

KIC 010362577

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})
010362577-01	OBS	No	0.504853	131.690919	74.2	2.034	8.0	9.7	1.85	6770	1.86	33428.96

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010362577-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED

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

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

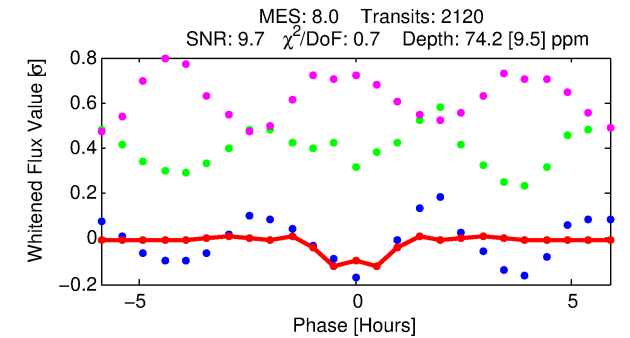
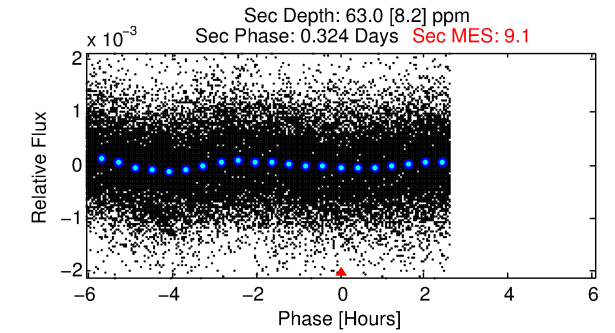
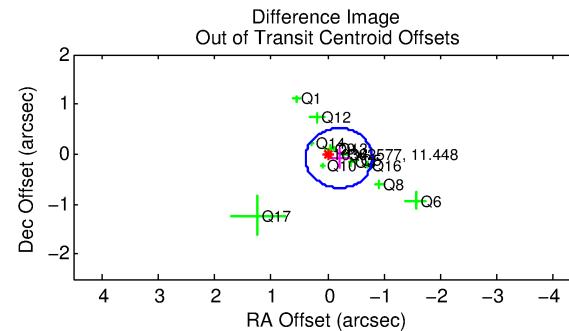
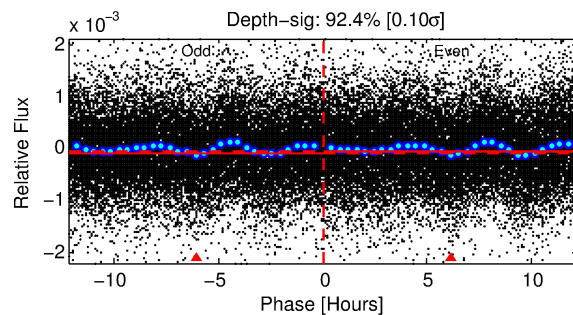
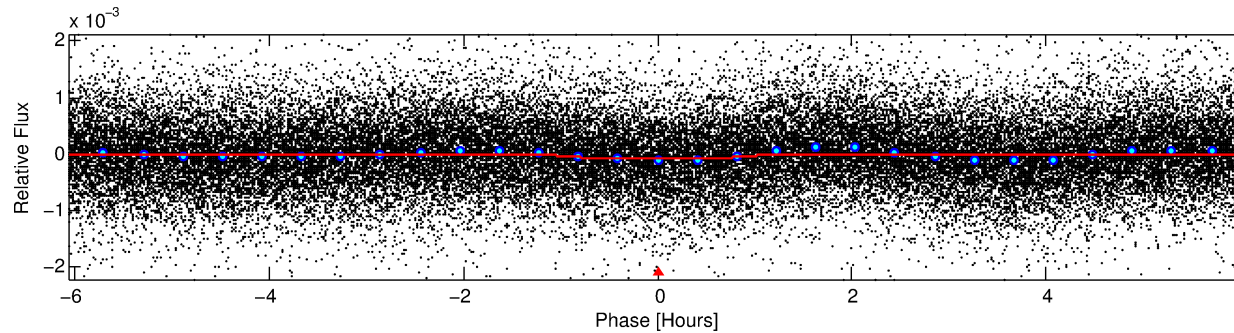
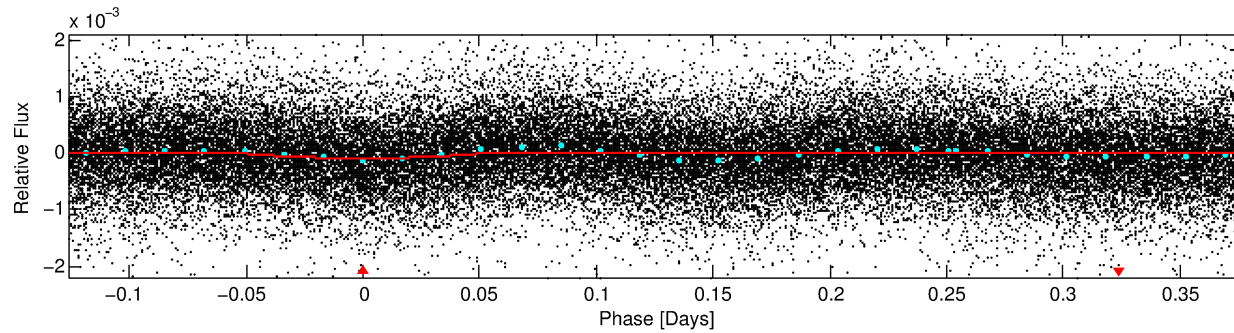
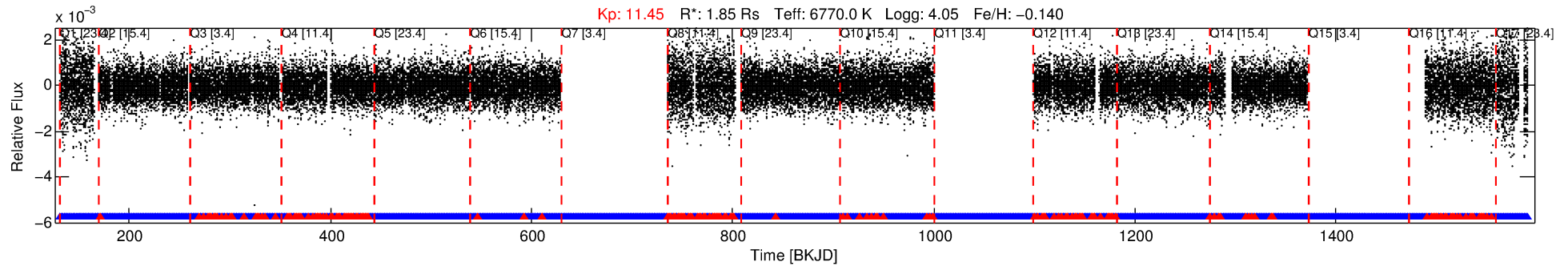
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010362577-01

No Significant Match Found

DV One-Page Summary

KIC: 10362577 Candidate: 1 of 1 Period: 0.505 d



DV Fit Results:

Period = 0.50485 [0.00001] d
Epoch = 131.6909 [0.0016] BKJD
 $R_p/R^* = 0.0092$ [0.0031]
 $a/R^* = 1.28$ [0.98]
 $b = 0.90$ [0.42]
 $\text{Seff} = 33428.96$ [15389.51]
 $T_{\text{eq}} = 3448$ [397] K
 $R_p = 1.86$ [0.84] R_e
 $a = 0.0139$ [0.0038] AU
 $A_g = 1.93$ [1.56] [0.60 σ]
 $T_{\text{eff}} = 6286$ [1105] K [2.42 σ]

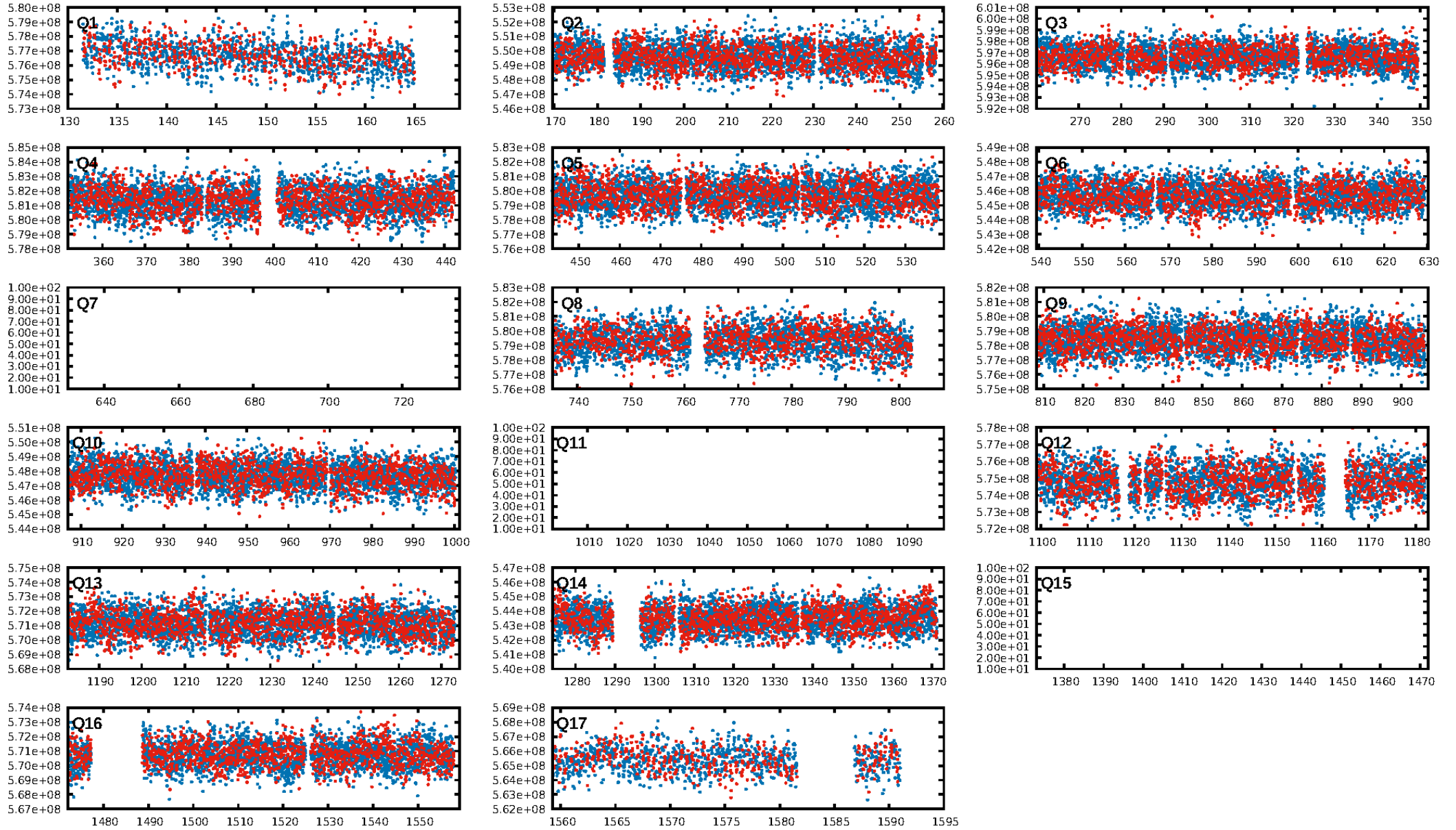
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 6.82e-13
RollingBand-fgt: 0.90 [1797/2000]
GhostDiagnostic-chr: 0.7267
Centroid-sig: 97.0%
Centroid-so: 0.283 arcsec [1.71 σ]
OotOffset-rm: 0.215 arcsec [1.08 σ]
KicOffset-rm: 0.331 arcsec [1.71 σ]
OotOffset-st: 3/1/4/5 [13]
KicOffset-st: 3/1/4/5 [13]
DiffImageQuality-fgm: 0.62 [8/13]
DiffImageOverlap-fno: 1.00 [14/14]

