

KIC 007613246

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})
007613246-01	OBS	3062.01	0.769122	131.569346	112.2	0.796	10.3	14.9	0.83	6024	1.04	3197.73

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007613246-01	OBS	FP	0.00	0	0	1	0	CENT_UNRESOLVED_OFFSET—HALO_GHOST

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.

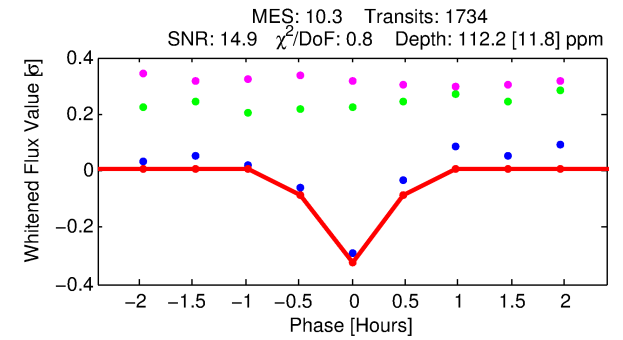
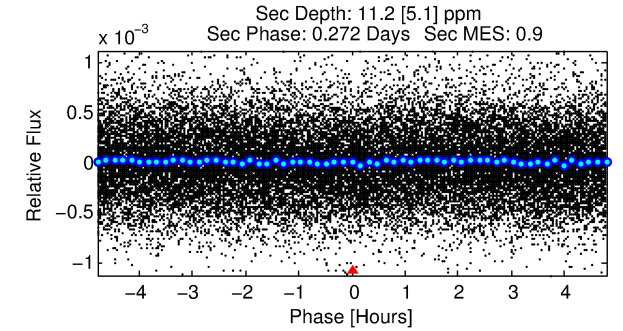
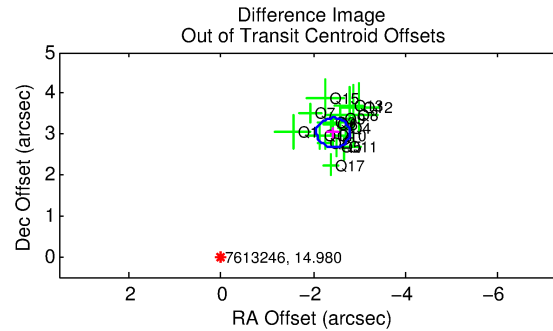
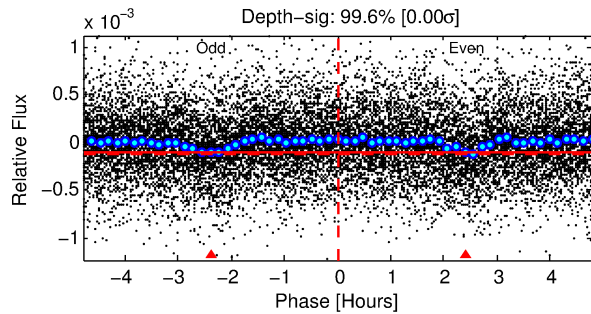
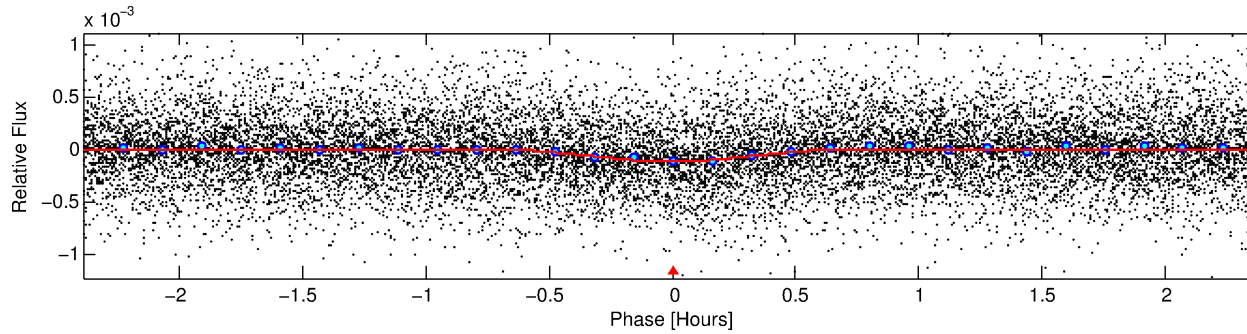
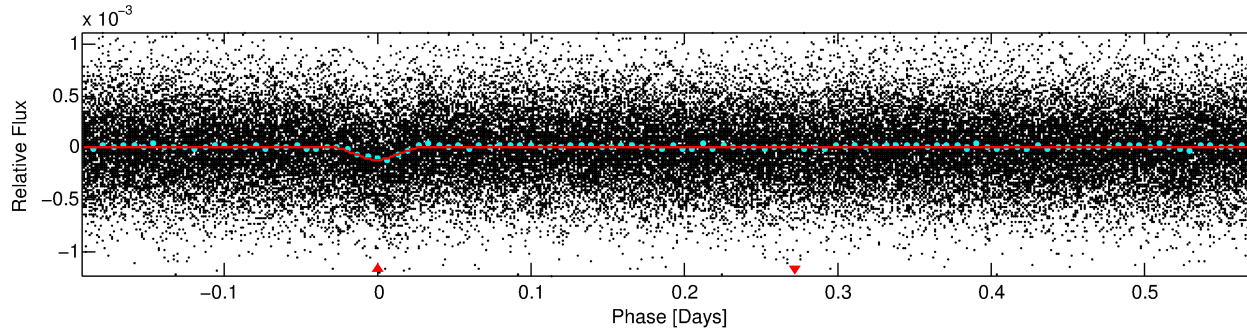
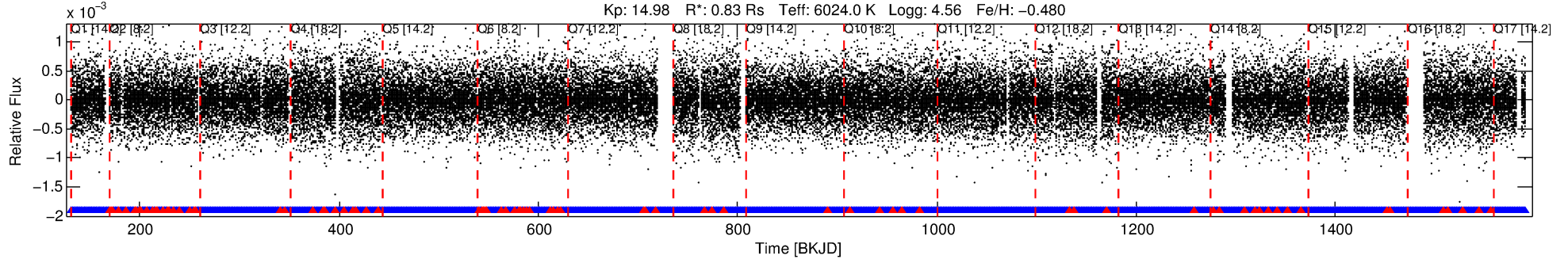
Ephemeris Match Information For 007613246-01

No Significant Match Found

DV One-Page Summary

KIC: 7613246 Candidate: 1 of 1 Period: 0.769 d
KOI: K03062.01 Corr: 0.889

Kp: 14.98 R*: 0.83 Rs Teff: 6024.0 K Logg: 4.56 Fe/H: -0.480



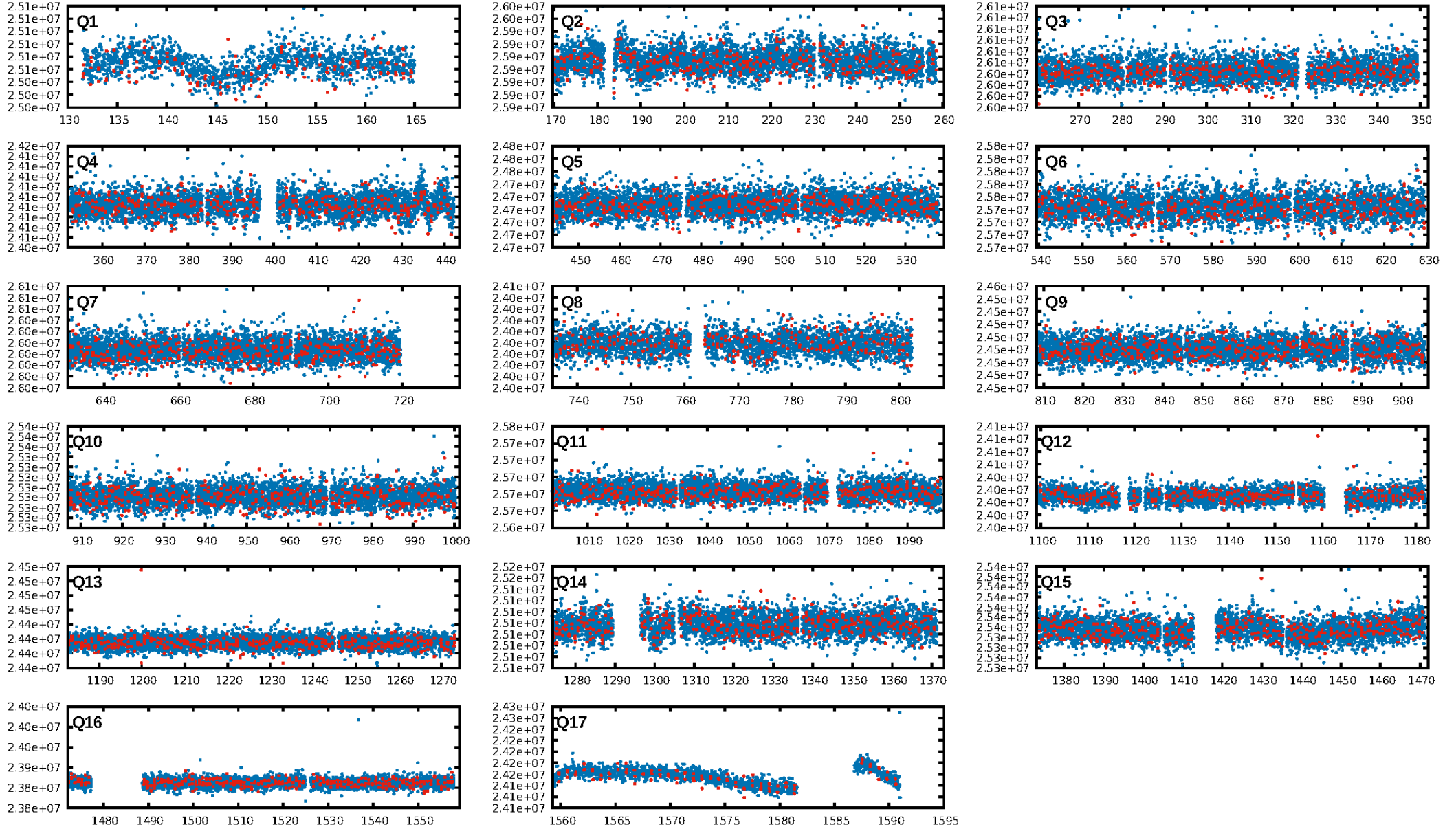
DV Fit Results:

Period = 0.76912 [0.00001] d
Epoch = 131.5693 [0.0010] BKJD
Rp/R* = 0.0115 [0.0026]
a/R* = 3.61 [3.95]
b = 0.89 [0.27]
Seff = 3197.73 [1230.34]
Teff = 1918 [184] K
Rp = 1.04 [0.38] Re
a = 0.0160 [0.0039] AU
Ag = 1.44 [1.06] [0.41σ]
Teffp = 3249 [530] K [2.37σ]

