

KIC 004646848

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})
004646848-01	OBS	No	0.515798	131.853858	39.8	4.285	89.8	17.1	1.45	5907	0.95	14327.42

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004646848-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV

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

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

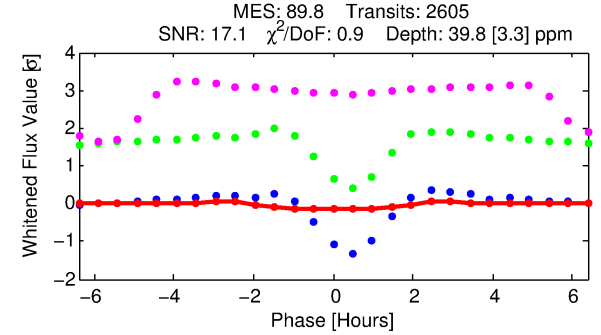
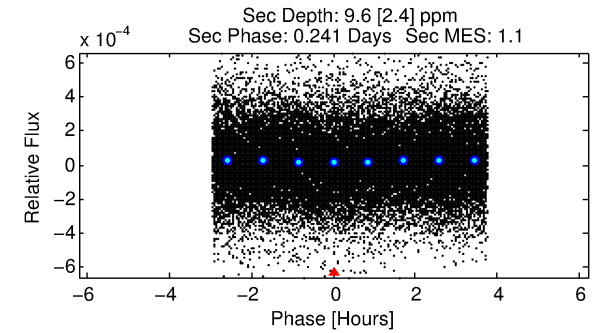
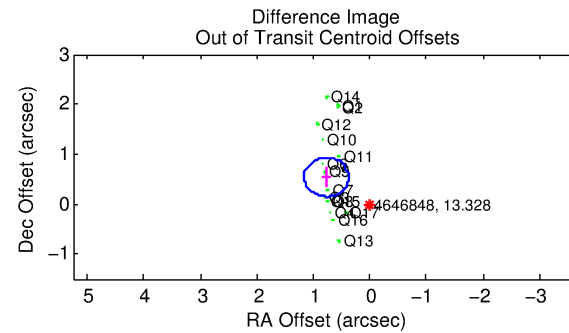
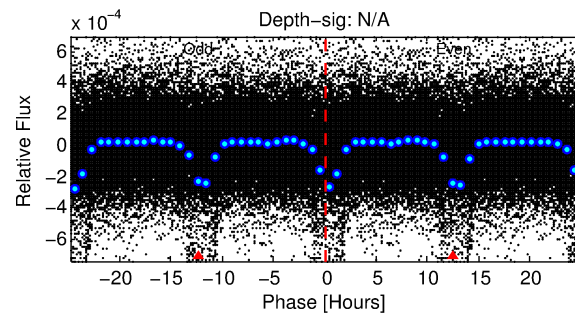
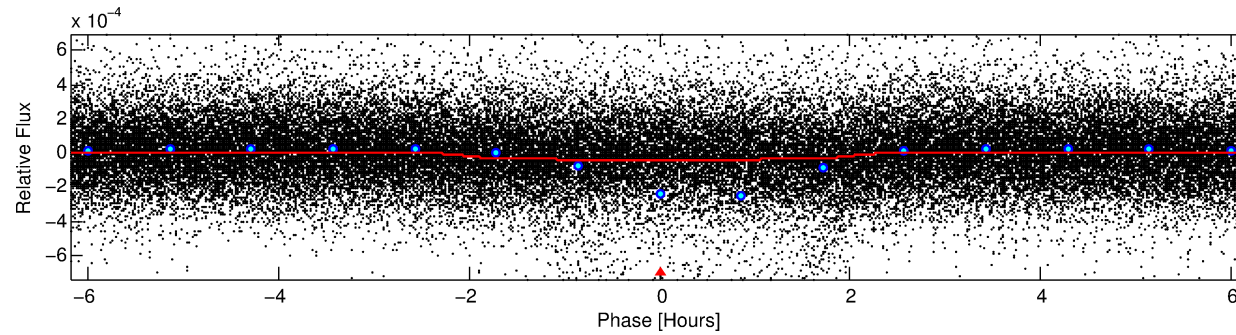
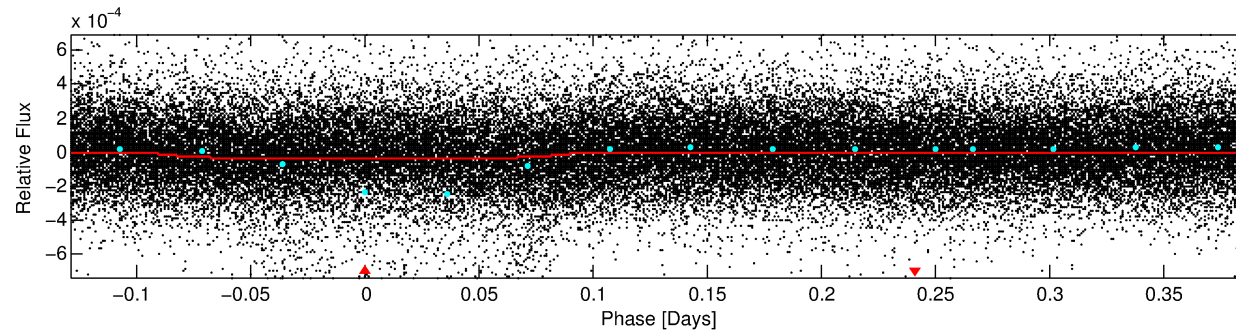
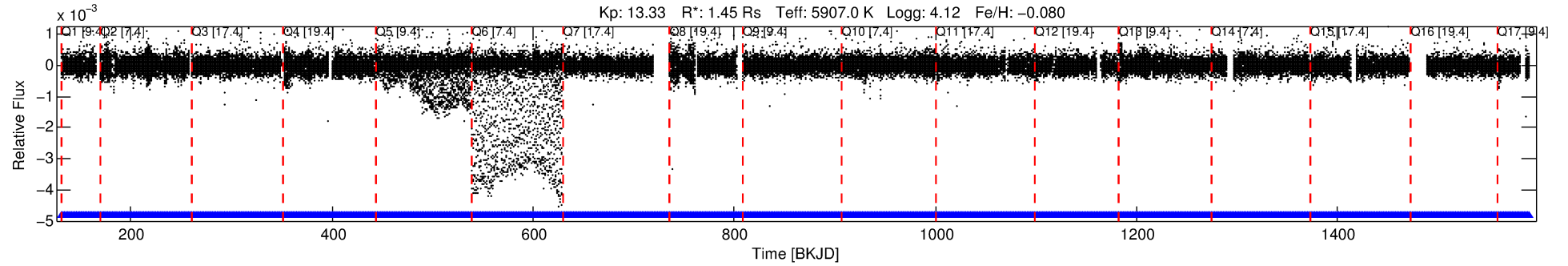
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004646848-01

No Significant Match Found

DV One-Page Summary

KIC: 4646848 Candidate: 1 of 1 Period: 0.516 d



DV Fit Results:

Period = 0.51580 [0.00001] d
Epoch = 131.8539 [0.0017] BKJD
Rp/R* = 0.0060 [0.0024]
a/R* = 1.09 [0.33]
b = 0.60 [2.07]
Seff = 14327.42 [4712.17]
Teq = 2790 [229] K
Rp = 0.95 [0.44] Re
a = 0.0127 [0.0026] AU
Ag = 0.93 [0.85] [-0.08σ]
Teffp = 4237 [901] K [1.56σ]

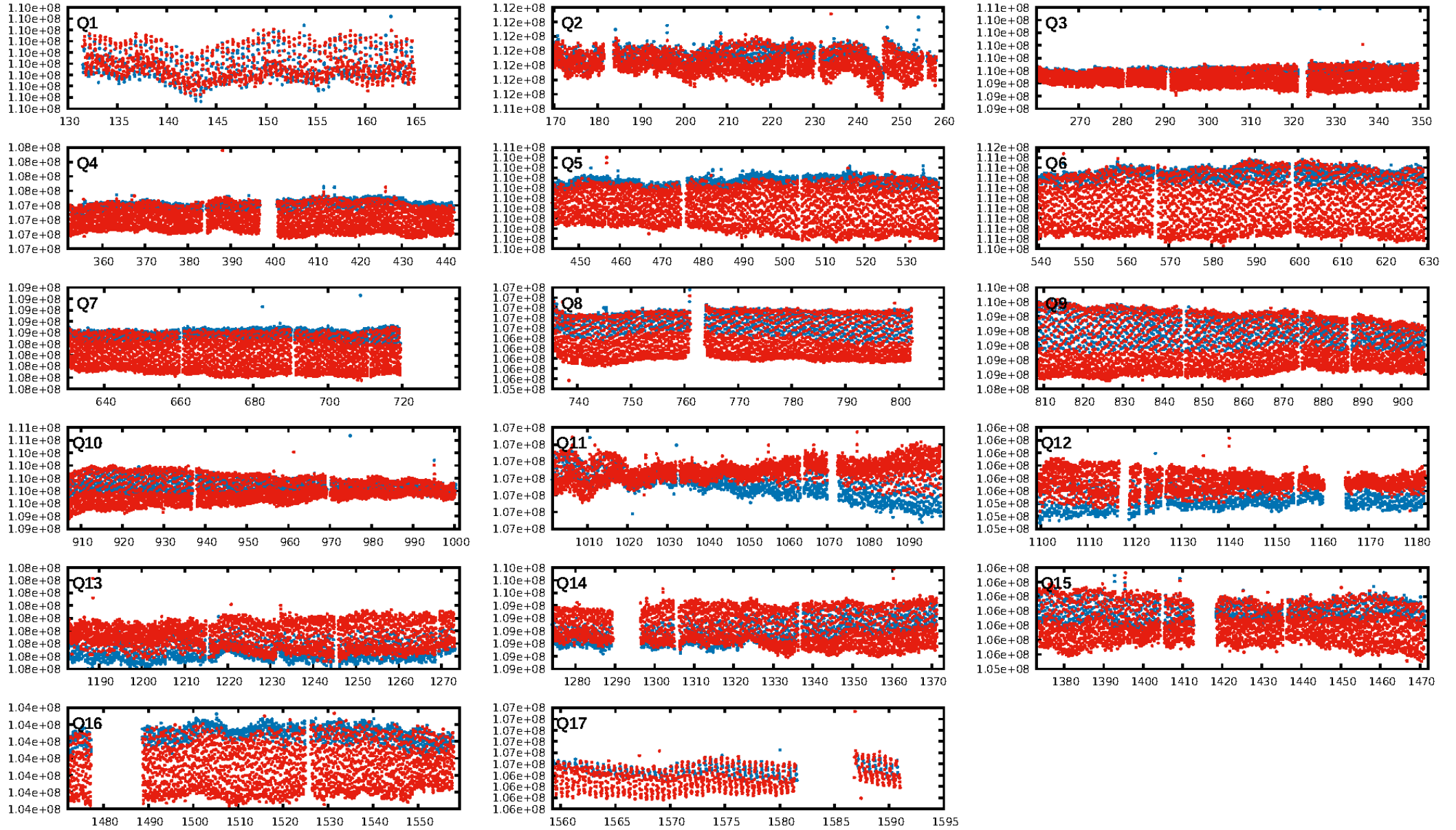
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [2488/2488]
GhostDiagnostic-chr: 0.8505
Centroid-sig: 43.1%
Centroid-so: 0.360 arcsec [0.94σ]
OotOffset-rm: 0.941 arcsec [7.21σ]
KicOffset-rm: 0.900 arcsec [6.53σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.82 [14/17]
DiffImageOverlap-fno: 1.00 [17/17]

