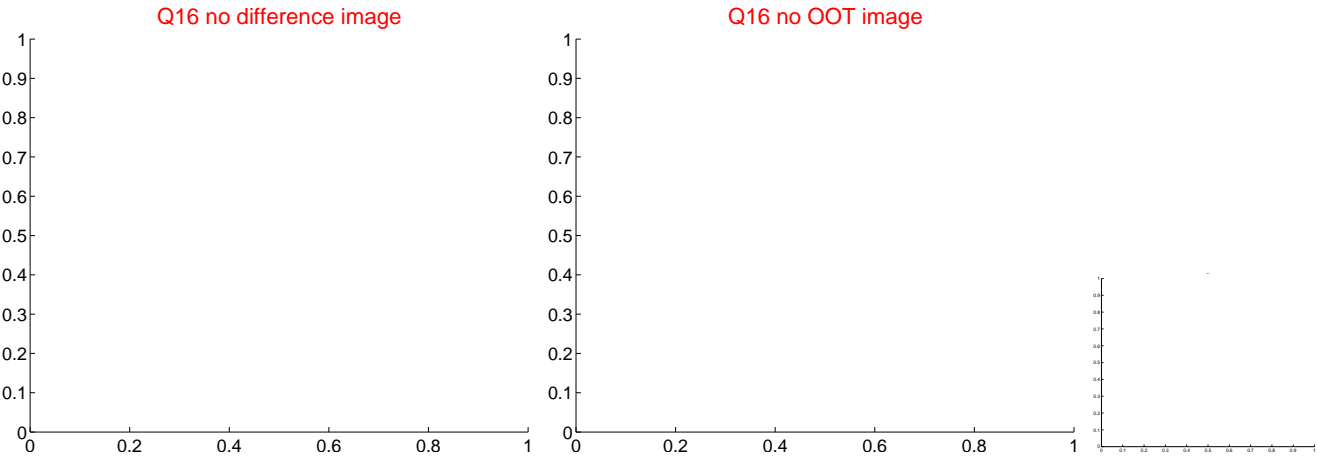
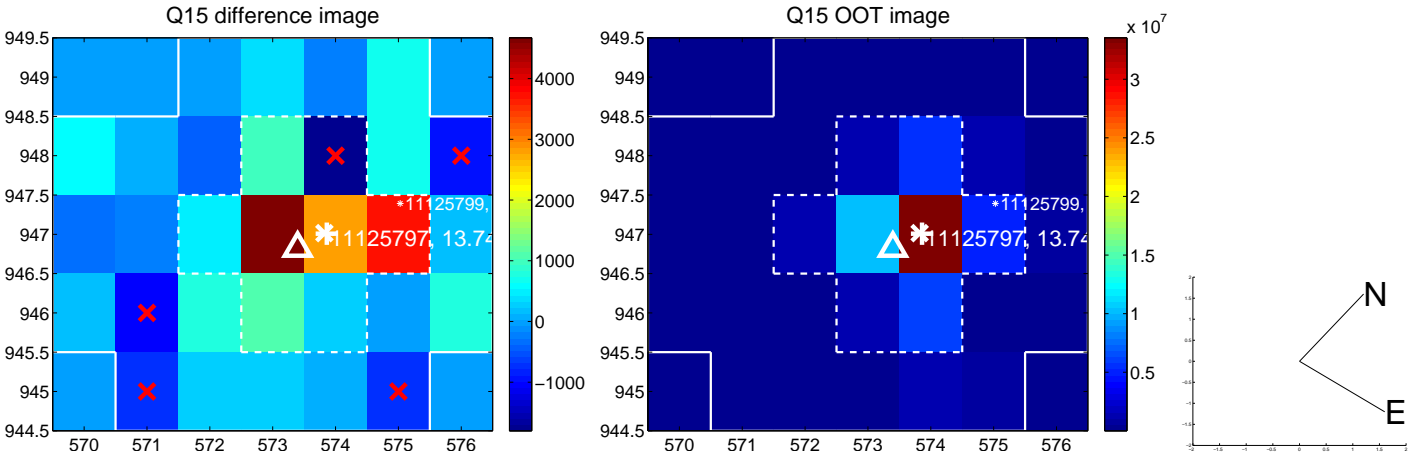
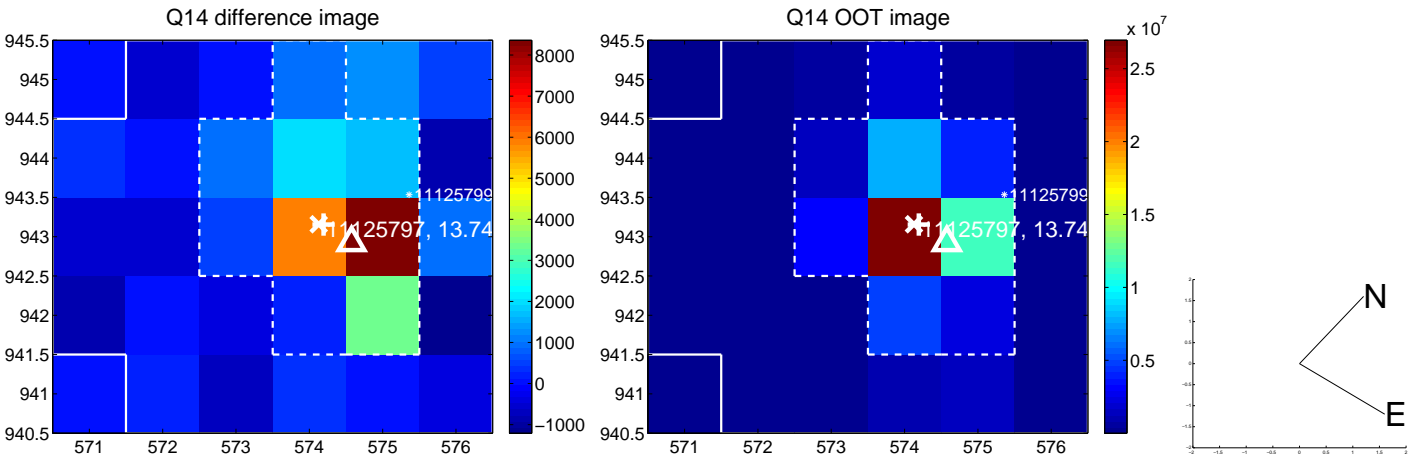
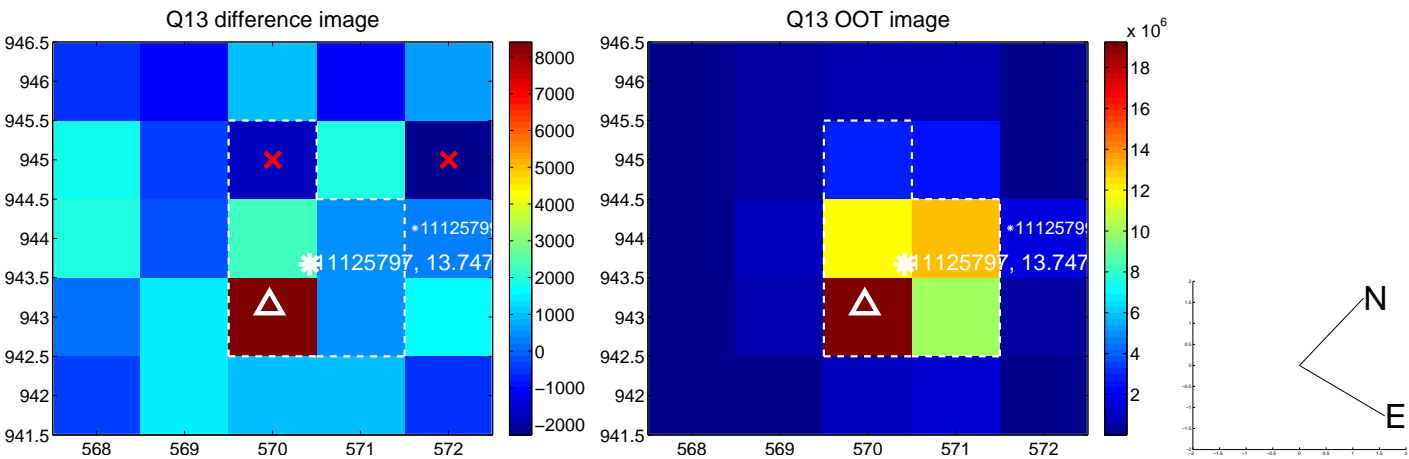
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



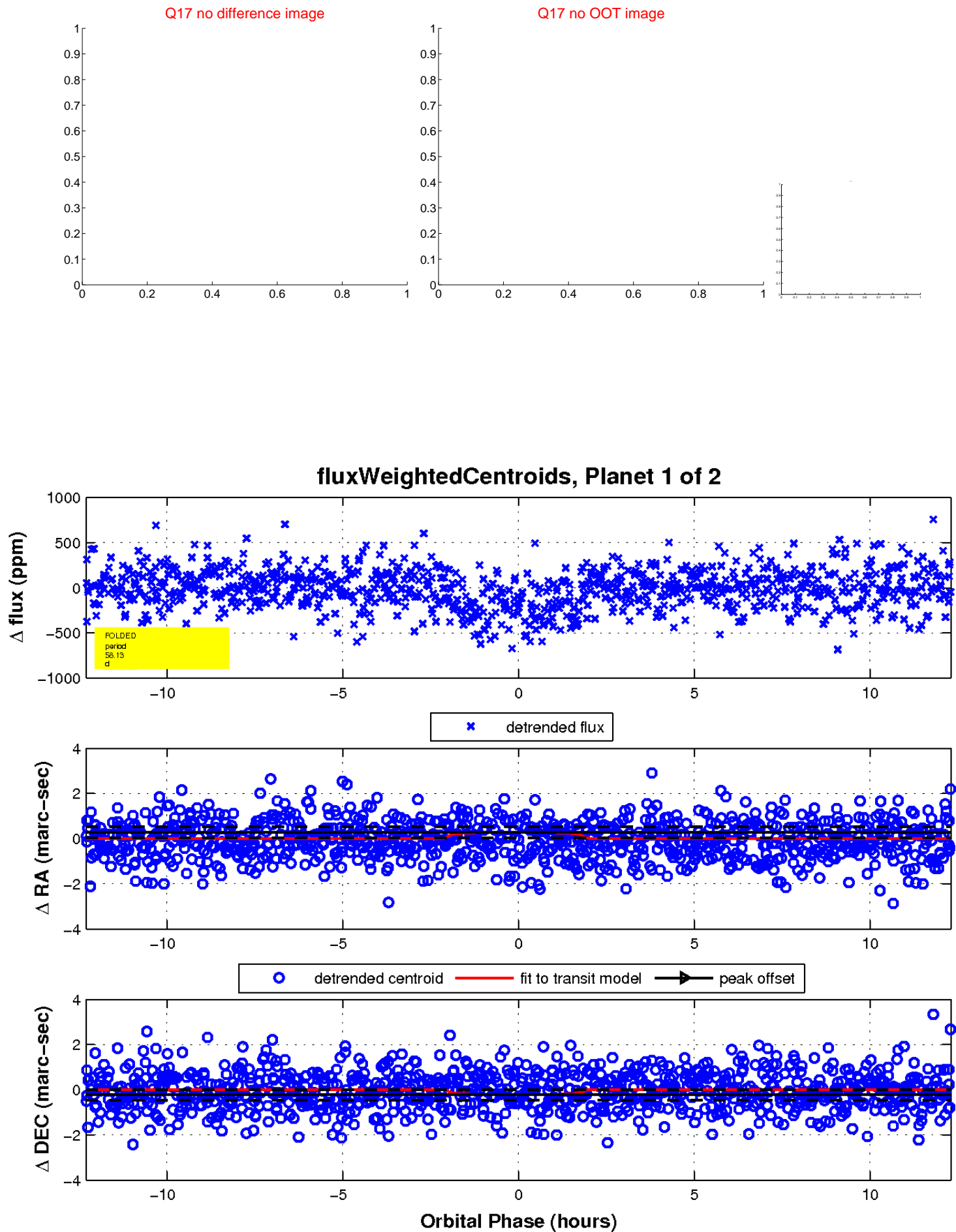
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

