

KIC 004156254

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})
004156254-01	OBS	No	1.274065	132.307634	9.7	12.505	10.0	8.5	9.21	7022	2.89	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004156254-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_FEW_DIFFS

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

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

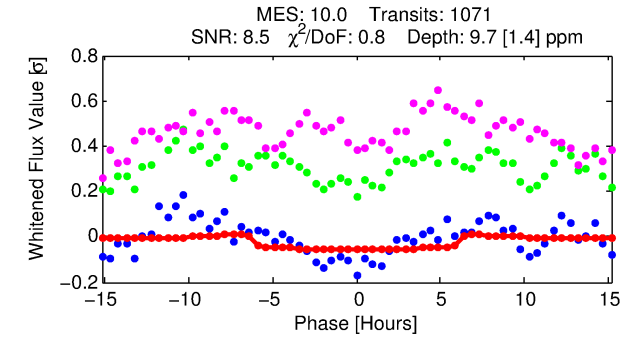
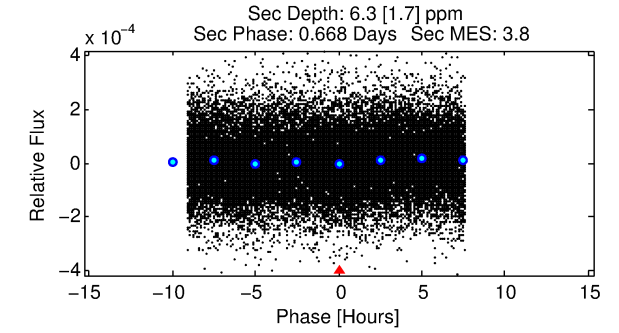
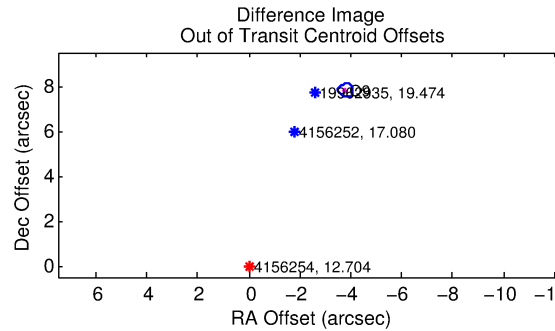
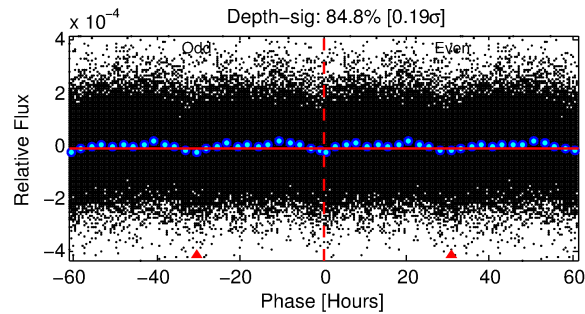
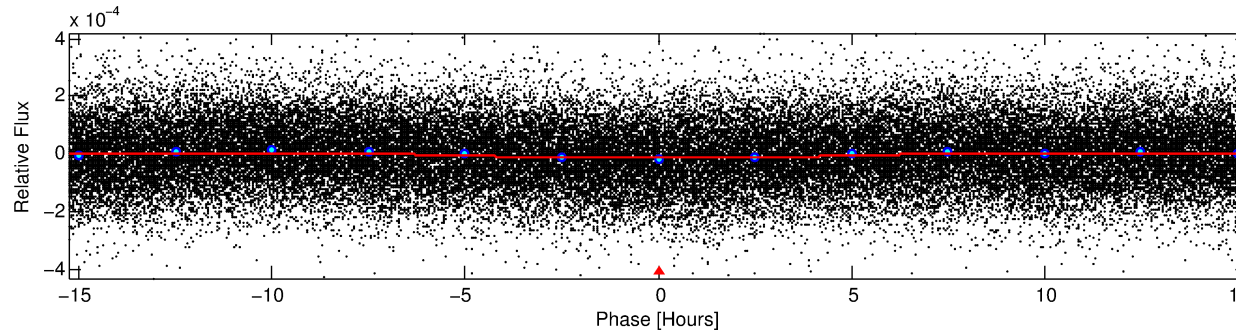
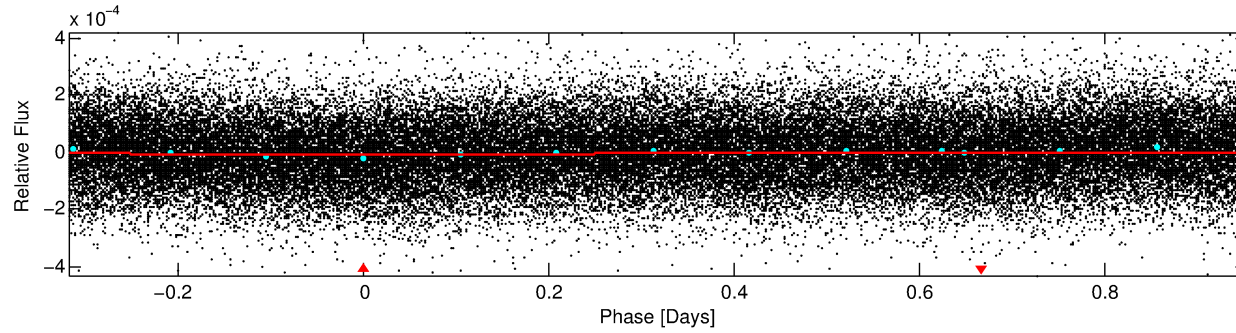
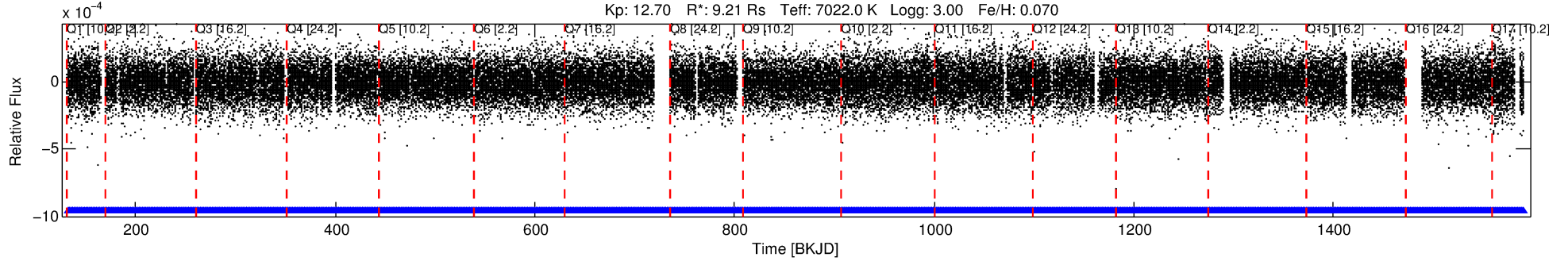
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004156254-01

No Significant Match Found

DV One-Page Summary

KIC: 4156254 Candidate: 1 of 1 Period: 1.274 d



DV Fit Results:

Period = 1.27406 [0.00003] d
Epoch = 132.3076 [0.0094] BKJD
Rp/R* = 0.0029 [0.0017]
a/R* = 1.05 [0.27]
b = 0.07 [47.42]
Seff = N/A
Teq = N/A
Rp = 2.89 [2.37] Re
a = N/A
Ag = N/A
Teffp = N/A

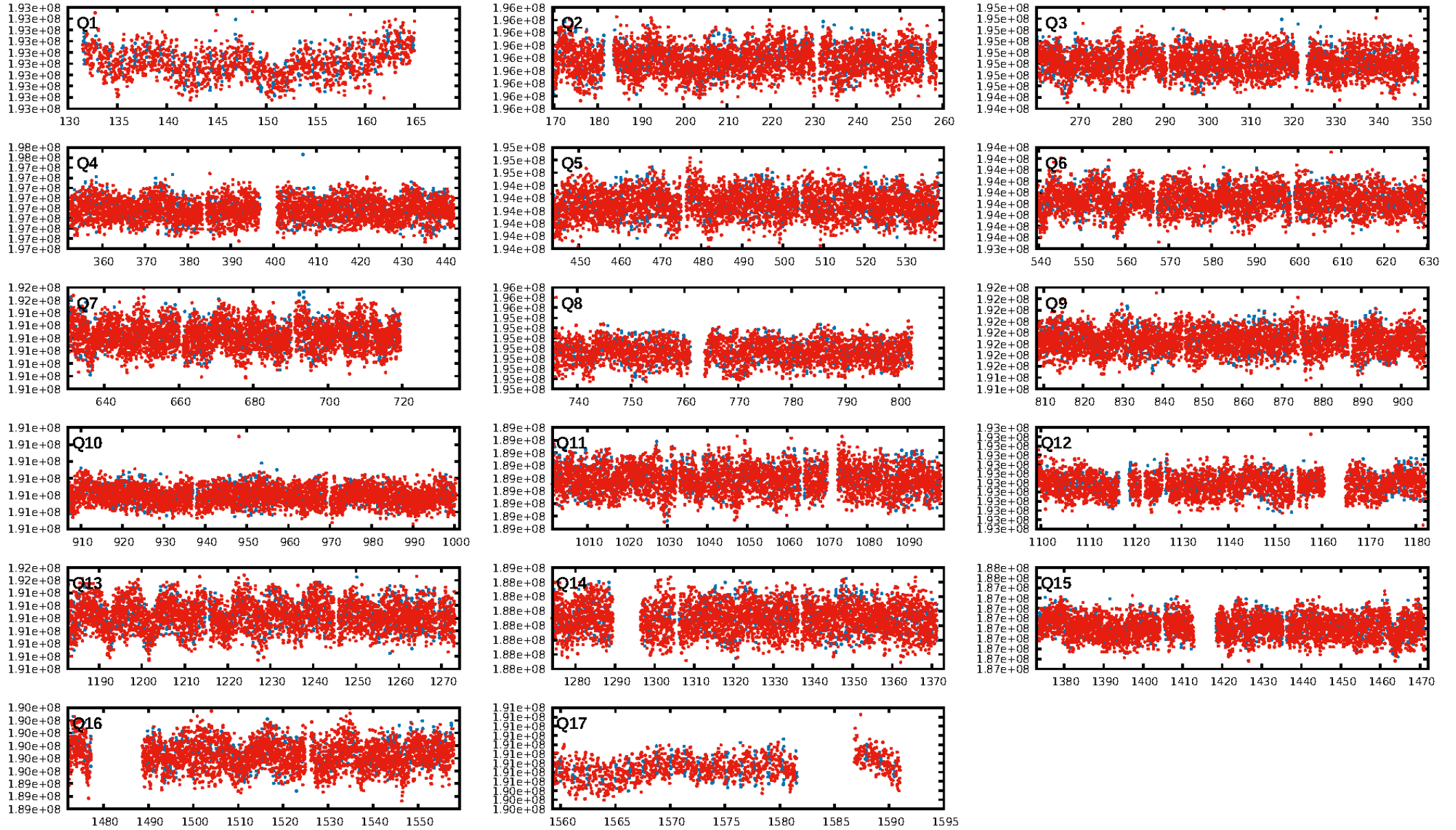
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1023/1023]
GhostDiagnostic-chr: 1.763
Centroid-sig: 2.9%
Centroid-so: 2.095 arcsec [1.87 σ]
OotOffset-rm: 8.689 arcsec [90.07 σ]
KicOffset-rm: 8.709 arcsec [90.29 σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [17/17]

