

KIC 005471108

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})
005471108-01	OBS	5173.01	12.425904	141.484048	43.9	20.506	9.0	9.7	1.19	5841	0.94	135.99

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005471108-01	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 005471108-01

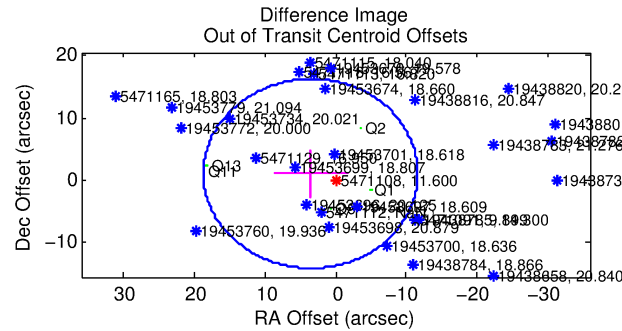
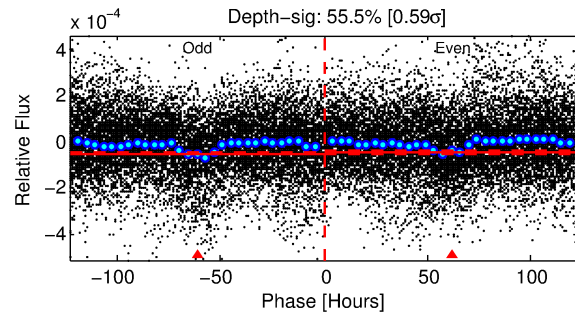
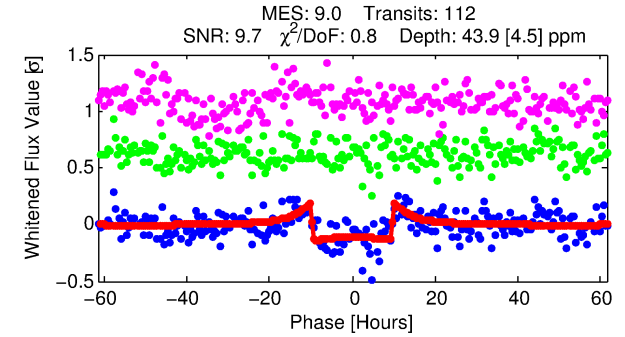
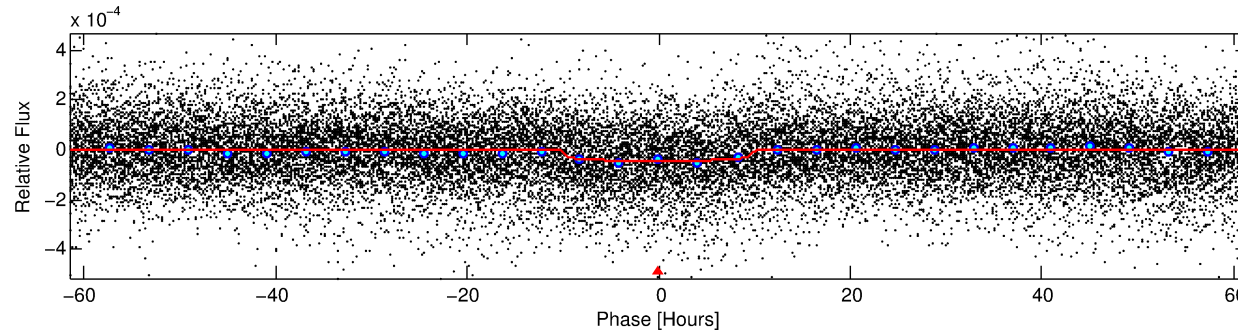
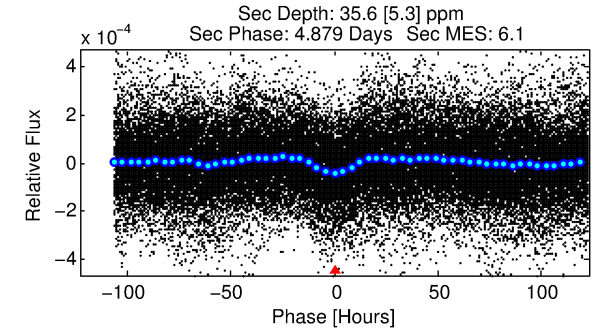
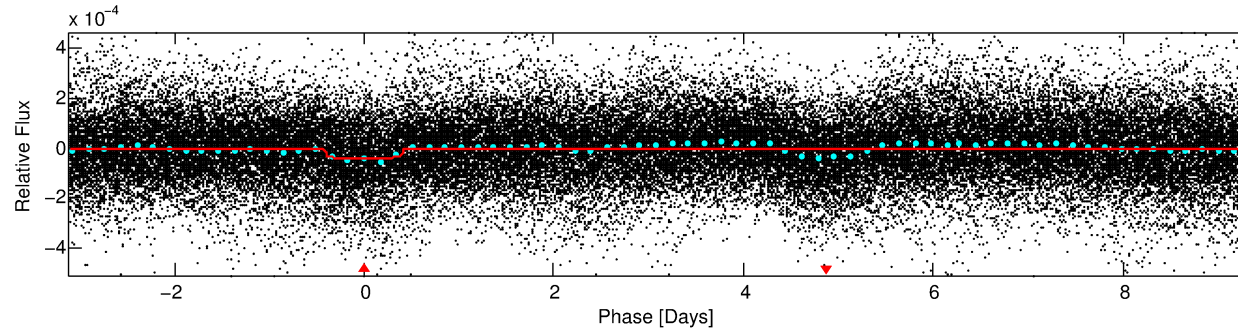
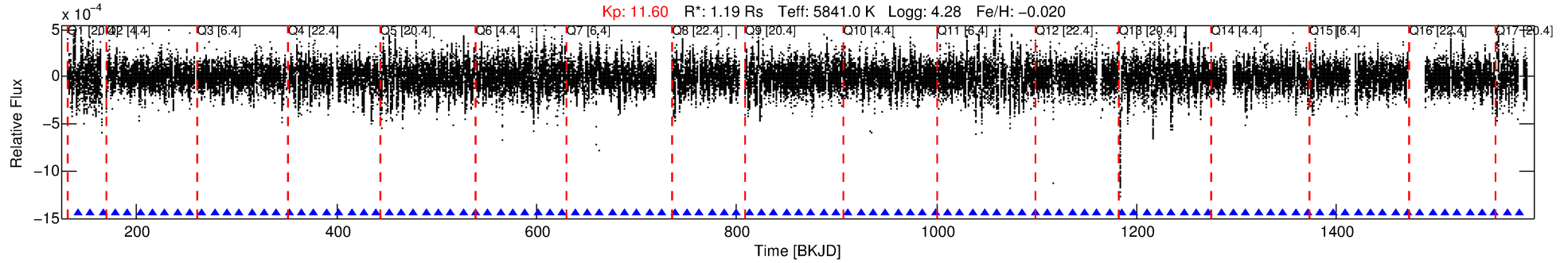
TCE (1)	KIC	Parent (2)	Parent KIC	P ₁ :P ₂	Dist ($''$)	Δ Row	Δ Col	m ₂	m ₁	D ₂ /D ₁	Mechanism	Flag	σ_P	σ_T
005471108-01	5471108	V380-Cyg-pri	5385723	1:1	246.3	44	-43	5.77	11.60	3293.90	Direct-PRF	0	0.53	1.73

Notes: P₁:P₂ 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. m₂ and m₁ are the magnitudes of the parent and child. D₂/D₁ 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: 5471108 Candidate: 1 of 1 Period: 12.426 d

KOI: K05173.01 Corr: 0.951



DV Fit Results:

Period = 12.42590 [0.00017] d
Epoch = 141.4840 [0.0108] BKJD
Rp/R* = 0.0072 [0.0006]
a/R* = 2.29 [0.47]
b = 0.90 [0.05]
Seff = 135.99 [52.48]
Teq = 871 [84] K
Rp = 0.94 [0.27] Re
a = 0.1045 [0.0251] AU
Ag = 243.47 [102.49] [2.37σ]
Teffp = 5318 [334] K [12.90σ]

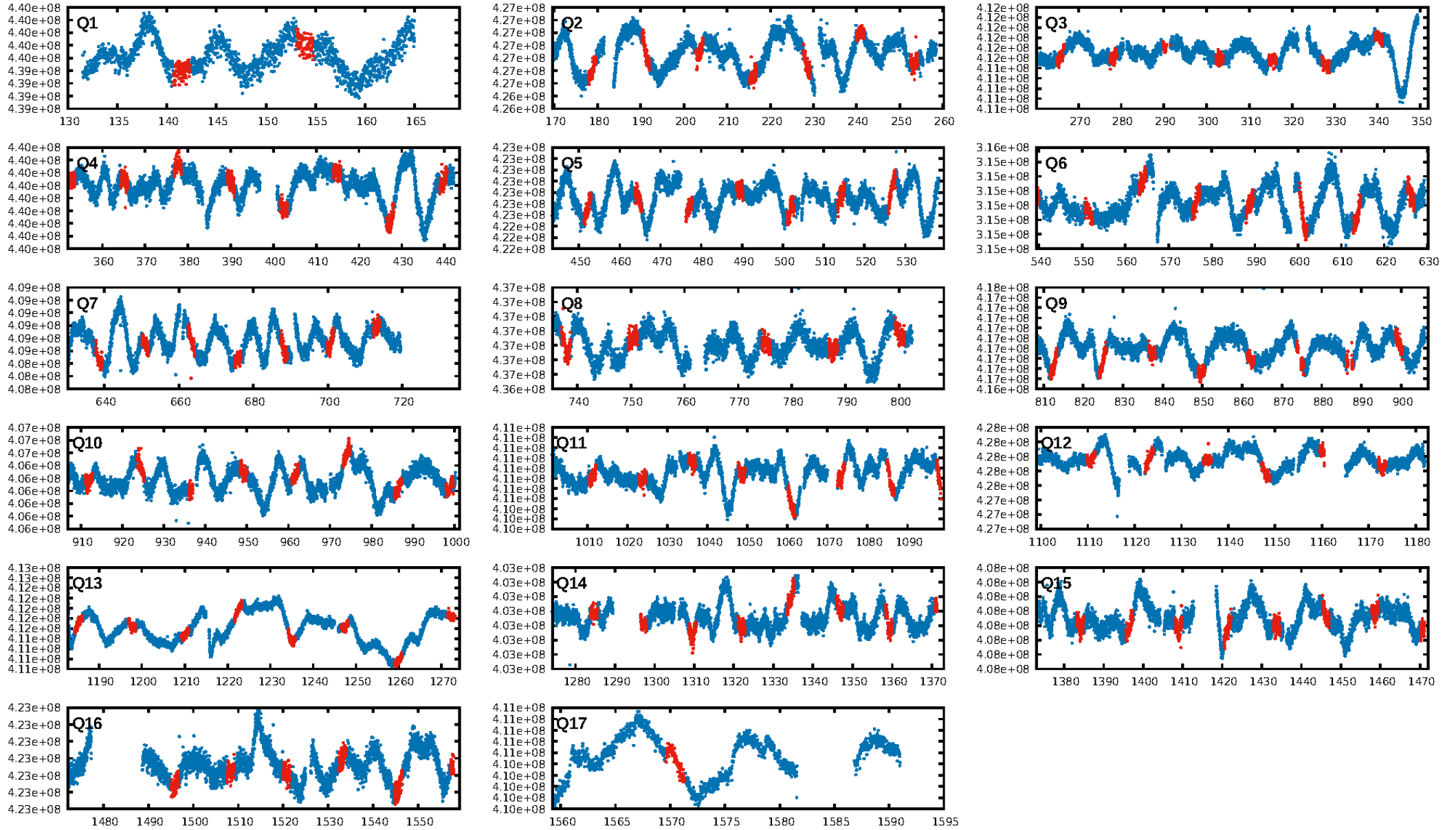
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.15e-21
RollingBand-fgt: 1.00 [109/109]
GhostDiagnostic-chr: 0.486
Centroid-sig: 0.0%
Centroid-so: 2.118 arcsec [1.71σ]
OotOffset-rm: 3.695 arcsec [0.73σ]
KicOffset-rm: 8.516 arcsec [2.12σ]
OotOffset-st: 1/1/0/3 [5]
KicOffset-st: 1/1/0/3 [5]
DiffImageQuality-fgm: 0.20 [1/5]
DiffImageOverlap-fno: 1.00 [17/17]

