

KIC 007286173

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})
007286173-01	OBS	1862.01	56.435001	151.410409	573.6	4.898	39.8	40.3	1.00	5534	2.65	11.06

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007286173-01	OBS	PC	0.36	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.

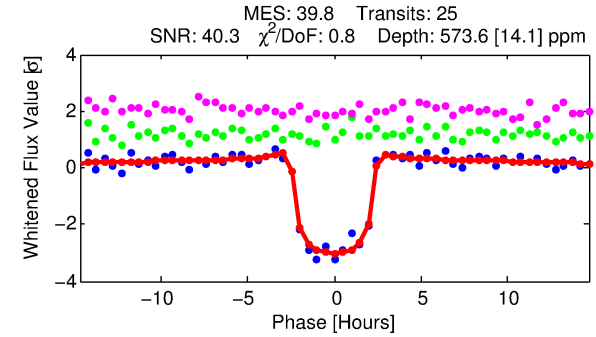
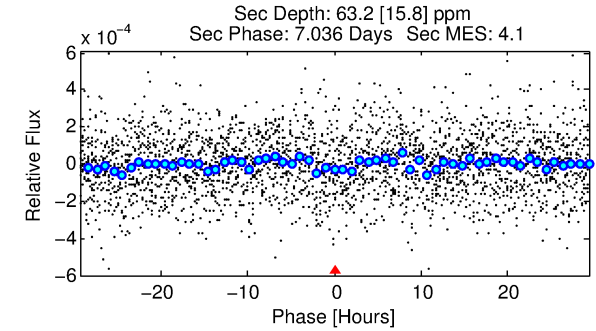
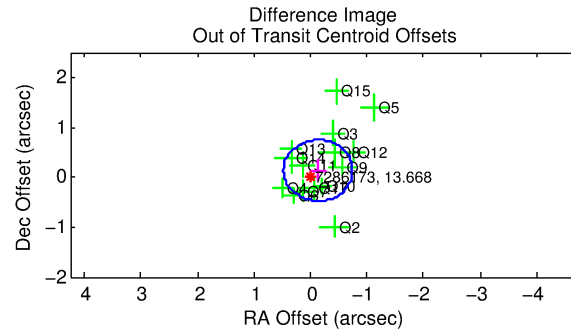
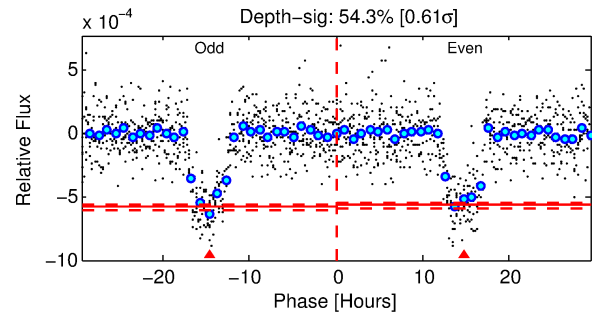
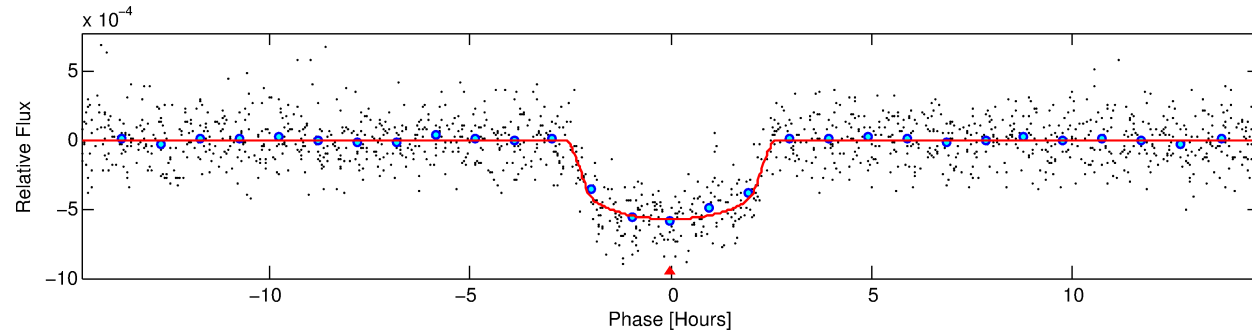
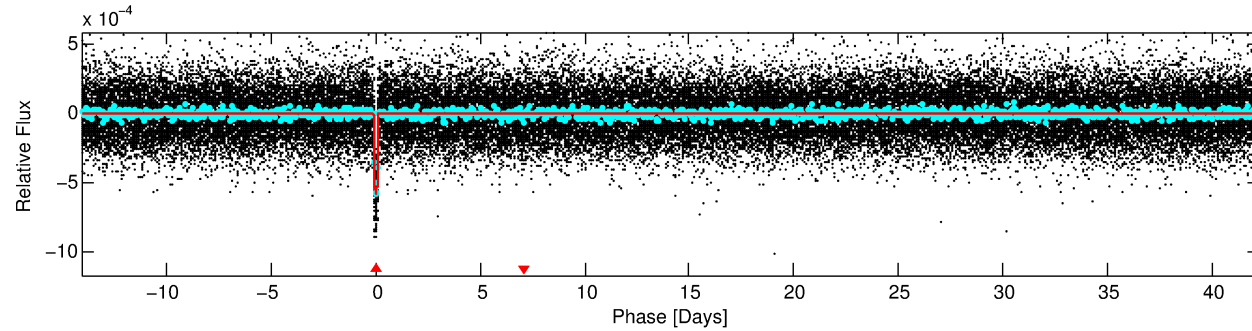
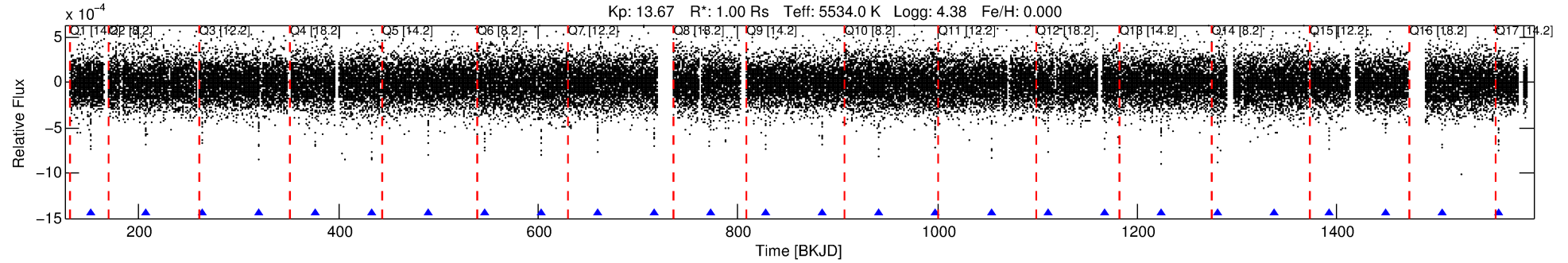
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007286173-01

No Significant Match Found

DV One-Page Summary

KIC: 7286173 Candidate: 1 of 1 Period: 56.435 d
KOI: K01862.01 Corr: 0.980



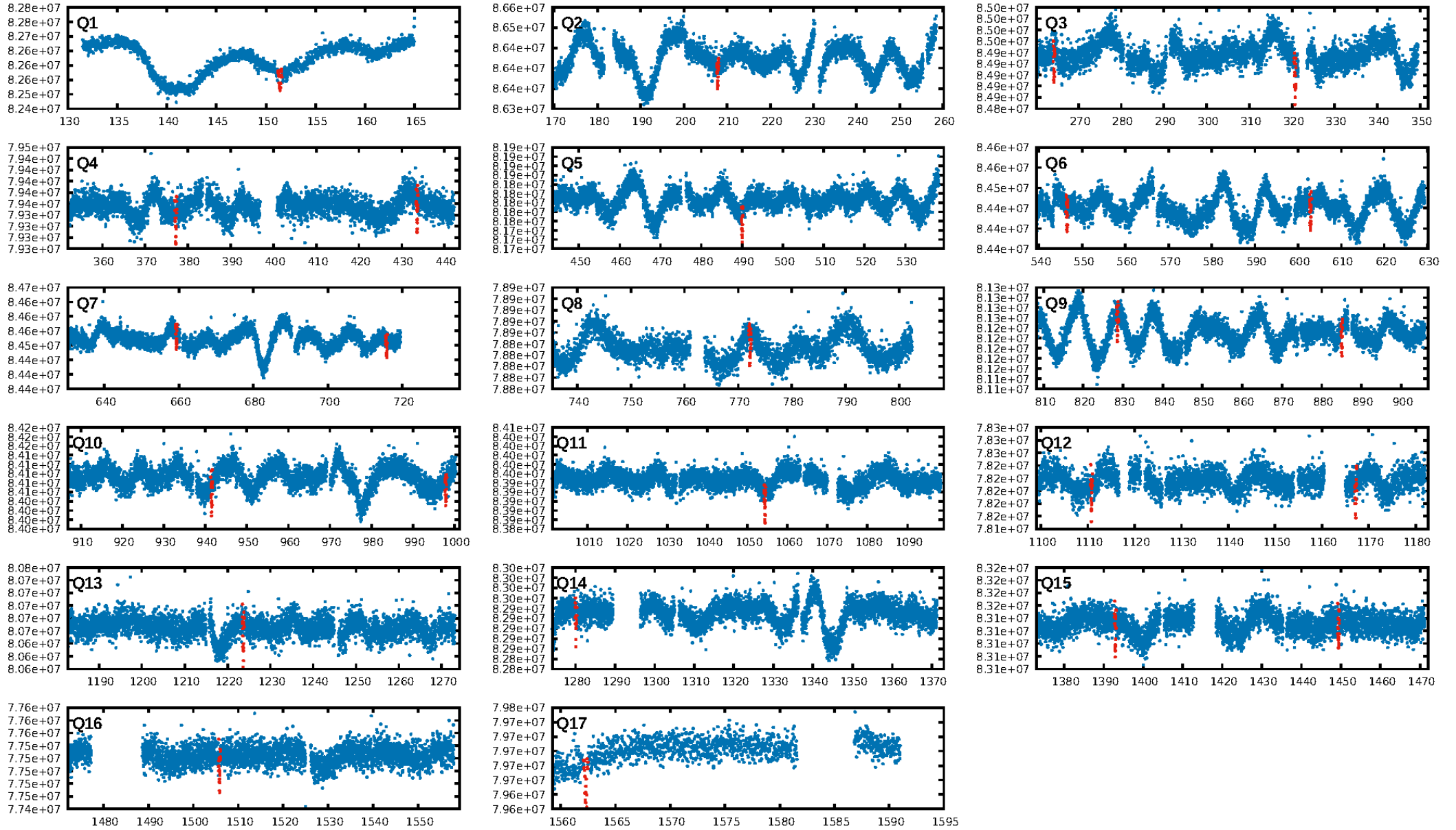
DV Fit Results:

Period = 56.43500 [0.00016] d
Epoch = 151.4104 [0.0023] BKJD
Rp/R* = 0.0242 [0.0038]
a/R* = 57.84 [37.07]
b = 0.79 [0.32]
Seff = 11.06 [2.44]
Teff = 465 [26] K
Rp = 2.65 [0.54] Re
a = 0.2759 [0.0355] AU
Ag = 377.40 [169.01] [2.23 σ]
Teffp = 3169 [321] K [8.39 σ]

