

KIC 005113809

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})
005113809-01	OBS	6523.01	1.547209	132.963021	30.5	6.219	10.5	9.6	1.26	6612	0.75	3591.91

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005113809-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—CENT_KIC_POS

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

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

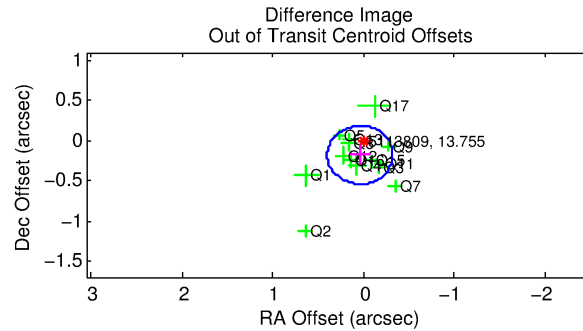
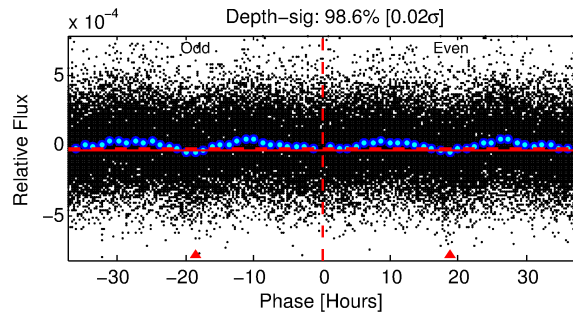
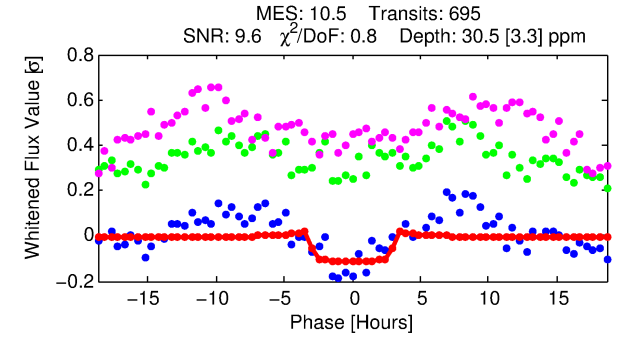
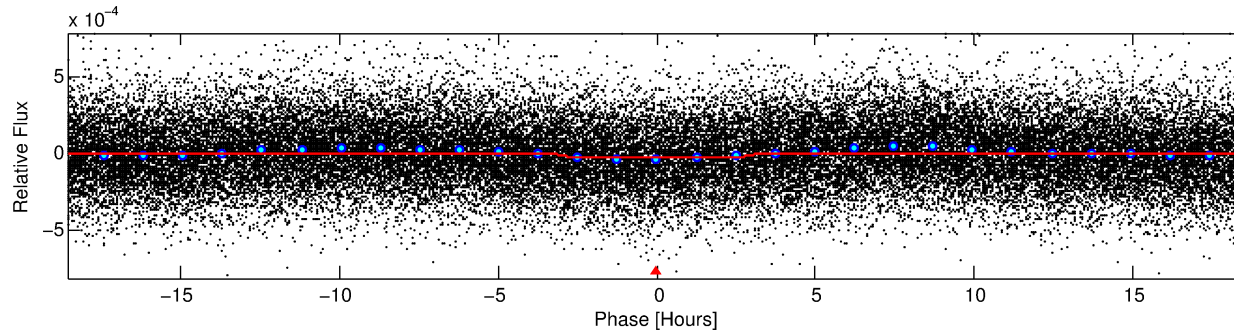
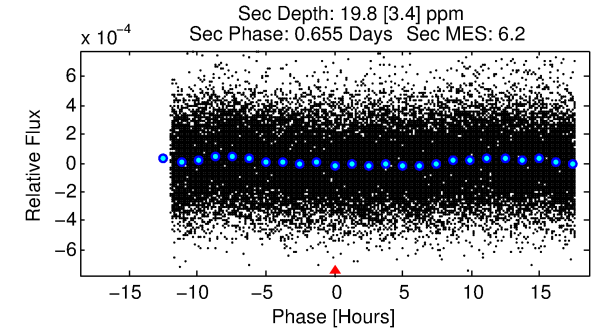
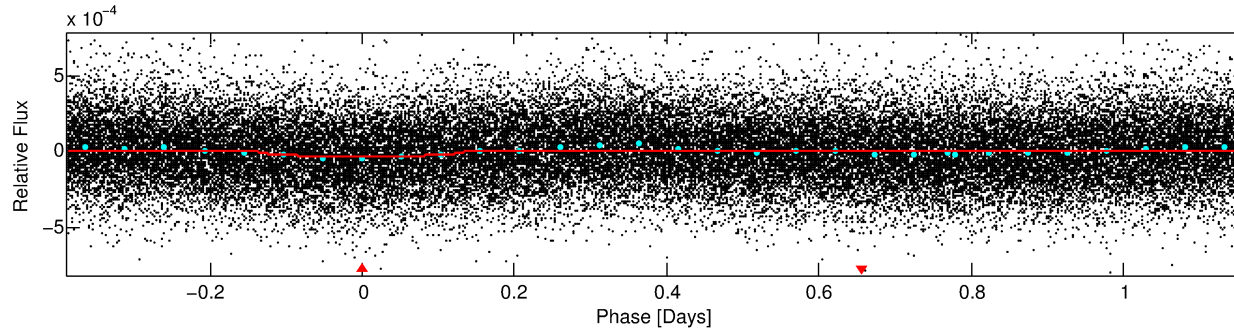
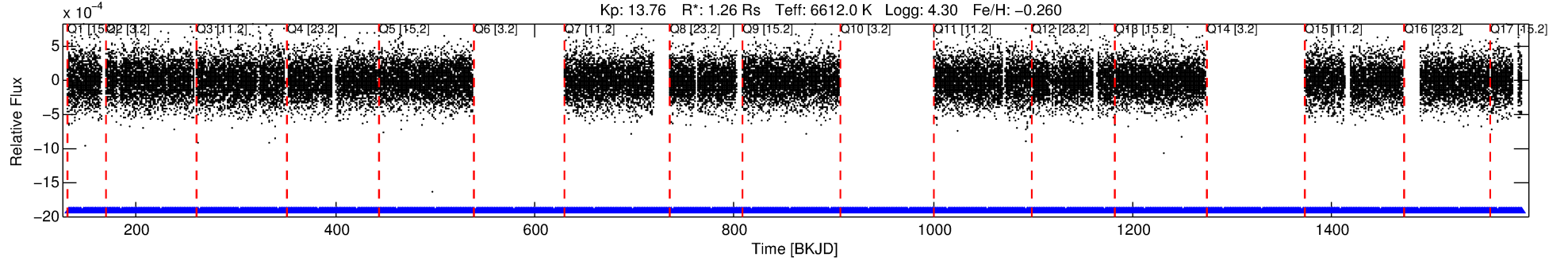
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005113809-01

No Significant Match Found

DV One-Page Summary

KIC: 5113809 Candidate: 1 of 1 Period: 1.547 d
KOI: K06523.01 Corr: 0.822



DV Fit Results:

Period = 1.54721 [0.00002] d
Epoch = 132.9630 [0.0057] BKJD
Rp/R* = 0.0054 [0.0021]
a/R* = 1.61 [2.13]
b = 0.69 [1.65]
Seff = 3591.91 [1345.00]
Teq = 1974 [185] K
Rp = 0.75 [0.36] Re
a = 0.0276 [0.0068] AU
Ag = 14.94 [12.82] [1.09σ]
Teffp = 6000 [1191] K [3.34σ]

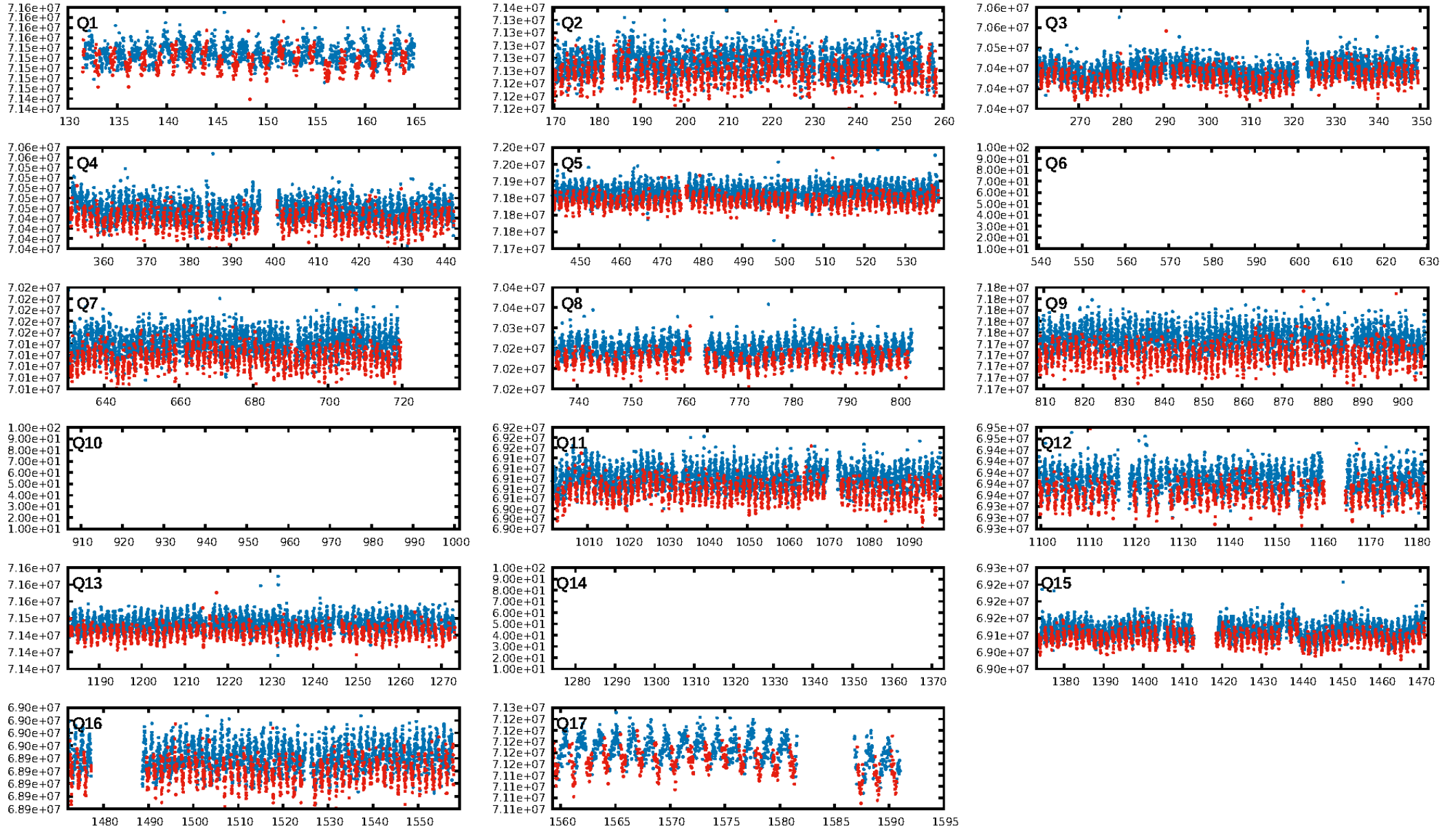
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.16e-19
RollingBand-fgt: 1.00 [655/655]
GhostDiagnostic-chr: 0.6535
Centroid-sig: 0.0%
Centroid-so: 3.945 arcsec [3.70σ]
OotOffset-rm: 0.184 arcsec [1.53σ]
KicOffset-rm: 0.196 arcsec [1.96σ]
OotOffset-st: 1/4/4/5 [14]
KicOffset-st: 1/4/4/5 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

