

KIC 007458762

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})
007458762-01	OBS	0887.01	7.411144	138.290360	609.5	2.645	42.6	47.6	0.92	5849	2.64	158.58

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007458762-01	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.

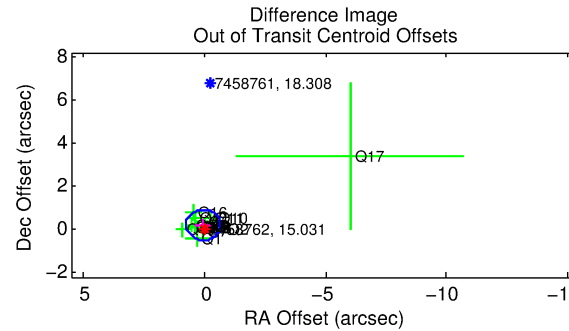
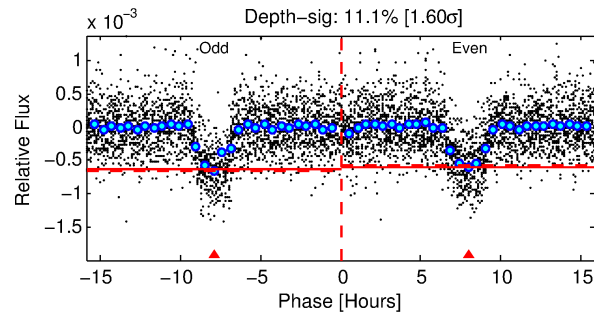
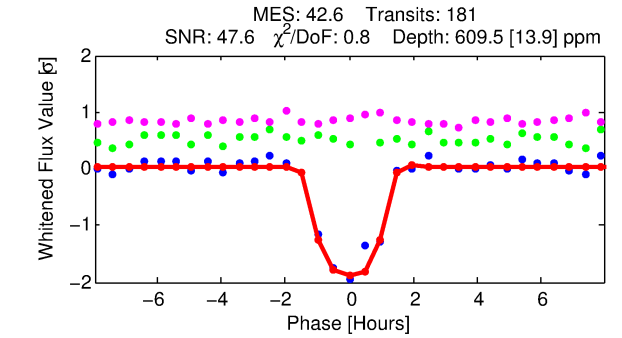
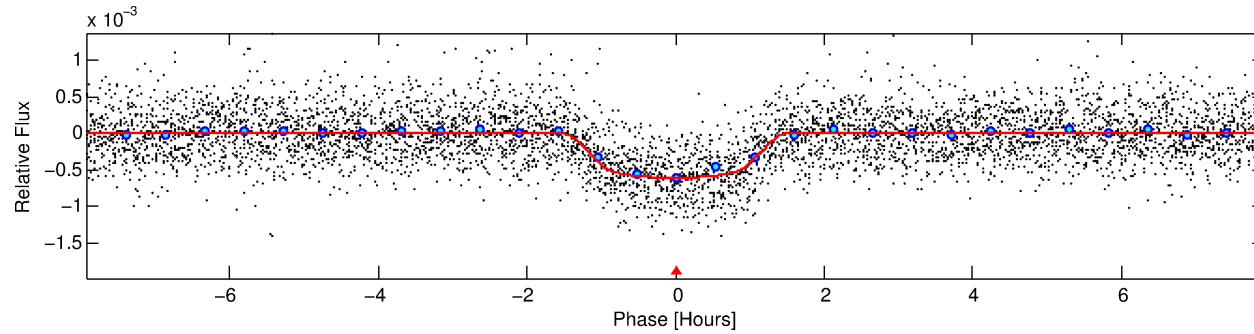
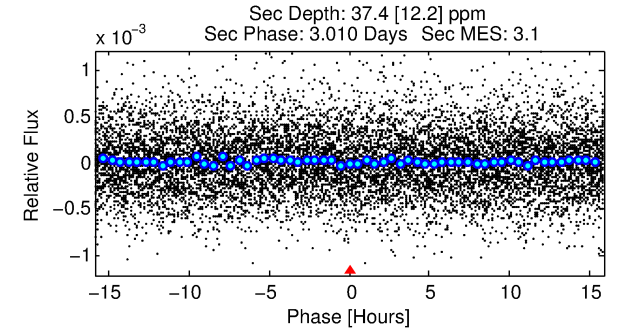
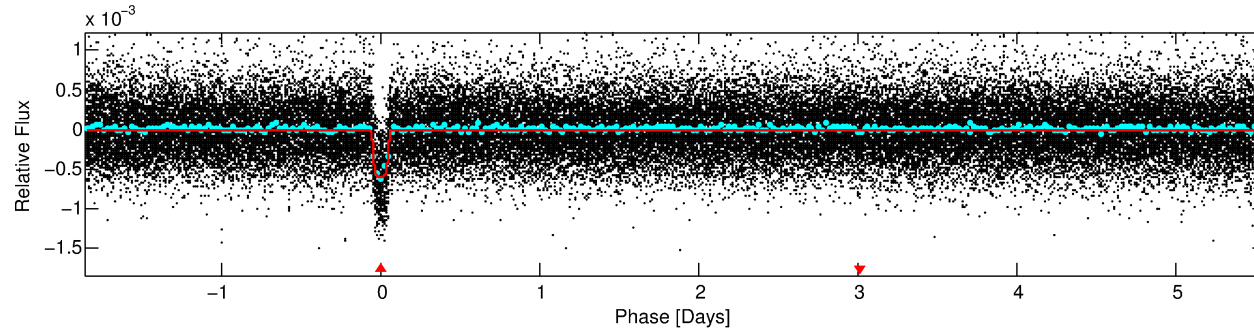
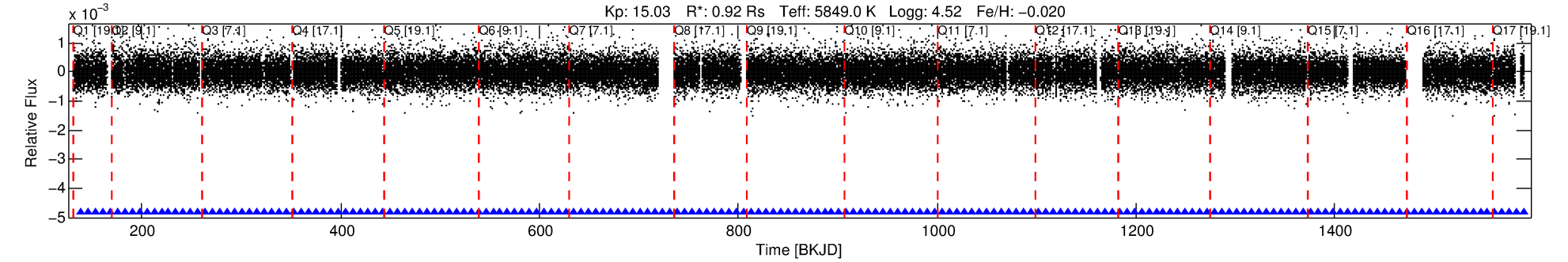
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007458762-01

No Significant Match Found

DV One-Page Summary

KIC: 7458762 Candidate: 1 of 1 Period: 7.411 d
KOI: K00887.01 Corr: 0.968



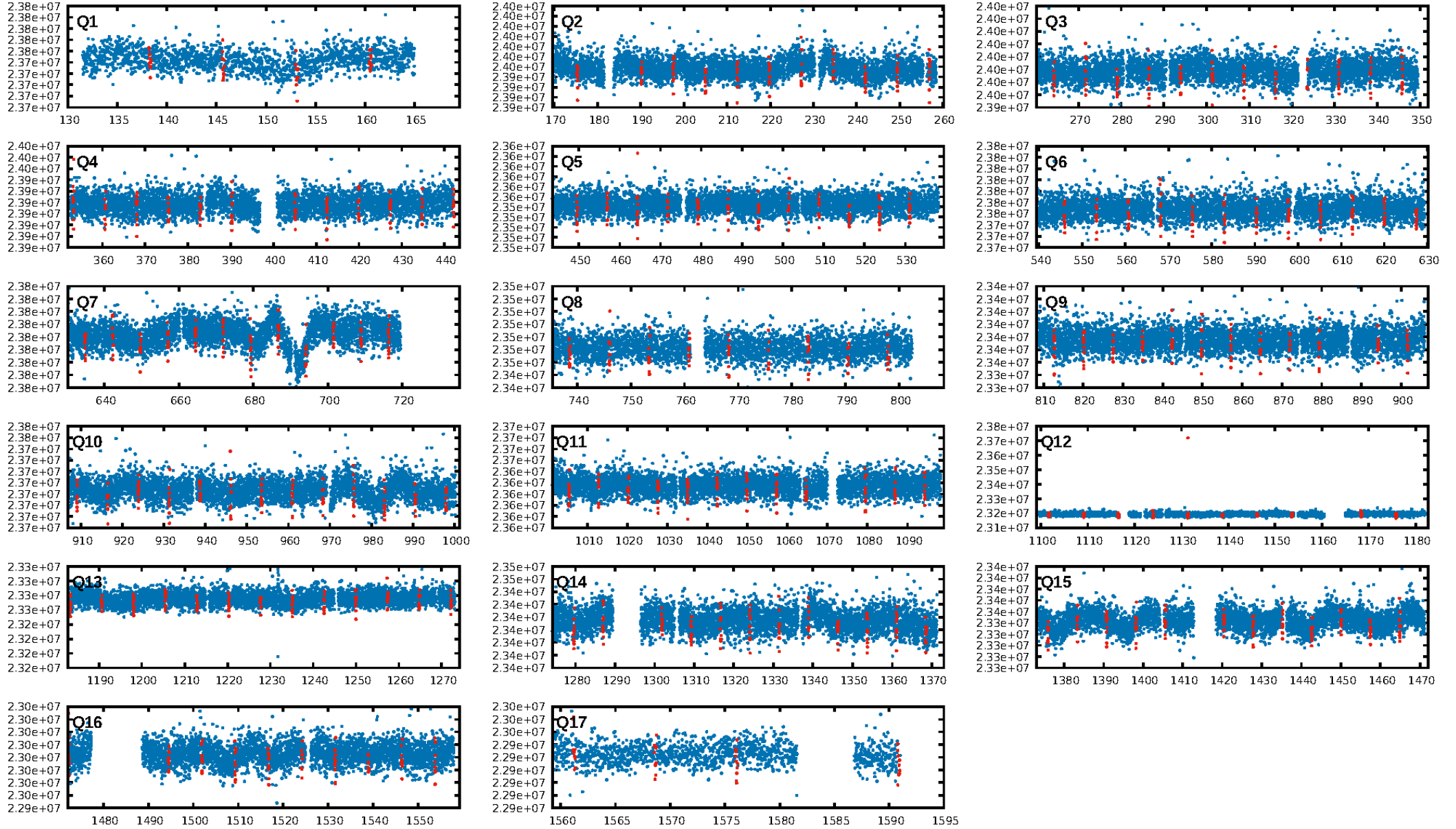
DV Fit Results:

