

KIC 007008149

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})
007008149-01	OBS	2918.01	0.515553	131.652393	579.0	0.985	28.7	37.0	0.73	5068	2.15	2524.02

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007008149-01	OBS	FP	0.00	0	0	1	0	CENT_RESOLVED_OFFSET

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.

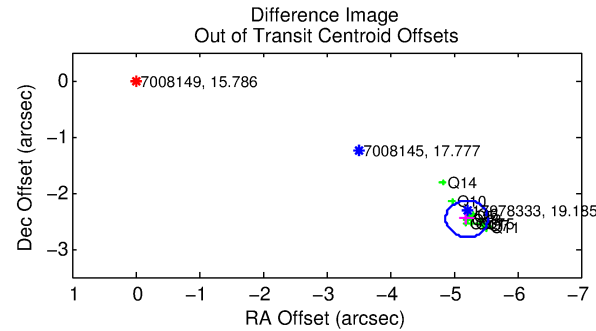
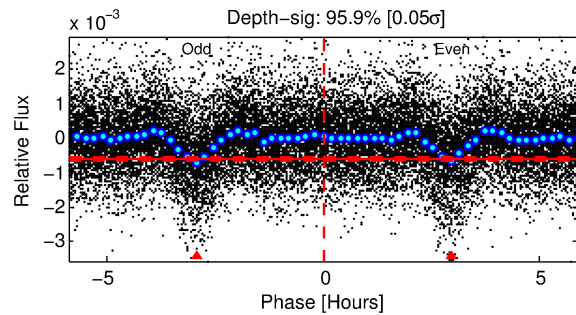
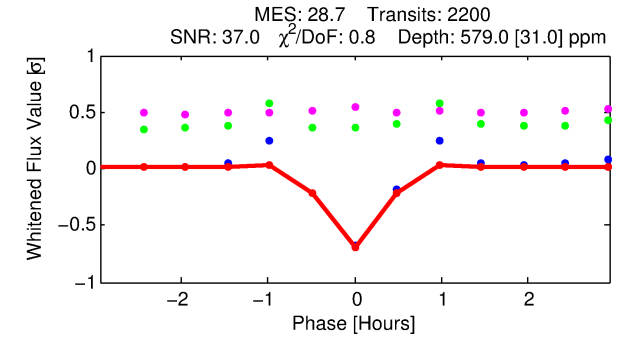
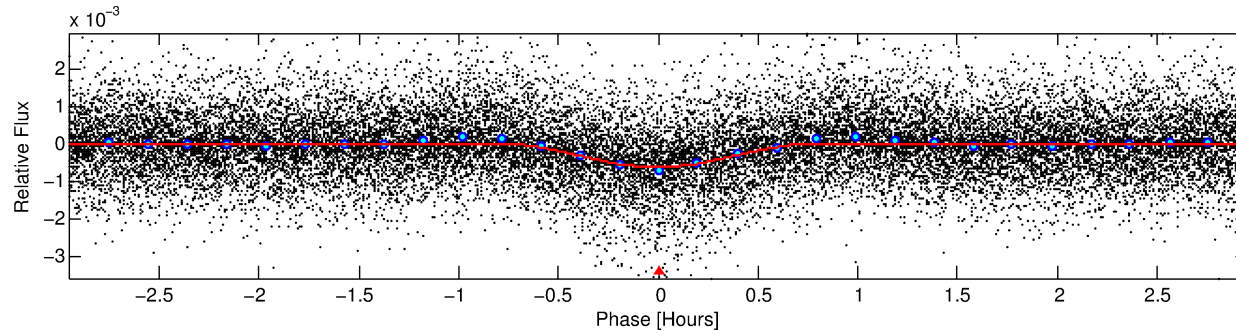
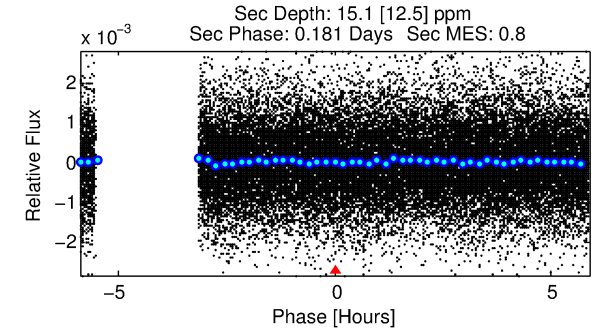
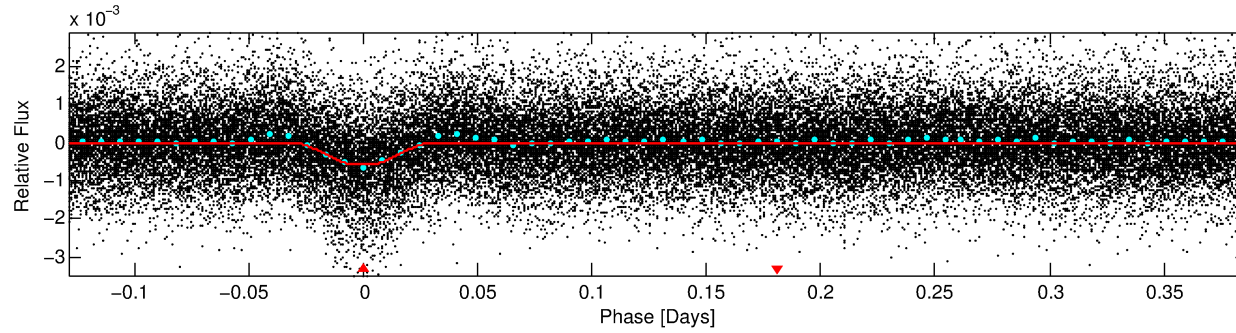
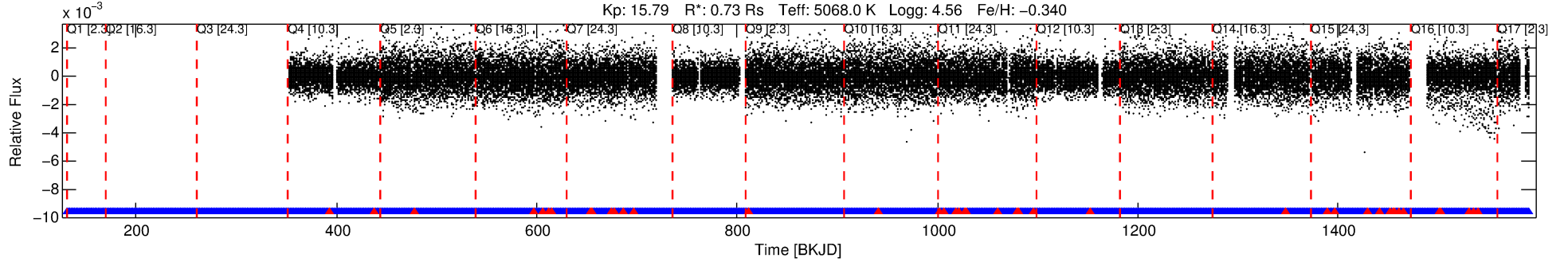
Ephemeris Match Information For 007008149-01

No Significant Match Found

DV One-Page Summary

KIC: 7008149 Candidate: 1 of 1 Period: 0.516 d
KOI: K02918.02 Corr: 0.783

Kp: 15.79 R*: 0.73 Rs Teff: 5068.0 K Logg: 4.56 Fe/H: -0.340



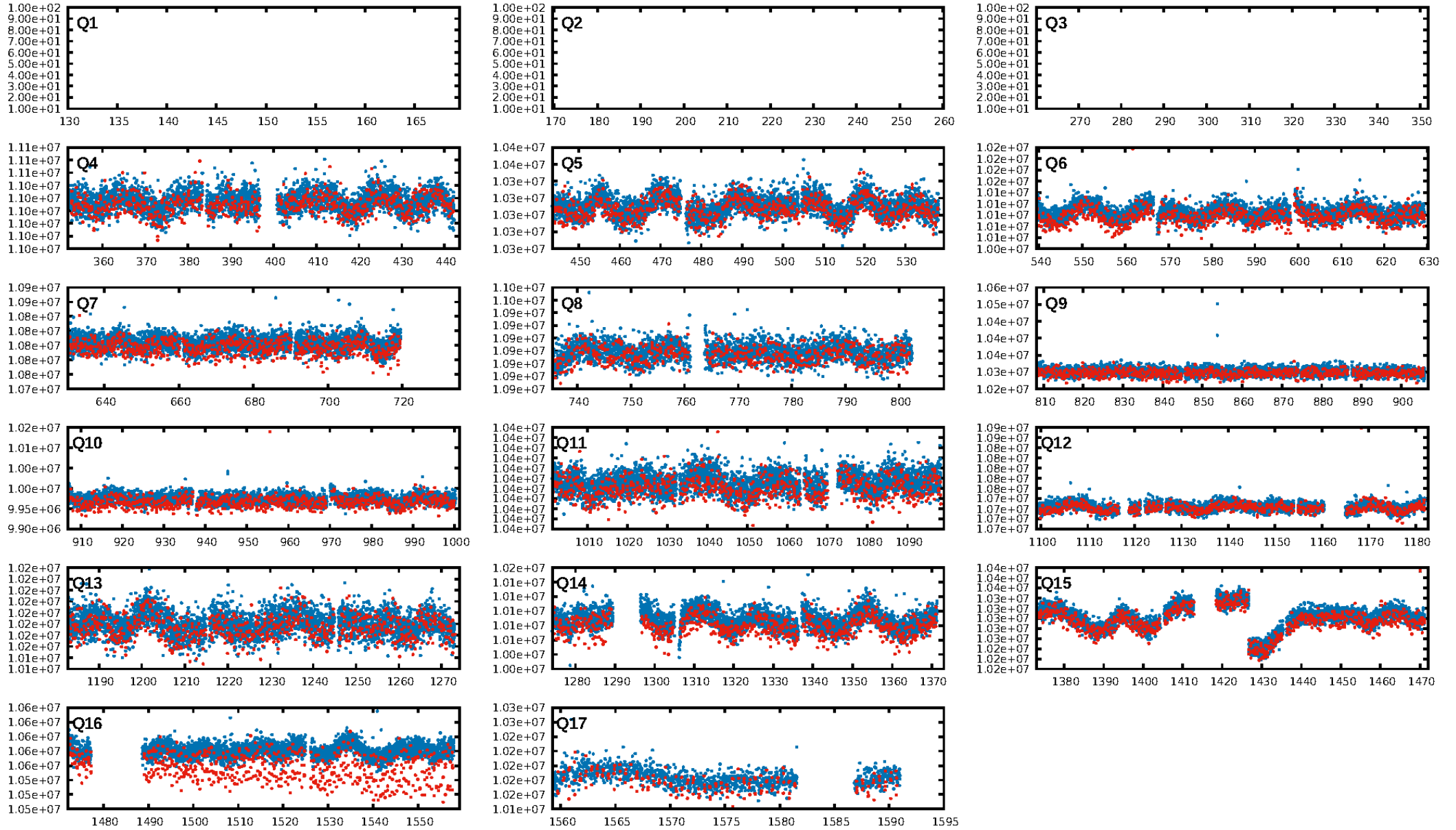
DV Fit Results:

