

KIC 005286221

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})
005286221-01	OBS	No	15.296157	139.895137	262.6	38.892	22.5	34.4	2.14	8233	6.65	834.50

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005286221-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_FEW_DIFFS

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

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

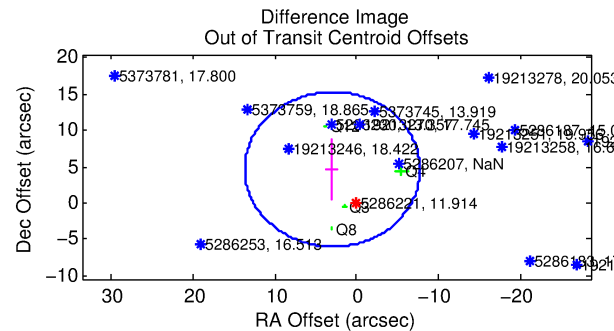
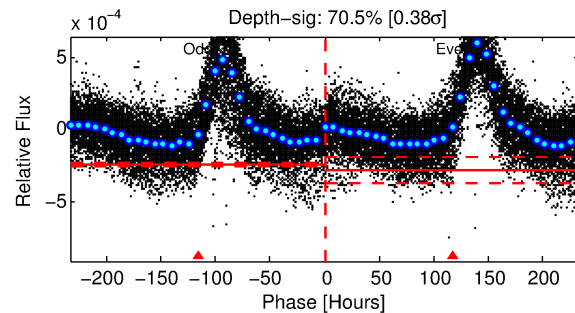
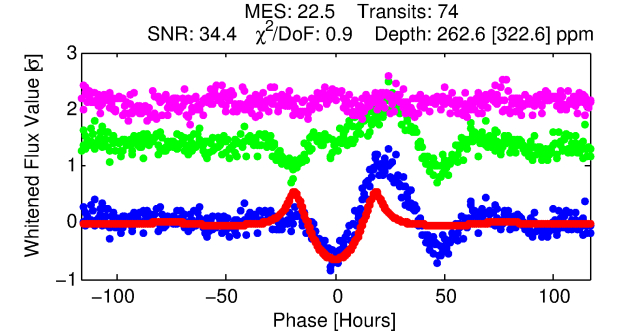
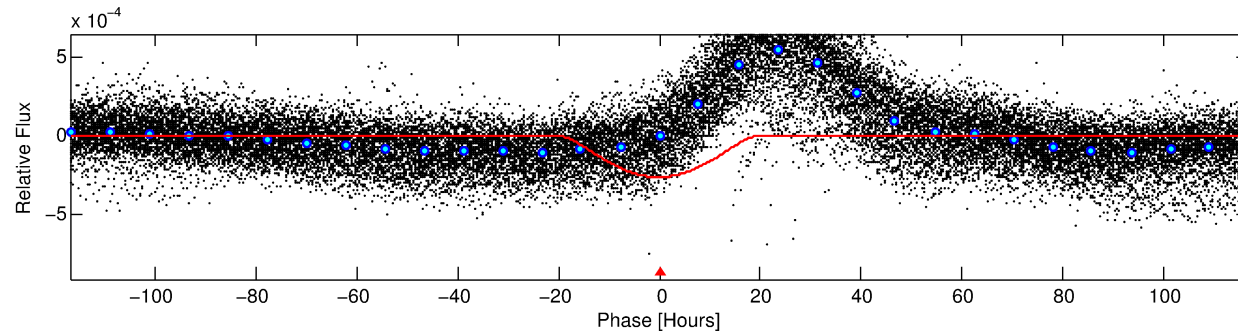
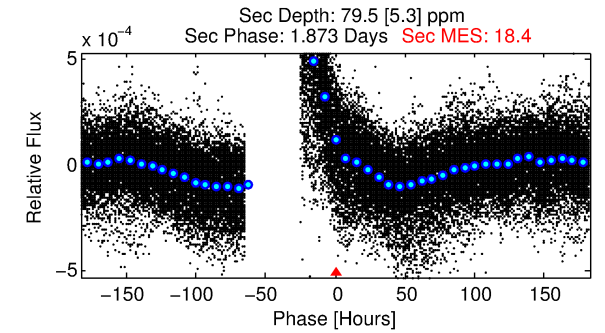
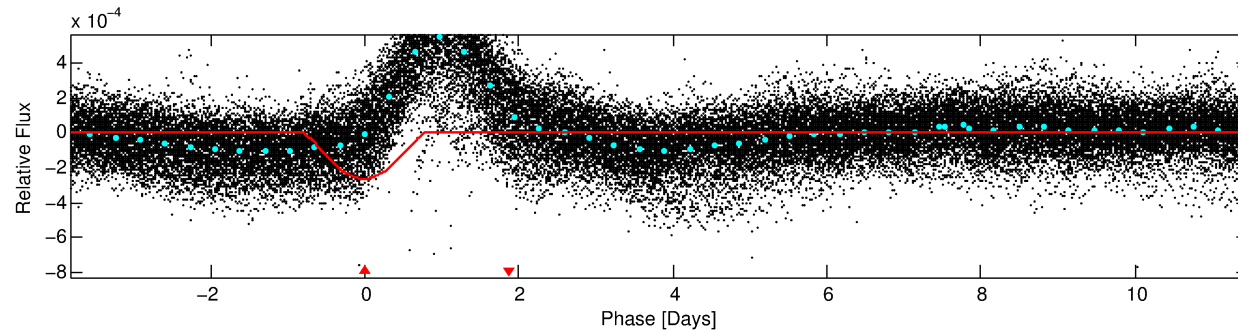
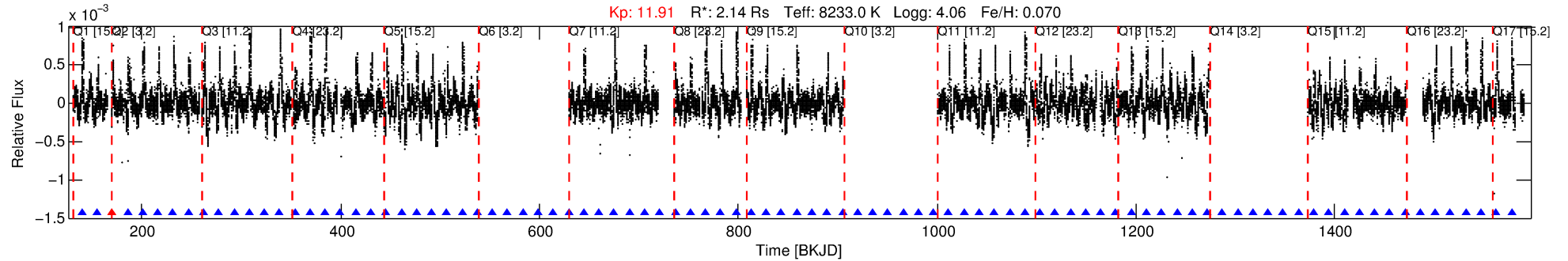
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005286221-01

No Significant Match Found

DV One-Page Summary

KIC: 5286221 Candidate: 1 of 1 Period: 15.296 d



DV Fit Results:

Period = 15.29616 [0.00025] d
Epoch = 139.8951 [0.0137] BKJD
Rp/R* = 0.0285 [0.0077]
b = 1.00 [0.01]
Seff = 834.50 [288.98]
Teff = 1371 [119] K
Rp = 6.65 [2.39] Re
a = 0.1504 [0.0299] AU
Ag = 22.34 [13.82] [1.54 σ]
Teffp = 4607 [665] K [4.79 σ]

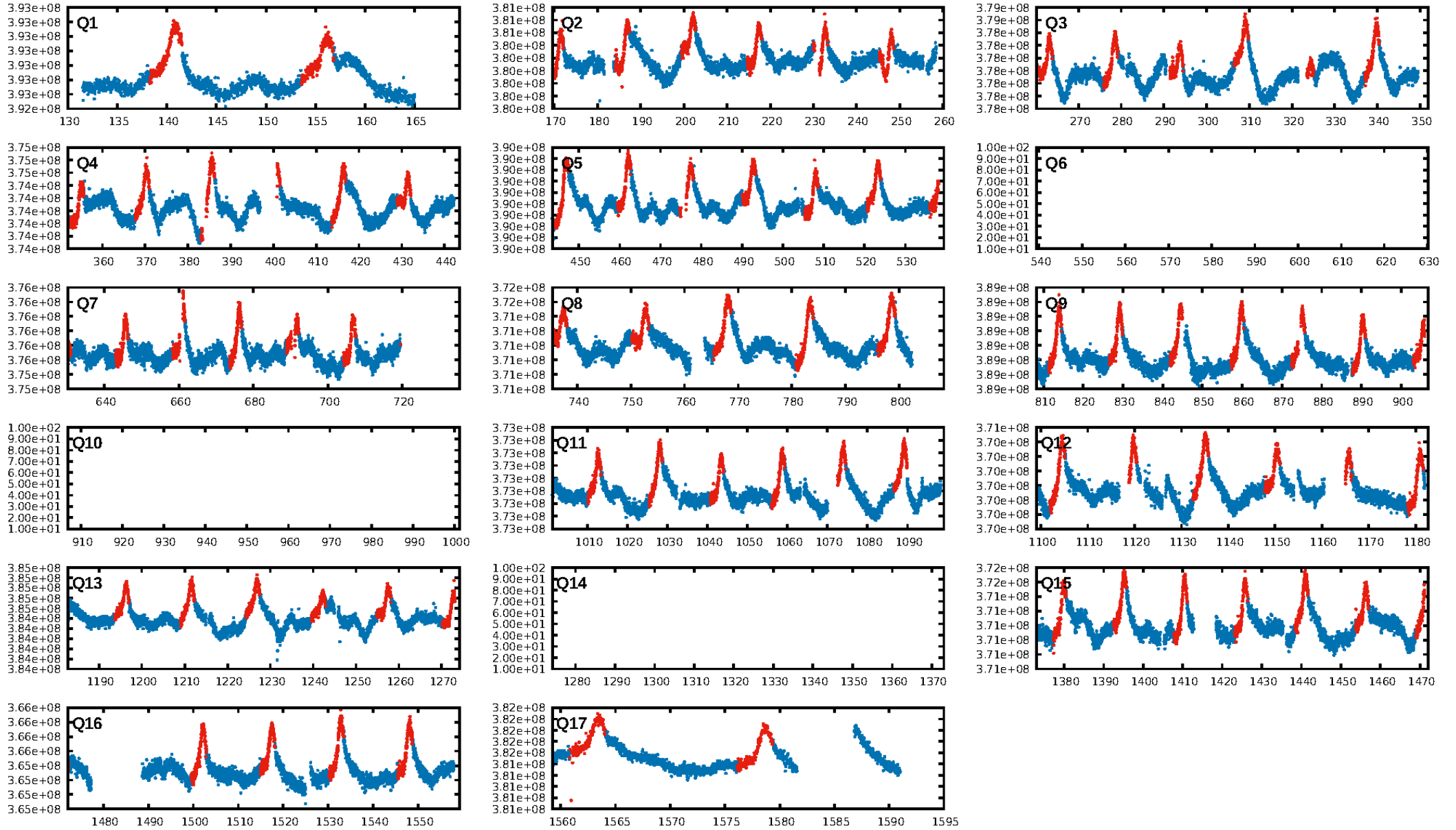
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 38.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 5.42e-118
RollingBand-fgt: 0.99 [69/70]
GhostDiagnostic-chr: 0.7689
Centroid-sig: 0.0%
Centroid-so: 1.601 arcsec [5.79 σ]
OotOffset-rm: 5.504 arcsec [1.55 σ]
KicOffset-rm: 5.431 arcsec [1.52 σ]
OotOffset-st: 0/1/3/0 [4]
KicOffset-st: 0/1/3/0 [4]
DiffImageQuality-fgm: 0.00 [0/4]
DiffImageOverlap-fno: 1.00 [13/13]

