

KIC 011670599

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})
011670599-01	OBS	4282.01	0.847573	131.567187	33.8	2.433	13.1	11.0	1.07	6335	0.73	5001.59

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011670599-01	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.

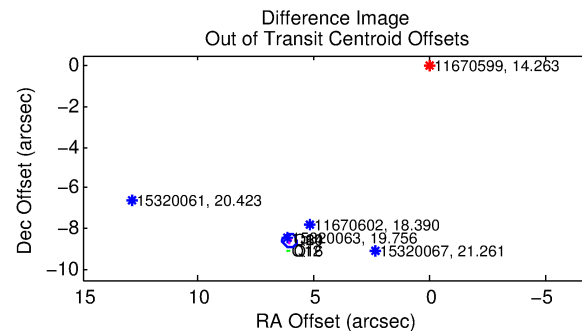
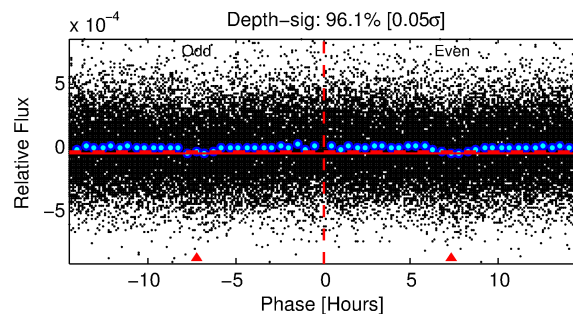
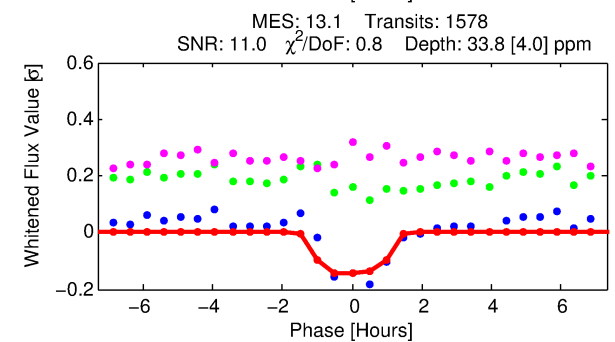
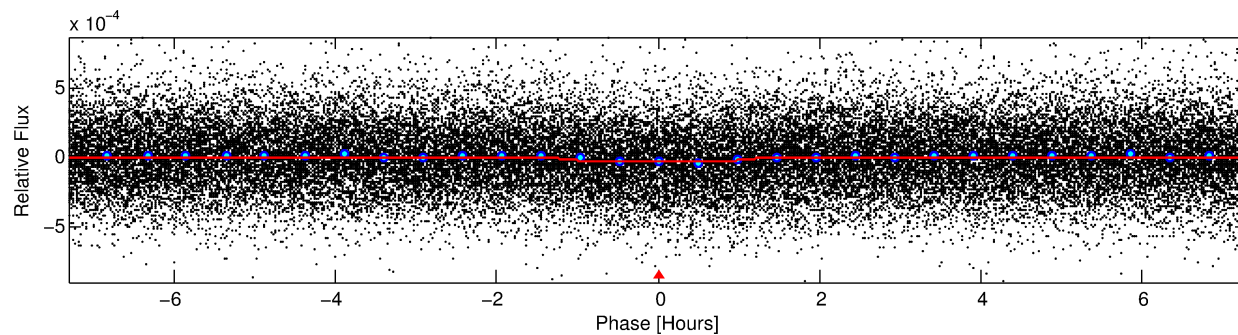
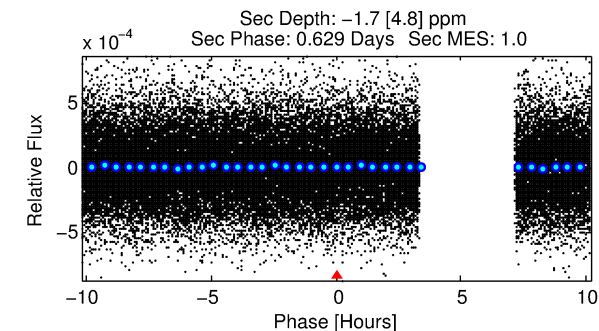
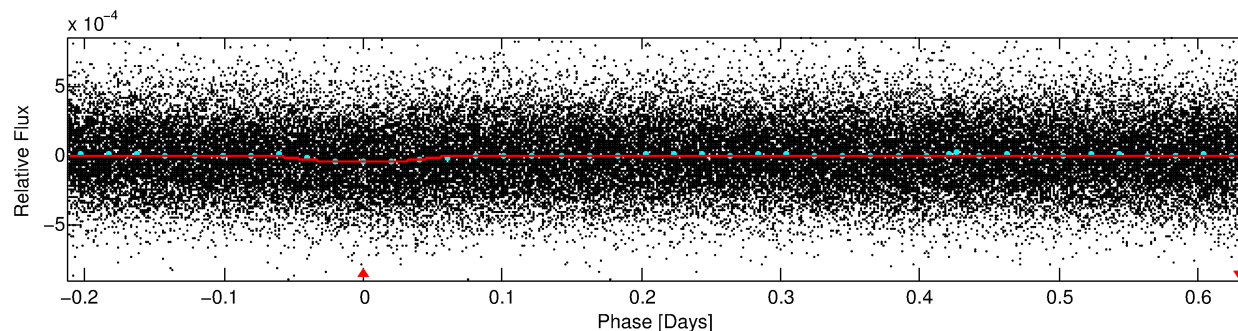
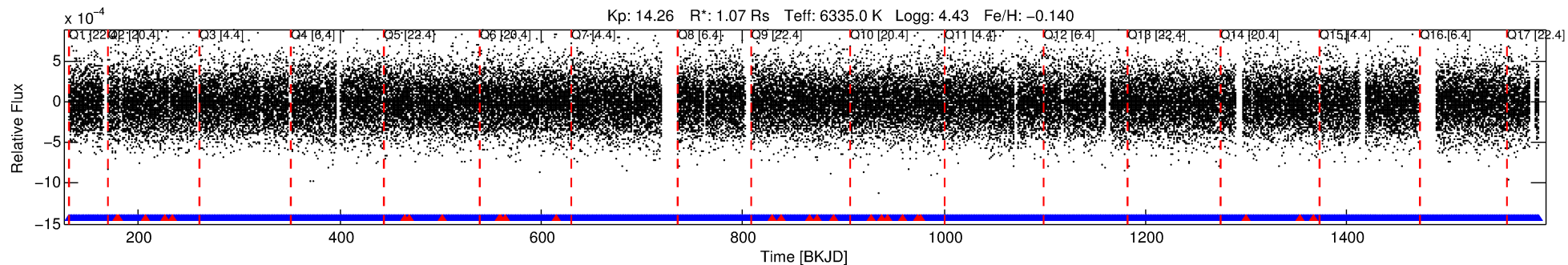
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011670599-01

No Significant Match Found

DV One-Page Summary

KIC: 11670599 Candidate: 1 of 1 Period: 0.848 d
KOI: K04282.01 Corr: 0.897



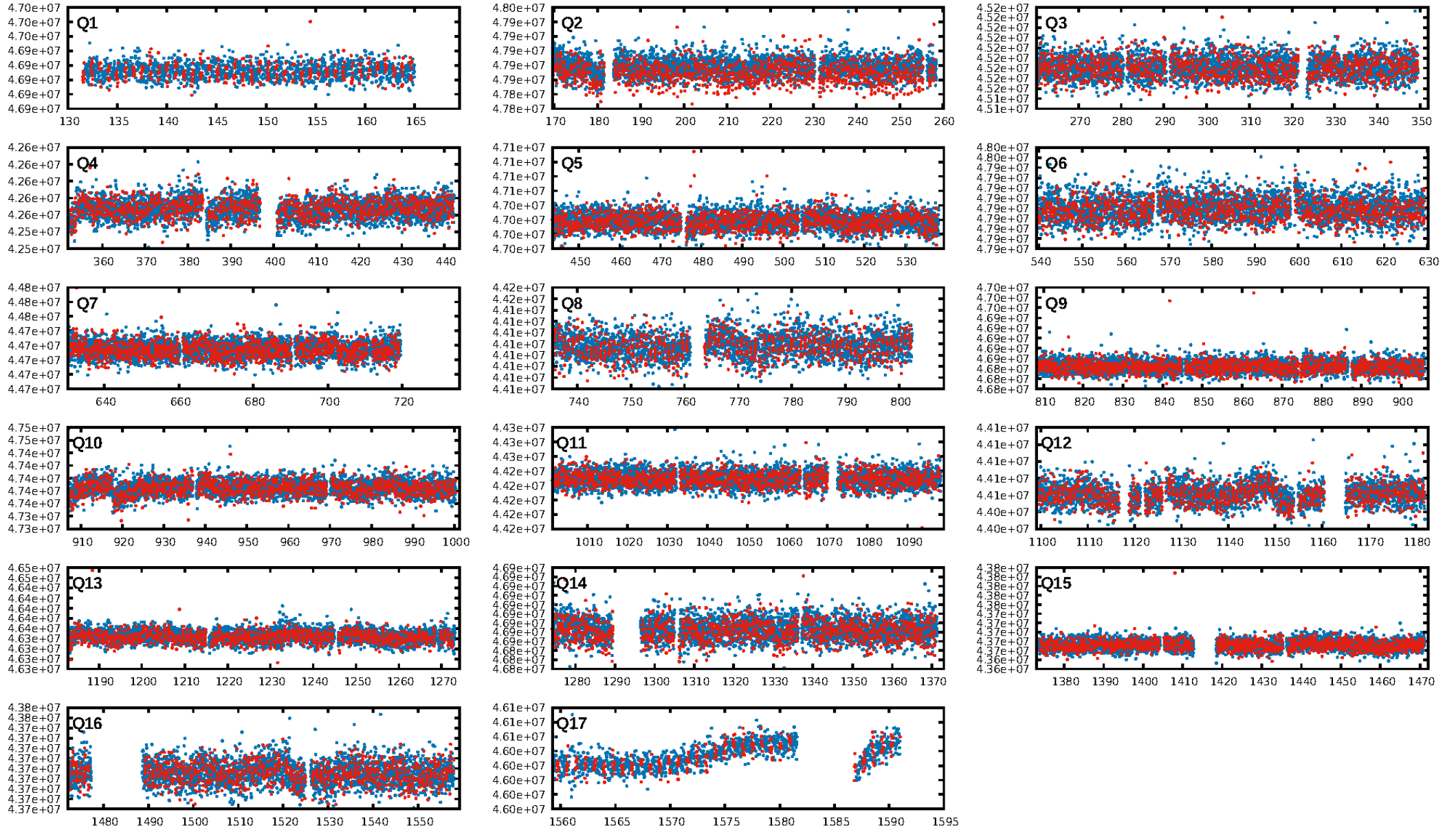
DV Fit Results:

Period = 0.84757 [0.00001] d
Epoch = 131.5672 [0.0030] BKJD
Rp/R* = 0.0063 [0.0025]
a/R* = 1.51 [1.87]
b = 0.90 [0.46]
Seff = 5001.59 [2135.27]
Teq = 2144 [229] K
Rp = 0.73 [0.38] Re
a = 0.0182 [0.0050] AU
Ag = N/A
Teff = N/A

