

KIC 012456063

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})
012456063-01	OBS	4329.01	17.800956	134.376720	46.4	6.454	11.0	11.7	1.25	6240	1.00	105.22

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
012456063-01	OBS	PC	0.91	0	0	0	0	NO_COMMENT

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.

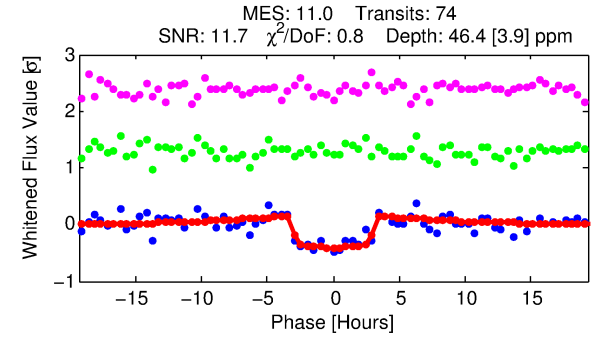
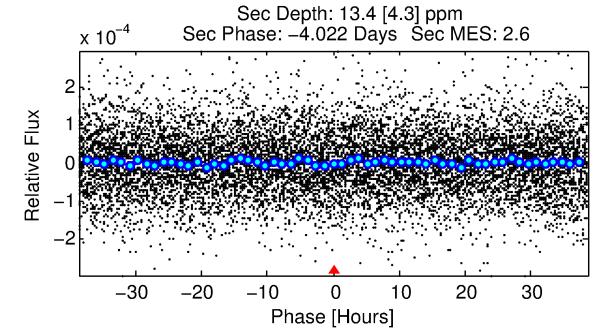
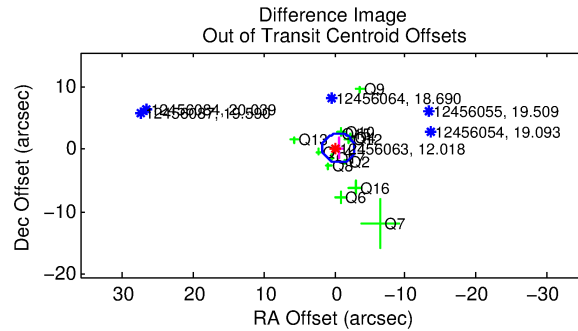
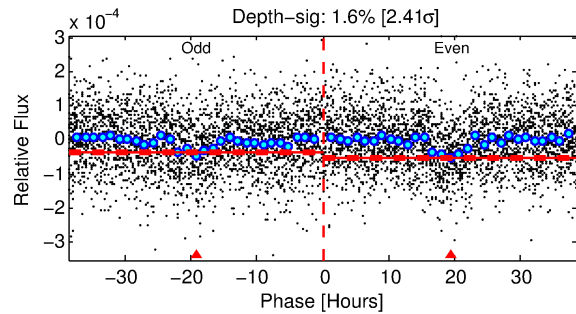
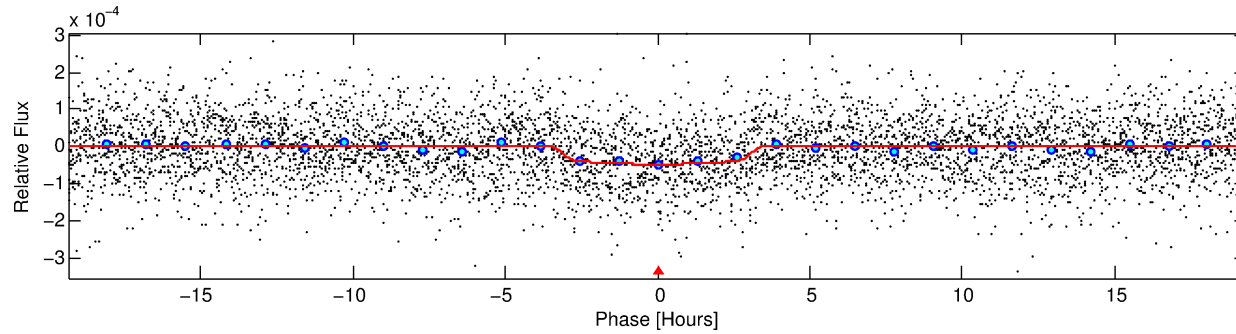
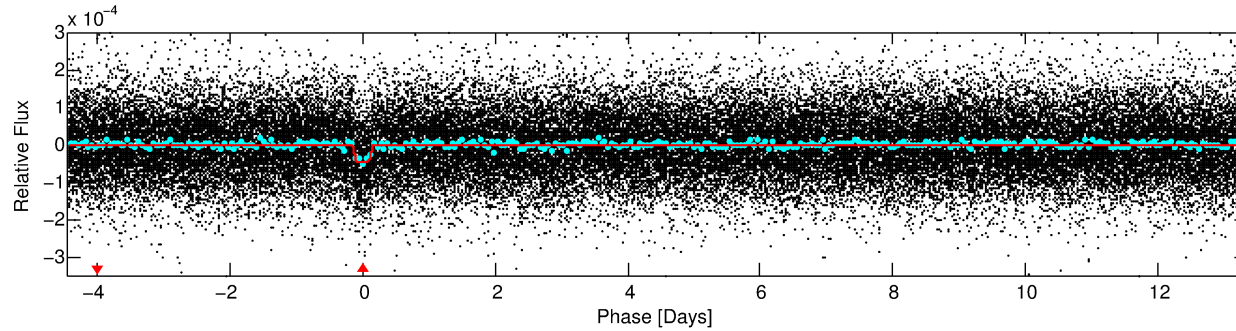
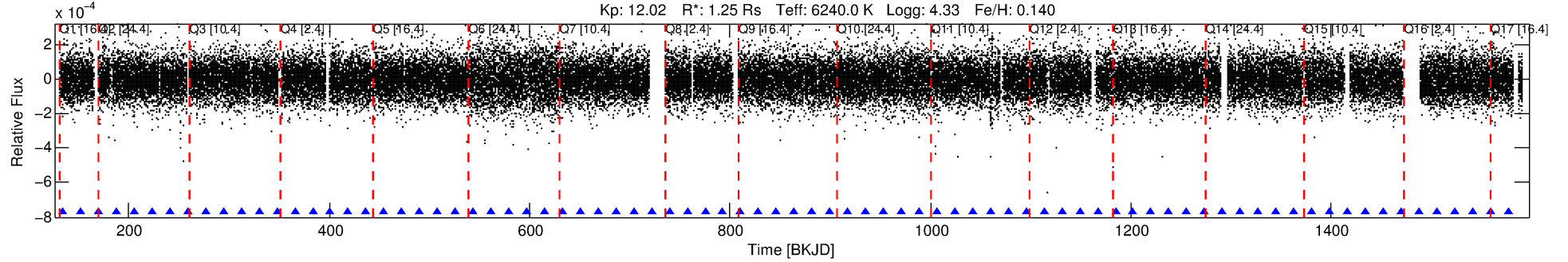
Ephemeris Match Information For 012456063-01

No Significant Match Found

DV One-Page Summary

KIC: 12456063 Candidate: 1 of 1 Period: 17.801 d

KOI: K04329.01 Corr: 0.986



DV Fit Results:

Period = 17.80096 [0.00018] d
Epoch = 134.3767 [0.0078] BKJD
Rp/R* = 0.0073 [0.0017]
a/R* = 9.92 [12.05]
b = 0.89 [0.28]
Seff = 105.22 [23.94]
Teq = 817 [46] K
Rp = 1.00 [0.29] Re
a = 0.1423 [0.0201] AU
Ag = 150.29 [91.51] [1.63 σ]
Teffp = 4421 [639] K [5.63 σ]

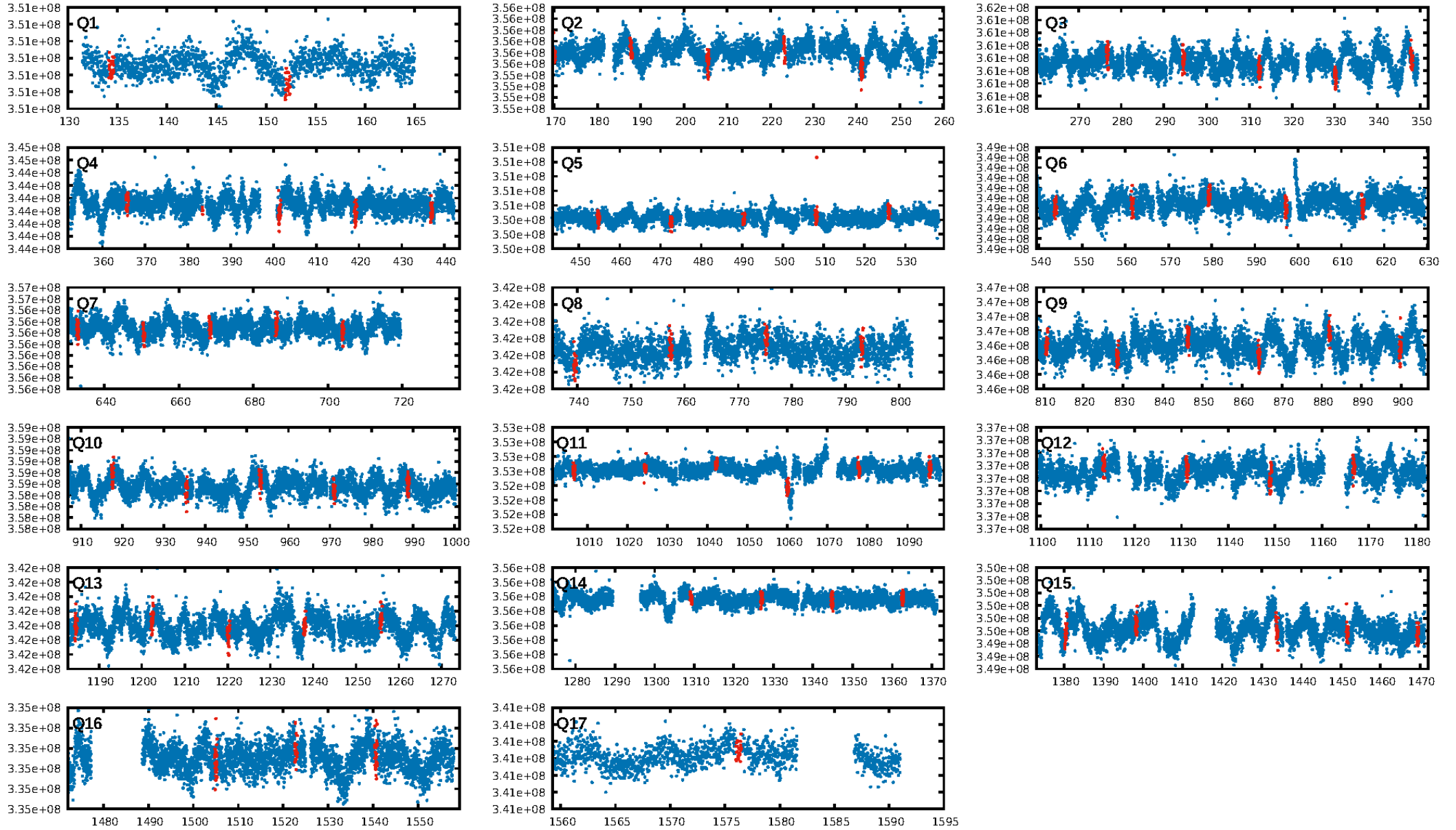
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 98.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.52e-27
RollingBand-fgt: 1.00 [71/71]
GhostDiagnostic-chr: 3.103
Centroid-sig: N/A
Centroid-so: 0.633 arcsec [0.69 σ]
OotOffset-rm: 0.554 arcsec [0.72 σ]
KicOffset-rm: 0.696 arcsec [0.88 σ]
OotOffset-st: 4/2/4/3 [13]
KicOffset-st: 4/2/4/3 [13]
DiffImageQuality-fgm: 0.38 [5/13]
DiffImageOverlap-fno: 1.00 [17/17]

