

KIC 007553235

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})
007553235-01	OBS	No	0.669730	131.959260	16.5	4.470	11.2	4.5	6.83	6594	2.81	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007553235-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

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

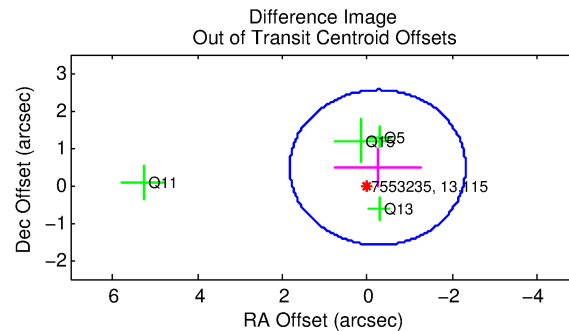
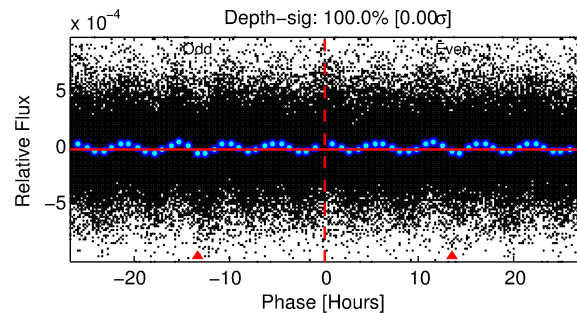
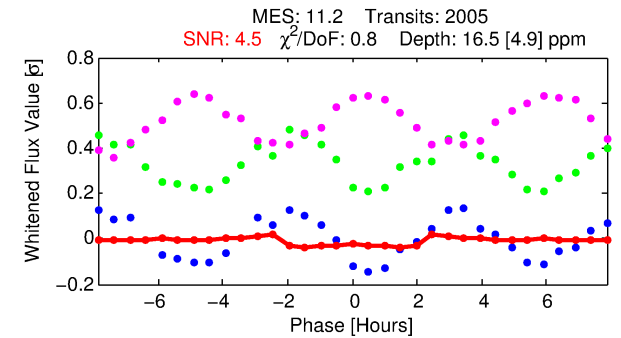
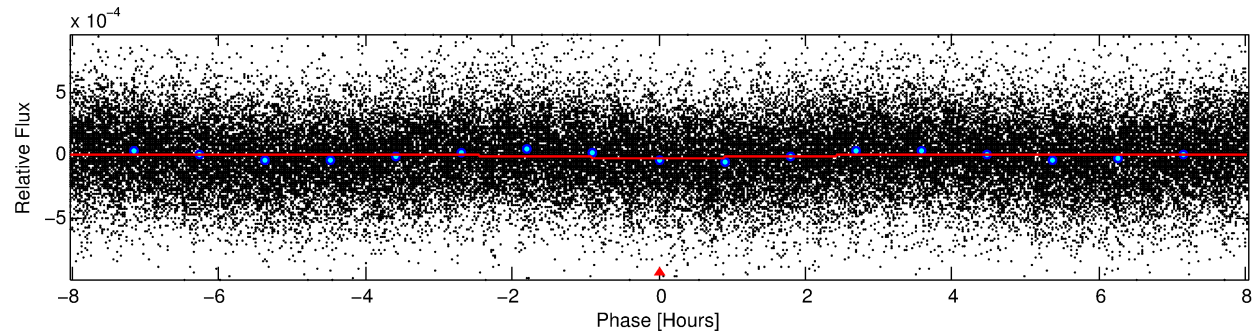
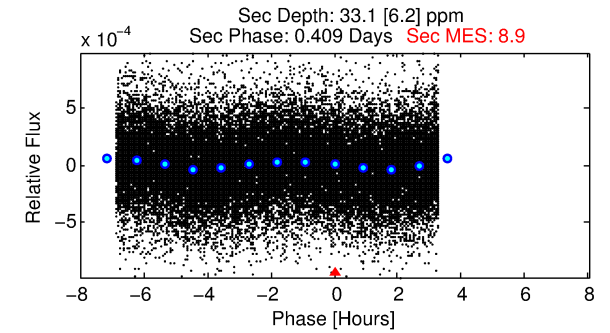
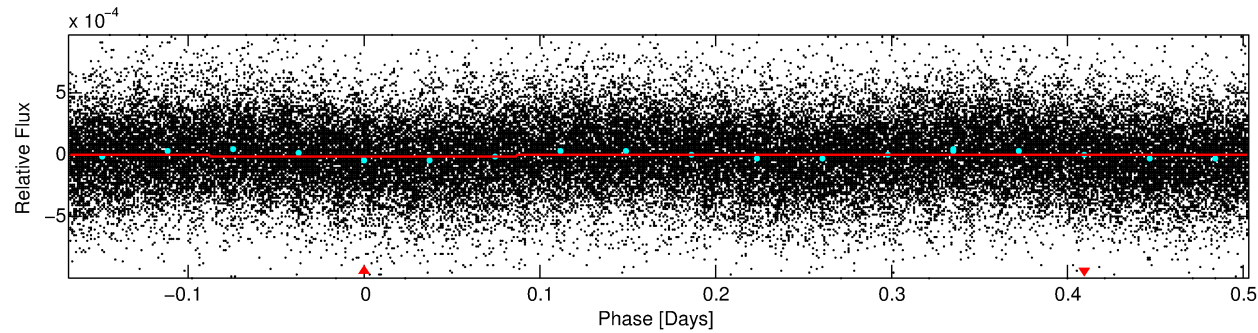
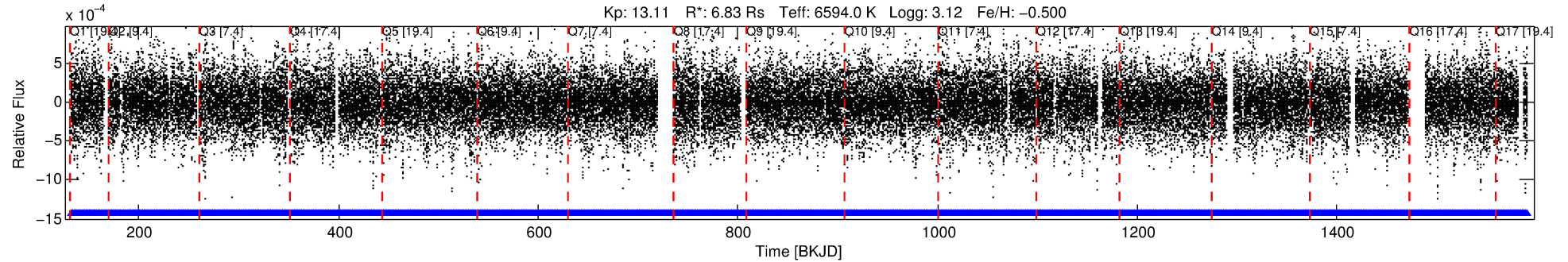
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007553235-01

No Significant Match Found

DV One-Page Summary

KIC: 7553235 Candidate: 1 of 1 Period: 0.670 d



DV Fit Results:

Period = 0.66973 [0.00002] d
Epoch = 131.9593 [0.0044] BKJD
Rp/R* = 0.0038 [0.0028]
a/R* = 1.28 [2.10]
b = 0.30 [12.66]
Seff = N/A
Teq = N/A
Rp = 2.81 [2.58] Re
a = N/A
Ag = N/A
Teffp = N/A