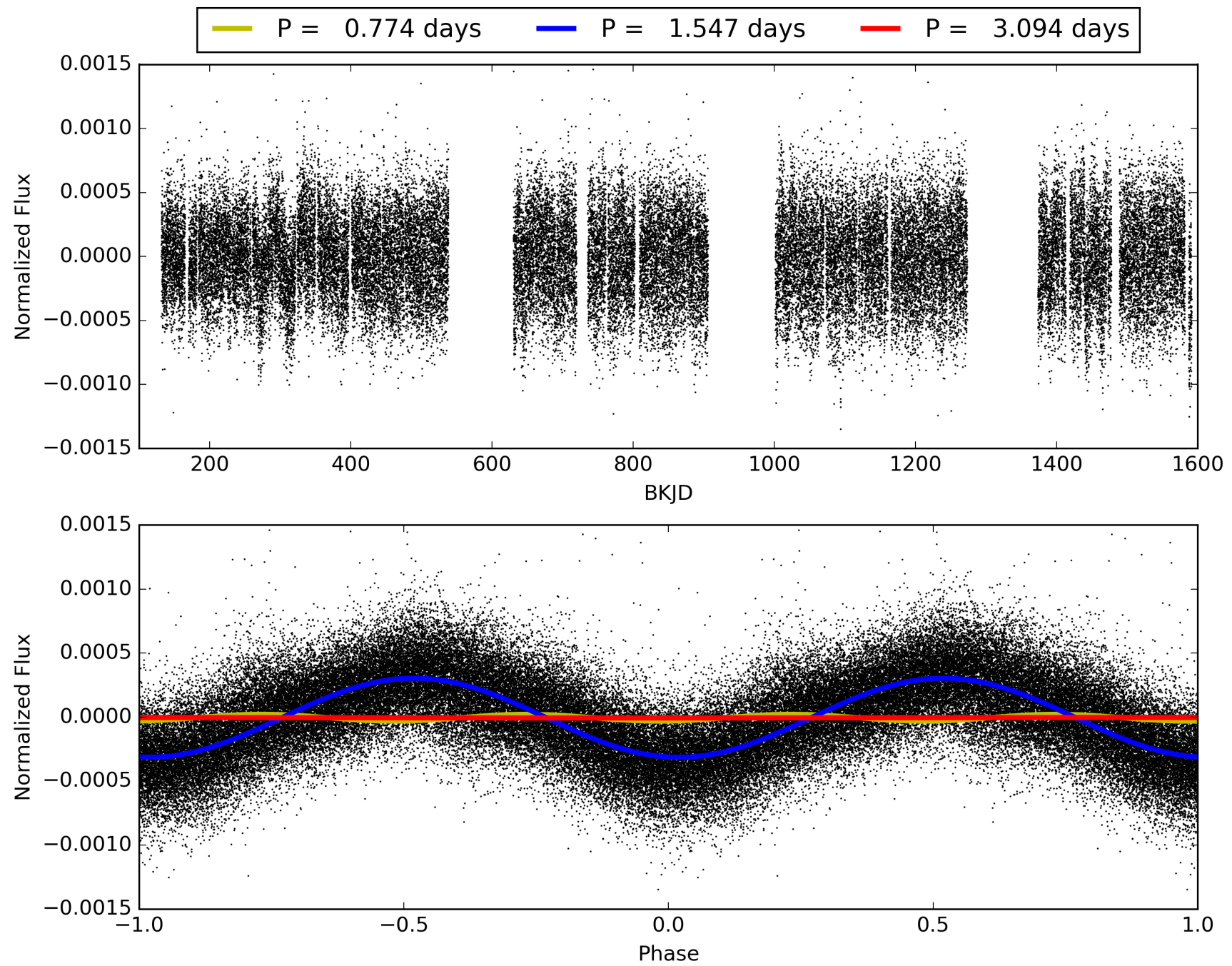
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 23:39:54 Z

