

KIC 005707999

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})
005707999-01	OBS	No	0.579475	131.586784	7.3	1.018	8.3	1.1	1.08	7841	0.34	18825.78

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005707999-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT

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

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

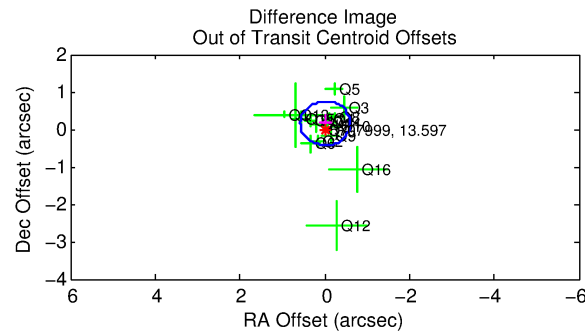
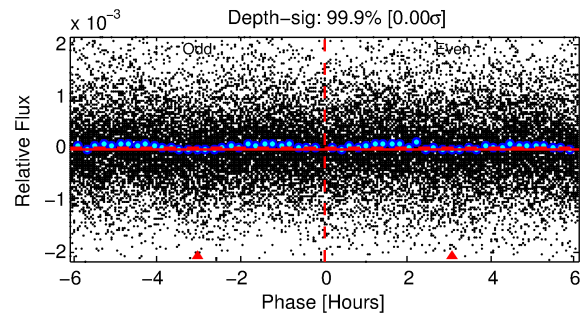
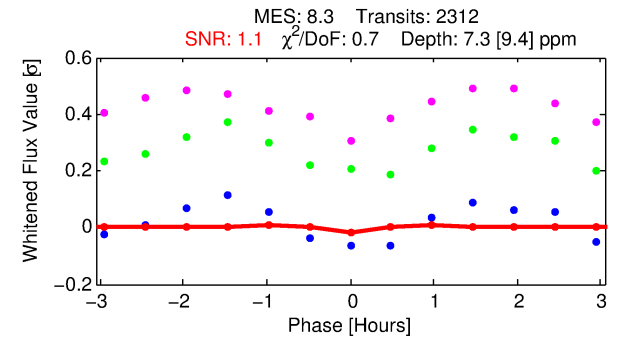
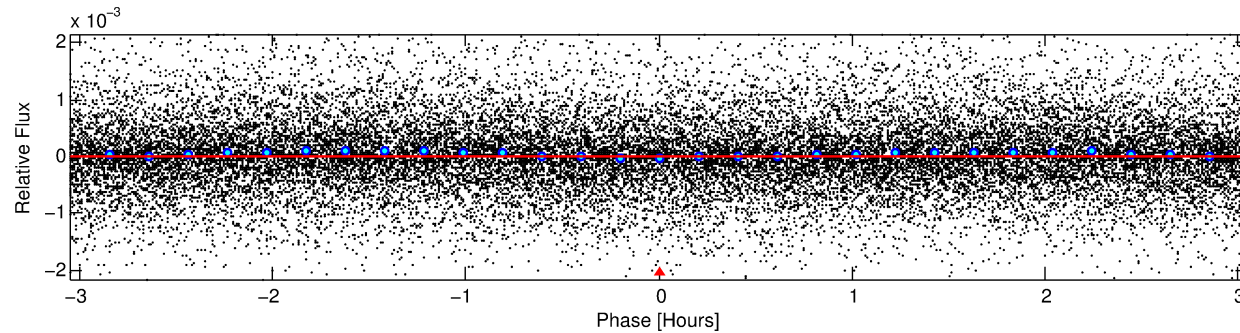
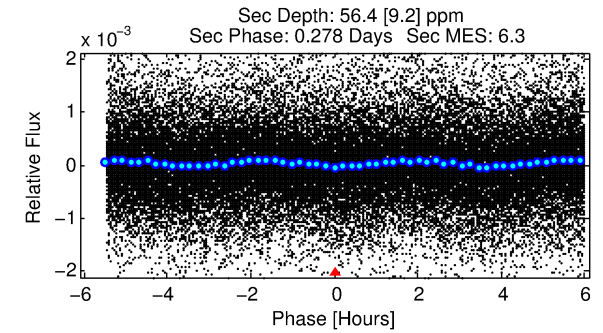
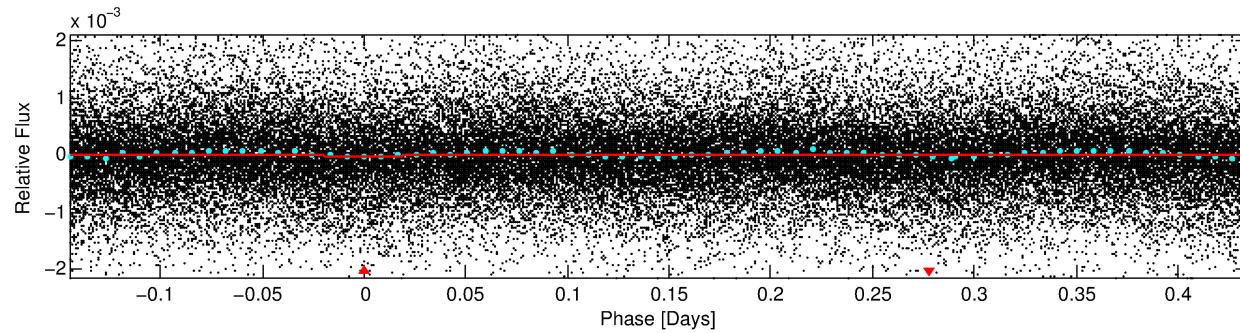
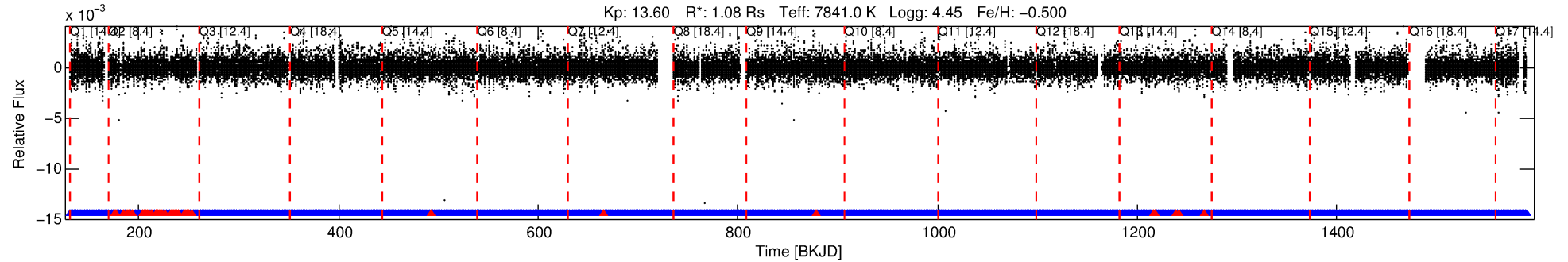
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005707999-01

No Significant Match Found

DV One-Page Summary

KIC: 5707999 Candidate: 1 of 1 Period: 0.579 d



DV Fit Results:

Period = 0.57947 [0.00010] d
Epoch = 131.5868 [0.0091] BKJD
Rp/R* = 0.0029 [0.0023]
a/R* = 2.15 [5.26]
b = 0.90 [0.67]
Seff = 18825.78 [7801.56]
Teq = 2987 [309] K
Rp = 0.34 [0.30] Re
a = 0.0145 [0.0044] AU
Ag = 56.91 [93.96] [0.59σ]
Teffp = 12684 [5073] K [1.91σ]

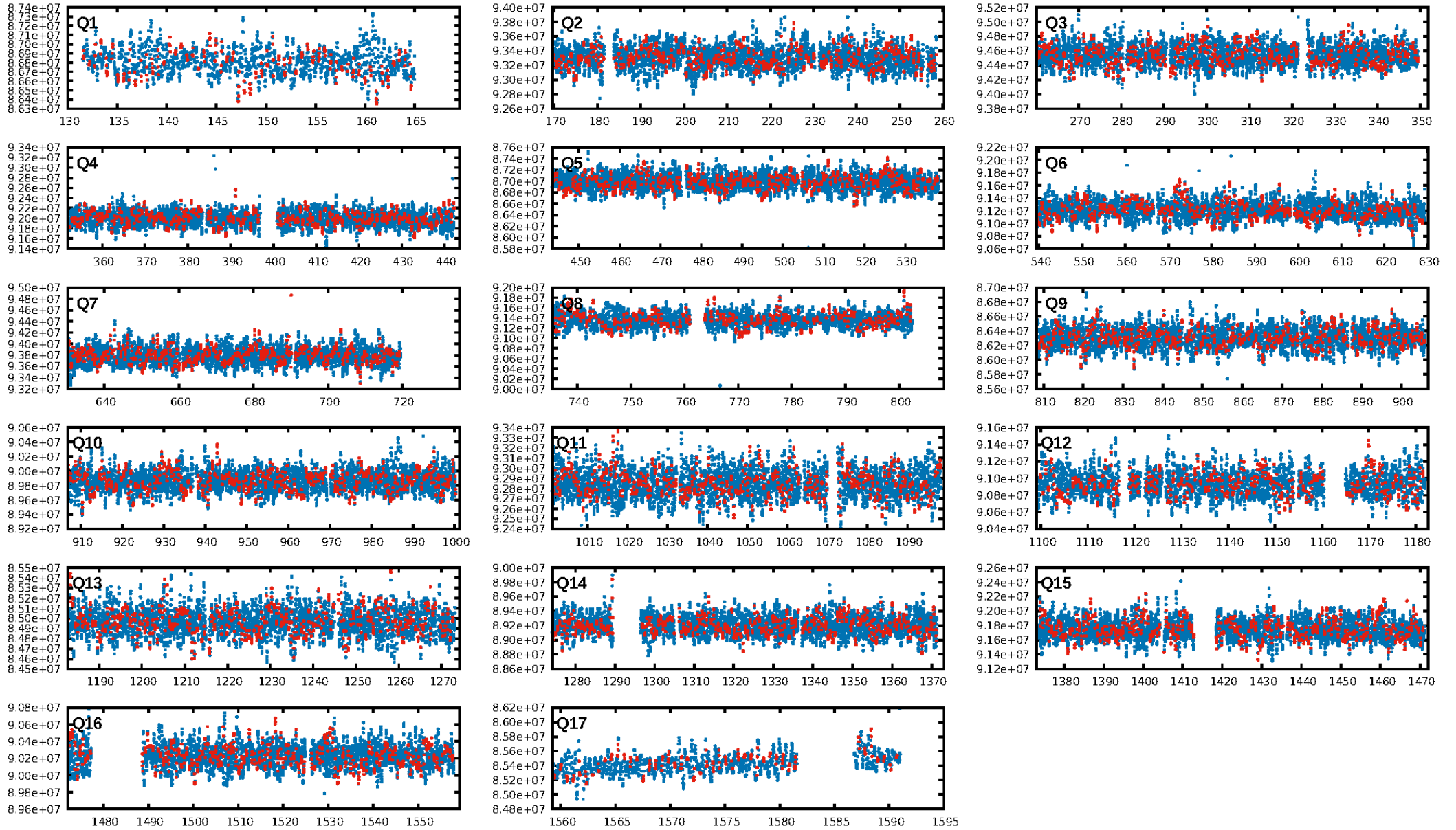
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.45e-18
RollingBand-fgt: 0.98 [2162/2208]
GhostDiagnostic-chr: 4.546
Centroid-sig: 0.0%
Centroid-so: 11.965 arcsec [2.86σ]
OotOffset-rm: 0.159 arcsec [0.81σ]
KicOffset-rm: 0.080 arcsec [0.44σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.35 [6/17]
DiffImageOverlap-fno: 1.00 [17/17]