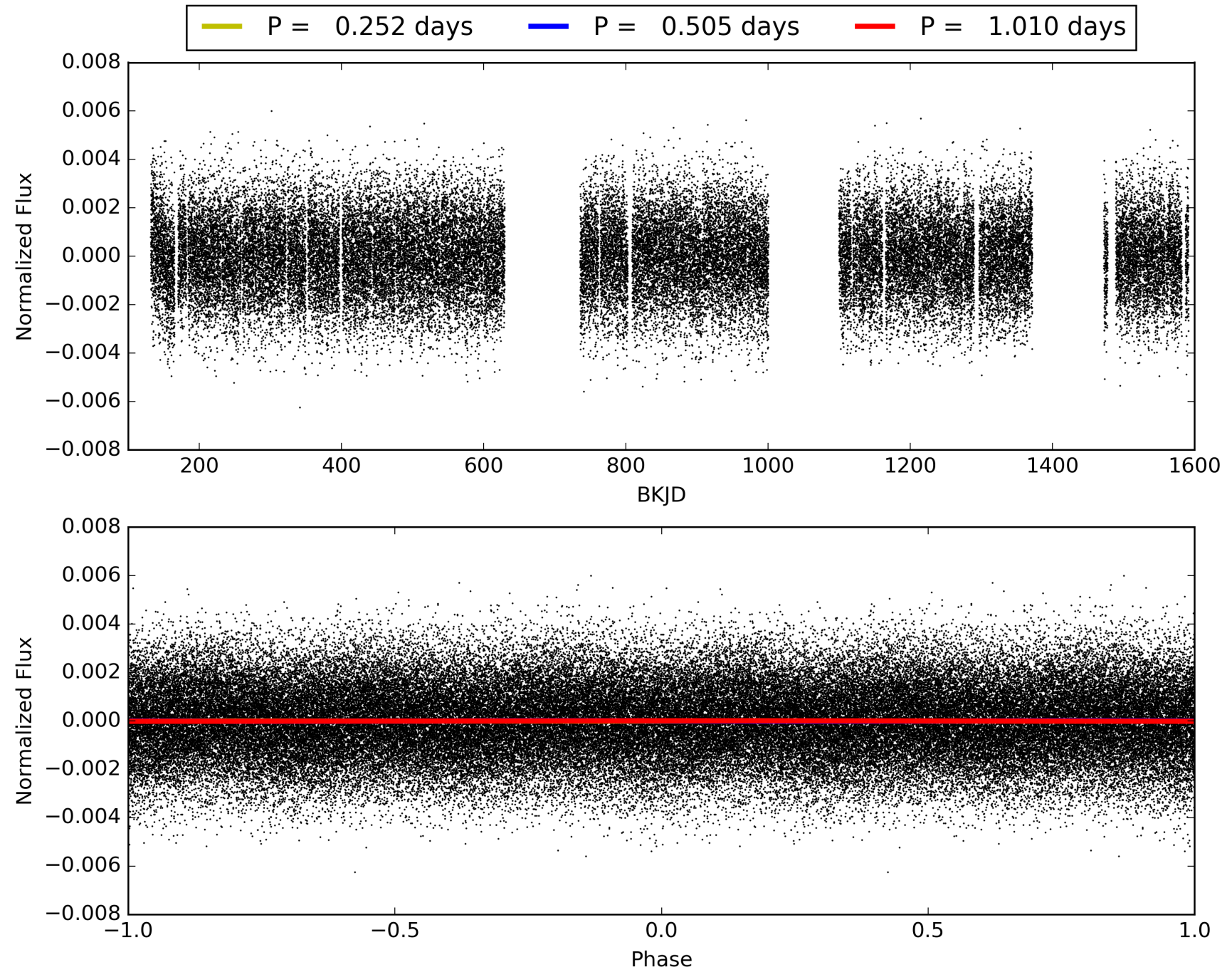
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 16:17:03 Z

