

KIC 005471619

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})
005471619-01	OBS	No	0.962831	132.198494	414235.0	2.500	10155.1	-1.0	2.60	8059	61.78	45830.72
005471619-02	OBS	No	0.962844	132.357027	1103.7	3.000	379.7	-1.0	2.60	8059	8.72	45829.86

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005471619-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_NOFITS
005471619-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—SAME_NTL_PERIOD—CENT_NOFITS

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

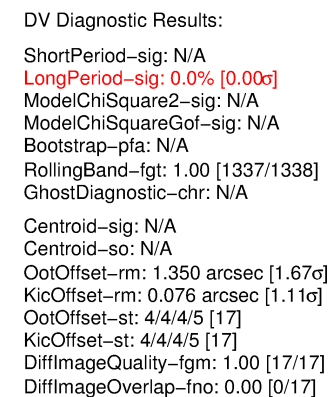
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

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

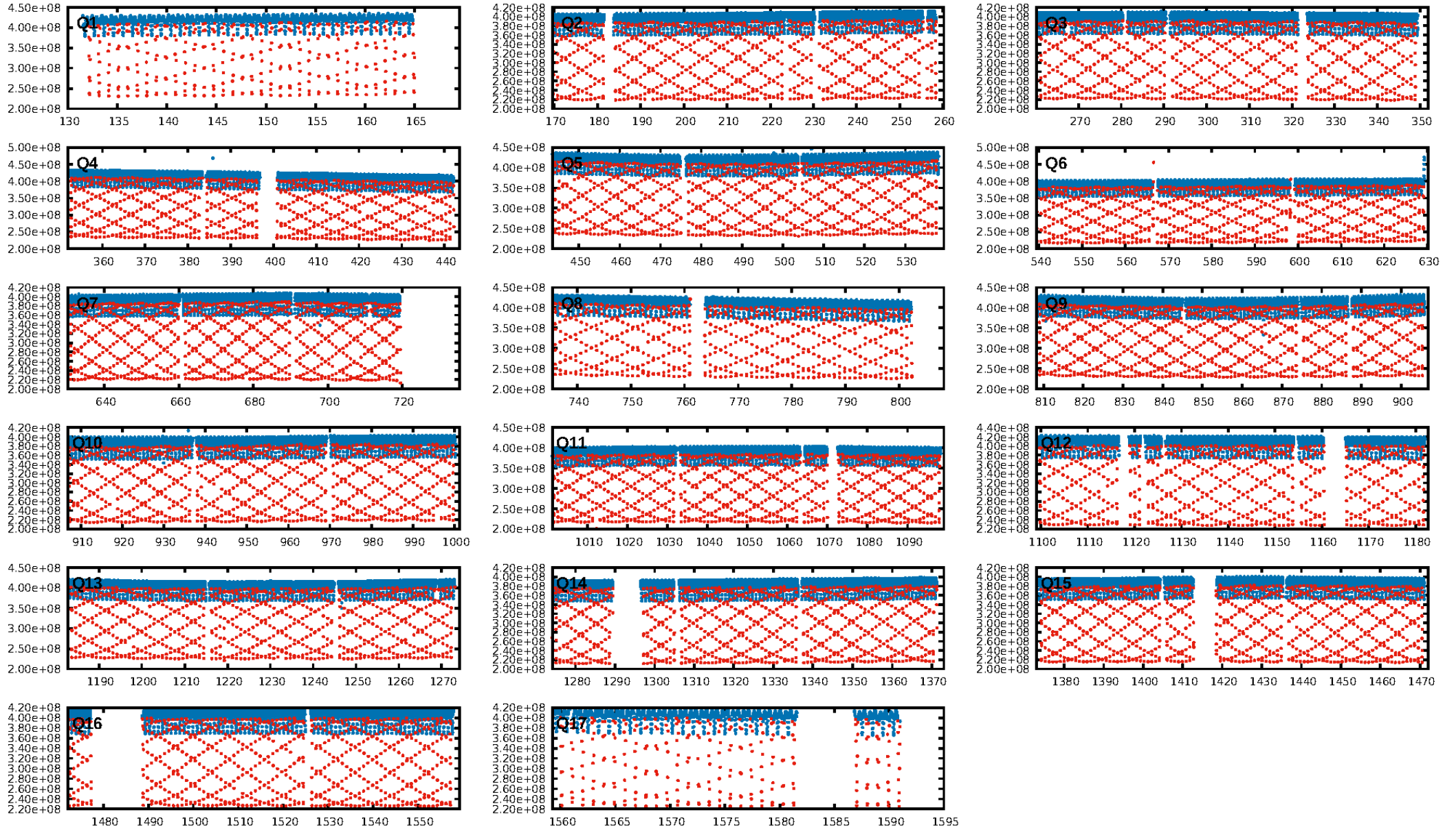
Ephemeris Match Information For 005471619-01

No Significant Match Found

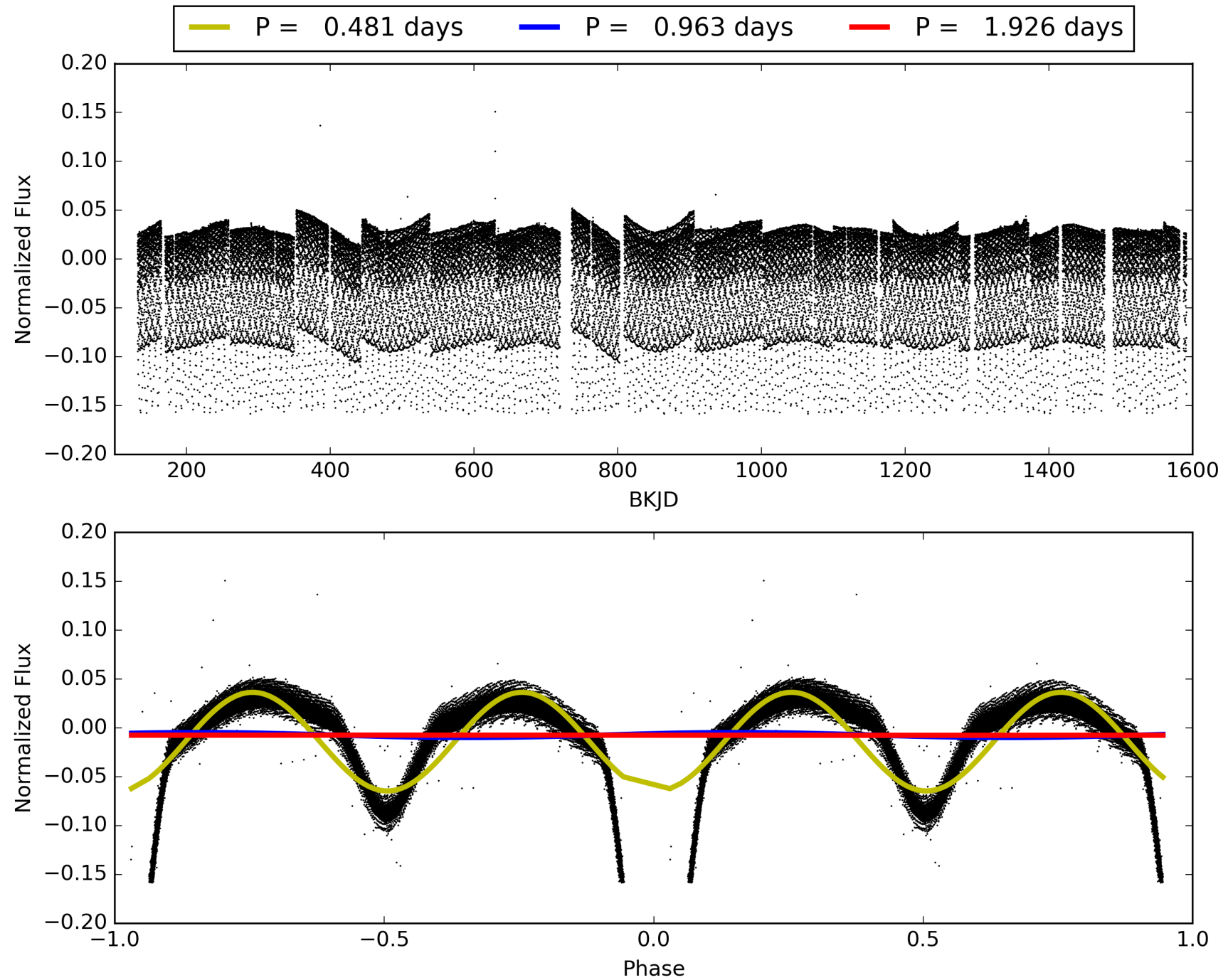
KIC: 5471619 Candidate: 1 of 2 Period: 0.963 d



