

KIC 010347481

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})
010347481-01	OBS	No	1.143420	131.756722	22.0	4.894	8.3	6.8	1.73	7300	0.87	12665.01

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010347481-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT

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

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

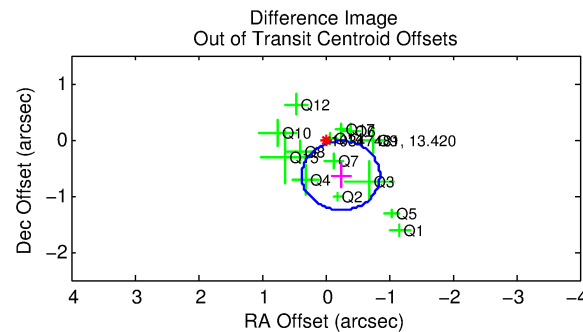
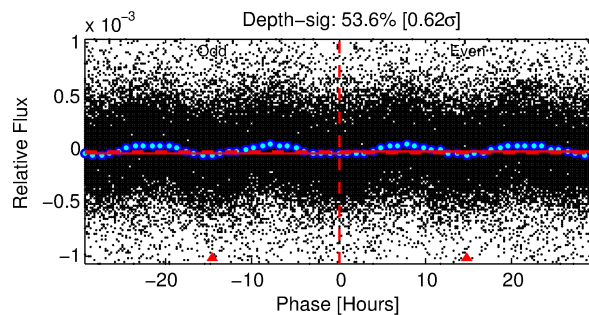
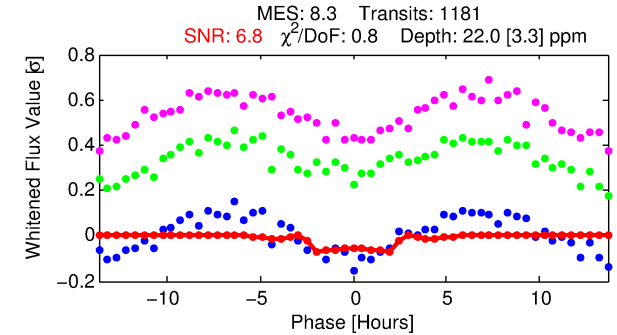
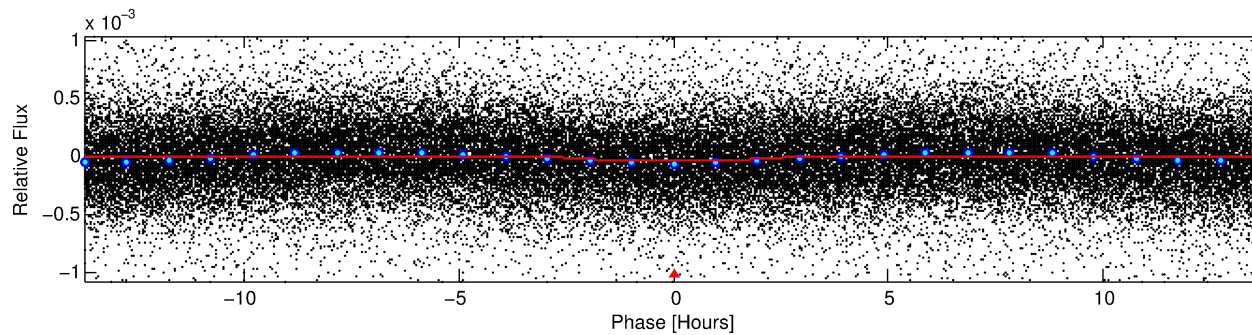
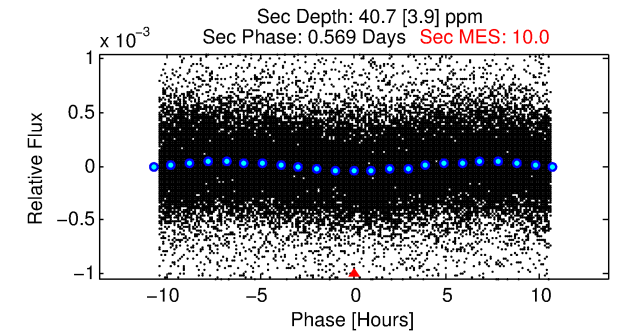
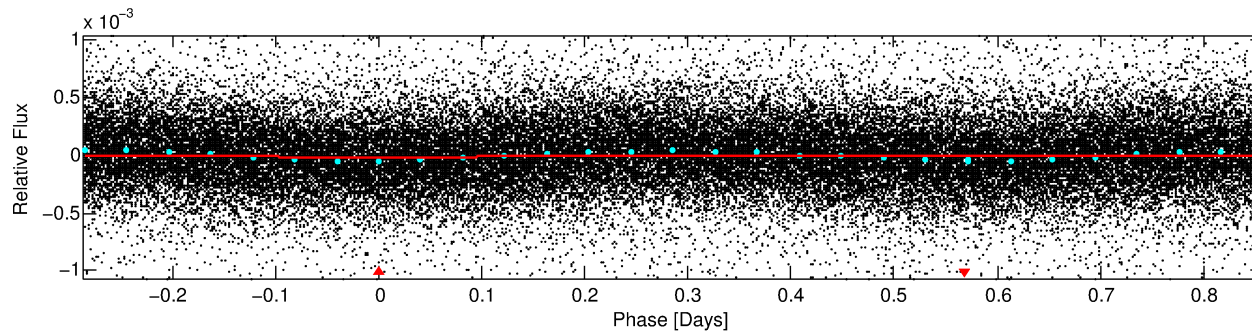
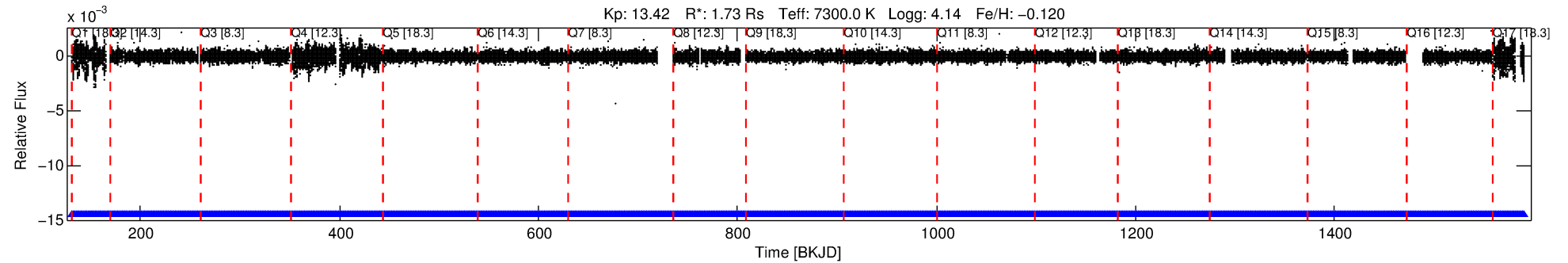
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010347481-01

No Significant Match Found

DV One-Page Summary

KIC: 10347481 Candidate: 1 of 1 Period: 1.143 d



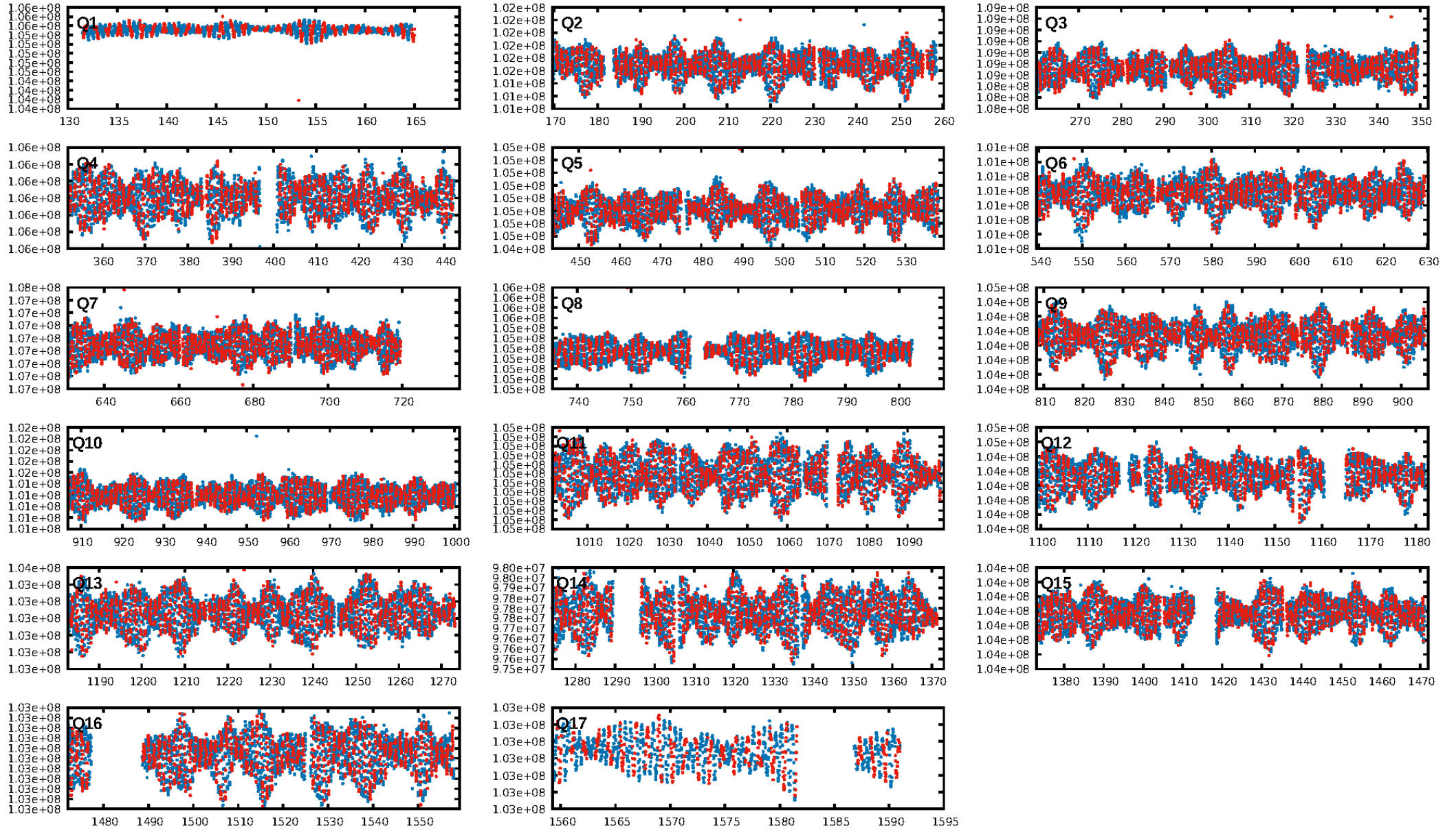
DV Fit Results:

Period = 1.14342 [0.00002] d
Epoch = 131.7567 [0.0045] BKJD
Rp/R* = 0.0046 [0.0014]
a/R* = 1.53 [1.60]
b = 0.70 [1.35]
Seff = 12665.01 [4956.09]
Teq = 2705 [265] K
Rp = 0.87 [0.37] Re
a = 0.0245 [0.0061] AU
Ag = 17.83 [12.53] [1.34σ]
Teffp = 8594 [1370] K [4.22σ]

