

KIC 010292465

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})
010292465-01	OBS	7307.01	1.353367	131.939089	100558.8	2.107	3349.9	1854.2	0.78	5426	25.76	1029.13
010292465-02	OBS	No	0.676786	131.926943	195.2	1.920	19.1	8.0	0.78	5426	1.31	2592.72

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010292465-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_ALT—HAS_SEC_TCE—CENT_KIC_POS
010292465-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—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.

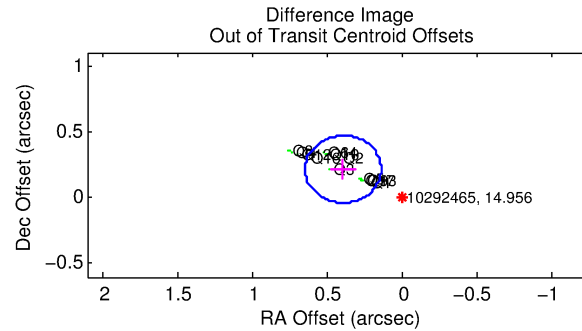
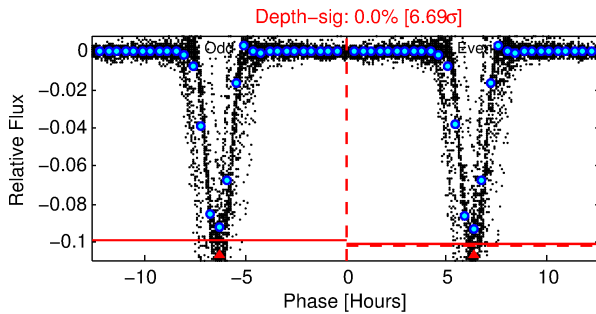
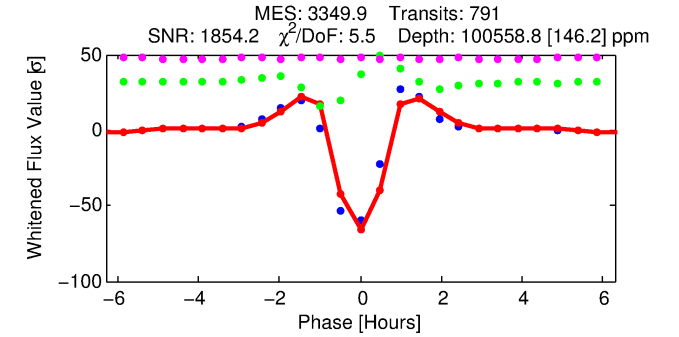
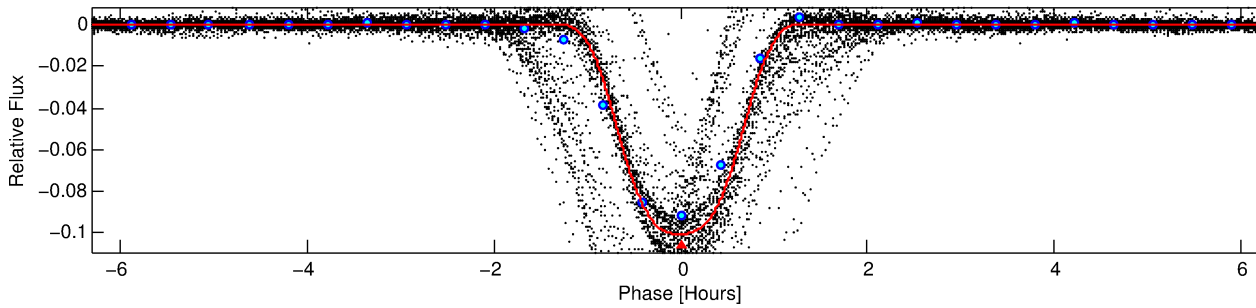
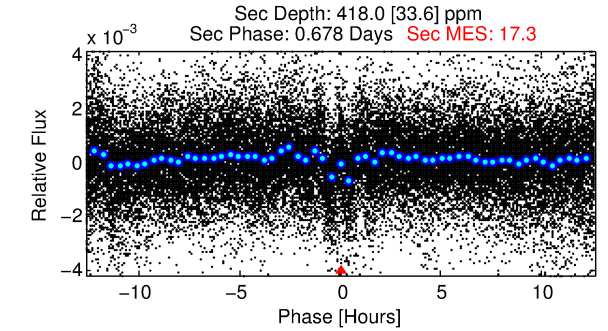
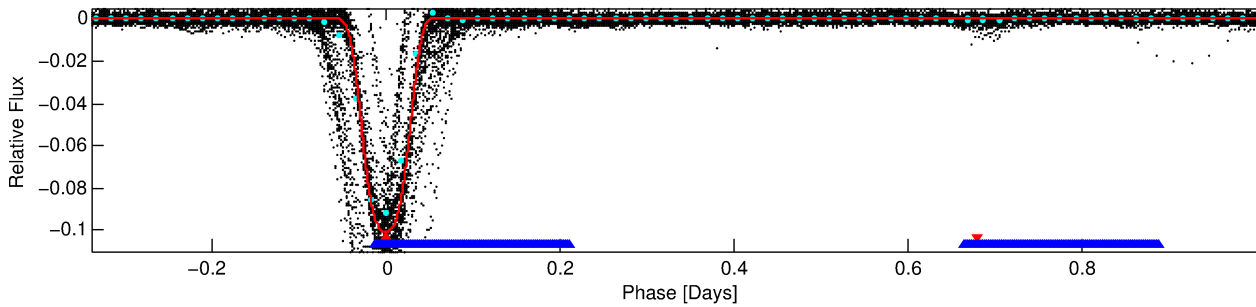
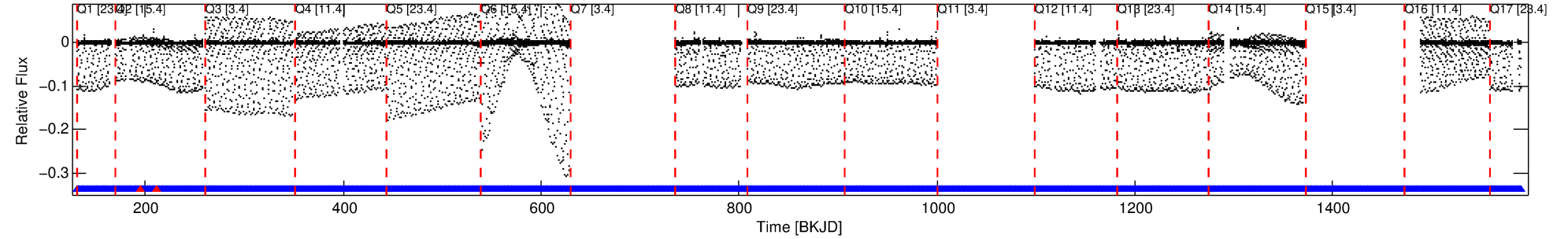
Ephemeris Match Information For 010292465-01

No Significant Match Found

DV One-Page Summary

KIC: 10292465 Candidate: 1 of 2 Period: 1.353 d
KOI: K07307.01 Corr: 0.983

Kp: 14.96 R*: 0.78 Rs Teff: 5426.0 K Logg: 4.51 Fe/H: -0.480



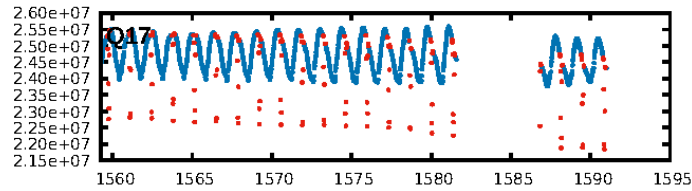
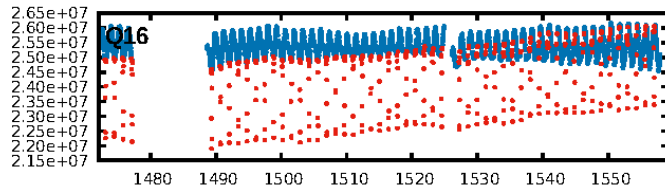
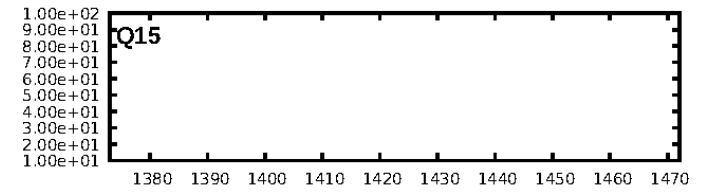
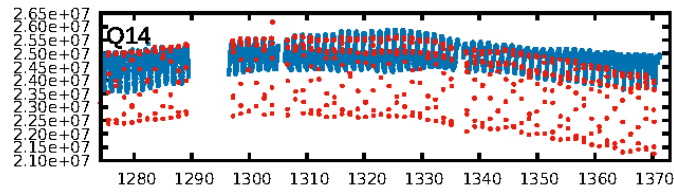
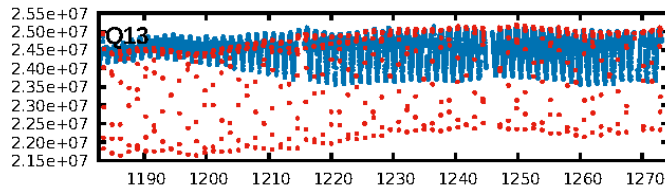
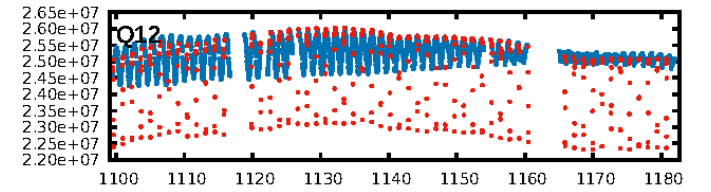
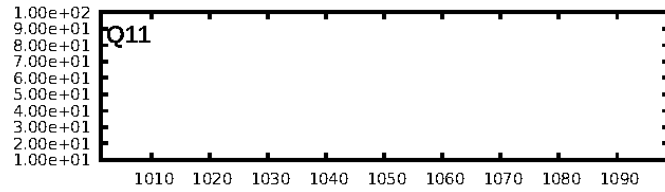
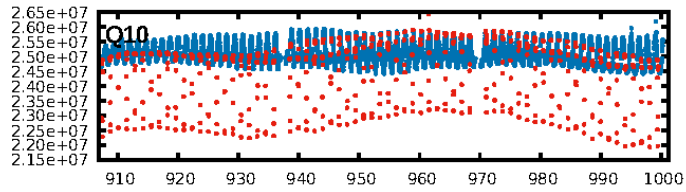
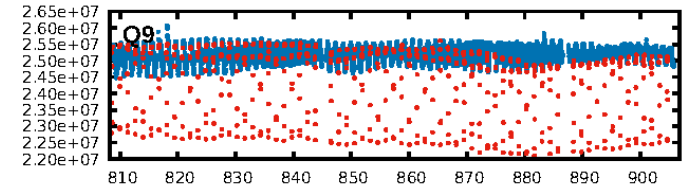
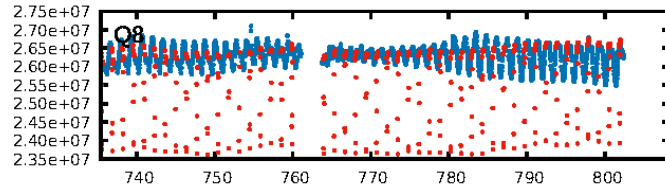
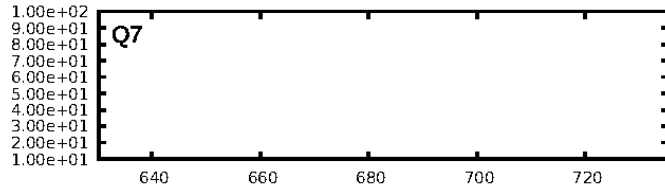
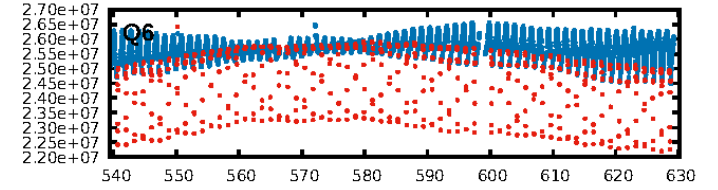
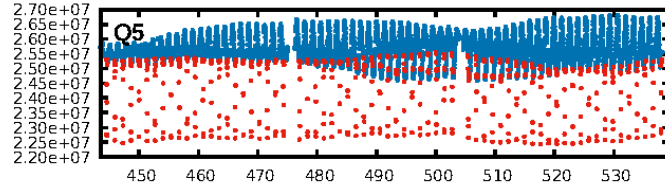
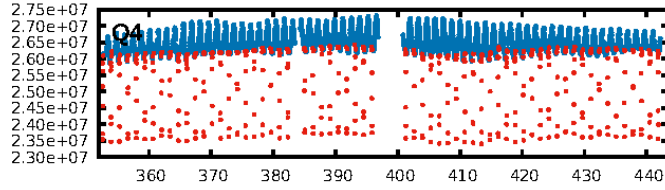
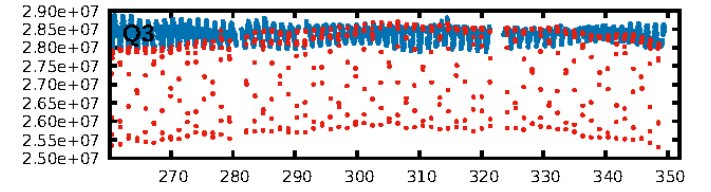
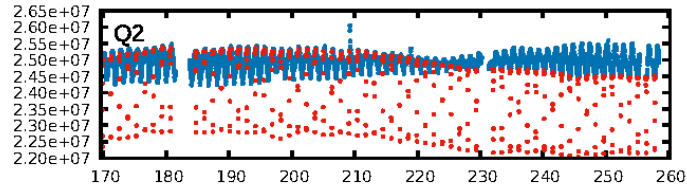
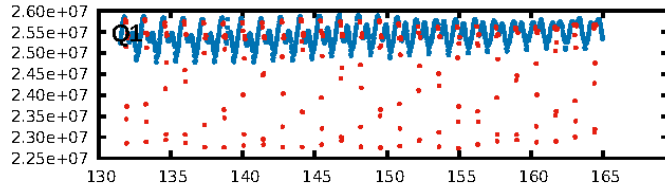
DV Fit Results:

Period = 1.35337 [0.00000] d
Epoch = 131.9391 [0.0000] BKJD
Rp/R* = 0.3011 [0.0004]
a/R* = 5.94 [0.02]
b = 0.51 [0.00]
Seff = 1029.13 [231.68]
Teq = 1444 [81] K
Rp = 25.76 [3.84] Re
a = 0.0215 [0.0027] AU
Ag = 0.16 [0.03] [-26.13σ]
Teffp = 1414 [54] K [-0.31σ]

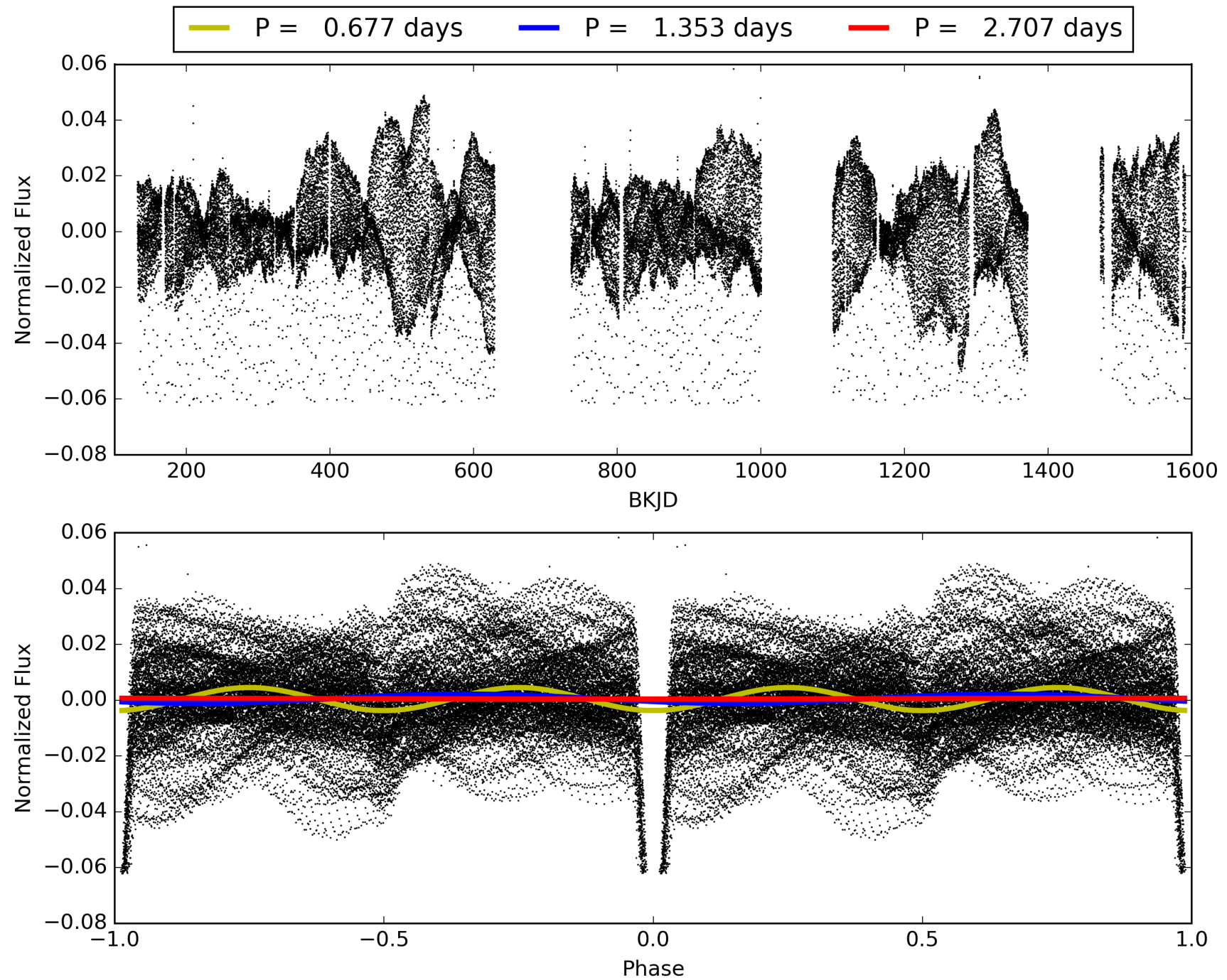
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [5.70σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [743/745]
GhostDiagnostic-chr: N/A
Centroid-sig: 0.0%
Centroid-so: 0.087 arcsec [48.79σ]
OotOffset-rm: 0.445 arcsec [5.26σ]
KicOffset-rm: 0.147 arcsec [2.09σ]
OotOffset-st: 4/1/4/5 [14]
KicOffset-st: 4/1/4/5 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 0.00 [0/14]

