

KIC 003120308

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})
003120308-01	OBS	3380.01	10.265627	136.494166	248.5	4.047	16.0	17.5	0.98	5774	1.84	111.46

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003120308-01	OBS	FP	0.00	0	0	1	1	CENT_RESOLVED_OFFSET—HALO_GHOST—EPHEM_MATCH

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 003120308-01

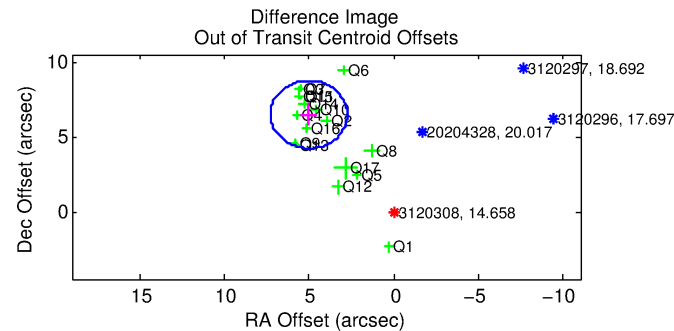
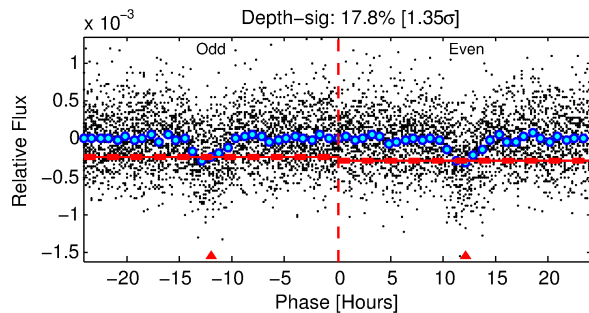
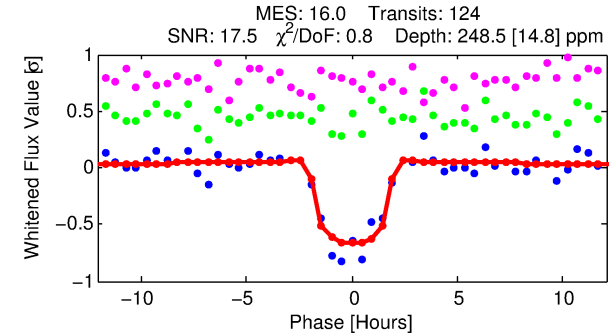
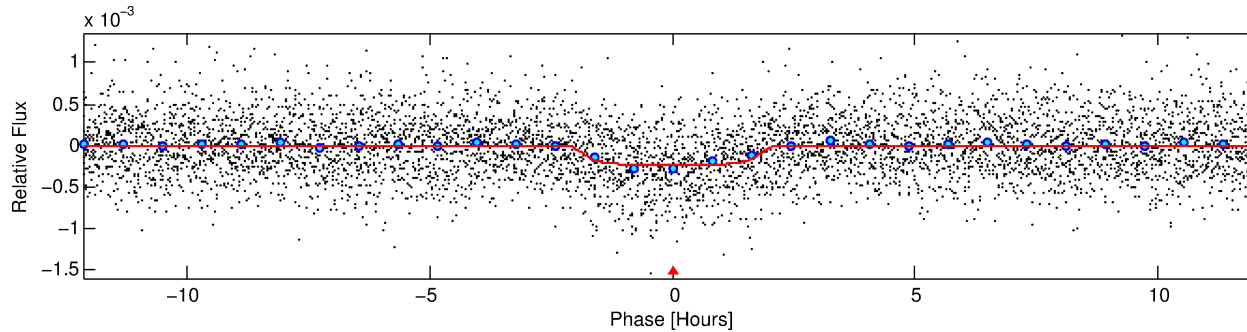
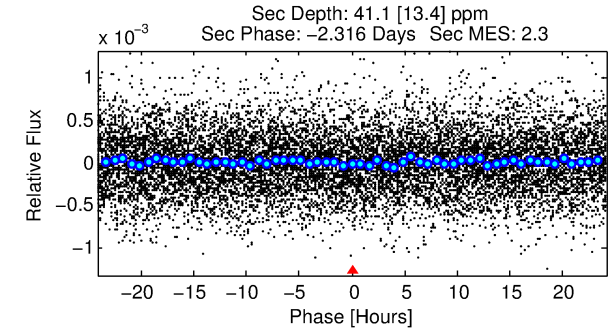
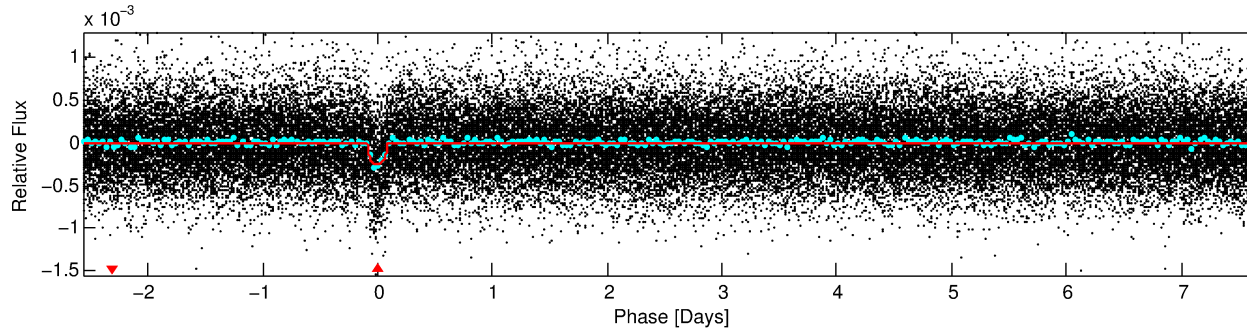
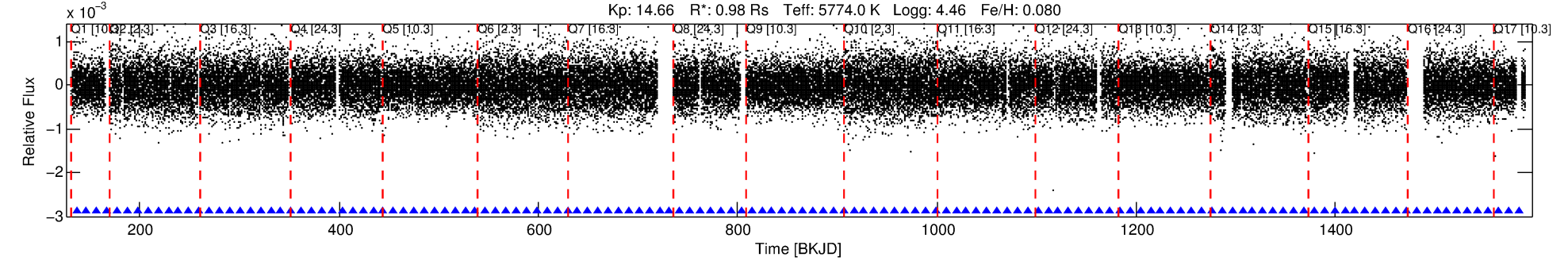
TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
003120308-01	3120308	6307.01	3120320	1:1	38.7	-7	7	10.88	14.65	605.74	Direct-PRF	0	0.05	0.17

Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 3120308 Candidate: 1 of 1 Period: 10.266 d
KOI: K03380.01 Corr: 0.962

Kp: 14.66 R*: 0.98 Rs Teff: 5774.0 K Logg: 4.46 Fe/H: 0.080



DV Fit Results:

Period = 10.26563 [0.00006] d
Epoch = 136.4942 [0.0046] BKJD
Rp/R* = 0.0172 [0.0037]
a/R* = 9.22 [9.11]
b = 0.90 [0.21]
Seff = 111.46 [42.92]
Teq = 829 [80] K
Rp = 1.84 [0.66] Re
a = 0.0926 [0.0230] AU
Ag = 57.29 [37.30] [1.51σ]
Teffp = 3524 [486] K [5.47σ]

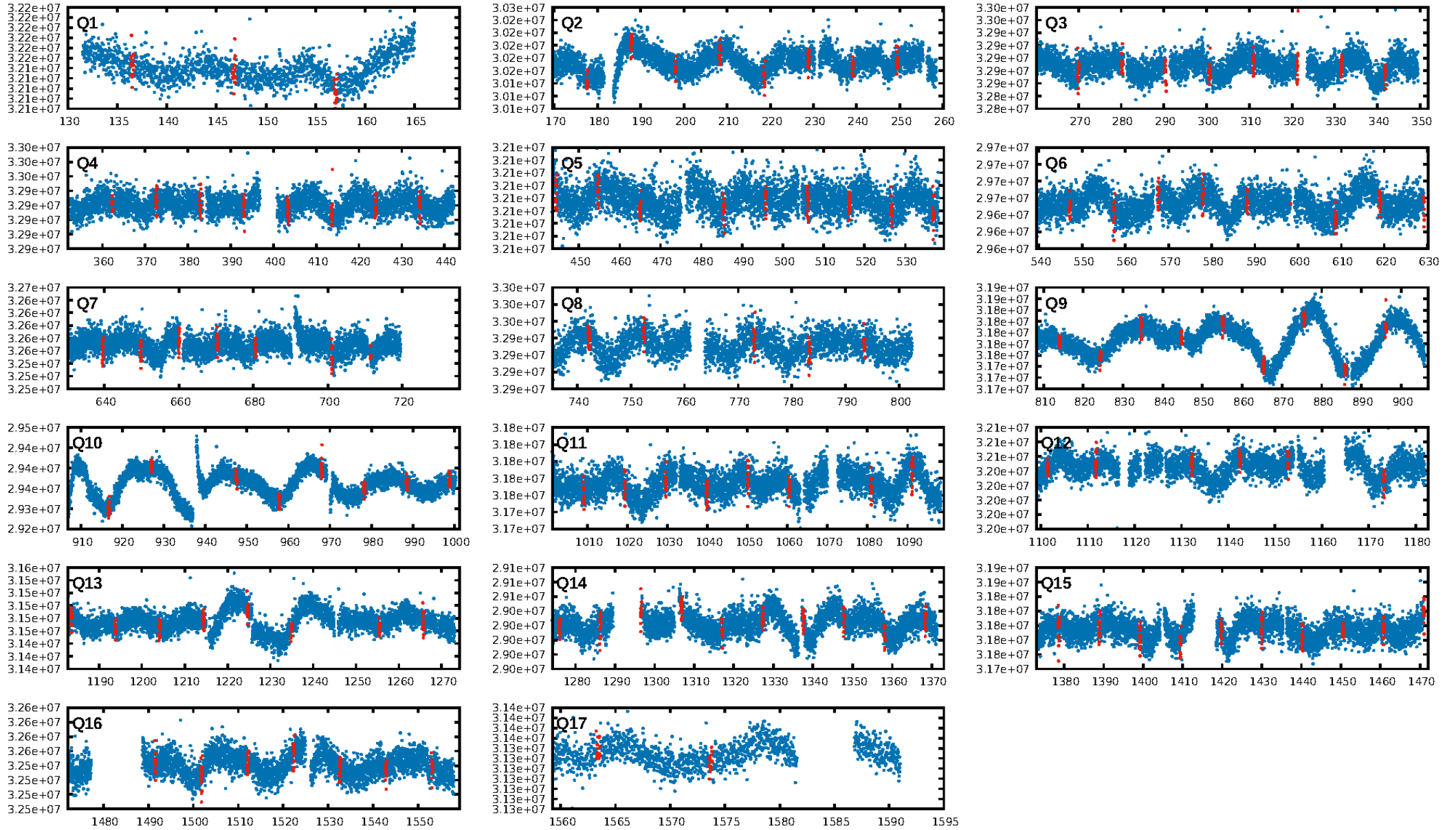
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 32.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.32e-55
RollingBand-fgt: 1.00 [119/119]
GhostDiagnostic-chr: -0.005322
Centroid-sig: 0.0%
Centroid-so: 5.051 arcsec [7.07σ]
OotOffset-rm: 8.206 arcsec [10.88σ]
KicOffset-rm: 8.030 arcsec [10.75σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.12 [2/17]
DiffImageOverlap-fno: 1.00 [17/17]

