

KIC 005526727

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})
005526727-01	OBS	No	0.563528	131.608108	7.3	5.042	8.5	6.4	1.25	6238	0.42	11082.42

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005526727-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV

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

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

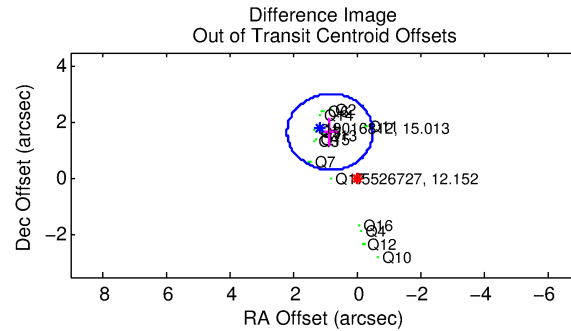
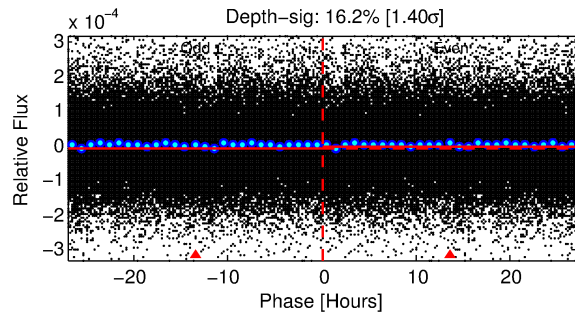
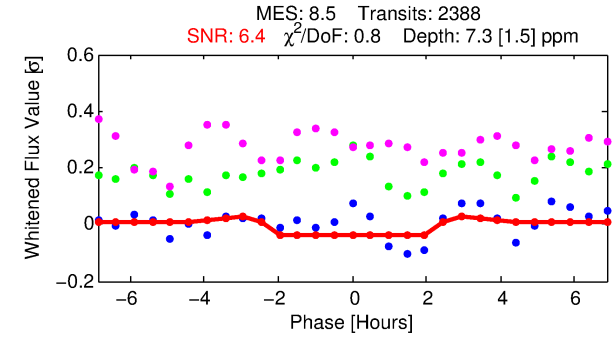
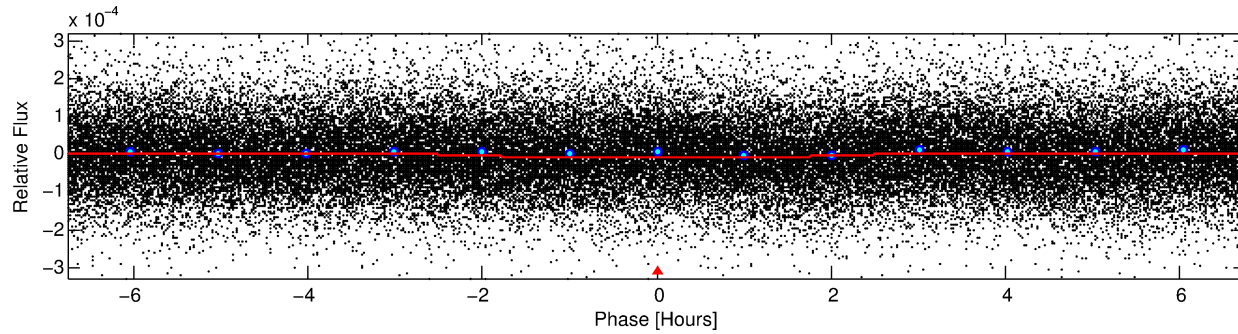
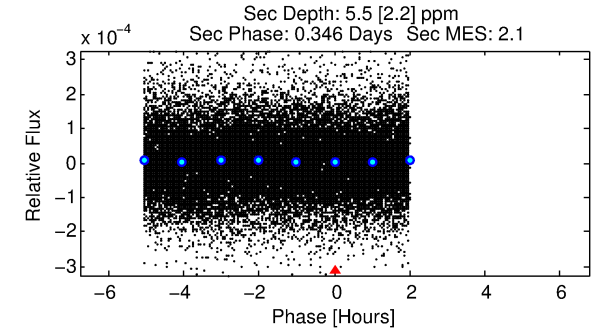
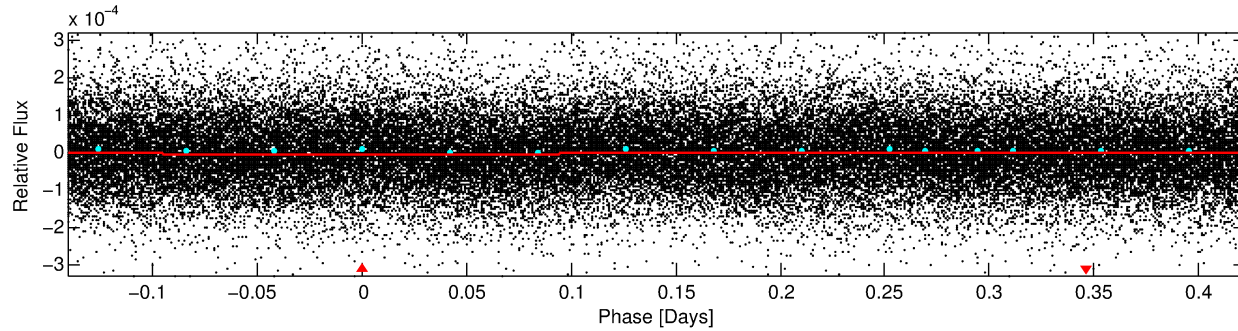
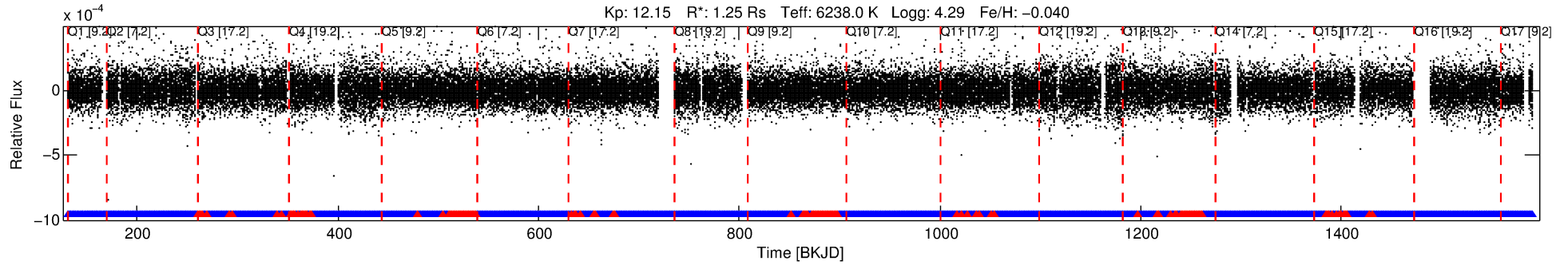
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005526727-01

No Significant Match Found

DV One-Page Summary

KIC: 5526727 Candidate: 1 of 1 Period: 0.564 d



DV Fit Results:

Period = 0.56353 [0.00002] d
Epoch = 131.6081 [0.0047] BKJD
Rp/R* = 0.0031 [0.0014]
a/R* = 1.01 [0.06]
b = 0.95 [0.28]
Seff = 11082.42 [2539.26]
Teq = 2616 [150] K
Rp = 0.42 [0.20] Re
a = 0.0138 [0.0021] AU
Ag = 3.33 [3.33] [0.70σ]
Teffp = 5466 [1332] K [2.13σ]

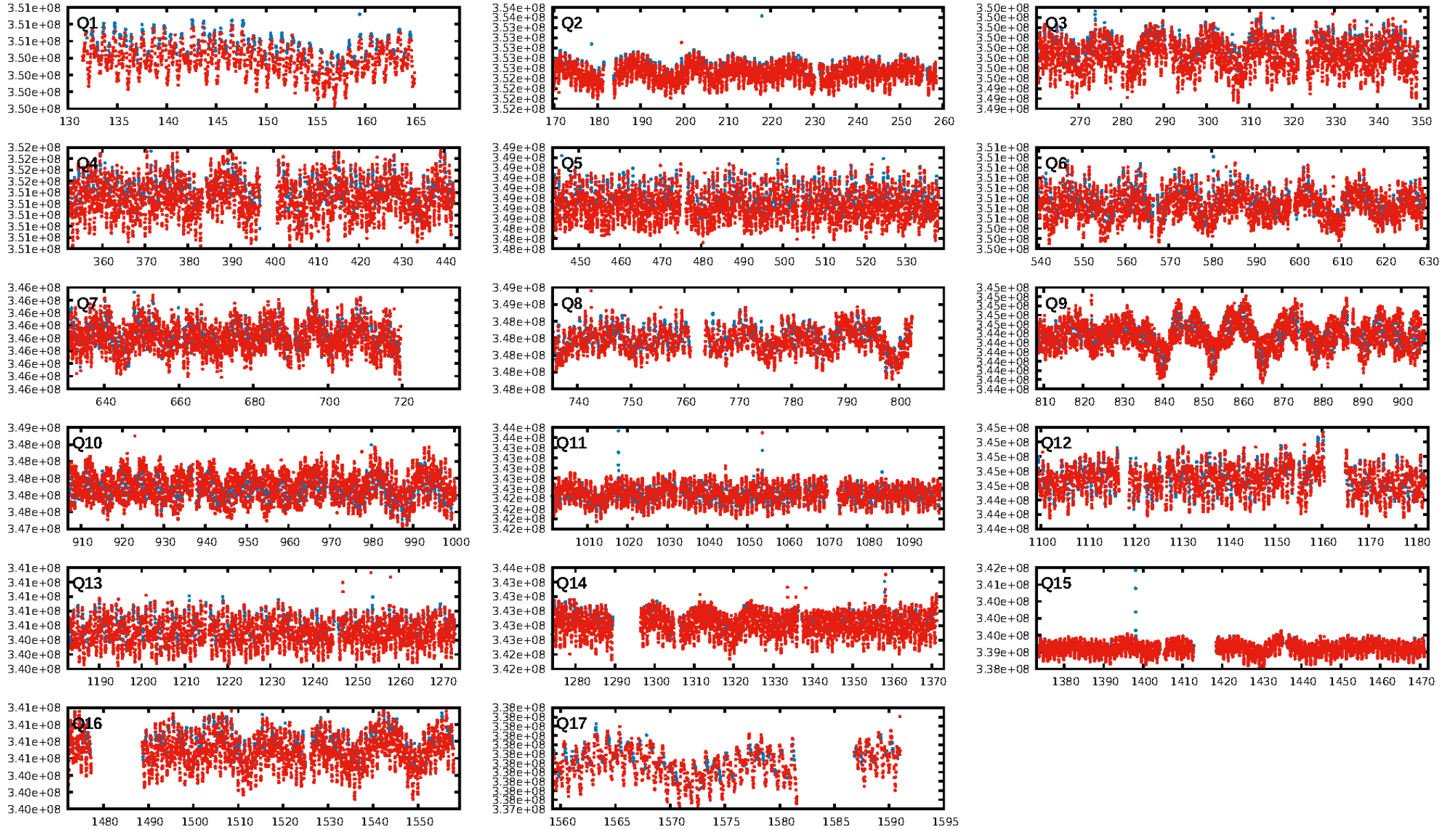
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.91 [2082/2281]
GhostDiagnostic-chr: 0.4462
Centroid-sig: 0.5%
Centroid-so: 1.921 arcsec [1.80σ]
OotOffset-rm: 1.860 arcsec [4.13σ]
KicOffset-rm: 1.809 arcsec [3.79σ]
OotOffset-st: 4/4/3/4 [15]
KicOffset-st: 4/4/3/4 [15]
DiffImageQuality-fgm: 0.87 [13/15]
DiffImageOverlap-fno: 1.00 [17/17]

