

KIC 011190969

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})
011190969-01	OBS	No	471.387255	139.044376	360.8	4.520	13.9	3.4	0.55	4941	1.07	0.17
011190969-02	OBS	No	591.300424	186.083924	548.4	3.043	11.4	6.7	0.55	4941	1.38	0.13

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011190969-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011190969-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—MOD_POS_ALT—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.

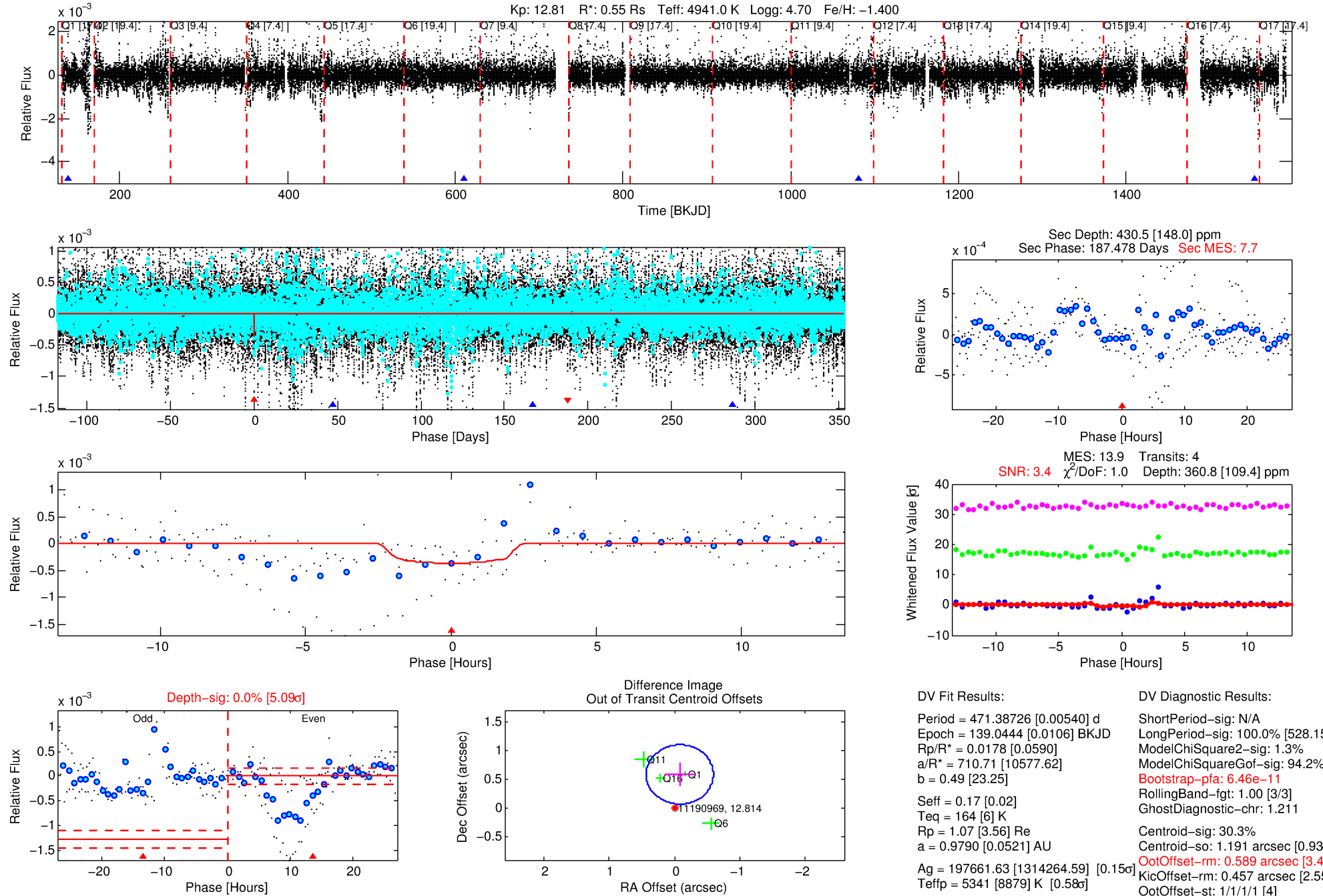
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011190969-01

No Significant Match Found

DV One-Page Summary

KIC: 11190969 Candidate: 1 of 2 Period: 471.387 d



DV Fit Results:

Period = 471.38726 [0.00540] d
Epoch = 139.0444 [0.0106] BKJD
Rp/R* = 0.0178 [0.0590]
a/R* = 710.71 [10577.62]
b = 0.49 [23.25]
Seff = 0.17 [0.02]
Teq = 164 [6] K
Rp = 1.07 [3.56] Re
a = 0.9790 [0.0521] AU
Ag = 197661.63 [1314264.59] [0.15σ]
Teffp = 5341 [8879] K [0.58σ]

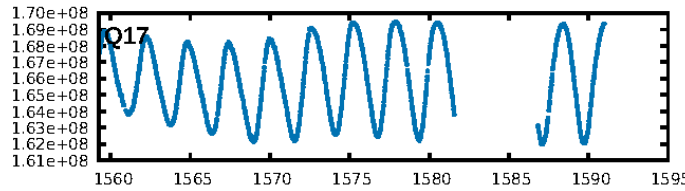
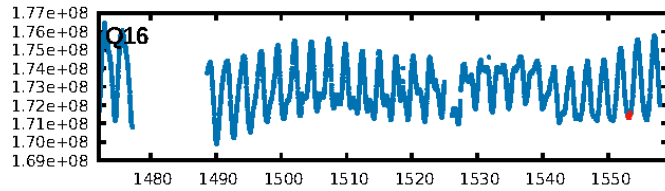
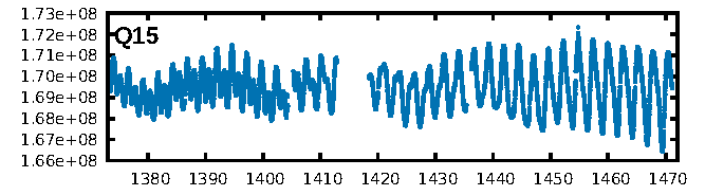
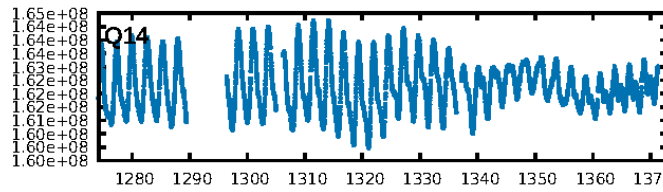
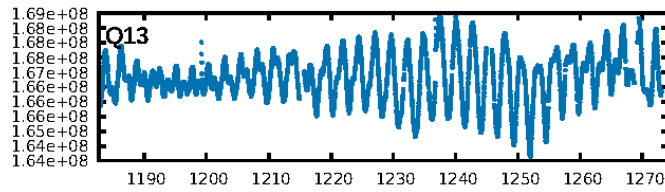
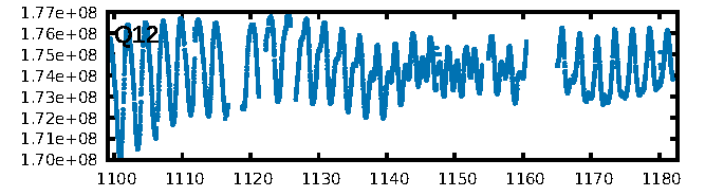
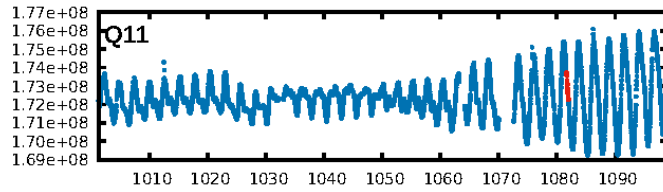
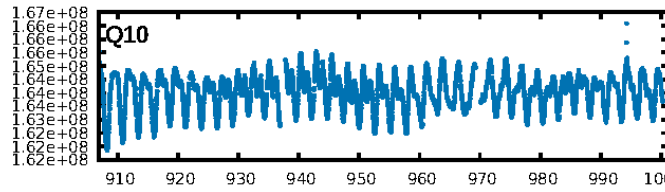
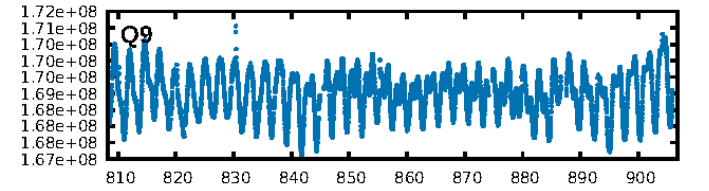
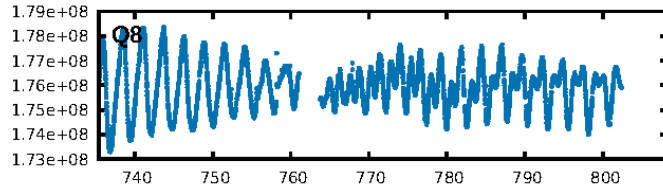
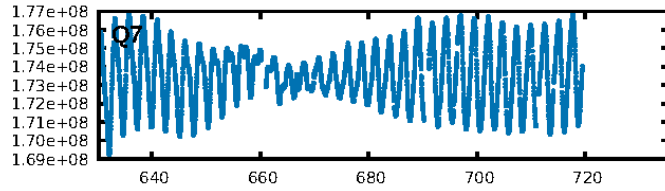
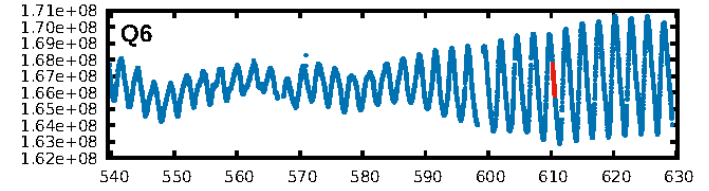
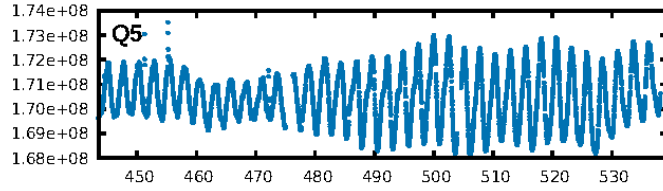
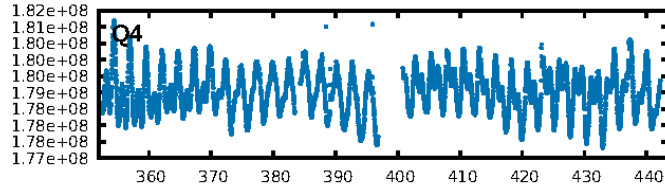
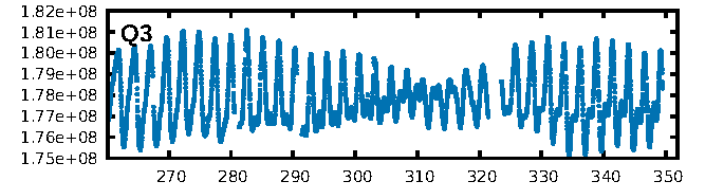
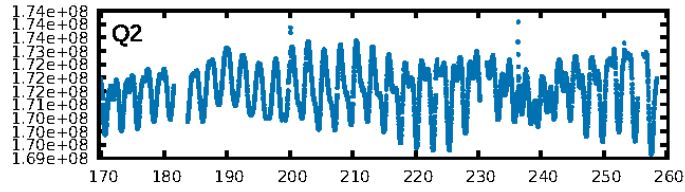
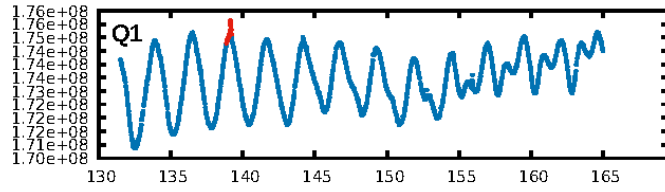
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [528.15σ]
ModelChiSquare2-sig: 1.3%
ModelChiSquareGof-sig: 94.2%
Bootstrap-pfa: 6.46e-11
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.211
Centroid-sig: 30.3%
Centroid-so: 1.191 arcsec [0.93σ]
OotOffset-rm: 0.589 arcsec [3.43σ]
KicOffset-rm: 0.457 arcsec [2.55σ]
OotOffset-st: 1/1/1/1 [4]
KicOffset-st: 1/1/1/1 [4]
DiffImageQuality-fgm: 0.50 [2/4]
DiffImageOverlap-fno: 1.00 [4/4]

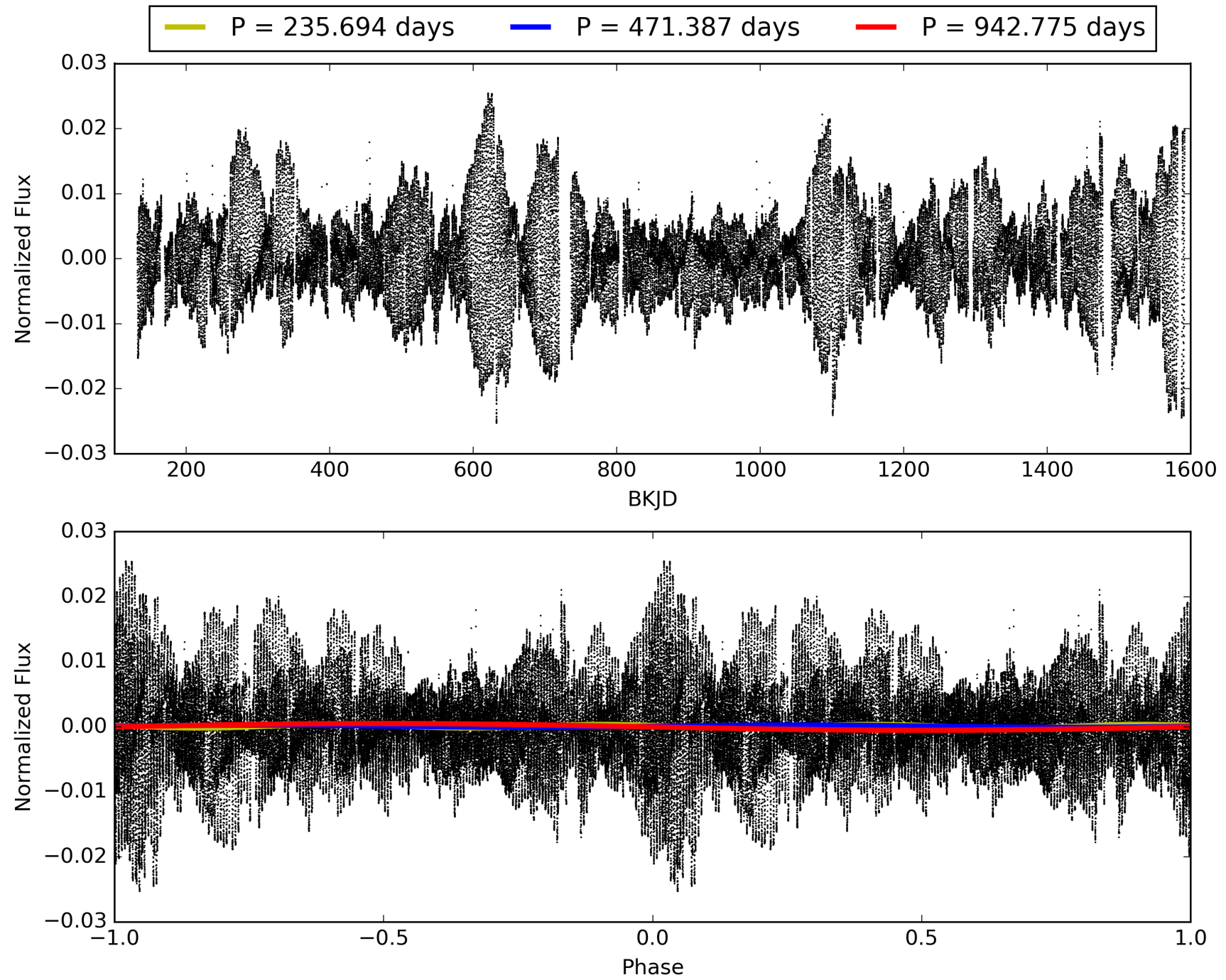
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 17:29:27 Z

