

KIC 004476392

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})
004476392-01	OBS	No	8.761423	132.765928	161.9	34.878	15.2	22.1	1.35	6453	3.23	365.73

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004476392-01	OBS	FP	0.00	1	0	0	0	LPP_DV

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

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

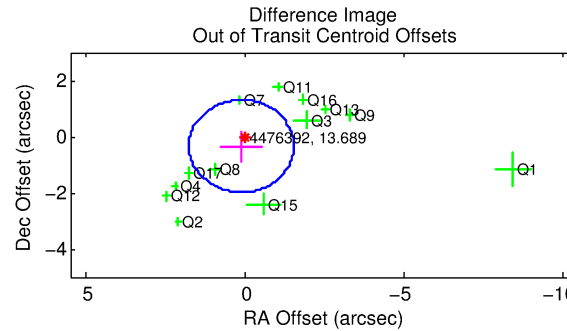
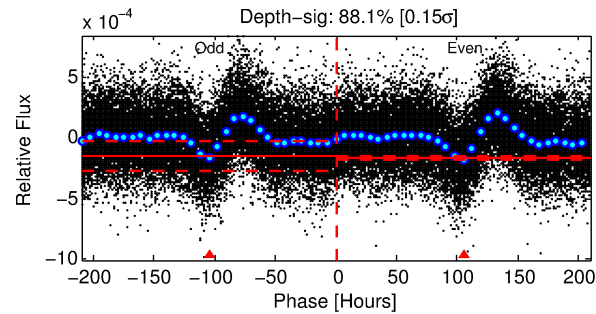
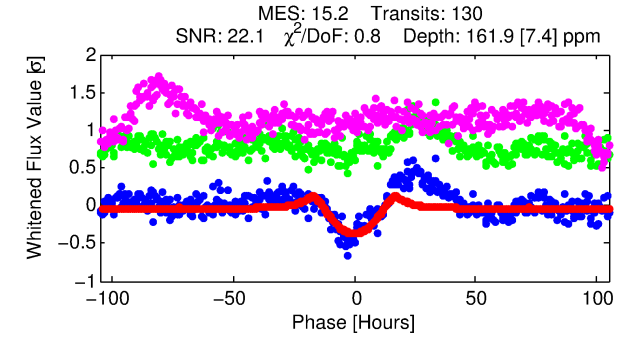
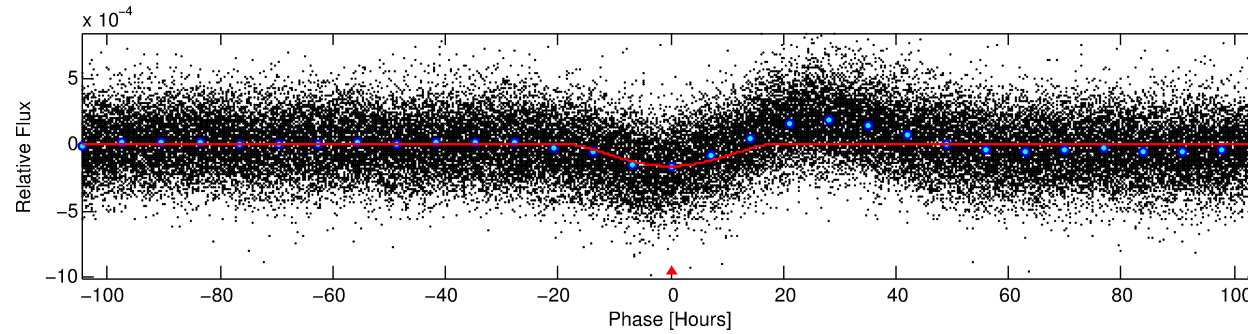
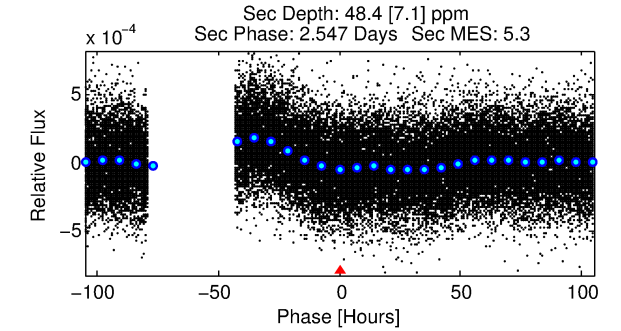
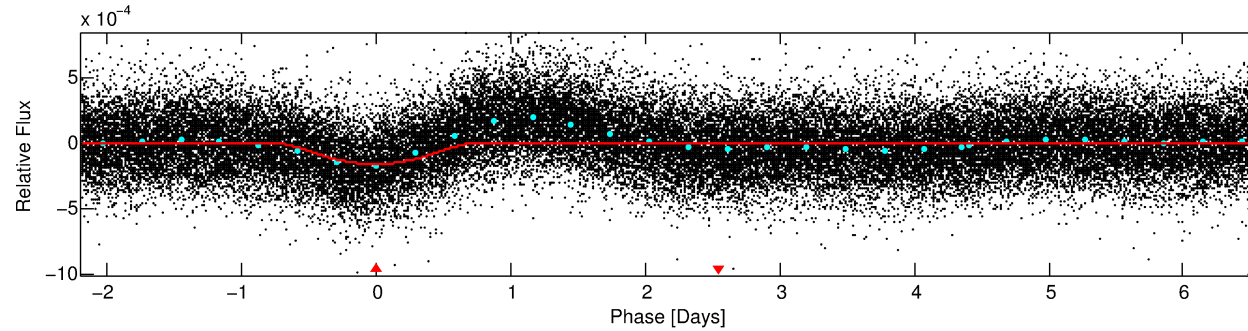
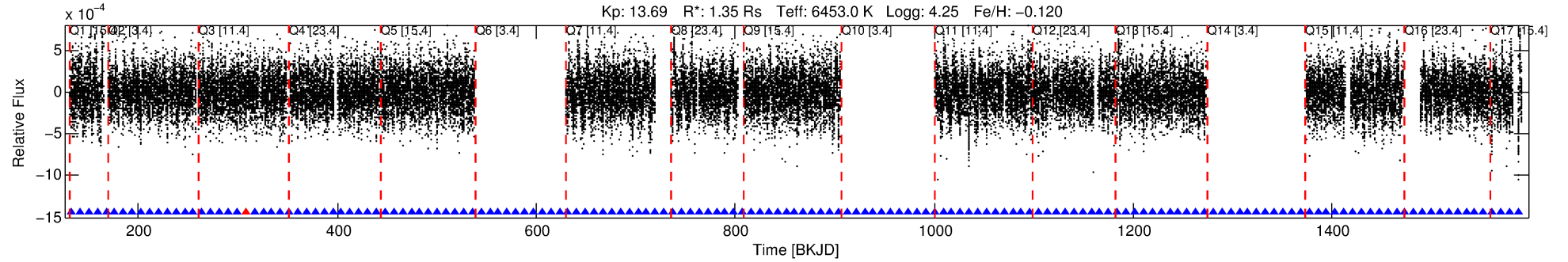
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004476392-01

No Significant Match Found

DV One-Page Summary

KIC: 4476392 Candidate: 1 of 1 Period: 8.761 d



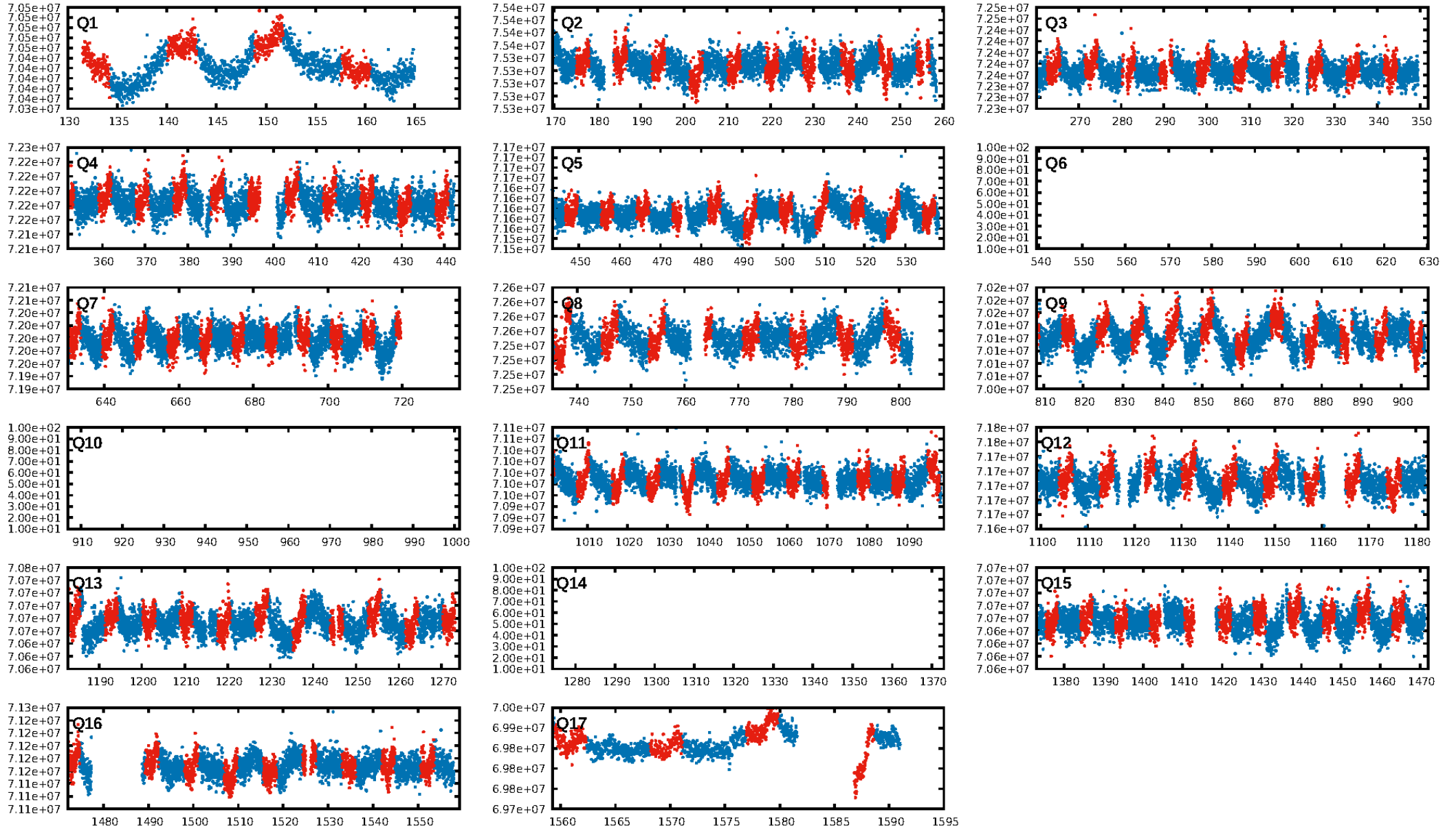
DV Fit Results:

Period = 8.76142 [0.00027] d
Epoch = 132.7659 [0.0254] BKJD
Rp/R* = 0.0219 [0.0128]
a/R* = 1.09 [0.01]
b = 1.00 [0.02]
Seff = 365.73 [139.68]
Teq = 1115 [106] K
Rp = 3.23 [2.14] Re
a = 0.0881 [0.0227] AU
Ag = 19.85 [24.45] [0.77σ]
Teffp = 3639 [1076] K [2.33σ]

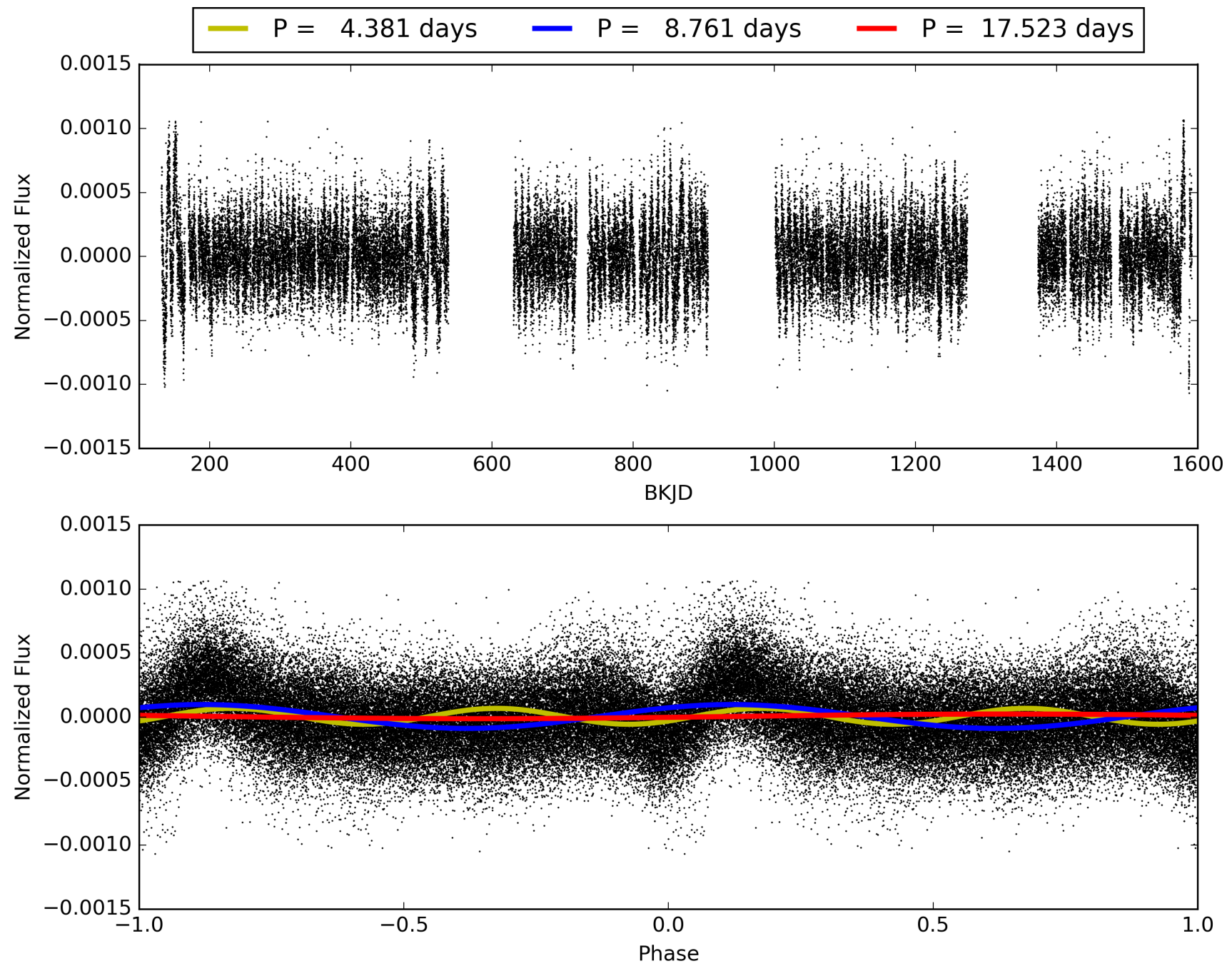
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 9.28e-49
RollingBand-fgt: 0.99 [121/122]
GhostDiagnostic-chr: 1.29
Centroid-sig: 0.0%
Centroid-so: 1.190 arcsec [3.27σ]
OotOffset-rm: 0.362 arcsec [0.66σ]
KicOffset-rm: 0.372 arcsec [0.72σ]
OotOffset-st: 1/4/4/4 [13]
KicOffset-st: 1/4/4/4 [13]
DiffImageQuality-fgm: 0.46 [6/13]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 004476392-01, PDC Light Curves