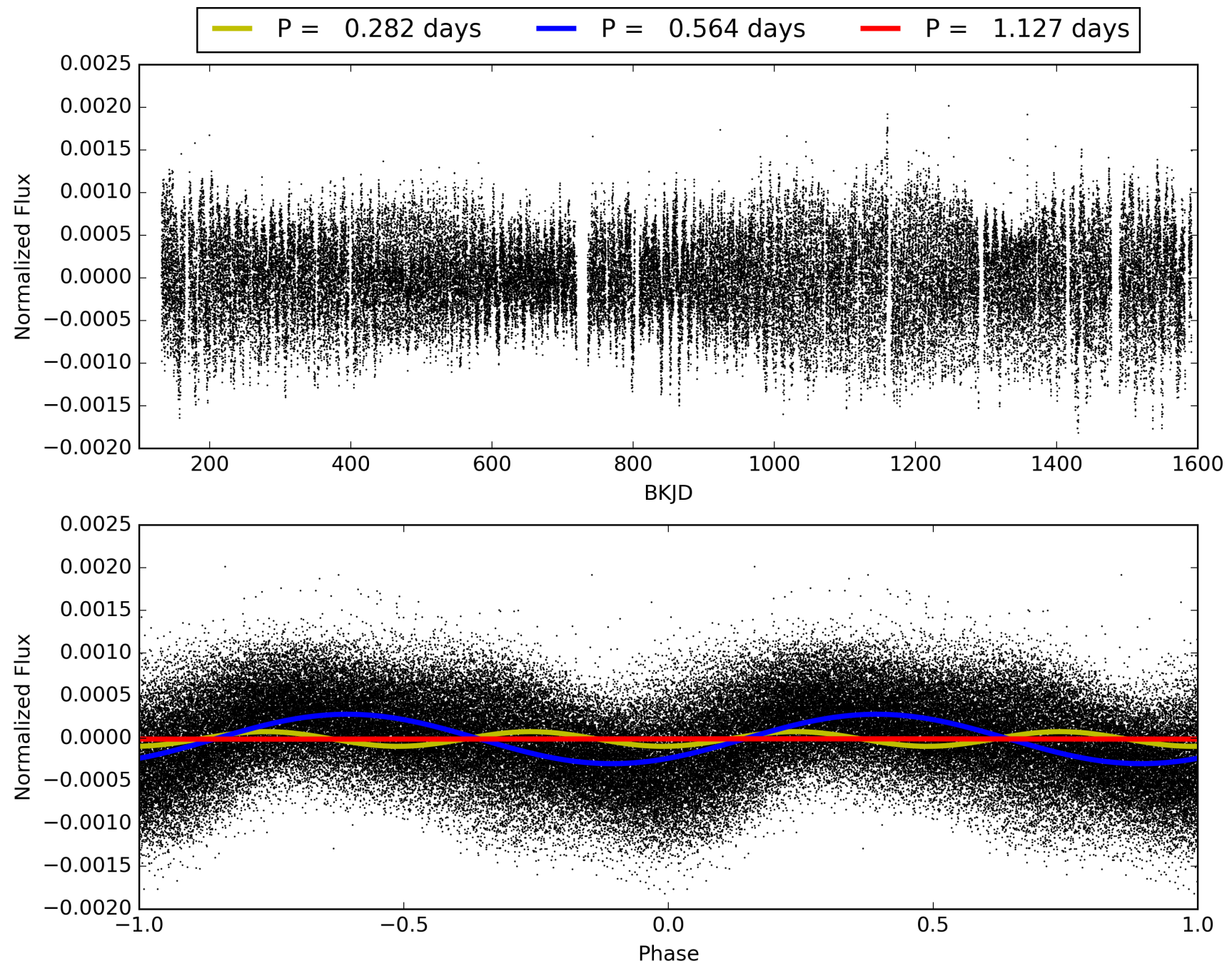
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 04:33:02 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 005526727-01, PDC Light Curves