Period = 0.51555 [0.00000] d
Epoch = 131.6524 [0.0004] BKJD
Rp/R* = 0.0271 [0.0063]
a/R* = 2.19 [1.59]
b = 0.90 [0.20]
Seff = 2524.02 [497.41]
Teq = 1807 [89] K
Rp = 2.15 [0.56] Re
a = 0.0112 [0.0010] AU
Ag = 0.22 [0.21] [-3.62 sigma]
Teffp = 1921 [461] K [0.24 sigma]

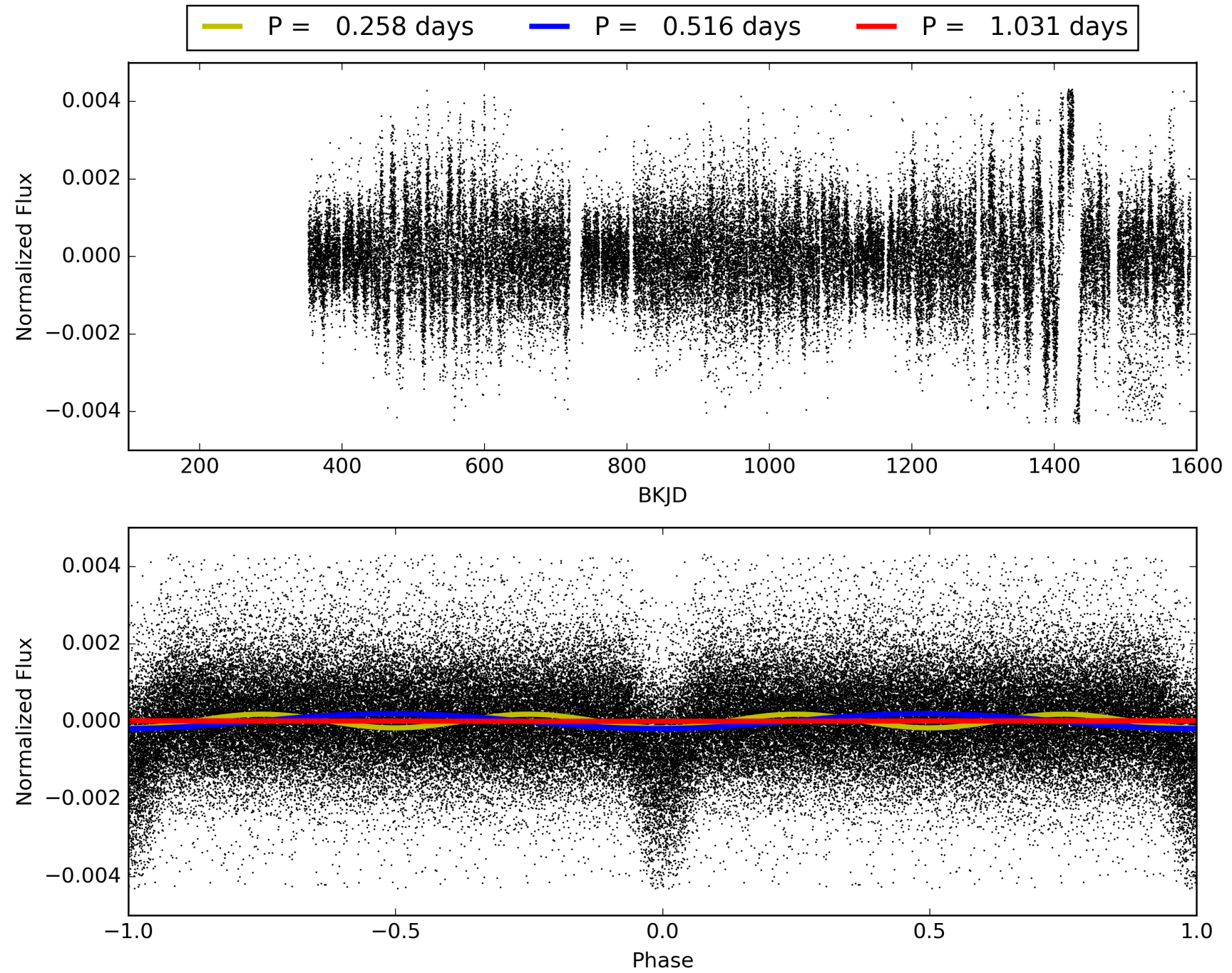
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.78e-159
RollingBand-fgt: 0.98 [2105/2148]
GhostDiagnostic-chr: -0.7327
Centroid-sig: 0.0%
Centroid-so: 8.294 arcsec [26.33 sigma]
OotOffset-rm: 5.757 arcsec [52.48 sigma]
KicOffset-rm: 5.674 arcsec [49.61 sigma]
OotOffset-st: 3/3/0/4 [10]
KicOffset-st: 3/3/0/4 [10]
DiffImageQuality-fgm: 1.00 [10/10]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 007008149-01, PDC Light Curves

