

KIC 010032819

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})
010032819-01	OBS	No	0.821601	131.509110	1226.2	2.000	9.0	-1.0	0.74	5275	2.57	1658.34
010032819-02	OBS	No	0.816652	132.088274	99.2	6.461	7.8	3.2	0.74	5275	0.89	1671.76

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010032819-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_NOFITS
010032819-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT

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

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

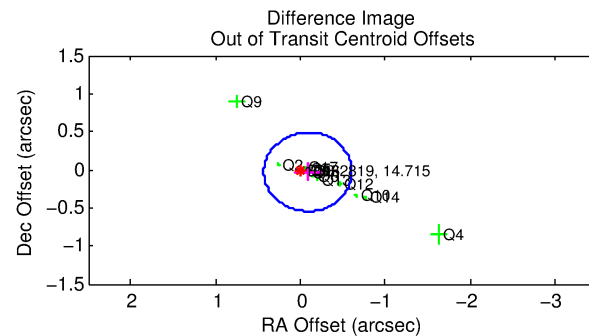
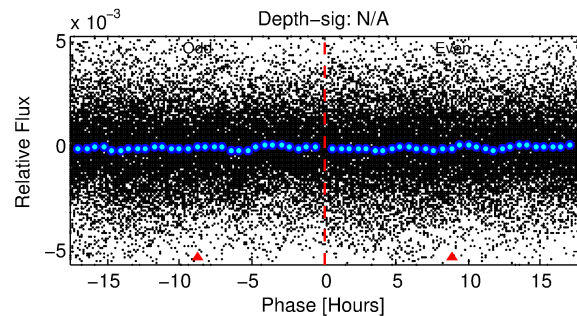
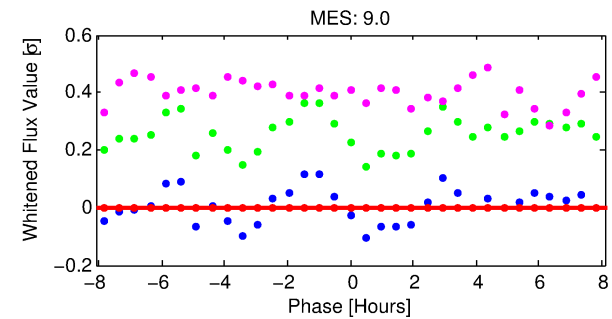
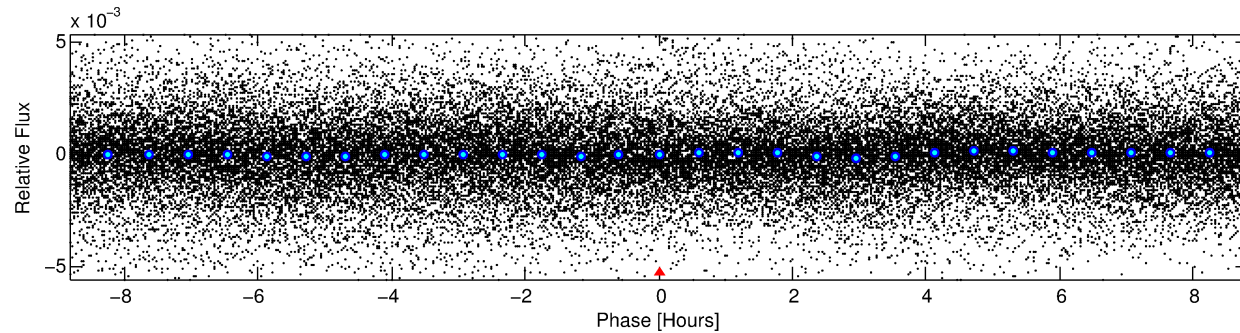
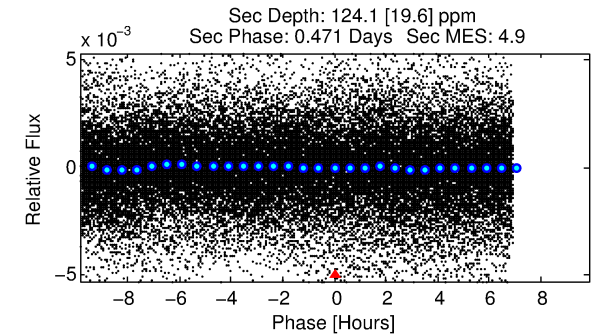
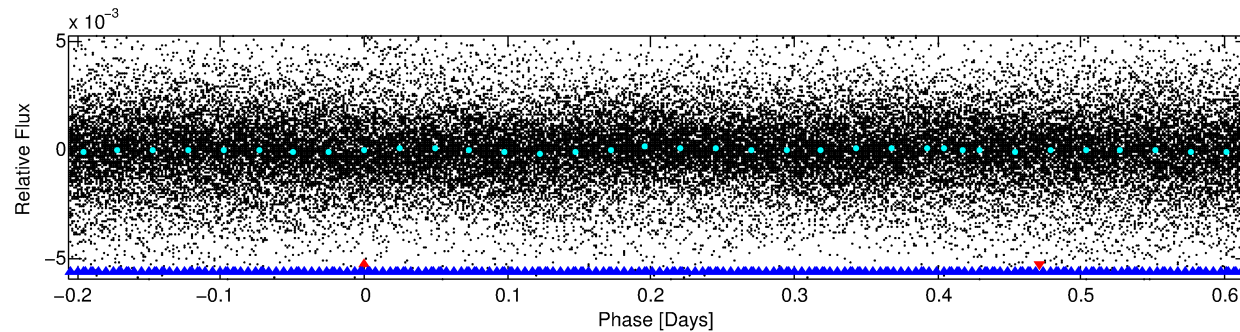
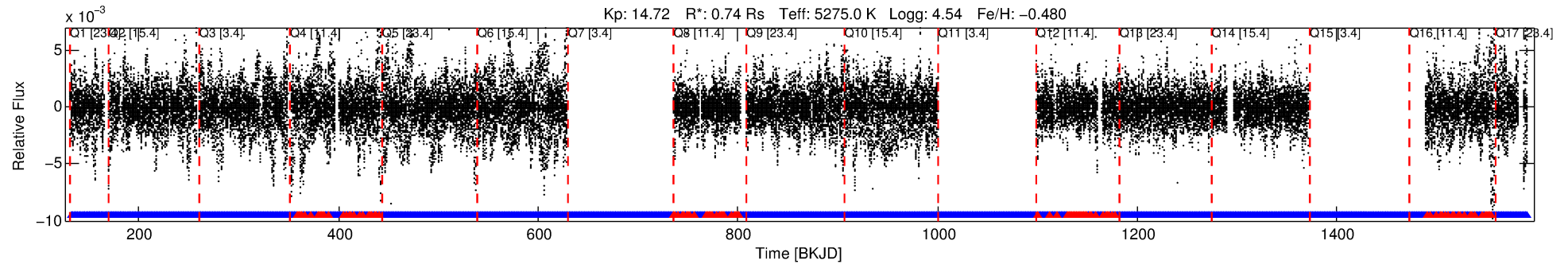
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010032819-01