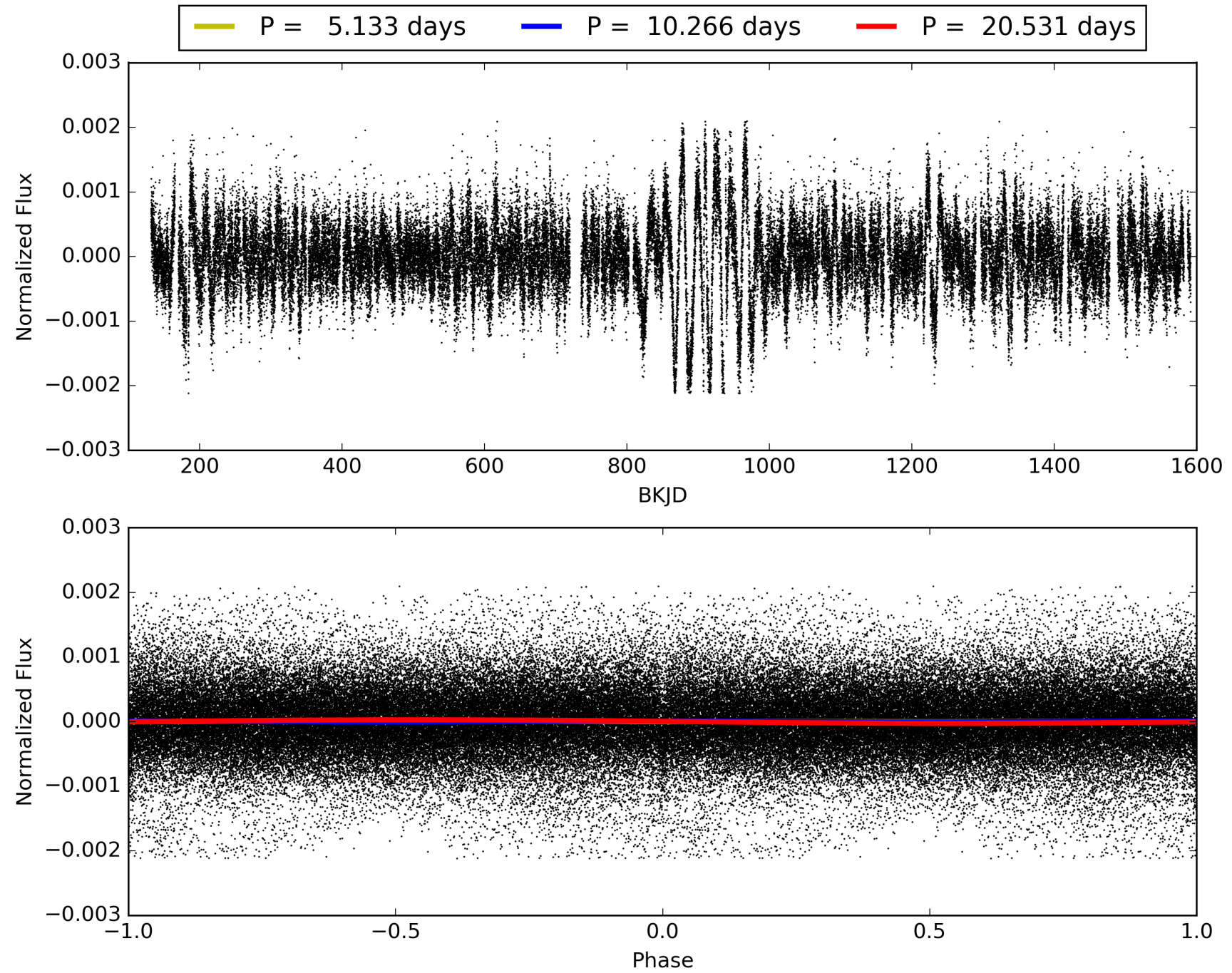
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 21:22:47 Z