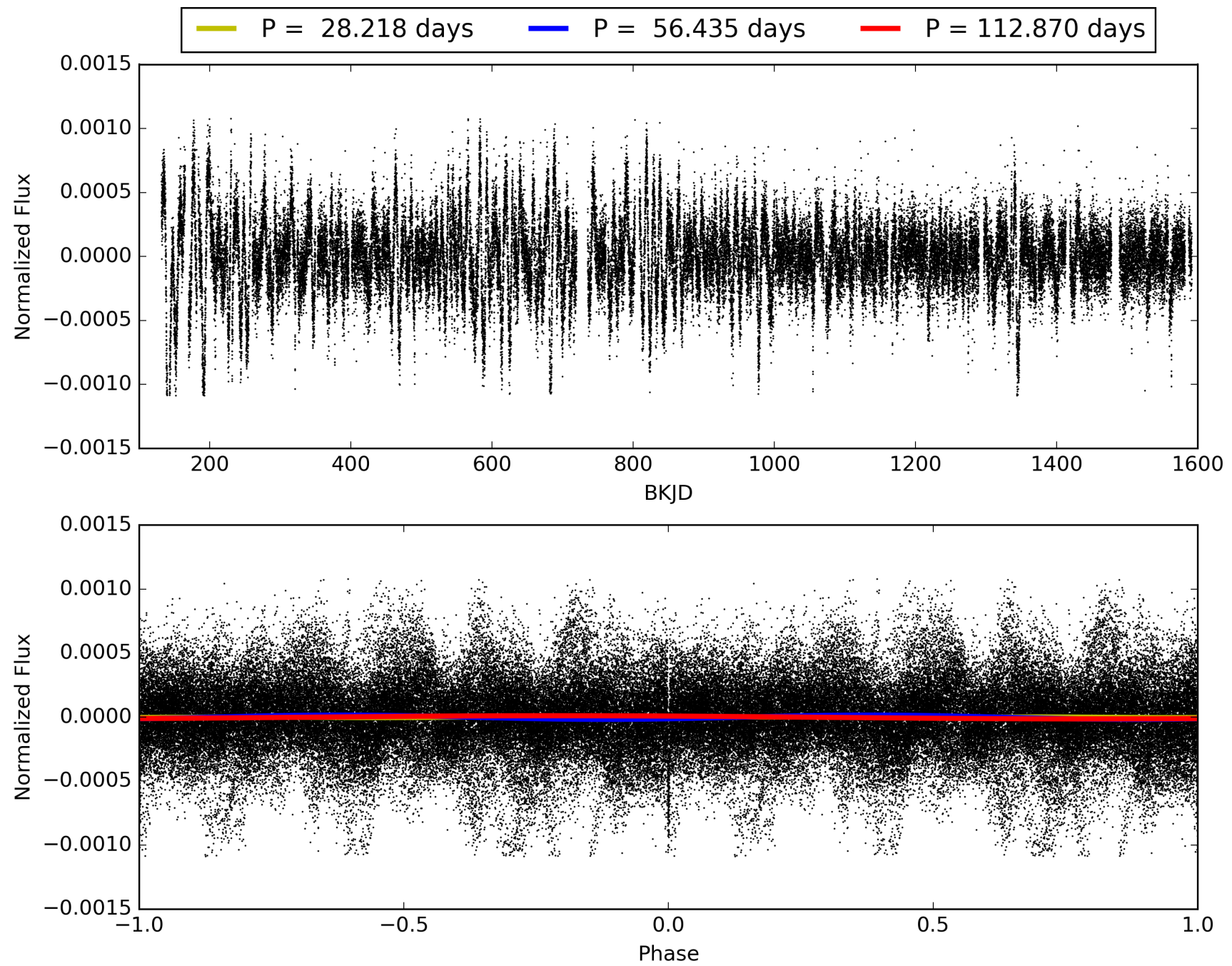
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 84.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [23/23]
GhostDiagnostic-chr: 5.483
Centroid-sig: 22.3%
Centroid-so: 0.345 arcsec [1.20 σ]
OotOffset-rm: 0.188 arcsec [0.92 σ]
KicOffset-rm: 0.209 arcsec [1.08 σ]
OotOffset-st: 4/4/3/4 [15]
KicOffset-st: 4/4/3/4 [15]
DiffImageQuality-fgm: 1.00 [15/15]
DiffImageOverlap-fno: 1.00 [16/16]

