

KIC 005385469

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})
005385469-01	OBS	6571.01	12.424151	141.721627	47.1	10.903	8.8	8.7	1.41	7225	1.06	354.97

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005385469-01	OBS	FP	0.00	1	0	0	1	LPP_DV—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.

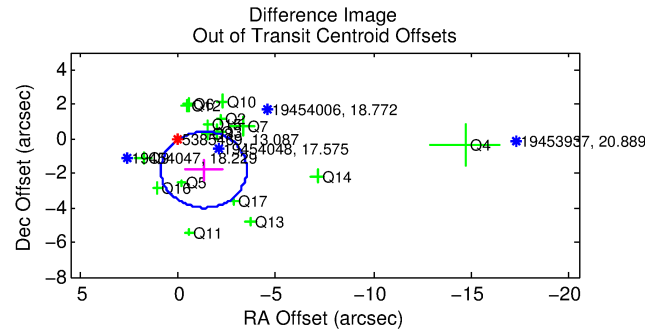
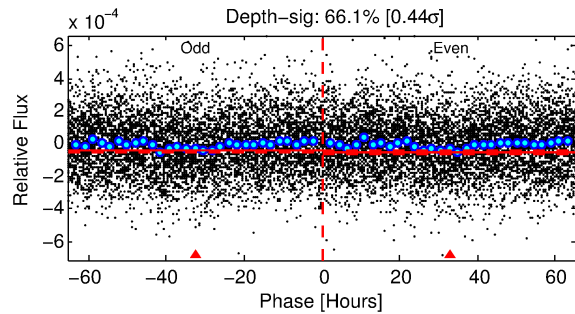
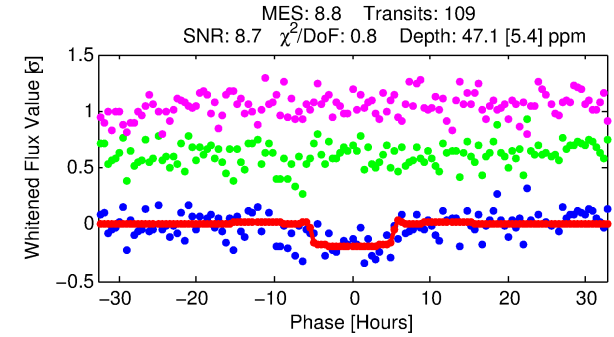
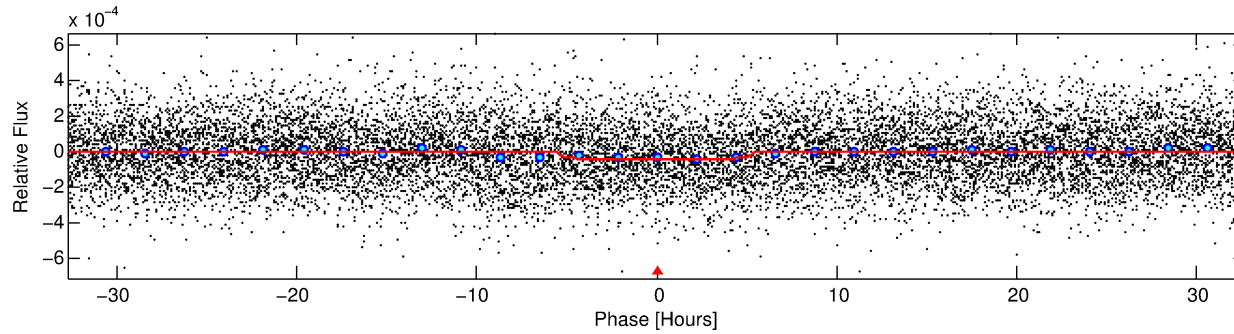
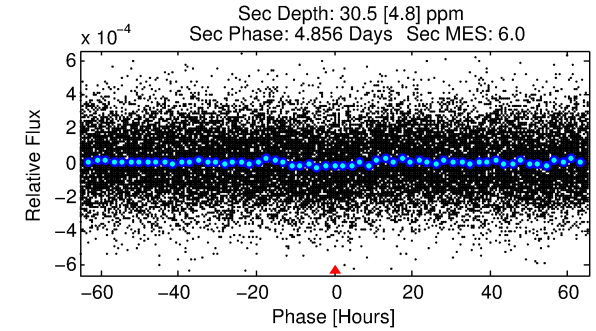
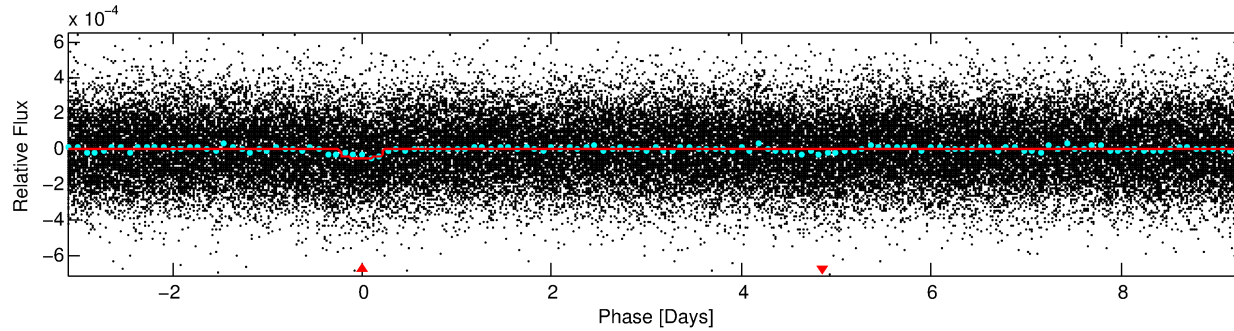
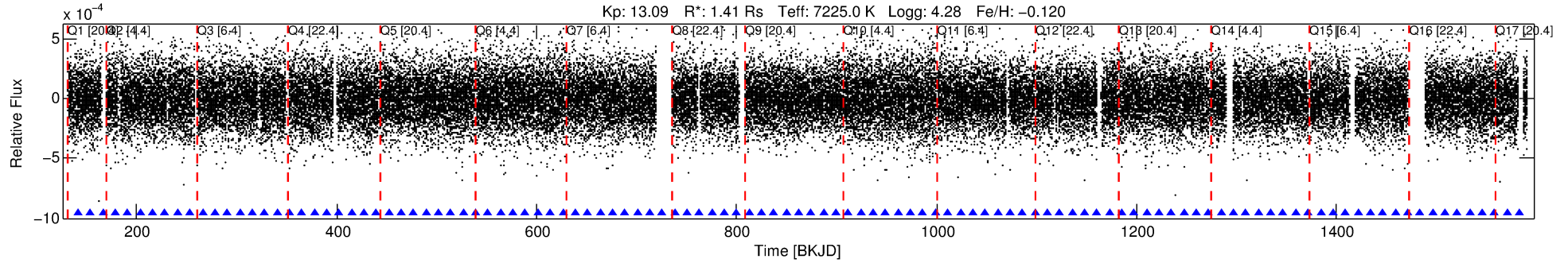
Ephemeris Match Information For 005385469-01

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
005385469-01	5385469	6004.01	5385566	1:1	65.3	12	-12	15.54	13.09	9.85	Direct-PRF	1	3.67	4.70

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: 5385469 Candidate: 1 of 1 Period: 12.424 d
KOI: K06571.01 Corr: 0.861



DV Fit Results:

Period = 12.42415 [0.00022] d
Epoch = 141.7216 [0.0143] BKJD
Rp/R* = 0.0069 [0.0017]
a/R* = 5.73 [8.26]
b = 0.77 [0.80]
Seff = 354.97 [158.80]
Teff = 1107 [124] K
Rp = 1.06 [0.47] Re
a = 0.1173 [0.0345] AU
Ag = 206.21 [137.04] [1.50σ]
Teffp = 6485 [891] K [5.98σ]

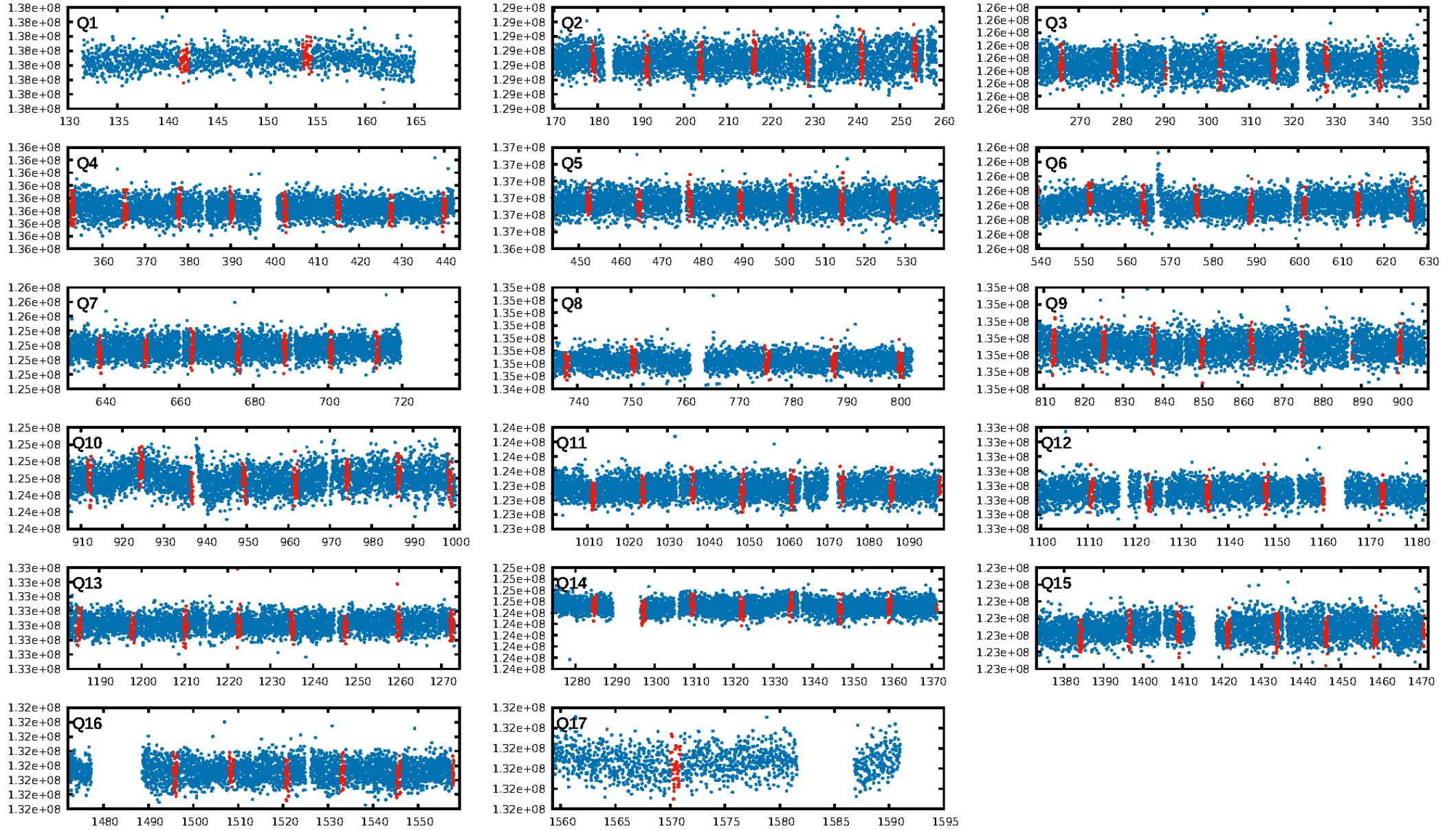
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.23e-19
RollingBand-fgt: 1.00 [106/106]
GhostDiagnostic-chr: 0.7724
Centroid-sig: 1.9%
Centroid-so: 1.456 arcsec [1.27σ]
OotOffset-rm: 2.233 arcsec [3.05σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-rm: 2.255 arcsec [2.84σ]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.44 [7/16]
DiffImageOverlap-fno: 1.00 [17/17]