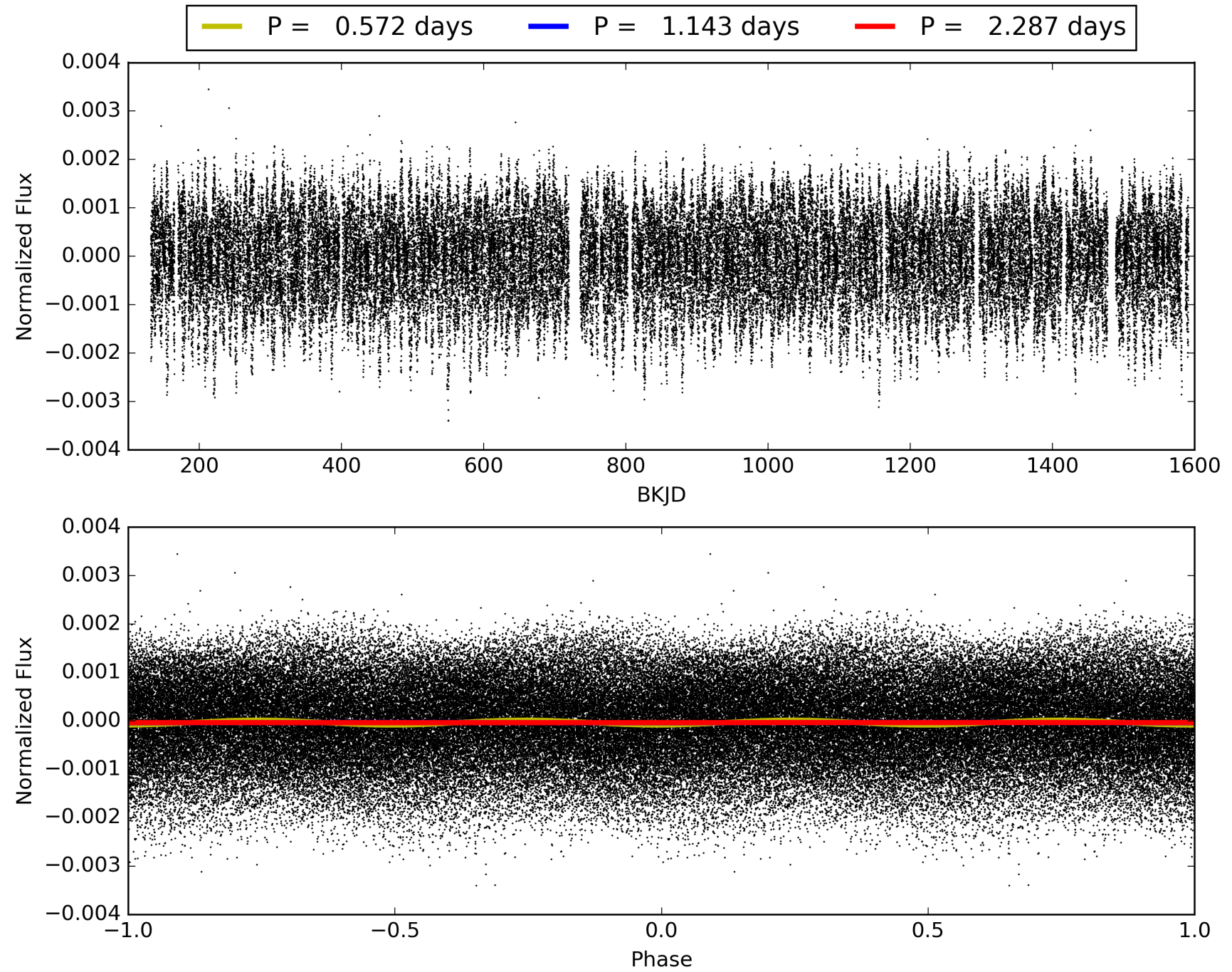
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.94e-11
RollingBand-fgt: 1.00 [1127/1127]
GhostDiagnostic-chr: 4.967
Centroid-sig: 21.6%
Centroid-so: 0.784 arcsec [1.01σ]
OotOffset-rm: 0.685 arcsec [3.34σ]
KicOffset-rm: 0.761 arcsec [3.67σ]
OotOffset-st: 4/3/3/4 [14]
KicOffset-st: 4/3/3/4 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 010347481-01, PDC Light Curves