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

TCE 005113809-01, PDC Light Curves

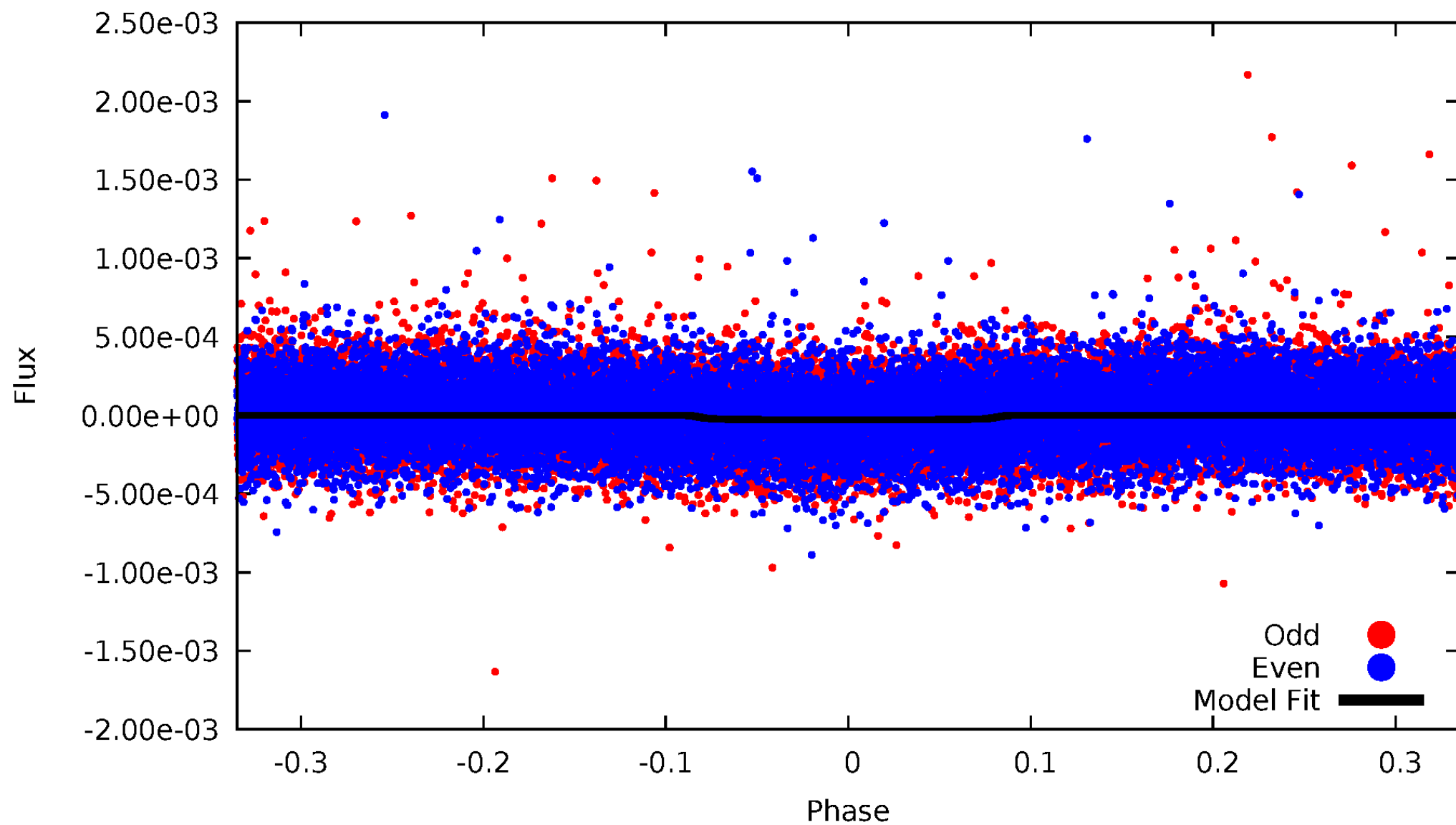


TCE 005113809-01



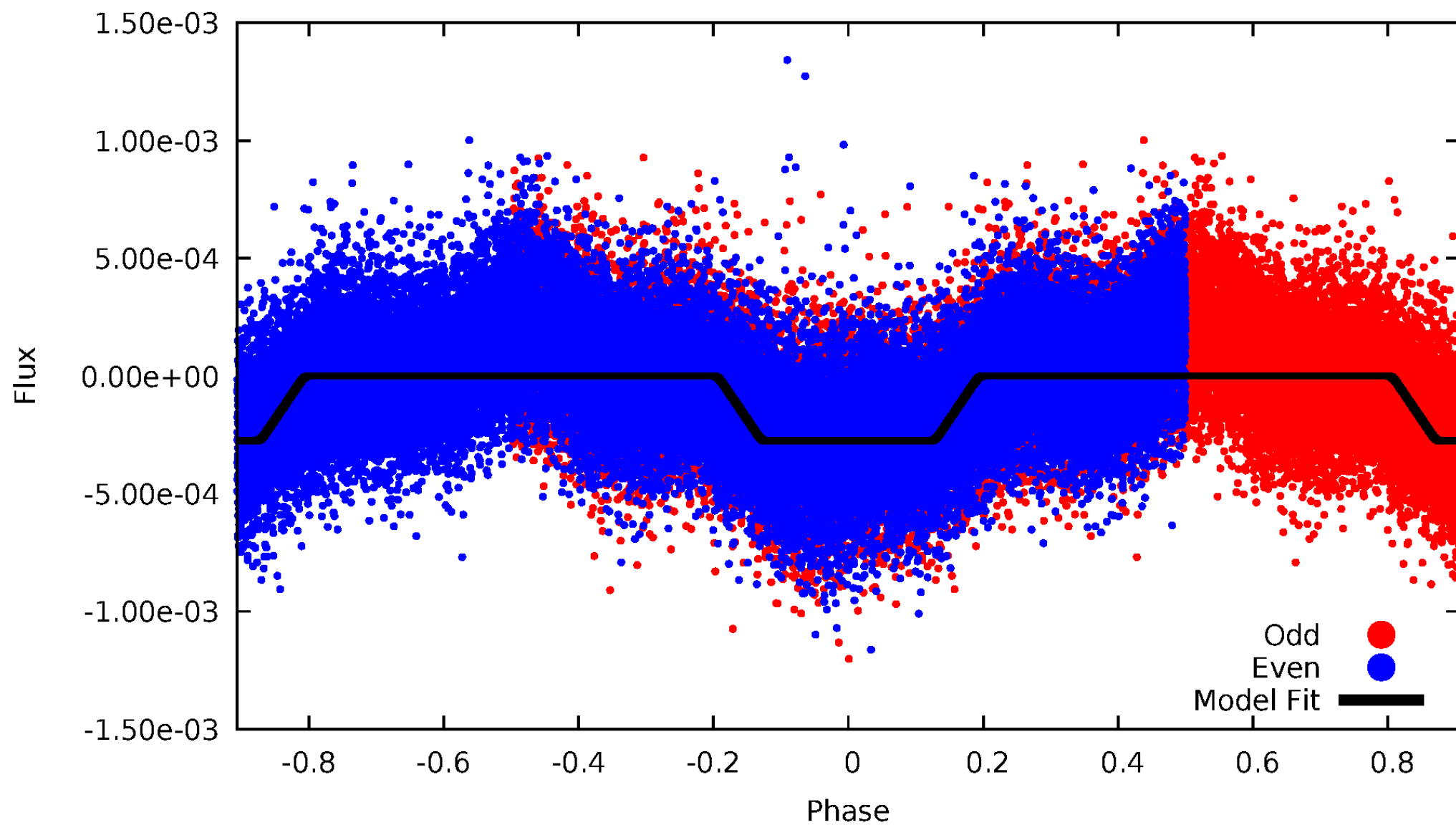
DV Odd/Even

TCE 005113809-01

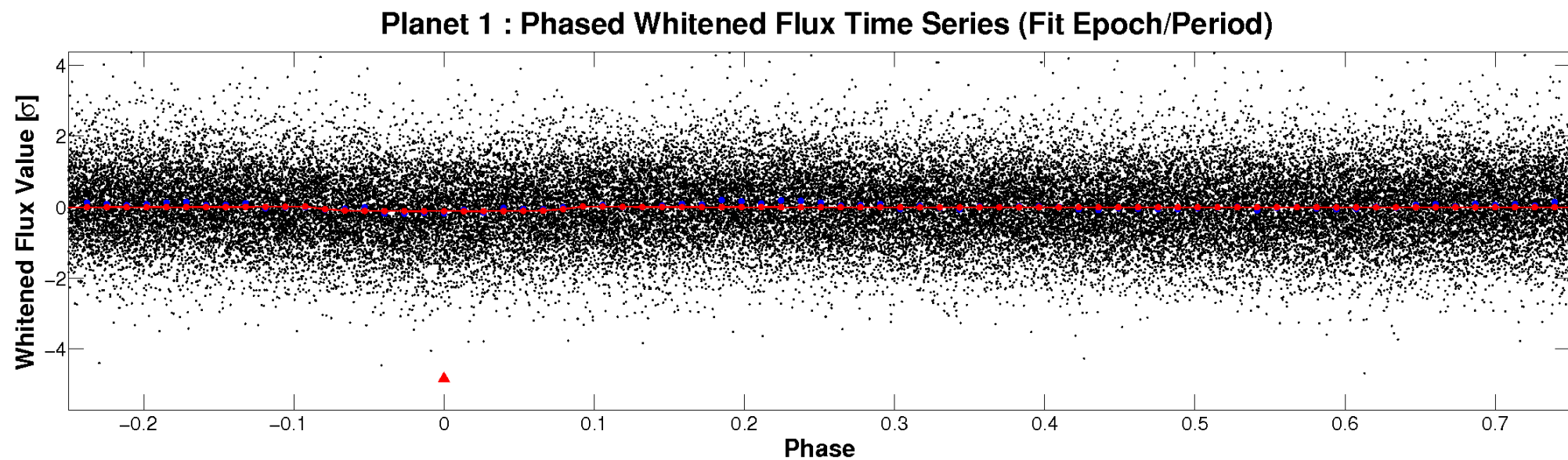
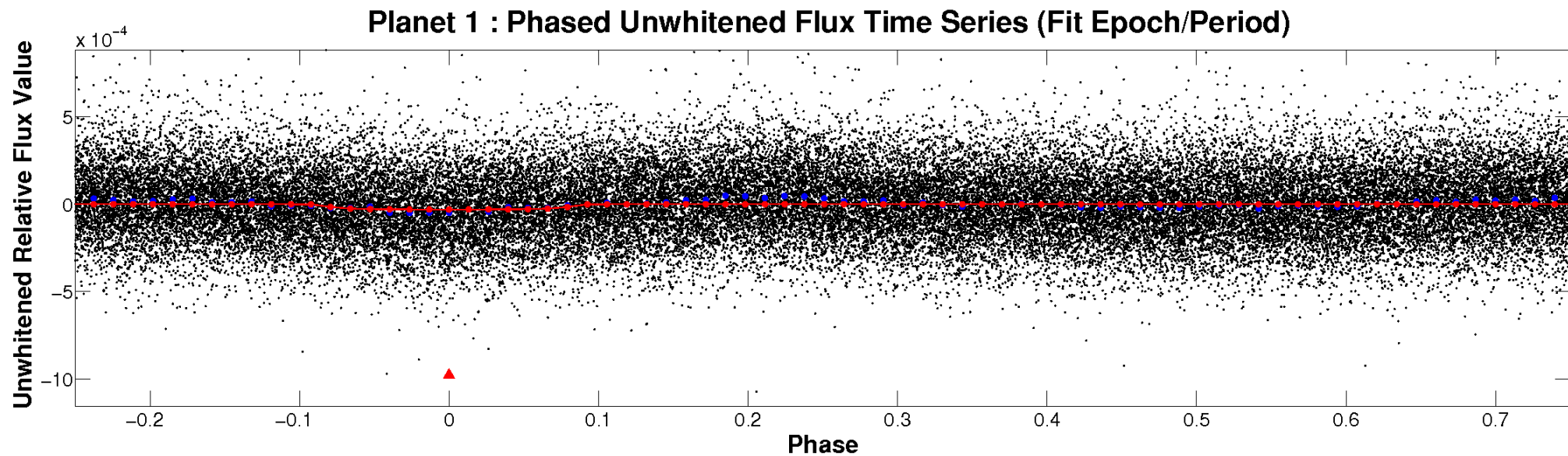