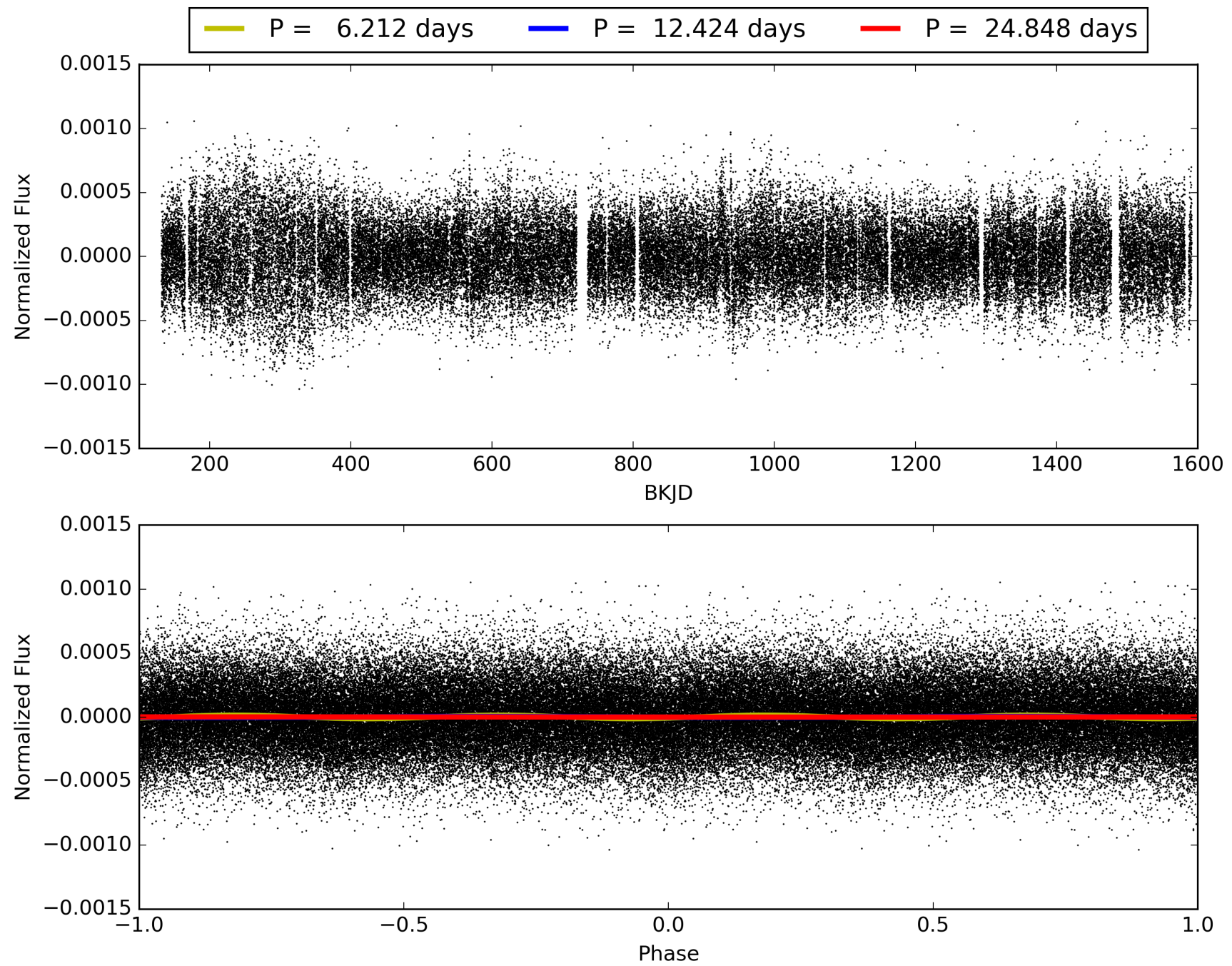
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 07:11:56 Z

