

KIC 005287619

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})
005287619-01	OBS	No	0.560442	131.709687	417.7	0.634	7.8	8.3	1.81	7274	3.87	35937.25
005287619-02	OBS	No	0.560421	132.009558	230.9	1.435	8.9	7.5	1.81	7274	3.19	35939.08

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005287619-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005287619-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD

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

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

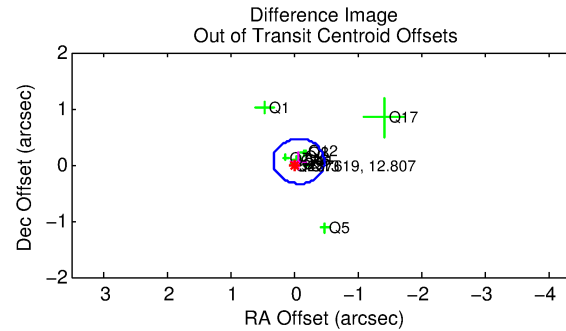
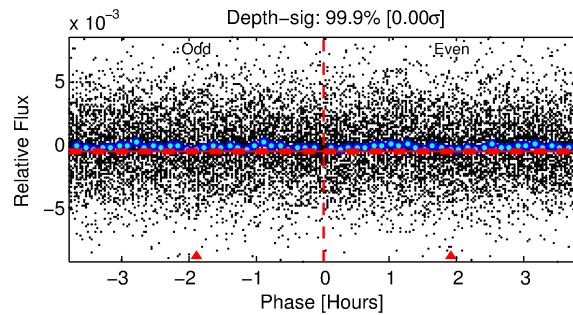
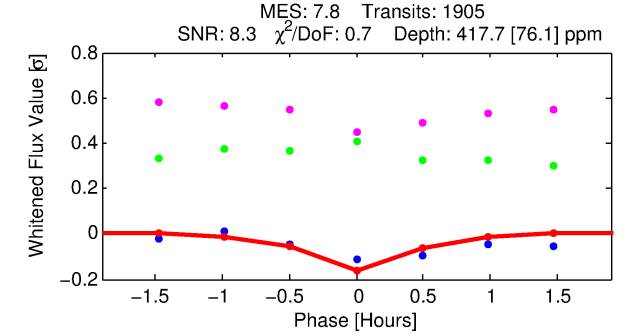
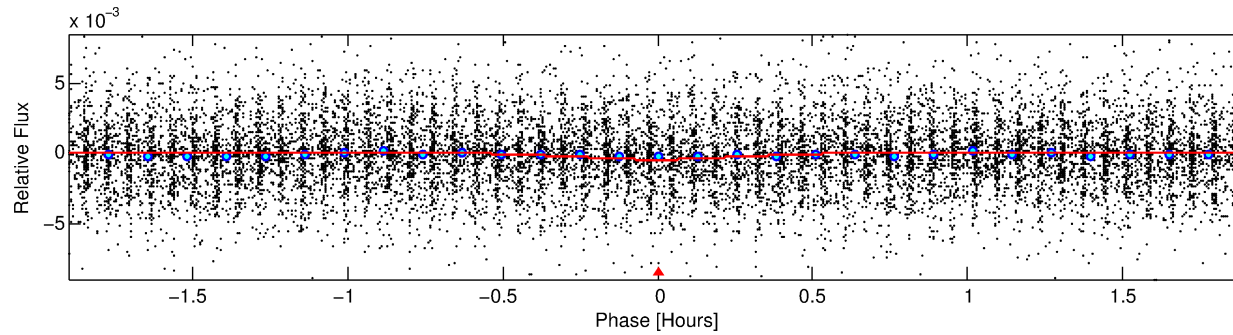
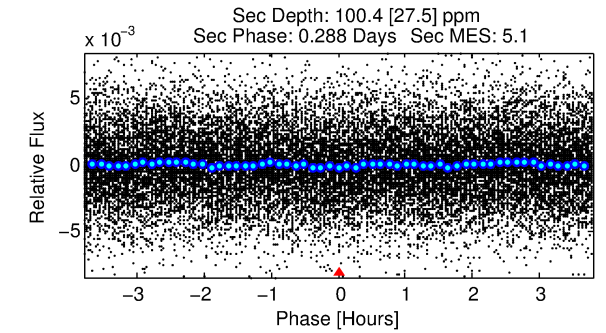
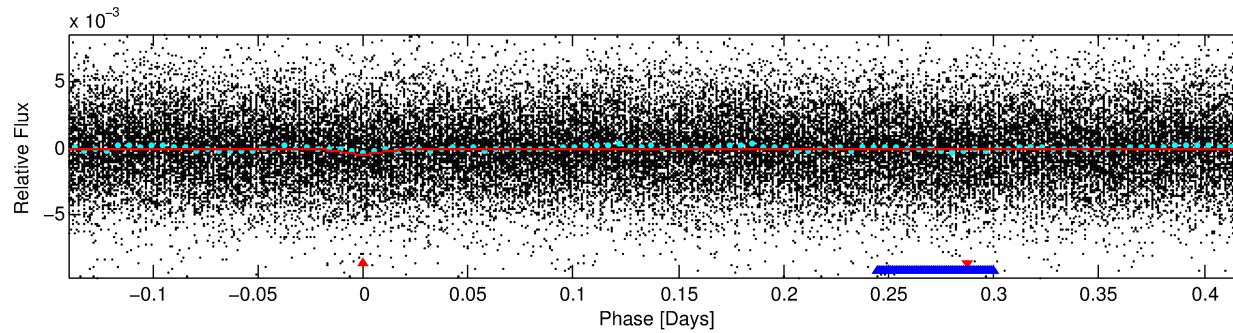
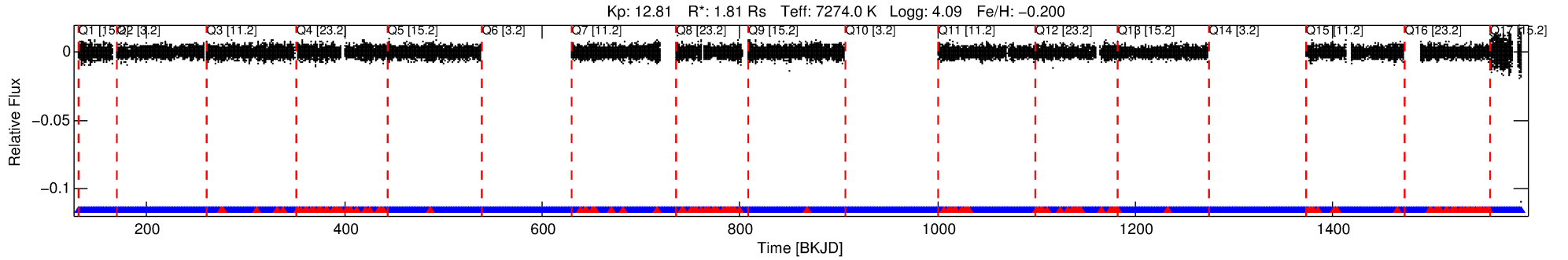
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005287619-01

No Significant Match Found

DV One-Page Summary

KIC: 5287619 Candidate: 1 of 2 Period: 0.560 d



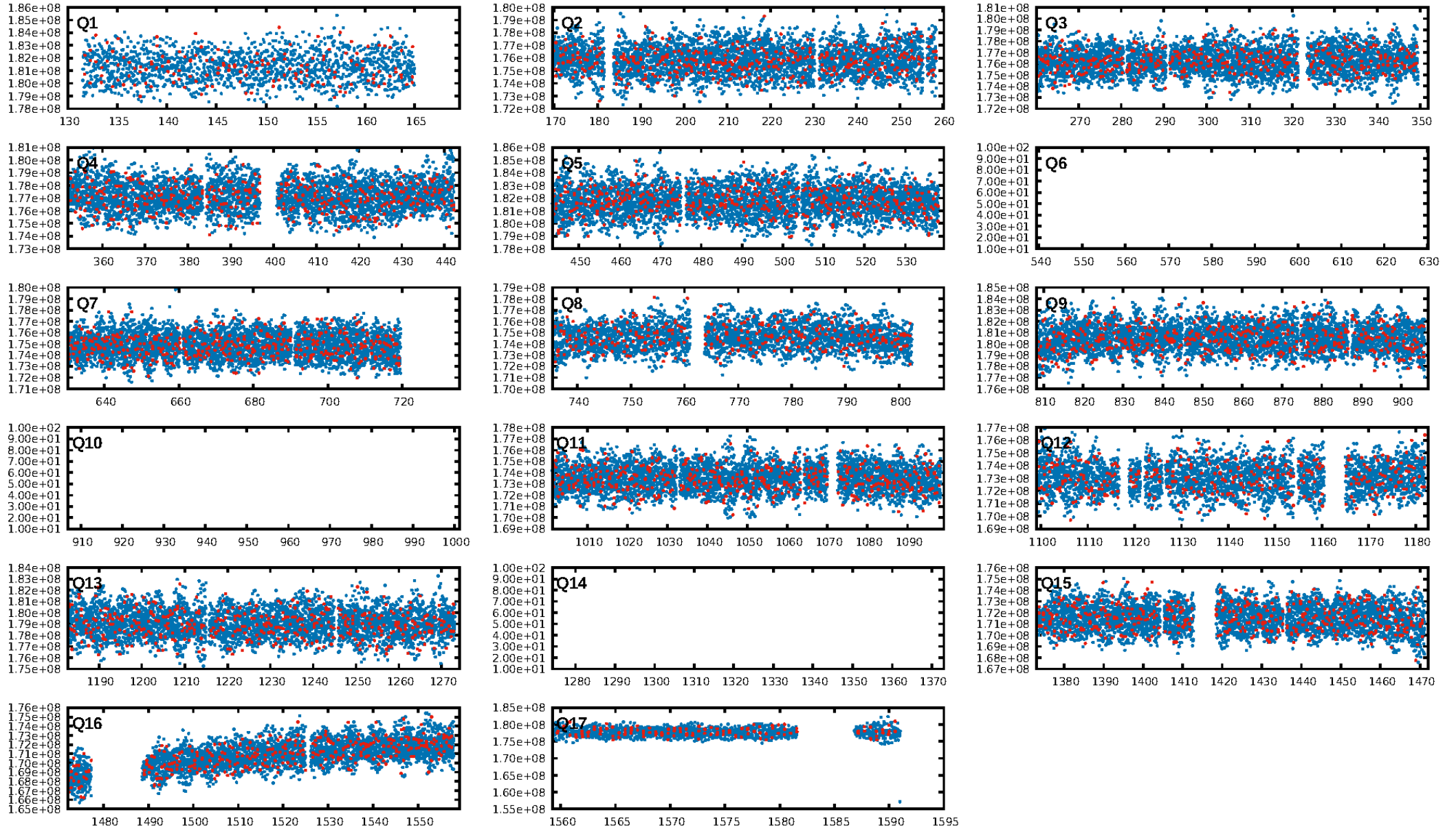
DV Fit Results:

Period = 0.56044 [0.00001] d
Epoch = 131.7097 [0.0019] BKJD
Rp/R* = 0.0195 [0.0176]
a/R* = 6.61 [34.27]
b = 0.30 [16.18]
Seff = 35937.25 [13340.72]
Teff = 3511 [326] K
Rp = 3.87 [3.65] Re
a = 0.0151 [0.0036] AU
Ag = 0.85 [1.57] [-0.10 σ]
Teffp = 5210 [2378] K [0.71 σ]

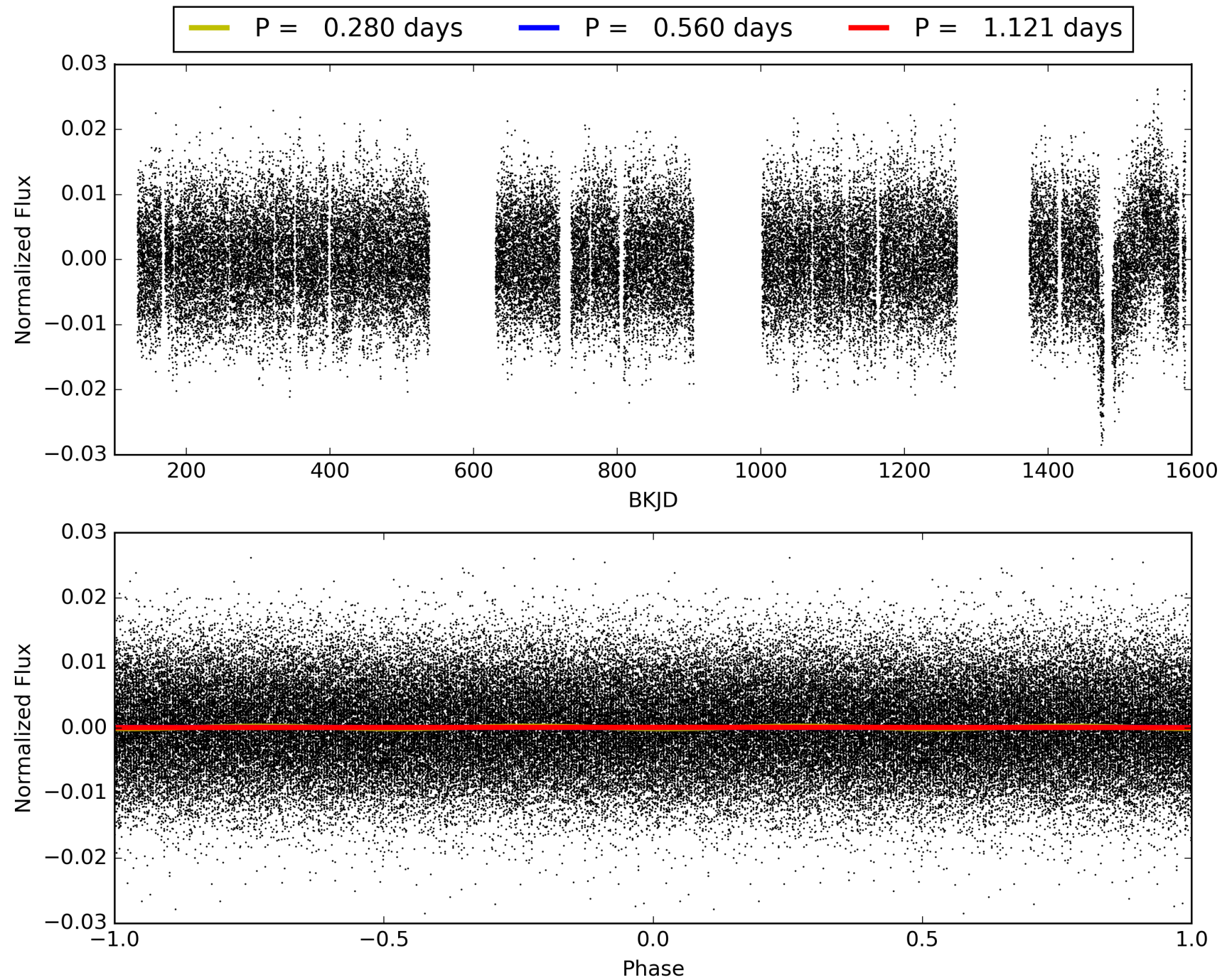
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.07e-31
RollingBand-fgt: 0.92 [1661/1798]
GhostDiagnostic-chr: 1.061
Centroid-sig: N/A
Centroid-so: 0.154 arcsec [1.85 σ]
OotOffset-rm: 0.096 arcsec [0.73 σ]
KicOffset-rm: 0.166 arcsec [1.22 σ]
OotOffset-st: 1/4/4/5 [14]
KicOffset-st: 1/4/4/5 [14]
DiffImageQuality-fgm: 0.64 [9/14]
DiffImageOverlap-fno: 0.93 [13/14]