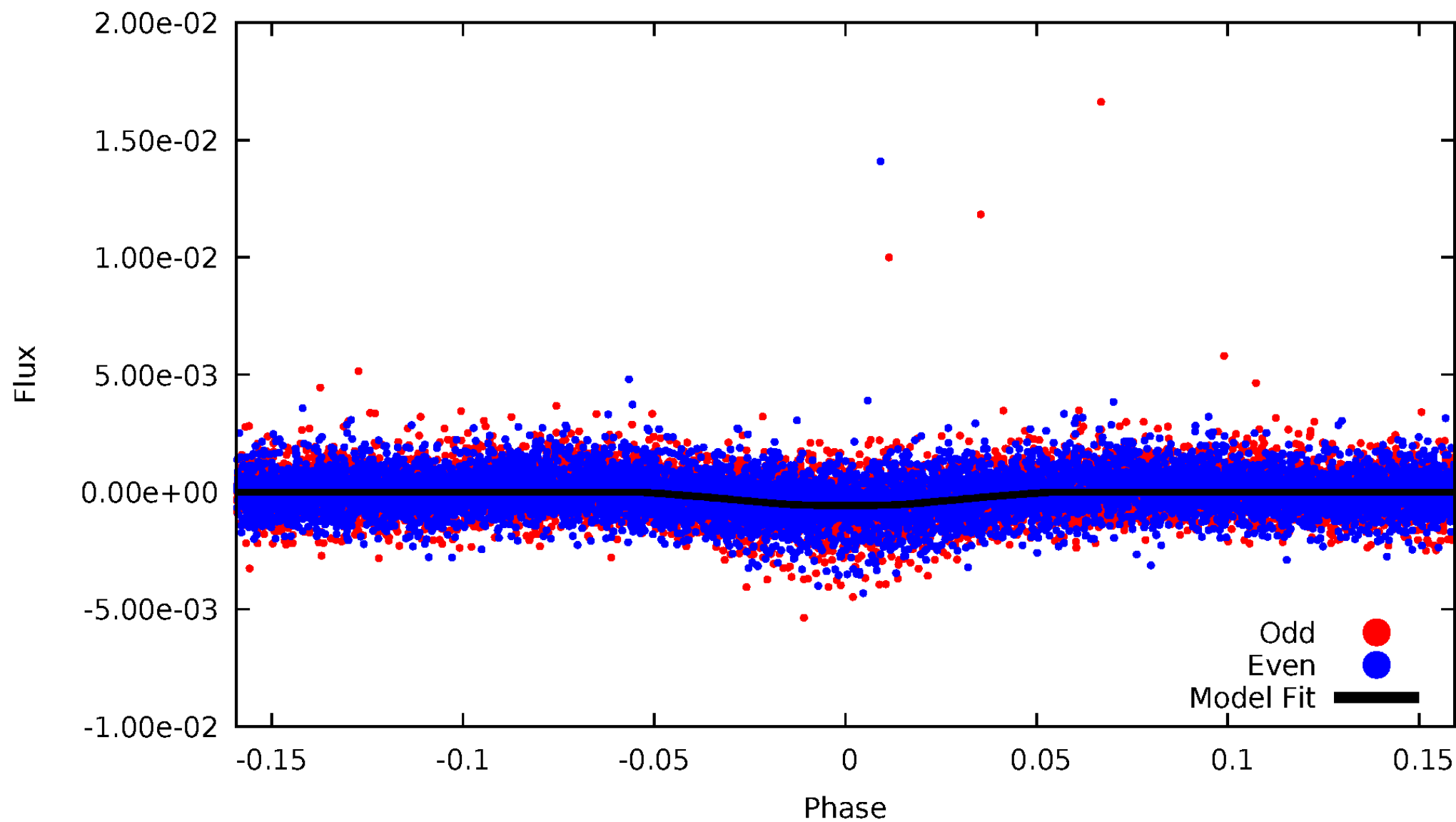


TCE 007008149-01



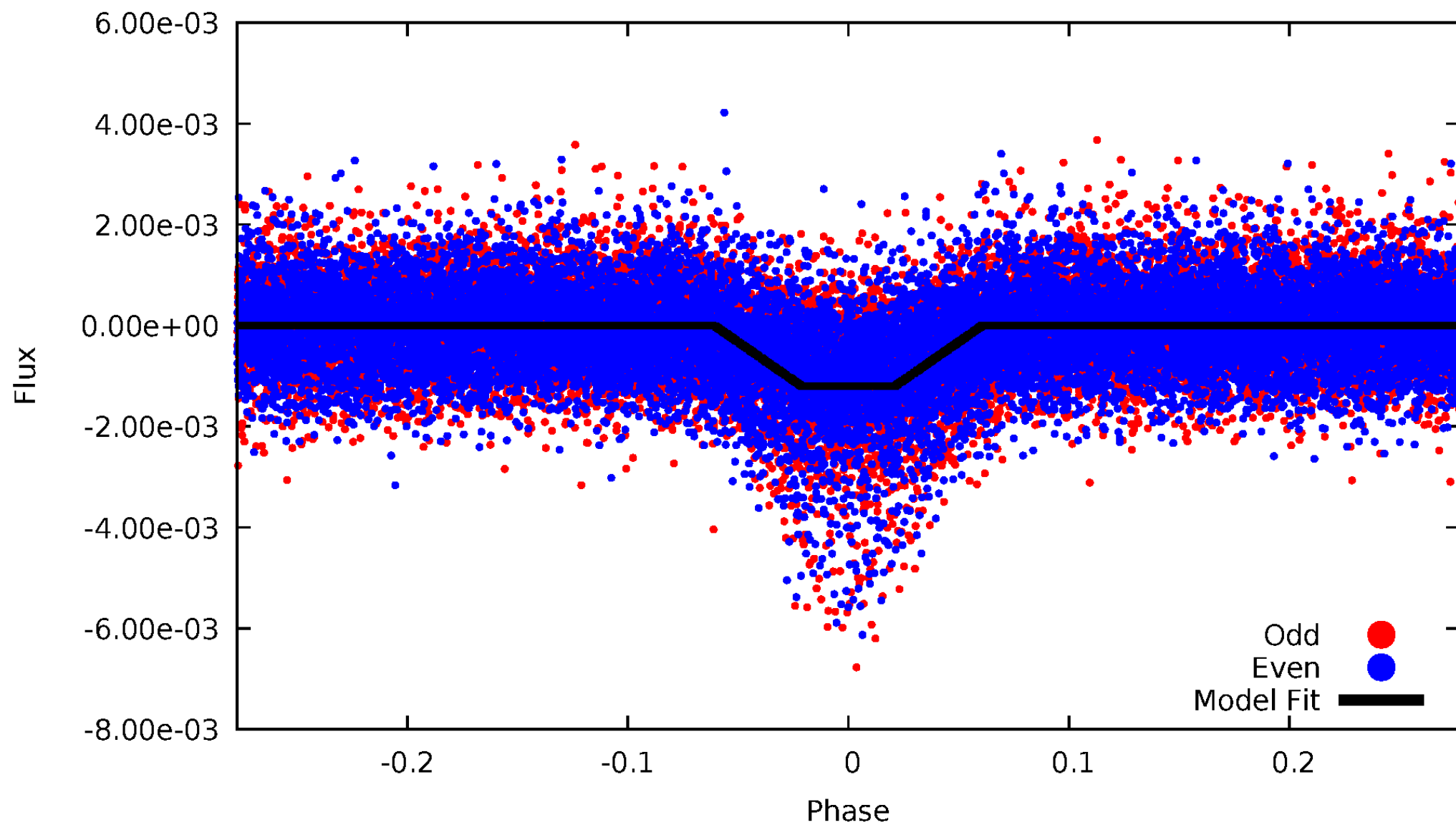
DV Odd/Even

TCE 007008149-01

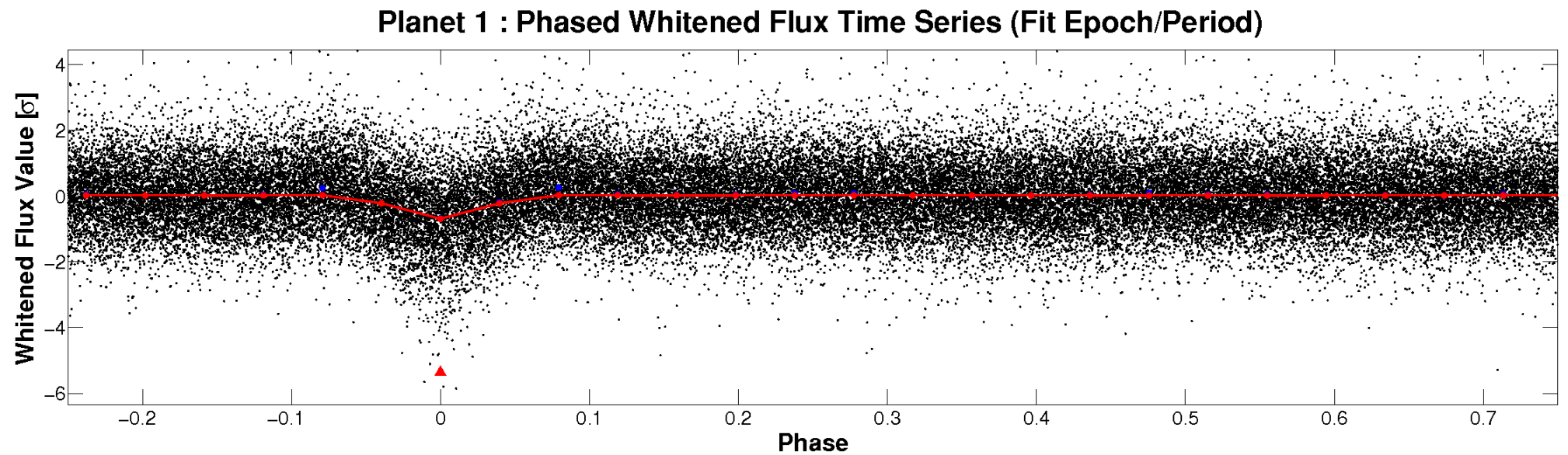
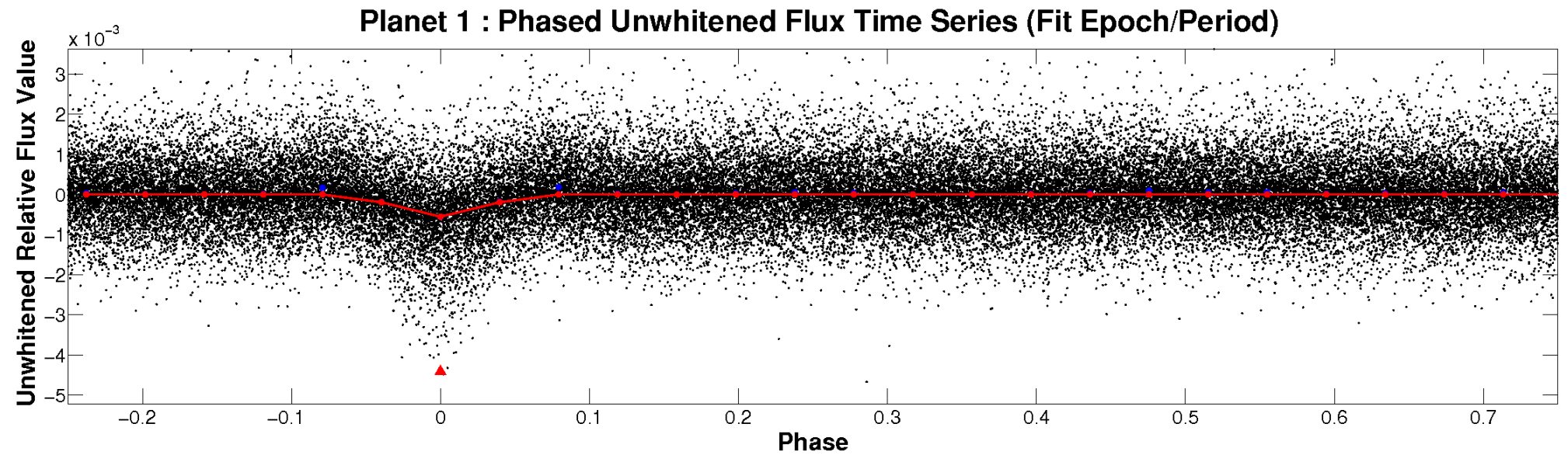