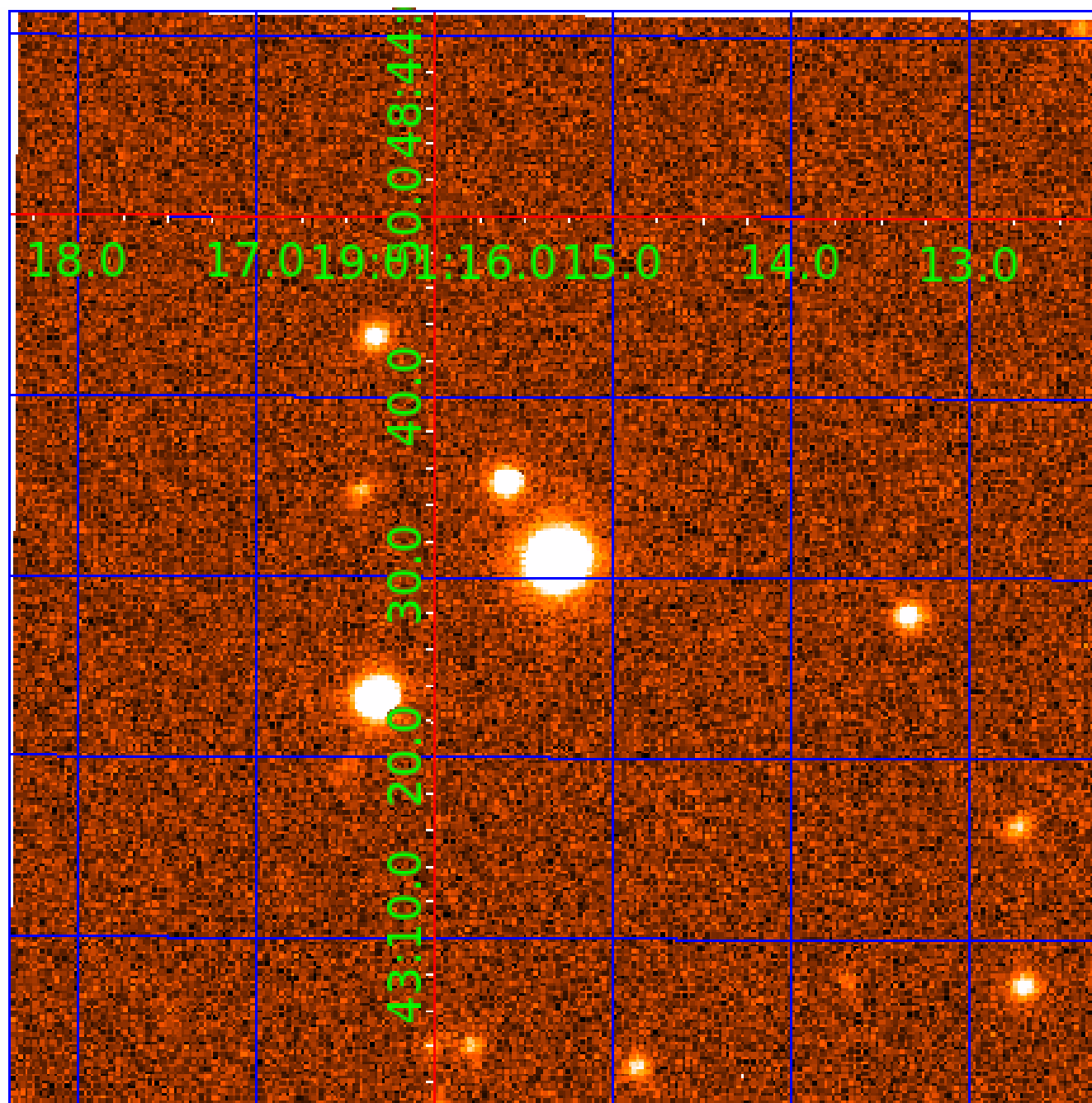


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011125797

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})
011125797-01	OBS	3371.01	58.126145	163.119747	268.1	4.113	10.8	11.2	0.82	5413	1.55	6.29
011125797-02	OBS	3371.02	12.253897	143.703332	144.0	2.409	10.1	11.0	0.82	5413	1.18	50.14

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011125797-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT
011125797-02	OBS	PC	1.00	0	0	0	0	NO_COMMENT

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.

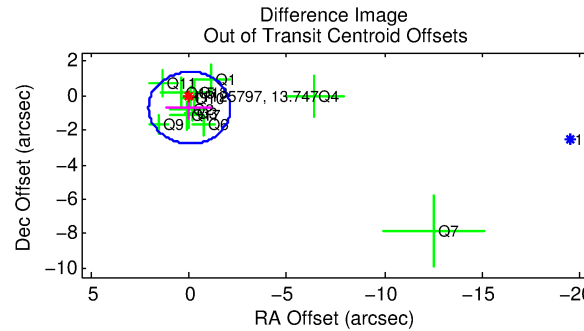
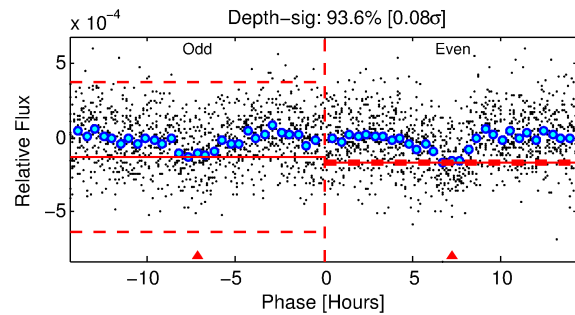
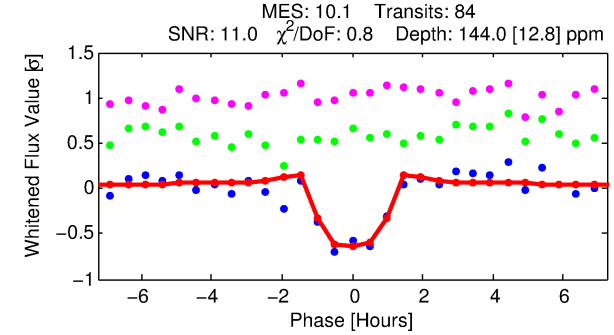
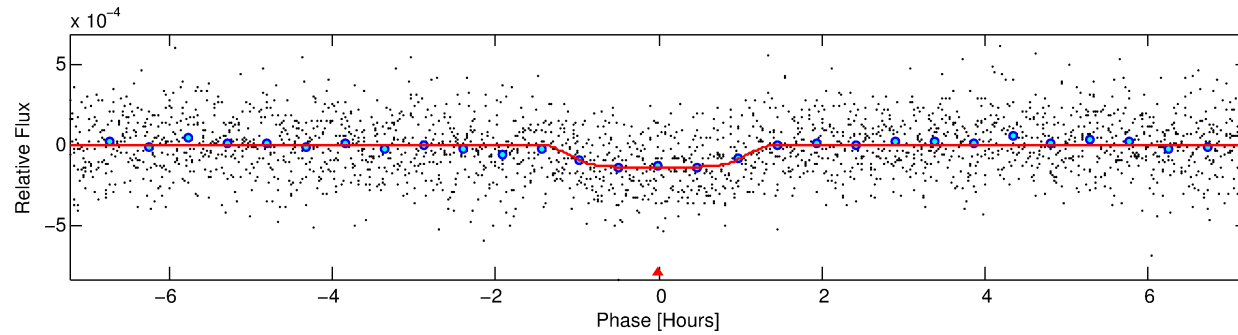
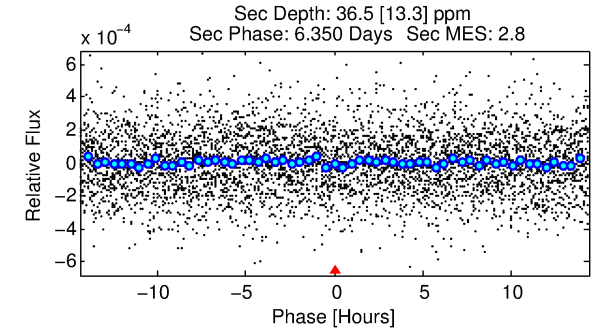
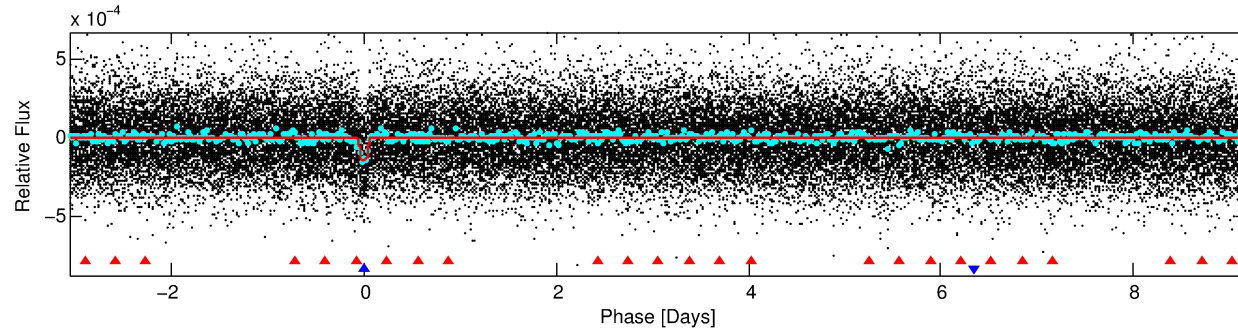
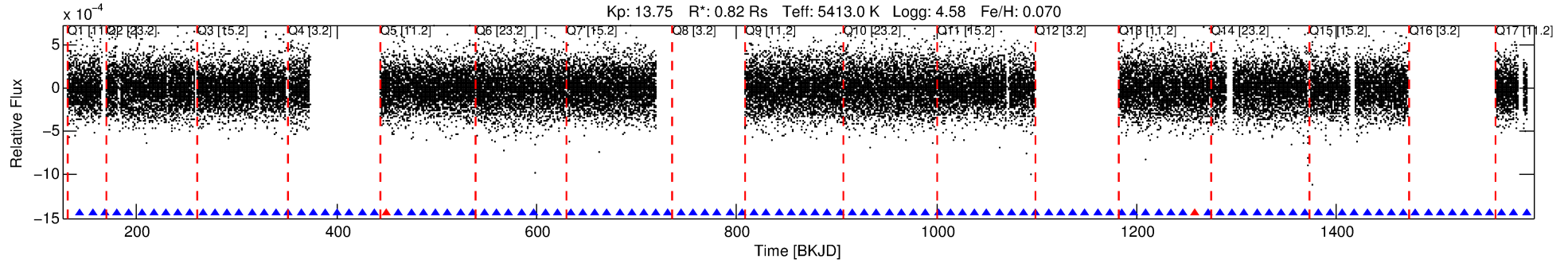
Ephemeris Match Information For 011125797-02

No Significant Match Found

DV One-Page Summary

KIC: 11125797 Candidate: 2 of 2 Period: 12.254 d

KOI: K03371.02 Corr: 0.949



DV Fit Results:

Period = 12.25390 [0.00007] d
Epoch = 143.7033 [0.0043] BKJD
Rp/R* = 0.0132 [0.0081]
a/R* = 18.58 [49.30]
b = 0.89 [0.62]
Seff = 50.14 [9.54]
Teq = 679 [32] K
Rp = 1.18 [0.74] Re
a = 0.1016 [0.0116] AU
Ag = 149.51 [194.10] [0.77σ]
Teffp = 3668 [1180] K [2.53σ]