TCE 010292465-01, PDC Light Curves

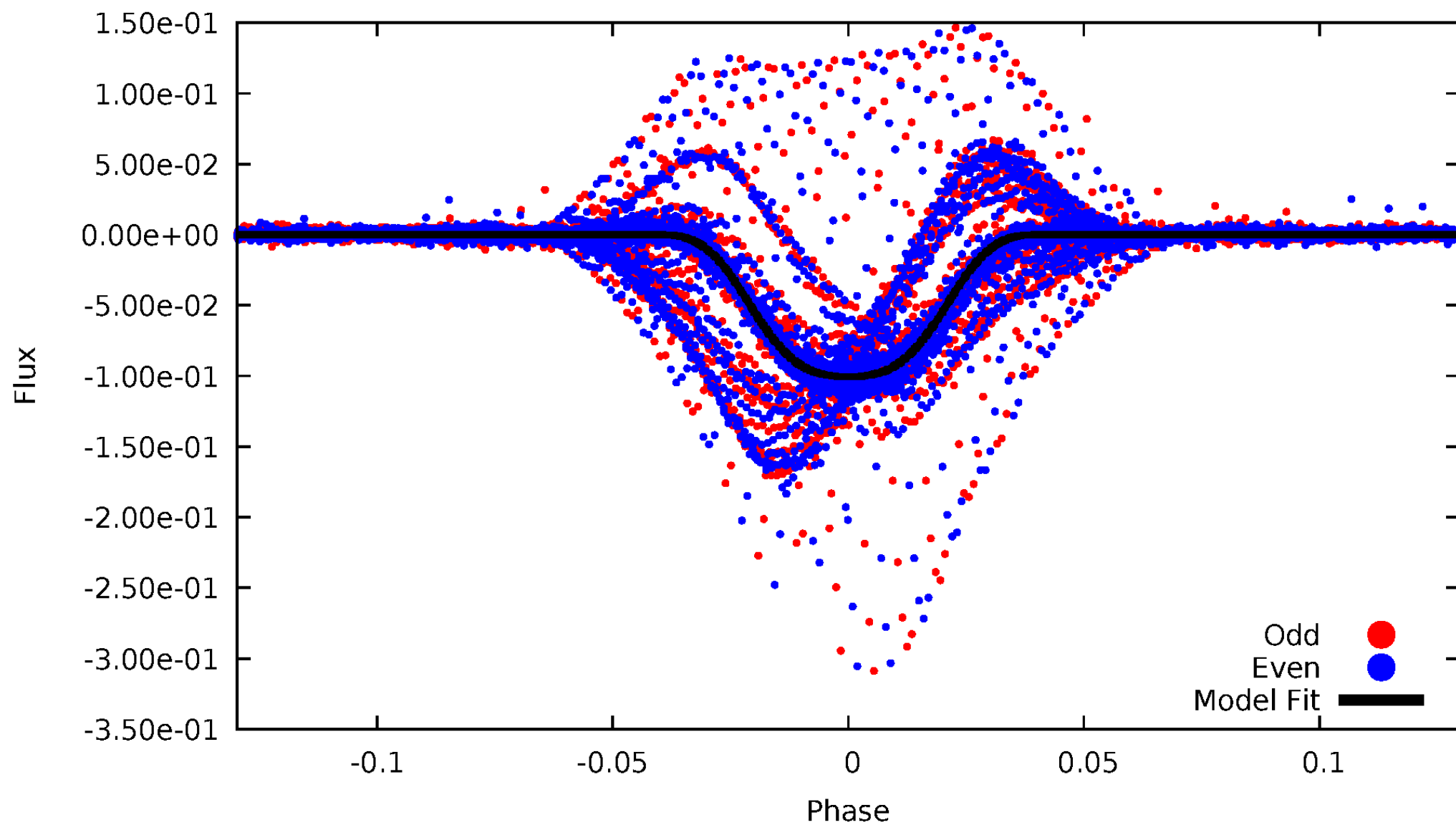


TCE 010292465-01



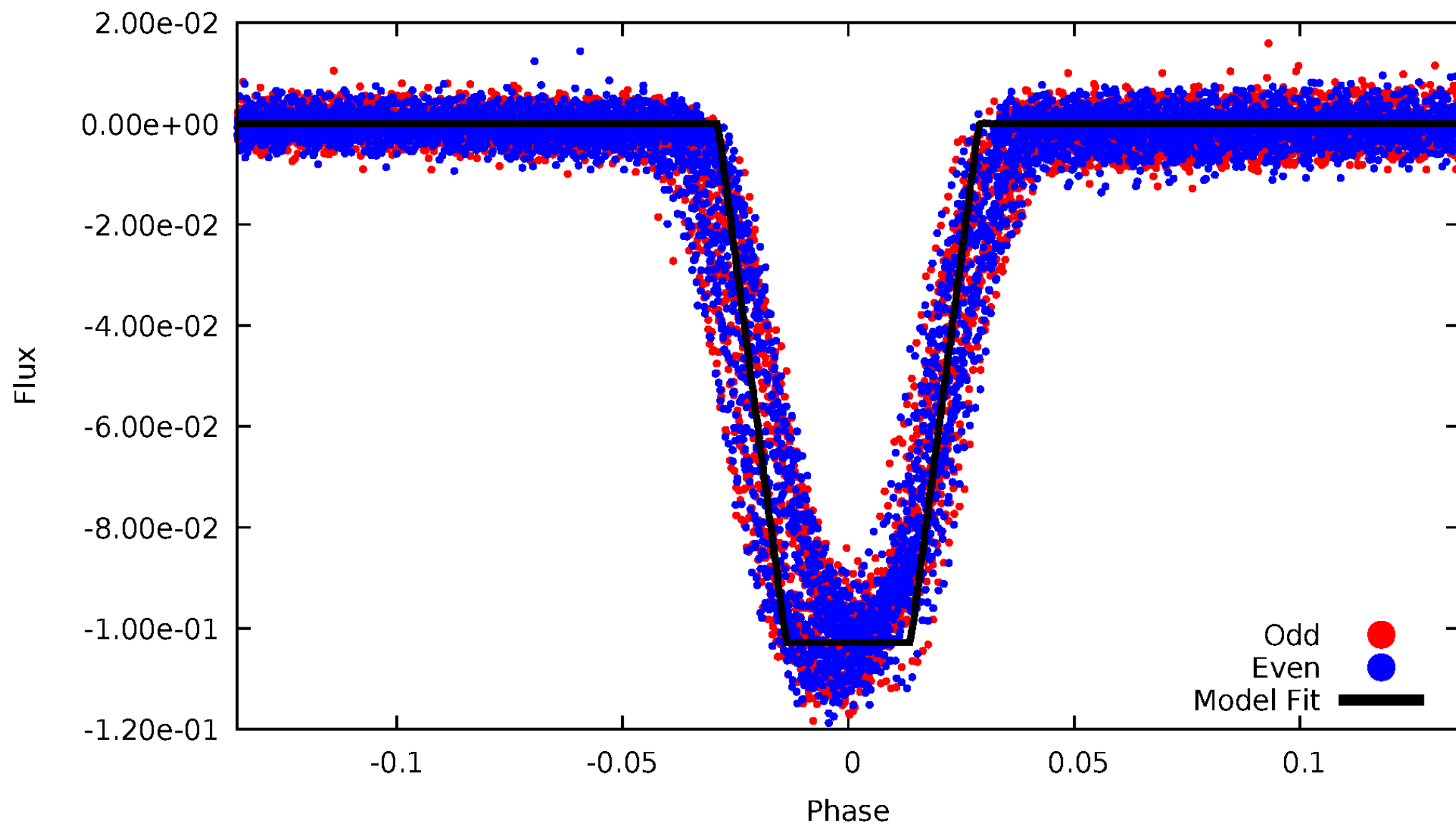
DV Odd/Even

TCE 010292465-01



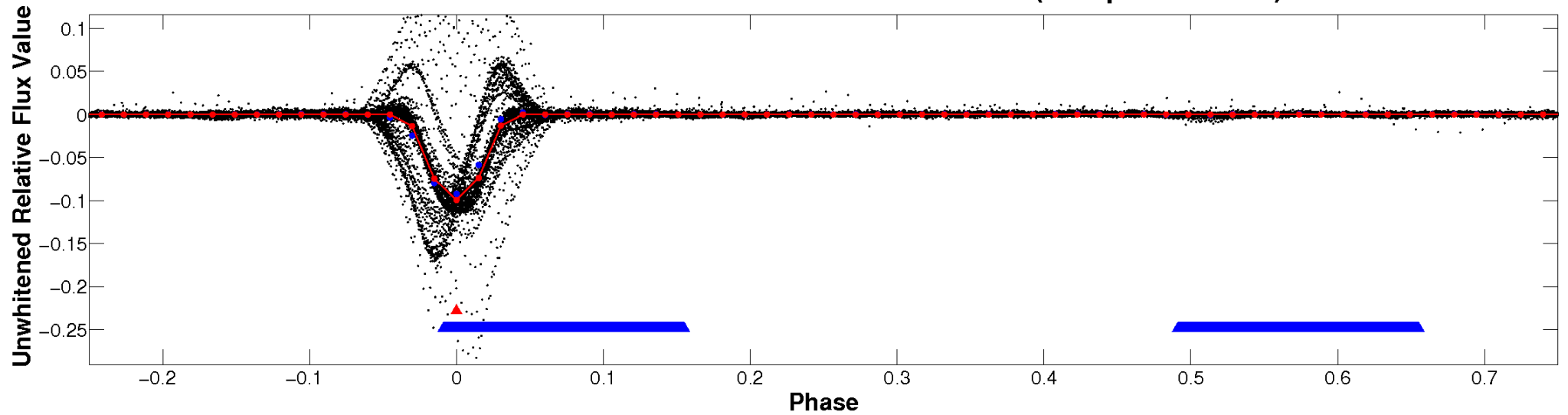
ALT Odd/Even

TCE 010292465-01

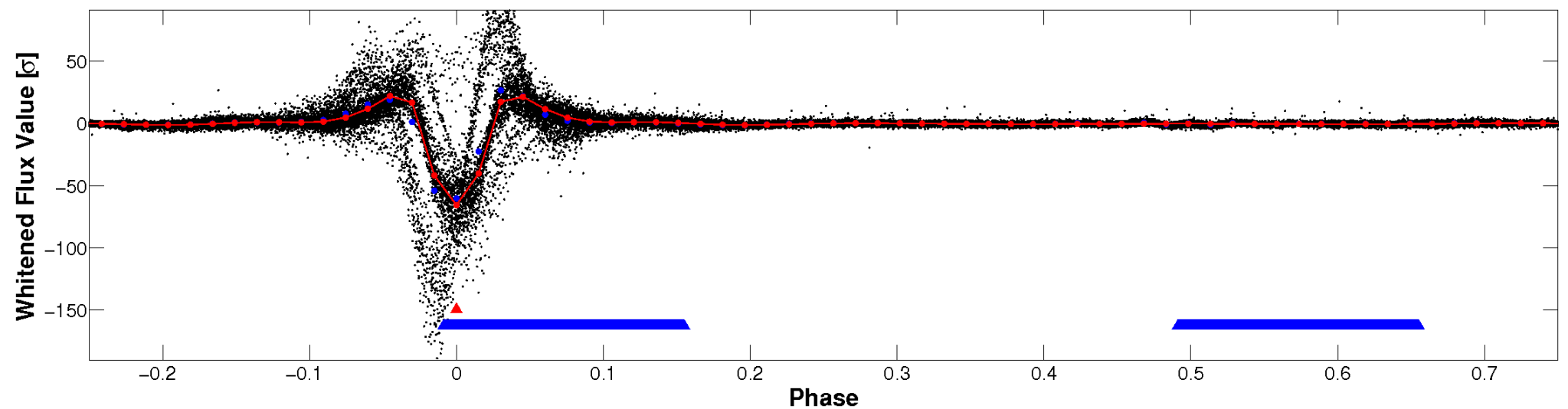


Non-Whitened Vs. Whitened Light Curve

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

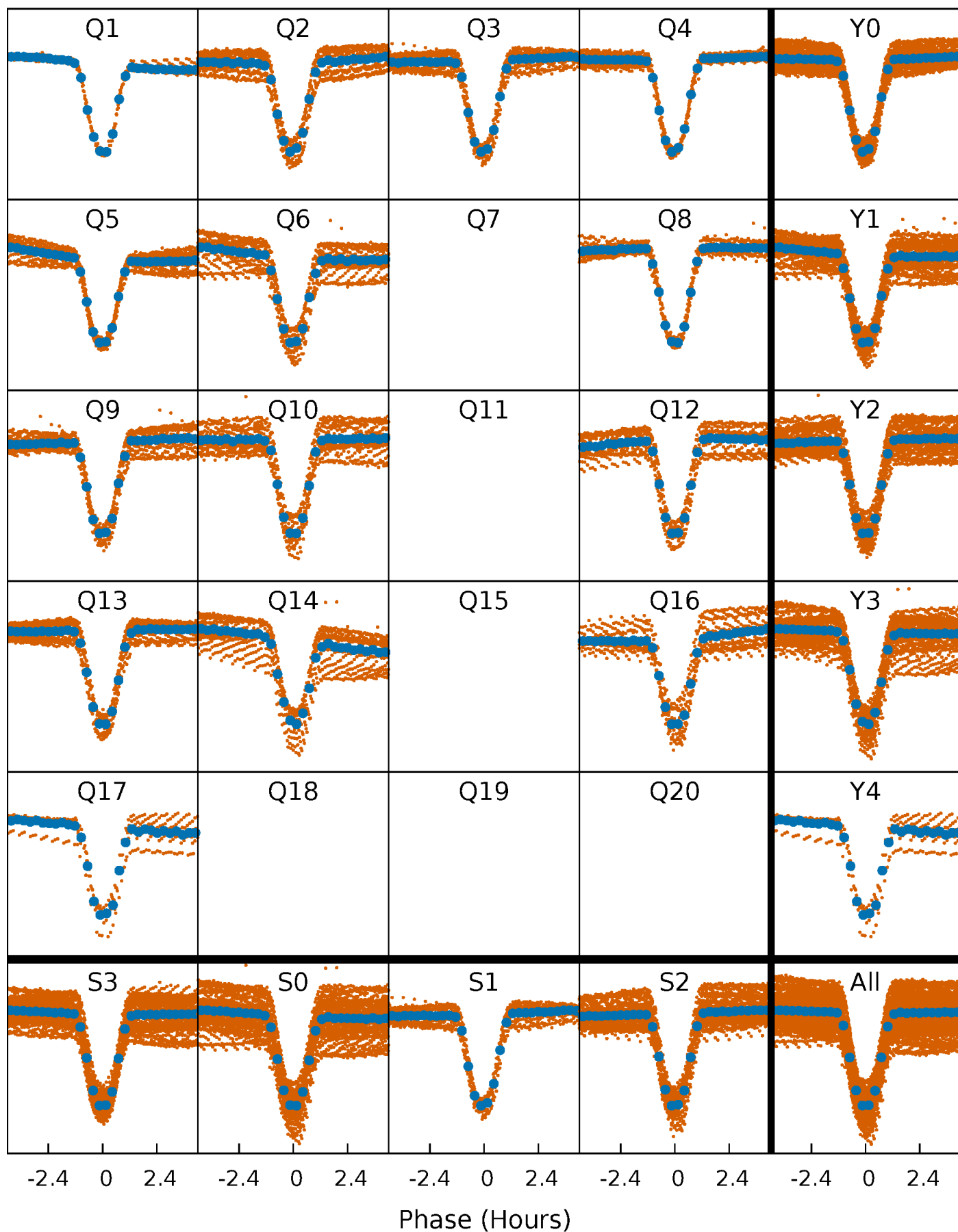


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



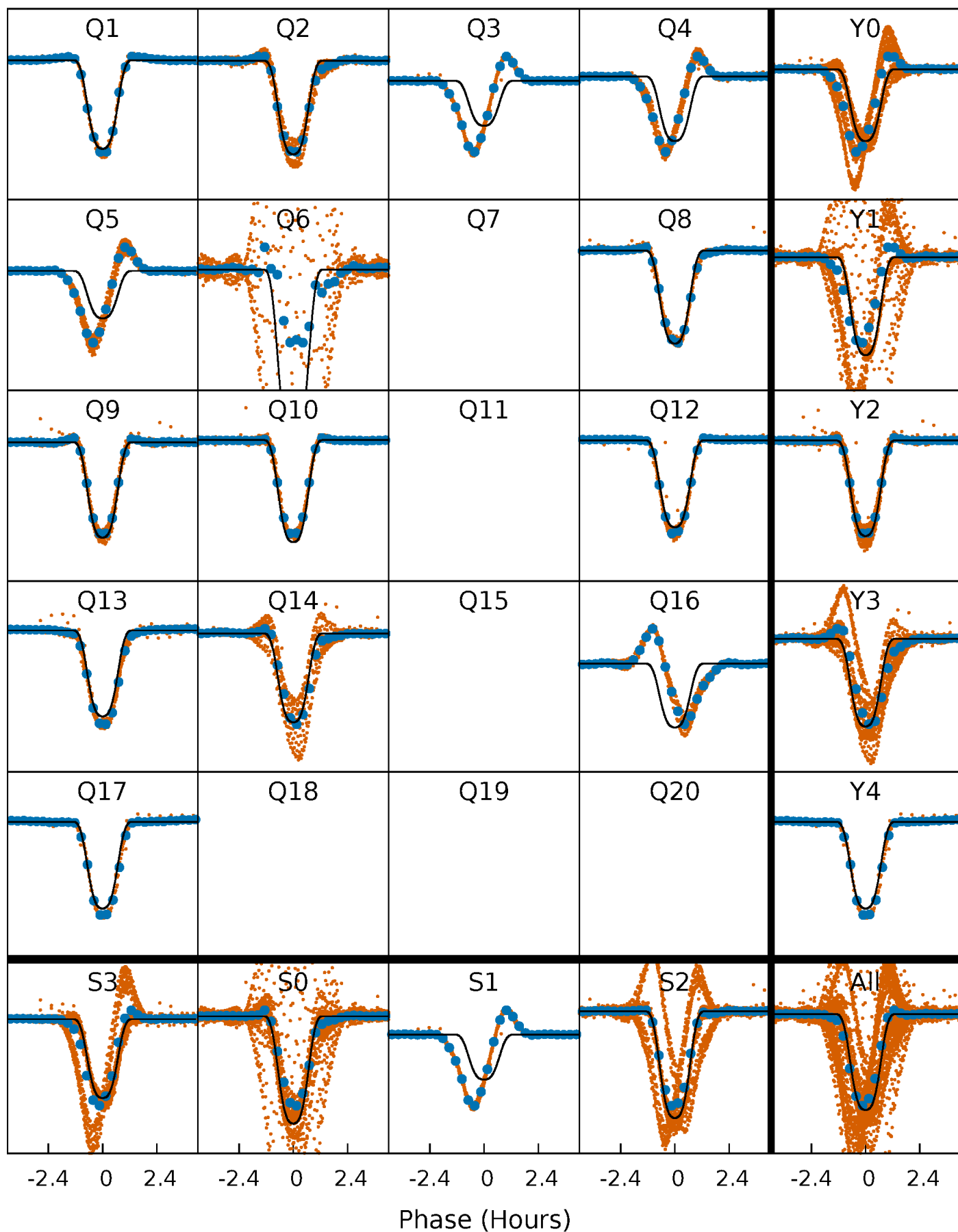
PDC Quarter-Phased Transit Curves

TCE 010292465-01 P= 1.353367 Days $T_0=131.939089$ (BKJD)



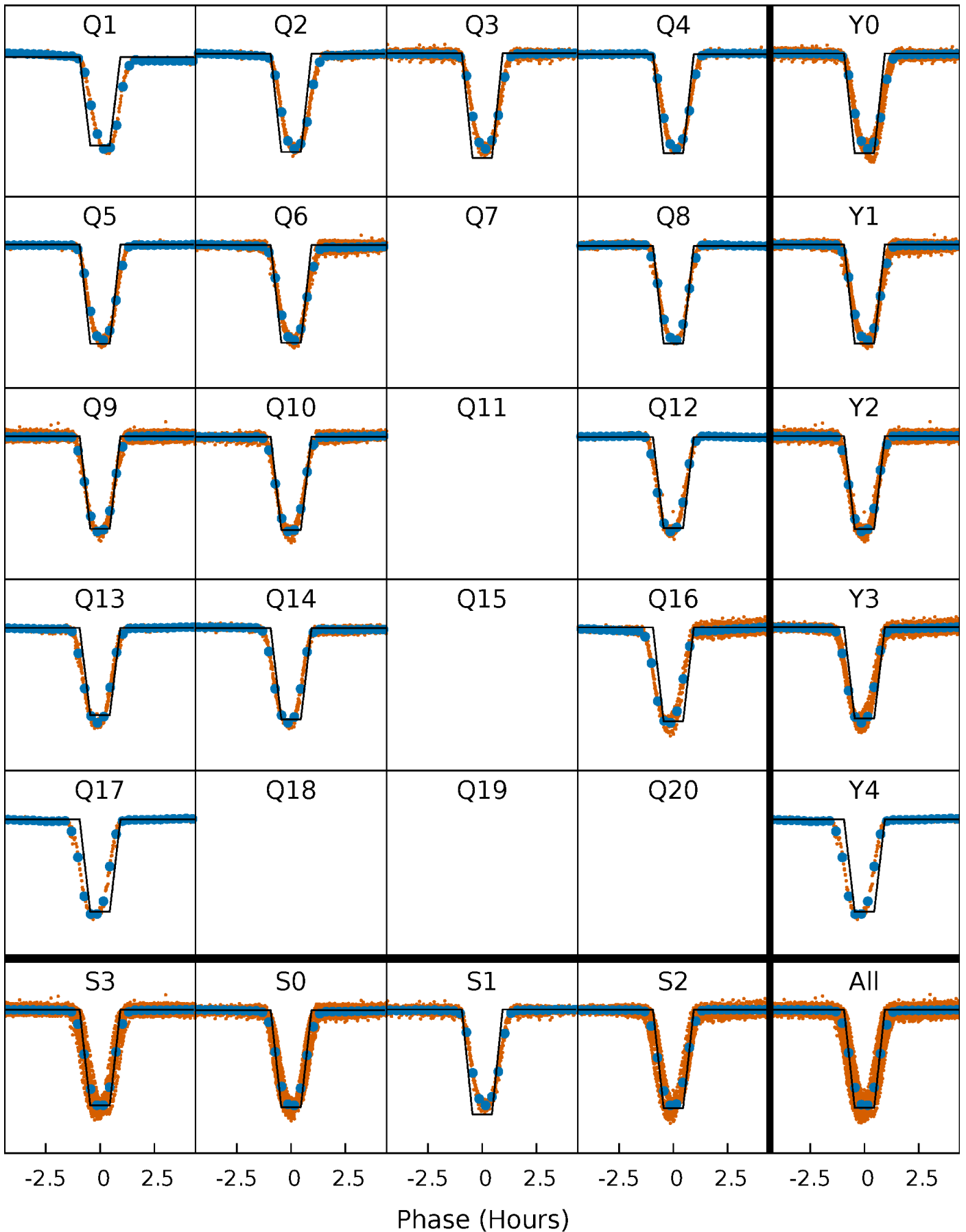
DV Quarter-Phased Transit Curves

TCE 010292465-01 P= 1.353367 Days $T_0=131.939089$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

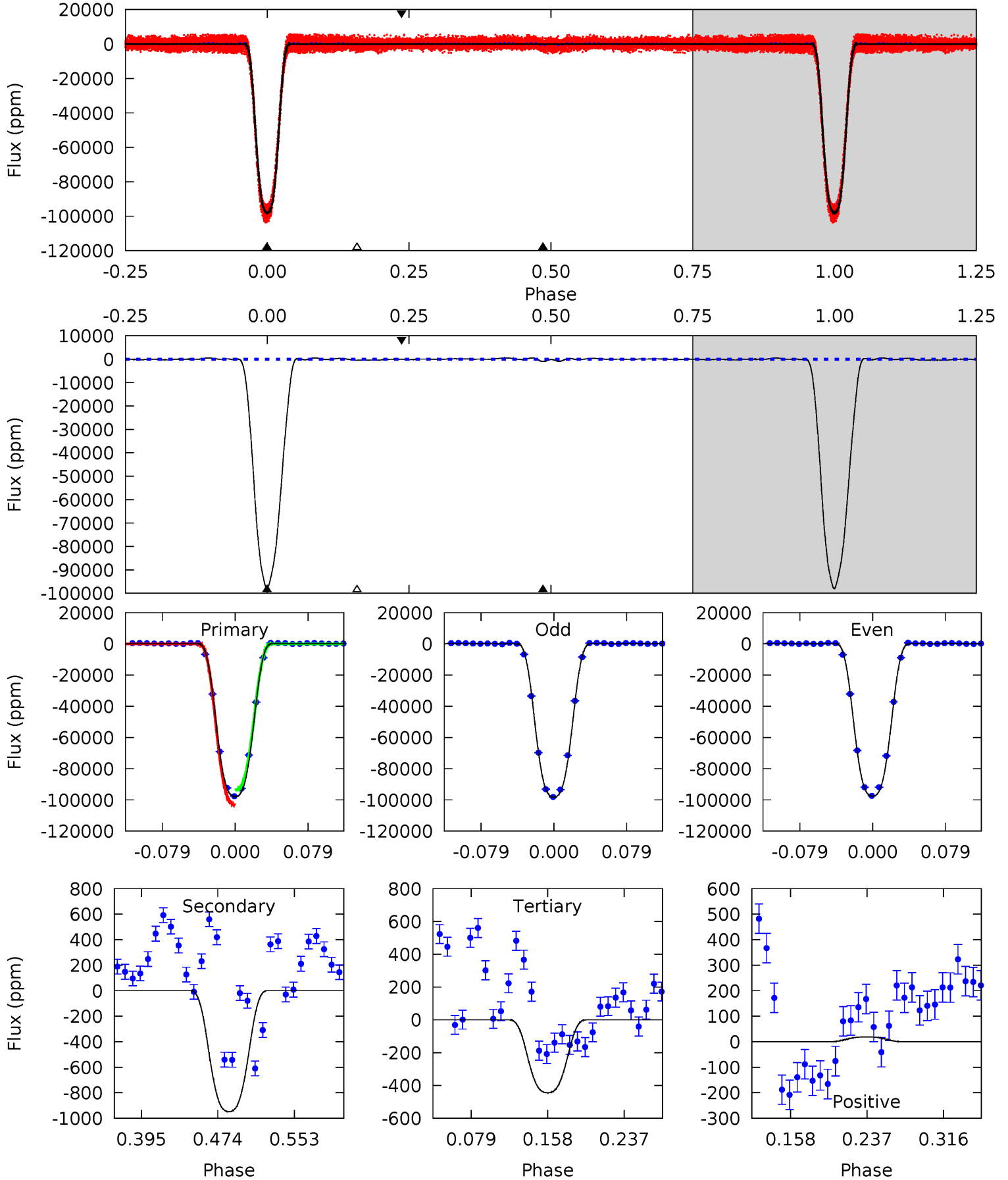
TCE 010292465-01 P= 1.353388 Days $T_0=131.927939$ (BKJD)



