

KIC 011294453

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})
011294453-01	OBS	No	13.745301	131.855614	25.2	24.550	10.8	12.2	0.99	5948	0.58	87.05

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011294453-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_UNRESOLVED_OFFSET

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

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

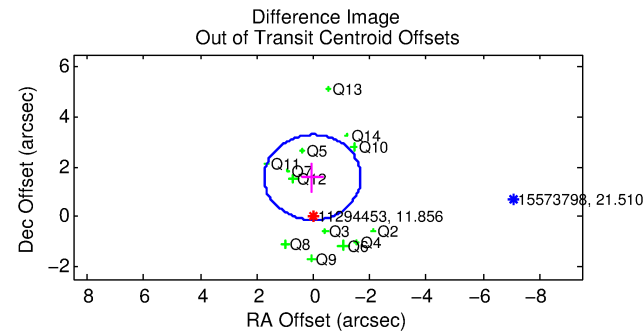
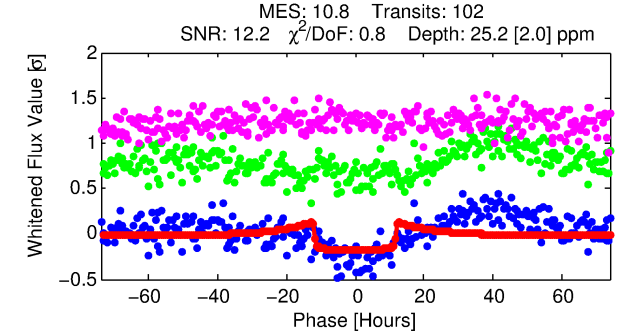
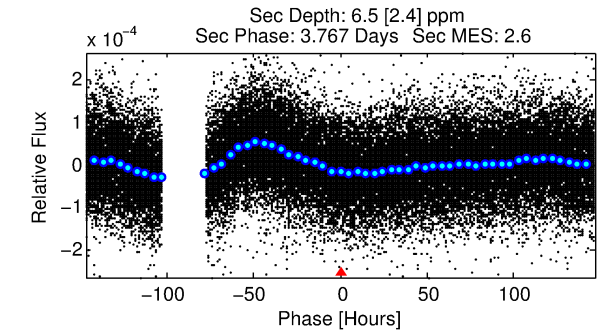
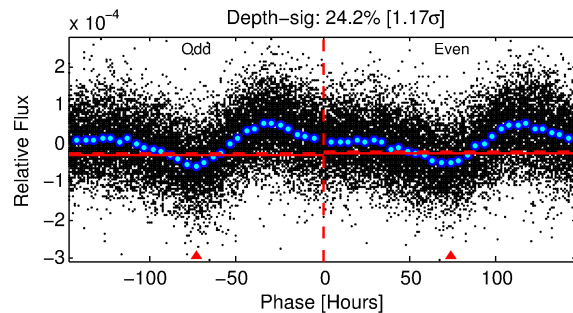
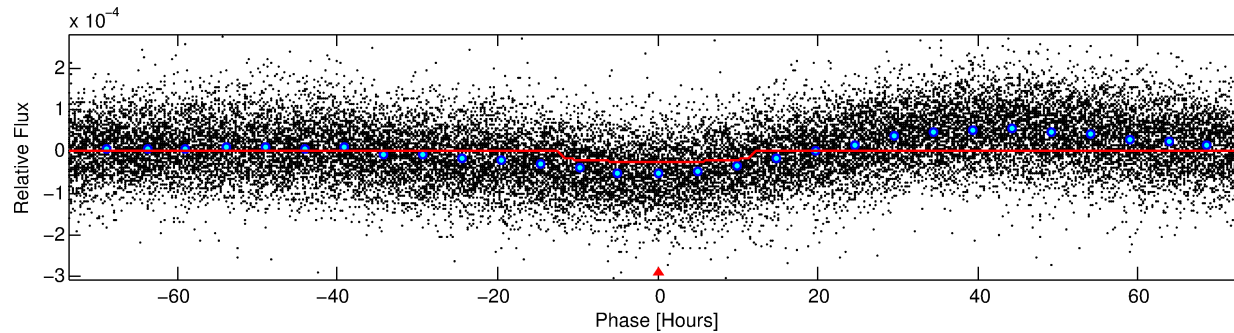
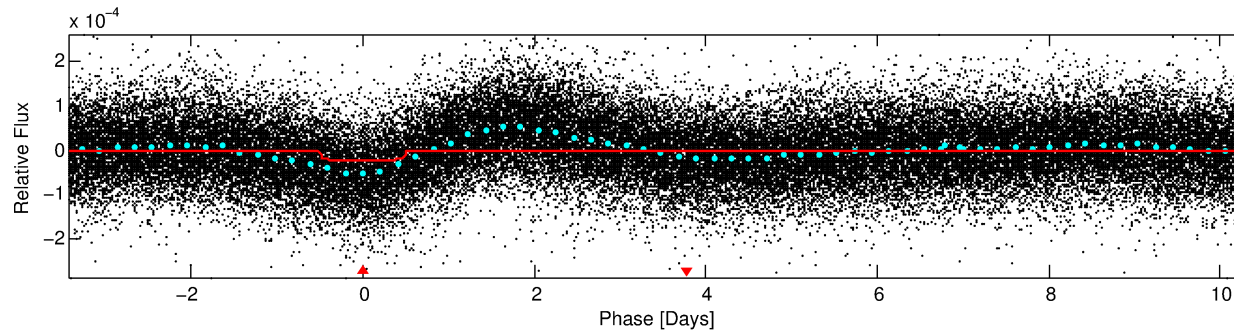
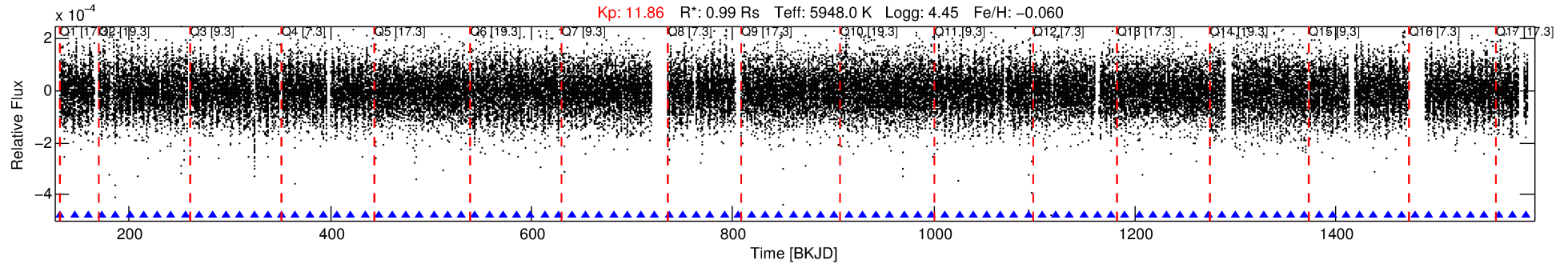
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011294453-01

No Significant Match Found

DV One-Page Summary

KIC: 11294453 Candidate: 1 of 1 Period: 13.745 d



DV Fit Results:

Period = 13.74530 [0.00023] d
Epoch = 131.8556 [0.0140] BKJD
 $R_p/R^* = 0.0054$ [0.0004]
 $a/R^* = 2.20$ [0.54]
 $b = 0.89$ [0.07]
 $\text{Seff} = 87.05$ [35.08]
 $T_{\text{eq}} = 779$ [78] K
 $R_p = 0.58$ [0.19] R_e
 $a = 0.1128$ [0.0299] AU
 $A_g = 133.12$ [73.27] [1.80 σ]
 $T_{\text{eff}} = 4090$ [420] K [7.75 σ]

