

KIC 008037038

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})
008037038-01	OBS	5466.01	4.095155	131.676013	168.2	1.955	9.7	10.2	0.96	5858	1.54	375.50

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008037038-01	OBS	PC	1.00	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.

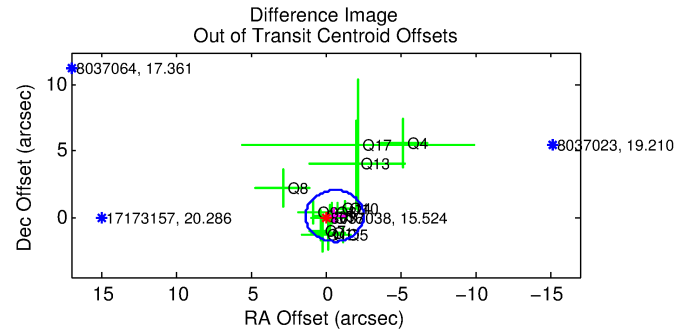
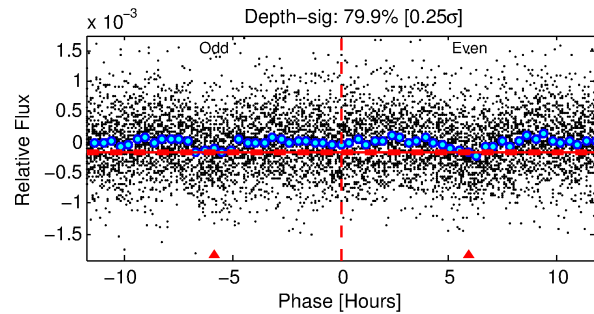
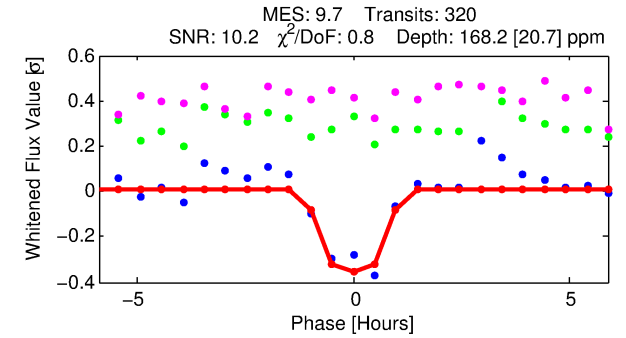
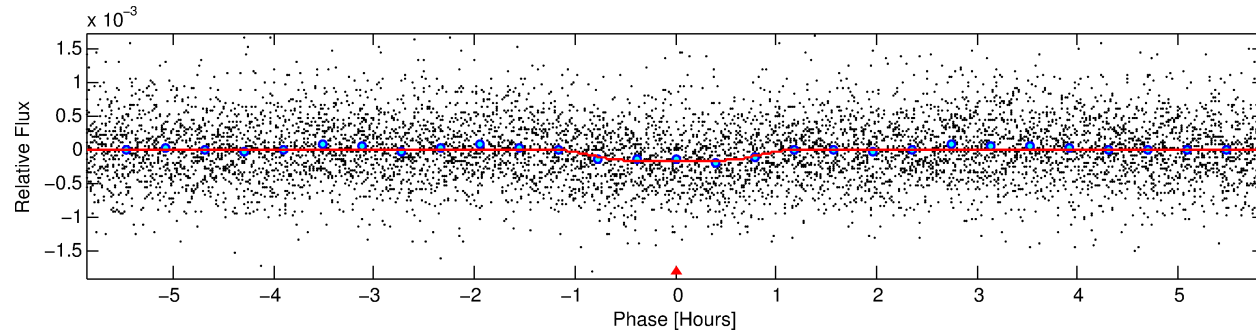
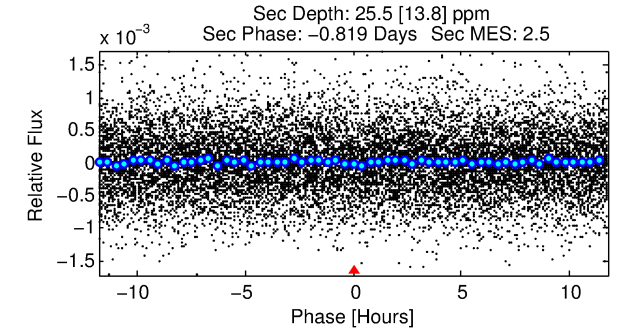
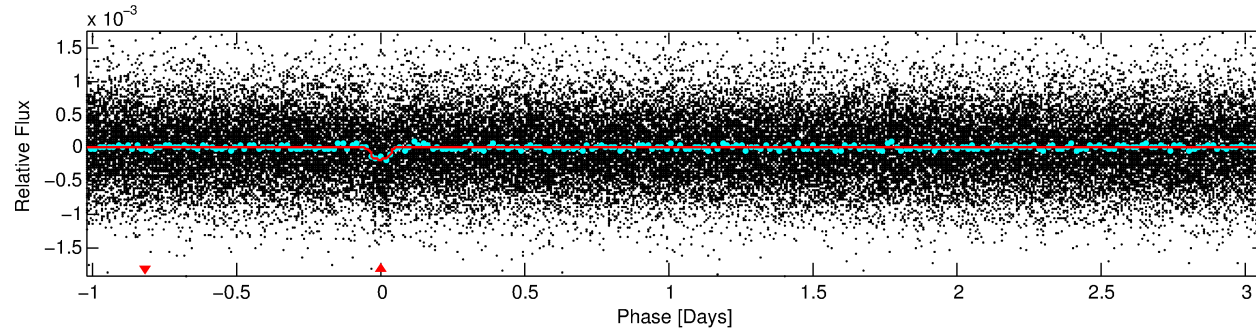
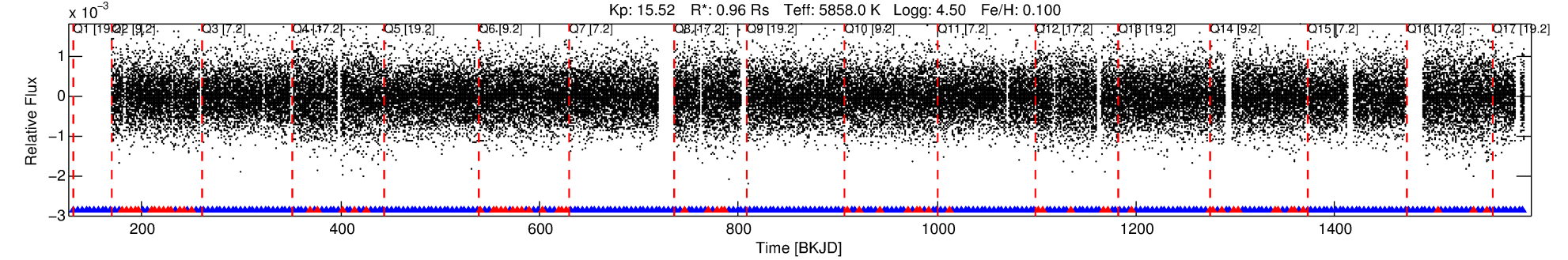
Ephemeris Match Information For 008037038-01

No Significant Match Found

DV One-Page Summary

KIC: 8037038 Candidate: 1 of 1 Period: 4.095 d

KOI: K05466.01 Corr: 0.972



DV Fit Results:

Period = 4.09515 [0.00002] d
Epoch = 131.6760 [0.0037] BKJD
Rp/R* = 0.0147 [0.0078]
a/R* = 6.50 [16.66]
b = 0.93 [0.38]
Seff = 375.50 [152.40]
Teff = 1122 [114] K
Rp = 1.54 [0.95] Re
a = 0.0510 [0.0136] AU
Ag = 15.36 [19.19] [0.75σ]
Teffp = 3435 [1027] K [2.24σ]