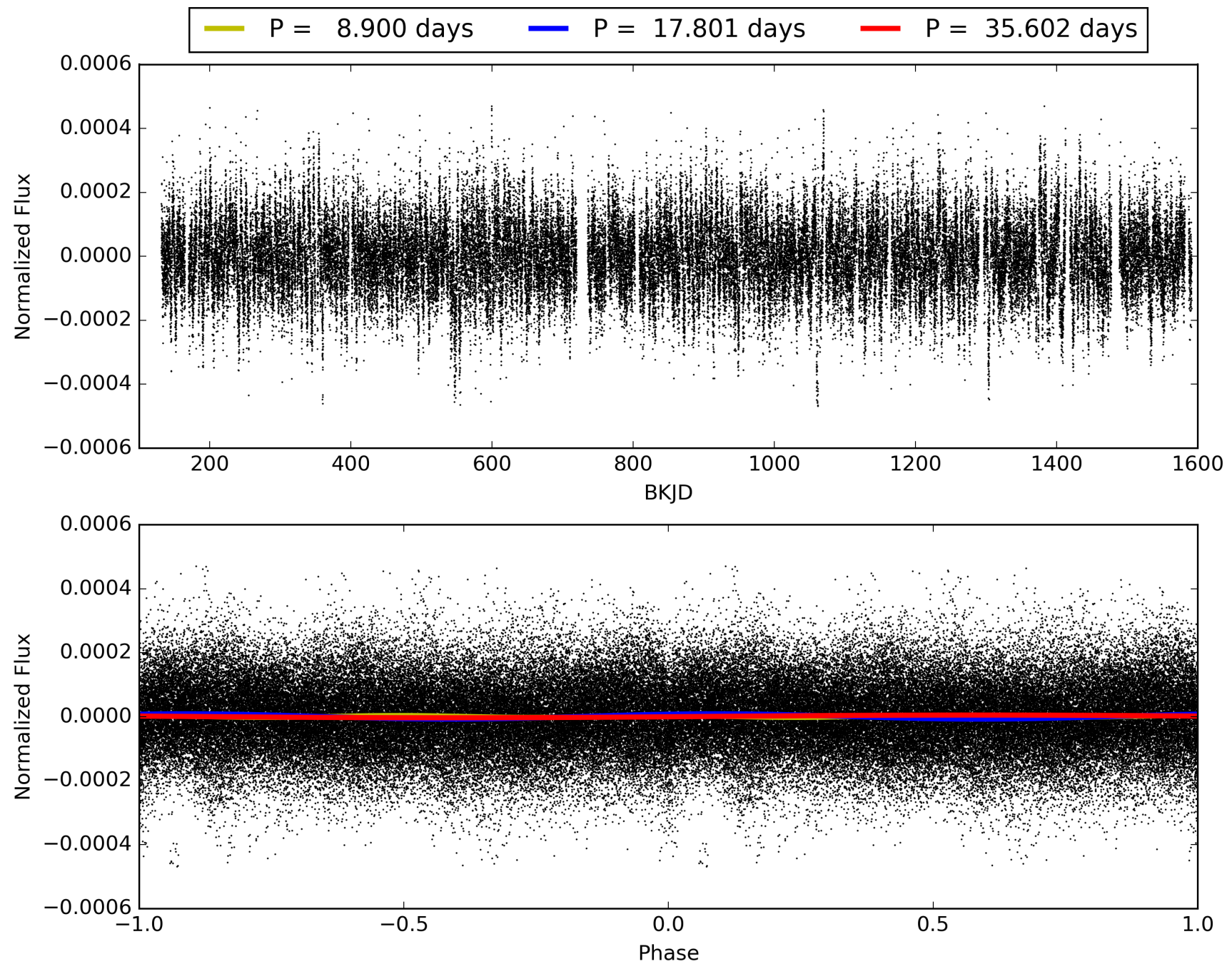
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 20:06:37 Z