Period = 7.41114 [0.00001] d
Epoch = 138.2904 [0.0012] BKJD
Rp/R* = 0.0263 [0.0025]
a/R* = 11.48 [5.10]
b = 0.88 [0.12]
Seff = 158.58 [64.05]
Teff = 905 [91] K
Rp = 2.64 [0.87] Re
a = 0.0747 [0.0197] AU
Ag = 16.50 [8.88] [1.74 σ]
Teffp = 2820 [283] K [6.44 σ]

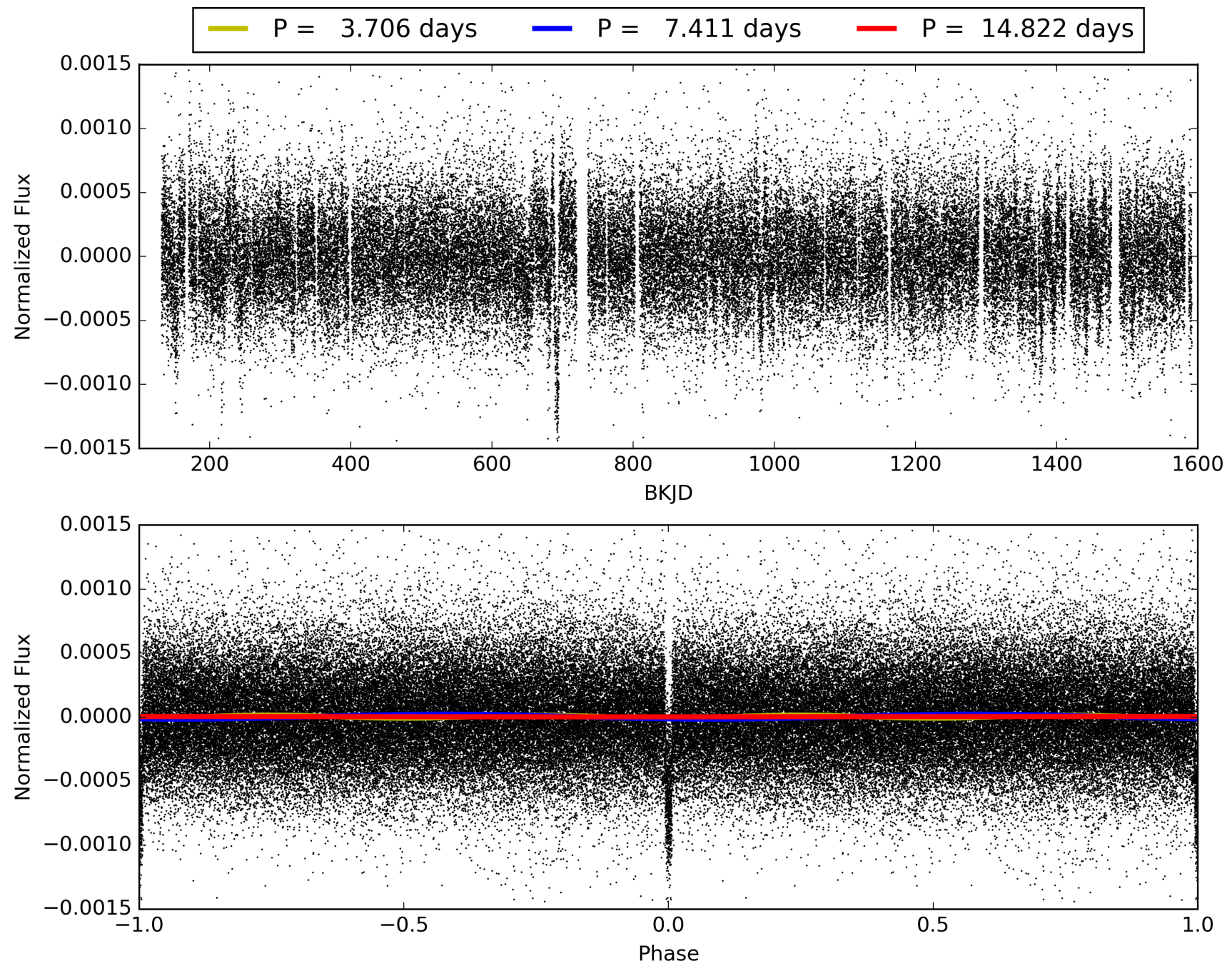
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [173/173]
GhostDiagnostic-chr: 19.66
Centroid-sig: 0.0%
Centroid-so: 0.335 arcsec [1.25 σ]
OotOffset-rm: 0.182 arcsec [0.77 σ]
KicOffset-rm: 0.155 arcsec [0.37 σ]
OotOffset-st: 4/4/3/5 [16]
KicOffset-st: 4/4/3/5 [16]
DiffImageQuality-fgm: 0.94 [15/16]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 007458762-01, PDC Light Curves