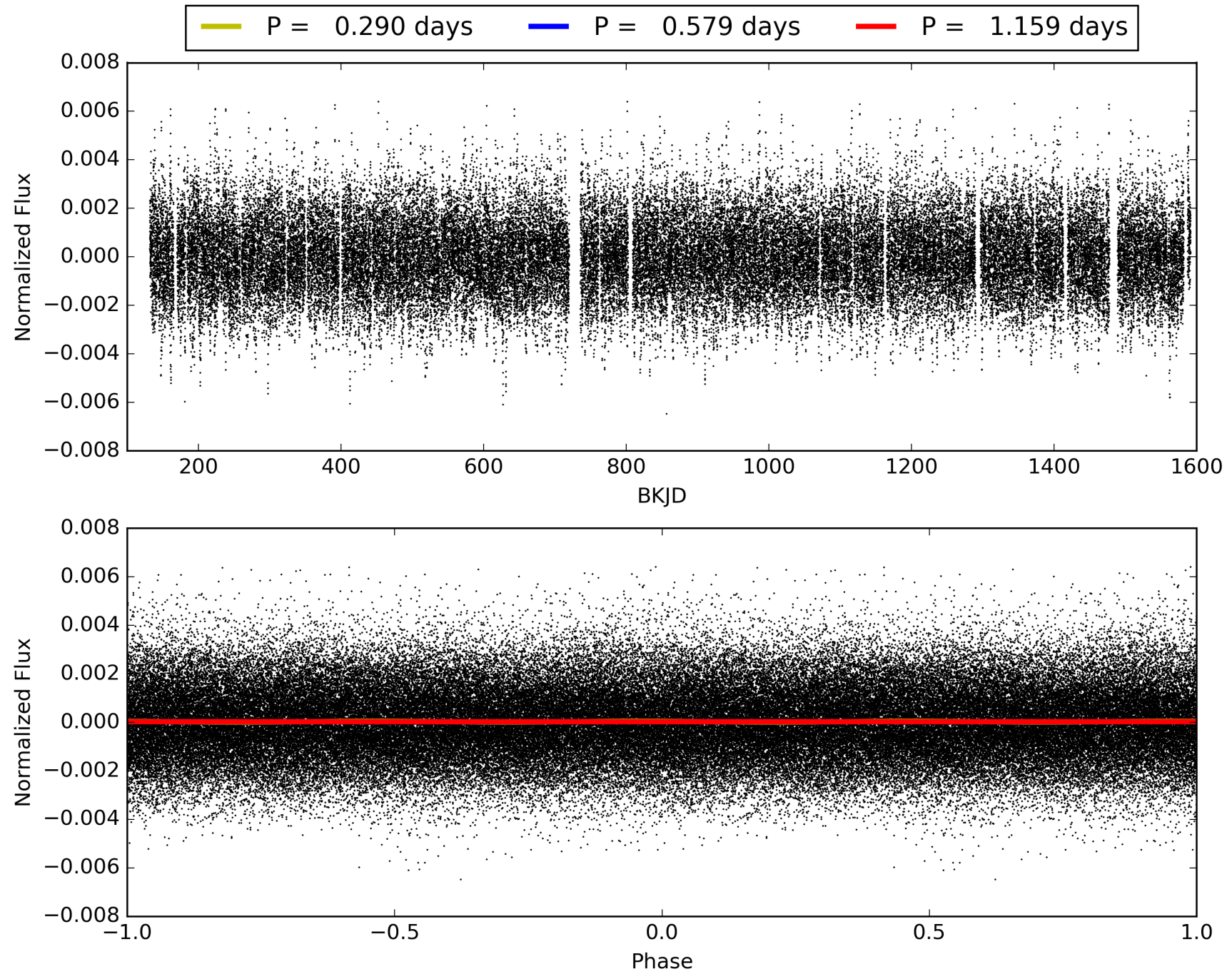
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 20:18:47 Z