ALT Odd/Even

TCE 007008149-01

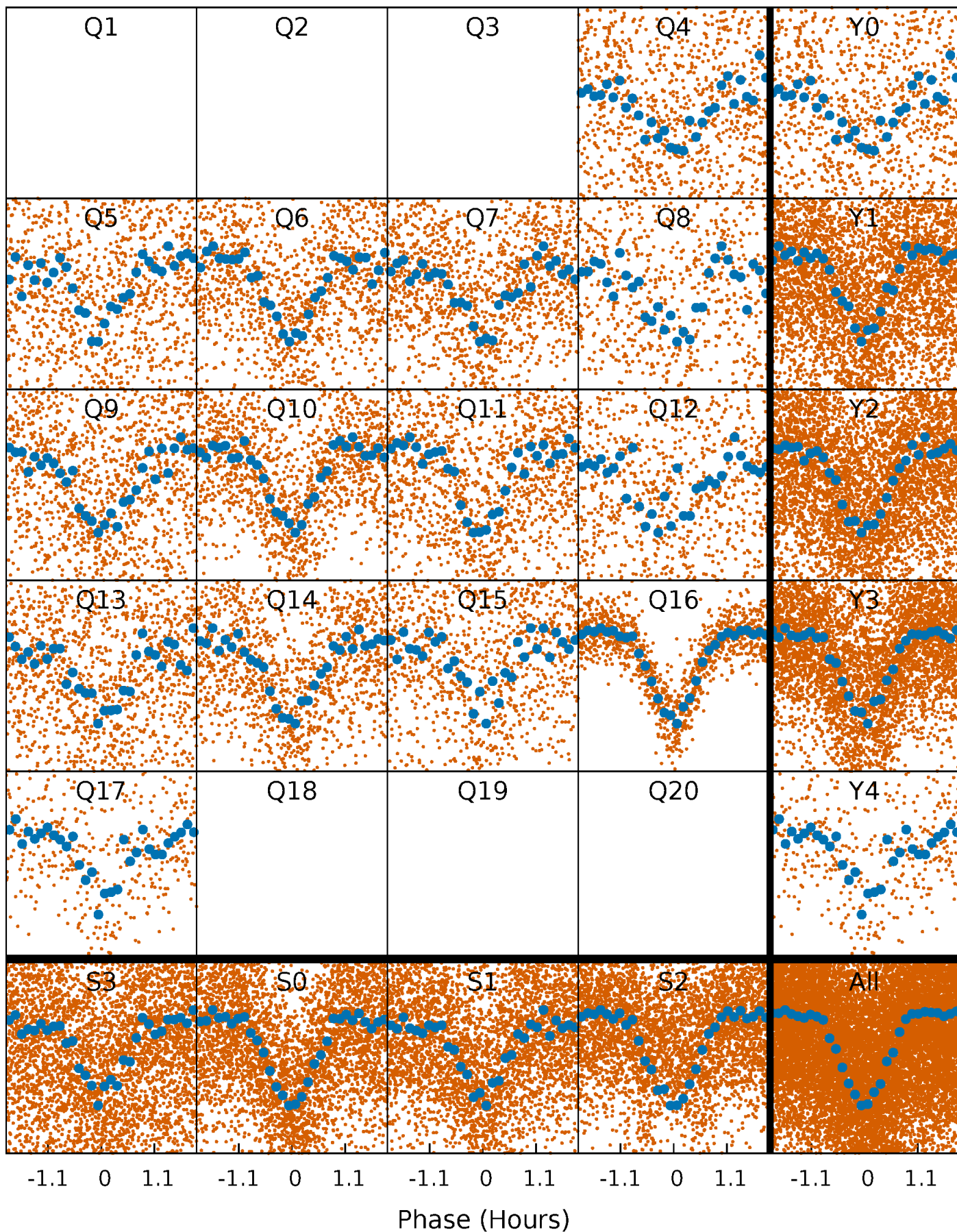


Non-Whitened Vs. Whitened Light Curve



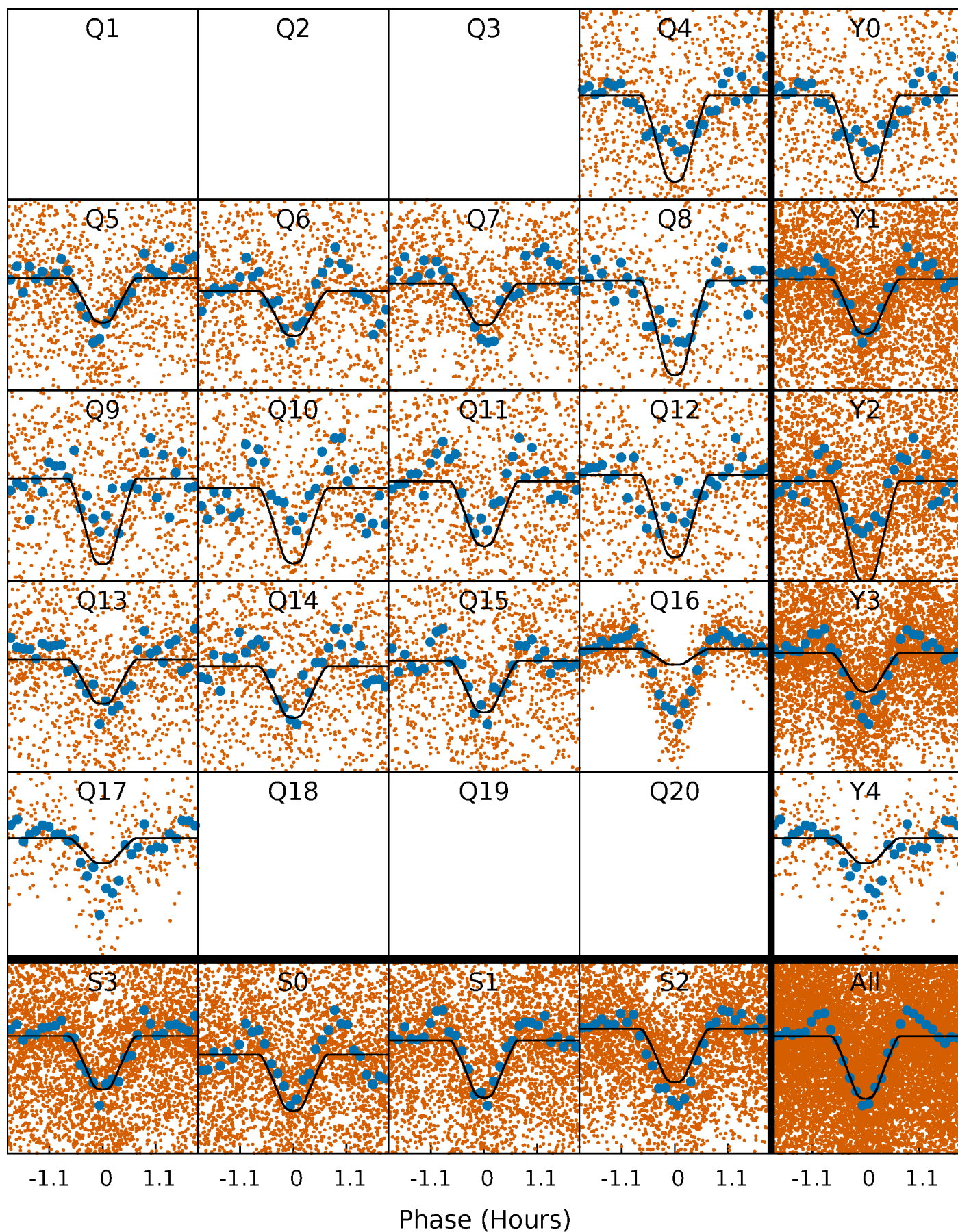
PDC Quarter-Phased Transit Curves

TCE 007008149-01 P= 0.515553 Days $T_0=131.652393$ (BKJD)



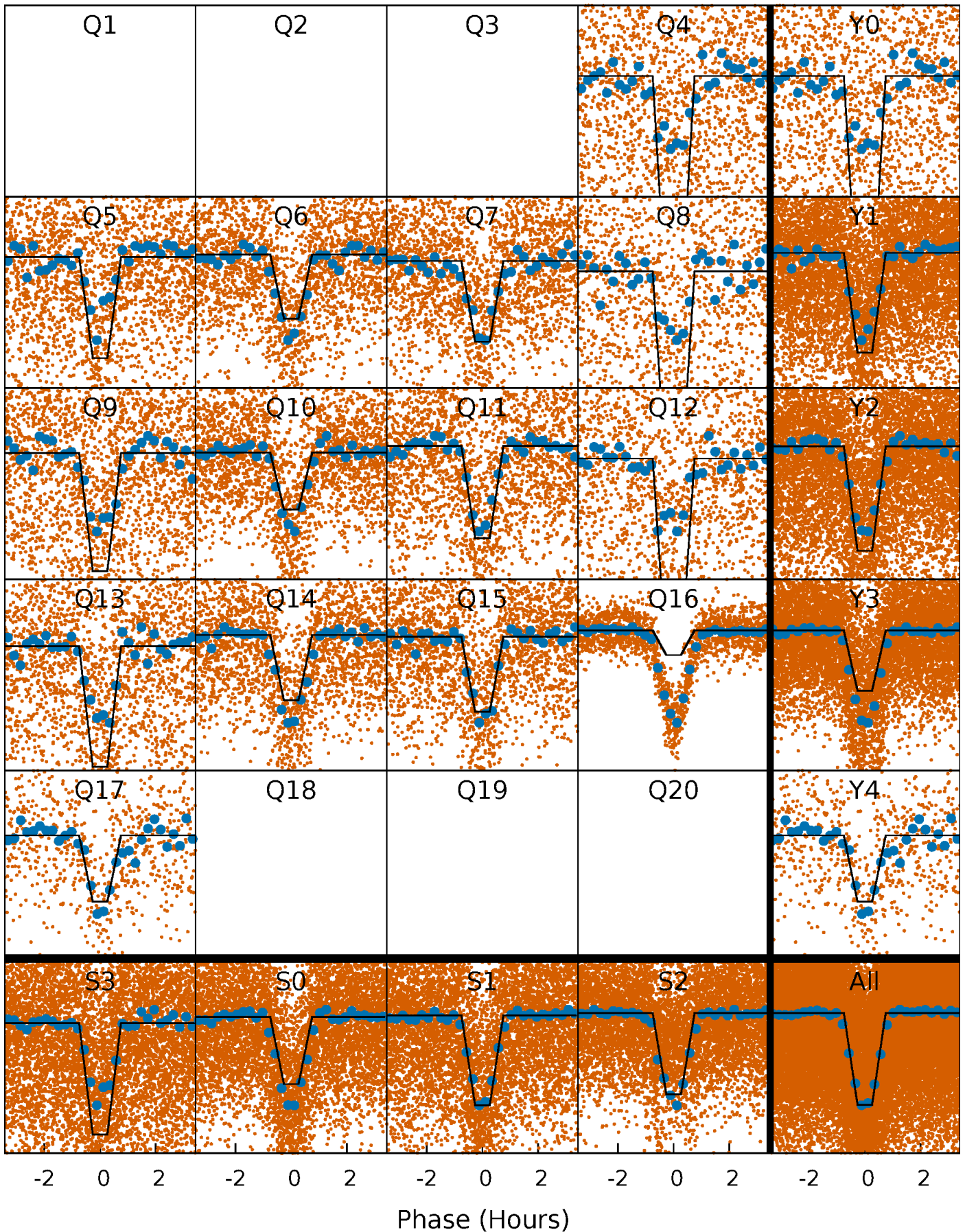
DV Quarter-Phased Transit Curves

TCE 007008149-01 P= 0.515553 Days $T_0=131.652393$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

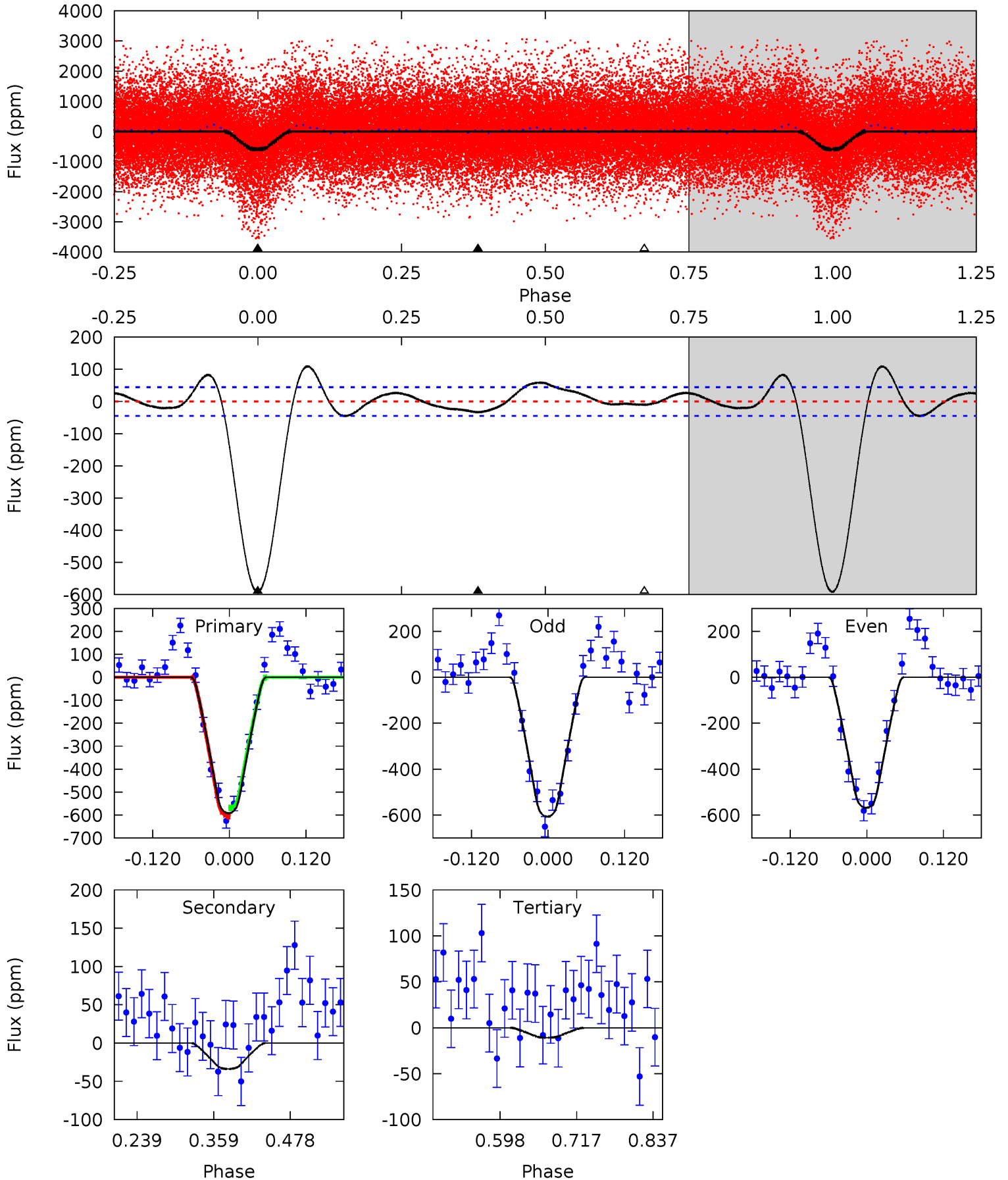
TCE 007008149-01 P= 0.515552 Days $T_0=131.653463$ (BKJD)



