

KIC 008656375

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})
008656375-01	OBS	No	0.817740	132.053693	42.4	2.506	10.6	9.7	5.75	6258	4.38	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008656375-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—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.

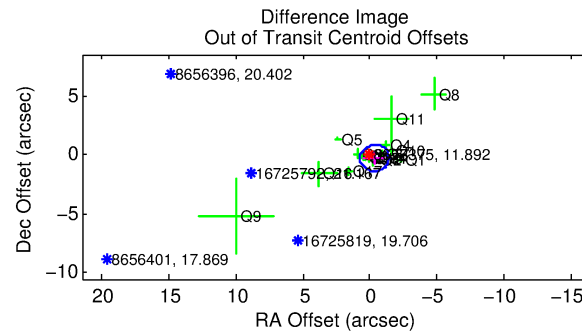
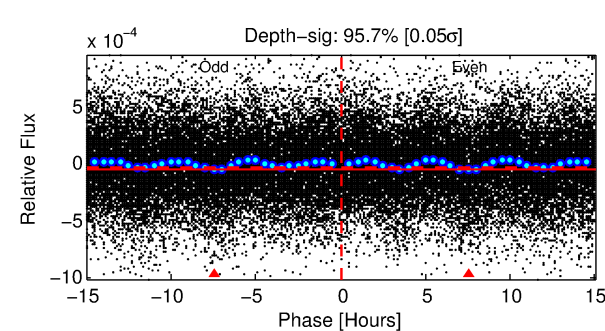
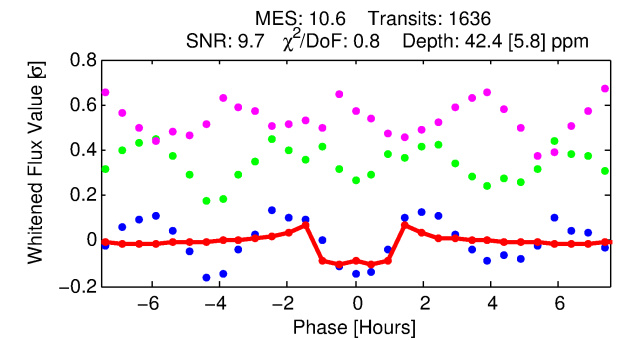
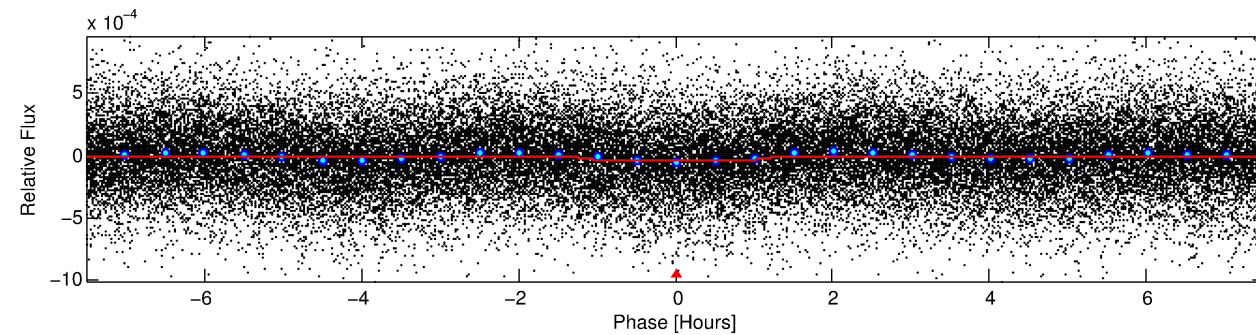
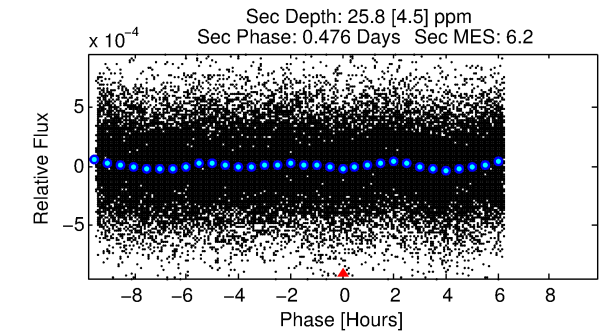
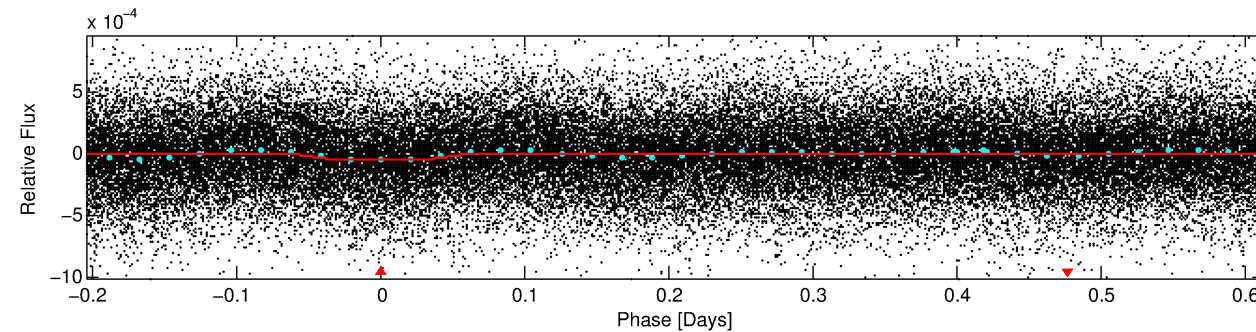
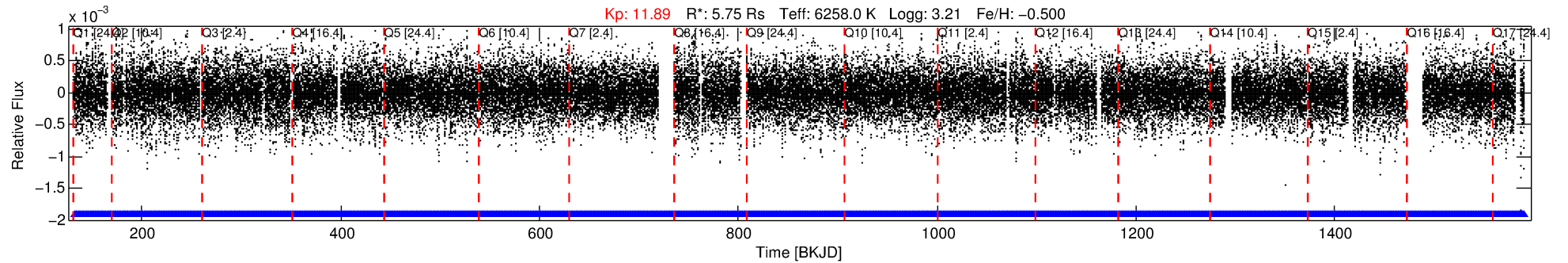
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008656375-01

No Significant Match Found

DV One-Page Summary

KIC: 8656375 Candidate: 1 of 1 Period: 0.818 d



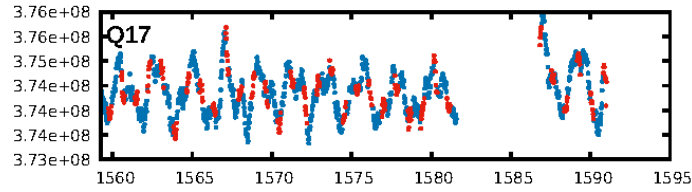
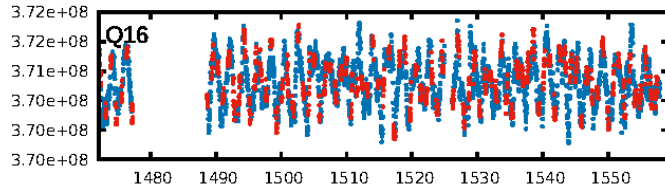
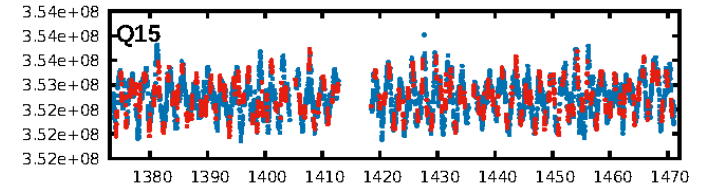
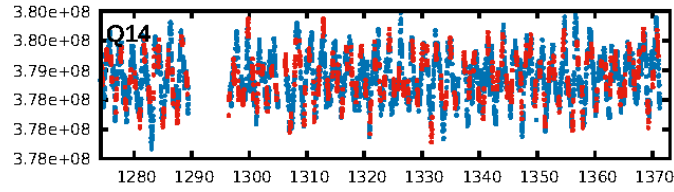
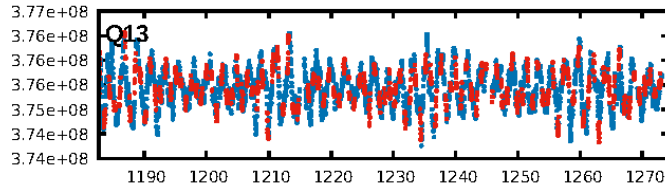
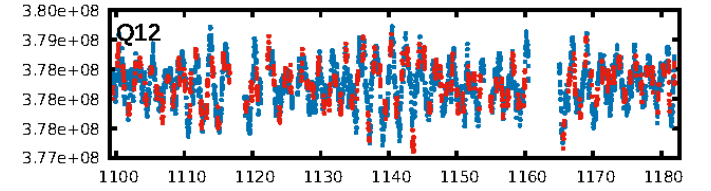
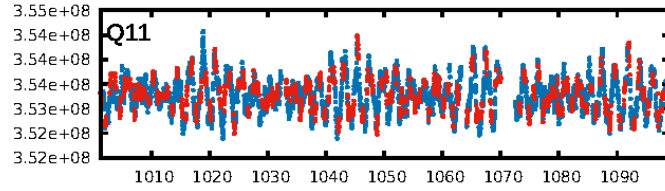
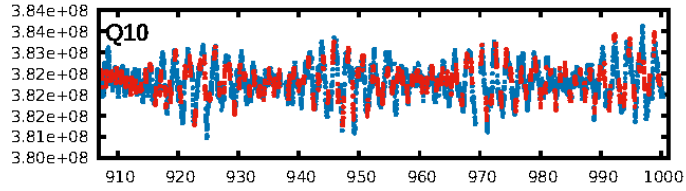
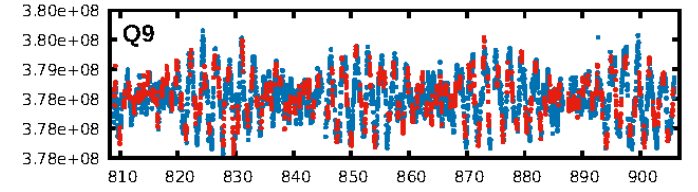
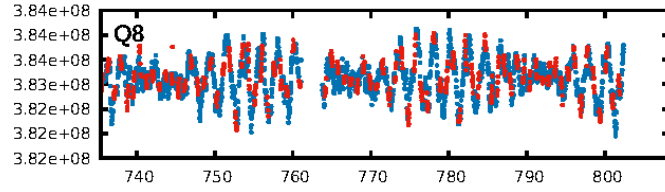
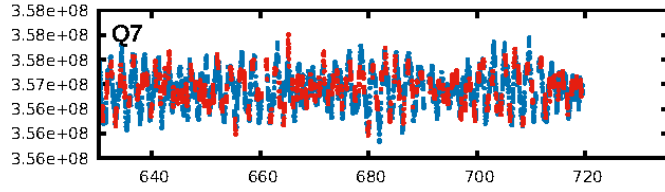
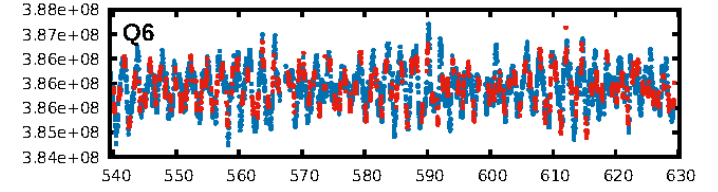
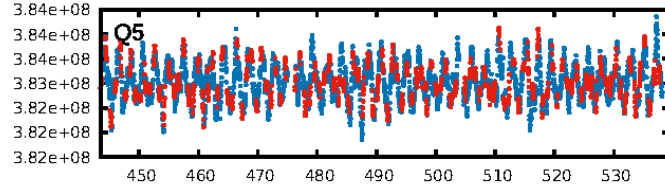
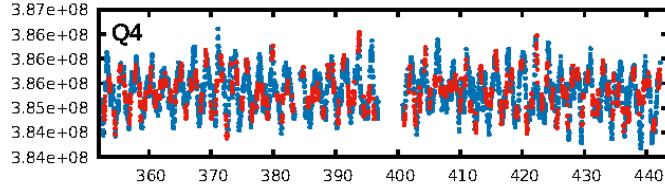
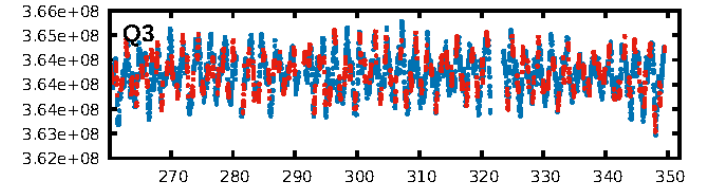
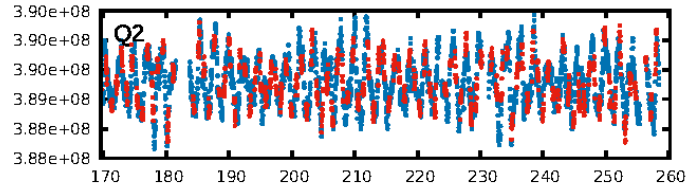
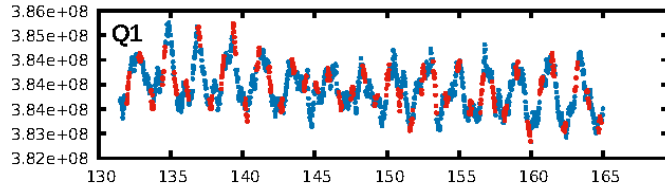
DV Fit Results:

Period = 0.81774 [0.00001] d
Epoch = 132.0537 [0.0016] BKJD
Rp/R* = 0.0070 [0.0016]
a/R* = 1.47 [1.01]
b = 0.90 [0.28]
Seff = N/A
Teq = N/A
Rp = 4.38 [2.22] Re
a = N/A
Ag = N/A
Teffp = N/A

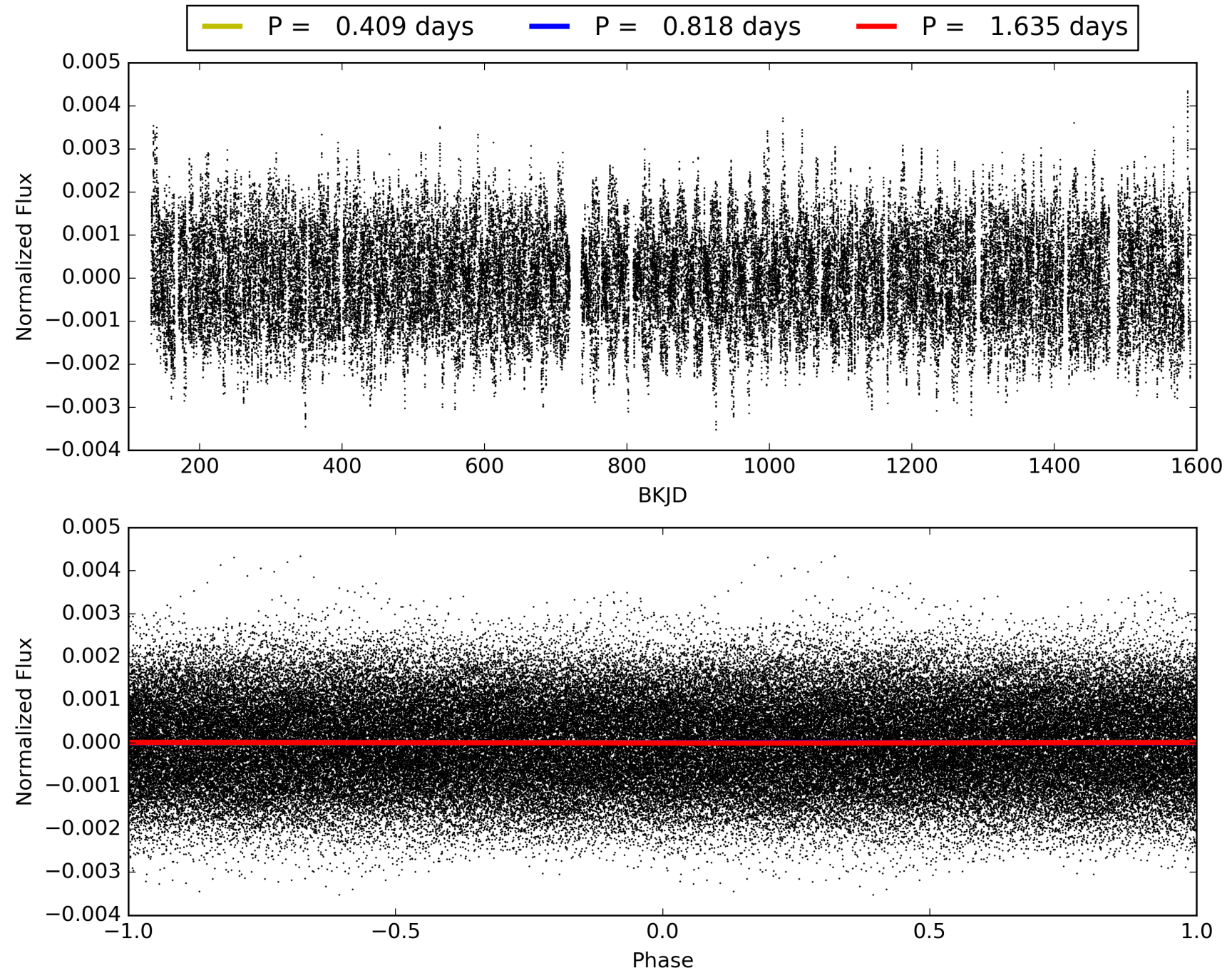
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 7.05e-25
RollingBand-fgt: 1.00 [1562/1562]
GhostDiagnostic-chr: -4.6
Centroid-sig: 63.1%
Centroid-so: 0.128 arcsec [0.27σ]
OotOffset-rm: 0.420 arcsec [1.15σ]
KicOffset-rm: 0.444 arcsec [1.28σ]
OotOffset-st: 4/4/3/5 [16]
KicOffset-st: 4/4/3/5 [16]
DiffImageQuality-fgm: 0.50 [8/16]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 008656375-01, PDC Light Curves