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

TCE 005385469-01, PDC Light Curves

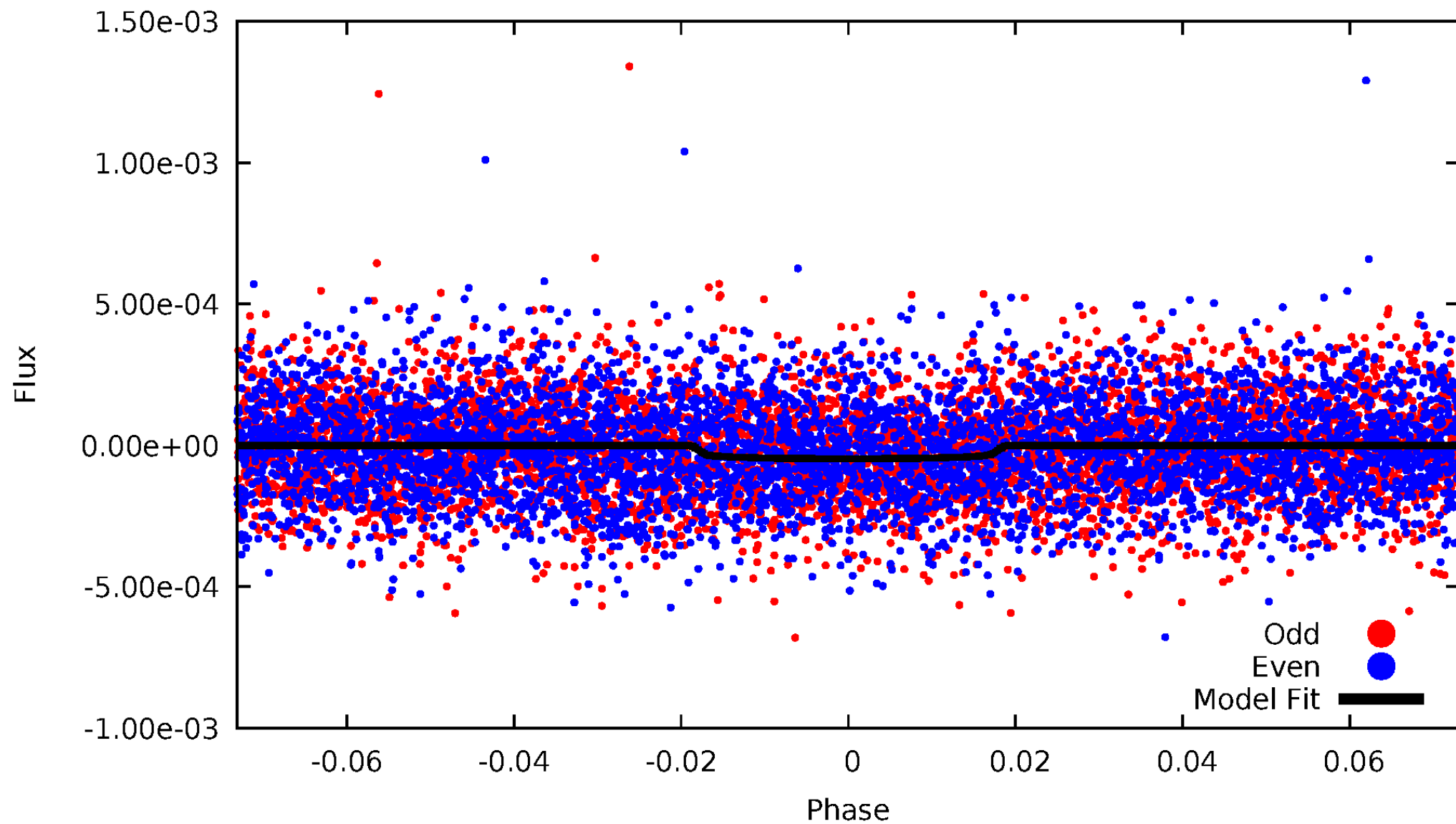


TCE 005385469-01



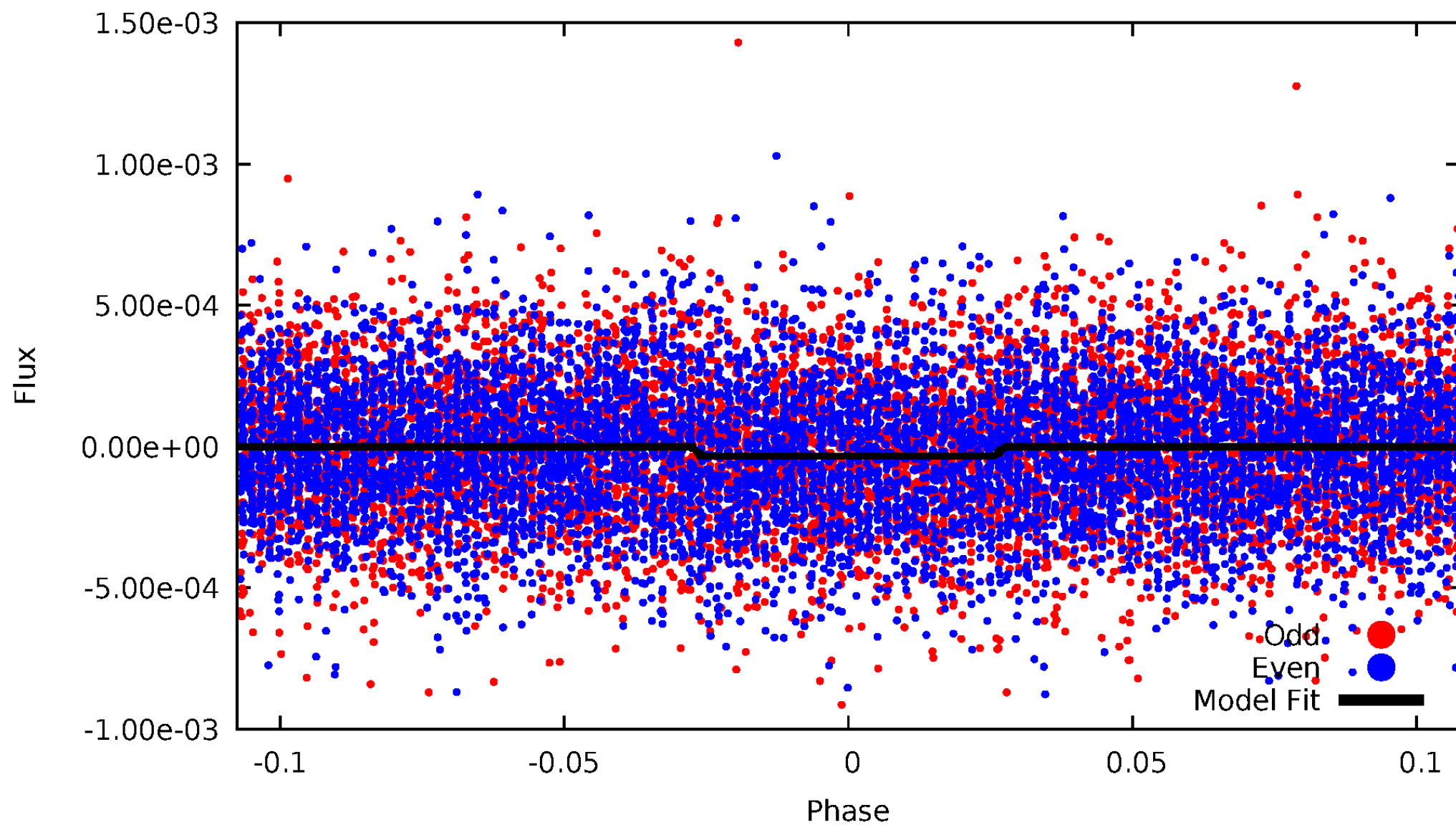
DV Odd/Even

TCE 005385469-01



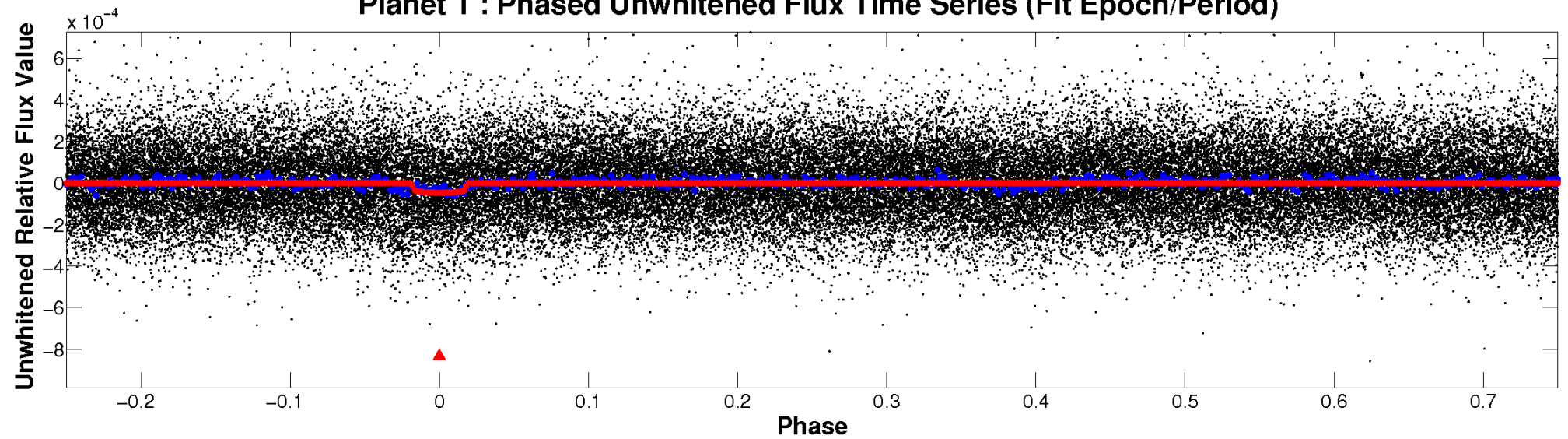
ALT Odd/Even

TCE 005385469-01