DV Model-Shift Uniqueness Test

007008149-01, P = 0.515553 Days, E = 131.652393 Days

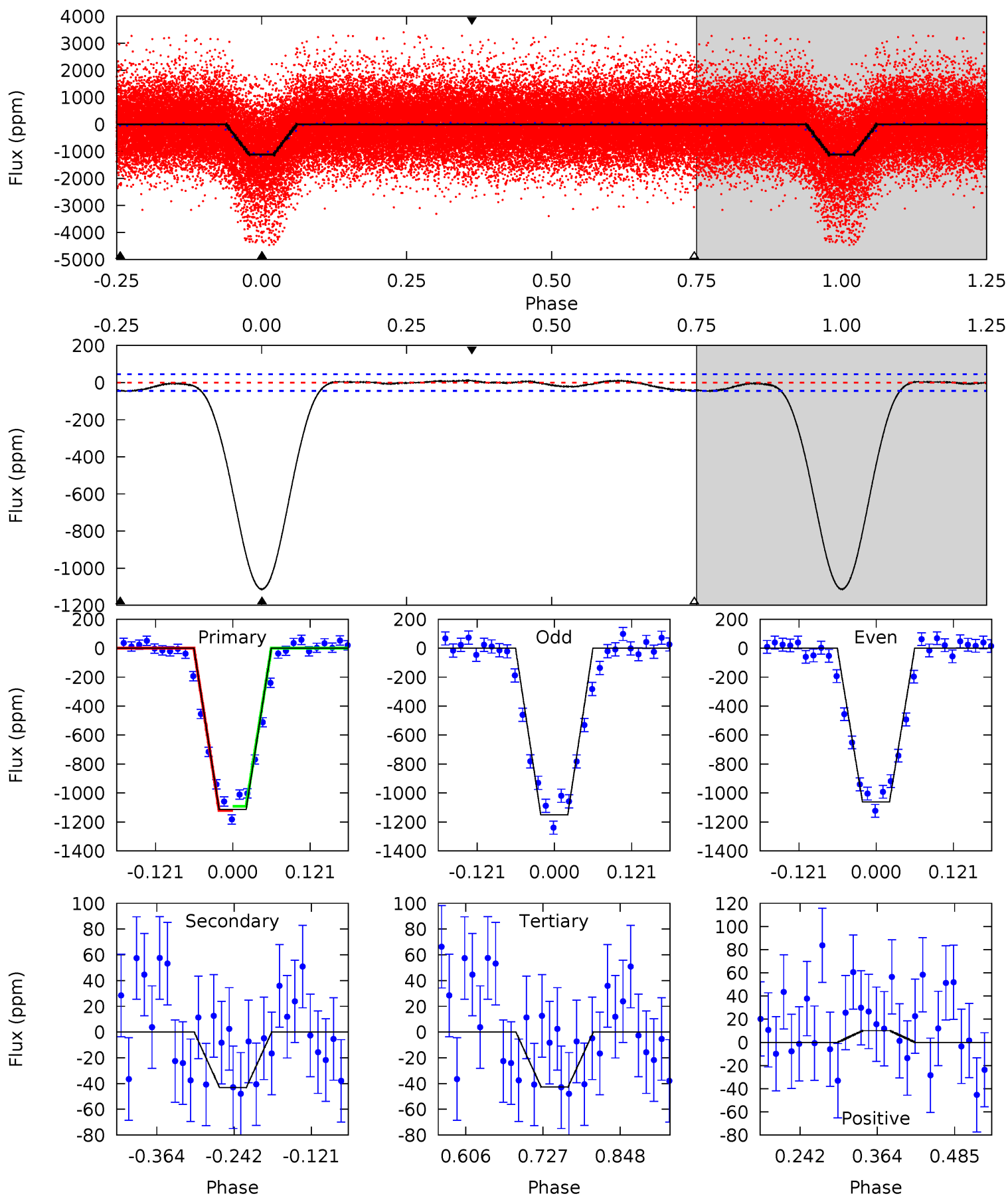
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
60.1	3.43	1.10	0	4.53	1.56	2.22	59.0	60.1	2.34	3.43	1.95	1.05	0.16	1.88



Alt Model-Shift Uniqueness Test

007008149-01, P = 0.515552 Days, E = 131.653463 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
111.5	4.30	4.27	1.01	4.52	1.55	1.39	107.2	110.4	0.03	3.29	4.47	1.20	0.01	0



Stellar Parameters For KIC 007008149

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5068^{+176}_{-176}	$4.556^{+0.078}_{-0.052}$	$-0.340^{+0.350}_{-0.300}$	$0.730^{+0.079}_{-0.079}$	$0.698^{+0.100}_{-0.050}$	$2.532^{+0.814}_{-0.464}$
	+3%/-3%	+2%/-1%	+103%/-88%	+11%/-11%	+14%/-7%	+32%/-18%
Source	KIC0	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 007008149-01 / KOI 2918.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-34 ± 10	$2.13^{+0.58}_{-0.50}$	2513^{+95}_{-111}	2654^{+415}_{-4661}	$0.510^{+0.431}_{-0.228}$
Alt.	-43 ± 10	$2.70^{+0.59}_{-0.56}$	2509^{+113}_{-102}	2434^{+429}_{-4625}	$0.405^{+0.264}_{-0.144}$

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

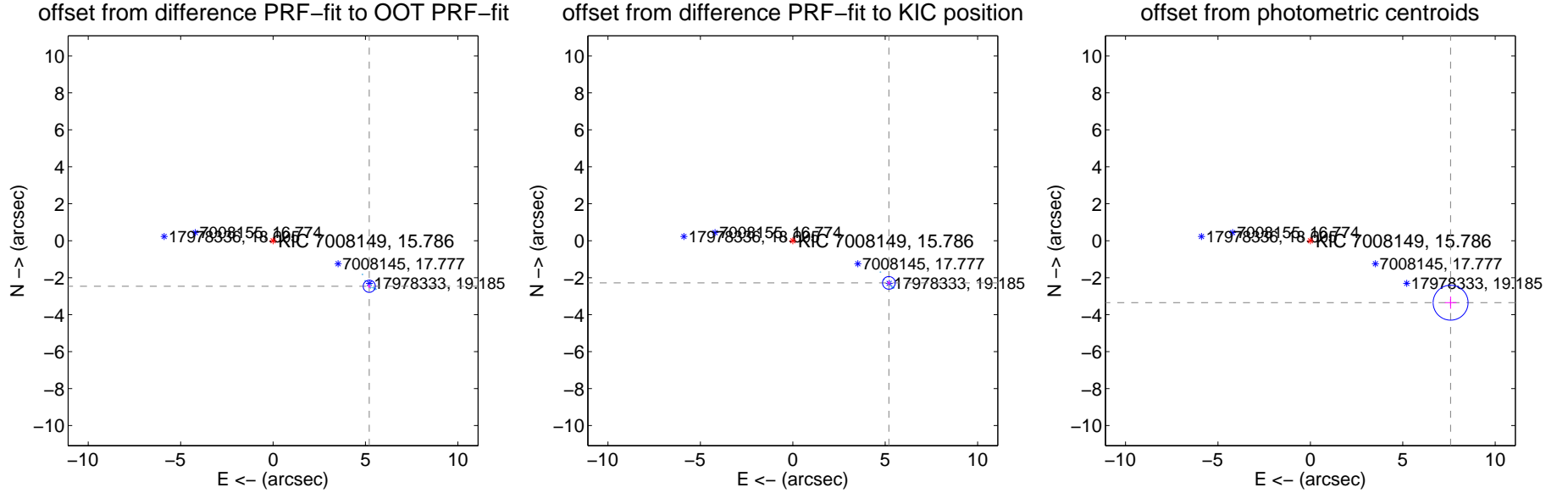
DV Centroid Data

Supplemental centroid analysis for 007008149-01. Kepler magnitude: 15.79. Transit SNR 36.97

There are 10 quarters with good PRF difference image offsets

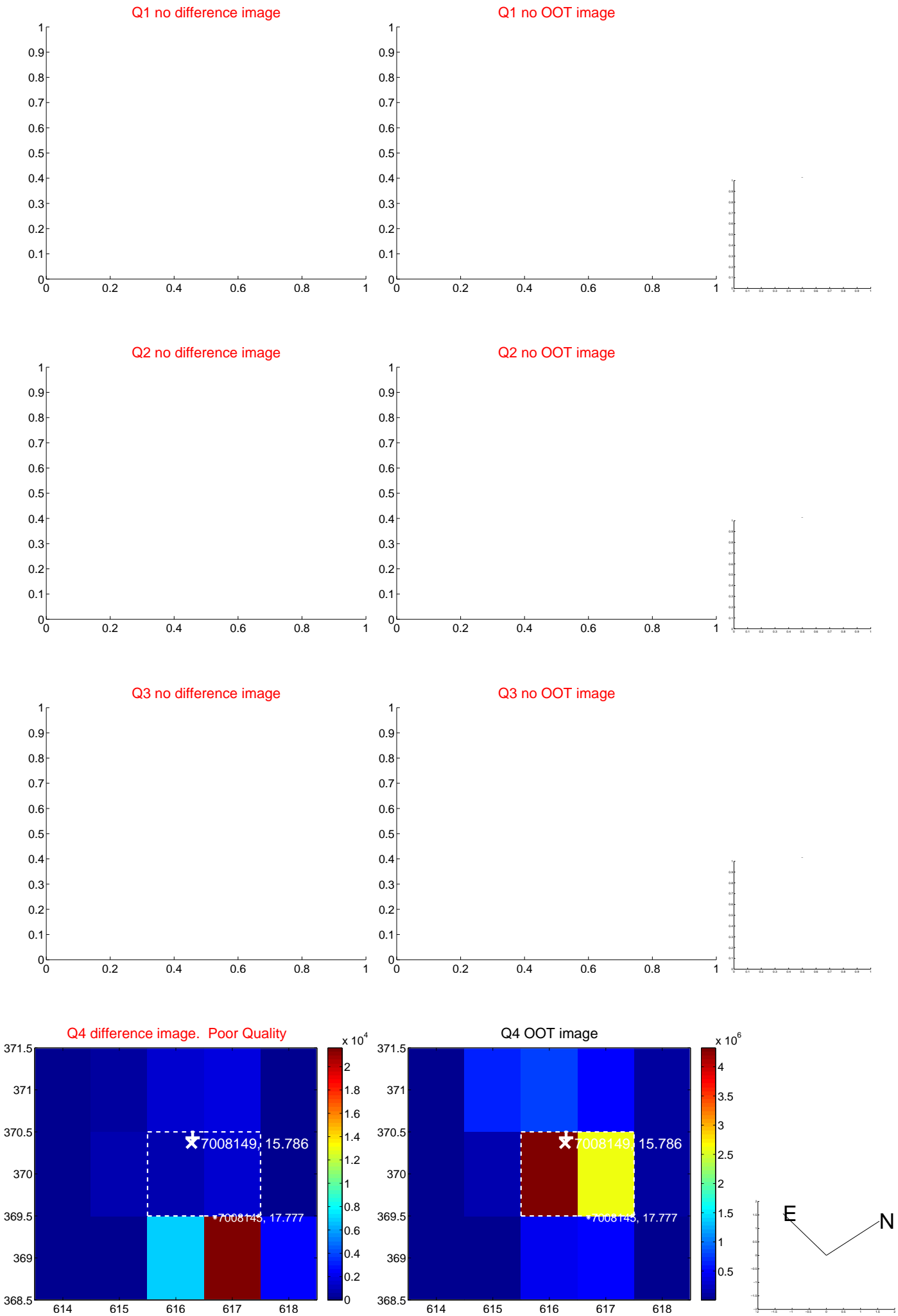
The direct PRF centroid is offset from the target star catalog position by about 0.31 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.757 \pm 0.110	52.48	-5.203 \pm 0.093	-2.464 \pm 0.098
PRF-fit source offset from KIC position	5.674 \pm 0.114	49.61	-5.196 \pm 0.095	-2.280 \pm 0.103
photometric centroid source offset	8.29 \pm 0.32	26.33	-7.59 \pm 0.31	-3.35 \pm 0.33