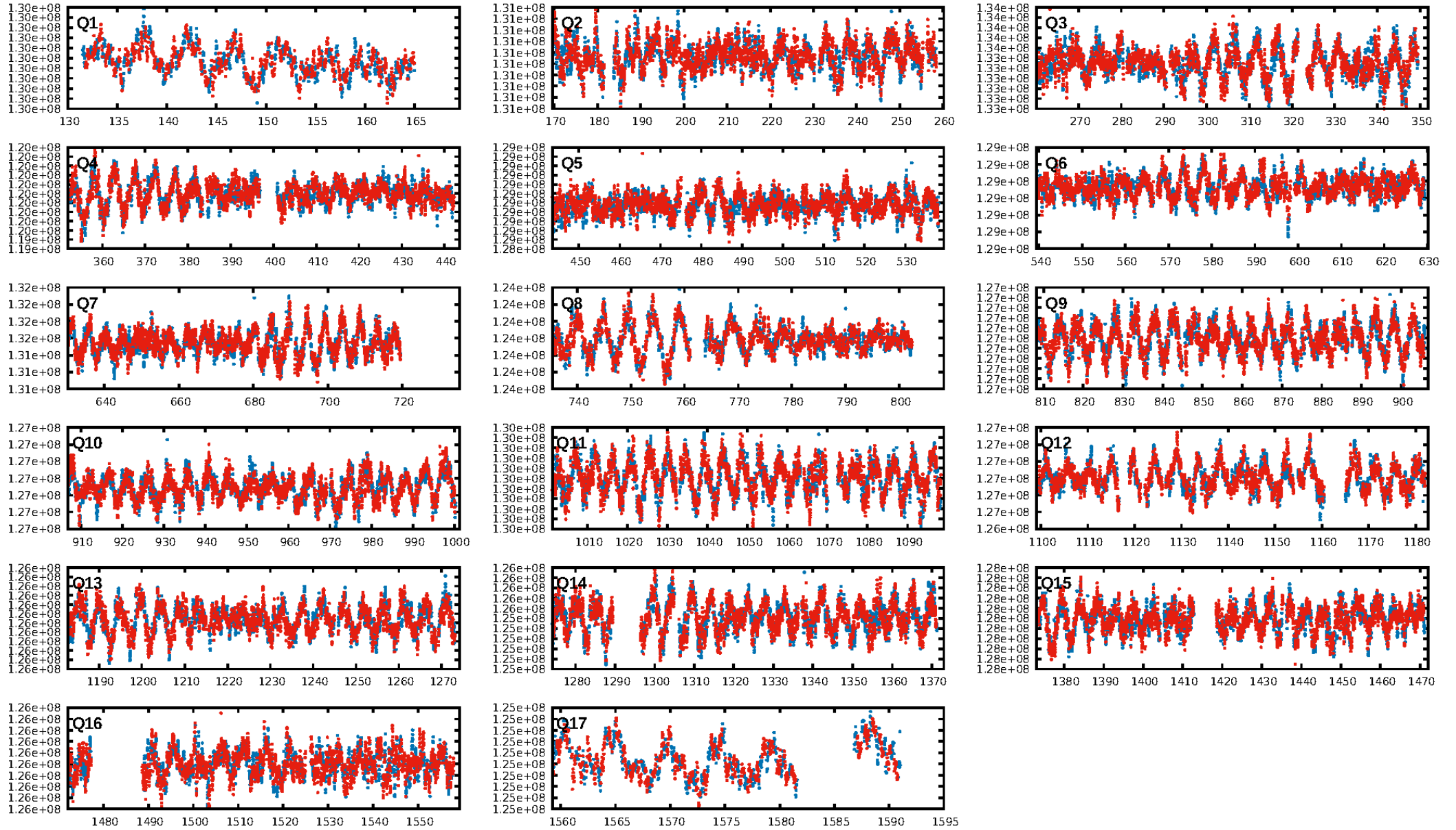
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 9.11e-21
RollingBand-fgt: 1.00 [1915/1915]
GhostDiagnostic-chr: 0.4151
Centroid-sig: 17.4%
Centroid-so: 0.703 arcsec [0.90σ]
OotOffset-rm: 0.542 arcsec [0.78σ]
OotOffset-st: 0/2/0/2 [4]
KicOffset-rm: 0.427 arcsec [0.47σ]
KicOffset-st: 0/2/0/2 [4]
DiffImageQuality-fgm: 0.75 [3/4]
DiffImageOverlap-fno: 1.00 [17/17]

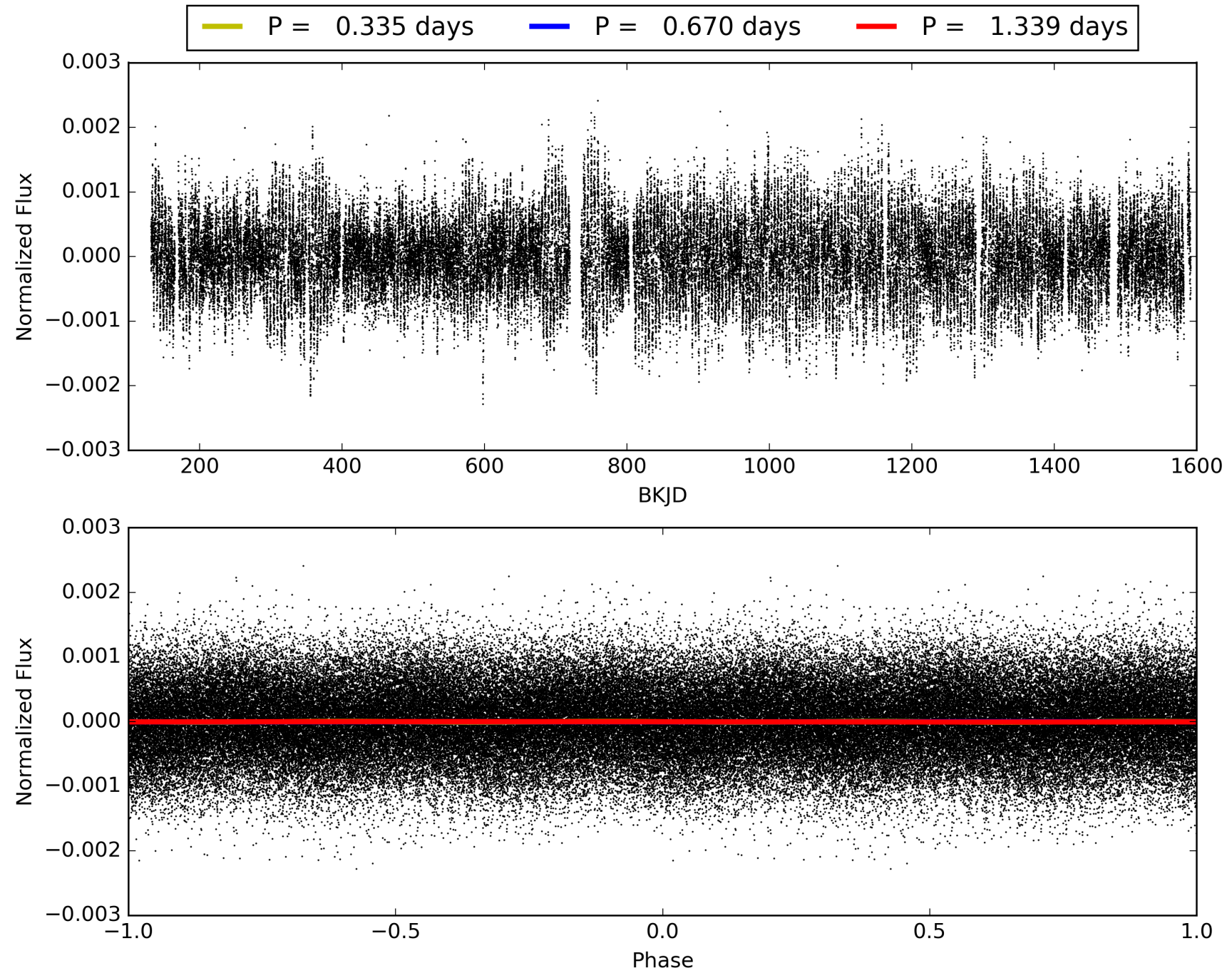
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 02:00:31 Z