TCE 005471619-01, PDC Light Curves

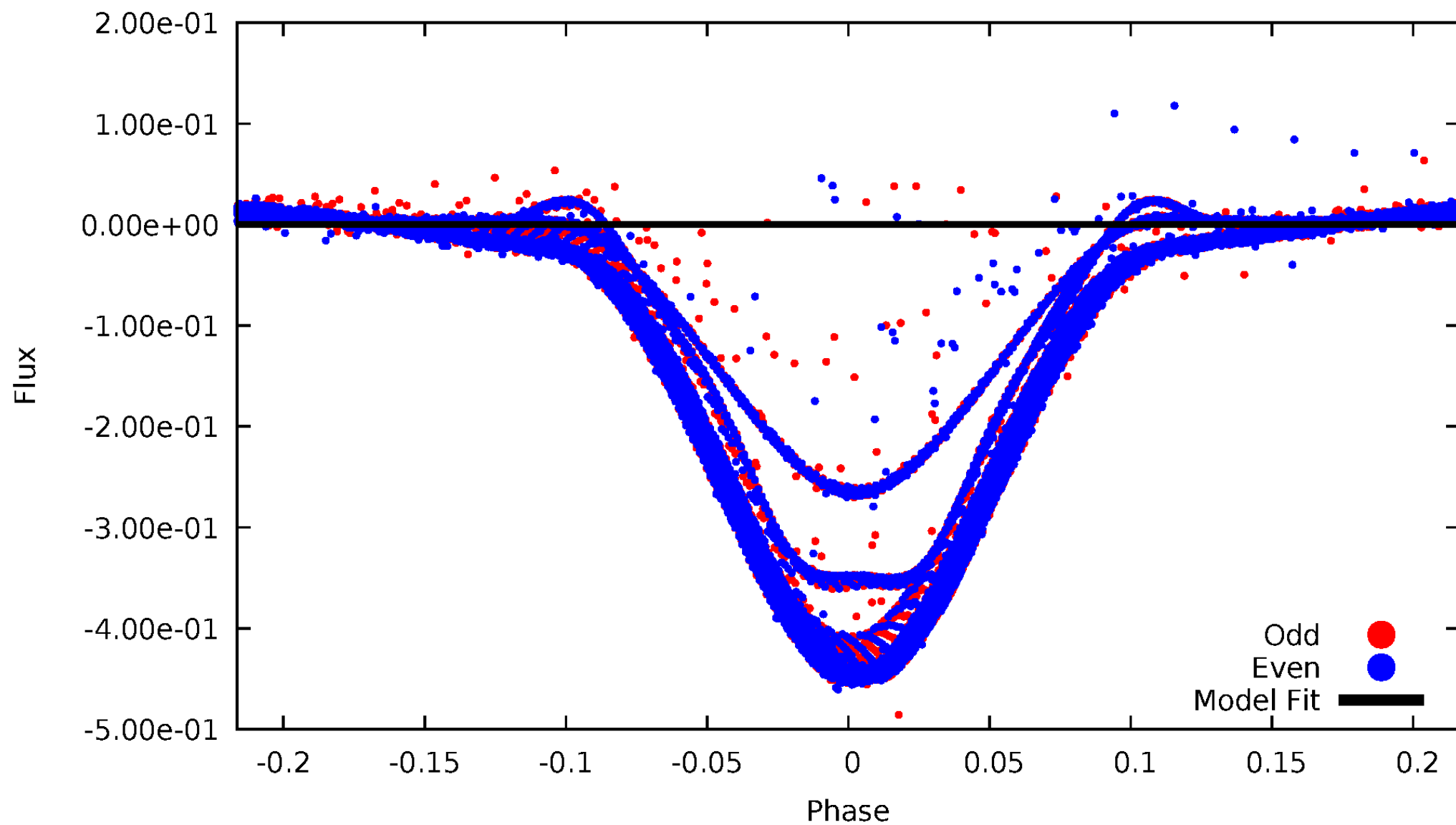


TCE 005471619-01



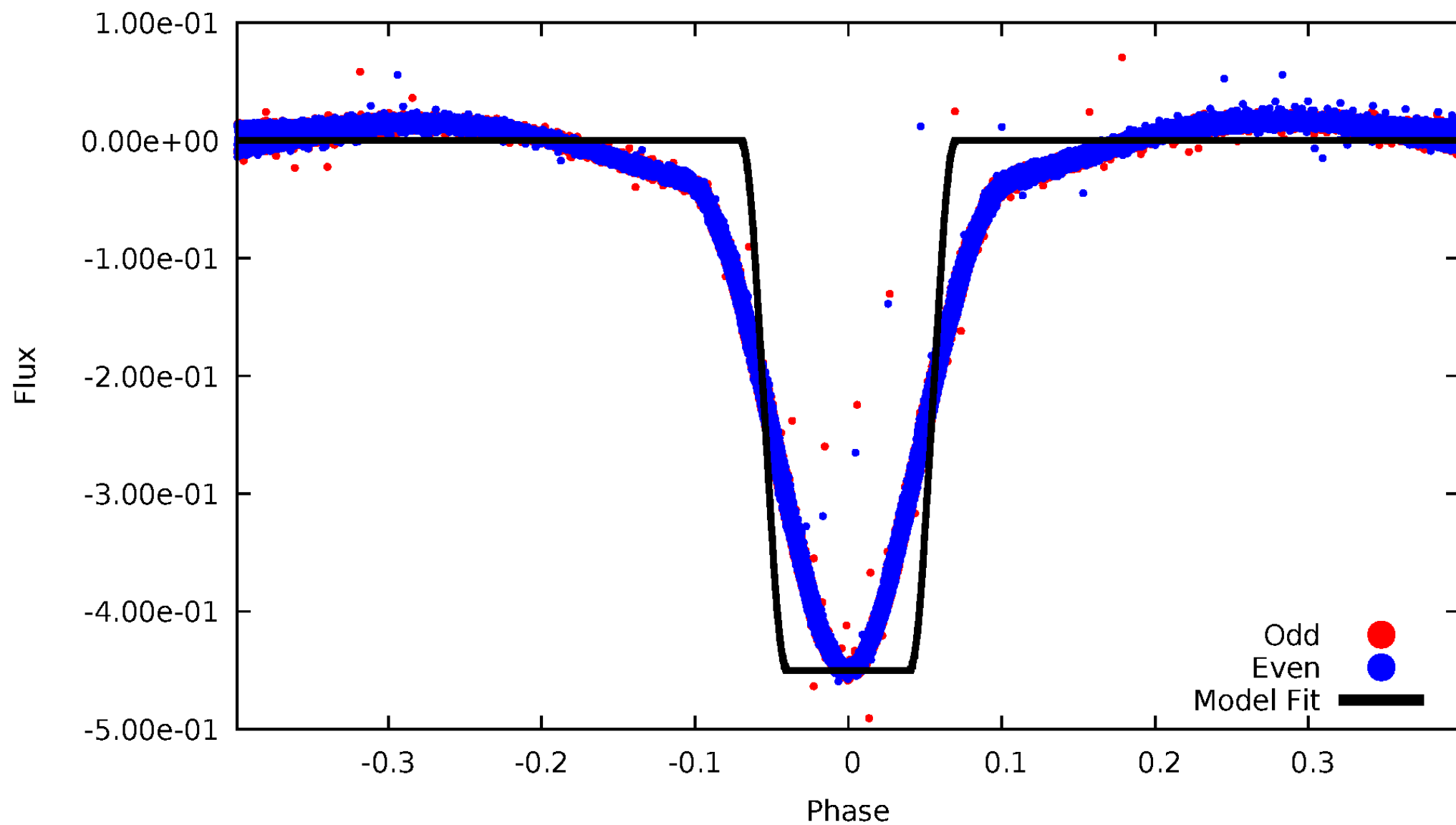
DV Odd/Even

TCE 005471619-01



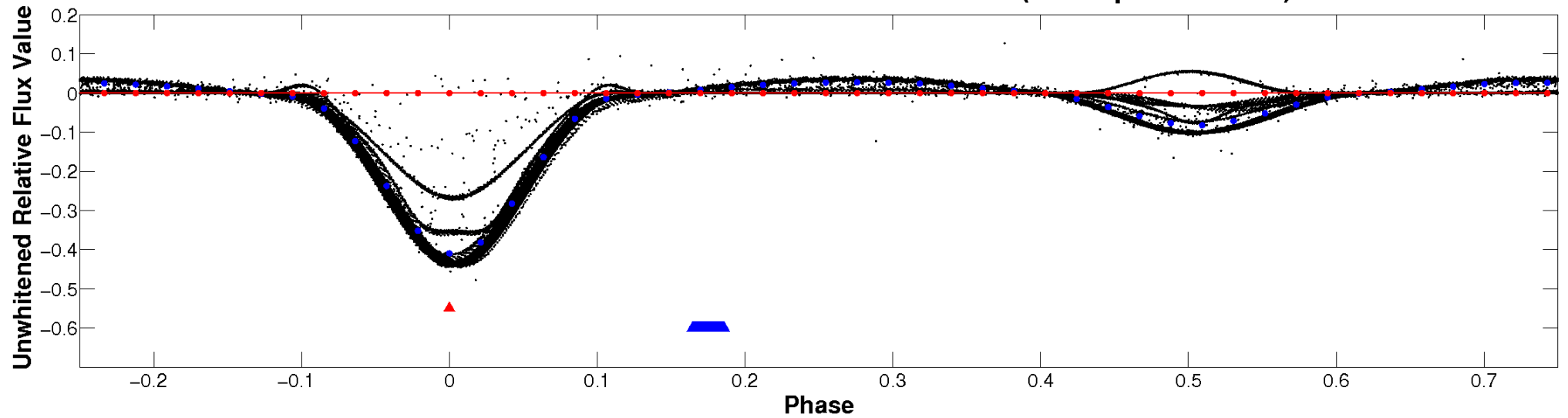
ALT Odd/Even

TCE 005471619-01



Non-Whitened Vs. Whitened Light Curve

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

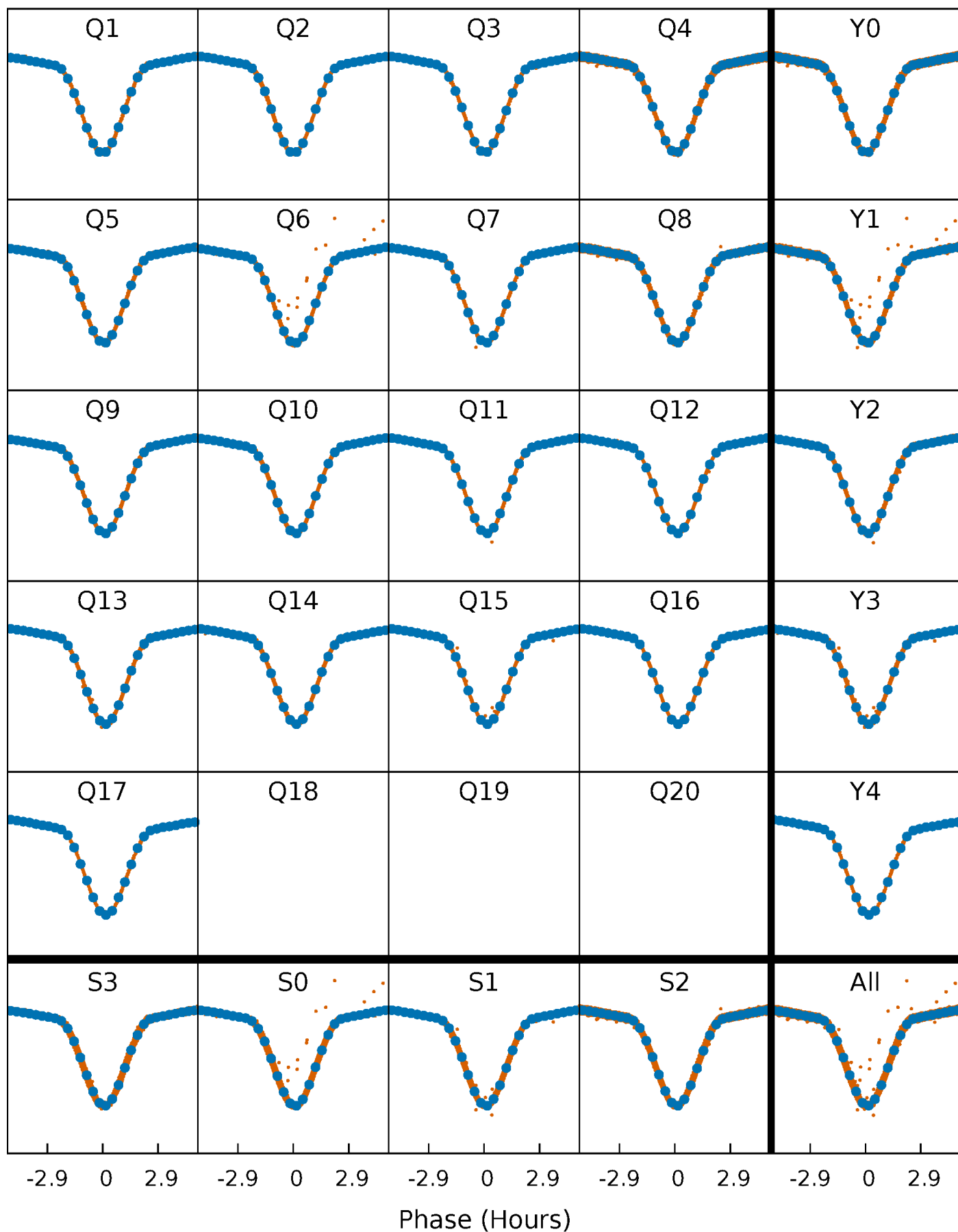


Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)



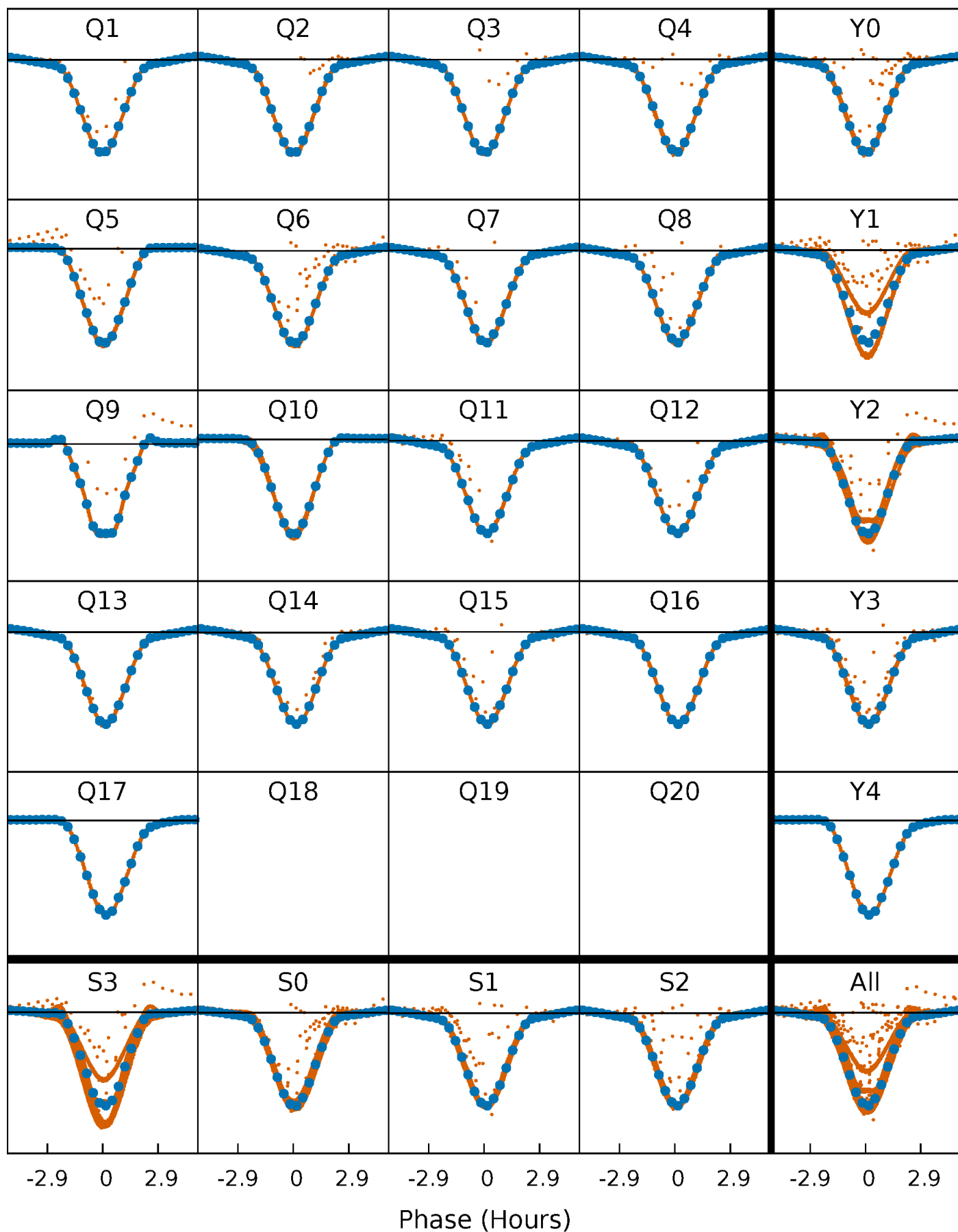
PDC Quarter-Phased Transit Curves

TCE 005471619-01 P= 0.962831 Days $T_0=132.198494$ (BKJD)



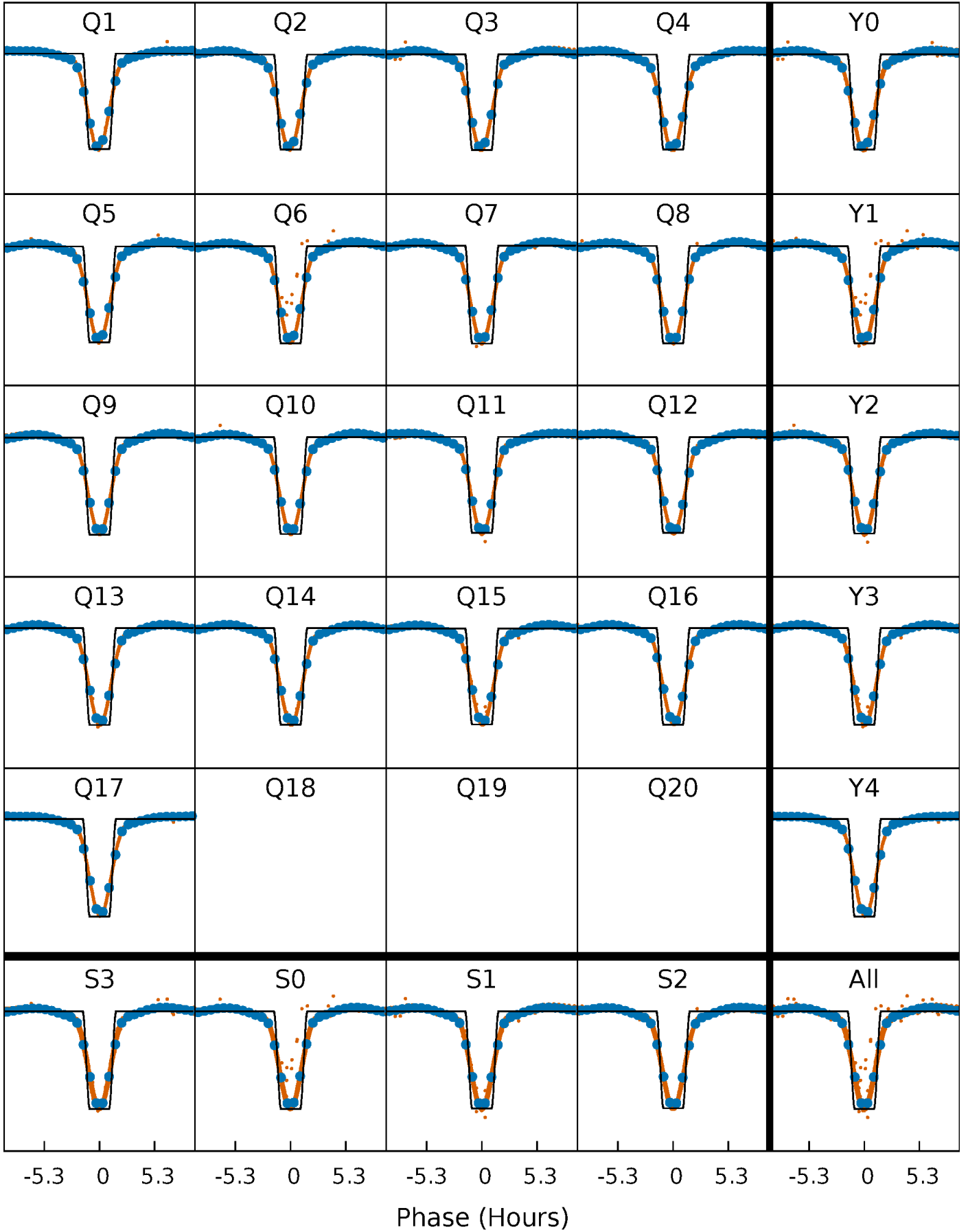
DV Quarter-Phased Transit Curves

TCE 005471619-01 P= 0.962831 Days $T_0=132.198494$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

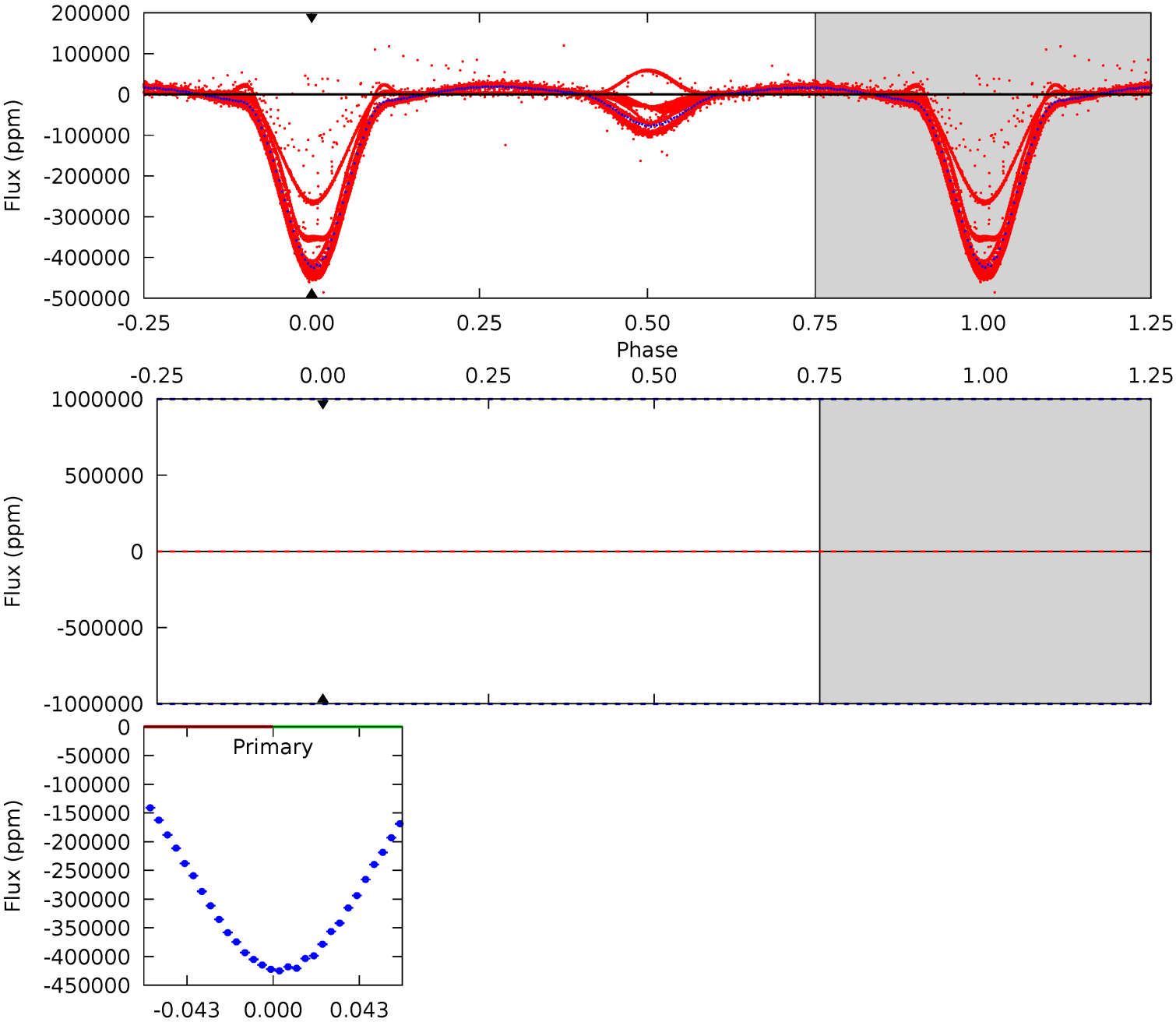
TCE 005471619-01 P= 0.962831 Days $T_0=132.202519$ (BKJD)