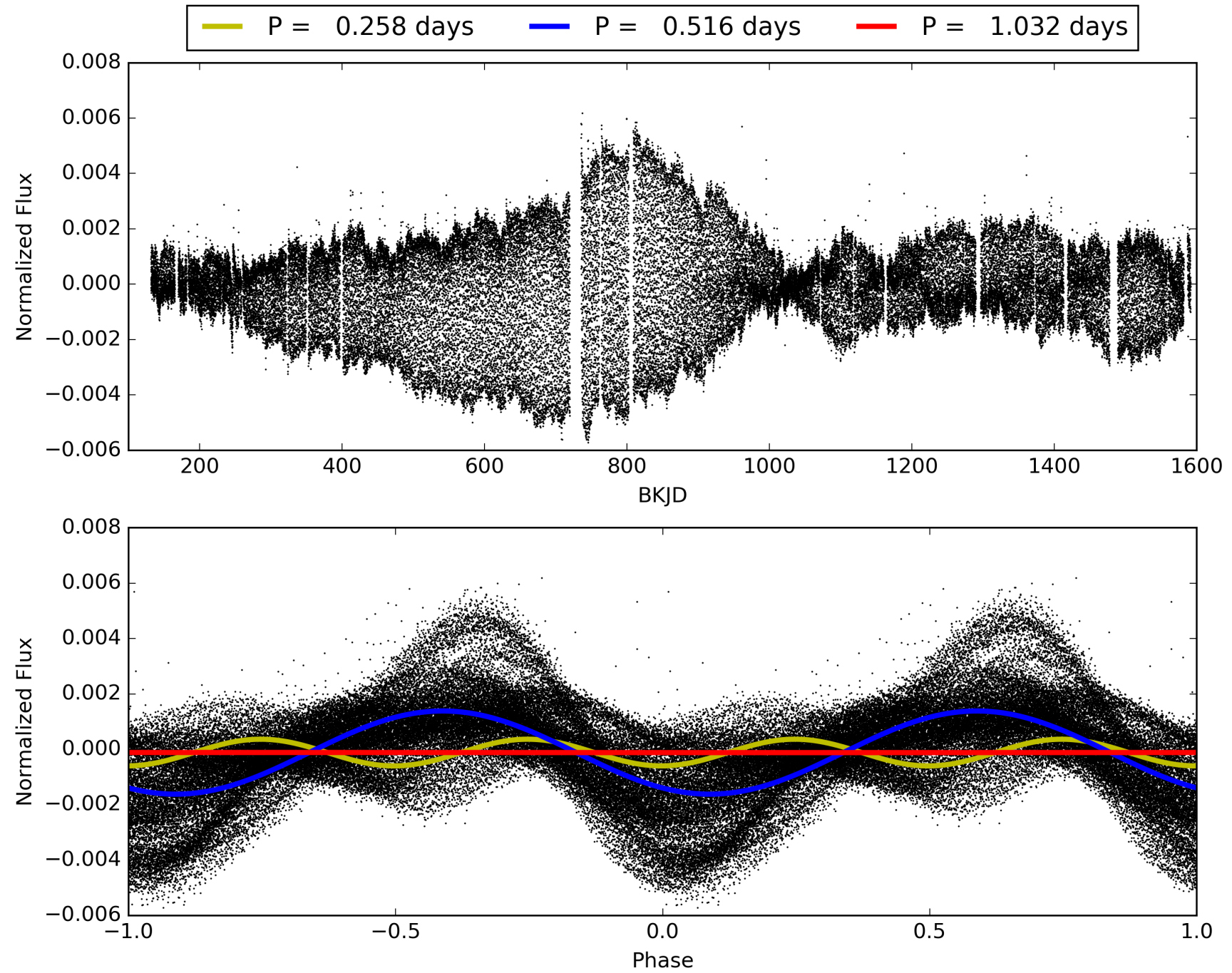
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 01:50:06 Z

