

KIC 011296561

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})
011296561-01	OBS	No	546.435771	264.516587	183.8	2.444	12.4	2.7	0.93	5944	1.53	0.57
011296561-02	OBS	No	329.553552	432.304025	488.1	2.736	14.2	6.7	0.93	5944	2.10	1.12

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011296561-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
011296561-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—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.

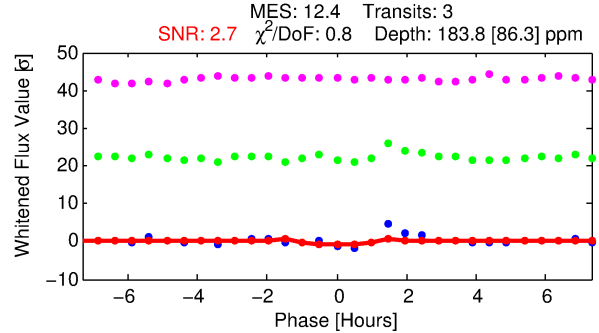
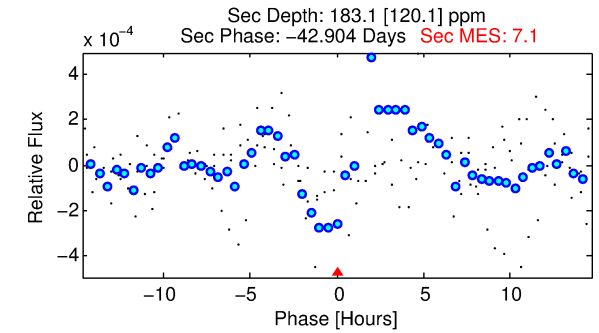
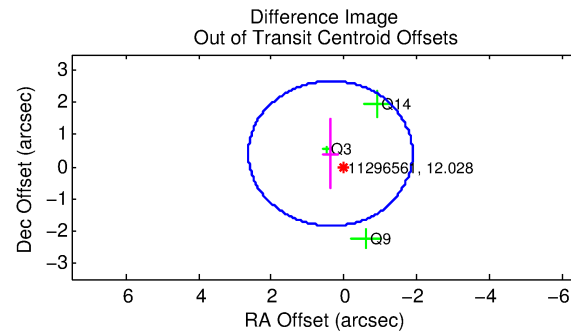
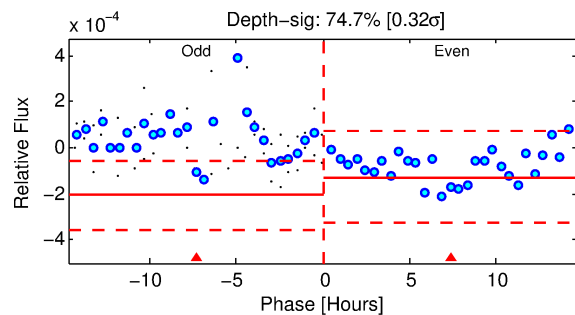
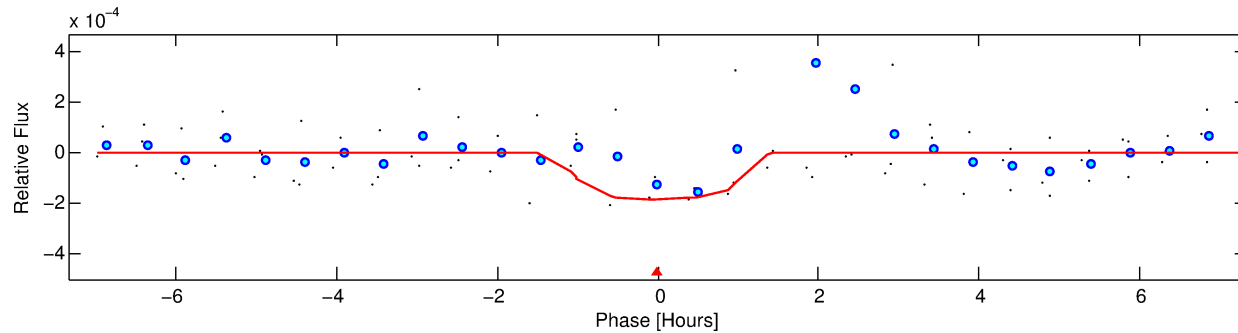
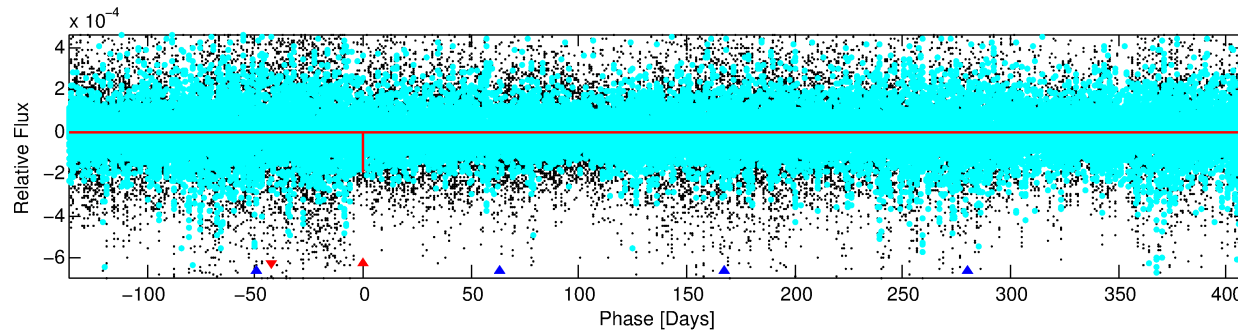
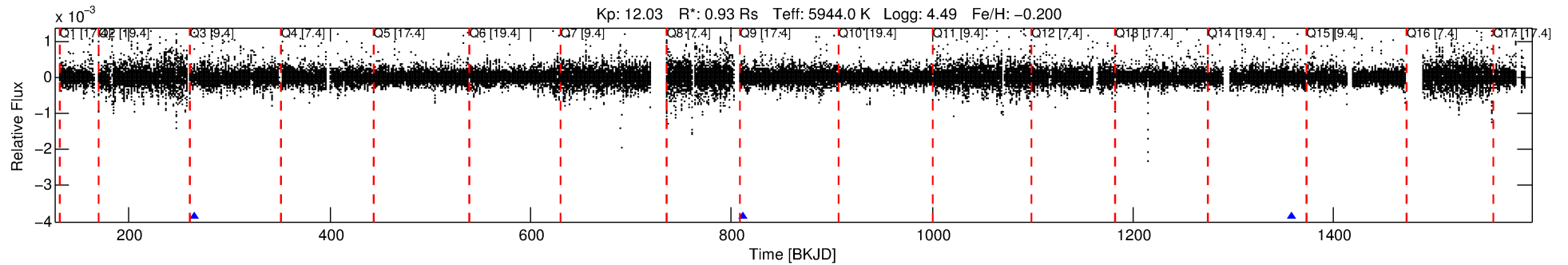
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011296561-01

No Significant Match Found

DV One-Page Summary

KIC: 11296561 Candidate: 1 of 2 Period: 546.436 d



DV Fit Results:

Period = 546.43577 [0.00908] d
Epoch = 264.5166 [0.0145] BKJD
Rp/R* = 0.0151 [0.0166]
a/R* = 701.27 [3778.04]
b = 0.93 [0.81]
Seff = 0.57 [0.22]
Teq = 222 [22] K
Rp = 1.53 [1.73] Re
a = 1.2956 [0.3237] AU
Ag = 72275.98 [167246.92] [0.43σ]
Teff = 5620 [3212] K [1.68σ]

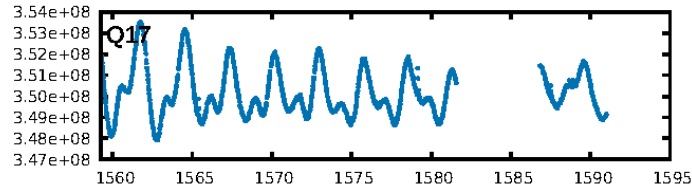
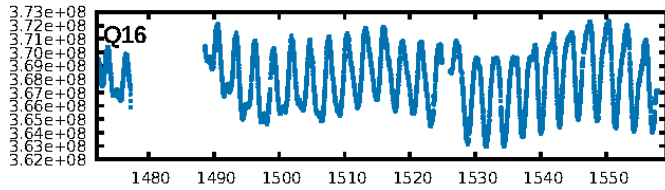
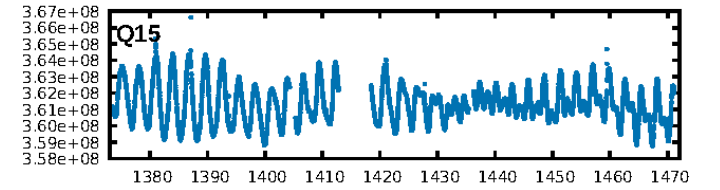
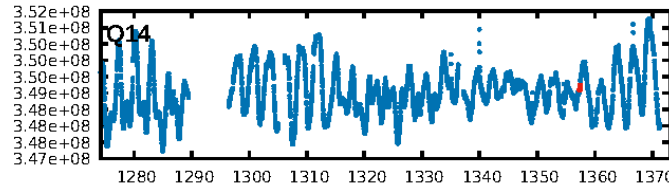
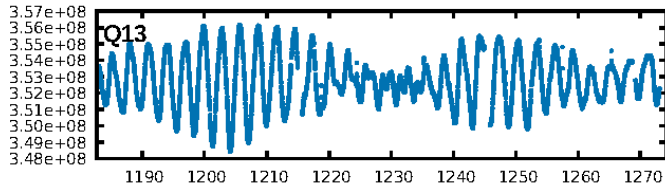
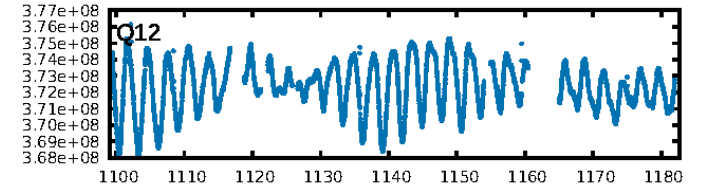
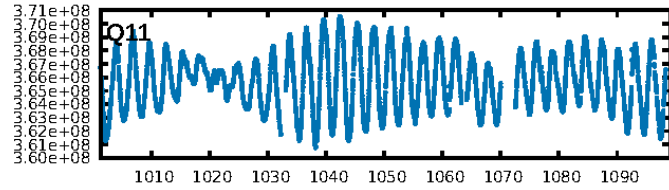
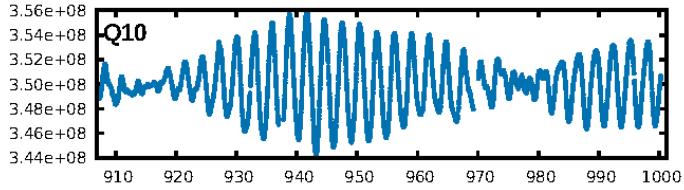
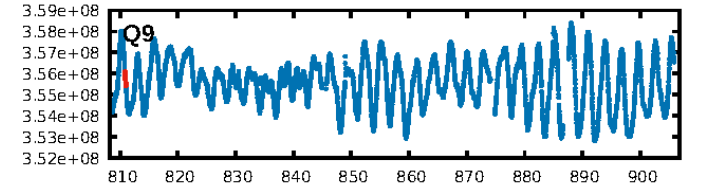
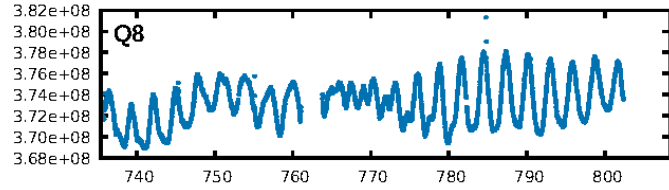
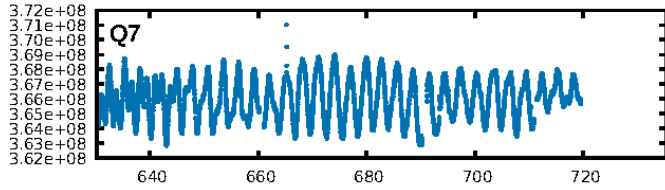
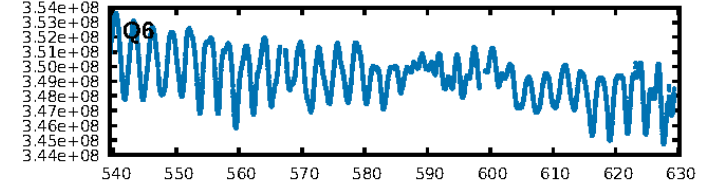
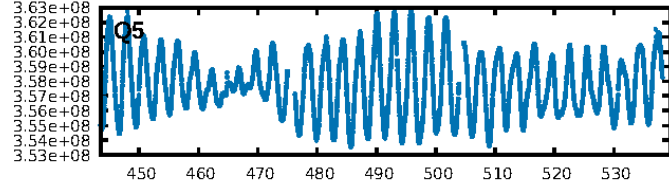
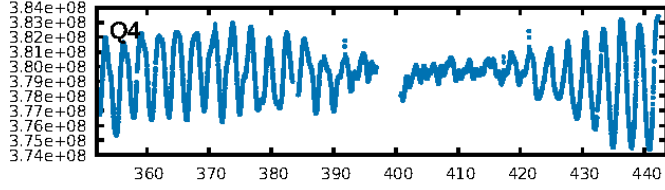
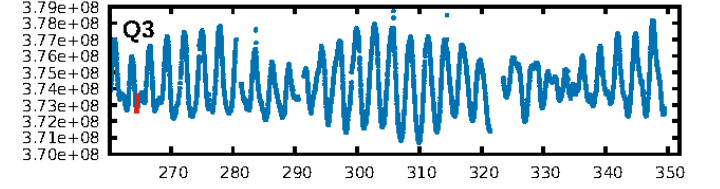
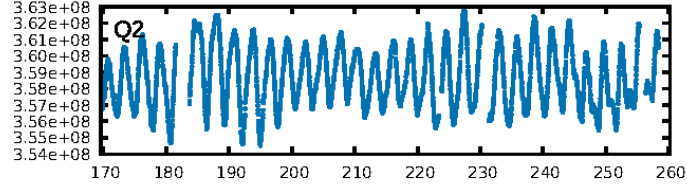
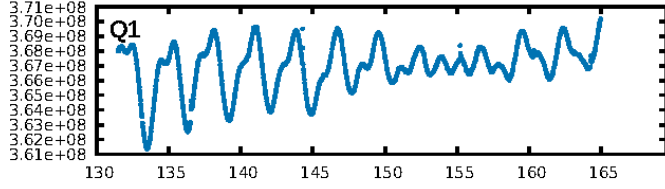
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [1418.75σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 40.2%
ModelChiSquareGof-sig: 99.6%
Bootstrap-pfa: 3.99e-09
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.2359
Centroid-sig: 25.7%
Centroid-so: 1.413 arcsec [0.93σ]
OotOffset-rm: 0.554 arcsec [0.74σ]
OotOffset-st: 1/1/0/1 [3]
KicOffset-rm: 0.693 arcsec [1.03σ]
KicOffset-st: 1/1/0/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