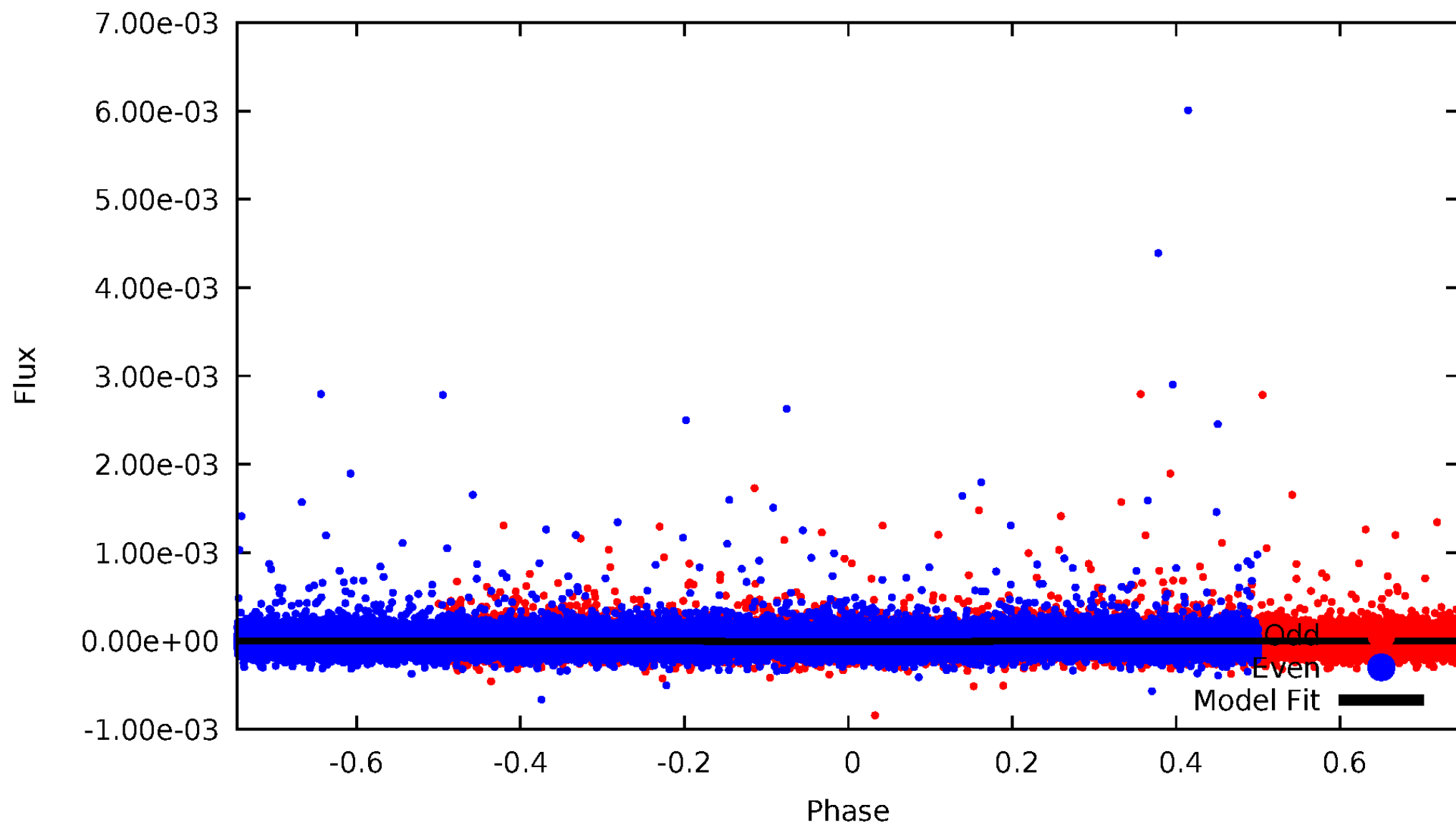


TCE 005526727-01



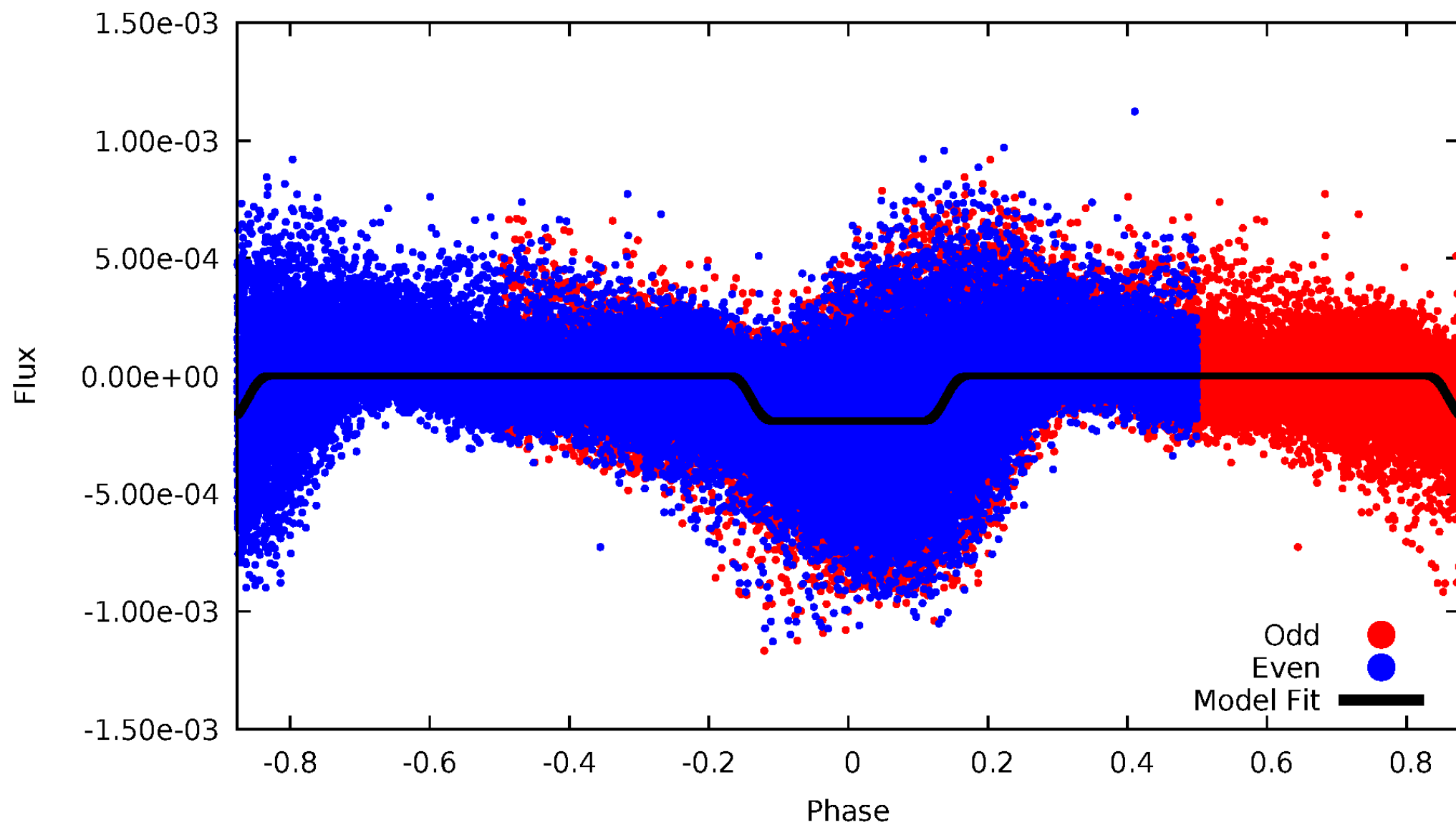
DV Odd/Even

TCE 005526727-01



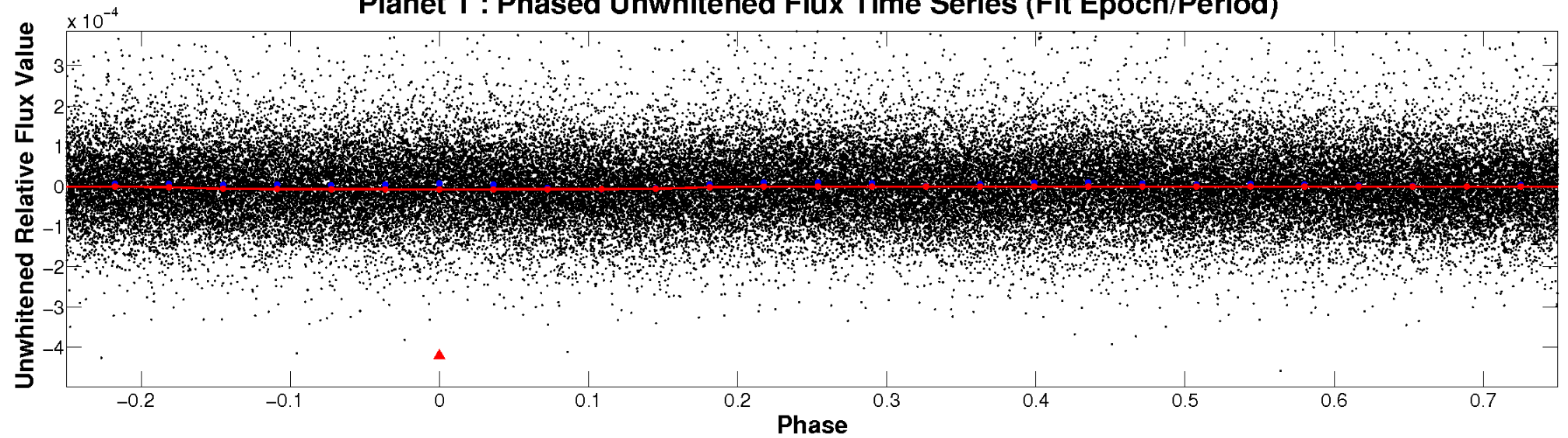
ALT Odd/Even

TCE 005526727-01

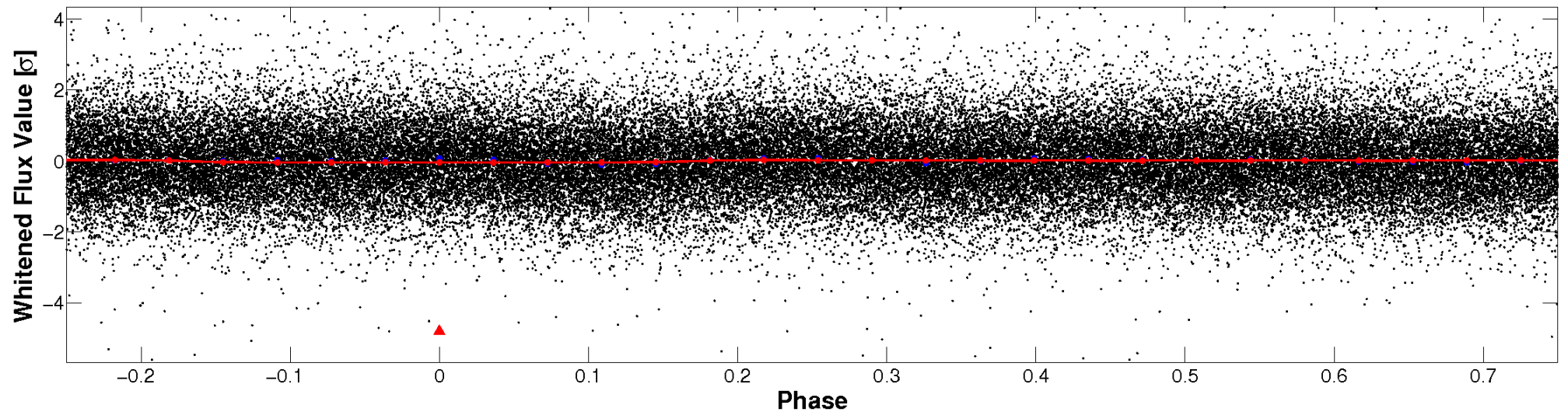


Non-Whitened Vs. Whitened Light Curve

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

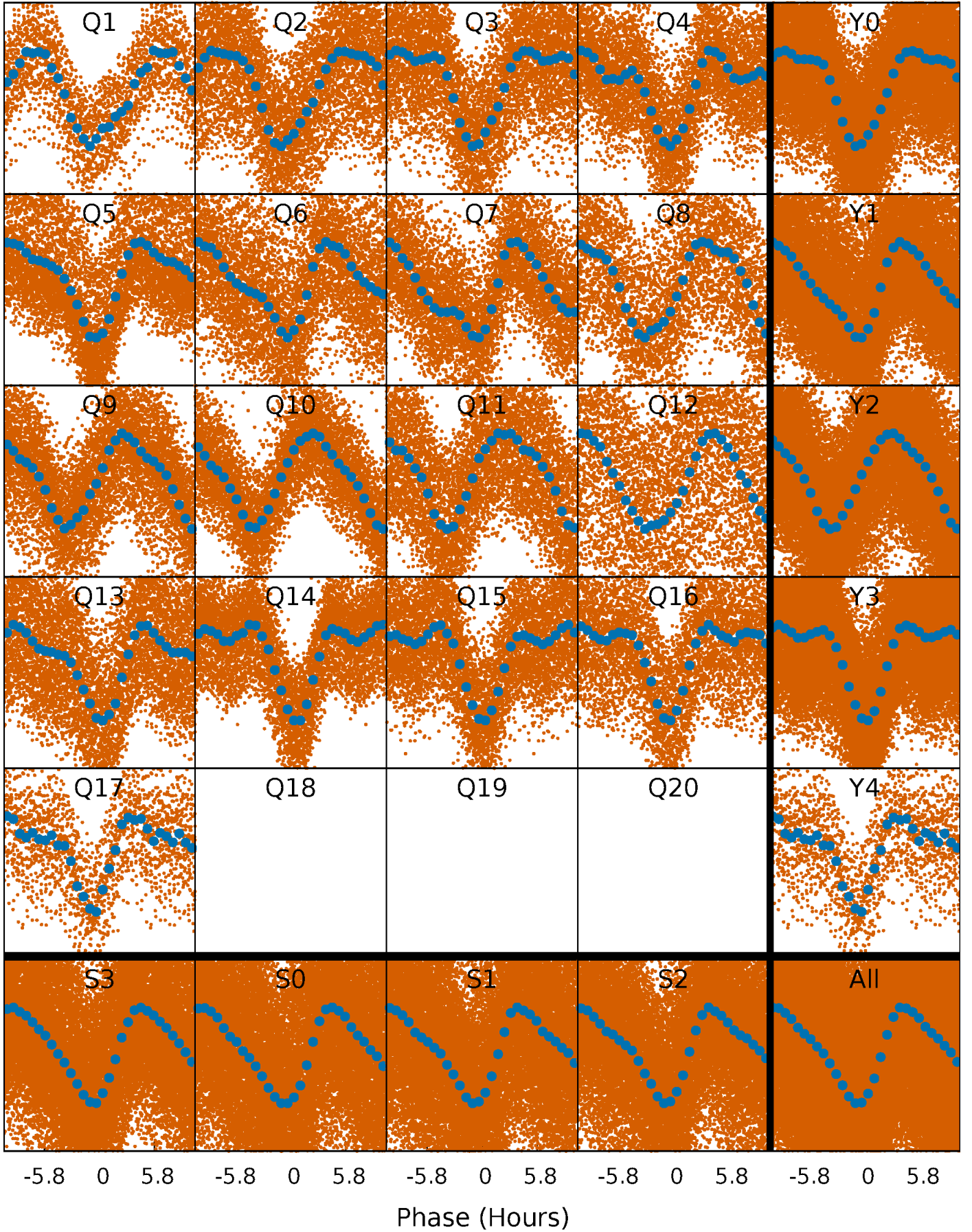


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



