

KIC 001719308

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})
001719308-01	OBS	No	36.572991	164.834657	228.1	28.334	13.2	16.0	1.50	6256	3.69	64.01
001719308-02	OBS	No	313.247538	410.030334	578.3	8.456	12.9	12.3	1.50	6256	3.85	3.65

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
001719308-01	OBS	FP	0.00	1	0	0	0	LPP_DV
001719308-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—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.

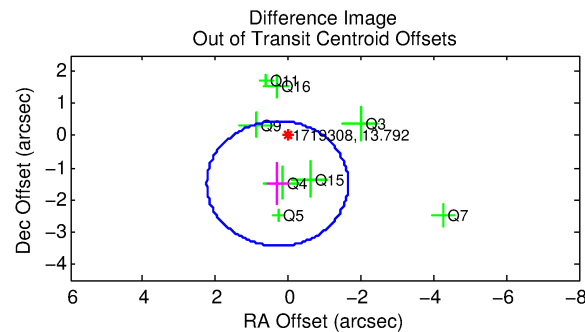
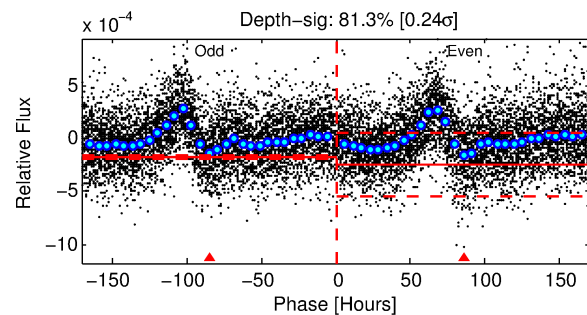
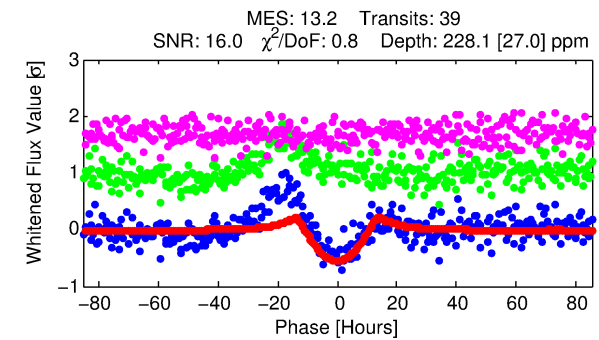
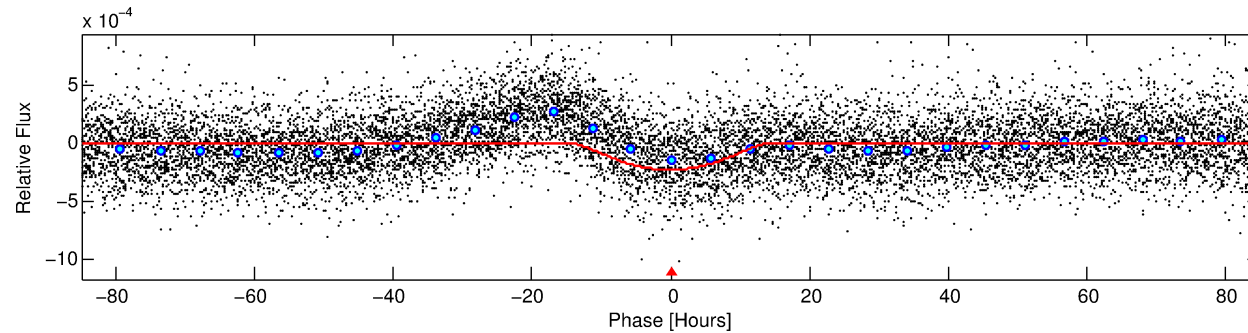
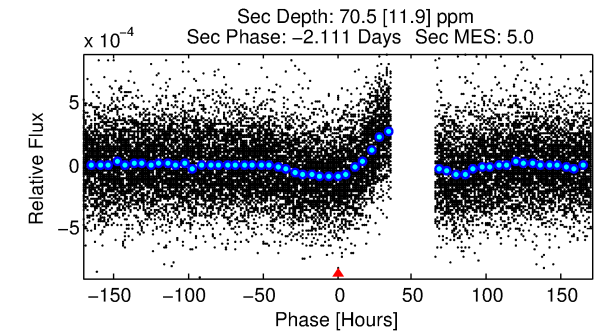
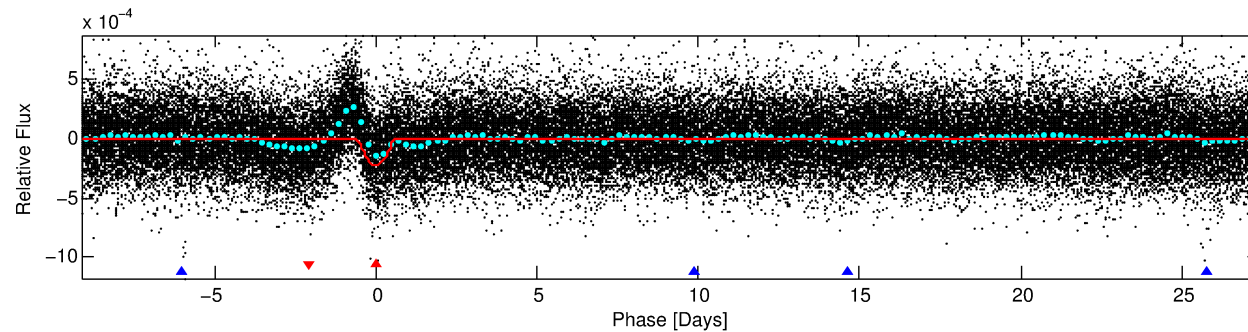
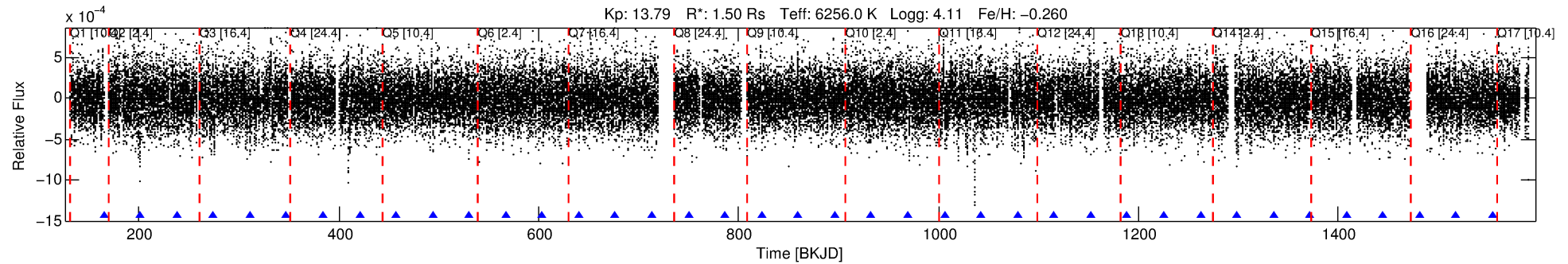
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 001719308-01

No Significant Match Found

DV One-Page Summary

KIC: 1719308 Candidate: 1 of 2 Period: 36.573 d



DV Fit Results:

Period = 36.57299 [0.00140] d
Epoch = 164.8347 [0.0305] BKJD
Rp/R* = 0.0224 [0.0114]
a/R* = 2.65 [0.43]
b = 0.99 [0.02]
Seff = 64.01 [20.11]
Teq = 721 [57] K
Rp = 3.69 [2.01] Re
a = 0.2204 [0.0427] AU
Ag = 138.57 [149.02] [0.92σ]
Teffp = 3826 [986] K [3.14σ]

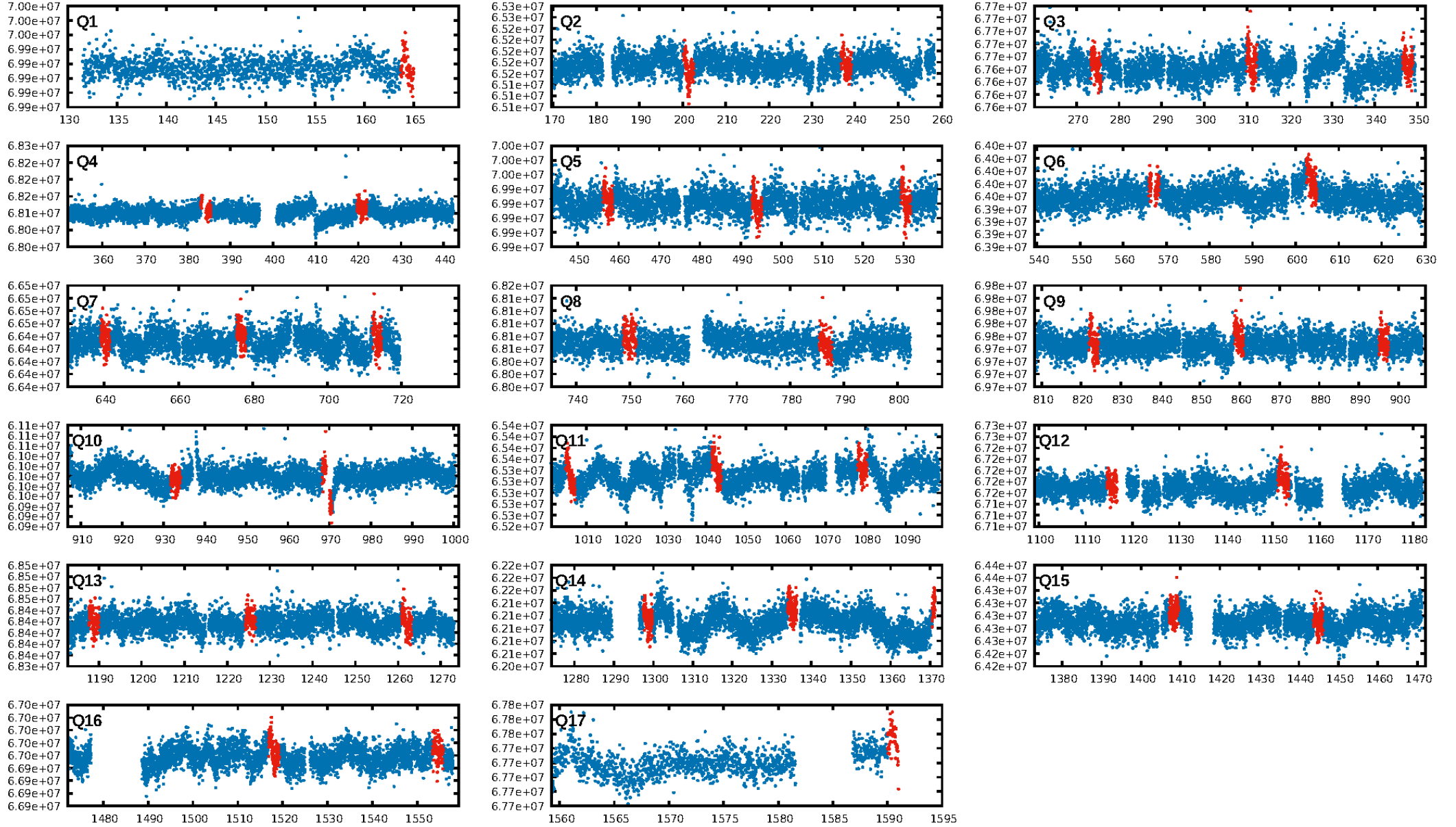
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [224.57σ]
ModelChiSquare2-sig: 36.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.05e-37
RollingBand-fgt: 1.00 [37/37]
GhostDiagnostic-chr: 3.298
Centroid-sig: 48.9%
Centroid-so: 1.044 arcsec [2.22σ]
OotOffset-rm: 1.525 arcsec [2.35σ]
KicOffset-rm: 1.440 arcsec [2.20σ]
OotOffset-st: 0/4/2/2 [8]
KicOffset-st: 0/4/2/2 [8]
DiffImageQuality-fgm: 0.75 [6/8]
DiffImageOverlap-fno: 1.00 [14/14]

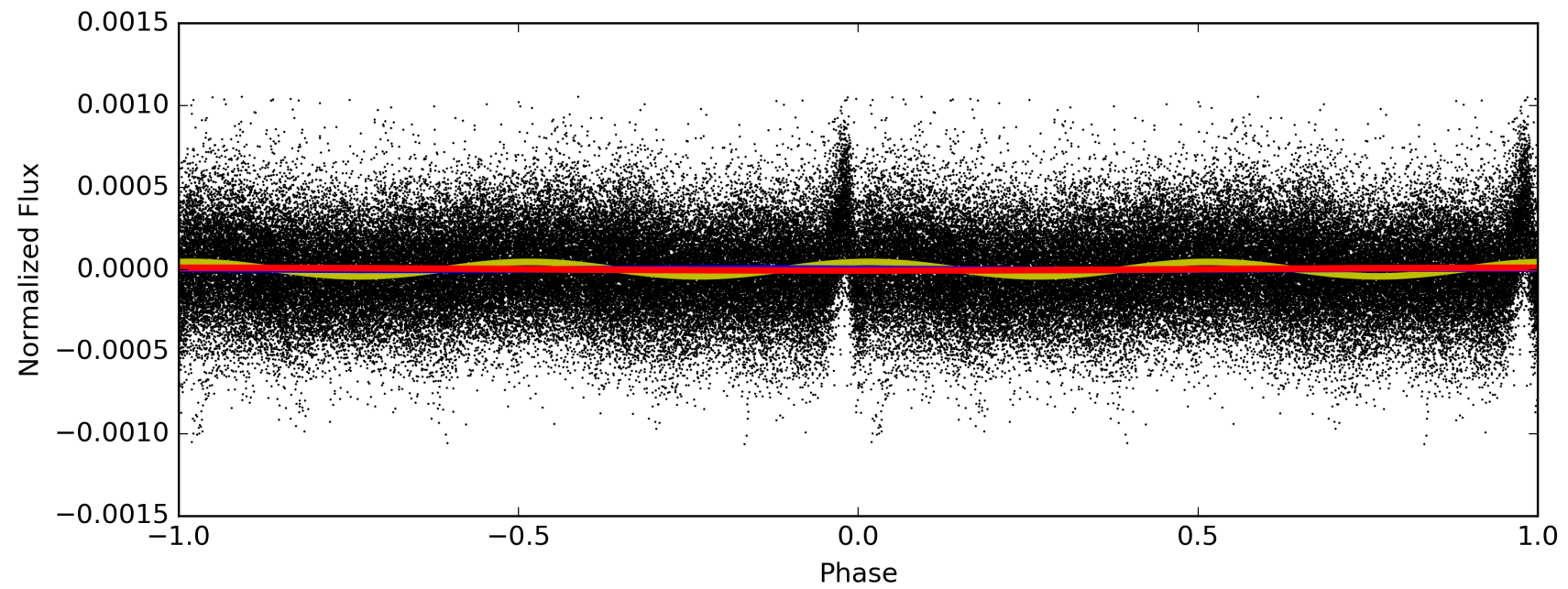
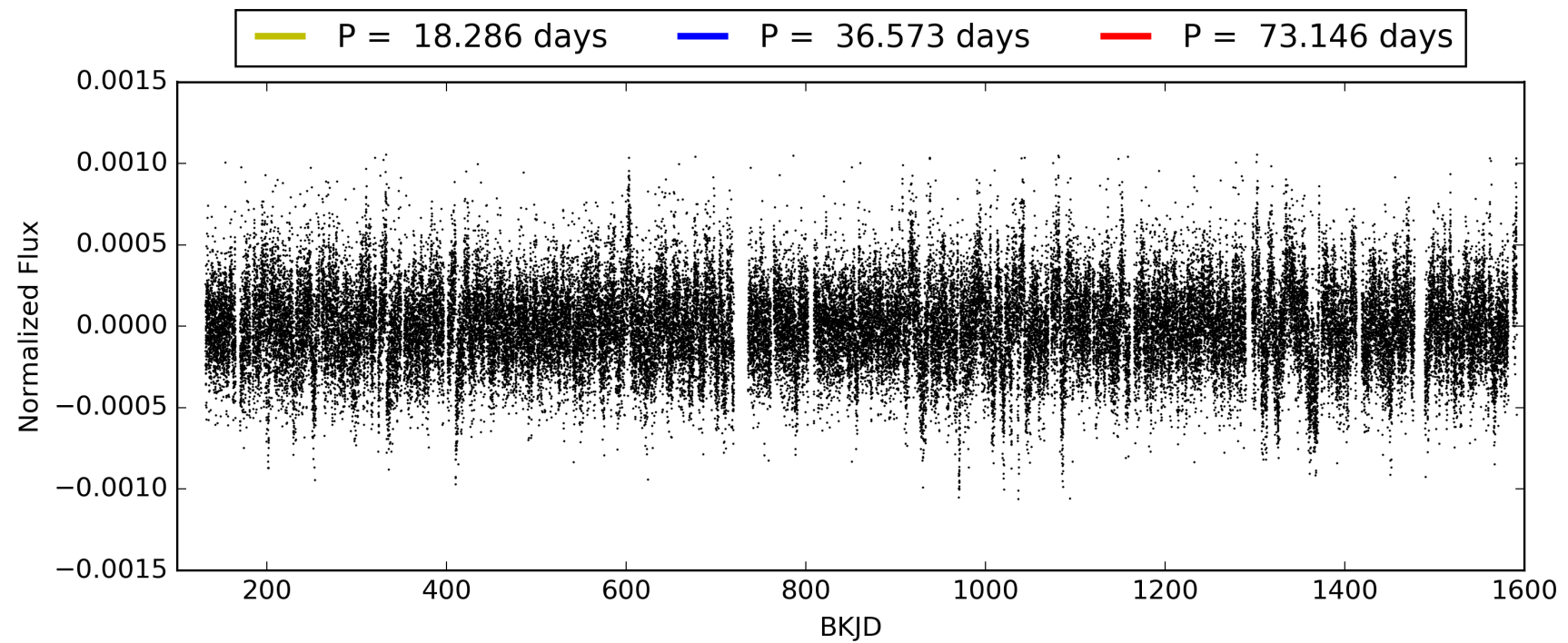
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 21:43:47 Z