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

TCE 012456063-01, PDC Light Curves

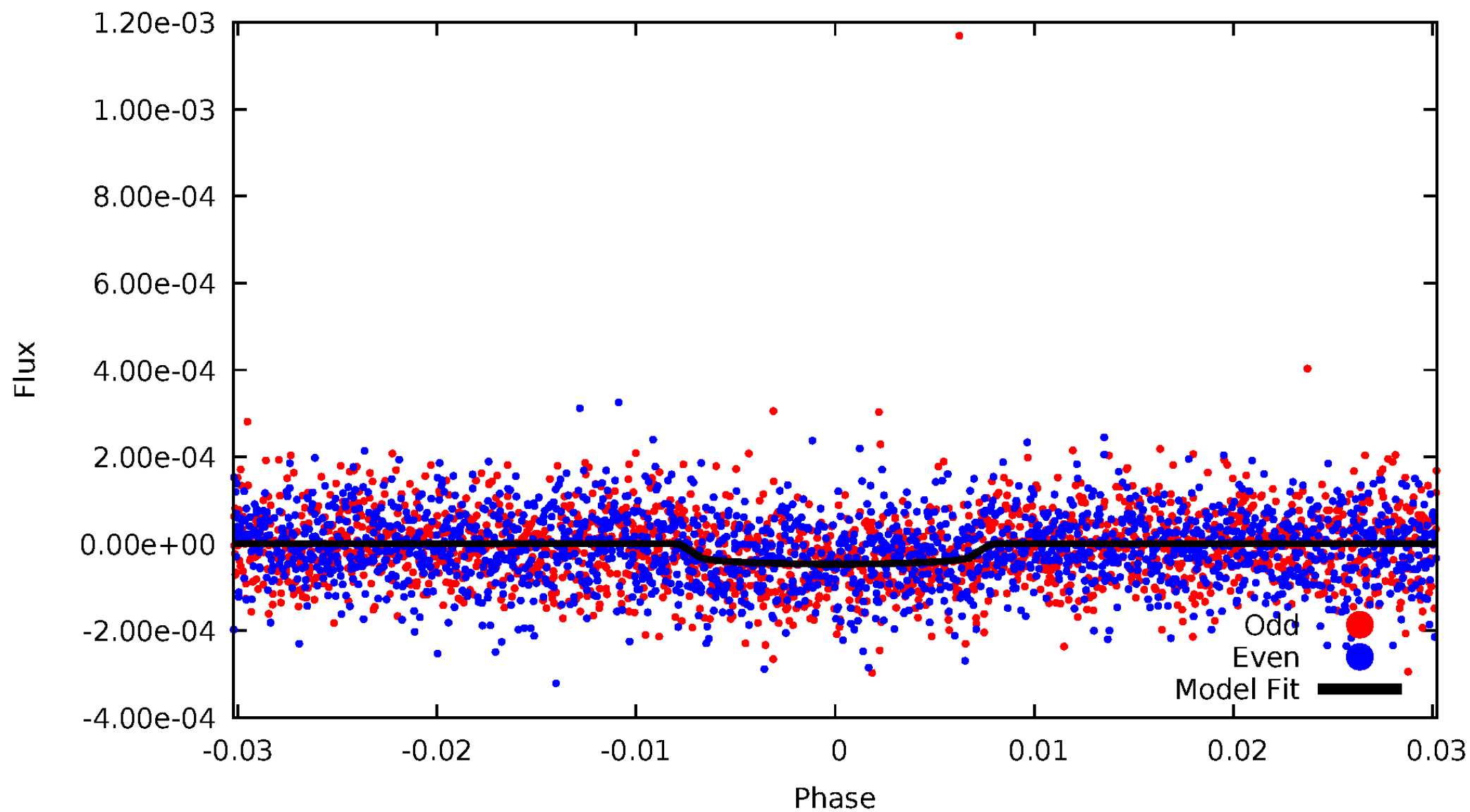


TCE 012456063-01



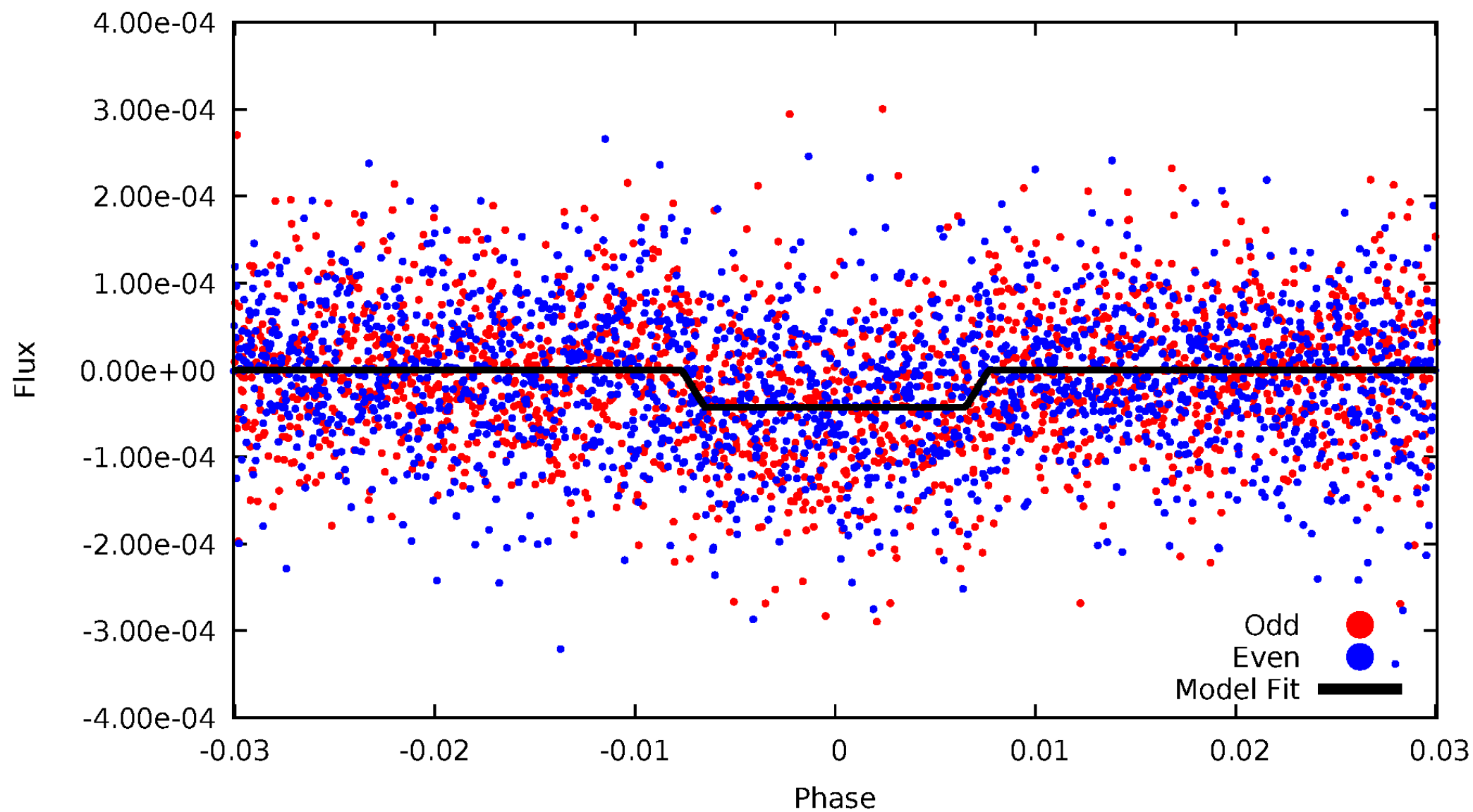
DV Odd/Even

TCE 012456063-01



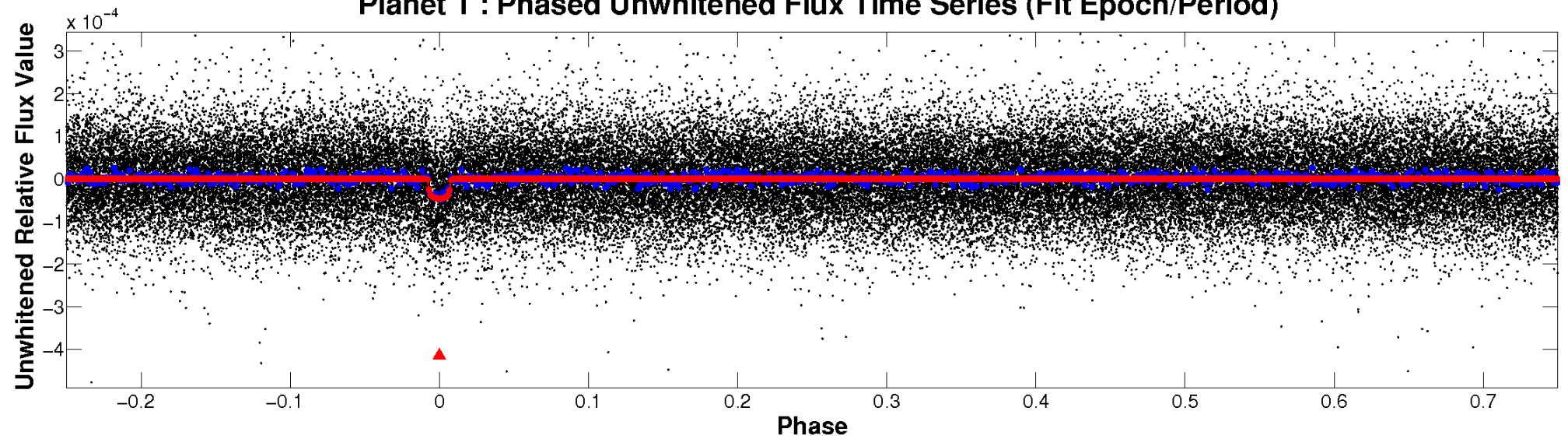
ALT Odd/Even

TCE 012456063-01

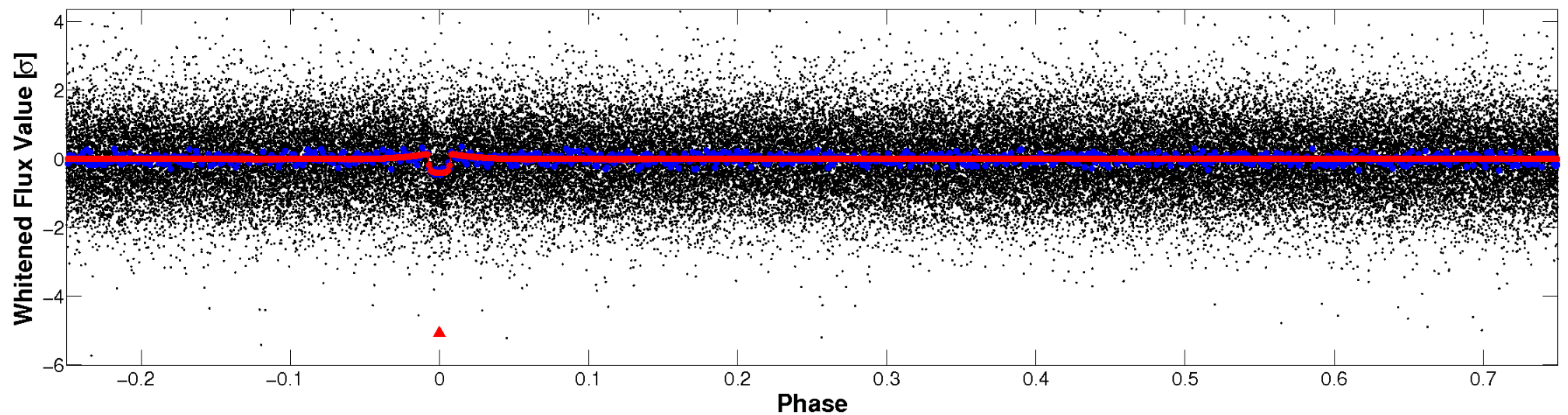


Non-Whitened Vs. Whitened Light Curve

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