DV Model-Shift Uniqueness Test

005471619-01, P = 0.962831 Days, E = 131.235663 Days

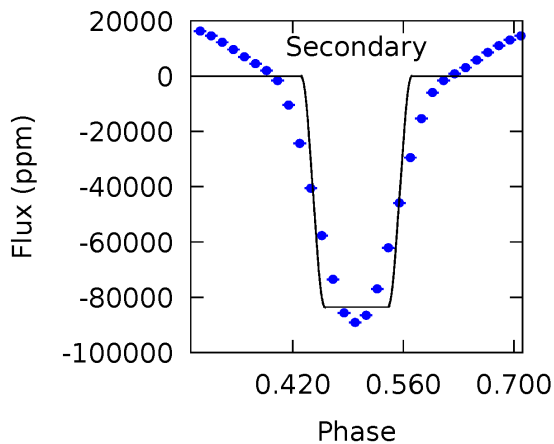
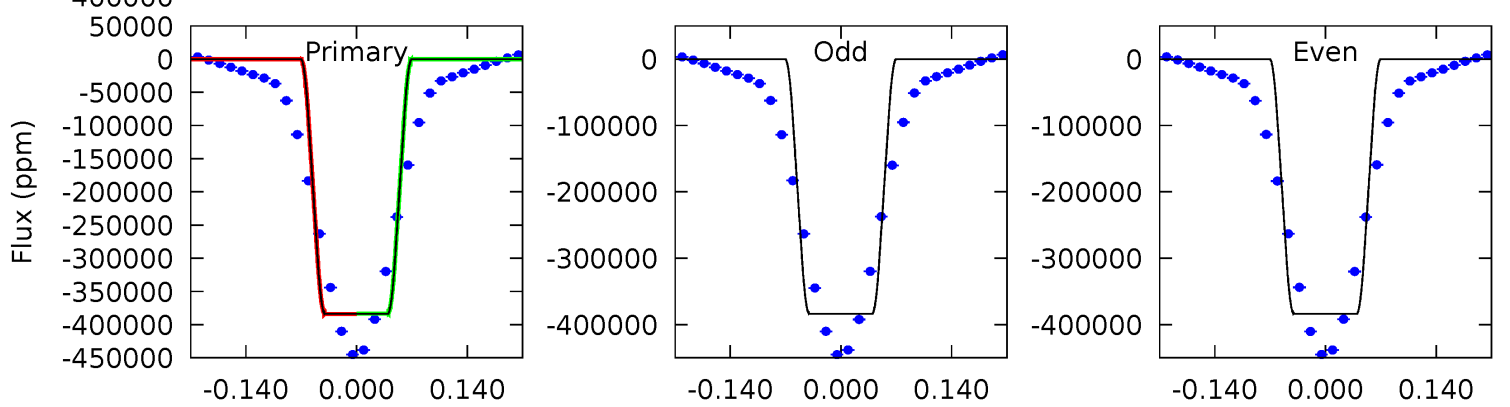
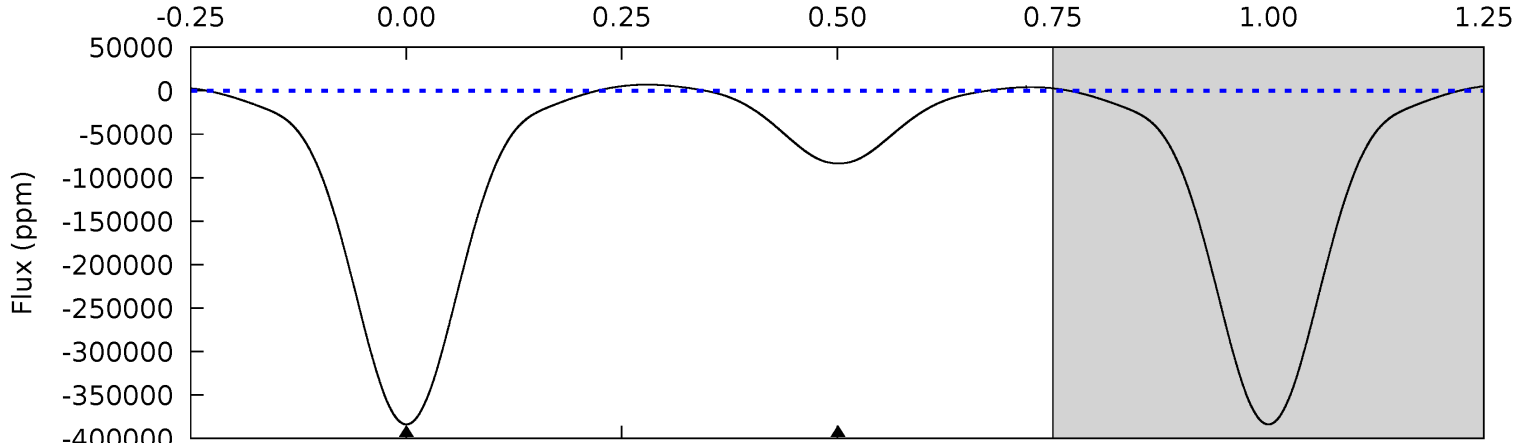
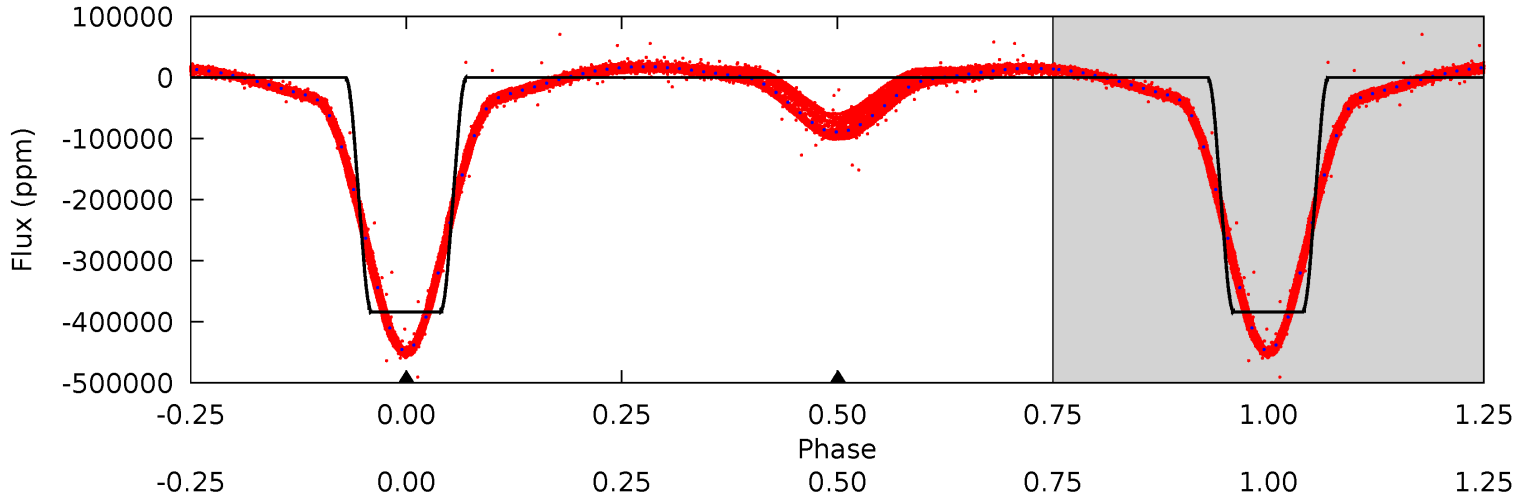
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

005471619-01, P = 0.962831 Days, E = 131.239688 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2899	631.0	0	0	4.49	1.48	75.9	2899	2899	631.0	631.0	0.21	1.00	0.02	2.33



Stellar Parameters For KIC 005471619

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8059^{+224}_{-336}	$3.885^{+0.328}_{-0.102}$	$-0.240^{+0.200}_{-0.300}$	$2.599^{+0.347}_{-0.971}$	$1.891^{+0.076}_{-0.428}$	$0.152^{+0.376}_{-0.040}$
	+3%/-4%	+8%/-3%	+83%/-125%	+13%/-37%	+4%/-23%	+247%/-27%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 005471619-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$57.18^{+30.70}_{-26.10}$	5110^{+314}_{-520}	-3708^{+14723}_{-7242}	$0.084^{+11.397}_{-10.519}$
Alt.	-83534 ± 132	$177.90^{+42.01}_{-42.12}$	5101^{+336}_{-507}	4815^{+536}_{-508}	$0.872^{+0.582}_{-0.301}$

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 $A_{obs} \gg 1.0$

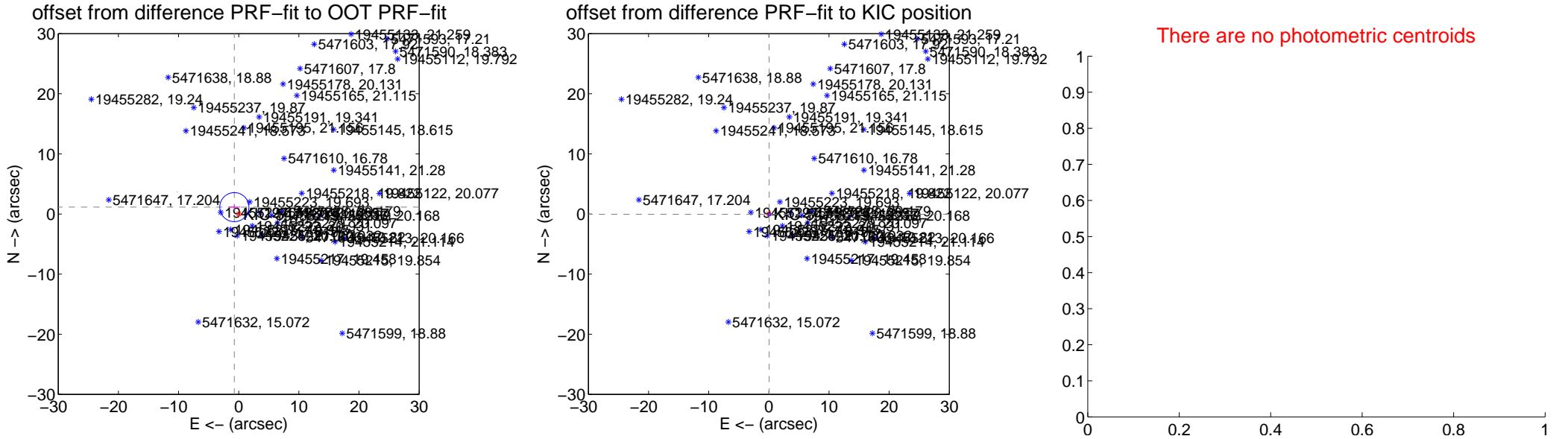
DV Centroid Data

Supplemental centroid analysis for 005471619-01. Kepler magnitude: 12.37. Transit SNR -1.00

There are 17 quarters with good PRF difference image offsets

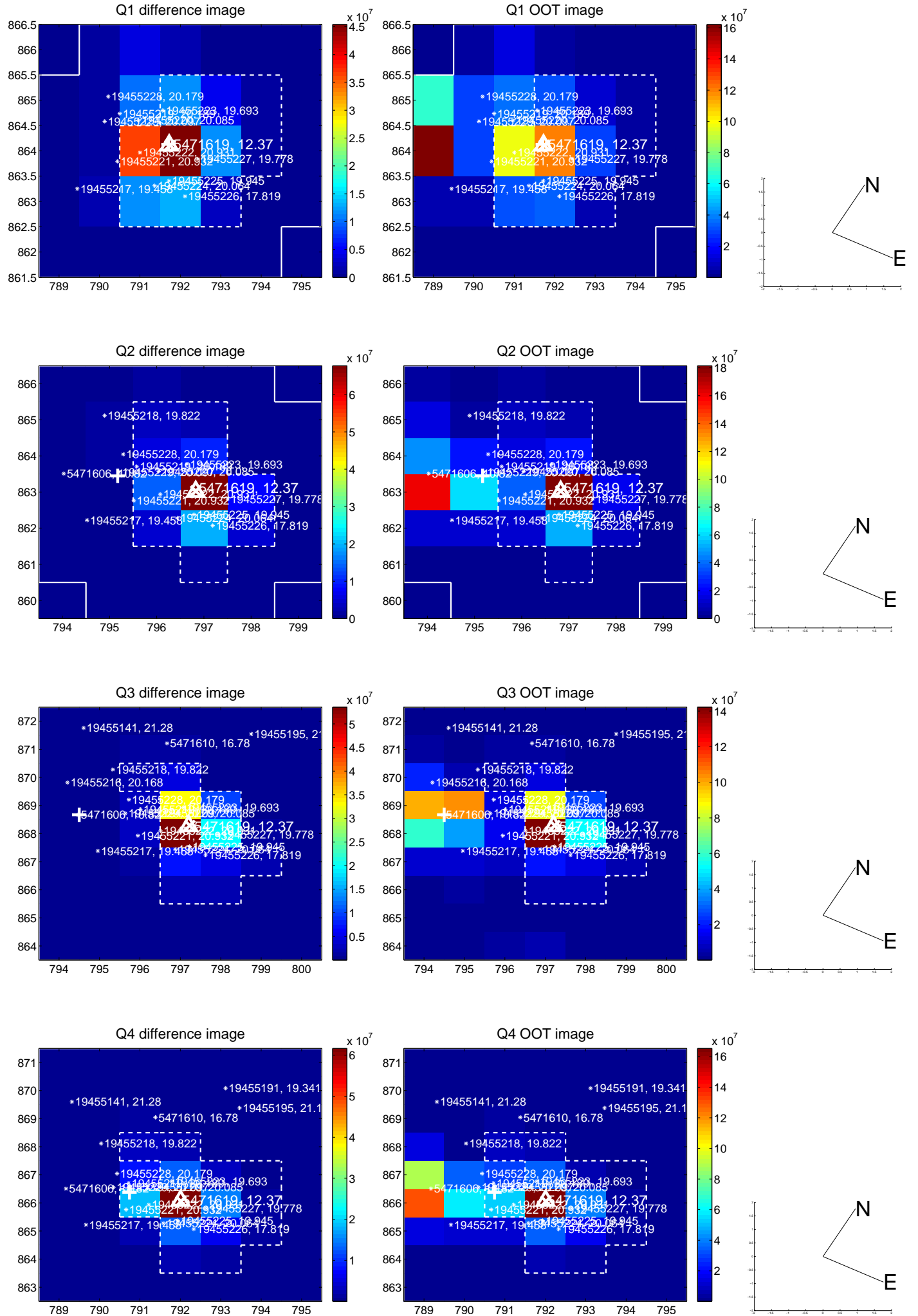
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.350 ± 0.806	1.67	0.725 ± 0.981	1.139 ± 0.341
PRF-fit source offset from KIC position	0.076 ± 0.068	1.11	-0.051 ± 0.068	-0.056 ± 0.068
photometric centroid source offset	—	—	—	—