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

TCE 004646848-01, PDC Light Curves

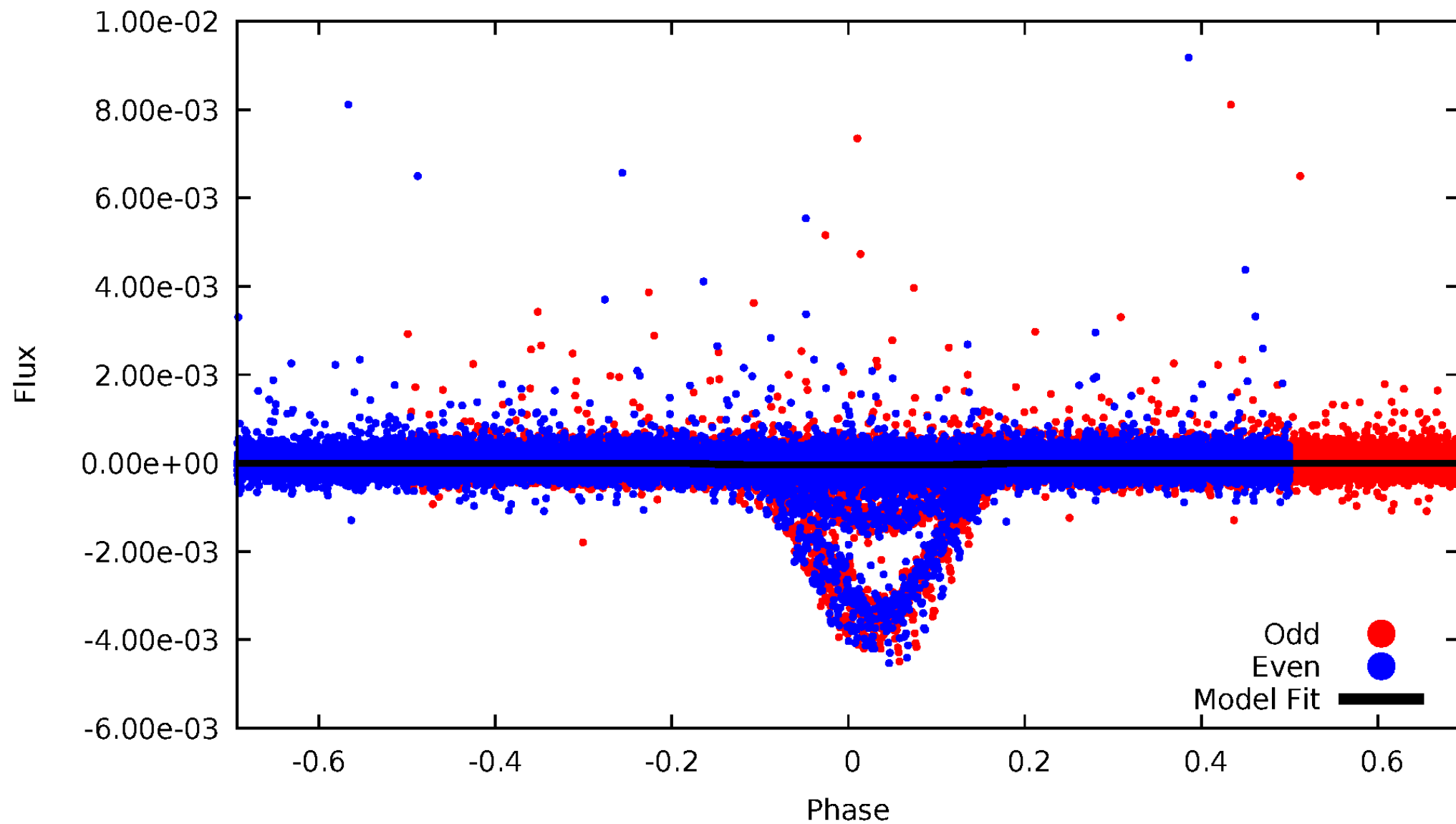


TCE 004646848-01



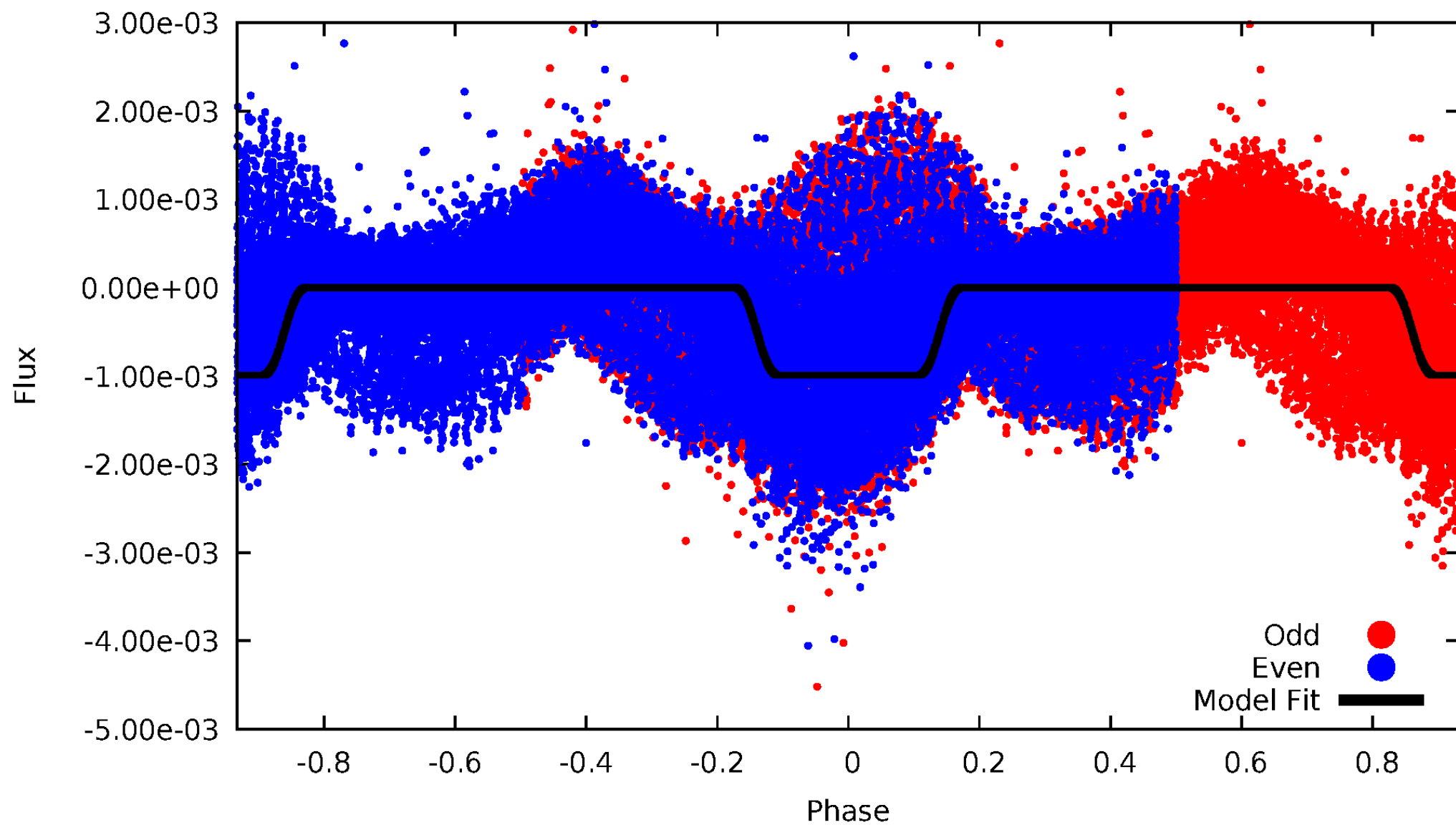
DV Odd/Even

TCE 004646848-01

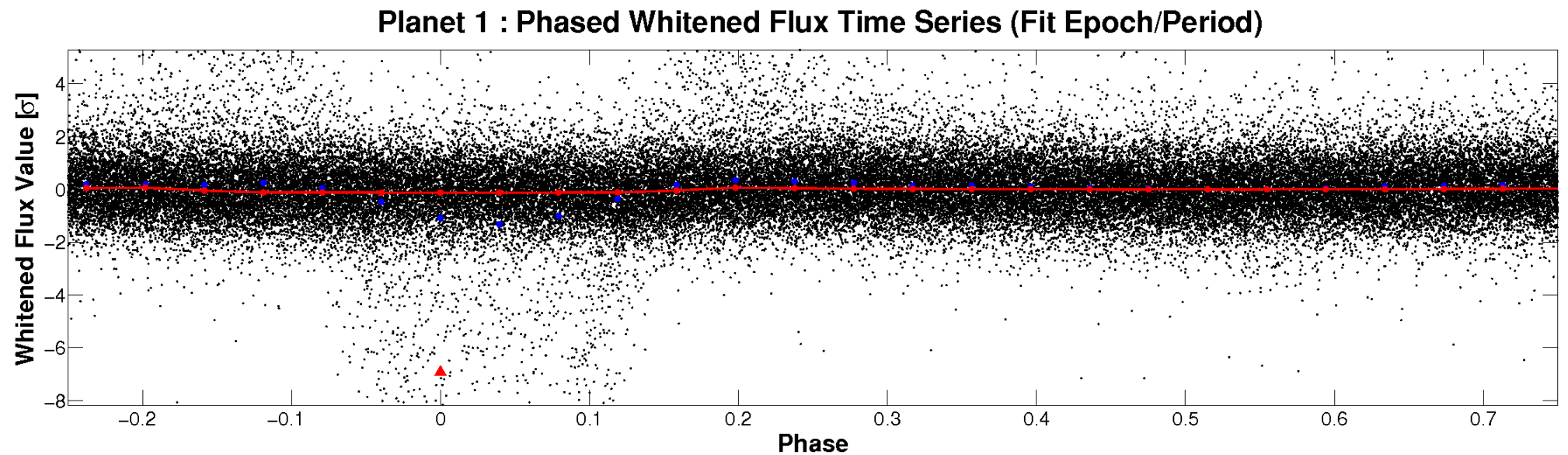
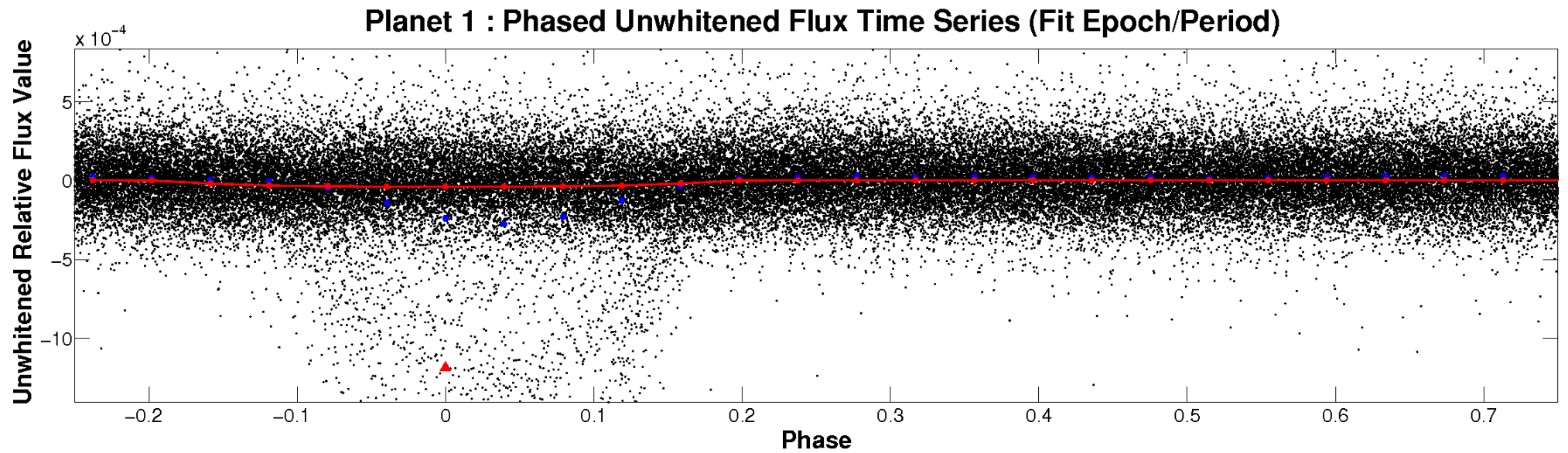


