

KIC 007454979

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})
007454979-01	OBS	No	0.917335	132.314919	32.3	8.726	9.5	15.8	2.62	8755	1.51	61813.63

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007454979-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—CENT_UNRESOLVED_OFFSET

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

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

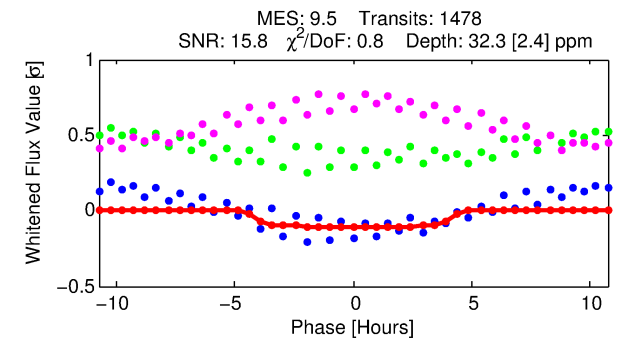
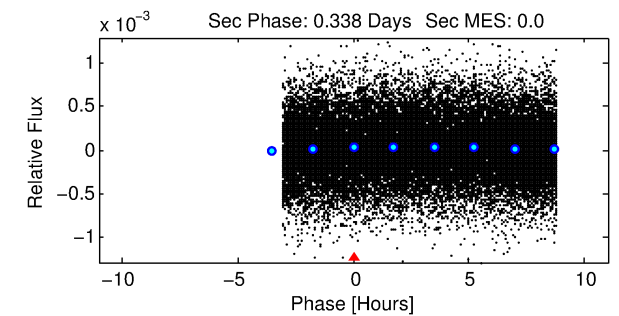
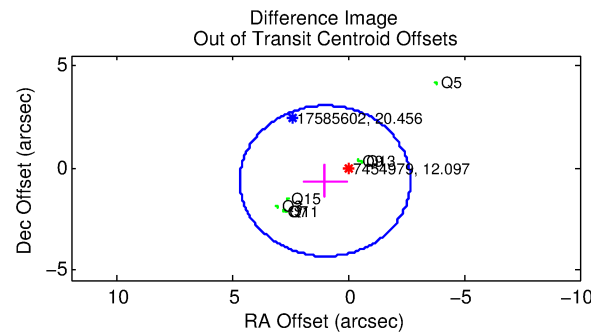
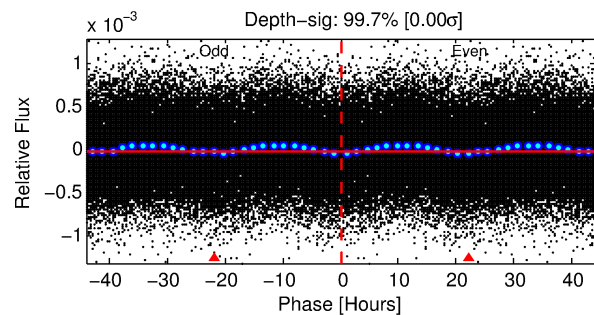
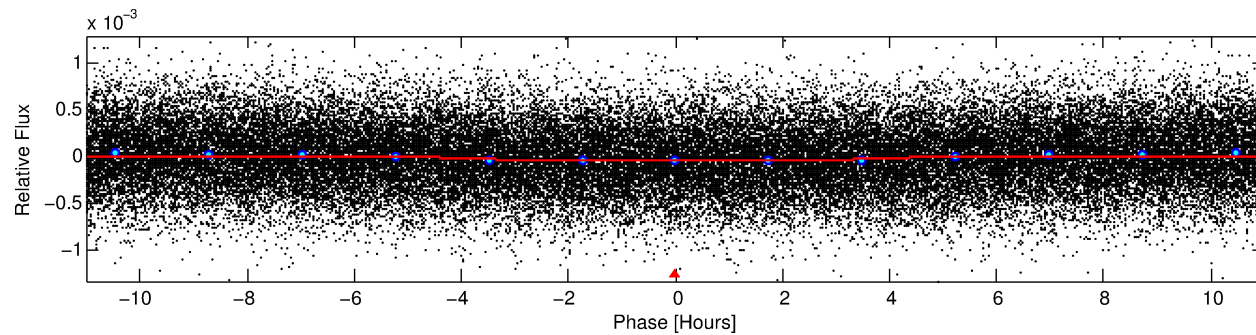
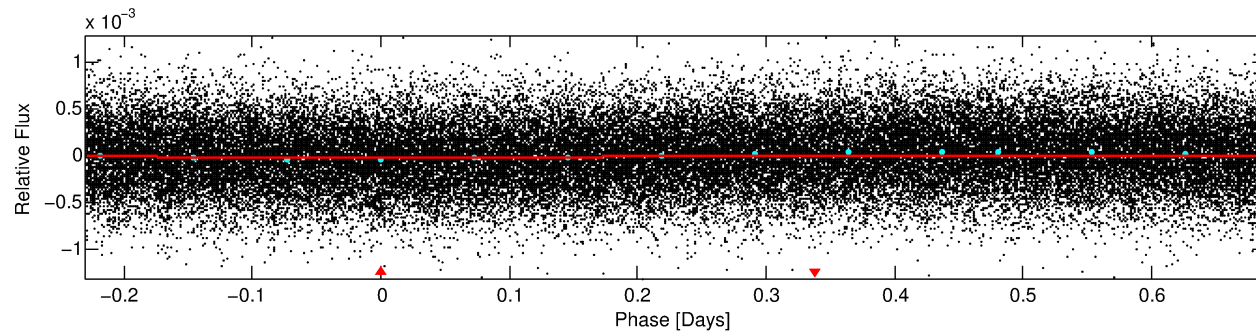
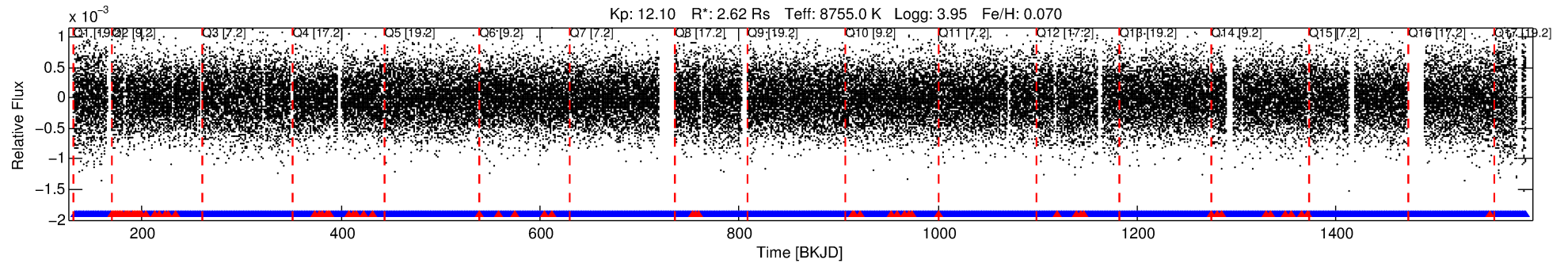
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007454979-01

No Significant Match Found

DV One-Page Summary

KIC: 7454979 Candidate: 1 of 1 Period: 0.917 d



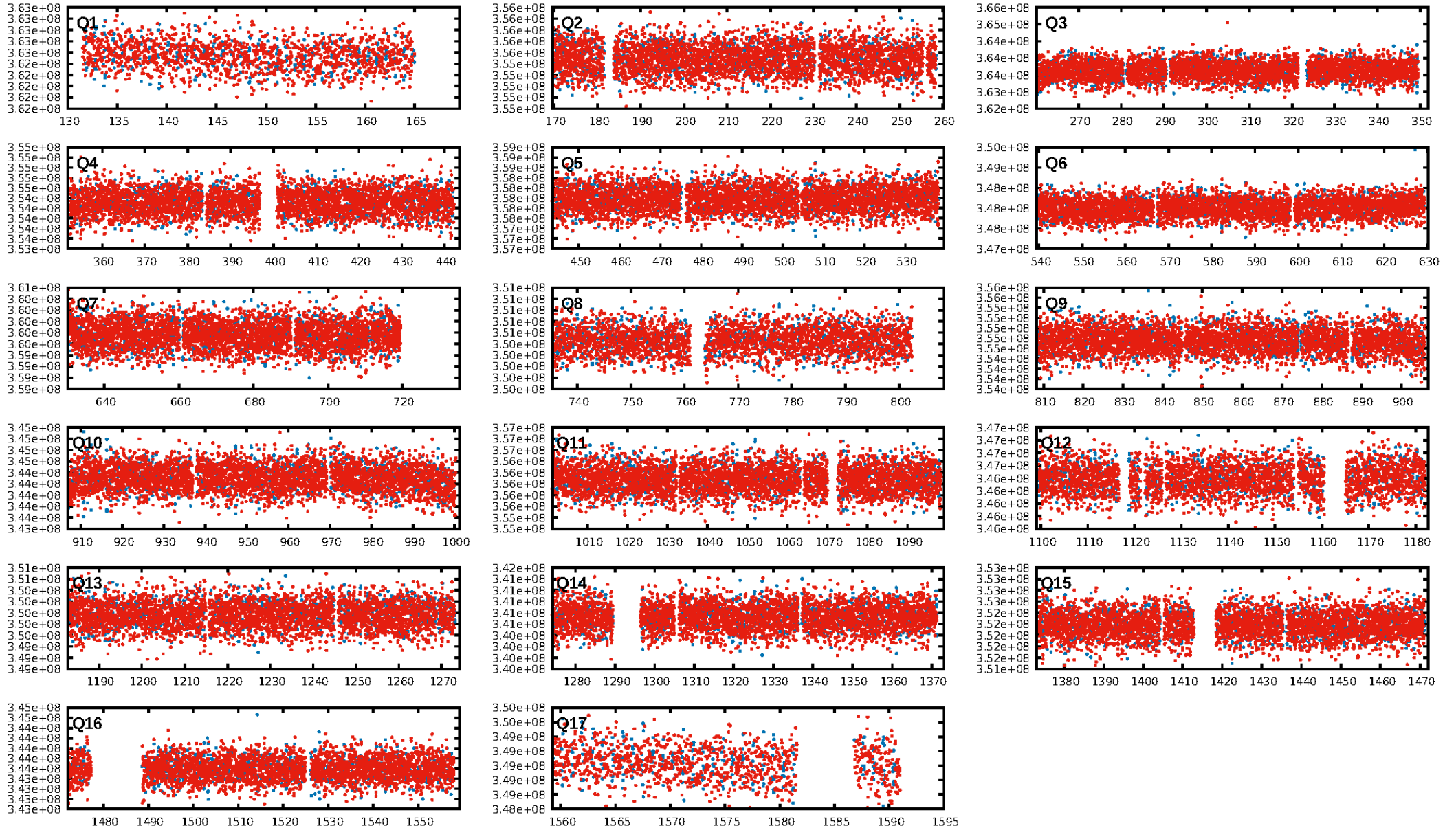
DV Fit Results:

Period = 0.91733 [0.00001] d
Epoch = 132.3149 [0.0056] BKJD
Rp/R* = 0.0053 [0.0033]
a/R* = 1.06 [0.44]
b = 0.12 [31.84]
Seff = 61813.63 [30681.84]
Teff = 4021 [499] K
Rp = 1.51 [1.08] Re
a = 0.0242 [0.0075] AU
Ag = N/A
Teffp = N/A