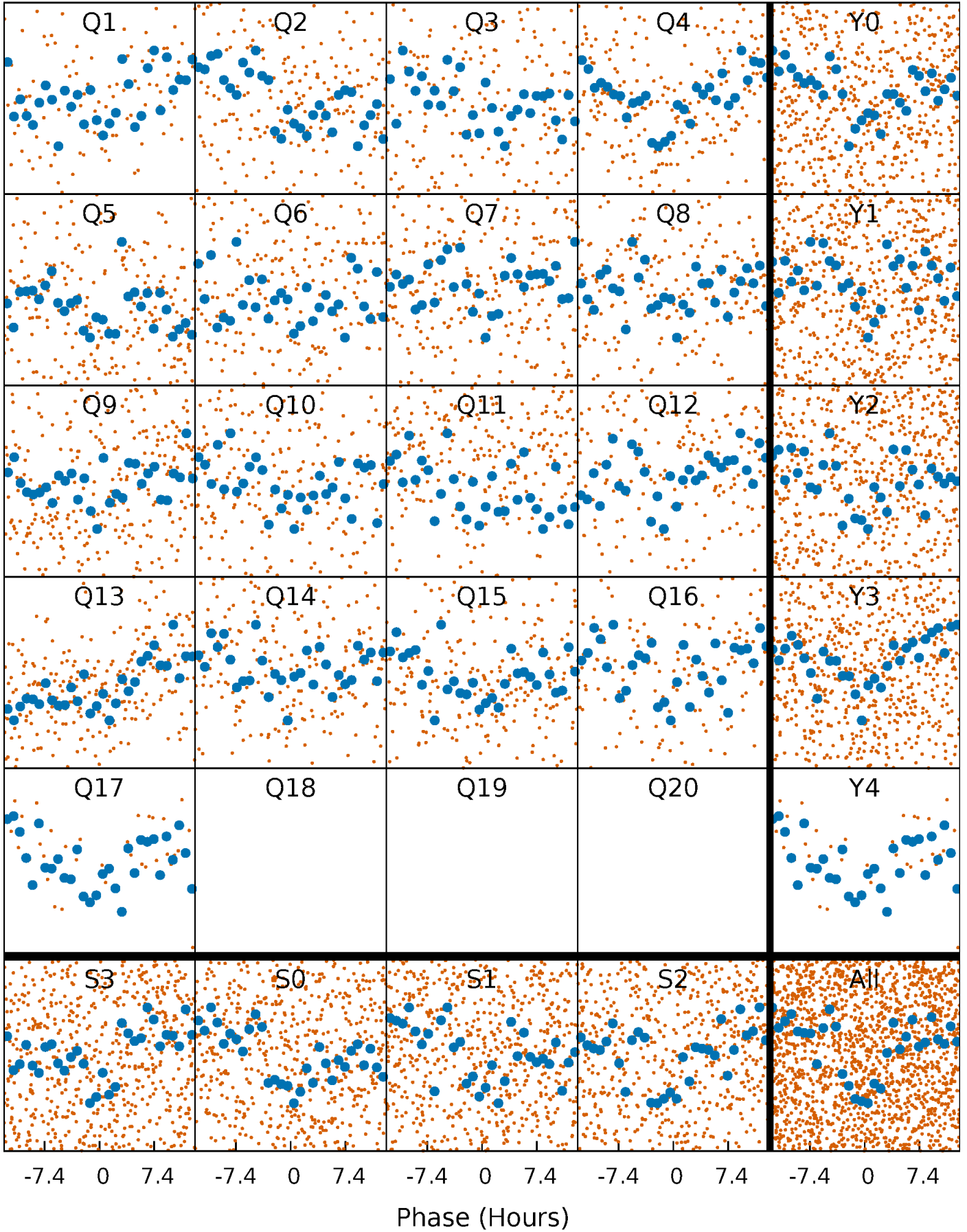


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



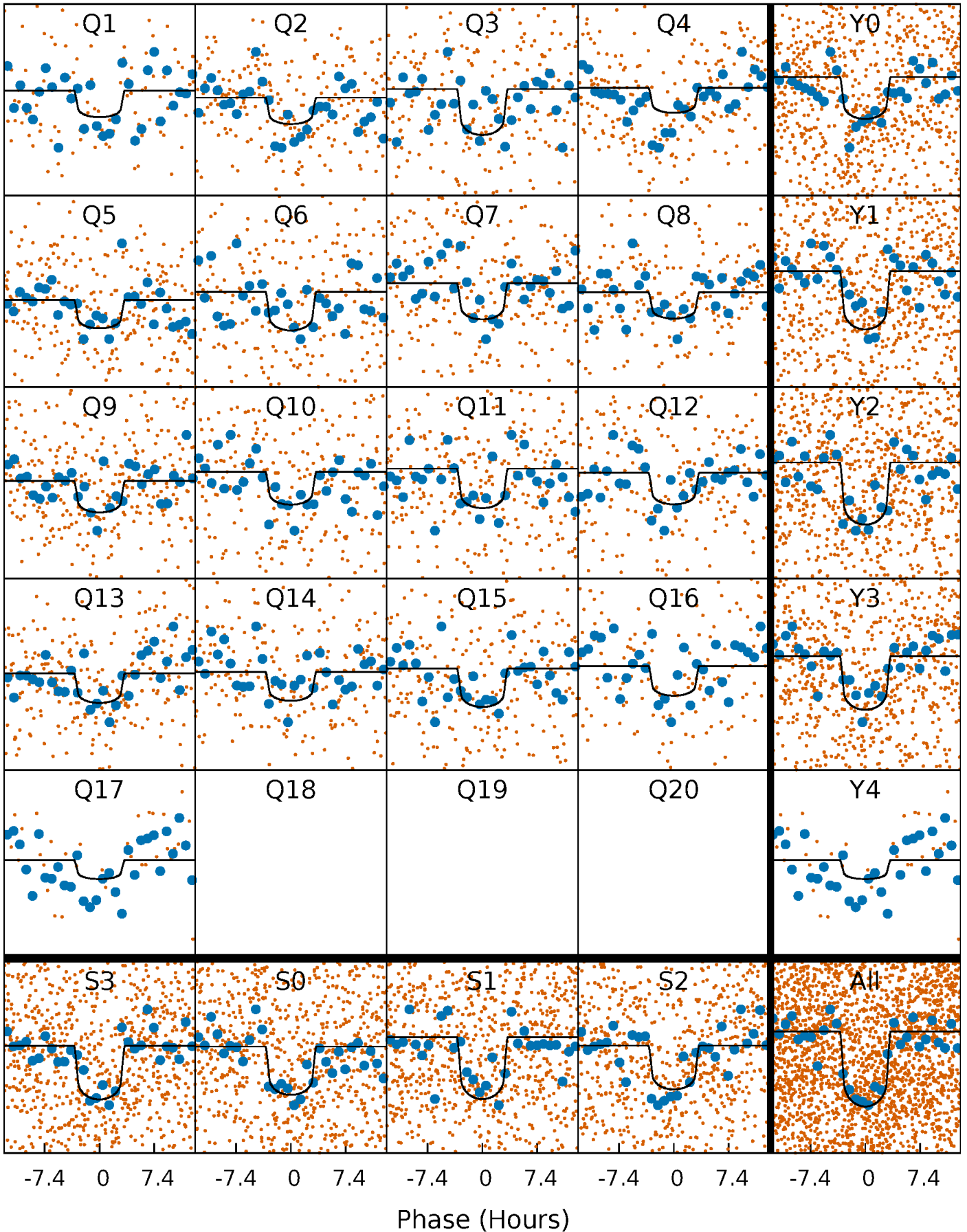
PDC Quarter-Phased Transit Curves

TCE 012456063-01 P= 17.800956 Days $T_0=134.376720$ (BKJD)



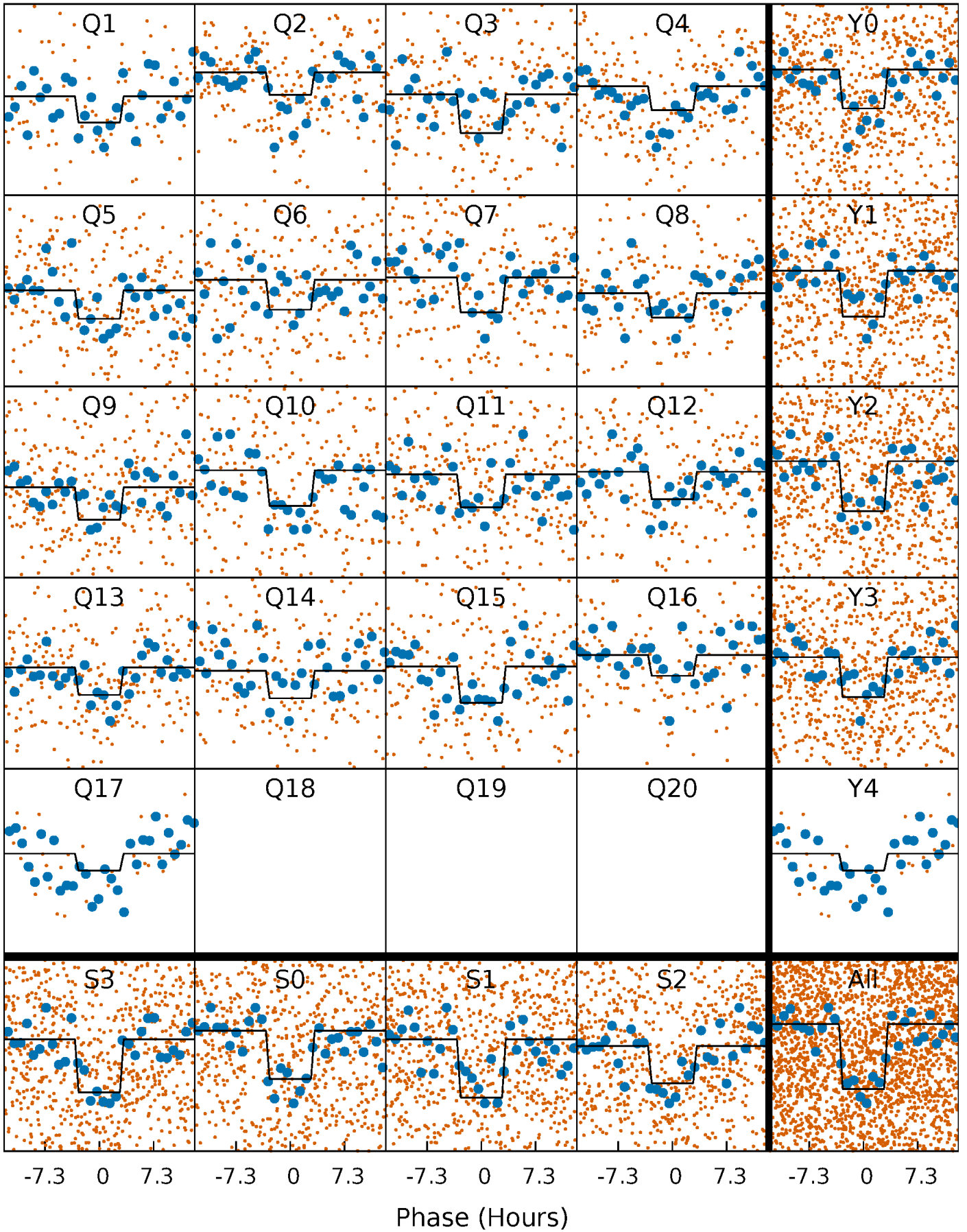
DV Quarter-Phased Transit Curves

TCE 012456063-01 P= 17.800956 Days $T_0=134.376720$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