No Significant Match Found

DV One-Page Summary

KIC: 10032819 Candidate: 1 of 2 Period: 0.822 d



TPS TCE Results:

Period = 0.82160 d
Epoch = 131.5091 BKJD

DV fit results are unavailable

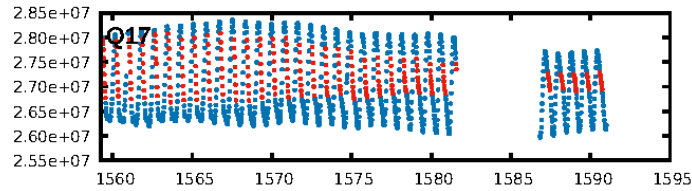
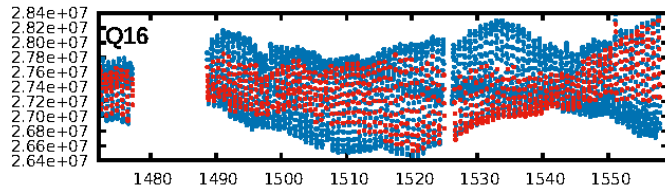
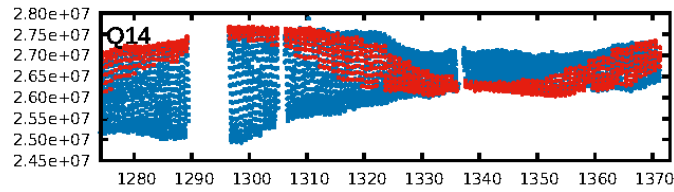
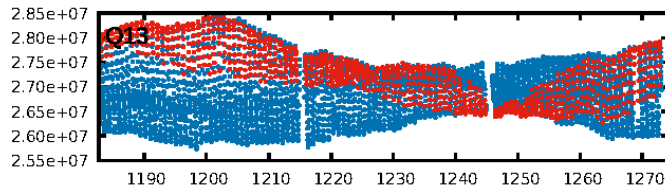
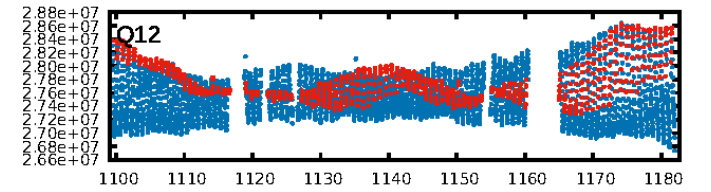
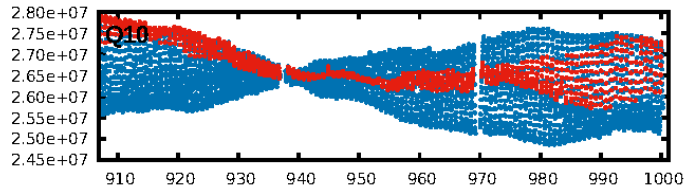
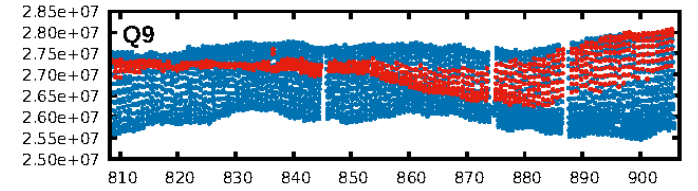
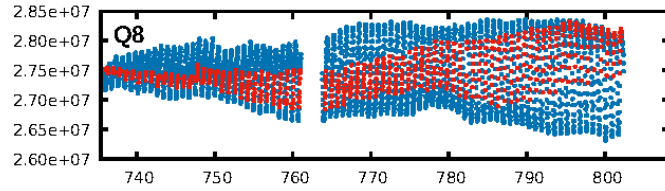
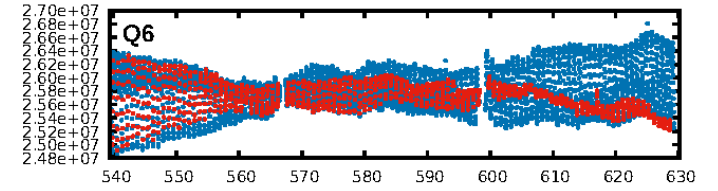
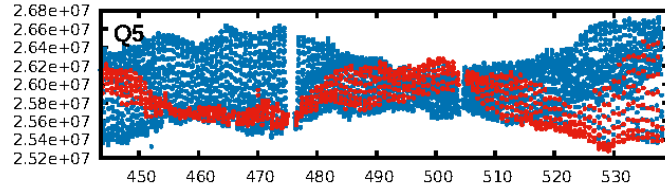
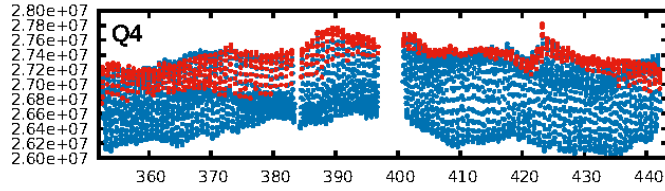
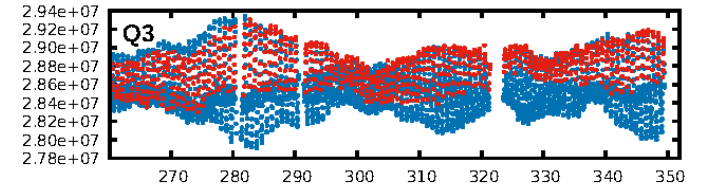
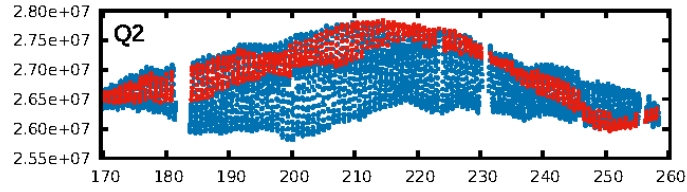
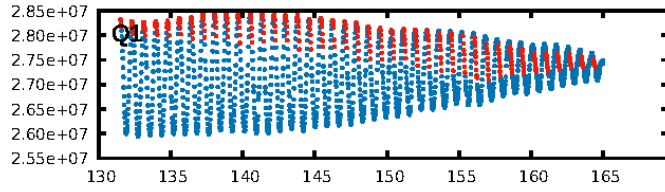
DV Diagnostic Results:

ShortPeriod-sig: 1.4% [0.02σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.91 [1125/1232]
GhostDiagnostic-chr: 0.984
Centroid-sig: 19.1%
Centroid-so: 0.543 arcsec [1.17σ]
OotOffset-rm: 0.093 arcsec [0.54σ]
KicOffset-rm: 0.150 arcsec [1.11σ]
OotOffset-st: 4/1/4/5 [14]
KicOffset-st: 4/1/4/5 [14]
DiffImageQuality-fgm: 0.43 [6/14]
DiffImageOverlap-fno: 0.00 [0/14]

