

KIC 006386598

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})
006386598-01	OBS	No	0.744833	131.730636	12.1	5.954	8.6	3.1	10.38	6616	3.81	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006386598-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_ALT

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

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

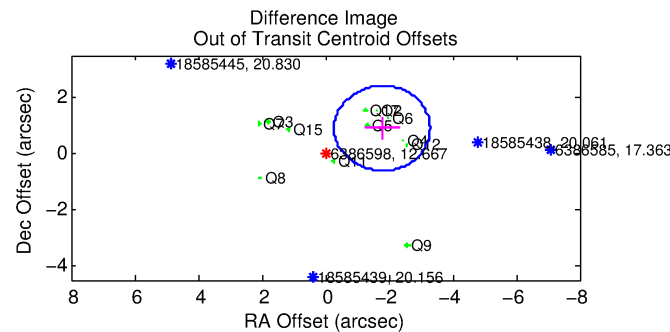
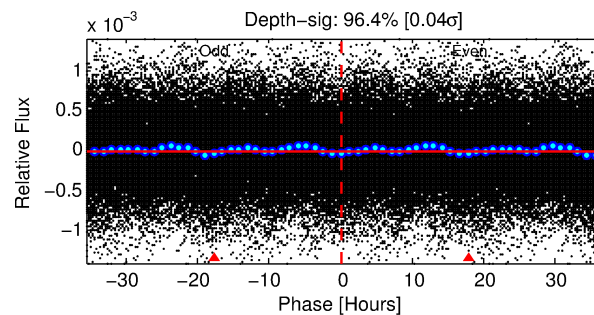
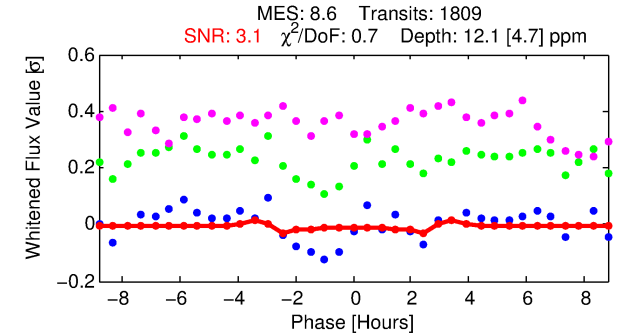
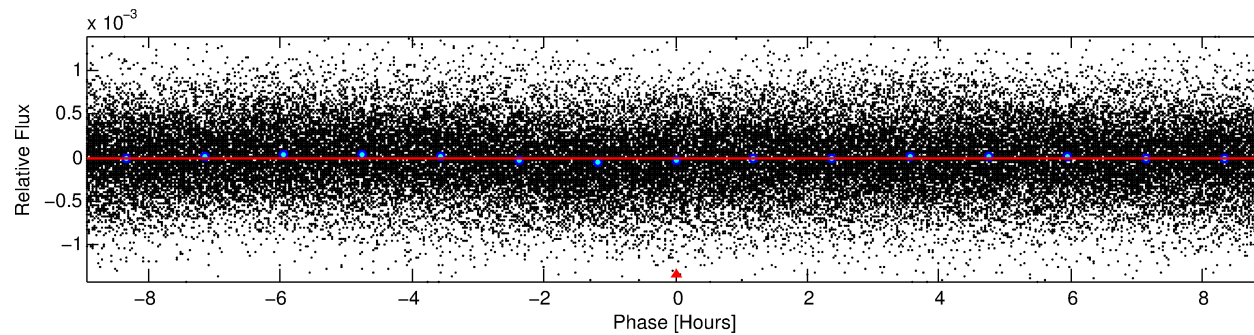
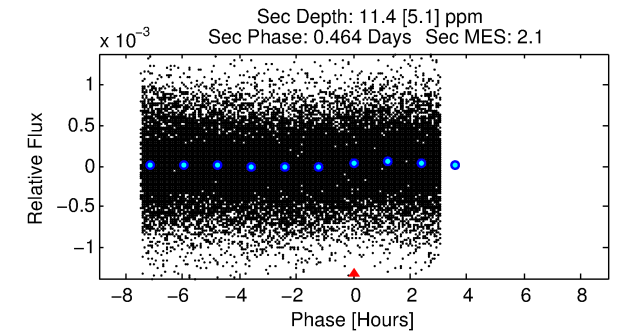
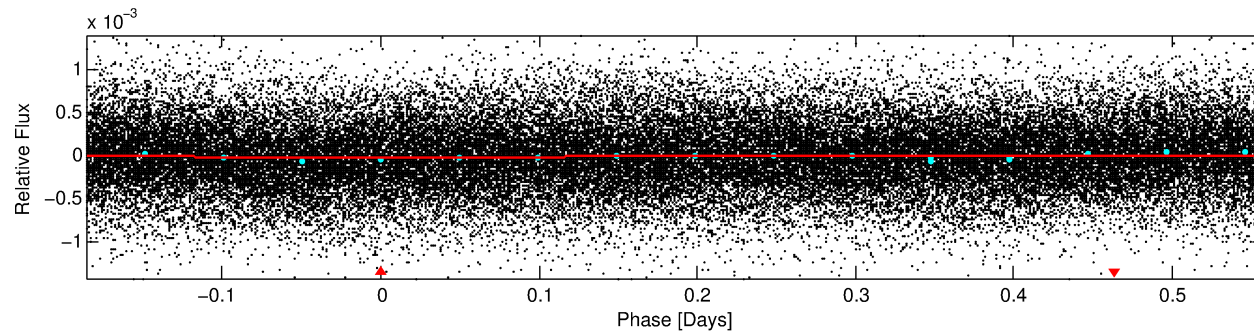
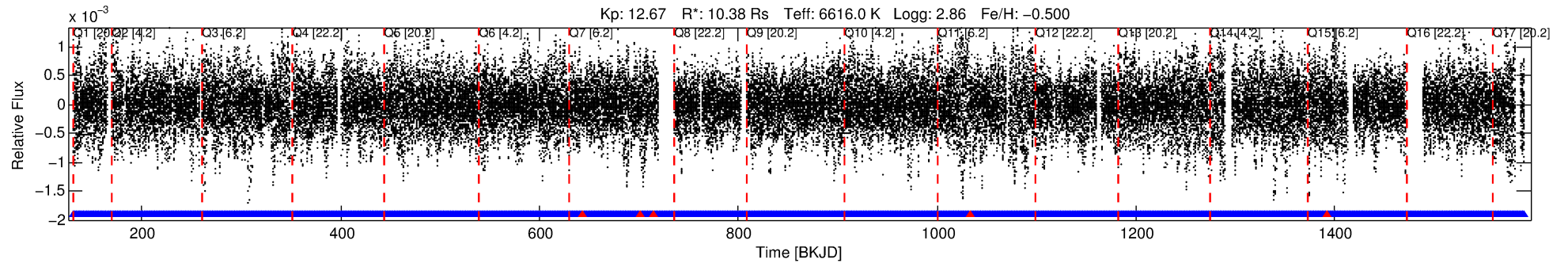
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006386598-01

No Significant Match Found

DV One-Page Summary

KIC: 6386598 Candidate: 1 of 1 Period: 0.745 d



DV Fit Results:

Period = 0.74483 [0.00003] d
Epoch = 131.7306 [0.0056] BKJD
Rp/R* = 0.0034 [0.0030]
a/R* = 1.10 [0.99]
b = 0.63 [5.01]
Seff = N/A
Teq = N/A
Rp = 3.81 [4.03] Re
a = N/A
Ag = N/A
Teffp = N/A

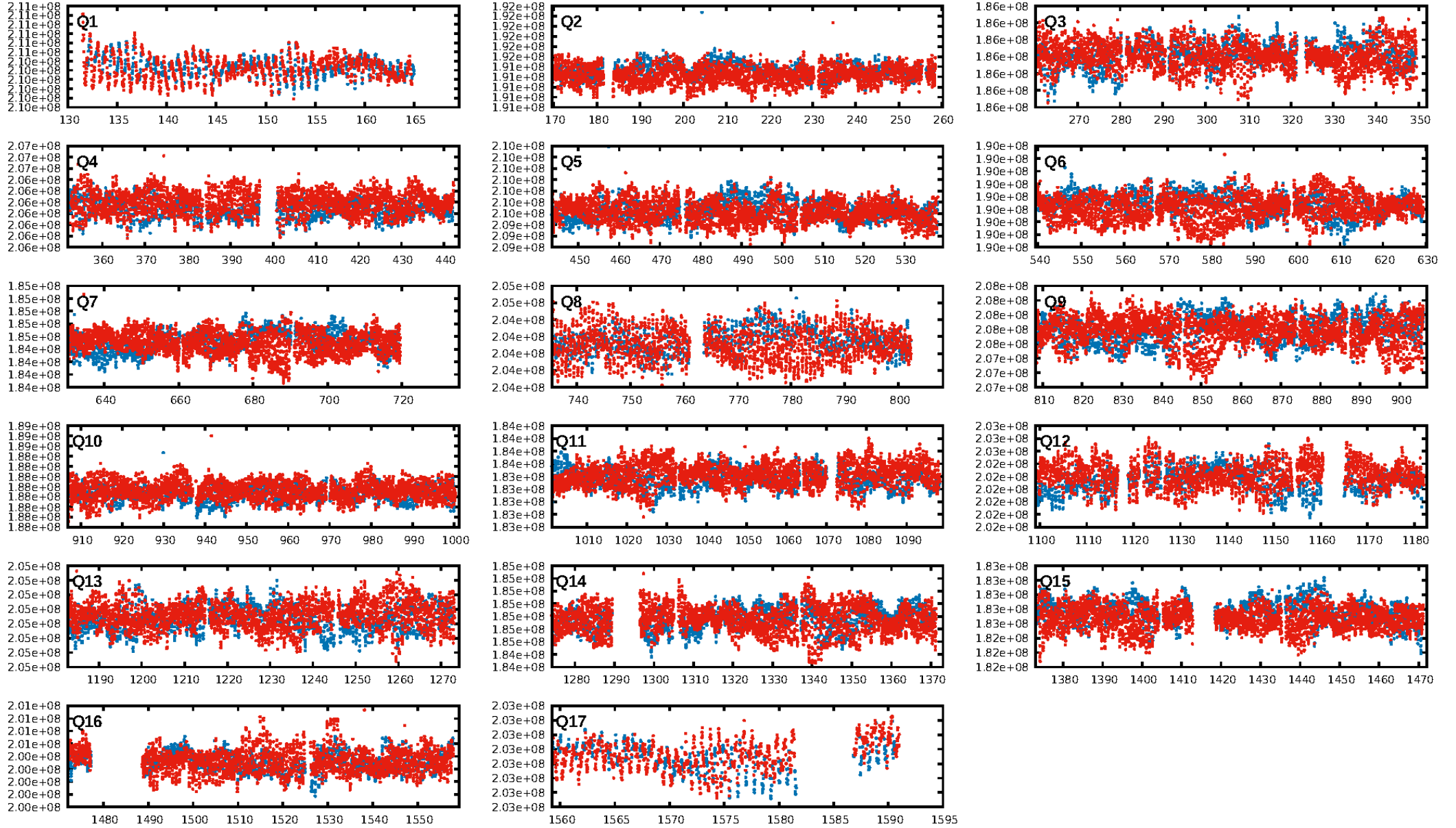
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1723/1728]
GhostDiagnostic-chr: 1.794
Centroid-sig: 18.1%
Centroid-so: 1.065 arcsec [1.16σ]
OotOffset-rm: 1.999 arcsec [3.96σ]
KicOffset-rm: 2.007 arcsec [4.08σ]
OotOffset-st: 2/4/3/3 [12]
KicOffset-st: 2/4/3/3 [12]
DiffImageQuality-fgm: 0.67 [8/12]
DiffImageOverlap-fno: 1.00 [17/17]

