

KIC 006385010

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})
006385010-01	OBS	No	20.855758	137.238428	517.7	90.431	8.8	22.6	1.13	6026	5.07	64.59

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006385010-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT

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

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

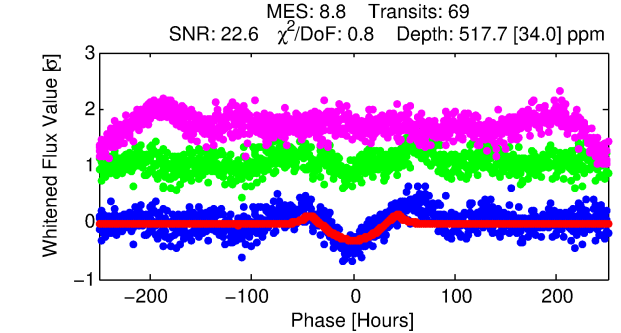
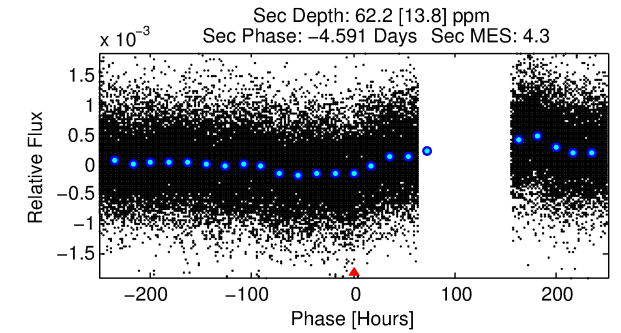
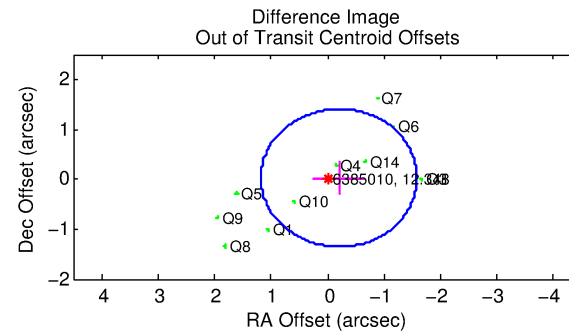
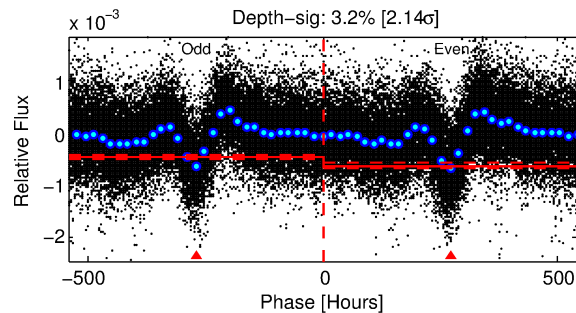
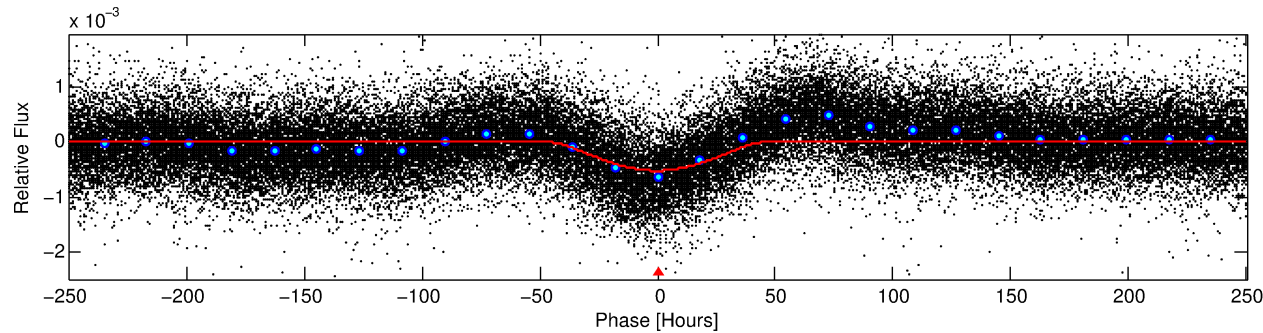
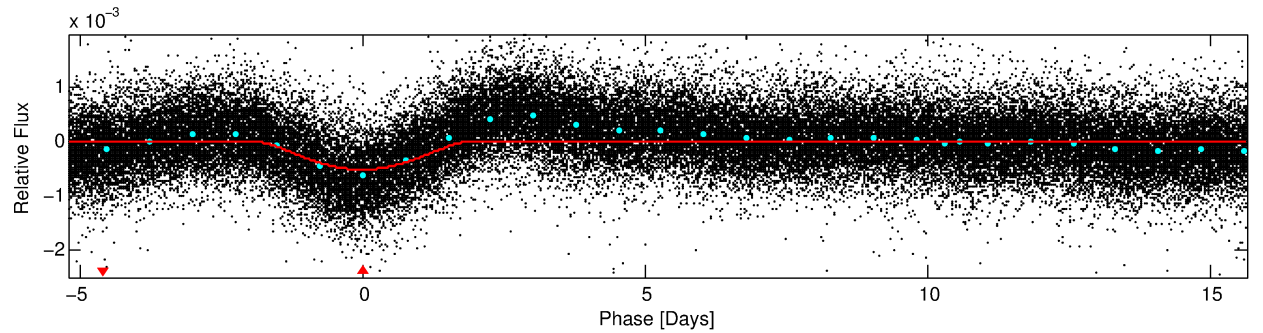
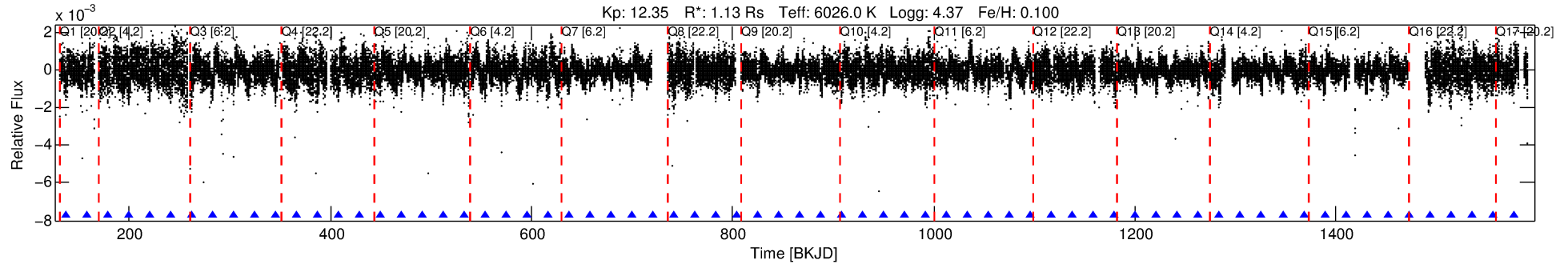
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006385010-01

No Significant Match Found

DV One-Page Summary

KIC: 6385010 Candidate: 1 of 1 Period: 20.856 d



DV Fit Results:

Period = 20.85576 [0.00147] d
Epoch = 137.2384 [0.0583] BKJD
Rp/R* = 0.0410 [0.0198]
a/R* = 1.14 [0.01]
b = 1.00 [0.03]
Seff = 64.59 [28.09]
Teff = 723 [79] K
Rp = 5.07 [2.93] Re
a = 0.1532 [0.0403] AU
Ag = 31.30 [33.16] [0.91 σ]
Teffp = 2644 [671] K [2.84 σ]

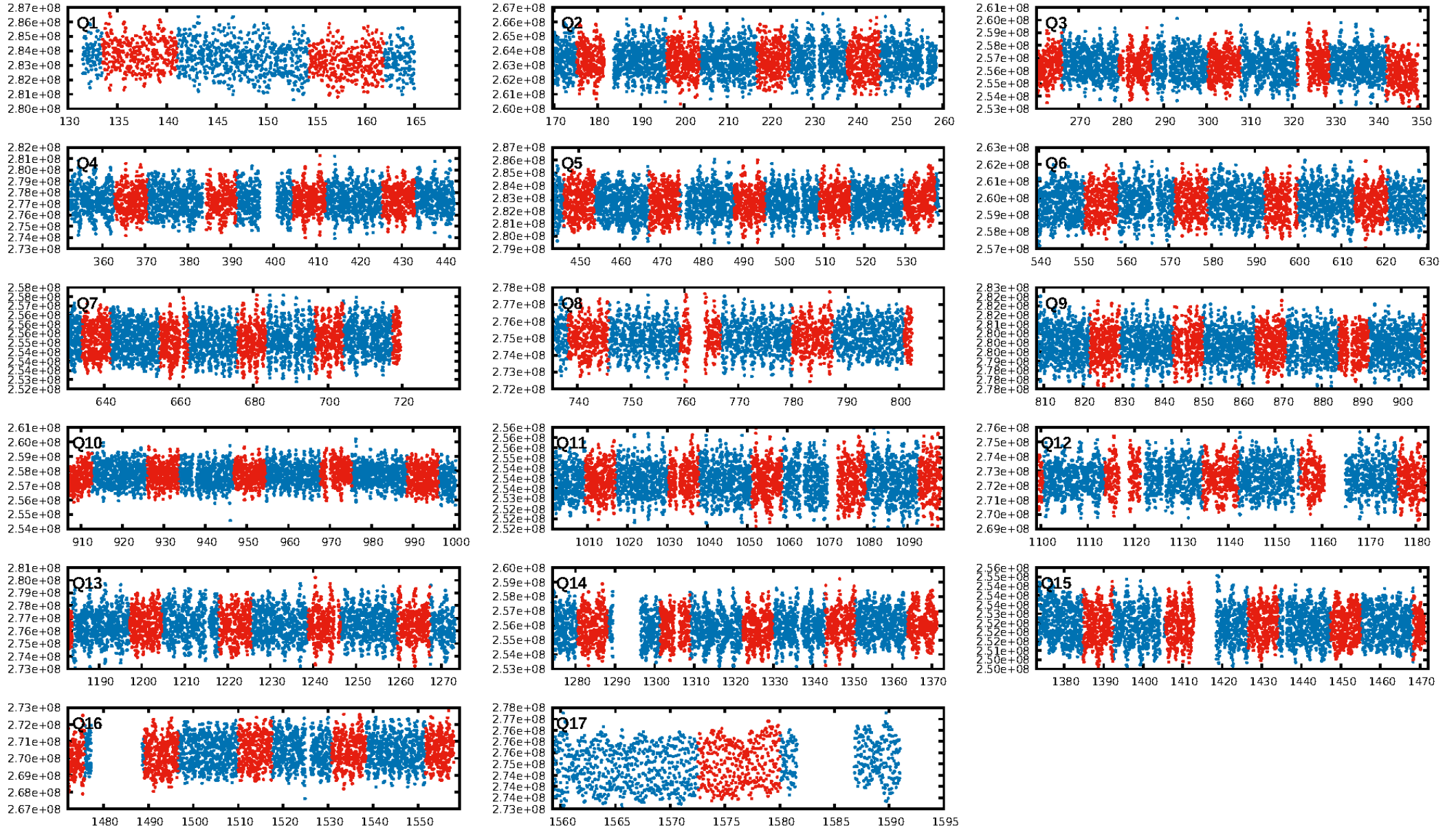
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 75.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.54e-17
RollingBand-fgt: 1.00 [66/66]
GhostDiagnostic-chr: 2.505
Centroid-sig: 51.4%
Centroid-so: 0.036 arcsec [0.61 σ]
OotOffset-rm: 0.202 arcsec [0.44 σ]
KicOffset-rm: 0.269 arcsec [0.52 σ]
OotOffset-st: 3/2/2/3 [10]
KicOffset-st: 3/2/2/3 [10]
DiffImageQuality-fgm: 1.00 [10/10]
DiffImageOverlap-fno: 1.00 [11/11]