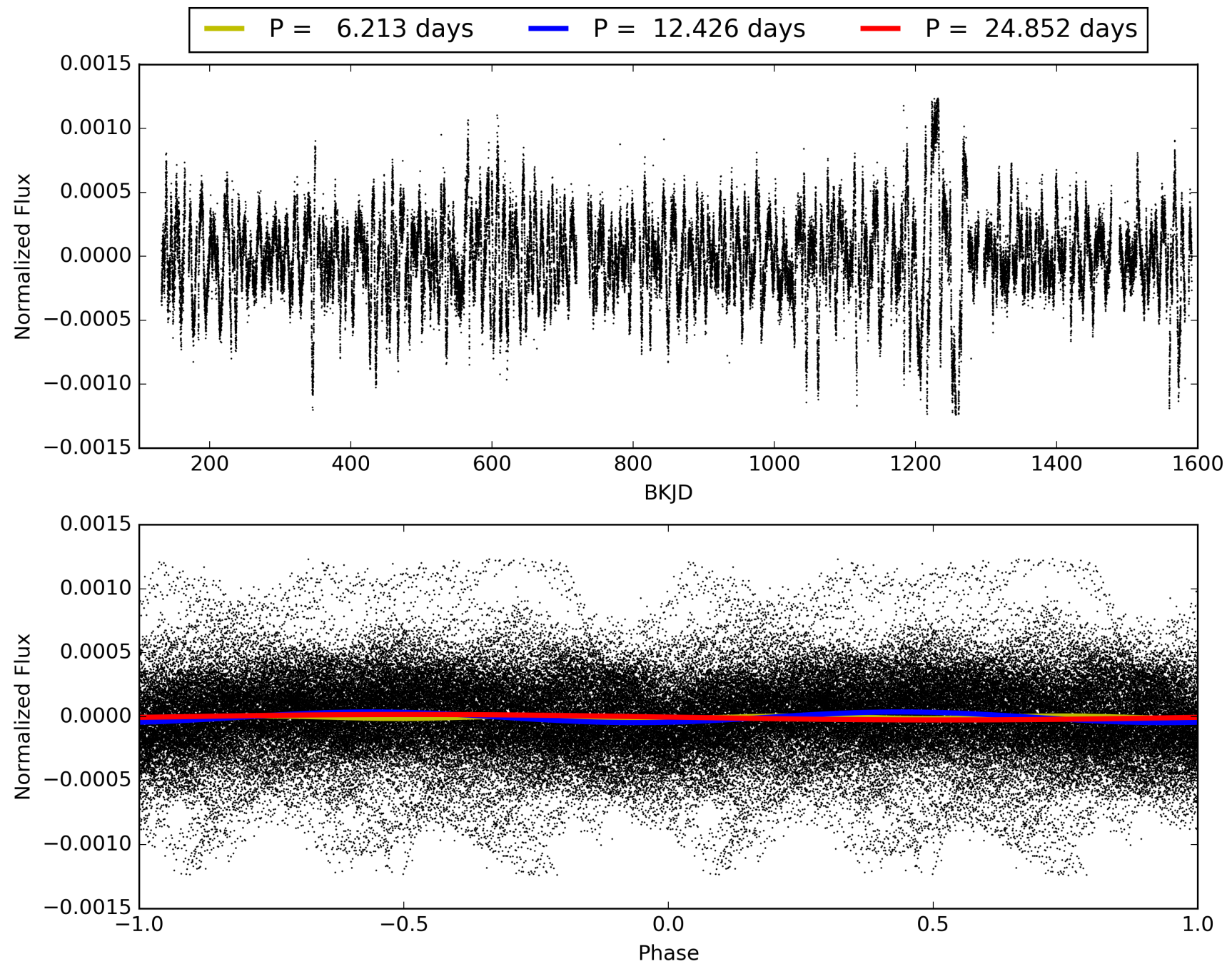
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 06:32:26 Z