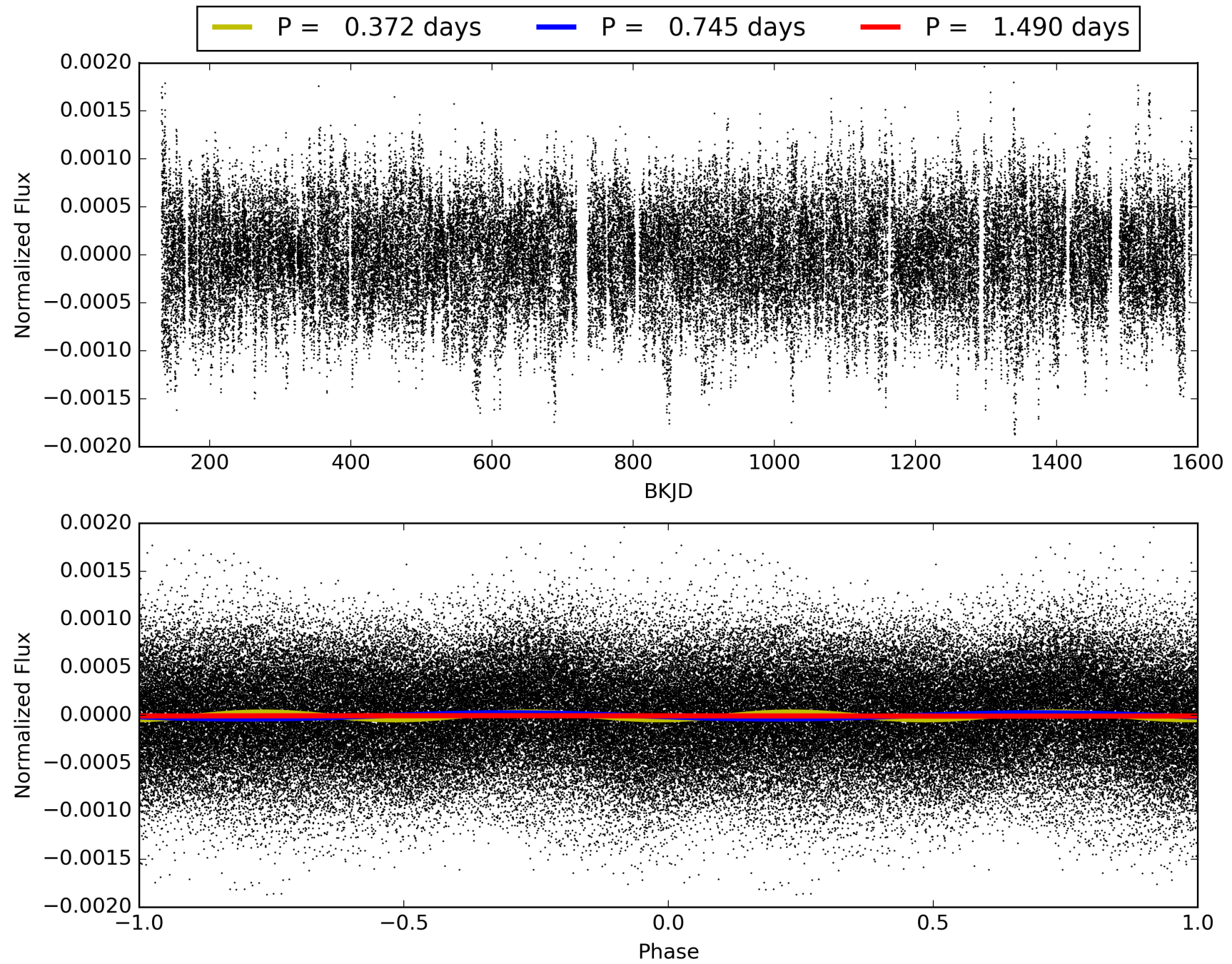
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 01:39:23 Z