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

TCE 007553235-01, PDC Light Curves

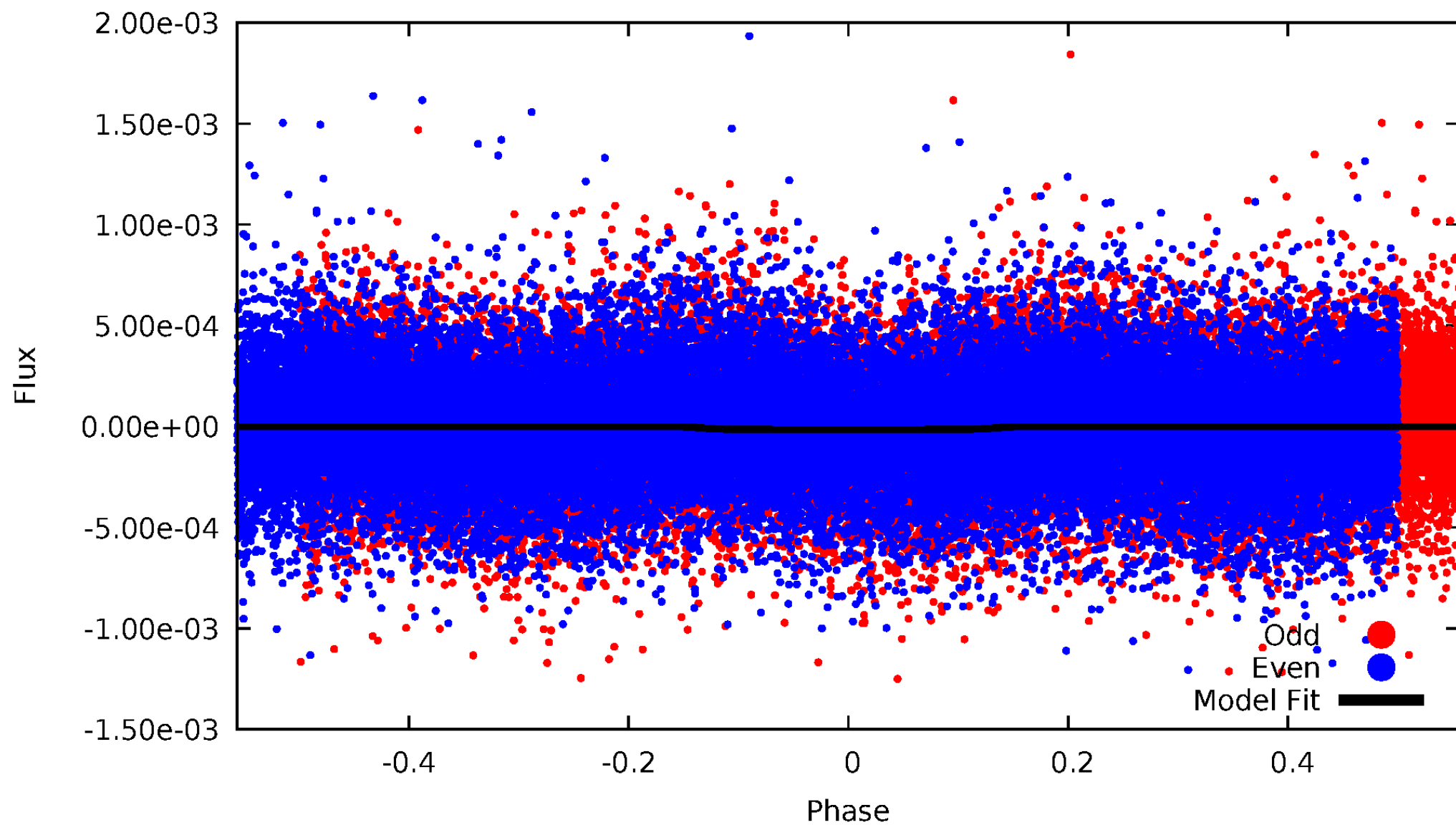


TCE 007553235-01



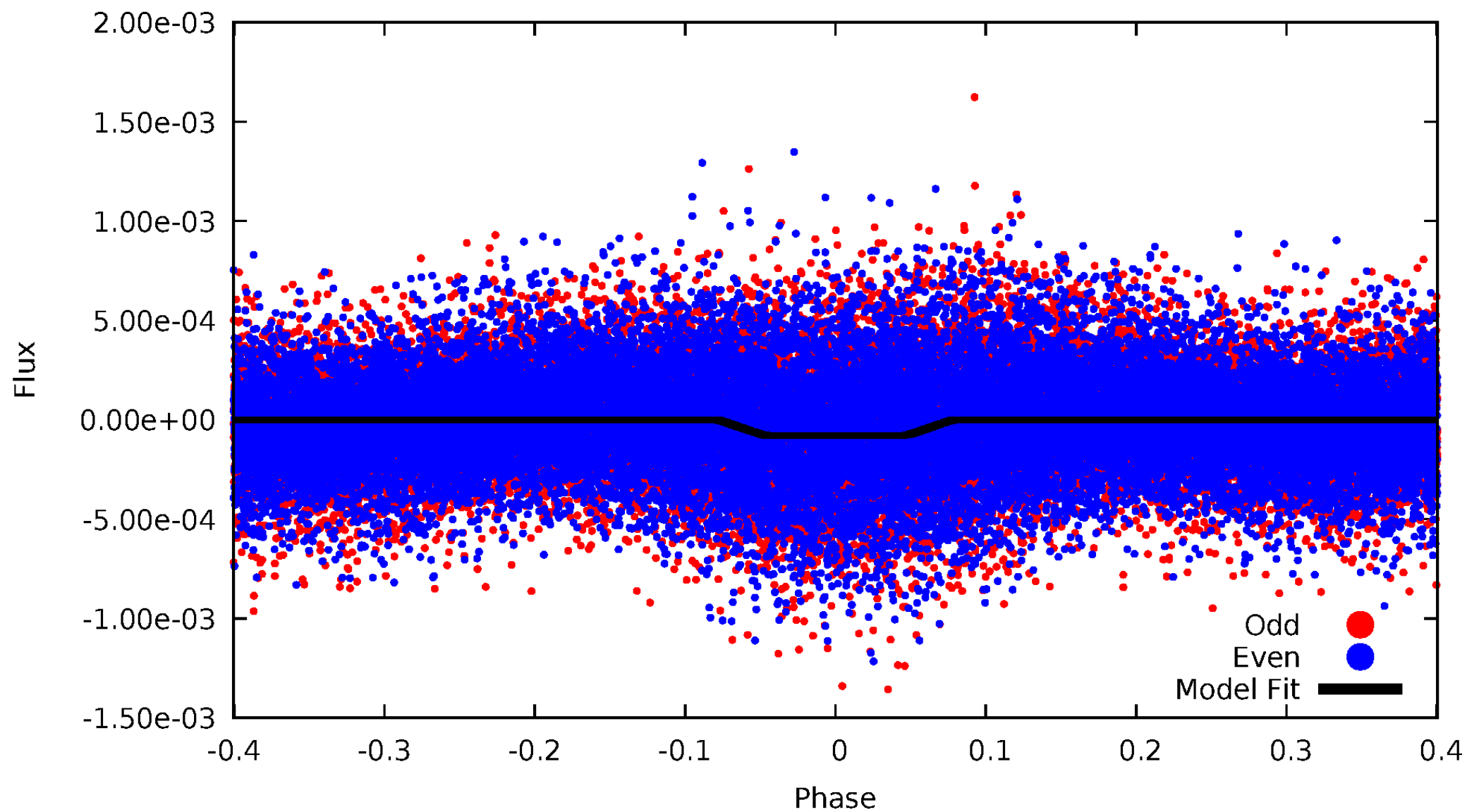
DV Odd/Even

TCE 007553235-01

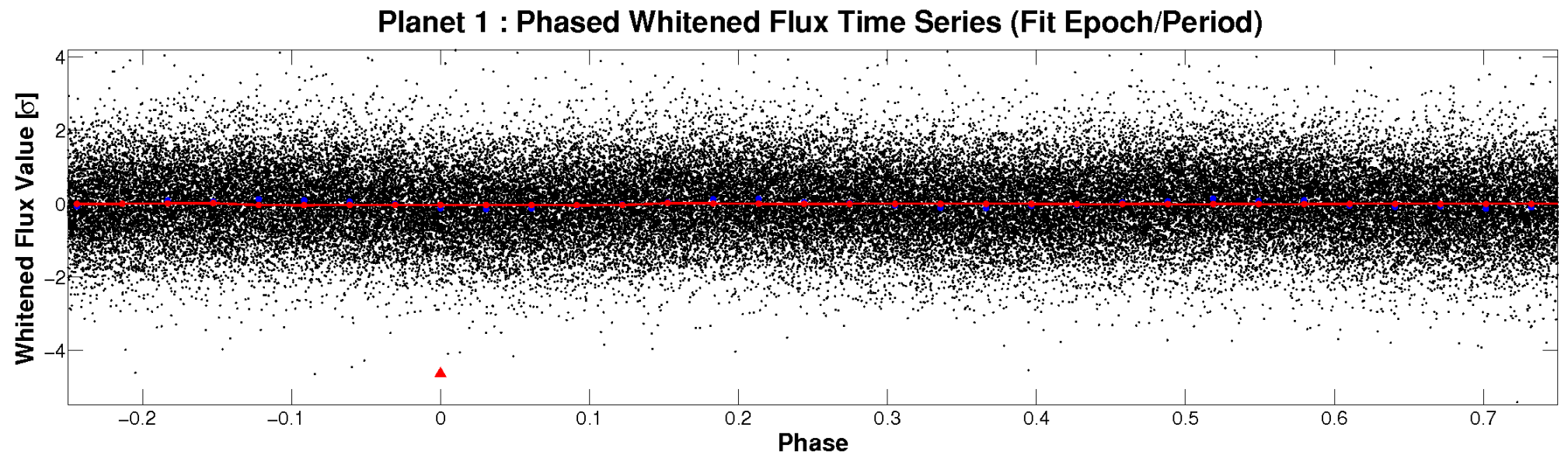
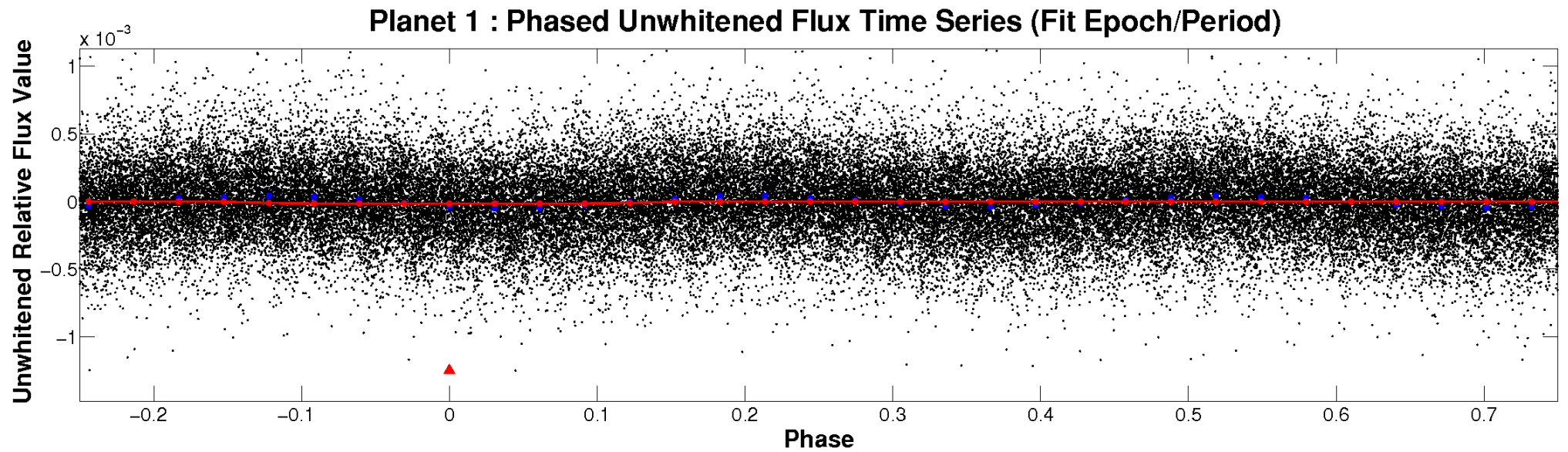


