

KIC 008552607

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})
008552607-01	OBS	5542.01	1.061897	131.744367	72.6	1.912	22.9	19.5	0.87	5853	0.88	1958.75

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008552607-01	OBS	FP	0.00	0	1	1	1	MOD_SEC_ALT—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 008552607-01

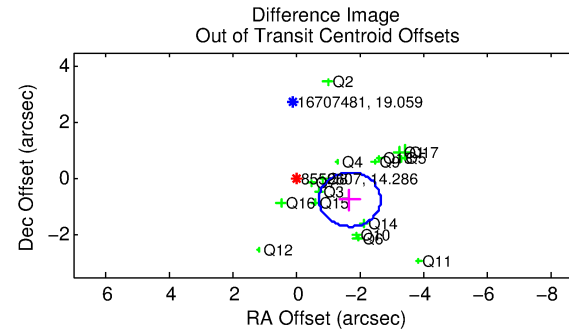
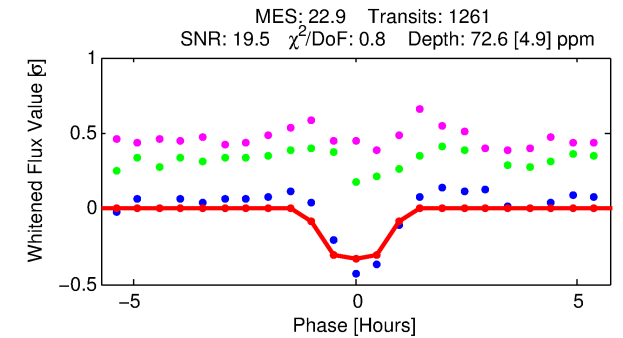
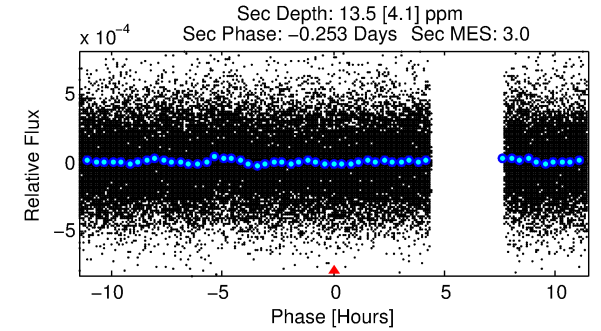
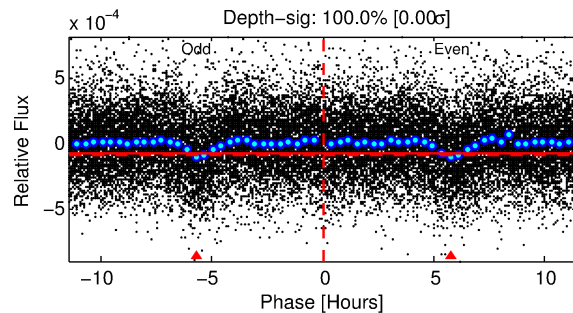
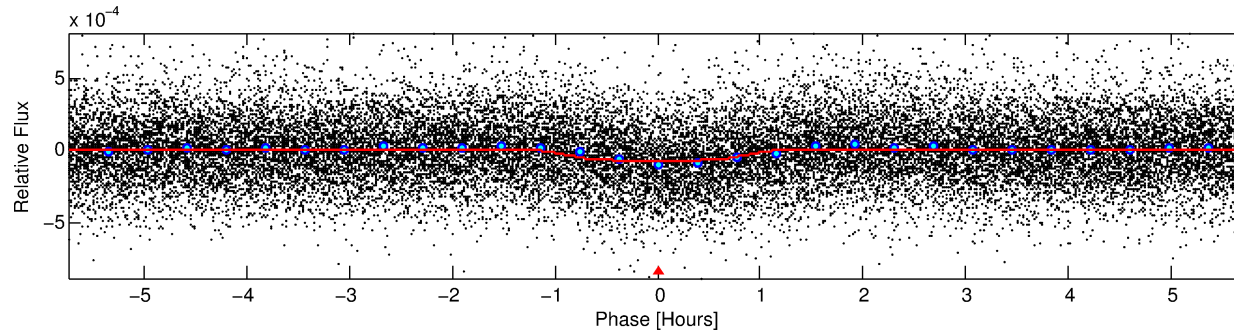
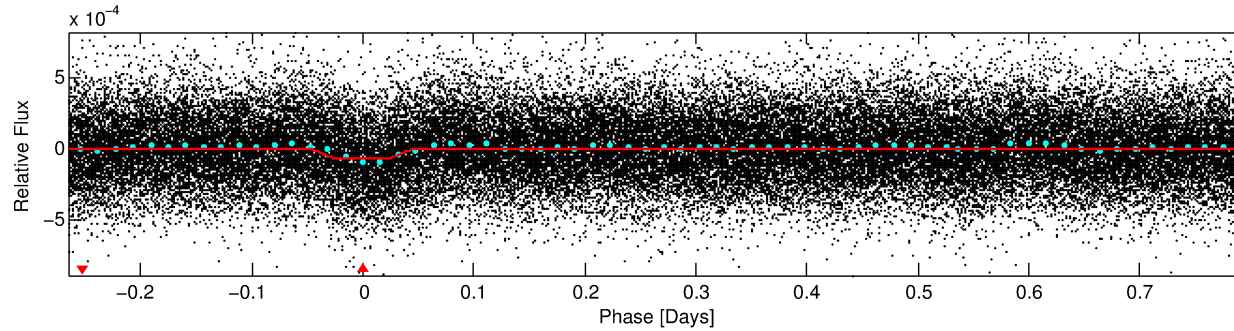
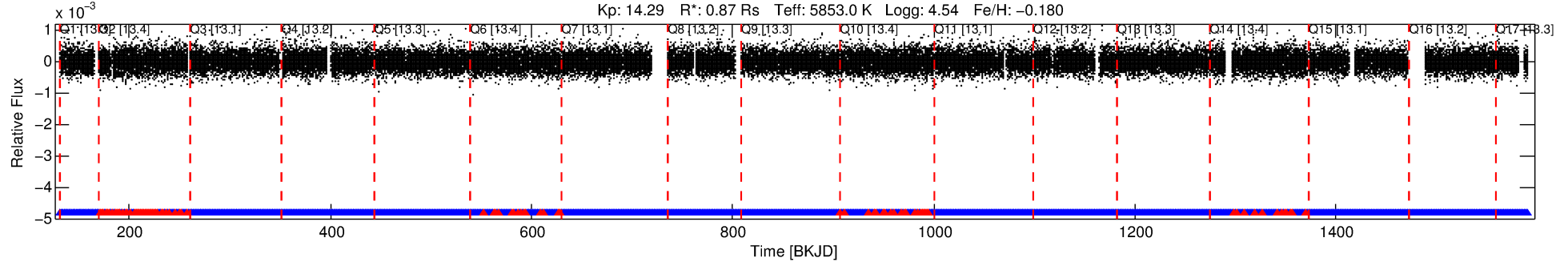
TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
008552607-01	8552607	008552540-01	8552540	1:1	103.0	26	-3	10.29	14.28	6367.60	Direct-PRF	0	3.36	1.79

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: 8552607 Candidate: 1 of 1 Period: 1.062 d
KOI: K05542.01 Corr: 0.758

Kp: 14.29 R*: 0.87 Rs Teff: 5853.0 K Logg: 4.54 Fe/H: -0.180



DV Fit Results:

Period = 1.06190 [0.00001] d
Epoch = 131.7444 [0.0014] BKJD
Rp/R* = 0.0093 [0.0028]
a/R* = 2.15 [2.57]
b = 0.90 [0.33]
Seff = 1958.75 [757.02]
Teq = 1696 [164] K
Rp = 0.88 [0.37] Re
a = 0.0201 [0.0050] AU
Ag = 3.91 [3.02] [0.96σ]
Teffp = 3687 [637] K [3.03σ]

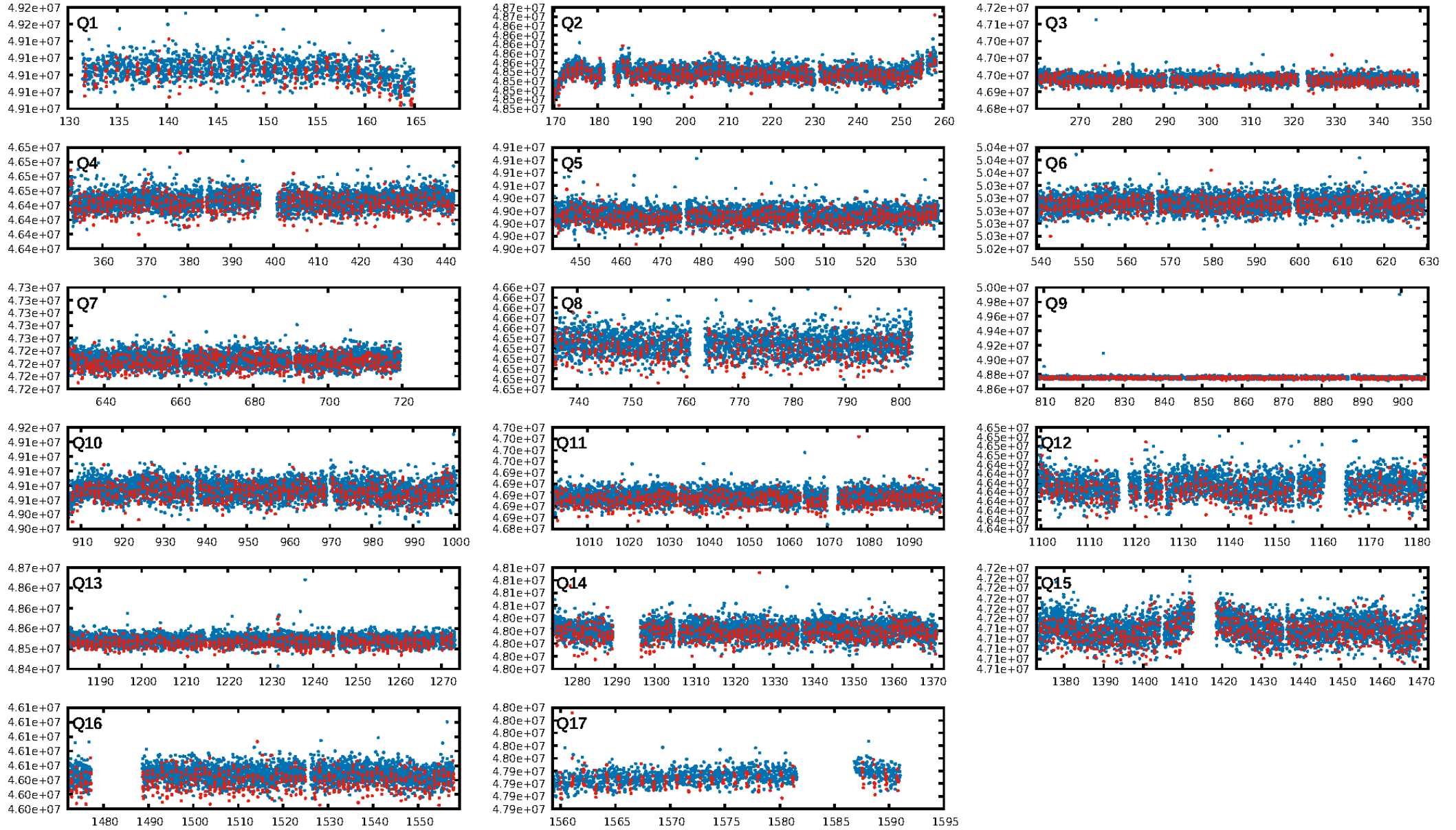
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.62e-110
RollingBand-fgt: 0.92 [1105/1204]
GhostDiagnostic-chr: -0.08911
Centroid-sig: 0.0%
Centroid-so: 3.278 arcsec [4.55σ]
OotOffset-rm: 1.853 arcsec [5.76σ]
KicOffset-rm: 1.705 arcsec [5.49σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.06 [1/17]
DiffImageOverlap-fno: 1.00 [17/17]