ALT Odd/Even

TCE 004646848-01

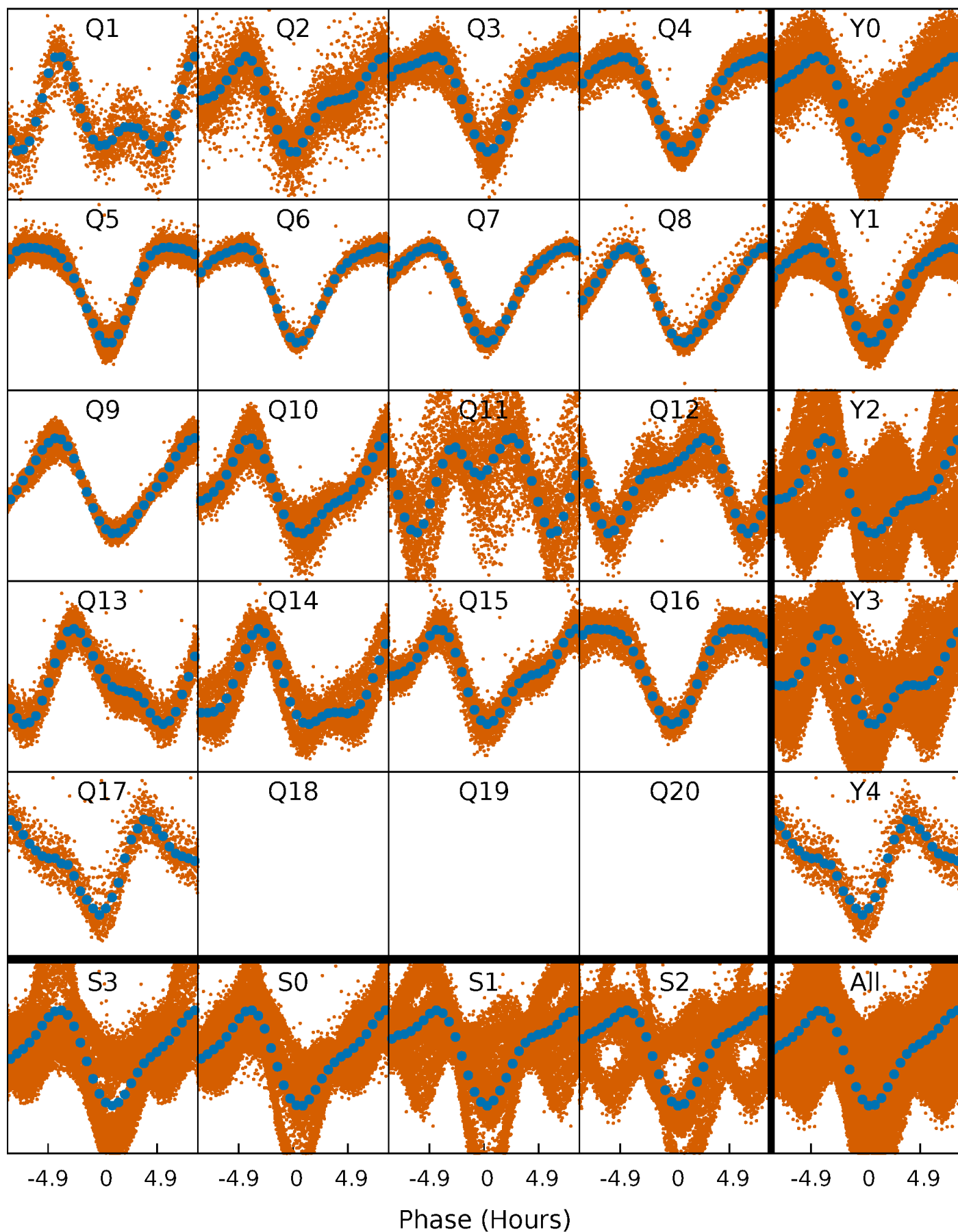


Non-Whitened Vs. Whitened Light Curve



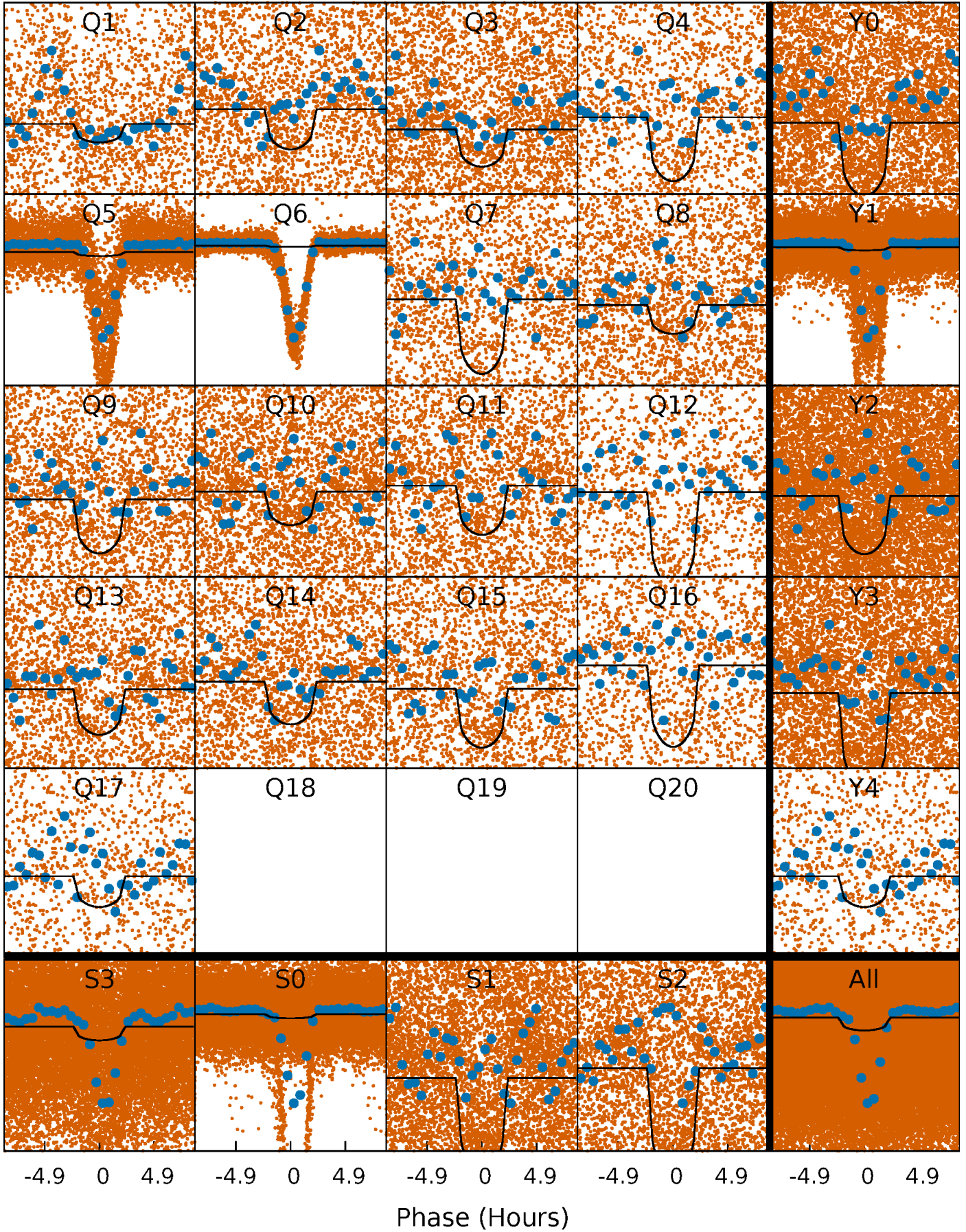
PDC Quarter-Phased Transit Curves

TCE 004646848-01 P= 0.515798 Days $T_0=131.853858$ (BKJD)



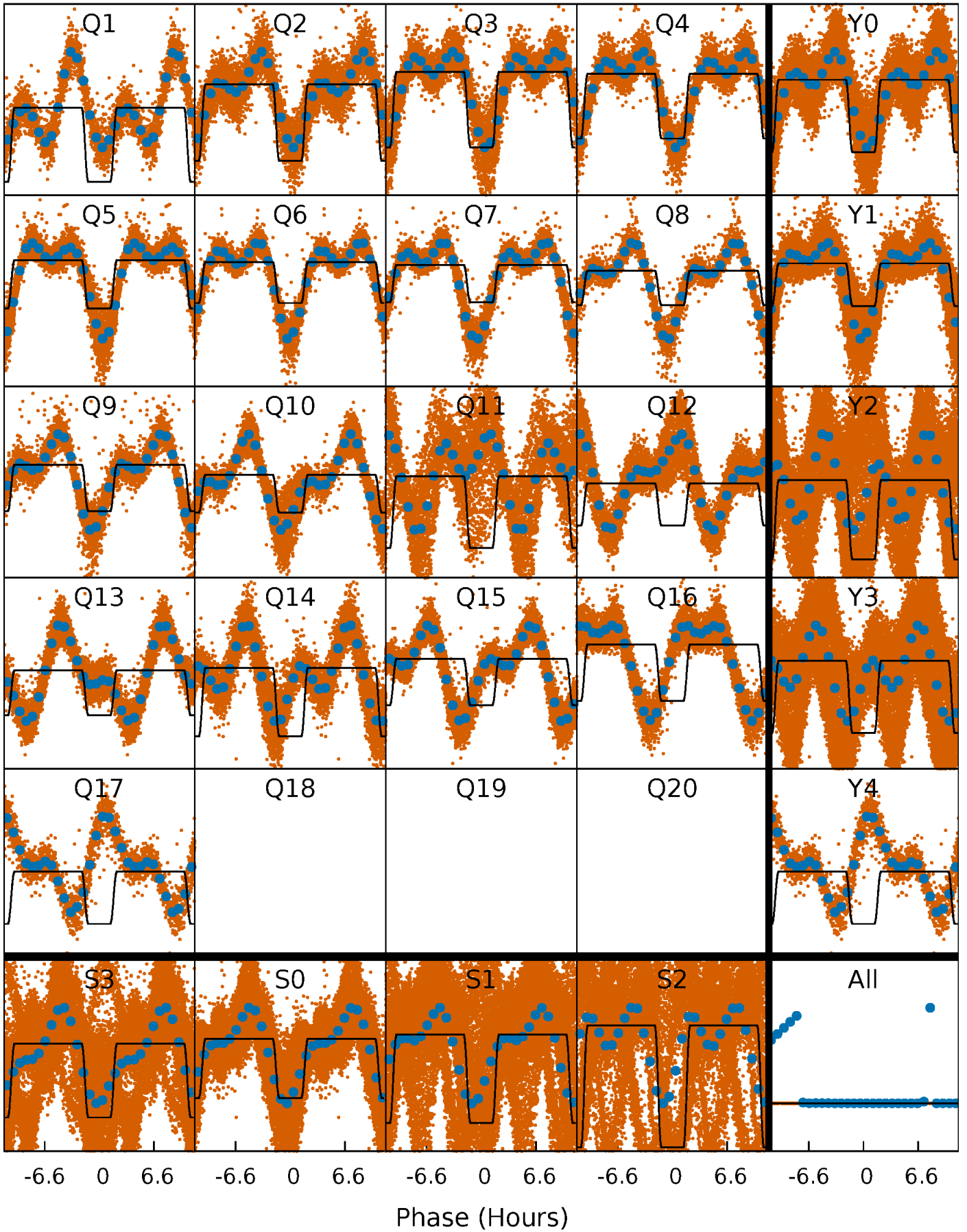
DV Quarter-Phased Transit Curves

TCE 004646848-01 P= 0.515798 Days $T_0=131.853858$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