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

TCE 001719308-01, PDC Light Curves

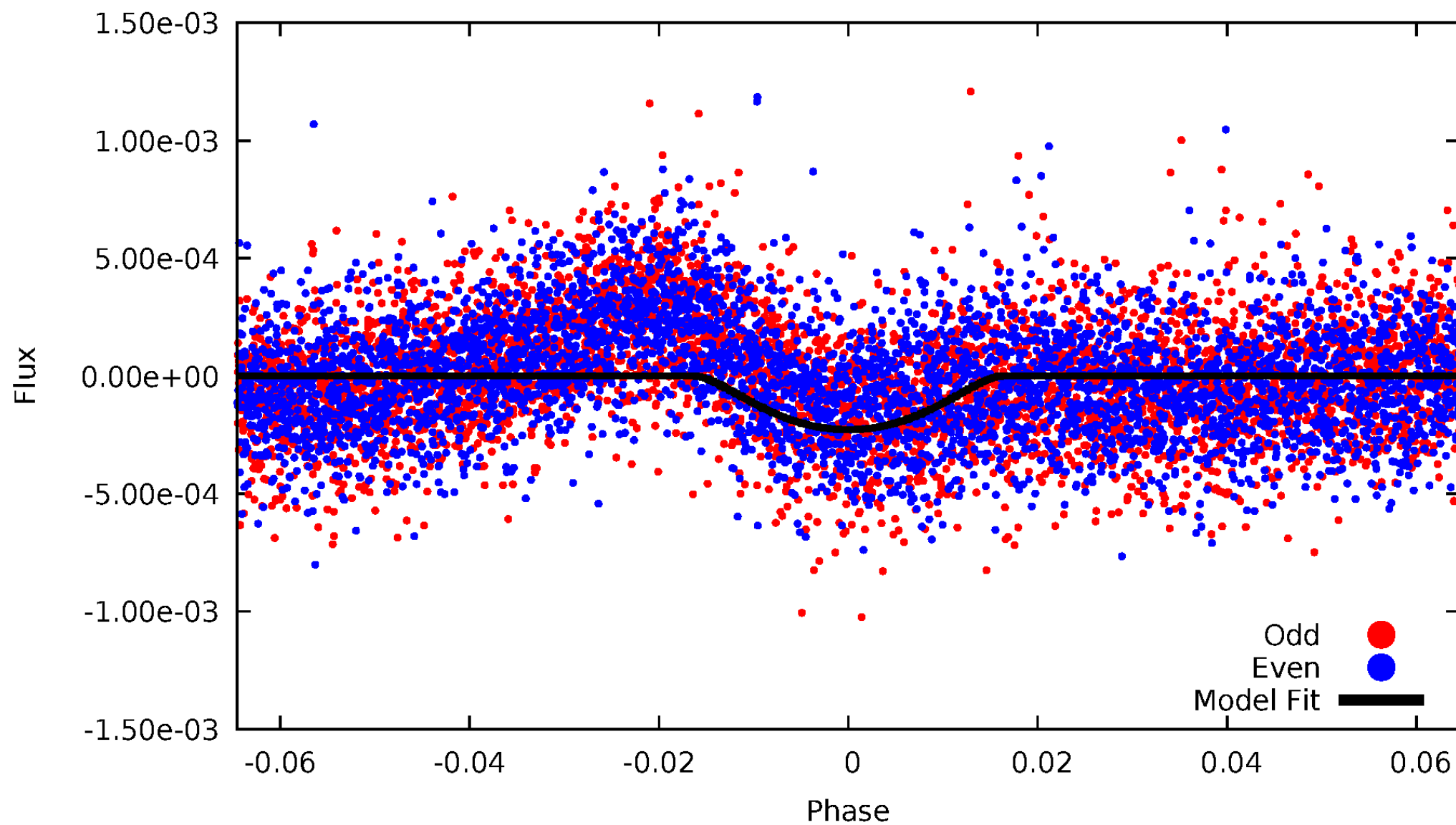


TCE 001719308-01



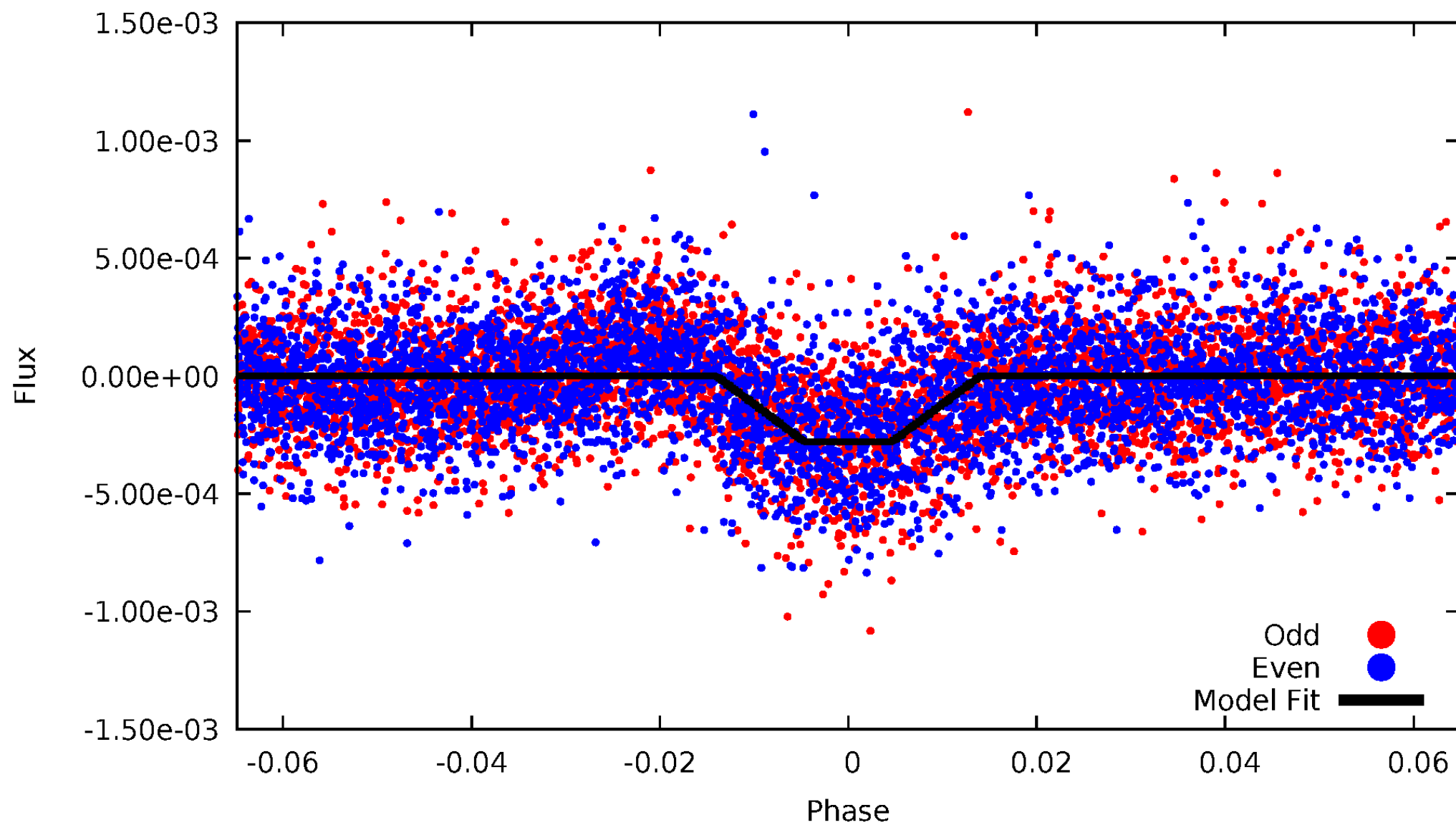
DV Odd/Even

TCE 001719308-01



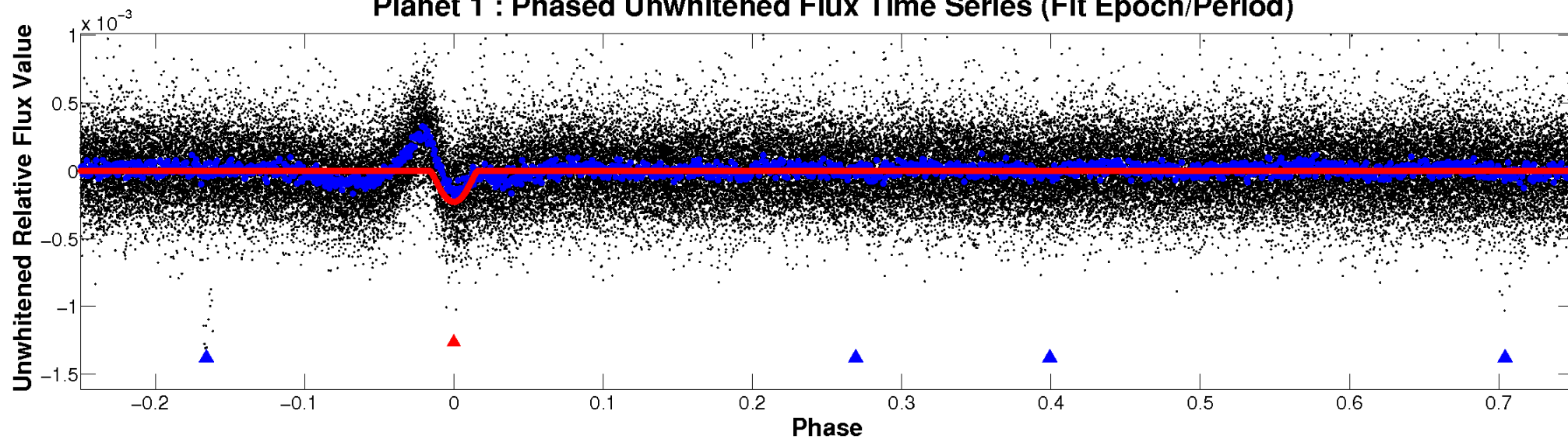
ALT Odd/Even

TCE 001719308-01

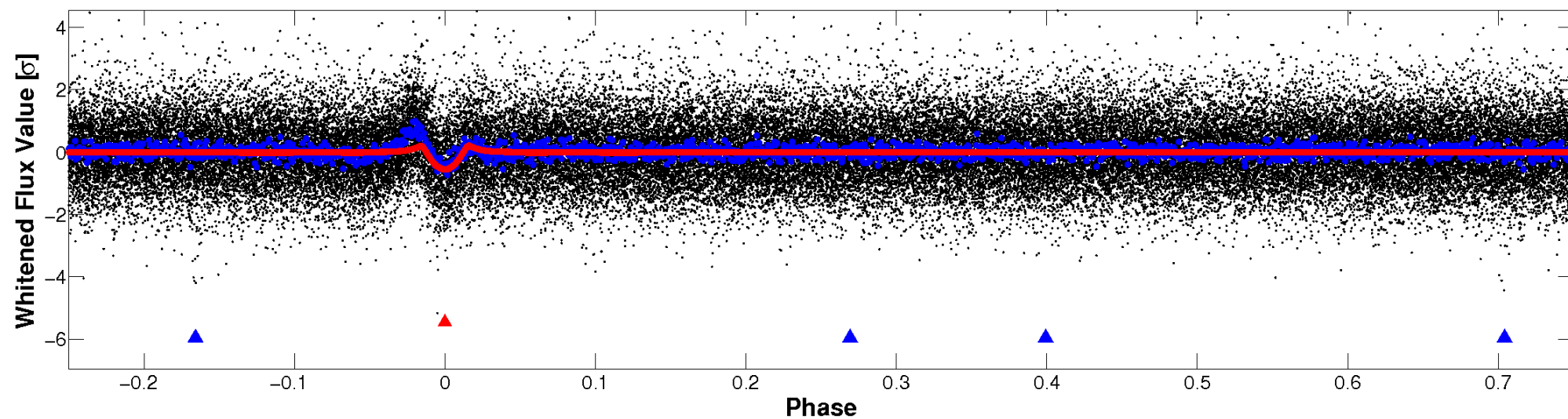


Non-Whitened Vs. Whitened Light Curve

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

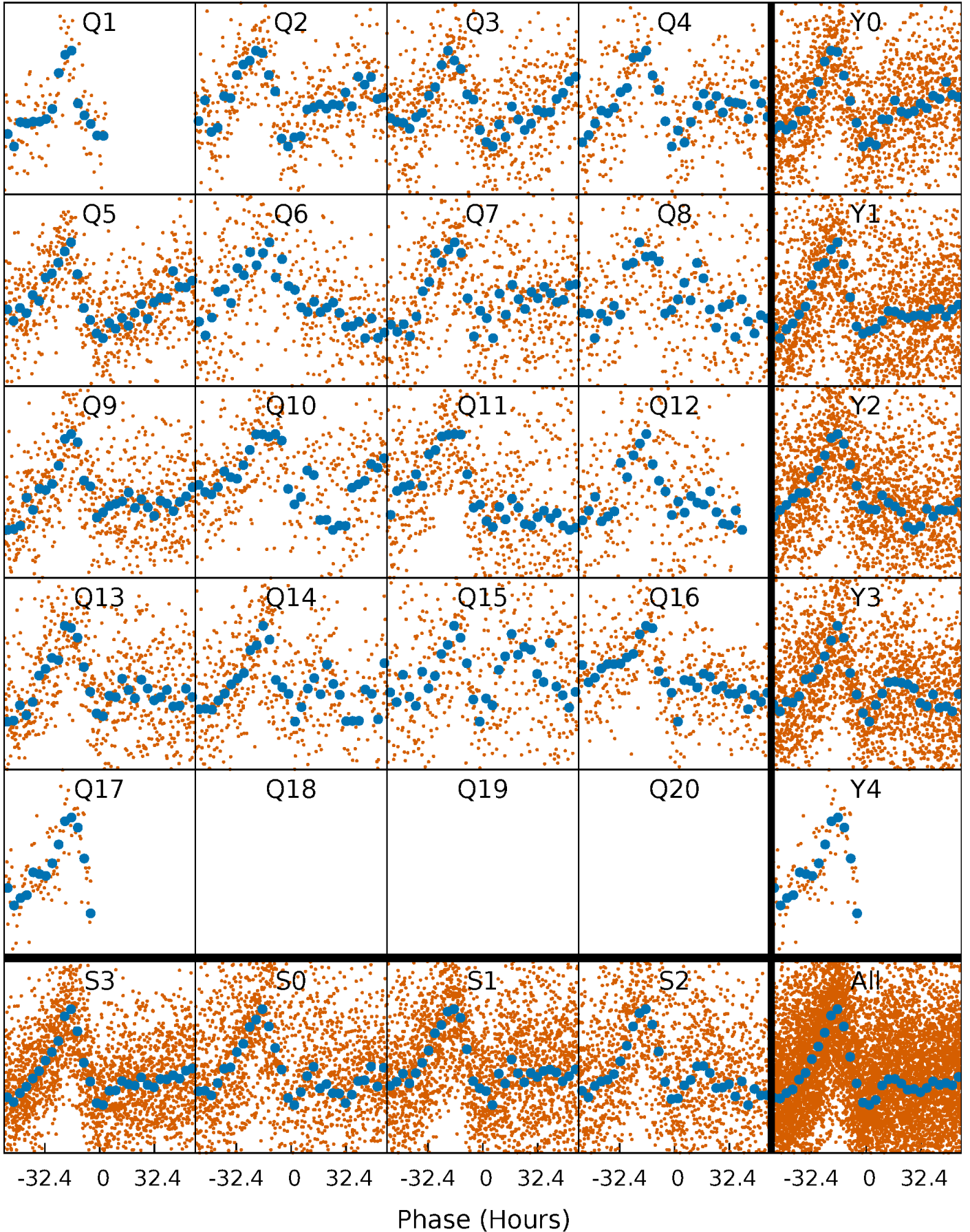


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



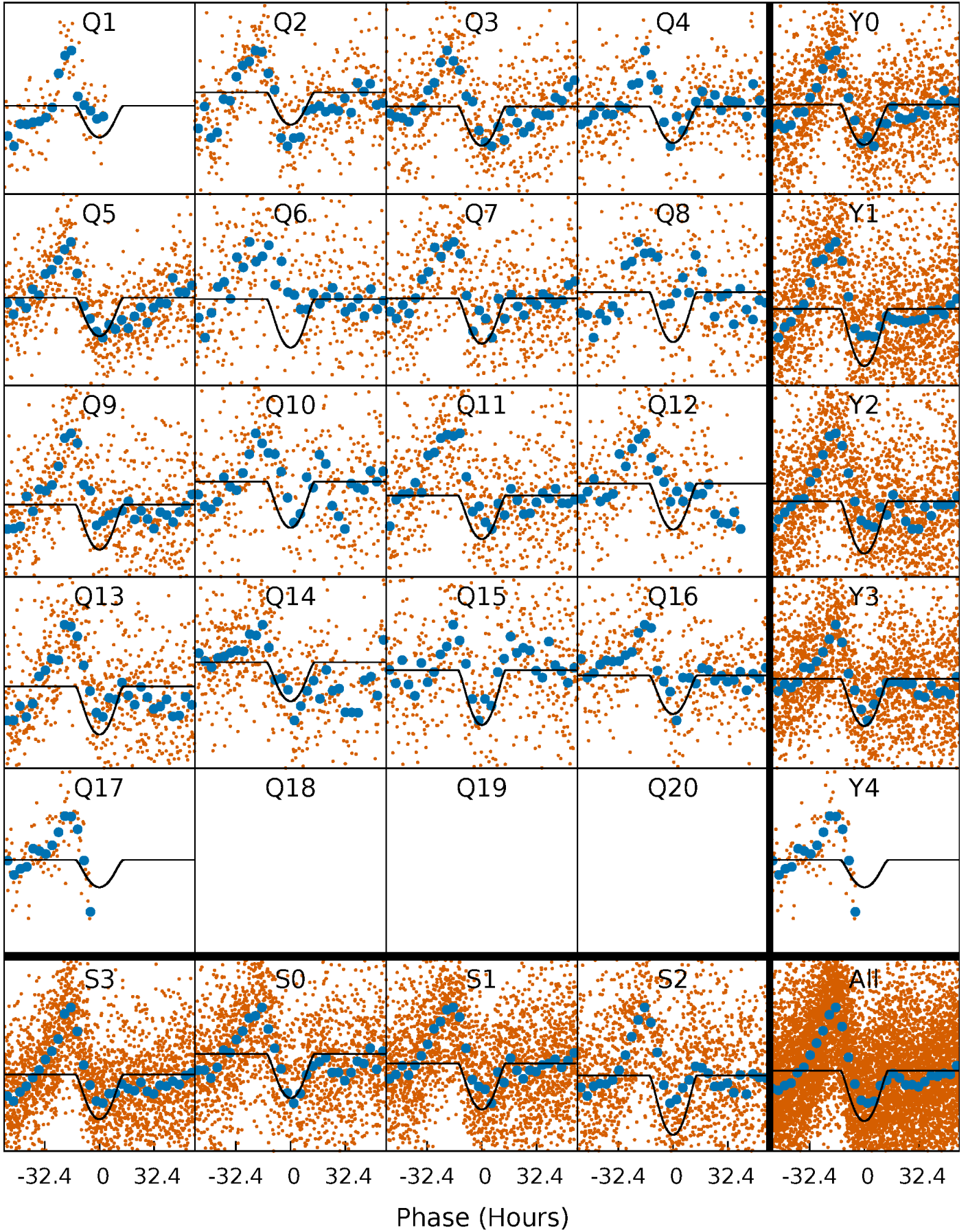
PDC Quarter-Phased Transit Curves

TCE 001719308-01 P= 36.572991 Days $T_0=164.834656$ (BKJD)



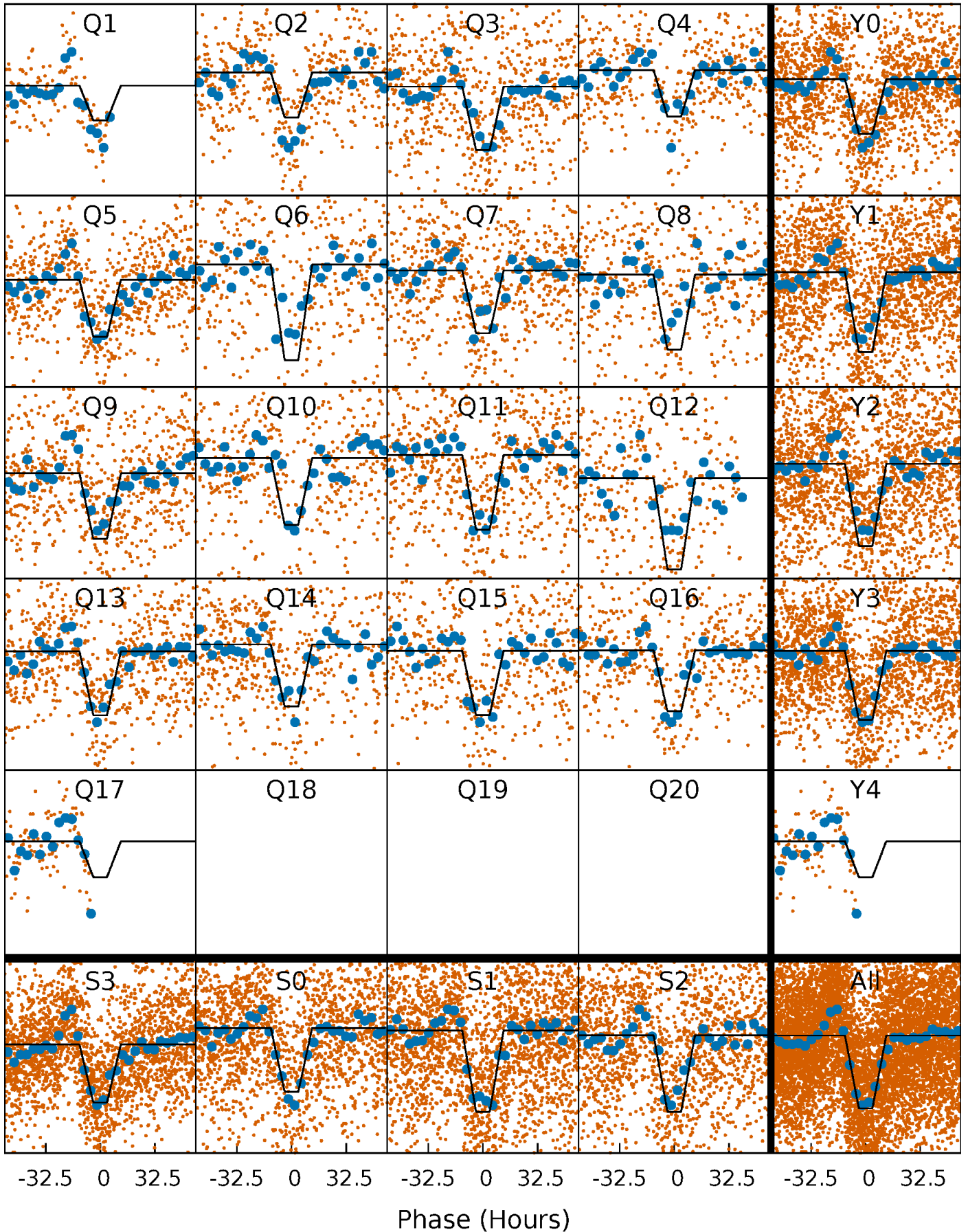
DV Quarter-Phased Transit Curves

TCE 001719308-01 P= 36.572991 Days $T_0=164.834656$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