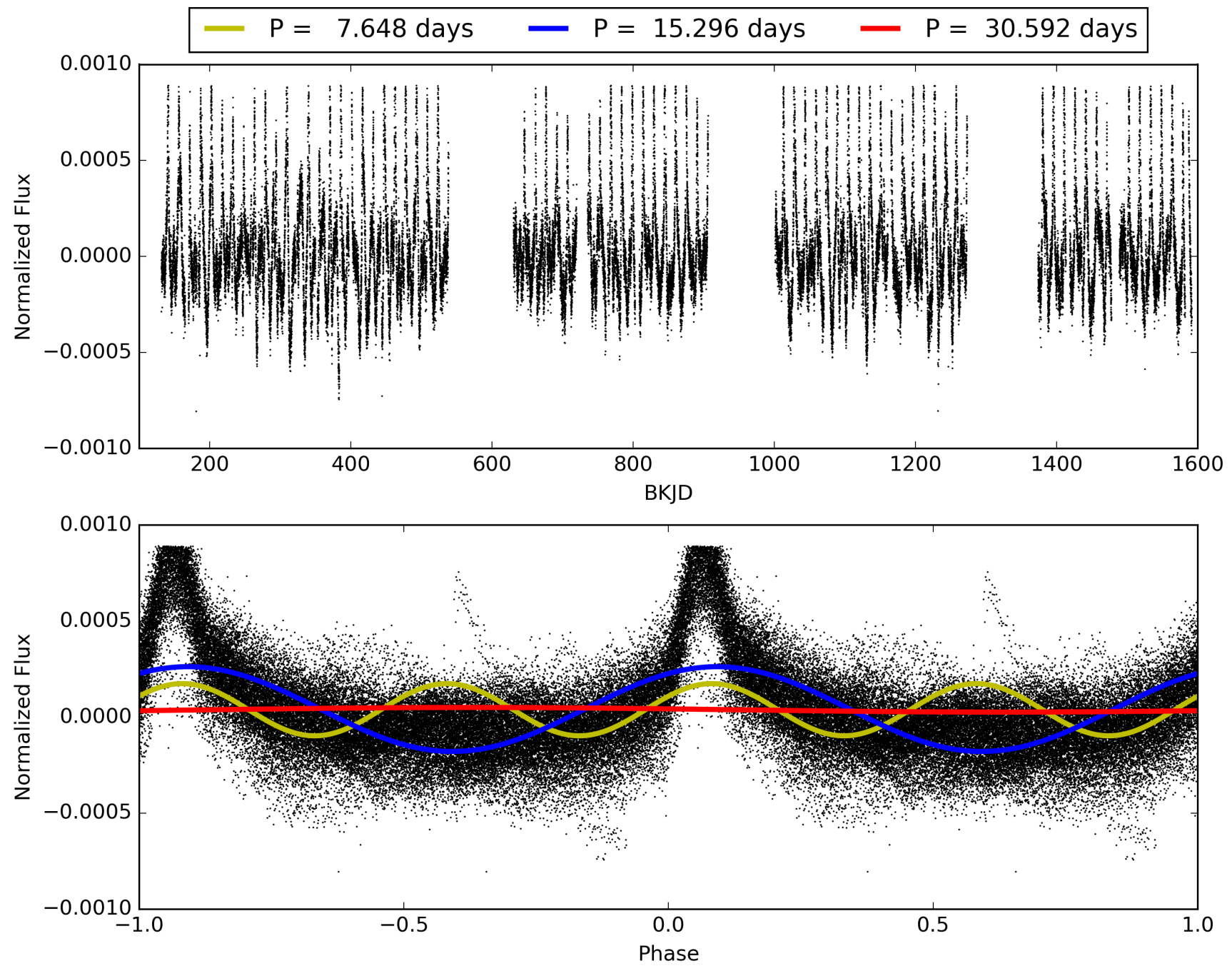
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 01:06:53 Z