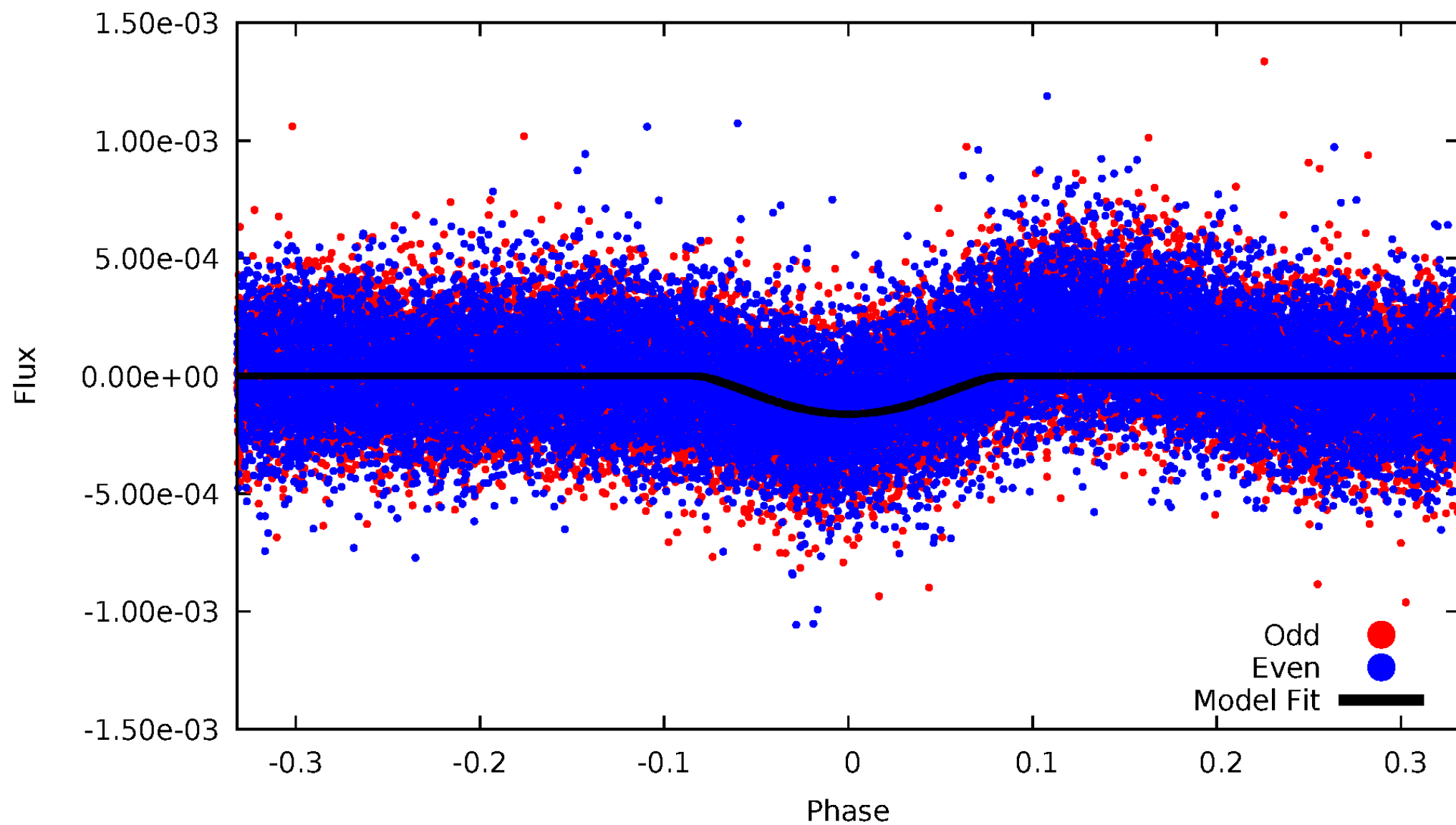


TCE 004476392-01



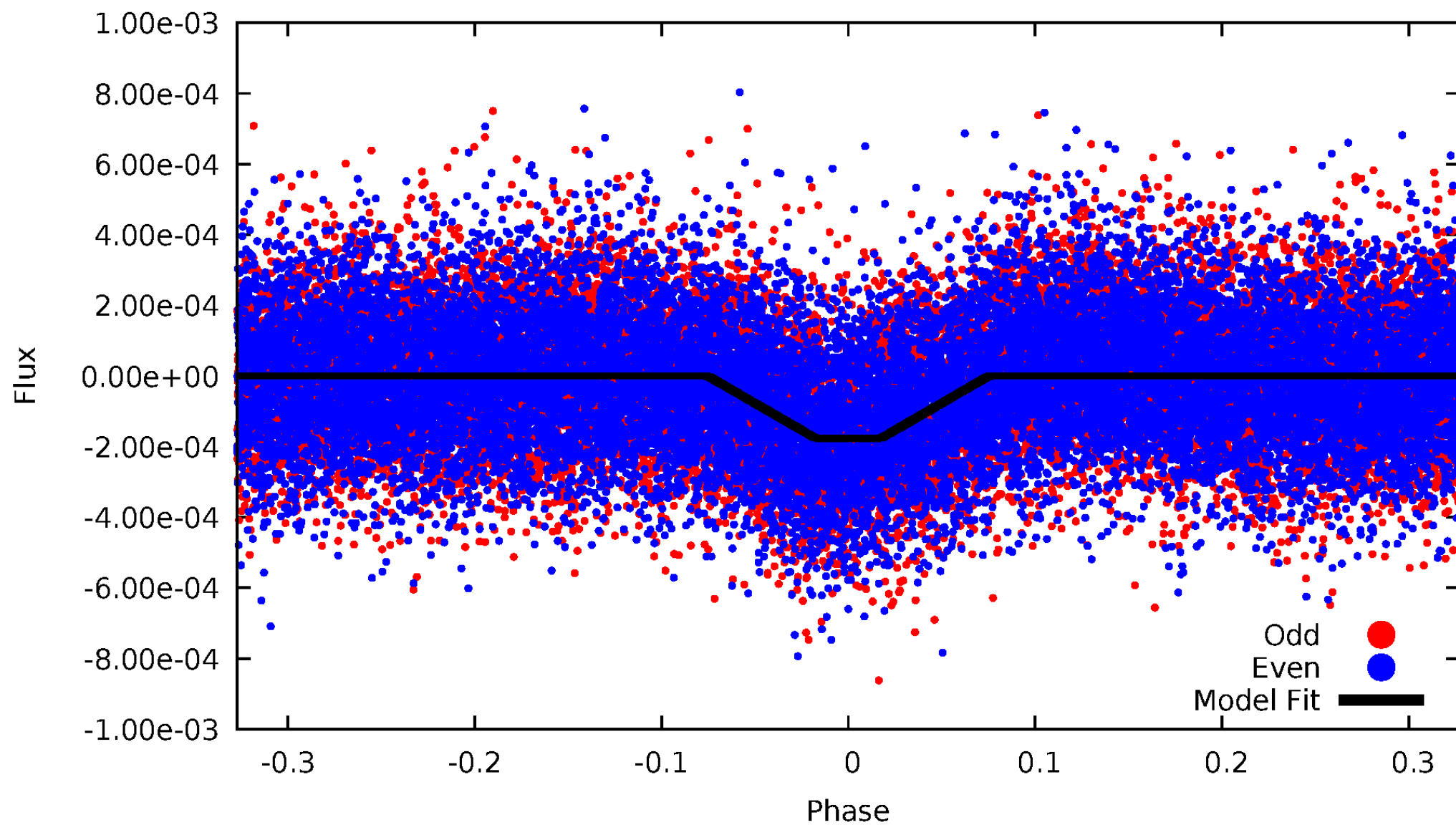
DV Odd/Even

TCE 004476392-01

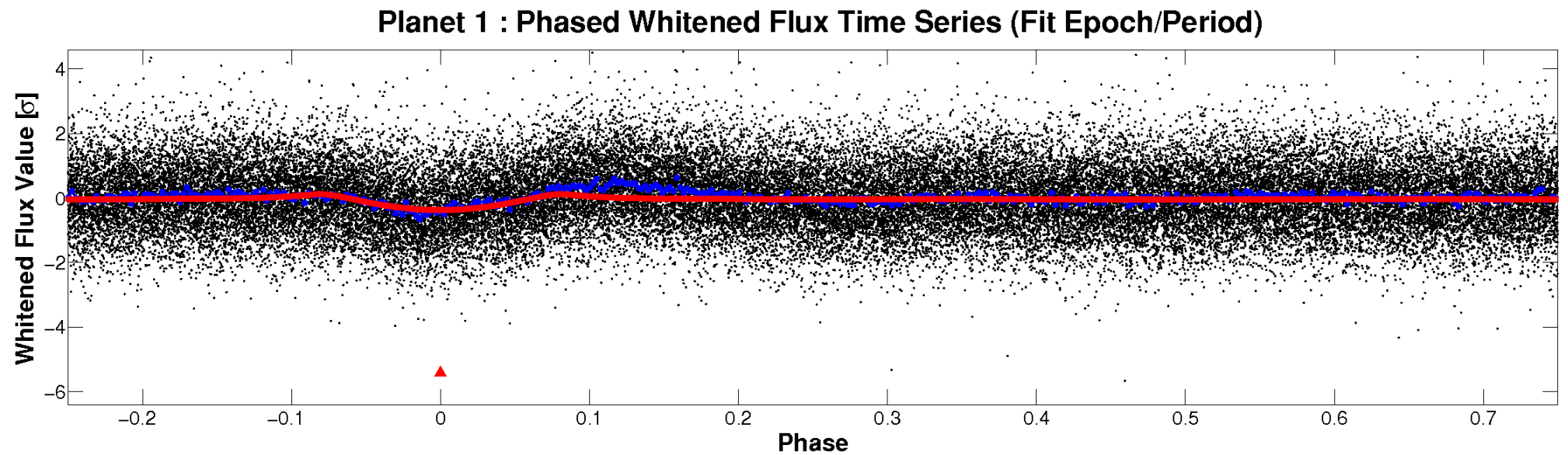
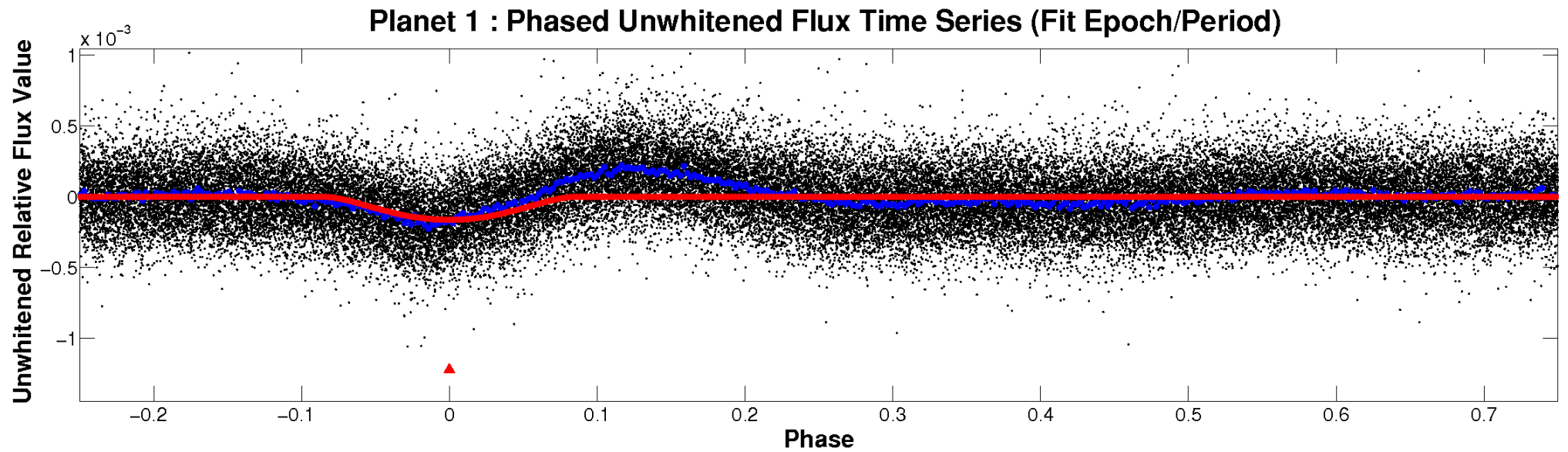