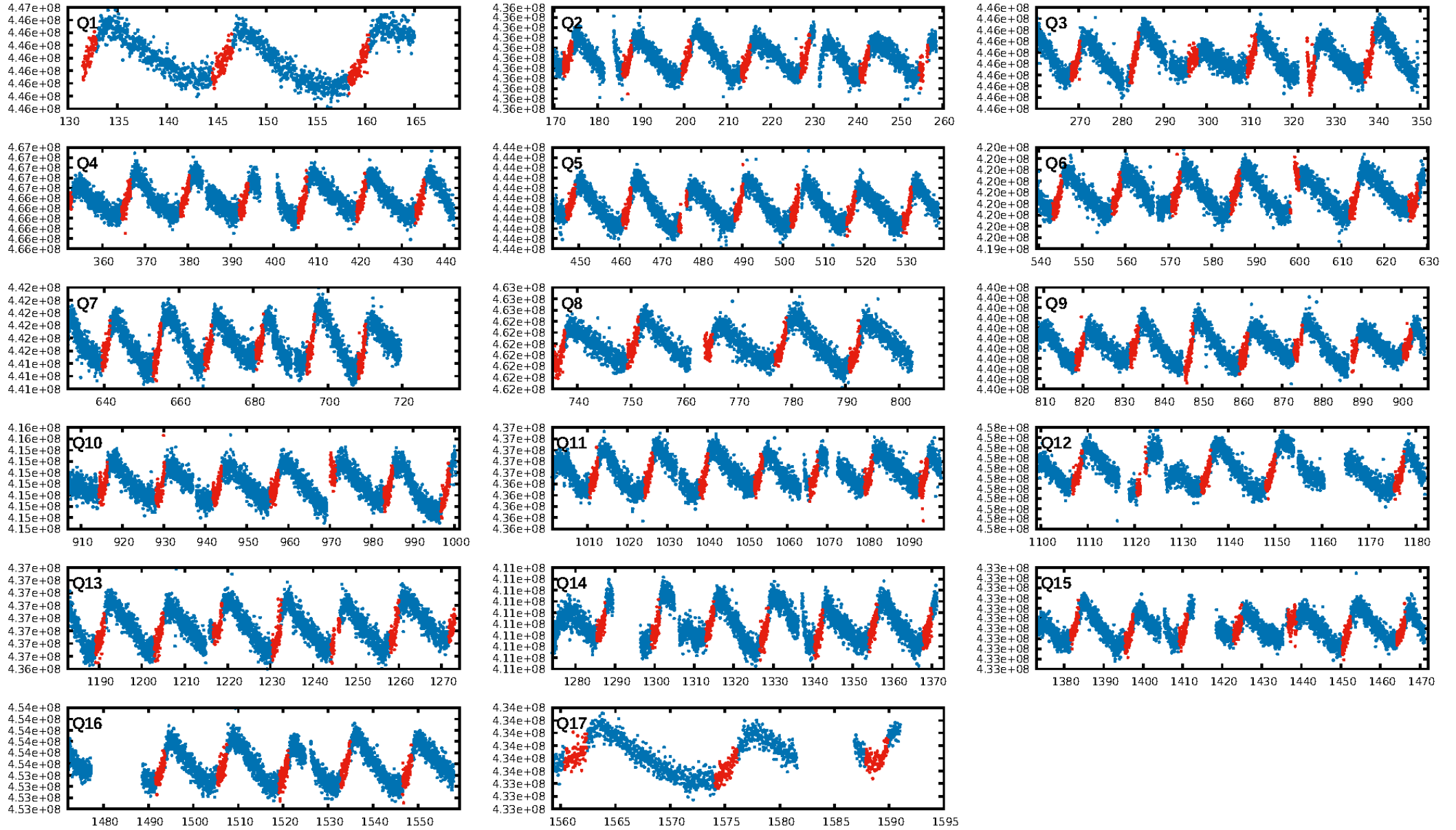
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 98.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.96e-27
RollingBand-fgt: 1.00 [96/96]
GhostDiagnostic-chr: -8.195
Centroid-sig: 39.3%
Centroid-so: 0.863 arcsec [1.07 σ]
OotOffset-rm: 1.571 arcsec [2.76 σ]
KicOffset-rm: 1.434 arcsec [2.50 σ]
OotOffset-st: 4/3/3/3 [13]
KicOffset-st: 4/3/3/3 [13]
DiffImageQuality-fgm: 0.69 [9/13]
DiffImageOverlap-fno: 1.00 [17/17]

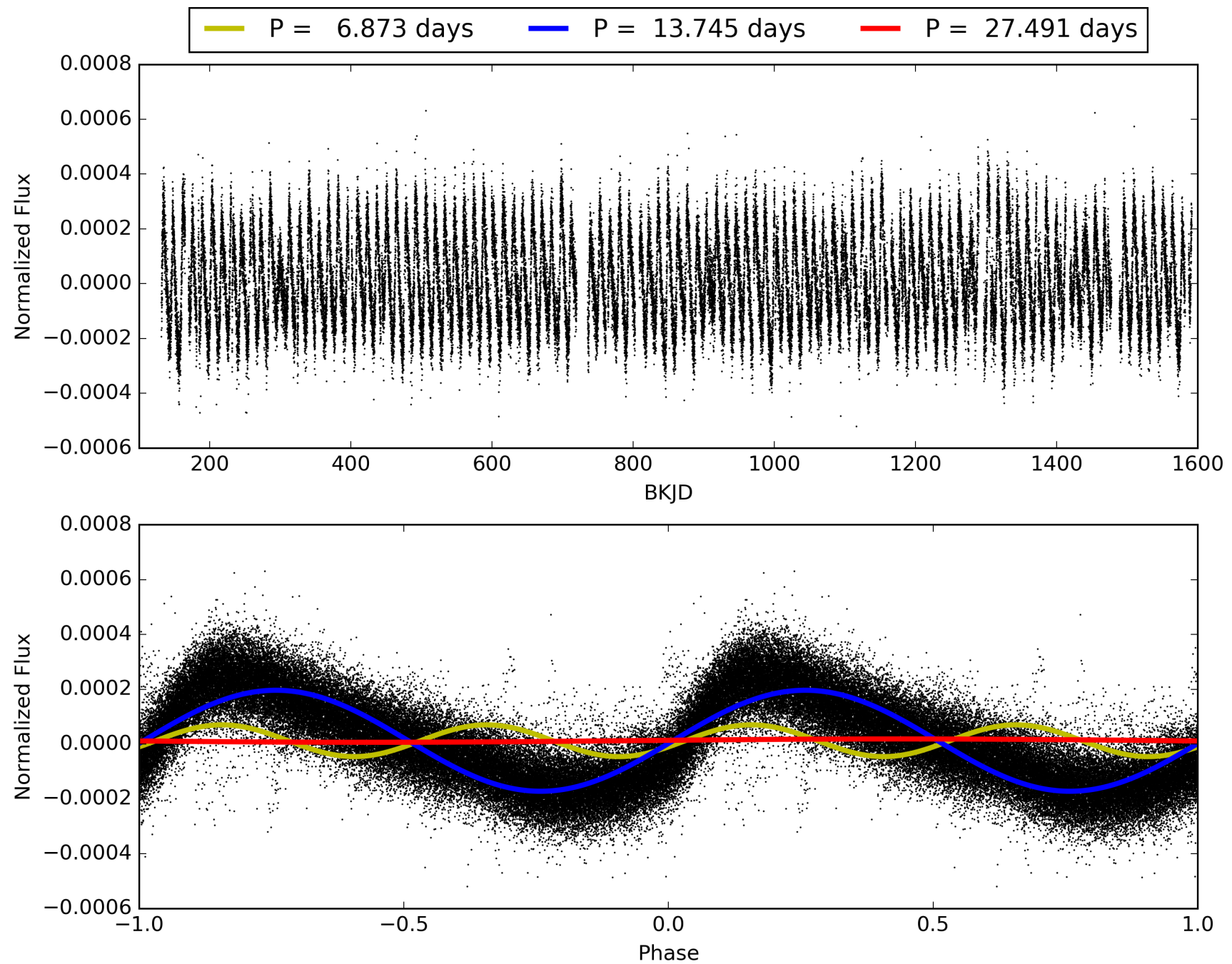
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 20:03:34 Z

