

KIC 008382075

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})
008382075-01	OBS	No	1.258654	132.533118	55.3	9.911	8.7	11.1	0.73	5354	0.54	958.72

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008382075-01	OBS	FP	0.00	1	0	0	1	LPP_DV—CENT_FEW_DIFFS—EPHEM_MATCH

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.

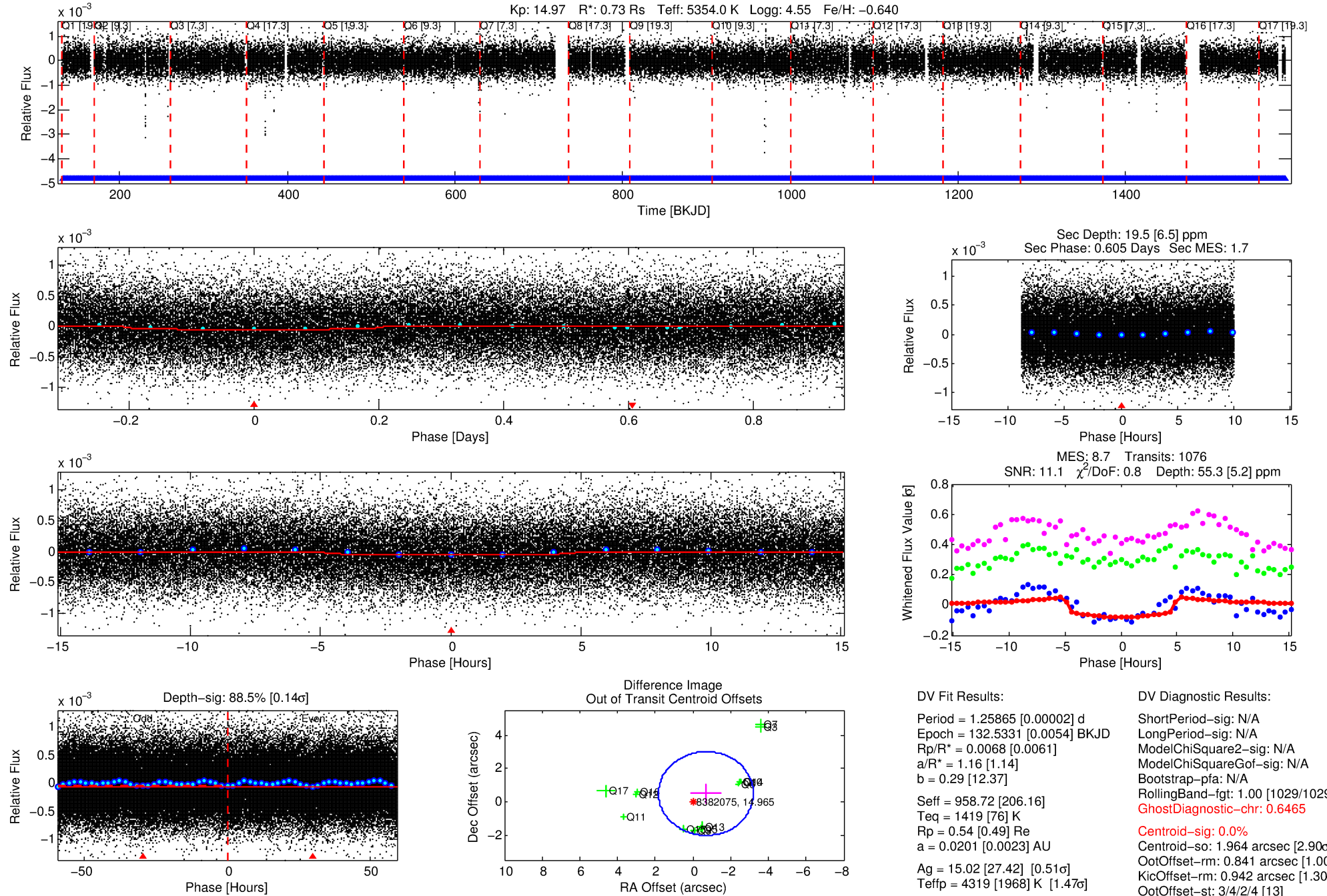
Ephemeris Match Information For 008382075-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
008382075-01	8382075	008382182-pri	8382182	1:1	82.7	14	-16	8.18	14.96	267.27	Direct-PRF	0	4.06	3.50

Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 8382075 Candidate: 1 of 1 Period: 1.259 d



DV Fit Results:

Period = 1.25865 [0.00002] d
Epoch = 132.5331 [0.0054] BKJD
Rp/R* = 0.0068 [0.0061]
a/R* = 1.16 [1.14]
b = 0.29 [12.37]
Seff = 958.72 [206.16]
Teff = 1419 [76] K
Rp = 0.54 [0.49] Re
a = 0.0201 [0.0023] AU
Ag = 15.02 [27.42] [0.51 σ]
Teffp = 4319 [1968] K [1.47 σ]

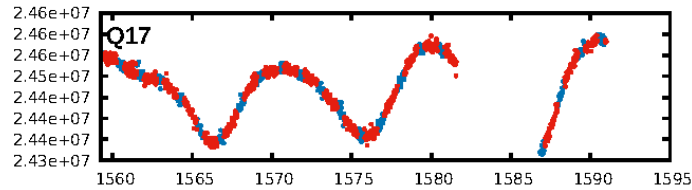
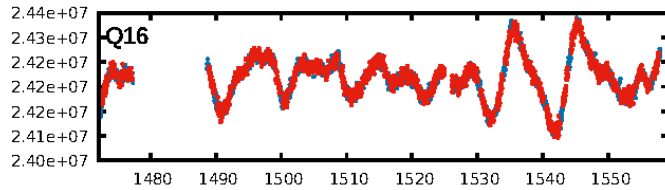
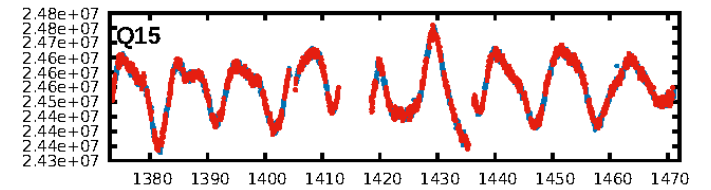
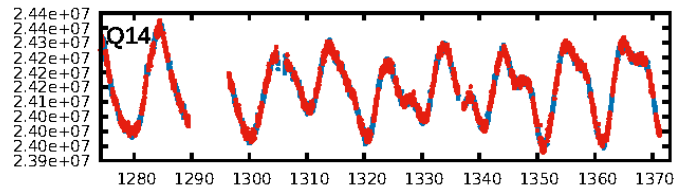
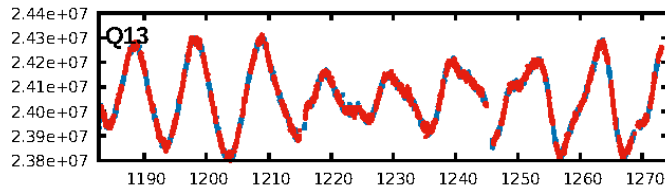
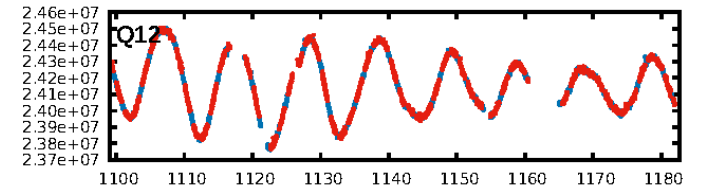
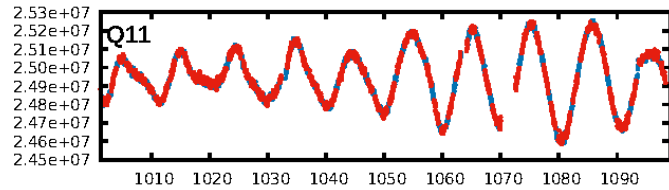
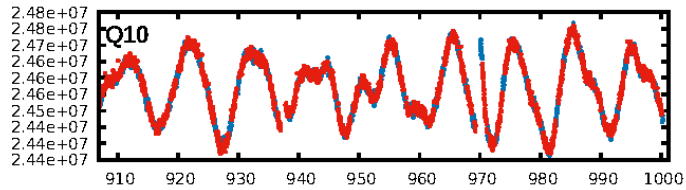
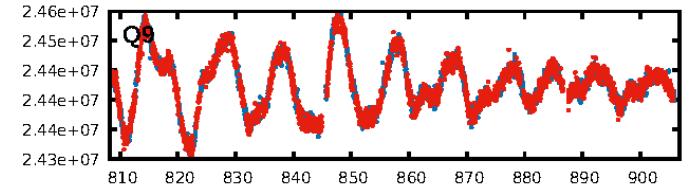
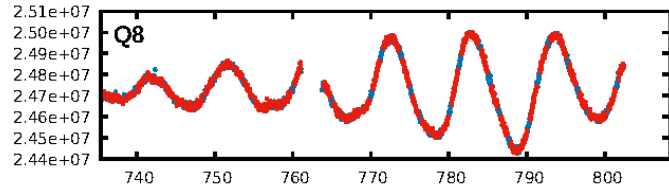
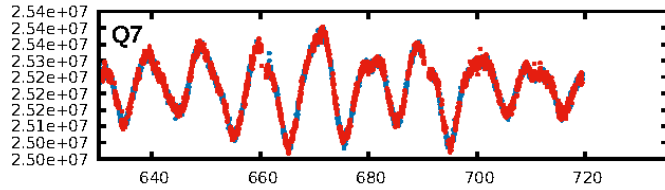
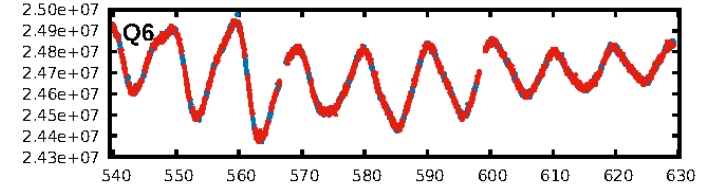
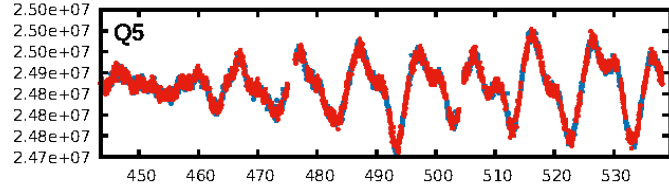
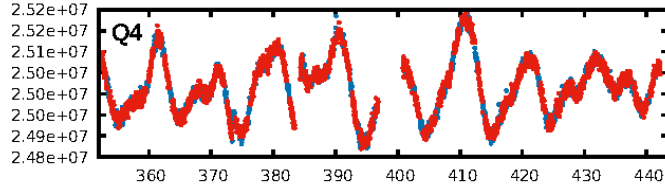
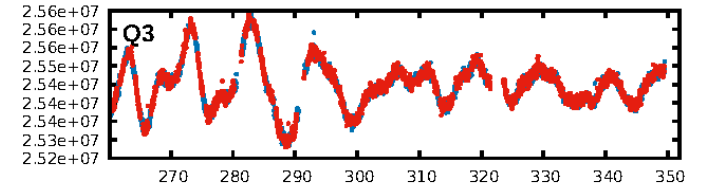
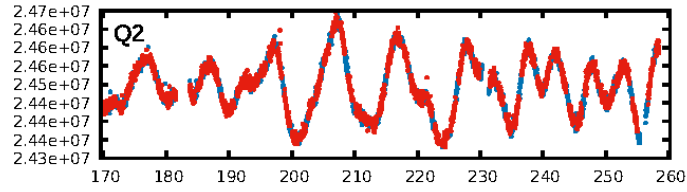
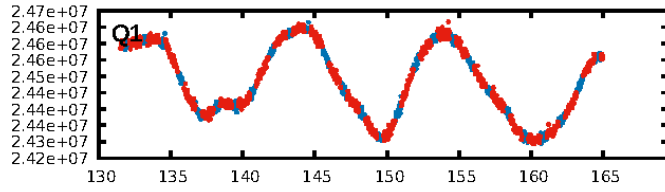
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1029/1029]
GhostDiagnostic-chr: 0.6465
Centroid-sig: 0.0%
Centroid-so: 1.964 arcsec [2.90 σ]
OotOffset-rm: 0.841 arcsec [1.00 σ]
KicOffset-rm: 0.942 arcsec [1.30 σ]
OotOffset-st: 3/4/2/4 [13]
KicOffset-st: 3/4/2/4 [13]
DiffImageQuality-fgm: 0.54 [7/13]
DiffImageOverlap-fno: 1.00 [17/17]

