

KIC 004136285

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})
004136285-01	OBS	No	1.581603	132.603069	224.3	14.719	15.5	24.4	1.00	5780	1.48	1416.26

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004136285-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—CENT_SATURATED

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

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

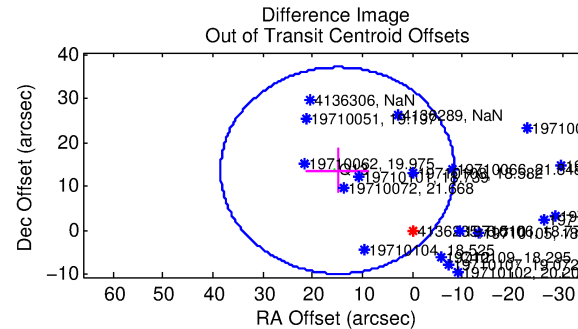
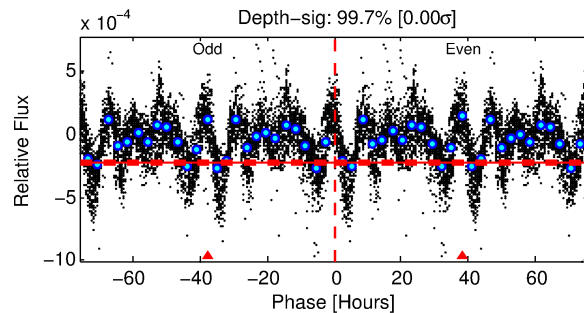
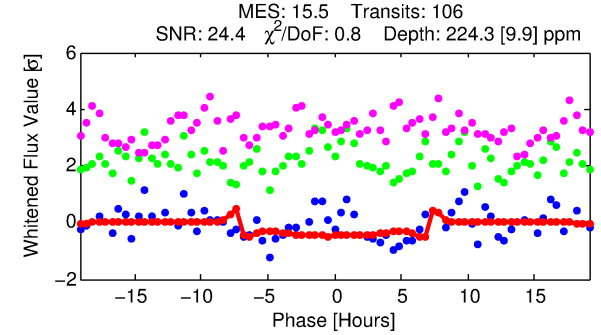
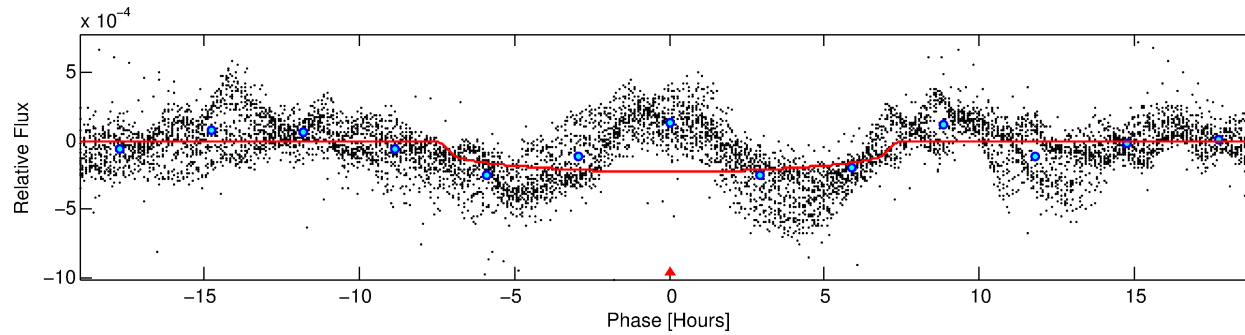
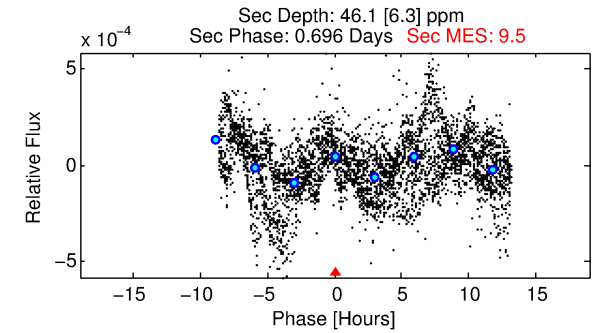
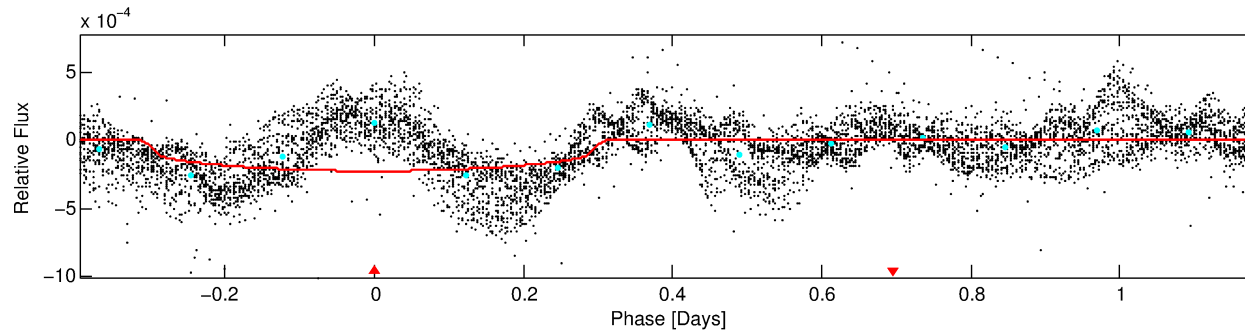
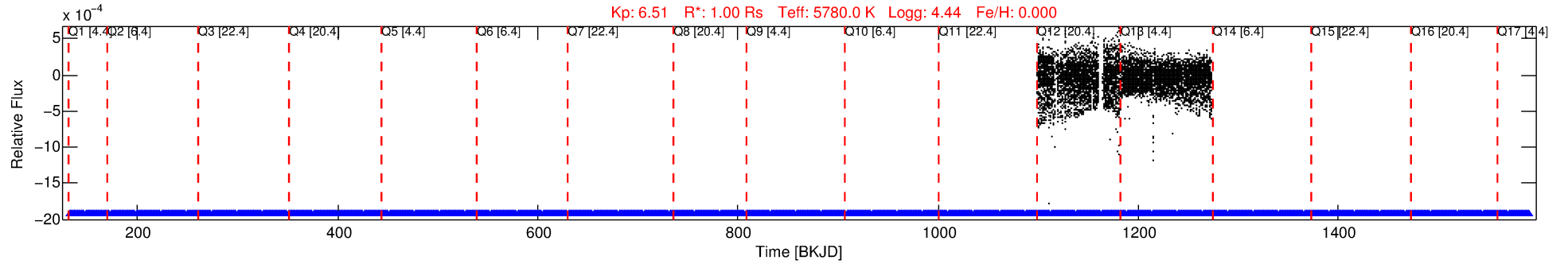
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004136285-01

No Significant Match Found

DV One-Page Summary

KIC: 4136285 Candidate: 1 of 1 Period: 1.582 d



DV Fit Results:

Period = 1.58160 [0.00000] d
Epoch = 132.6031 [0.0012] BKJD
Rp/R* = 0.0136 [0.0011]
a/R* = 1.08 [0.05]
b = 0.12 [2.73]
Seff = 1416.26 [0.01]
Teq = 1564 [0] K
Rp = 1.48 [0.11] Re
a = 0.0266 [0.0000] AU
Ag = 8.14 [1.68] [4.24σ]
Teffp = 4085 [211] K [11.93σ]