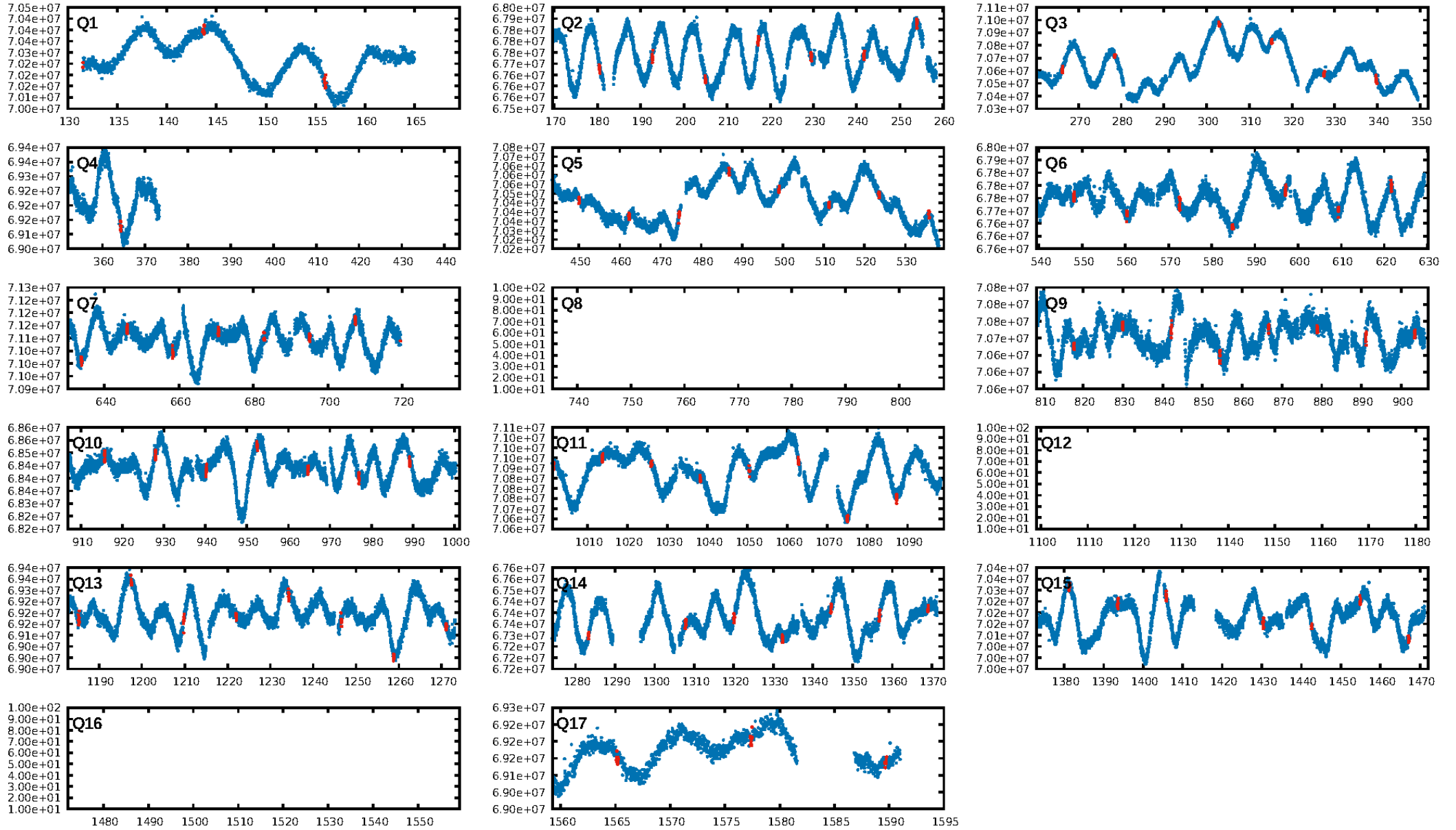
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [230.94σ]
ModelChiSquare2-sig: 83.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.24e-23
RollingBand-fgt: 0.97 [76/78]
GhostDiagnostic-chr: 50.42
Centroid-sig: 69.7%
Centroid-so: 0.689 arcsec [0.67σ]
OotOffset-rm: 0.716 arcsec [1.03σ]
KicOffset-rm: 0.659 arcsec [1.20σ]
OotOffset-st: 3/4/1/4 [12]
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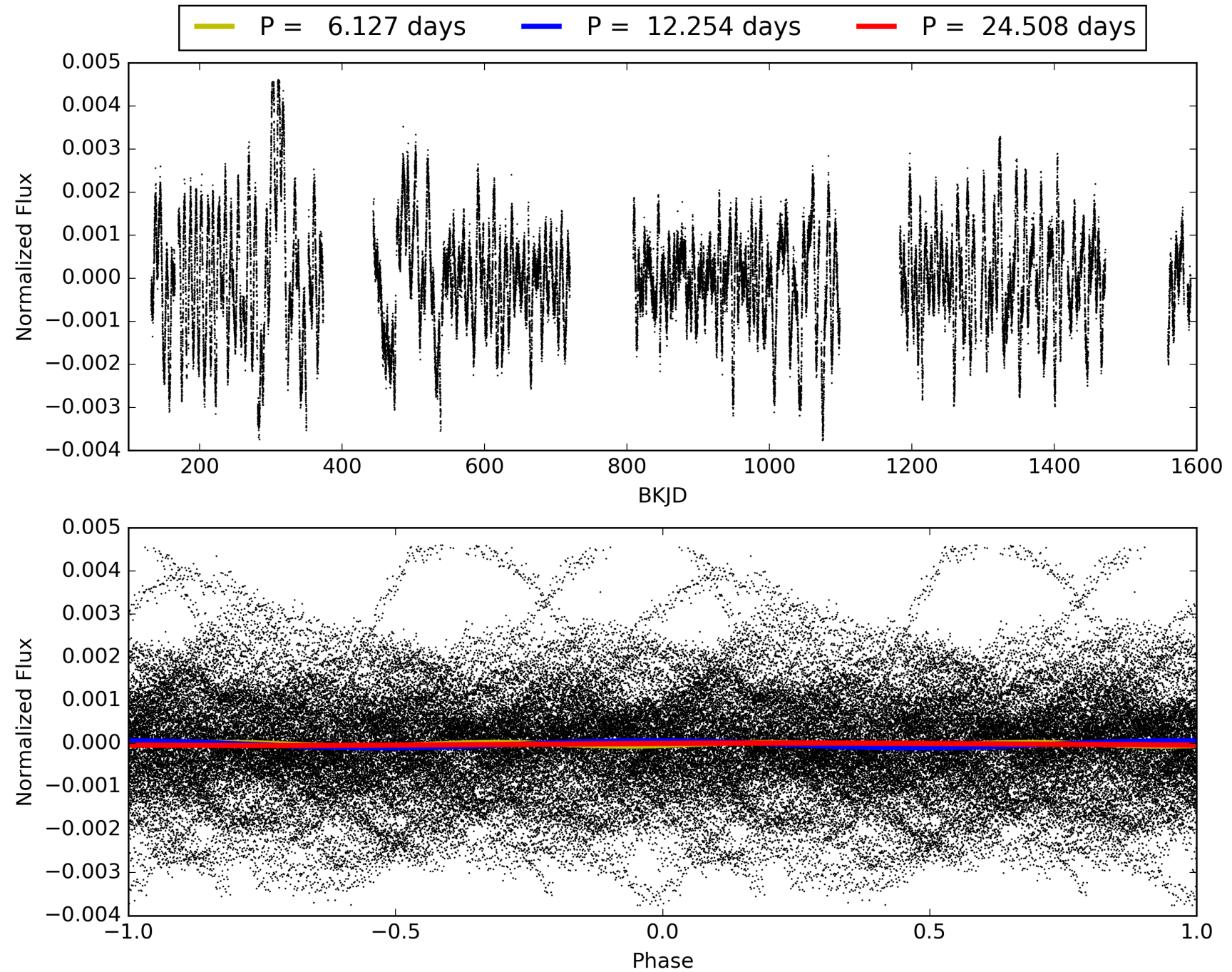
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 011125797-02, PDC Light Curves