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

TCE 006386598-01, PDC Light Curves

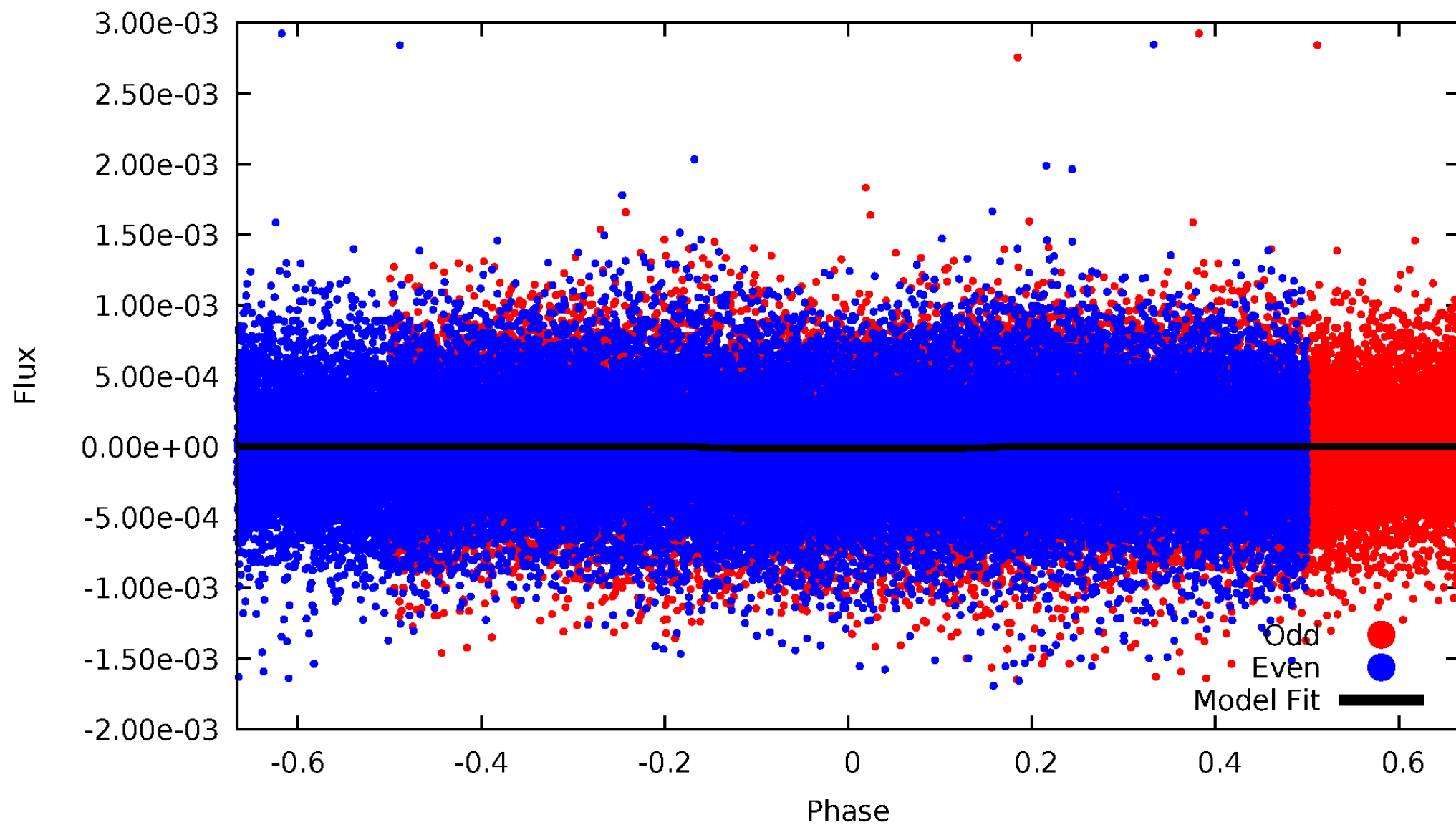


TCE 006386598-01



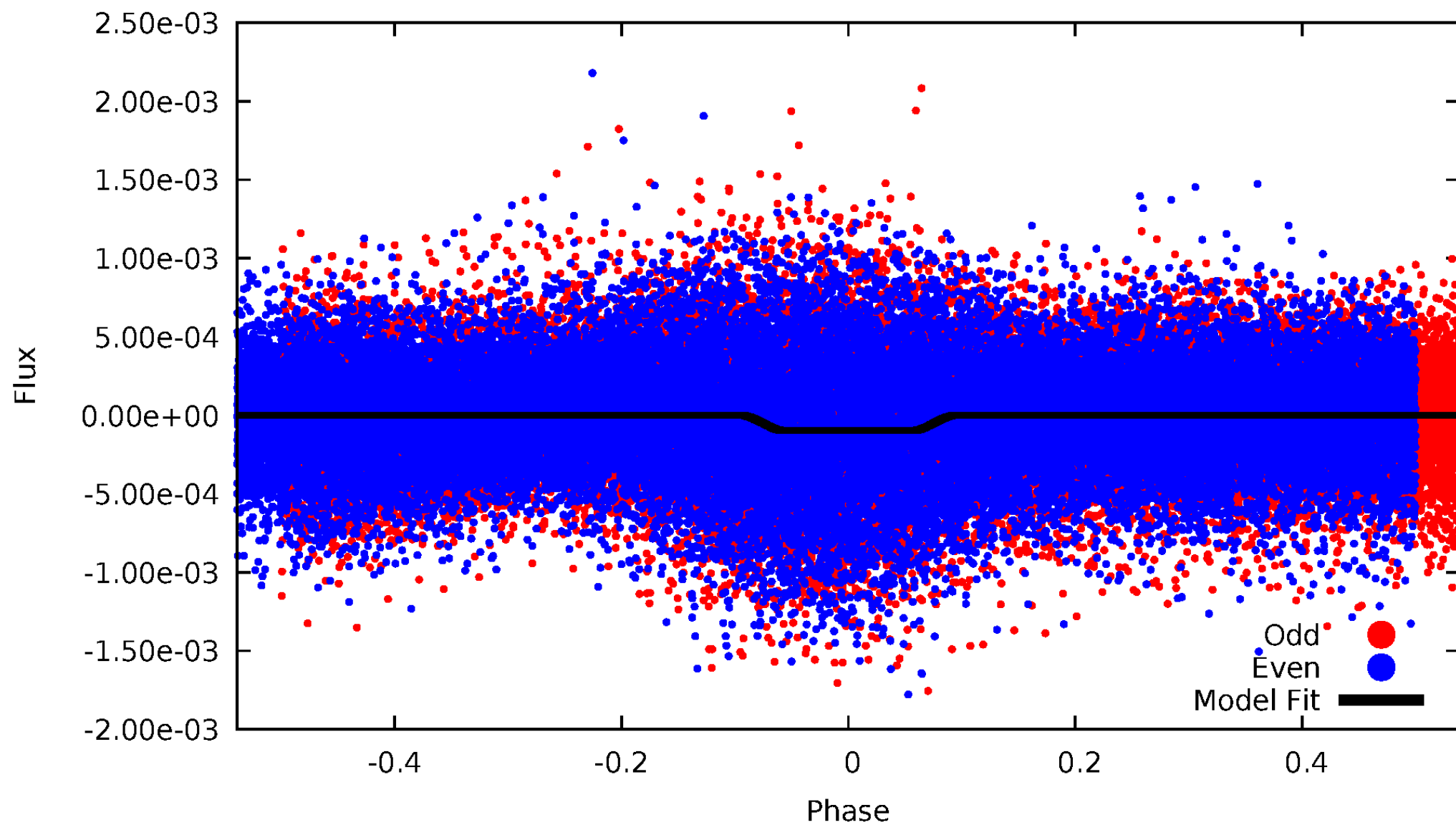
DV Odd/Even

TCE 006386598-01

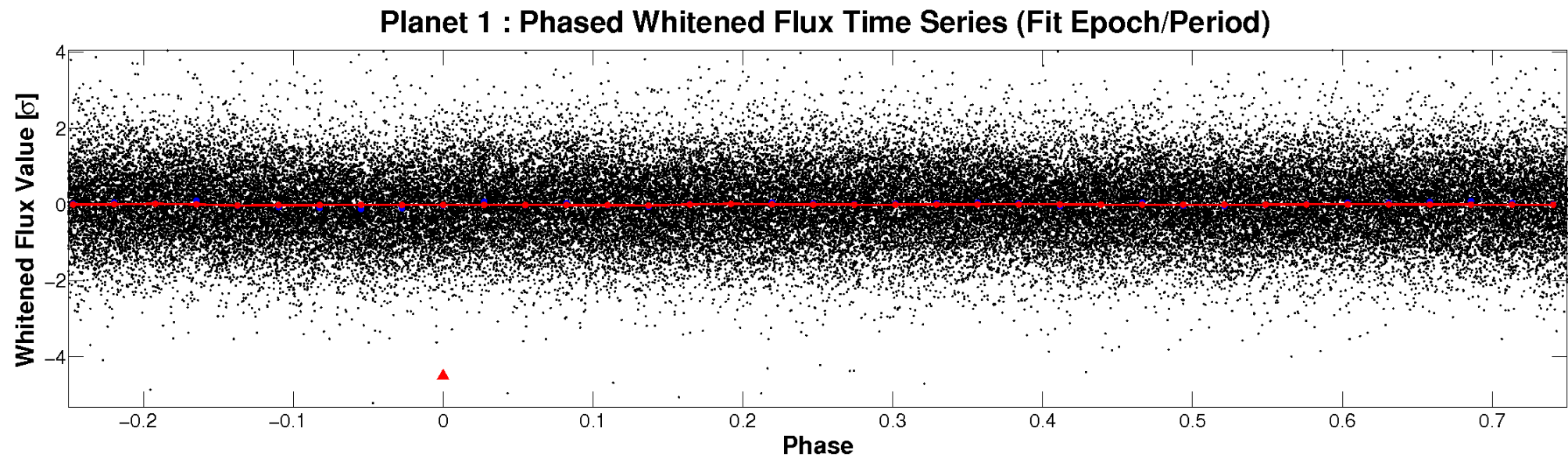
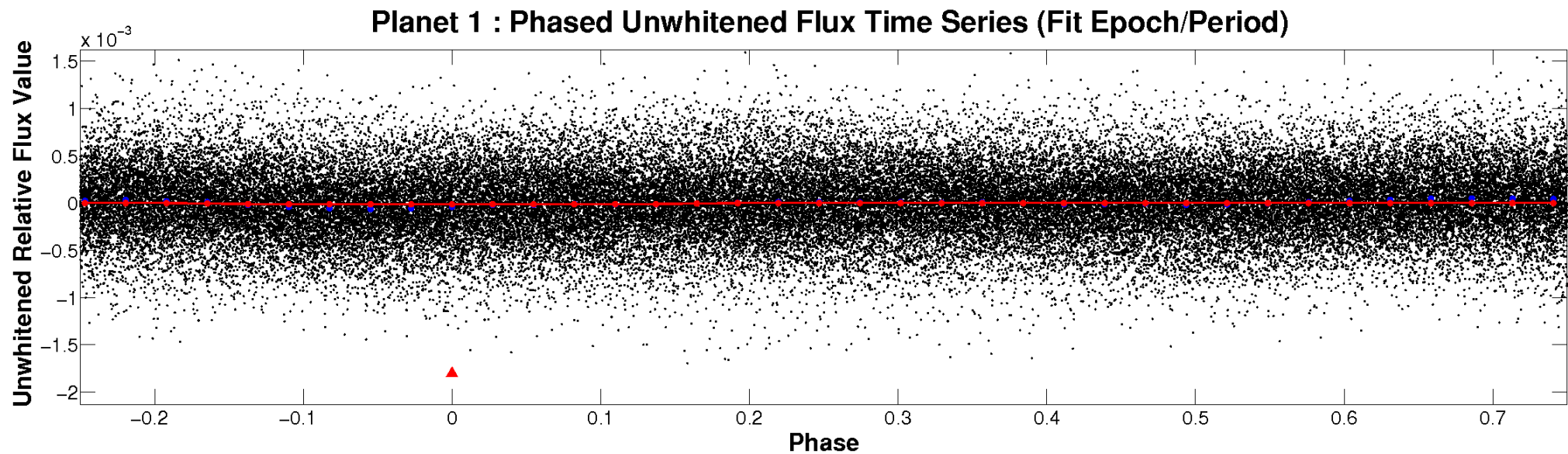


ALT Odd/Even

TCE 006386598-01

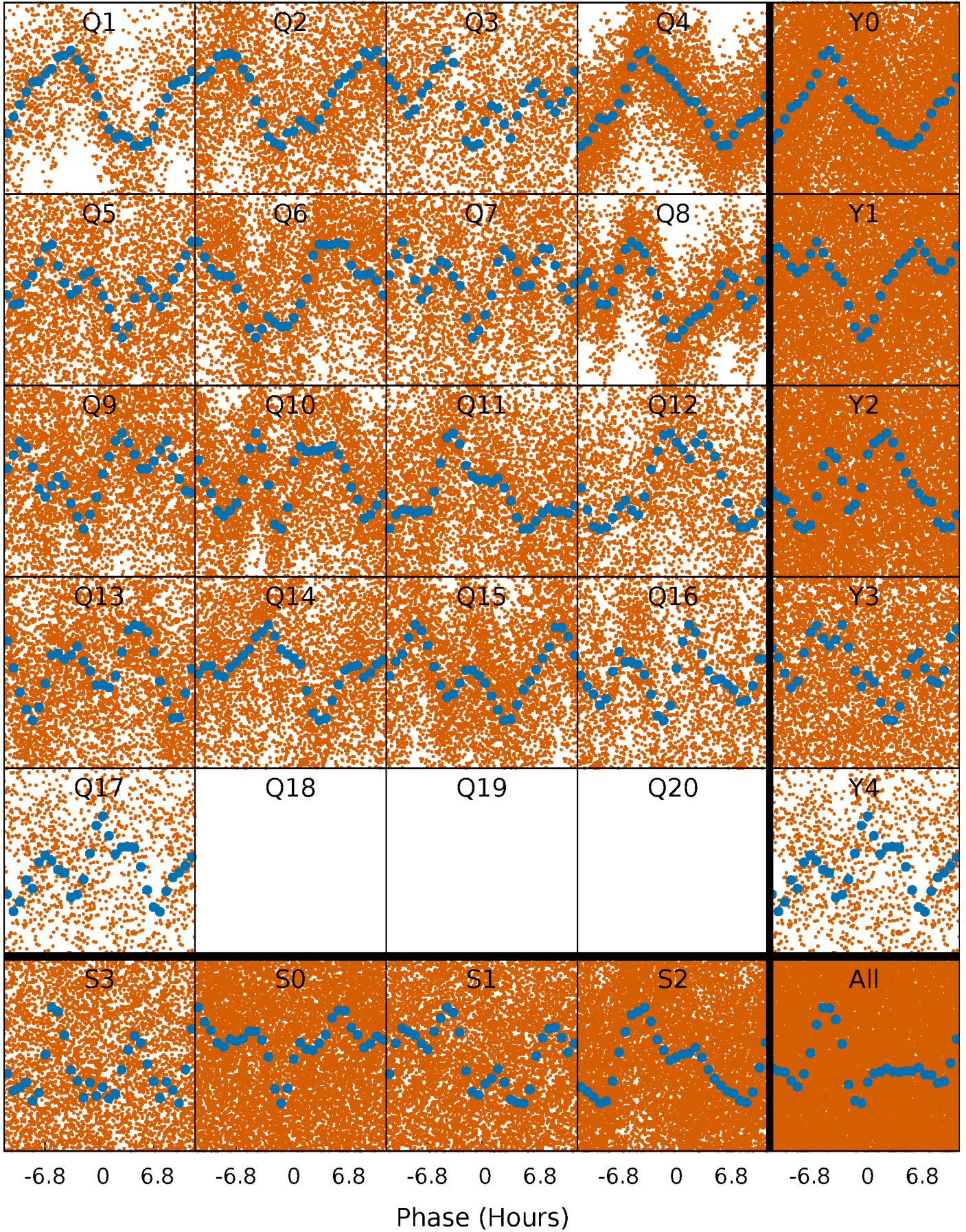


Non-Whitened Vs. Whitened Light Curve



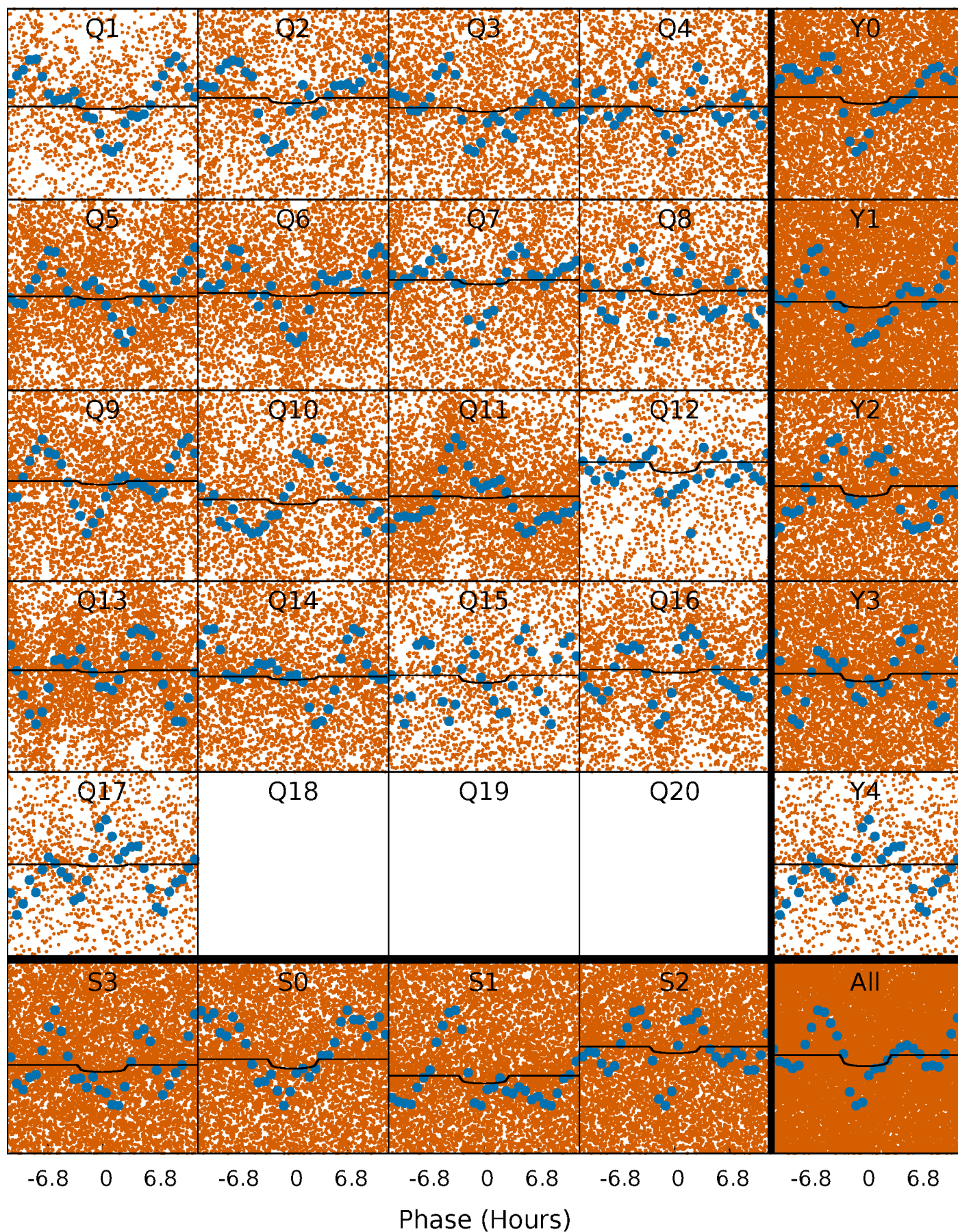
PDC Quarter-Phased Transit Curves

TCE 006386598-01 P= 0.744833 Days $T_0=131.730636$ (BKJD)