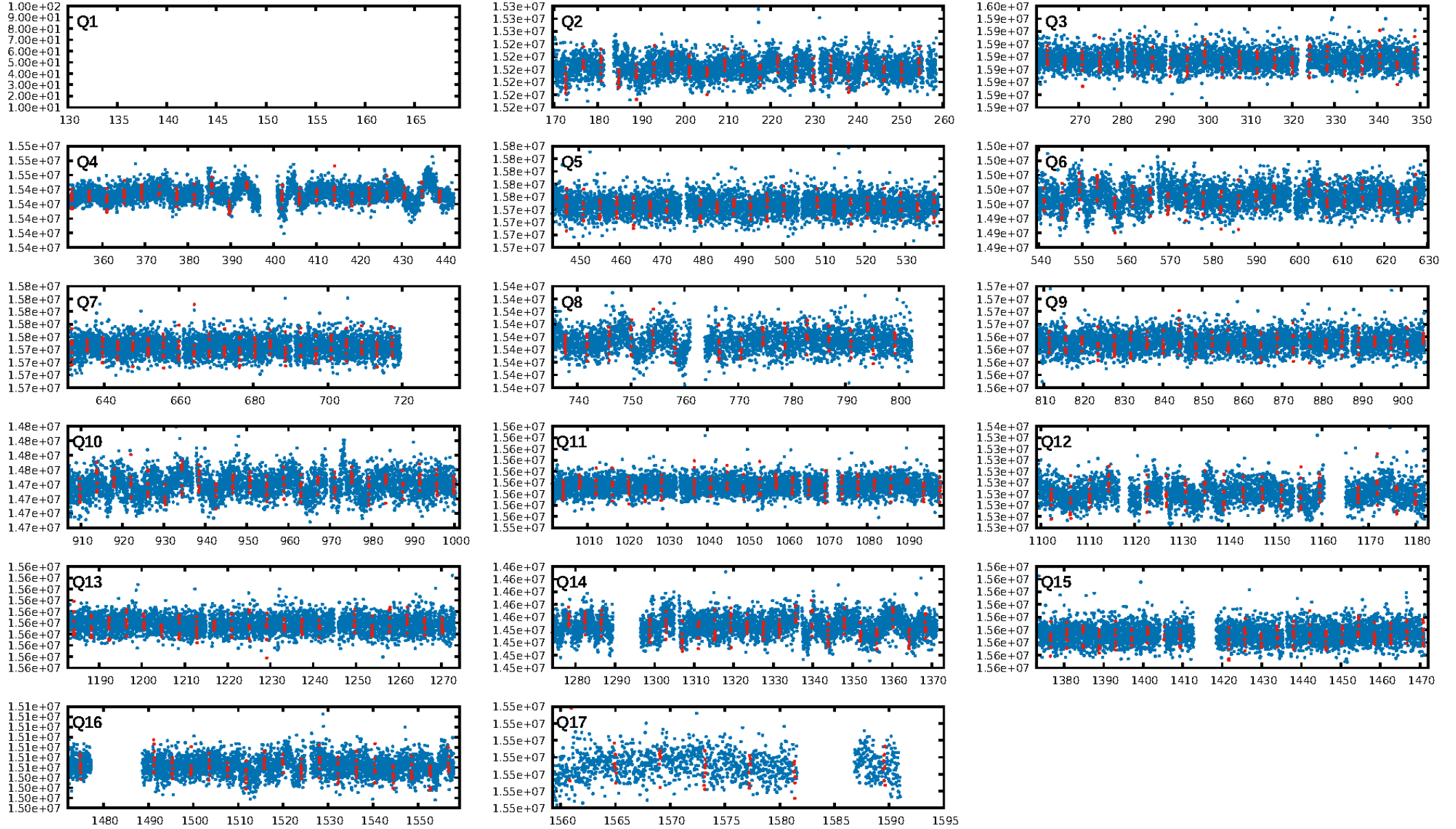
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.46e-22
RollingBand-fgt: 0.80 [249/313]
GhostDiagnostic-chr: 1.389
Centroid-sig: 39.0%
Centroid-so: 1.556 arcsec [0.96σ]
OotOffset-rm: 0.612 arcsec [0.94σ]
KicOffset-rm: 0.456 arcsec [0.71σ]
OotOffset-st: 2/4/4/4 [14]
KicOffset-st: 2/4/4/4 [14]
DiffImageQuality-fgm: 0.57 [8/14]
DiffImageOverlap-fno: 1.00 [16/16]

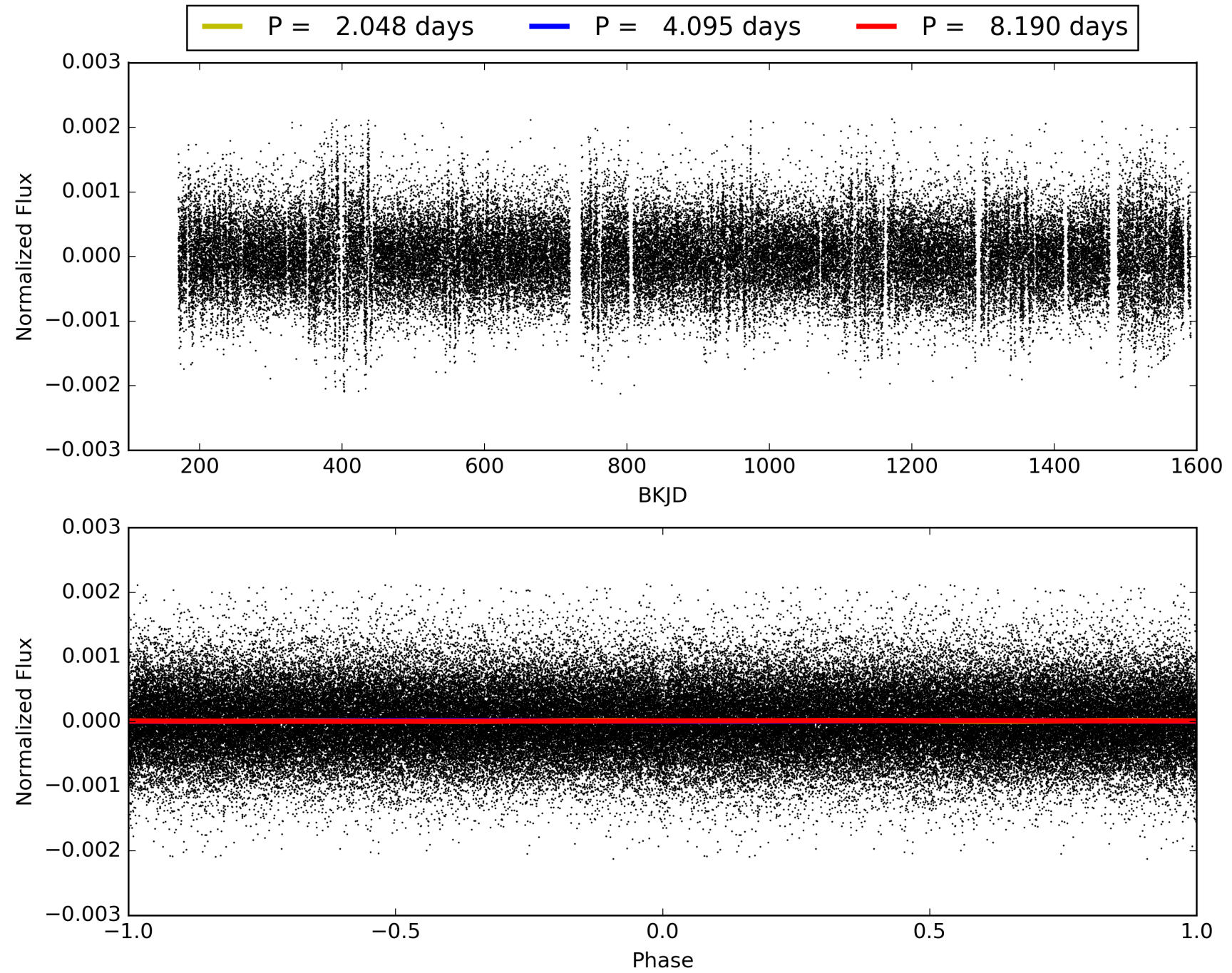
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 00:39:20 Z