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

TCE 005707999-01, PDC Light Curves

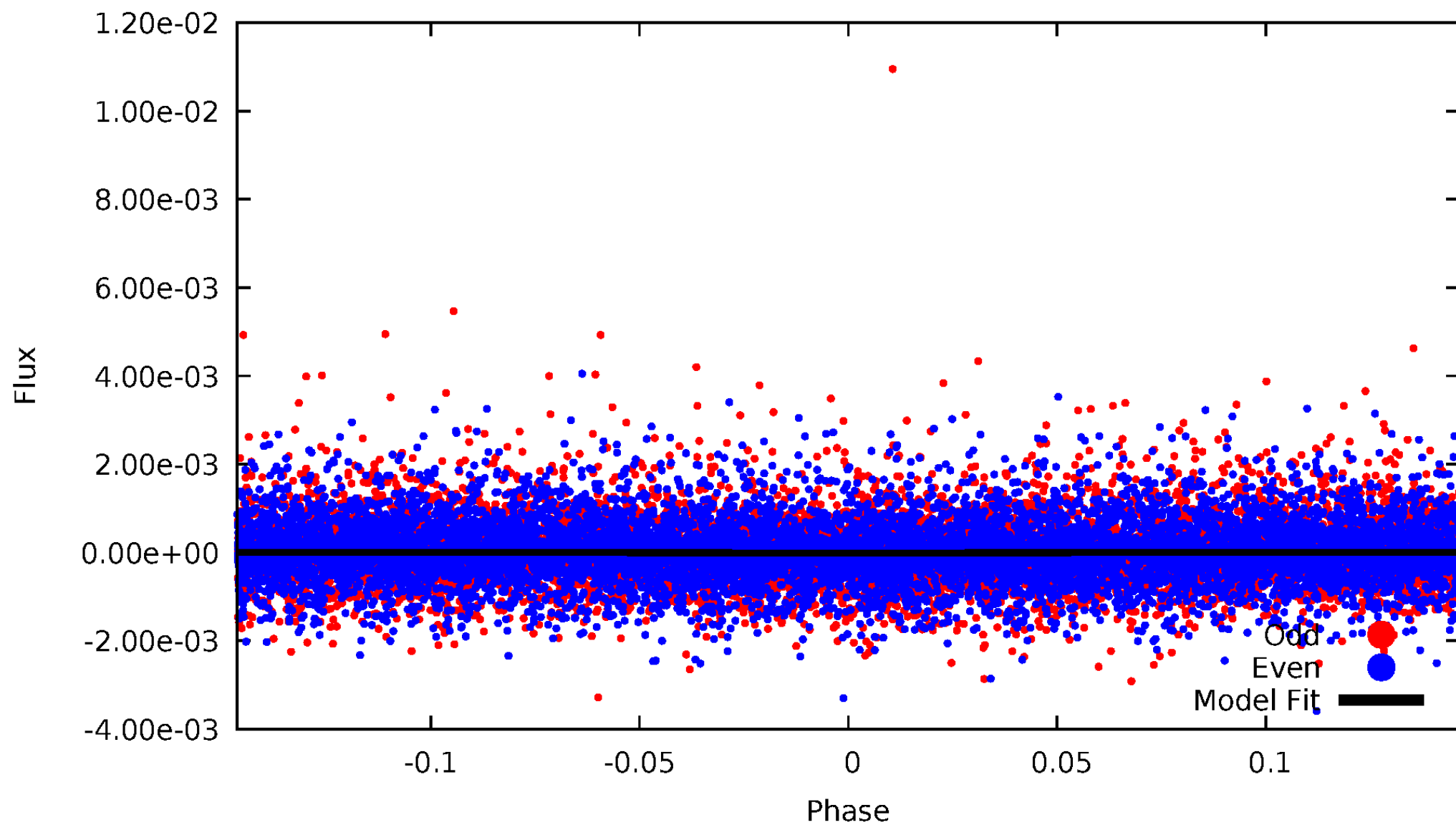


TCE 005707999-01



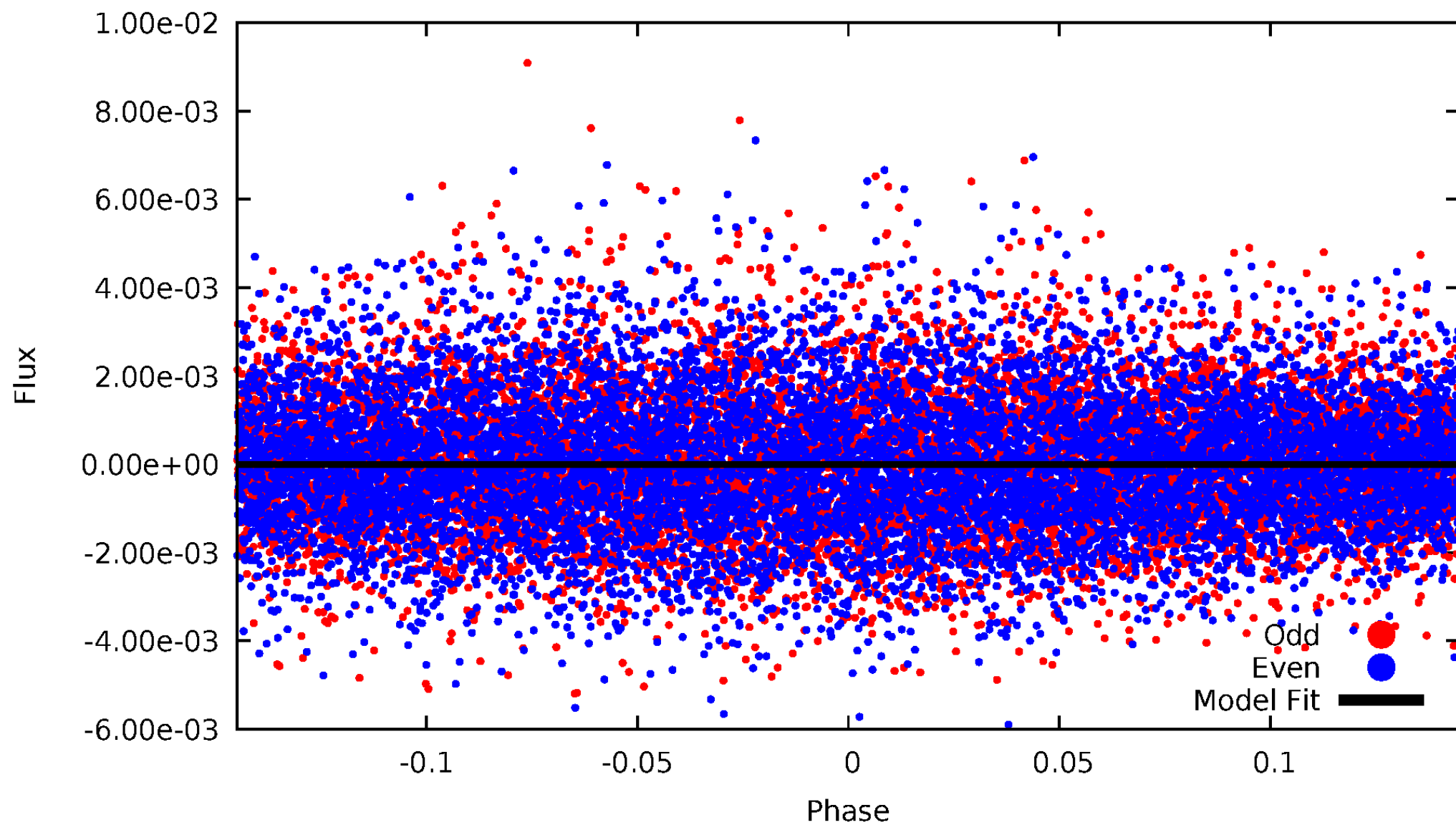
DV Odd/Even

TCE 005707999-01



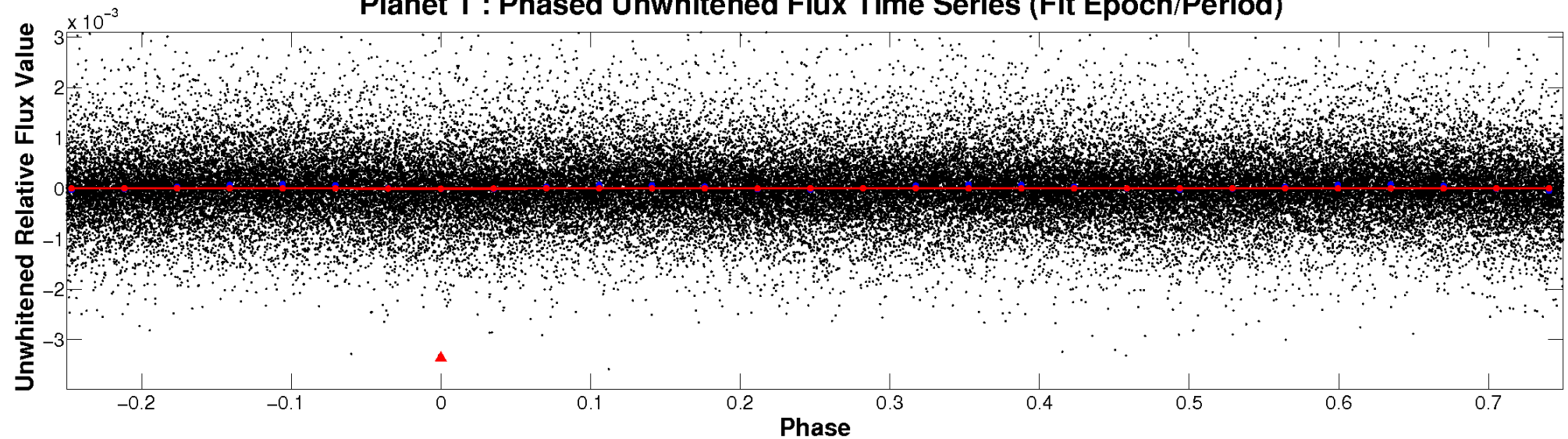
ALT Odd/Even

TCE 005707999-01

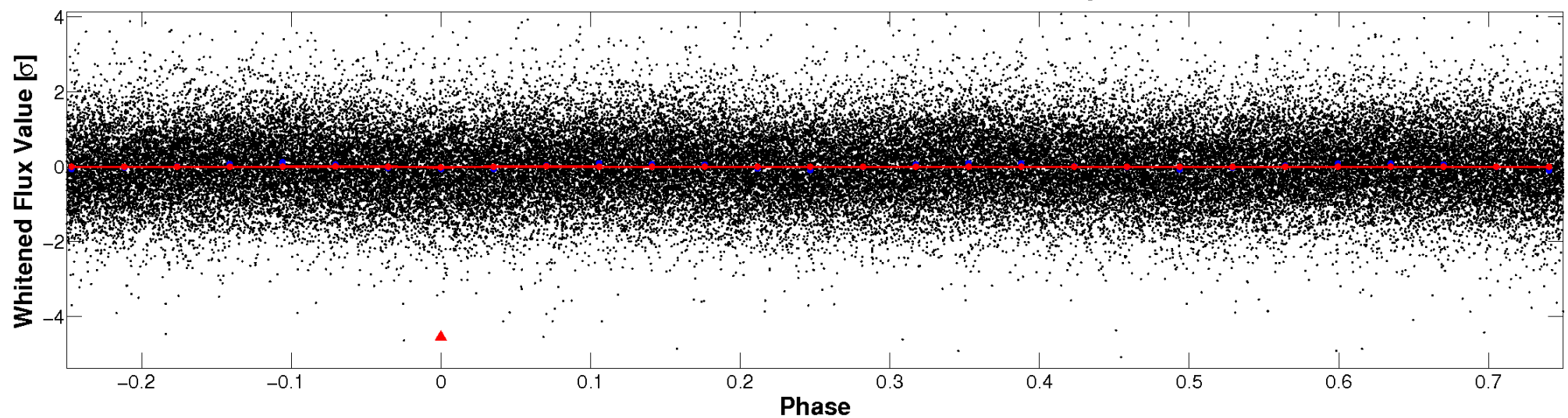


Non-Whitened Vs. Whitened Light Curve

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

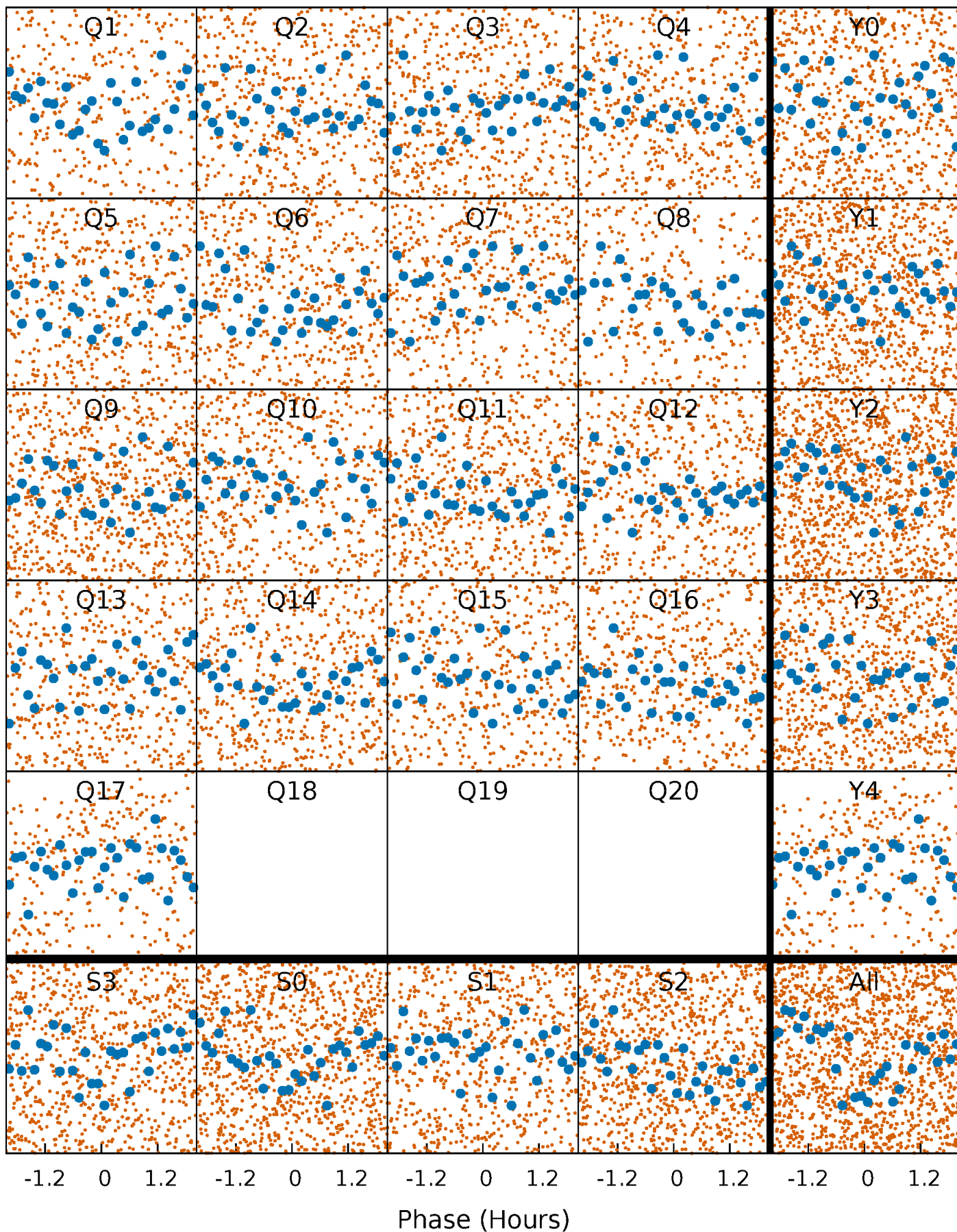


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



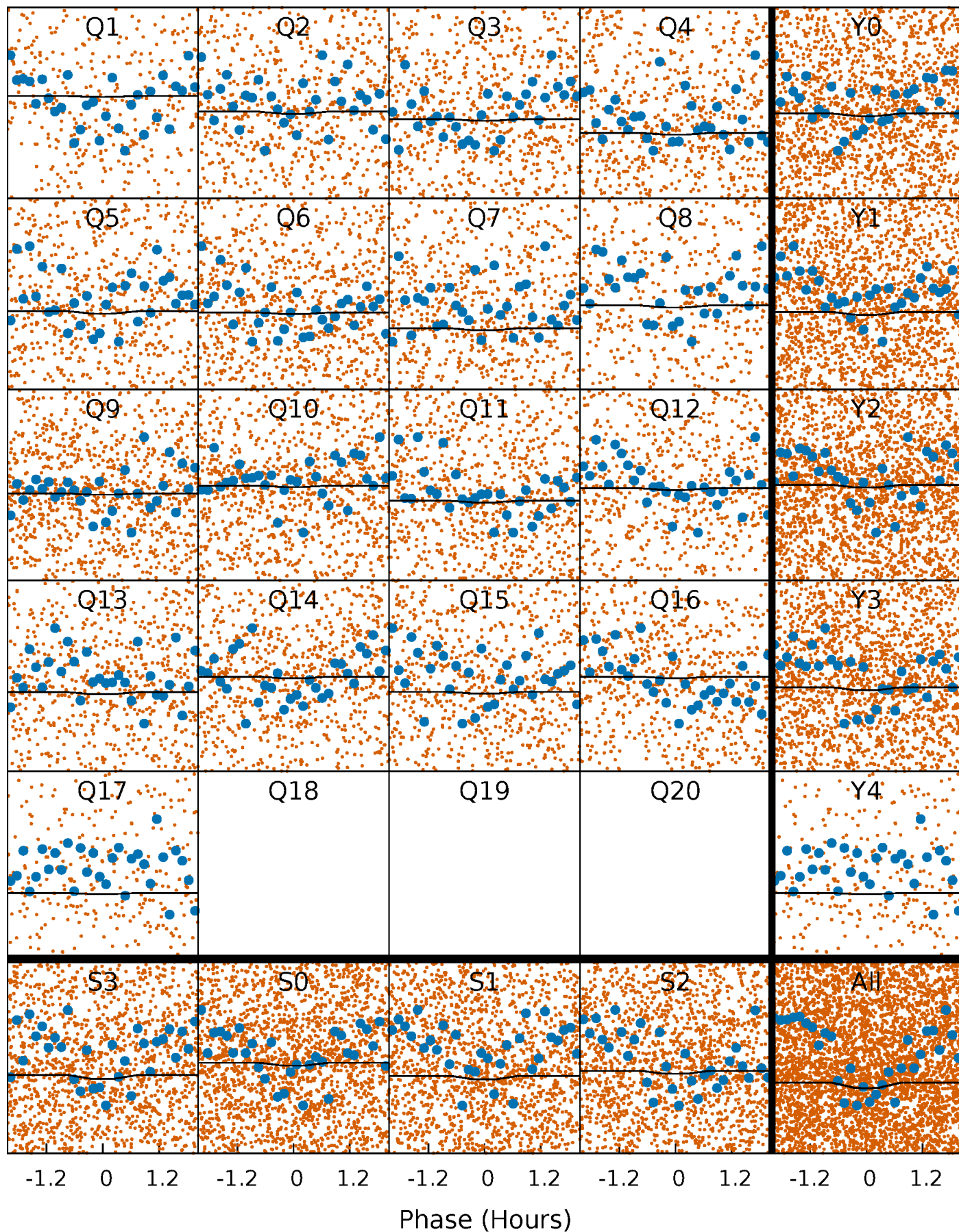
PDC Quarter-Phased Transit Curves

TCE 005707999-01 P= 0.579475 Days $T_0=131.586784$ (BKJD)