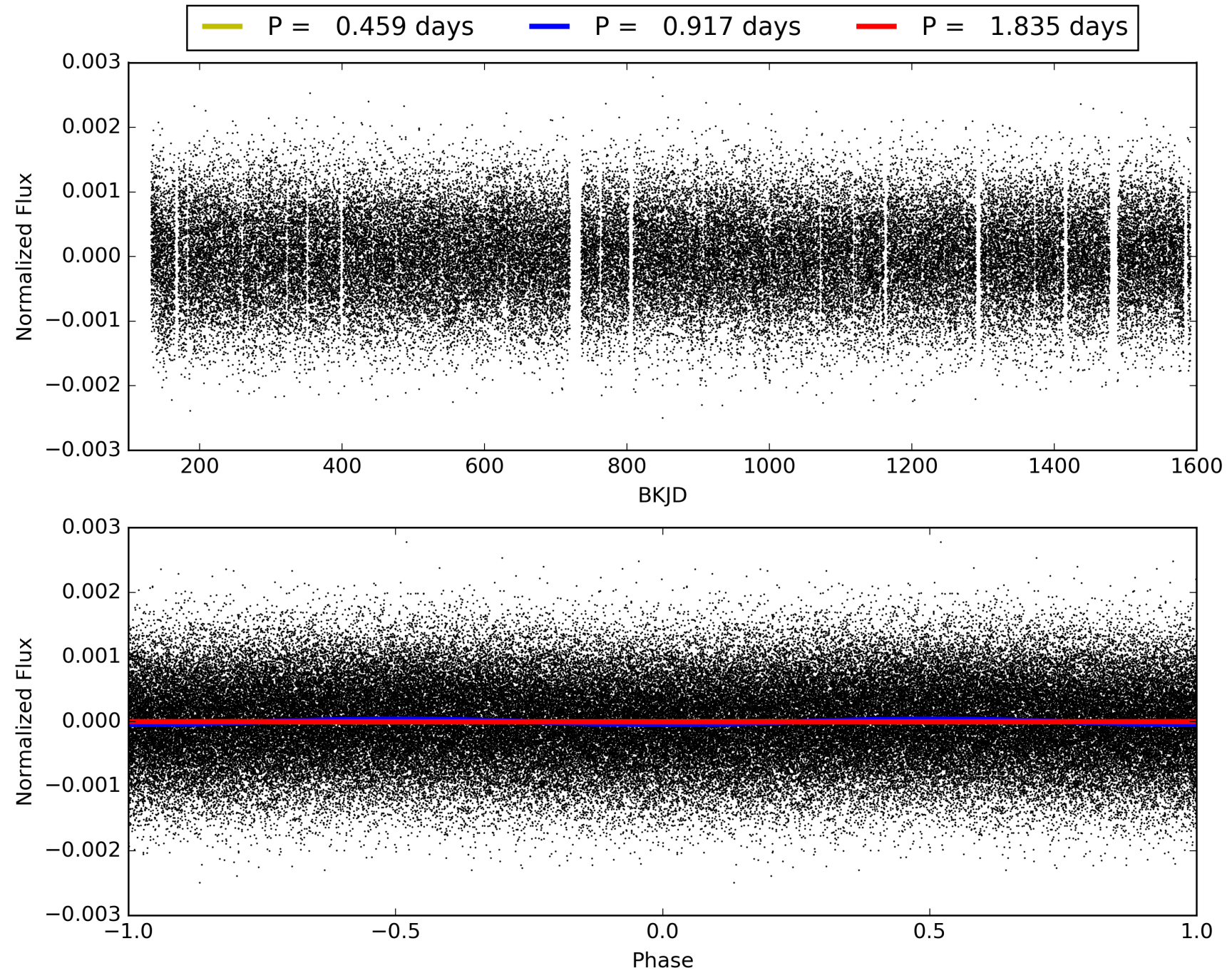
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.95 [1334/1411]
GhostDiagnostic-chr: 5.062
Centroid-sig: 18.3%
Centroid-so: 0.090 arcsec [0.42σ]
OotOffset-rm: 1.206 arcsec [0.98σ]
KicOffset-rm: 1.164 arcsec [1.00σ]
OotOffset-st: 0/4/0/3 [7]
KicOffset-st: 0/4/0/3 [7]
DiffImageQuality-fgm: 0.86 [6/7]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 007454979-01, PDC Light Curves