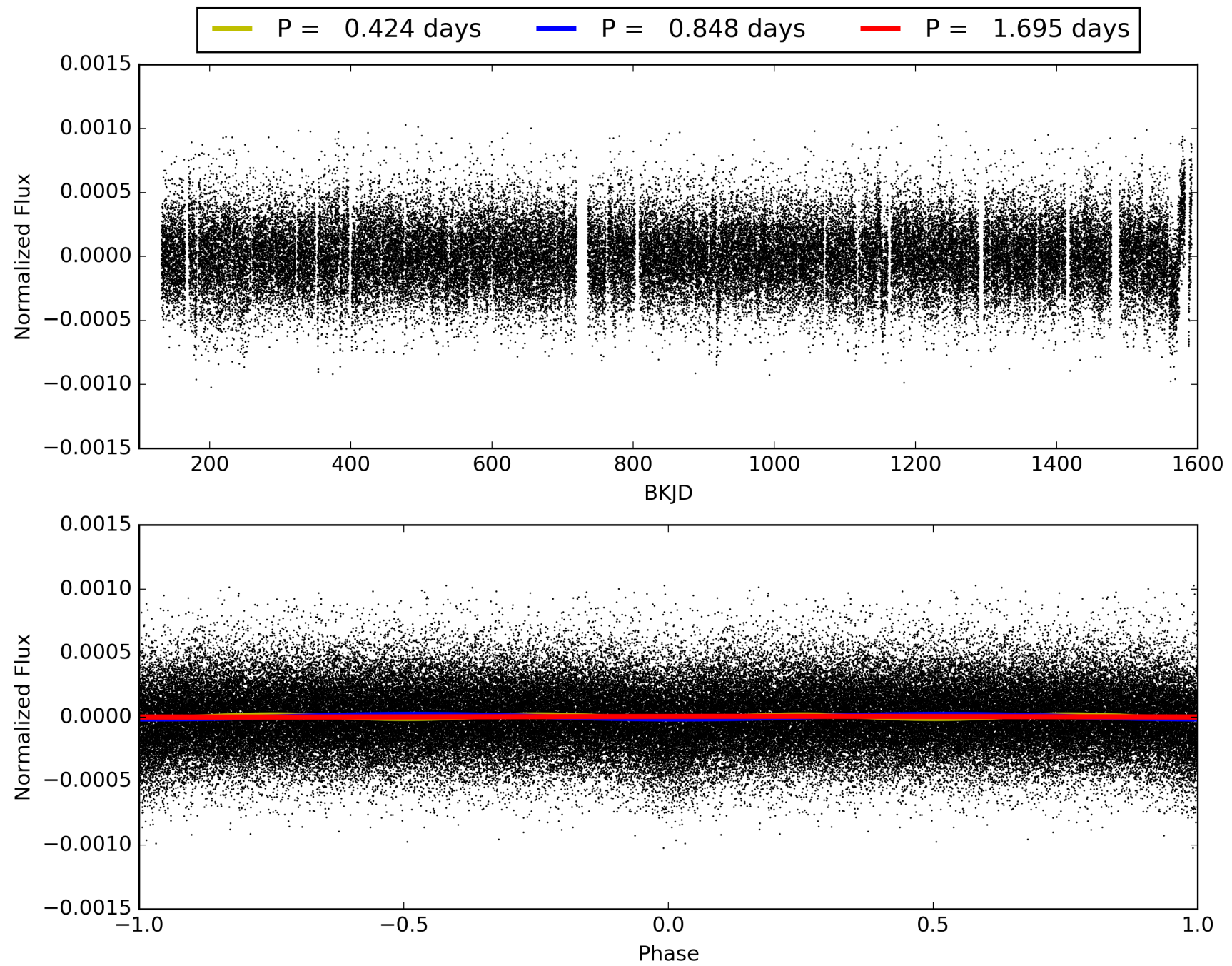
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 7.80e-36
RollingBand-fgt: 0.98 [1480/1507]
GhostDiagnostic-chr: -1.578
Centroid-sig: 0.0%
Centroid-so: 10.407 arcsec [8.44σ]
OotOffset-rm: 10.488 arcsec [97.95σ]
KicOffset-rm: 10.437 arcsec [145.29σ]
OotOffset-st: 4/0/2/0 [6]
KicOffset-st: 4/0/2/0 [6]
DiffImageQuality-fgm: 1.00 [6/6]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 011670599-01, PDC Light Curves