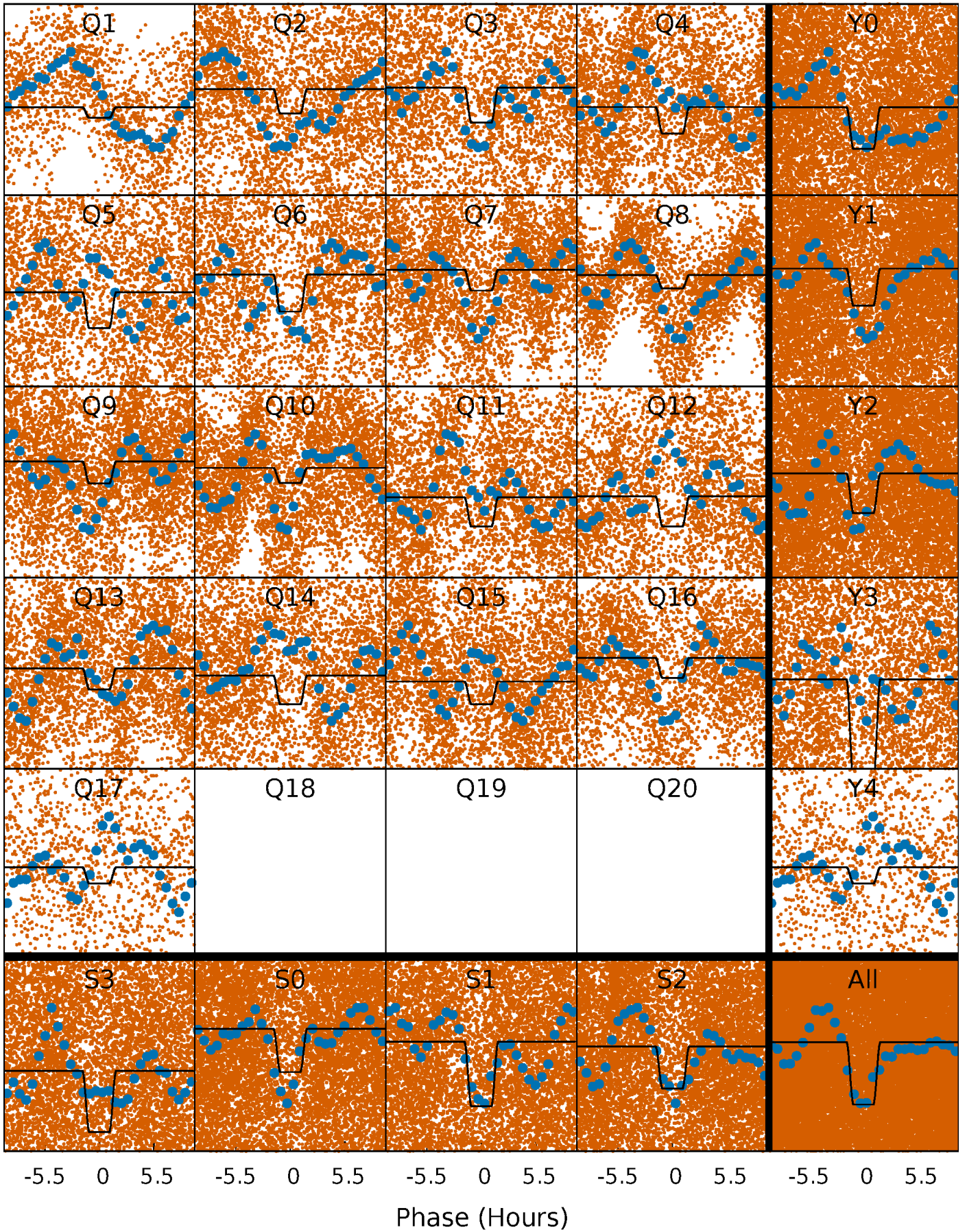
DV Quarter-Phased Transit Curves

TCE 006386598-01 P= 0.744833 Days $T_0=131.730636$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

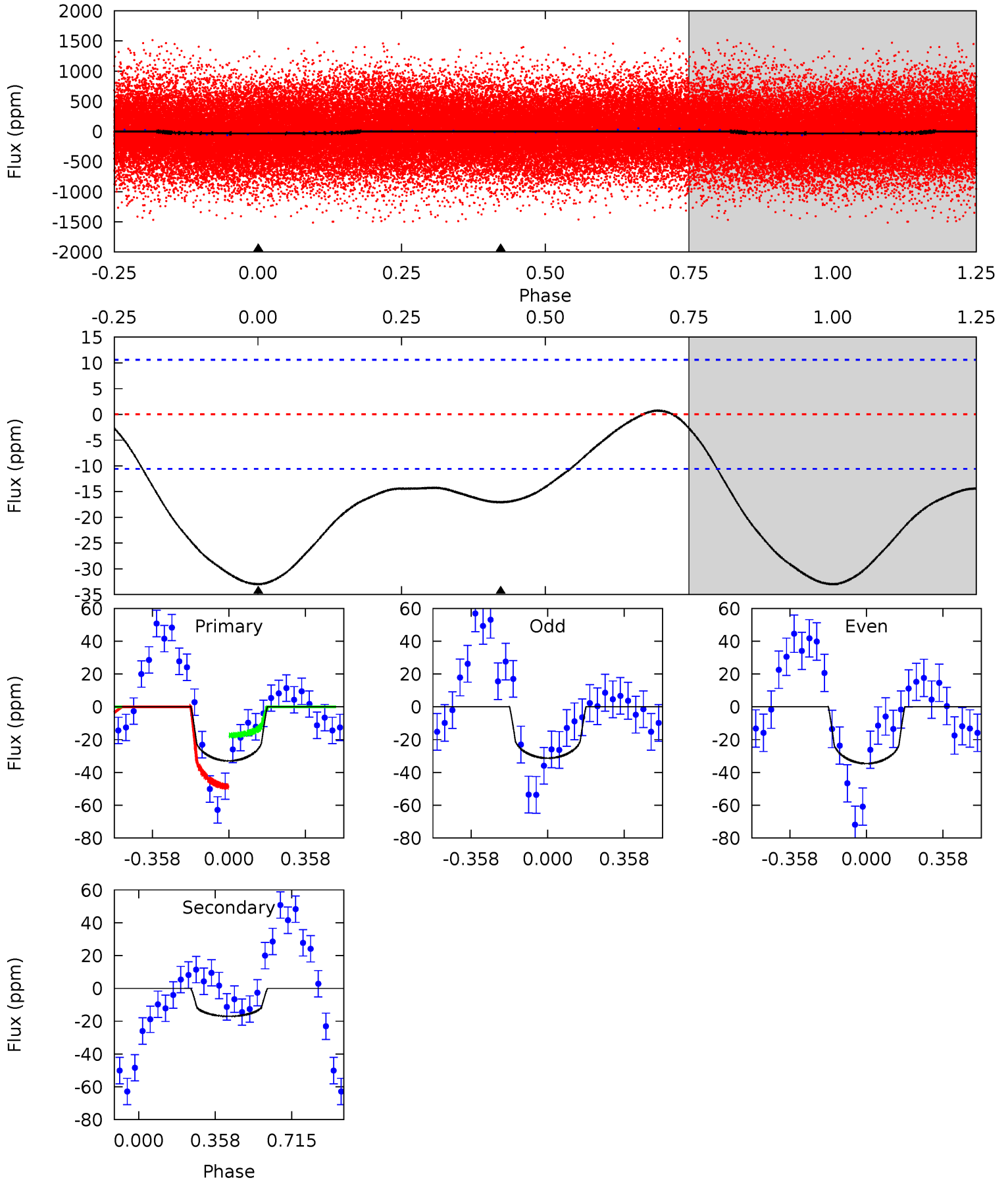
TCE 006386598-01 P= 0.744834 Days $T_0=131.700412$ (BKJD)



DV Model-Shift Uniqueness Test

006386598-01, $P = 0.744833$ Days, $E = 130.985803$ Days

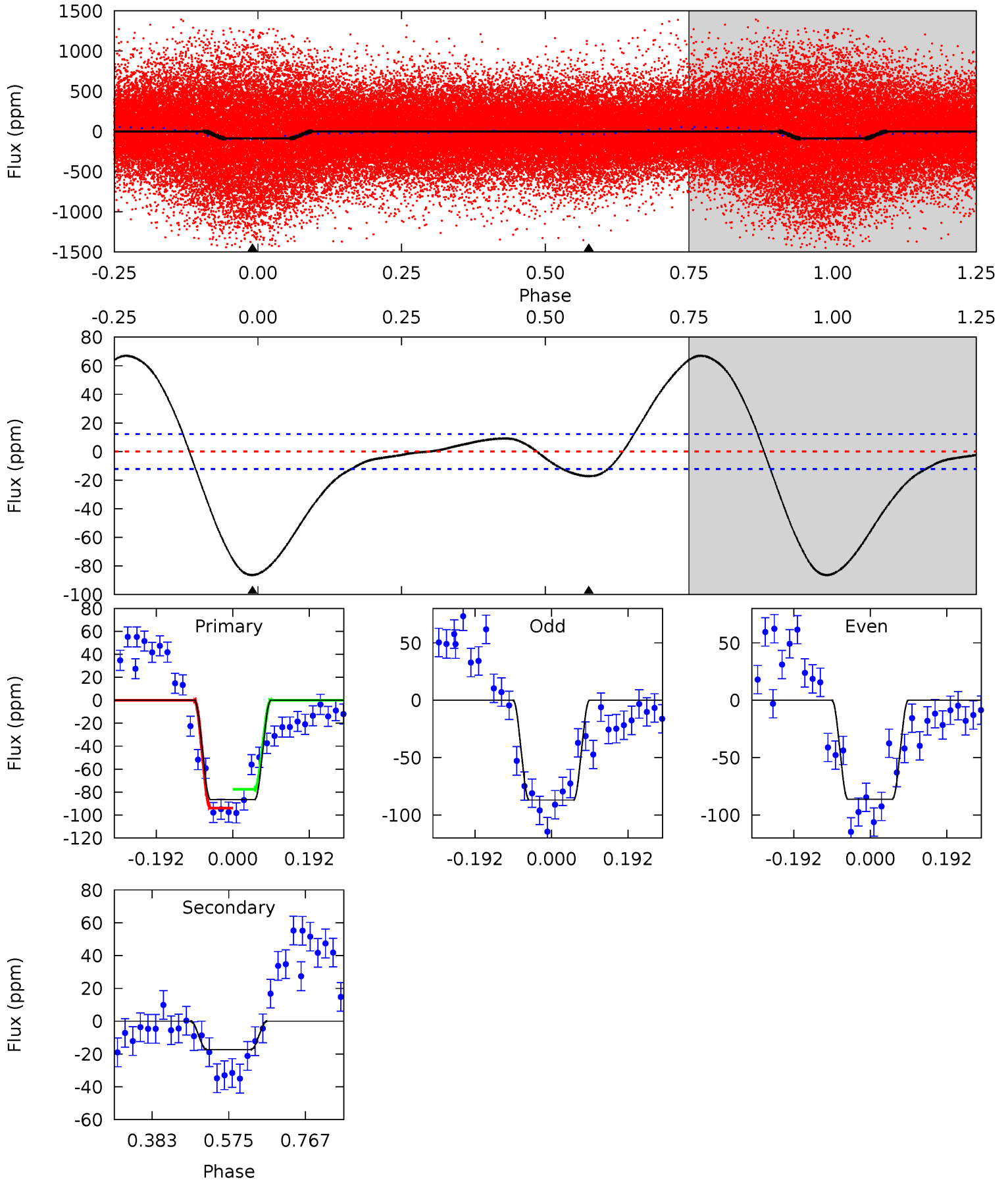
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.4	6.91	0	0	4.29	0.92	0.57	13.4	13.4	6.91	6.91	0.67	1.05	0.02	6.23