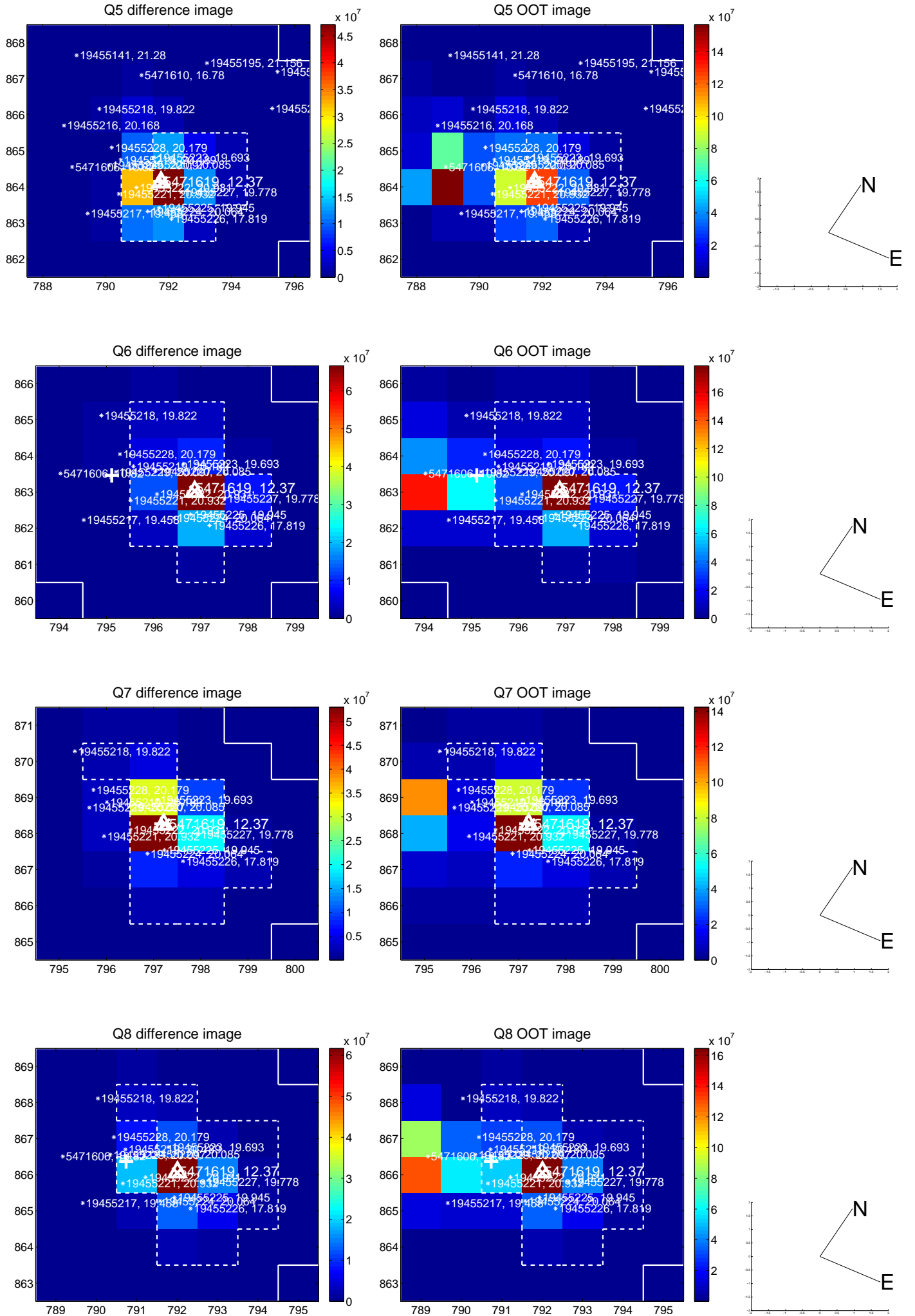


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

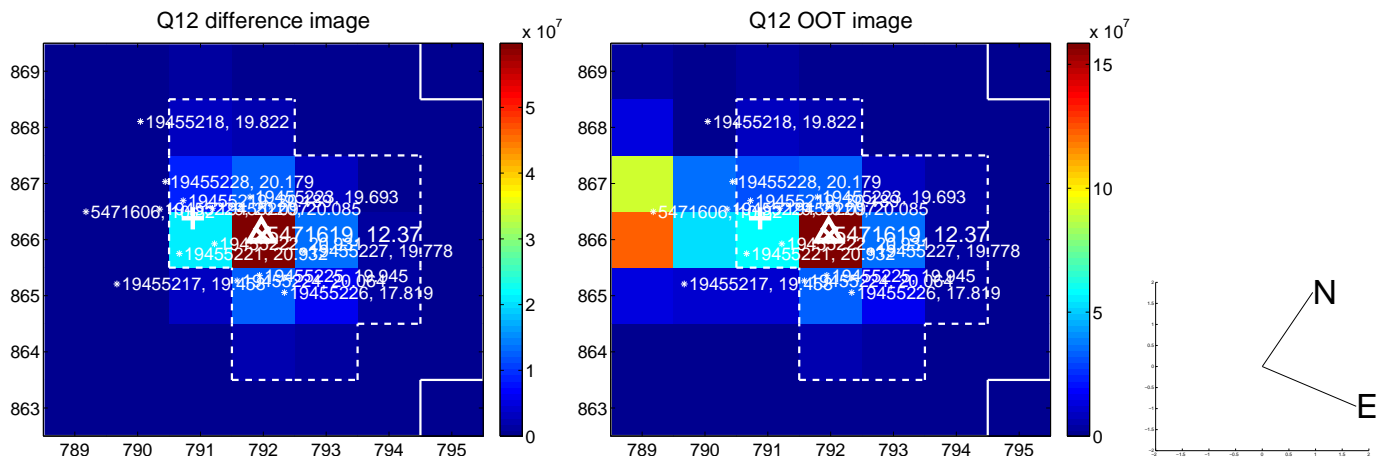
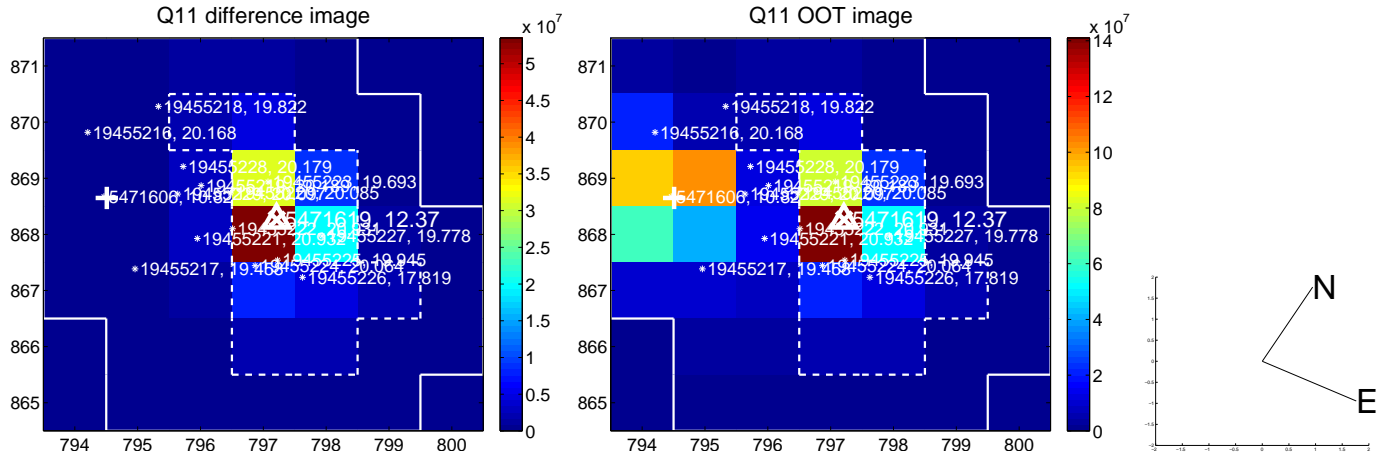
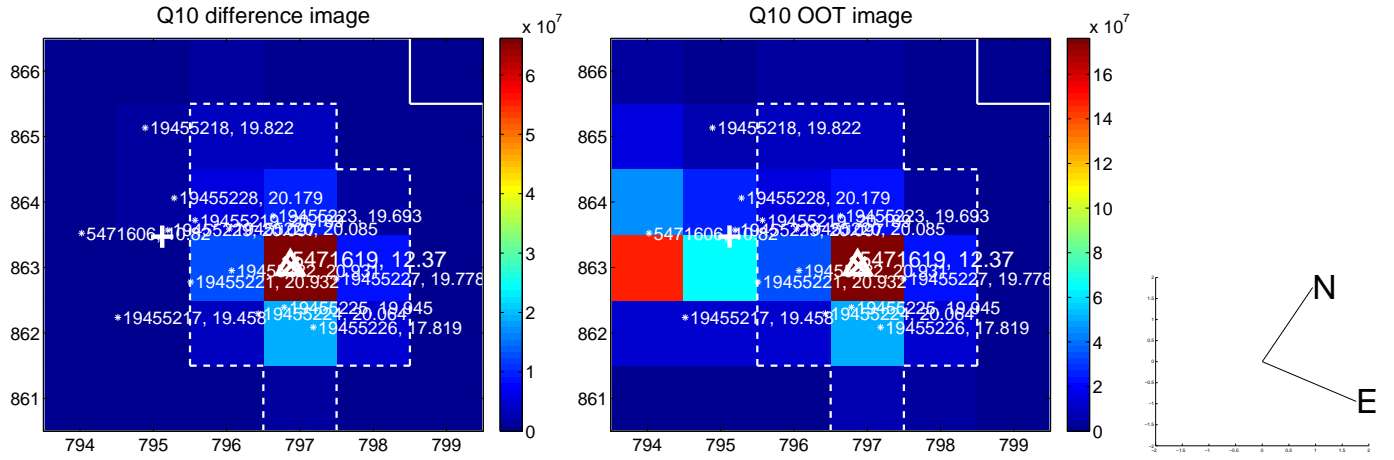
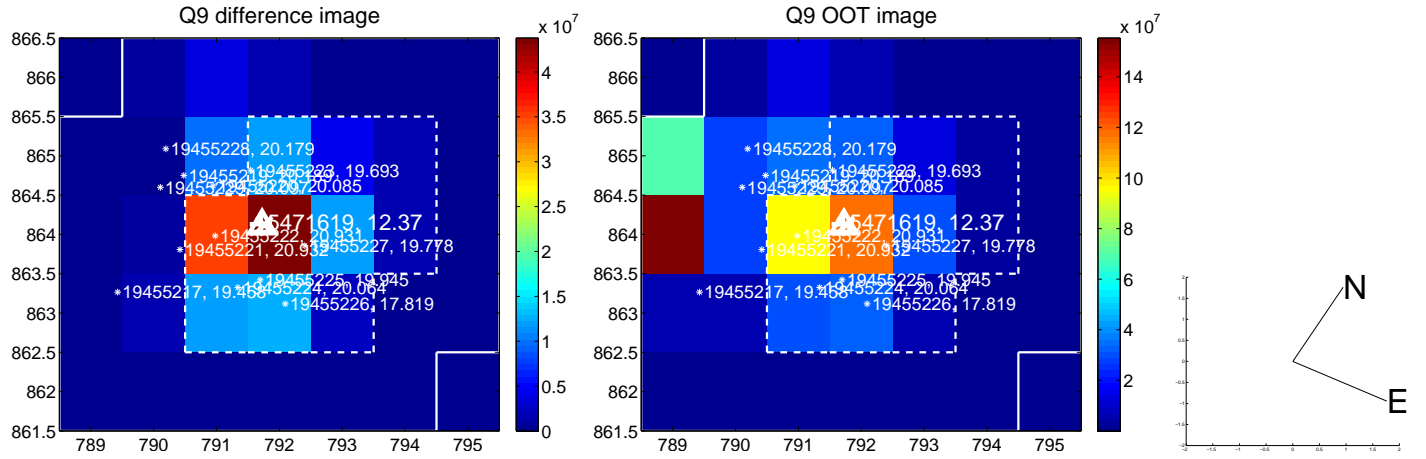
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



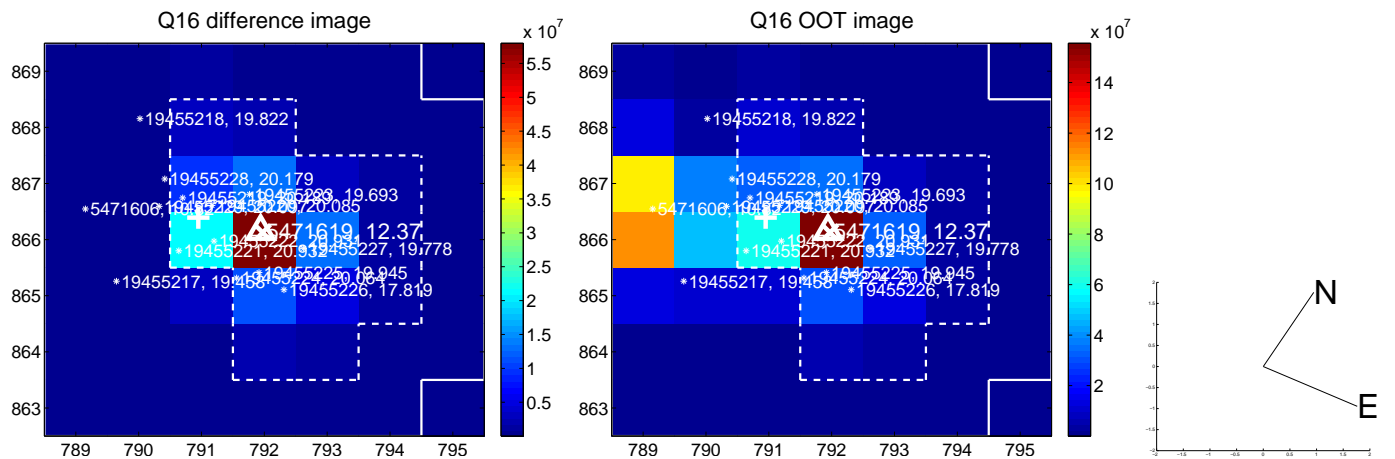
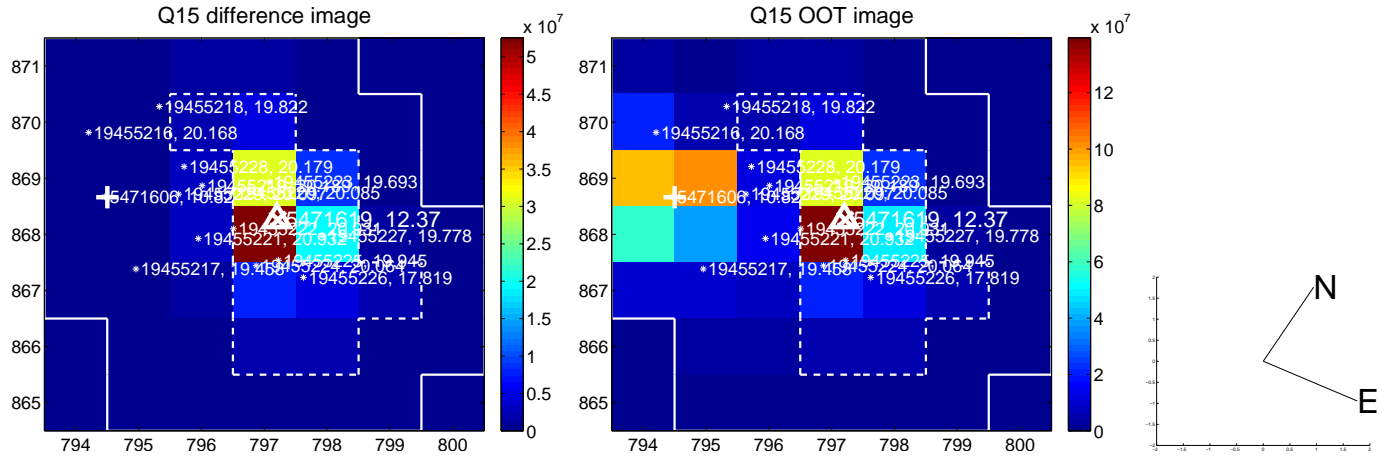
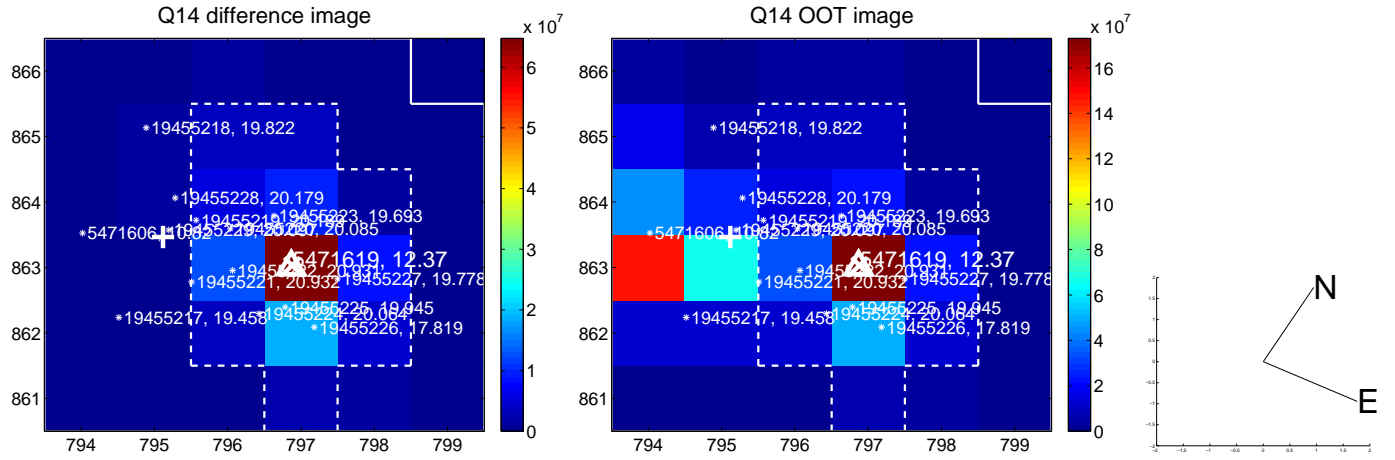
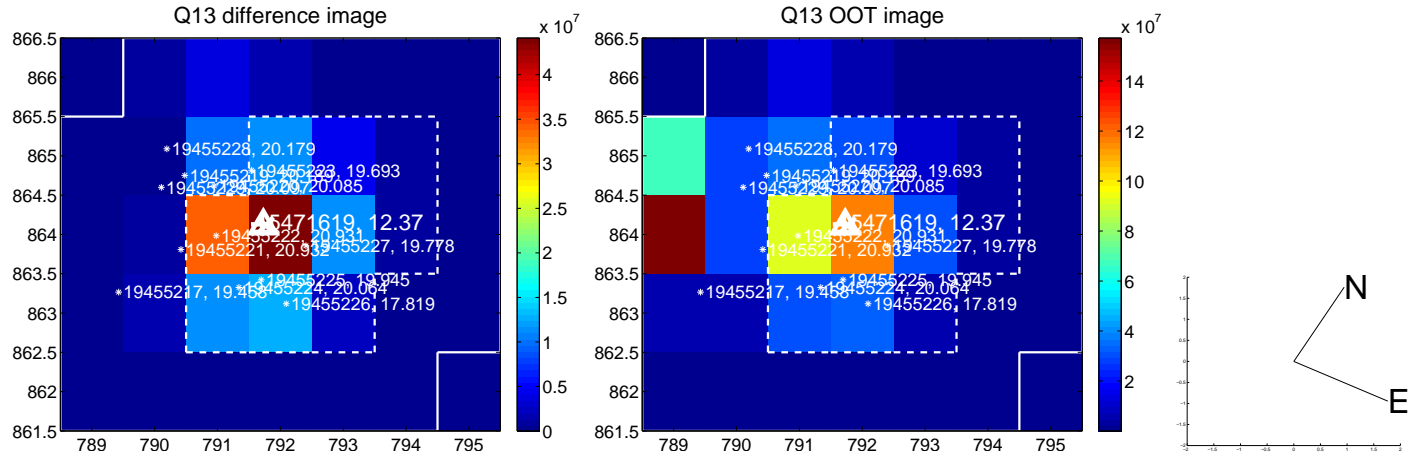
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



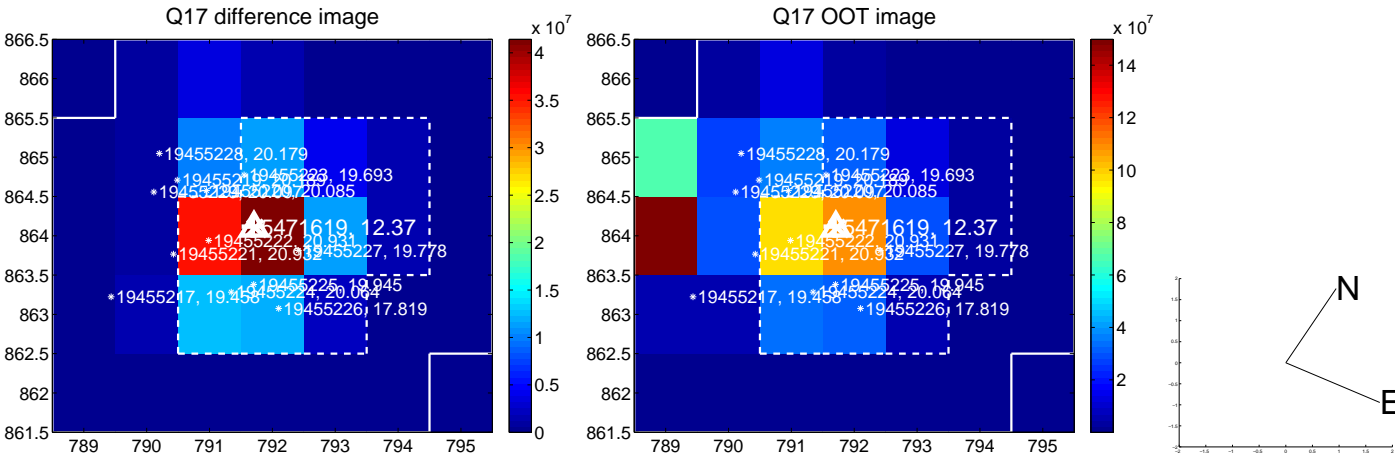
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



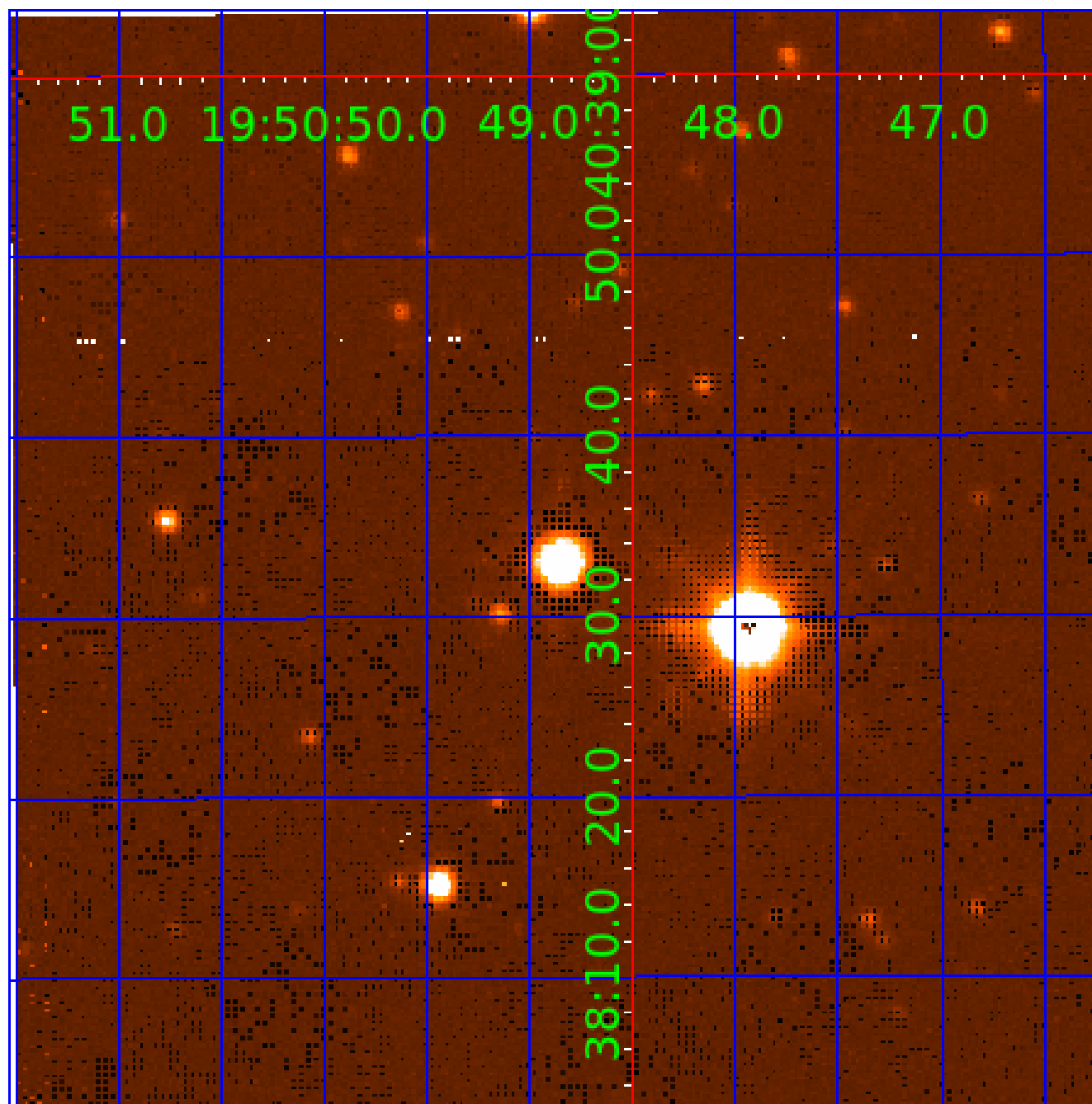
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 005471619

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})
005471619-01	OBS	No	0.962831	132.198494	414235.0	2.500	10155.1	-1.0	2.60	8059	61.78	45830.72
005471619-02	OBS	No	0.962844	132.357027	1103.7	3.000	379.7	-1.0	2.60	8059	8.72	45829.86

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005471619-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_NOFITS
005471619-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—SAME_NTL_PERIOD—CENT_NOFITS

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.