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

TCE 011190969-01, PDC Light Curves

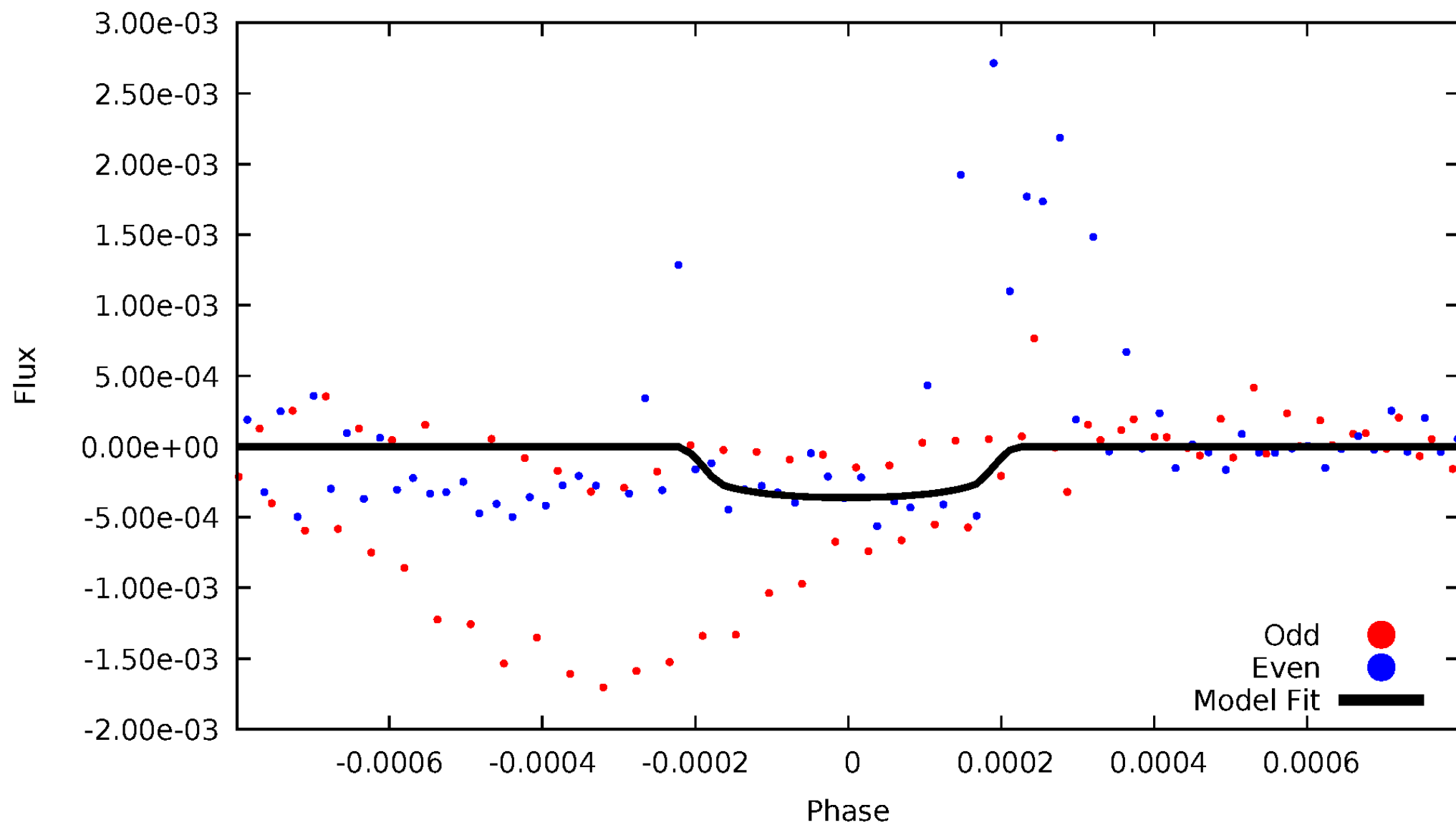


TCE 011190969-01



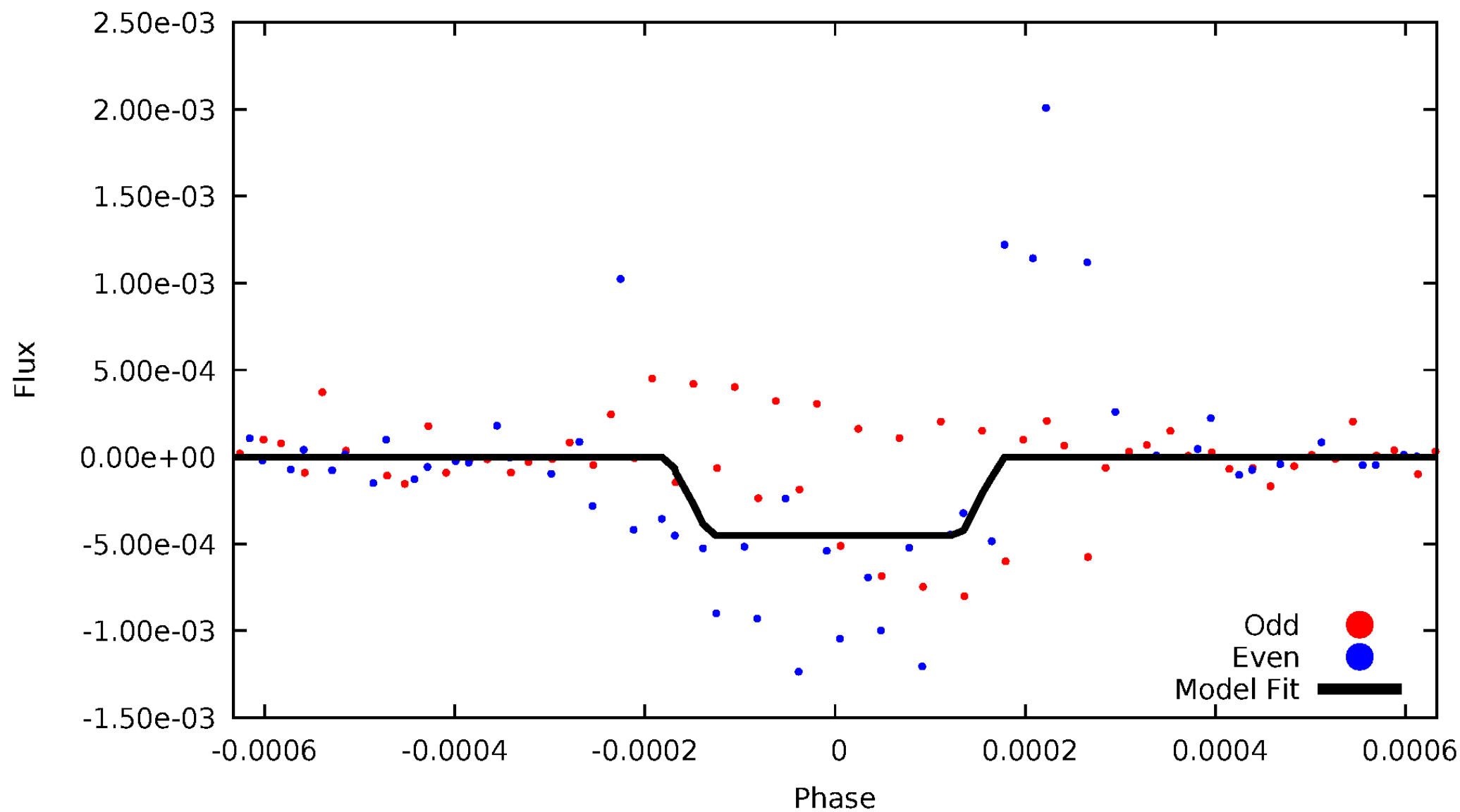
DV Odd/Even

TCE 011190969-01



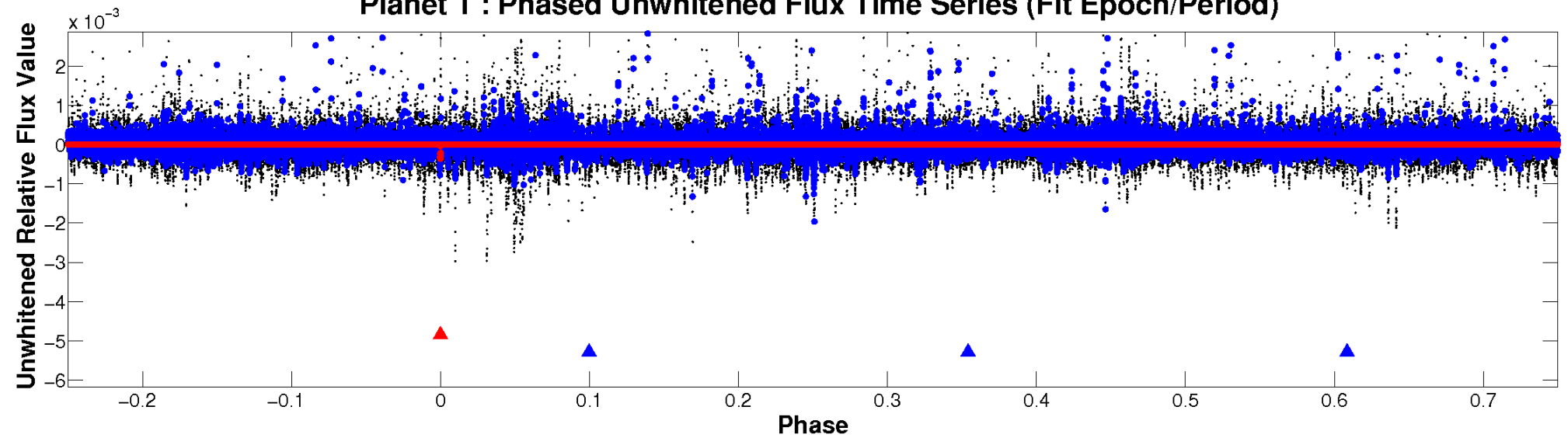
ALT Odd/Even

TCE 011190969-01

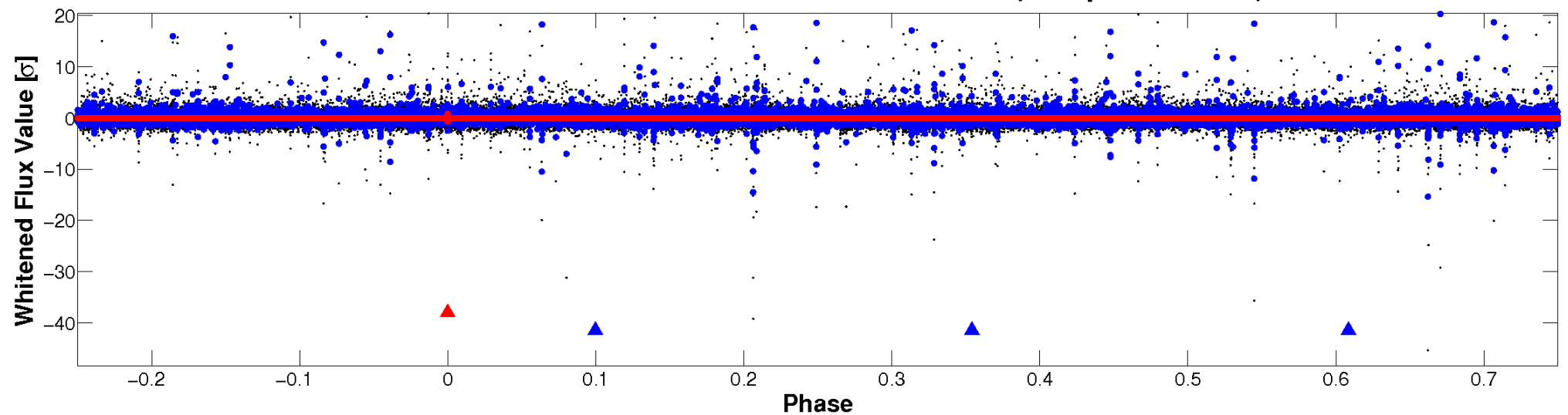


Non-Whitened Vs. Whitened Light Curve

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

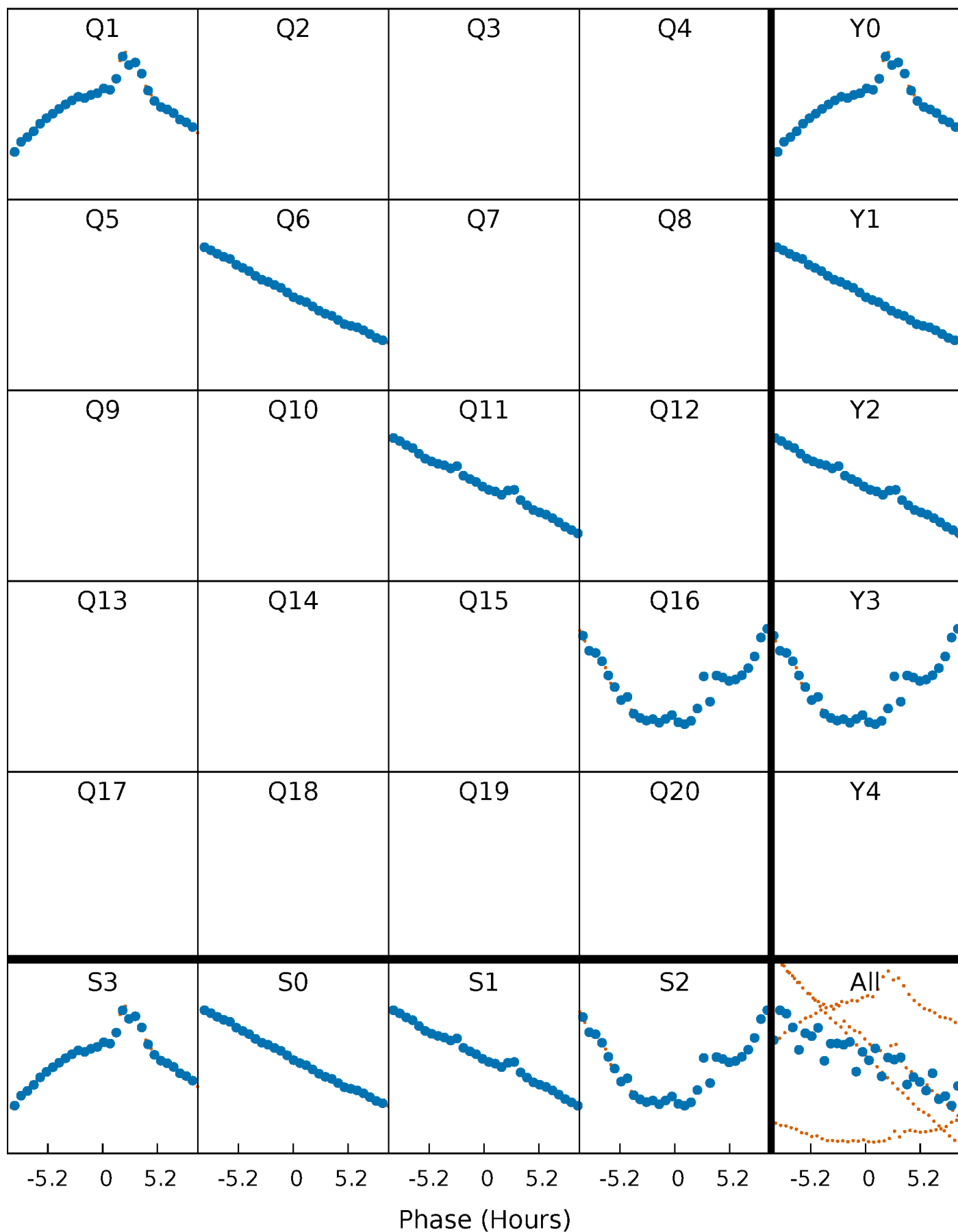


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



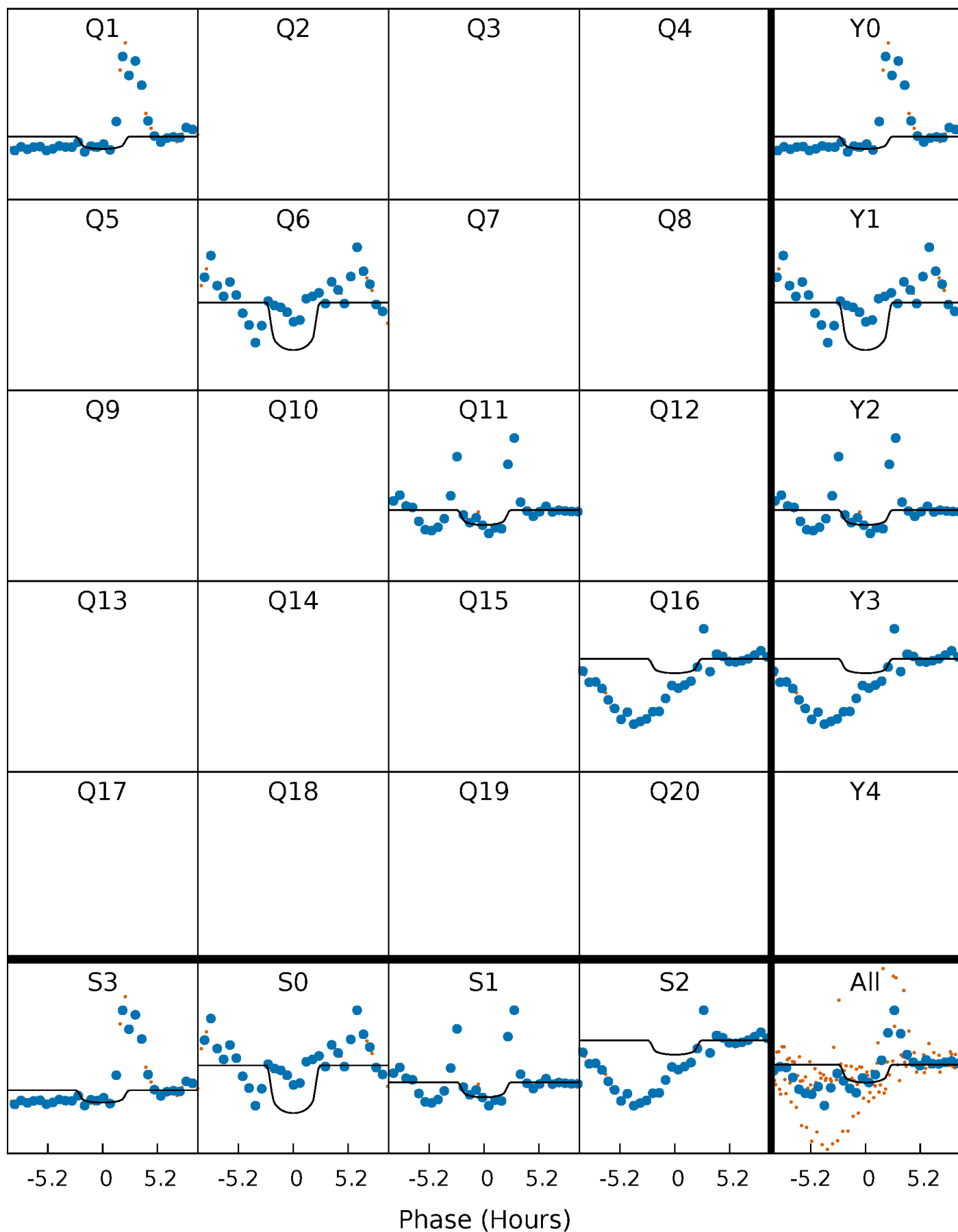
PDC Quarter-Phased Transit Curves

TCE 011190969-01 P=471.387255 Days $T_0=139.044376$ (BKJD)