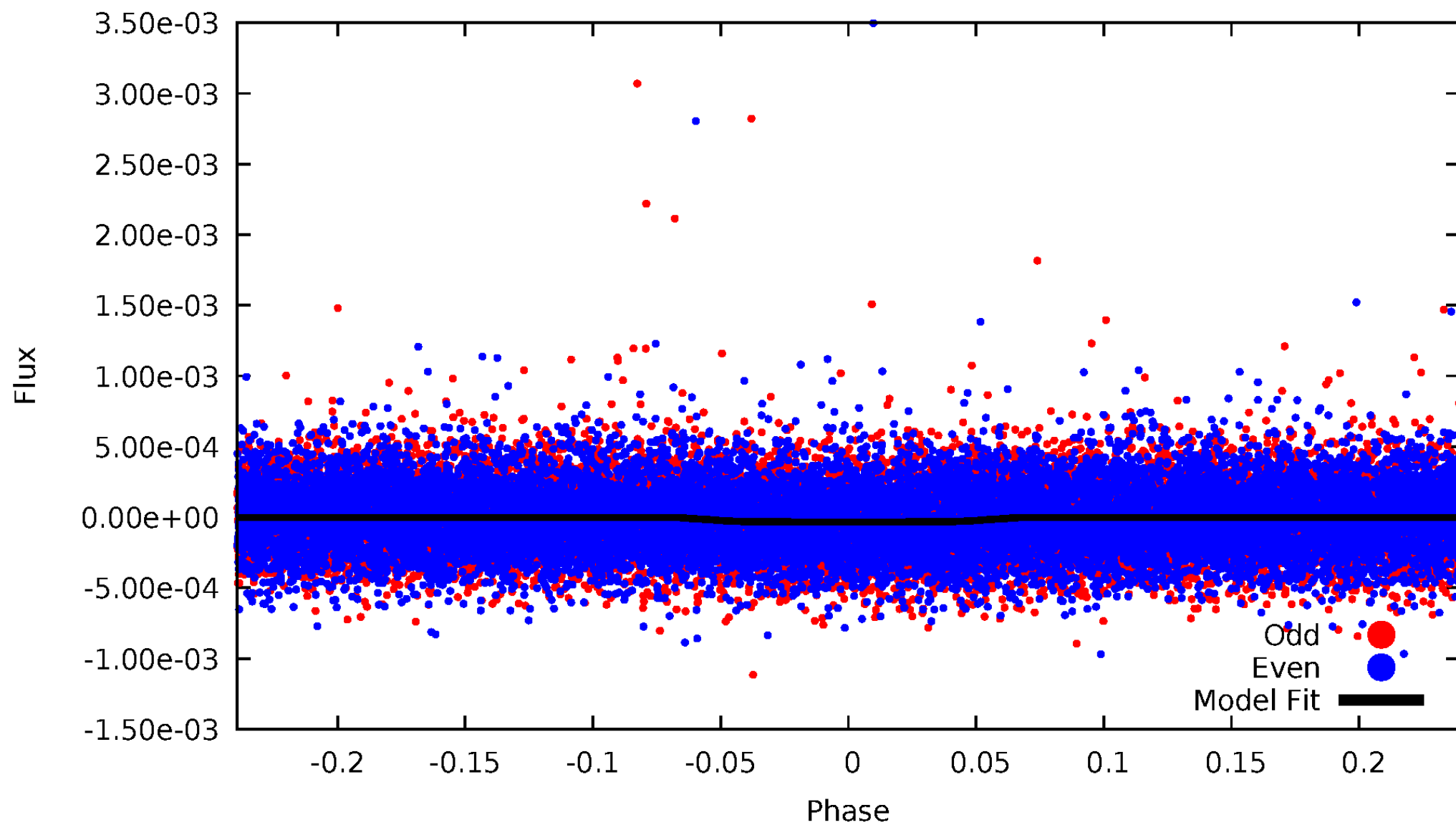


TCE 011670599-01



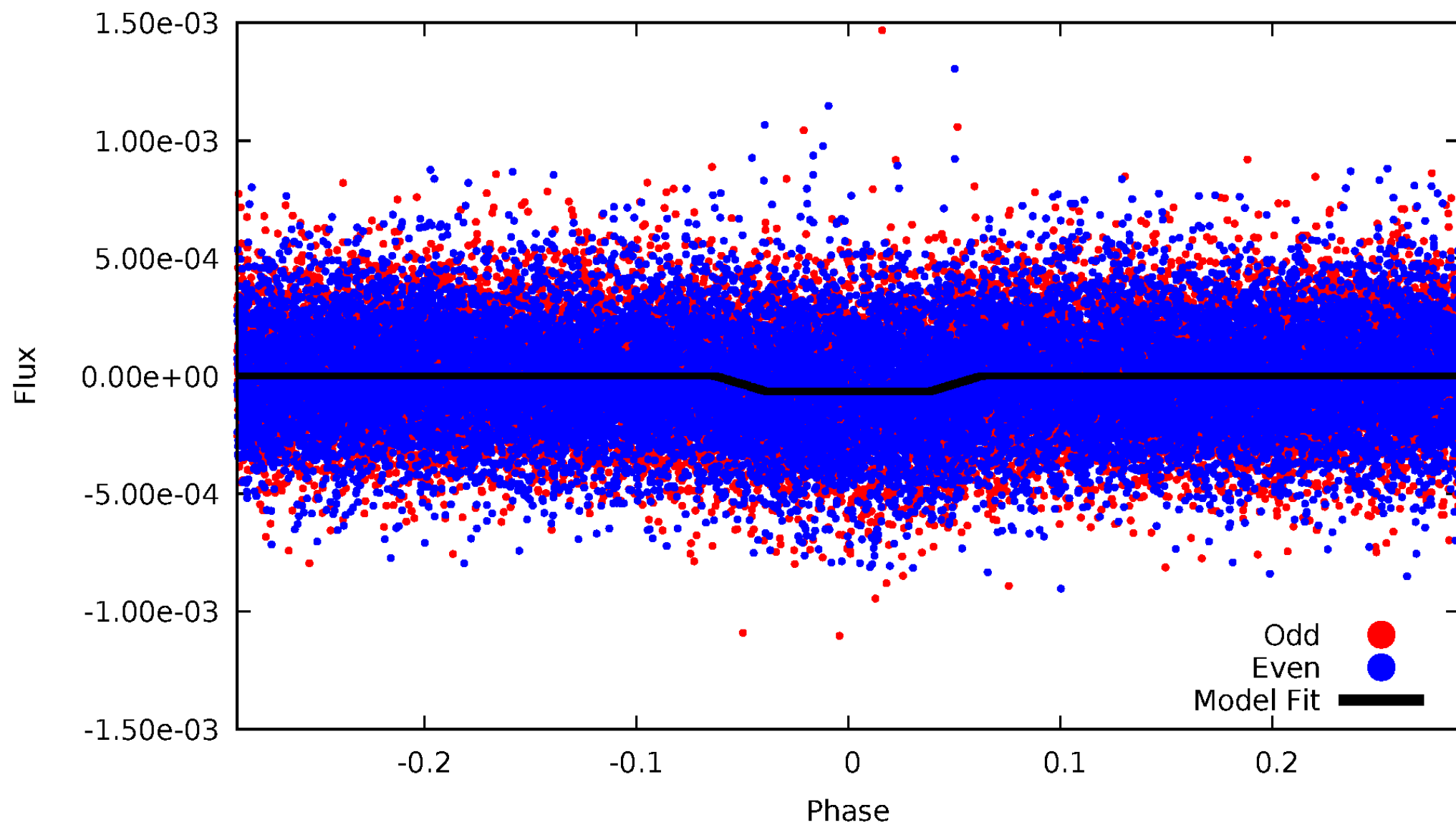
DV Odd/Even

TCE 011670599-01

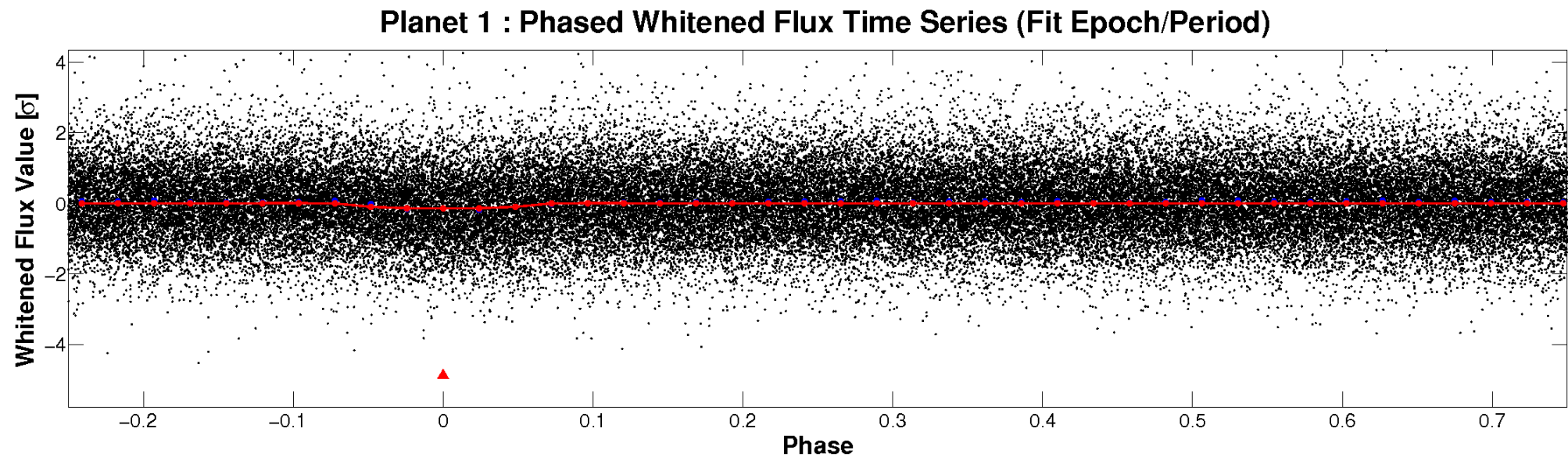
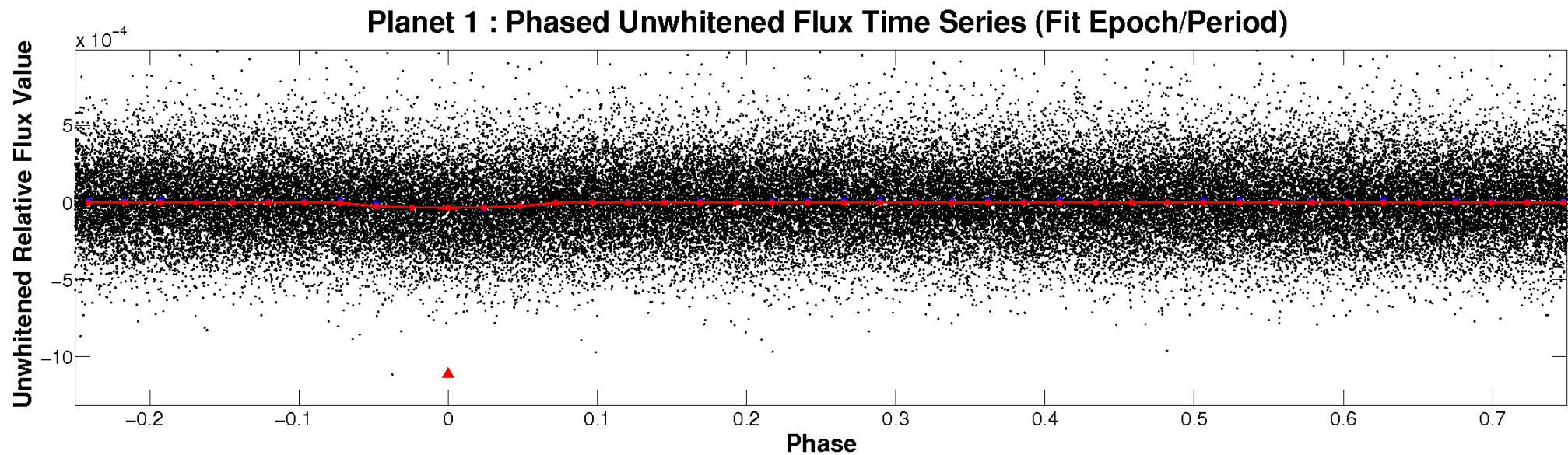


ALT Odd/Even

TCE 011670599-01

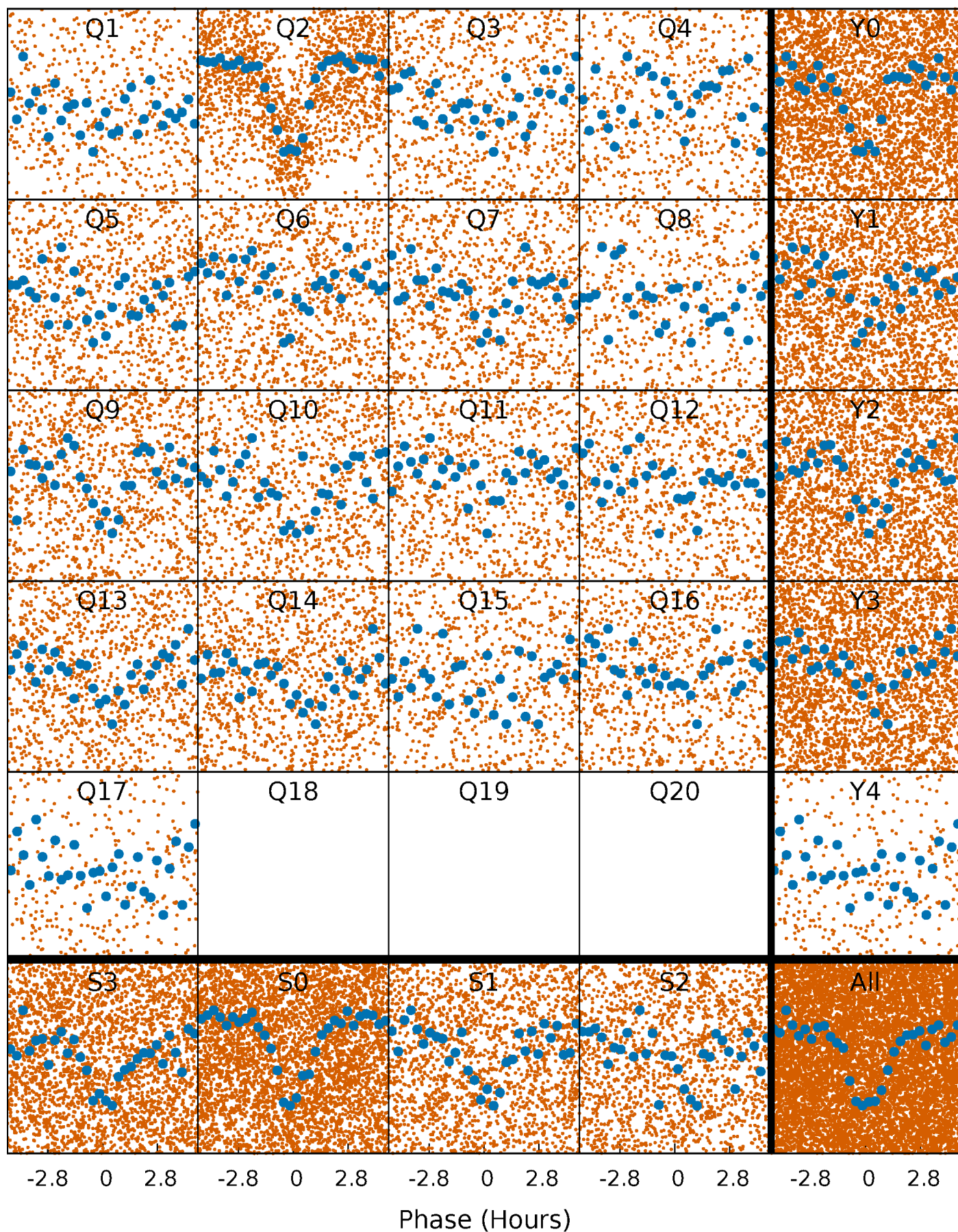


Non-Whitened Vs. Whitened Light Curve



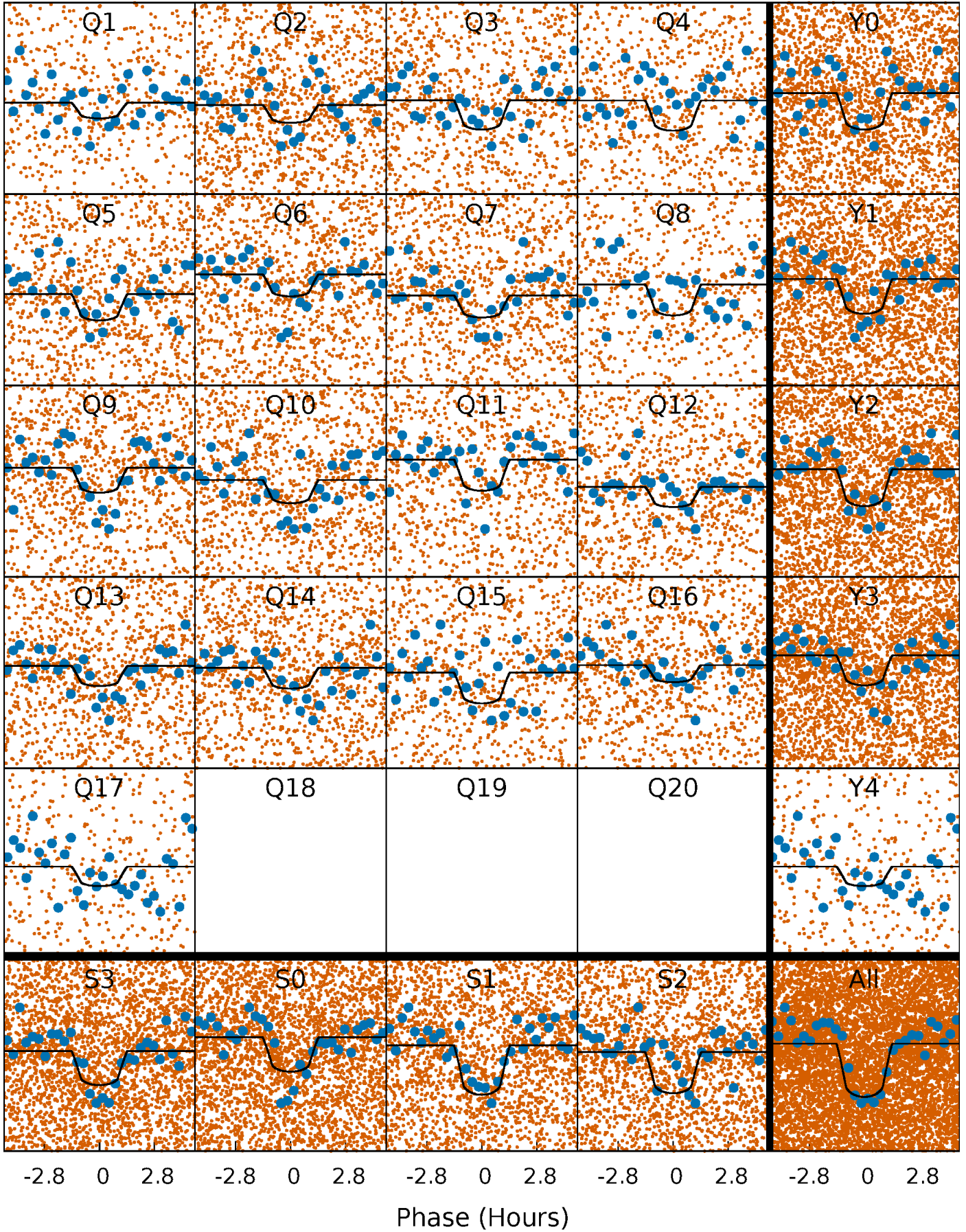
PDC Quarter-Phased Transit Curves

TCE 011670599-01 P= 0.847573 Days $T_0=131.567187$ (BKJD)