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

TCE 005471108-01, PDC Light Curves

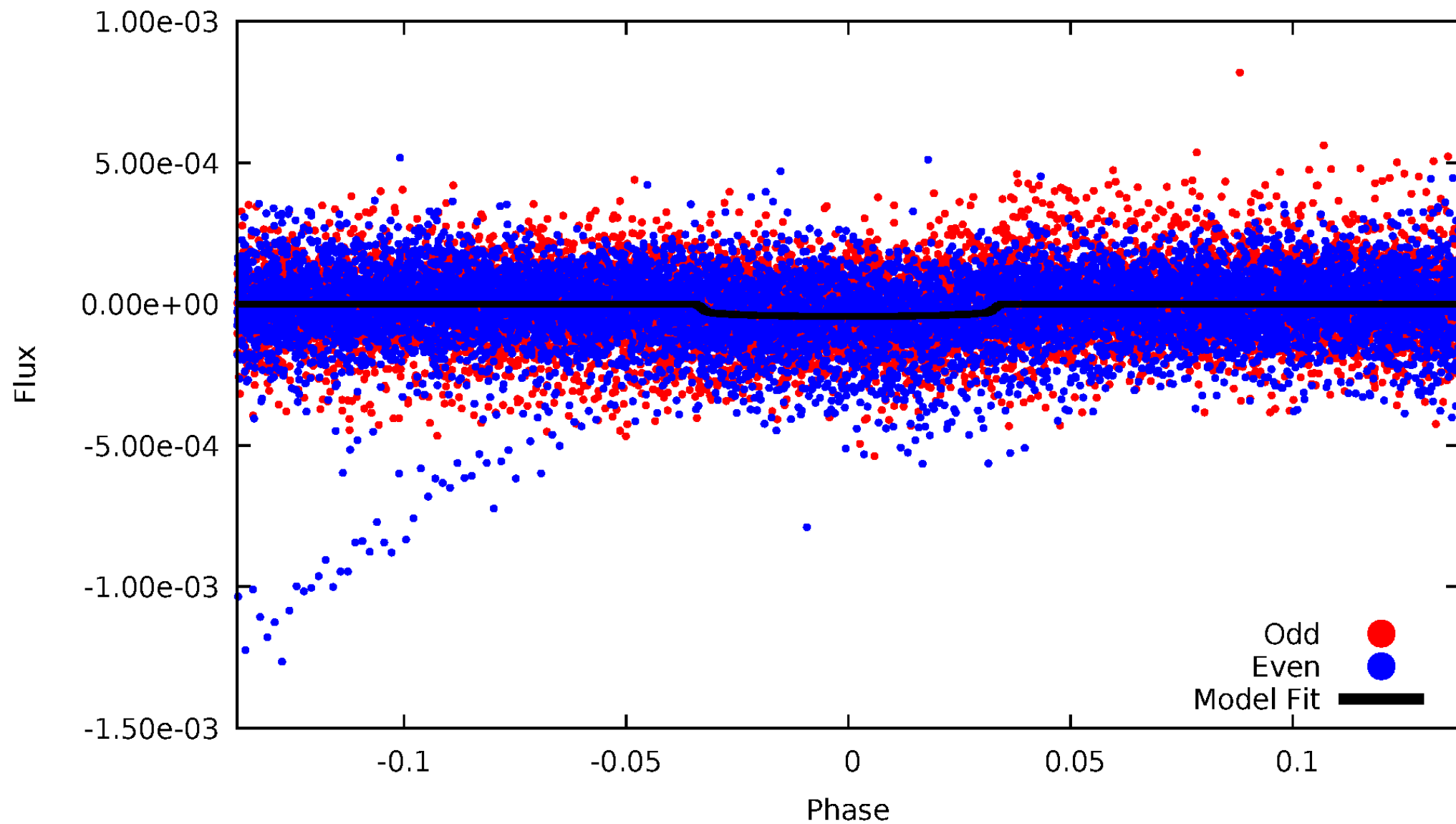


TCE 005471108-01



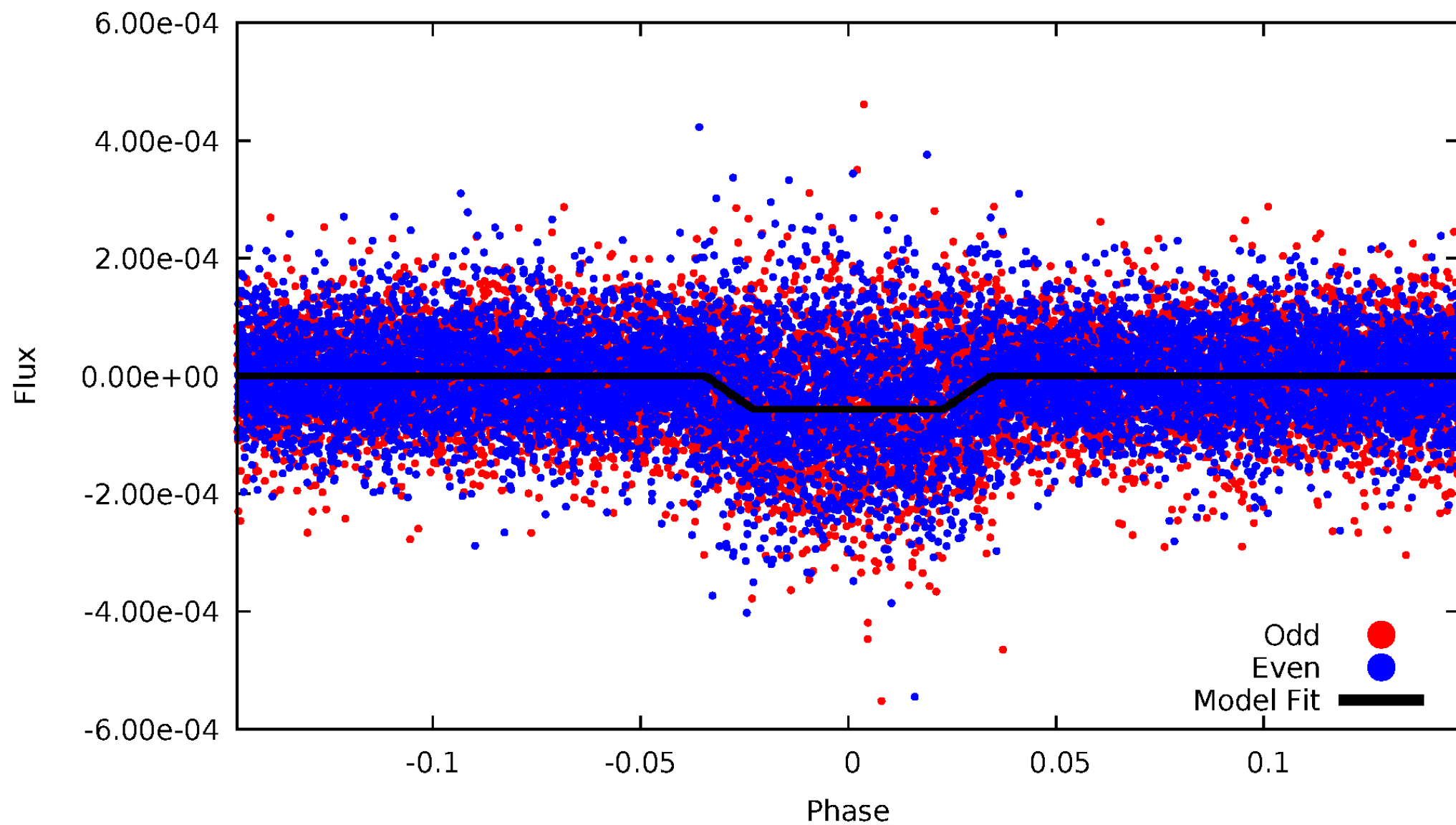
DV Odd/Even

TCE 005471108-01

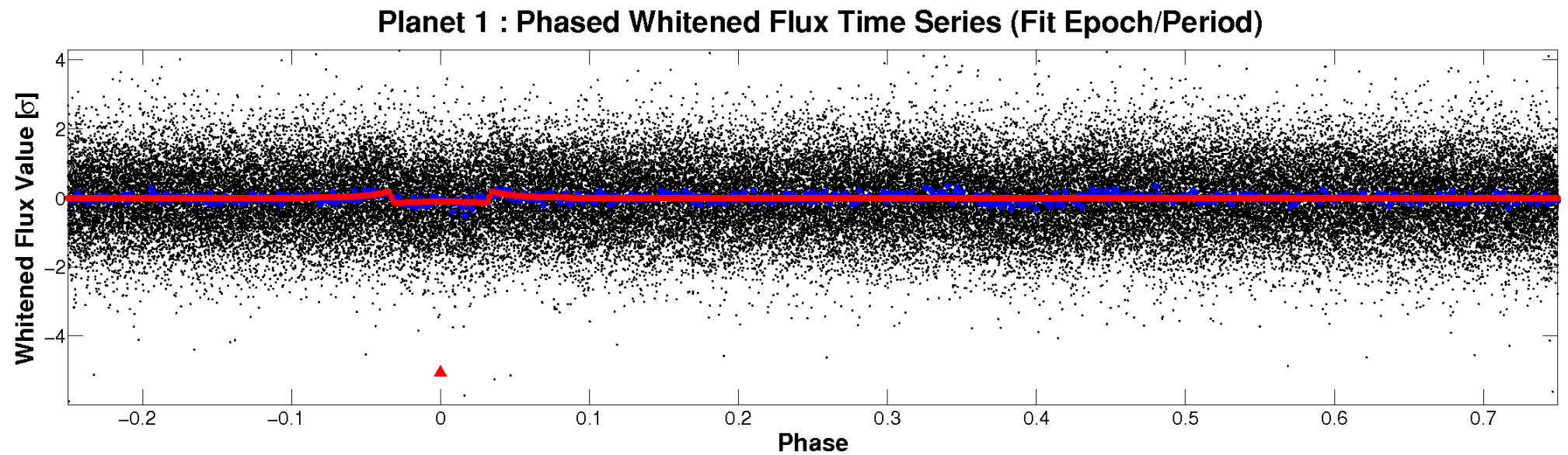
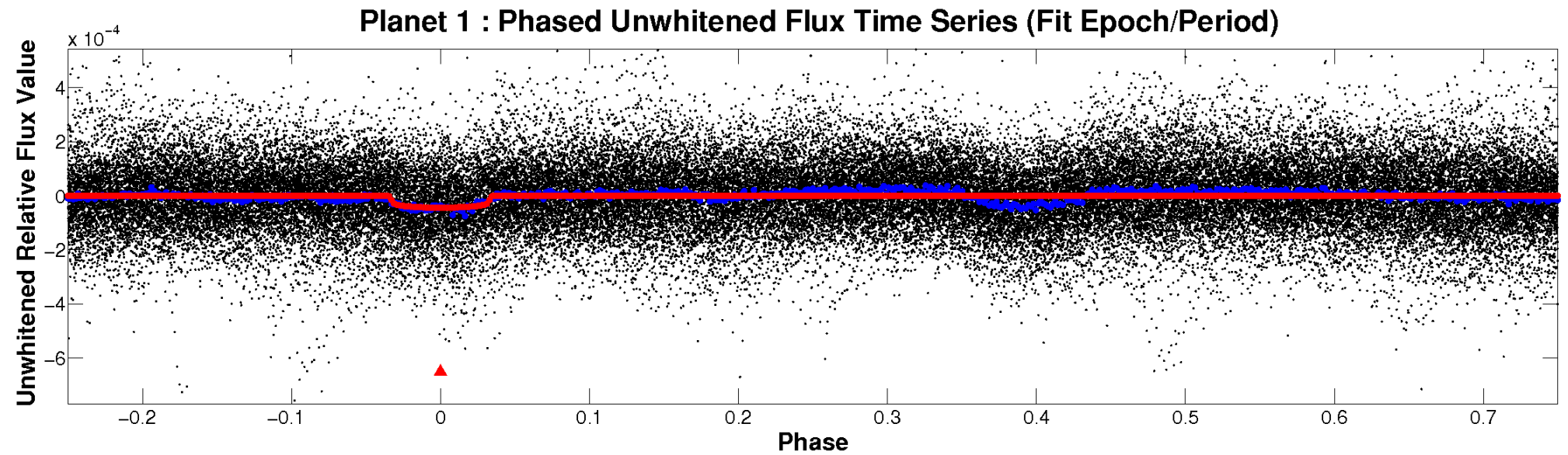


