

KIC 007433585

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})
007433585-01	OBS	2999.01	0.545513	131.737457	28.4	3.135	15.7	9.3	0.92	6050	0.50	5961.66

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007433585-01	OBS	FP	0.00	0	1	1	0	MOD_SEC_DV—MOD_SEC_ALT—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 007433585-01

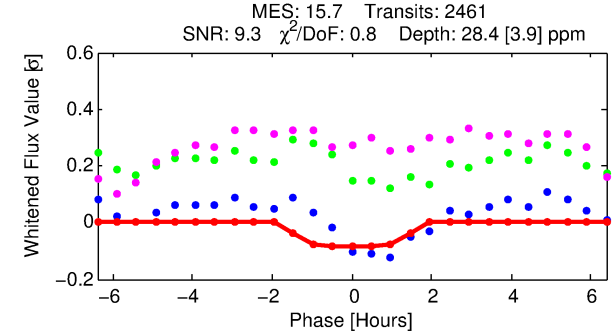
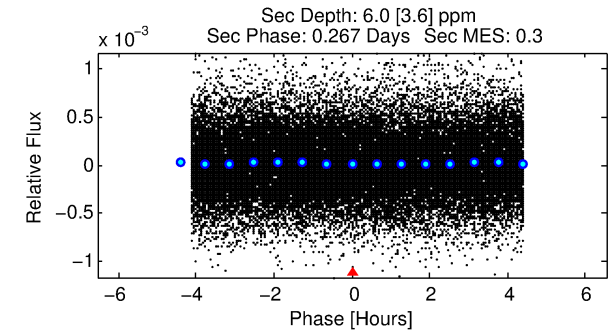
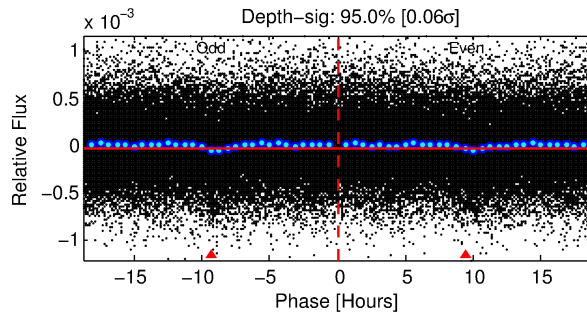
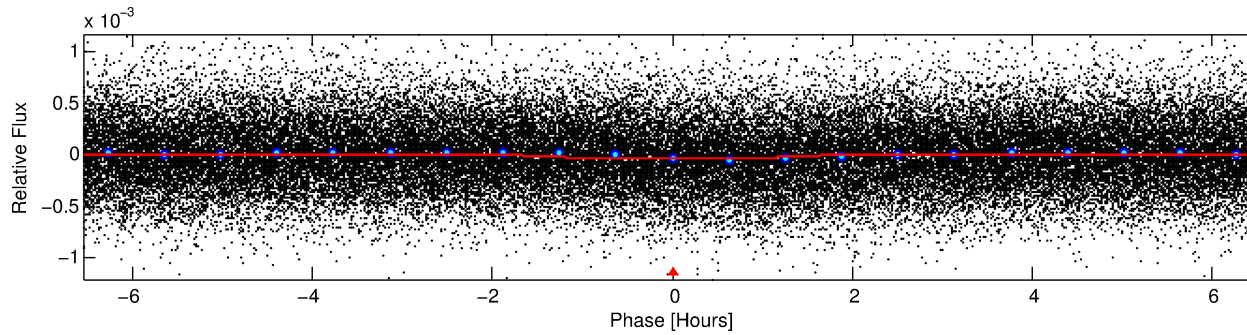
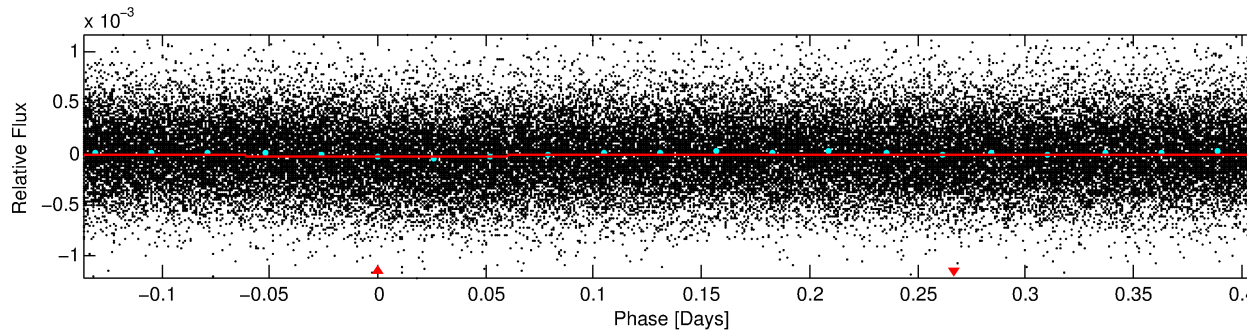
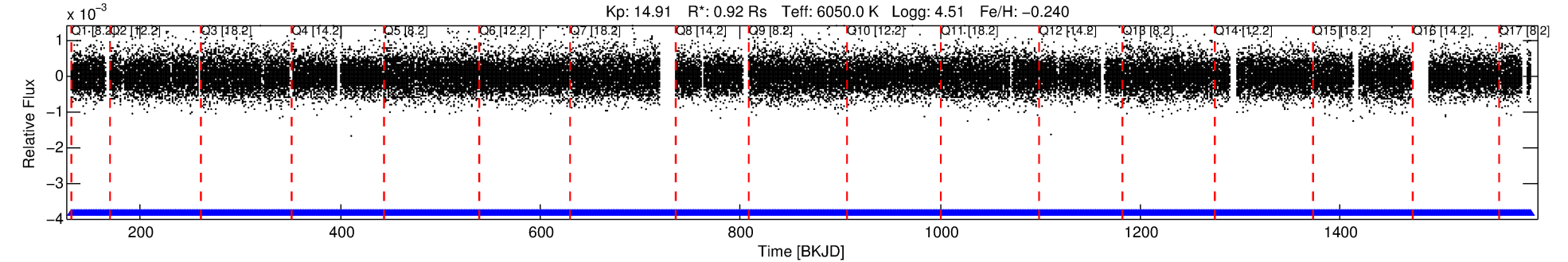
No Significant Match Found

DV One-Page Summary

KIC: 7433585 Candidate: 1 of 1 Period: 0.546 d

KOI: K02999 Corr: No Ephemeris Match

Kp: 14.91 R*: 0.92 Rs Teff: 6050.0 K Logg: 4.51 Fe/H: -0.240



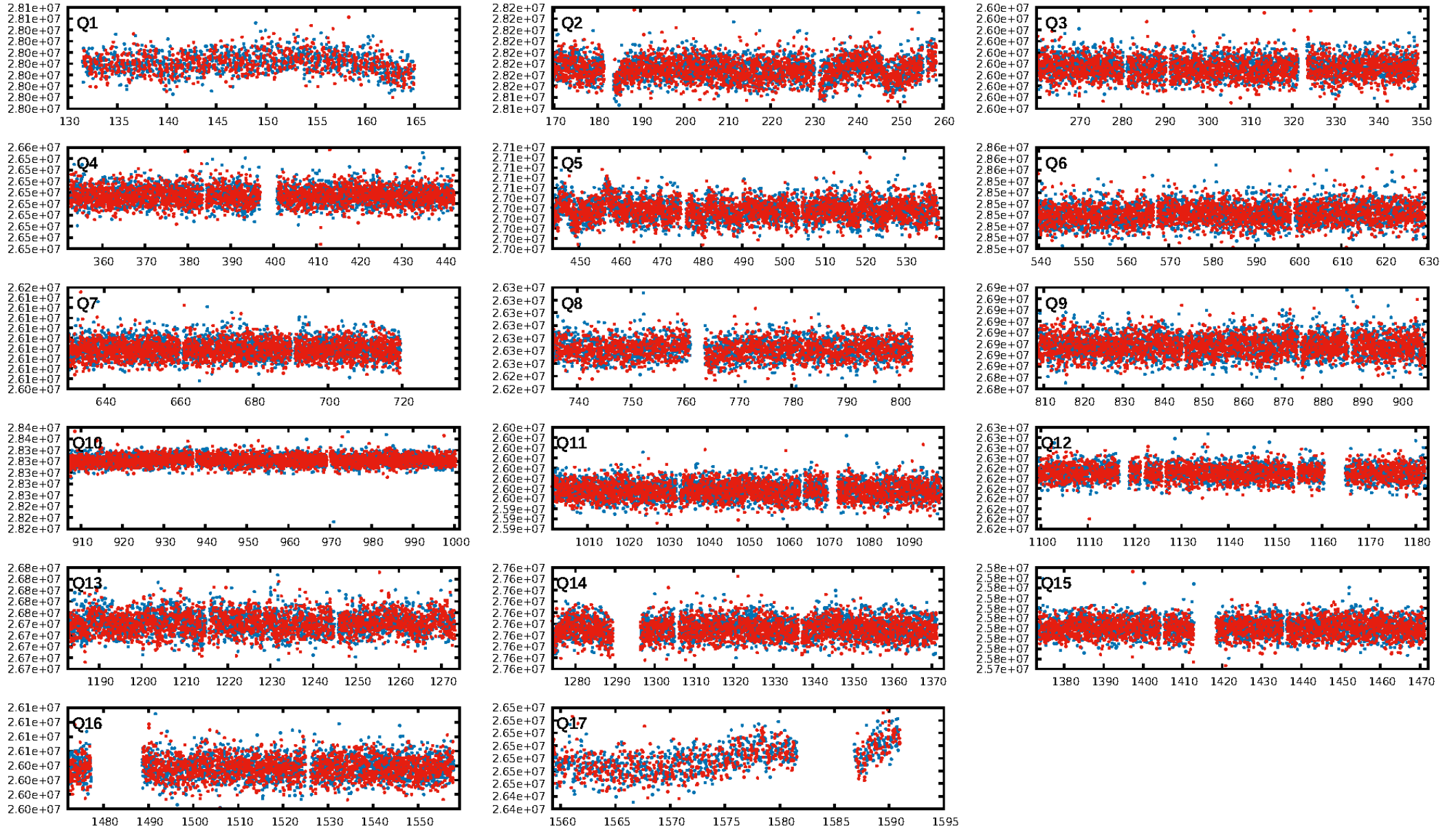
DV Fit Results:

Period = 0.54551 [0.00001] d
Epoch = 131.7375 [0.0041] BKJD
Rp/R* = 0.0050 [0.0049]
a/R* = 1.41 [3.40]
b = 0.38 [10.98]
Seff = 5961.66 [2446.62]
Teq = 2241 [230] K
Rp = 0.50 [0.51] Re
a = 0.0131 [0.0035] AU
Ag = 2.29 [4.78] [0.27σ]
Teffp = 4260 [2189] K [0.92σ]