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

TCE 005286221-01, PDC Light Curves

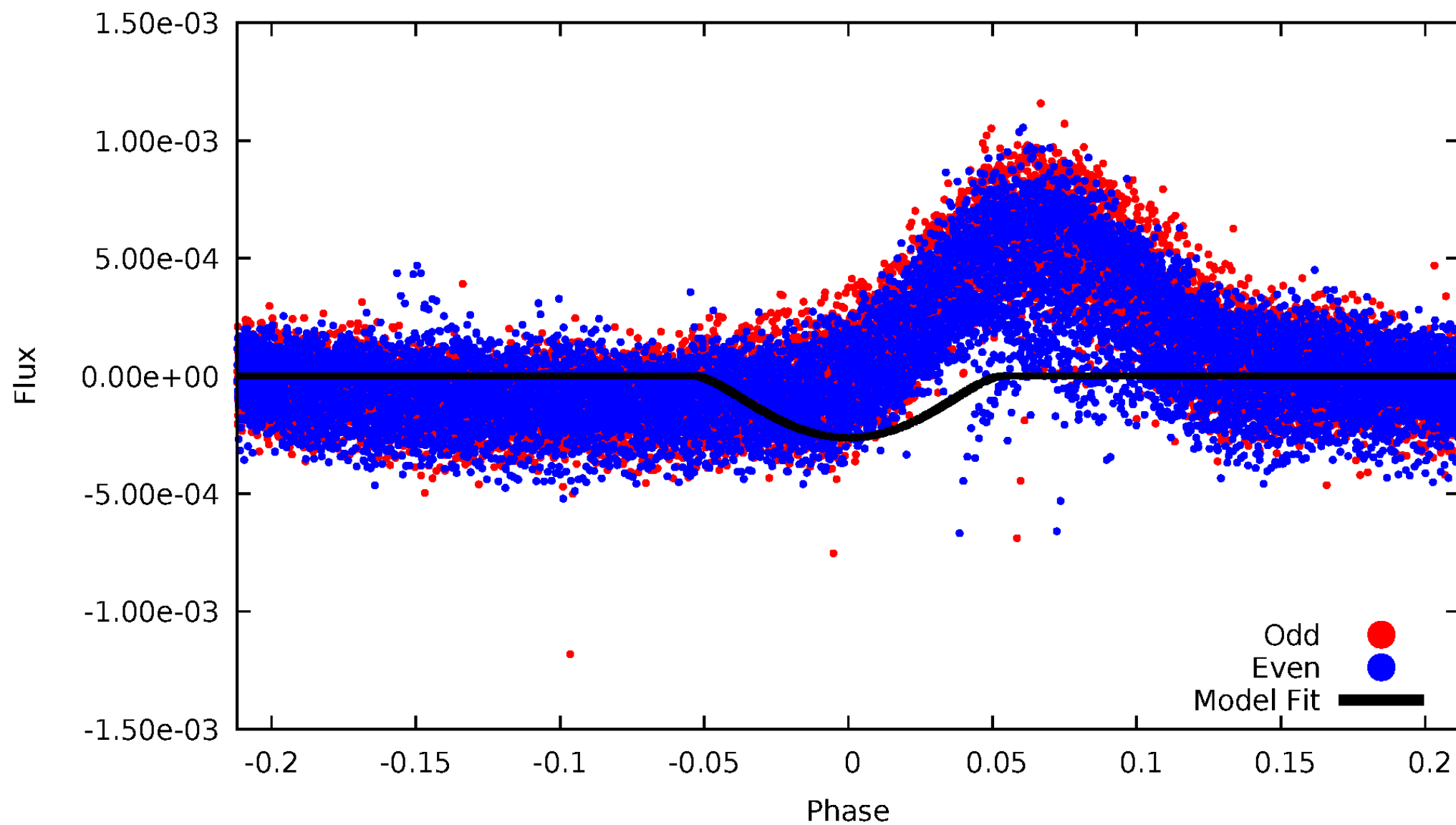


TCE 005286221-01



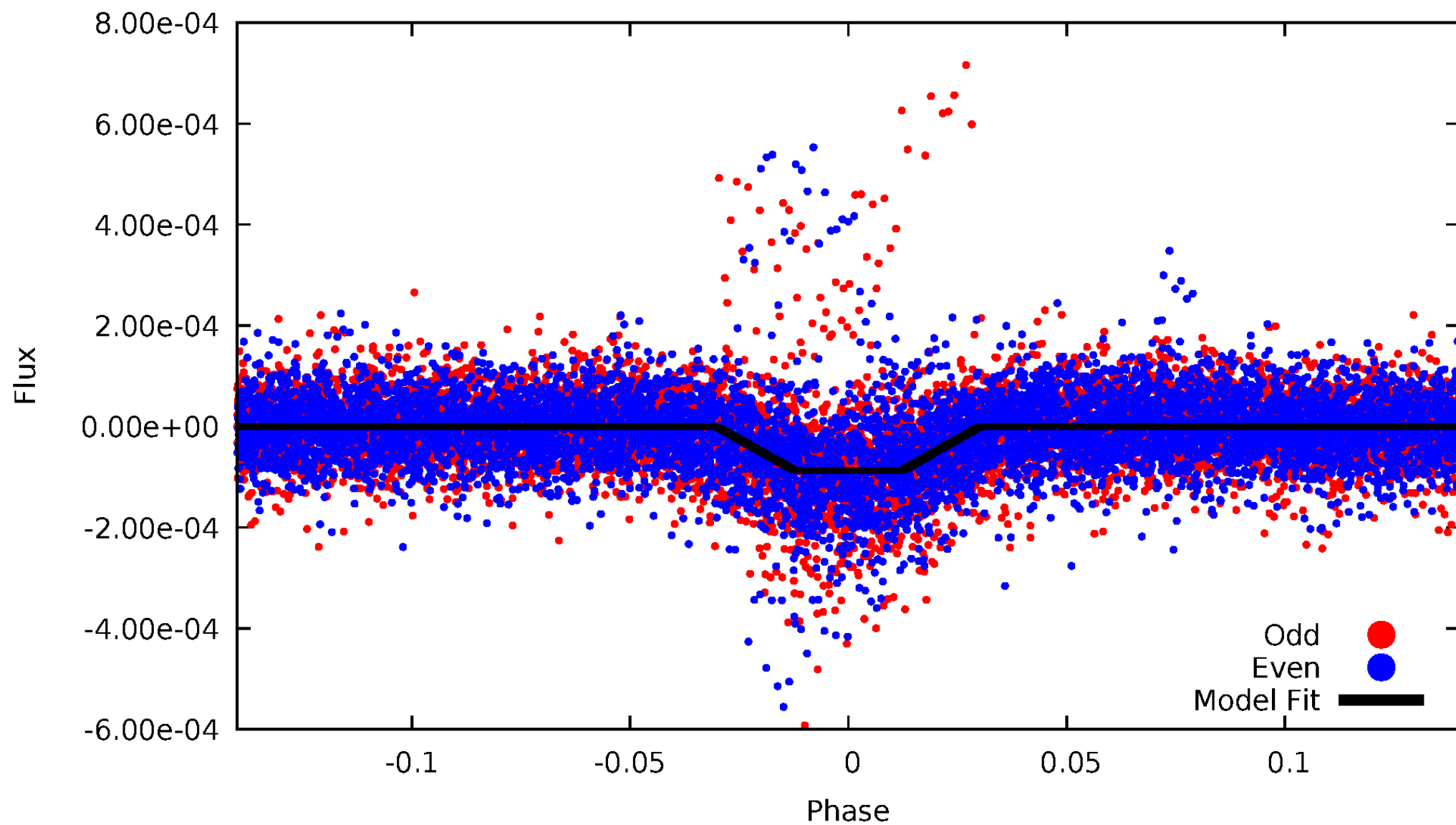
DV Odd/Even

TCE 005286221-01



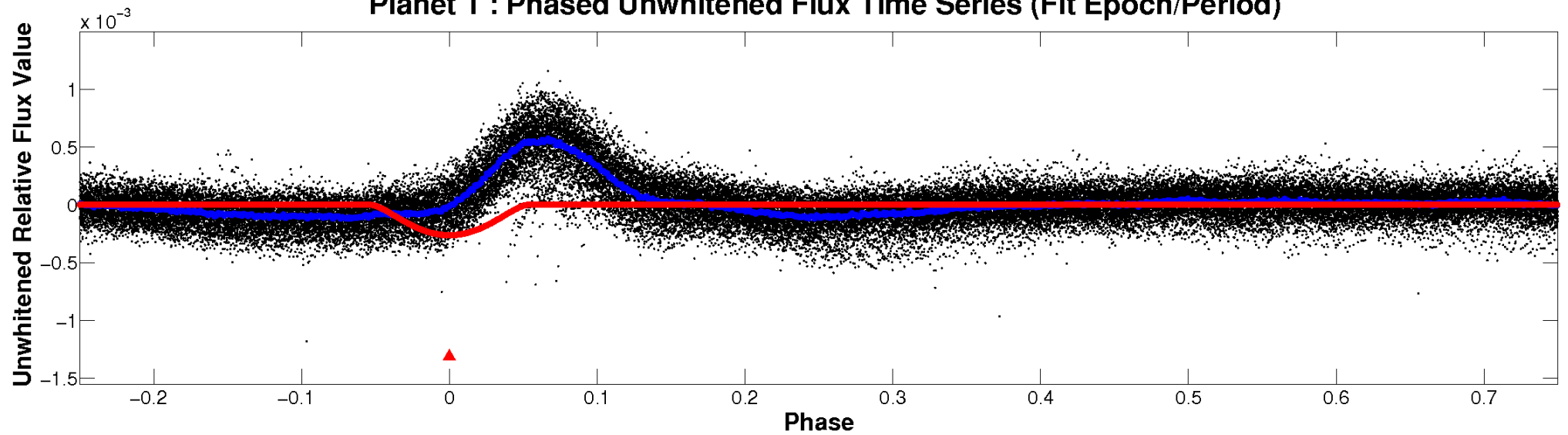
ALT Odd/Even

TCE 005286221-01

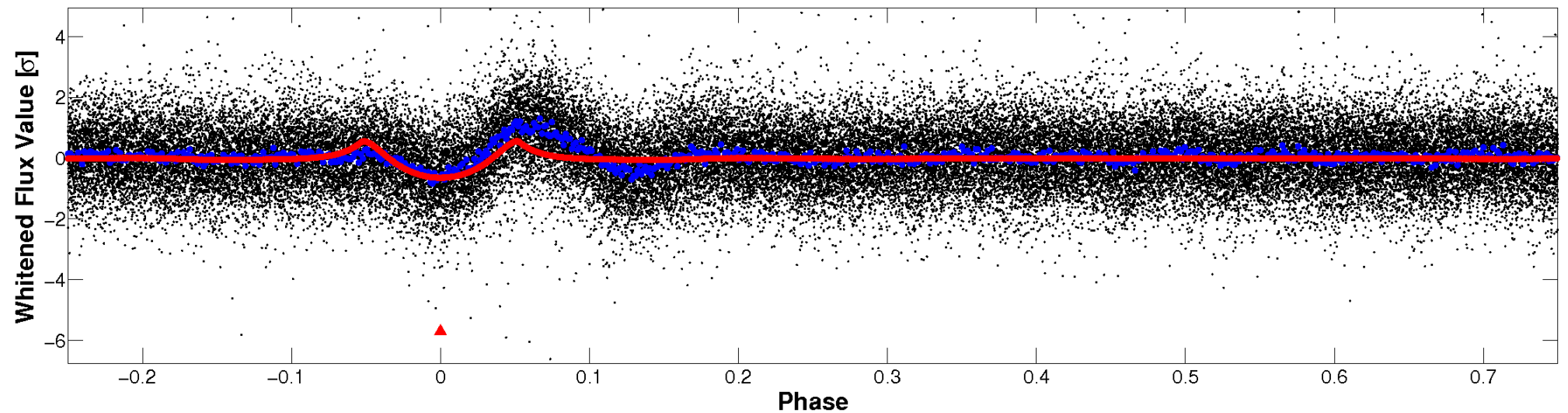


Non-Whitened Vs. Whitened Light Curve

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