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

TCE 008037038-01, PDC Light Curves

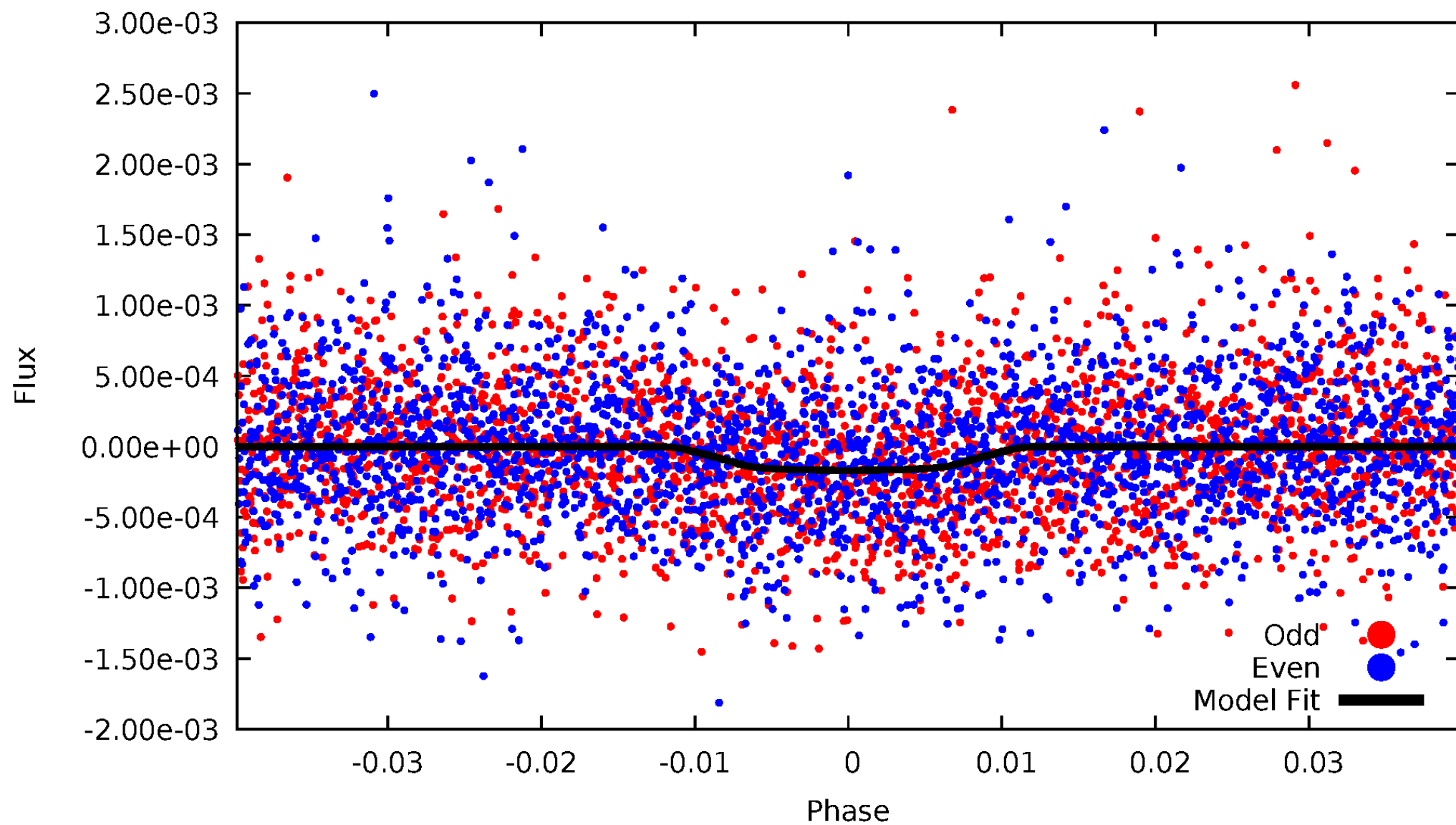


TCE 008037038-01



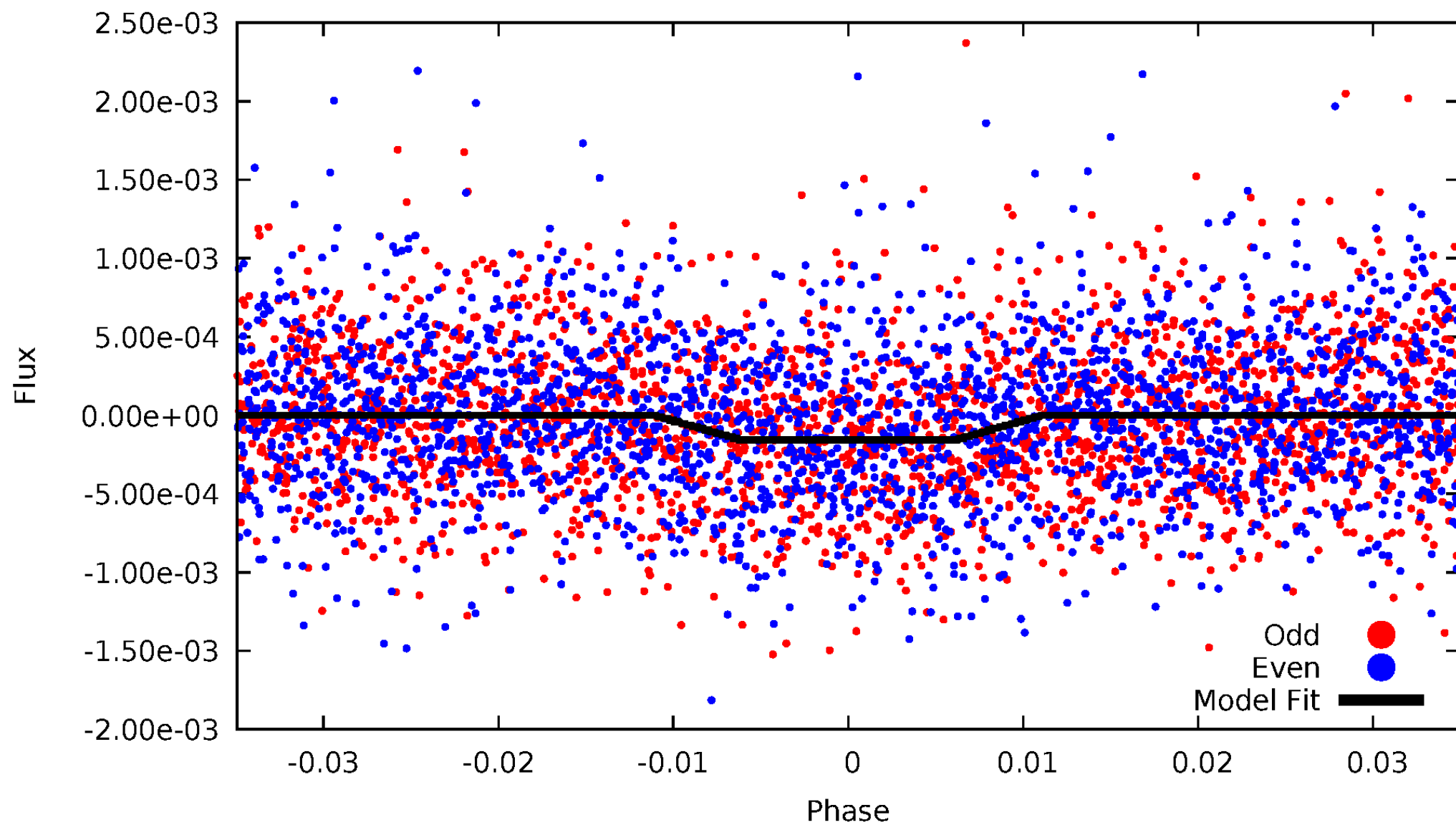
DV Odd/Even

TCE 008037038-01



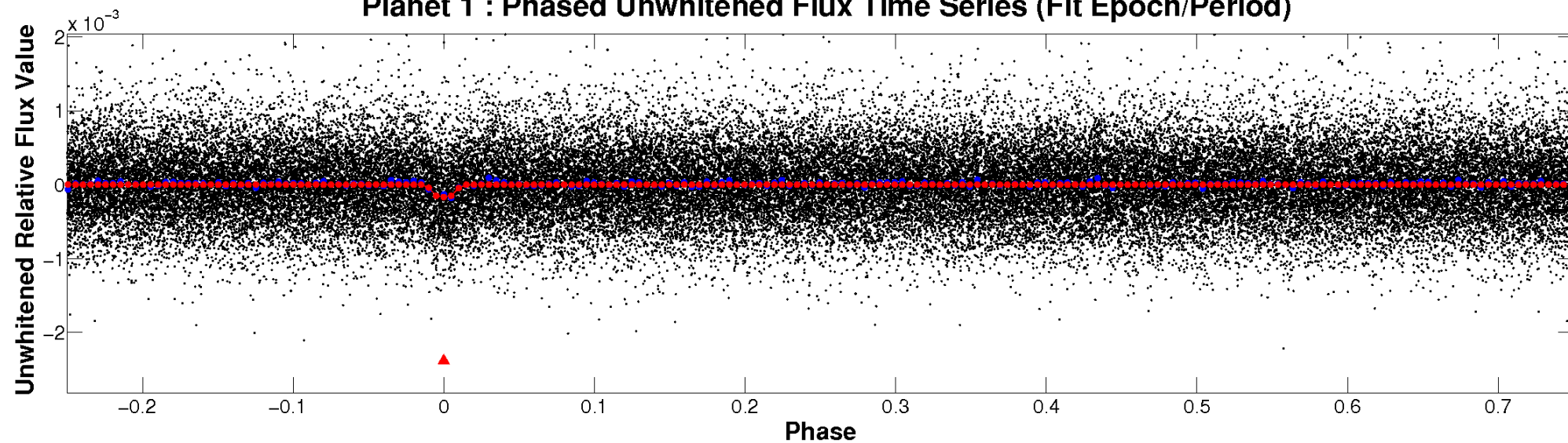
ALT Odd/Even

TCE 008037038-01

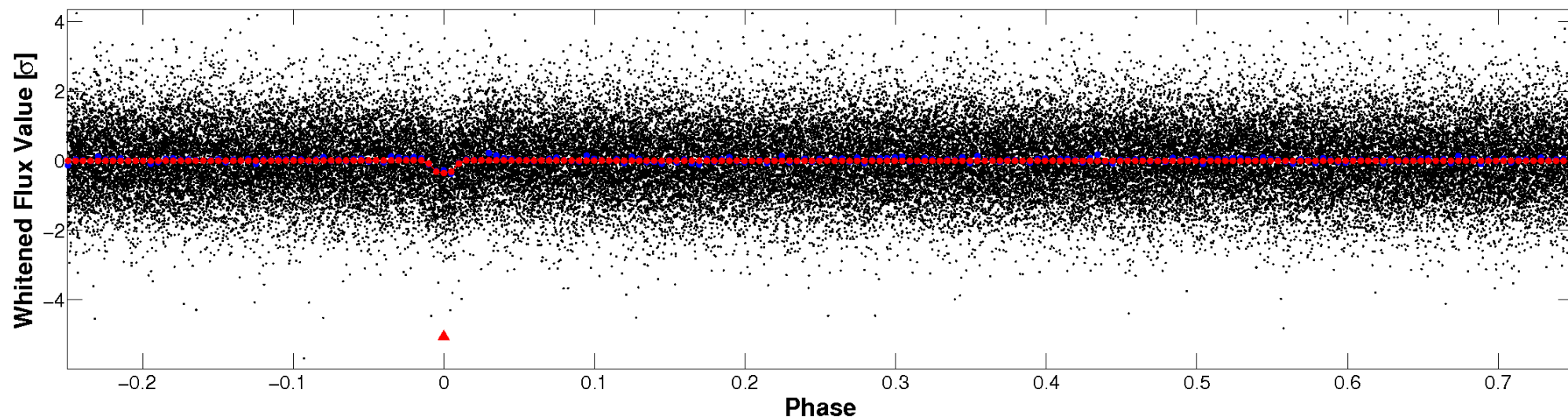


Non-Whitened Vs. Whitened Light Curve

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