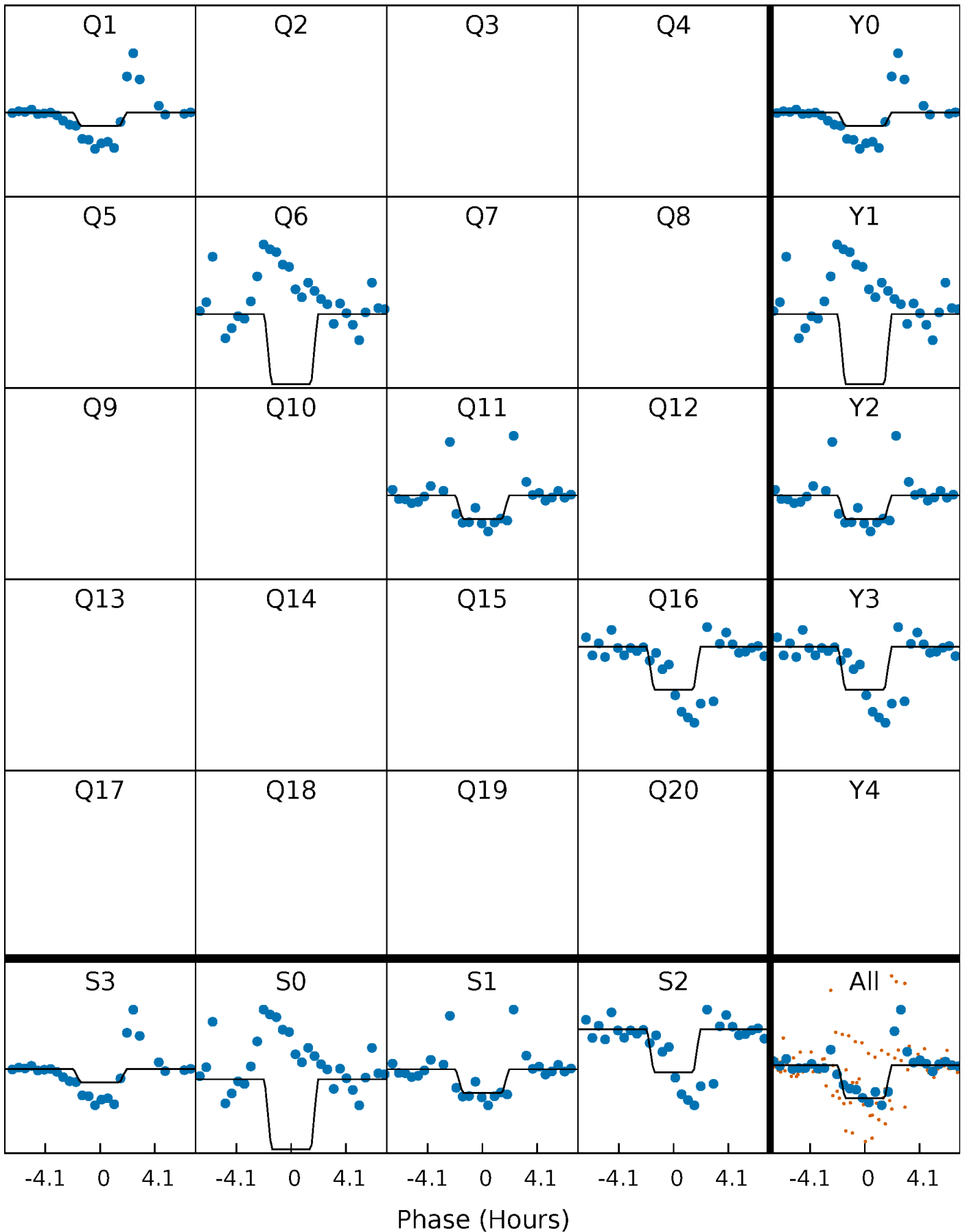
DV Quarter-Phased Transit Curves

TCE 011190969-01 P=471.387255 Days $T_0=139.044376$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

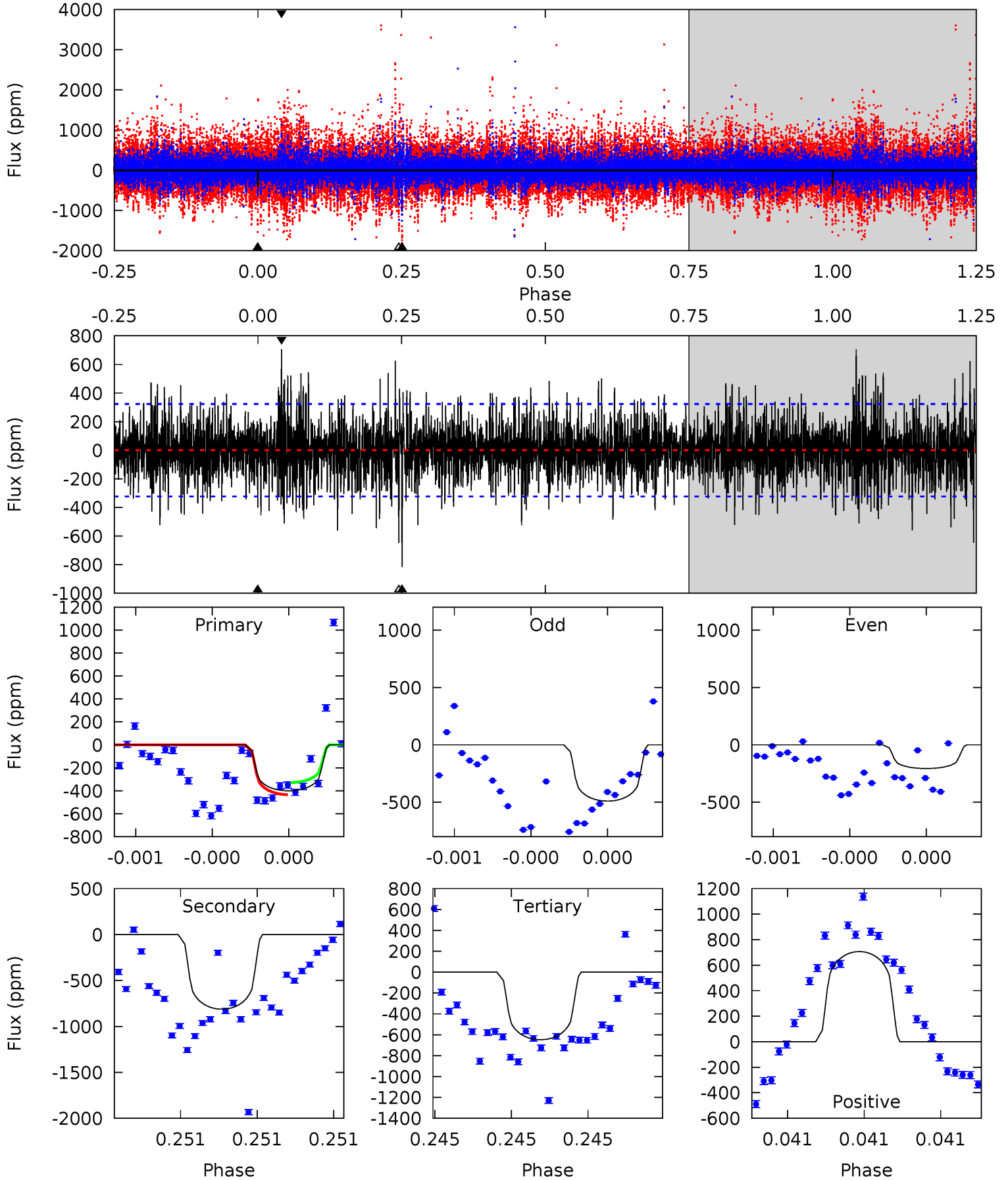
TCE 011190969-01 P=471.395418 Days $T_0=139.029500$ (BKJD)



DV Model-Shift Uniqueness Test

011190969-01, P = 471.387255 Days, E = 139.044376 Days

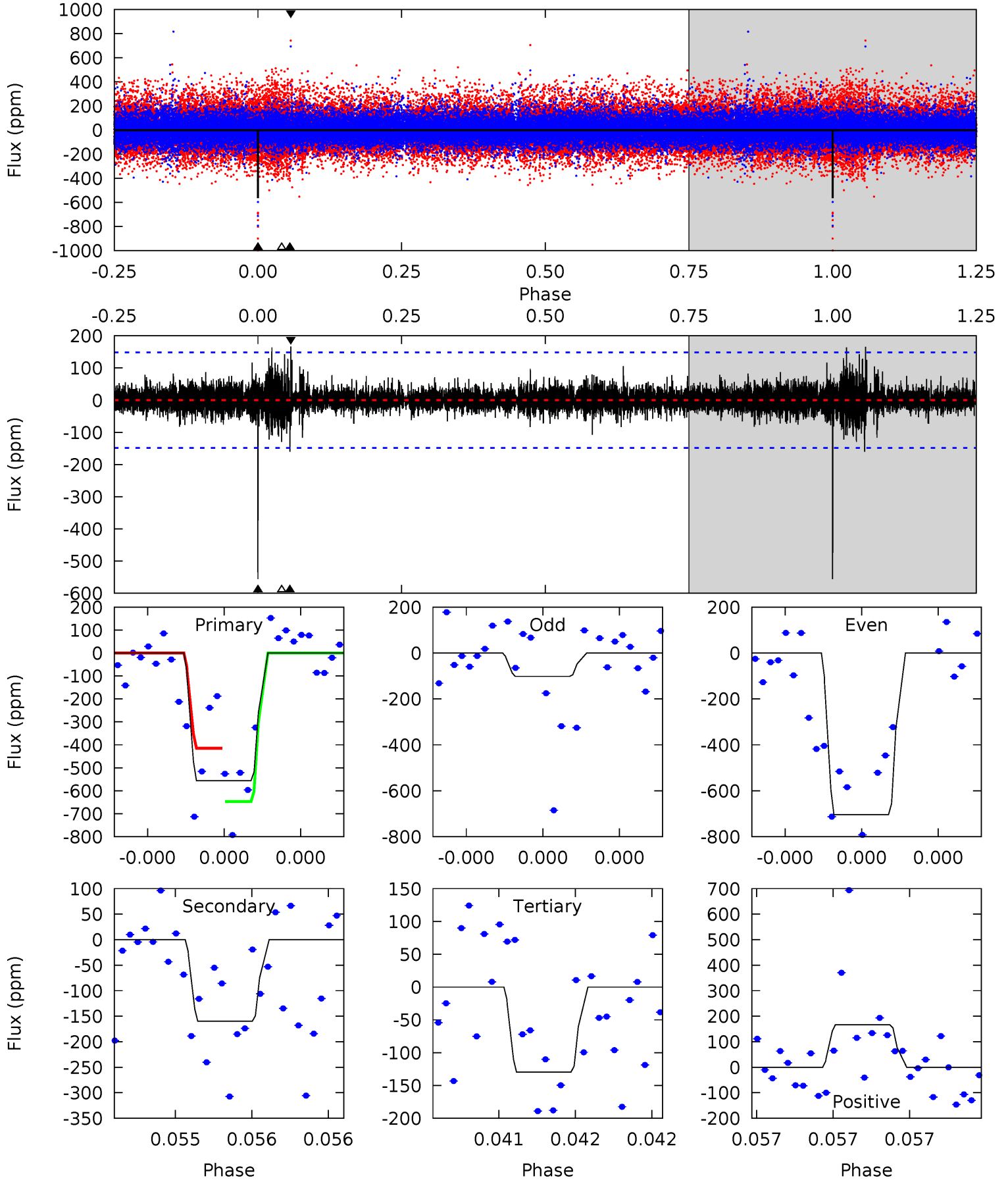
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.94	14.1	11.2	12.2	5.60	3.52	2.60	-4.28	-5.31	2.86	1.84	2.15	1.39	0.47	0.90



Alt Model-Shift Uniqueness Test

011190969-01, P = 471.395418 Days, E = 139.029500 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.1	6.08	4.92	6.32	5.64	3.58	0.88	16.2	14.8	1.16	-0.24	13.9	0.85	0.23	4.53



Stellar Parameters For KIC 011190969

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4941^{+148}_{-148}	$4.703^{+0.046}_{-0.025}$	$-1.400^{+0.300}_{-0.300}$	$0.553^{+0.026}_{-0.033}$	$0.562^{+0.037}_{-0.017}$	$4.687^{+0.848}_{-0.492}$
	+3%/-3%	+1%/-1%	+21%/-21%	+5%/-6%	+7%/-3%	+18%/-11%
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 011190969-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-812 ± 58	$2.87^{+2.97}_{-2.00}$	228^{+8}_{-7}	4049^{+2743}_{-834}	$52913^{+523350}_{-40154}$
Alt.	-160 ± 26	$2.79^{+2.94}_{-1.85}$	228^{+7}_{-7}	3131^{+1388}_{-554}	10865^{+81836}_{-8284}

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

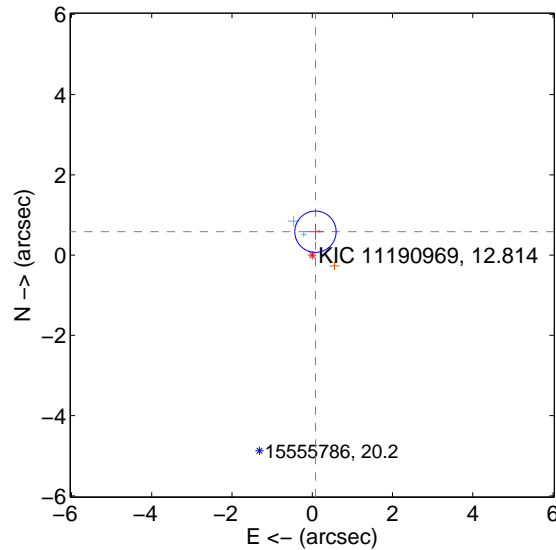
Supplemental centroid analysis for 011190969-01. Kepler magnitude: 12.81. Transit SNR 3.42

There are 2 quarters with good PRF difference image offsets

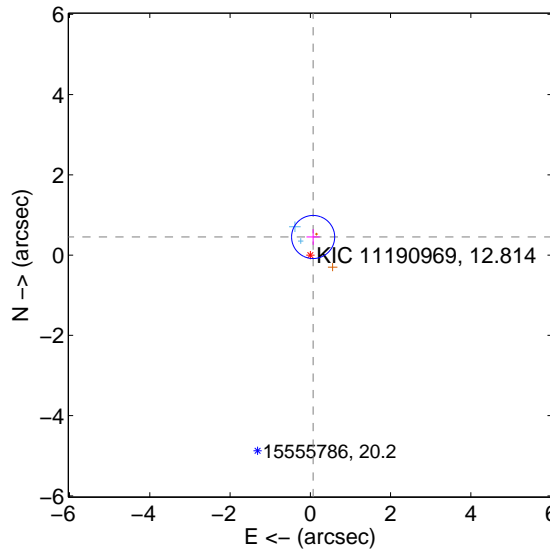
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.589 ± 0.172	3.43	-0.080 ± 0.220	0.583 ± 0.197
PRF-fit source offset from KIC position	0.457 ± 0.179	2.55	-0.070 ± 0.166	0.451 ± 0.196
photometric centroid source offset	1.19 ± 1.28	0.93	0.70 ± 0.74	-0.96 ± 1.49

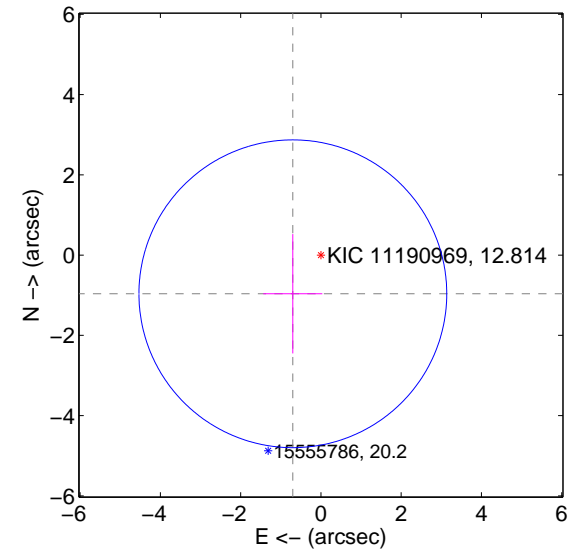
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