ALT Odd/Even

TCE 005471108-01

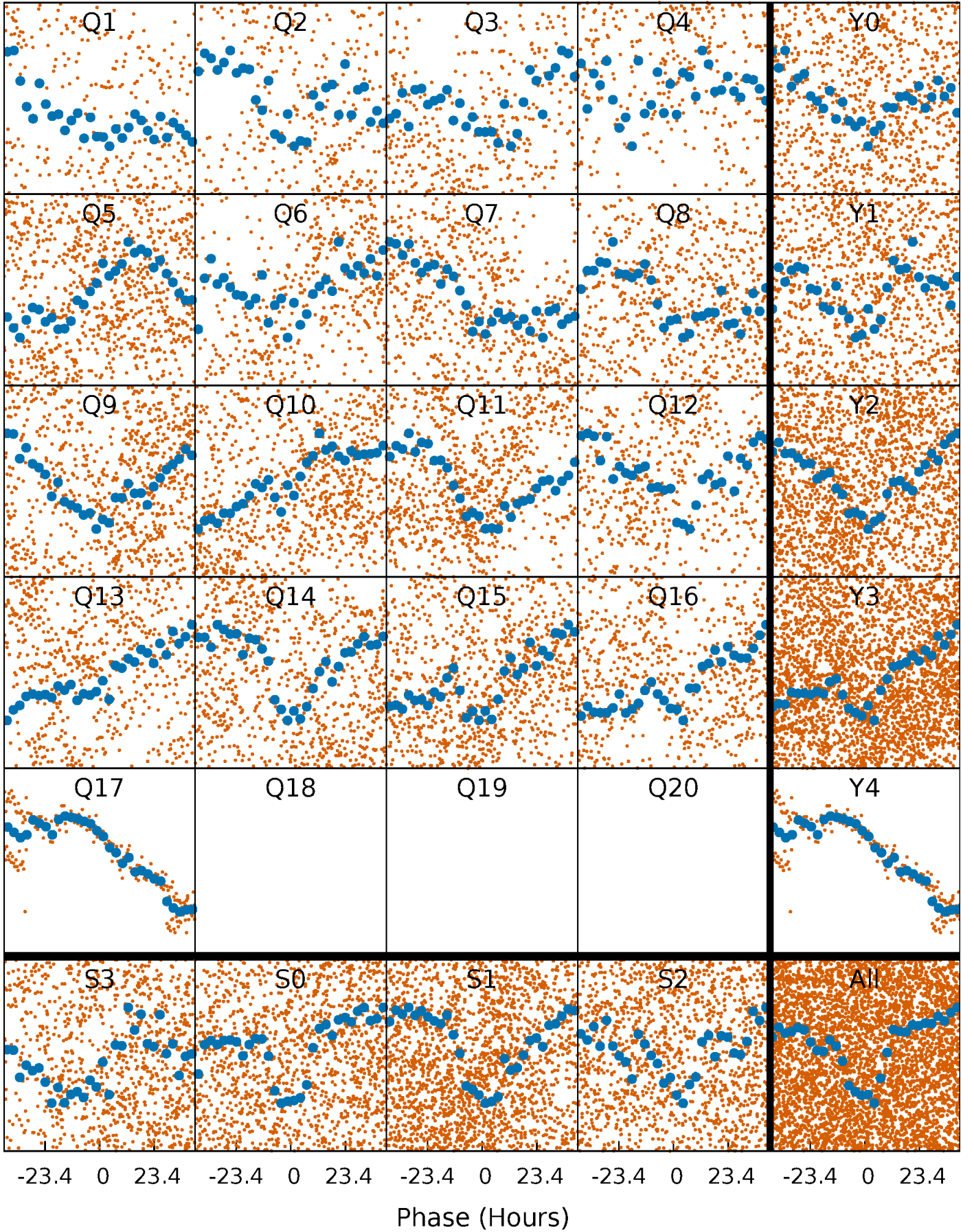


Non-Whitened Vs. Whitened Light Curve



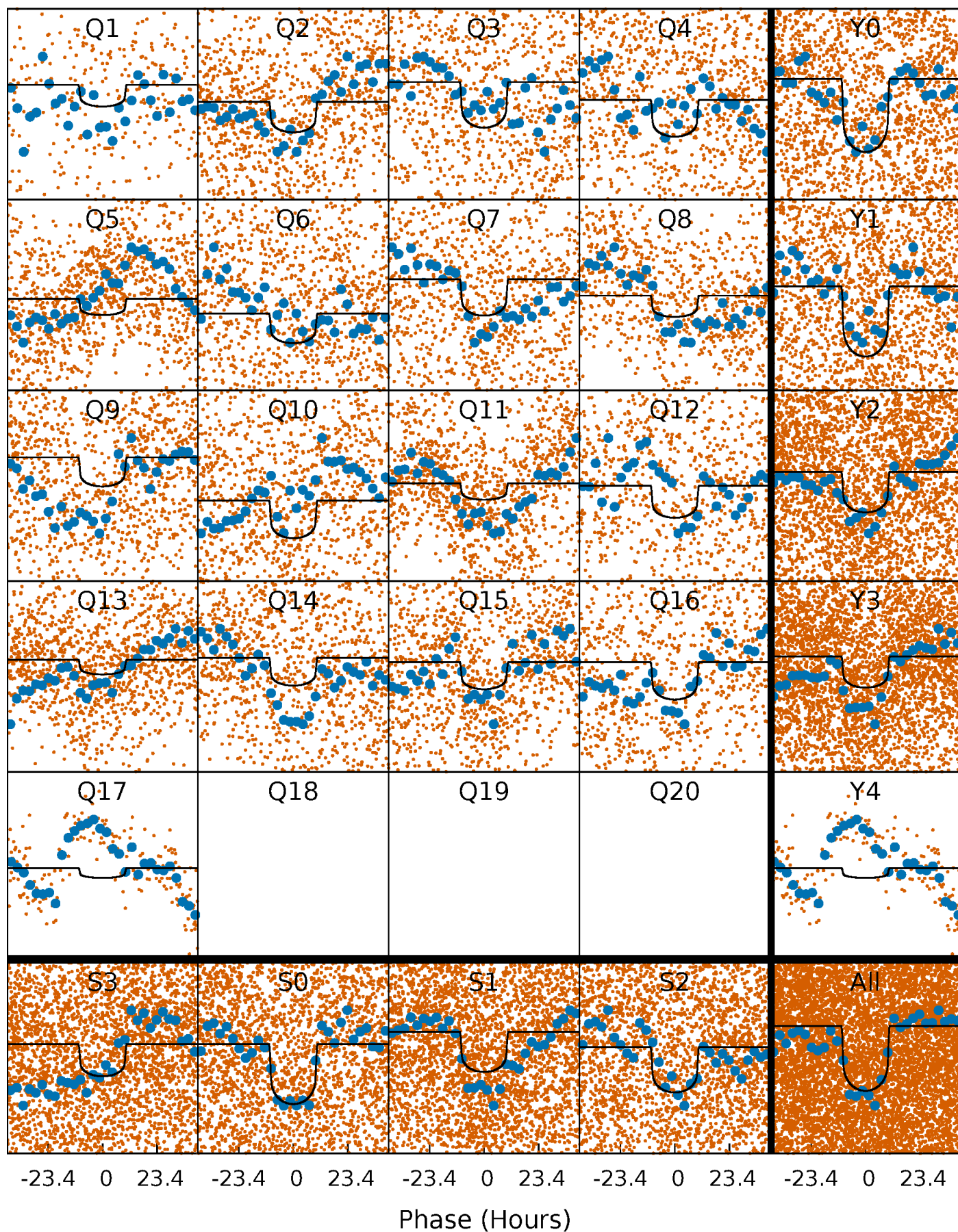
PDC Quarter-Phased Transit Curves

TCE 005471108-01 P= 12.425904 Days $T_0=141.484048$ (BKJD)



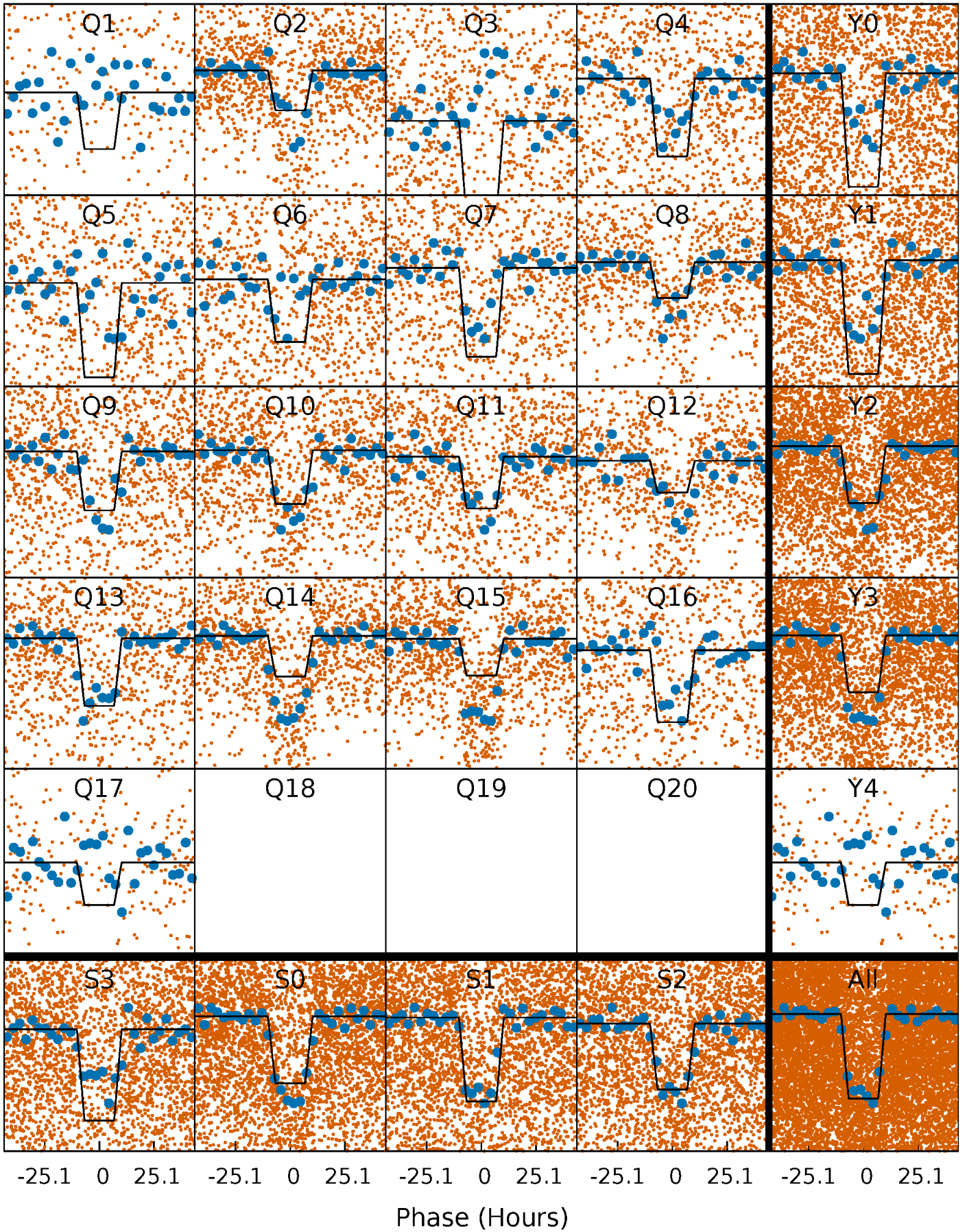
DV Quarter-Phased Transit Curves

TCE 005471108-01 P= 12.425904 Days $T_0=141.484048$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