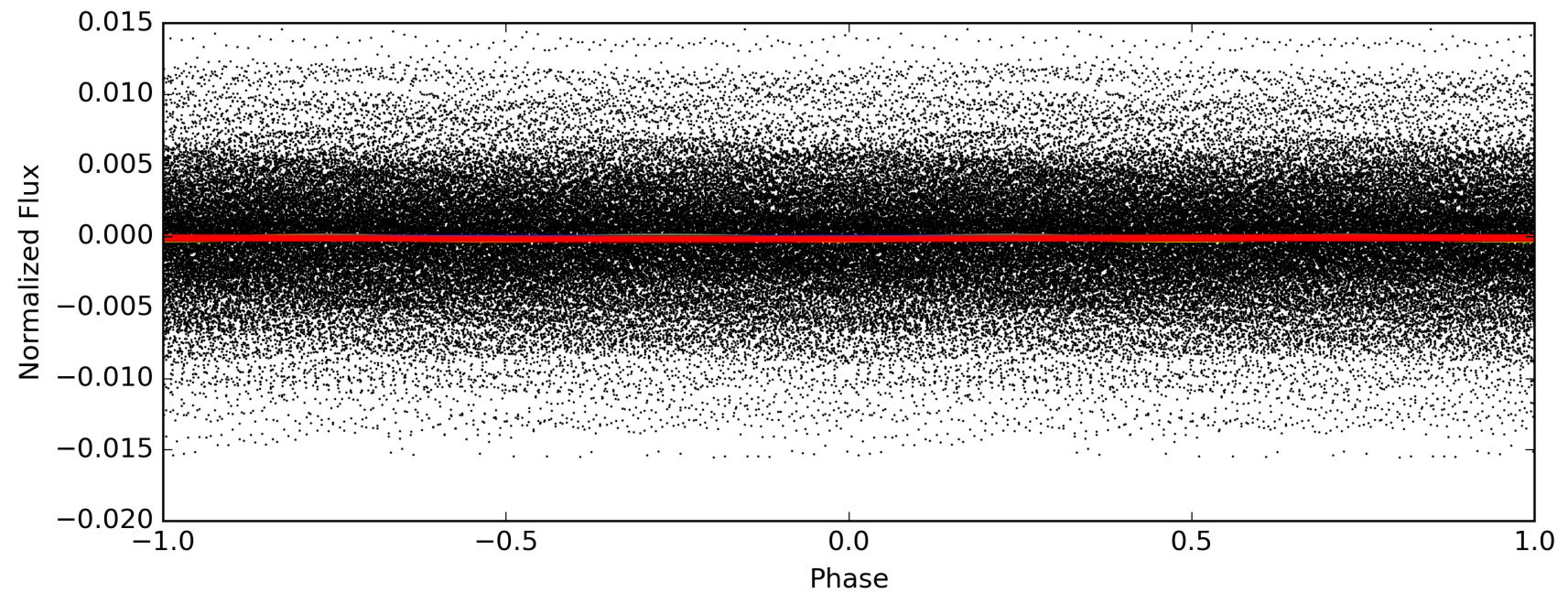
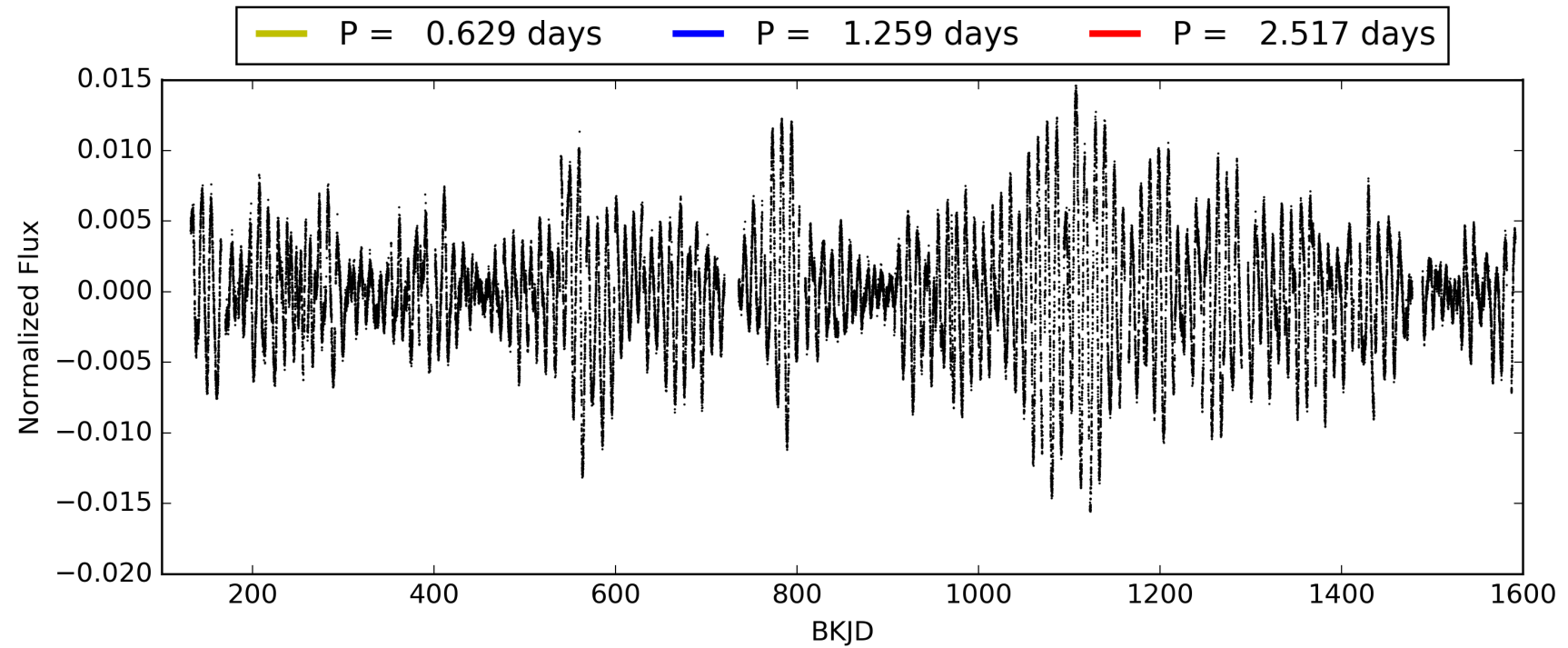
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 008382075-01, PDC Light Curves