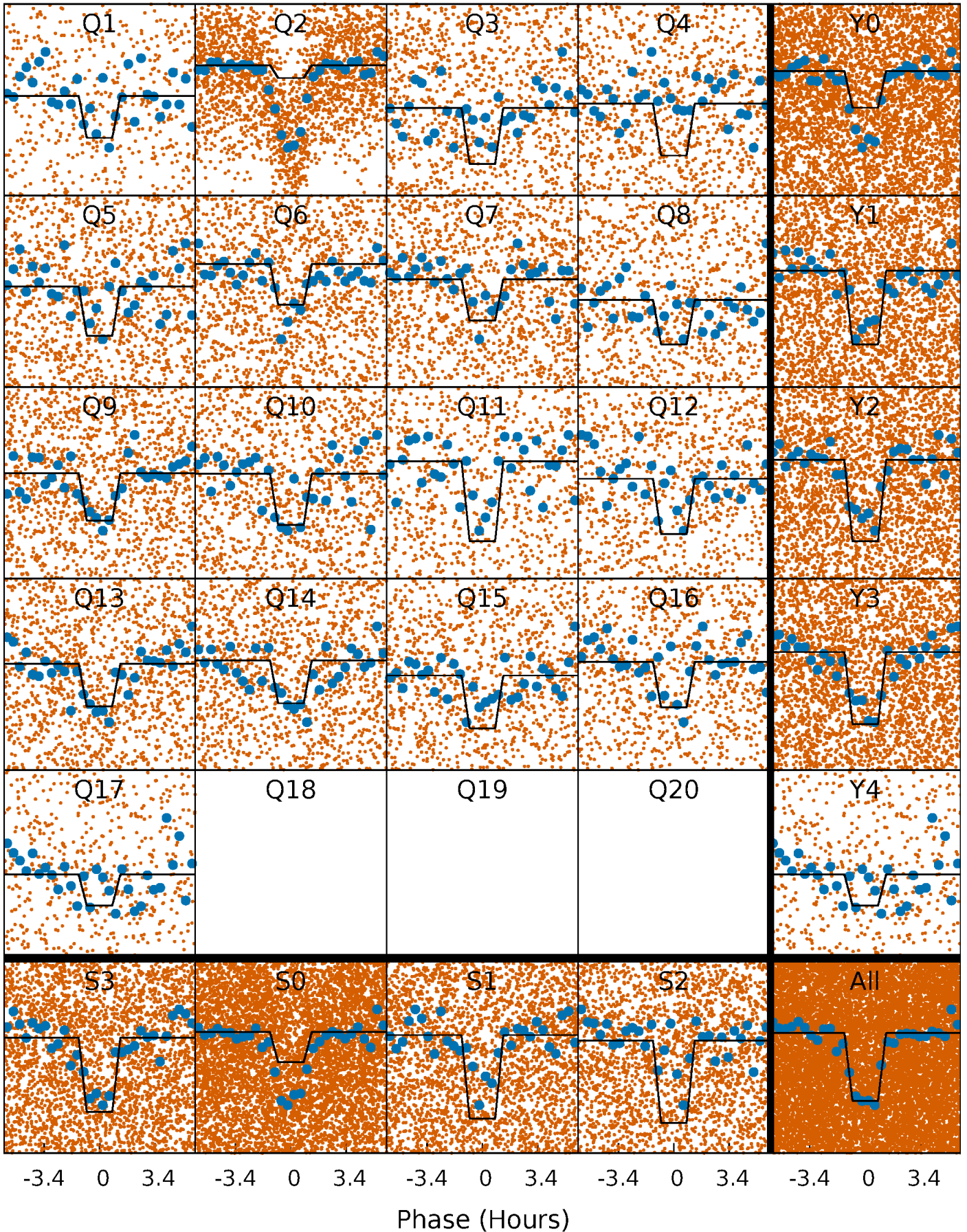
DV Quarter-Phased Transit Curves

TCE 011670599-01 P= 0.847573 Days $T_0=131.567187$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

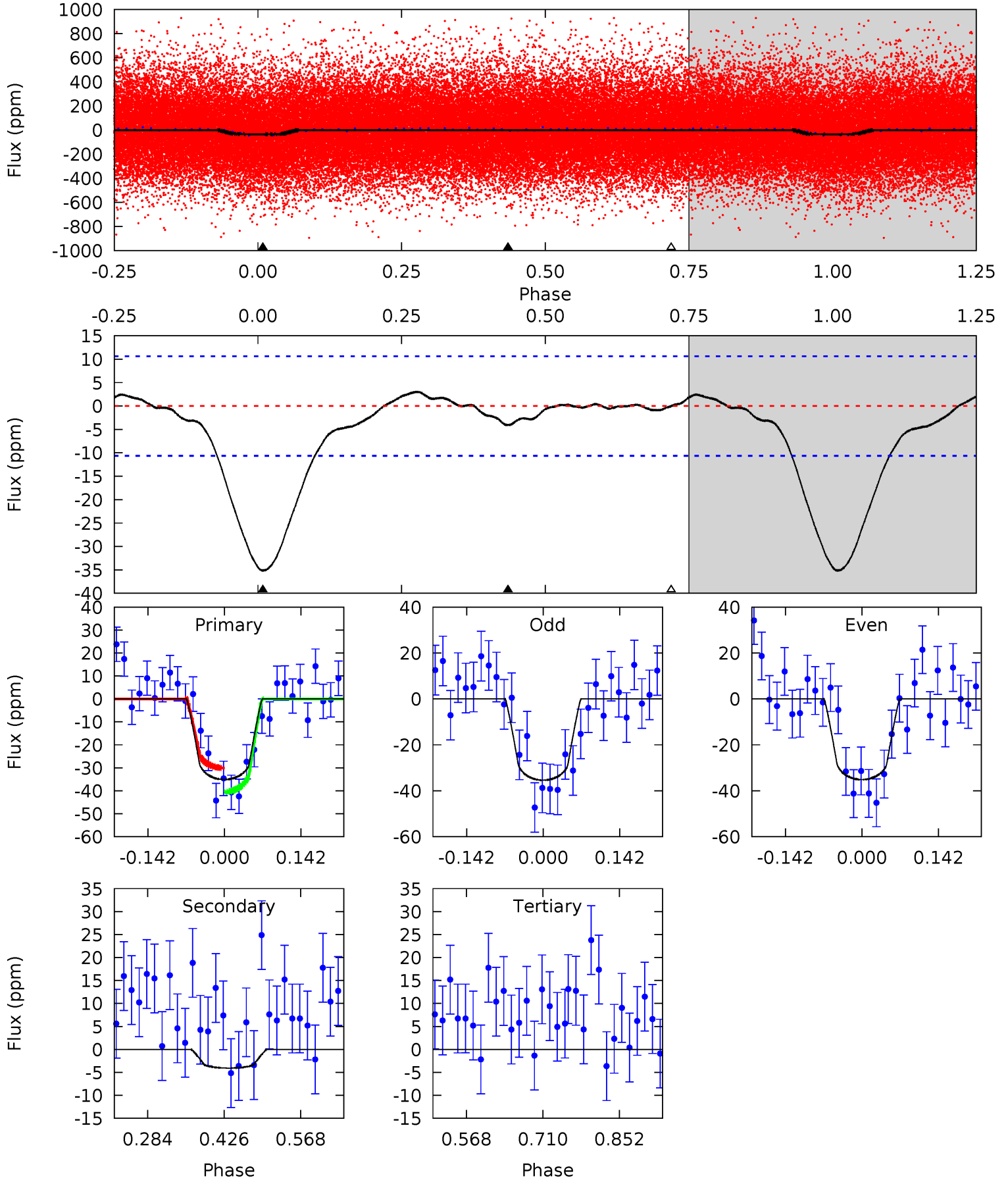
TCE 011670599-01 P= 0.847590 Days $T_0=131.560969$ (BKJD)



DV Model-Shift Uniqueness Test

011670599-01, $P = 0.847573$ Days, $E = 130.719614$ Days

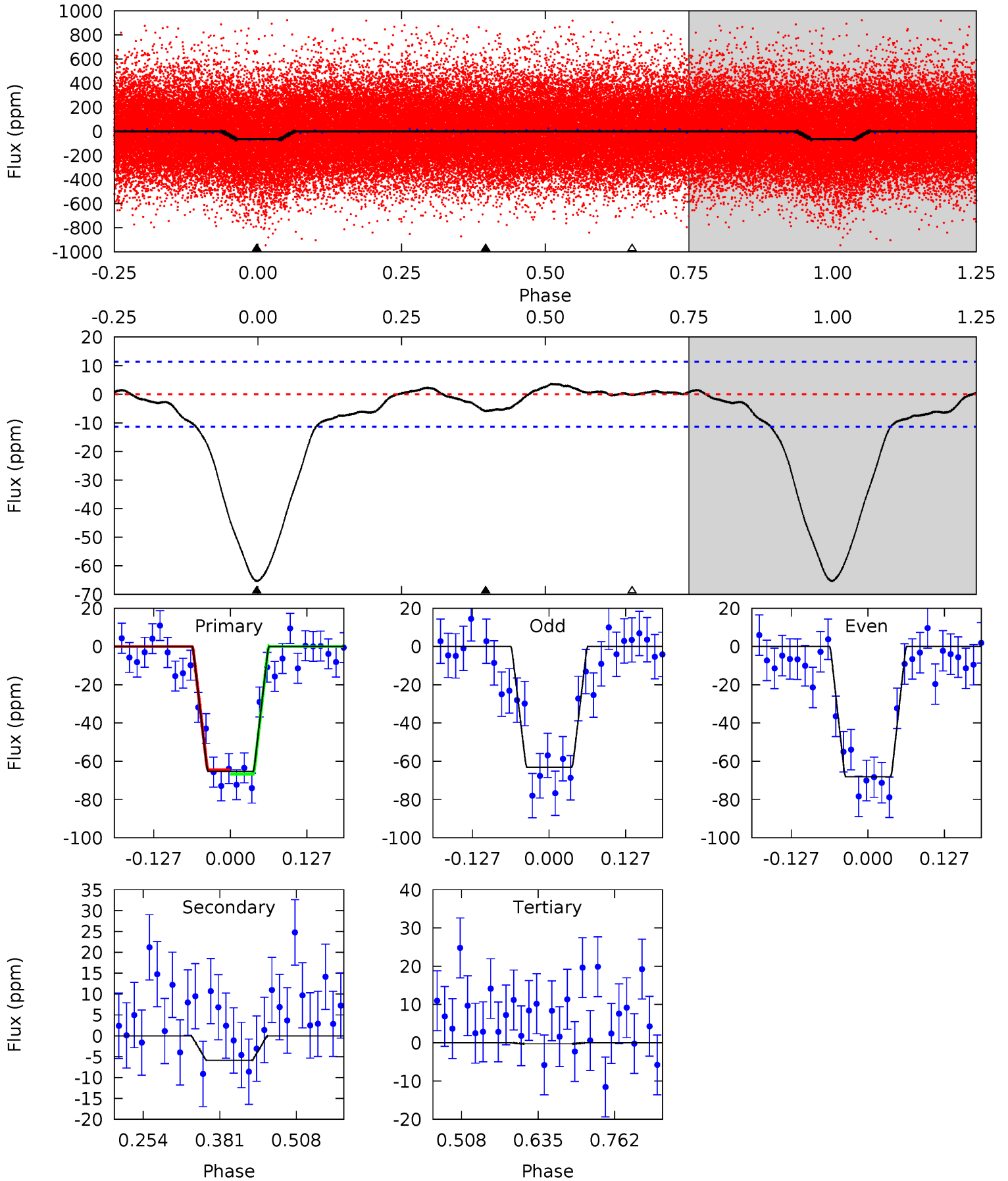
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.8	1.72	0	0	4.49	1.47	0.74	14.8	14.8	1.72	1.72	0.06	0.93	0.08	2.19