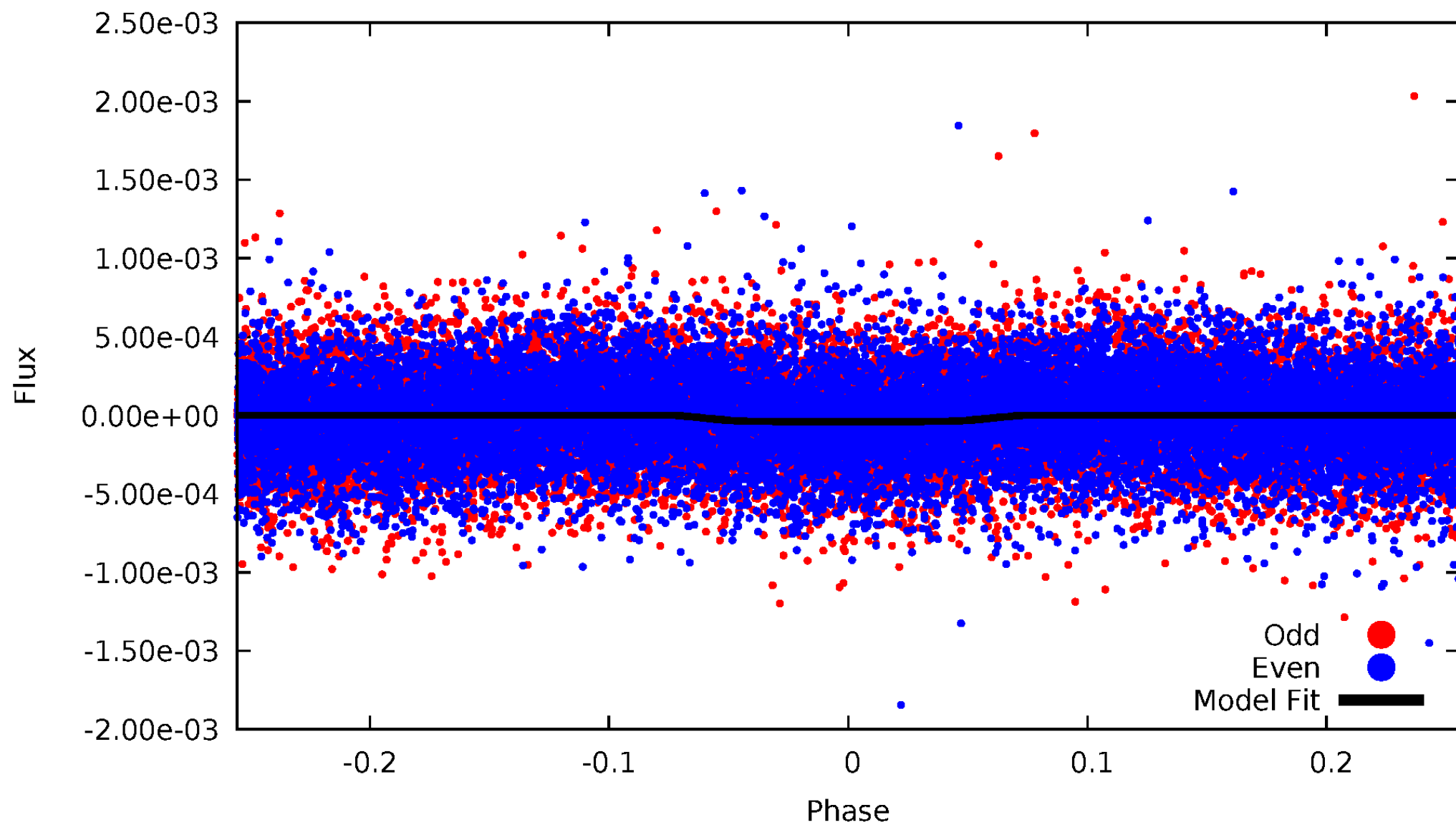


TCE 008656375-01



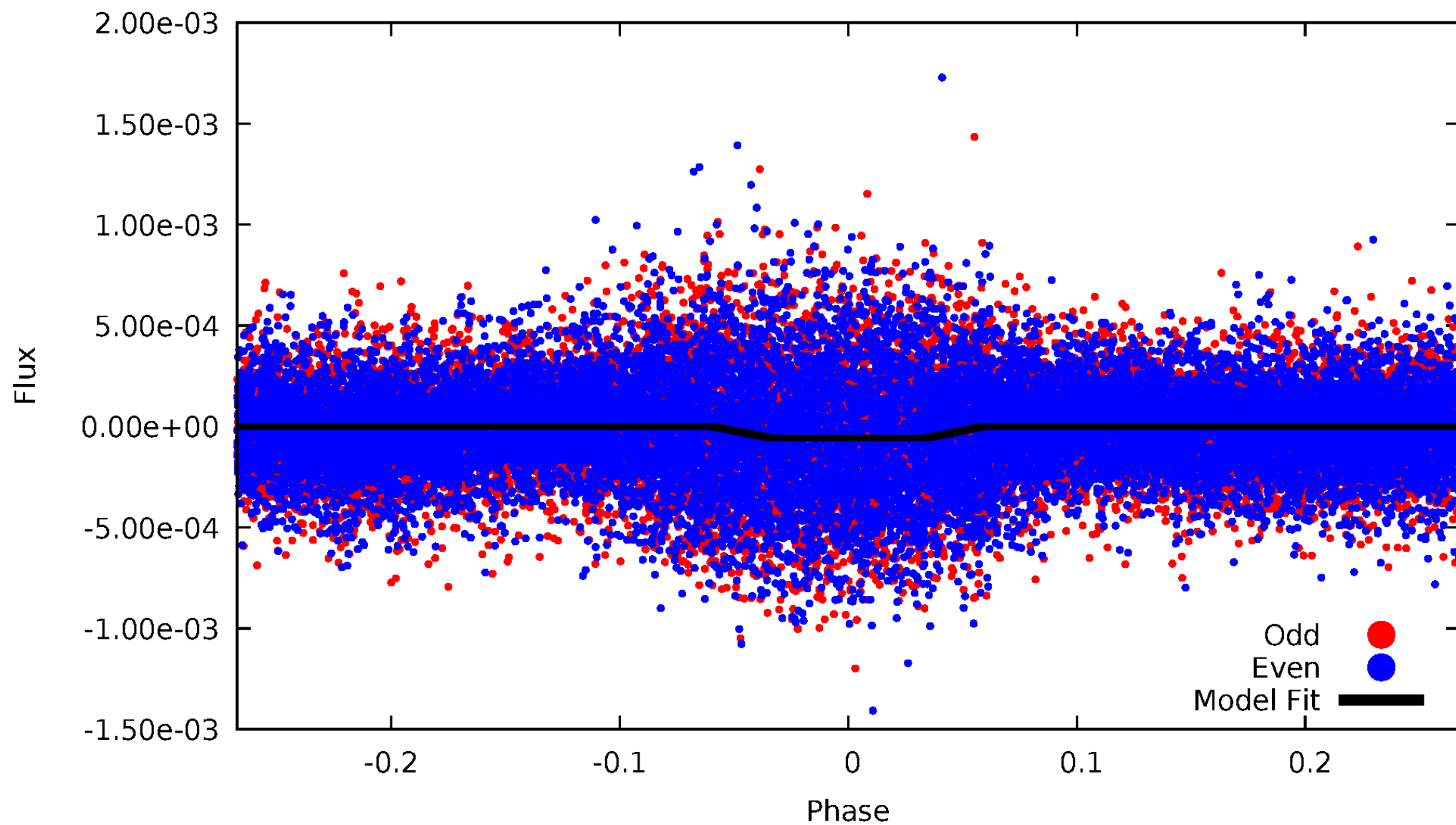
DV Odd/Even

TCE 008656375-01



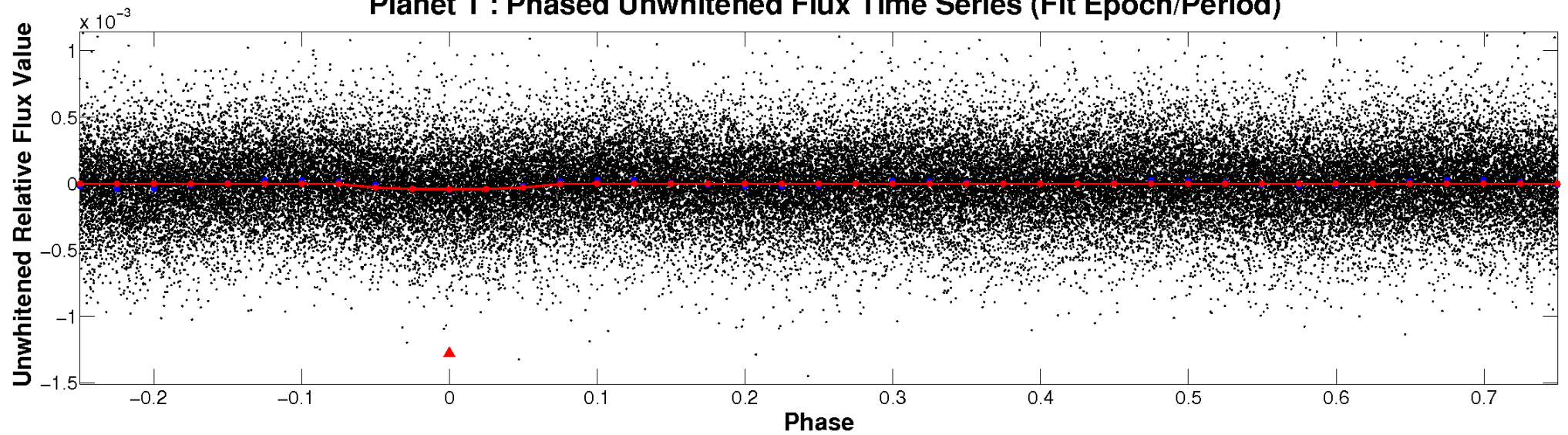
ALT Odd/Even

TCE 008656375-01

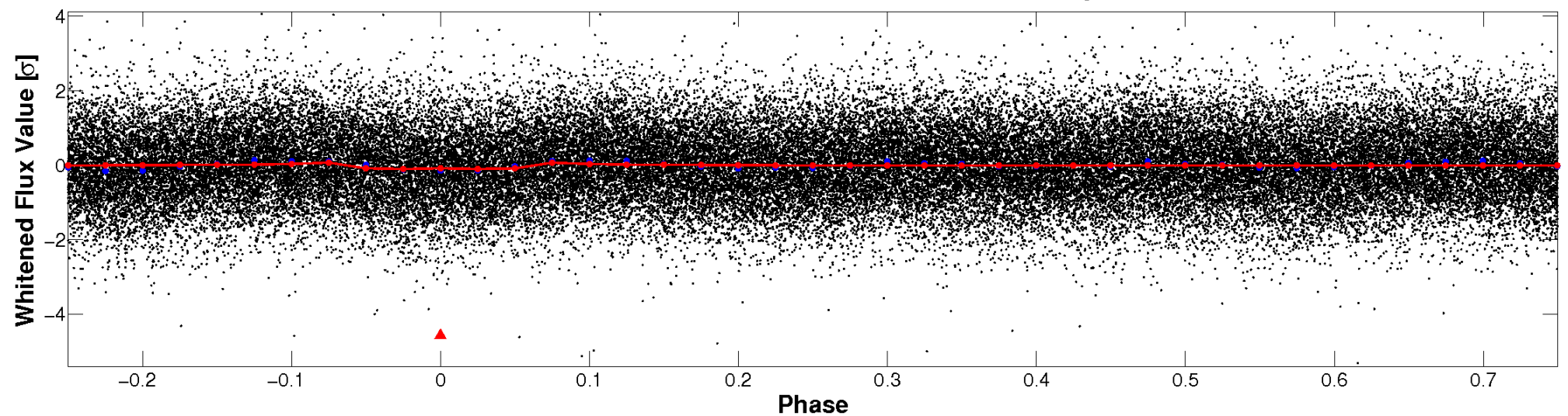


Non-Whitened Vs. Whitened Light Curve

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

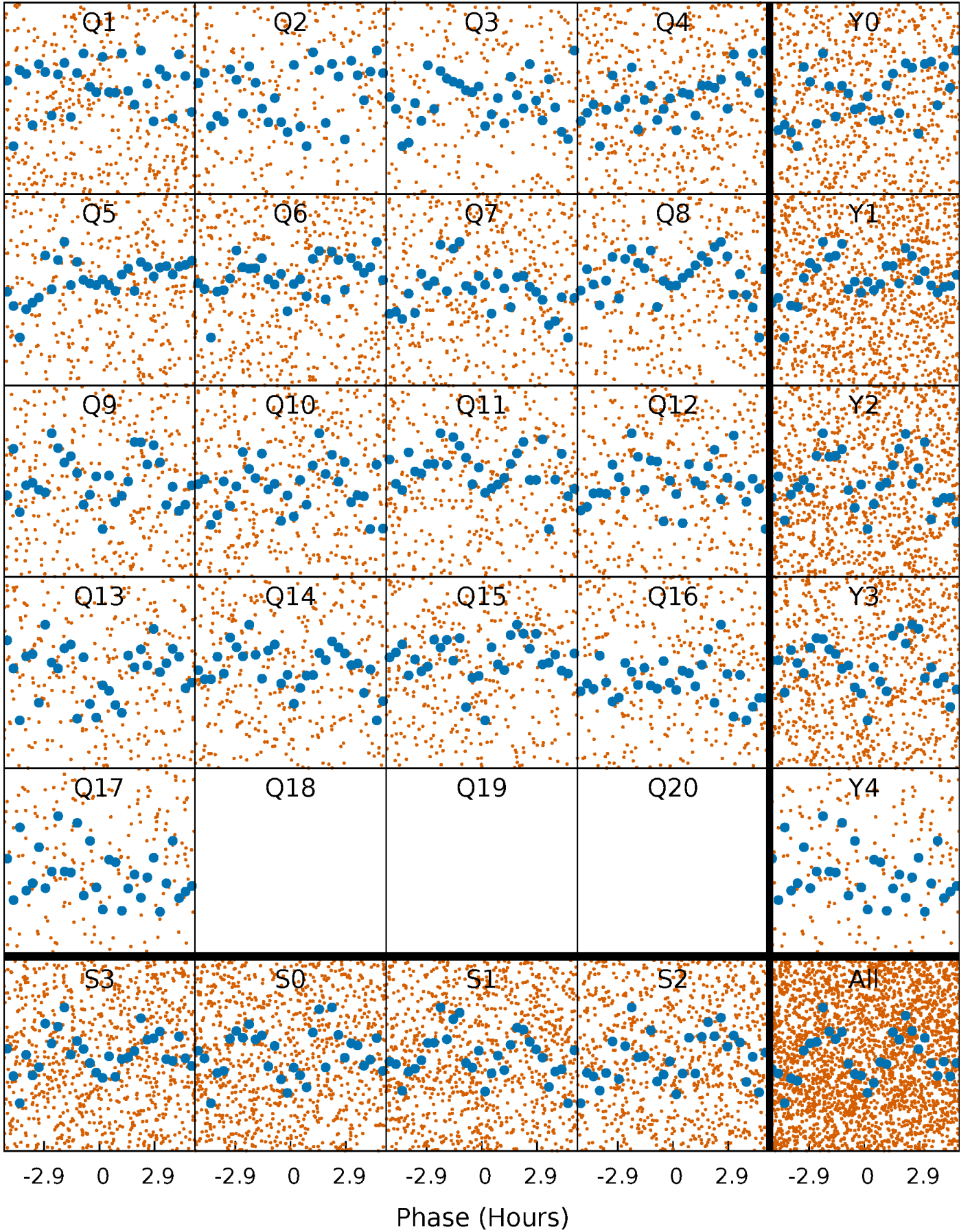