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

TCE 003120308-01, PDC Light Curves

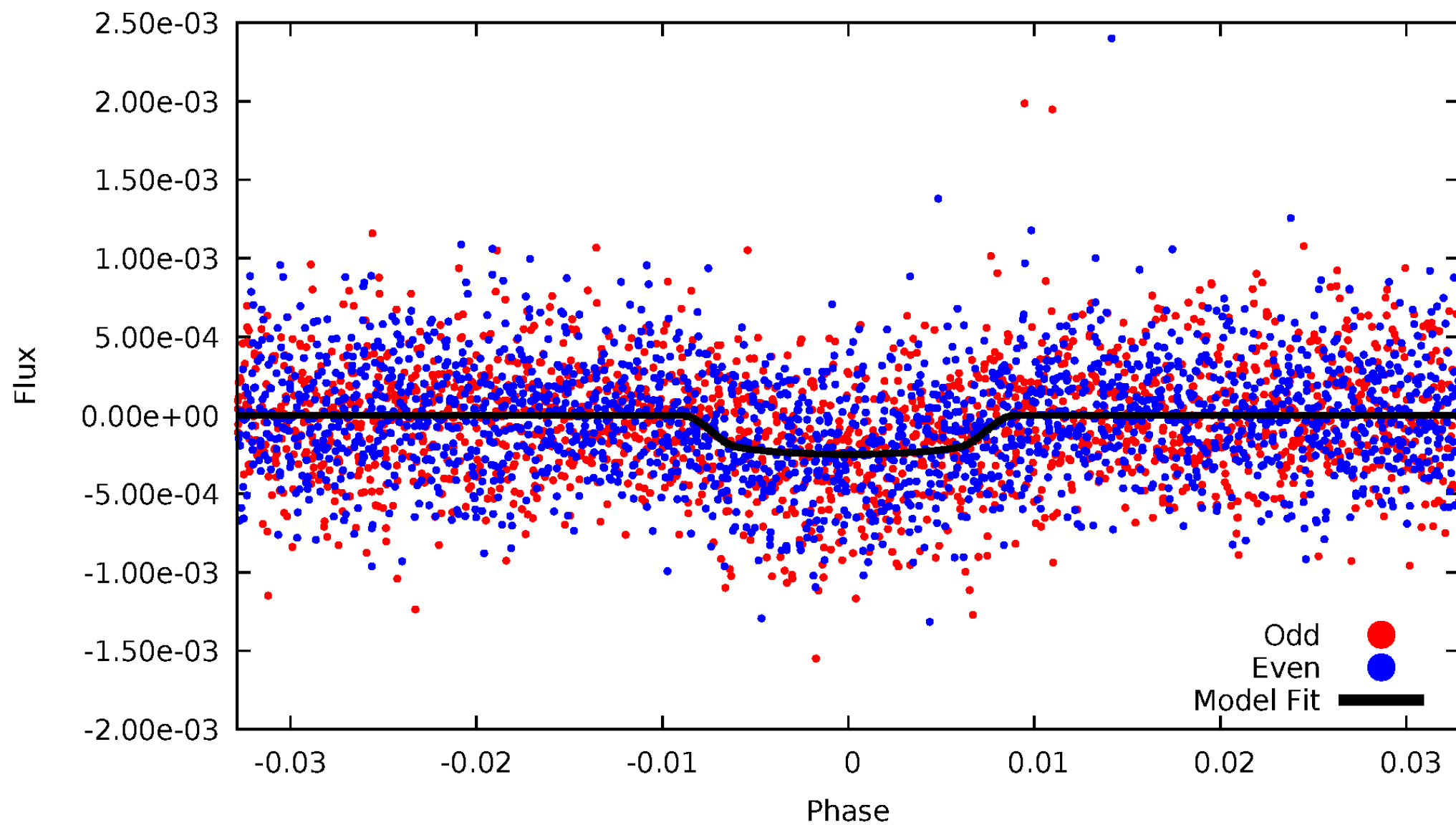


TCE 003120308-01



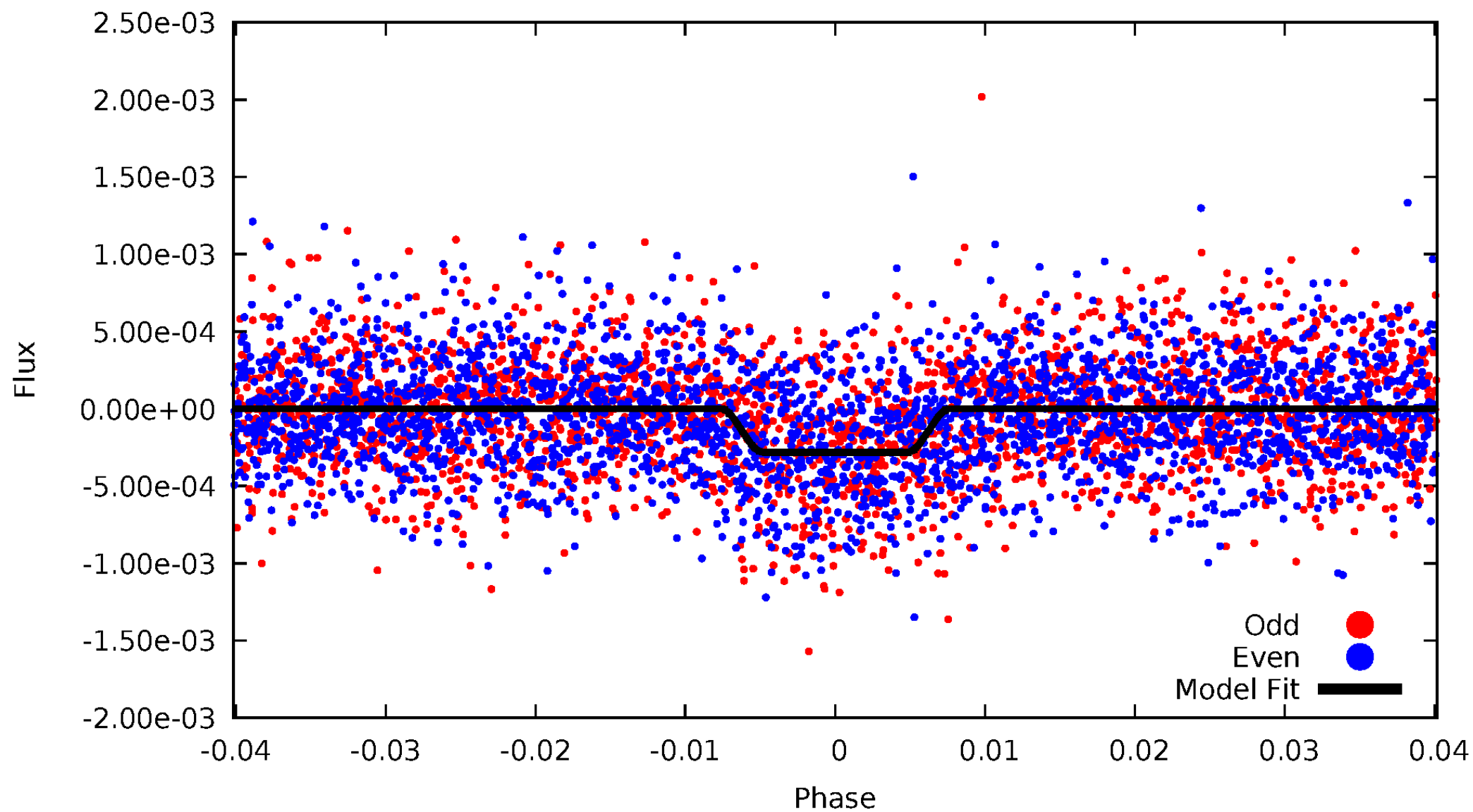
DV Odd/Even

TCE 003120308-01

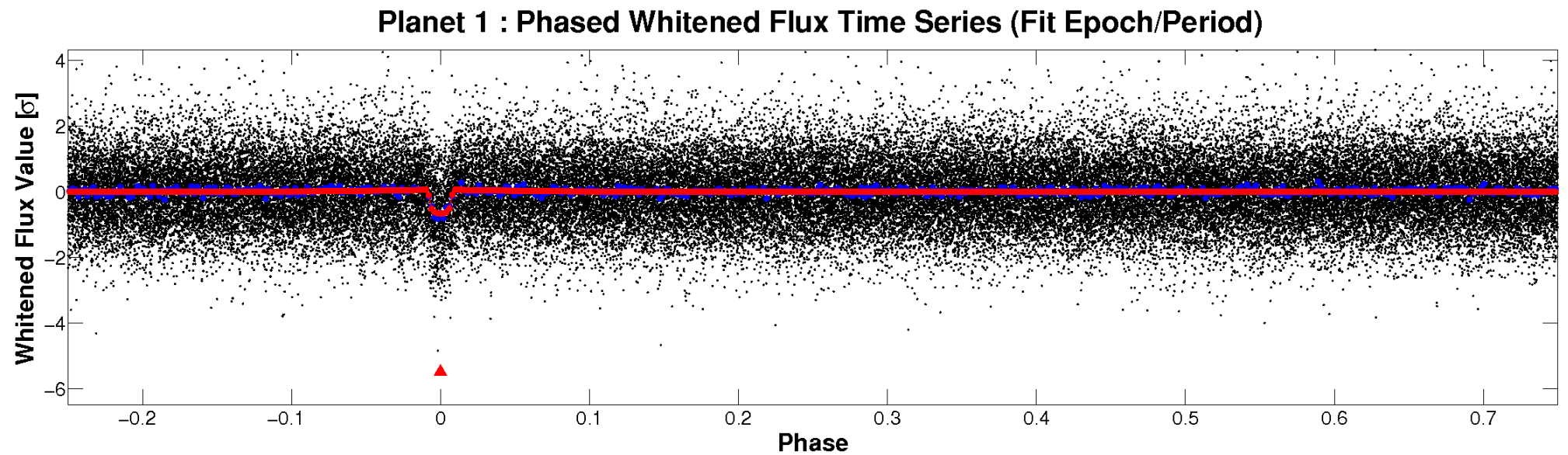
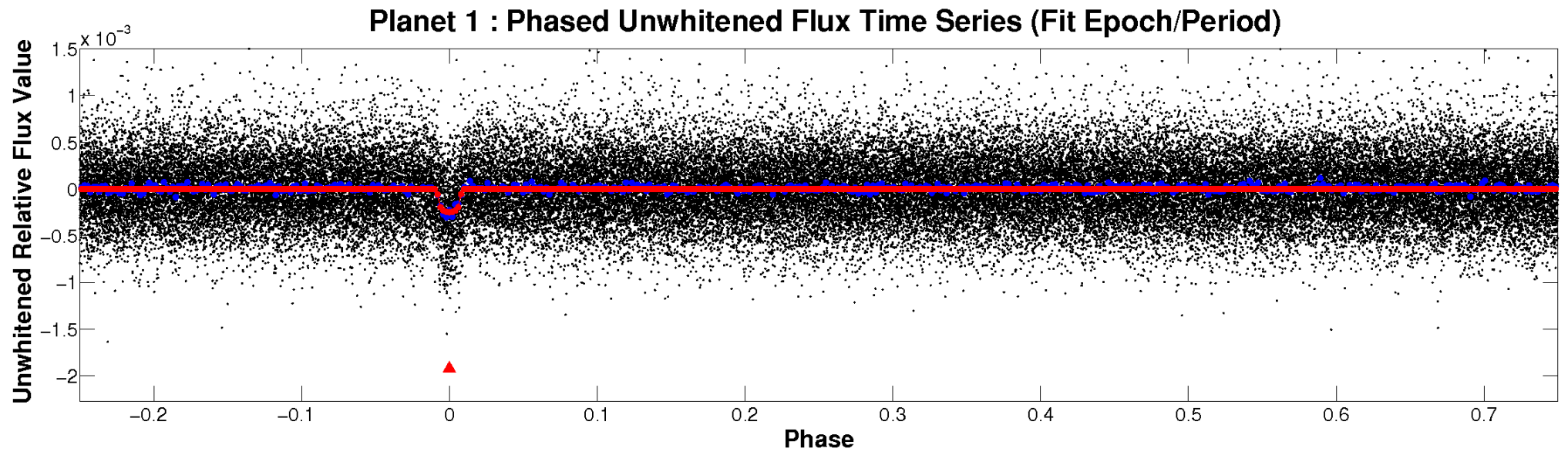