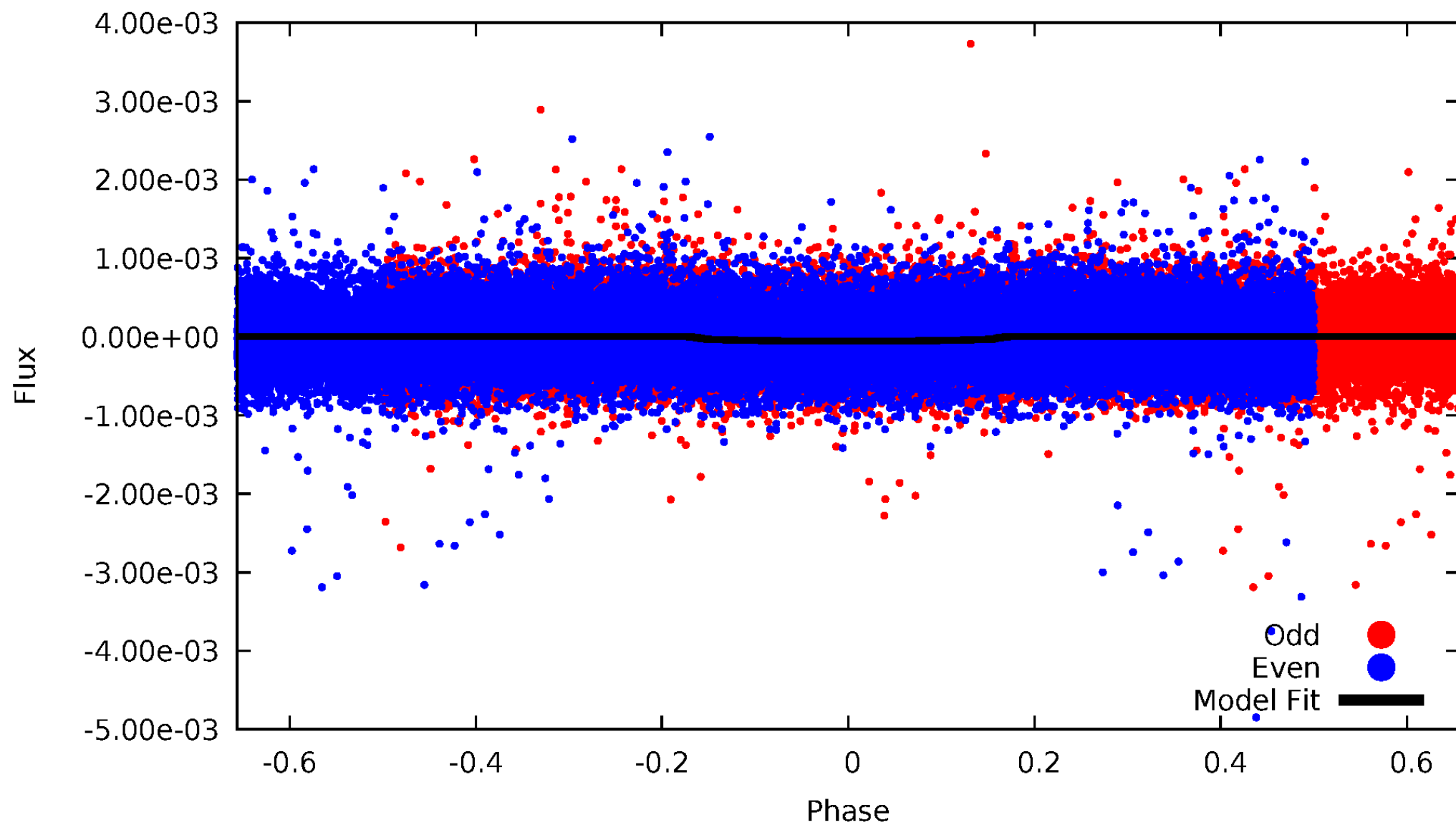


TCE 008382075-01



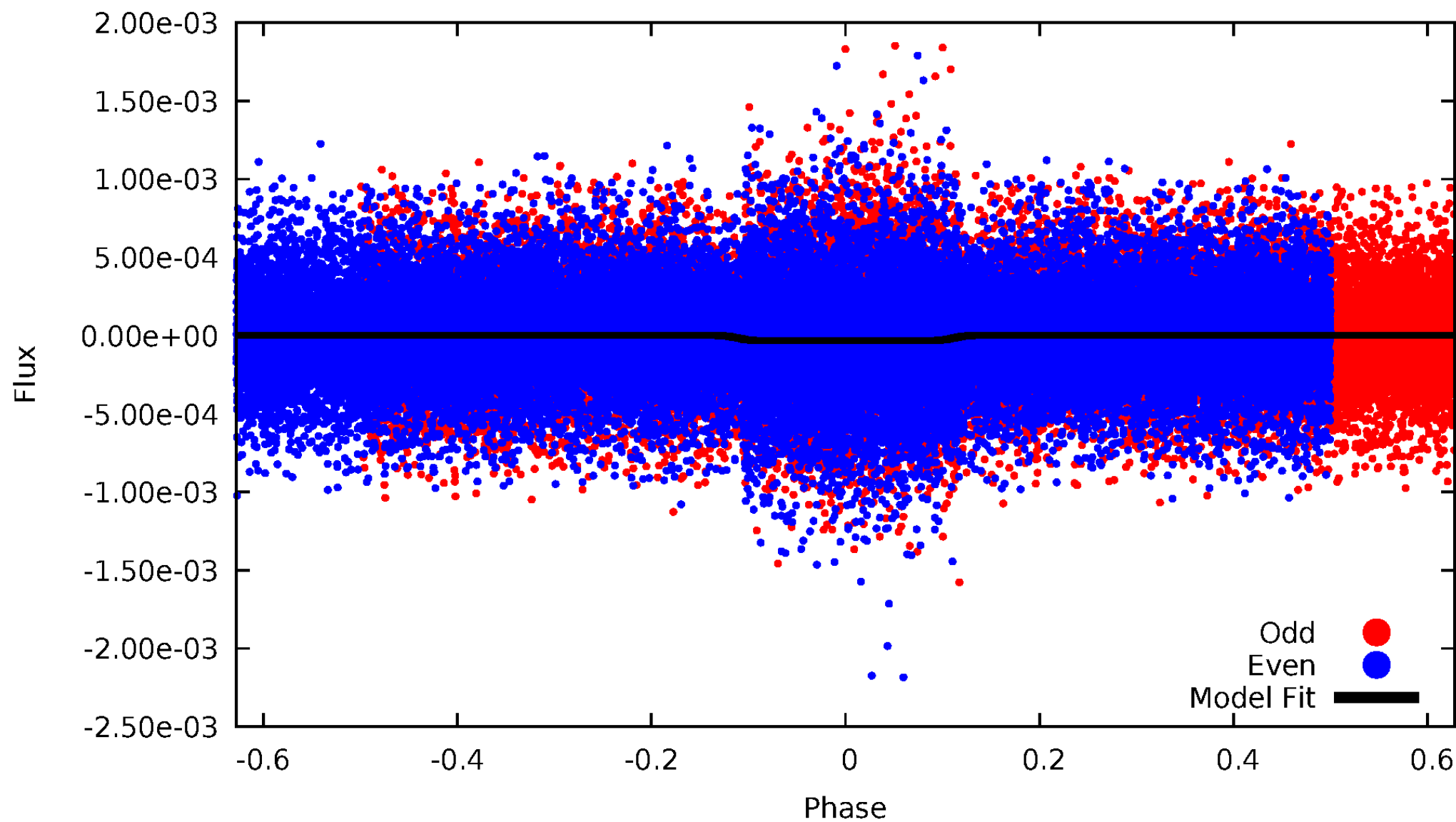
DV Odd/Even

TCE 008382075-01



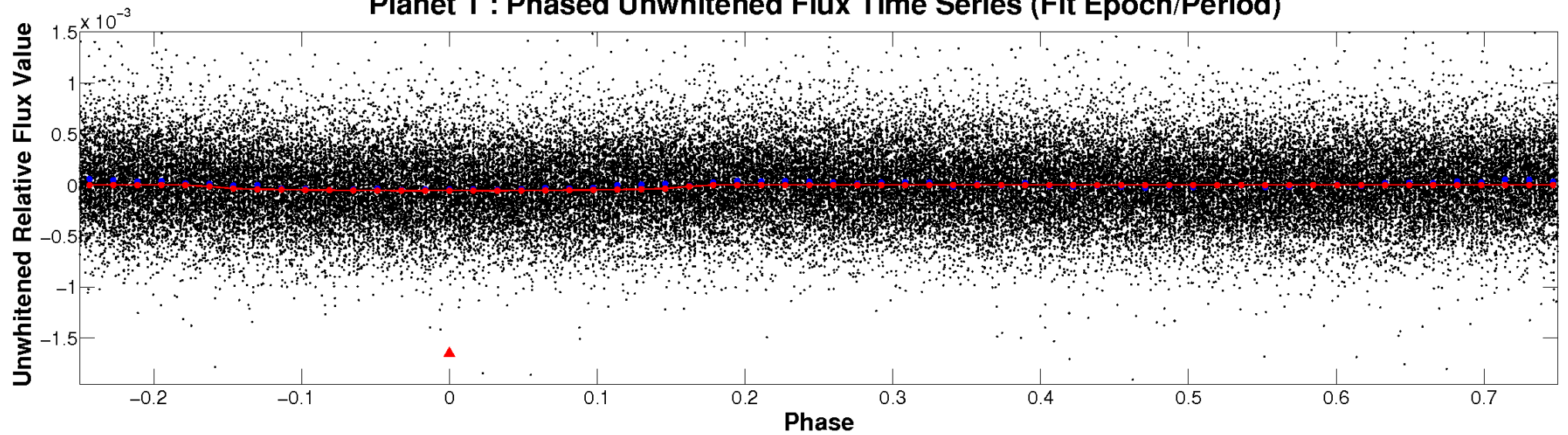
ALT Odd/Even

TCE 008382075-01

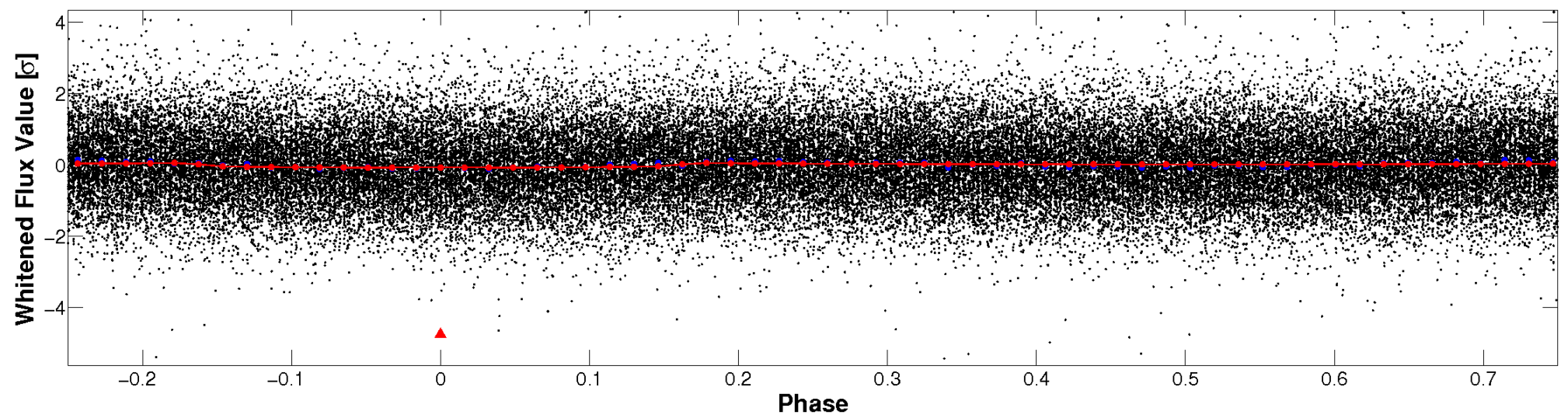


Non-Whitened Vs. Whitened Light Curve

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

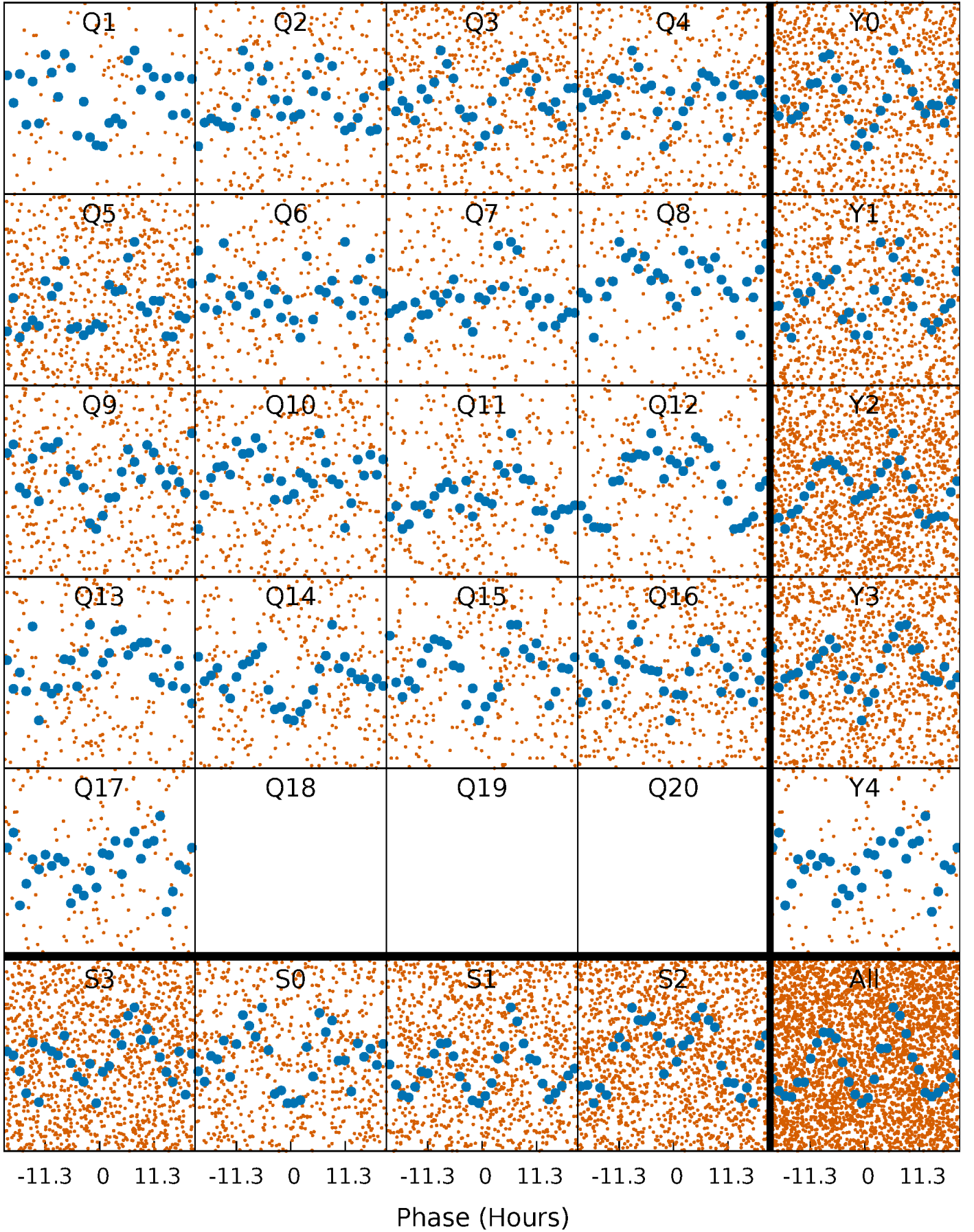


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