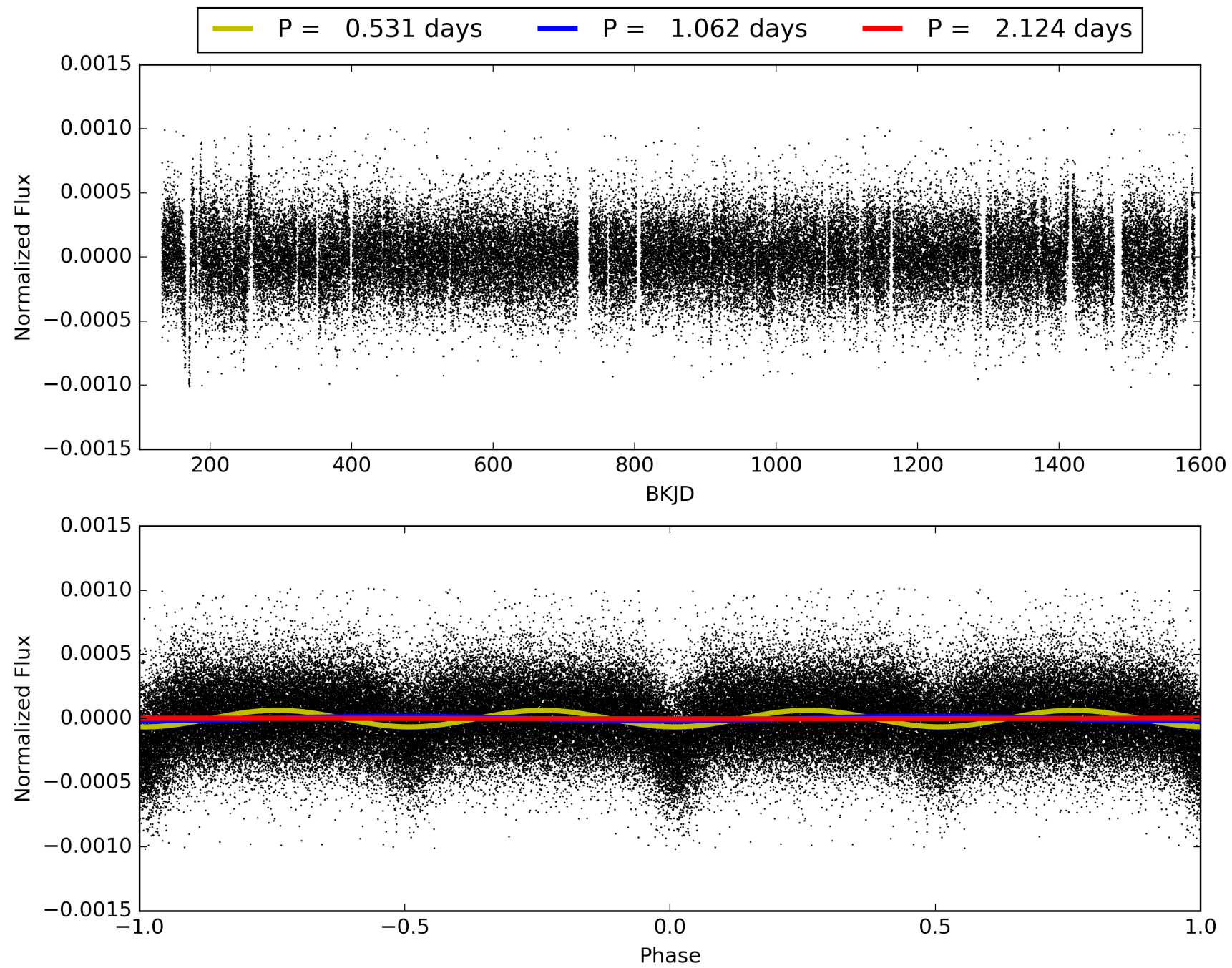
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 18:28:27 Z