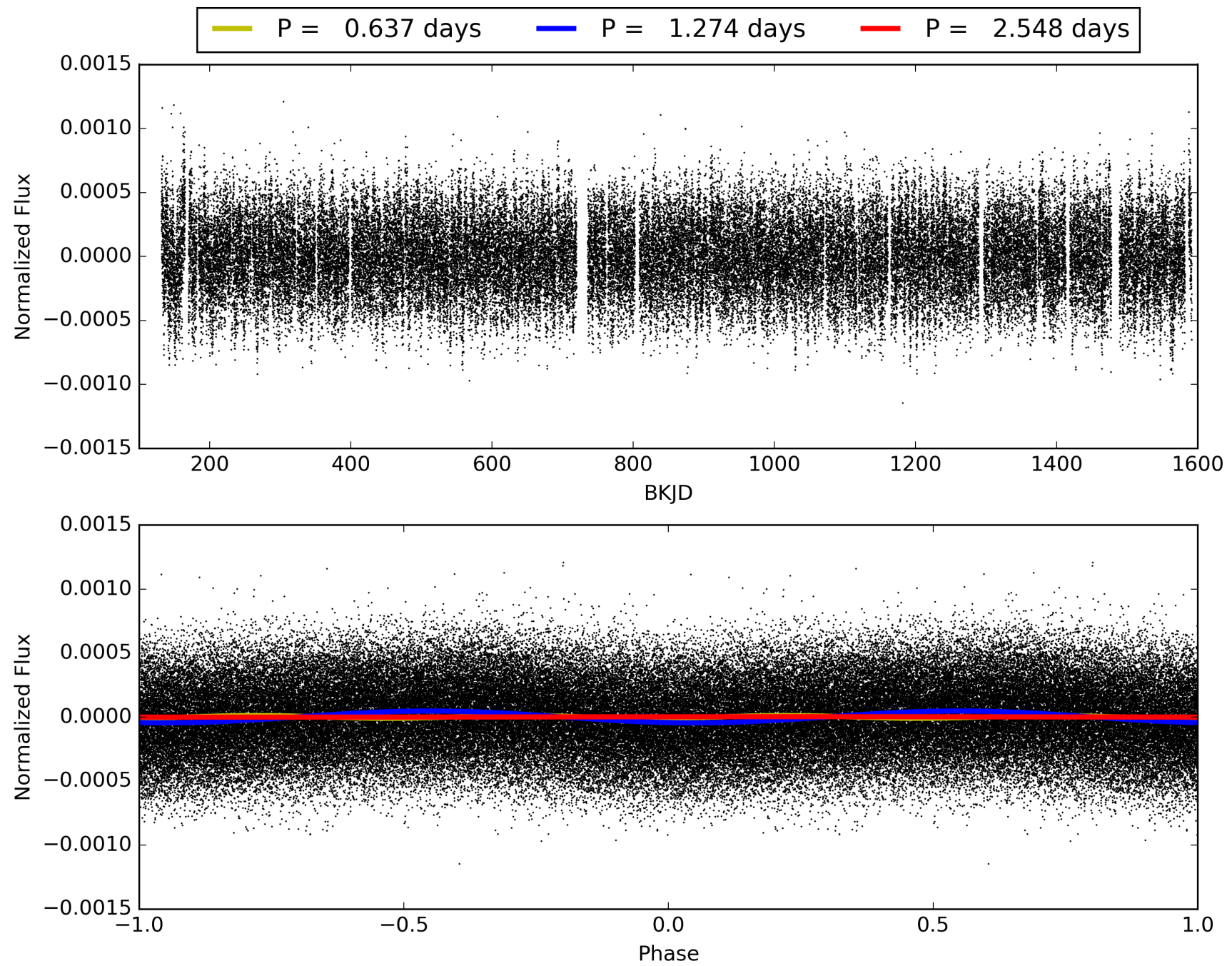
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 22:33:57 Z