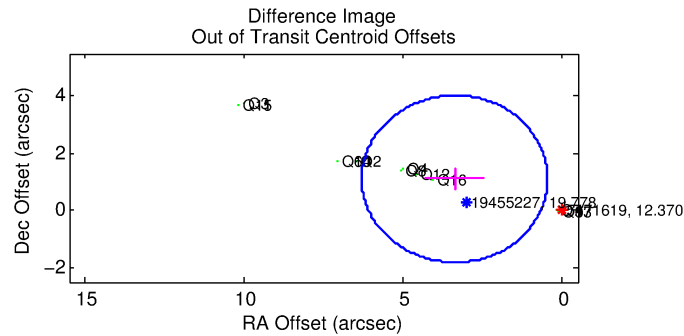
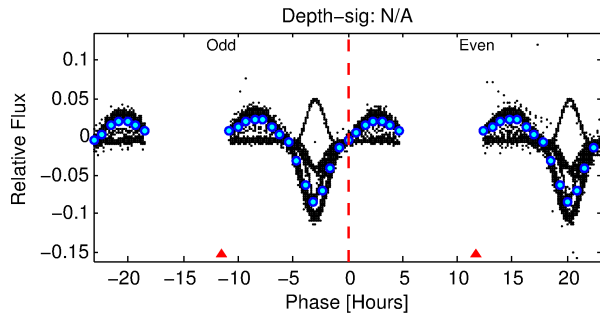
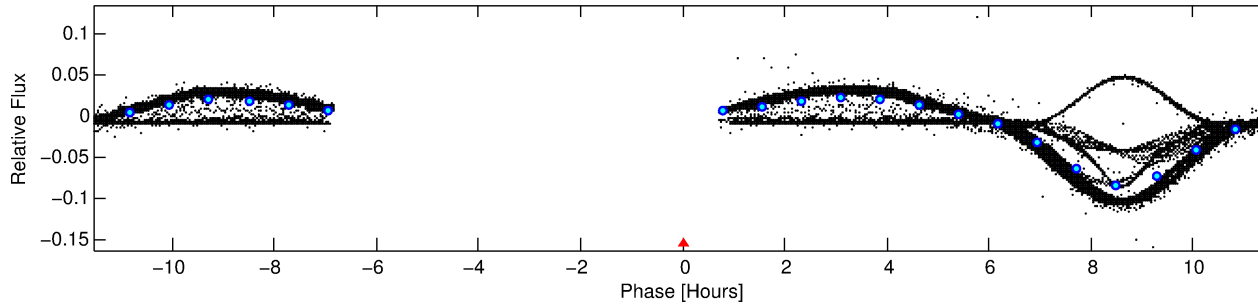
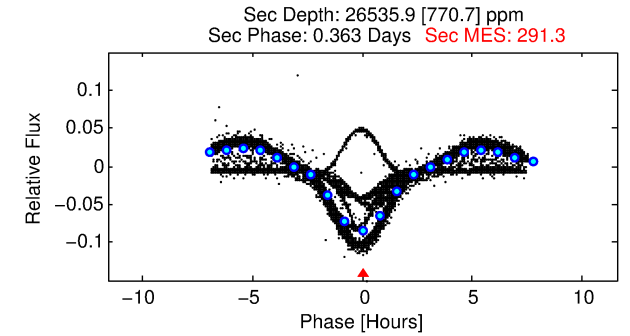
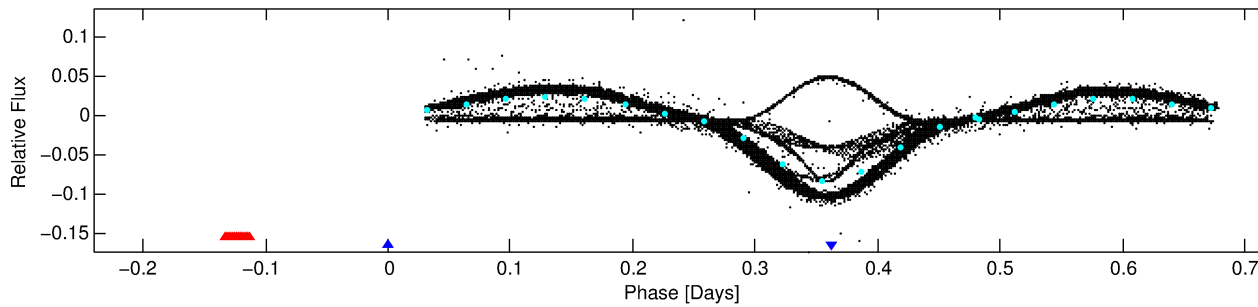
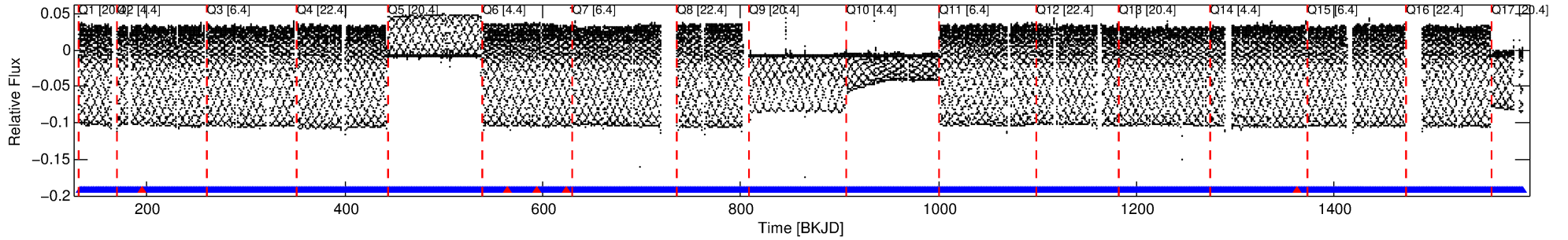
Ephemeris Match Information For 005471619-02

No Significant Match Found

DV One-Page Summary

KIC: 5471619 Candidate: 2 of 2 Period: 0.963 d

Kp: 12.37 R*: 2.60 Rs Teff: 8059.0 K Logg: 3.88 Fe/H: -0.240



TPS TCE Results:

Period = 0.96284 d
Epoch = 132.3570 BKJD

DV fit results are unavailable

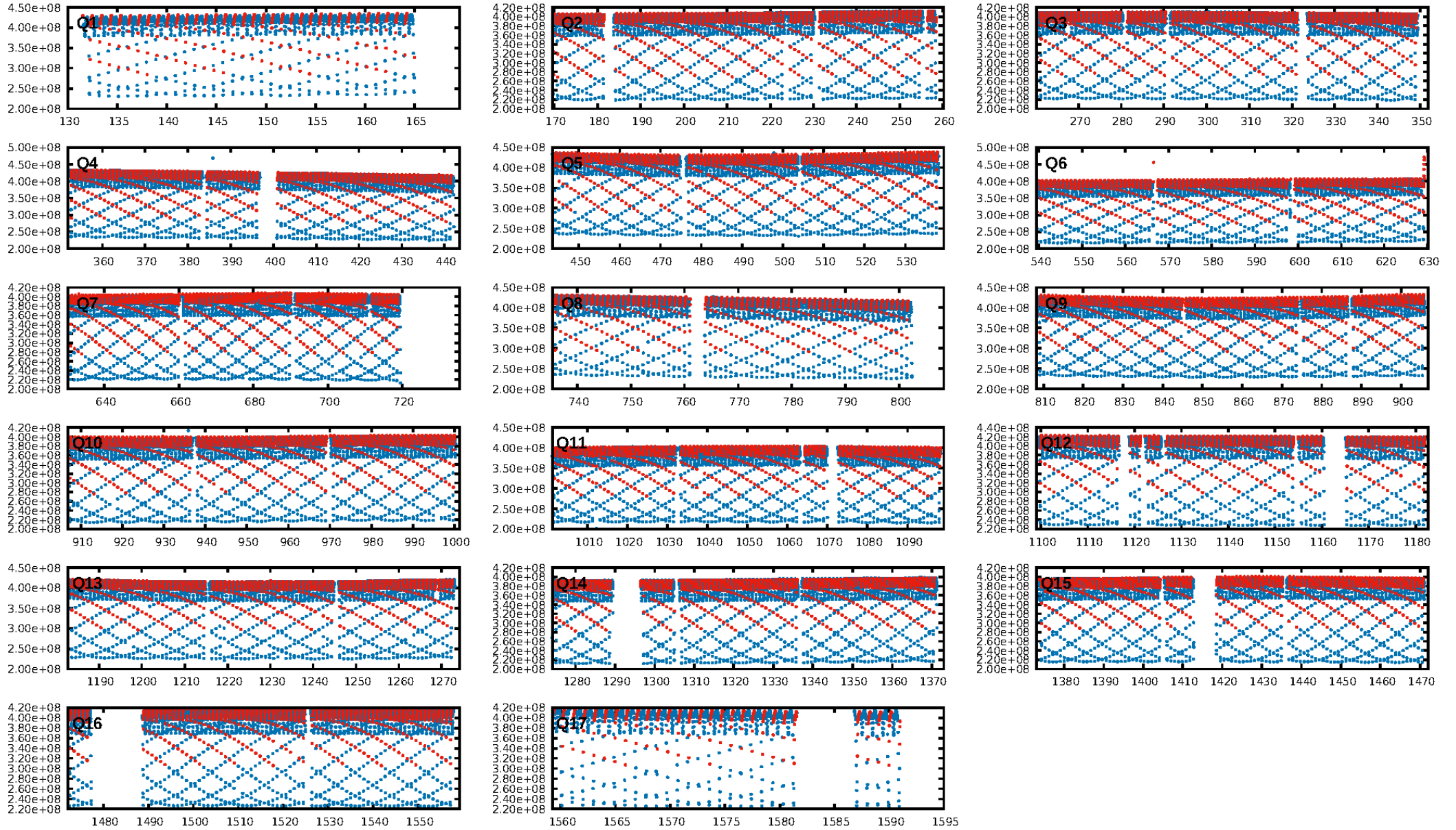
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1313/1318]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 3.556 arcsec [3.65σ]
KicOffset-rm: 0.107 arcsec [1.56σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.00 [0/17]
DiffImageOverlap-fno: 0.00 [0/17]

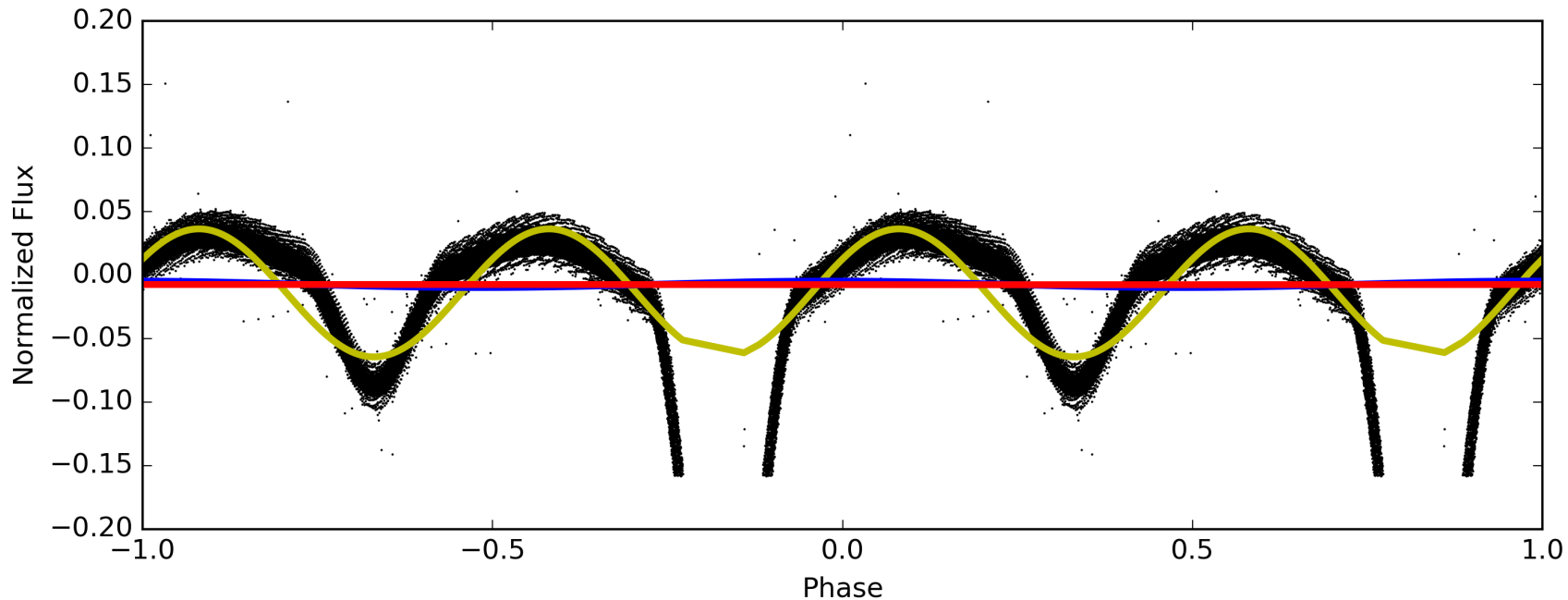
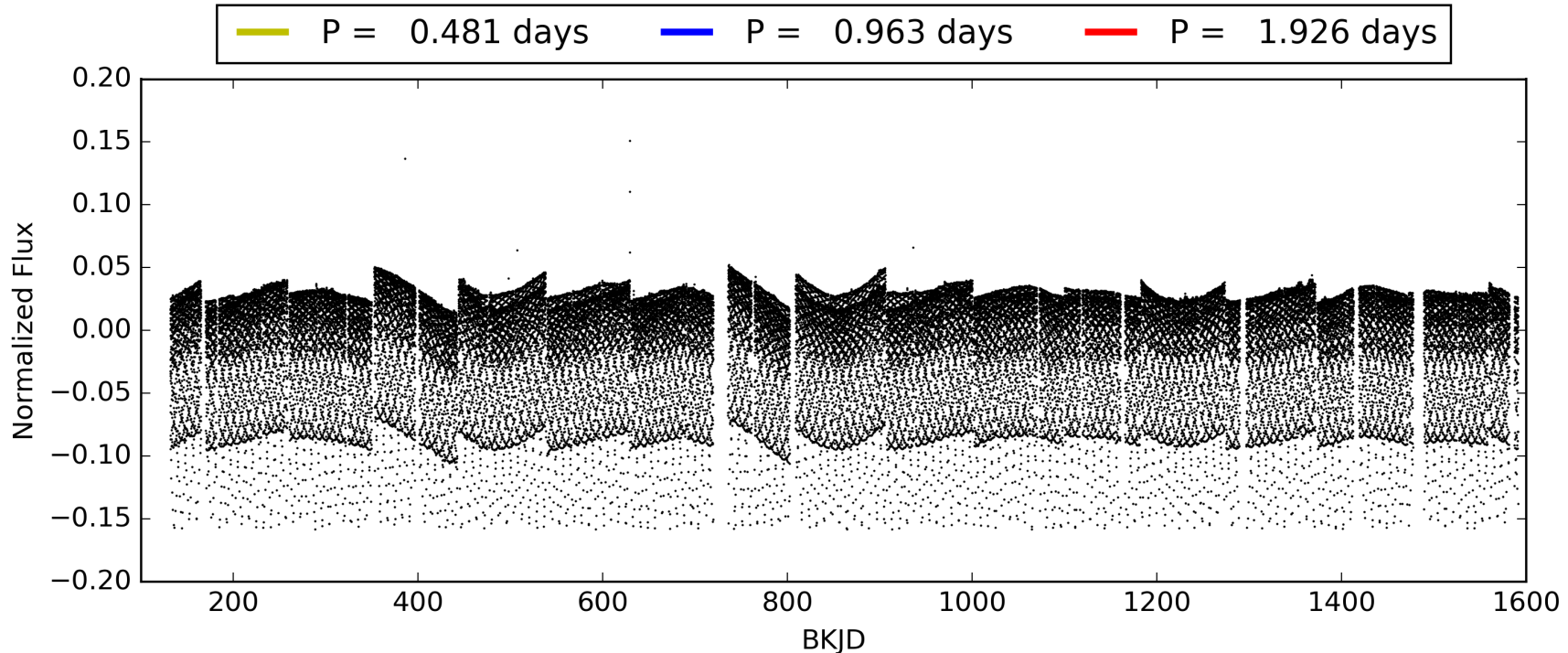
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 21:00:29 Z