ALT Odd/Even

TCE 003120308-01

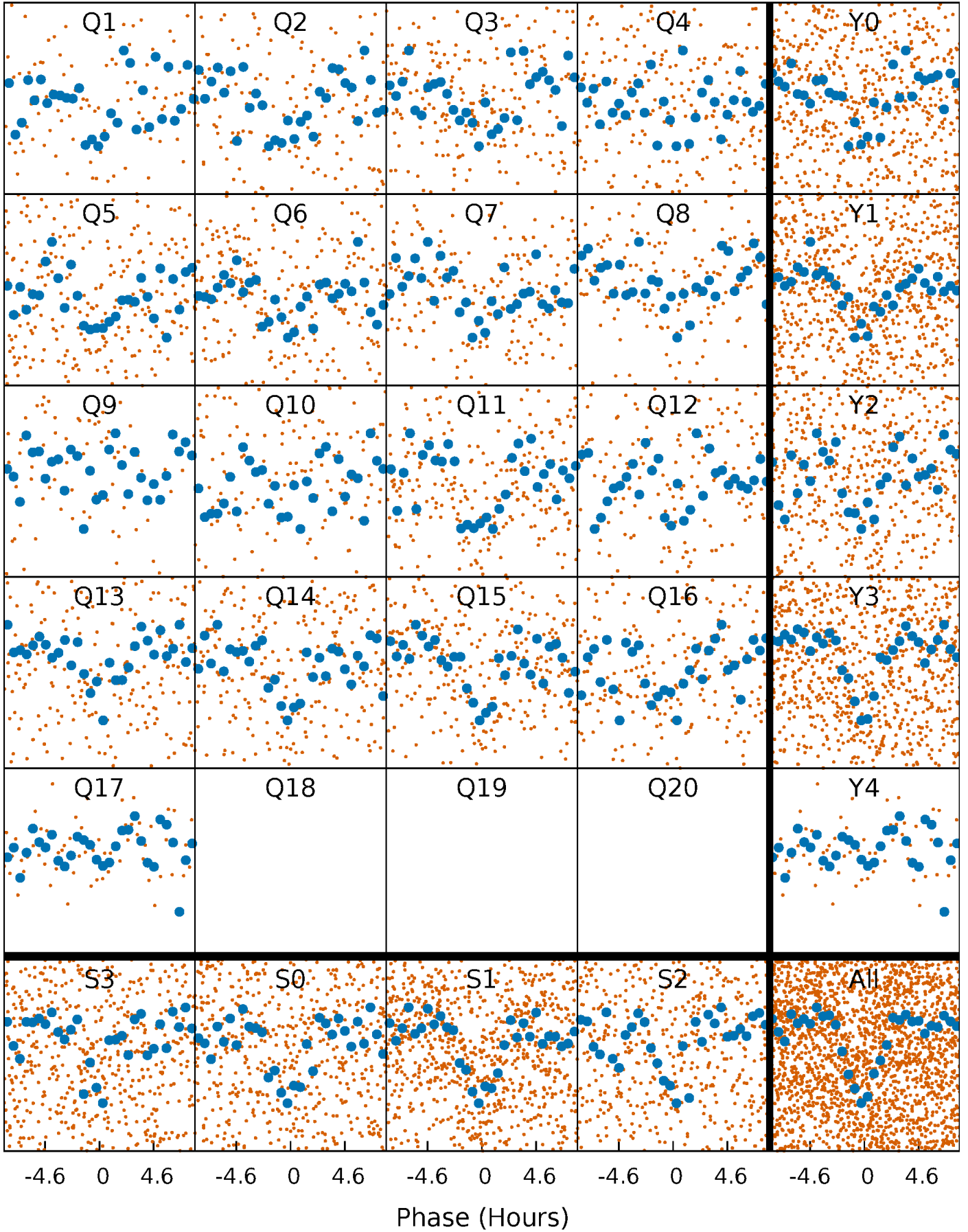


Non-Whitened Vs. Whitened Light Curve



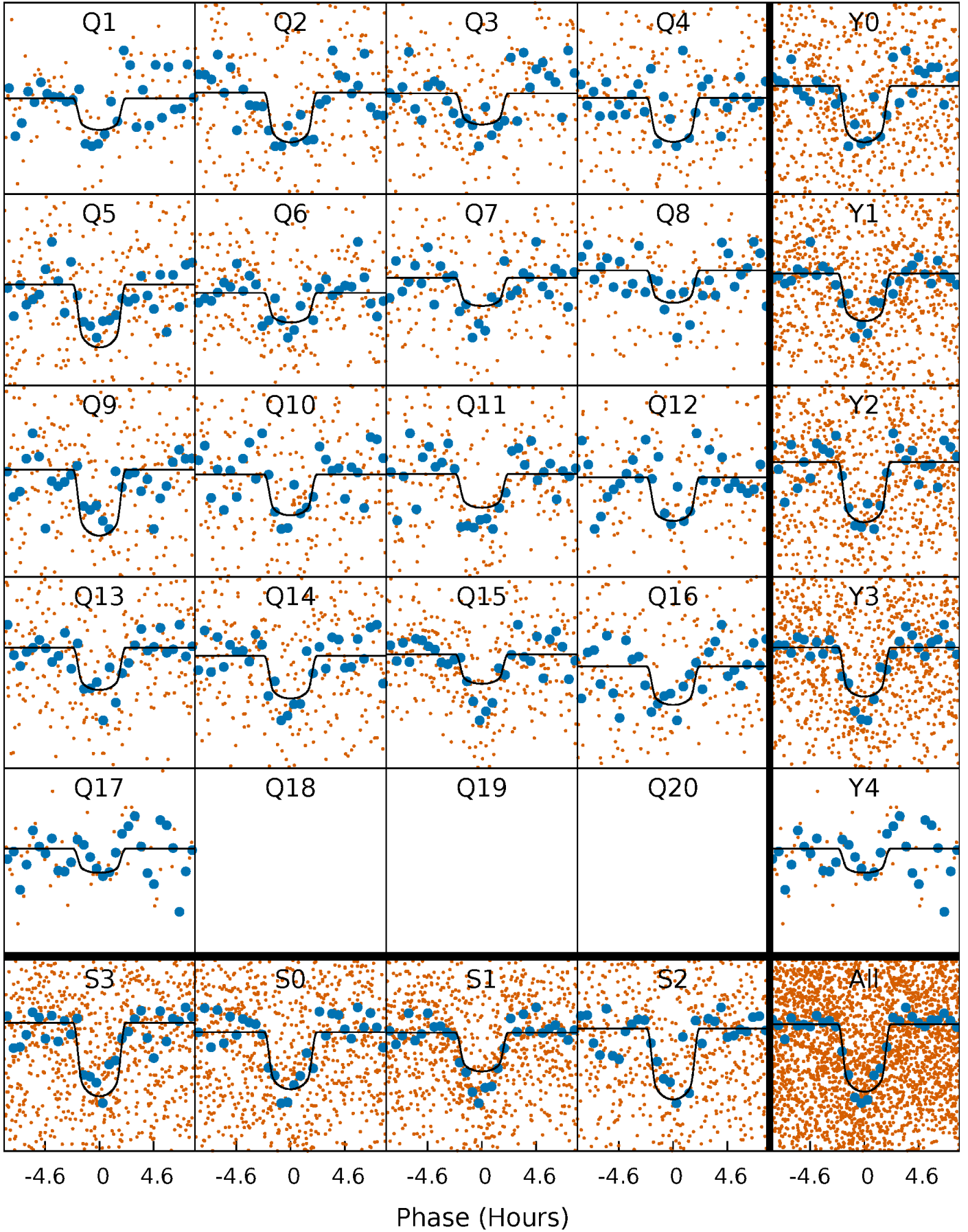
PDC Quarter-Phased Transit Curves

TCE 003120308-01 P= 10.265627 Days $T_0=136.494166$ (BKJD)



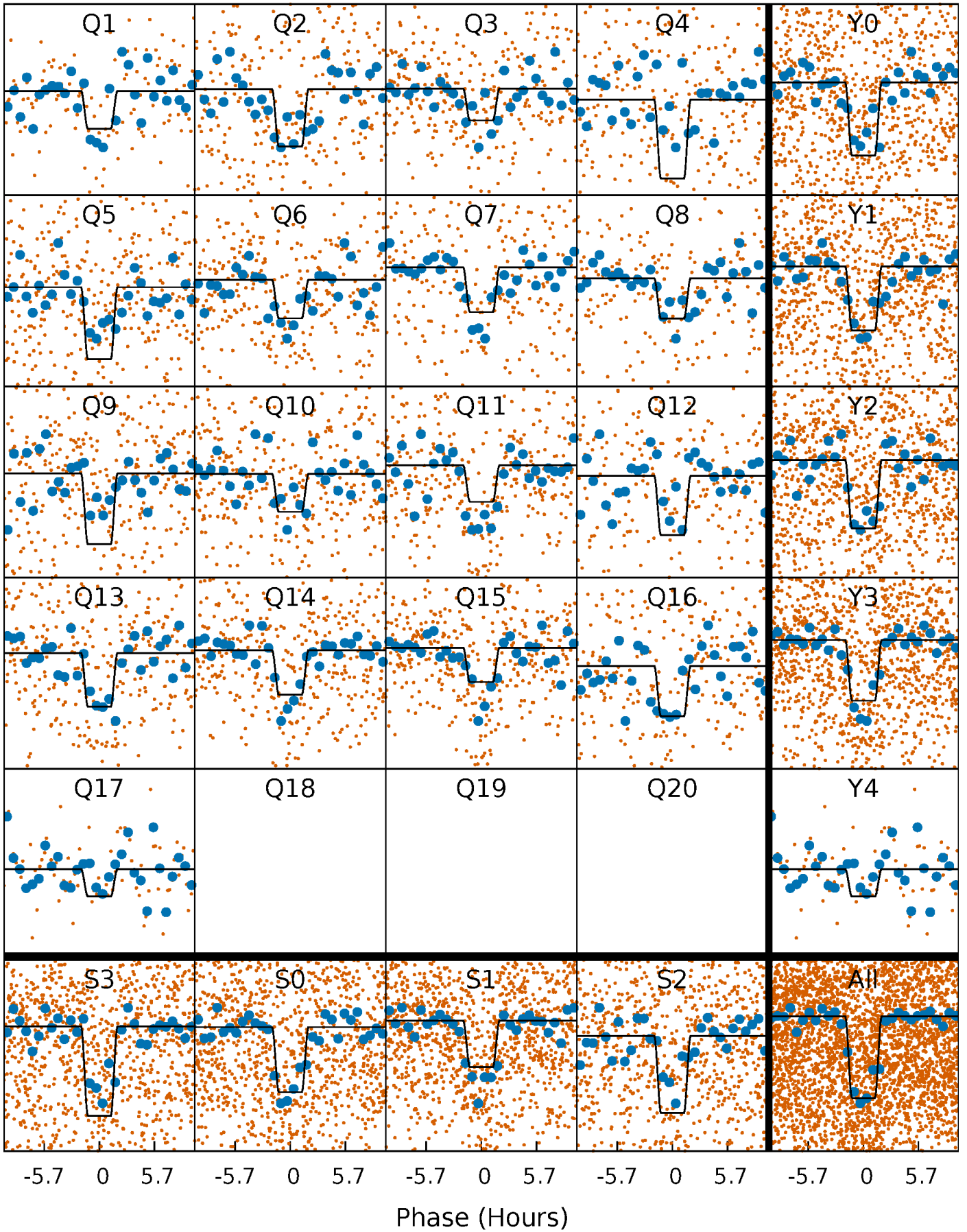
DV Quarter-Phased Transit Curves

TCE 003120308-01 P= 10.265627 Days $T_0=136.494166$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