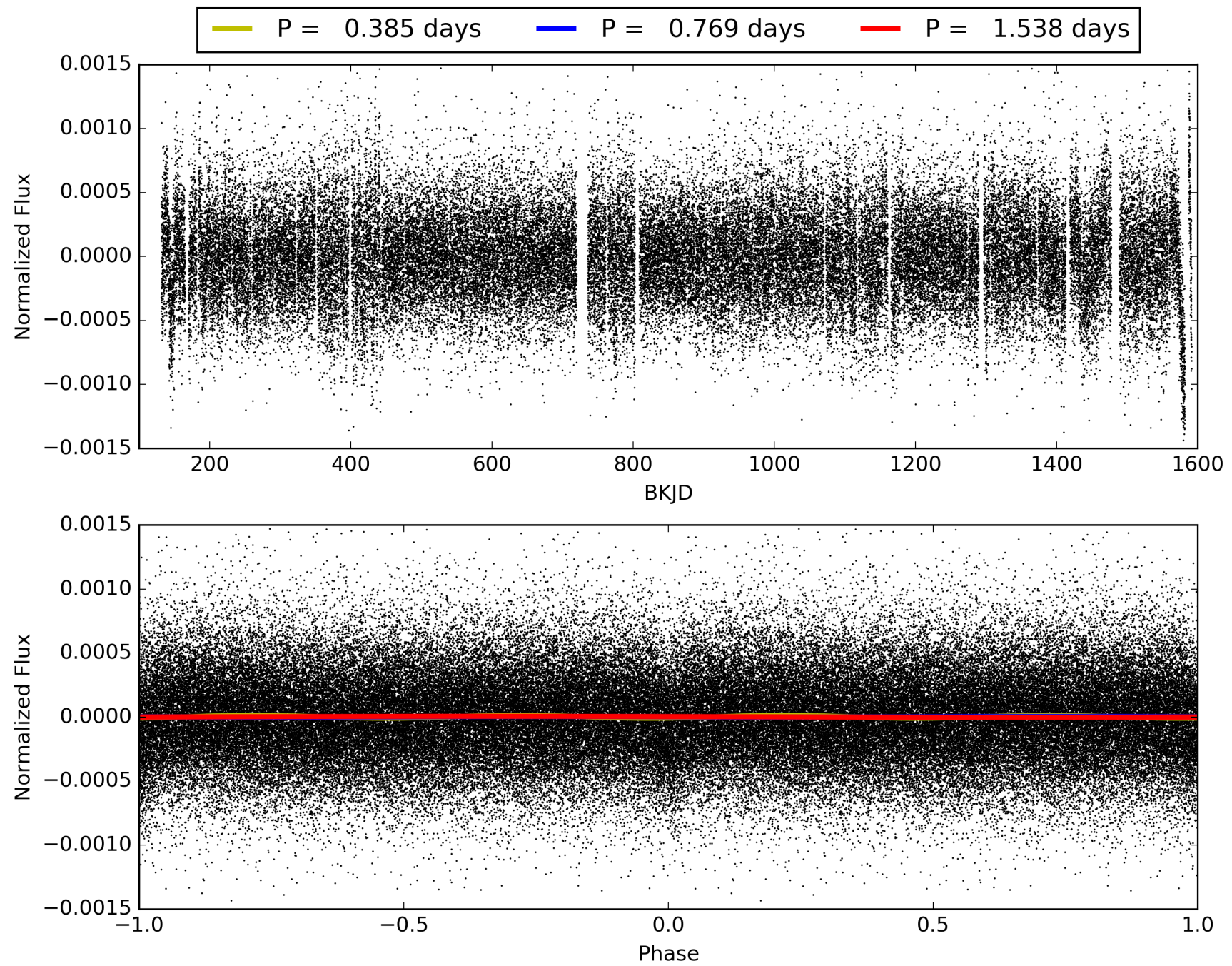
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.79e-25
RollingBand-fgt: 0.95 [1574/1656]
GhostDiagnostic-chr: -0.1317
Centroid-sig: 0.0%
Centroid-so: 7.814 arcsec [8.51σ]
OotOffset-rm: 3.888 arcsec [32.35σ]
KicOffset-rm: 3.782 arcsec [28.10σ]
OotOffset-st: 4/4/3/5 [16]
KicOffset-st: 4/4/3/5 [16]
DiffImageQuality-fgm: 1.00 [16/16]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 007613246-01, PDC Light Curves