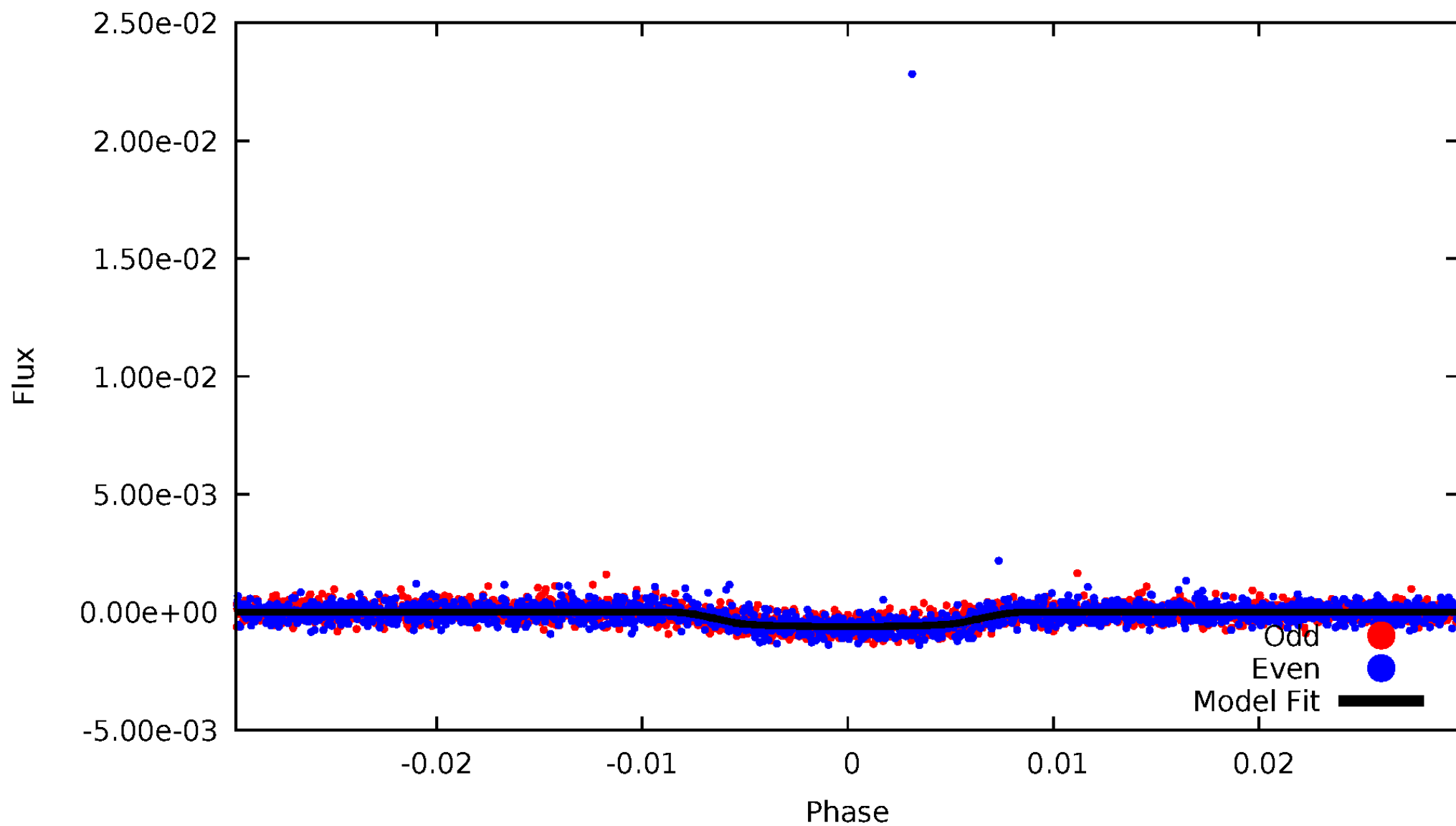


TCE 007458762-01



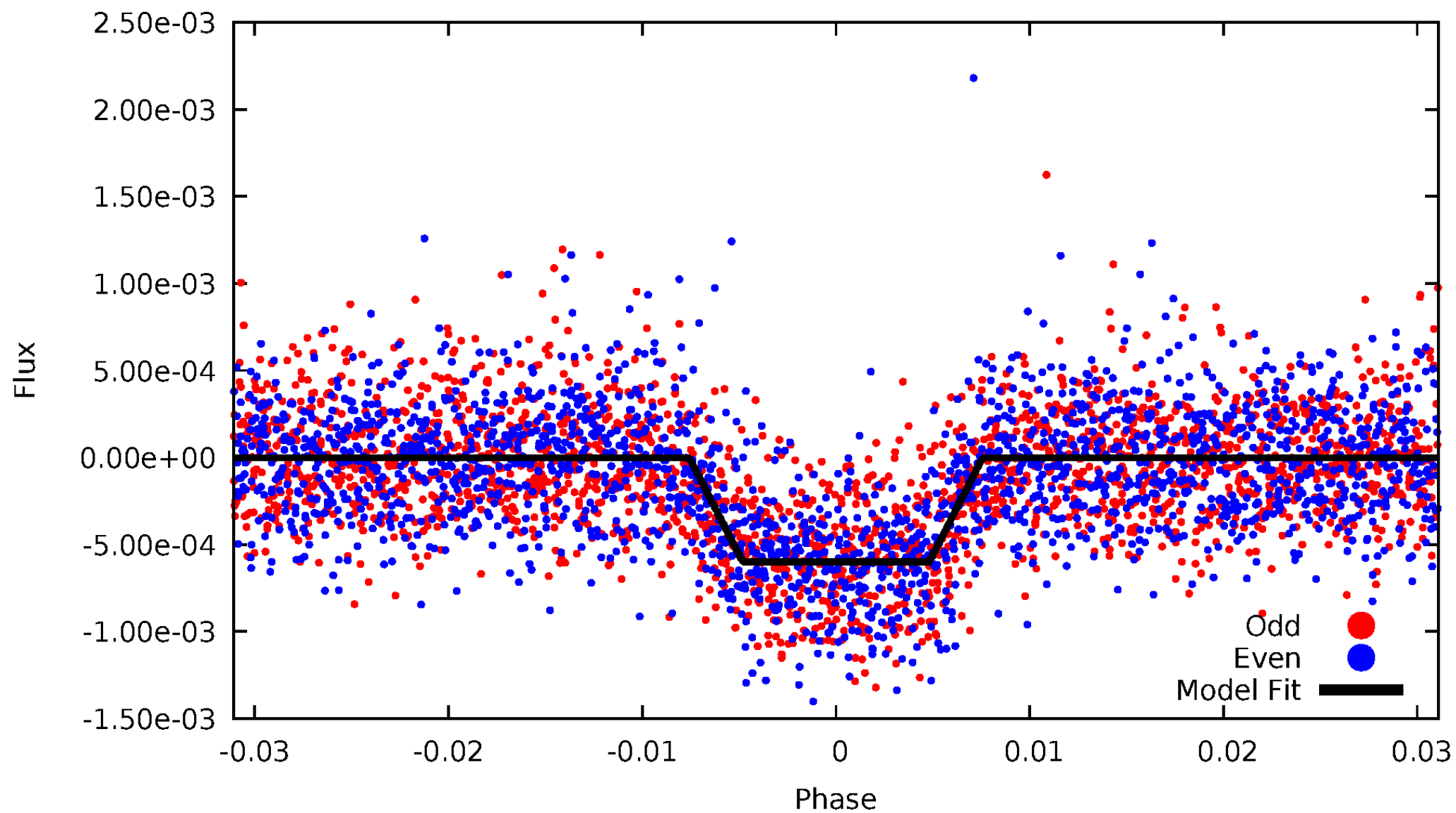
DV Odd/Even

TCE 007458762-01

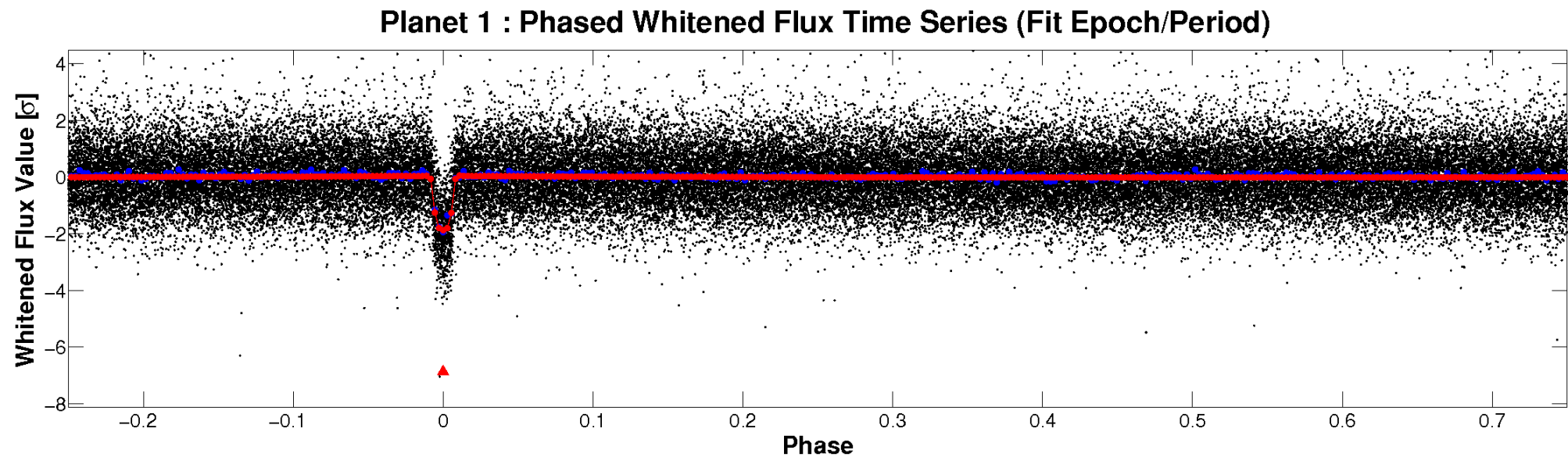
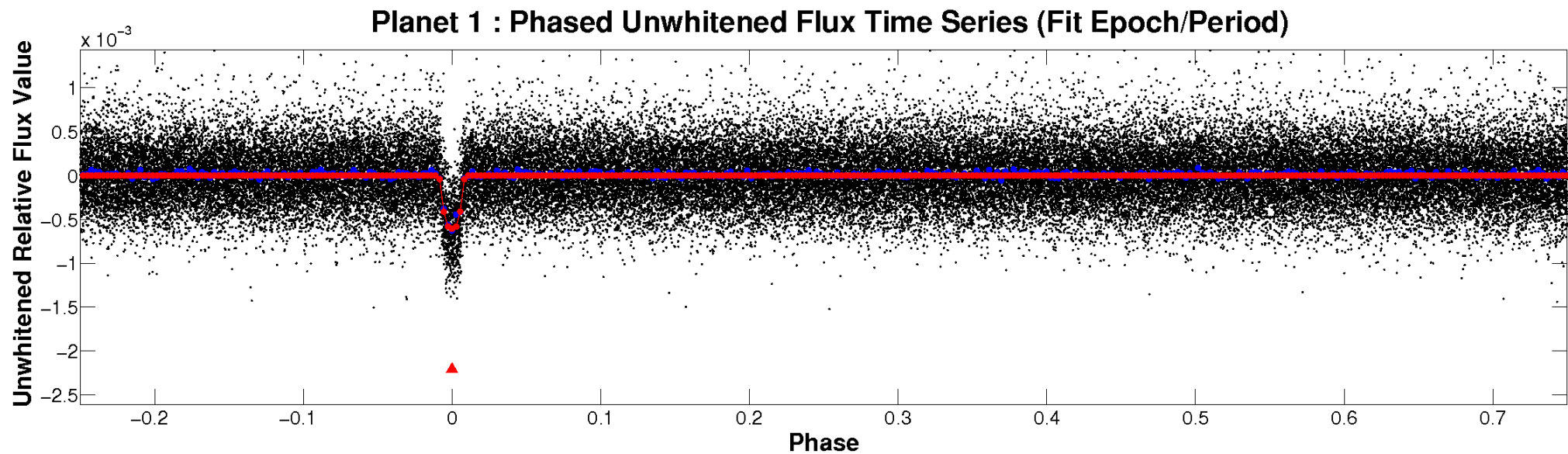