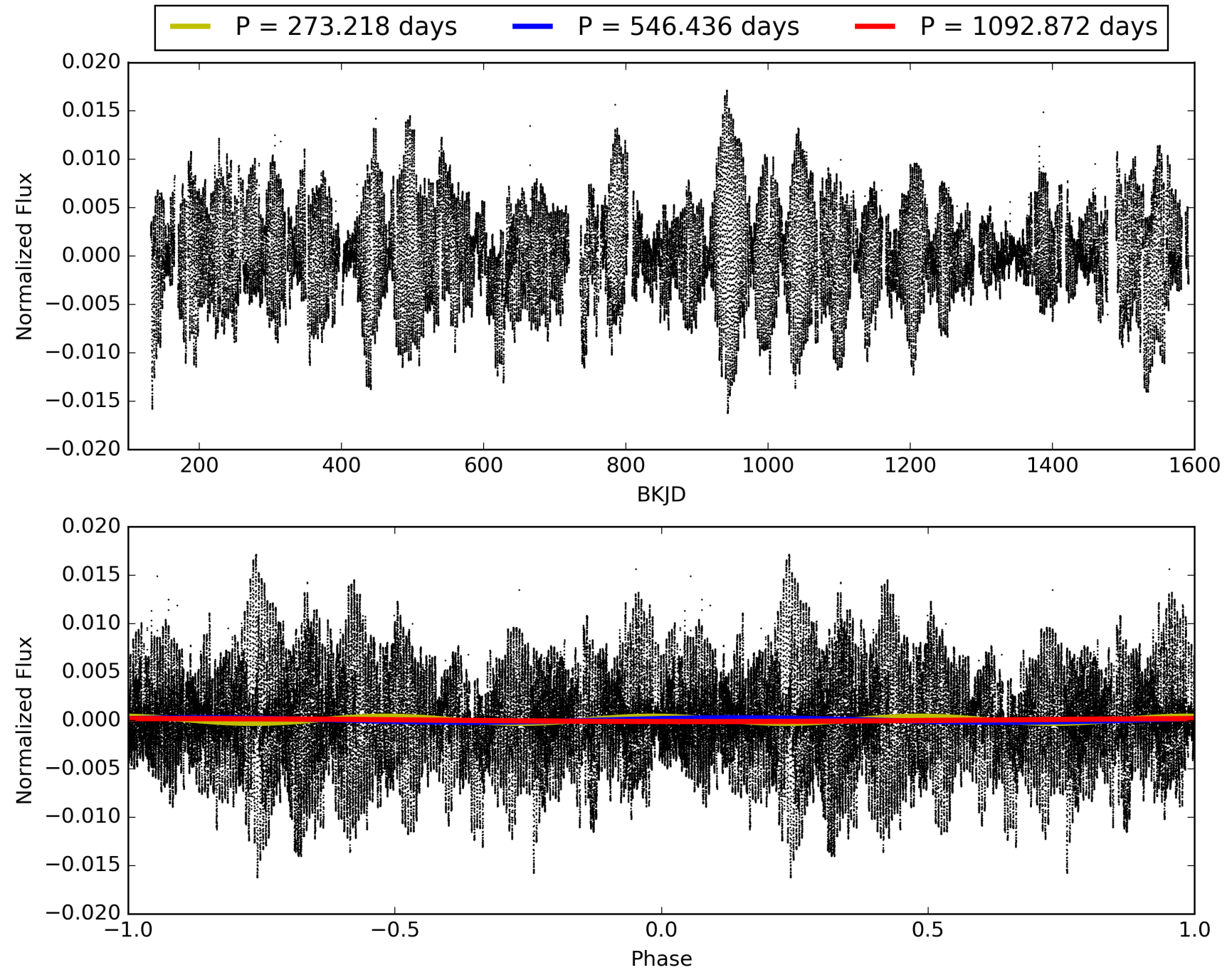
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 08:55:41 Z