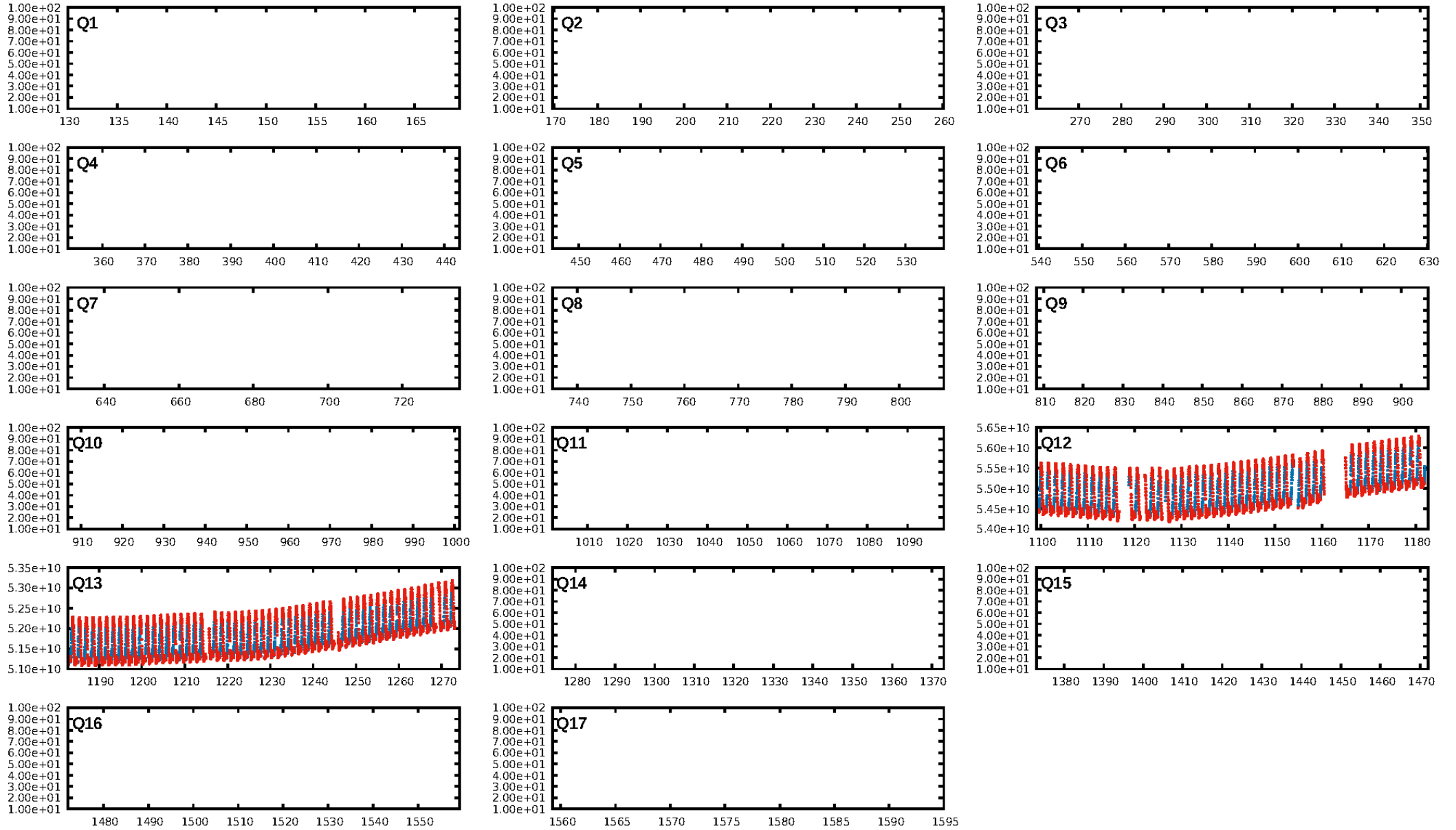
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [106/106]
GhostDiagnostic-chr: N/A
Centroid-sig: 19.5%
Centroid-so: 19.280 arcsec [1.70σ]
OotOffset-rm: 20.259 arcsec [2.59σ]
KicOffset-rm: 32.043 arcsec [1.51σ]
OotOffset-st: 0/0/1/1 [2]
KicOffset-st: 0/0/1/1 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [2/2]

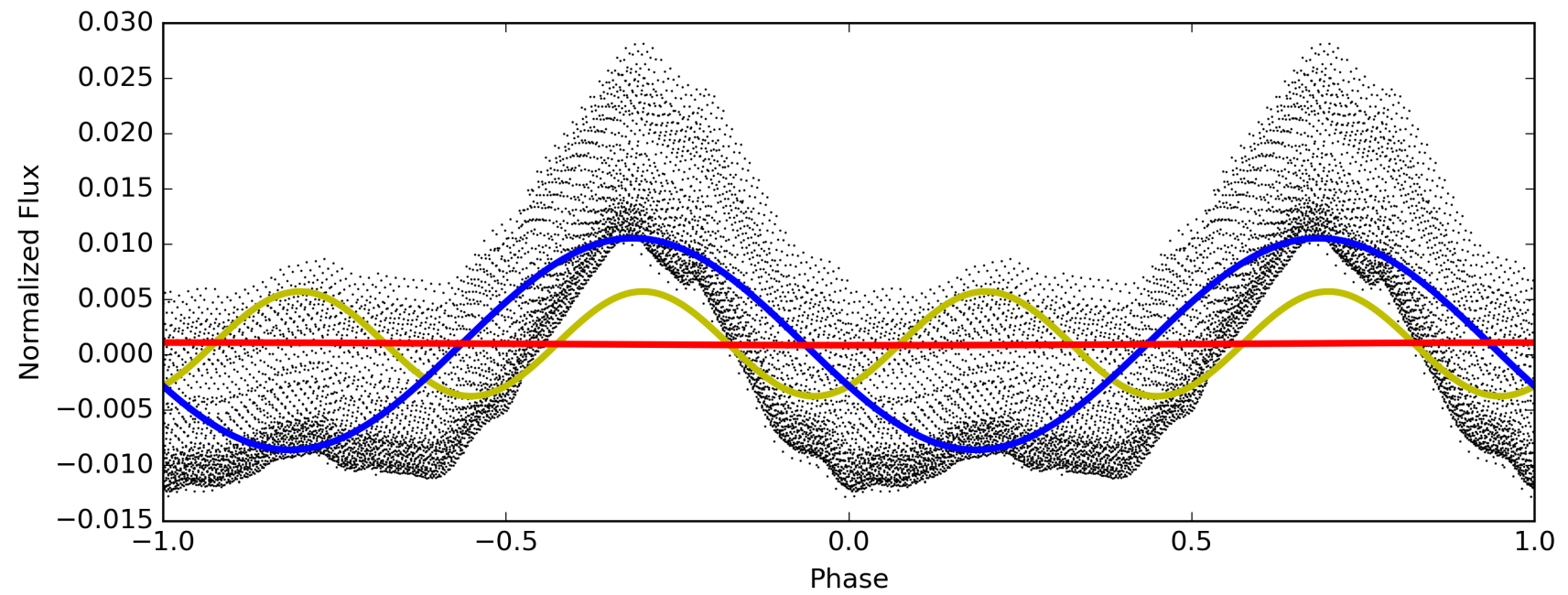
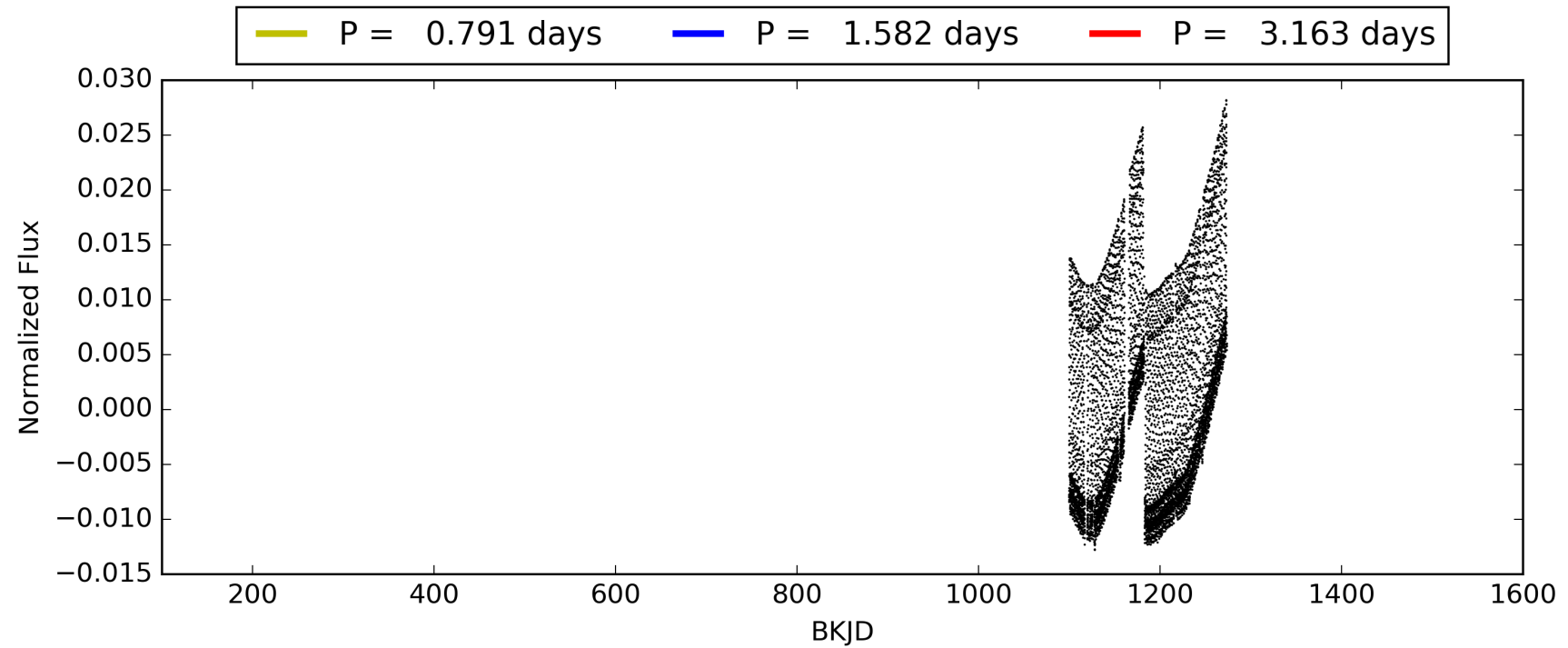
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 10:45:34 Z