TCE 007286173-01, PDC Light Curves

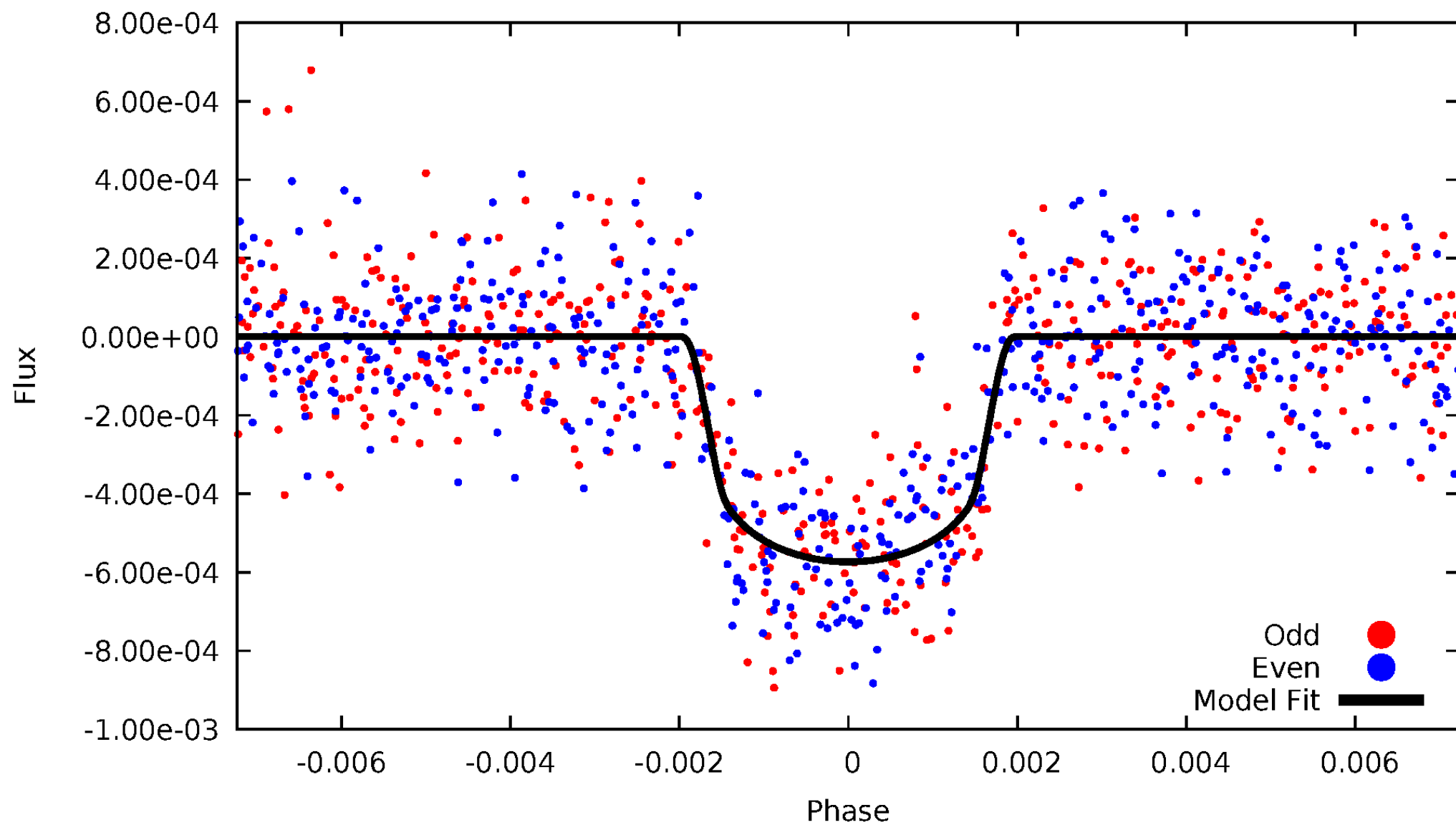


TCE 007286173-01



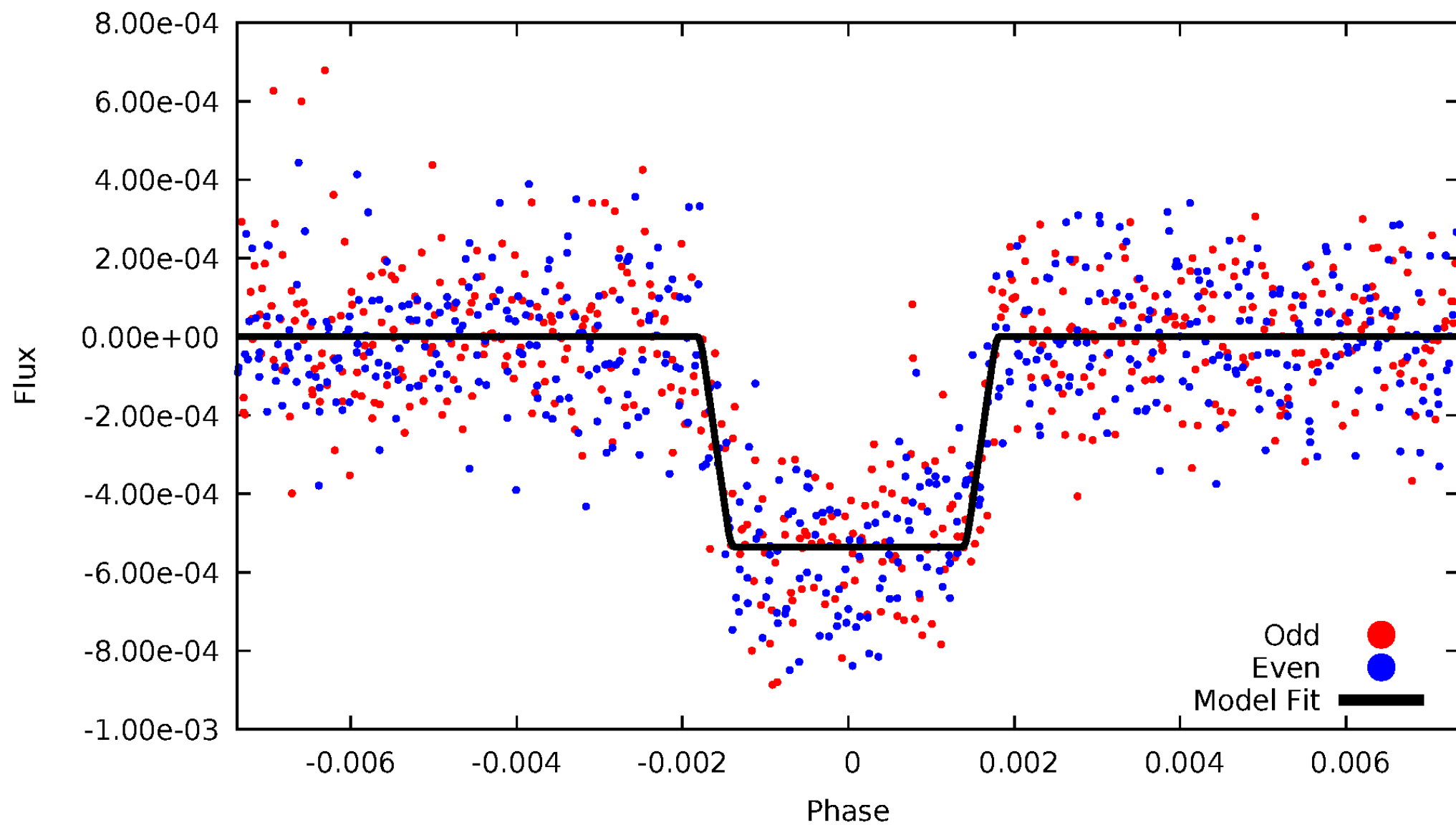
DV Odd/Even

TCE 007286173-01



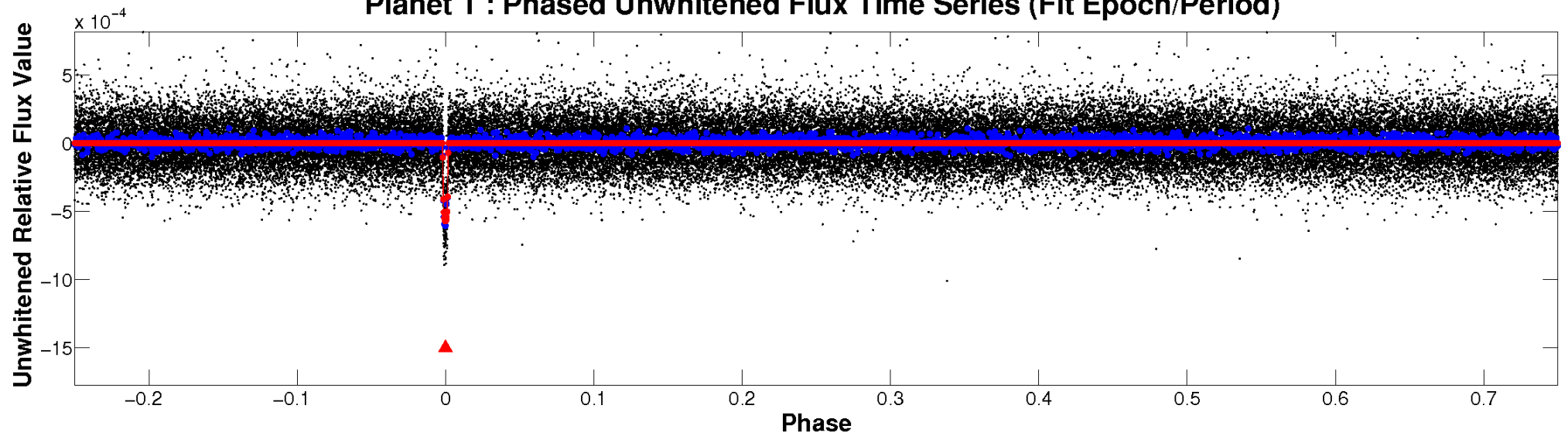
ALT Odd/Even

TCE 007286173-01

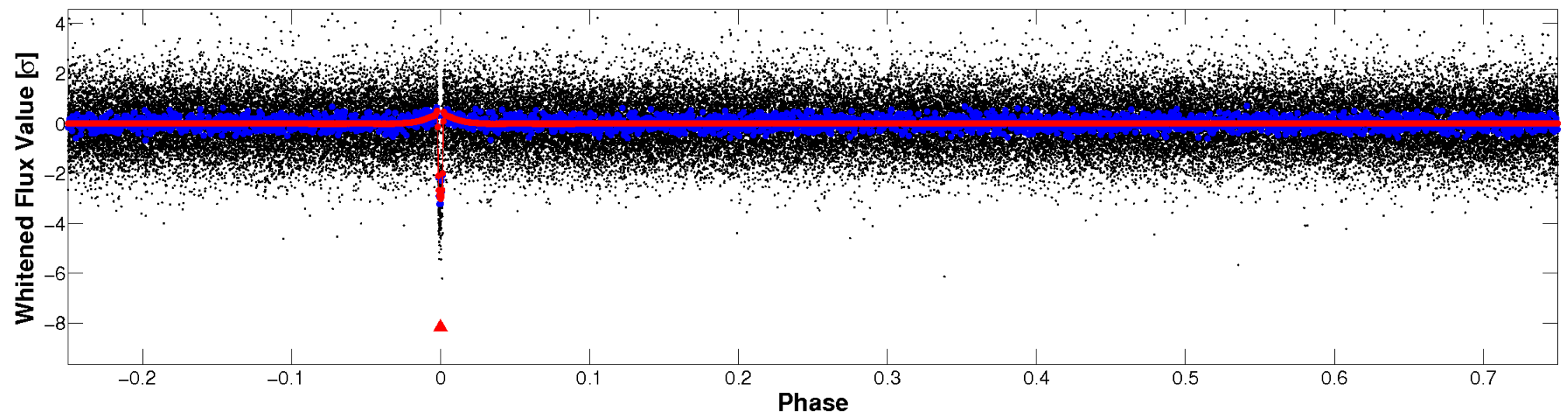


Non-Whitened Vs. Whitened Light Curve

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

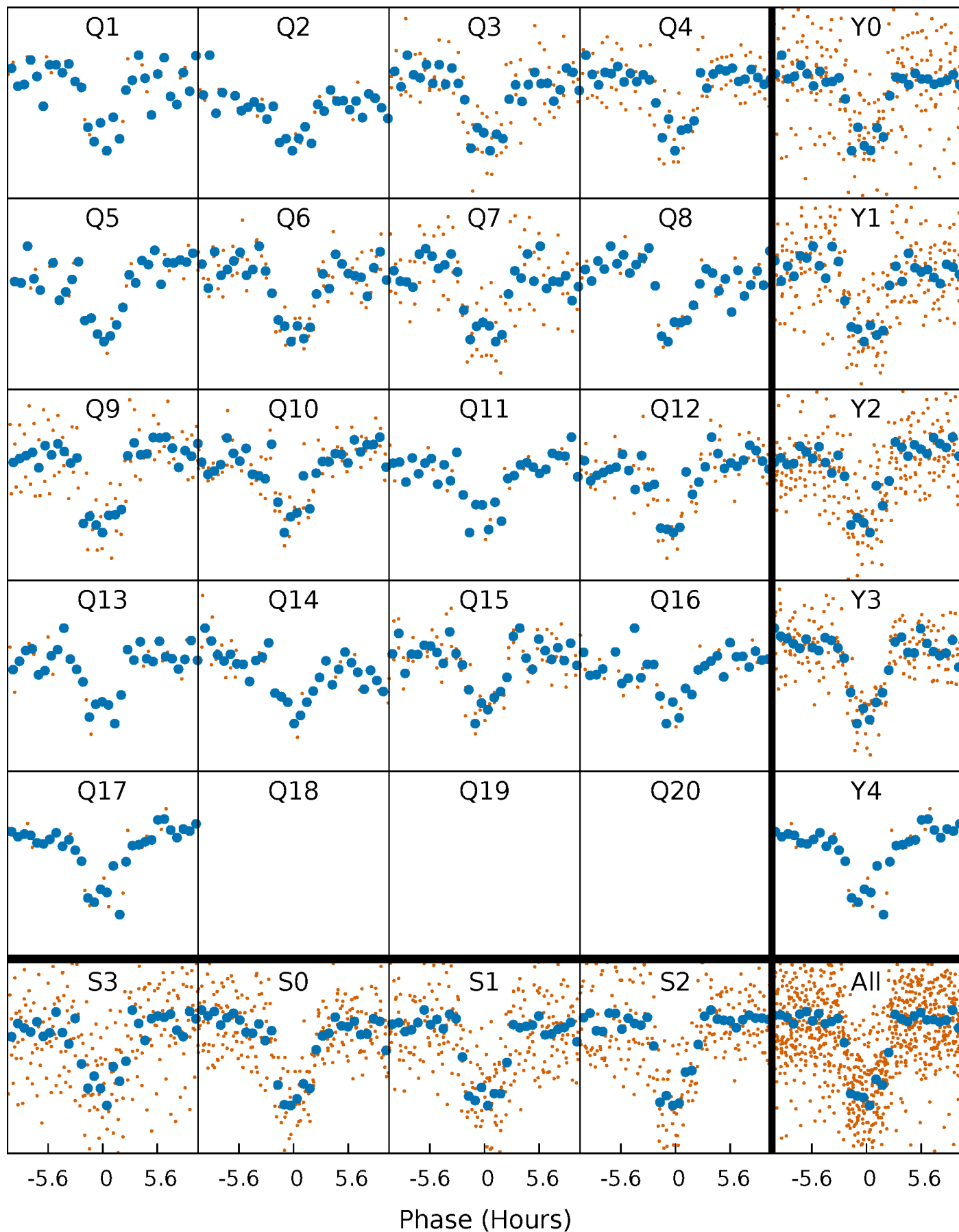