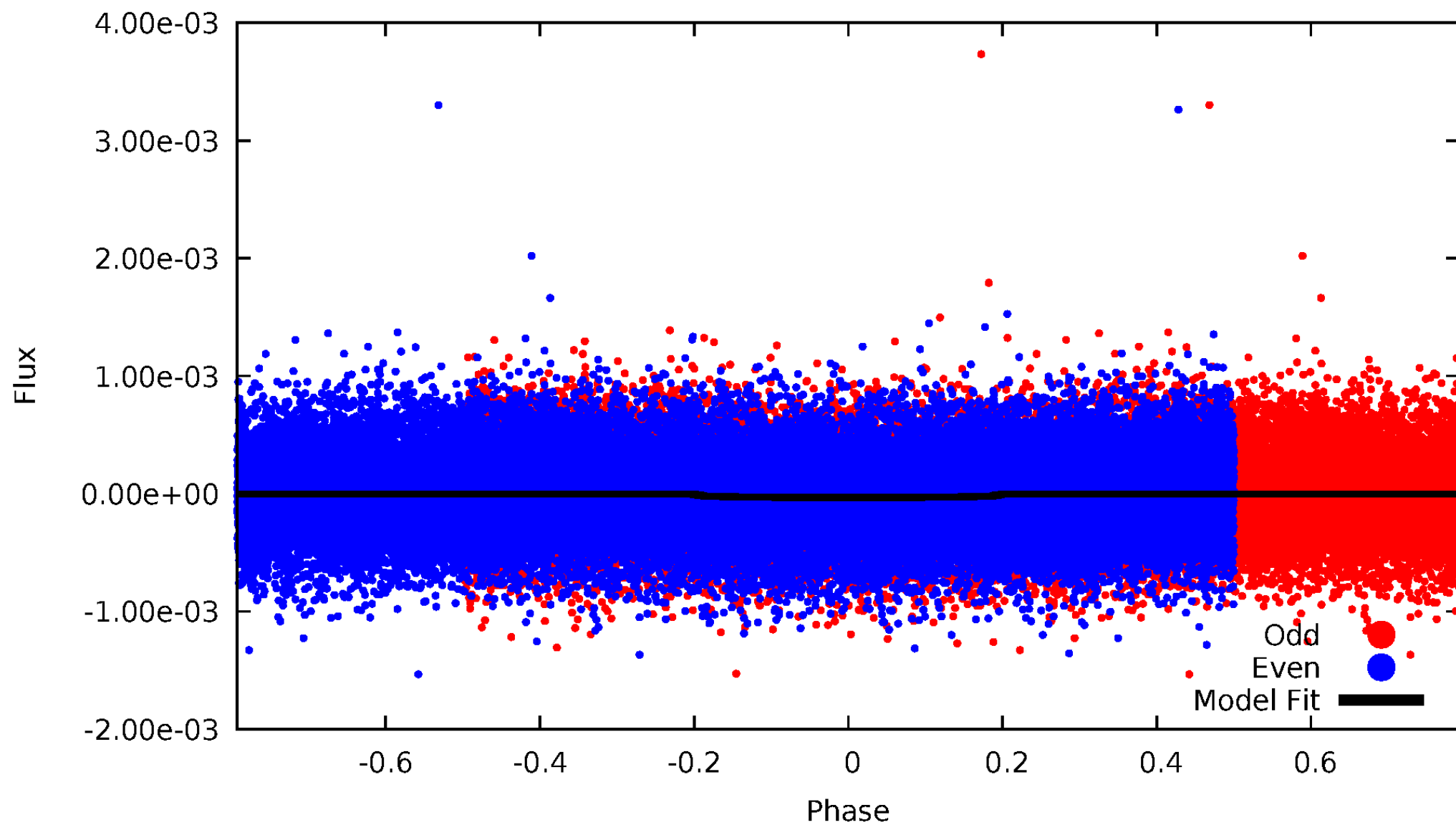


TCE 007454979-01



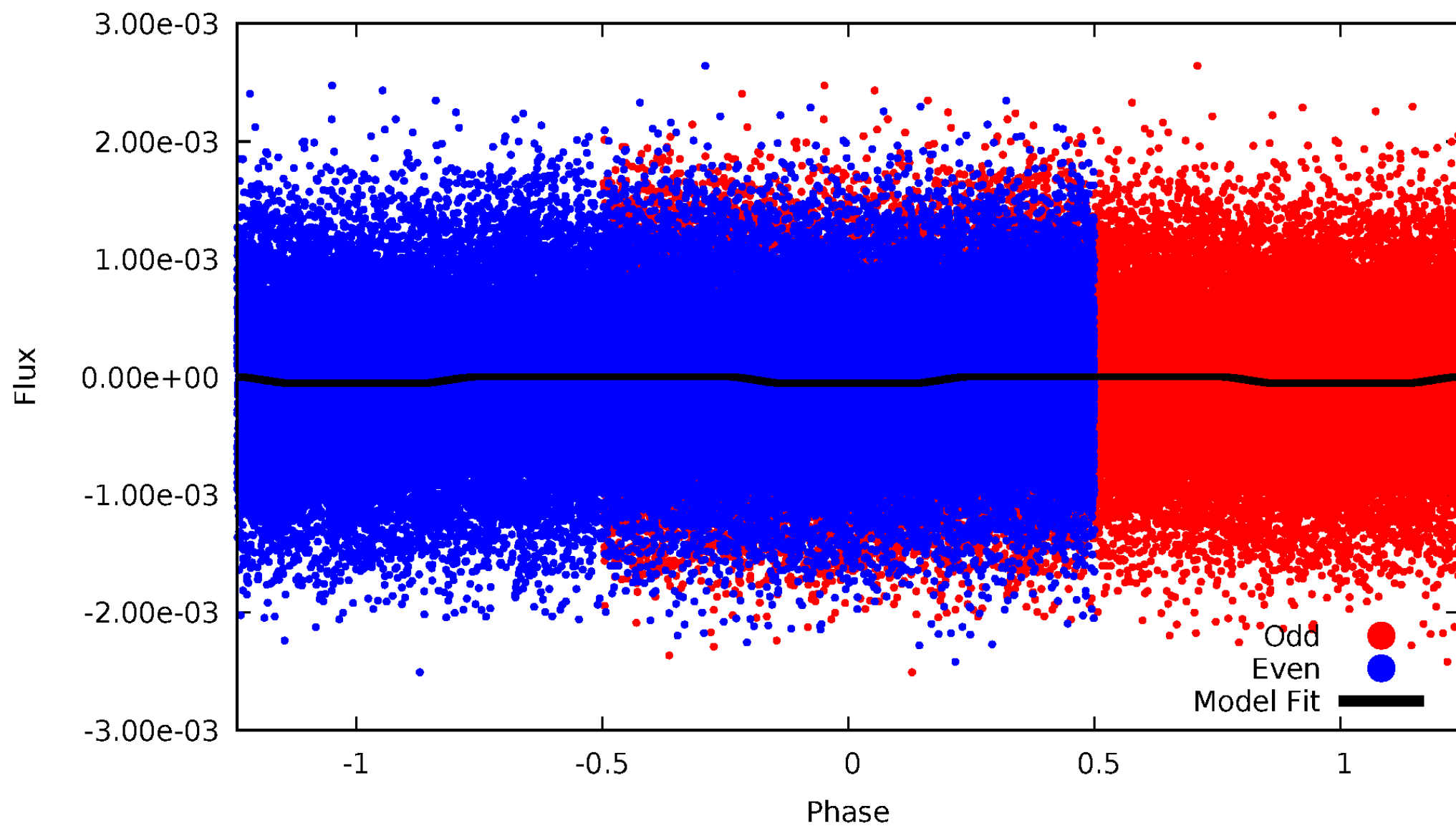
DV Odd/Even

TCE 007454979-01



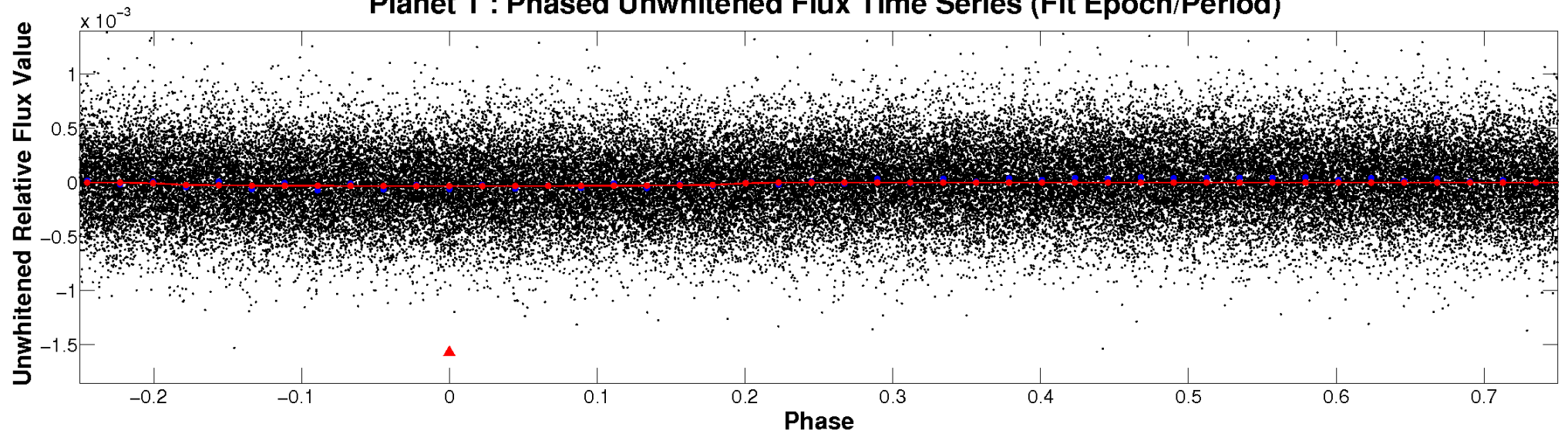
ALT Odd/Even

TCE 007454979-01

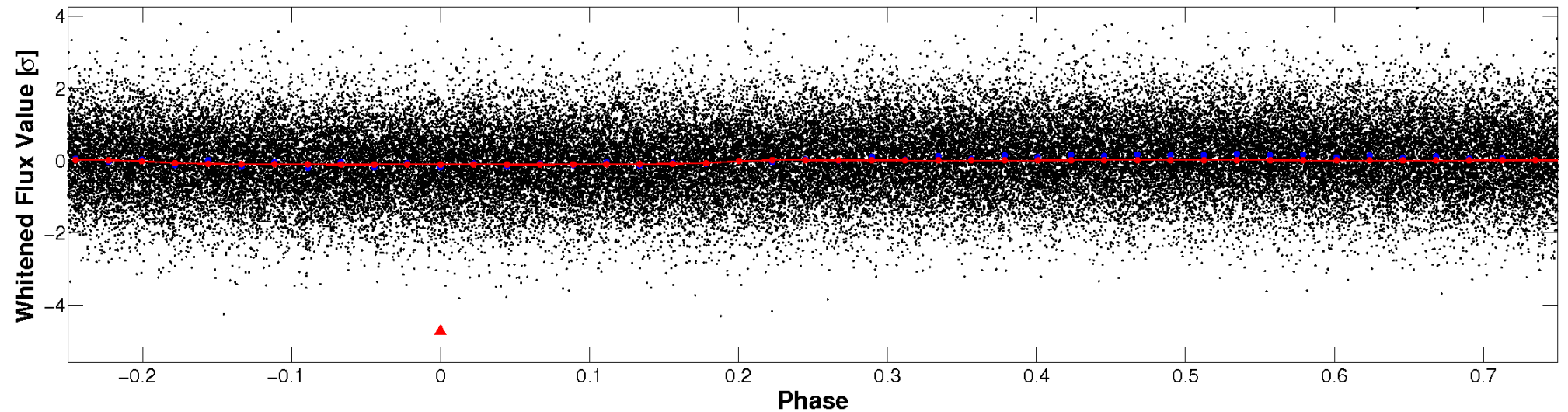


Non-Whitened Vs. Whitened Light Curve

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

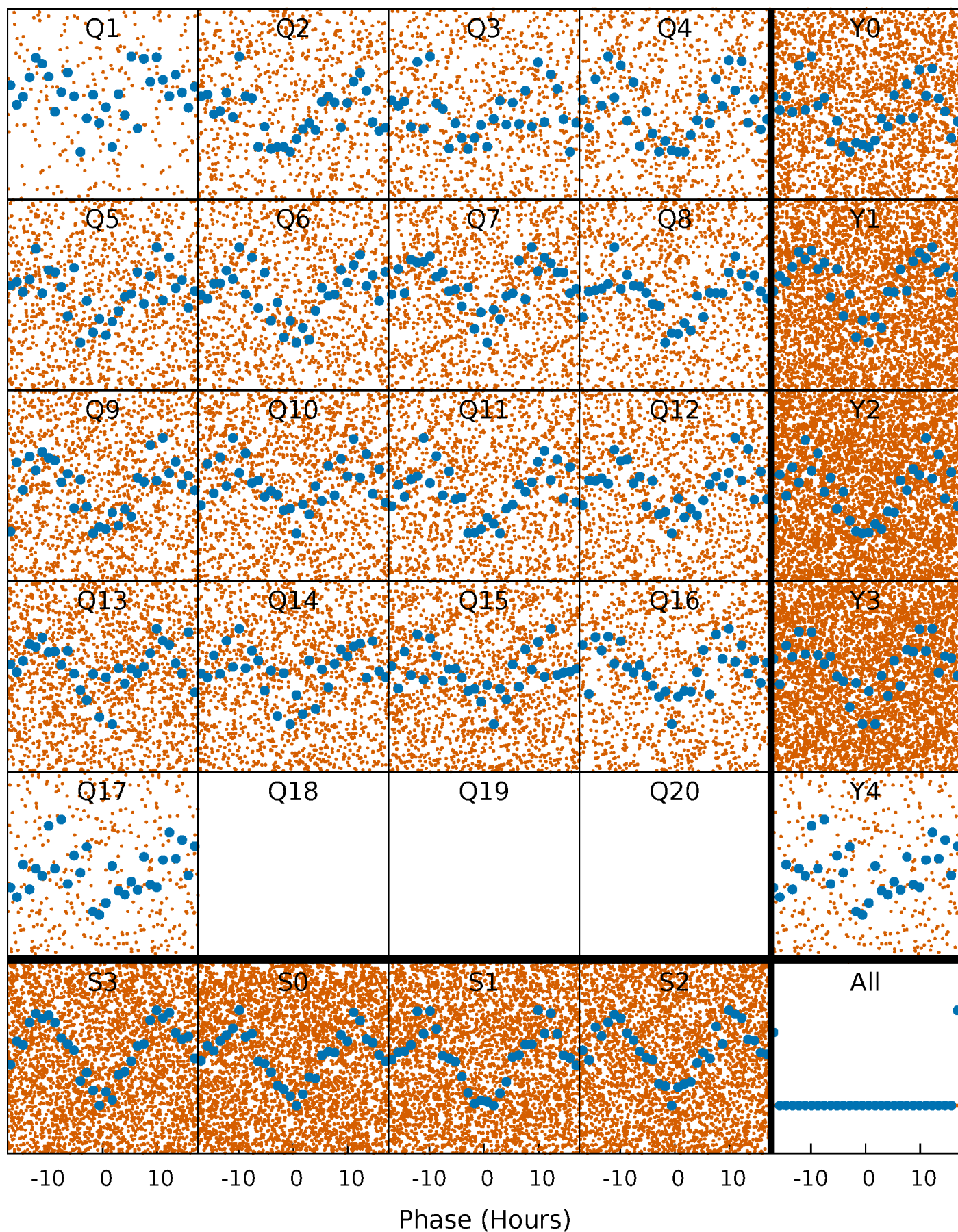


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



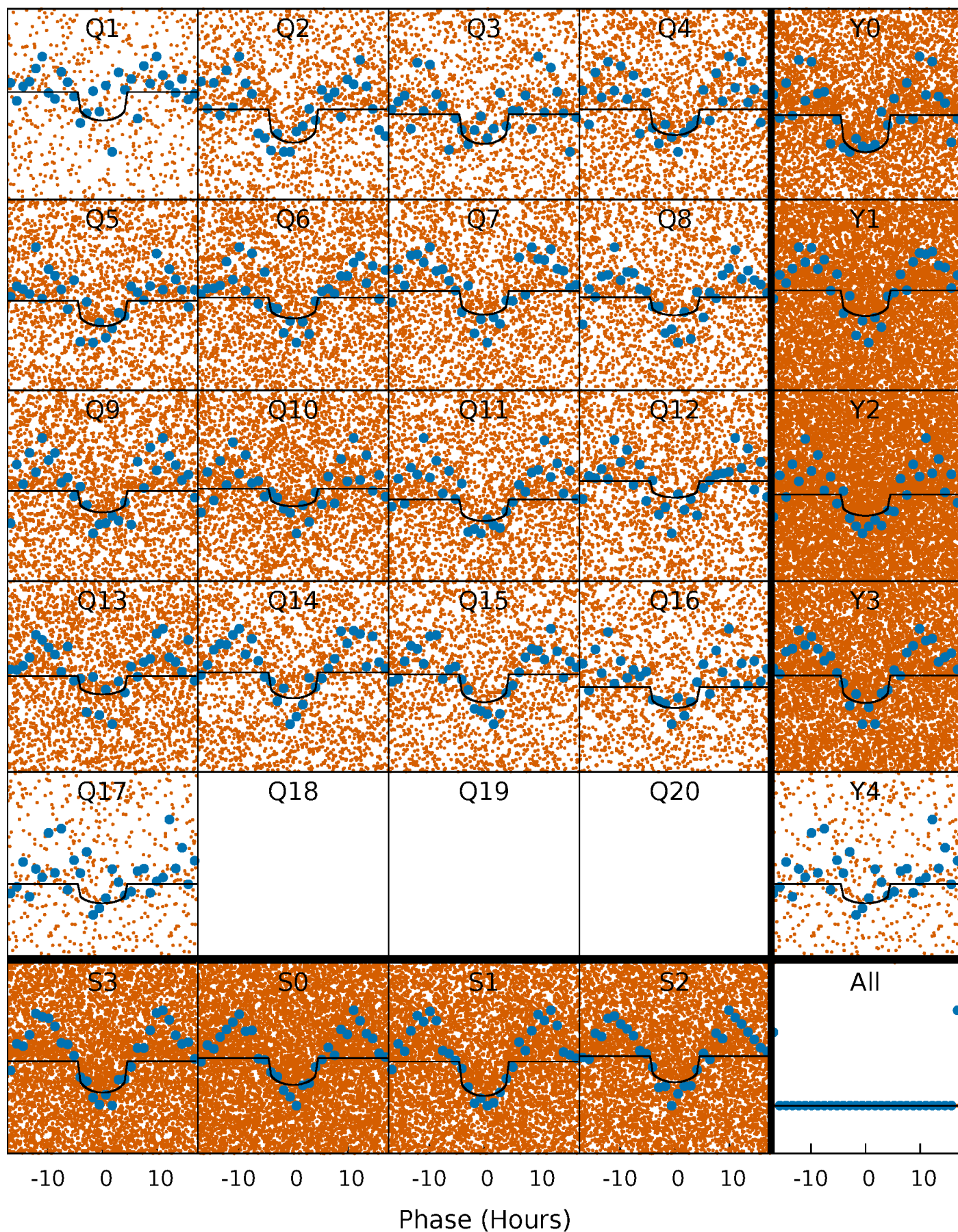
PDC Quarter-Phased Transit Curves

TCE 007454979-01 P= 0.917335 Days $T_0=132.314919$ (BKJD)