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

TCE 011296561-01, PDC Light Curves

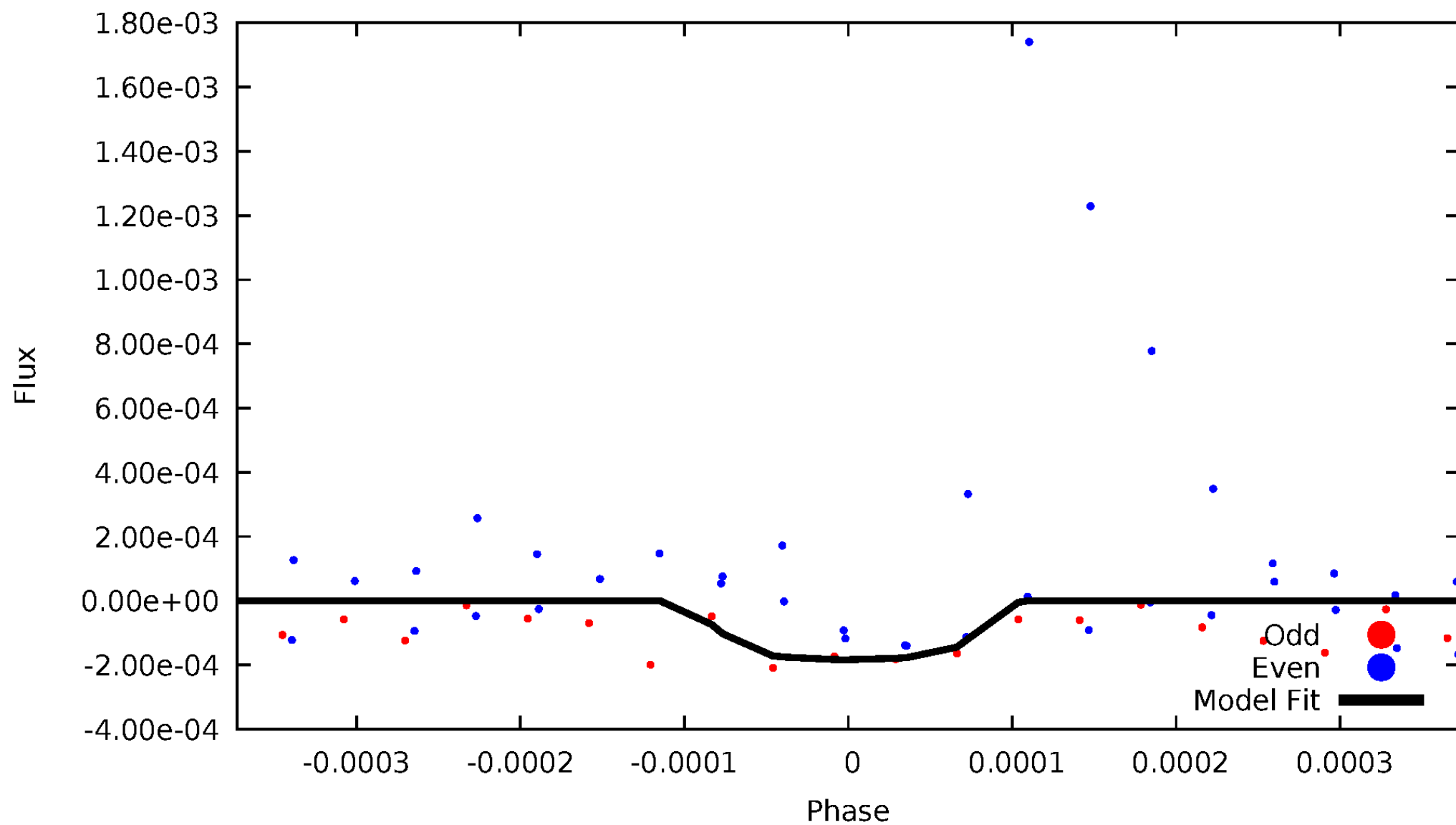


TCE 011296561-01



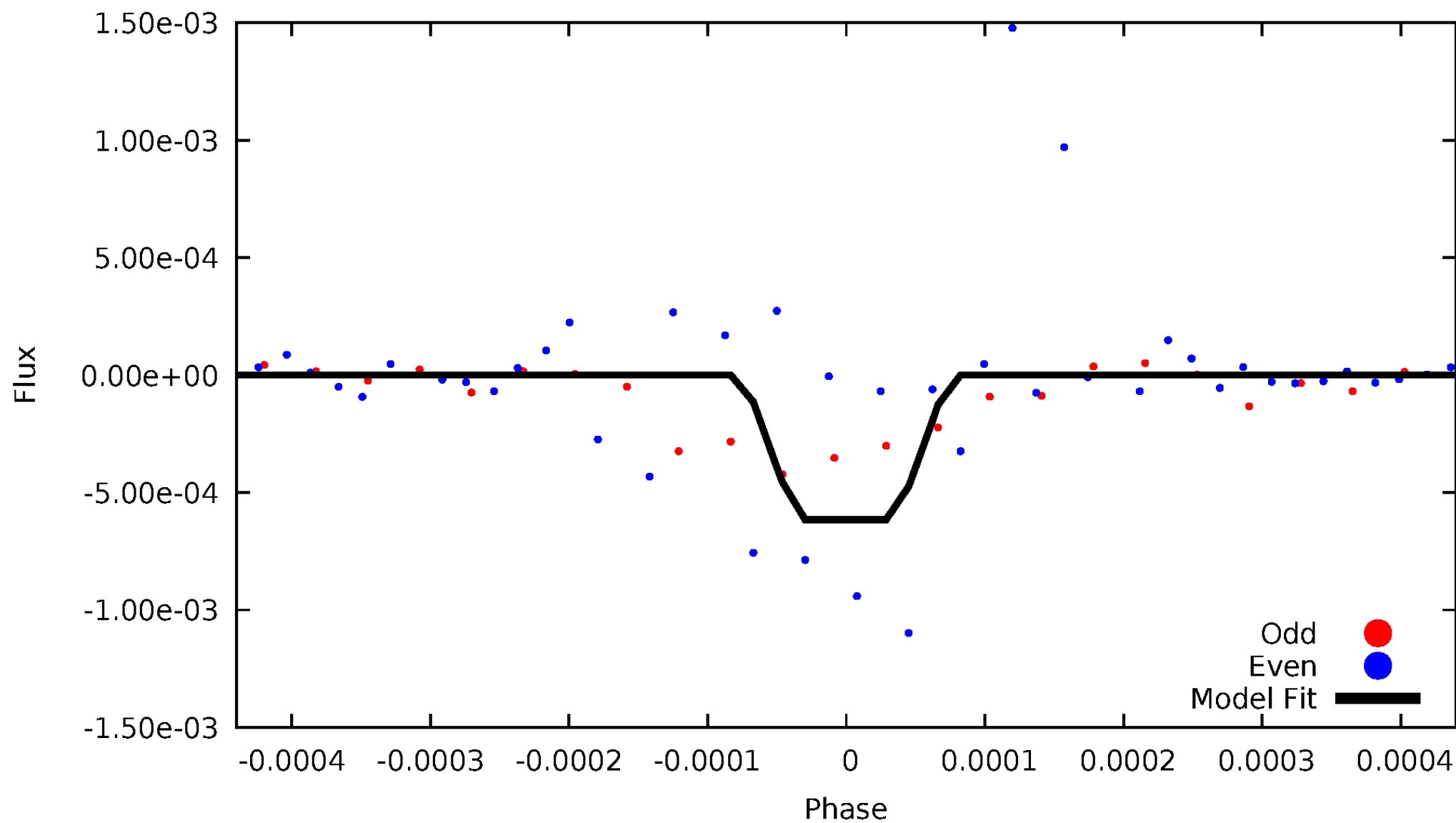
DV Odd/Even

TCE 011296561-01



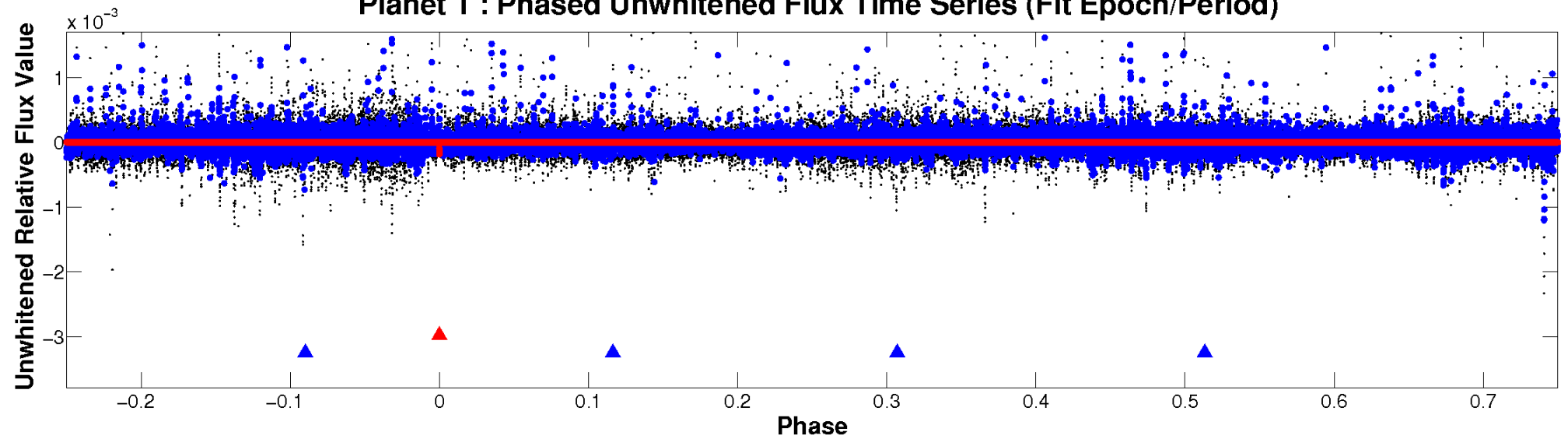
ALT Odd/Even

TCE 011296561-01

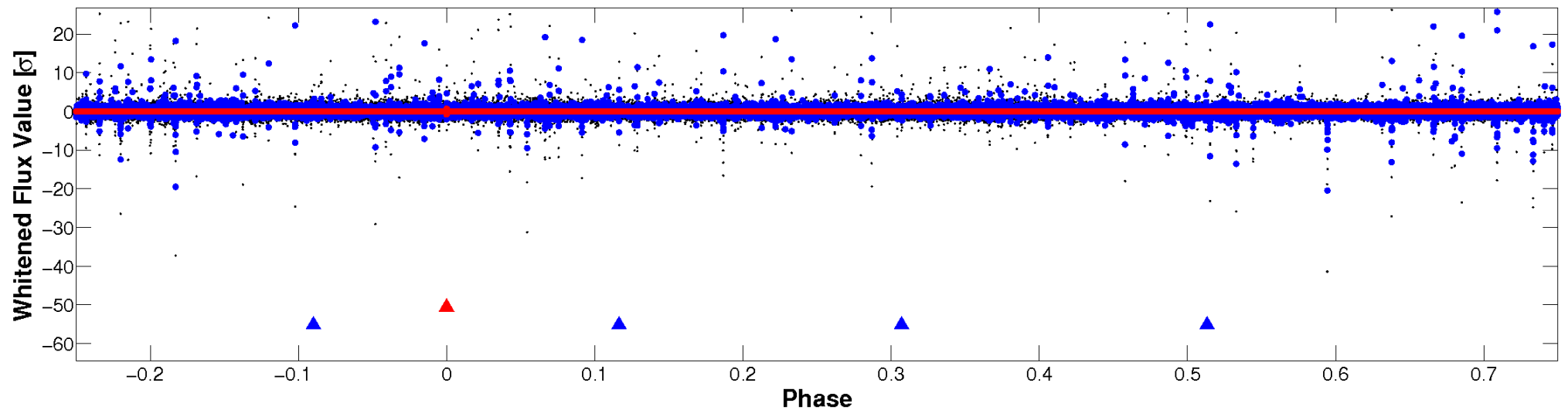


Non-Whitened Vs. Whitened Light Curve

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

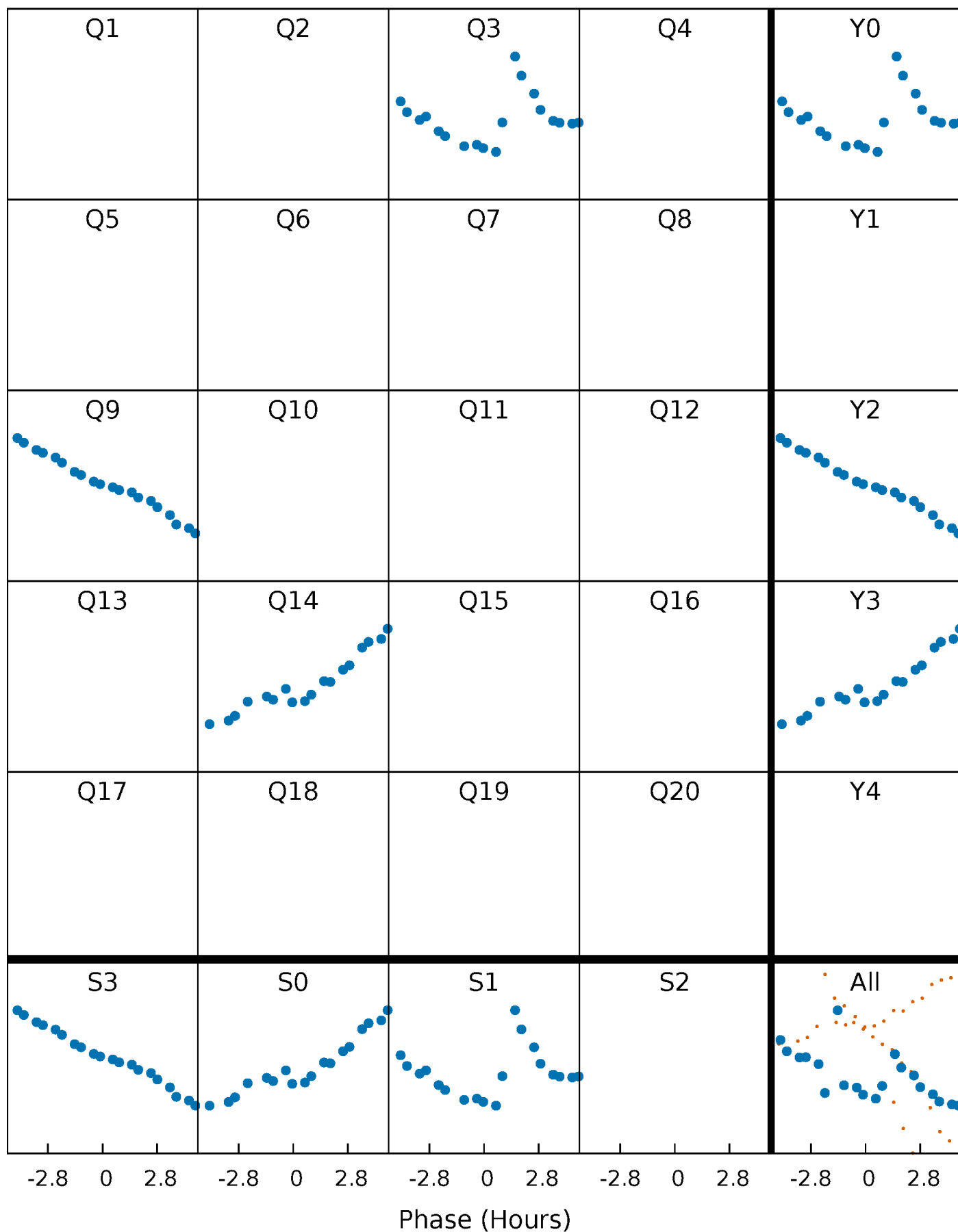


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



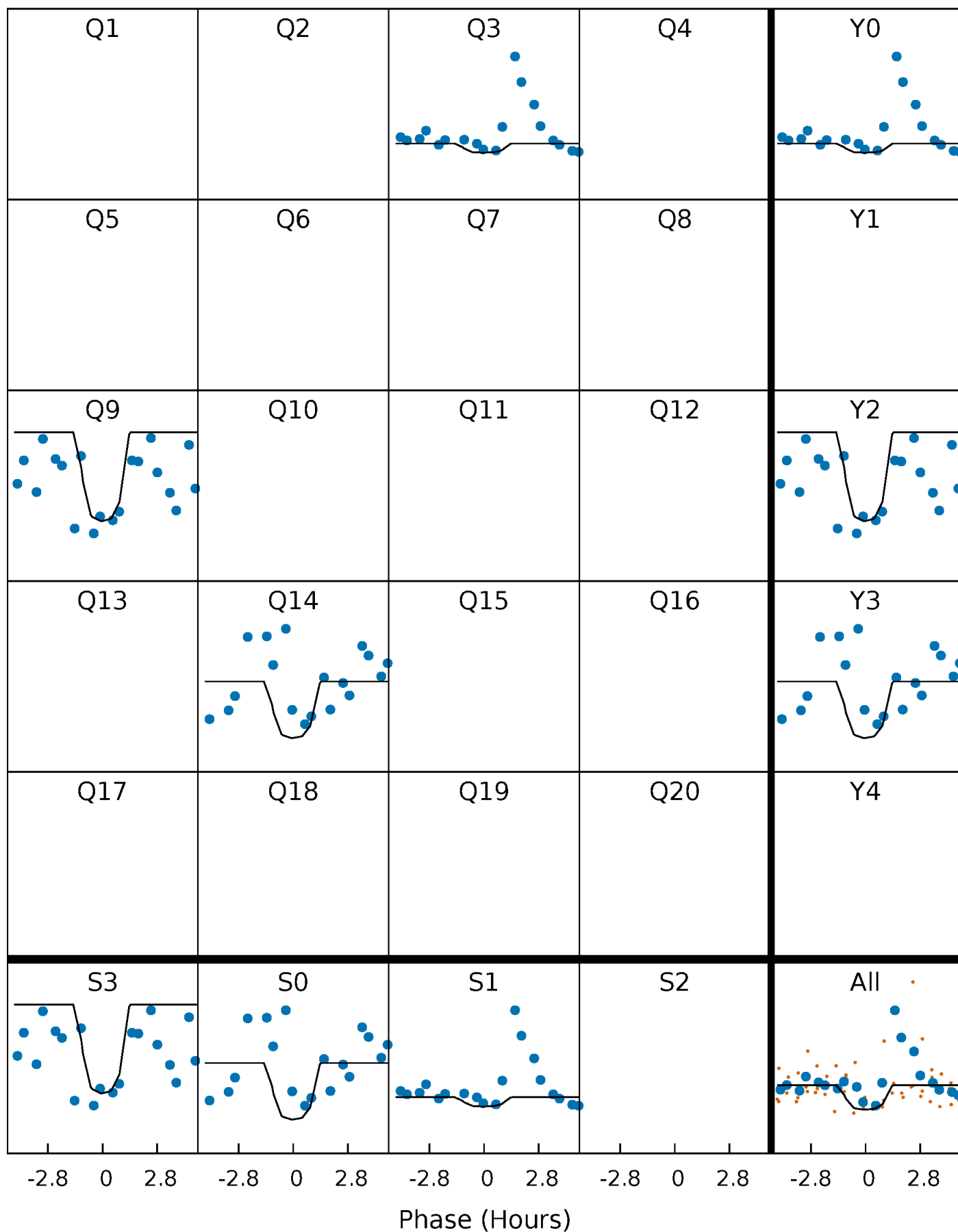
PDC Quarter-Phased Transit Curves

TCE 011296561-01 $P=546.435771$ Days $T_0=264.516587$ (BKJD)



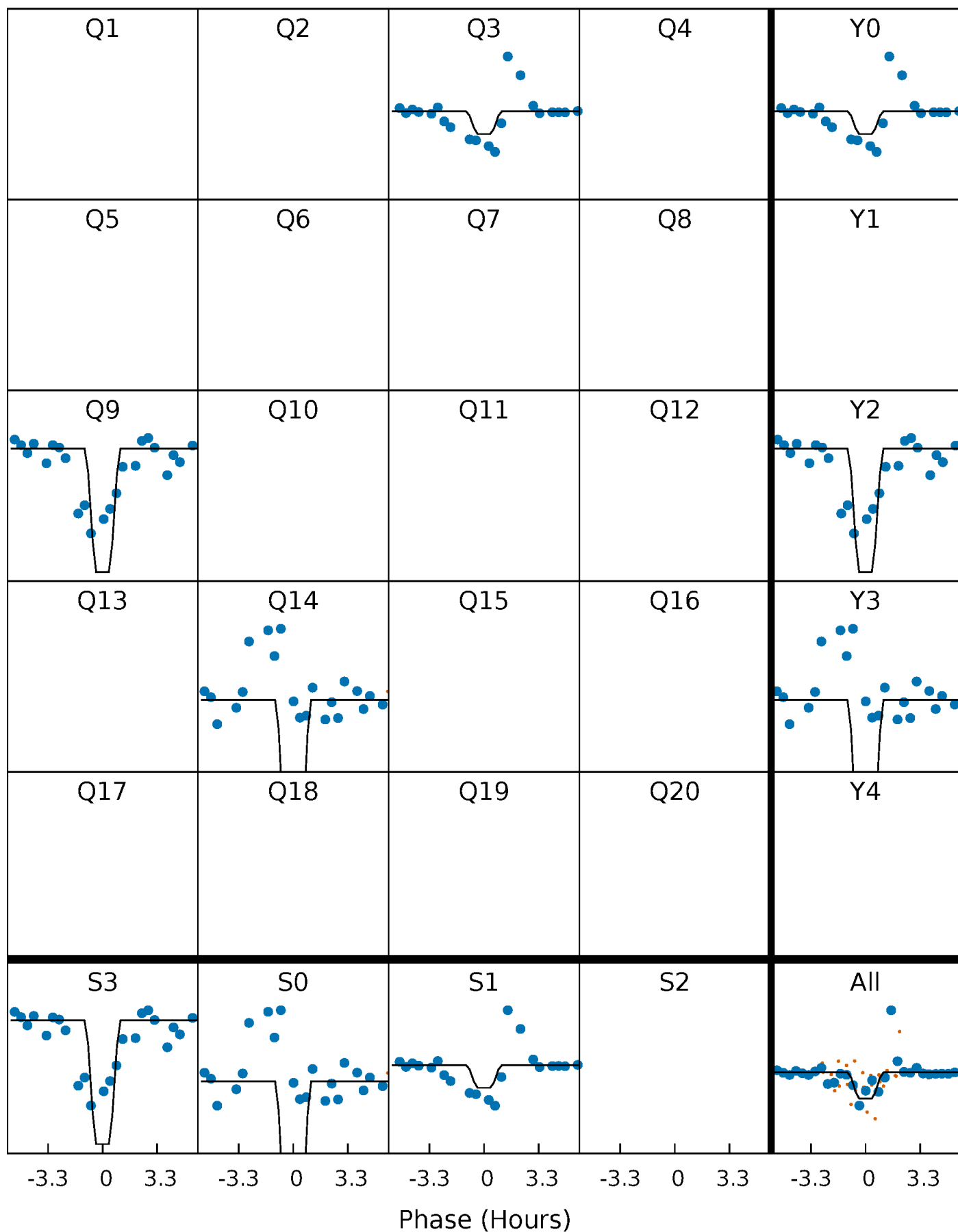
DV Quarter-Phased Transit Curves

TCE 011296561-01 P=546.435771 Days $T_0=264.516587$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

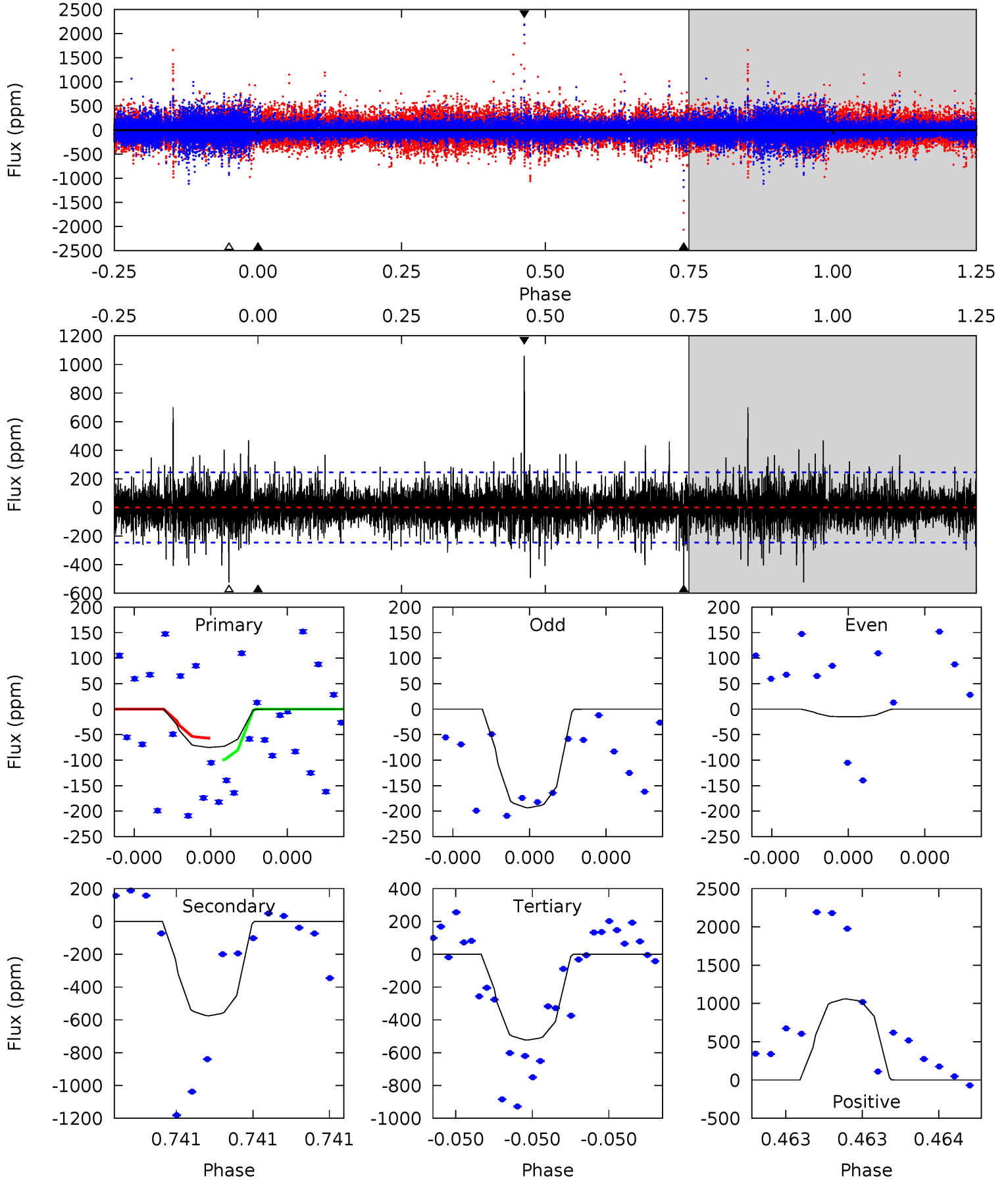
TCE 011296561-01 P=546.441073 Days $T_0=264.511348$ (BKJD)



DV Model-Shift Uniqueness Test

011296561-01, P = 546.435771 Days, E = 264.516587 Days

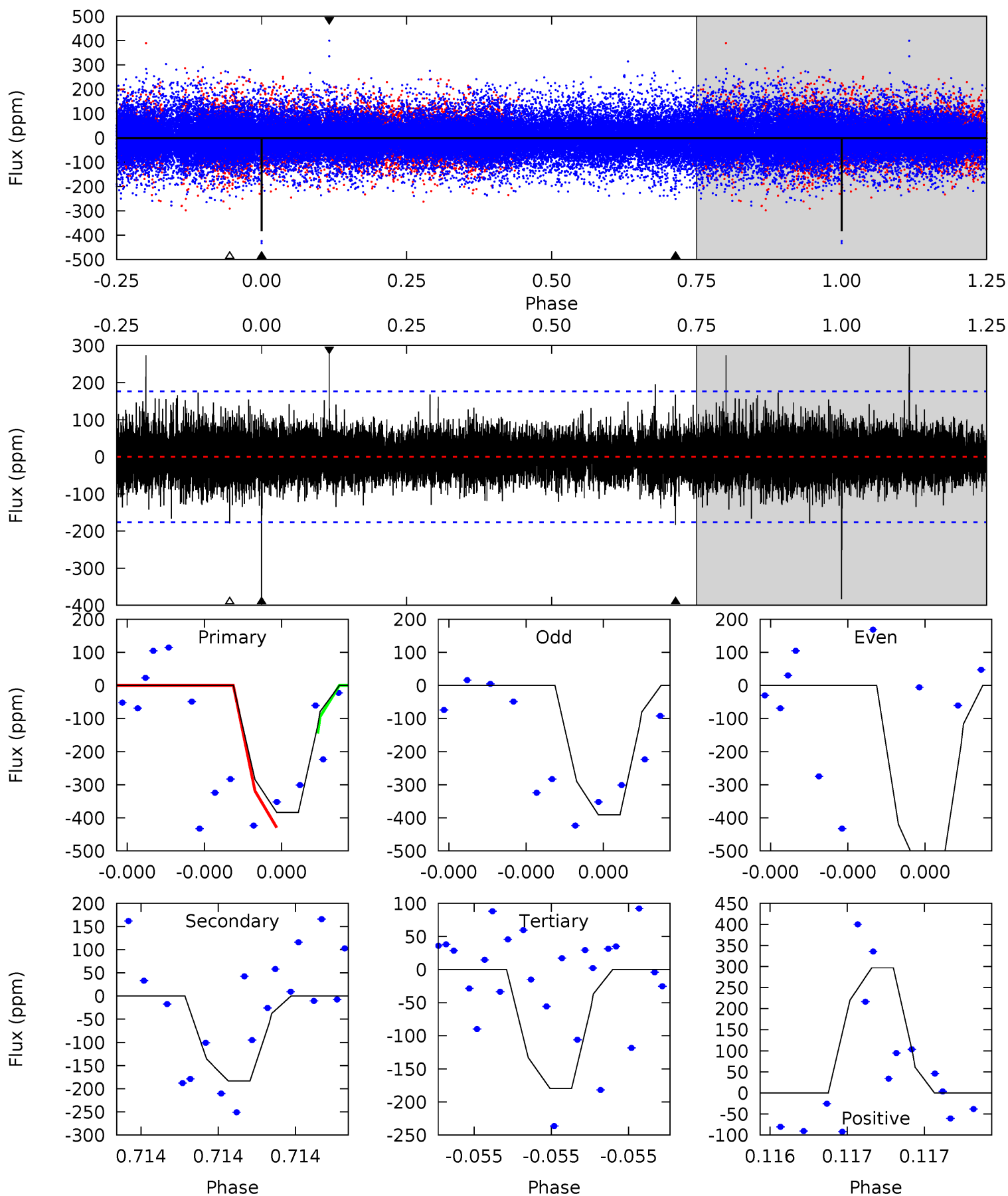
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.75	13.5	12.2	24.8	5.74	3.74	1.99	-10.5	-23.0	1.22	-11.3	1.58	2.43	0.65	0.50