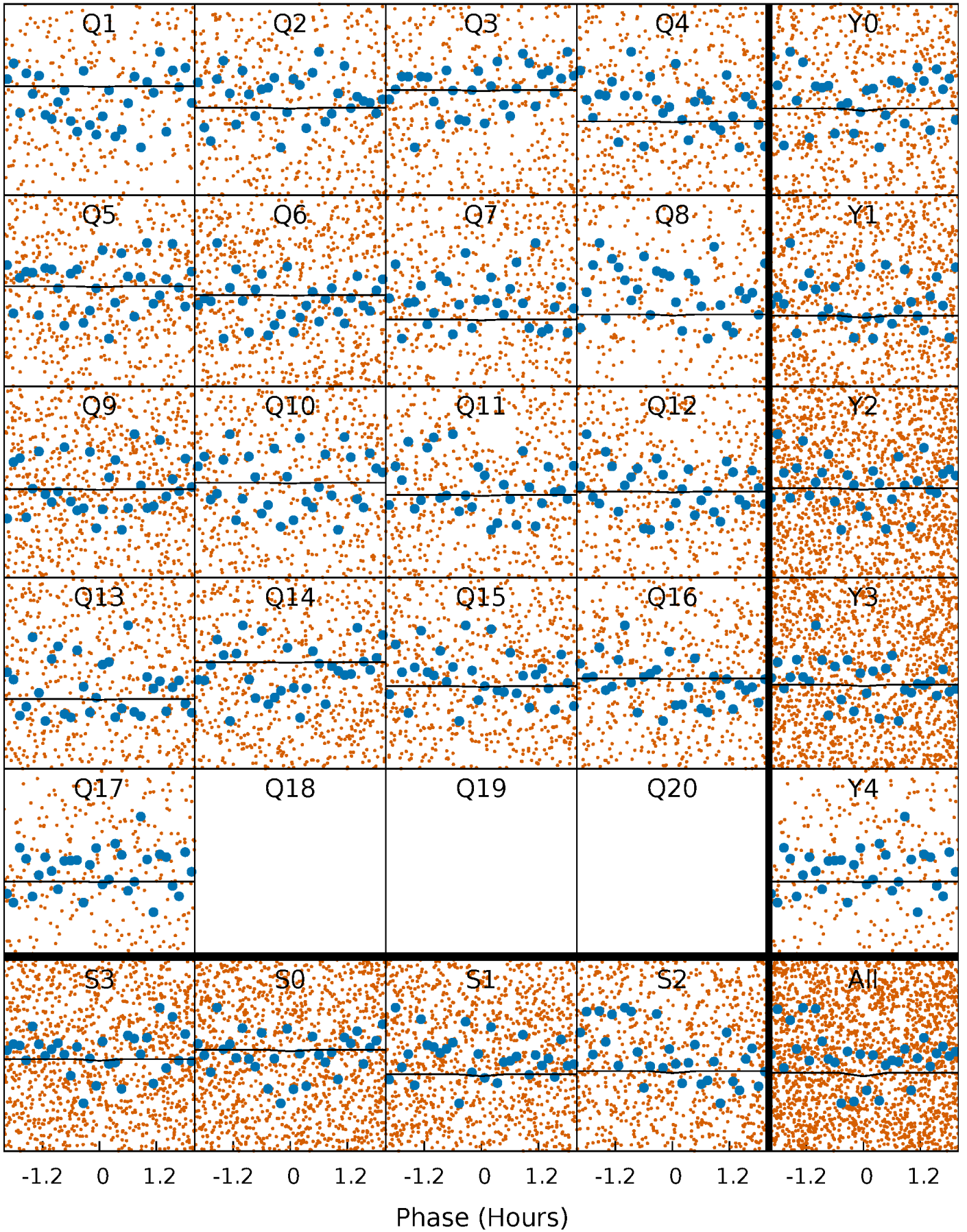
DV Quarter-Phased Transit Curves

TCE 005707999-01 P= 0.579475 Days $T_0=131.586784$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

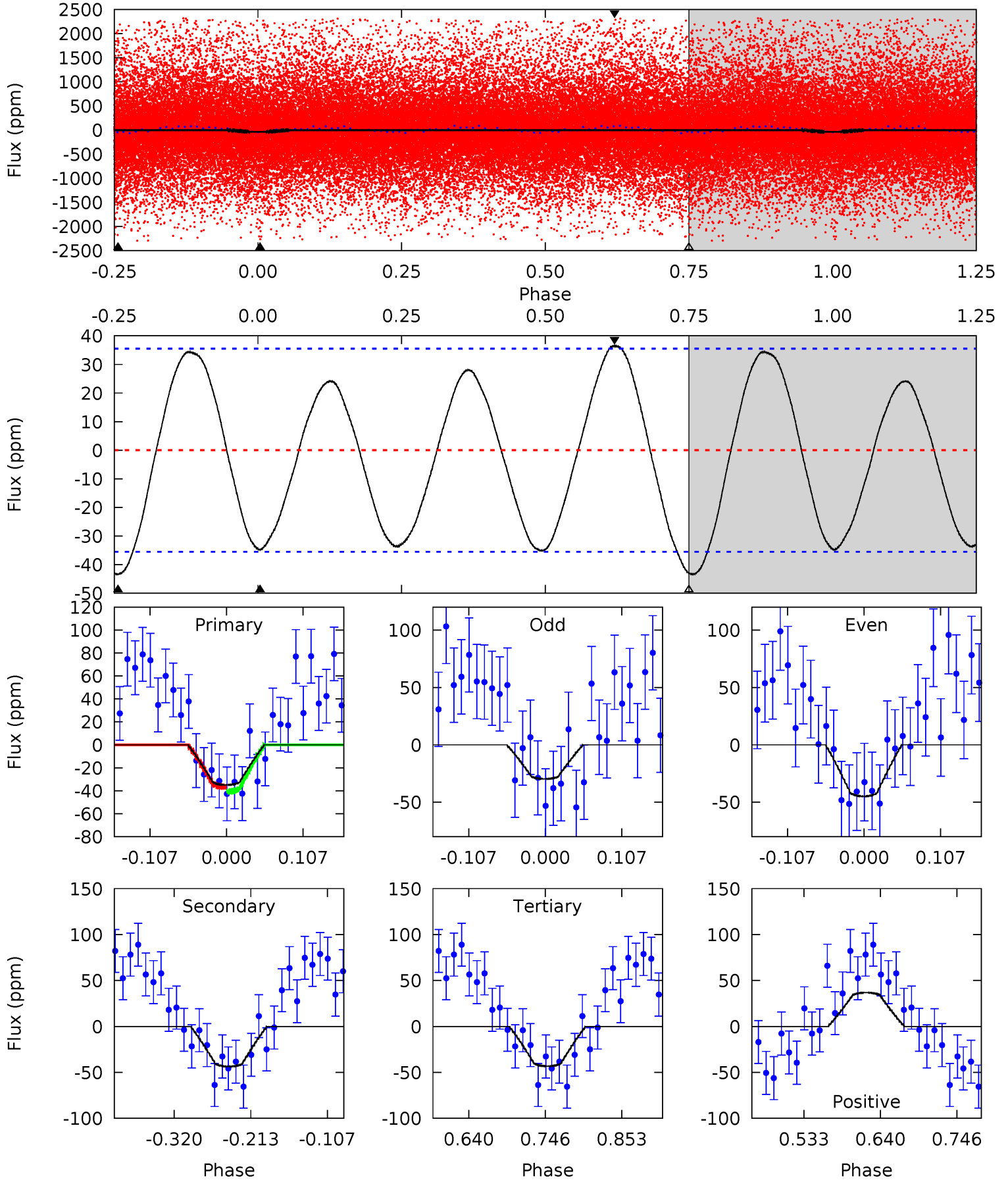
TCE 005707999-01 P= 0.579479 Days $T_0=131.587356$ (BKJD)



DV Model-Shift Uniqueness Test

005707999-01, P = 0.579475 Days, E = 131.007309 Days

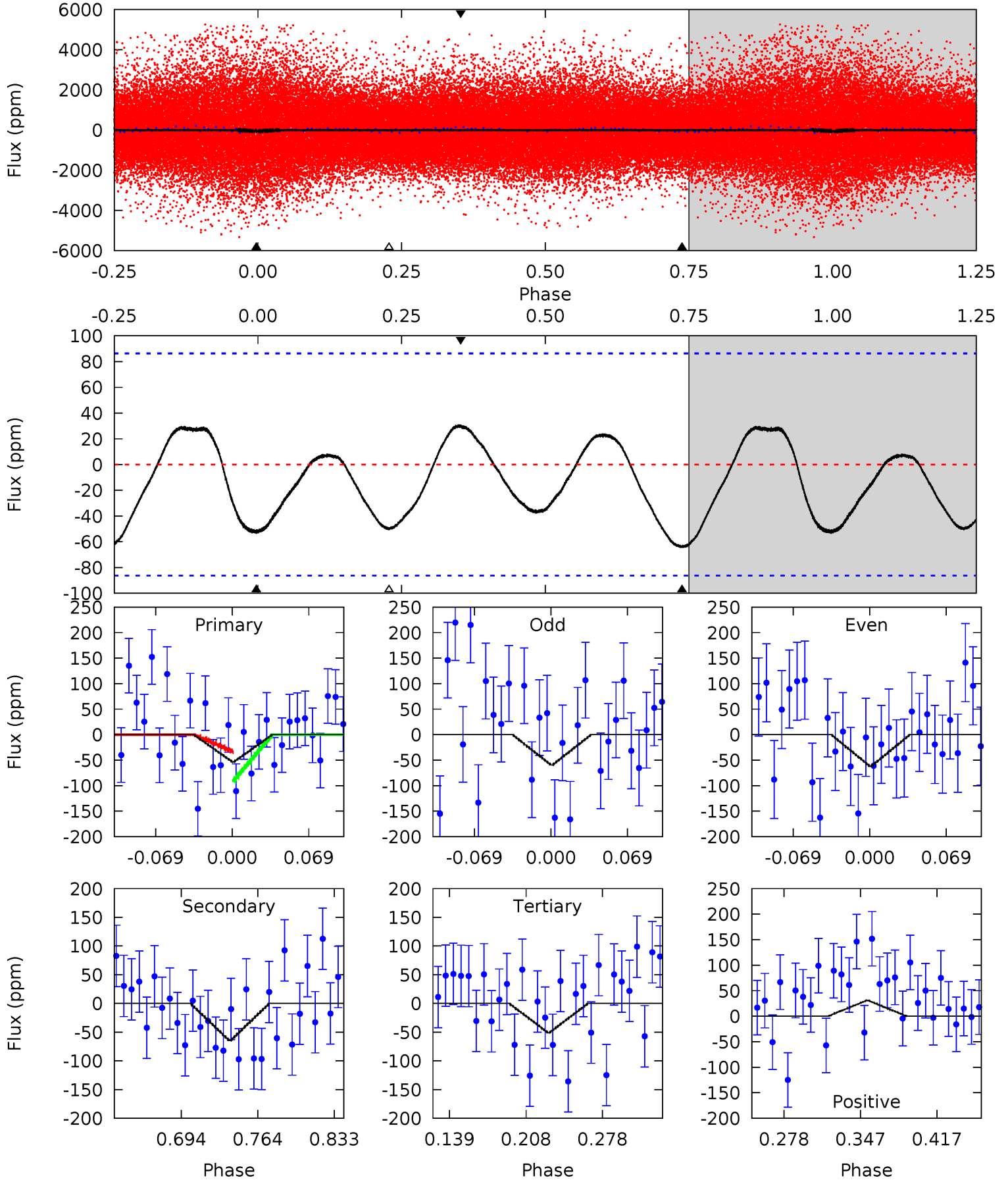
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.48	5.59	5.55	4.71	4.55	1.61	3.10	-1.07	-0.23	0.04	0.89	0.98	0.77	0.46	0.27