TCE 005287619-01, PDC Light Curves

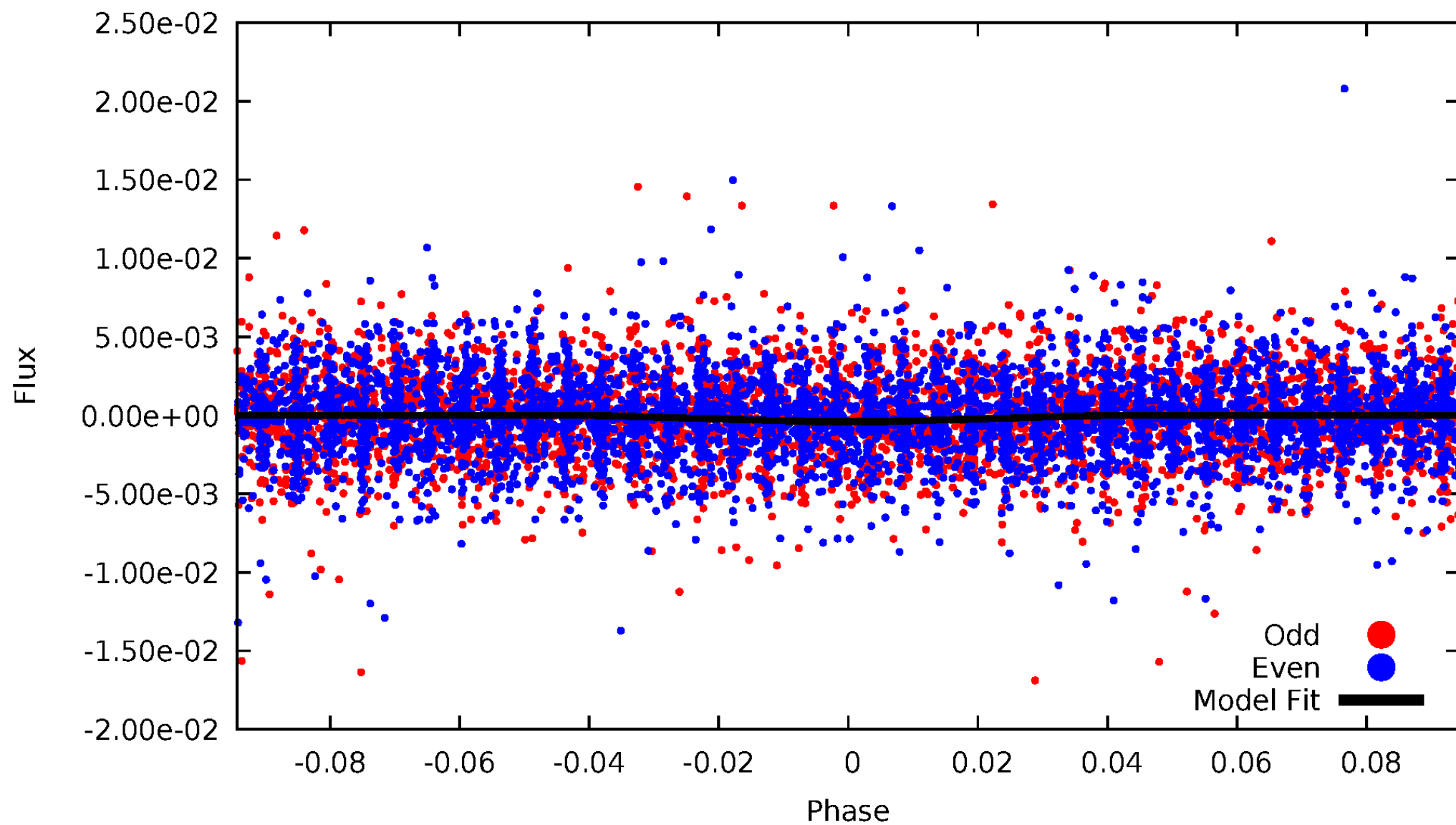


TCE 005287619-01



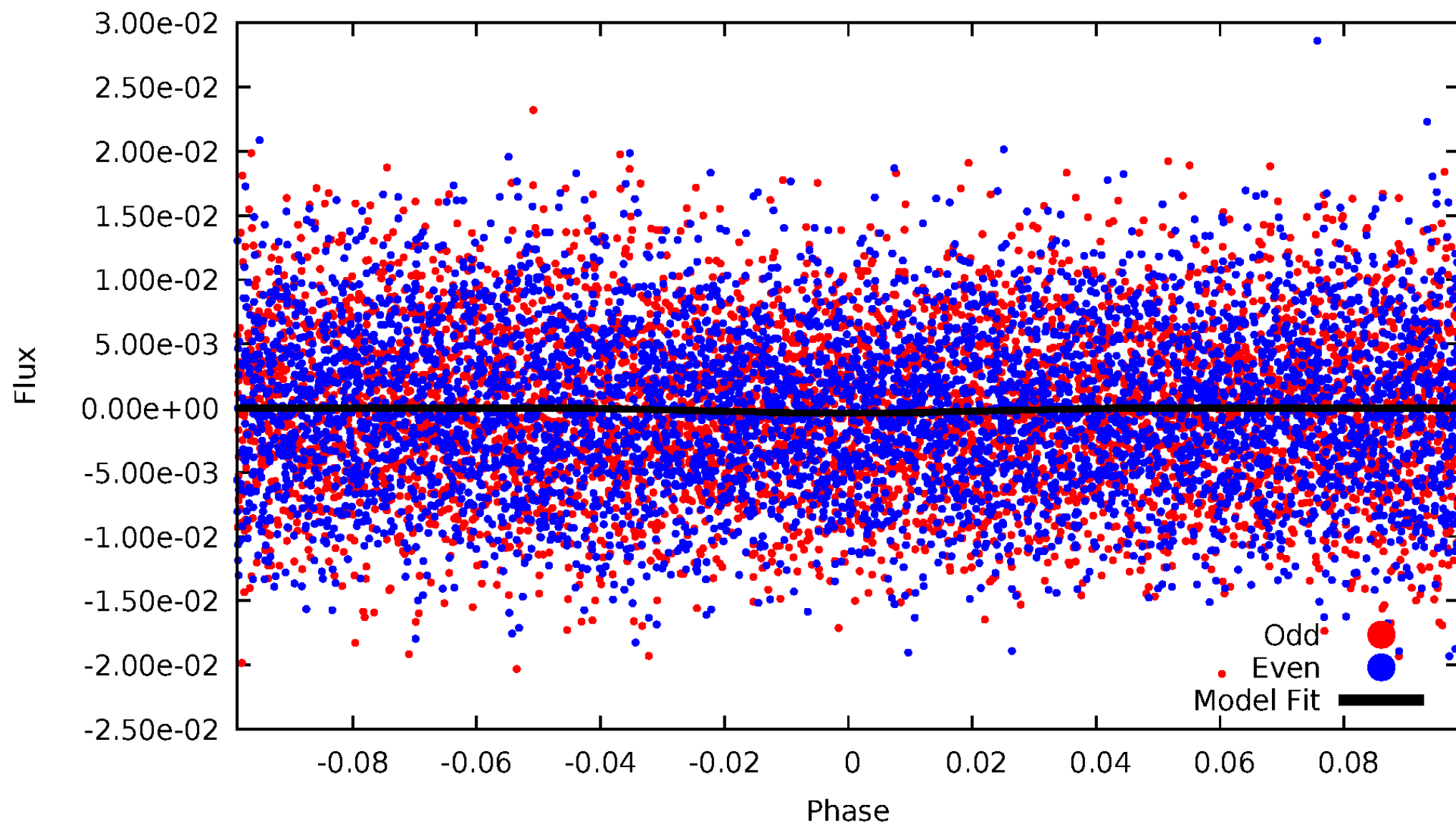
DV Odd/Even

TCE 005287619-01



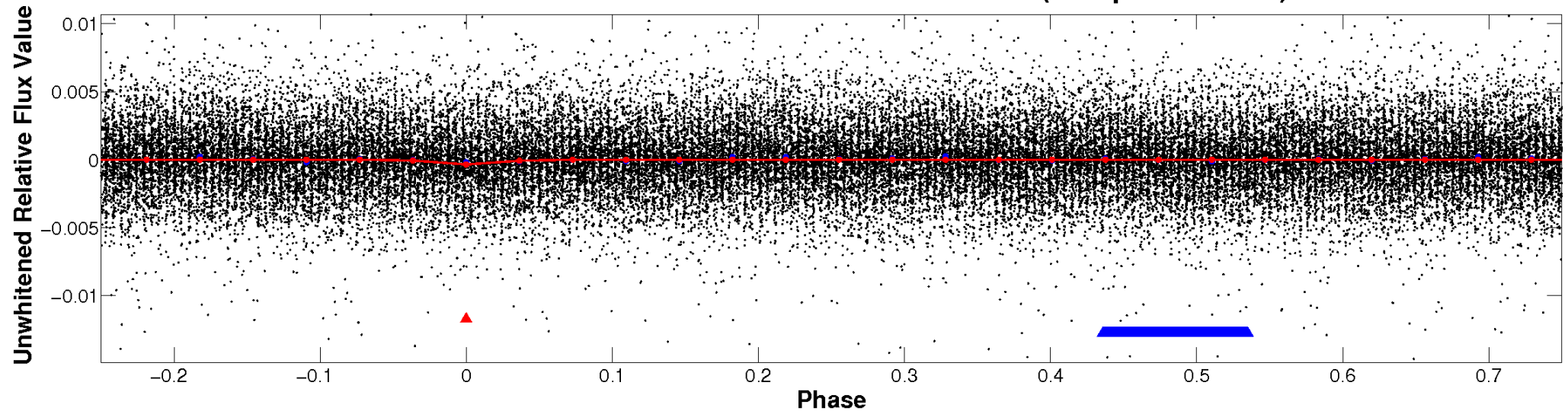
ALT Odd/Even

TCE 005287619-01

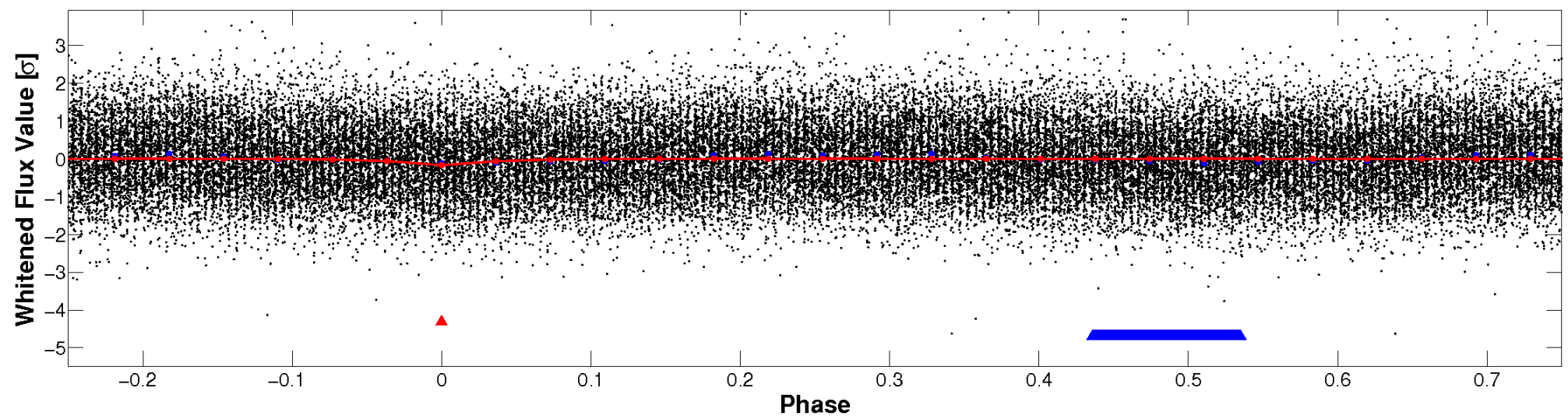


Non-Whitened Vs. Whitened Light Curve

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

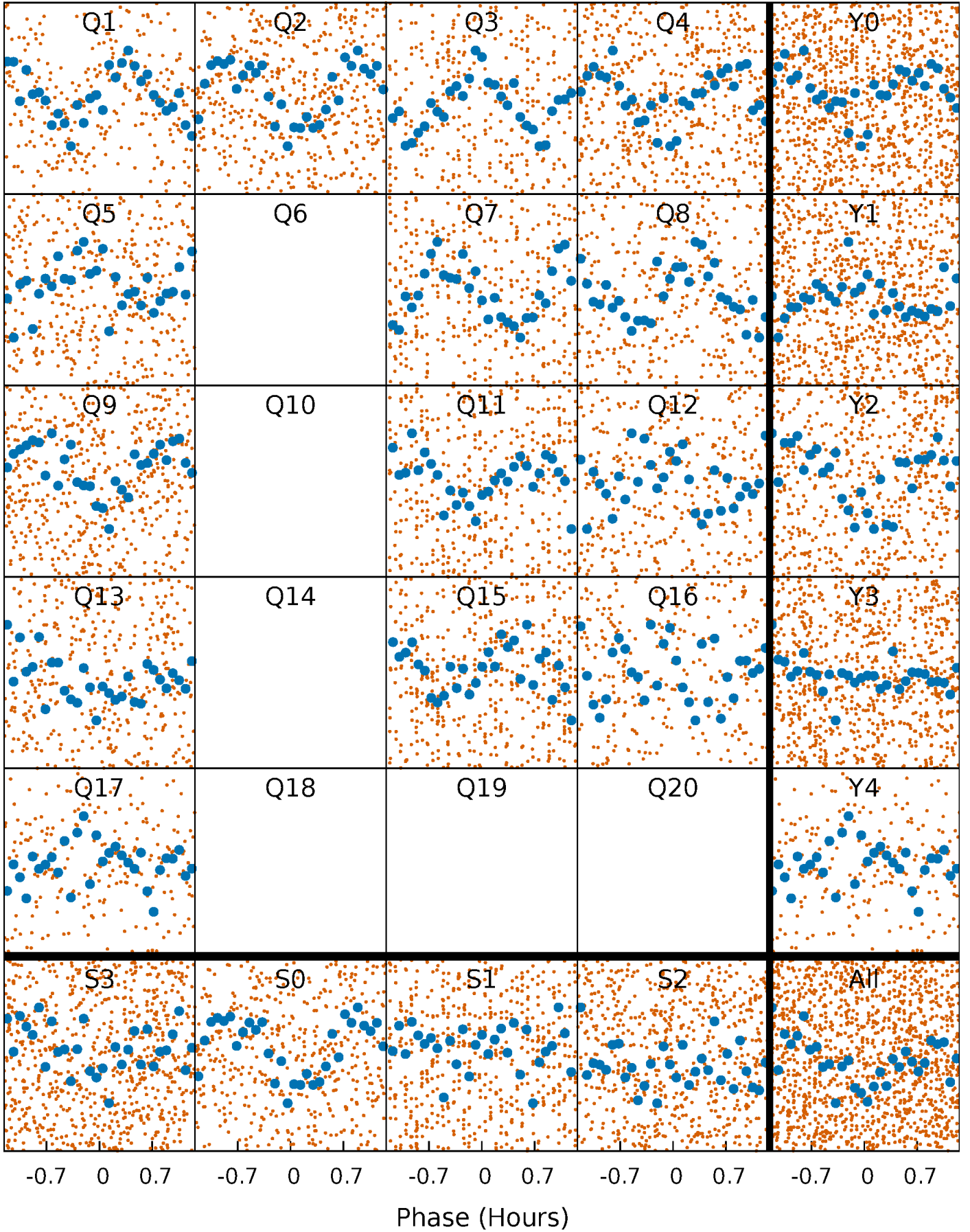


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



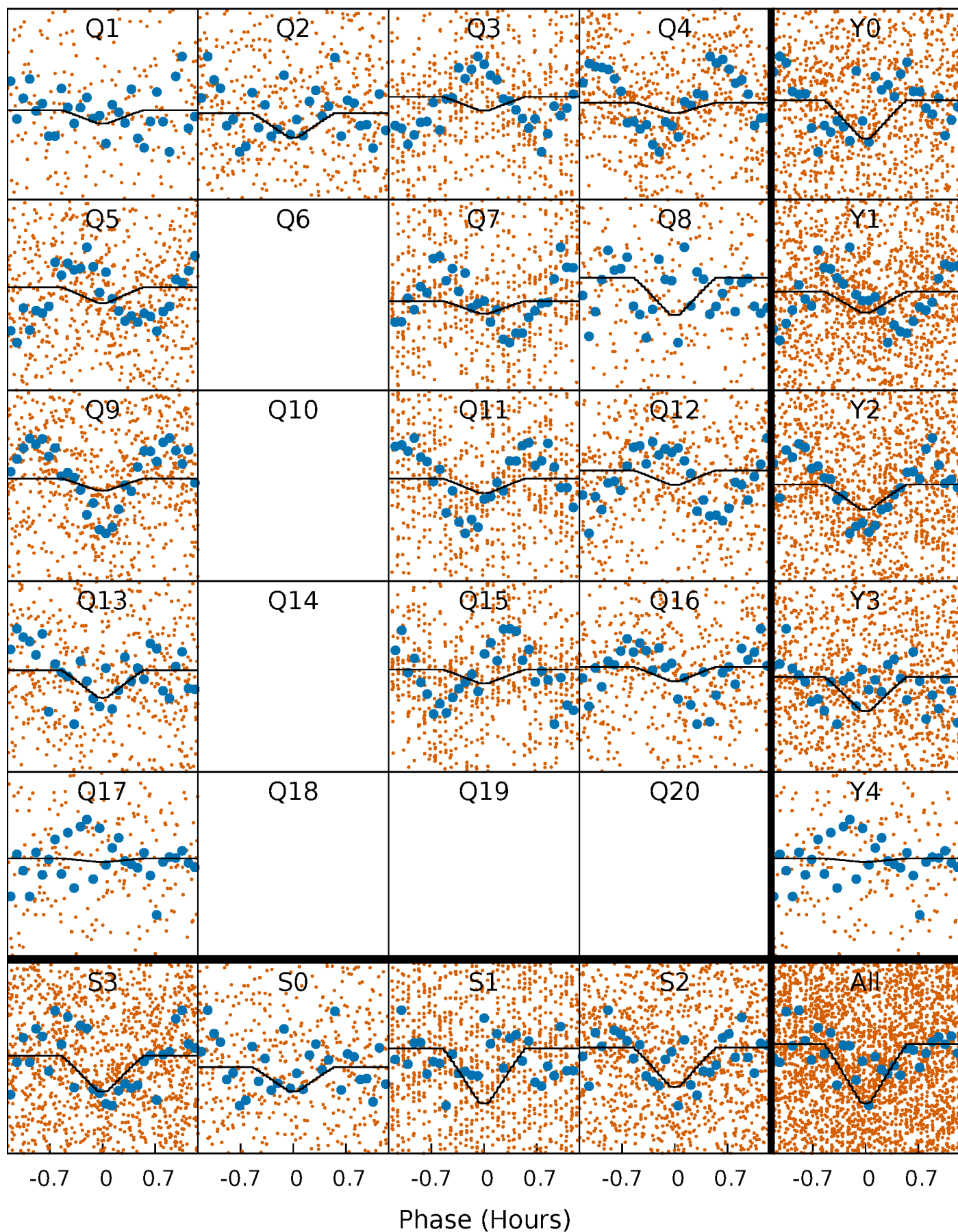
PDC Quarter-Phased Transit Curves

TCE 005287619-01 P= 0.560442 Days $T_0=131.709687$ (BKJD)



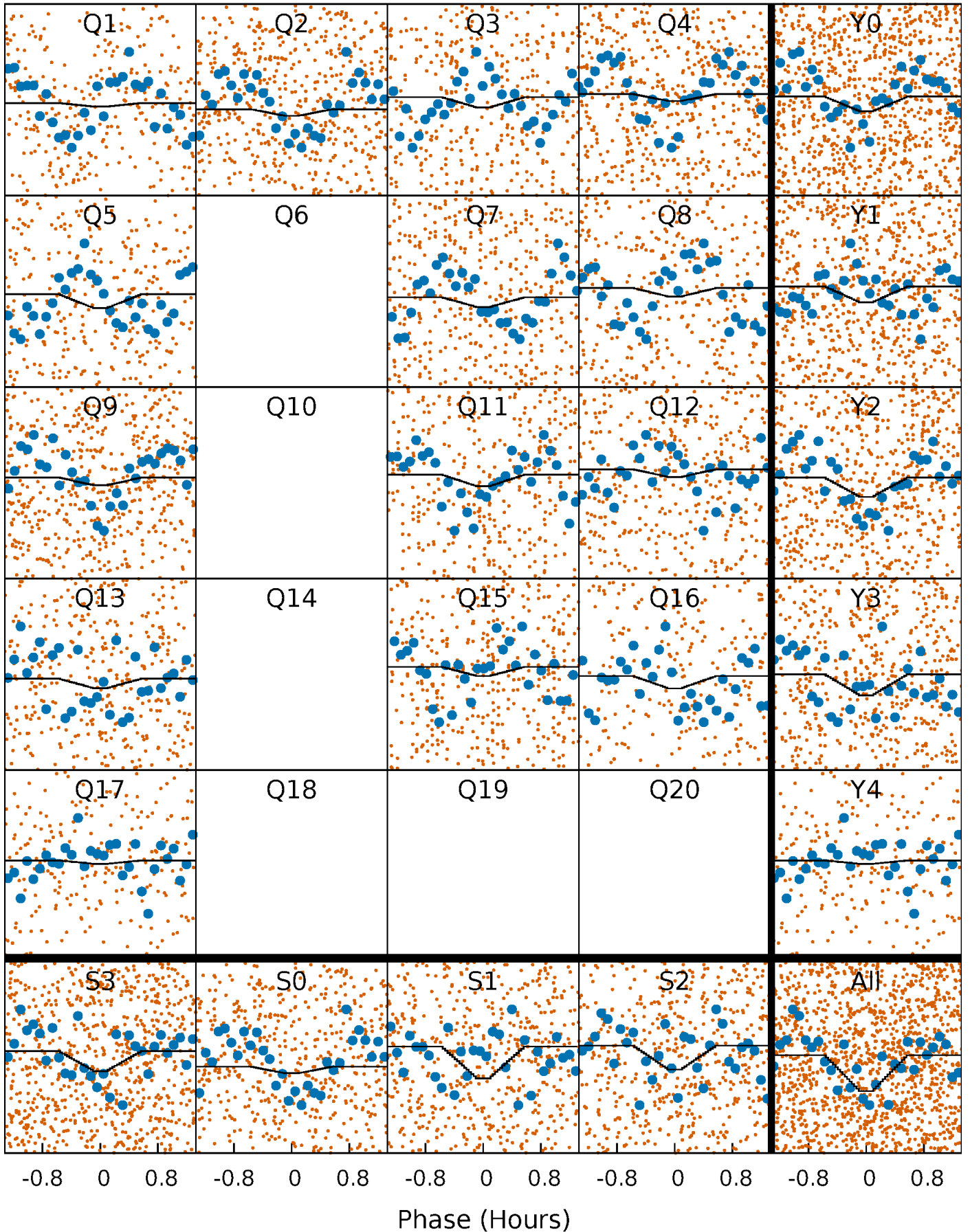
DV Quarter-Phased Transit Curves

TCE 005287619-01 P= 0.560442 Days $T_0=131.709687$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

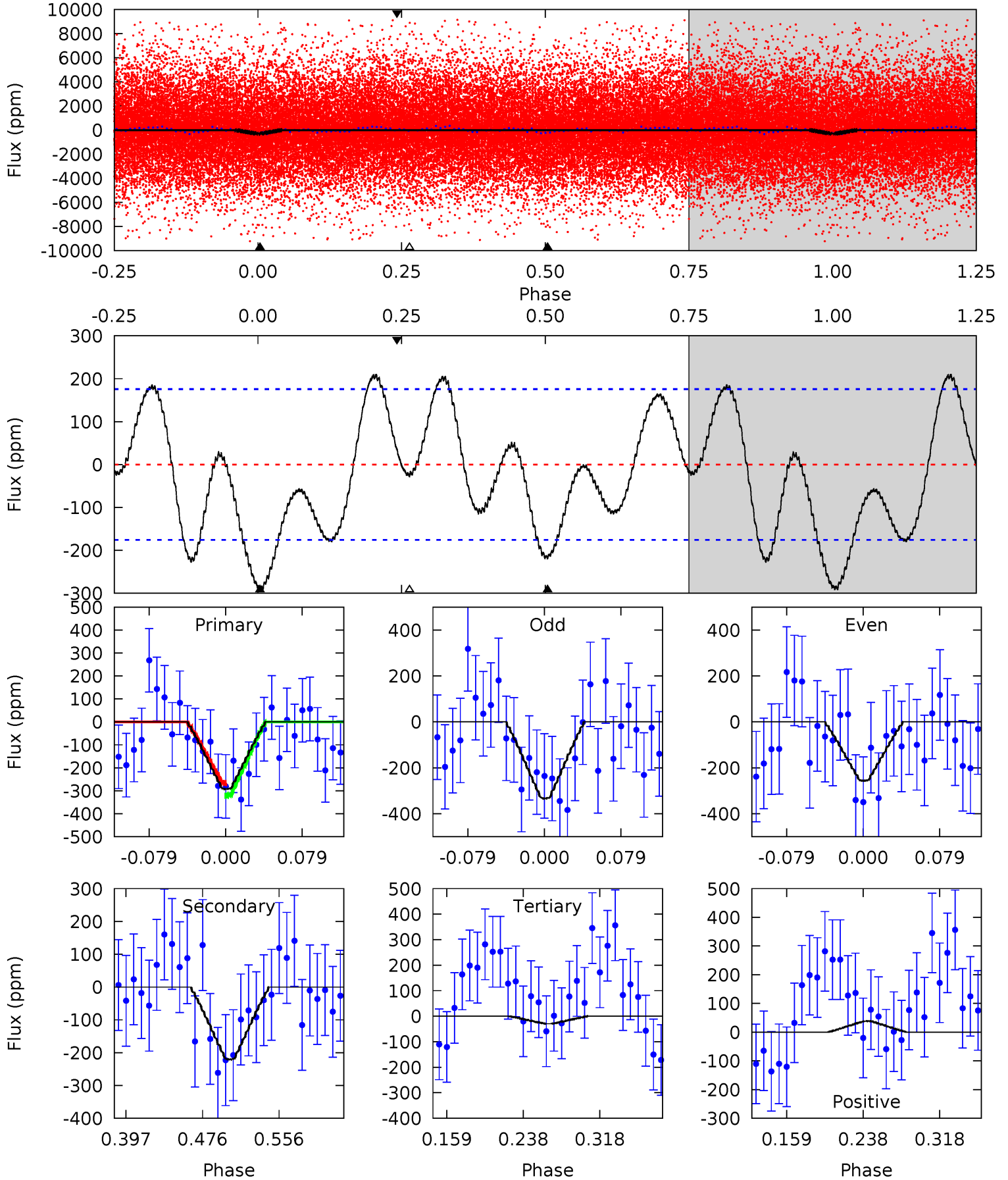
TCE 005287619-01 P= 0.560444 Days $T_0=131.709030$ (BKJD)