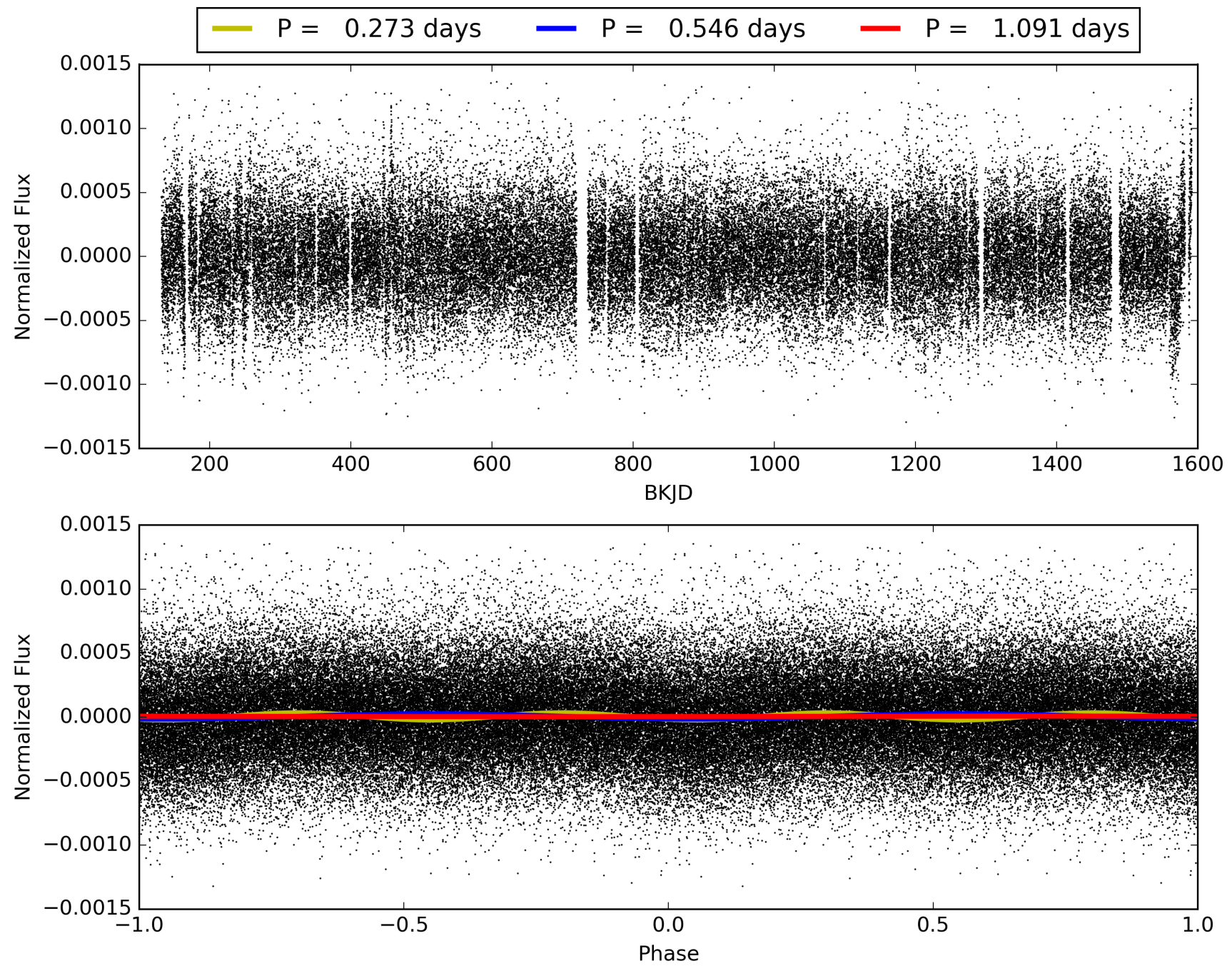
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.39e-41
RollingBand-fgt: 1.00 [2350/2350]
GhostDiagnostic-chr: -0.399
Centroid-sig: 0.0%
Centroid-so: 28.188 arcsec [13.99σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [17/17]