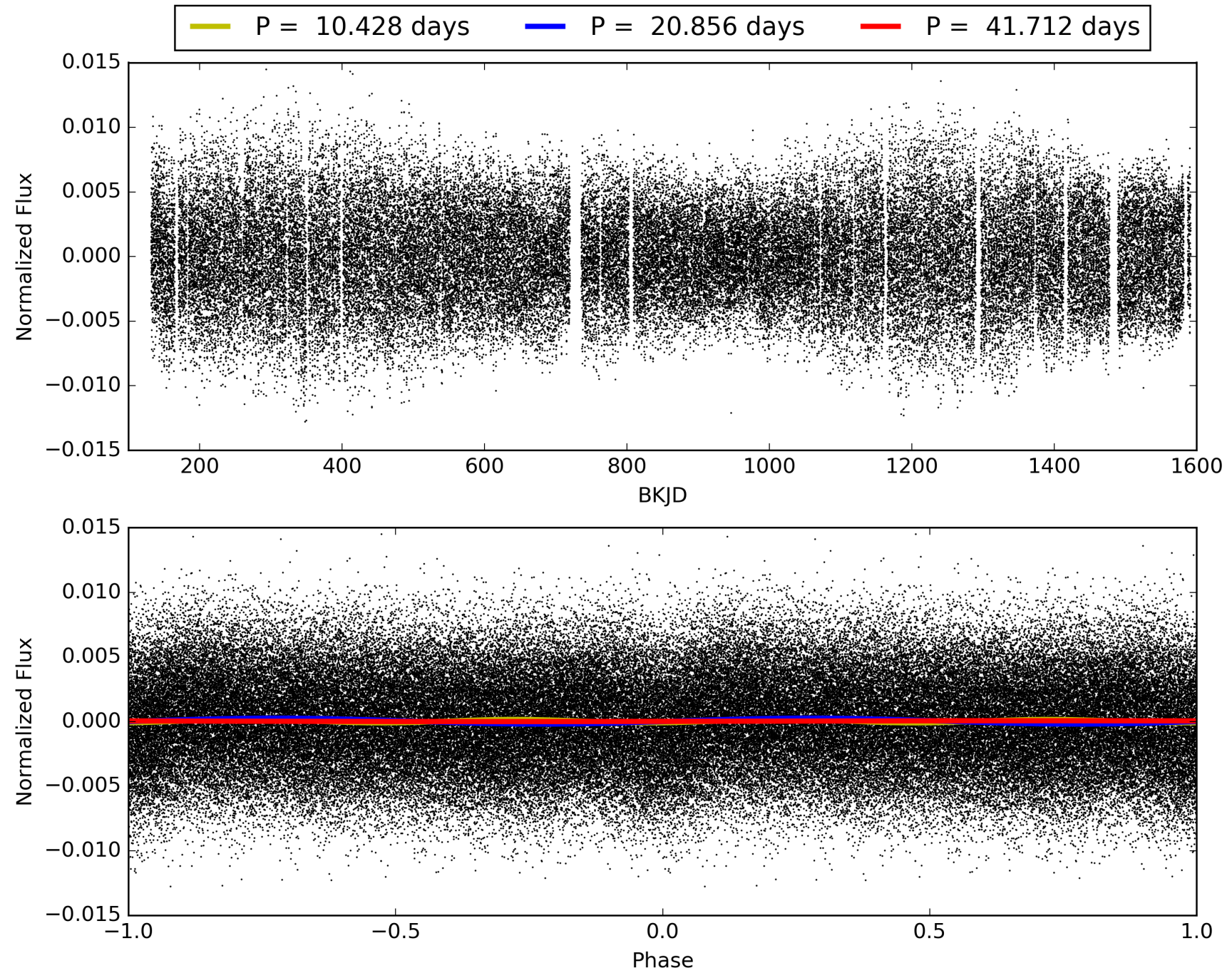
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 01:26:57 Z