Alt Model-Shift Uniqueness Test

005707999-01, P = 0.579479 Days, E = 131.007877 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.89	3.49	2.75	1.67	4.64	1.82	1.27	0.14	1.22	0.74	1.81	0.07	0.10	0.32	1.56



Stellar Parameters For KIC 005707999

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	7841^{+78}_{-86}	$4.454^{+0.010}_{-0.210}$	$-0.500^{+0.200}_{-0.100}$	$1.083^{+0.417}_{-0.022}$	$1.337^{+0.122}_{-0.029}$	$1.480^{+0.071}_{-0.875}$
	+1%/-1%	+0%/-5%	+40%/-20%	+39%/-2%	+9%/-2%	+5%/-59%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 005707999-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-44 ± 8	$0.45^{+0.31}_{-0.27}$	4424^{+292}_{-170}	13269^{+24043}_{-4360}	26^{+140}_{-17}
Alt.	-65 ± 19	$0.43^{+0.30}_{-0.26}$	4423^{+283}_{-163}	16889^{+42354}_{-6589}	46^{+240}_{-31}

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 $A_{obs} \gg 1.0$

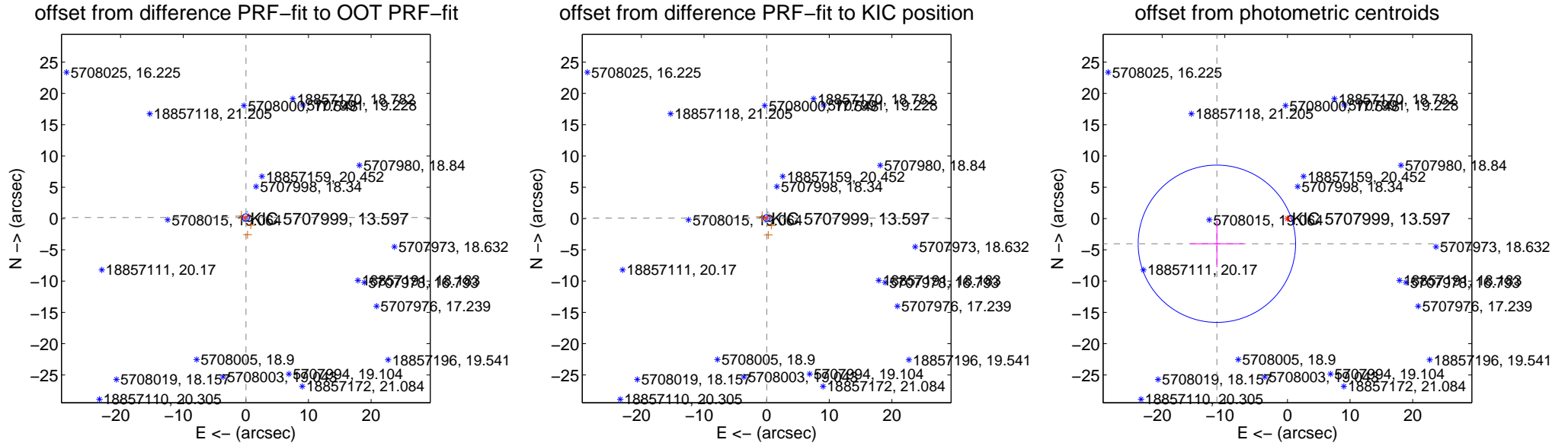
DV Centroid Data

Supplemental centroid analysis for 005707999-01. Kepler magnitude: 13.60. Transit SNR 1.12

There are 6 quarters with good PRF difference image offsets

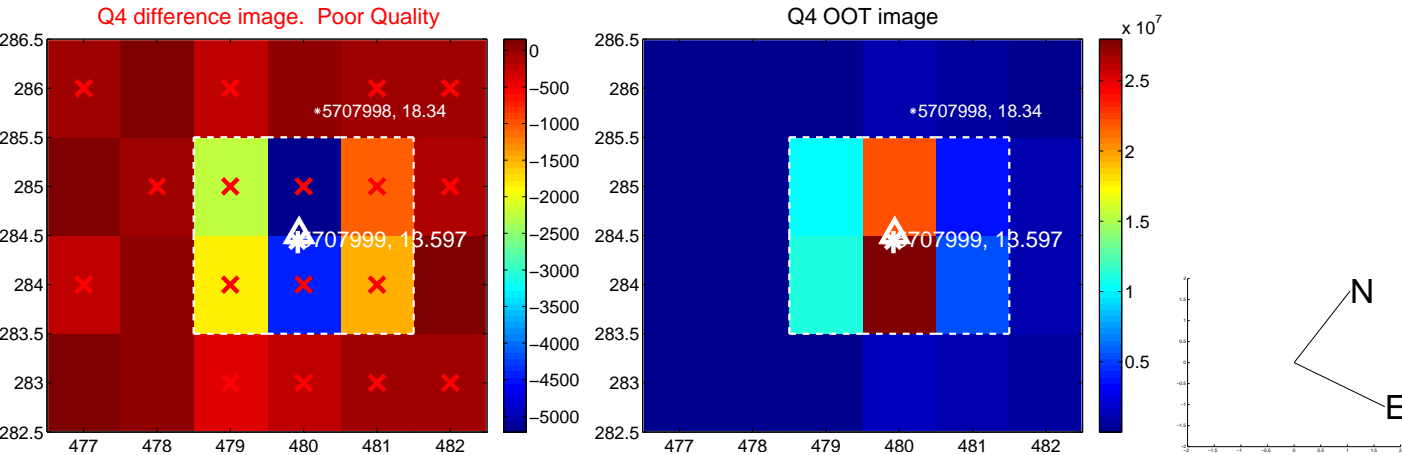
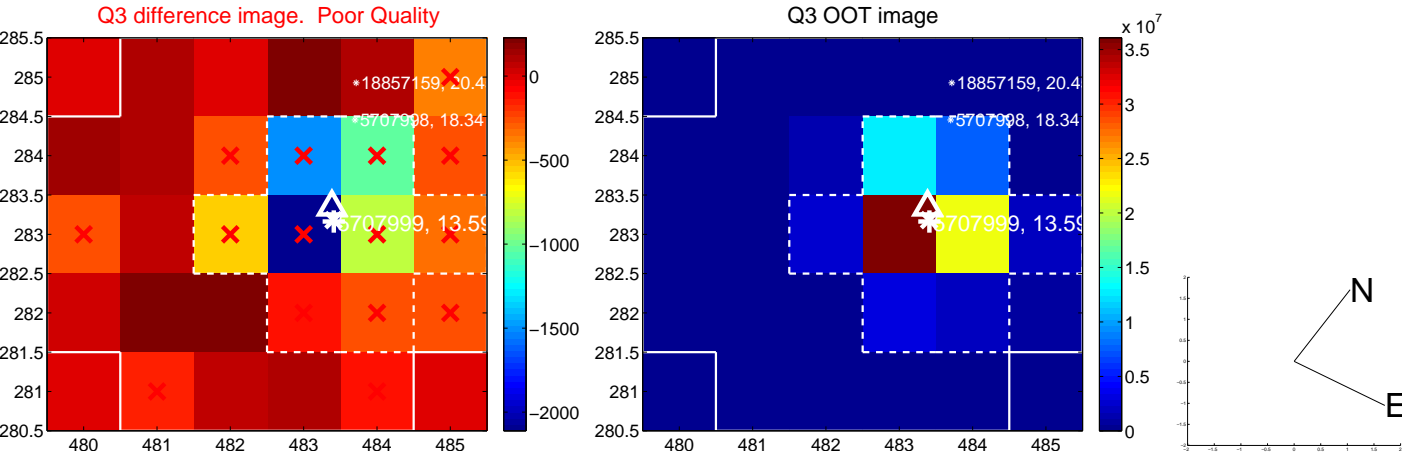
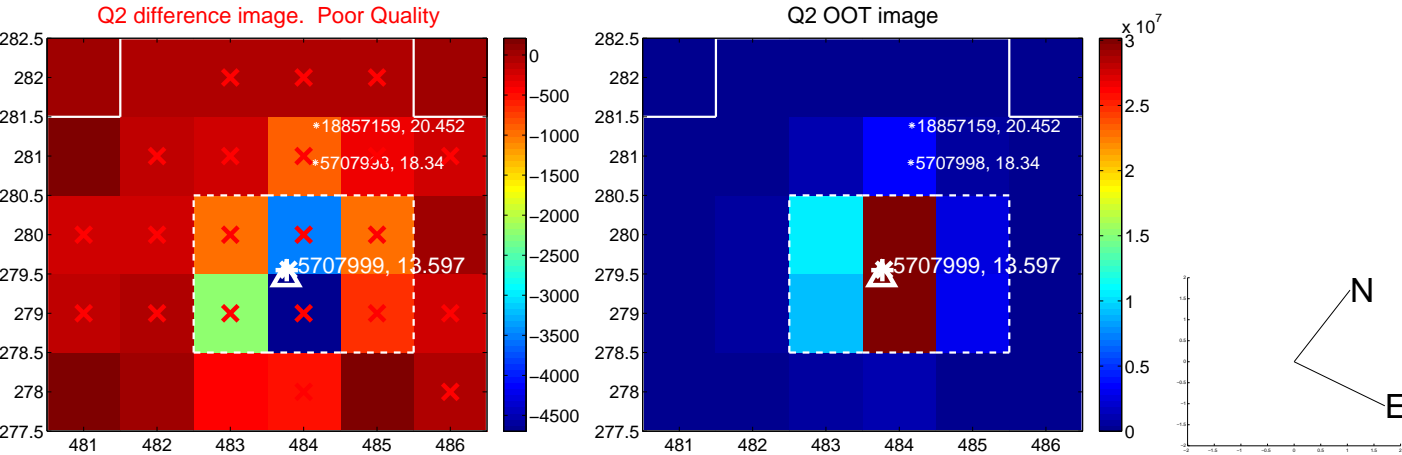
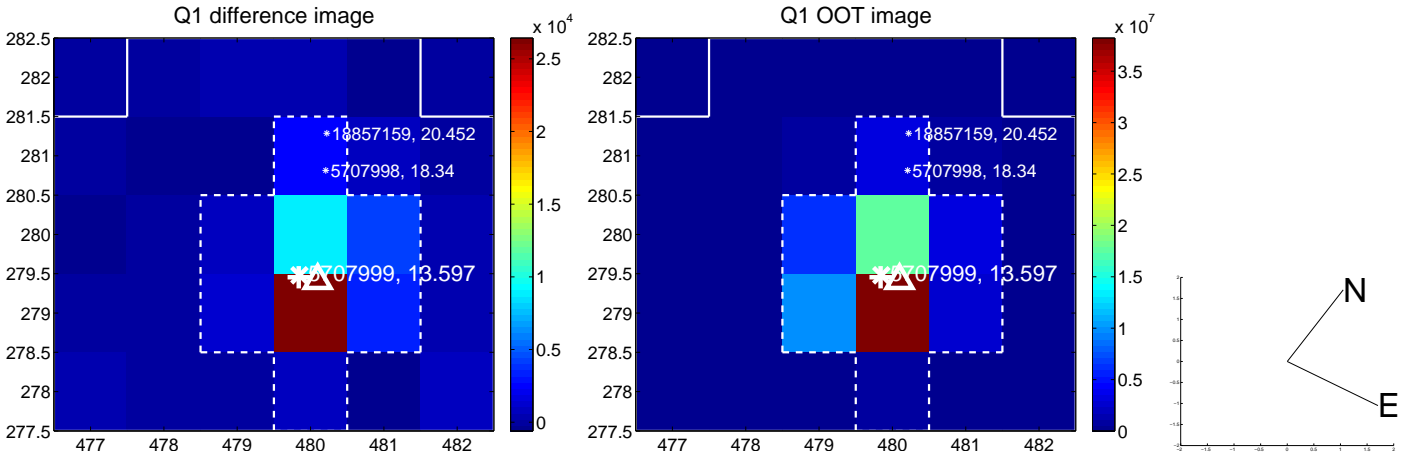
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.159 ± 0.197	0.81	-0.015 ± 0.120	0.158 ± 0.200
PRF-fit source offset from KIC position	0.080 ± 0.182	0.44	-0.025 ± 0.123	0.076 ± 0.195
photometric centroid source offset	11.96 ± 4.19	2.86	11.27 ± 4.24	-4.03 ± 3.76