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

TCE 004156254-01, PDC Light Curves

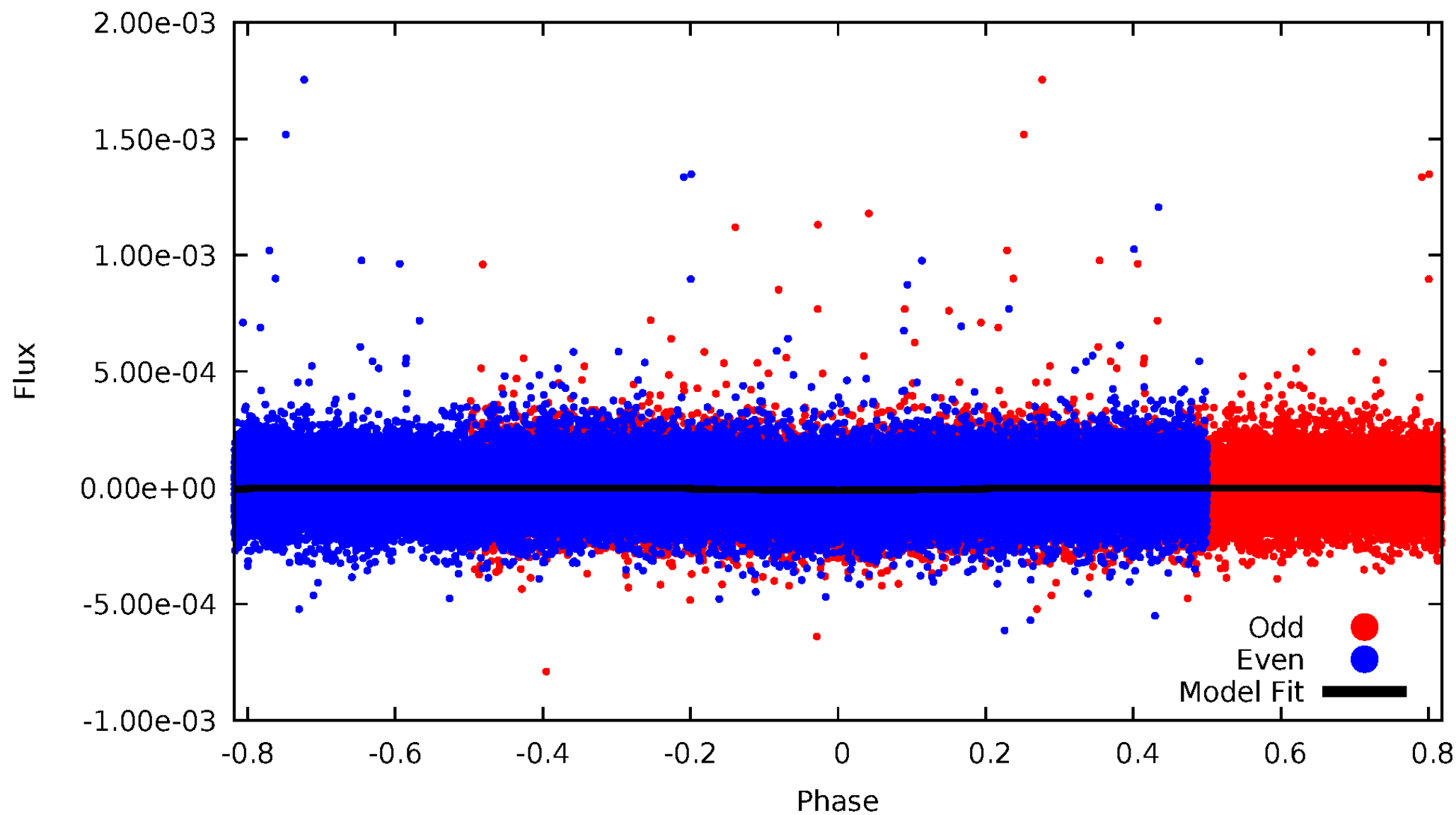


TCE 004156254-01



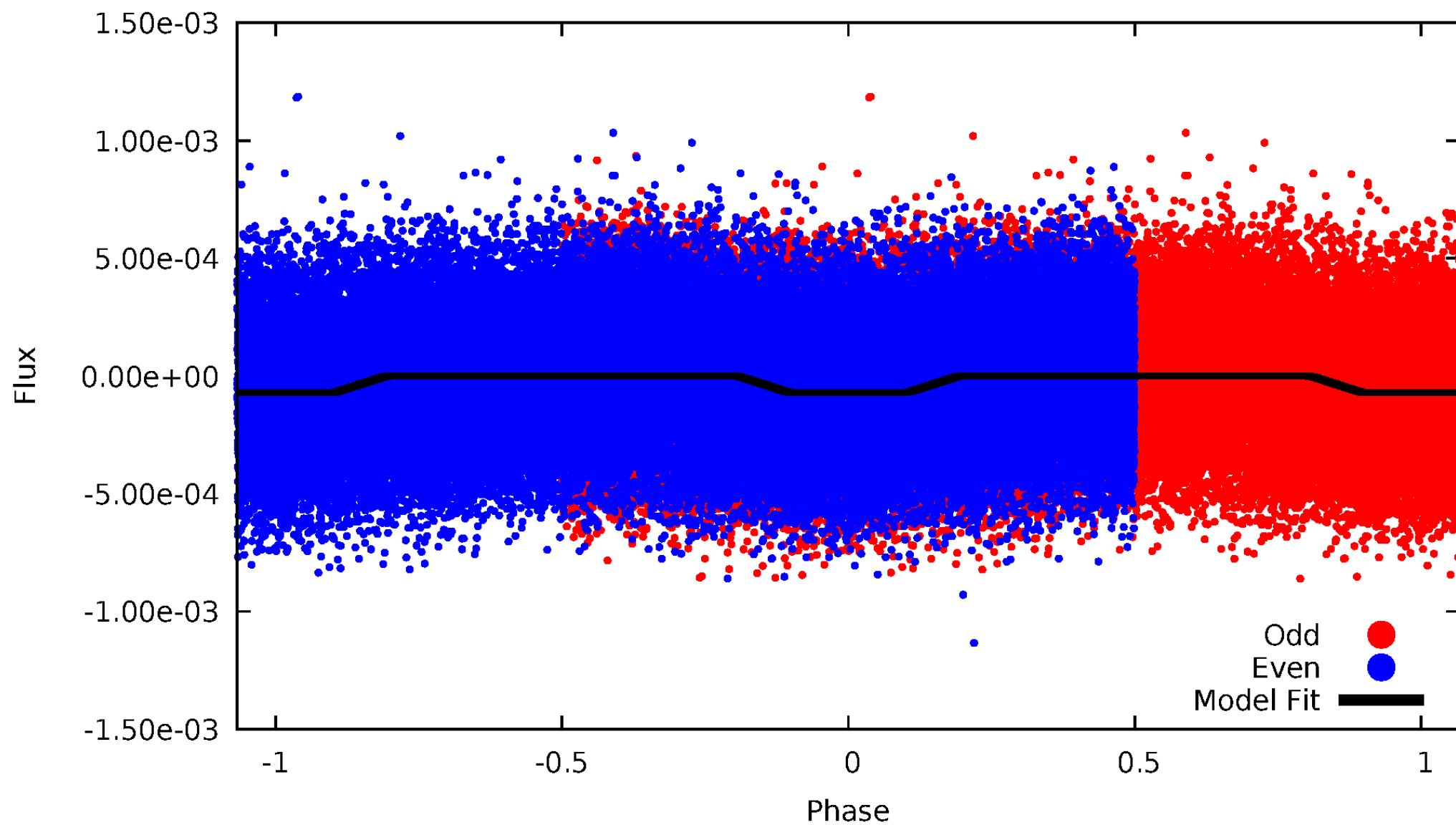
DV Odd/Even

TCE 004156254-01

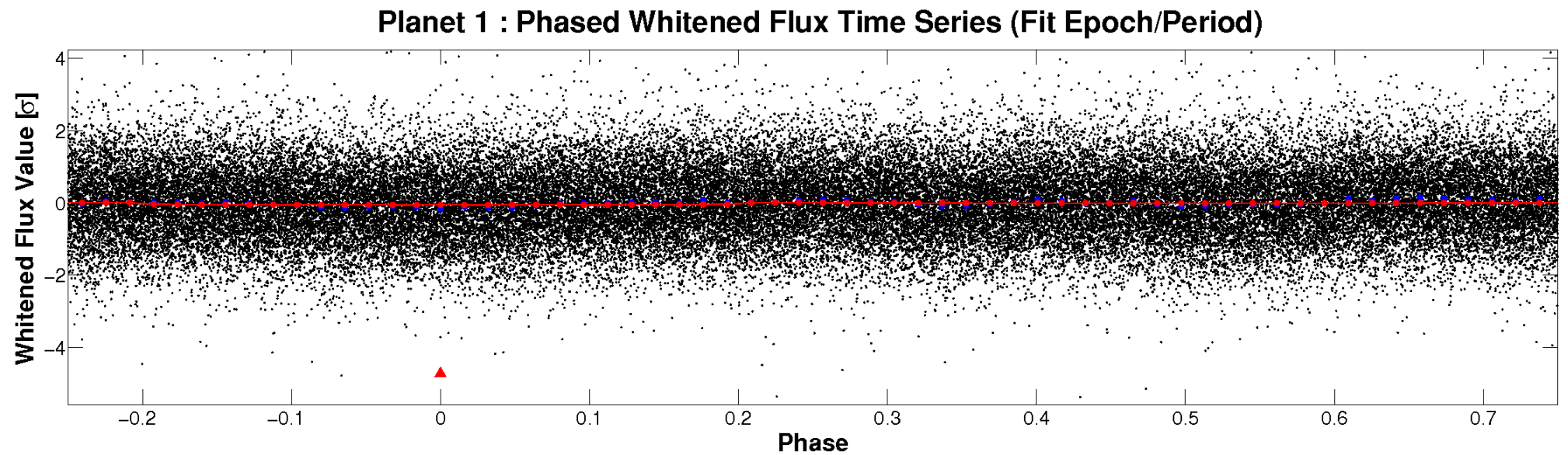
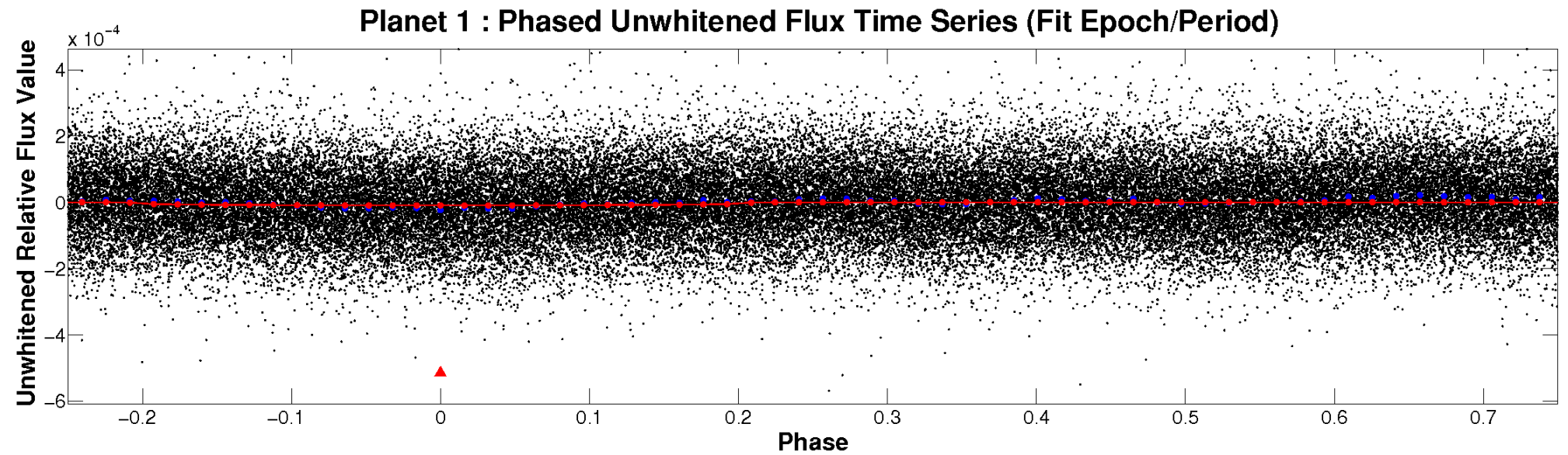