Alt Model-Shift Uniqueness Test

011670599-01, P = 0.847590 Days, E = 130.713379 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.0	2.35	0.12	0	4.51	1.53	1.26	25.9	26.0	2.23	2.35	1.01	1.12	0.05	0.44



Stellar Parameters For KIC 011670599

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6335^{+150}_{-206}	$4.427^{+0.056}_{-0.224}$	$-0.140^{+0.250}_{-0.300}$	$1.072^{+0.349}_{-0.116}$	$1.120^{+0.154}_{-0.154}$	$1.280^{+0.377}_{-0.689}$
	+2%/-3%	+1%/-5%	+179%/-214%	+33%/-11%	+14%/-14%	+29%/-54%
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 011670599-01 / KOI 4282.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-4 ± 2	$0.75^{+0.33}_{-0.28}$	3058^{+197}_{-150}	3725^{+913}_{-1060}	$1.222^{+2.204}_{-0.824}$
Alt.	-6 ± 3	$0.98^{+0.38}_{-0.31}$	3069^{+220}_{-152}	3594^{+741}_{-813}	$1.014^{+1.495}_{-0.597}$

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 $A_{obs} \gg 1.0$

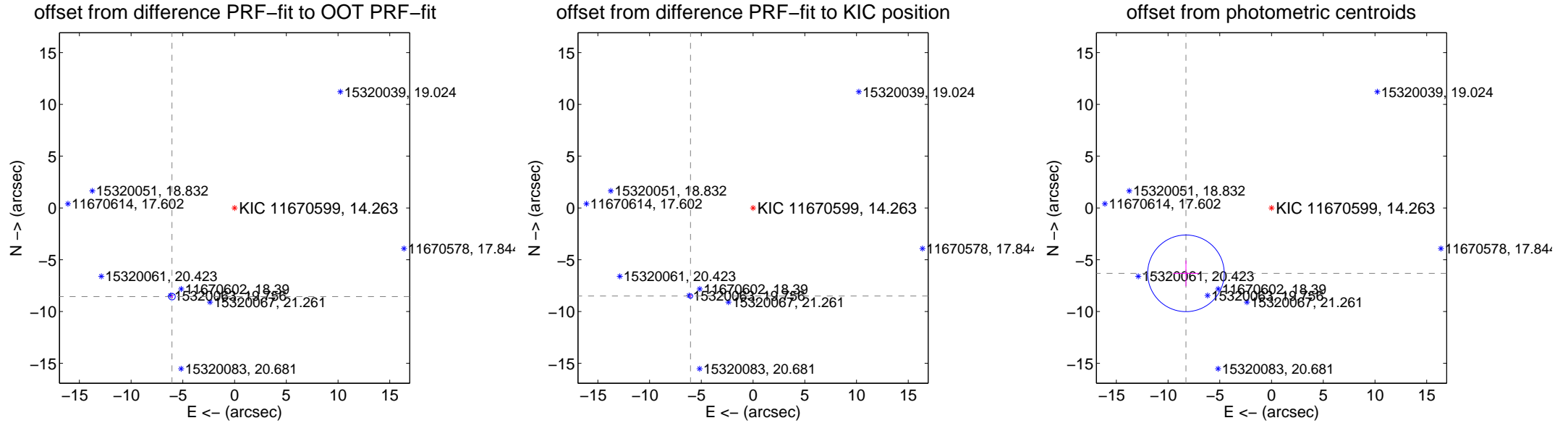
DV Centroid Data

Supplemental centroid analysis for 011670599-01. Kepler magnitude: 14.26. Transit SNR 10.95

There are 6 quarters with good PRF difference image offsets

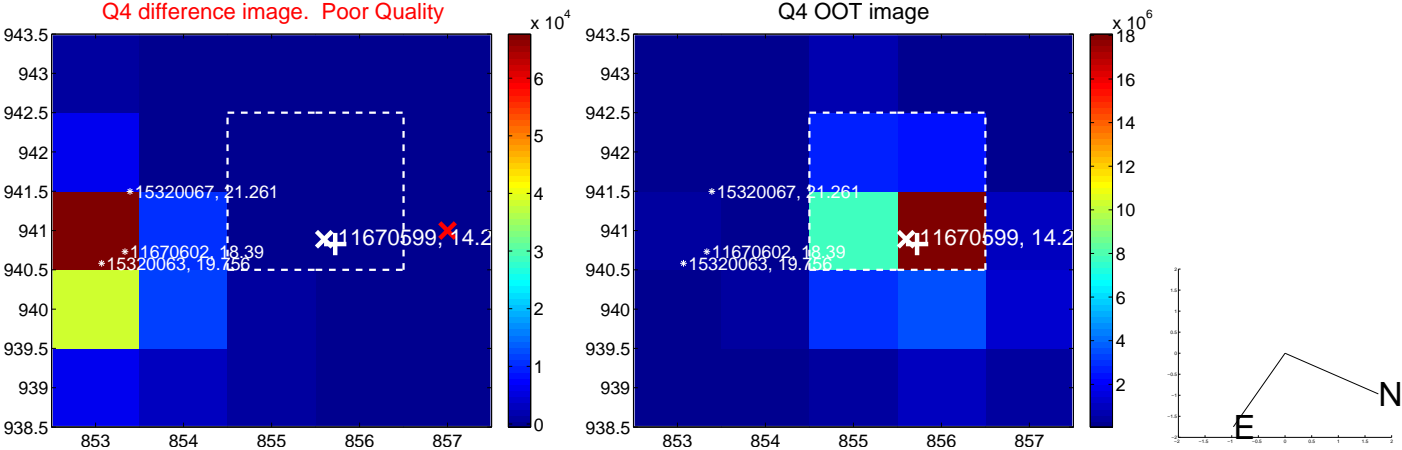
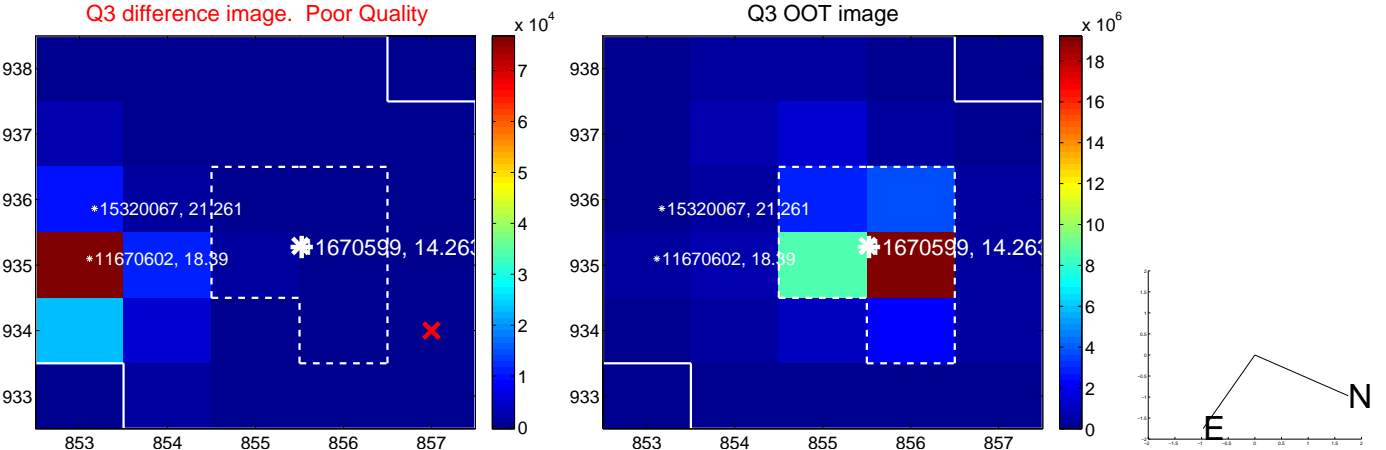
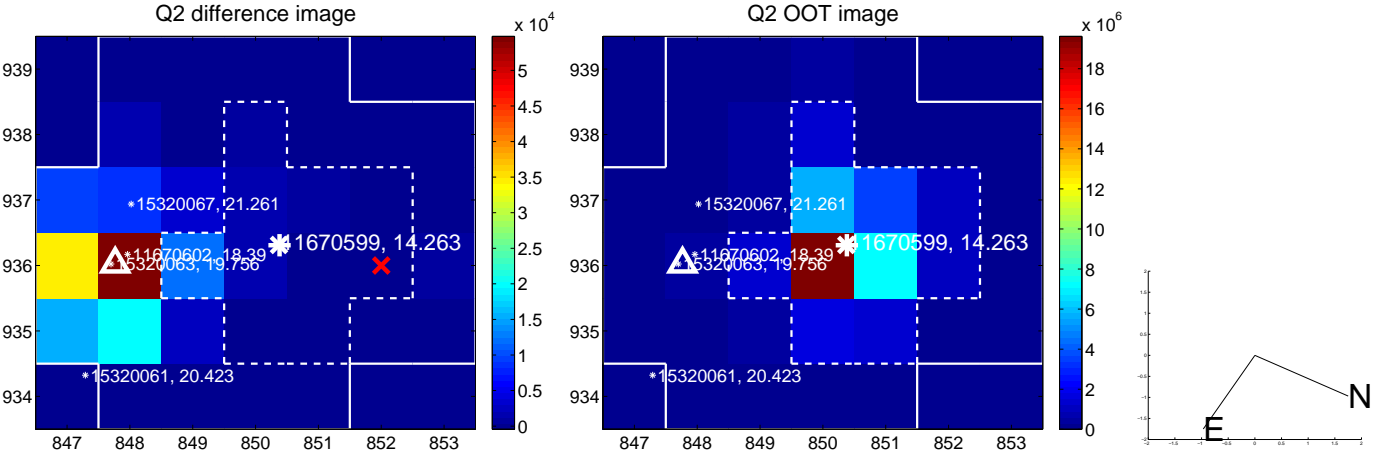
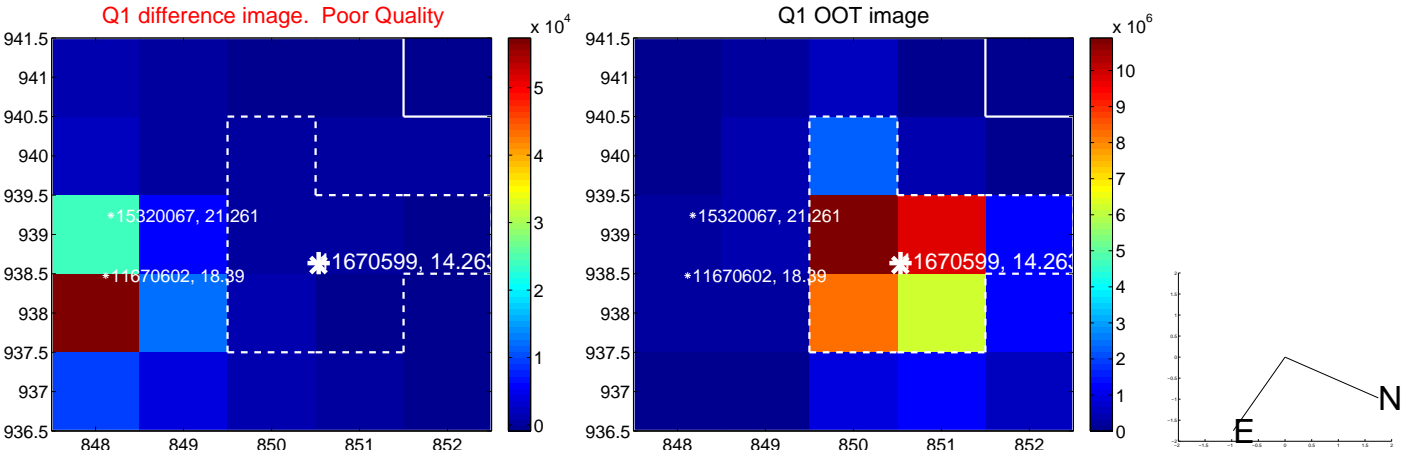
The direct PRF centroid is offset from the target star catalog position by about 0.43 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	10.488 ± 0.107	97.95	6.056 ± 0.068	-8.564 ± 0.116
PRF-fit source offset from KIC position	10.437 ± 0.072	145.29	6.046 ± 0.067	-8.508 ± 0.073
photometric centroid source offset	10.41 ± 1.23	8.44	8.27 ± 1.23	-6.31 ± 1.24