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

TCE 004136285-01, PDC Light Curves

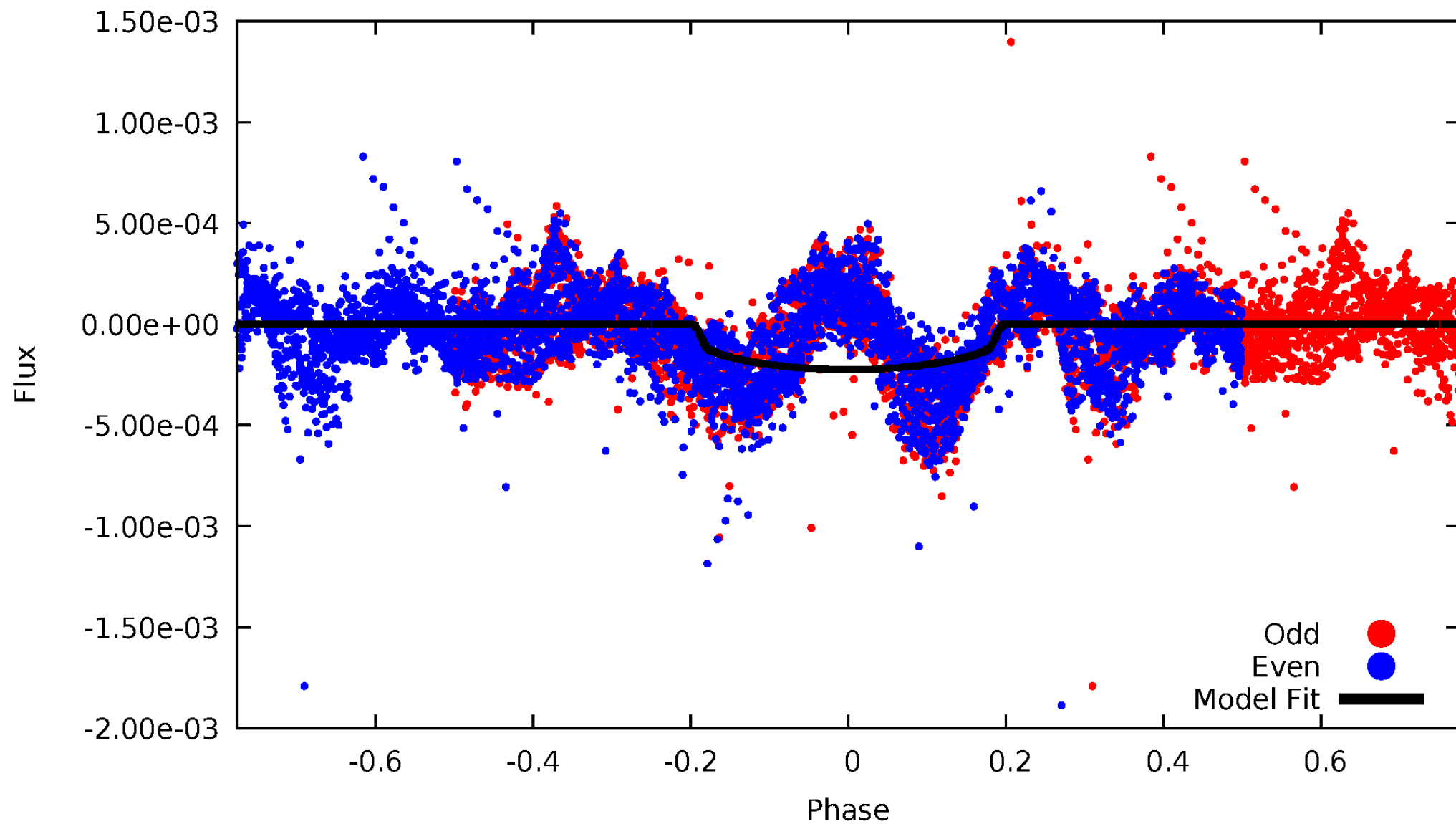


TCE 004136285-01



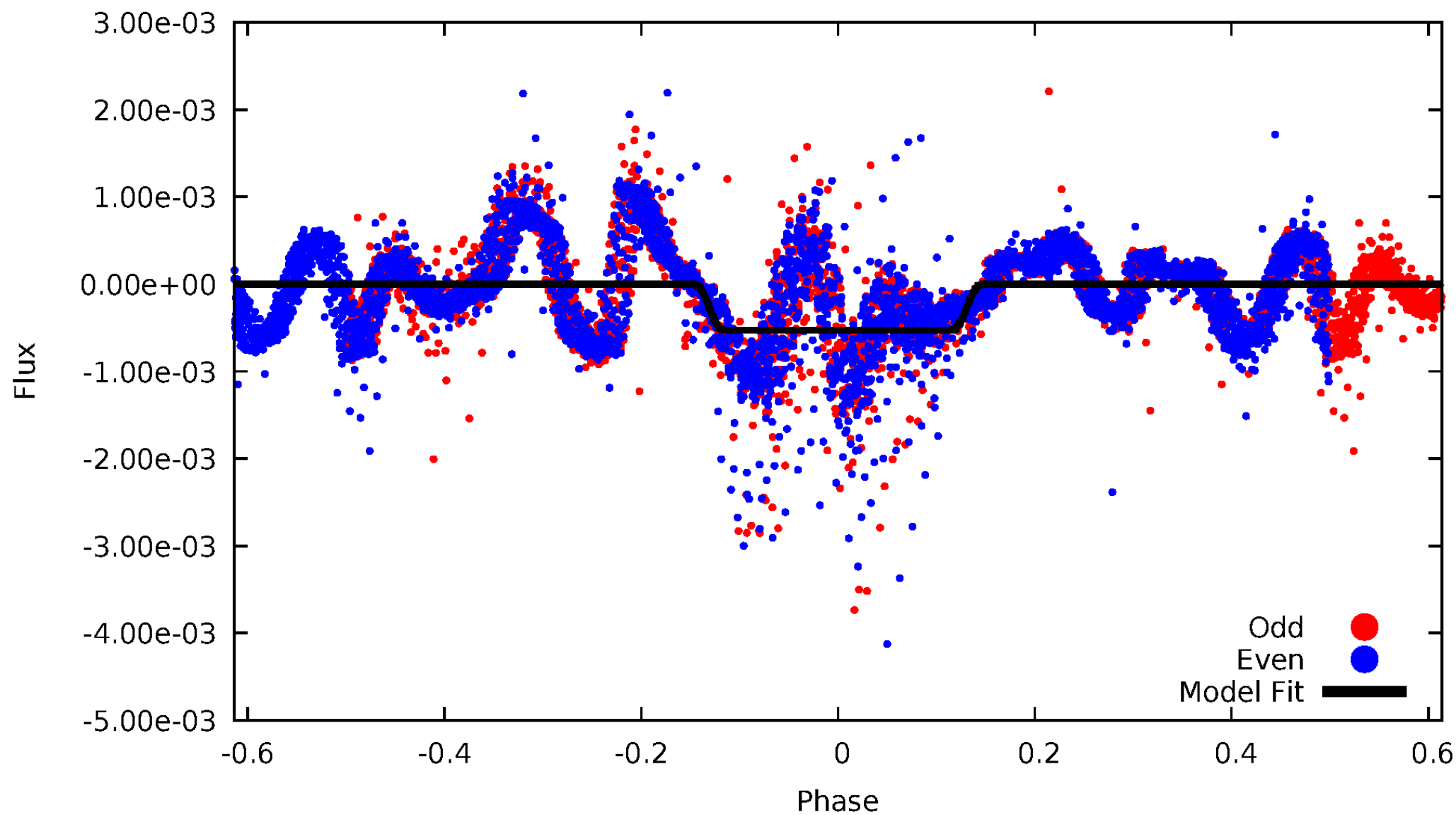
DV Odd/Even

TCE 004136285-01

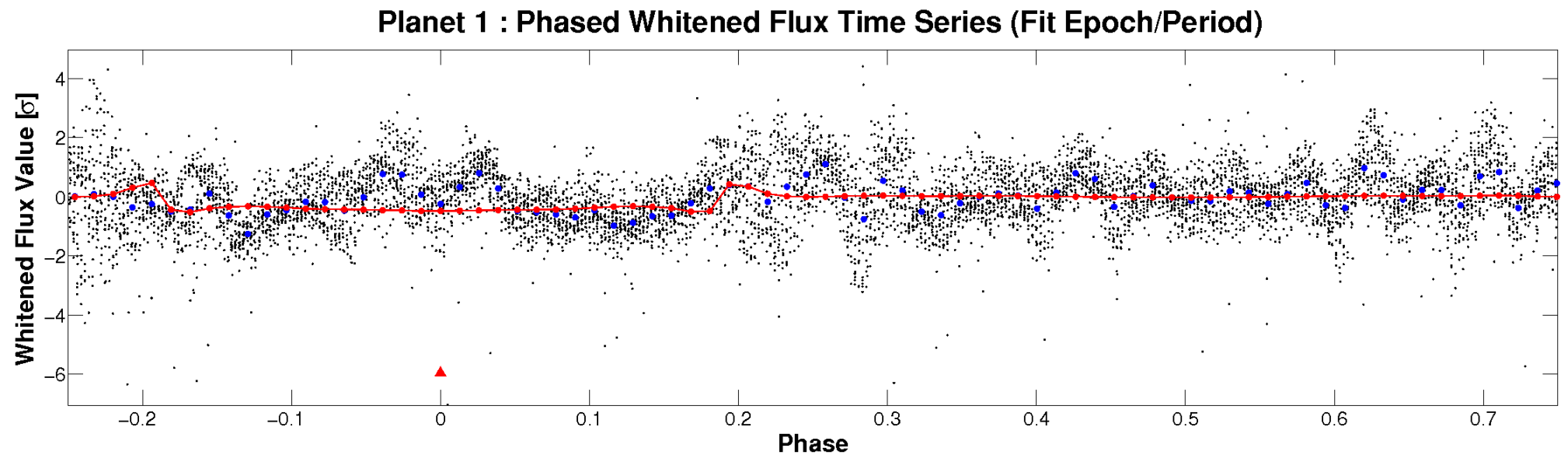
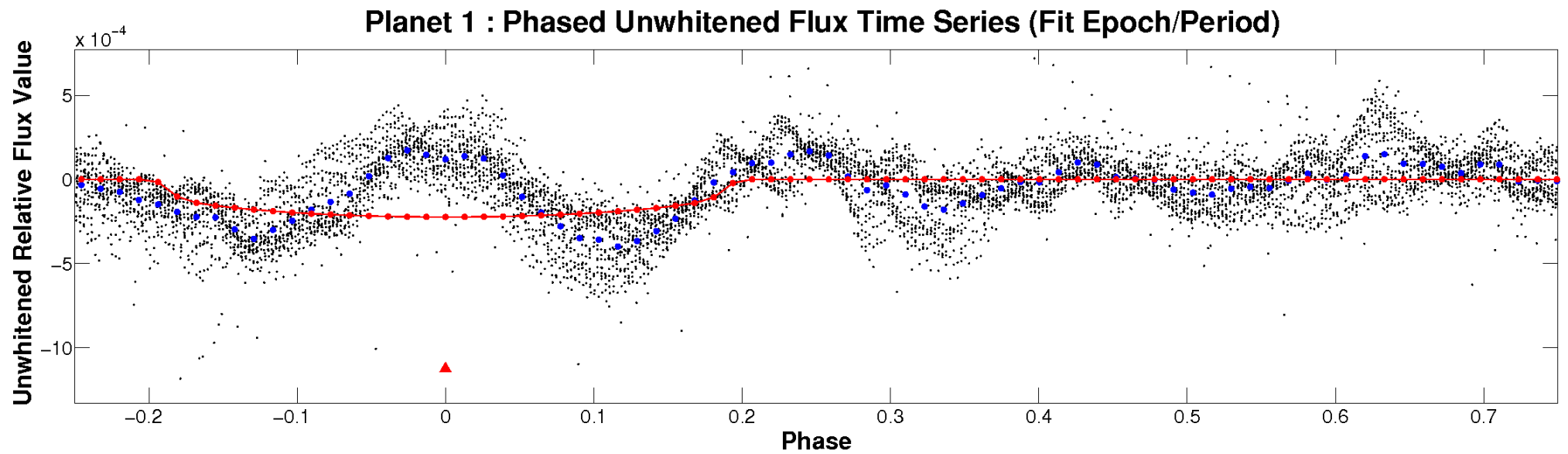