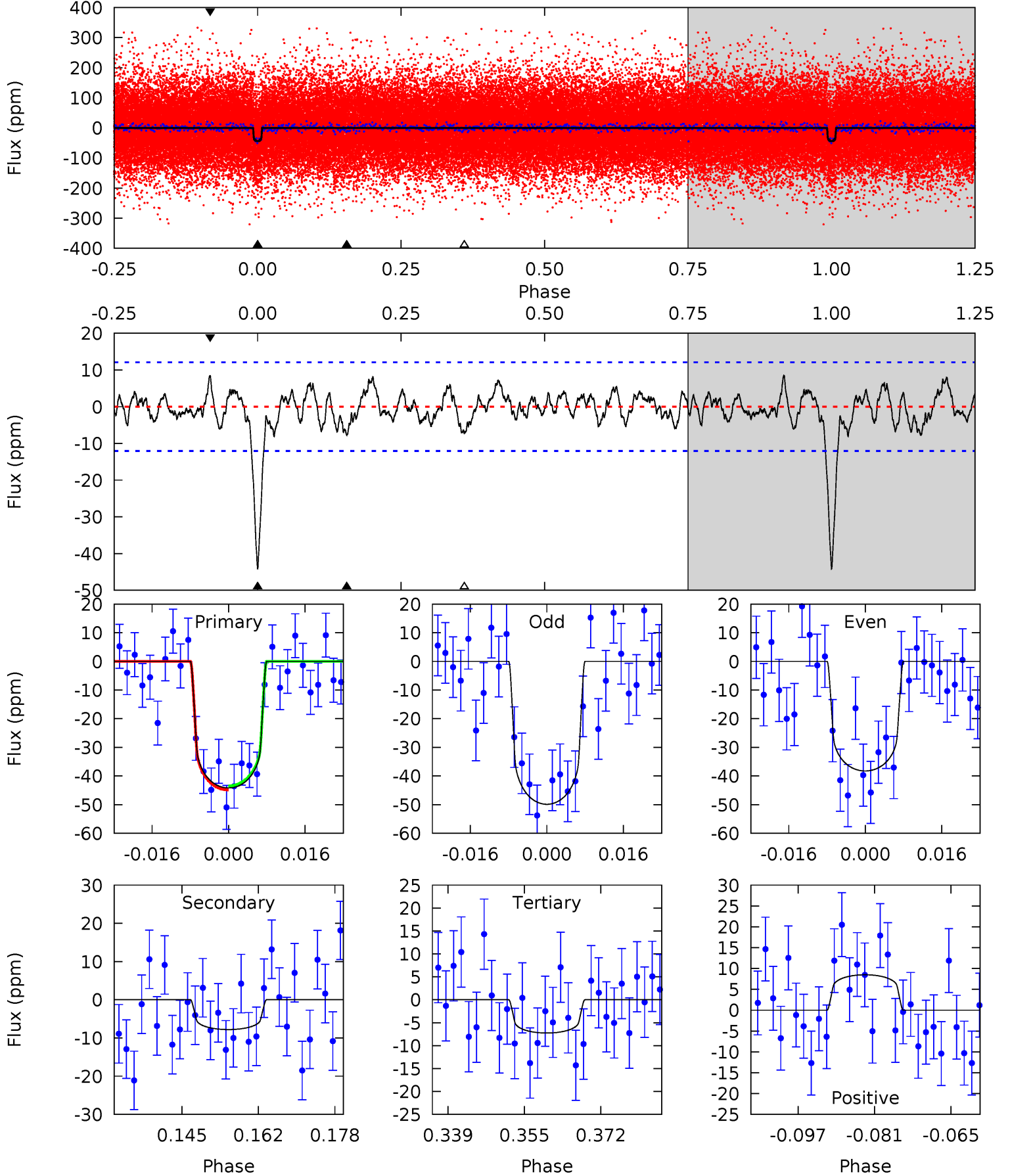
TCE 012456063-01 P= 17.800613 Days $T_0=134.388416$ (BKJD)



DV Model-Shift Uniqueness Test

012456063-01, P = 17.800956 Days, E = 116.575764 Days

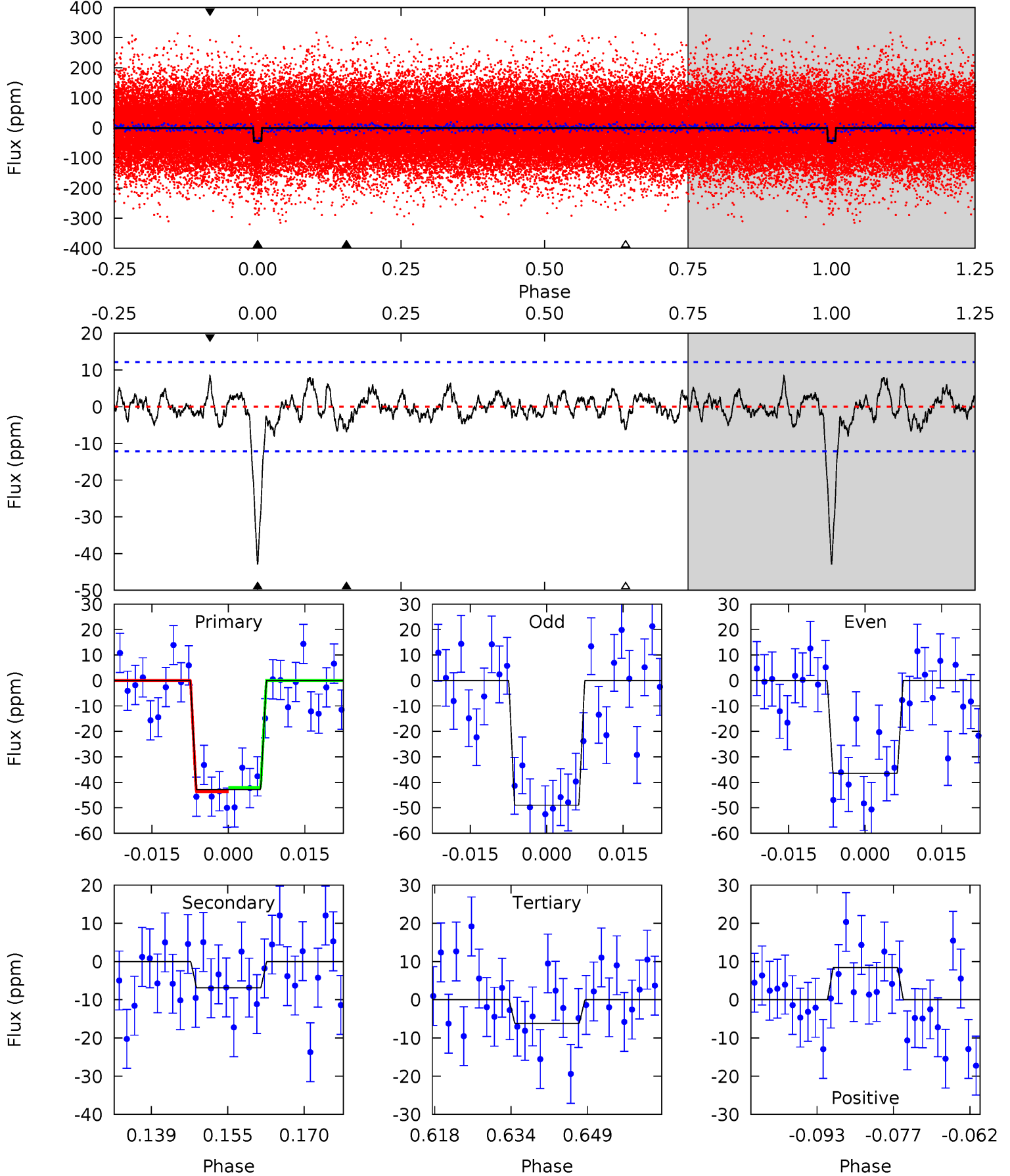
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.0	3.18	2.96	3.47	4.93	2.41	1.27	15.1	14.6	0.22	-0.28	2.38	1.08	0.16	0.28



Alt Model-Shift Uniqueness Test

012456063-01, P = 17.800613 Days, E = 116.587803 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.5	2.80	2.52	3.44	4.94	2.42	1.08	14.9	14.0	0.28	-0.64	2.54	1.18	0.16	0.33



Stellar Parameters For KIC 012456063

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6240^{+111}_{-136}	$4.326^{+0.063}_{-0.117}$	$0.140^{+0.150}_{-0.200}$	$1.252^{+0.205}_{-0.119}$	$1.214^{+0.087}_{-0.097}$	$0.873^{+0.233}_{-0.311}$
	+2%/-2%	+1%/-3%	+107%/-143%	+16%/-10%	+7%/-8%	+27%/-36%
Source	SPE59	SPE59	SPE59	DSEP		

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

Secondary Eclipse Parameters for KIC 012456063-01 / KOI 4329.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-8 ± 2	$1.01^{+0.26}_{-0.23}$	1149^{+50}_{-40}	4119^{+481}_{-391}	81^{+68}_{-37}
Alt.	-7 ± 2	$0.93^{+0.26}_{-0.27}$	1146^{+50}_{-38}	4187^{+623}_{-482}	90^{+92}_{-43}

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 $A_{obs} \gg 1.0$

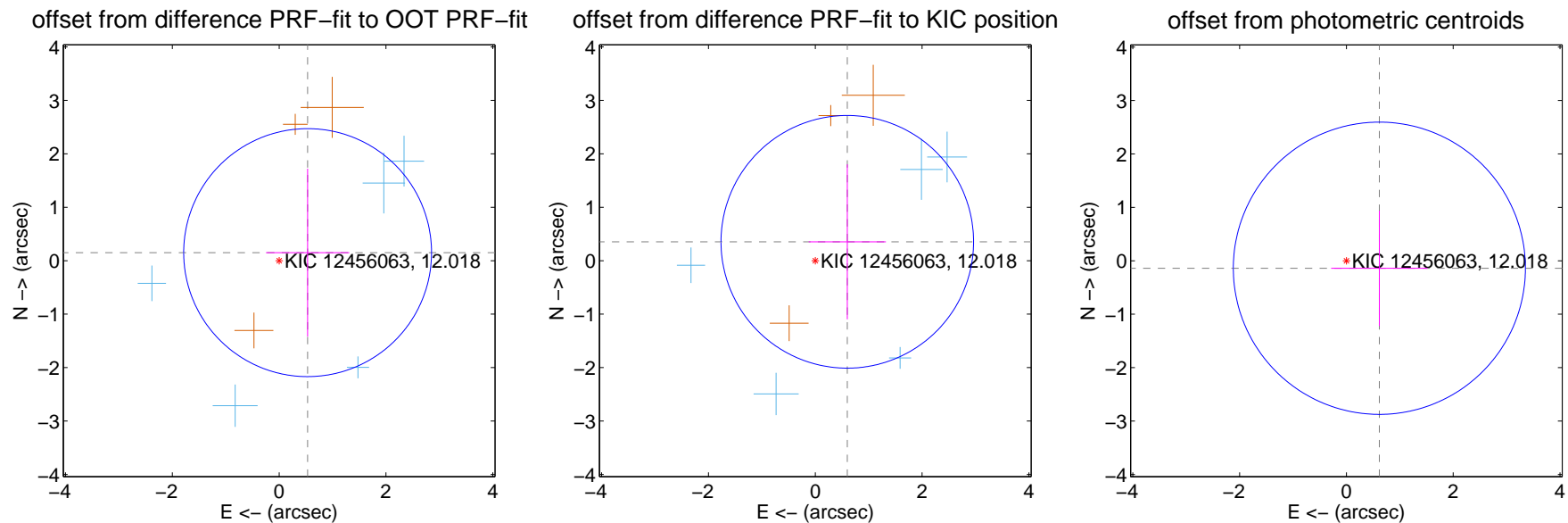
DV Centroid Data

Supplemental centroid analysis for 012456063-01. Kepler magnitude: 12.02. Transit SNR 11.69