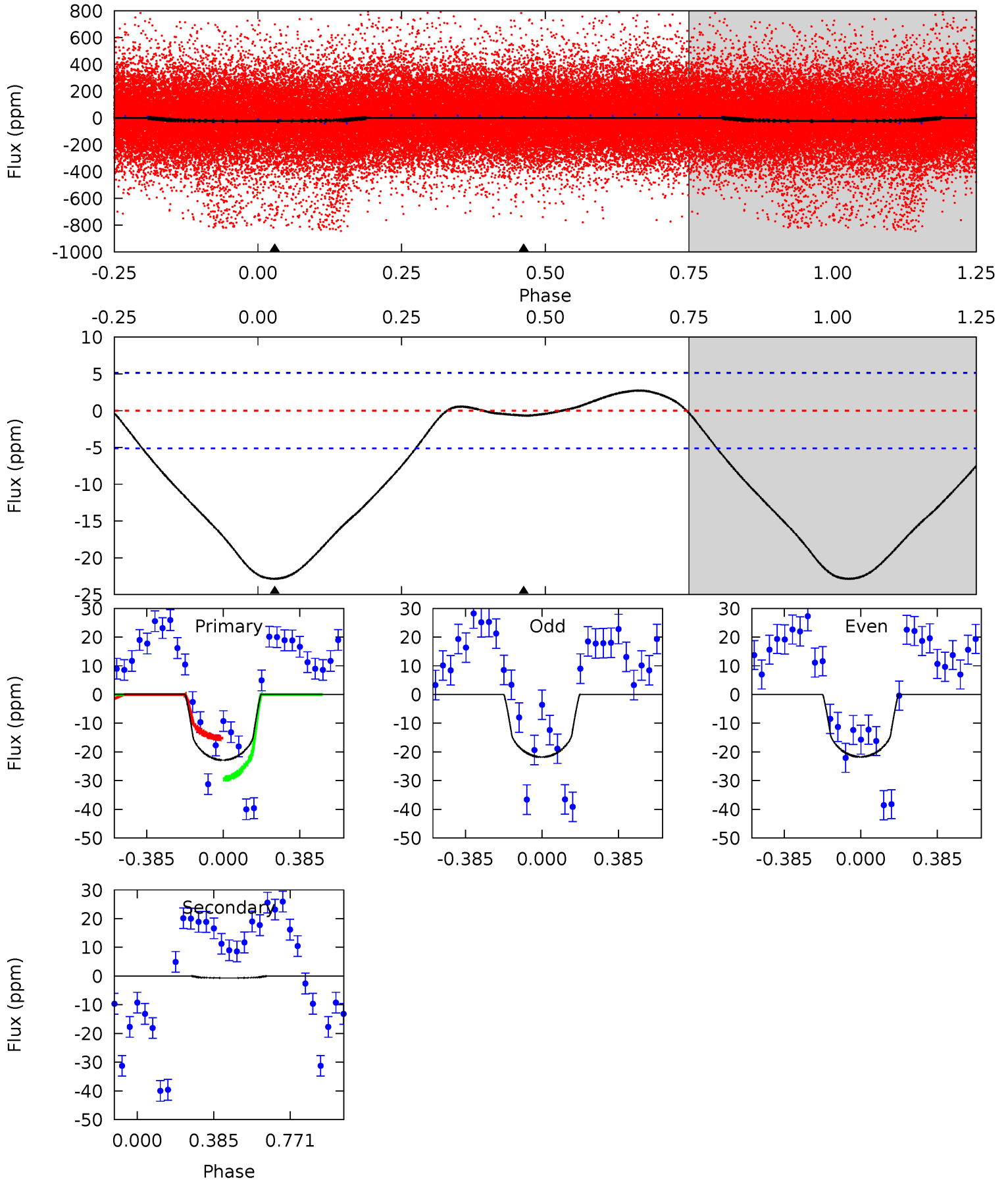
TCE 004646848-01 P= 0.515852 Days $T_0=131.820281$ (BKJD)



DV Model-Shift Uniqueness Test

004646848-01, P = 0.515798 Days, E = 131.338060 Days

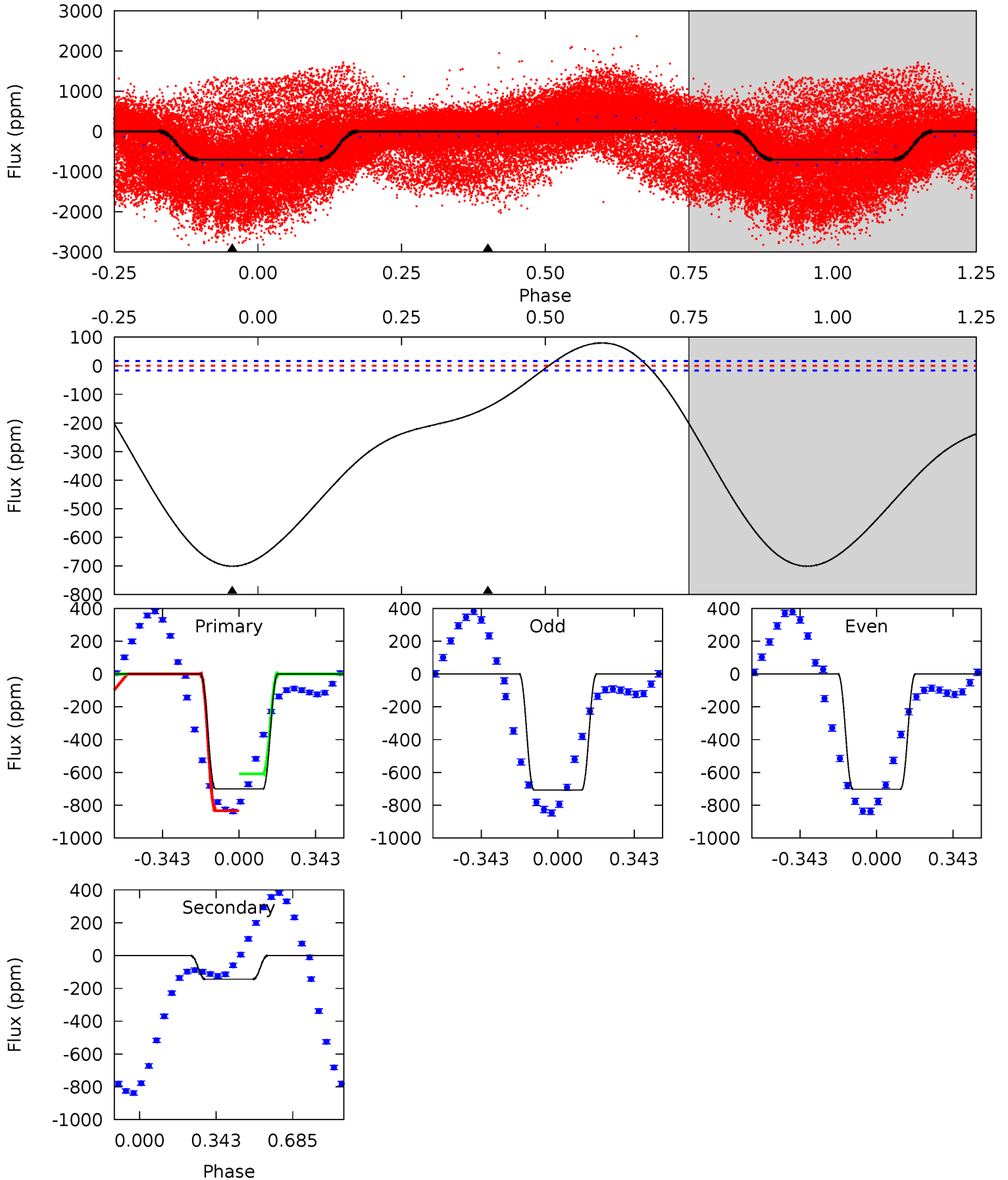
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.1	0.56	0	0	4.27	0.87	1.81	19.1	19.1	0.56	0.56	0.02	7.41	0.11	5.57



Alt Model-Shift Uniqueness Test

004646848-01, P = 0.515852 Days, E = 131.304429 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
179.6	37.0	0	0	4.30	0.95	15.5	179.6	179.6	37.0	37.0	0.62	0.99	0.10	27.4



Stellar Parameters For KIC 004646848

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5907^{+79}_{-79}	$4.122^{+0.188}_{-0.101}$	$-0.080^{+0.150}_{-0.150}$	$1.451^{+0.242}_{-0.323}$	$1.018^{+0.092}_{-0.075}$	$0.469^{+0.461}_{-0.144}$
	+1%/-1%	+5%/-2%	+188%/-188%	+17%/-22%	+9%/-7%	+98%/-31%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 004646848-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1 ± 1	$0.91^{+0.45}_{-0.37}$	3867^{+193}_{-225}	-3469^{+862}_{-283}	$0.057^{+0.211}_{-0.109}$
Alt.	-144 ± 4	$4.92^{+0.69}_{-0.63}$	3880^{+173}_{-219}	3461^{+222}_{-283}	$0.528^{+0.158}_{-0.113}$

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

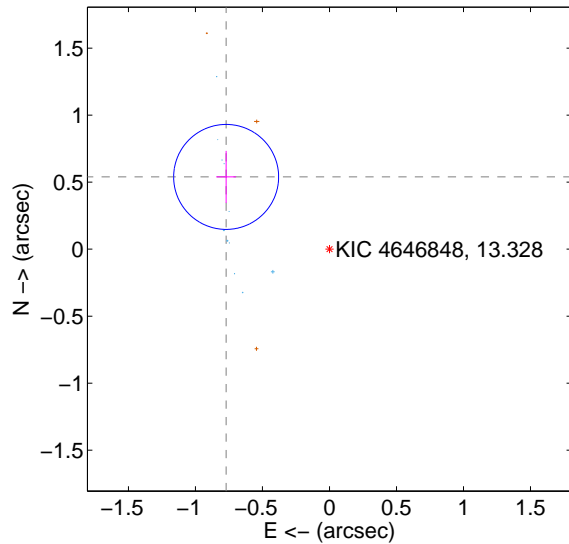
Supplemental centroid analysis for 004646848-01. Kepler magnitude: 13.33. Transit SNR 17.06

There are 14 quarters with good PRF difference image offsets

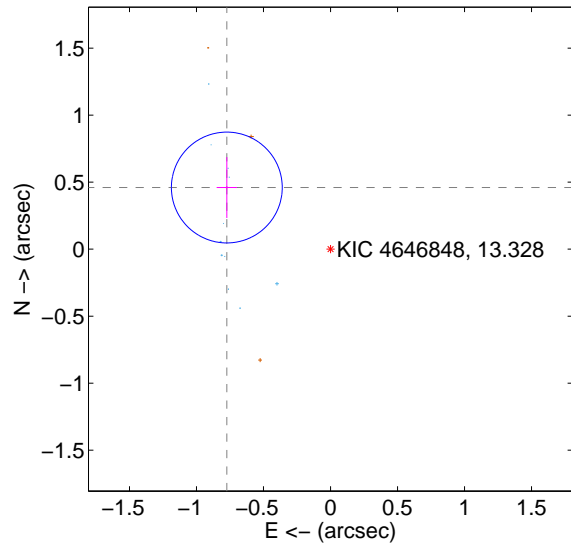
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.941 ± 0.131	7.21	0.771 ± 0.074	0.539 ± 0.195
PRF-fit source offset from KIC position	0.900 ± 0.138	6.53	0.774 ± 0.076	0.460 ± 0.227
photometric centroid source offset	0.36 ± 0.38	0.94	0.35 ± 0.38	0.08 ± 0.35

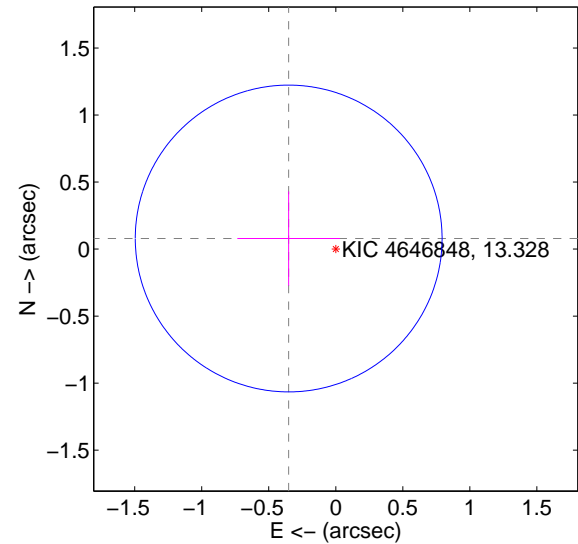
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