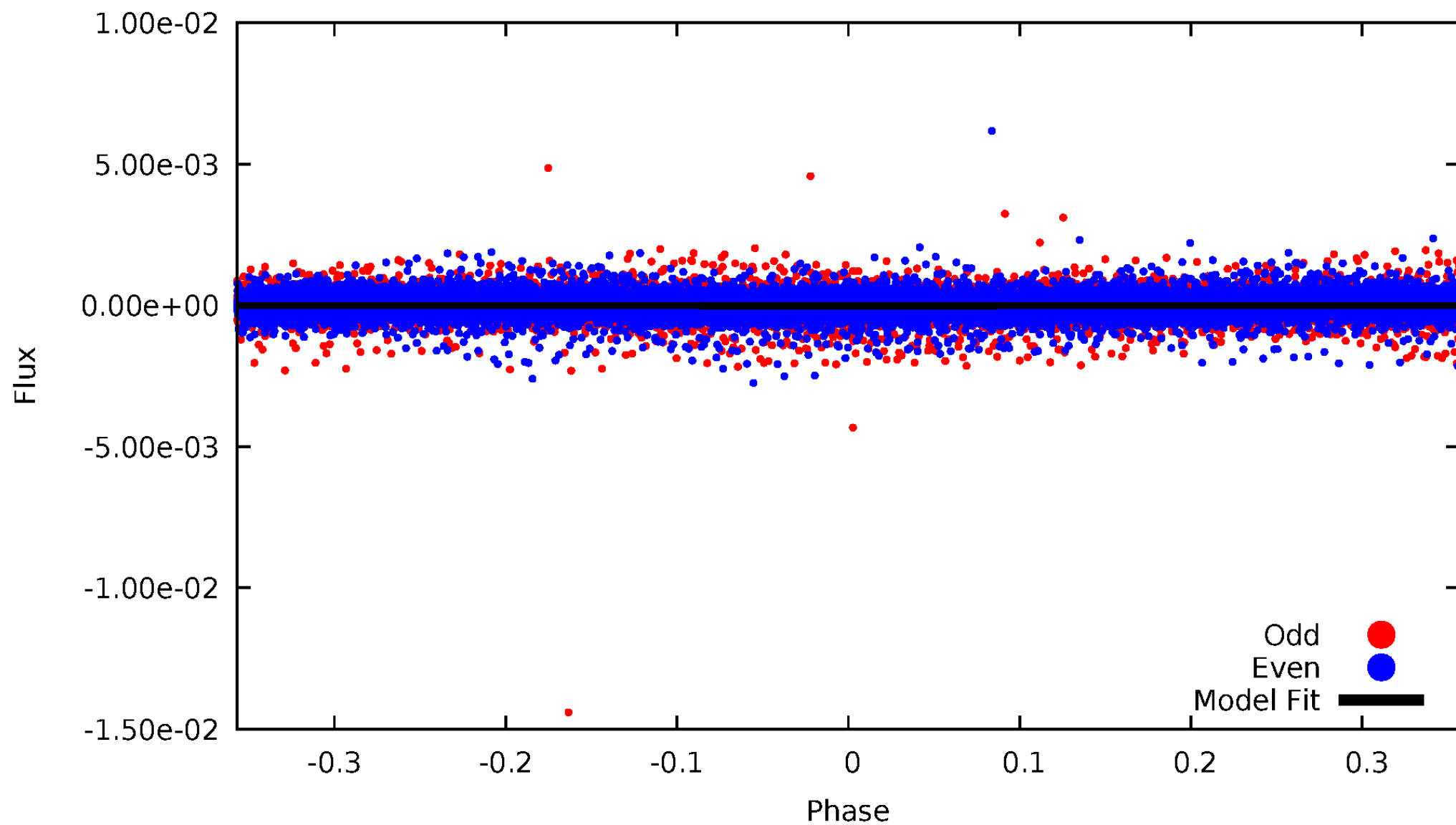


TCE 010347481-01



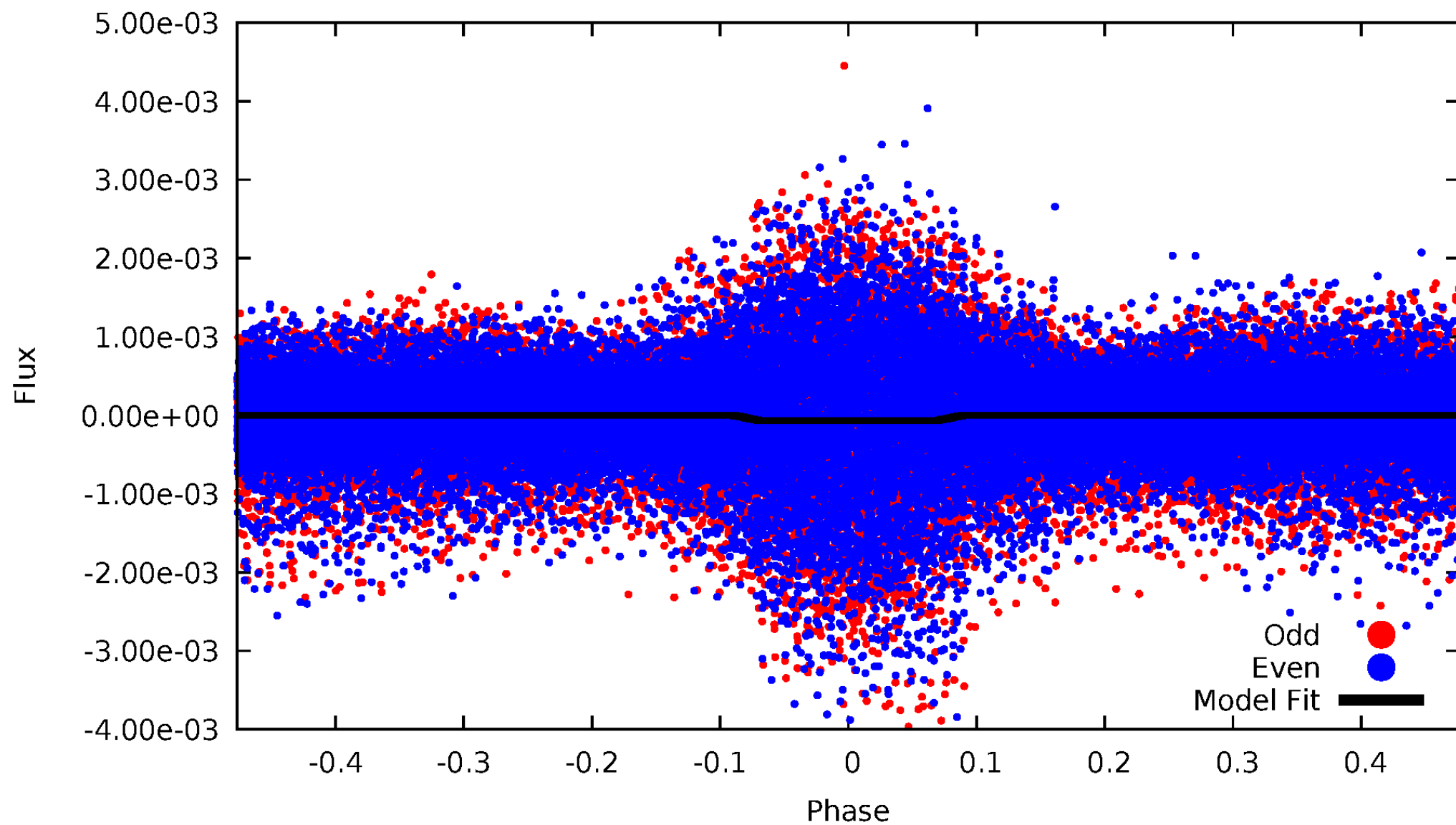
DV Odd/Even

TCE 010347481-01

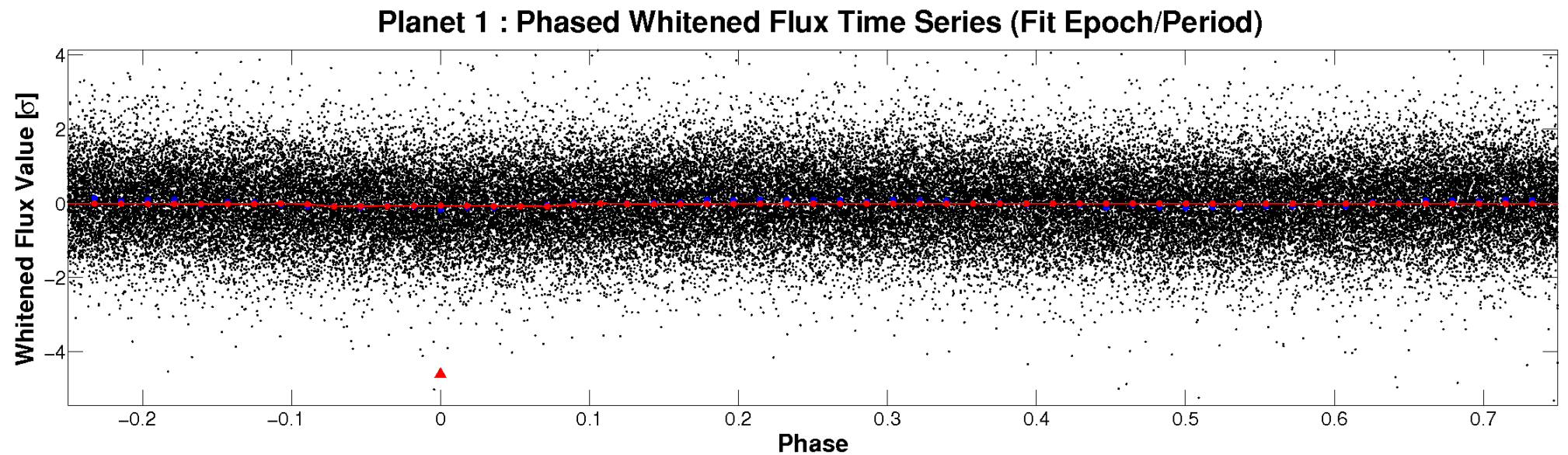
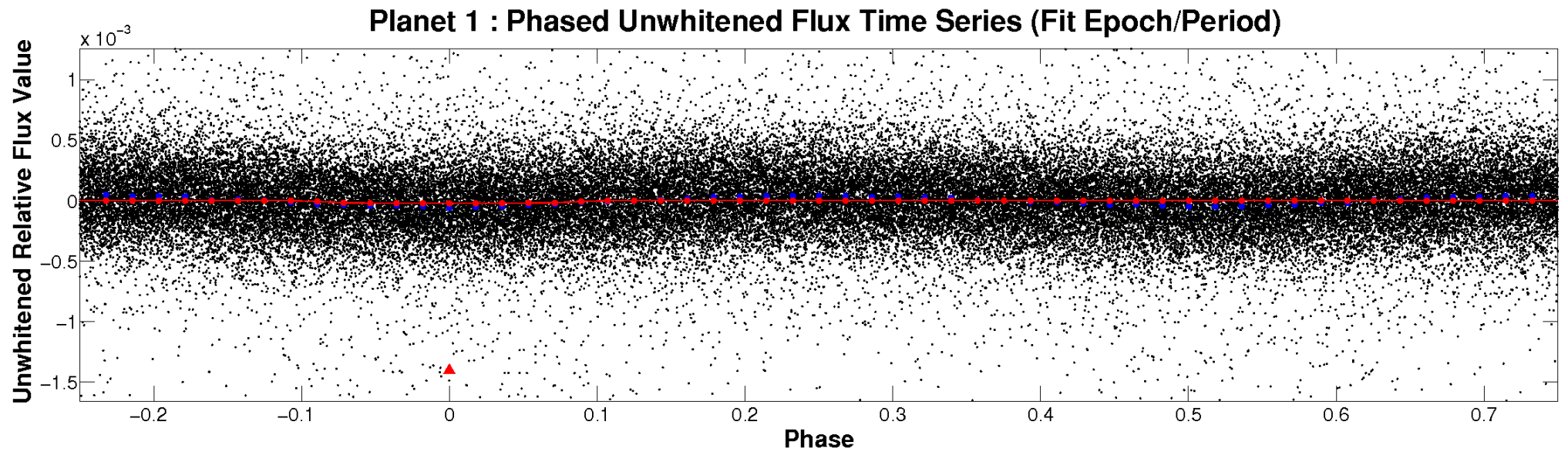


ALT Odd/Even

TCE 010347481-01

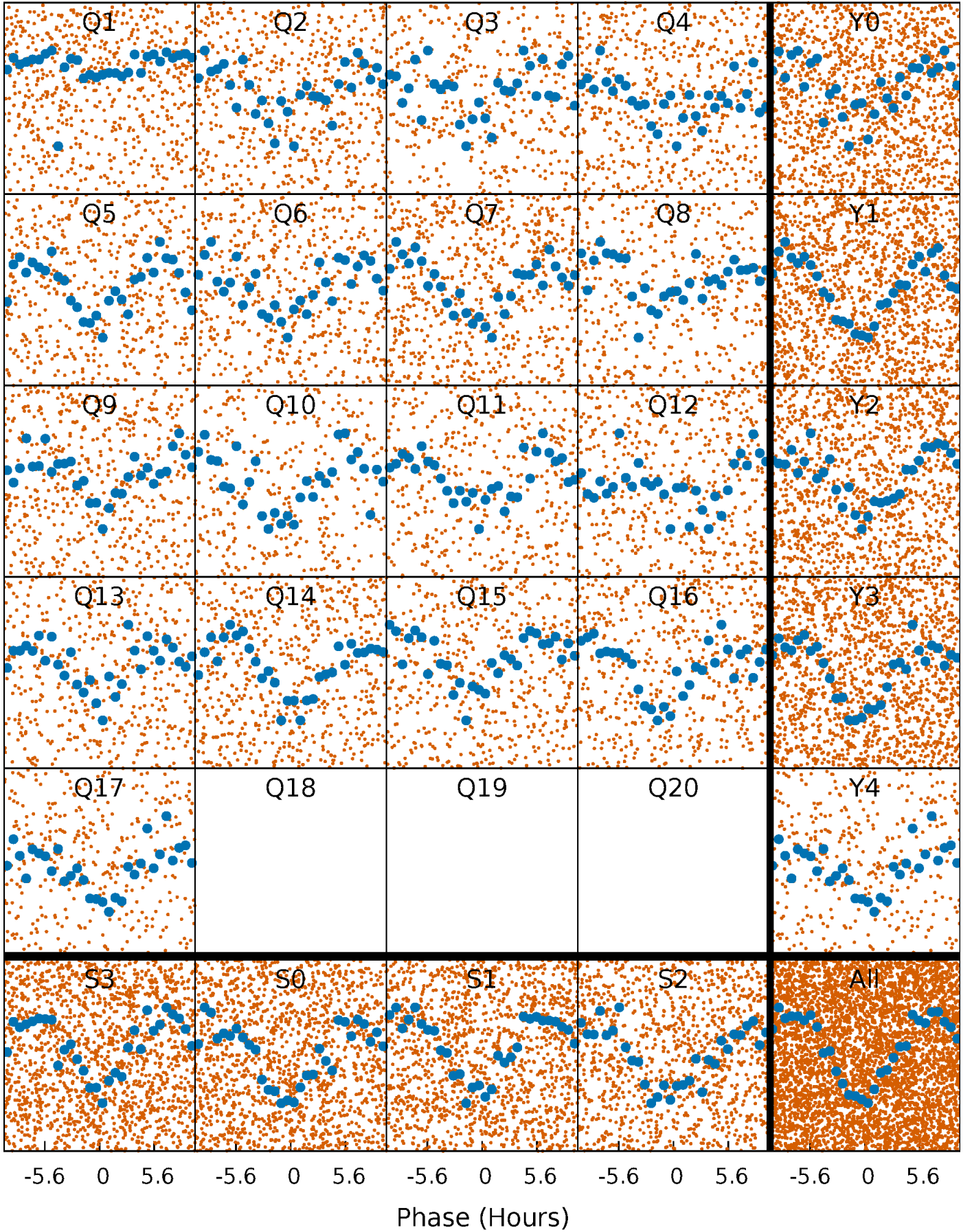


Non-Whitened Vs. Whitened Light Curve



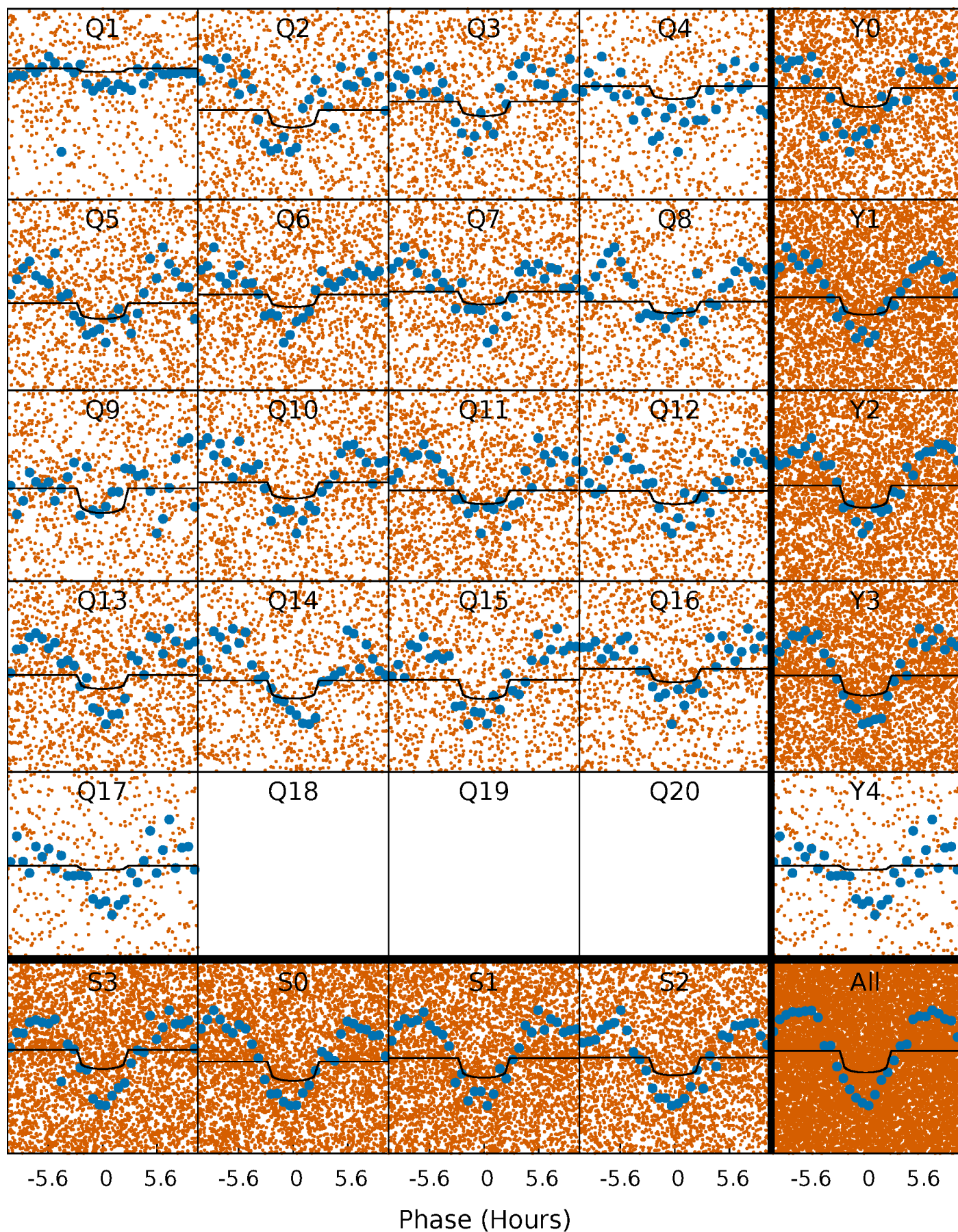
PDC Quarter-Phased Transit Curves

TCE 010347481-01 P= 1.143420 Days $T_0=131.756722$ (BKJD)