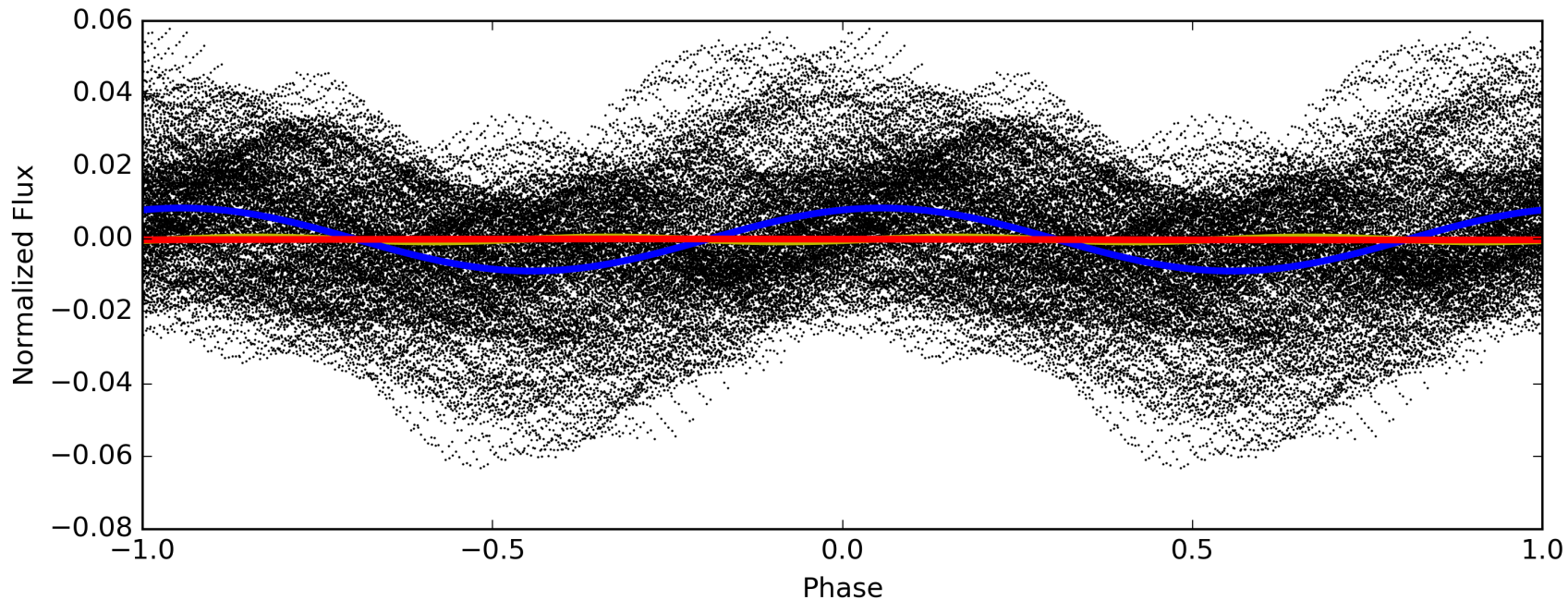
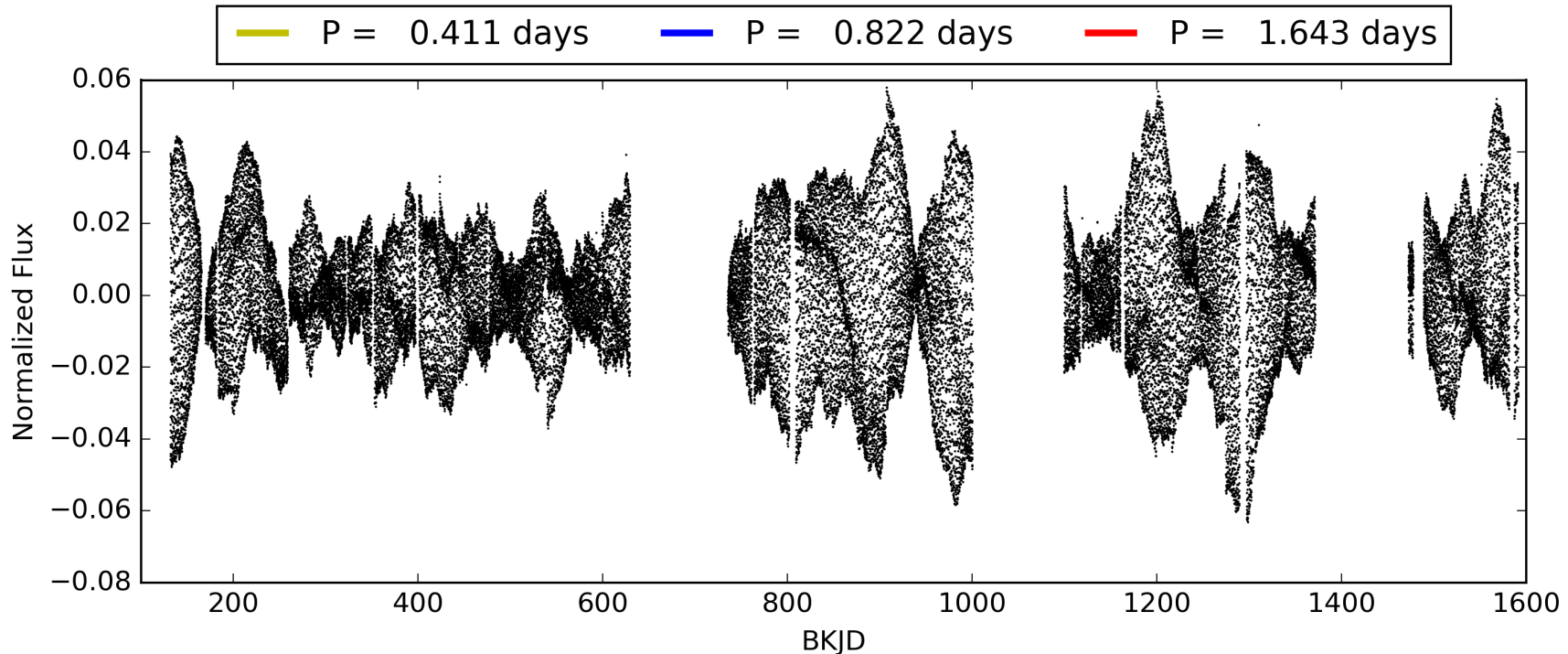
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 04:26:15 Z