Alt Model-Shift Uniqueness Test

006386598-01, P = 0.744834 Days, E = 130.955578 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
31.4	6.27	0	0	4.43	1.31	8.31	31.4	31.4	6.27	6.27	0.13	1.22	0.44	3.05



Stellar Parameters For KIC 006386598

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6616^{+178}_{-218}	$2.859^{+0.540}_{-0.090}$	$-0.500^{+0.550}_{-0.150}$	$10.378^{+1.453}_{-5.812}$	$2.837^{+0.261}_{-0.979}$	$0.004^{+0.022}_{-0.001}$
	+3%/-3%	+19%/-3%	+110%/-30%	+14%/-56%	+9%/-35%	+617%/-21%
Source	PHO1	FLK73	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 006386598-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-17 ± 2	$3.56^{+3.06}_{-2.21}$	8416^{+576}_{-1040}	4532^{+7912}_{-10715}	$0.368^{+2.152}_{-0.261}$
Alt.	-17 ± 3	$9.81^{+3.96}_{-3.55}$	8453^{+571}_{-1202}	-6518^{+1259}_{-654}	$0.049^{+0.068}_{-0.024}$

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

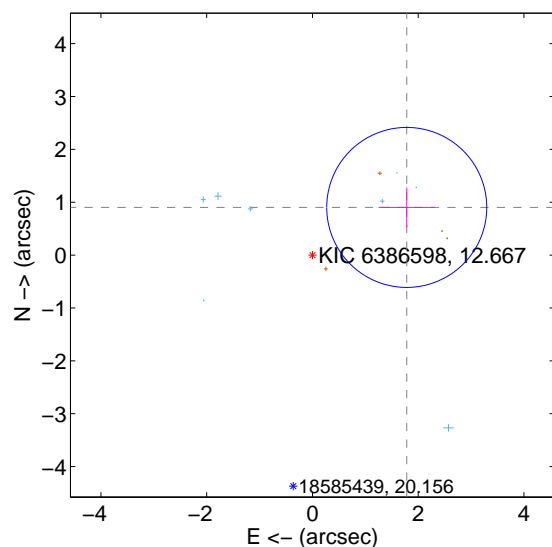
Supplemental centroid analysis for 006386598-01. Kepler magnitude: 12.67. Transit SNR 3.07

There are 8 quarters with good PRF difference image offsets

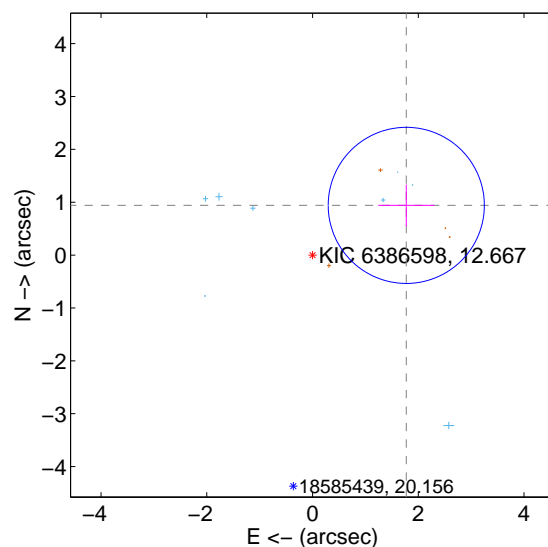
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.999 ± 0.504	3.96	-1.784 ± 0.530	0.902 ± 0.376
PRF-fit source offset from KIC position	2.007 ± 0.492	4.08	-1.773 ± 0.531	0.941 ± 0.393
photometric centroid source offset	1.07 ± 0.92	1.16	-0.93 ± 0.92	0.51 ± 0.89

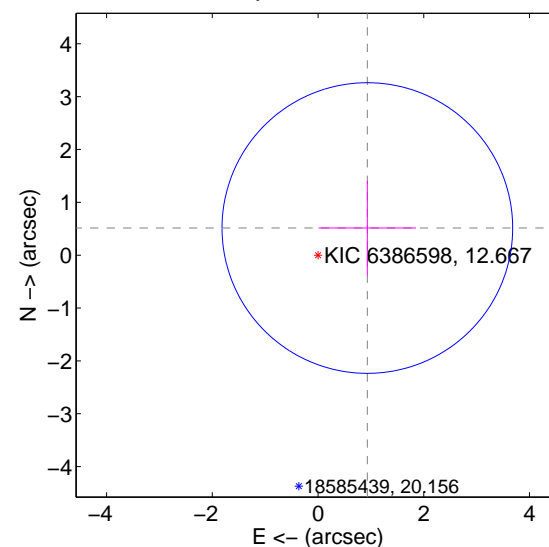
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

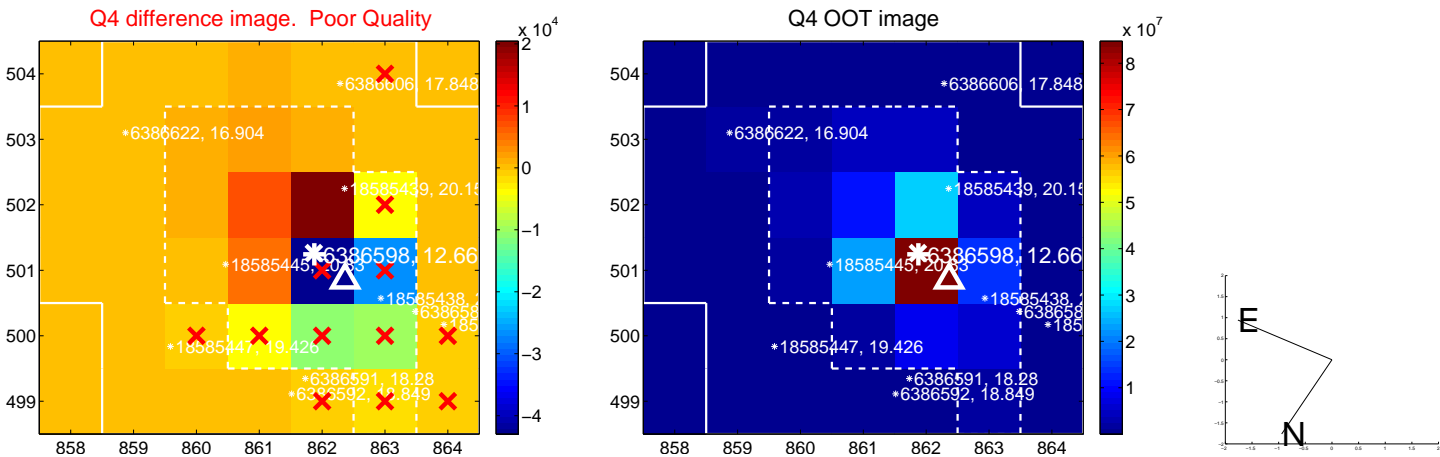
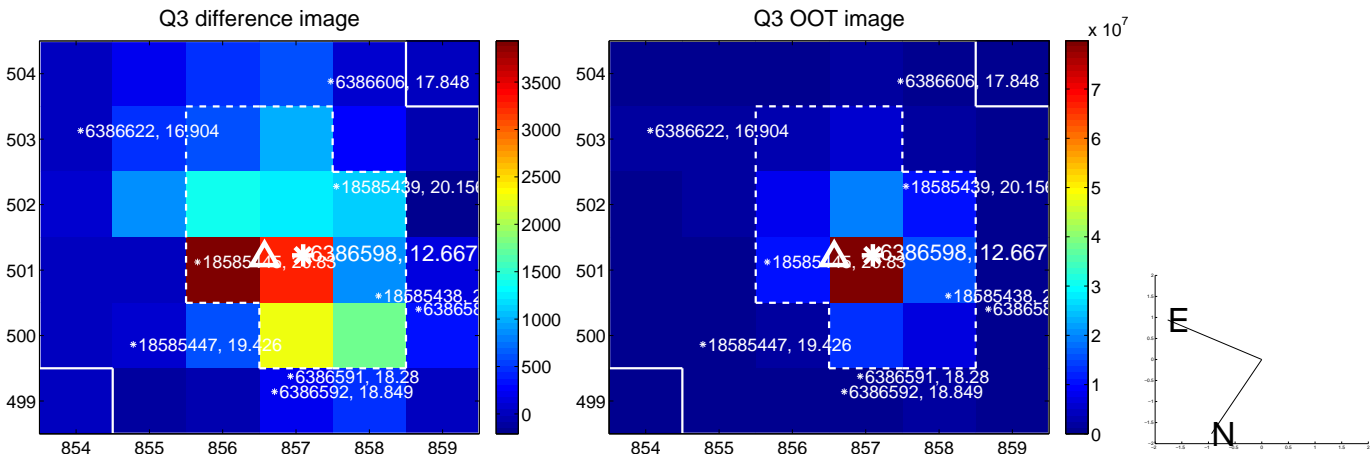
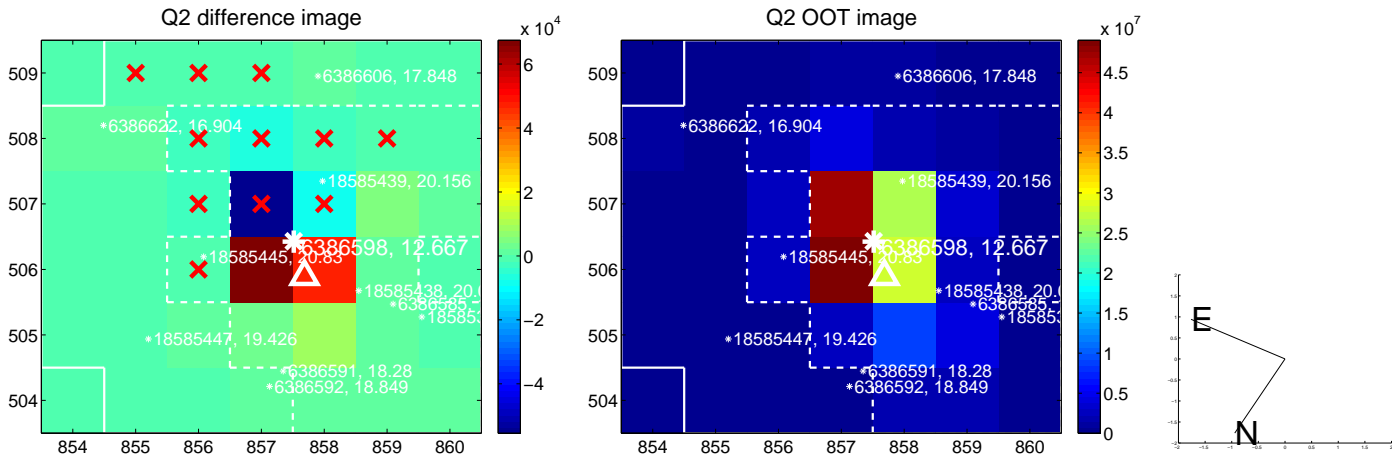
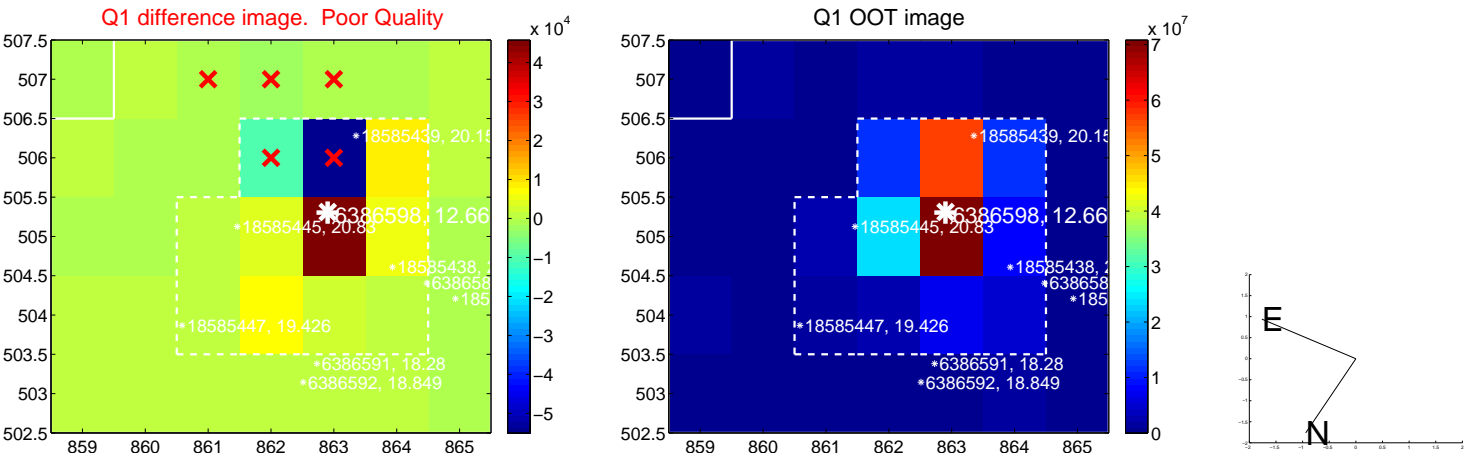