ALT Odd/Even

TCE 004136285-01

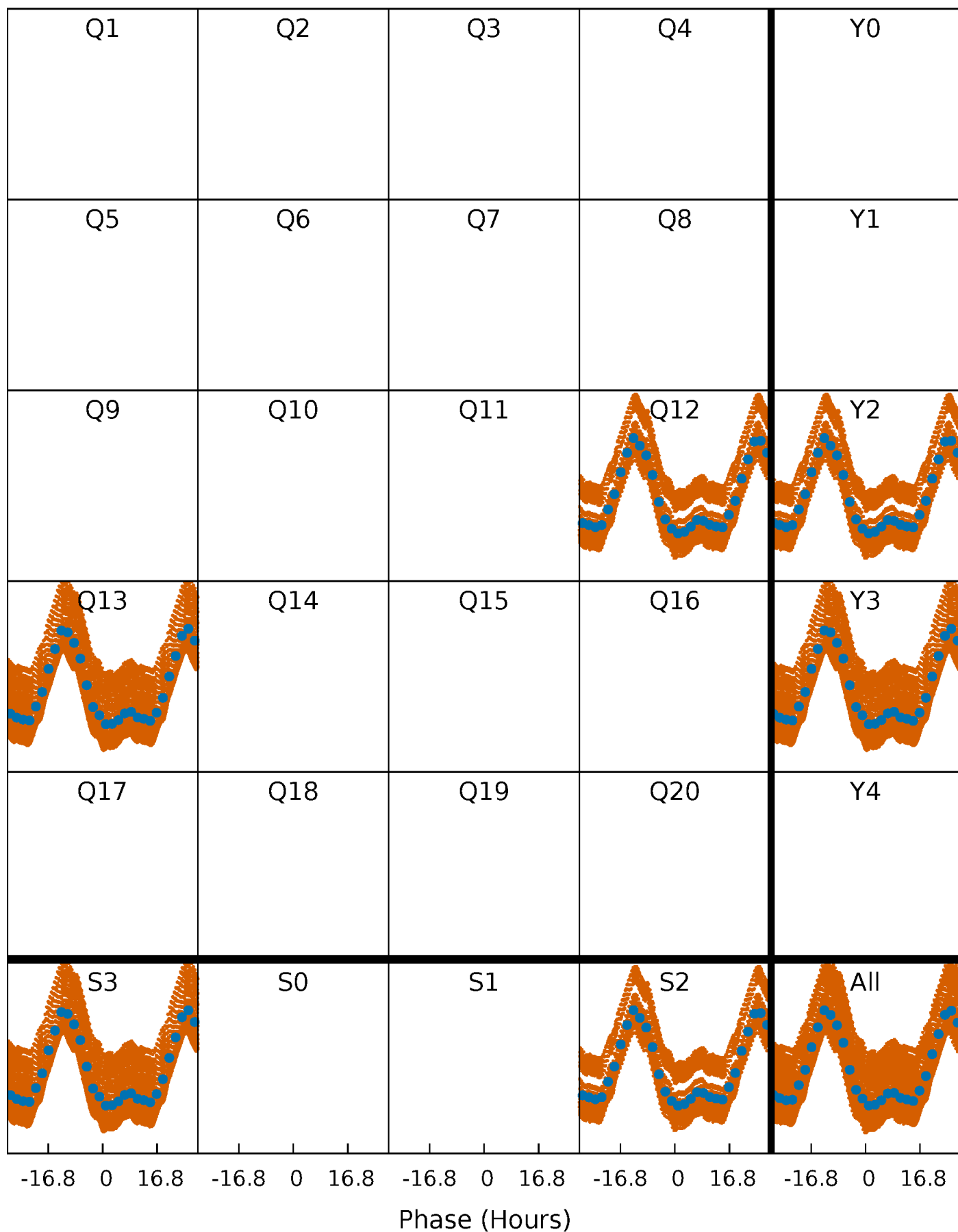


Non-Whitened Vs. Whitened Light Curve



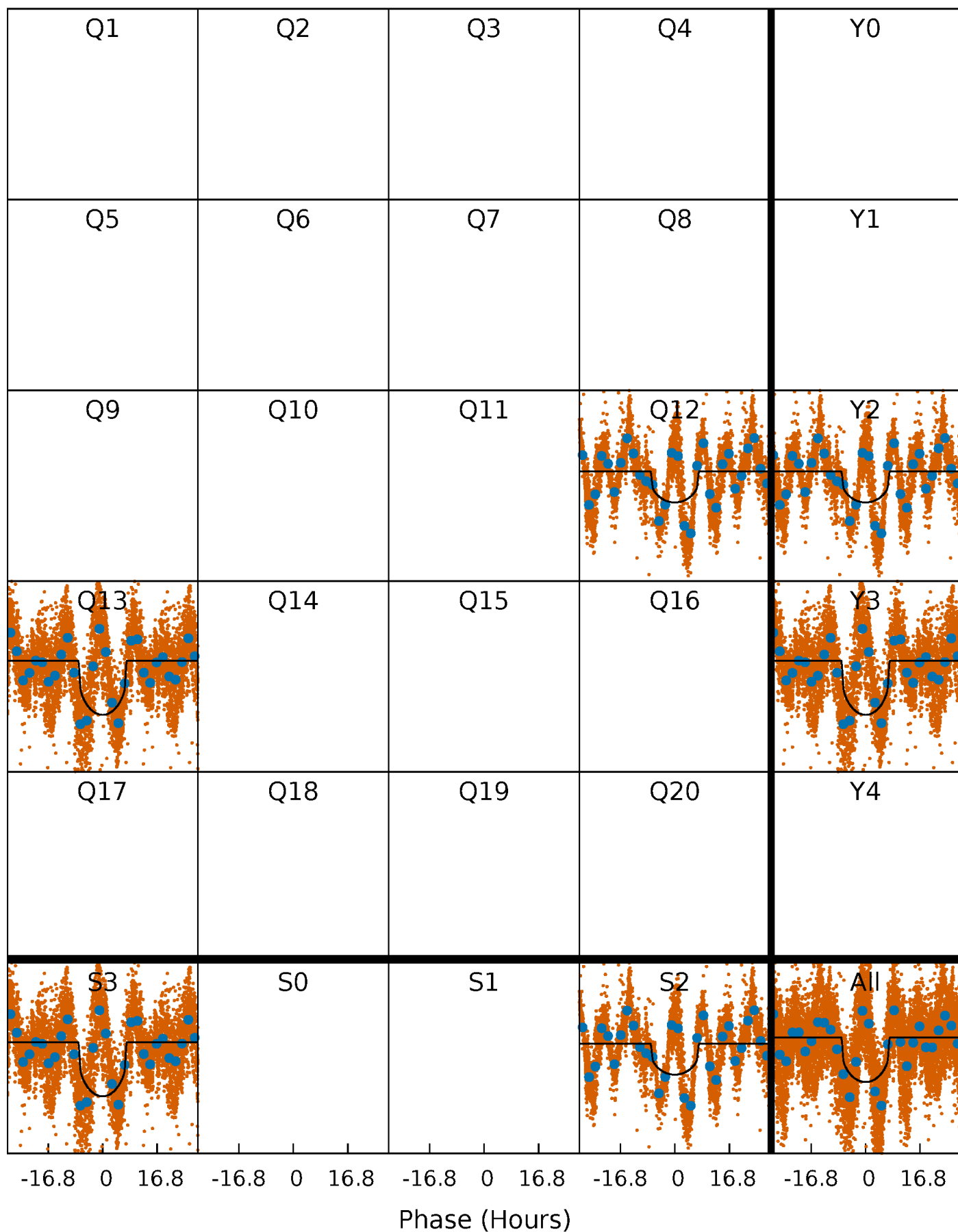
PDC Quarter-Phased Transit Curves

TCE 004136285-01 P= 1.581603 Days $T_0=132.603069$ (BKJD)



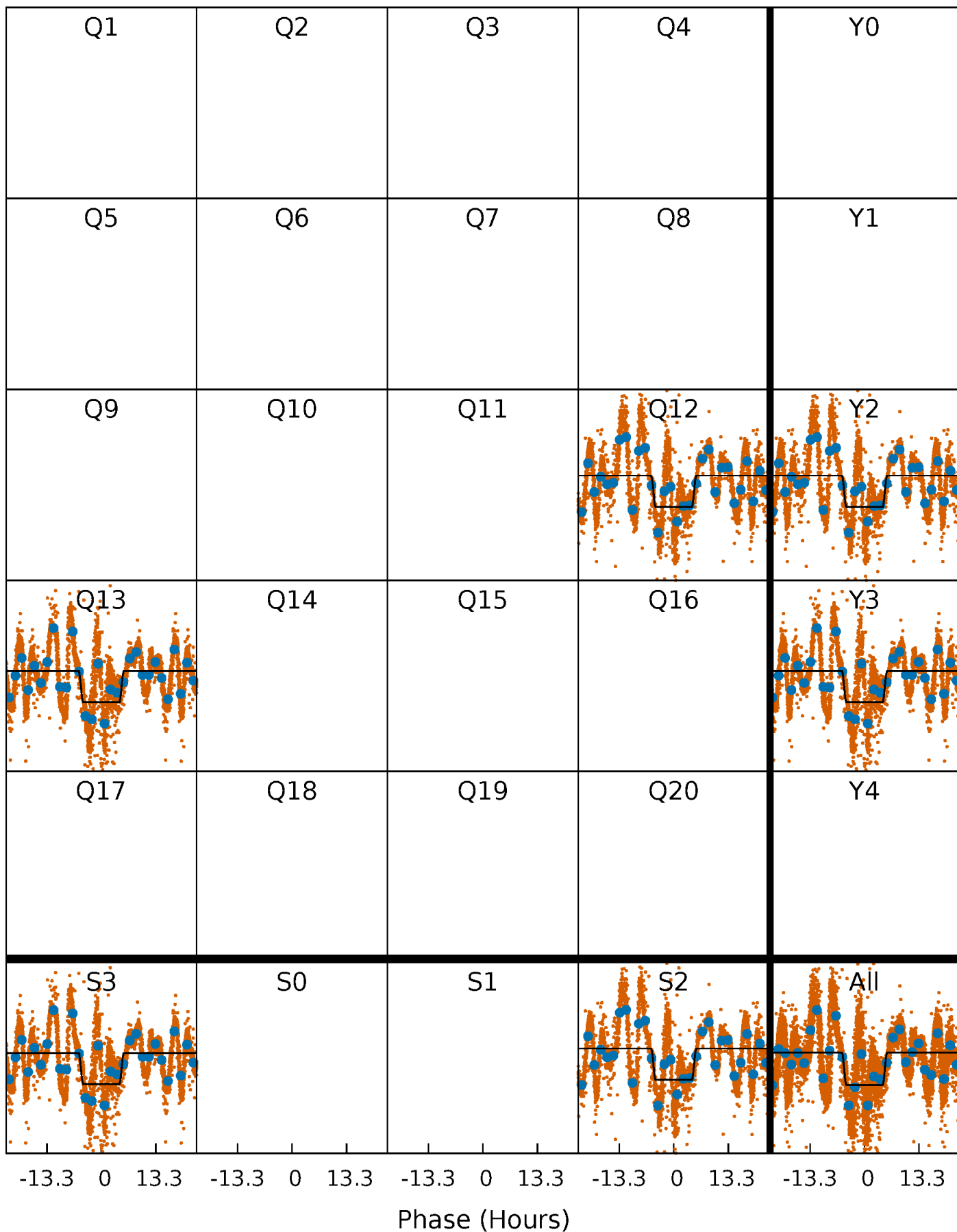
DV Quarter-Phased Transit Curves

TCE 004136285-01 P= 1.581603 Days $T_0=132.603069$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