TCE 007433585-01, PDC Light Curves

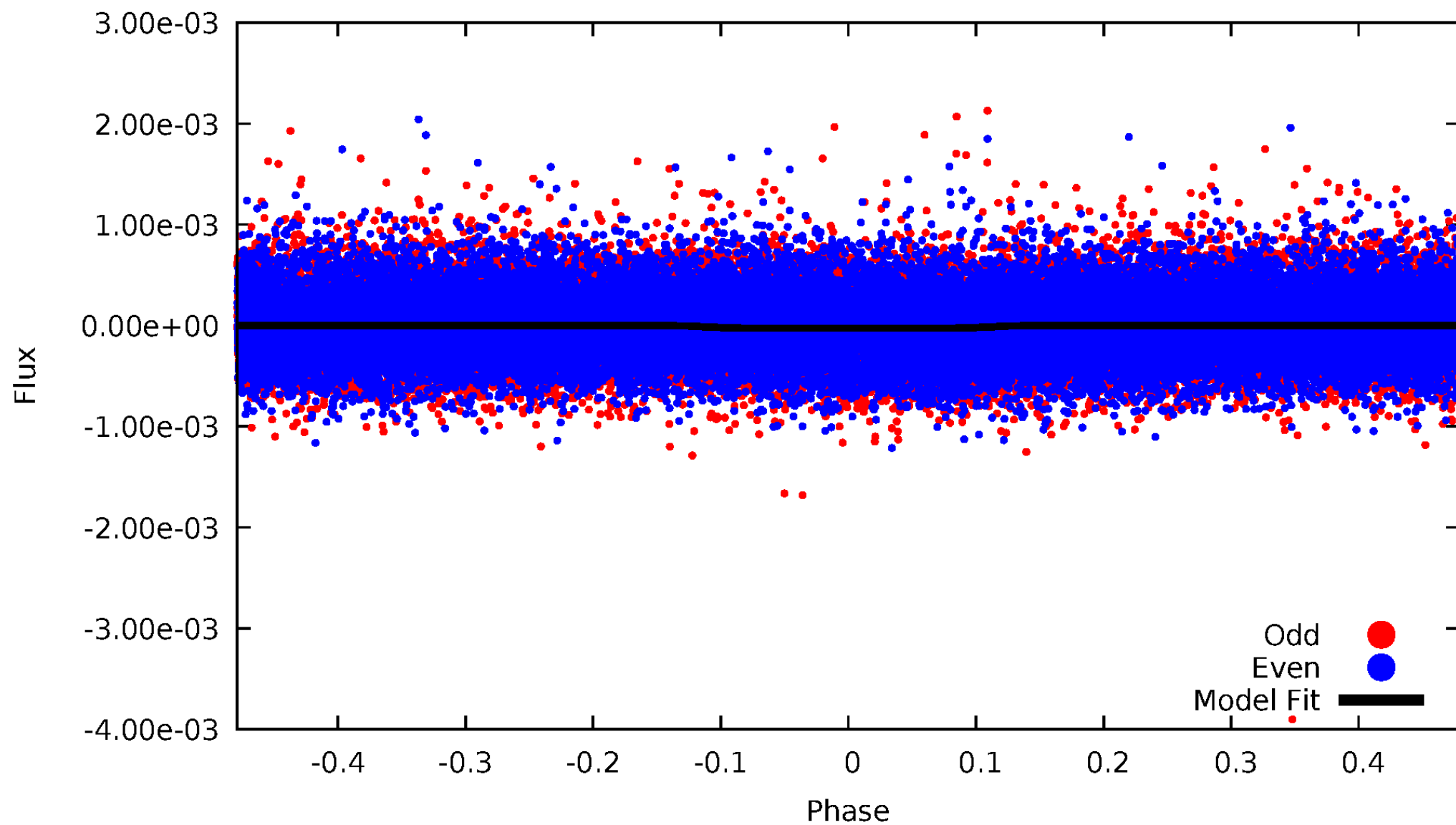


TCE 007433585-01



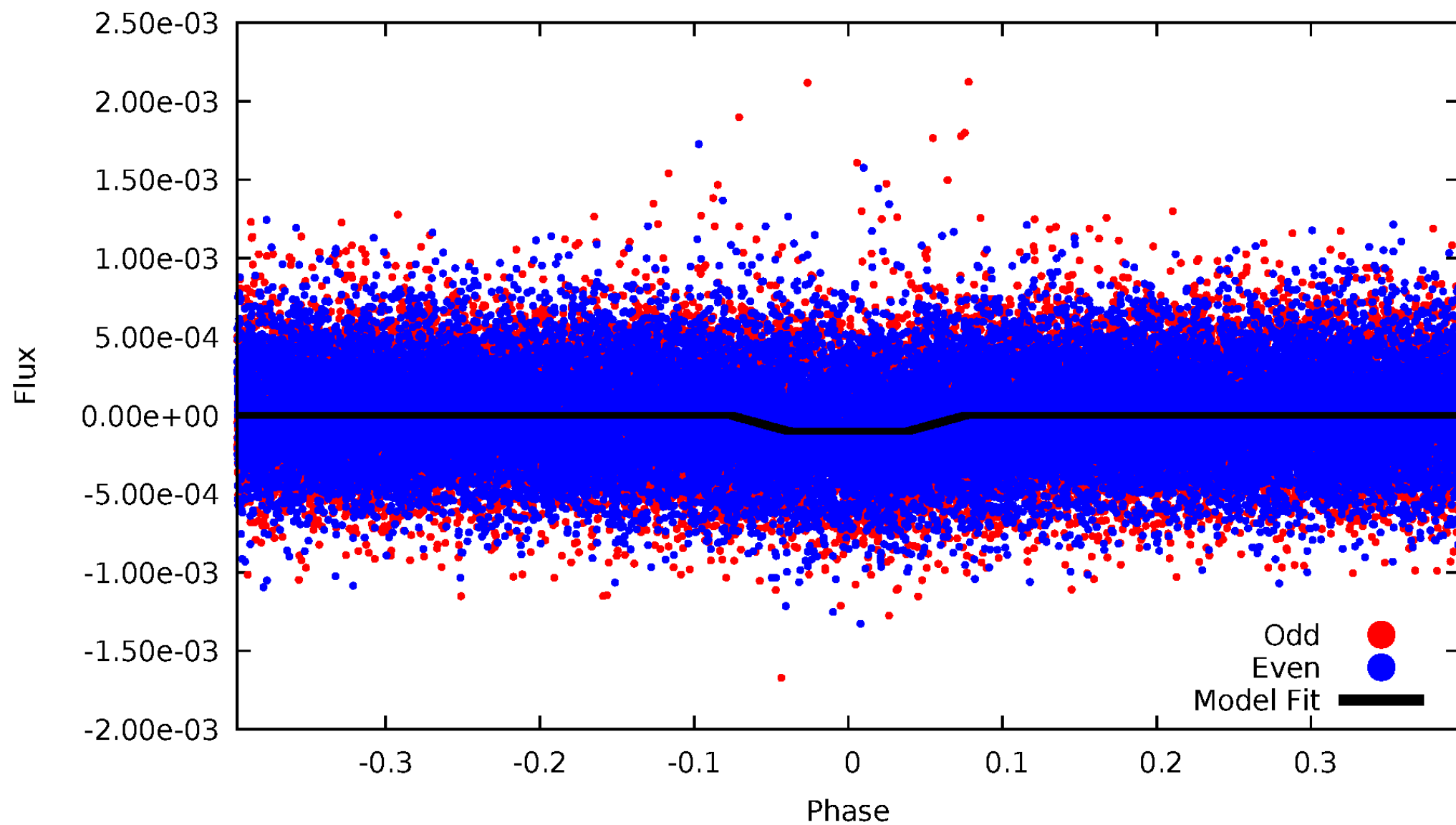
DV Odd/Even

TCE 007433585-01

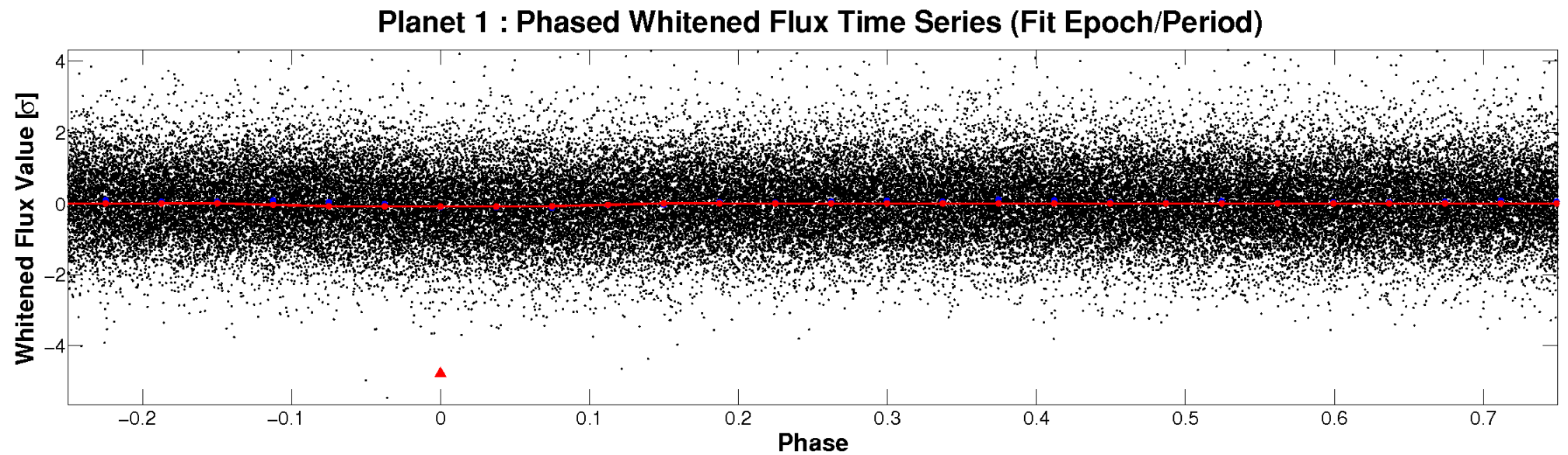
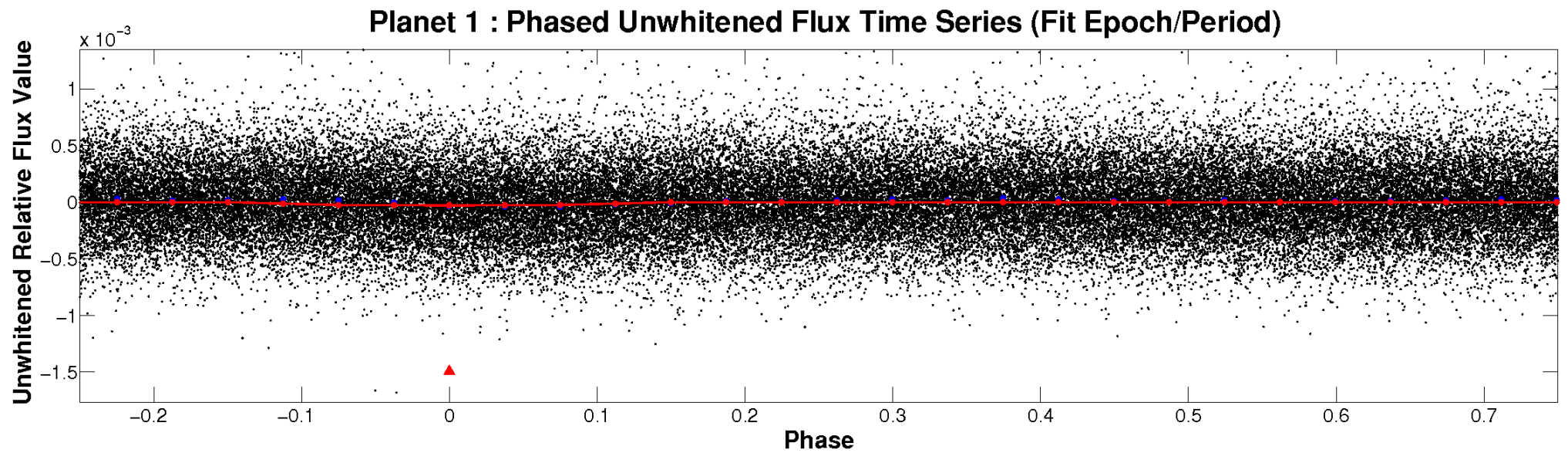


ALT Odd/Even

TCE 007433585-01

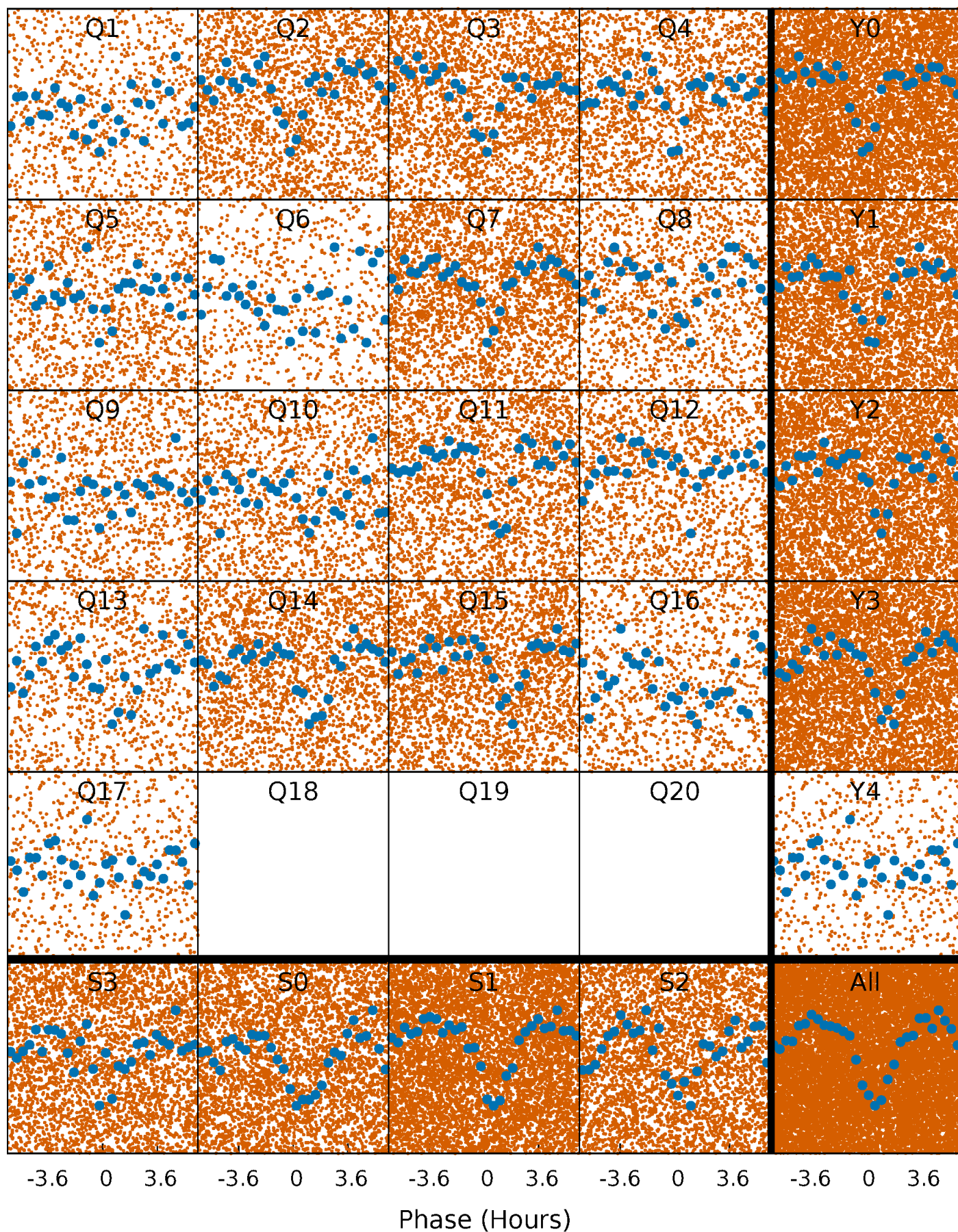


Non-Whitened Vs. Whitened Light Curve



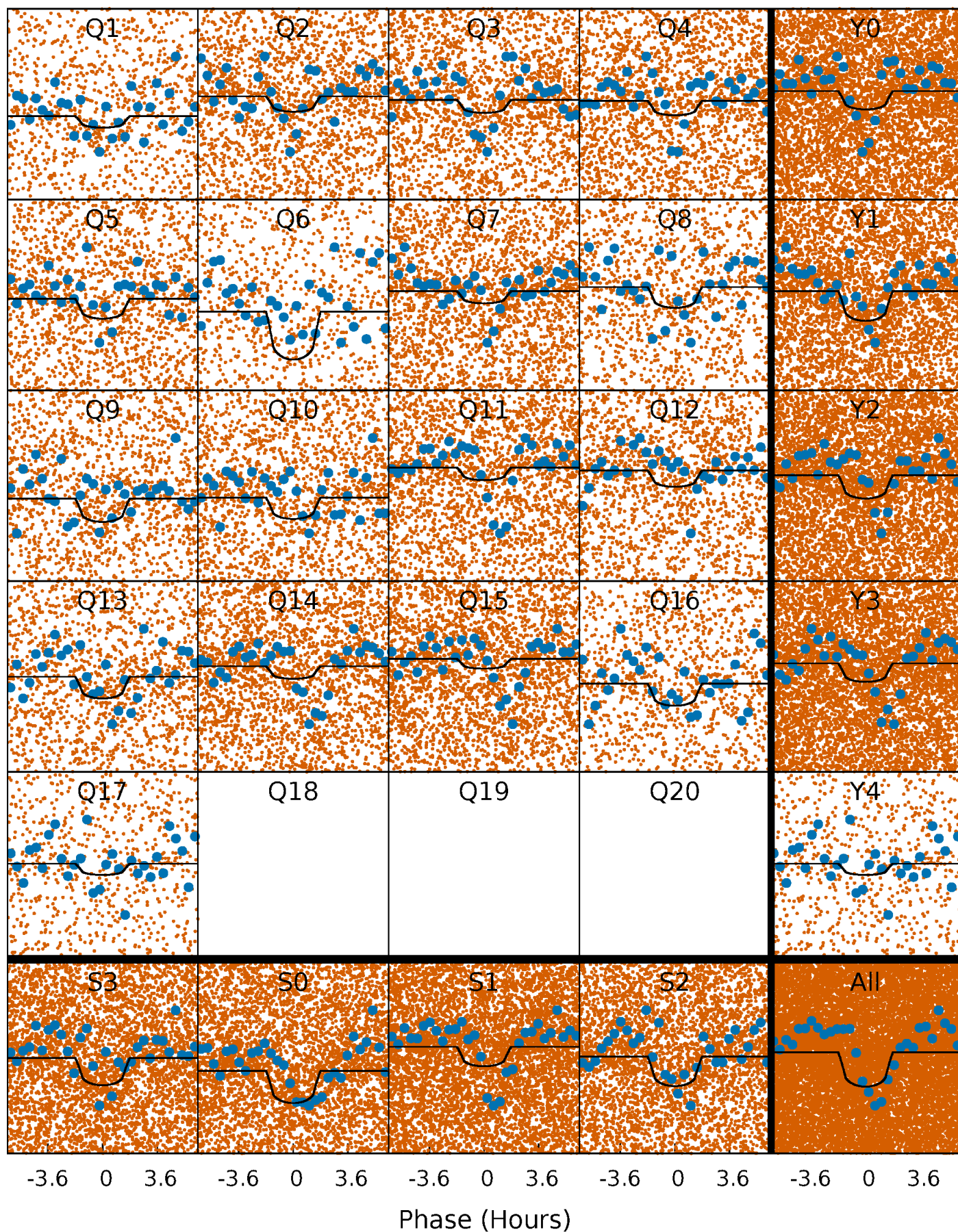
PDC Quarter-Phased Transit Curves

TCE 007433585-01 P= 0.545513 Days $T_0=131.737457$ (BKJD)