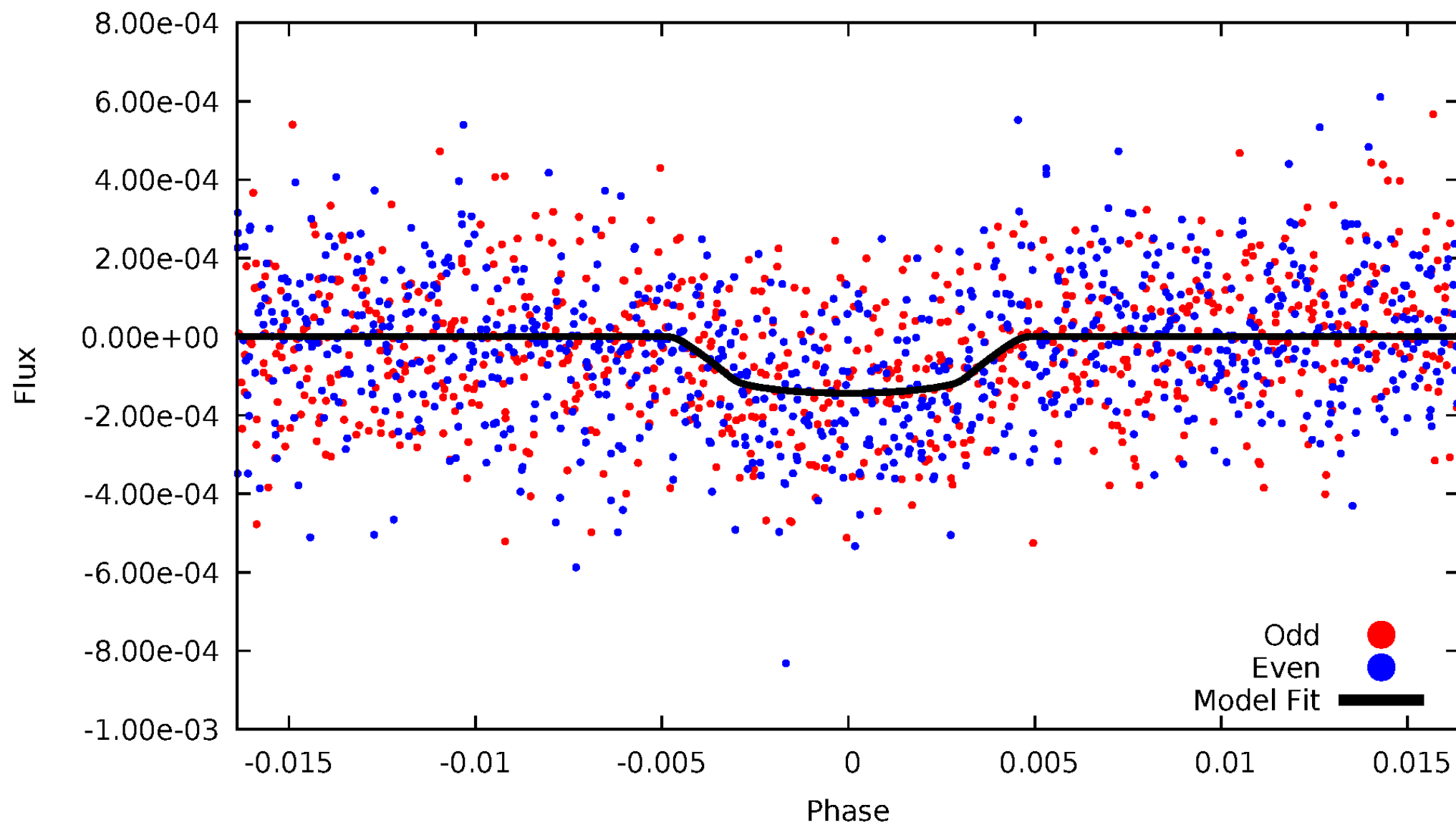


TCE 011125797-02



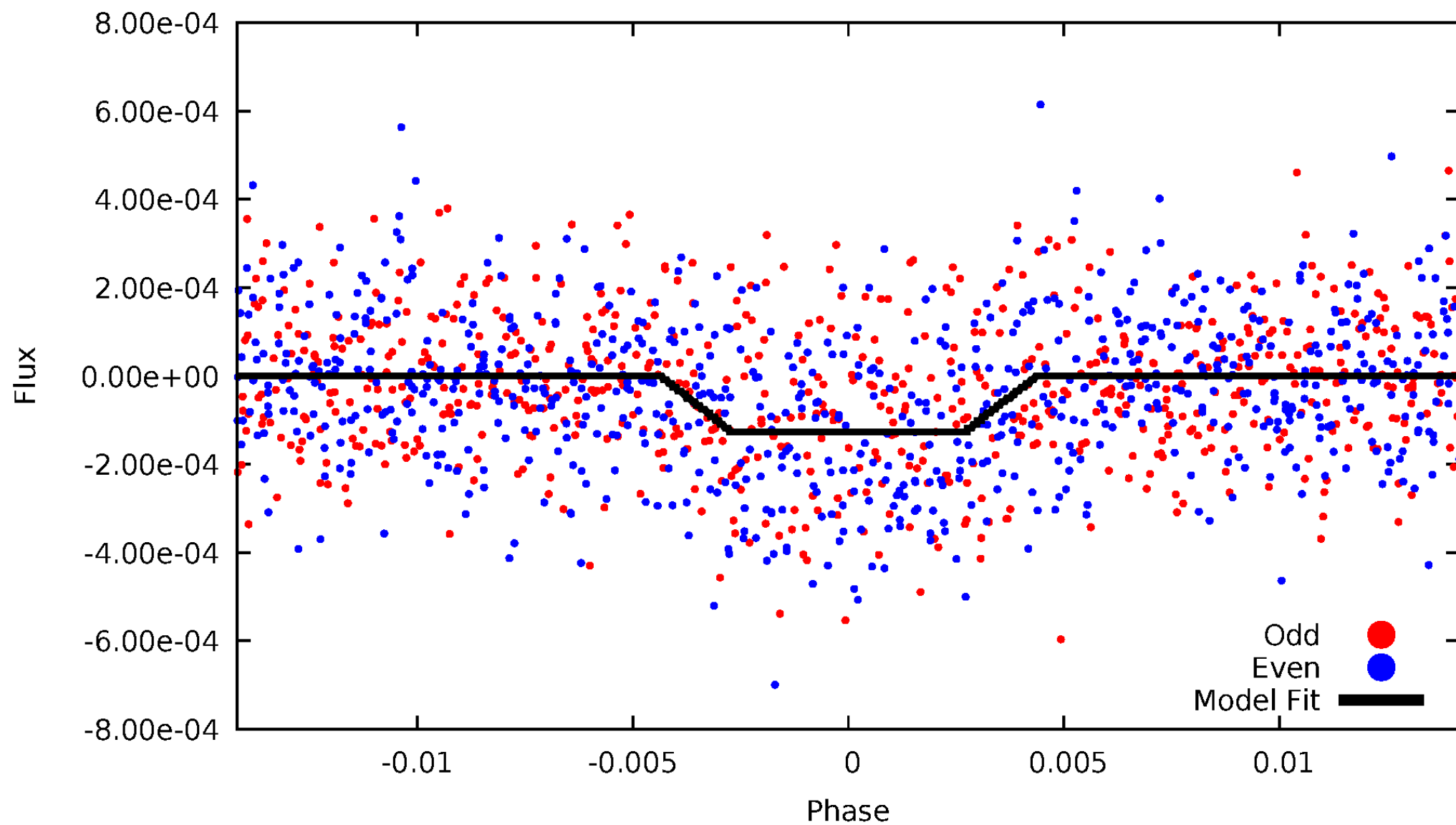
DV Odd/Even

TCE 011125797-02



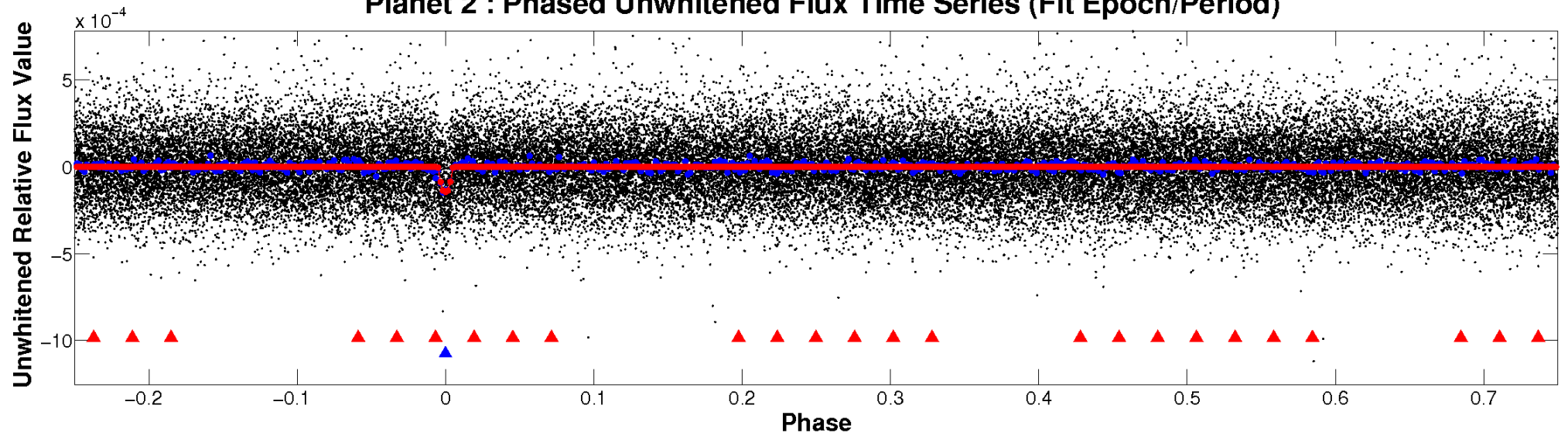
ALT Odd/Even

TCE 011125797-02

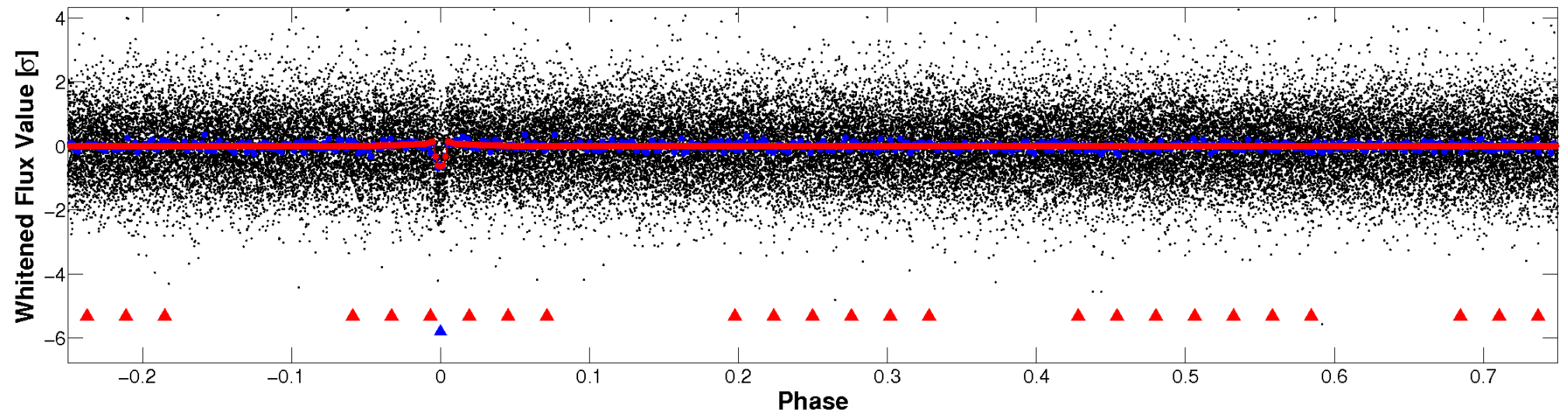


Non-Whitened Vs. Whitened Light Curve

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

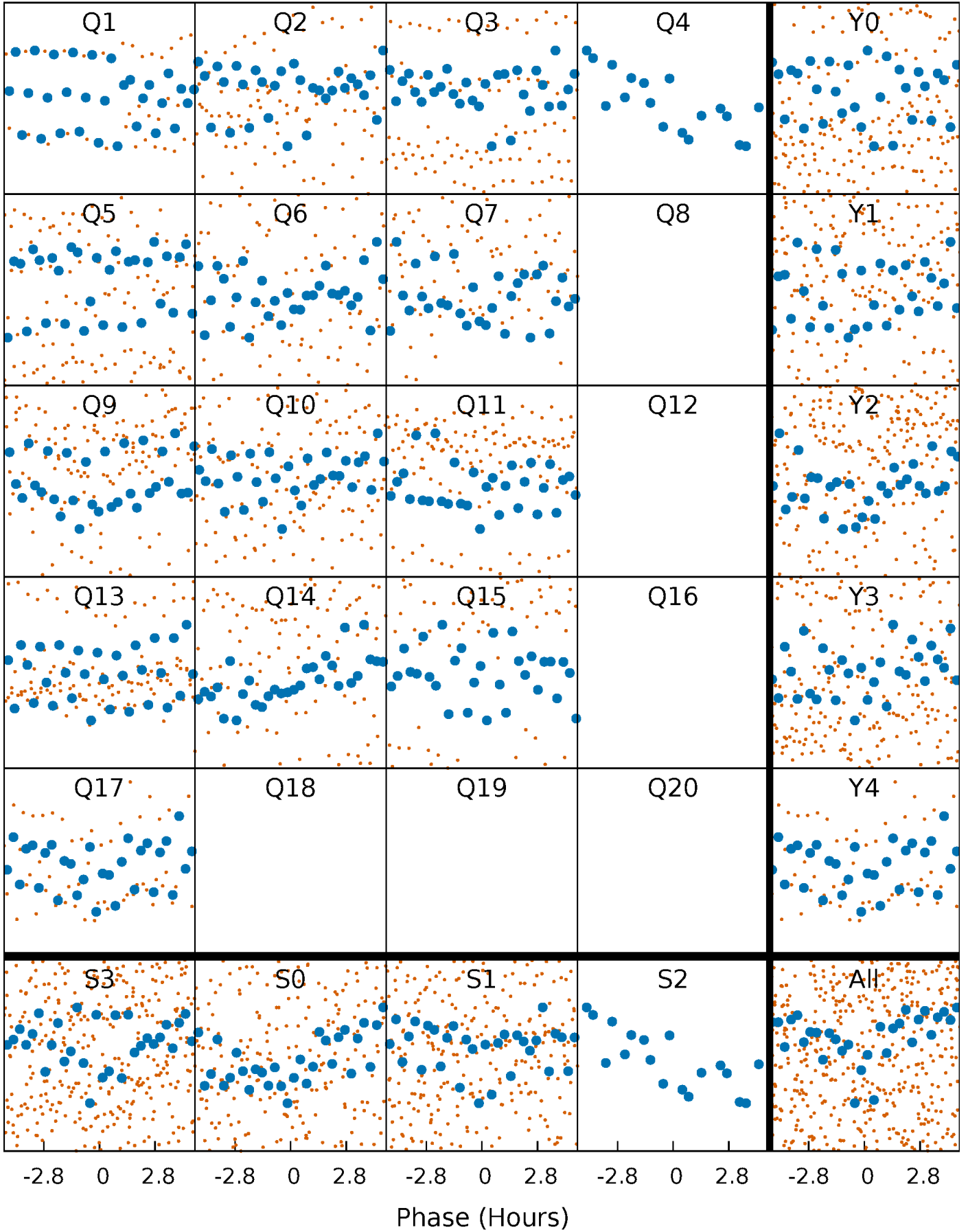


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



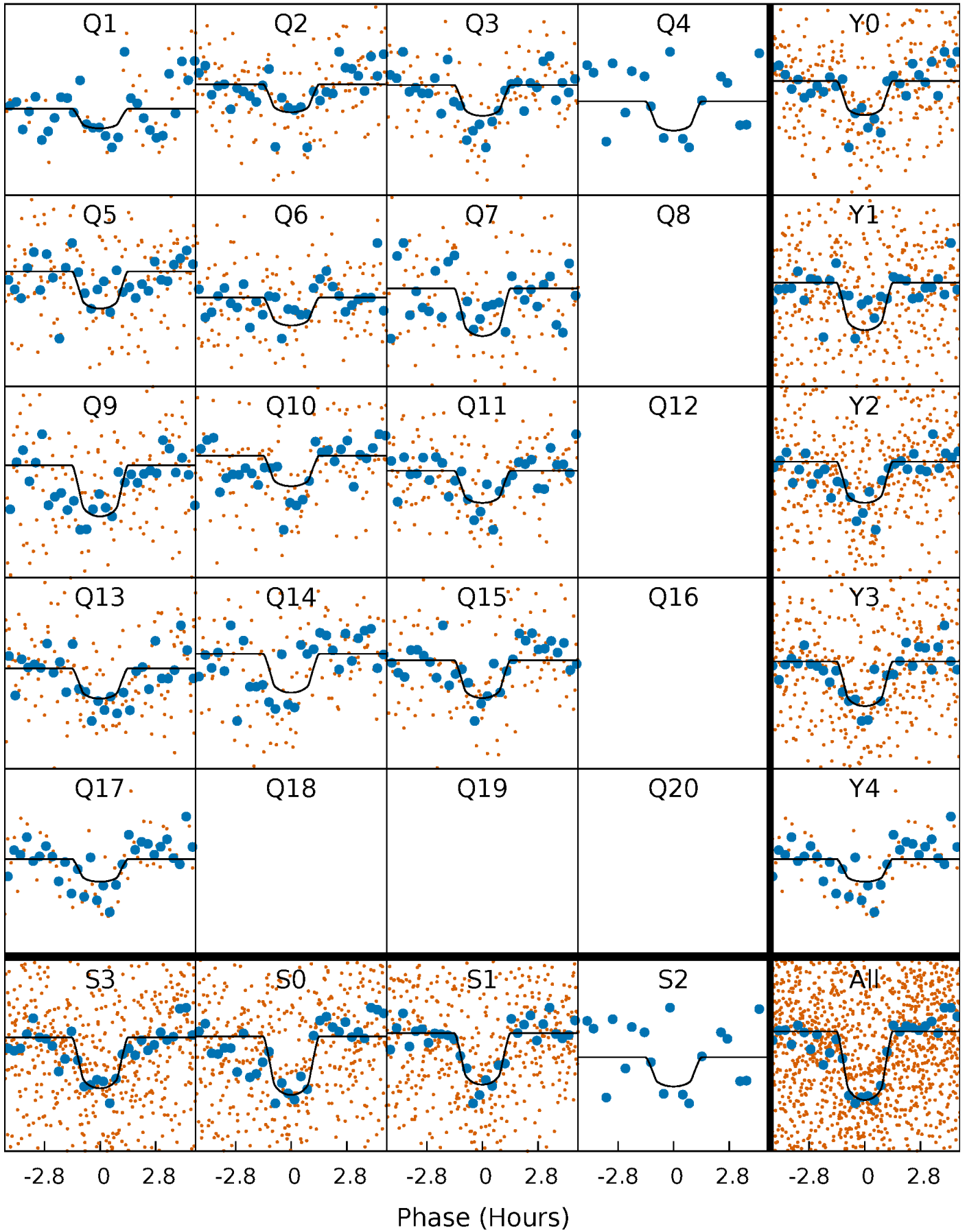
PDC Quarter-Phased Transit Curves

TCE 011125797-02 P= 12.253897 Days $T_0=143.703332$ (BKJD)