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

TCE 010032819-01, PDC Light Curves

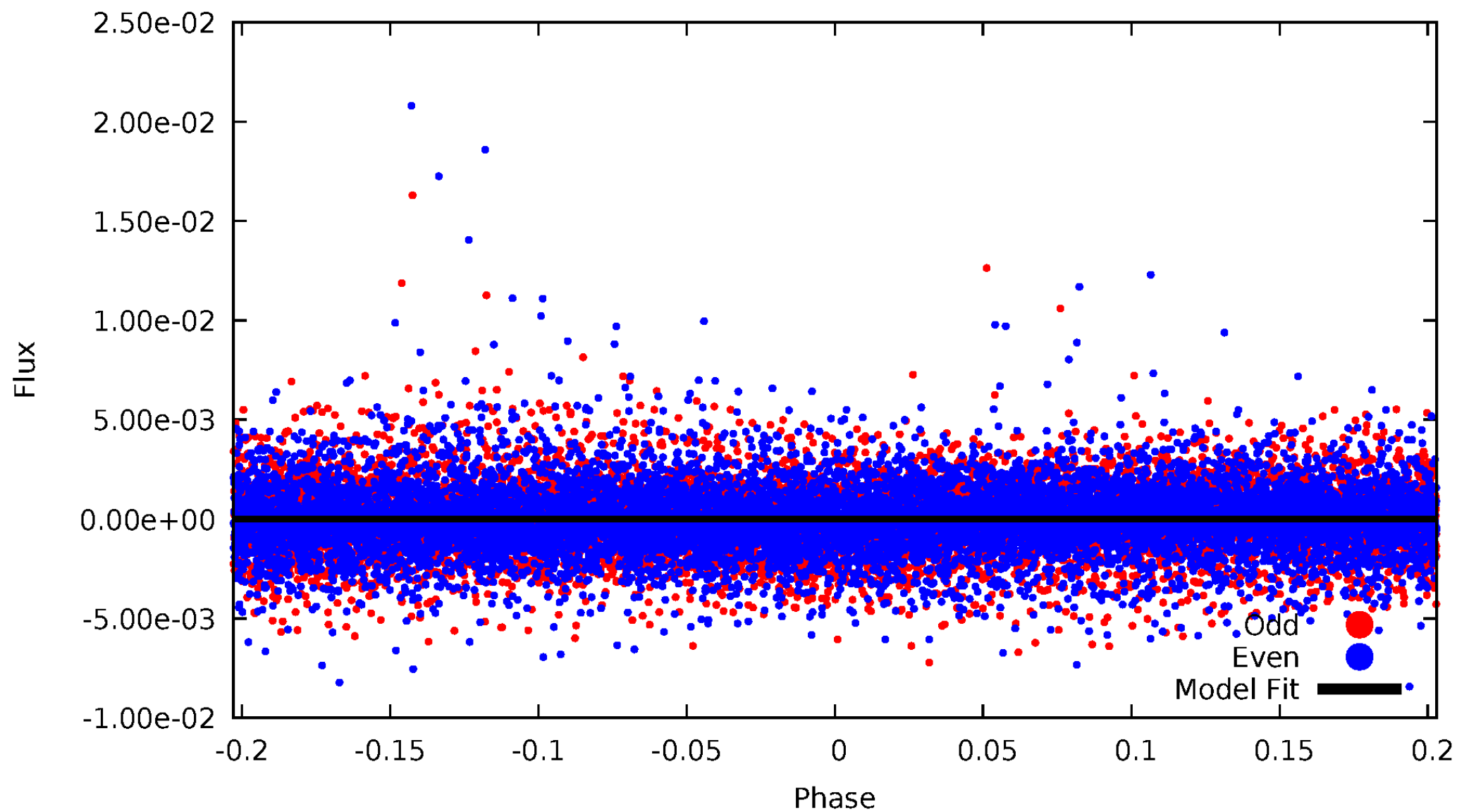


TCE 010032819-01