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



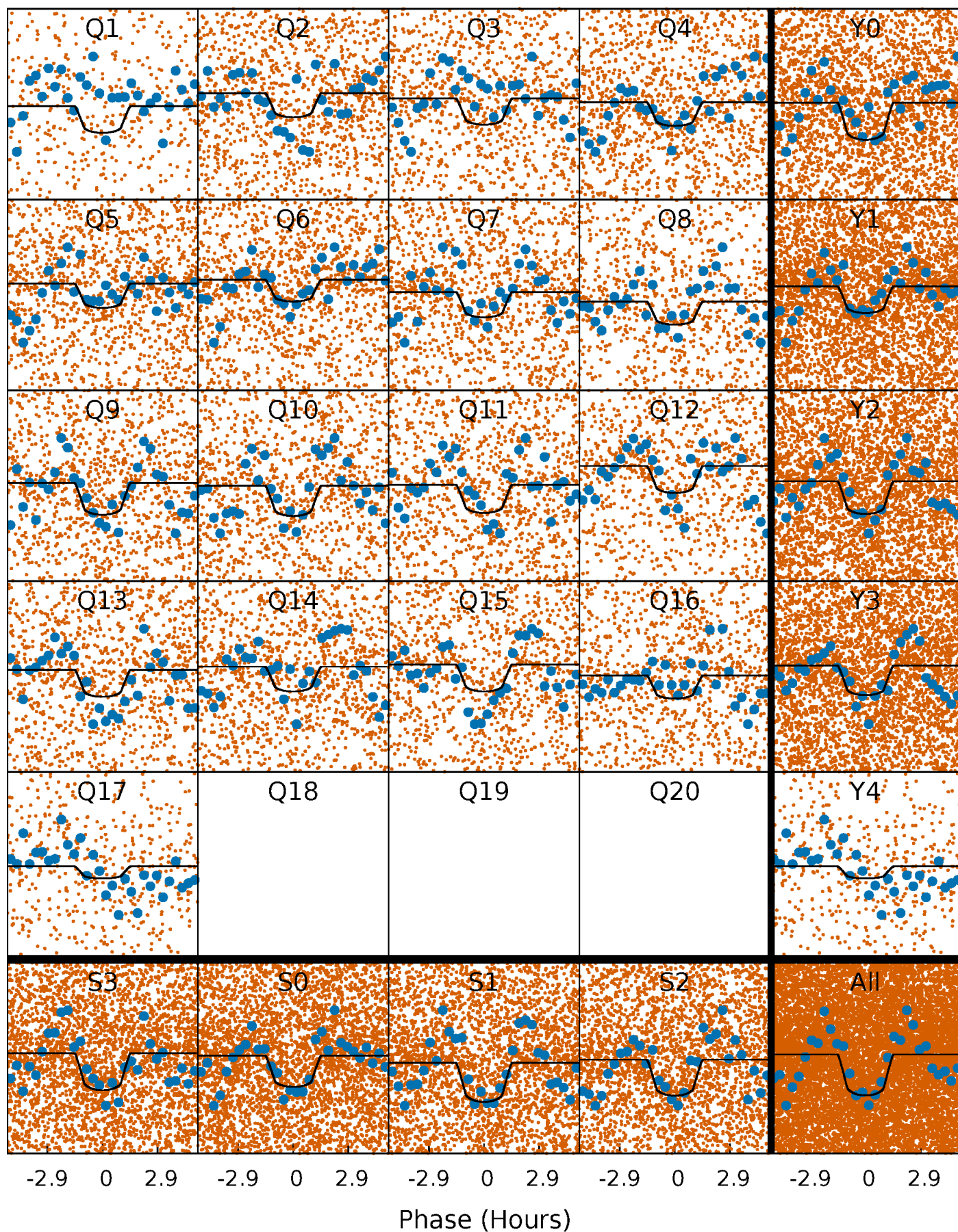
PDC Quarter-Phased Transit Curves

TCE 008656375-01 P= 0.817740 Days $T_0=132.053693$ (BKJD)



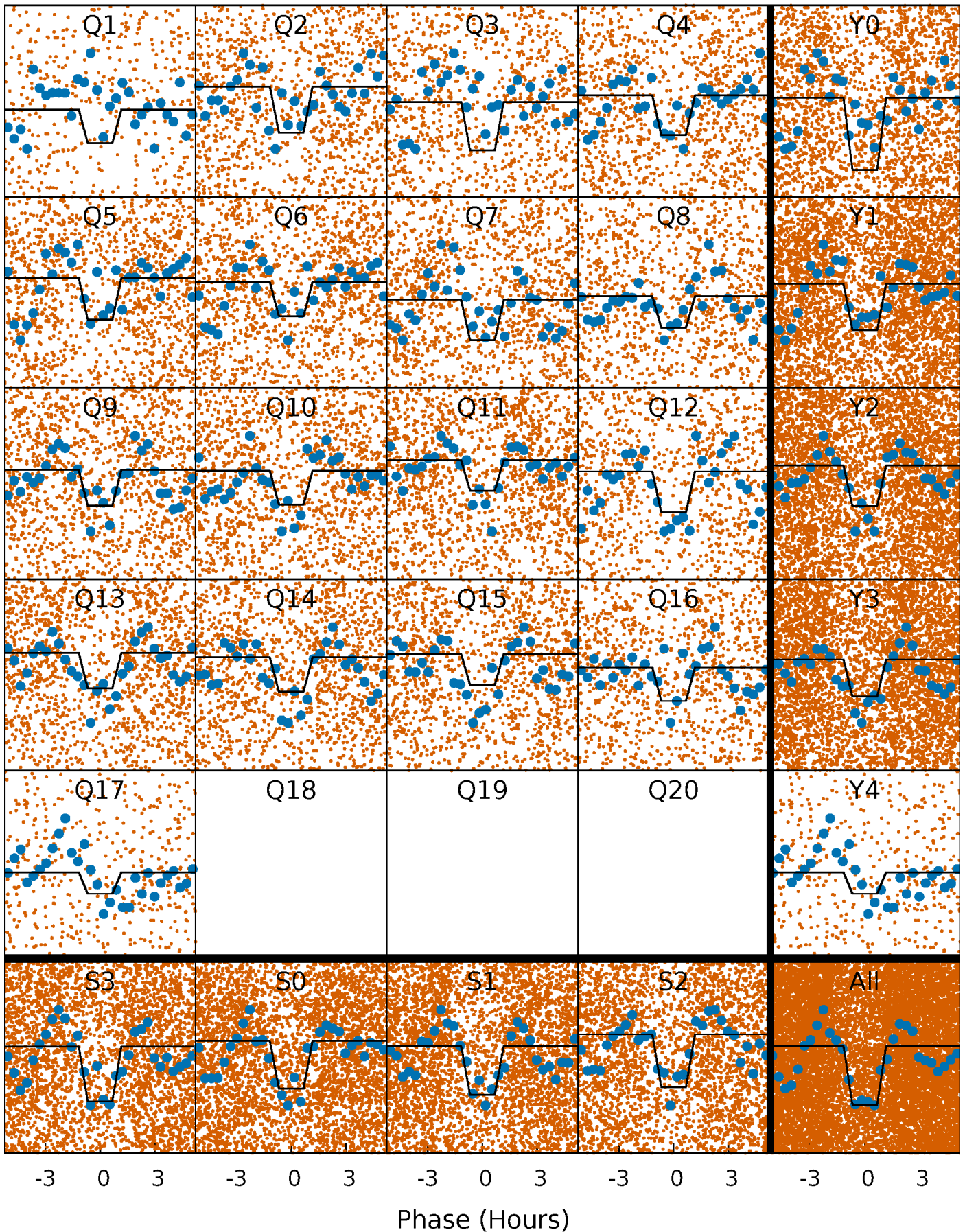
DV Quarter-Phased Transit Curves

TCE 008656375-01 P= 0.817740 Days $T_0=132.053693$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