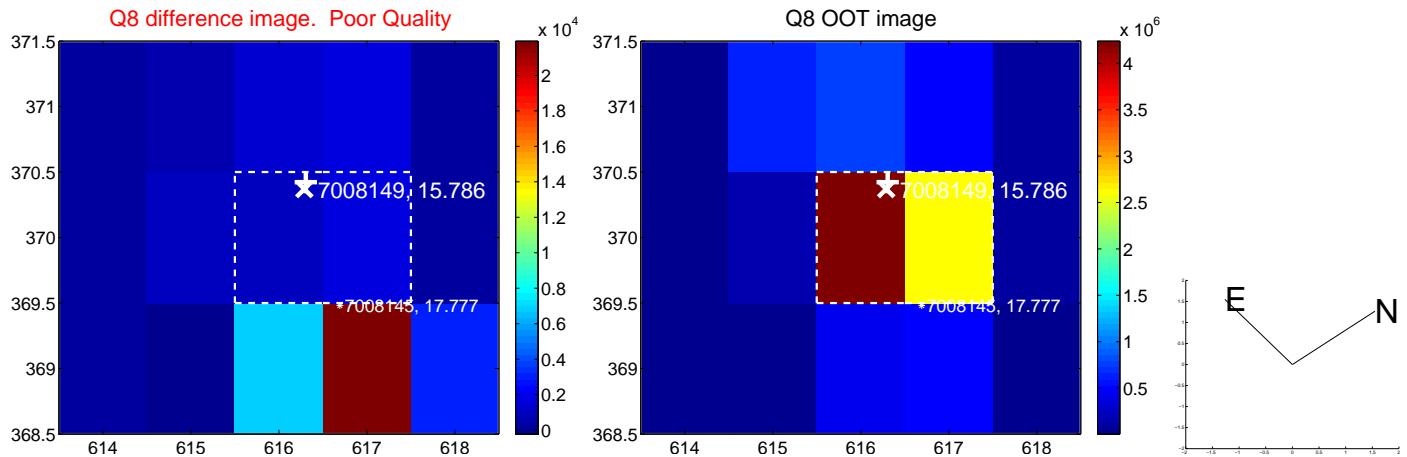
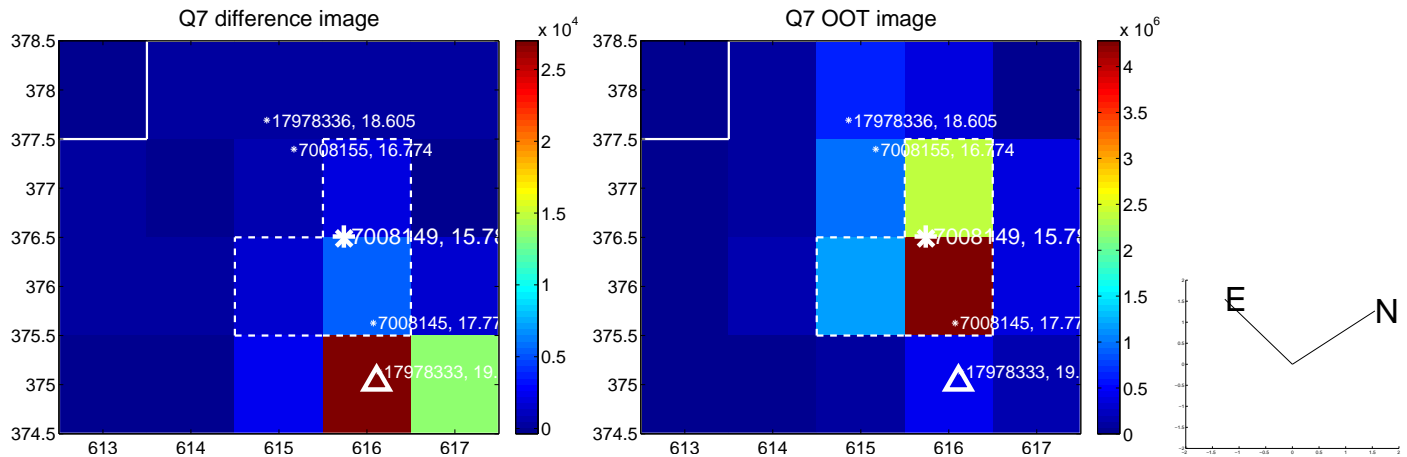
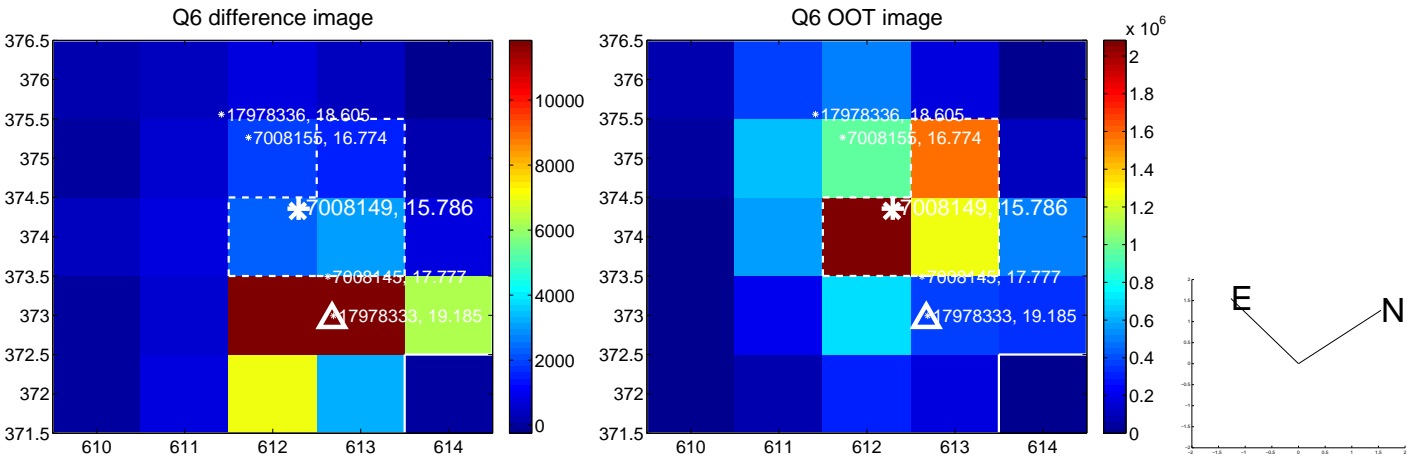
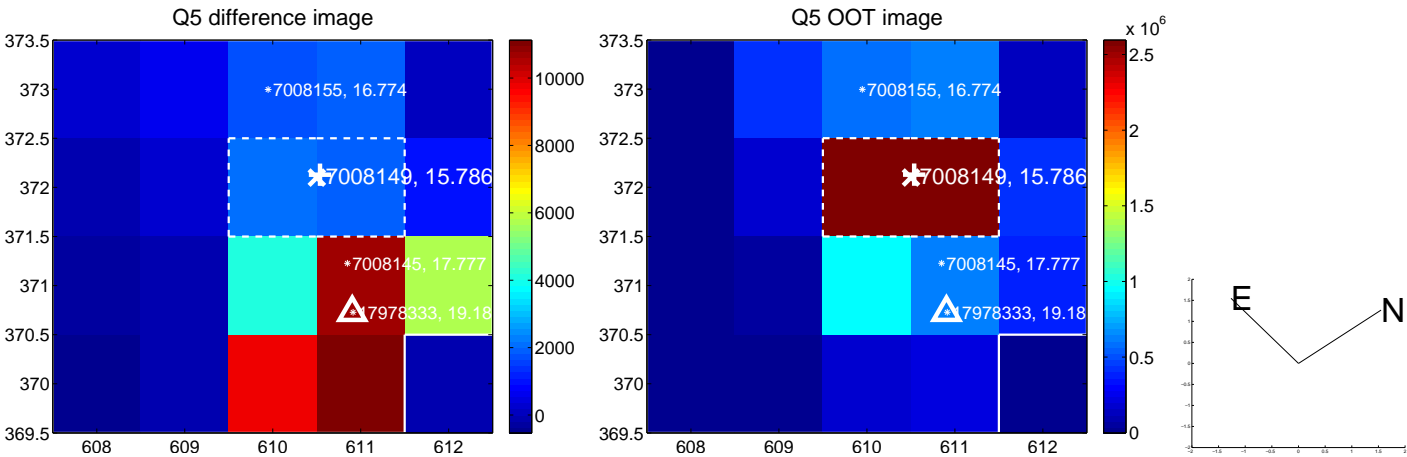