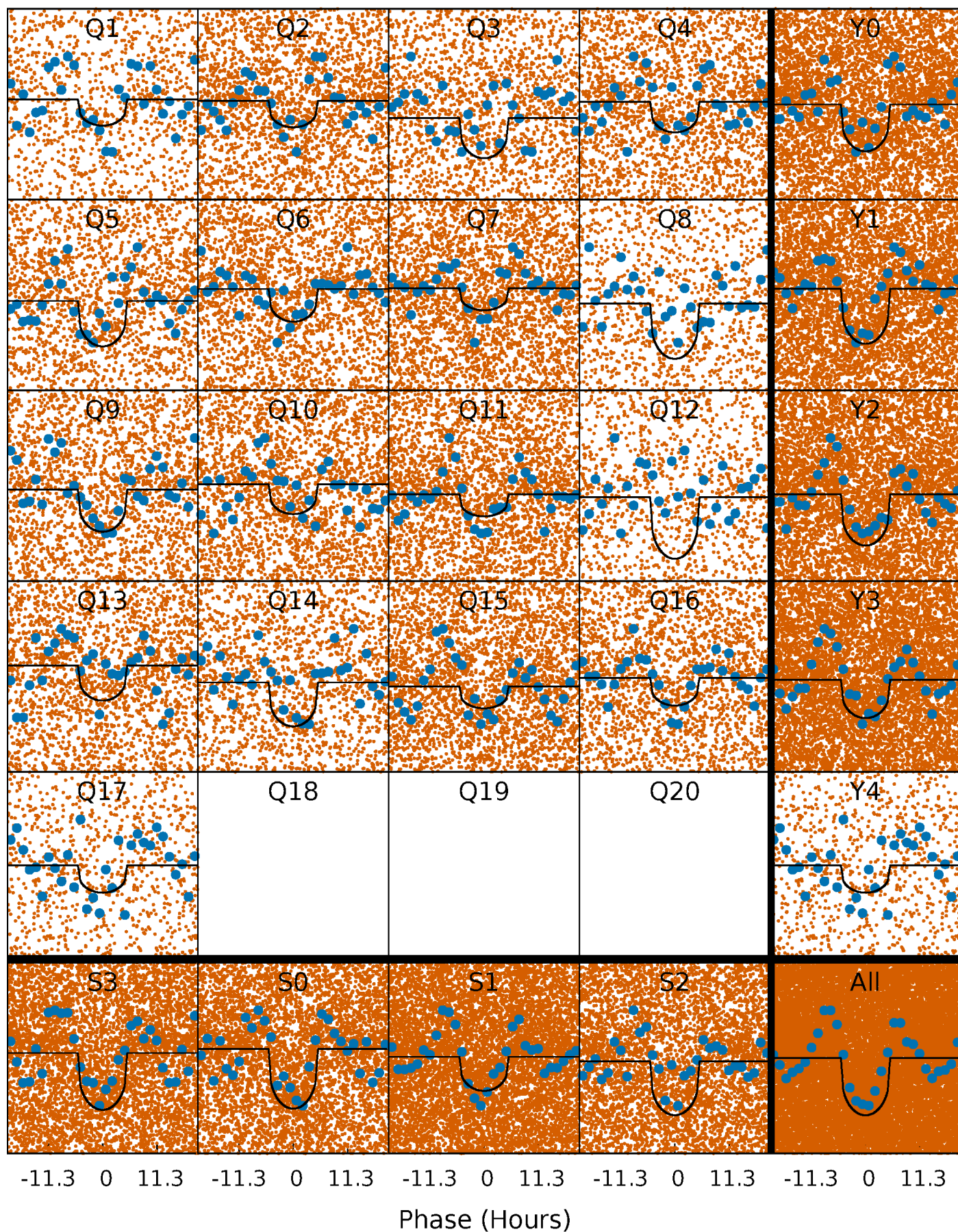
PDC Quarter-Phased Transit Curves

TCE 008382075-01 P= 1.258654 Days $T_0=132.533118$ (BKJD)



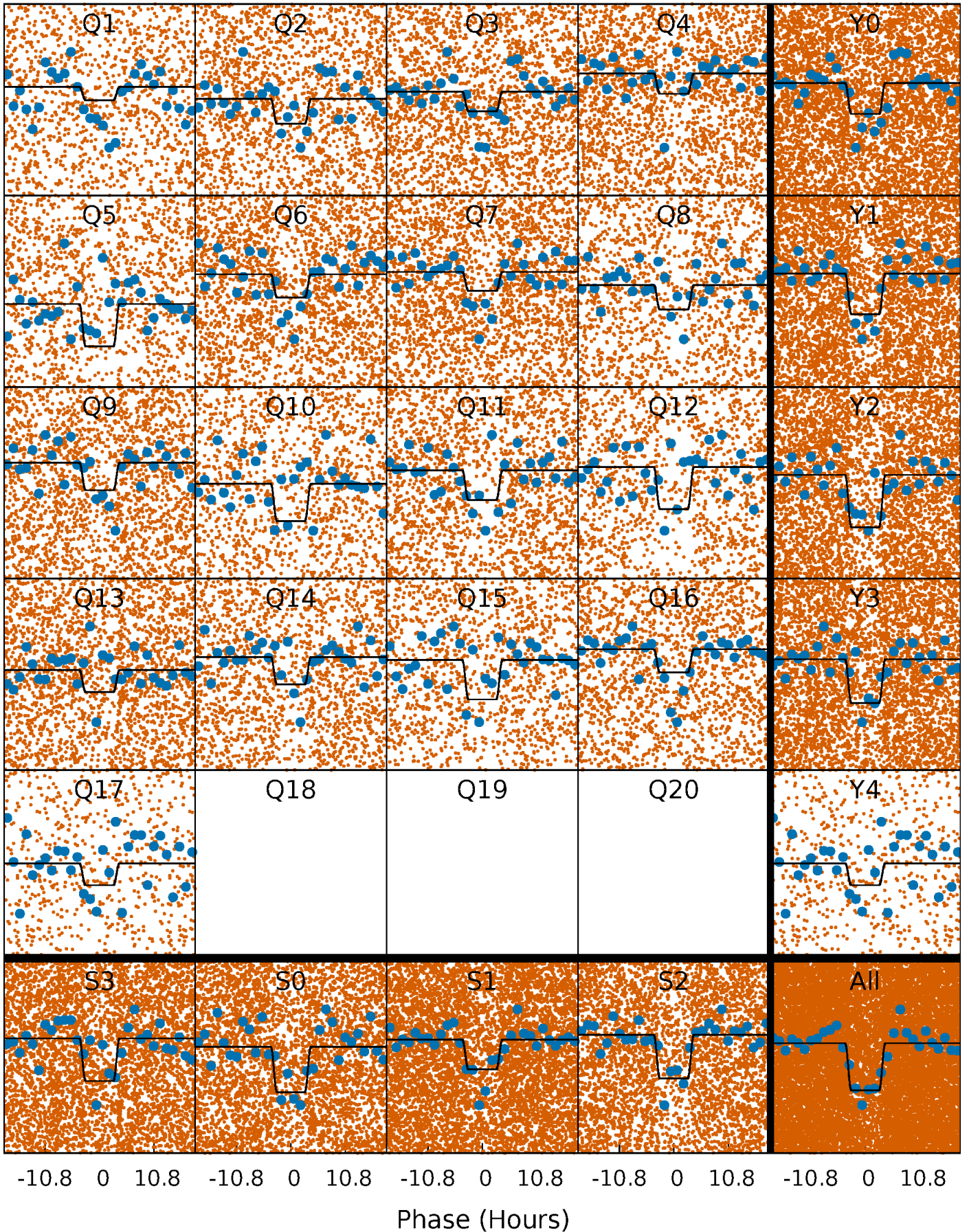
DV Quarter-Phased Transit Curves

TCE 008382075-01 P= 1.258654 Days $T_0=132.533118$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

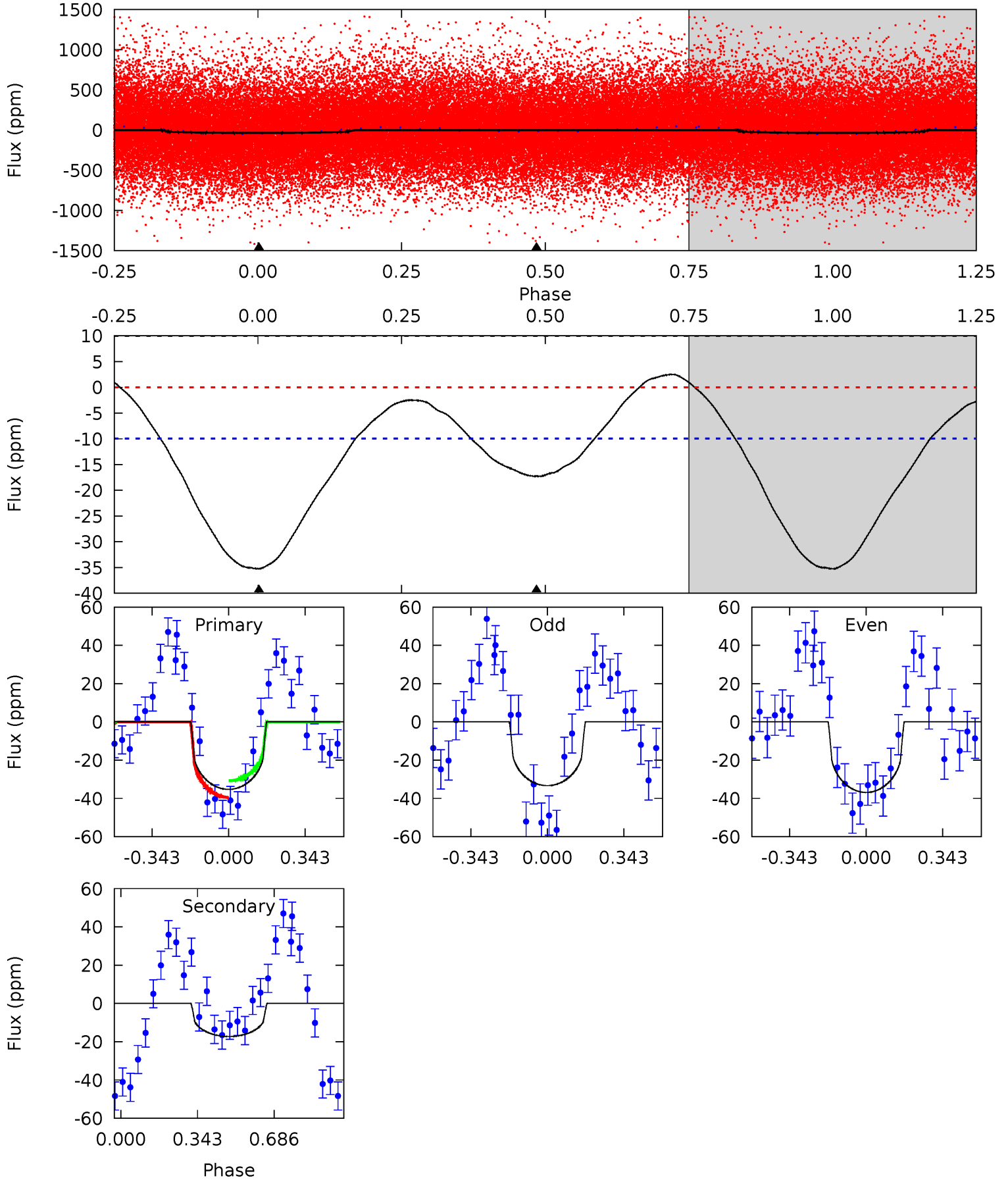
TCE 008382075-01 P= 1.258700 Days $T_0=132.484317$ (BKJD)