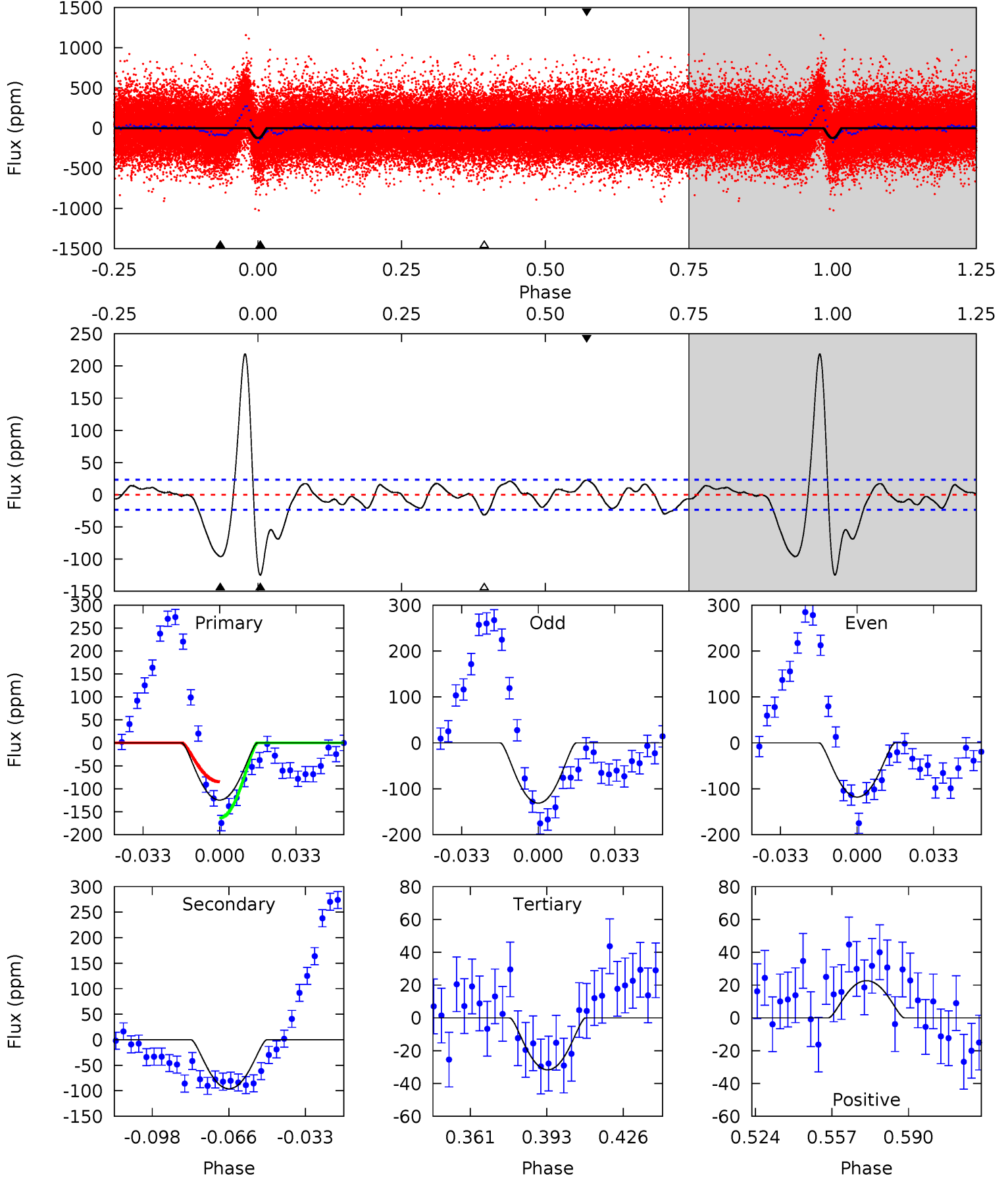
TCE 001719308-01 P= 36.575370 Days $T_0=164.798147$ (BKJD)



DV Model-Shift Uniqueness Test

001719308-01, $P = 36.572991$ Days, $E = 128.261665$ Days

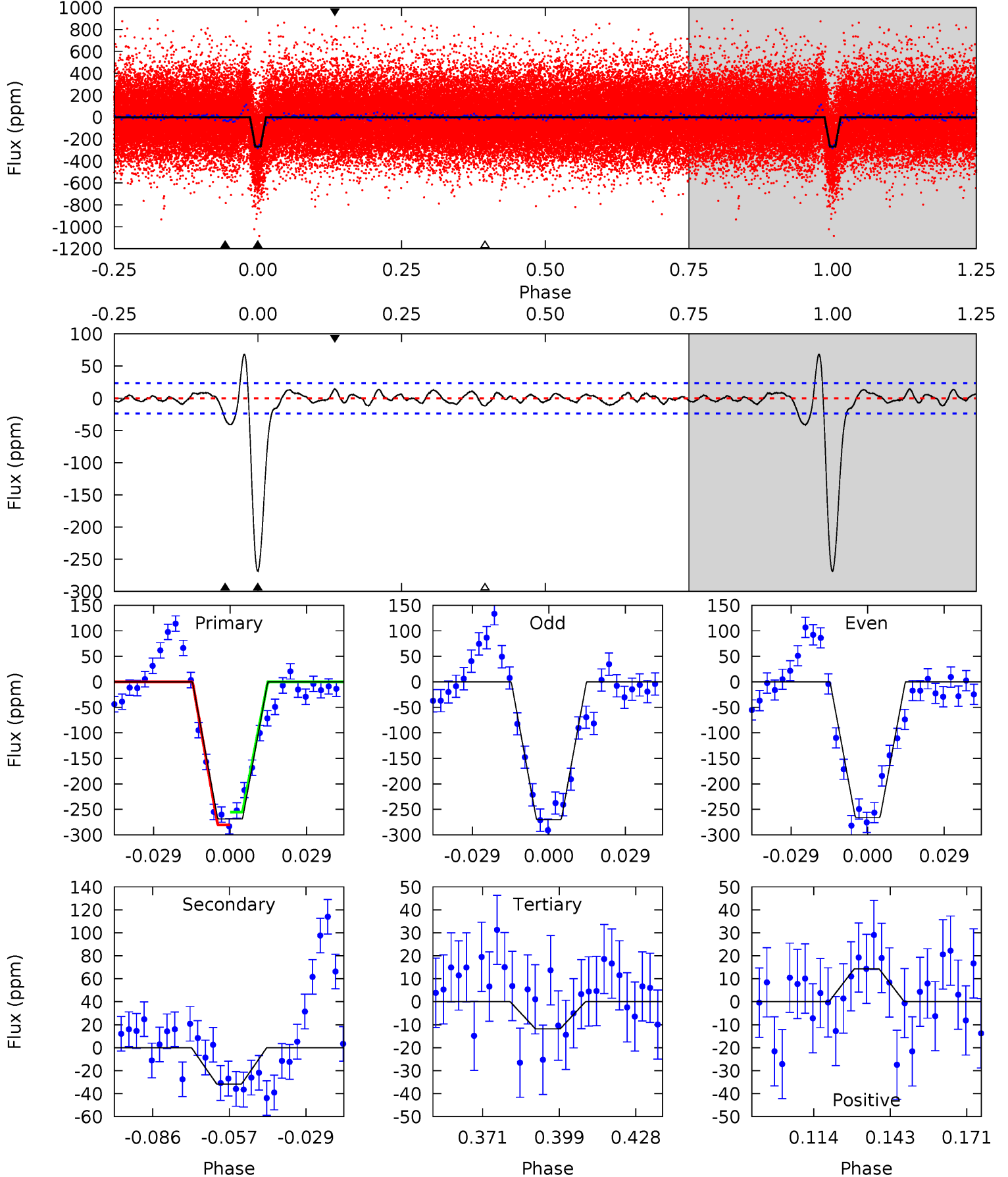
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.5	19.6	6.48	4.64	4.79	2.13	3.60	19.0	20.9	13.2	15.0	1.35	1.05	0.64	8.00



Alt Model-Shift Uniqueness Test

001719308-01, $P = 36.575370$ Days, $E = 128.222777$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
55.1	6.50	2.42	2.94	4.82	2.19	1.19	52.7	52.2	4.08	3.56	0.43	1.00	0.20	2.60



Stellar Parameters For KIC 001719308

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6256^{+81}_{-81}	$4.111^{+0.182}_{-0.098}$	$-0.260^{+0.150}_{-0.150}$	$1.505^{+0.248}_{-0.303}$	$1.068^{+0.109}_{-0.079}$	$0.441^{+0.418}_{-0.132}$
	+1%/-1%	+4%/-2%	+58%/-58%	+16%/-20%	+10%/-7%	+95%/-30%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 001719308-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-96 ± 5	$3.58^{+2.02}_{-1.71}$	1001^{+47}_{-57}	4371^{+1333}_{-631}	204^{+548}_{-121}
Alt.	-32 ± 5	$2.76^{+1.99}_{-1.47}$	1002^{+44}_{-55}	3916^{+1359}_{-632}	111^{+390}_{-74}

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 $A_{obs} \gg 1.0$

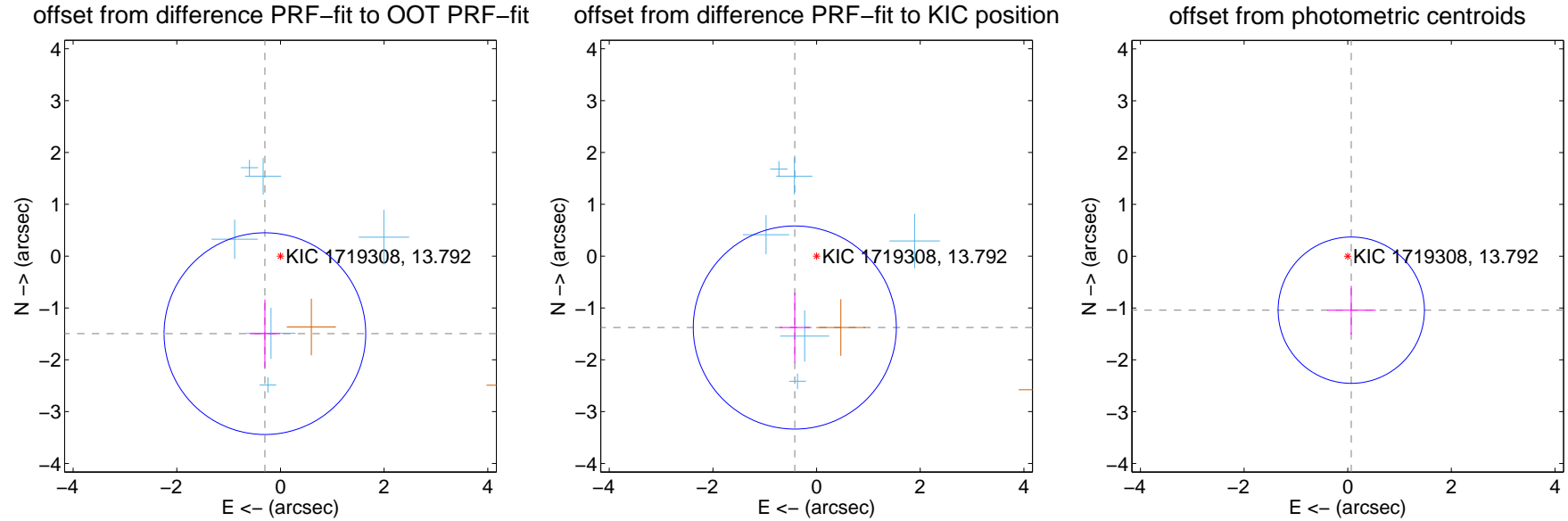
DV Centroid Data

Supplemental centroid analysis for 001719308-01. Kepler magnitude: 13.79. Transit SNR 15.97

There are 6 quarters with good PRF difference image offsets

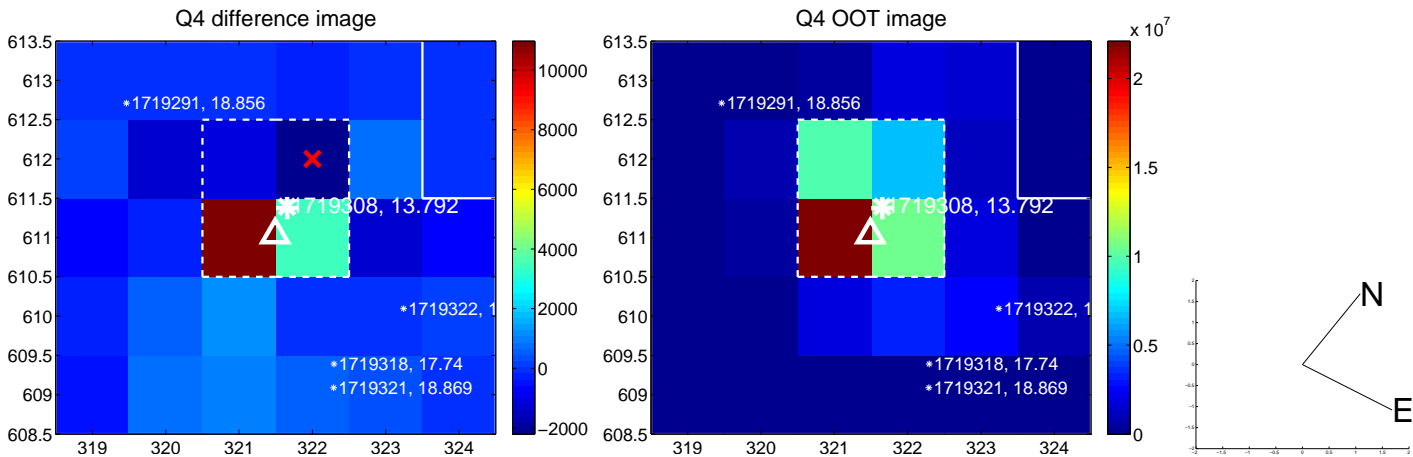
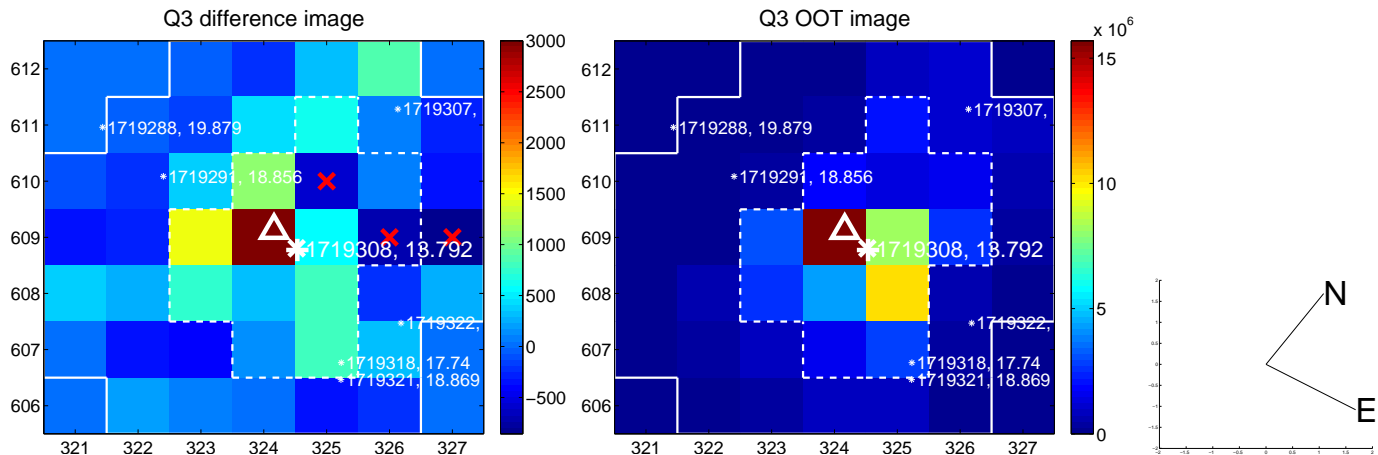
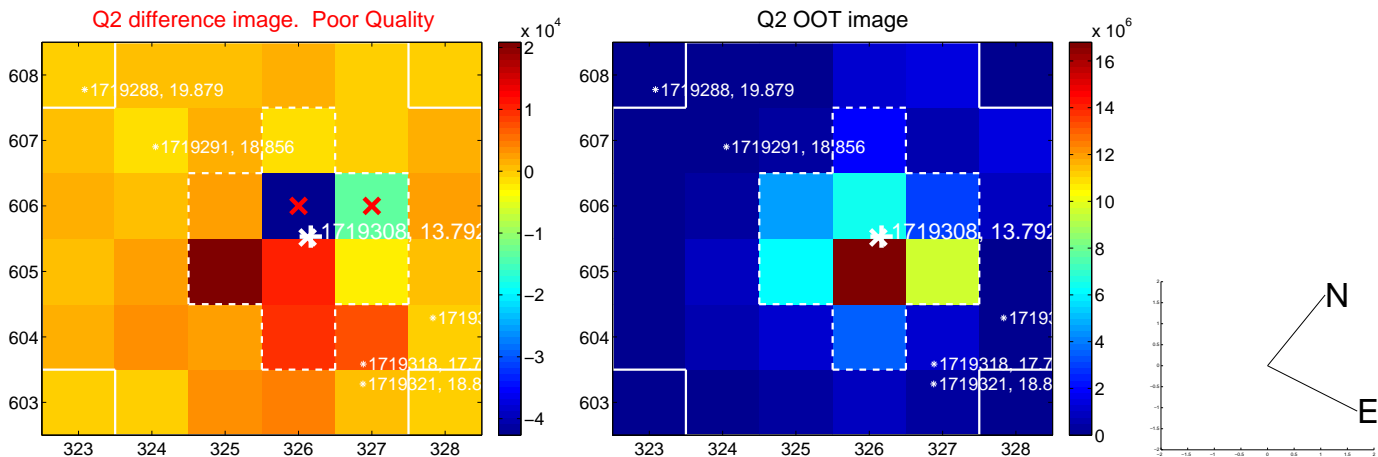
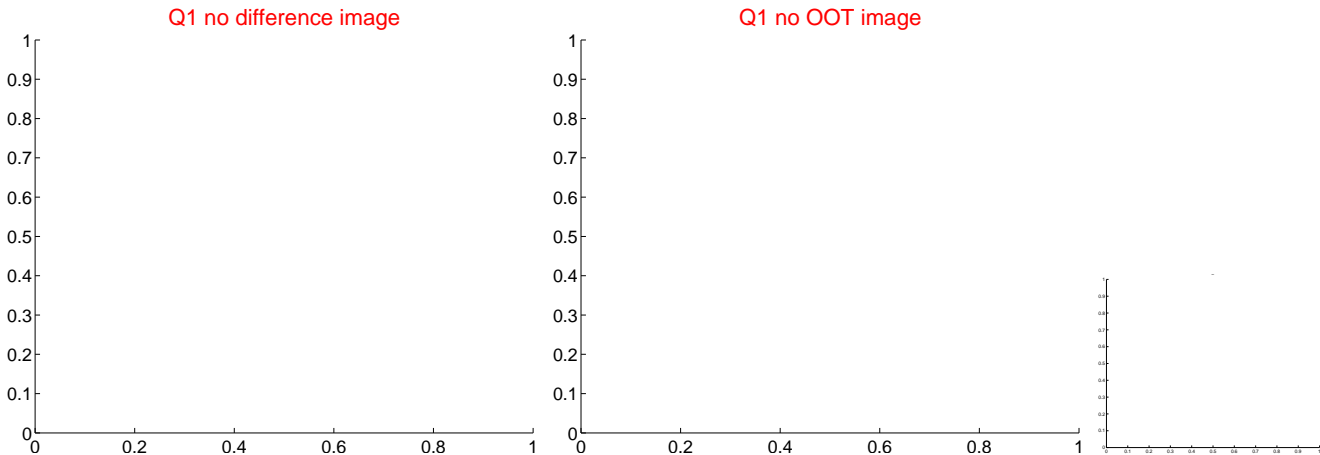
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.525 ± 0.648	2.35	0.300 ± 0.290	-1.496 ± 0.659
PRF-fit source offset from KIC position	1.440 ± 0.653	2.20	0.420 ± 0.292	-1.377 ± 0.677
photometric centroid source offset	1.04 ± 0.47	2.22	-0.07 ± 0.47	-1.04 ± 0.47