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

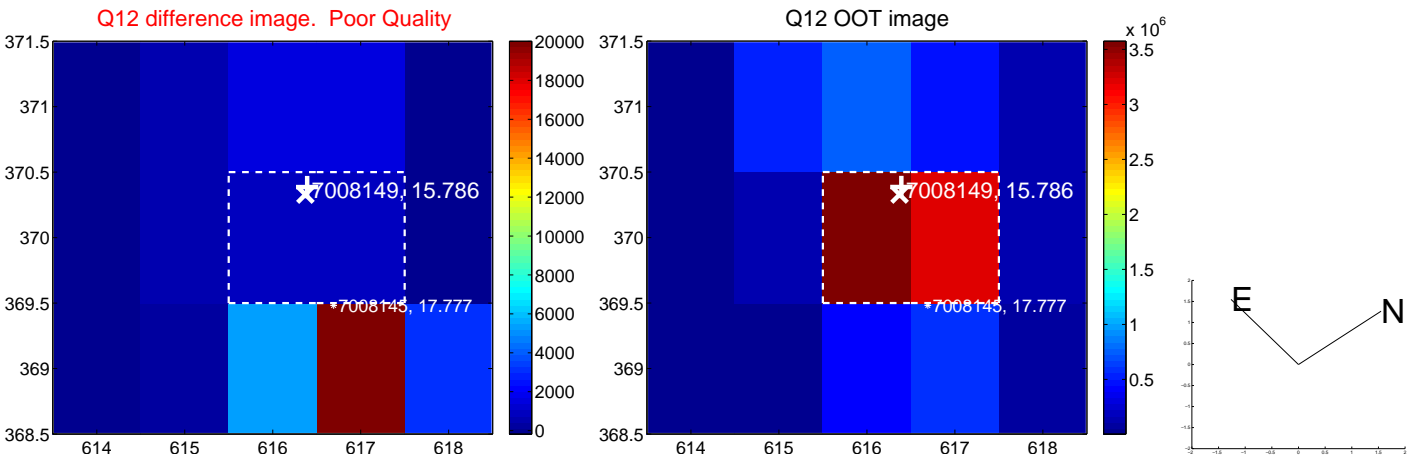
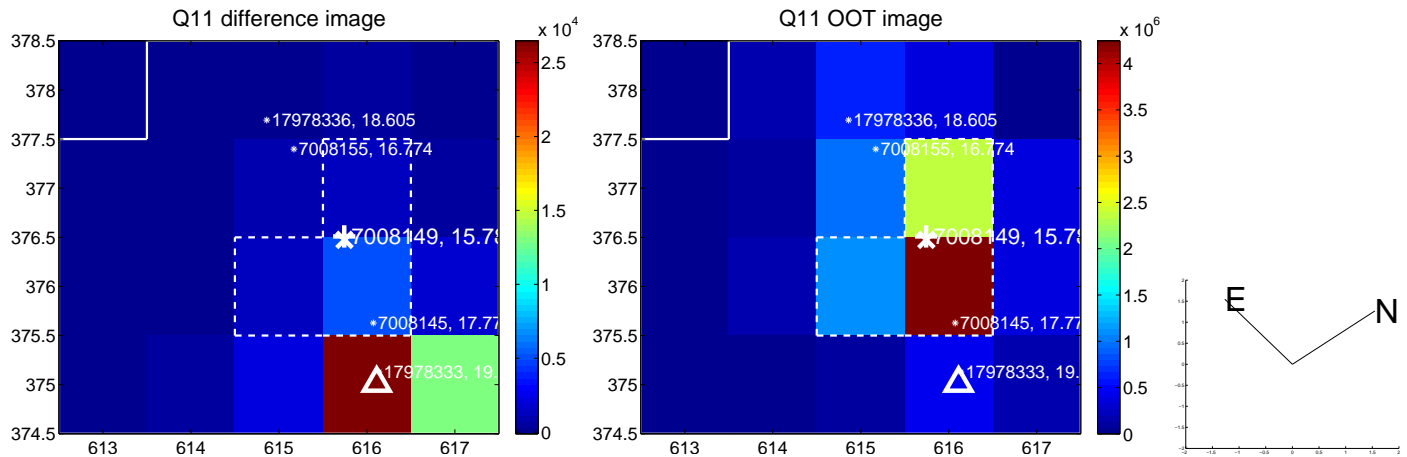
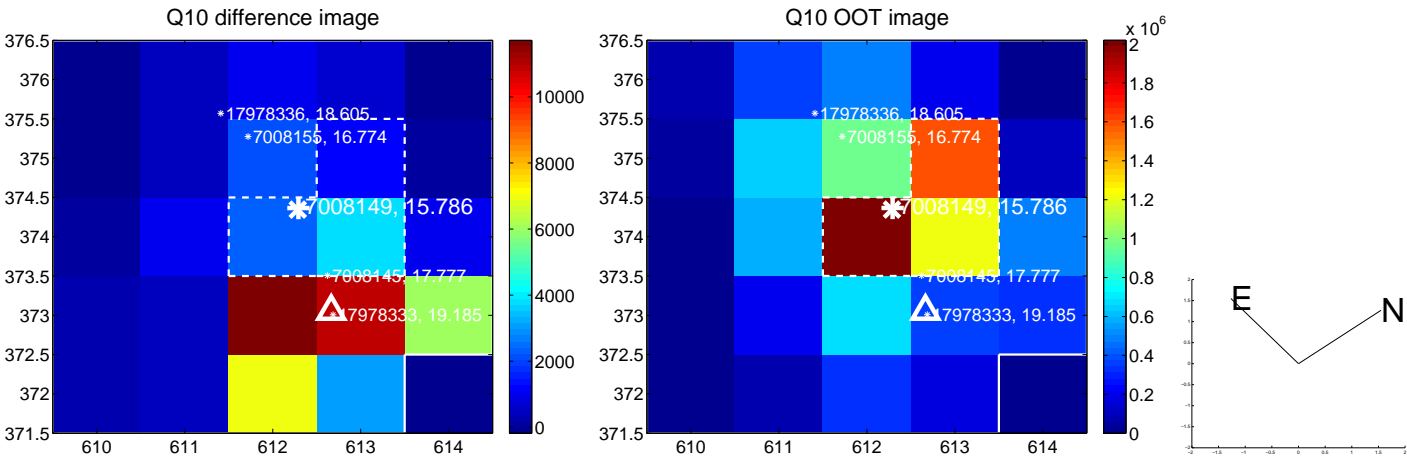
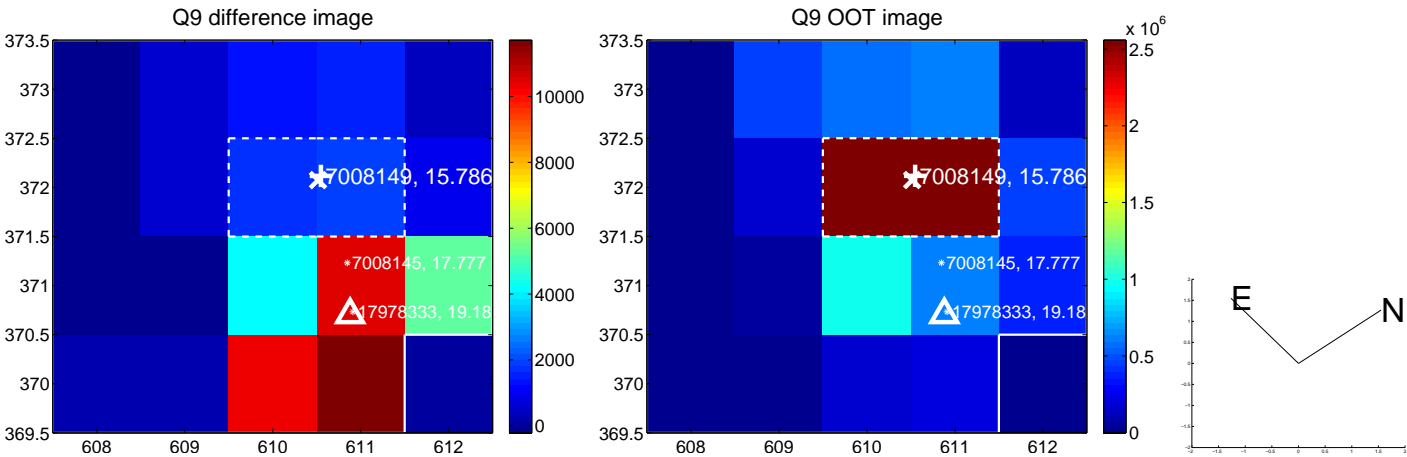
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