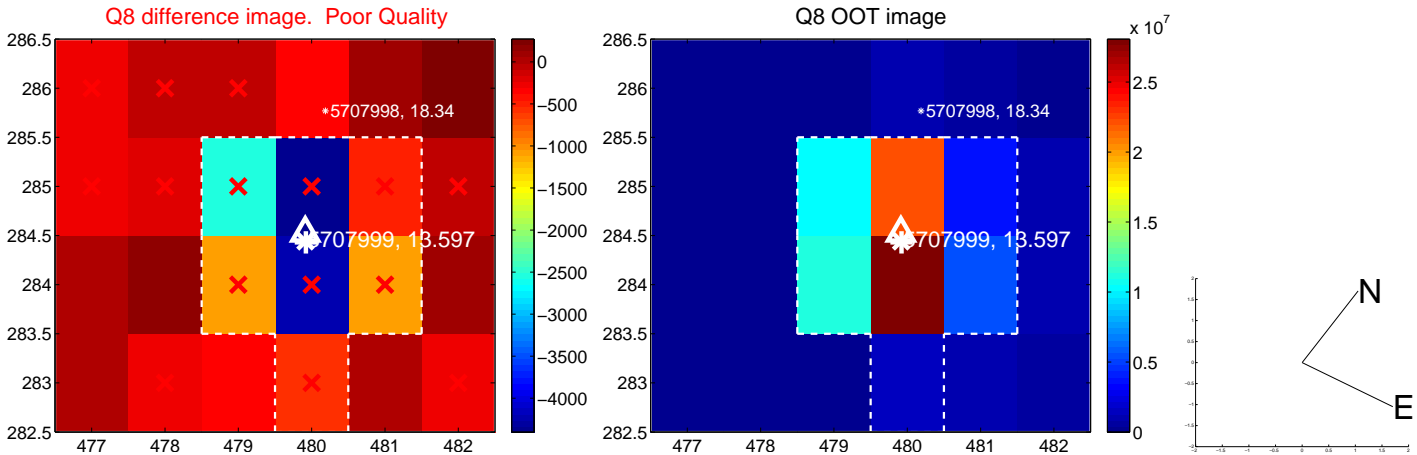
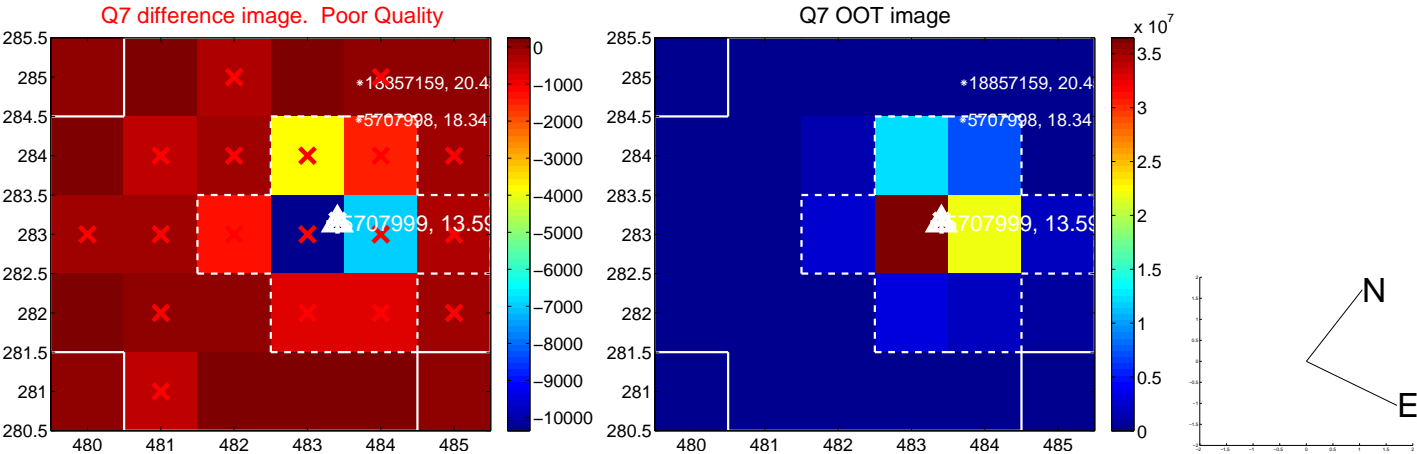
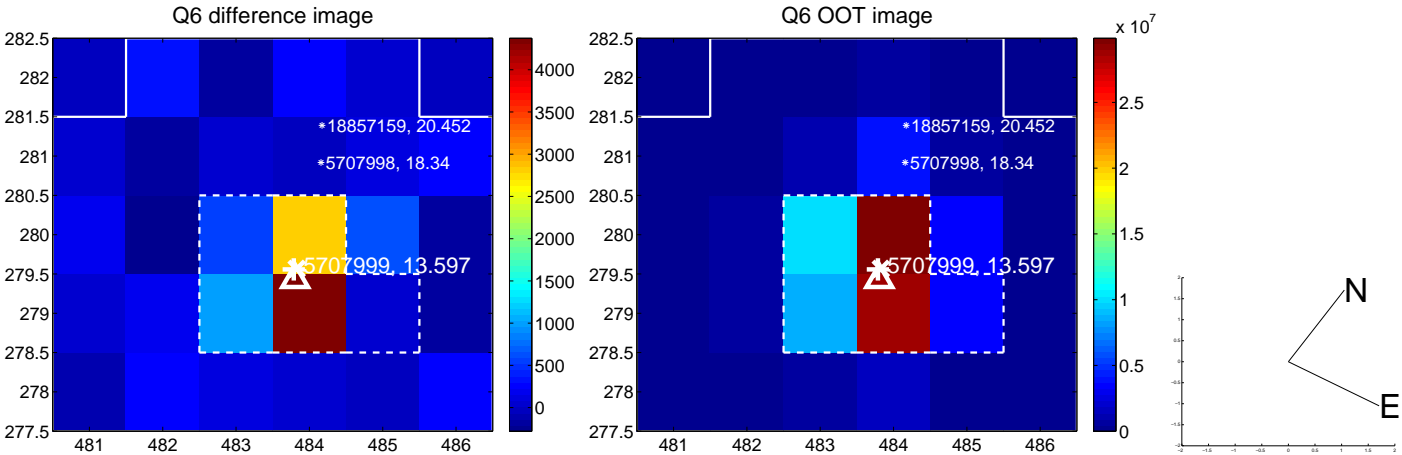
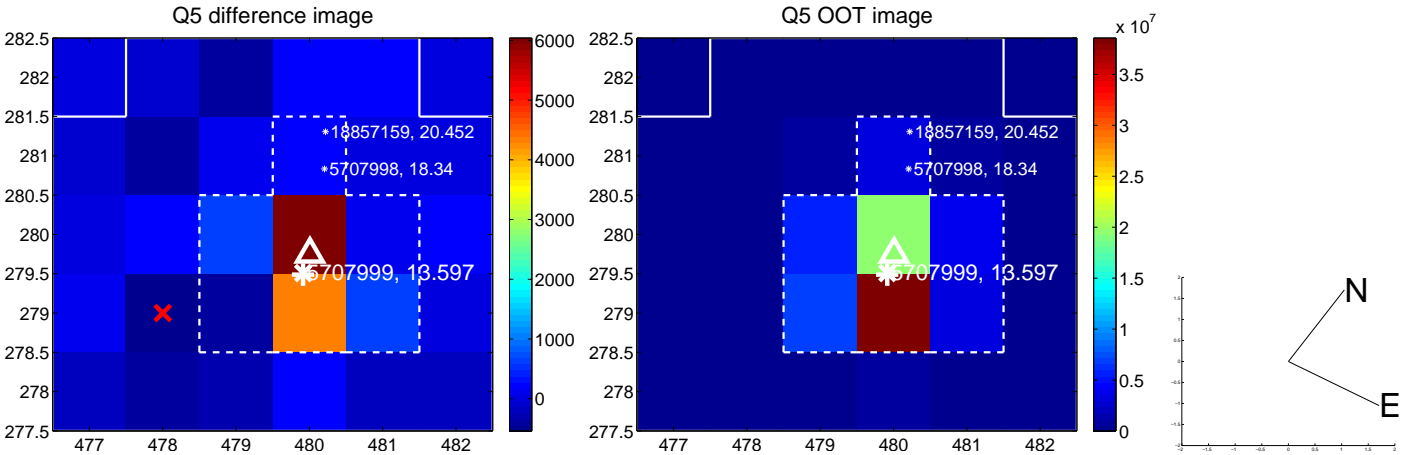