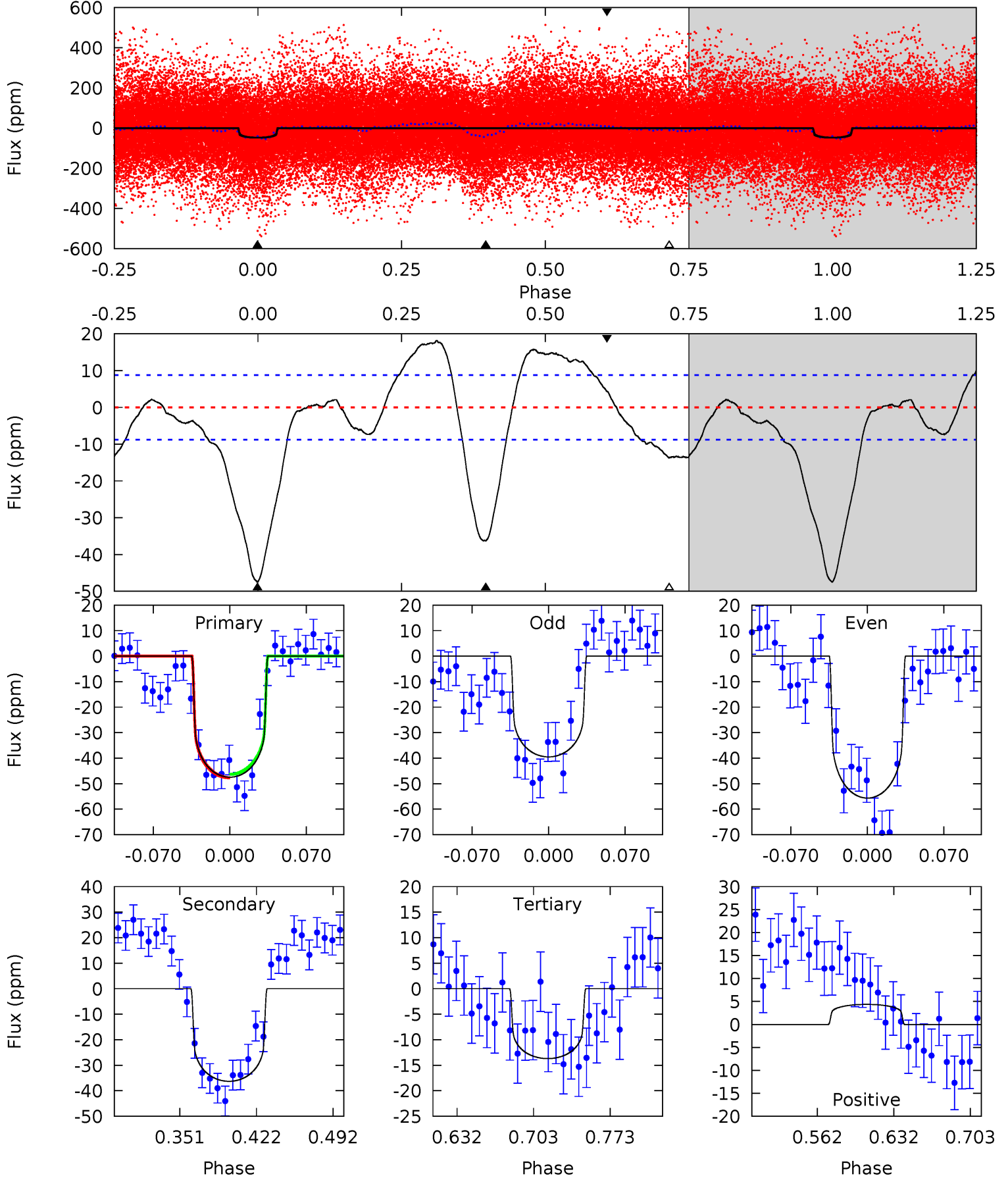
TCE 005471108-01 P= 12.425672 Days $T_0=141.490661$ (BKJD)



DV Model-Shift Uniqueness Test

005471108-01, P = 12.425904 Days, E = 129.058144 Days

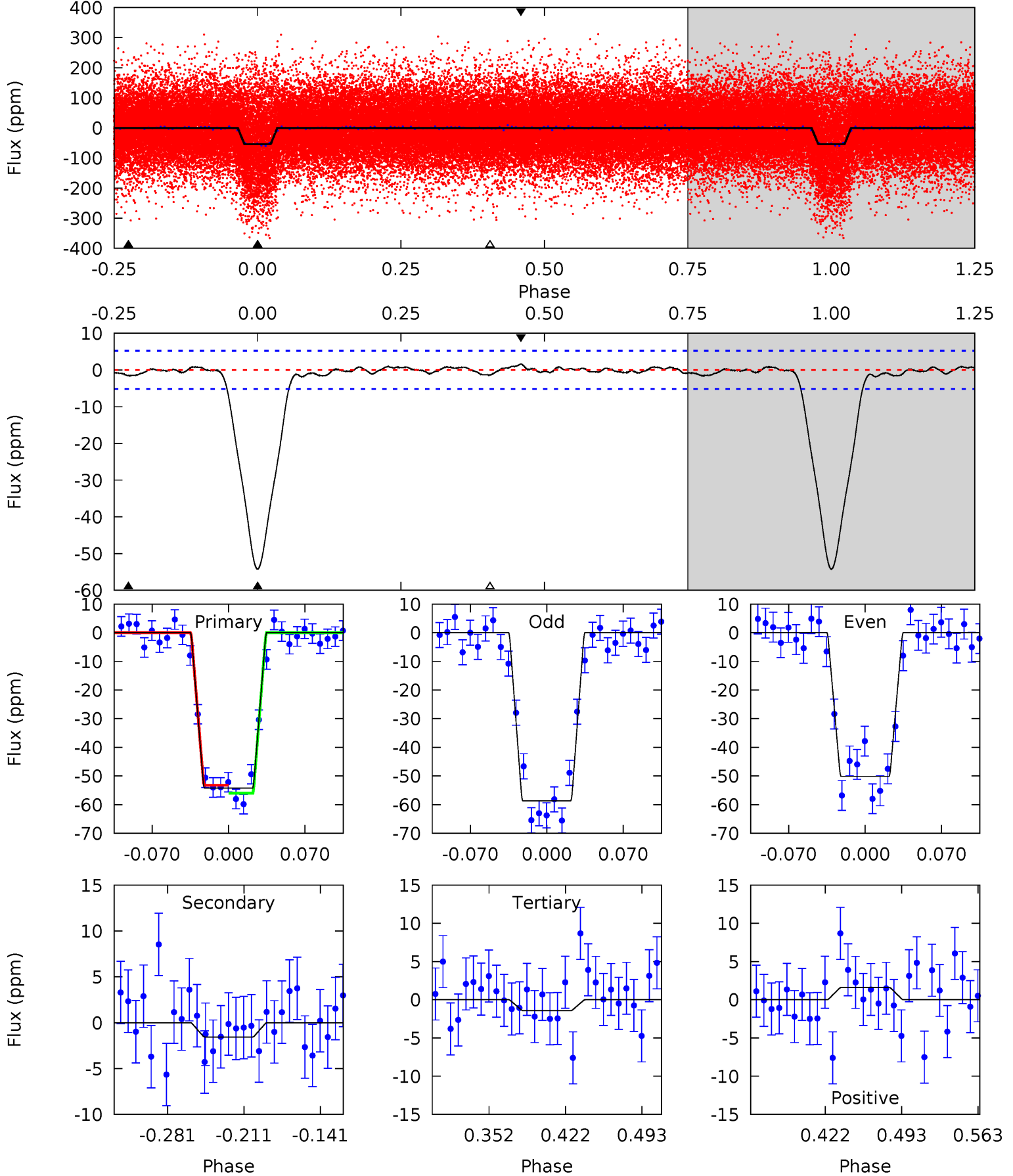
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.1	19.2	7.23	2.31	4.64	1.81	5.00	17.8	22.8	11.9	16.9	4.26	0.95	0.28	0.36



Alt Model-Shift Uniqueness Test

005471108-01, P = 12.425672 Days, E = 129.064989 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
48.5	1.39	1.27	1.44	4.64	1.81	0.60	47.3	47.1	0.12	-0.05	3.82	0.73	0.03	1.24



Stellar Parameters For KIC 005471108

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5841^{+176}_{-193}	$4.278^{+0.204}_{-0.185}$	$-0.020^{+0.250}_{-0.300}$	$1.193^{+0.327}_{-0.268}$	$0.985^{+0.140}_{-0.102}$	$0.817^{+0.770}_{-0.391}$
	+3%/-3%	+5%/-4%	+1250%/-1500%	+27%/-22%	+14%/-10%	+94%/-48%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 005471108-01 / KOI 5173.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-36 ± 2	$0.93^{+0.16}_{-0.14}$	1208^{+96}_{-79}	5377^{+272}_{-244}	253^{+93}_{-67}
Alt.	-2 ± 1	$0.99^{+0.16}_{-0.15}$	1214^{+96}_{-83}	3049^{+265}_{-452}	10^{+9}_{-7}

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

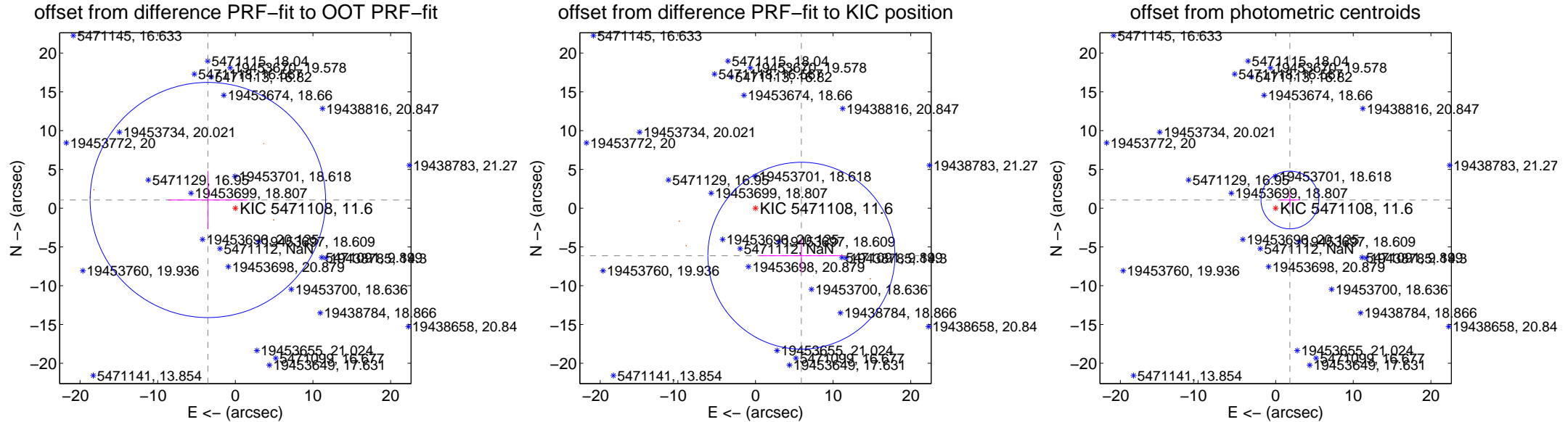
DV Centroid Data

Supplemental centroid analysis for 005471108-01. **Kepler magnitude: 11.60.** Transit SNR 9.74