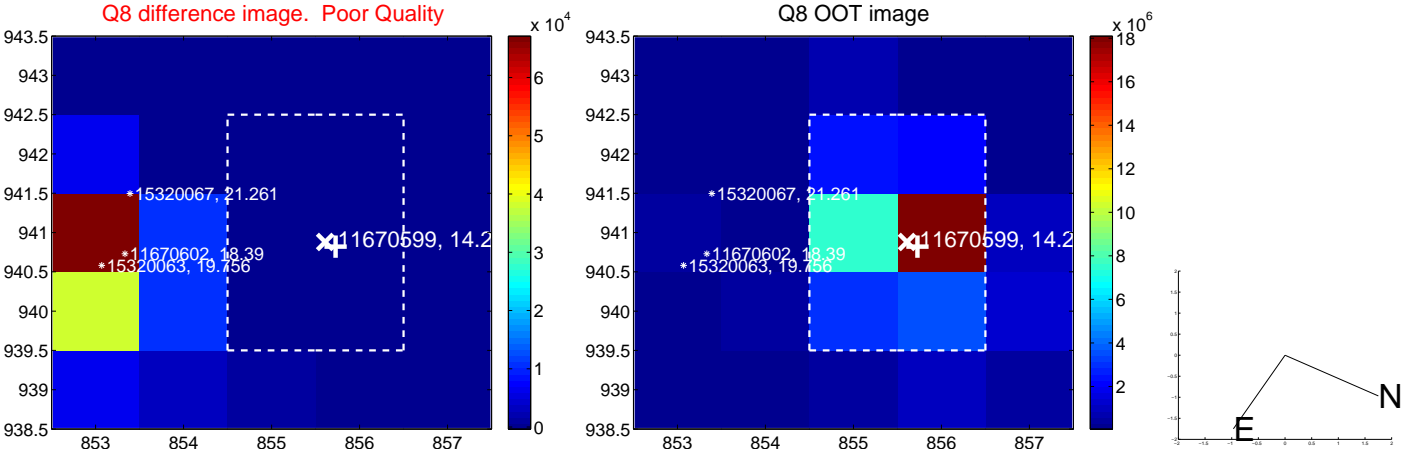
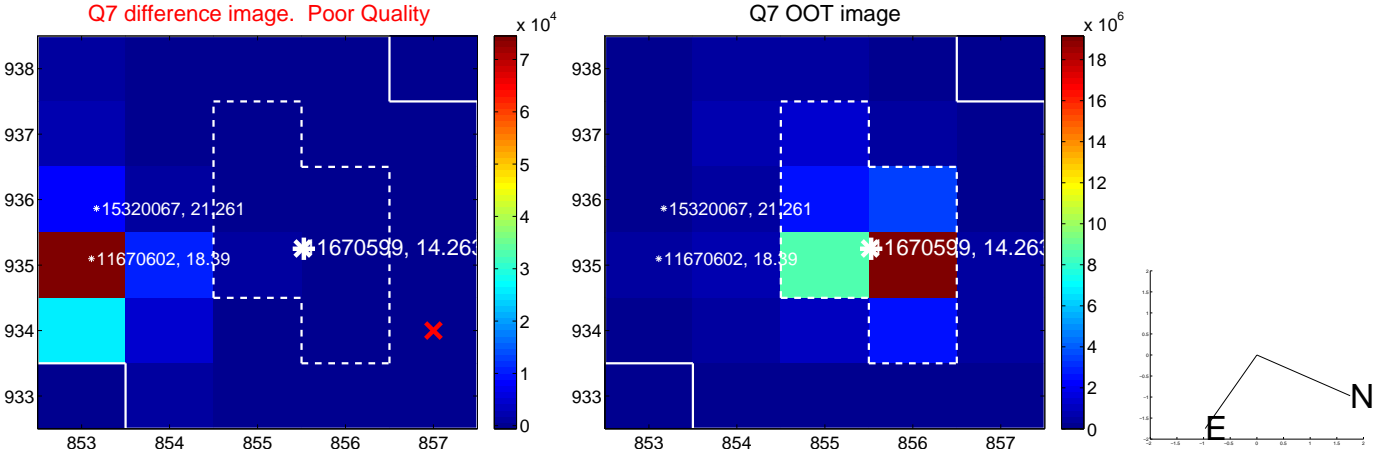
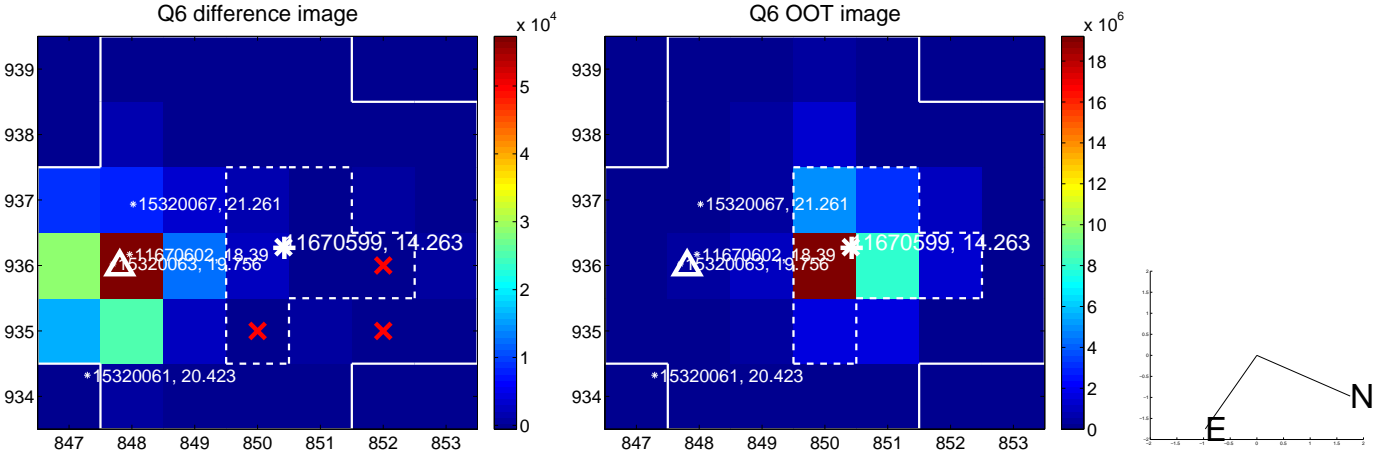
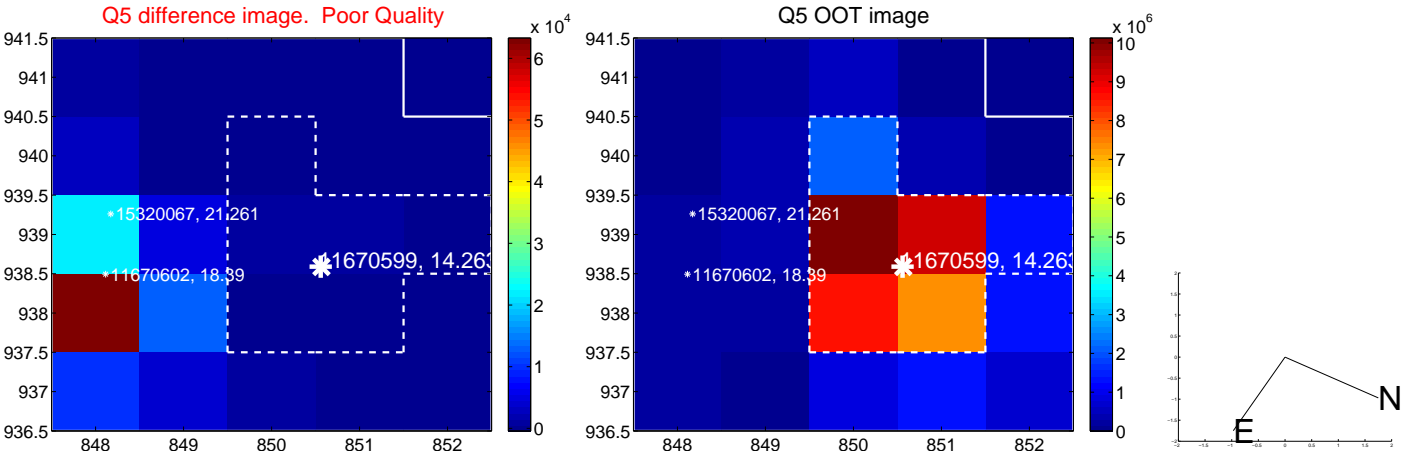