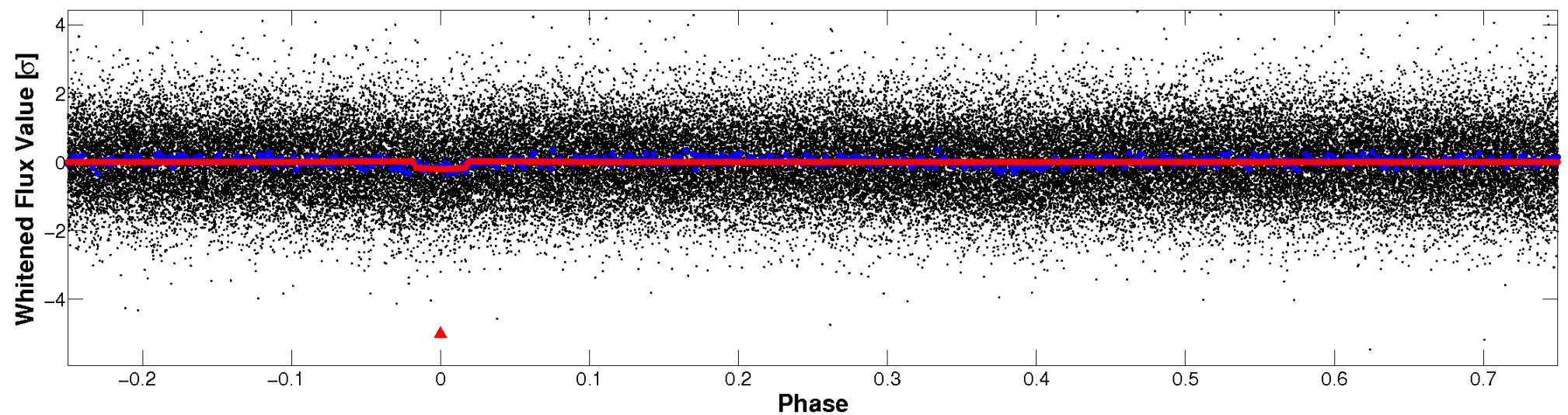


Non-Whitened Vs. Whitened Light Curve

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

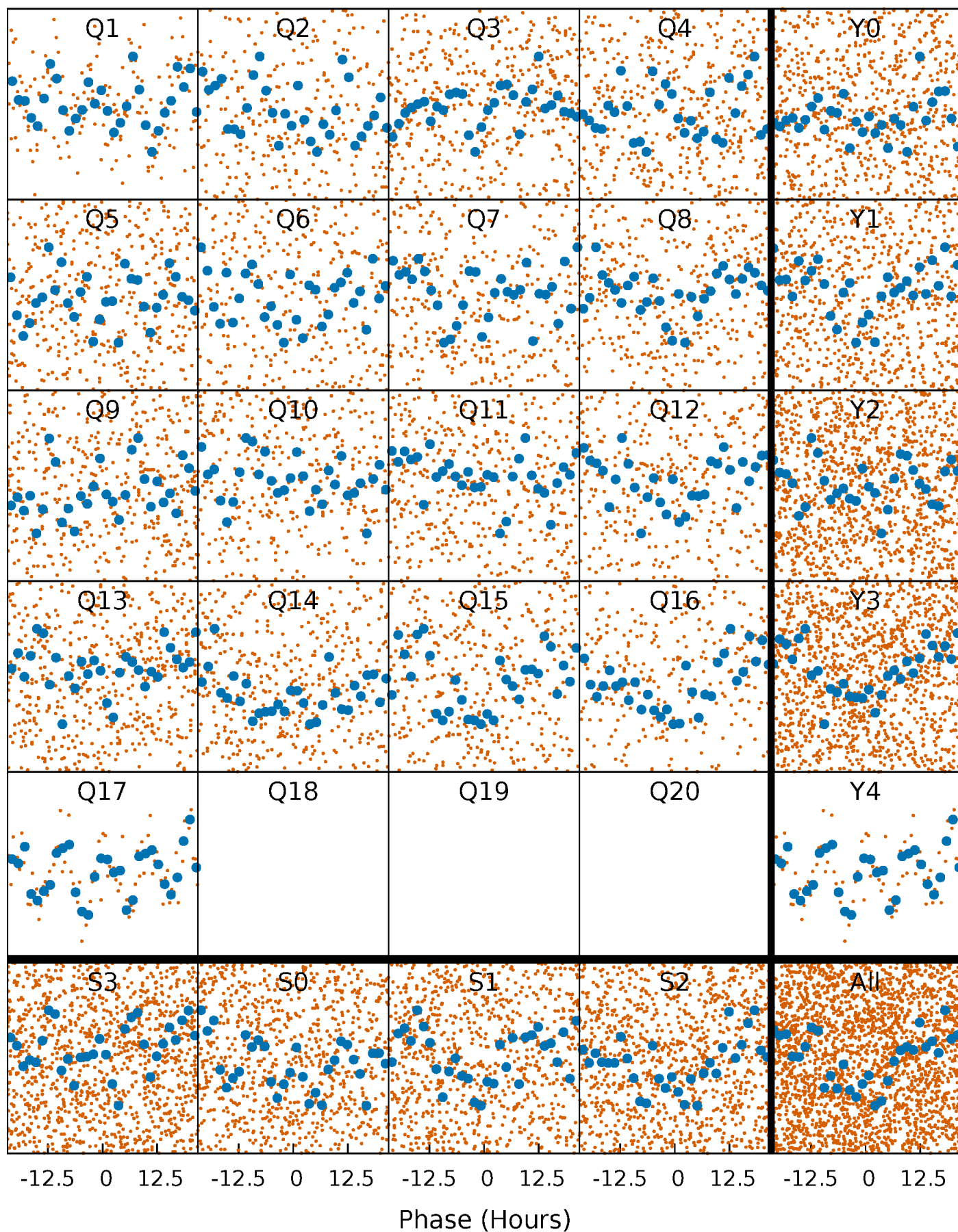


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



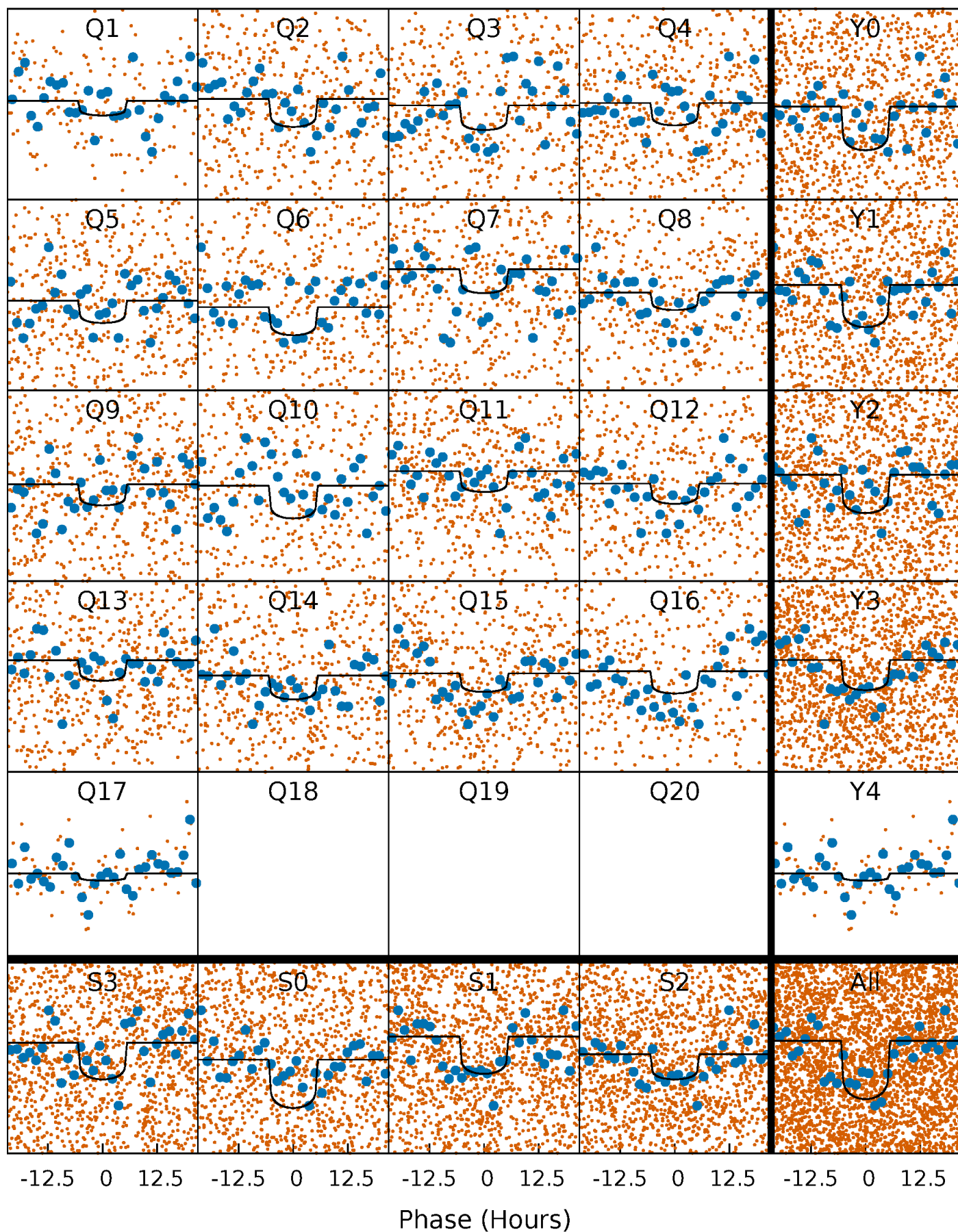
PDC Quarter-Phased Transit Curves