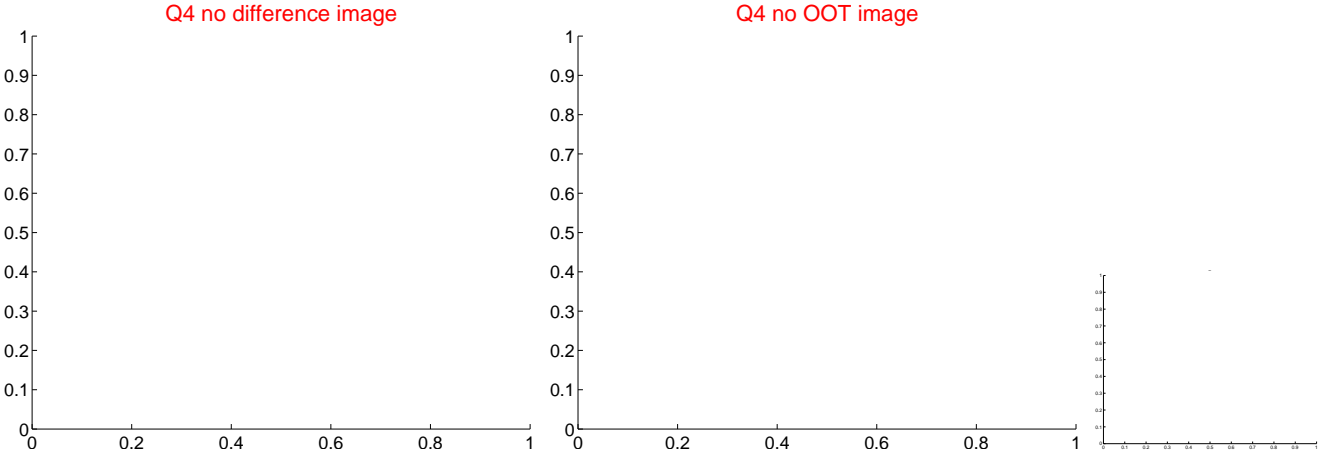
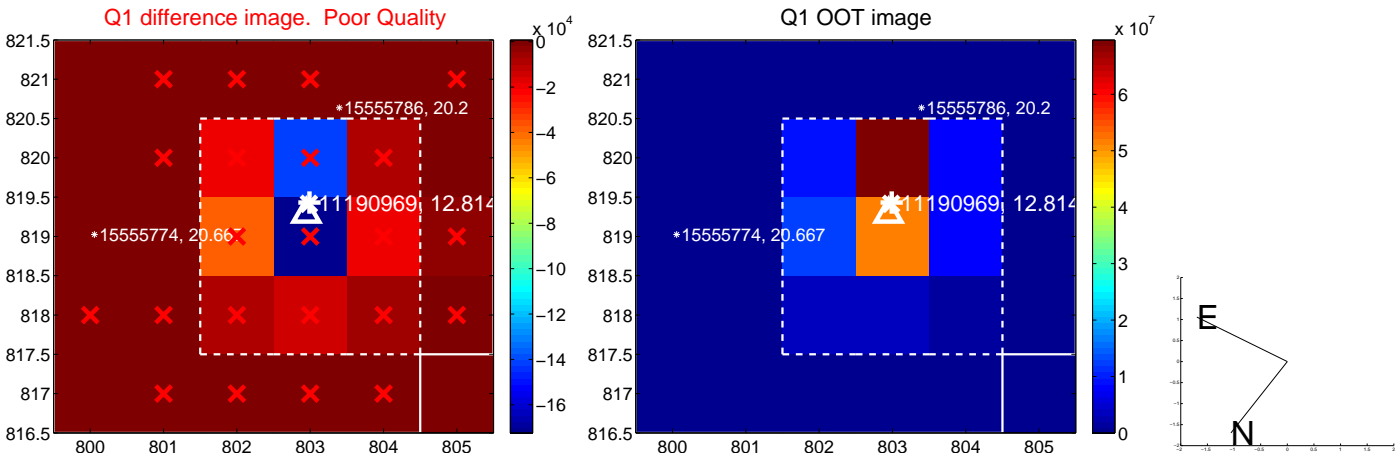


offset from photometric centroids

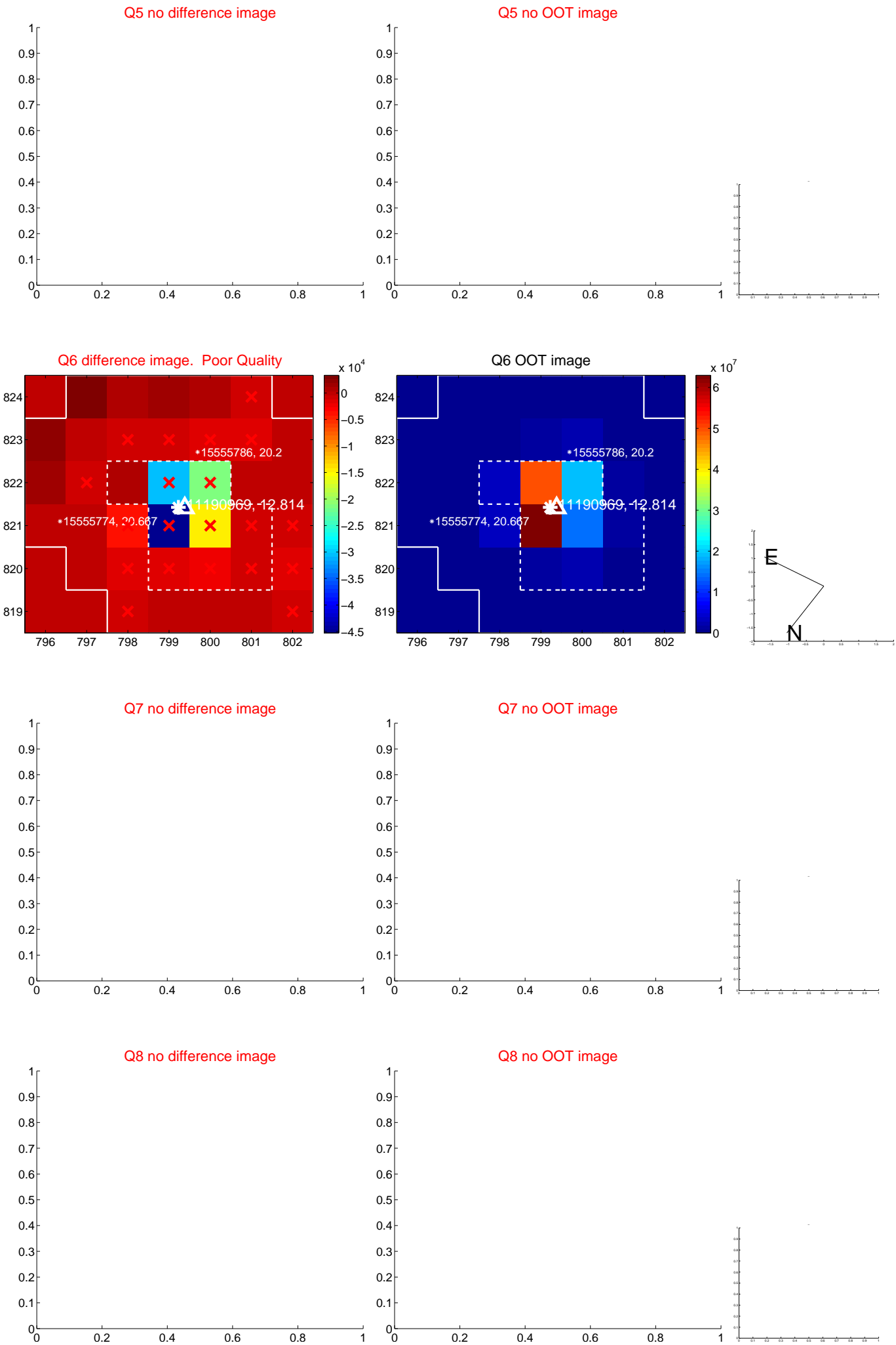


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



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

Q9 no difference image



Q9 no OOT image



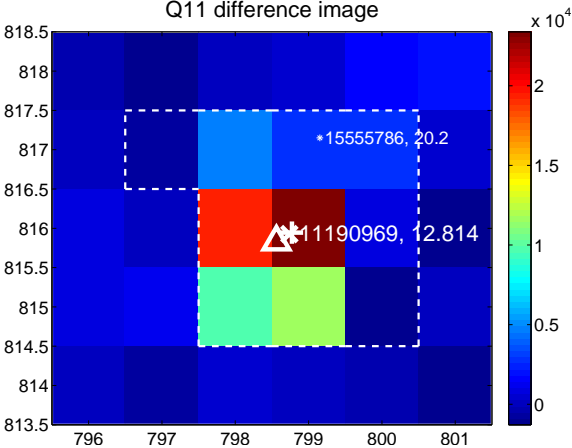
Q10 no difference image



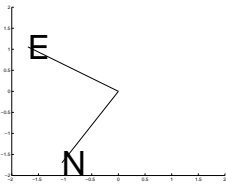
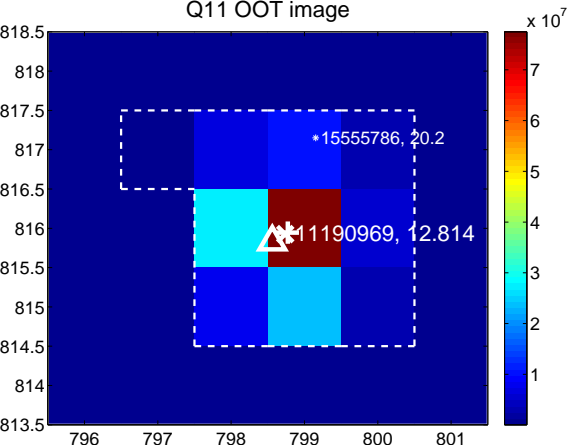
Q10 no OOT image



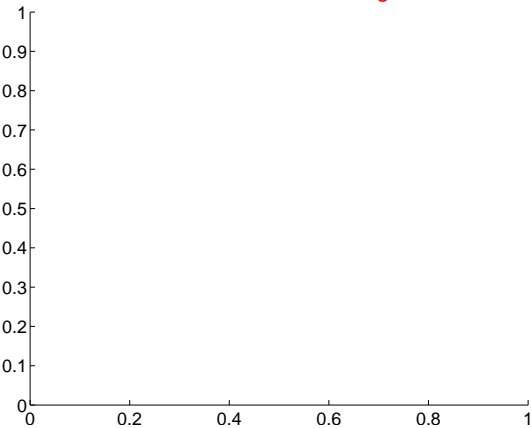
Q11 difference image



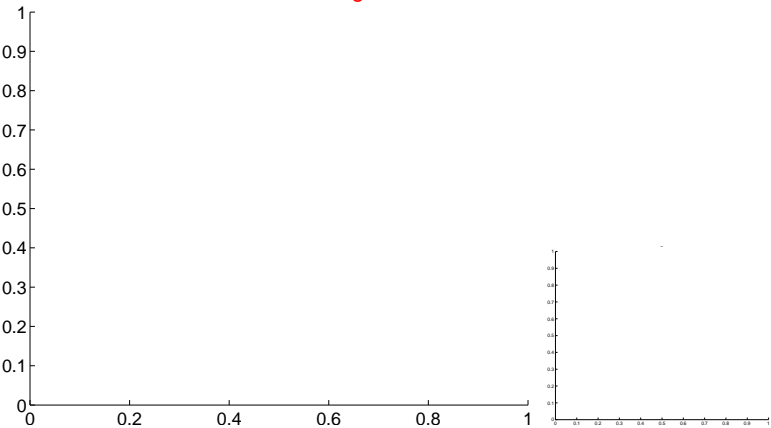
Q11 OOT image



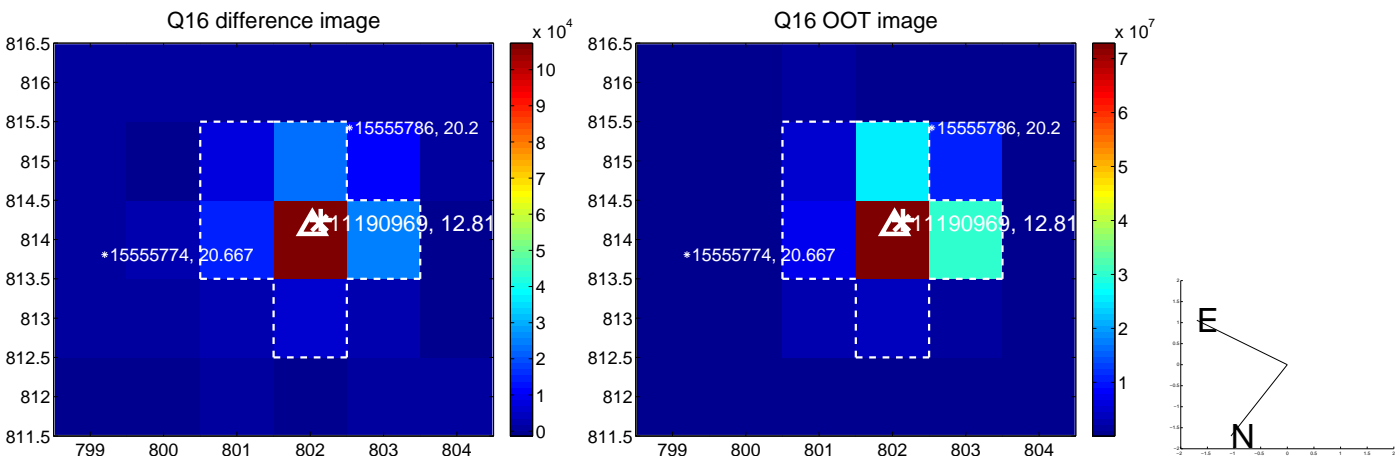
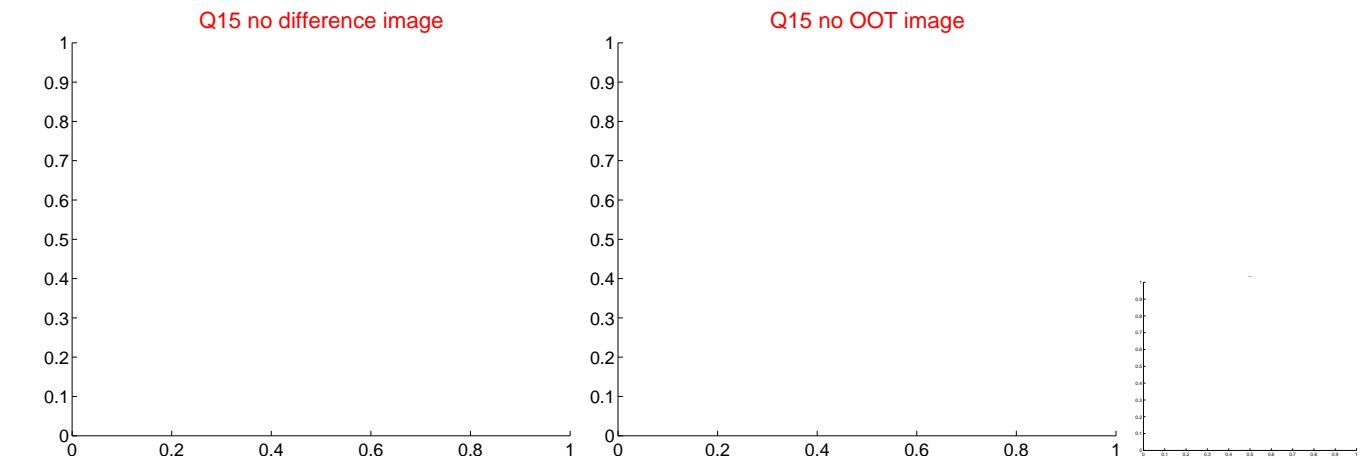
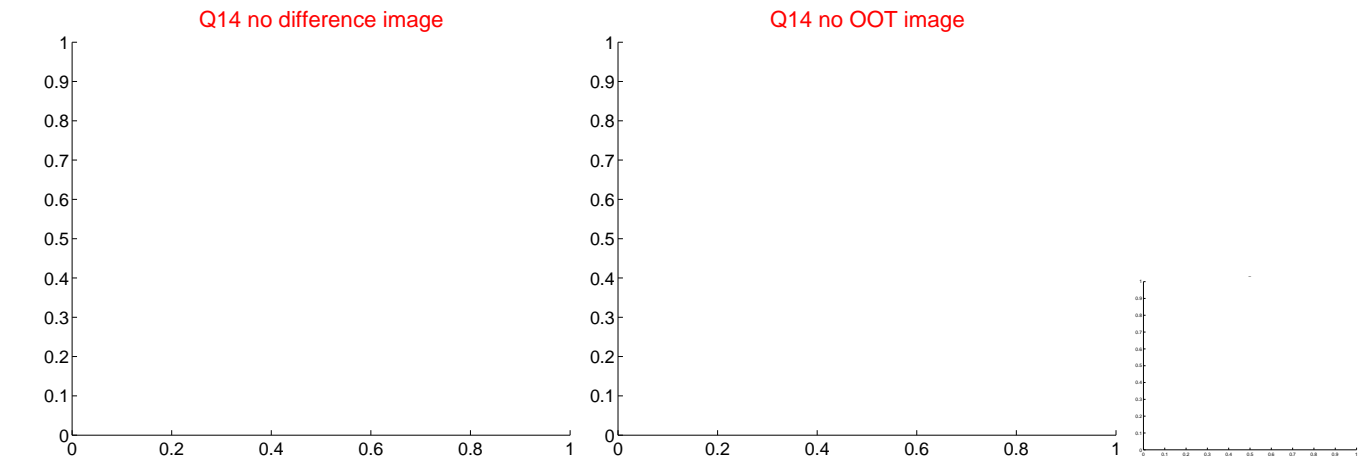
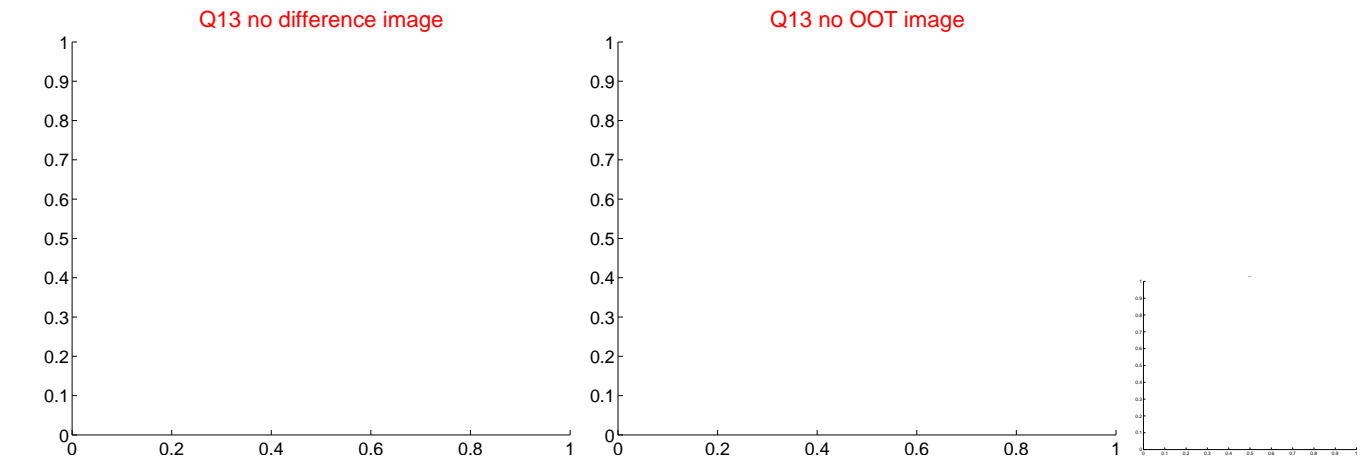
Q12 no difference image