ALT Odd/Even

TCE 007553235-01

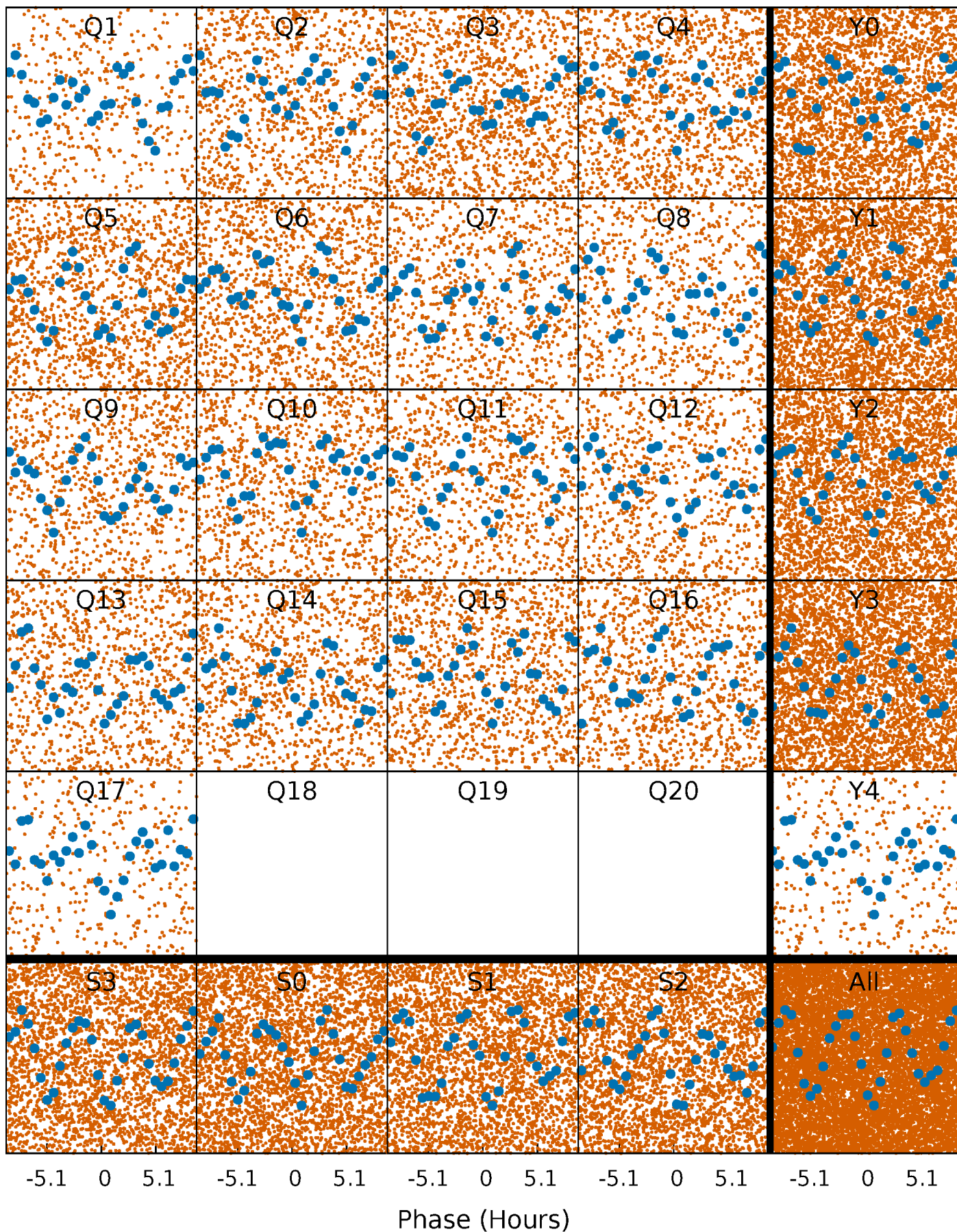


Non-Whitened Vs. Whitened Light Curve



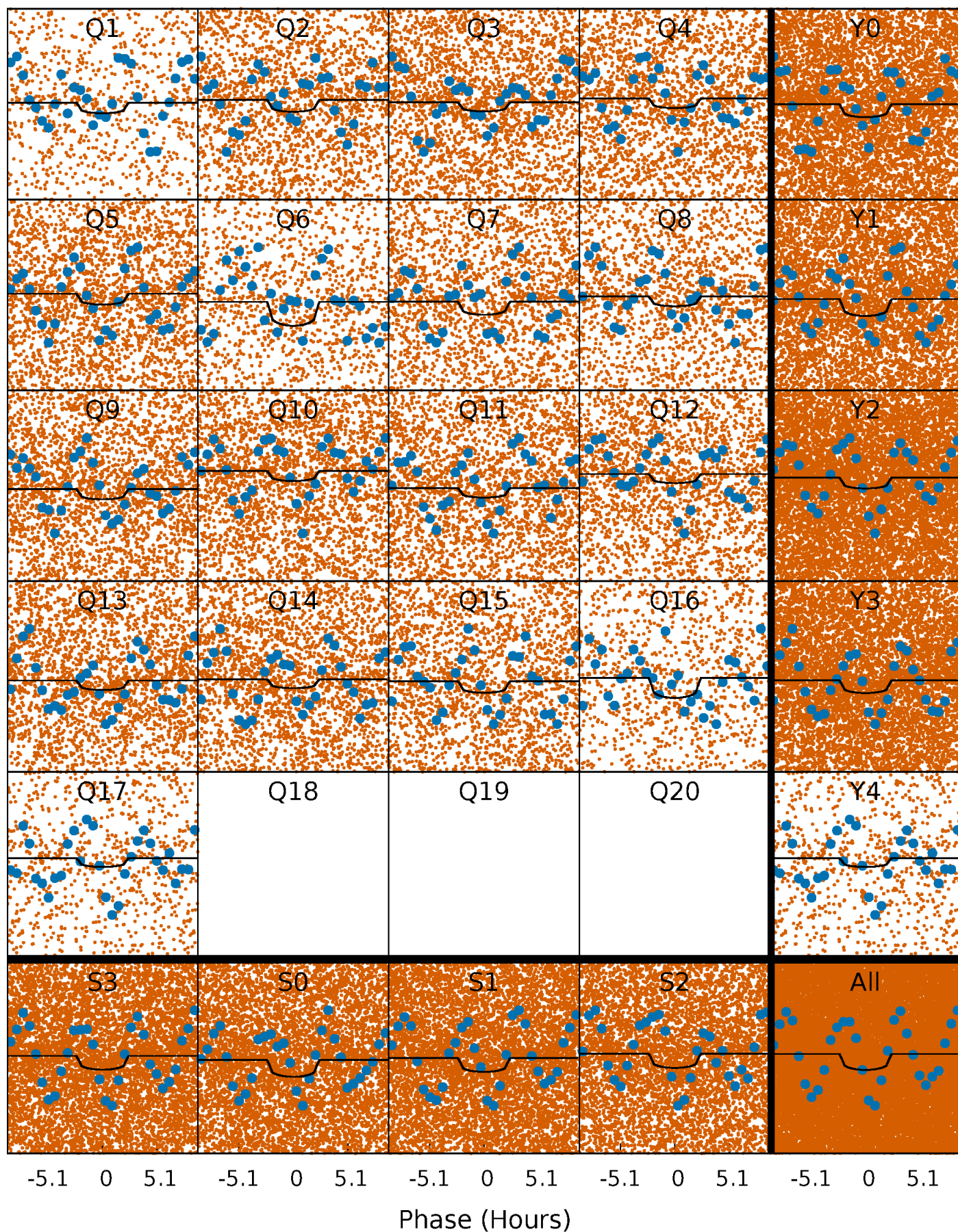
PDC Quarter-Phased Transit Curves

TCE 007553235-01 P= 0.669730 Days $T_0=131.959260$ (BKJD)