ALT Odd/Even

TCE 004476392-01

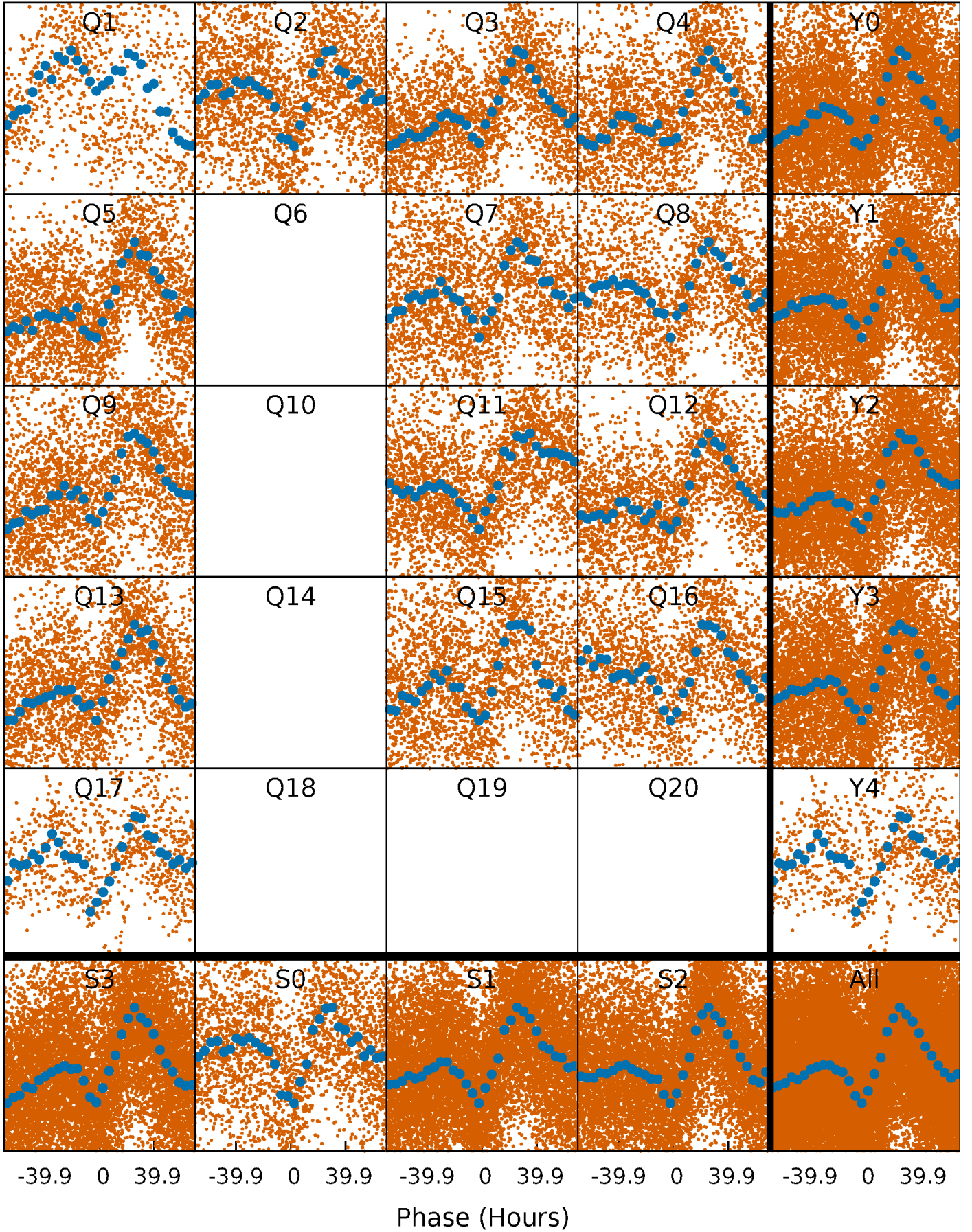


Non-Whitened Vs. Whitened Light Curve



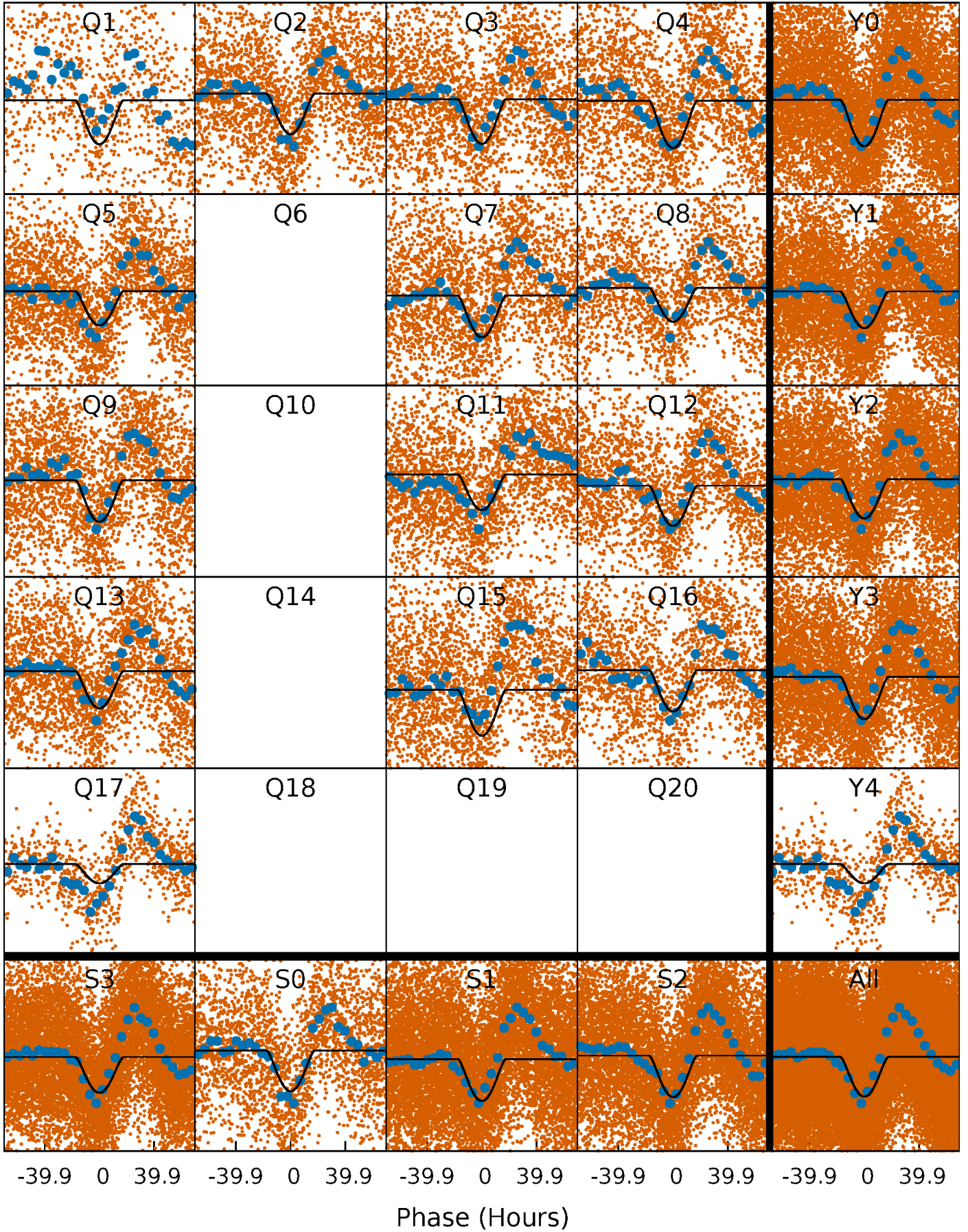
PDC Quarter-Phased Transit Curves

TCE 004476392-01 $P = 8.761423$ Days $T_0 = 132.765928$ (BKJD)



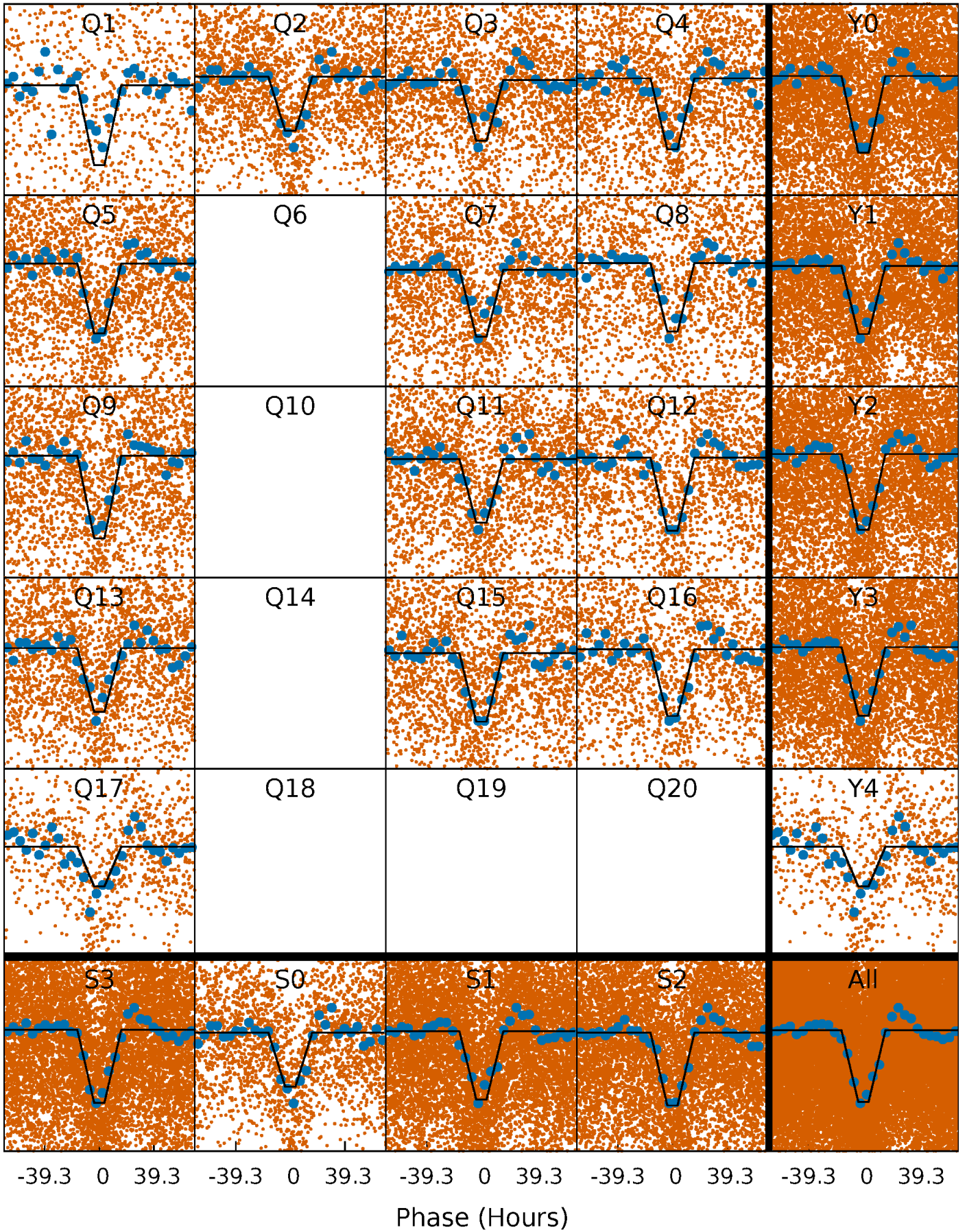
DV Quarter-Phased Transit Curves

TCE 004476392-01 P= 8.761423 Days $T_0=132.765928$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

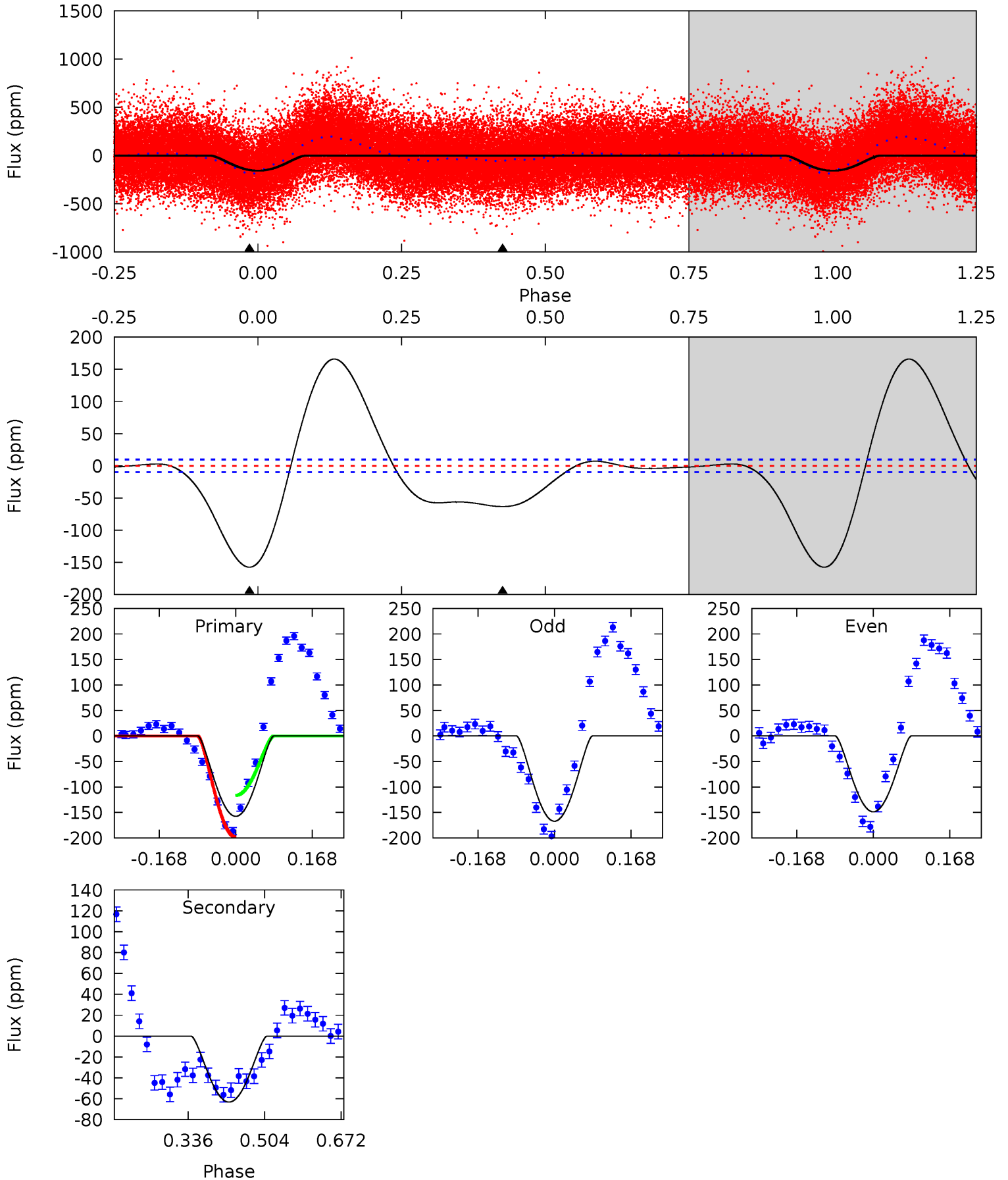
TCE 004476392-01 P= 8.761801 Days $T_0=132.706867$ (BKJD)