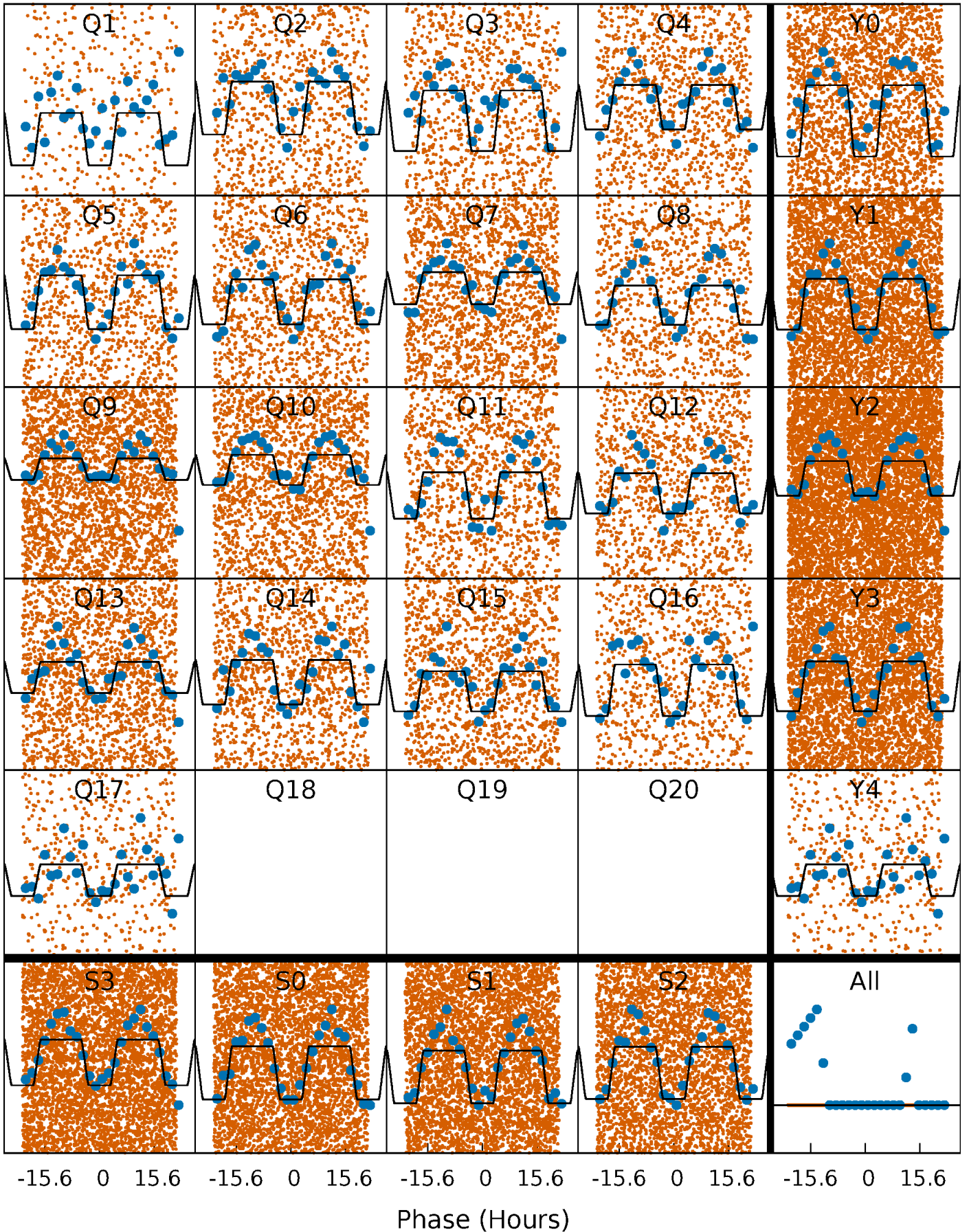
DV Quarter-Phased Transit Curves

TCE 007454979-01 P= 0.917335 Days $T_0=132.314919$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

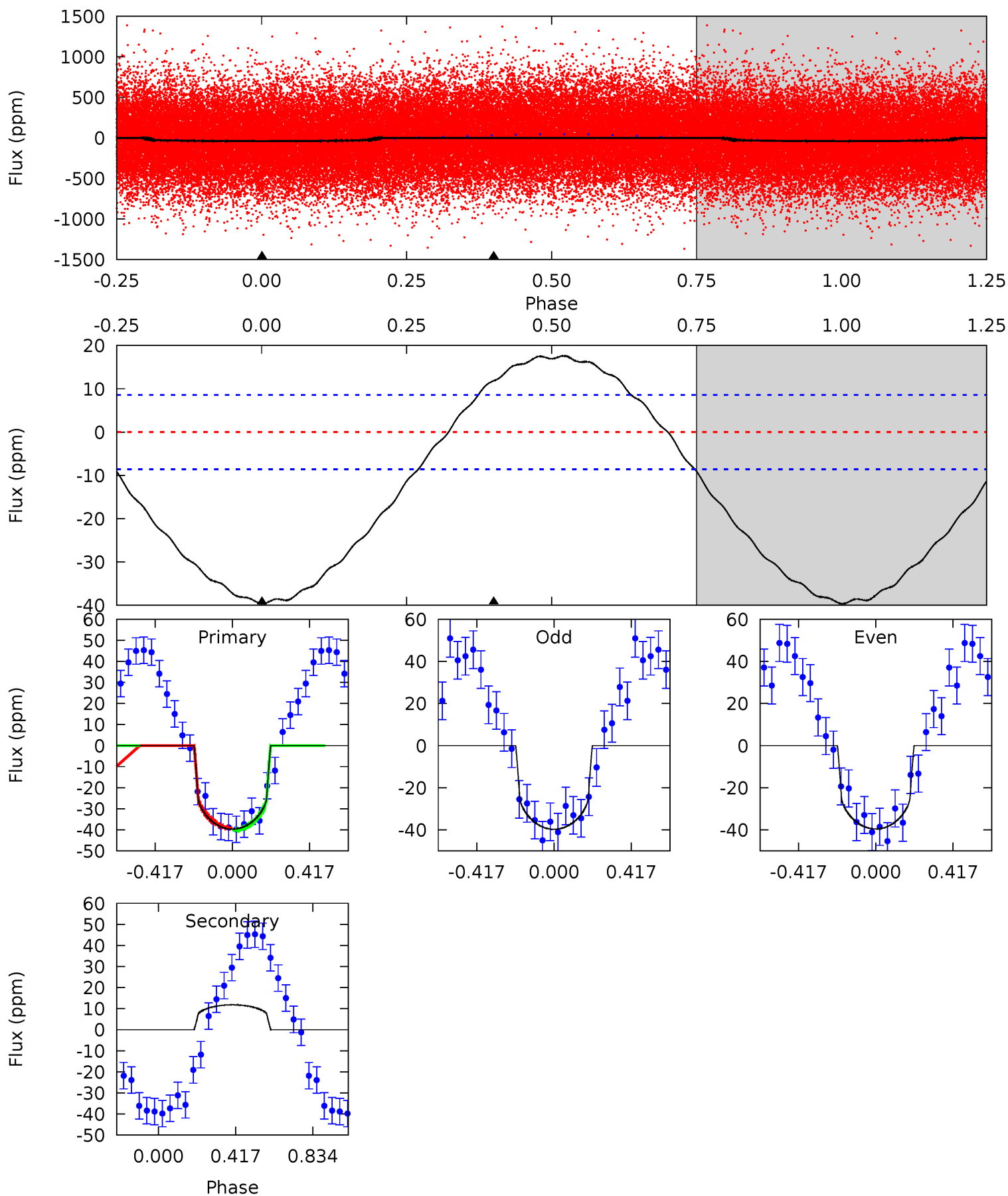
TCE 007454979-01 P= 0.917359 Days $T_0=132.299793$ (BKJD)



DV Model-Shift Uniqueness Test

007454979-01, P = 0.917335 Days, E = 131.397584 Days

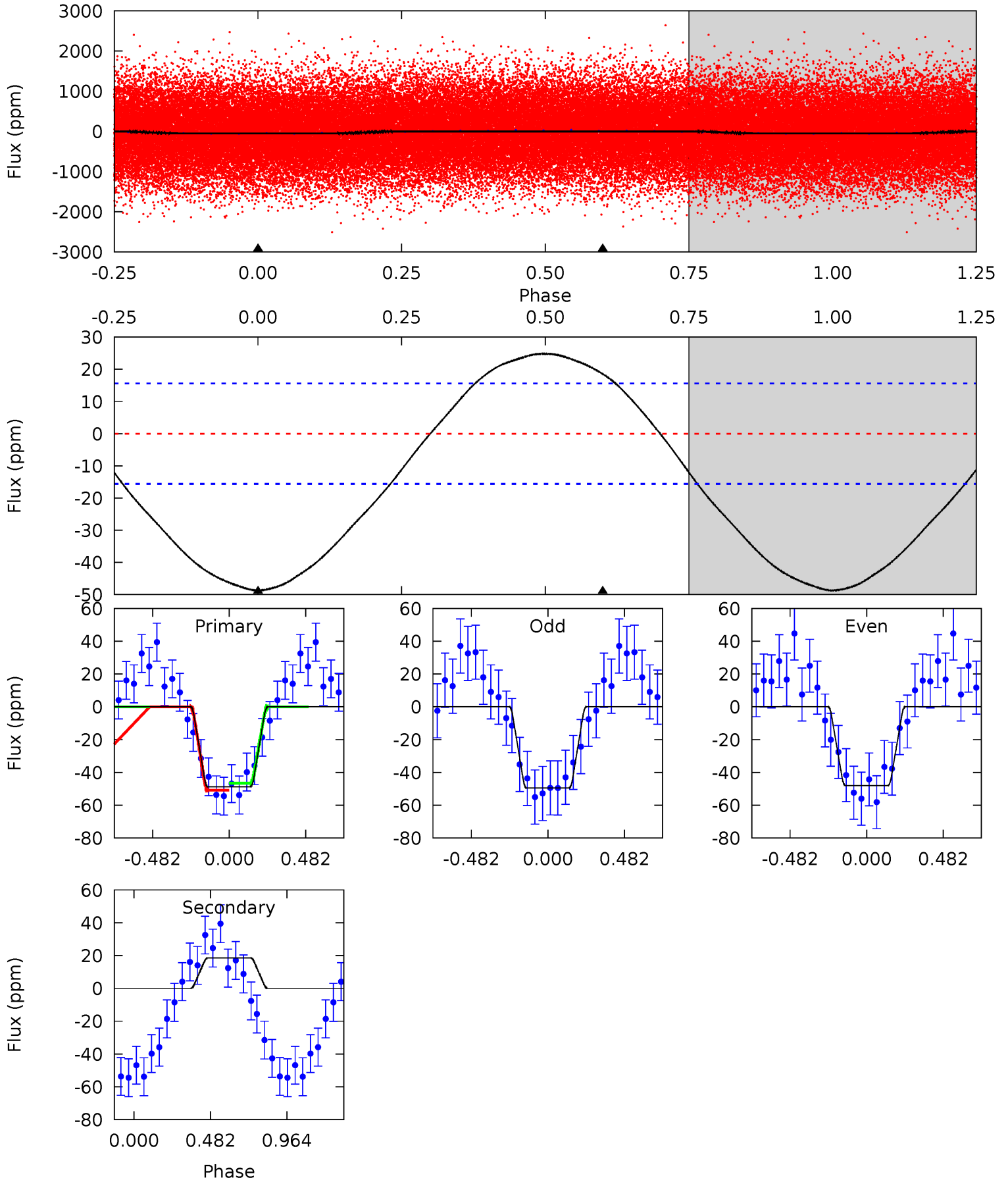
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.6	-5.86	0	0	4.26	0.81	2.57	19.6	19.6	-5.86	-5.86	0.03	1.03	0.31	0.27