ALT Odd/Even

TCE 005113809-01

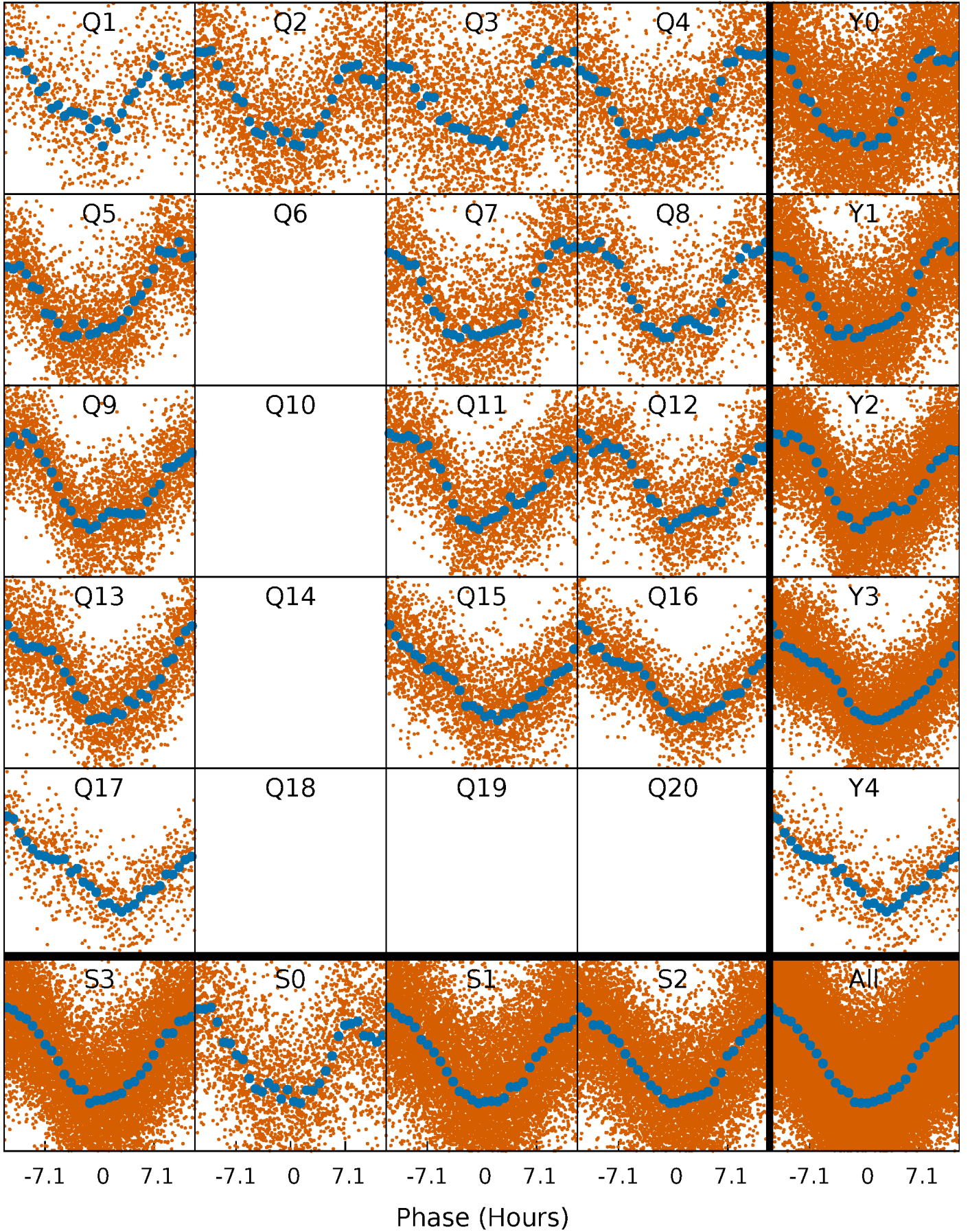


Non-Whitened Vs. Whitened Light Curve



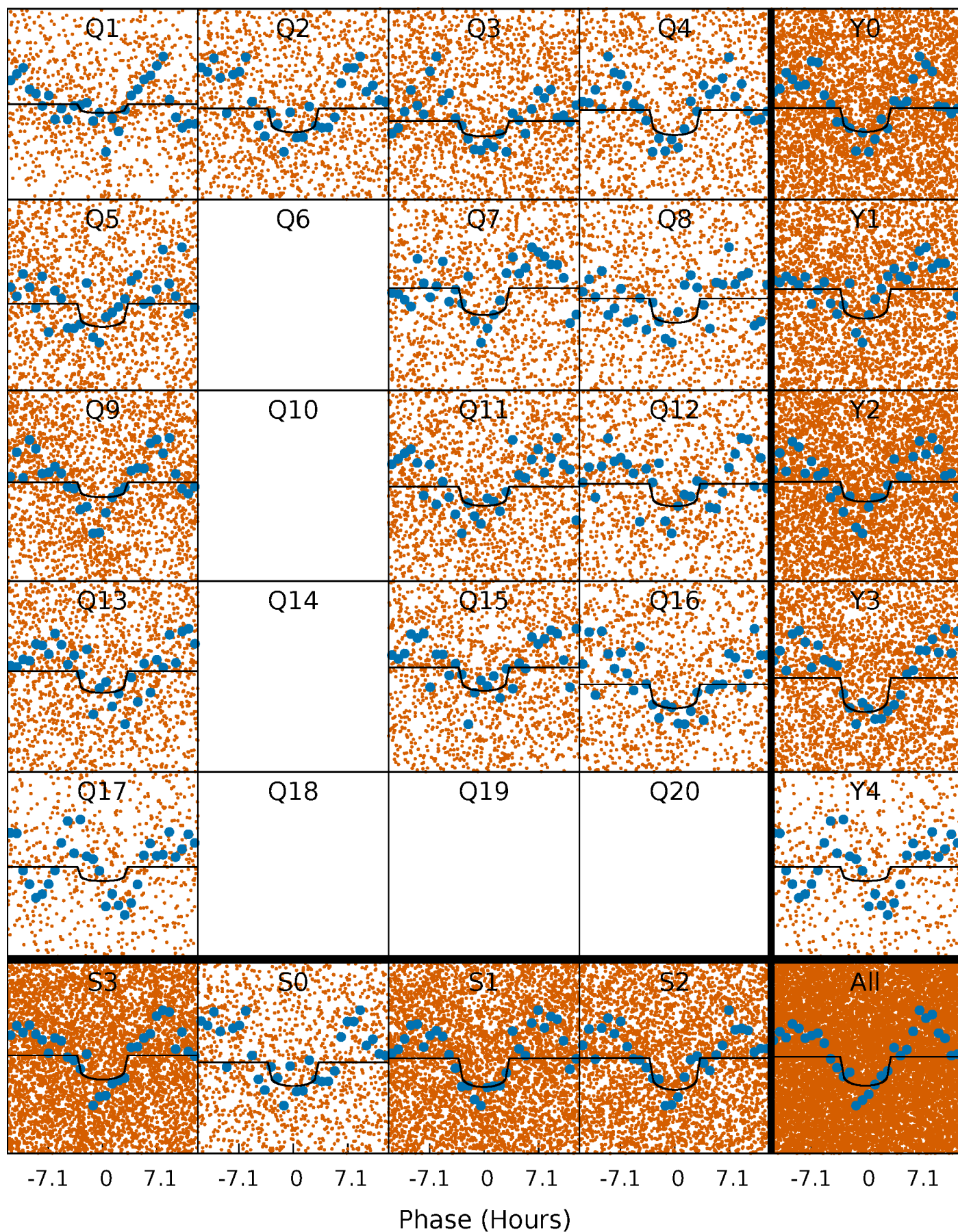
PDC Quarter-Phased Transit Curves

TCE 005113809-01 P= 1.547209 Days $T_0=132.963021$ (BKJD)



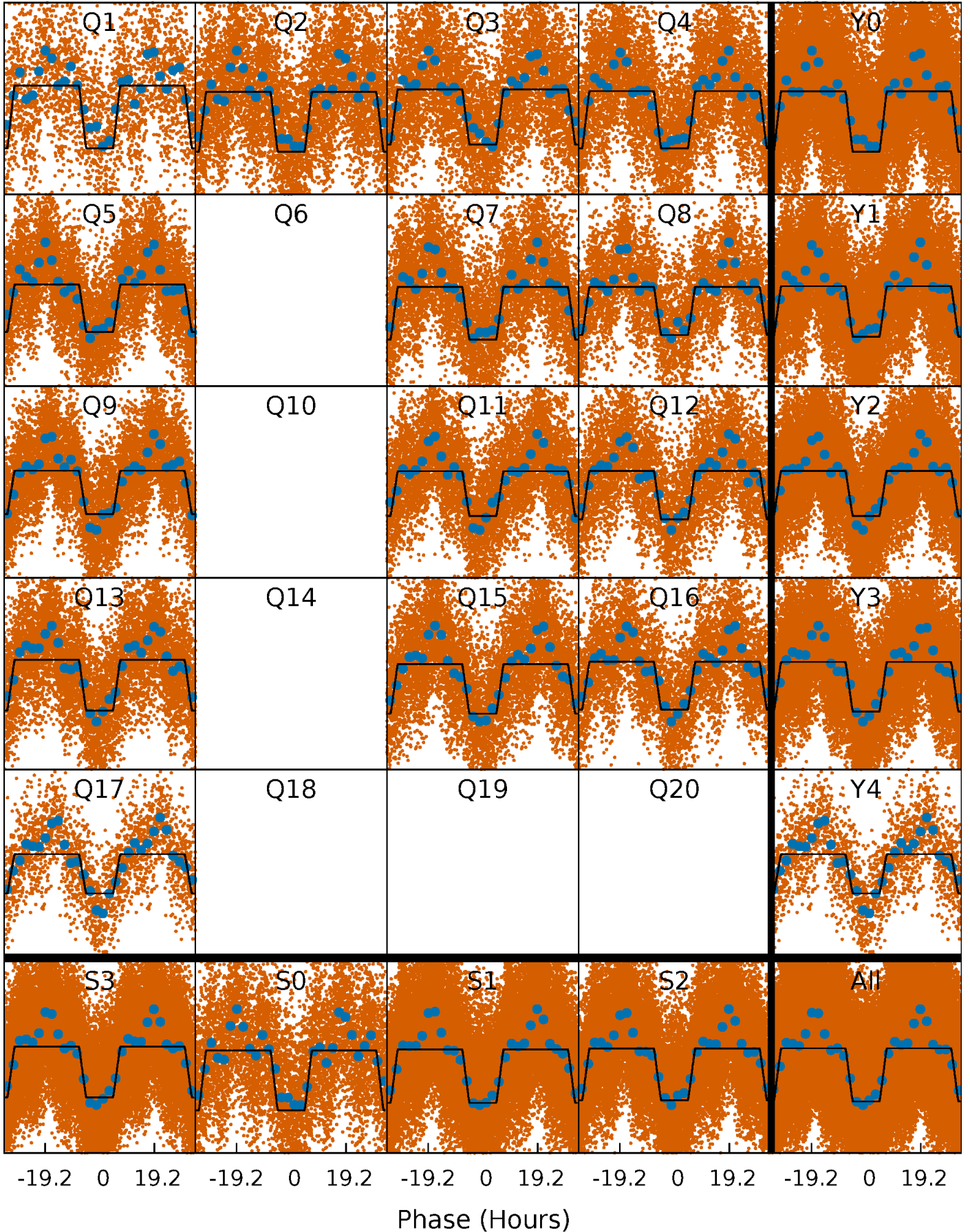
DV Quarter-Phased Transit Curves

TCE 005113809-01 P= 1.547209 Days $T_0=132.963021$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

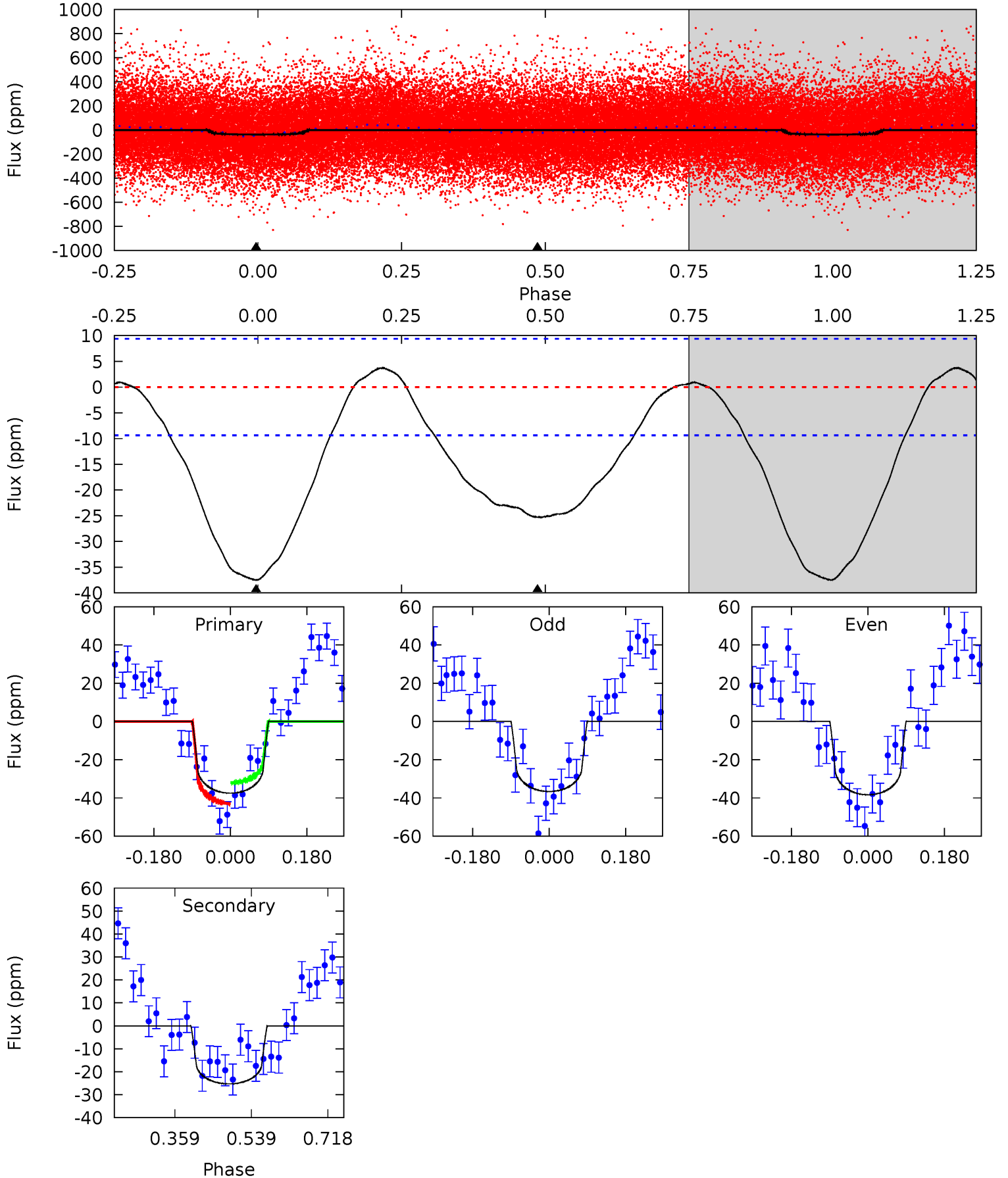
TCE 005113809-01 P= 1.547388 Days $T_0=132.895570$ (BKJD)