DV Model-Shift Uniqueness Test

004476392-01, P = 8.761423 Days, E = 124.004505 Days

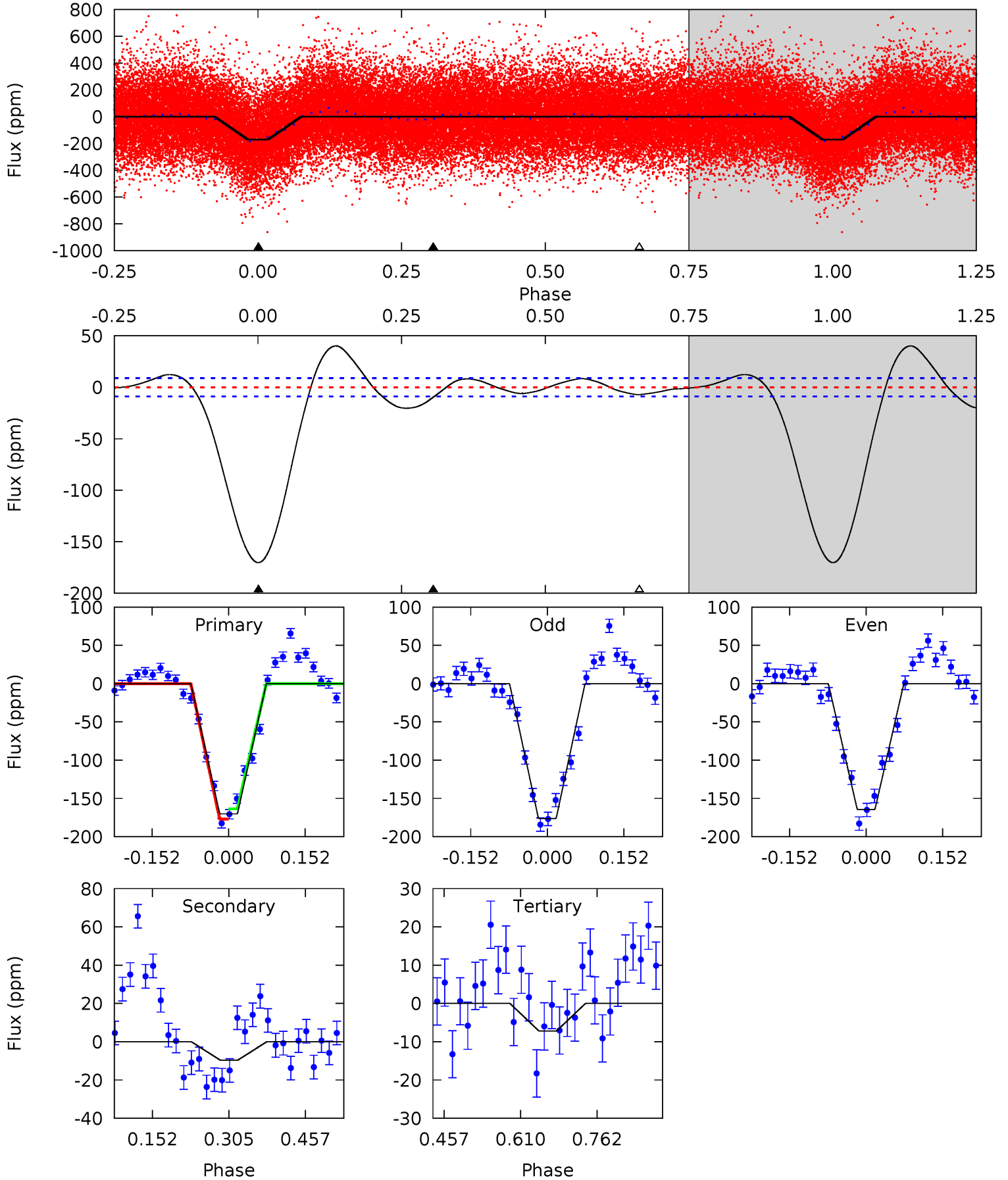
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
71.3	28.6	0	0	4.45	1.38	19.6	71.3	71.3	28.6	28.6	4.19	1.05	0.51	18.6



Alt Model-Shift Uniqueness Test

004476392-01, P = 8.761801 Days, E = 123.945066 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
85.5	4.83	3.61	0	4.48	1.43	2.71	81.9	85.5	1.22	4.83	2.99	0.99	0.19	3.37



Stellar Parameters For KIC 004476392

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6453^{+155}_{-194}	$4.251^{+0.144}_{-0.192}$	$-0.120^{+0.250}_{-0.300}$	$1.352^{+0.428}_{-0.263}$	$1.187^{+0.192}_{-0.157}$	$0.677^{+0.430}_{-0.355}$
	+2%/-3%	+3%/-5%	+208%/-250%	+32%/-19%	+16%/-13%	+64%/-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 004476392-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-63 ± 2	$3.32^{+2.04}_{-1.90}$	1565^{+107}_{-97}	4105^{+1693}_{-587}	24^{+107}_{-15}
Alt.	-10 ± 2	$2.42^{+1.87}_{-1.44}$	1562^{+119}_{-92}	3330^{+1174}_{-528}	$6.897^{+33.439}_{-4.746}$

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 $A_{obs} \gg 1.0$

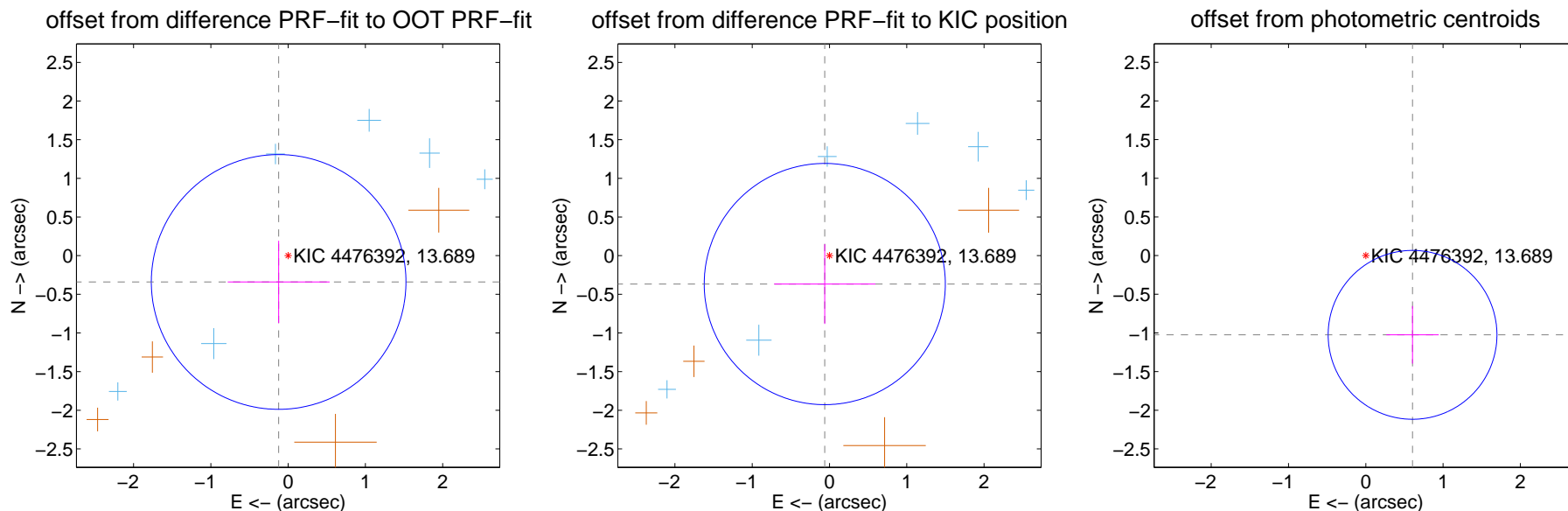
DV Centroid Data

Supplemental centroid analysis for 004476392-01. Kepler magnitude: 13.69. Transit SNR 22.11