ALT Odd/Even

TCE 004156254-01

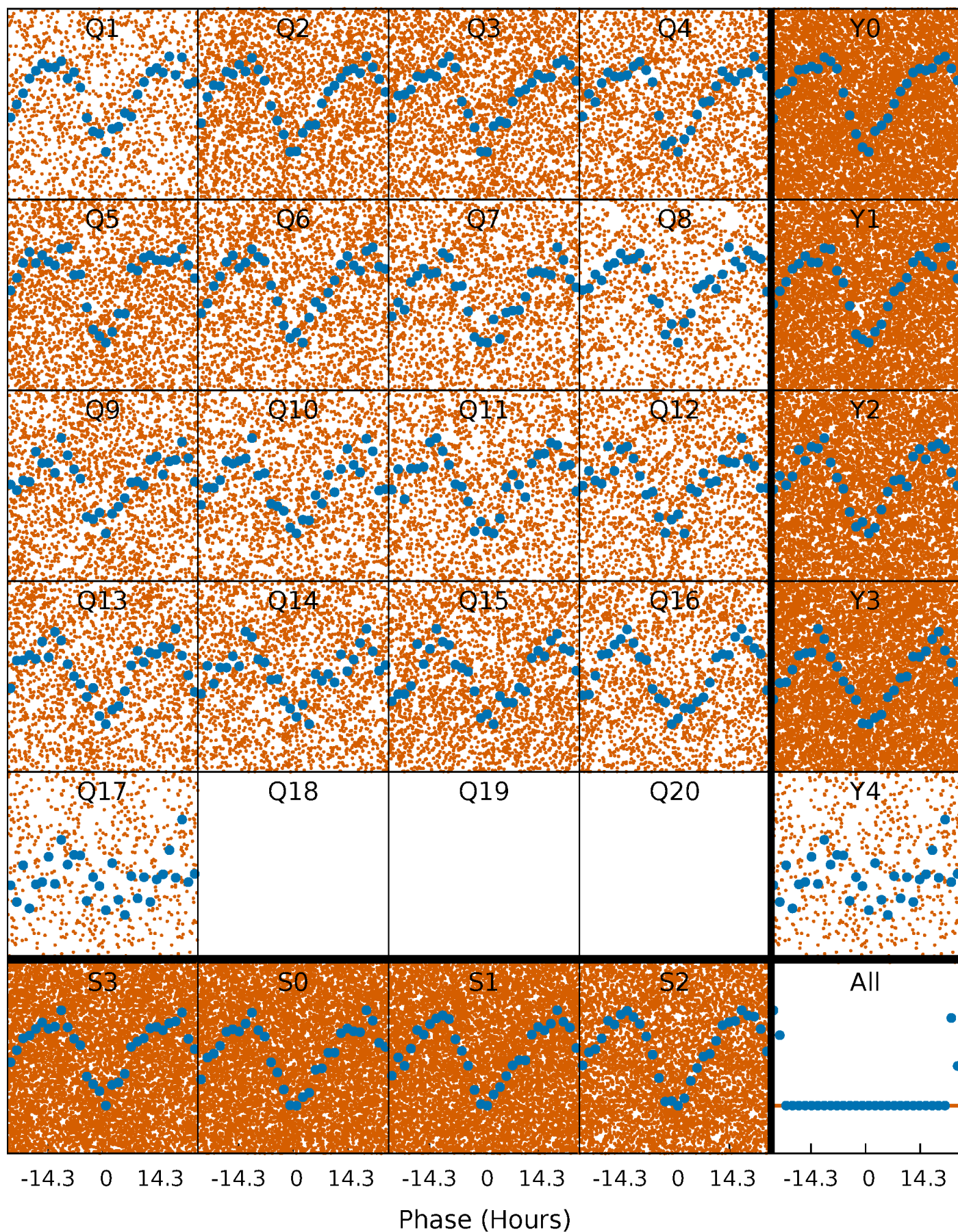


Non-Whitened Vs. Whitened Light Curve



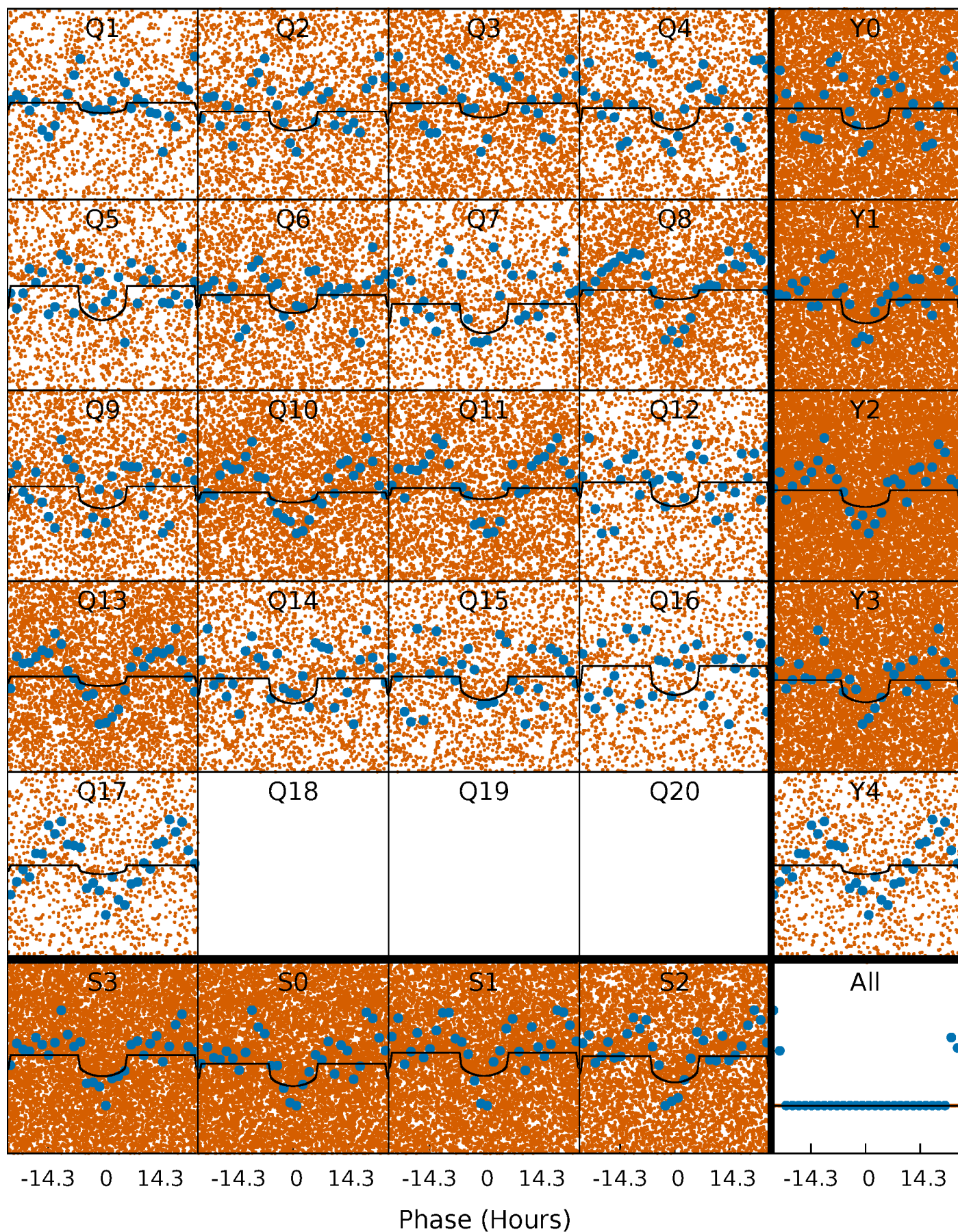
PDC Quarter-Phased Transit Curves

TCE 004156254-01 P= 1.274065 Days $T_0=132.307634$ (BKJD)



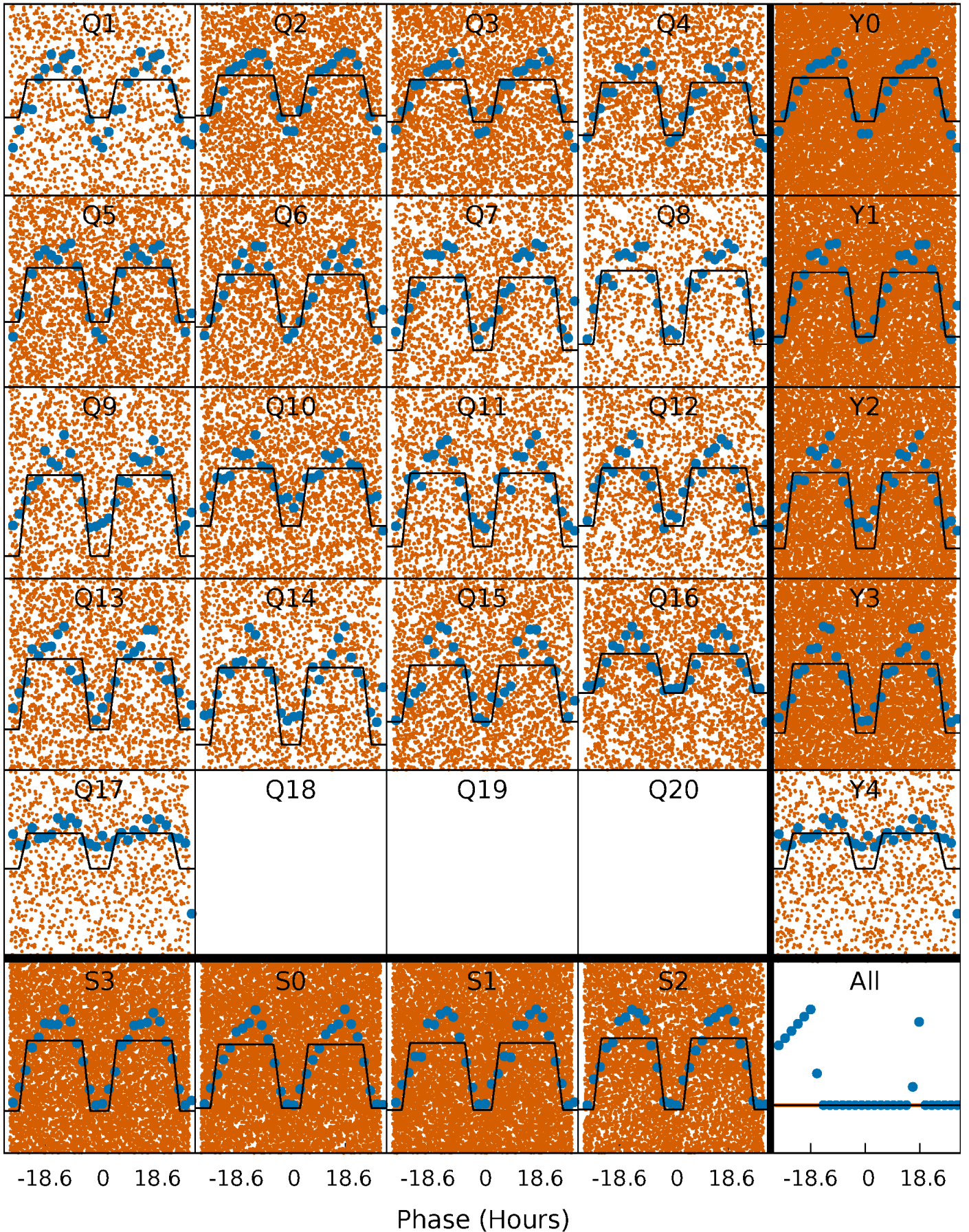
DV Quarter-Phased Transit Curves

TCE 004156254-01 P= 1.274065 Days $T_0=132.307634$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