DV Model-Shift Uniqueness Test

008382075-01, P = 1.258654 Days, E = 131.274464 Days

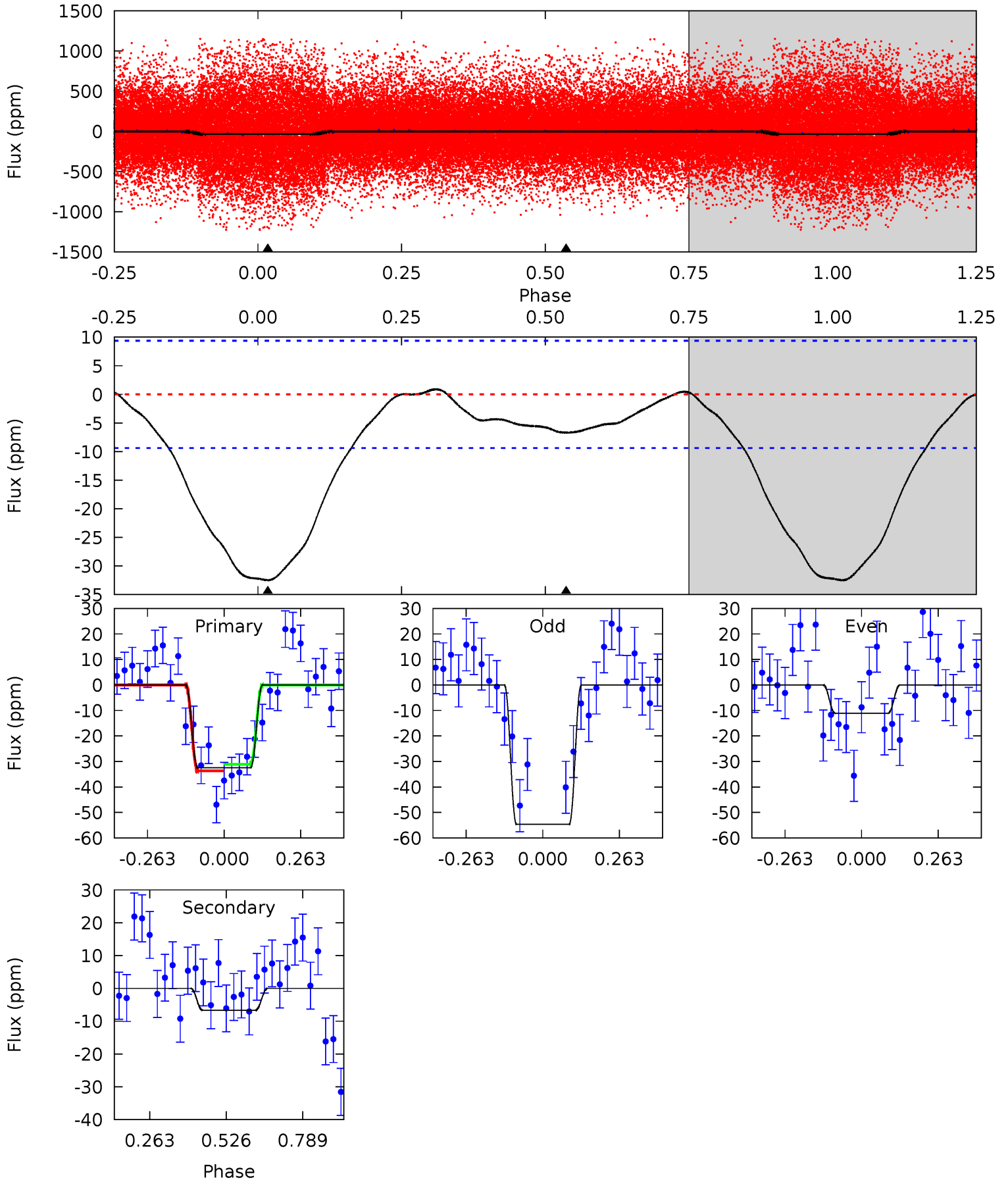
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.2	7.46	0	0	4.30	0.95	0.98	15.2	15.2	7.46	7.46	0.78	0.90	0.07	1.90



Alt Model-Shift Uniqueness Test

008382075-01, P = 1.258700 Days, E = 131.225617 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.1	3.11	0	0	4.36	1.12	0.53	15.1	15.1	3.11	3.11	10.1	1.06	0.03	0.60



Stellar Parameters For KIC 008382075

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5354^{+177}_{-160}	$4.552^{+0.094}_{-0.085}$	$-0.640^{+0.350}_{-0.300}$	$0.726^{+0.097}_{-0.080}$	$0.684^{+0.090}_{-0.032}$	$2.521^{+0.933}_{-0.624}$
	+3%/-3%	+2%/-2%	+55%/-47%	+13%/-11%	+13%/-5%	+37%/-25%
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 008382075-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-17 ± 2	$0.63^{+0.44}_{-0.39}$	1977^{+96}_{-84}	4094^{+2119}_{-702}	$9.930^{+57.064}_{-6.593}$
Alt.	-7 ± 2	$0.54^{+0.43}_{-0.33}$	1987^{+87}_{-96}	3641^{+1745}_{-705}	$4.918^{+32.947}_{-3.460}$

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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

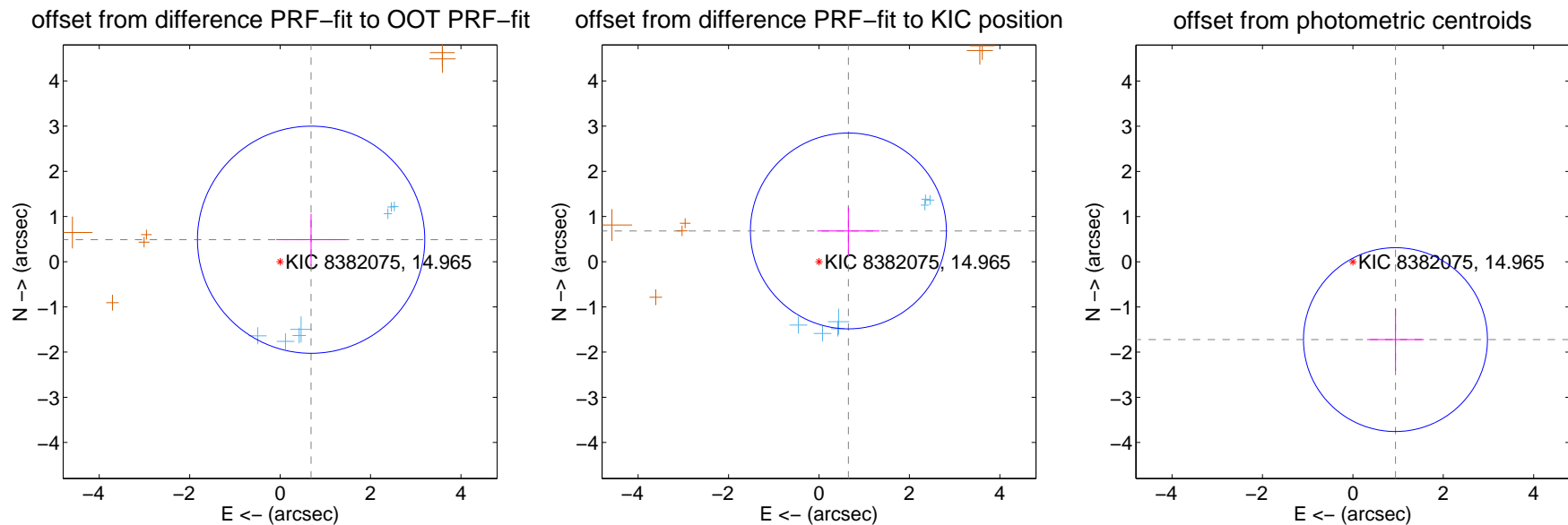
DV Centroid Data

Supplemental centroid analysis for 008382075-01. Kepler magnitude: 14.96. Transit SNR 11.08

There are 7 quarters with good PRF difference image offsets

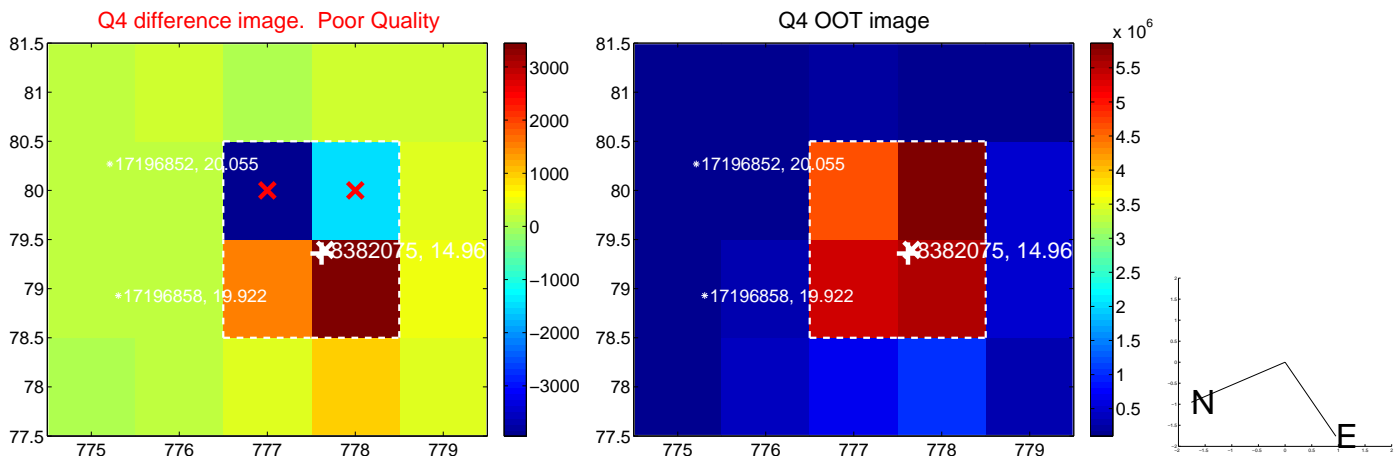
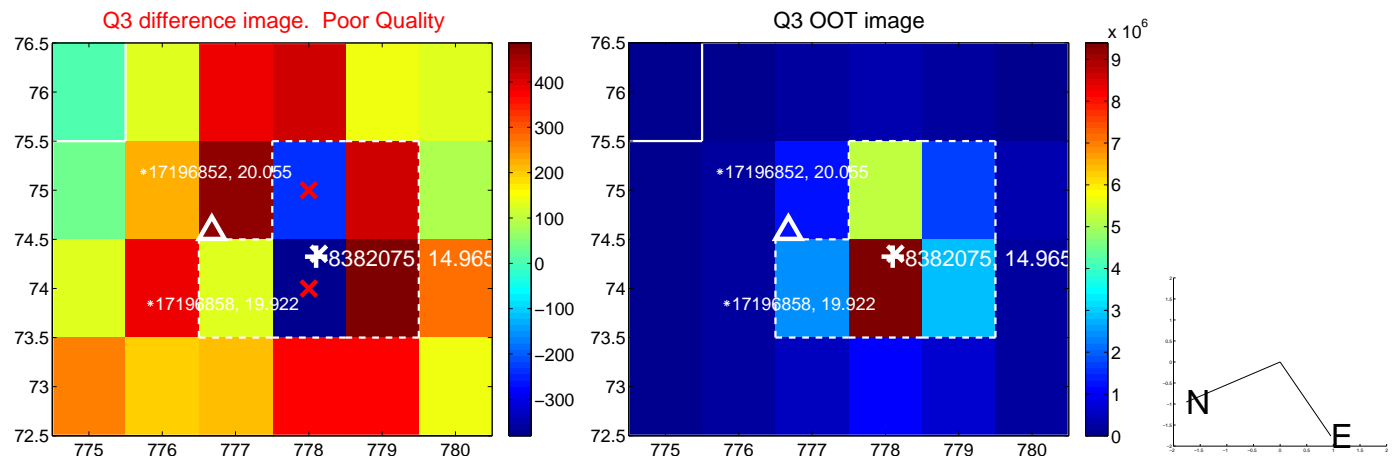
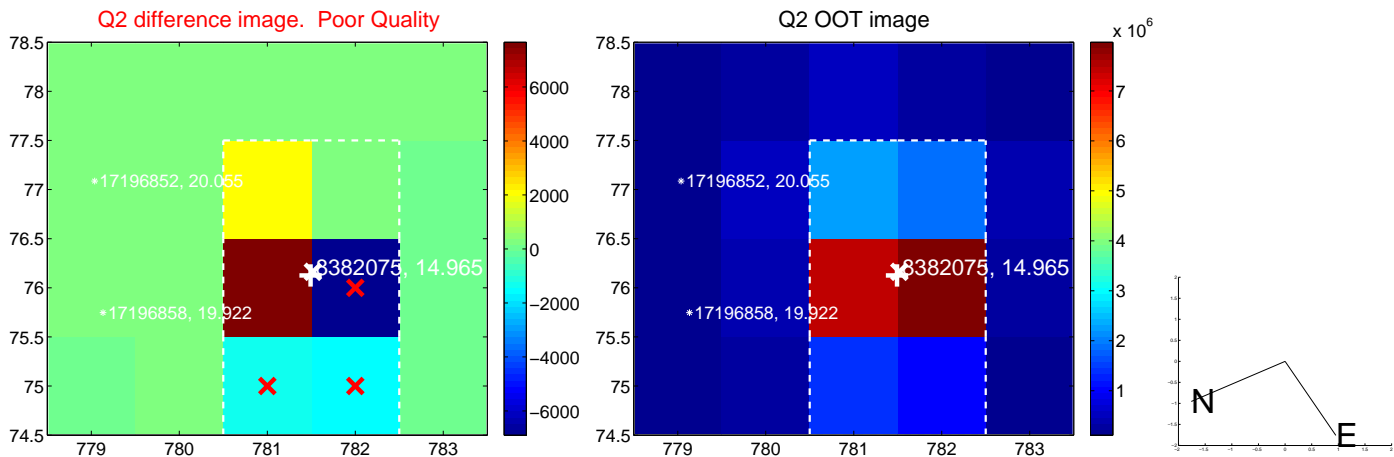
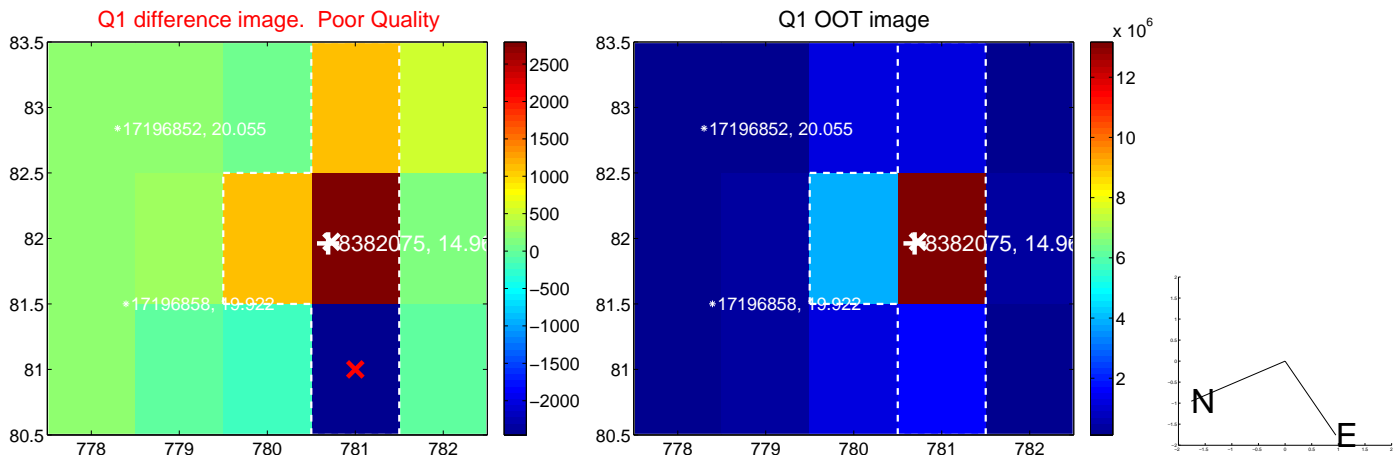
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.841 ± 0.838	1.00	-0.686 ± 0.772	0.486 ± 0.574
PRF-fit source offset from KIC position	0.942 ± 0.722	1.30	-0.650 ± 0.687	0.681 ± 0.522
photometric centroid source offset	1.96 ± 0.68	2.90	-0.94 ± 0.63	-1.72 ± 0.69