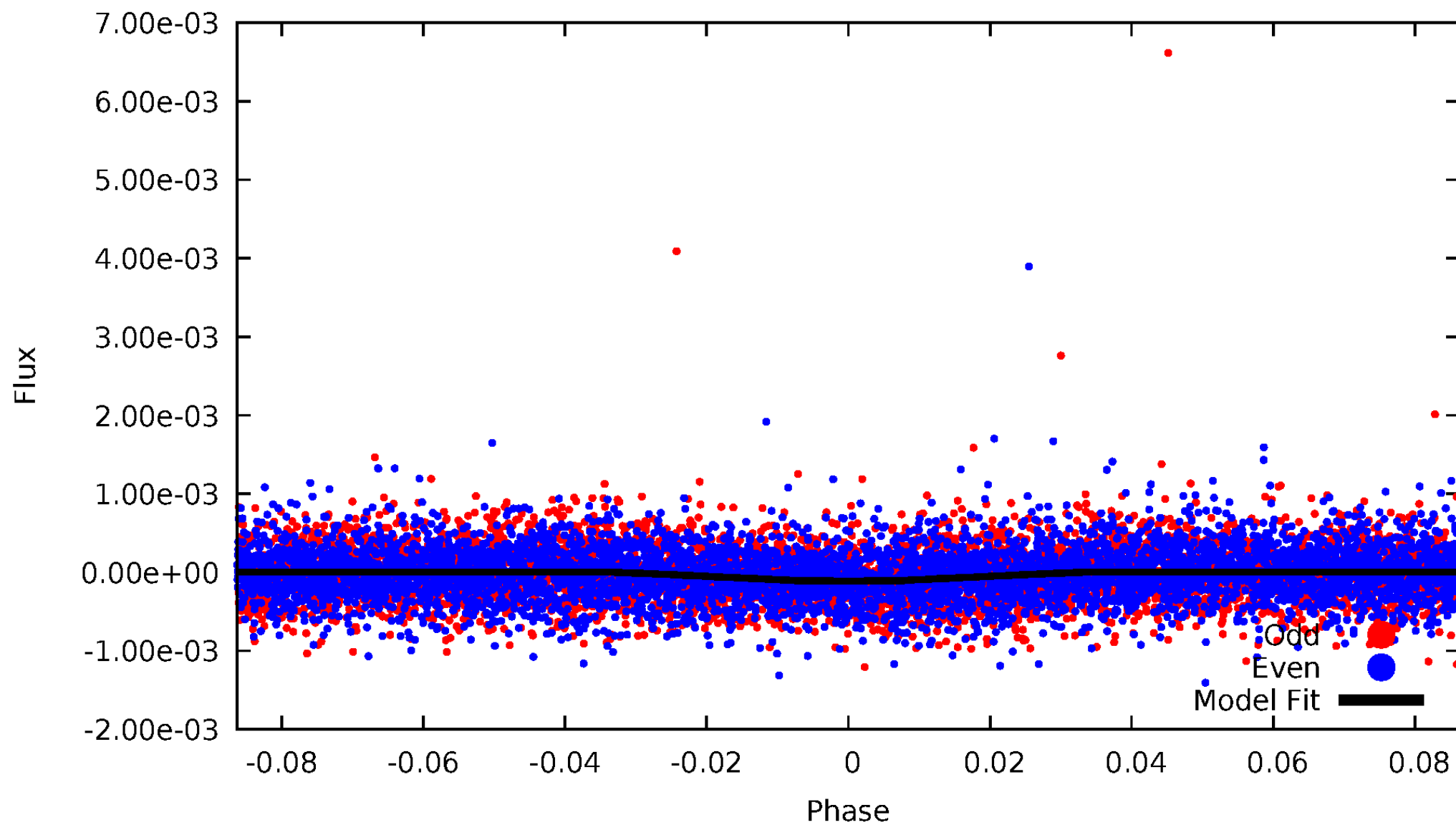


TCE 007613246-01



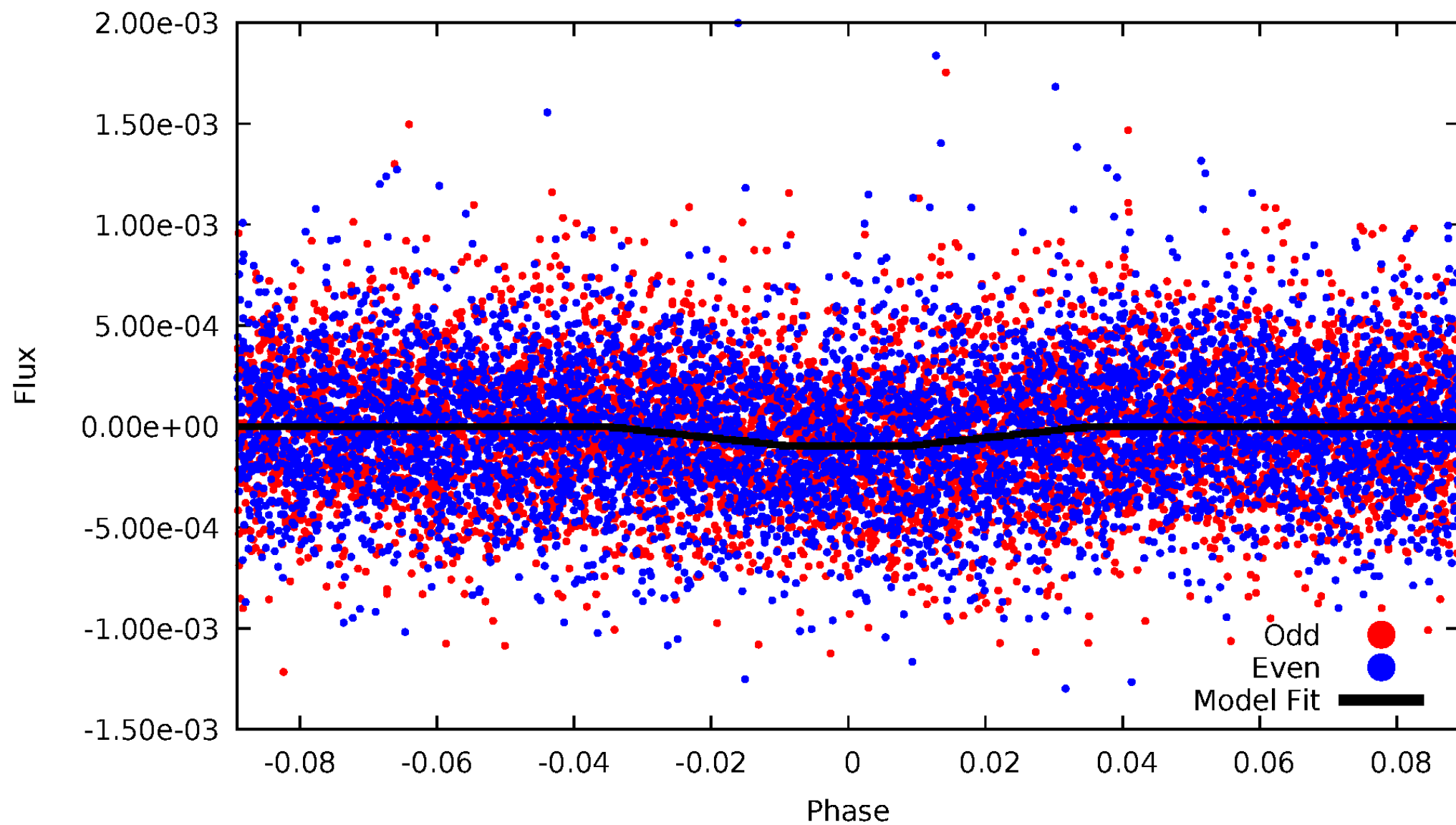
DV Odd/Even

TCE 007613246-01

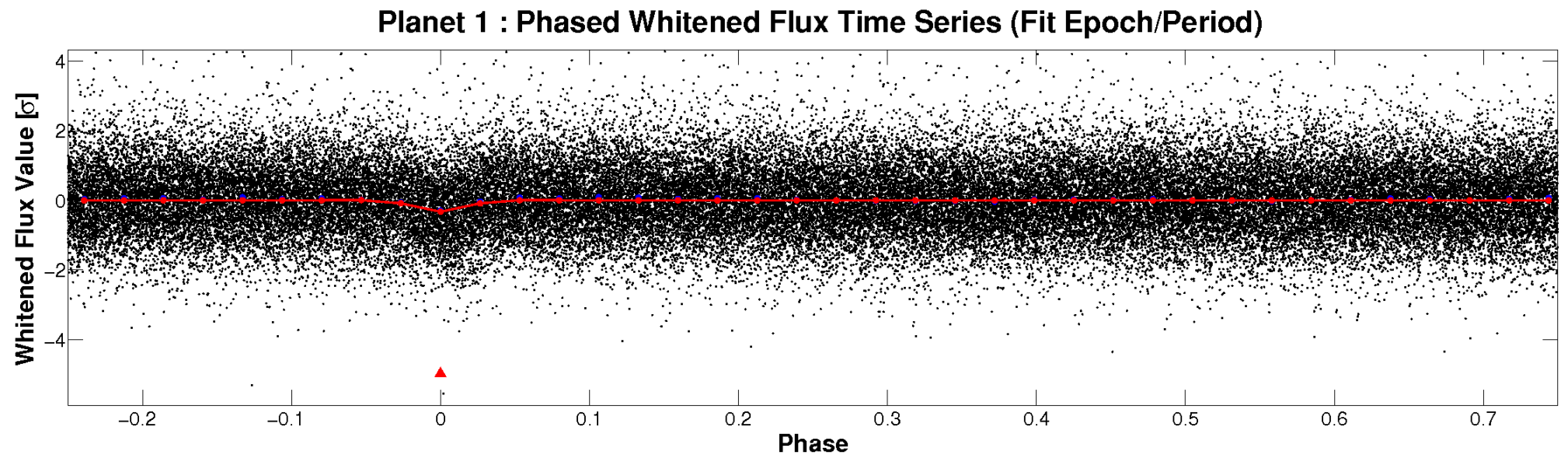
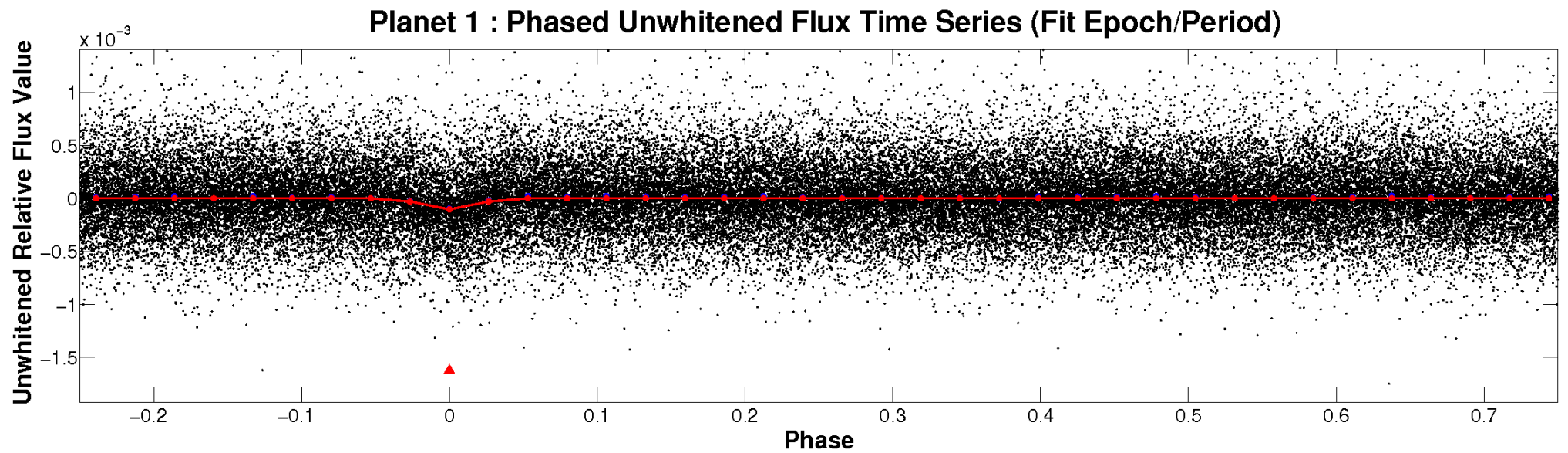


ALT Odd/Even

TCE 007613246-01

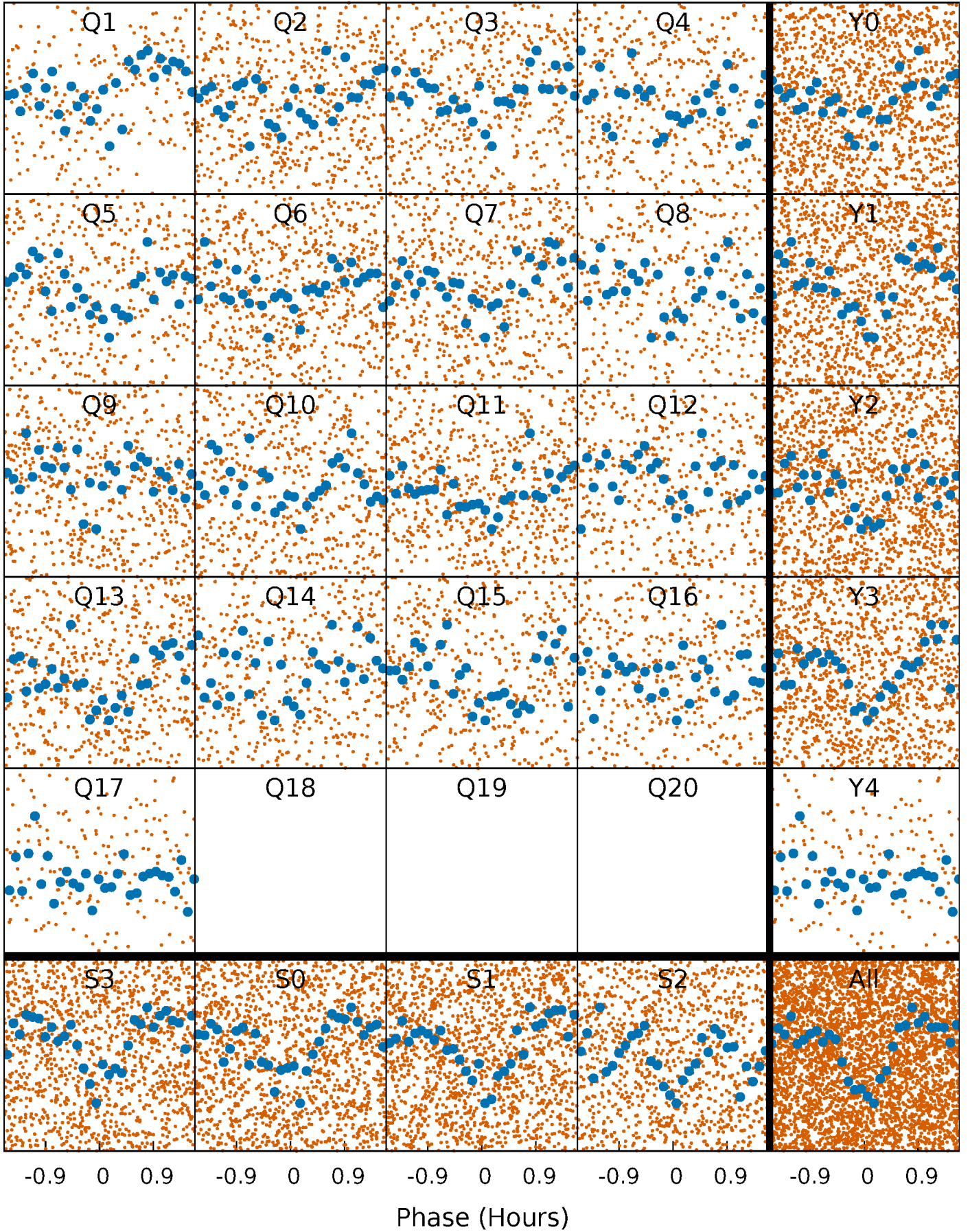


Non-Whitened Vs. Whitened Light Curve



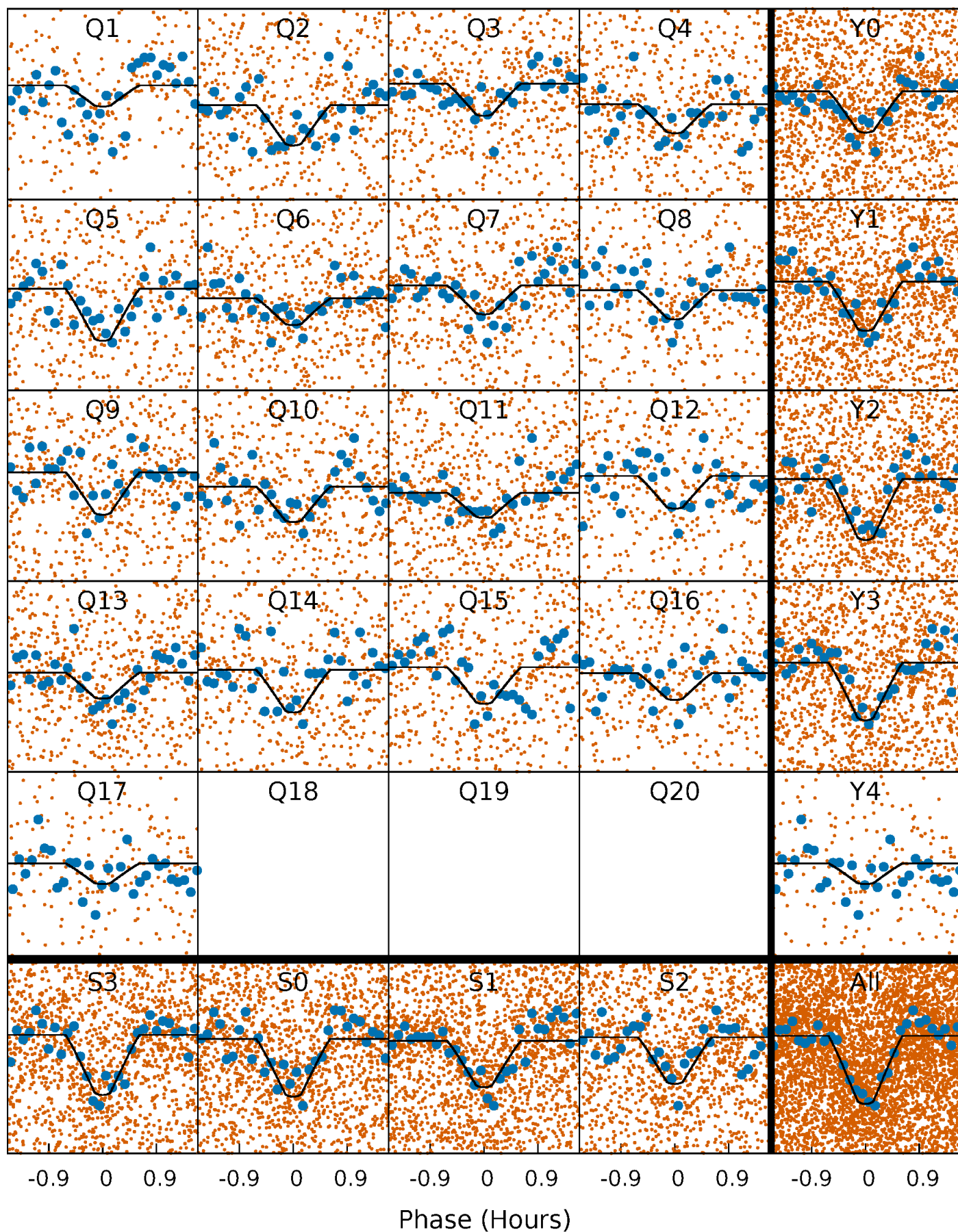
PDC Quarter-Phased Transit Curves

TCE 007613246-01 P= 0.769122 Days $T_0=131.569346$ (BKJD)