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

TCE 010362577-01, PDC Light Curves

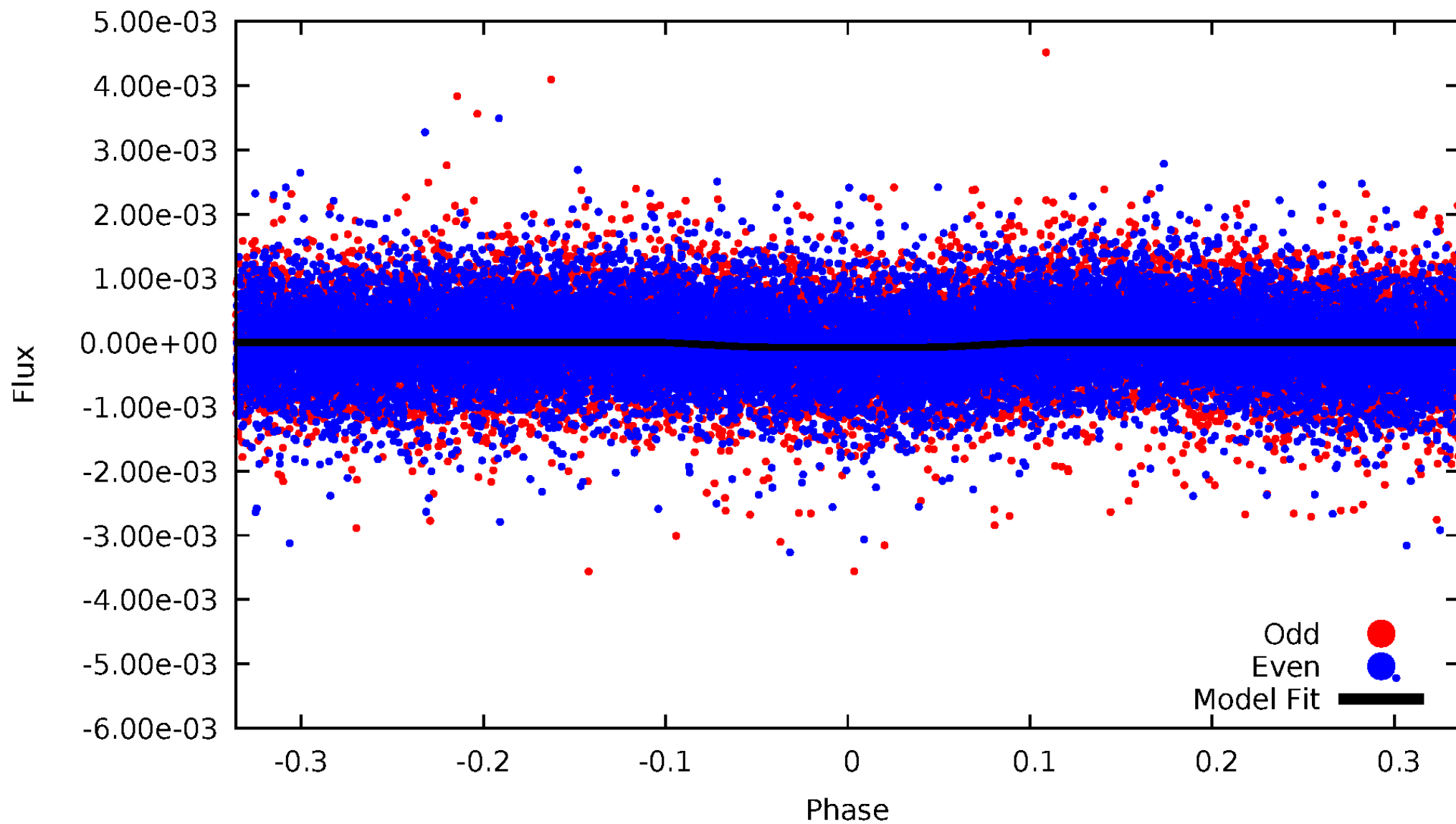


TCE 010362577-01



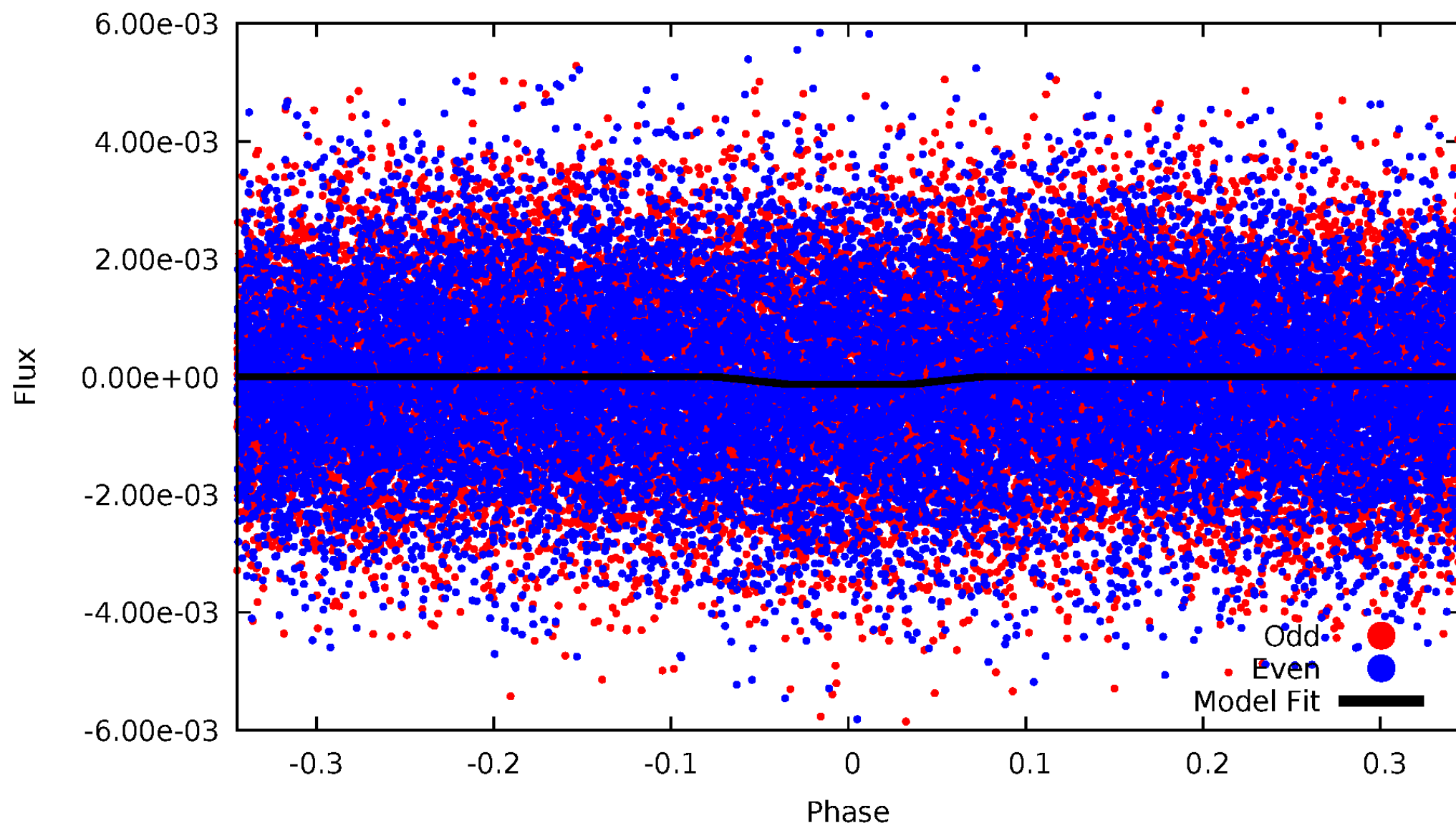
DV Odd/Even

TCE 010362577-01



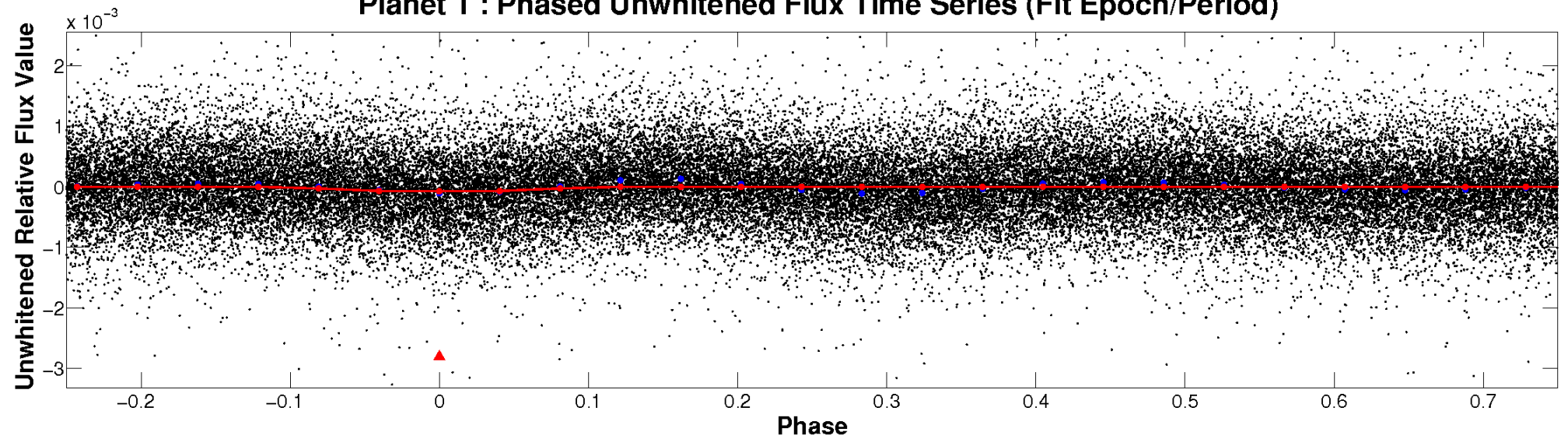
ALT Odd/Even

TCE 010362577-01

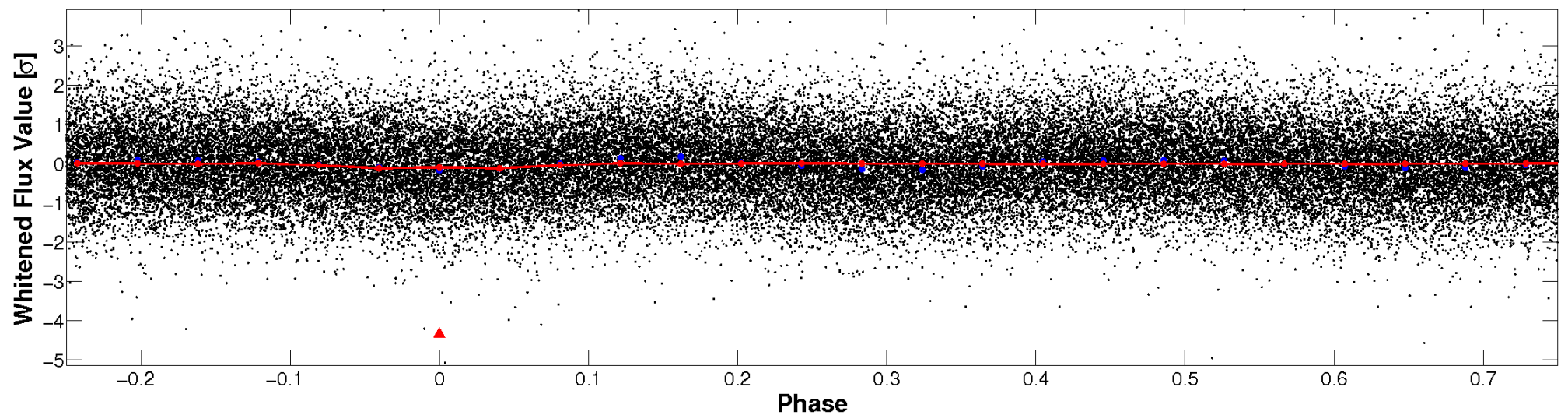


Non-Whitened Vs. Whitened Light Curve

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

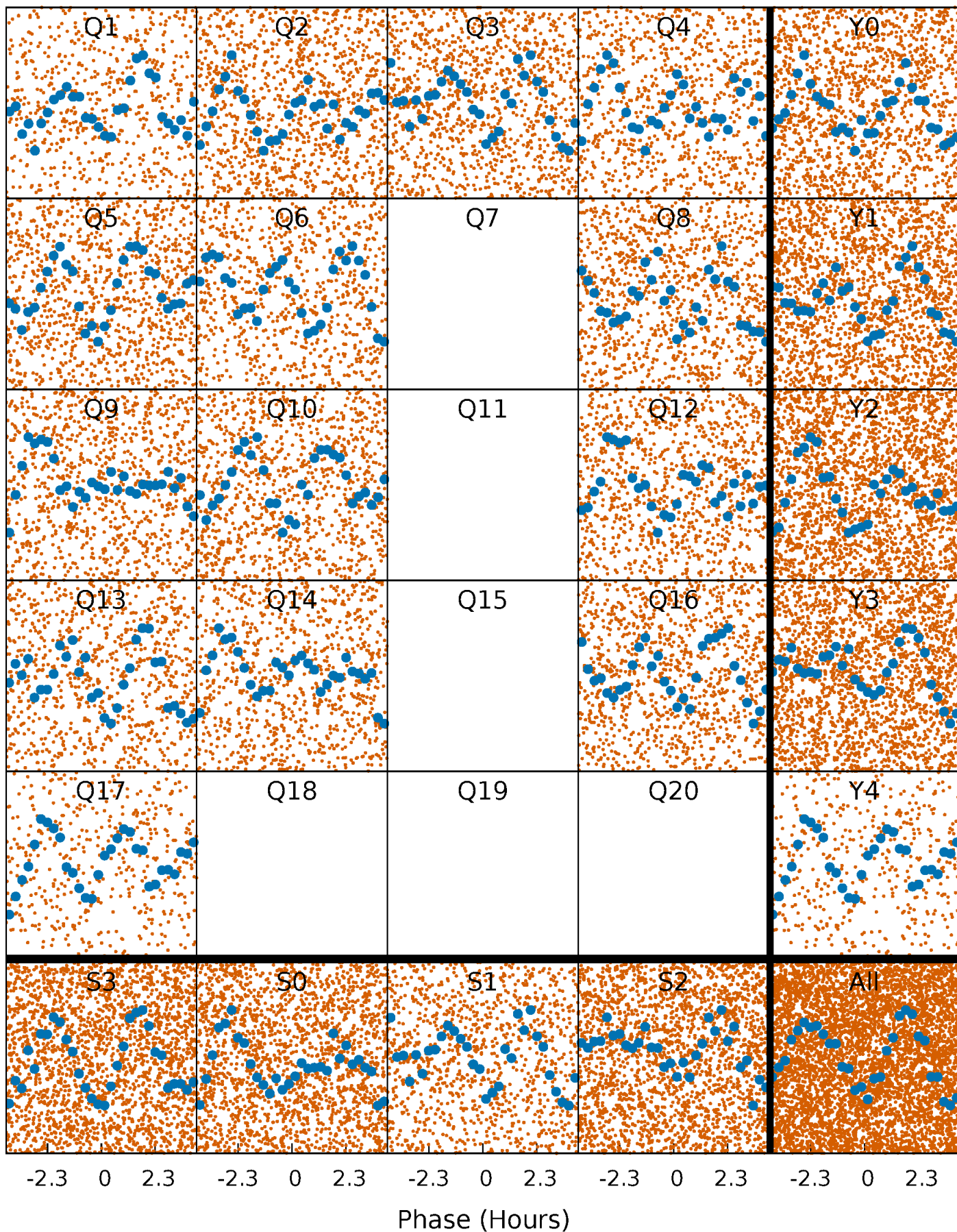