Alt Model-Shift Uniqueness Test

011296561-01, P = 546.441073 Days, E = 264.511348 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.6	6.02	5.90	9.75	5.80	3.82	1.10	6.71	2.85	0.13	-3.73	3.69	1.19	0.44	3.90



Stellar Parameters For KIC 011296561

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5944^{+148}_{-163}	$4.492^{+0.052}_{-0.208}$	$-0.200^{+0.300}_{-0.300}$	$0.926^{+0.267}_{-0.095}$	$0.970^{+0.119}_{-0.119}$	$1.721^{+0.475}_{-0.896}$
	+2%/-3%	+1%/-5%	+150%/-150%	+29%/-10%	+12%/-12%	+28%/-52%
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 011296561-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-575 ± 43	$2.04^{+1.58}_{-1.25}$	317^{+24}_{-14}	6724^{+6303}_{-1625}	$128198^{+734391}_{-88405}$
Alt.	-183 ± 30	$2.82^{+1.73}_{-1.59}$	317^{+21}_{-14}	4455^{+1887}_{-696}	21343^{+83134}_{-13373}

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

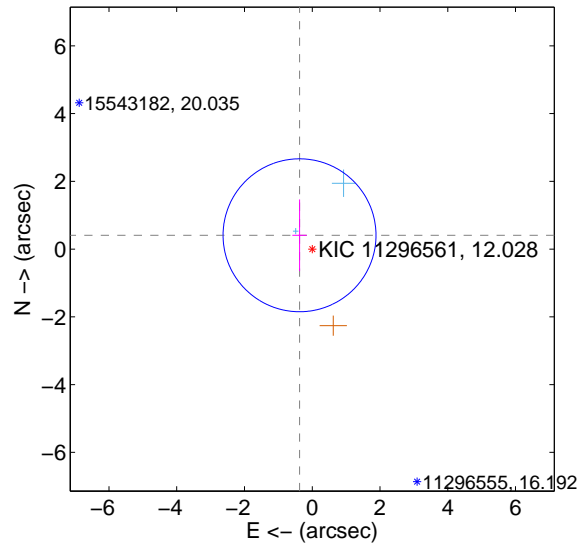
Supplemental centroid analysis for 011296561-01. Kepler magnitude: 12.03. Transit SNR 2.69

There are 2 quarters with good PRF difference image offsets

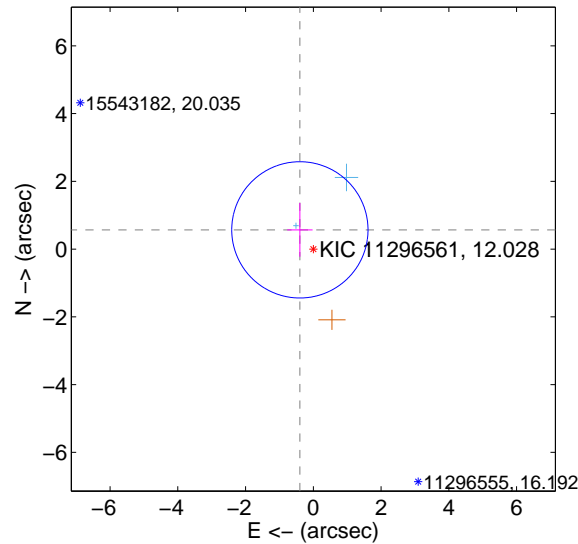
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.554 ± 0.752	0.74	0.375 ± 0.211	0.408 ± 1.058
PRF-fit source offset from KIC position	0.693 ± 0.670	1.03	0.397 ± 0.376	0.568 ± 0.792
photometric centroid source offset	1.41 ± 1.51	0.93	0.87 ± 1.39	-1.12 ± 1.58

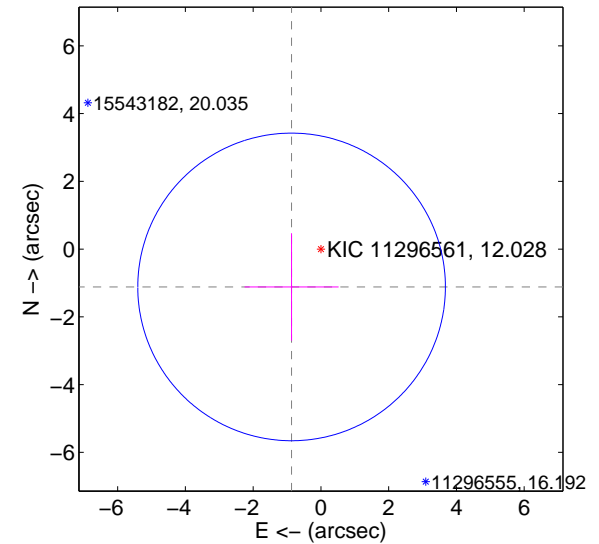
offset from difference PRF-fit to OOT PRF-fit



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.

Q1 no difference image



Q1 no OOT image



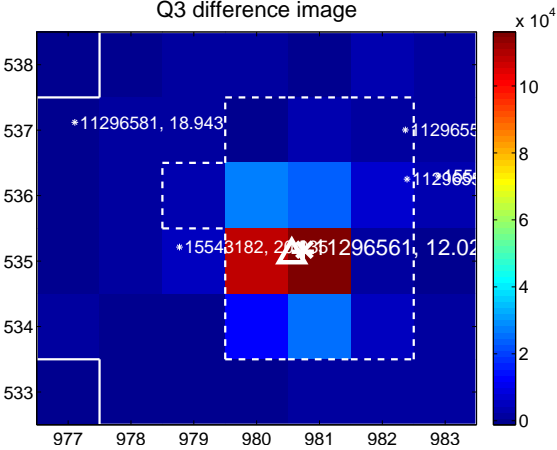
Q2 no difference image



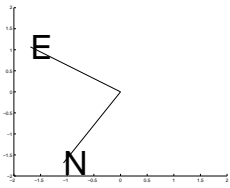
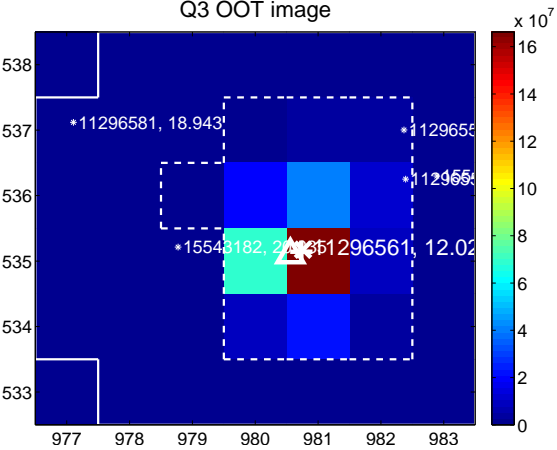
Q2 no OOT image



Q3 difference image



Q3 OOT image



Q4 no difference image



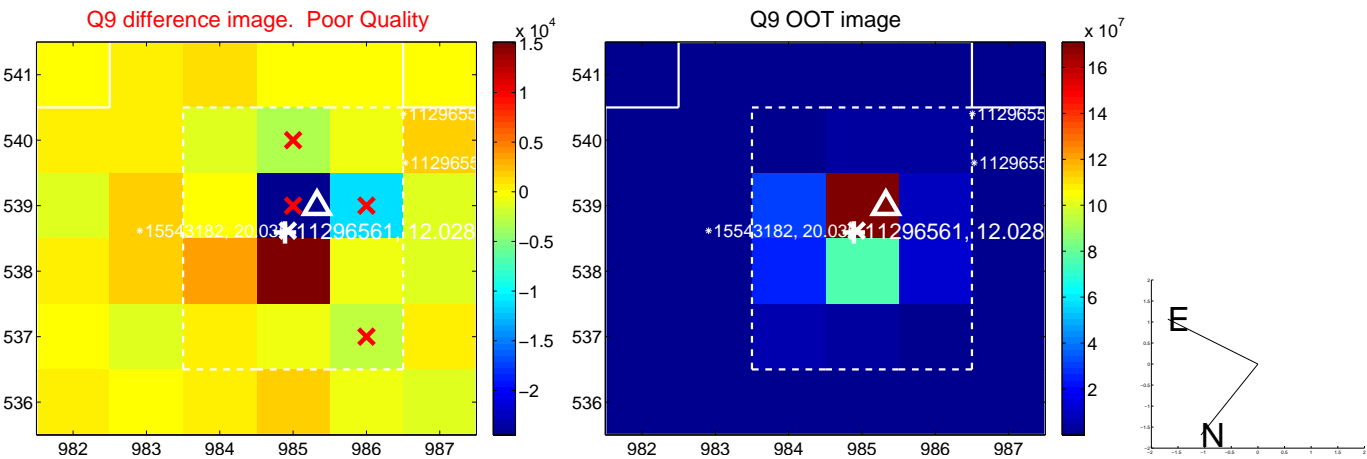
Q4 no OOT image



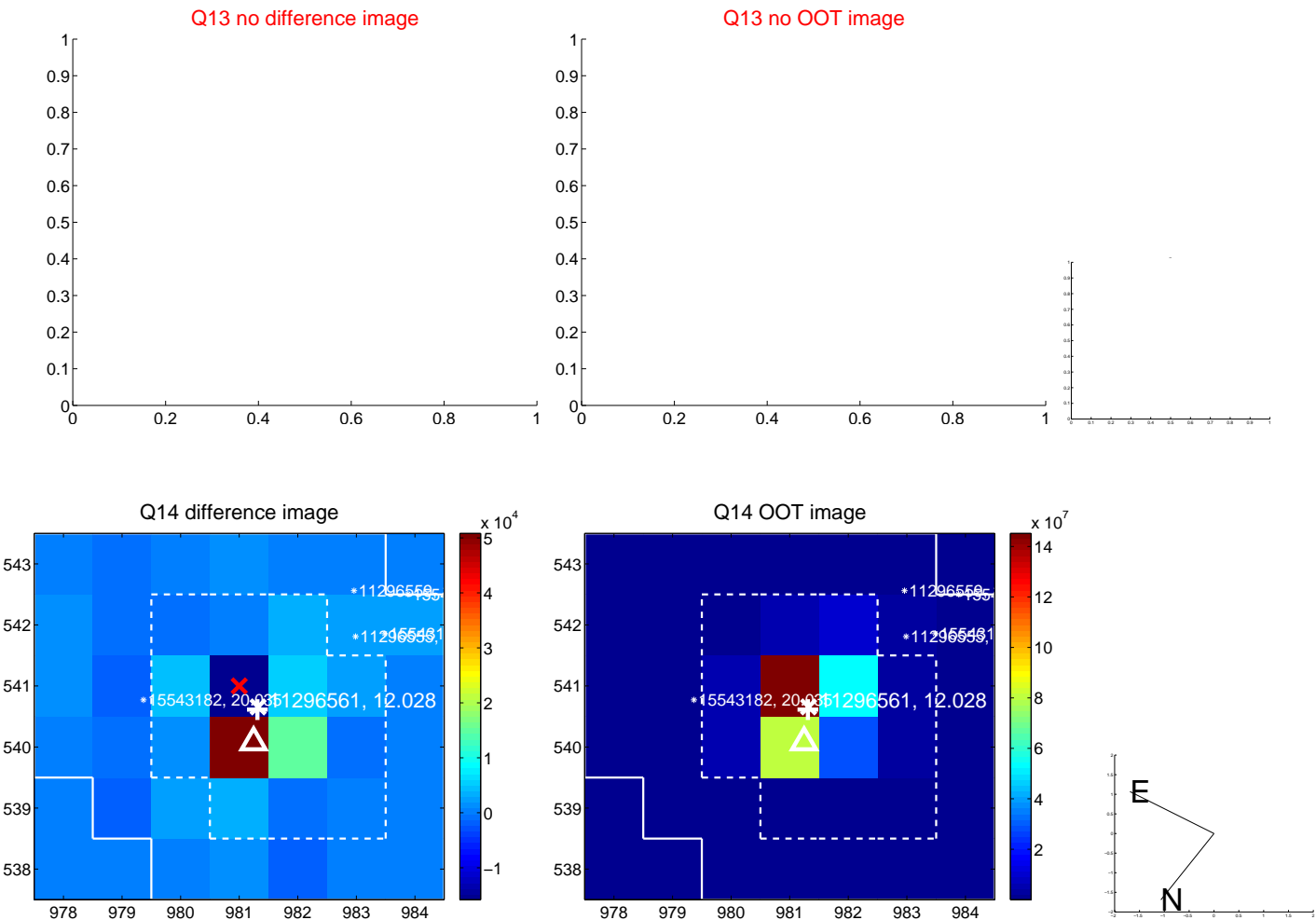
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



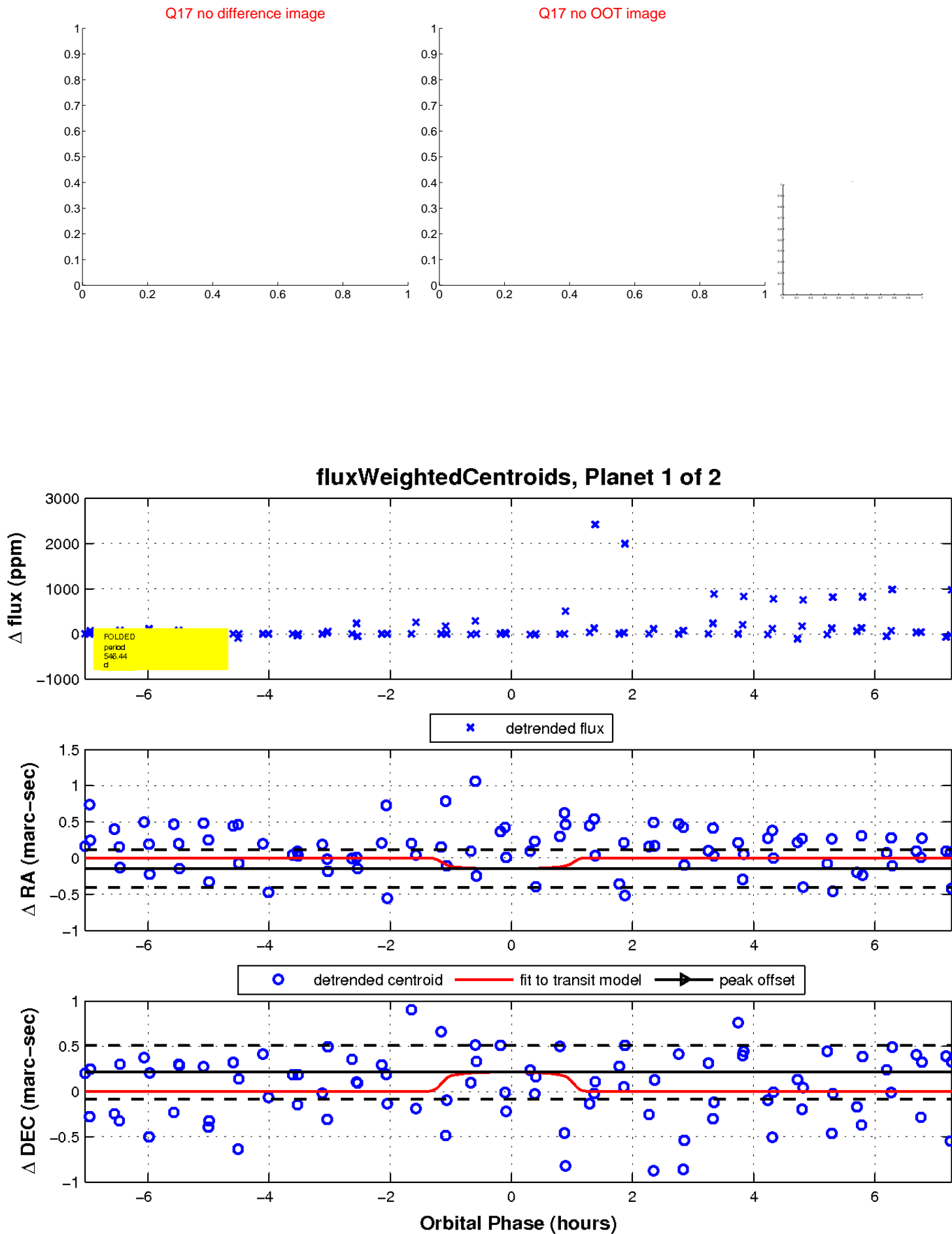
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