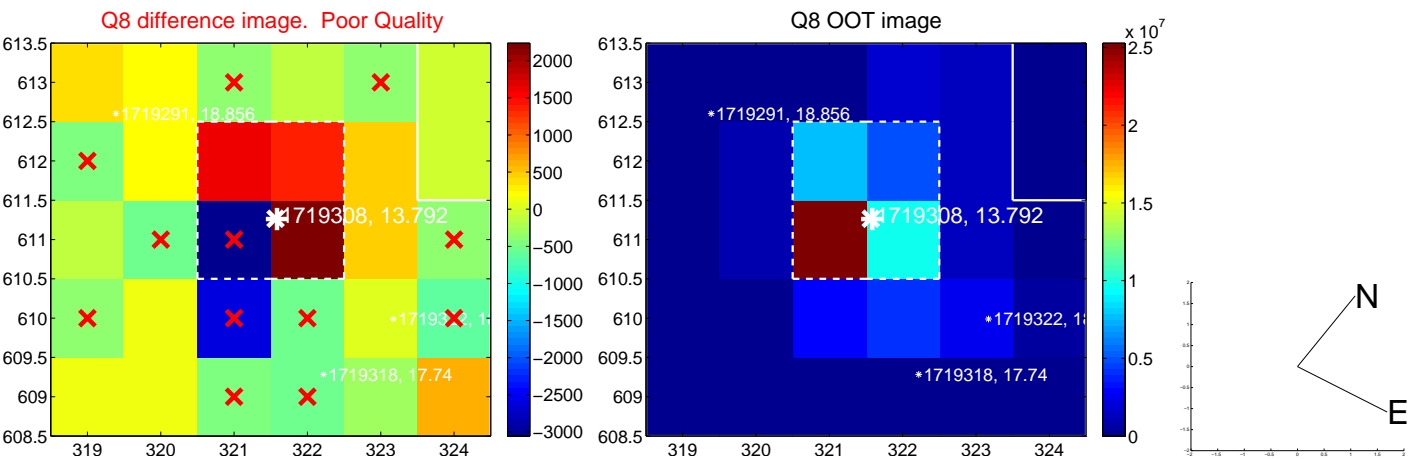
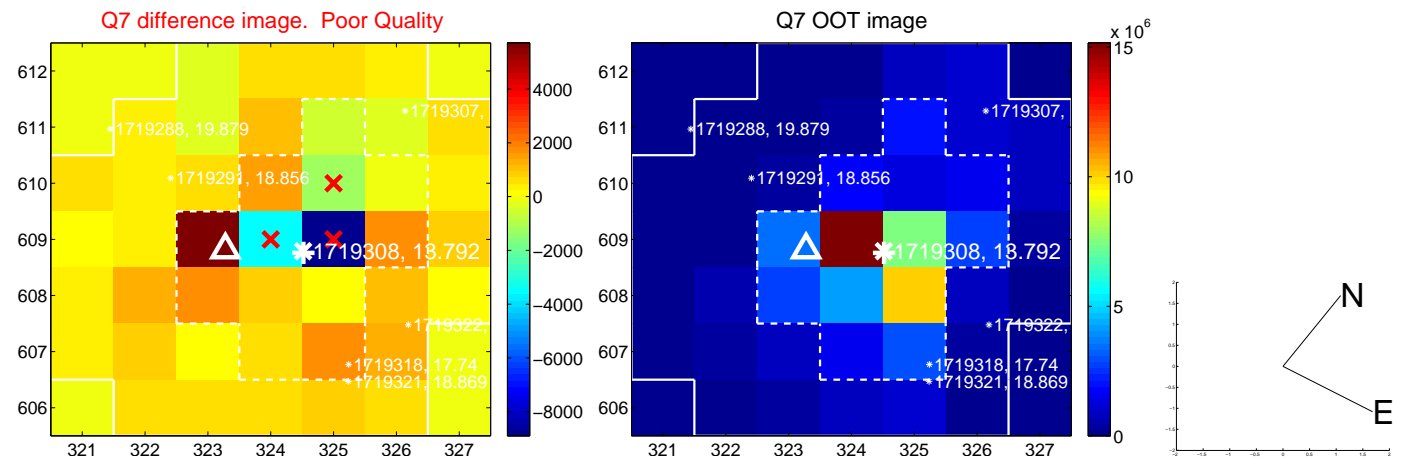
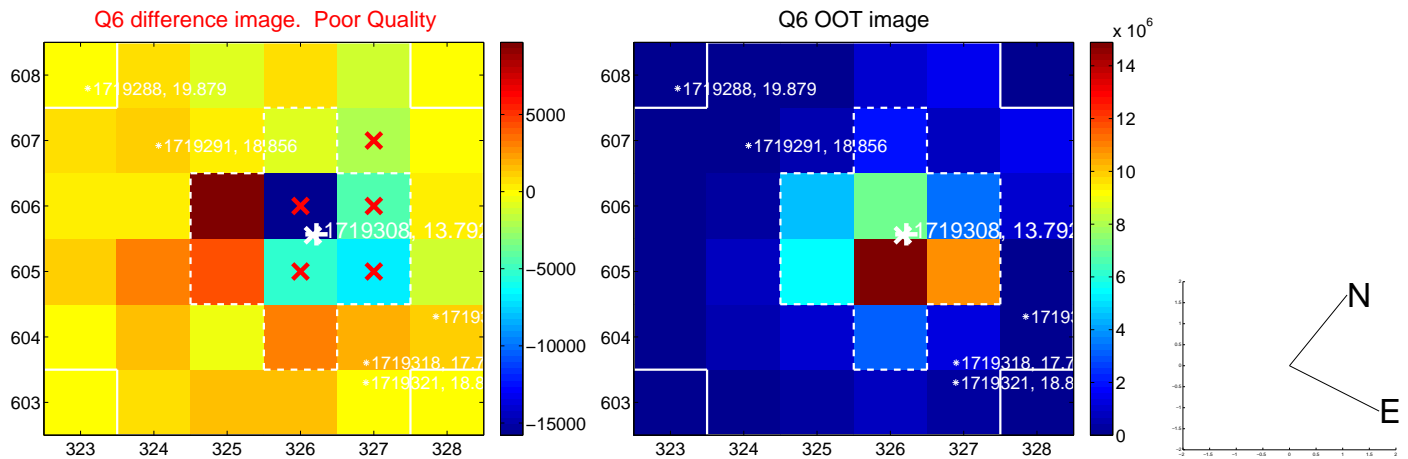
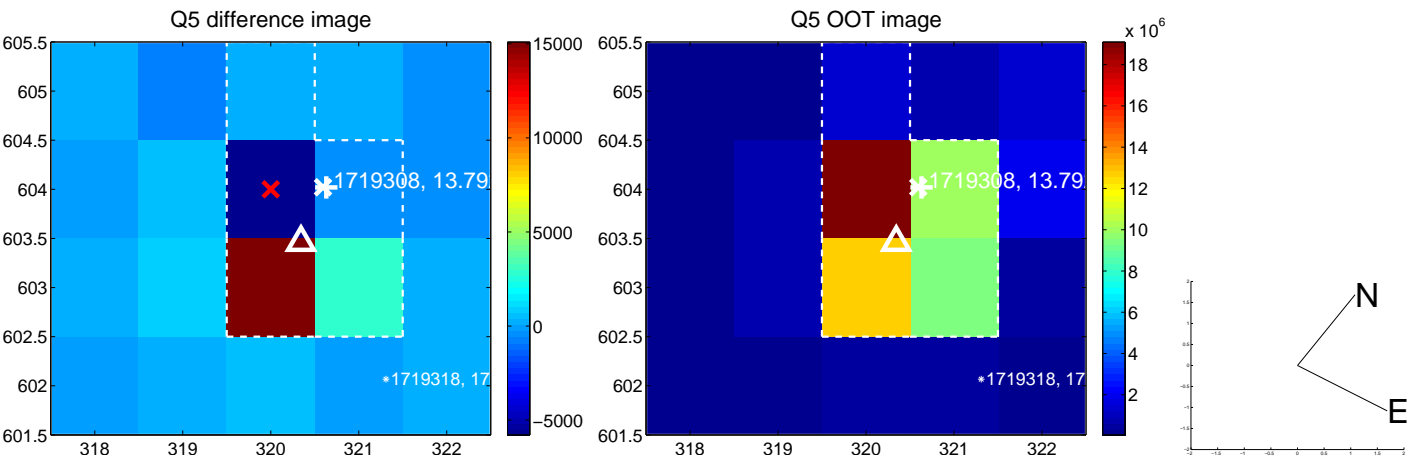


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

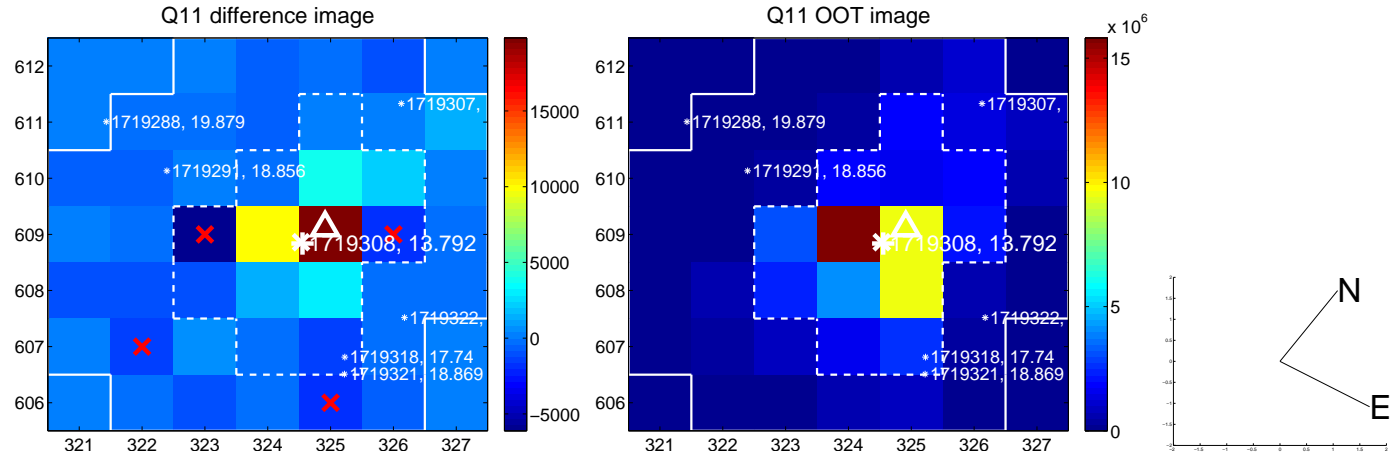
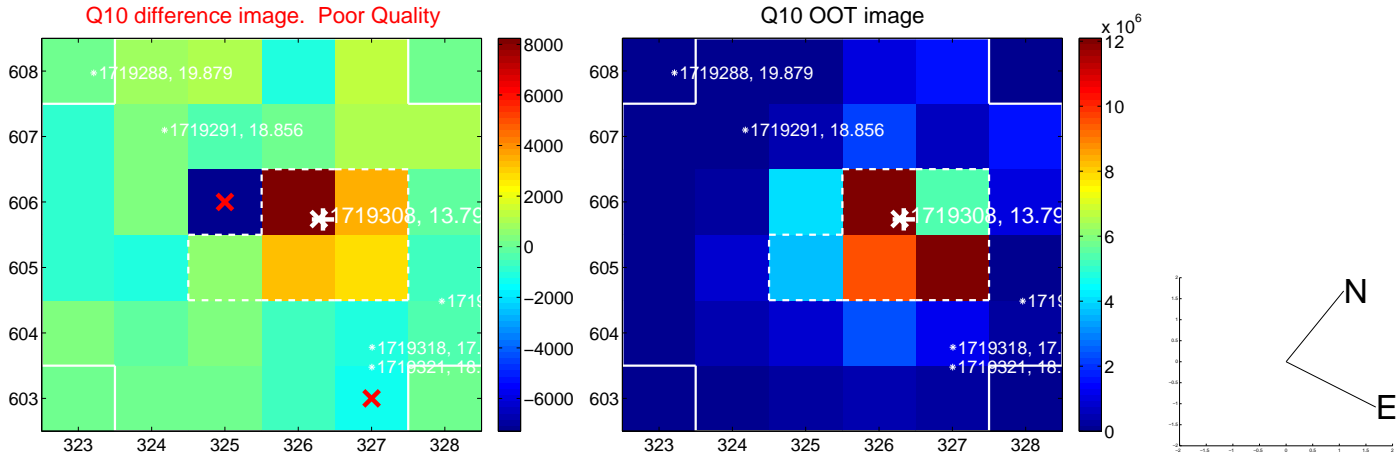
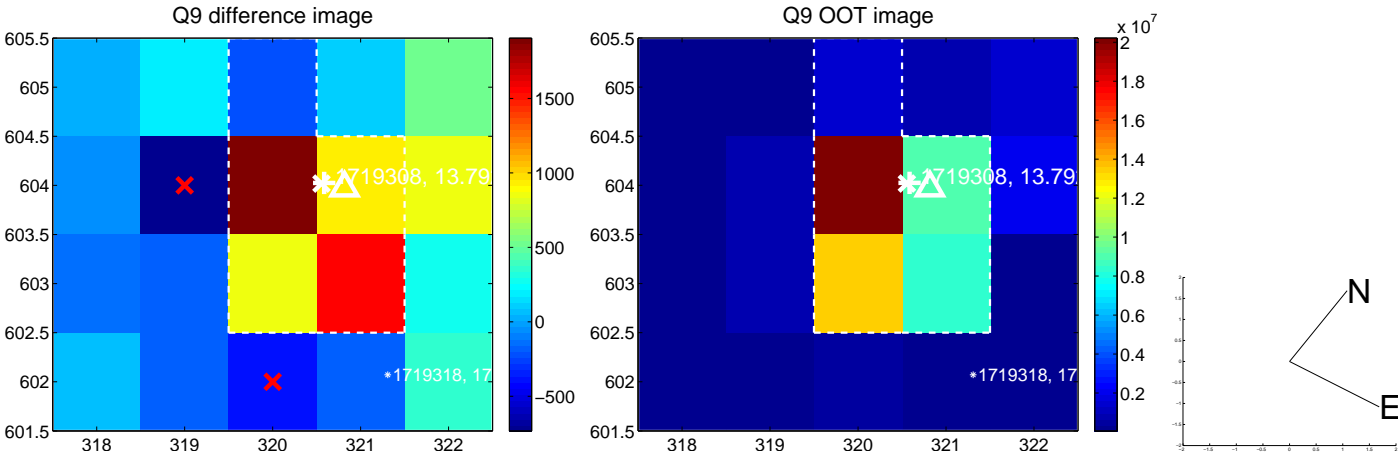
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