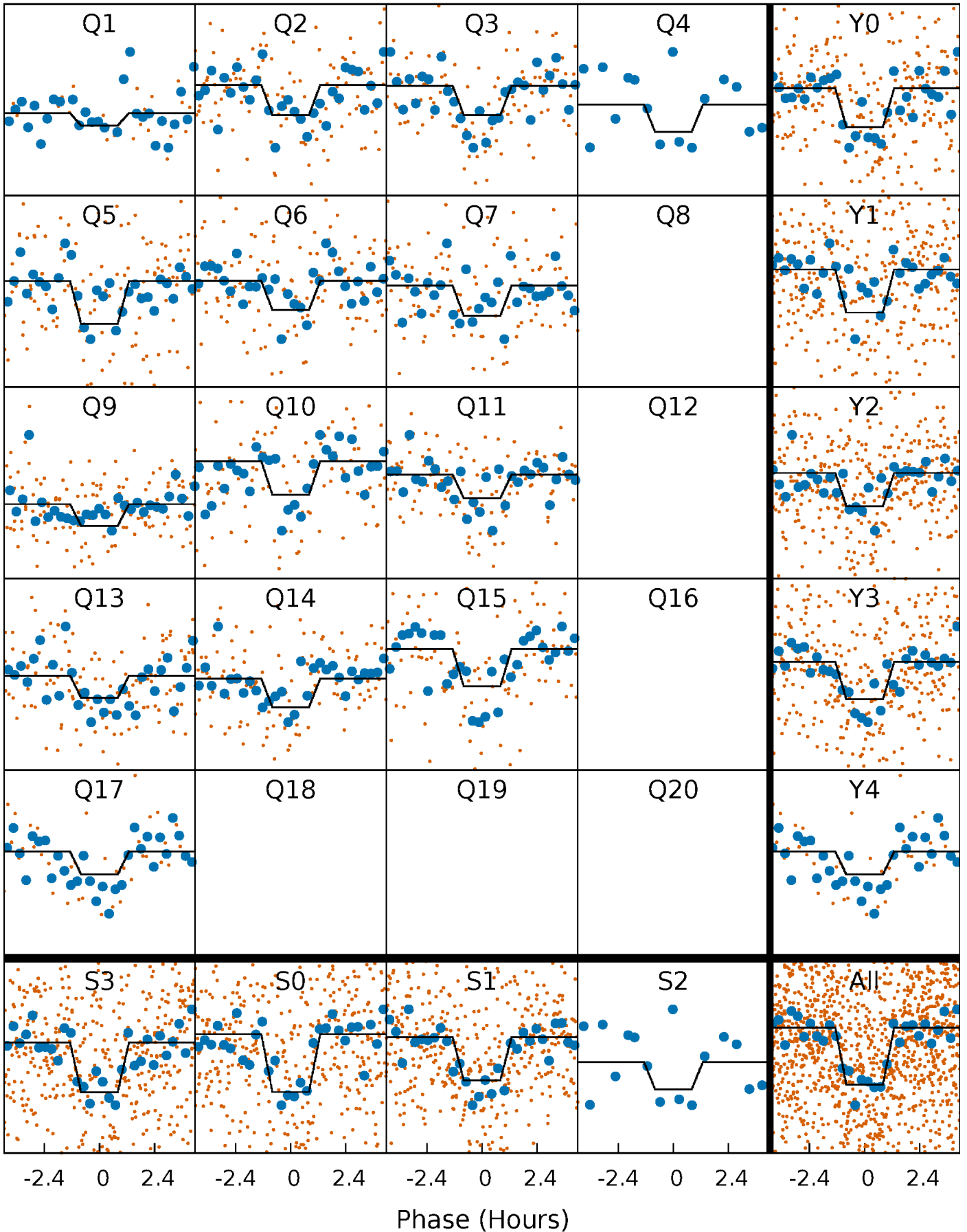
DV Quarter-Phased Transit Curves

TCE 011125797-02 P= 12.253897 Days $T_0=143.703332$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

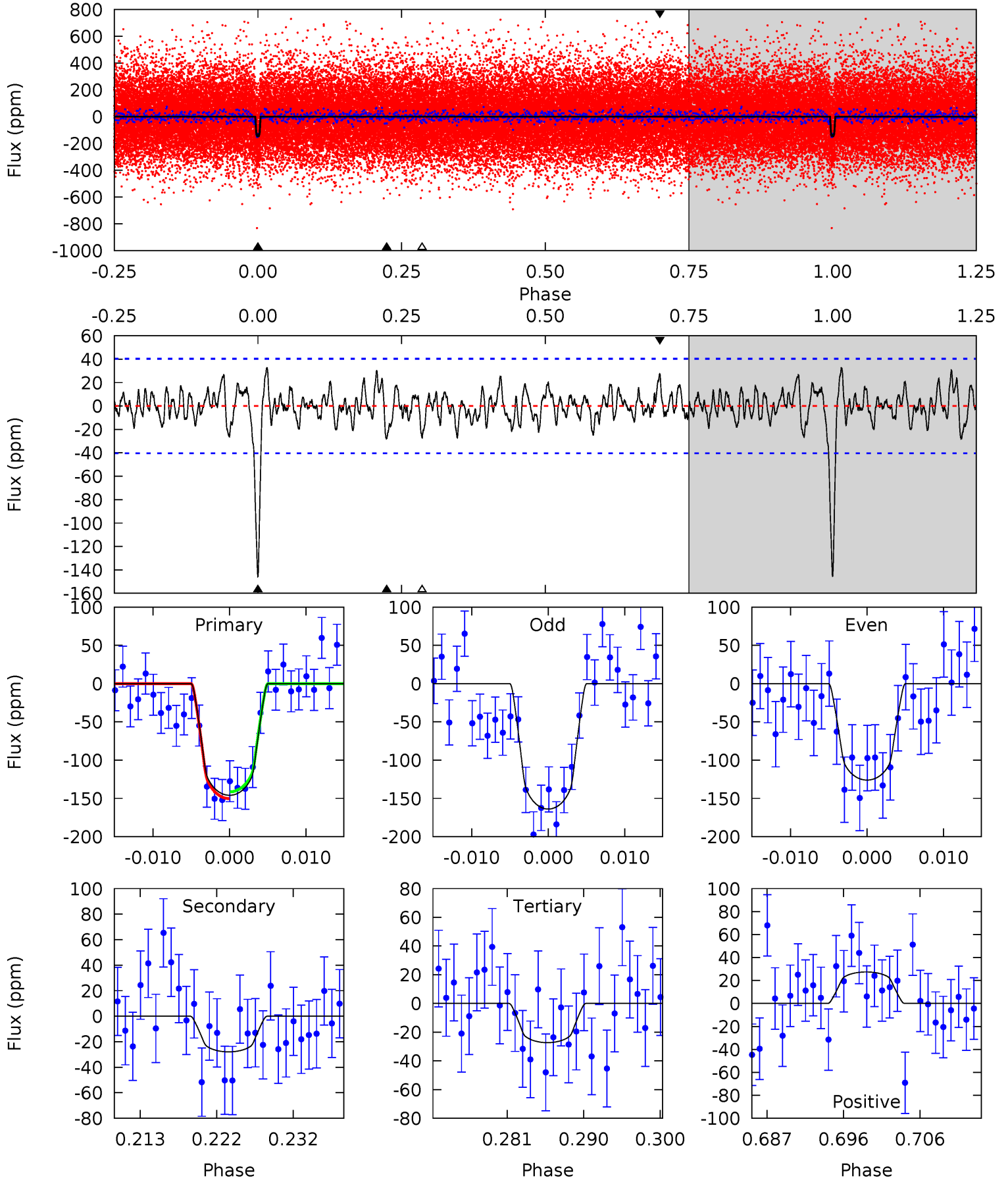
TCE 011125797-02 P= 12.253888 Days $T_0=143.704453$ (BKJD)



DV Model-Shift Uniqueness Test

011125797-02, $P = 12.253897$ Days, $E = 131.449435$ Days

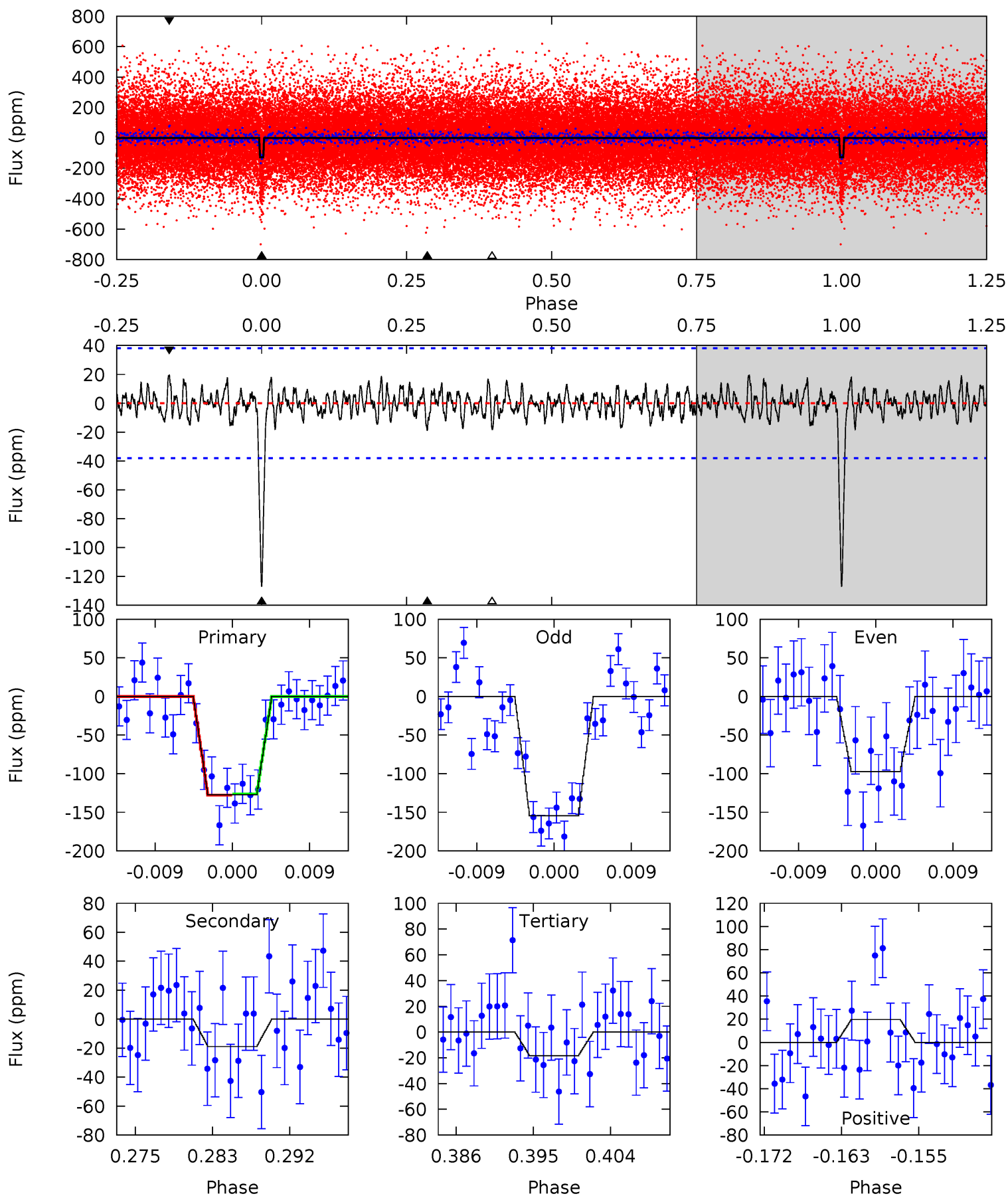
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.2	3.48	3.40	3.42	5.03	2.59	1.29	14.8	14.8	0.08	0.06	2.36	1.15	0.18	0.56



Alt Model-Shift Uniqueness Test

011125797-02, $P = 12.253888$ Days, $E = 131.450565$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.9	2.51	2.43	2.62	5.06	2.63	0.90	14.4	14.3	0.08	-0.11	3.80	1.01	0.13	0.09



Stellar Parameters For KIC 011125797

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	5413^{+73}_{-81}	$4.579^{+0.011}_{-0.105}$	$0.070^{+0.150}_{-0.150}$	$0.820^{+0.100}_{-0.027}$	$0.931^{+0.033}_{-0.066}$	$2.383^{+0.153}_{-0.710}$
	+1%/-1%	+0%/-2%	+214%/-214%	+12%/-3%	+4%/-7%	+6%/-30%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 011125797-02 / KOI 3371.02

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-28 ± 8	$1.26^{+0.77}_{-0.73}$	961^{+31}_{-21}	3731^{+1365}_{-550}	96^{+404}_{-61}
Alt.	-19 ± 8	$1.13^{+0.69}_{-0.64}$	961^{+34}_{-20}	3594^{+1331}_{-553}	78^{+342}_{-52}