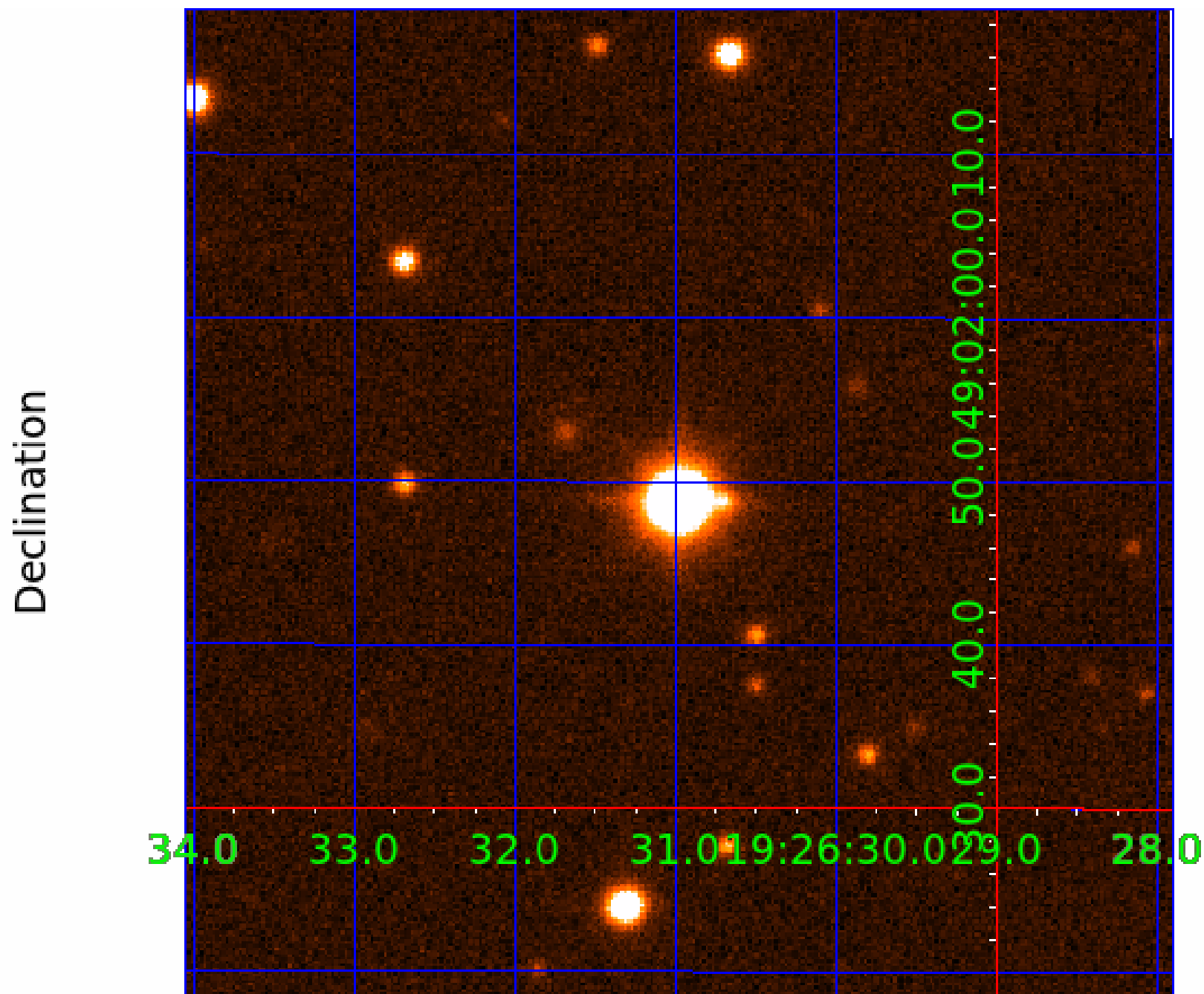
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 011296561

Q1-17 DR25 TCE Parameters

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011296561-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—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.

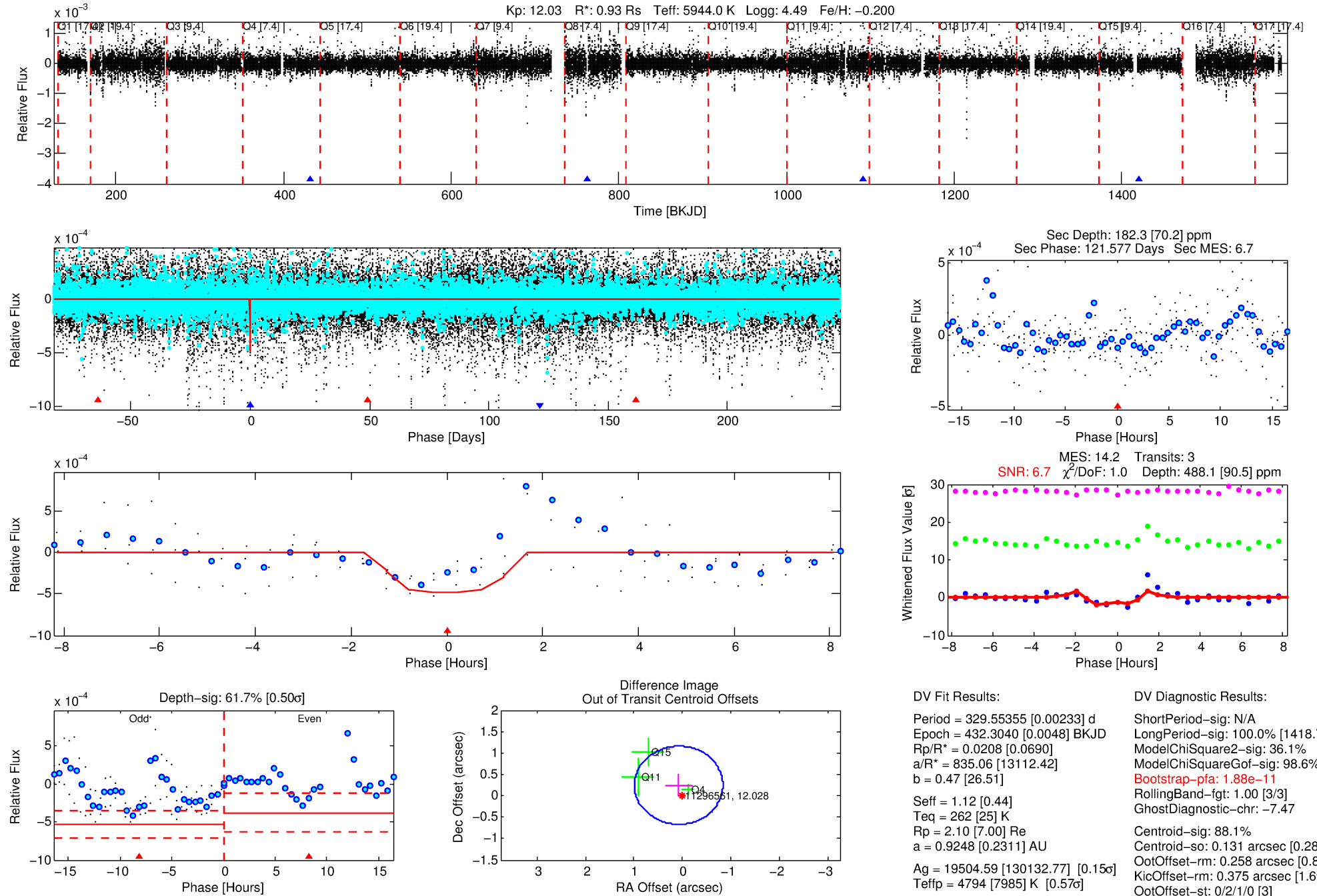
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011296561-02

No Significant Match Found

DV One-Page Summary

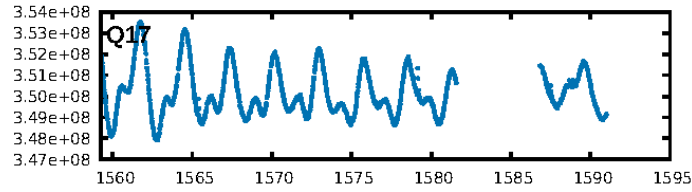
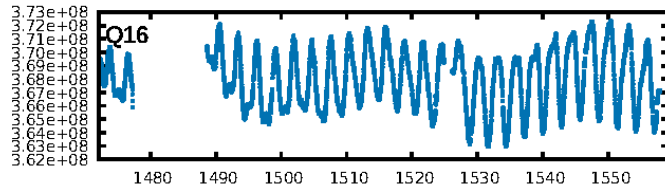
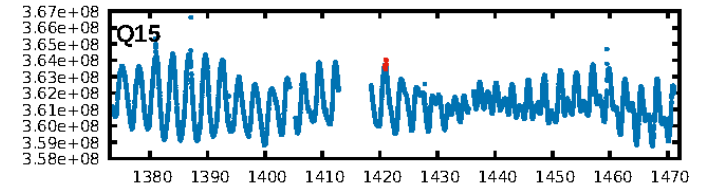
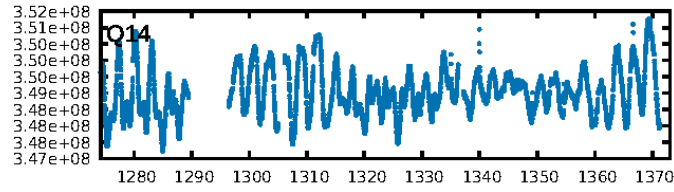
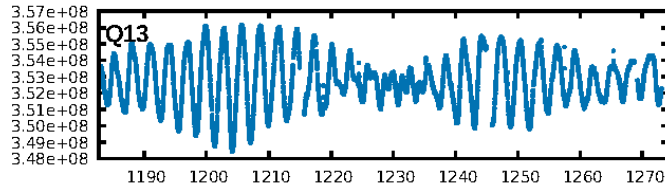
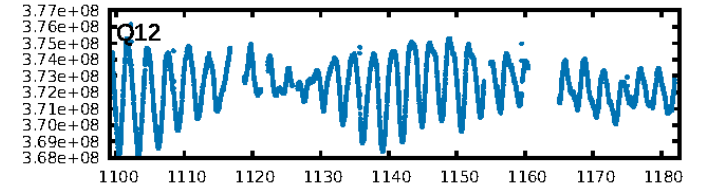
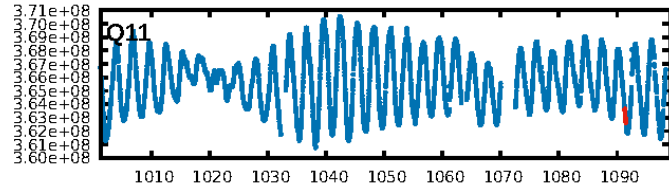
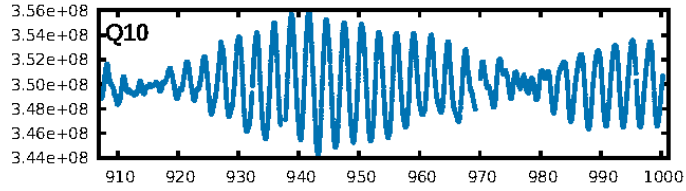
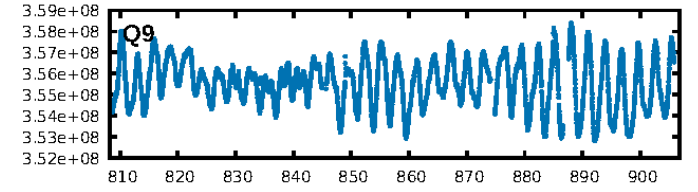
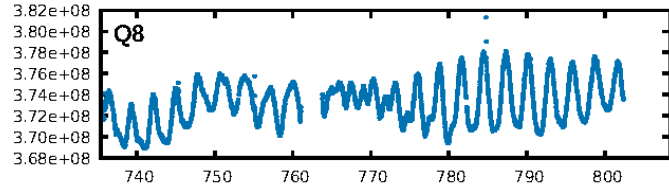
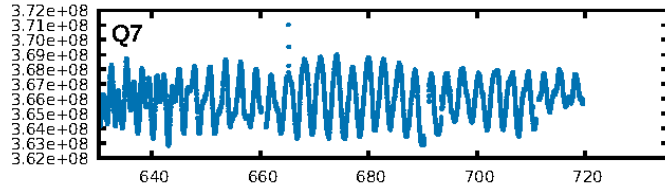
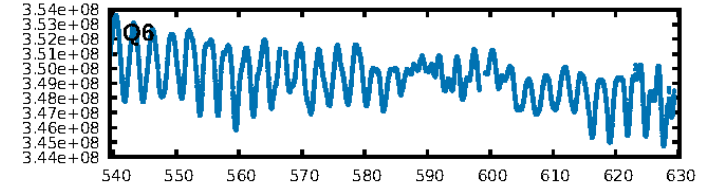
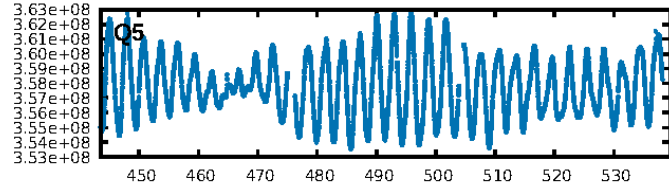
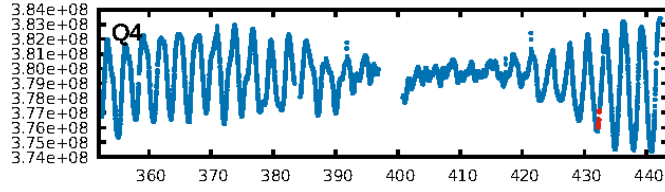
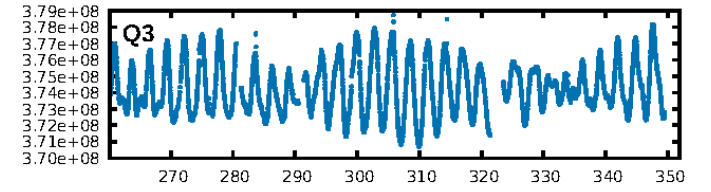
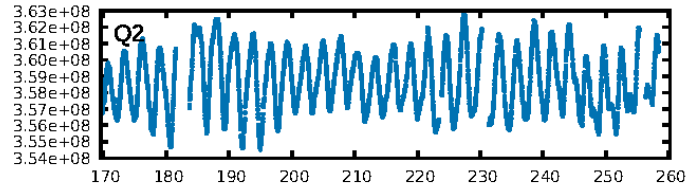
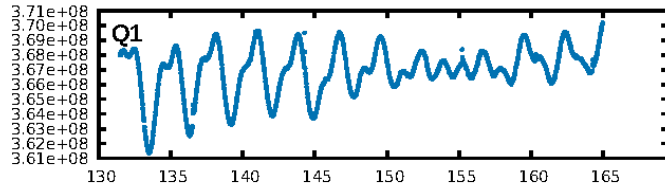
KIC: 11296561 Candidate: 2 of 2 Period: 329.554 d



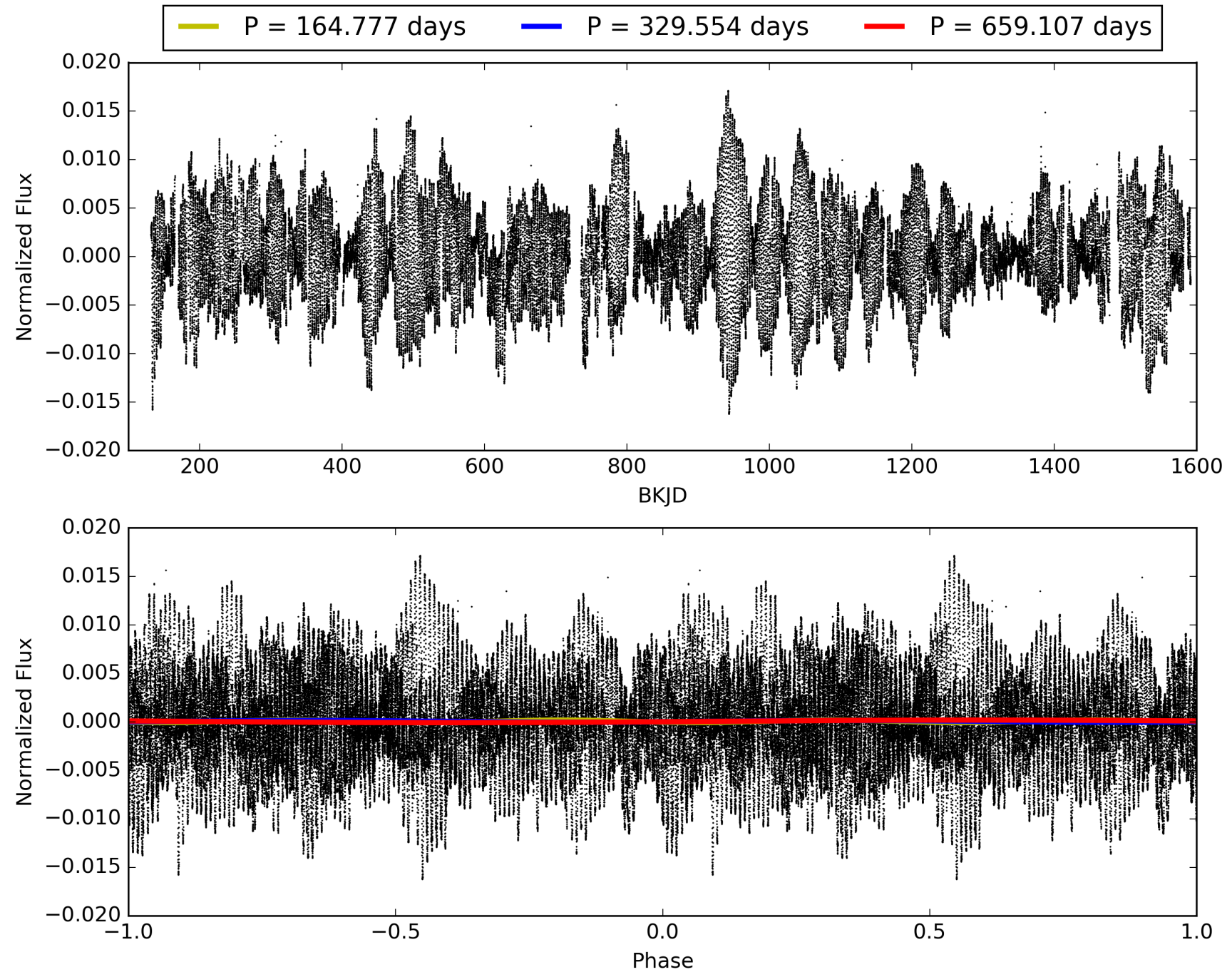
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 08:55:59 Z