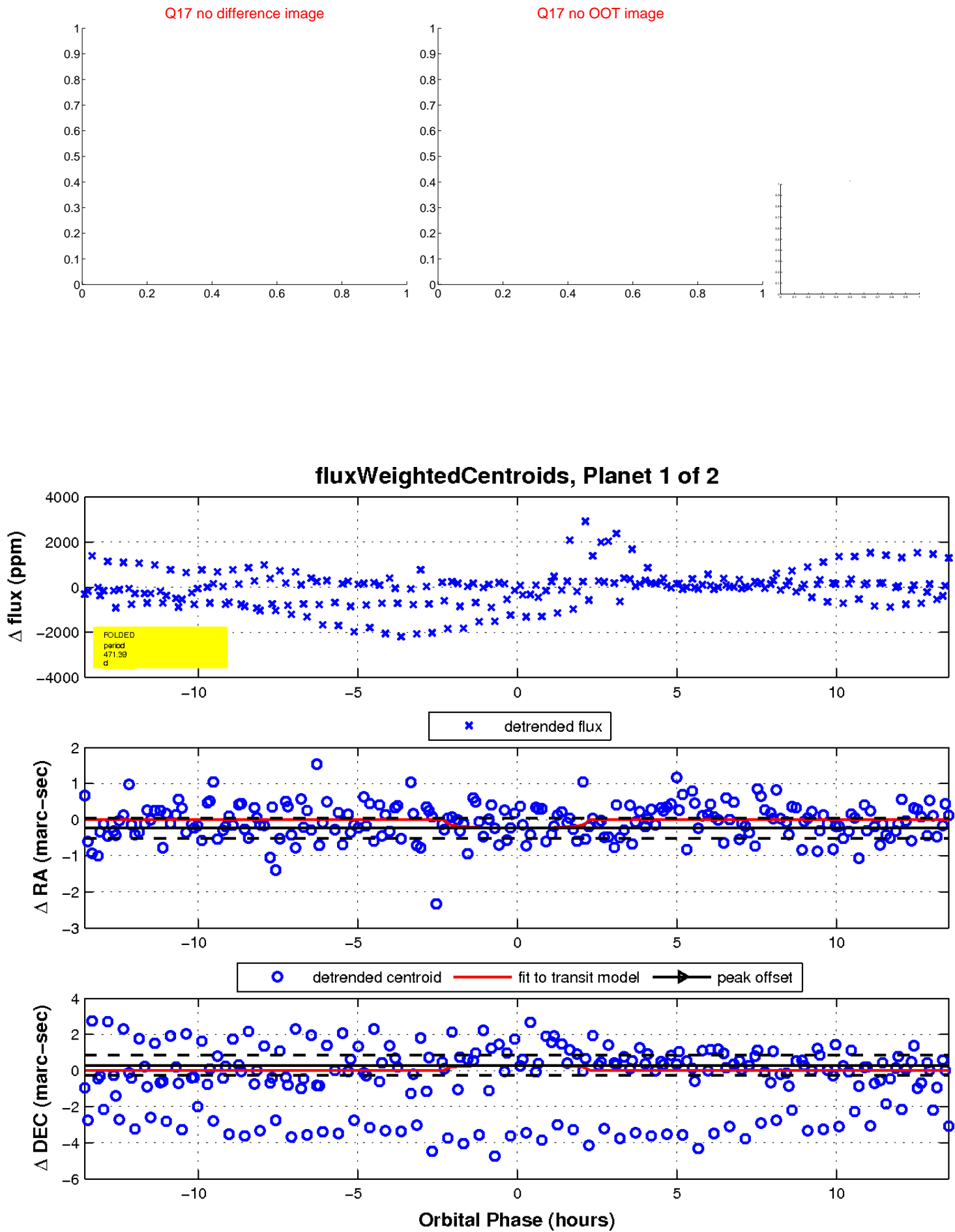
Q12 no OOT image



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

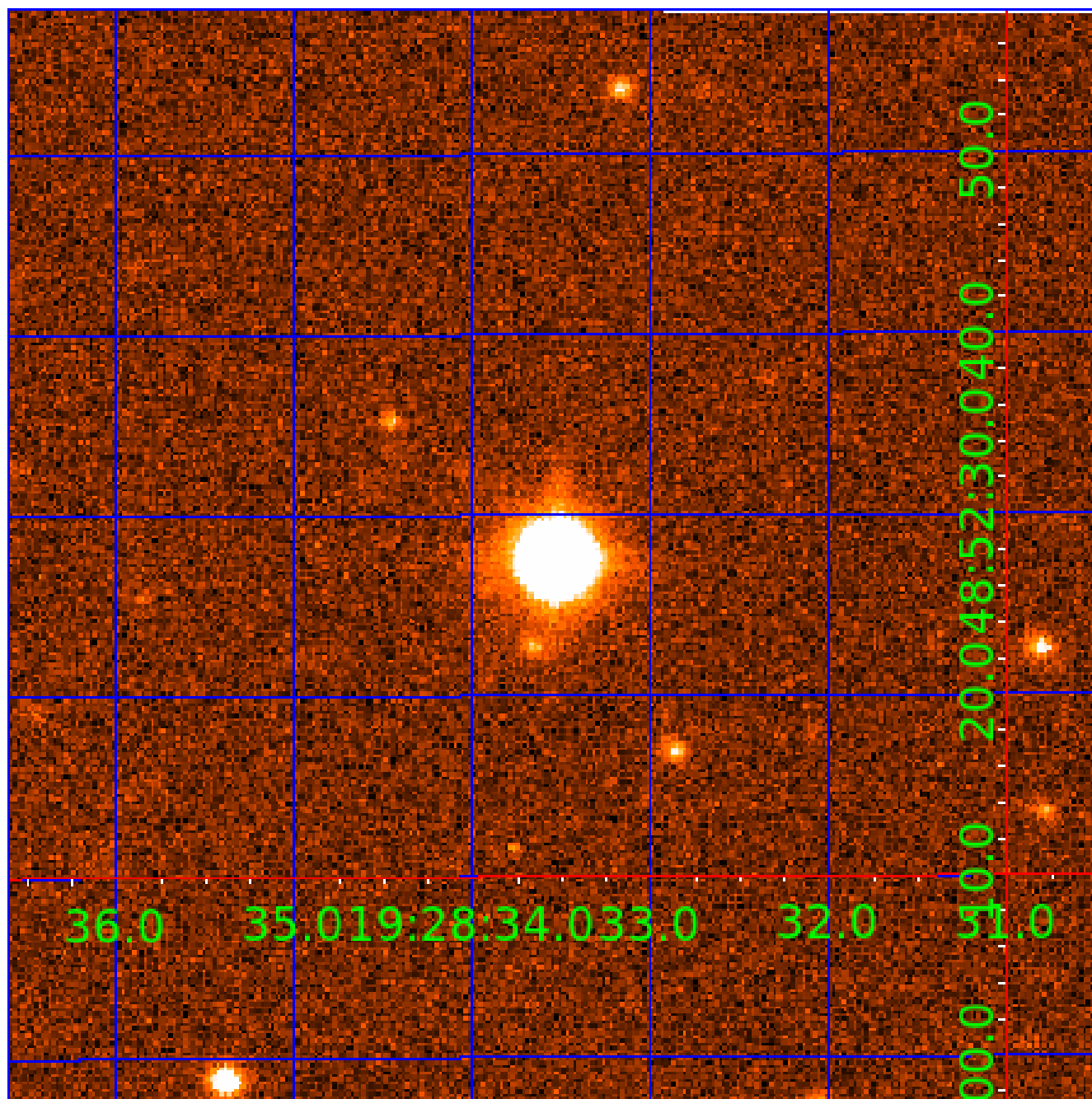


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011190969

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})
011190969-01	OBS	No	471.387255	139.044376	360.8	4.520	13.9	3.4	0.55	4941	1.07	0.17
011190969-02	OBS	No	591.300424	186.083924	548.4	3.043	11.4	6.7	0.55	4941	1.38	0.13

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011190969-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011190969-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—MOD_POS_ALT—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.

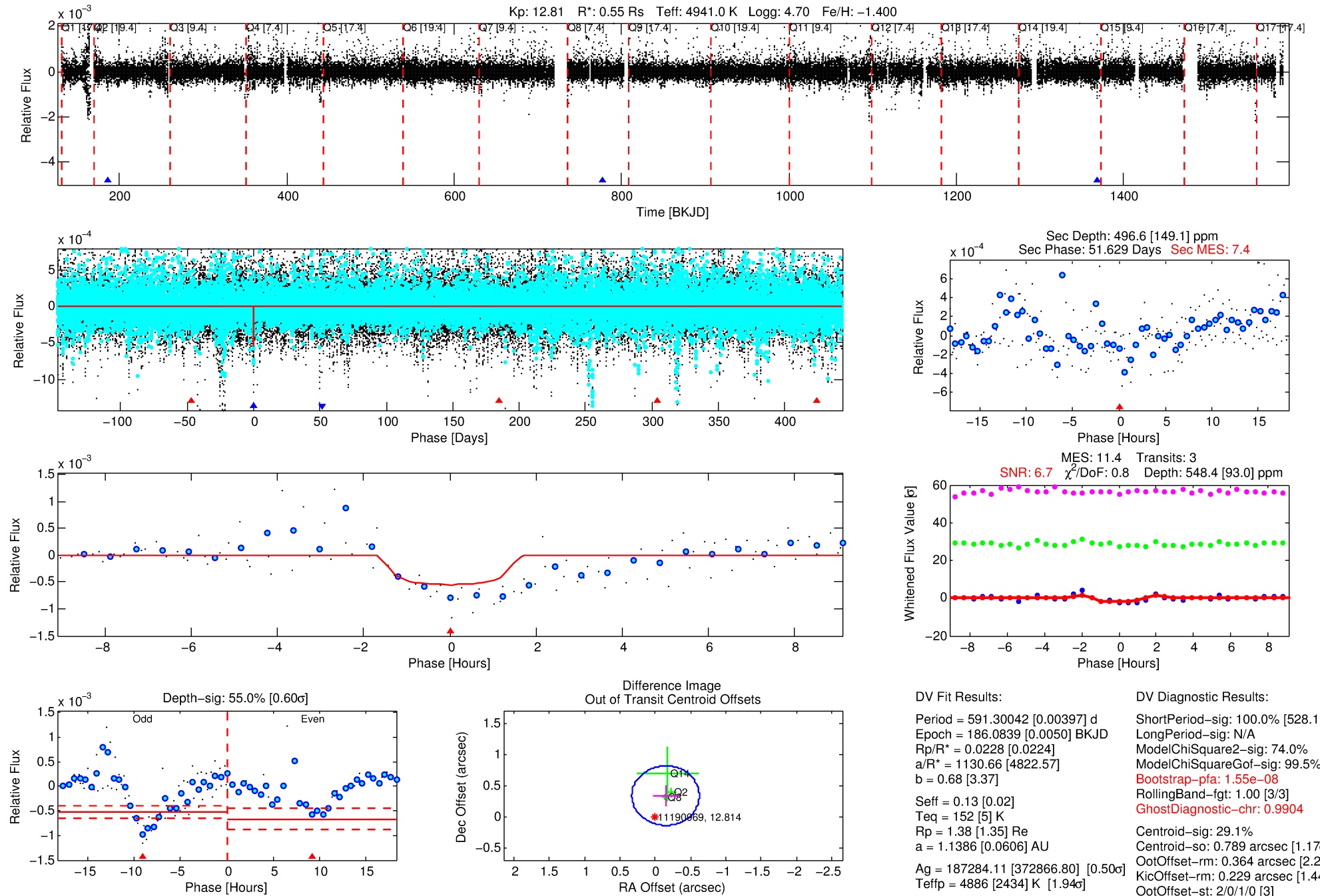
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011190969-02

No Significant Match Found

DV One-Page Summary

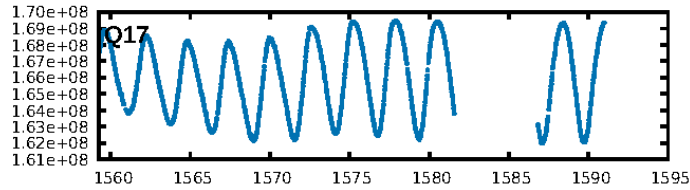
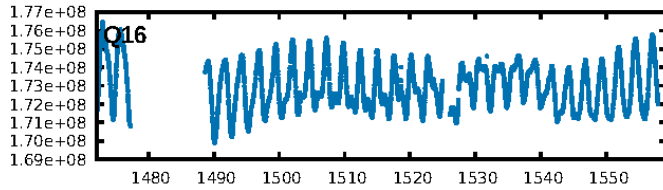
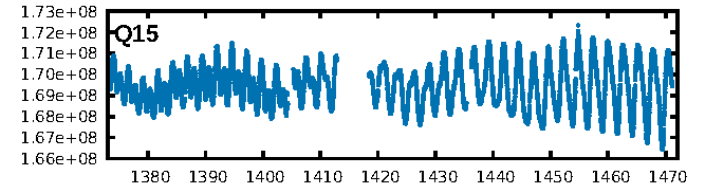
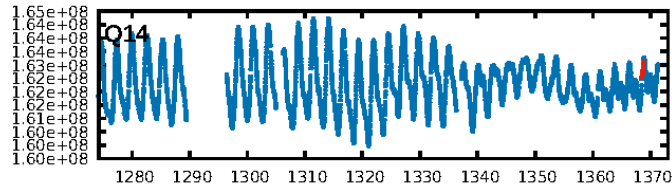
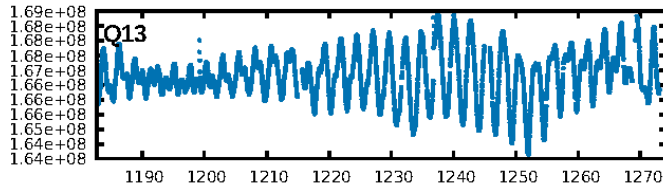
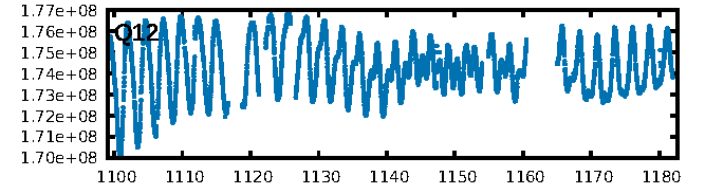
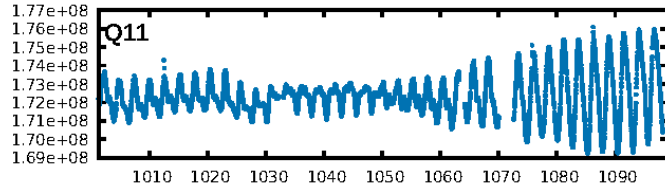
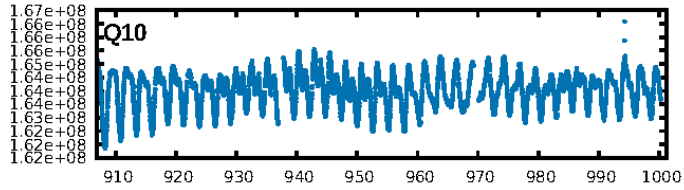
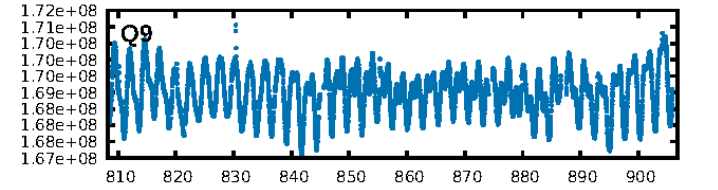
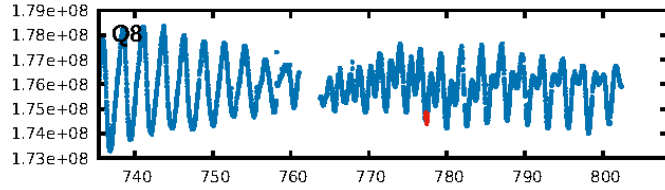
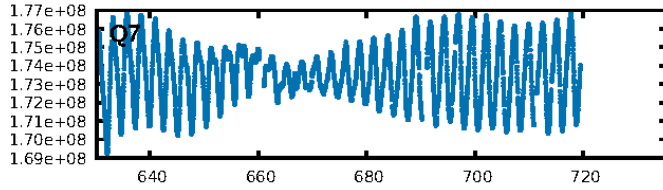
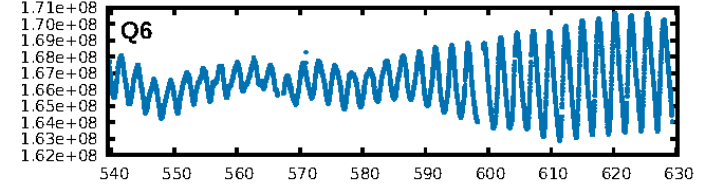
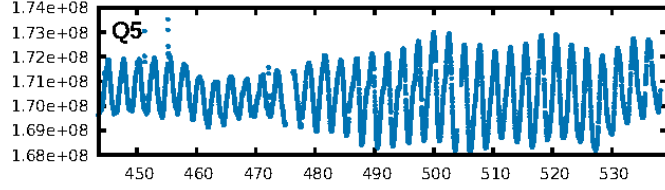
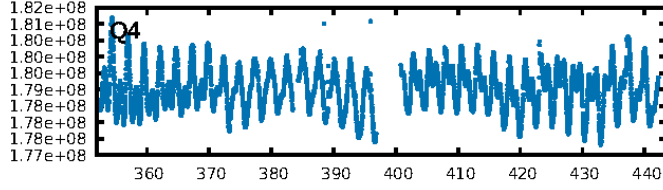
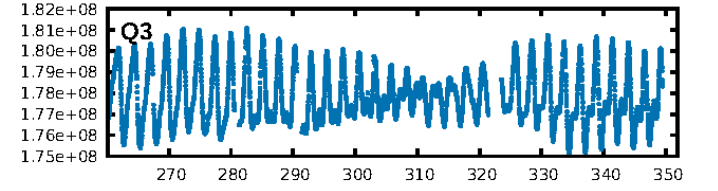
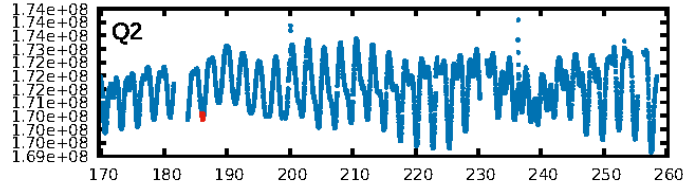
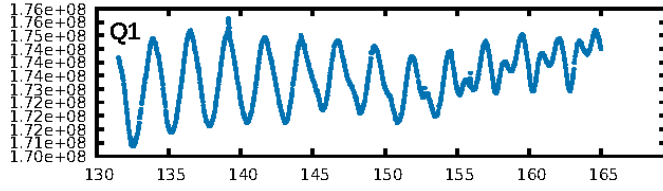
KIC: 11190969 Candidate: 2 of 2 Period: 591.300 d