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



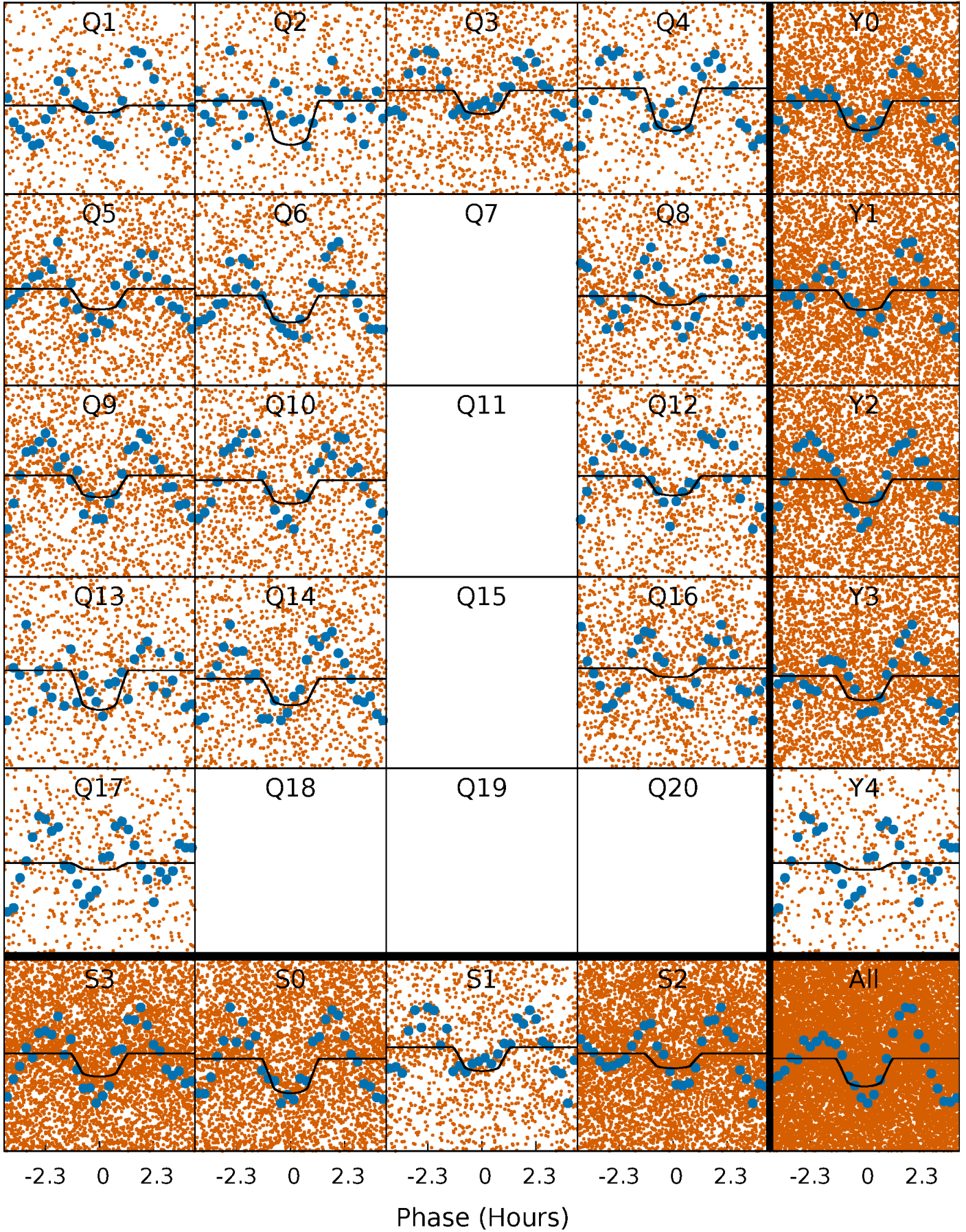
PDC Quarter-Phased Transit Curves

TCE 010362577-01 P= 0.504853 Days $T_0=131.690919$ (BKJD)



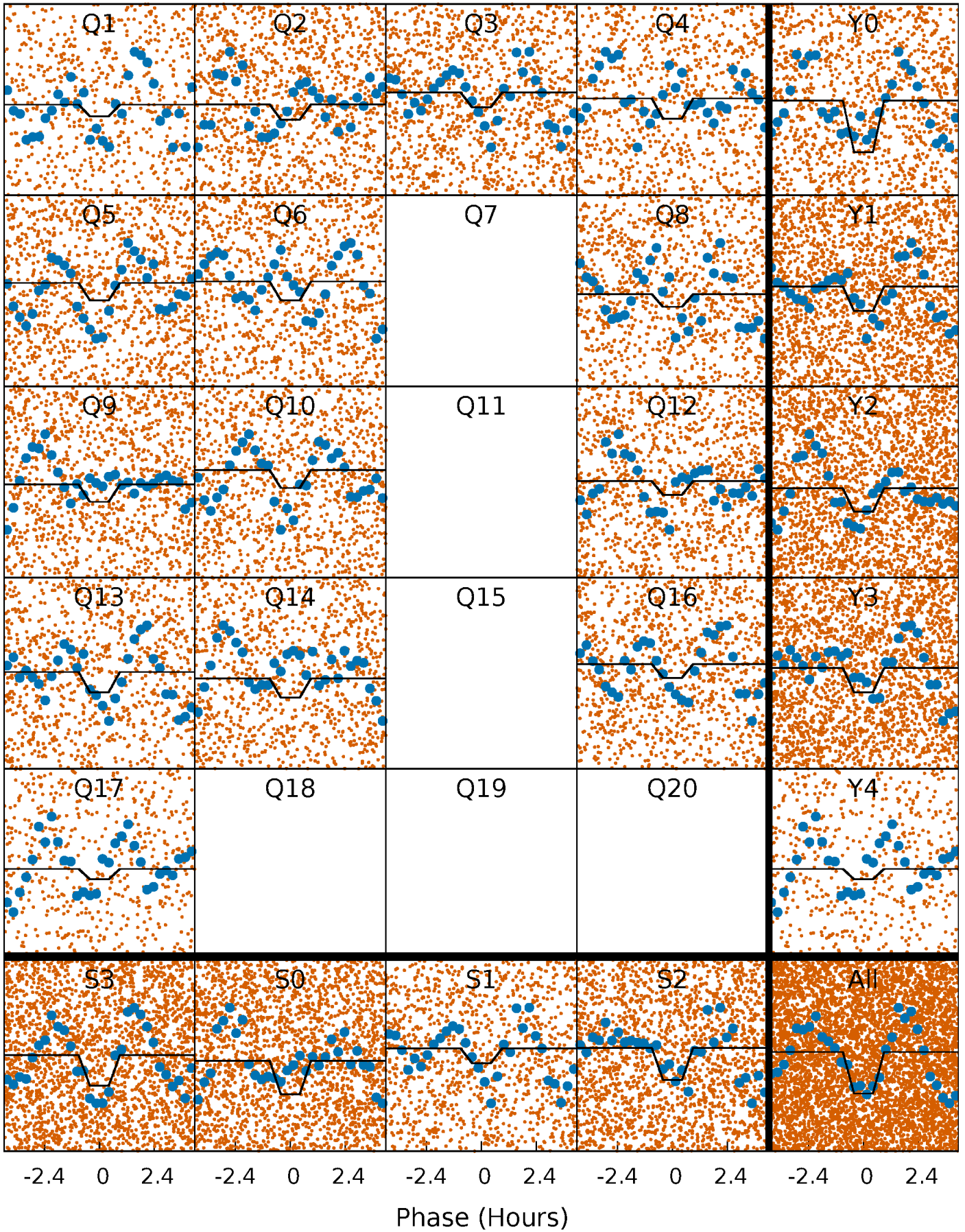
DV Quarter-Phased Transit Curves

TCE 010362577-01 P= 0.504853 Days $T_0=131.690919$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

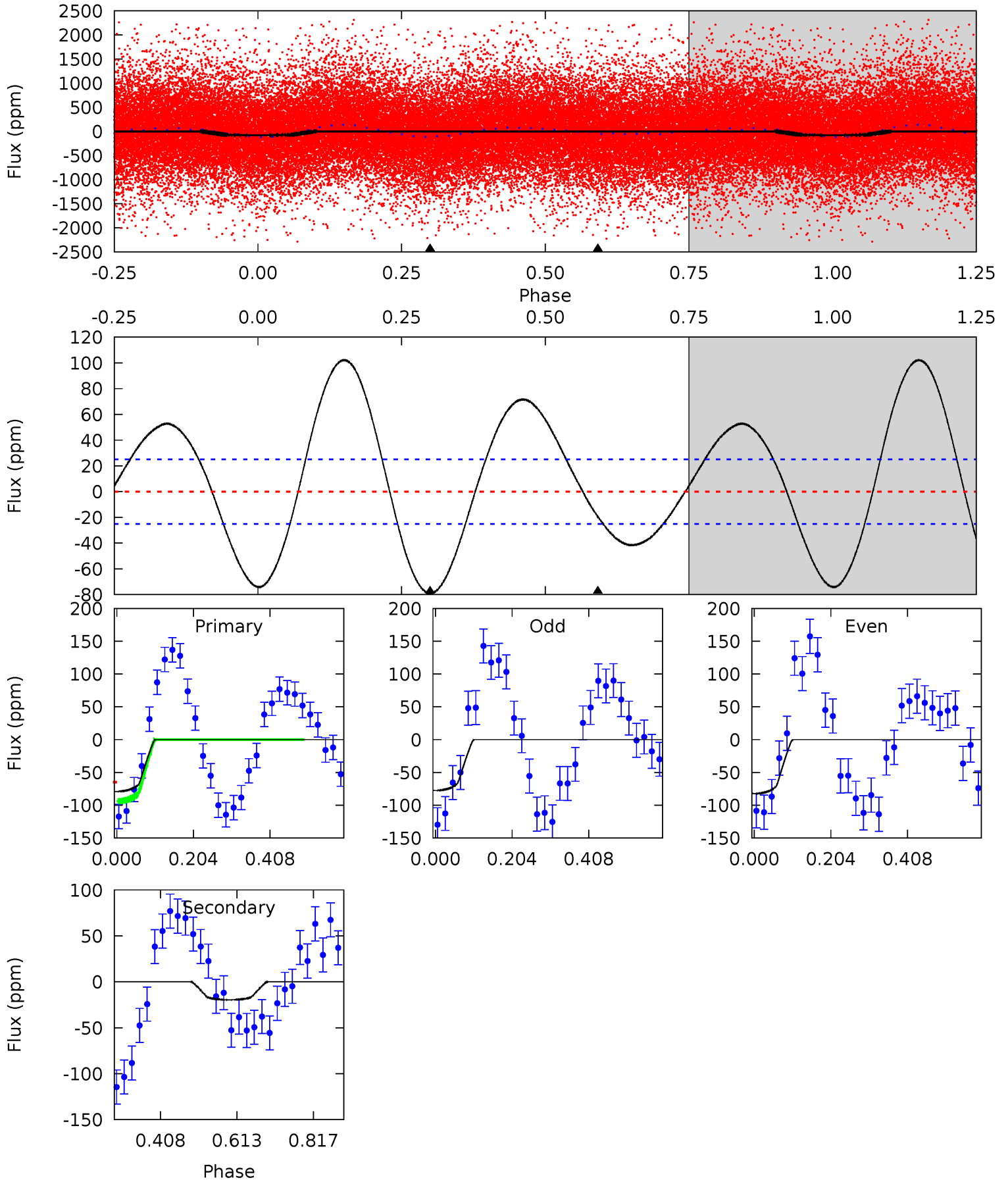
TCE 010362577-01 P= 0.504853 Days $T_0=131.689576$ (BKJD)