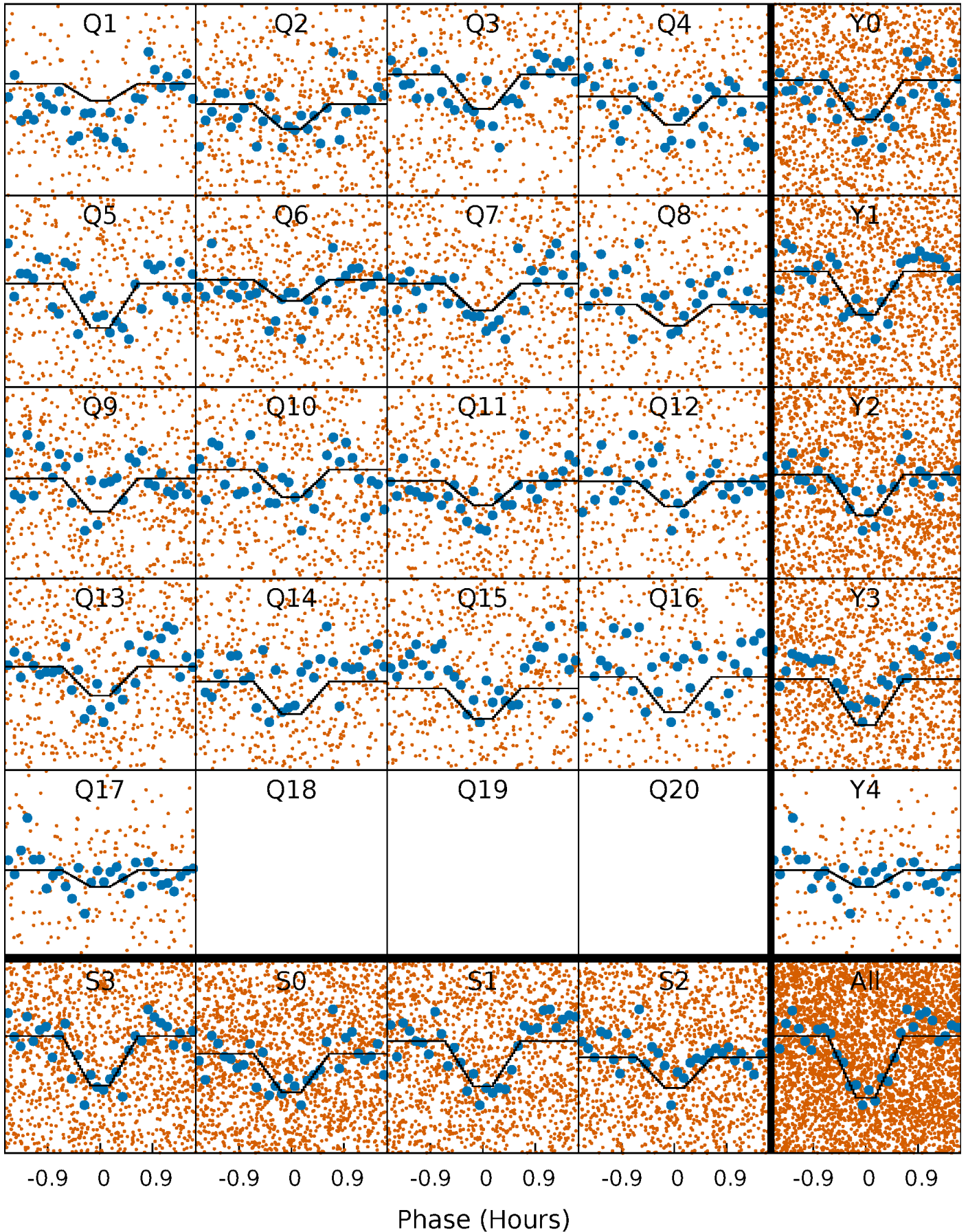
DV Quarter-Phased Transit Curves

TCE 007613246-01 P= 0.769122 Days $T_0=131.569346$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

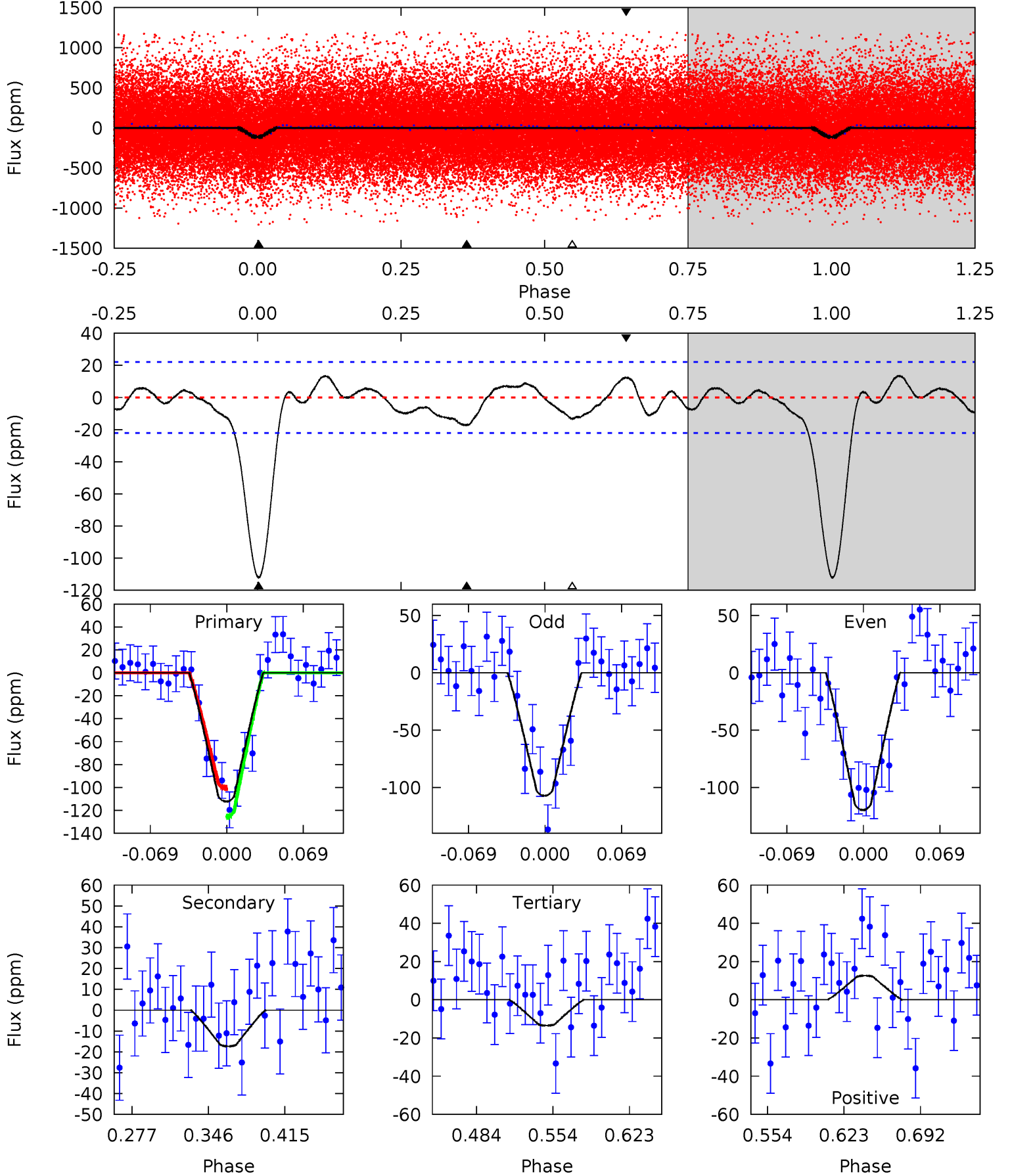
TCE 007613246-01 P= 0.769129 Days $T_0=131.562806$ (BKJD)



DV Model-Shift Uniqueness Test

007613246-01, P = 0.769122 Days, E = 130.800224 Days

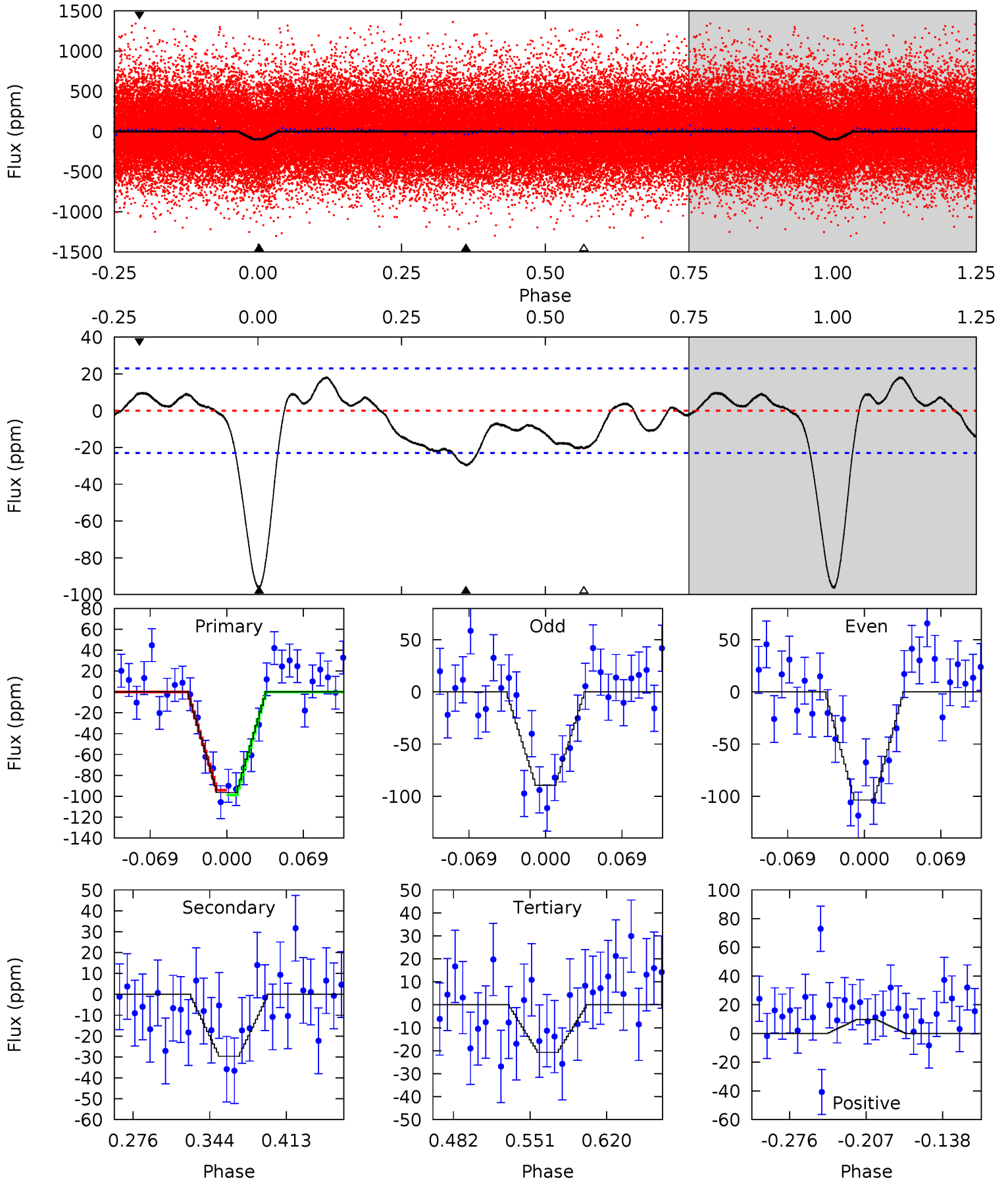
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.6	3.64	2.84	2.65	4.64	1.82	1.38	20.8	20.9	0.80	0.99	1.32	0.97	0.11	2.69