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

TCE 008552607-01, PDC Light Curves

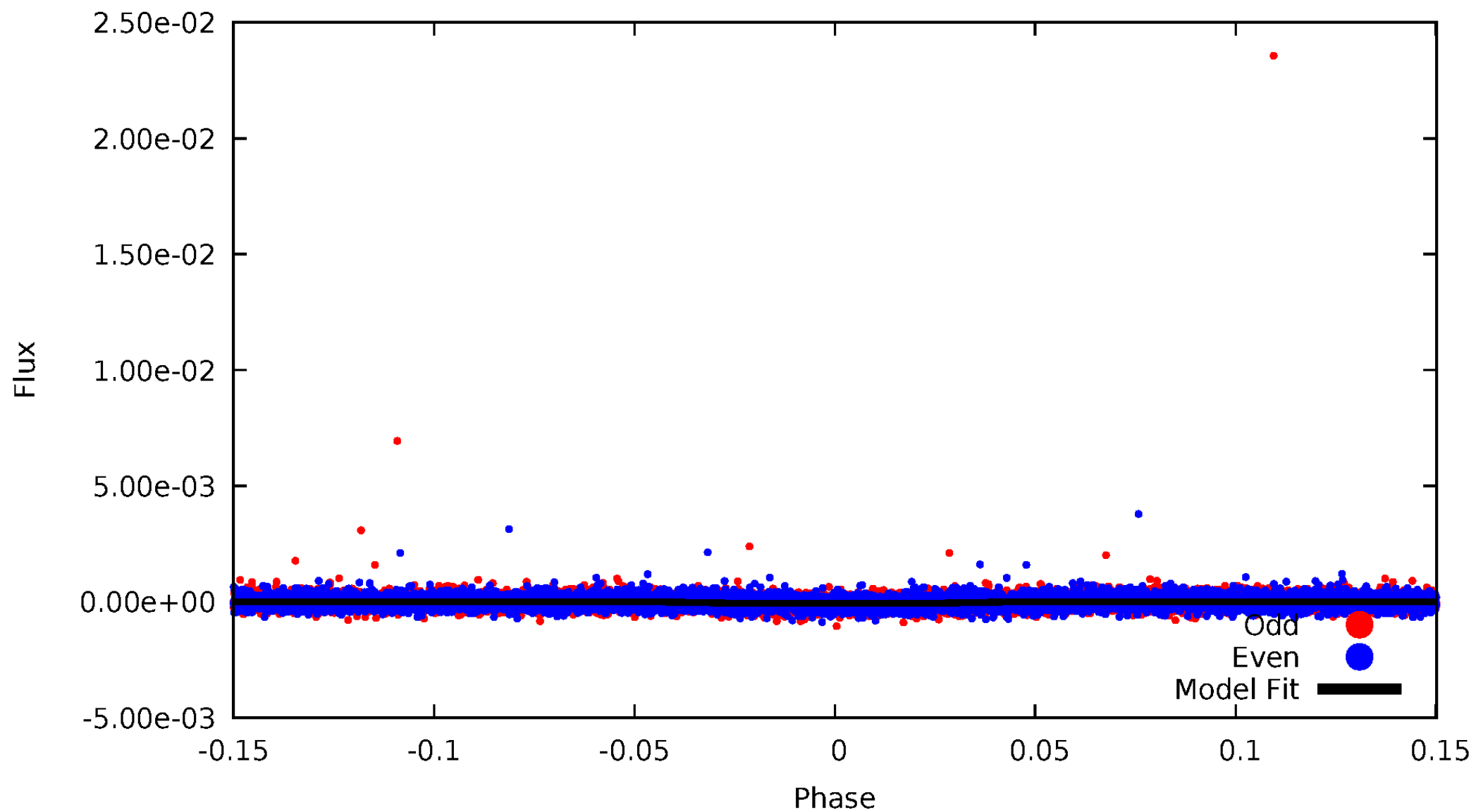


TCE 008552607-01



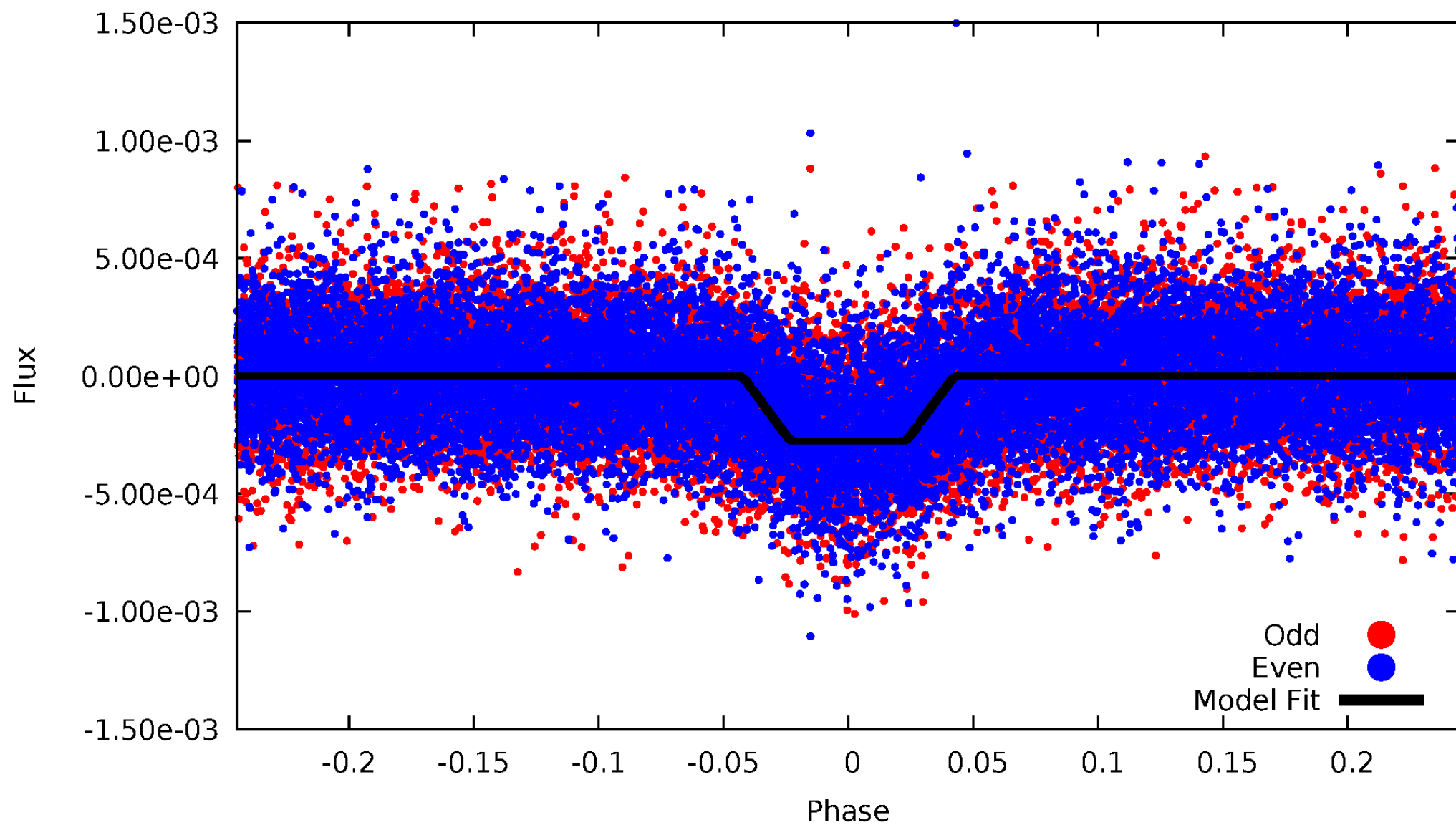
DV Odd/Even

TCE 008552607-01

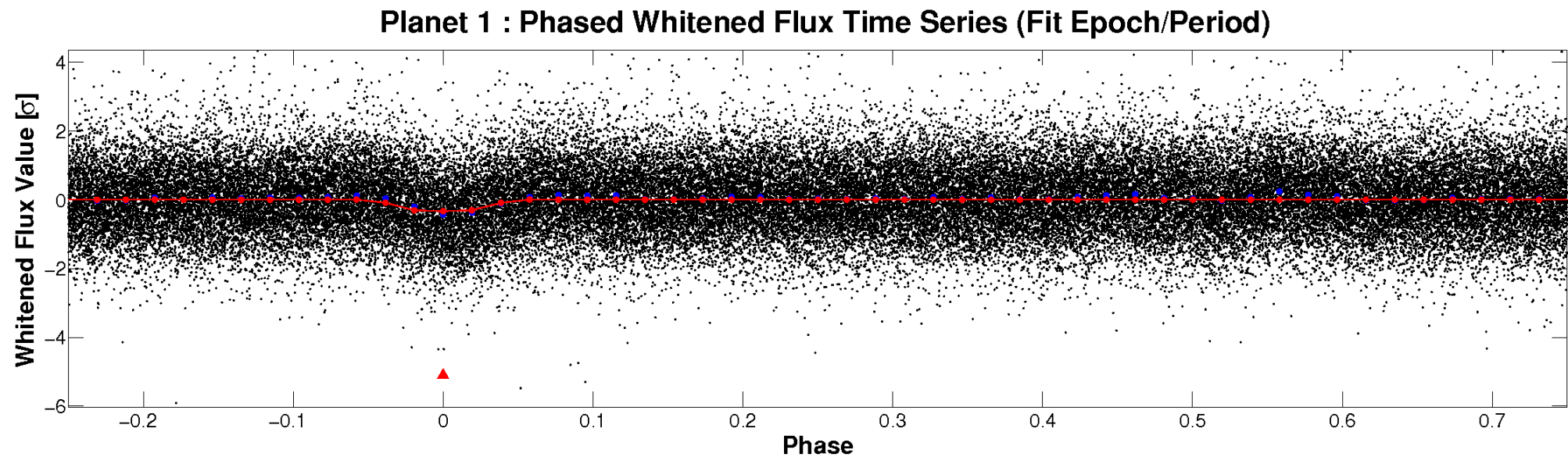
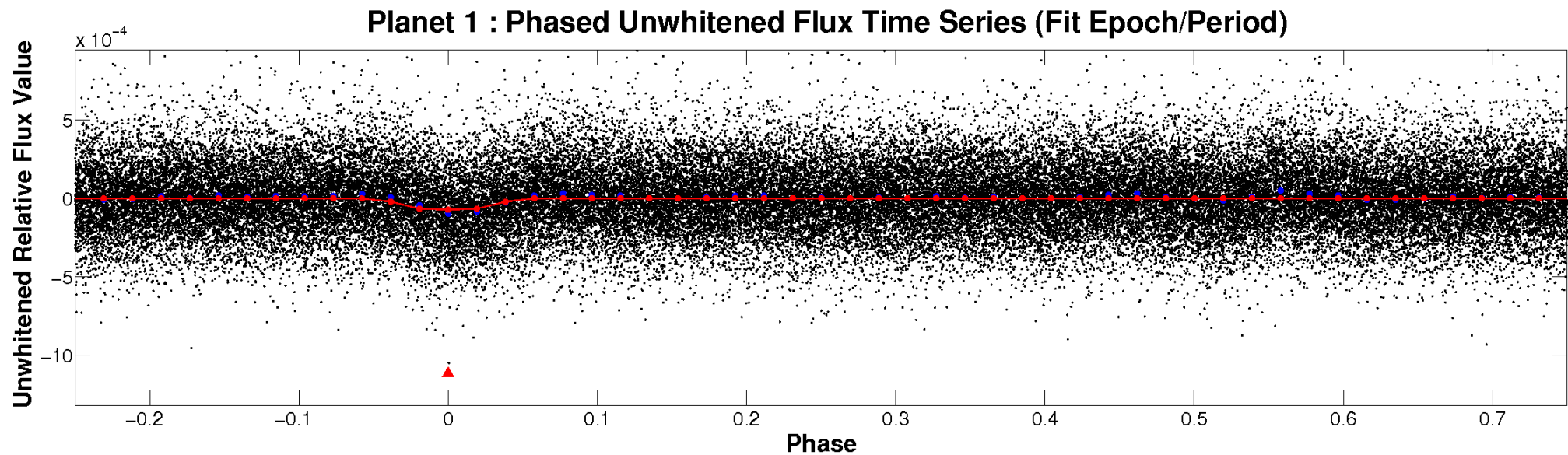