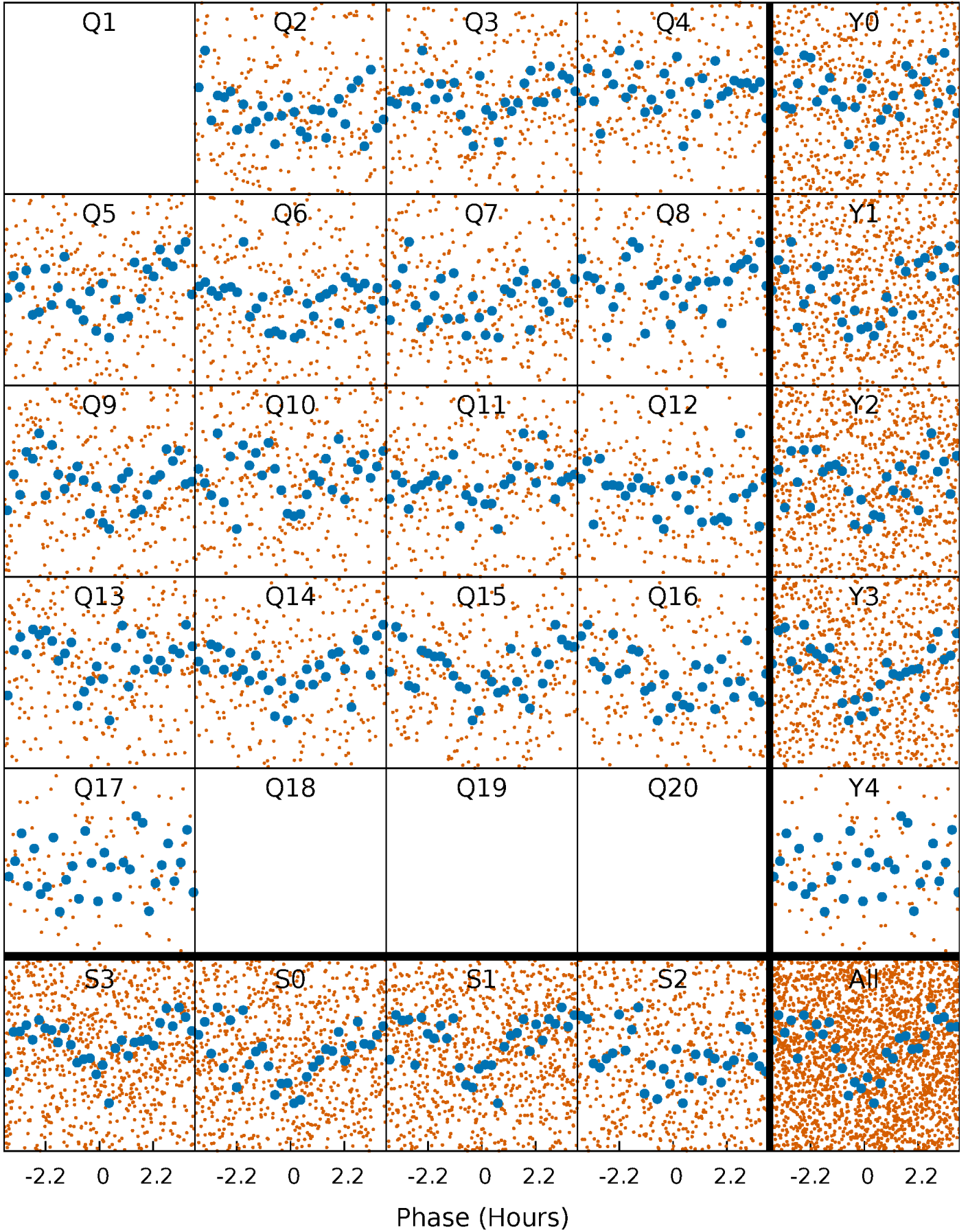


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



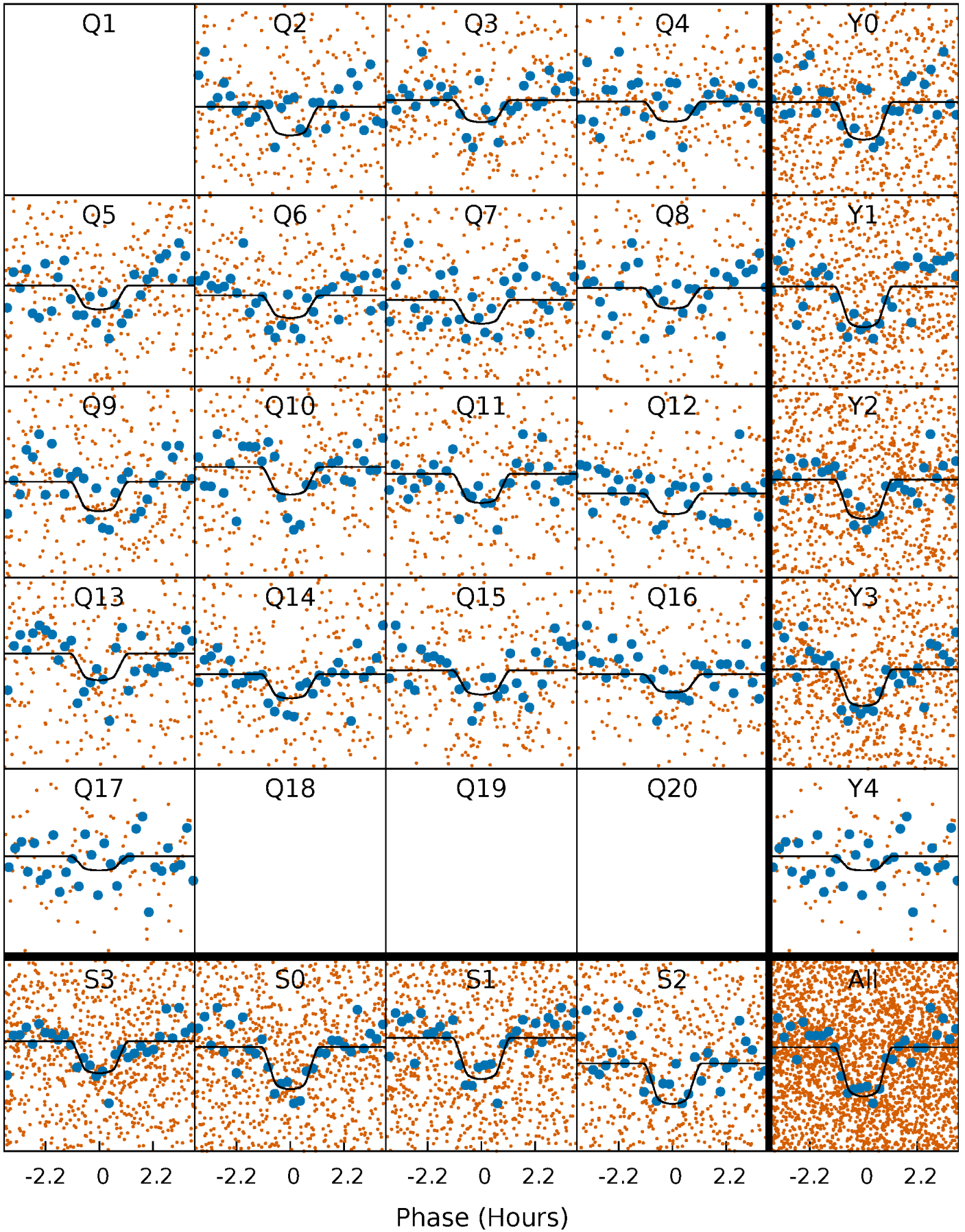
PDC Quarter-Phased Transit Curves

TCE 008037038-01 P= 4.095155 Days $T_0=131.676013$ (BKJD)



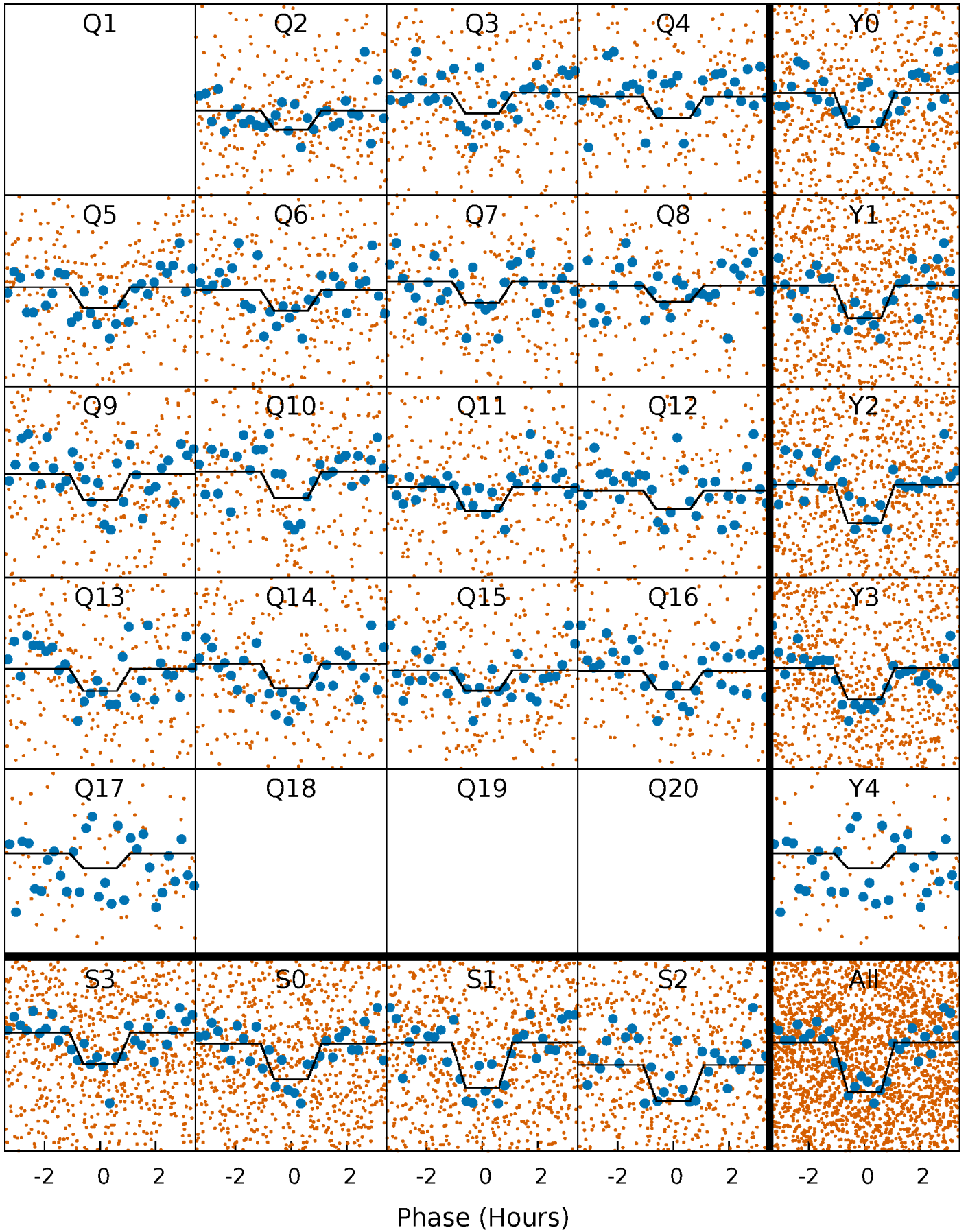
DV Quarter-Phased Transit Curves

TCE 008037038-01 P= 4.095155 Days $T_0=131.676013$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