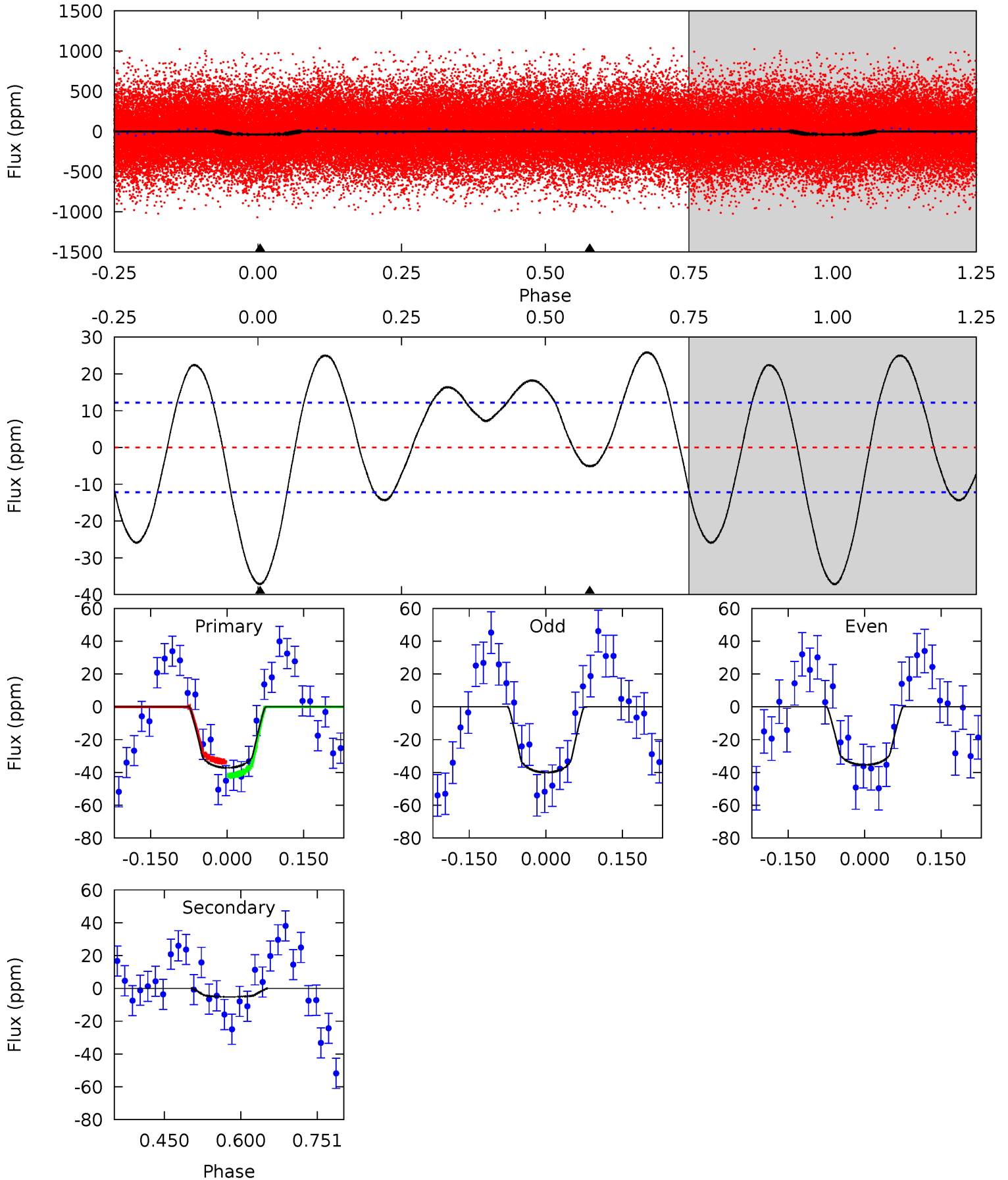
TCE 008656375-01 P= 0.817745 Days $T_0=132.054027$ (BKJD)



DV Model-Shift Uniqueness Test

008656375-01, P = 0.817740 Days, E = 131.235953 Days

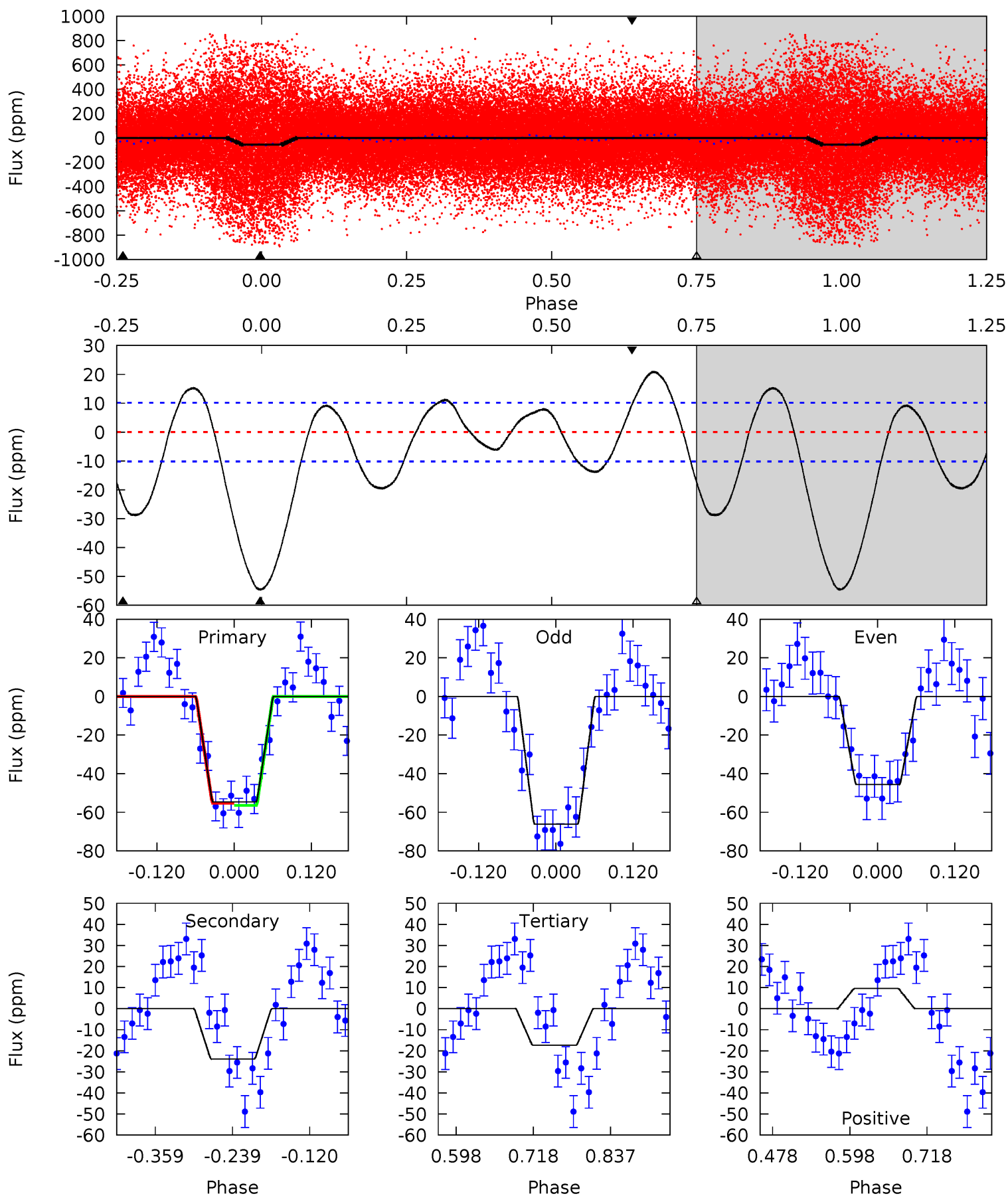
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.7	1.90	0	0	4.48	1.44	4.75	13.7	13.7	1.90	1.90	0.85	1.09	0.41	1.58



Alt Model-Shift Uniqueness Test

008656375-01, P = 0.817745 Days, E = 131.236282 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.3	10.6	7.72	4.25	4.53	1.56	4.63	16.5	20.0	2.89	6.36	4.54	0.99	0.28	0



Stellar Parameters For KIC 008656375

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6258^{+173}_{-238}	$3.207^{+0.396}_{-0.044}$	$-0.500^{+0.300}_{-0.350}$	$5.747^{+0.304}_{-2.588}$	$1.940^{+0.105}_{-0.593}$	$0.014^{+0.051}_{-0.003}$
	+3%/-4%	+12%/-1%	+60%/-70%	+5%/-45%	+5%/-31%	+354%/-22%
Source	PHO1	FLK73	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 008656375-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-5 ± 3	$4.02^{+1.12}_{-1.20}$	6143^{+342}_{-670}	-4736^{+746}_{-370}	$0.080^{+0.099}_{-0.047}$
Alt.	-24 ± 2	$4.19^{+1.32}_{-1.17}$	6119^{+358}_{-552}	3441^{+1425}_{-7606}	$0.338^{+0.281}_{-0.141}$

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 $A_{obs} \gg 1.0$

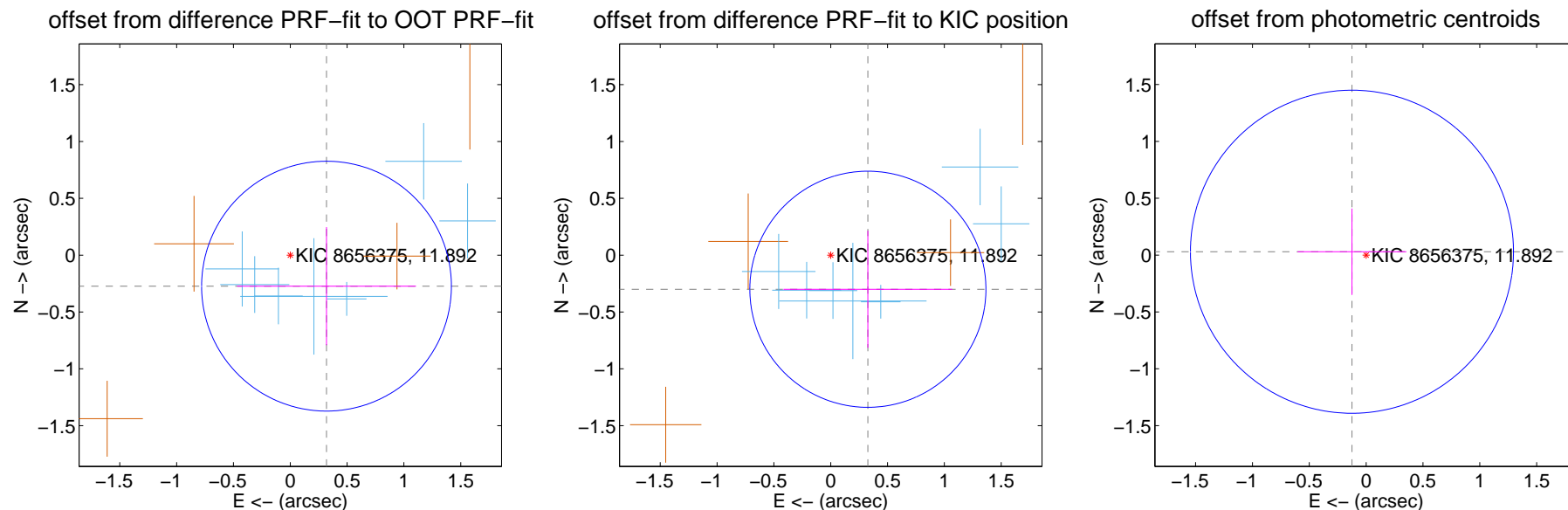
DV Centroid Data

Supplemental centroid analysis for 008656375-01. **Kepler magnitude: 11.89.** Transit SNR 9.66