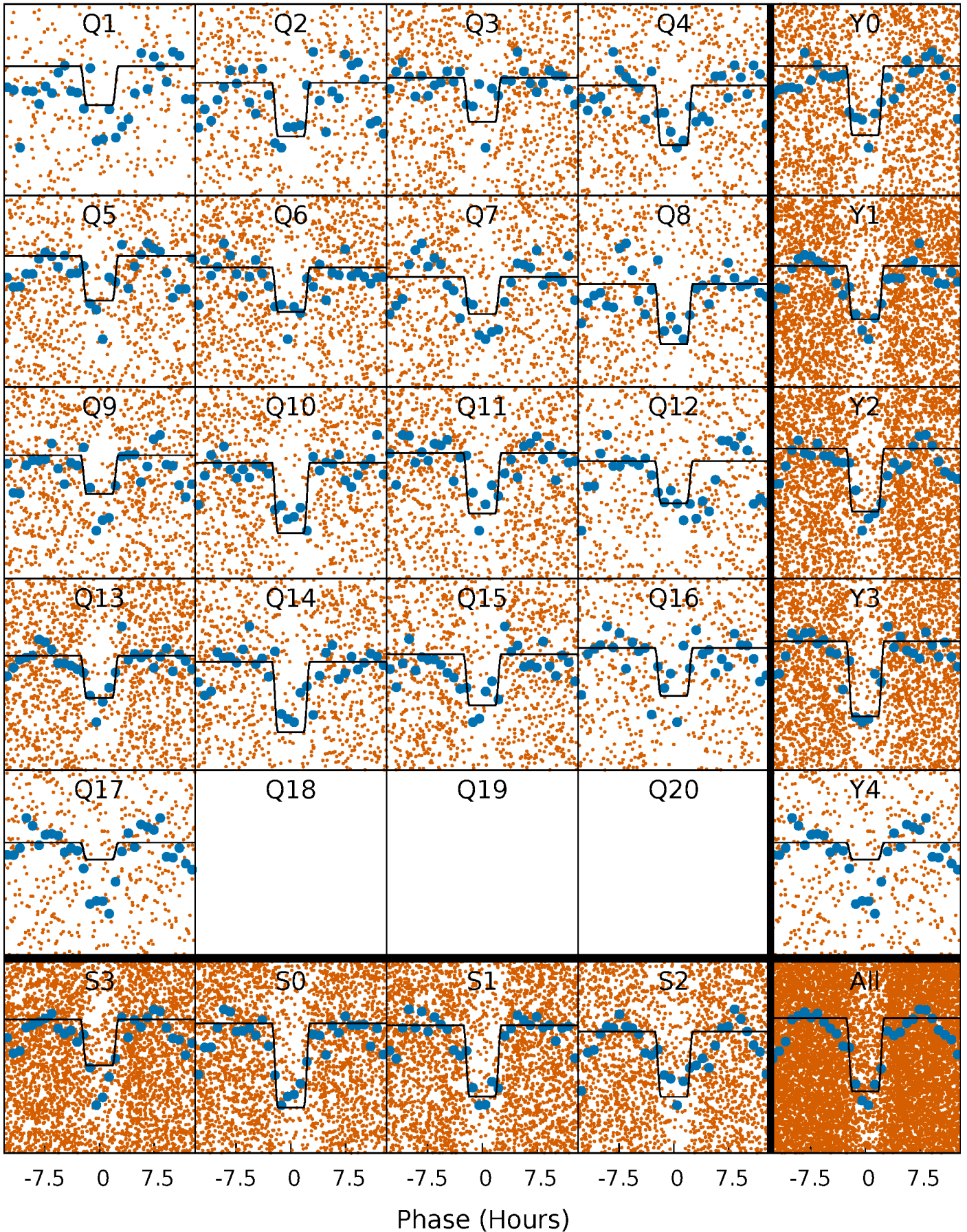
DV Quarter-Phased Transit Curves

TCE 010347481-01 P= 1.143420 Days $T_0=131.756722$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

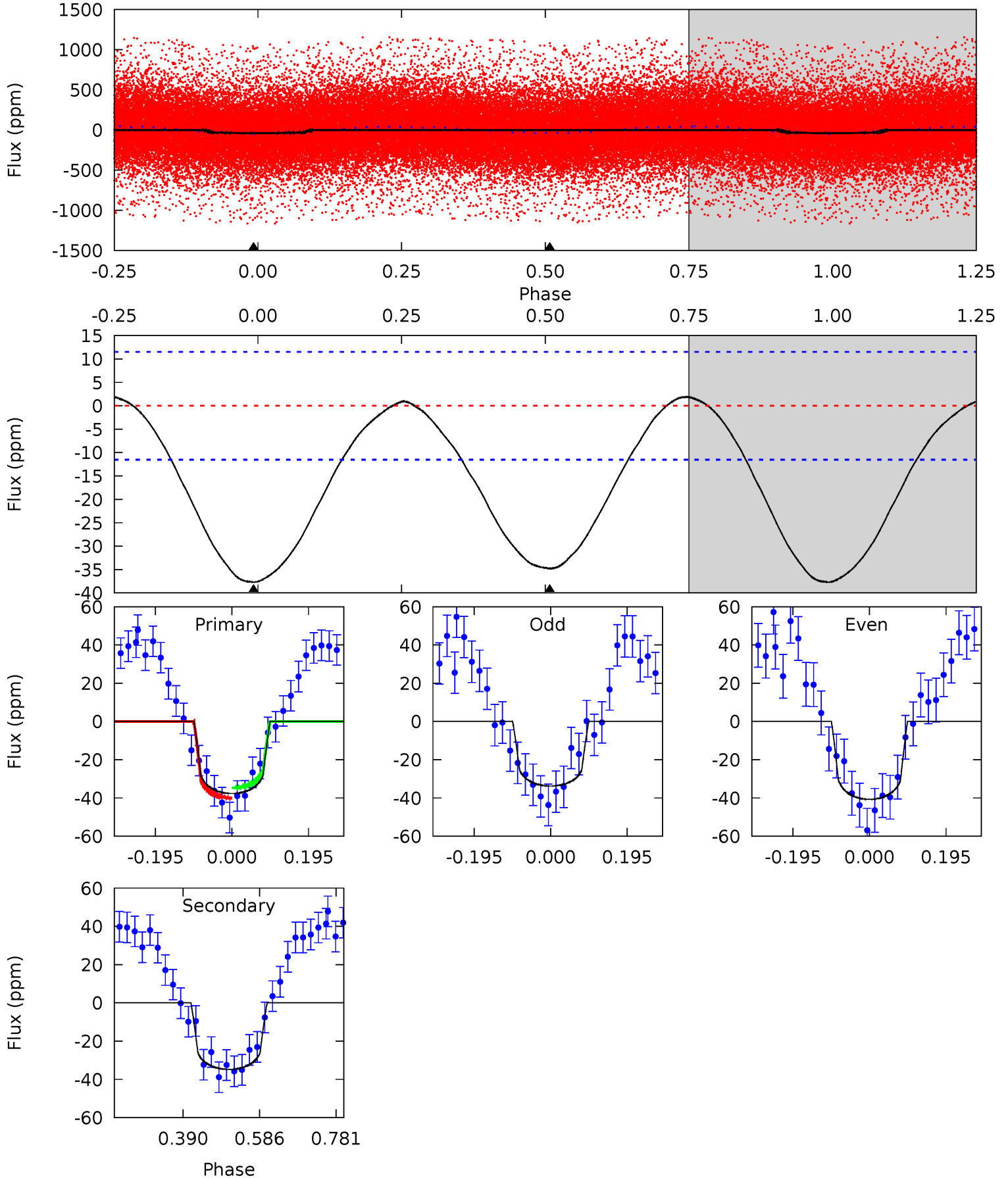
TCE 010347481-01 P= 1.143468 Days $T_0=131.726028$ (BKJD)



DV Model-Shift Uniqueness Test

010347481-01, P = 1.143420 Days, E = 130.613302 Days

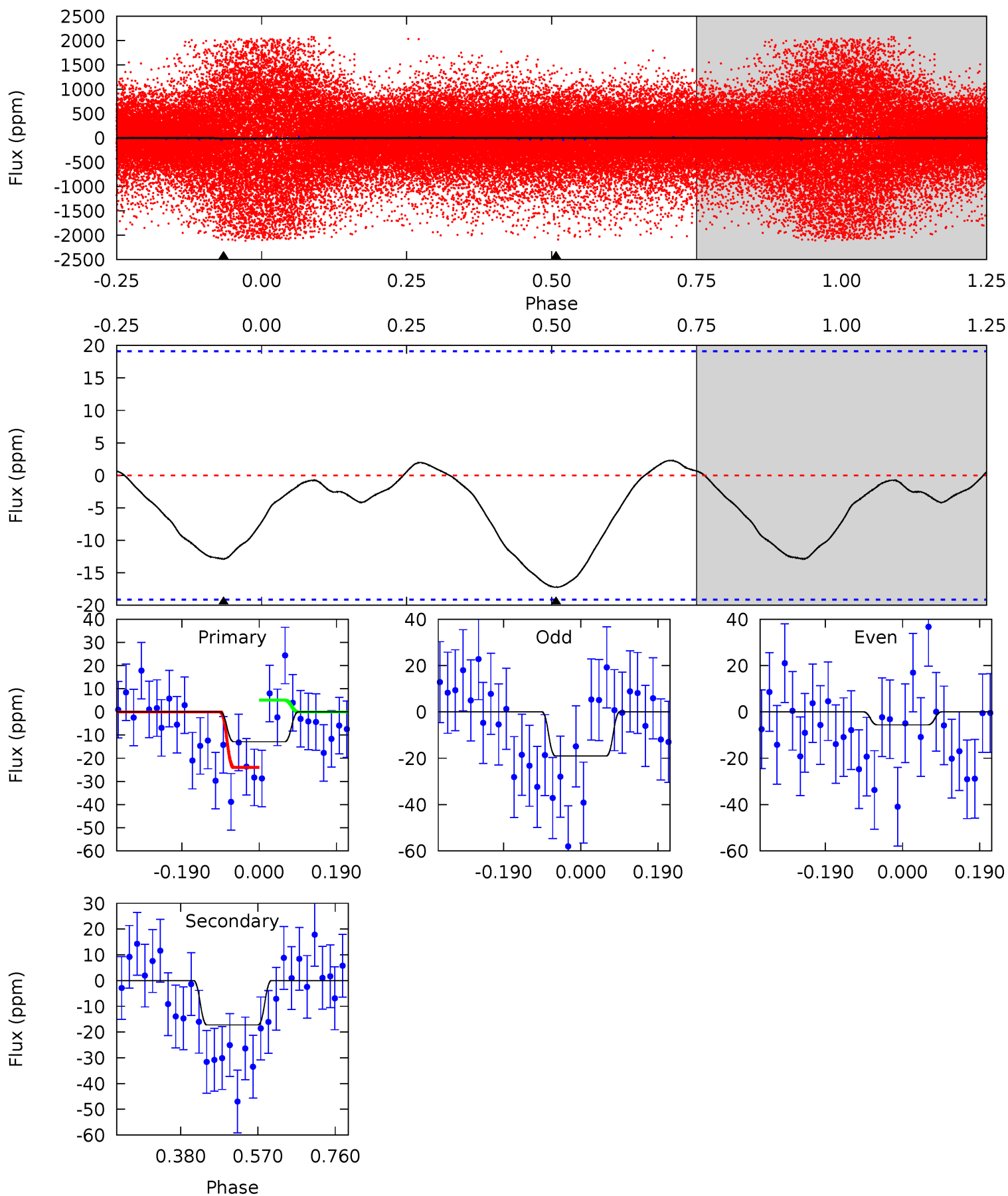
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.5	13.4	0	0	4.42	1.30	0.65	14.5	14.5	13.4	13.4	1.34	1.19	0.05	1.03