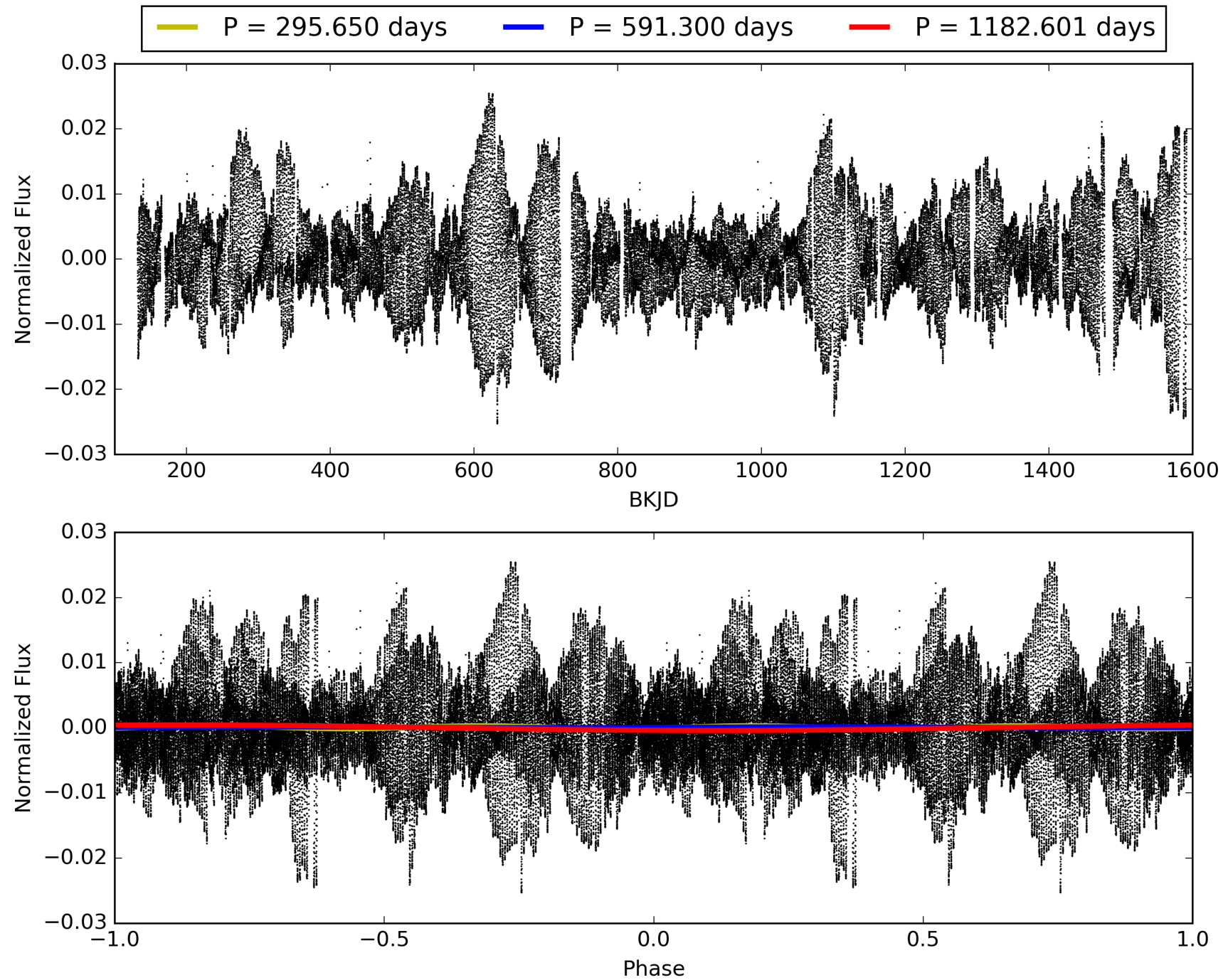
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 17:29:52 Z