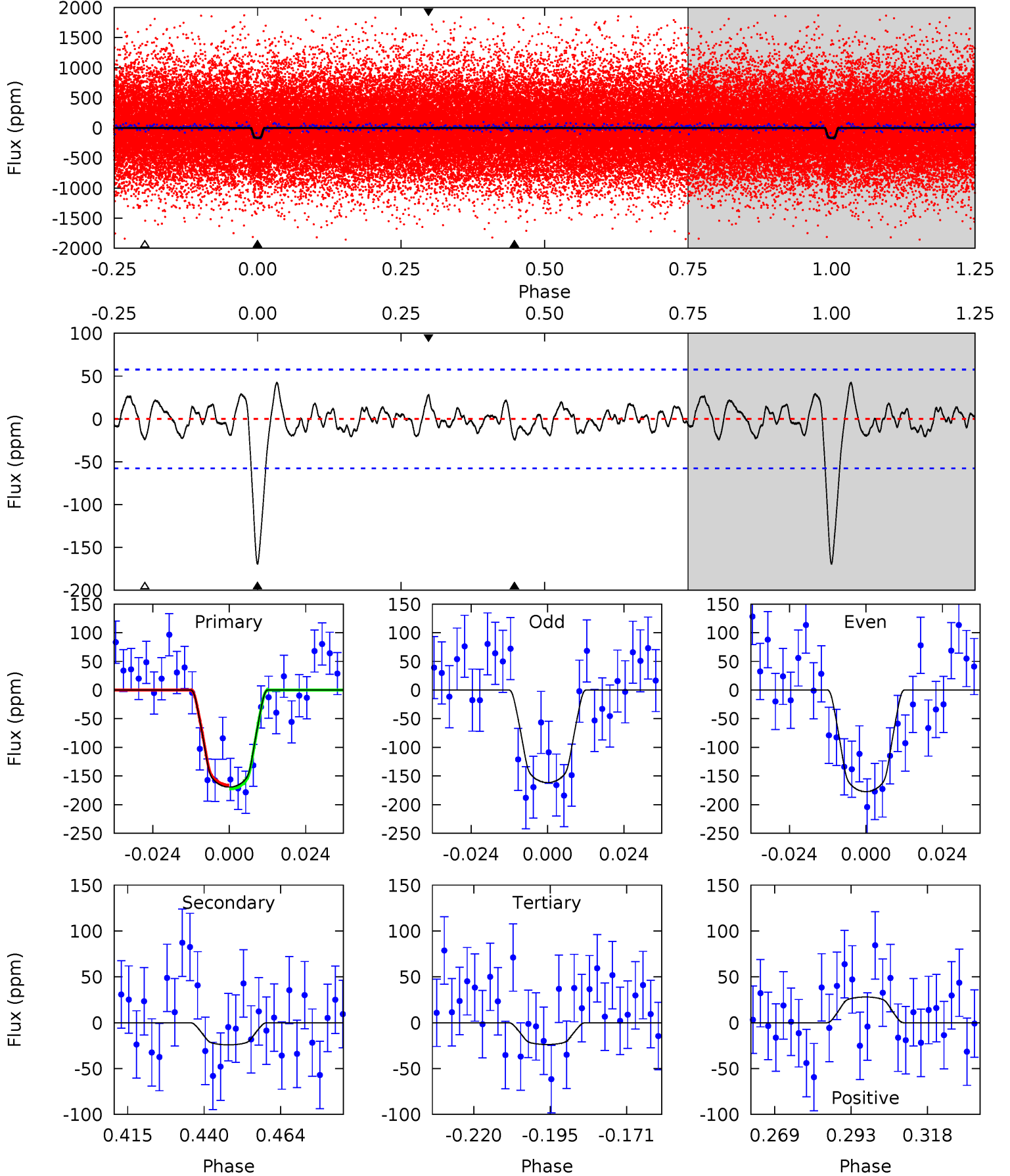
TCE 008037038-01 P= 4.095142 Days $T_0=131.677074$ (BKJD)



DV Model-Shift Uniqueness Test

008037038-01, P = 4.095155 Days, E = 131.676013 Days

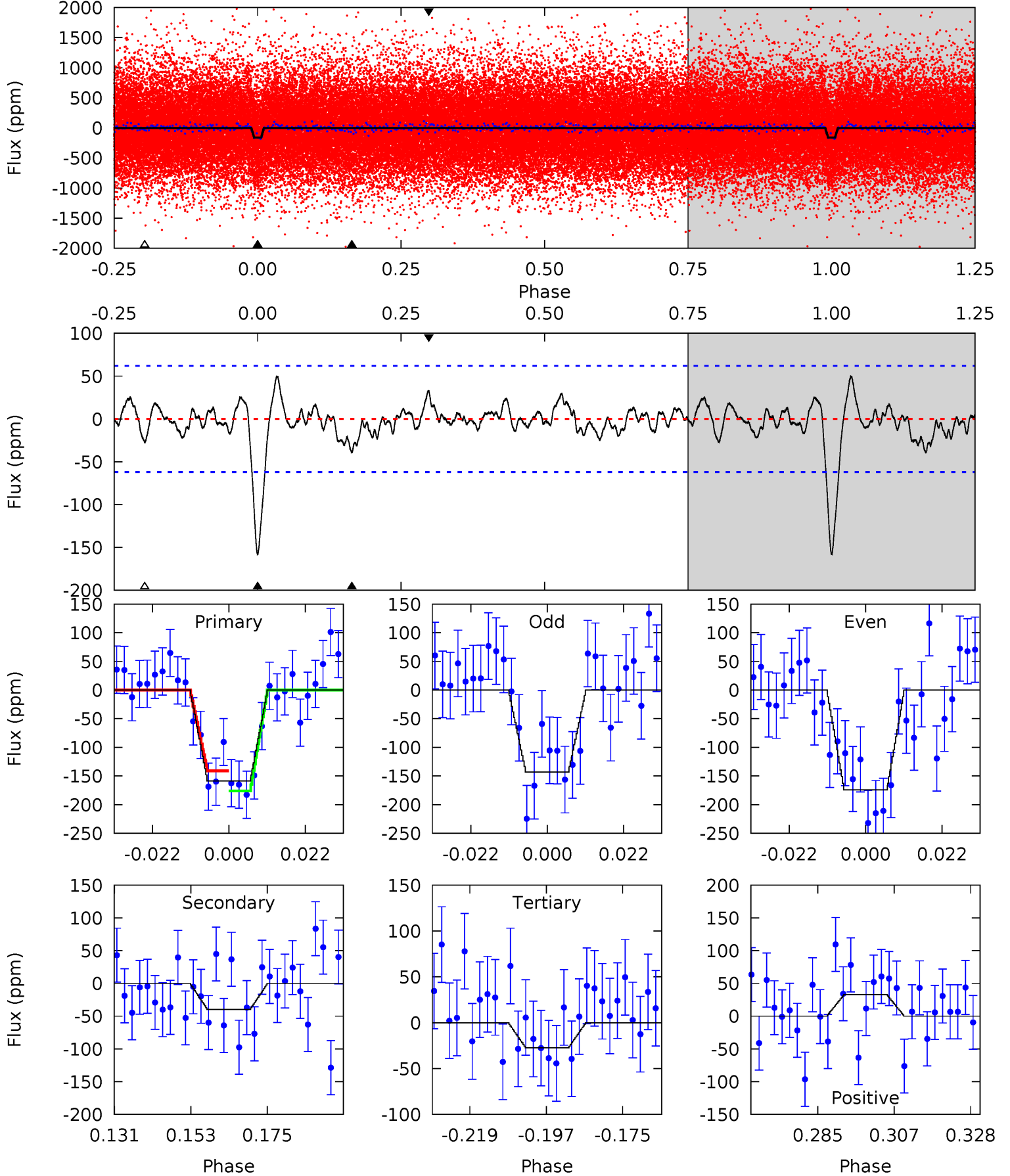
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.3	2.03	2.00	2.36	4.85	2.25	0.99	12.3	11.9	0.03	-0.32	0.67	0.86	0.20	0



Alt Model-Shift Uniqueness Test

008037038-01, P = 4.095142 Days, E = 131.677074 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.5	3.13	2.16	2.58	4.87	2.29	0.97	10.3	9.90	0.97	0.55	1.24	0.97	0.24	1.38



Stellar Parameters For KIC 008037038

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5858^{+156}_{-191}	$4.495^{+0.052}_{-0.208}$	$0.100^{+0.250}_{-0.300}$	$0.963^{+0.309}_{-0.096}$	$1.056^{+0.125}_{-0.137}$	$1.665^{+0.357}_{-0.901}$
	+3%/-3%	+1%/-5%	+250%/-300%	+32%/-10%	+12%/-13%	+21%/-54%
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 008037038-01 / KOI 5466.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-24 ± 12	$1.59^{+0.93}_{-0.76}$	1599^{+113}_{-75}	3722^{+1115}_{-627}	13^{+38}_{-9}
Alt.	-40 ± 13	$1.40^{+0.88}_{-0.77}$	1600^{+116}_{-70}	4311^{+1726}_{-710}	28^{+104}_{-18}