Alt Model-Shift Uniqueness Test

010347481-01, P = 1.143468 Days, E = 130.582560 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.98	3.99	0	0	4.43	1.31	0.52	2.98	2.98	3.99	3.99	1.54	1.57	0.12	2.21



Stellar Parameters For KIC 010347481

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7300^{+228}_{-330}	$4.138^{+0.149}_{-0.182}$	$-0.120^{+0.250}_{-0.350}$	$1.726^{+0.533}_{-0.355}$	$1.491^{+0.234}_{-0.234}$	$0.409^{+0.316}_{-0.206}$
	+3%/-5%	+4%/-4%	+208%/-292%	+31%/-21%	+16%/-16%	+77%/-51%
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 010347481-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-35 ± 3	$0.87^{+0.31}_{-0.28}$	3760^{+292}_{-262}	8269^{+2771}_{-1300}	15^{+17}_{-7}
Alt.	-17 ± 4	$1.58^{+0.37}_{-0.32}$	3788^{+309}_{-261}	4977^{+552}_{-515}	$2.222^{+1.495}_{-0.875}$

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

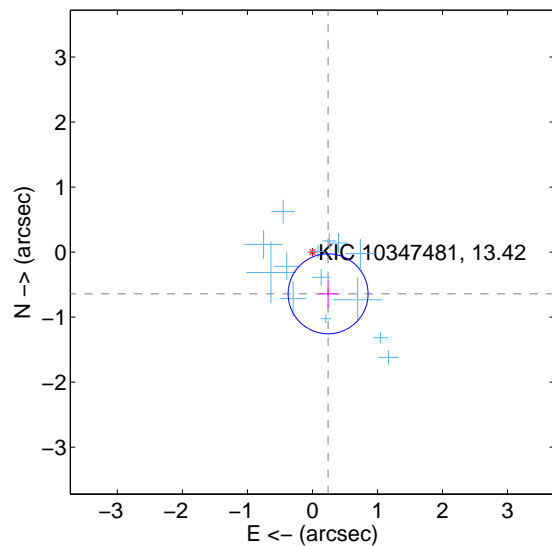
Supplemental centroid analysis for 010347481-01. Kepler magnitude: 13.42. Transit SNR 6.81

There are 14 quarters with good PRF difference image offsets

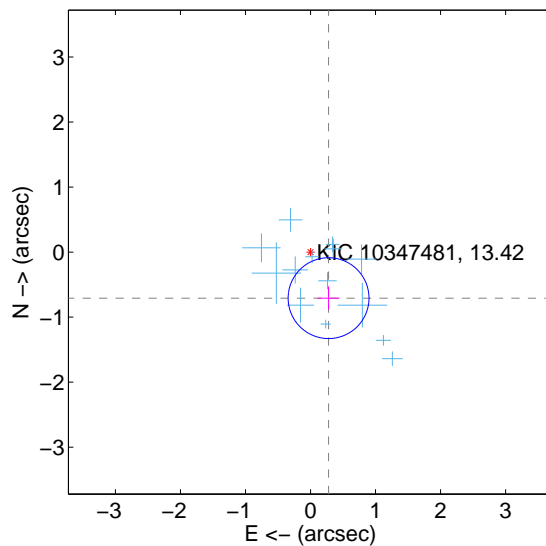
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.685 ± 0.205	3.34	-0.241 ± 0.147	-0.642 ± 0.212
PRF-fit source offset from KIC position	0.761 ± 0.207	3.67	-0.277 ± 0.171	-0.708 ± 0.180
photometric centroid source offset	0.78 ± 0.77	1.01	0.78 ± 0.77	-0.10 ± 0.91

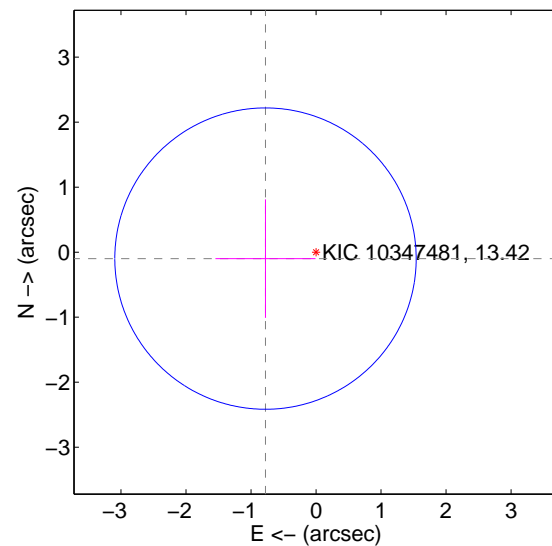
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

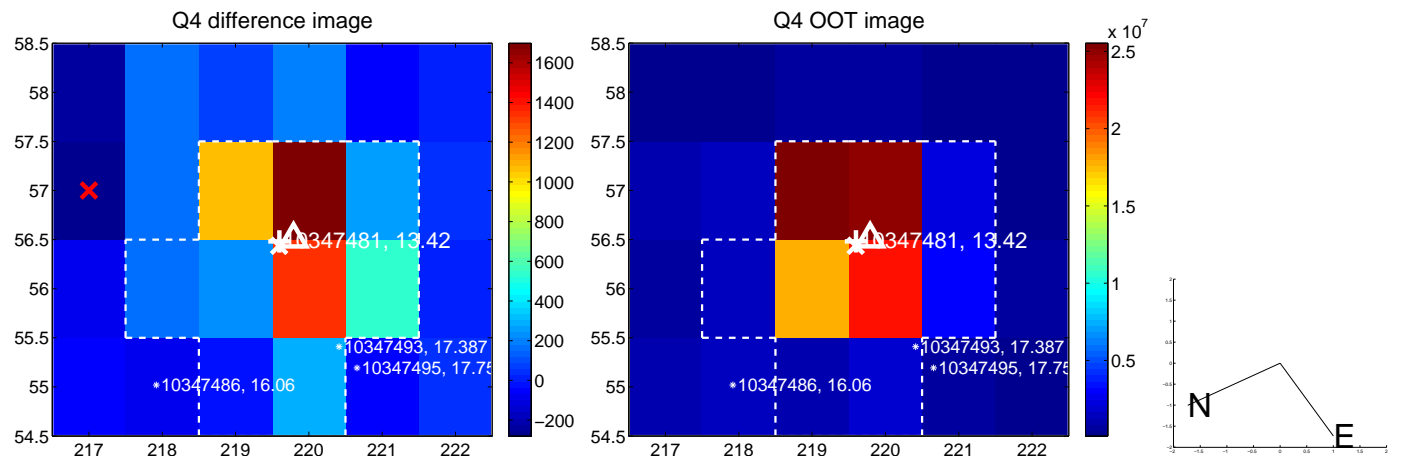
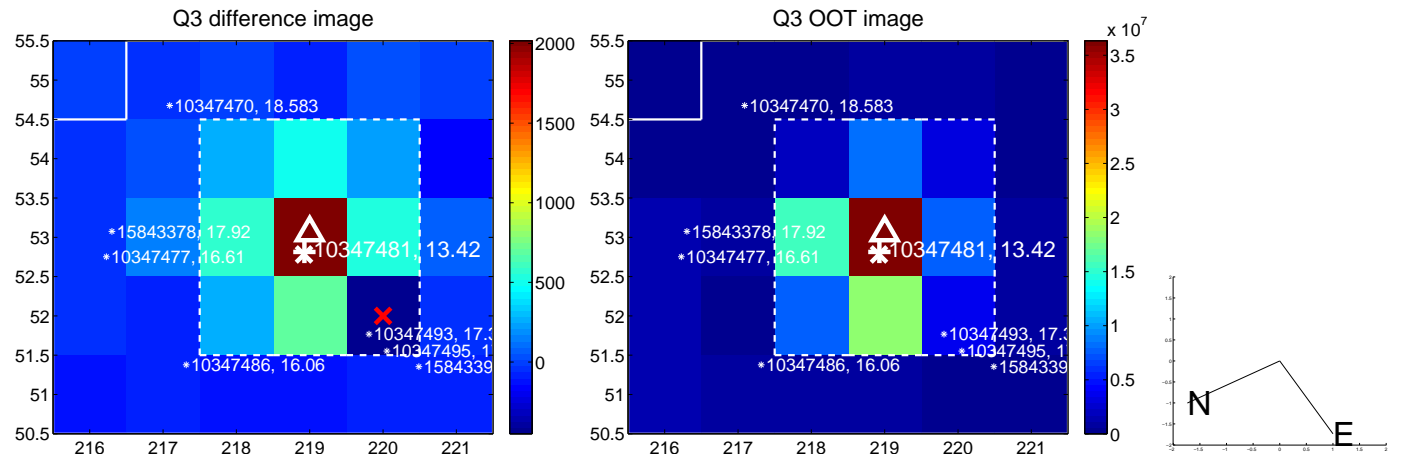
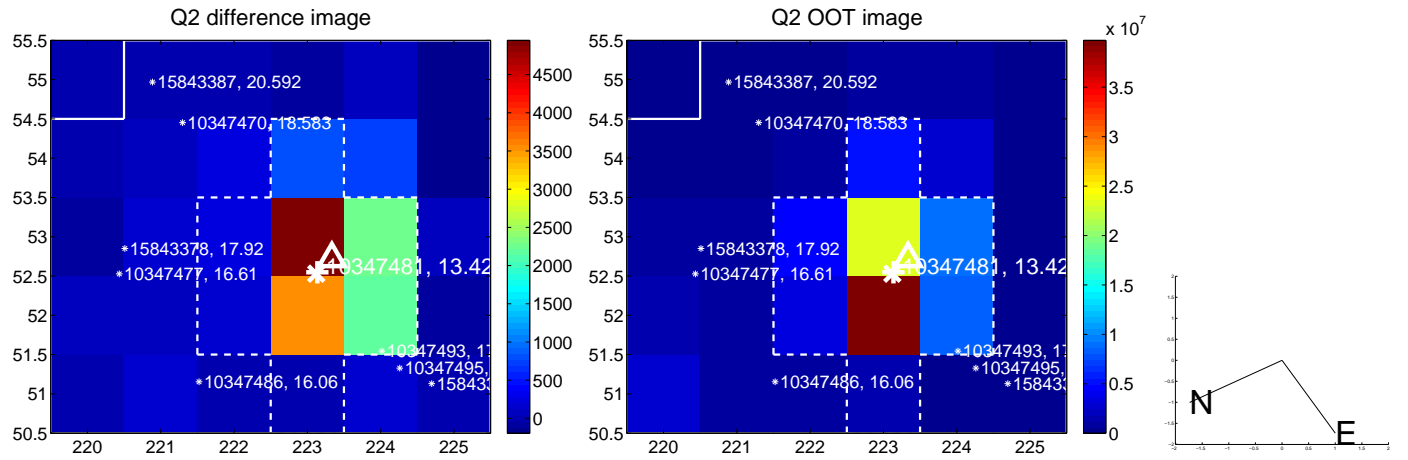
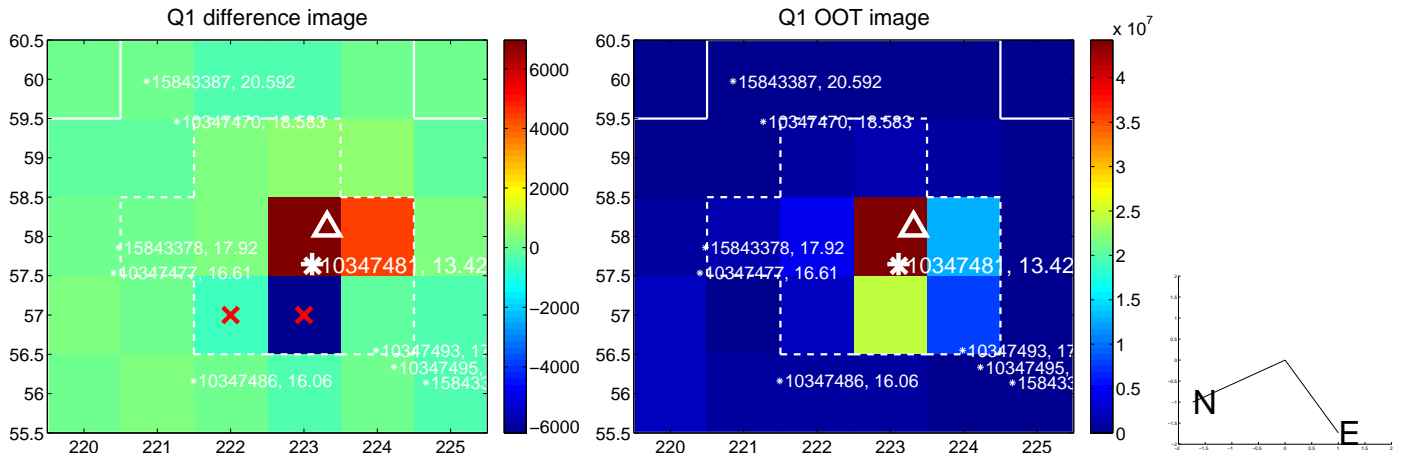