ALT Odd/Even

TCE 007458762-01

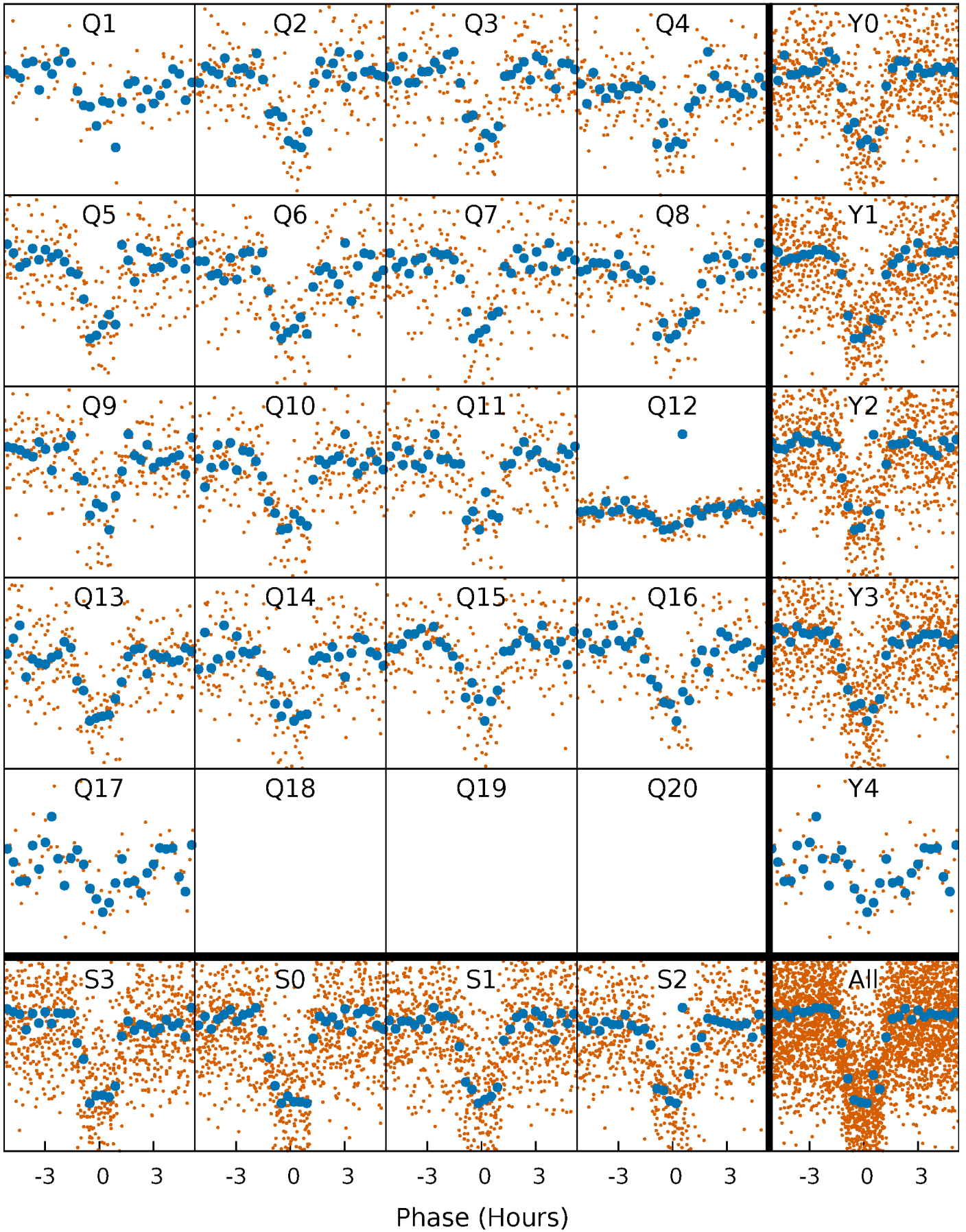


Non-Whitened Vs. Whitened Light Curve



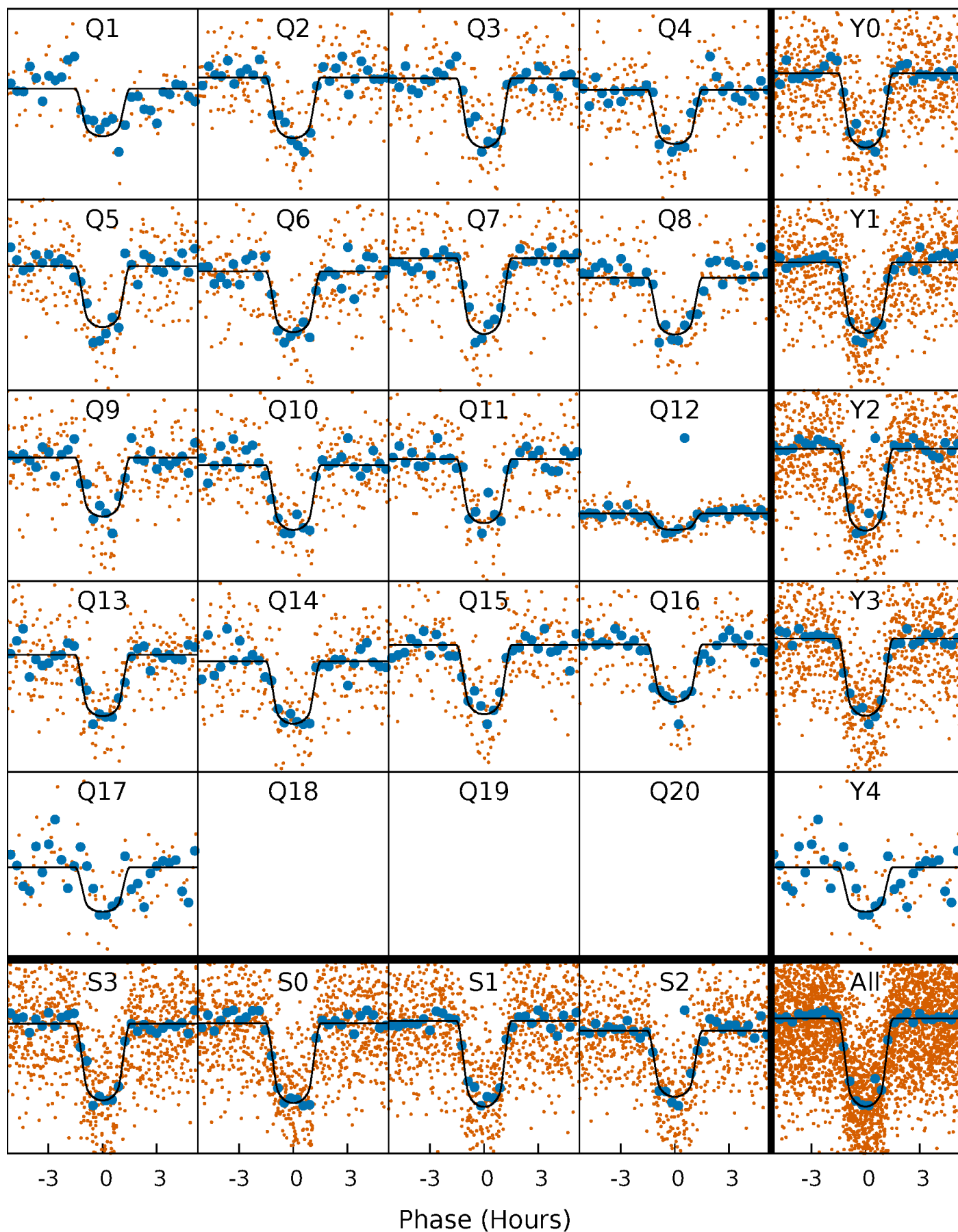
PDC Quarter-Phased Transit Curves

TCE 007458762-01 P= 7.411144 Days $T_0=138.290359$ (BKJD)



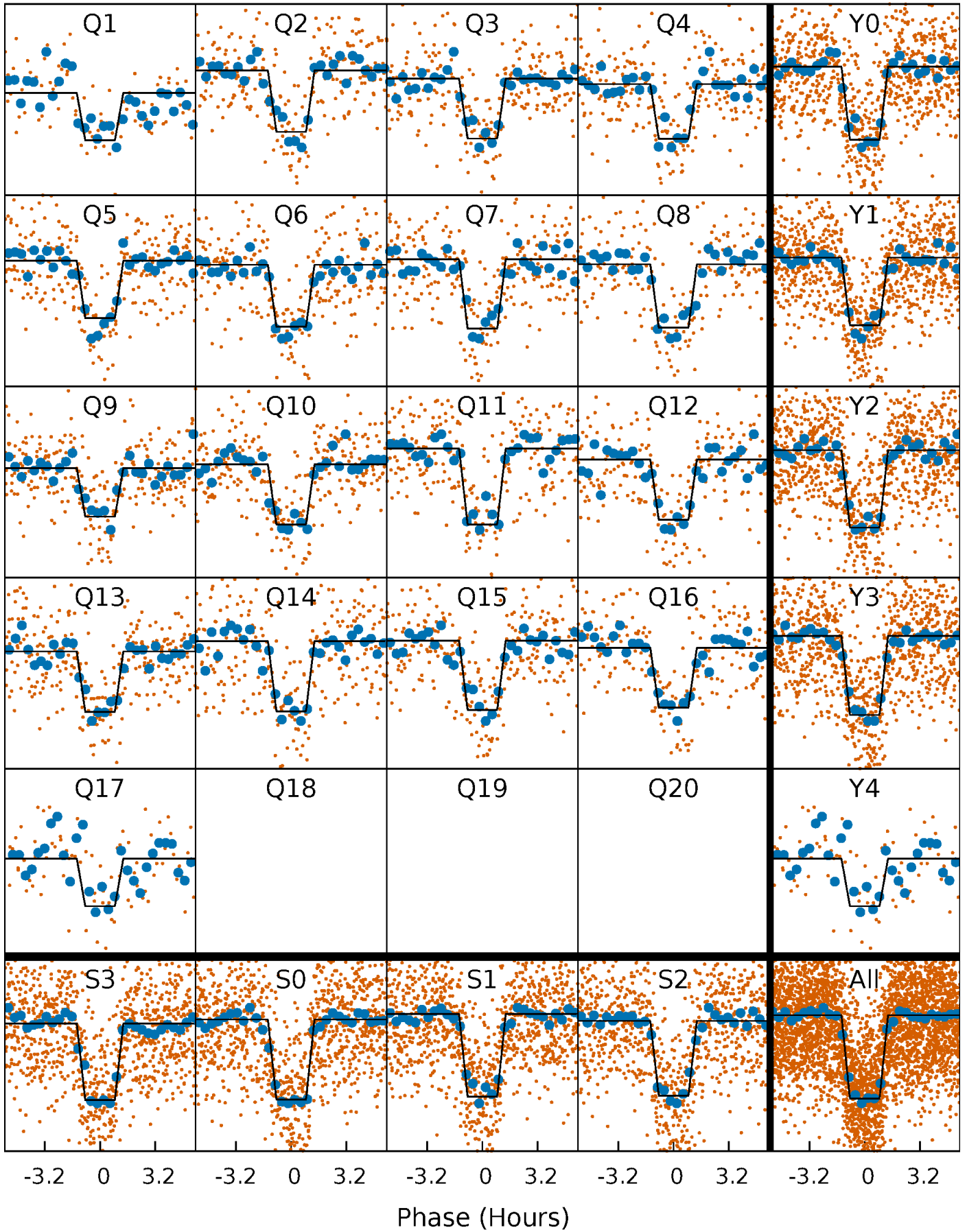
DV Quarter-Phased Transit Curves

TCE 007458762-01 P= 7.411144 Days $T_0=138.290359$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

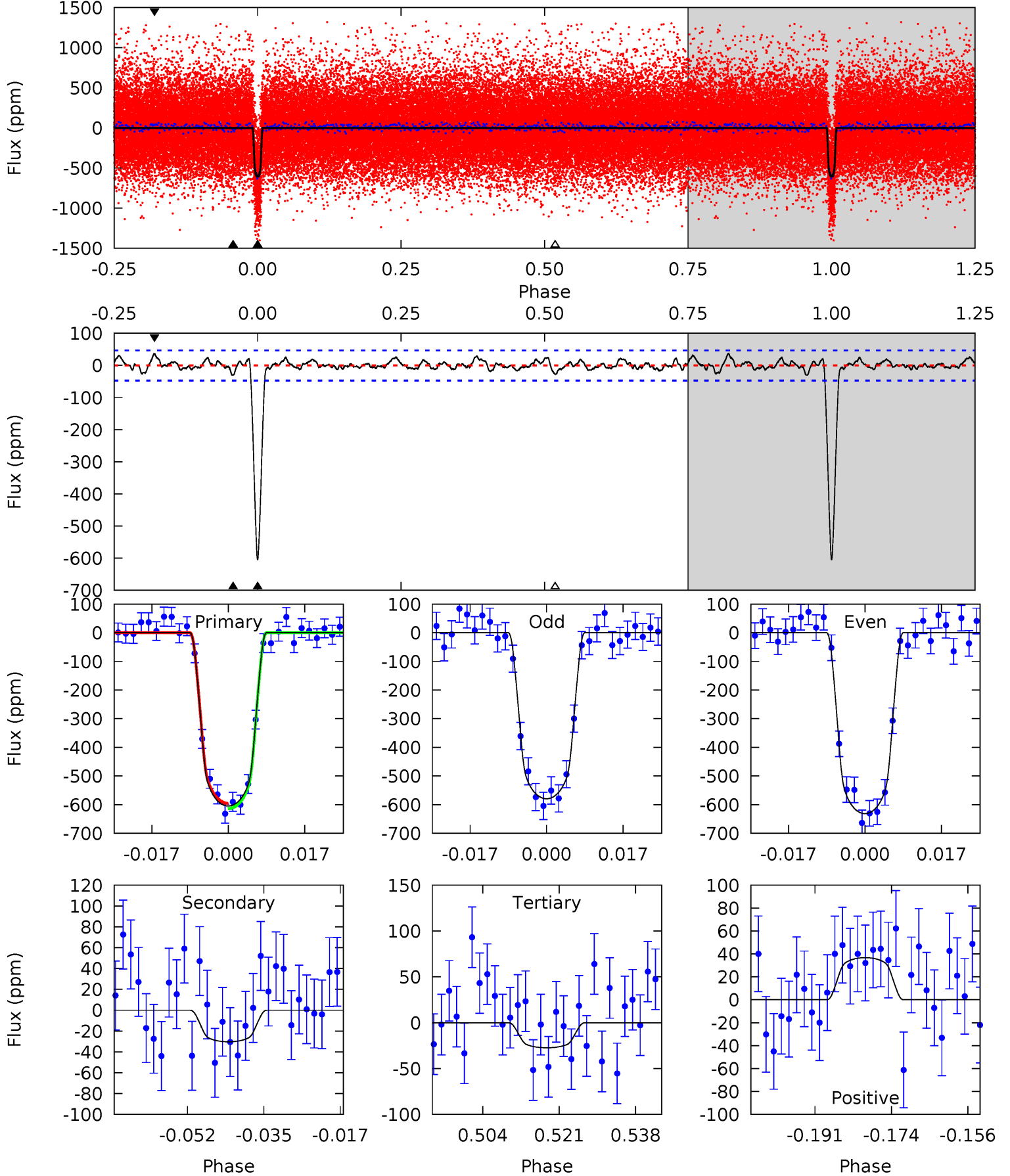
TCE 007458762-01 P= 7.411114 Days $T_0=138.293480$ (BKJD)