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 $A_{\text{obs}} \gg 1.0$

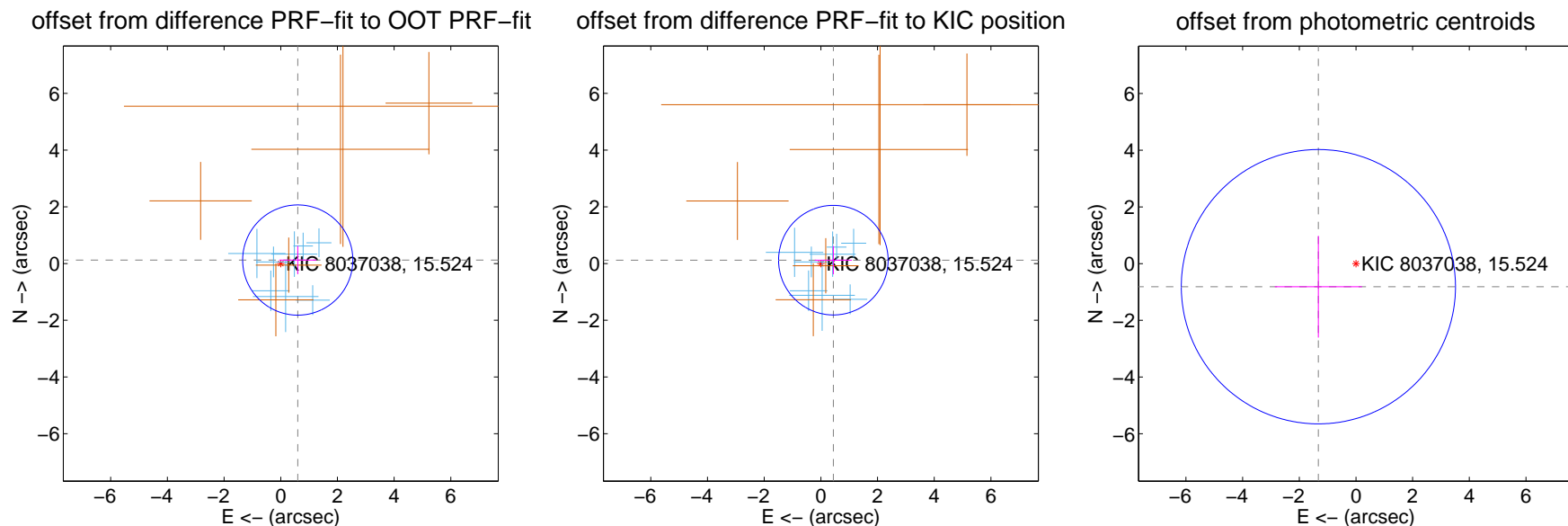
DV Centroid Data

Supplemental centroid analysis for 008037038-01. Kepler magnitude: 15.52. Transit SNR 10.22

There are 8 quarters with good PRF difference image offsets

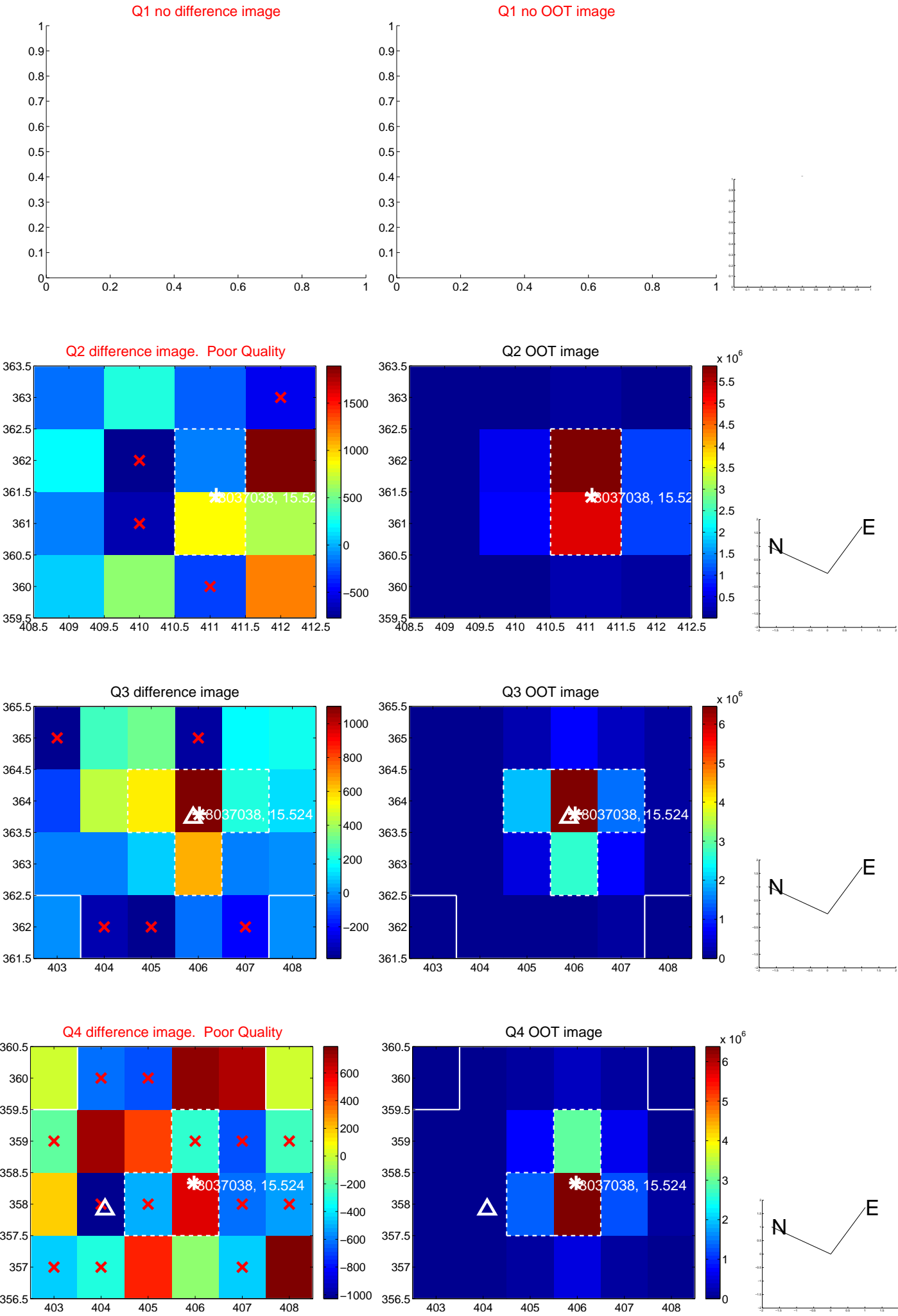
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.612 ± 0.648	0.94	-0.599 ± 0.653	0.123 ± 0.499
PRF-fit source offset from KIC position	0.456 ± 0.644	0.71	-0.440 ± 0.653	0.119 ± 0.499
photometric centroid source offset	1.56 ± 1.61	0.96	1.33 ± 1.54	-0.81 ± 1.79