offset from photometric centroids

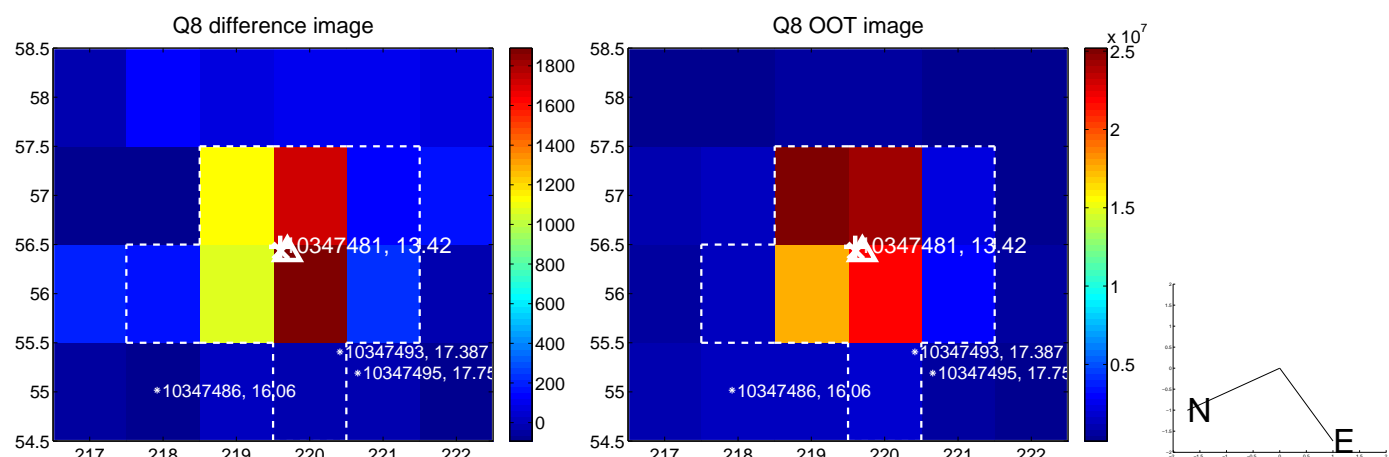
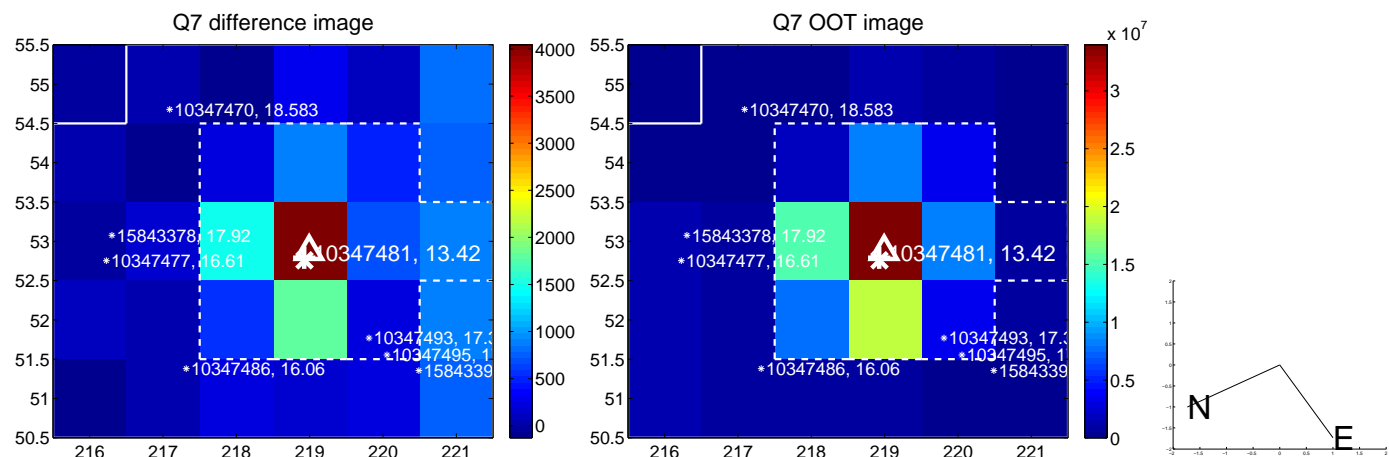
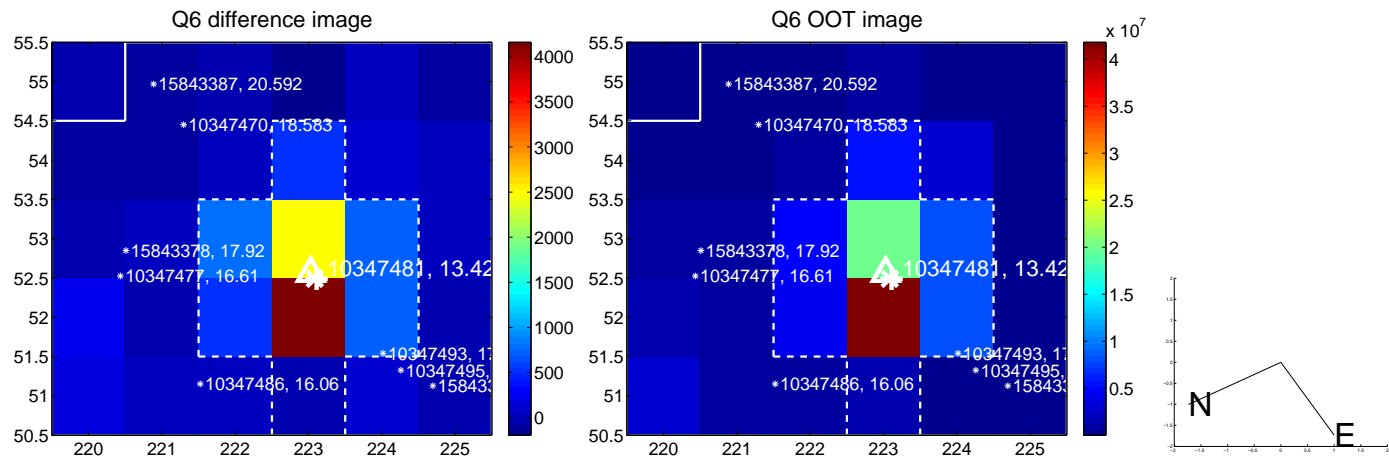
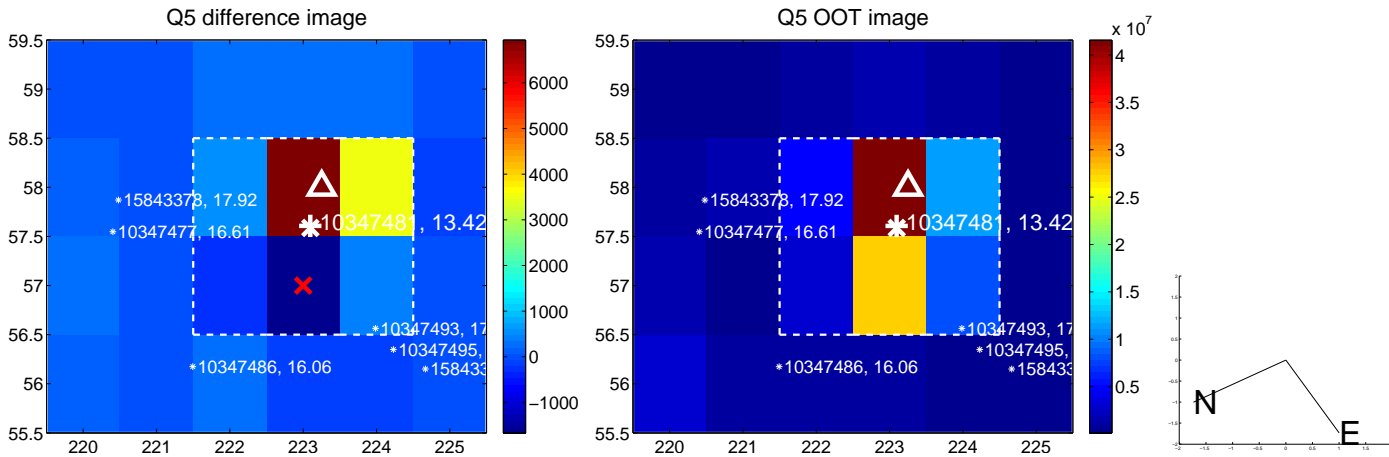