offset from photometric centroids

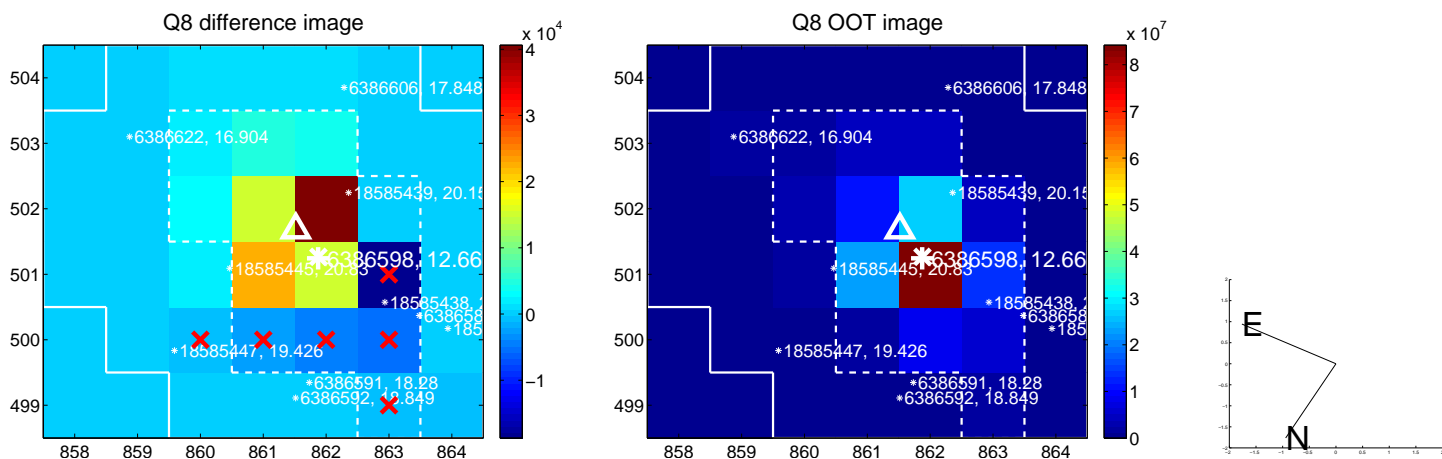
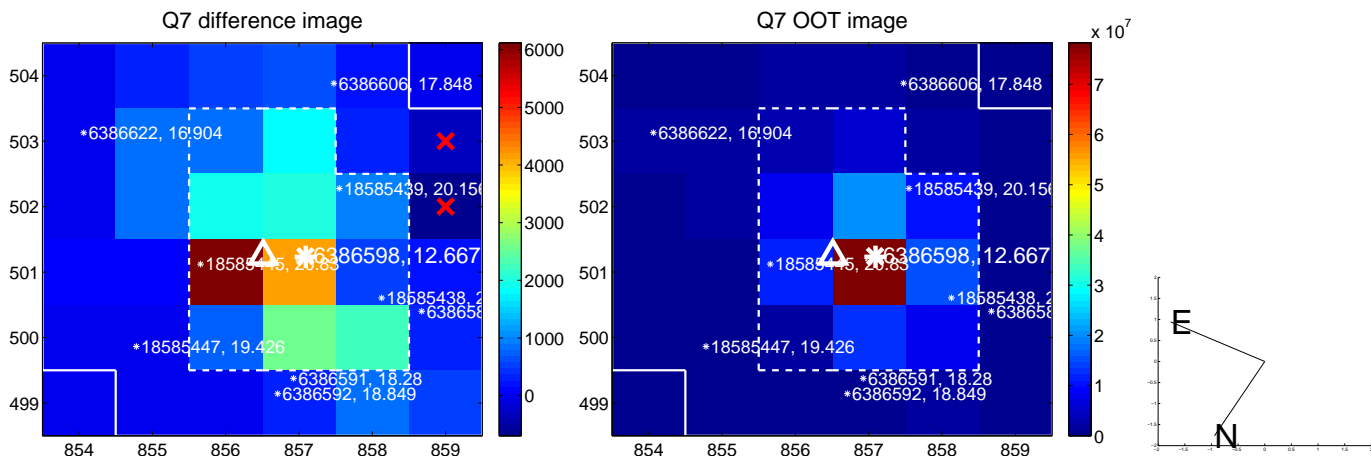
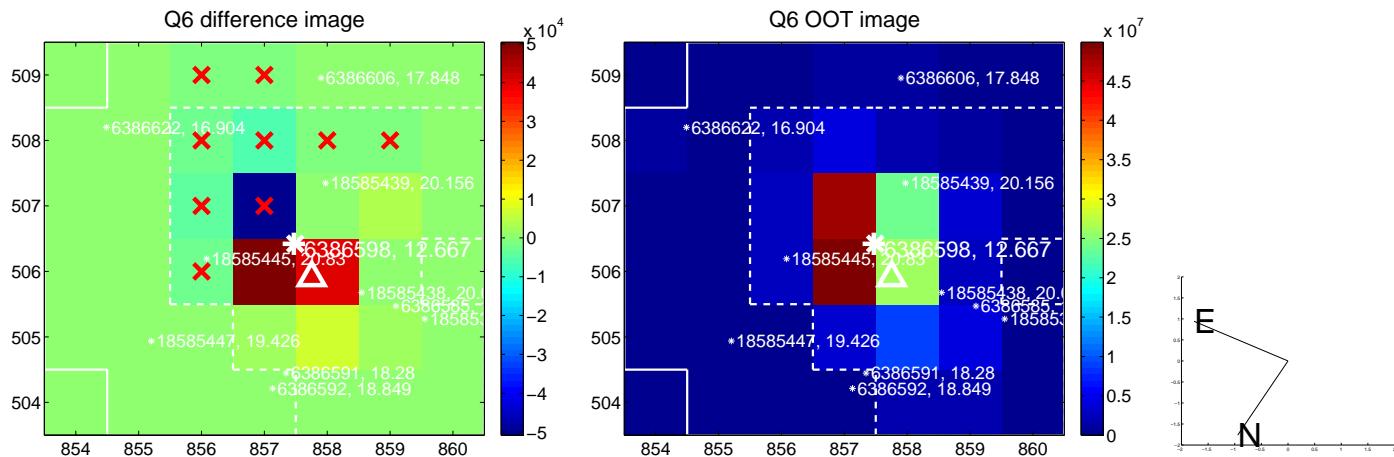
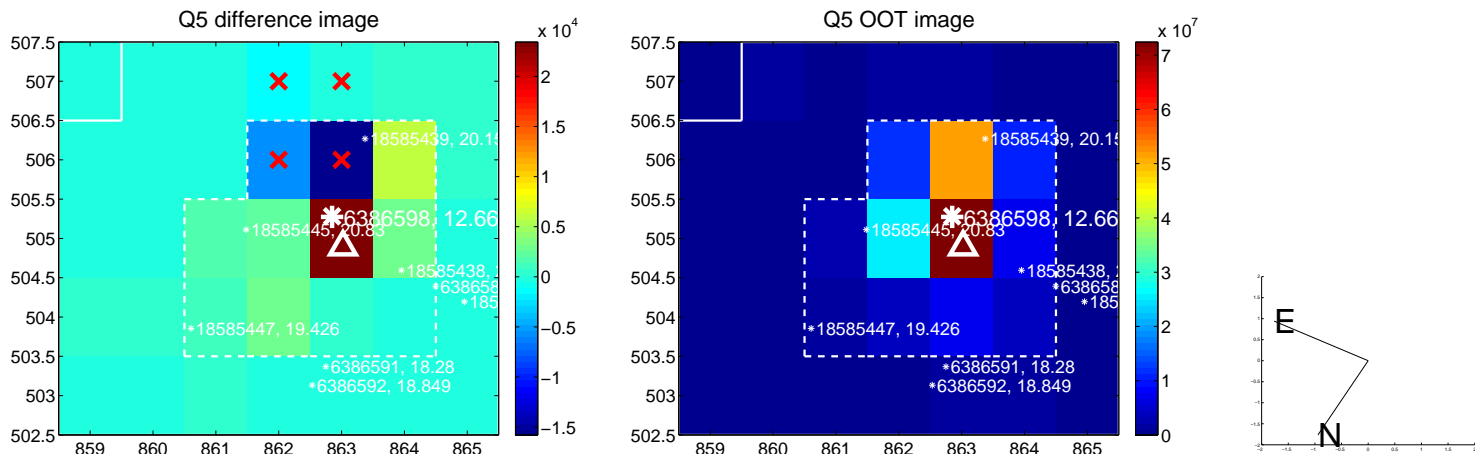