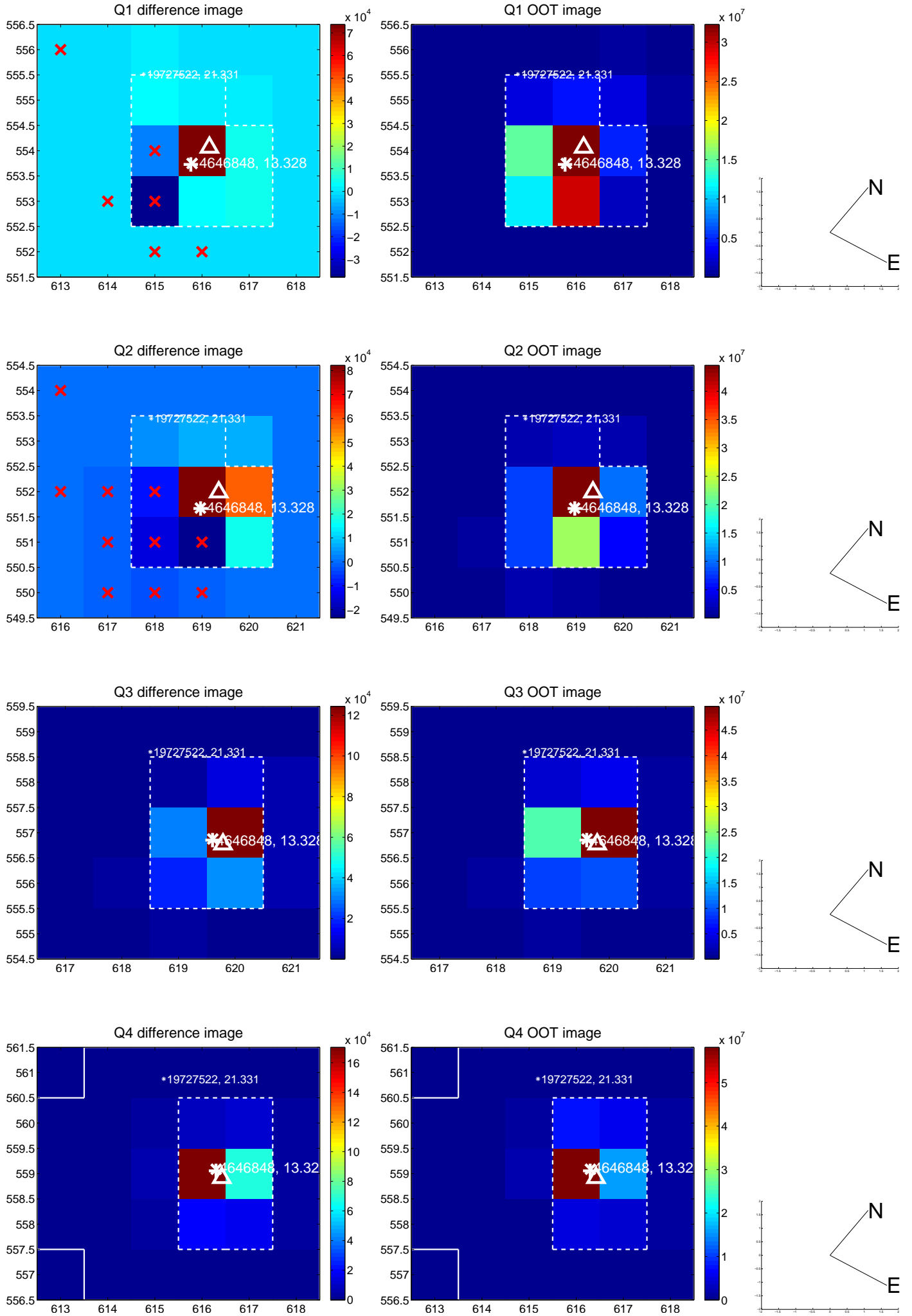


offset from photometric centroids

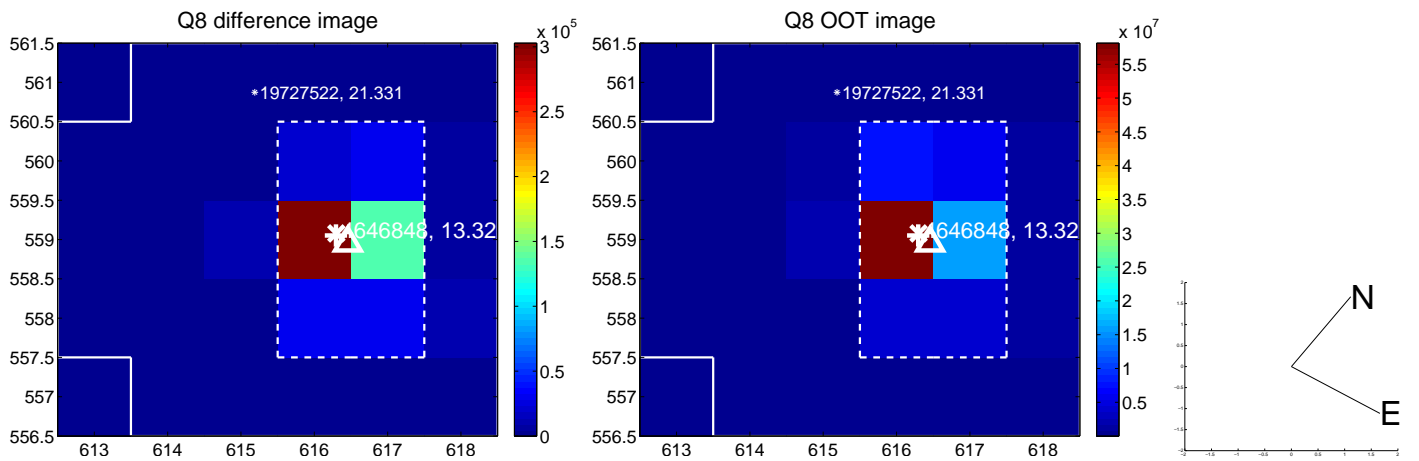
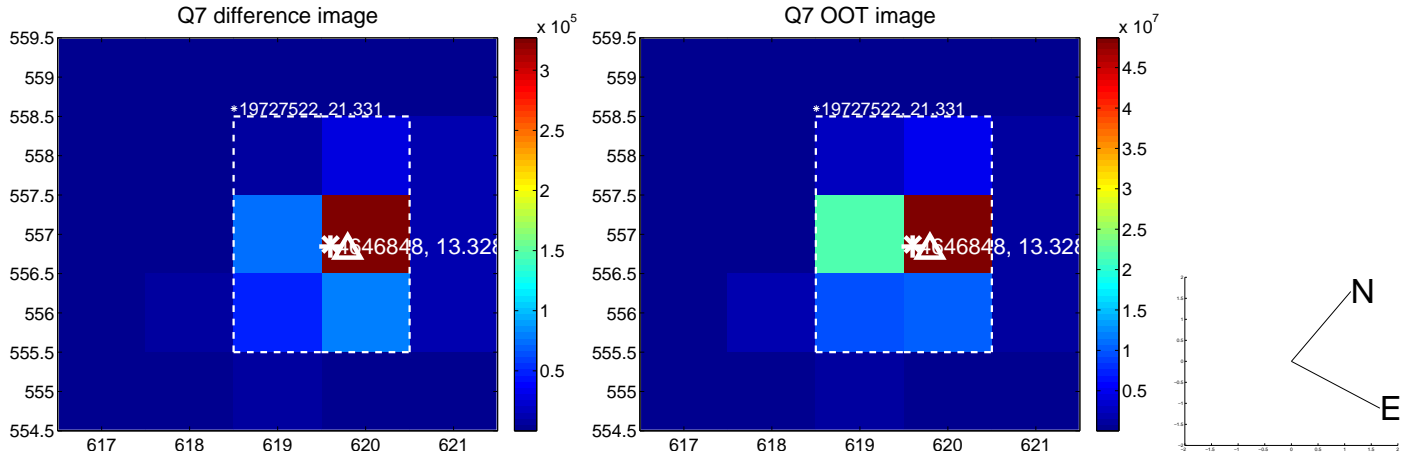
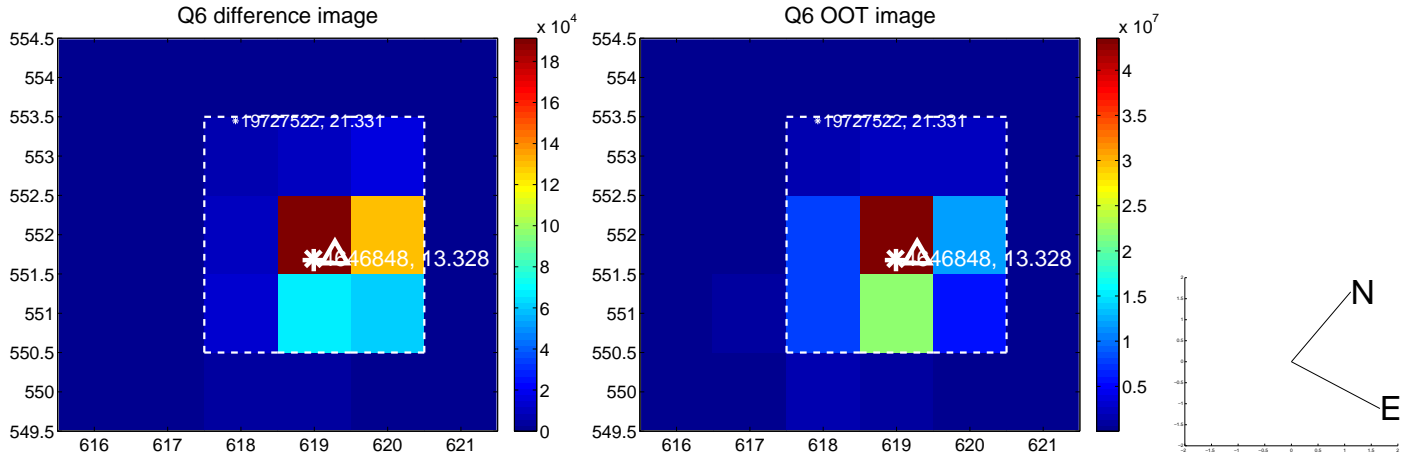
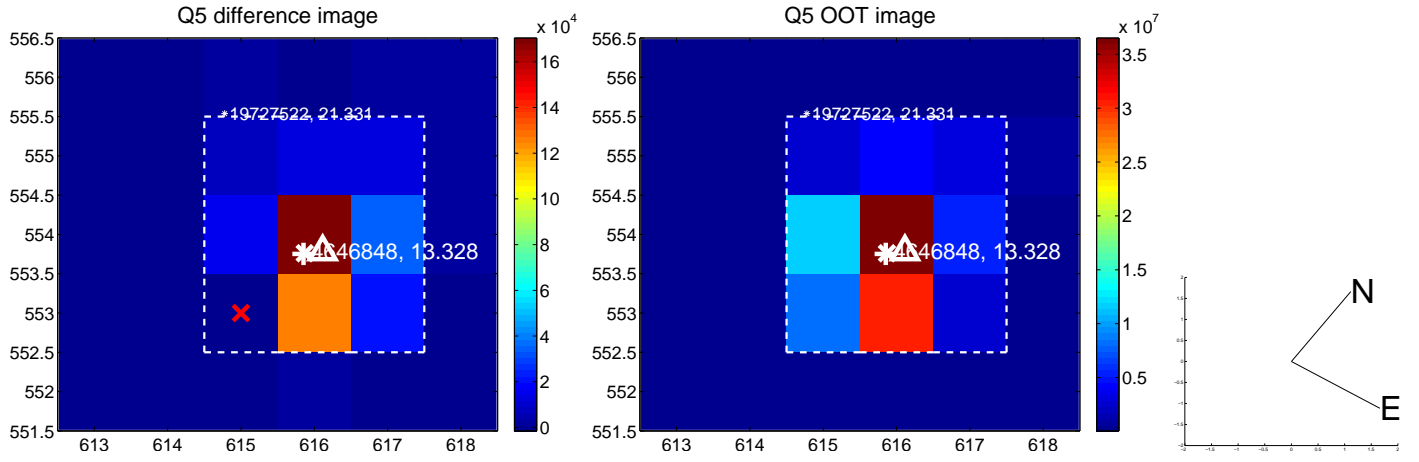