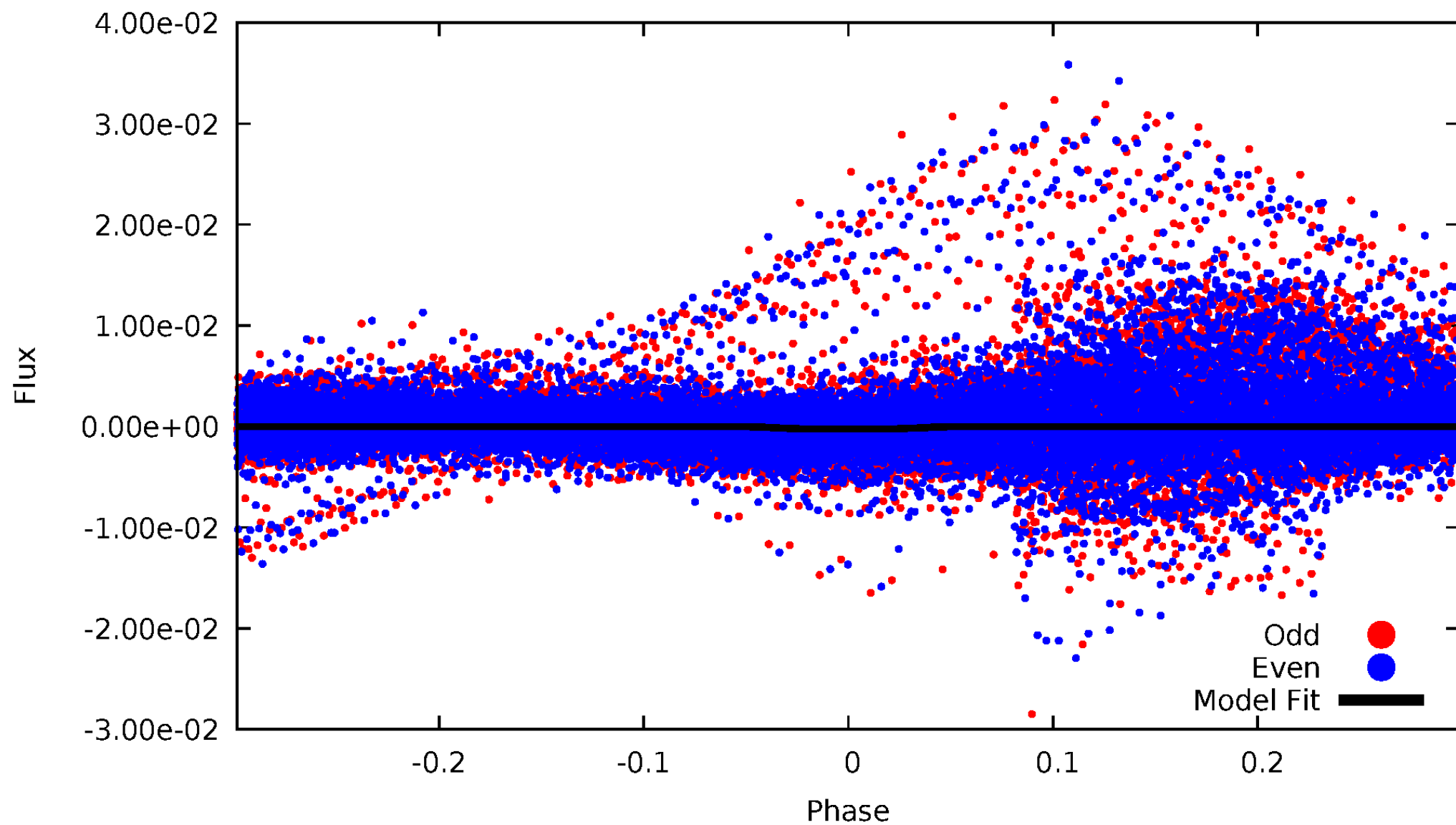
DV Odd/Even

TCE 010032819-01

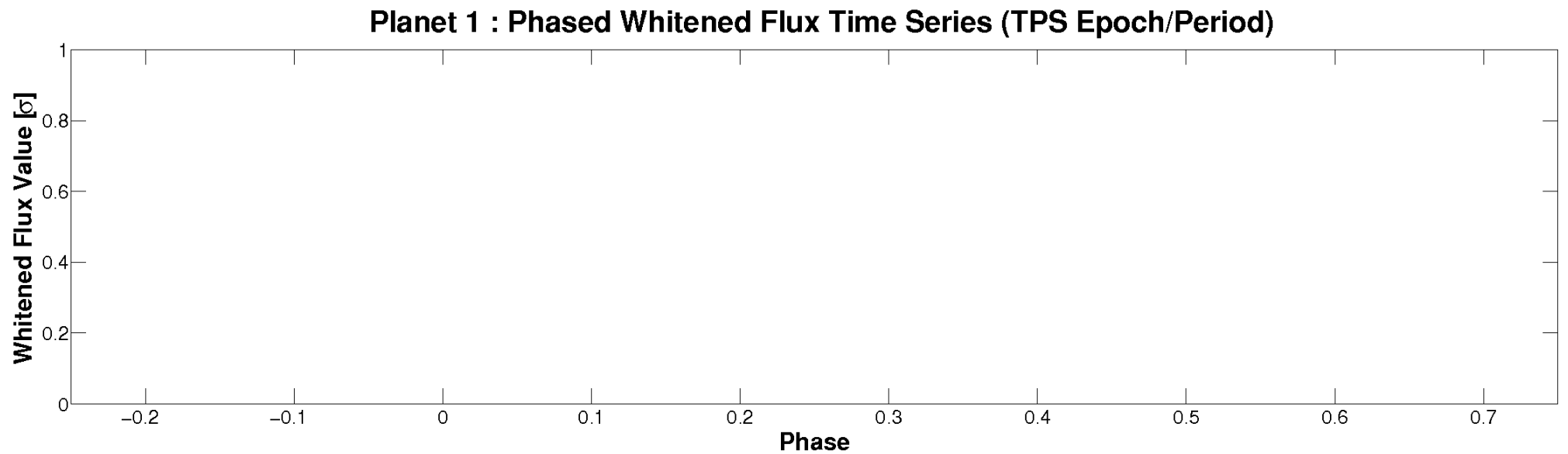
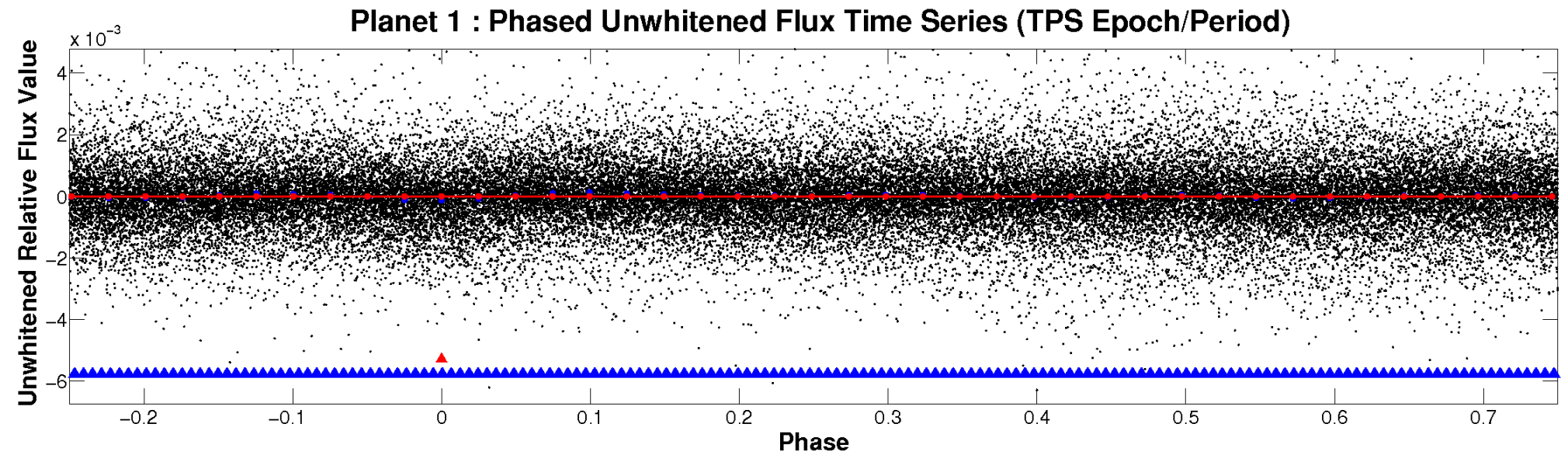