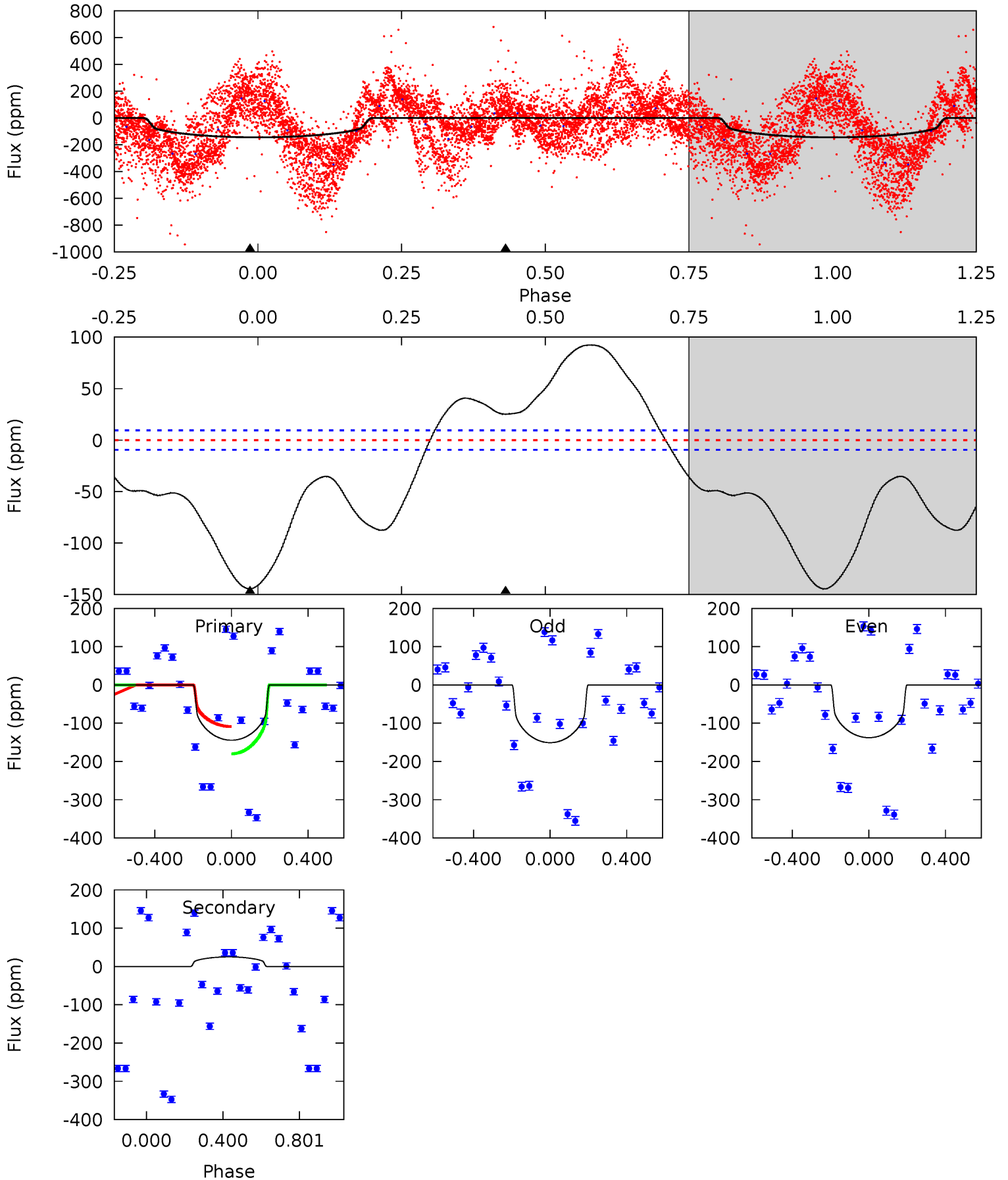
TCE 004136285-01 P= 1.581580 Days $T_0=132.604612$ (BKJD)



DV Model-Shift Uniqueness Test

004136285-01, P = 1.581603 Days, E = 132.603069 Days

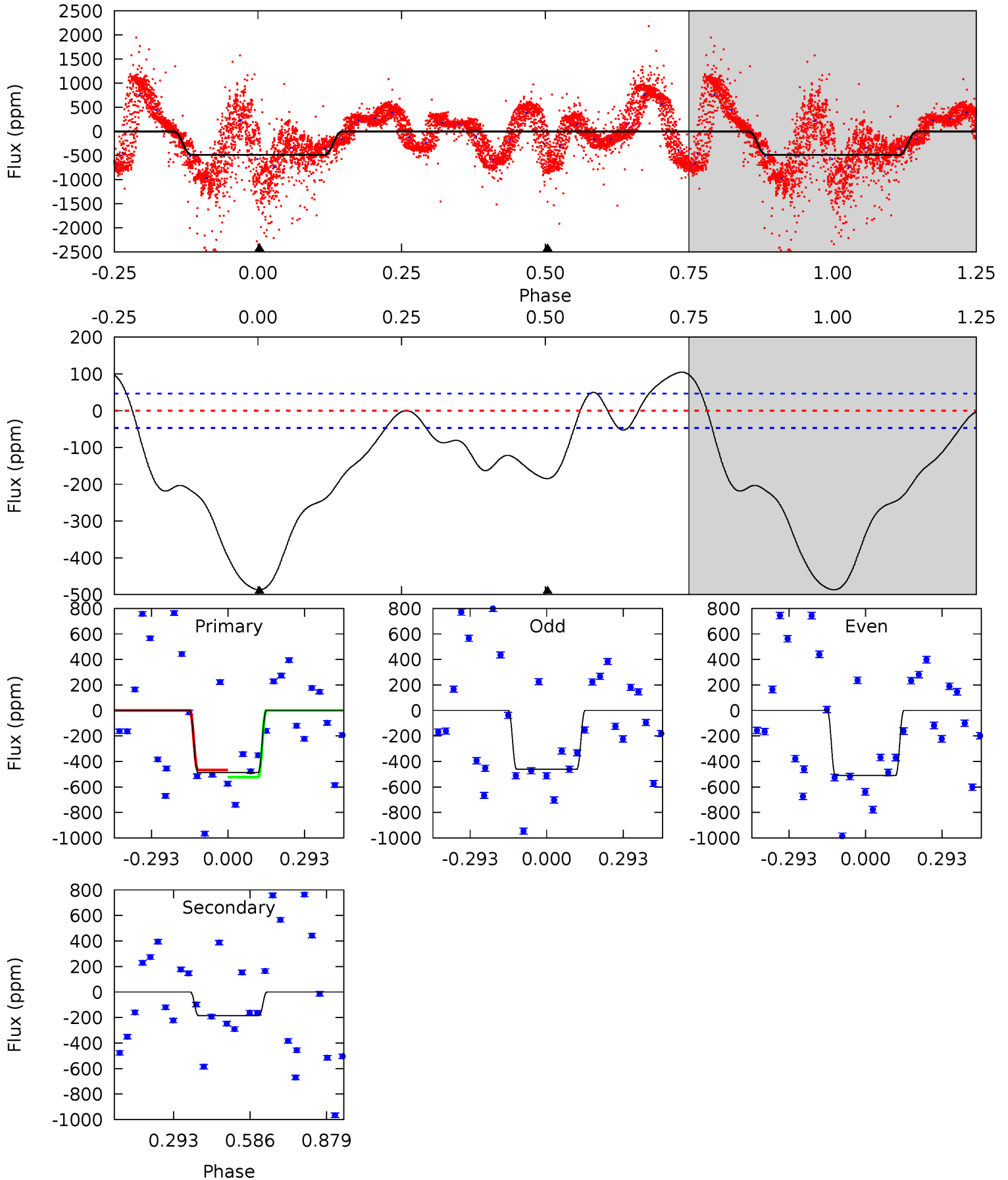
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
64.8	-11.2	0	0	4.26	0.84	12.7	64.8	64.8	-11.2	-11.2	2.97	1.00	0.39	13.3



Alt Model-Shift Uniqueness Test

004136285-01, P = 1.581580 Days, E = 132.604612 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
45.1	17.1	0	0	4.33	1.05	4.60	45.1	45.1	17.1	17.1	2.28	1.16	0.18	2.83



Stellar Parameters For KIC 004136285

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5780^{+1}_{-1}	$4.438^{+1.000}_{-1.000}$	$0.000^{+1.000}_{-1.000}$	$1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$
	+0%/-0%	+23%/-23%	+inf%/-inf%	+100%/-100%	+100%/-100%	+100%/-100%
Source	Solar	Solar	Solar	Solar		

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

Secondary Eclipse Parameters for KIC 004136285-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	25 ± 2	$1.49^{+0.15}_{-0.17}$	2187^{+104}_{-107}	-3910^{+146}_{-148}	$-4.378^{+0.820}_{-1.191}$
Alt.	-185 ± 11	$2.52^{+0.20}_{-0.19}$	2186^{+100}_{-102}	4579^{+169}_{-158}	11^{+2}_{-2}