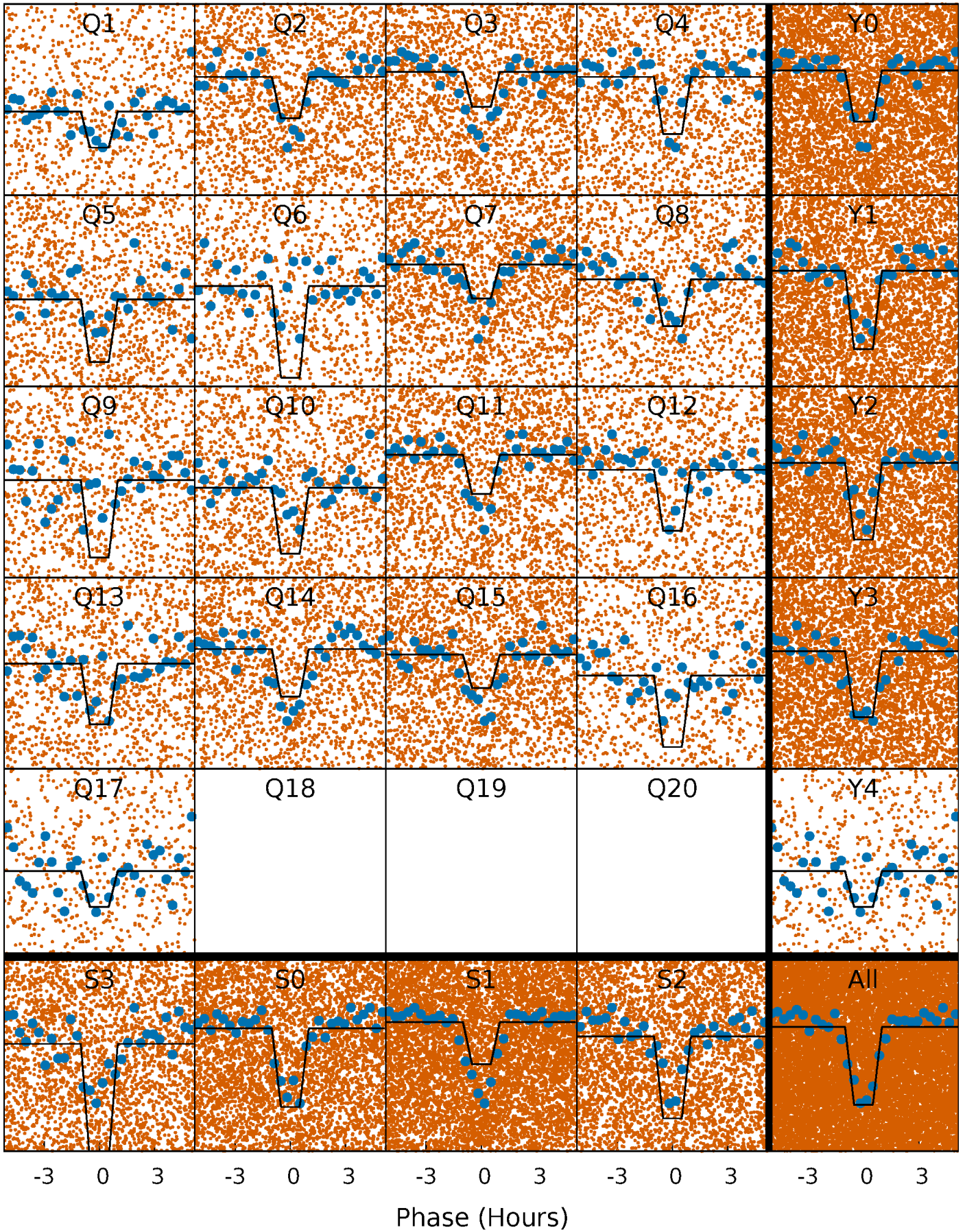
DV Quarter-Phased Transit Curves

TCE 007433585-01 P= 0.545513 Days $T_0=131.737457$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

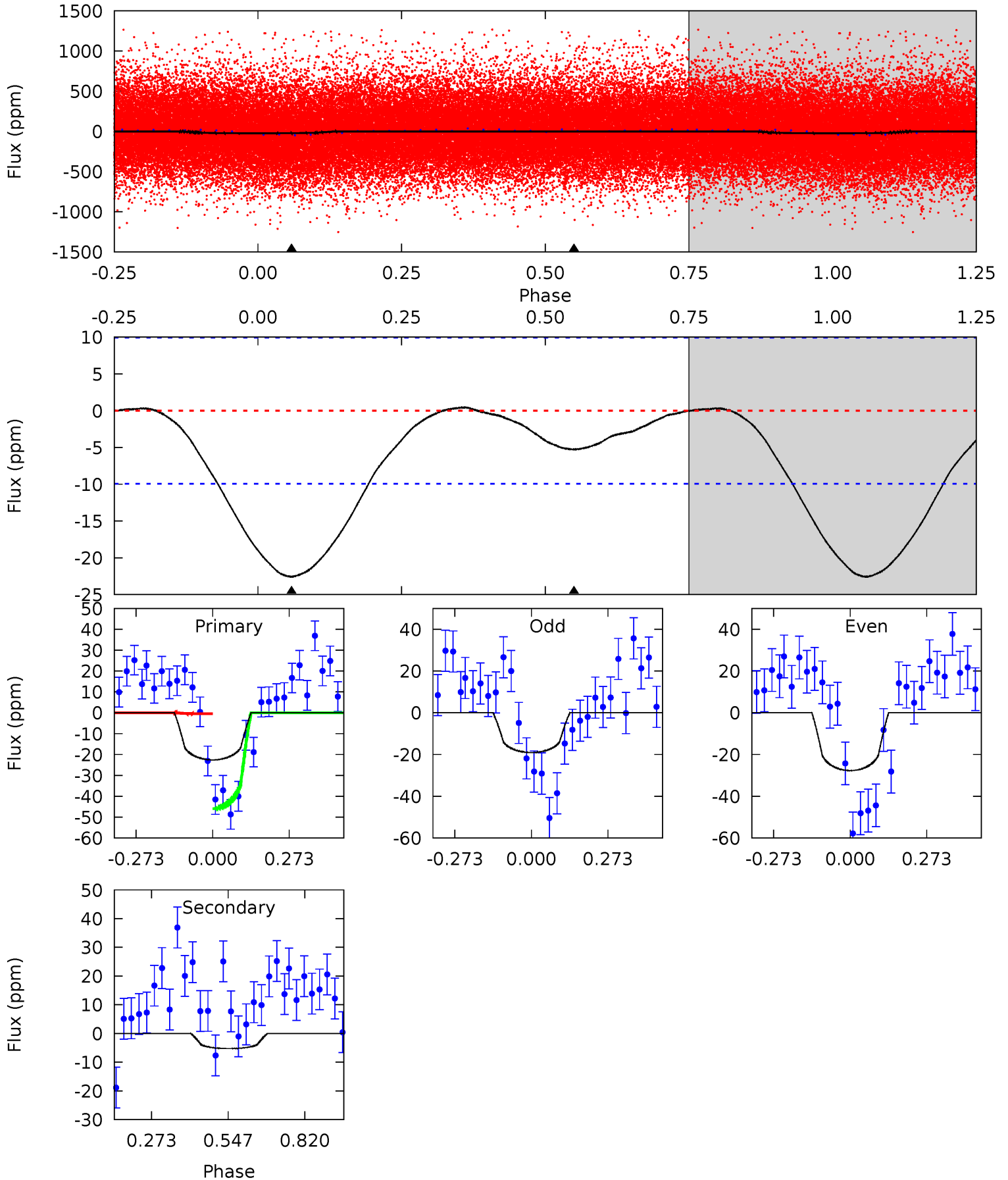
TCE 007433585-01 P= 0.545544 Days $T_0=131.725682$ (BKJD)



DV Model-Shift Uniqueness Test

007433585-01, P = 0.545513 Days, E = 131.191944 Days

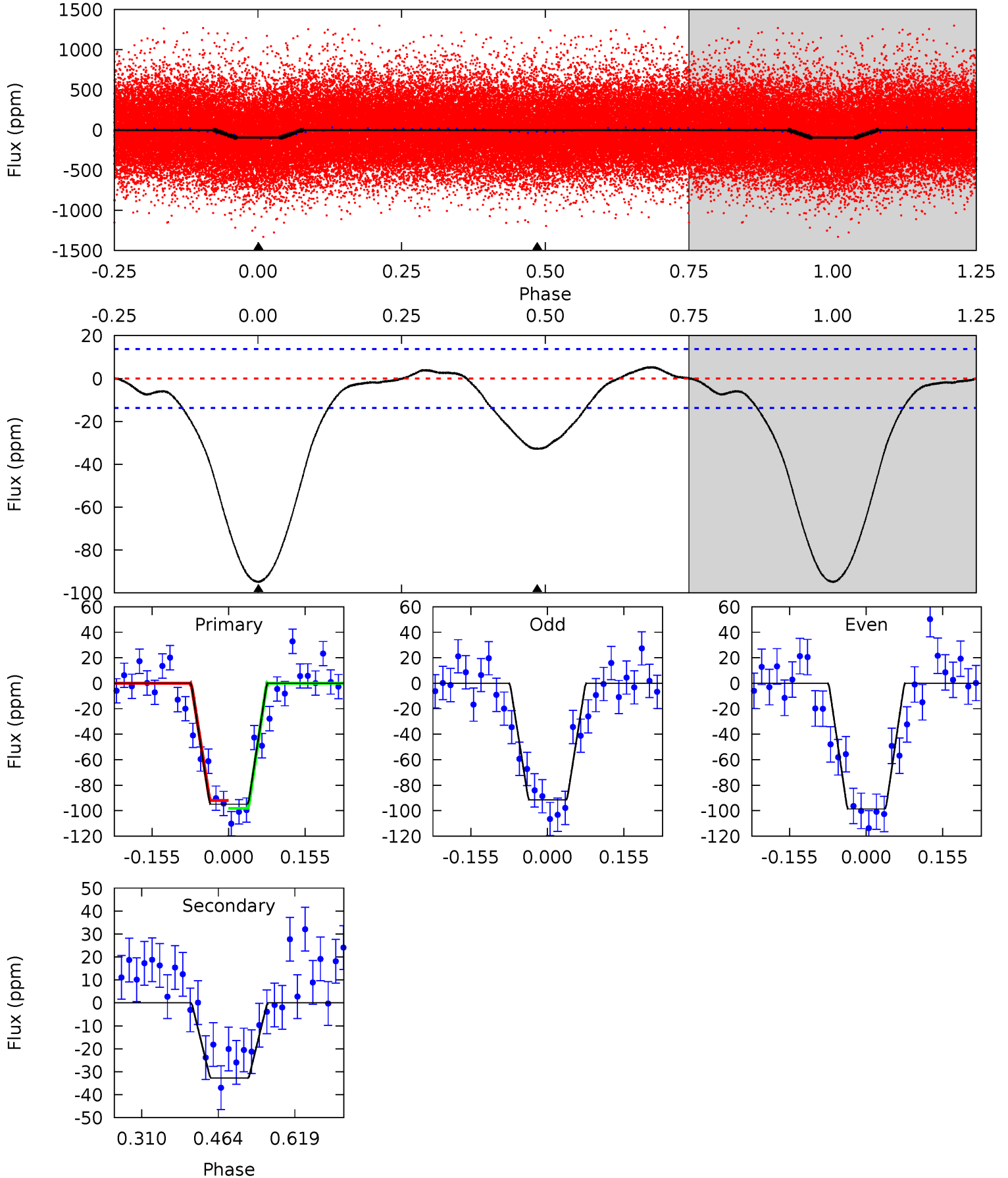
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.89	2.31	0	0	4.35	1.10	0.22	9.89	9.89	2.31	2.31	1.91	0.85	0.02	9.75