DV Model-Shift Uniqueness Test

007458762-01, P = 7.411144 Days, E = 130.879215 Days

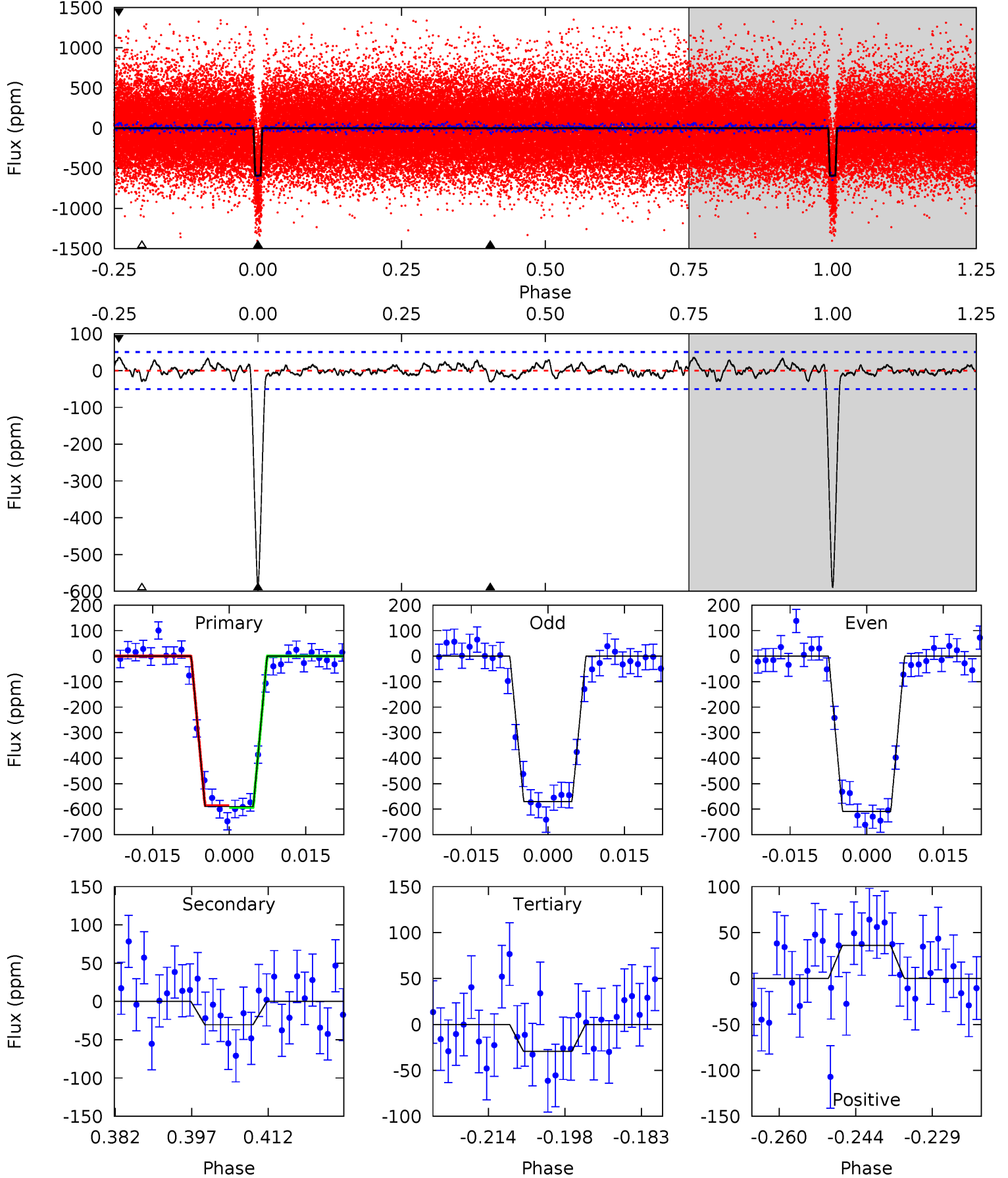
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
63.4	3.18	2.87	3.85	4.92	2.38	1.14	60.5	59.5	0.31	-0.67	2.74	0.94	0.06	0.97



Alt Model-Shift Uniqueness Test

007458762-01, P = 7.411114 Days, E = 130.882366 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
57.9	2.98	2.88	3.53	4.94	2.43	1.14	55.0	54.3	0.10	-0.55	1.90	0.98	0.06	0.33



Stellar Parameters For KIC 007458762

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5849^{+157}_{-192}	$4.517^{+0.039}_{-0.208}$	$-0.020^{+0.250}_{-0.300}$	$0.919^{+0.289}_{-0.096}$	$1.014^{+0.113}_{-0.126}$	$1.839^{+0.378}_{-0.964}$
	+3%/-3%	+1%/-5%	+1250%/-1500%	+31%/-10%	+11%/-12%	+21%/-52%
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 007458762-01 / KOI 0887.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-30 ± 10	$2.80^{+0.46}_{-0.37}$	1295^{+87}_{-62}	3215^{+195}_{-219}	11^{+6}_{-4}
Alt.	-30 ± 10	$2.58^{+0.46}_{-0.33}$	1294^{+90}_{-64}	3287^{+218}_{-238}	13^{+7}_{-5}

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

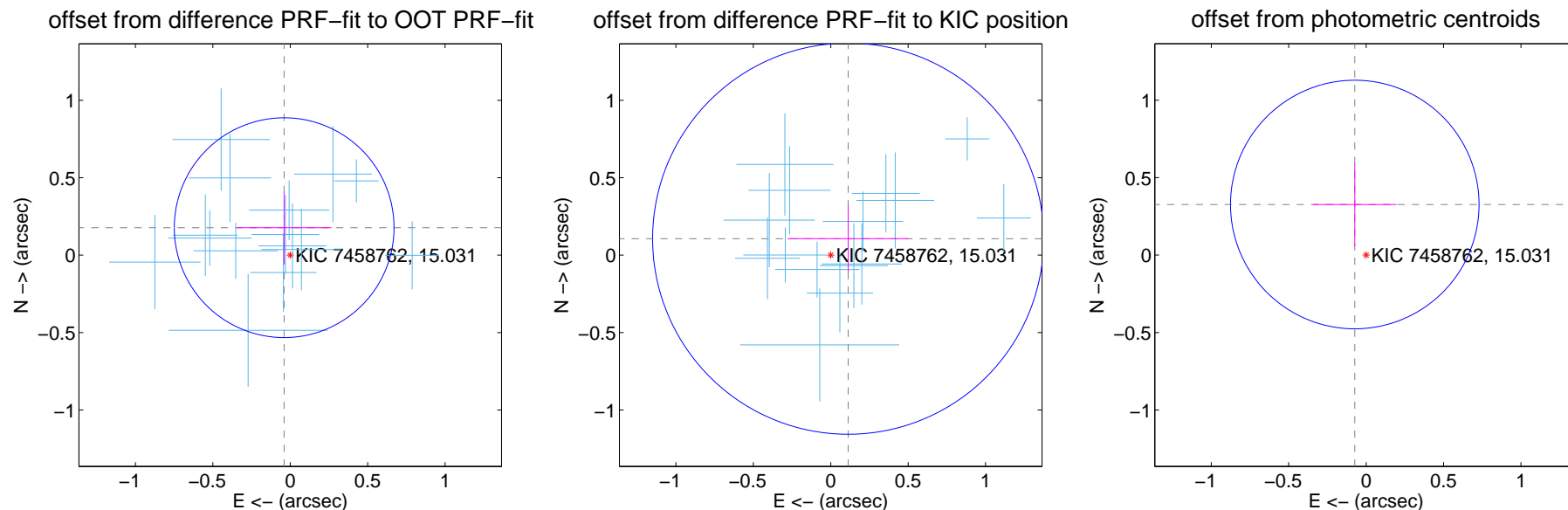
DV Centroid Data

Supplemental centroid analysis for 007458762-01. Kepler magnitude: 15.03. Transit SNR 47.61

There are 15 quarters with good PRF difference image offsets

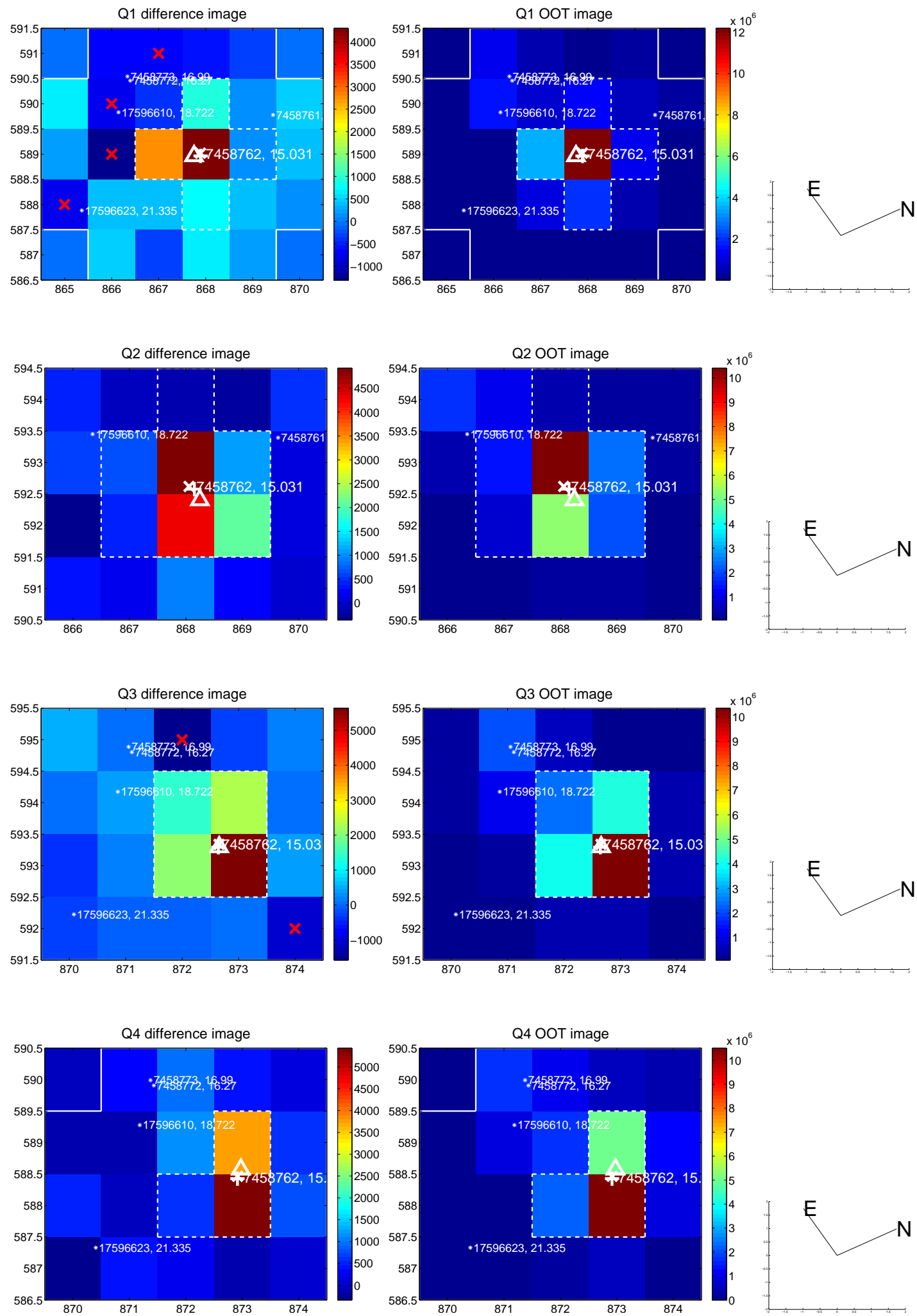
The direct PRF centroid is offset from the target star catalog position by about 0.23 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.182 ± 0.237	0.77	0.039 ± 0.306	0.177 ± 0.233
PRF-fit source offset from KIC position	0.155 ± 0.421	0.37	-0.112 ± 0.391	0.106 ± 0.218
photometric centroid source offset	0.33 ± 0.27	1.25	0.07 ± 0.27	0.33 ± 0.27