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

TCE 006385010-01, PDC Light Curves

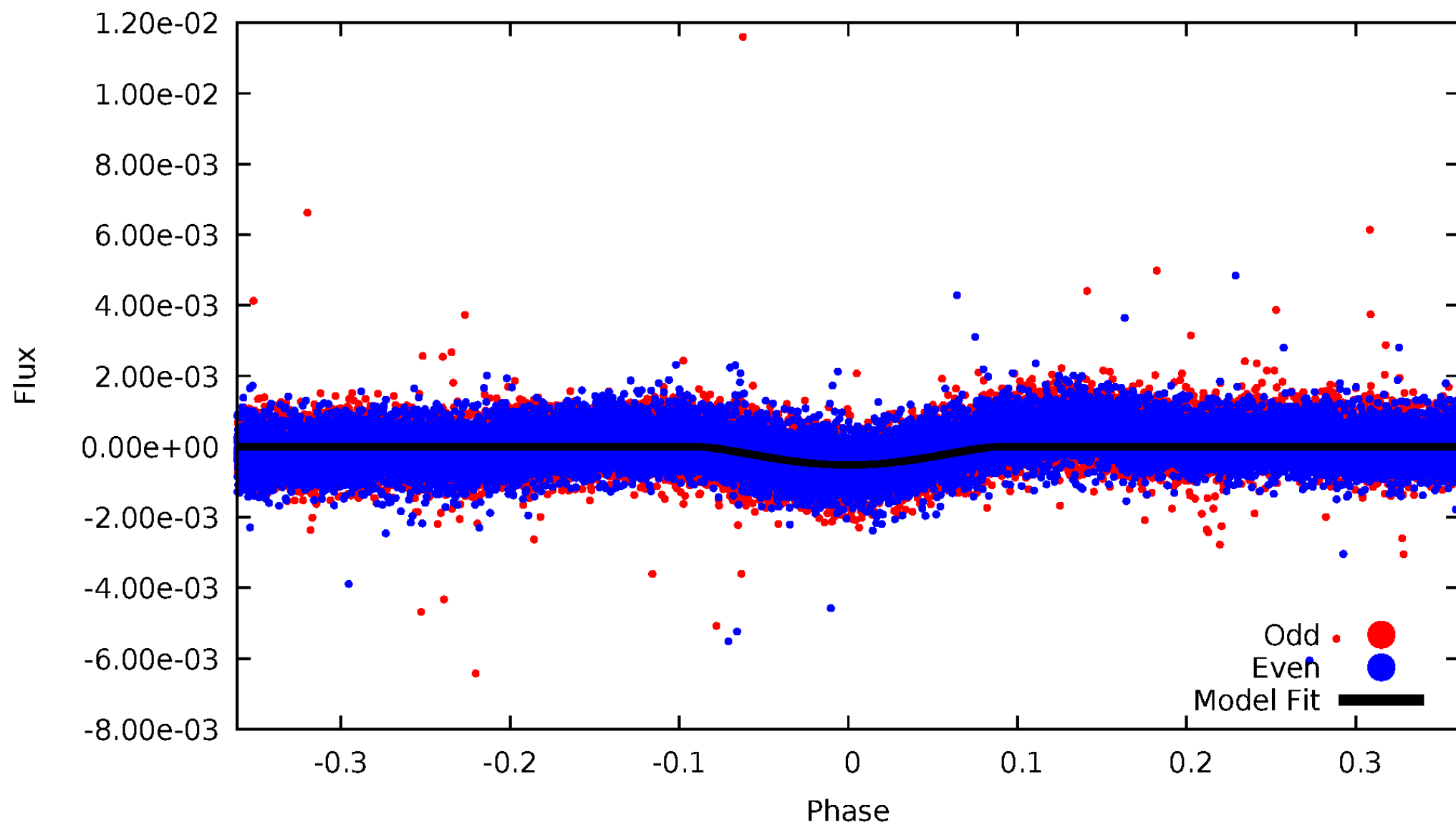


TCE 006385010-01



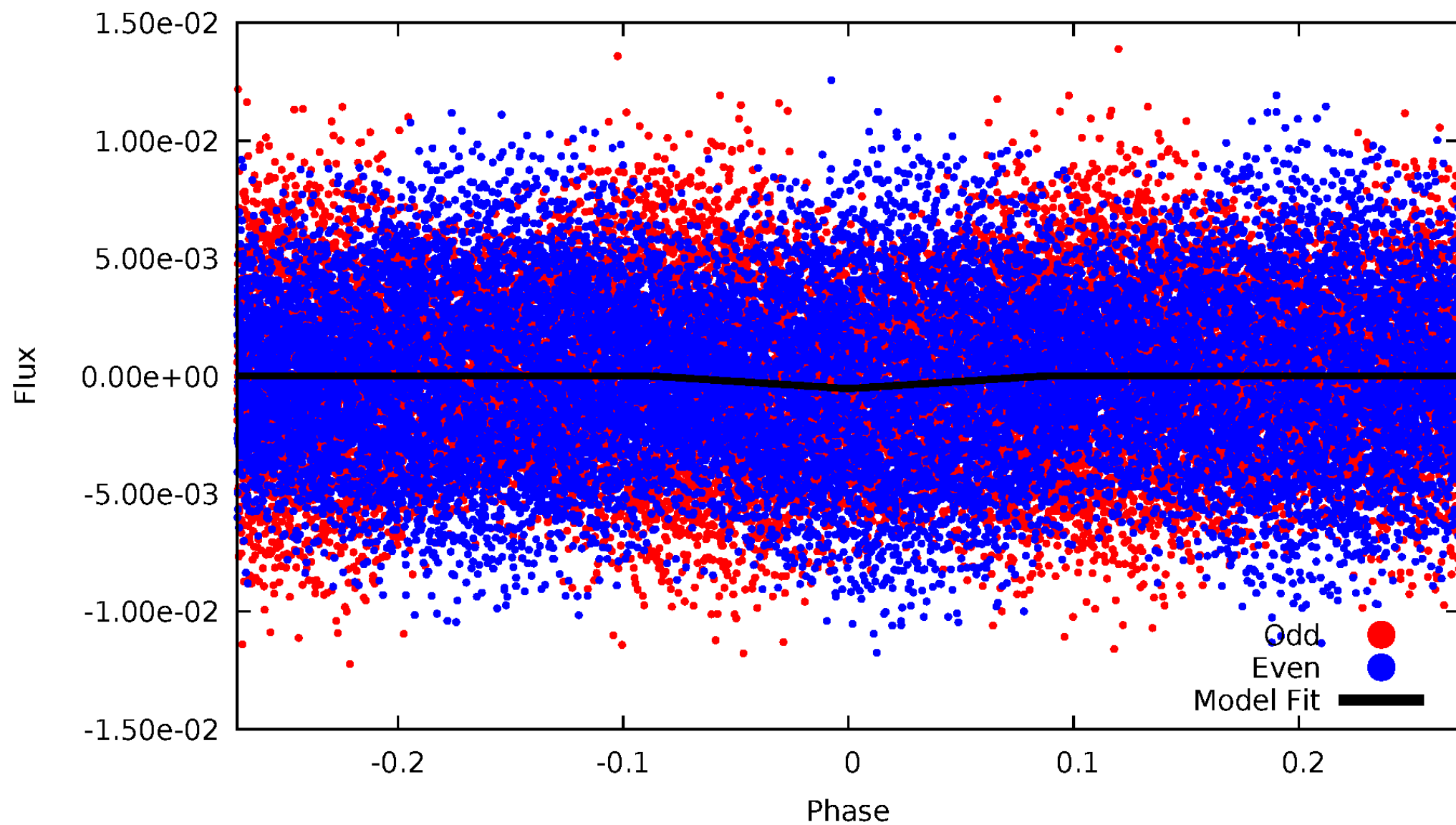
DV Odd/Even

TCE 006385010-01

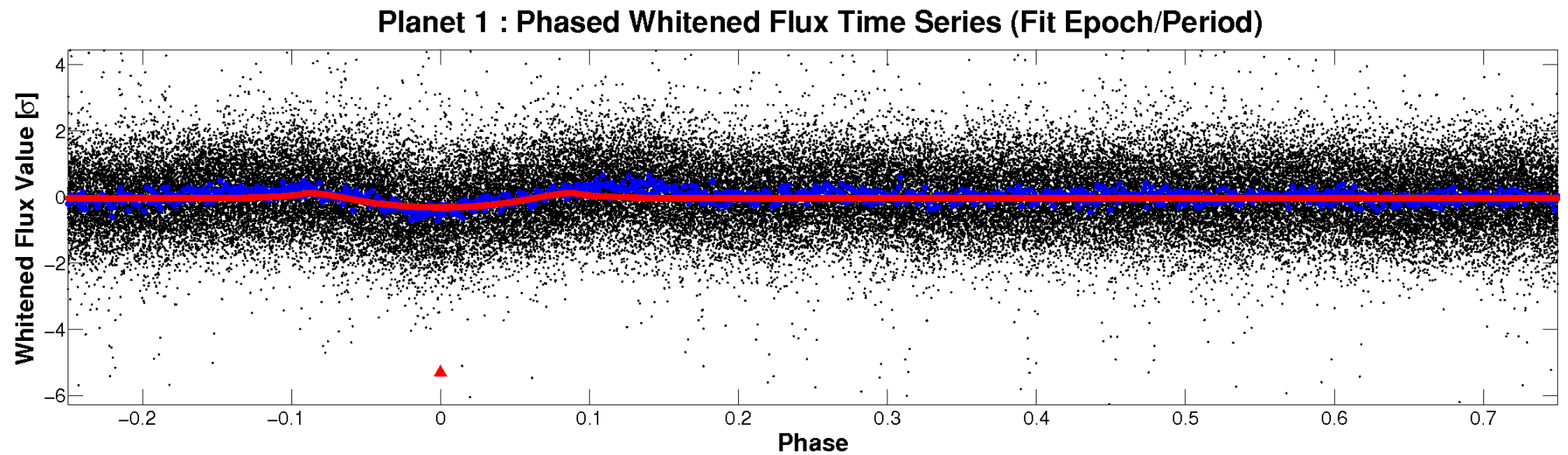
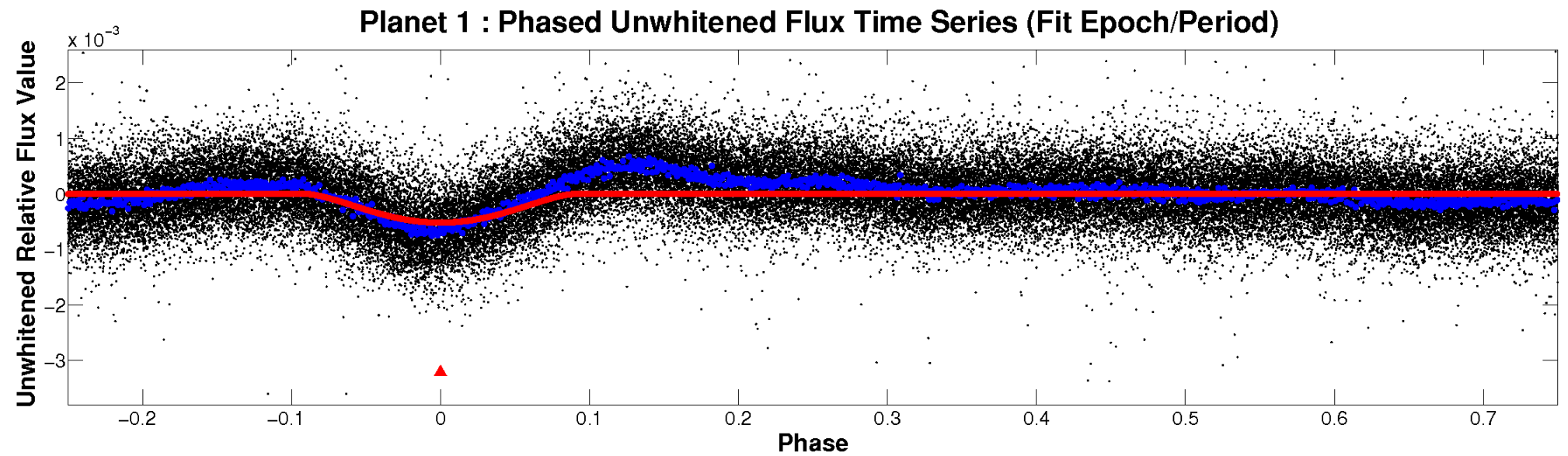