DV Model-Shift Uniqueness Test

005287619-01, P = 0.560442 Days, E = 131.149245 Days

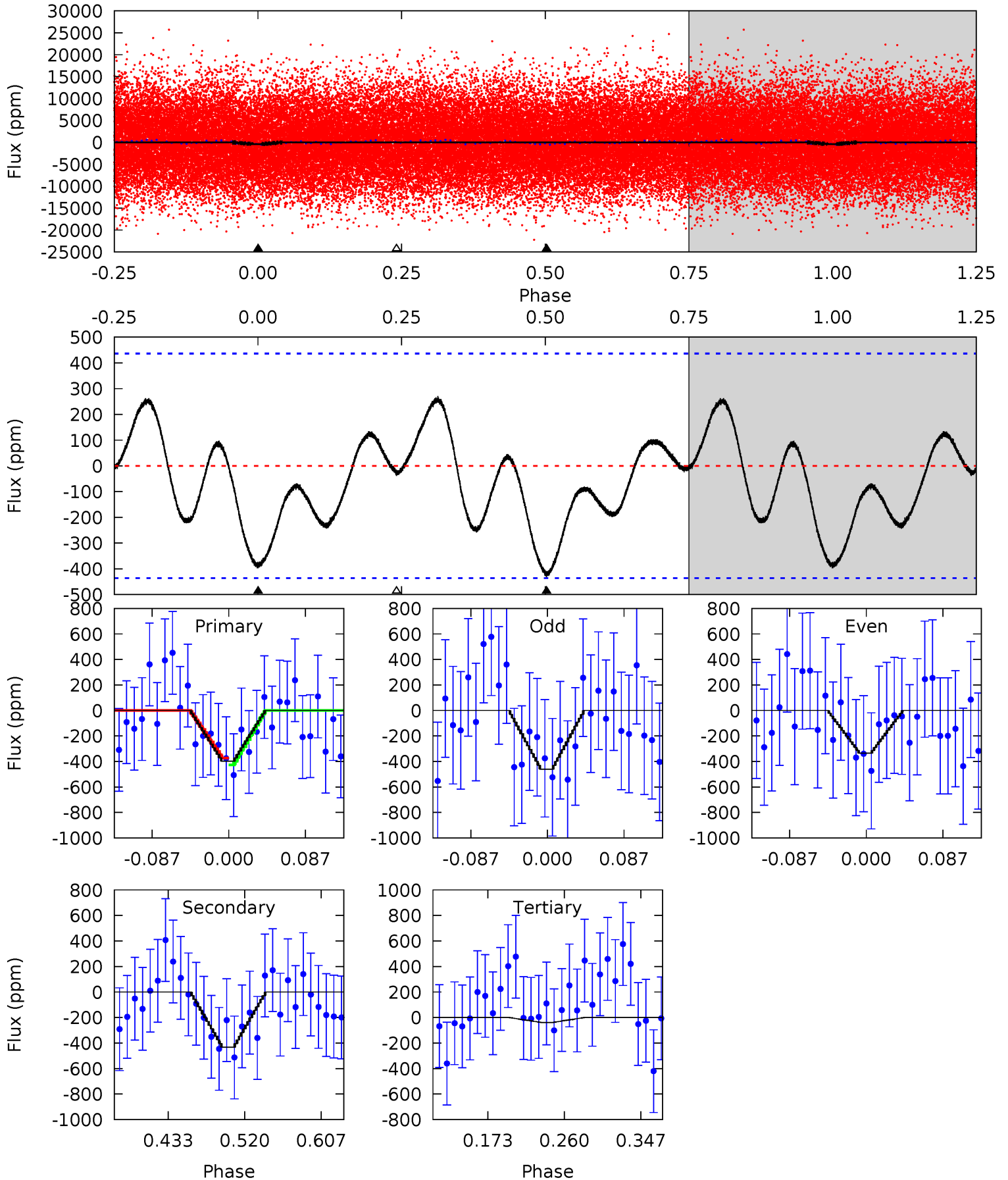
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.68	5.79	0.77	1.00	4.61	1.75	3.10	6.91	6.68	5.02	4.79	1.02	0.65	0.42	0.72



Alt Model-Shift Uniqueness Test

005287619-01, P = 0.560444 Days, E = 131.148586 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.19	4.56	0.41	0	4.59	1.71	1.51	3.78	4.19	4.15	4.56	0.66	1.06	0.38	0.28



Stellar Parameters For KIC 005287619

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7274^{+228}_{-304}	$4.090^{+0.175}_{-0.175}$	$-0.200^{+0.250}_{-0.350}$	$1.813^{+0.528}_{-0.480}$	$1.474^{+0.219}_{-0.241}$	$0.348^{+0.333}_{-0.171}$
	+3%/-4%	+4%/-4%	+125%/-175%	+29%/-26%	+15%/-16%	+96%/-49%
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 005287619-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-221 ± 38	$4.37^{+3.28}_{-2.74}$	4898^{+383}_{-366}	5516^{+4831}_{-1681}	$1.412^{+8.786}_{-0.939}$
Alt.	-433 ± 95	$4.45^{+3.31}_{-2.81}$	4904^{+367}_{-374}	6661^{+6542}_{-1799}	$2.637^{+17.137}_{-1.749}$

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

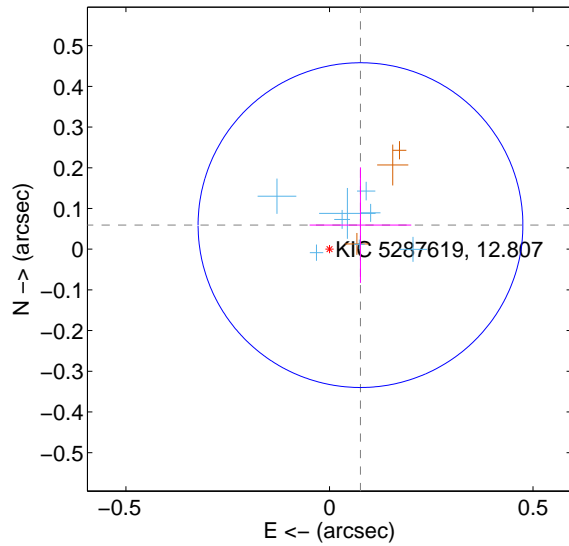
Supplemental centroid analysis for 005287619-01. Kepler magnitude: 12.81. Transit SNR 8.34

There are 9 quarters with good PRF difference image offsets

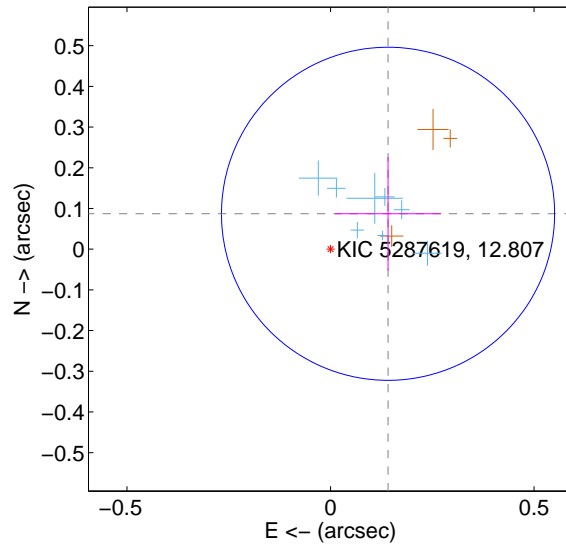
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.096 ± 0.133	0.73	-0.076 ± 0.125	0.059 ± 0.142
PRF-fit source offset from KIC position	0.166 ± 0.136	1.22	-0.141 ± 0.131	0.087 ± 0.139
photometric centroid source offset	0.15 ± 0.08	1.85	-0.08 ± 0.08	0.13 ± 0.08

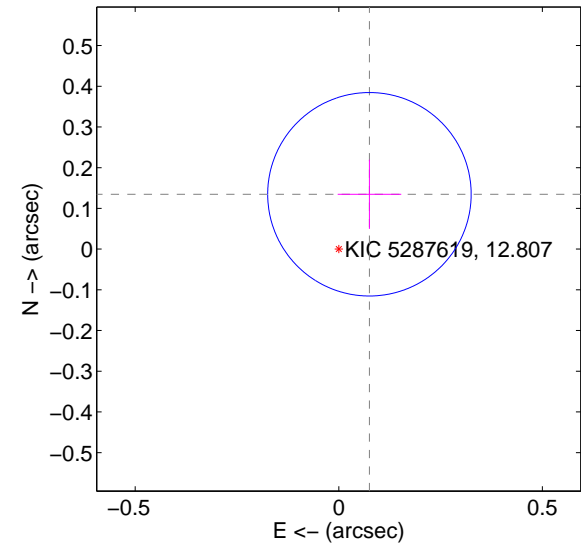
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

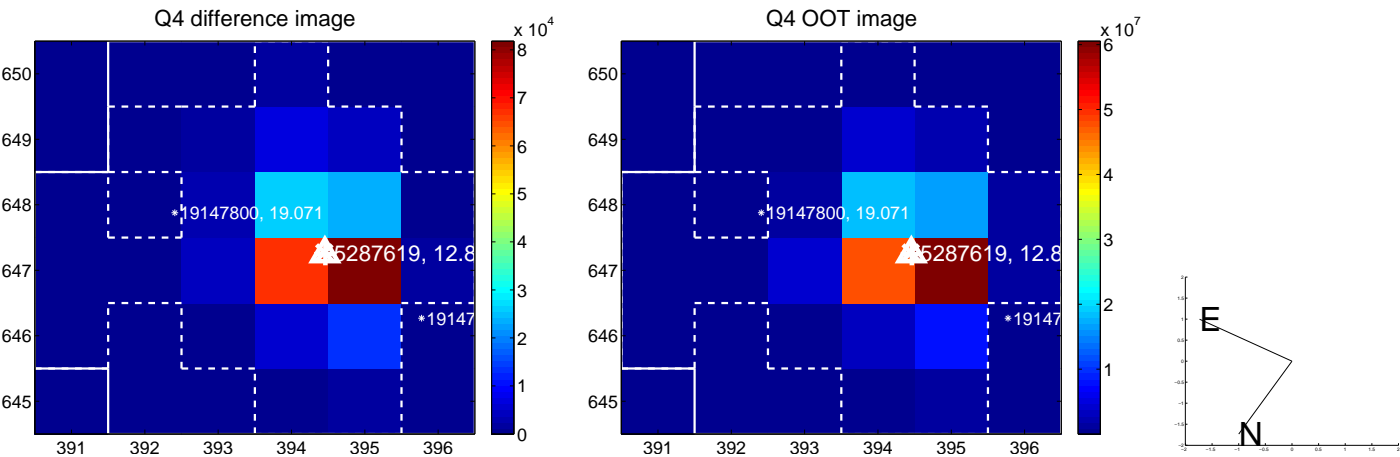
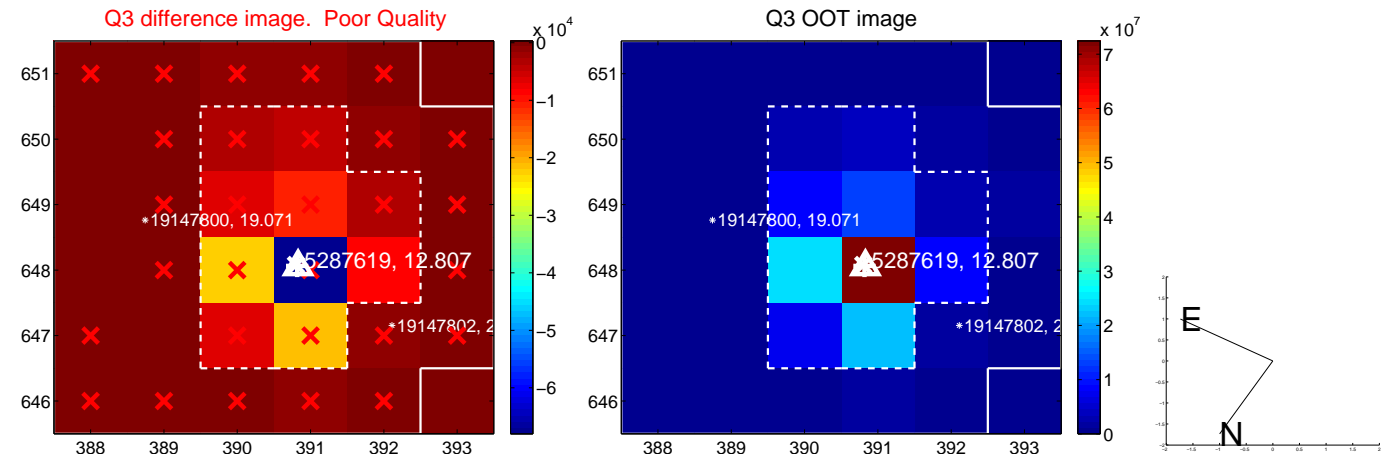
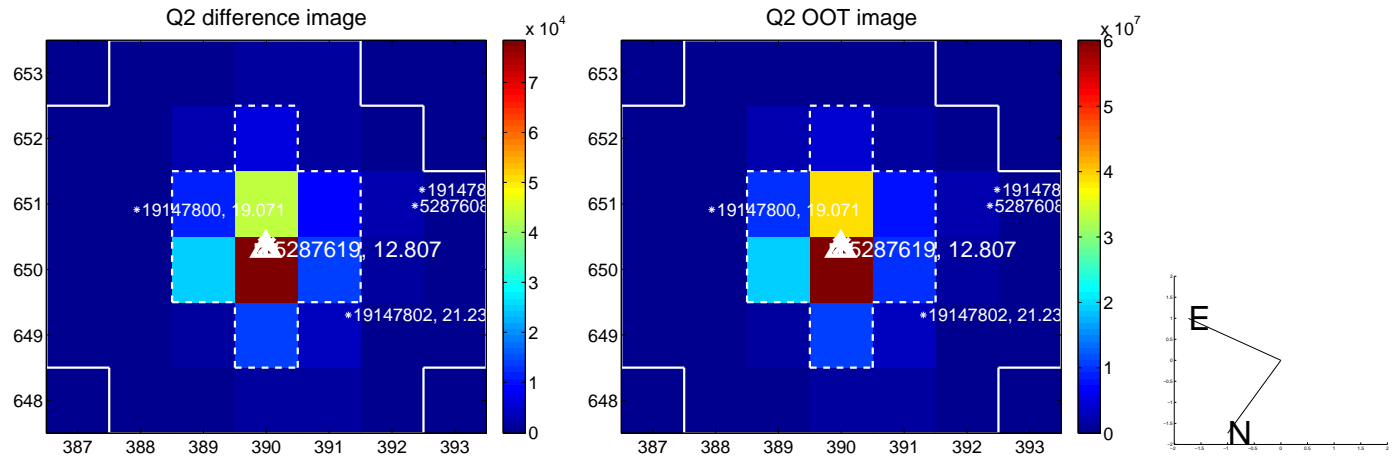
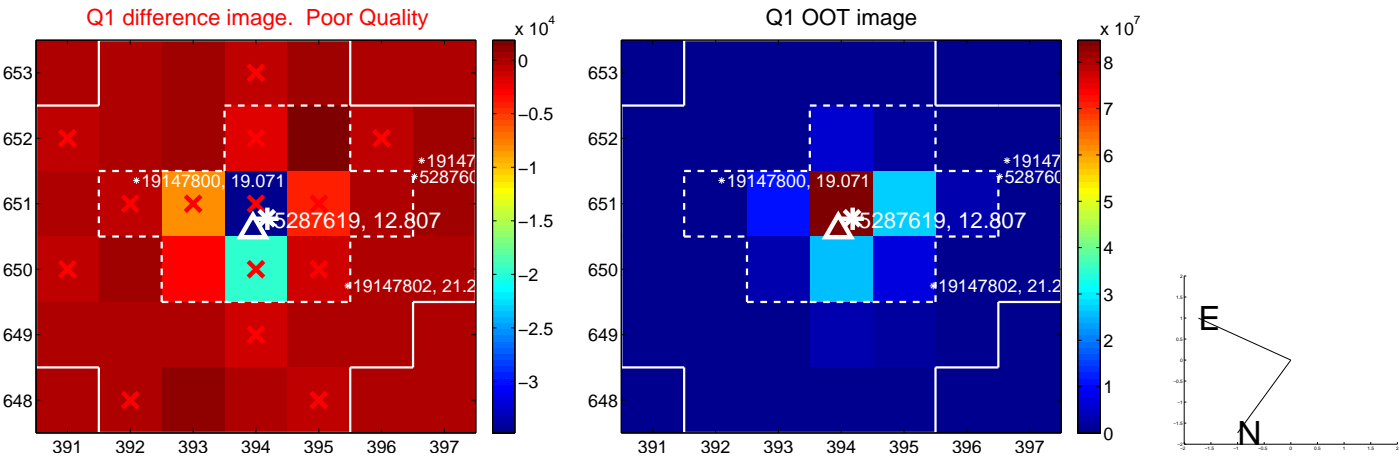


offset from photometric centroids

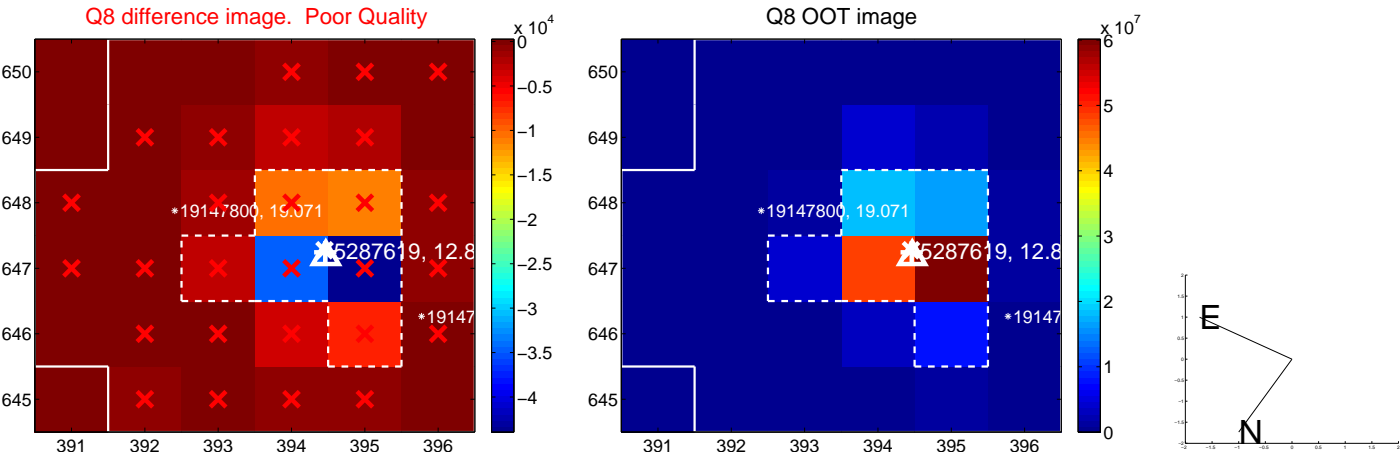
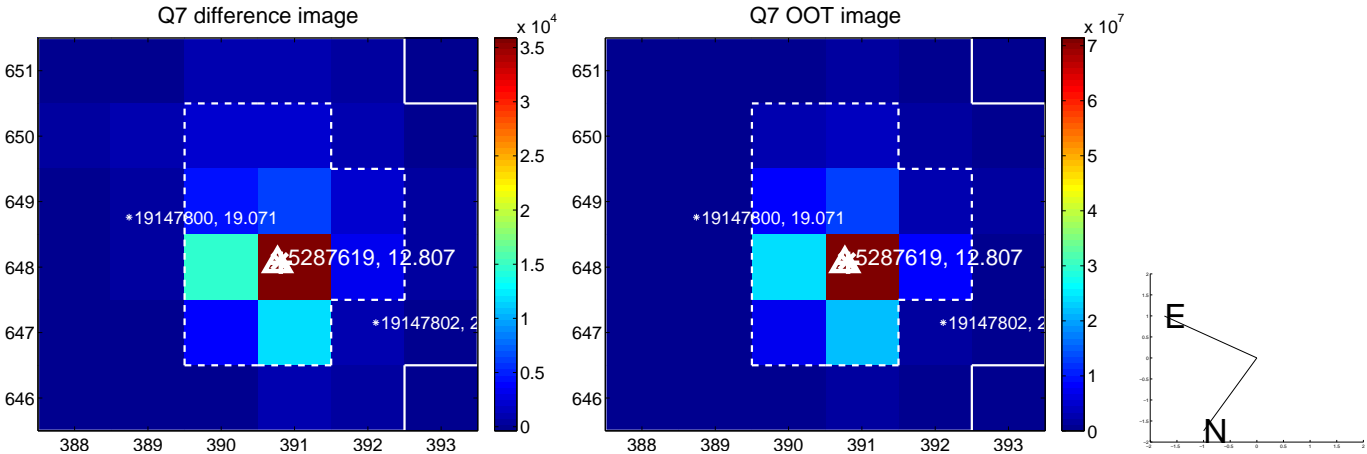
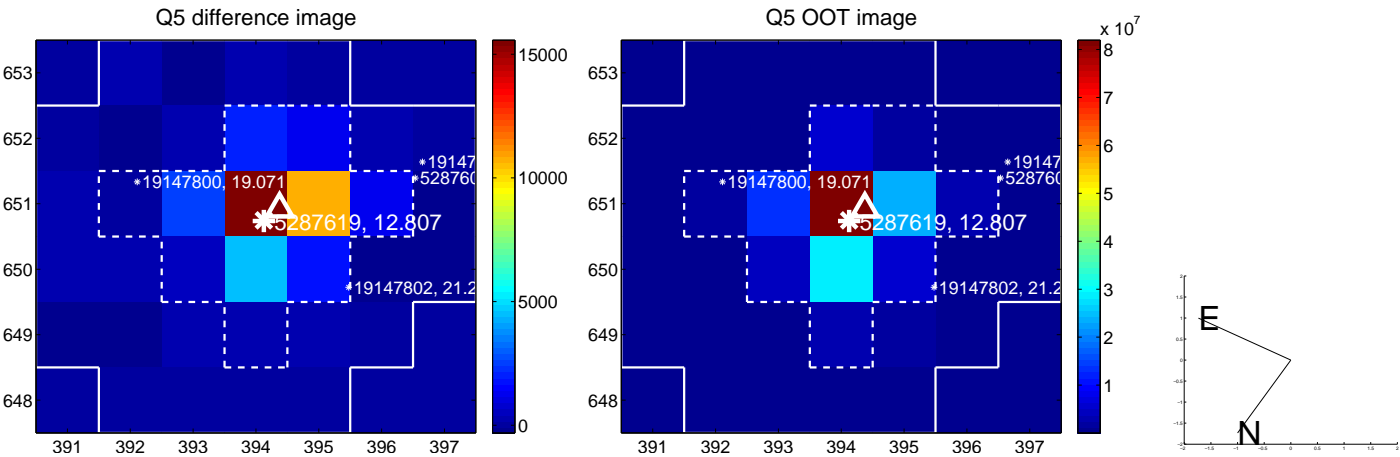