ALT Odd/Even

TCE 008552607-01

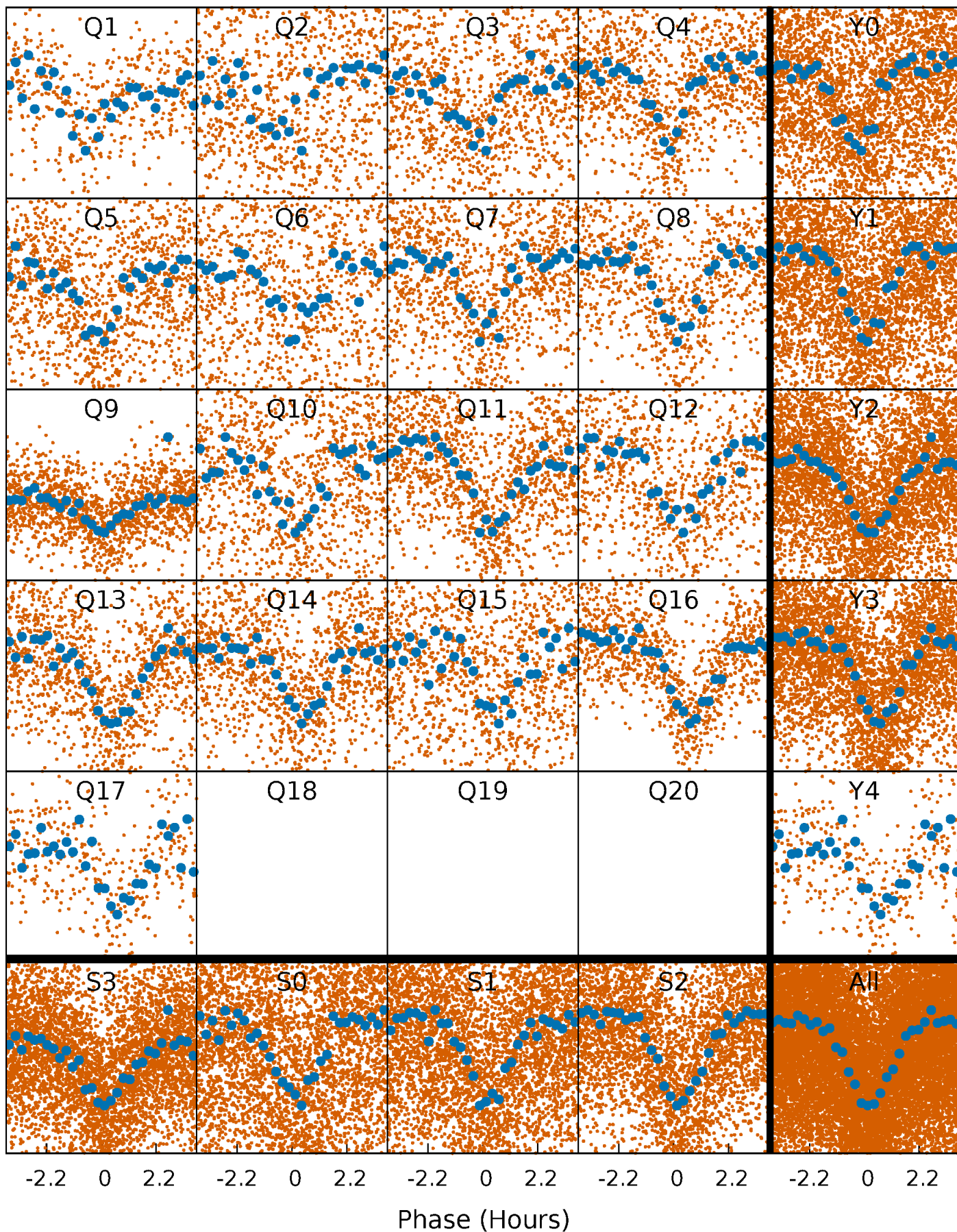


Non-Whitened Vs. Whitened Light Curve



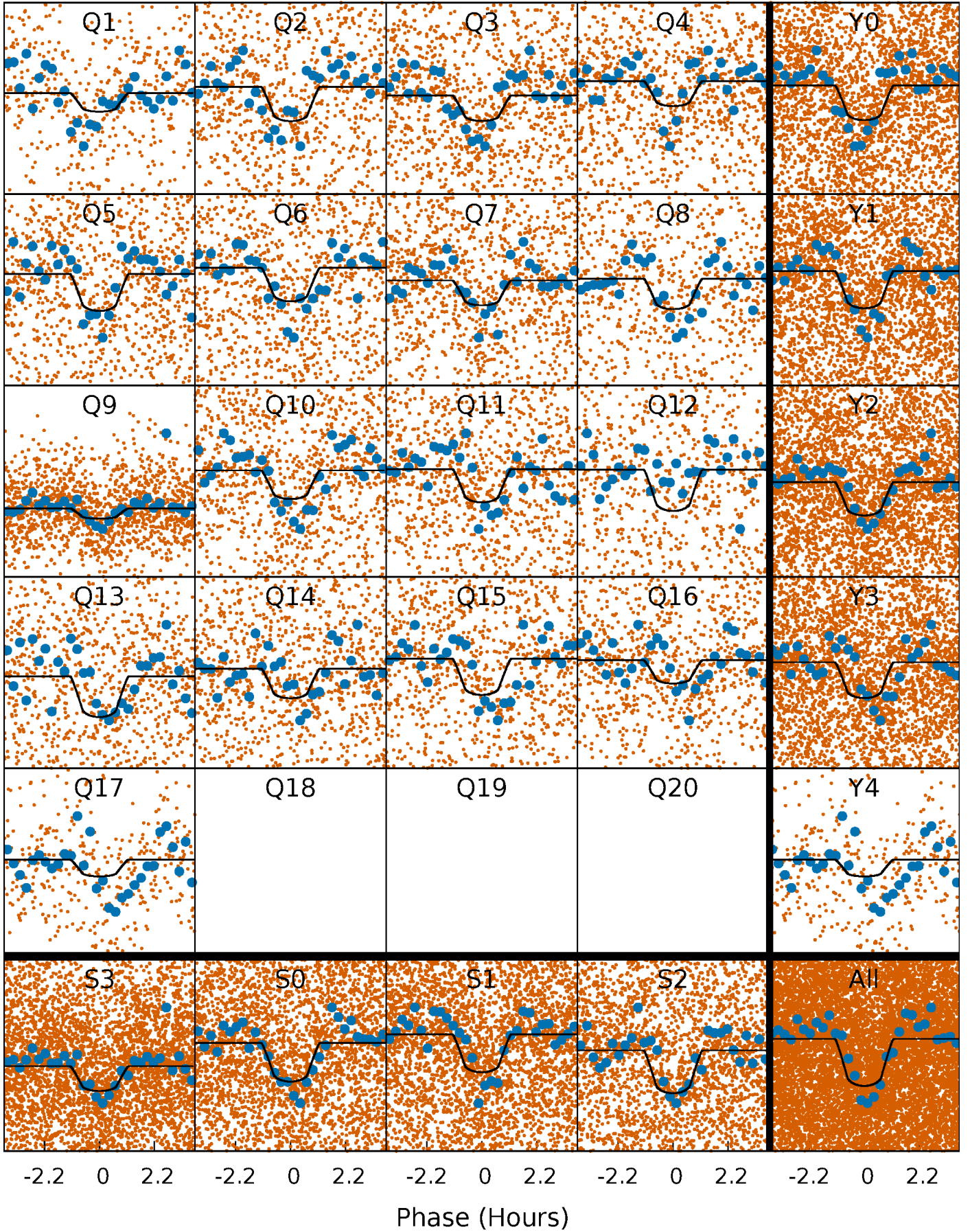
PDC Quarter-Phased Transit Curves

TCE 008552607-01 P= 1.061897 Days $T_0=131.744367$ (BKJD)



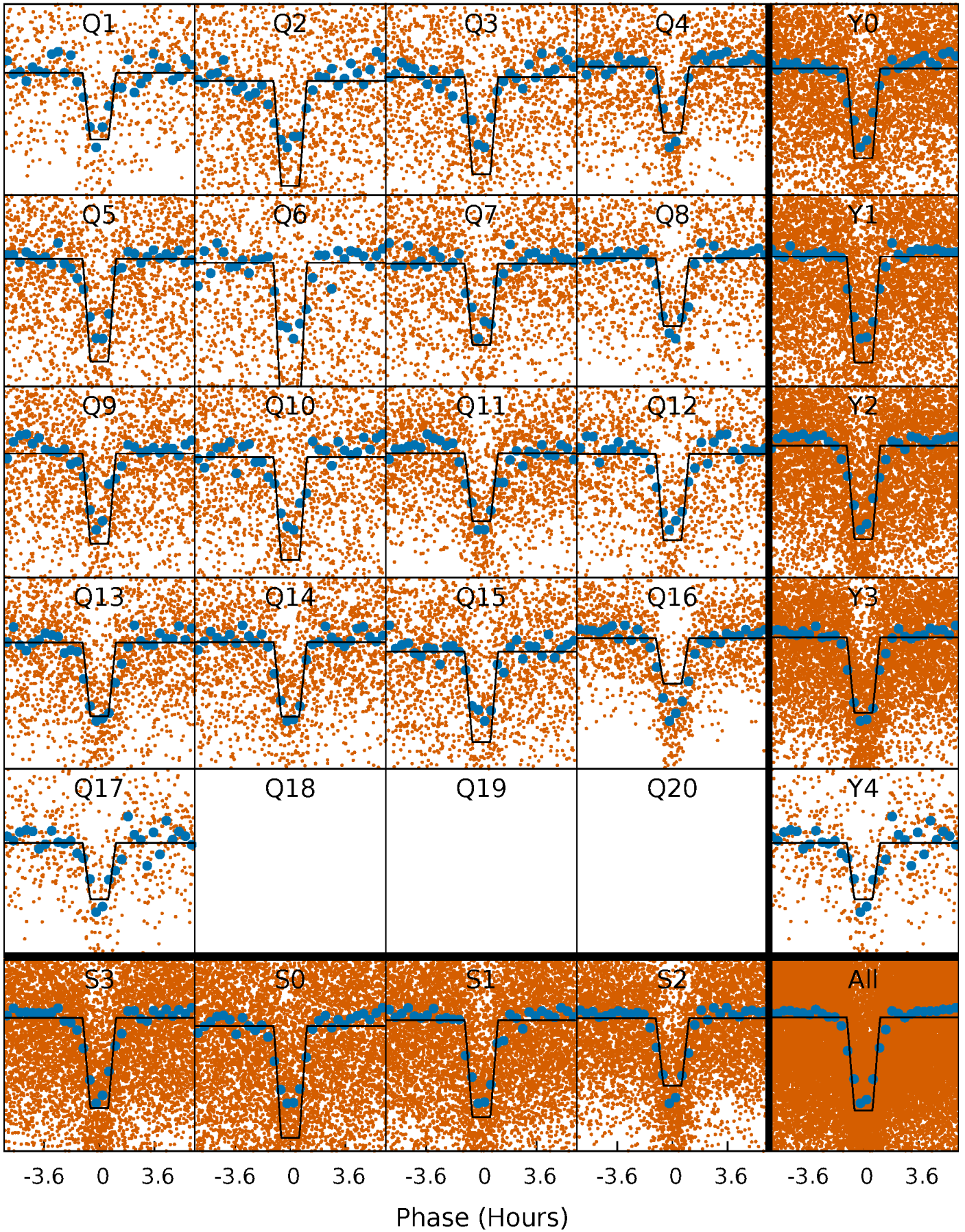
DV Quarter-Phased Transit Curves

TCE 008552607-01 P= 1.061897 Days $T_0=131.744367$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

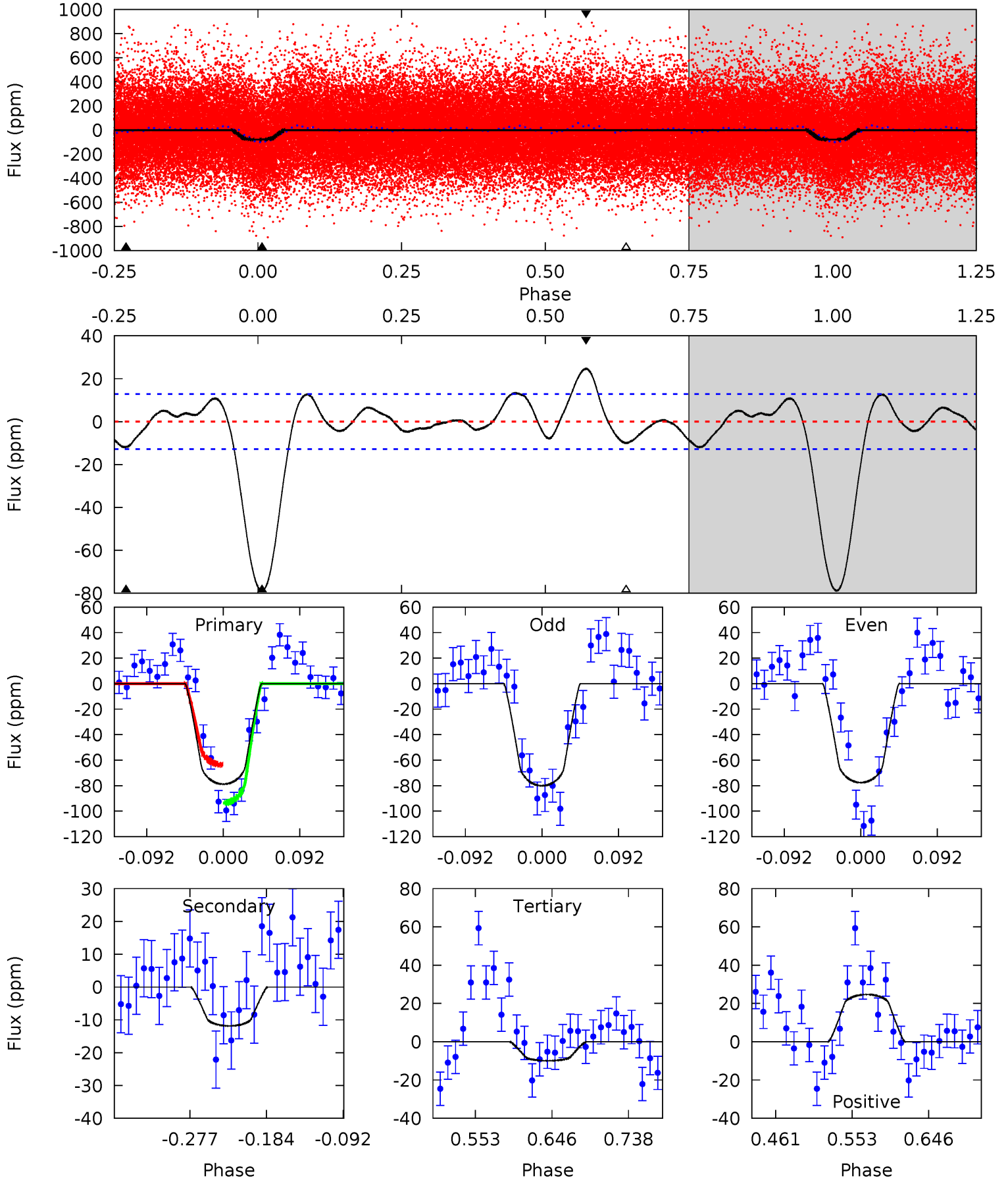
TCE 008552607-01 P= 1.061930 Days $T_0=131.729587$ (BKJD)