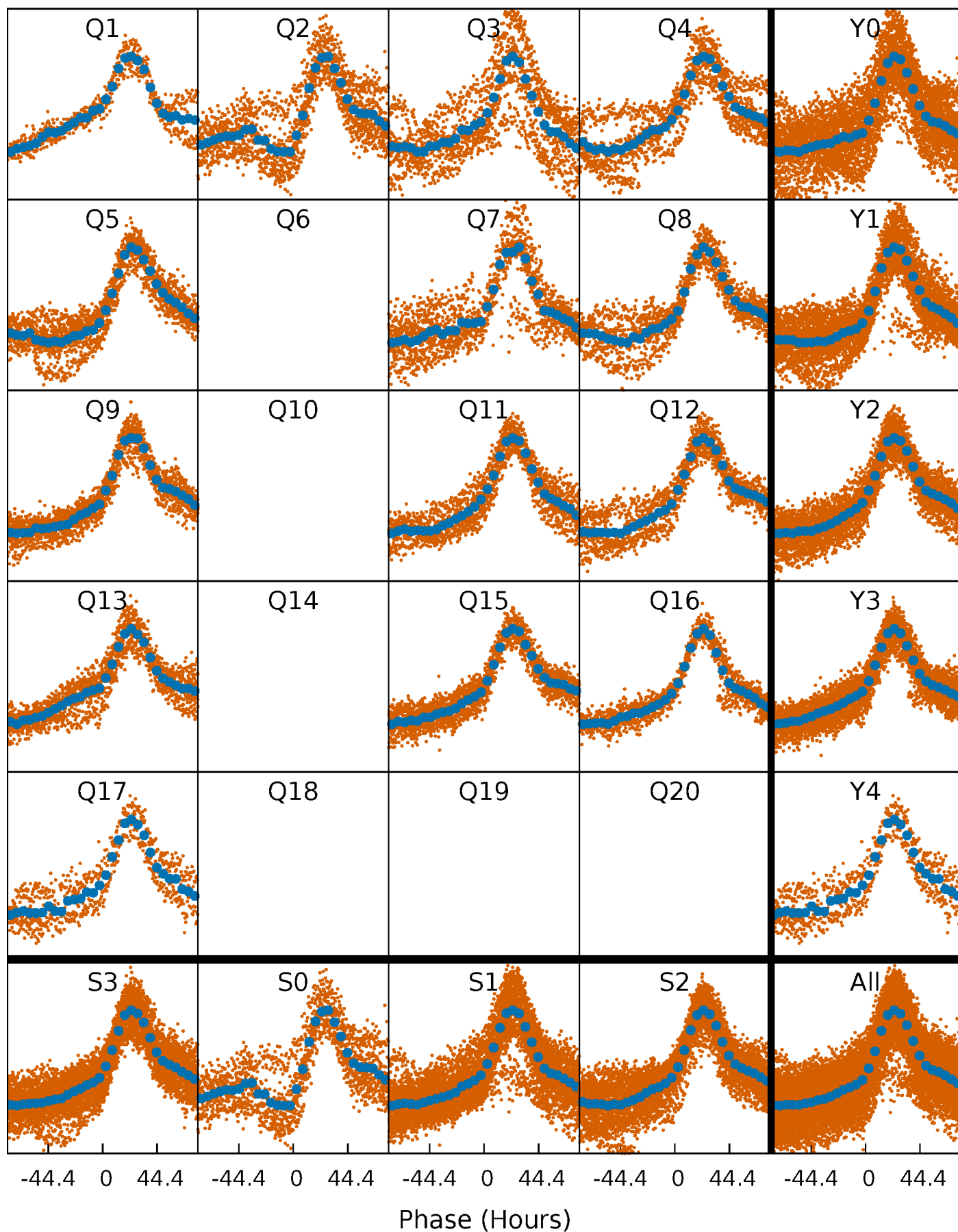


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



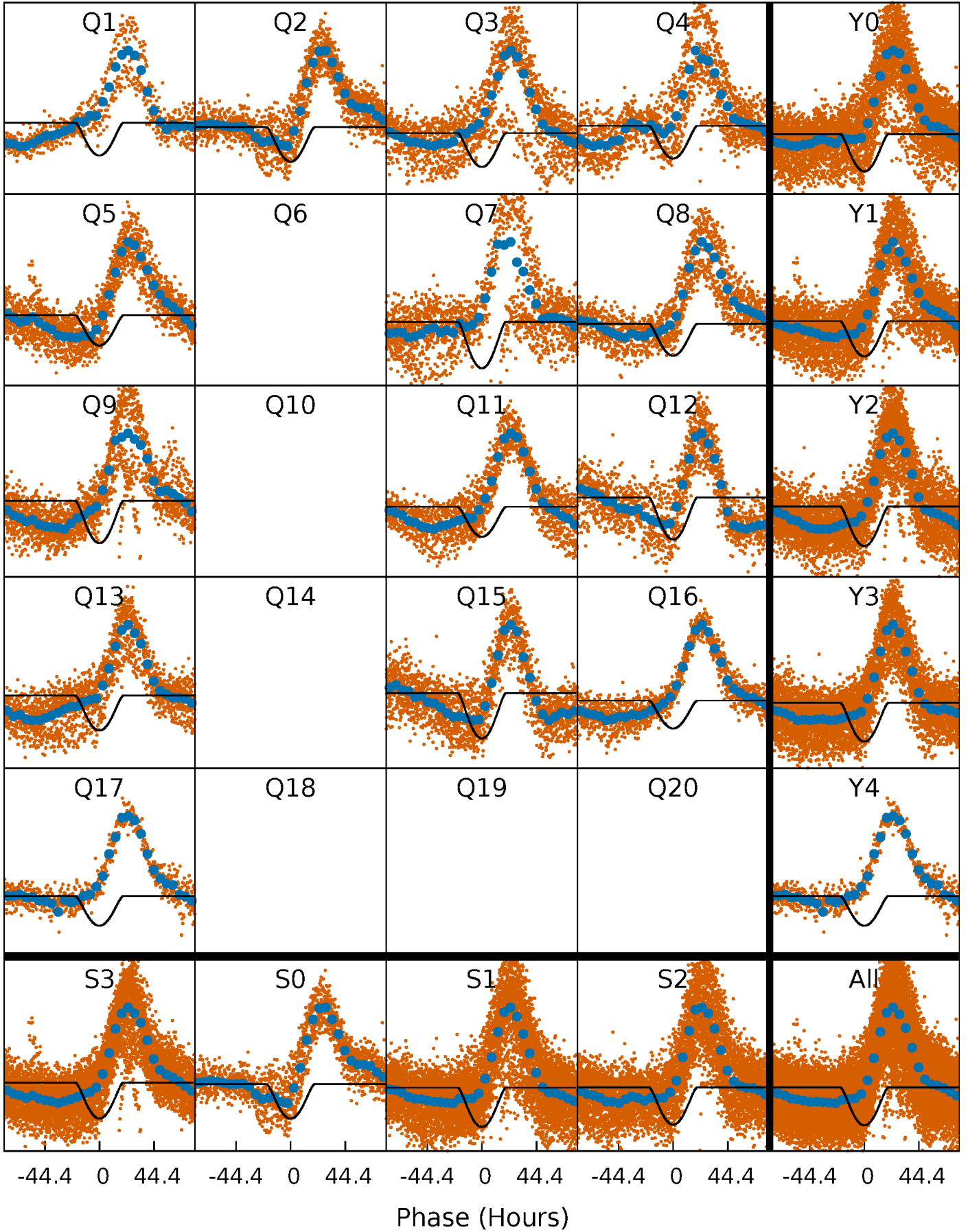
PDC Quarter-Phased Transit Curves

TCE 005286221-01 P= 15.296157 Days $T_0=139.895137$ (BKJD)



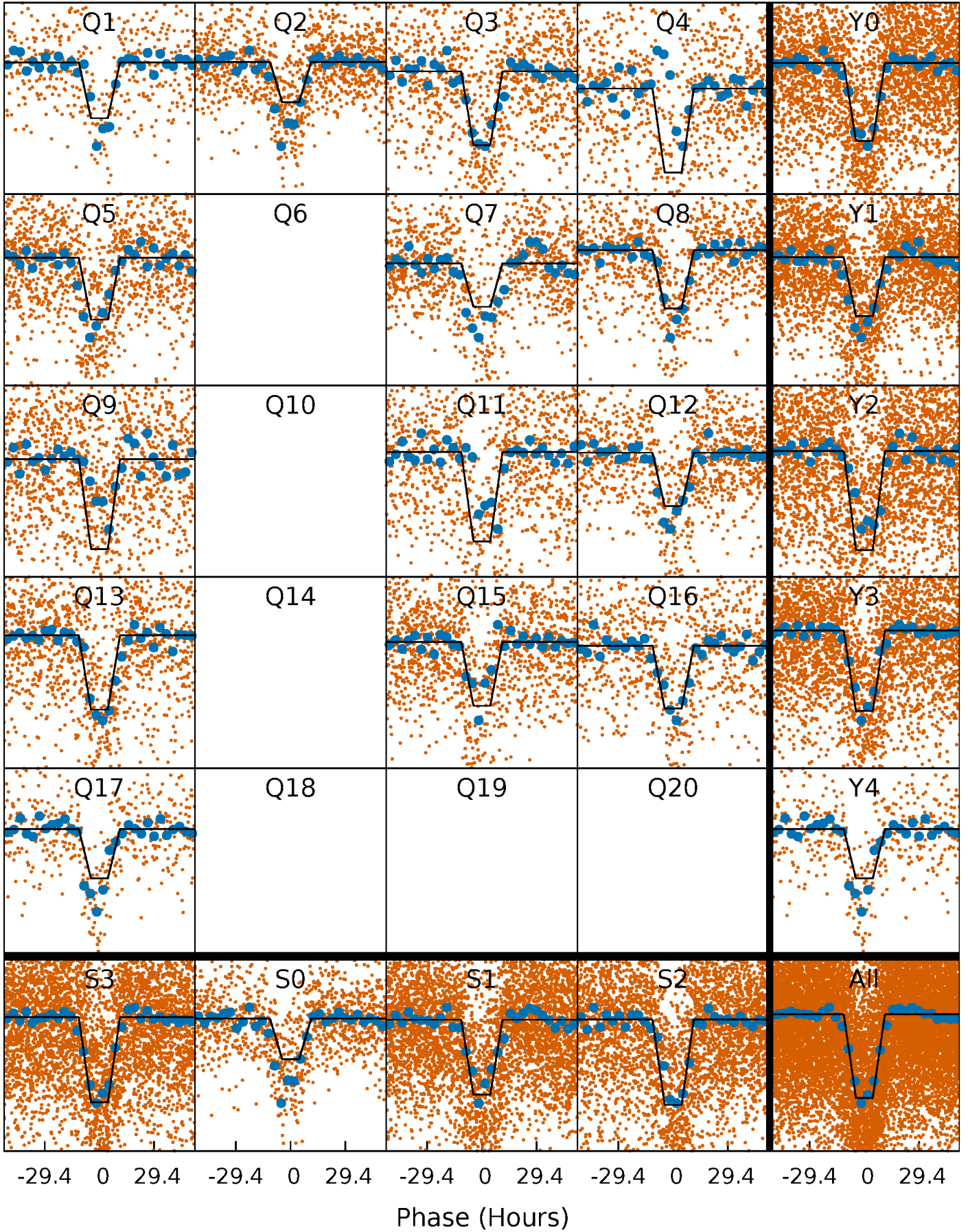
DV Quarter-Phased Transit Curves

TCE 005286221-01 P= 15.296157 Days $T_0=139.895137$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