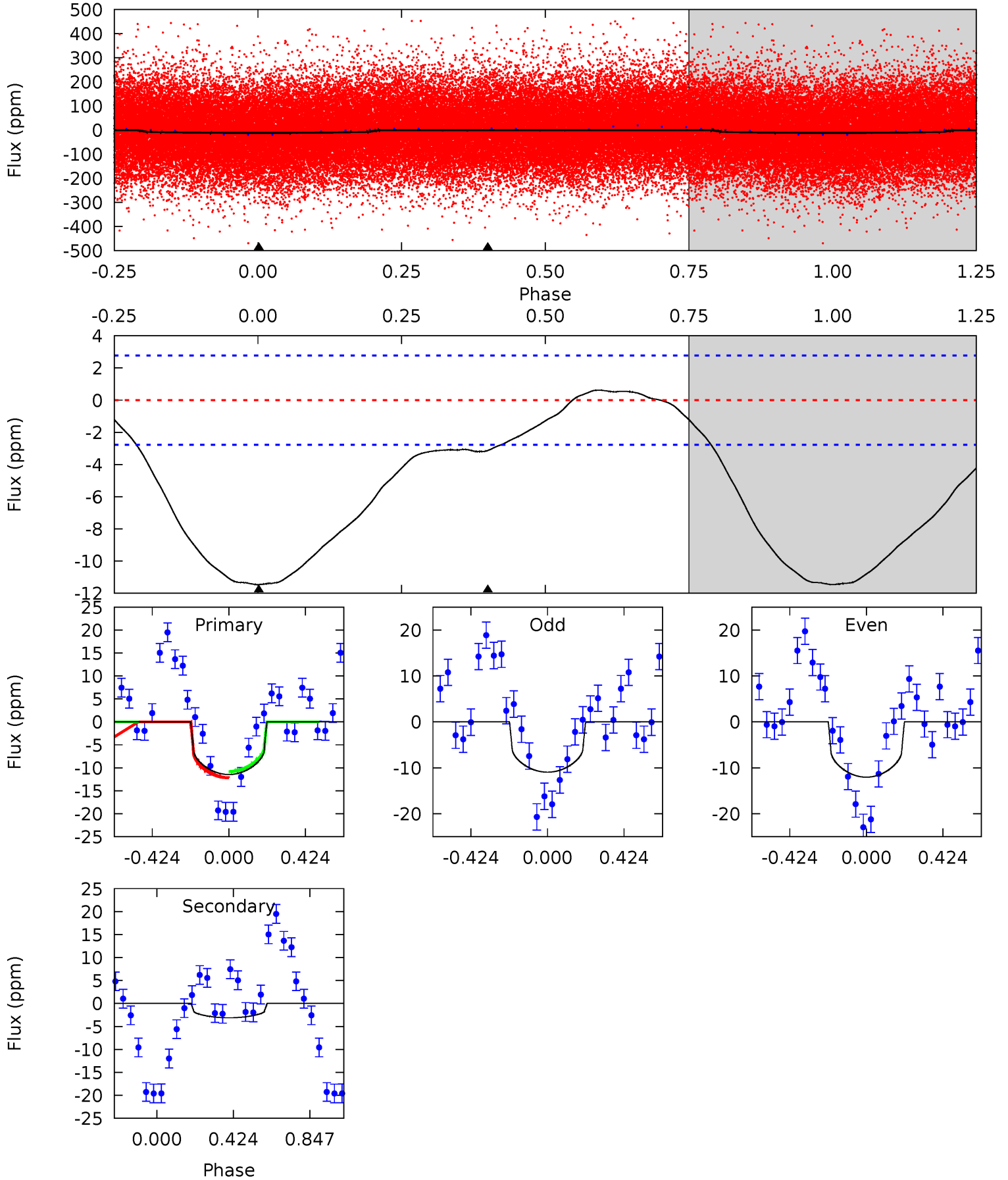
TCE 004156254-01 P= 1.274117 Days $T_0=132.314015$ (BKJD)



DV Model-Shift Uniqueness Test

004156254-01, P = 1.274065 Days, E = 131.033569 Days

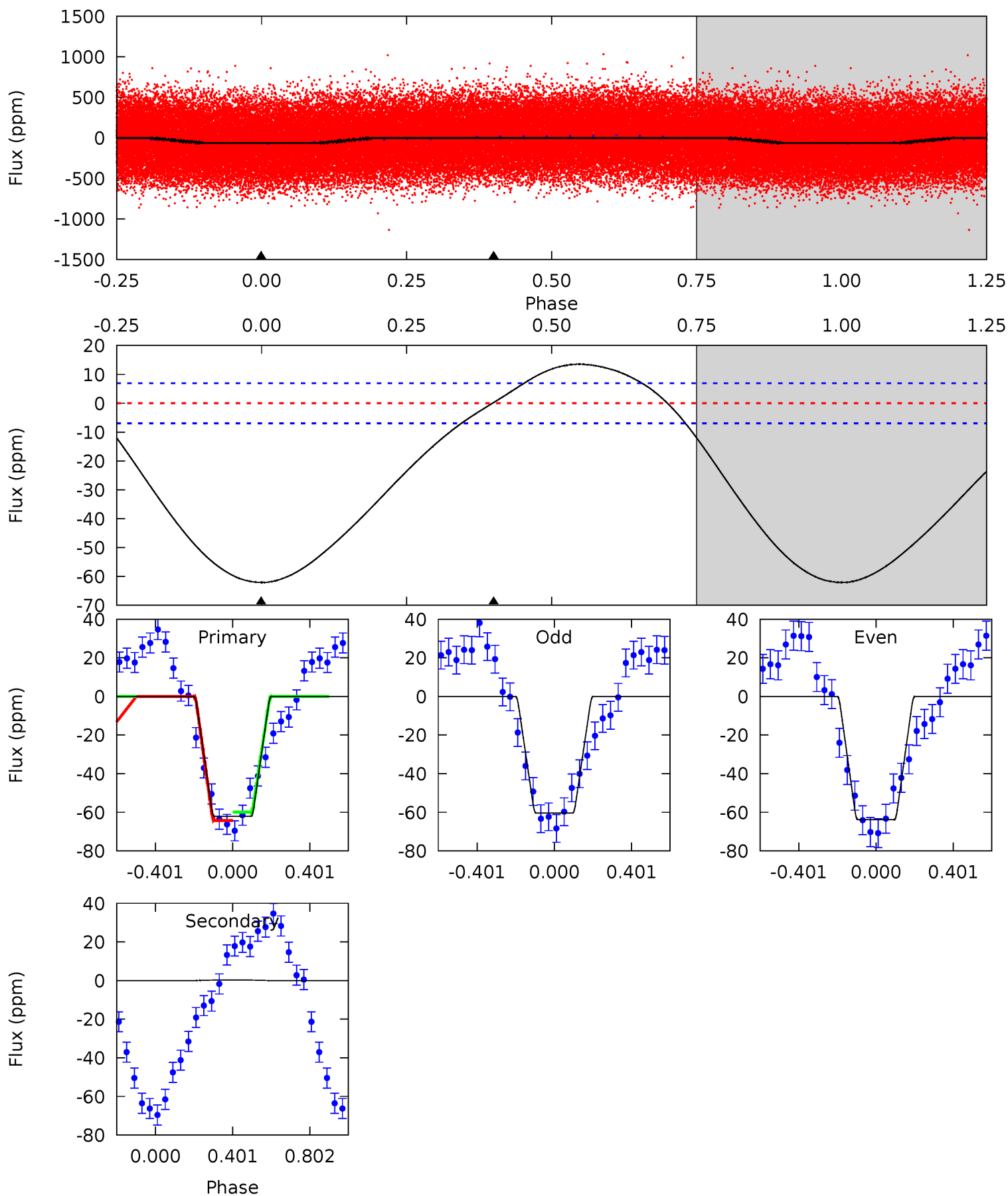
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.6	4.78	0	0	4.25	0.80	0.74	17.6	17.6	4.78	4.78	0.84	1.16	0.05	1.04



Alt Model-Shift Uniqueness Test

004156254-01, P = 1.274117 Days, E = 131.039898 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
38.2	-0.15	0	0	4.26	0.84	3.58	38.2	38.2	-0.15	-0.15	1.03	1.05	0.18	1.35



Stellar Parameters For KIC 004156254

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7022^{+145}_{-270}	$2.998^{+0.621}_{-0.103}$	$0.070^{+0.200}_{-0.350}$	$9.213^{+1.352}_{-5.410}$	$3.080^{+0.197}_{-1.185}$	$0.006^{+0.051}_{-0.001}$
	+2%/-4%	+21%/-3%	+286%/-500%	+15%/-59%	+6%/-38%	+924%/-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 004156254-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-3 ± 1	$2.44^{+1.74}_{-1.37}$	6966^{+487}_{-1078}	1662^{+5604}_{-6886}	$0.300^{+1.202}_{-0.191}$
Alt.	0 ± 2	$7.58^{+2.43}_{-2.56}$	6950^{+488}_{-1027}	-5672^{+712}_{-381}	$-0.002^{+0.018}_{-0.020}$

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

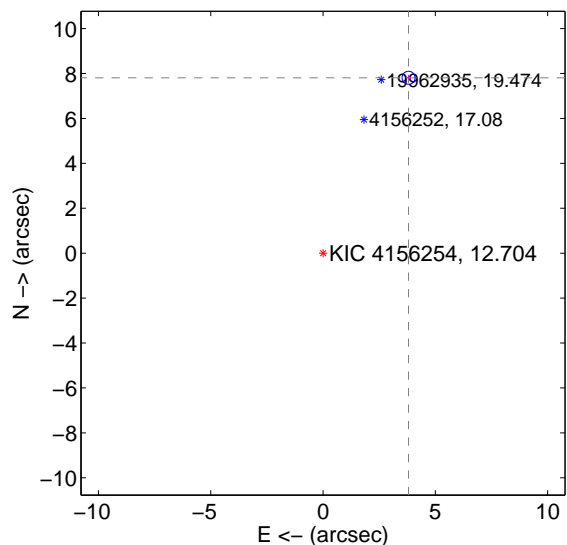
Supplemental centroid analysis for 004156254-01. Kepler magnitude: 12.70. Transit SNR 8.46

There are 0 quarters with good PRF difference image offsets

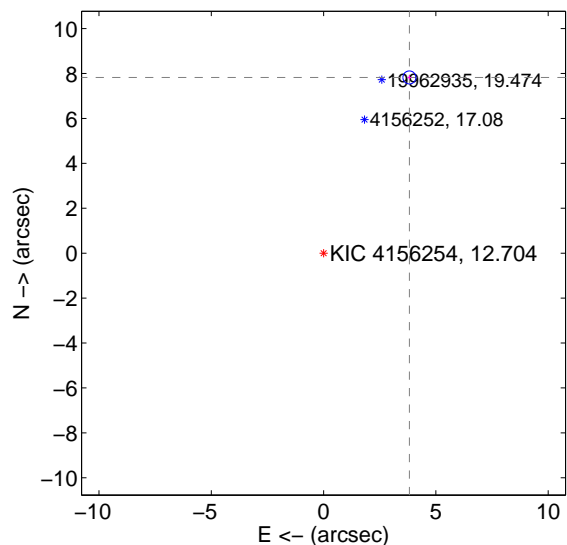
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	8.689 ± 0.096	90.07	-3.807 ± 0.088	7.810 ± 0.098
PRF-fit source offset from KIC position	8.709 ± 0.096	90.29	-3.822 ± 0.088	7.826 ± 0.098
photometric centroid source offset	2.10 ± 1.12	1.87	-1.94 ± 1.06	-0.79 ± 1.43