There are 6 quarters with good PRF difference image offsets

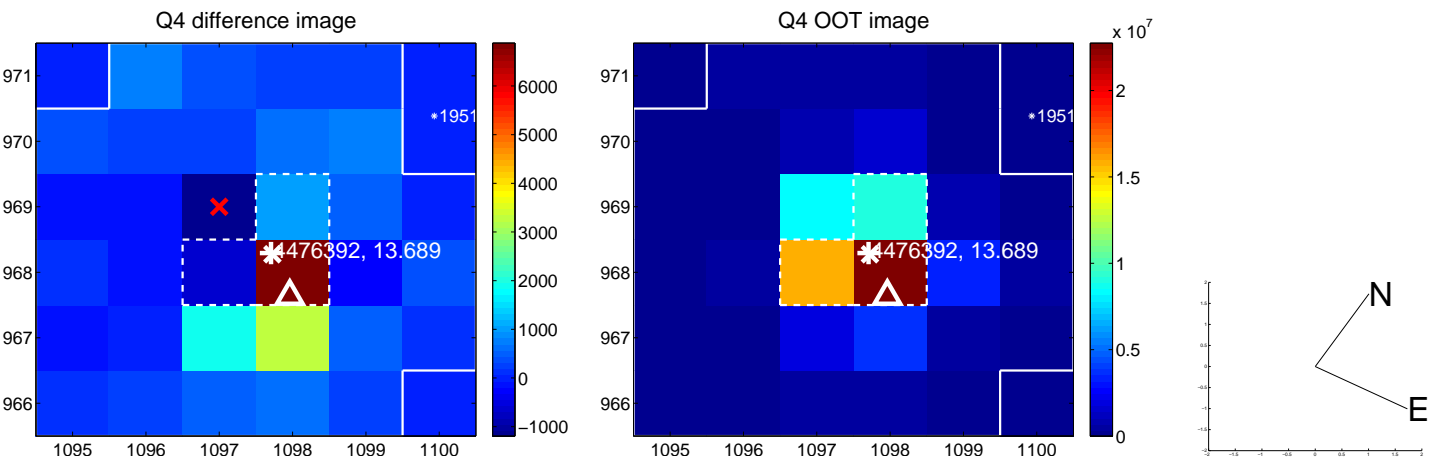
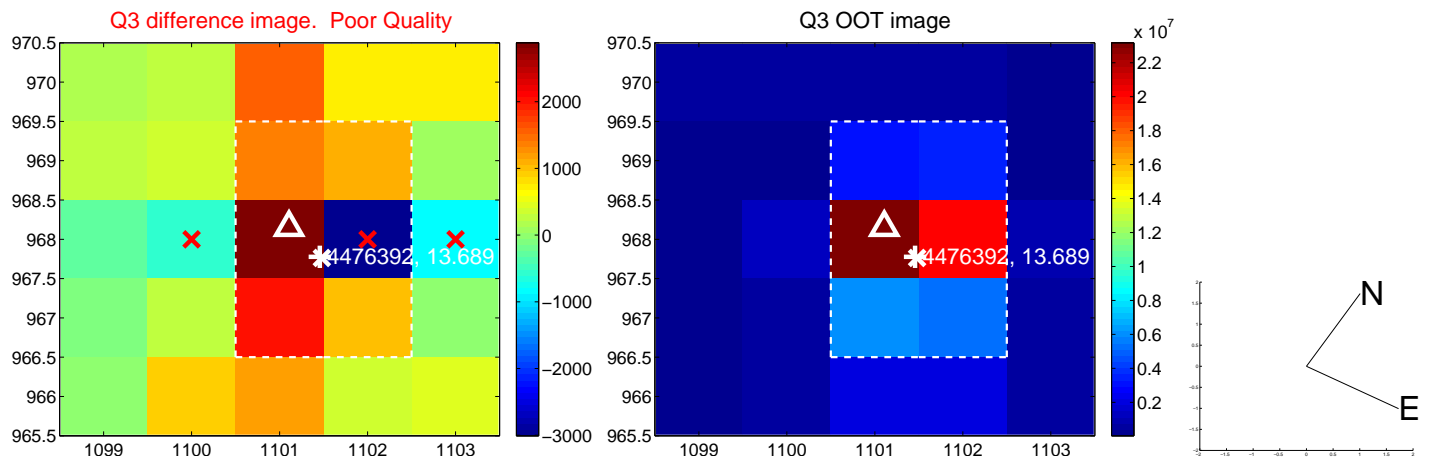
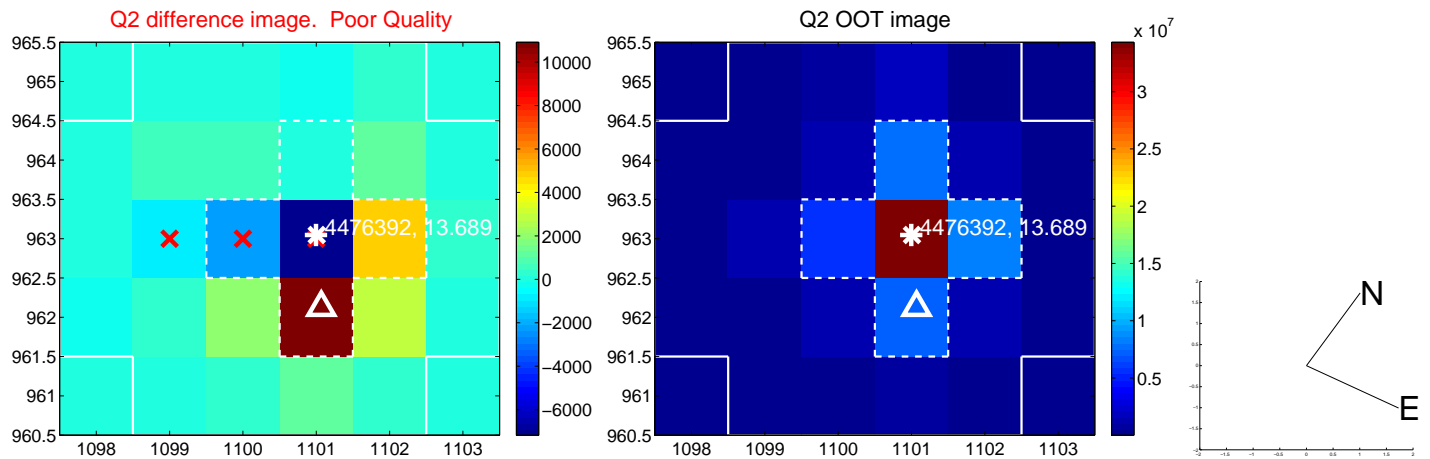
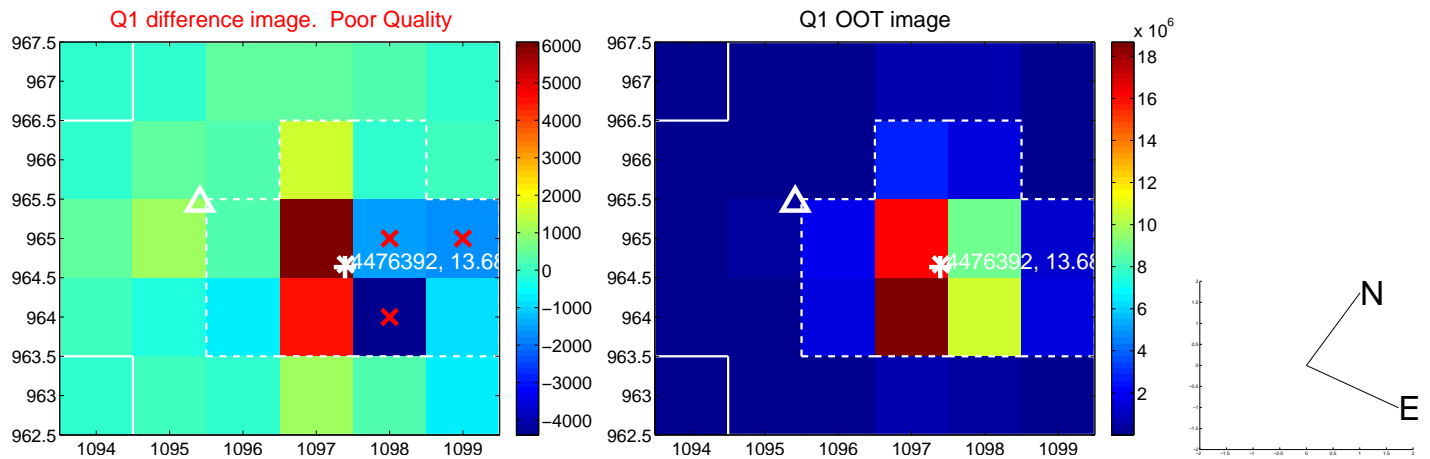
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.362 ± 0.549	0.66	0.123 ± 0.660	-0.340 ± 0.533
PRF-fit source offset from KIC position	0.372 ± 0.520	0.72	0.061 ± 0.656	-0.367 ± 0.516
photometric centroid source offset	1.19 ± 0.36	3.27	-0.61 ± 0.34	-1.03 ± 0.37

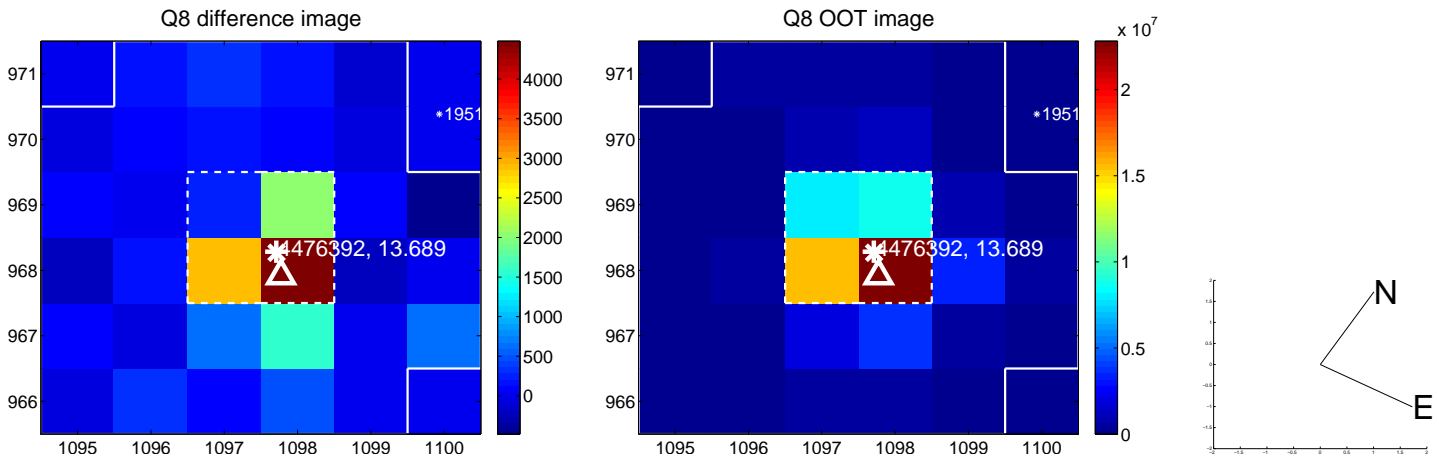
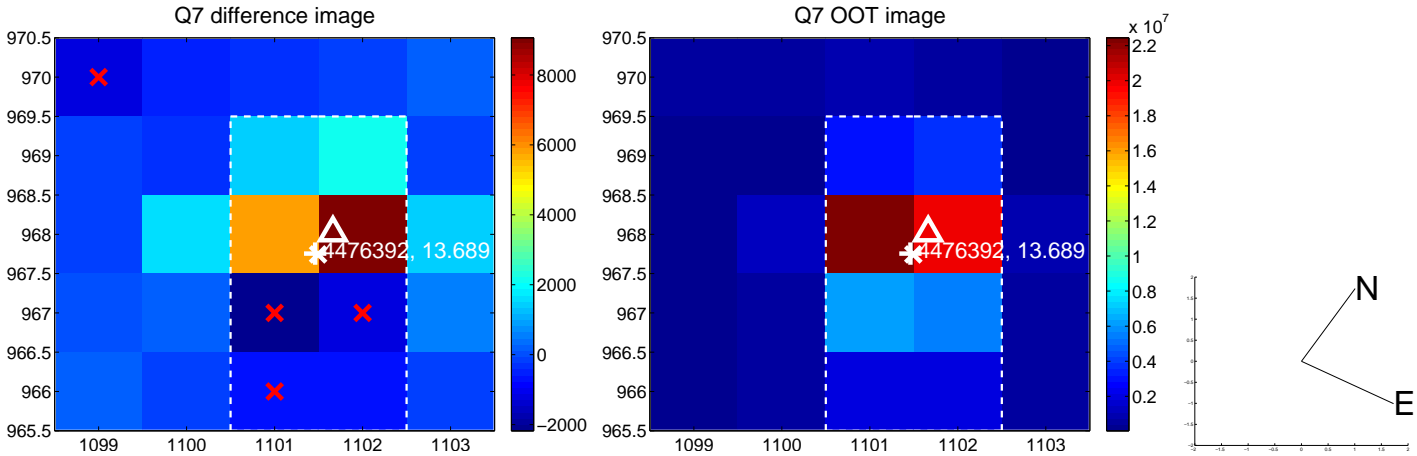
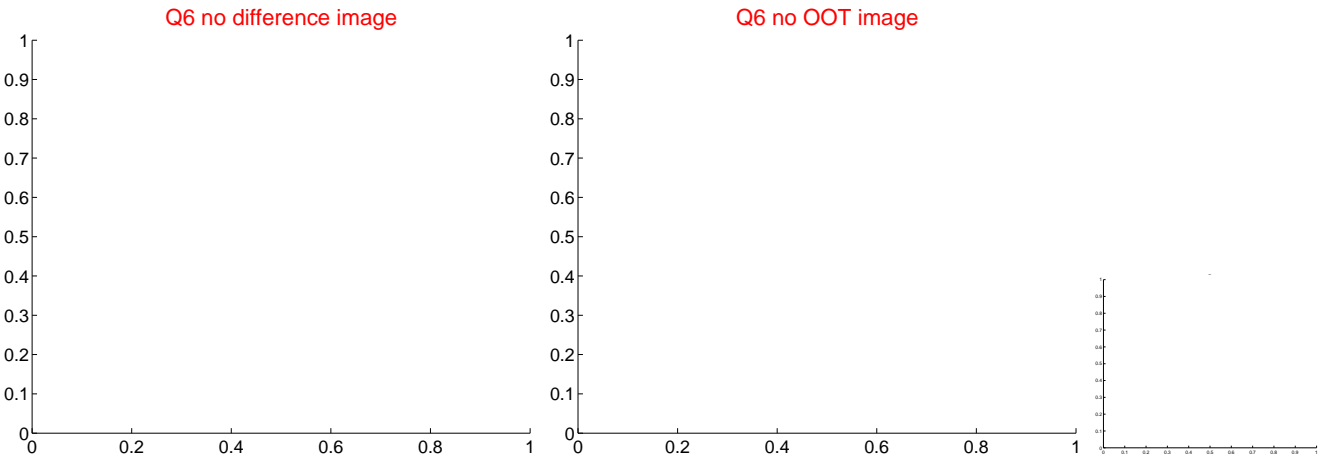
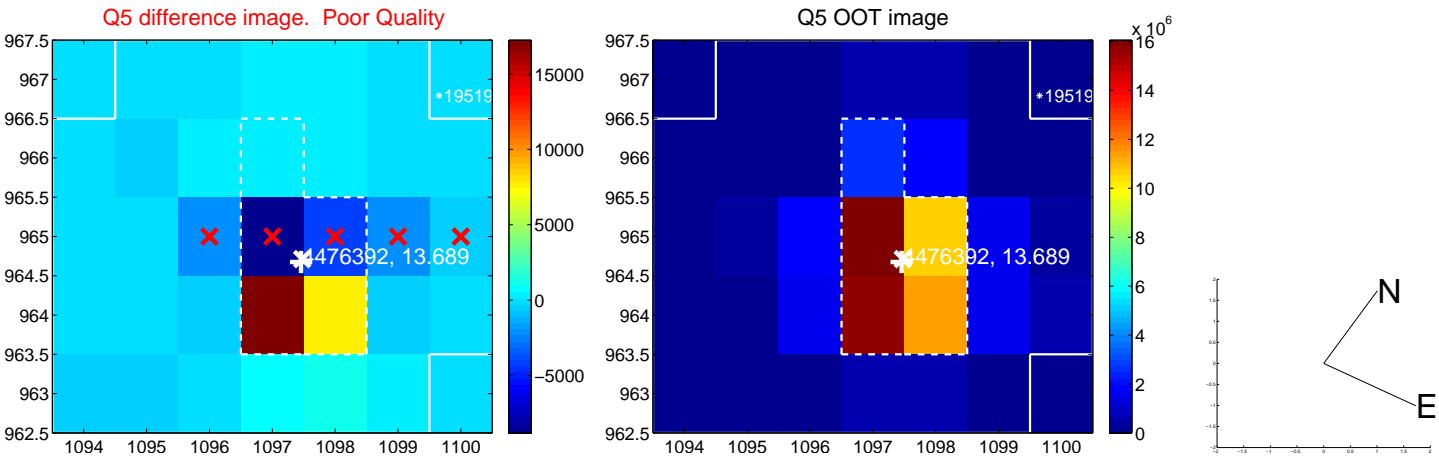