DV Model-Shift Uniqueness Test

010362577-01, P = 0.504853 Days, E = 131.186066 Days

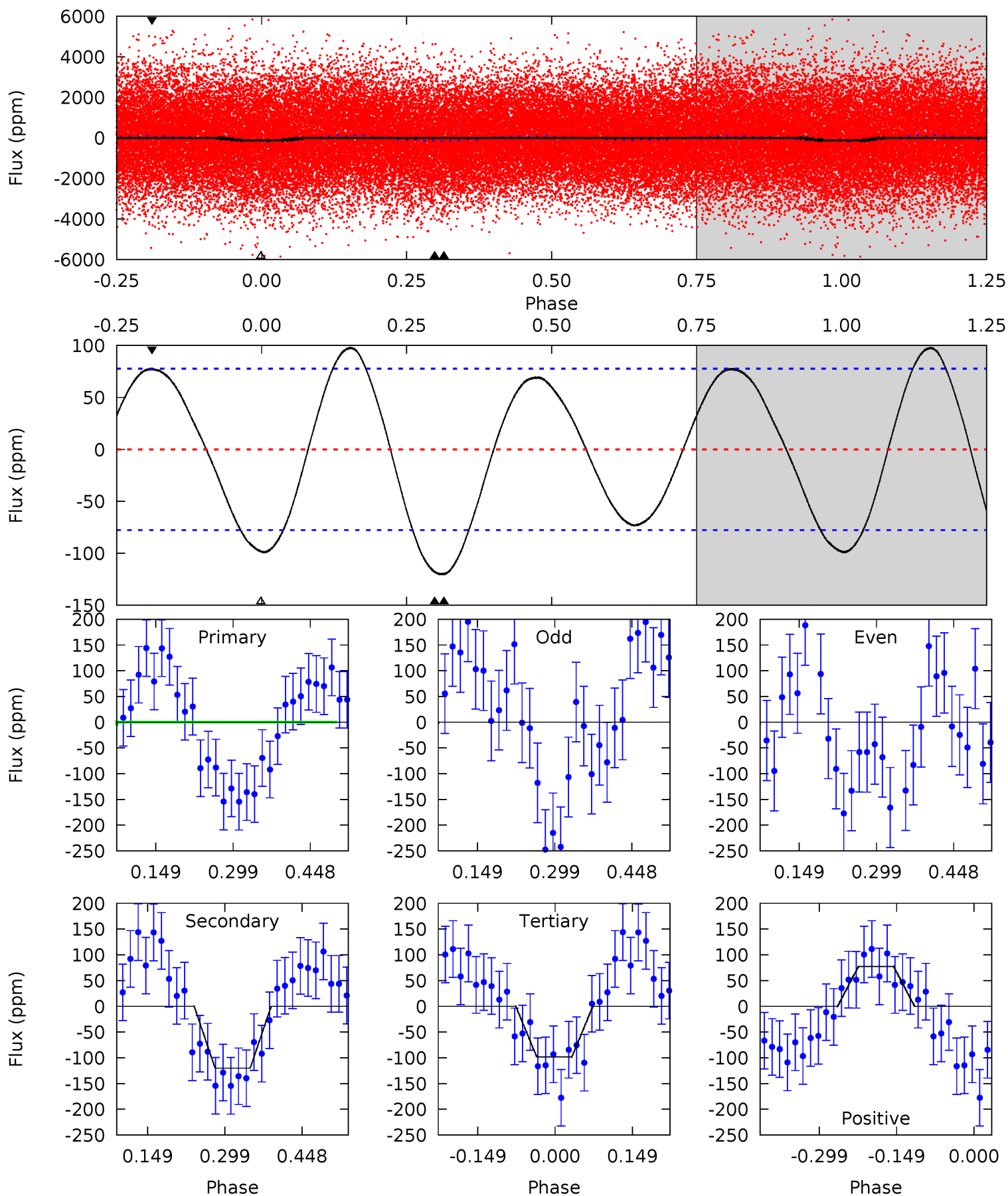
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.9	3.44	0	0	4.41	1.27	8.05	13.9	13.9	3.44	3.44	0.42	1.06	0.56	2.58



Alt Model-Shift Uniqueness Test

010362577-01, P = 0.504853 Days, E = 131.184723 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.79	6.92	5.66	4.46	4.48	1.44	3.39	1.13	2.33	1.26	2.46	0.25	1.16	0.45	0.38



Stellar Parameters For KIC 010362577

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6770^{+190}_{-286}	$4.050^{+0.246}_{-0.164}$	$-0.140^{+0.300}_{-0.300}$	$1.852^{+0.561}_{-0.561}$	$1.408^{+0.191}_{-0.286}$	$0.312^{+0.479}_{-0.143}$
	+3%/-4%	+6%/-4%	+214%/-214%	+30%/-30%	+14%/-20%	+154%/-46%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 010362577-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-20 ± 6	$1.77^{+0.77}_{-0.63}$	4726^{+381}_{-395}	4206^{+1202}_{-6679}	$0.622^{+1.012}_{-0.329}$
Alt.	-120 ± 17	$2.18^{+0.78}_{-0.66}$	4748^{+388}_{-412}	6419^{+1369}_{-939}	$2.603^{+2.838}_{-1.180}$

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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

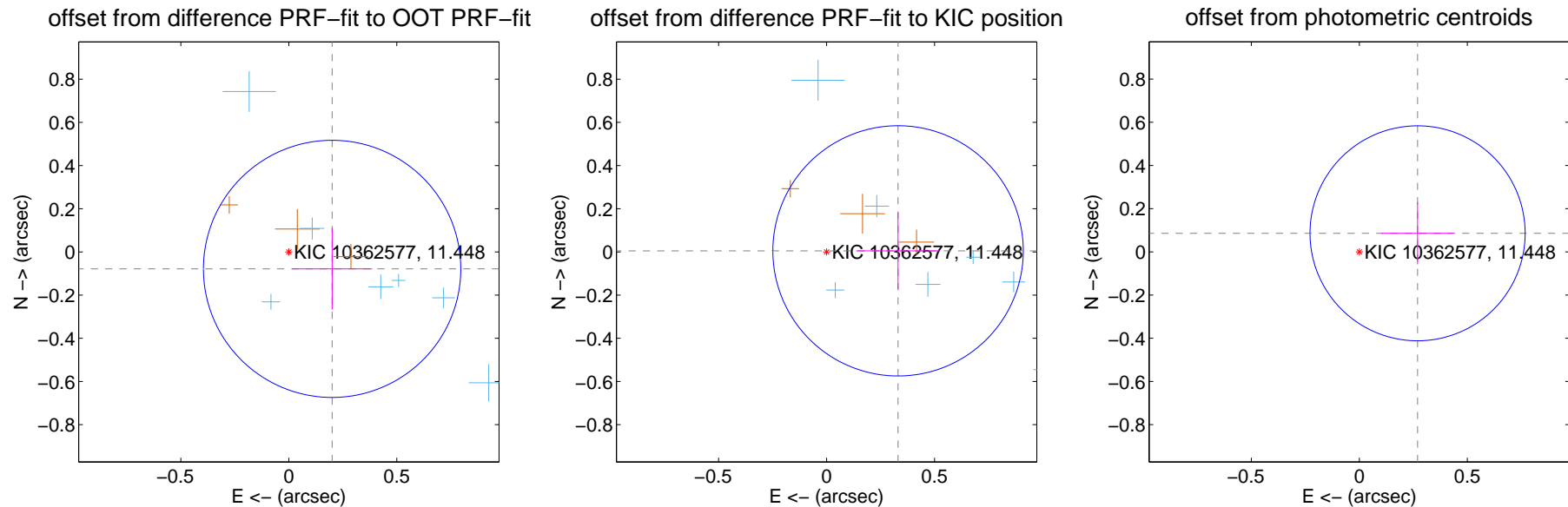
DV Centroid Data

Supplemental centroid analysis for 010362577-01. **Kepler magnitude: 11.45.** Transit SNR 9.68