DV Model-Shift Uniqueness Test

010292465-01, P = 1.353367 Days, E = 130.585722 Days

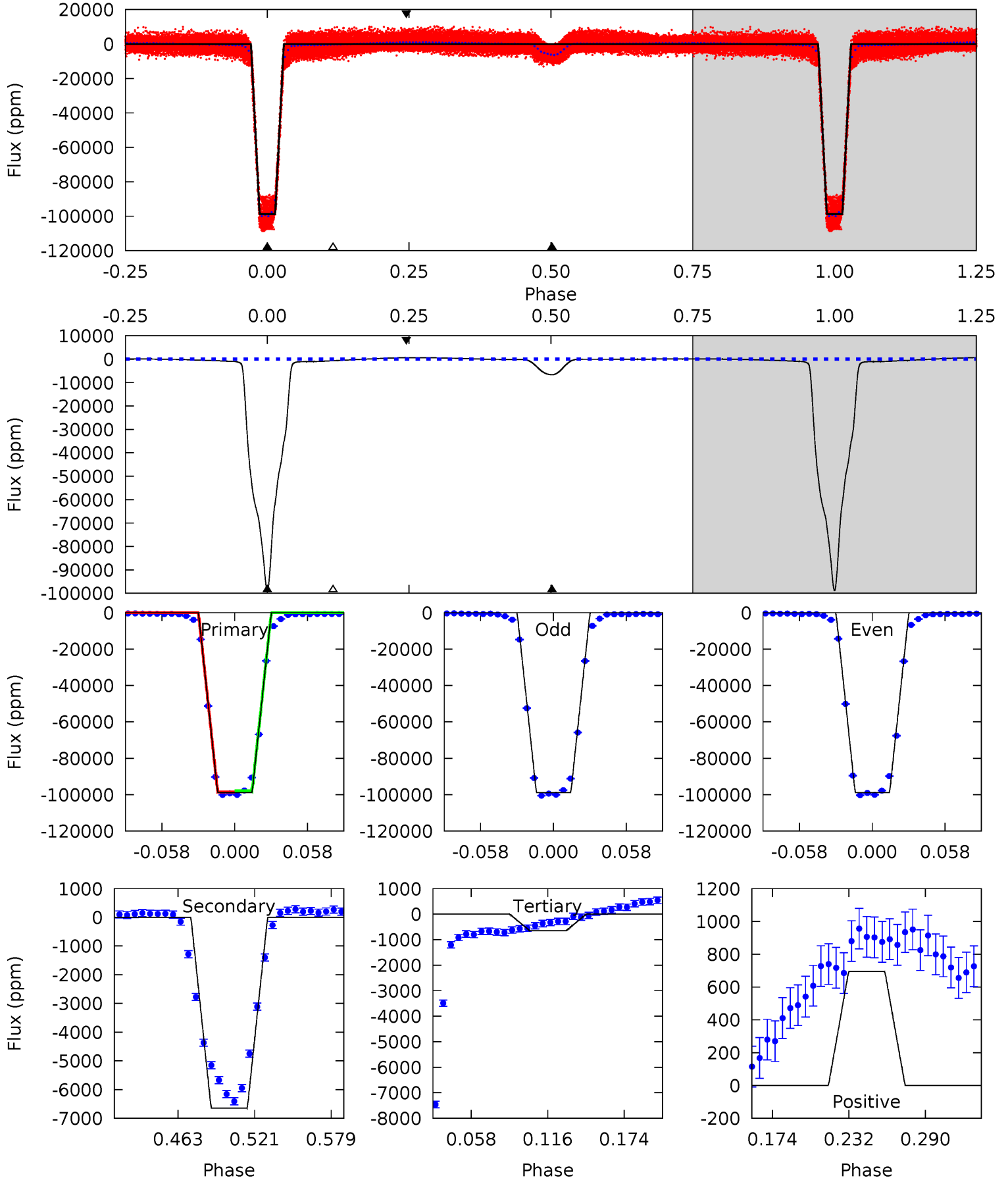
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2608	25.2	11.8	0.50	4.61	1.76	5.21	2597	2608	13.4	24.7	8.00	0.94	0.01	0



Alt Model-Shift Uniqueness Test

010292465-01, P = 1.353388 Days, E = 130.574551 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1596	107.4	10.6	11.2	4.68	1.90	6.91	1586	1585	96.8	96.2	0.56	1.00	0.01	5.38



Stellar Parameters For KIC 010292465

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5426^{+178}_{-146}	$4.511^{+0.100}_{-0.100}$	$-0.480^{+0.300}_{-0.300}$	$0.784^{+0.117}_{-0.096}$	$0.726^{+0.105}_{-0.045}$	$2.123^{+0.914}_{-0.640}$
	+3%/-3%	+2%/-2%	+62%/-62%	+15%/-12%	+14%/-6%	+43%/-30%
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 010292465-01 / KOI 7307.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-949 ± 38	$25.72^{+2.40}_{-1.76}$	2019^{+102}_{-93}	2110^{+116}_{-259}	$0.367^{+0.058}_{-0.052}$
Alt.	-6648 ± 62	$27.47^{+2.43}_{-1.98}$	2021^{+90}_{-90}	3221^{+62}_{-60}	$2.286^{+0.367}_{-0.302}$

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 $A_{obs} \gg 1.0$

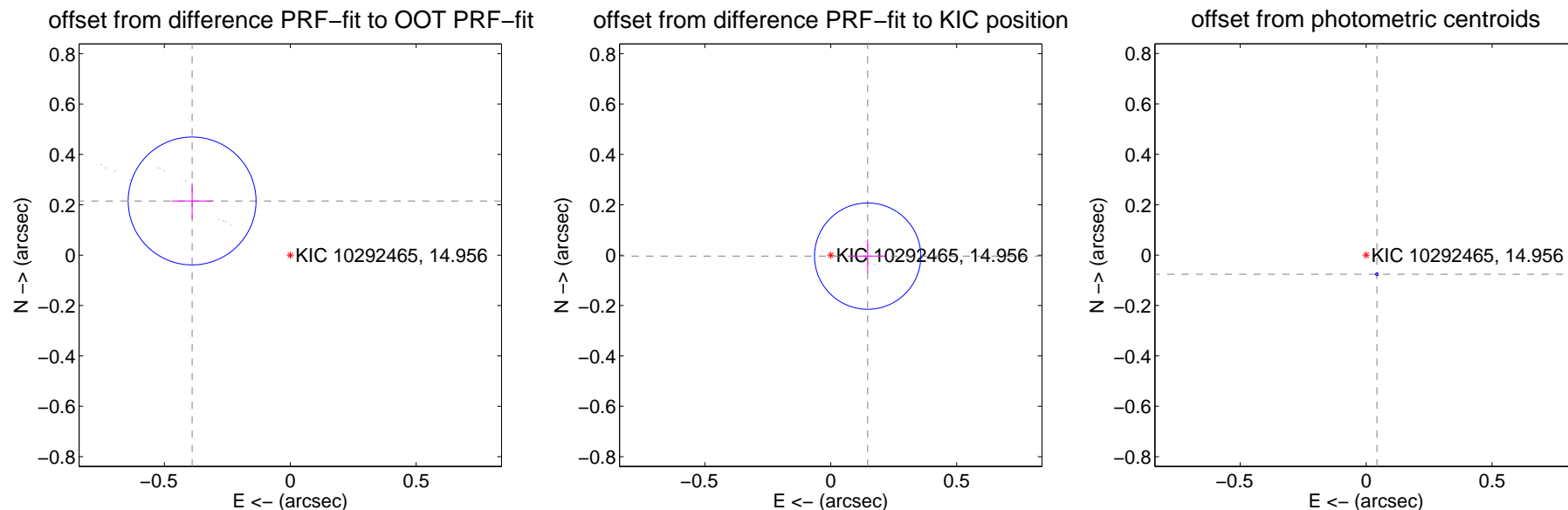
DV Centroid Data

Supplemental centroid analysis for 010292465-01. Kepler magnitude: 14.96. Transit SNR 1854.21

There are 14 quarters with good PRF difference image offsets

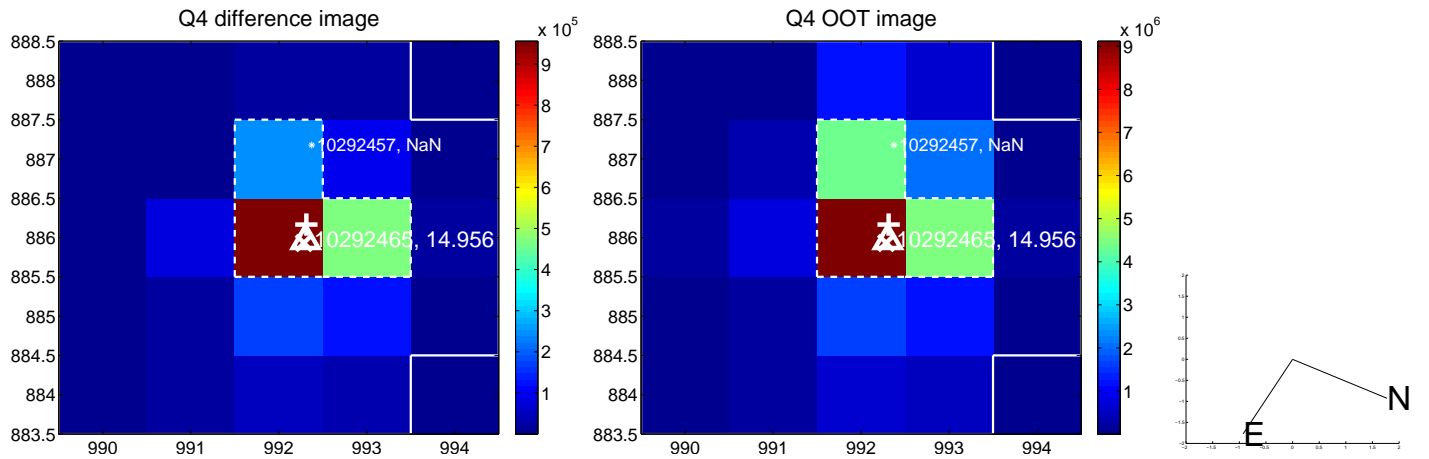
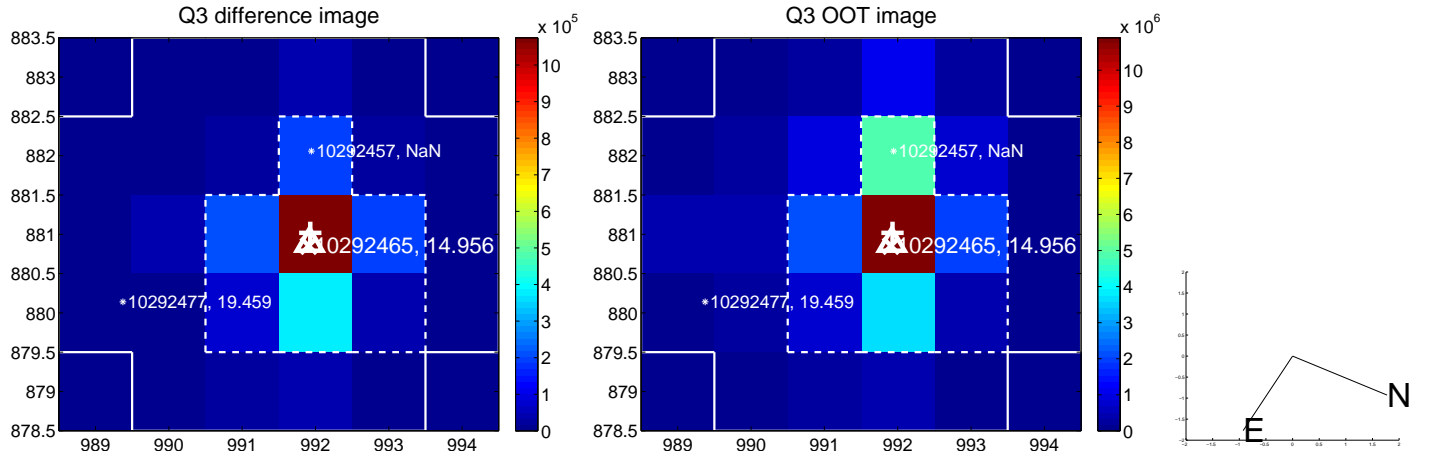
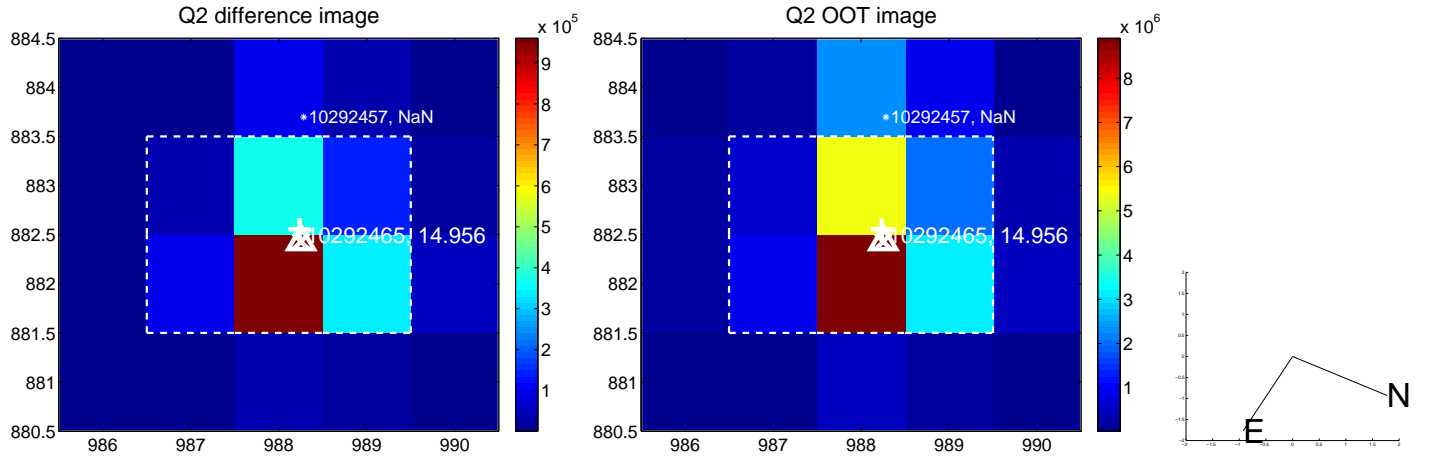
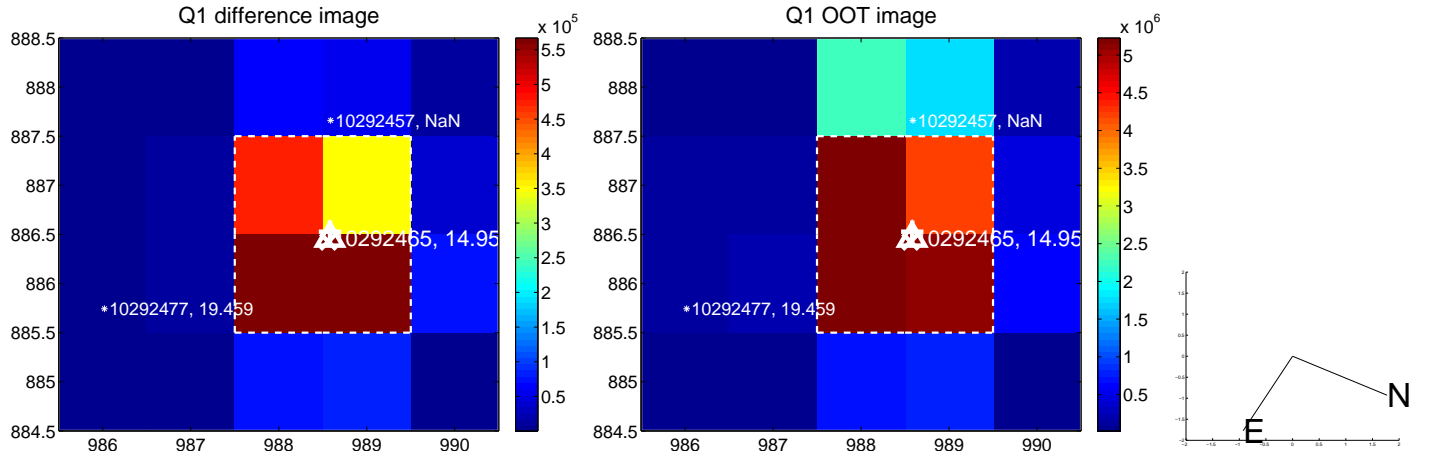
The direct PRF centroid is offset from the target star catalog position by about 0.43 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.445 ± 0.085	5.26	0.390 ± 0.082	0.215 ± 0.071
PRF-fit source offset from KIC position	0.147 ± 0.070	2.09	-0.147 ± 0.070	-0.004 ± 0.067
photometric centroid source offset	0.09 ± 0.00	48.79	-0.04 ± 0.00	-0.08 ± 0.00

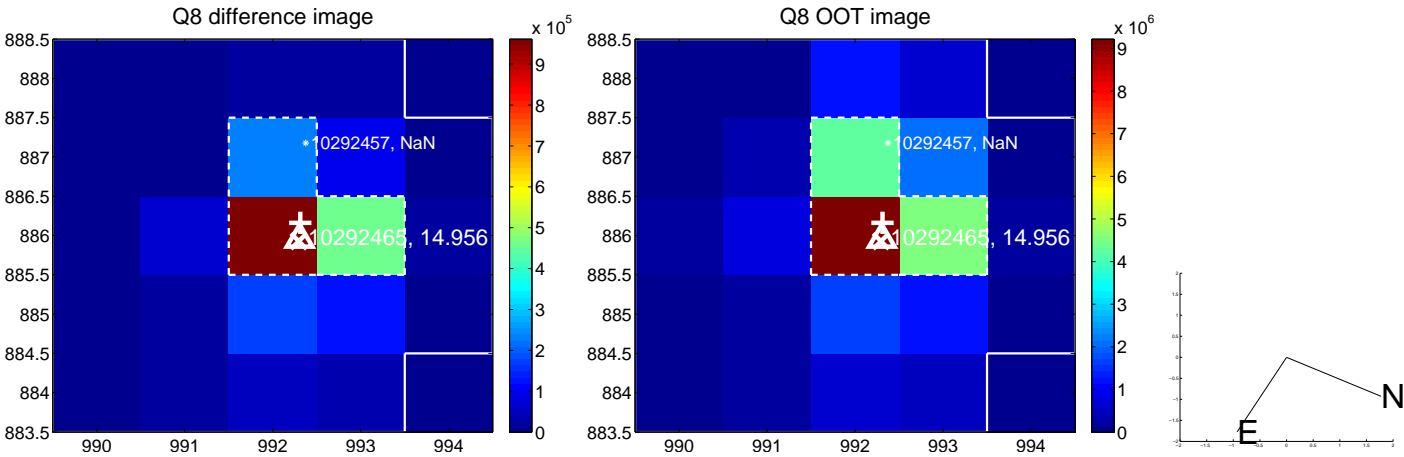
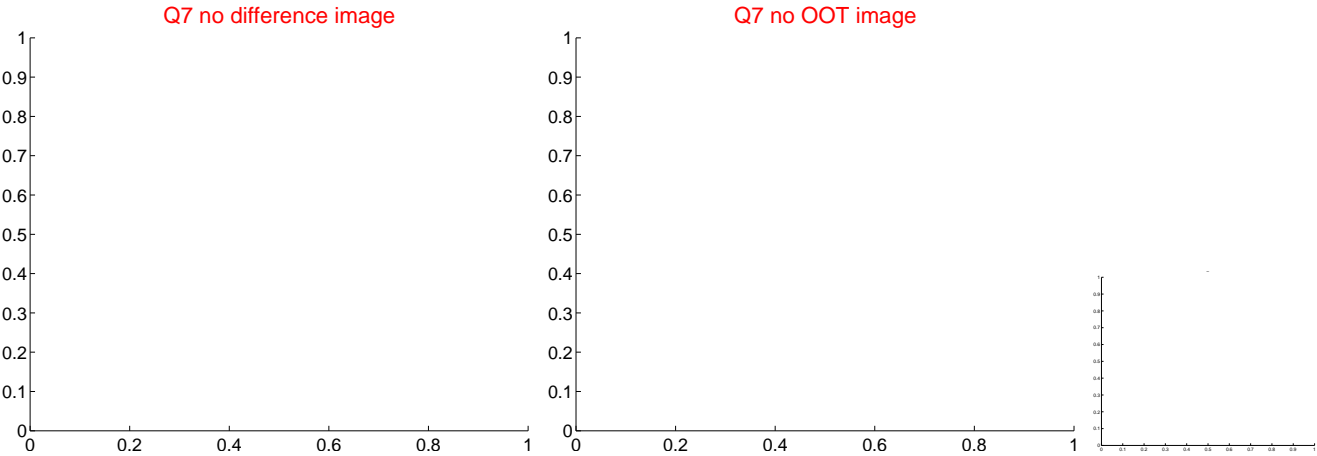
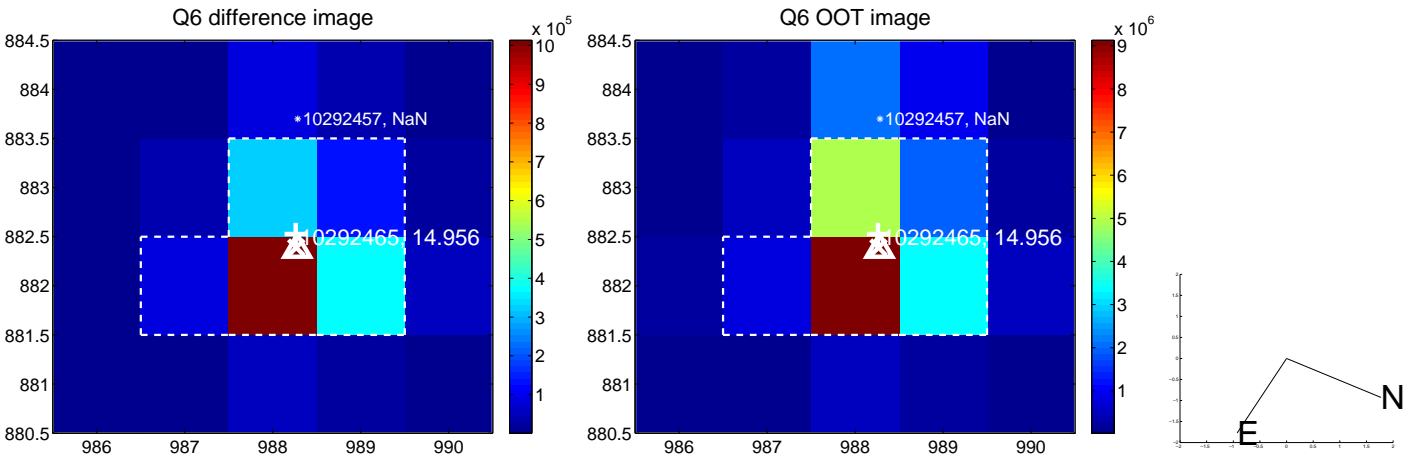
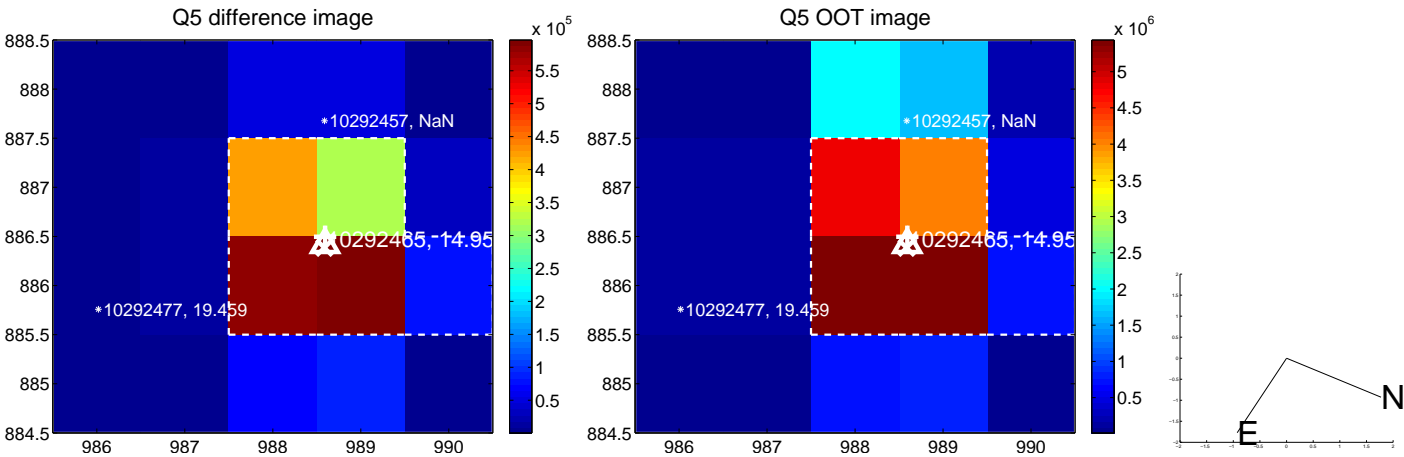