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

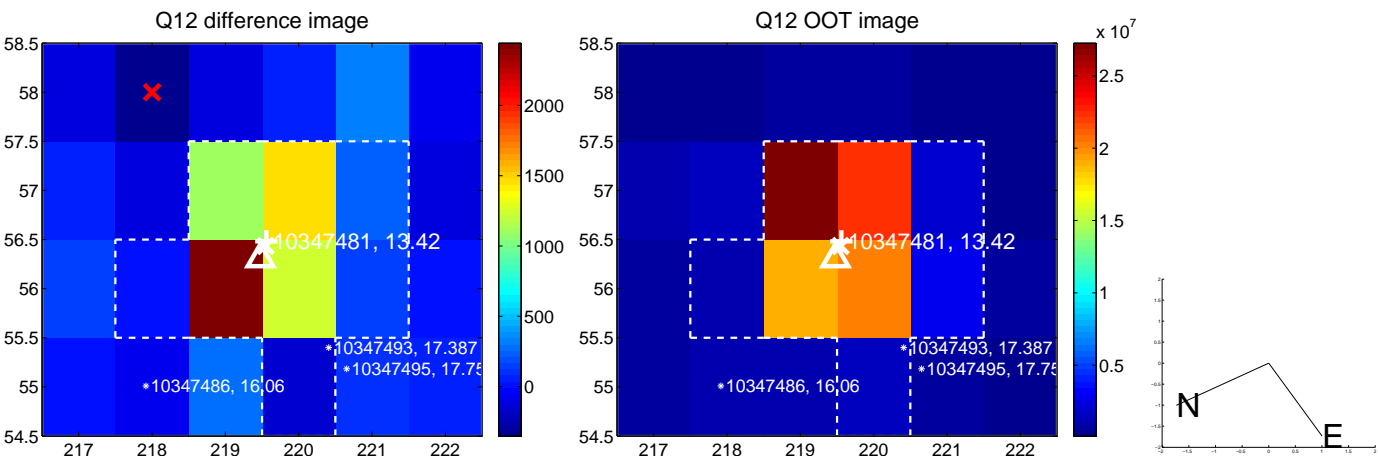
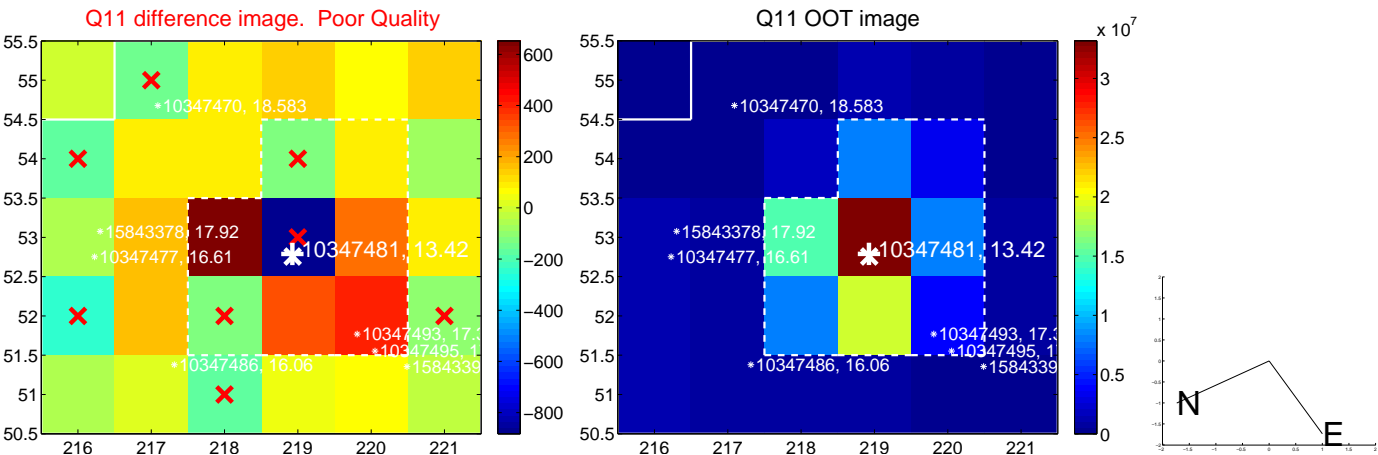
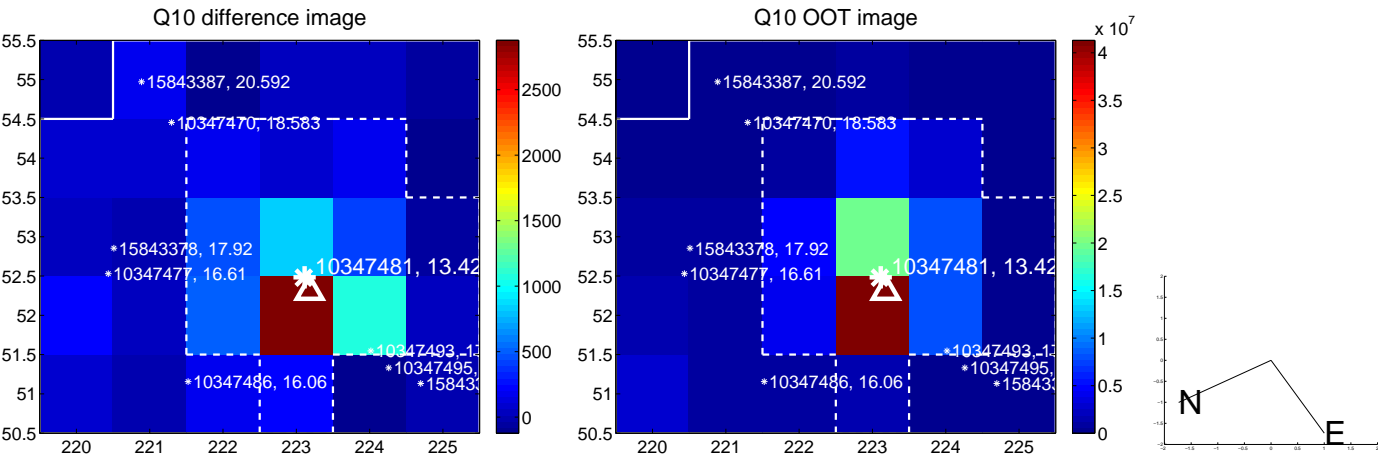
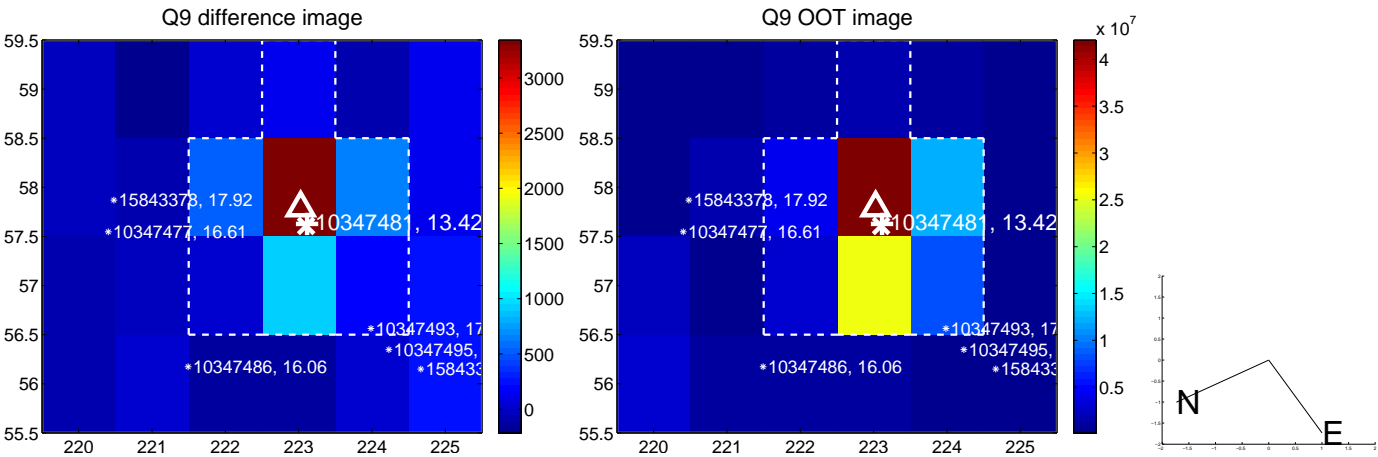
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