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 $A_{obs} \gg 1.0$

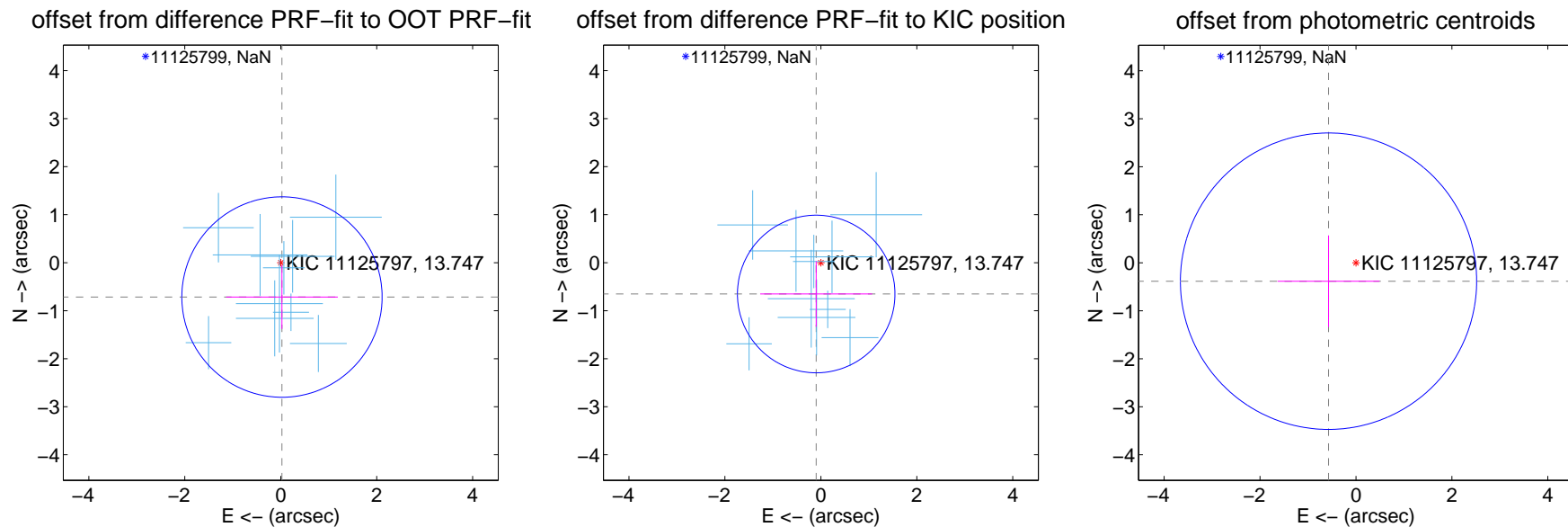
DV Centroid Data

Supplemental centroid analysis for 011125797-02. Kepler magnitude: 13.75. Transit SNR 11.01

There are 10 quarters with good PRF difference image offsets

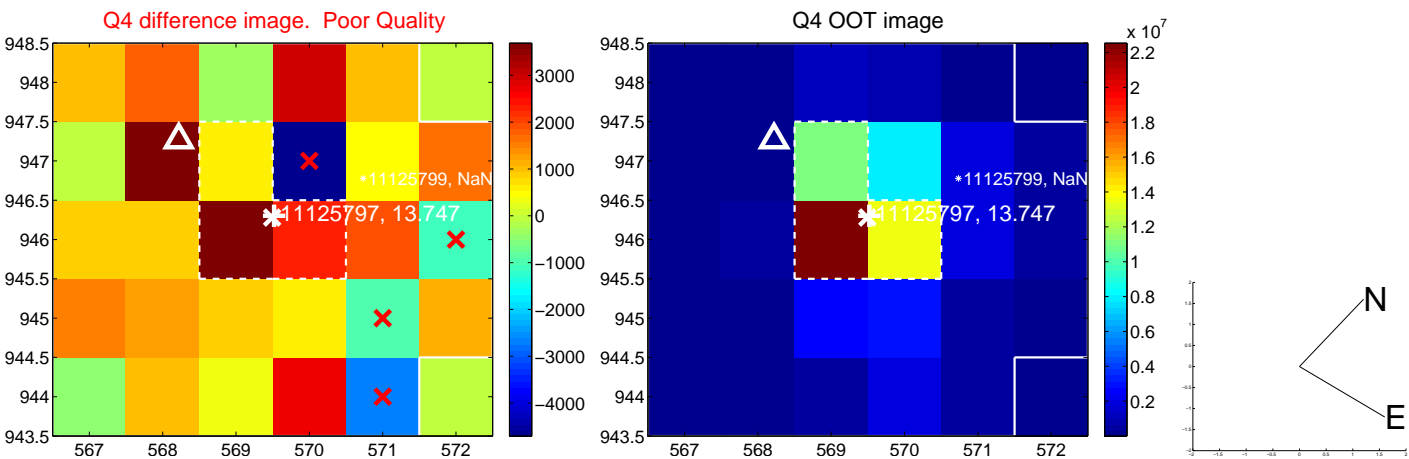
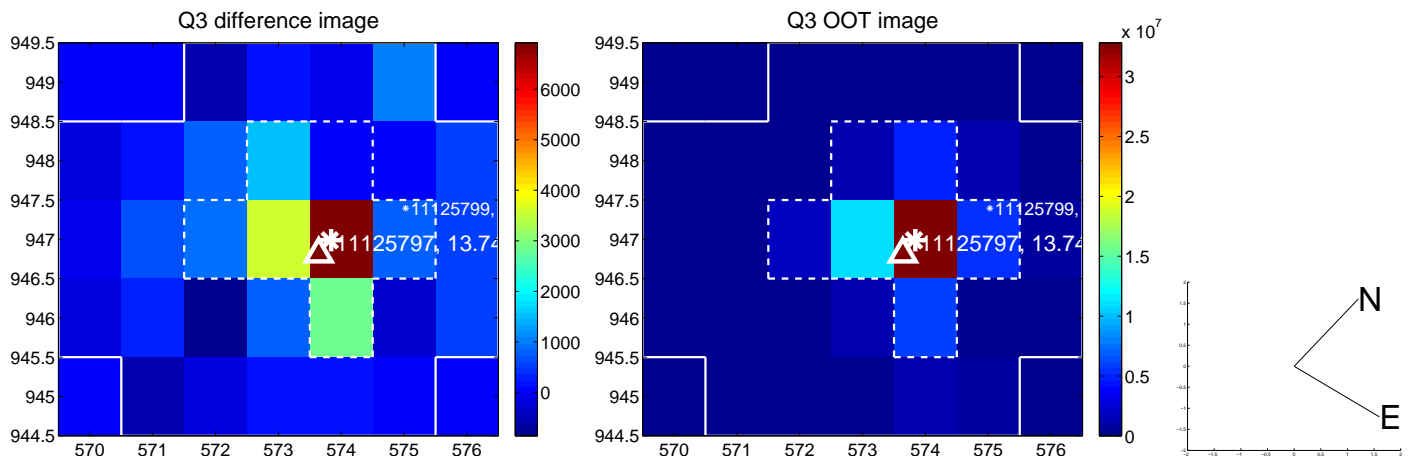
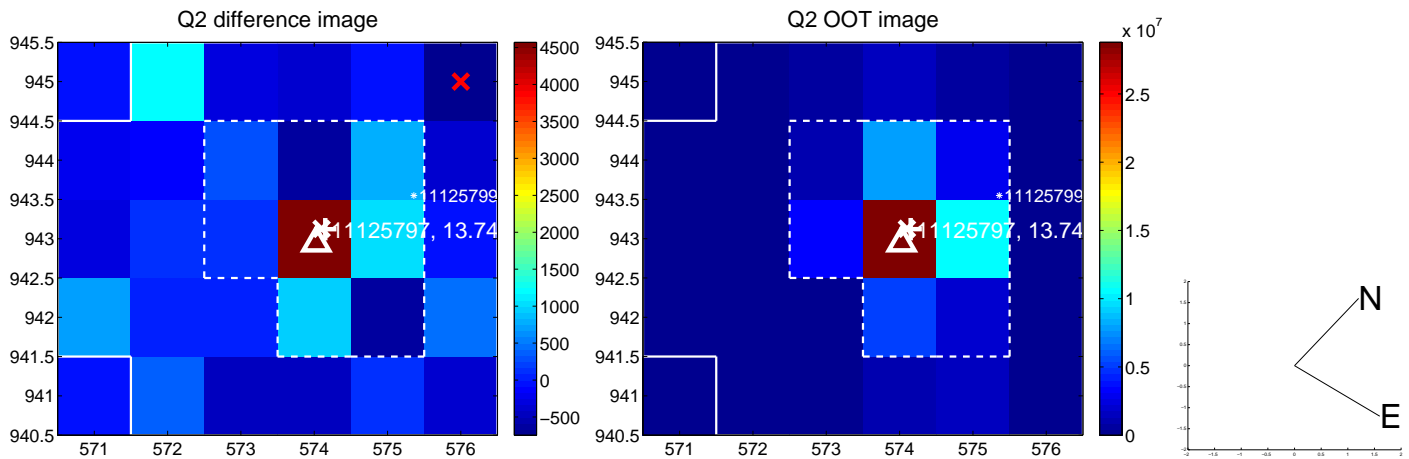
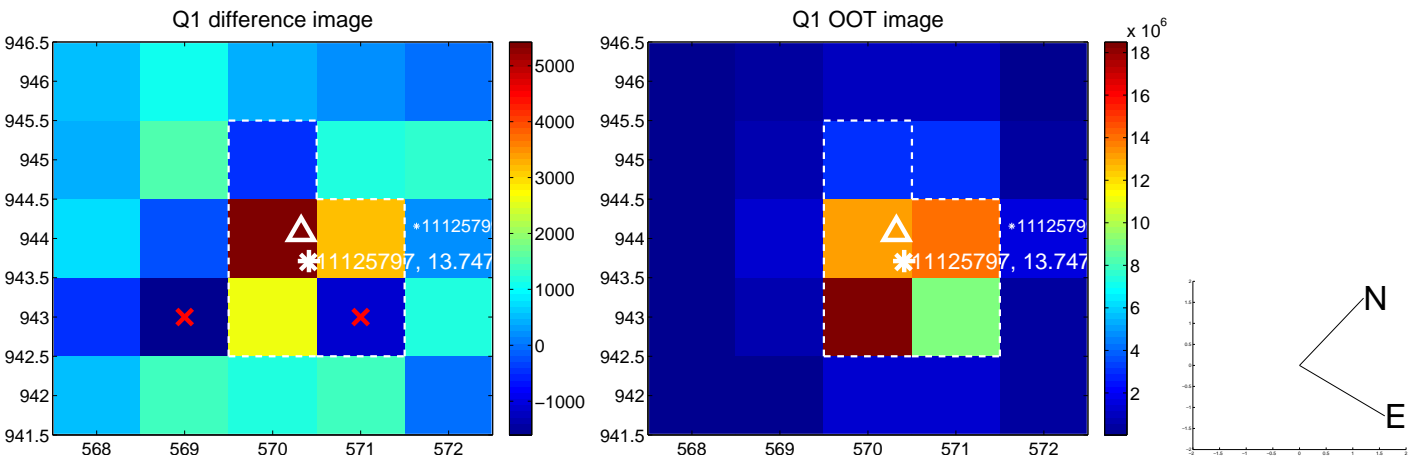
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.716 ± 0.696	1.03	-0.025 ± 1.163	-0.716 ± 0.663
PRF-fit source offset from KIC position	0.659 ± 0.547	1.20	0.097 ± 1.167	-0.652 ± 0.683
photometric centroid source offset	0.69 ± 1.03	0.67	0.57 ± 1.06	-0.38 ± 0.95