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

TCE 011190969-02, PDC Light Curves

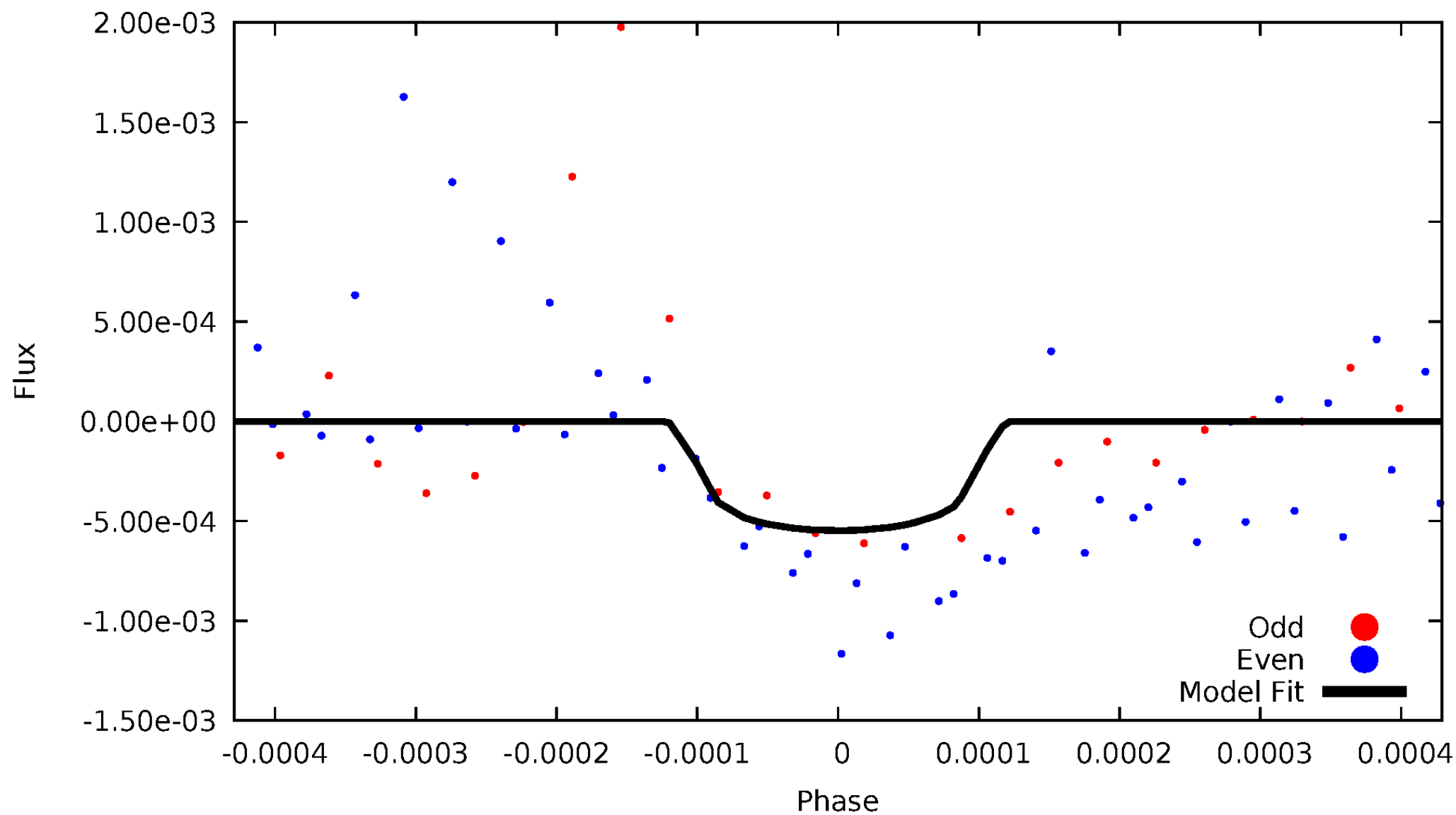


TCE 011190969-02



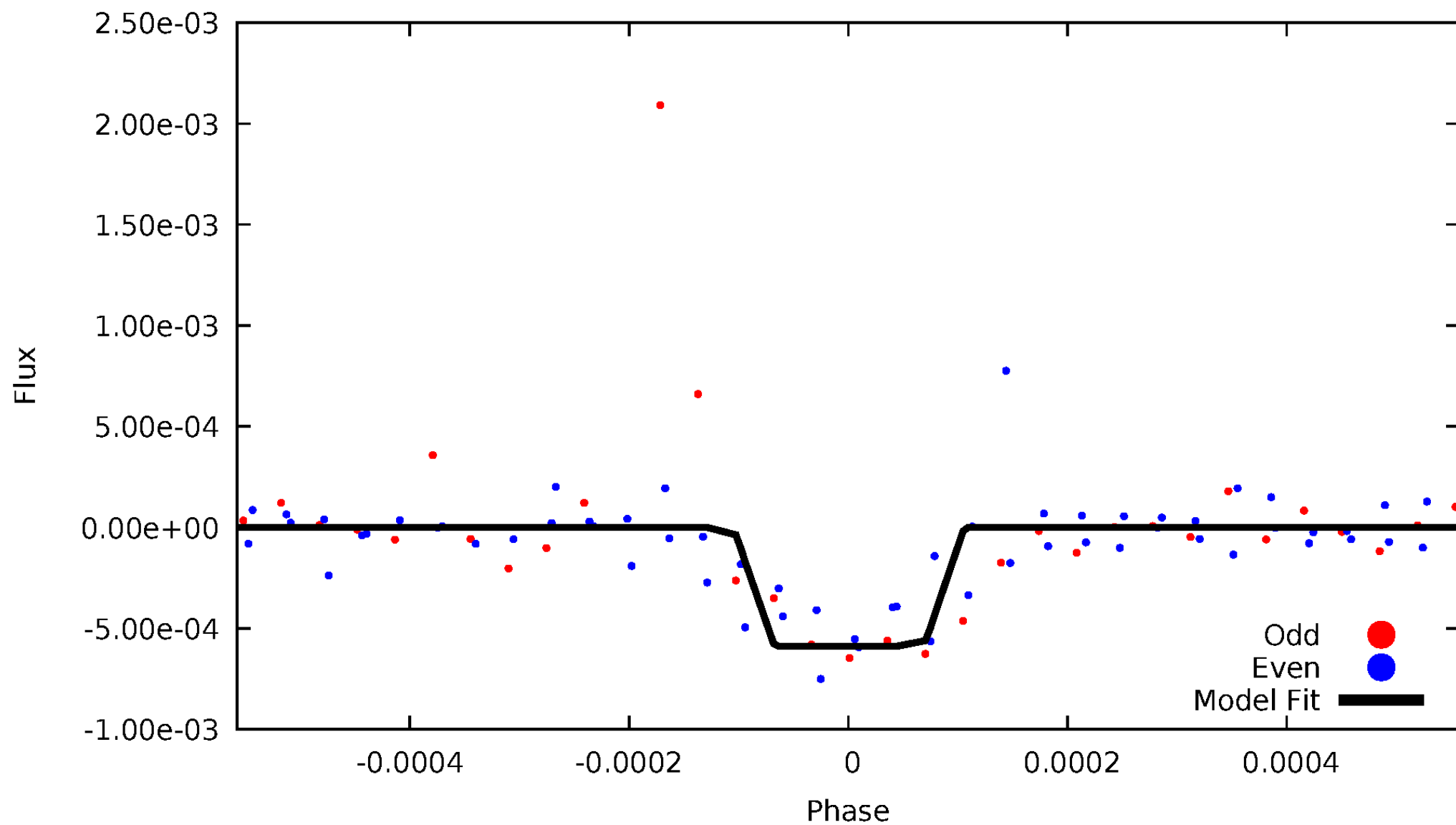
DV Odd/Even

TCE 011190969-02



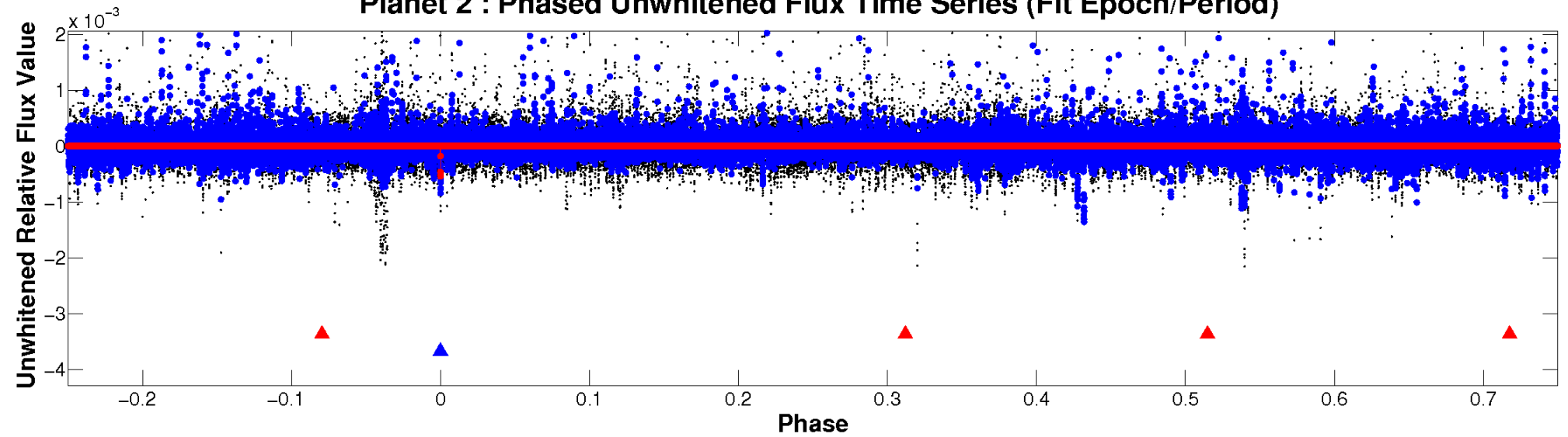
ALT Odd/Even

TCE 011190969-02

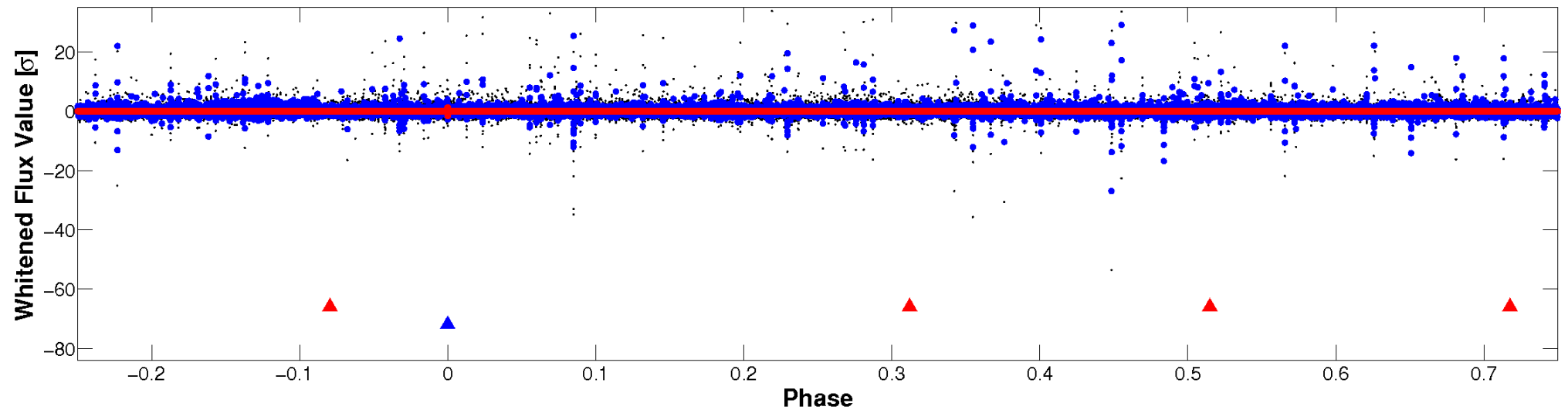


Non-Whitened Vs. Whitened Light Curve

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

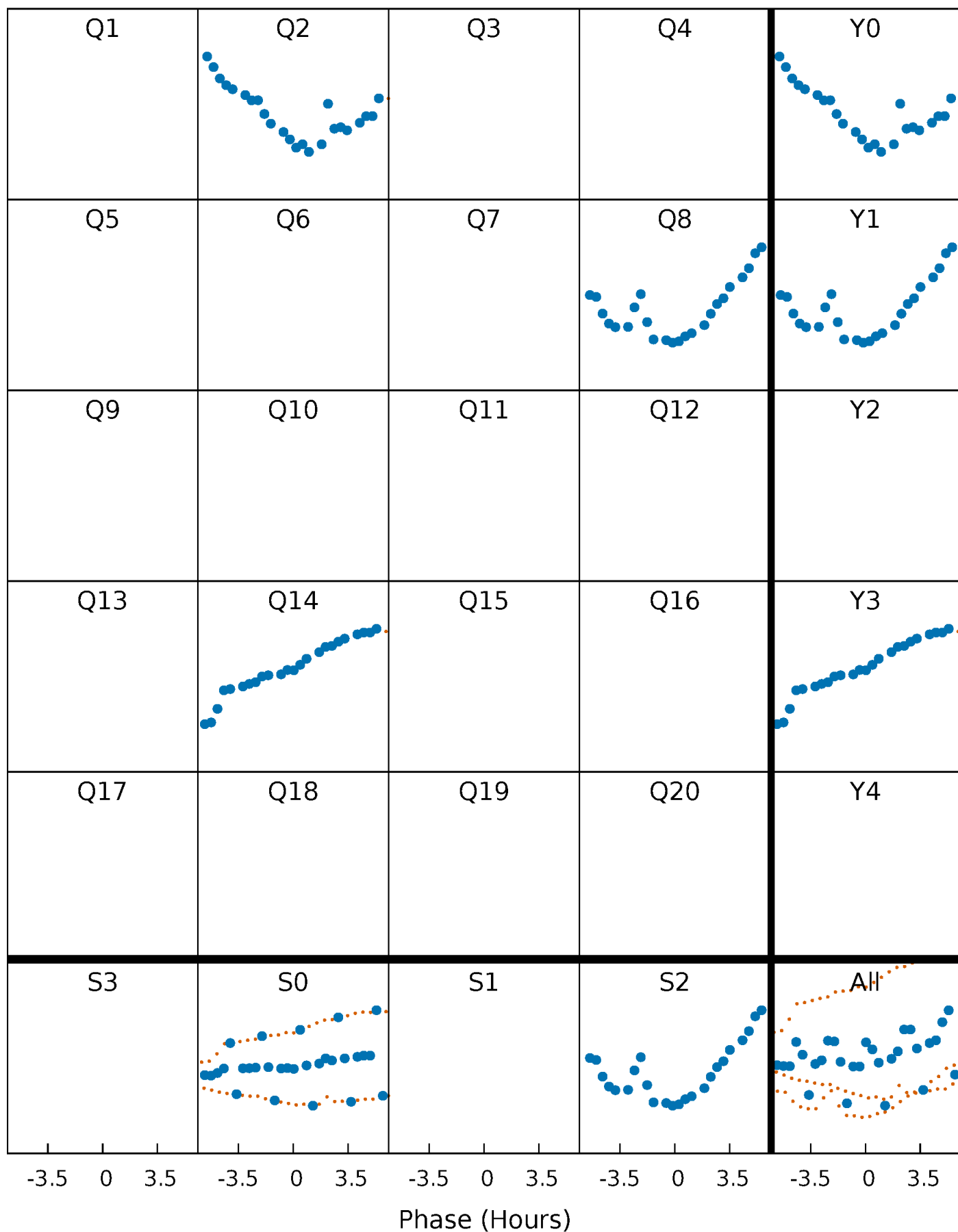


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



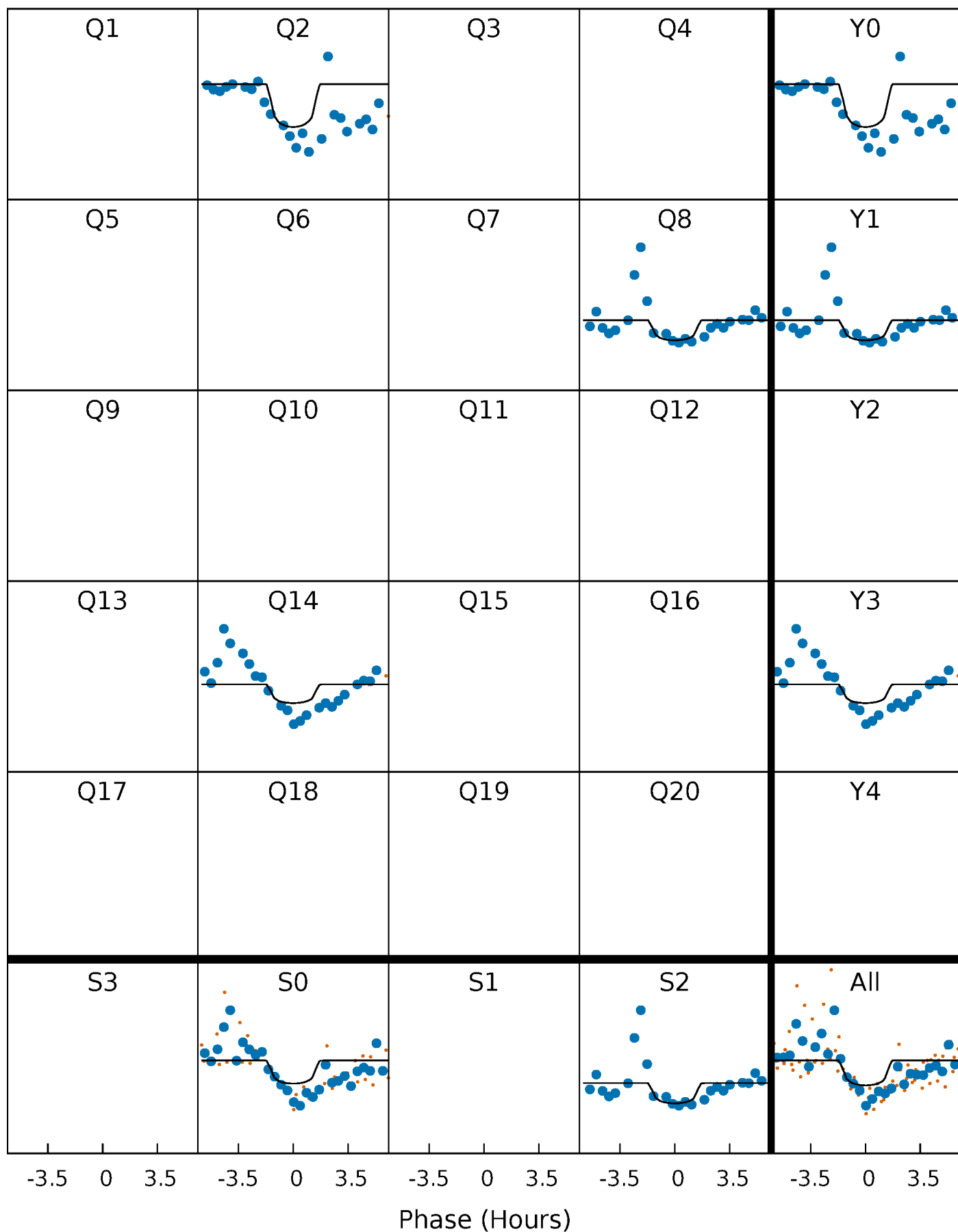
PDC Quarter-Phased Transit Curves

TCE 011190969-02 P=591.300424 Days $T_0=186.083924$ (BKJD)



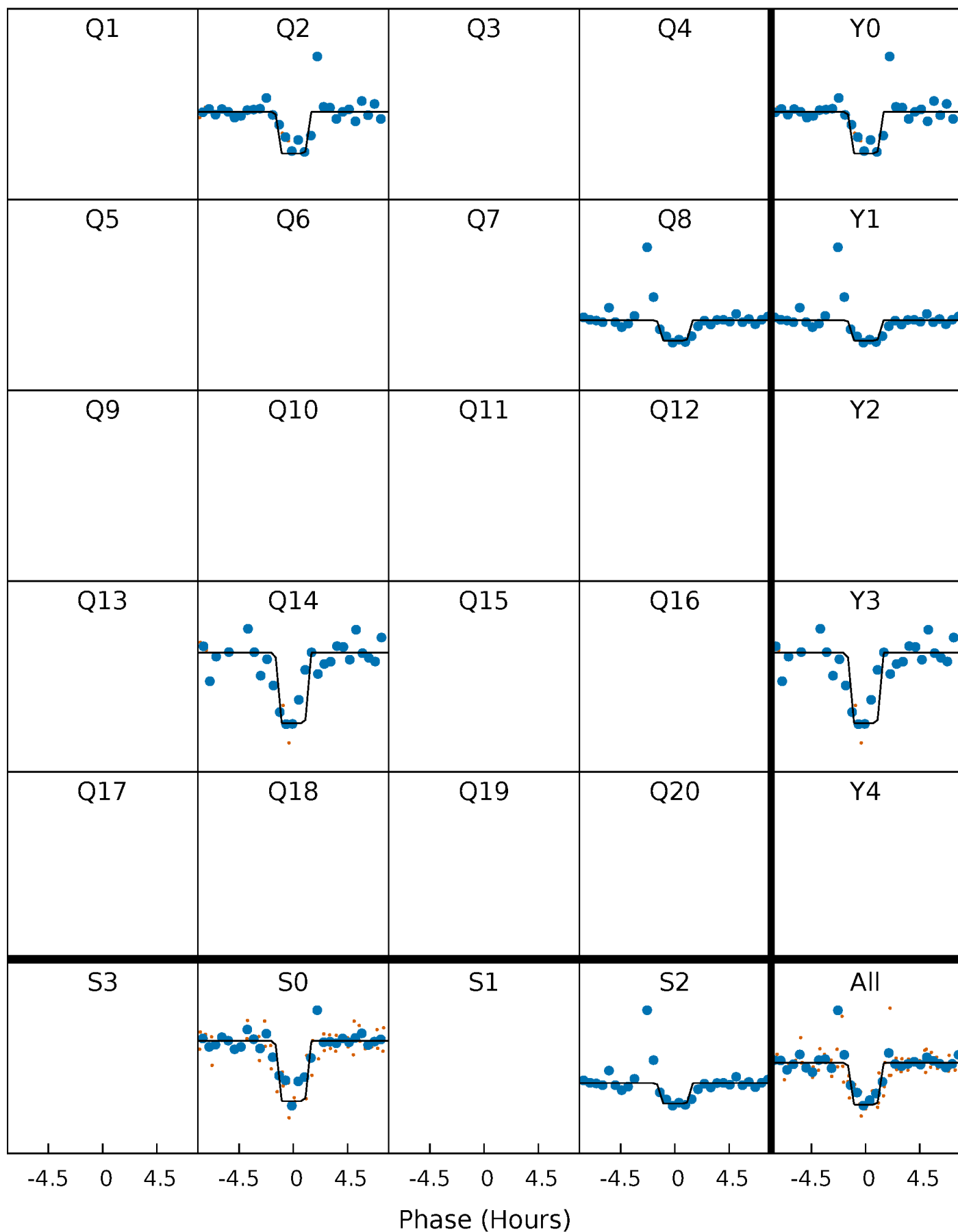
DV Quarter-Phased Transit Curves

TCE 011190969-02 P=591.300424 Days $T_0=186.083924$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

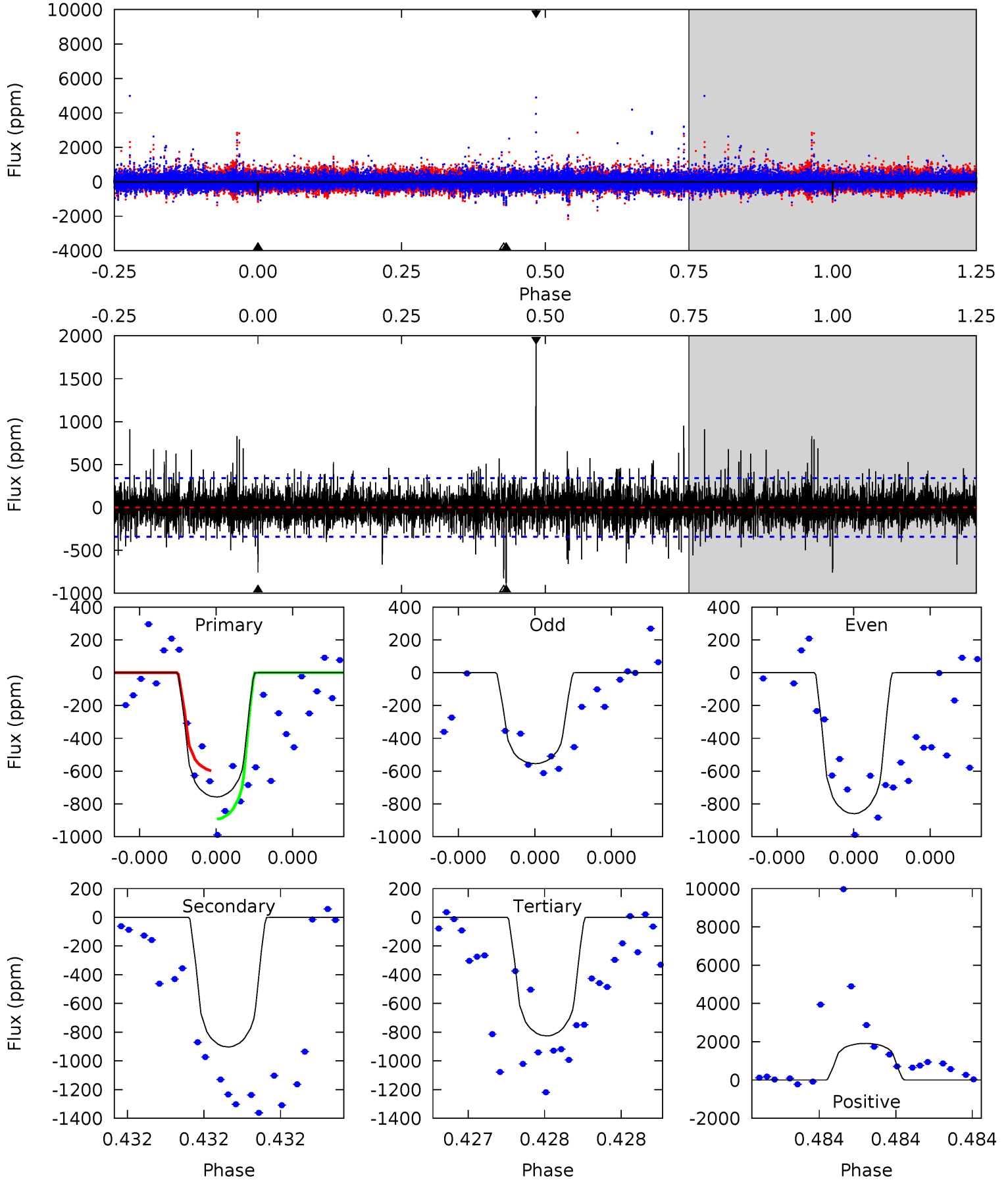
TCE 011190969-02 P=591.306359 Days $T_0=186.088319$ (BKJD)



DV Model-Shift Uniqueness Test

011190969-02, P = 591.300424 Days, E = 186.083924 Days

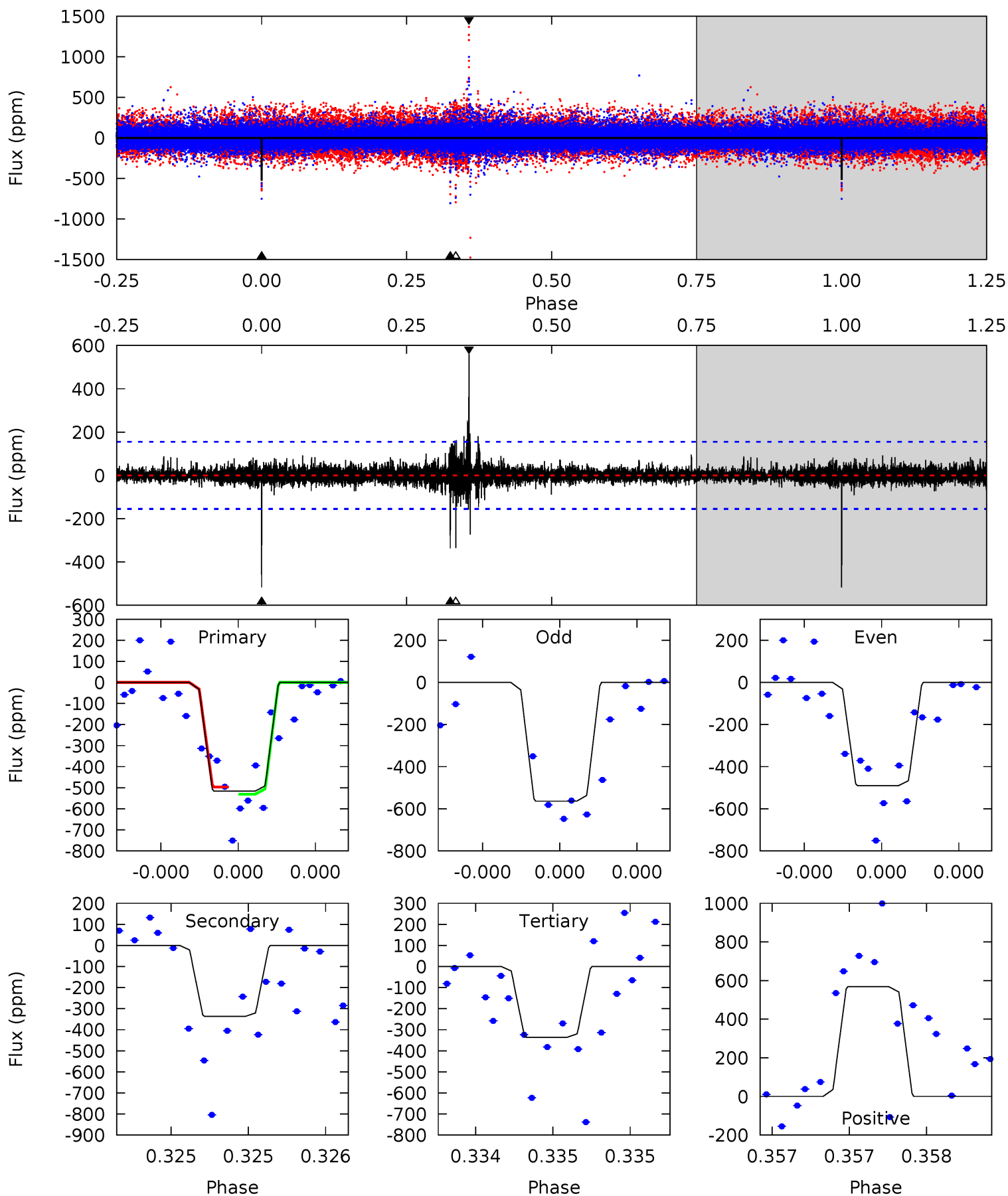
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.7	15.1	13.8	32.0	5.70	3.67	2.30	-1.14	-19.3	1.29	-16.9	2.00	1.03	0.68	2.44



Alt Model-Shift Uniqueness Test

011190969-02, P = 591.306359 Days, E = 186.088319 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.1	12.4	12.4	21.0	5.73	3.72	0.93	6.67	-1.89	0.03	-8.54	1.22	0.99	0.52	0.64



Stellar Parameters For KIC 011190969

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	4941^{+148}_{-148}	$4.703^{+0.046}_{-0.025}$	$-1.400^{+0.300}_{-0.300}$	$0.553^{+0.026}_{-0.033}$	$0.562^{+0.037}_{-0.017}$	$4.687^{+0.848}_{-0.492}$
	+3%/-3%	+1%/-1%	+21%/-21%	+5%/-6%	+7%/-3%	+18%/-11%
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 011190969-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-903 ± 60	$1.54^{+1.25}_{-0.98}$	211^{+7}_{-7}	5279^{+3982}_{-1114}	$274041^{+1905086}_{-189991}$
Alt.	-336 ± 27	$1.63^{+1.33}_{-0.96}$	212^{+7}_{-7}	4228^{+2061}_{-770}	$89842^{+440729}_{-62507}$