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

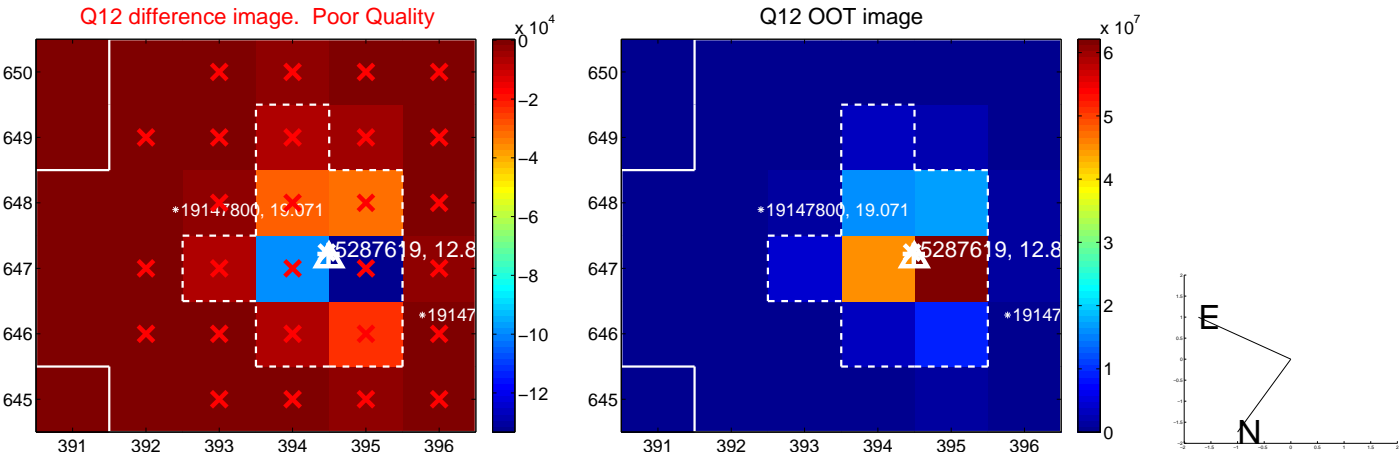
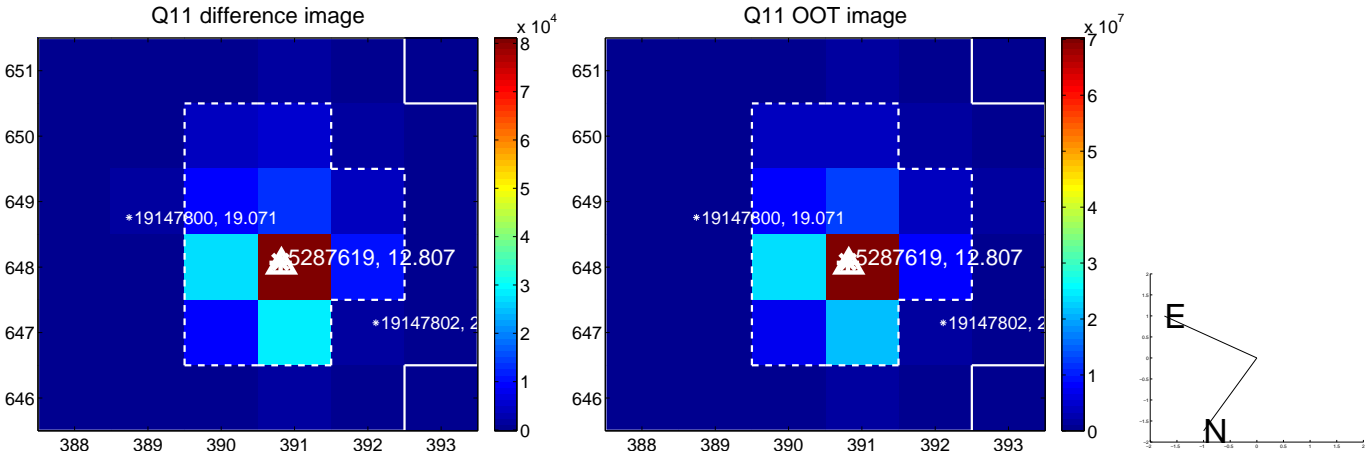
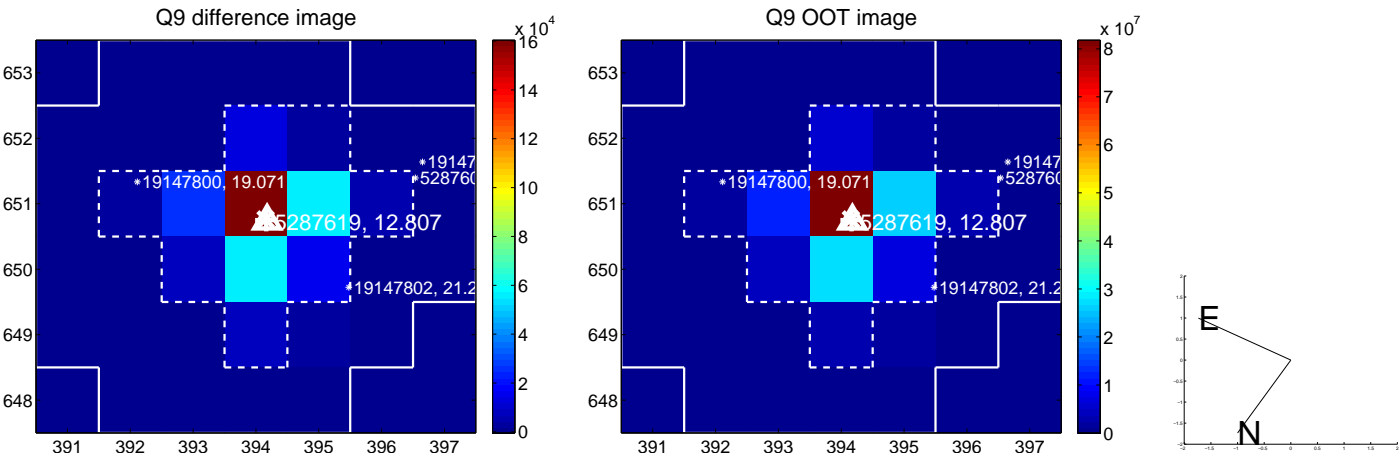
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



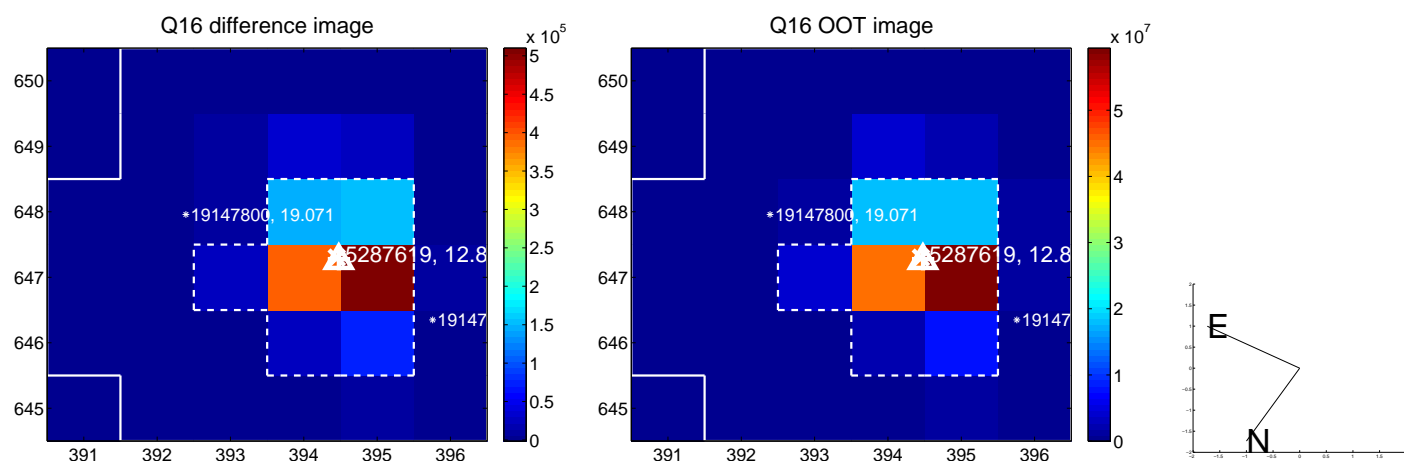
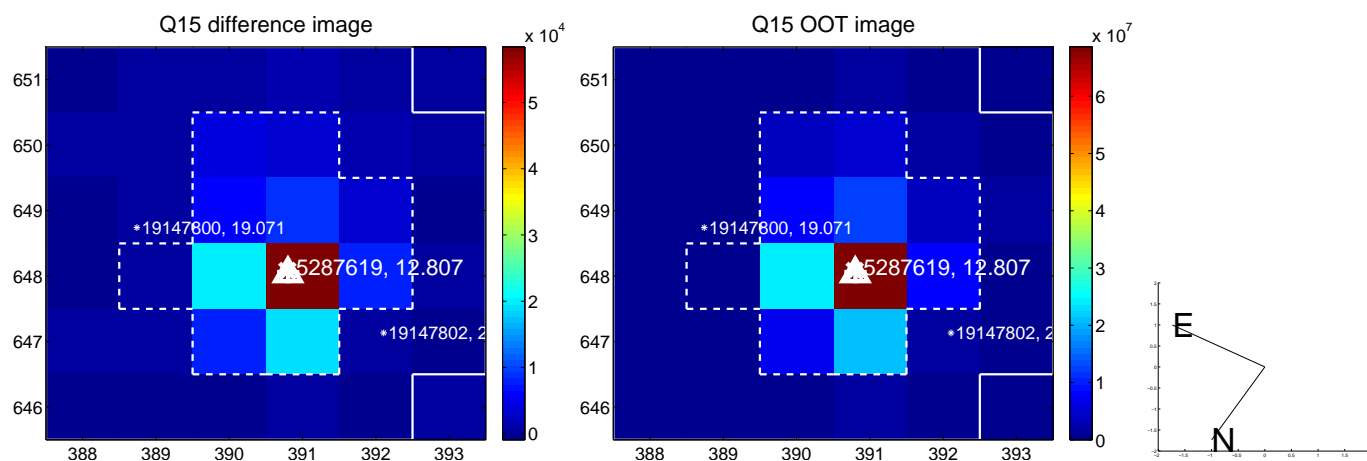
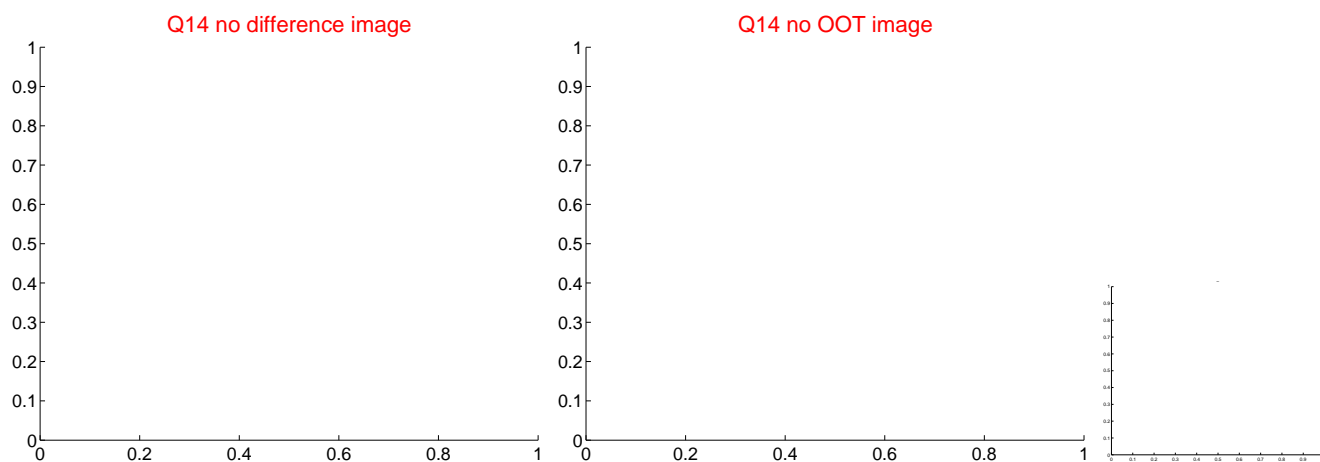
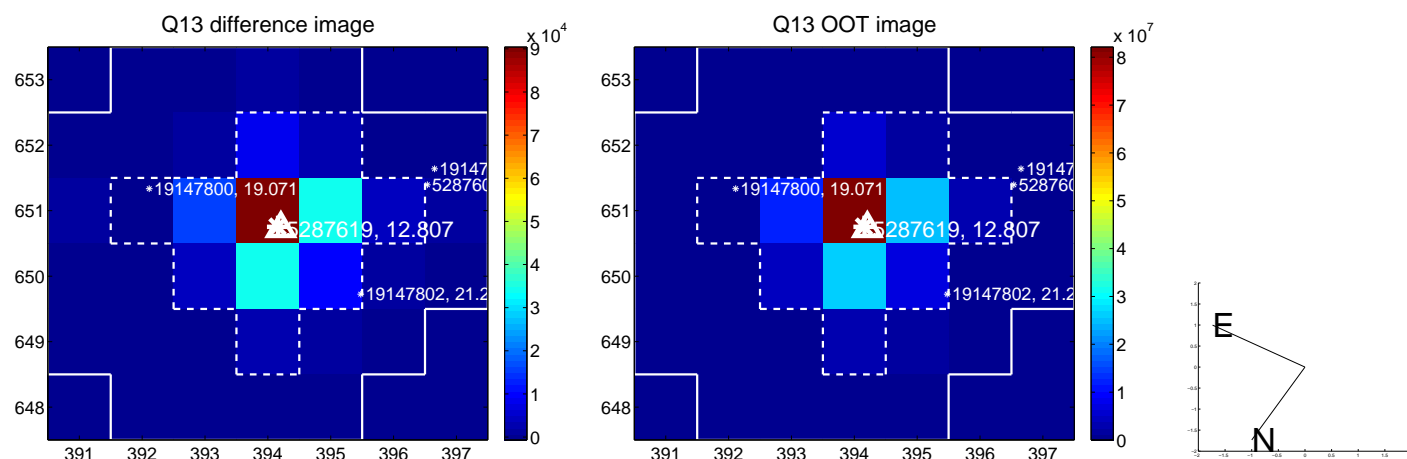
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



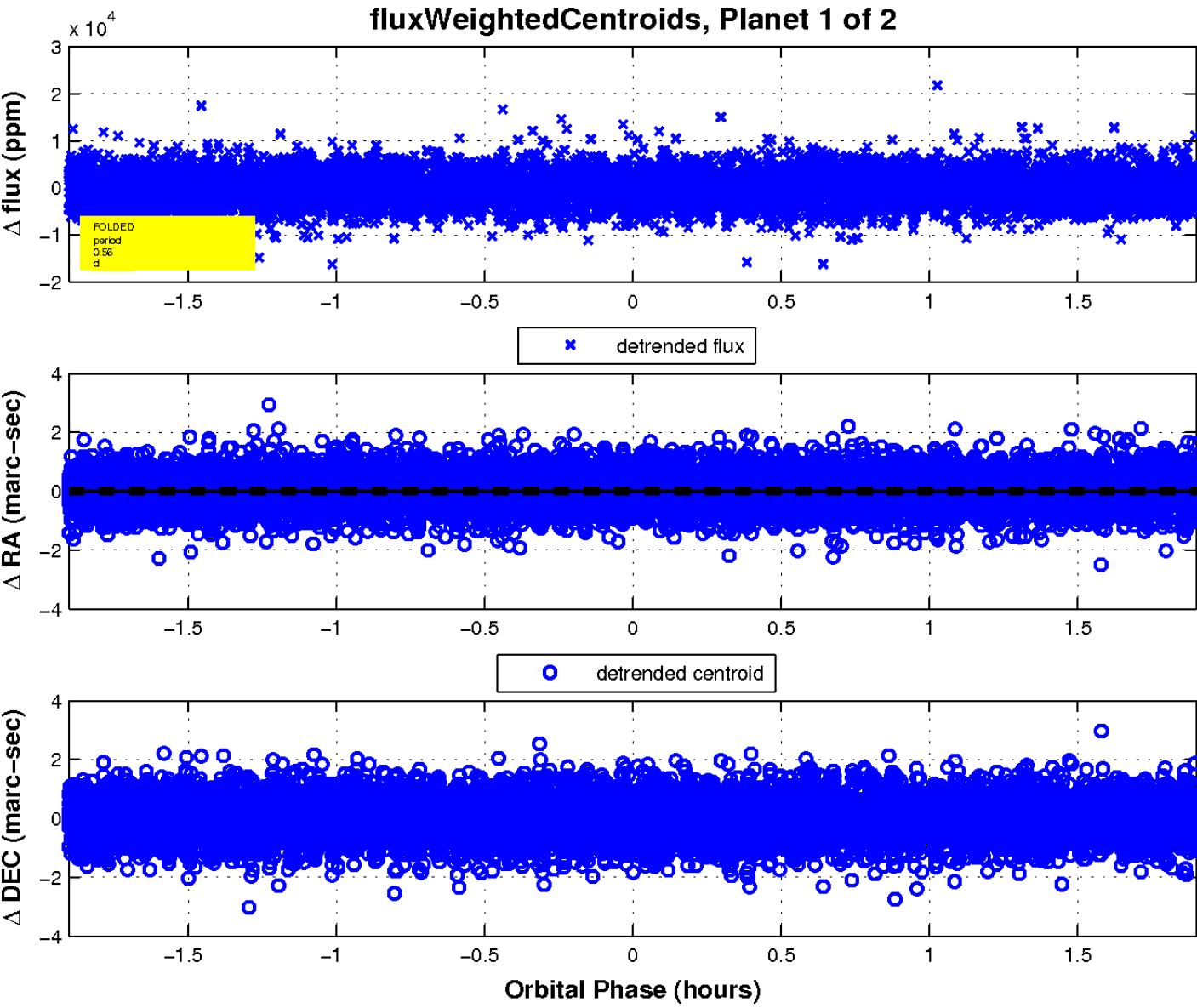
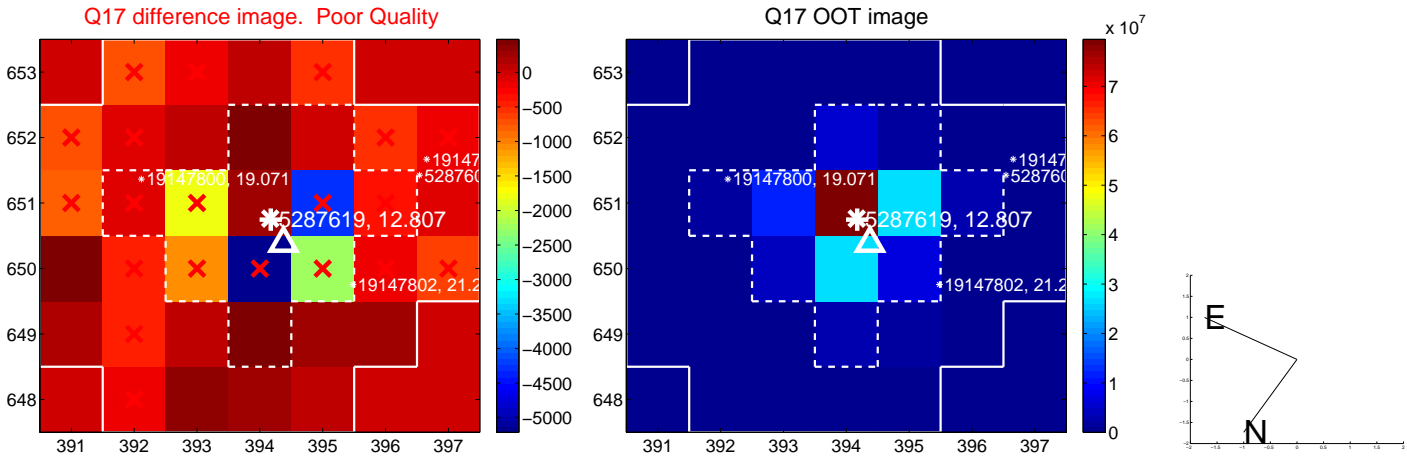
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