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



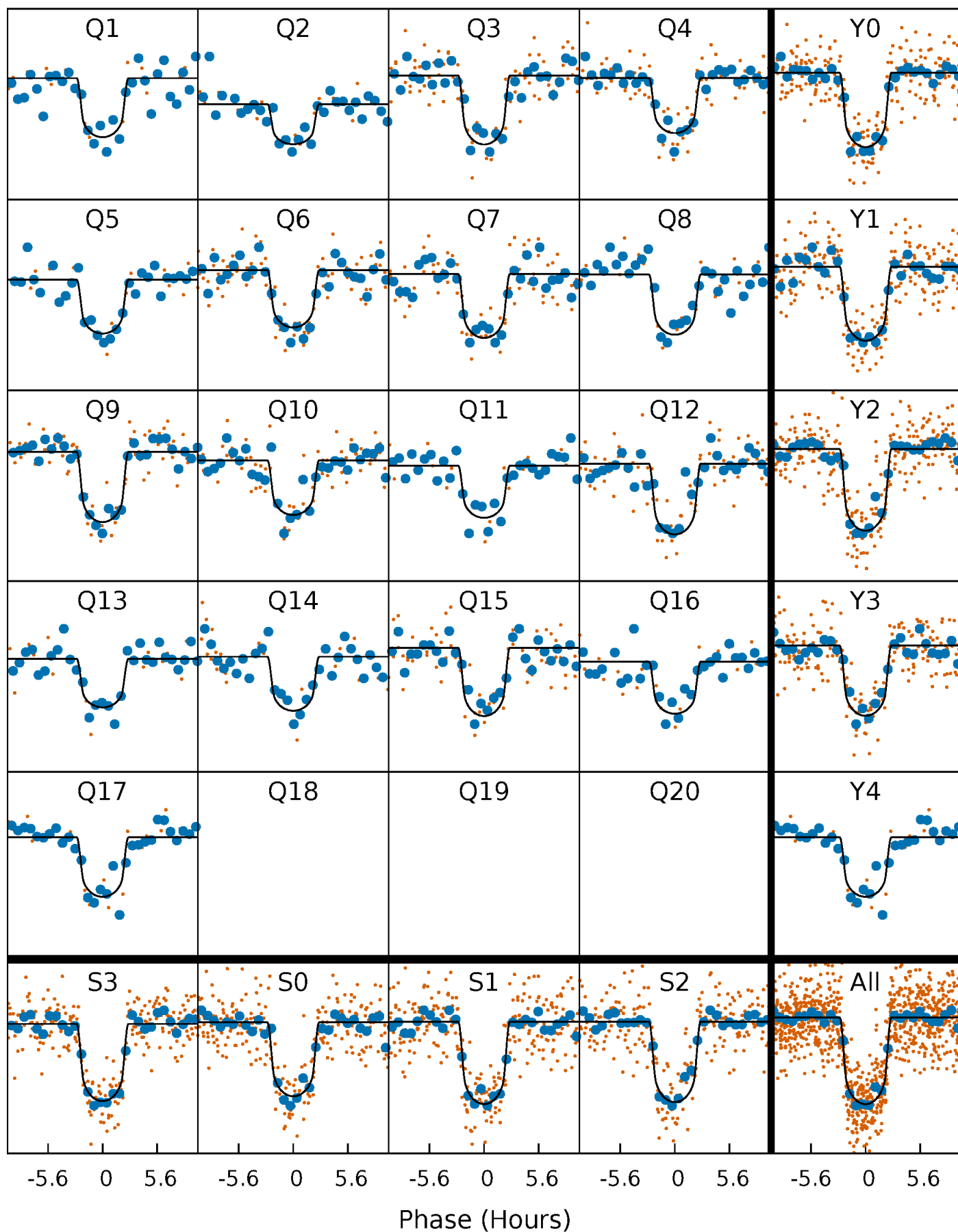
PDC Quarter-Phased Transit Curves

TCE 007286173-01 P= 56.435001 Days $T_0=151.410409$ (BKJD)



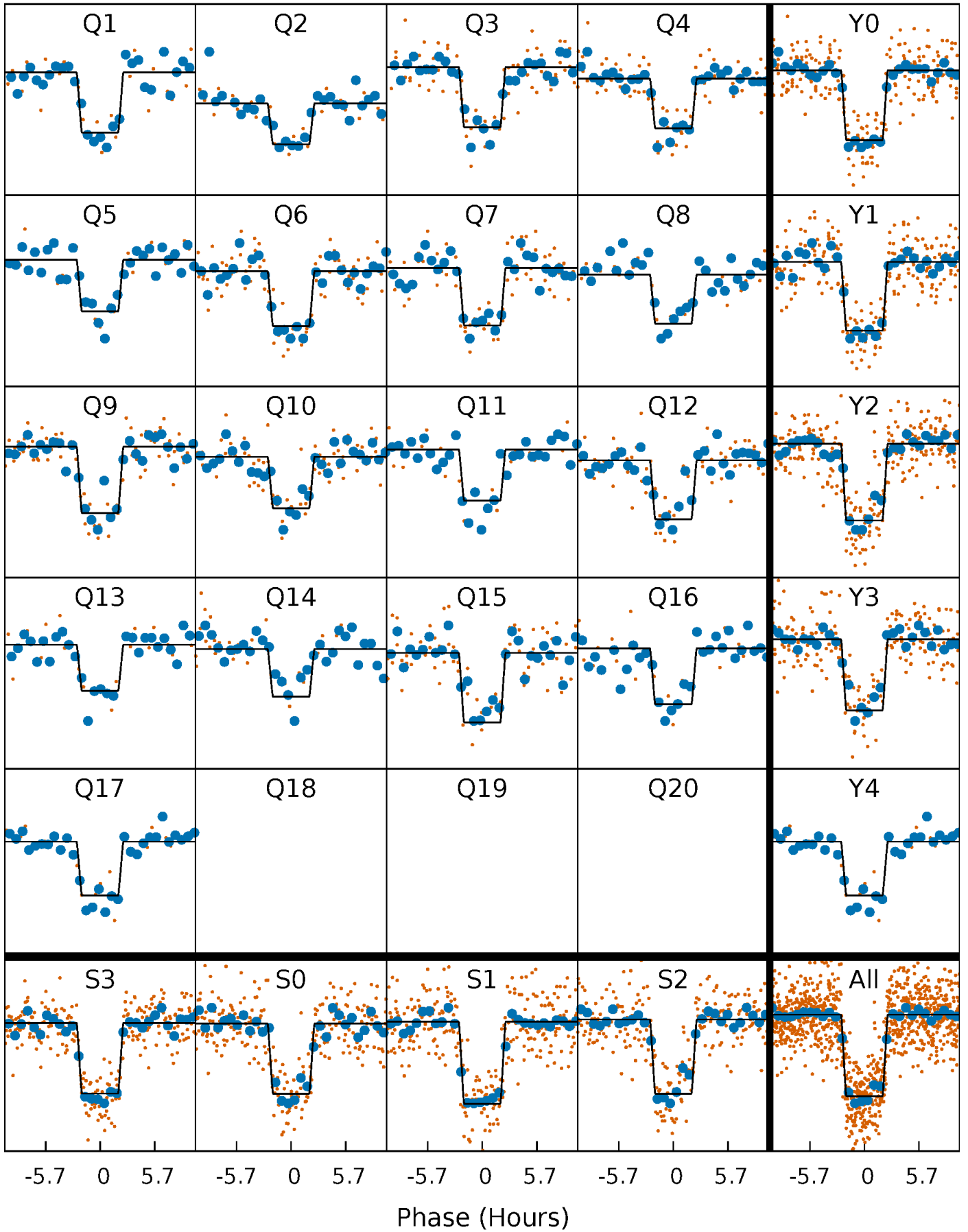
DV Quarter-Phased Transit Curves

TCE 007286173-01 P= 56.435001 Days $T_0=151.410409$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

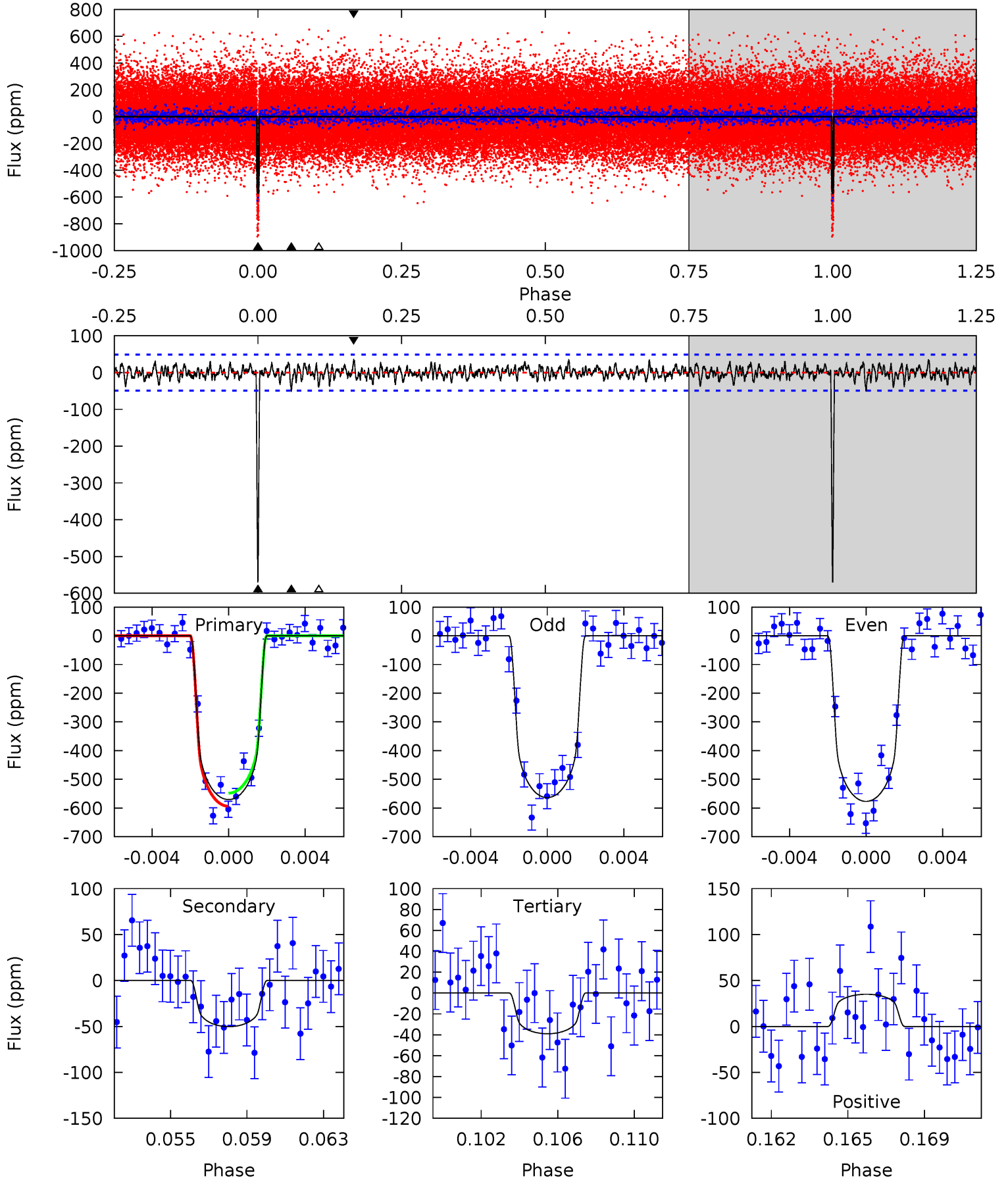
TCE 007286173-01 P= 56.435262 Days $T_0=151.407609$ (BKJD)