There are 1 quarters with good PRF difference image offsets

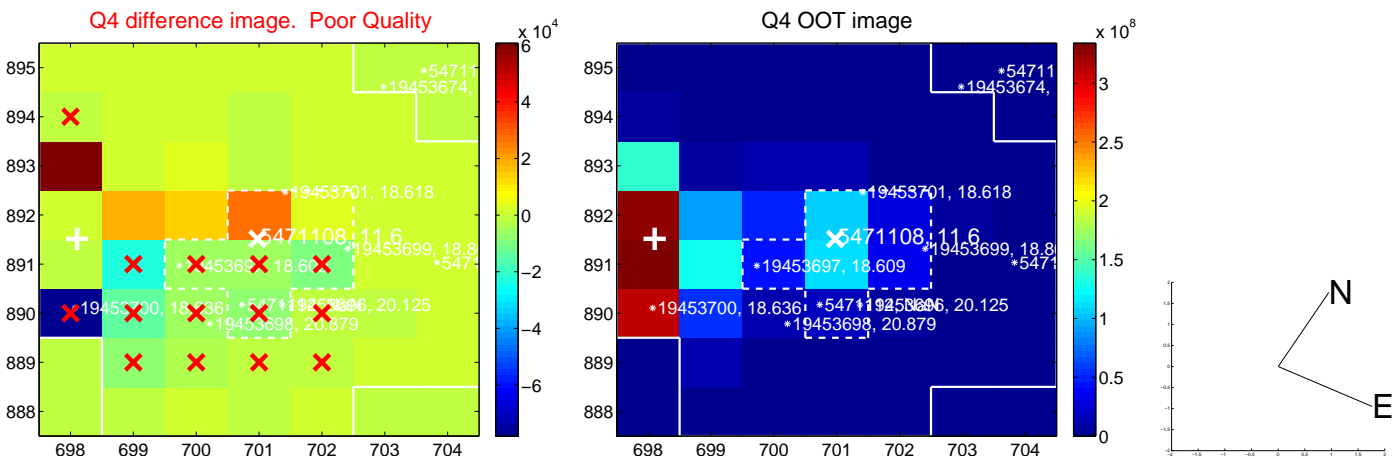
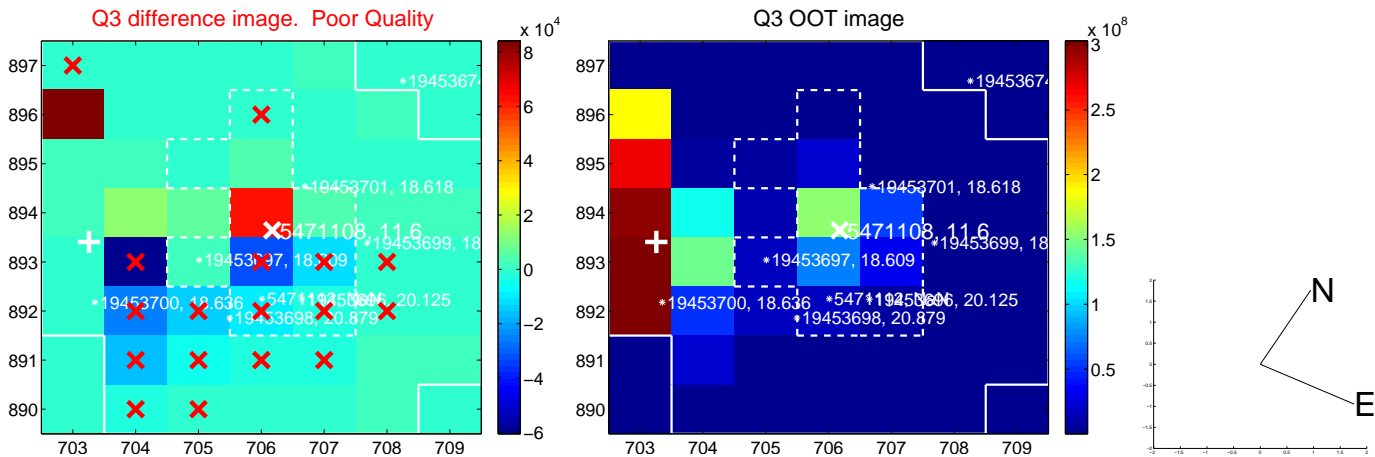
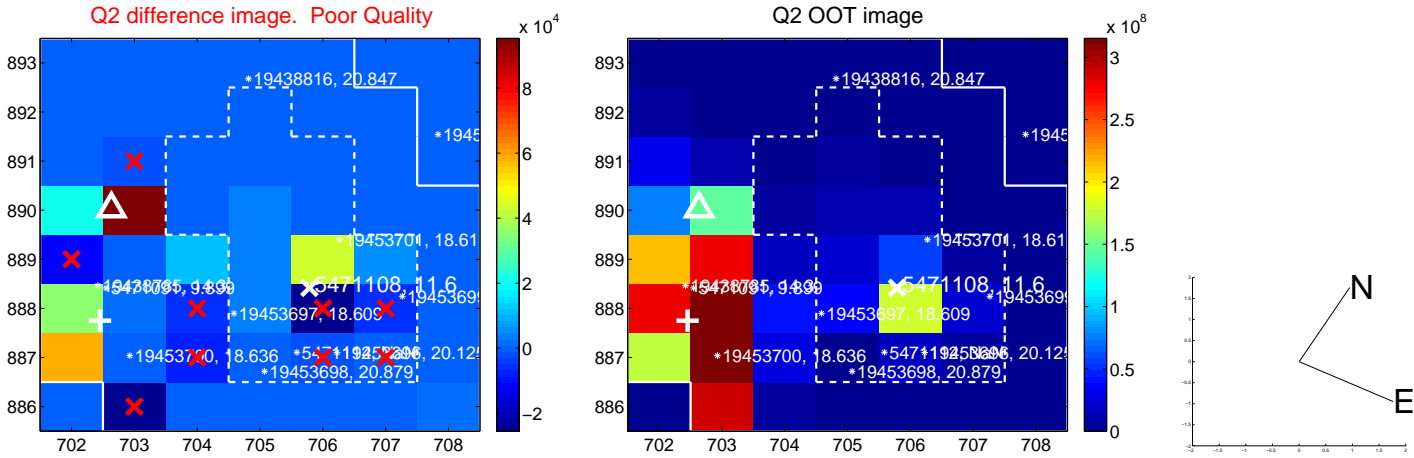
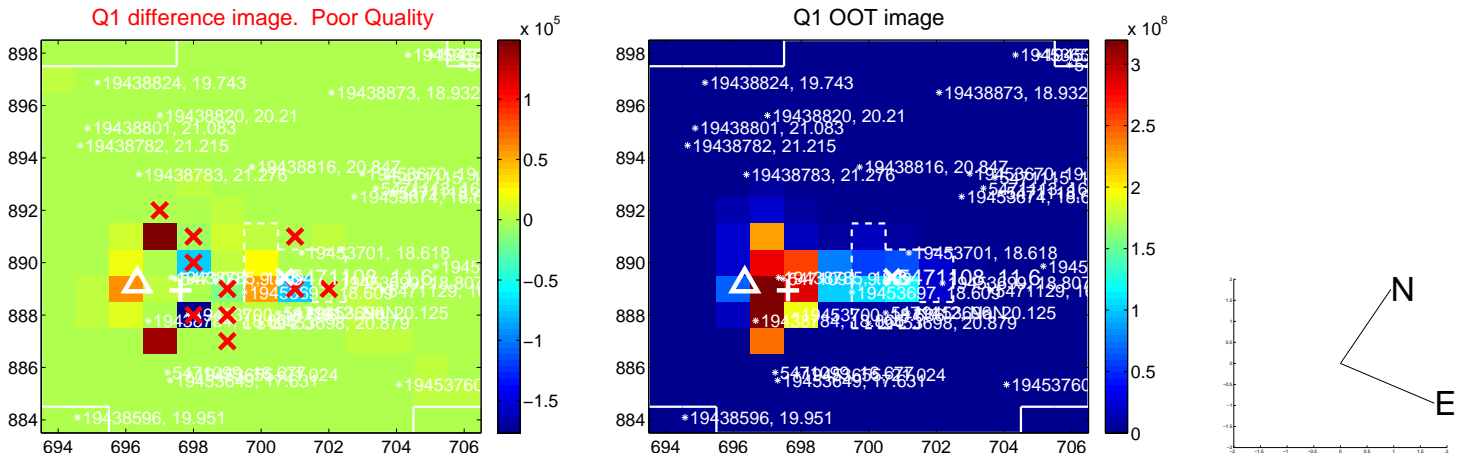
The OOT PRF centroid is offset from the target star catalog position by about 9.34 arcsec so the offset from difference PRF-fit to OOT-PRF-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.695 ± 5.055	0.73	3.541 ± 5.153	1.055 ± 3.772
PRF-fit source offset from KIC position	8.516 ± 4.016	2.12	-5.912 ± 5.363	-6.129 ± 2.090
photometric centroid source offset	2.12 ± 1.24	1.71	-1.84 ± 1.34	1.06 ± 0.88