ALT Odd/Even

TCE 010032819-01

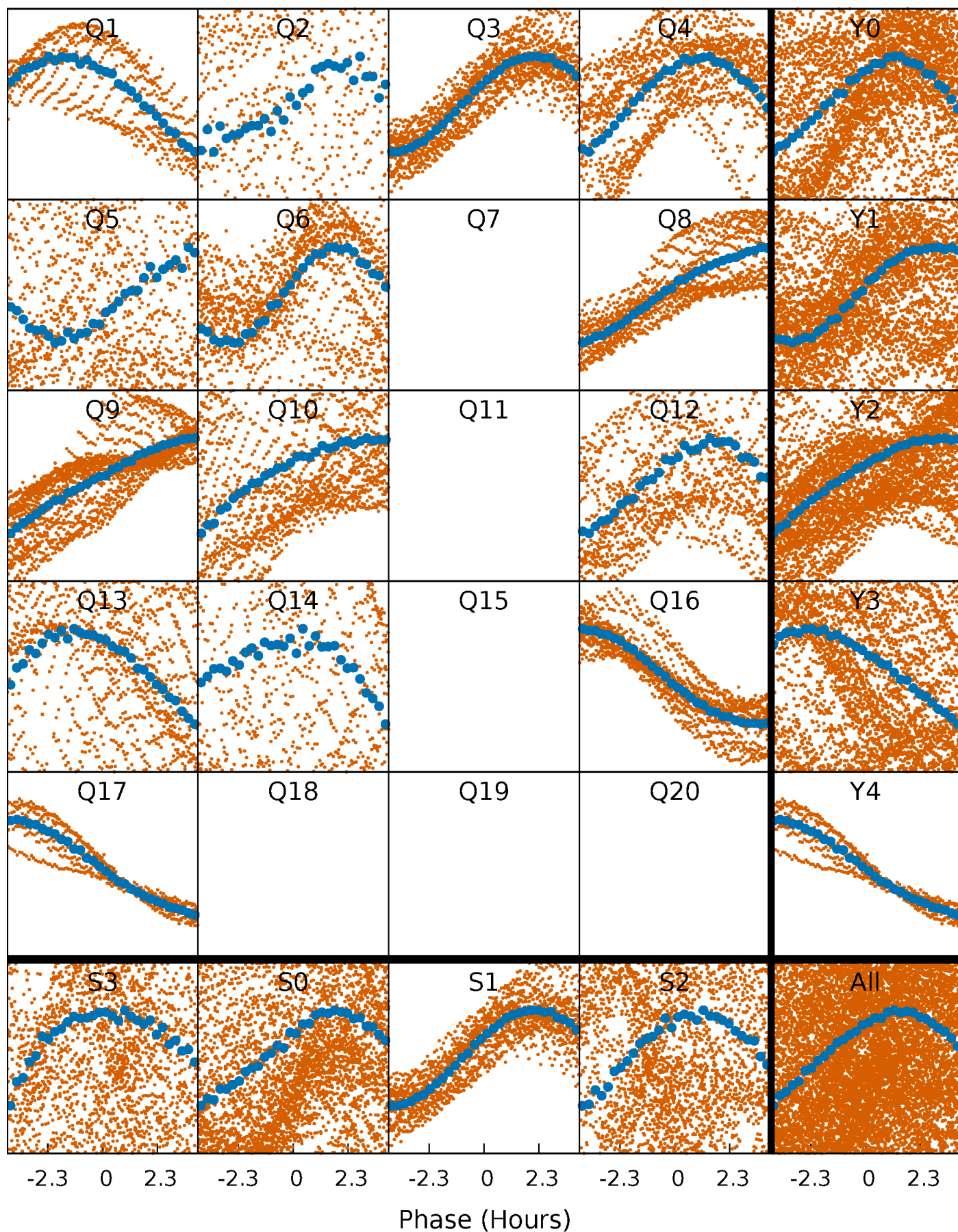


Non-Whitened Vs. Whitened Light Curve



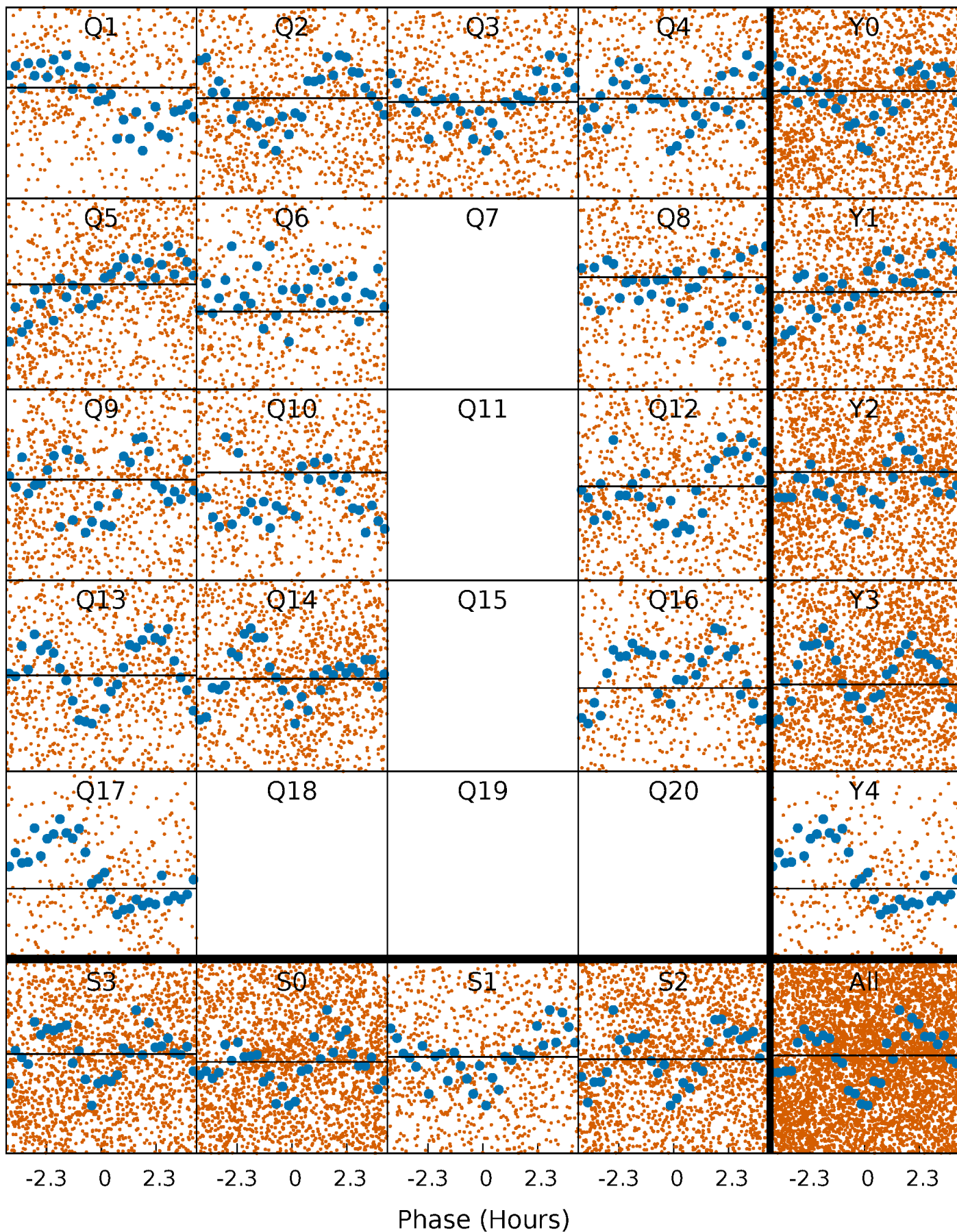
PDC Quarter-Phased Transit Curves

TCE 010032819-01 P= 0.821601 Days $T_0=131.509110$ (BKJD)