DV Model-Shift Uniqueness Test

007286173-01, P = 56.435001 Days, E = 94.975408 Days

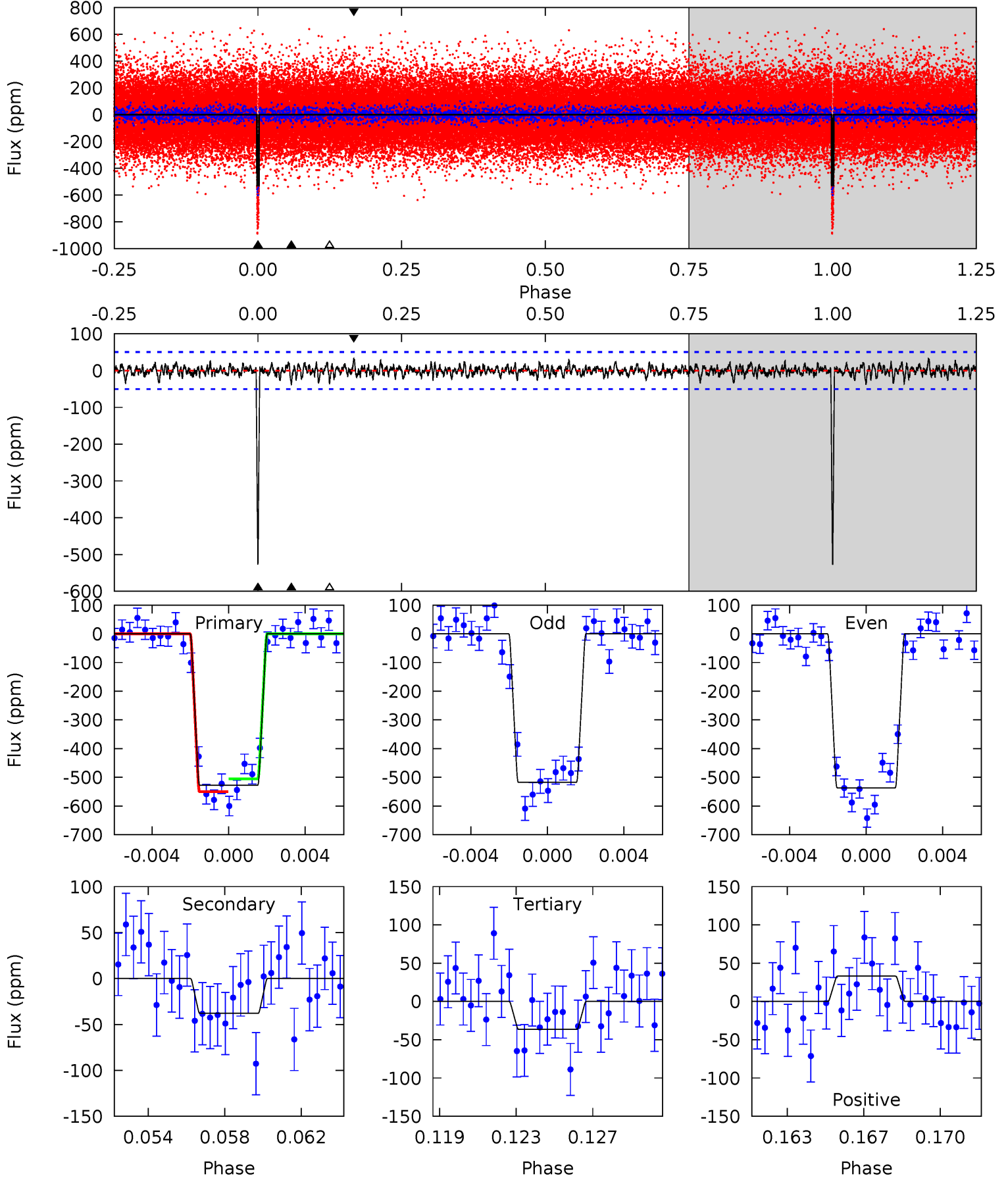
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
60.5	5.33	4.14	3.72	5.20	2.88	1.26	56.4	56.8	1.19	1.61	0.71	1.00	0.06	2.42



Alt Model-Shift Uniqueness Test

007286173-01, P = 56.435262 Days, E = 94.972347 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
54.6	3.93	3.77	3.41	5.22	2.91	1.02	50.8	51.2	0.16	0.51	1.00	0.96	0.06	2.33



Stellar Parameters For KIC 007286173

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5534^{+110}_{-1}	$4.381^{+0.121}_{-0.099}$	$0.000^{+0.150}_{-0.150}$	$1.001^{+0.134}_{-0.120}$	$0.880^{+0.072}_{-0.039}$	$1.235^{+0.582}_{-0.364}$
	+2%/-0%	+3%/-2%	+inf%/-inf%	+13%/-12%	+8%/-4%	+47%/-30%
Source	SPE57	SPE57	SPE57	DSEP		

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

Secondary Eclipse Parameters for KIC 007286173-01 / KOI 1862.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-50 ± 9	$2.66^{+0.44}_{-0.43}$	644^{+32}_{-28}	3455^{+225}_{-182}	301^{+141}_{-92}
Alt.	-38 ± 10	$2.55^{+0.49}_{-0.46}$	646^{+28}_{-31}	3353^{+240}_{-200}	248^{+145}_{-87}

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 $A_{obs} \gg 1.0$

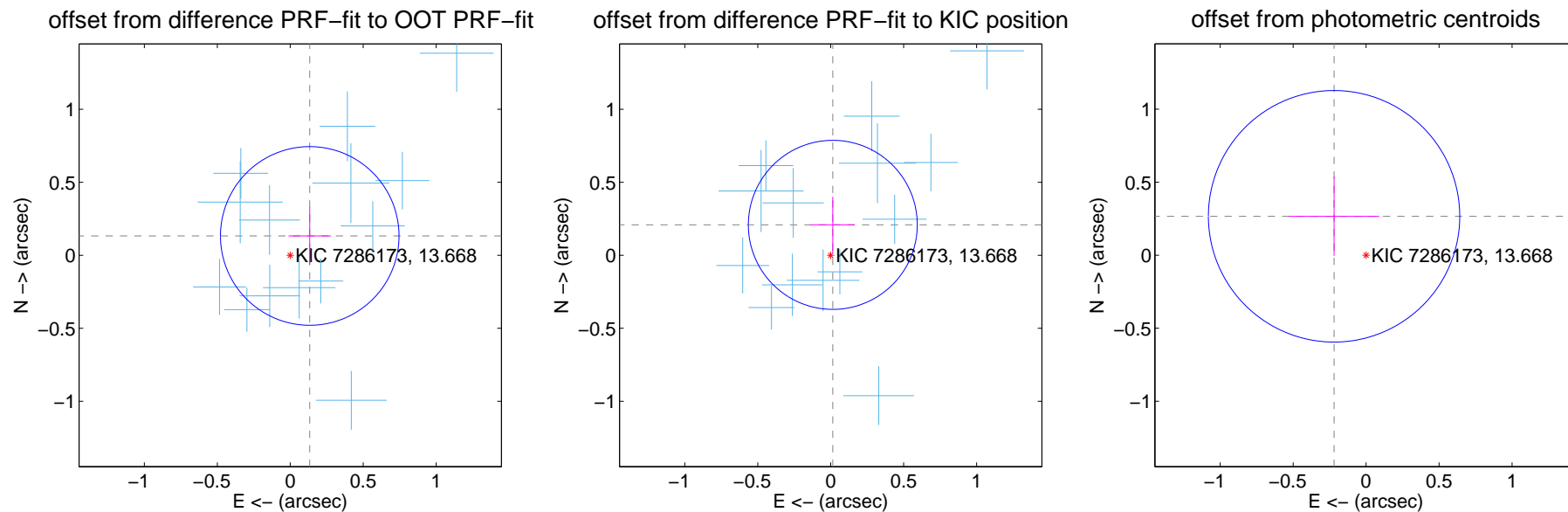
DV Centroid Data

Supplemental centroid analysis for 007286173-01. Kepler magnitude: 13.67. Transit SNR 40.27

There are 15 quarters with good PRF difference image offsets

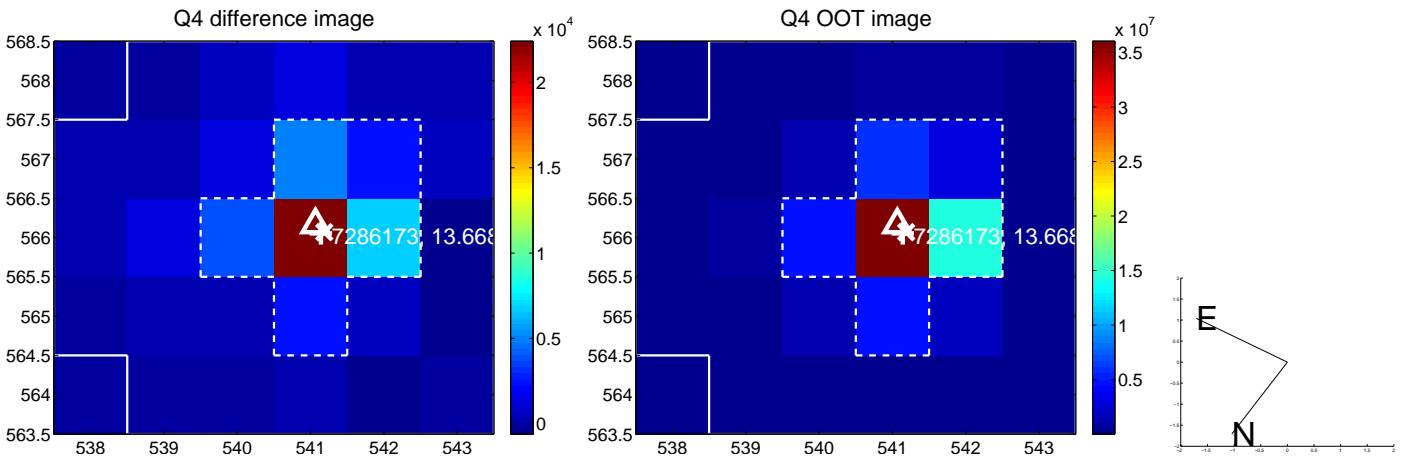
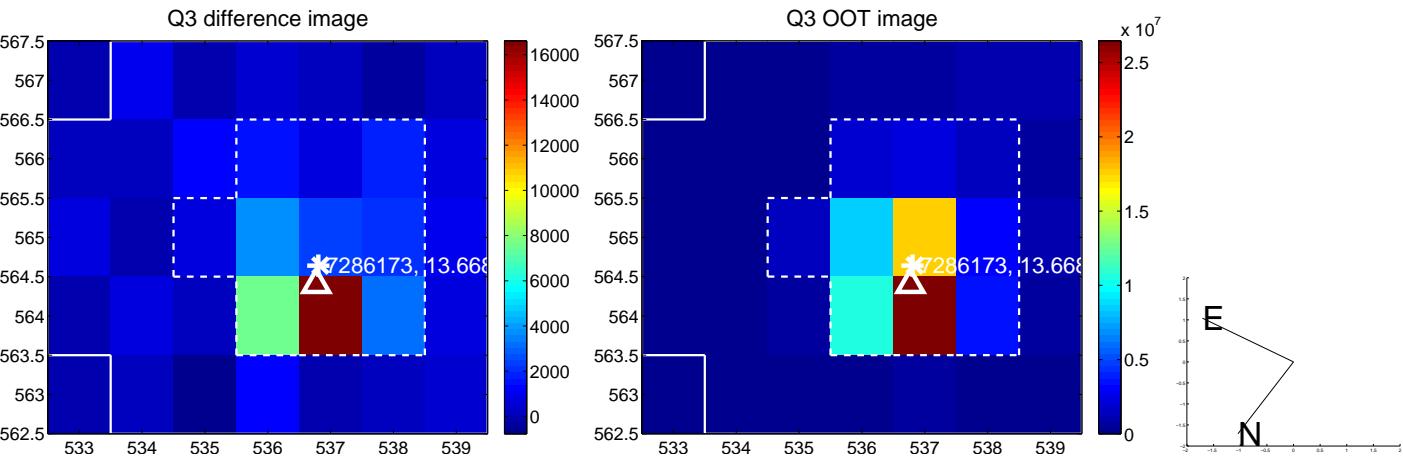
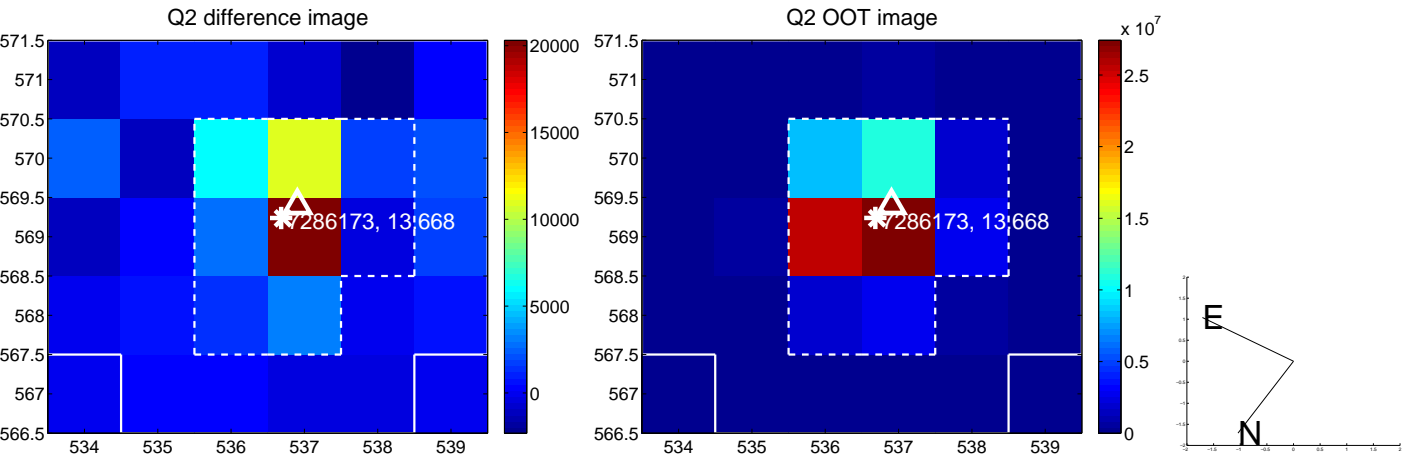
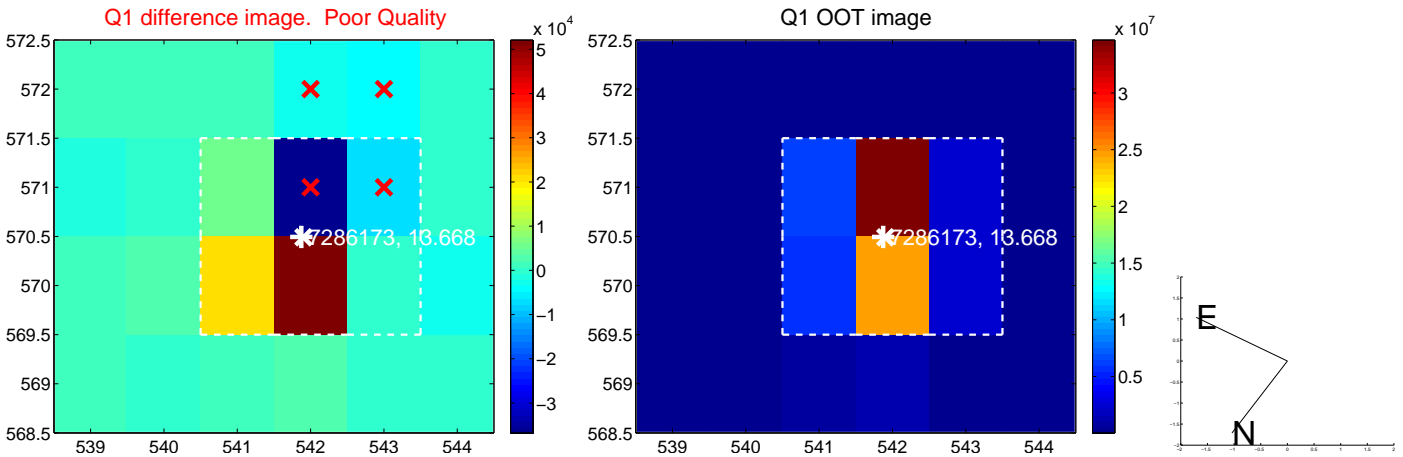
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.188 ± 0.204	0.92	-0.133 ± 0.146	0.132 ± 0.199
PRF-fit source offset from KIC position	0.209 ± 0.193	1.08	-0.014 ± 0.151	0.208 ± 0.193
photometric centroid source offset	0.35 ± 0.29	1.20	0.22 ± 0.31	0.27 ± 0.27