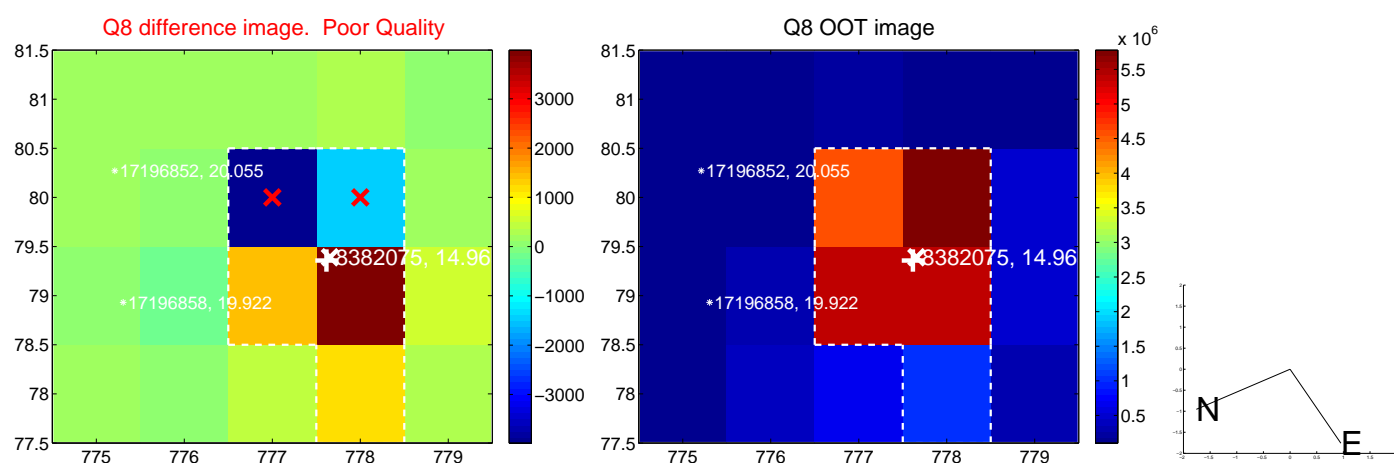
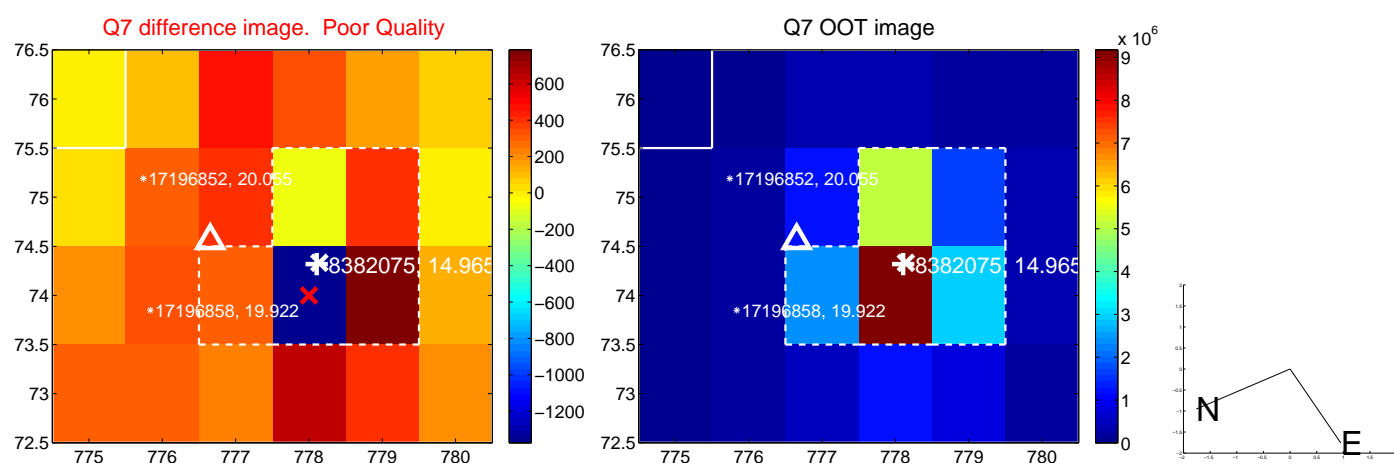
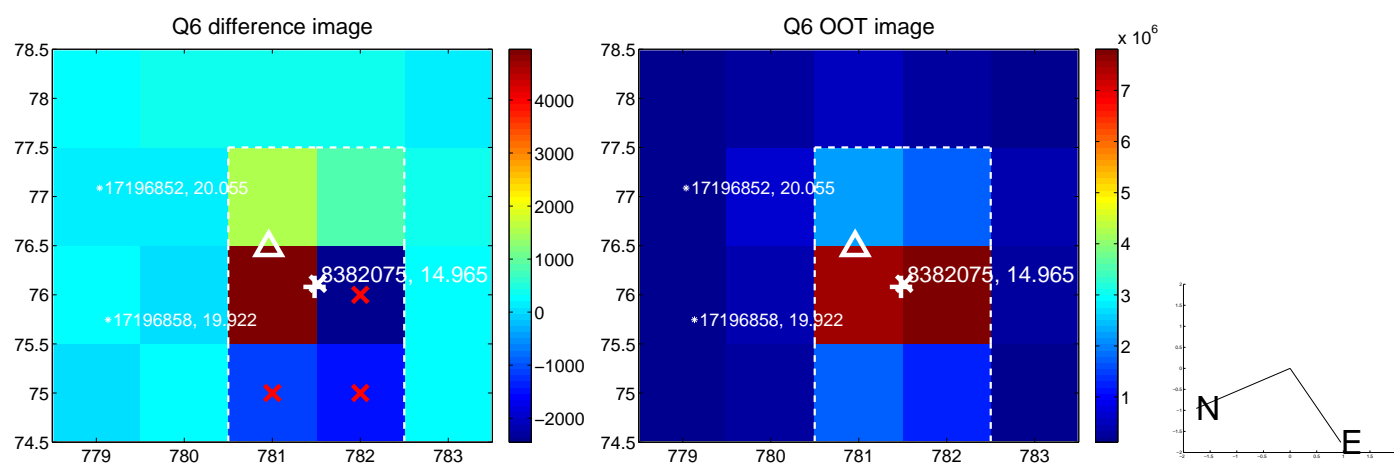
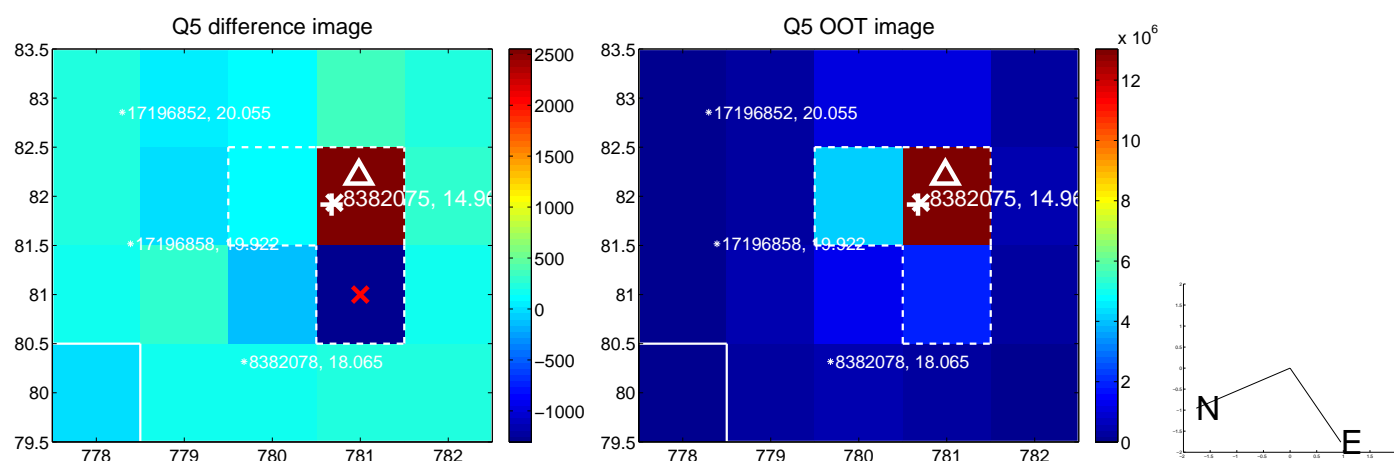