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

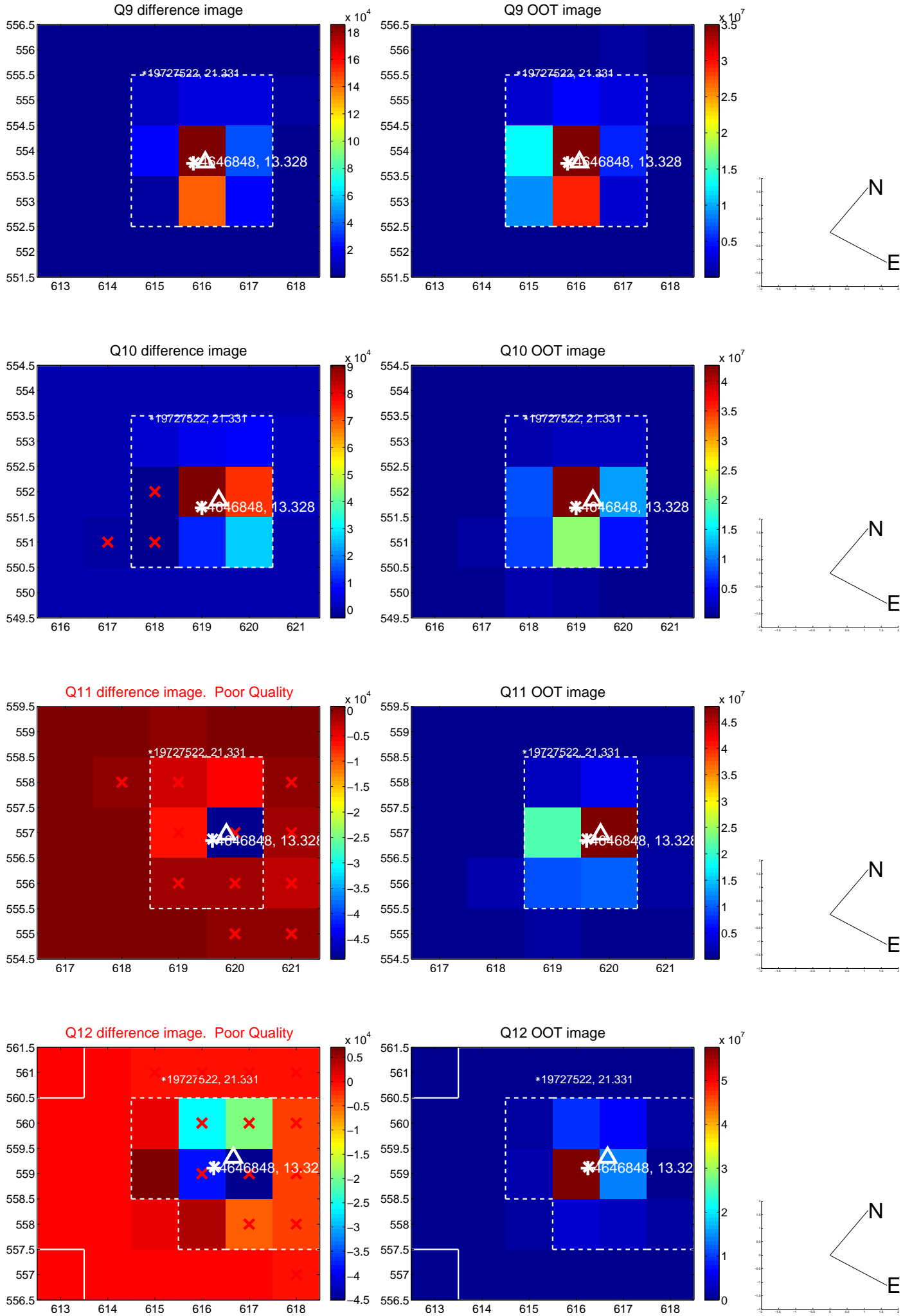
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