TCE 005385469-01 P= 12.424151 Days $T_0=141.721627$ (BKJD)



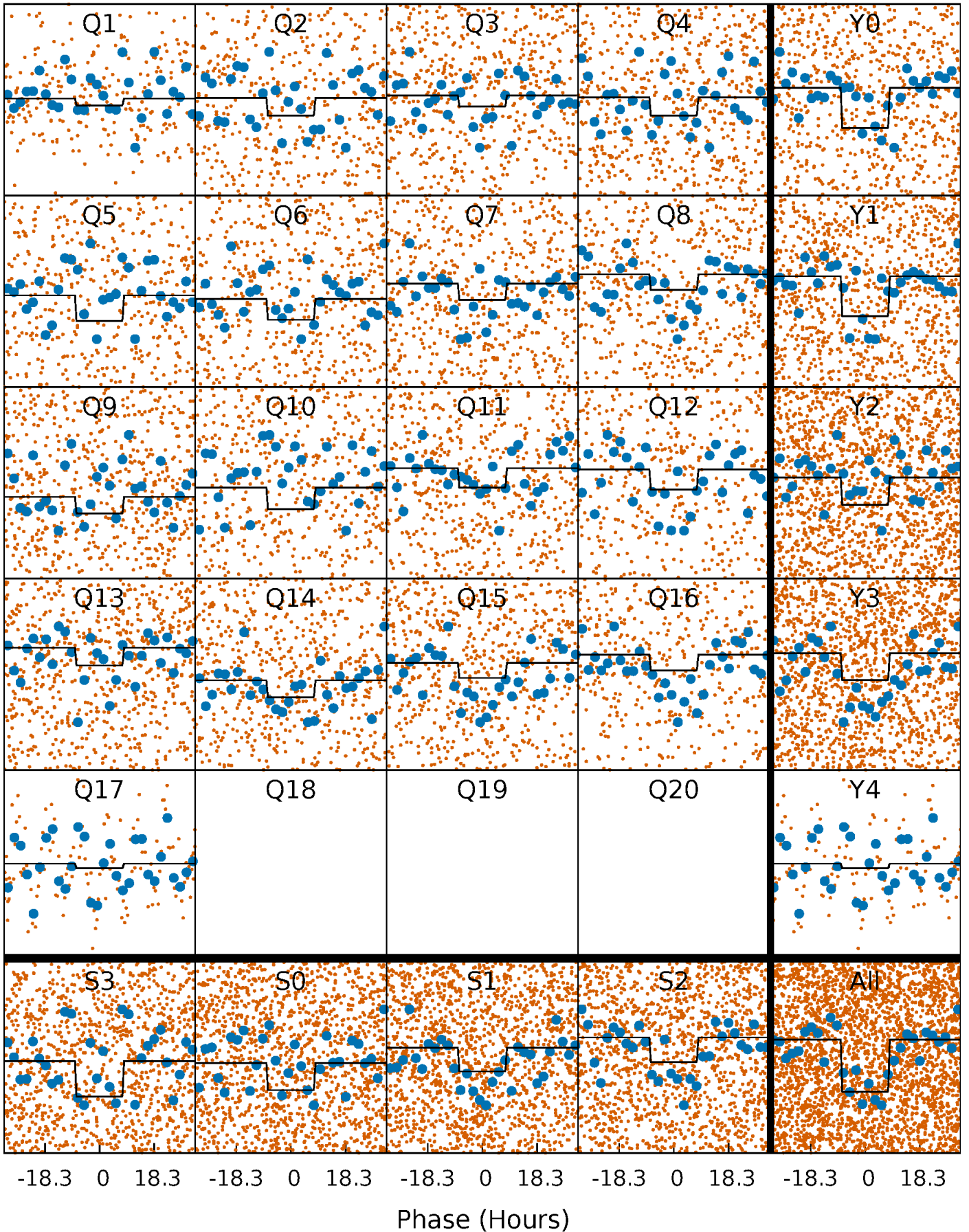
DV Quarter-Phased Transit Curves

TCE 005385469-01 P= 12.424151 Days $T_0=141.721627$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

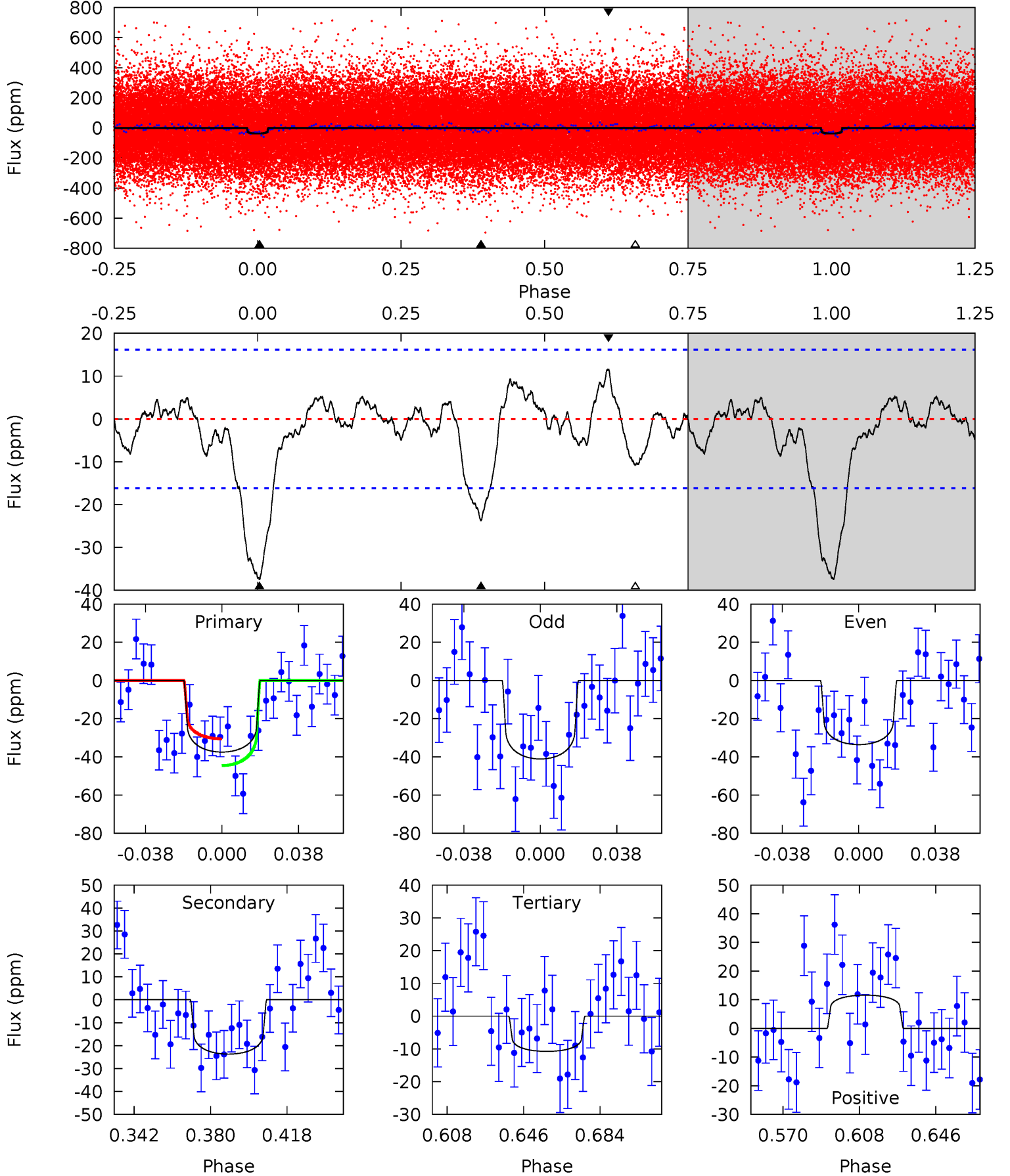
TCE 005385469-01 P= 12.423554 Days $T_0=141.689069$ (BKJD)