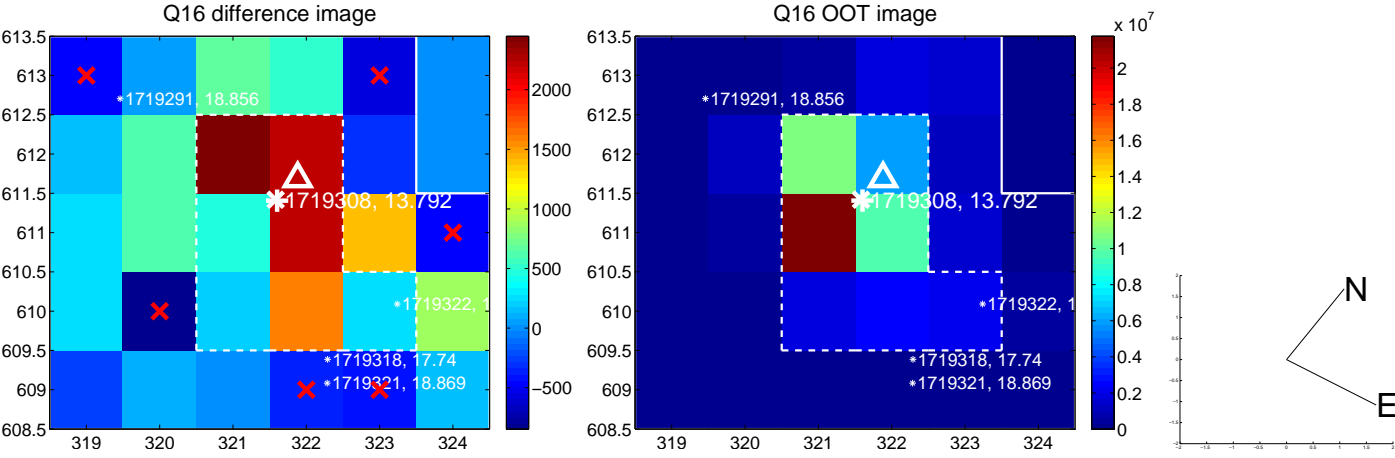
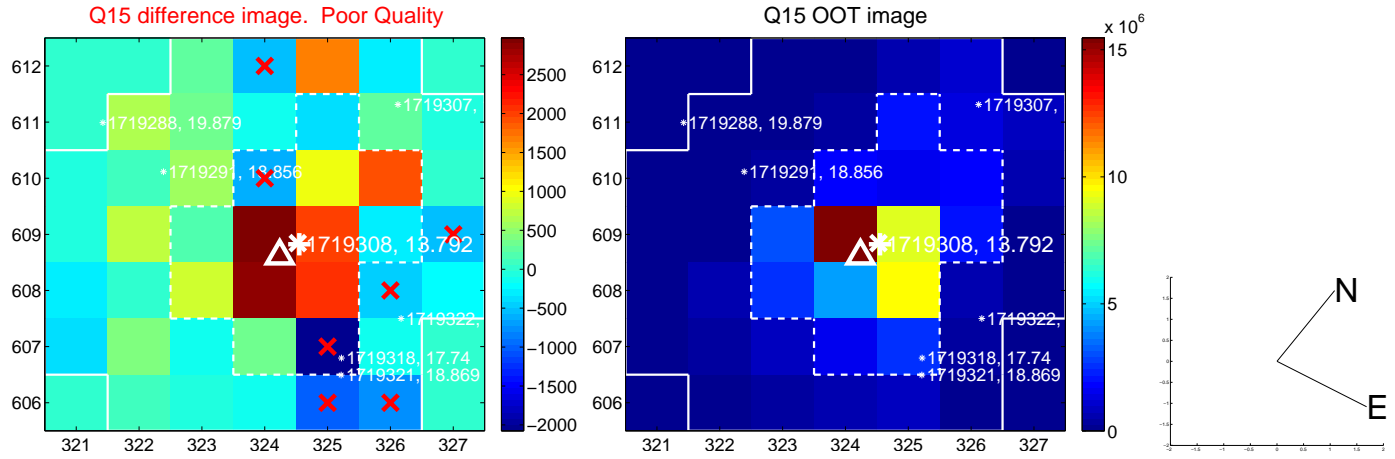
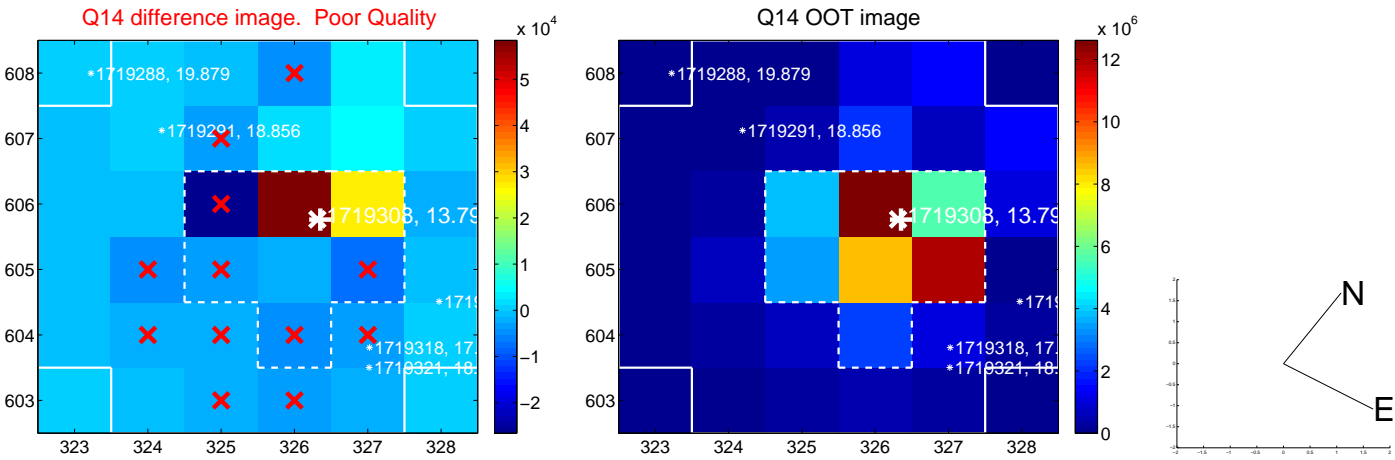
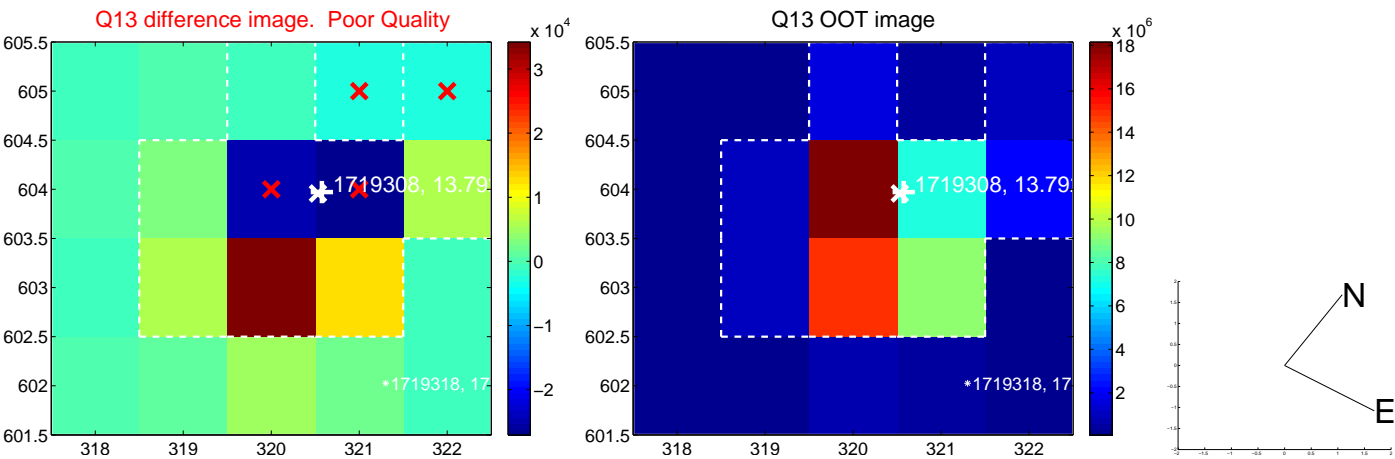
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



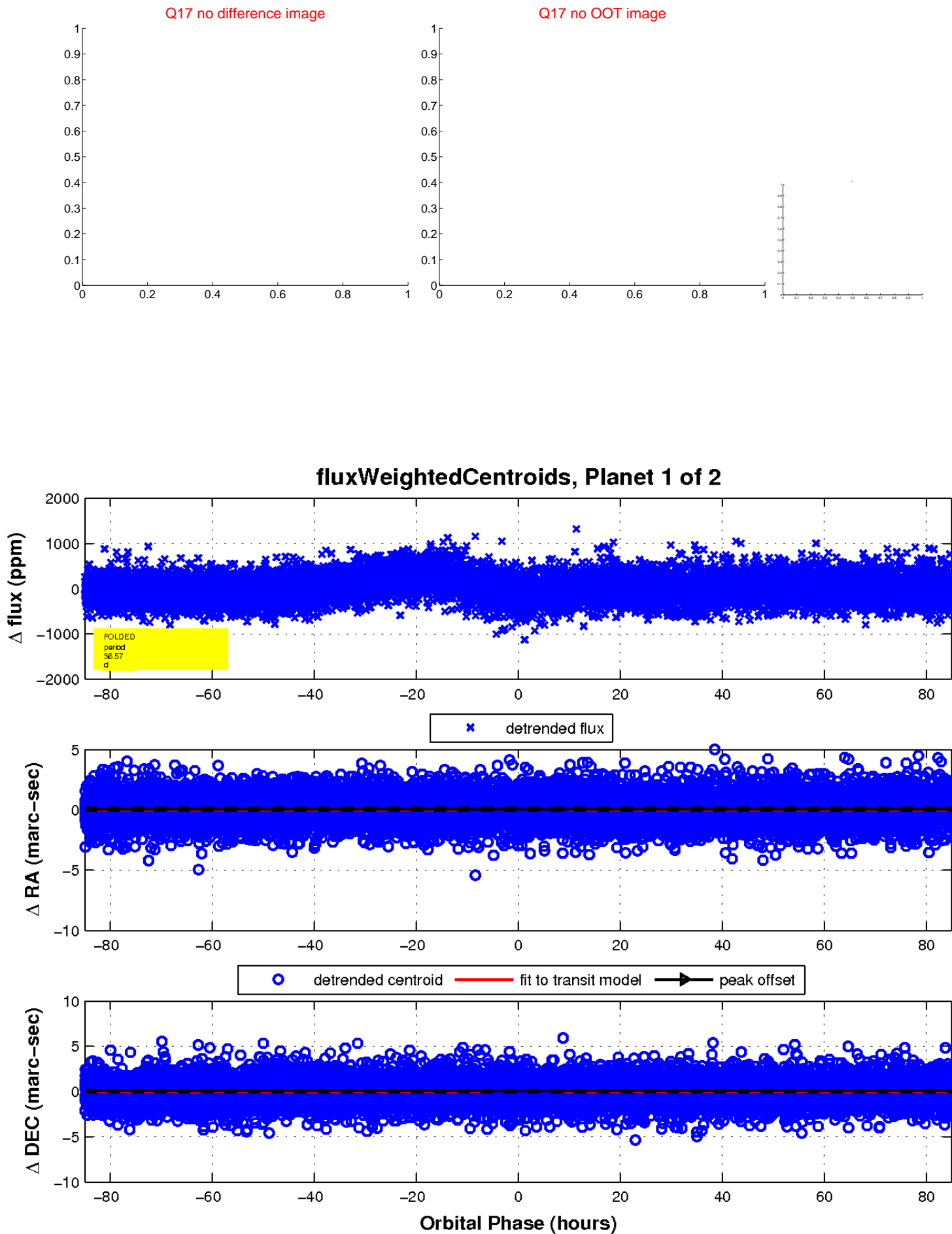
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

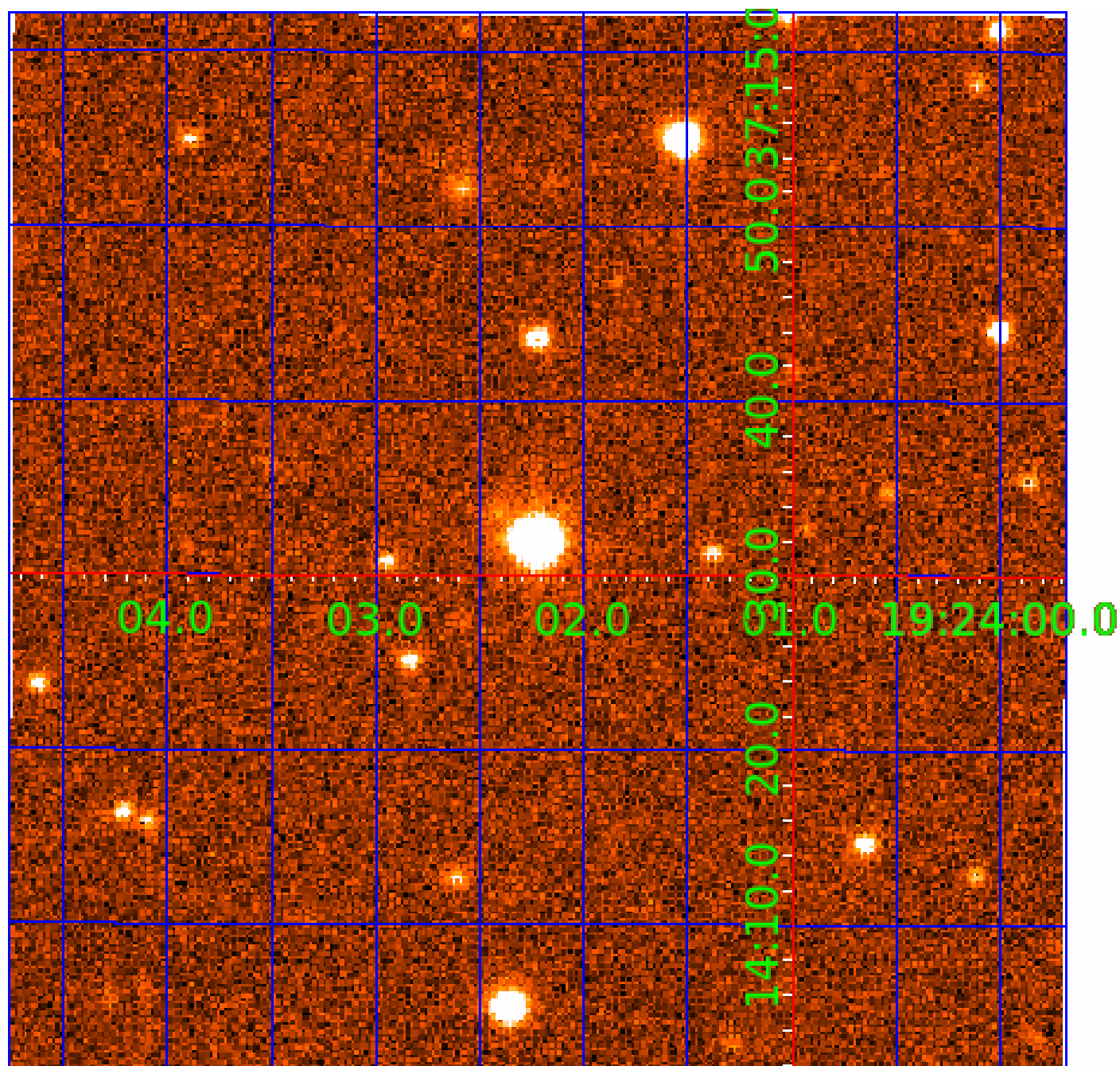


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 001719308

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})
001719308-01	OBS	No	36.572991	164.834657	228.1	28.334	13.2	16.0	1.50	6256	3.69	64.01
001719308-02	OBS	No	313.247538	410.030334	578.3	8.456	12.9	12.3	1.50	6256	3.85	3.65

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
001719308-01	OBS	FP	0.00	1	0	0	0	LPP_DV
001719308-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—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.

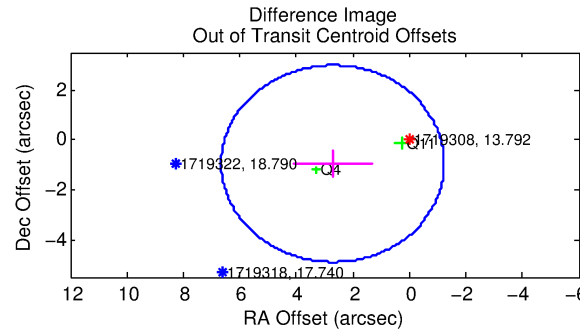
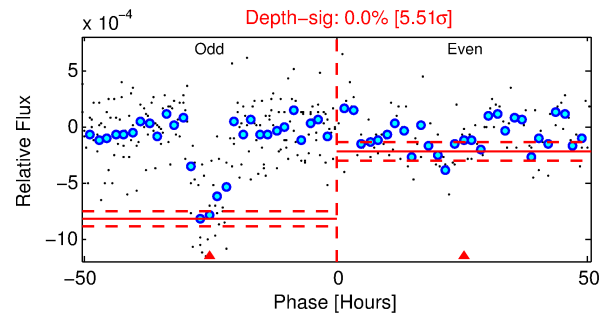
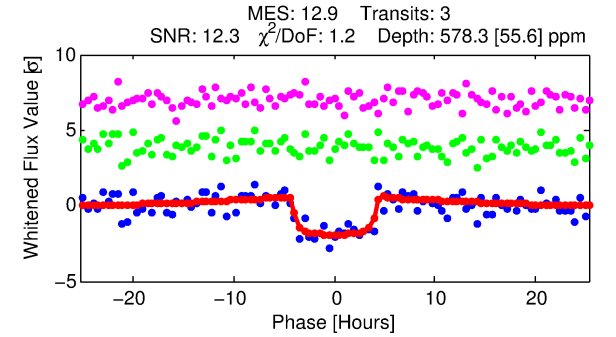
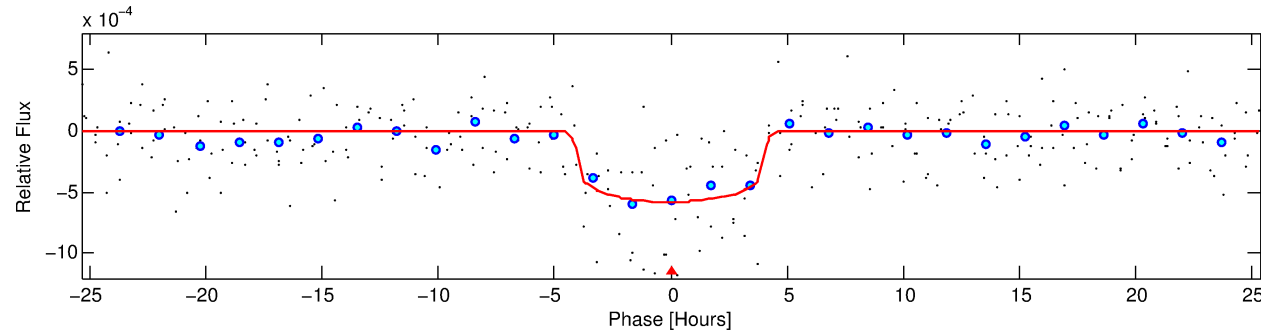
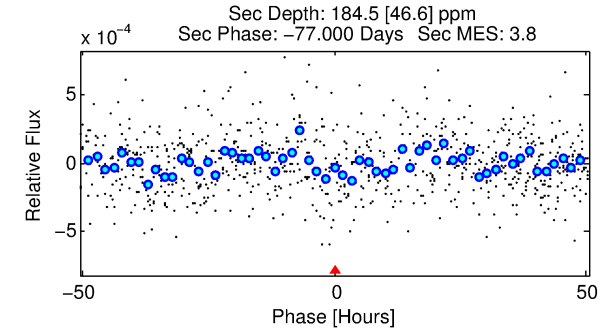
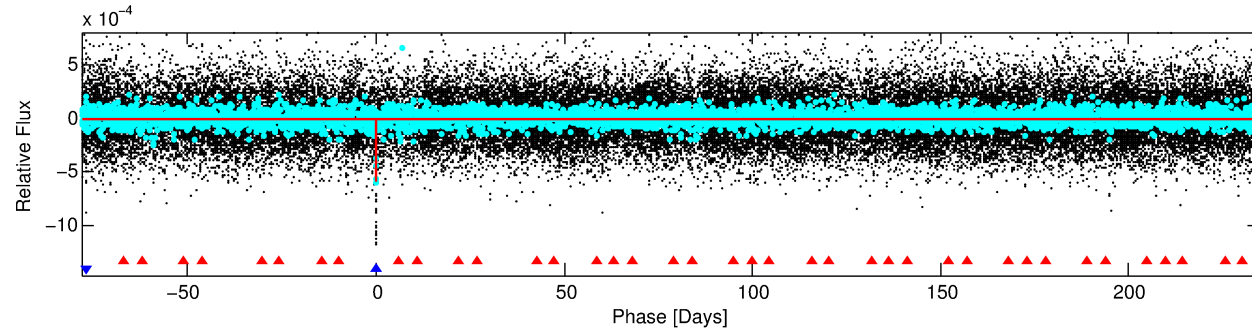
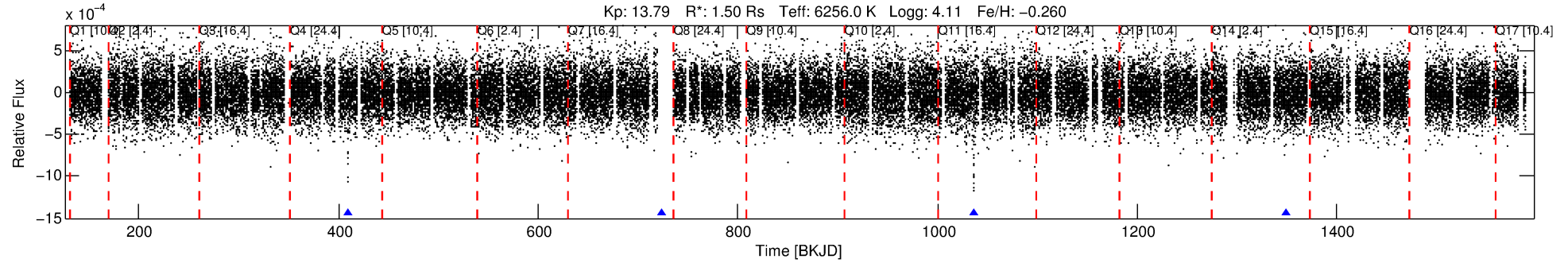
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 001719308-02

No Significant Match Found

DV One-Page Summary

KIC: 1719308 Candidate: 2 of 2 Period: 313.248 d



DV Fit Results:

Period = 313.24754 [0.00507] d
Epoch = 410.0303 [0.0109] BKJD
Rp/R* = 0.0234 [0.0113]
a/R* = 217.44 [537.54]
b = 0.68 [2.01]
Seff = 3.65 [1.15]
Teq = 353 [28] K
Rp = 3.85 [2.01] Re
a = 0.9225 [0.1787] AU
Ag = 5832.09 [6084.81] [0.96σ]
Teffp = 4763 [1188] K [3.71σ]