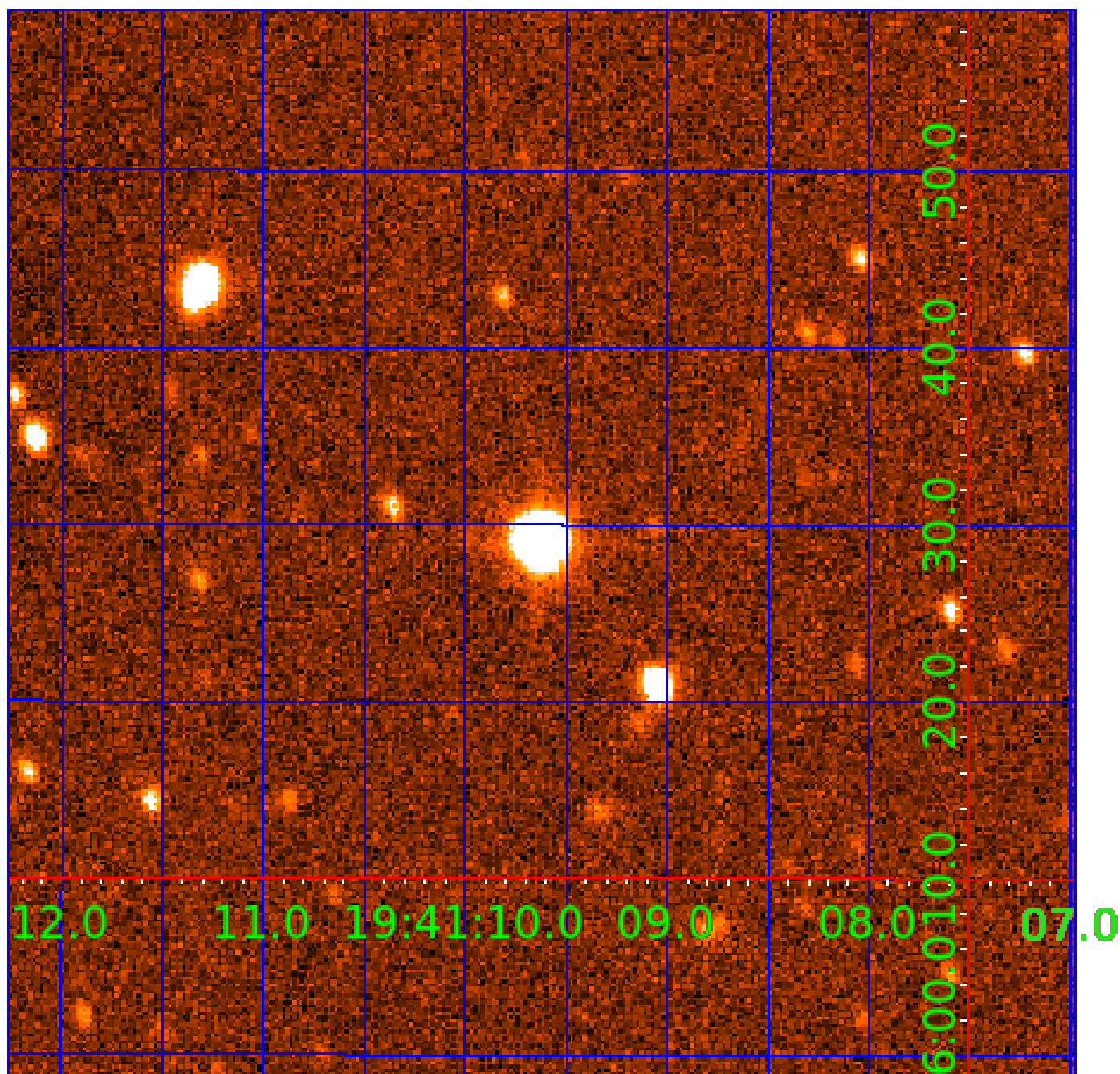


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005287619

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})
005287619-01	OBS	No	0.560442	131.709687	417.7	0.634	7.8	8.3	1.81	7274	3.87	35937.25
005287619-02	OBS	No	0.560421	132.009558	230.9	1.435	8.9	7.5	1.81	7274	3.19	35939.08

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005287619-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005287619-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD

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

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

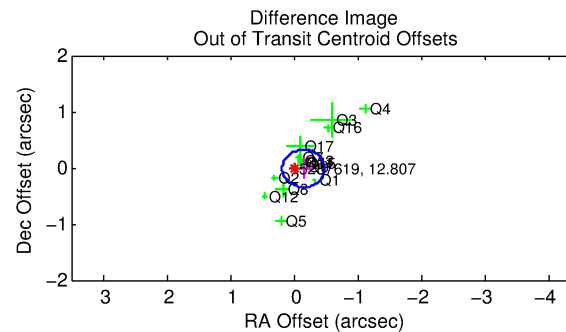
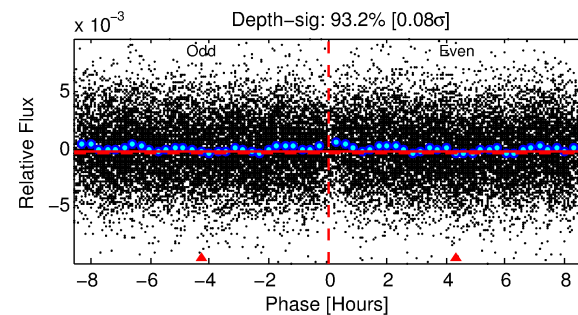
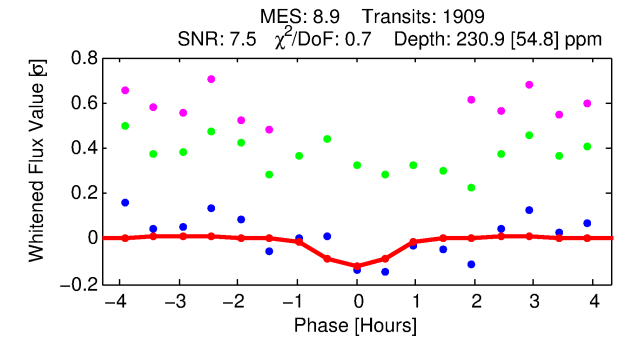
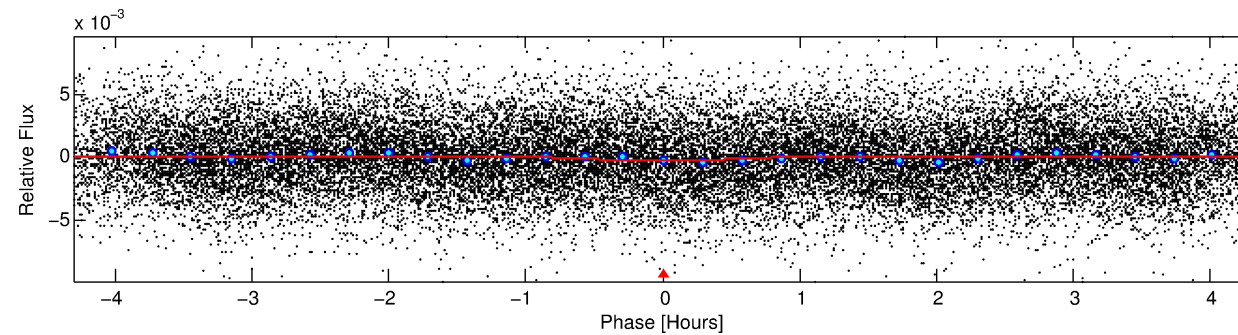
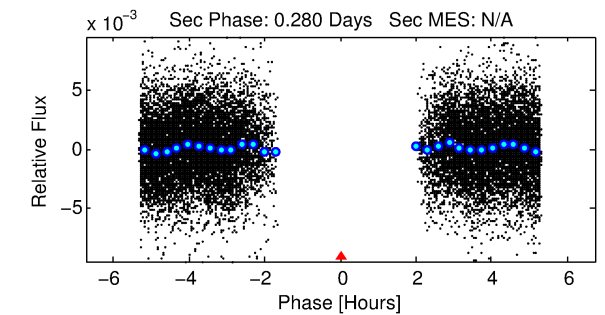
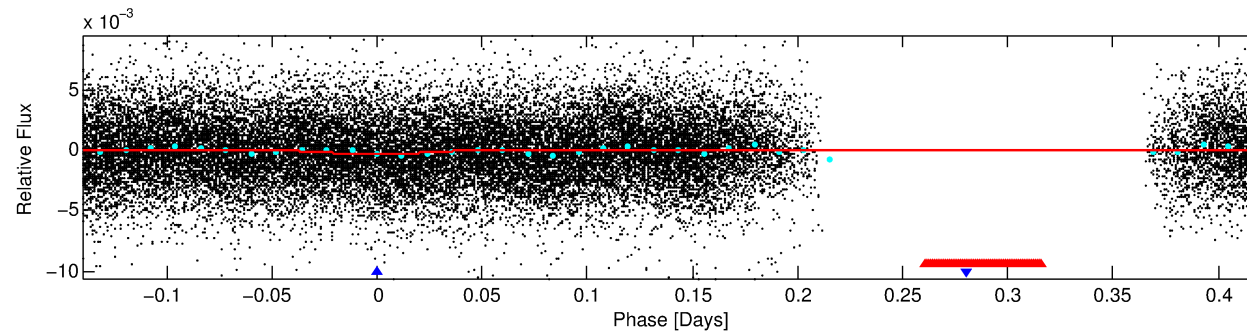
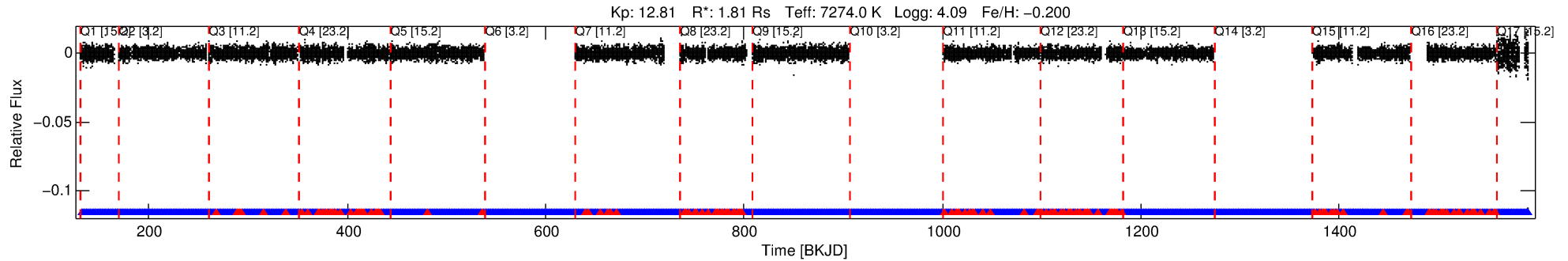
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005287619-02

No Significant Match Found

DV One-Page Summary

KIC: 5287619 Candidate: 2 of 2 Period: 0.560 d



DV Fit Results:

Period = 0.56042 [0.00002] d
Epoch = 132.0096 [0.0034] BKJD
Rp/R* = 0.0161 [0.0184]
a/R* = 1.73 [8.20]
b = 0.89 [1.65]
Seff = 35939.08 [13341.40]
Teq = 3511 [326] K
Rp = 3.19 [3.76] Re
a = 0.0151 [0.0036] AU

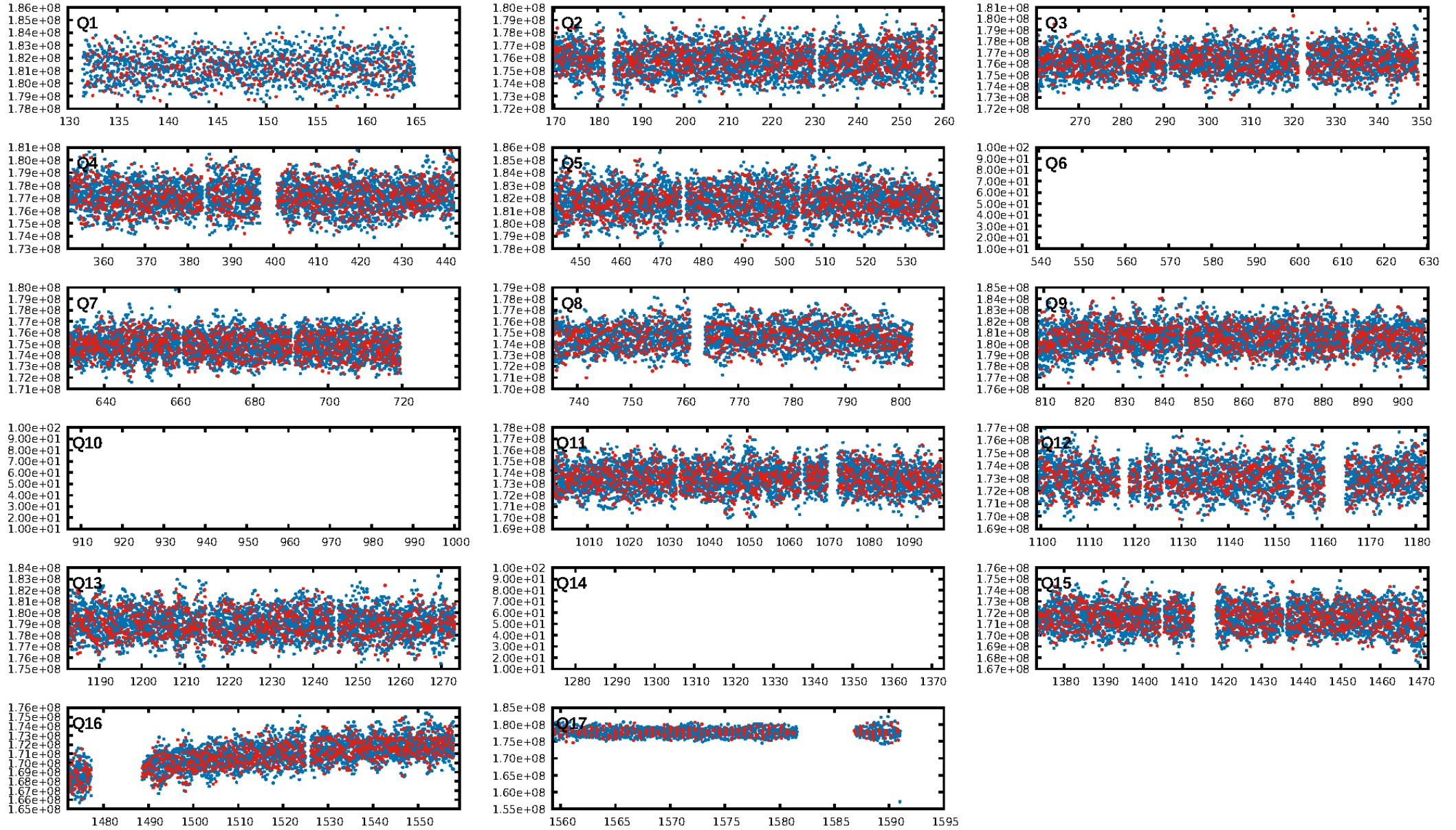
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 7.43e-38
RollingBand-fgt: 0.91 [1645/1802]
GhostDiagnostic-chr: 1.526
Centroid-sig: N/A
Centroid-so: 0.052 arcsec [0.55σ]
OotOffset-rm: 0.148 arcsec [1.33σ]
KicOffset-rm: 0.206 arcsec [1.59σ]
OotOffset-st: 1/4/4/5 [14]
KicOffset-st: 1/4/4/5 [14]
DiffImageQuality-fgm: 0.86 [12/14]
DiffImageOverlap-fno: 0.86 [12/14]

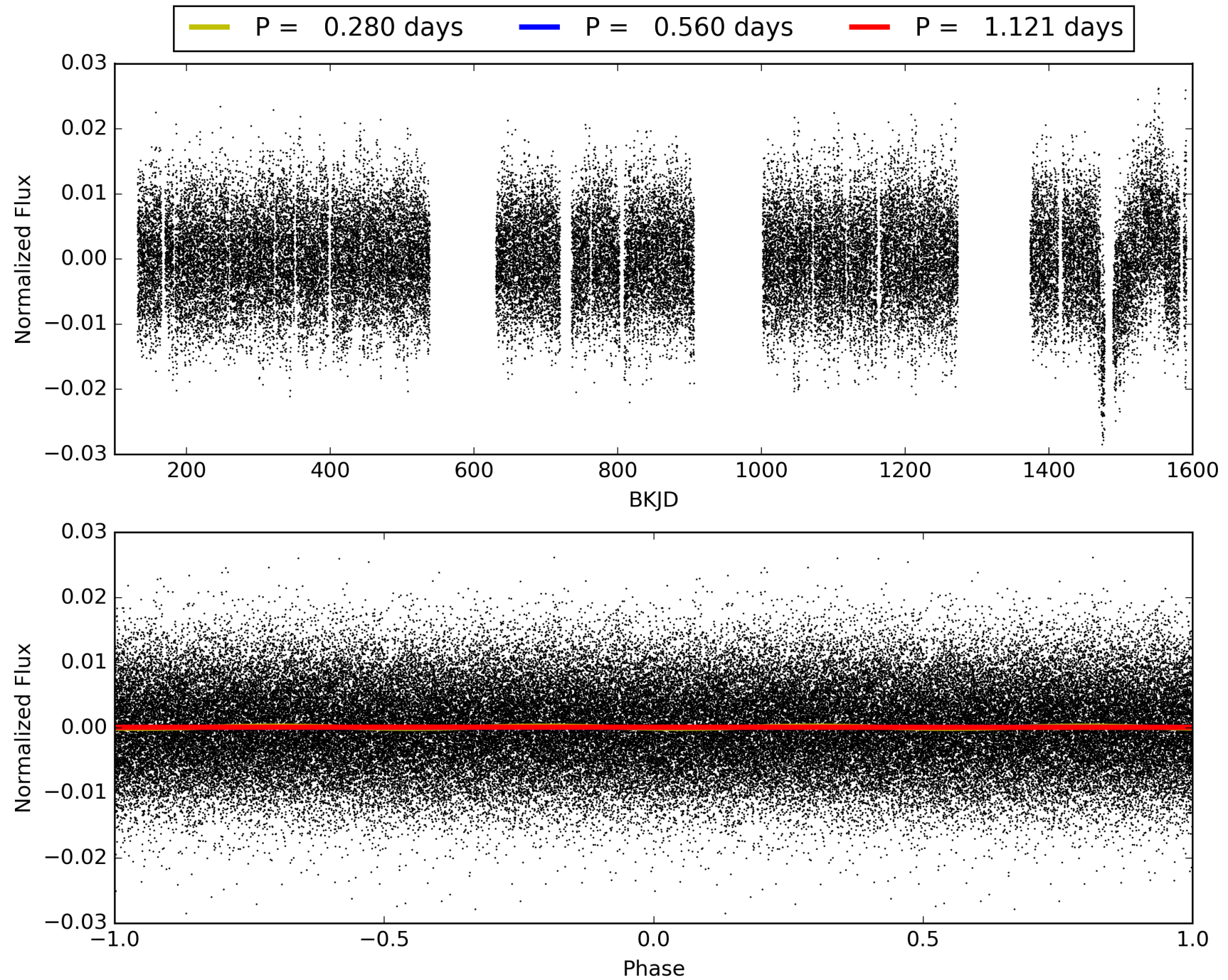
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 19:48:17 Z