DV Model-Shift Uniqueness Test

005113809-01, P = 1.547209 Days, E = 131.415812 Days

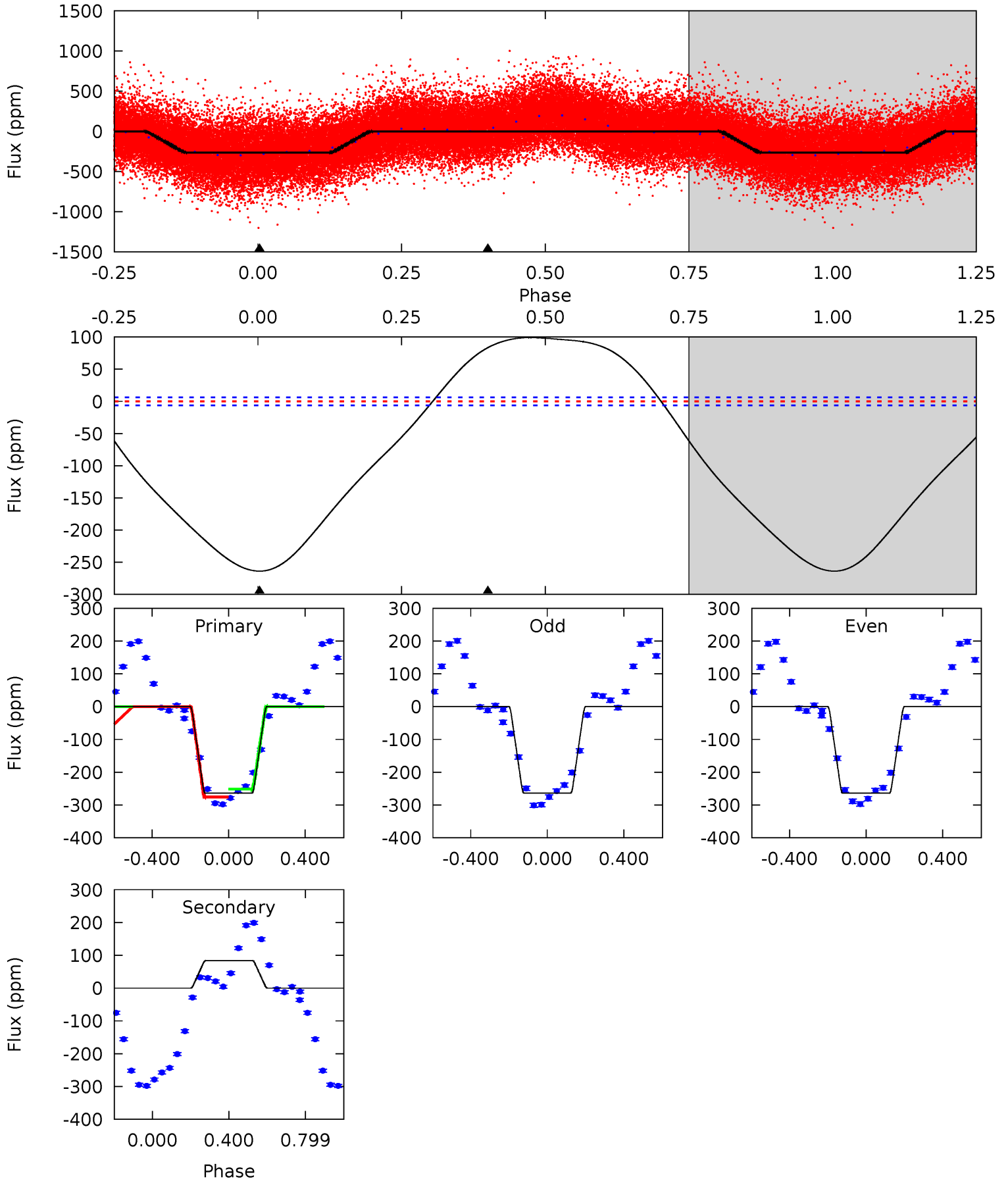
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.7	12.0	0	0	4.44	1.34	1.52	17.7	17.7	12.0	12.0	0.40	1.10	0.09	2.59



Alt Model-Shift Uniqueness Test

005113809-01, P = 1.547388 Days, E = 131.348182 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	-56.9	0	0	4.27	0.84	24.0	179.6	179.6	-56.9	-56.9	0.13	1.01	0.27	8.18



Stellar Parameters For KIC 005113809

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6612^{+158}_{-218}	$4.303^{+0.101}_{-0.188}$	$-0.260^{+0.250}_{-0.300}$	$1.264^{+0.377}_{-0.203}$	$1.173^{+0.175}_{-0.158}$	$0.819^{+0.443}_{-0.409}$
	+2%/-3%	+2%/-4%	+96%/-115%	+30%/-16%	+15%/-13%	+54%/-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 005113809-01 / KOI 6523.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-25 ± 2	$0.76^{+0.33}_{-0.28}$	2769^{+213}_{-140}	6324^{+1920}_{-951}	19^{+27}_{-10}
Alt.	84 ± 1	$2.35^{+0.44}_{-0.36}$	2784^{+189}_{-165}	-5018^{+258}_{-316}	$-6.312^{+1.777}_{-2.364}$

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 $A_{obs} \gg 1.0$

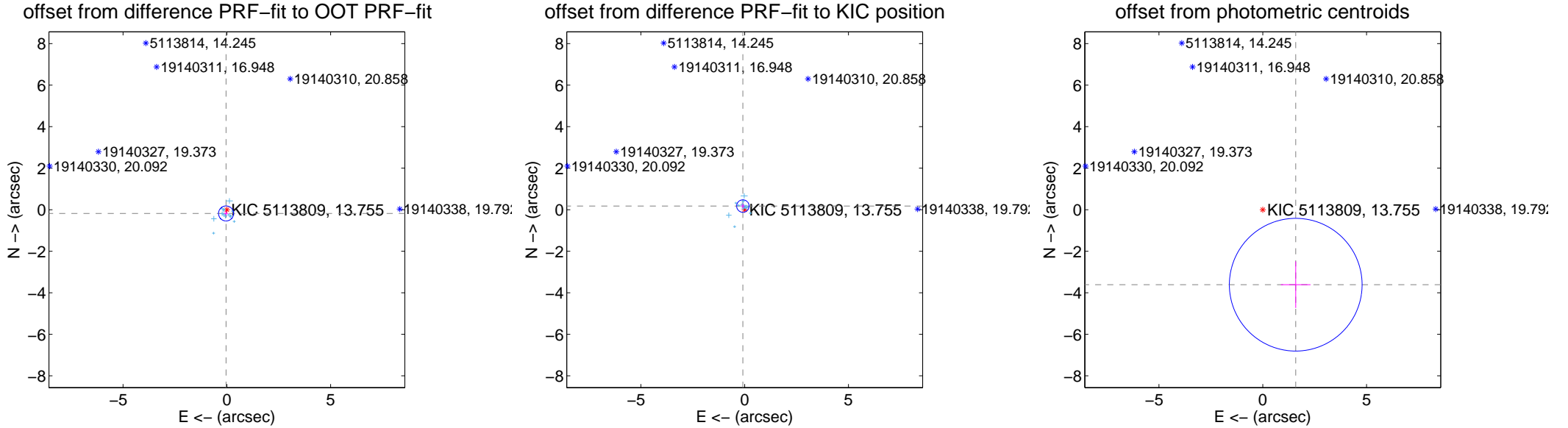
DV Centroid Data

Supplemental centroid analysis for 005113809-01. Kepler magnitude: 13.76. Transit SNR 9.59