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

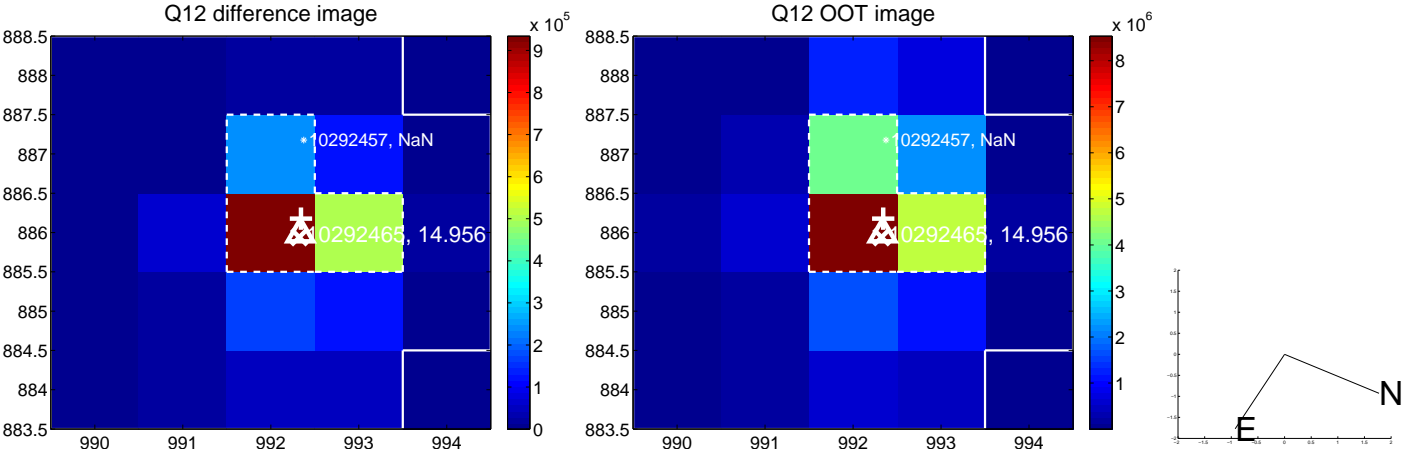
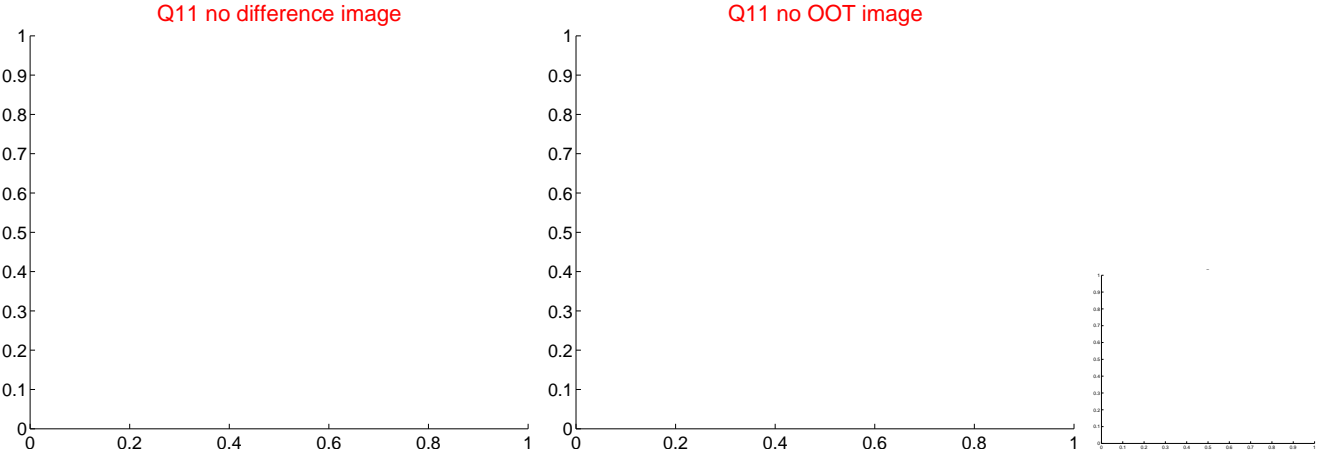
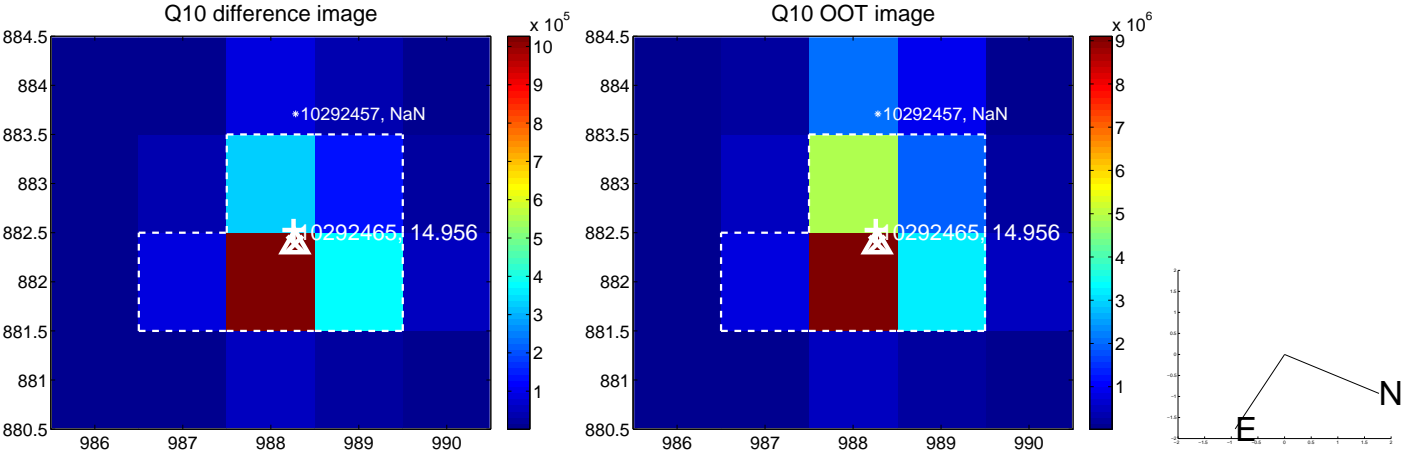
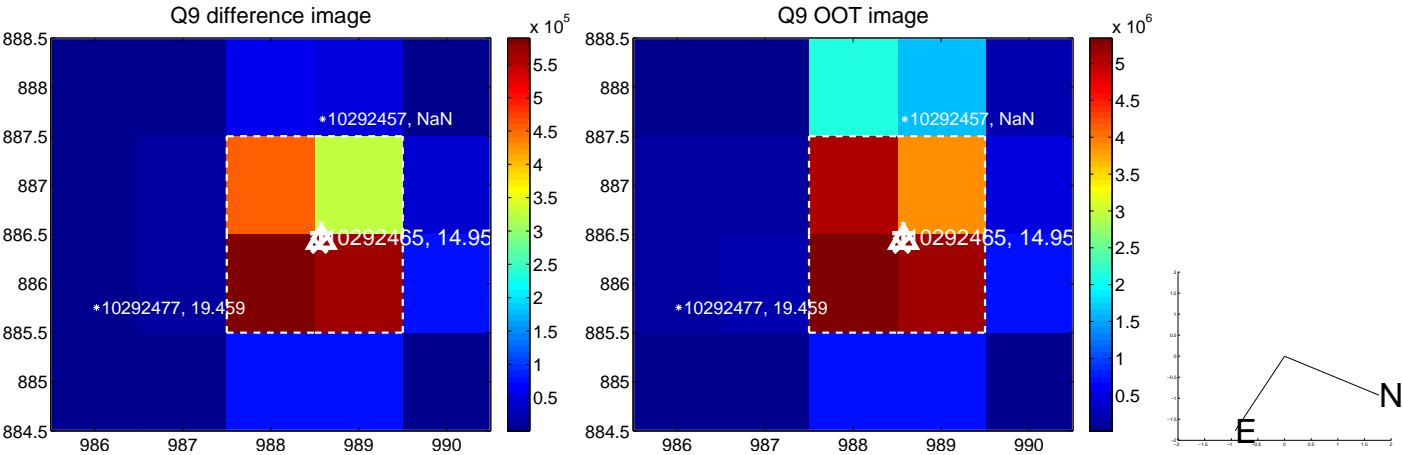
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



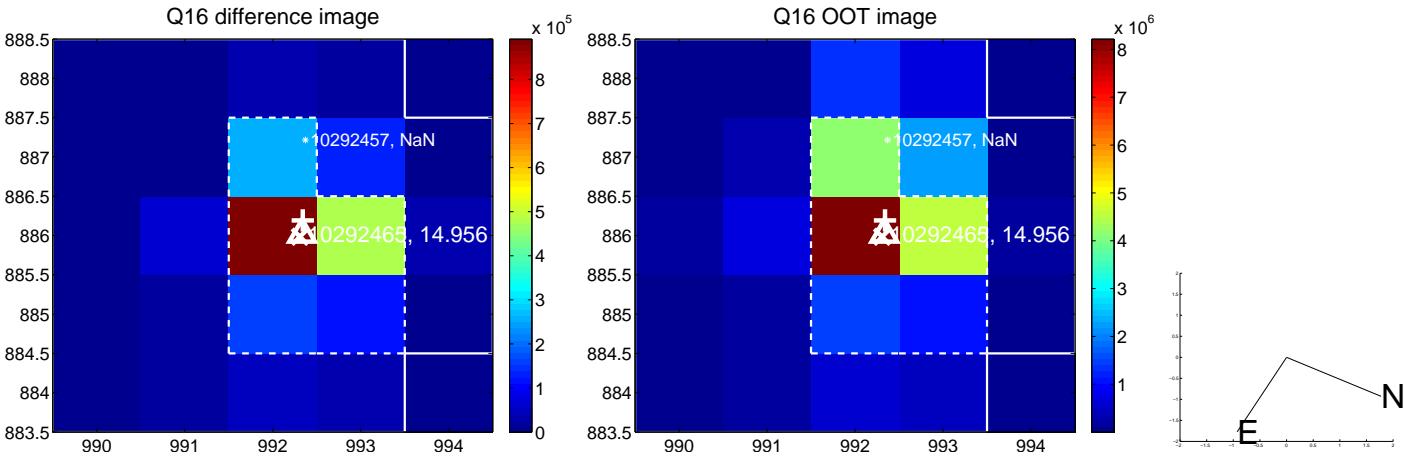
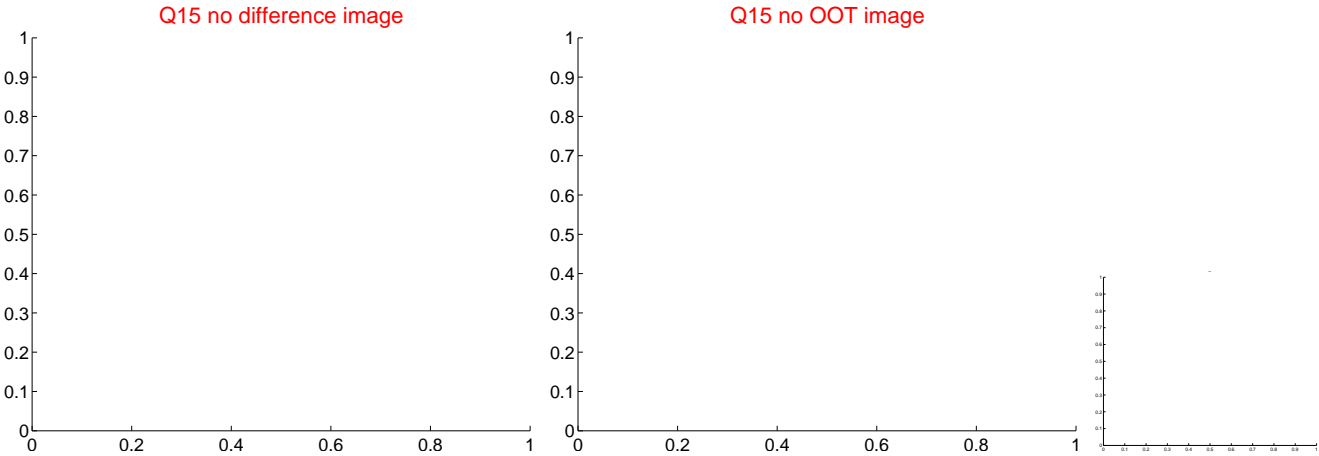
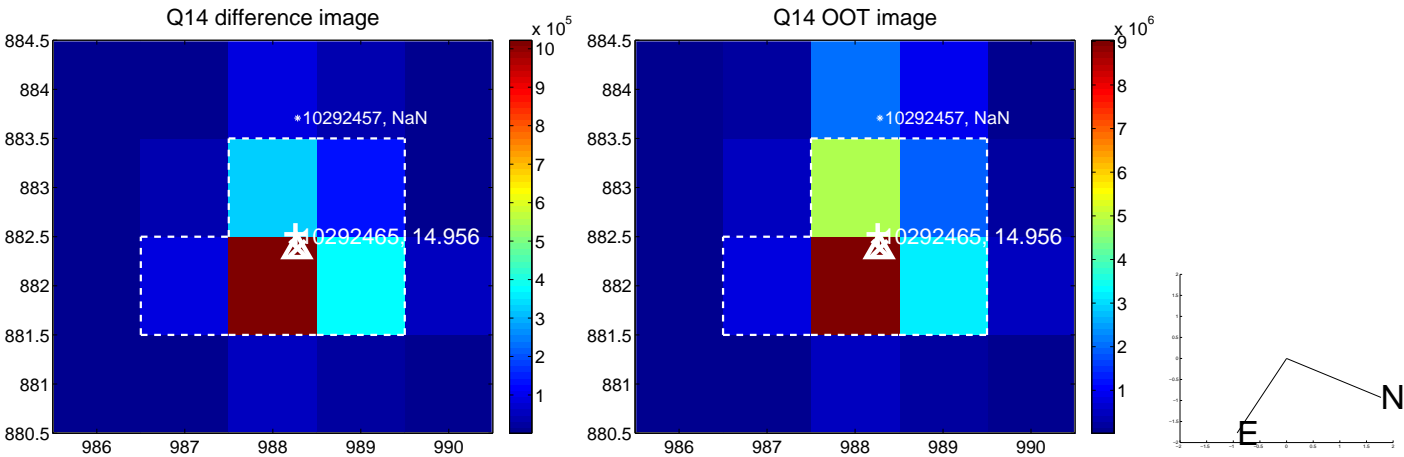
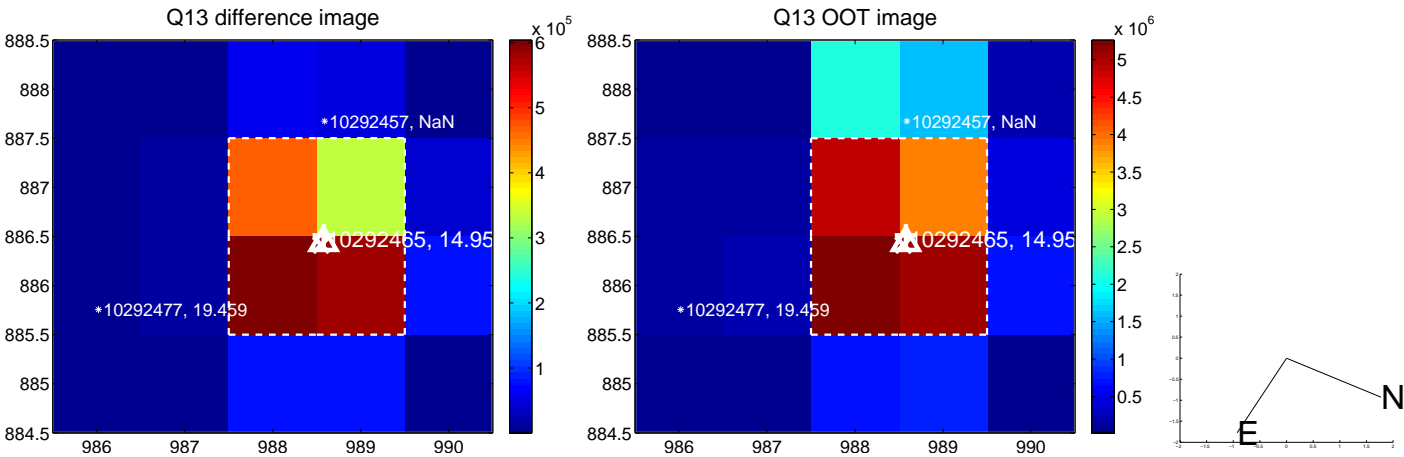
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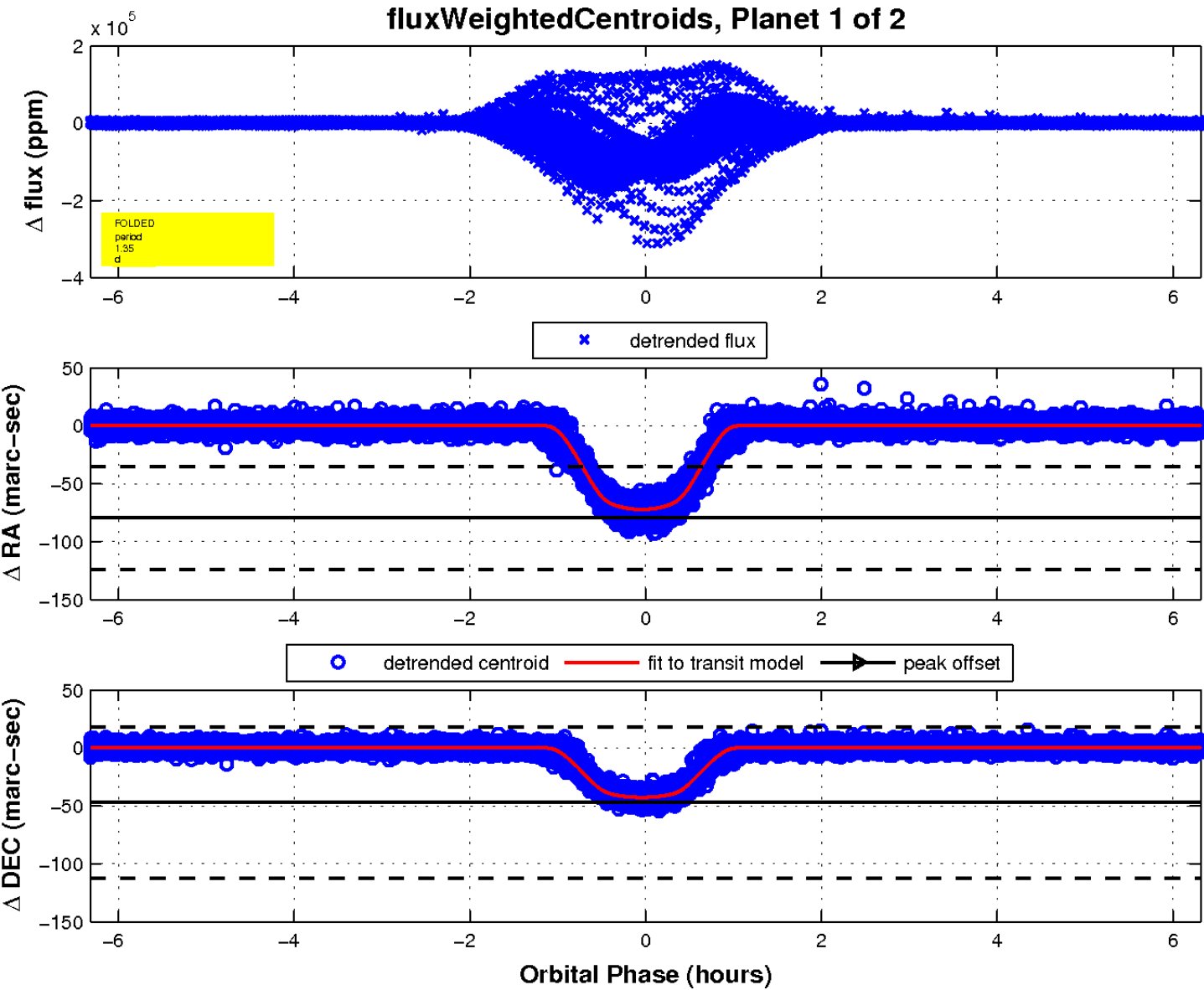
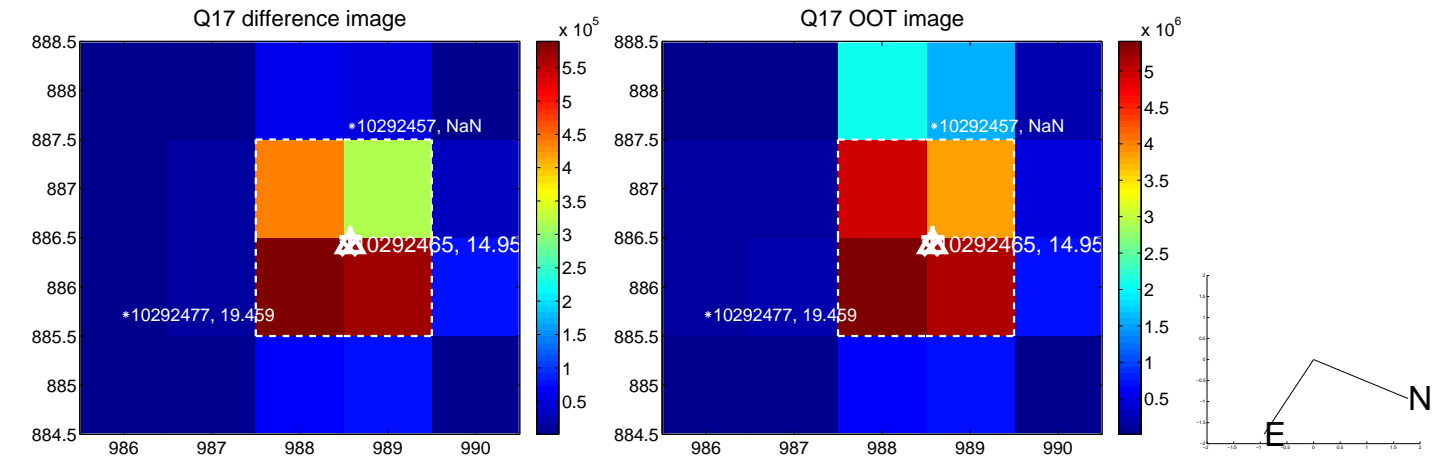
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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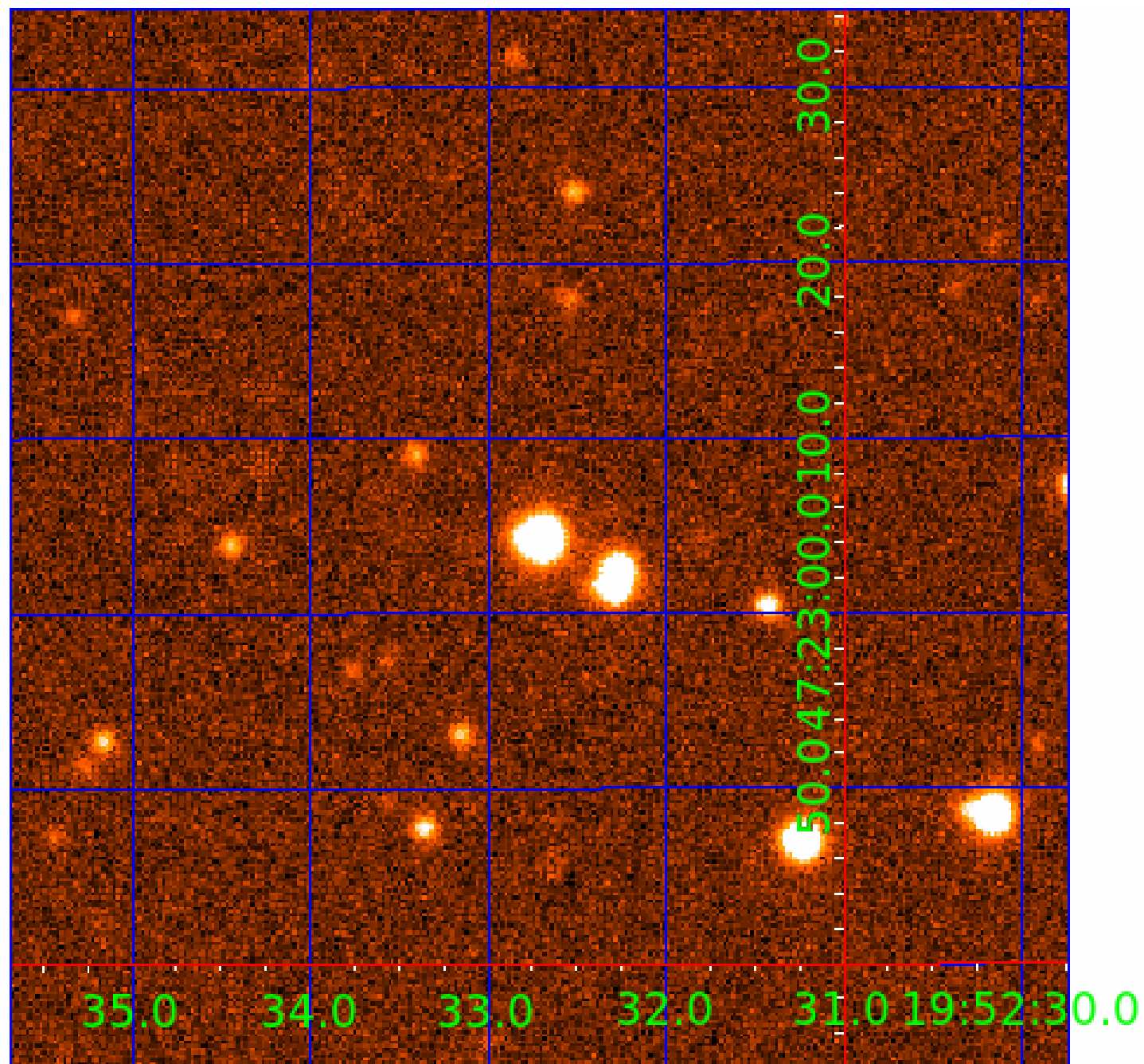


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010292465

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})
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010292465-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_ALT—HAS_SEC_TCE—CENT_KIC_POS
010292465-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—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.