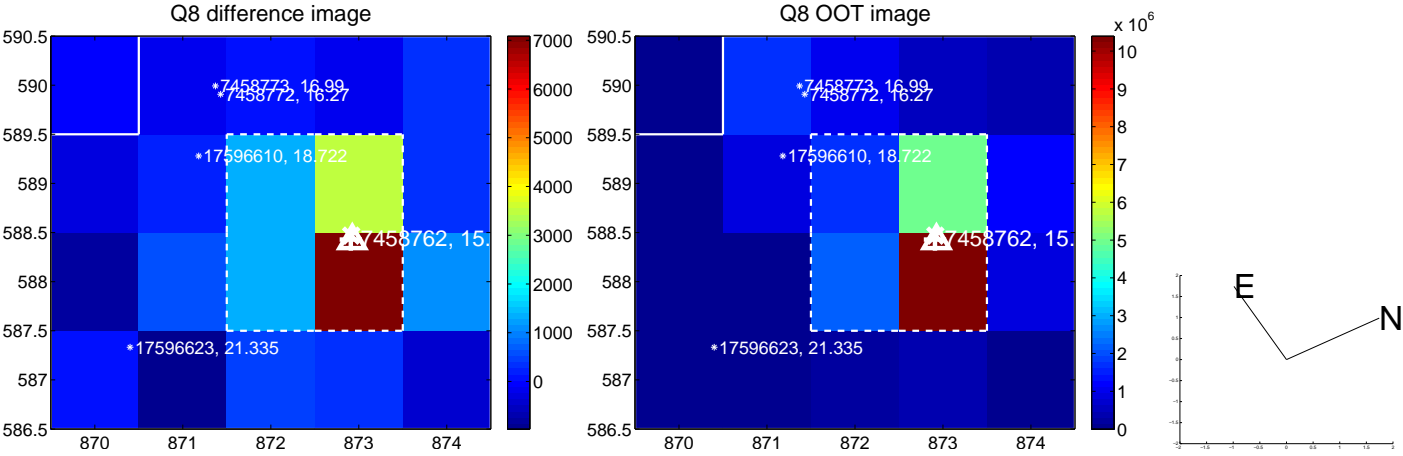
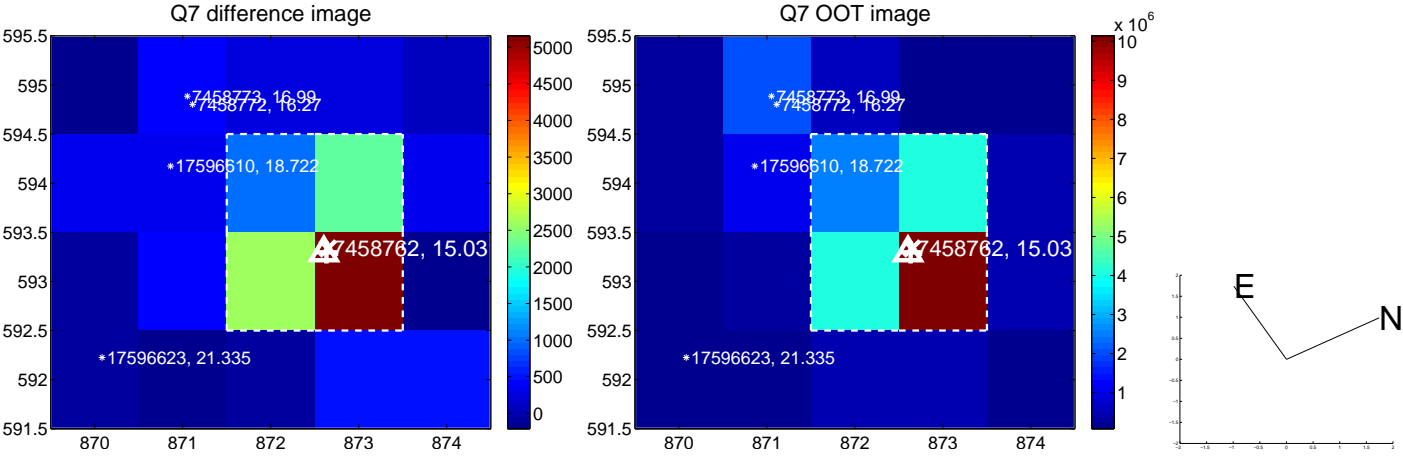
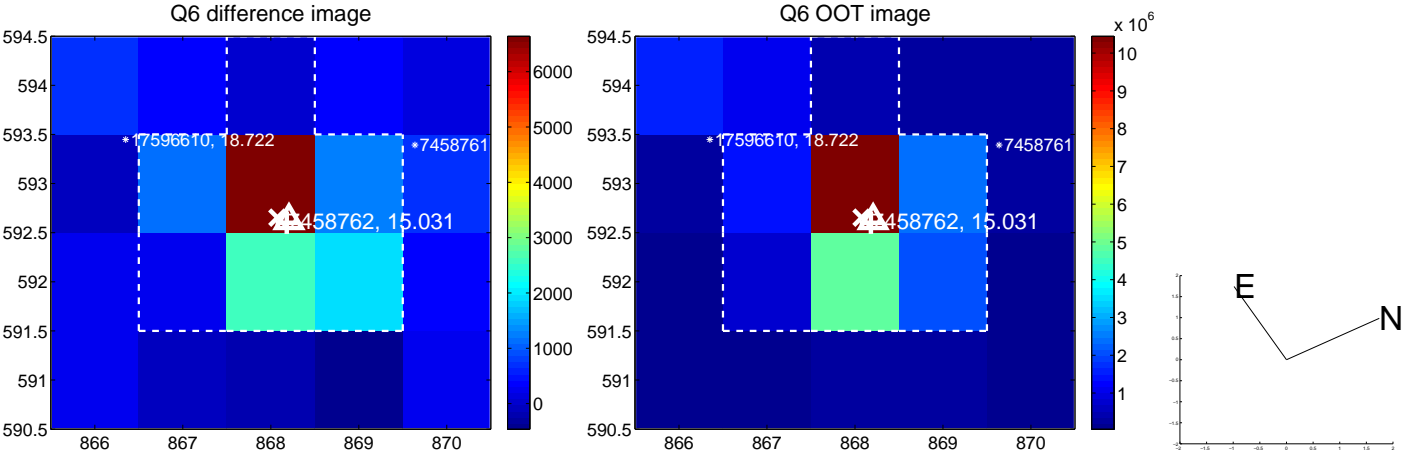
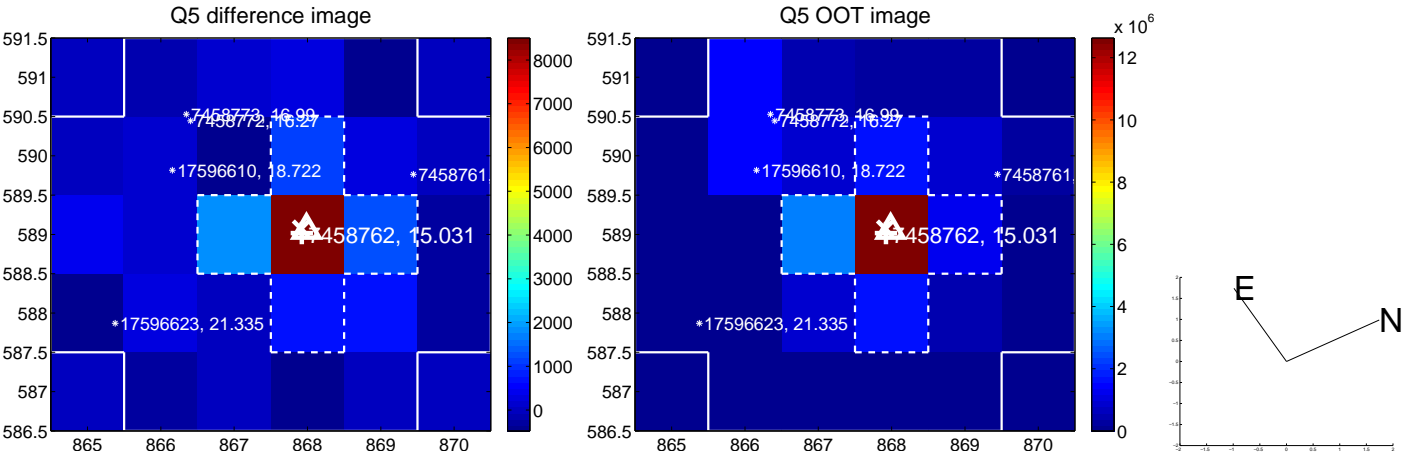