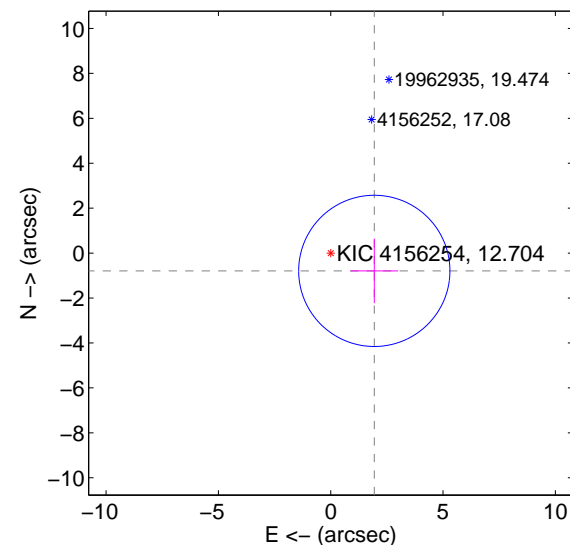
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

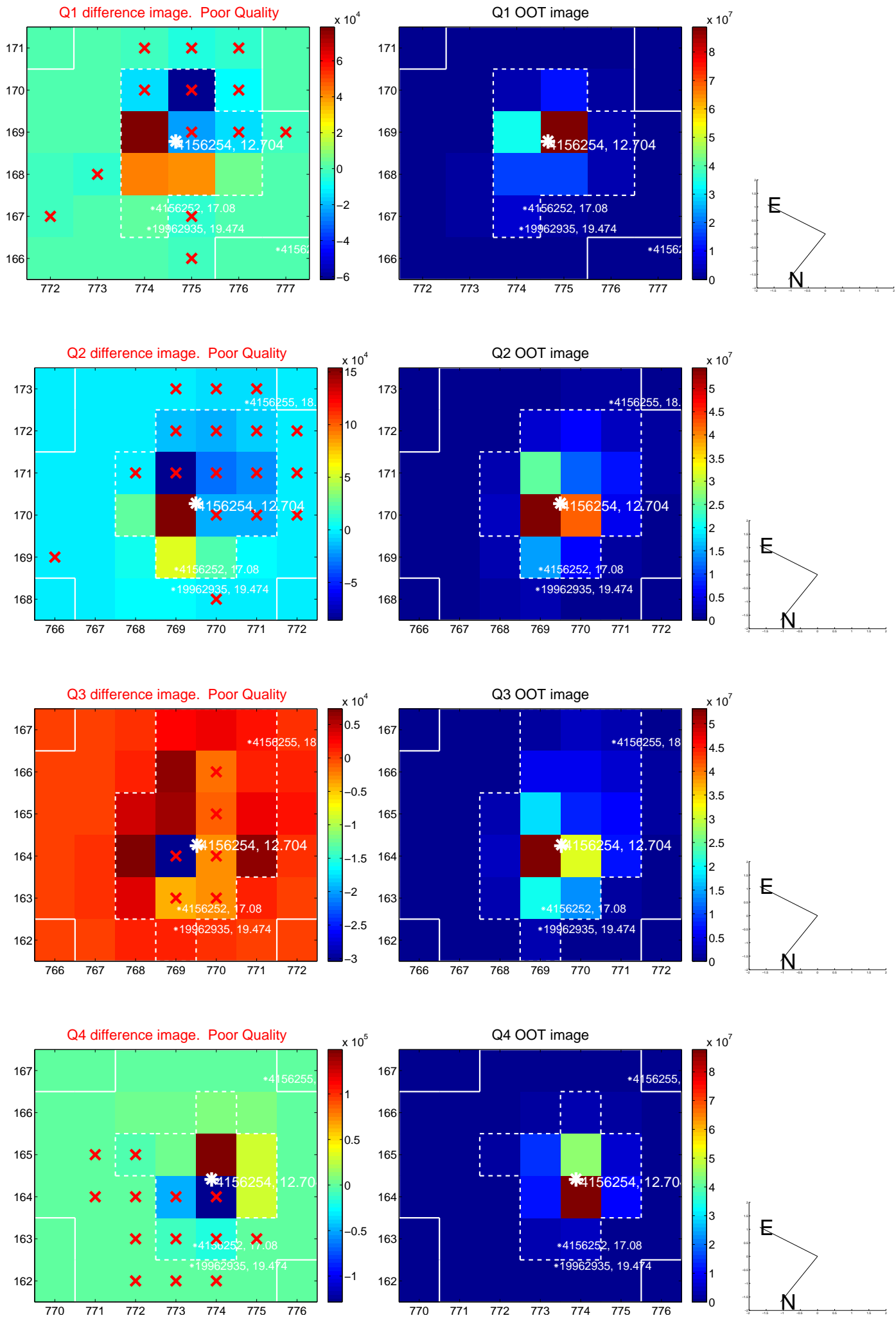


offset from photometric centroids

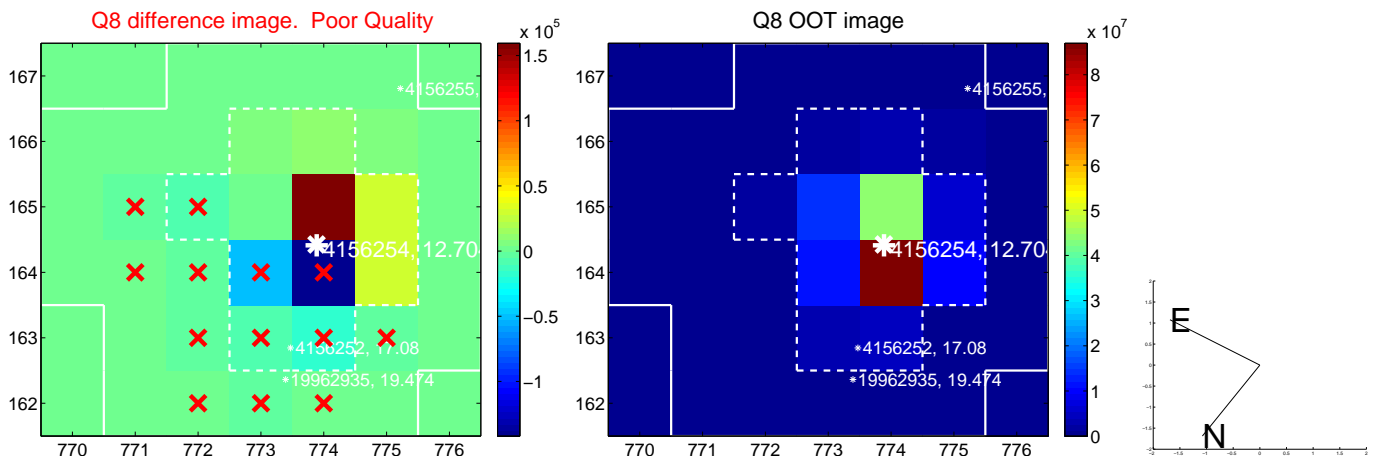
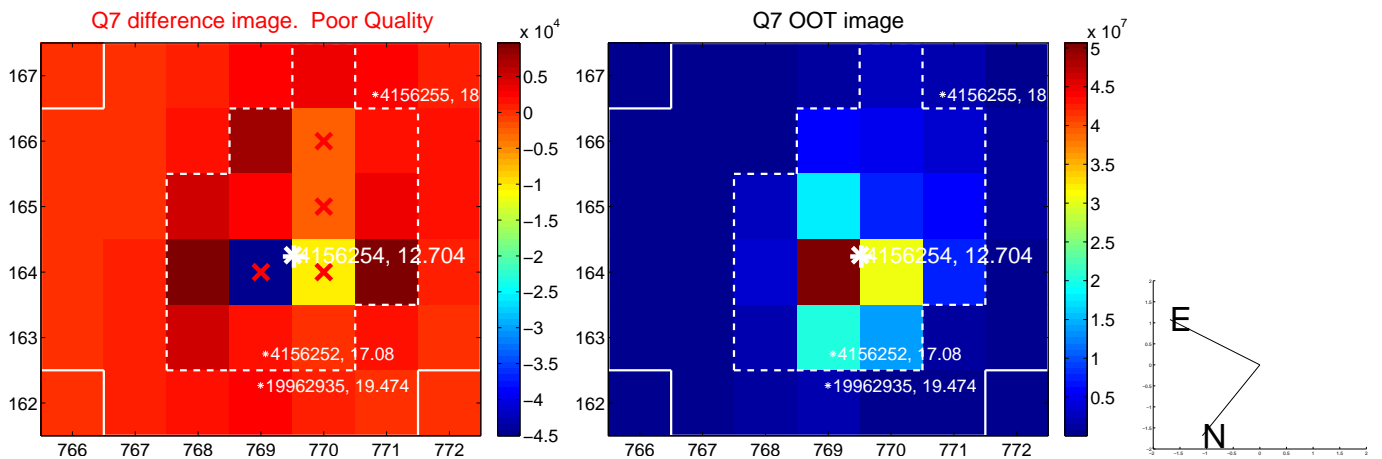
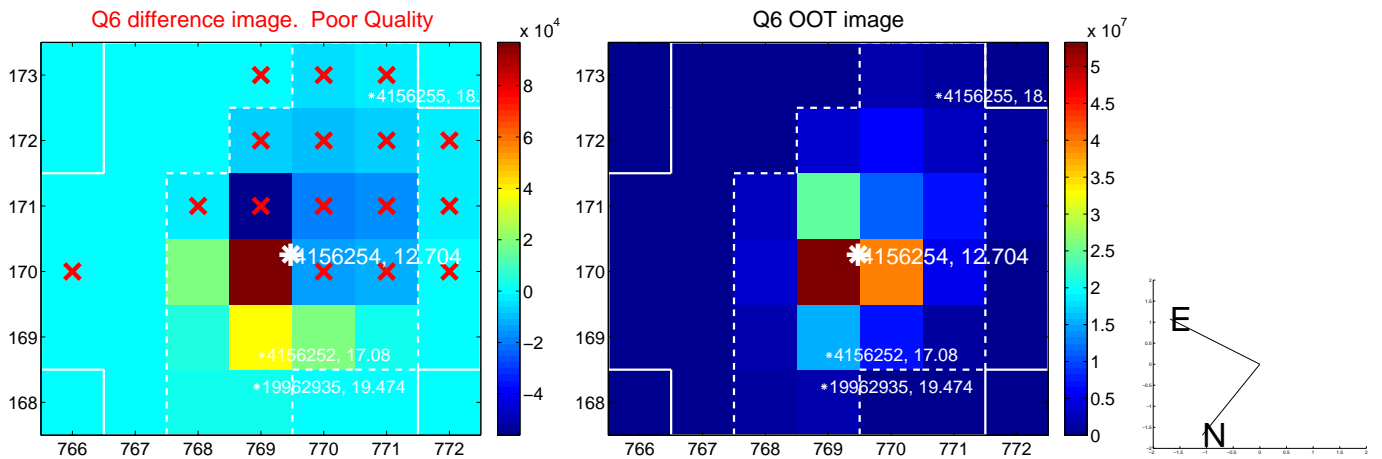
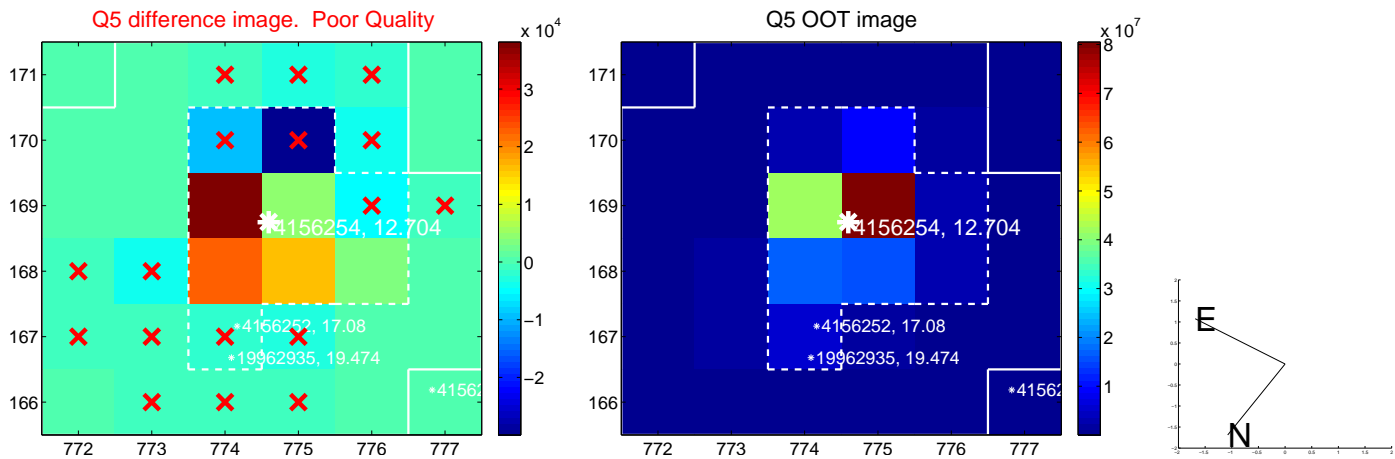