DV Model-Shift Uniqueness Test

008552607-01, P = 1.061897 Days, E = 130.682470 Days

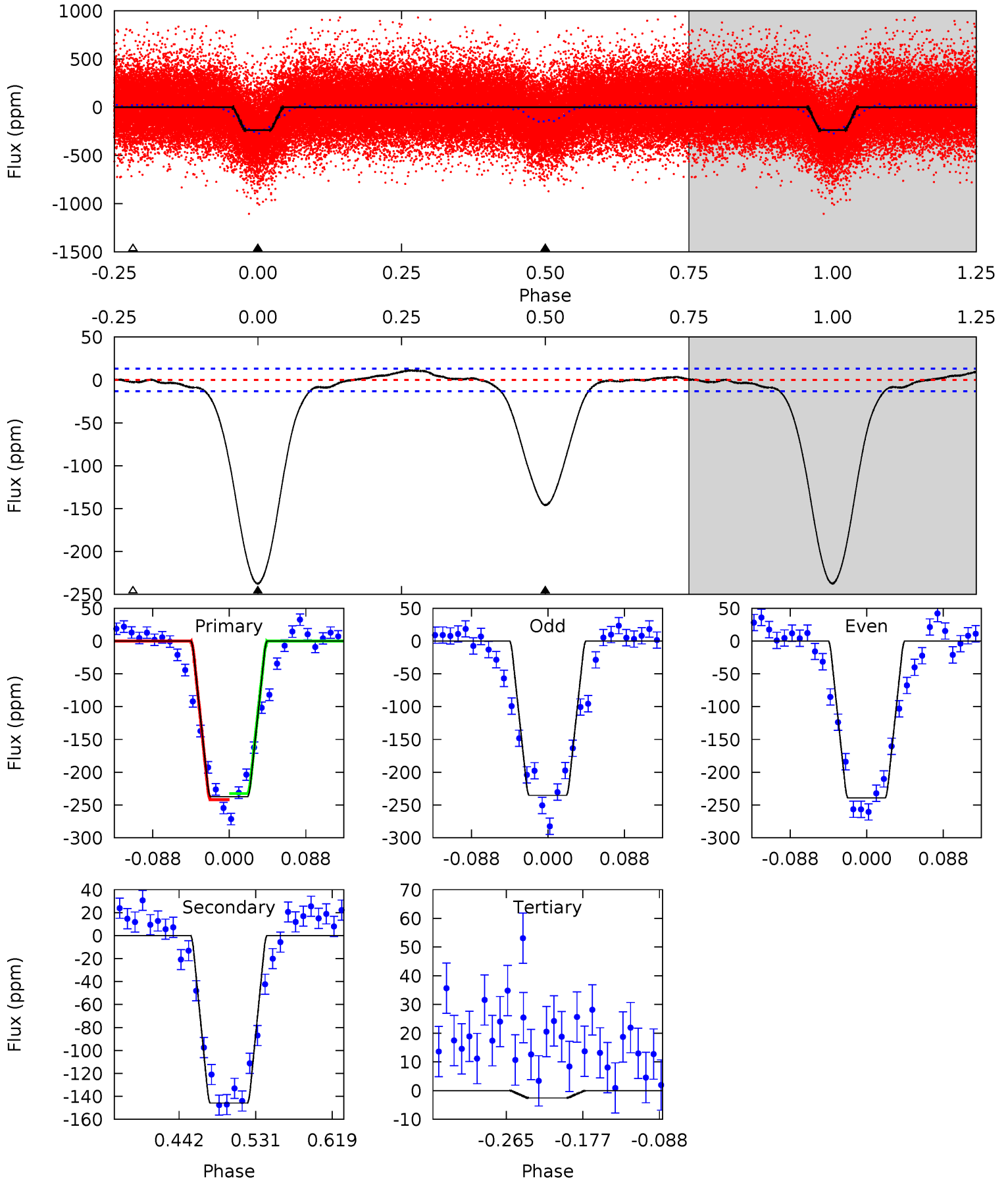
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
28.1	4.23	3.56	8.82	4.58	1.68	2.59	24.6	19.3	0.67	-4.58	0.44	1.01	0.24	5.37



Alt Model-Shift Uniqueness Test

008552607-01, P = 1.061930 Days, E = 130.667657 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
82.6	50.7	0.90	0	4.59	1.70	1.83	81.7	82.6	49.8	50.7	0.67	1.00	0.04	1.62



Stellar Parameters For KIC 008552607

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5853^{+139}_{-174}	$4.544^{+0.036}_{-0.204}$	$-0.180^{+0.300}_{-0.300}$	$0.868^{+0.251}_{-0.084}$	$0.961^{+0.110}_{-0.121}$	$2.069^{+0.401}_{-1.045}$
	+2%/-3%	+1%/-4%	+167%/-167%	+29%/-10%	+11%/-13%	+19%/-51%
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 008552607-01 / KOI 5542.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-12 ± 3	$0.92^{+0.31}_{-0.29}$	2426^{+170}_{-105}	3840^{+596}_{-451}	$2.980^{+3.641}_{-1.465}$
Alt.	-146 ± 3	$1.67^{+0.37}_{-0.33}$	2433^{+171}_{-109}	5041^{+483}_{-351}	11^{+6}_{-4}

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 $A_{\text{obs}} \gg 1.0$

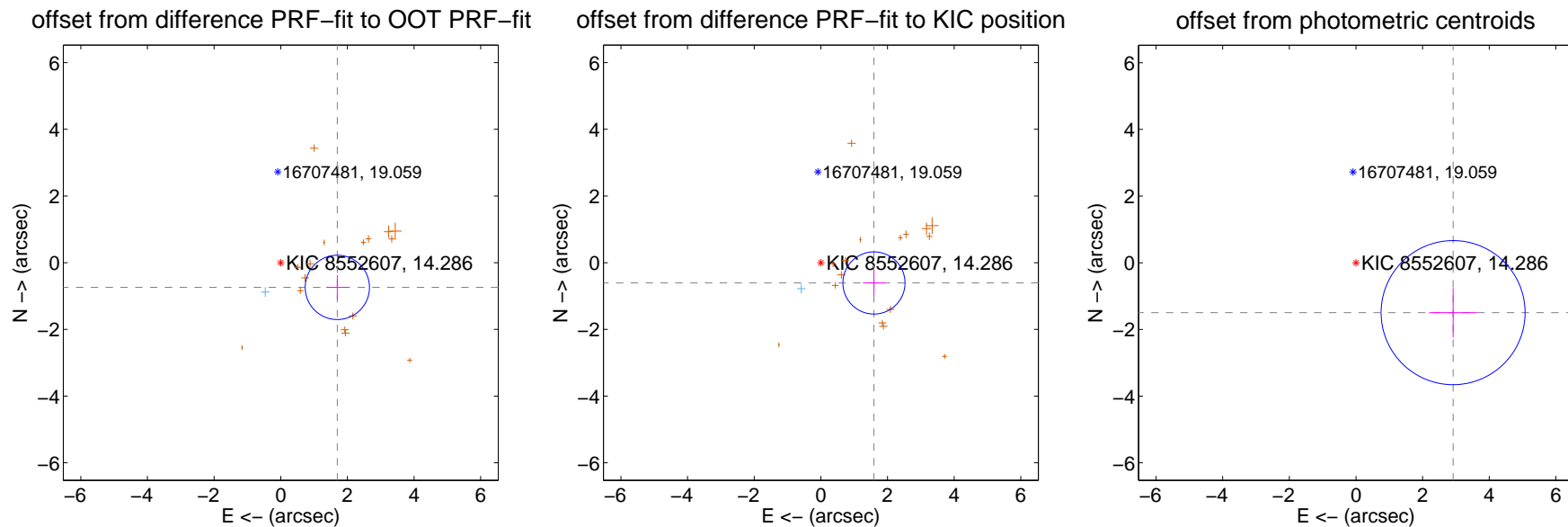
DV Centroid Data

Supplemental centroid analysis for 008552607-01. Kepler magnitude: 14.29. Transit SNR 19.50

There are 1 quarters with good PRF difference image offsets

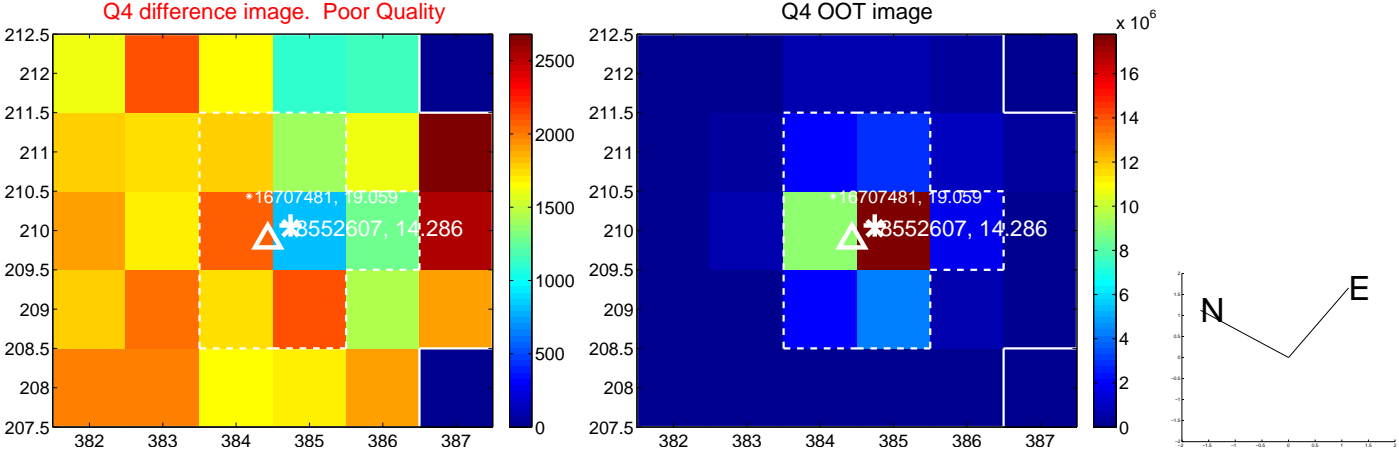
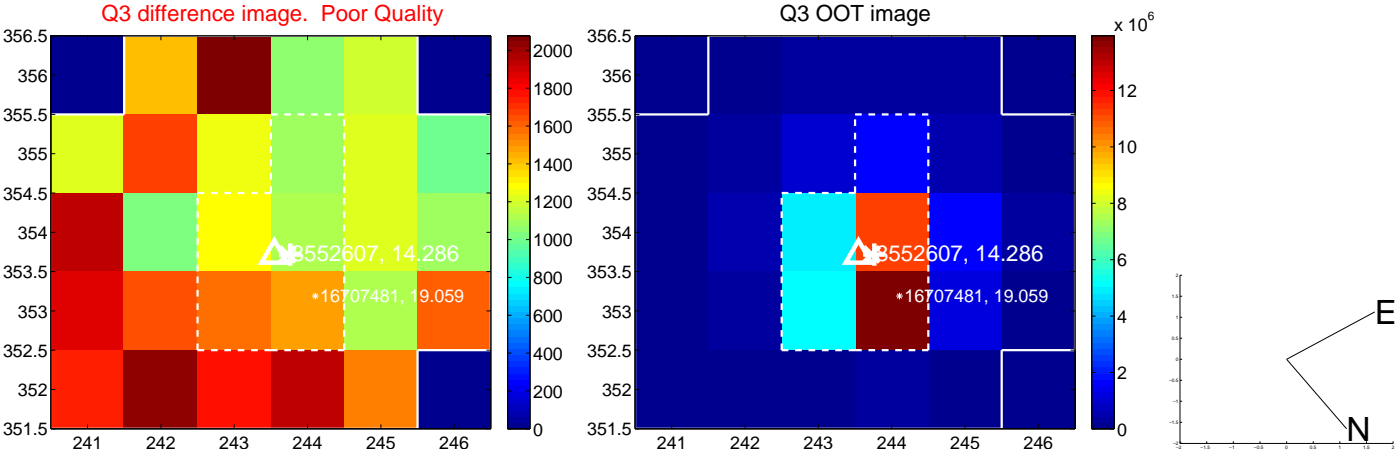
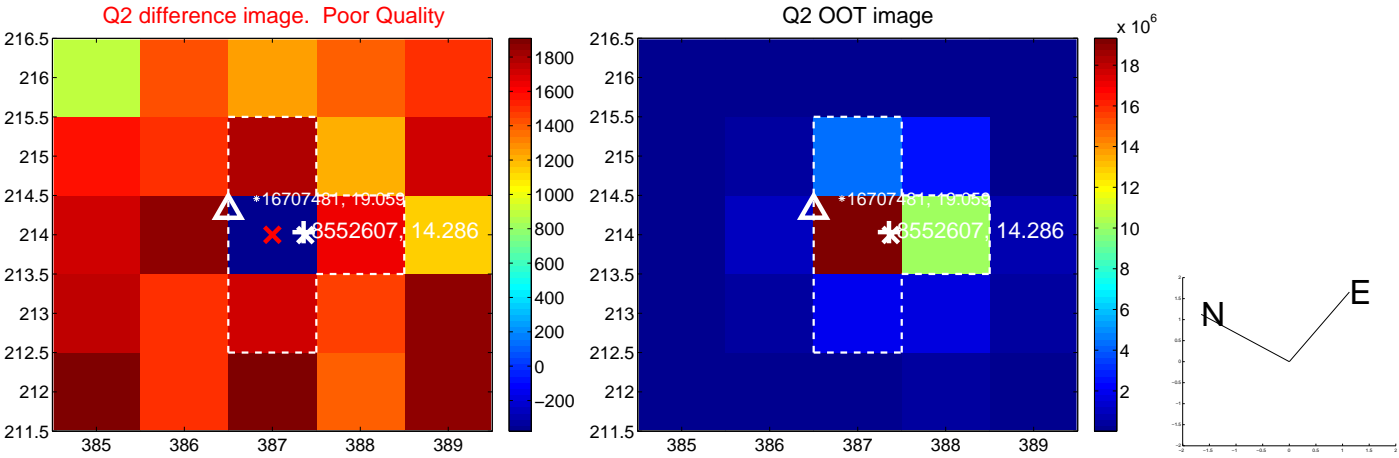
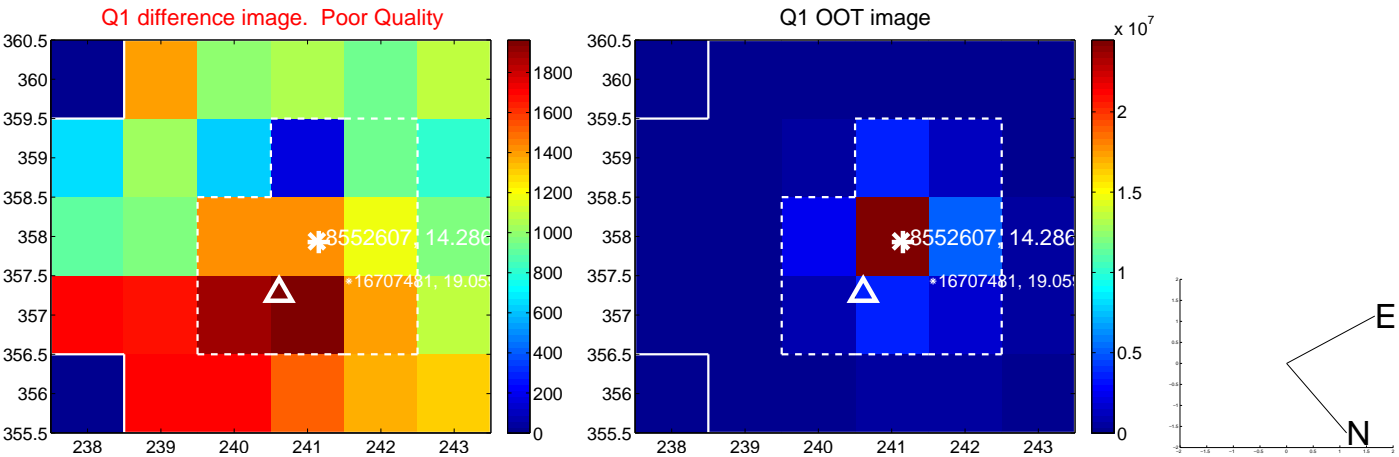
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.853 ± 0.321	5.76	-1.698 ± 0.334	-0.741 ± 0.366
PRF-fit source offset from KIC position	1.705 ± 0.311	5.49	-1.593 ± 0.329	-0.608 ± 0.384
photometric centroid source offset	3.28 ± 0.72	4.55	-2.92 ± 0.72	-1.50 ± 0.74