There are 14 quarters with good PRF difference image offsets

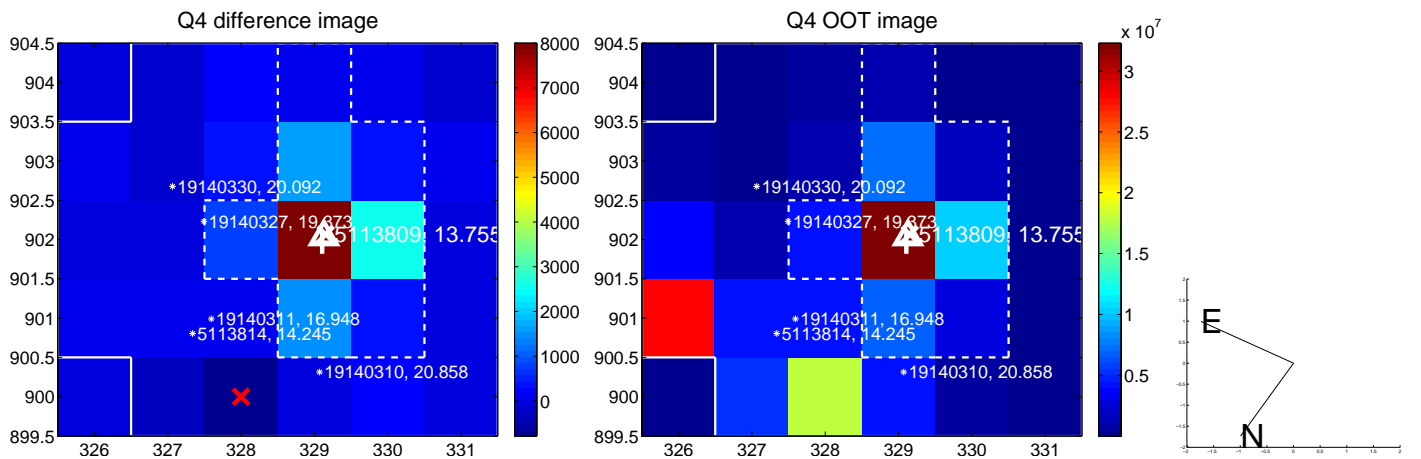
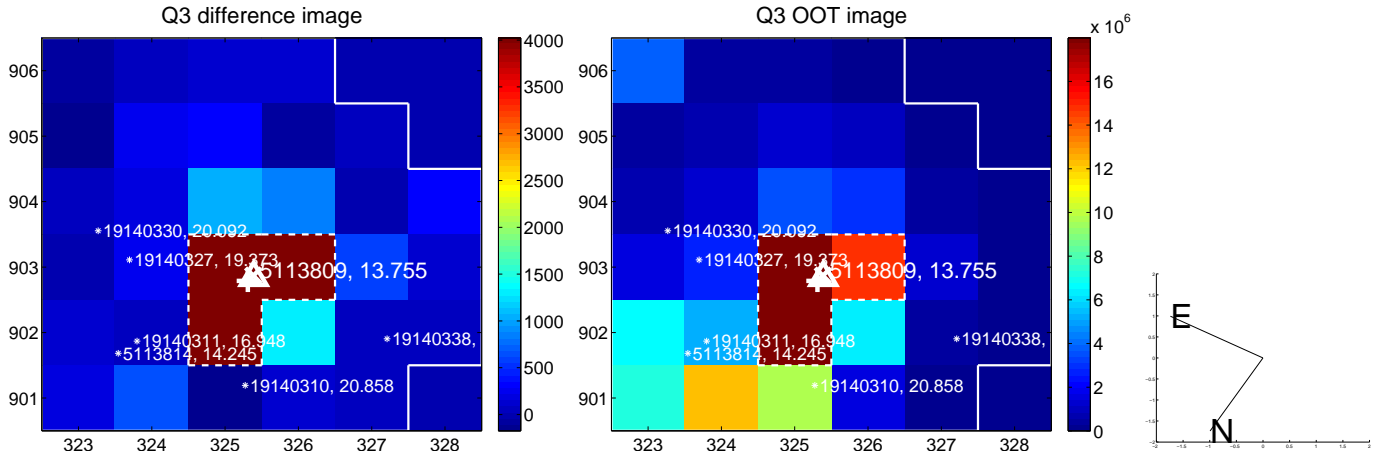
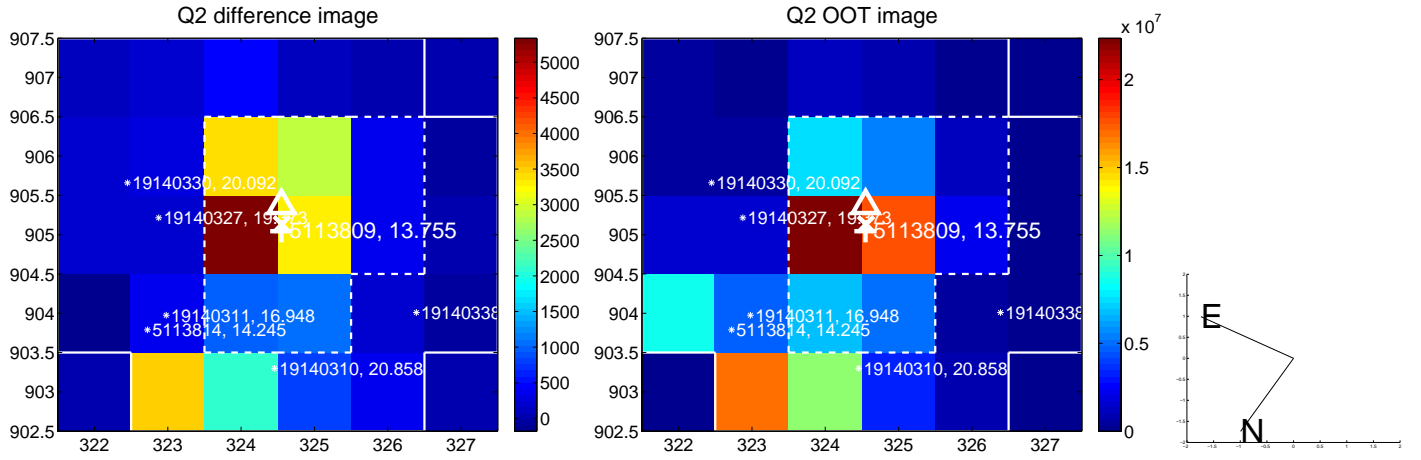
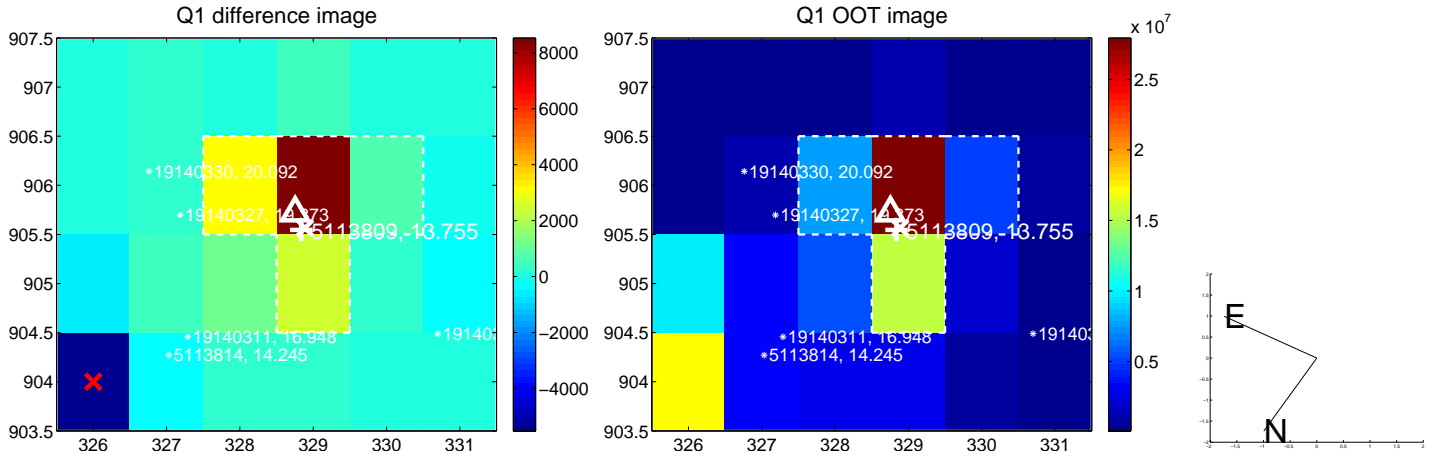
The direct PRF centroid is offset from the target star catalog position by about 0.28 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.184 ± 0.121	1.53	0.038 ± 0.105	-0.181 ± 0.116
PRF-fit source offset from KIC position	0.196 ± 0.100	1.96	0.086 ± 0.092	0.176 ± 0.111
photometric centroid source offset	3.95 ± 1.07	3.70	-1.59 ± 0.72	-3.61 ± 1.12

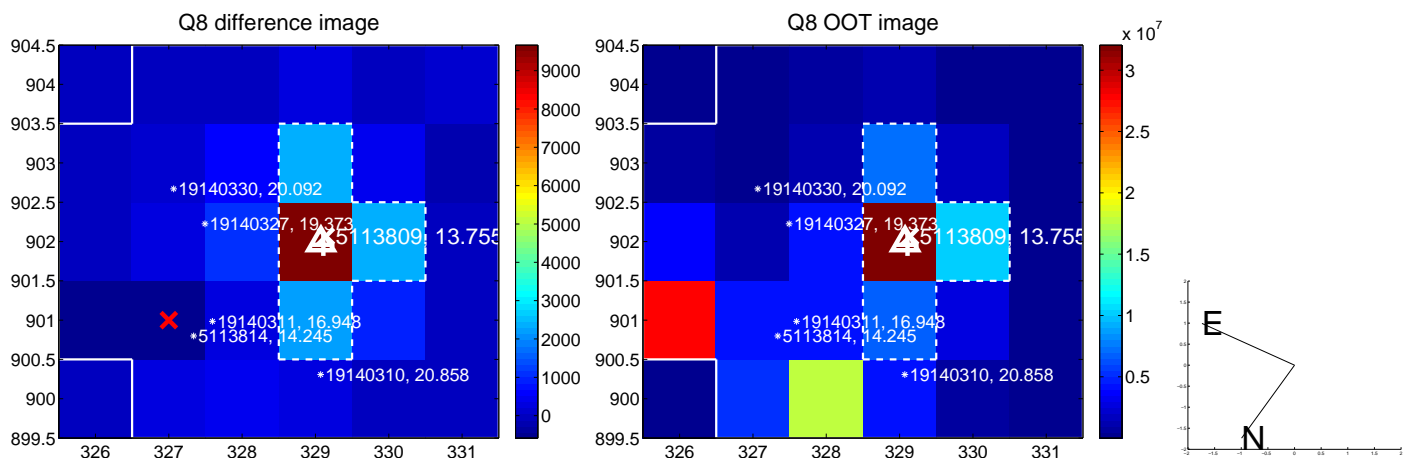
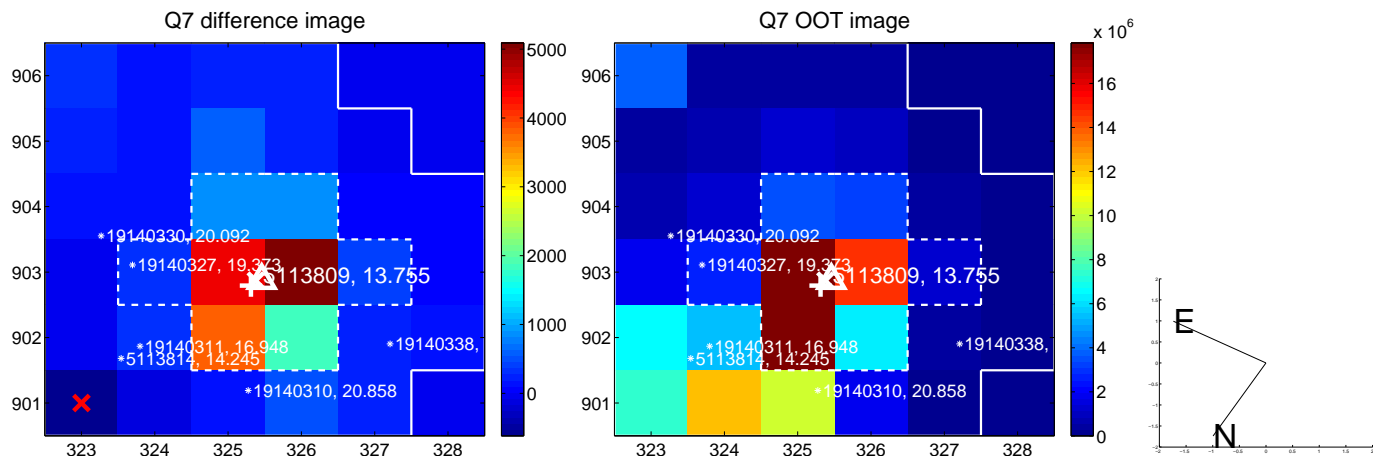
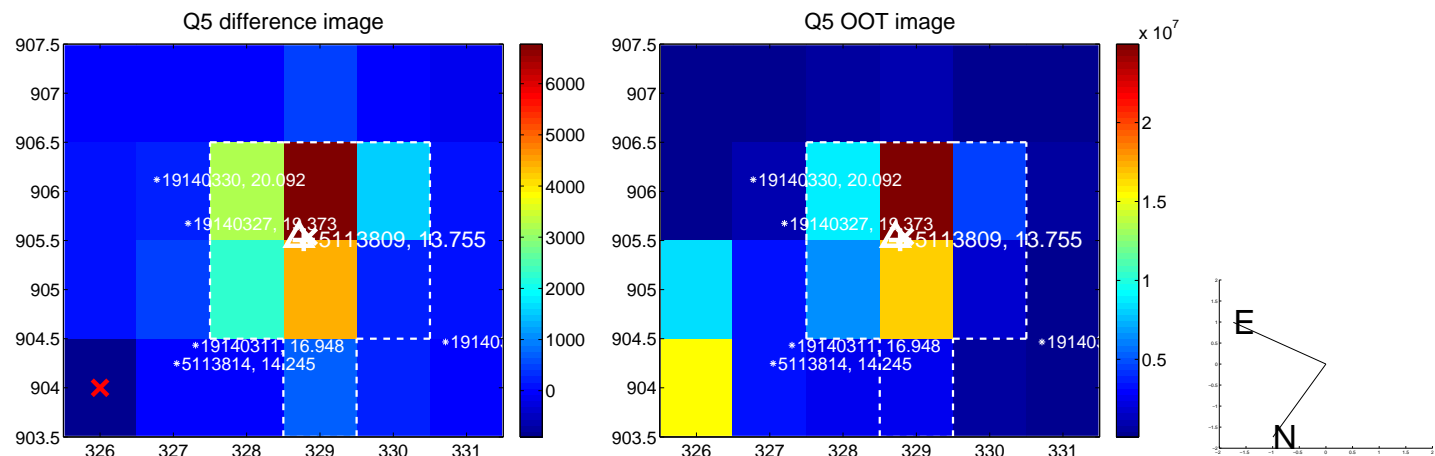