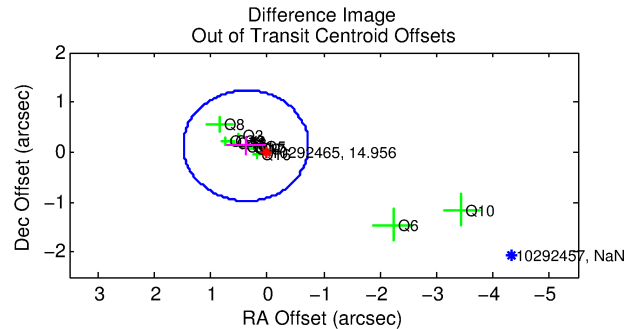
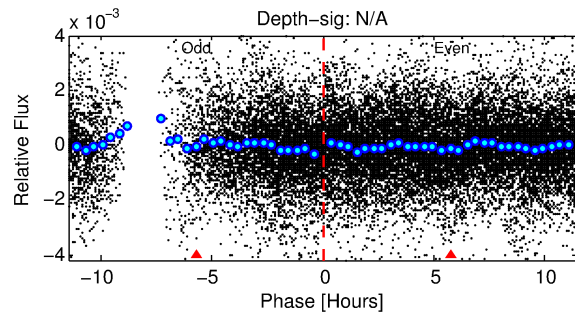
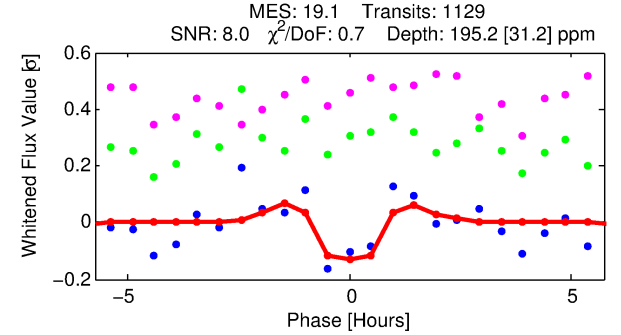
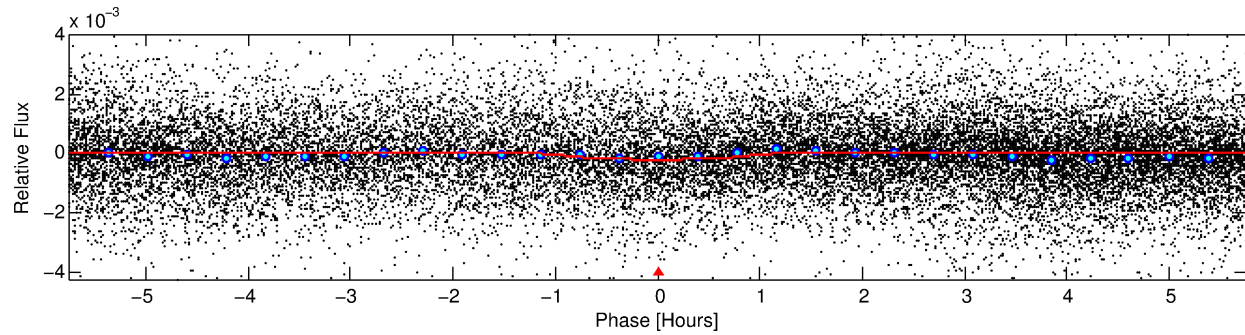
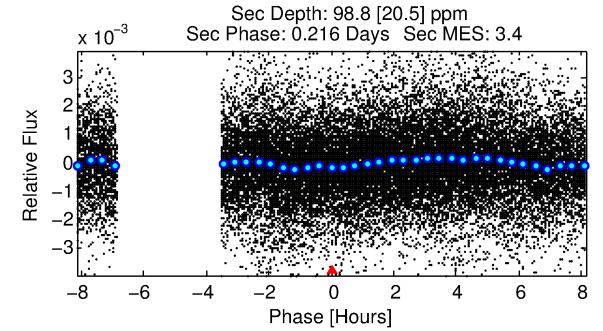
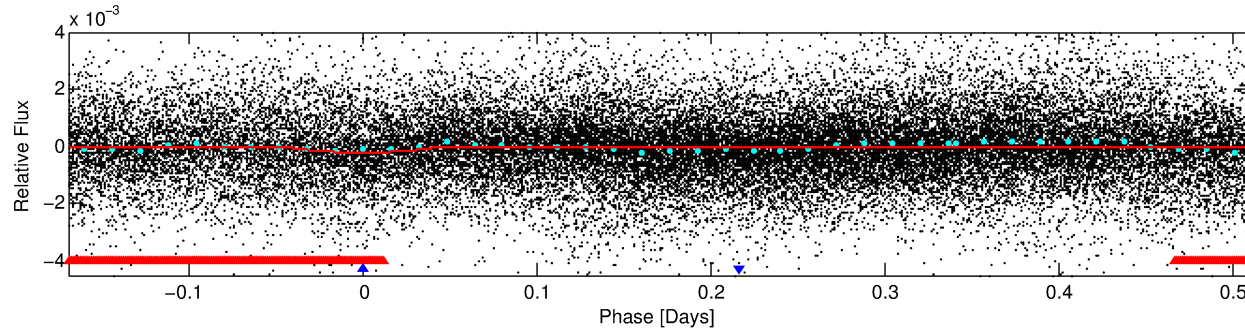
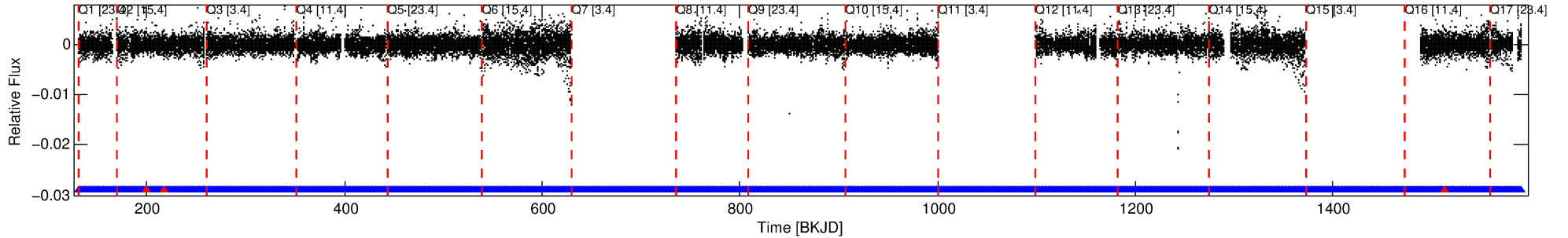
Ephemeris Match Information For 010292465-02

No Significant Match Found

DV One-Page Summary

KIC: 10292465 Candidate: 2 of 2 Period: 0.677 d
KOI: K07307 Corr: No Ephemeris Match

Kp: 14.96 R*: 0.78 Rs Teff: 5426.0 K Logg: 4.51 Fe/H: -0.480



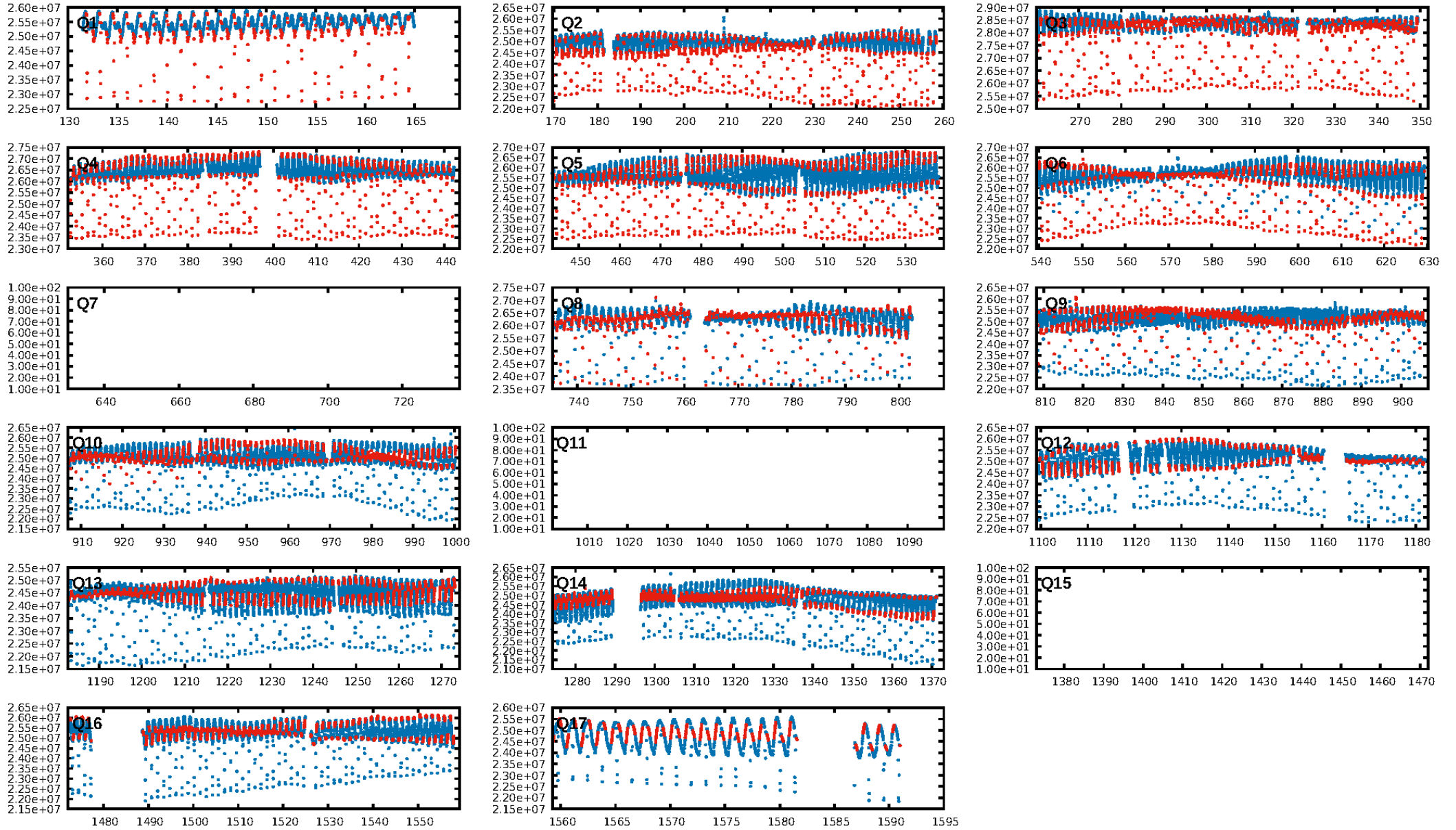
DV Fit Results:

Period = 0.67679 [0.00001] d
Epoch = 131.9269 [0.0020] BKJD
Rp/R* = 0.0153 [0.0091]
a/R* = 1.58 [2.52]
b = 0.90 [0.58]
Seff = 2592.72 [583.68]
Teff = 1820 [102] K
Rp = 1.31 [0.80] Re
a = 0.0136 [0.0017] AU
Ag = 5.83 [7.13] [0.68σ]
Teffp = 4372 [1328] K [1.92σ]

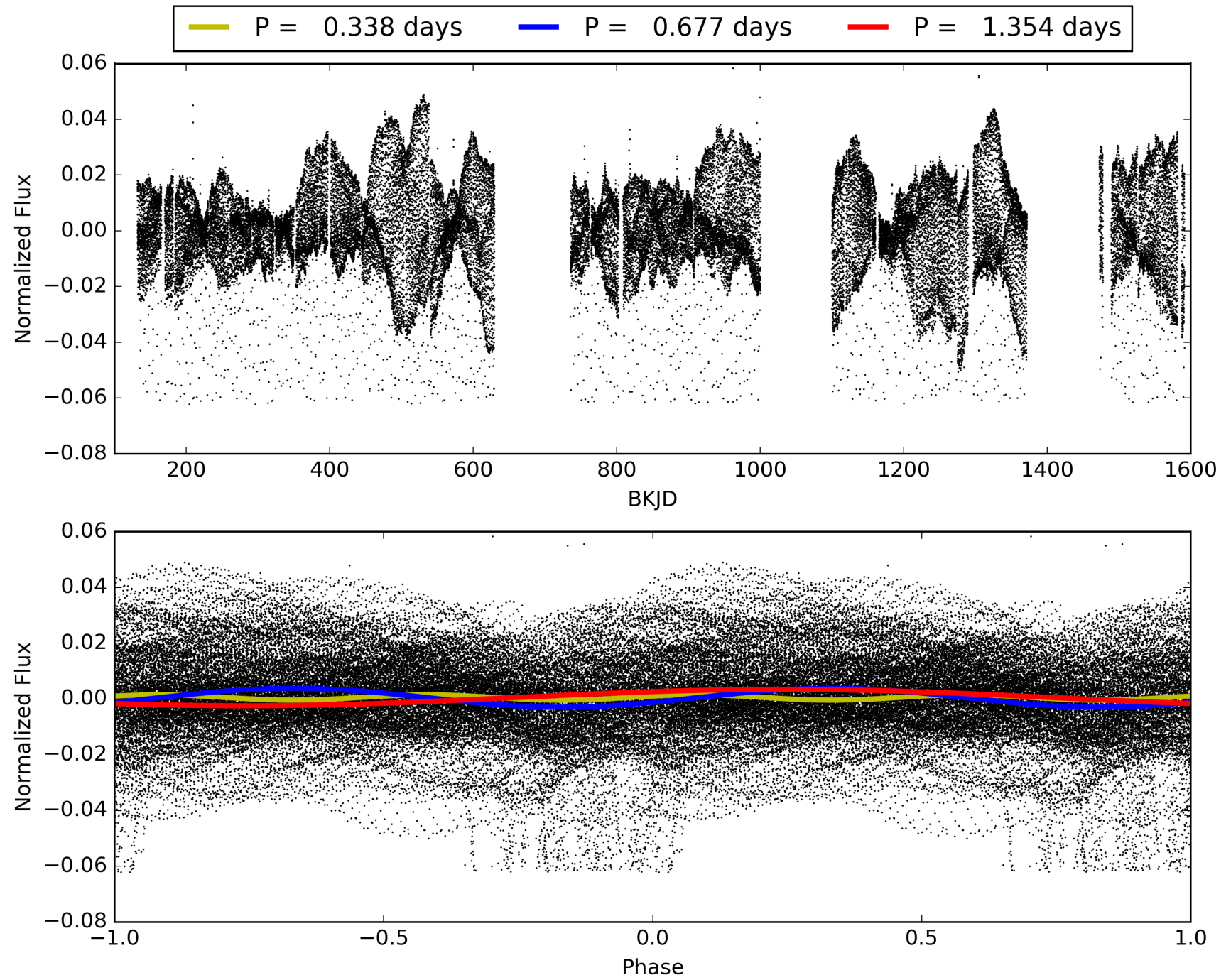
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [5.70σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1062/1065]
GhostDiagnostic-chr: N/A
Centroid-sig: 8.6%
Centroid-so: 2.068 arcsec [3.43σ]
OotOffset-rm: 0.395 arcsec [1.07σ]
KicOffset-rm: 0.115 arcsec [0.32σ]
OotOffset-st: 4/1/4/5 [14]
KicOffset-st: 4/1/4/5 [14]
DiffImageQuality-fgm: 0.43 [6/14]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 010292465-02, PDC Light Curves