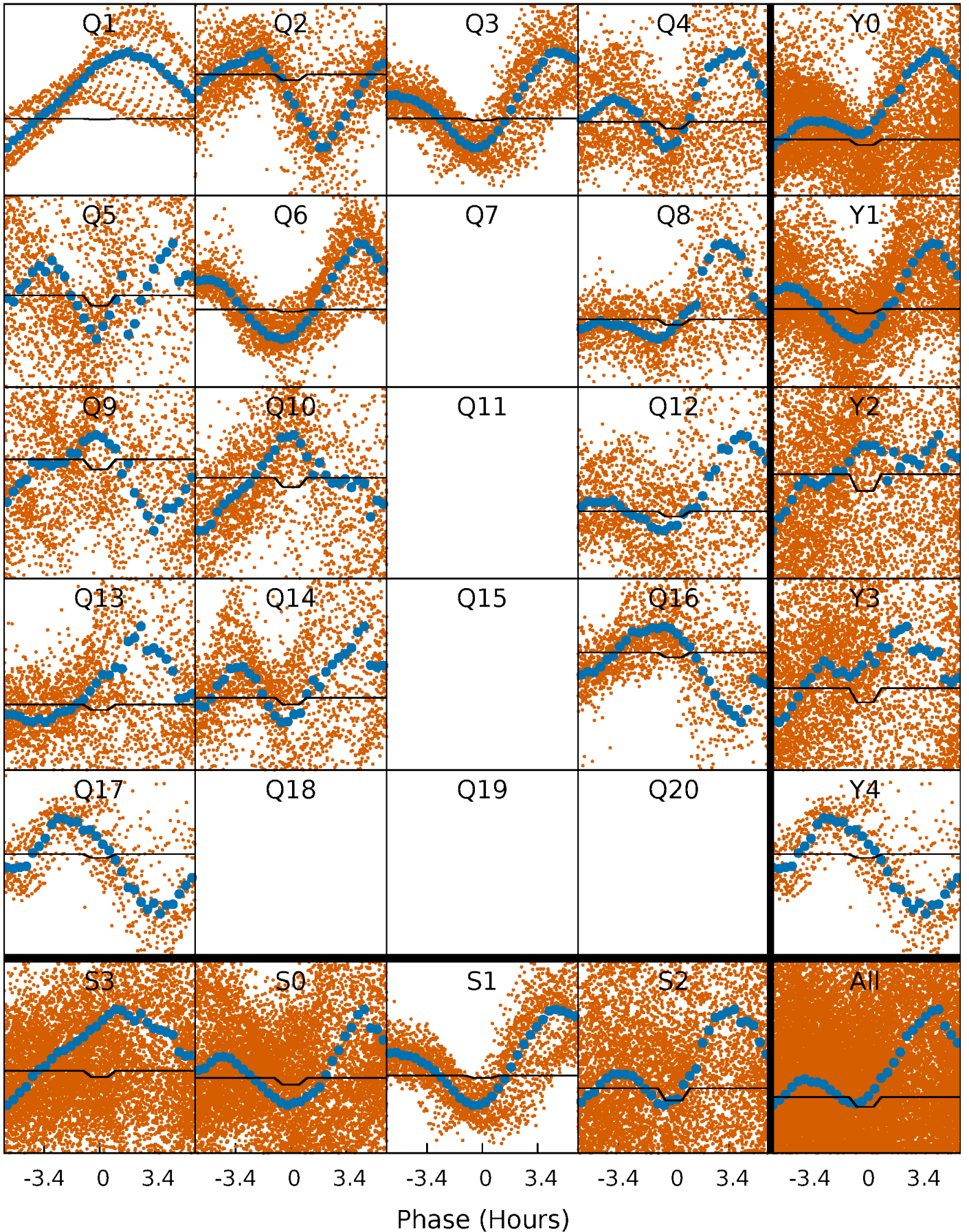
DV Quarter-Phased Transit Curves

TCE 010032819-01 P= 0.821601 Days $T_0=131.509110$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

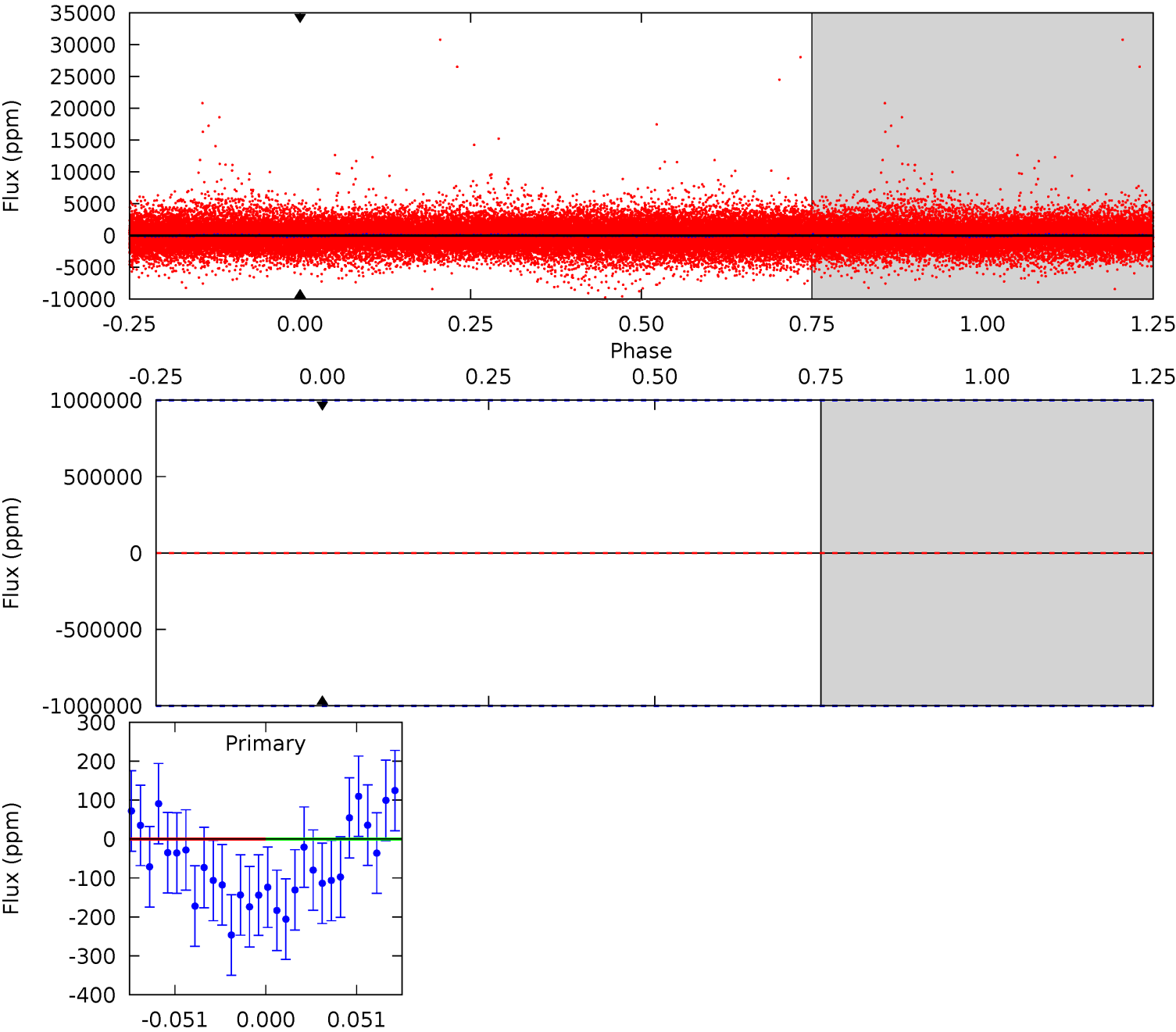
TCE 010032819-01 P= 0.821601 Days $T_0=132.204108$ (BKJD)