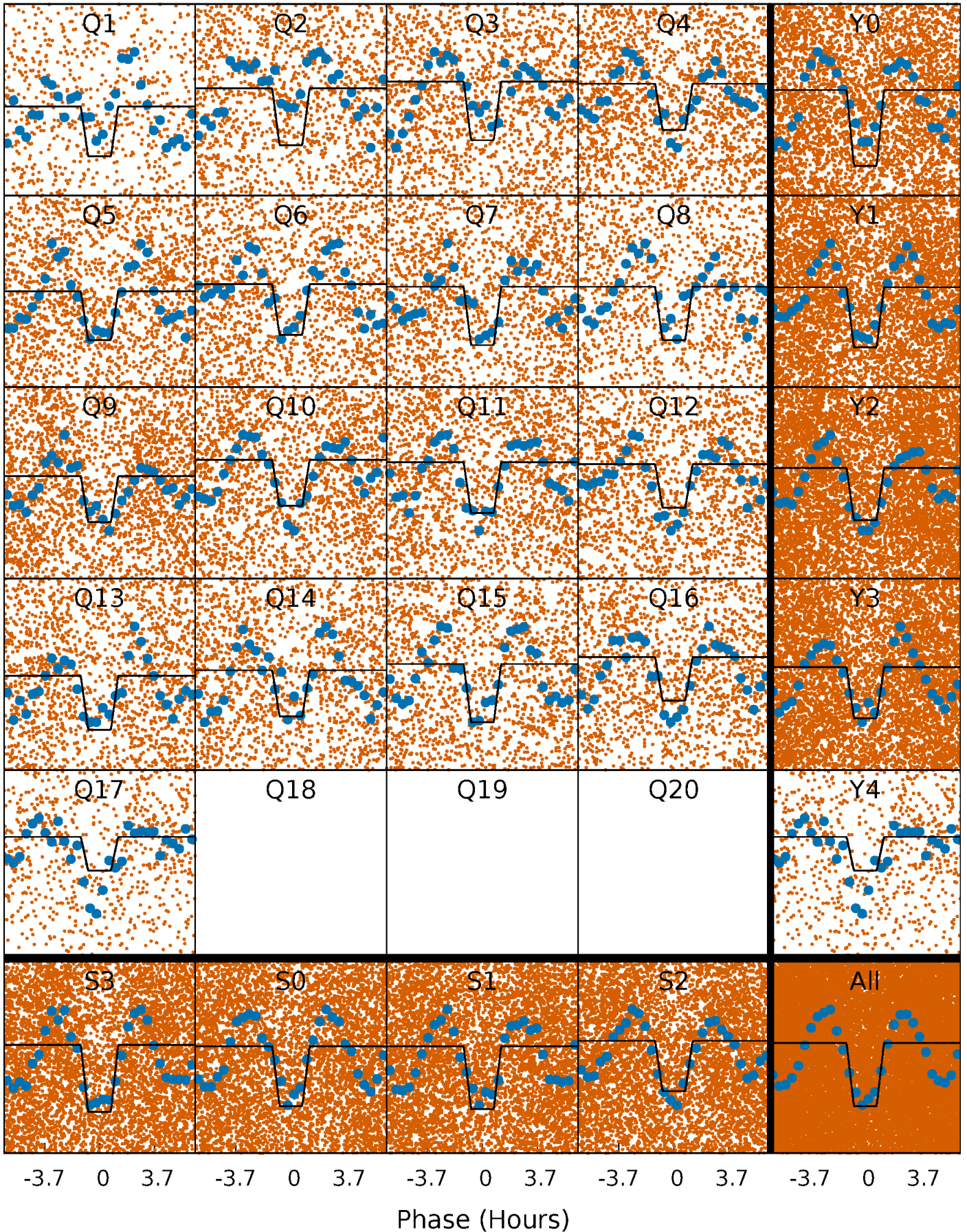
DV Quarter-Phased Transit Curves

TCE 007553235-01 P= 0.669730 Days $T_0=131.959260$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

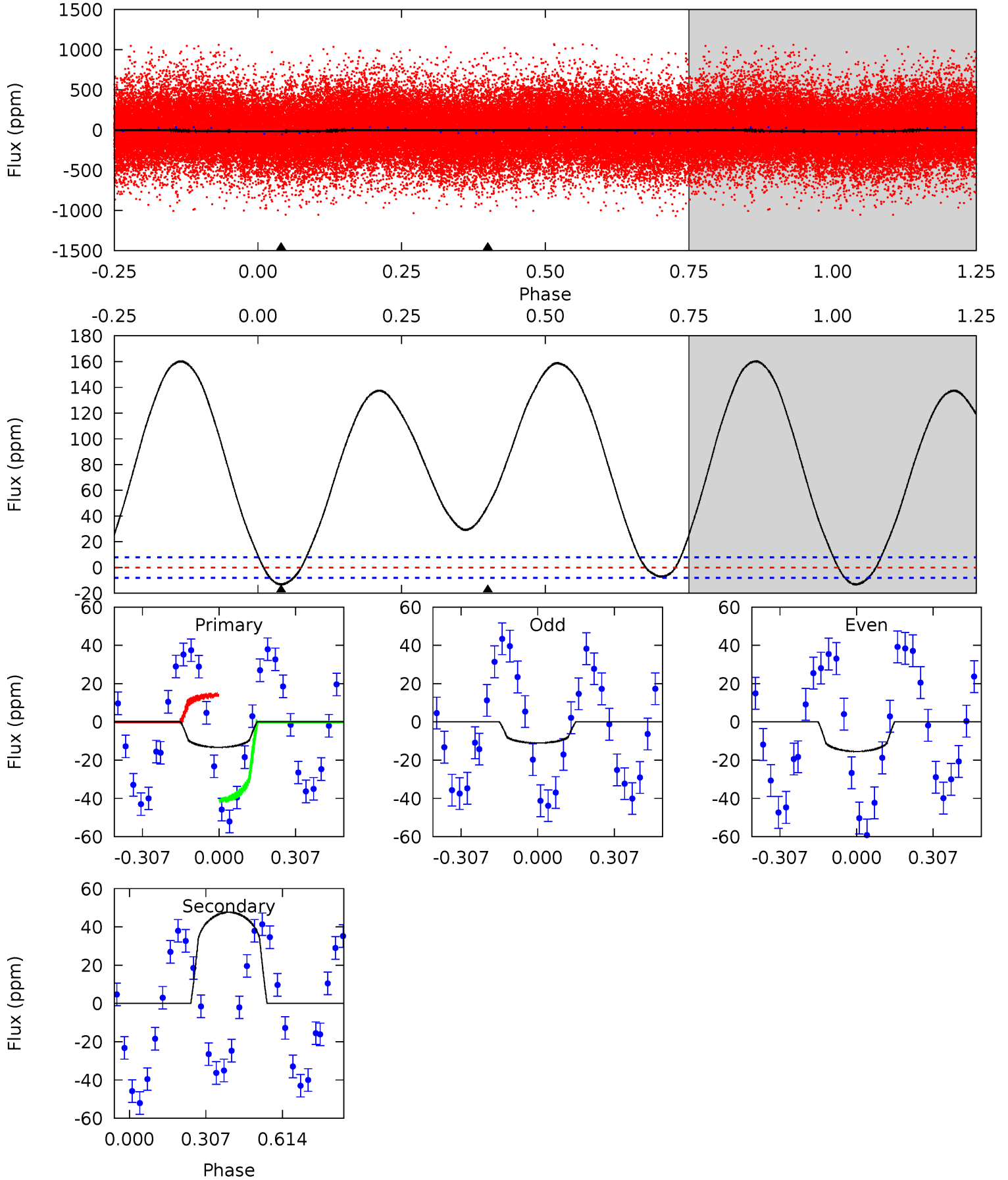
TCE 007553235-01 P= 0.669757 Days $T_0=131.955781$ (BKJD)



DV Model-Shift Uniqueness Test

007553235-01, P = 0.669730 Days, E = 131.289530 Days

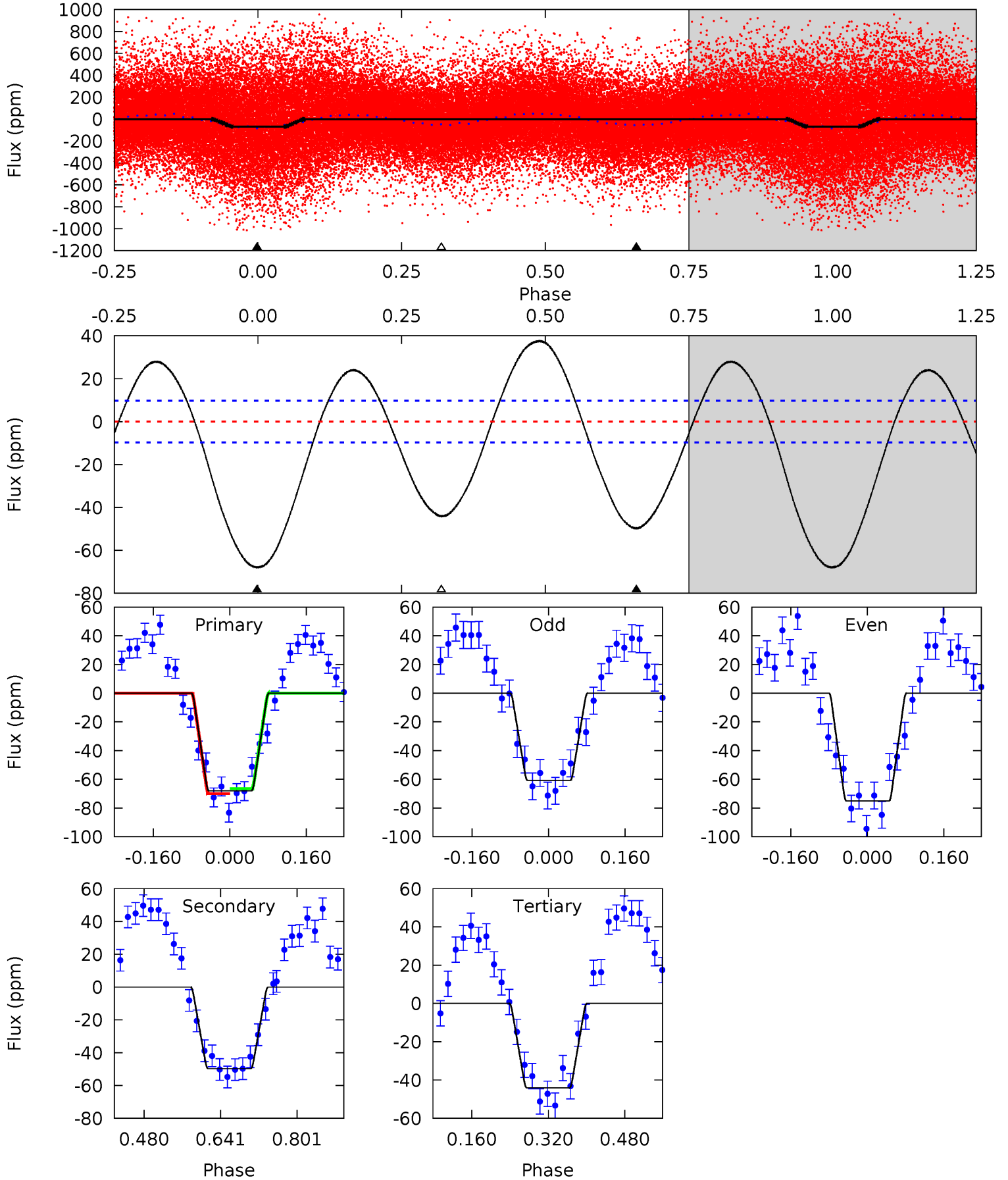
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.19	-25.7	0	0	4.32	1.02	10.0	7.19	7.19	-25.7	-25.7	1.19	0.99	0.92	7.30