DV Model-Shift Uniqueness Test

005385469-01, $P = 12.424151$ Days, $E = 129.297476$ Days

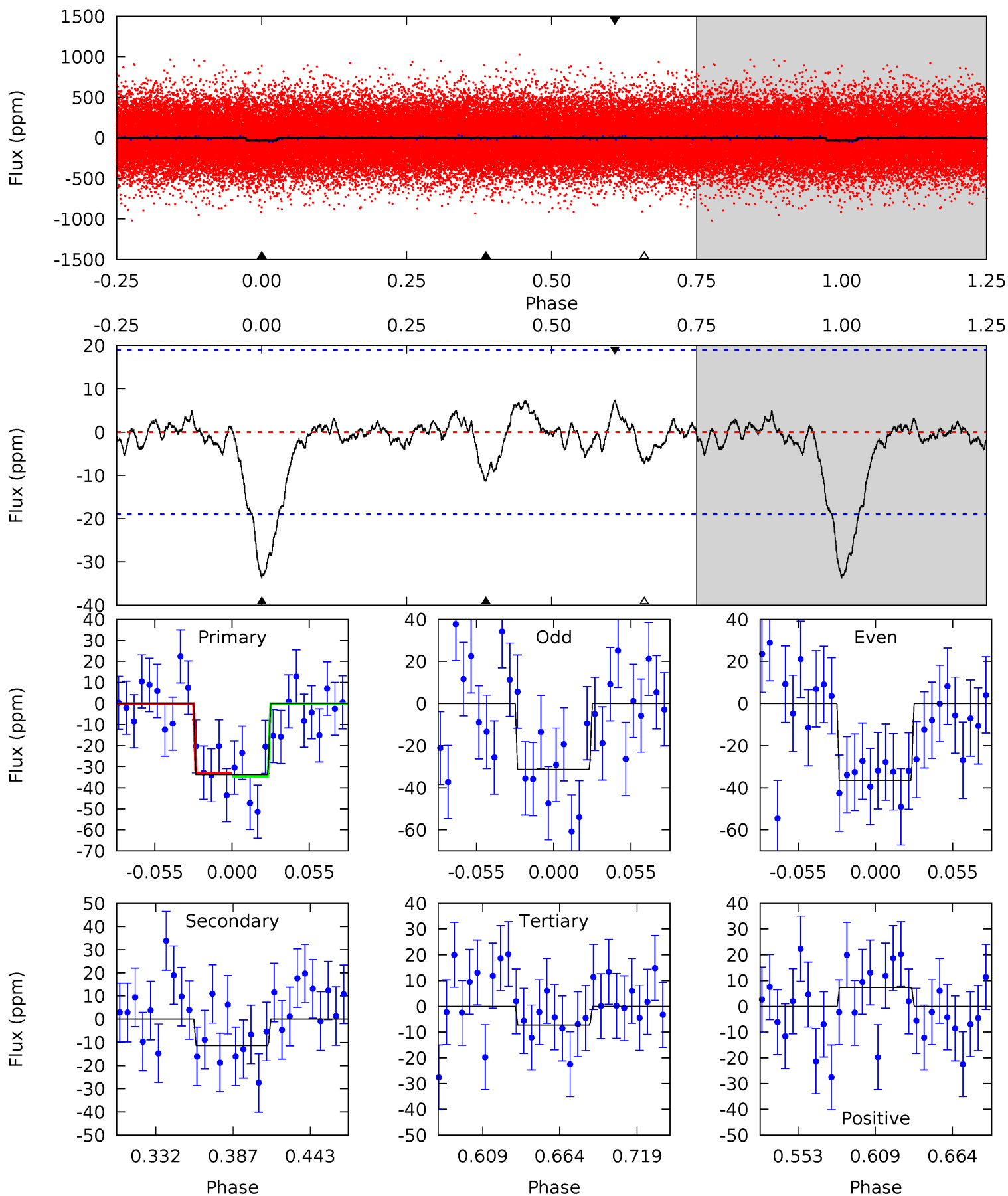
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.0	6.98	3.17	3.42	4.76	2.07	1.31	7.87	7.62	3.81	3.56	1.11	0.85	0.24	2.06



Alt Model-Shift Uniqueness Test

005385469-01, $P = 12.423554$ Days, $E = 129.265515$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.35	2.81	1.81	1.80	4.69	1.92	0.64	6.54	6.55	1.00	1.01	0.63	0.88	0.18	0.17



Stellar Parameters For KIC 005385469

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7225^{+228}_{-314}	$4.281^{+0.072}_{-0.217}$	$-0.120^{+0.250}_{-0.400}$	$1.414^{+0.515}_{-0.184}$	$1.397^{+0.218}_{-0.196}$	$0.696^{+0.238}_{-0.412}$
	+3%/-4%	+2%/-5%	+208%/-333%	+36%/-13%	+16%/-14%	+34%/-59%
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 005385469-01 / KOI 6571.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-24 ± 3	$1.12^{+0.34}_{-0.29}$	1573^{+117}_{-96}	5925^{+1046}_{-625}	141^{+120}_{-59}
Alt.	-11 ± 4	$0.94^{+0.32}_{-0.29}$	1576^{+133}_{-90}	5447^{+1125}_{-796}	92^{+115}_{-50}

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

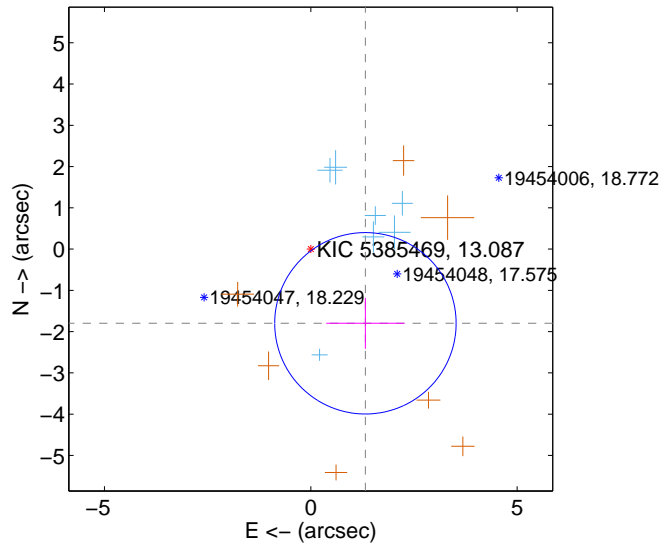
Supplemental centroid analysis for 005385469-01. Kepler magnitude: 13.09. Transit SNR 8.65

There are 7 quarters with good PRF difference image offsets

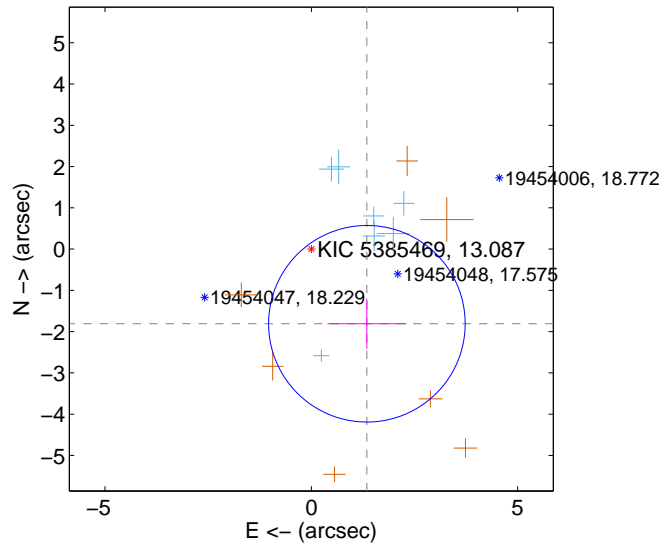
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.233 ± 0.733	3.05	-1.324 ± 0.947	-1.798 ± 0.617
PRF-fit source offset from KIC position	2.255 ± 0.794	2.84	-1.346 ± 0.955	-1.809 ± 0.607
photometric centroid source offset	1.46 ± 1.14	1.27	-0.29 ± 1.26	1.43 ± 1.14