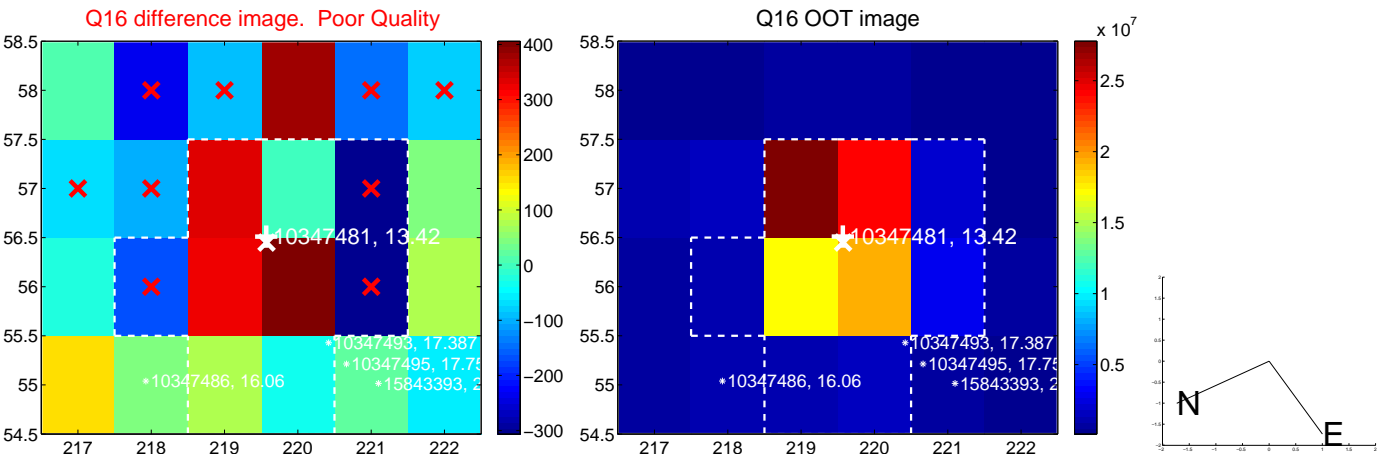
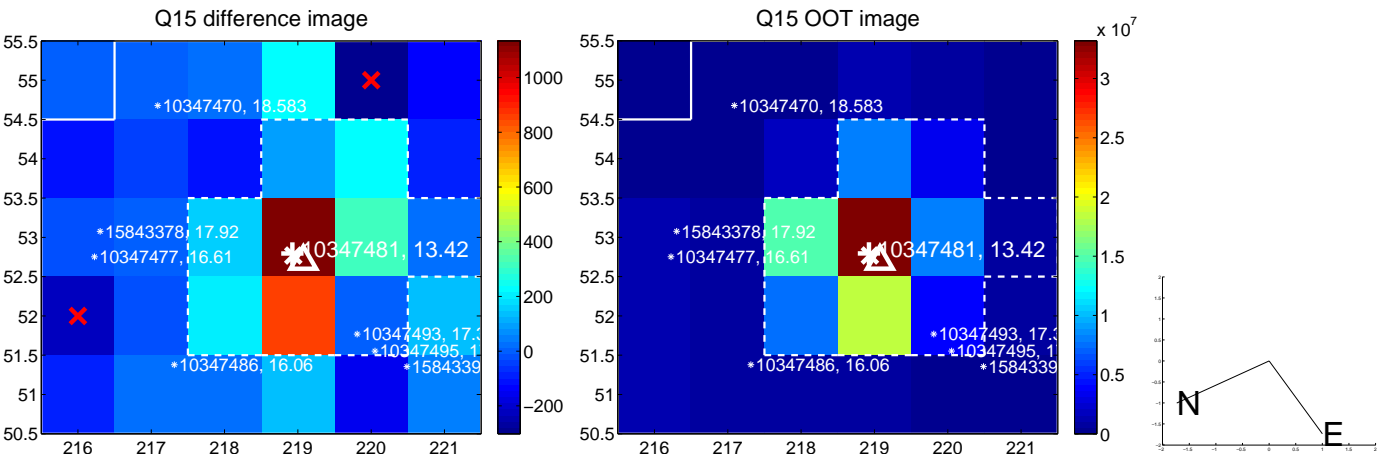
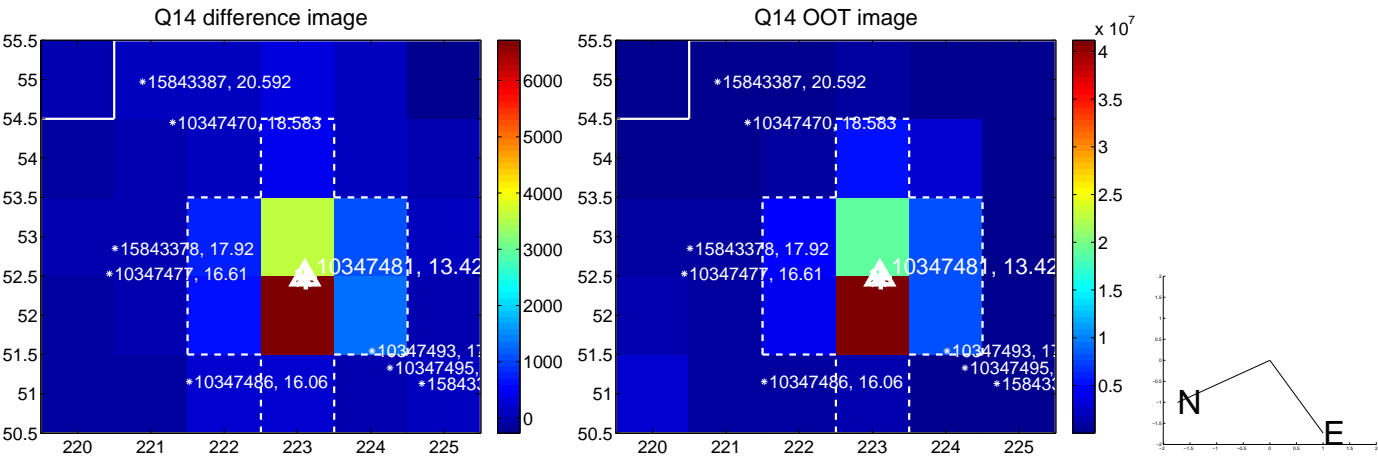
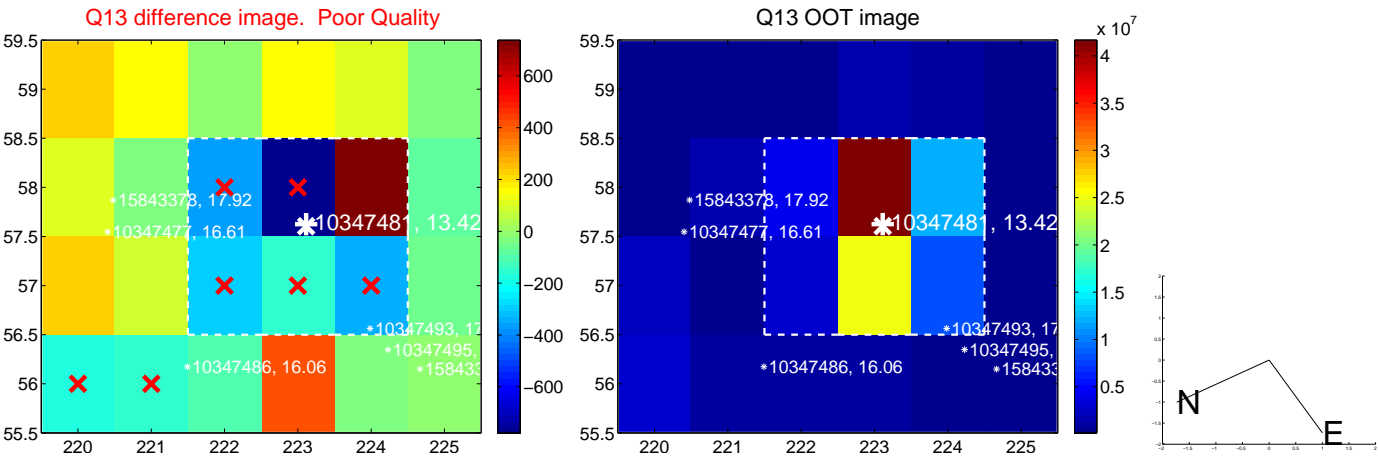
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



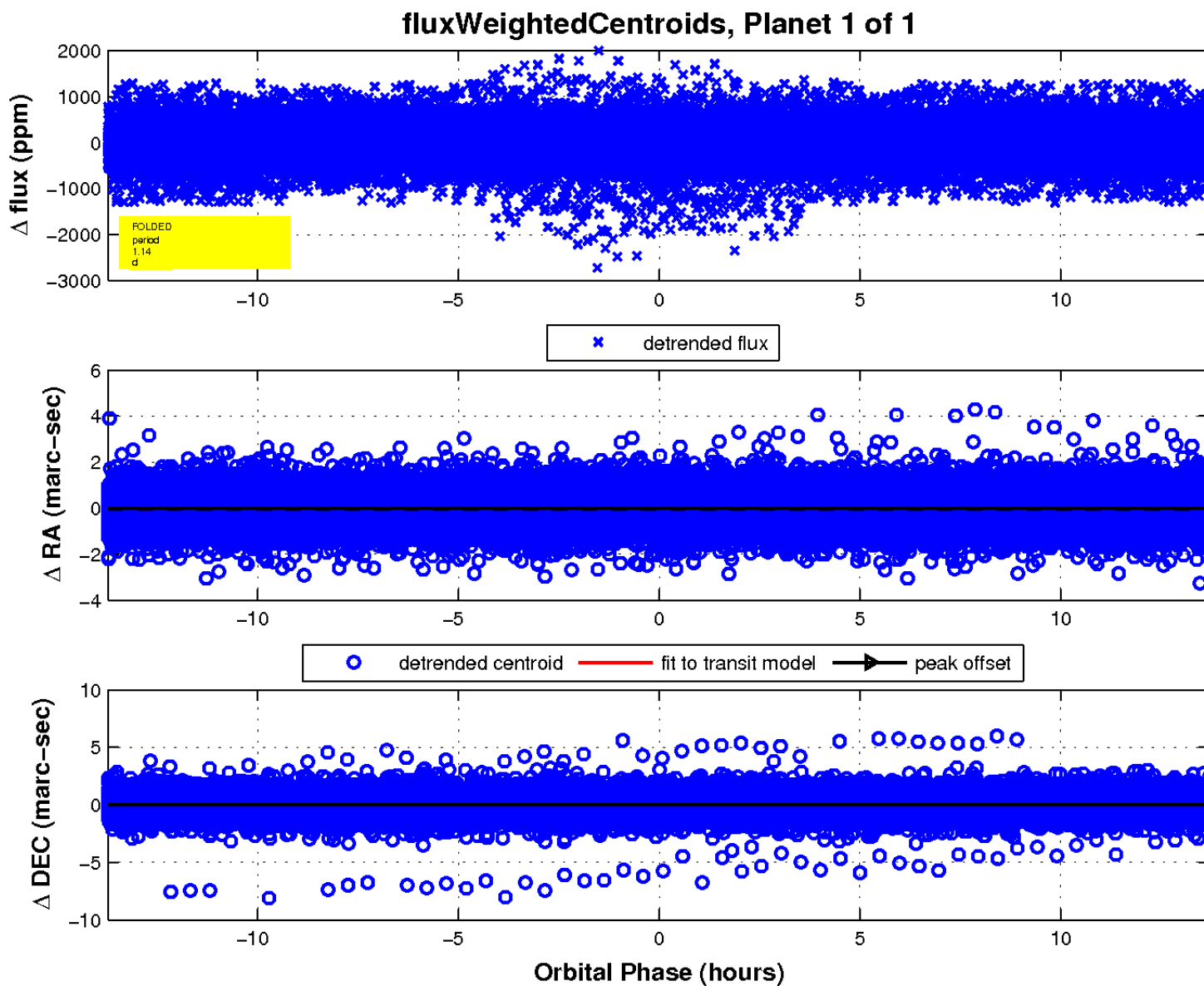
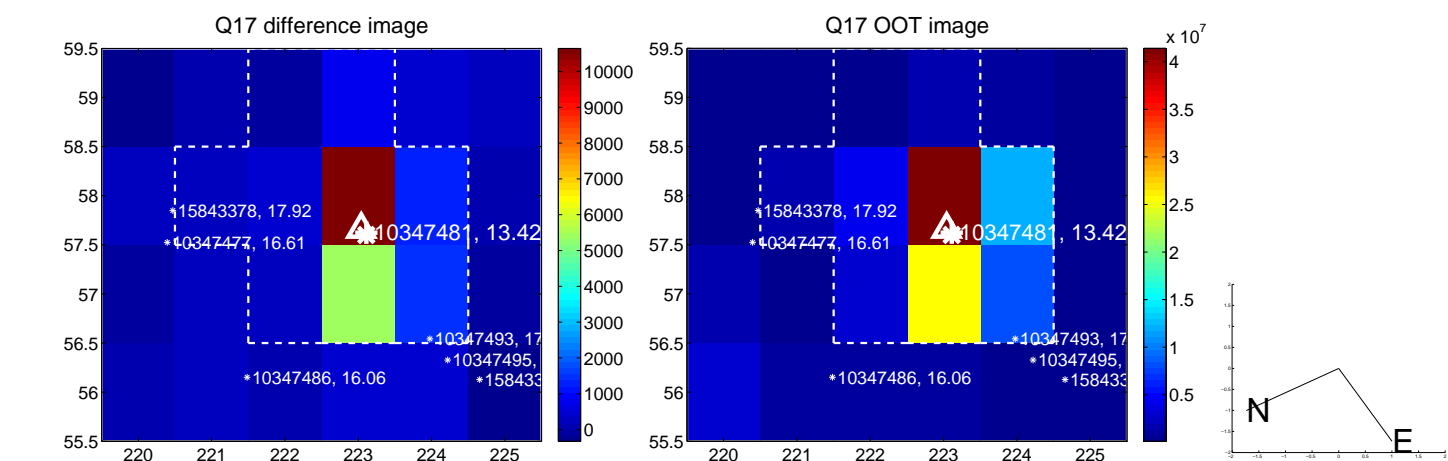
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