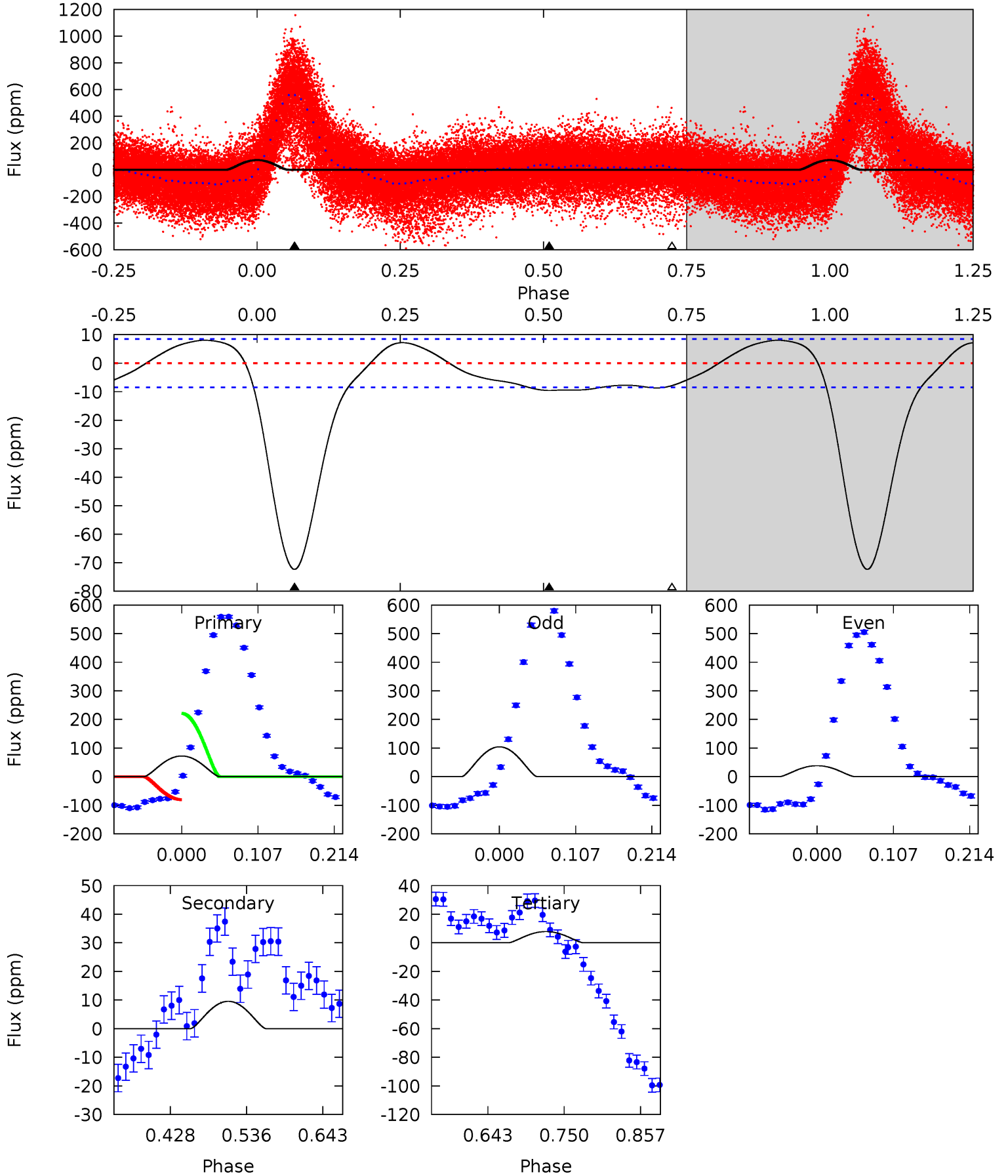
TCE 005286221-01 P= 15.295799 Days $T_0=139.969053$ (BKJD)



DV Model-Shift Uniqueness Test

005286221-01, P = 15.296157 Days, E = 124.598980 Days

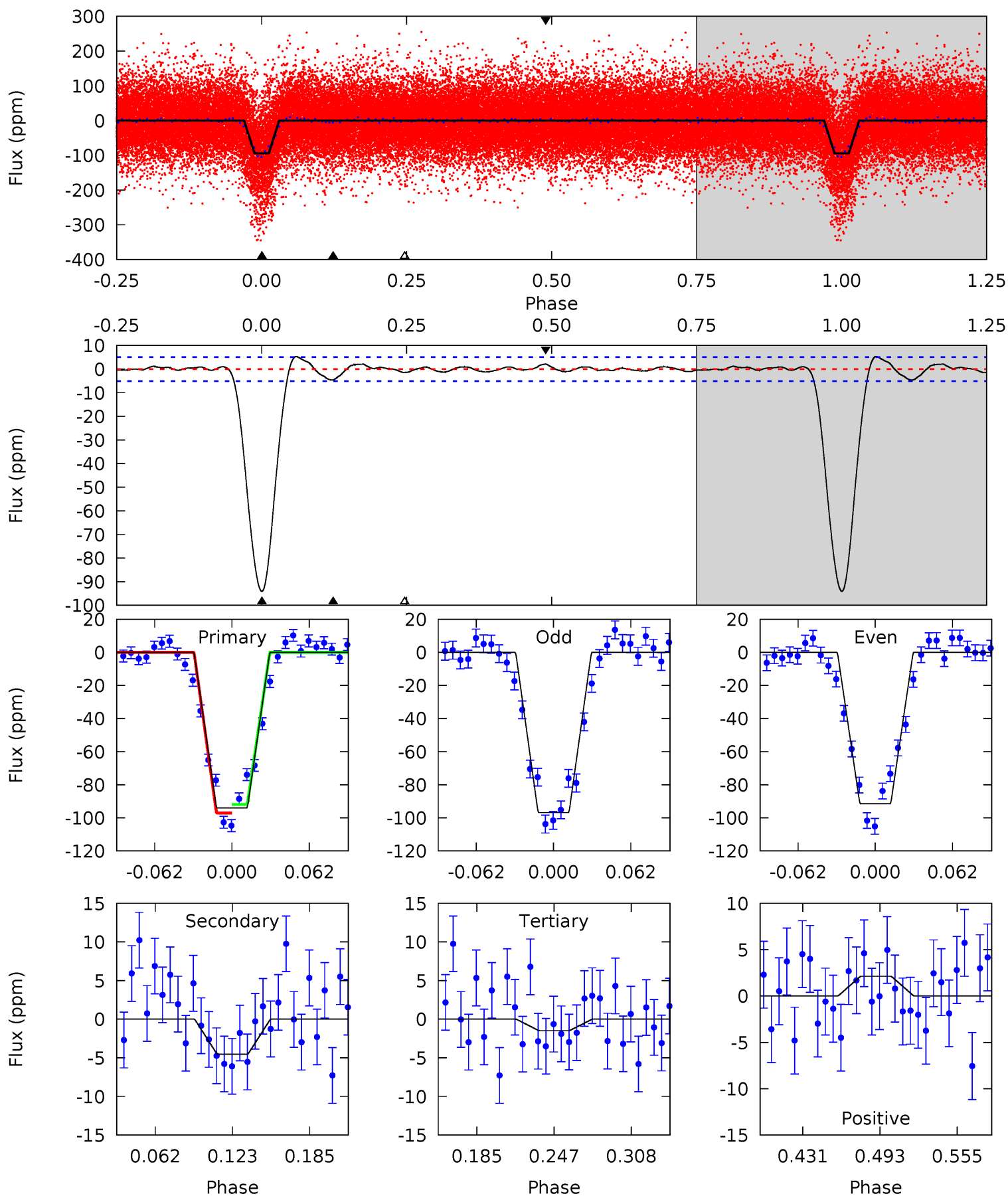
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
38.7	5.12	4.21	0	4.55	1.61	3.15	34.5	38.7	0.91	5.12	17.5	0.81	0.10	39.5



Alt Model-Shift Uniqueness Test

005286221-01, P = 15.295799 Days, E = 124.673254 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
86.2	4.15	1.35	1.95	4.67	1.87	0.65	84.8	84.3	2.80	2.20	2.45	1.06	0.05	0



Stellar Parameters For KIC 005286221

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8233^{+227}_{-389}	$4.064^{+0.145}_{-0.159}$	$0.070^{+0.250}_{-0.450}$	$2.141^{+0.504}_{-0.454}$	$1.935^{+0.335}_{-0.369}$	$0.278^{+0.208}_{-0.118}$
	+3%/-5%	+4%/-4%	+357%/-643%	+24%/-21%	+17%/-19%	+75%/-43%
Source	KIC0	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 005286221-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-10 ± 2	$6.52^{+2.20}_{-1.88}$	1912^{+116}_{-137}	3147^{+397}_{-269}	$2.646^{+2.799}_{-1.125}$
Alt.	-5 ± 1	$2.47^{+1.74}_{-1.44}$	1907^{+142}_{-130}	3887^{+1601}_{-677}	$9.316^{+44.091}_{-6.294}$

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 $A_{obs} \gg 1.0$

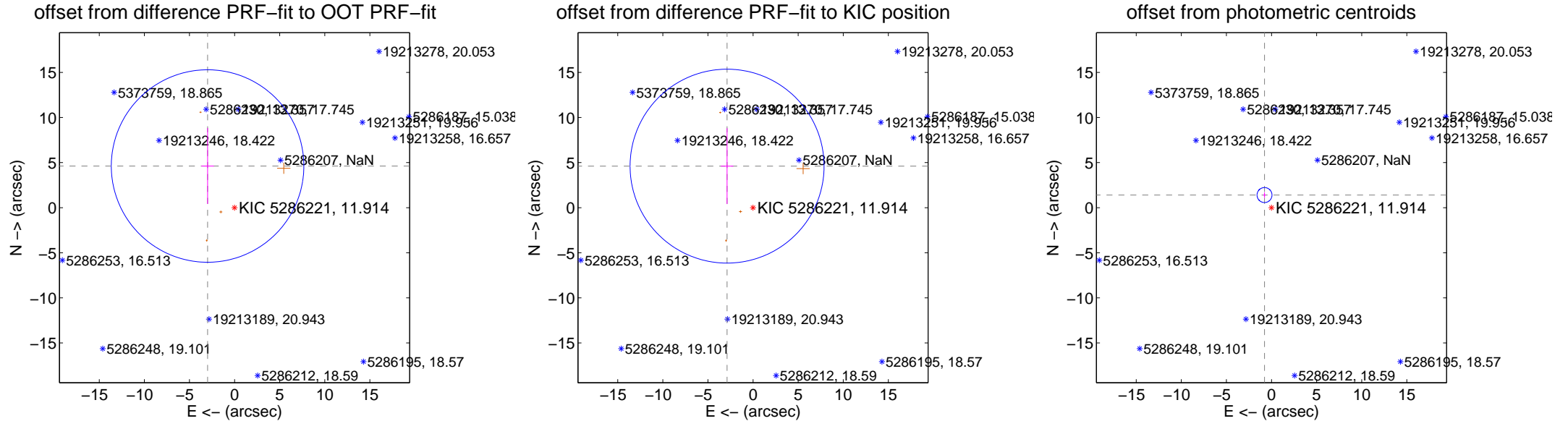
DV Centroid Data

Supplemental centroid analysis for 005286221-01. **Kepler magnitude: 11.91.** Transit SNR 34.37