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

TCE 011296561-02, PDC Light Curves

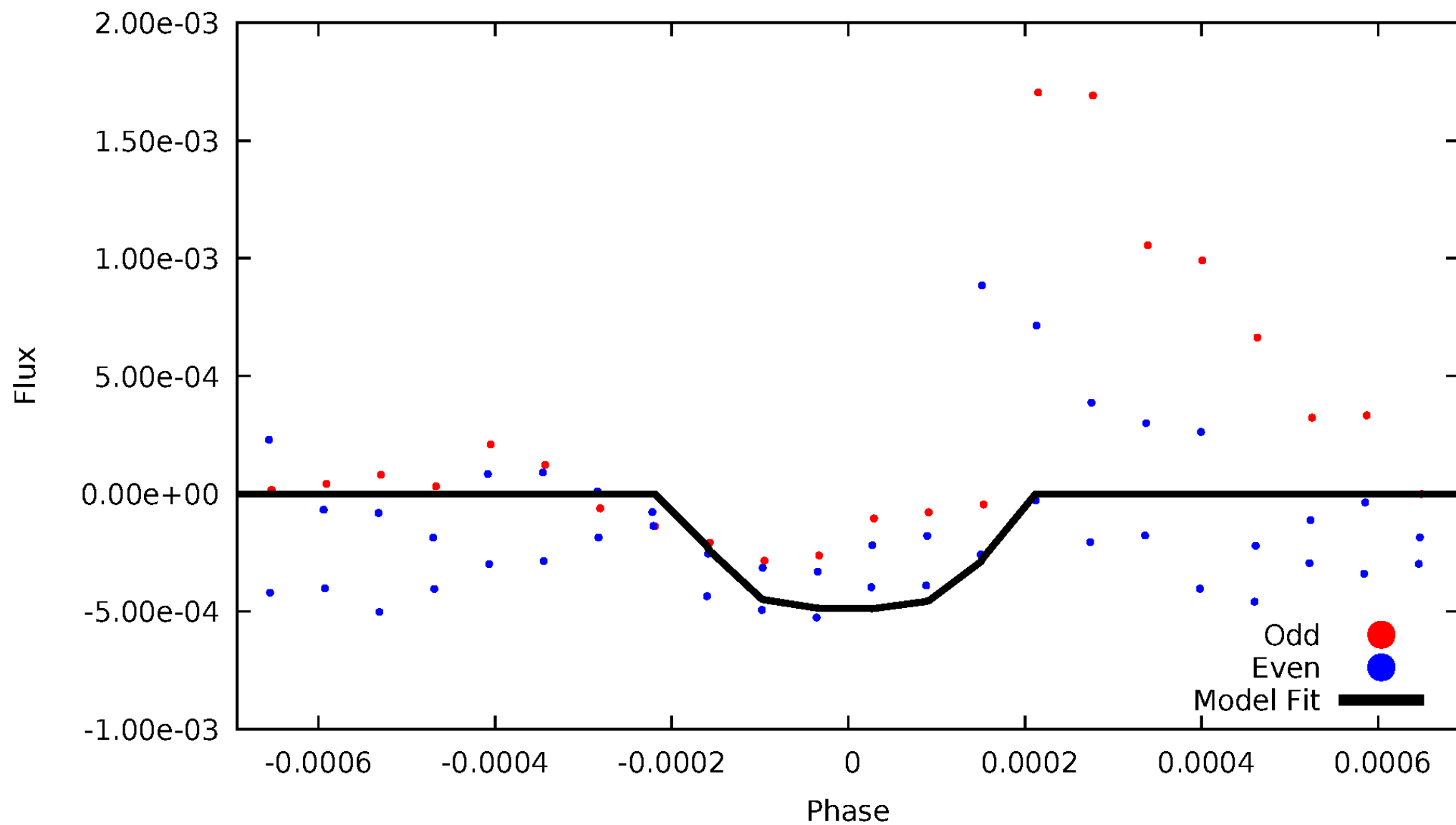


TCE 011296561-02



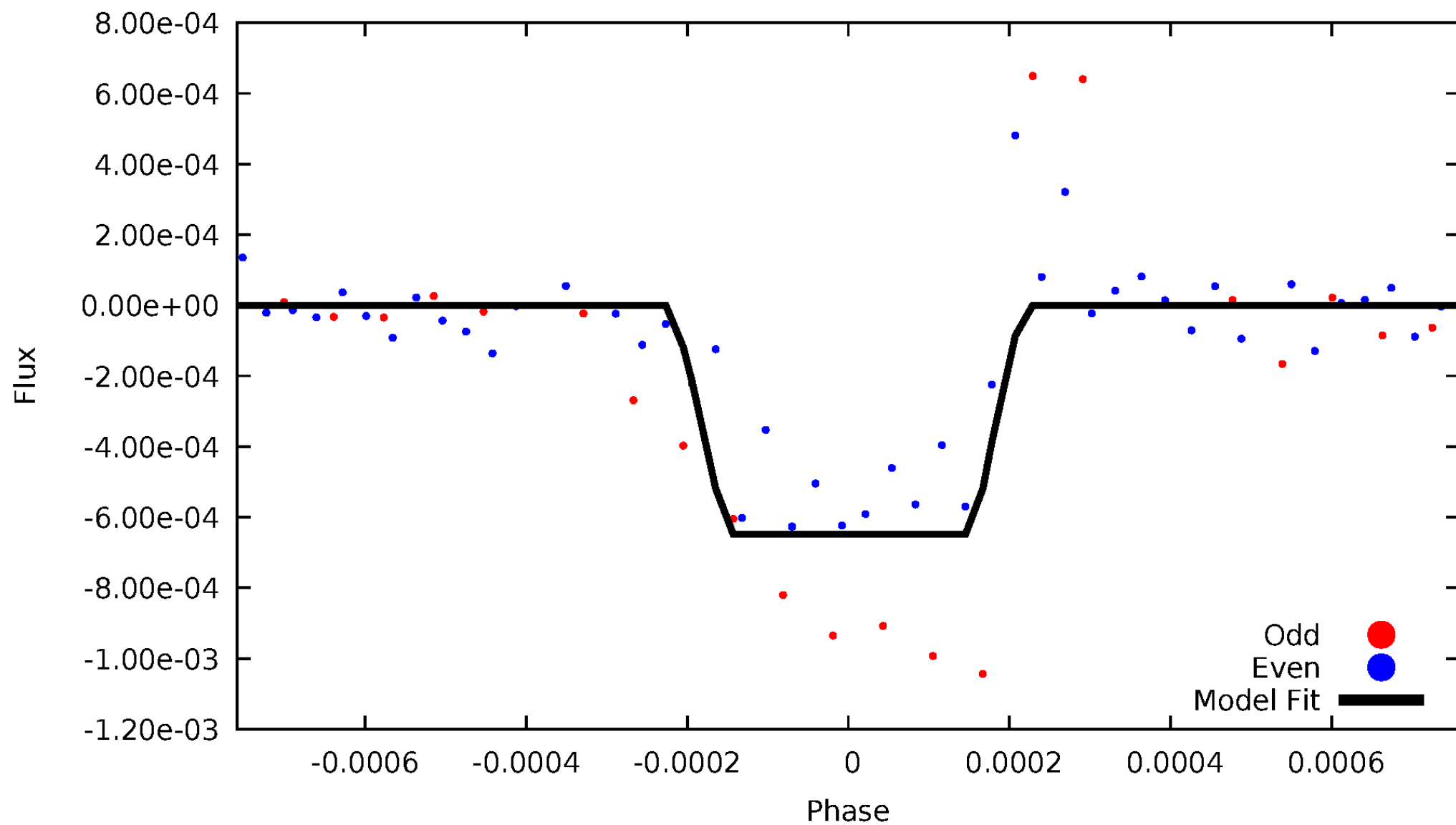
DV Odd/Even

TCE 011296561-02



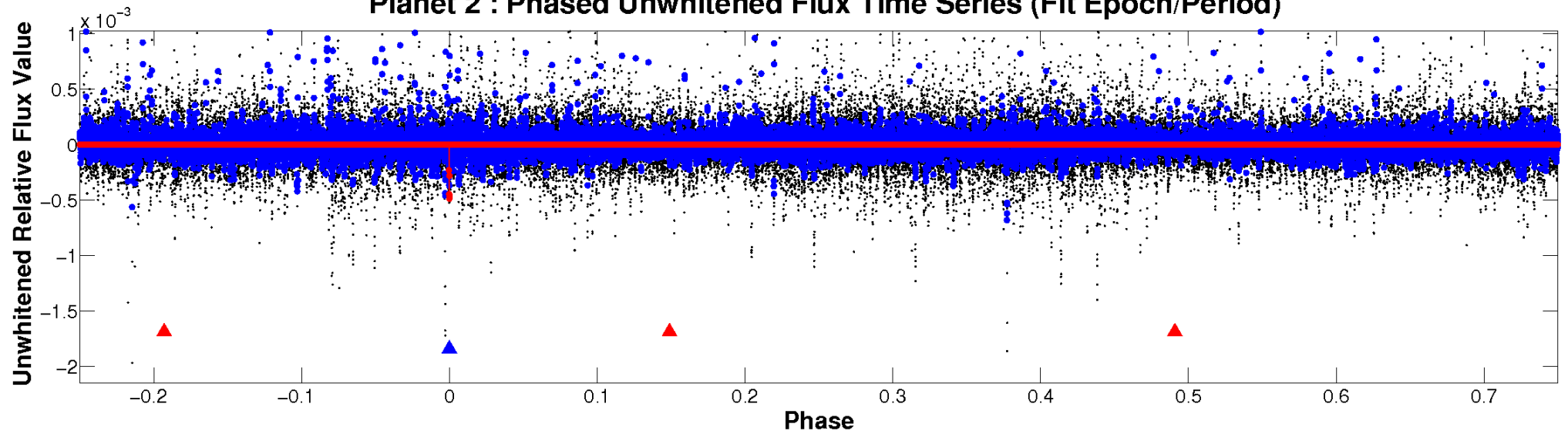
ALT Odd/Even

TCE 011296561-02

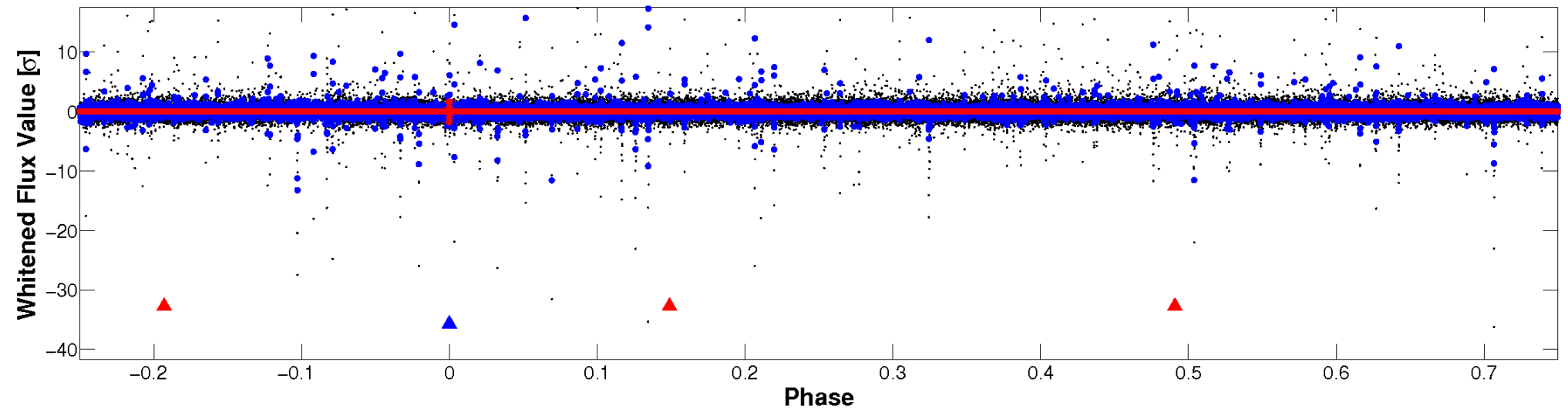


Non-Whitened Vs. Whitened Light Curve

Planet 2 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

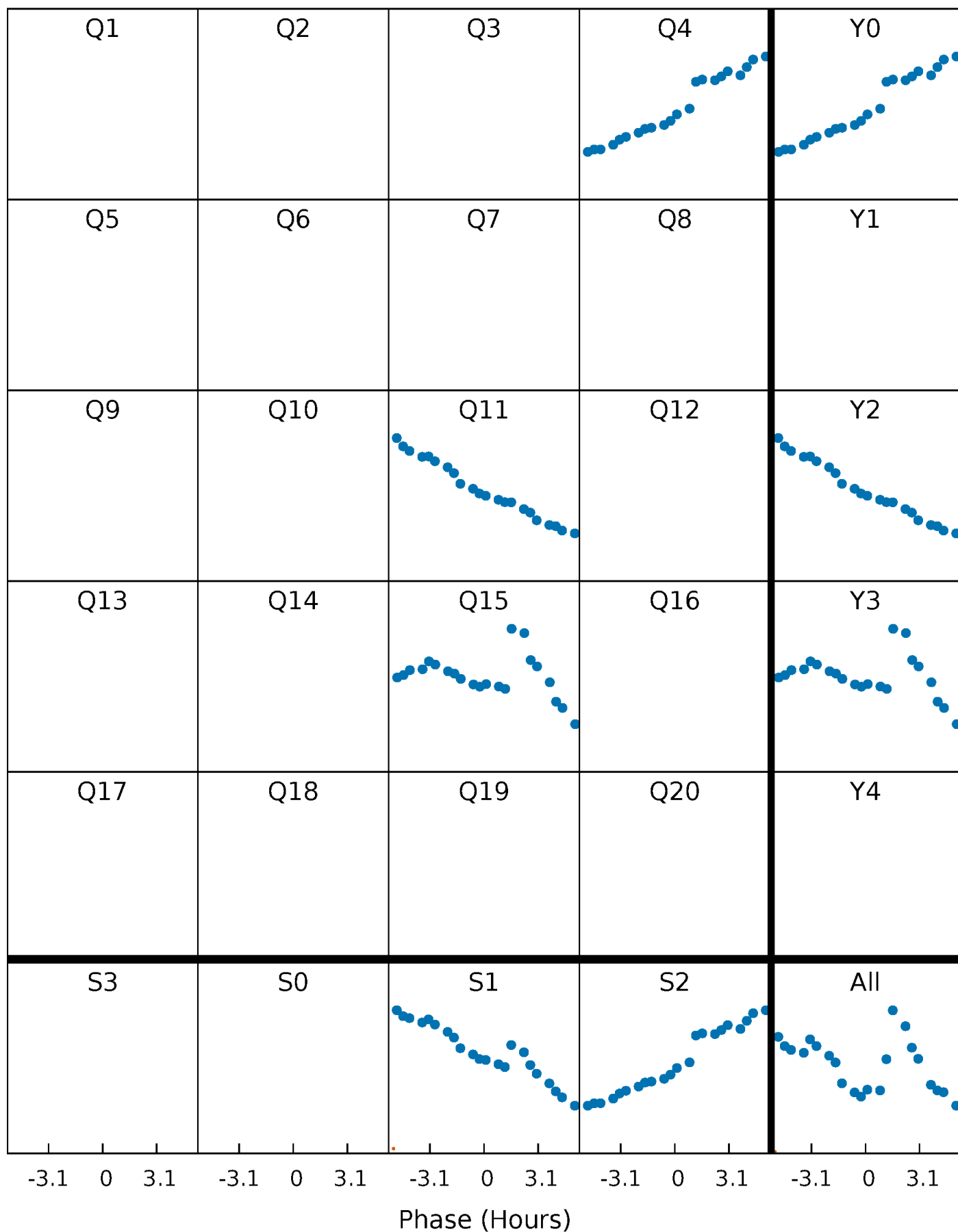


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



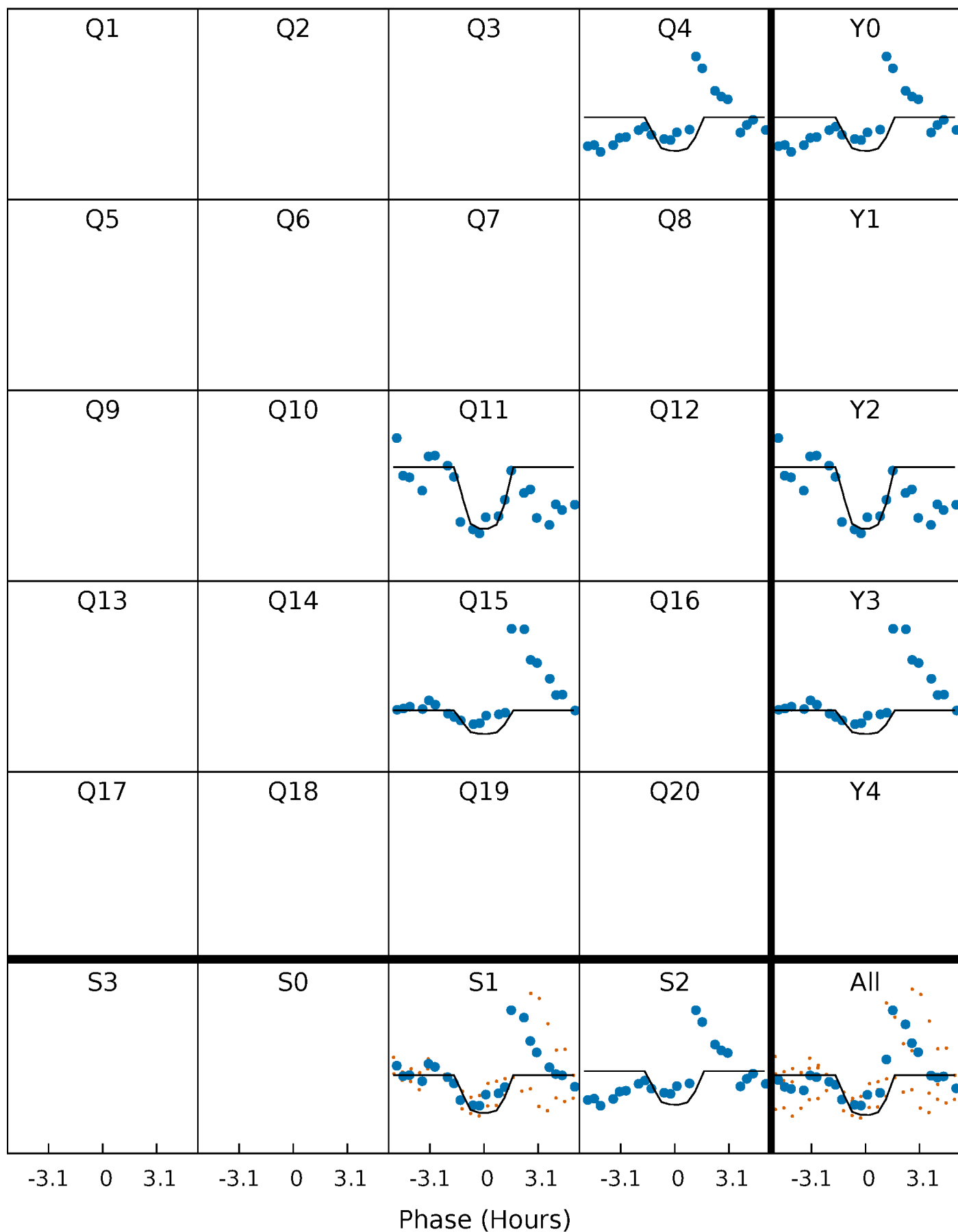
PDC Quarter-Phased Transit Curves

TCE 011296561-02 $P=329.553552$ Days $T_0=432.304025$ (BKJD)



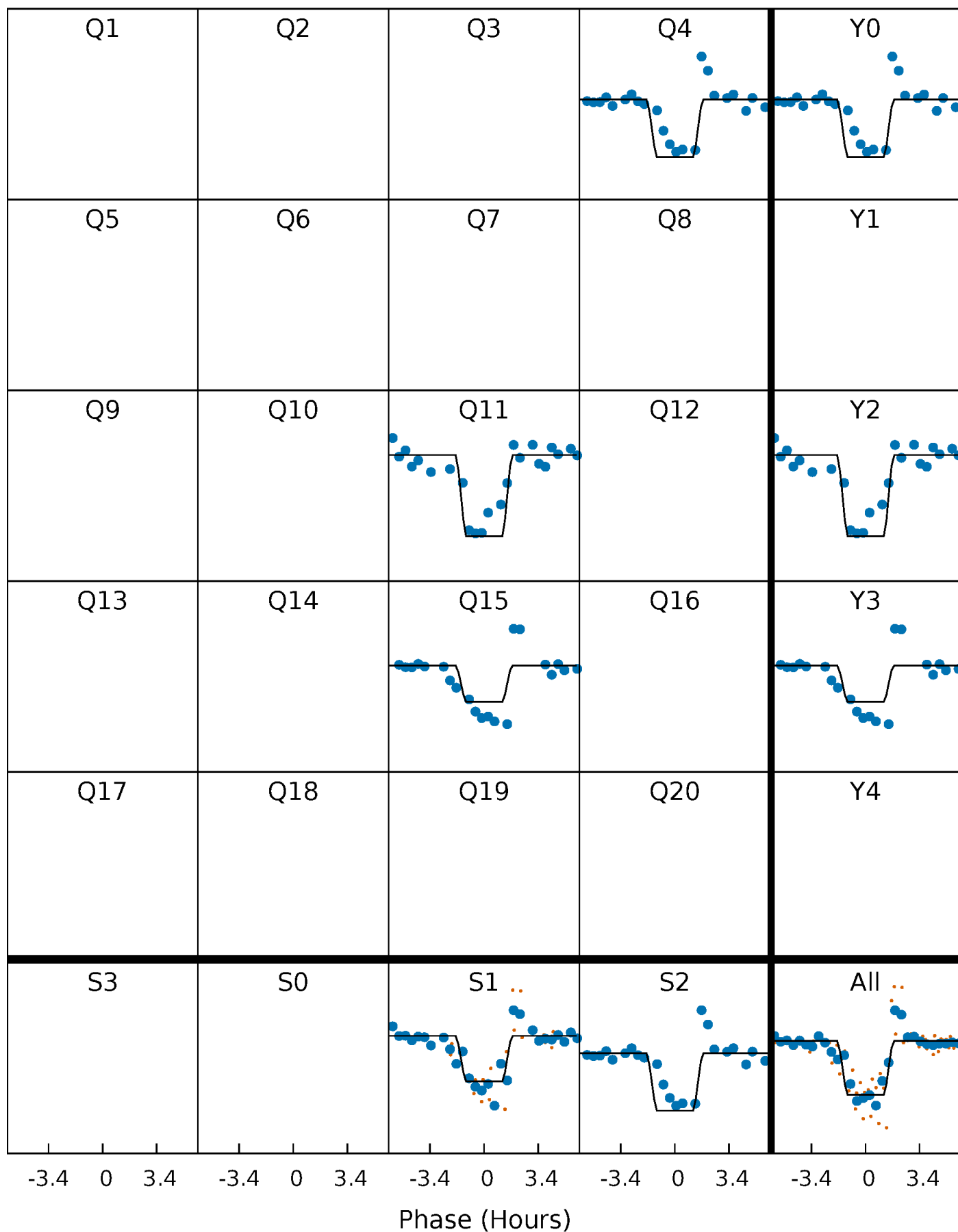