Alt Model-Shift Uniqueness Test

007613246-01, P = 0.769129 Days, E = 130.793677 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.5	6.00	4.19	1.97	4.64	1.82	1.99	15.3	17.5	1.81	4.03	1.43	0.93	0.16	0.47



Stellar Parameters For KIC 007613246

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6024^{+179}_{-179}	$4.561^{+0.036}_{-0.204}$	$-0.480^{+0.300}_{-0.300}$	$0.831^{+0.236}_{-0.059}$	$0.916^{+0.097}_{-0.108}$	$2.248^{+0.436}_{-1.148}$
	+3%/-3%	+1%/-4%	+62%/-62%	+28%/-7%	+11%/-12%	+19%/-51%
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 007613246-01 / KOI 3062.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-17 ± 5	$1.10^{+0.28}_{-0.26}$	2748^{+186}_{-114}	3817^{+483}_{-374}	$1.926^{+1.499}_{-0.824}$
Alt.	-30 ± 5	$0.93^{+0.30}_{-0.25}$	2744^{+185}_{-116}	4539^{+758}_{-443}	$4.579^{+4.225}_{-1.953}$

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

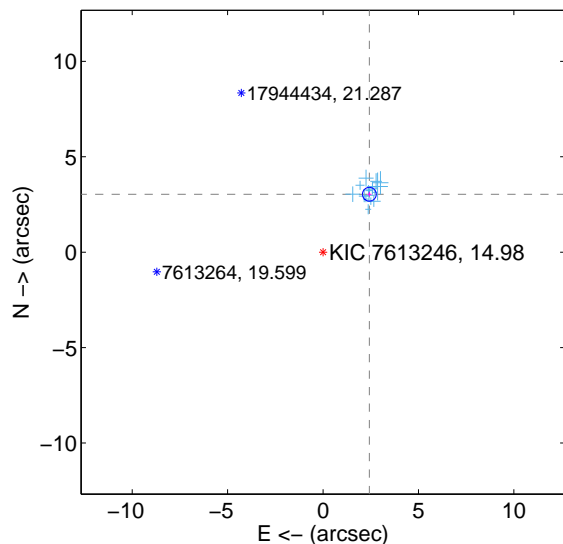
Supplemental centroid analysis for 007613246-01. Kepler magnitude: 14.98. Transit SNR 14.87

There are 16 quarters with good PRF difference image offsets

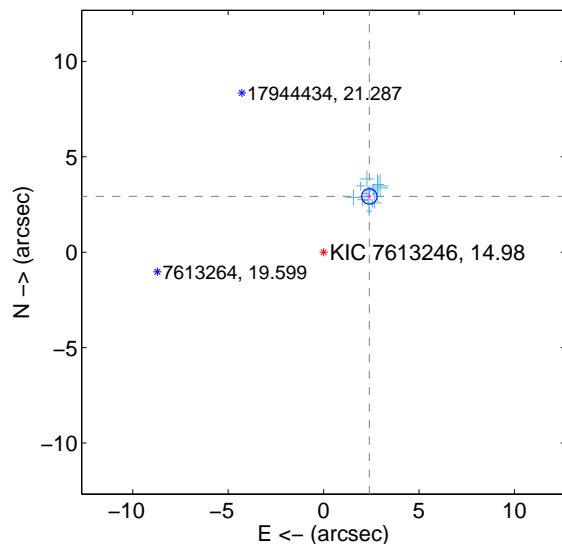
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.888 ± 0.120	32.35	-2.429 ± 0.111	3.036 ± 0.120
PRF-fit source offset from KIC position	3.782 ± 0.135	28.10	-2.398 ± 0.116	2.924 ± 0.130
photometric centroid source offset	7.81 ± 0.92	8.51	-3.46 ± 1.01	7.01 ± 0.90

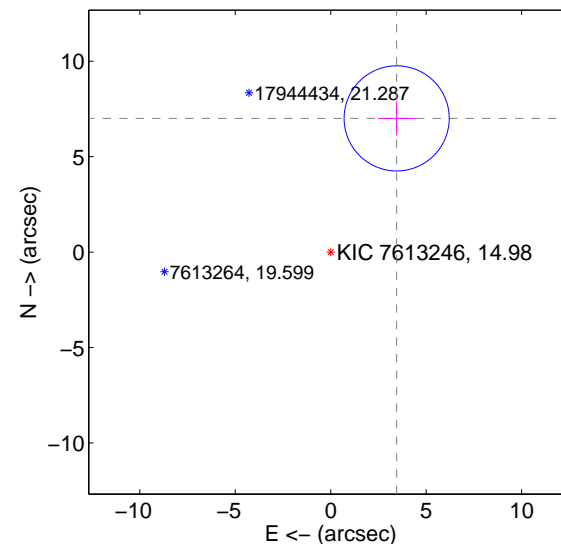
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

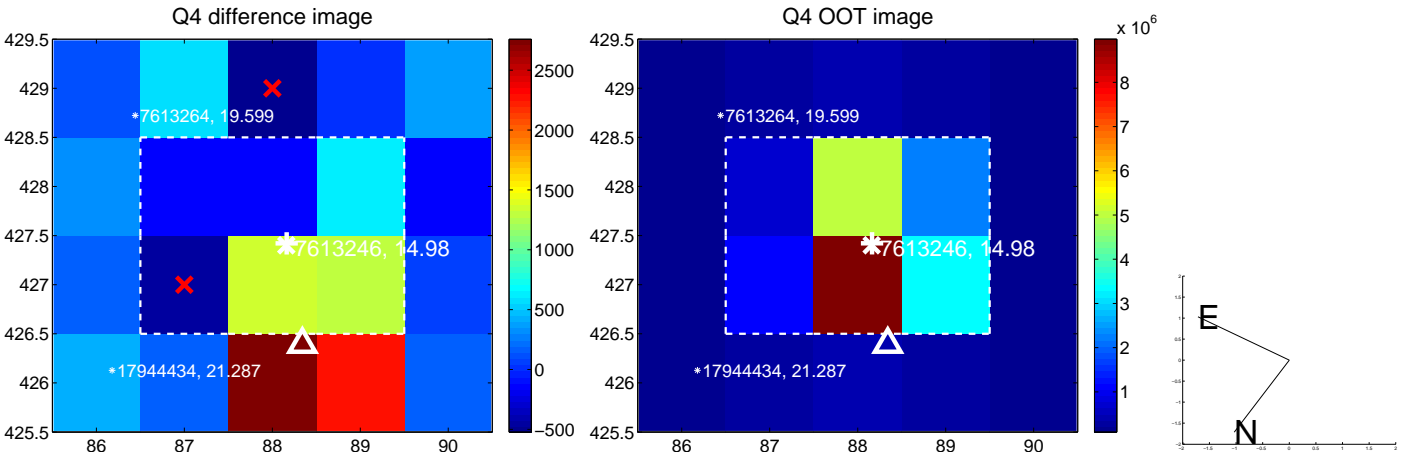
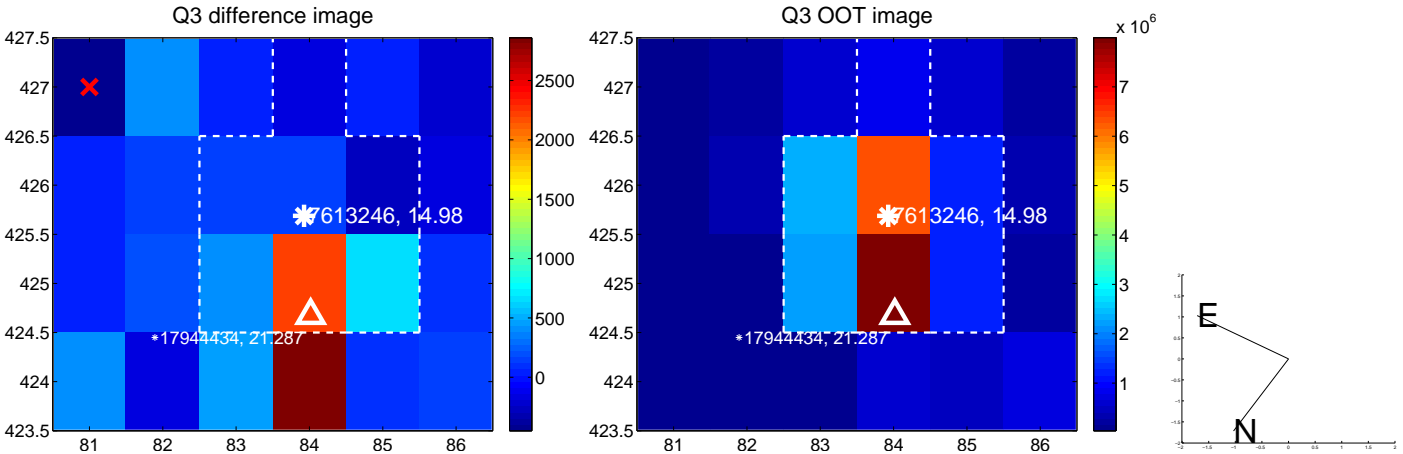
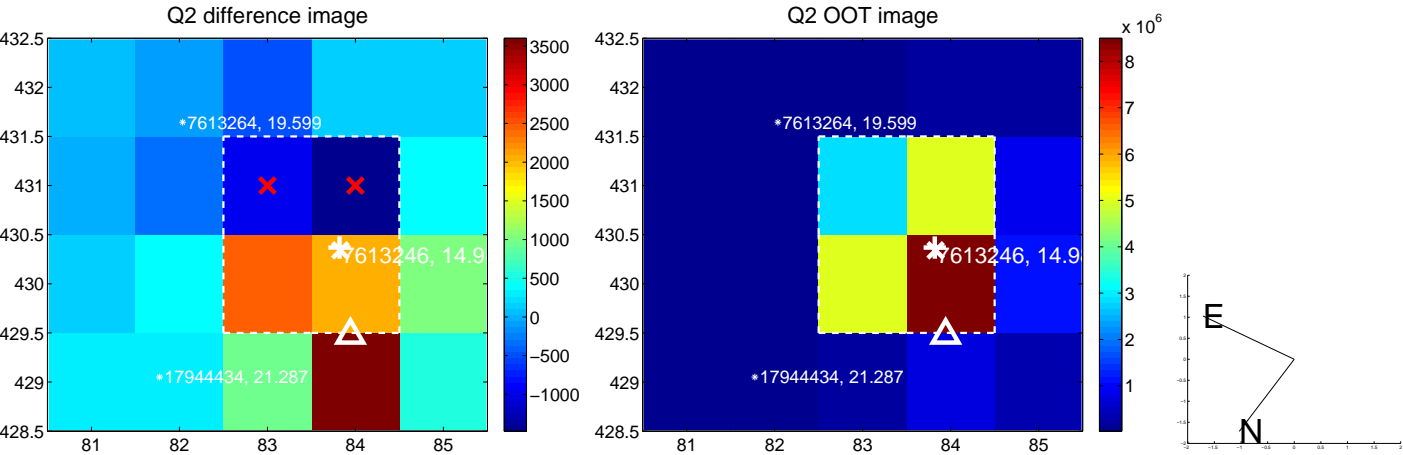
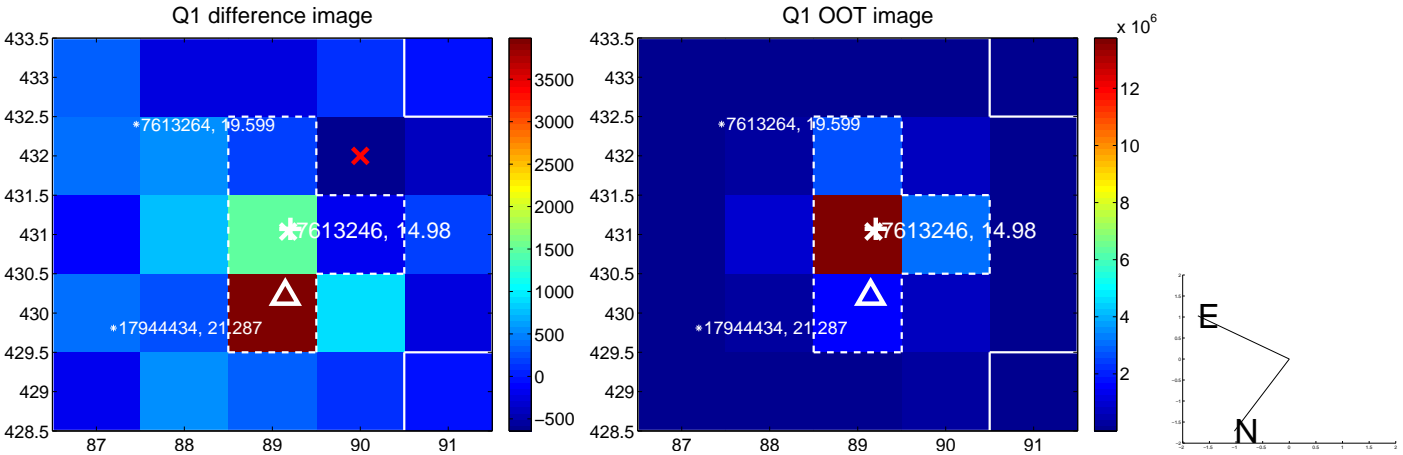