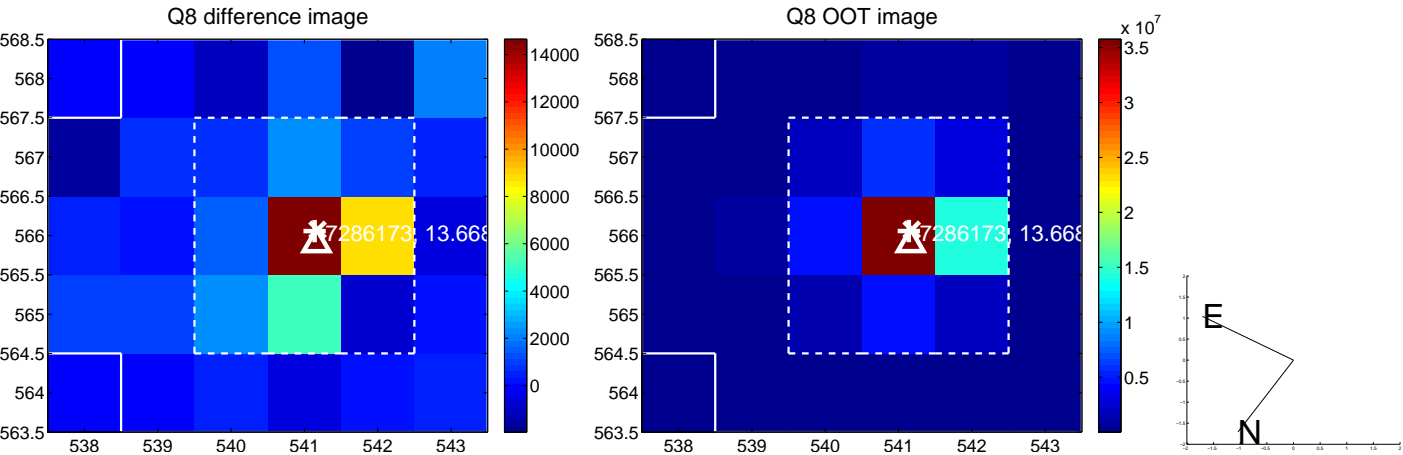
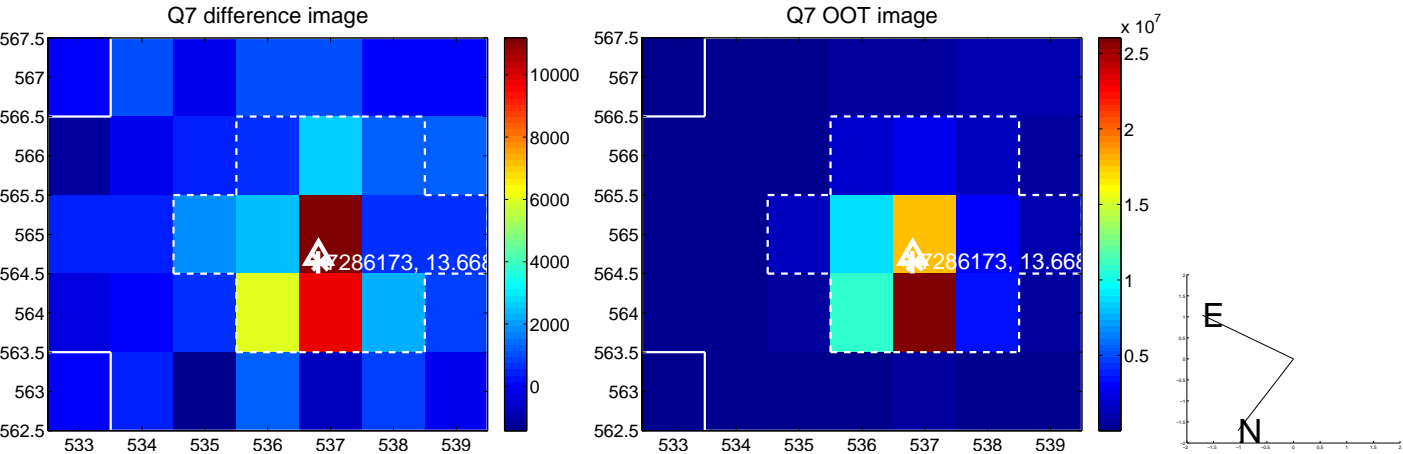
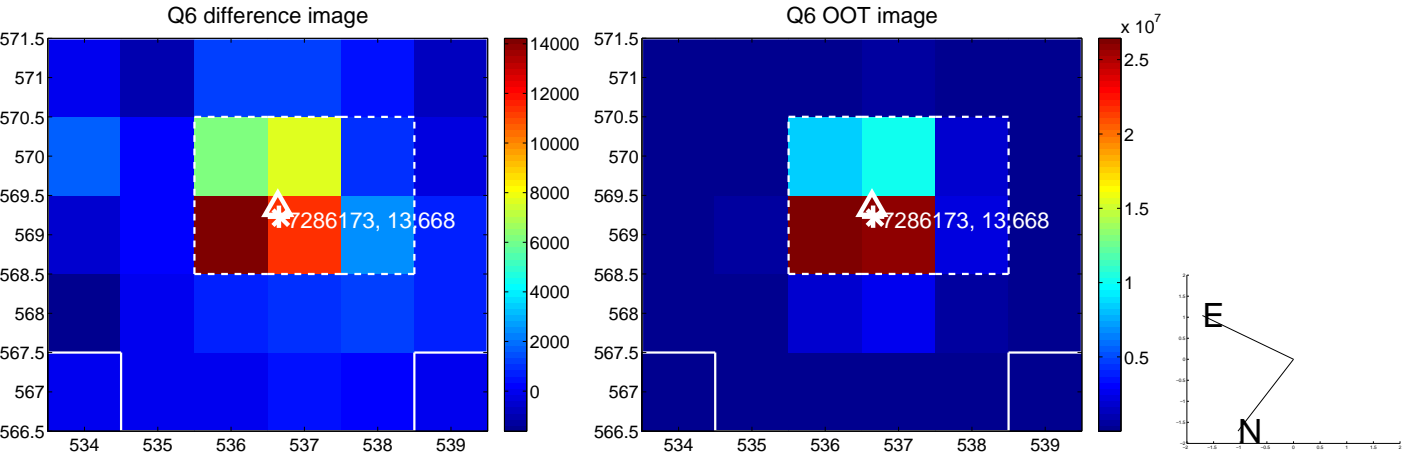
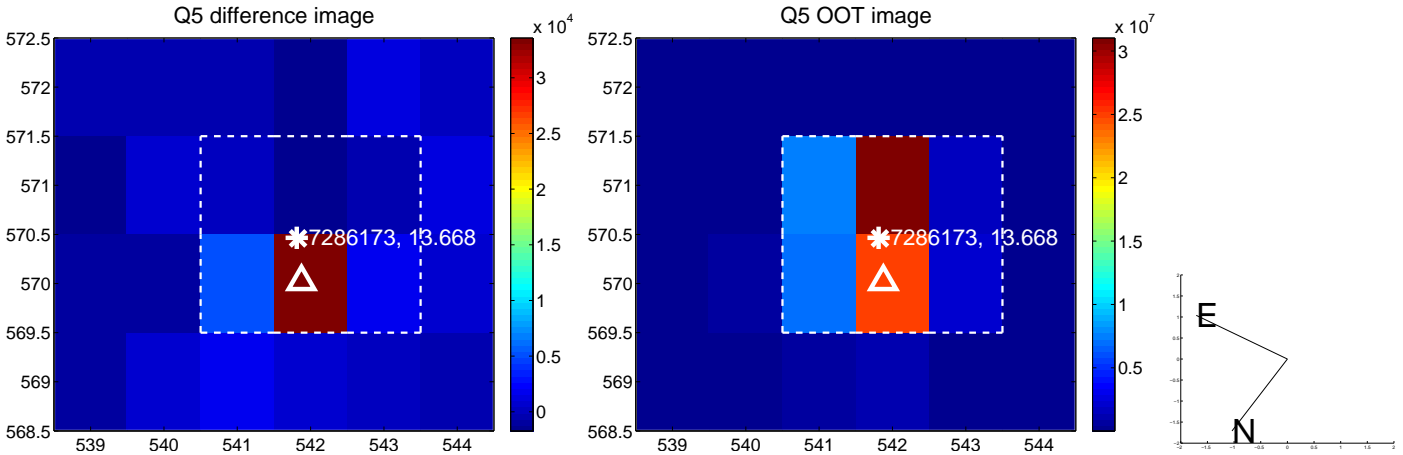