There are 5 quarters with good PRF difference image offsets

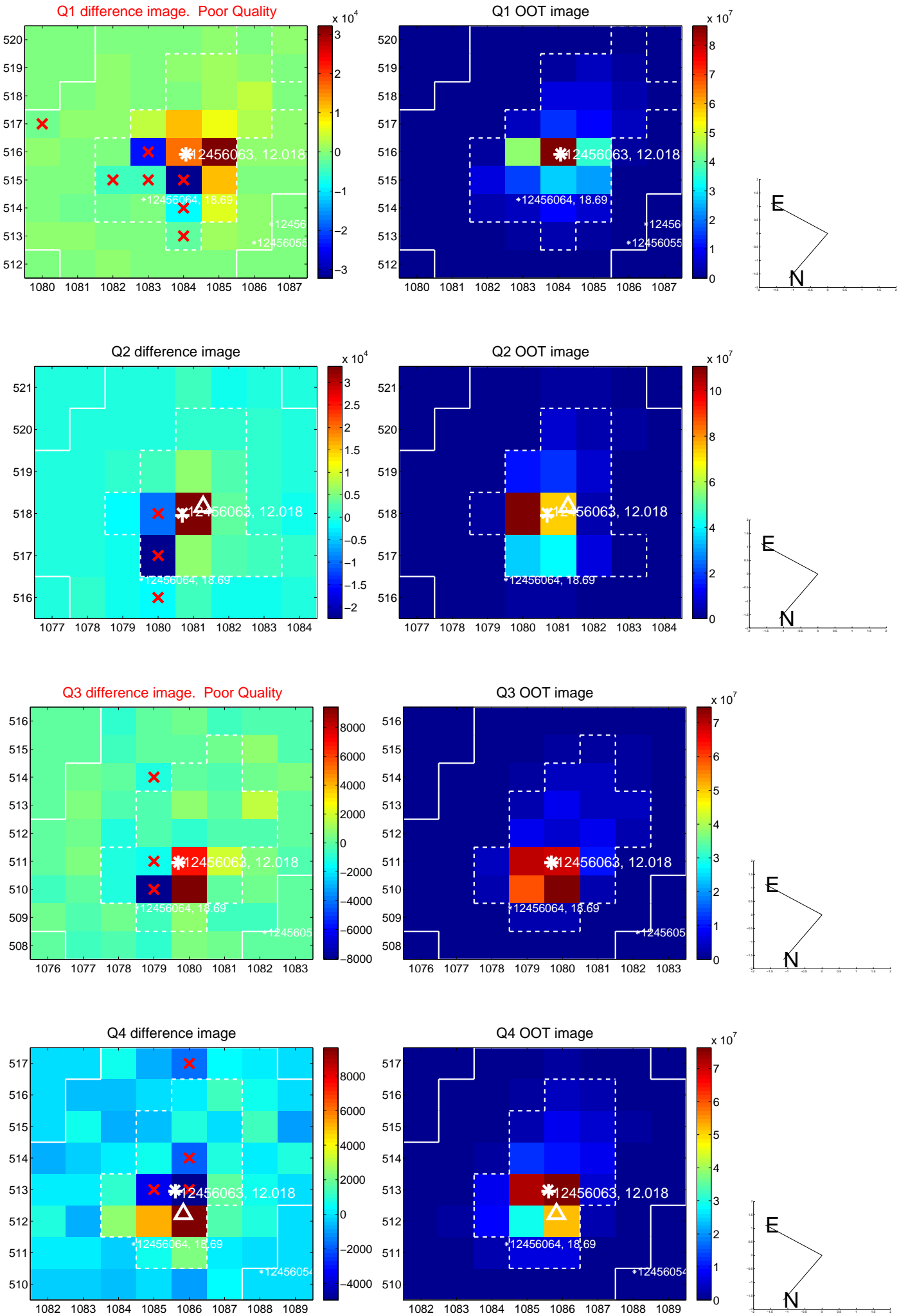
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.554 ± 0.773	0.72	-0.533 ± 0.779	0.151 ± 1.571
PRF-fit source offset from KIC position	0.696 ± 0.788	0.88	-0.599 ± 0.723	0.353 ± 1.450
photometric centroid source offset	0.63 ± 0.91	0.69	-0.62 ± 0.90	-0.14 ± 1.08