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

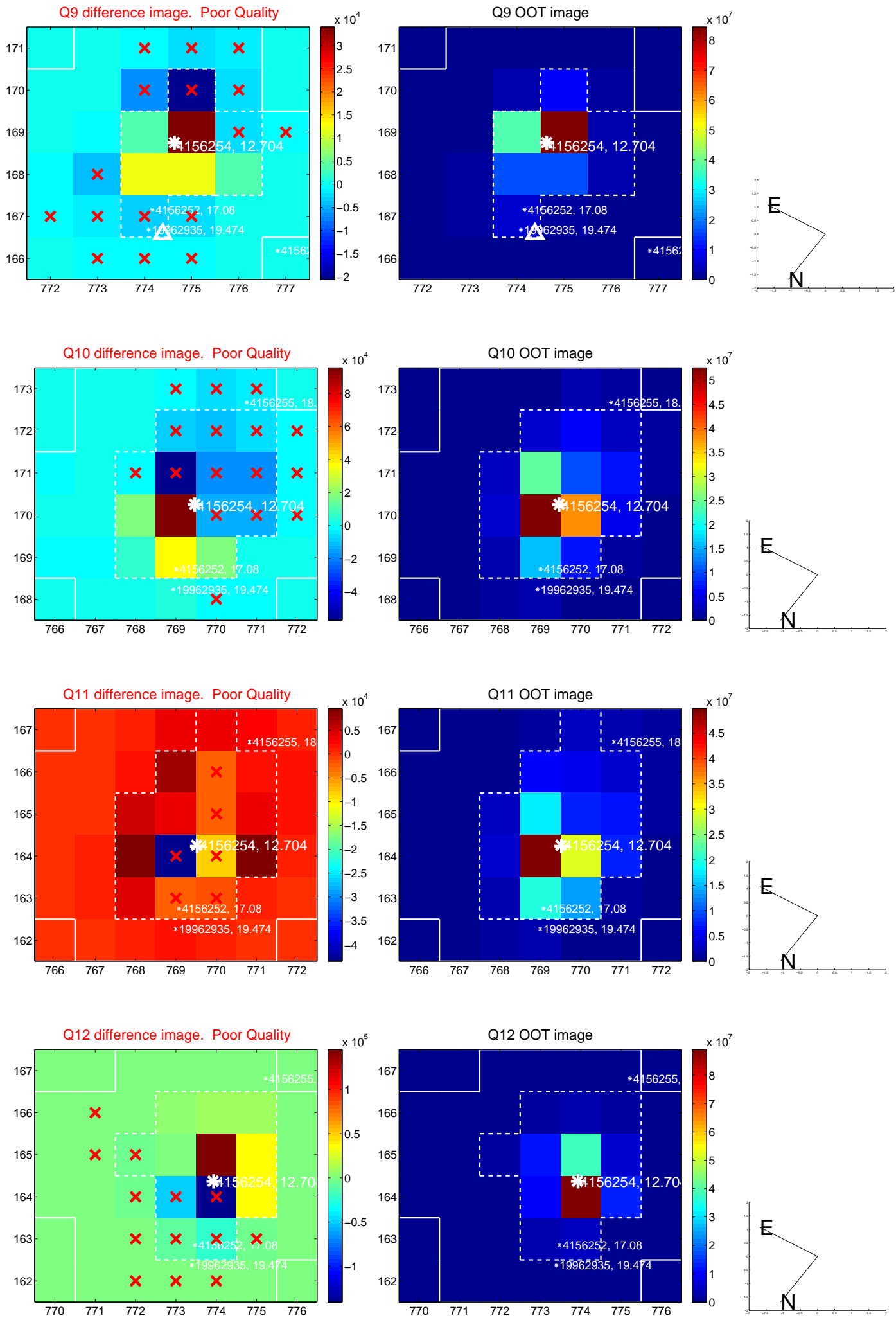
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