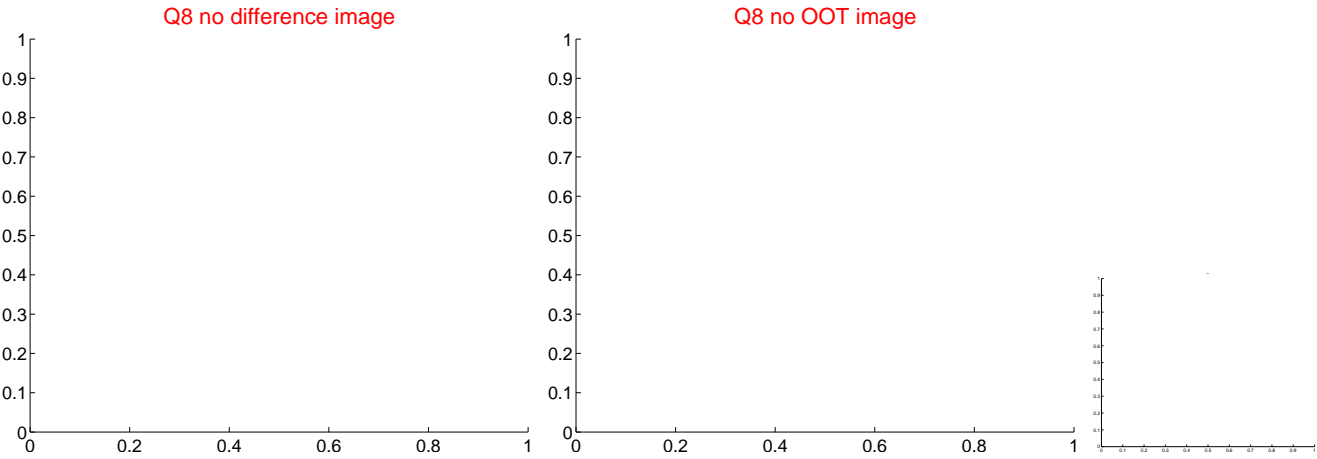
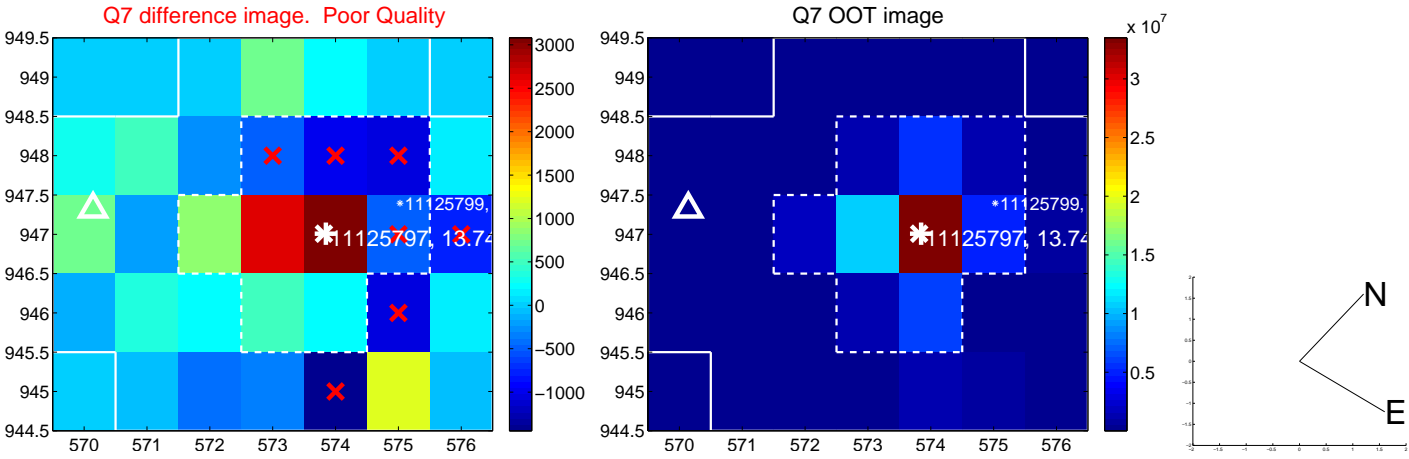
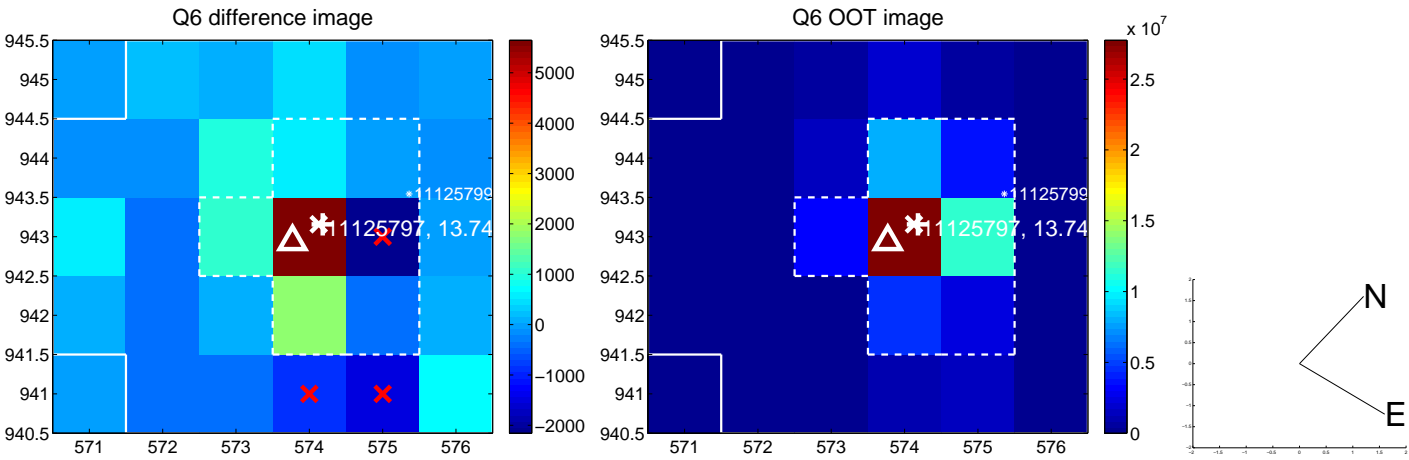
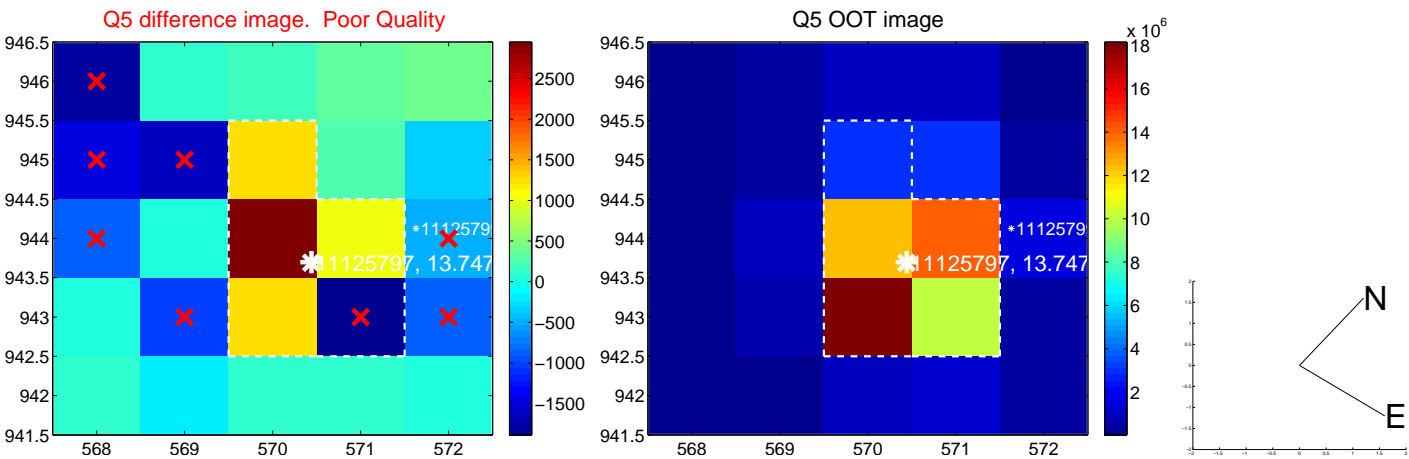


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

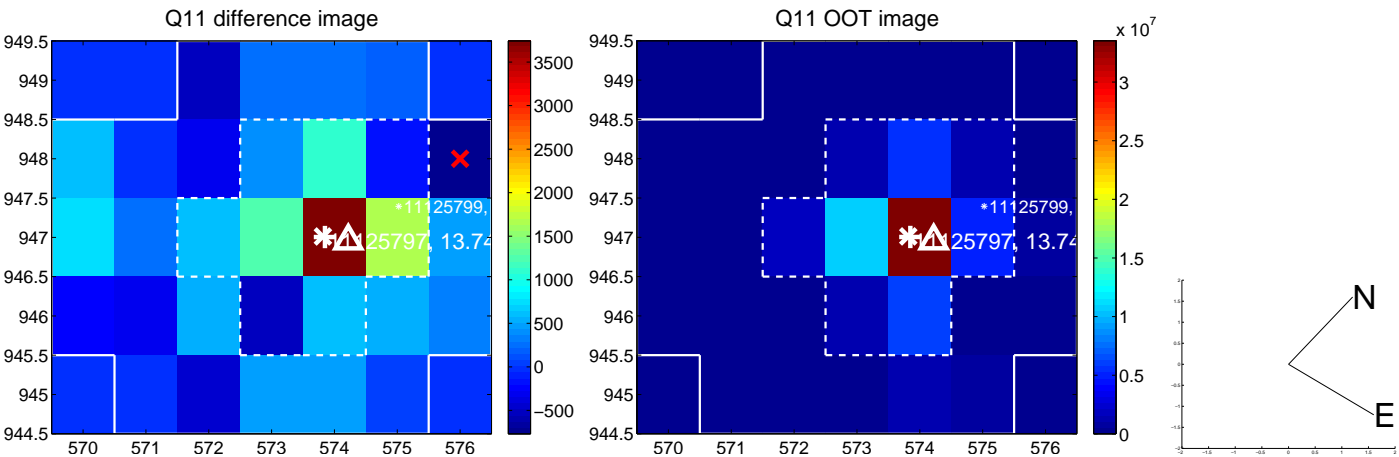
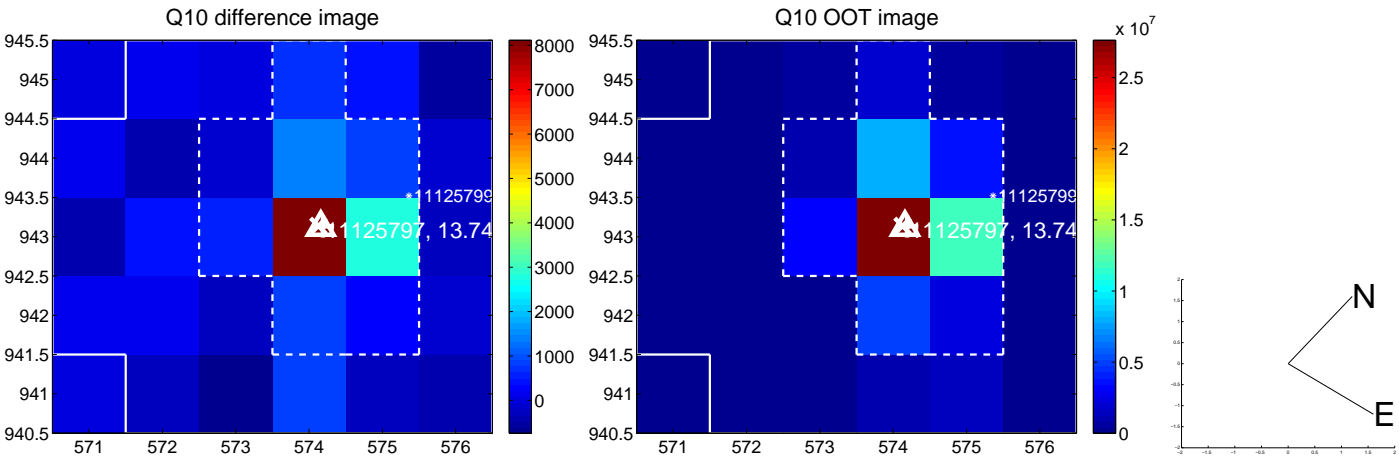
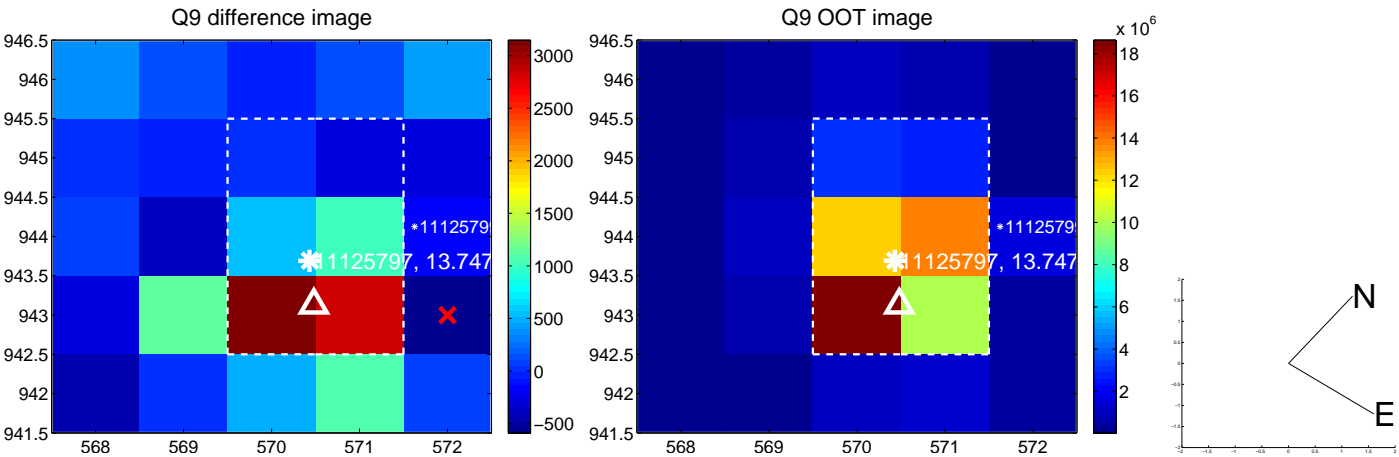
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