Alt Model-Shift Uniqueness Test

007433585-01, P = 0.545544 Days, E = 131.180138 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
30.9	10.7	0	0	4.47	1.42	1.18	30.9	30.9	10.7	10.7	1.15	0.99	0.05	0.99



Stellar Parameters For KIC 007433585

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6050^{+163}_{-181}	$4.509^{+0.040}_{-0.216}$	$-0.240^{+0.300}_{-0.300}$	$0.920^{+0.290}_{-0.097}$	$0.997^{+0.132}_{-0.132}$	$1.802^{+0.388}_{-0.979}$
	+3%/-3%	+1%/-5%	+125%/-125%	+32%/-11%	+13%/-13%	+22%/-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 007433585-01 / KOI 2999.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-5 ± 2	$0.63^{+0.50}_{-0.40}$	3214^{+240}_{-151}	3805^{+2259}_{-1655}	$1.145^{+6.883}_{-0.835}$
Alt.	-33 ± 3	$1.05^{+0.53}_{-0.47}$	3214^{+221}_{-151}	4617^{+1444}_{-769}	$2.663^{+6.304}_{-1.479}$

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 $A_{obs} \gg 1.0$

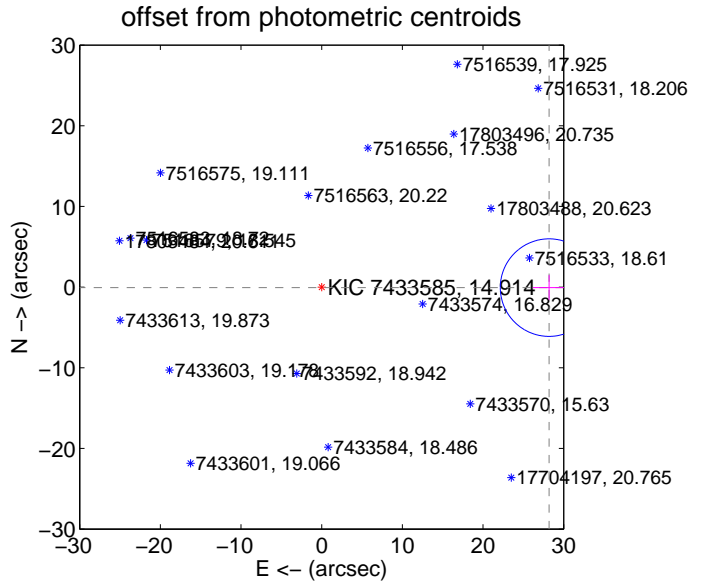
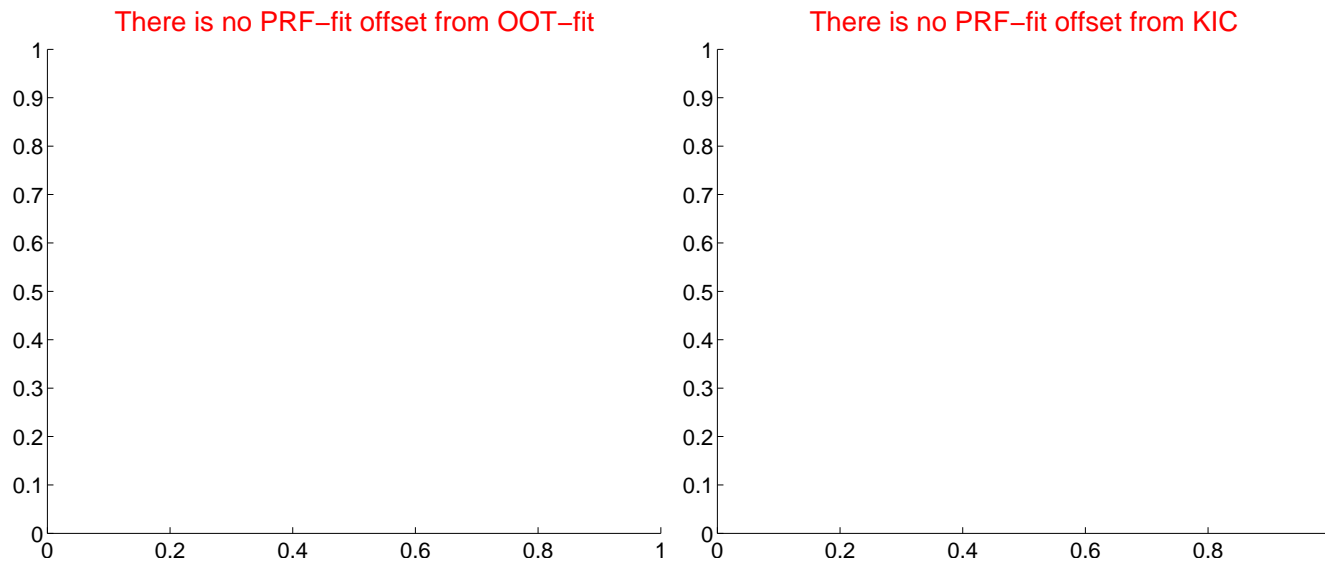
DV Centroid Data

Supplemental centroid analysis for 007433585-01. Kepler magnitude: 14.91. Transit SNR 9.34

There are 0 quarters with good PRF difference image offsets

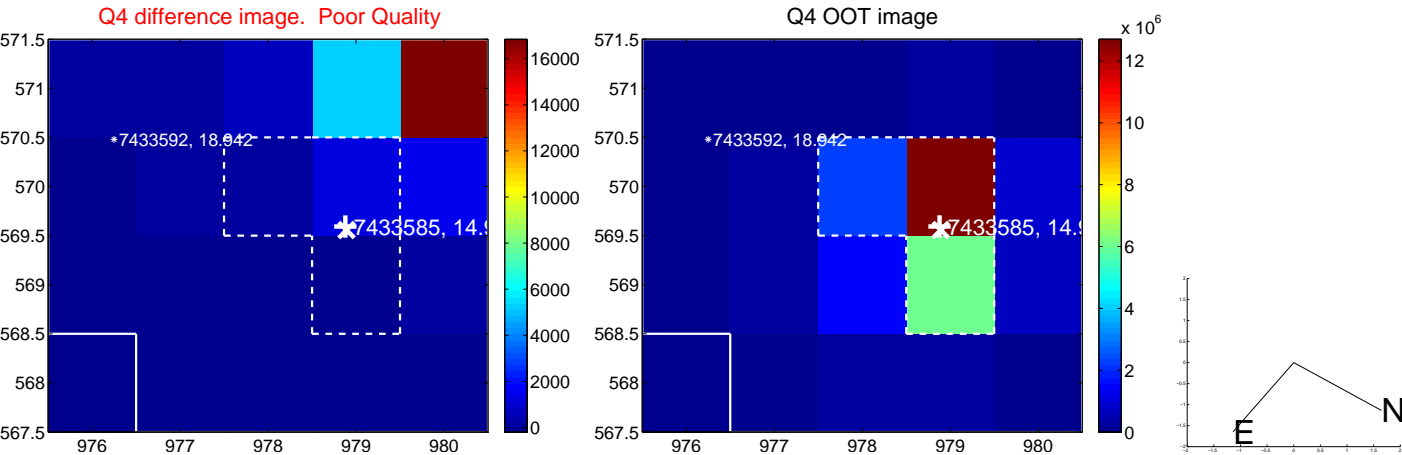
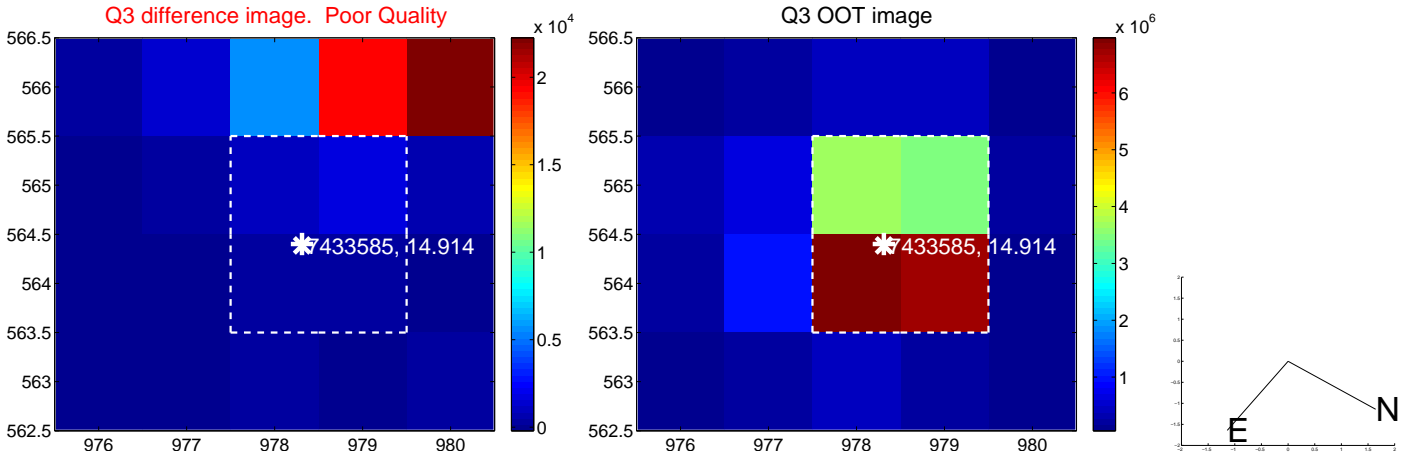
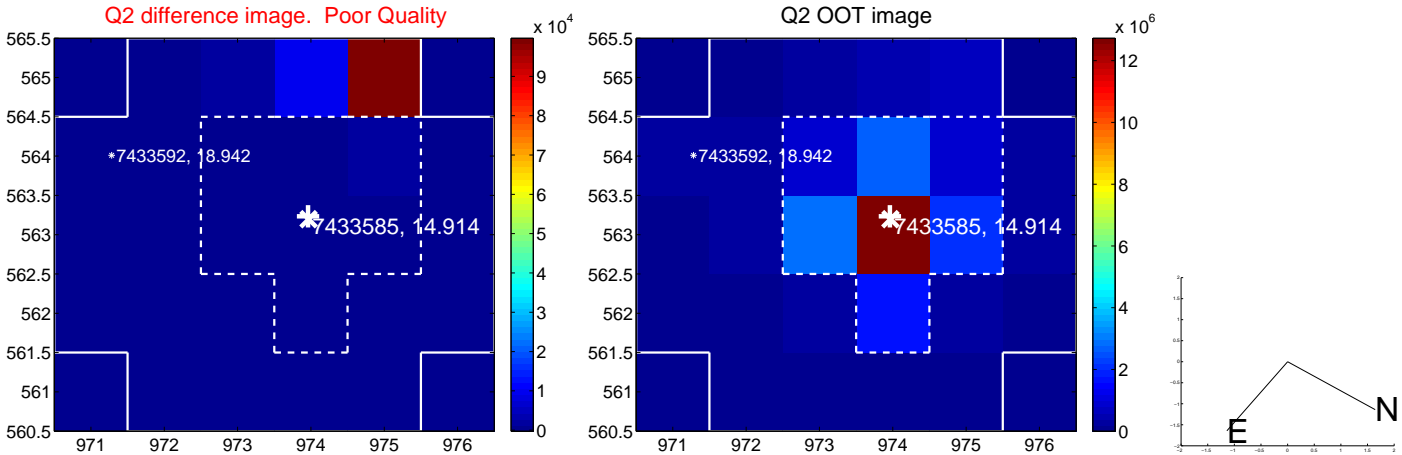
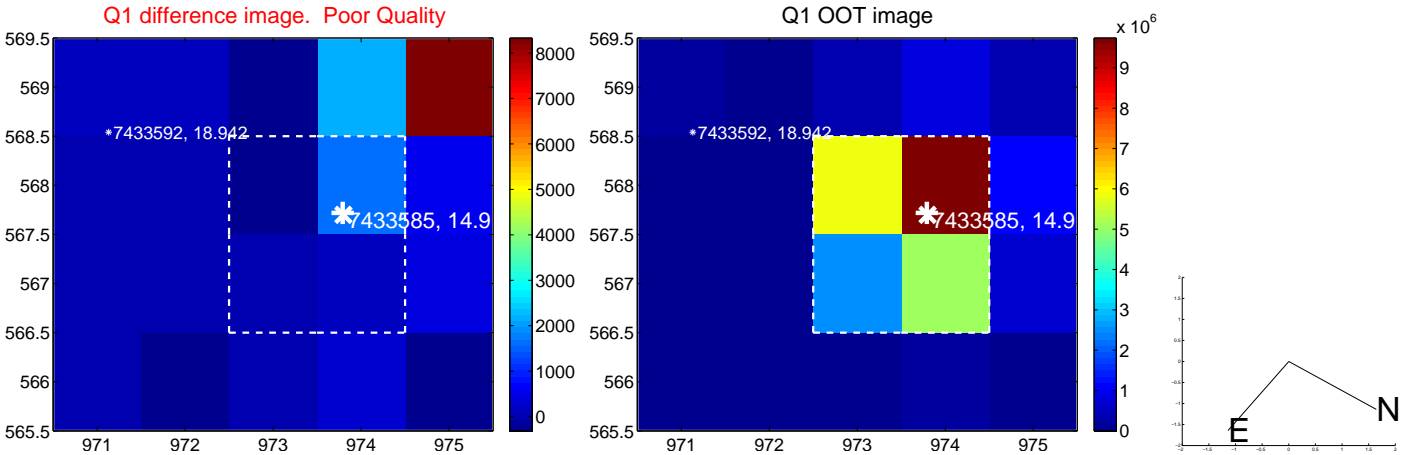
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	28.19 \pm 2.02	13.99	-28.19 \pm 2.02	-0.06 \pm 1.55