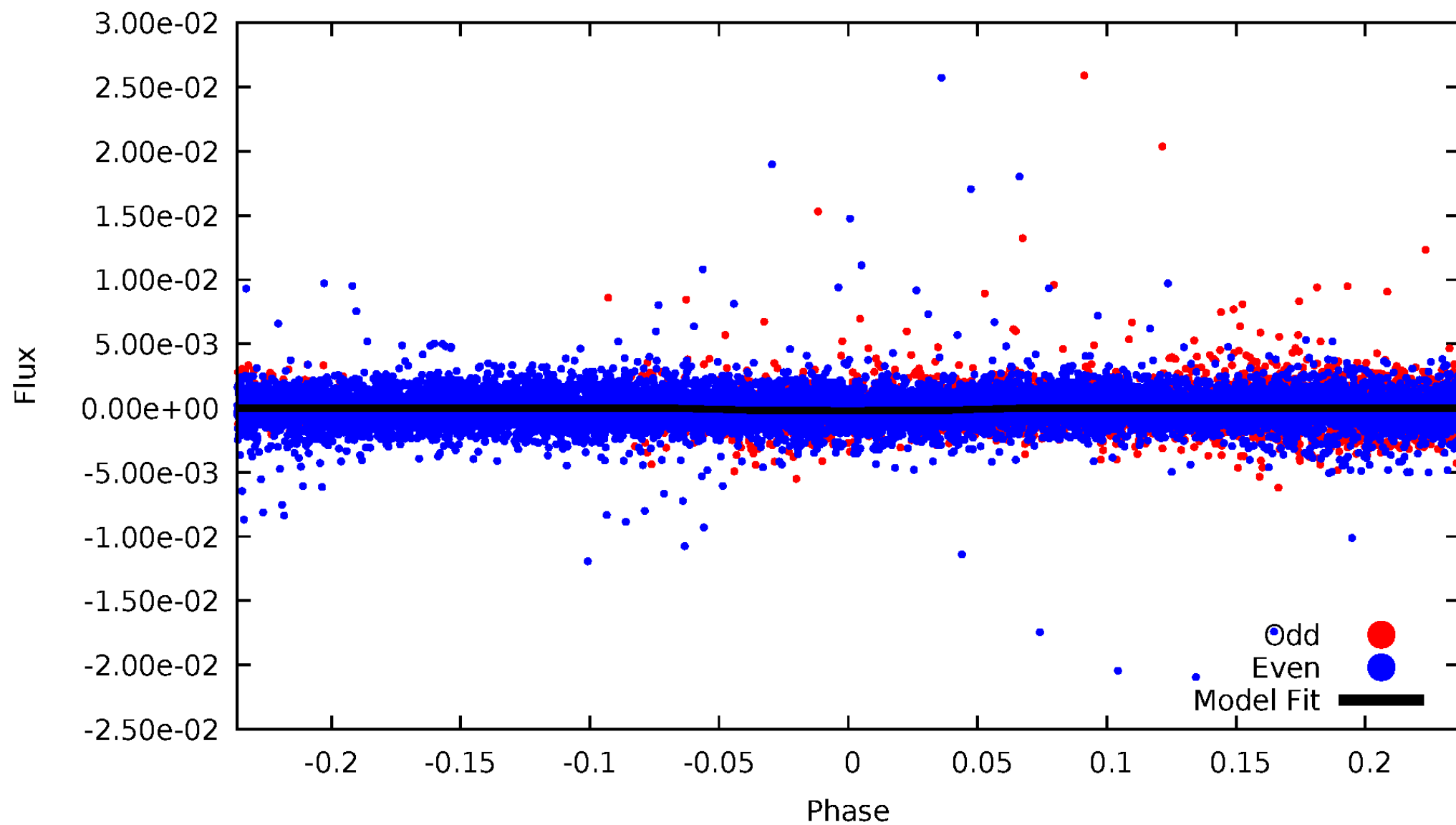


TCE 010292465-02



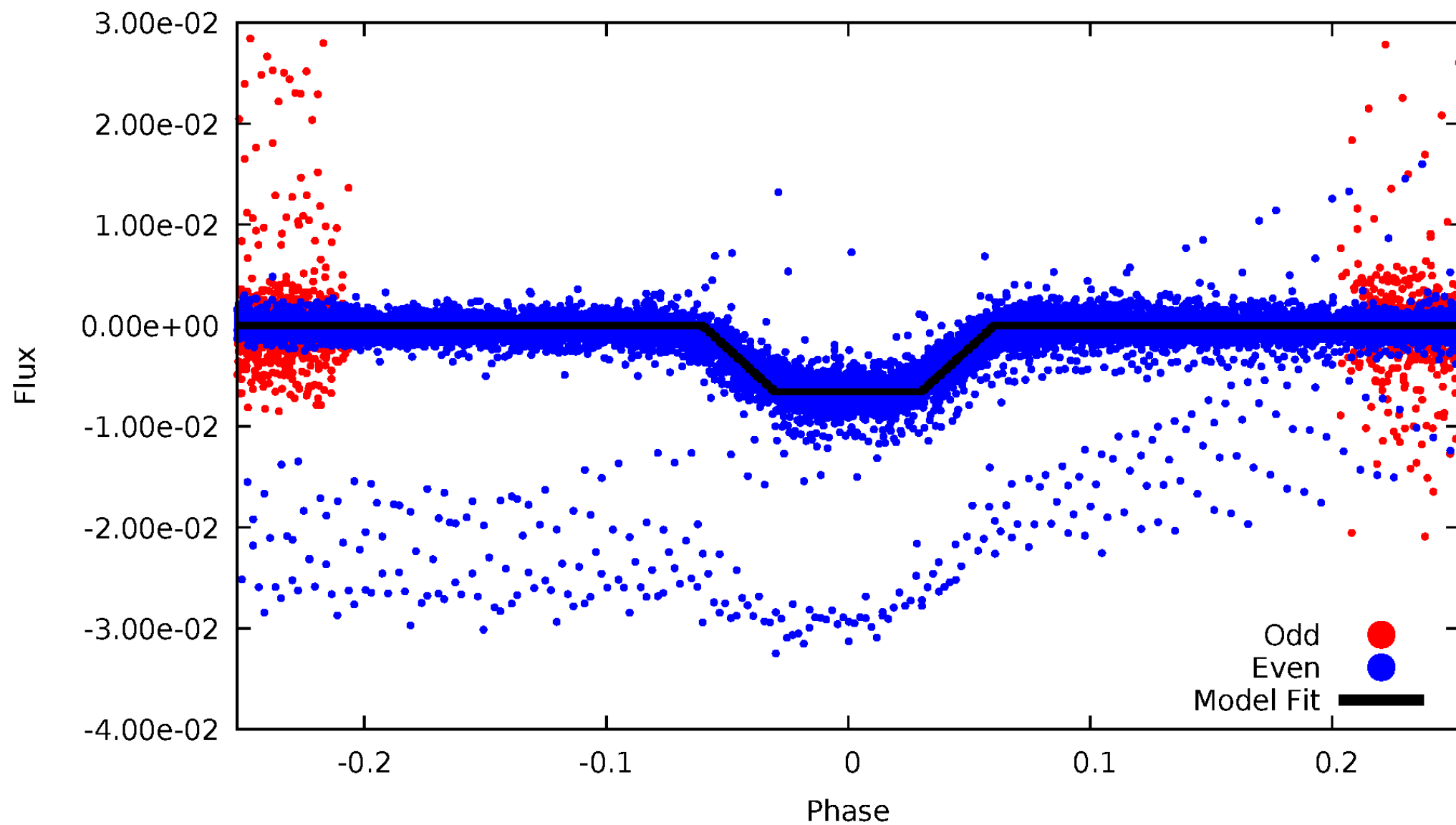
DV Odd/Even

TCE 010292465-02



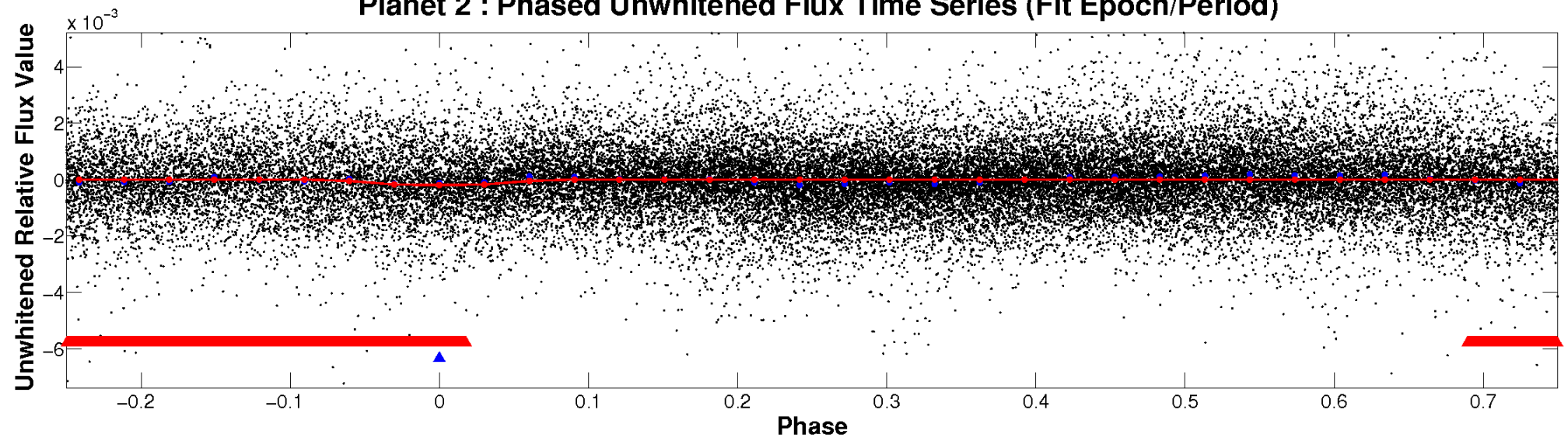
ALT Odd/Even

TCE 010292465-02

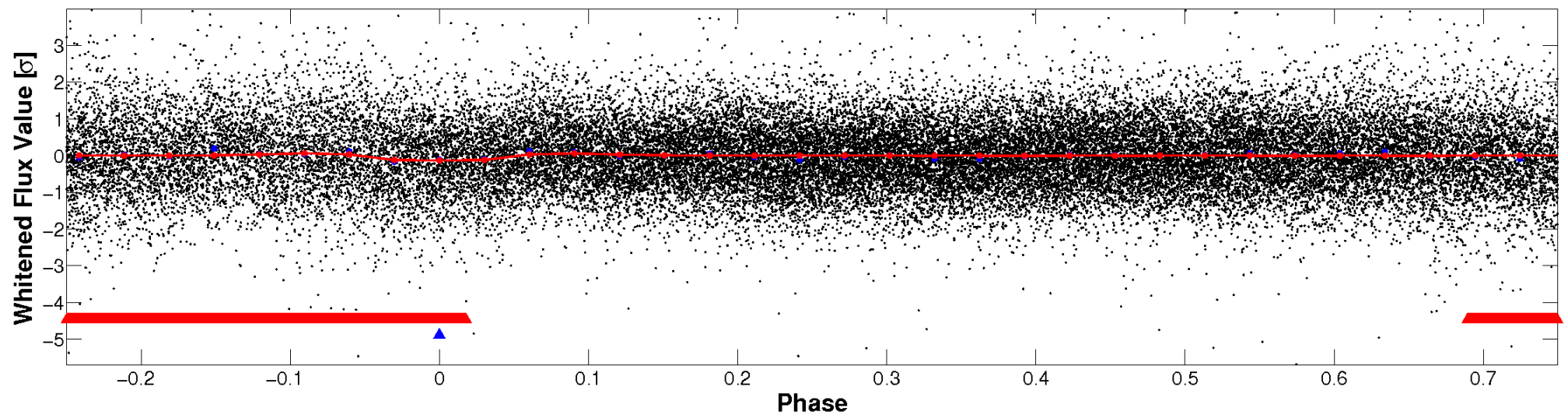


Non-Whitened Vs. Whitened Light Curve

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

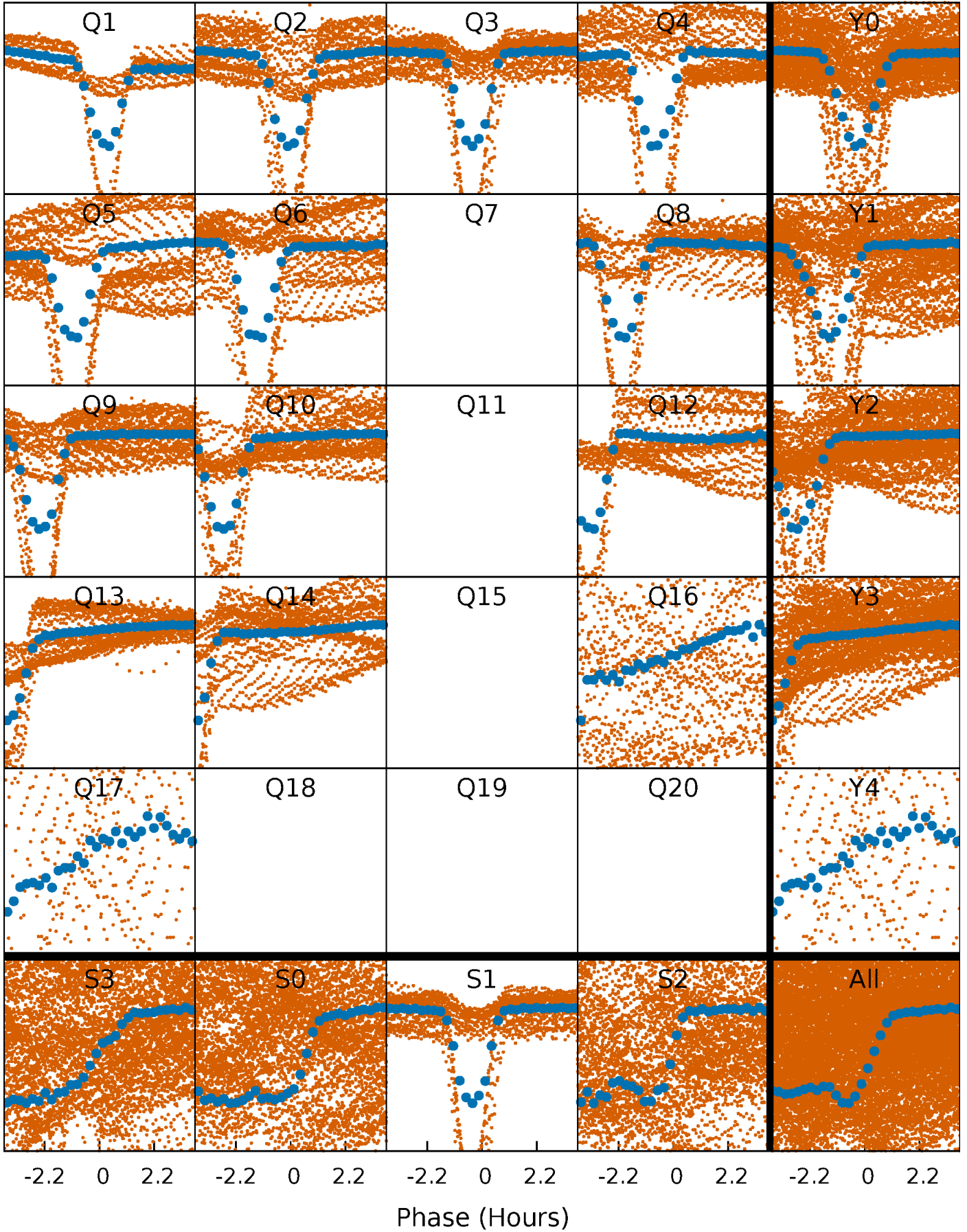


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



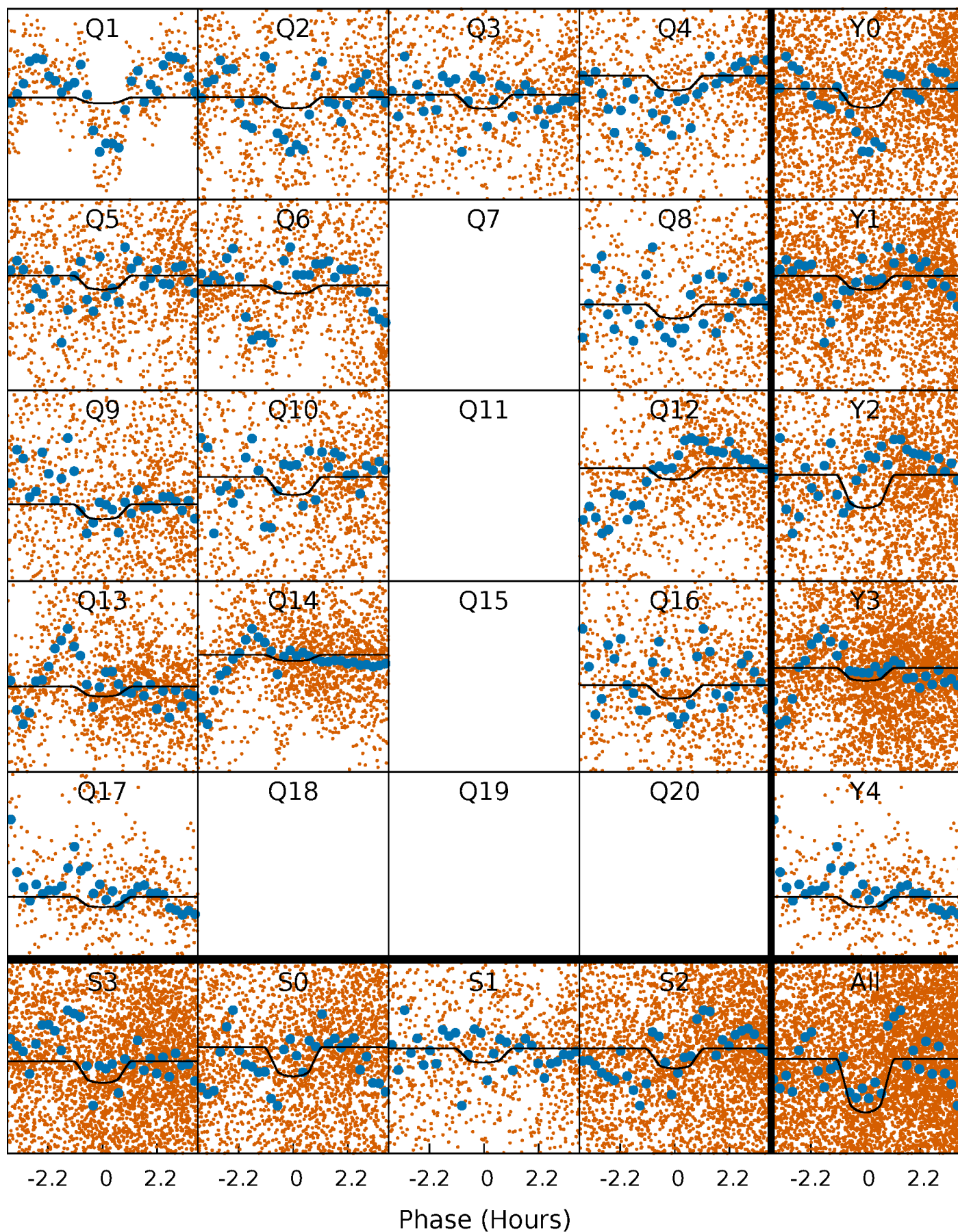
PDC Quarter-Phased Transit Curves

TCE 010292465-02 $P = 0.676786$ Days $T_0 = 131.926943$ (BKJD)



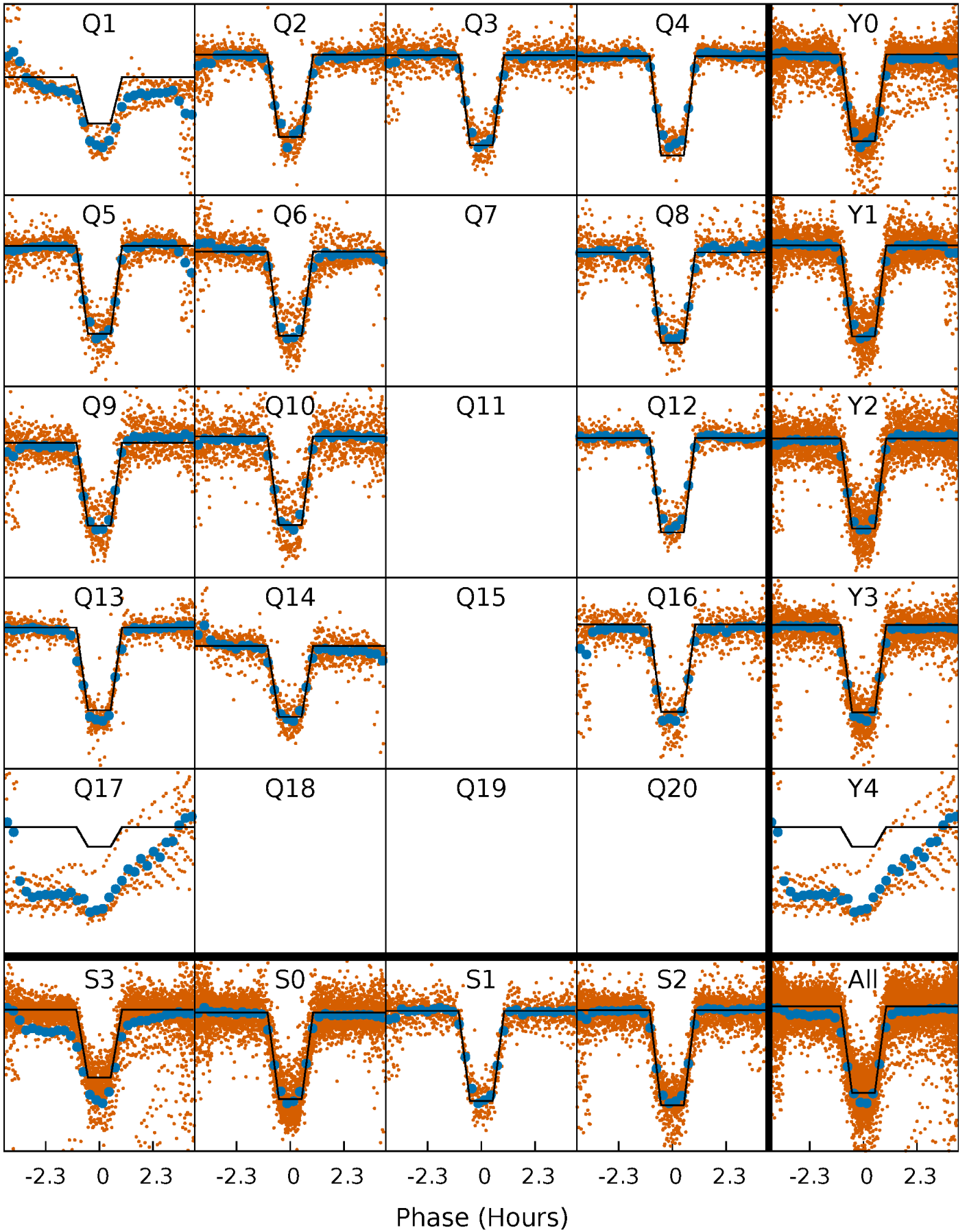
DV Quarter-Phased Transit Curves

TCE 010292465-02 P= 0.676786 Days $T_0=131.926943$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

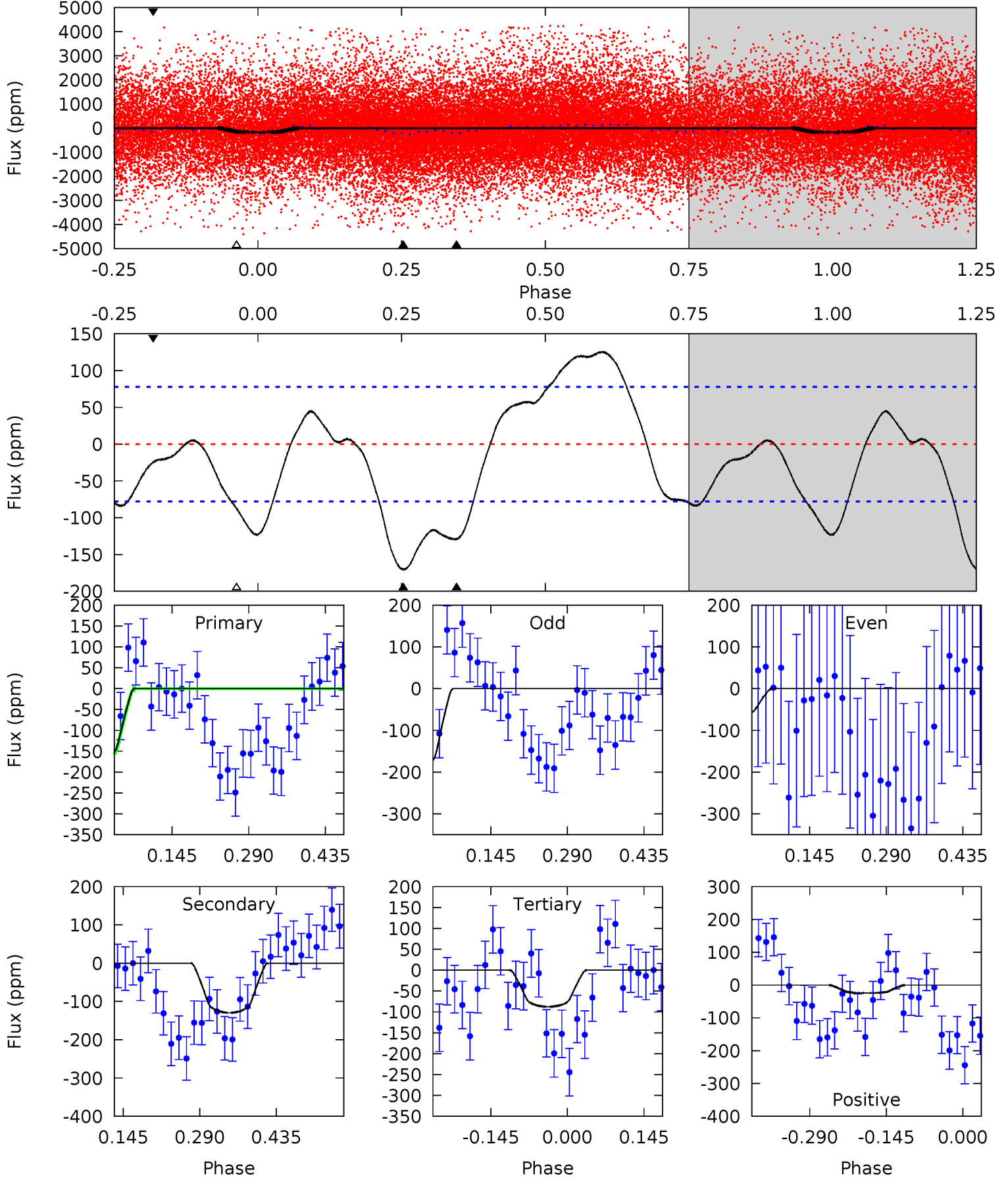
TCE 010292465-02 $P = 0.676687$ Days $T_0 = 131.936184$ (BKJD)