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

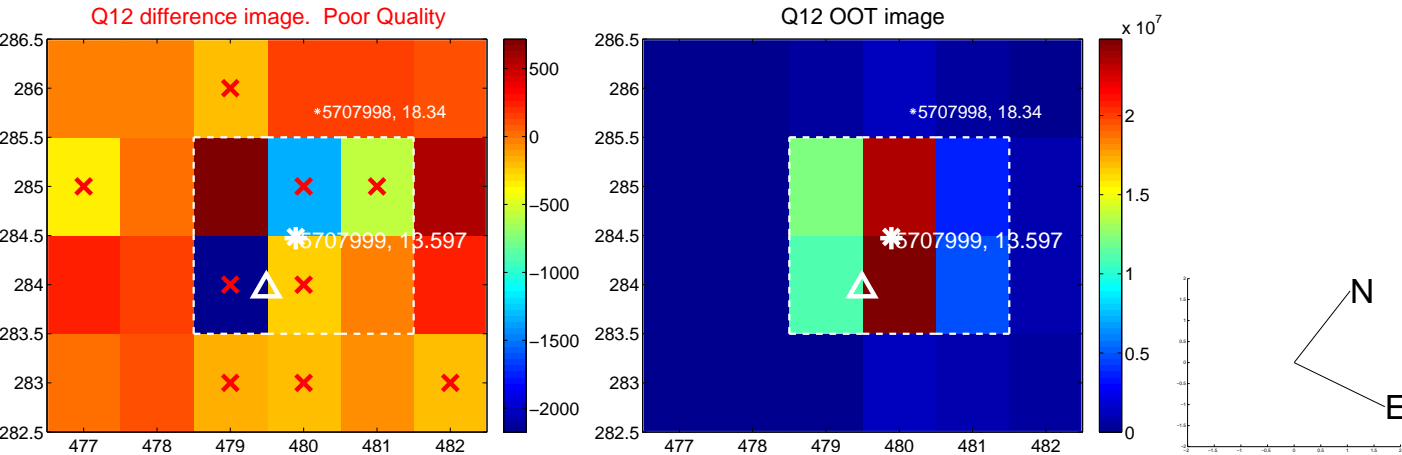
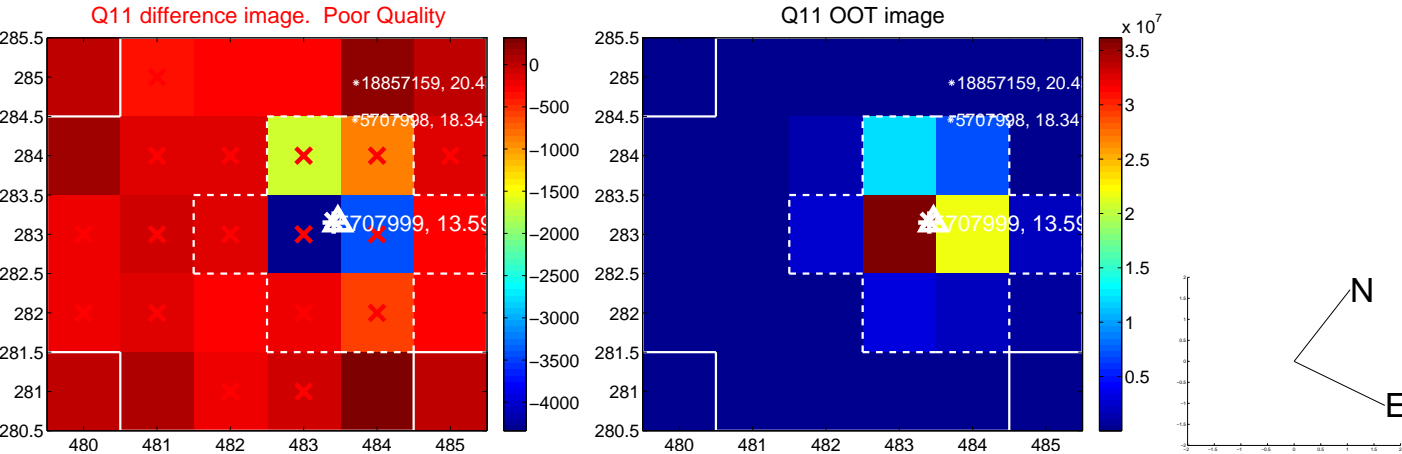
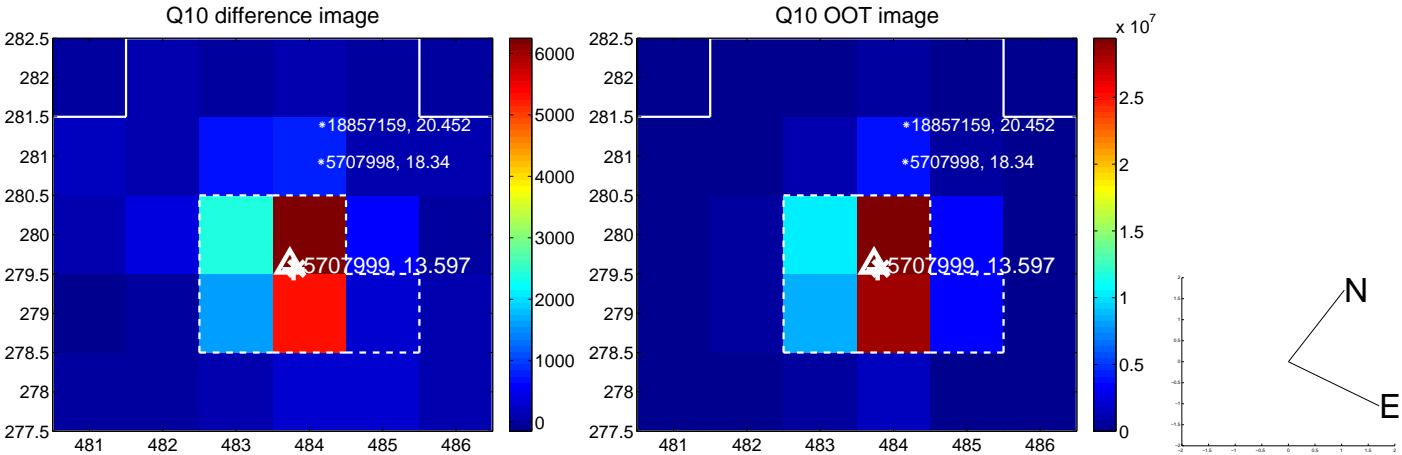
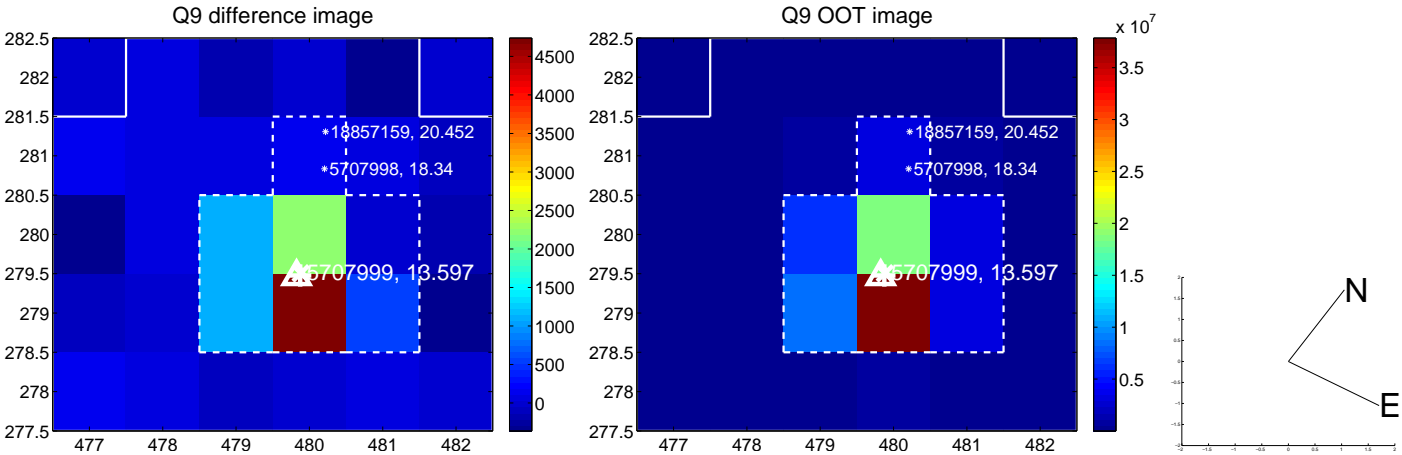
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