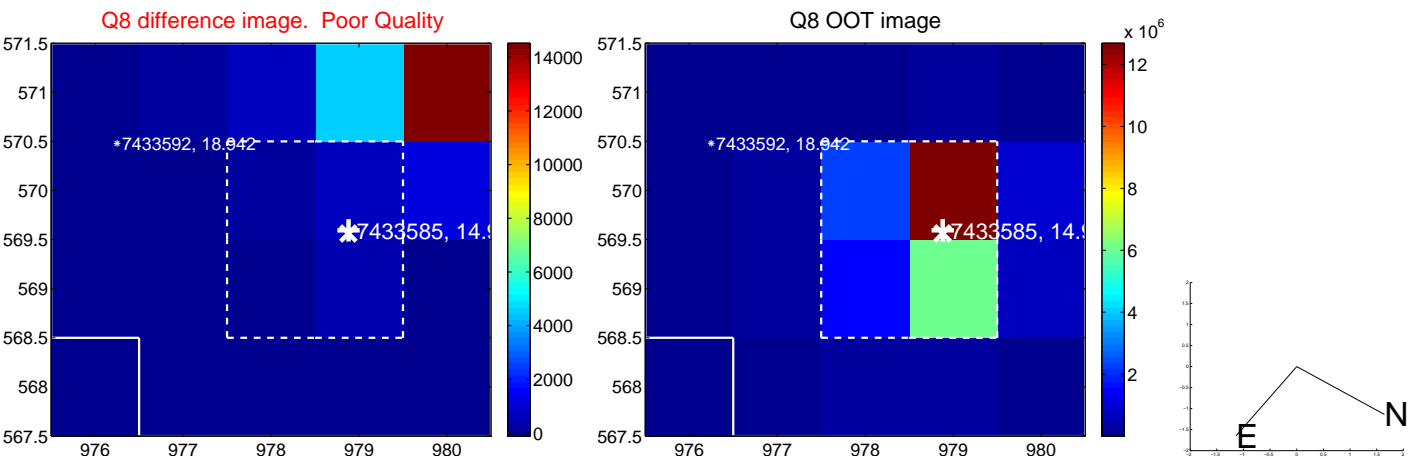
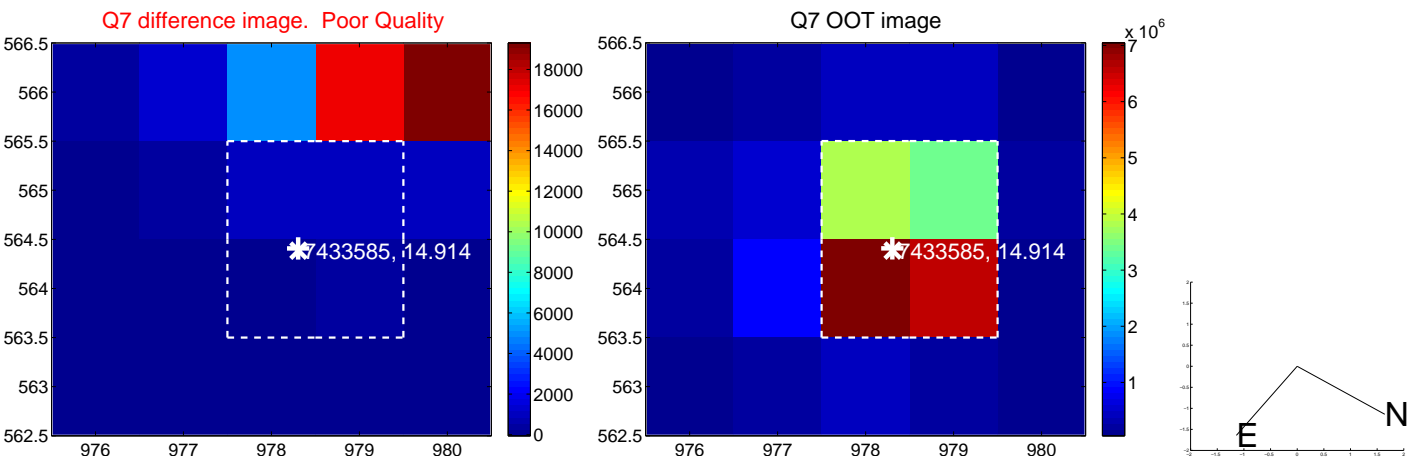
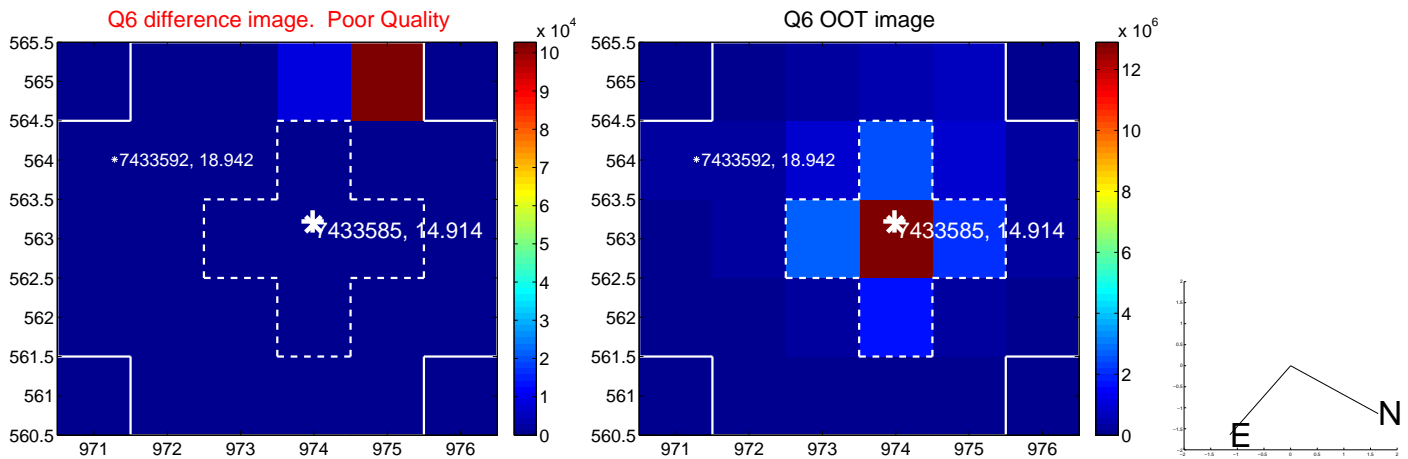
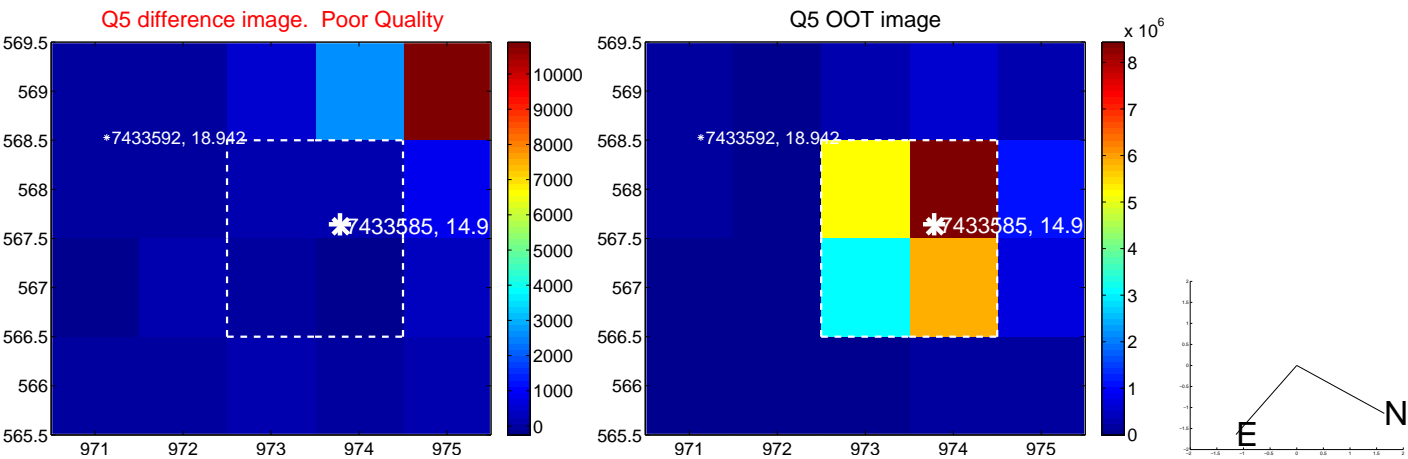