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

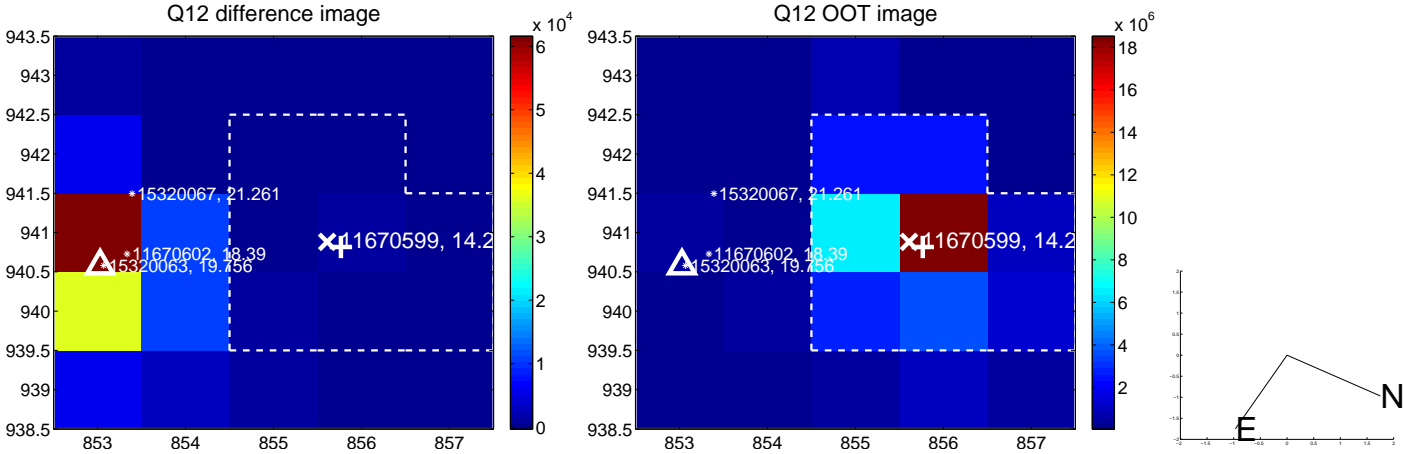
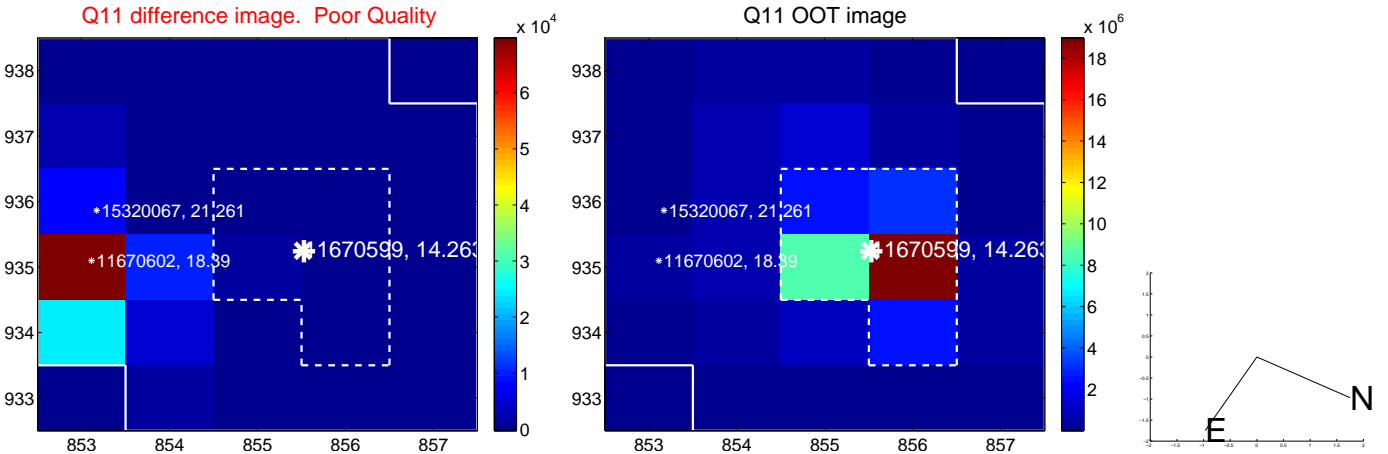
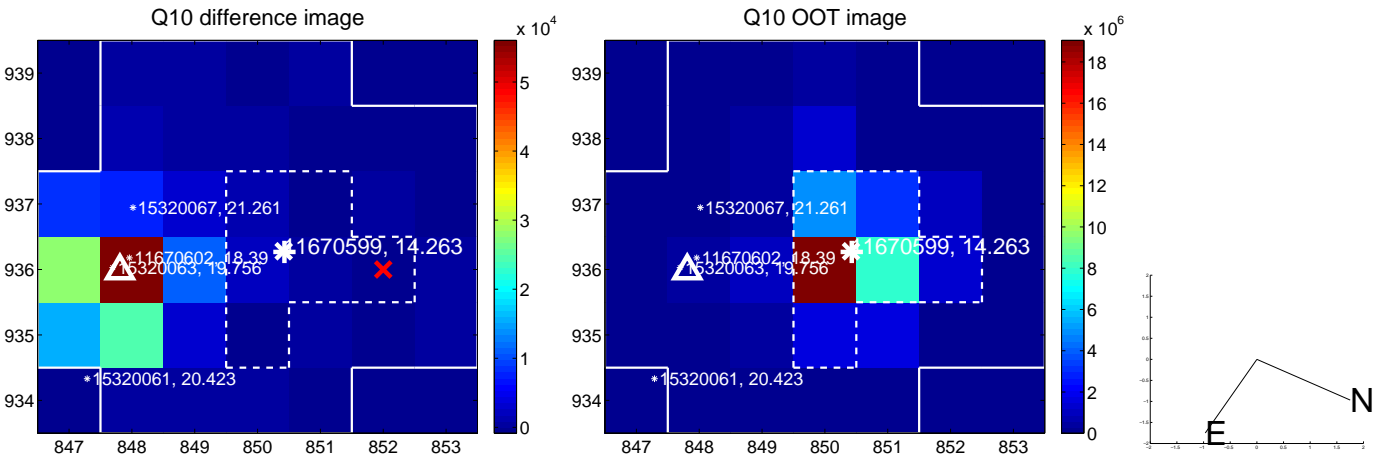
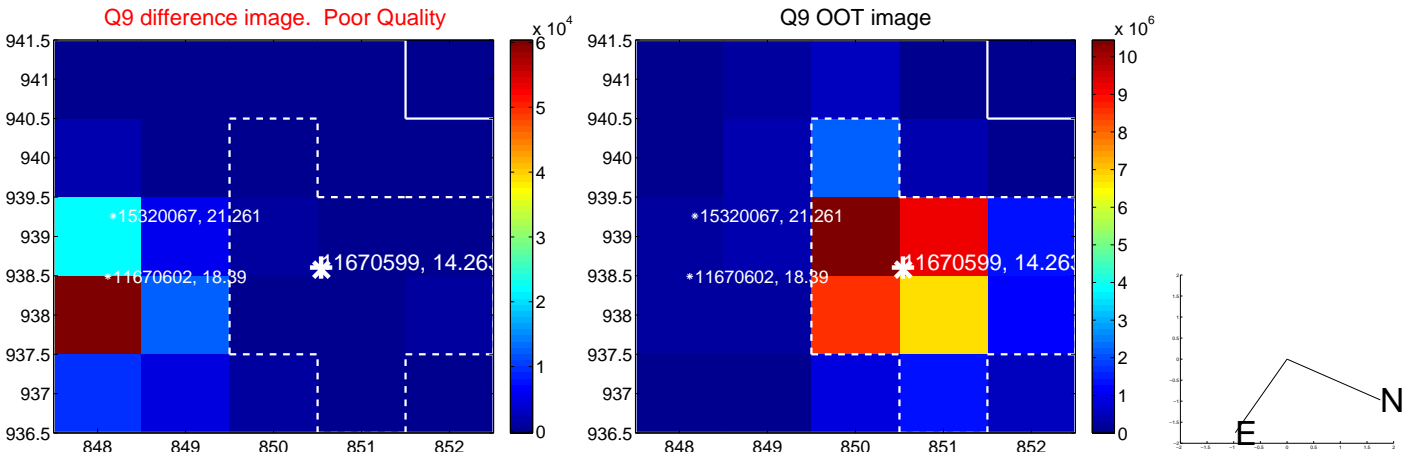
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