Alt Model-Shift Uniqueness Test

007553235-01, P = 0.669757 Days, E = 131.286024 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
31.3	22.9	20.3	0	4.46	1.40	12.7	11.0	31.3	2.58	22.9	3.28	0.99	0.36	0.80



Stellar Parameters For KIC 007553235

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6594^{+161}_{-253}	$3.118^{+0.480}_{-0.120}$	$-0.500^{+0.350}_{-0.350}$	$6.830^{+1.543}_{-3.601}$	$2.233^{+0.321}_{-0.748}$	$0.010^{+0.052}_{-0.004}$
	+2%/-4%	+15%/-4%	+70%/-70%	+23%/-53%	+14%/-33%	+529%/-36%
Source	PHO1	FLK73	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 007553235-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	48 ± 2	$2.57^{+2.22}_{-1.50}$	7363^{+591}_{-978}	-9793^{+2084}_{-11135}	$-1.492^{+1.046}_{-7.279}$
Alt.	-50 ± 2	$5.87^{+2.73}_{-2.22}$	7399^{+547}_{-1008}	2553^{+3470}_{-7859}	$0.302^{+0.472}_{-0.155}$

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

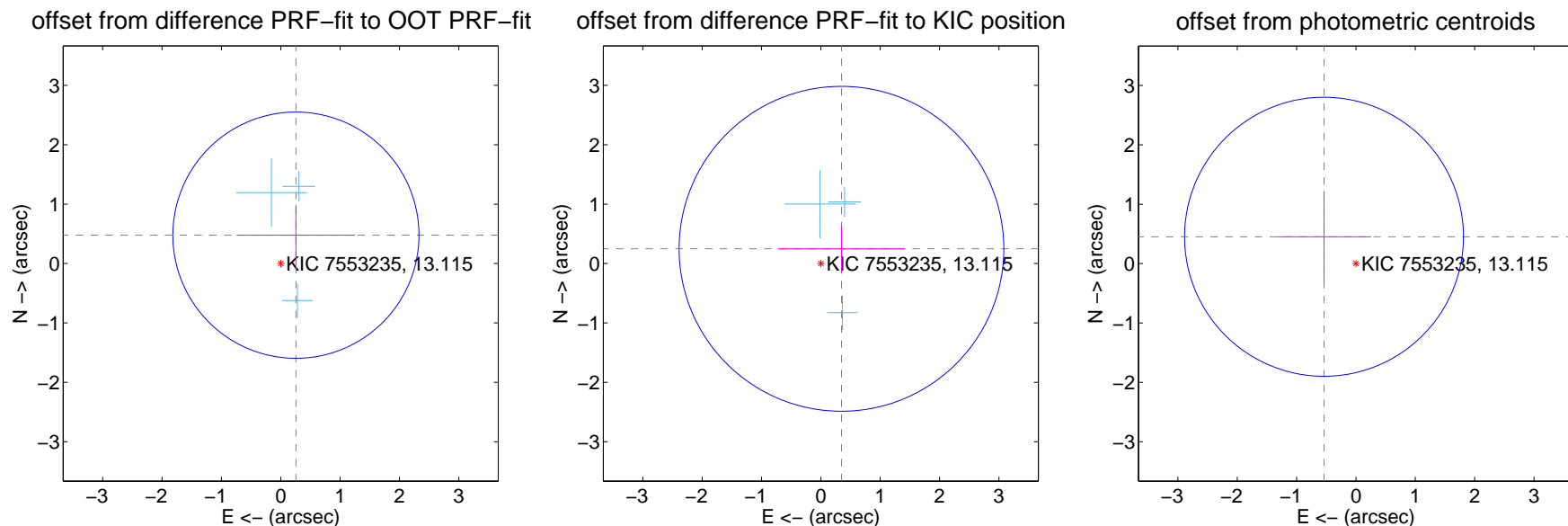
DV Centroid Data

Supplemental centroid analysis for 007553235-01. Kepler magnitude: 13.12. Transit SNR 4.49

There are 3 quarters with good PRF difference image offsets

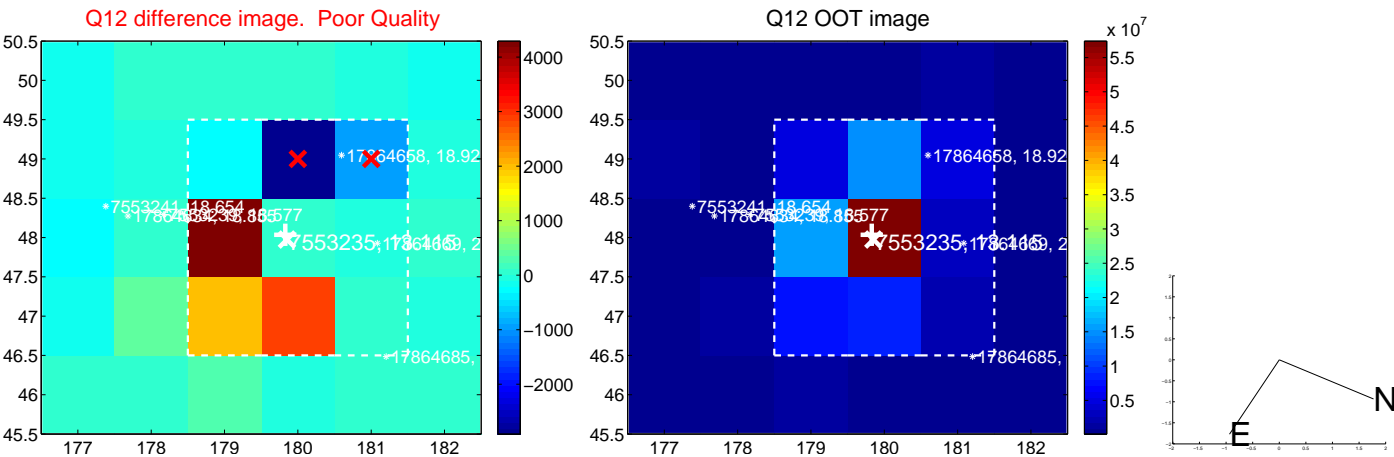
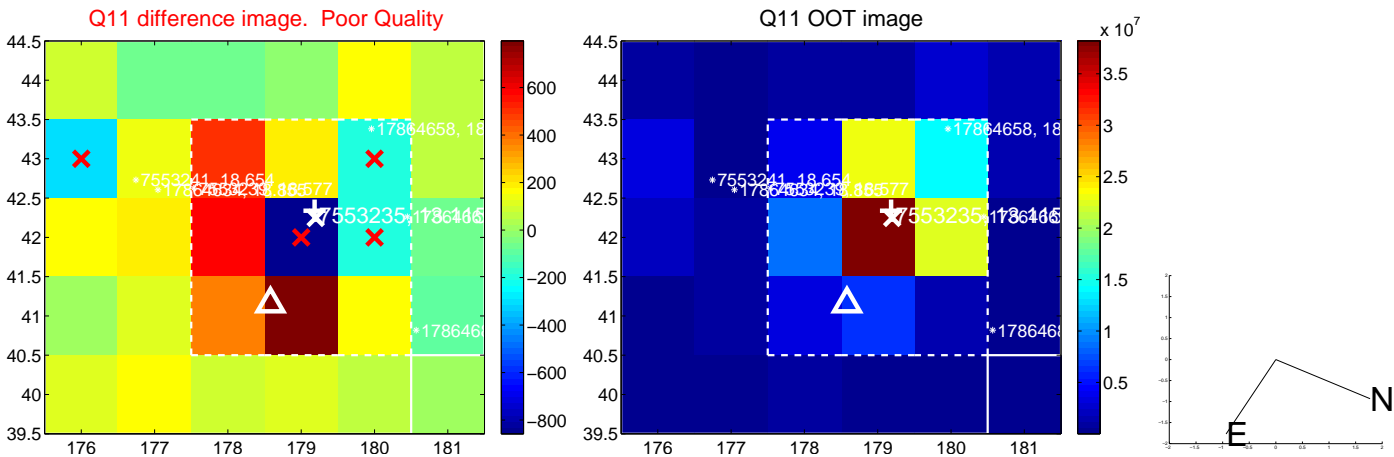
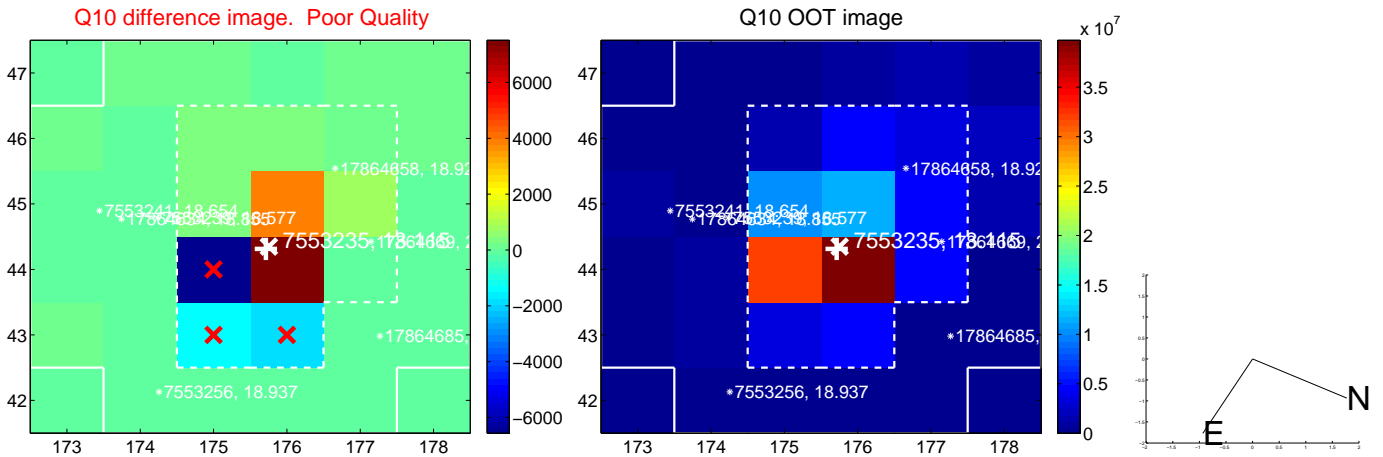
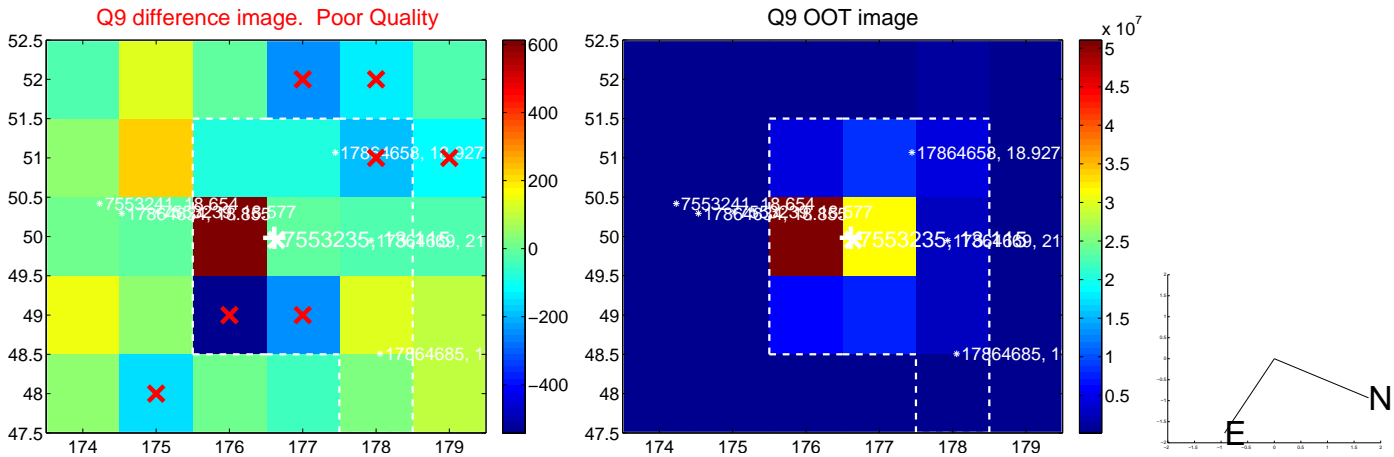
The direct PRF centroid is offset from the target star catalog position by about 0.24 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.542 ± 0.691	0.78	-0.255 ± 0.998	0.478 ± 0.511
PRF-fit source offset from KIC position	0.427 ± 0.912	0.47	-0.347 ± 1.070	0.248 ± 0.387
photometric centroid source offset	0.70 ± 0.78	0.90	0.54 ± 0.79	0.45 ± 0.77