Alt Model-Shift Uniqueness Test

007454979-01, P = 0.917359 Days, E = 131.382434 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.2	-5.02	0	0	4.22	0.70	1.72	13.2	13.2	-5.02	-5.02	0.20	1.04	0.34	0.57



Stellar Parameters For KIC 007454979

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	8755^{+276}_{-379}	$3.951^{+0.260}_{-0.140}$	$0.070^{+0.200}_{-0.600}$	$2.617^{+0.767}_{-0.938}$	$2.231^{+0.356}_{-0.660}$	$0.175^{+0.307}_{-0.073}$
	+3%/-4%	+7%/-4%	+286%/-857%	+29%/-36%	+16%/-30%	+175%/-41%
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 007454979-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	12 ± 2	$1.39^{+0.94}_{-0.73}$	5520^{+473}_{-549}	-6987^{+1193}_{-4146}	$-1.810^{+1.154}_{-6.281}$
Alt.	19 ± 4	$1.97^{+1.04}_{-0.83}$	5528^{+413}_{-521}	-6734^{+946}_{-2186}	$-1.561^{+0.901}_{-3.084}$

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

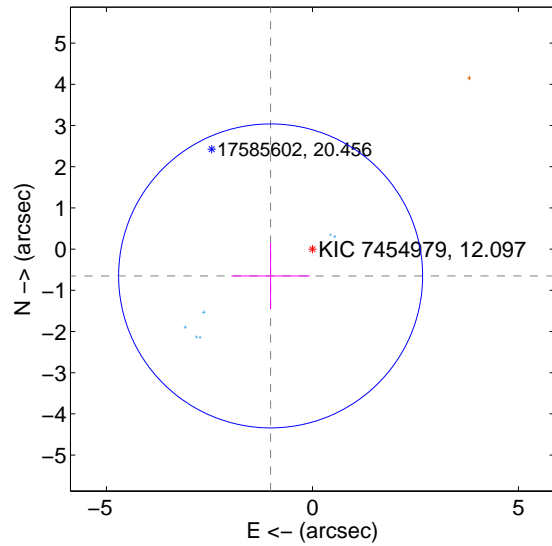
Supplemental centroid analysis for 007454979-01. Kepler magnitude: 12.10. Transit SNR 15.80

There are 6 quarters with good PRF difference image offsets

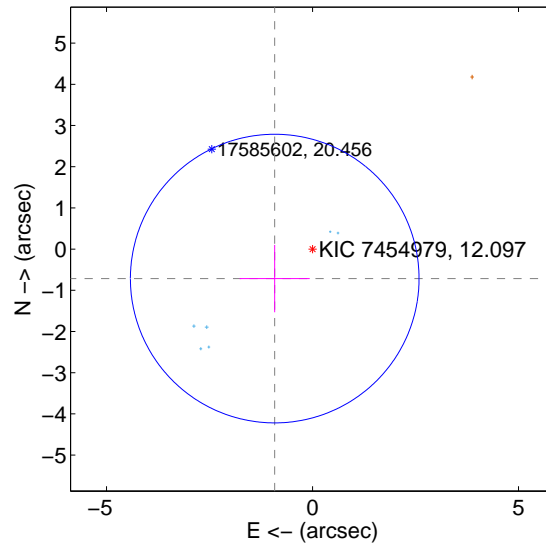
The direct PRF centroid is offset from the target star catalog position by about 0.37 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.206 ± 1.230	0.98	1.015 ± 0.952	-0.651 ± 0.803
PRF-fit source offset from KIC position	1.164 ± 1.168	1.00	0.917 ± 0.851	-0.716 ± 0.817
photometric centroid source offset	0.09 ± 0.22	0.42	0.09 ± 0.22	0.02 ± 0.19

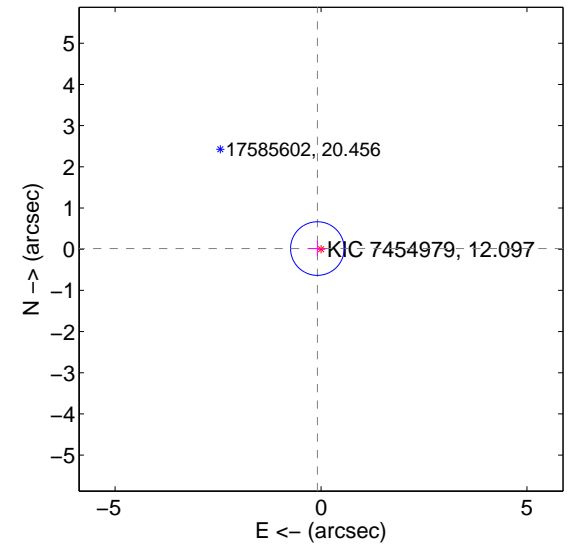
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

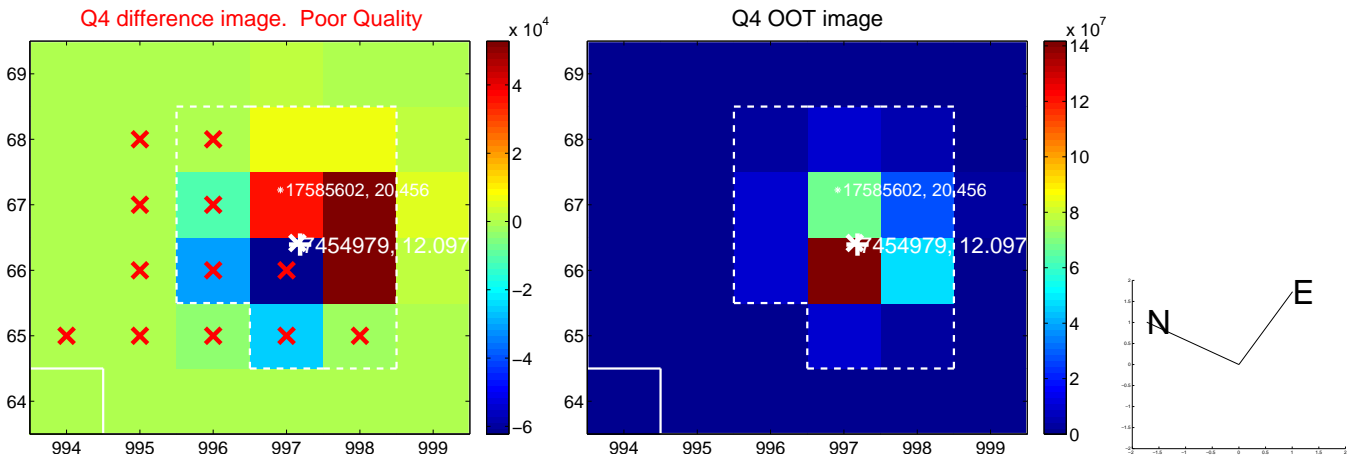
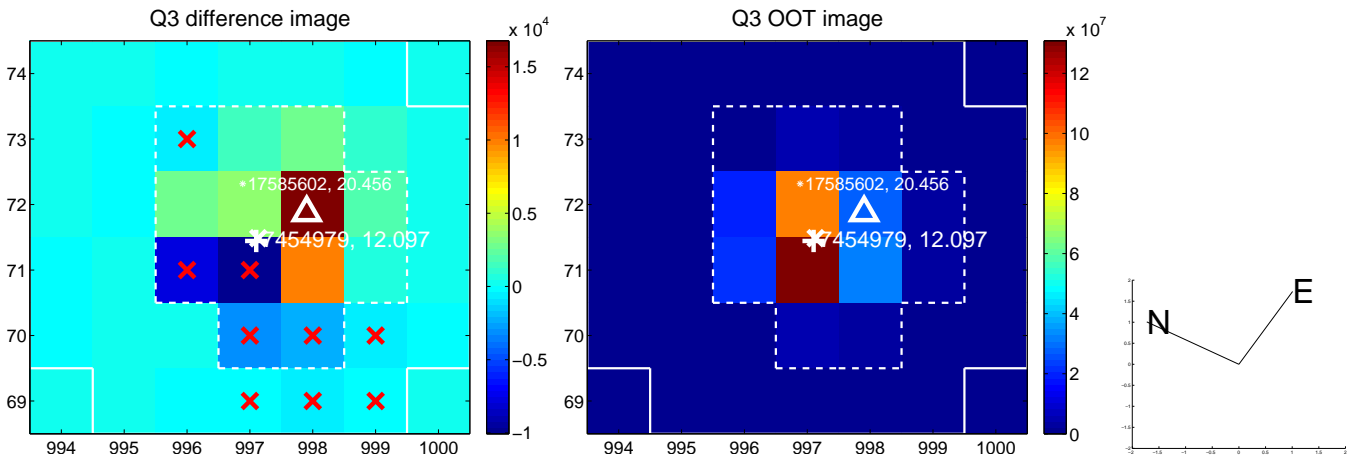
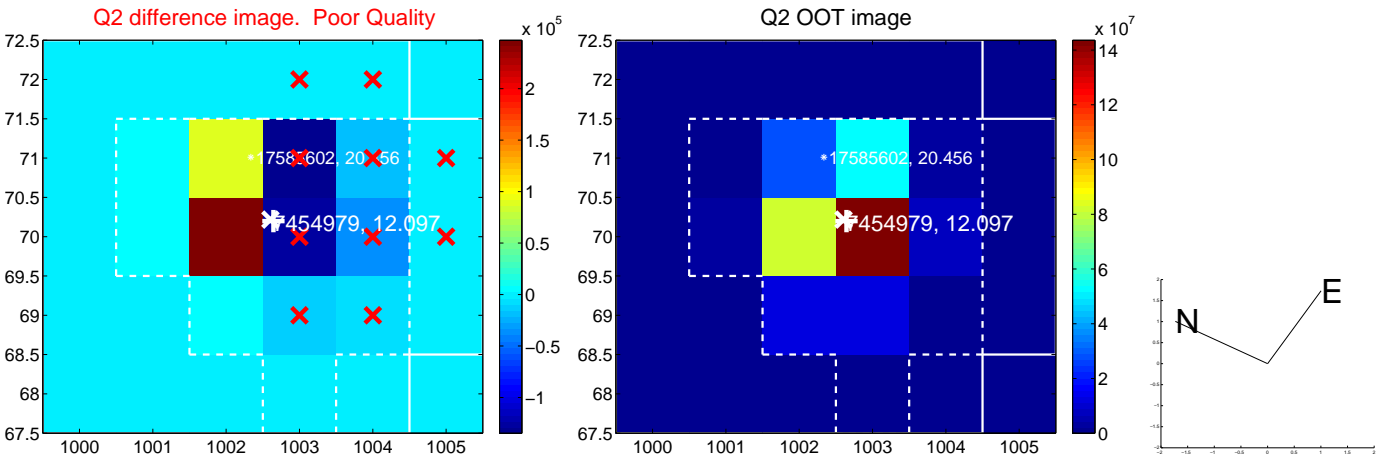
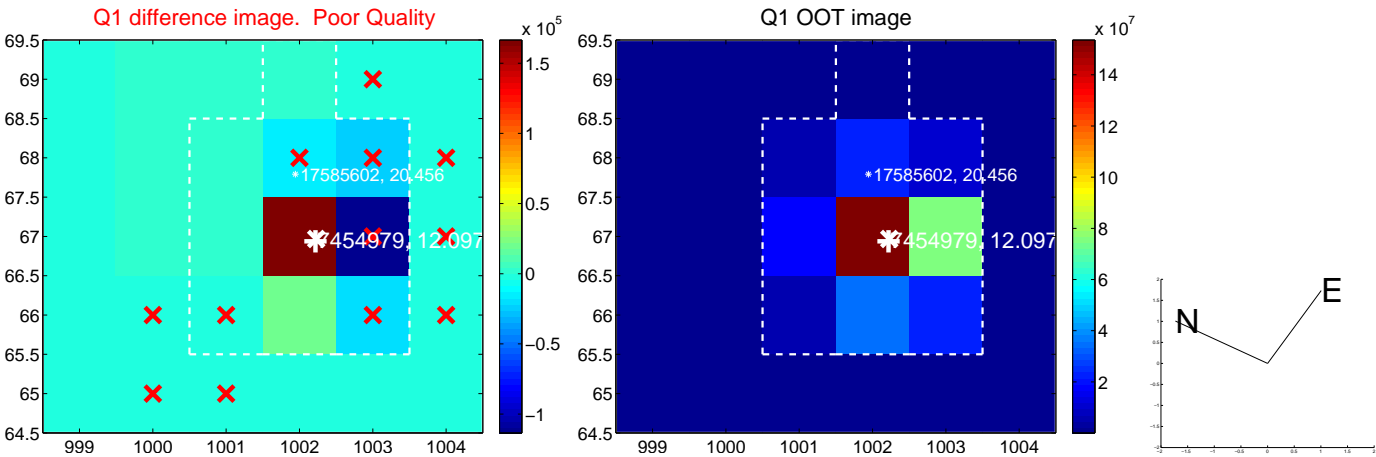