There are 8 quarters with good PRF difference image offsets

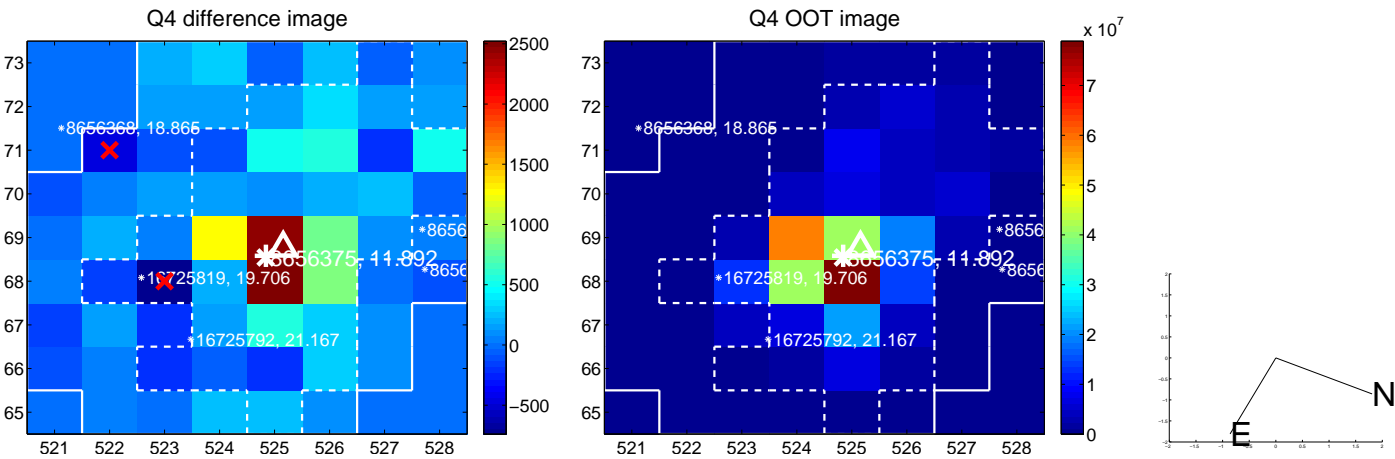
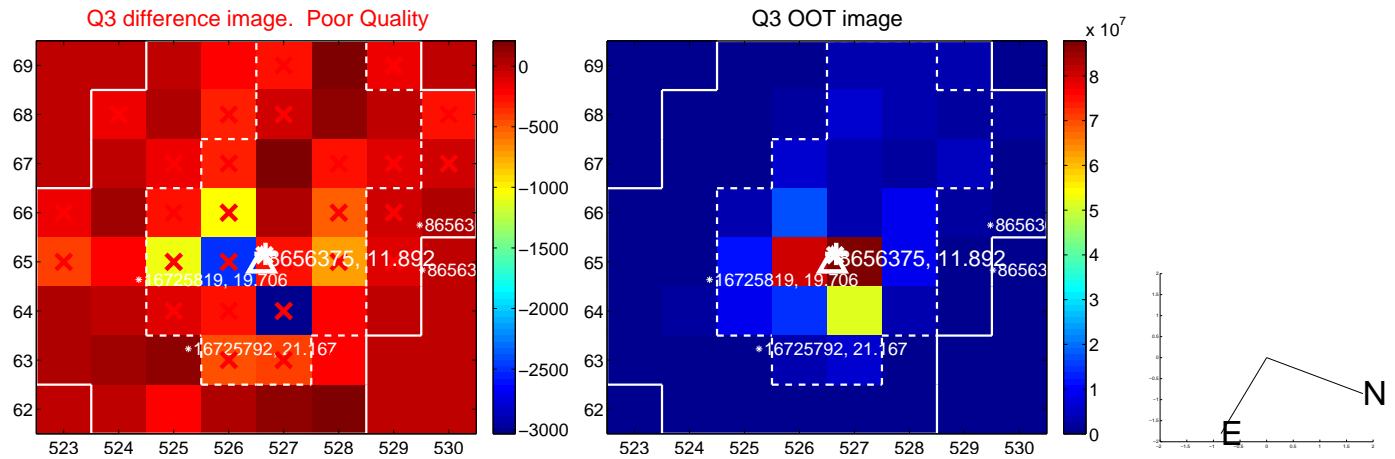
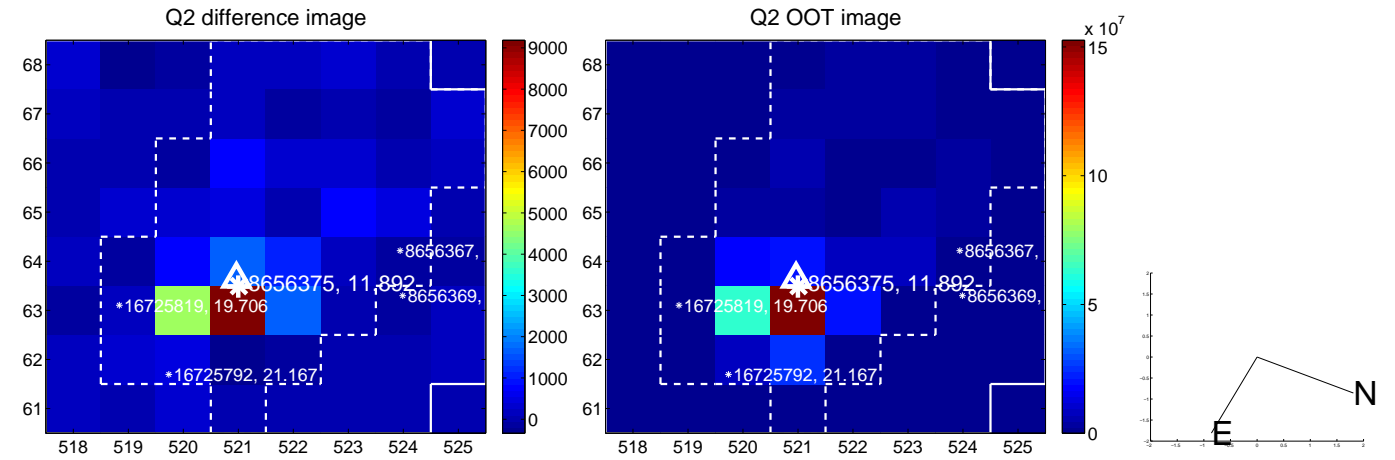
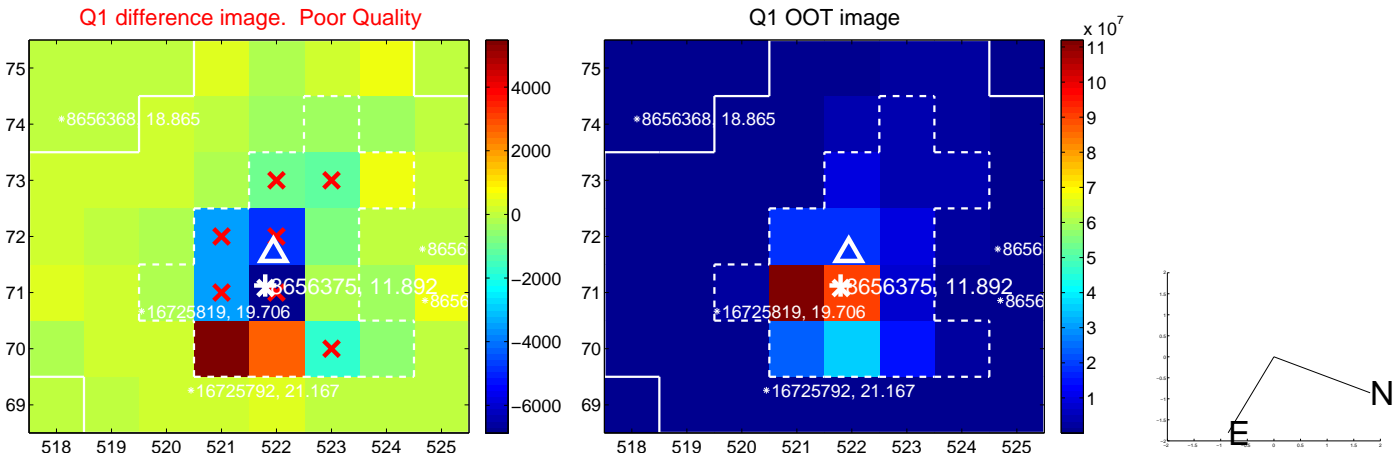
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.420 ± 0.366	1.15	-0.319 ± 0.787	-0.273 ± 0.520
PRF-fit source offset from KIC position	0.444 ± 0.346	1.28	-0.327 ± 0.743	$-0.300 \ \pm 0.515$
photometric centroid source offset	0.13 ± 0.47	0.27	0.12 ± 0.48	0.03 ± 0.38