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

TCE 005287619-02, PDC Light Curves

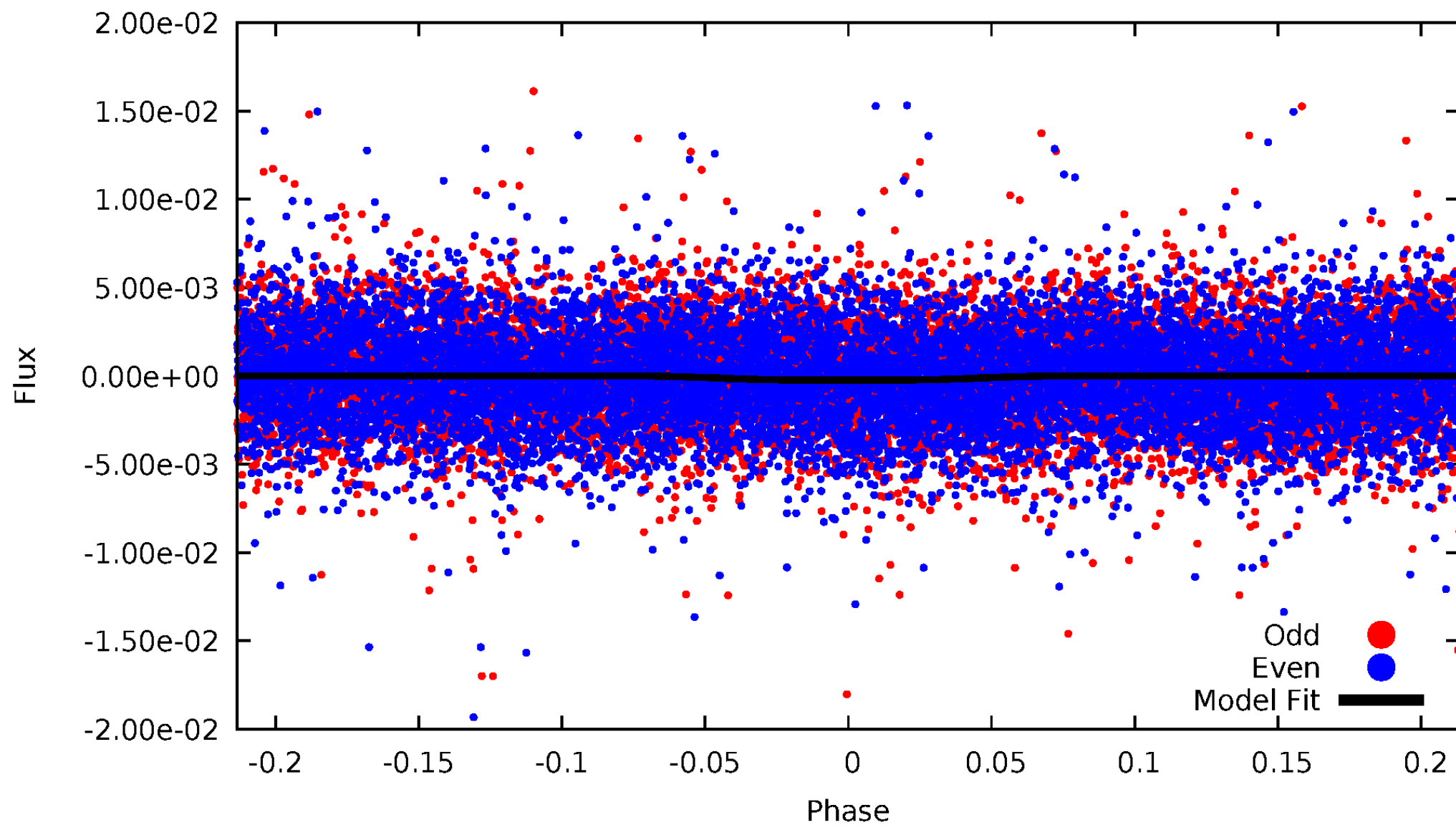


TCE 005287619-02



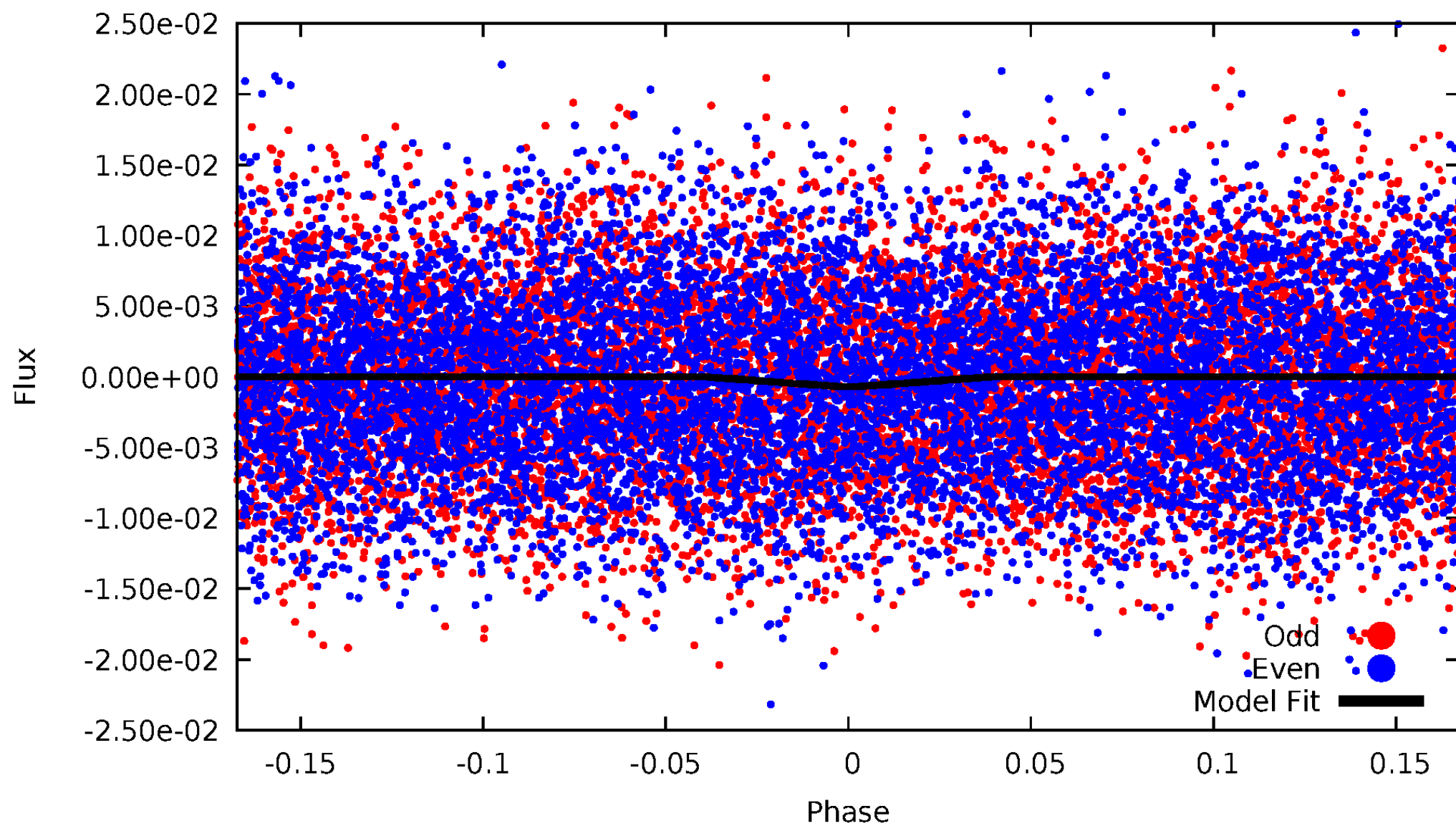
DV Odd/Even

TCE 005287619-02



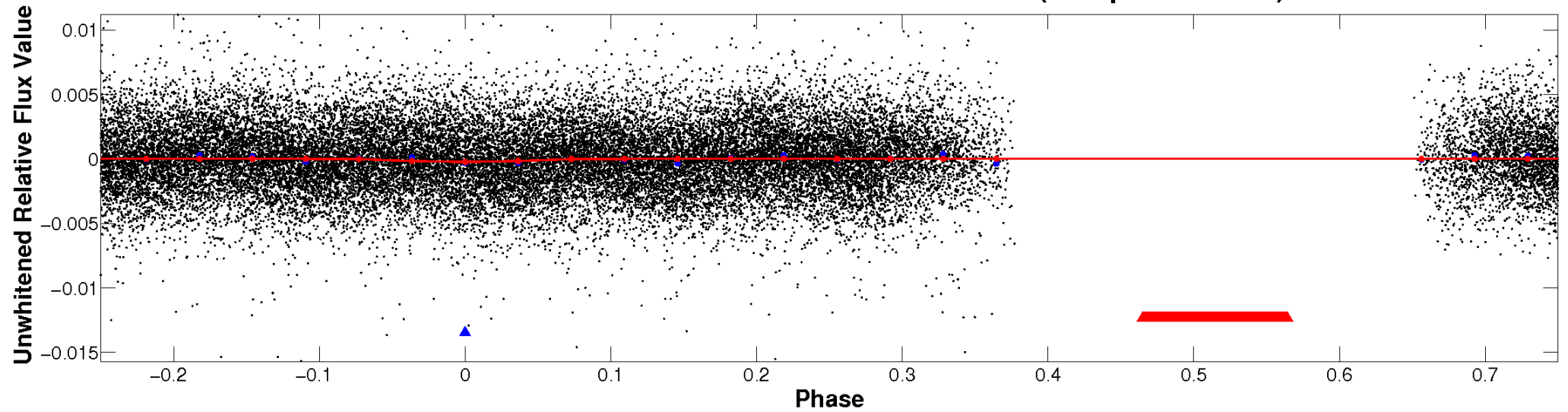
ALT Odd/Even

TCE 005287619-02

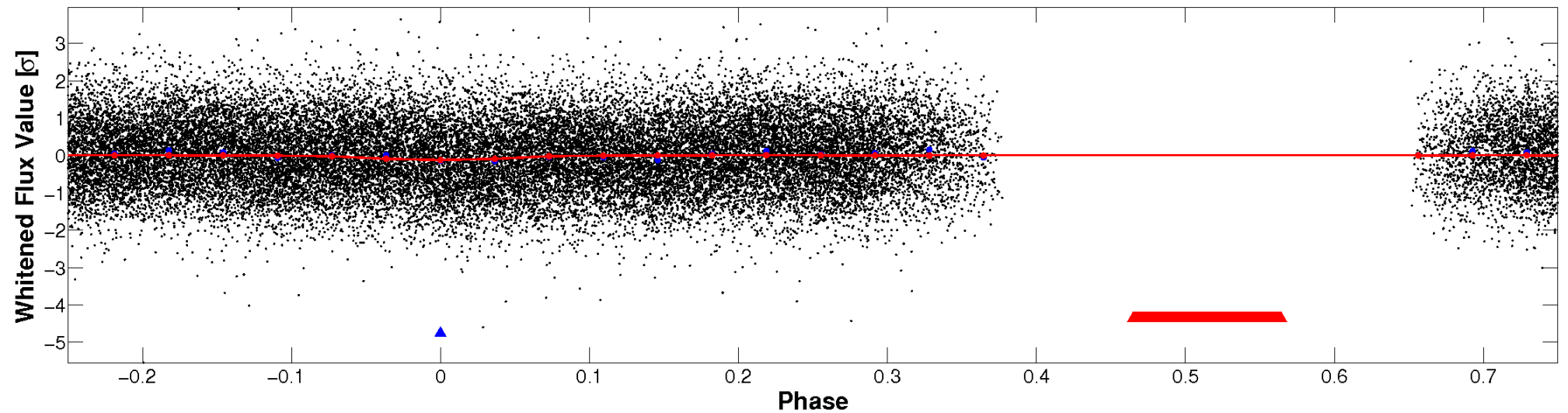


Non-Whitened Vs. Whitened Light Curve

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

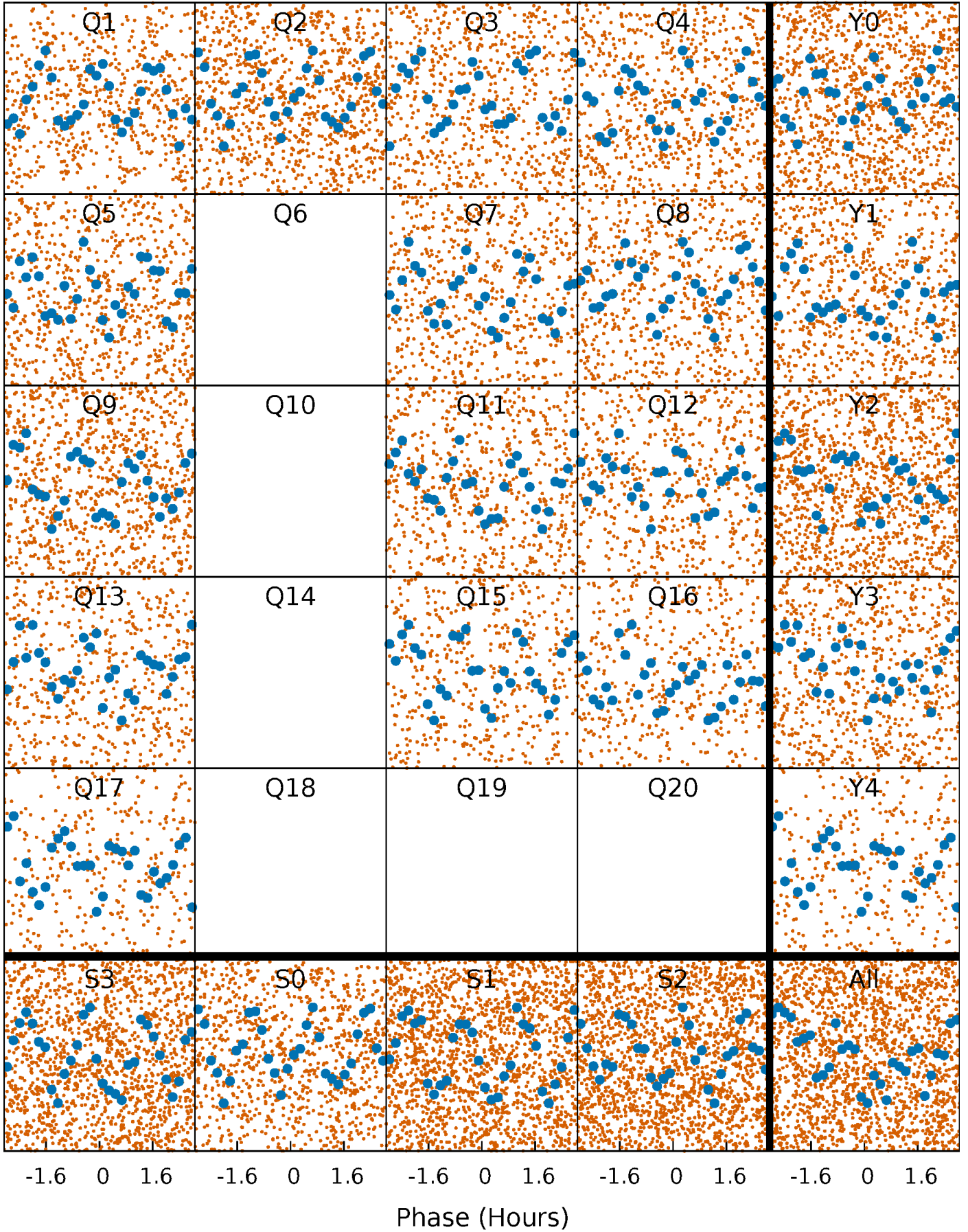


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



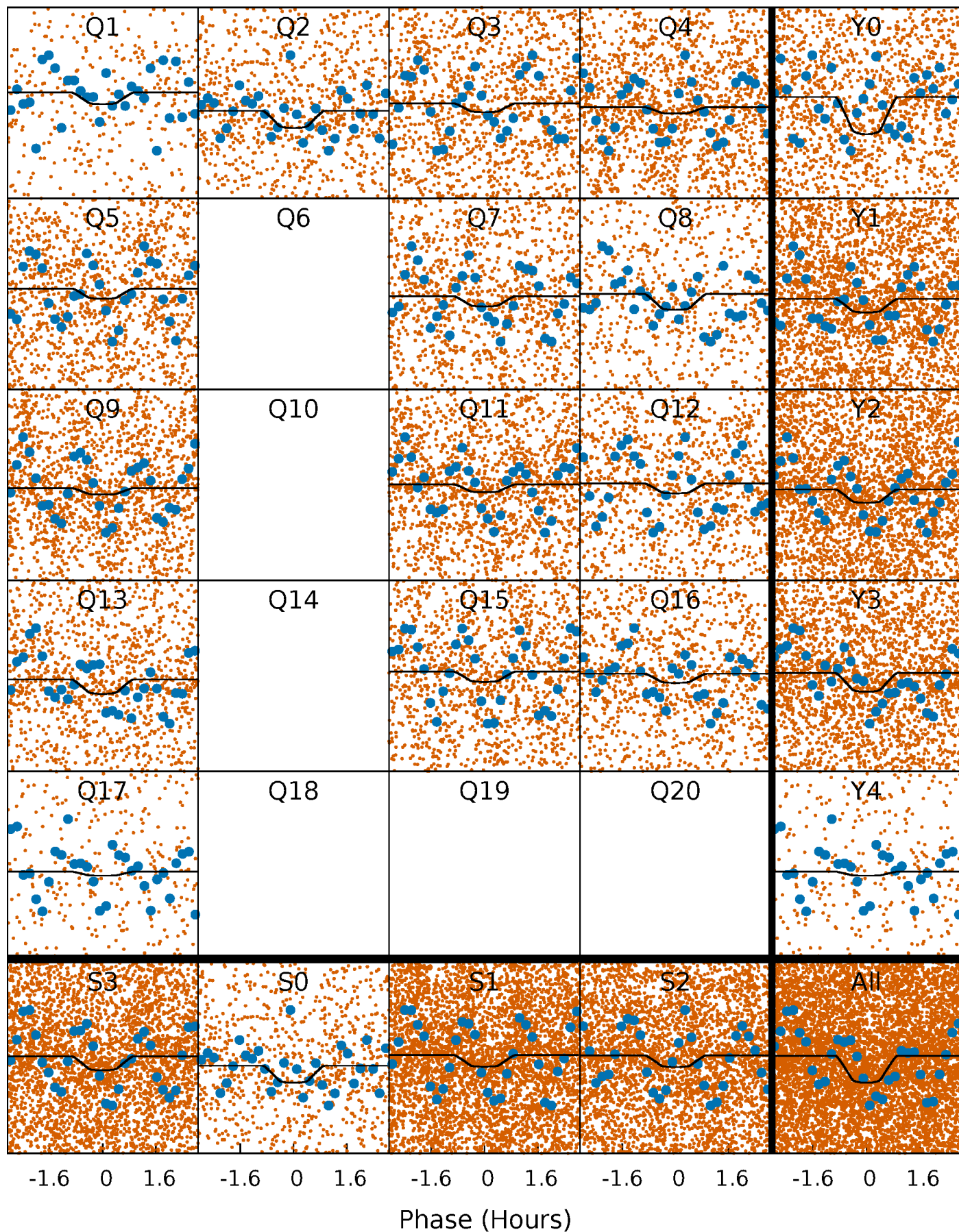
PDC Quarter-Phased Transit Curves

TCE 005287619-02 P= 0.560421 Days $T_0=132.009558$ (BKJD)



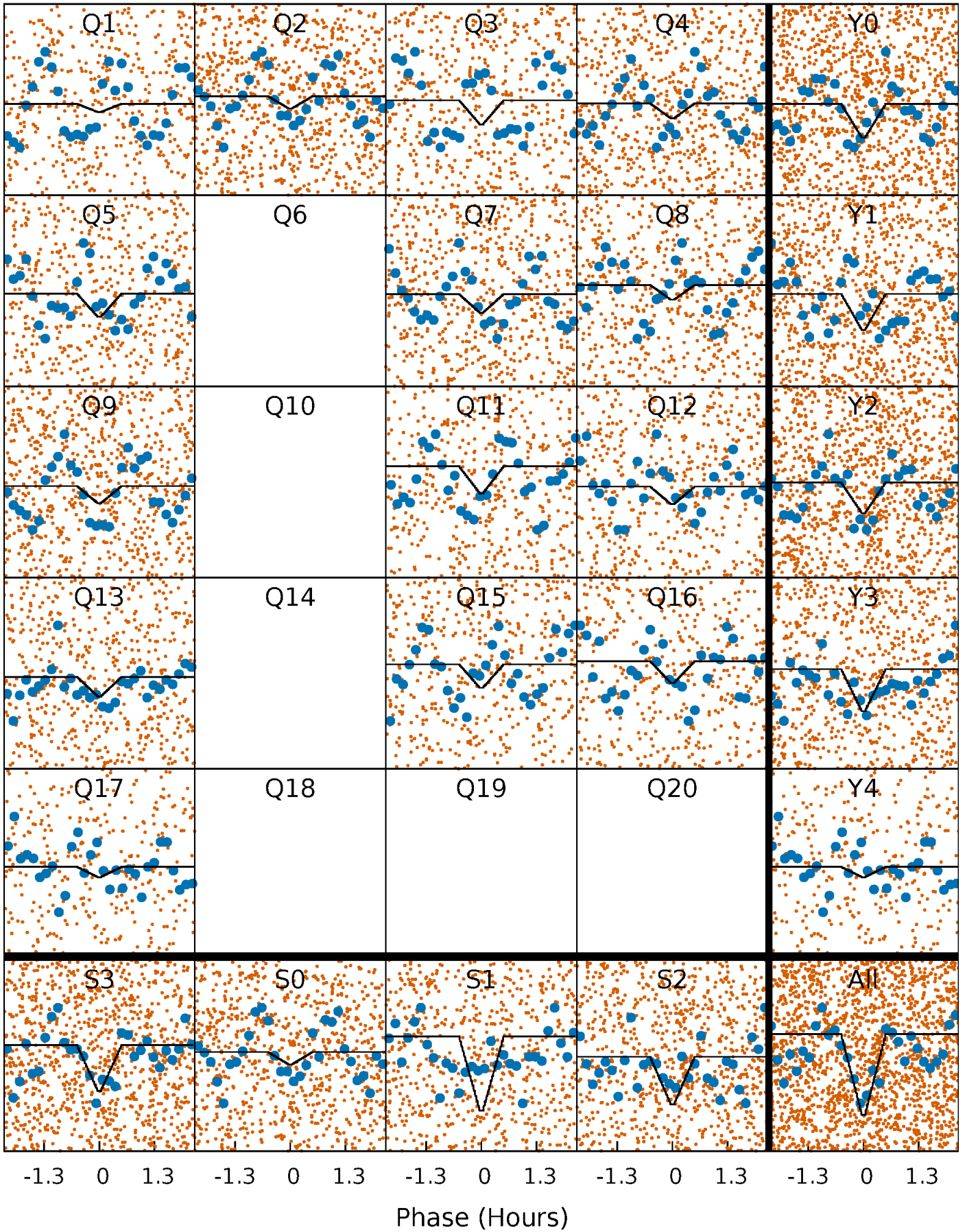
DV Quarter-Phased Transit Curves

TCE 005287619-02 P= 0.560421 Days $T_0=132.009558$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

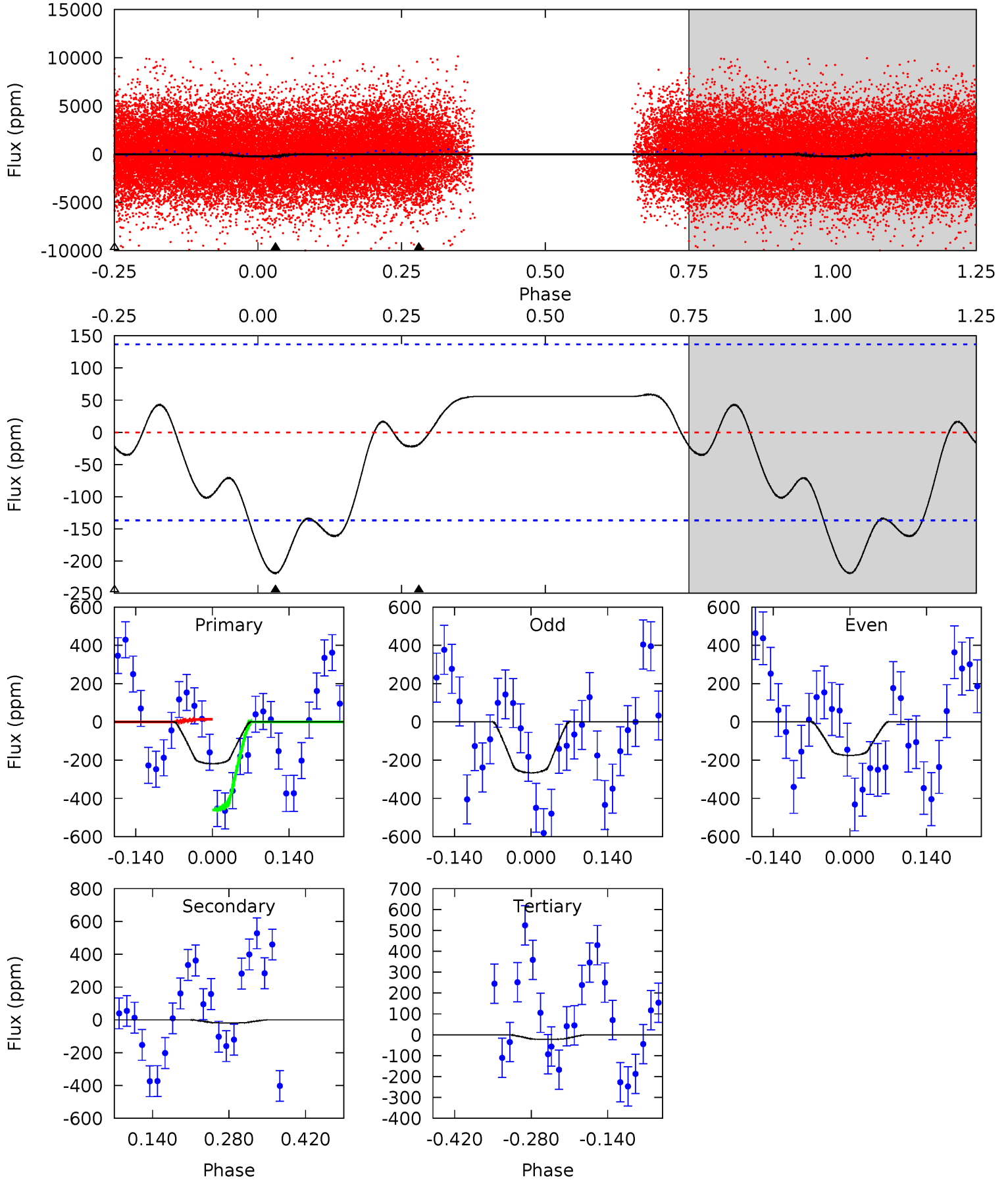
TCE 005287619-02 P= 0.560444 Days $T_0=131.990767$ (BKJD)