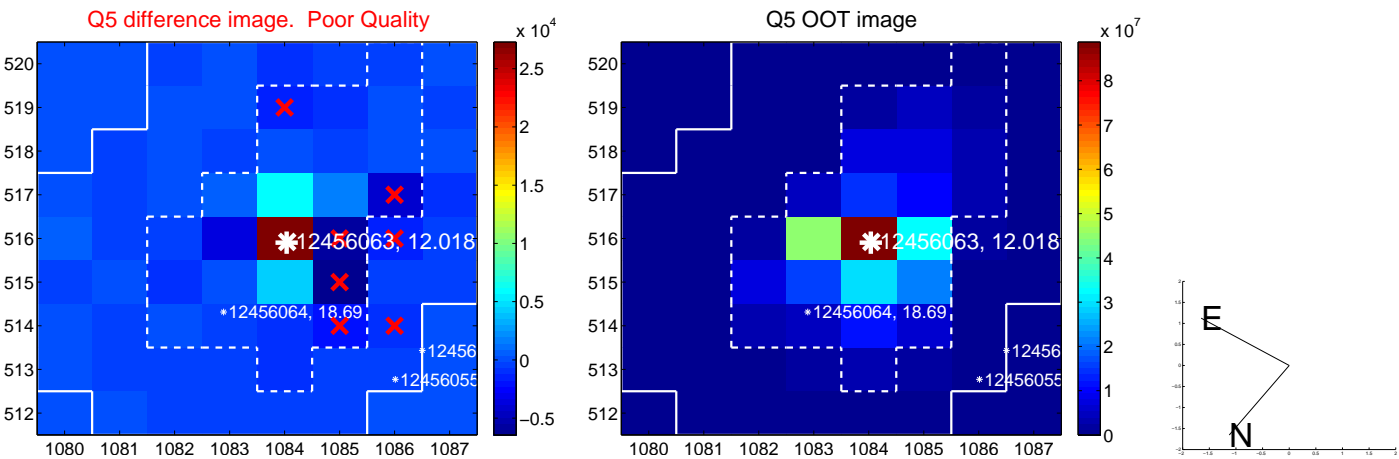


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

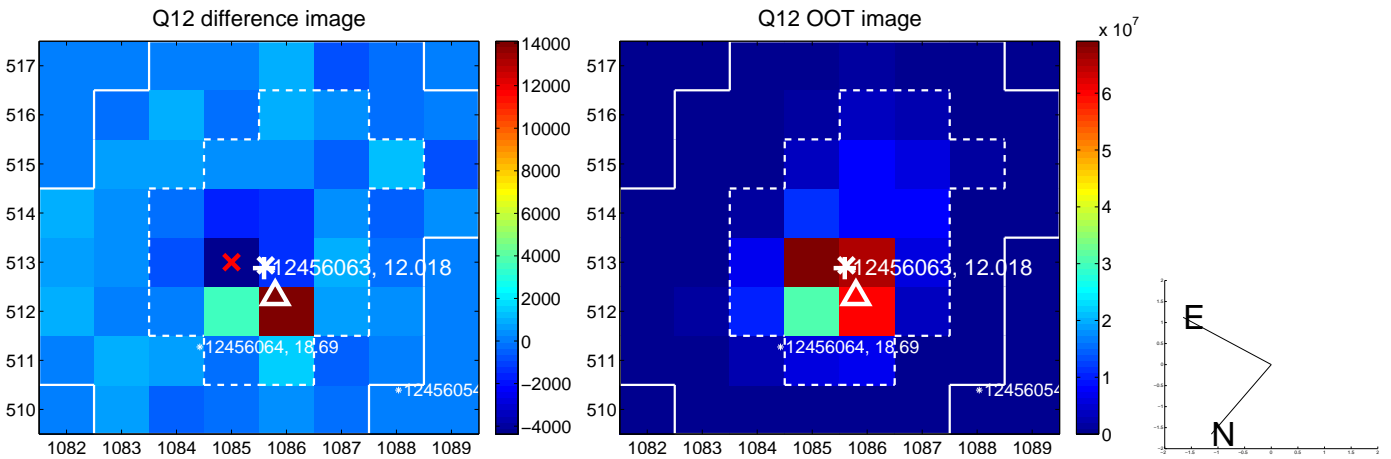
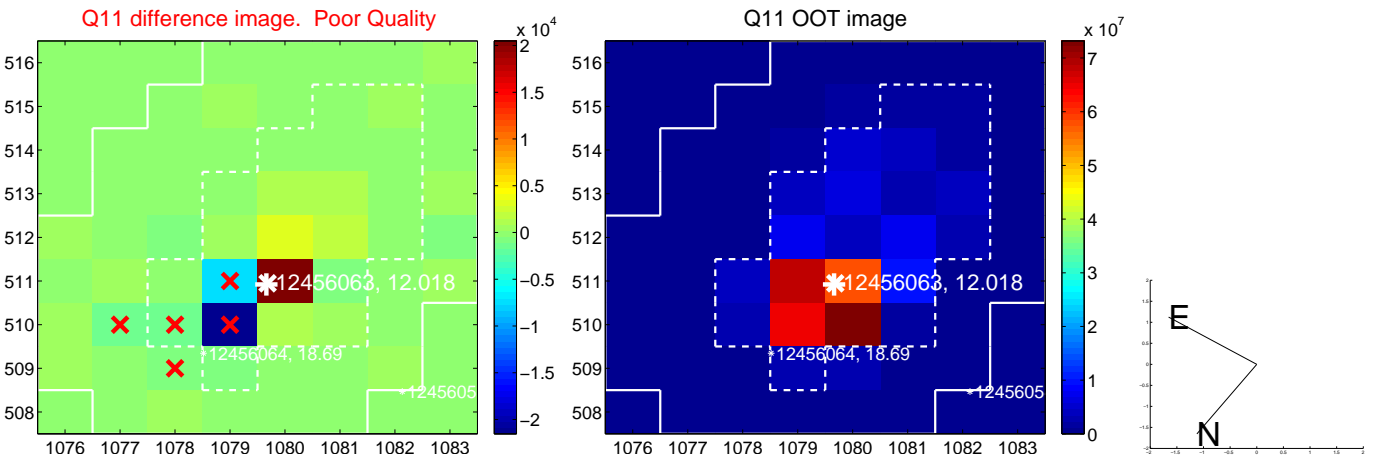
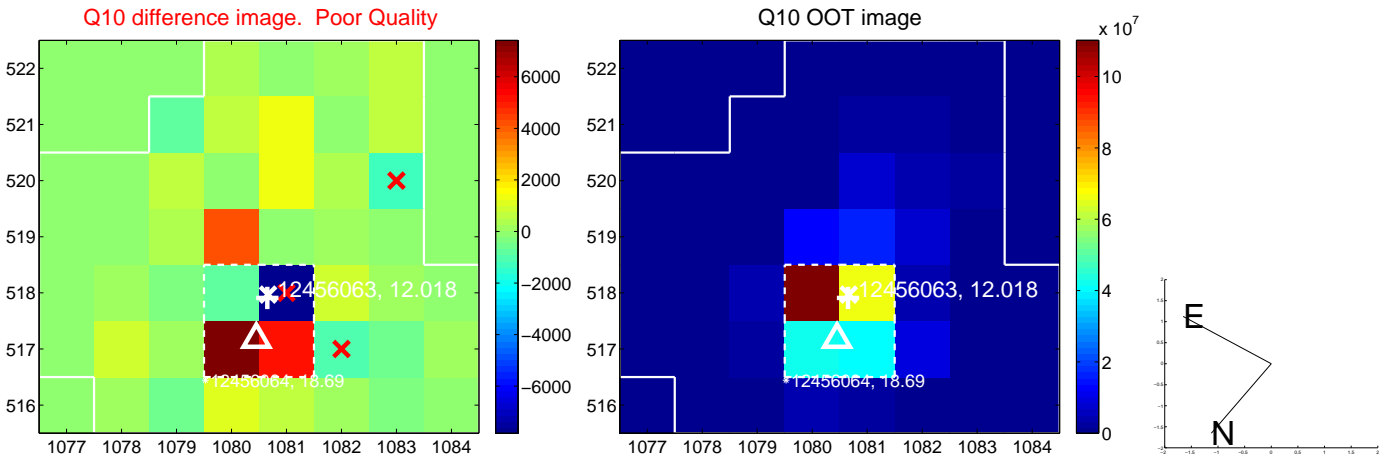
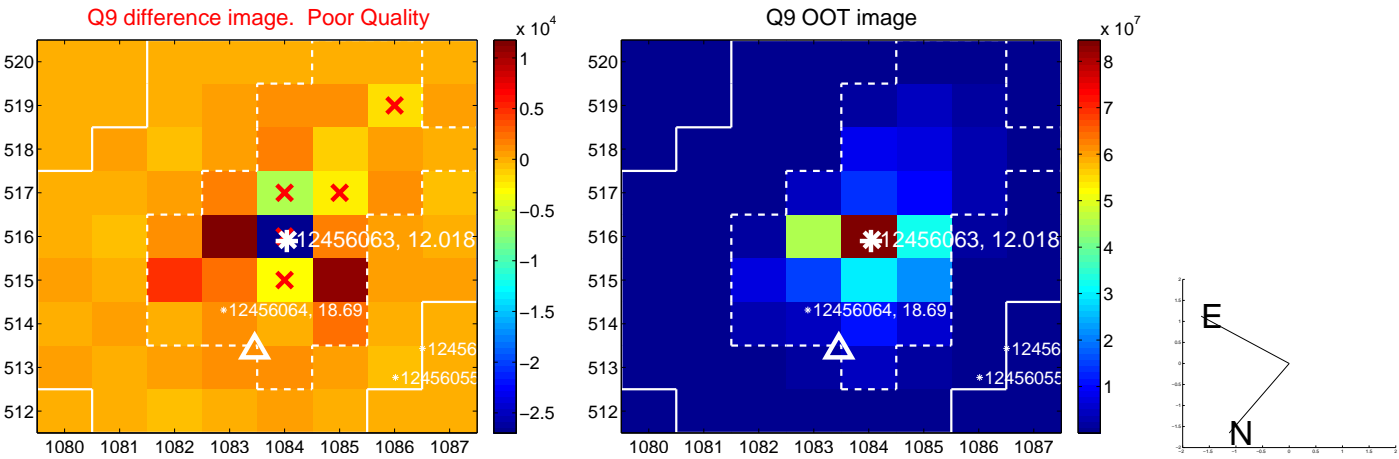
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