offset from photometric centroids

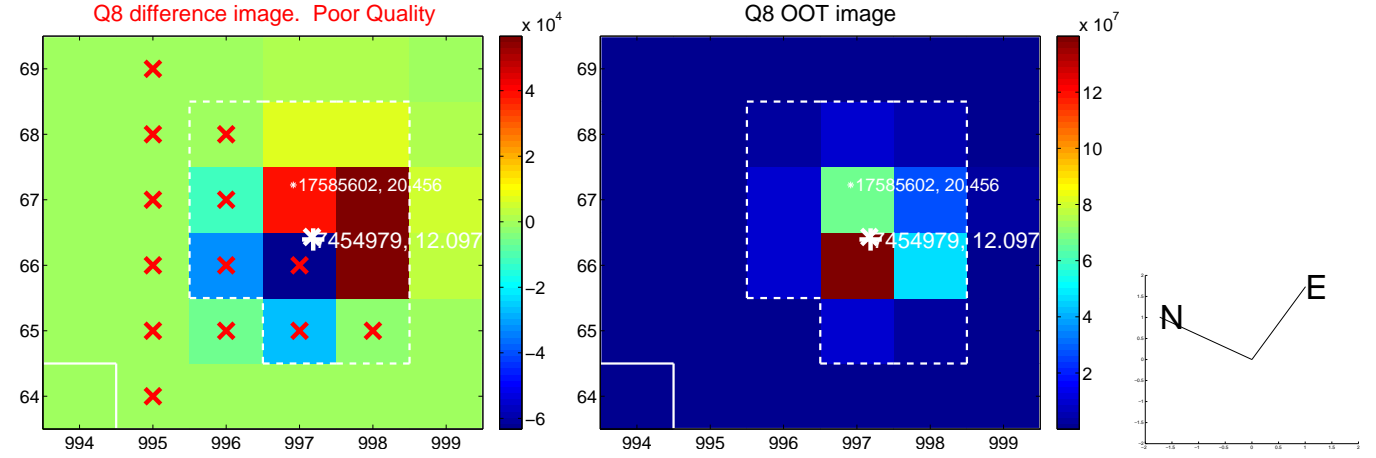
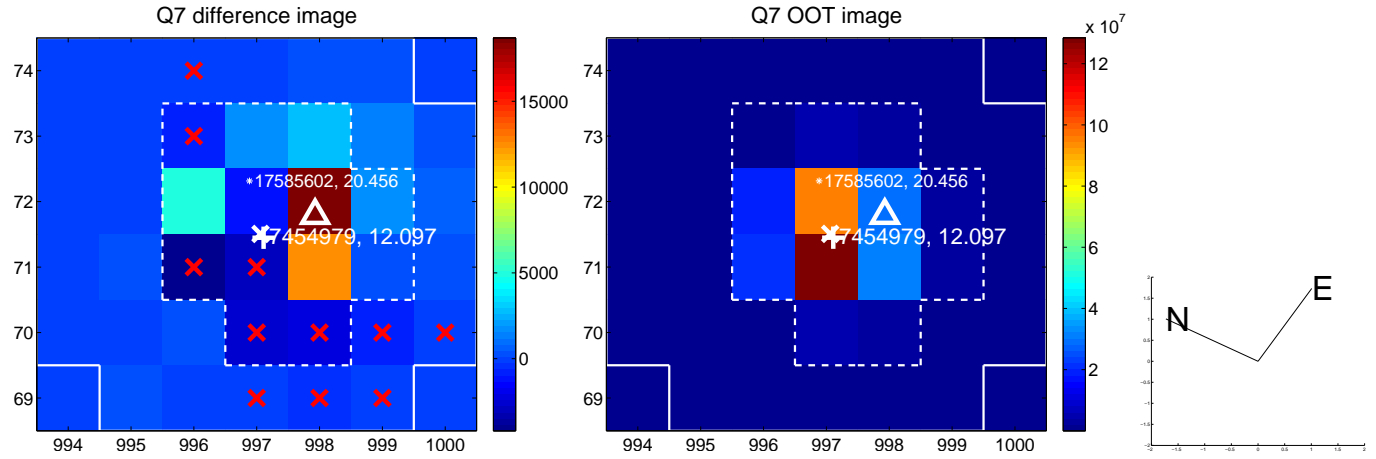
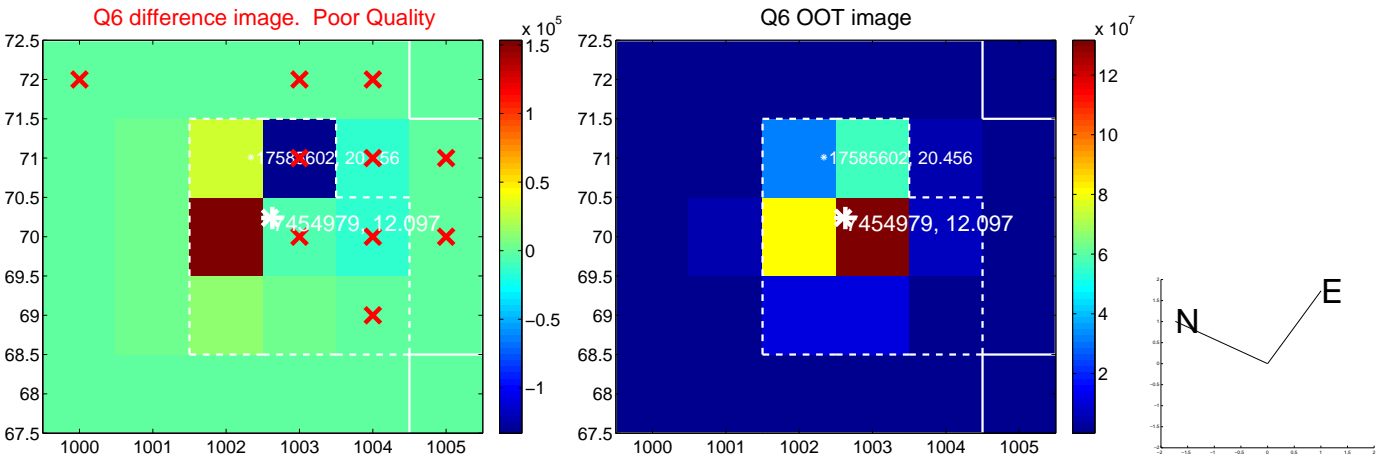
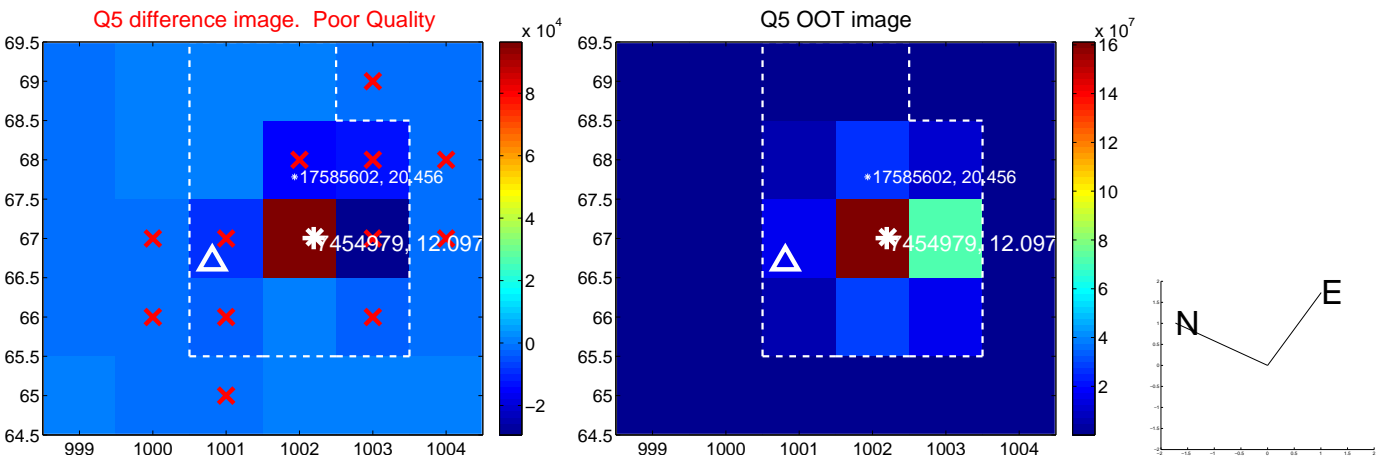