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

TCE 005471619-02, PDC Light Curves

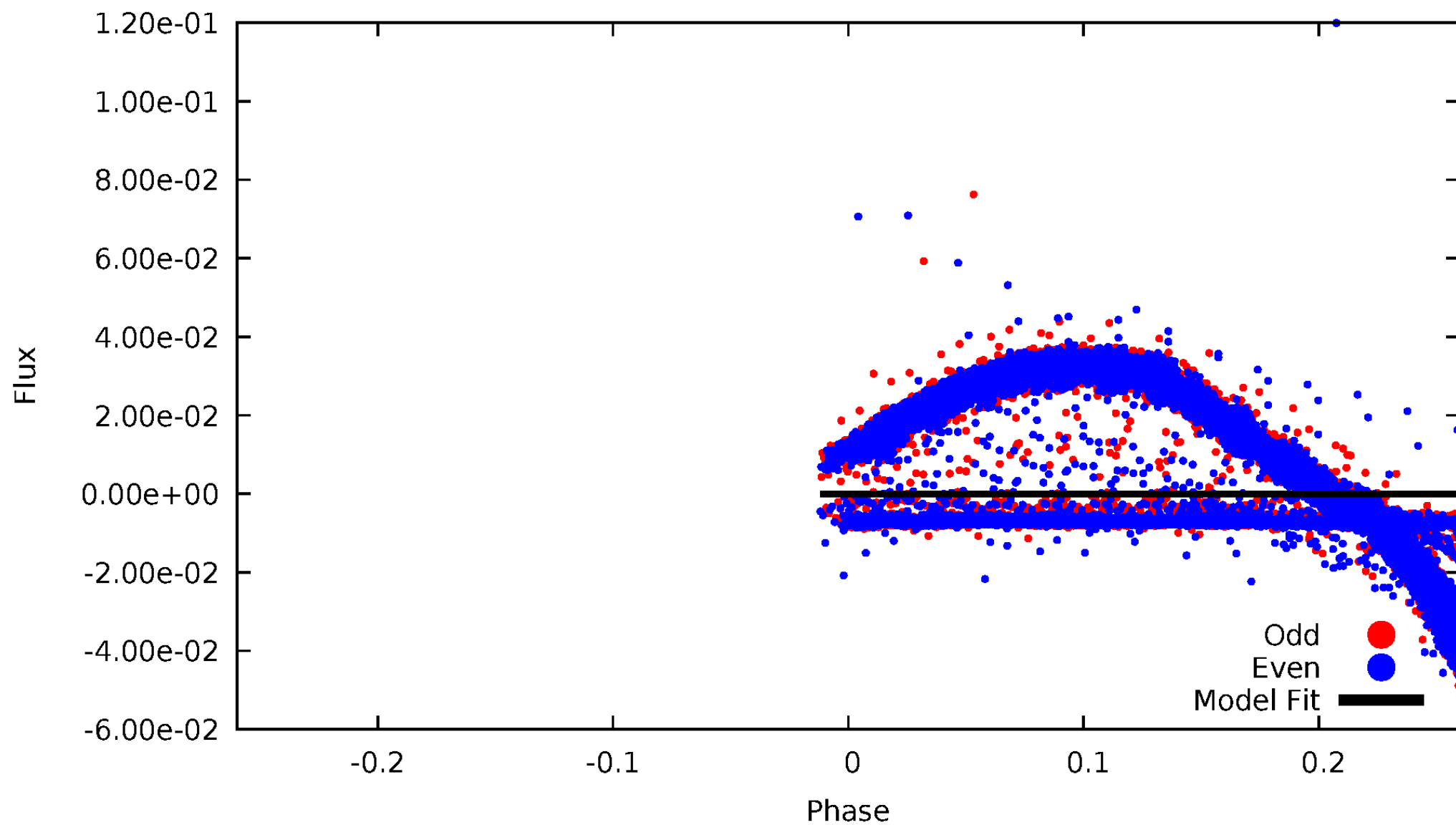


TCE 005471619-02



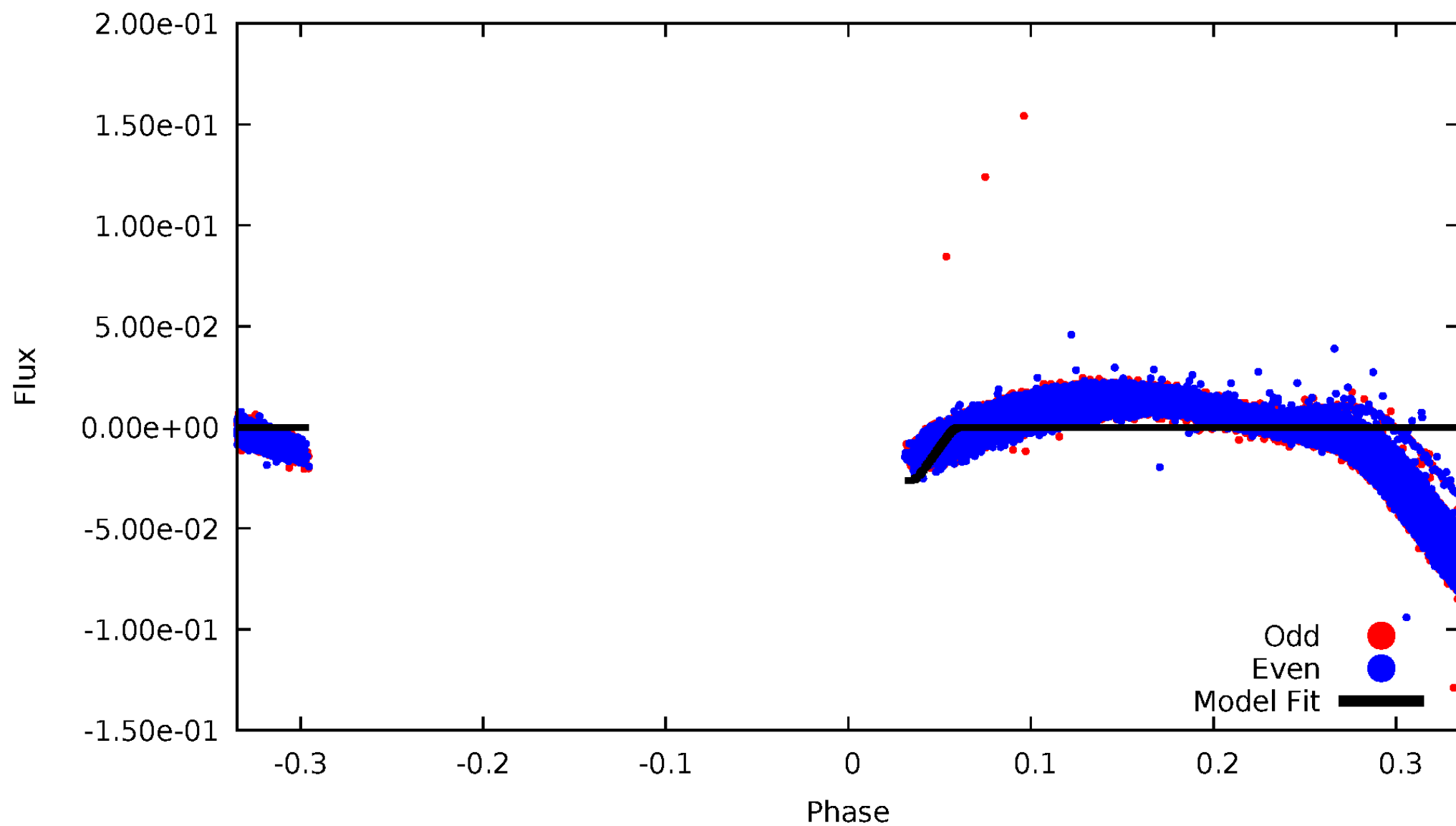
DV Odd/Even

TCE 005471619-02



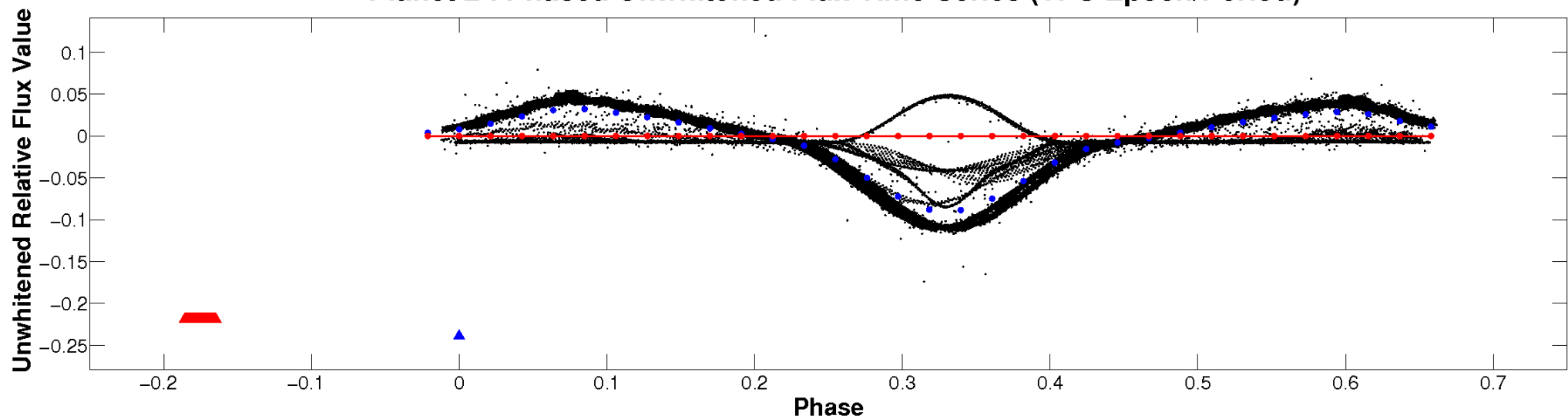
ALT Odd/Even

TCE 005471619-02

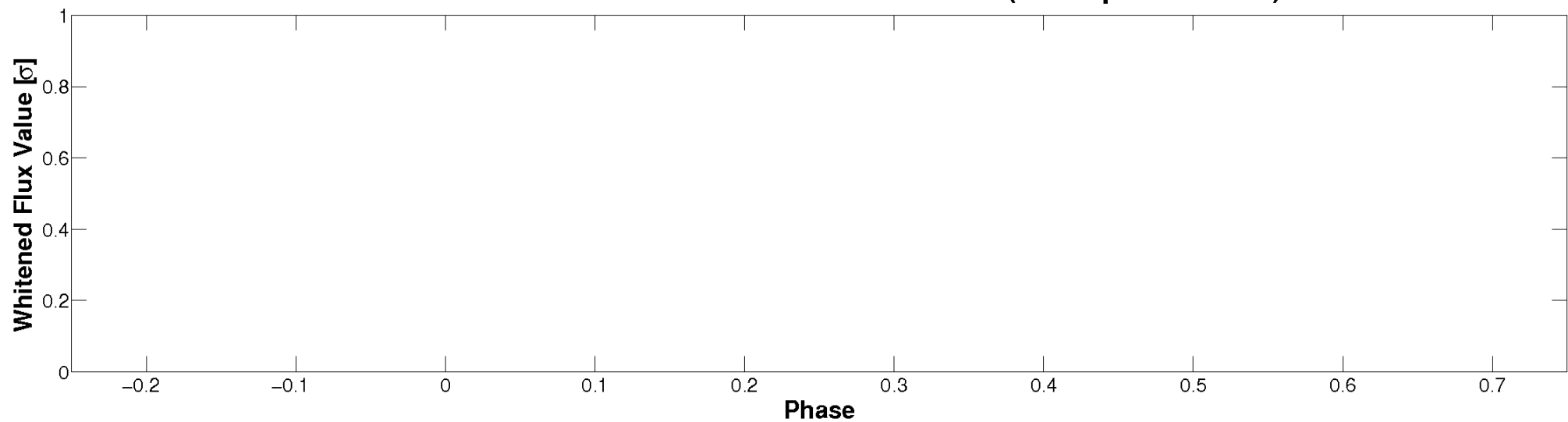


Non-Whitened Vs. Whitened Light Curve

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

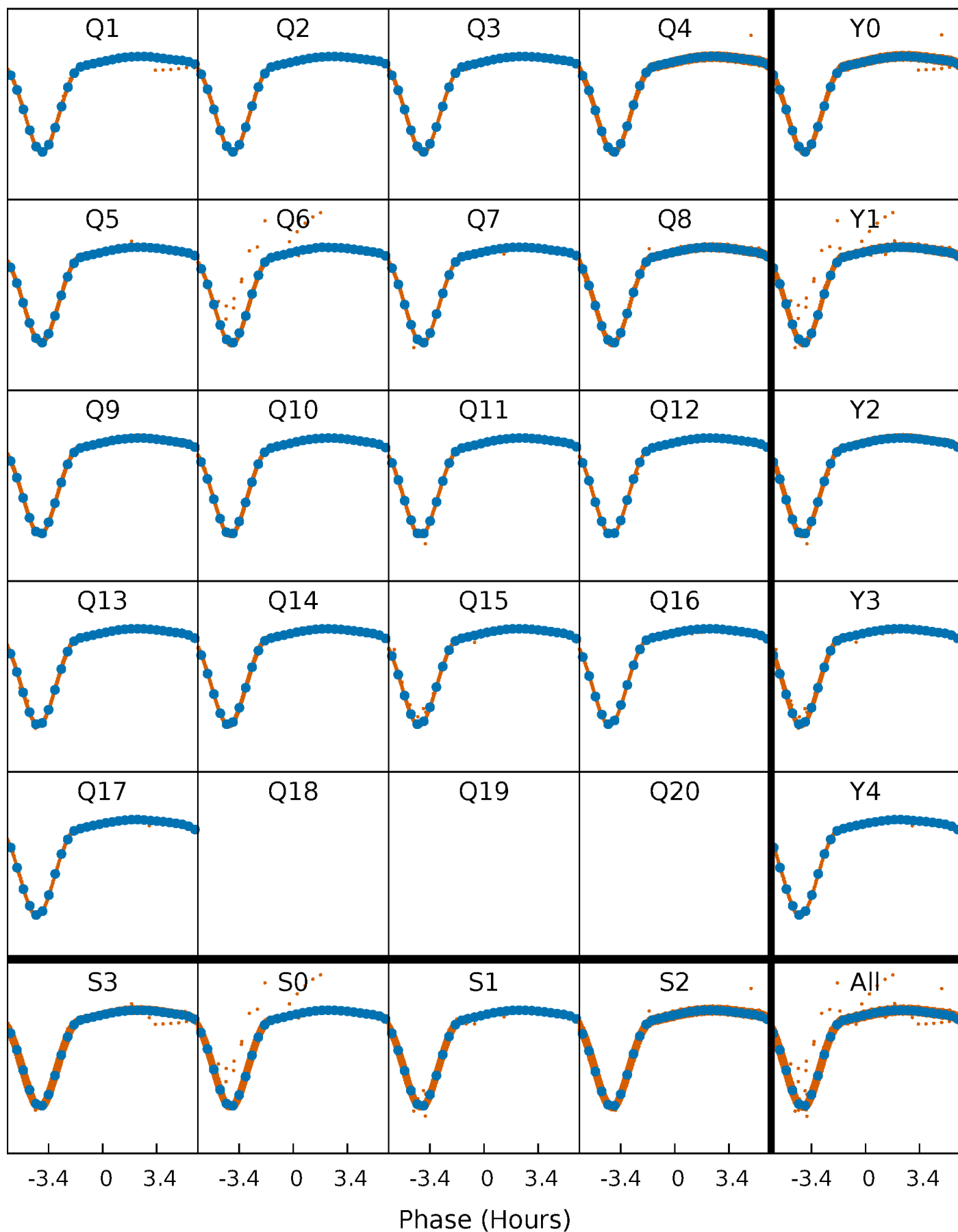


Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)