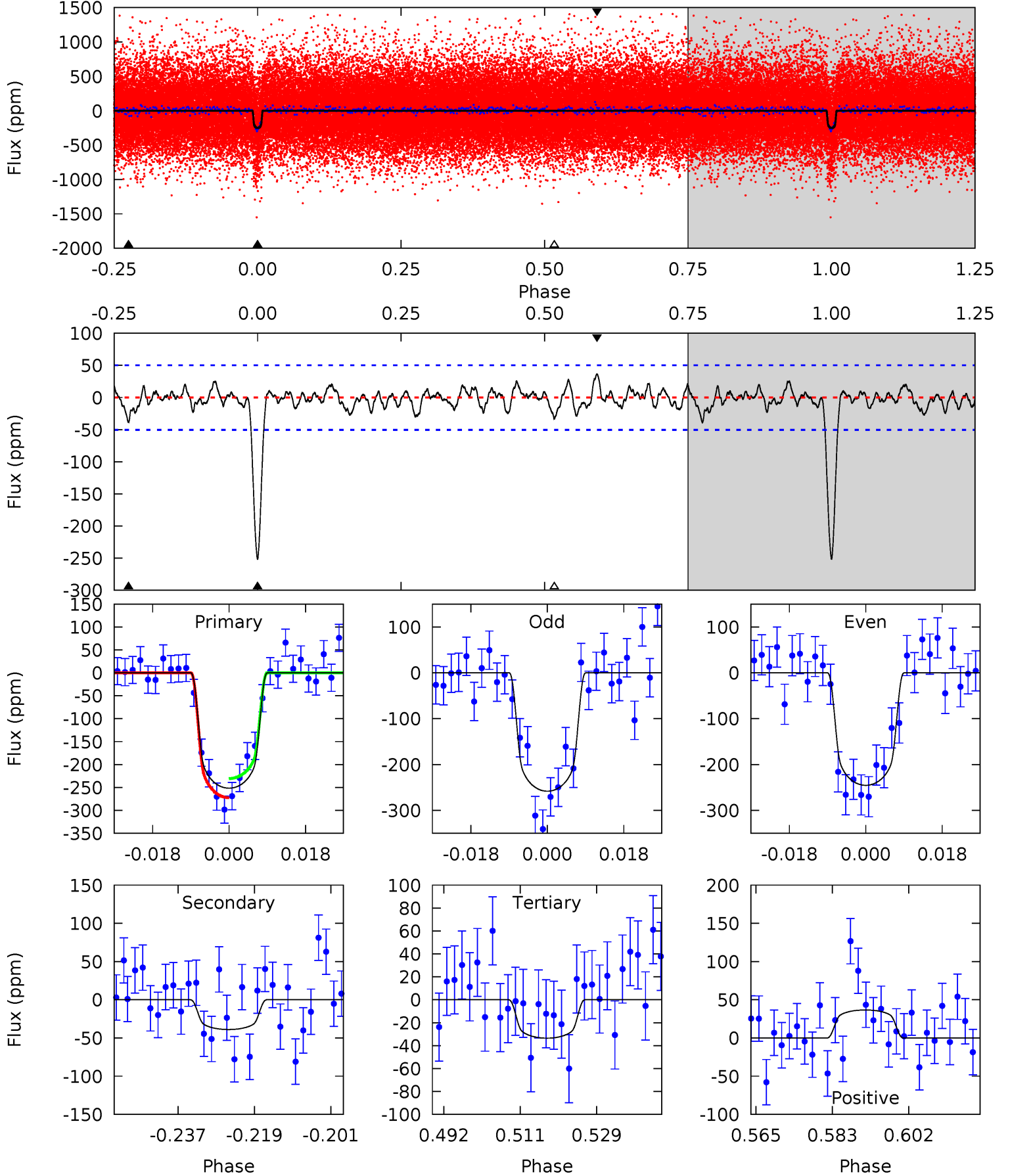
TCE 003120308-01 P= 10.265712 Days $T_0=136.484190$ (BKJD)



DV Model-Shift Uniqueness Test

003120308-01, P = 10.265627 Days, E = 126.228539 Days

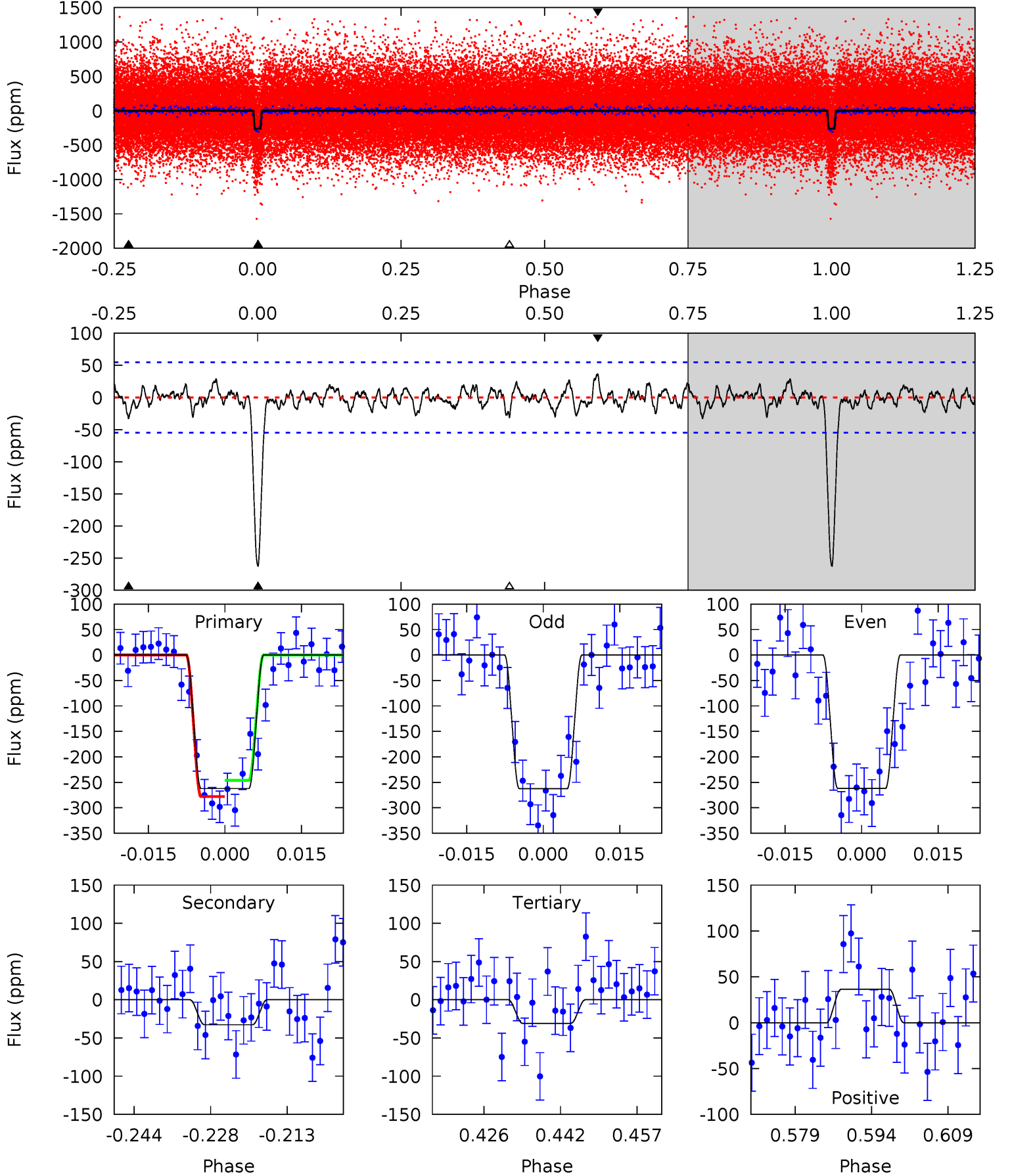
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.6	3.80	3.27	3.58	4.91	2.36	1.14	21.3	21.0	0.53	0.22	0.63	1.09	0.13	2.05



Alt Model-Shift Uniqueness Test

003120308-01, $P = 10.265712$ Days, $E = 126.218478$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.7	2.95	2.79	3.29	4.95	2.43	1.02	20.9	20.4	0.16	-0.34	0.03	1.05	0.12	1.44



Stellar Parameters For KIC 003120308

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5774^{+156}_{-174}	$4.458^{+0.067}_{-0.202}$	$0.080^{+0.250}_{-0.300}$	$0.980^{+0.285}_{-0.102}$	$1.006^{+0.113}_{-0.113}$	$1.505^{+0.421}_{-0.793}$
	+3%/-3%	+2%/-5%	+312%/-375%	+29%/-10%	+11%/-11%	+28%/-53%
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 003120308-01 / KOI 3380.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-39 ± 10	$1.92^{+0.47}_{-0.45}$	1177^{+82}_{-59}	3834^{+390}_{-330}	49^{+38}_{-21}
Alt.	-33 ± 11	$1.84^{+0.49}_{-0.42}$	1178^{+85}_{-62}	3767^{+394}_{-335}	44^{+36}_{-20}

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 $A_{obs} \gg 1.0$

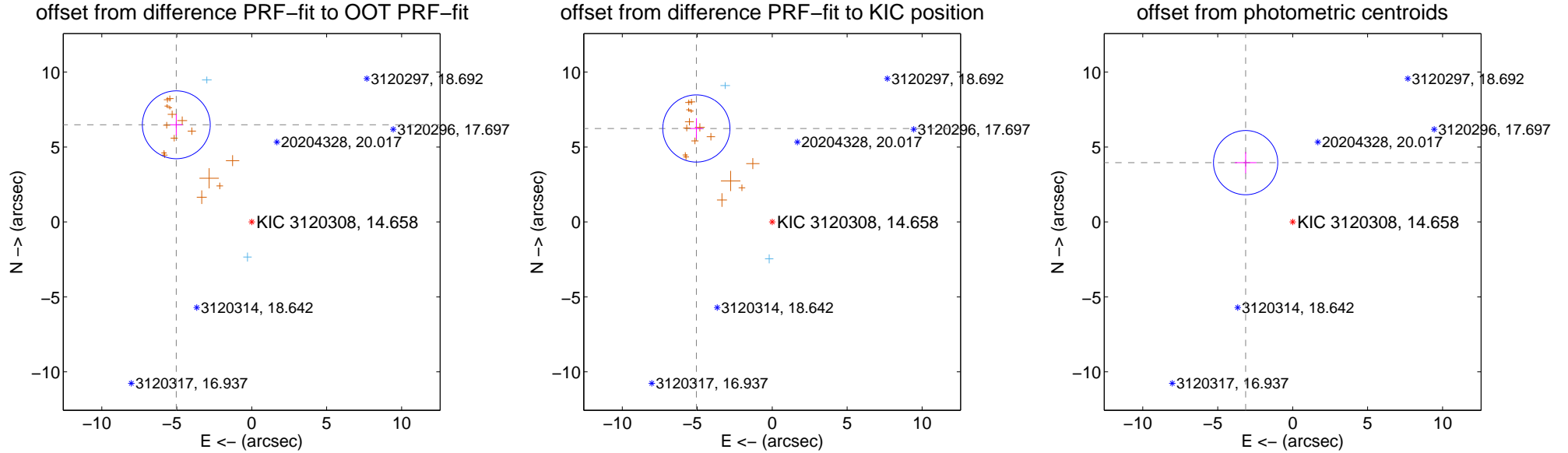
DV Centroid Data

Supplemental centroid analysis for 003120308-01. Kepler magnitude: 14.66. Transit SNR 17.52