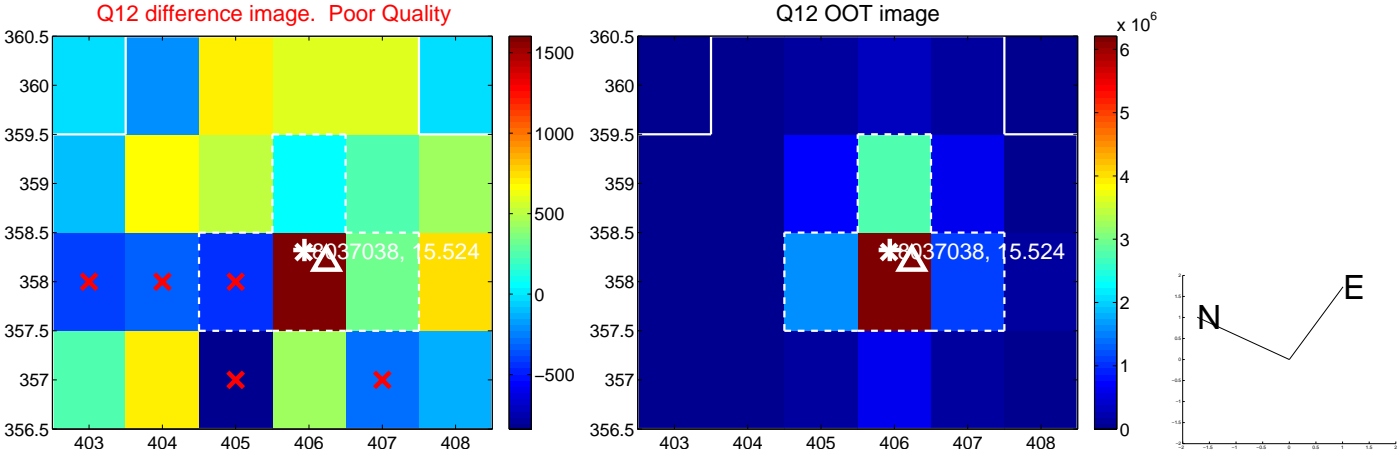
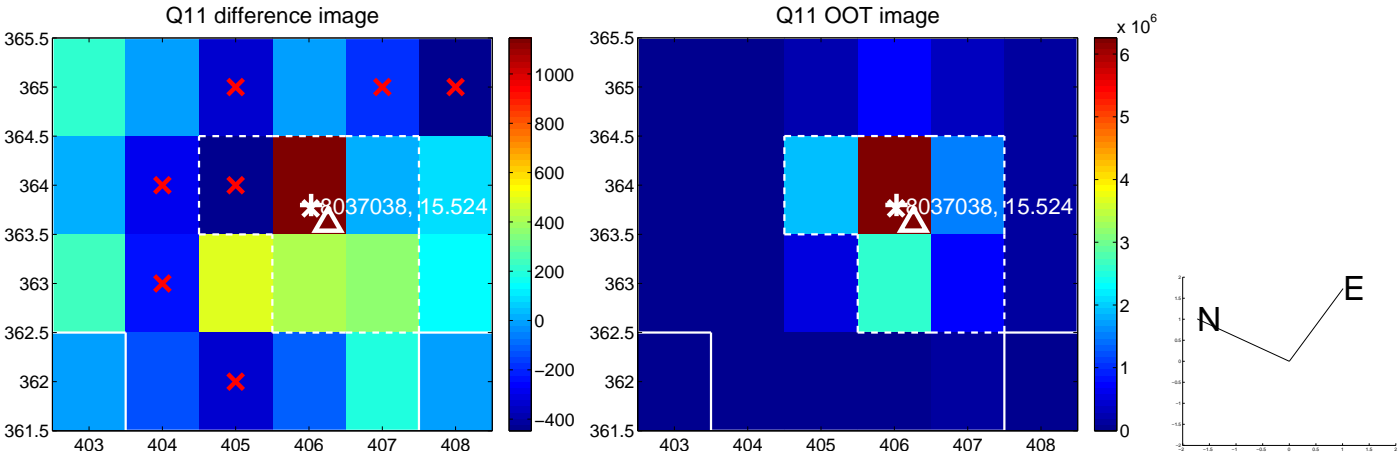
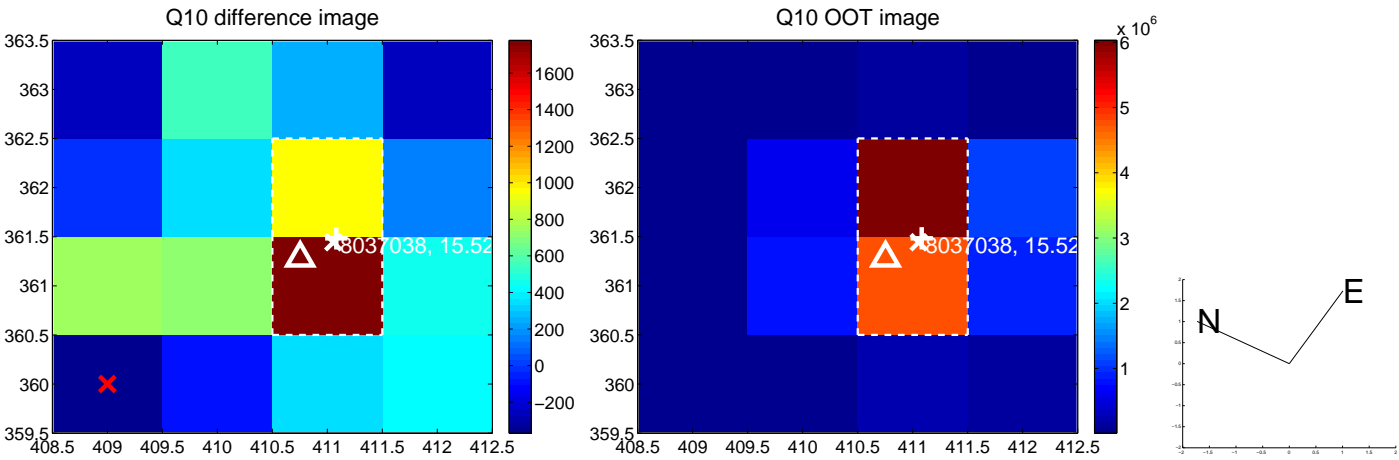
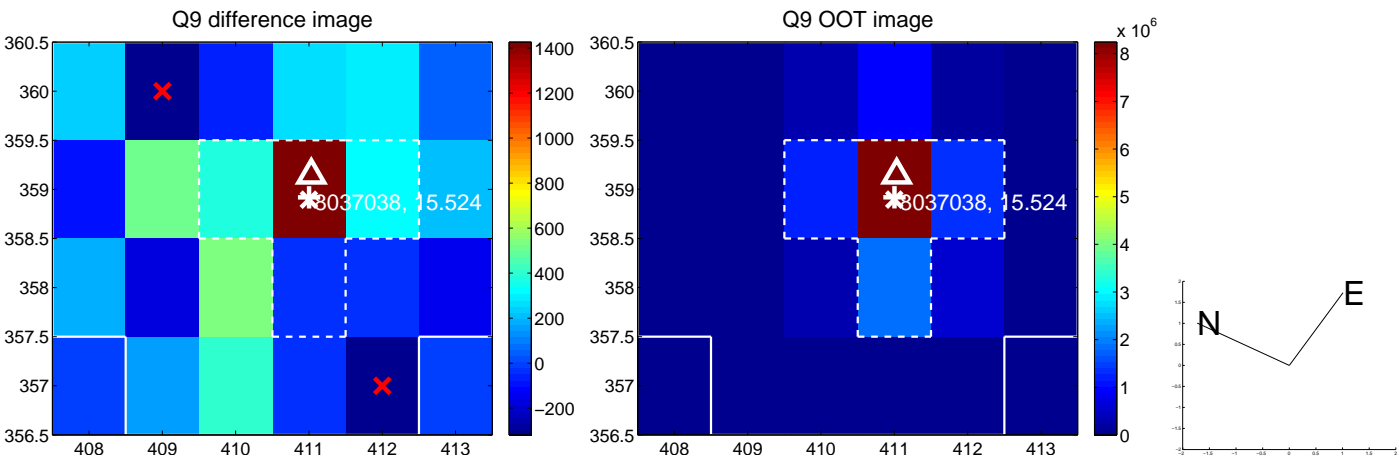


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

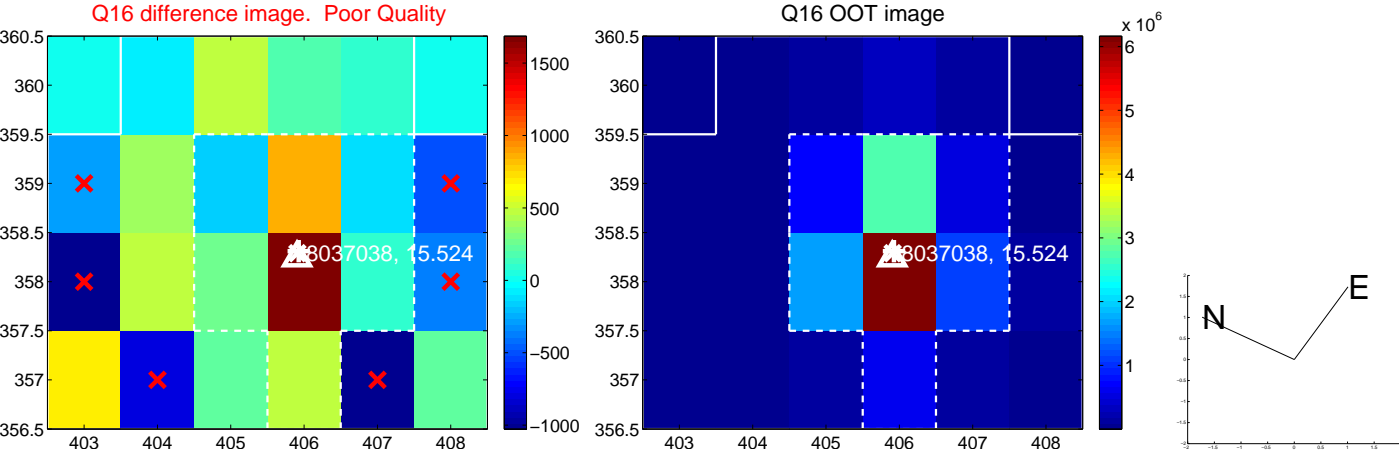
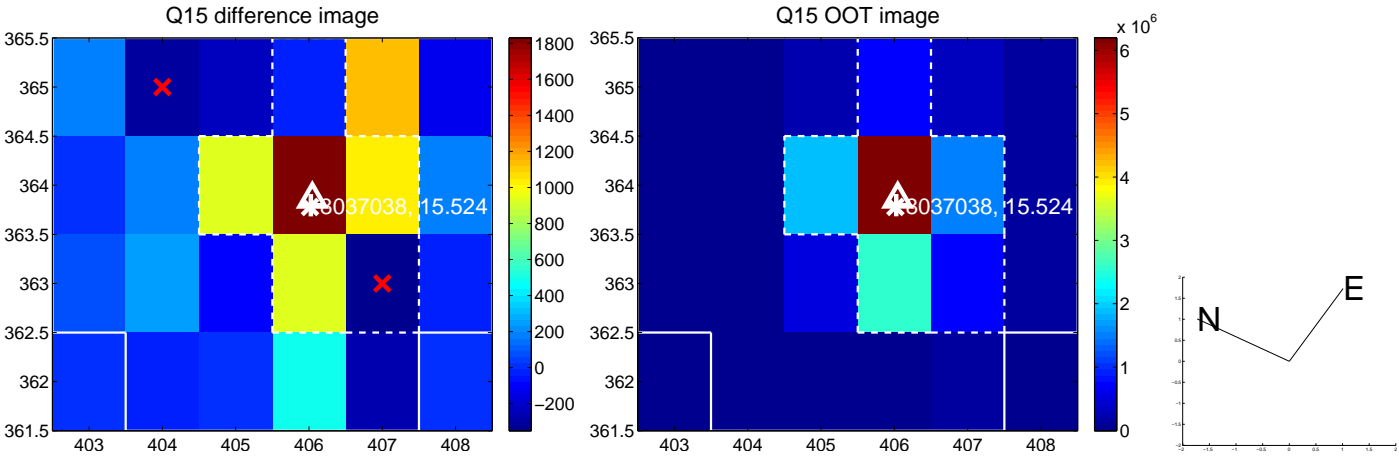
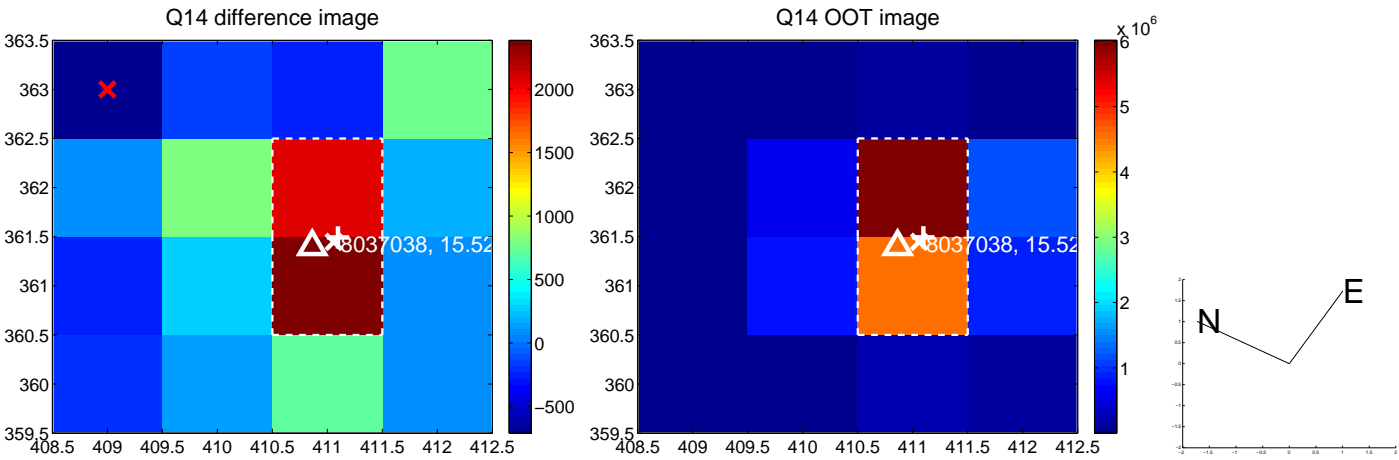
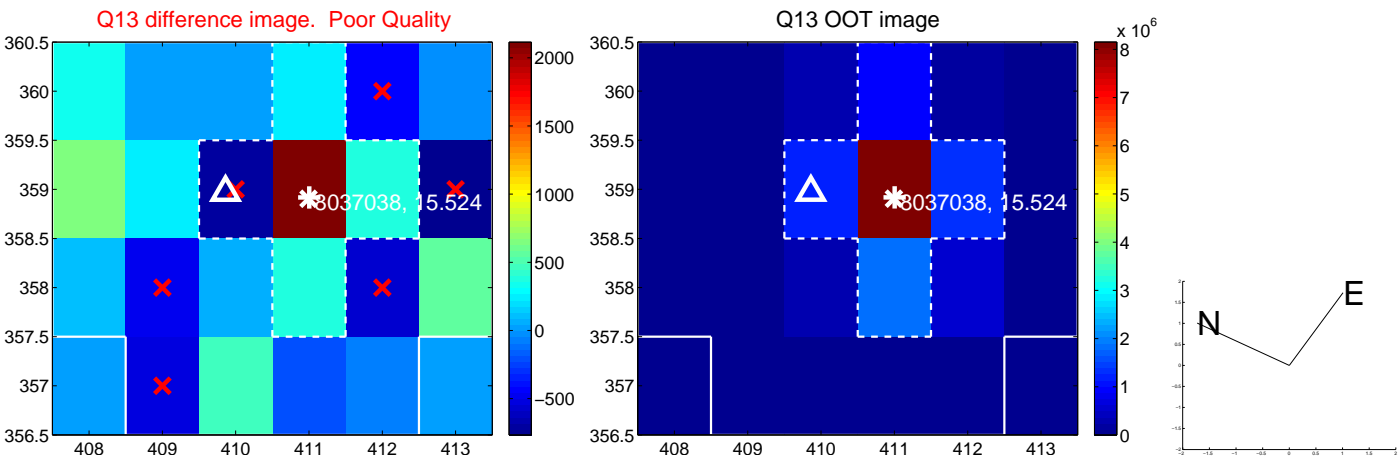
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