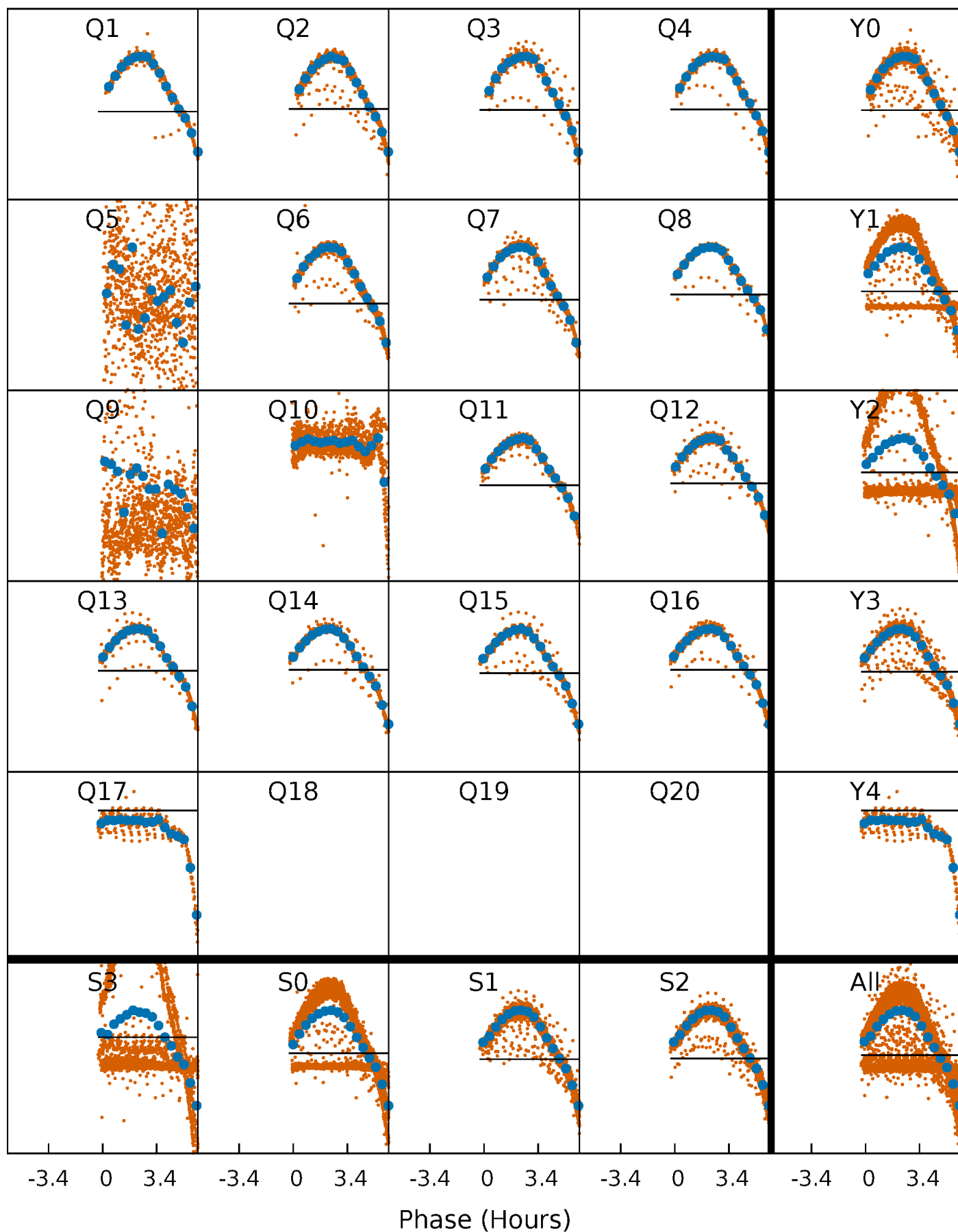
PDC Quarter-Phased Transit Curves

TCE 005471619-02 P= 0.962844 Days $T_0=132.357027$ (BKJD)



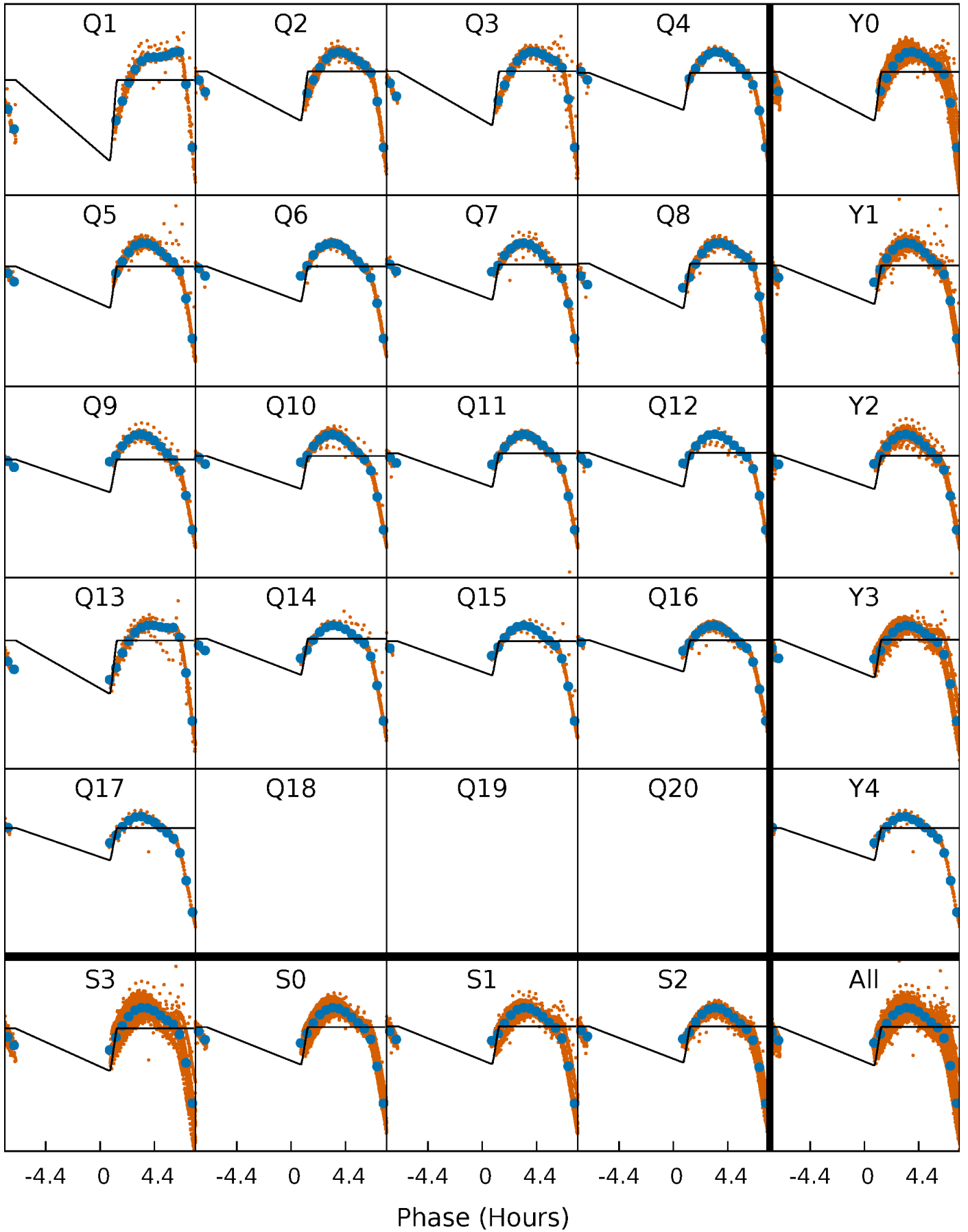
DV Quarter-Phased Transit Curves

TCE 005471619-02 P= 0.962844 Days $T_0=132.357027$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

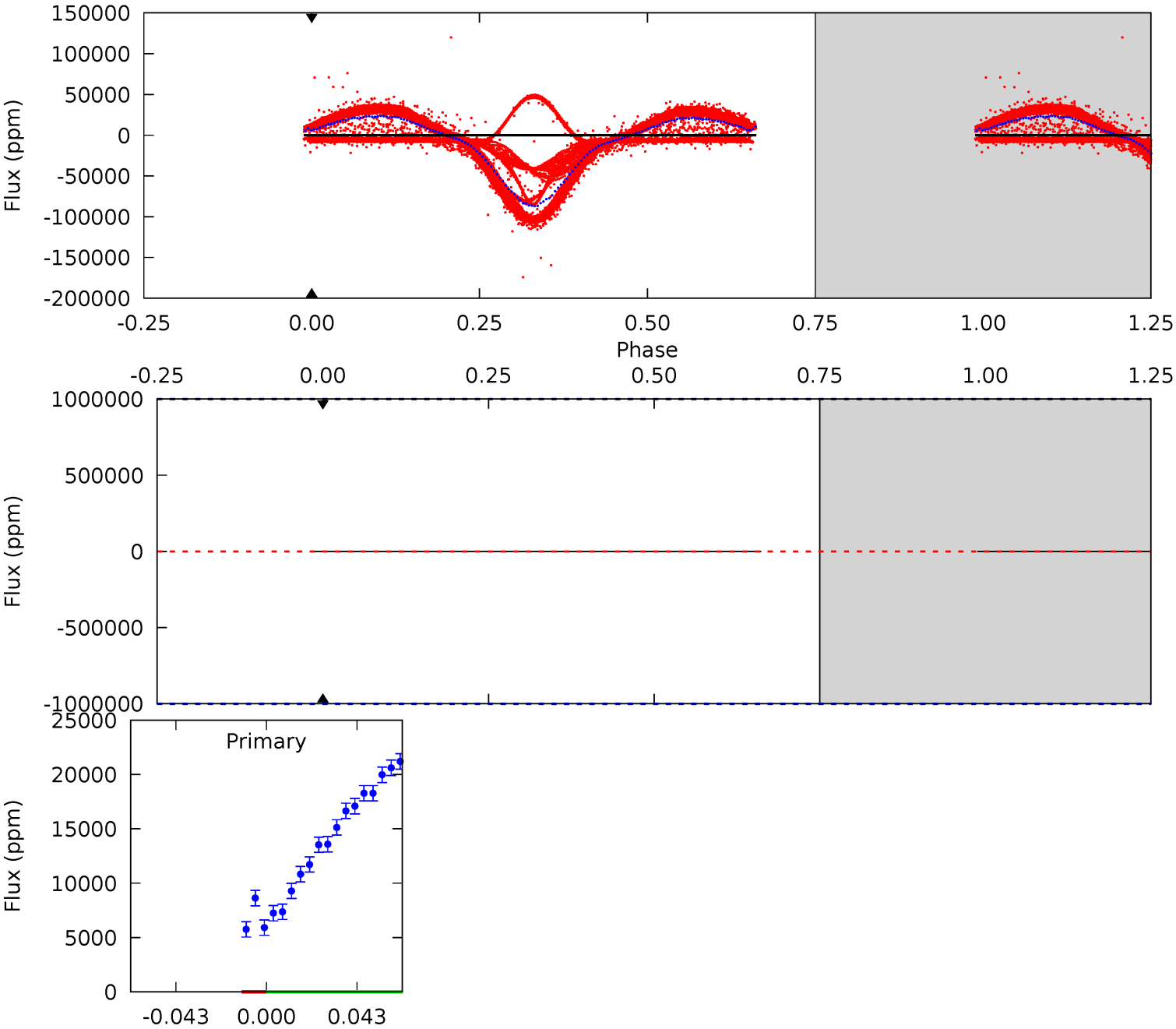
TCE 005471619-02 P= 0.962844 Days $T_0=132.315661$ (BKJD)



DV Model-Shift Uniqueness Test

005471619-02, P = 0.962844 Days, E = 131.394183 Days

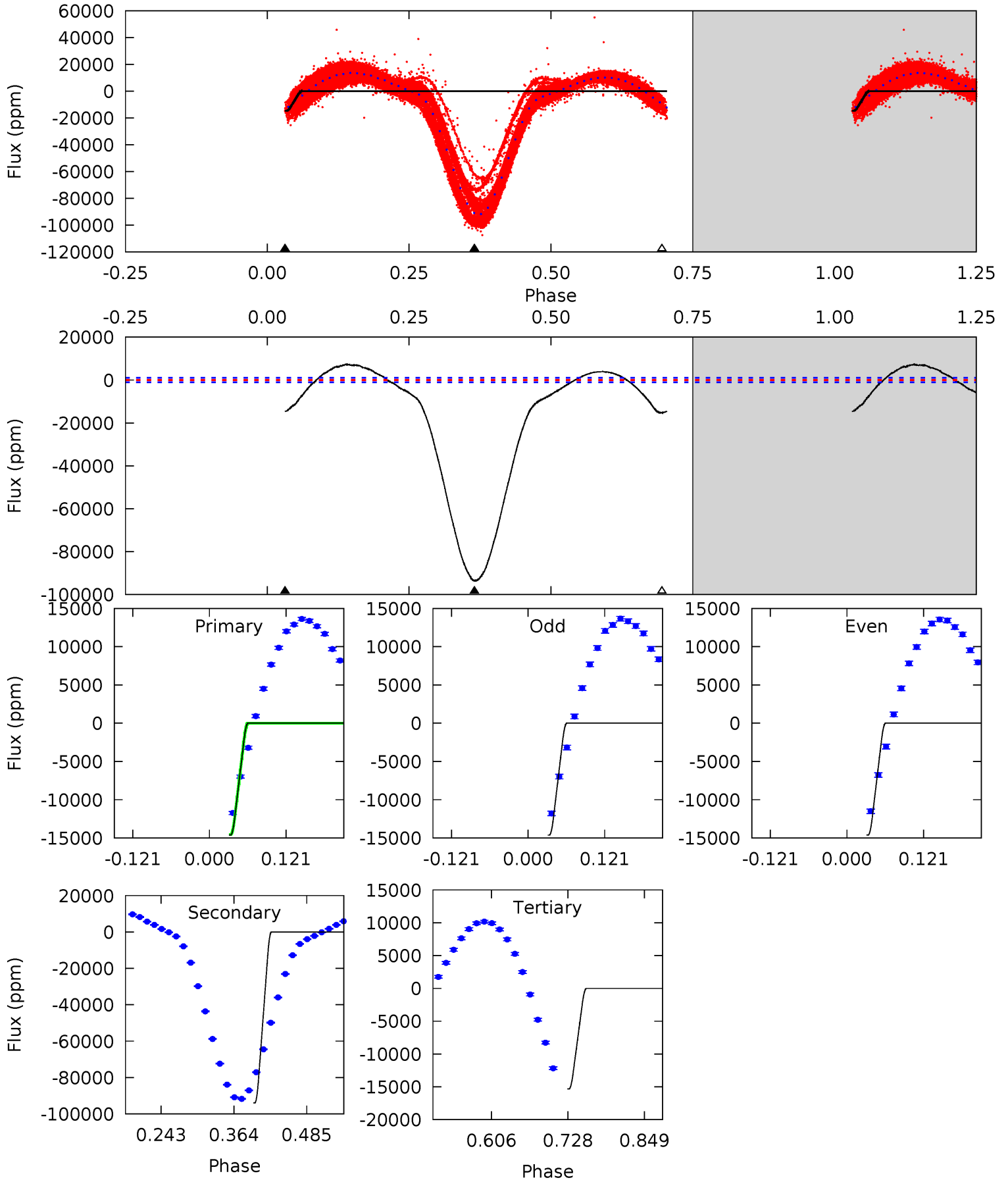
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

005471619-02, P = 0.962844 Days, E = 131.352817 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
63.5	407.7	66.6	0	4.52	1.55	23.3	-3.10	63.5	341.1	407.7	0.01	1.06	0.07	0



Stellar Parameters For KIC 005471619

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8059^{+224}_{-336}	$3.885^{+0.328}_{-0.102}$	$-0.240^{+0.200}_{-0.300}$	$2.599^{+0.347}_{-0.971}$	$1.891^{+0.076}_{-0.428}$	$0.152^{+0.376}_{-0.040}$
	+3%/-4%	+8%/-3%	+83%/-125%	+13%/-37%	+4%/-23%	+247%/-27%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 005471619-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$20.18^{+20.72}_{-13.89}$	5114^{+321}_{-551}	8109^{+48392}_{-42841}	$4.552^{+181.408}_{-96.180}$
Alt.	-93894 ± 230	$44.25^{+27.56}_{-23.43}$	5123^{+338}_{-486}	12742^{+15405}_{-3896}	16^{+57}_{-10}

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

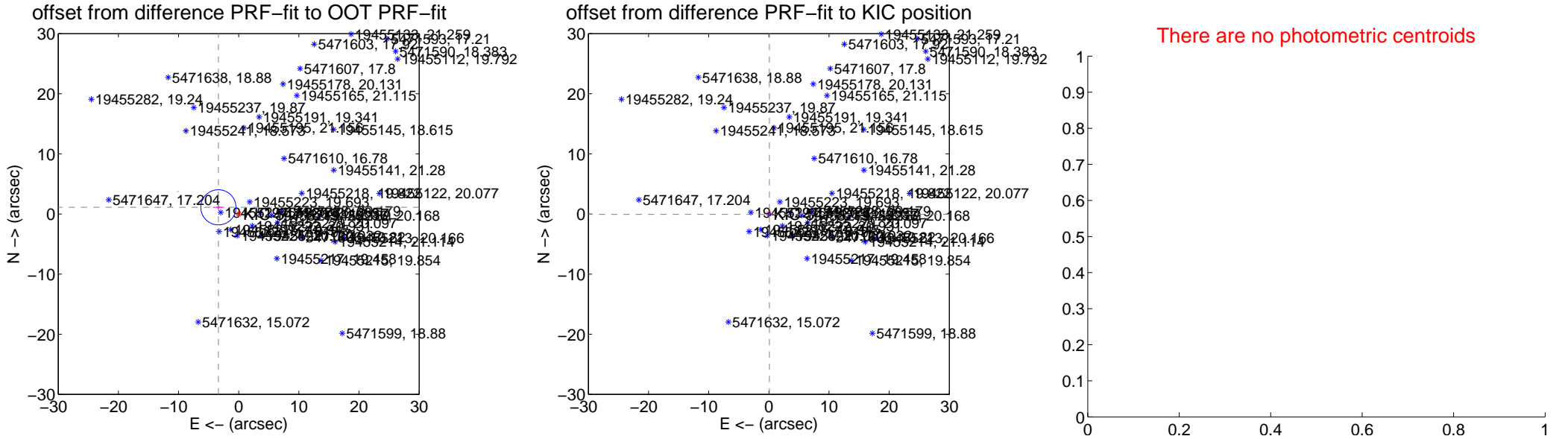
DV Centroid Data

Supplemental centroid analysis for 005471619-02. Kepler magnitude: 12.37. Transit SNR -1.00