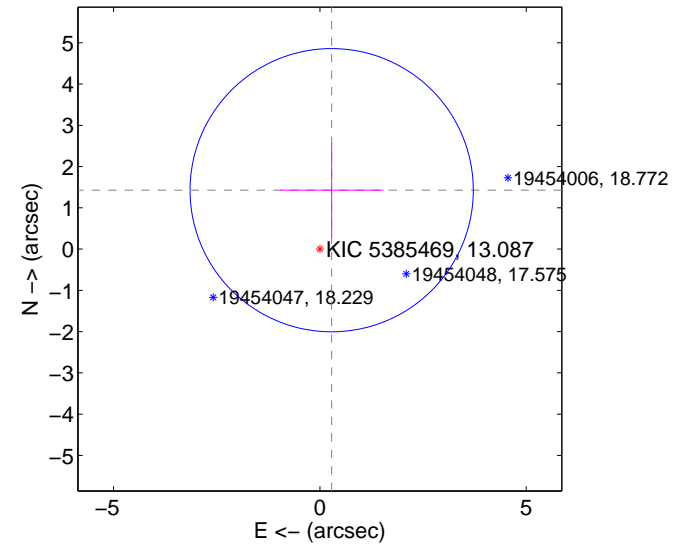
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

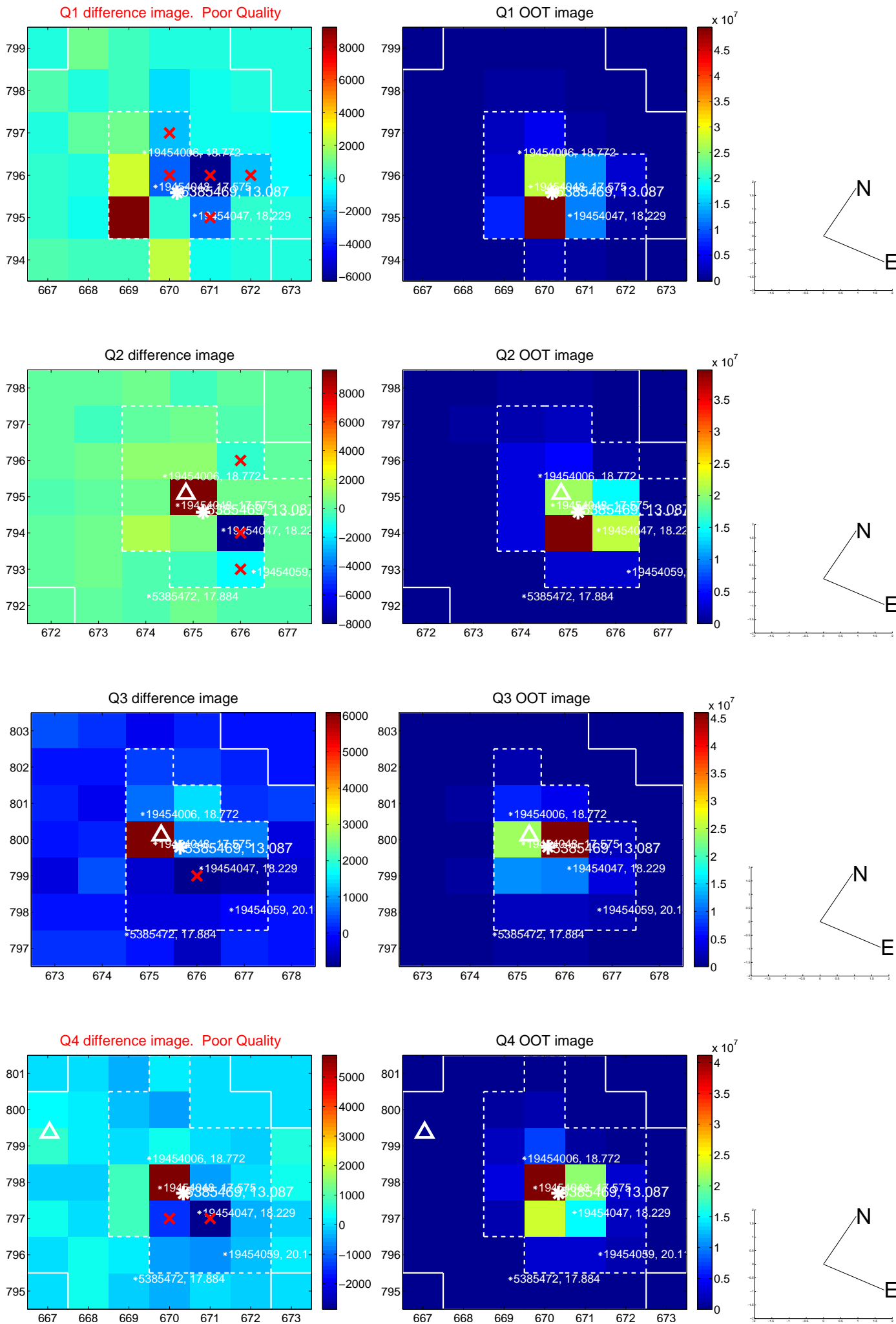


offset from photometric centroids

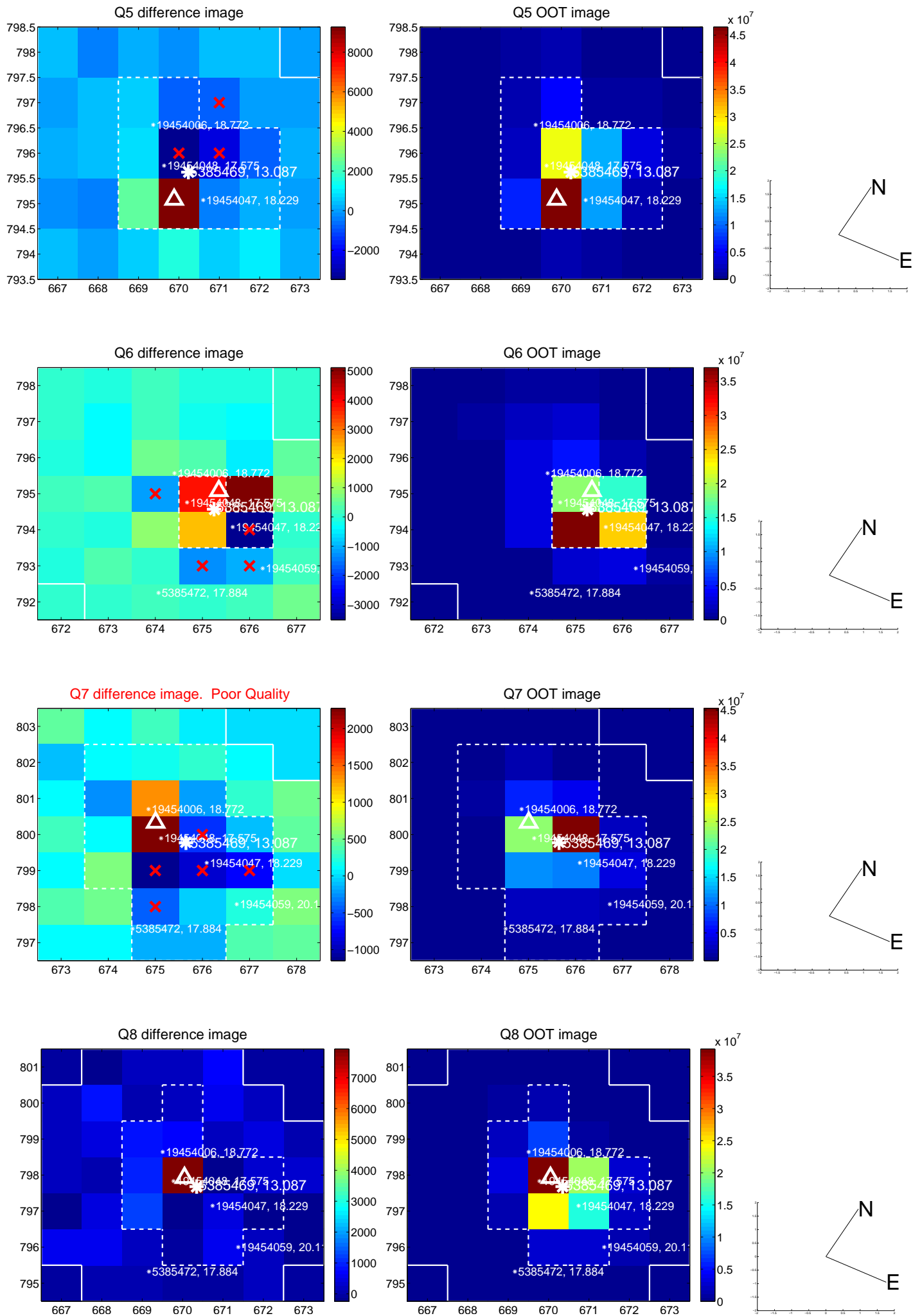


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

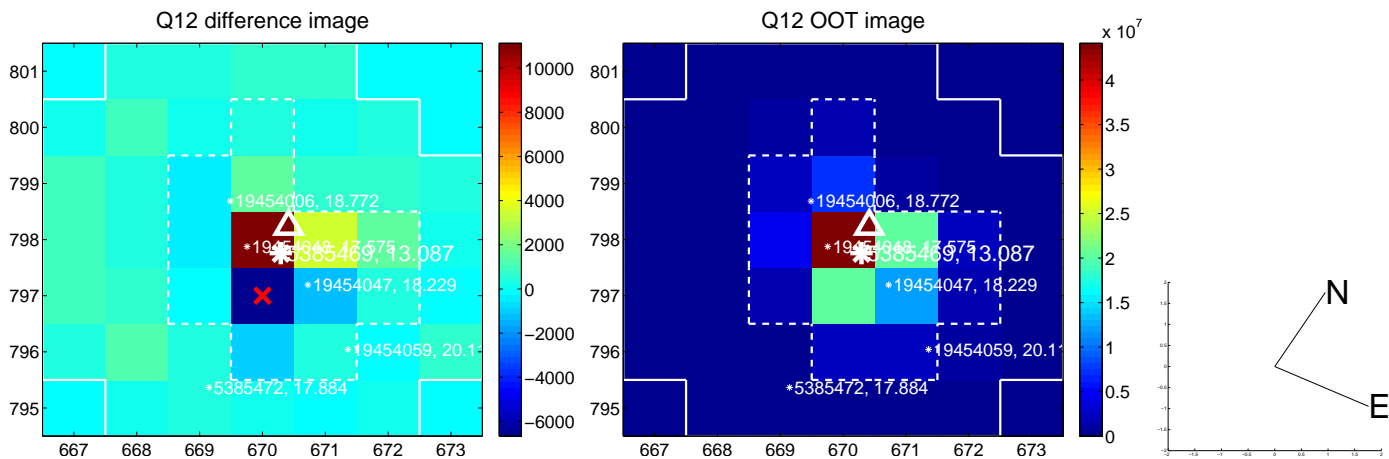
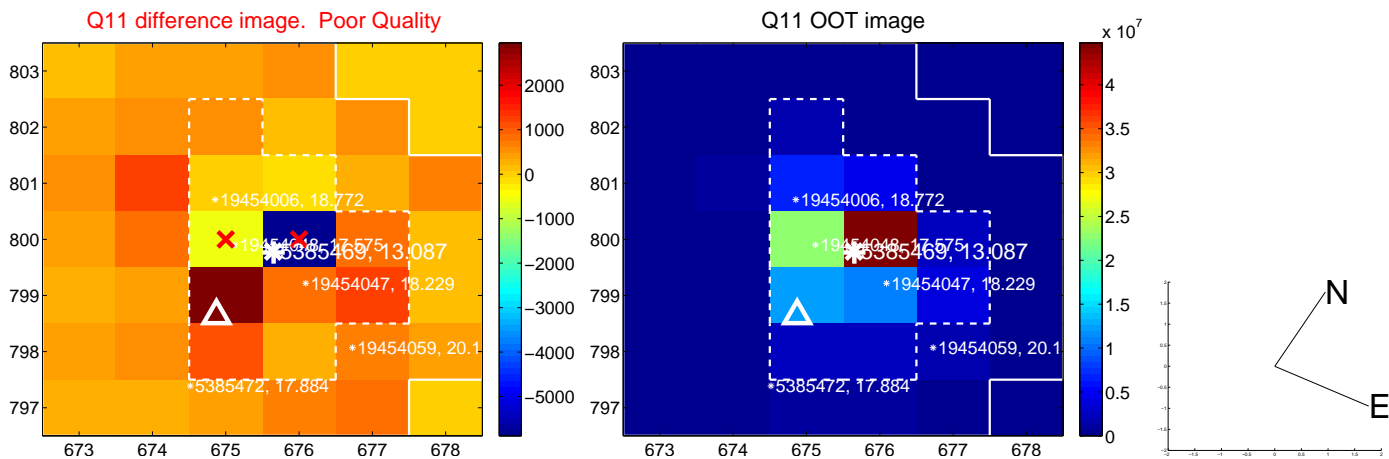
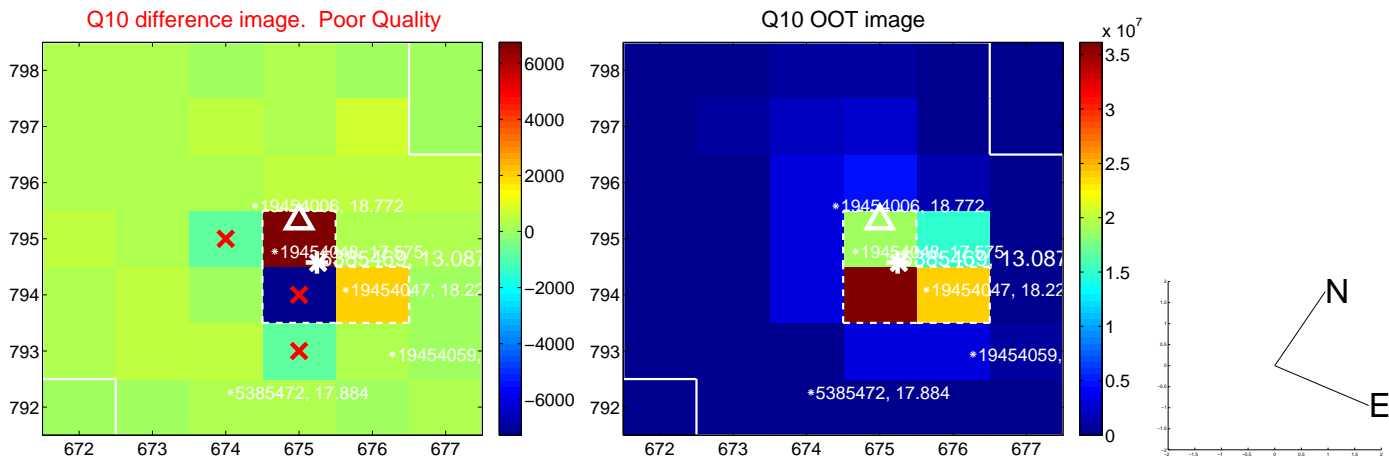
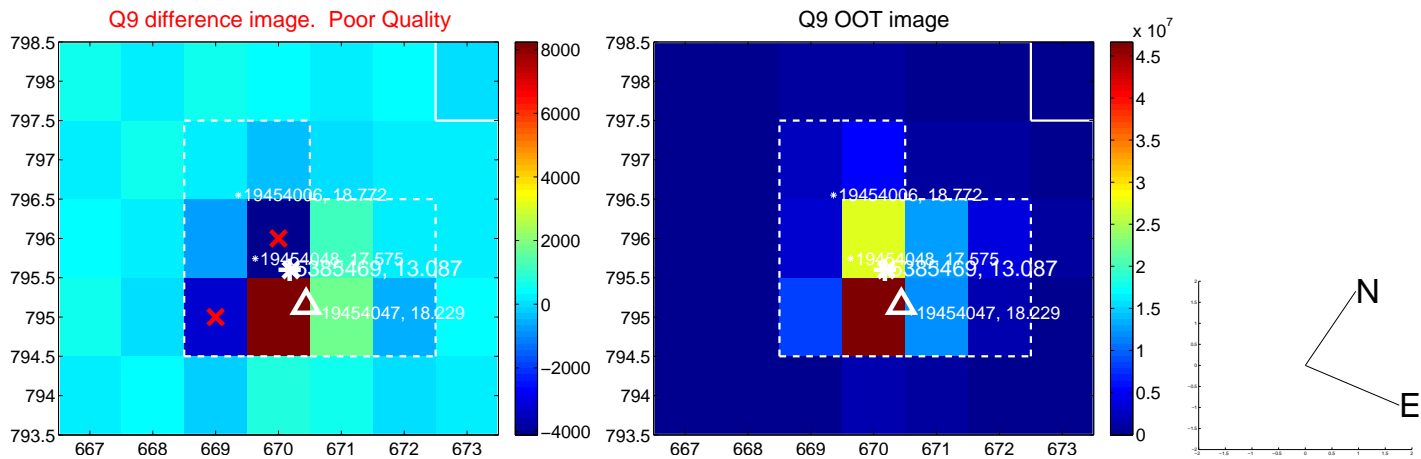
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