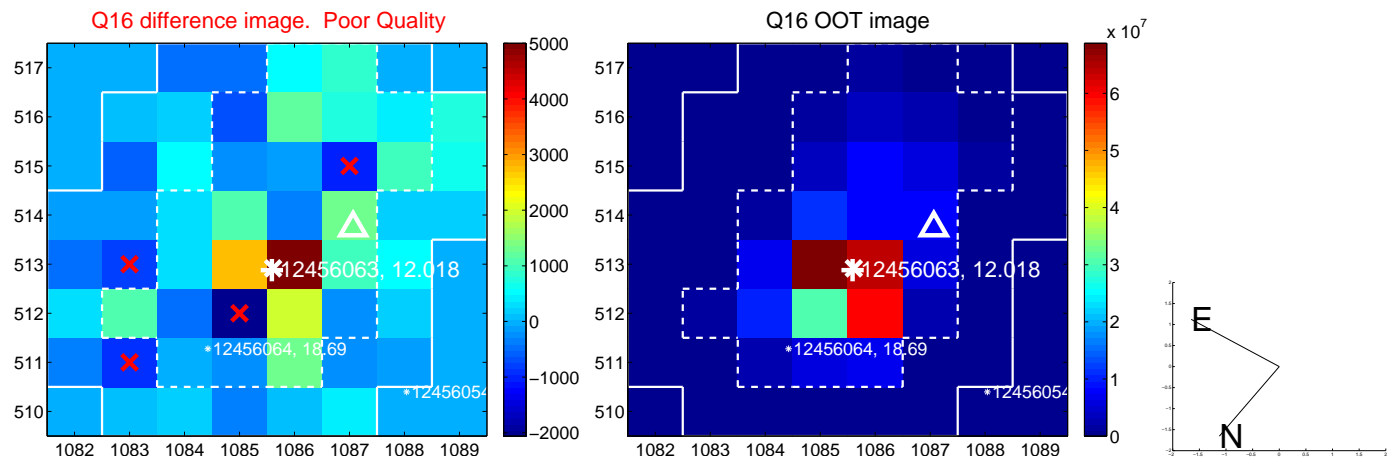
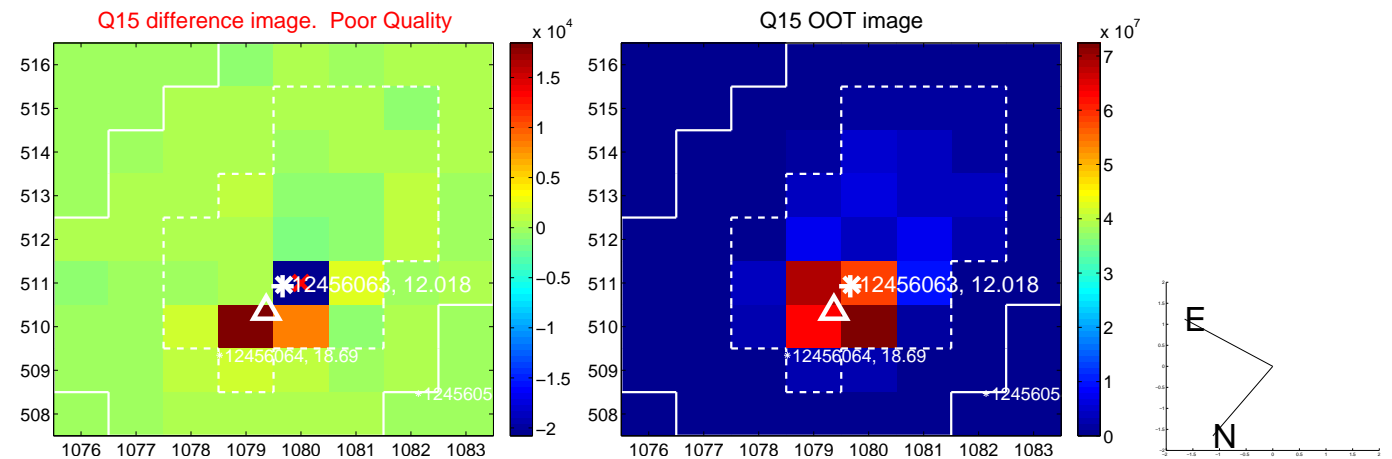
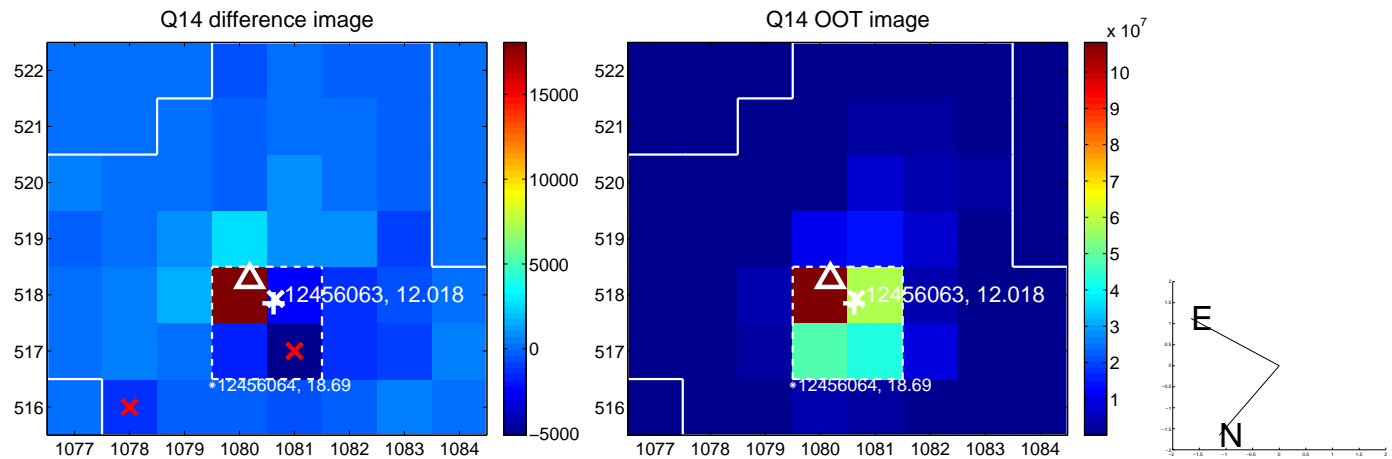
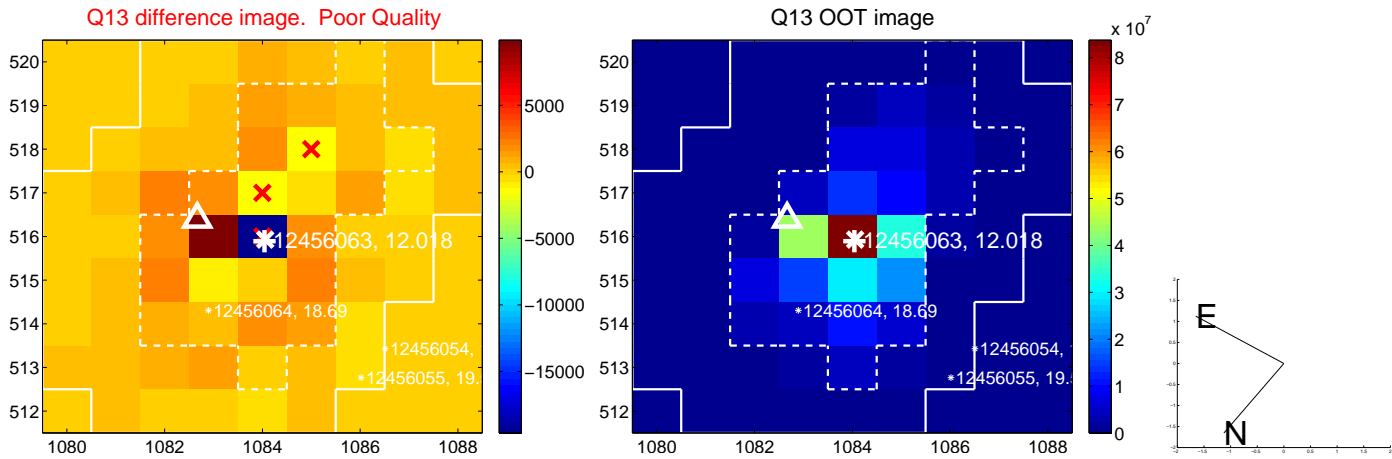
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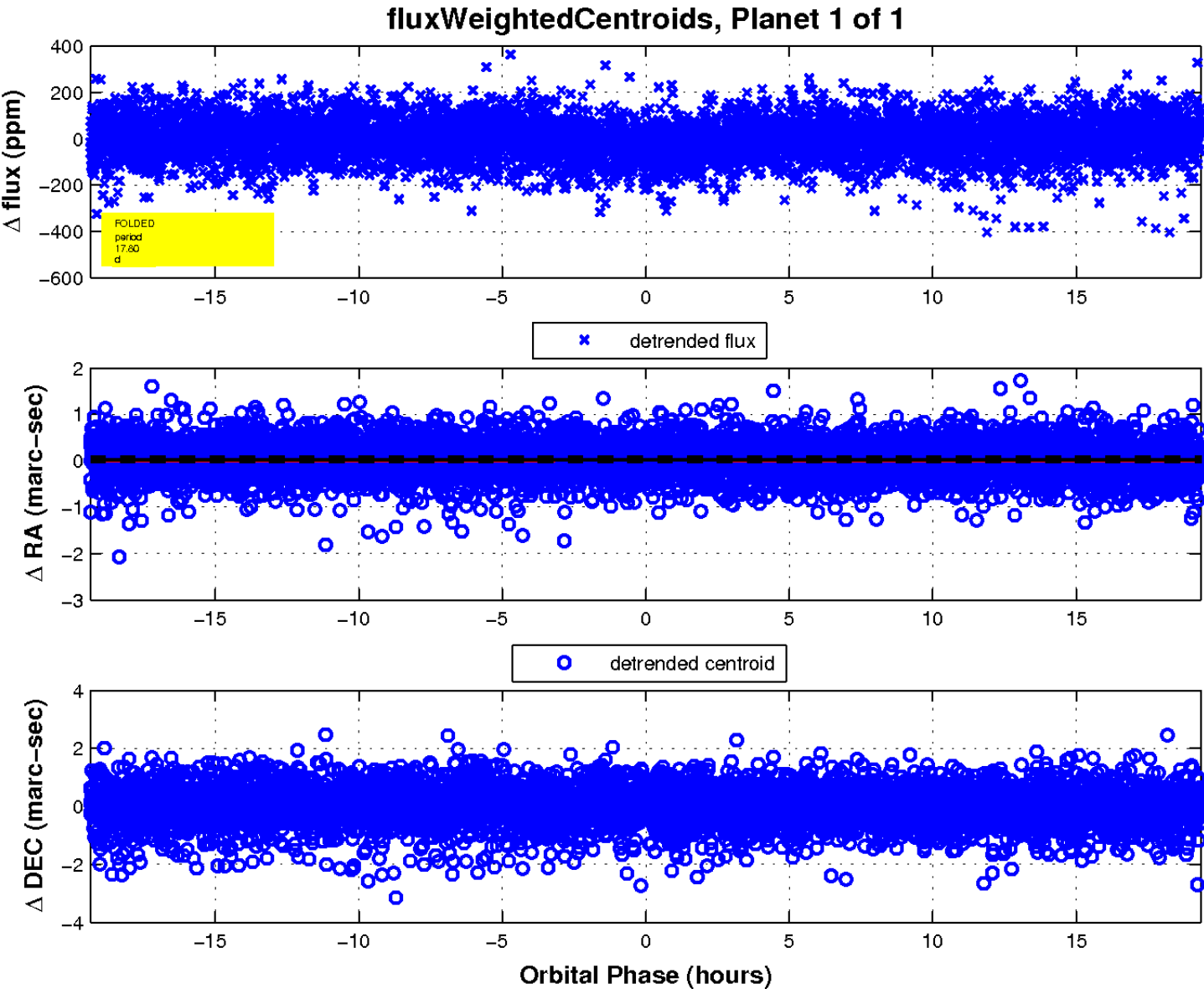
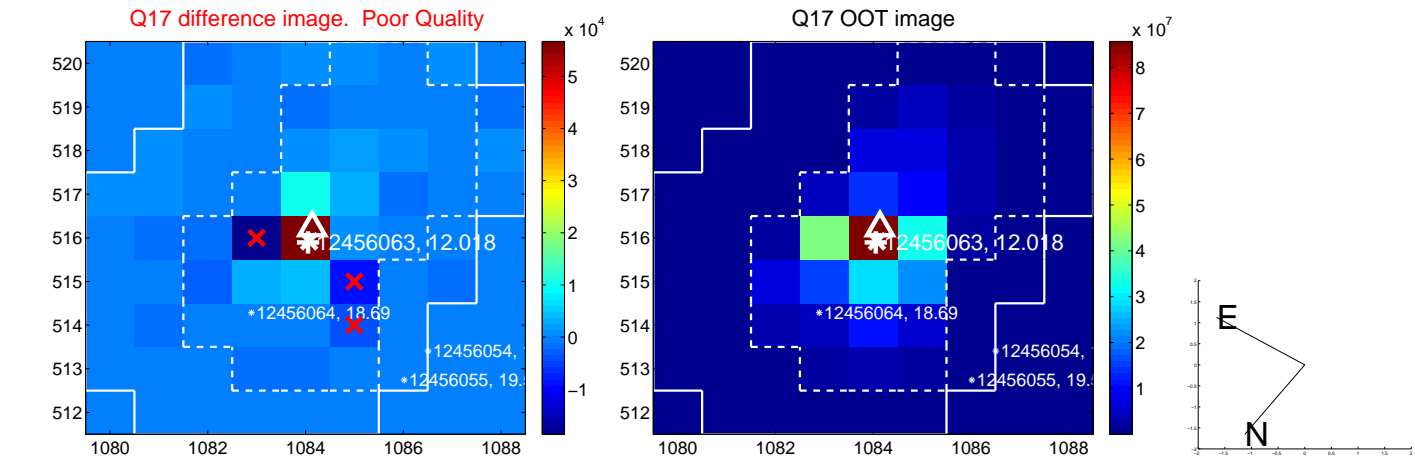
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UKIRT Image