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

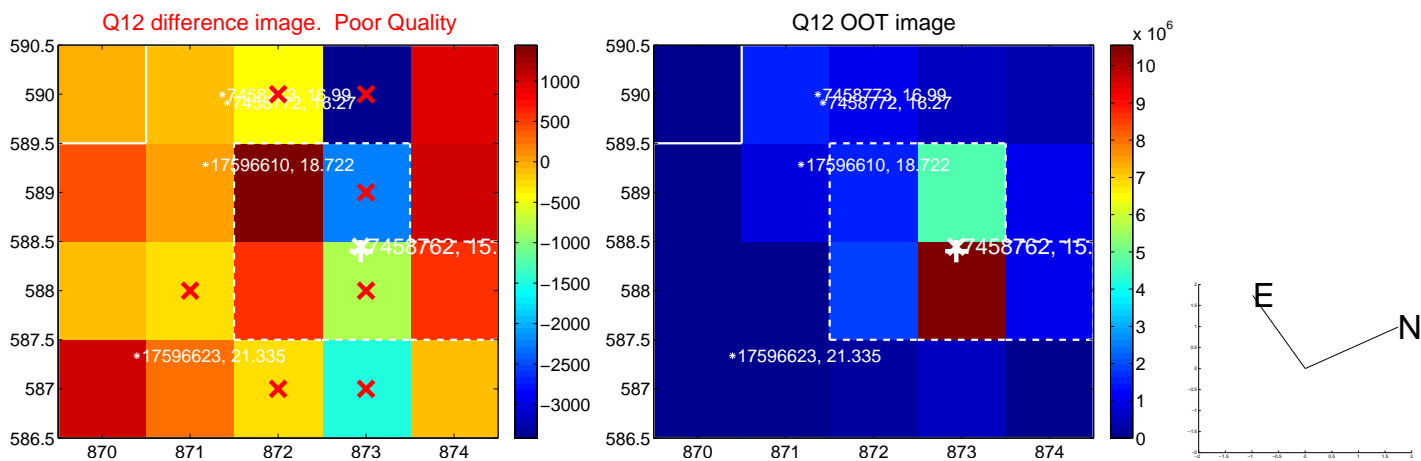
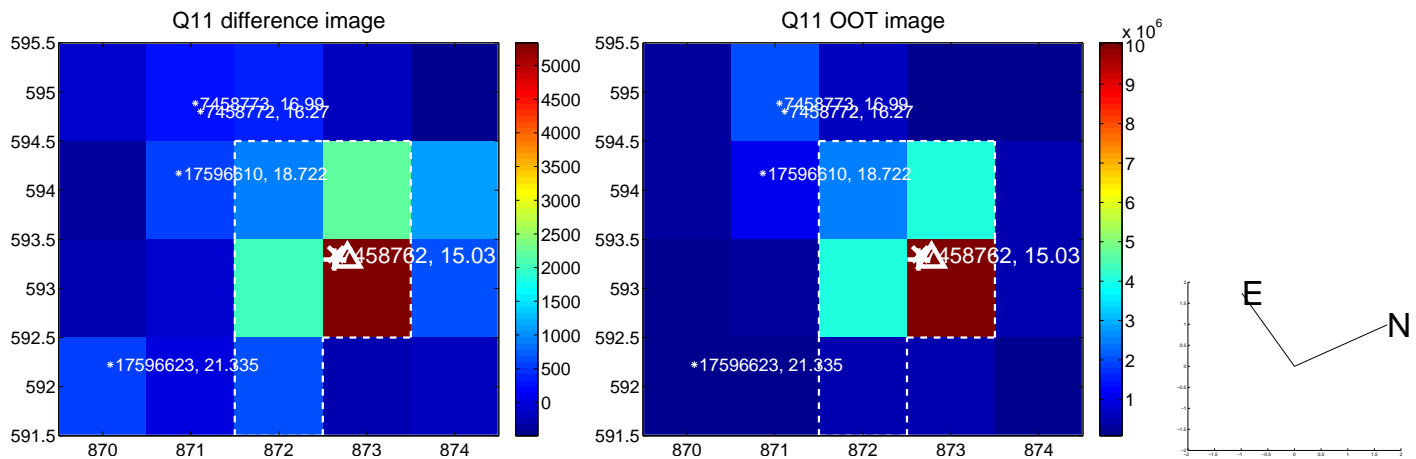
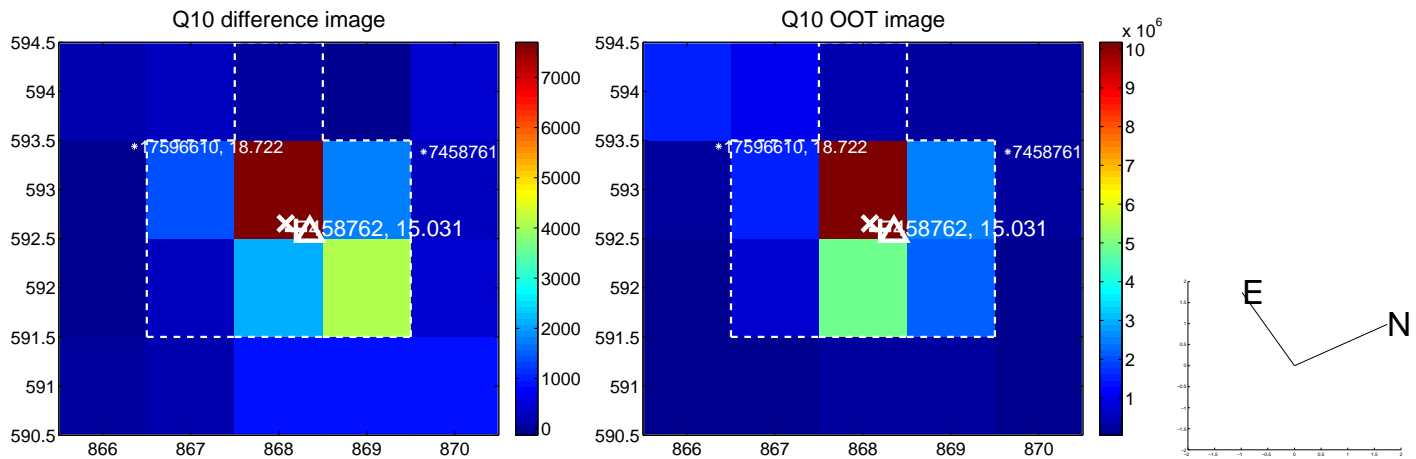
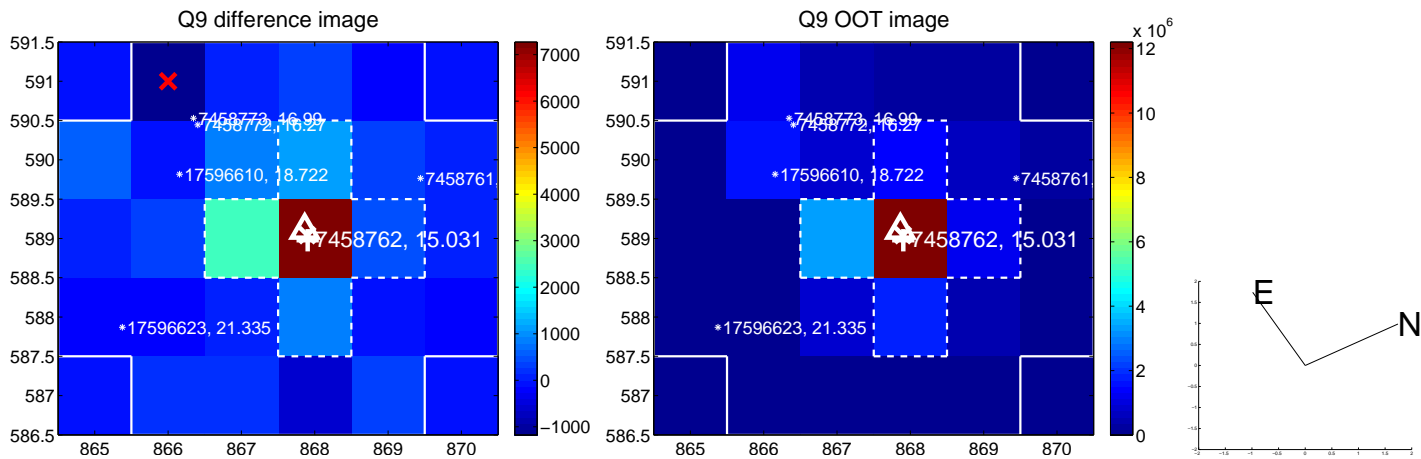
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