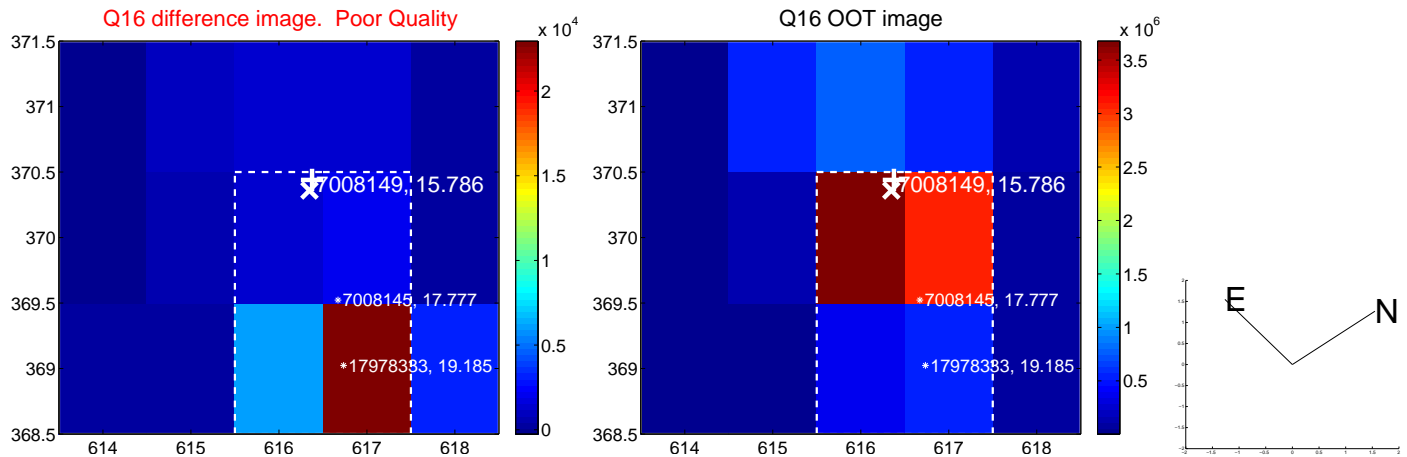
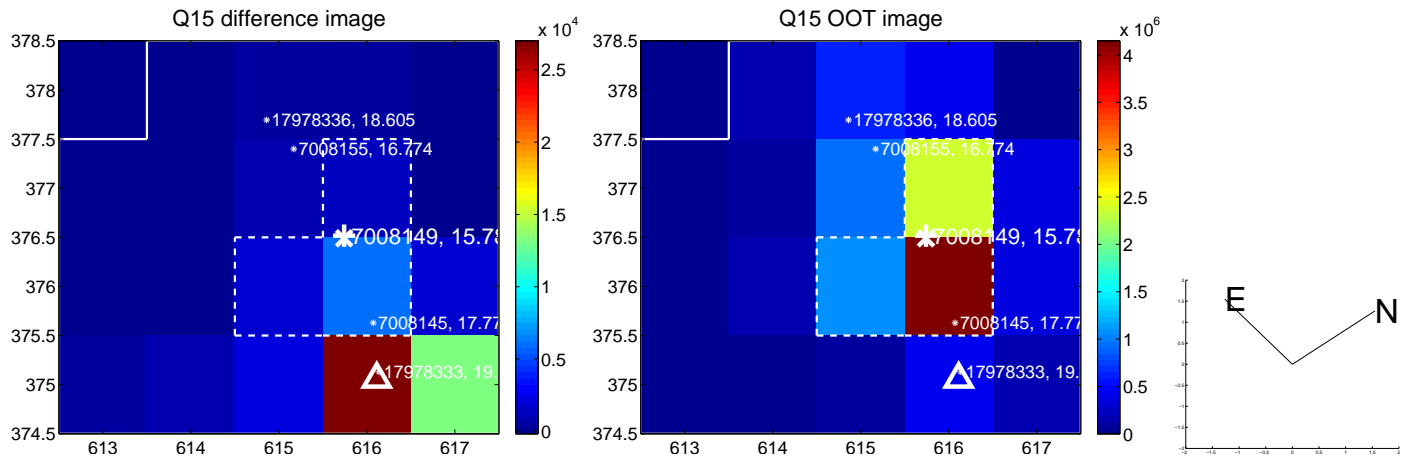
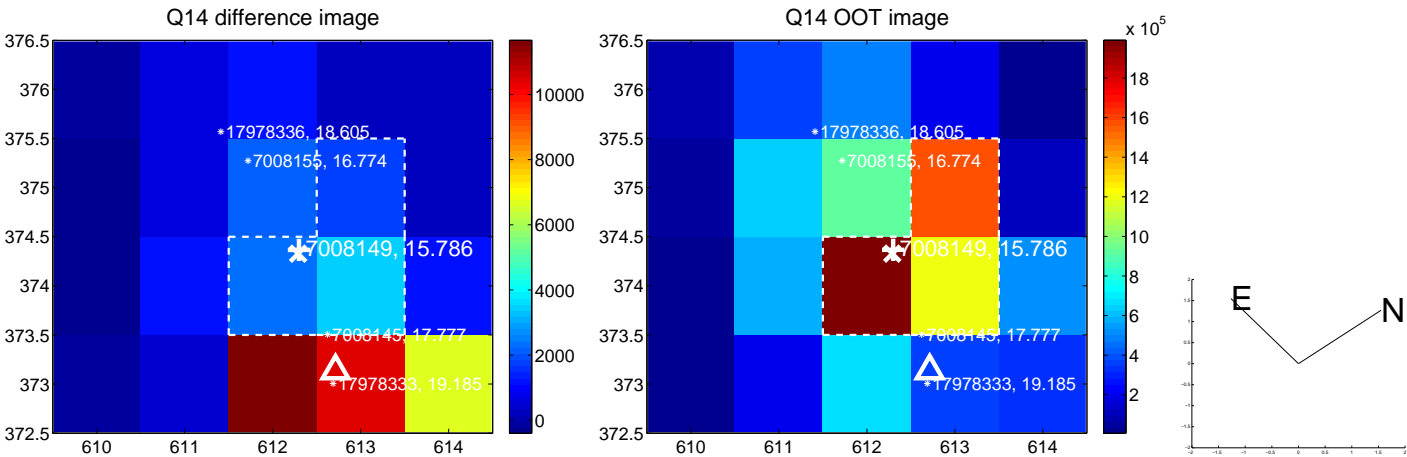
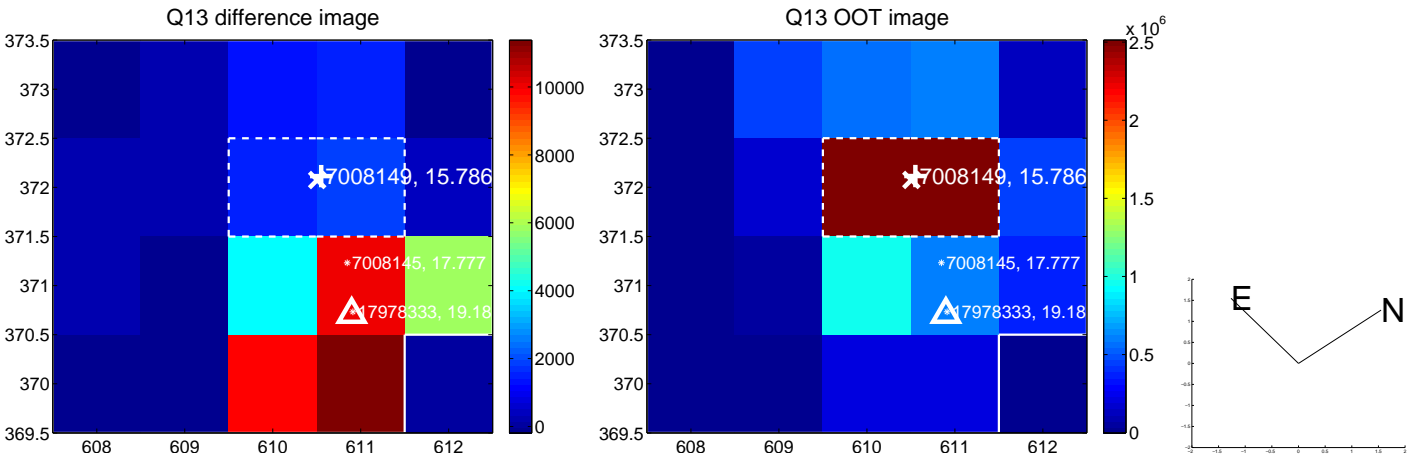
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



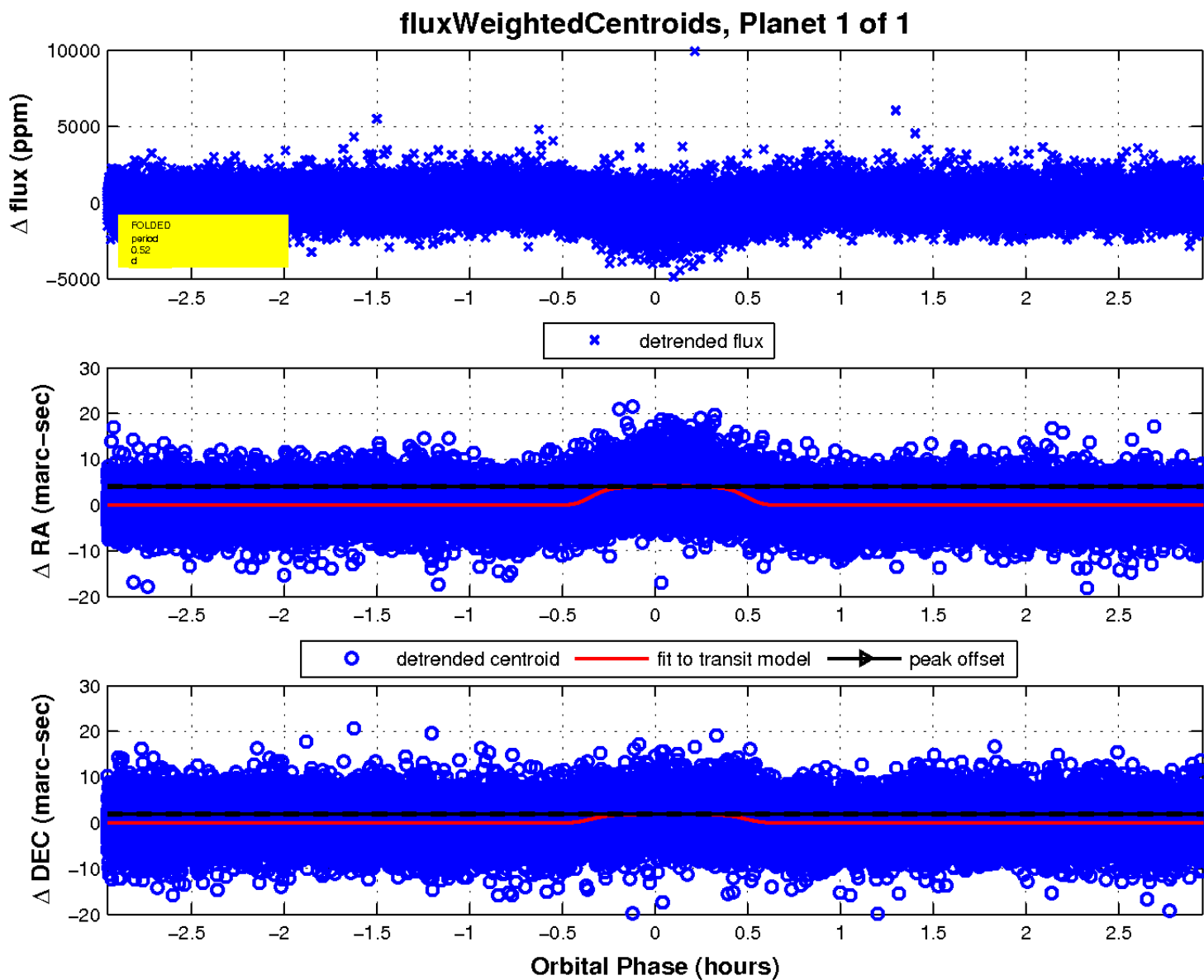
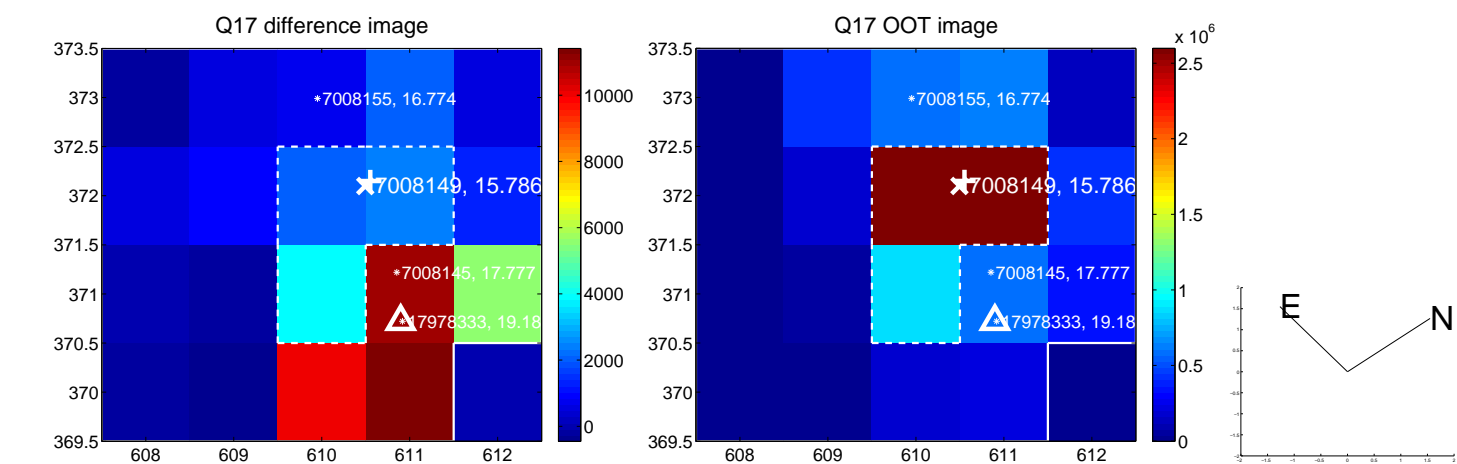
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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



UKIRT Image

Declination