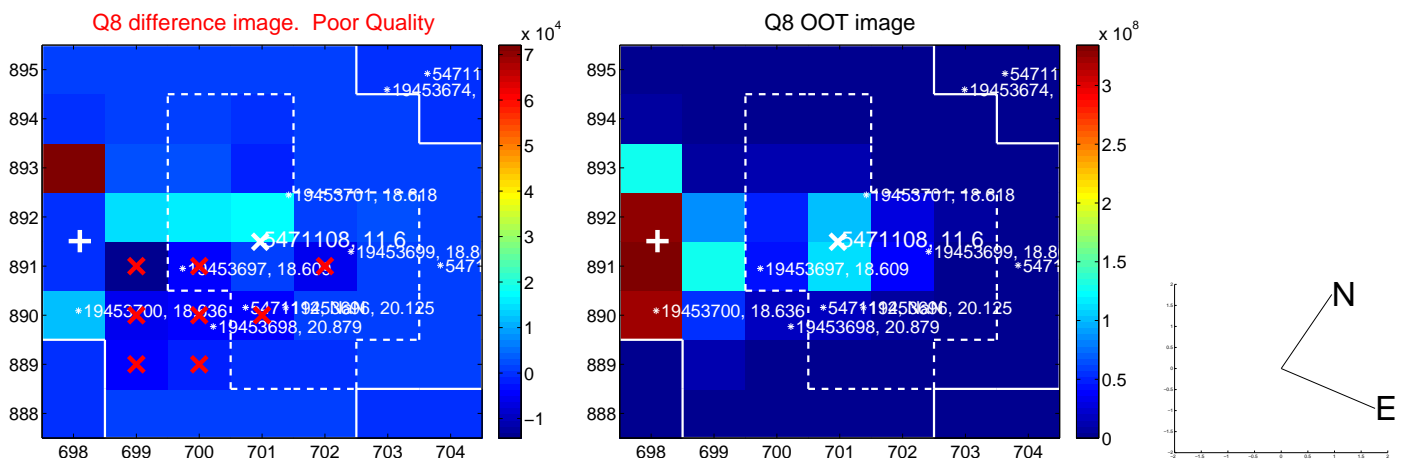
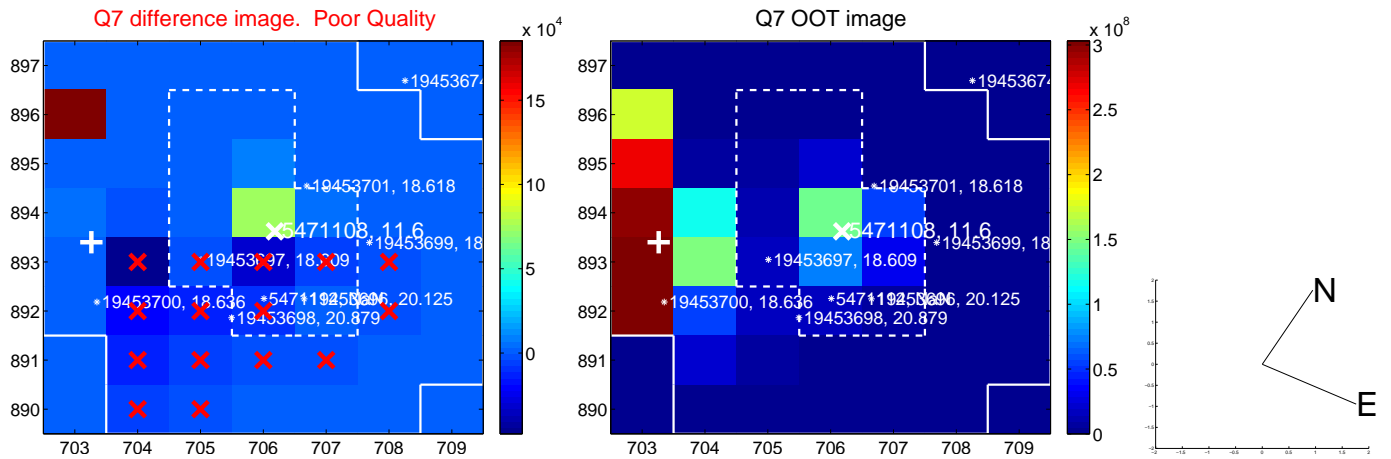
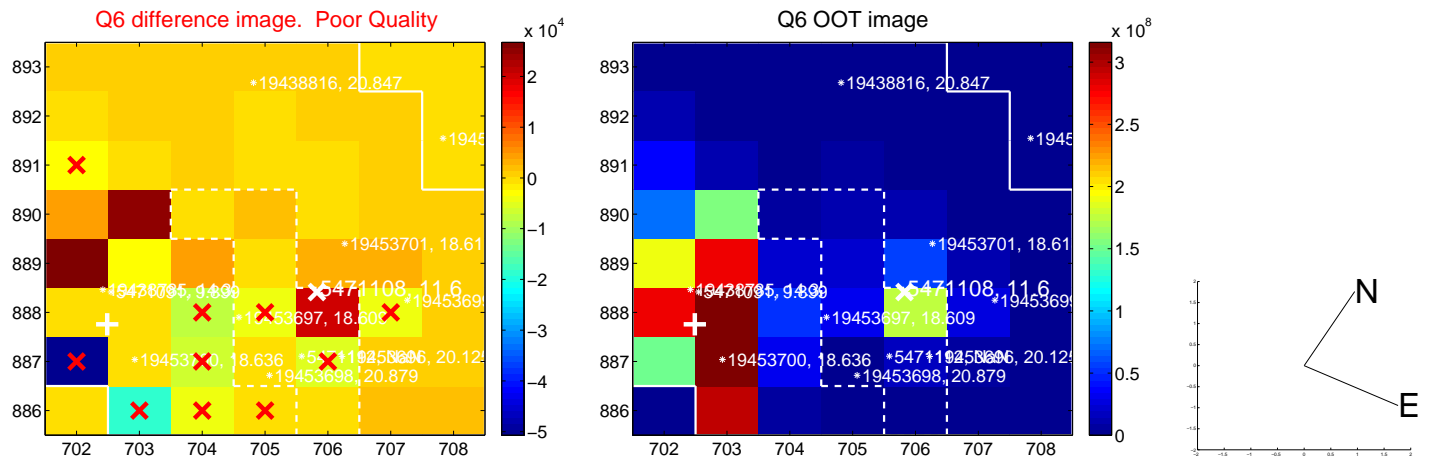
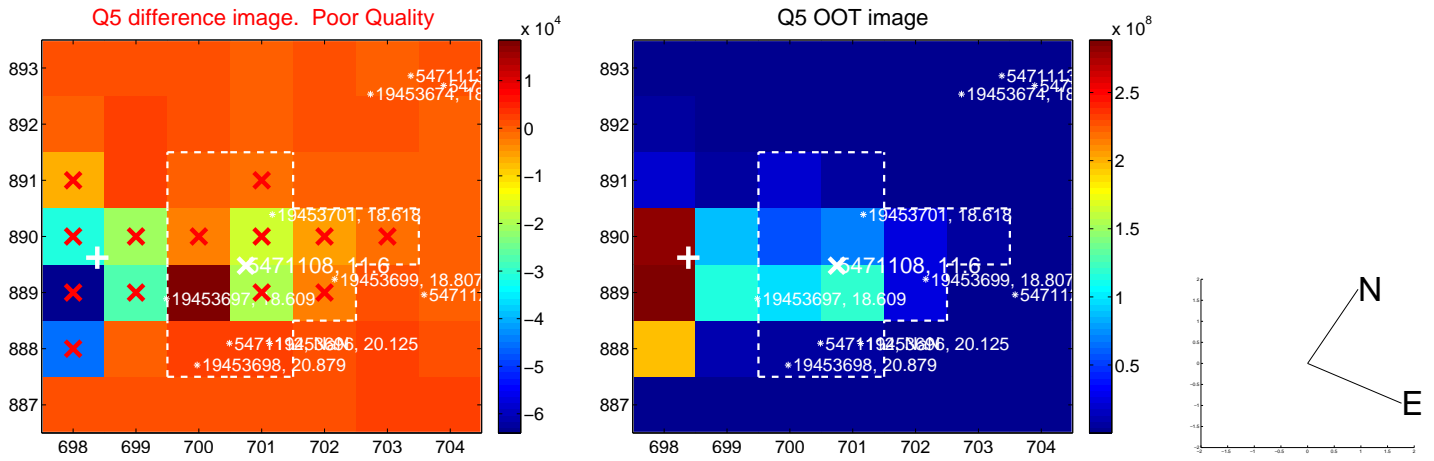


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

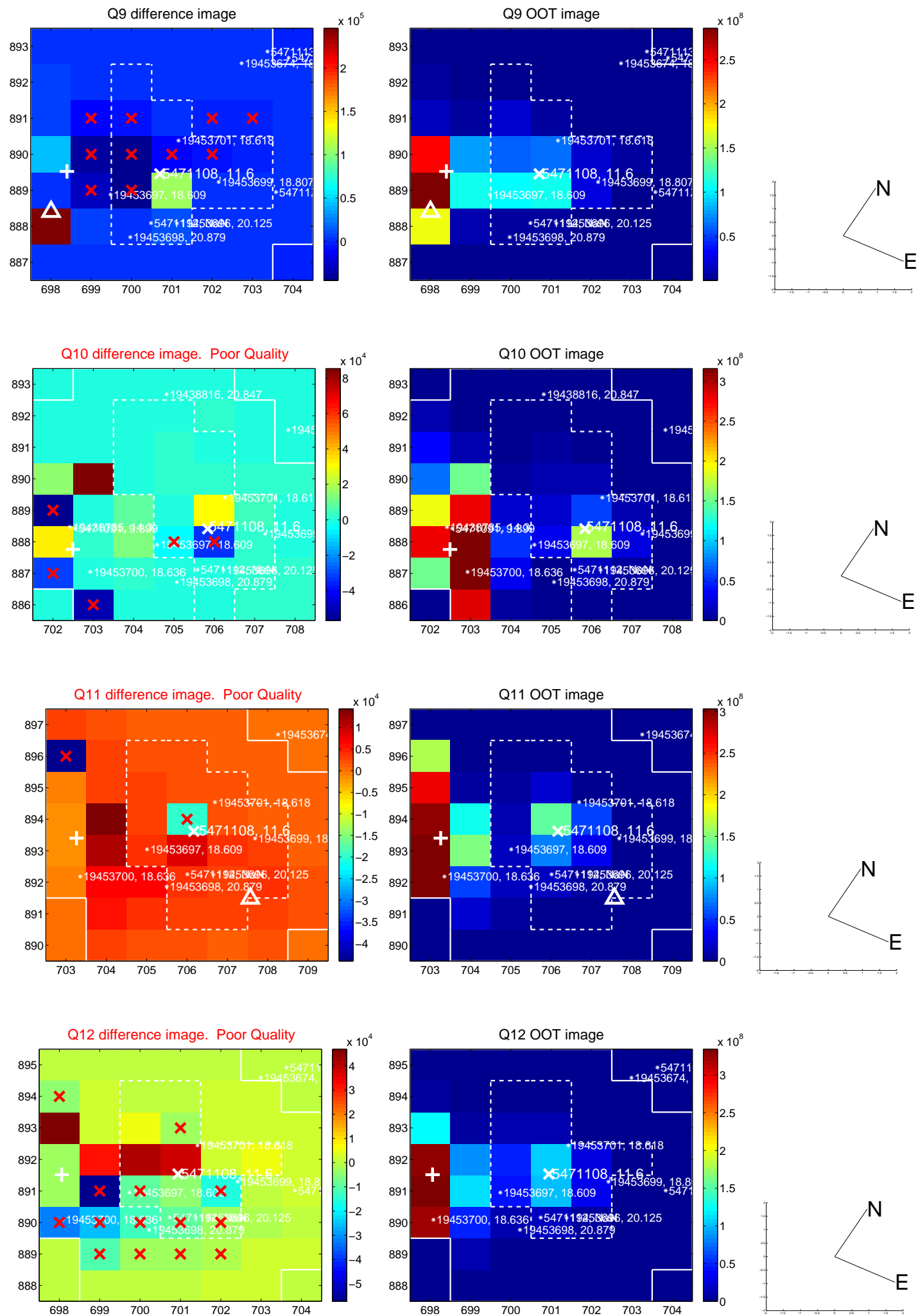
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