offset from photometric centroids

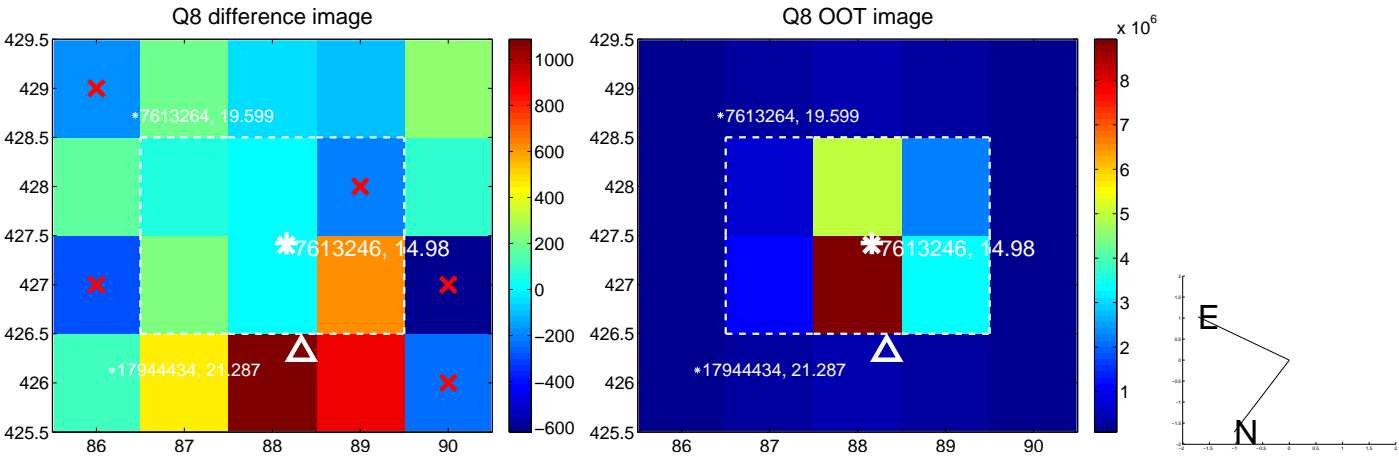
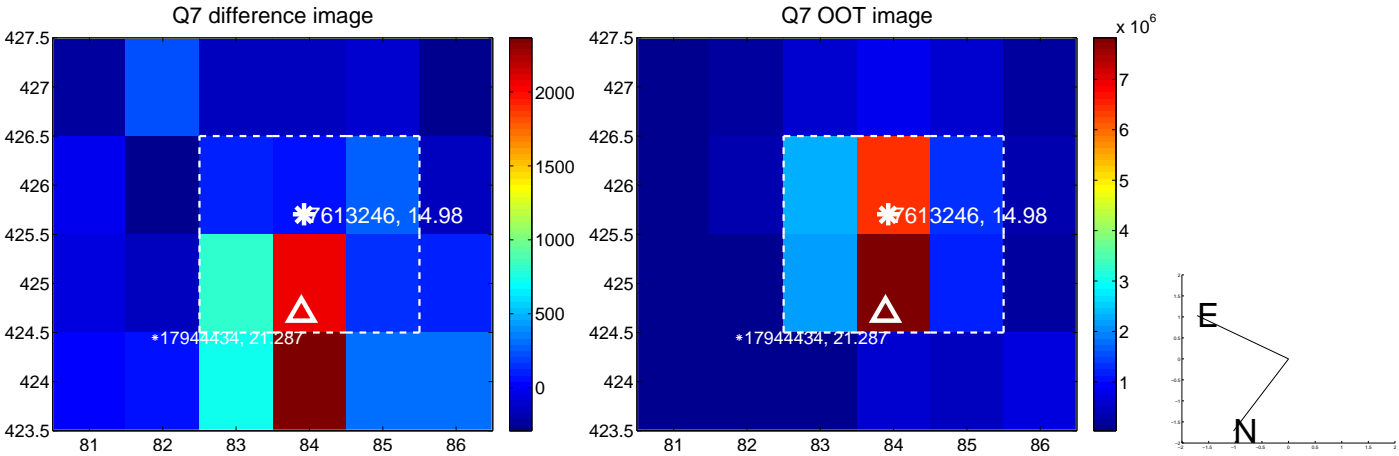
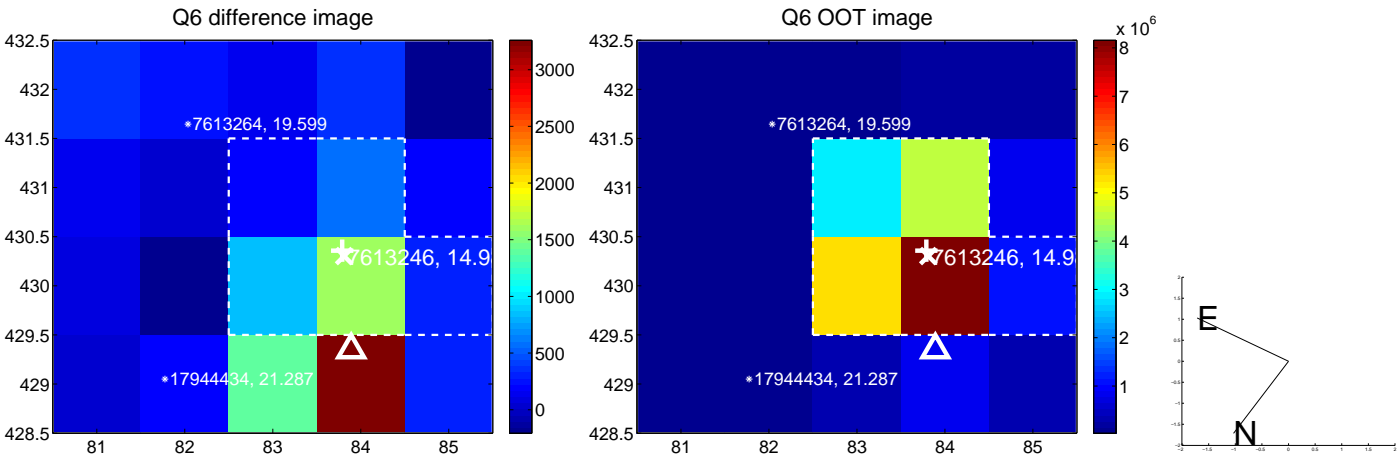
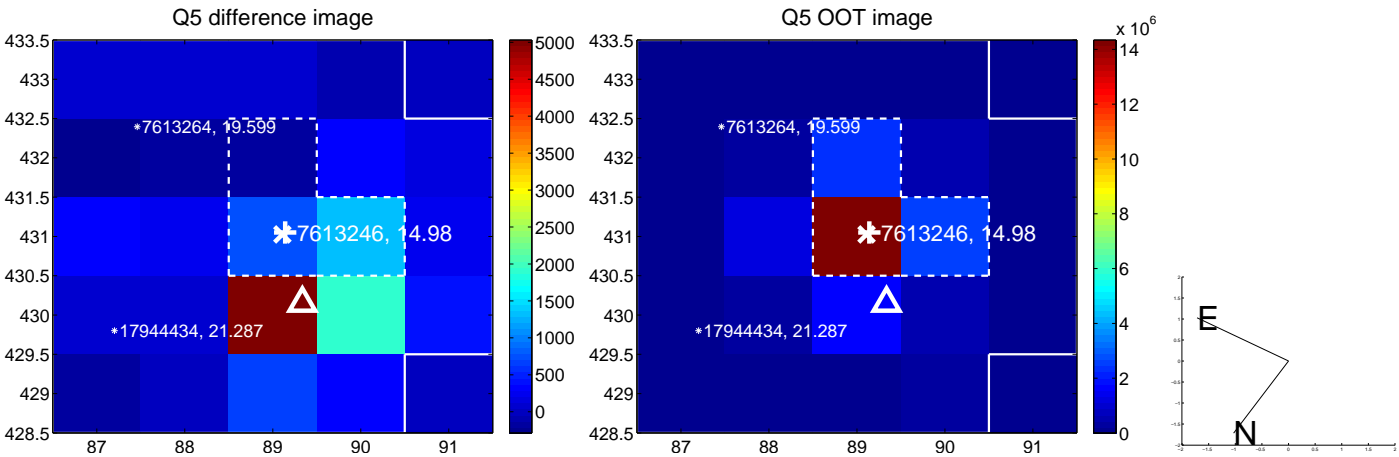