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

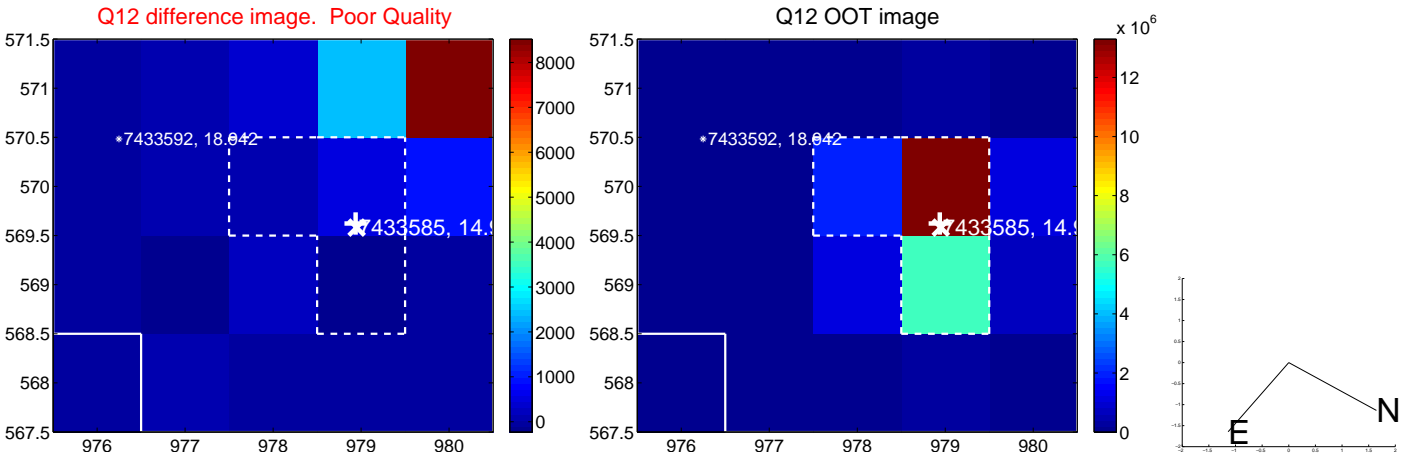
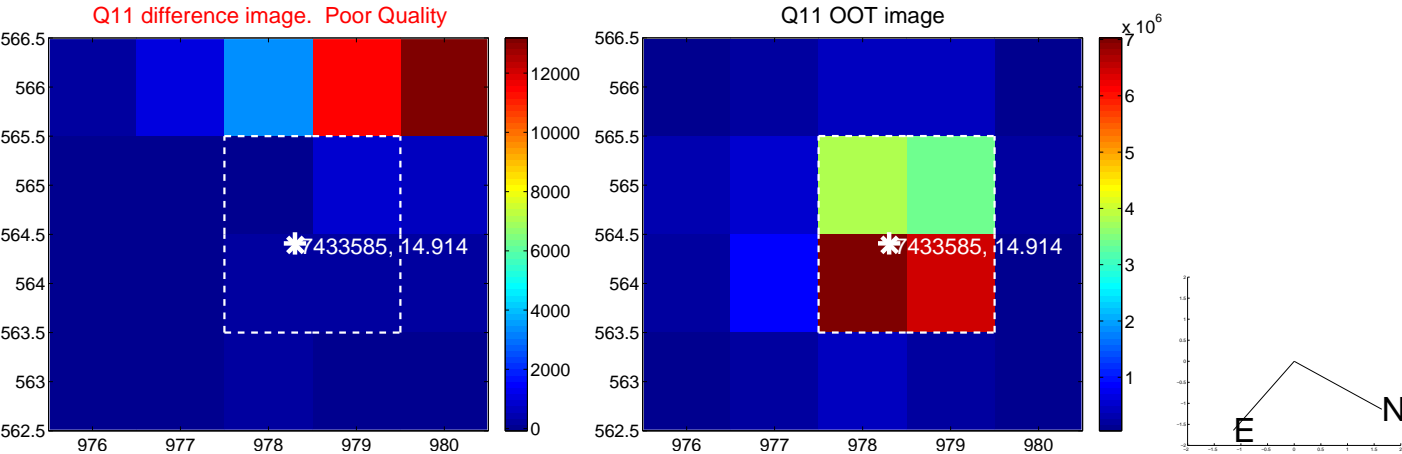
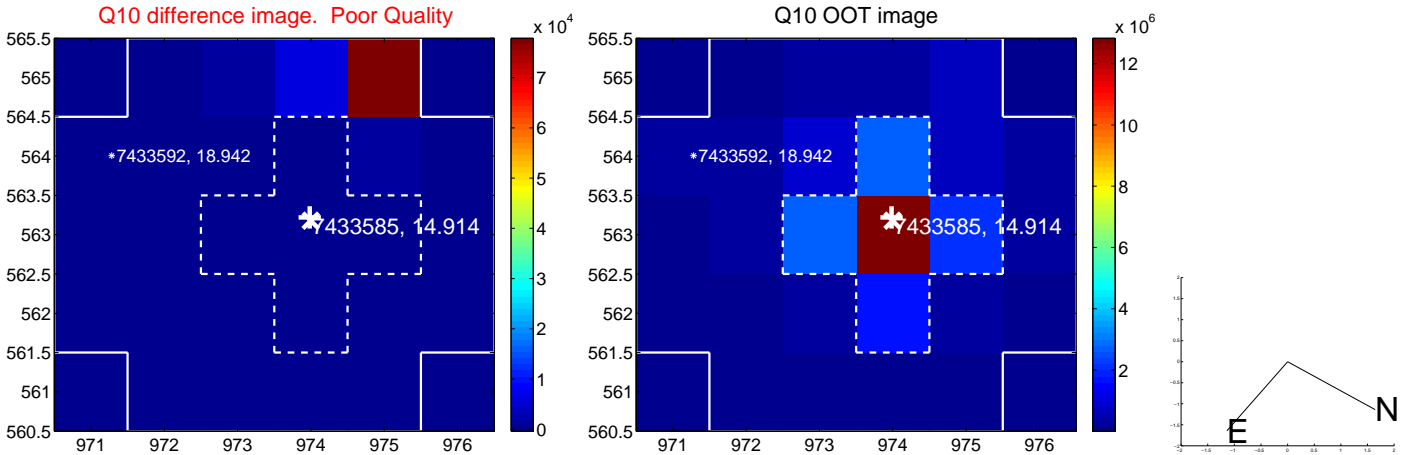
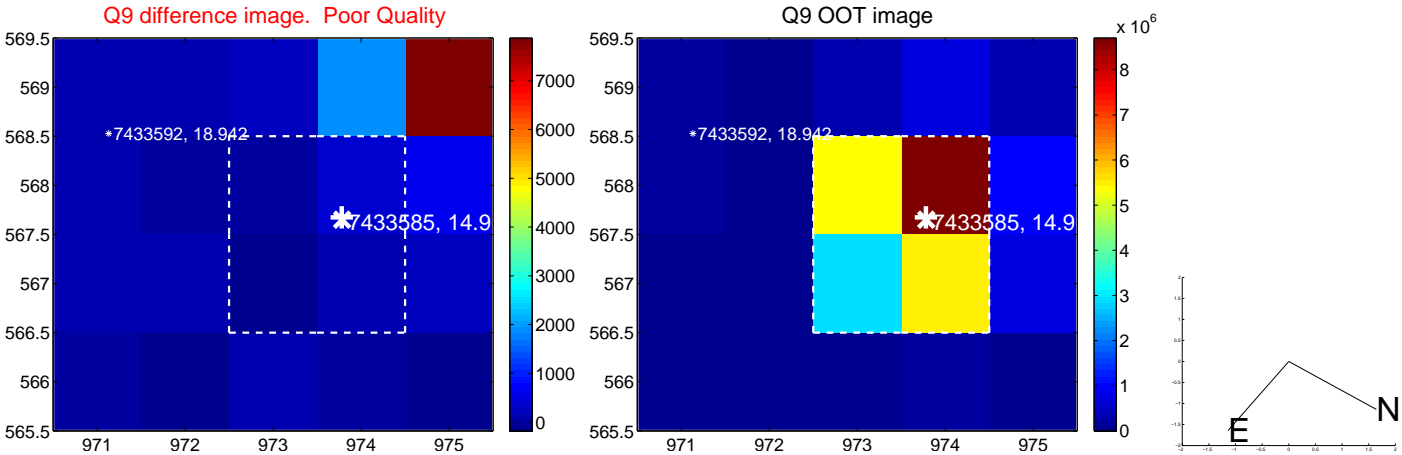
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