There are 8 quarters with good PRF difference image offsets

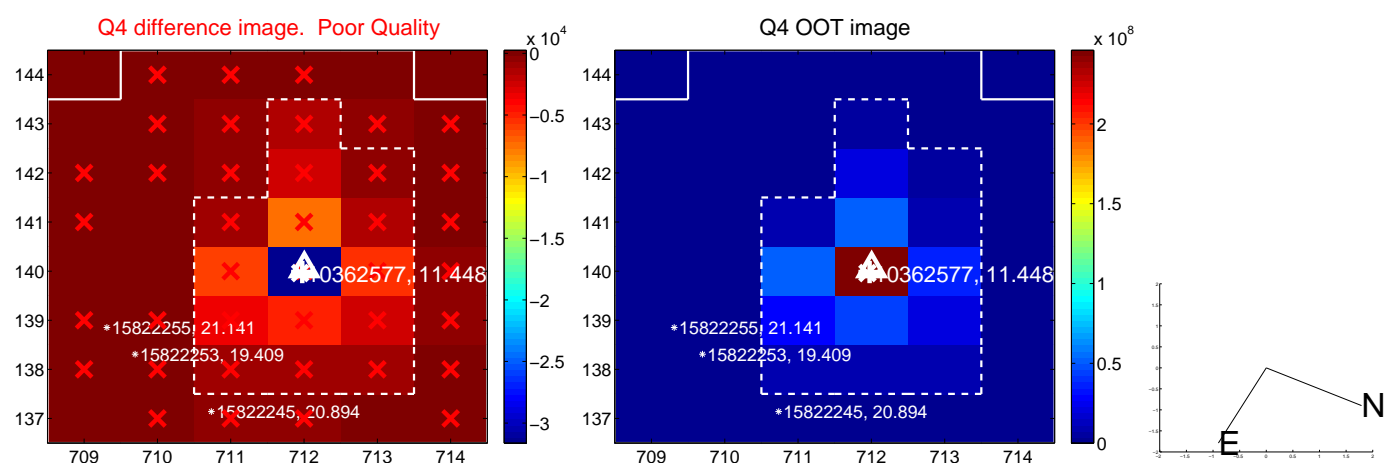
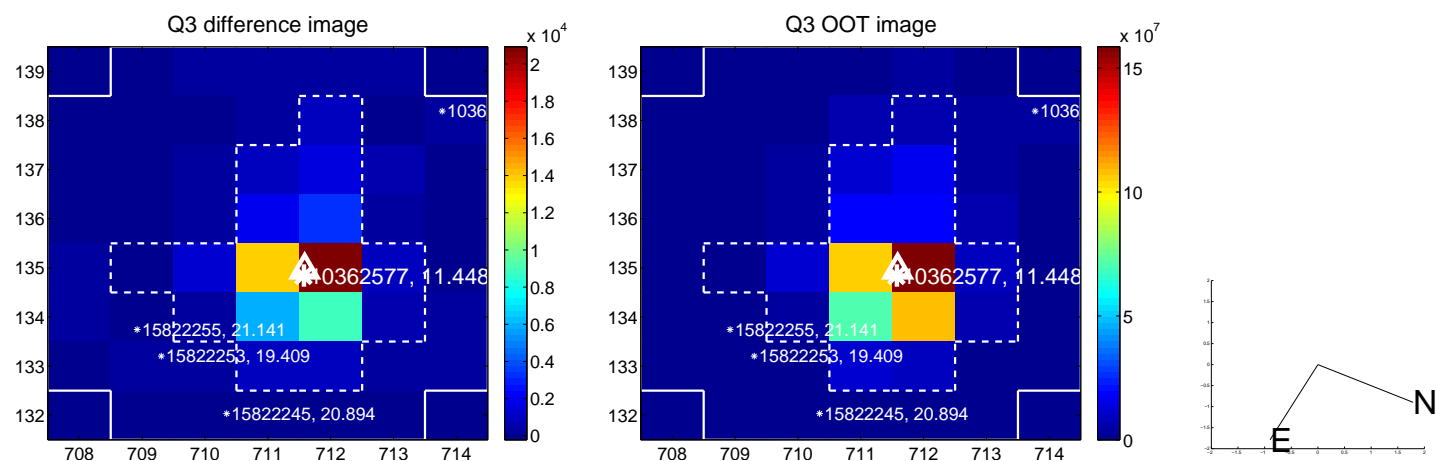
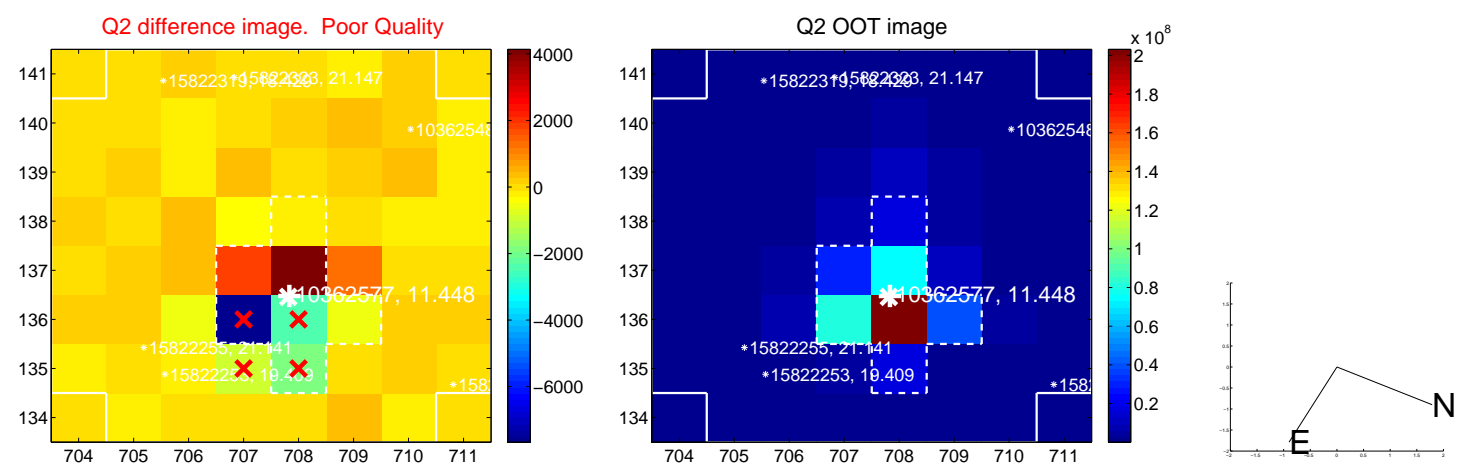
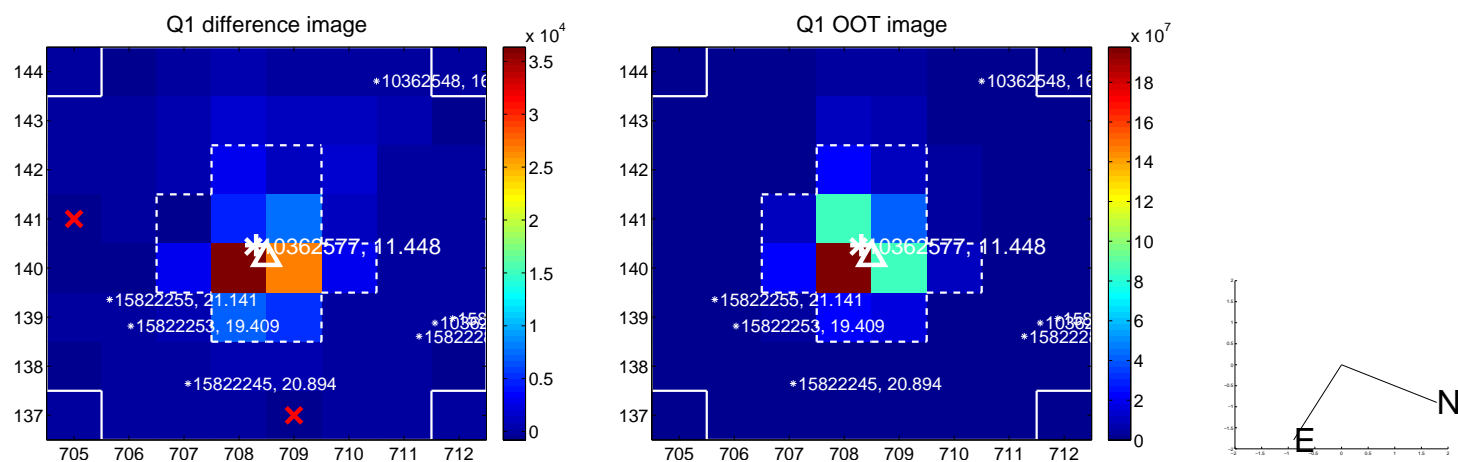
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.215 ± 0.199	1.08	-0.200 ± 0.185	-0.079 ± 0.188
PRF-fit source offset from KIC position	0.331 ± 0.193	1.71	-0.331 ± 0.194	0.005 ± 0.178
photometric centroid source offset	0.28 ± 0.17	1.71	-0.27 ± 0.17	0.09 ± 0.14