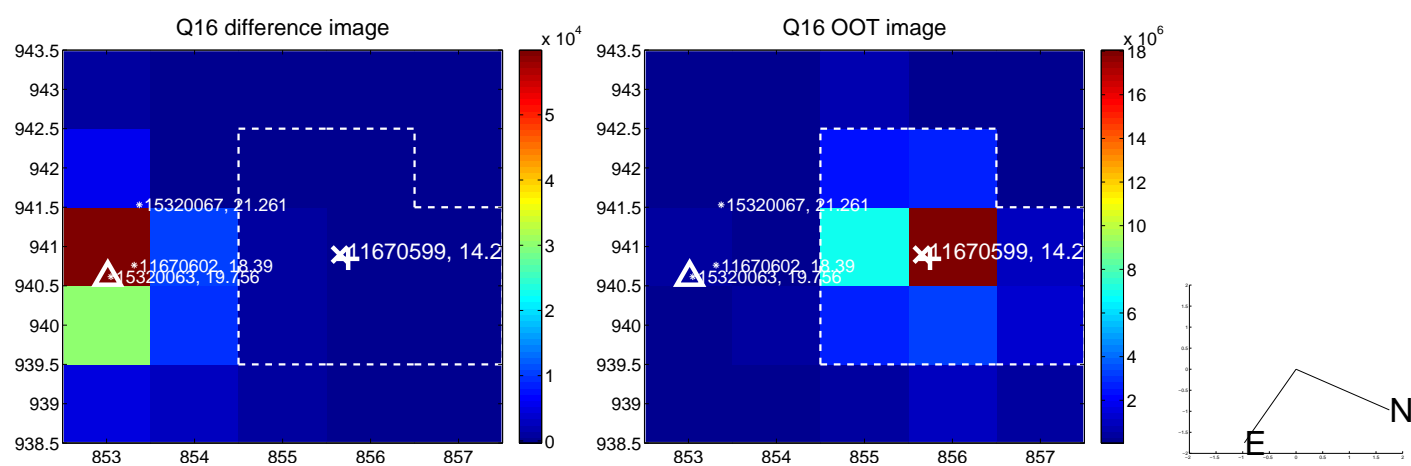
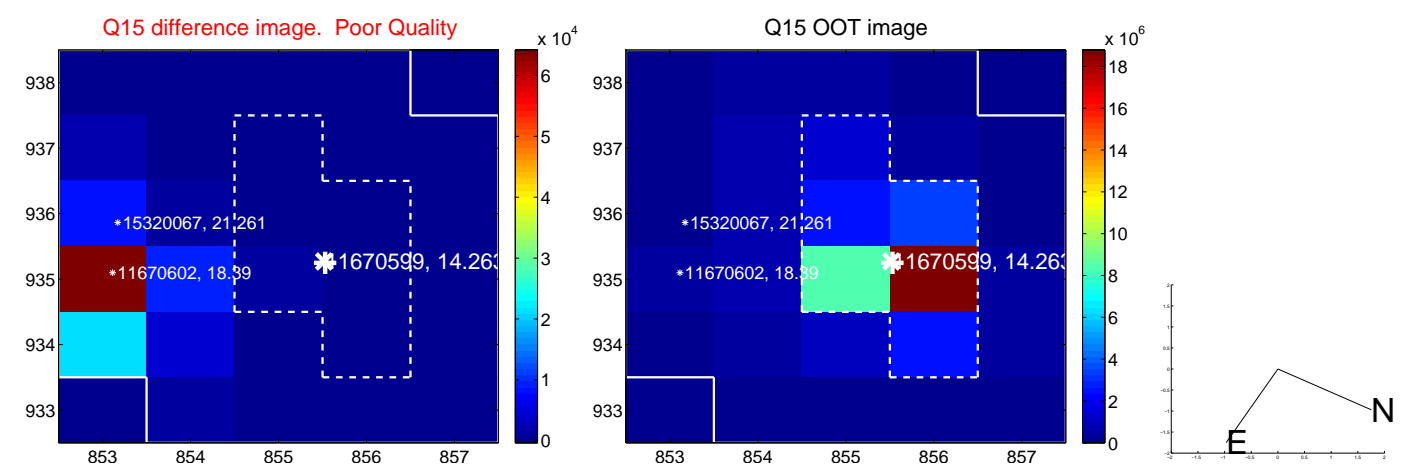
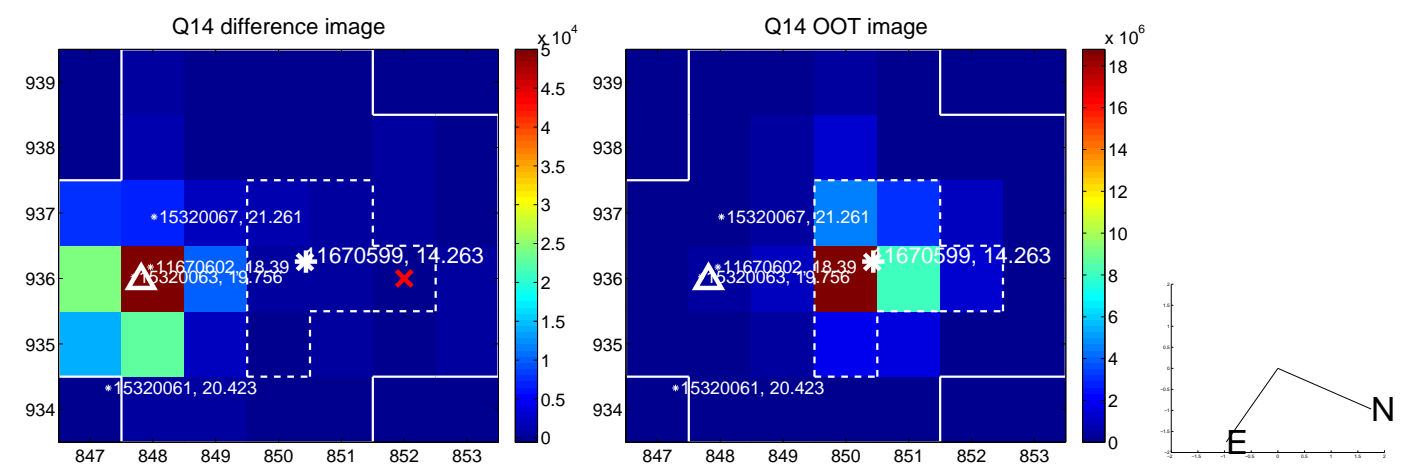
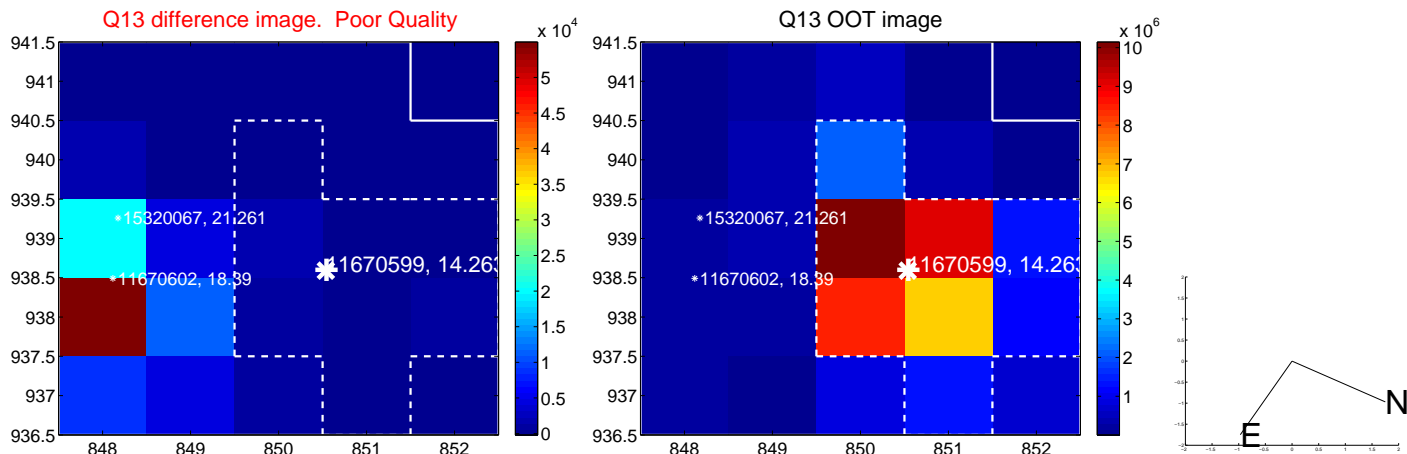
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



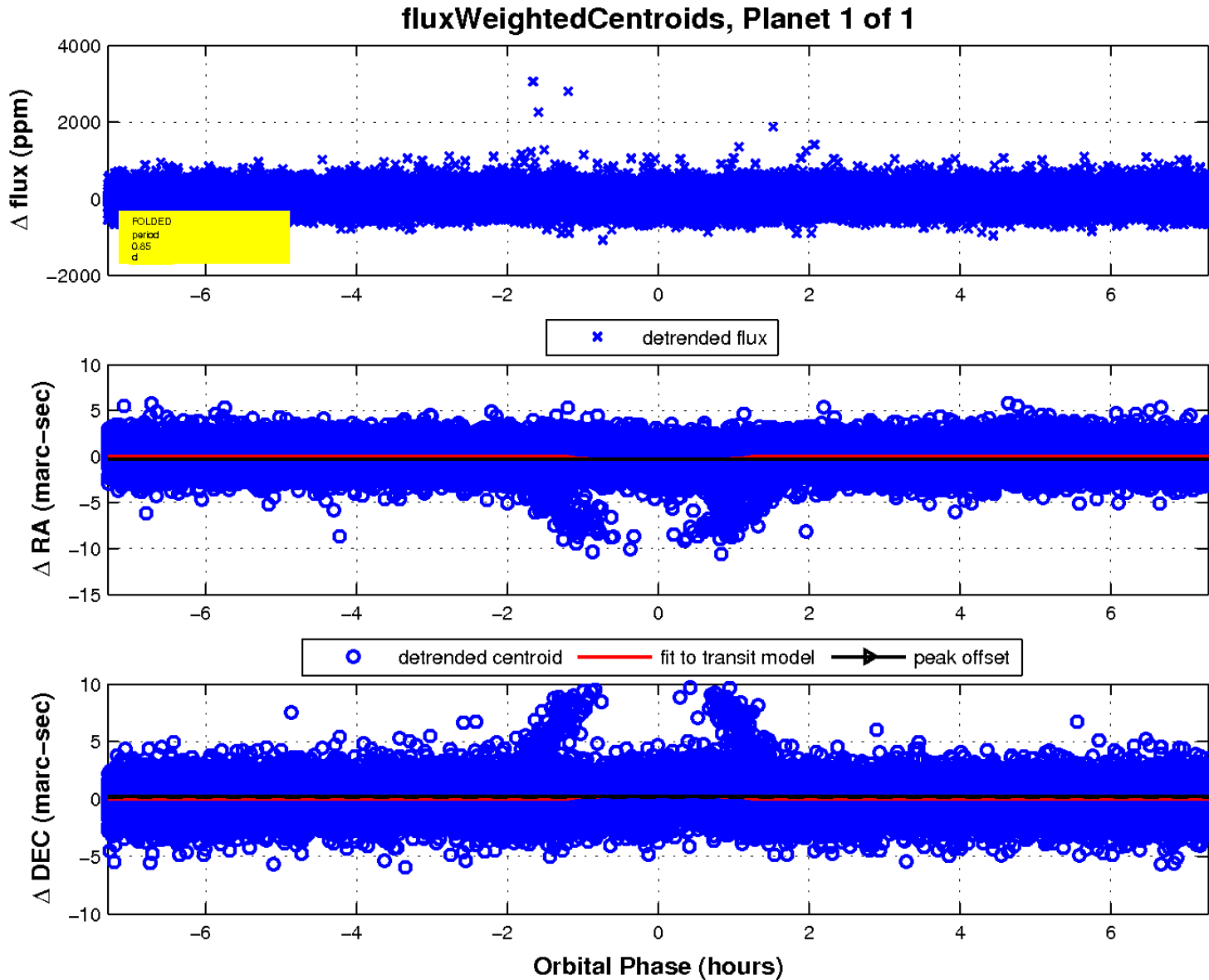
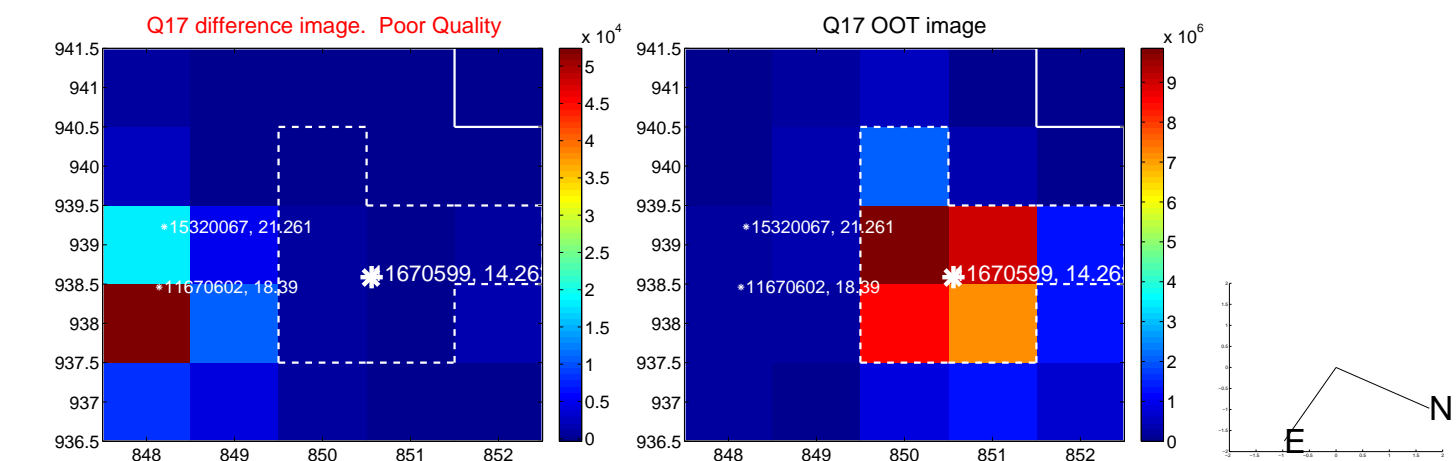
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