ALT Odd/Even

TCE 006385010-01

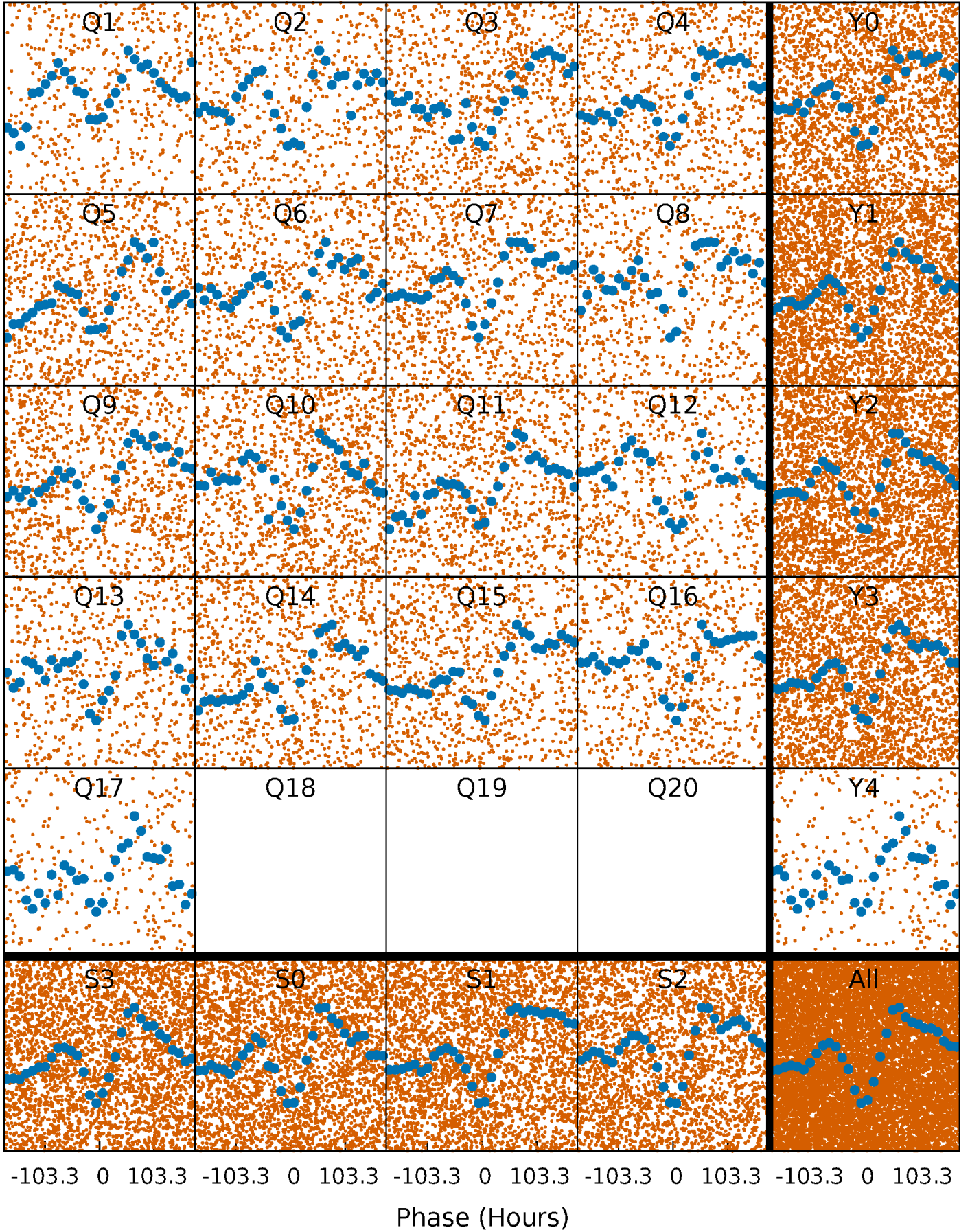


Non-Whitened Vs. Whitened Light Curve



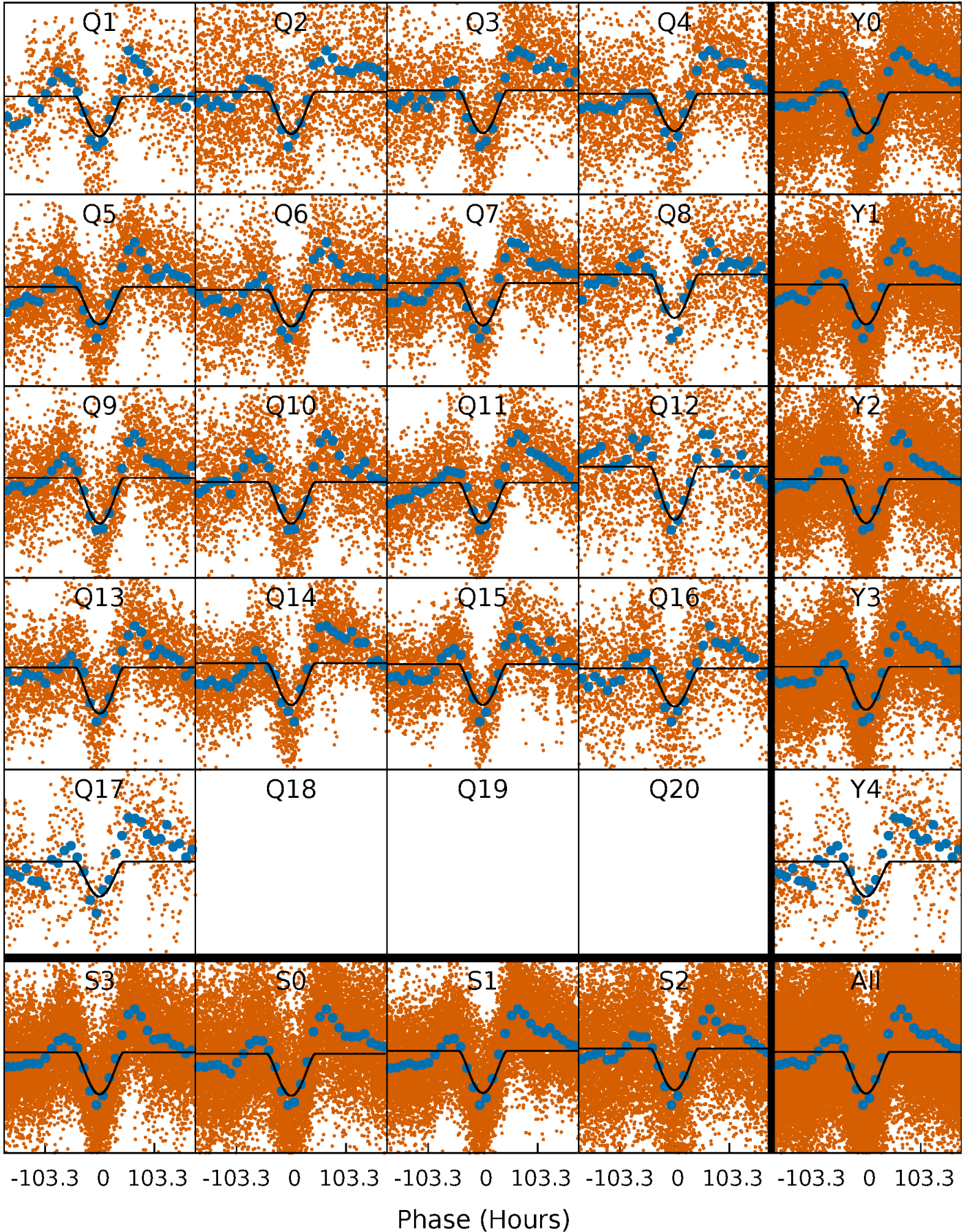
PDC Quarter-Phased Transit Curves

TCE 006385010-01 P= 20.855758 Days $T_0=137.238428$ (BKJD)



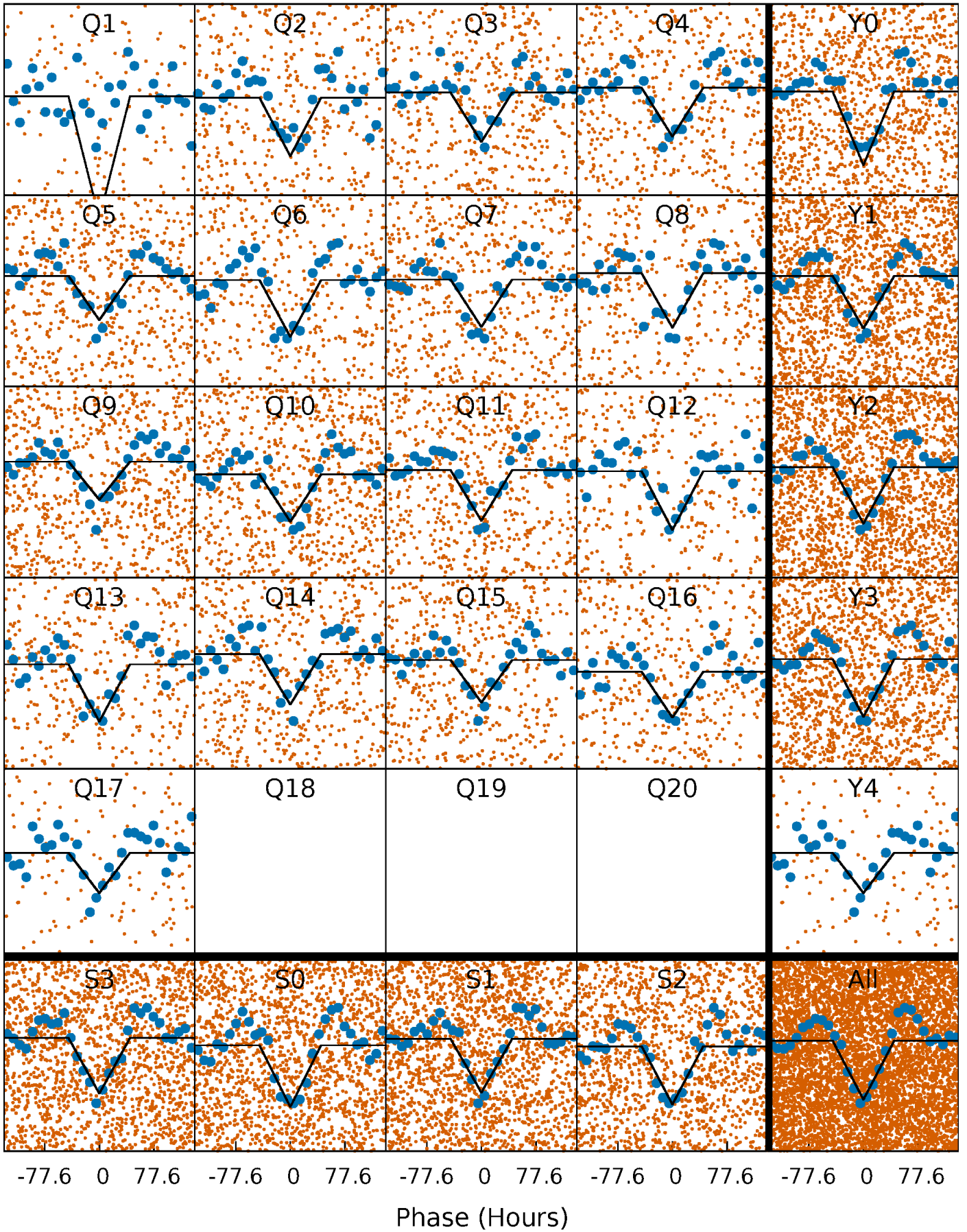
DV Quarter-Phased Transit Curves

TCE 006385010-01 P= 20.855758 Days $T_0=137.238428$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

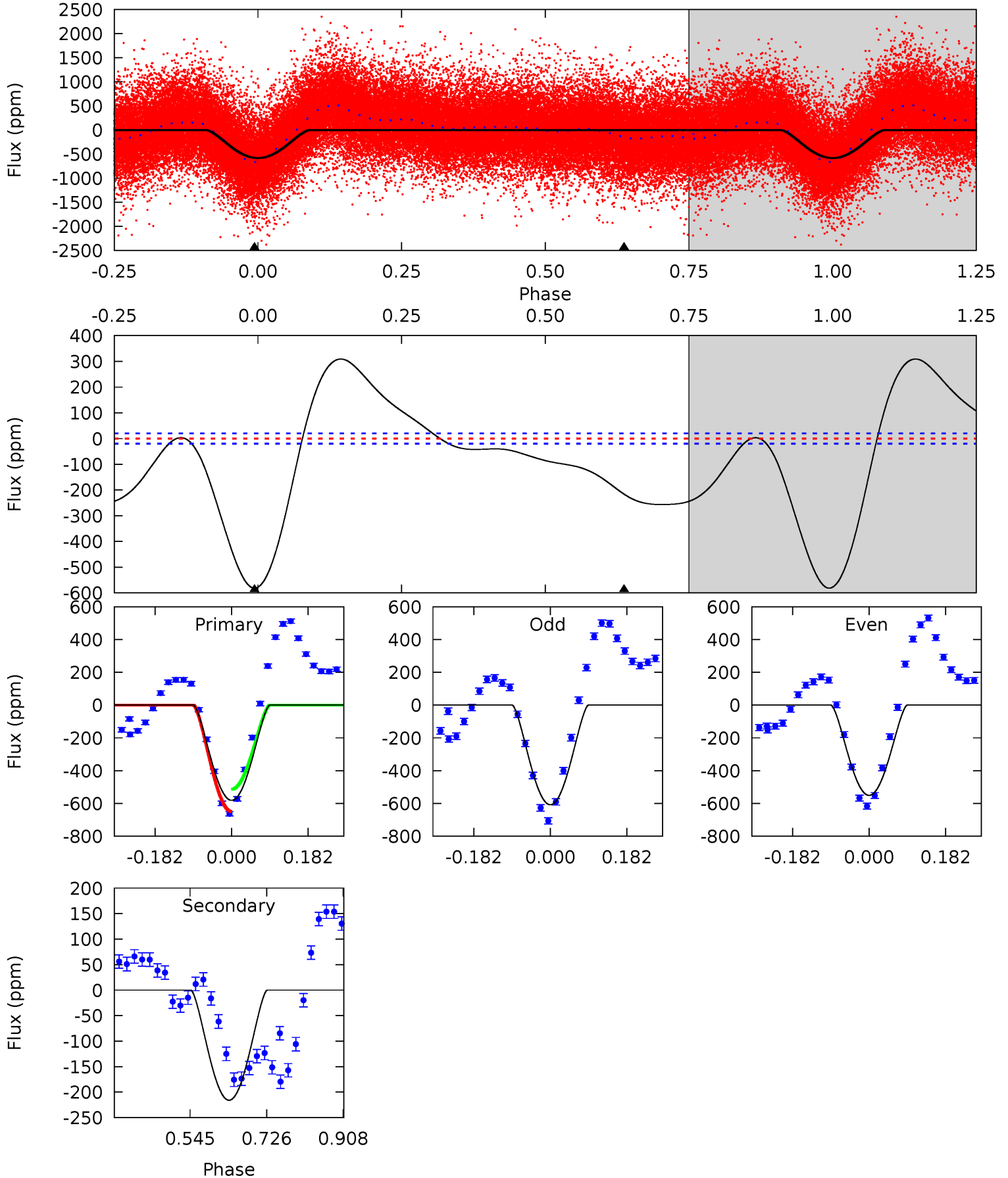
TCE 006385010-01 P= 20.856124 Days $T_0=137.244649$ (BKJD)