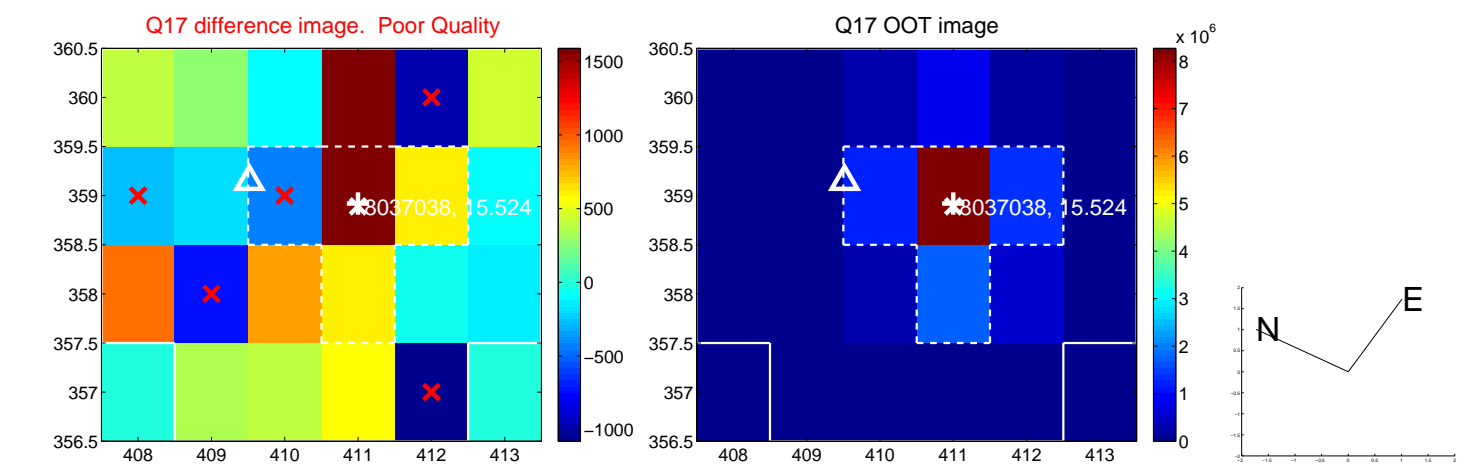
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



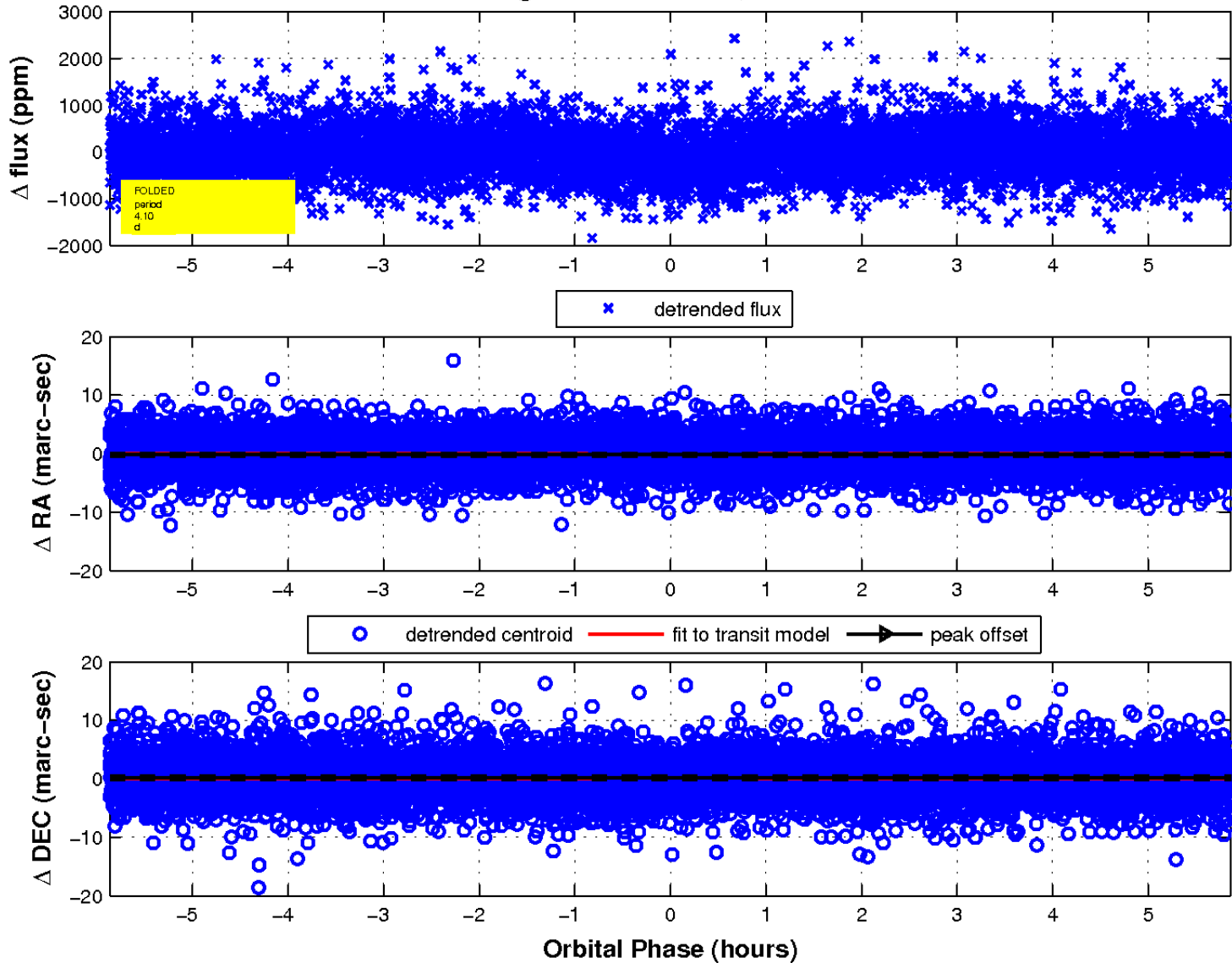
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