There are 0 quarters with good PRF difference image offsets

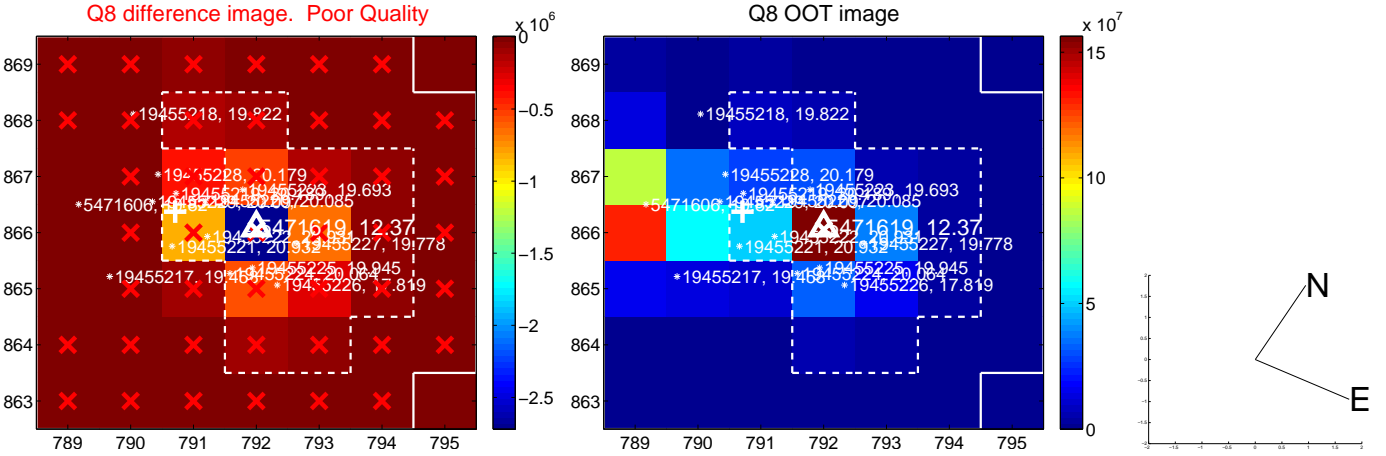
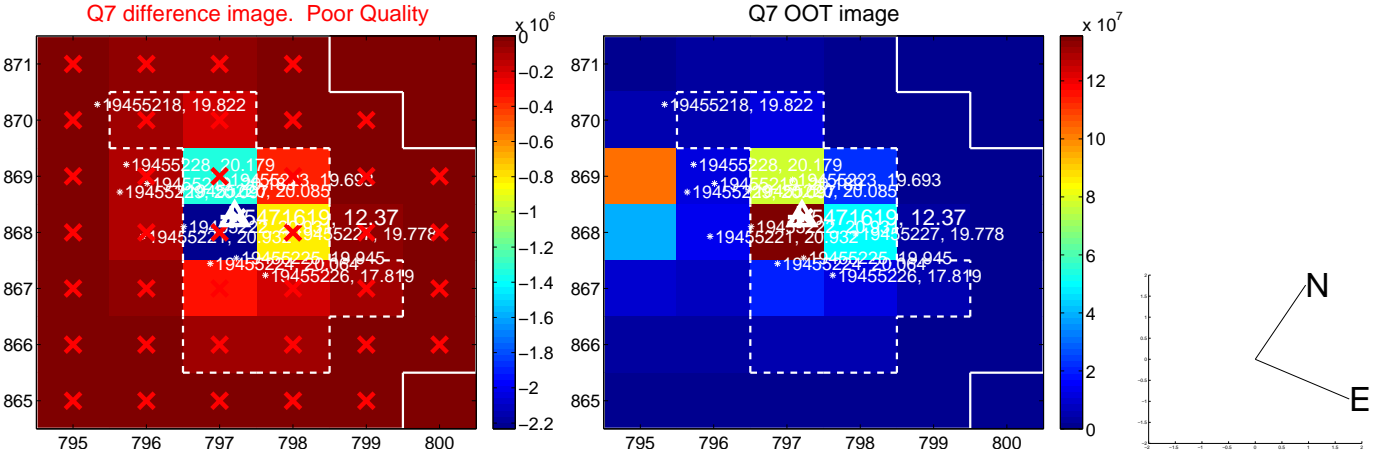
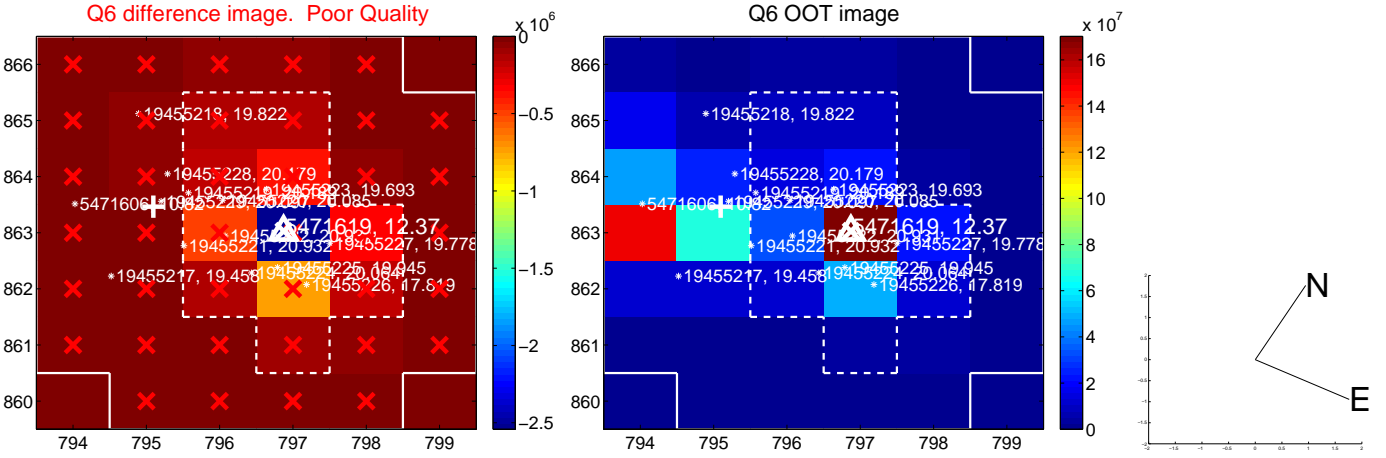
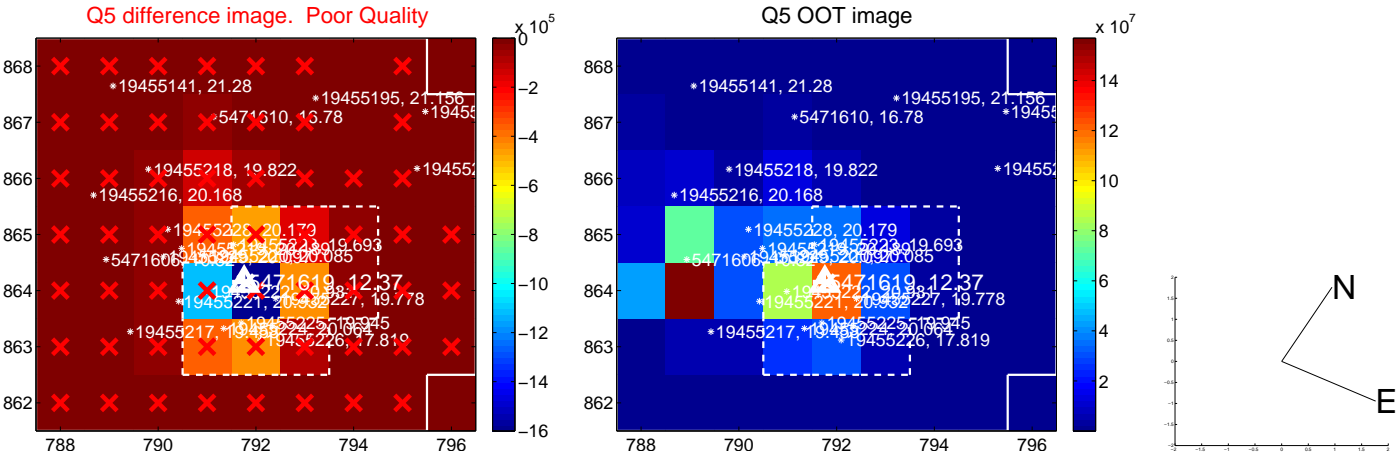
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.556 ± 0.975	3.65	3.378 ± 0.922	1.110 ± 0.332
PRF-fit source offset from KIC position	0.107 ± 0.069	1.56	-0.090 ± 0.069	-0.058 ± 0.070
photometric centroid source offset	—	—	—	—

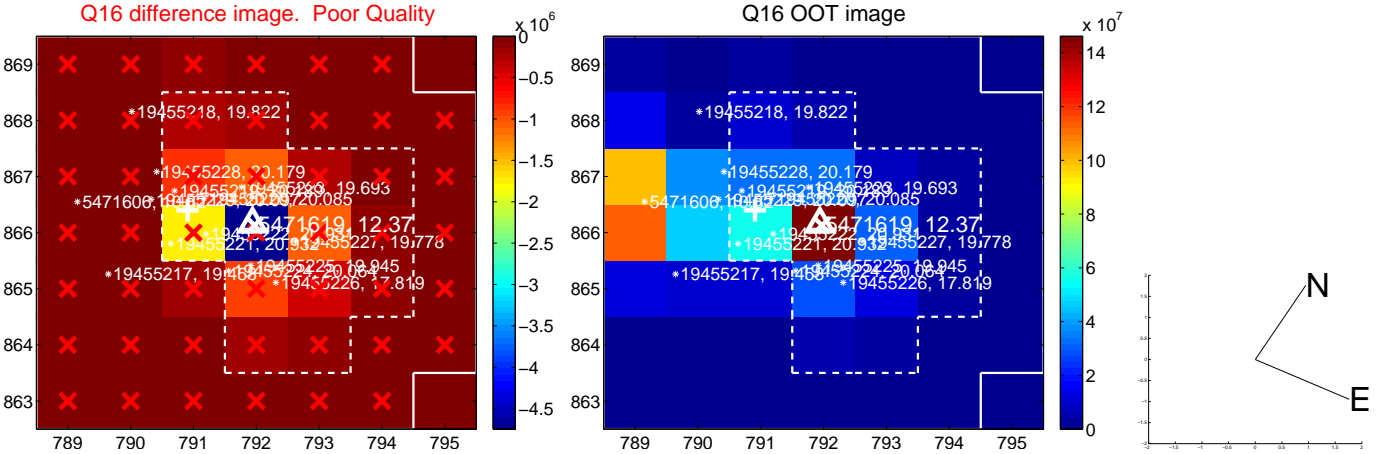
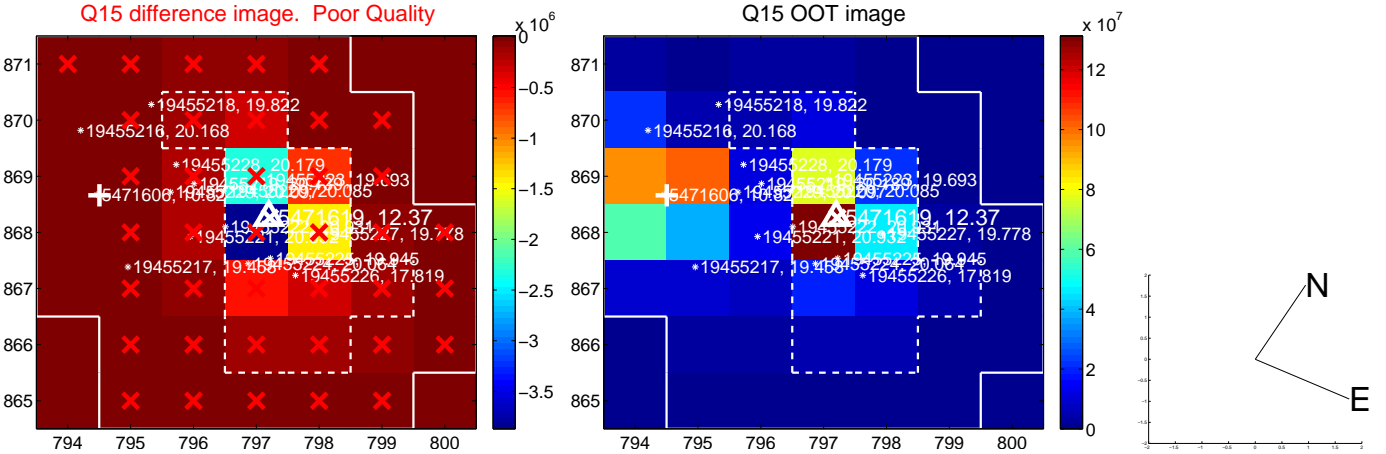
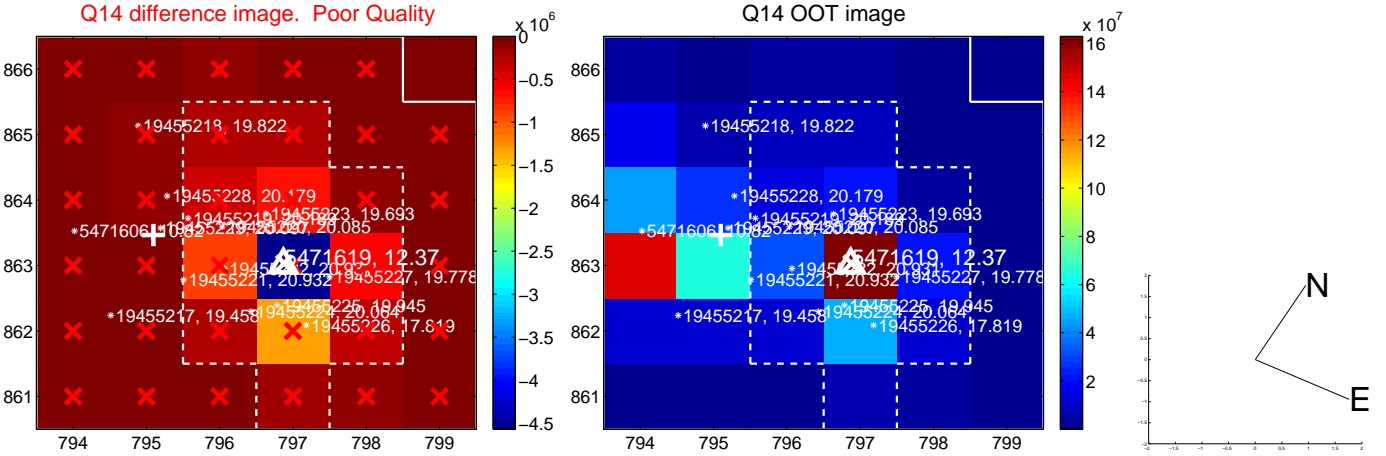
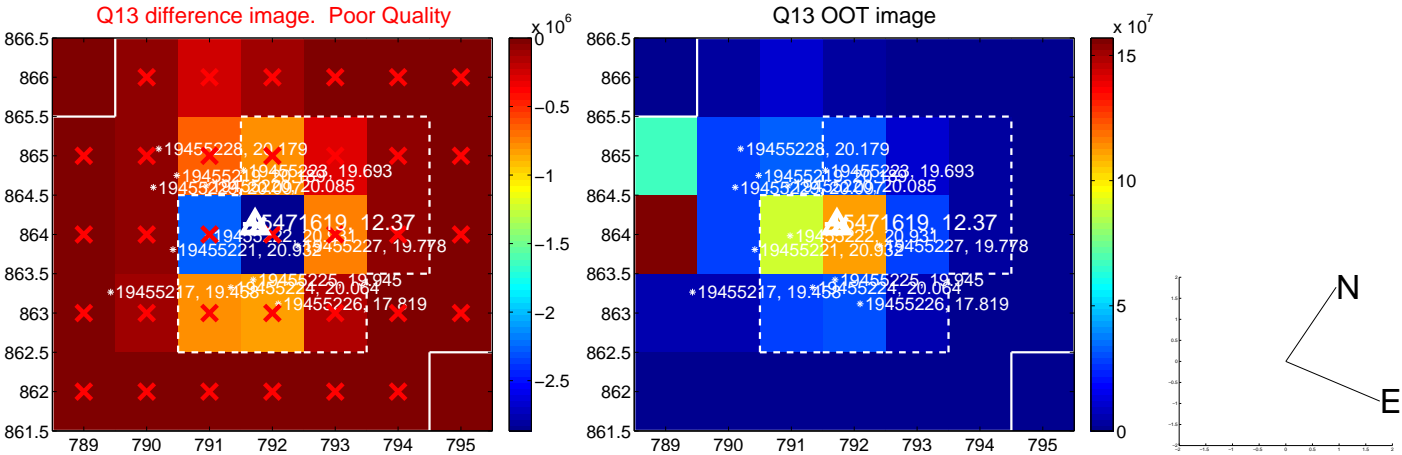


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

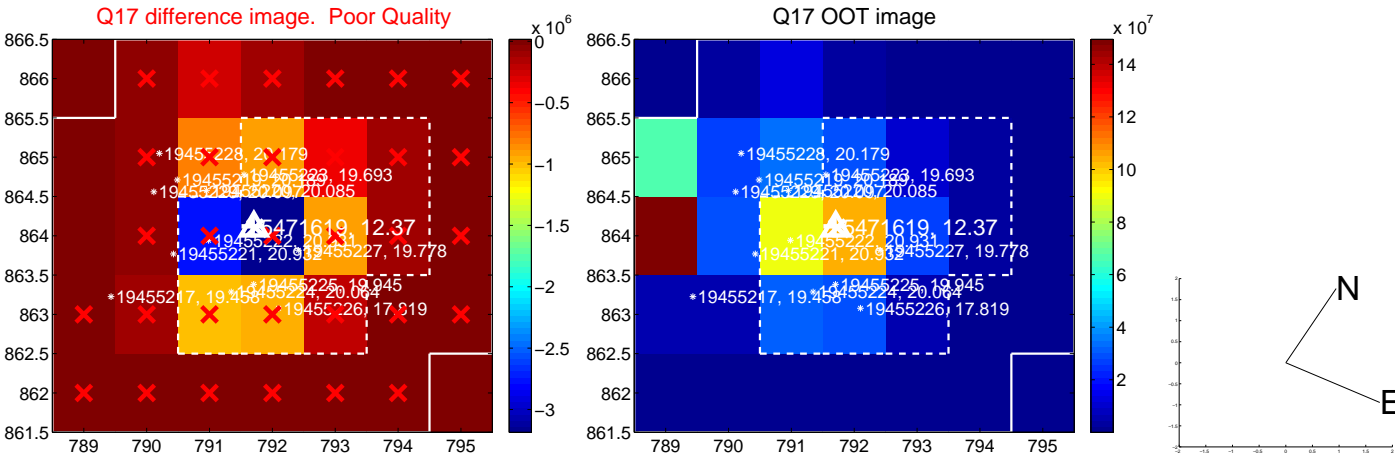
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



folded centroid time series figure for this object.

UKIRT Image

Declination