DV Model-Shift Uniqueness Test

006385010-01, P = 20.855758 Days, E = 116.382670 Days

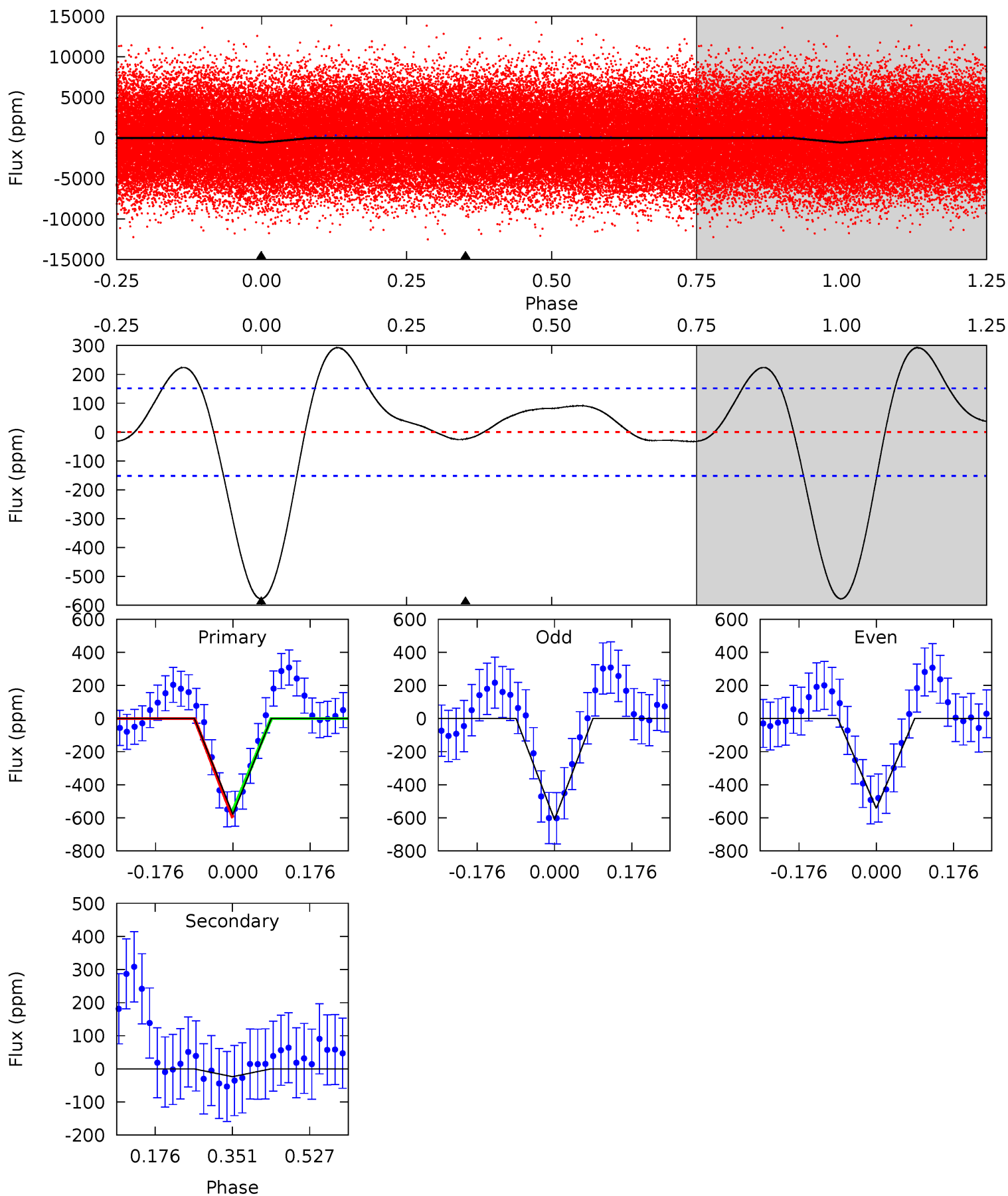
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
131.4	48.8	0	0	4.44	1.34	21.4	131.4	131.4	48.8	48.8	6.48	0.88	0.35	14.9



Alt Model-Shift Uniqueness Test

006385010-01, P = 20.856124 Days, E = 116.388525 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.0	0.70	0	0	4.45	1.35	1.49	17.0	17.0	0.70	0.70	0.97	0.93	0.34	0.60



Stellar Parameters For KIC 006385010

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6026^{+271}_{-332}	$4.372^{+0.108}_{-0.201}$	$0.100^{+0.250}_{-0.300}$	$1.133^{+0.362}_{-0.195}$	$1.104^{+0.164}_{-0.164}$	$1.069^{+0.552}_{-0.580}$
	+4%/-6%	+2%/-5%	+250%/-300%	+32%/-17%	+15%/-15%	+52%/-54%
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 006385010-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-216 ± 4	$5.44^{+2.55}_{-2.50}$	1025^{+78}_{-82}	3883^{+1000}_{-470}	96^{+216}_{-52}
Alt.	-24 ± 34	$3.28^{+2.58}_{-1.75}$	1019^{+85}_{-76}	3004^{+1180}_{-5841}	18^{+126}_{-29}

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

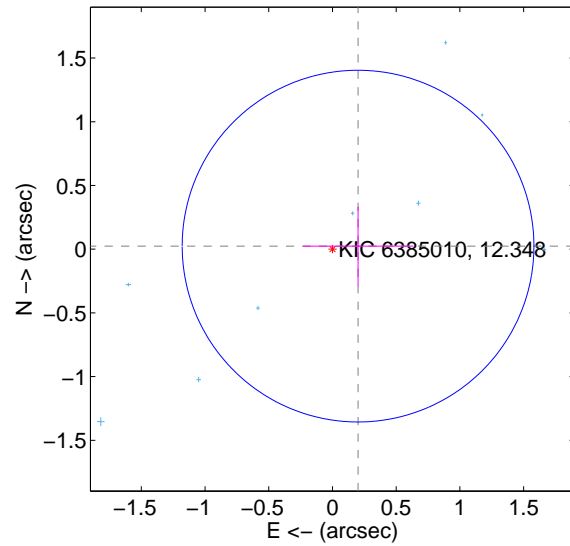
Supplemental centroid analysis for 006385010-01. Kepler magnitude: 12.35. Transit SNR 22.60

There are 10 quarters with good PRF difference image offsets

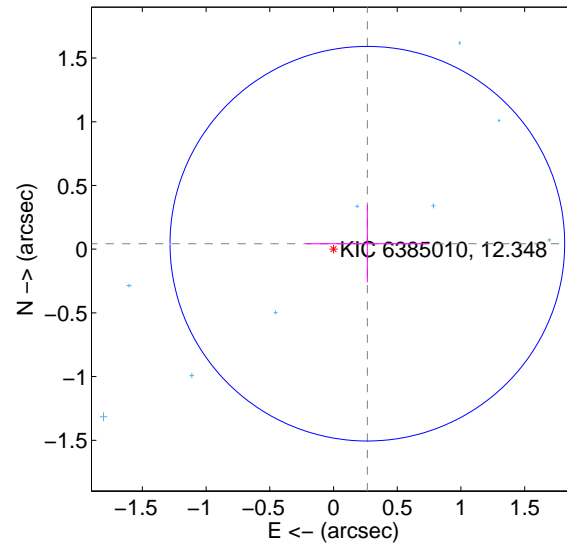
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.202 ± 0.460	0.44	-0.201 ± 0.434	0.024 ± 0.310
PRF-fit source offset from KIC position	0.269 ± 0.516	0.52	-0.266 ± 0.481	0.043 ± 0.303
photometric centroid source offset	0.04 ± 0.06	0.61	0.01 ± 0.06	0.04 ± 0.06

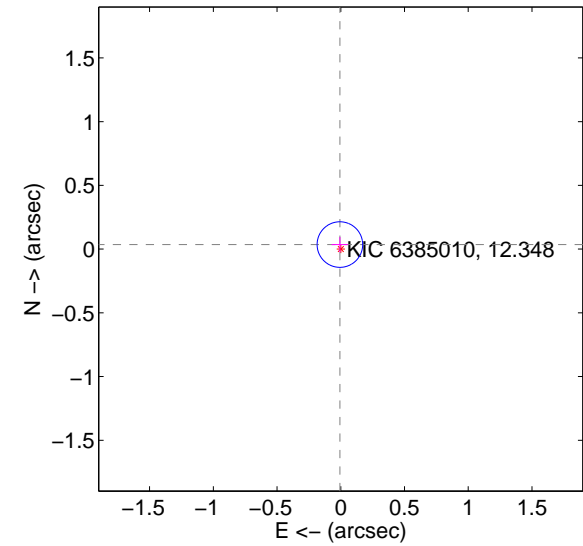
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