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 $A_{obs} \gg 1.0$

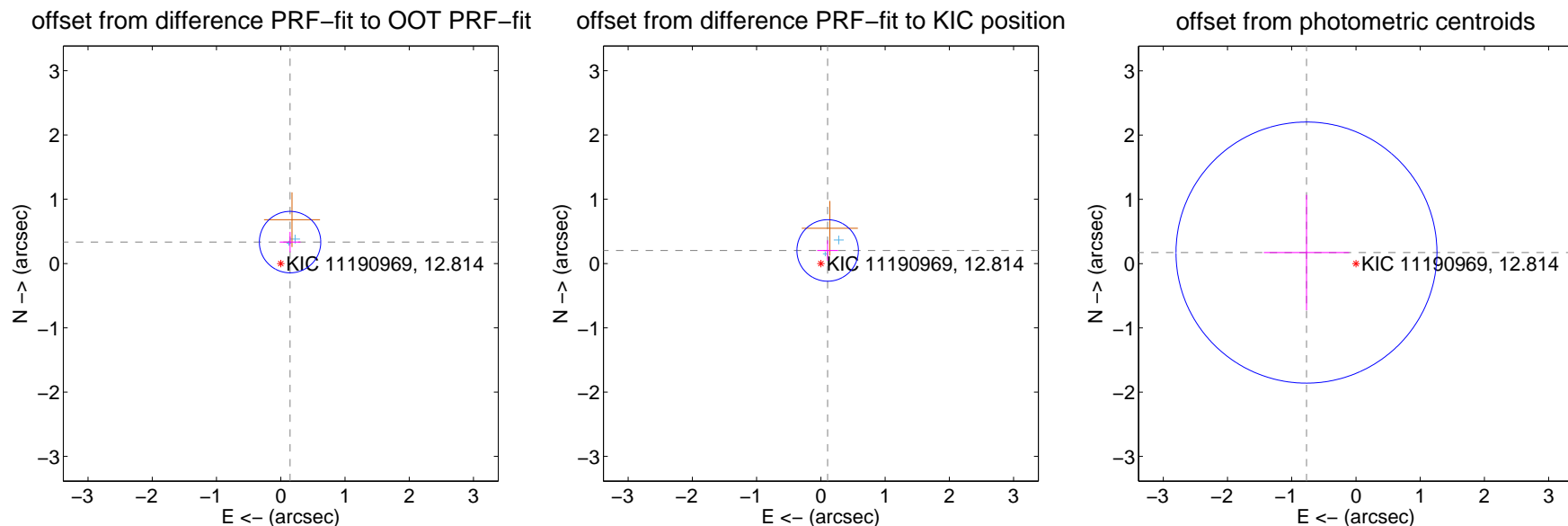
DV Centroid Data

Supplemental centroid analysis for 011190969-02. Kepler magnitude: 12.81. Transit SNR 6.72

There are 2 quarters with good PRF difference image offsets

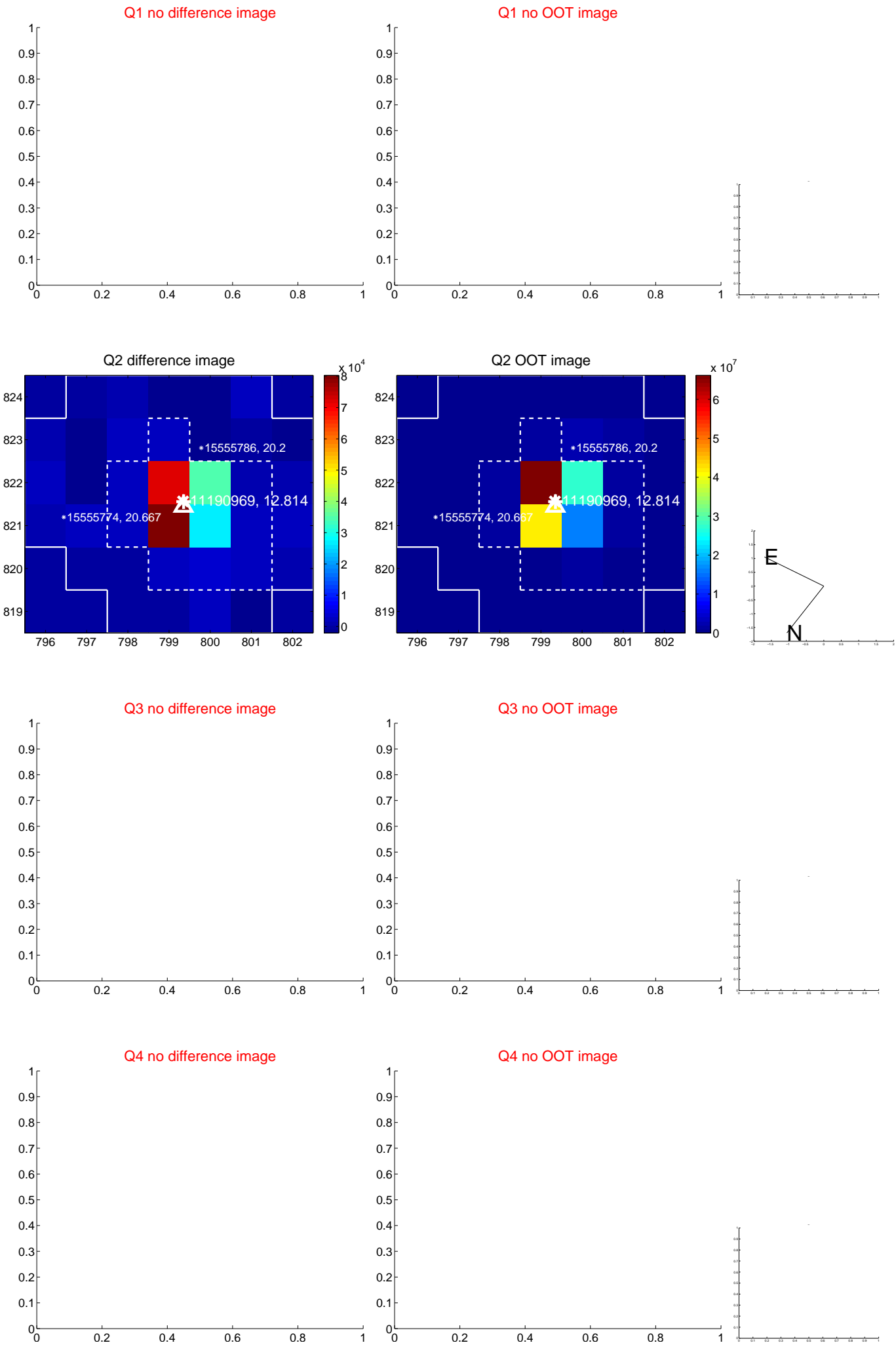
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.364 ± 0.159	2.28	-0.145 ± 0.162	0.333 ± 0.159
PRF-fit source offset from KIC position	0.229 ± 0.159	1.44	-0.106 ± 0.162	0.203 ± 0.159
photometric centroid source offset	0.79 ± 0.68	1.17	0.77 ± 0.66	0.17 ± 0.90

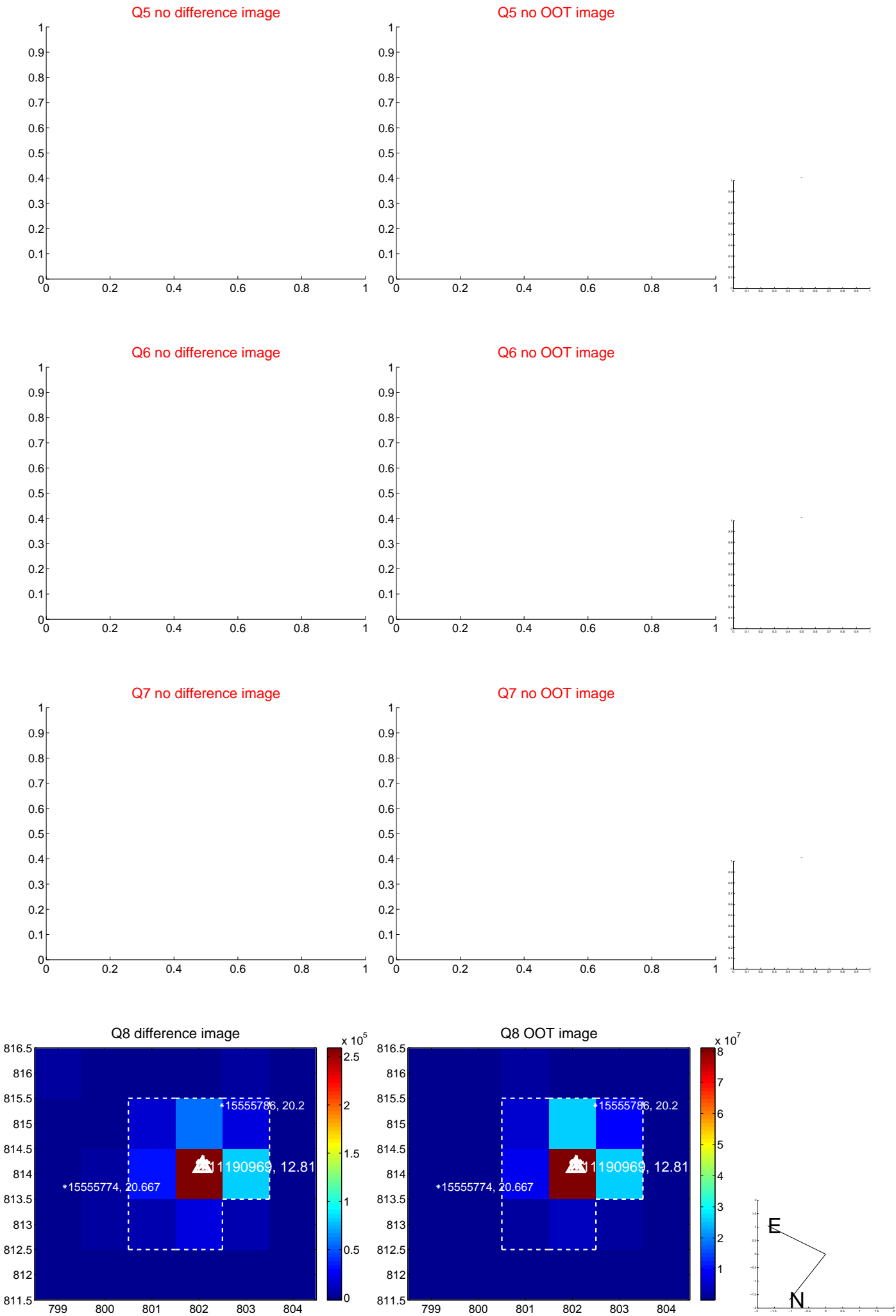


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



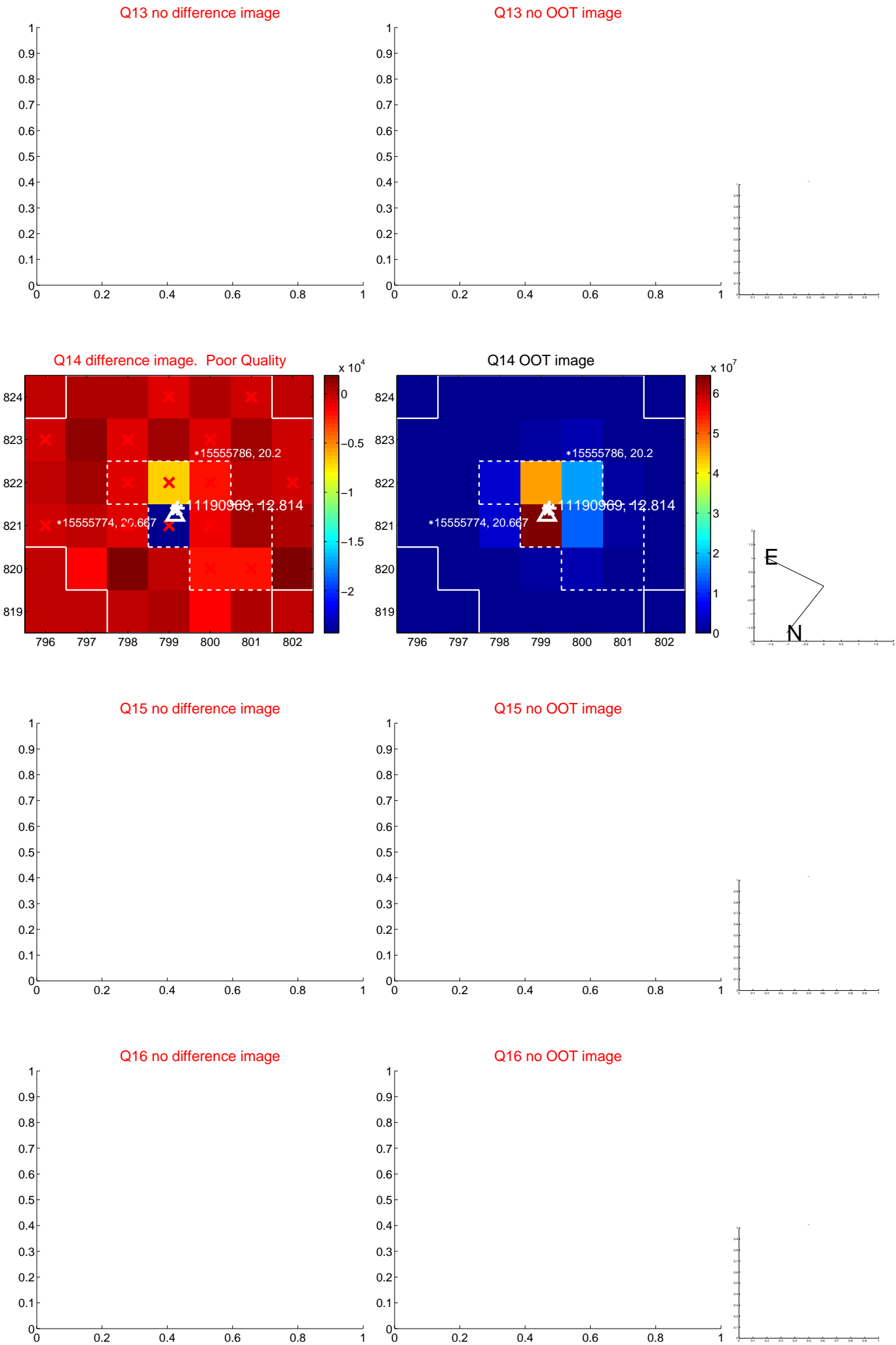
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



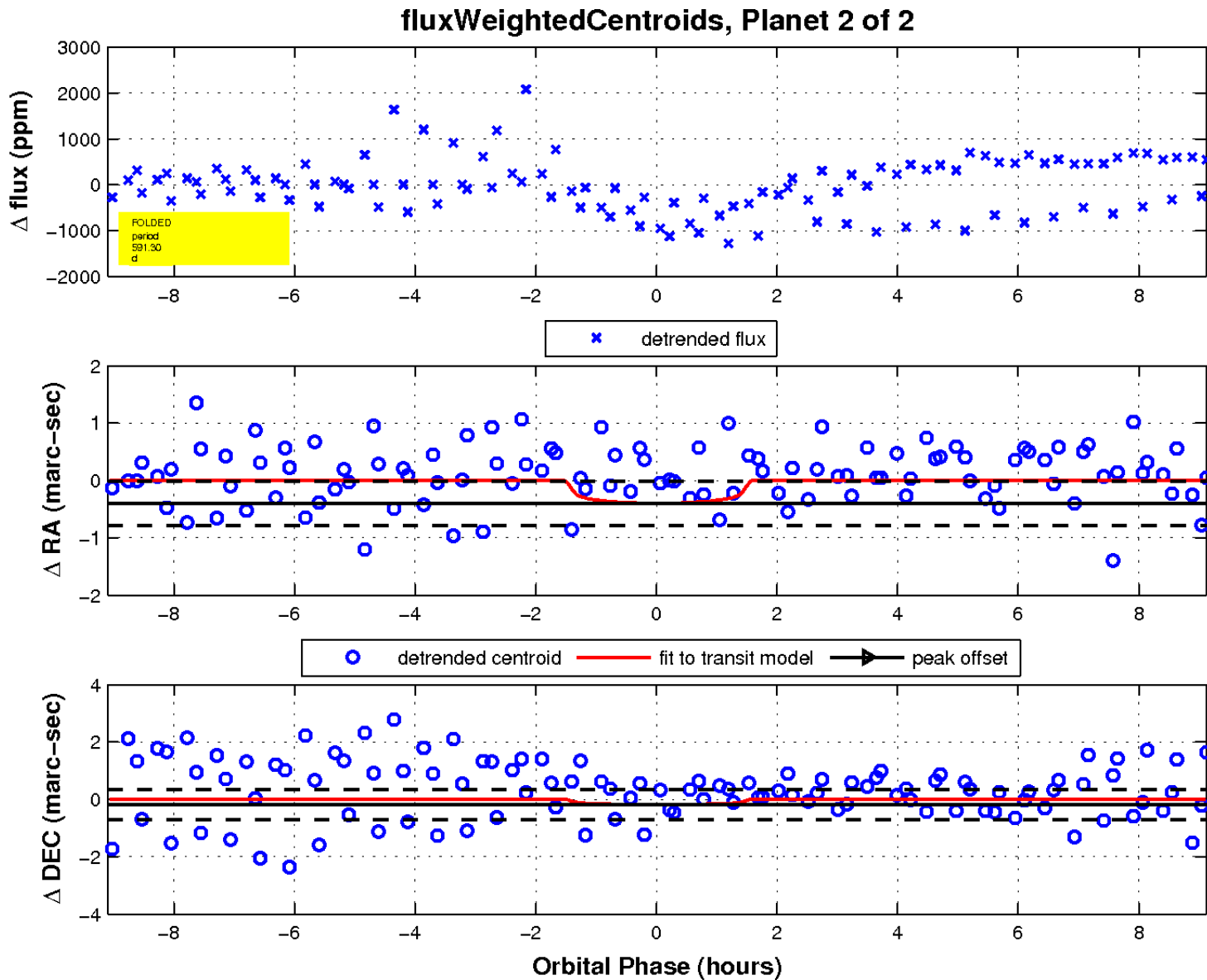
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