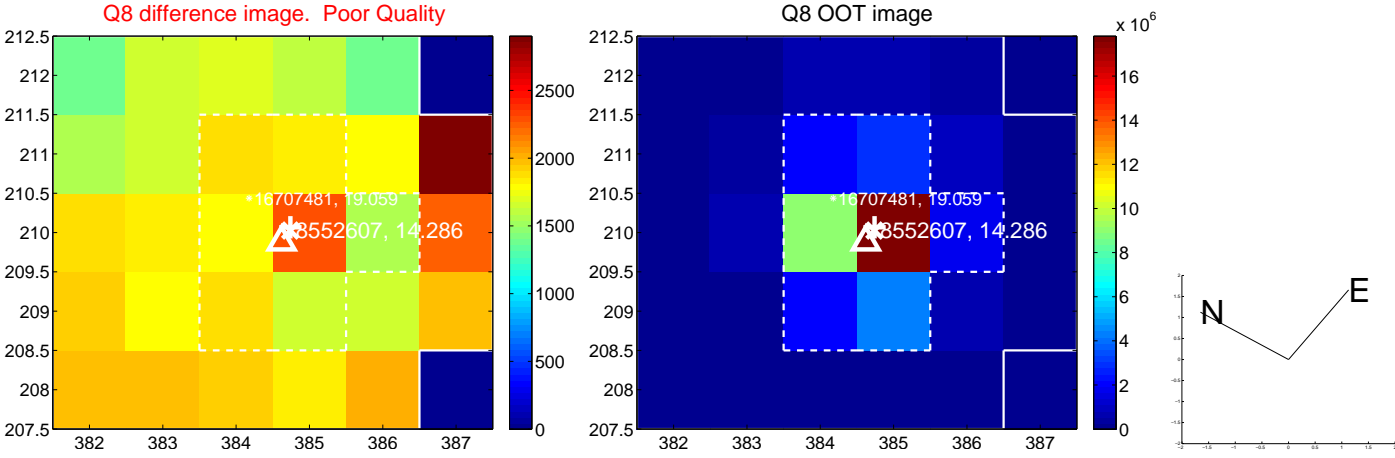
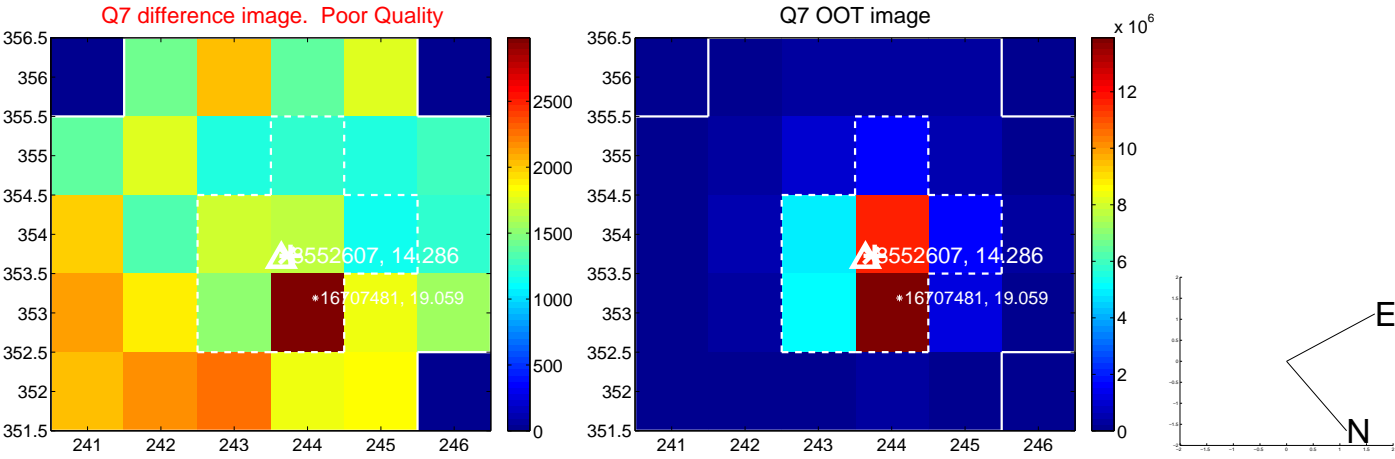
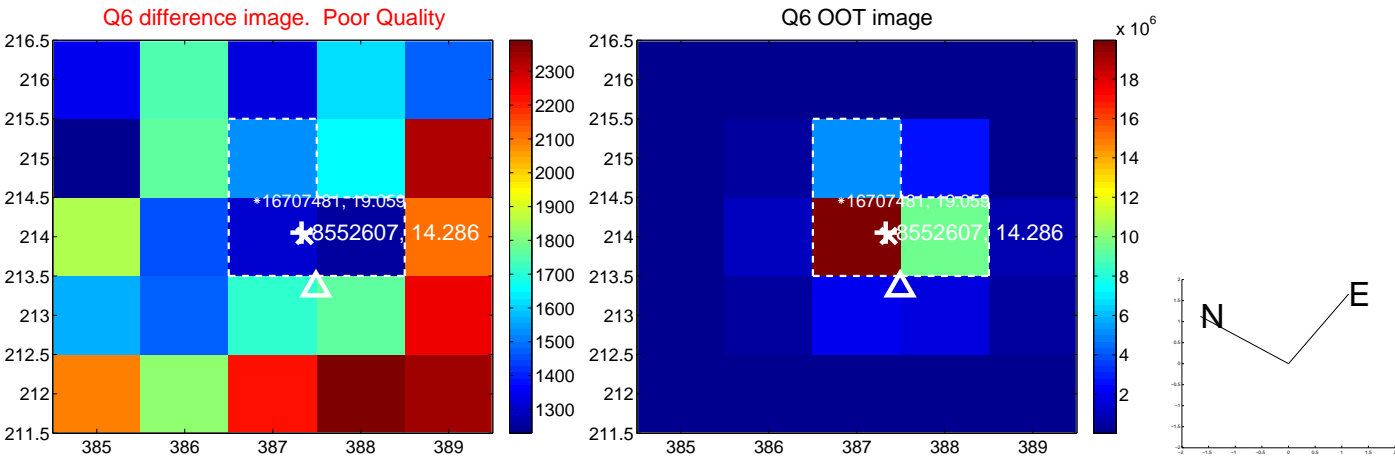
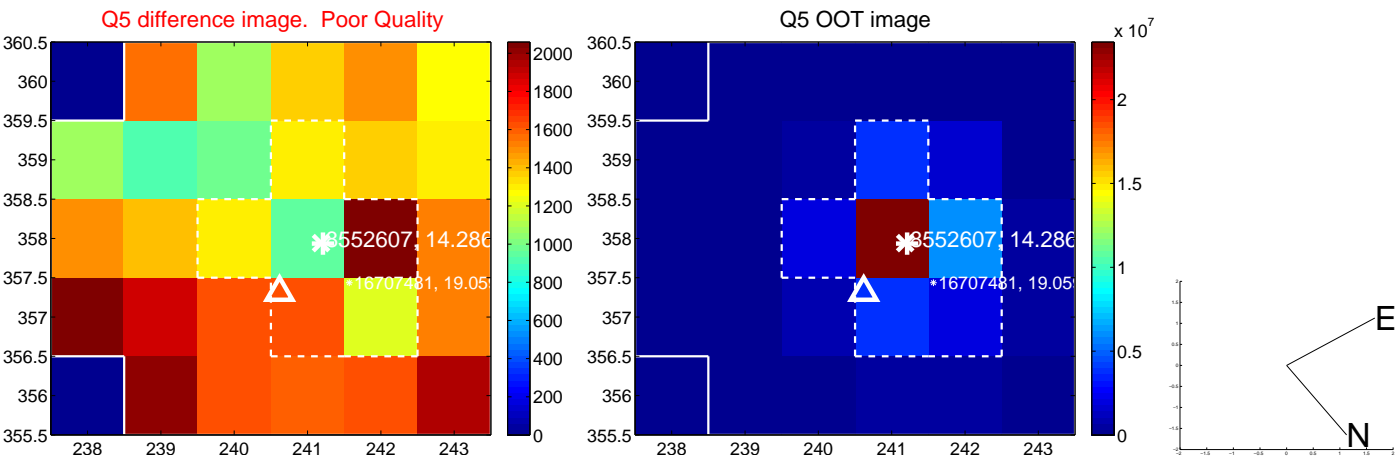