DV Model-Shift Uniqueness Test

005287619-02, P = 0.560421 Days, E = 131.449137 Days

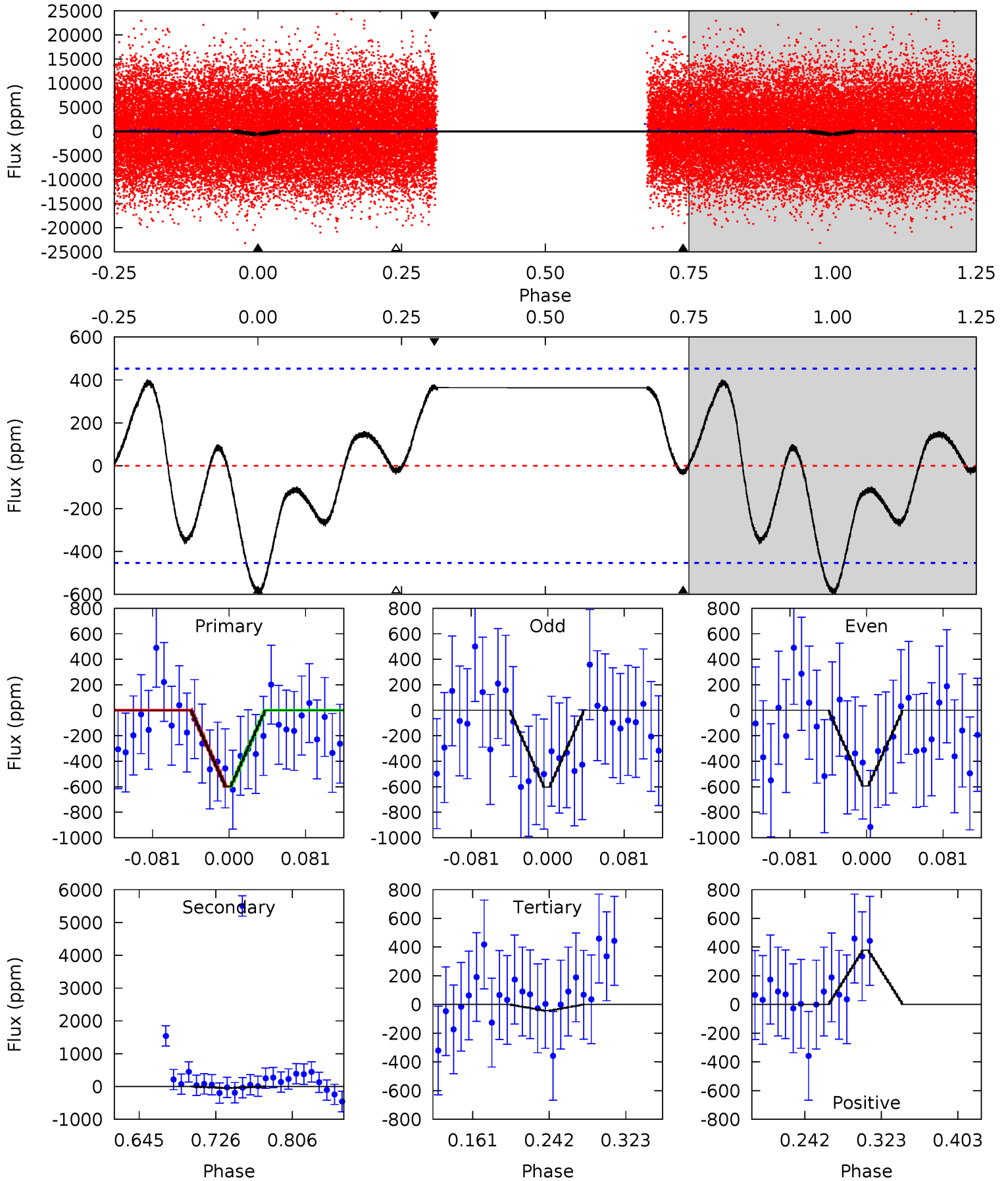
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.19	0.61	0.72	0	4.49	1.48	1.19	6.47	7.19	-0.10	0.61	1.50	0.91	0.21	7.40



Alt Model-Shift Uniqueness Test

005287619-02, P = 0.560444 Days, E = 131.430323 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.09	0.45	0.43	3.85	4.61	1.75	1.98	5.66	2.24	0.02	-3.41	0.05	0.88	0.40	0.02



Stellar Parameters For KIC 005287619

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7274^{+228}_{-304}	$4.090^{+0.175}_{-0.175}$	$-0.200^{+0.250}_{-0.350}$	$1.813^{+0.528}_{-0.480}$	$1.474^{+0.219}_{-0.241}$	$0.348^{+0.333}_{-0.171}$
	+3%/-4%	+4%/-4%	+125%/-175%	+29%/-26%	+15%/-16%	+96%/-49%
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 005287619-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-19 ± 30	$3.96^{+3.80}_{-2.62}$	4903^{+379}_{-353}	-3890^{+9132}_{-666}	$0.094^{+1.061}_{-0.171}$
Alt.	-44 ± 98	$5.48^{+3.71}_{-3.28}$	4918^{+372}_{-374}	-3747^{+8980}_{-1108}	$0.147^{+0.981}_{-0.384}$

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 $A_{obs} \gg 1.0$

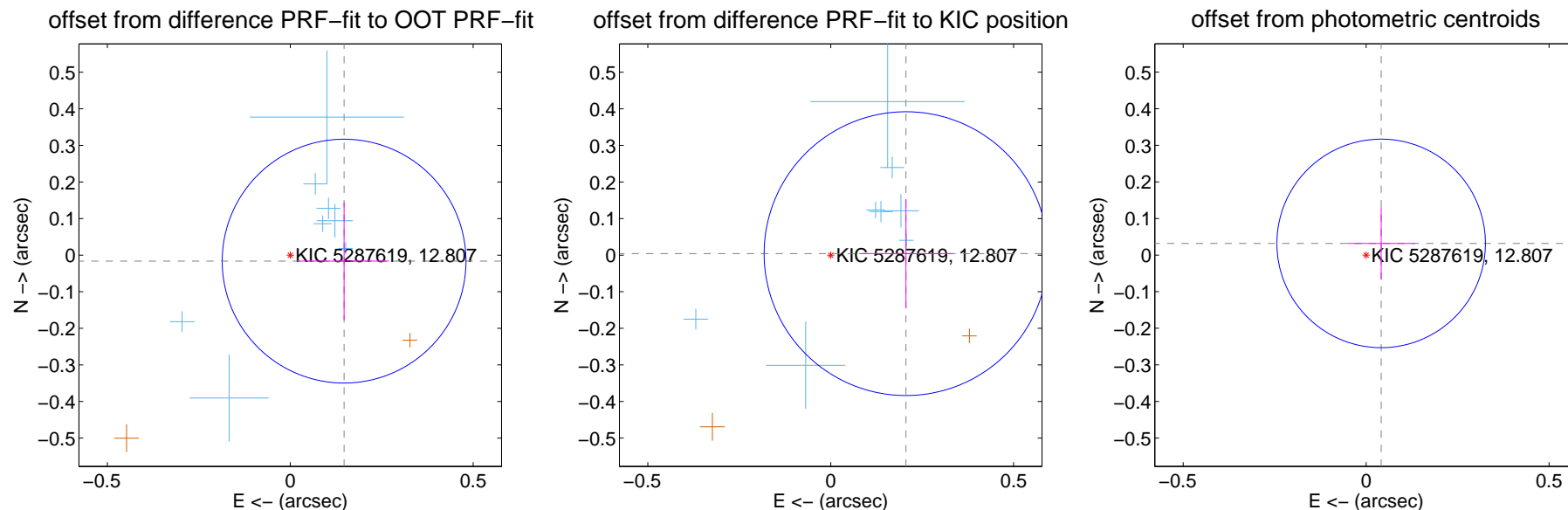
DV Centroid Data

Supplemental centroid analysis for 005287619-02. Kepler magnitude: 12.81. Transit SNR 7.49

There are 12 quarters with good PRF difference image offsets

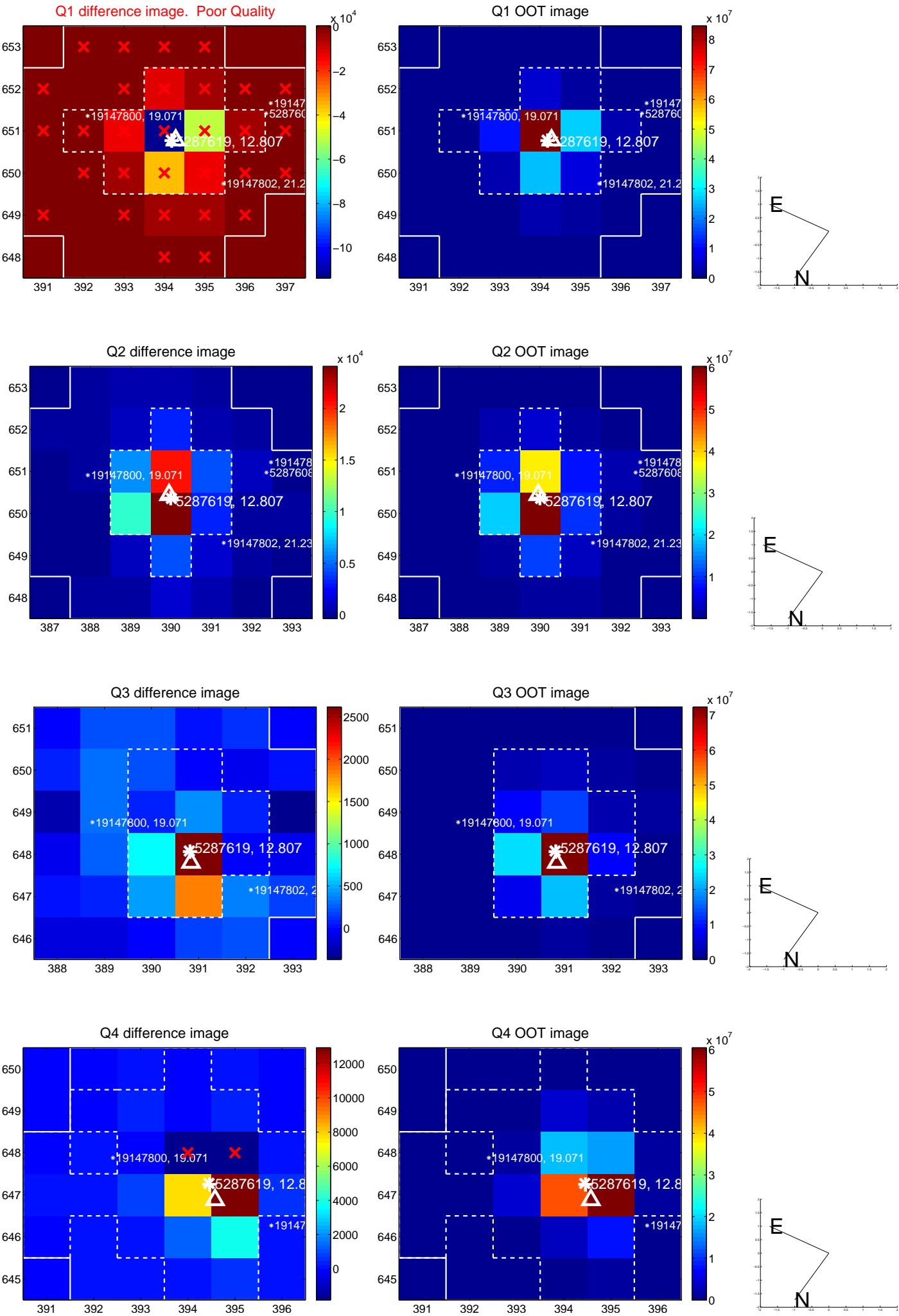
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.148 ± 0.111	1.33	-0.147 ± 0.123	-0.016 ± 0.160
PRF-fit source offset from KIC position	0.206 ± 0.129	1.59	-0.206 ± 0.127	0.004 ± 0.149
photometric centroid source offset	0.05 ± 0.09	0.55	-0.04 ± 0.09	0.03 ± 0.10

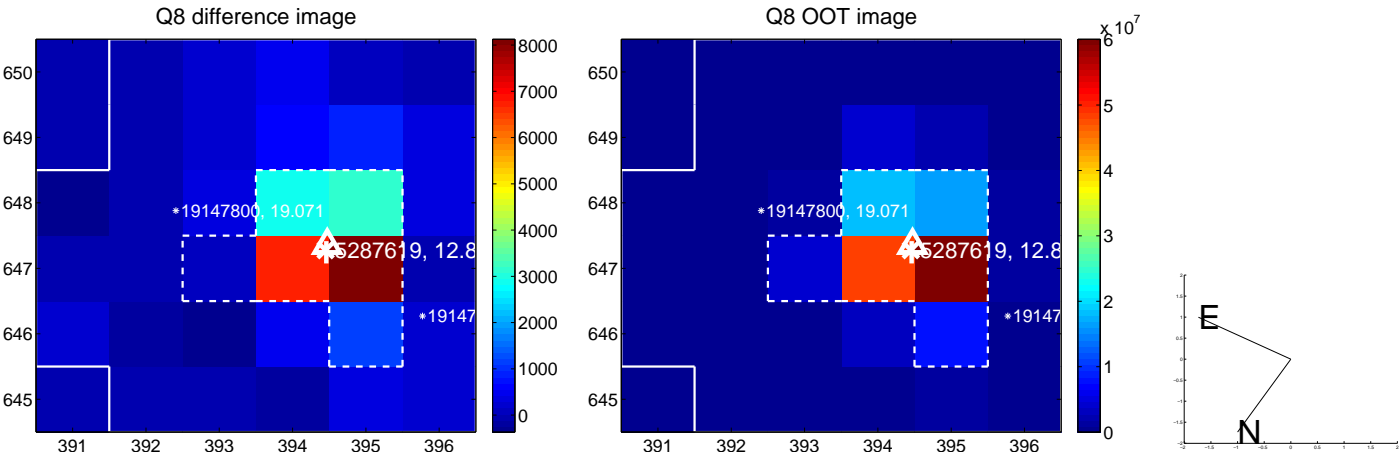
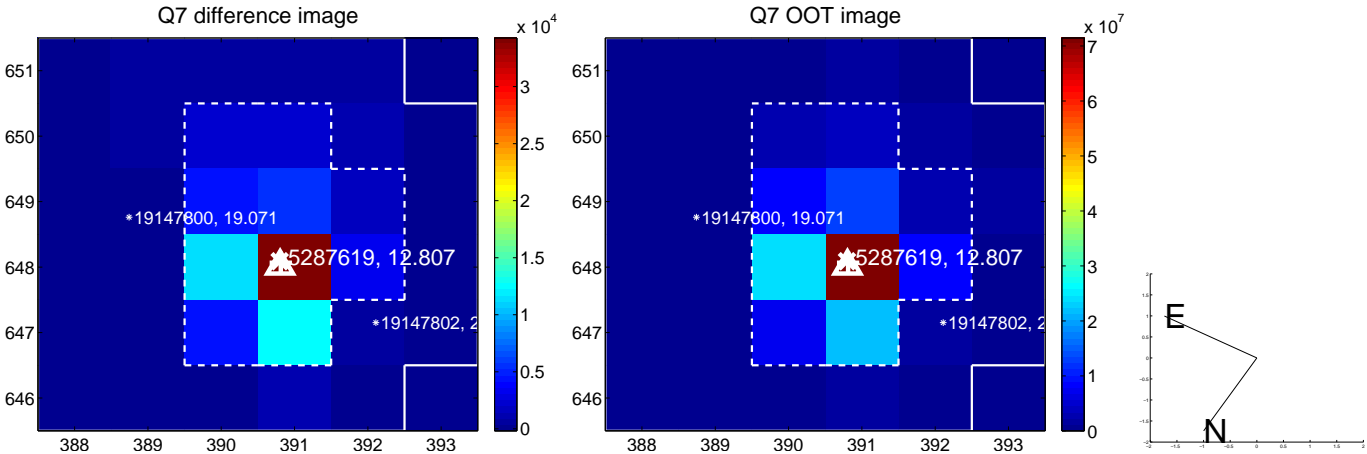
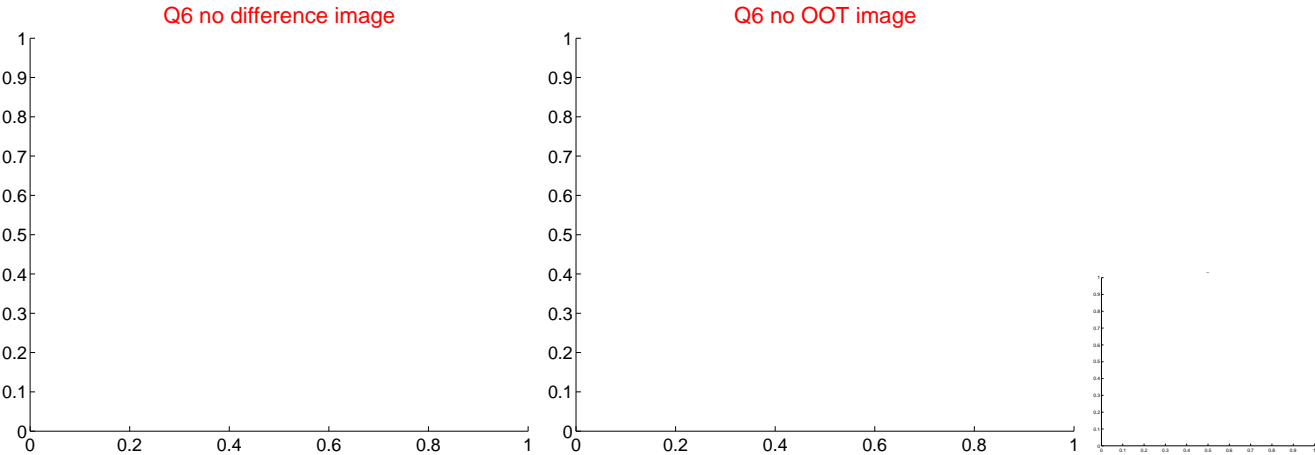
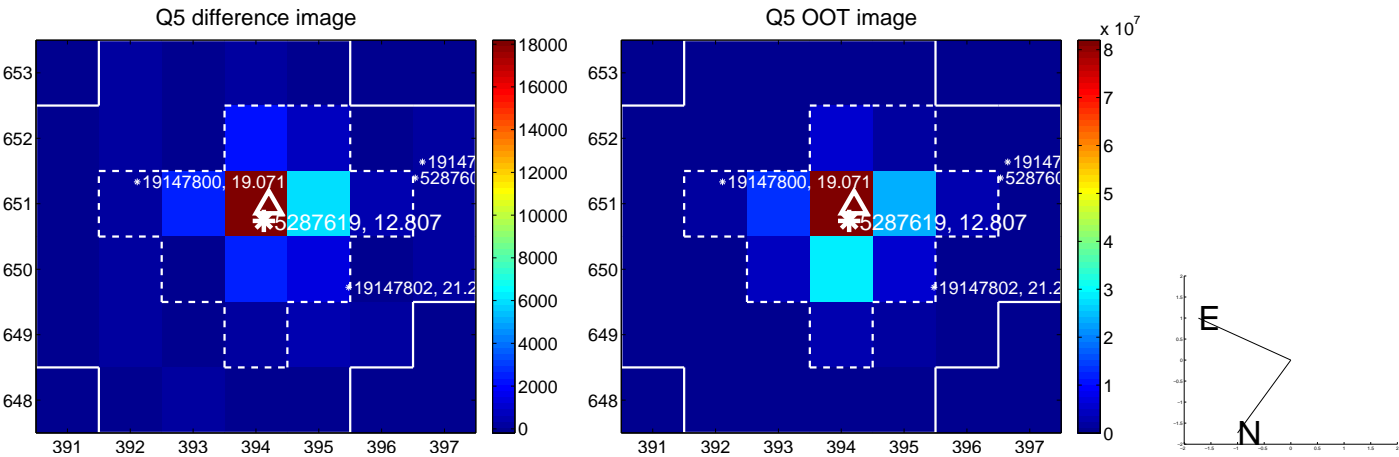