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

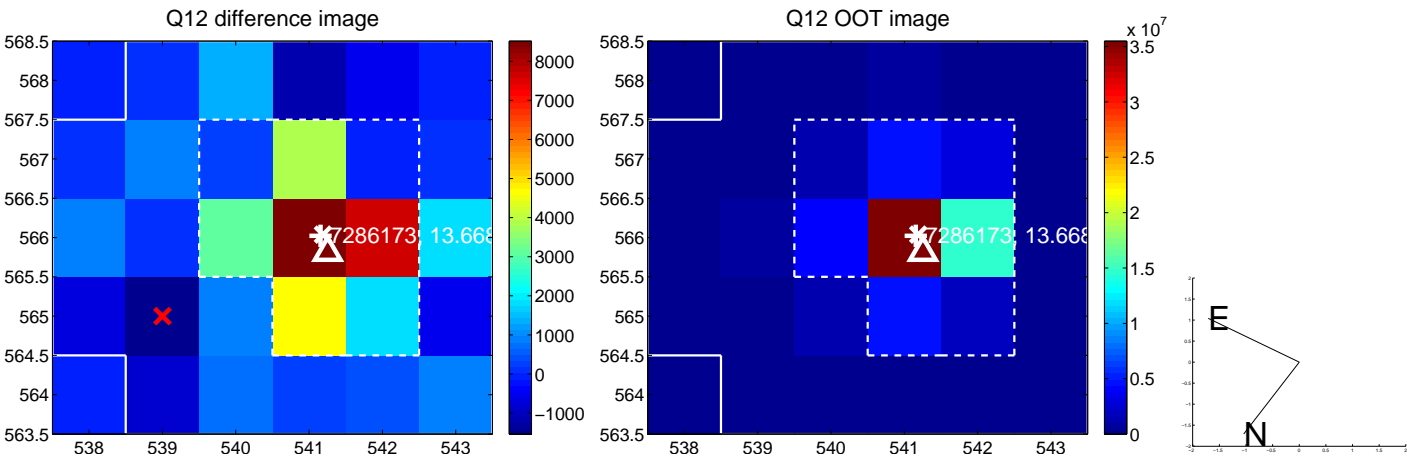
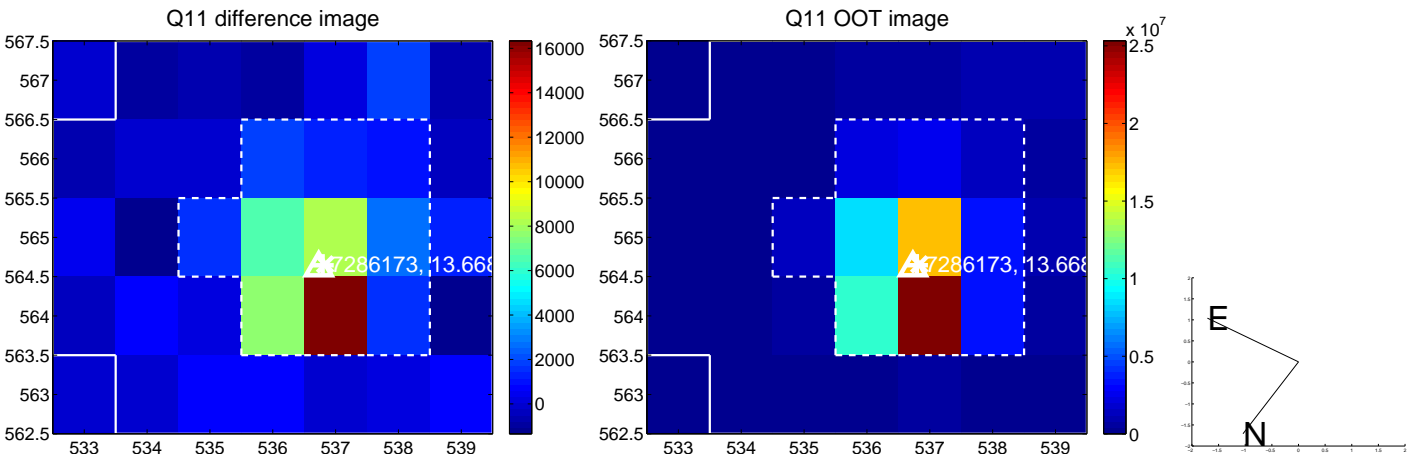
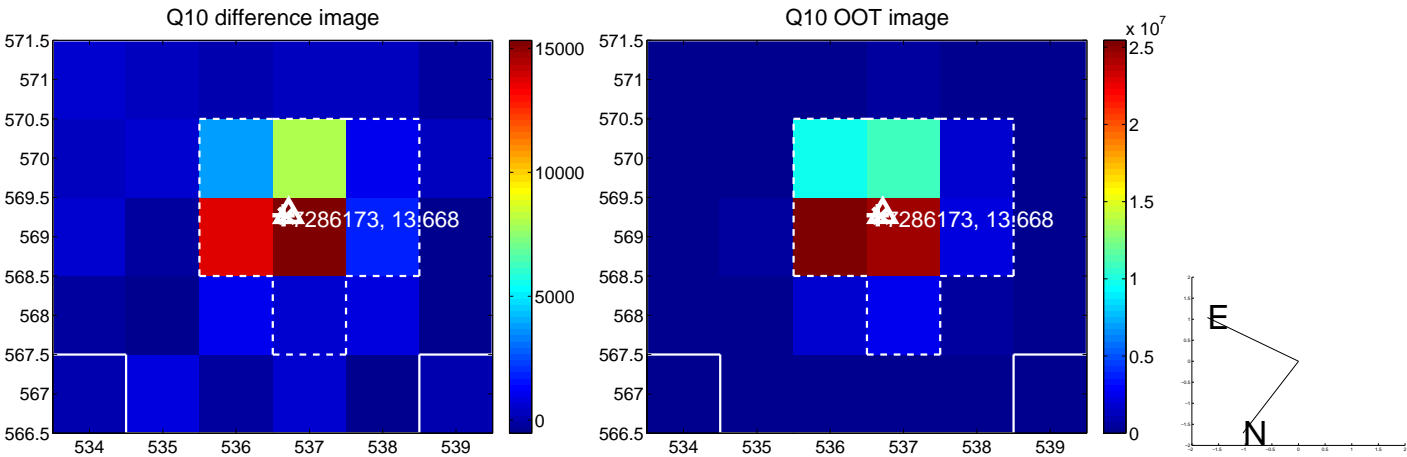
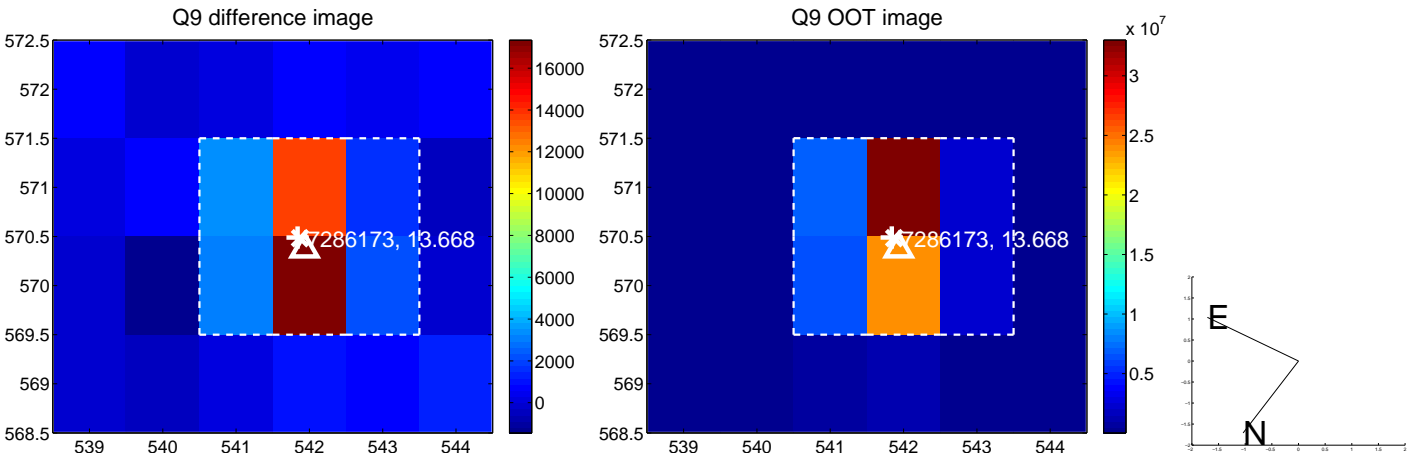
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