There are 0 quarters with good PRF difference image offsets

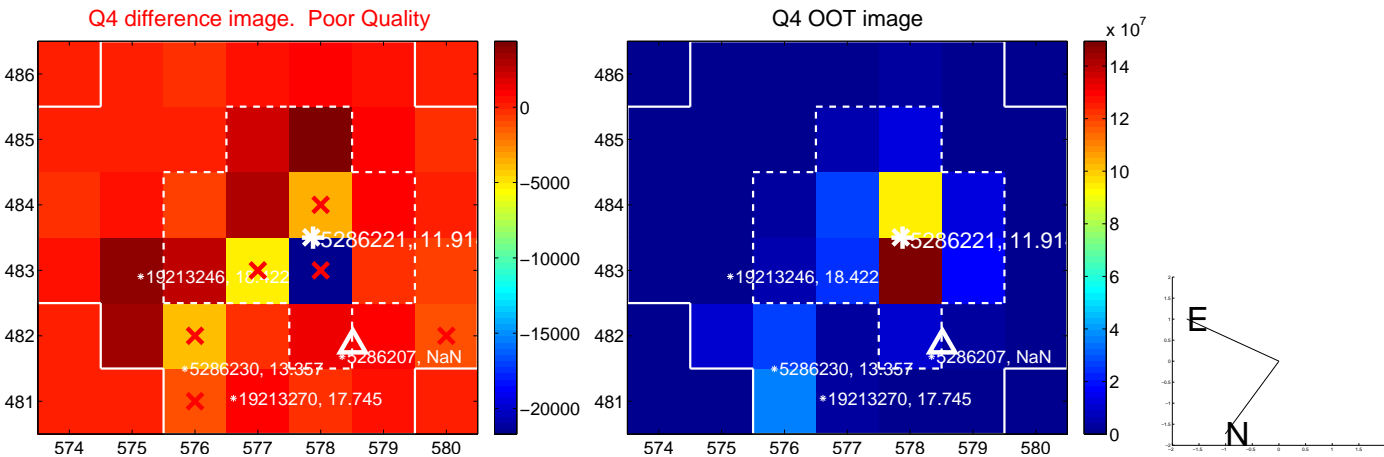
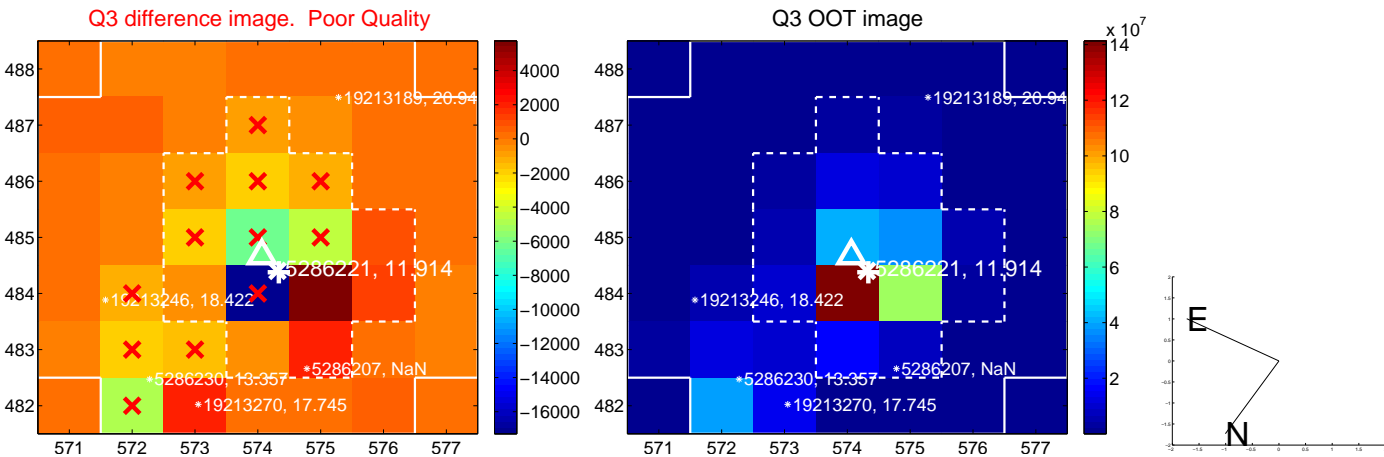
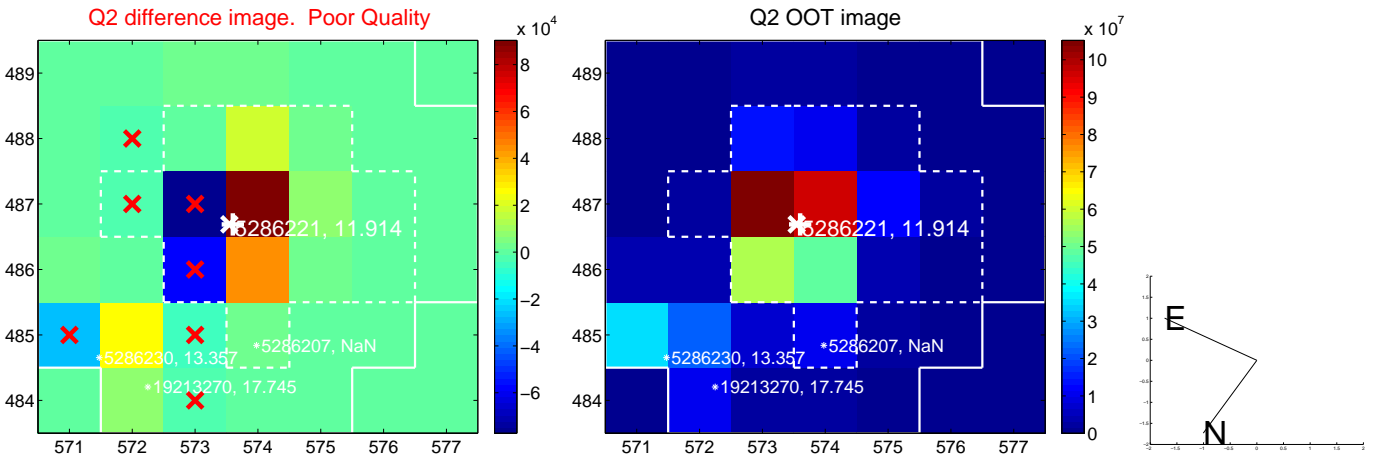
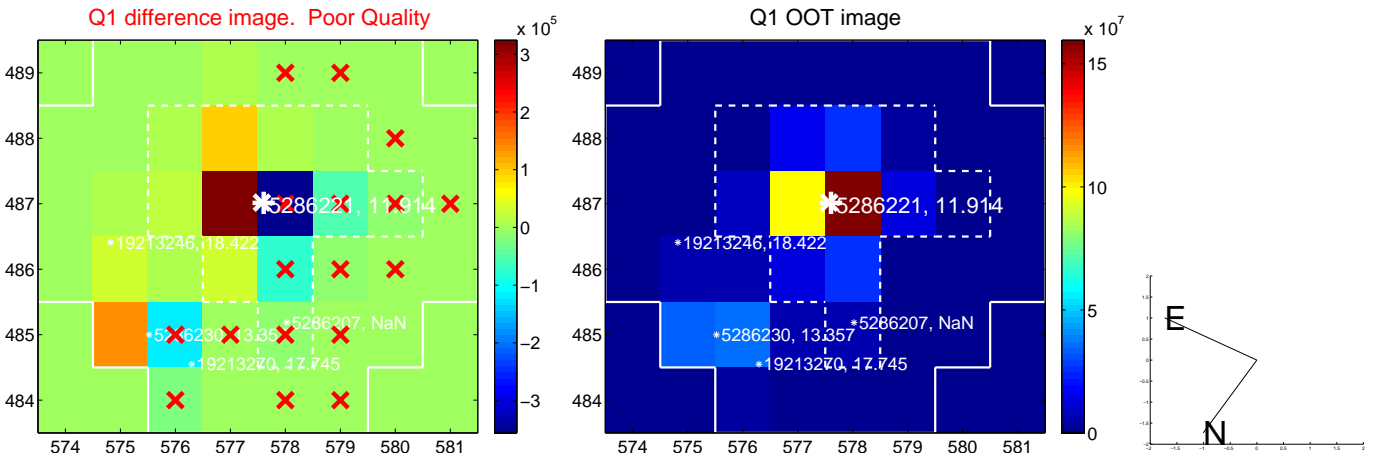
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.504 ± 3.557	1.55	2.993 ± 0.688	4.619 ± 4.215
PRF-fit source offset from KIC position	5.431 ± 3.583	1.52	2.878 ± 0.687	4.606 ± 4.204
photometric centroid source offset	1.60 ± 0.28	5.79	0.78 ± 0.13	1.40 ± 0.31