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

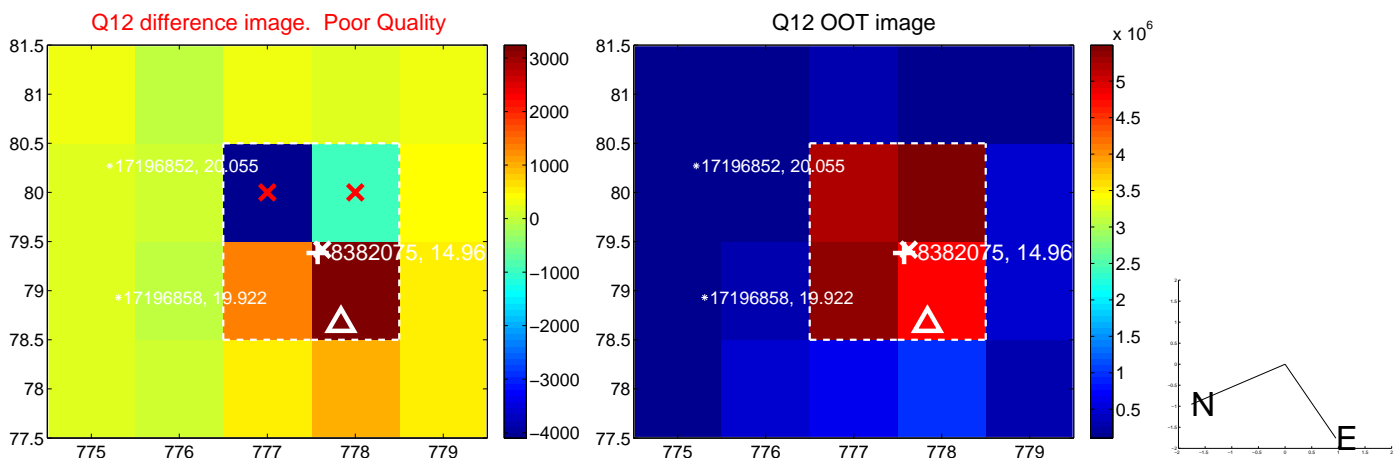
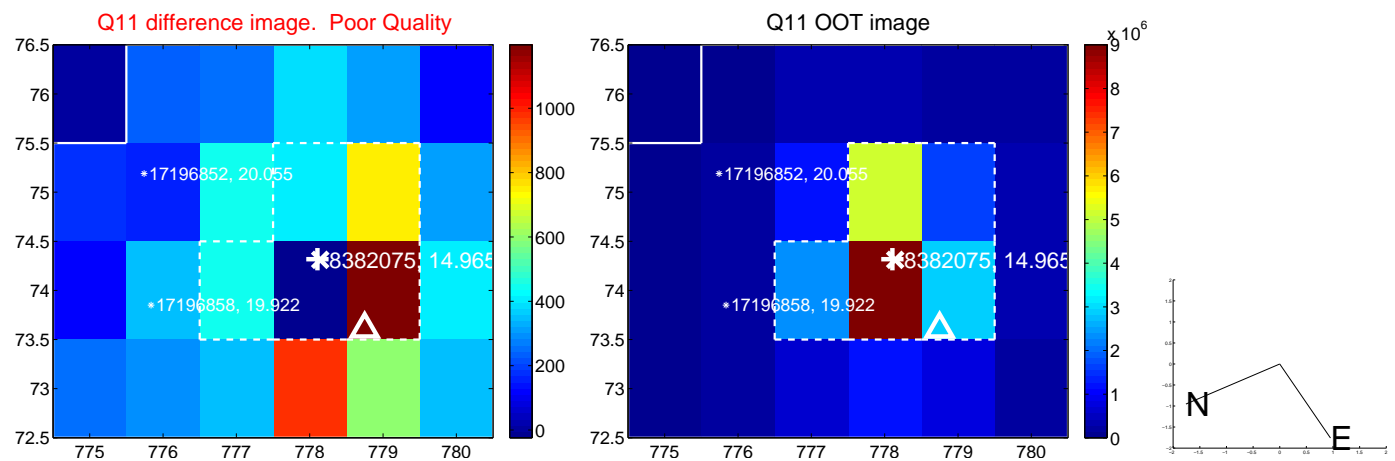
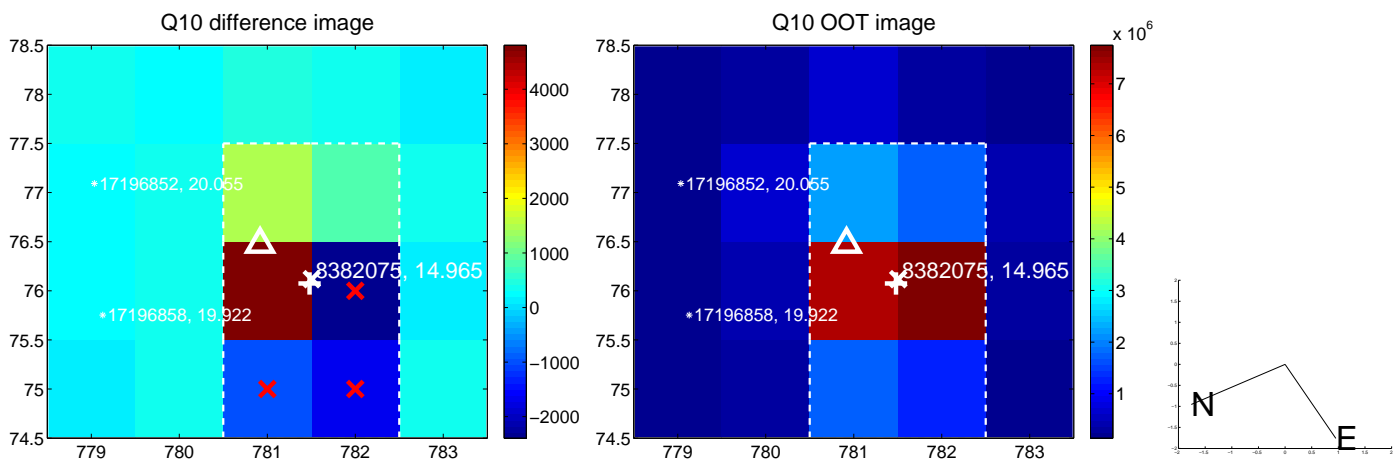
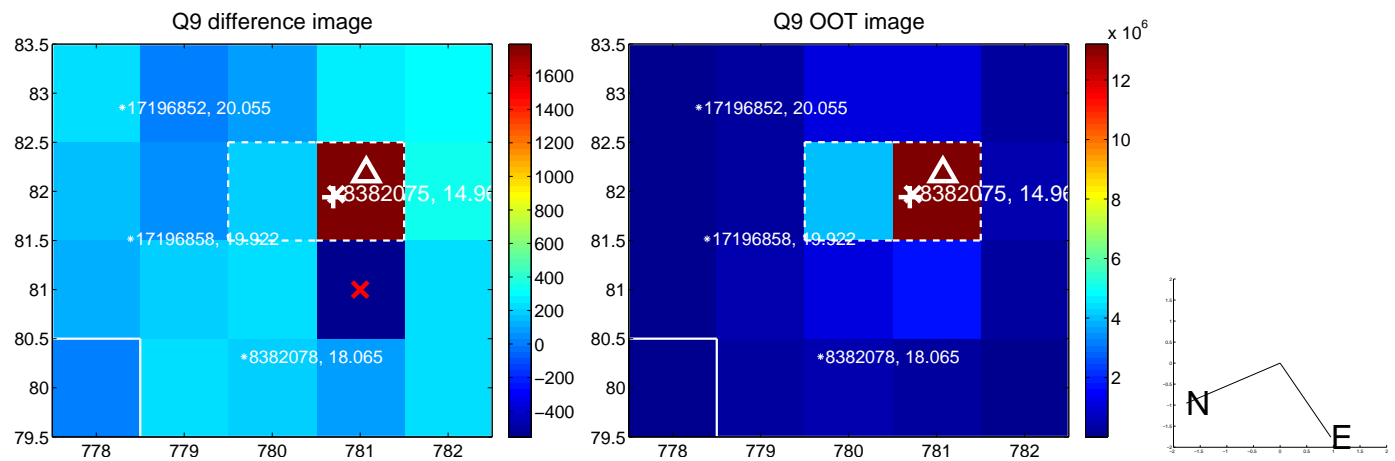
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