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

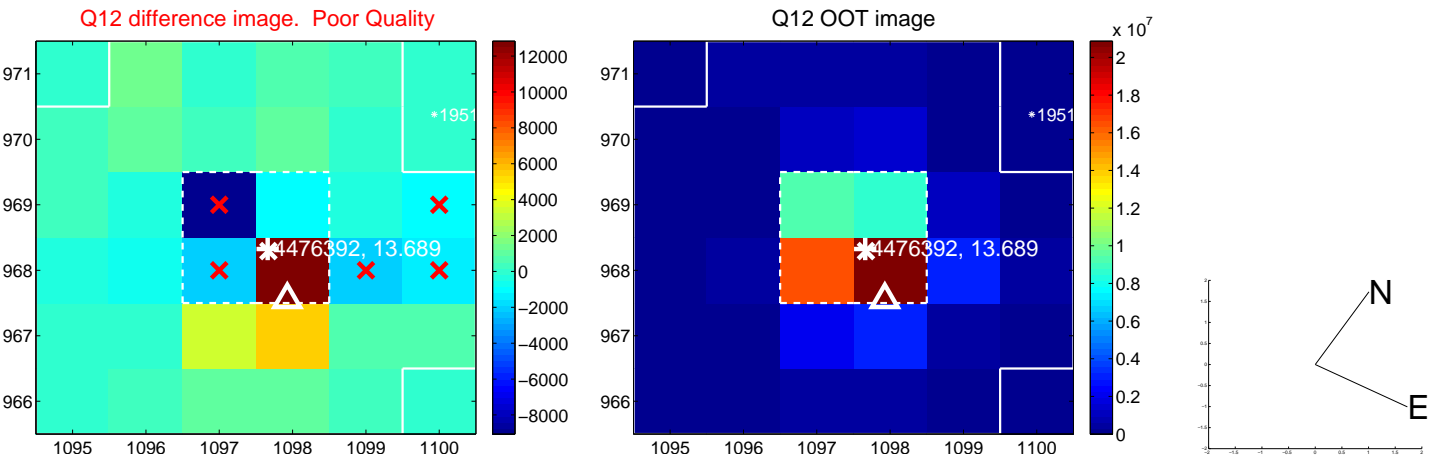
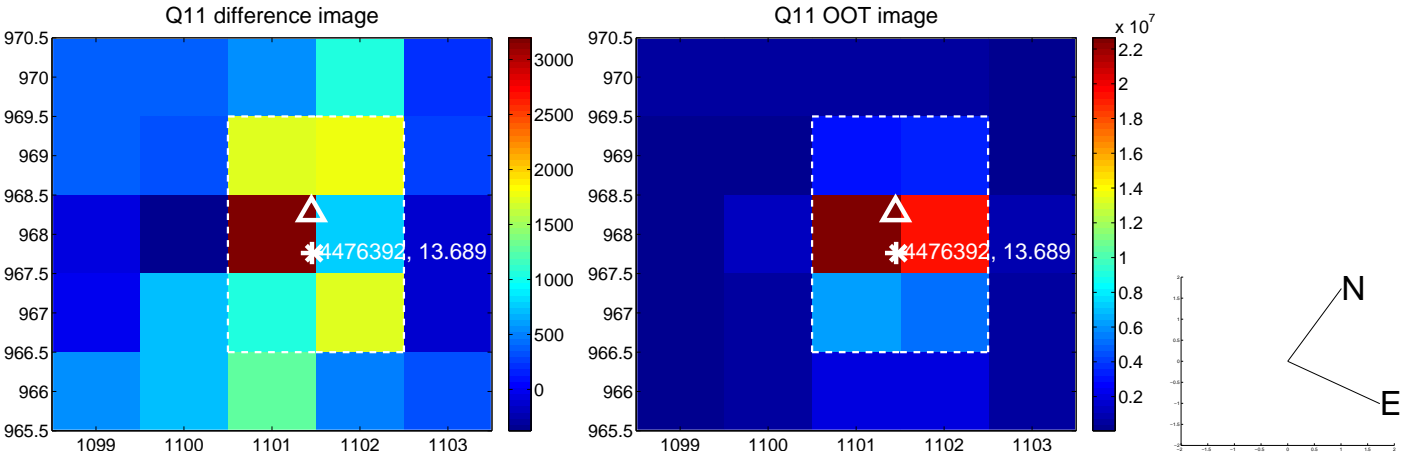
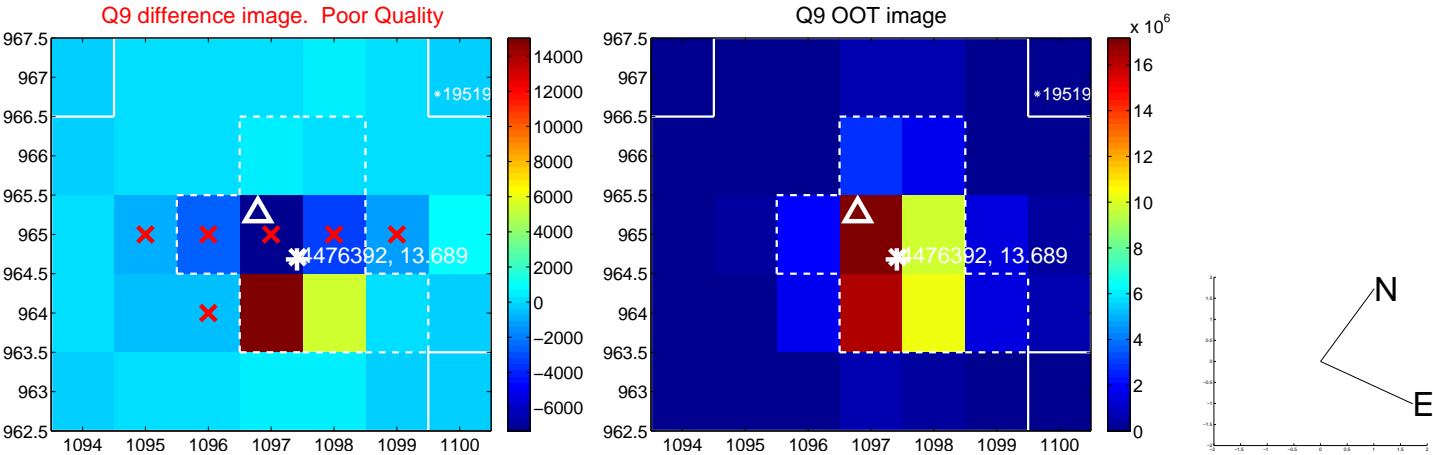
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