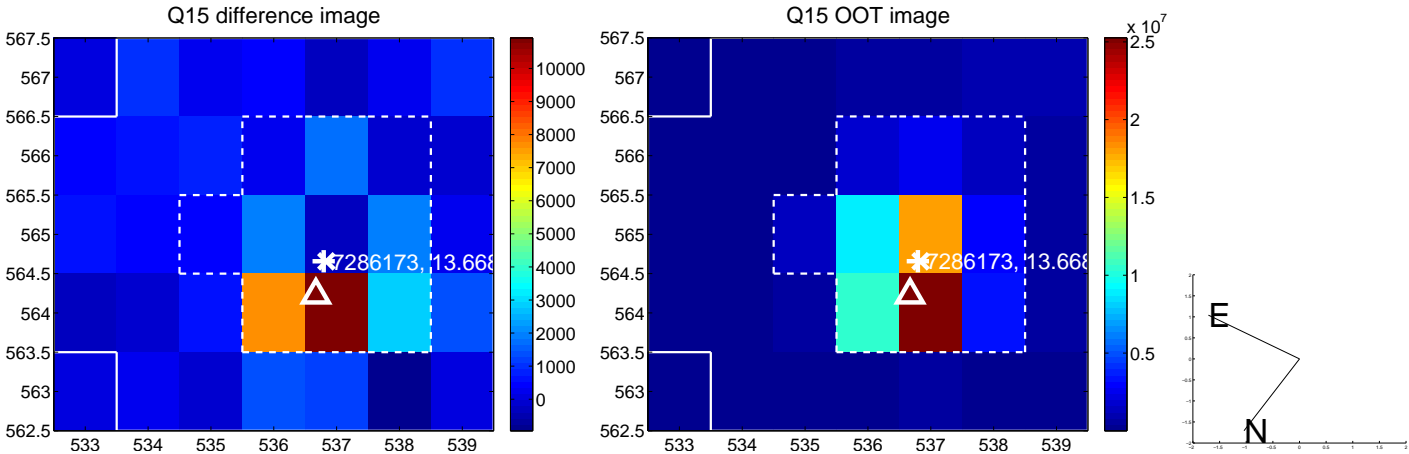
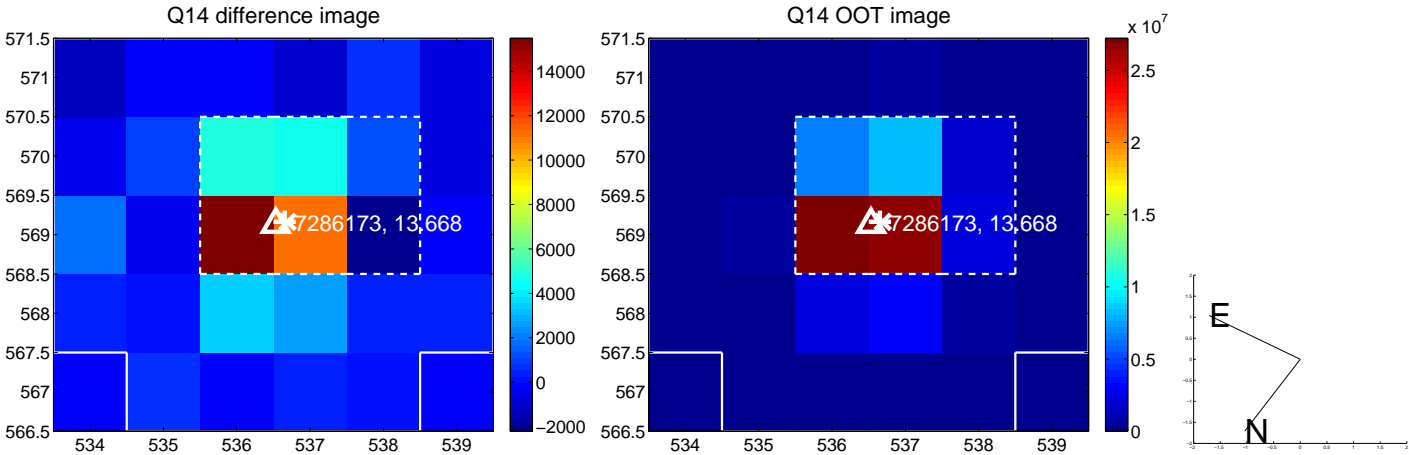
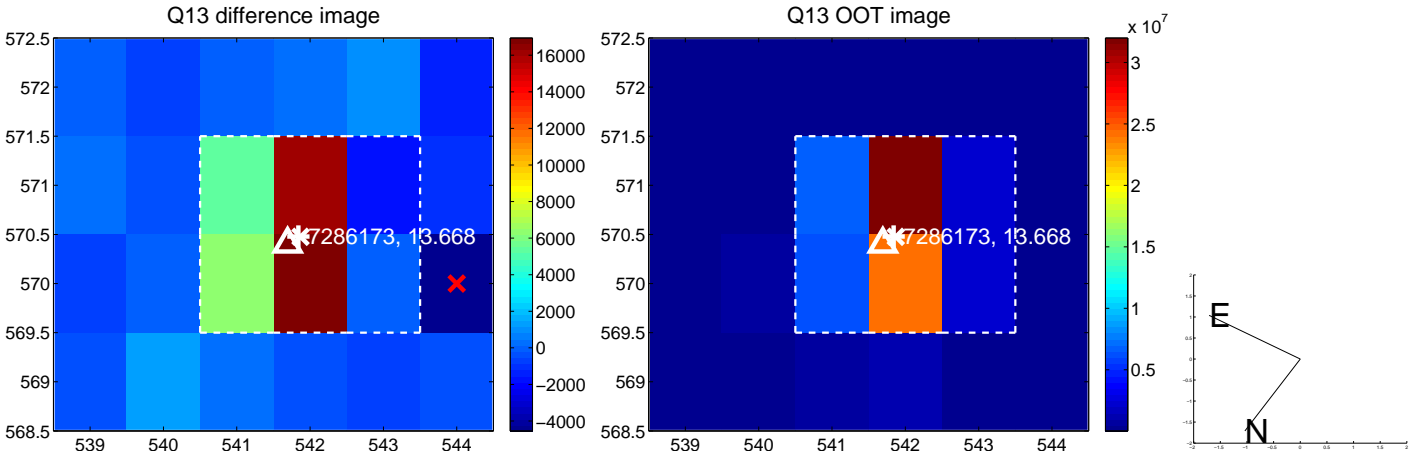
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



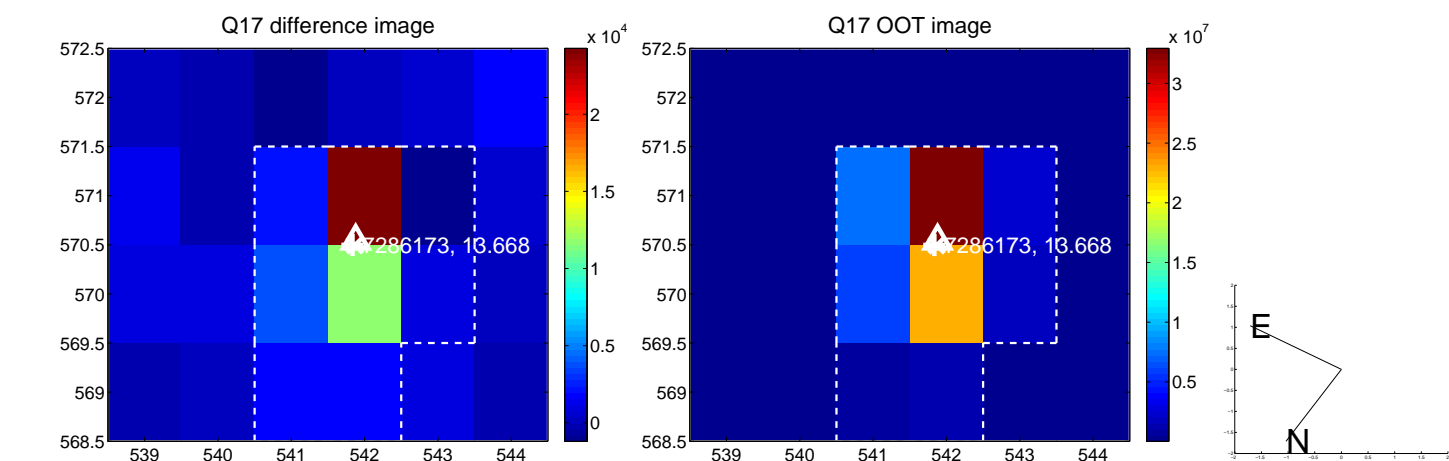
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



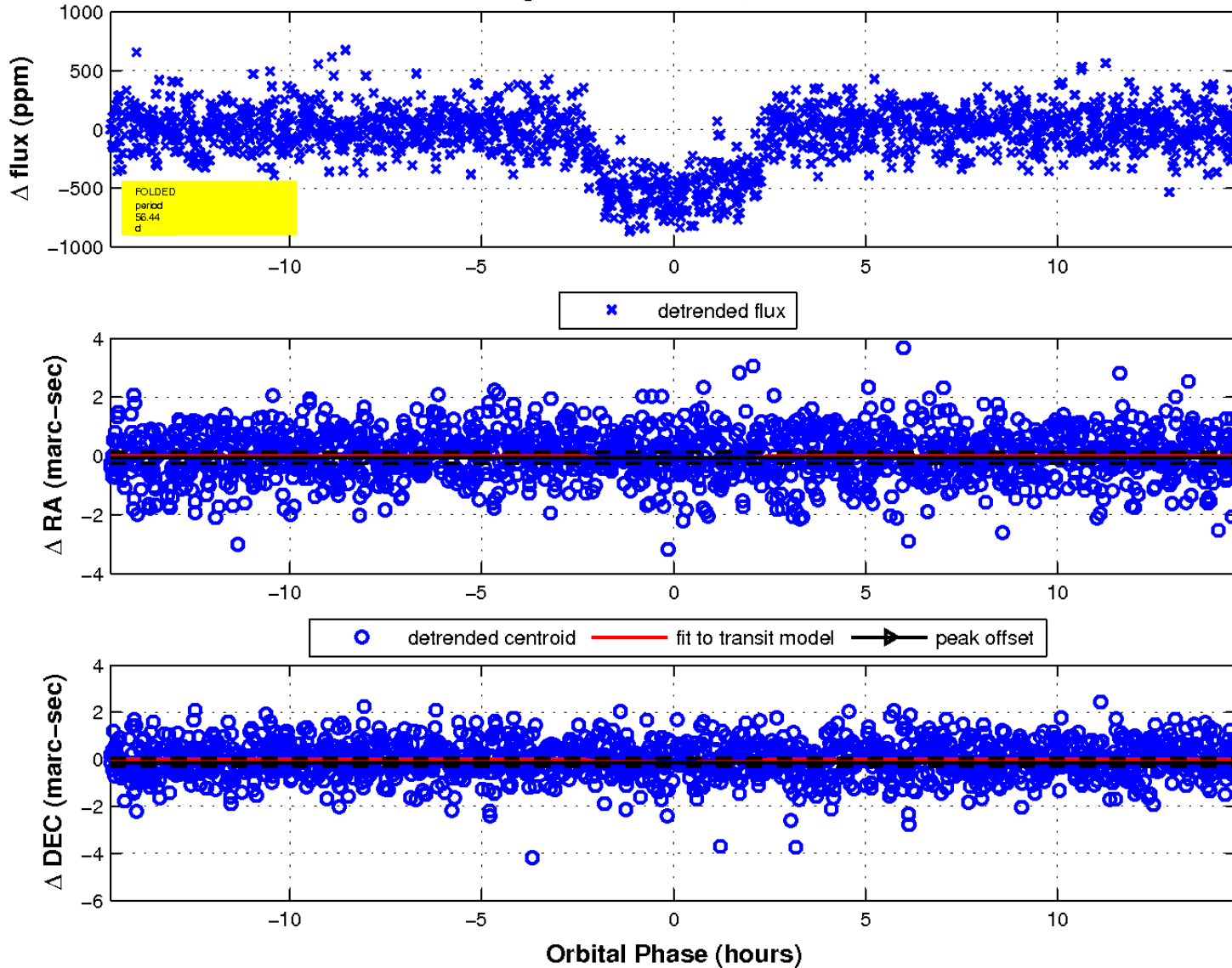
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