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

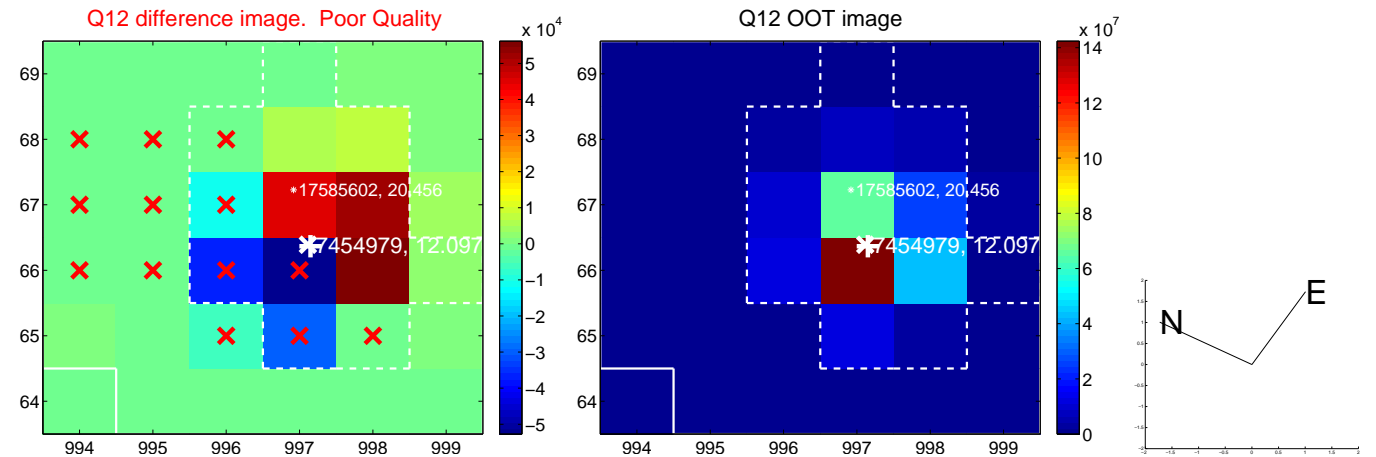
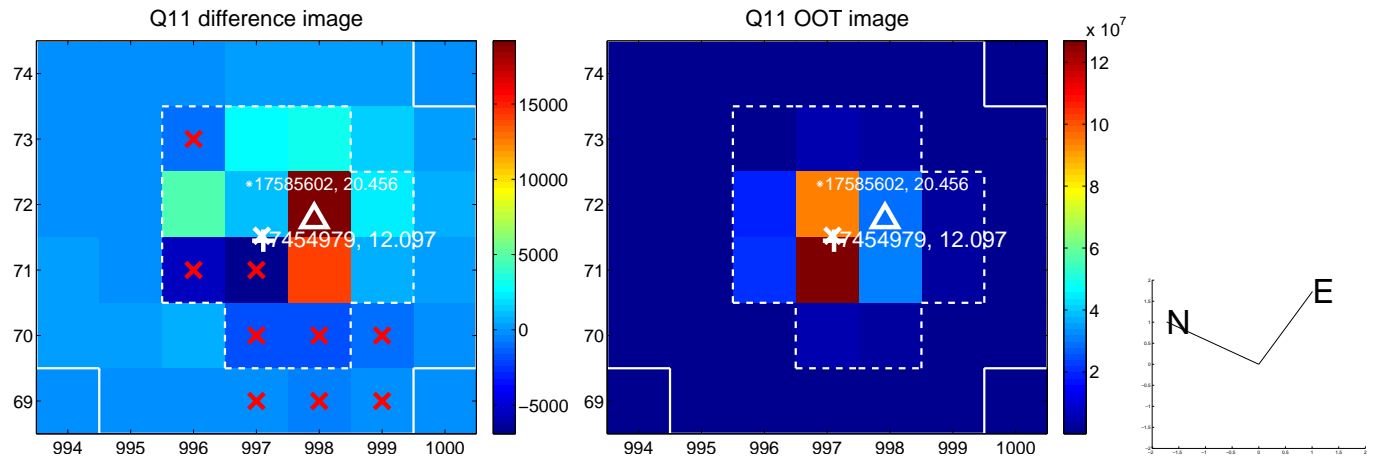
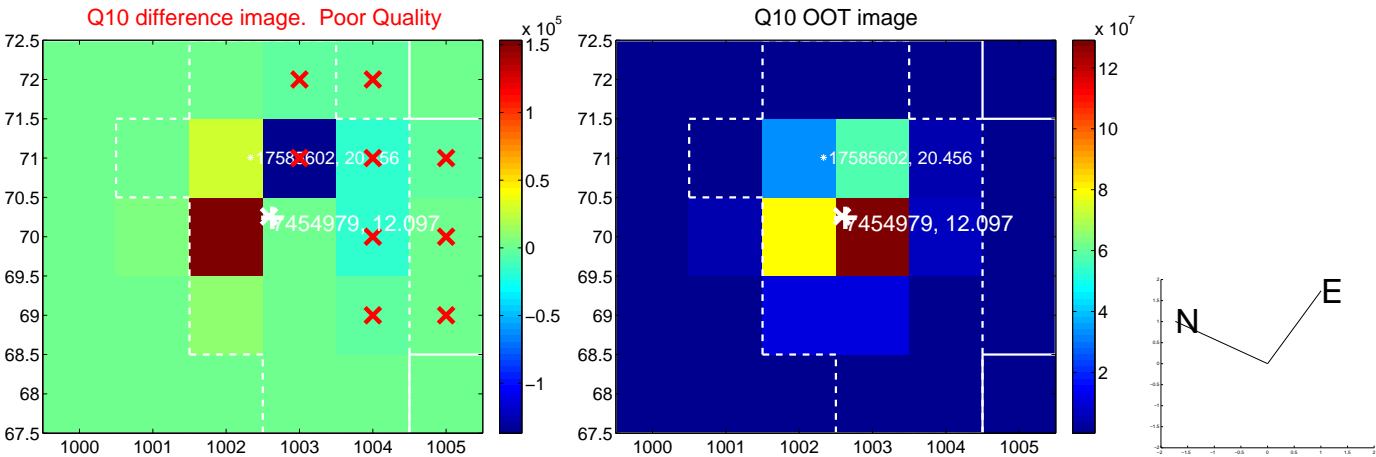
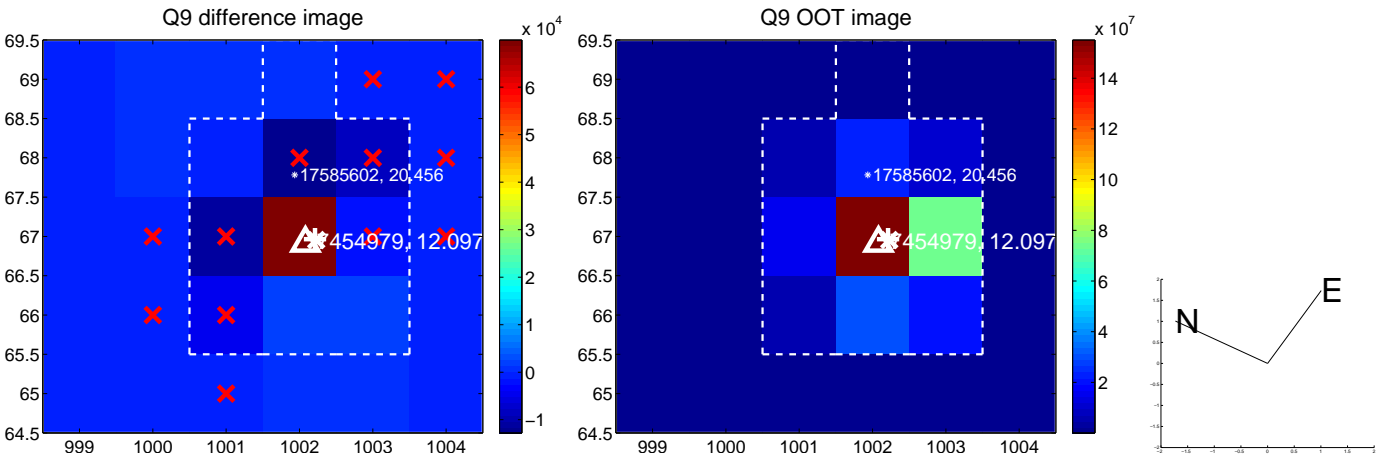
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