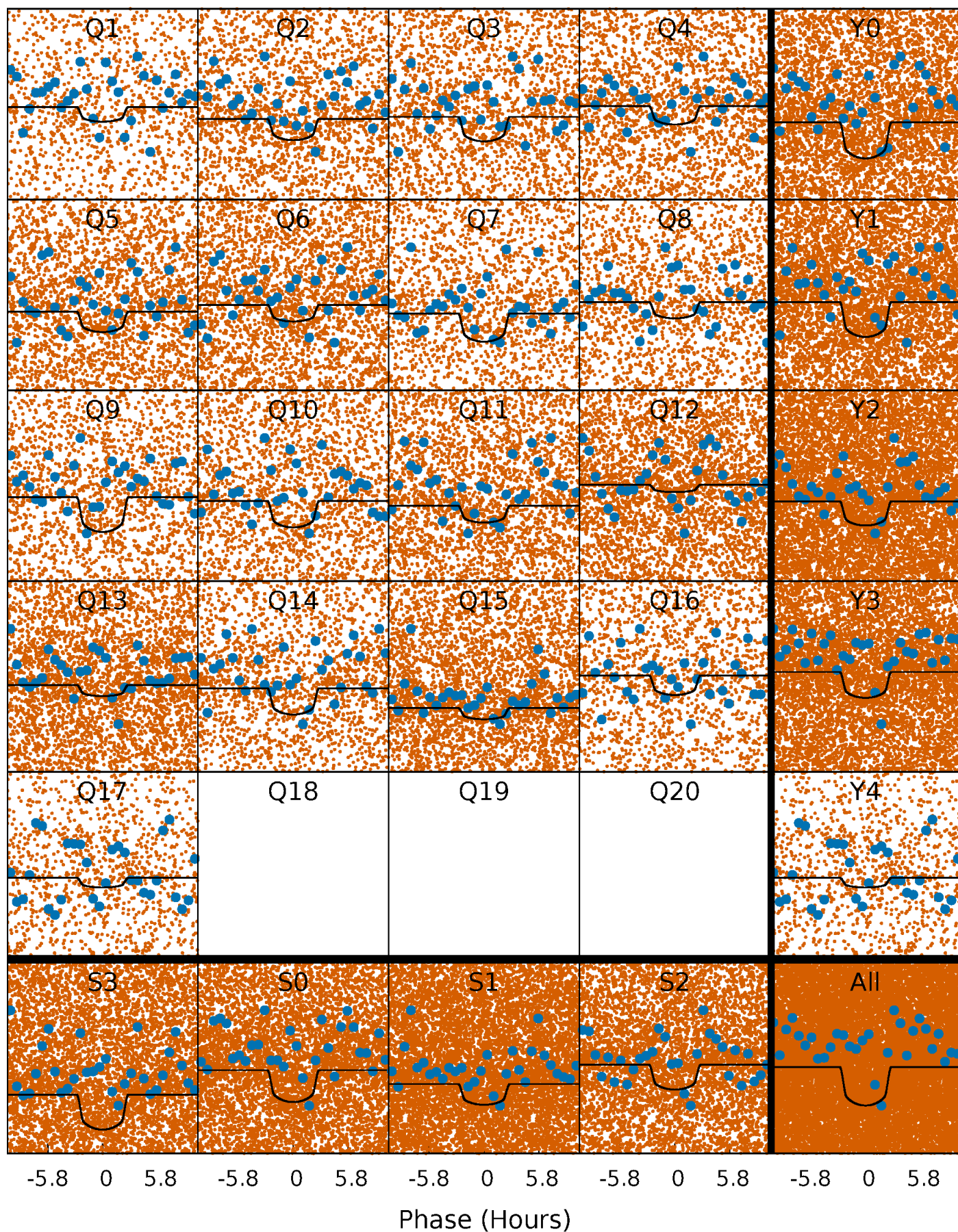
PDC Quarter-Phased Transit Curves

TCE 005526727-01 P= 0.563528 Days $T_0=131.608108$ (BKJD)



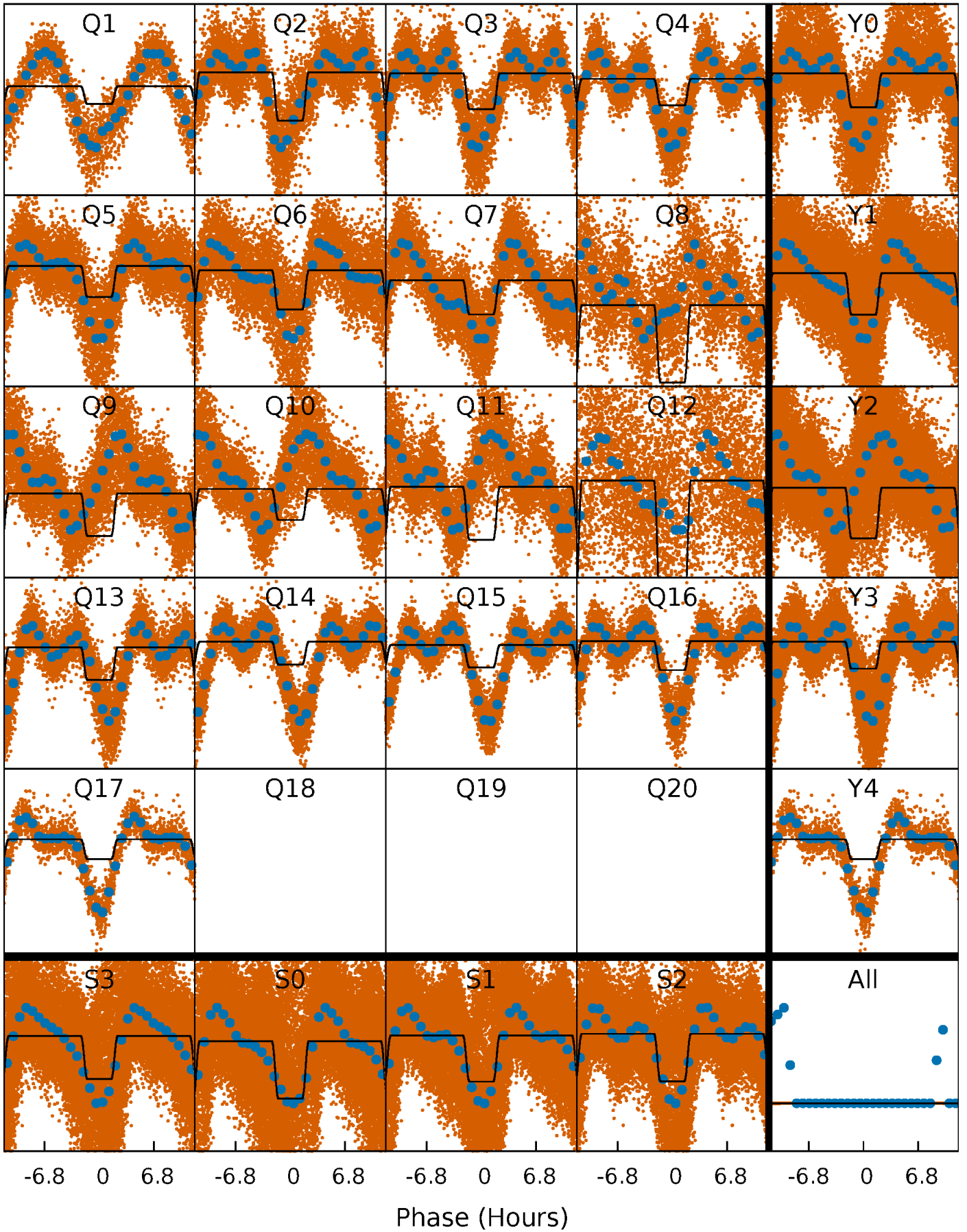
DV Quarter-Phased Transit Curves

TCE 005526727-01 P= 0.563528 Days $T_0=131.608108$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

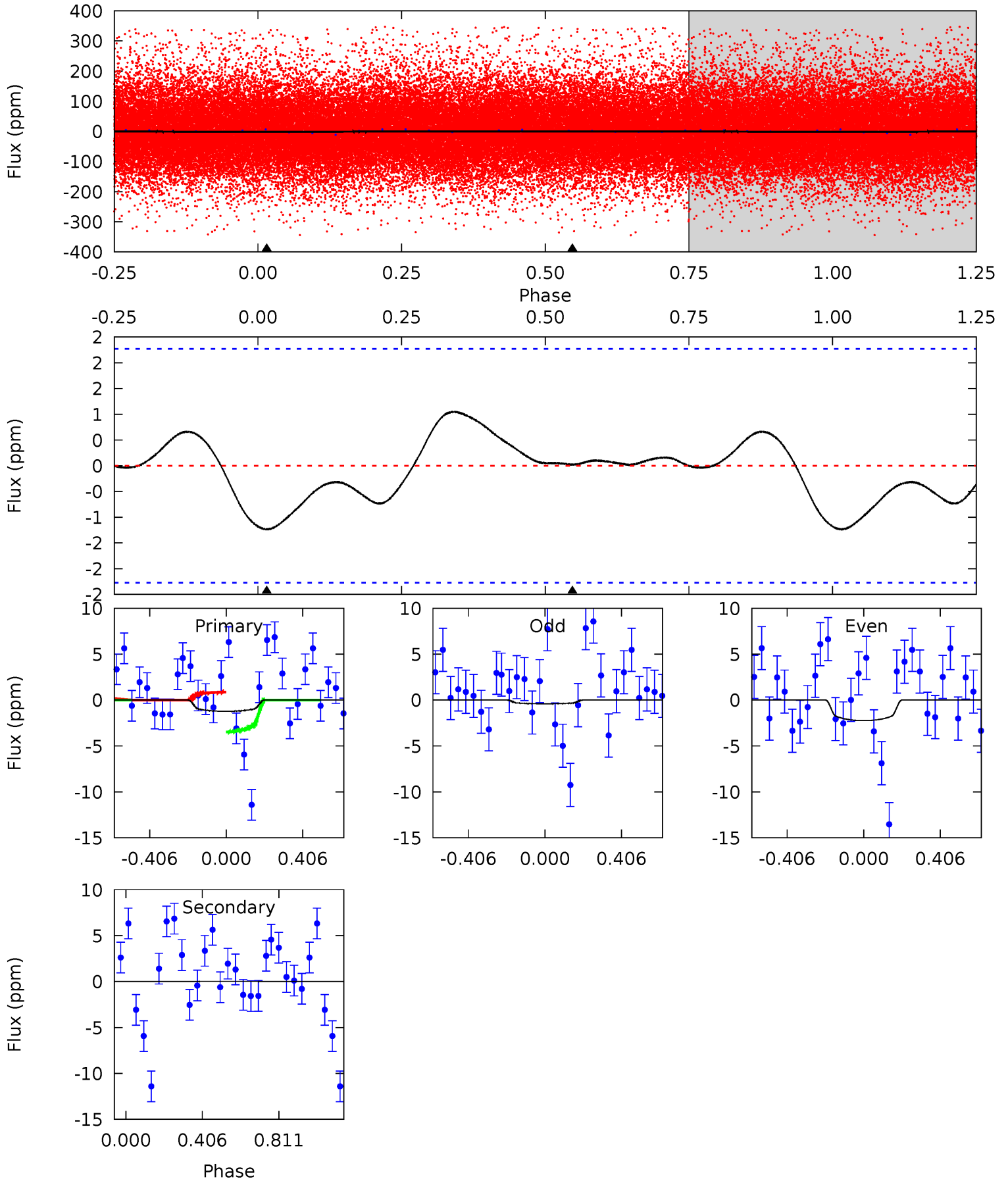
TCE 005526727-01 P= 0.563517 Days $T_0=131.602685$ (BKJD)