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

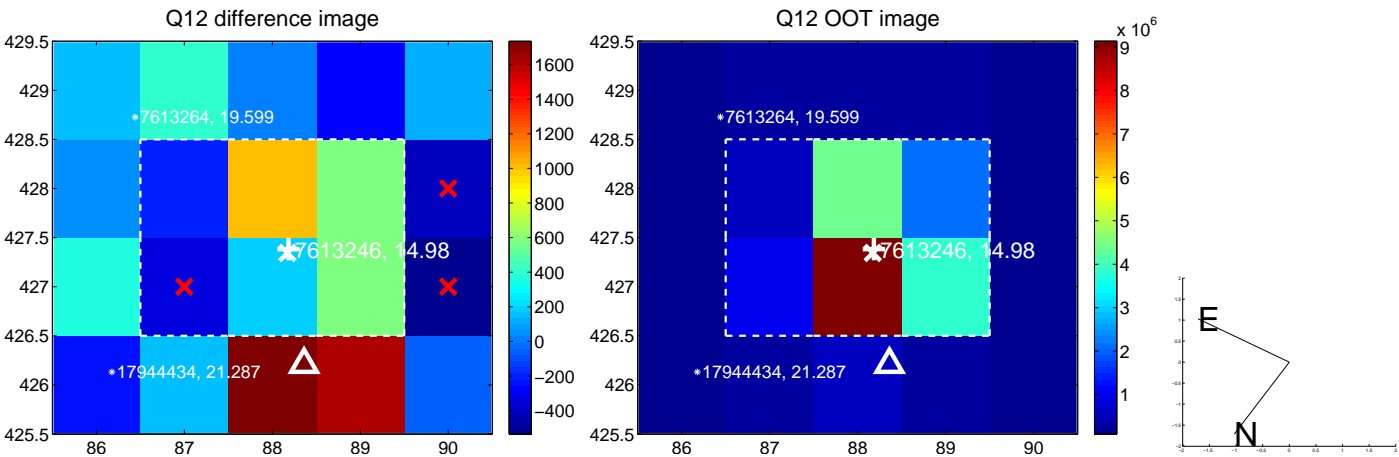
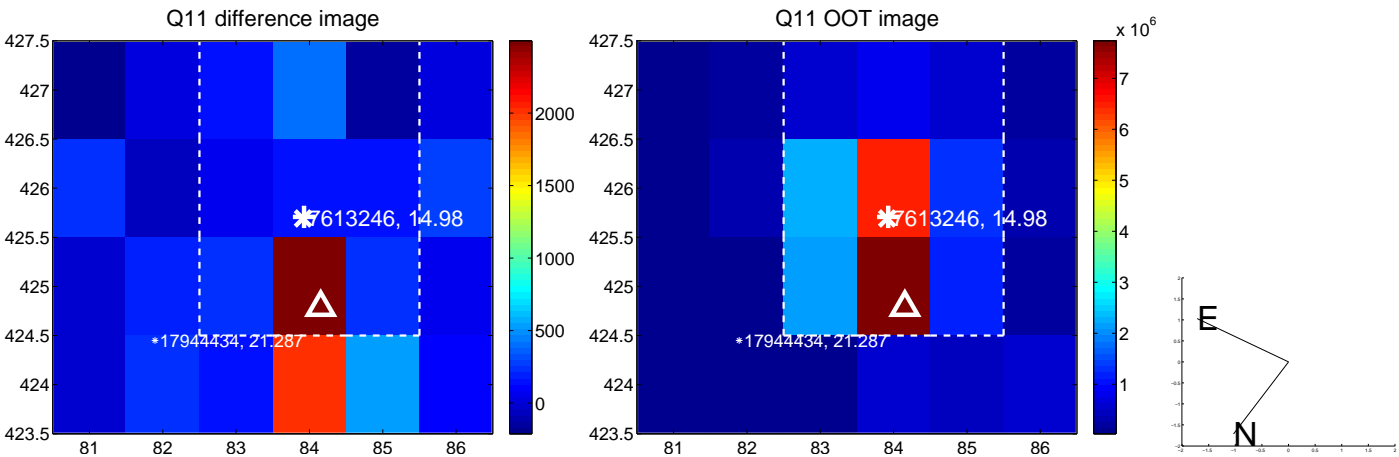
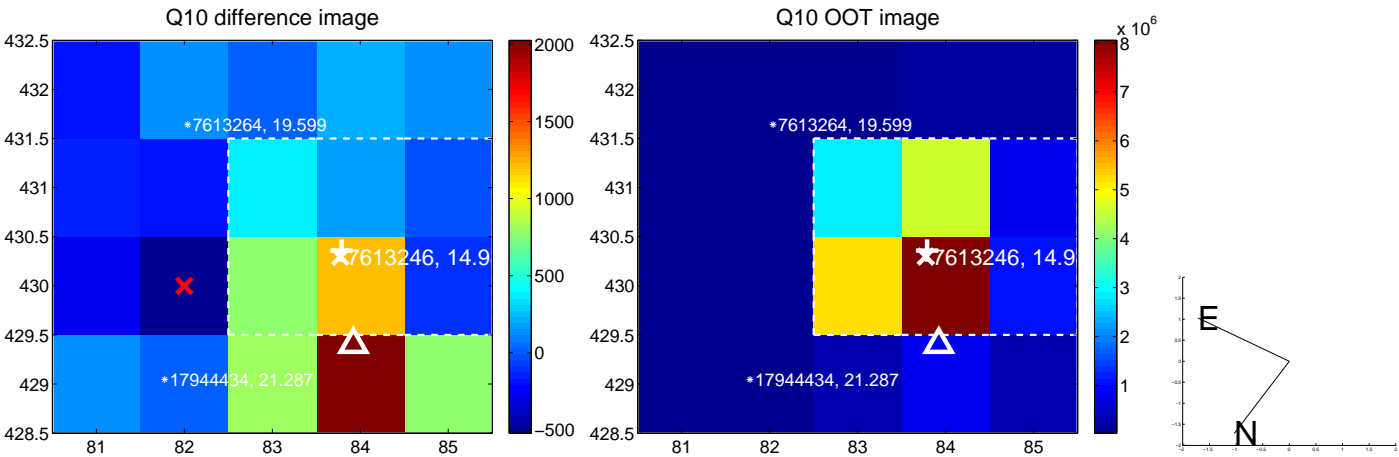
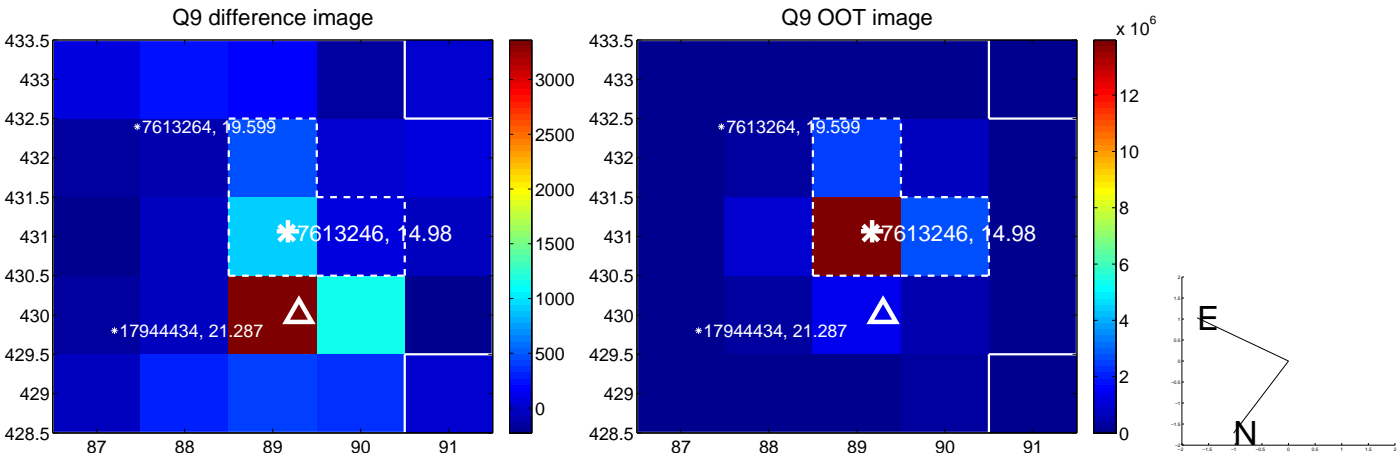
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