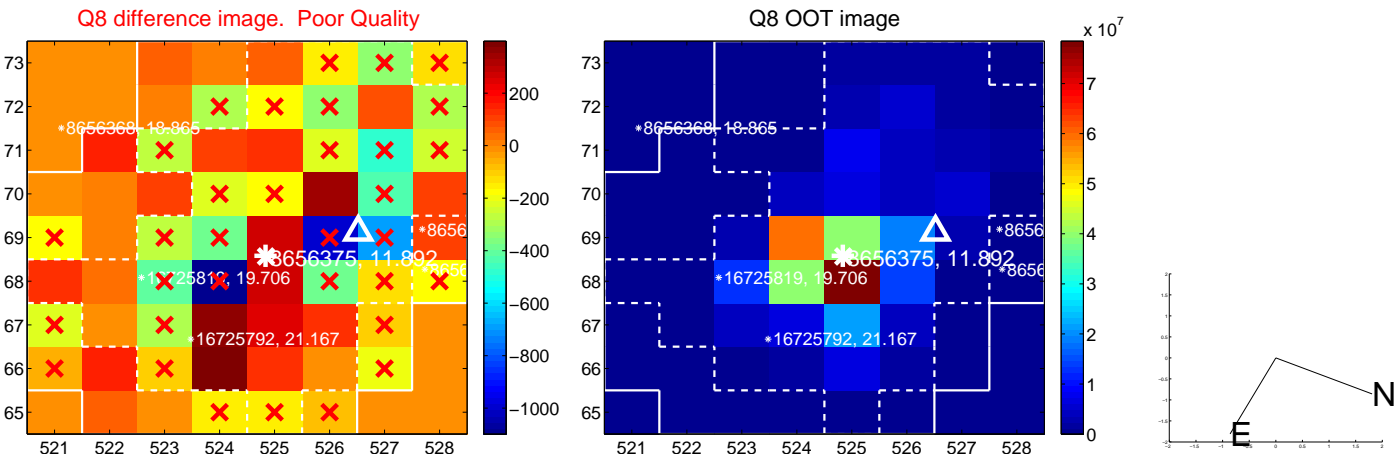
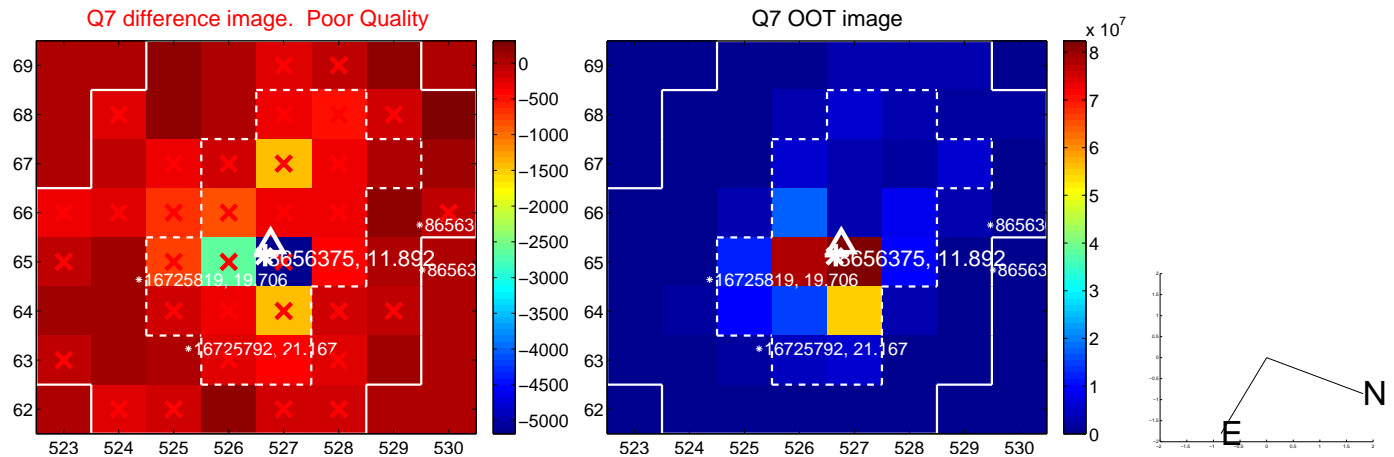
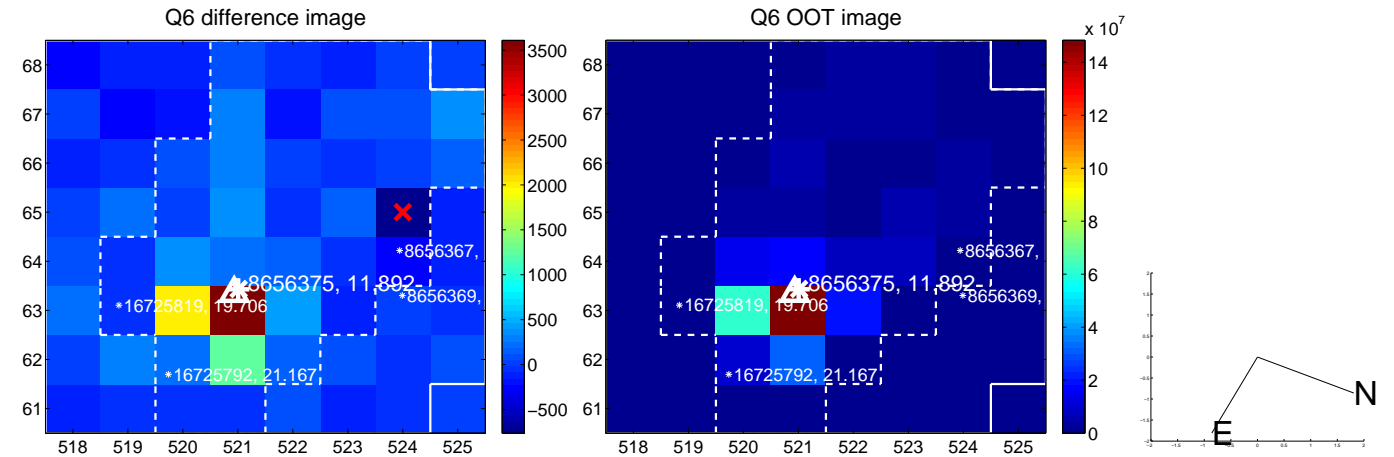
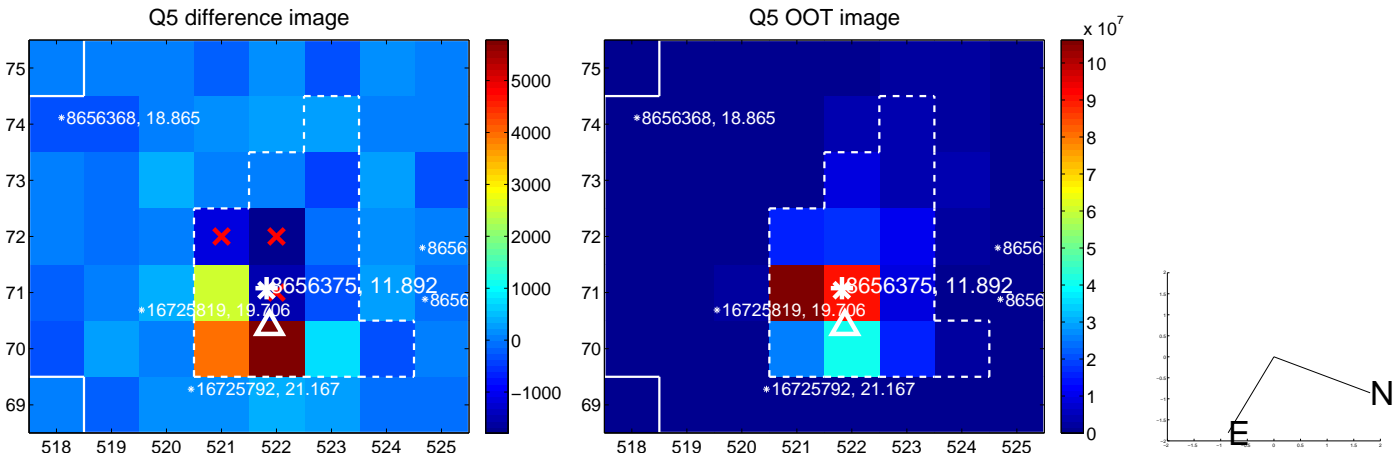


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

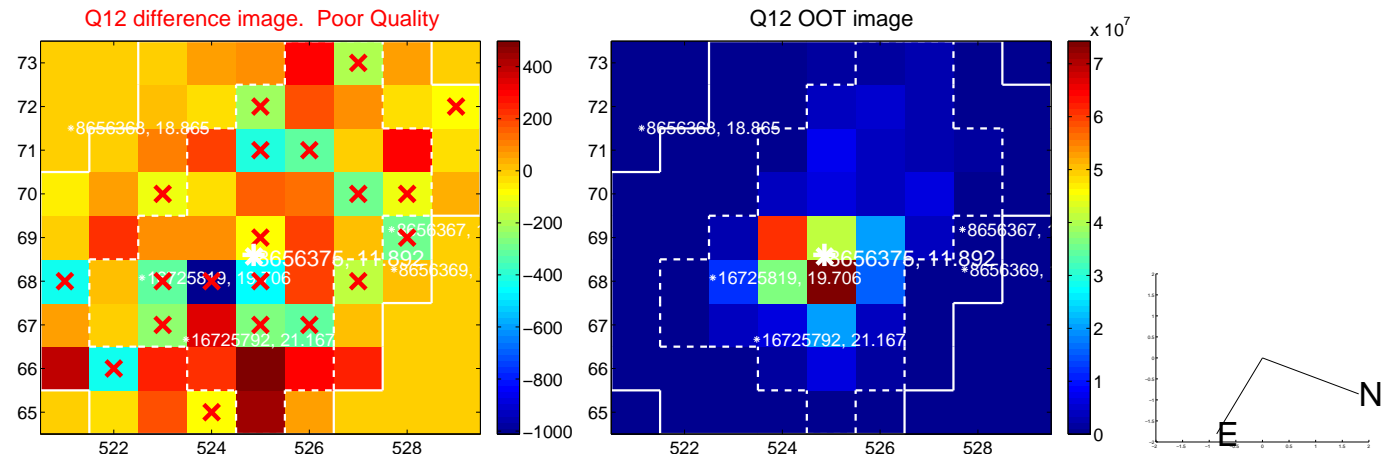
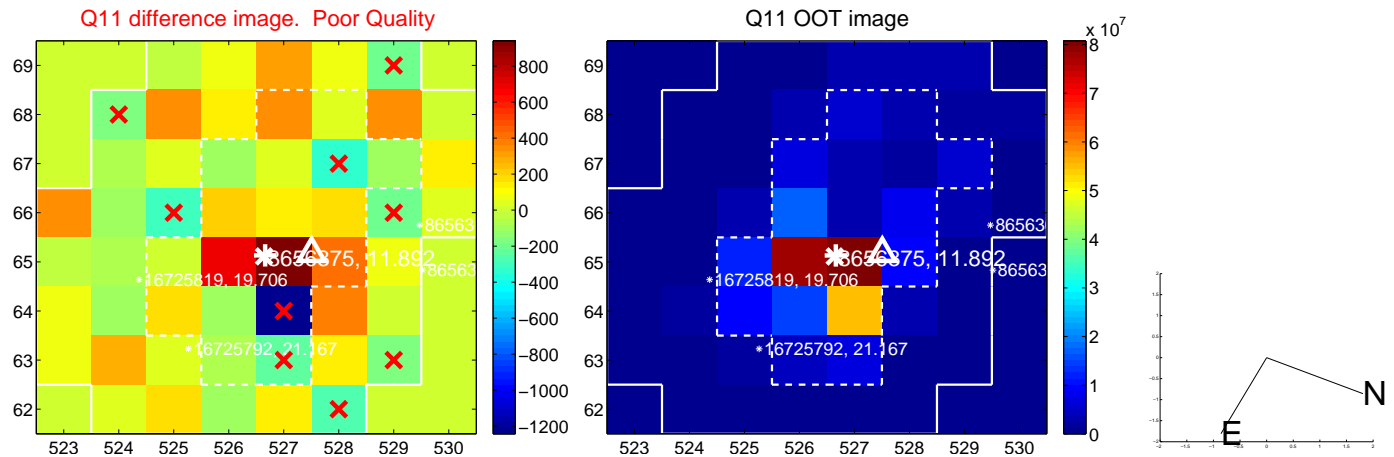
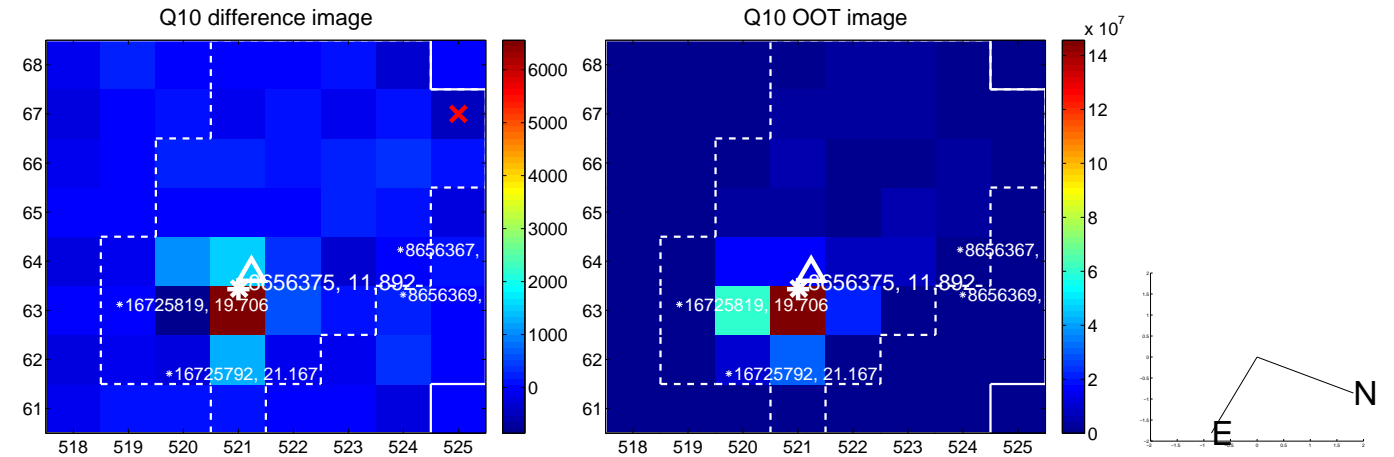
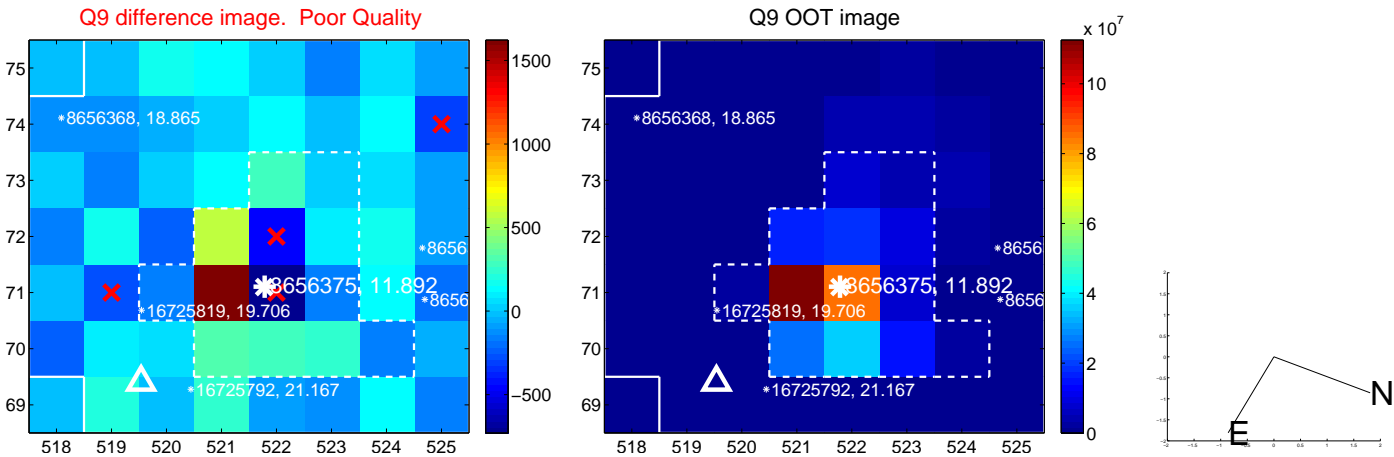
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