DV Model-Shift Uniqueness Test

005526727-01, P = 0.563528 Days, E = 131.044580 Days

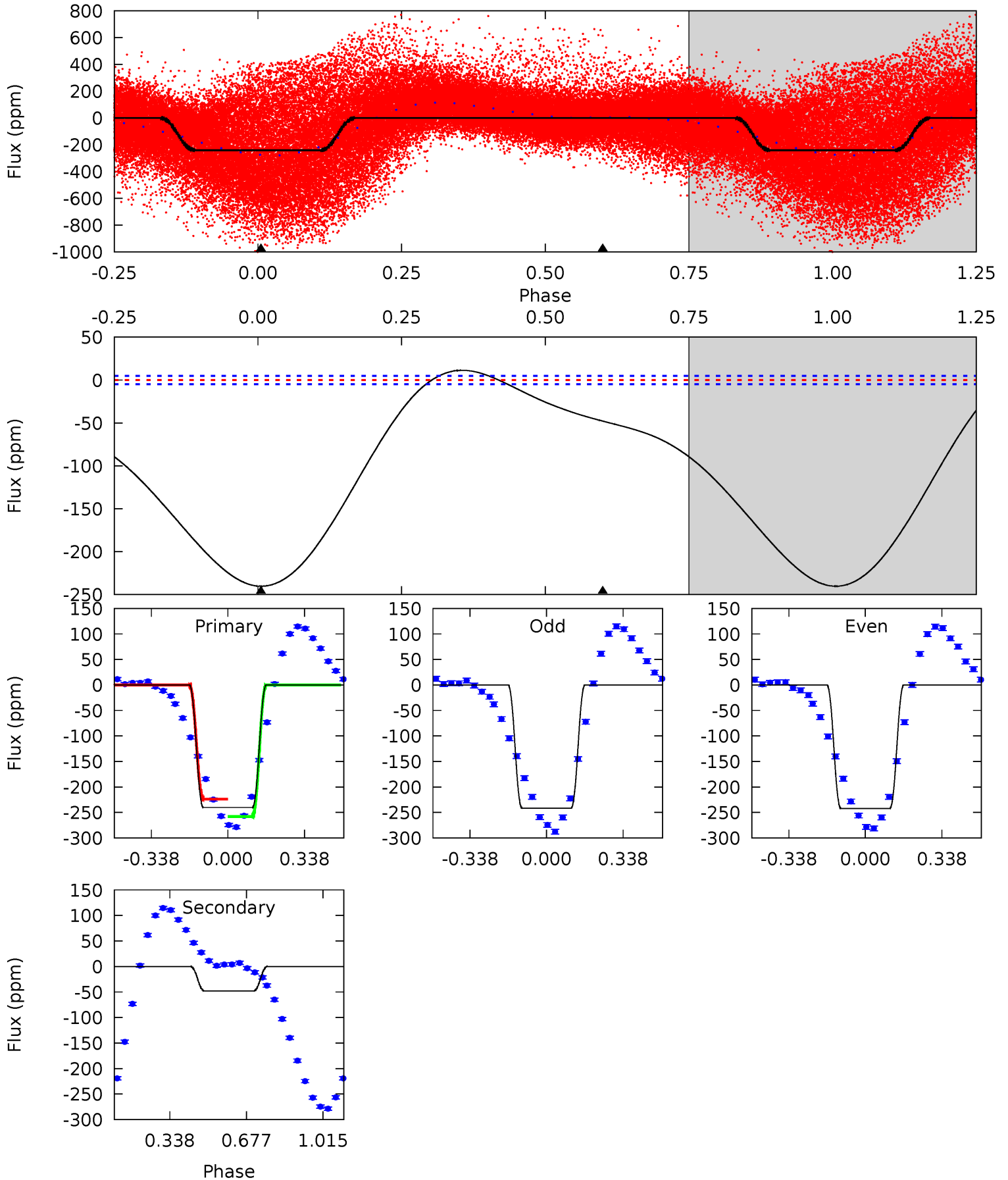
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.32	-0.04	0	0	4.26	0.83	0.81	2.32	2.32	-0.04	-0.04	1.72	-6.52	0.46	2.46



Alt Model-Shift Uniqueness Test

005526727-01, P = 0.563517 Days, E = 131.039168 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
211.9	42.2	0	0	4.30	0.96	11.7	211.9	211.9	42.2	42.2	0.20	0.85	0.05	14.4



Stellar Parameters For KIC 005526727

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6238^{+81}_{-74}	$4.288^{+0.099}_{-0.121}$	$-0.040^{+0.150}_{-0.150}$	$1.245^{+0.231}_{-0.135}$	$1.095^{+0.109}_{-0.059}$	$0.799^{+0.344}_{-0.281}$
	+1%/-1%	+2%/-3%	+375%/-375%	+19%/-11%	+10%/-5%	+43%/-35%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 005526727-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1	$0.42^{+0.21}_{-0.18}$	3665^{+163}_{-129}	-3515^{+6304}_{-550}	$-0.009^{+0.376}_{-0.427}$
Alt.	-48 ± 1	$1.88^{+0.25}_{-0.23}$	3659^{+172}_{-134}	4382^{+229}_{-203}	$1.412^{+0.428}_{-0.306}$

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

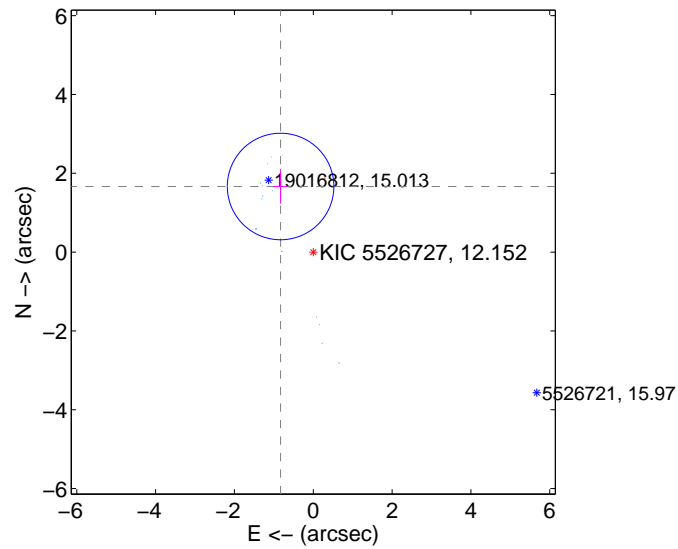
Supplemental centroid analysis for 005526727-01. Kepler magnitude: 12.15. Transit SNR 6.42

There are 13 quarters with good PRF difference image offsets

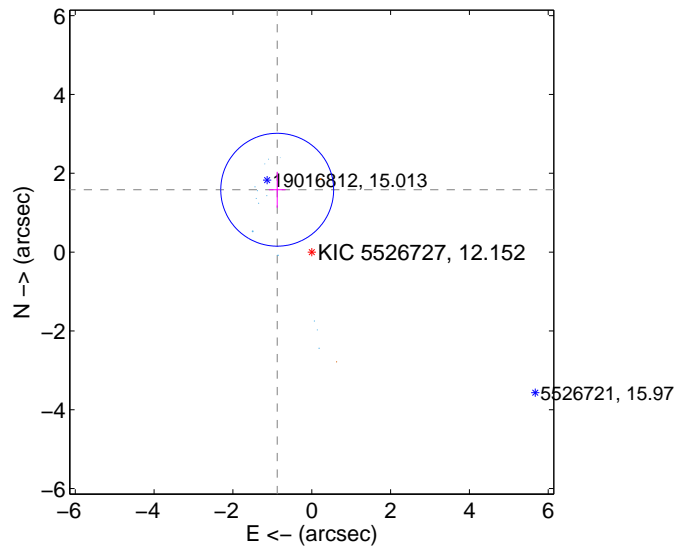
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.860 \pm 0.451	4.13	0.829 \pm 0.185	1.665 \pm 0.437
PRF-fit source offset from KIC position	1.809 \pm 0.477	3.79	0.877 \pm 0.208	1.582 \pm 0.456
photometric centroid source offset	1.92 \pm 1.07	1.80	0.28 \pm 1.11	-1.90 \pm 1.06

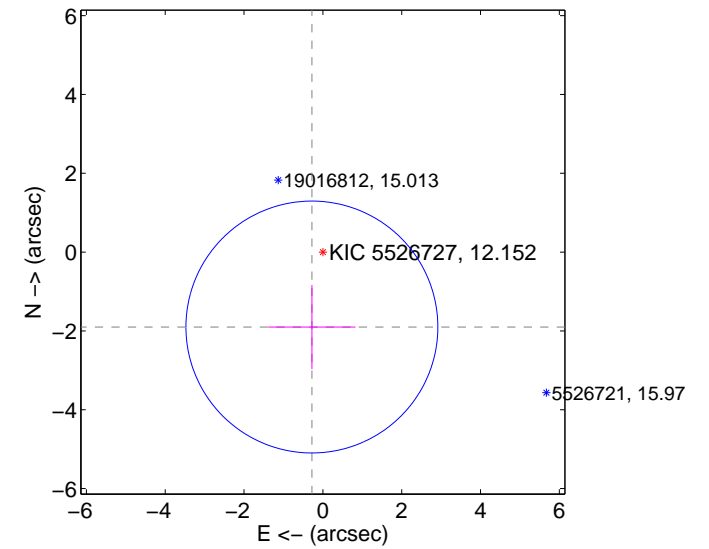
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