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

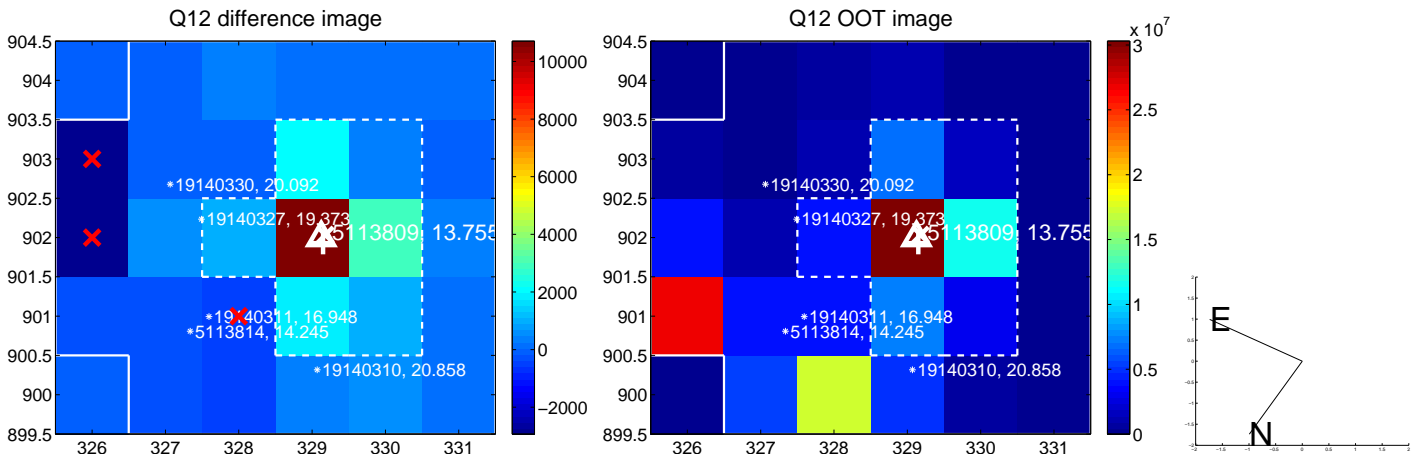
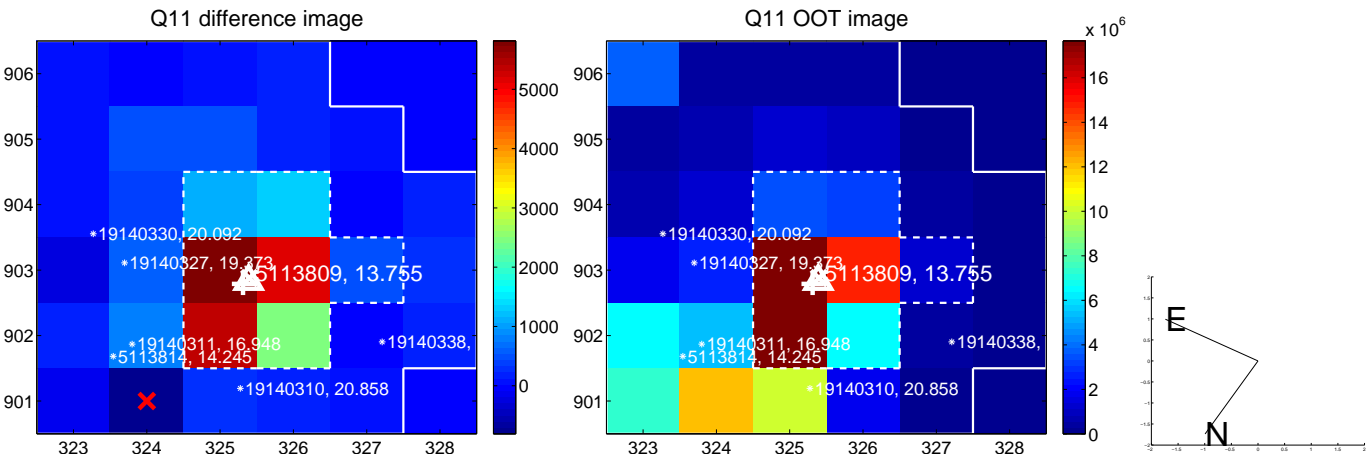
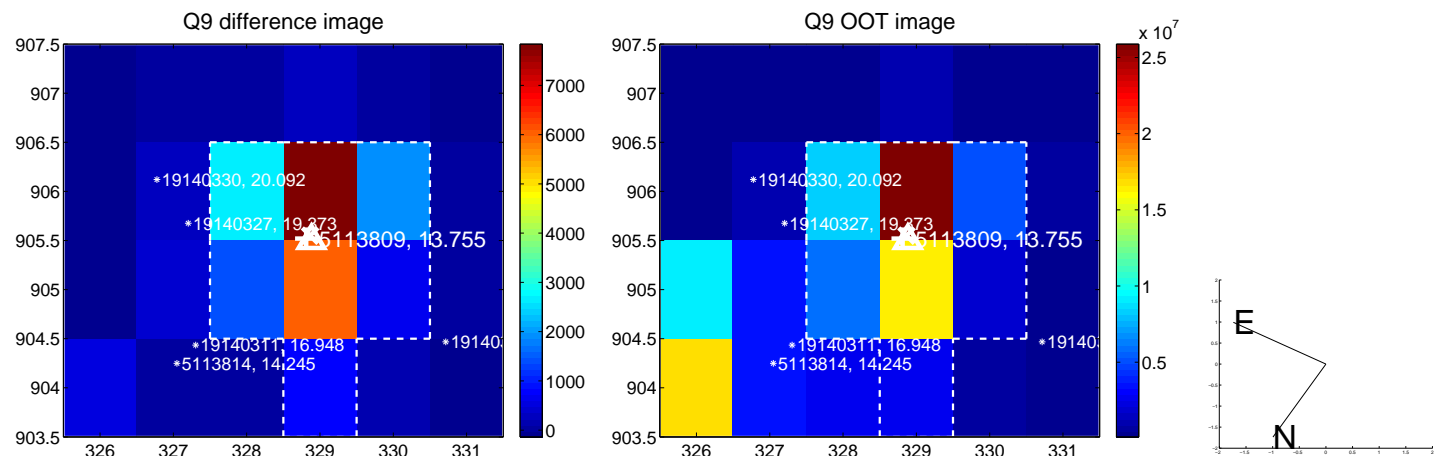
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