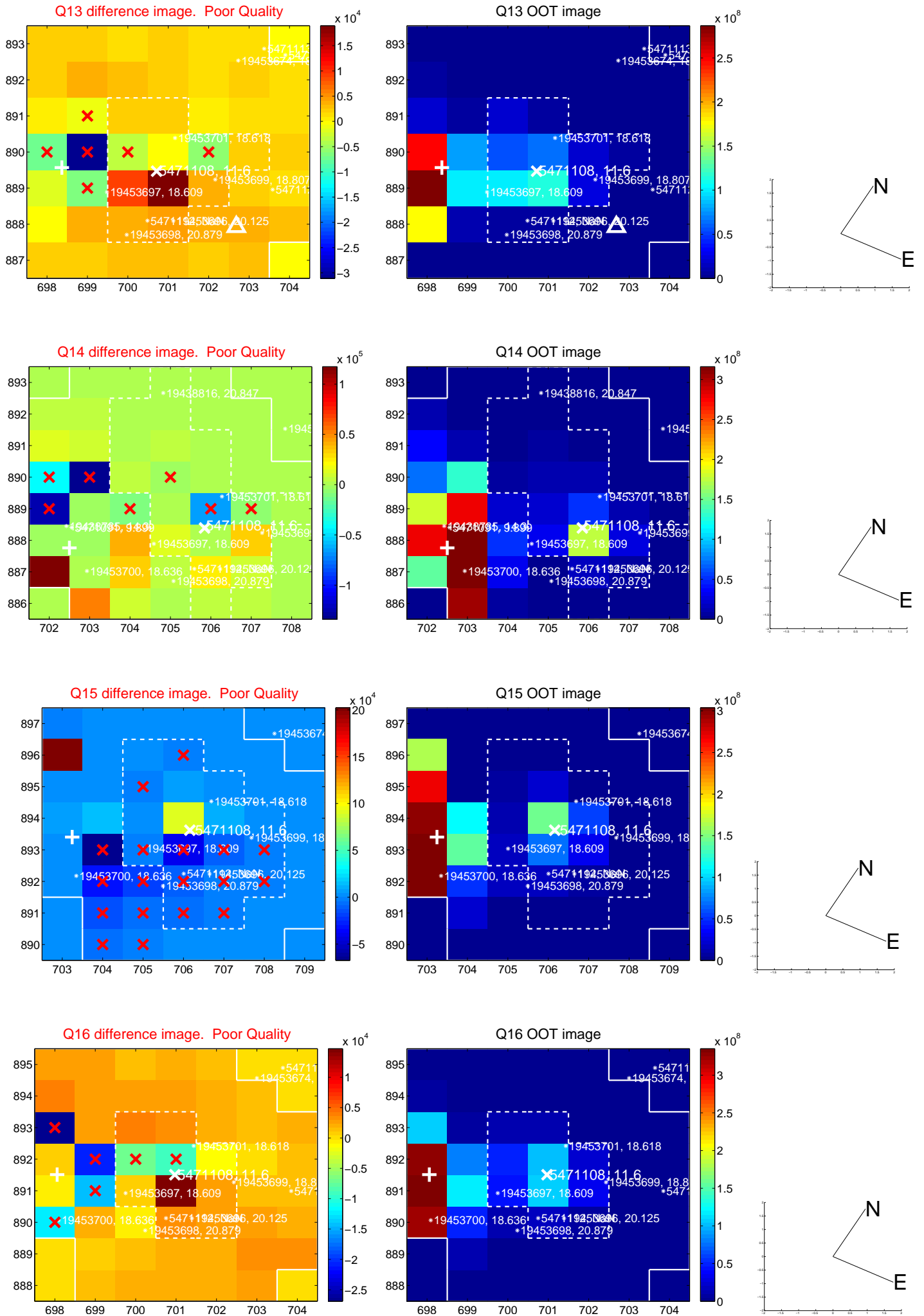
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



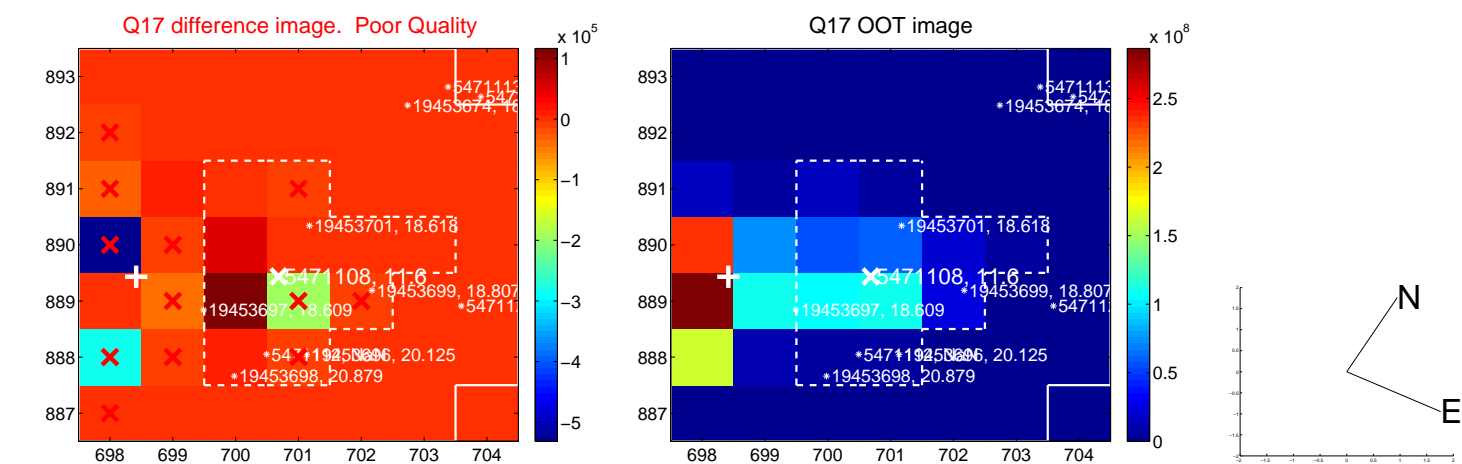
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



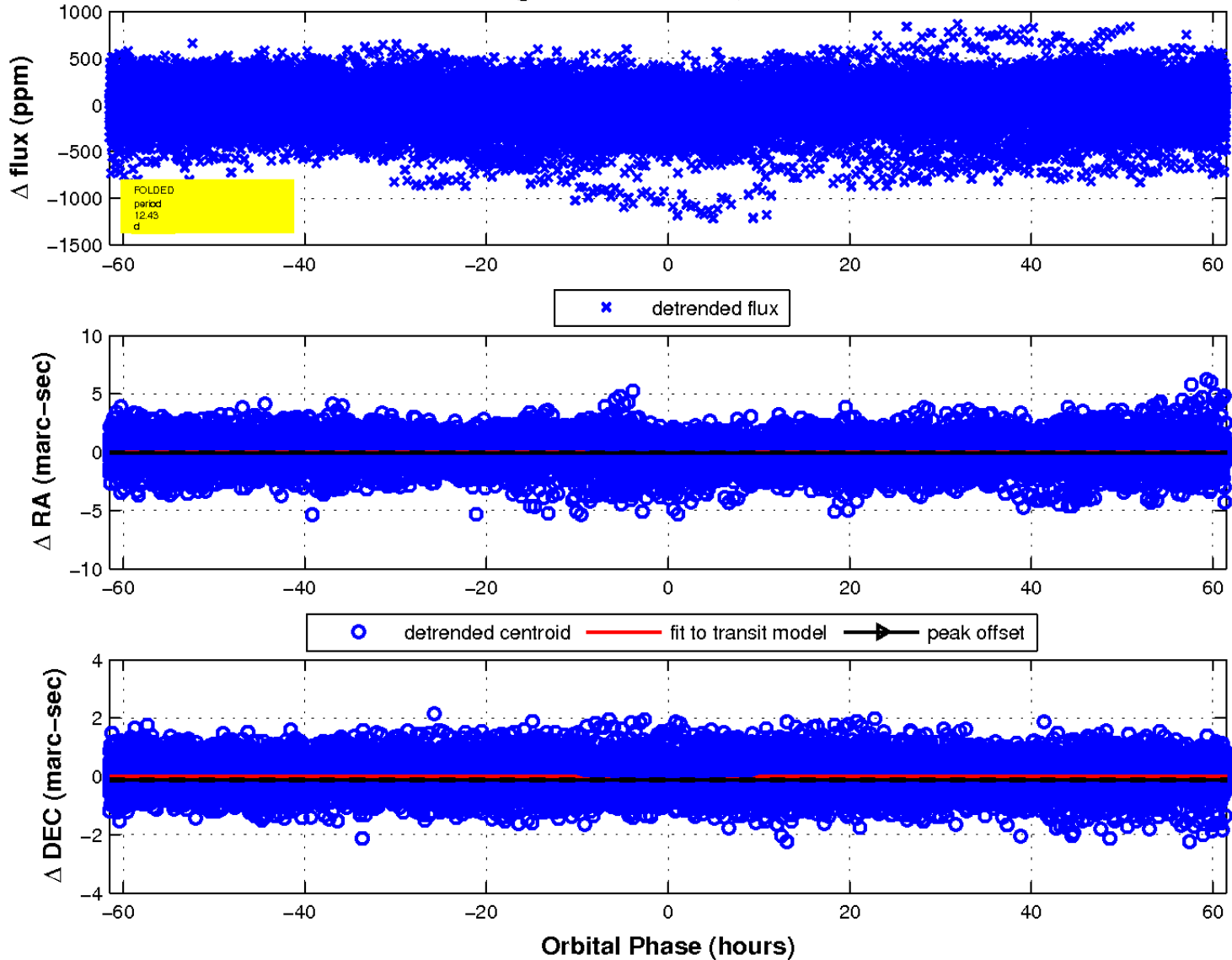
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