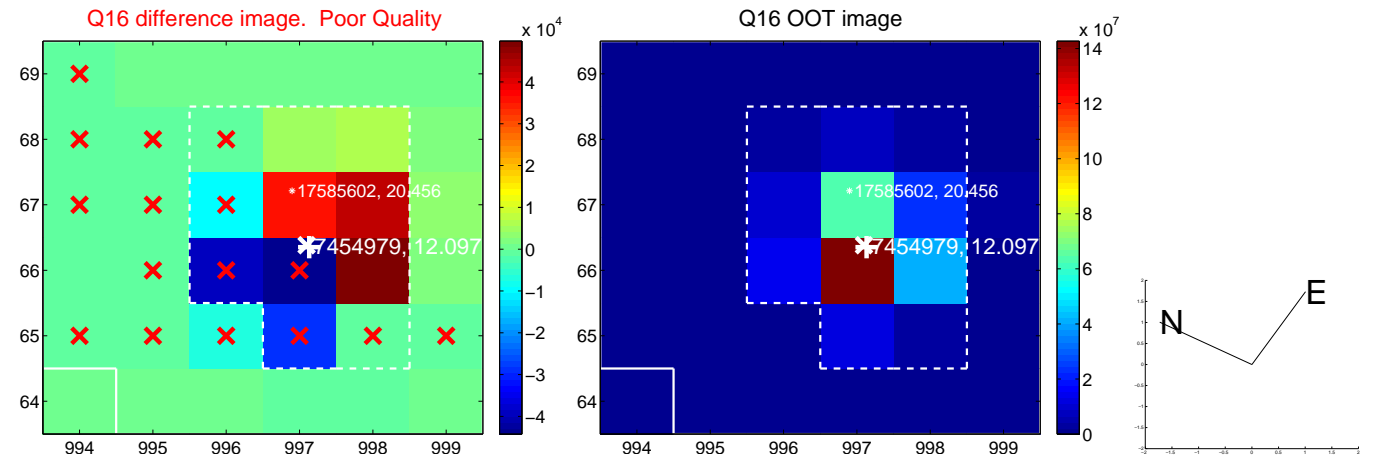
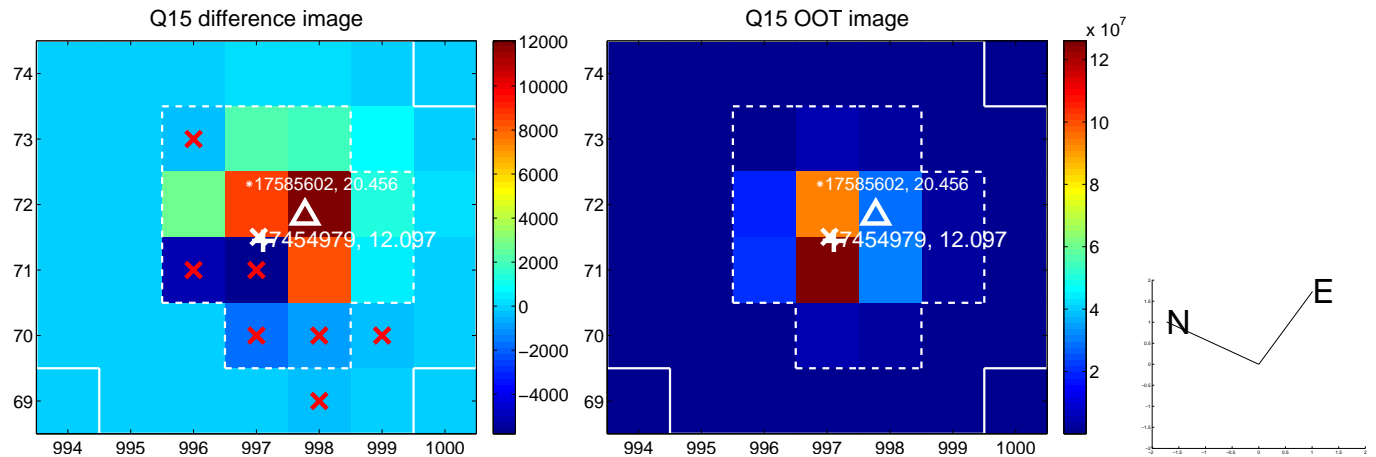
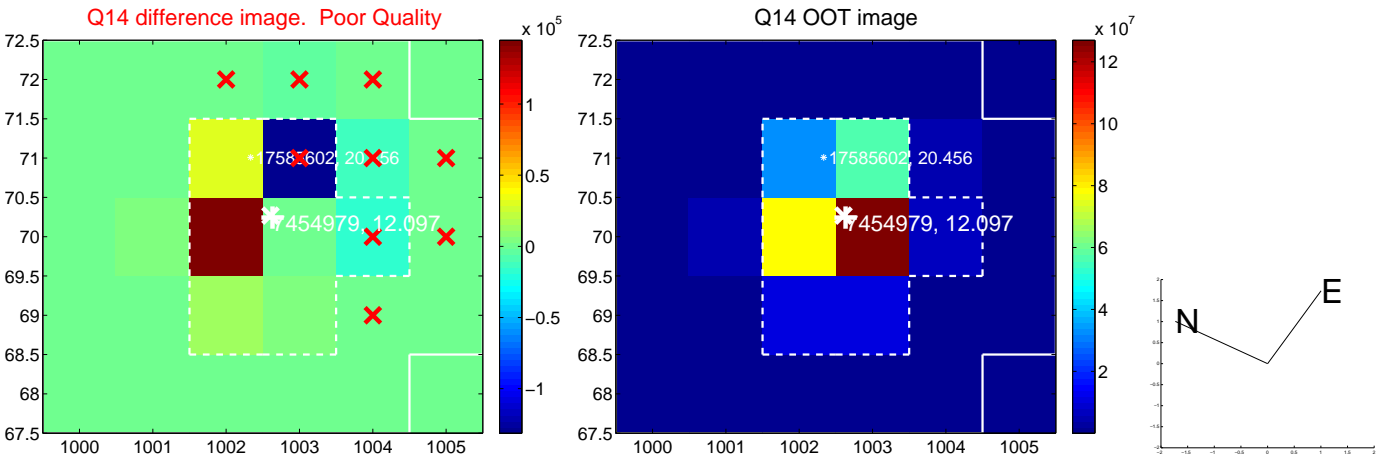
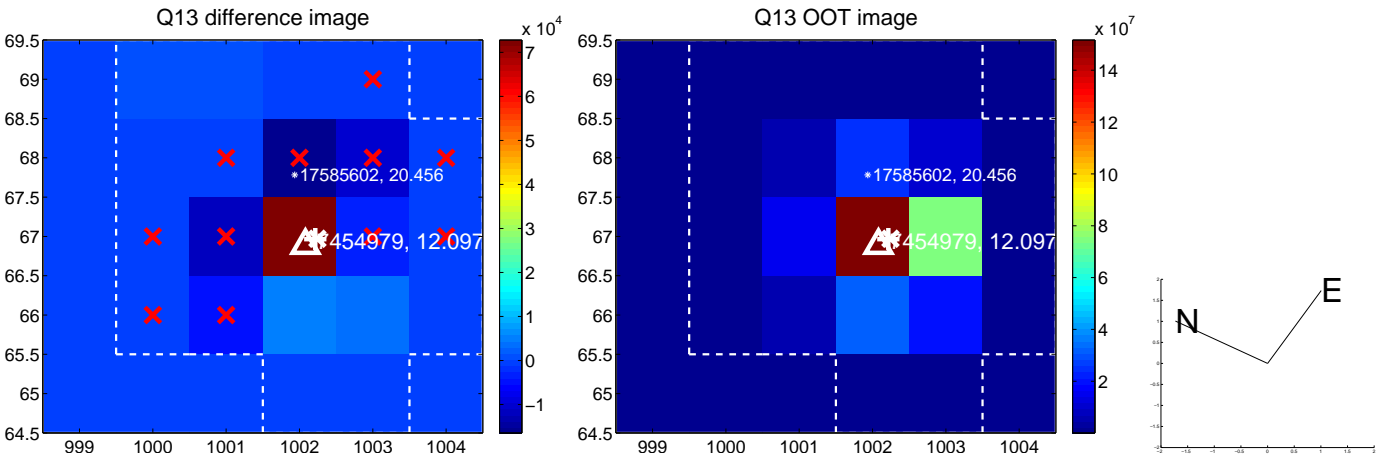
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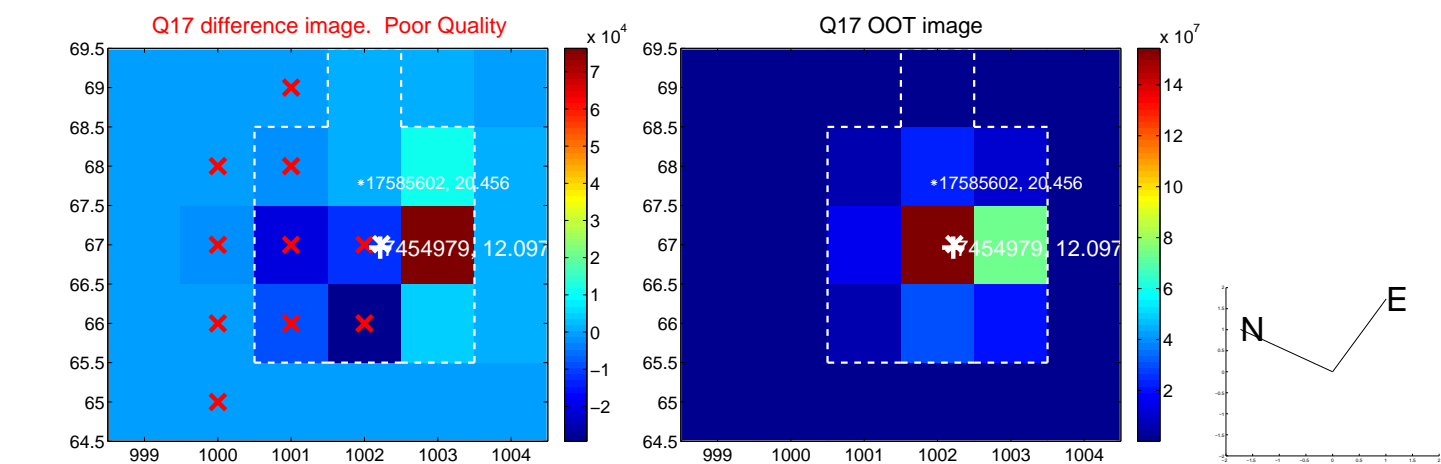
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



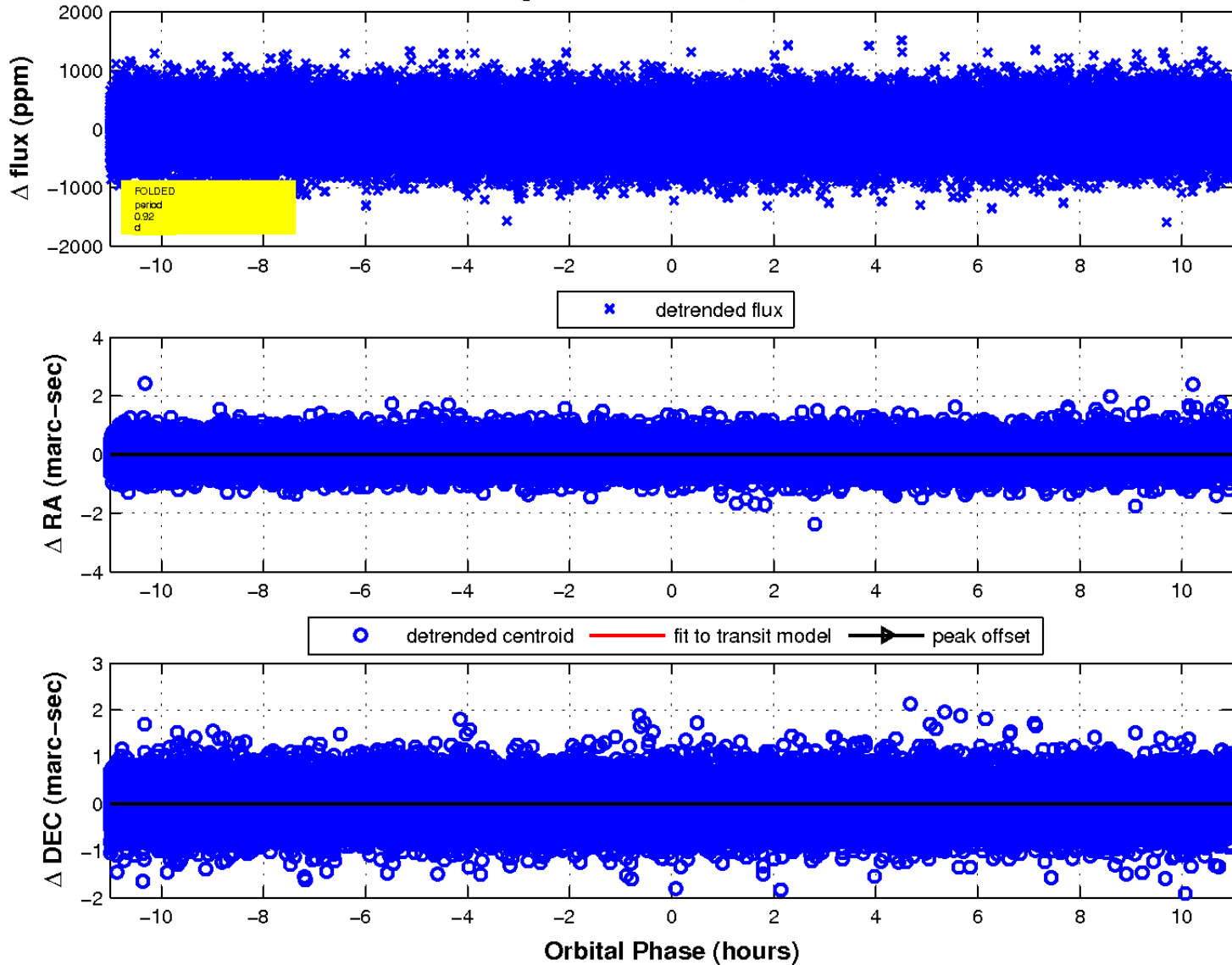
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