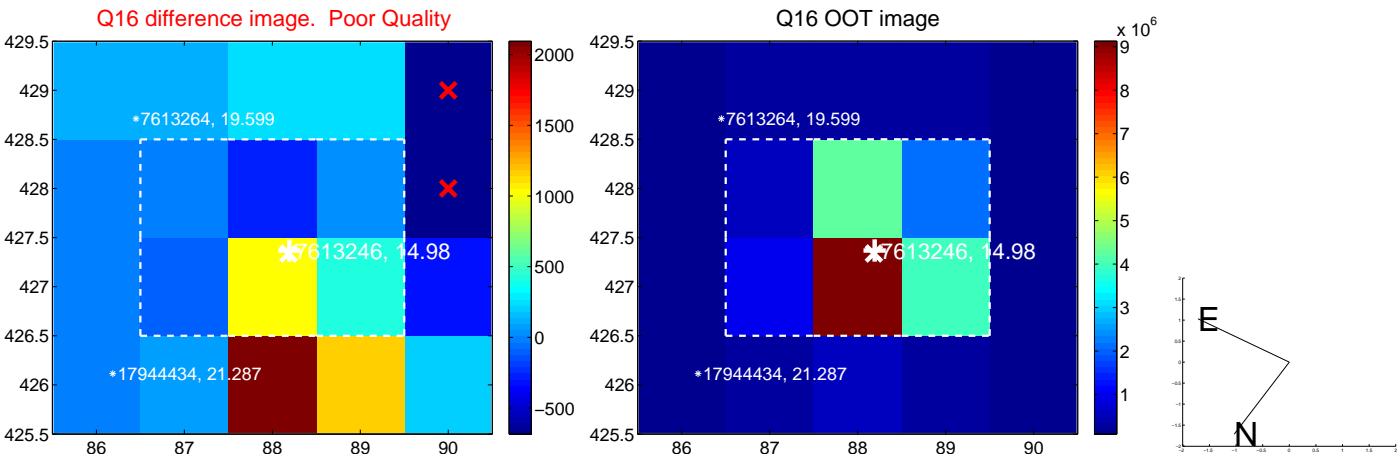
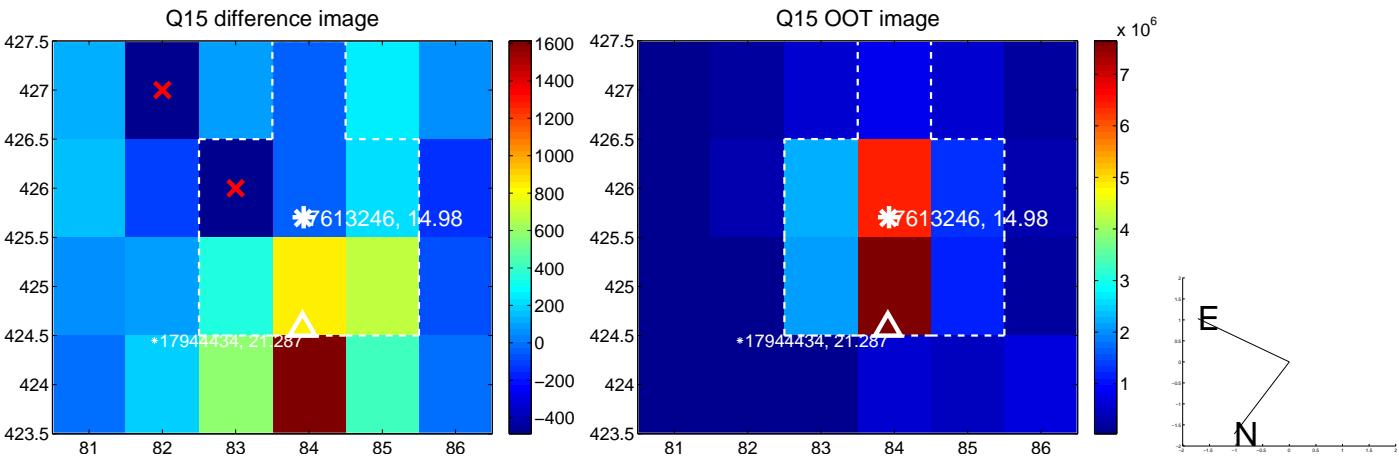
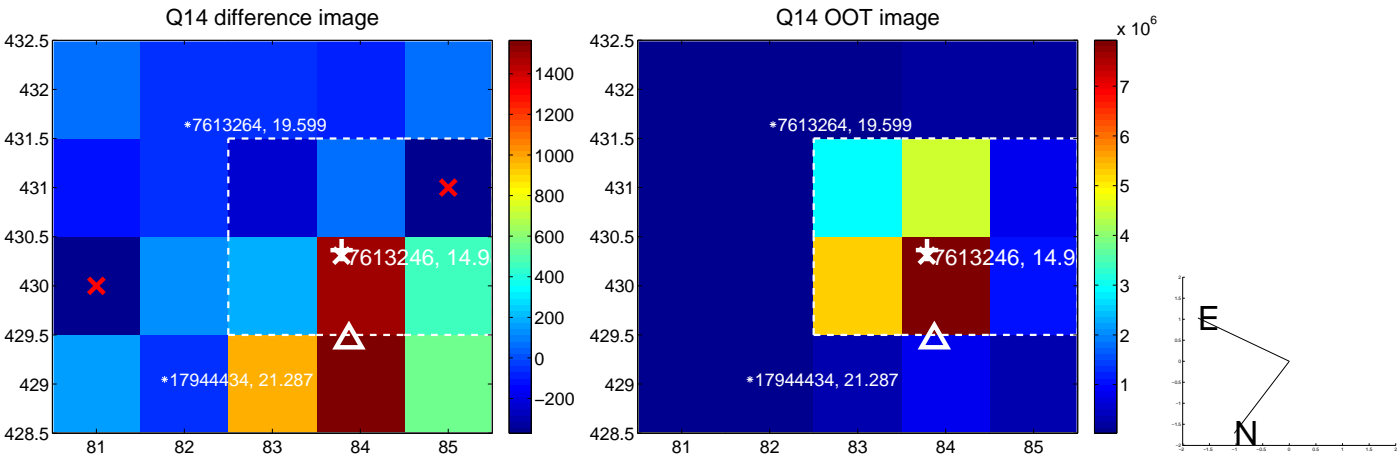
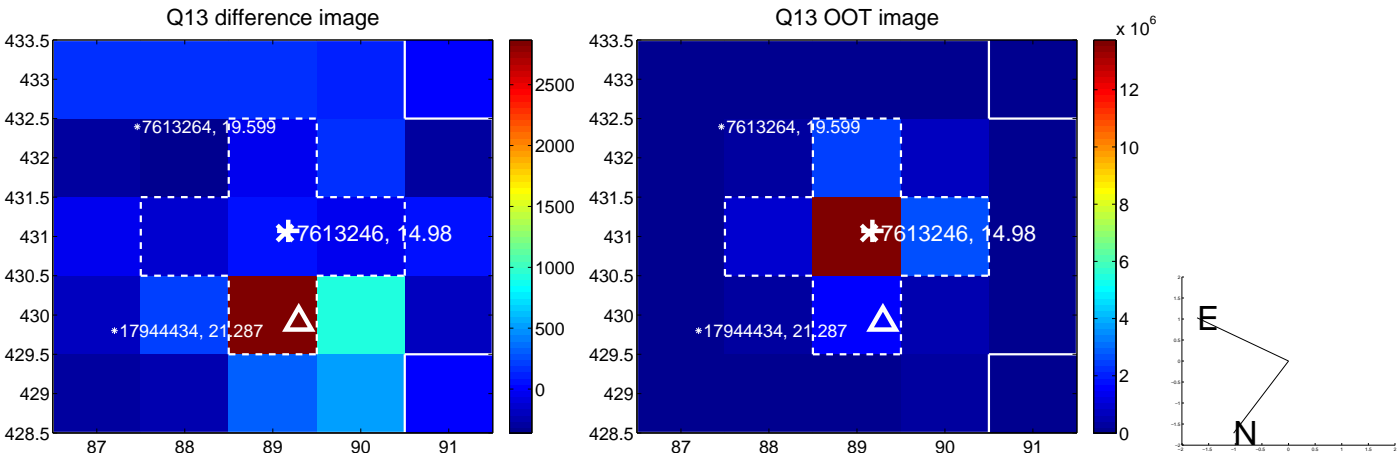
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



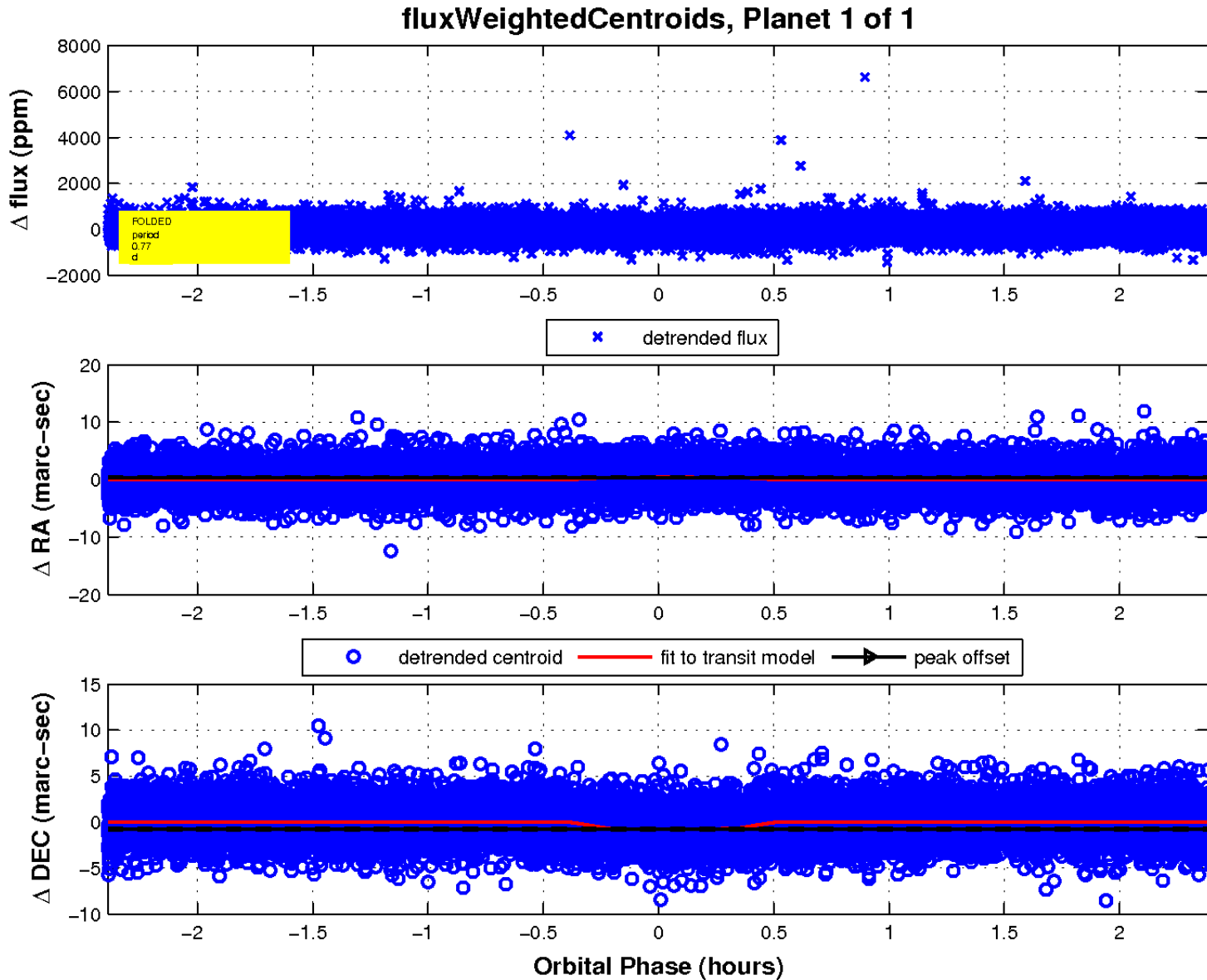
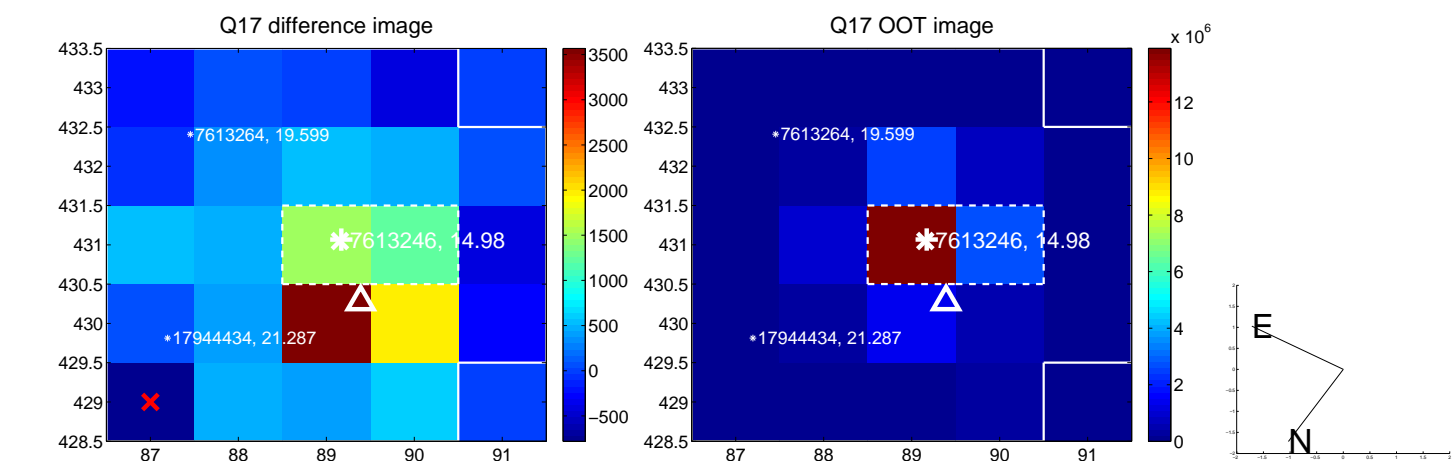
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