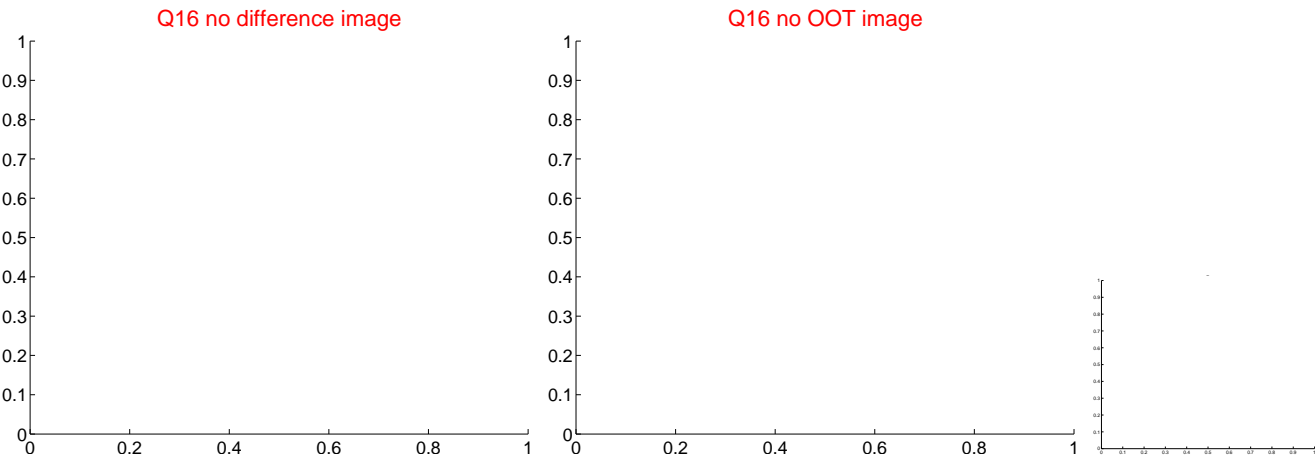
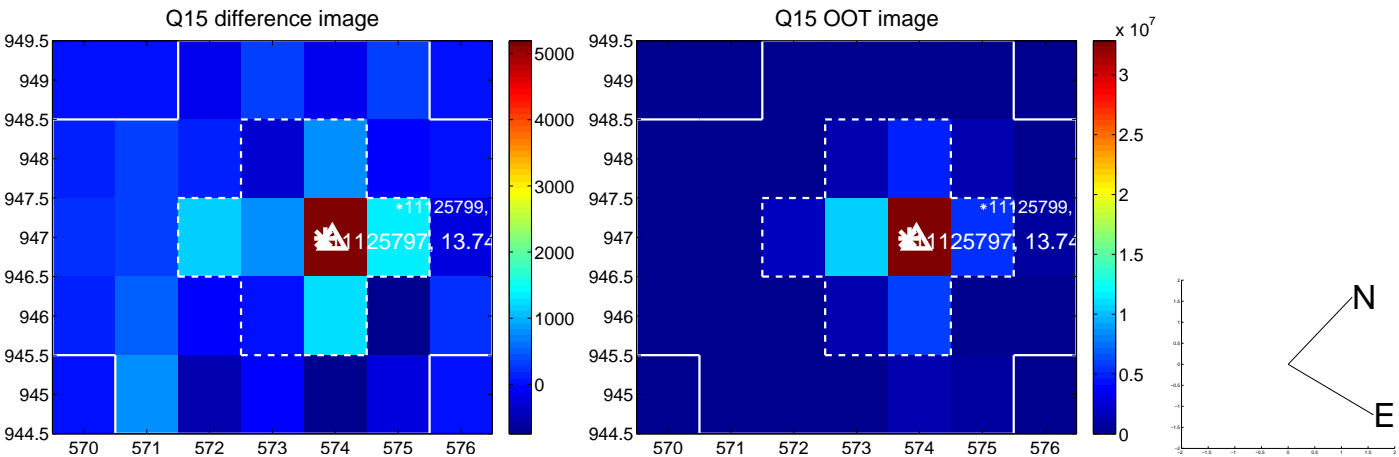
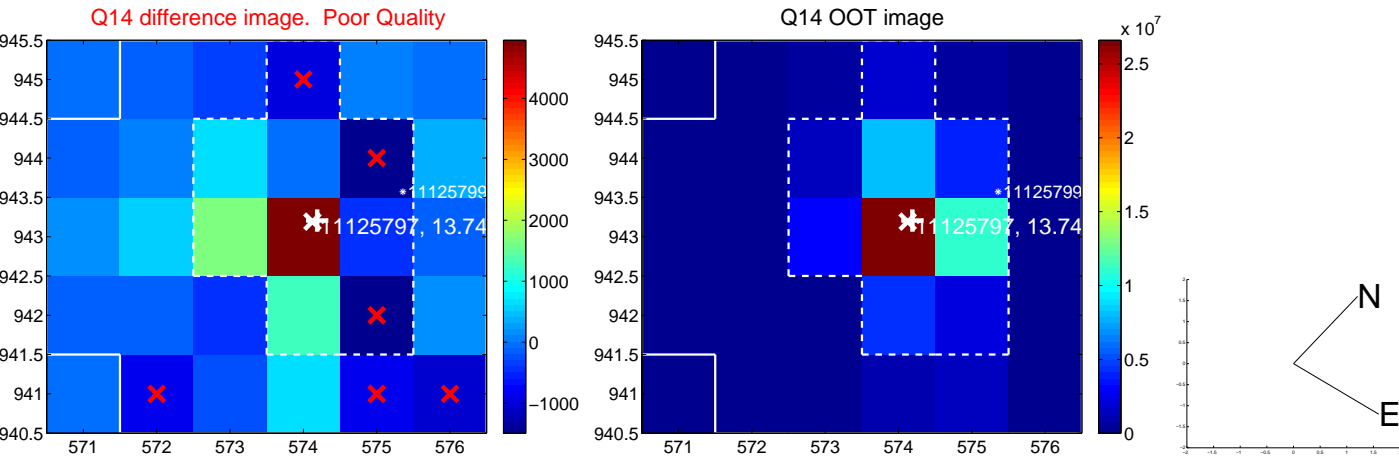
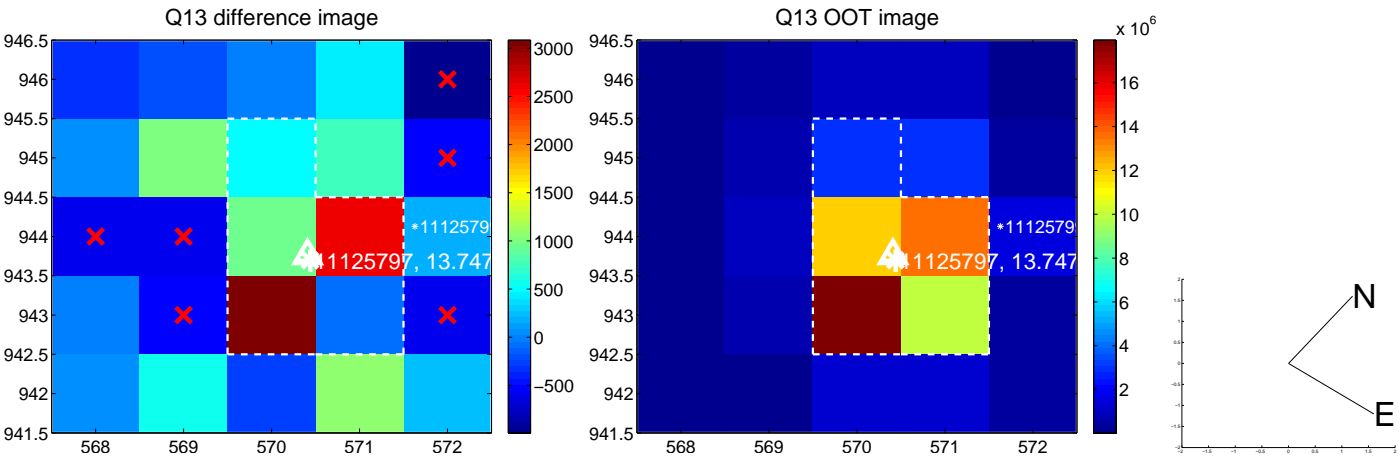
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



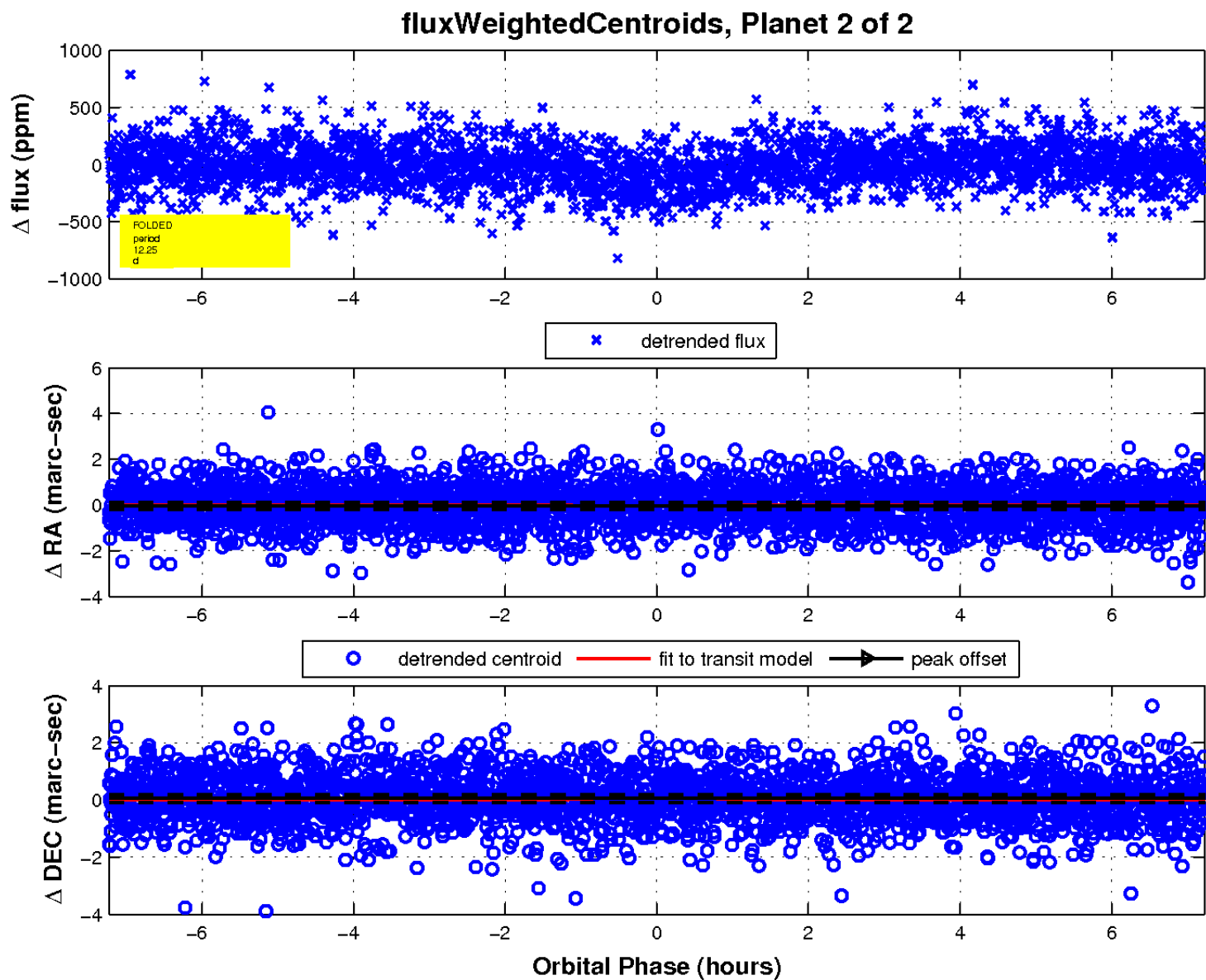
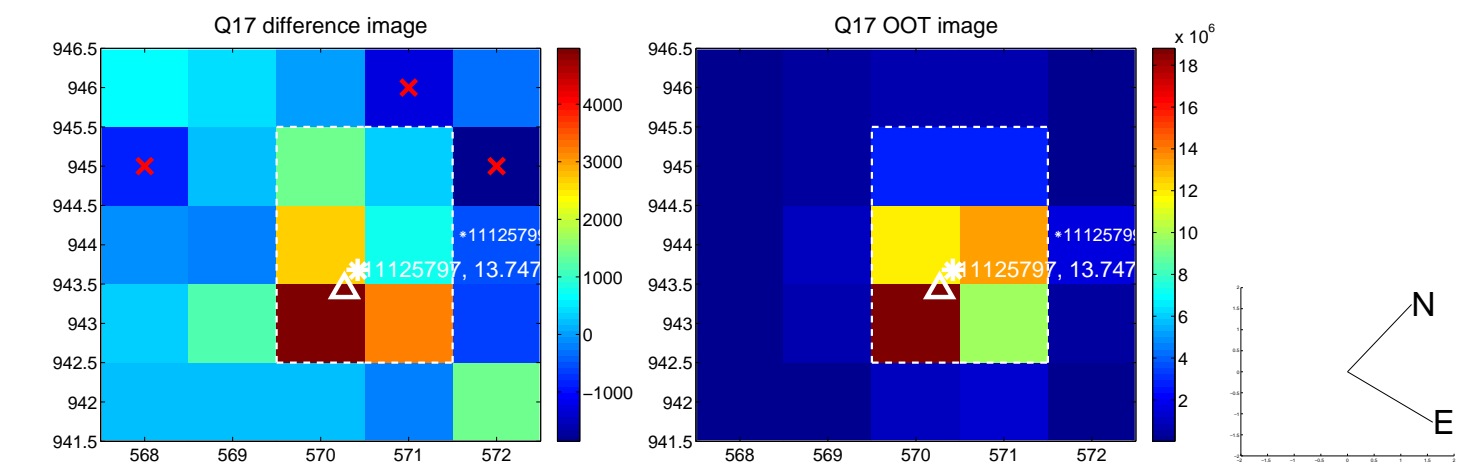
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