DV Quarter-Phased Transit Curves

TCE 011296561-02 $P=329.553552$ Days $T_0=432.304025$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

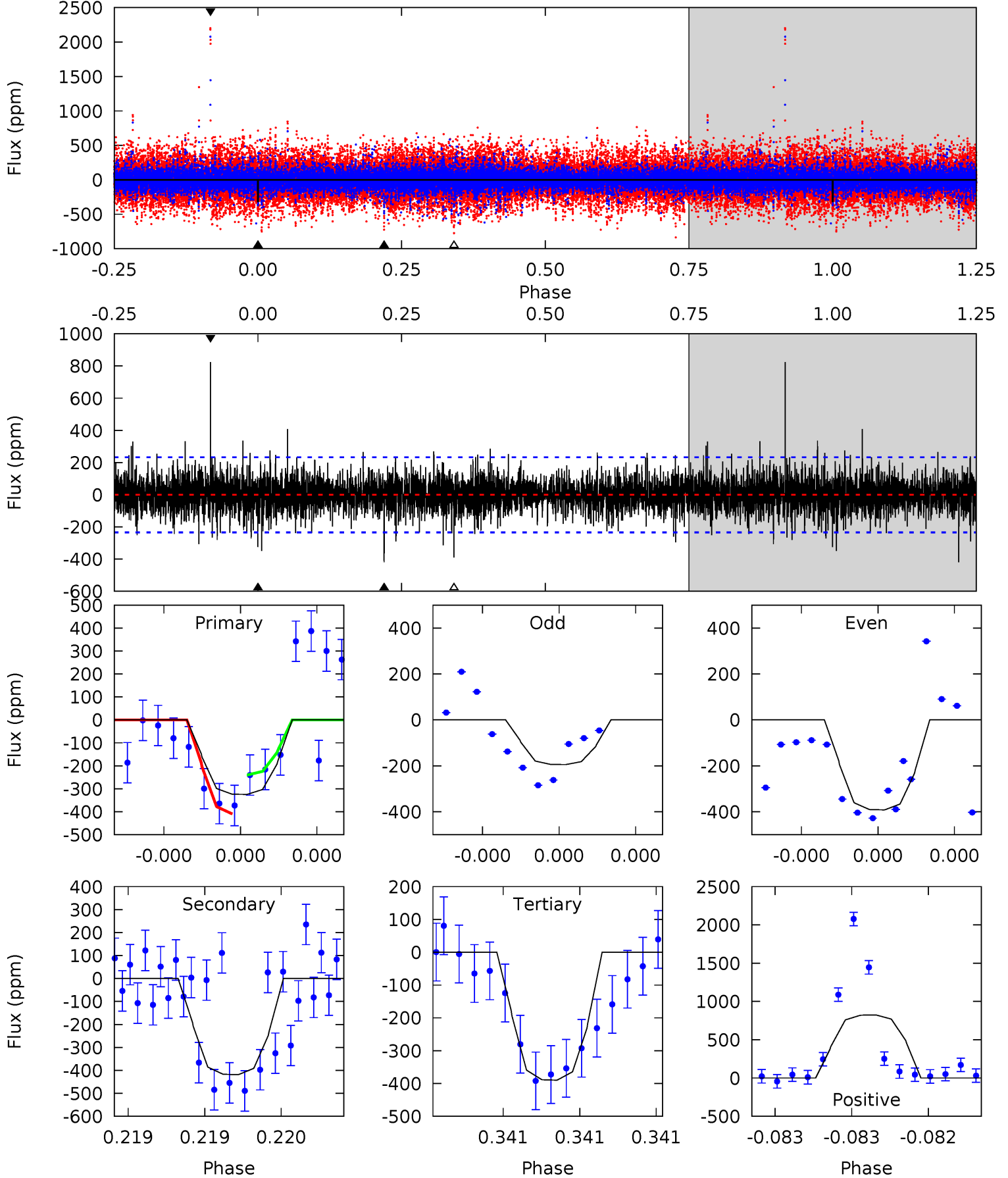
TCE 011296561-02 P=329.558178 Days $T_0=432.285523$ (BKJD)



DV Model-Shift Uniqueness Test

011296561-02, P = 329.553552 Days, E = 102.750473 Days

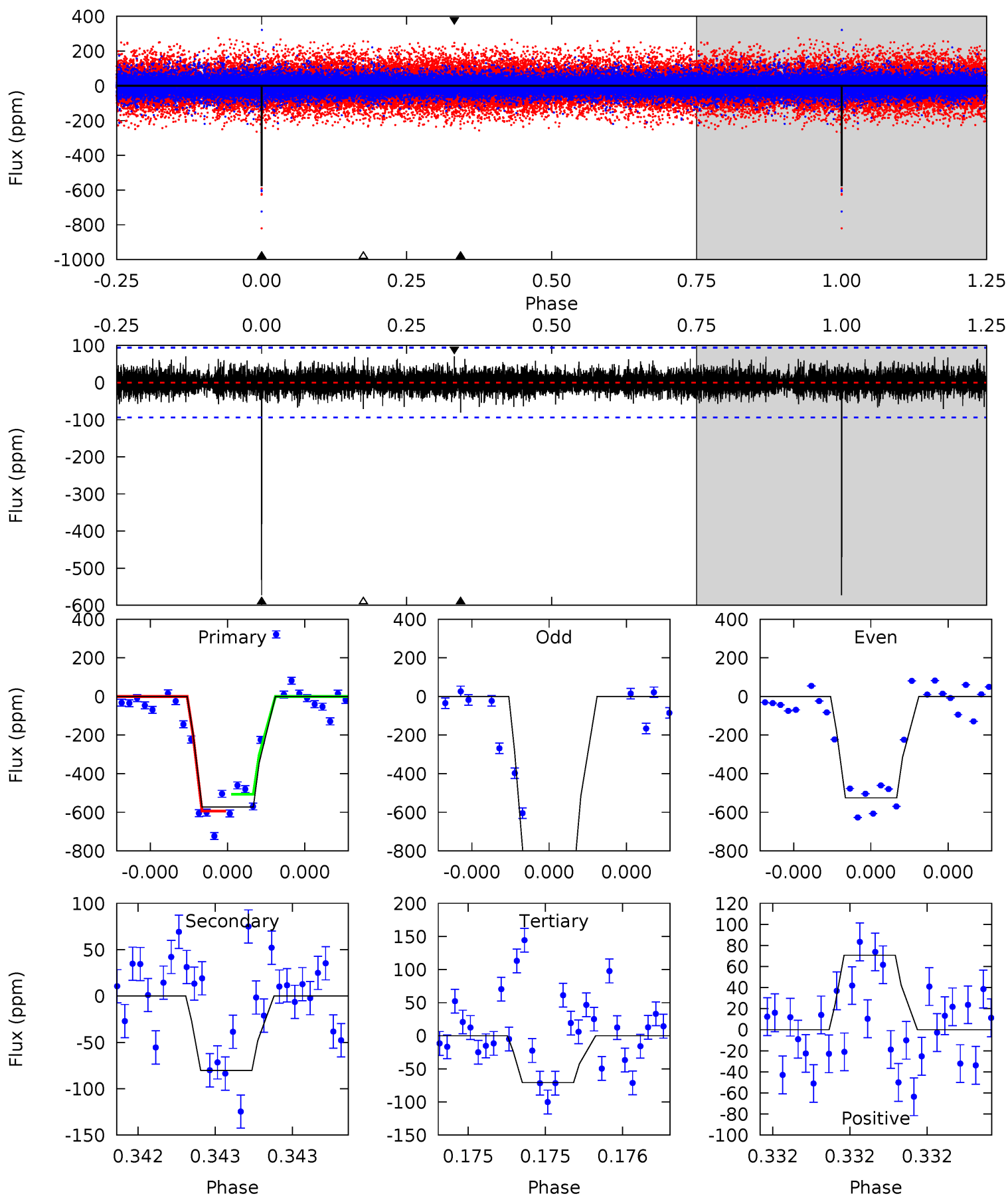
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.86	10.1	9.44	19.9	5.65	3.60	1.77	-1.58	-12.1	0.70	-9.81	1.96	1.42	0.66	2.06



Alt Model-Shift Uniqueness Test

011296561-02, P = 329.558178 Days, E = 102.727345 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
34.1	4.78	4.21	4.20	5.60	3.52	0.98	29.9	29.9	0.57	0.58	10.1	1.19	0.11	2.50