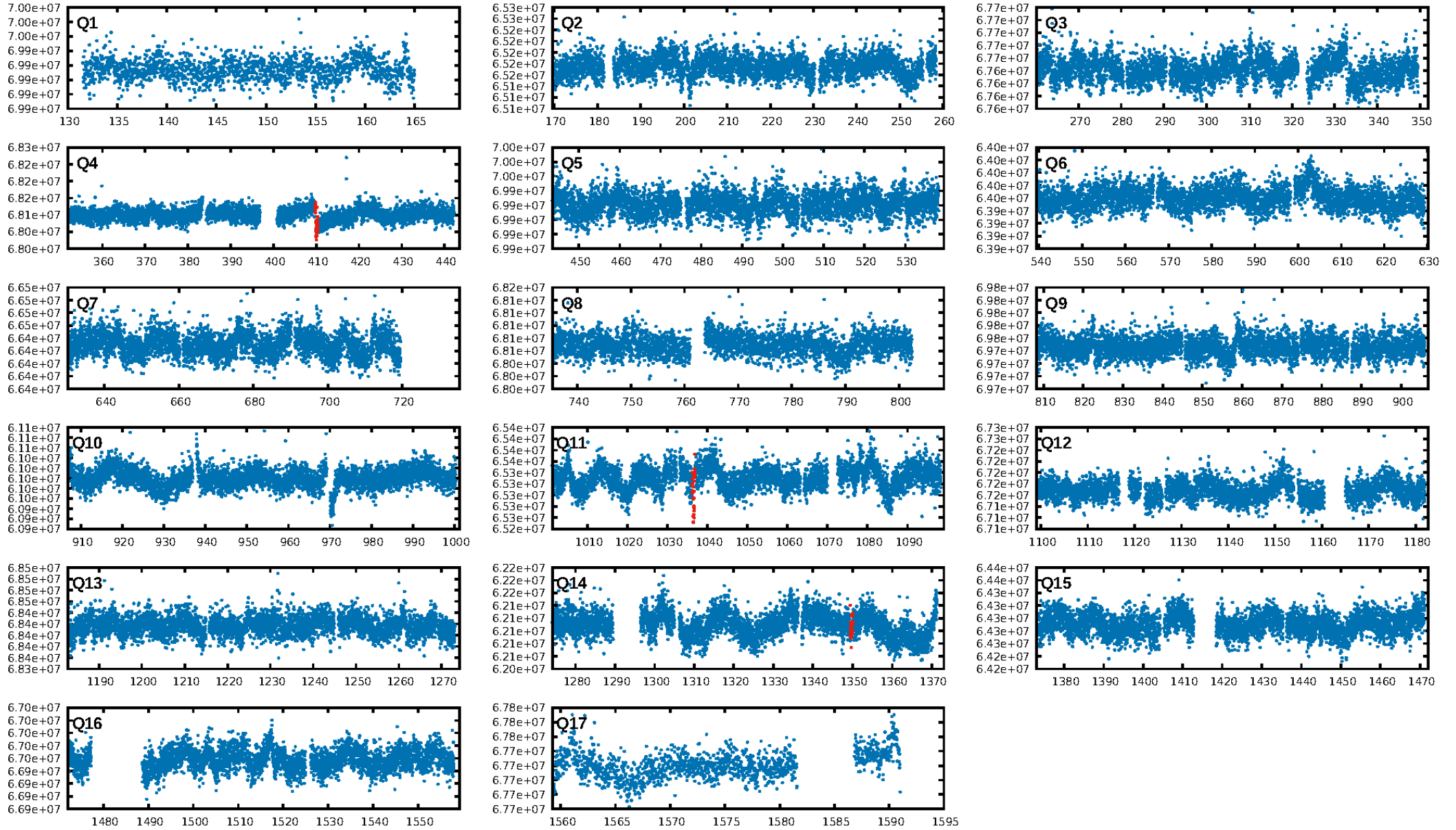
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [224.57σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 12.4%
Bootstrap-pfa: 1.15e-38
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.5896
Centroid-sig: 13.0%
Centroid-so: 1.700 arcsec [1.91σ]
OotOffset-rm: 2.878 arcsec [2.19σ]
OotOffset-st: 0/1/1/0 [2]
KicOffset-rm: 2.952 arcsec [1.86σ]
KicOffset-st: 0/1/1/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [3/3]

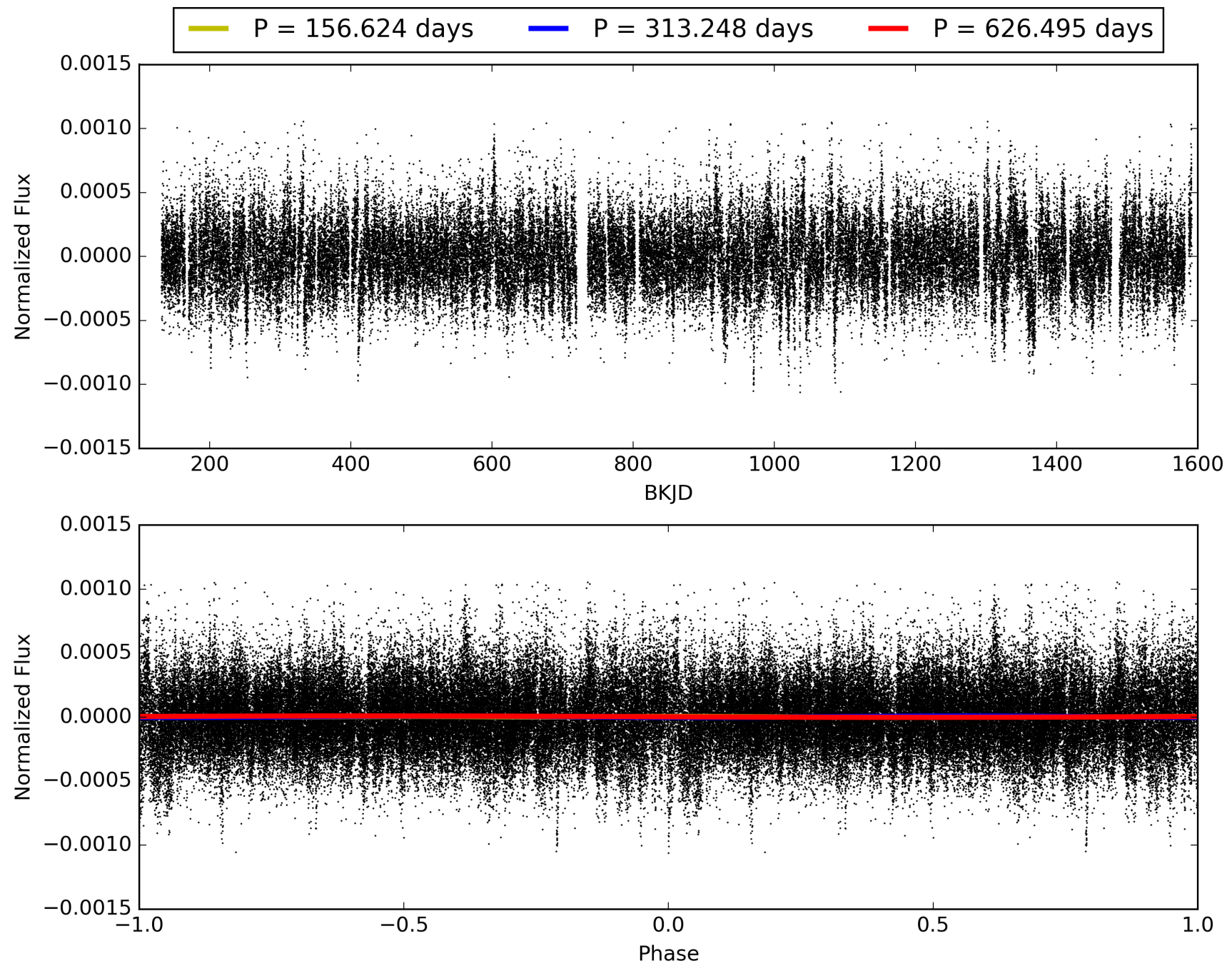
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 21:43:57 Z