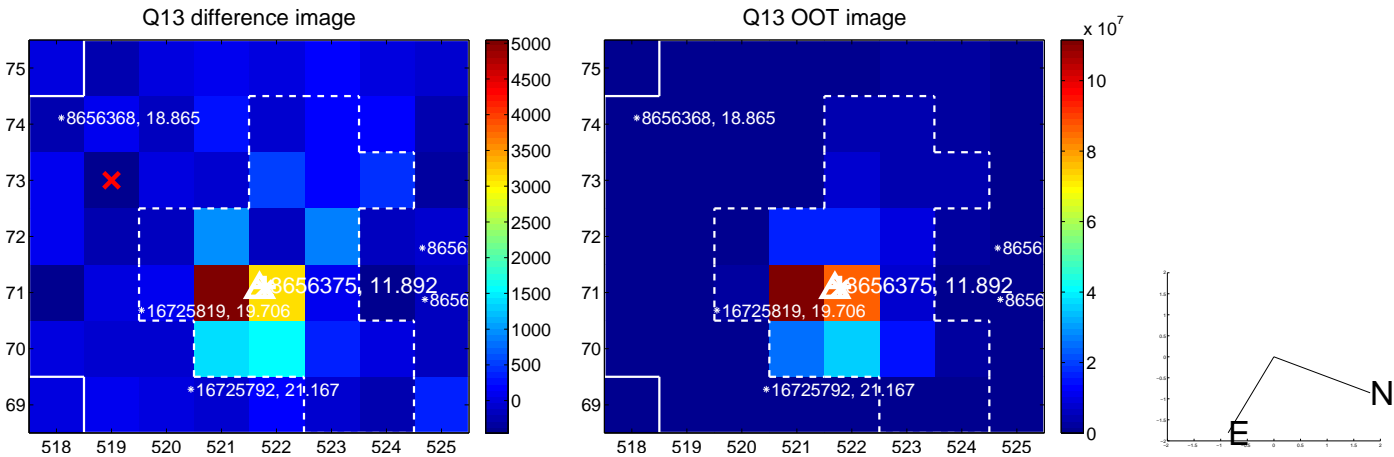
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



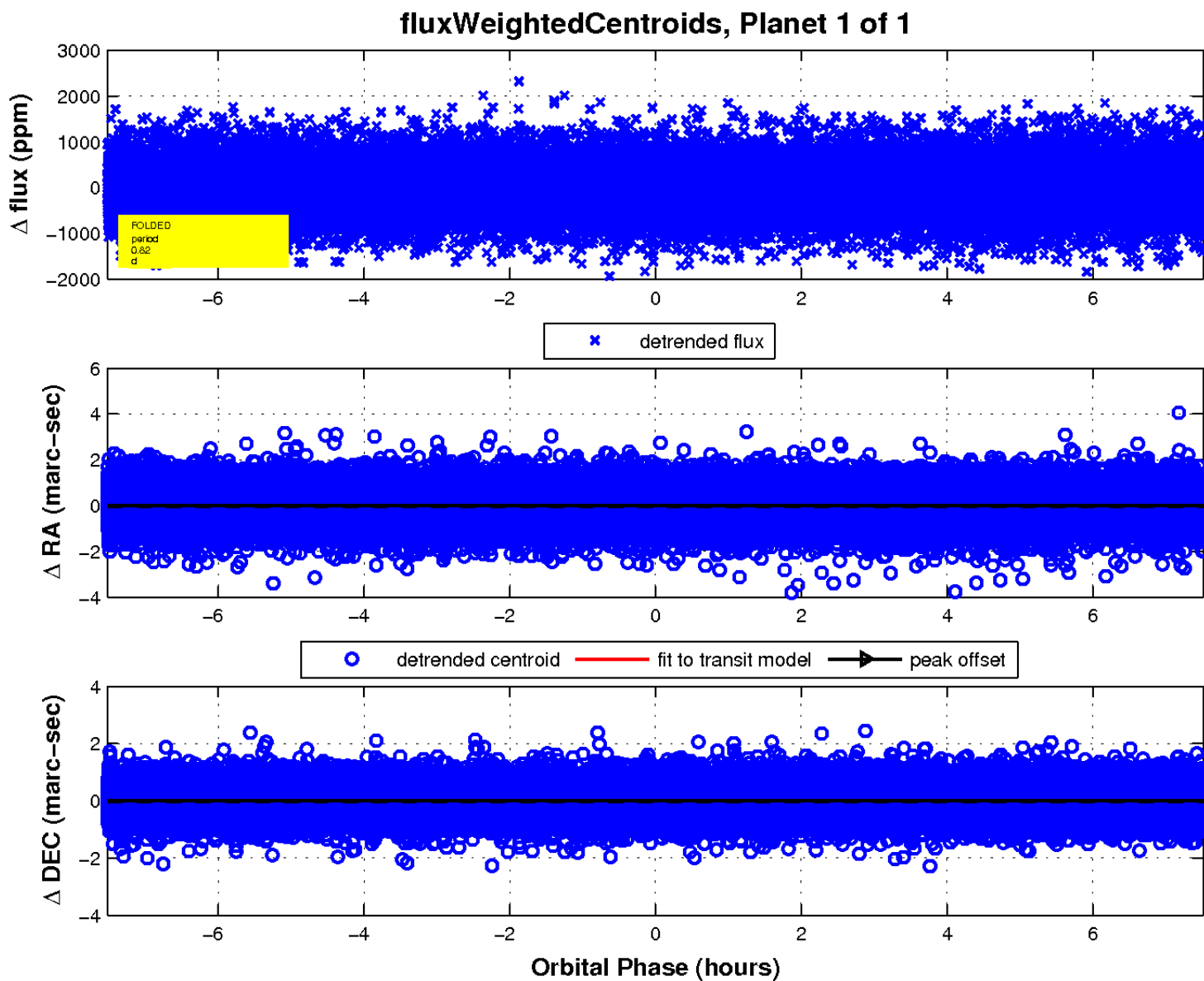
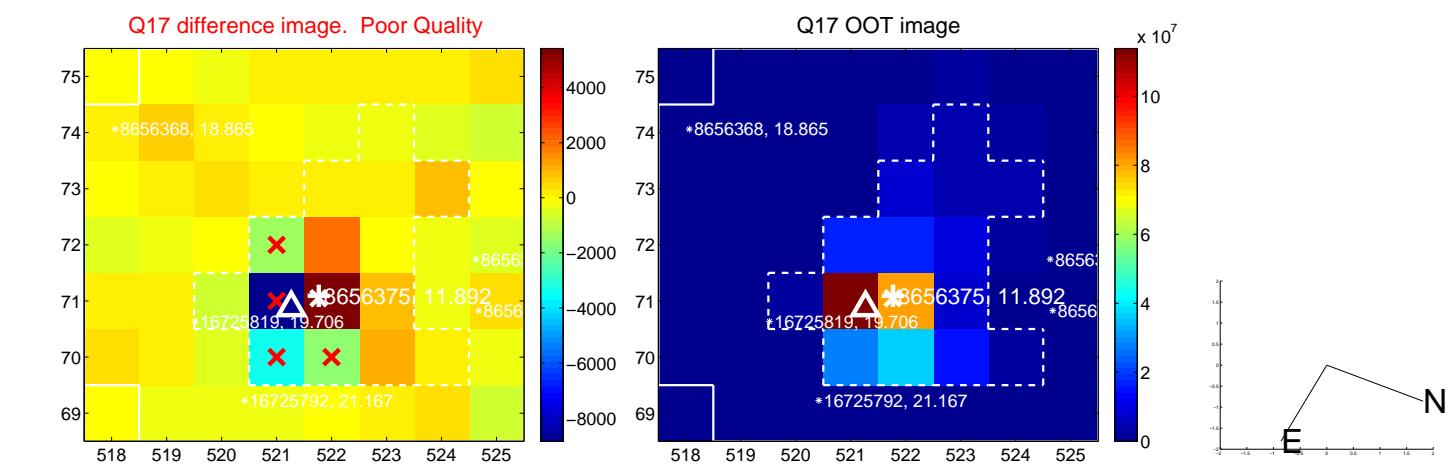
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