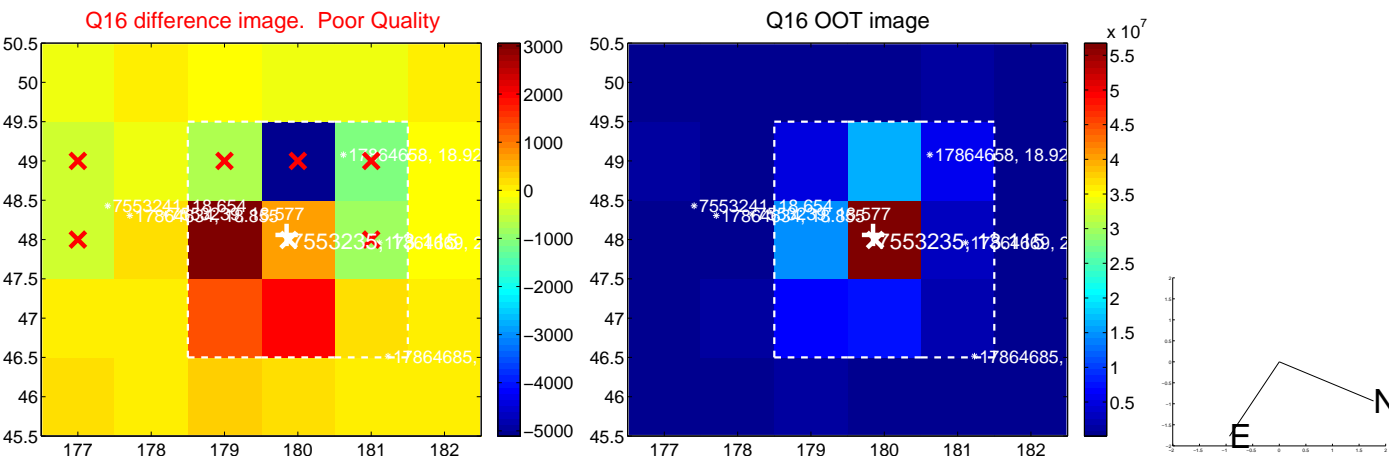
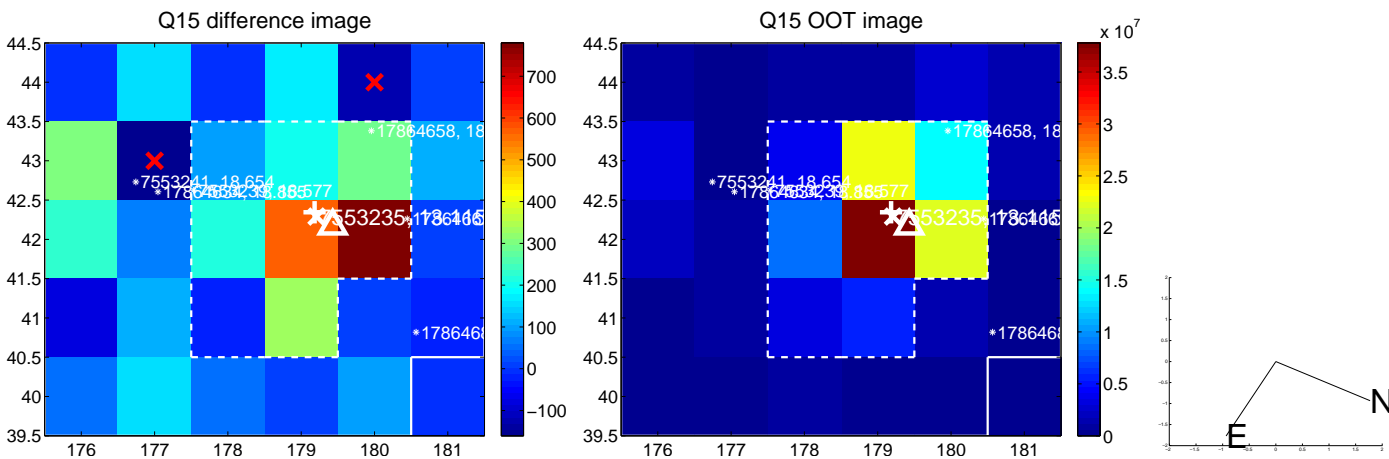
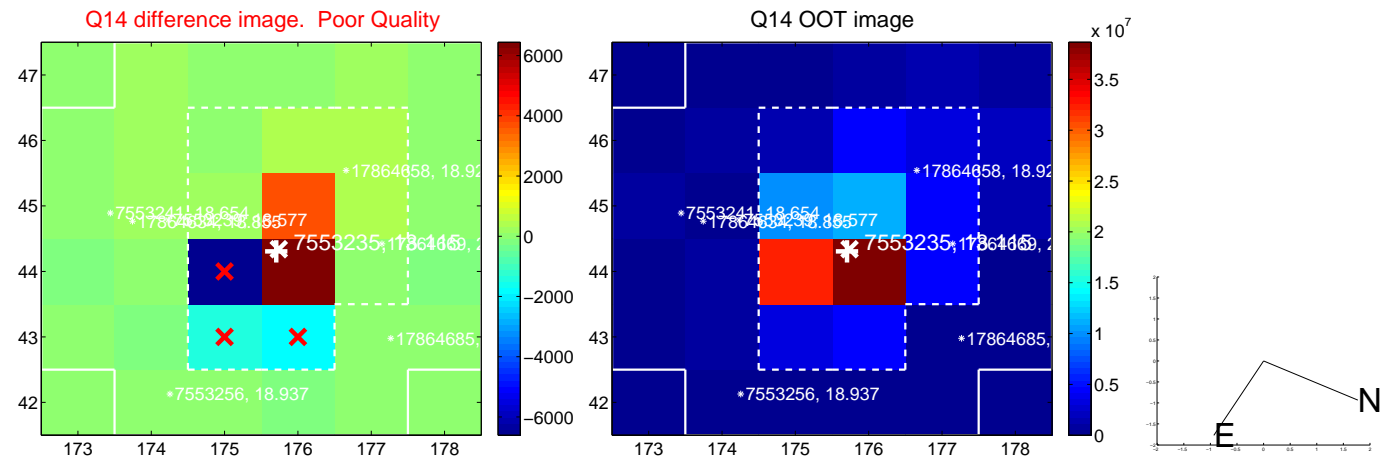
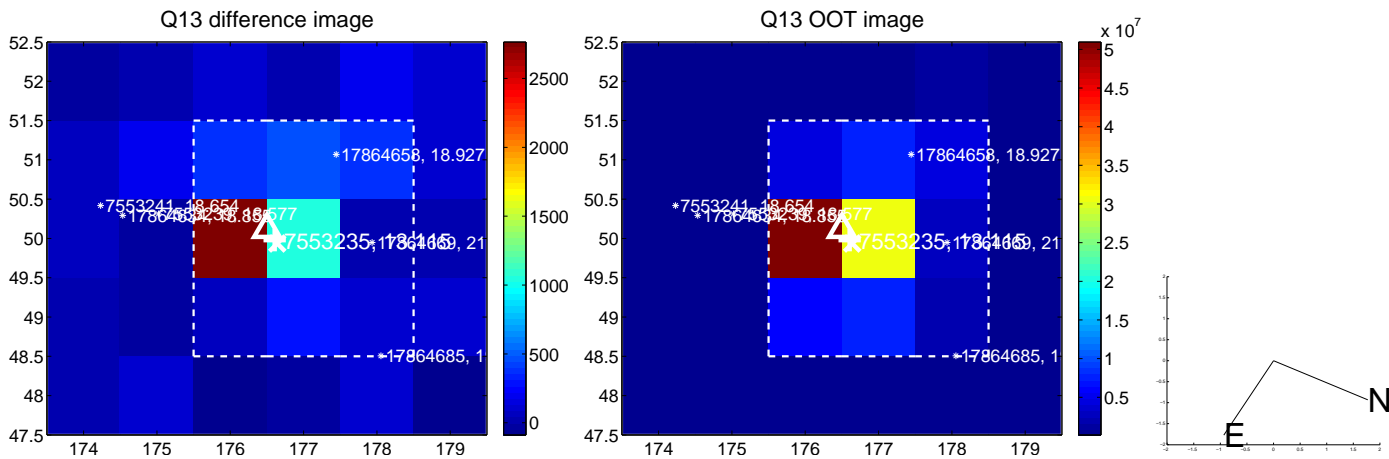