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

TCE 001719308-02, PDC Light Curves

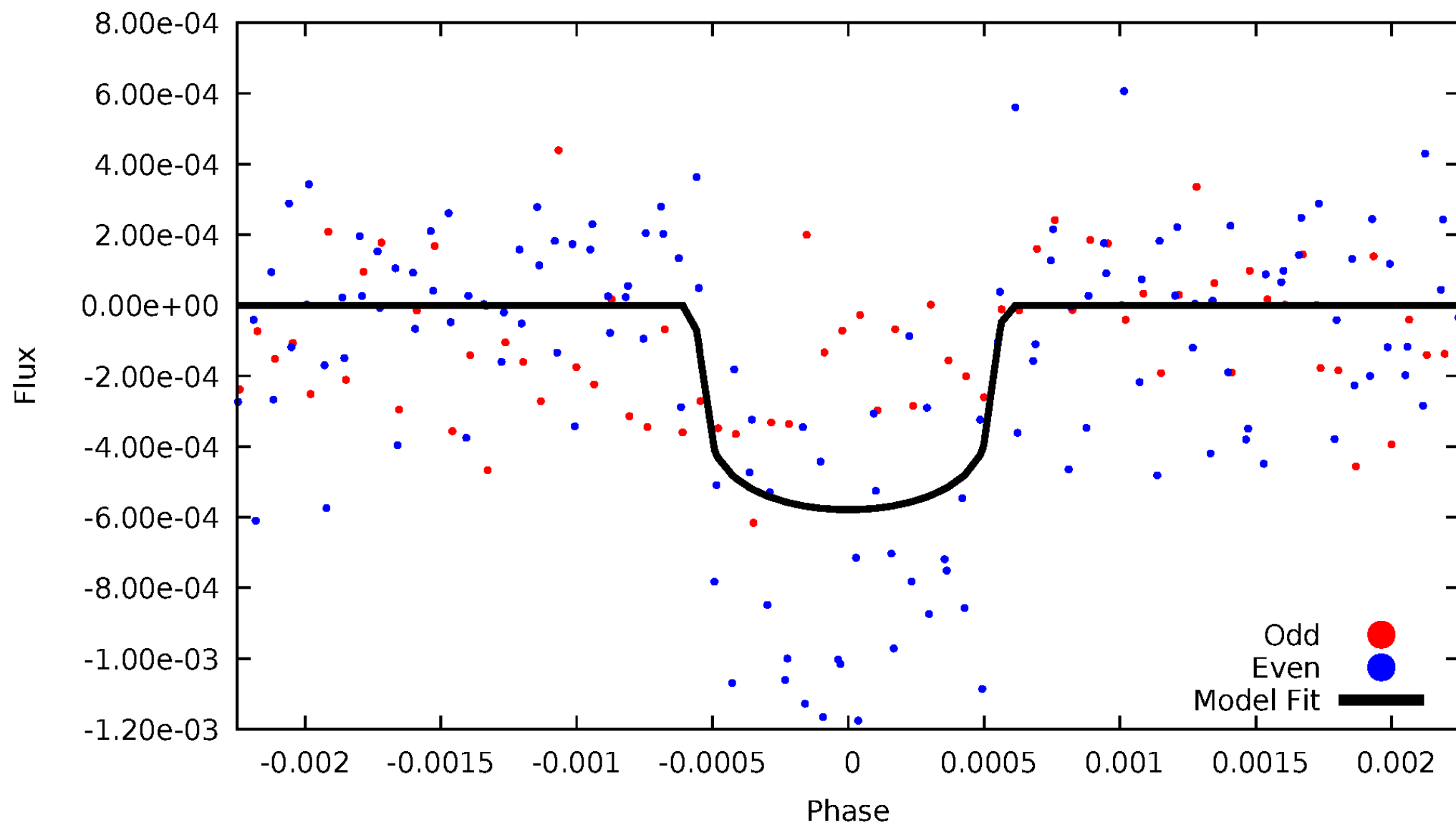


TCE 001719308-02



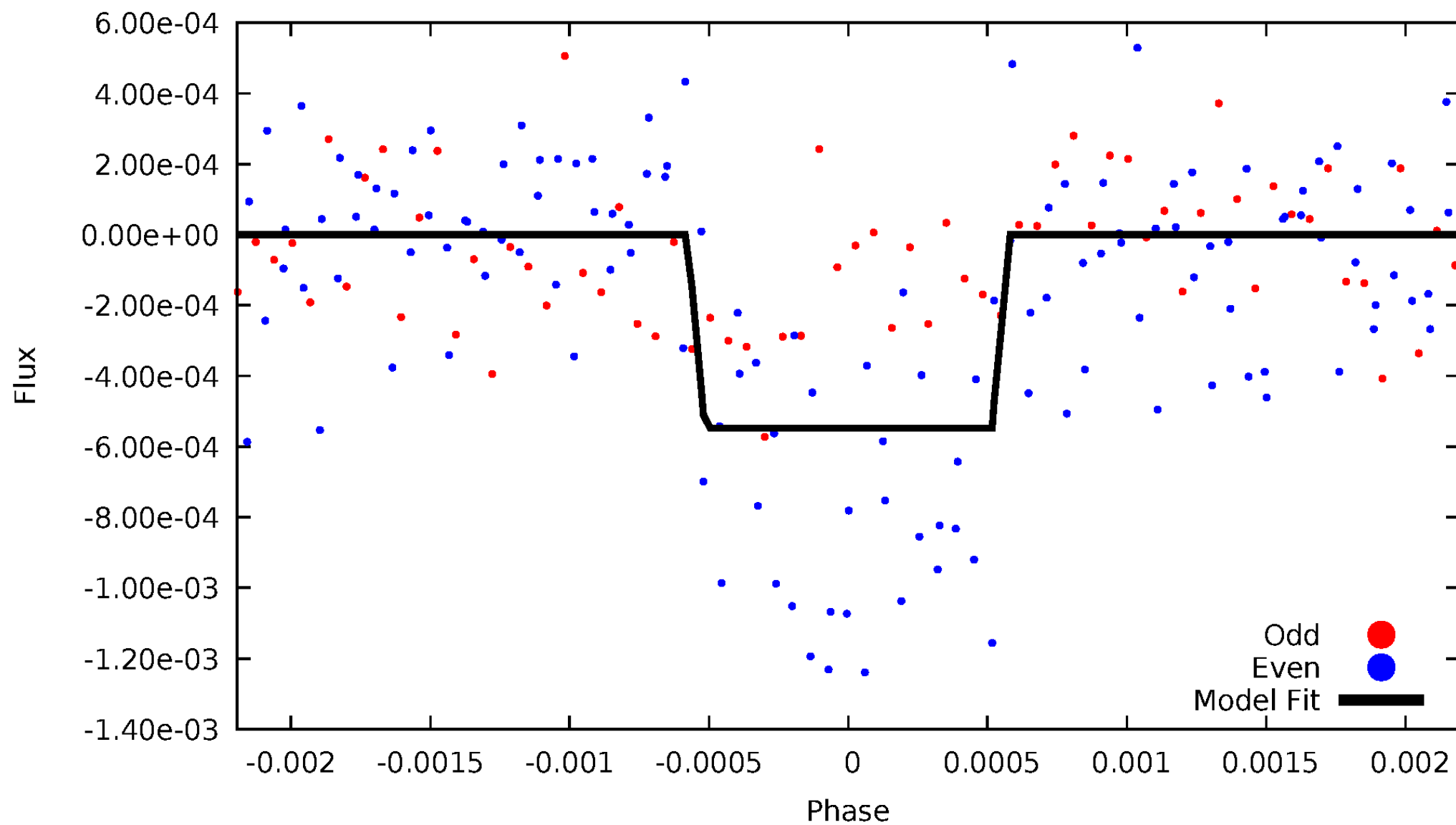
DV Odd/Even

TCE 001719308-02



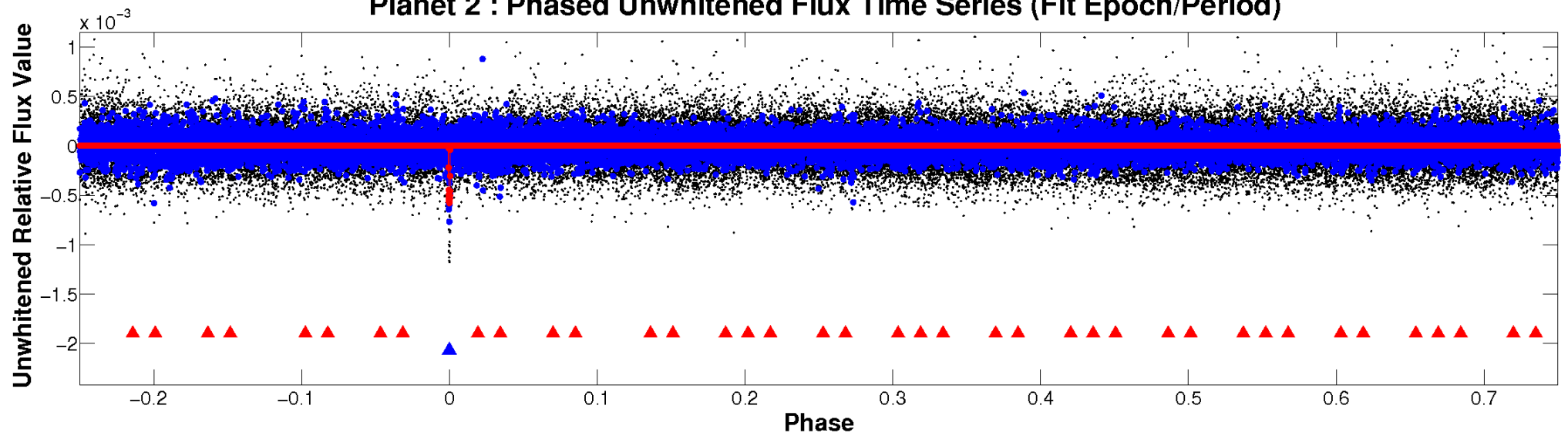
ALT Odd/Even

TCE 001719308-02

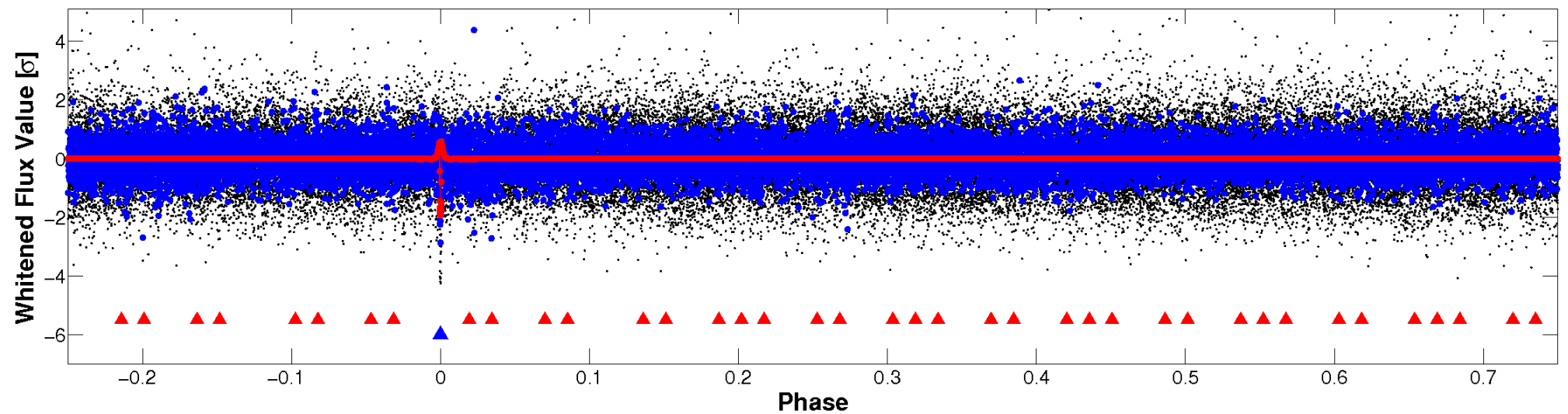


Non-Whitened Vs. Whitened Light Curve

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

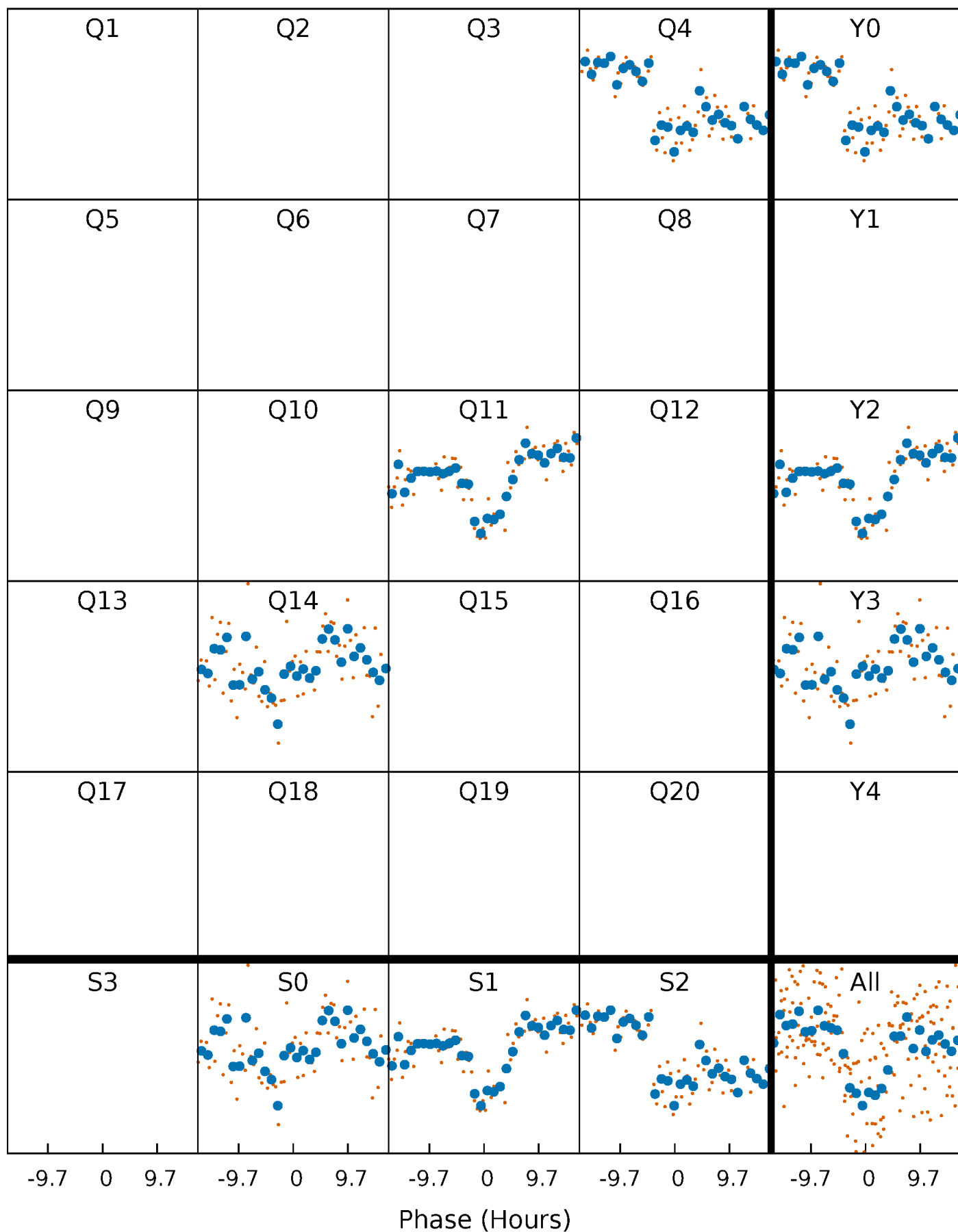


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



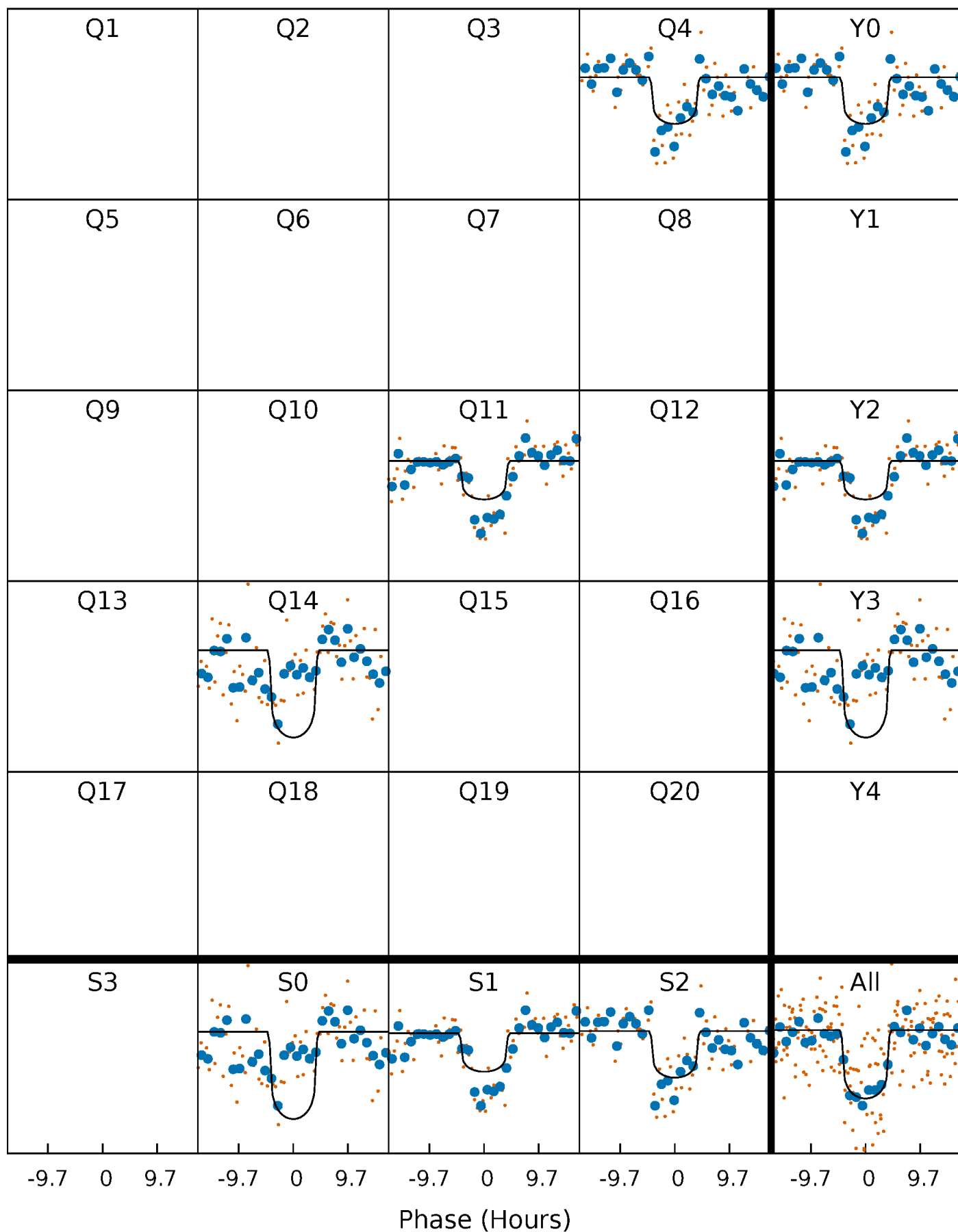
PDC Quarter-Phased Transit Curves

TCE 001719308-02 $P=313.247538$ Days $T_0=410.030334$ (BKJD)



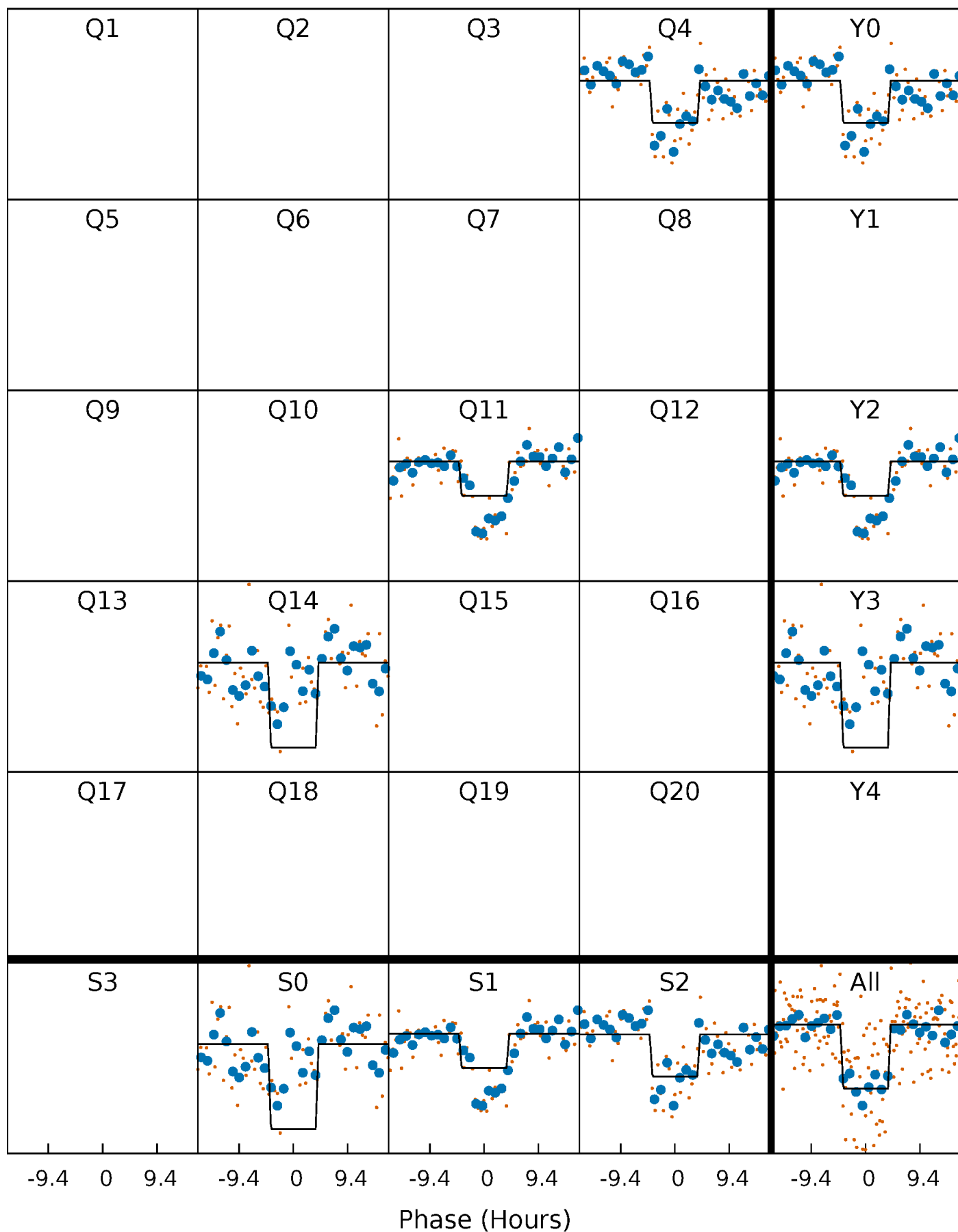
DV Quarter-Phased Transit Curves

TCE 001719308-02 $P=313.247538$ Days $T_0=410.030334$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

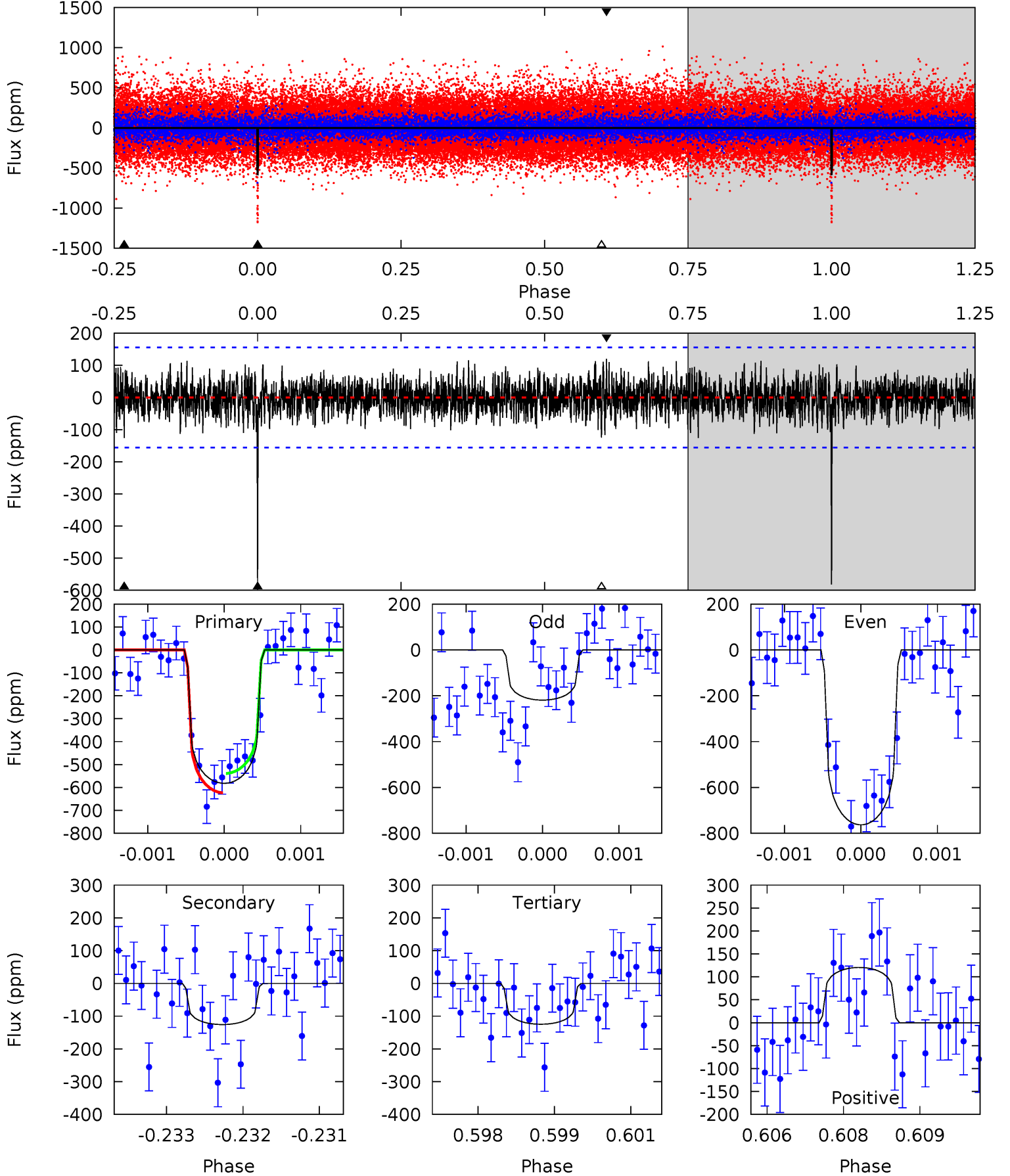
TCE 001719308-02 P=313.239664 Days $T_0=410.038794$ (BKJD)



DV Model-Shift Uniqueness Test

001719308-02, P = 313.247538 Days, E = 96.782796 Days

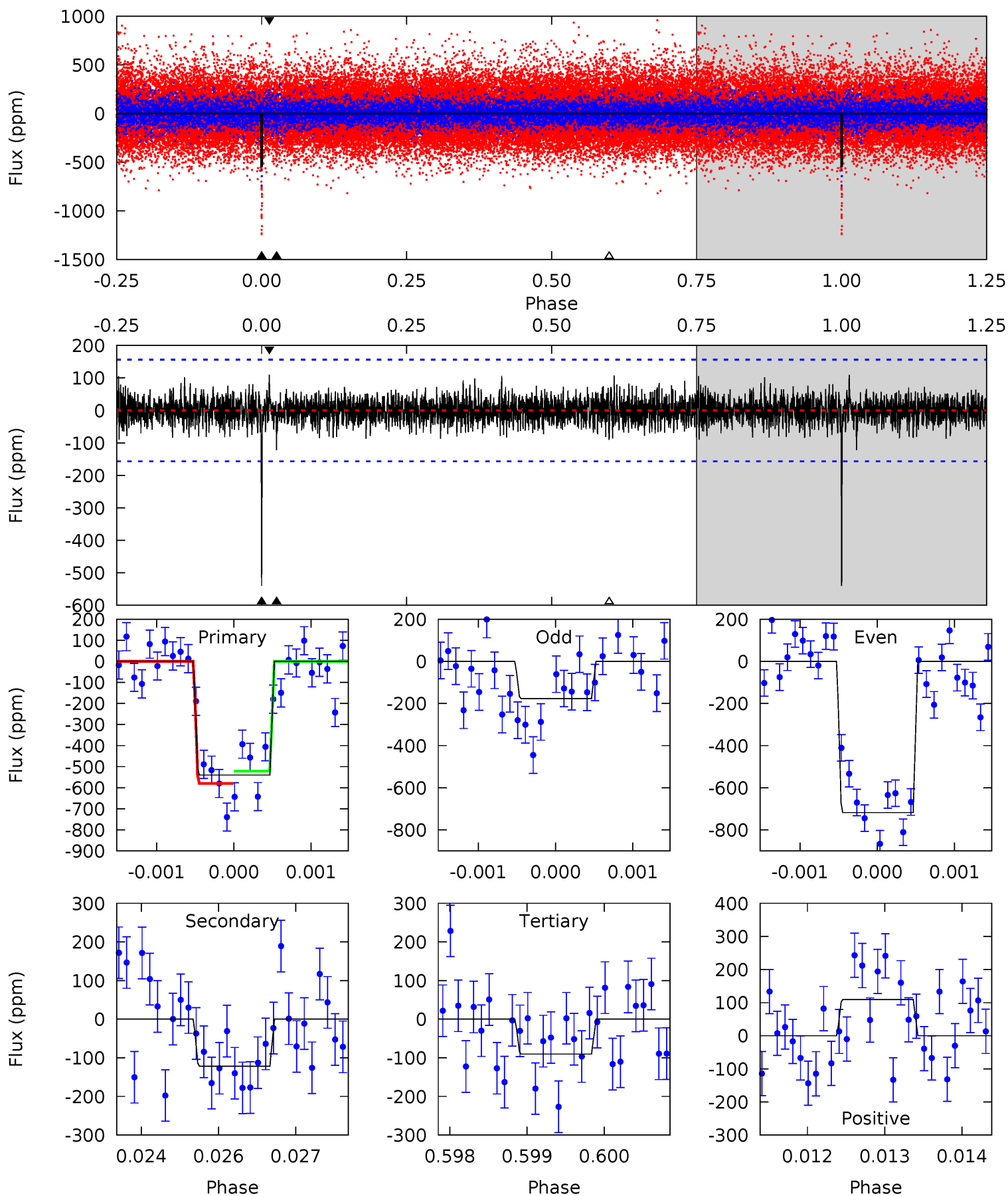
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.3	4.38	4.34	4.19	5.42	3.25	1.26	15.9	16.1	0.04	0.18	9.04	0.89	0.17	1.47



Alt Model-Shift Uniqueness Test

001719308-02, $P = 313.239664$ Days, $E = 96.799130$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.7	4.23	3.13	3.79	5.43	3.26	0.97	15.6	14.9	1.10	0.44	8.76	0.89	0.17	1.01



Stellar Parameters For KIC 001719308

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6256^{+81}_{-81}	$4.111^{+0.182}_{-0.098}$	$-0.260^{+0.150}_{-0.150}$	$1.505^{+0.248}_{-0.303}$	$1.068^{+0.109}_{-0.079}$	$0.441^{+0.418}_{-0.132}$
	+1%/-1%	+4%/-2%	+58%/-58%	+16%/-20%	+10%/-7%	+95%/-30%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 001719308-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-126 ± 29	$3.79^{+1.92}_{-1.76}$	489^{+23}_{-28}	4475^{+1439}_{-631}	4150^{+10751}_{-2377}
Alt.	-122 ± 29	$3.67^{+1.96}_{-1.63}$	488^{+21}_{-28}	4473^{+1375}_{-678}	4197^{+9865}_{-2501}