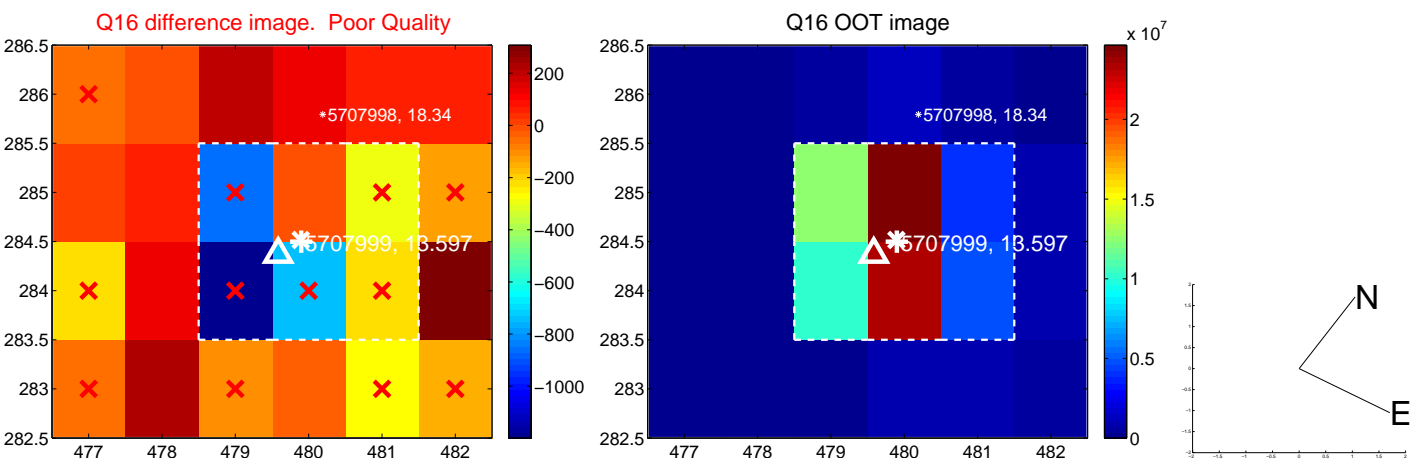
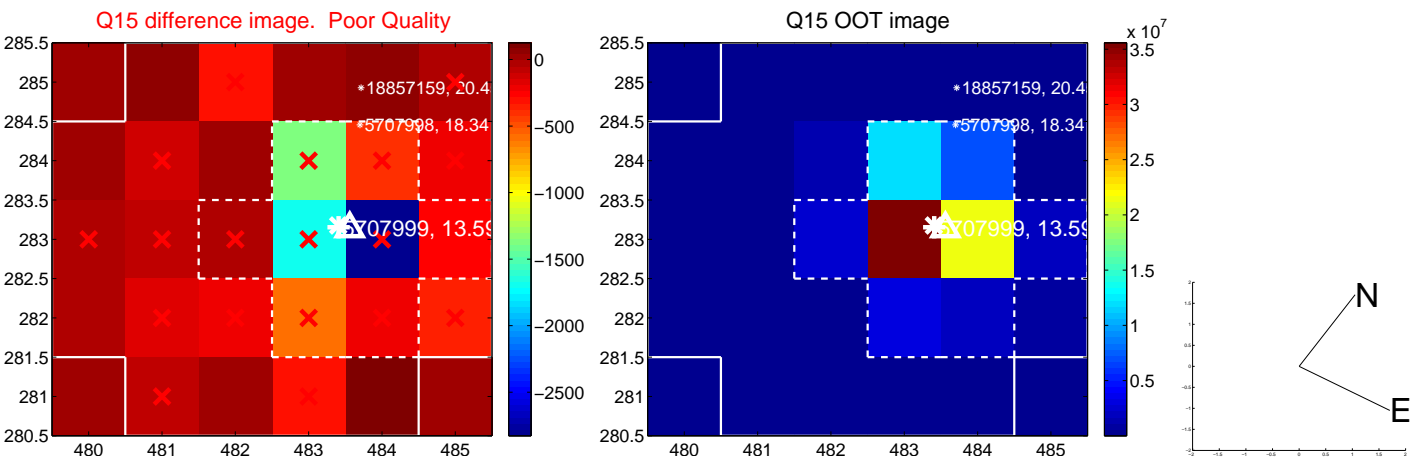
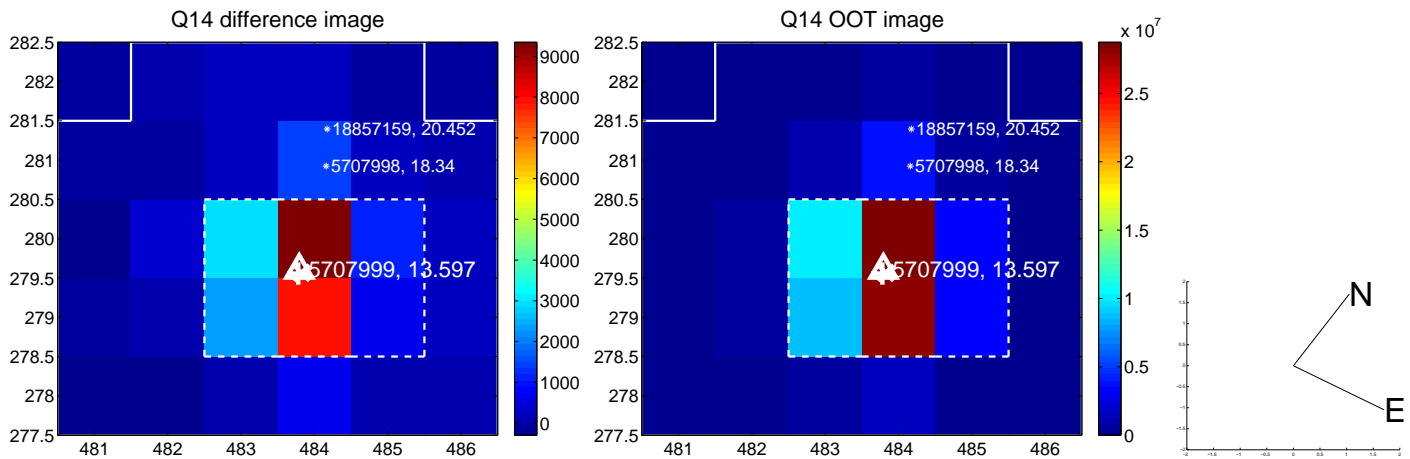
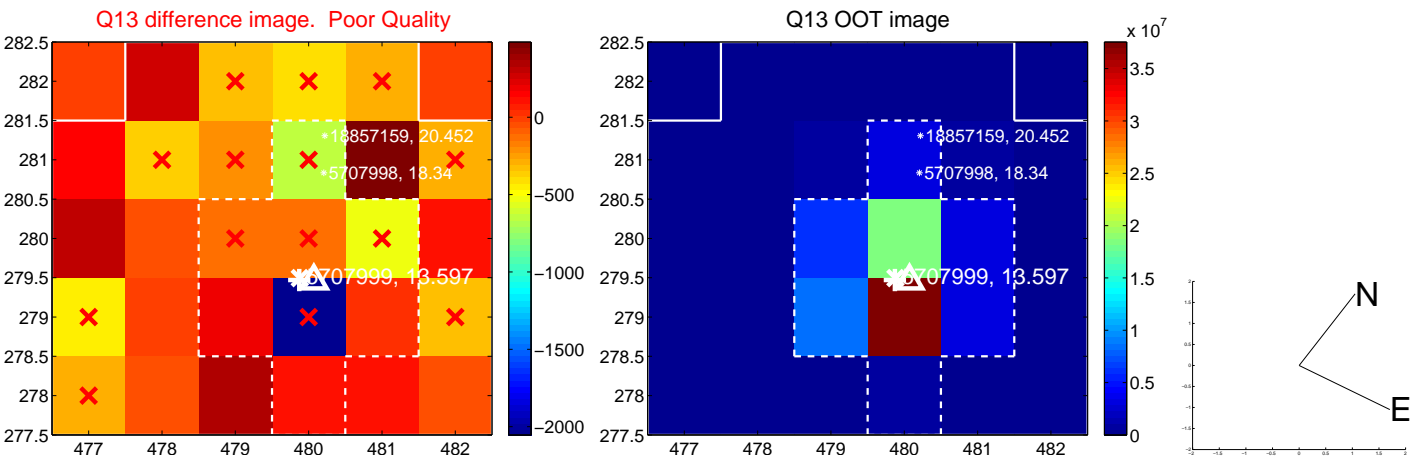
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



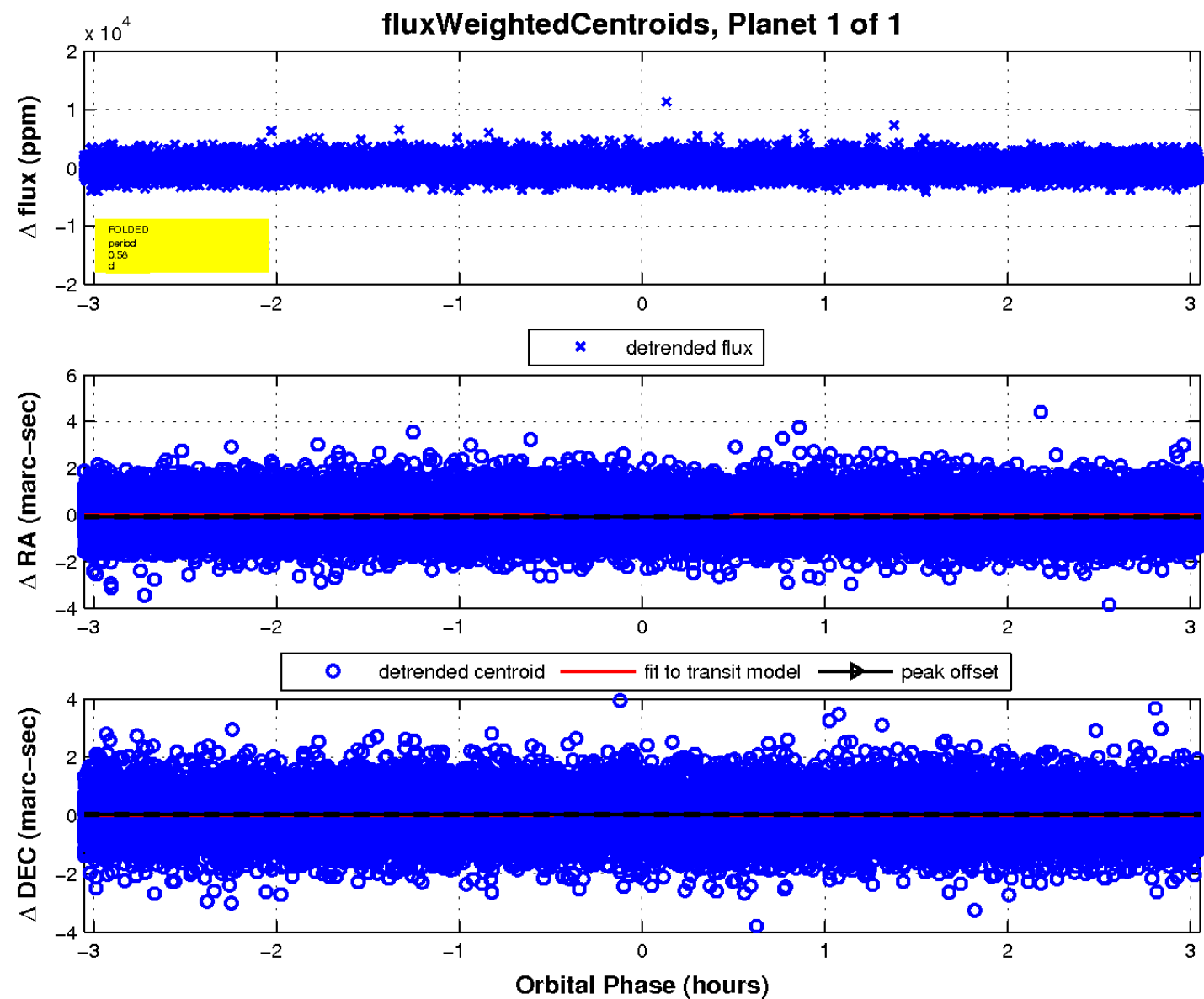
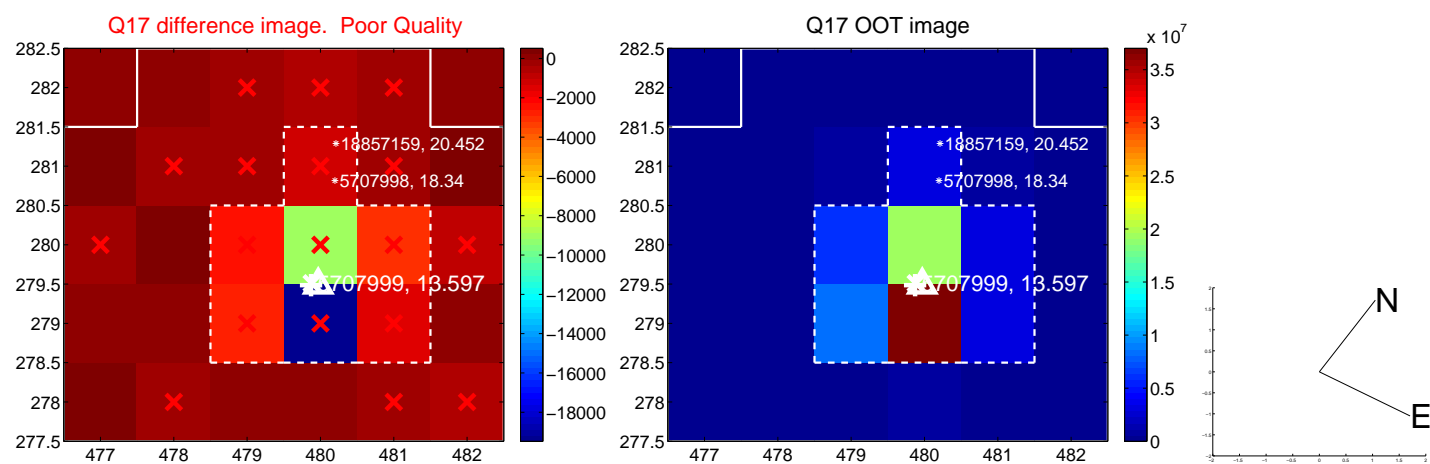
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