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

TCE 011294453-01, PDC Light Curves

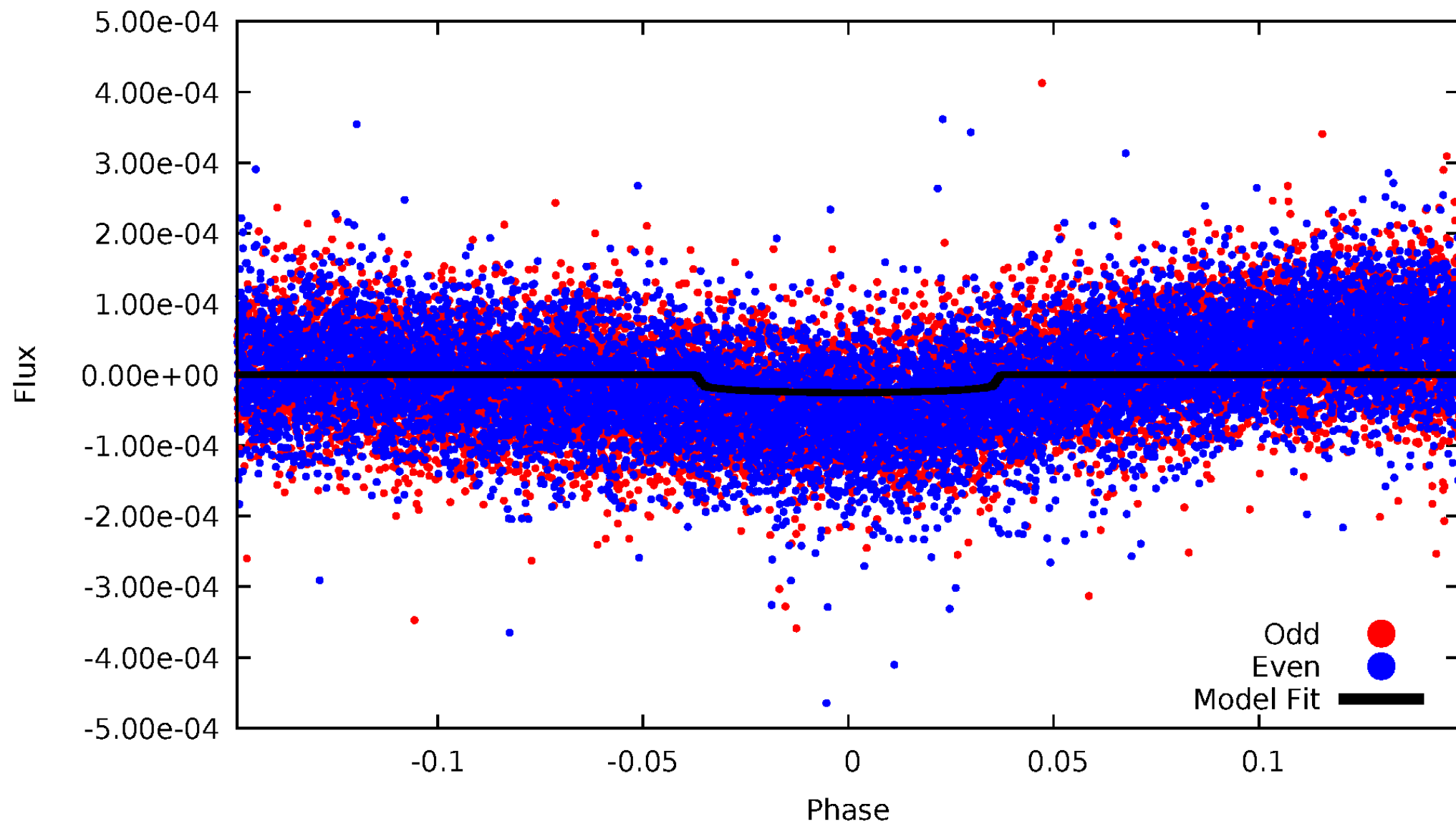


TCE 011294453-01



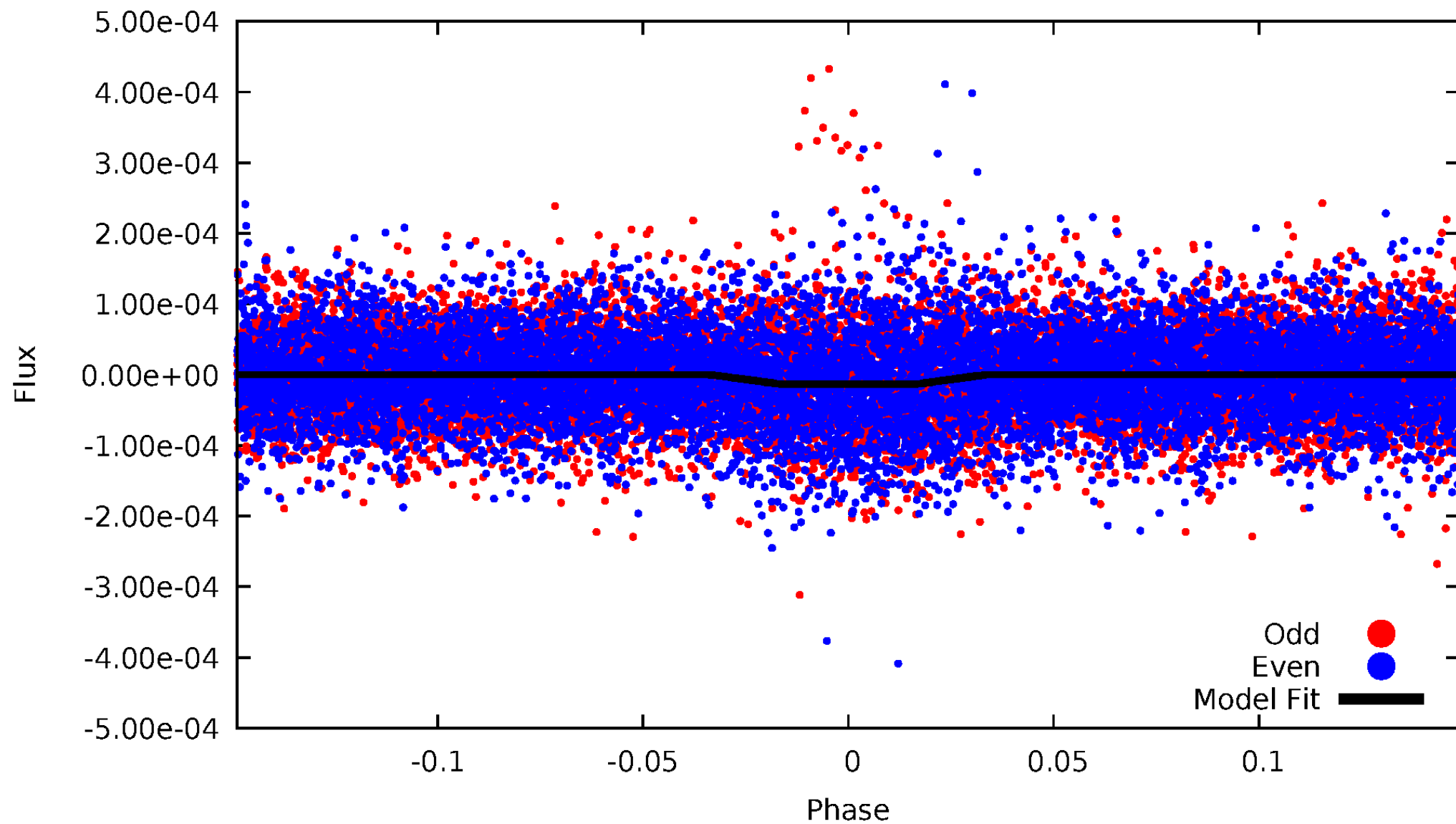
DV Odd/Even

TCE 011294453-01



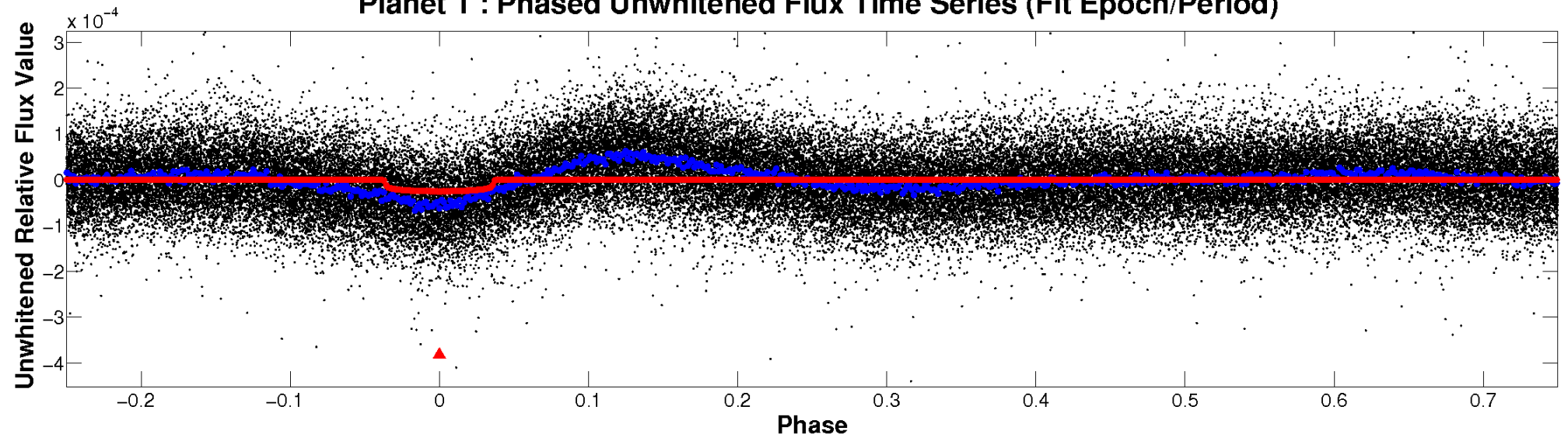
ALT Odd/Even

TCE 011294453-01

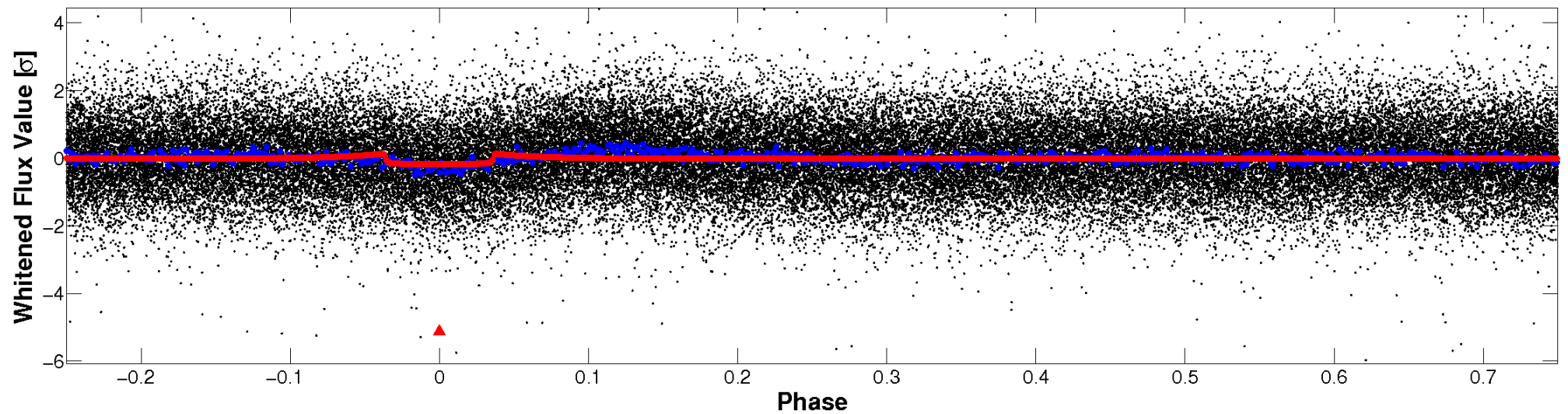