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

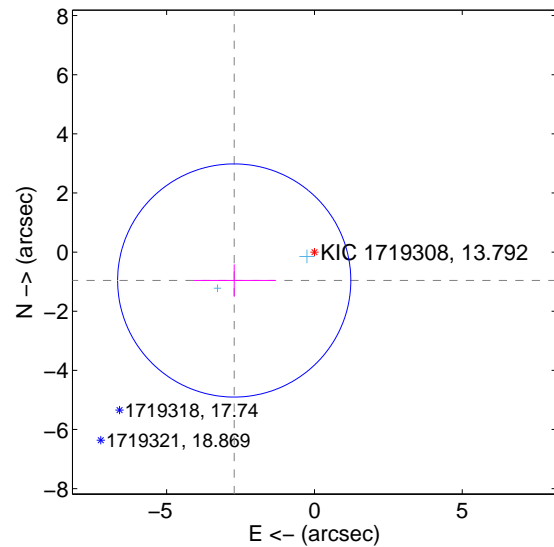
Supplemental centroid analysis for 001719308-02. Kepler magnitude: 13.79. Transit SNR 12.27

There are 2 quarters with good PRF difference image offsets

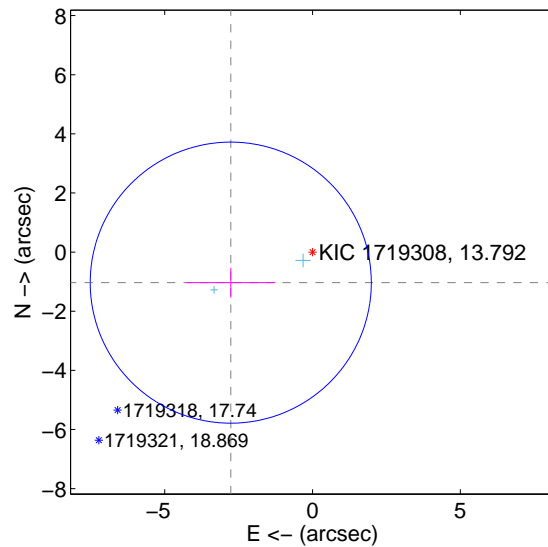
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.878 ± 1.314	2.19	2.713 ± 1.381	-0.960 ± 0.545
PRF-fit source offset from KIC position	2.952 ± 1.584	1.86	2.766 ± 1.505	-1.033 ± 0.502
photometric centroid source offset	1.70 ± 0.89	1.91	1.51 ± 0.88	-0.77 ± 0.92

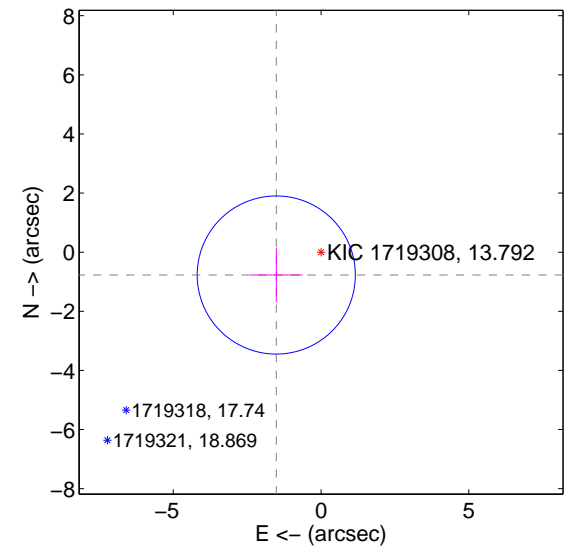
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

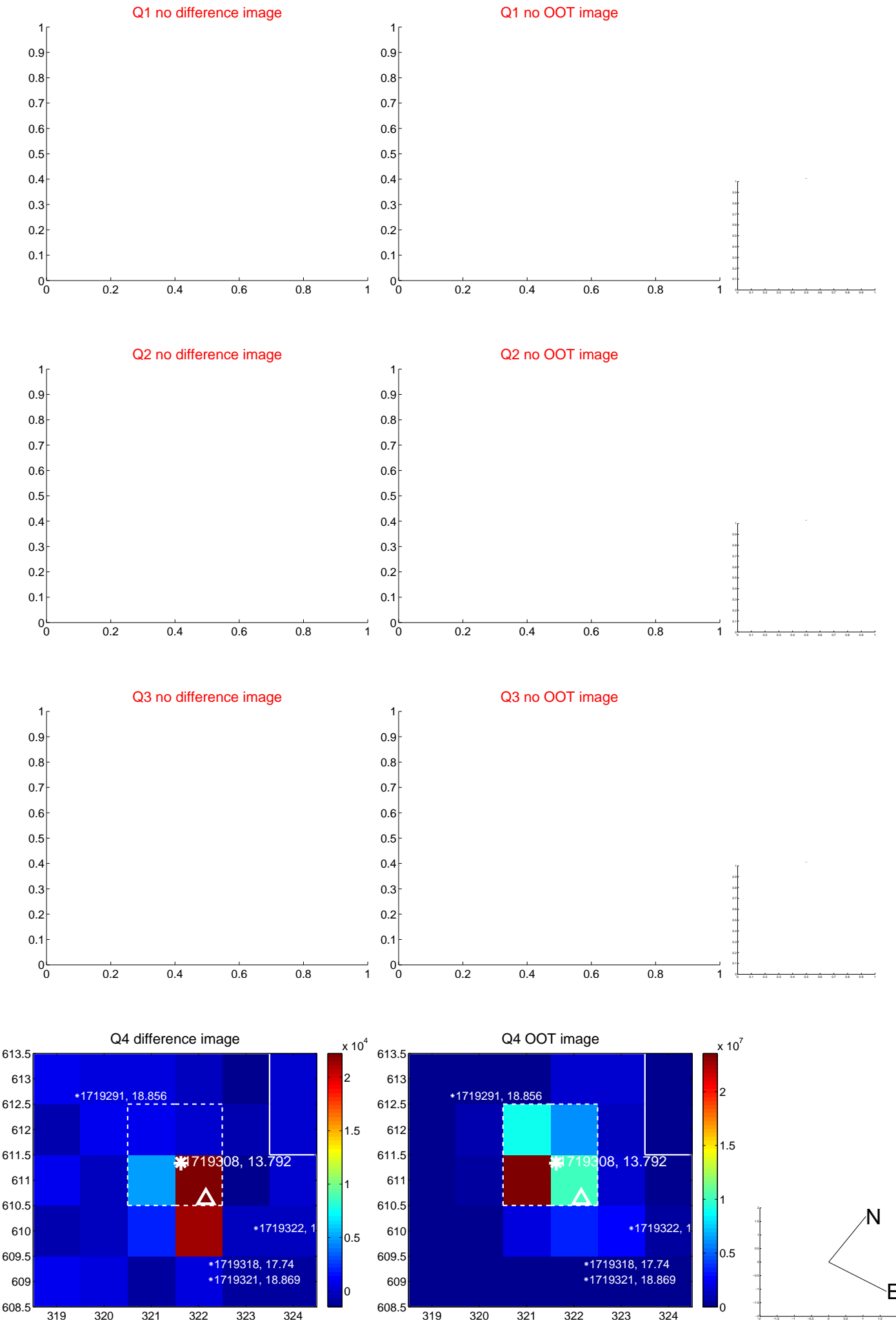


offset from photometric centroids



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.



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

Q9 no difference image



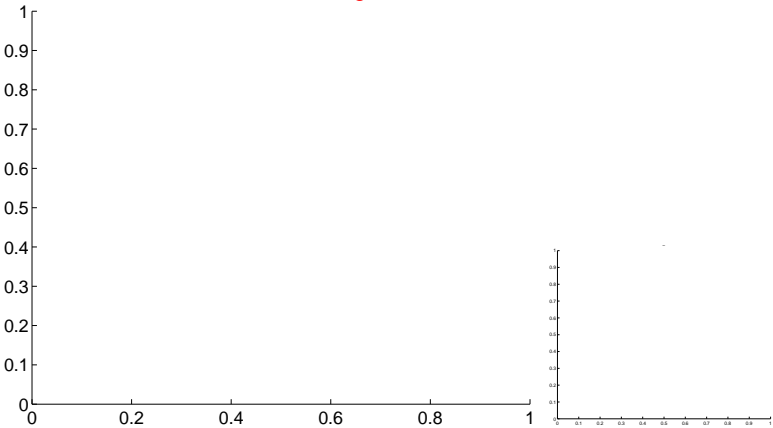
Q9 no OOT image



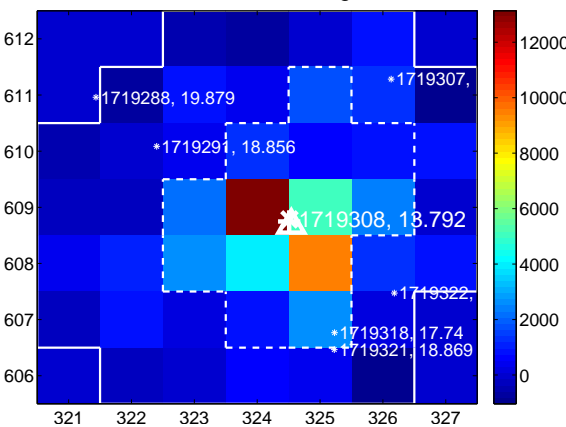
Q10 no difference image



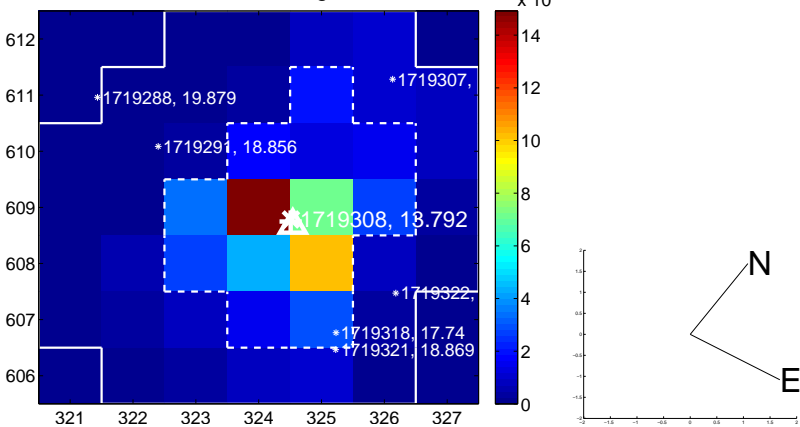
Q10 no OOT image



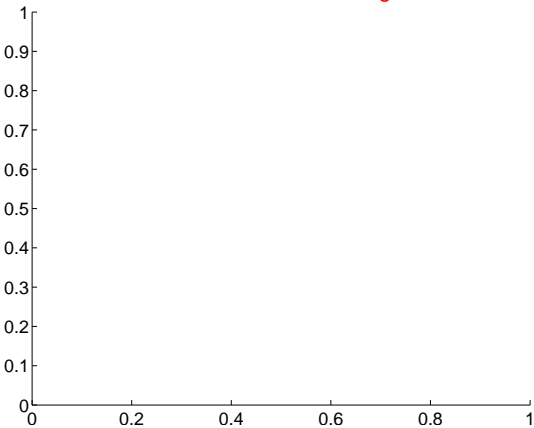
Q11 difference image



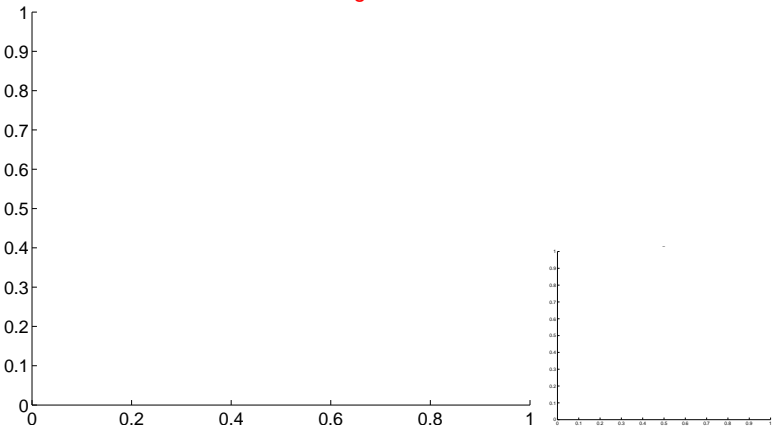
Q11 OOT image



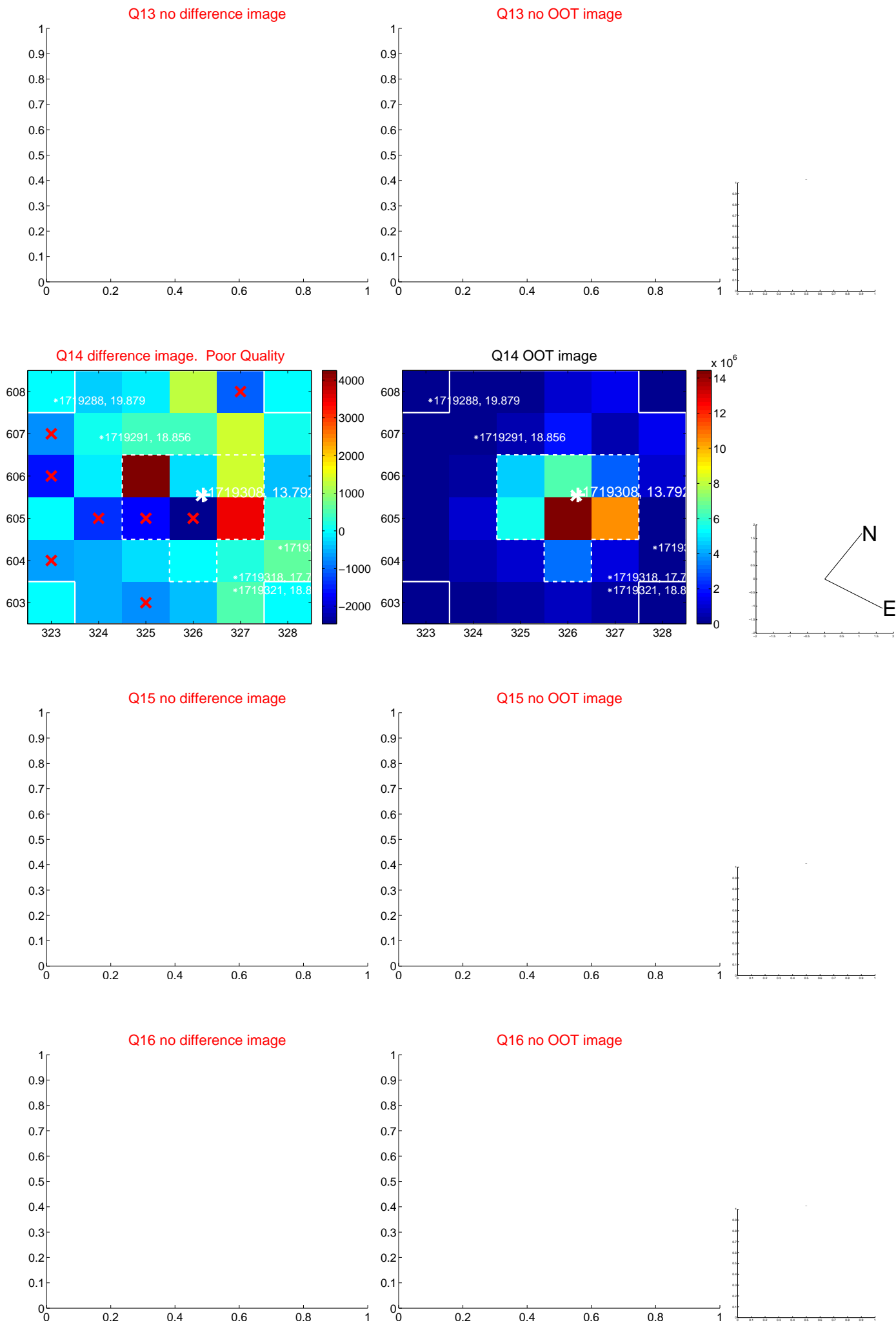
Q12 no difference image



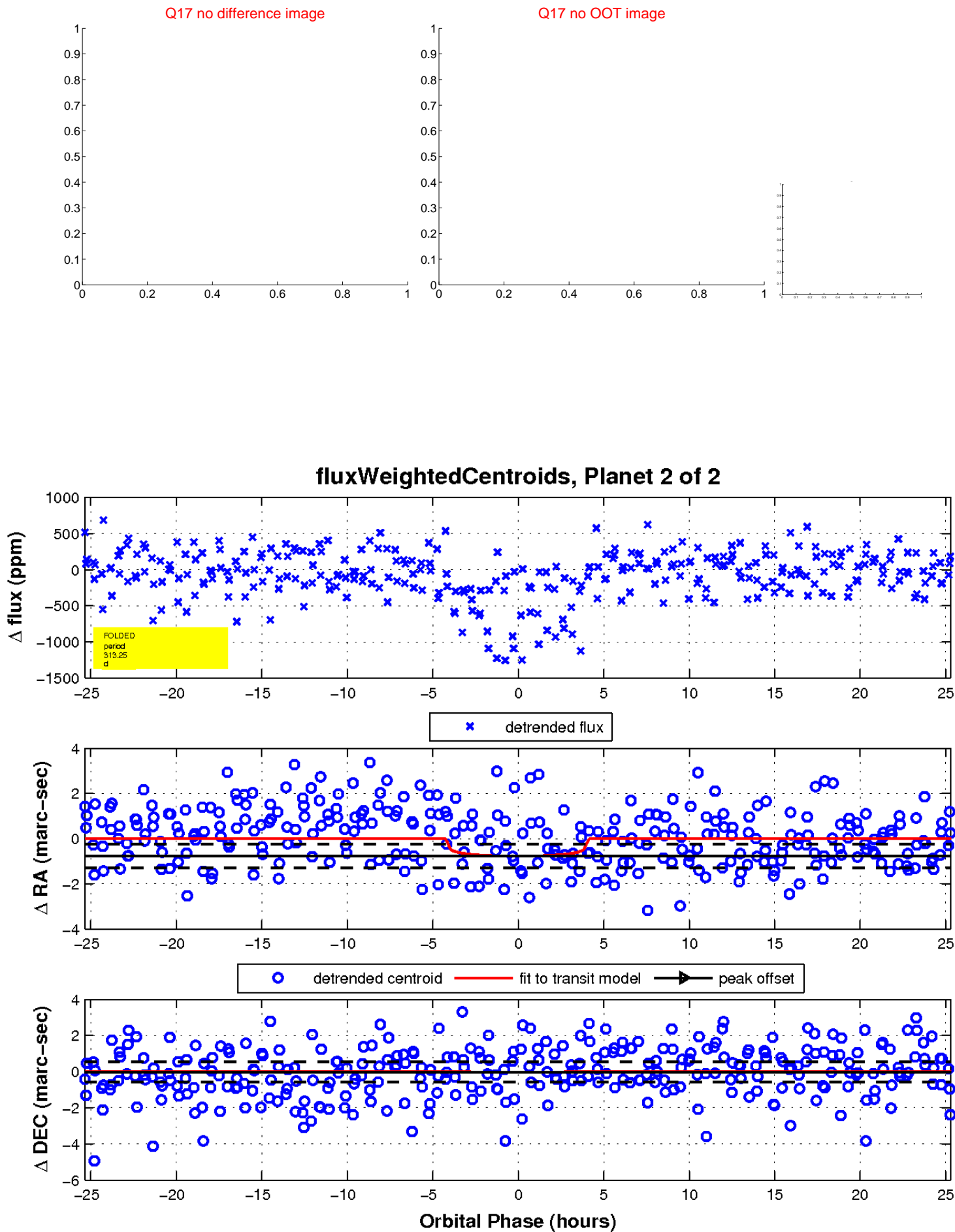
Q12 no OOT image



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