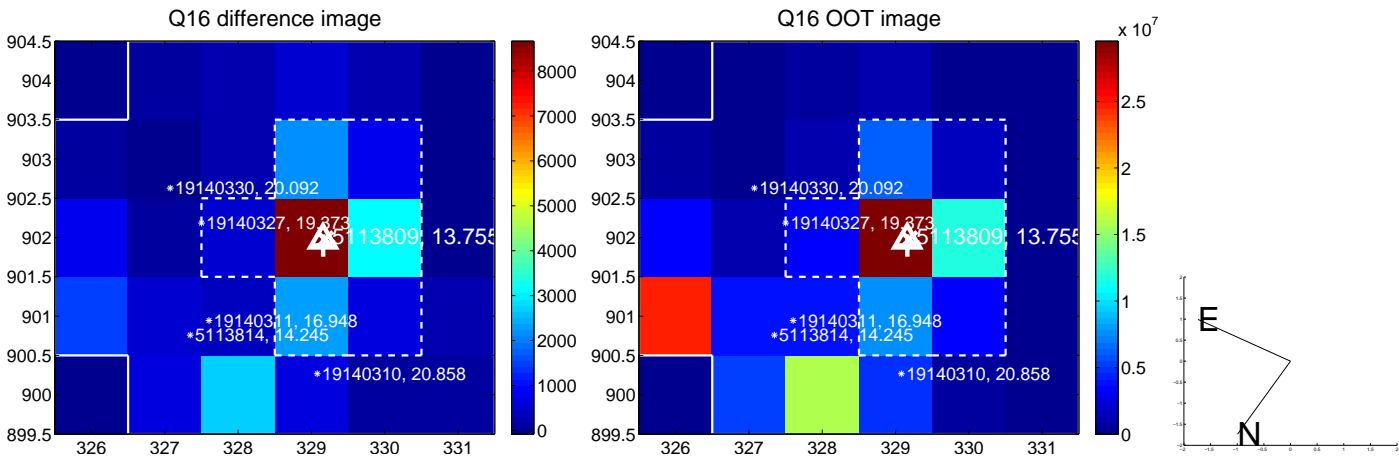
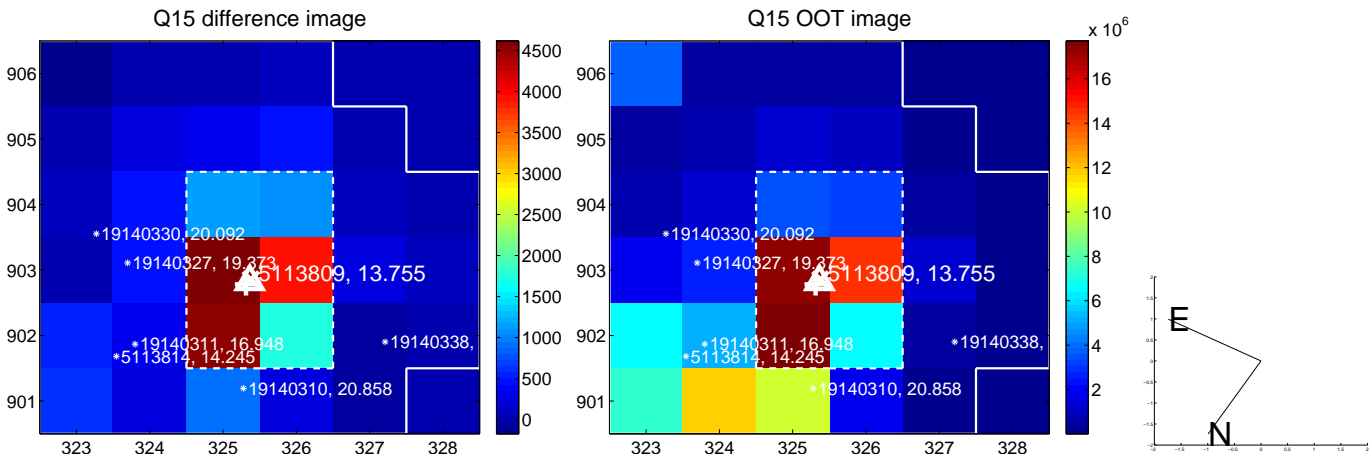
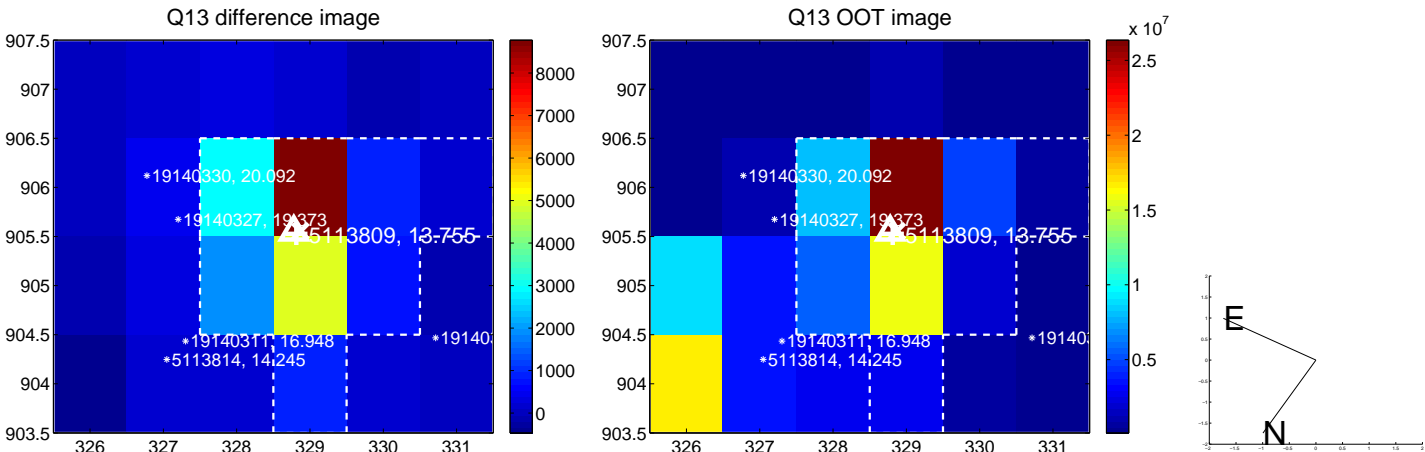
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



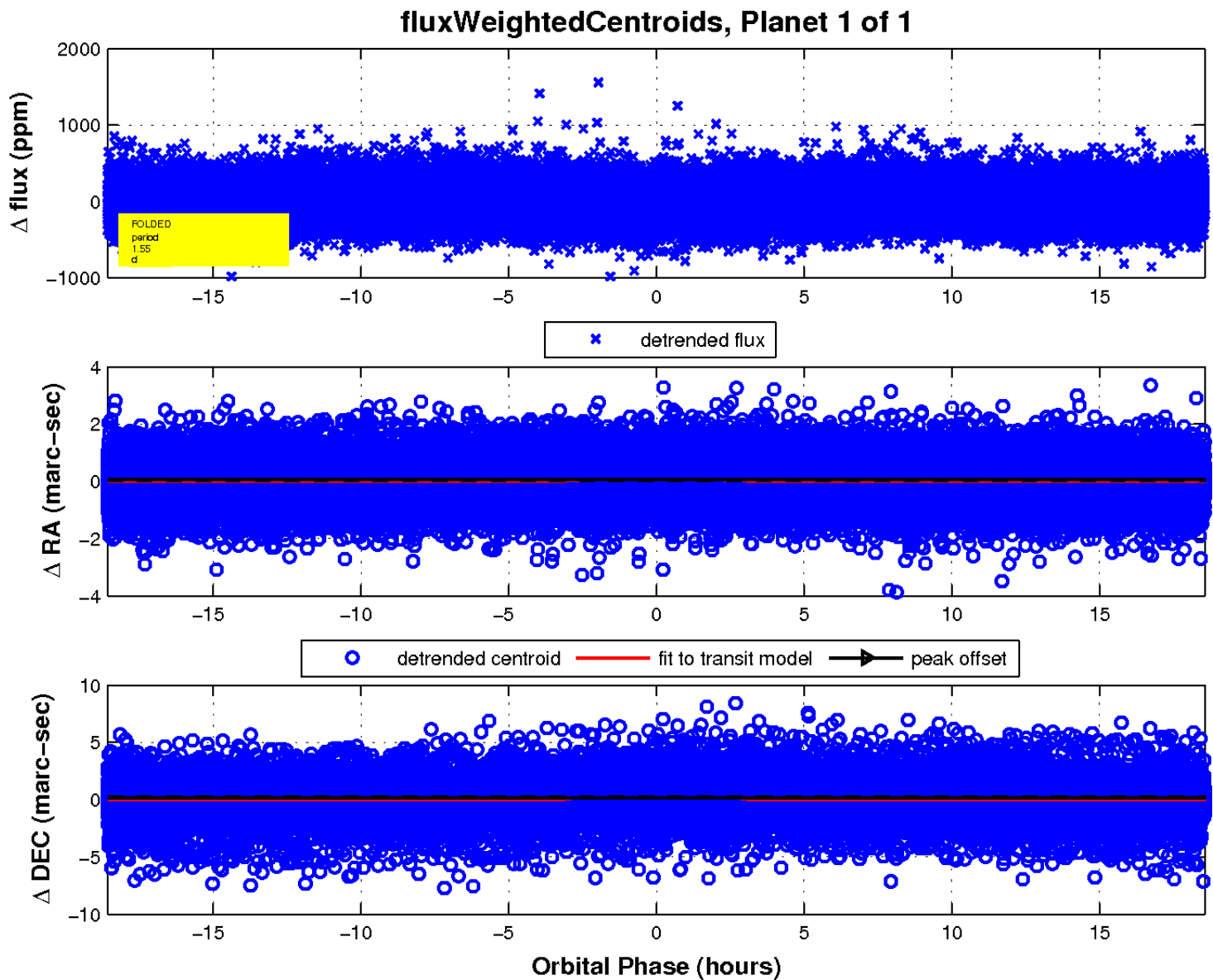
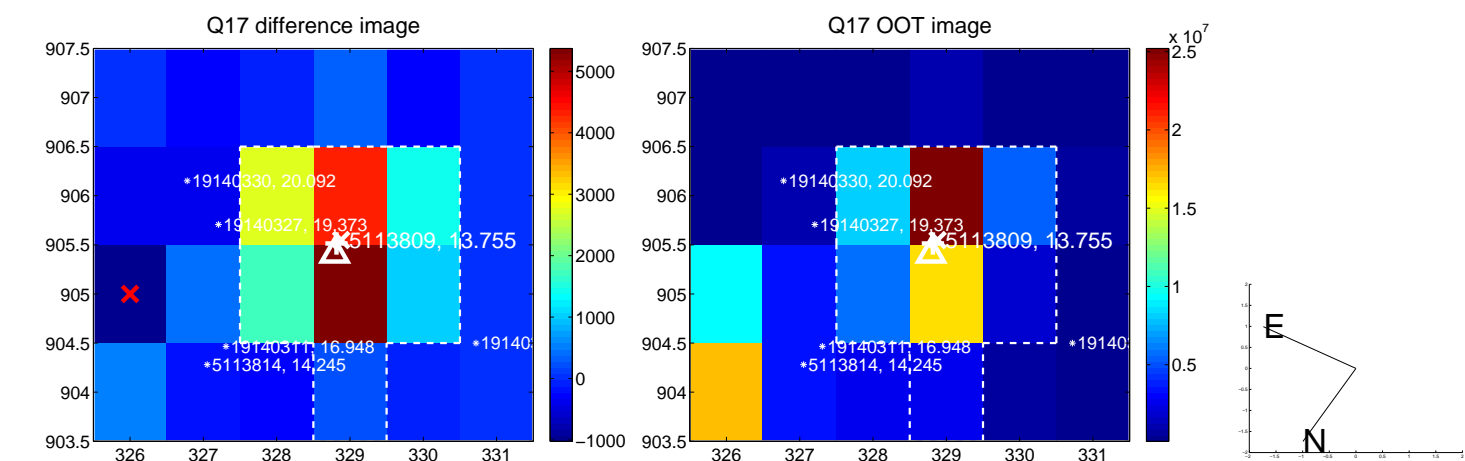
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