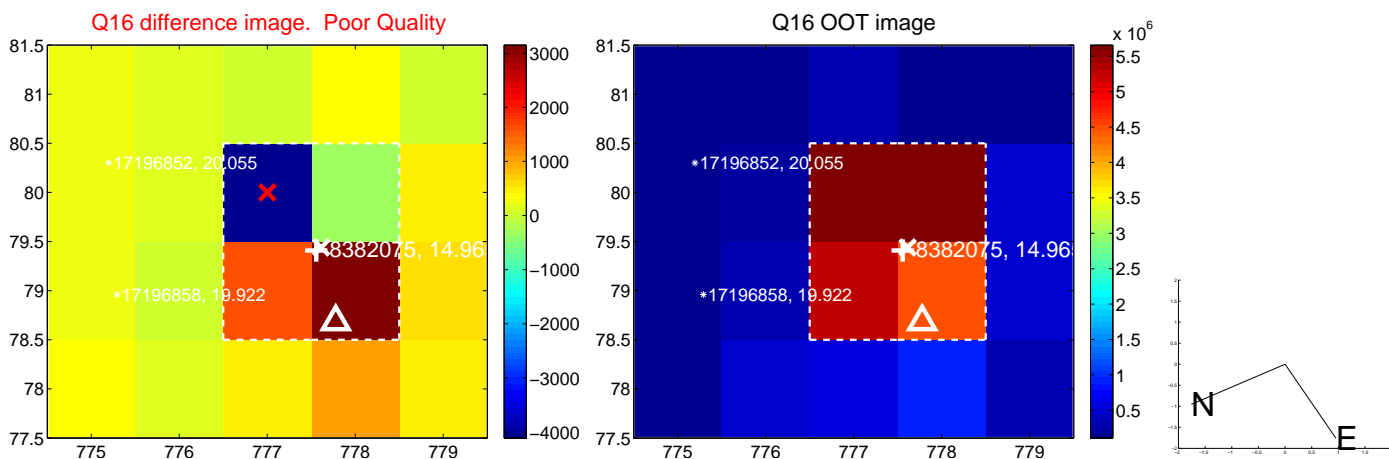
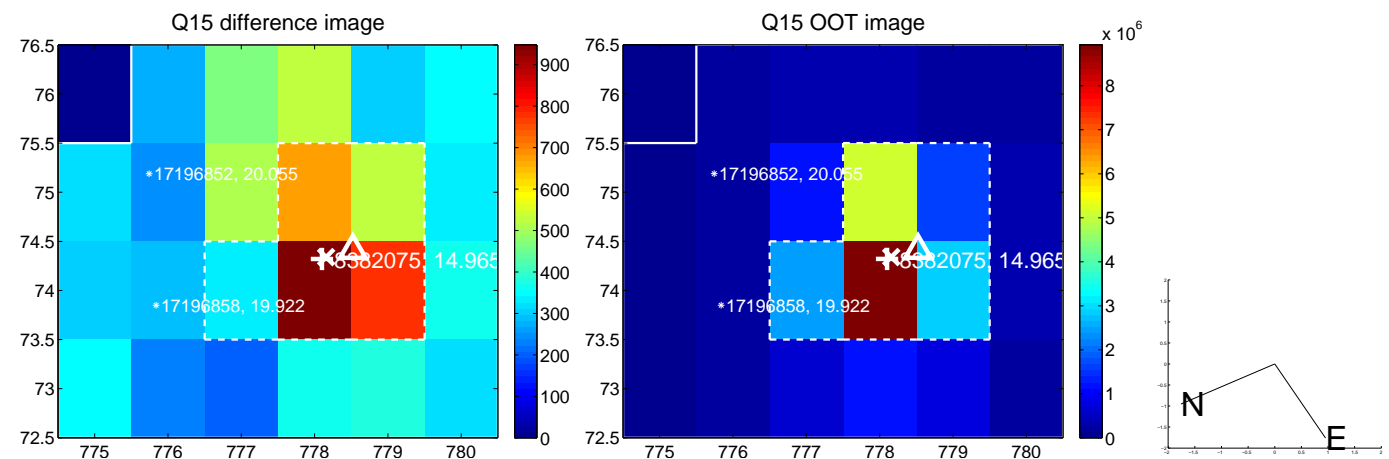
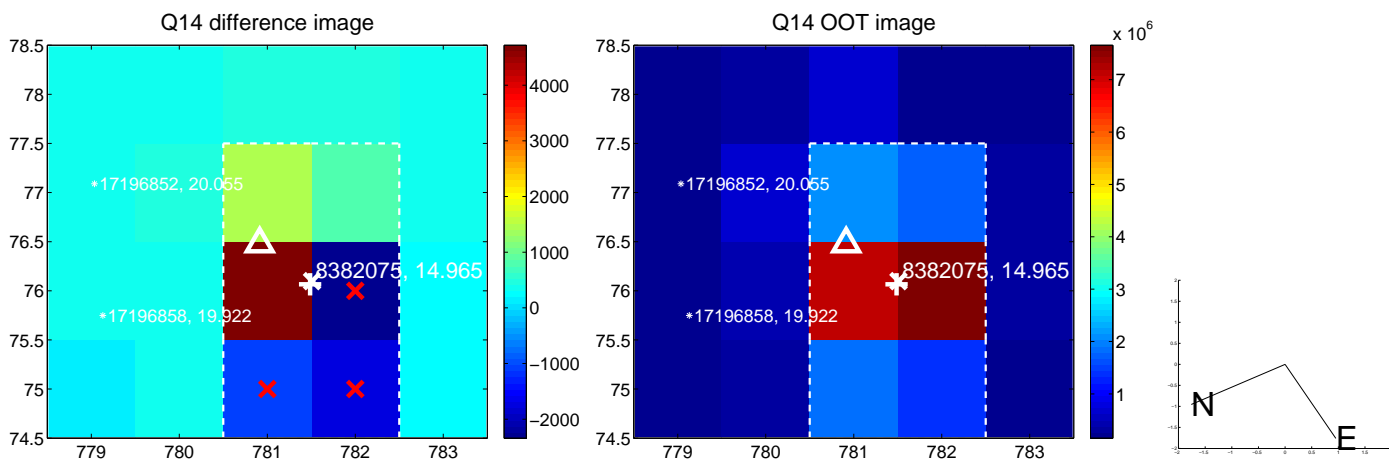
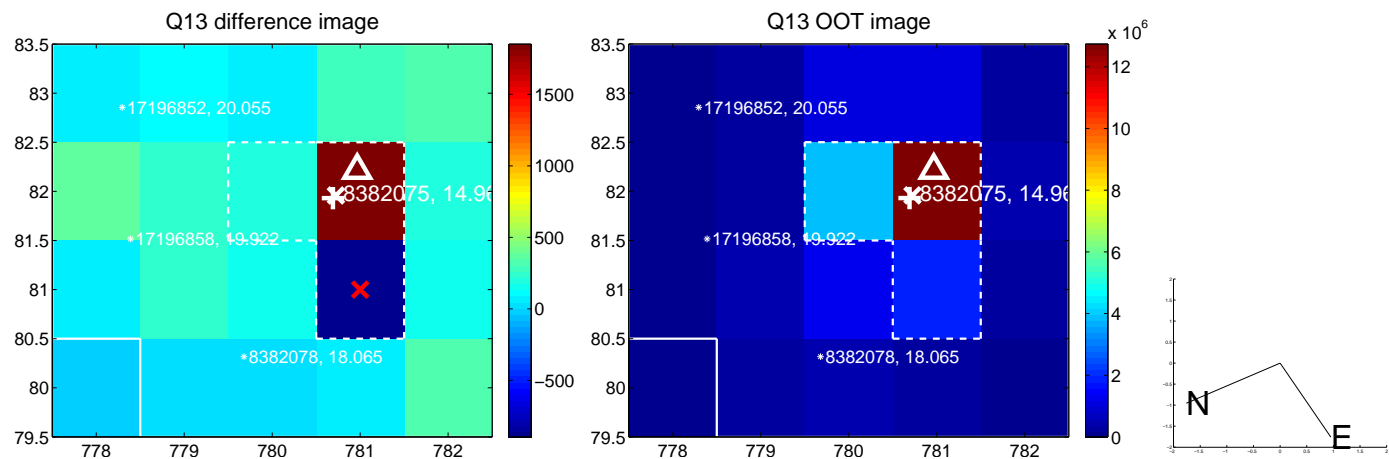
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



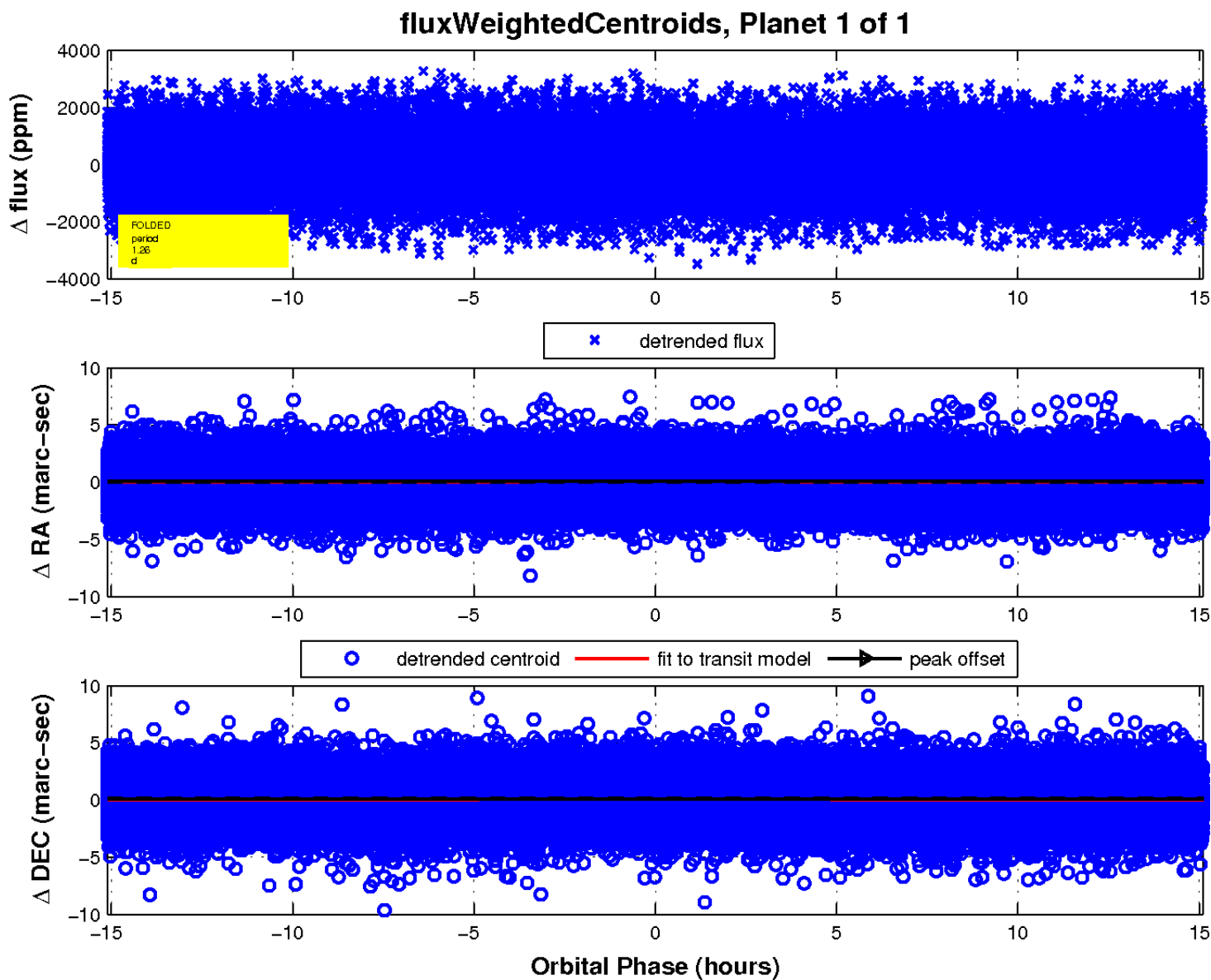
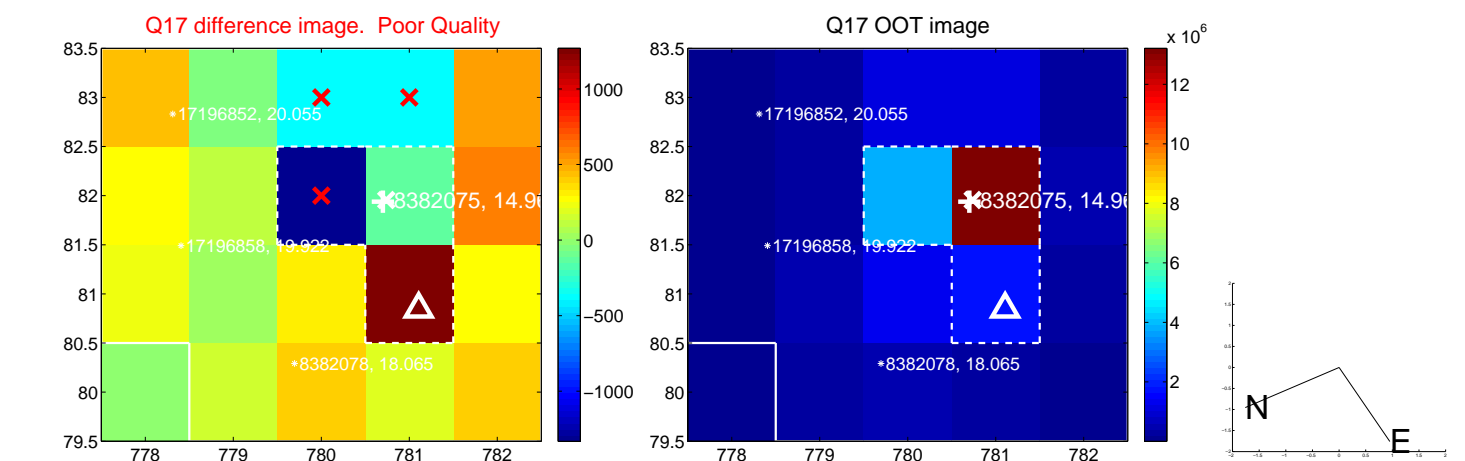
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