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

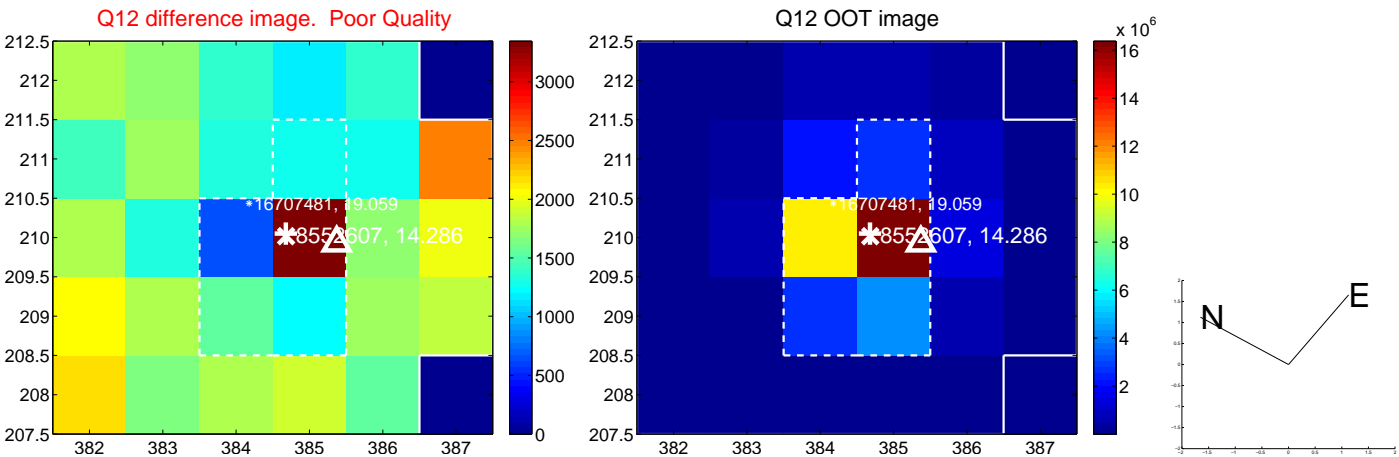
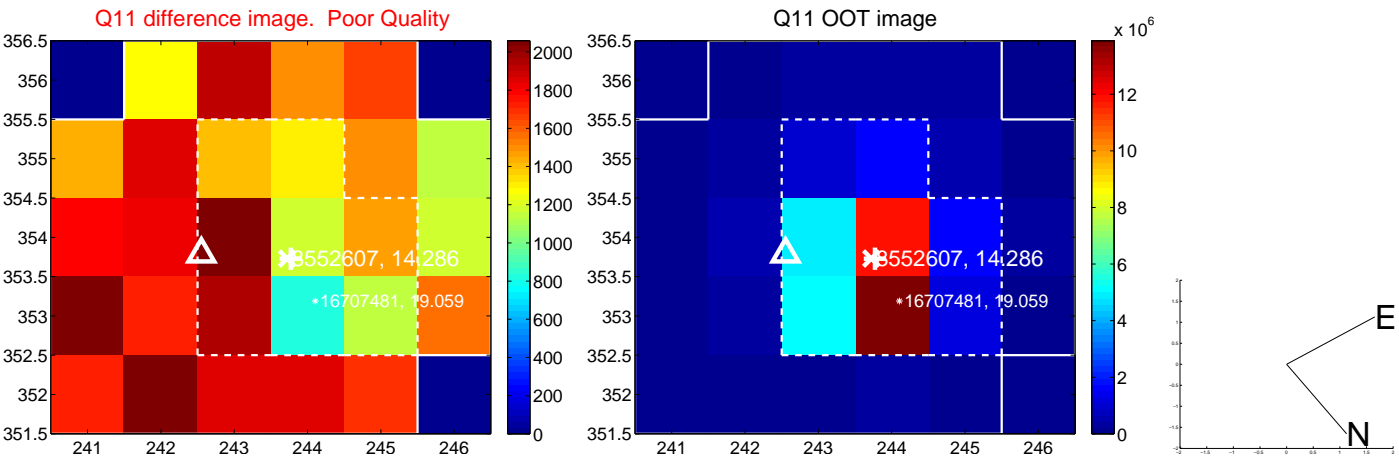
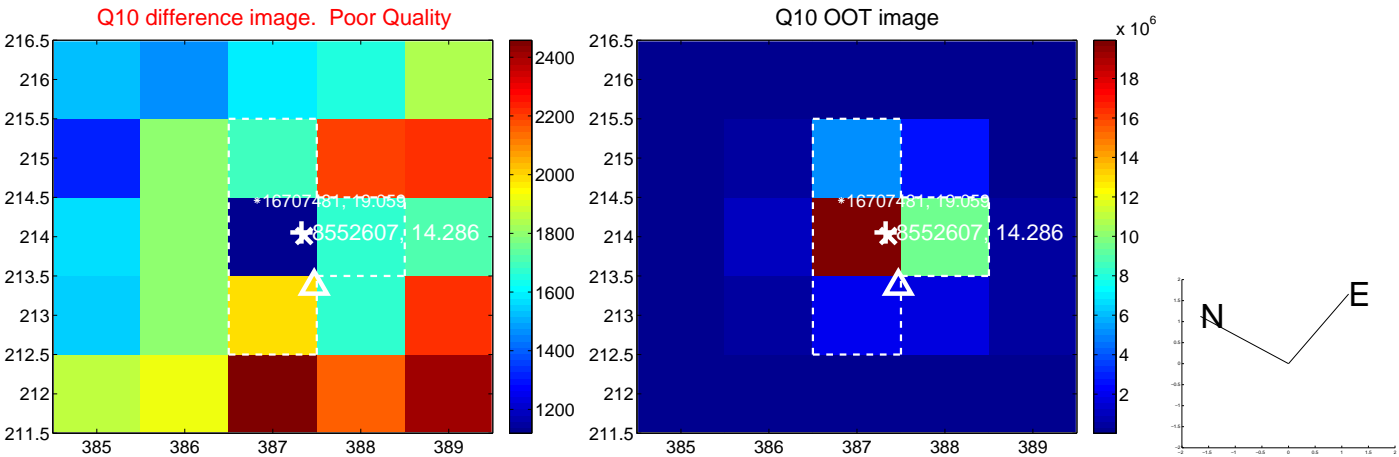
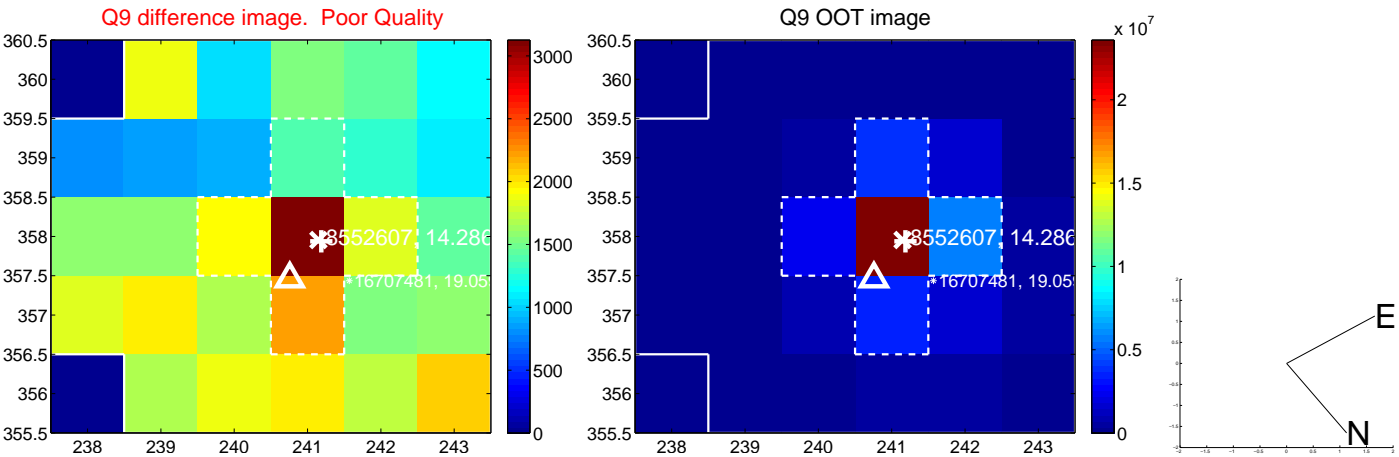
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