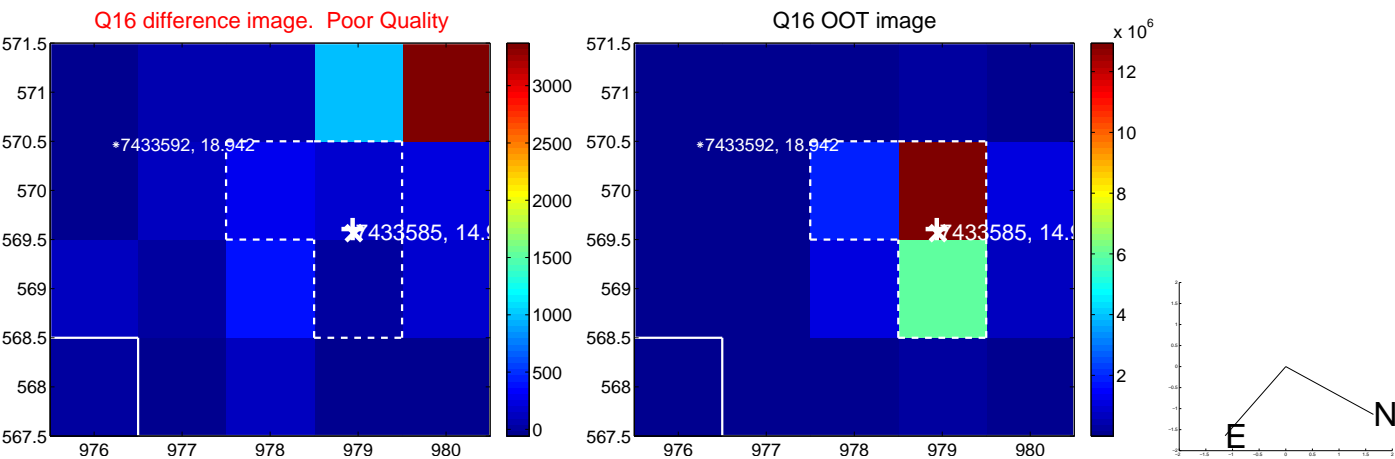
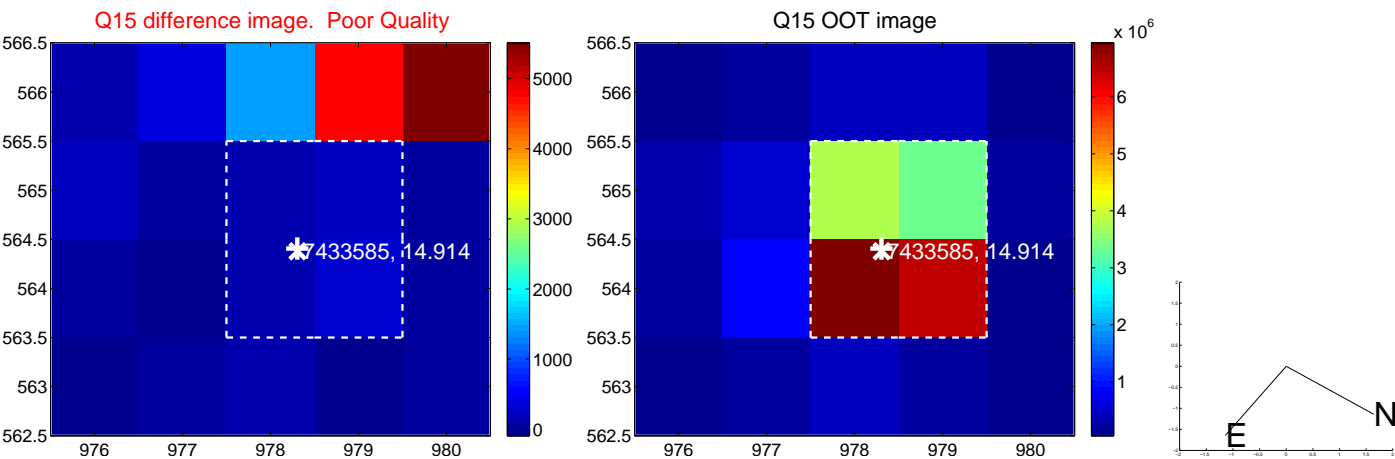
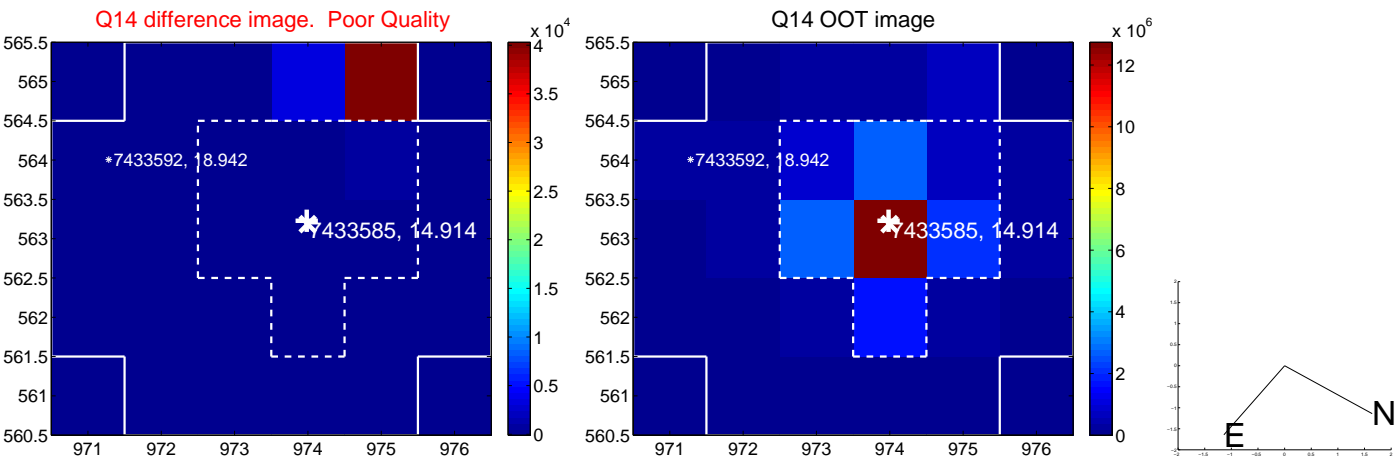
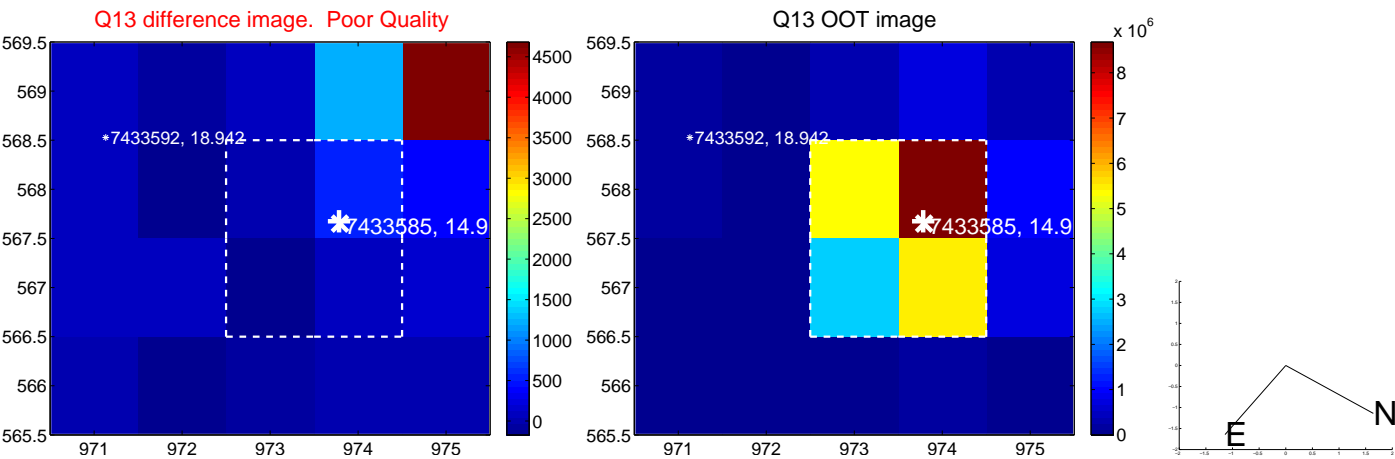
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



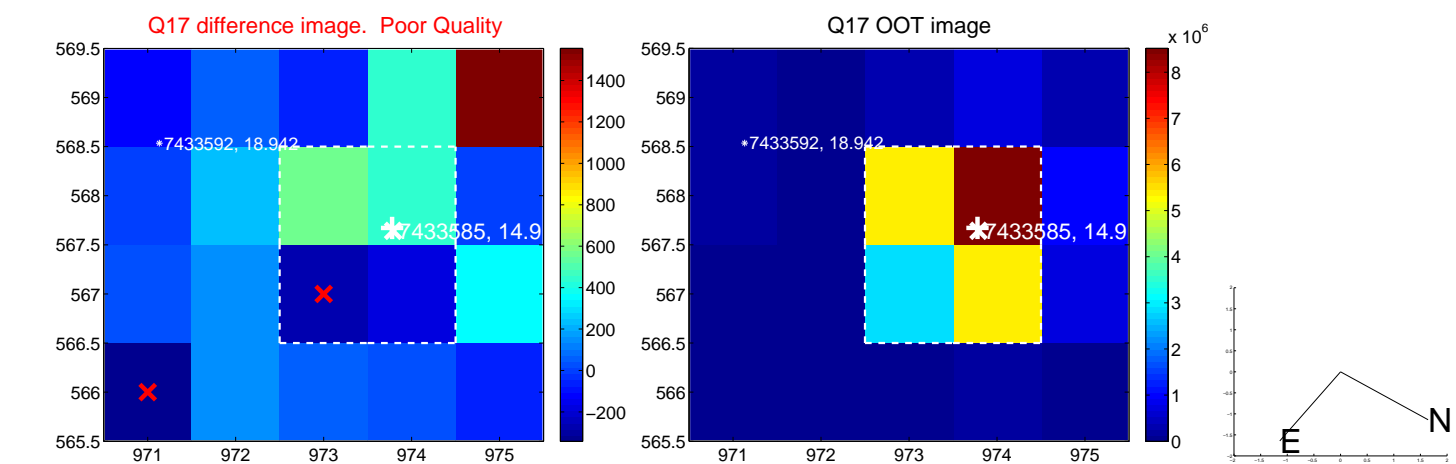
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



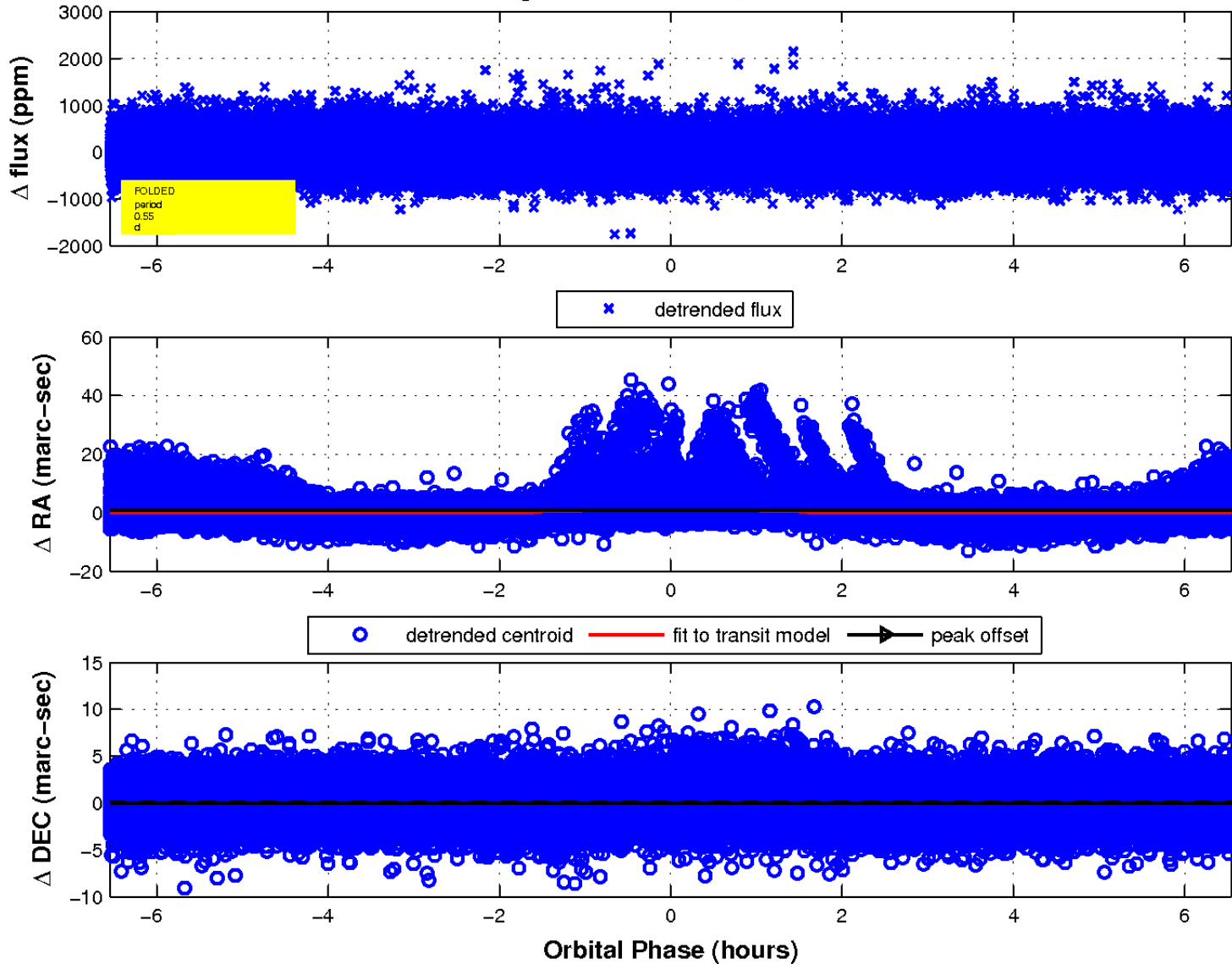
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