DV Model-Shift Uniqueness Test

010292465-02, P = 0.676786 Days, E = 131.250157 Days

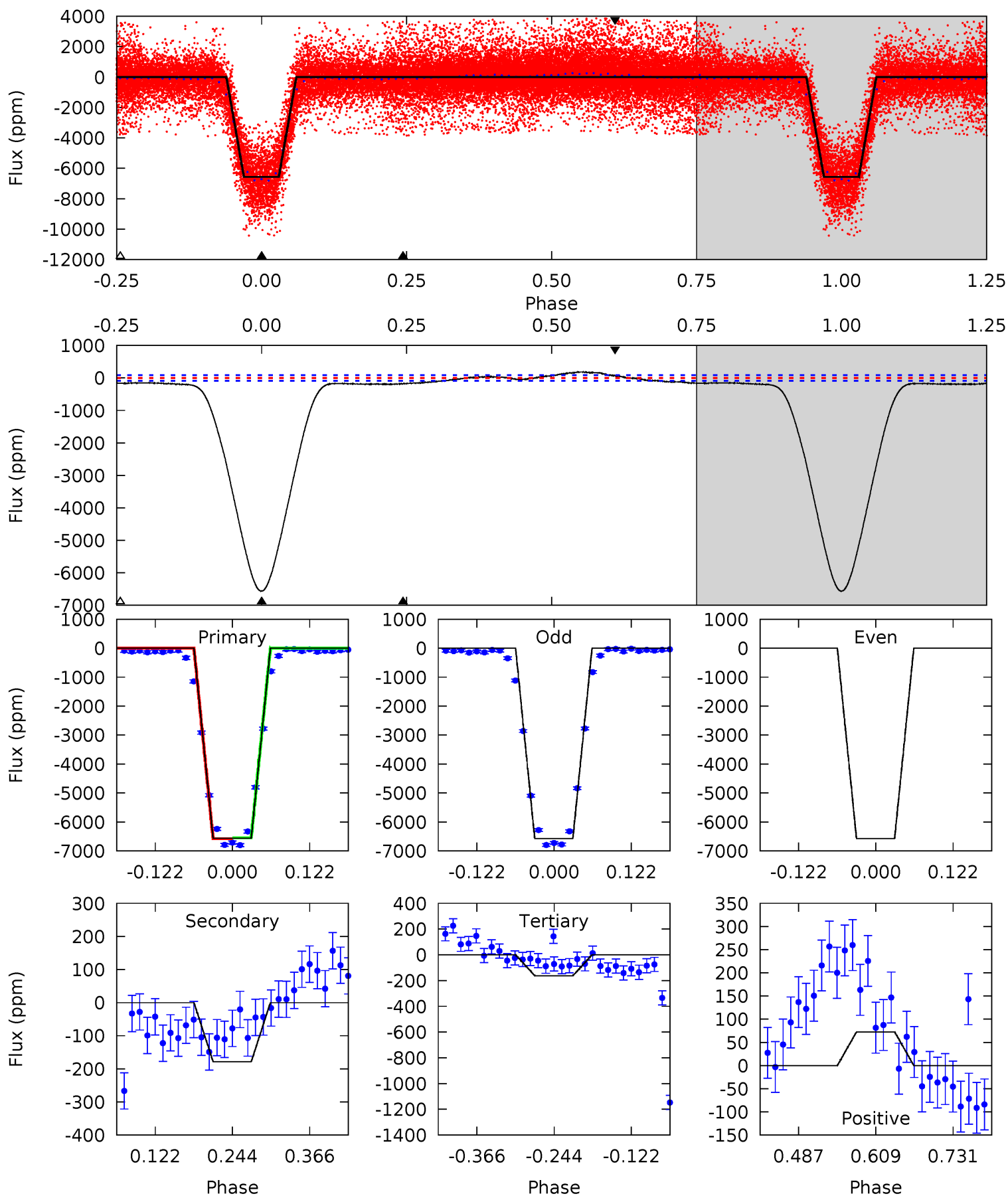
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.85	7.47	5.06	-1.41	4.49	1.46	4.49	4.79	11.3	2.42	8.89	2.87	0.44	0.42	0.13



Alt Model-Shift Uniqueness Test

010292465-02, P = 0.676687 Days, E = 131.259497 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
345.4	9.39	8.53	3.82	4.52	1.55	5.92	336.9	341.6	0.86	5.57	0	1.08	0.03	0.64



Stellar Parameters For KIC 010292465

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5426^{+178}_{-146}	$4.511^{+0.100}_{-0.100}$	$-0.480^{+0.300}_{-0.300}$	$0.784^{+0.117}_{-0.096}$	$0.726^{+0.105}_{-0.045}$	$2.123^{+0.914}_{-0.640}$
	+3%/-3%	+2%/-2%	+62%/-62%	+15%/-12%	+14%/-6%	+43%/-30%
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 010292465-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-130 ± 17	$1.38^{+0.78}_{-0.68}$	2541^{+127}_{-103}	4644^{+1722}_{-767}	$6.769^{+21.110}_{-4.035}$
Alt.	-178 ± 19	$7.02^{+1.00}_{-0.96}$	2547^{+118}_{-111}	2359^{+300}_{-4410}	$0.376^{+0.130}_{-0.095}$

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

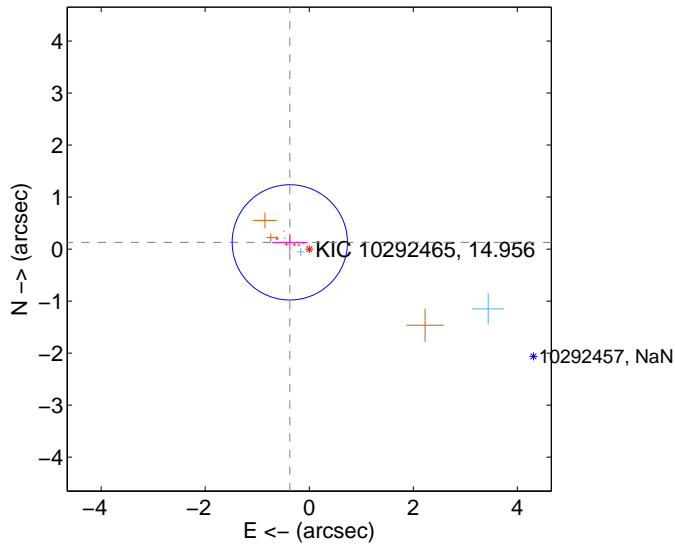
Supplemental centroid analysis for 010292465-02. Kepler magnitude: 14.96. Transit SNR 7.96

There are 6 quarters with good PRF difference image offsets

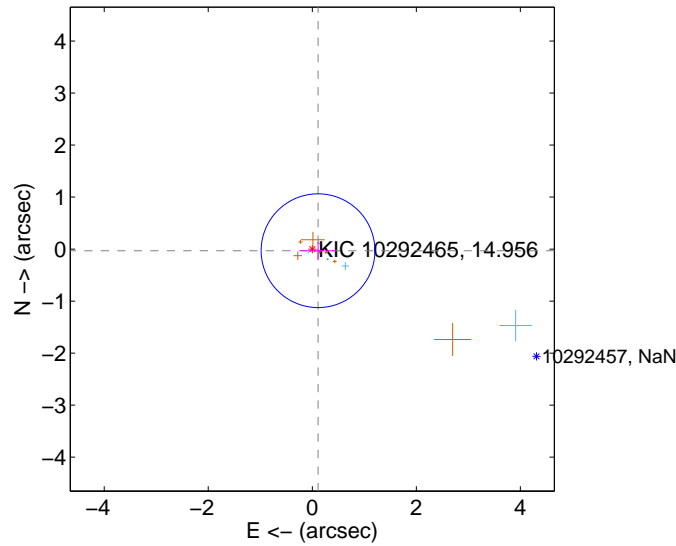
The direct PRF centroid is offset from the target star catalog position by about 0.44 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.395 ± 0.369	1.07	0.374 ± 0.340	0.130 ± 0.169
PRF-fit source offset from KIC position	0.115 ± 0.364	0.32	-0.111 ± 0.337	-0.031 ± 0.170
photometric centroid source offset	2.07 ± 0.60	3.43	-2.02 ± 0.61	-0.47 ± 0.55

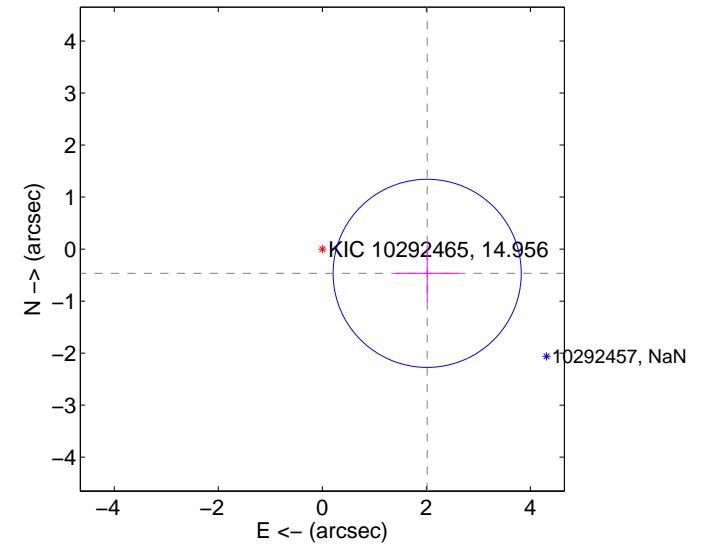
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

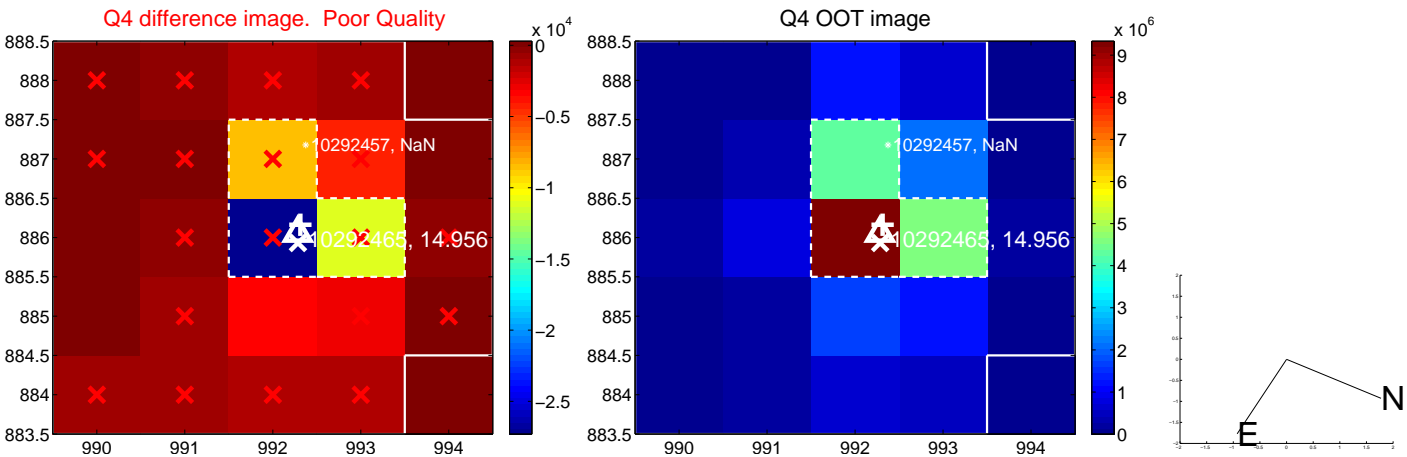
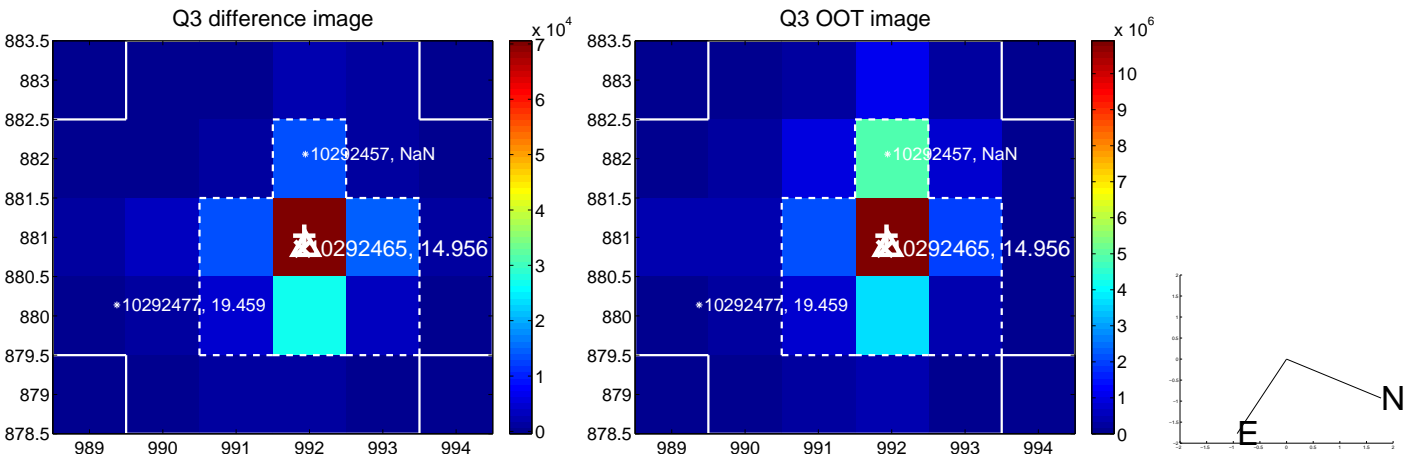
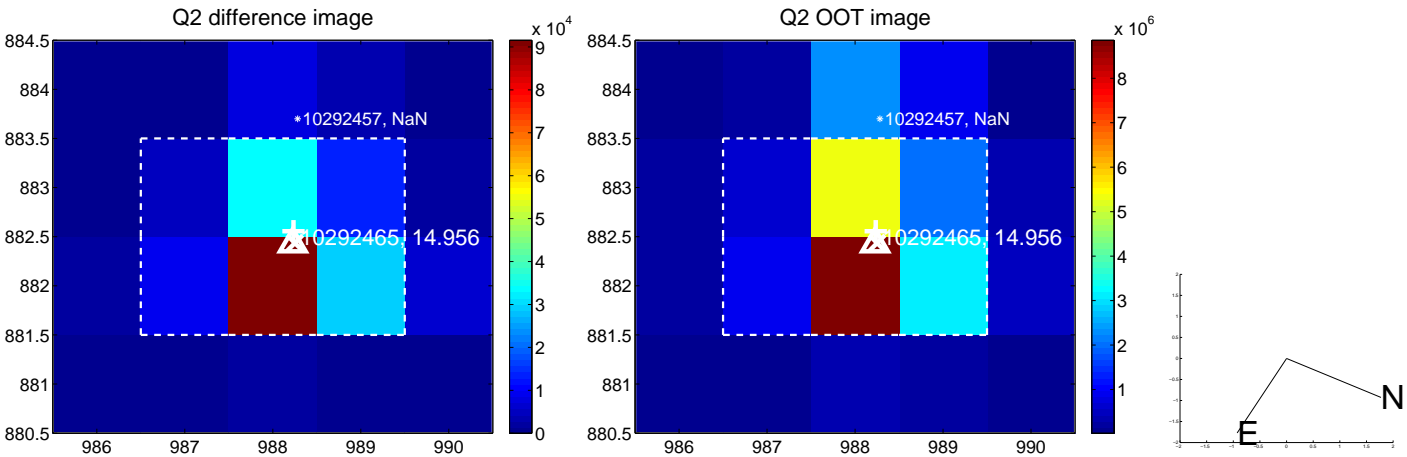
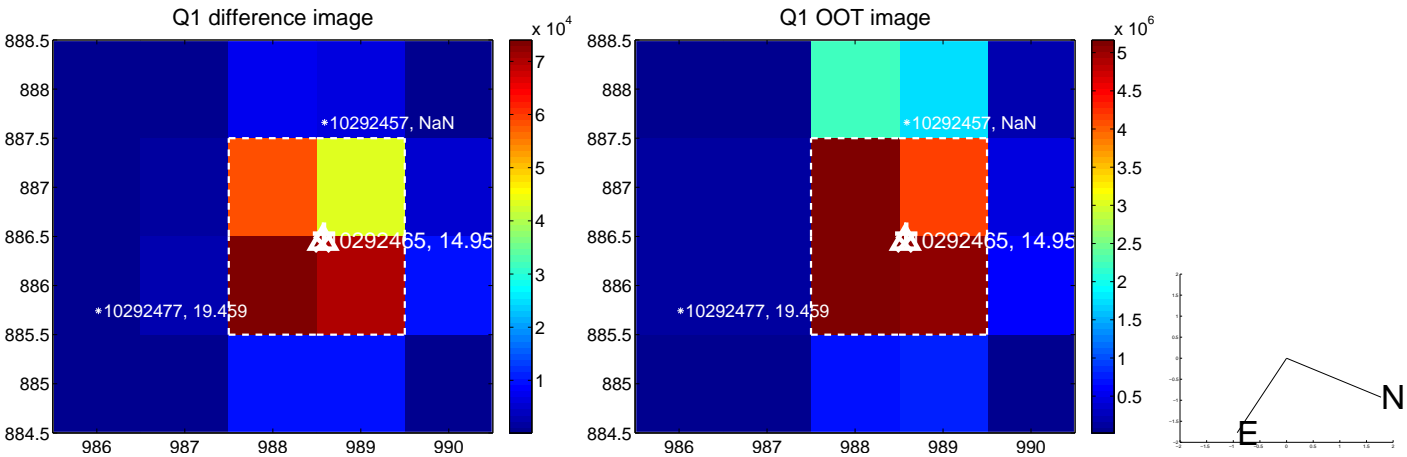


offset from photometric centroids

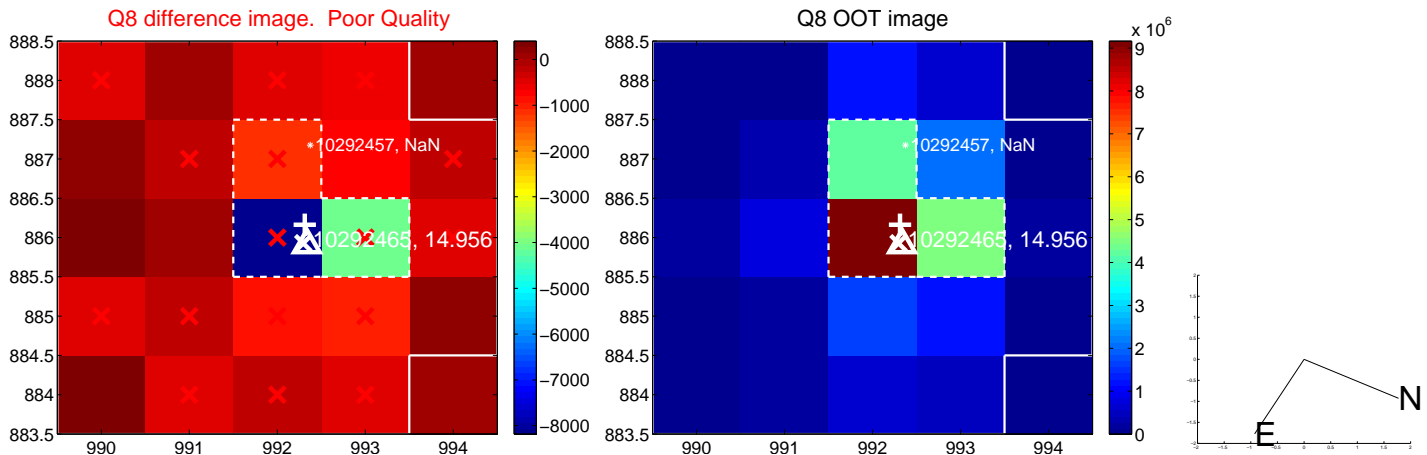
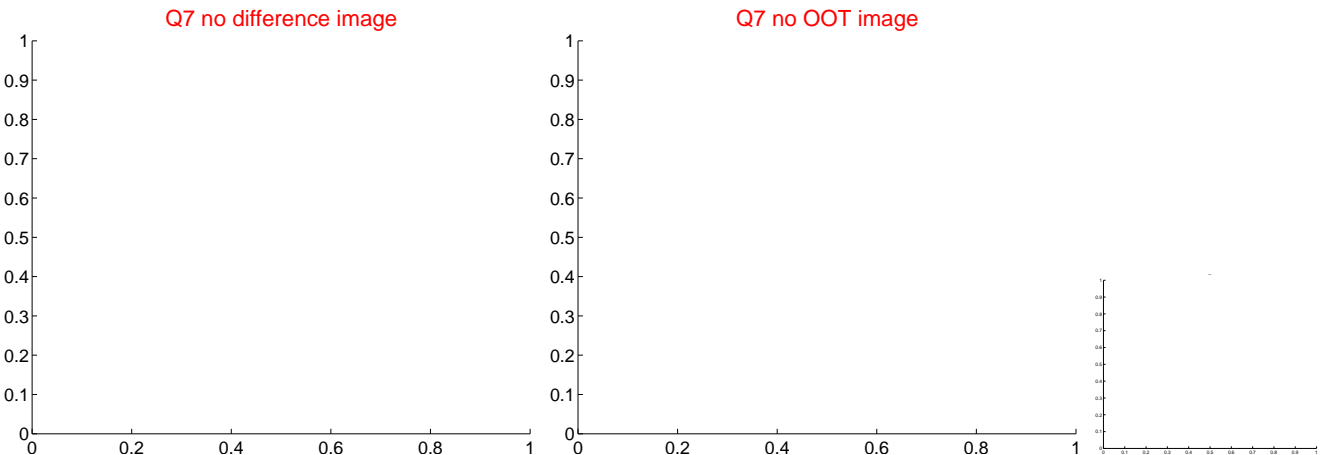
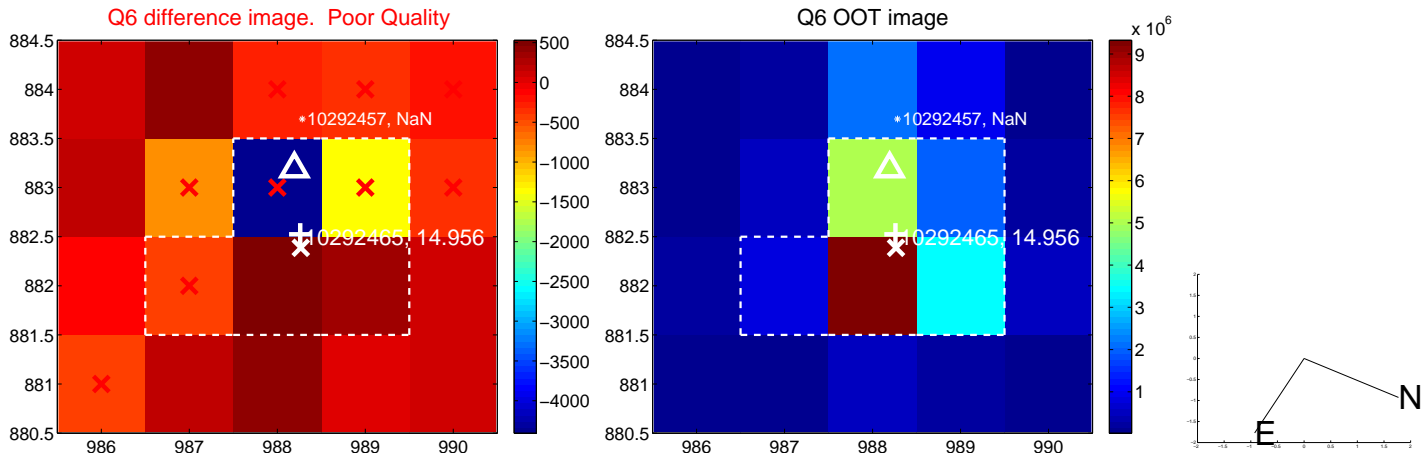
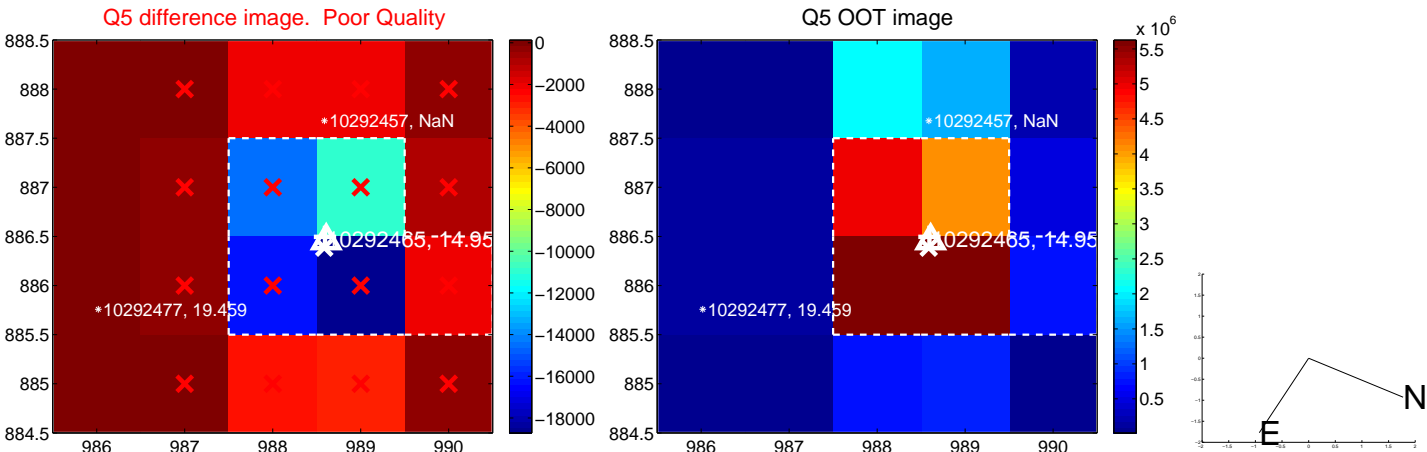