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

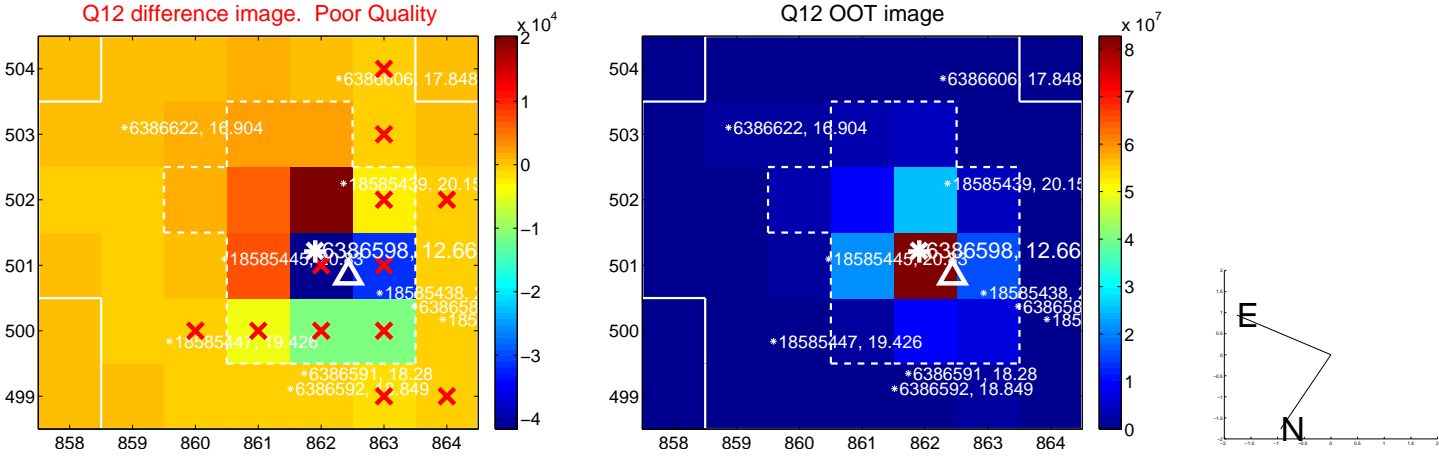
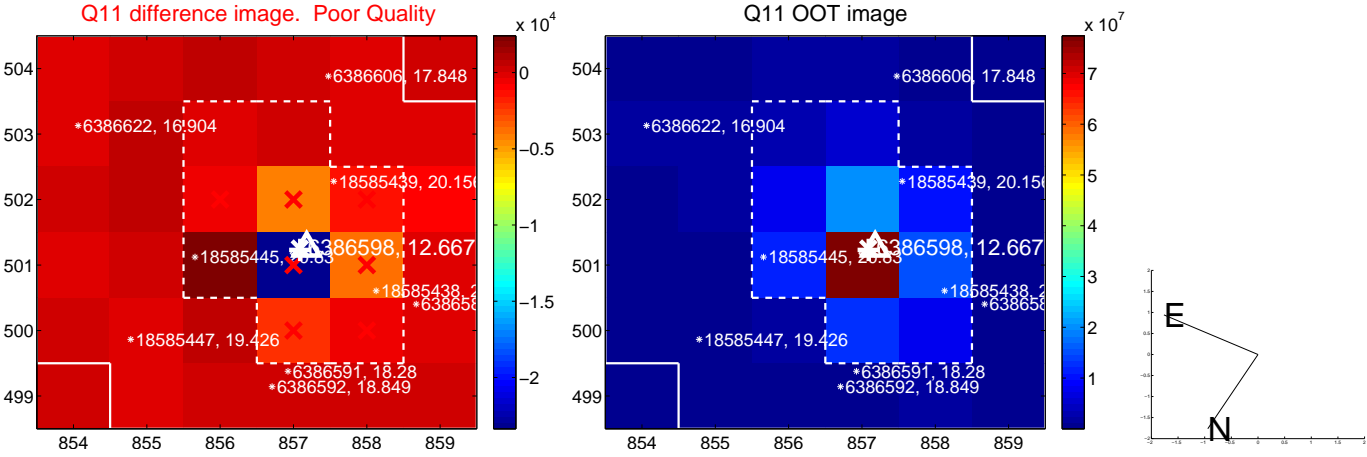
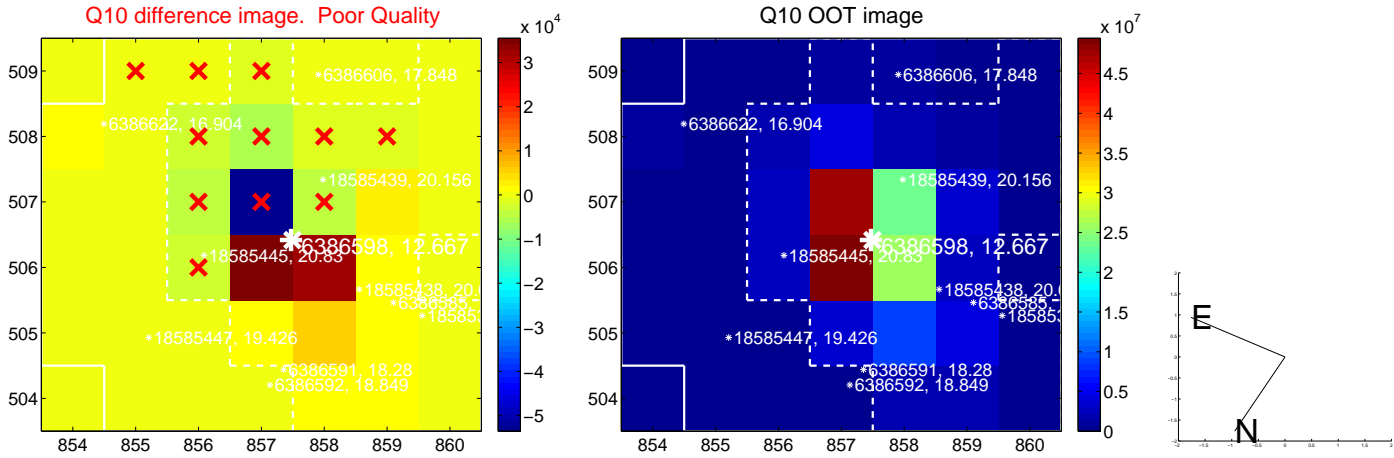
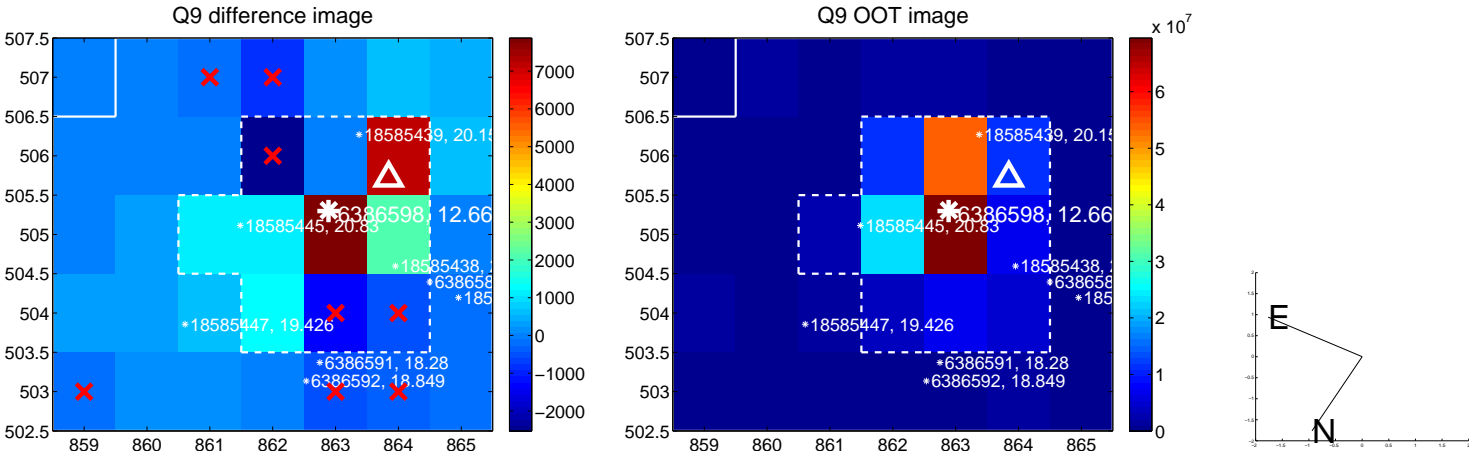
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