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

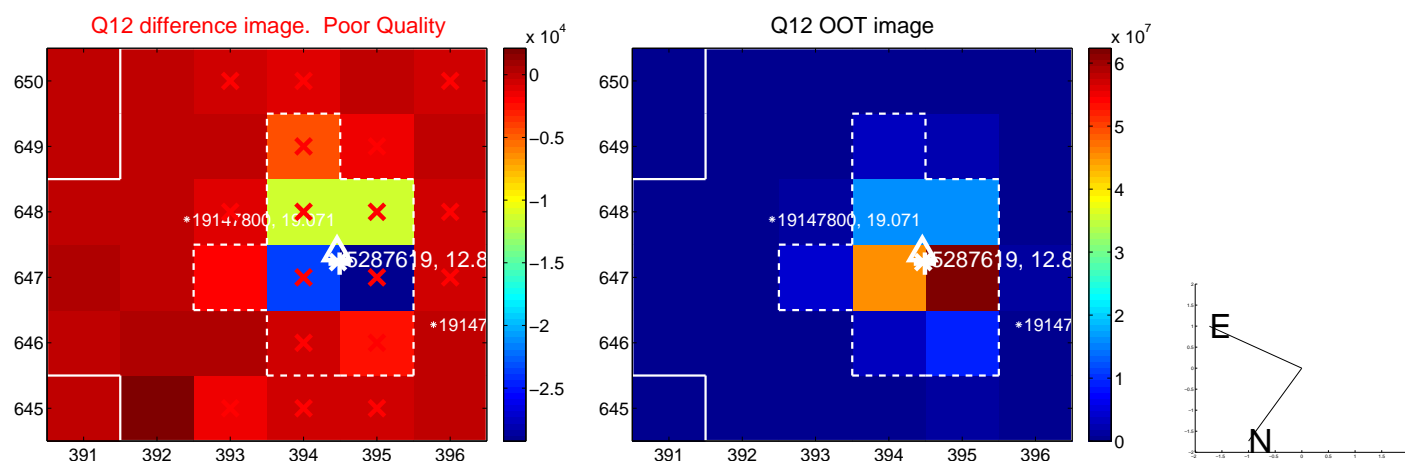
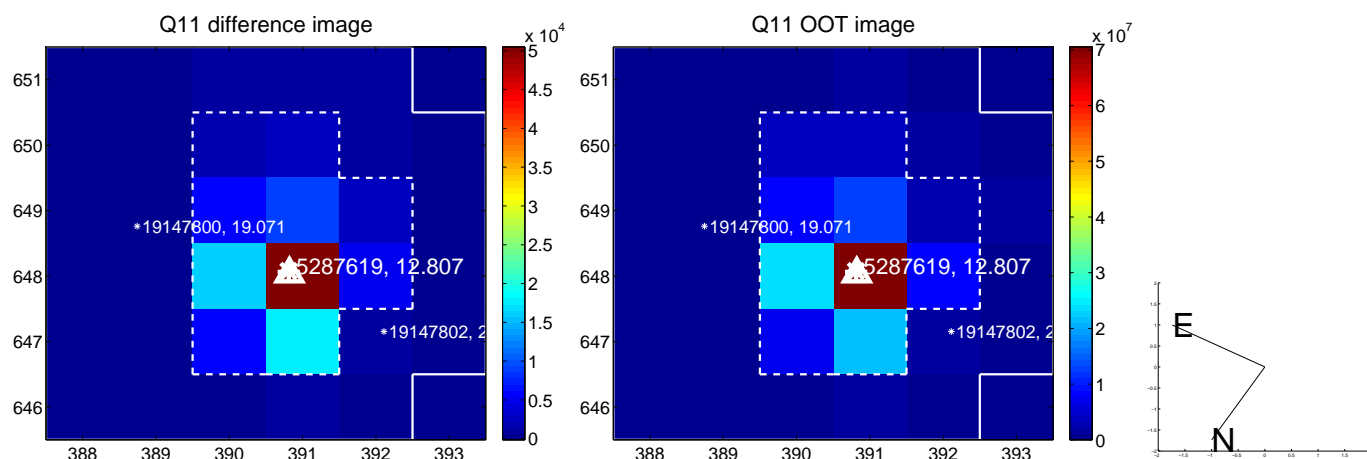
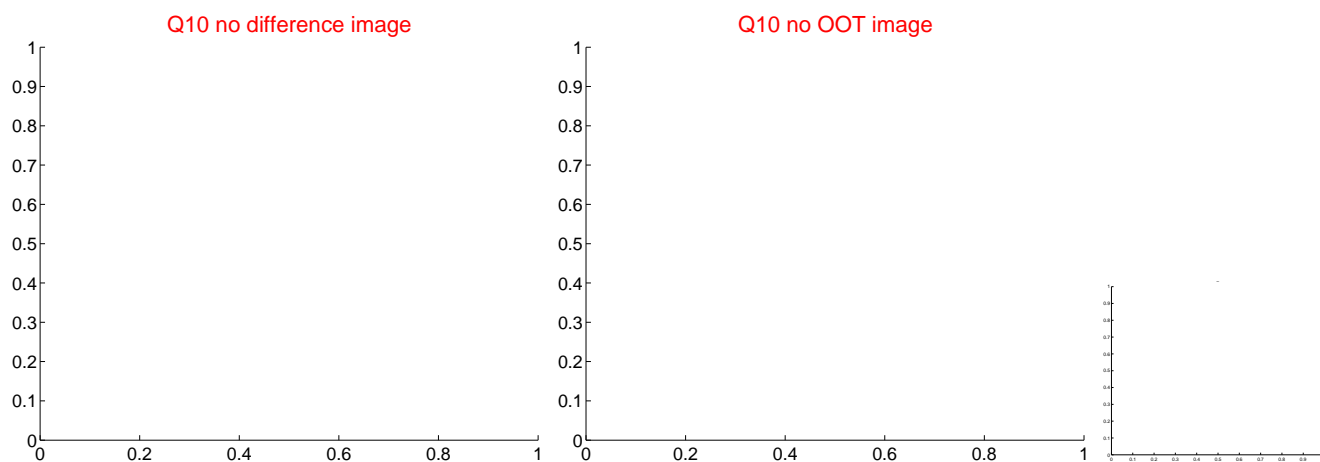
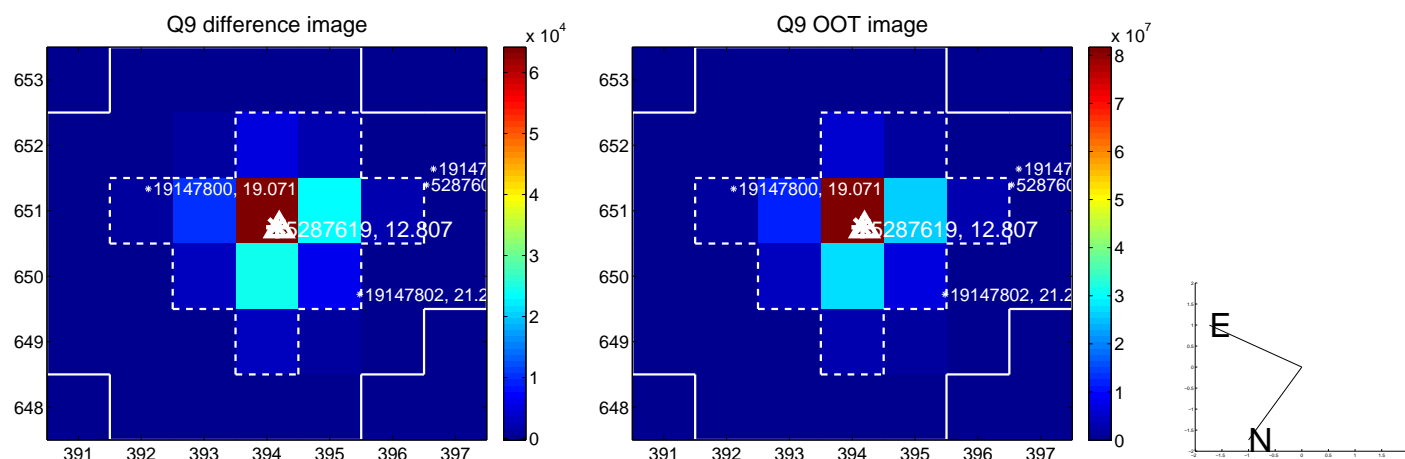
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



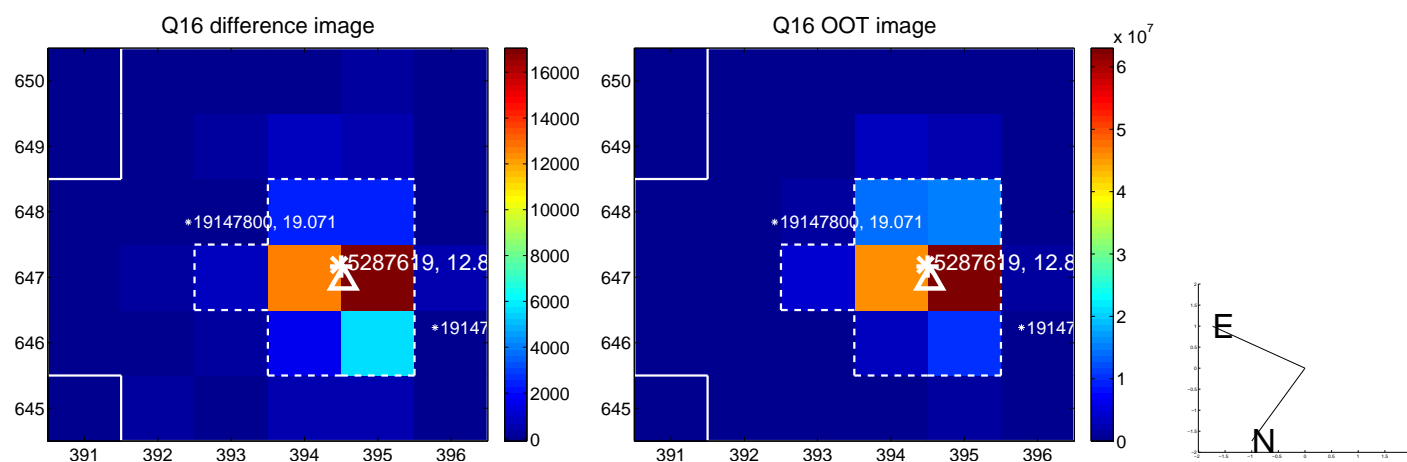
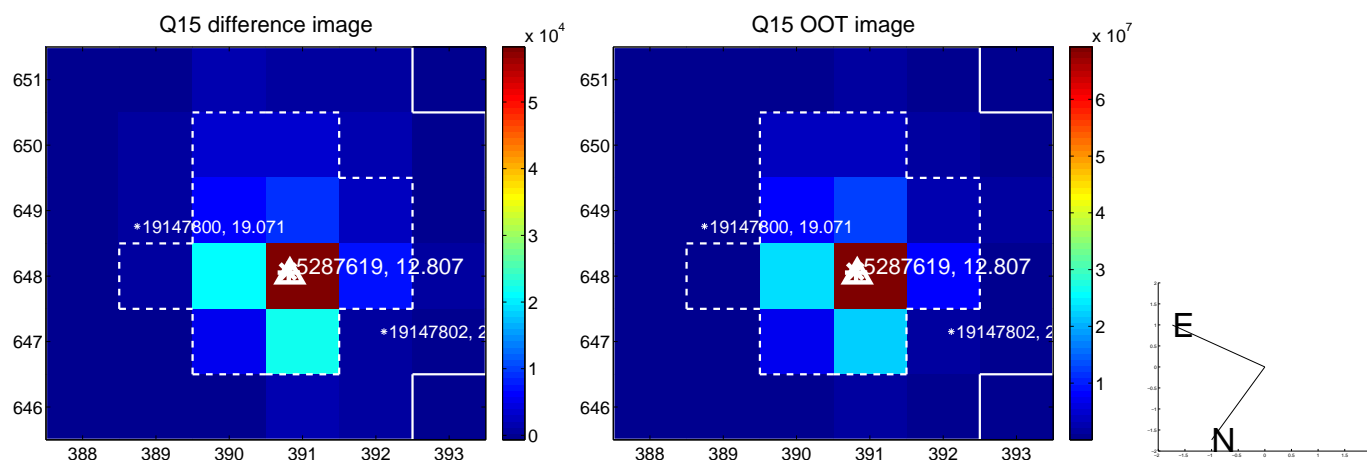
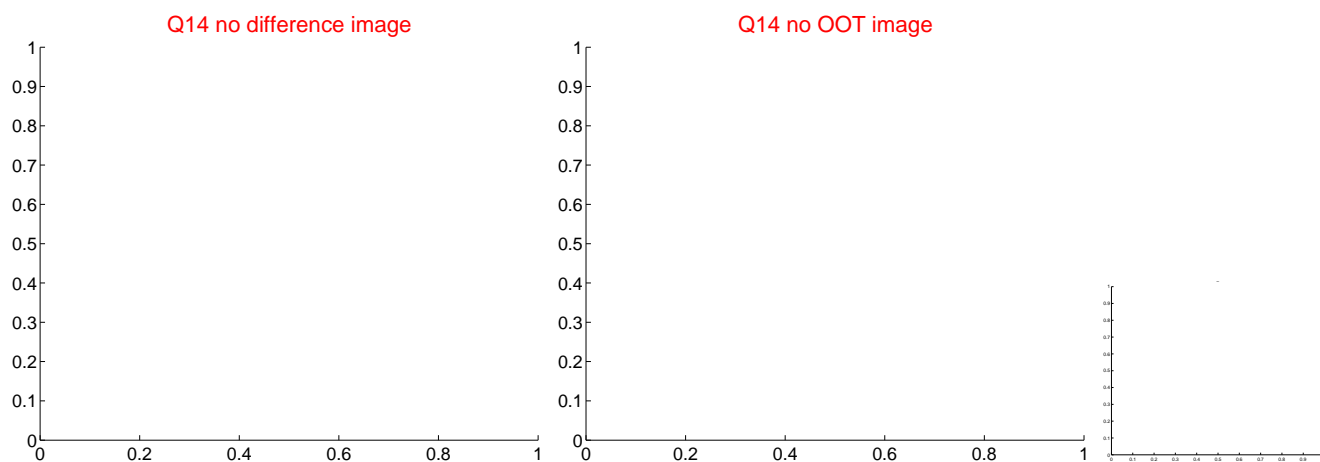
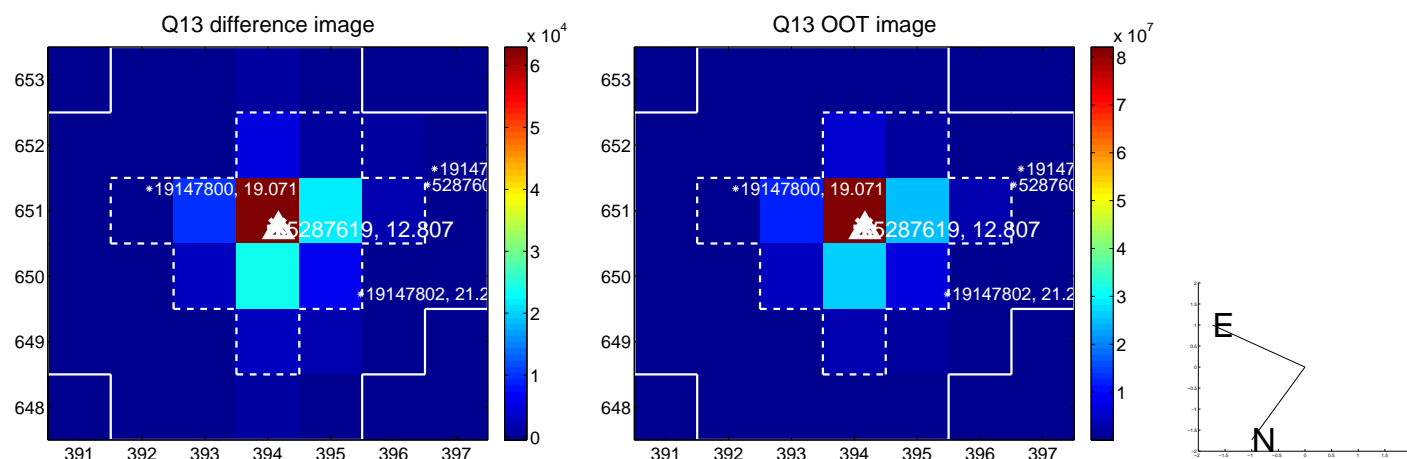
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



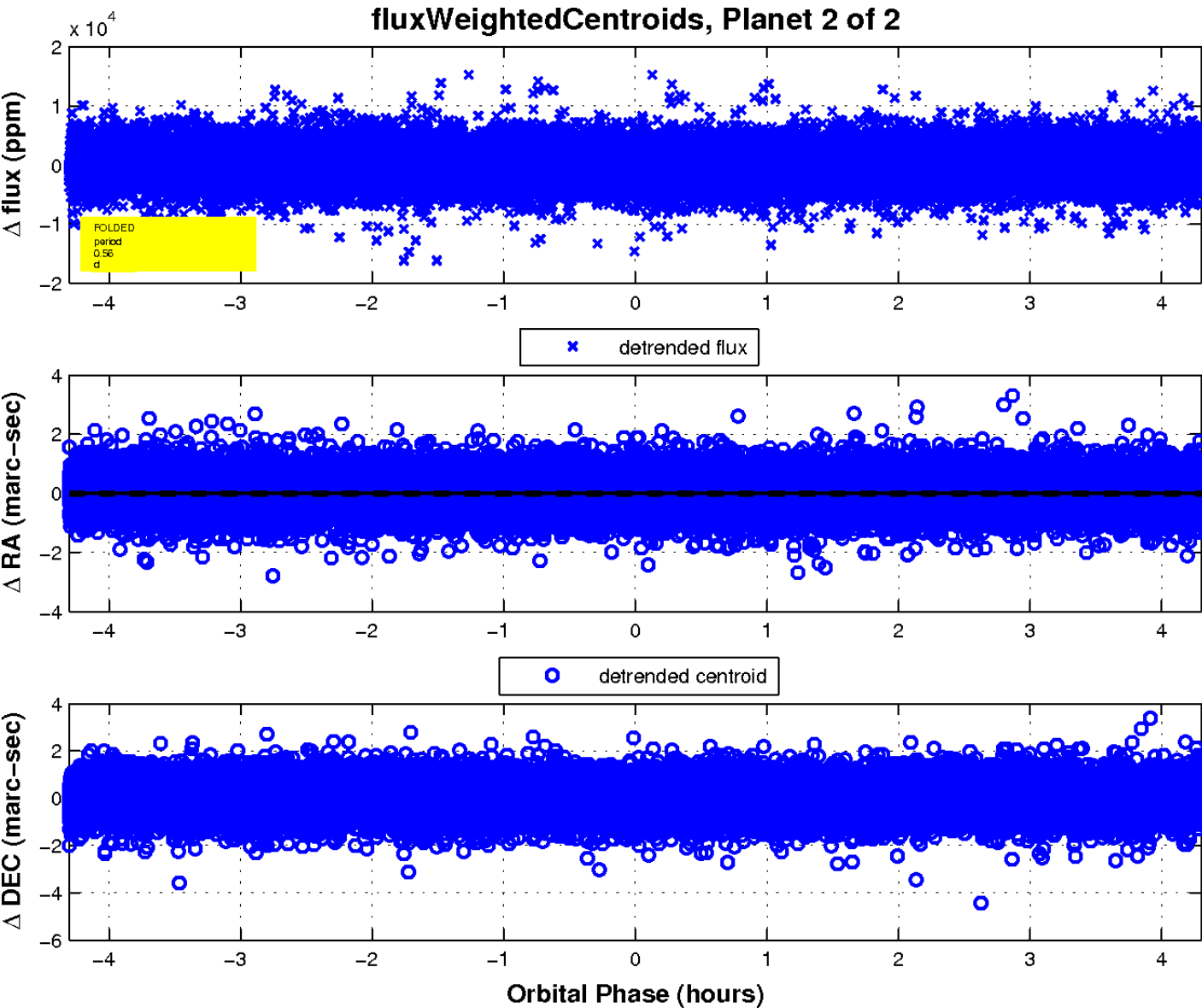
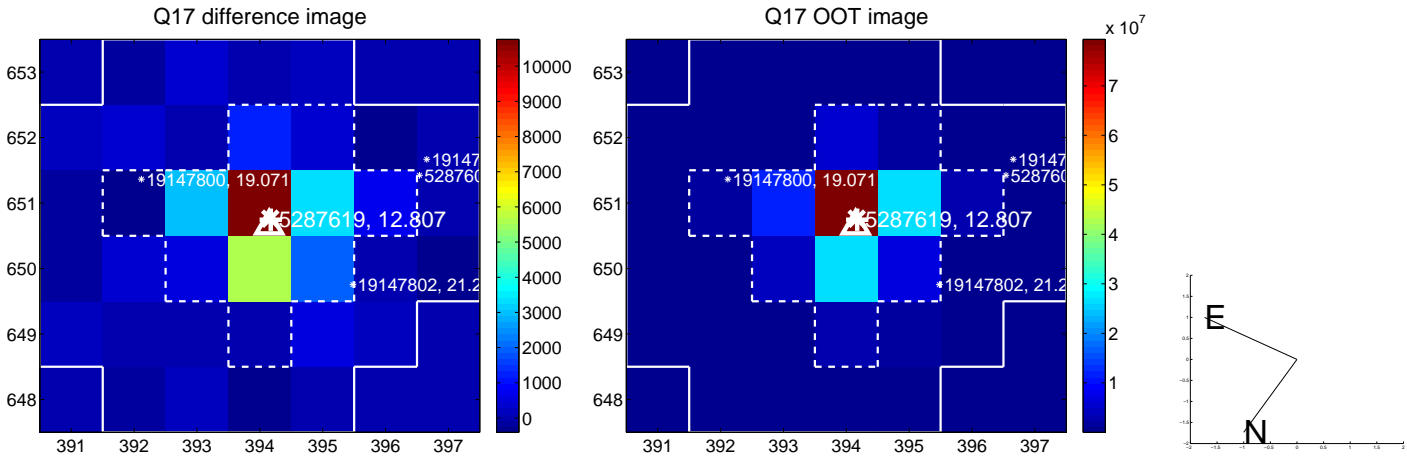
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