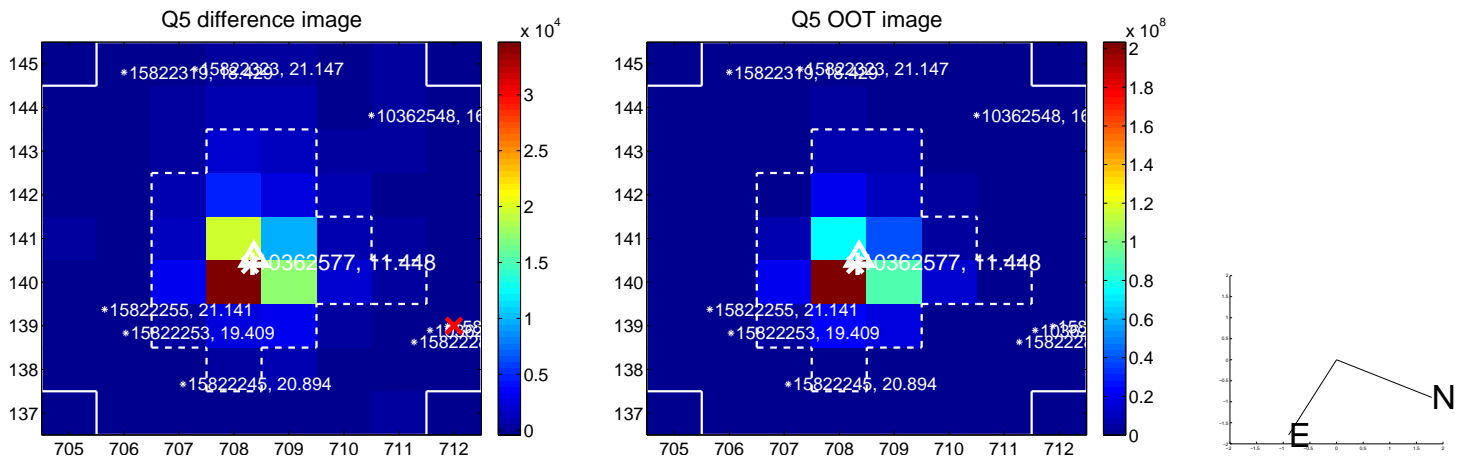


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

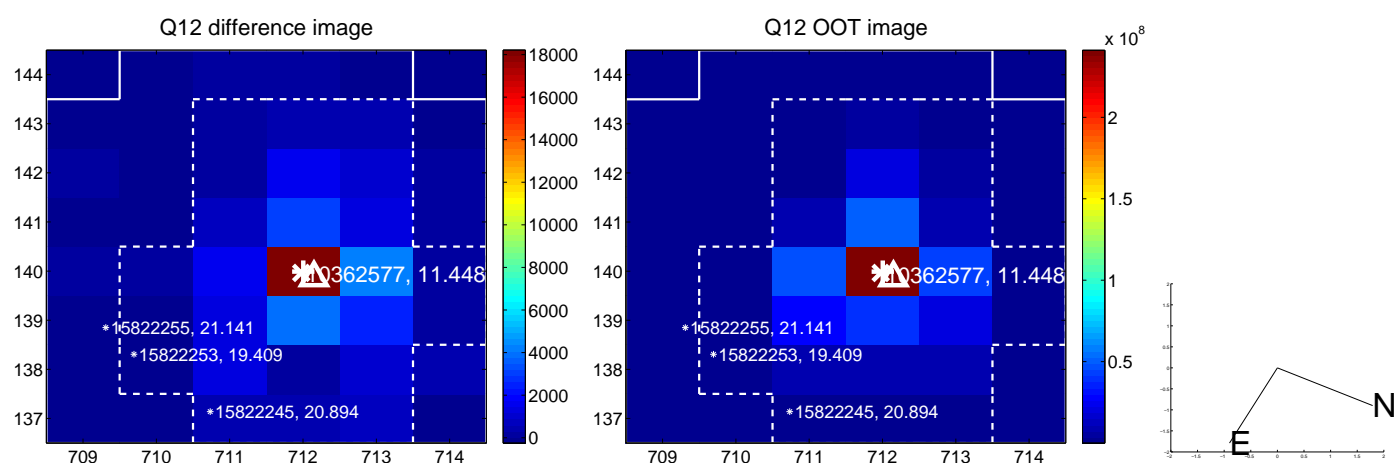
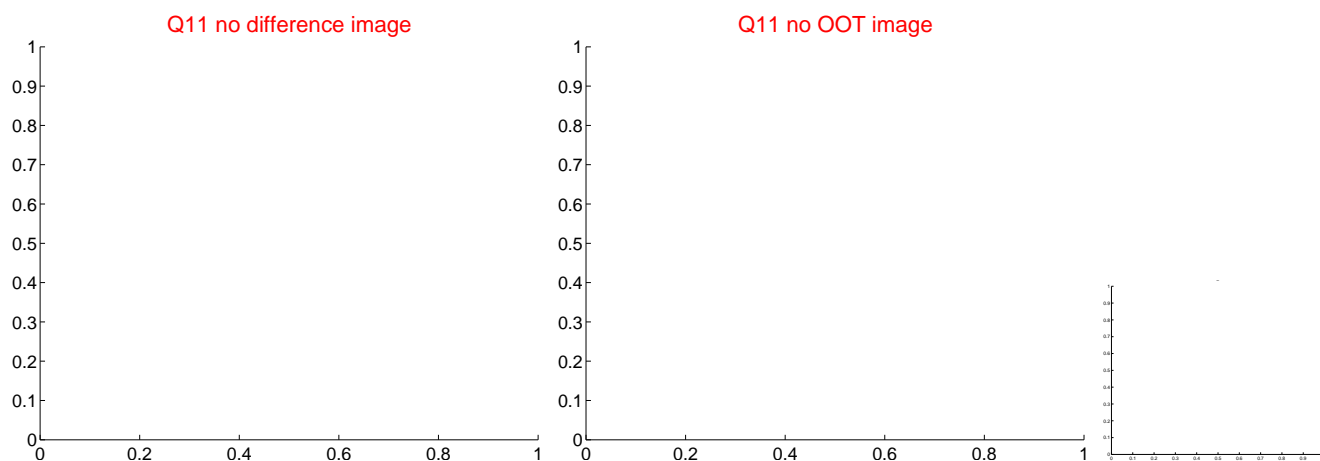
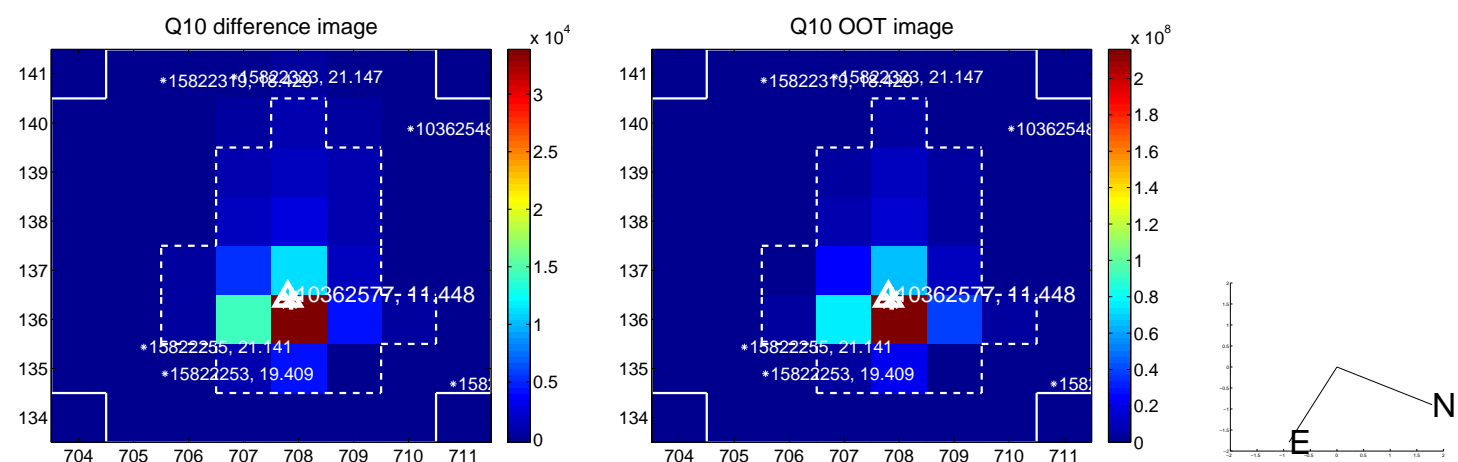
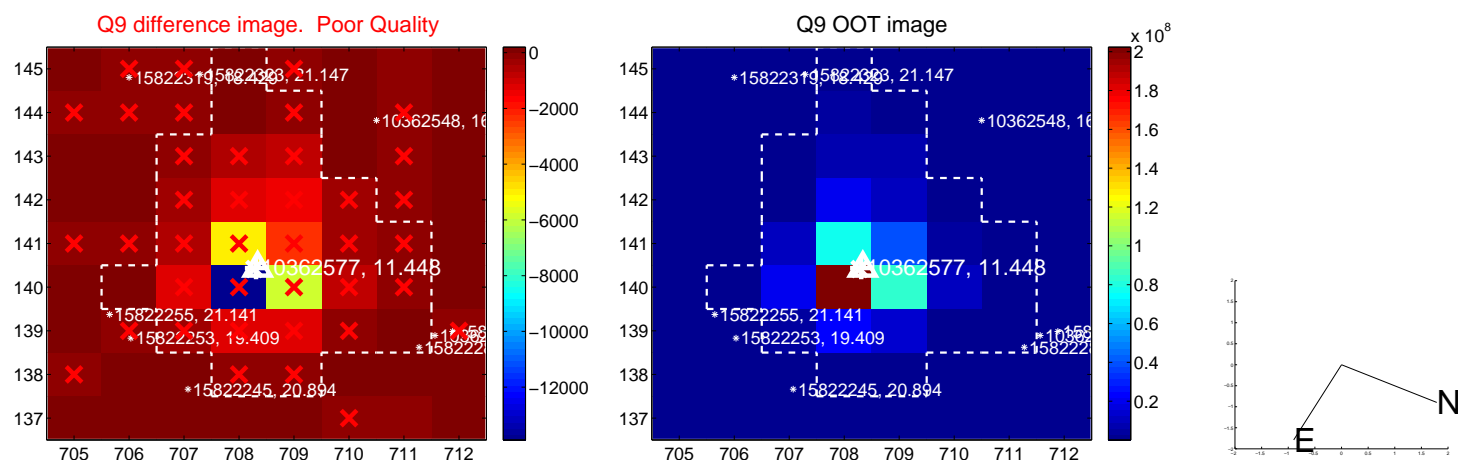
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