There are 2 quarters with good PRF difference image offsets

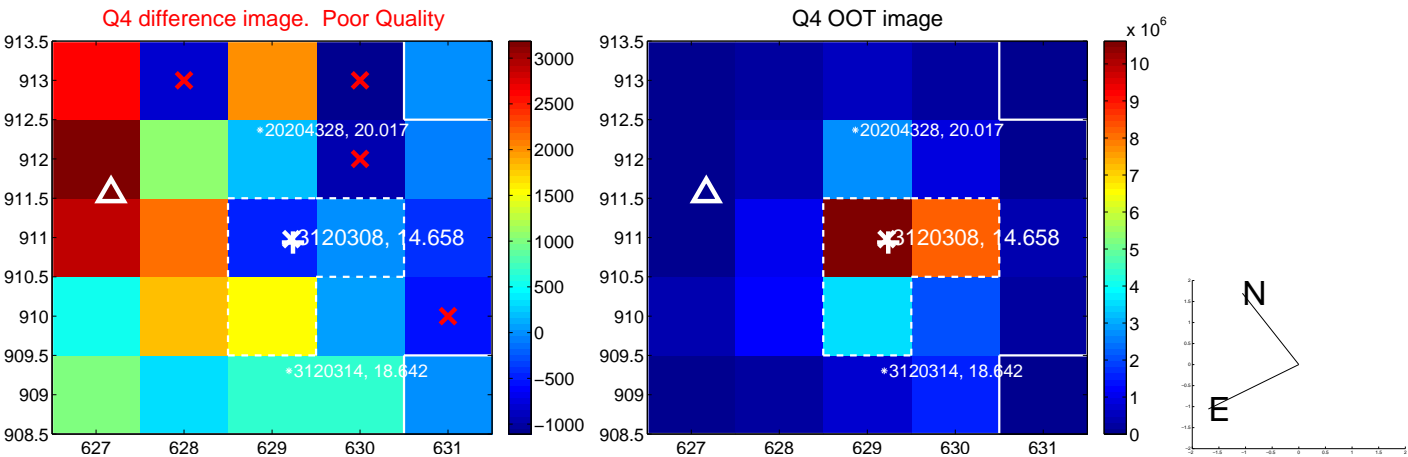
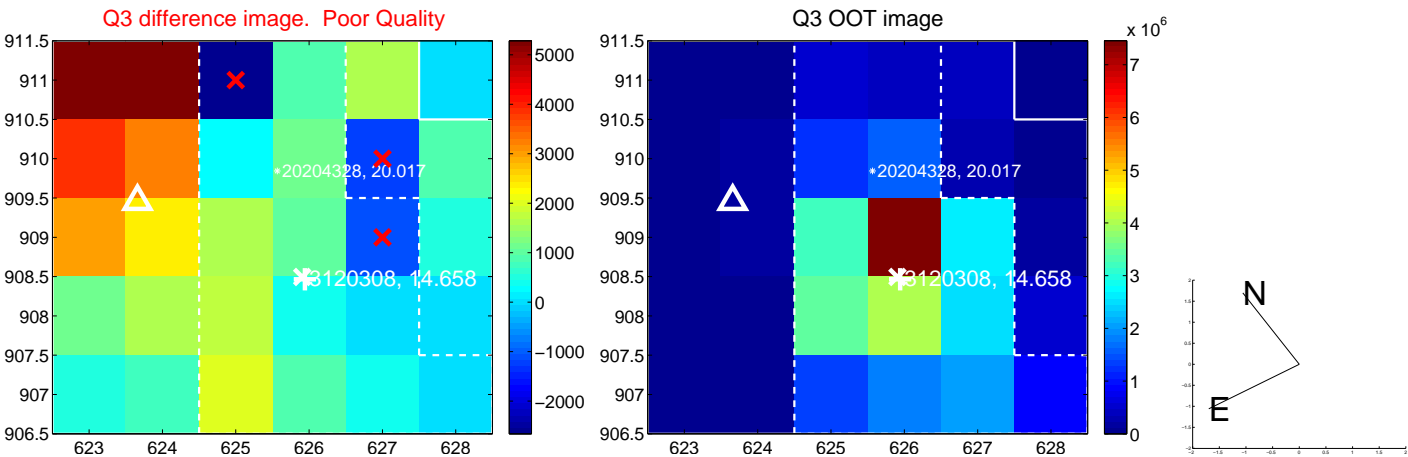
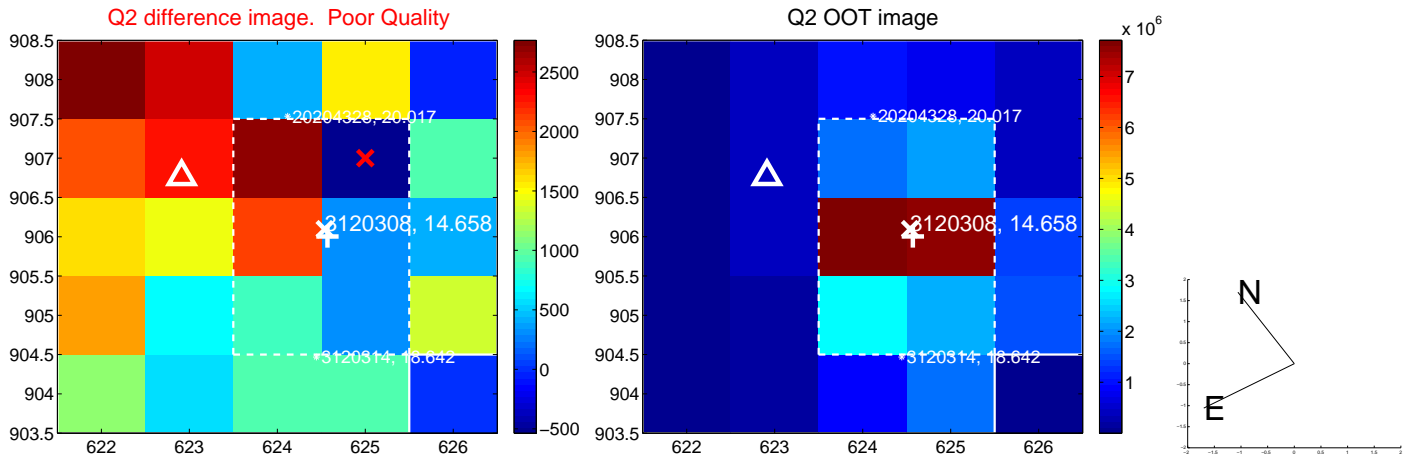
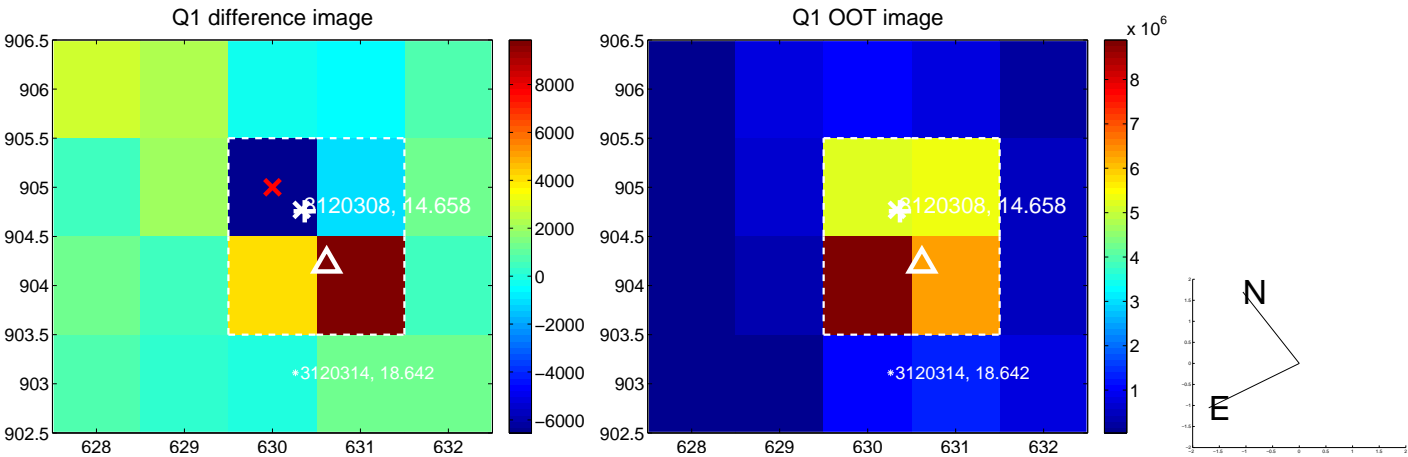
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	8.206 ± 0.755	10.88	5.030 ± 0.412	6.483 ± 0.713
PRF-fit source offset from KIC position	8.030 ± 0.747	10.75	5.057 ± 0.421	6.237 ± 0.689
photometric centroid source offset	5.05 ± 0.71	7.07	3.14 ± 0.72	3.96 ± 0.71