Non-Whitened Vs. Whitened Light Curve

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

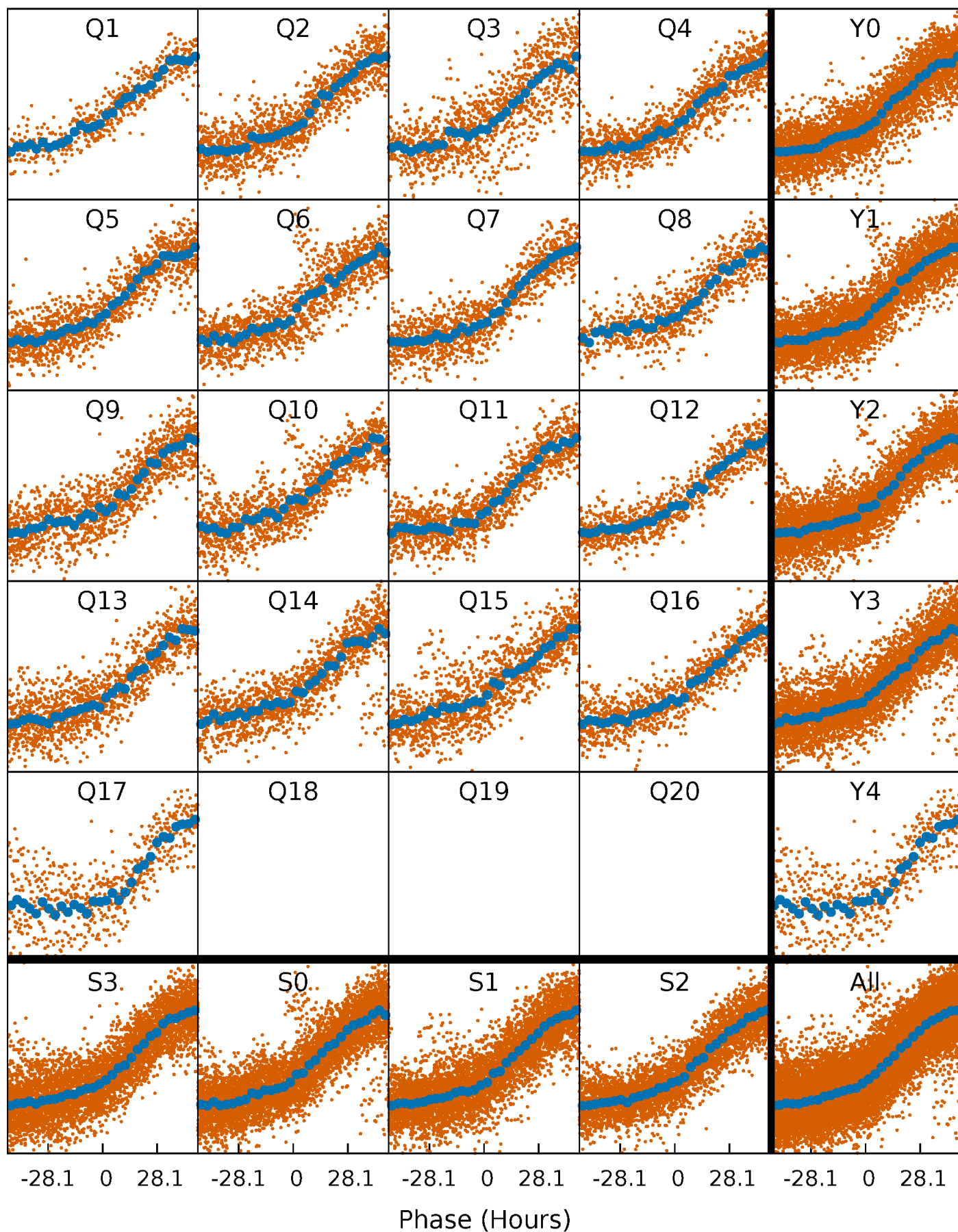


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



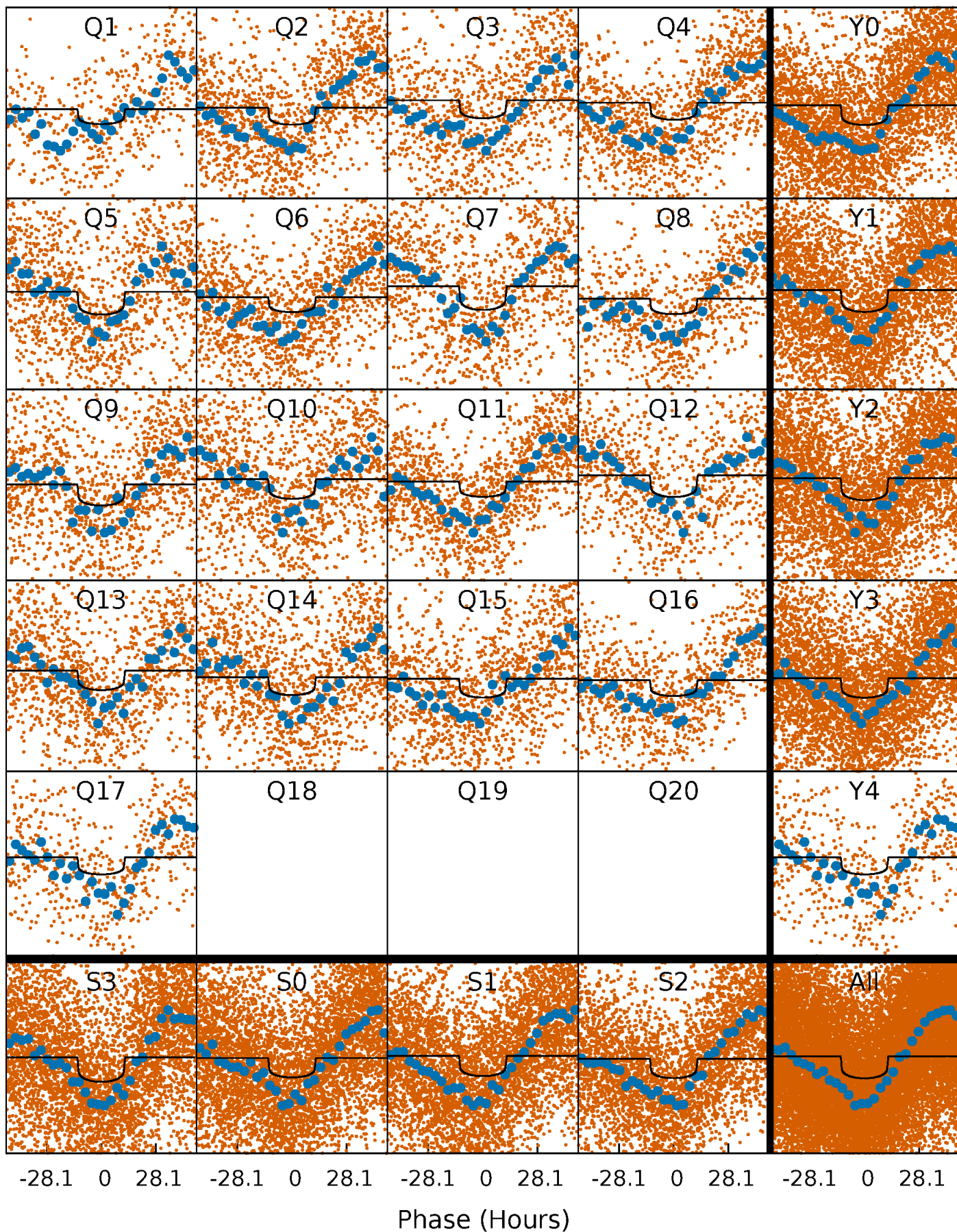
PDC Quarter-Phased Transit Curves

TCE 011294453-01 P= 13.745301 Days $T_0=131.855614$ (BKJD)