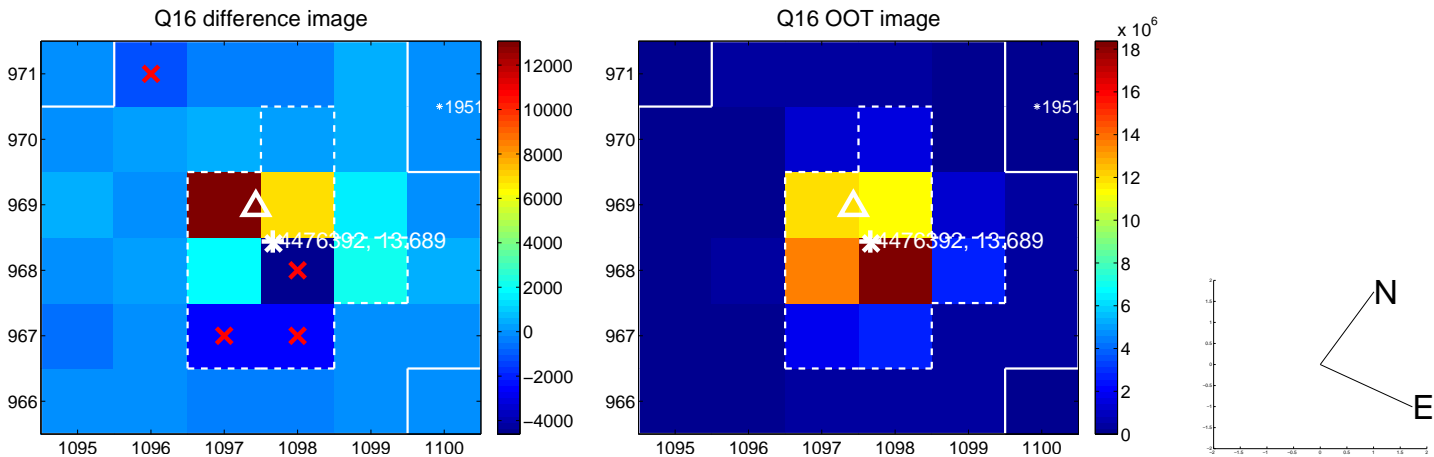
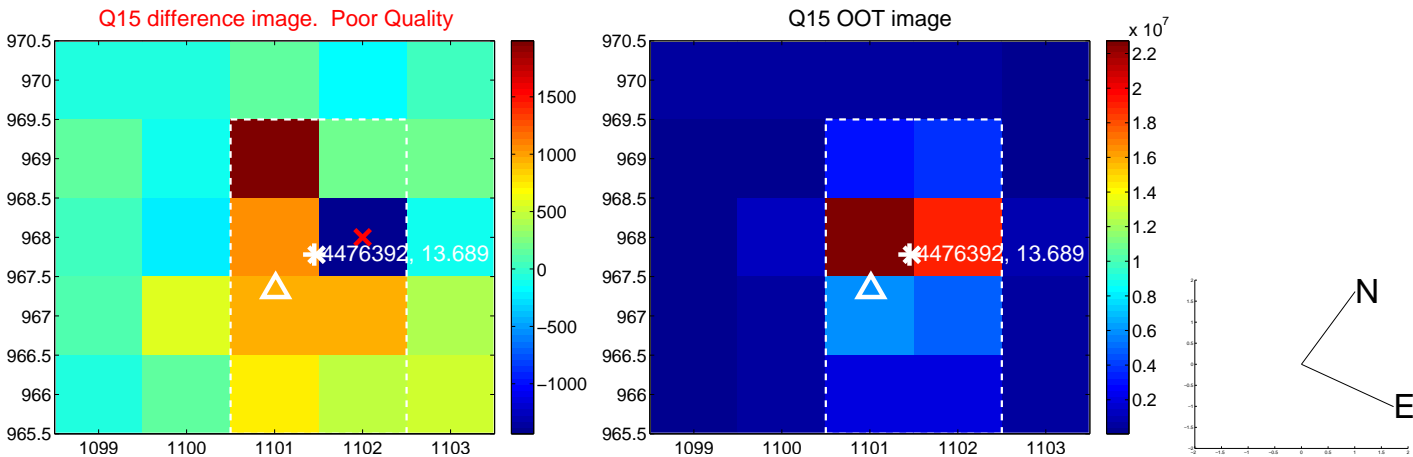
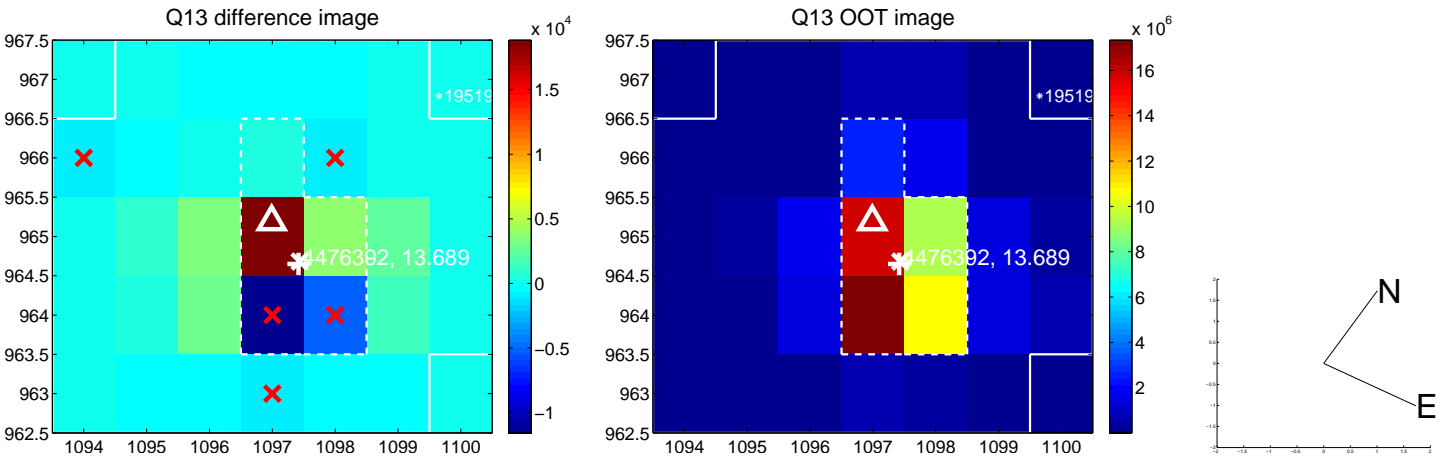
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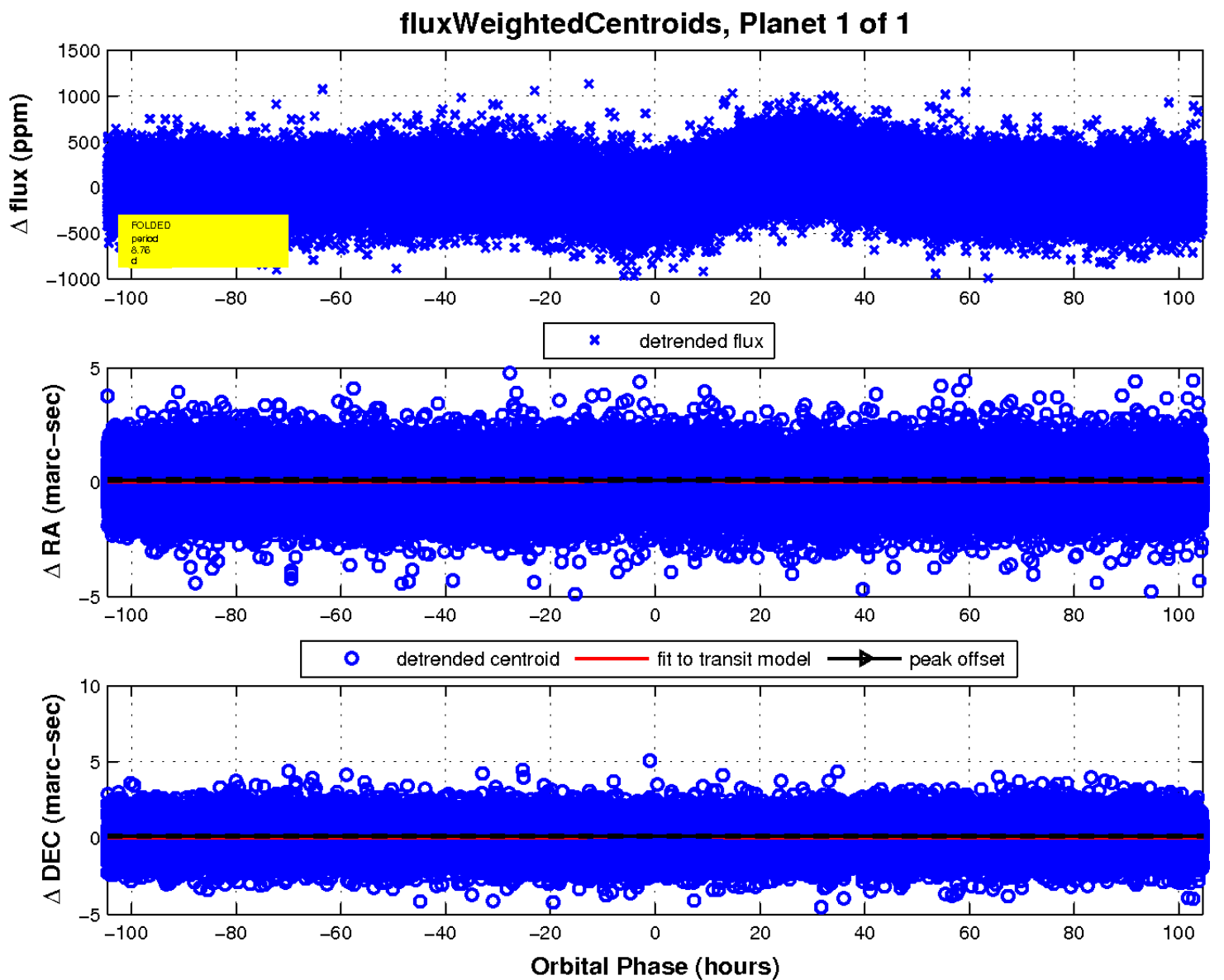
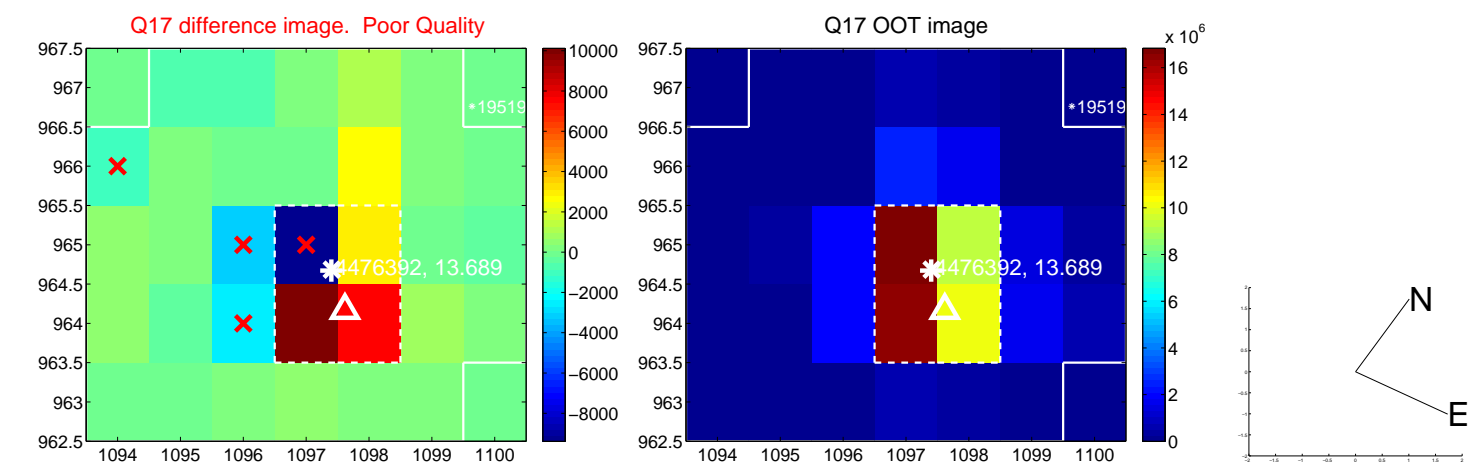
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