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

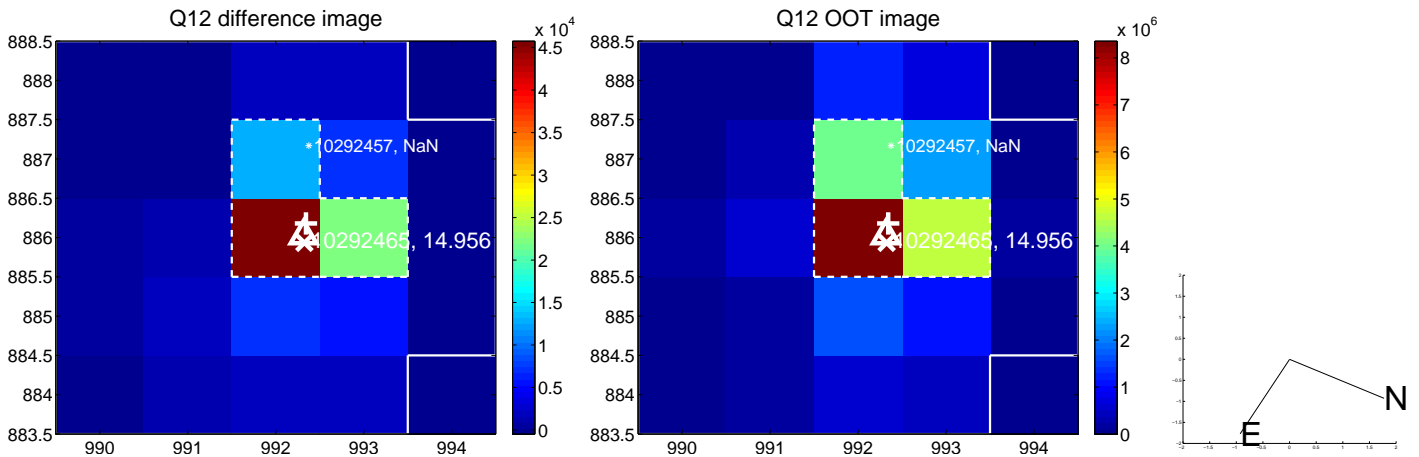
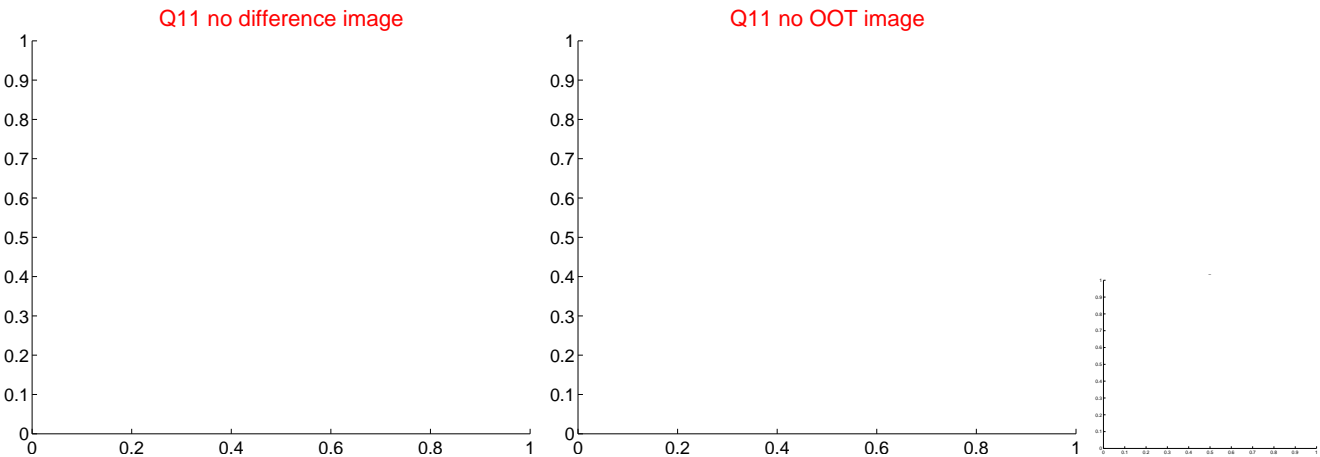
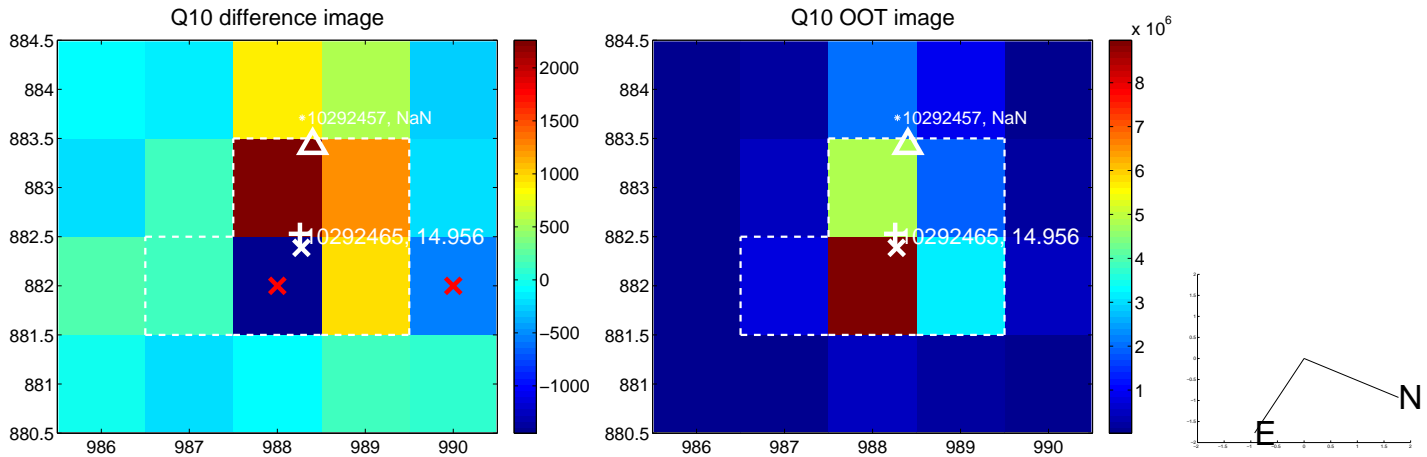
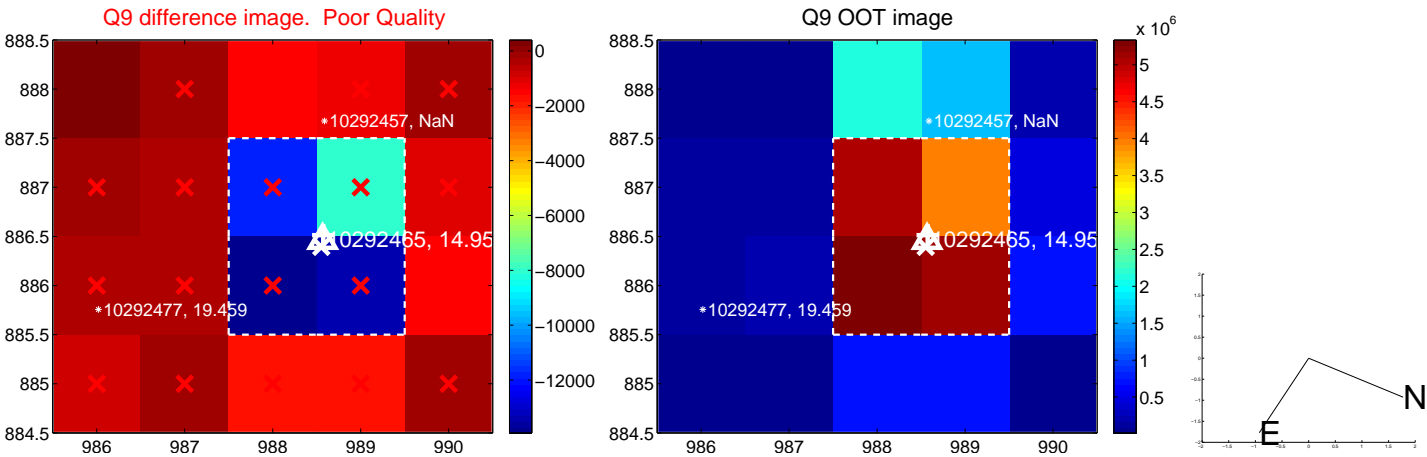
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



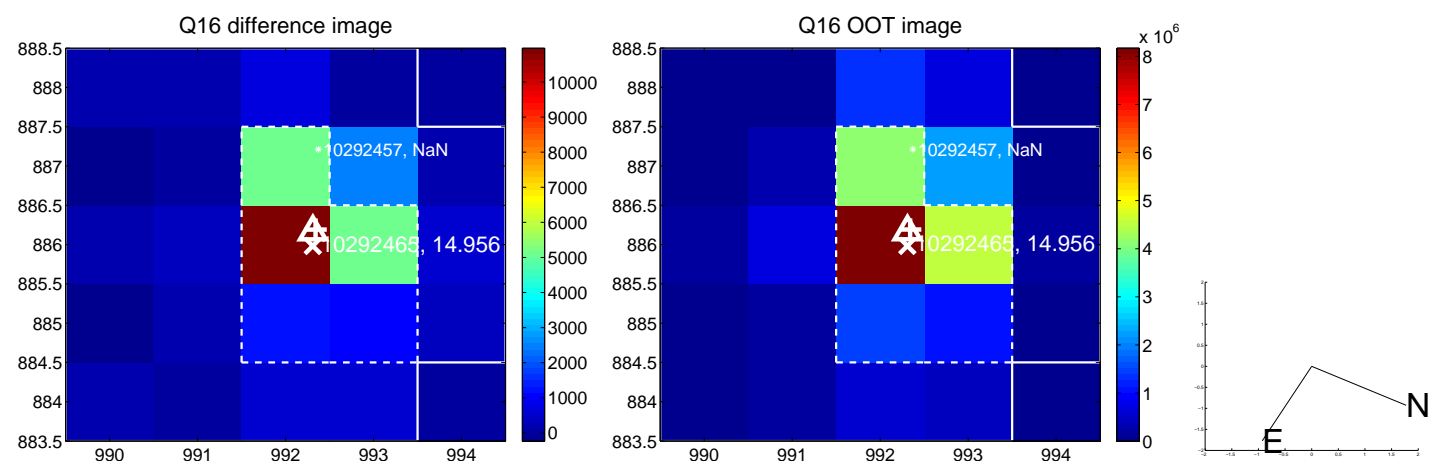
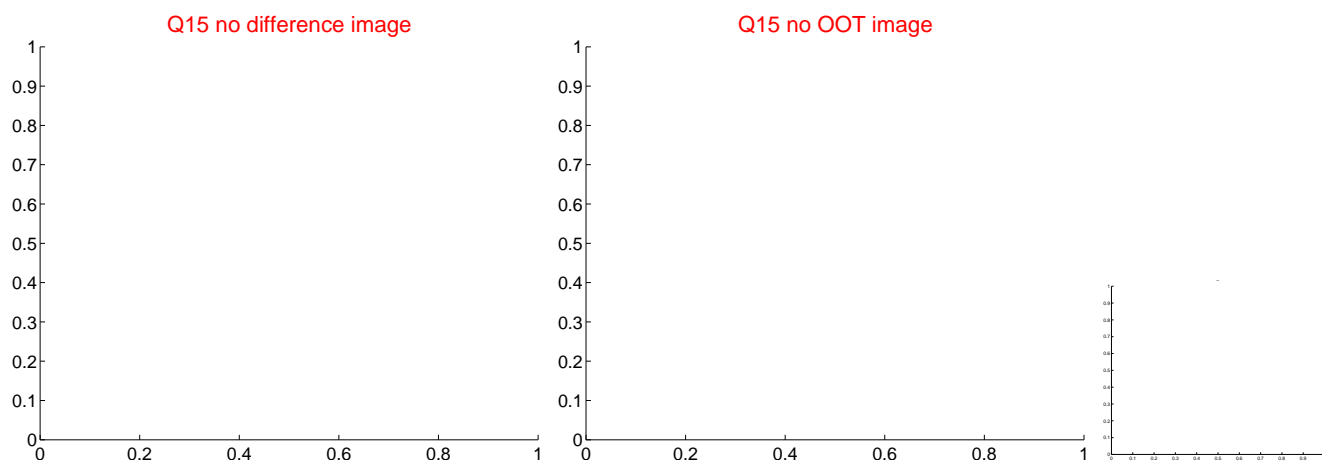
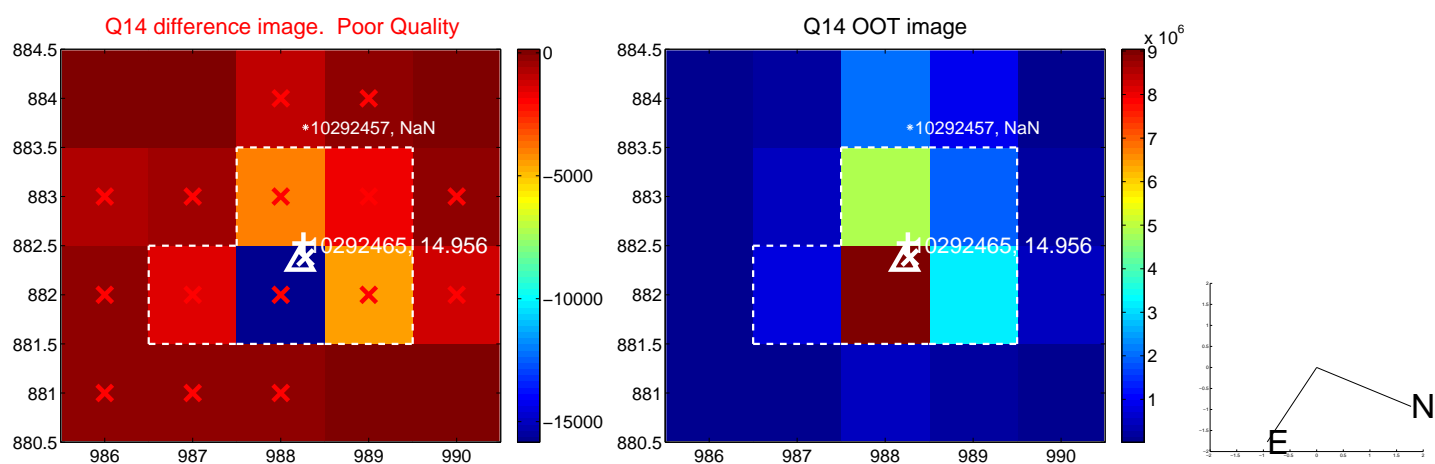
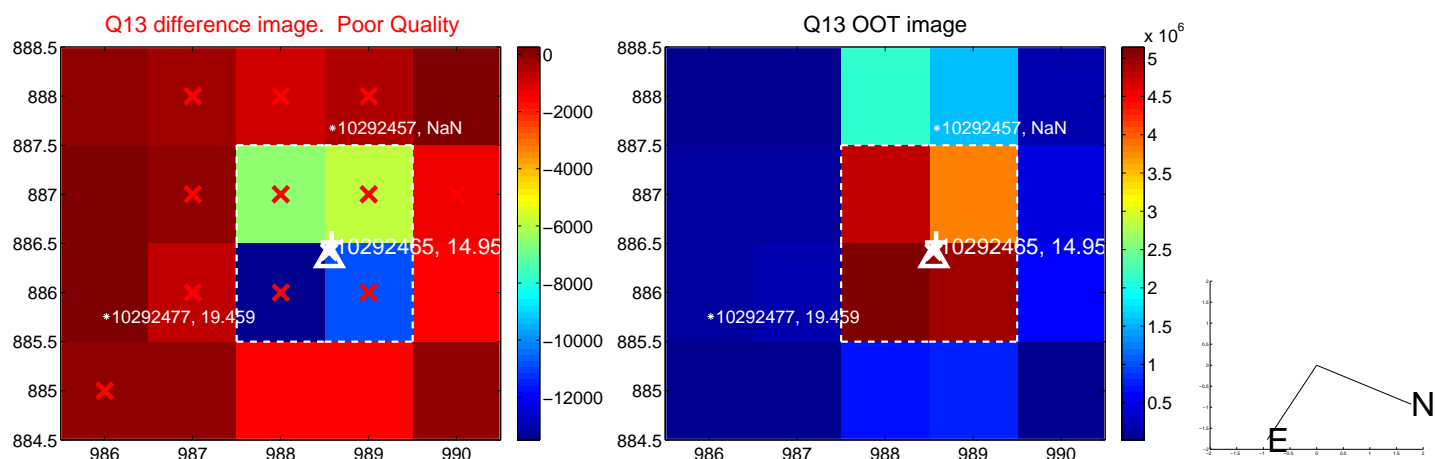
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



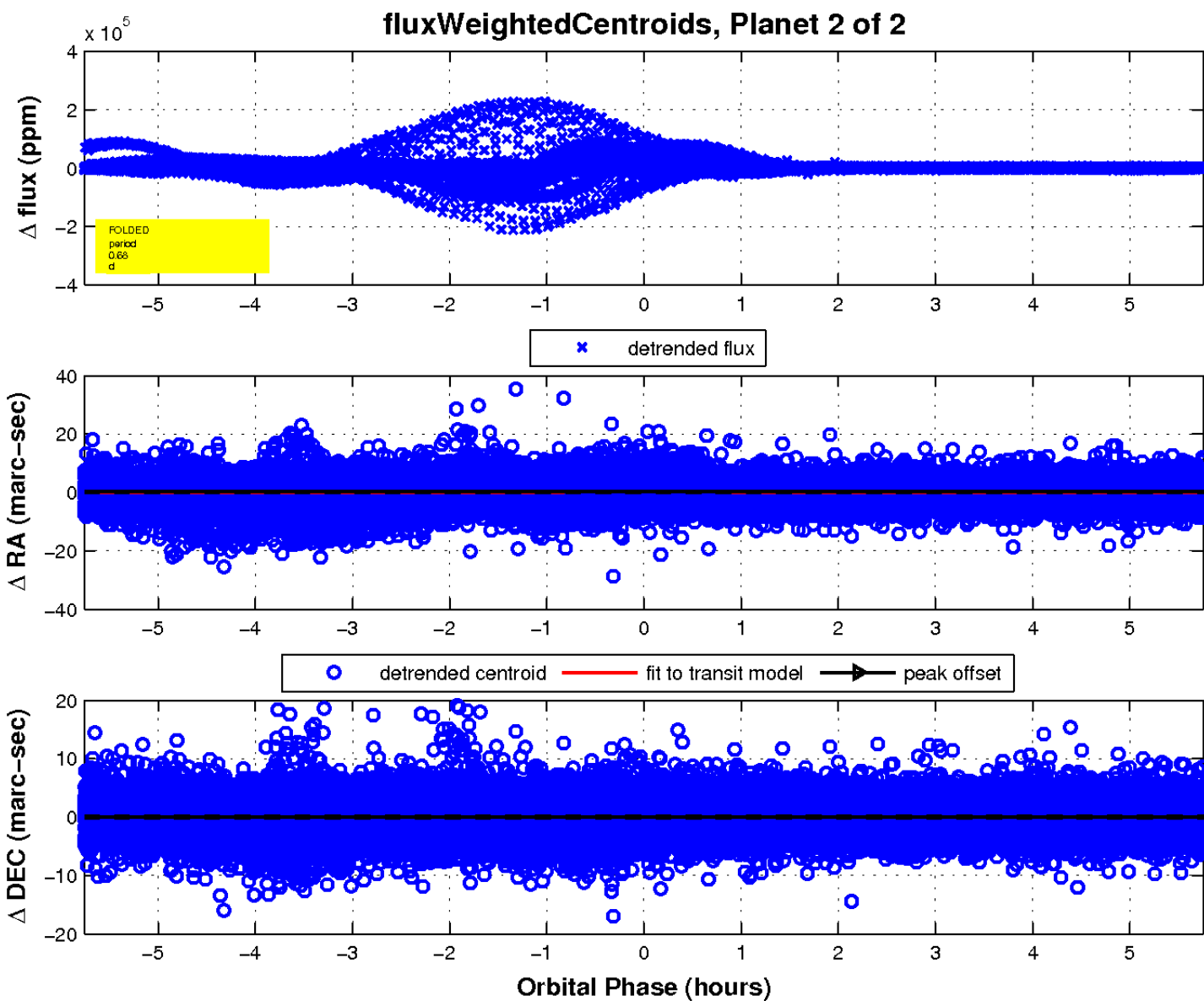
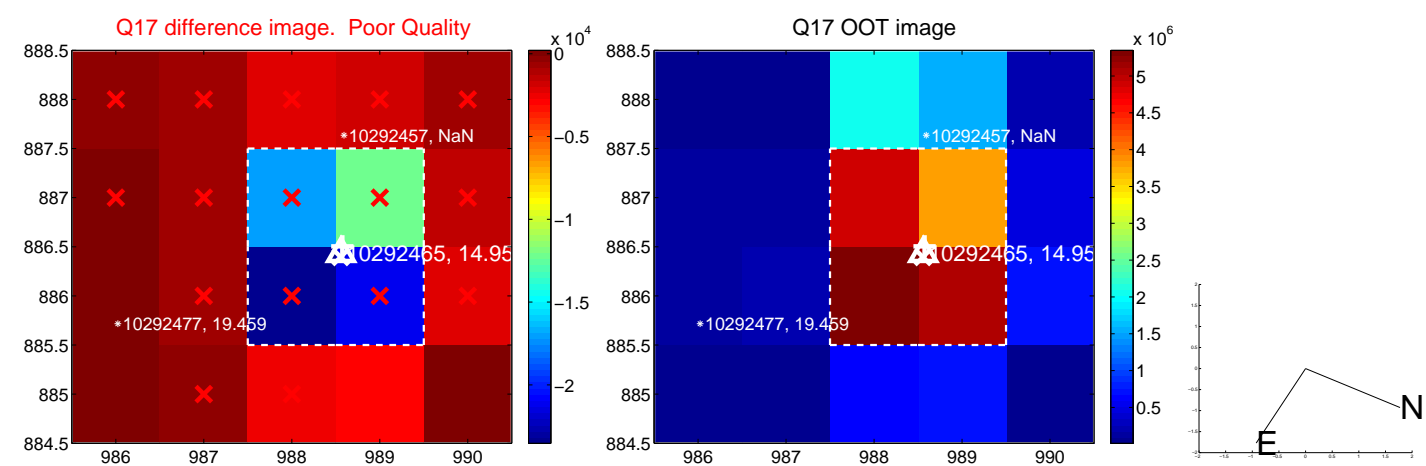
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