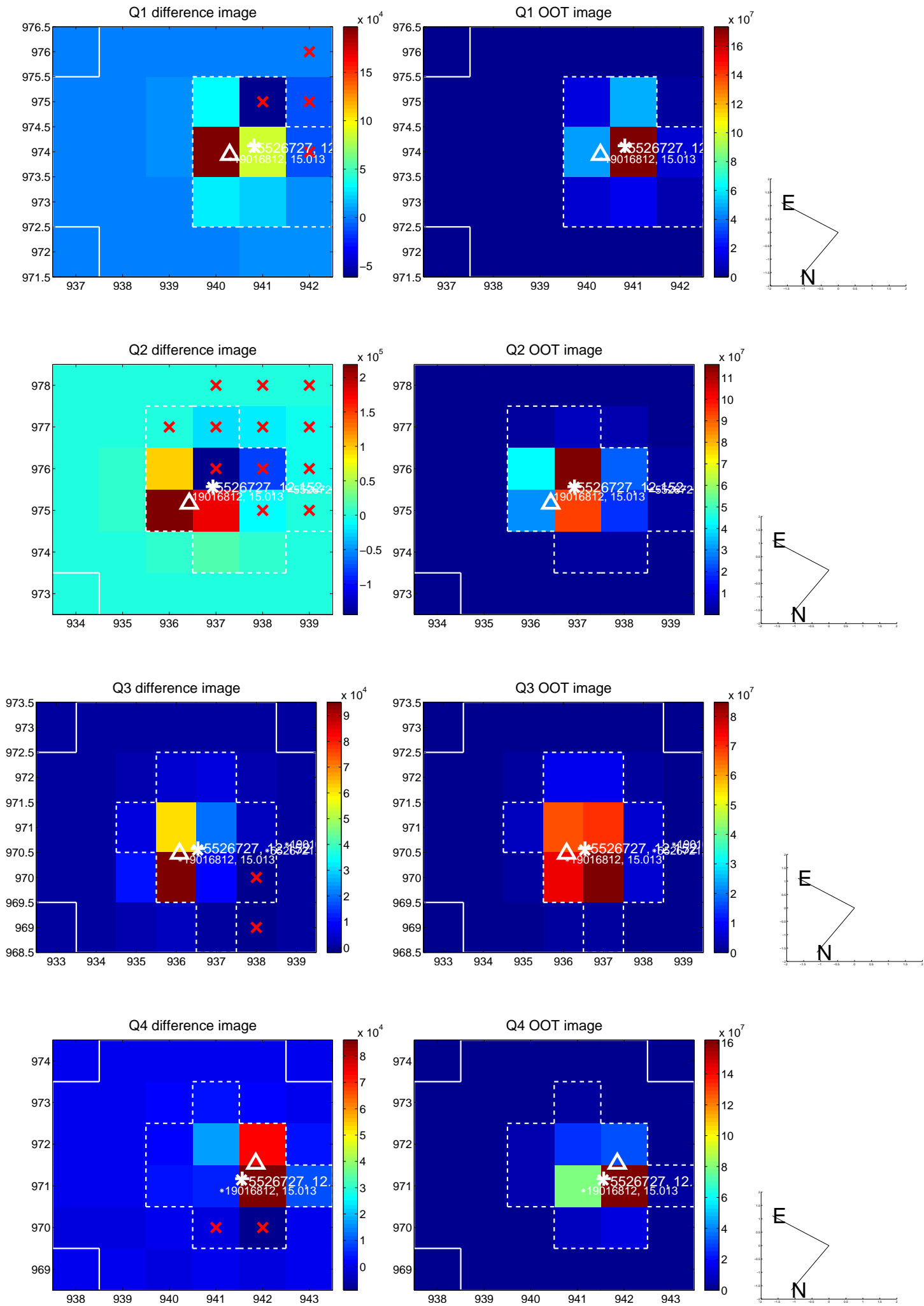


offset from photometric centroids

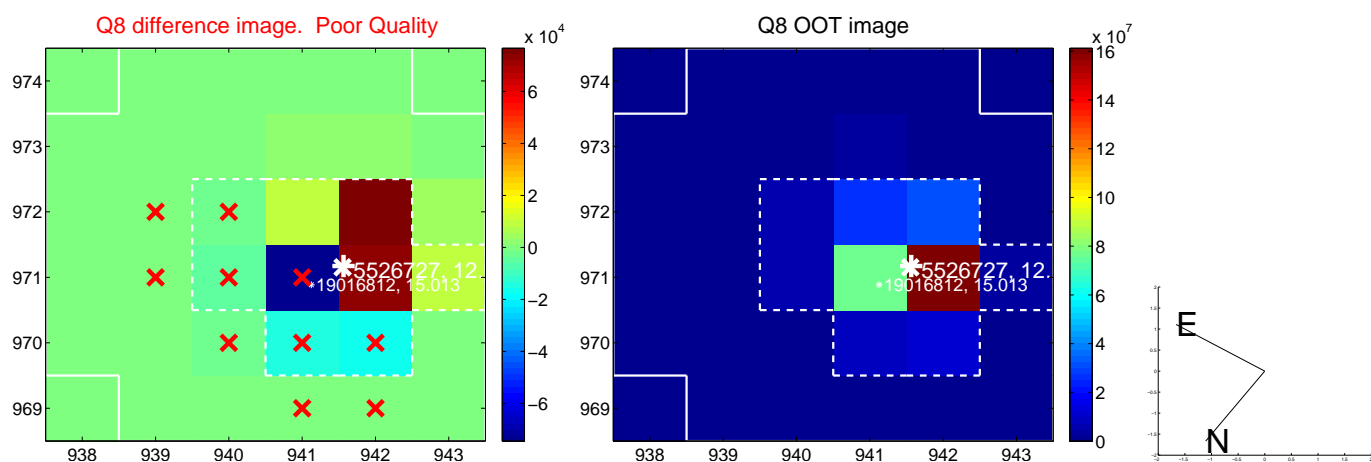
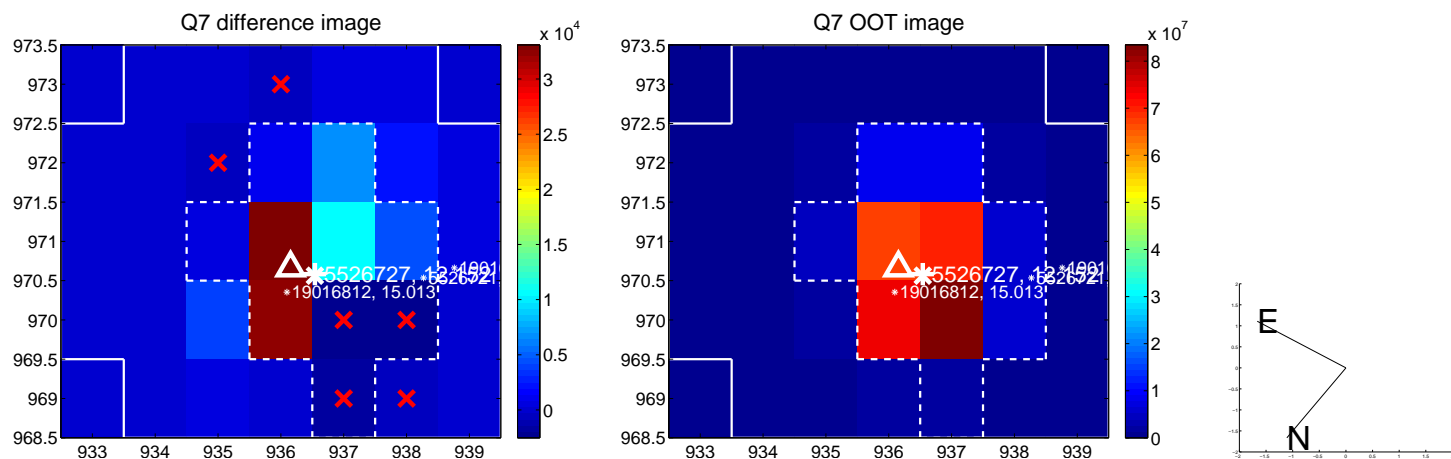
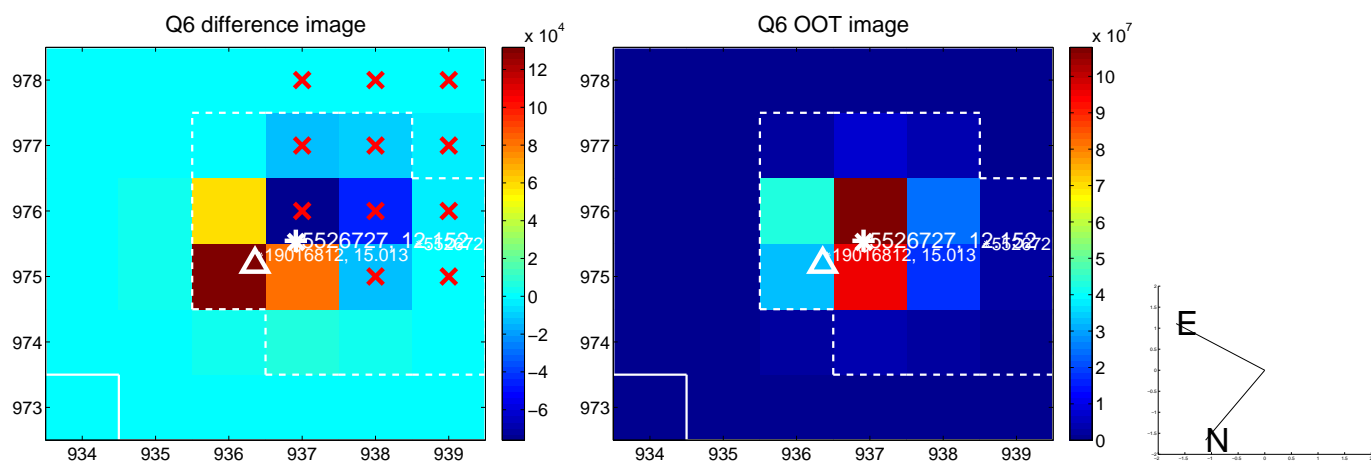
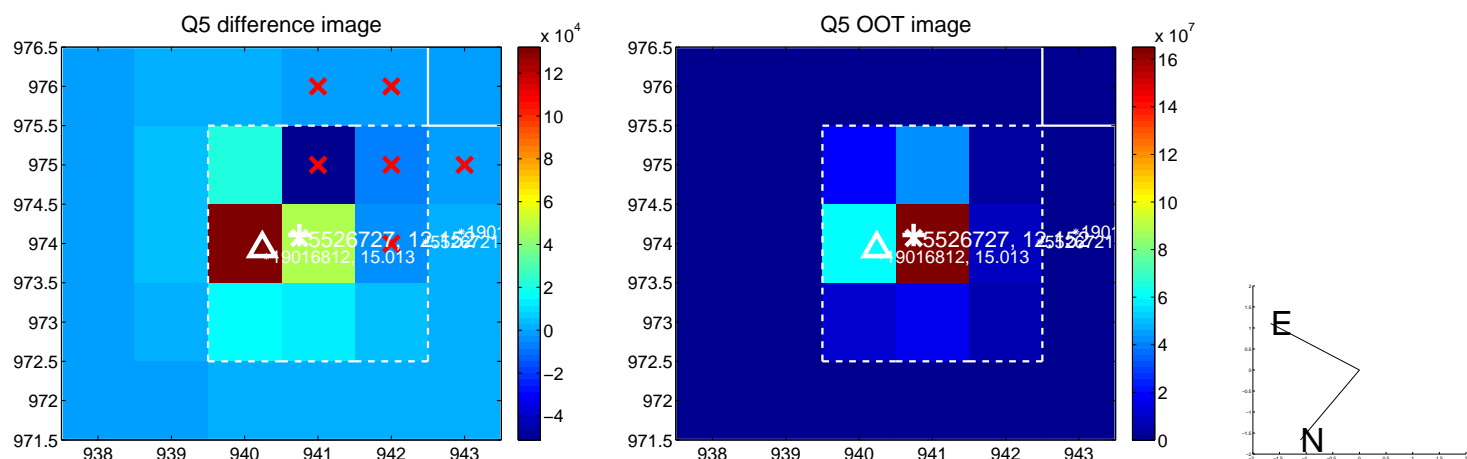