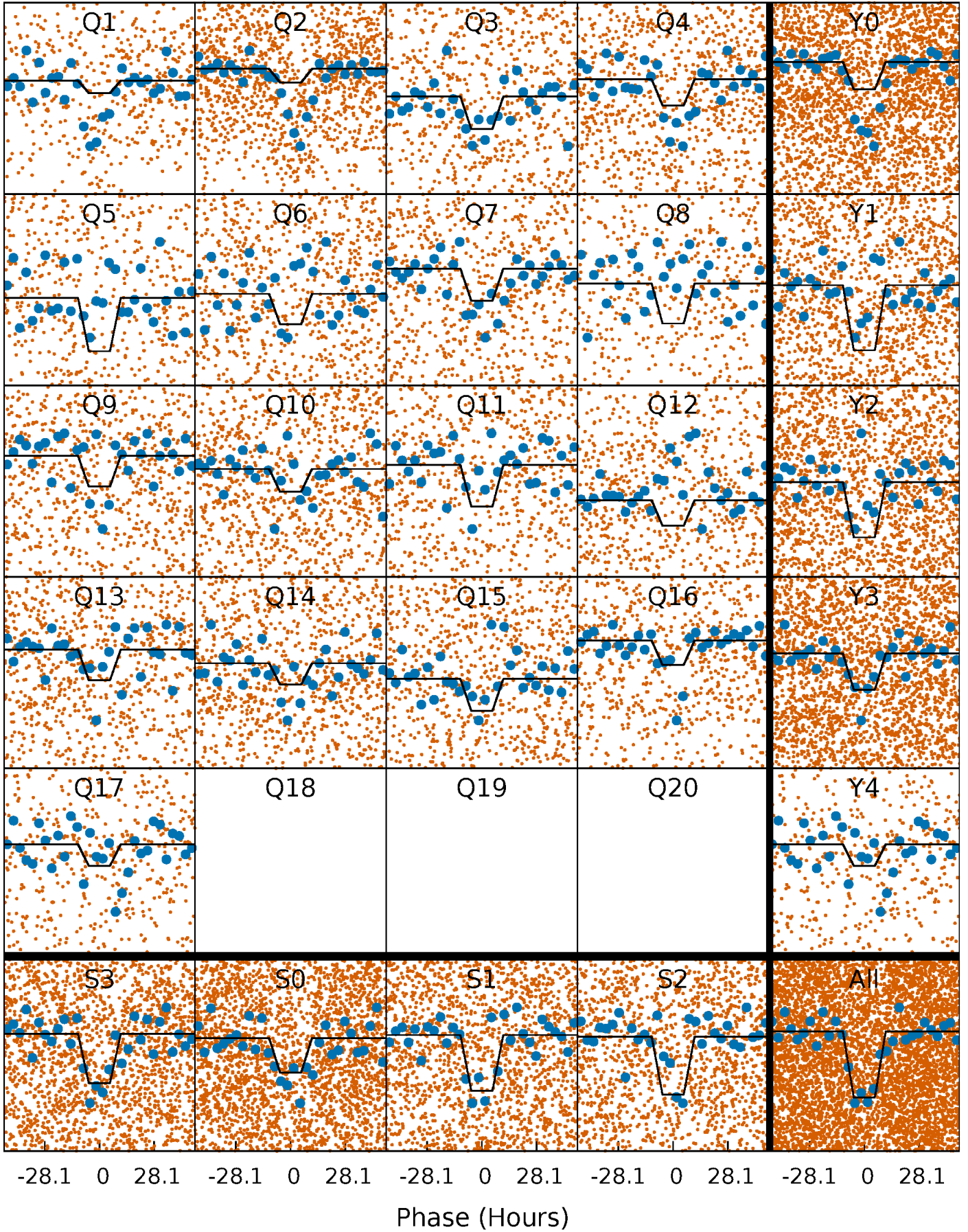
DV Quarter-Phased Transit Curves

TCE 011294453-01 P= 13.745301 Days $T_0=131.855614$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

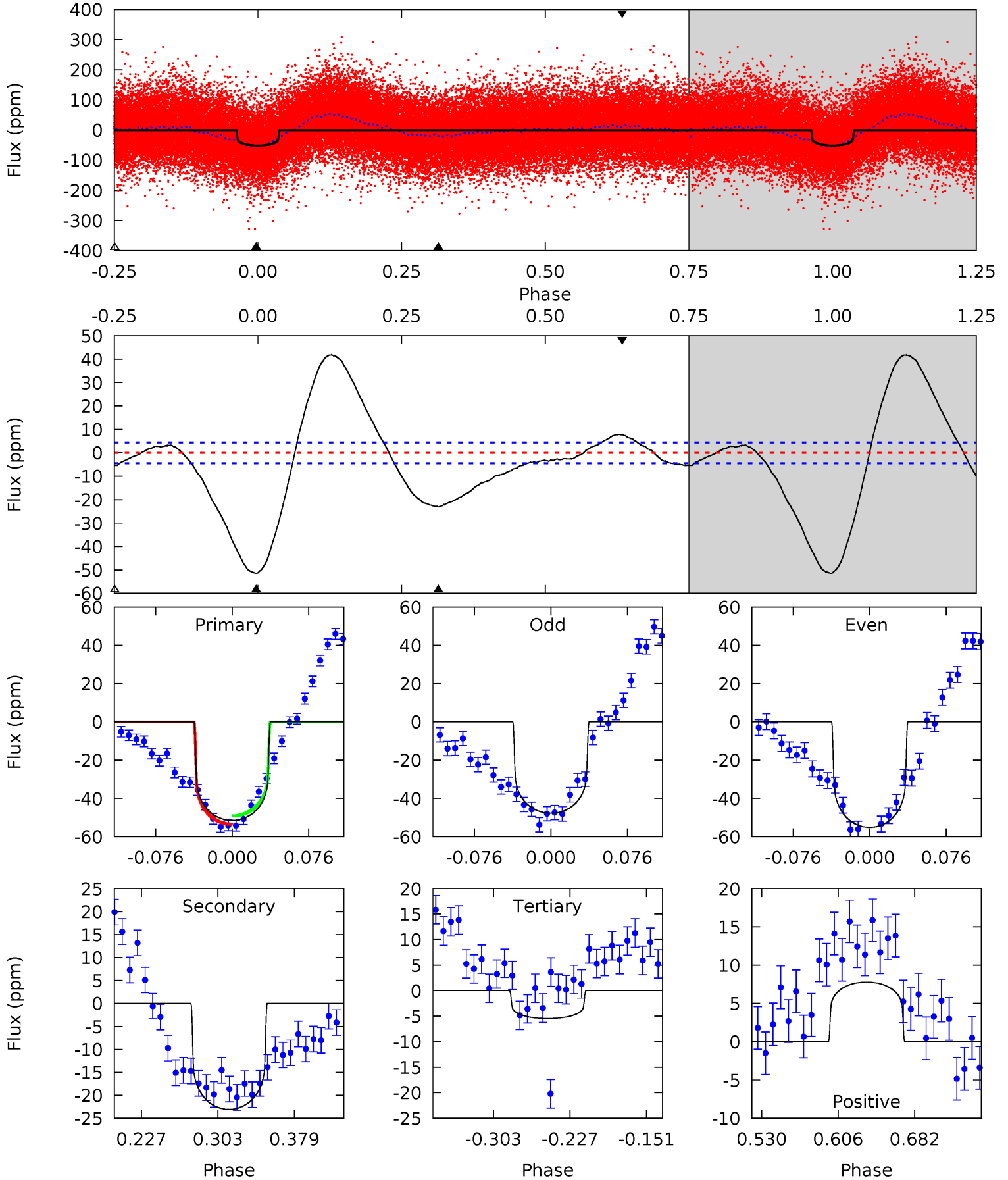
TCE 011294453-01 P= 13.745469 Days $T_0=131.842070$ (BKJD)



DV Model-Shift Uniqueness Test

011294453-01, P = 13.745301 Days, E = 118.110313 Days

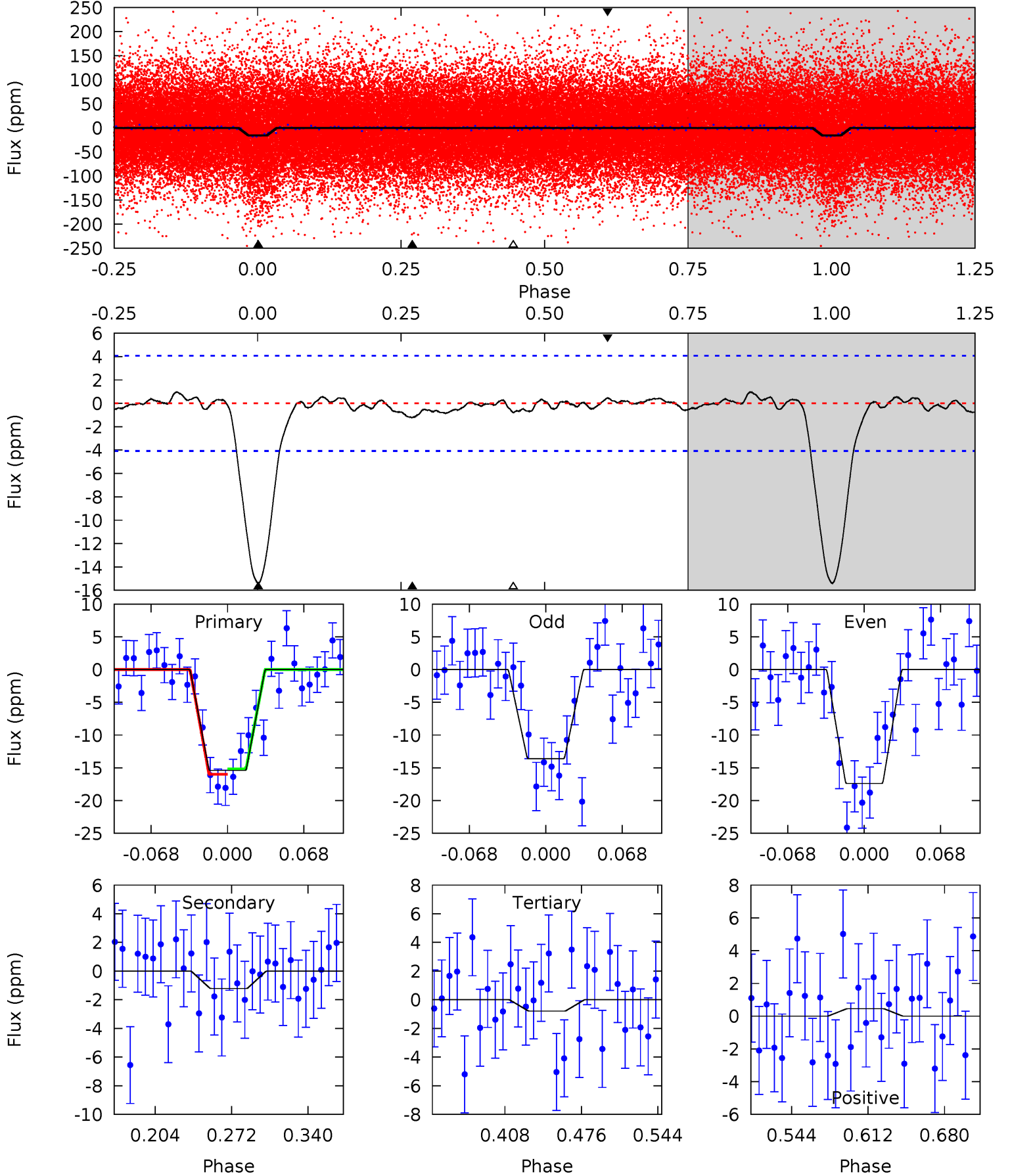
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
53.8	24.1	5.70	8.15	4.62	1.78	14.8	48.1	45.7	18.4	16.0	3.88	0.99	0.45	2.29