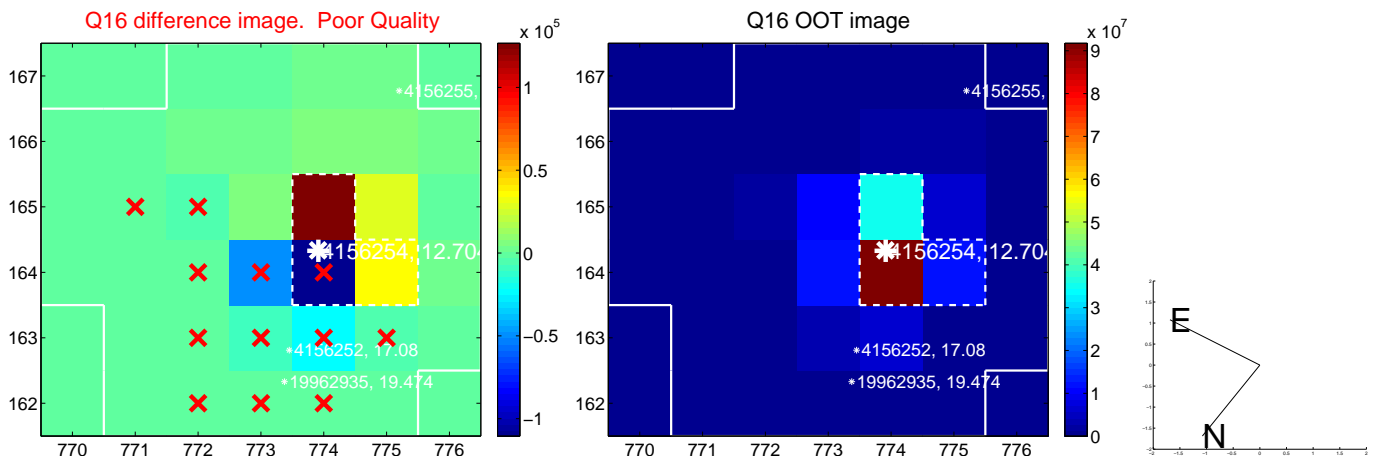
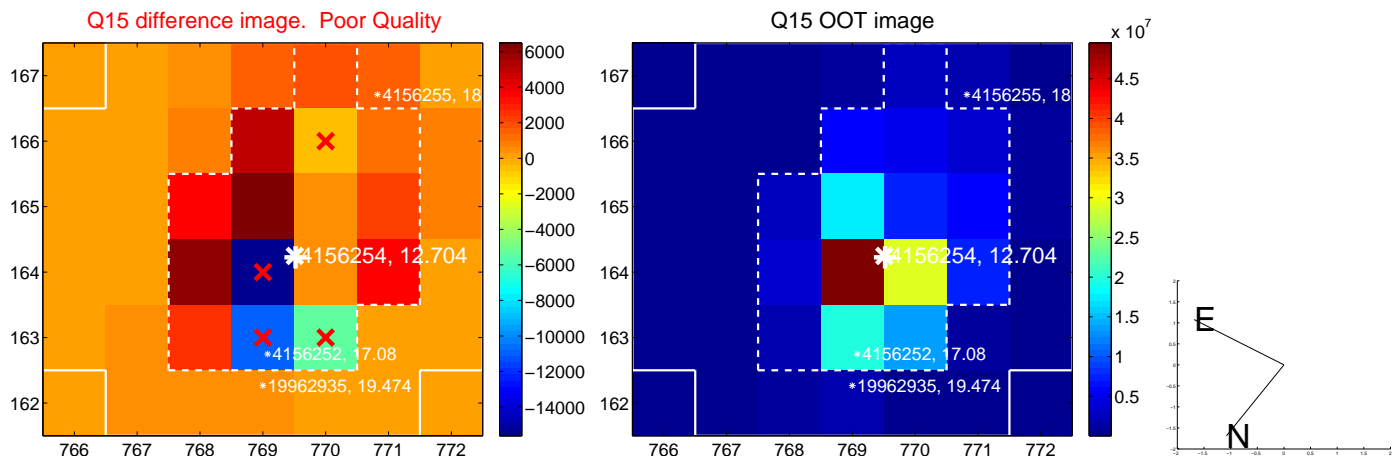
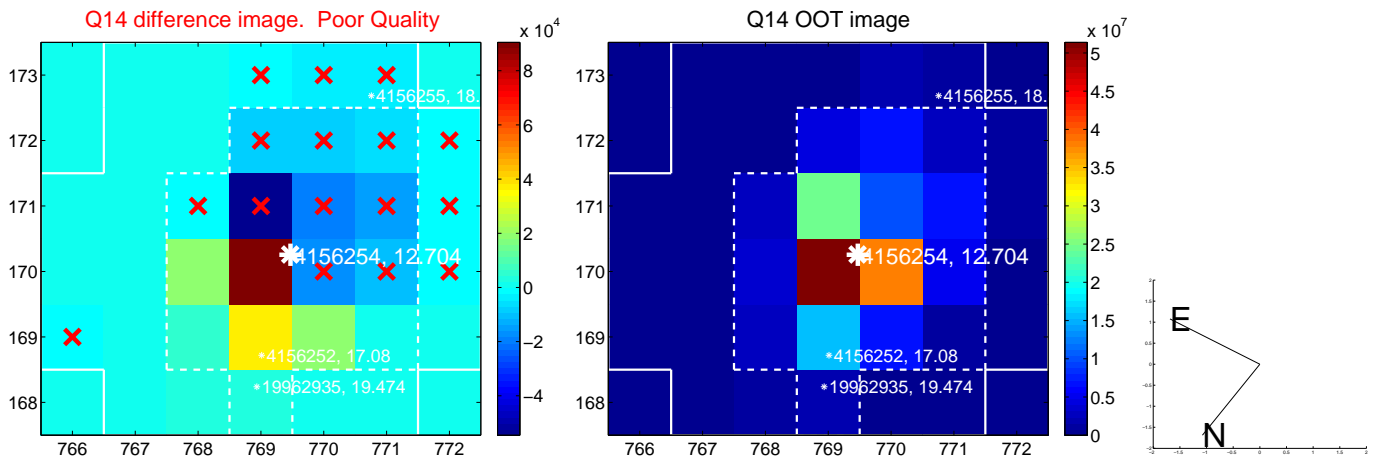
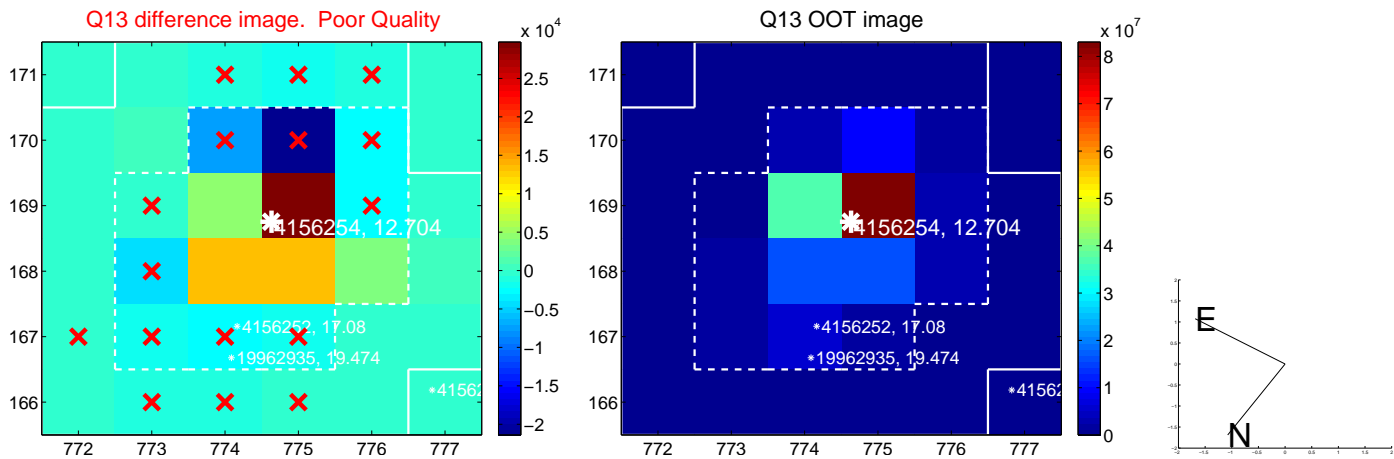
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



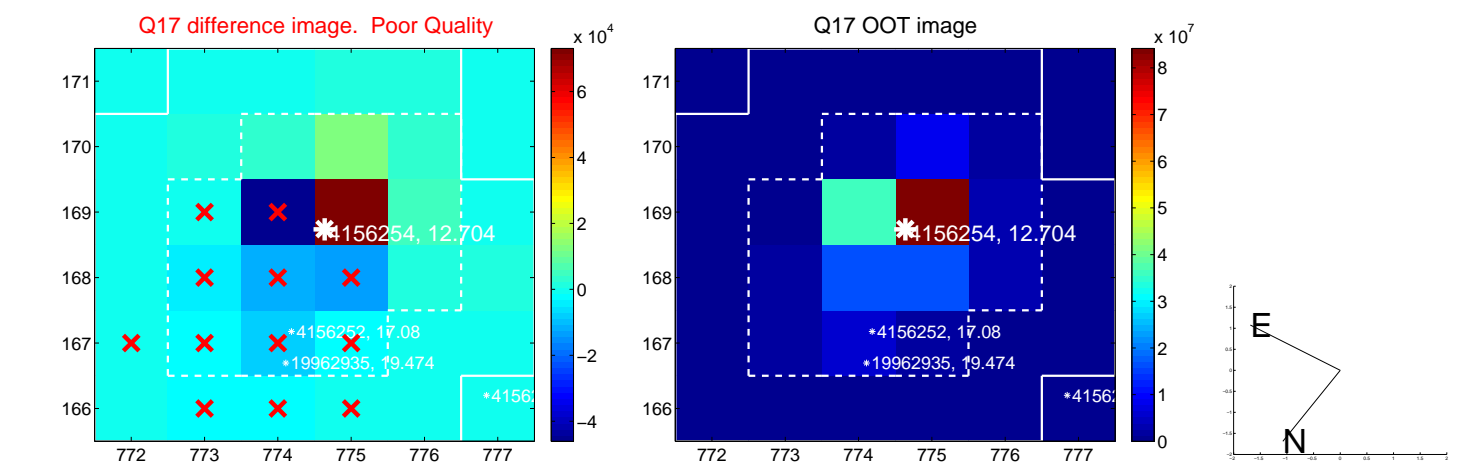
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



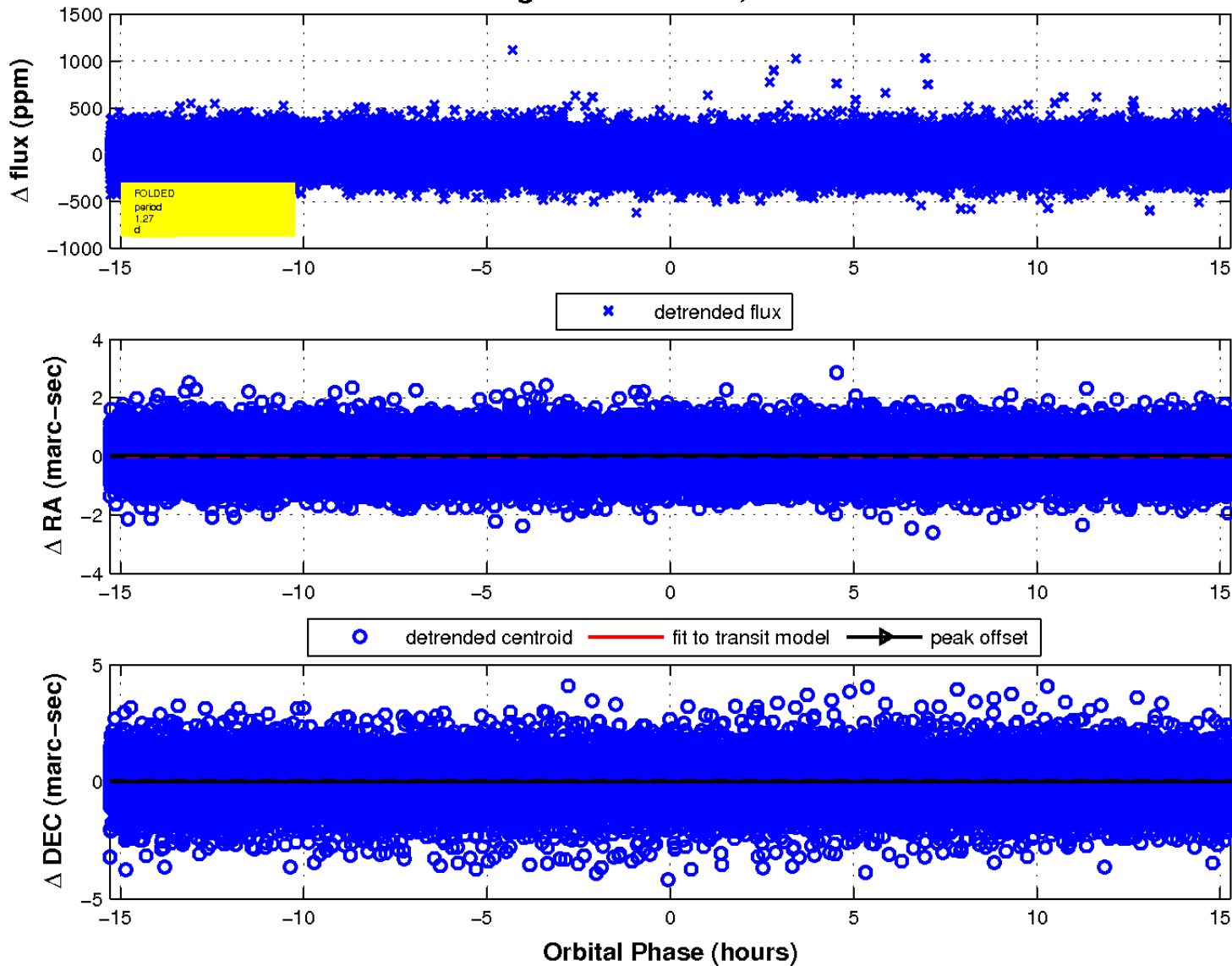
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