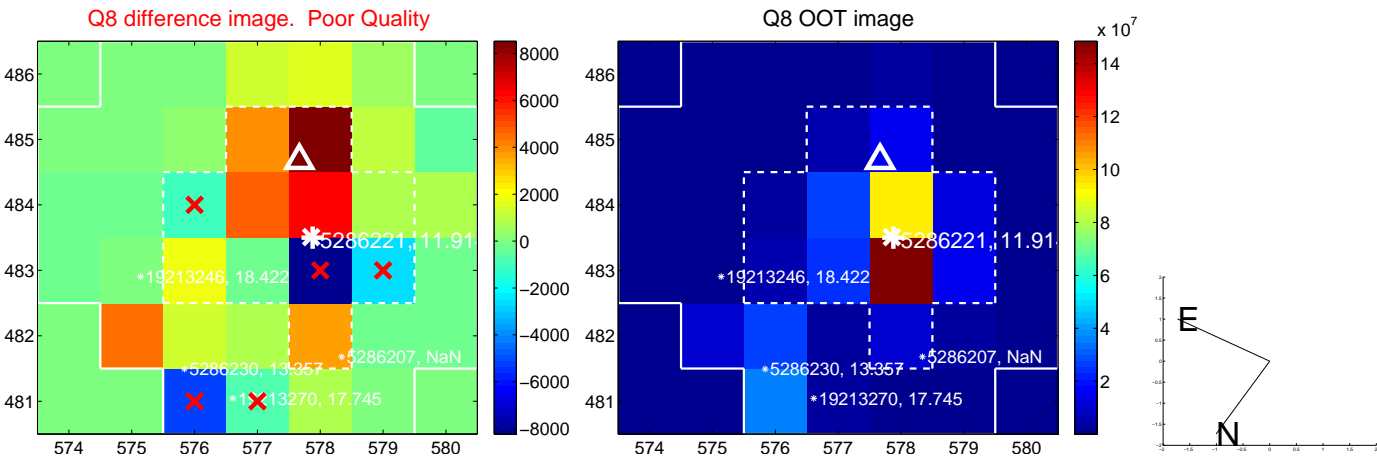
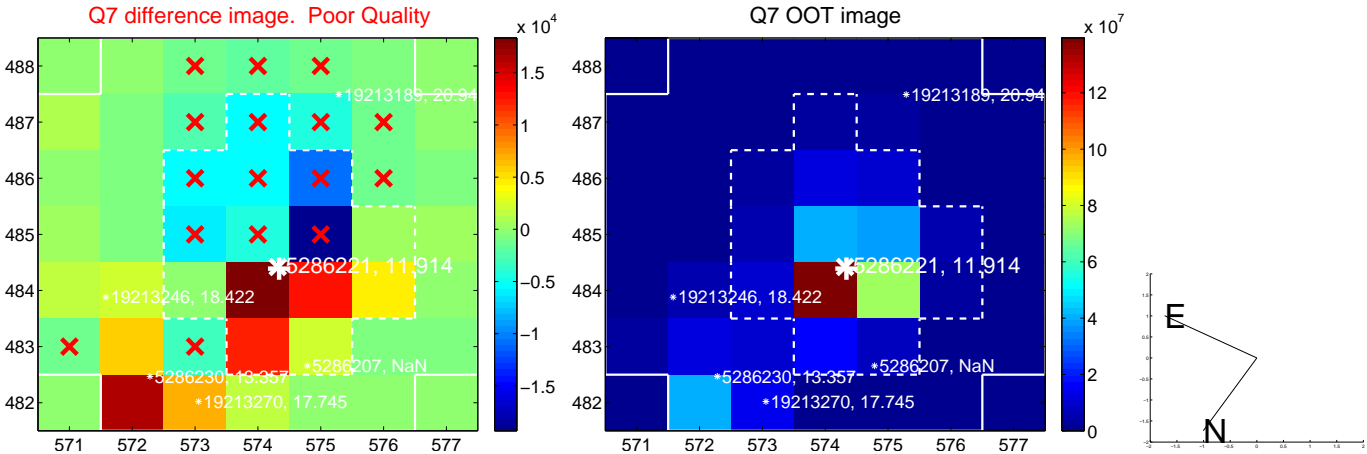
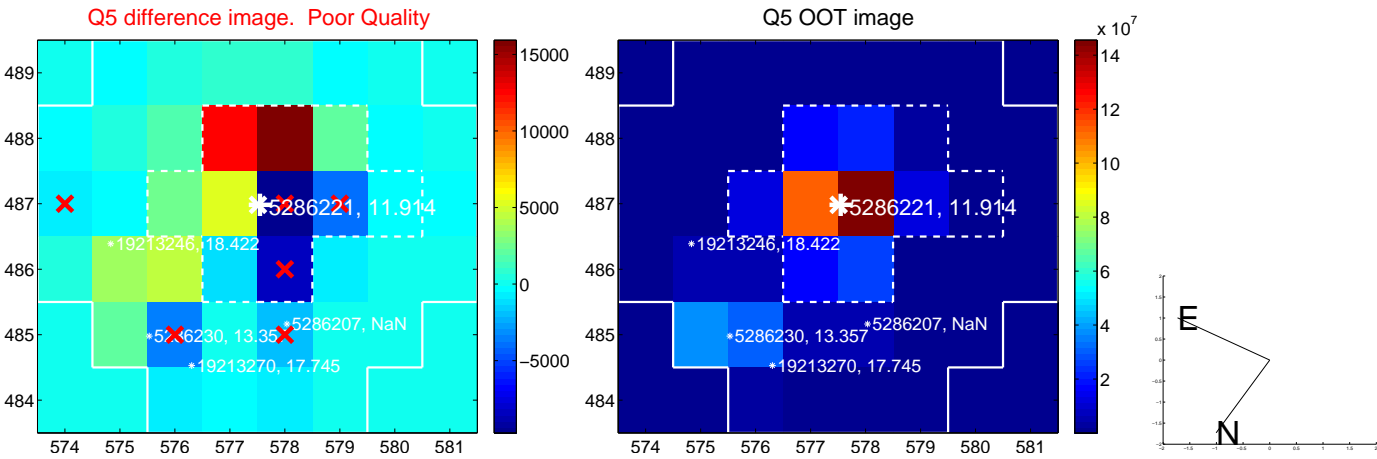


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

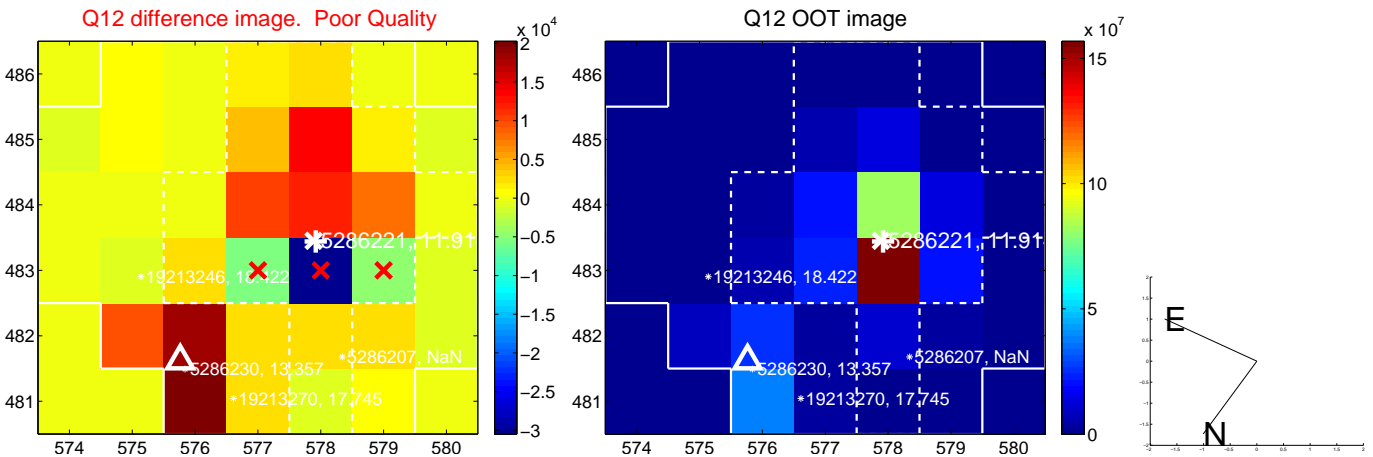
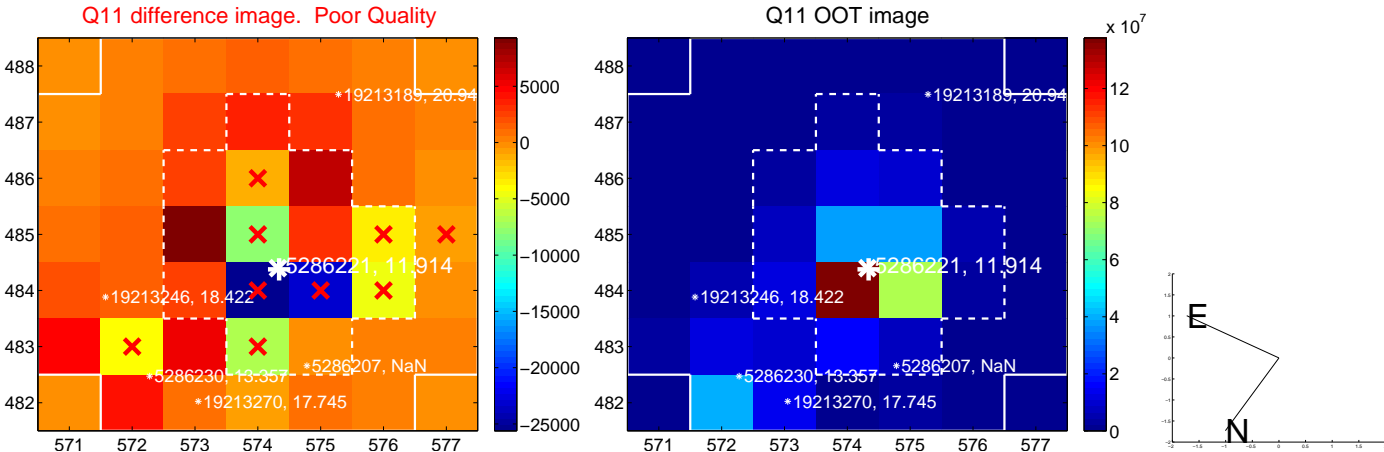
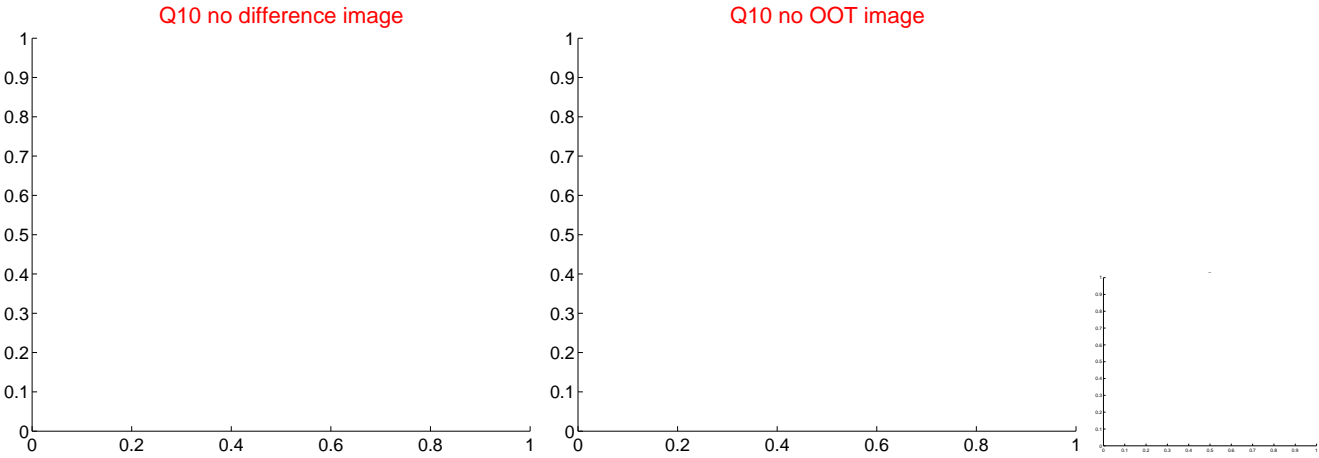
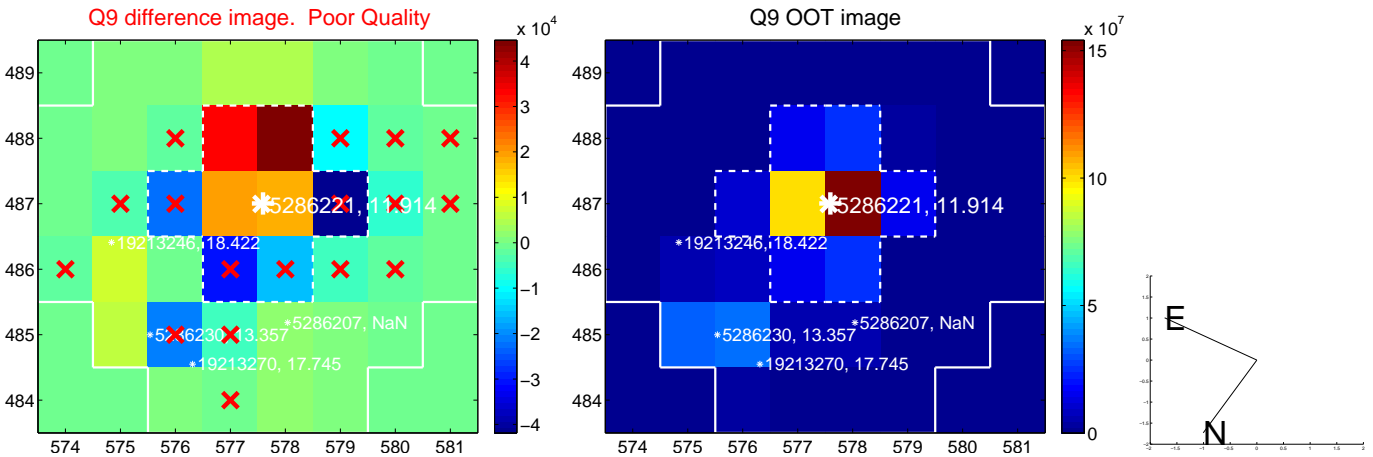
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