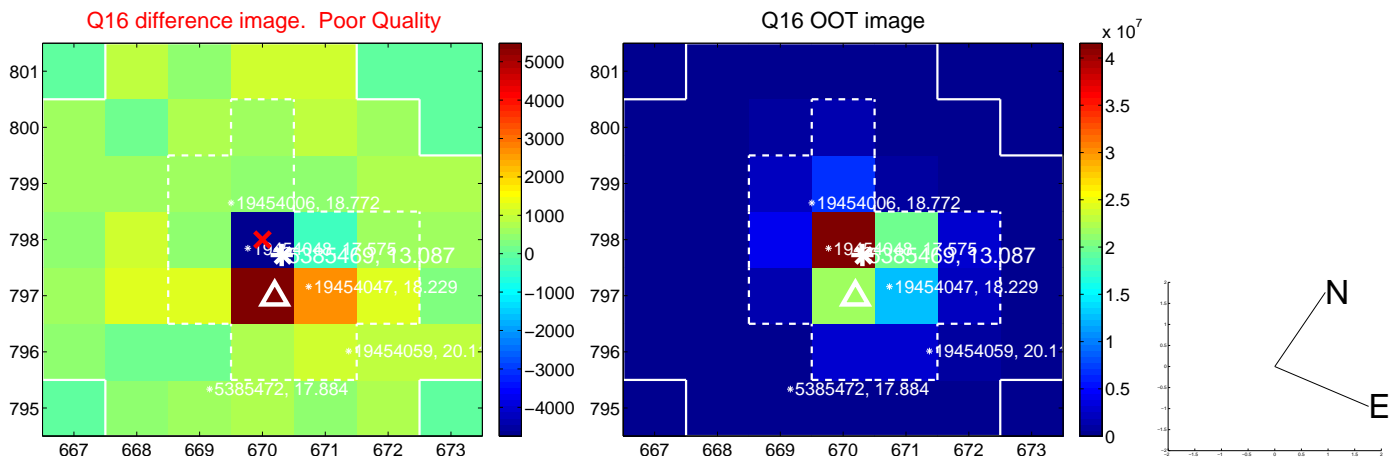
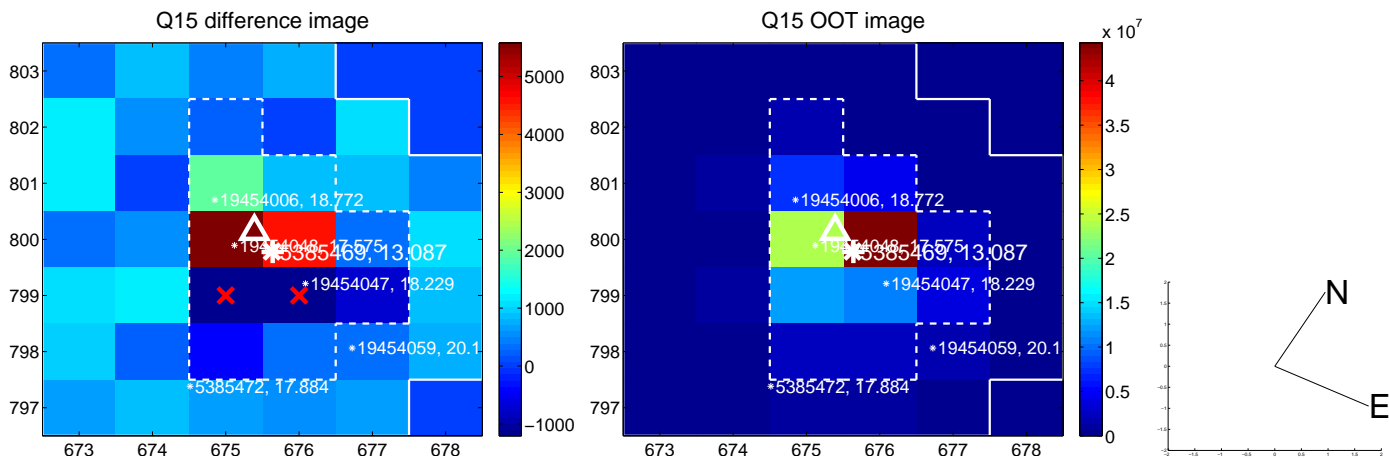
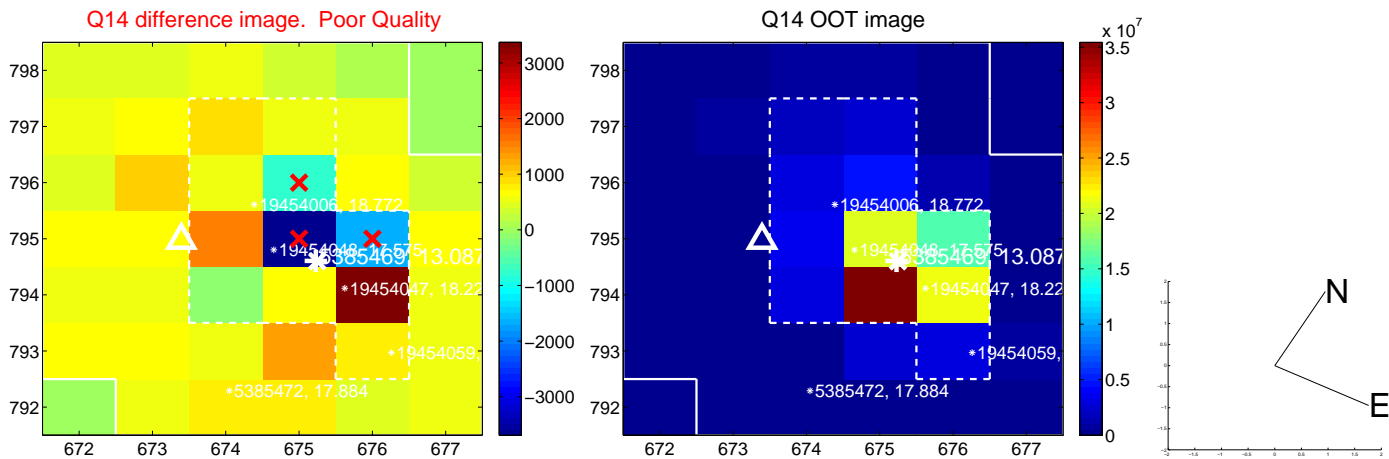
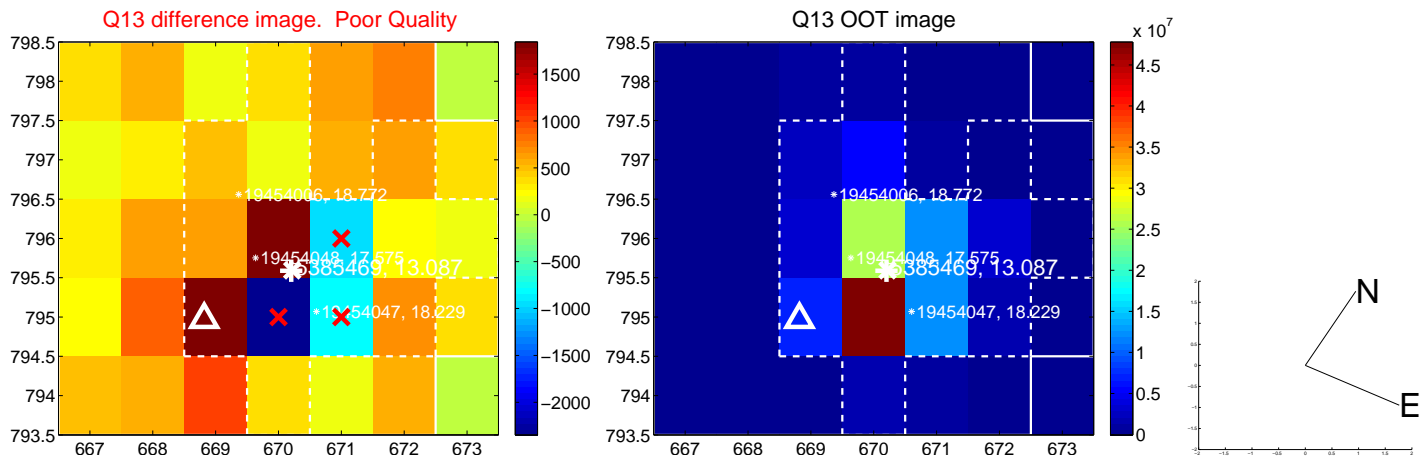
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



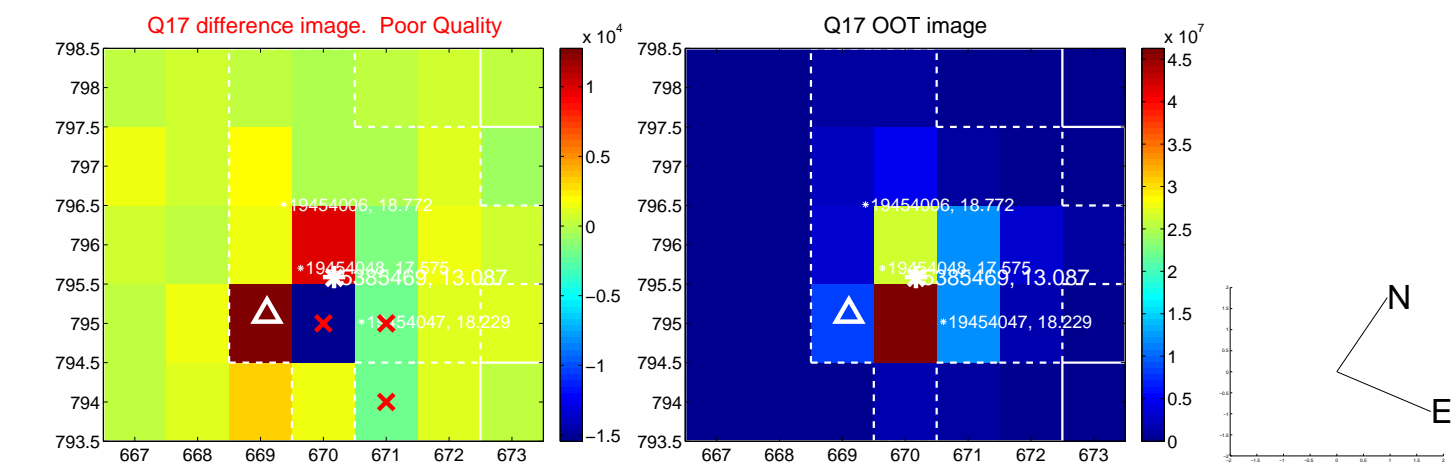
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



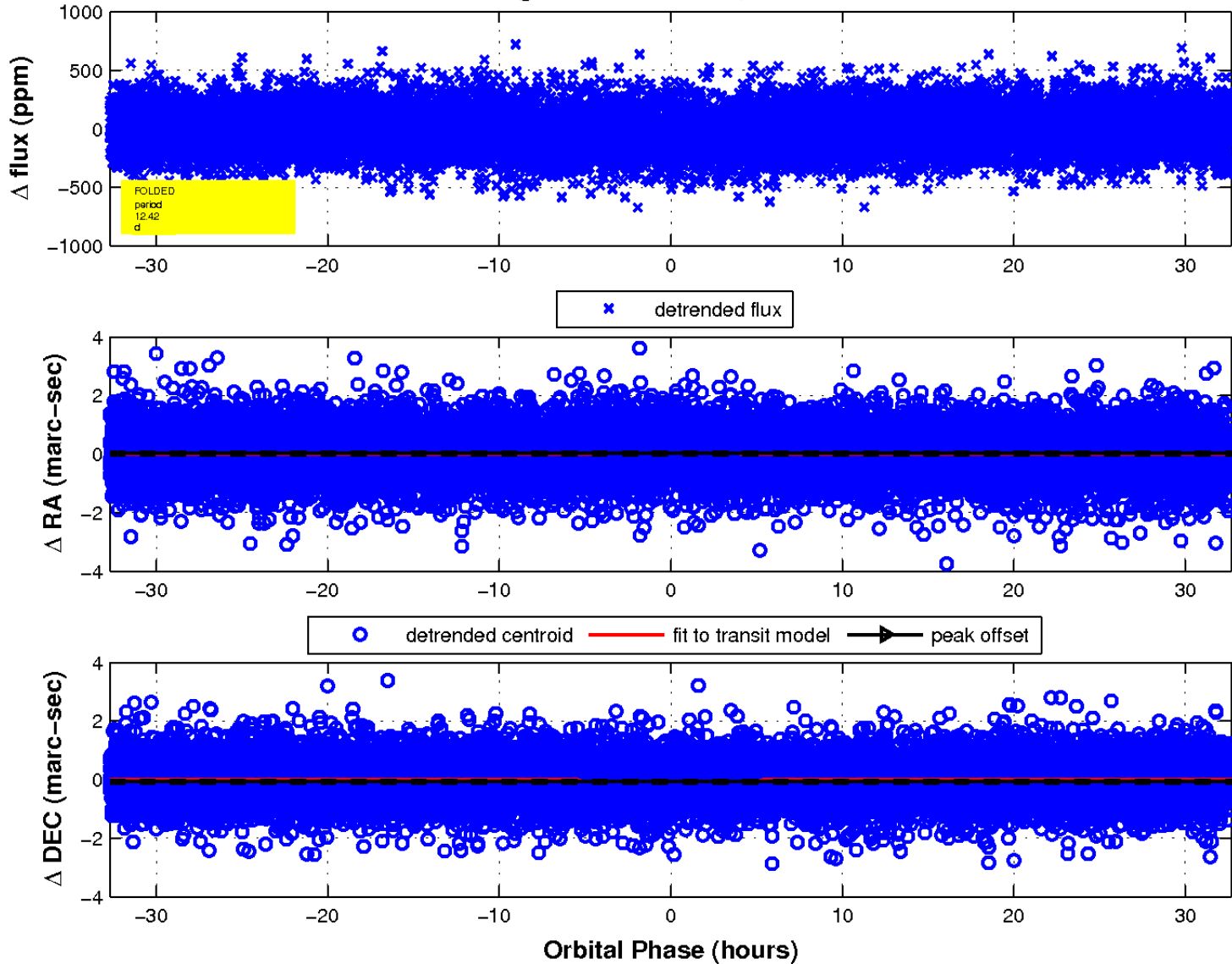
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