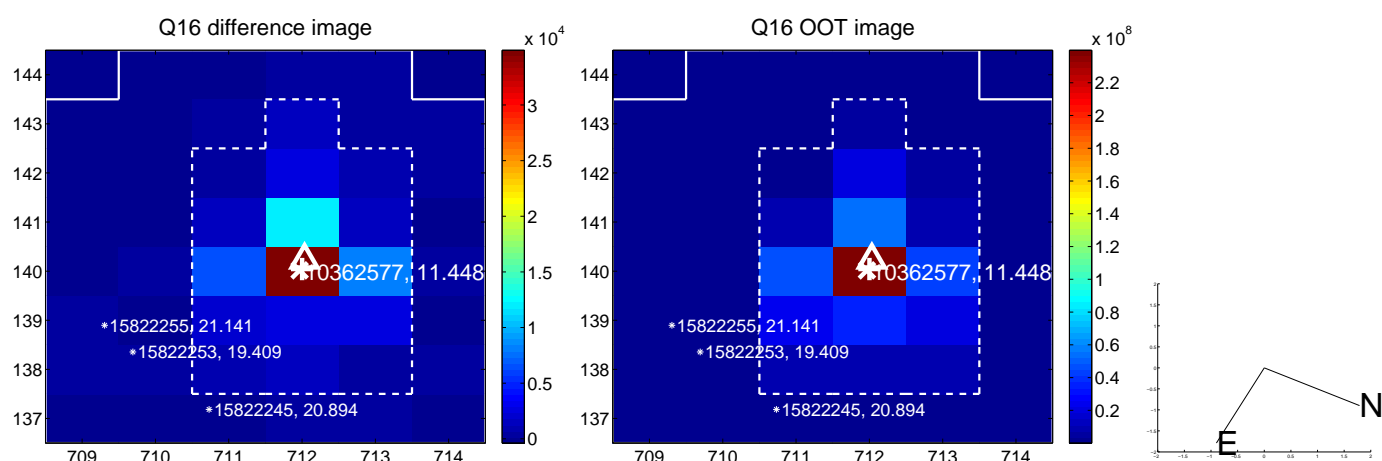
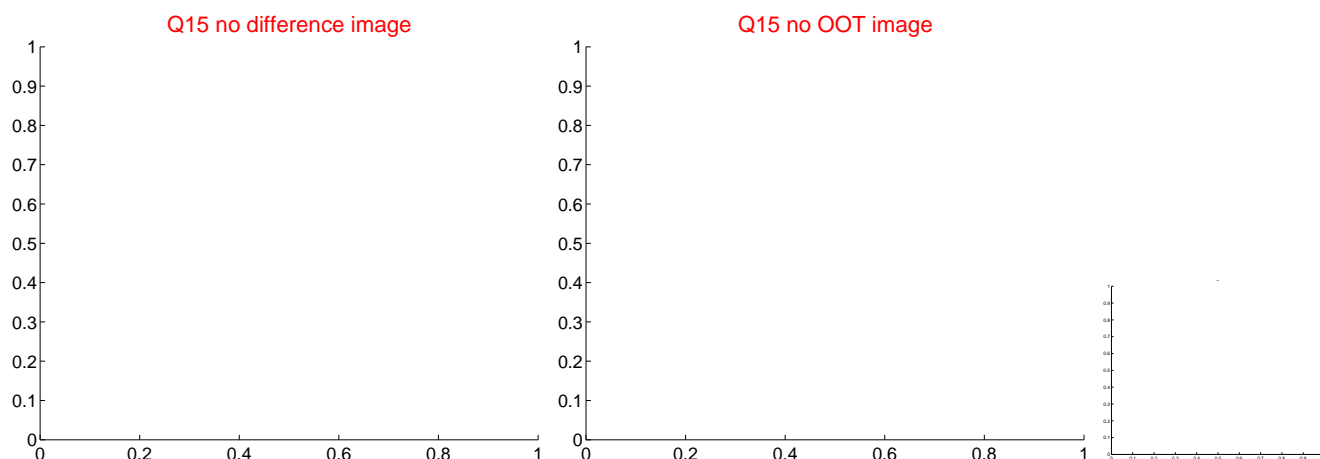
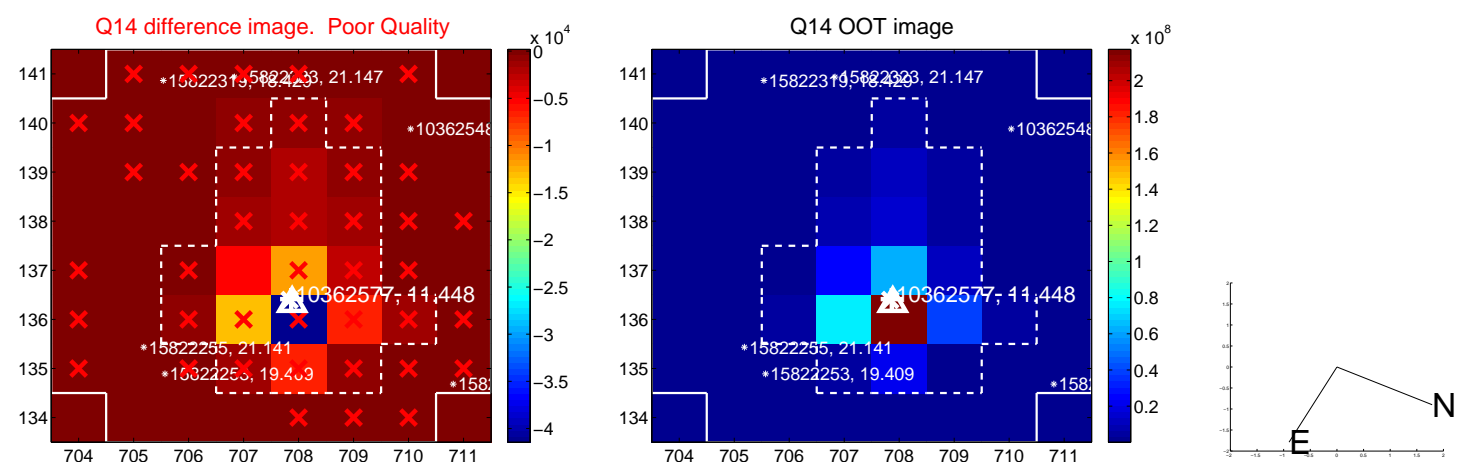
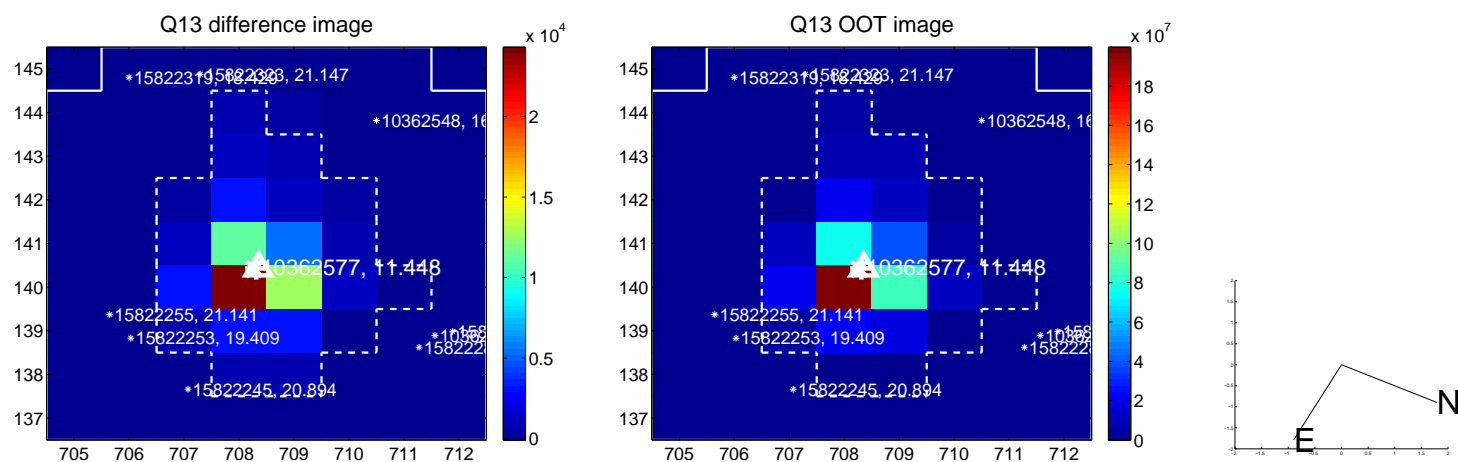
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



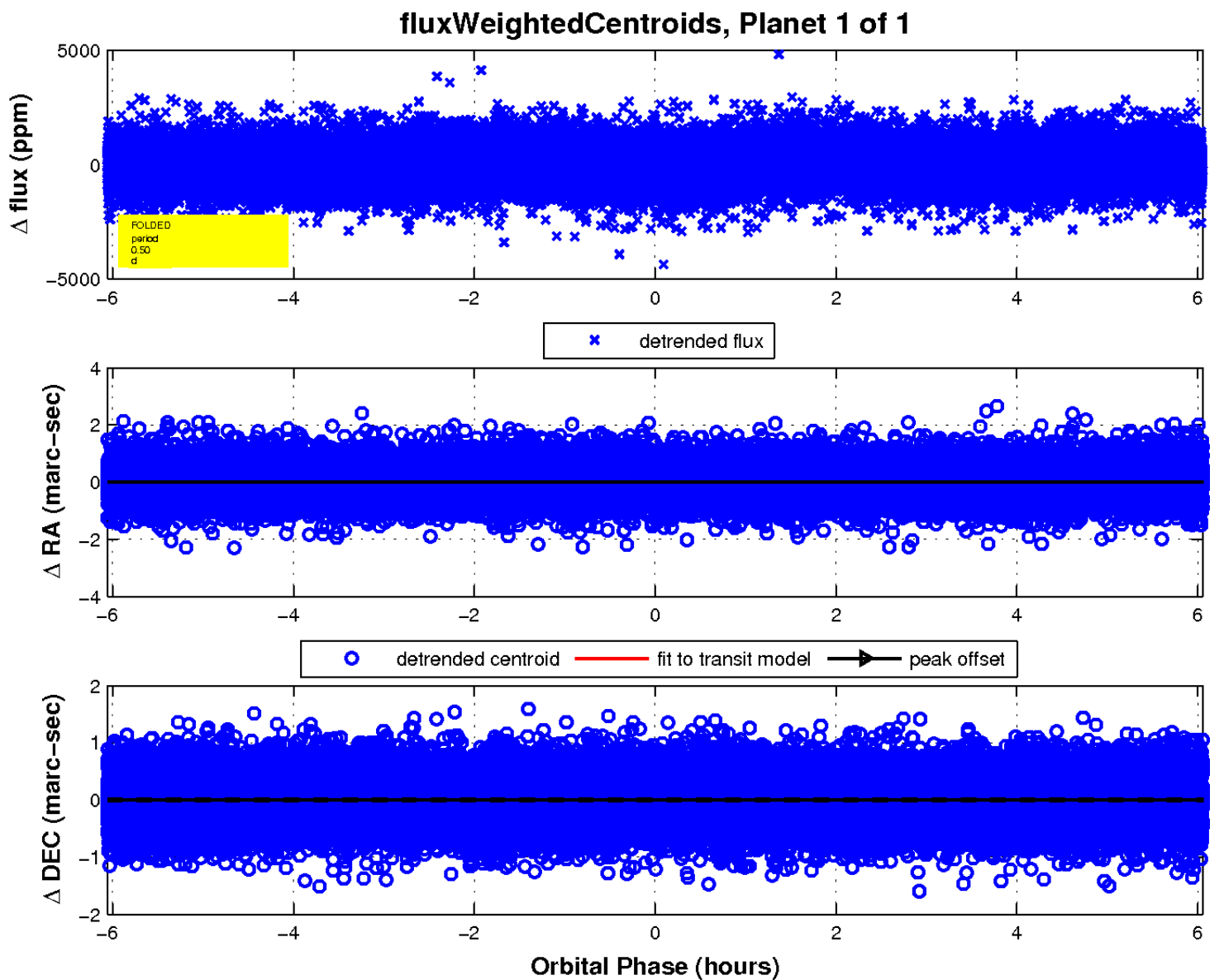
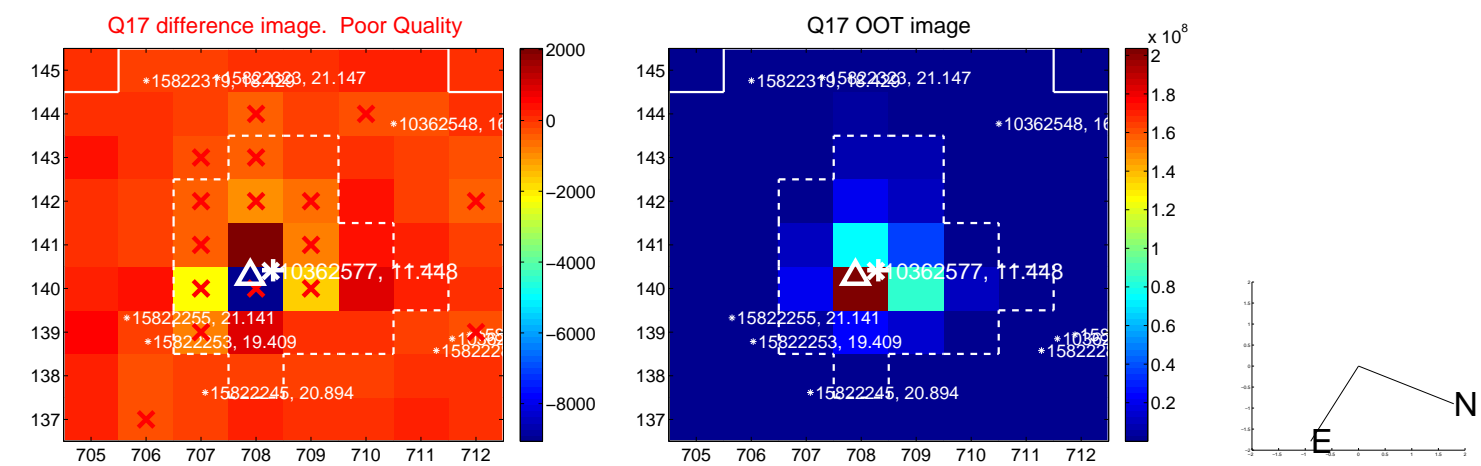
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UKIRT Image