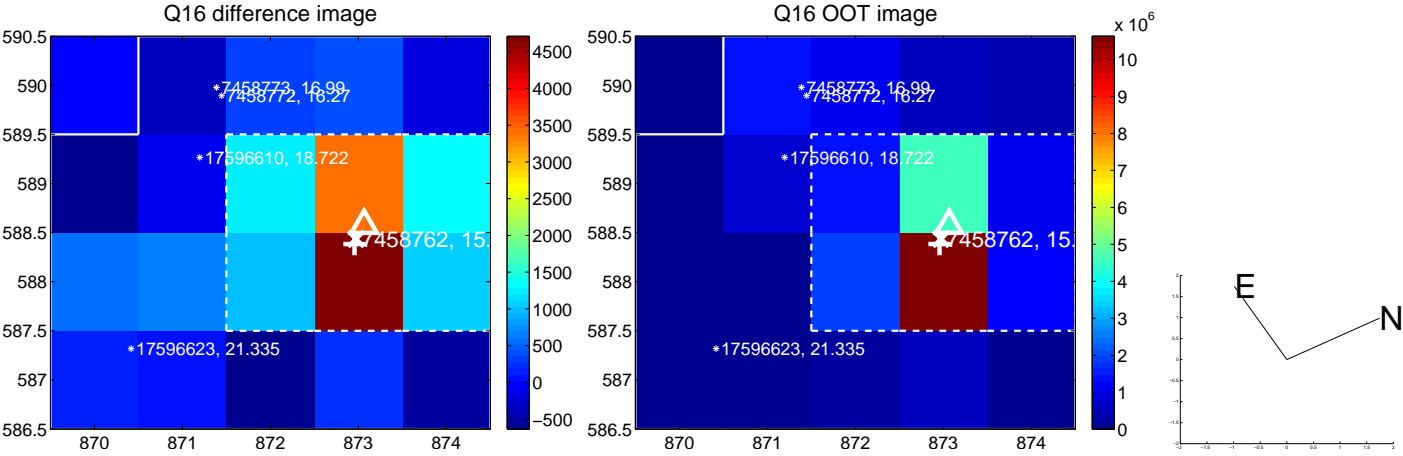
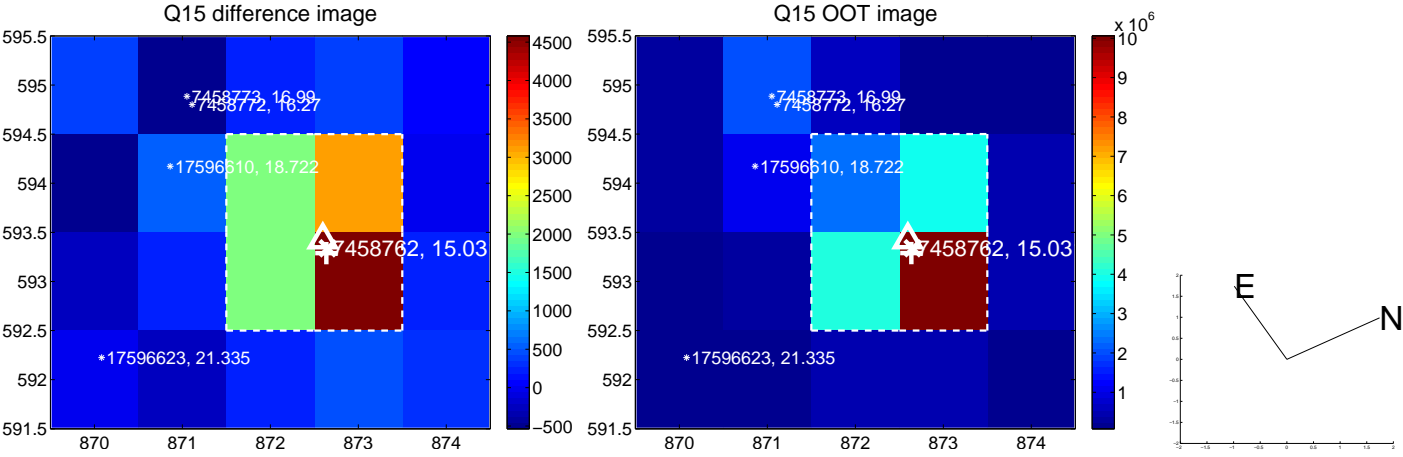
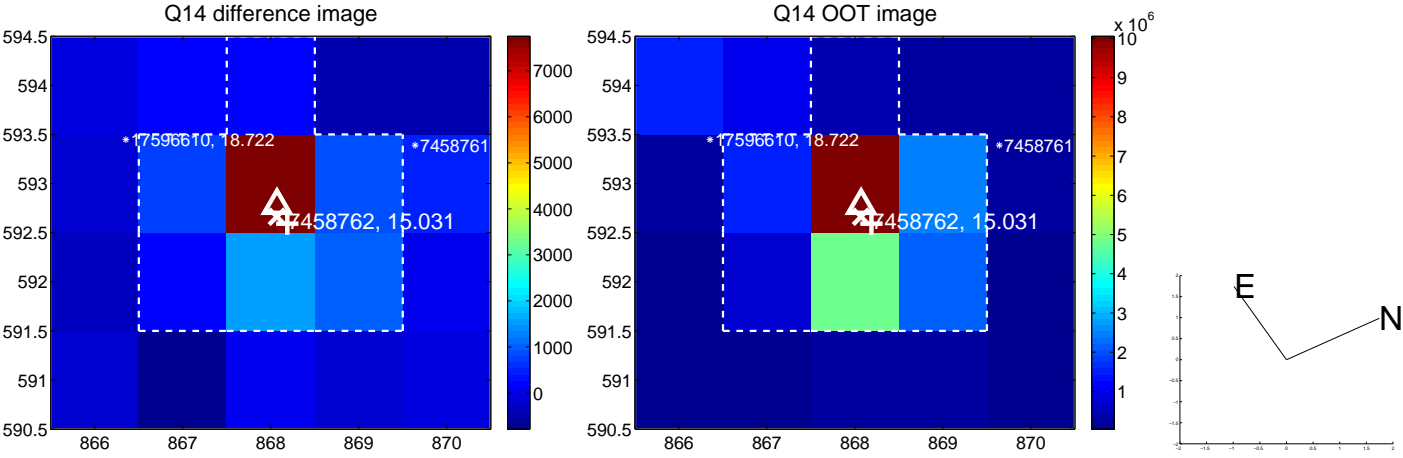
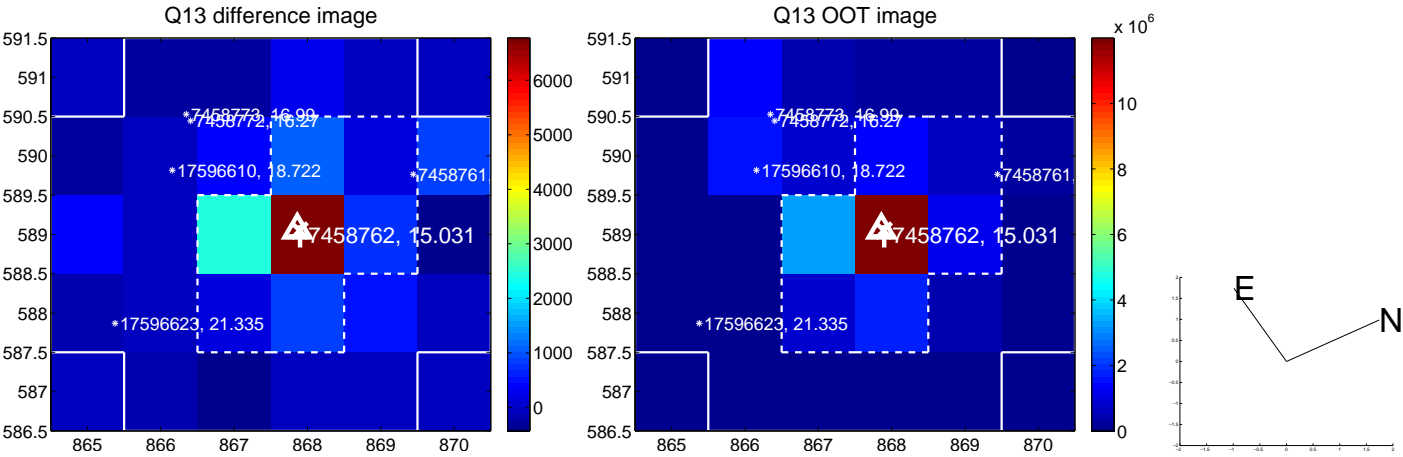
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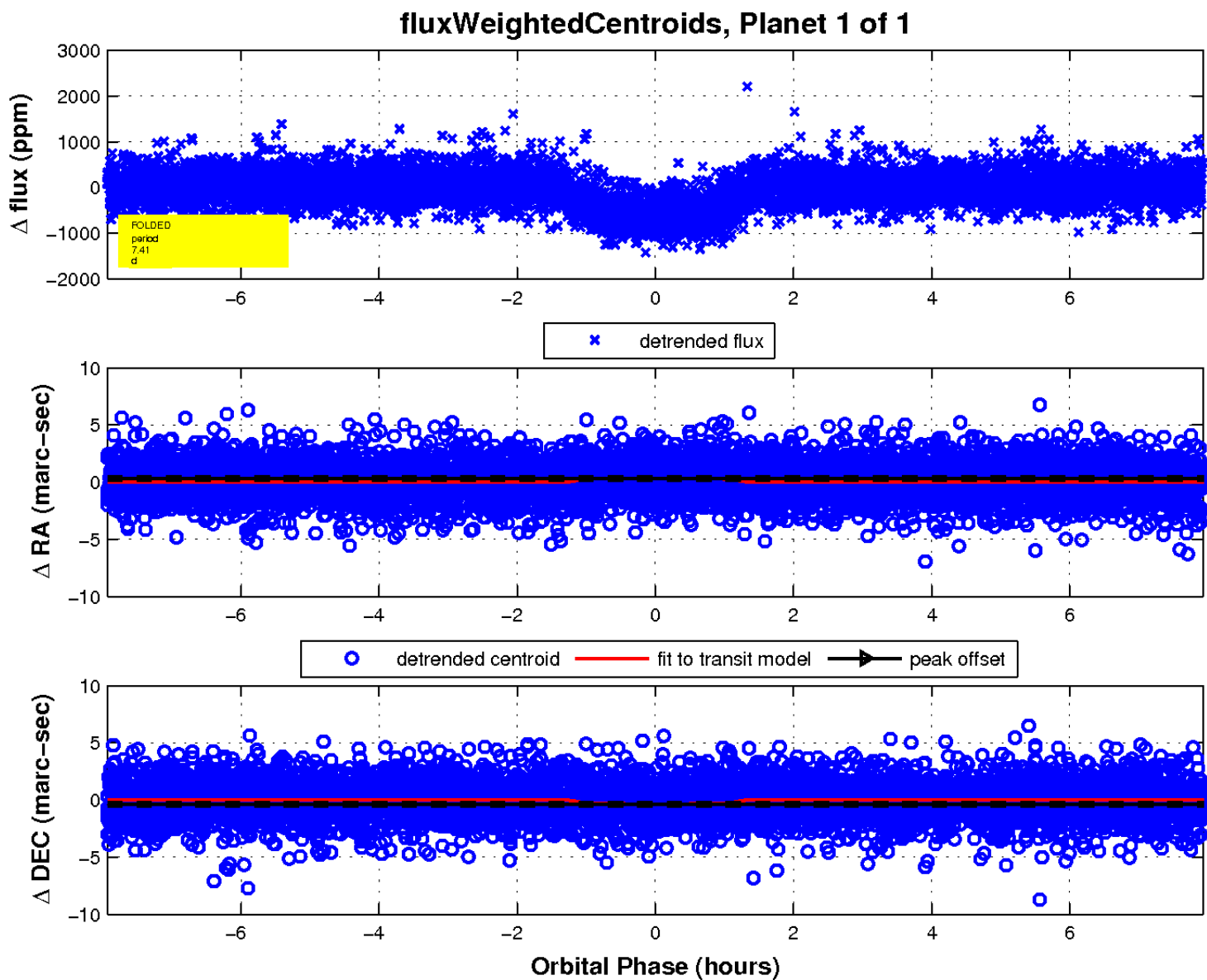
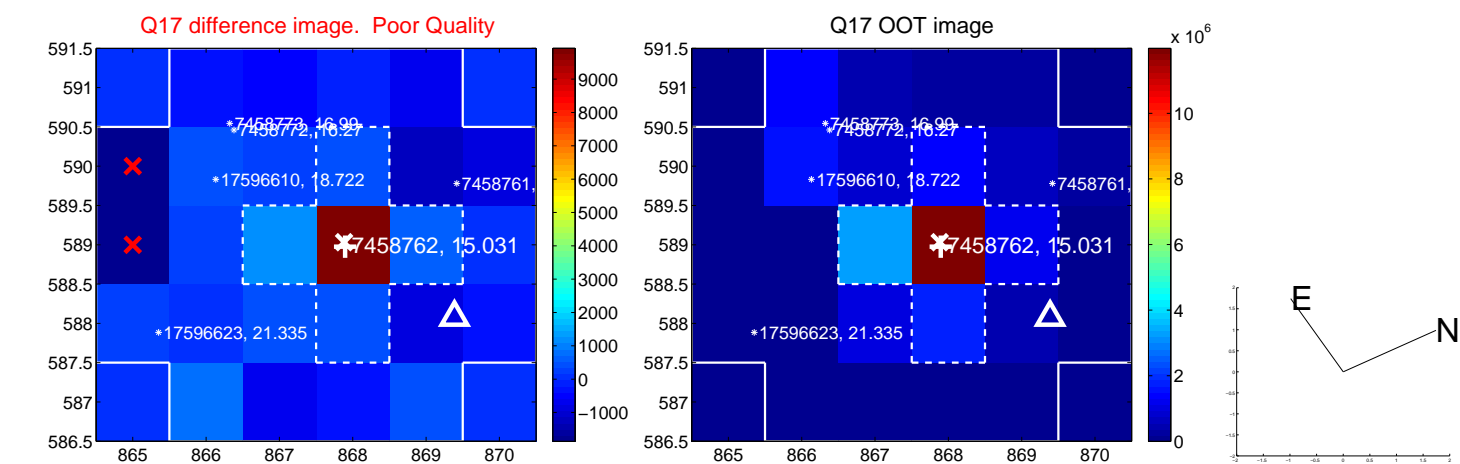
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UKIRT Image

Declination