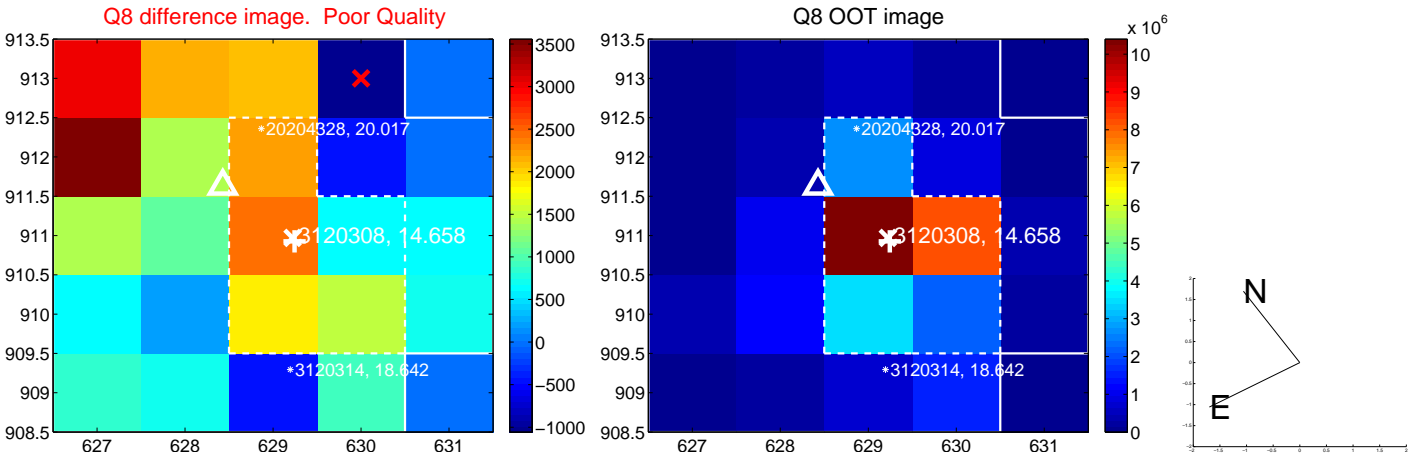
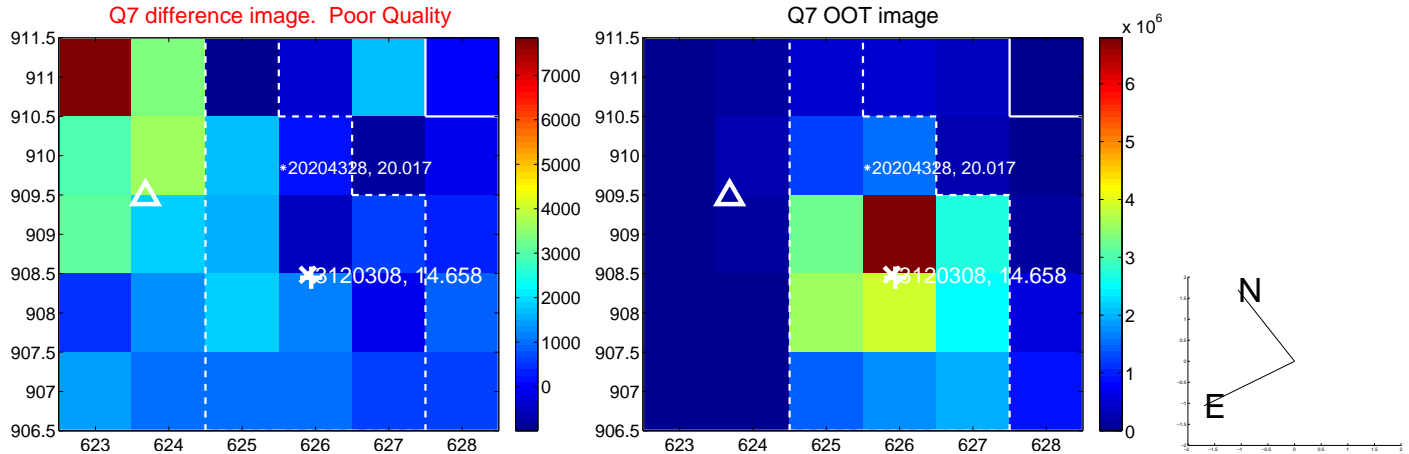
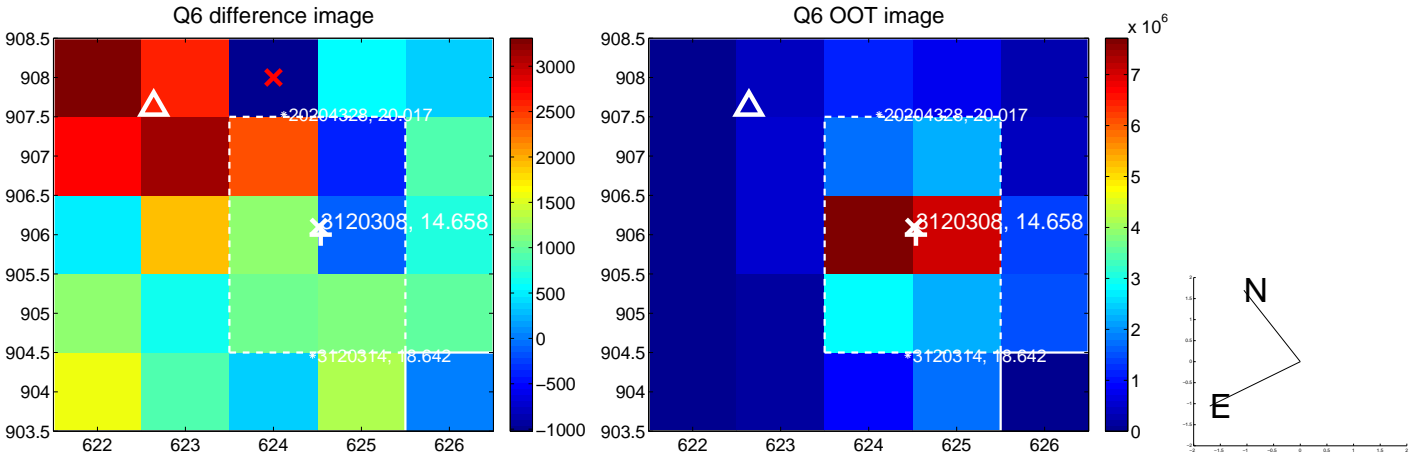
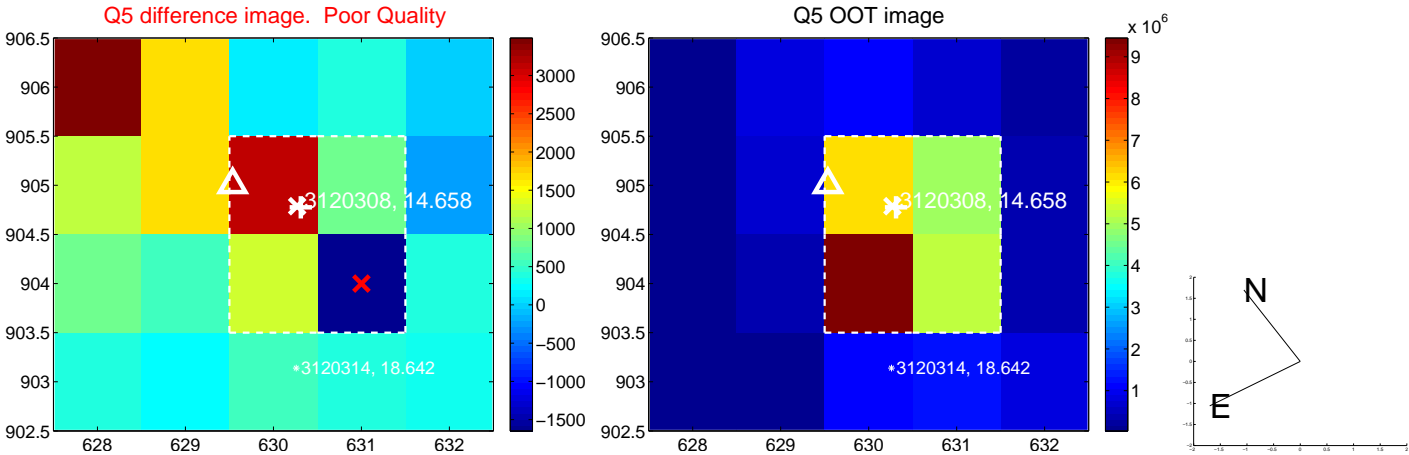