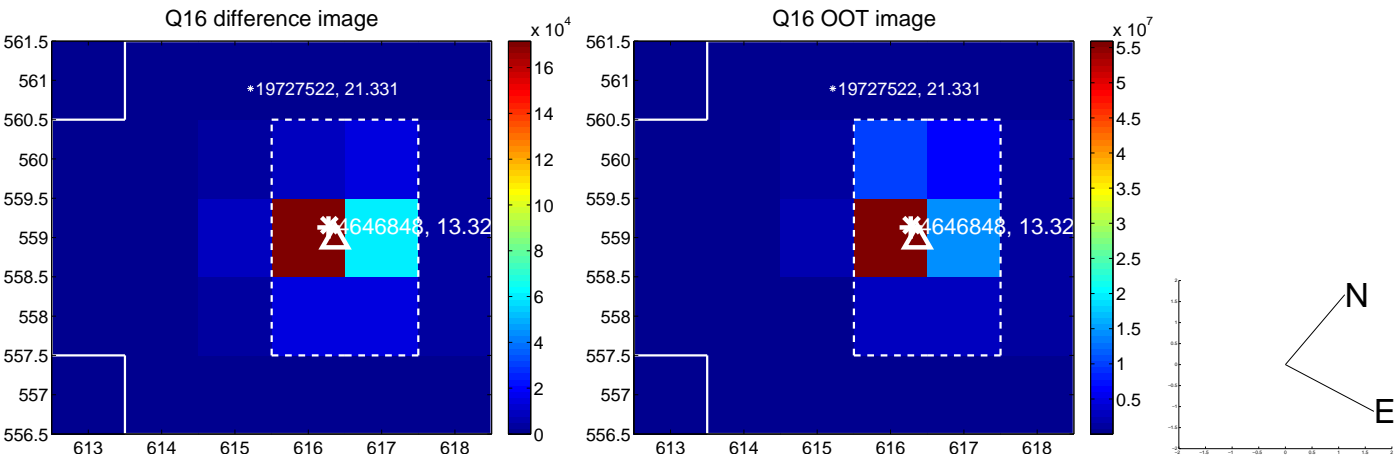
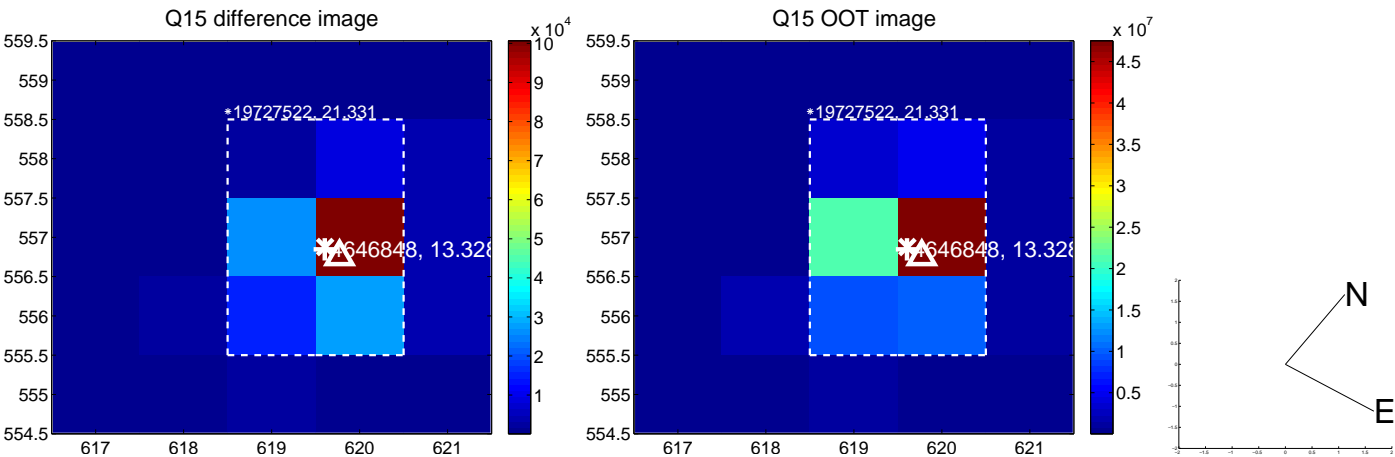
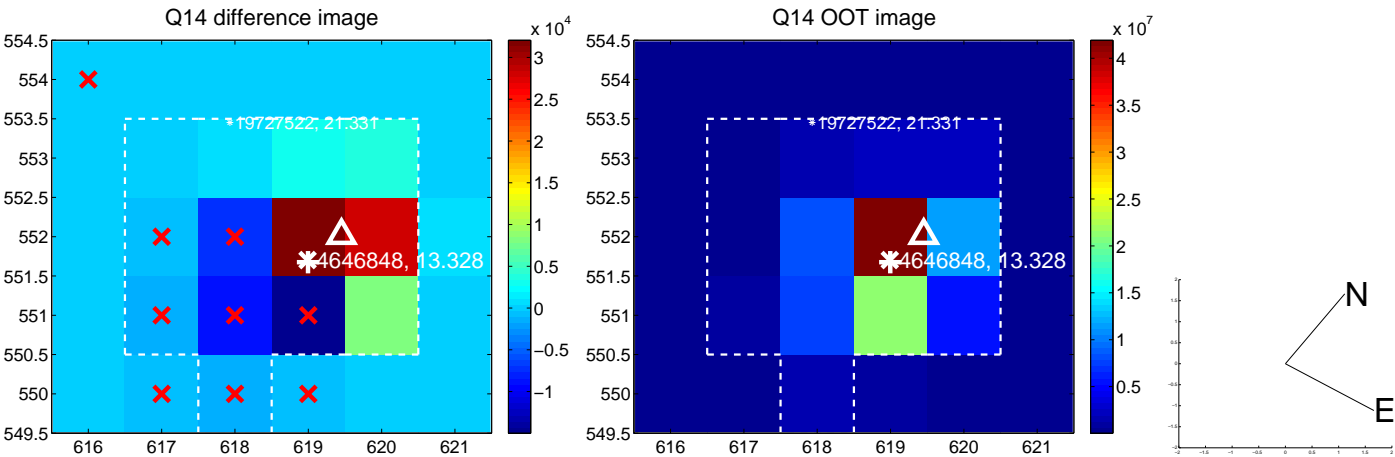
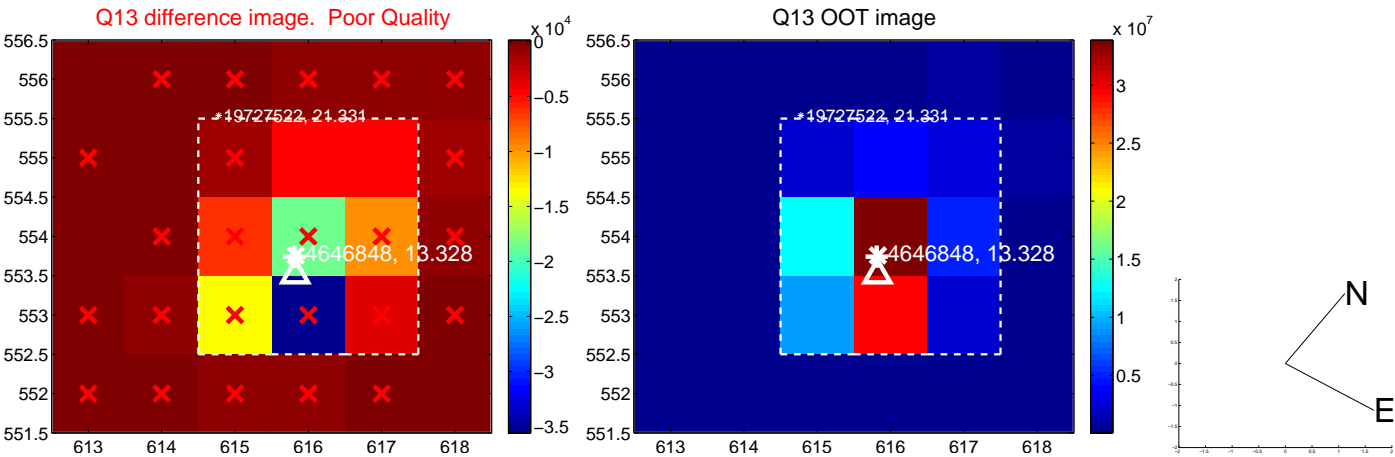
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



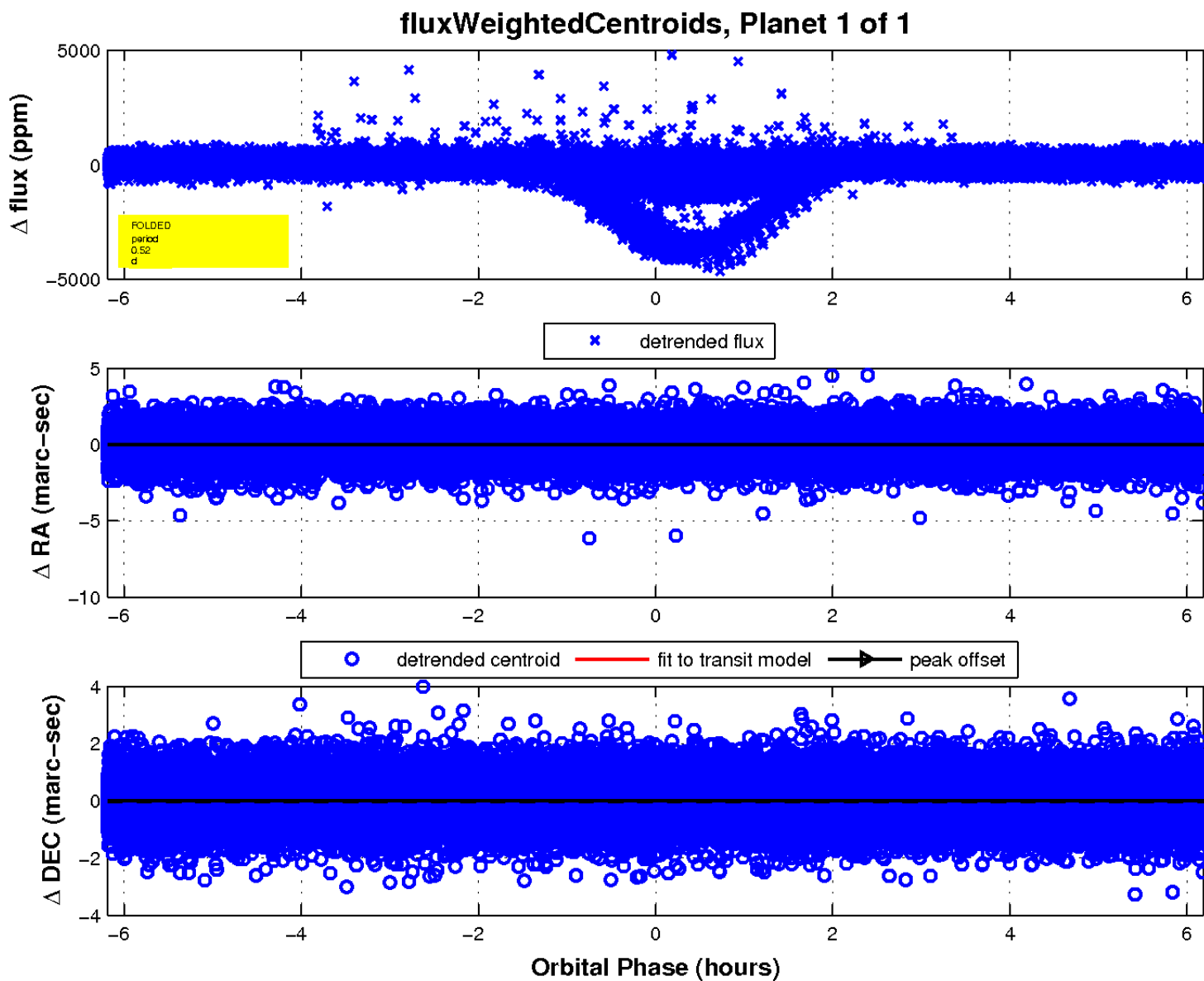
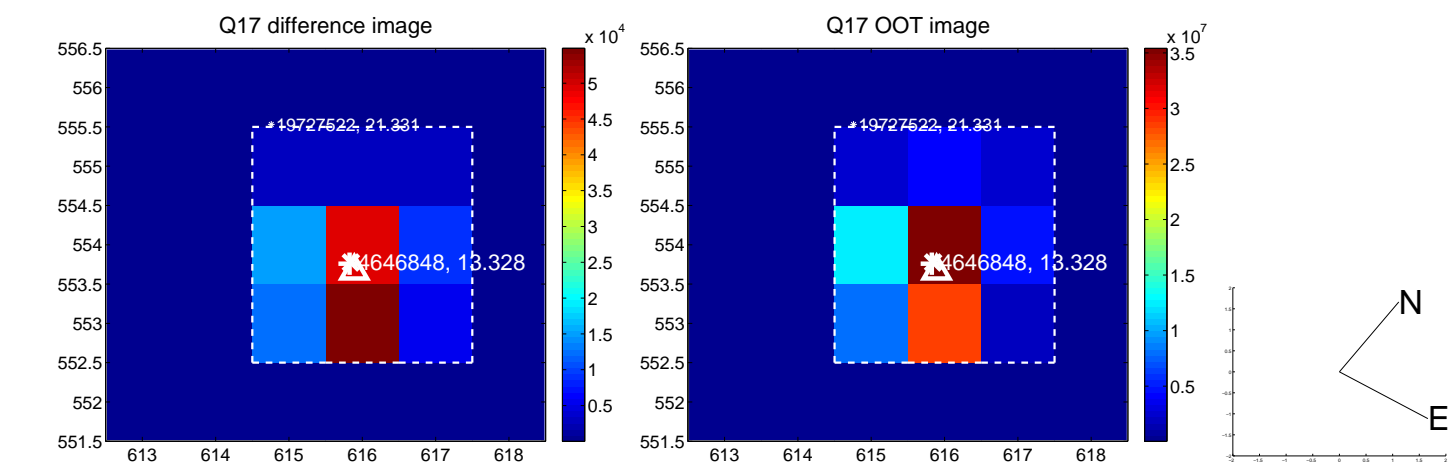
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UKIRT Image

Declination