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

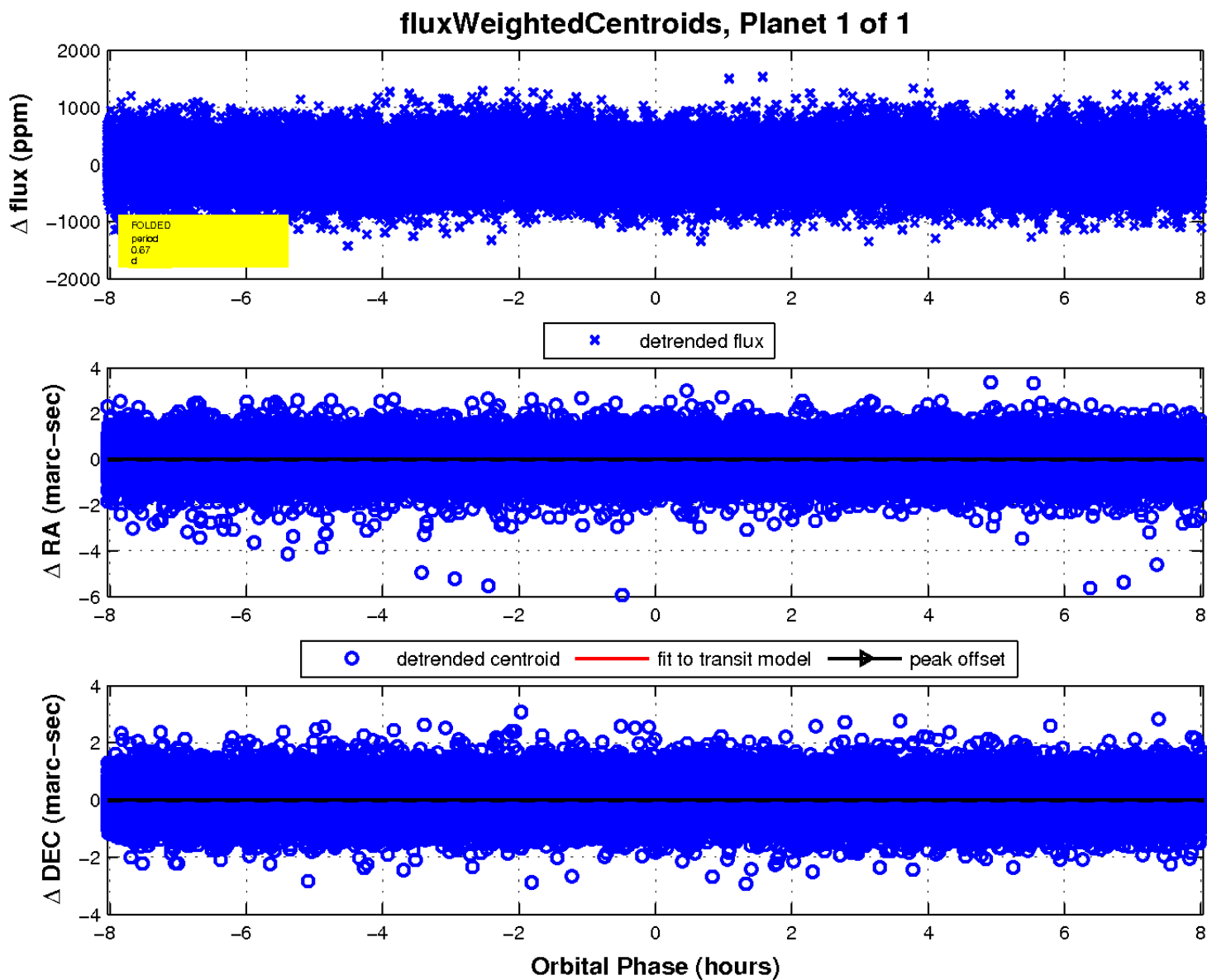
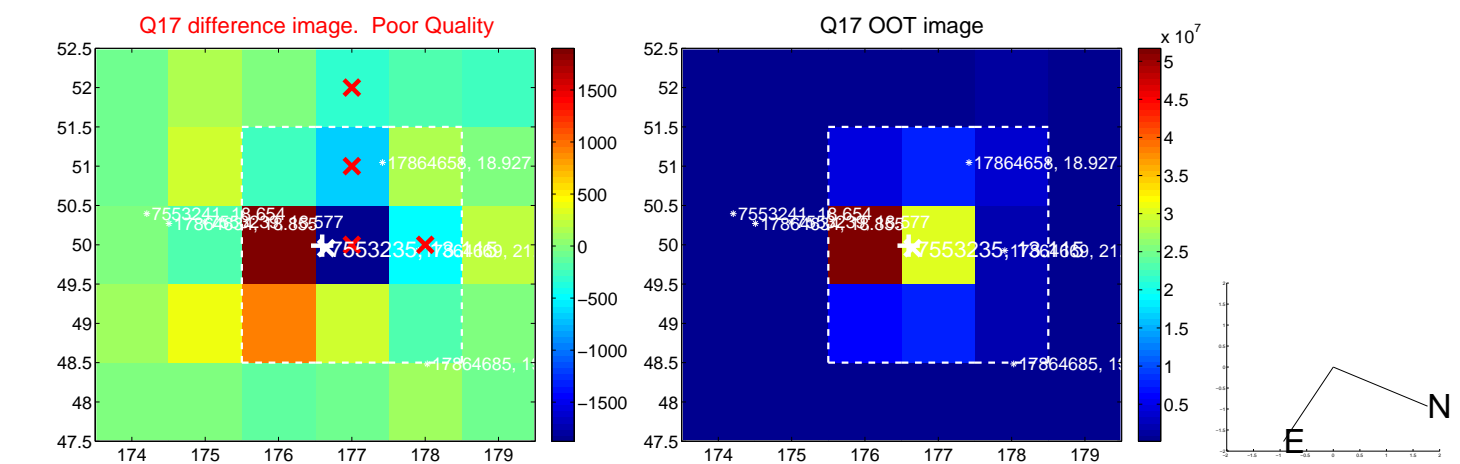
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



UKIRT Image

Declination