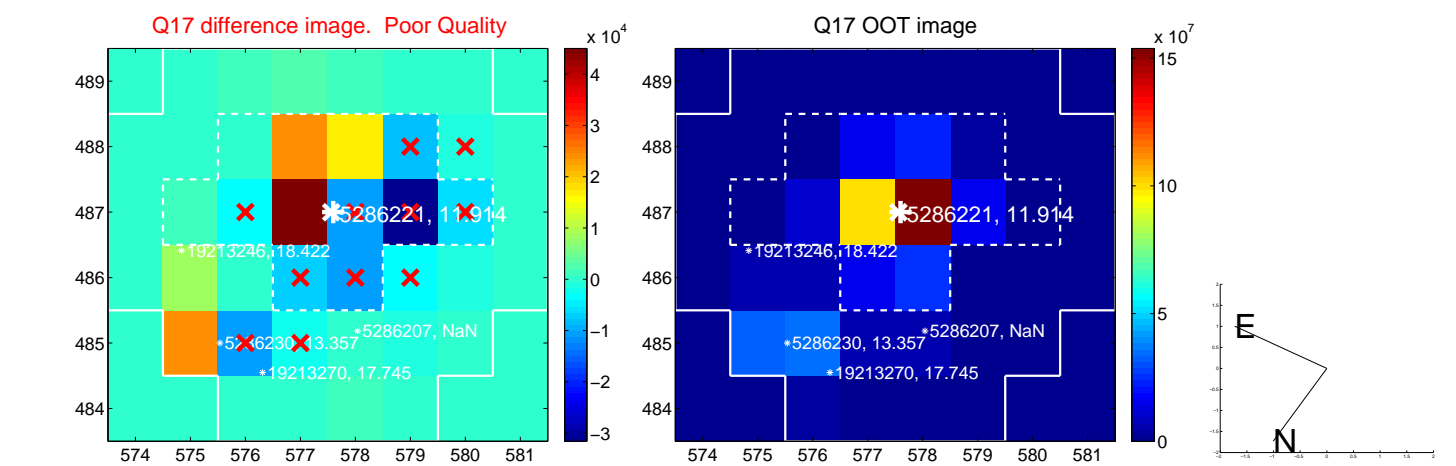
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



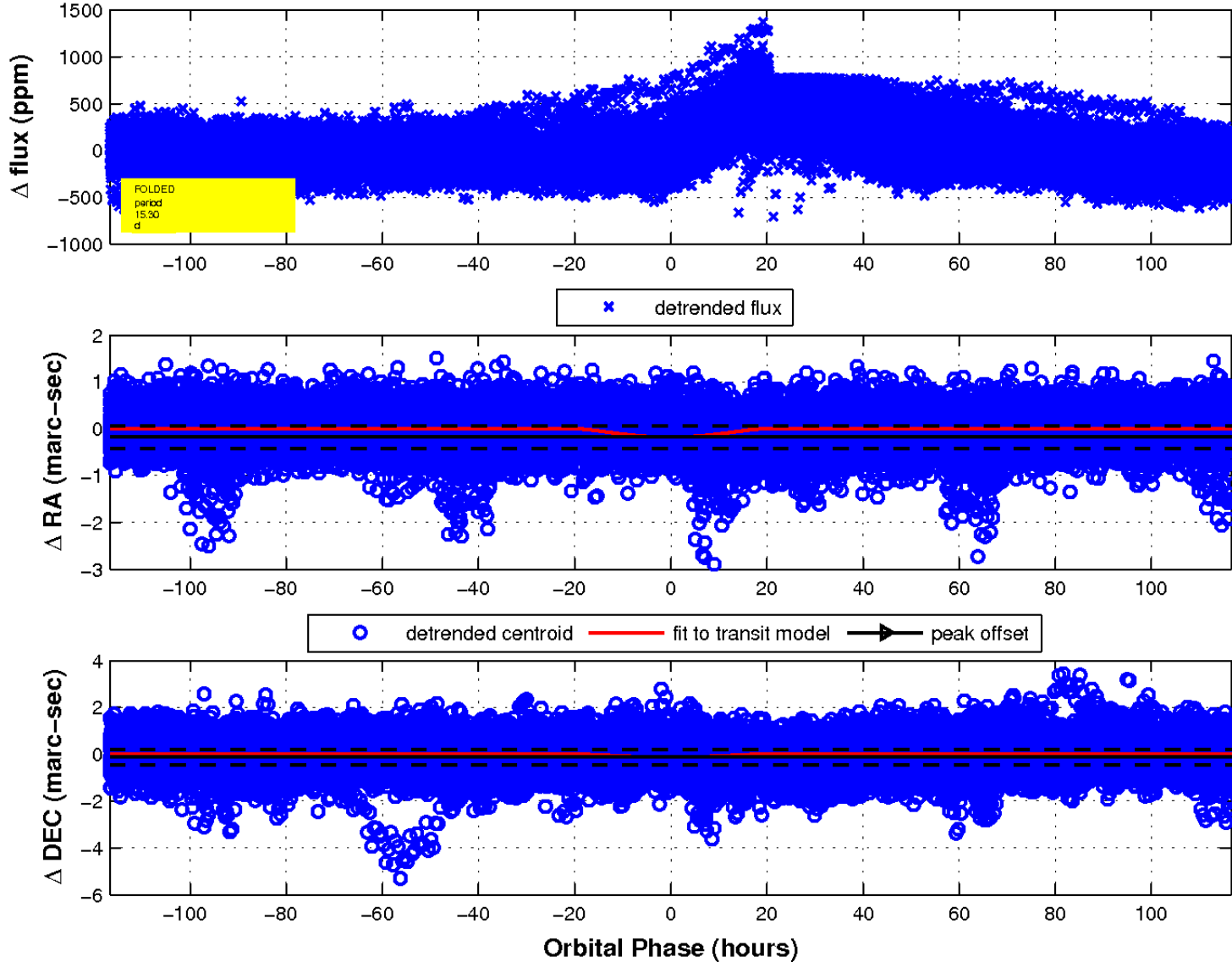
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