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

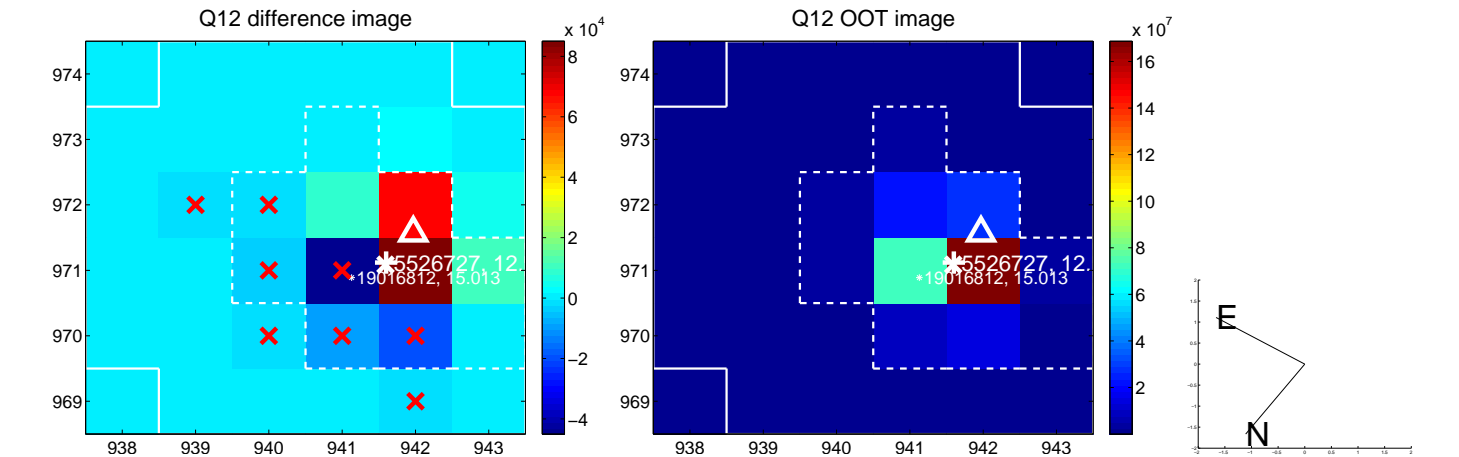
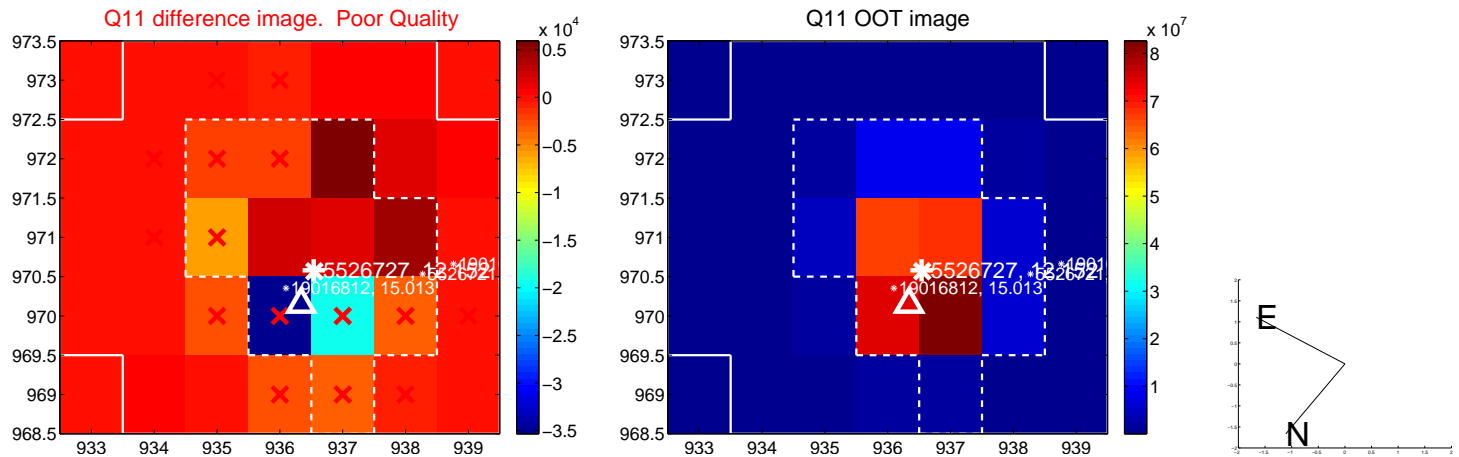
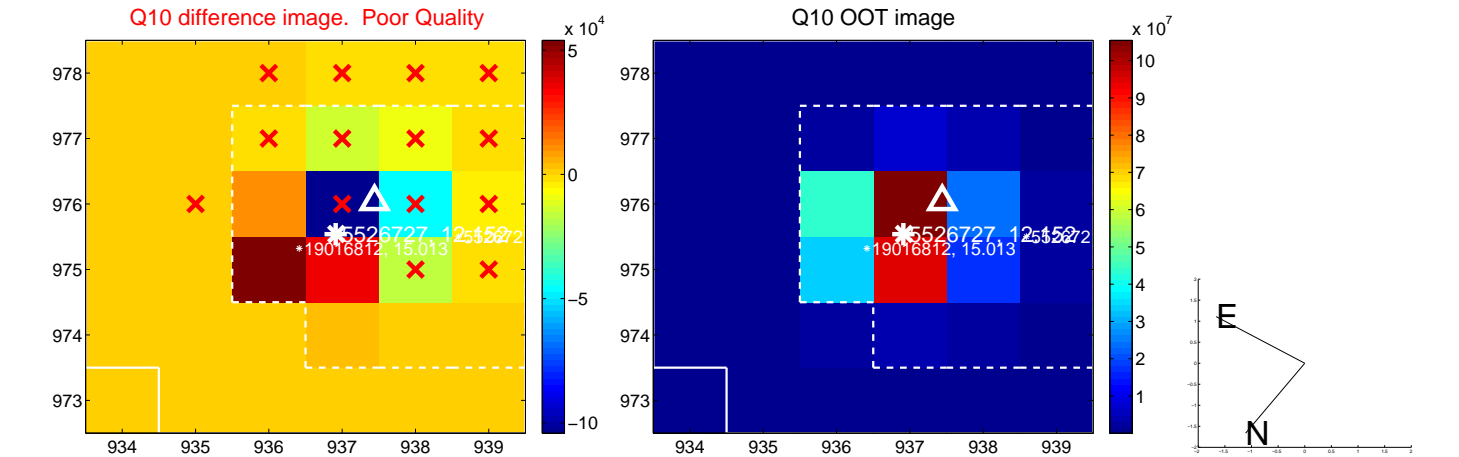
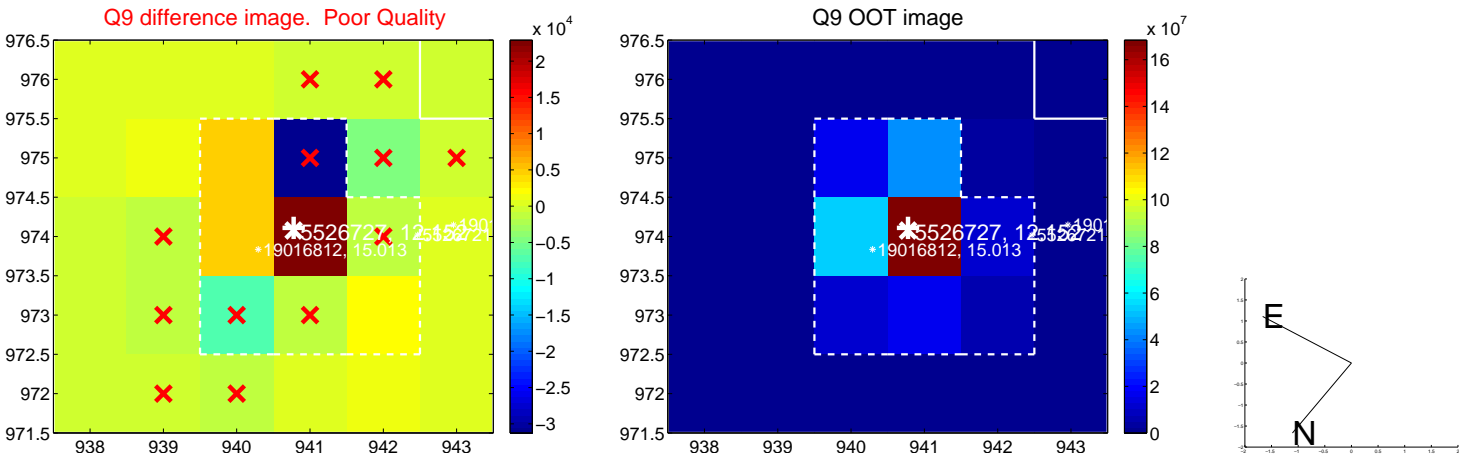
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