Alt Model-Shift Uniqueness Test

011294453-01, P = 13.745469 Days, E = 118.096601 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	1.38	0.90	0.52	4.65	1.82	0.39	16.7	17.0	0.49	0.86	2.17	0.79	0.06	0.46



Stellar Parameters For KIC 011294453

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5948^{+160}_{-177}	$4.449^{+0.070}_{-0.210}$	$-0.060^{+0.250}_{-0.300}$	$0.994^{+0.314}_{-0.125}$	$1.014^{+0.142}_{-0.129}$	$1.453^{+0.505}_{-0.723}$
	+3%/-3%	+2%/-5%	+417%/-500%	+32%/-13%	+14%/-13%	+35%/-50%
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 011294453-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-23 ± 1	$0.61^{+0.10}_{-0.07}$	1114^{+79}_{-57}	5618^{+272}_{-242}	426^{+112}_{-108}
Alt.	-1 ± 1	$0.41^{+0.08}_{-0.06}$	1107^{+81}_{-58}	3642^{+418}_{-694}	46^{+45}_{-35}

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

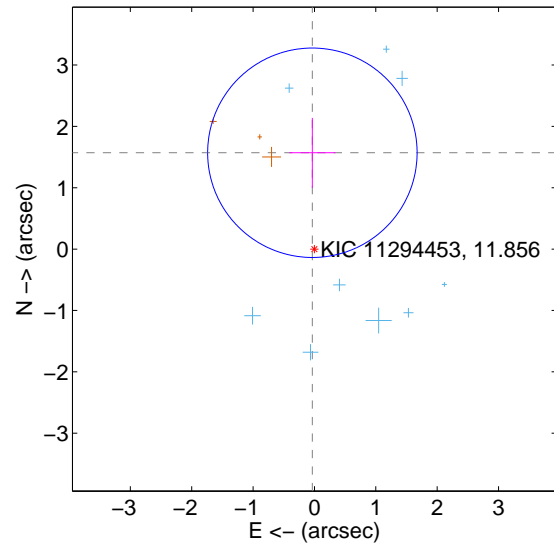
Supplemental centroid analysis for 011294453-01. **Kepler magnitude: 11.86.** Transit SNR 12.17

There are 9 quarters with good PRF difference image offsets

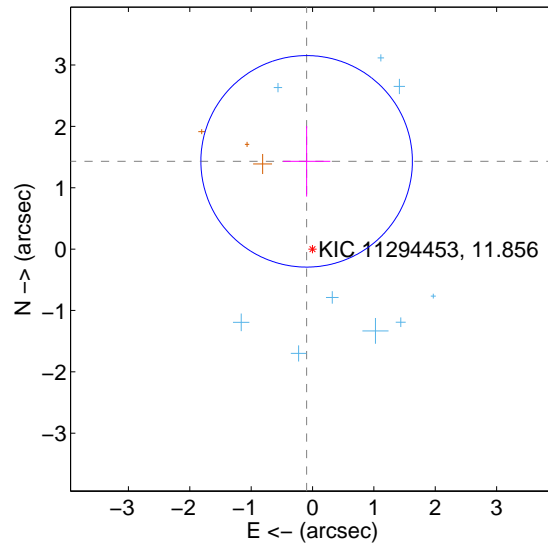
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.571 ± 0.569	2.76	0.034 ± 0.376	1.570 ± 0.569
PRF-fit source offset from KIC position	1.434 ± 0.575	2.50	0.096 ± 0.385	1.430 ± 0.575
photometric centroid source offset	0.86 ± 0.81	1.07	0.33 ± 0.66	-0.80 ± 0.83

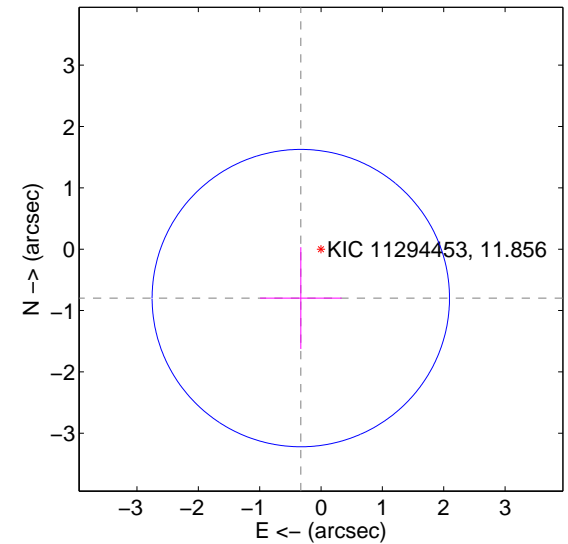
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