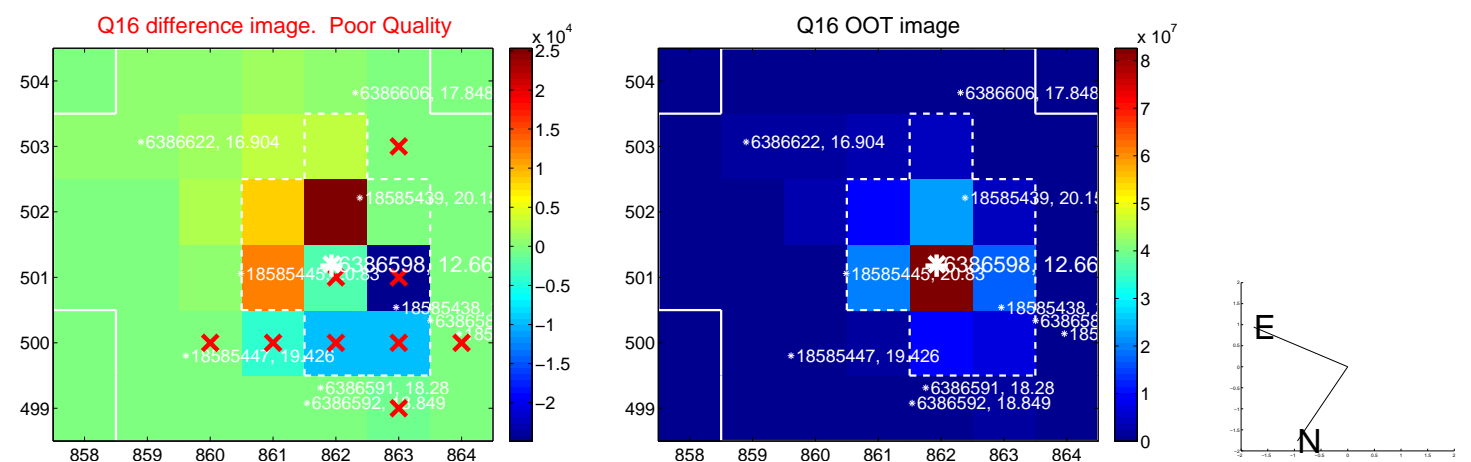
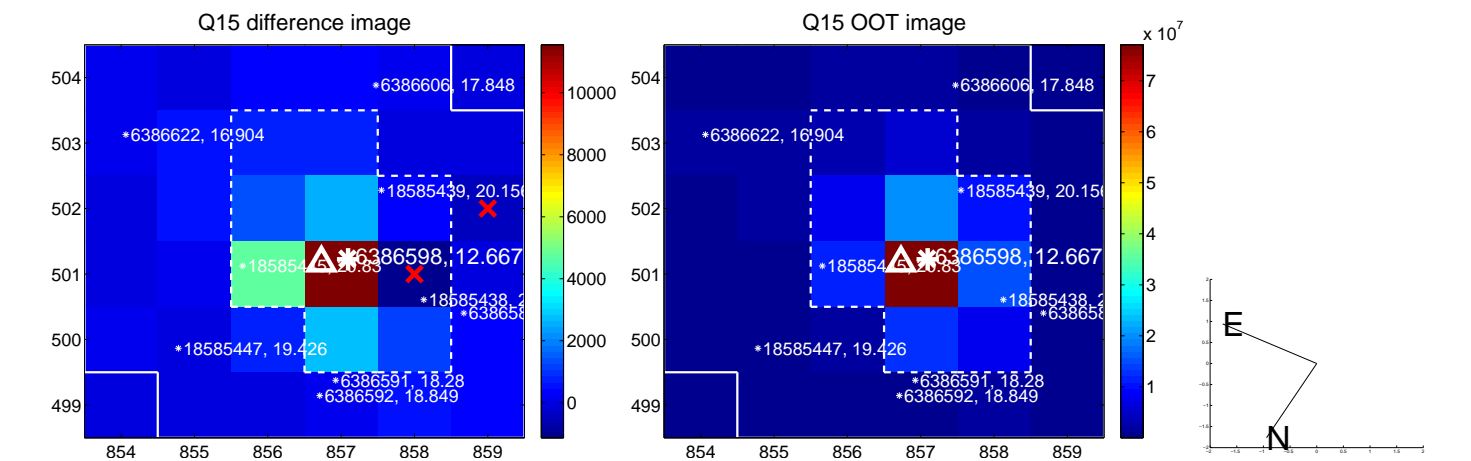
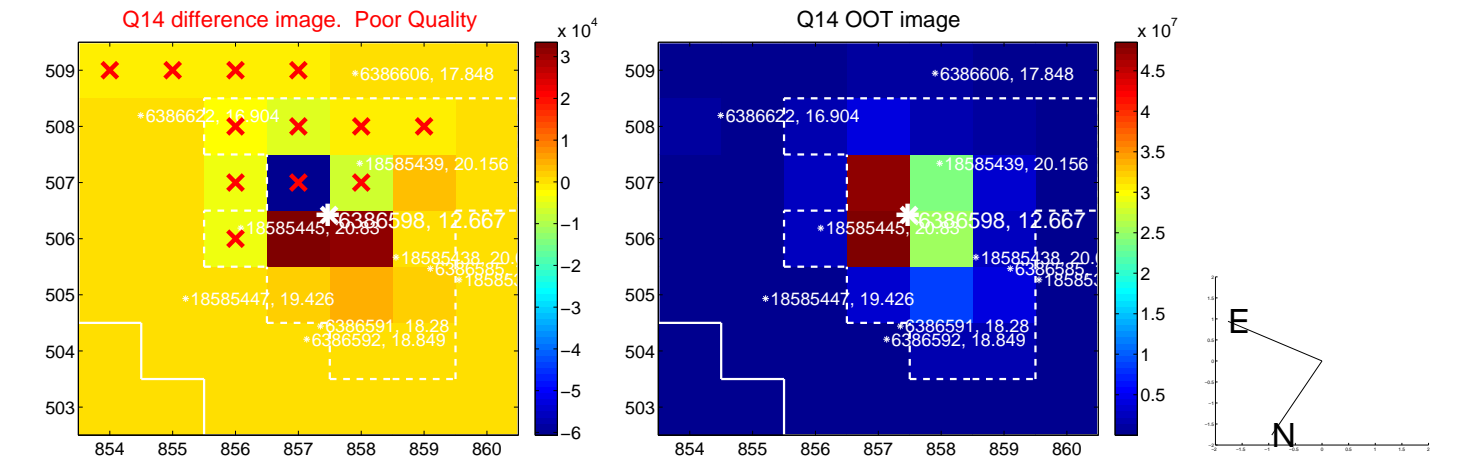
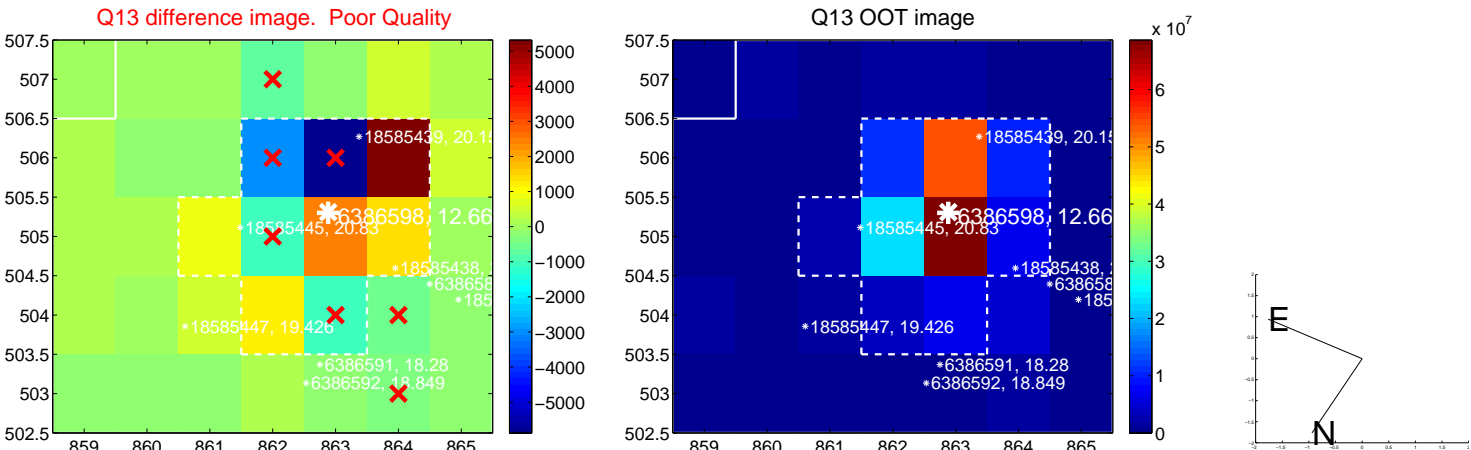
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



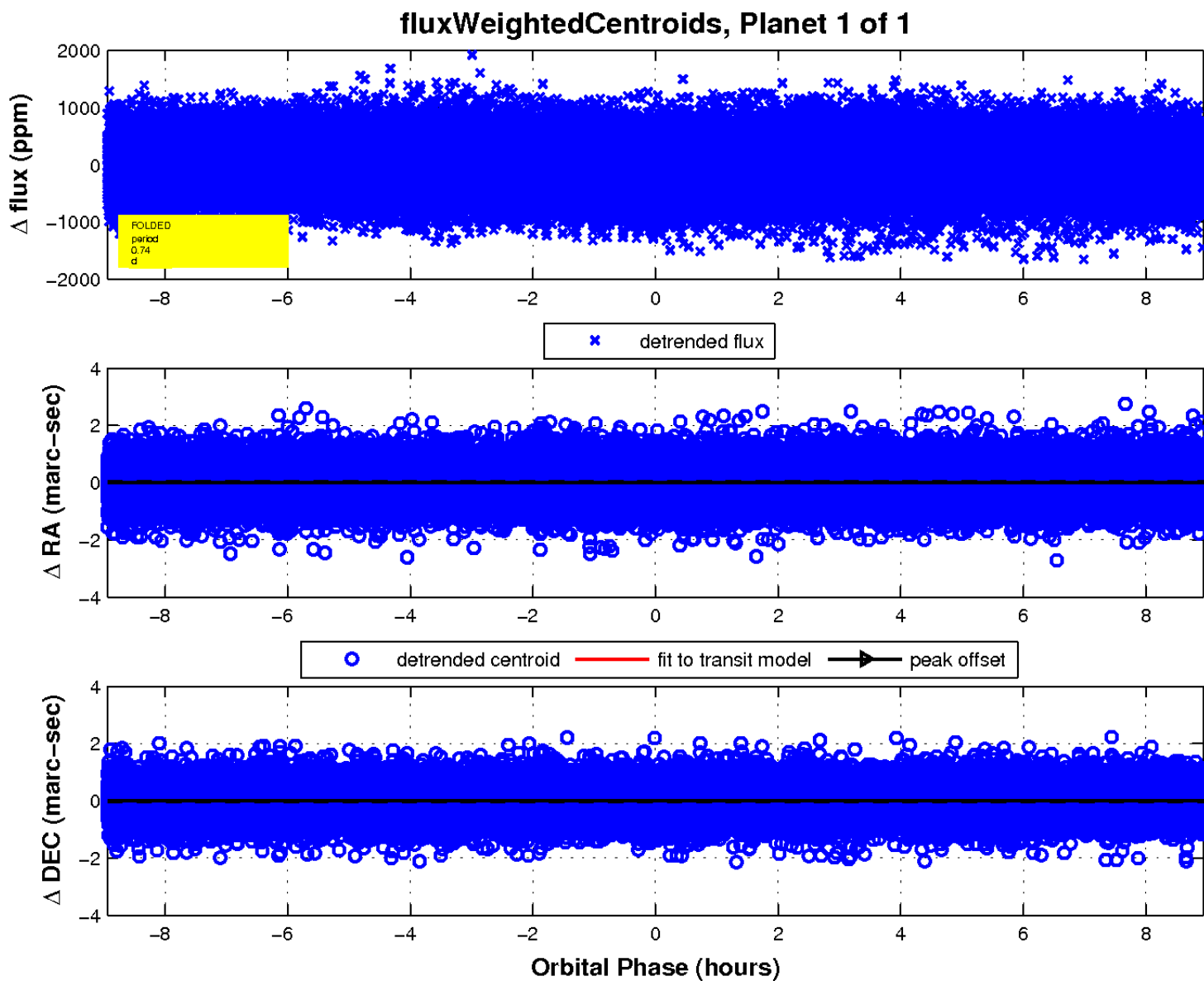
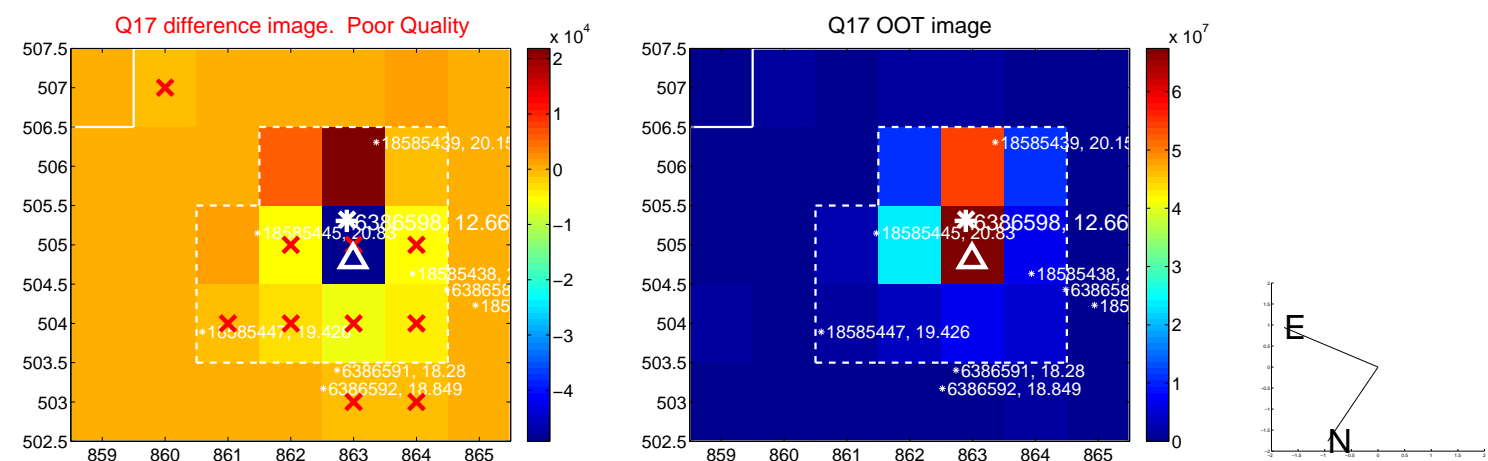
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