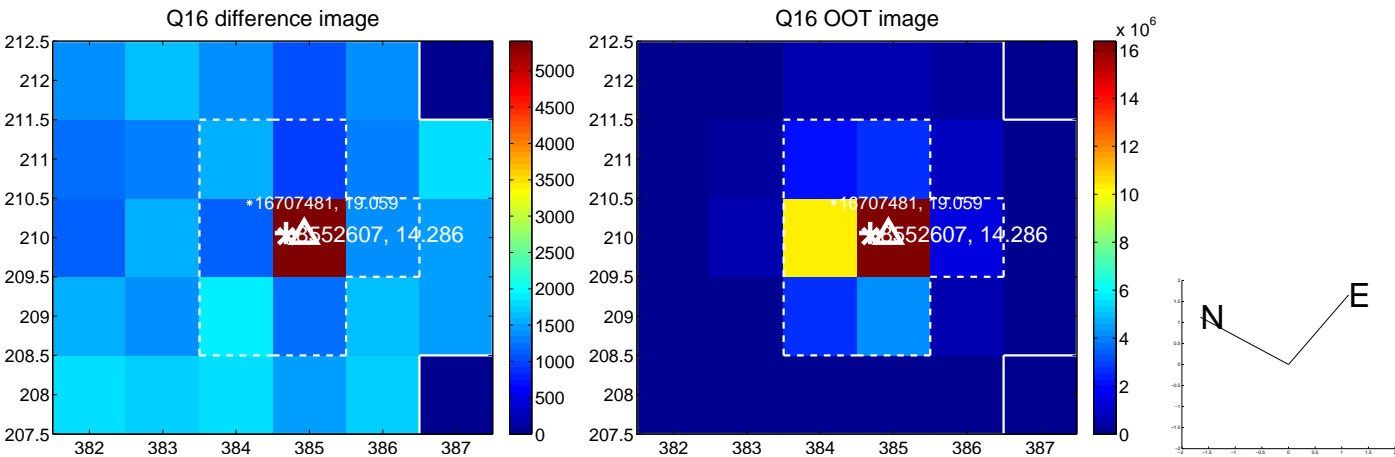
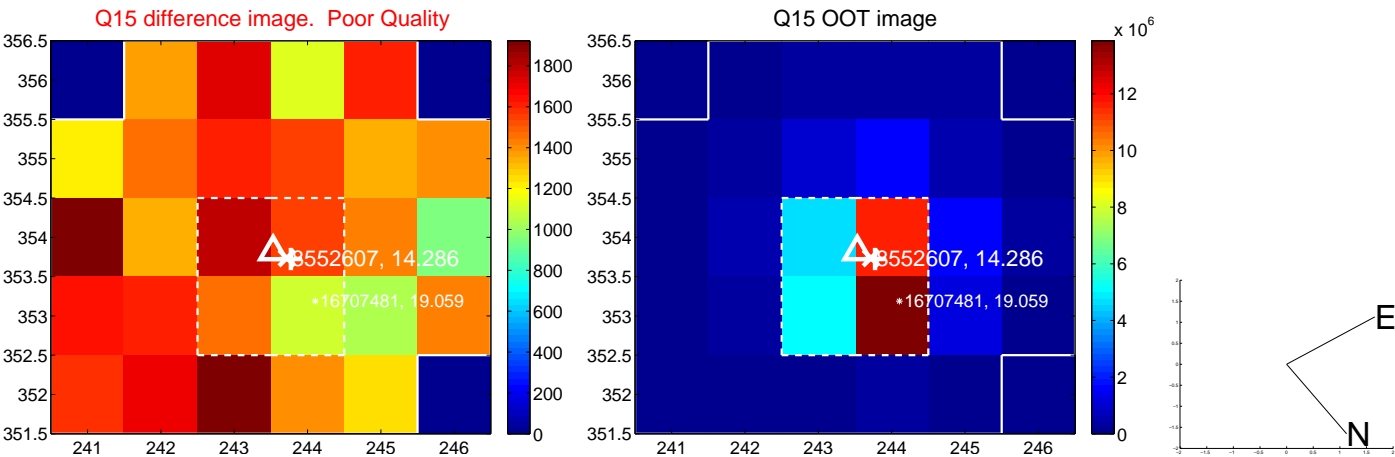
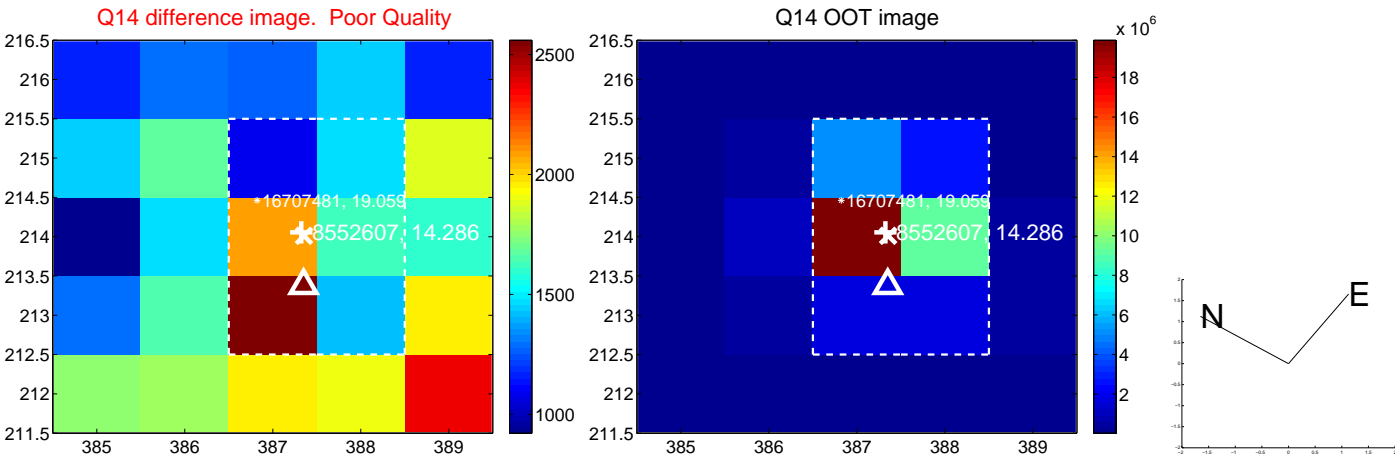
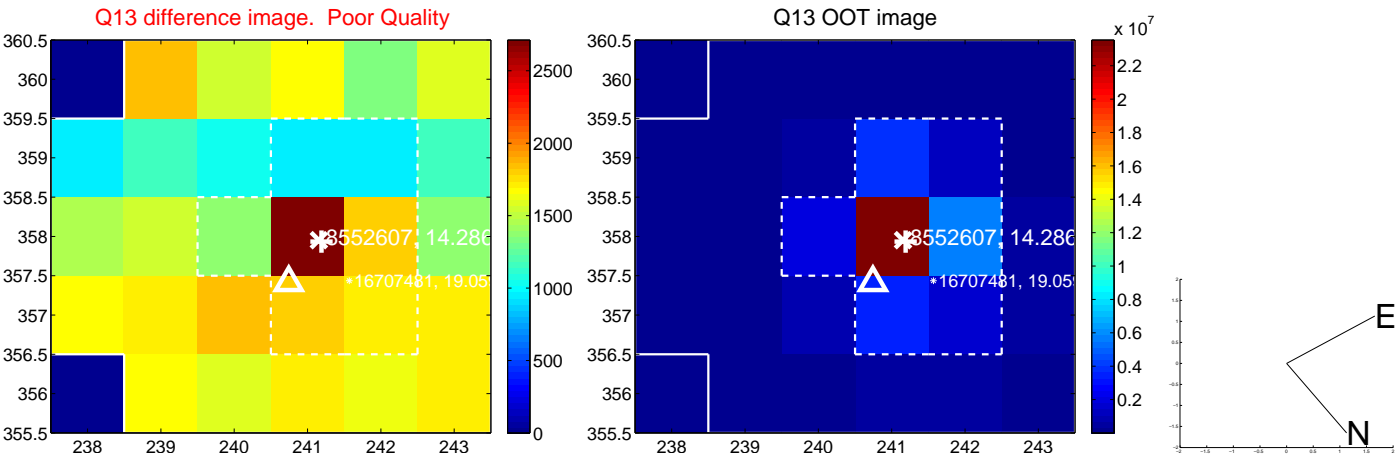
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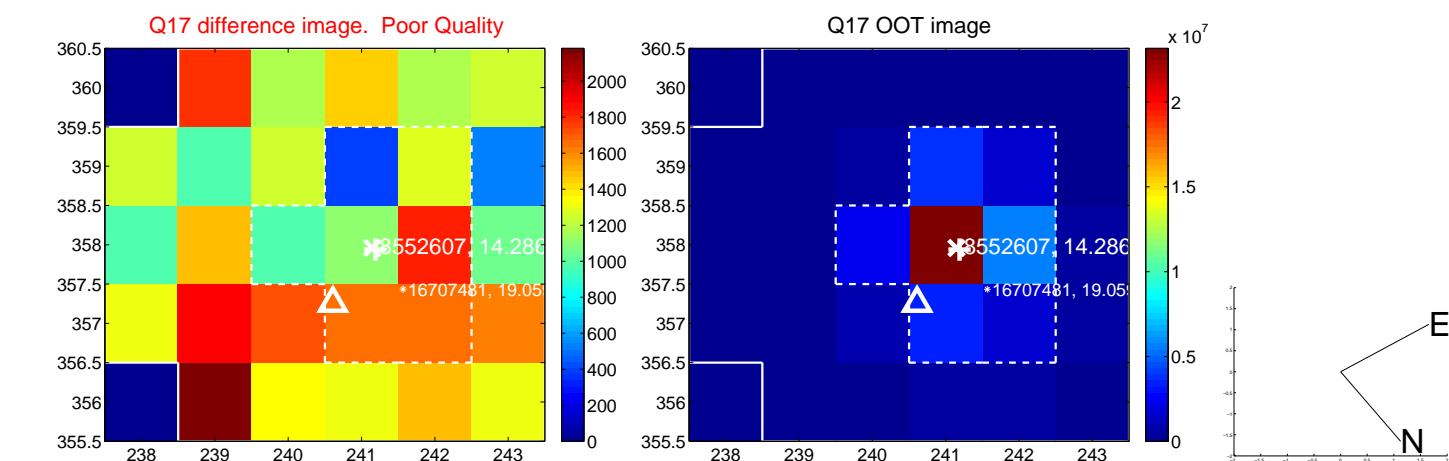
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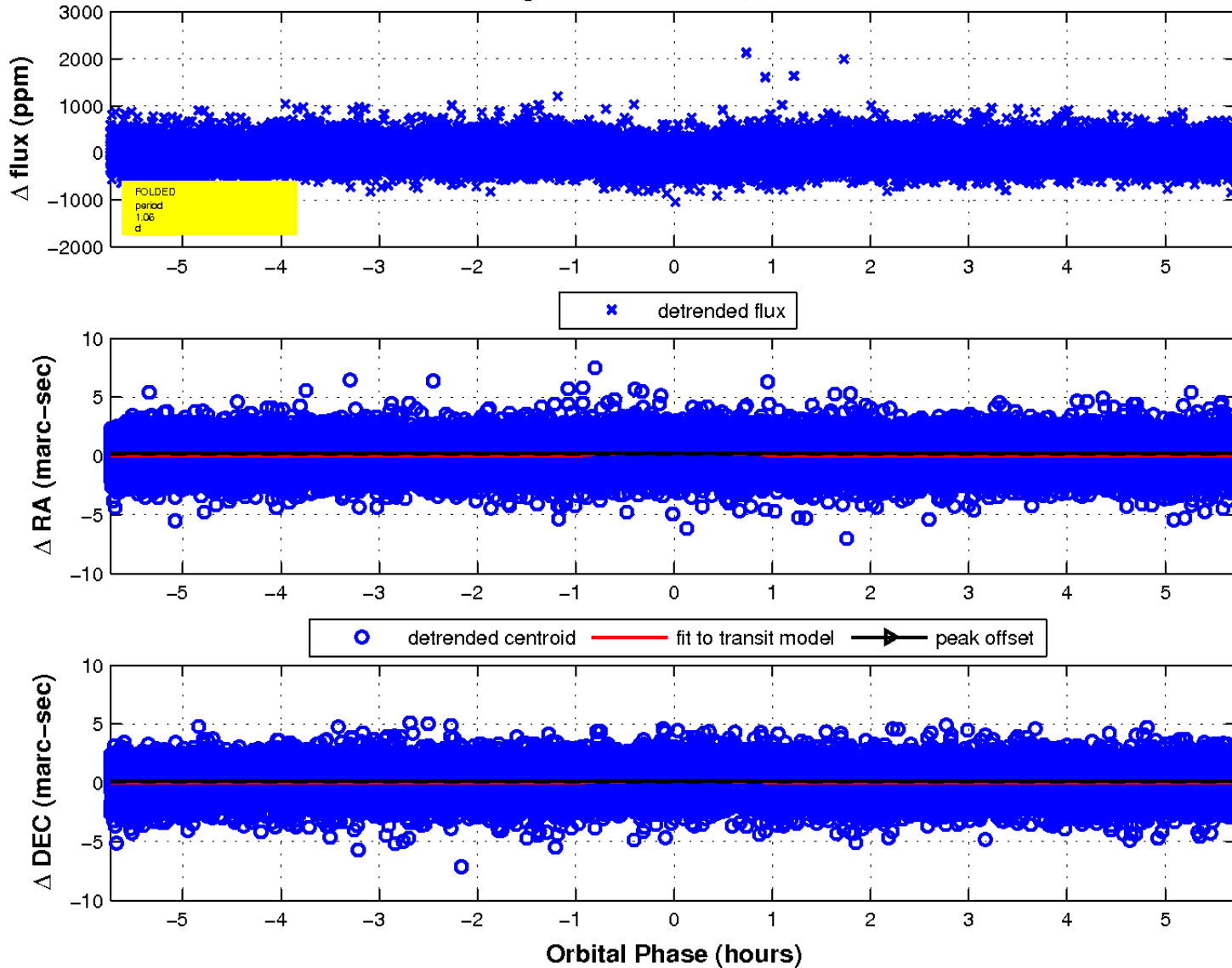
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