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

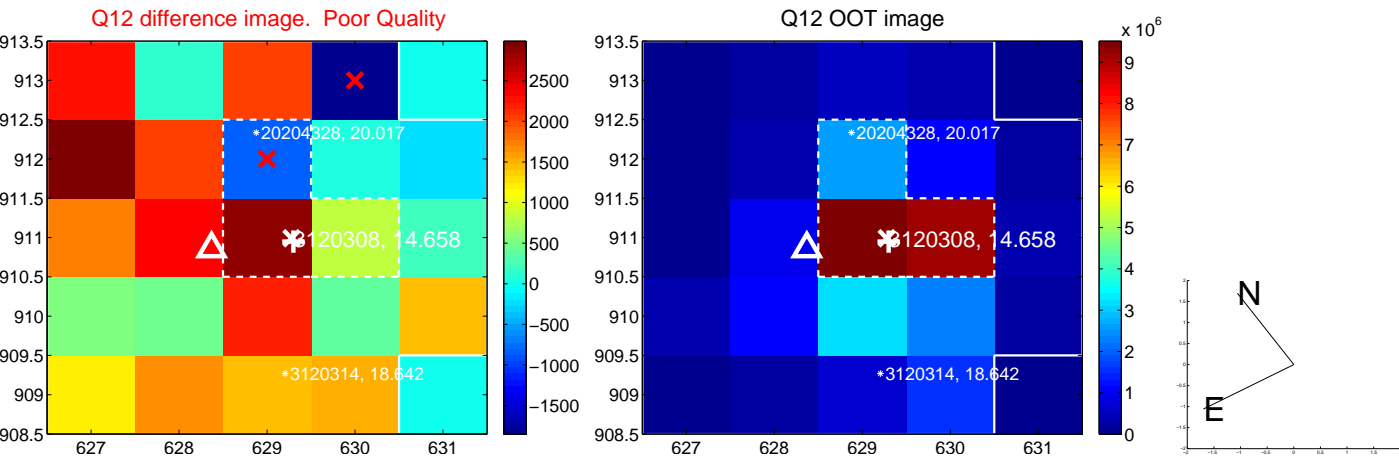
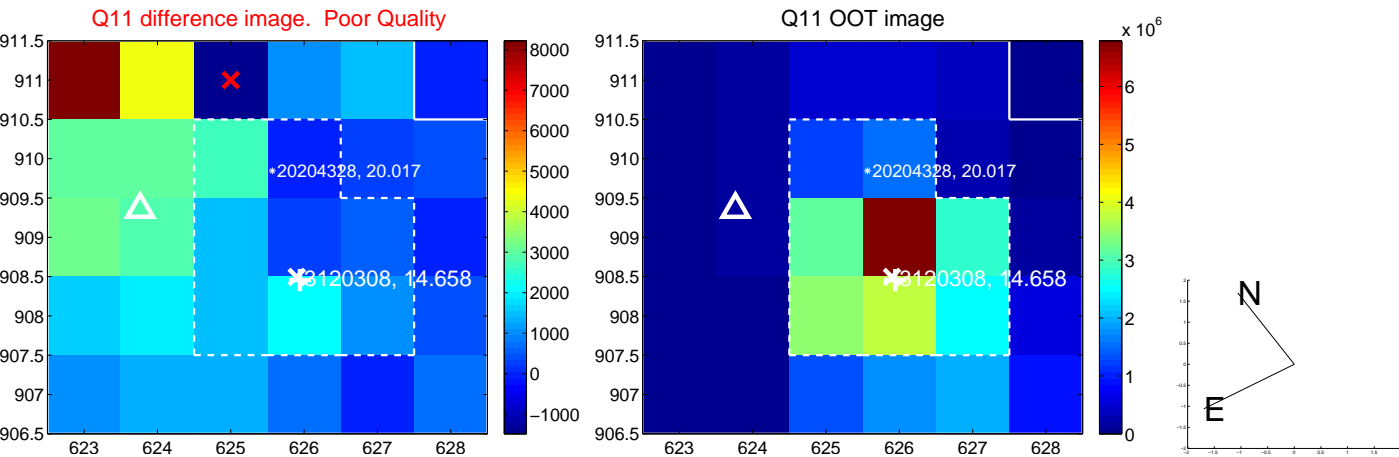
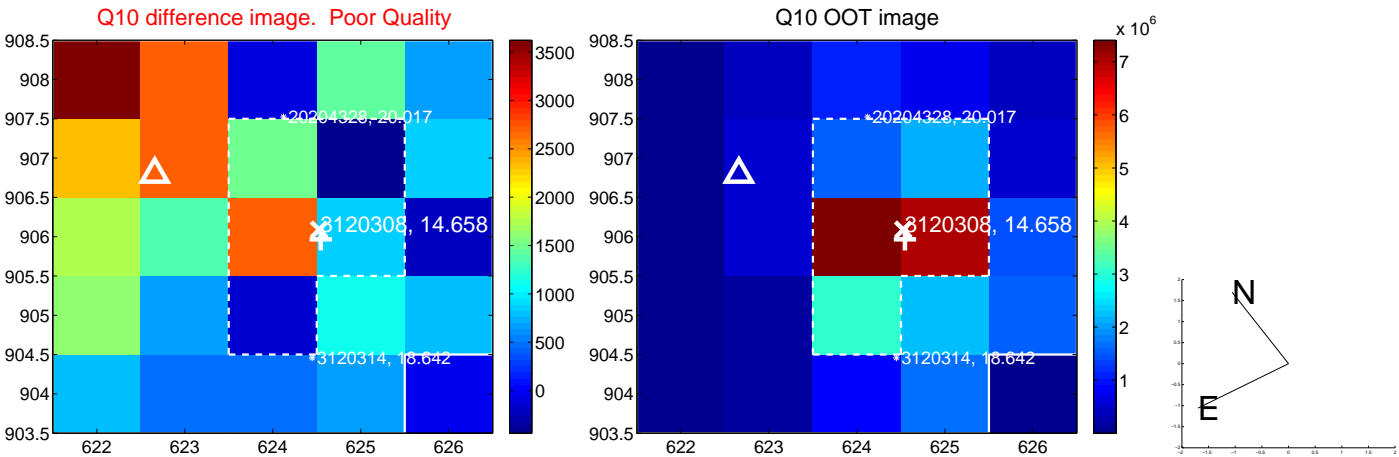
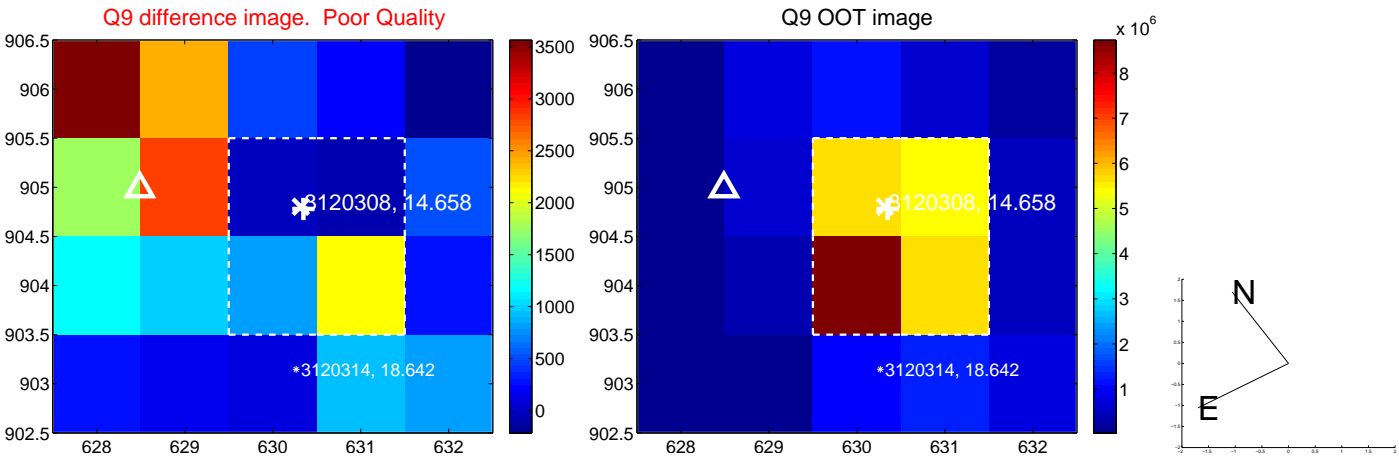
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



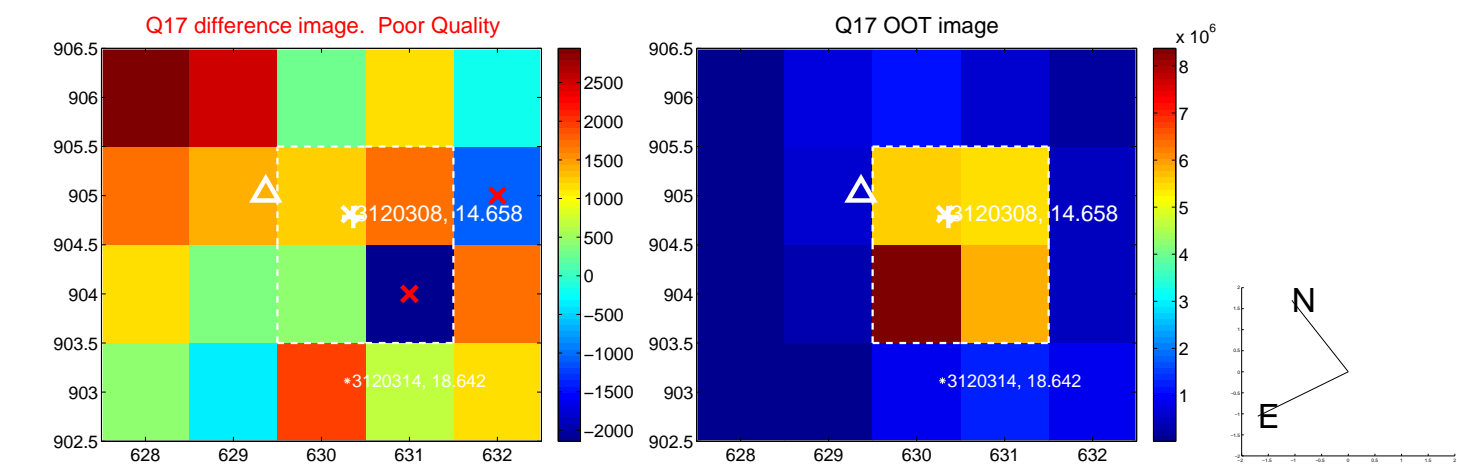
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



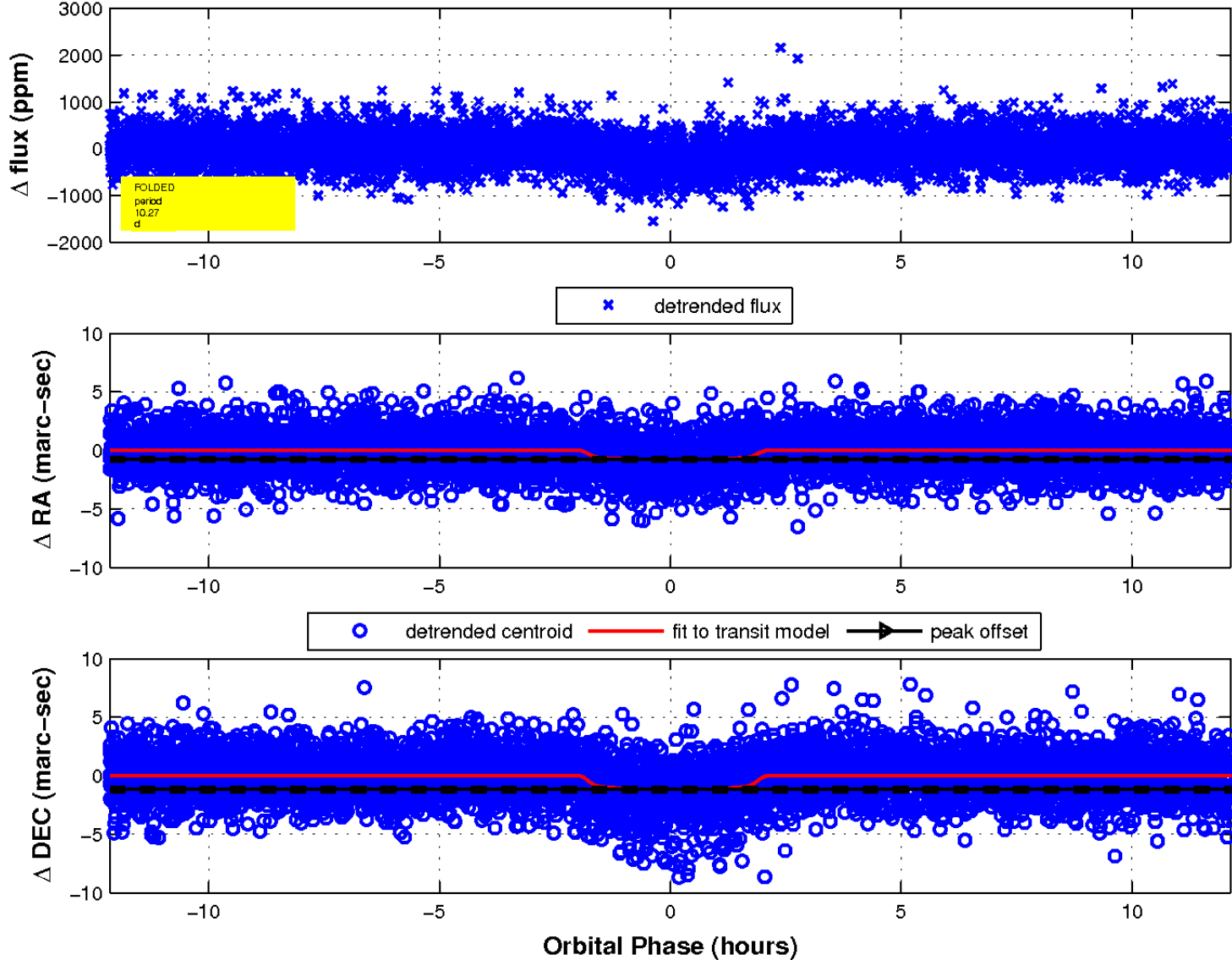
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