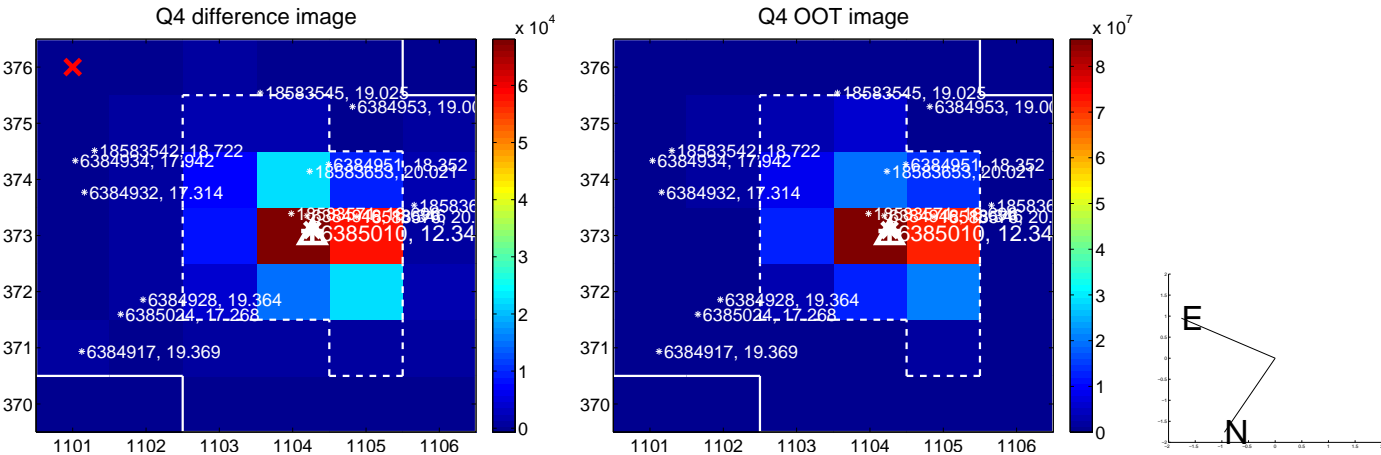
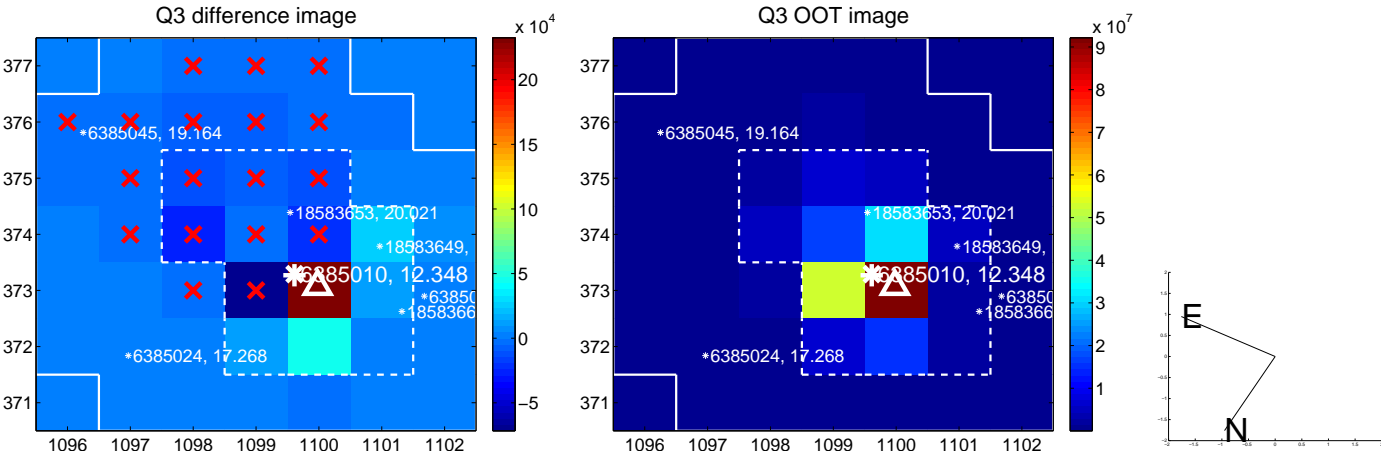
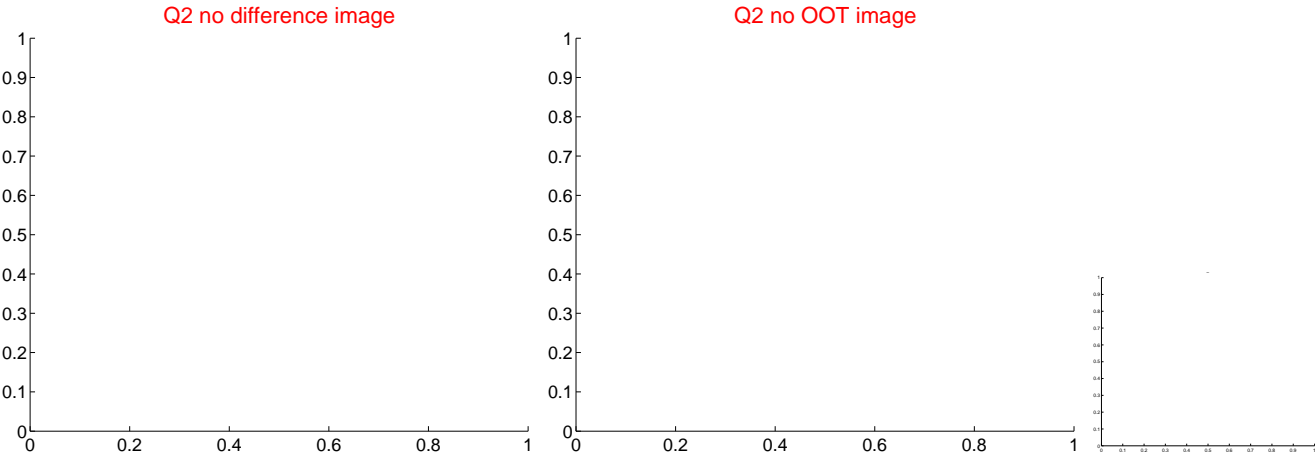
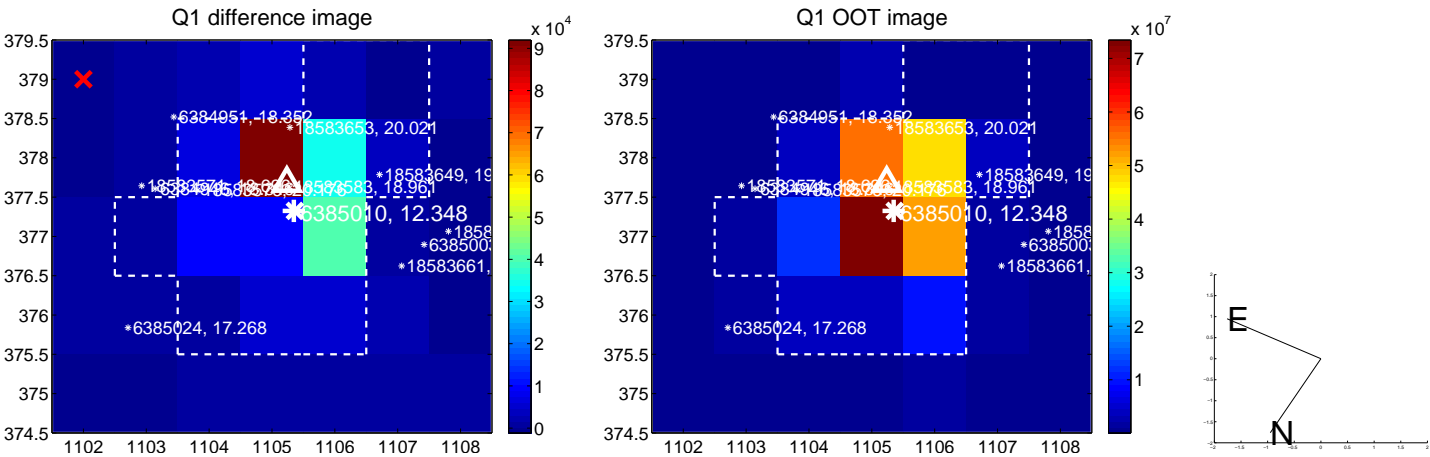