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

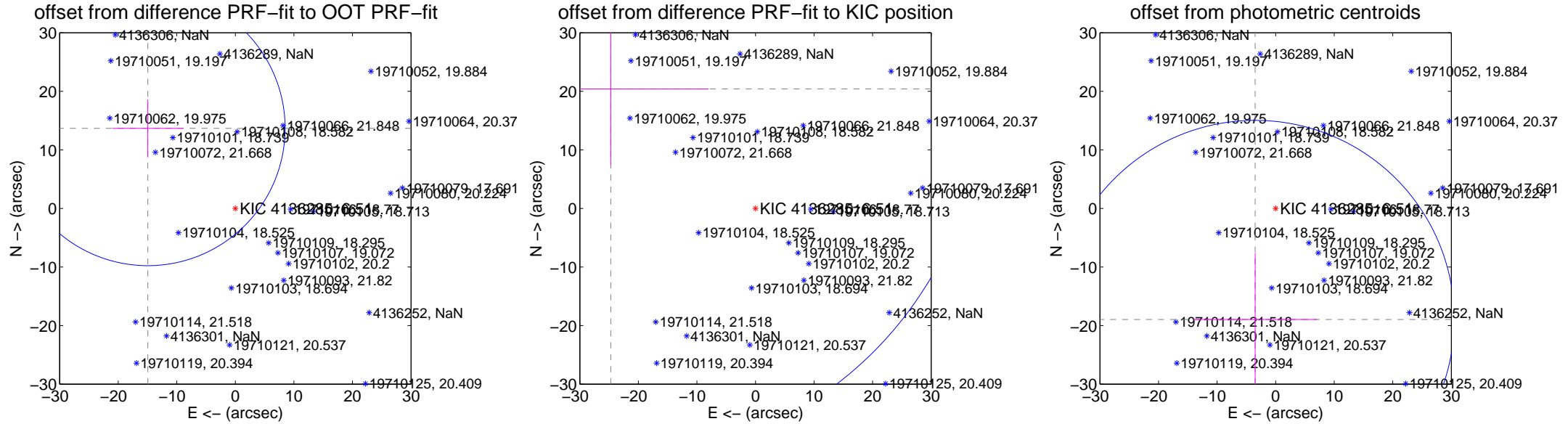
DV Centroid Data

Supplemental centroid analysis for 004136285-01. **Kepler magnitude: 6.51.** Transit SNR 24.42

There are 0 quarters with good PRF difference image offsets

The OOT PRF centroid is offset from the target star catalog position by about 11.57 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	20.259 ± 7.815	2.59	14.948 ± 6.080	13.674 ± 4.933
PRF-fit source offset from KIC position	32.043 ± 21.154	1.51	24.707 ± 16.704	20.404 ± 12.995
photometric centroid source offset	19.28 ± 11.33	1.70	3.49 ± 10.58	-18.96 ± 11.36



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.