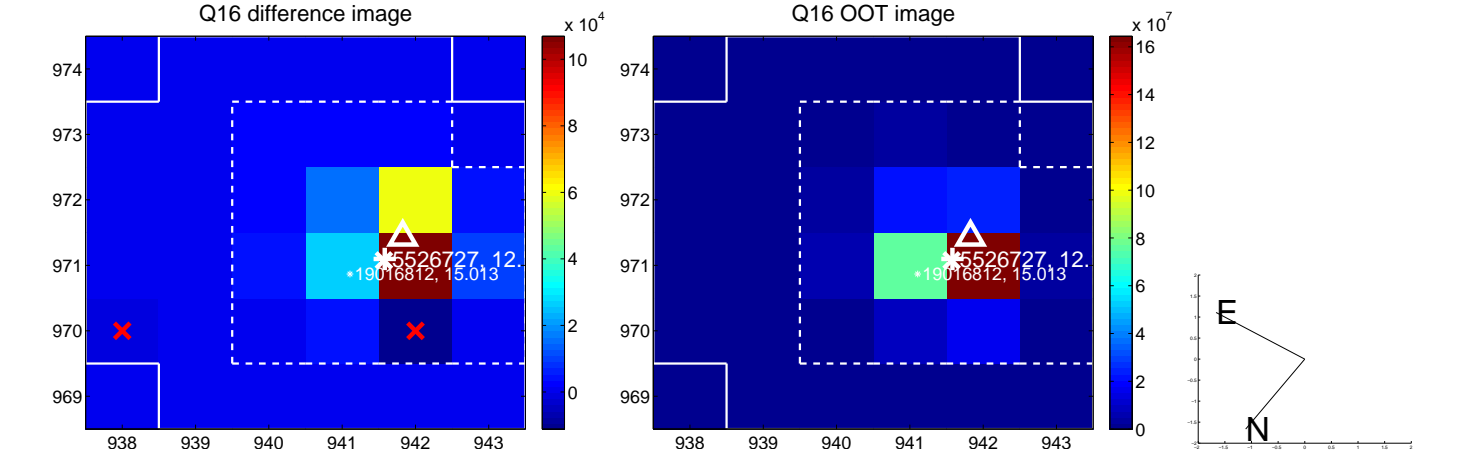
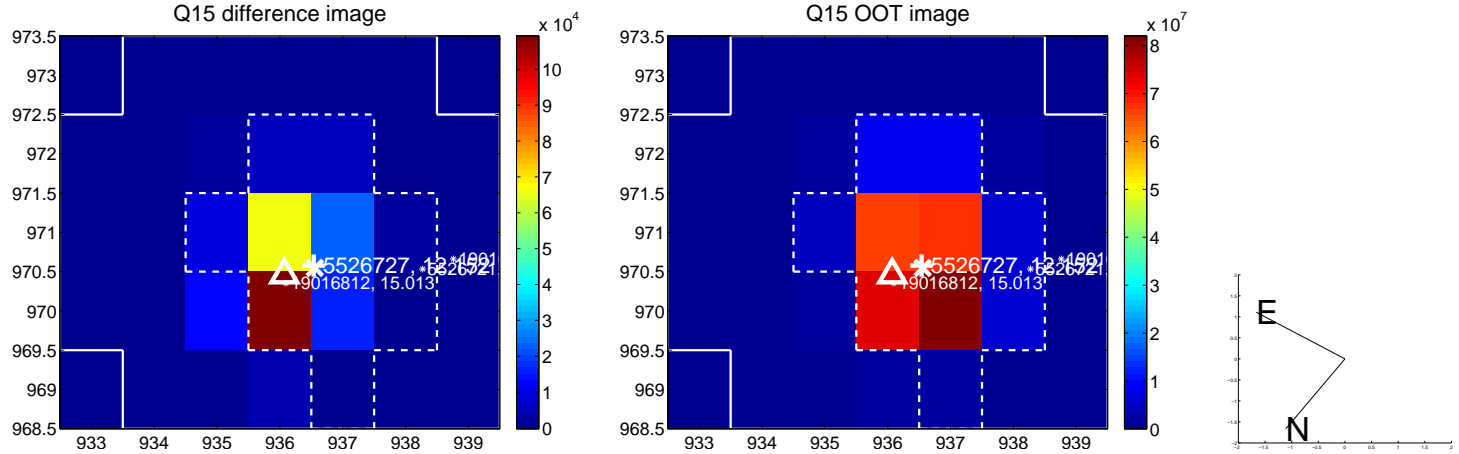
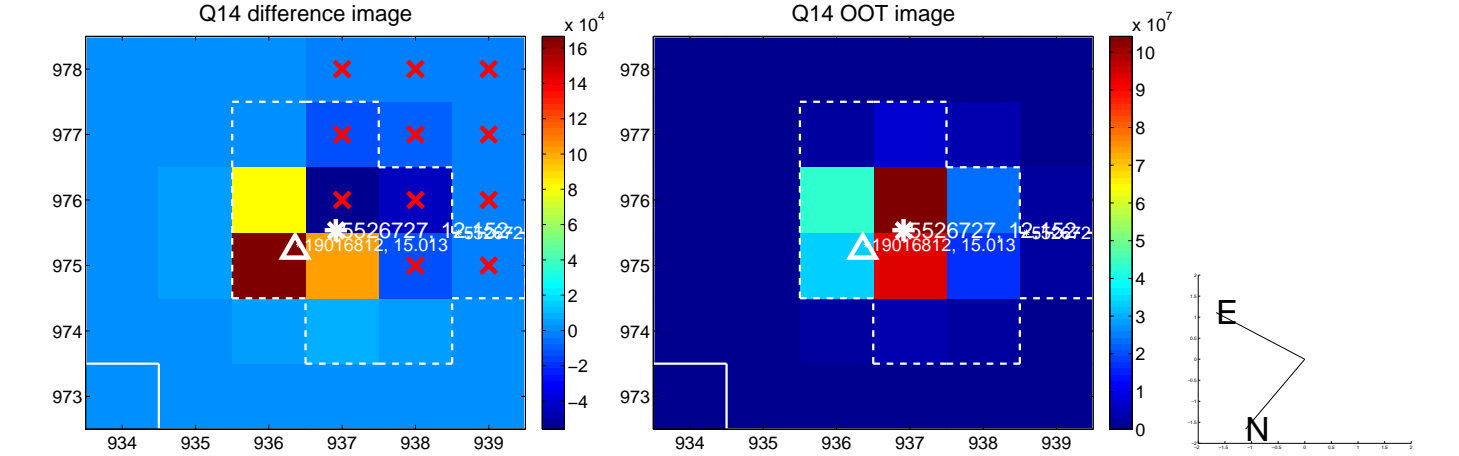
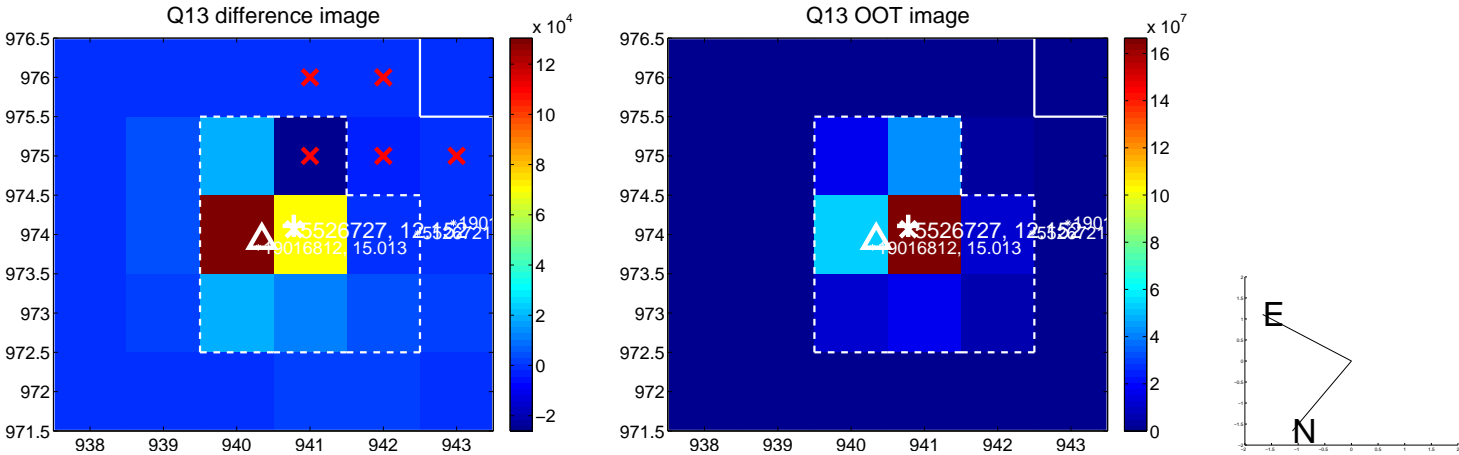
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



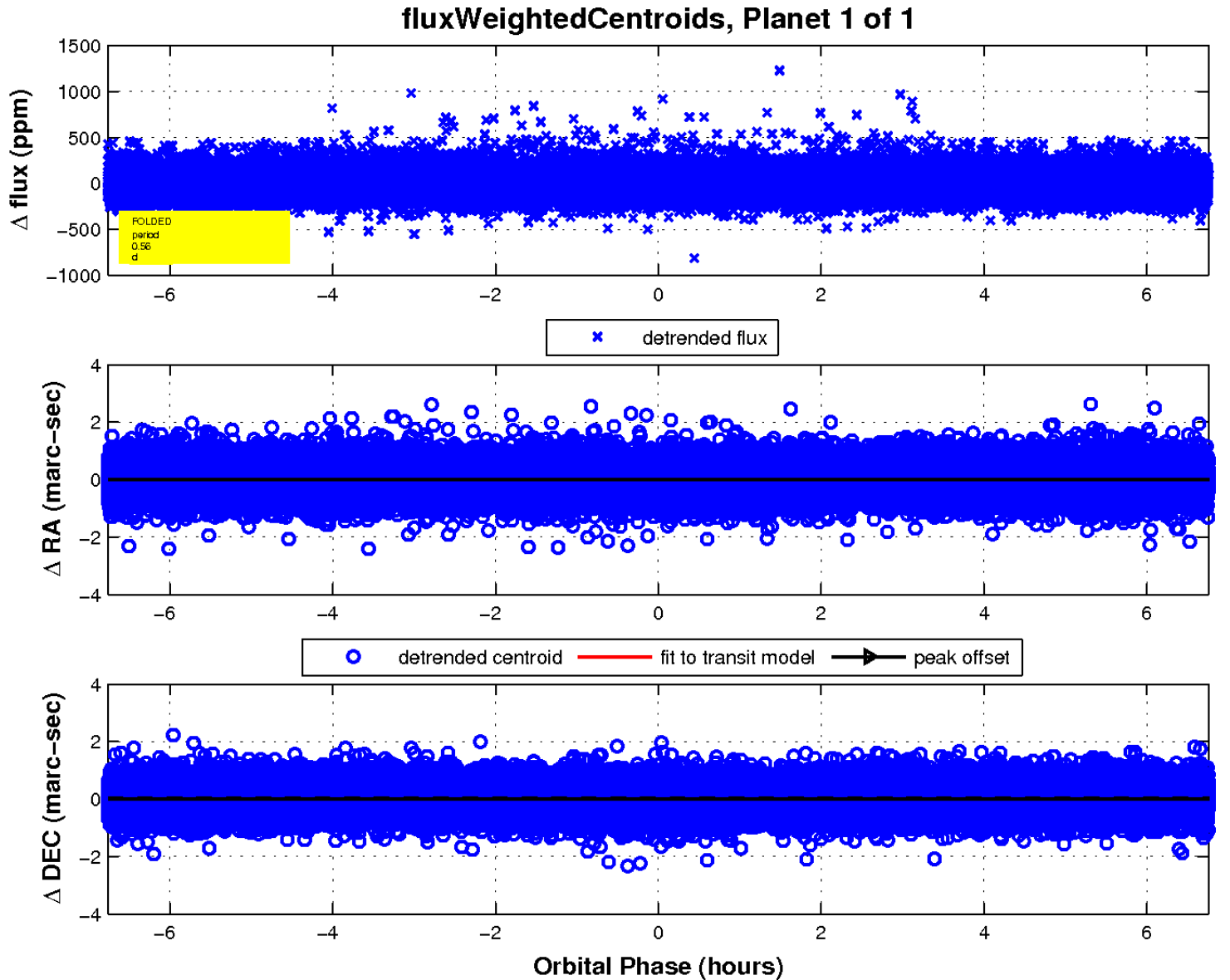
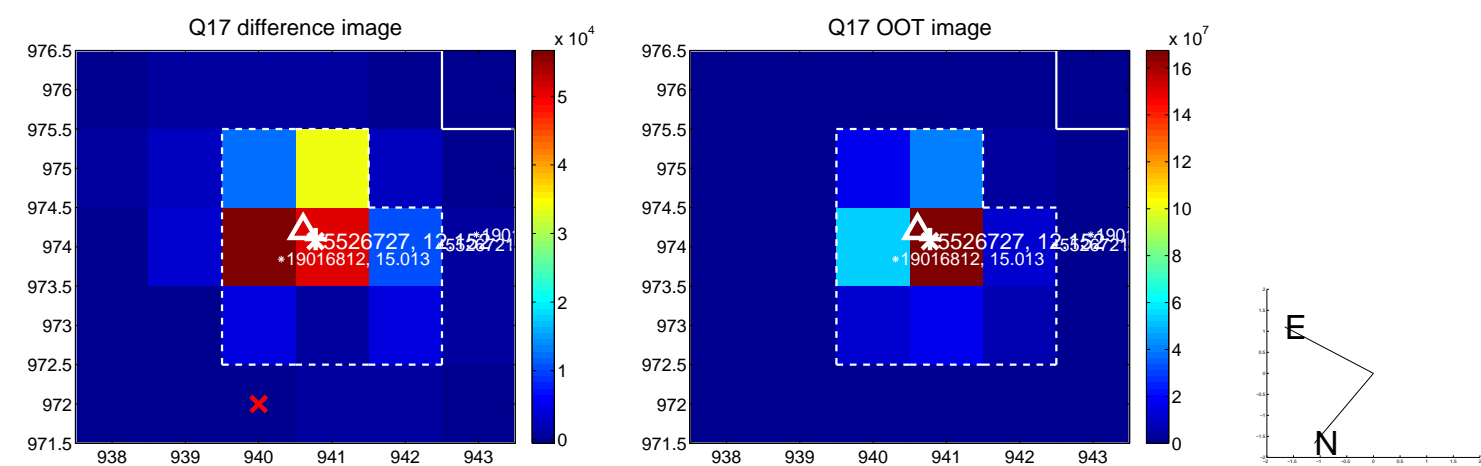
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