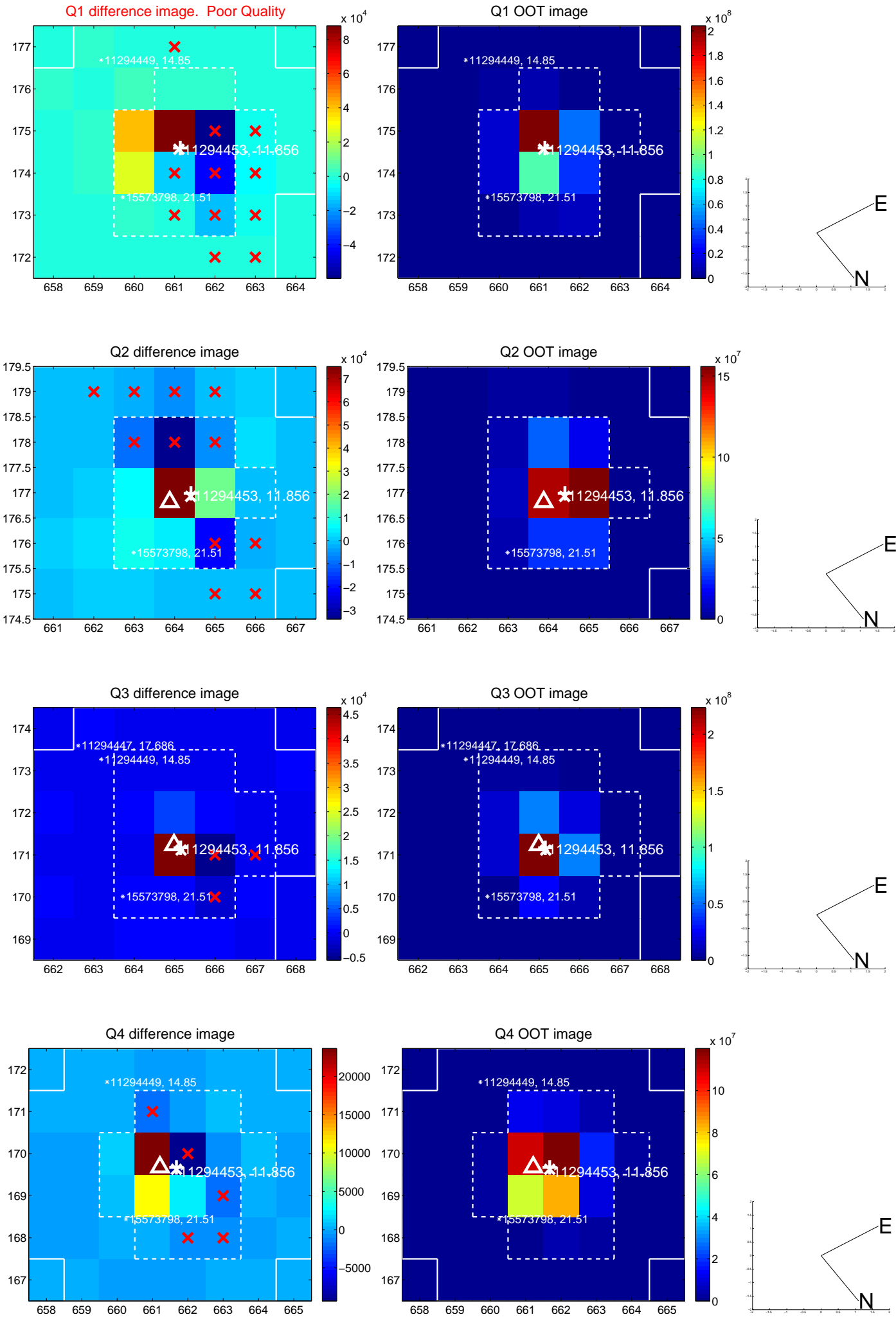


offset from photometric centroids

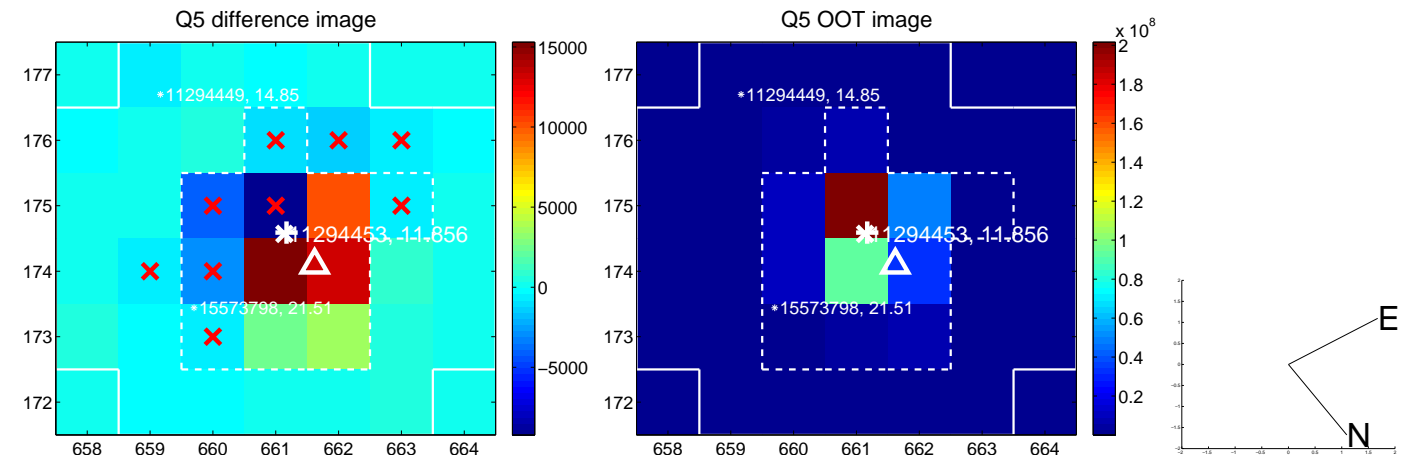


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

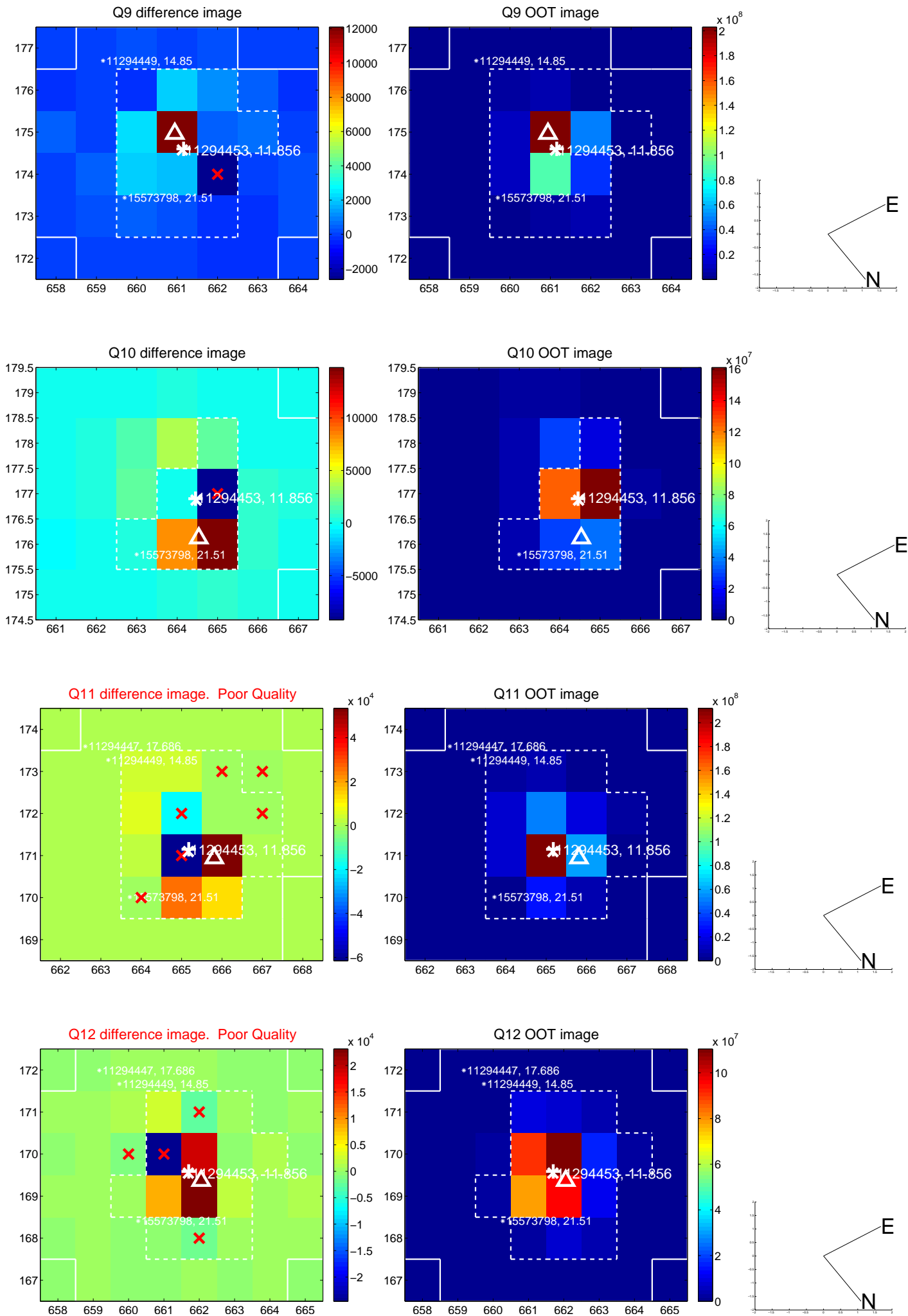
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



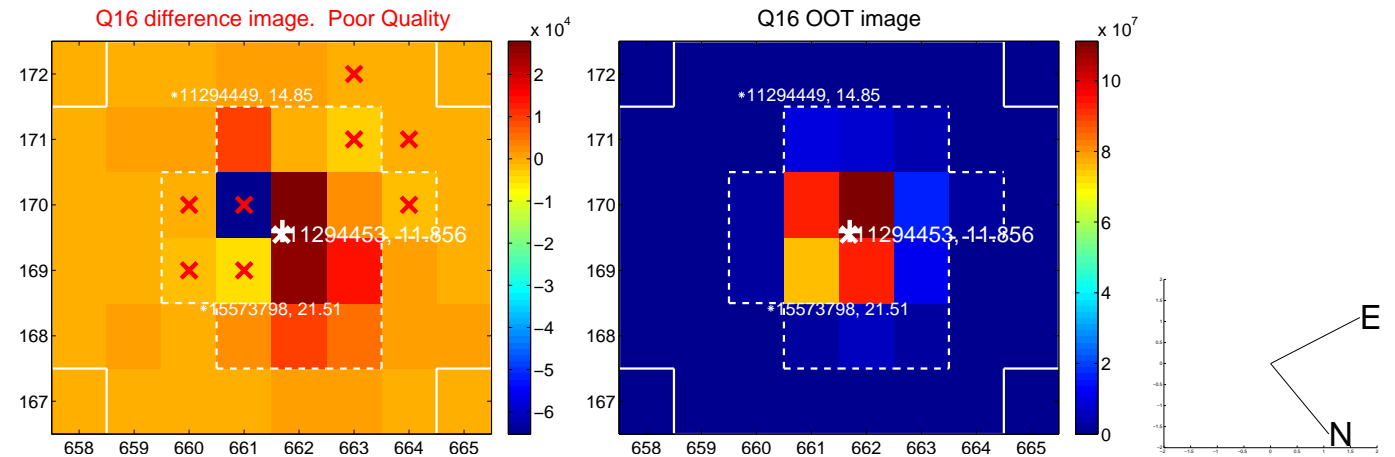
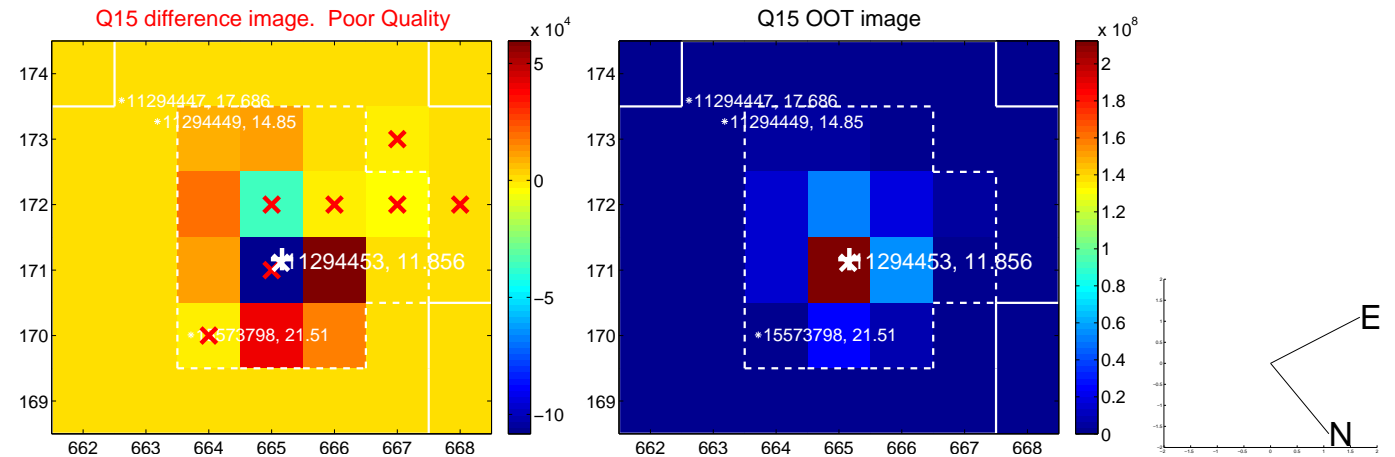
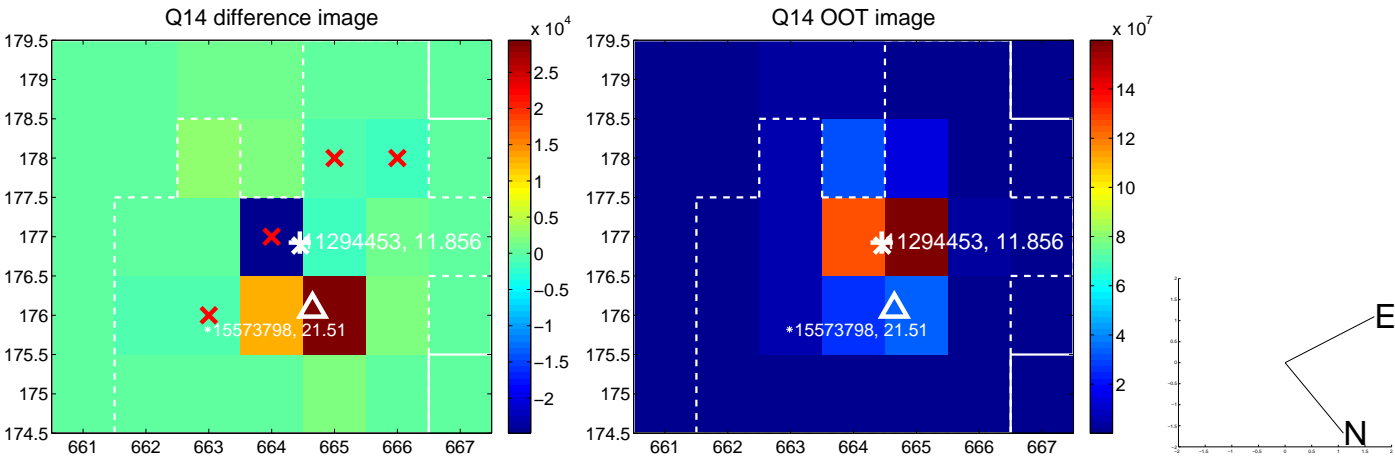
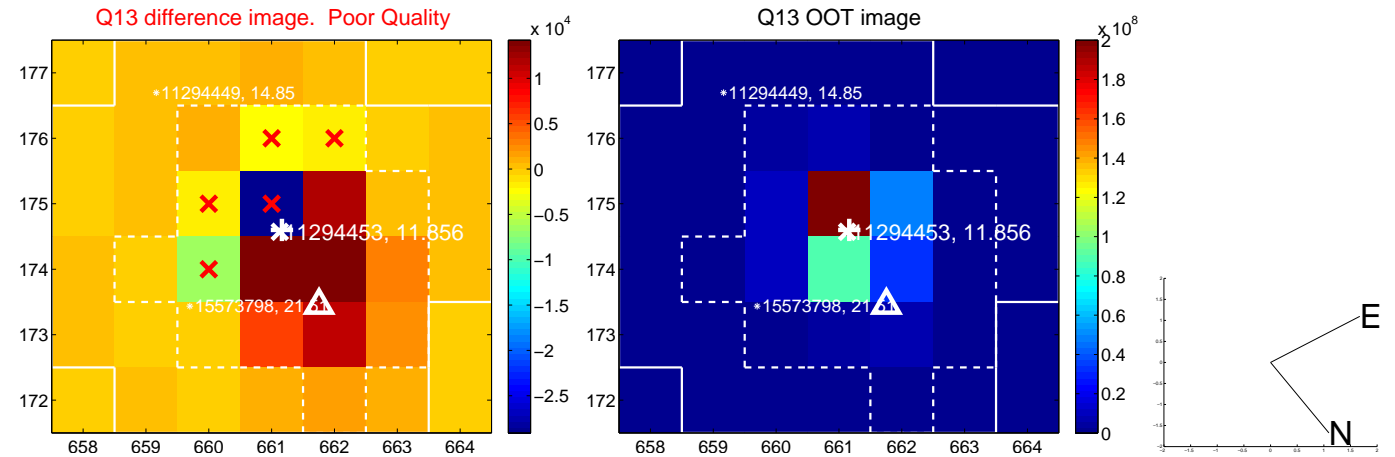
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