Q9 no difference image



Q9 no OOT image



Q10 no difference image



Q10 no OOT image



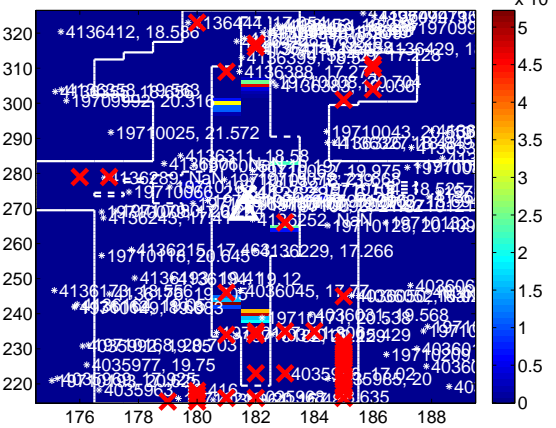
Q11 no difference image



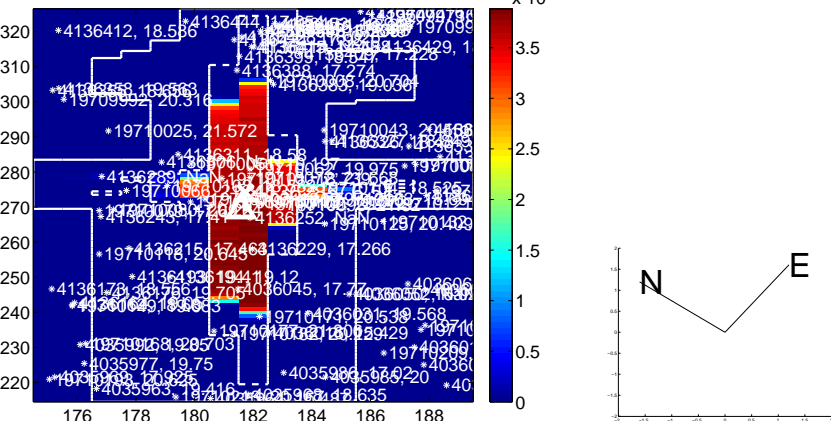
Q11 no OOT image



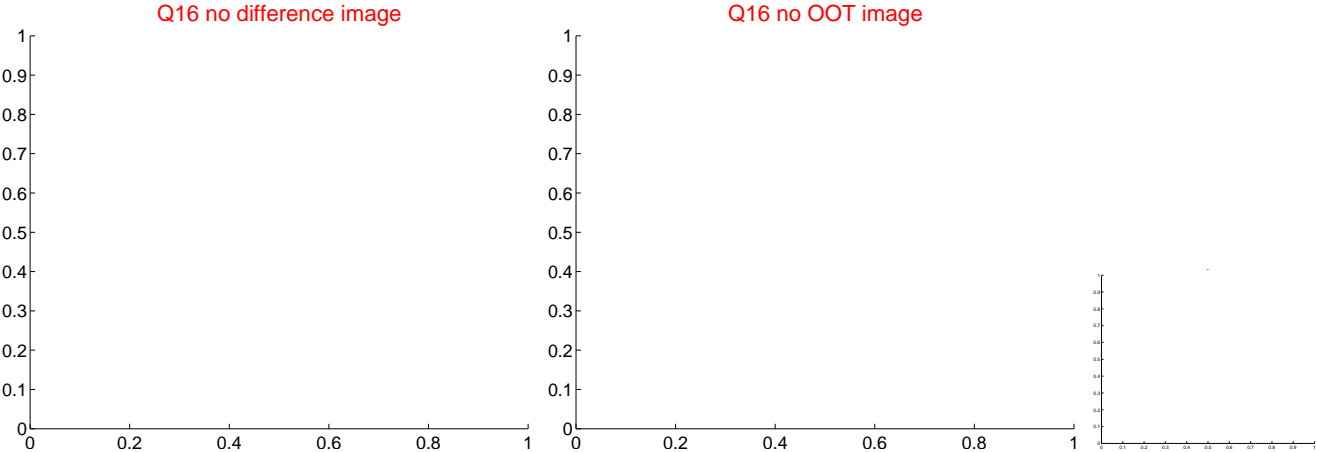