offset from photometric centroids

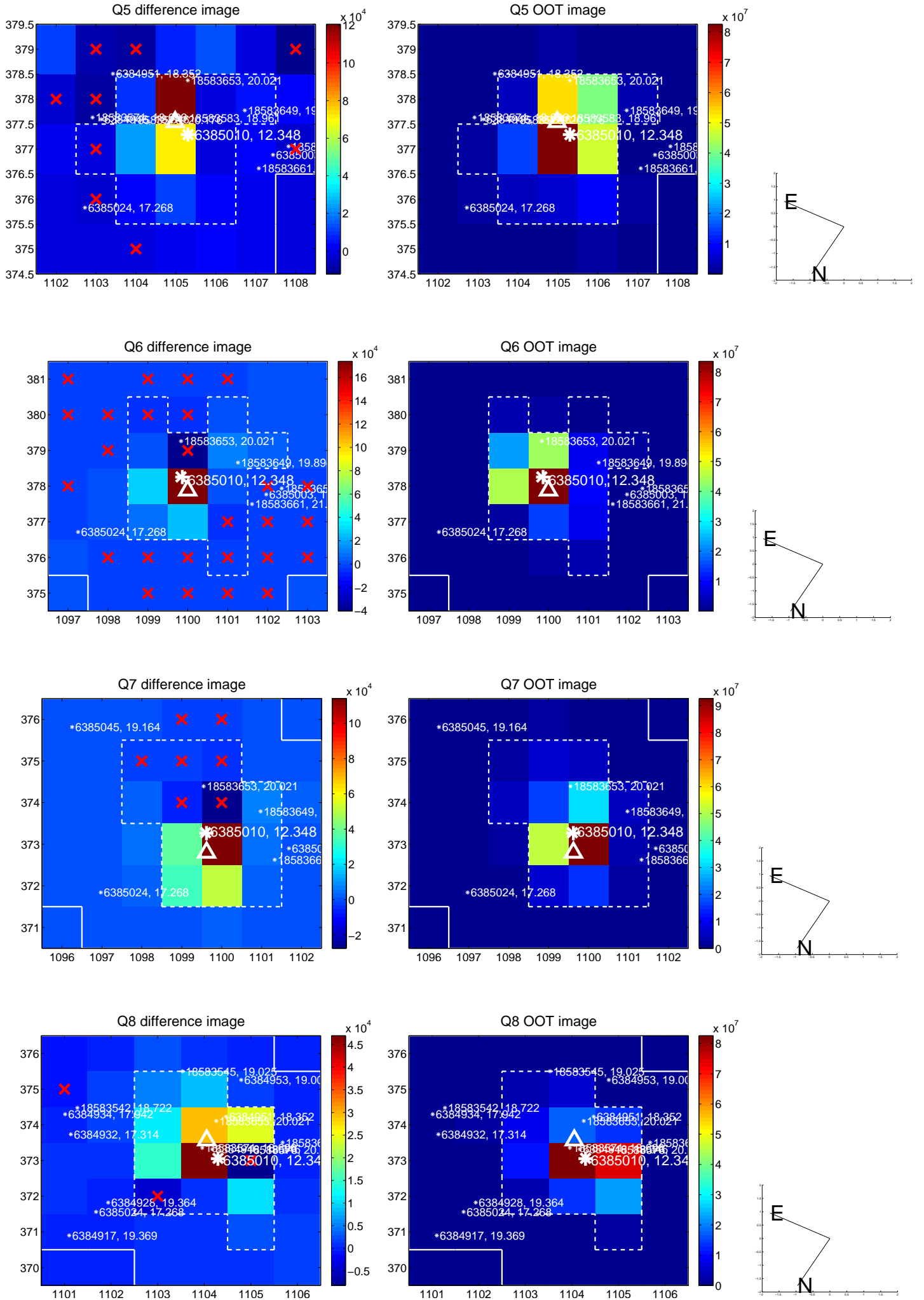


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

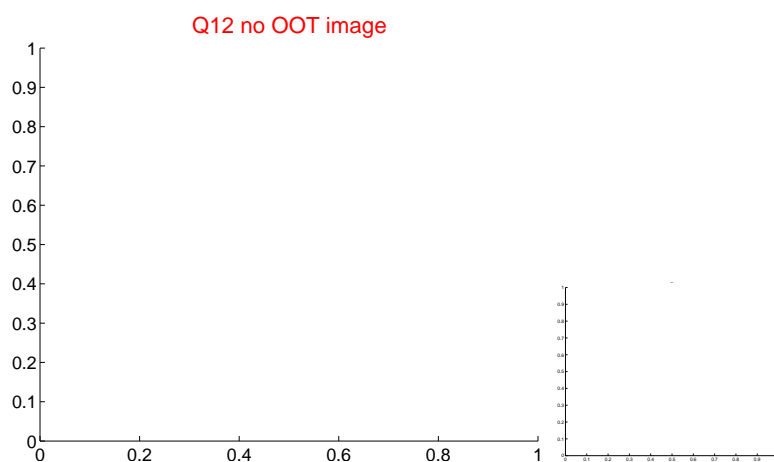
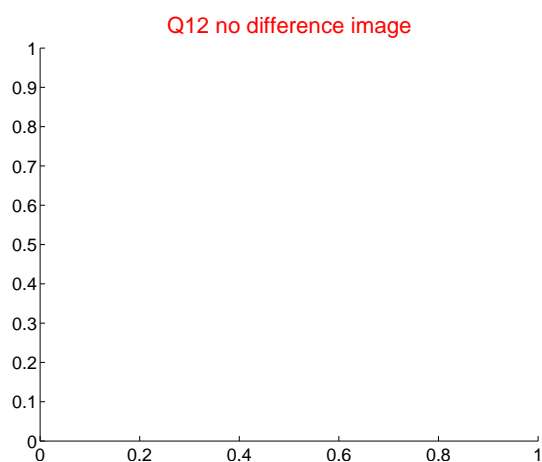
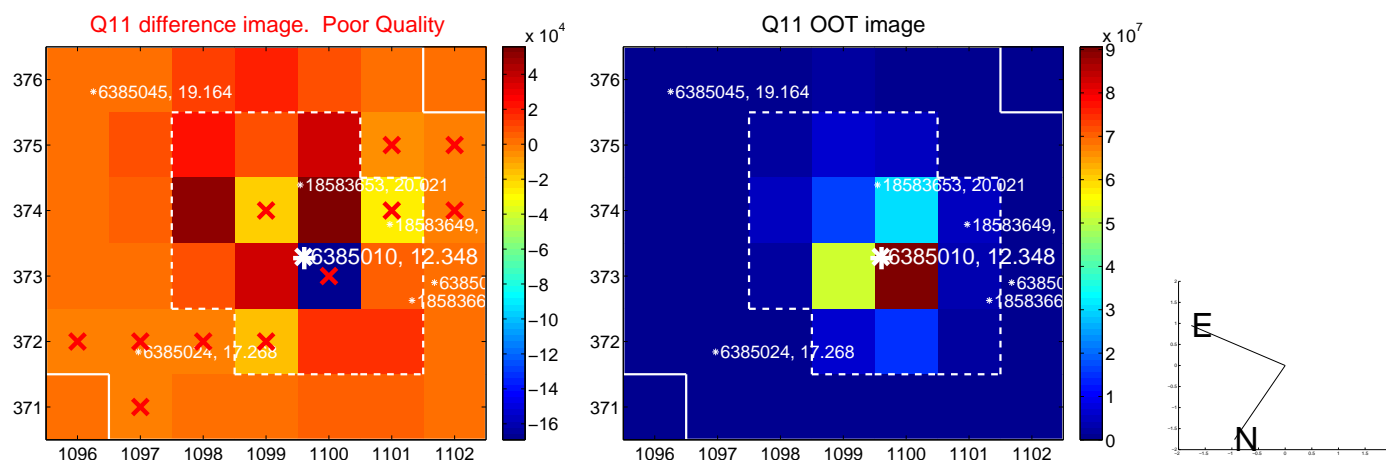
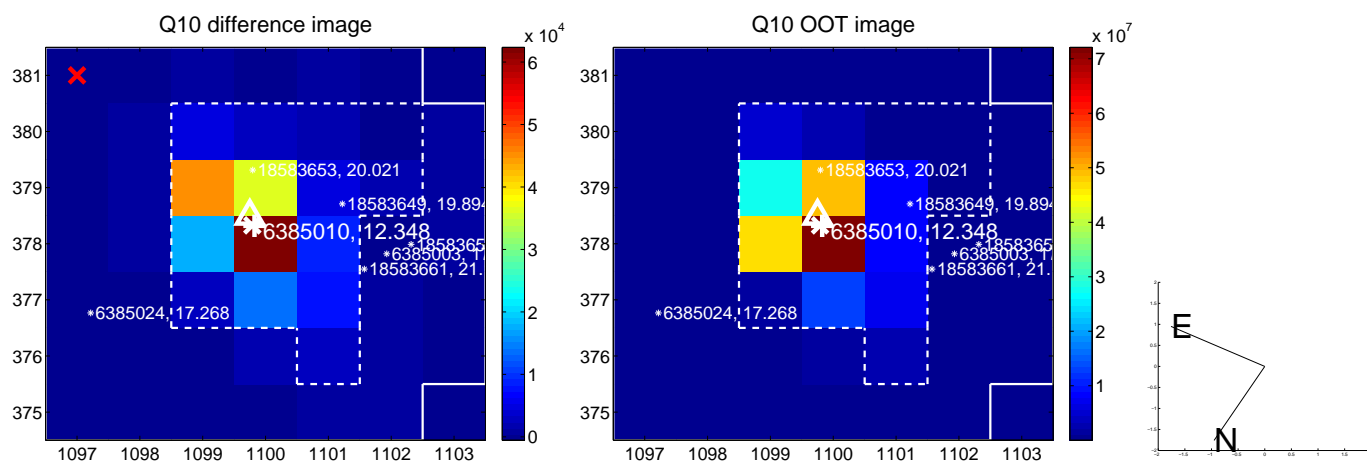
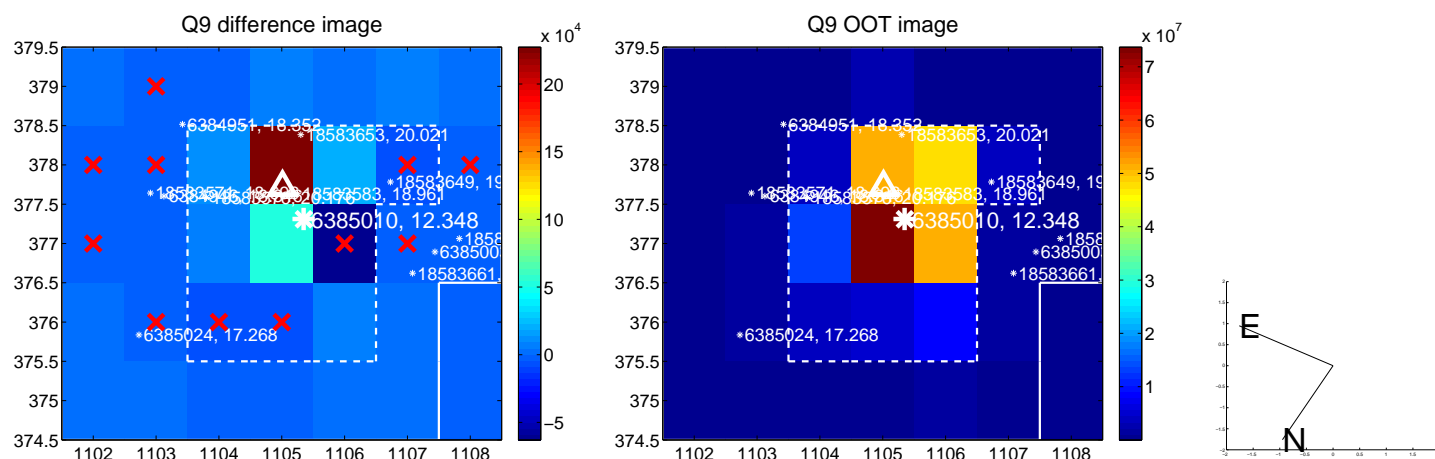
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