Stellar Parameters For KIC 011296561

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5944^{+148}_{-163}	$4.492^{+0.052}_{-0.208}$	$-0.200^{+0.300}_{-0.300}$	$0.926^{+0.267}_{-0.095}$	$0.970^{+0.119}_{-0.119}$	$1.721^{+0.475}_{-0.896}$
	+2%/-3%	+1%/-5%	+150%/-150%	+29%/-10%	+12%/-12%	+28%/-52%
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 011296561-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-419 ± 41	$5.94^{+5.59}_{-4.13}$	373^{+27}_{-18}	3953^{+2521}_{-795}	5626^{+48275}_{-4164}
Alt.	-80 ± 17	$5.79^{+6.54}_{-3.87}$	375^{+25}_{-17}	3047^{+1365}_{-524}	1066^{+9048}_{-826}

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 $A_{obs} \gg 1.0$

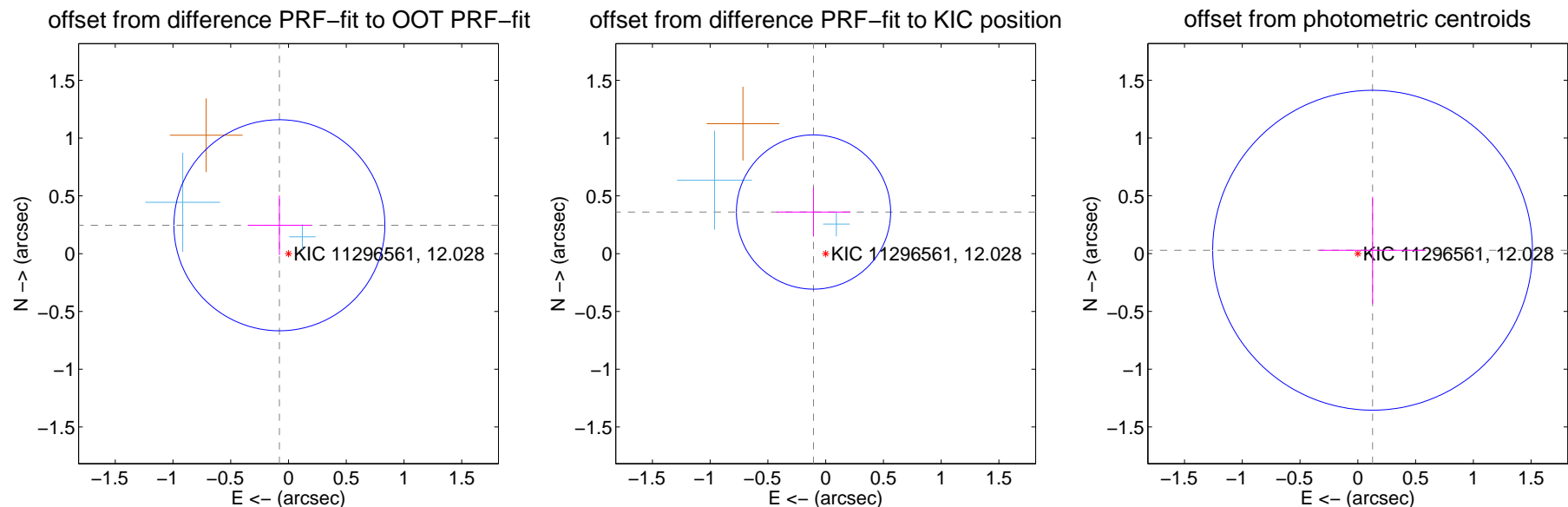
DV Centroid Data

Supplemental centroid analysis for 011296561-02. Kepler magnitude: 12.03. Transit SNR 6.65

There are 2 quarters with good PRF difference image offsets

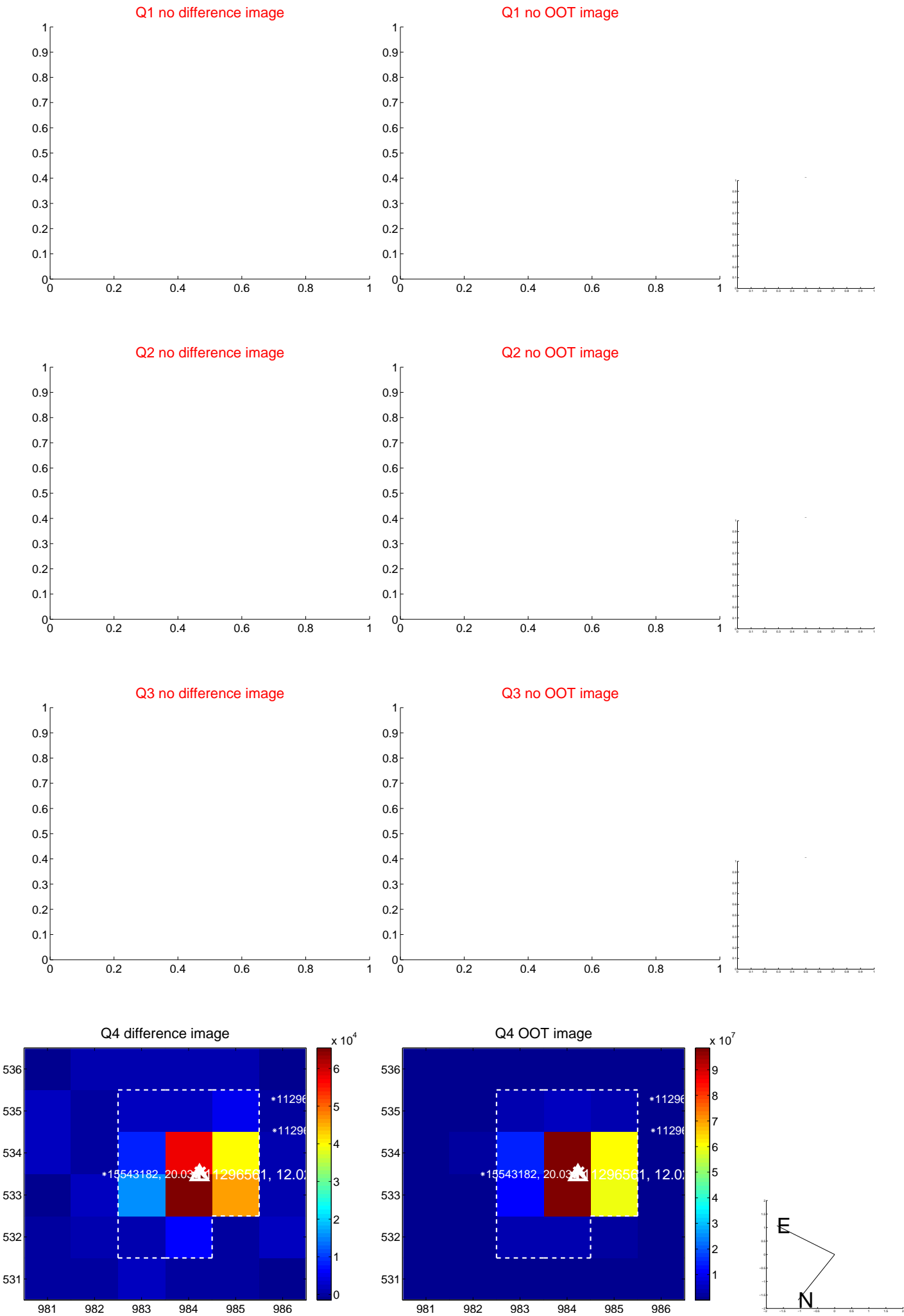
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.258 ± 0.304	0.85	0.079 ± 0.273	0.246 ± 0.258
PRF-fit source offset from KIC position	0.375 ± 0.223	1.69	0.105 ± 0.320	0.360 ± 0.212
photometric centroid source offset	0.13 ± 0.46	0.28	-0.13 ± 0.46	0.03 ± 0.46



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



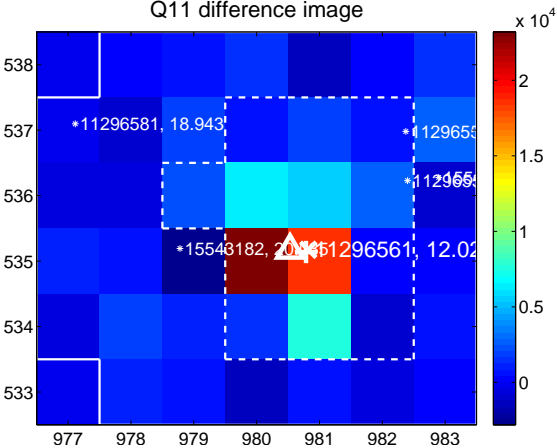
Q10 no difference image



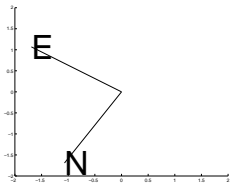
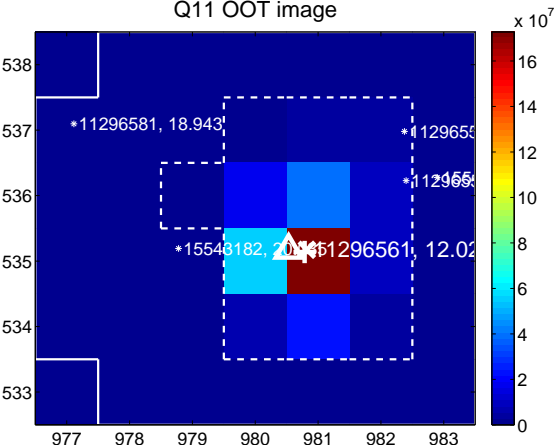
Q10 no OOT image



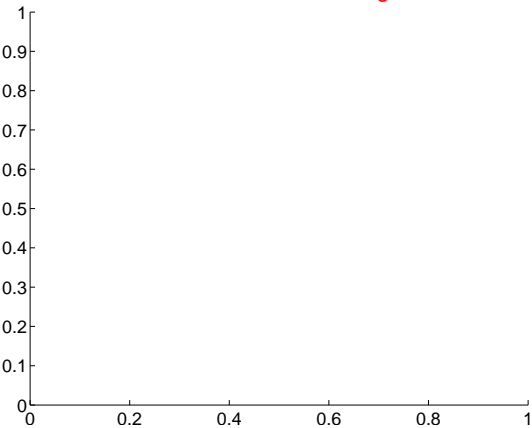
Q11 difference image



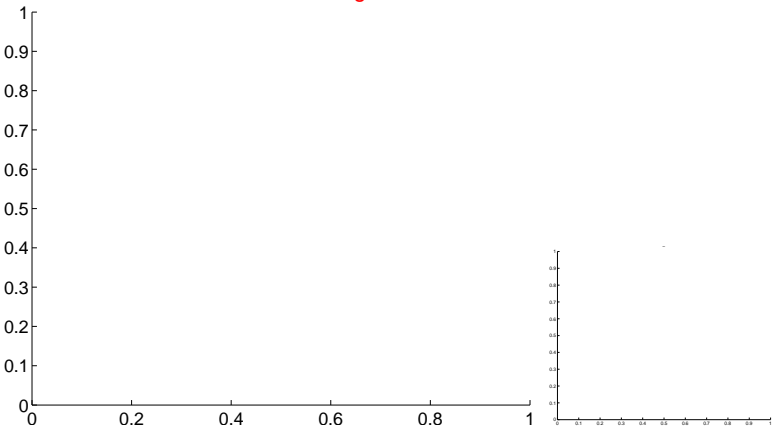
Q11 OOT image



Q12 no difference image



Q12 no OOT image



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

Q13 no difference image



Q13 no OOT image



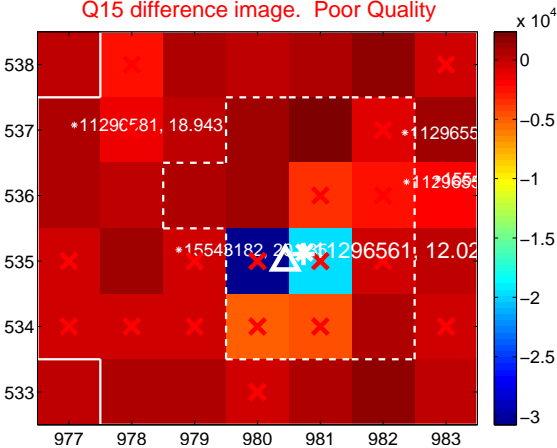
Q14 no difference image



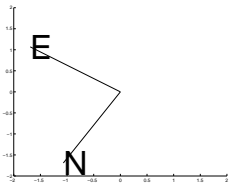
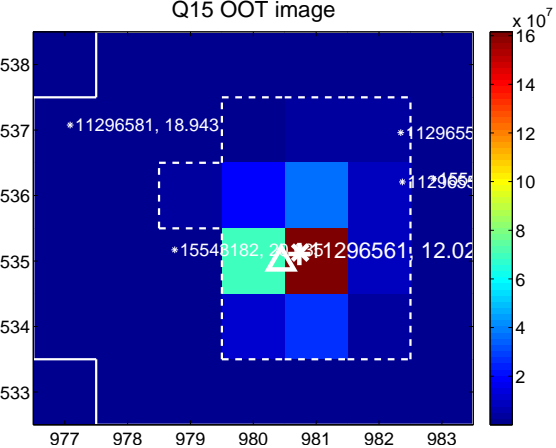
Q14 no OOT image



Q15 difference image. Poor Quality



Q15 OOT image



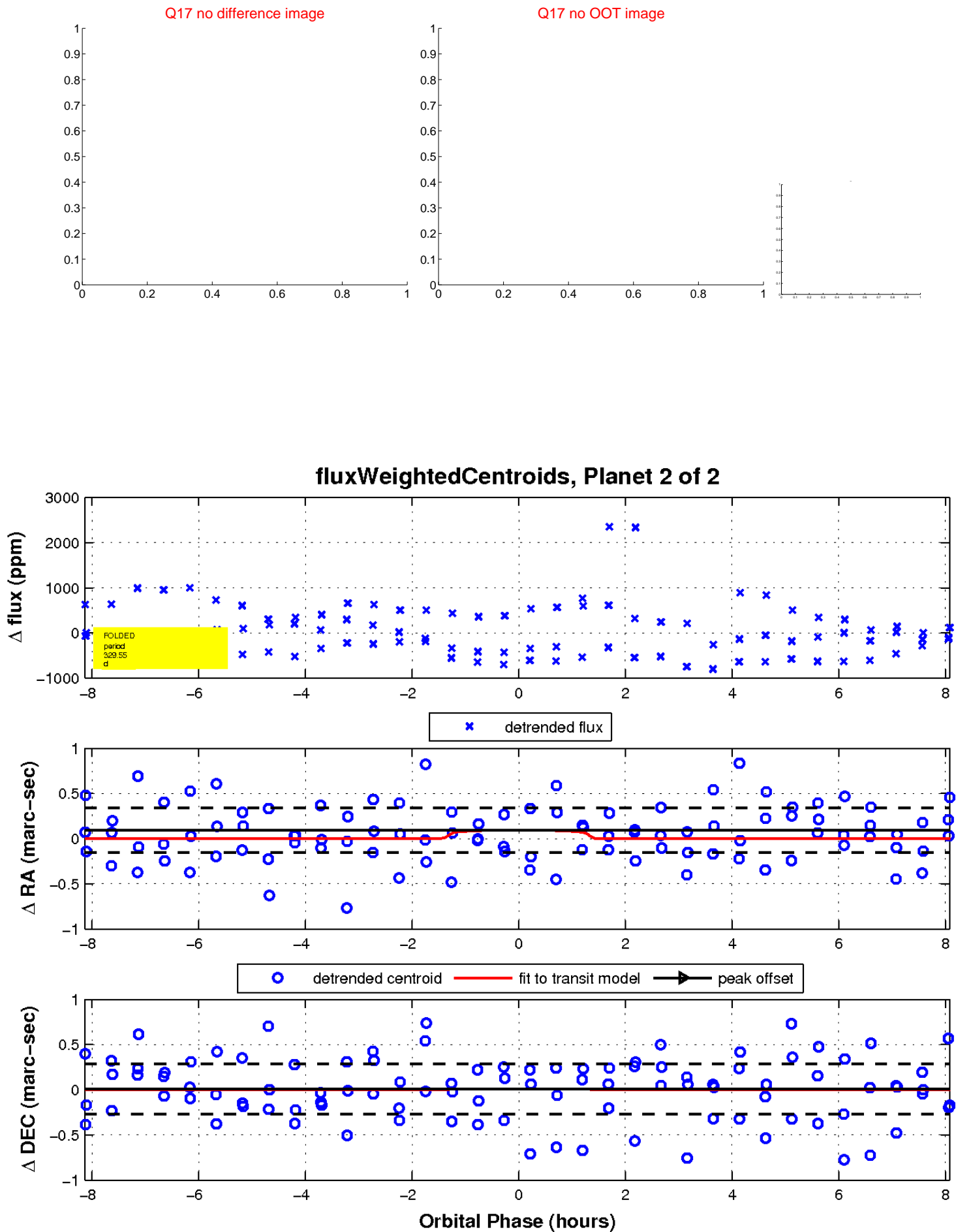
Q16 no difference image



Q16 no OOT image



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



UKIRT Image