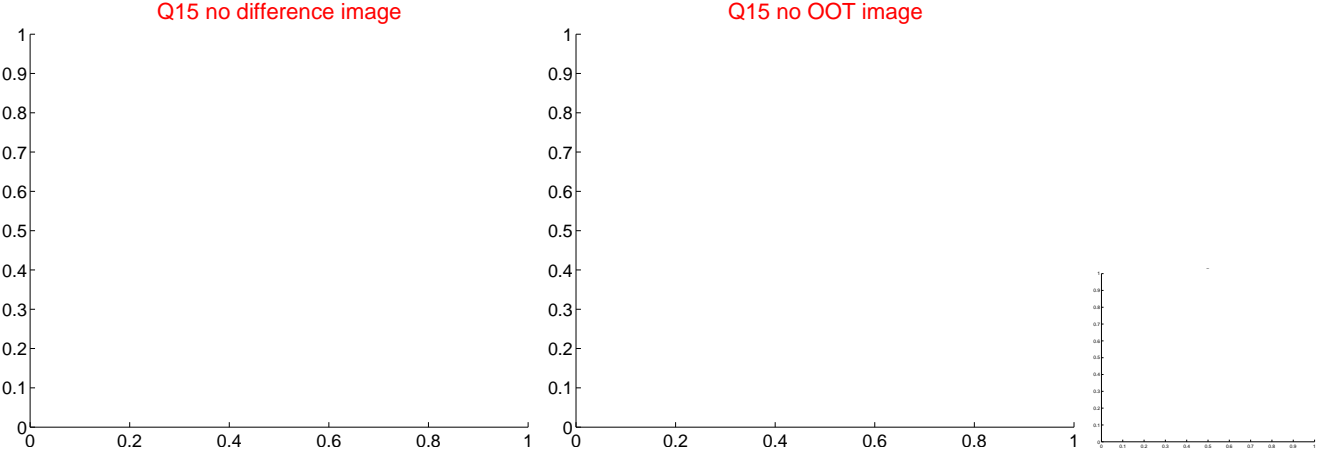
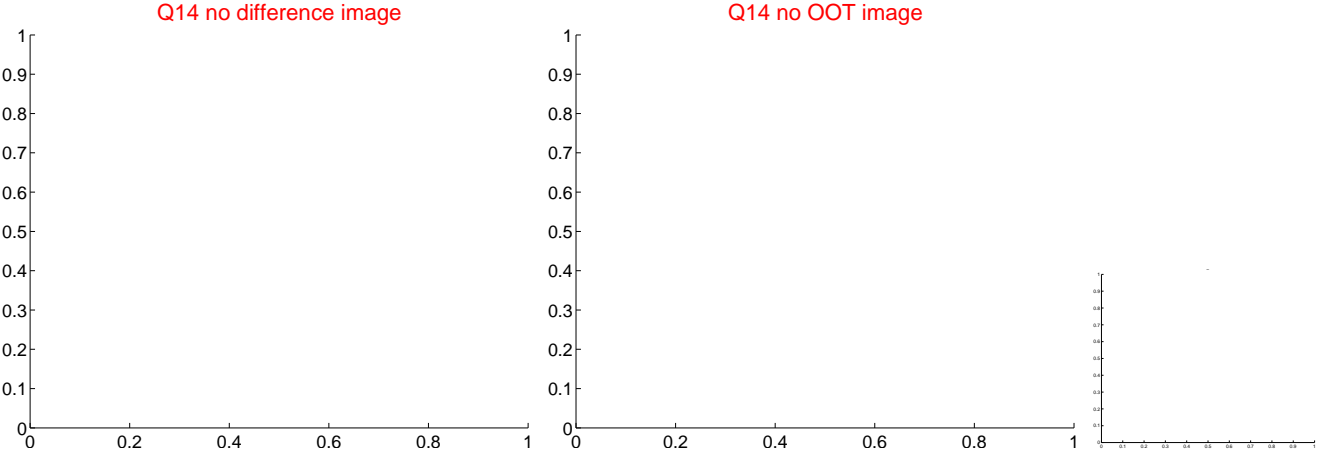
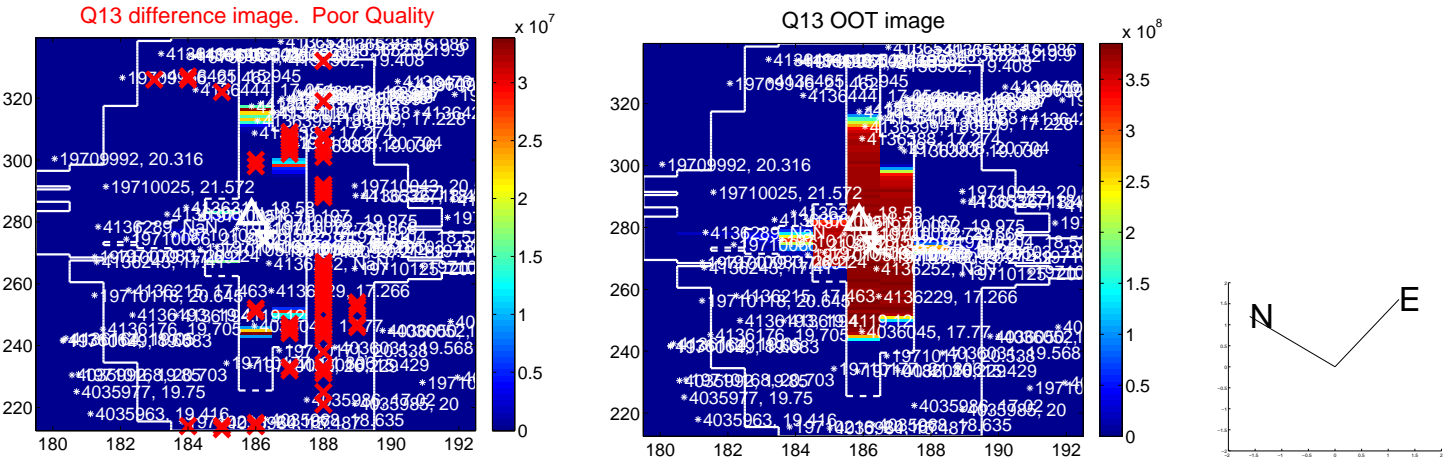
Q12 difference image. Poor Quality



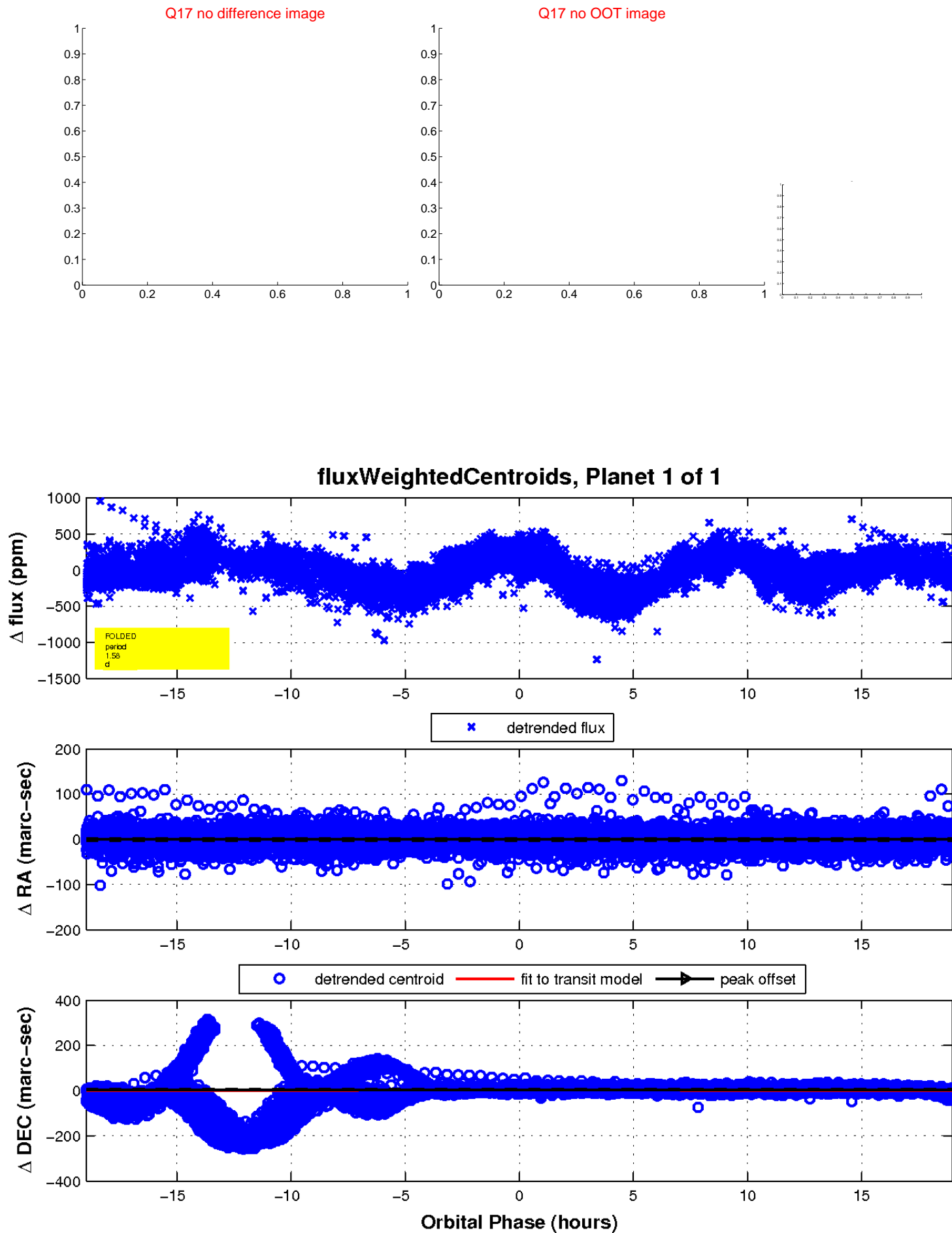
Q12 OOT image



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