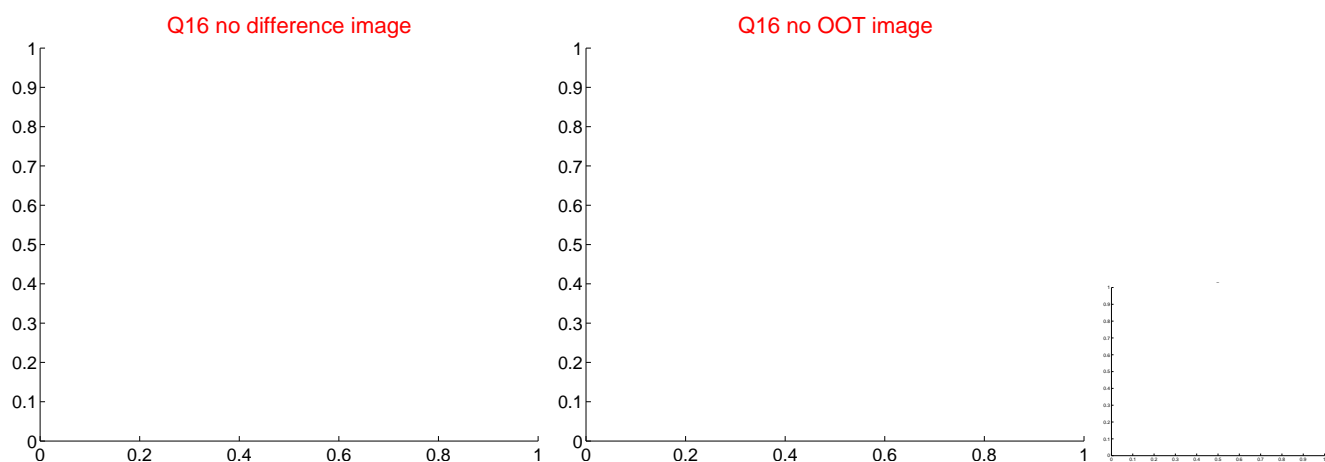
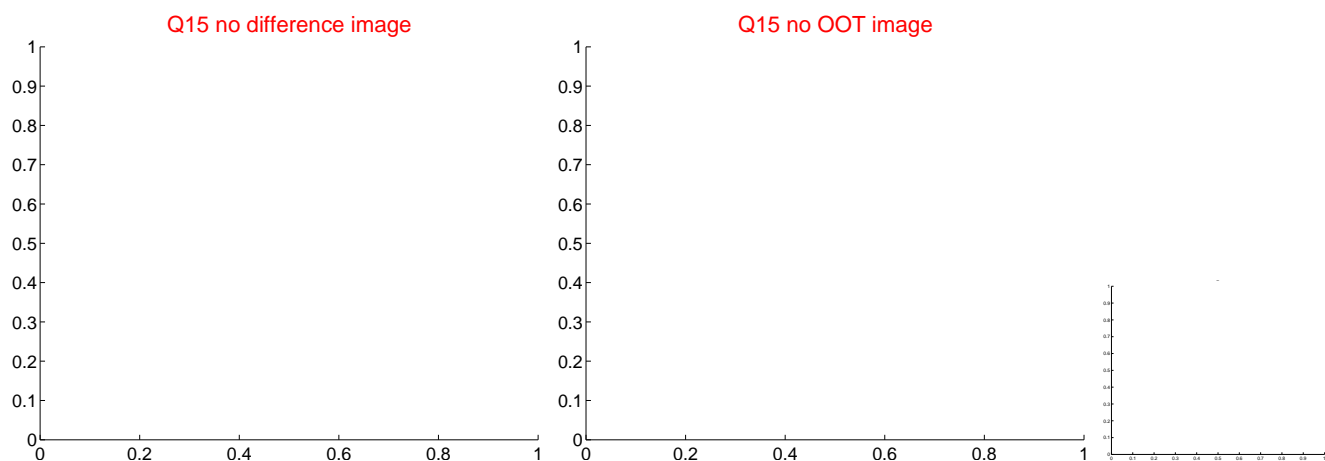
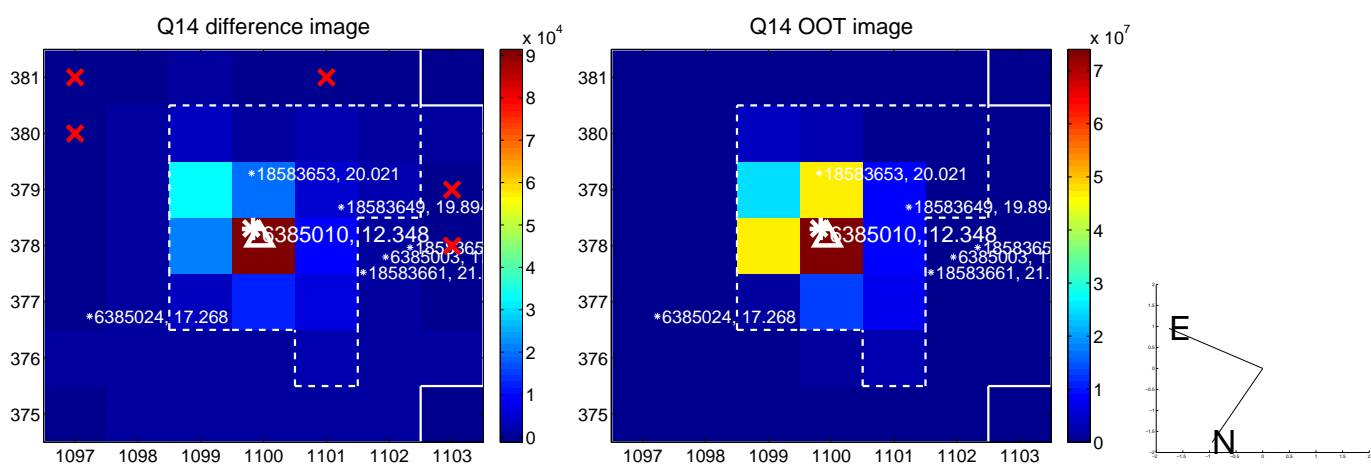
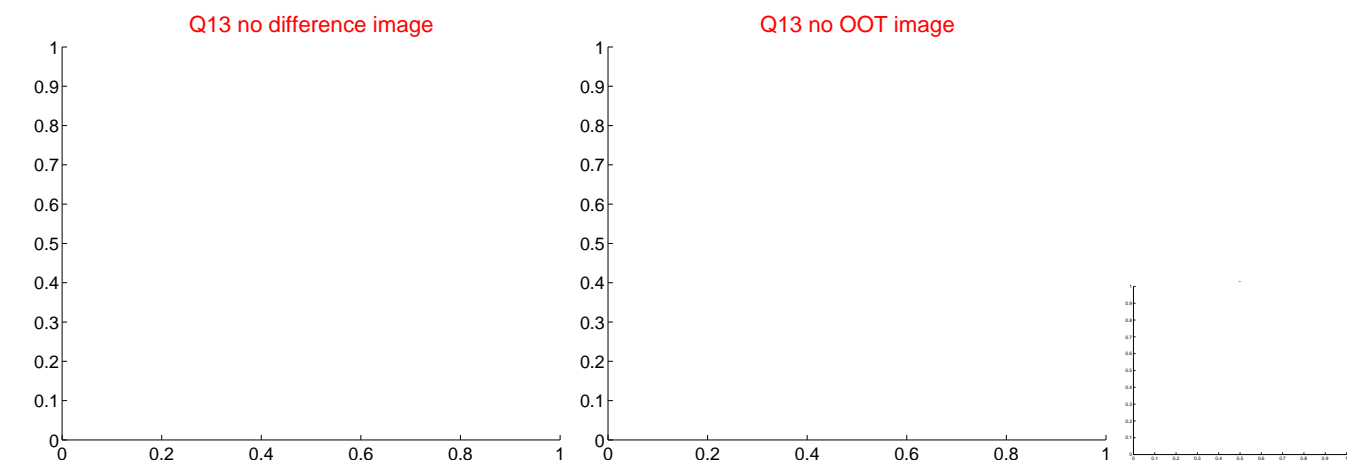
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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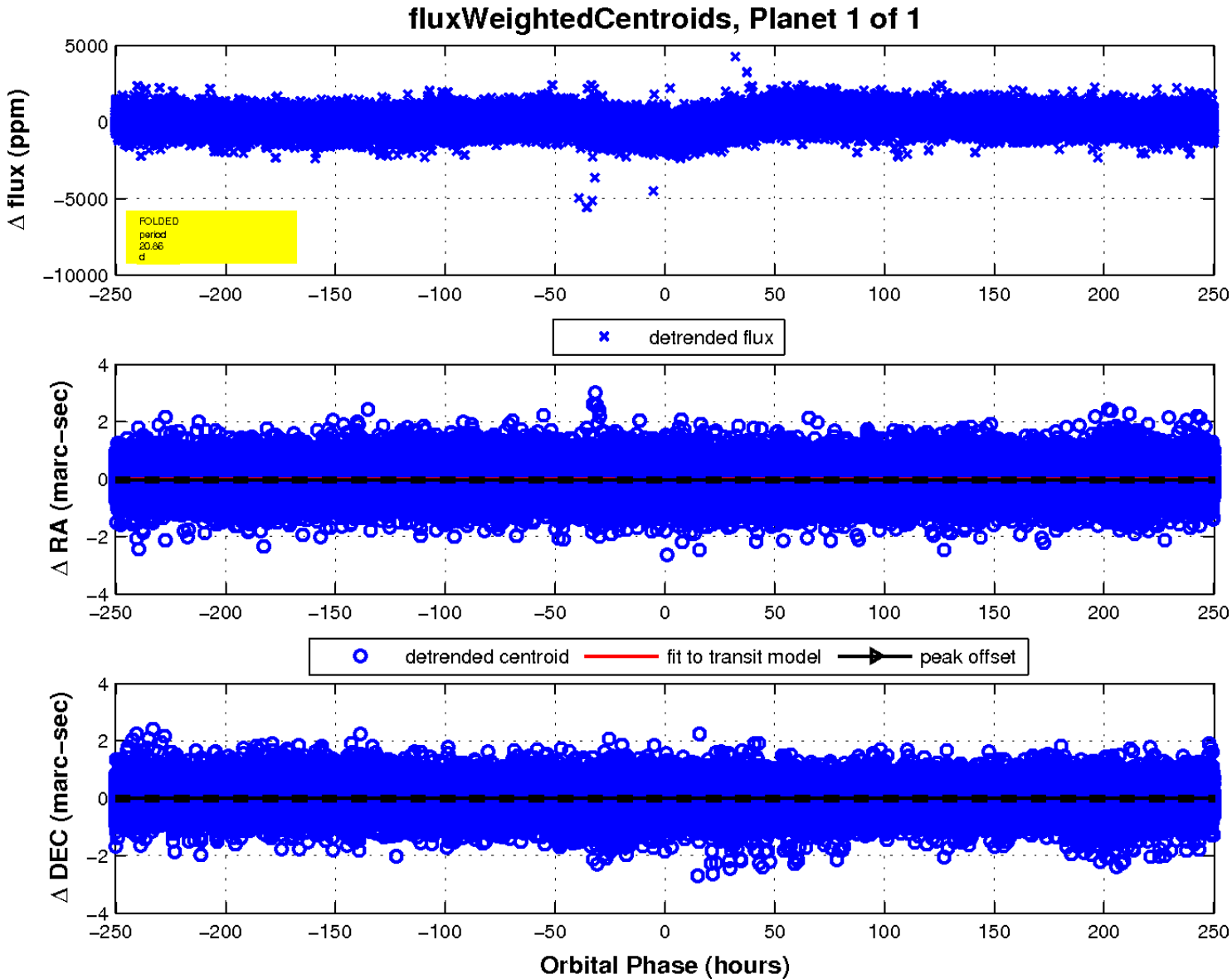
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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

Q17 no difference image

Q17 no OOT image



UKIRT Image

Declination