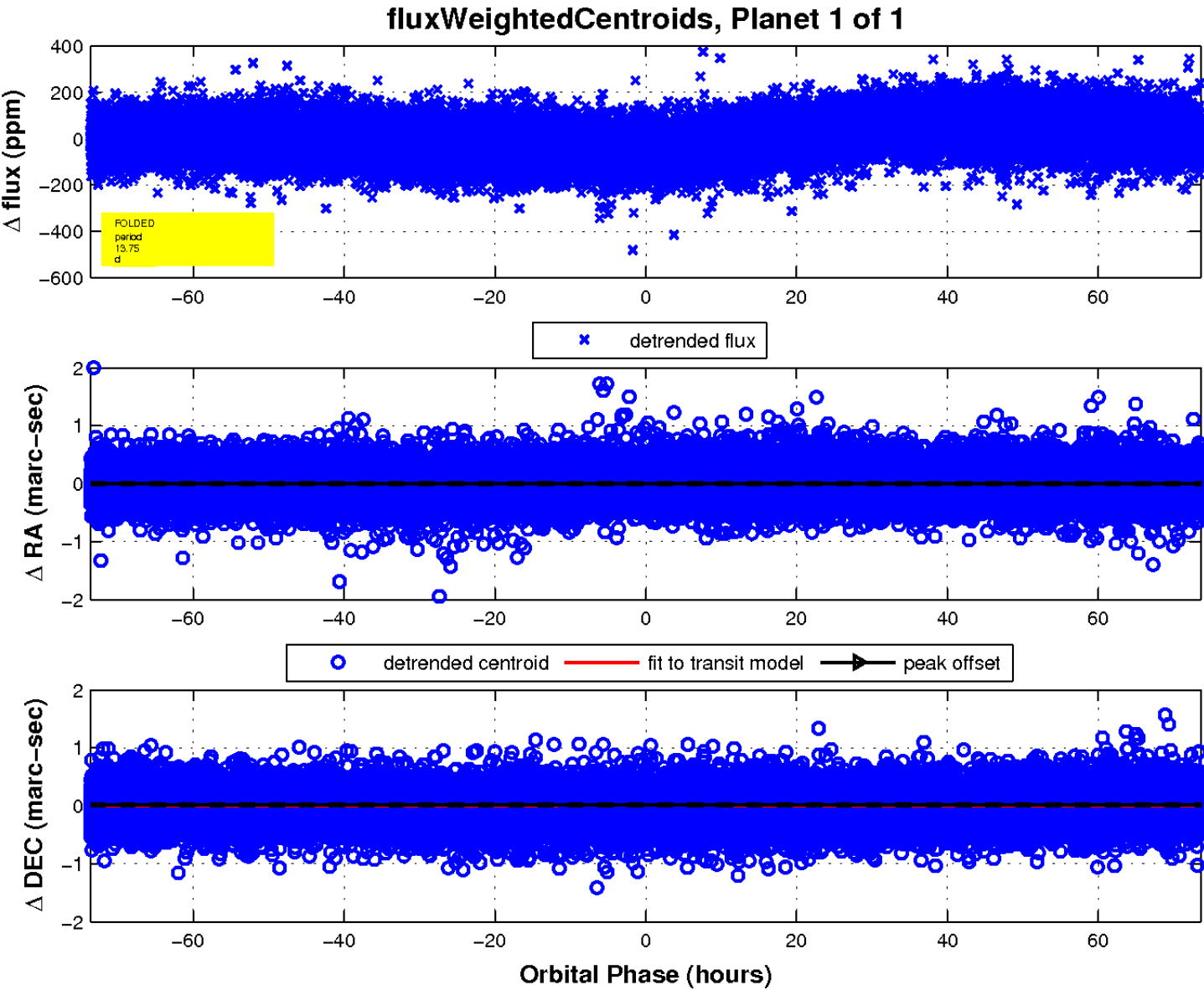
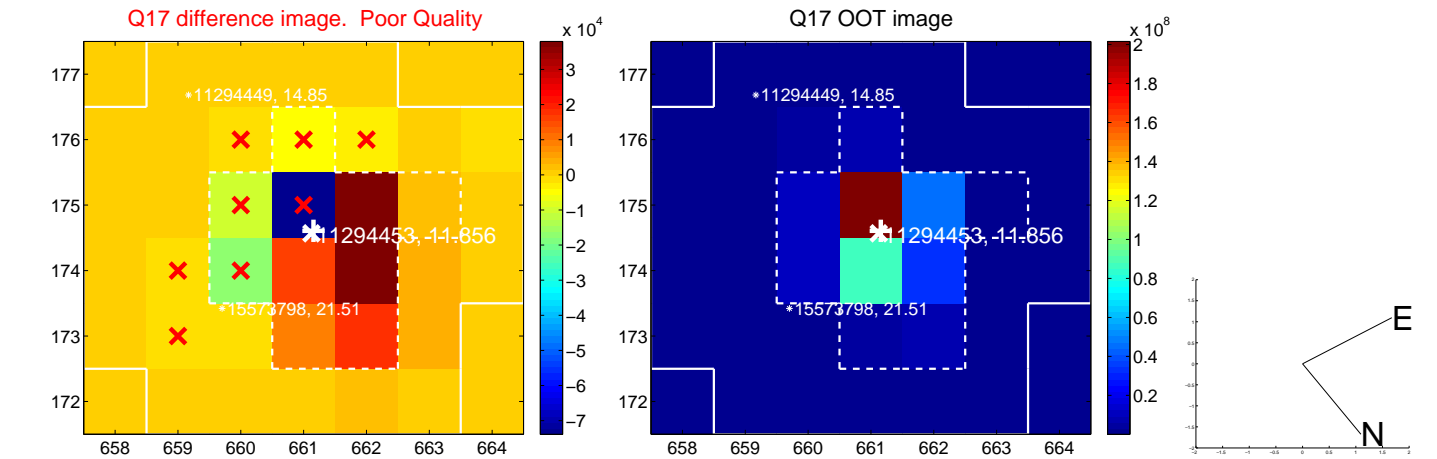
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UKIRT Image

Declination