DV Model-Shift Uniqueness Test

010032819-01, P = 0.821601 Days, E = 131.509110 Days

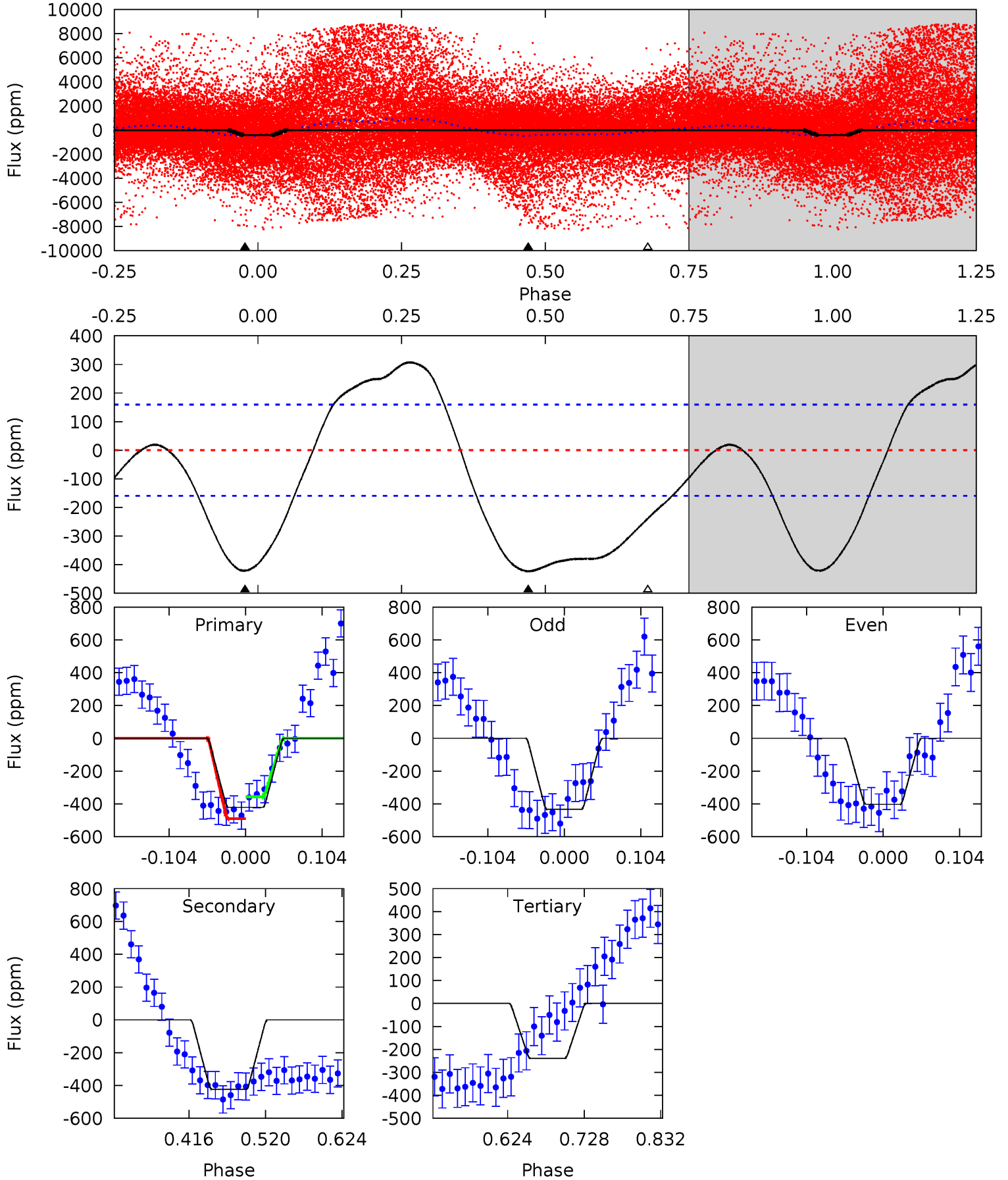
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

010032819-01, P = 0.821601 Days, E = 131.382507 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.0	12.1	6.83	0	4.56	1.63	6.09	5.21	12.0	5.27	12.1	0.44	0.11	0.42	1.68



Stellar Parameters For KIC 010032819

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5275^{+158}_{-158}	$4.538^{+0.094}_{-0.068}$	$-0.480^{+0.350}_{-0.300}$	$0.745^{+0.084}_{-0.092}$	$0.700^{+0.099}_{-0.040}$	$2.379^{+0.985}_{-0.545}$
	+3%/-3%	+2%/-1%	+73%/-62%	+11%/-12%	+14%/-6%	+41%/-23%
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 010032819-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$6.45^{+6.50}_{-4.29}$	2267^{+94}_{-103}	3972^{+12722}_{-18440}	$5.093^{+615.497}_{-467.075}$
Alt.	-423 ± 35	$5.97^{+6.29}_{-4.12}$	2263^{+94}_{-98}	3221^{+1774}_{-988}	$1.548^{+14.594}_{-1.164}$

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

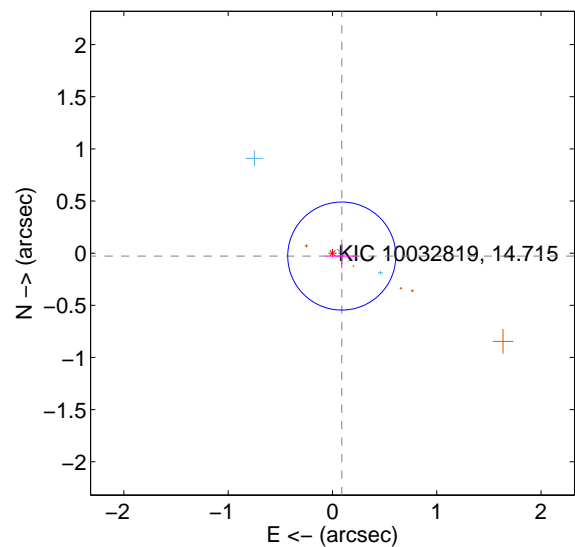
Supplemental centroid analysis for 010032819-01. Kepler magnitude: 14.71. Transit SNR -1.00

There are 6 quarters with good PRF difference image offsets

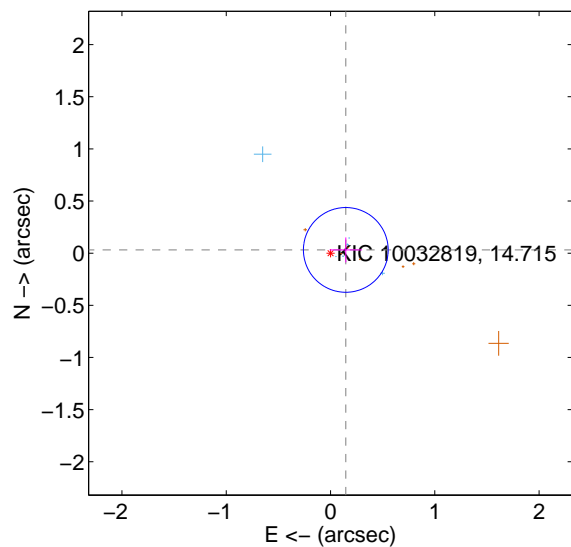
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.093 ± 0.173	0.54	-0.089 ± 0.154	-0.028 ± 0.116
PRF-fit source offset from KIC position	0.150 ± 0.135	1.11	-0.147 ± 0.155	0.031 ± 0.120
photometric centroid source offset	0.54 ± 0.46	1.17	0.07 ± 0.49	0.54 ± 0.46

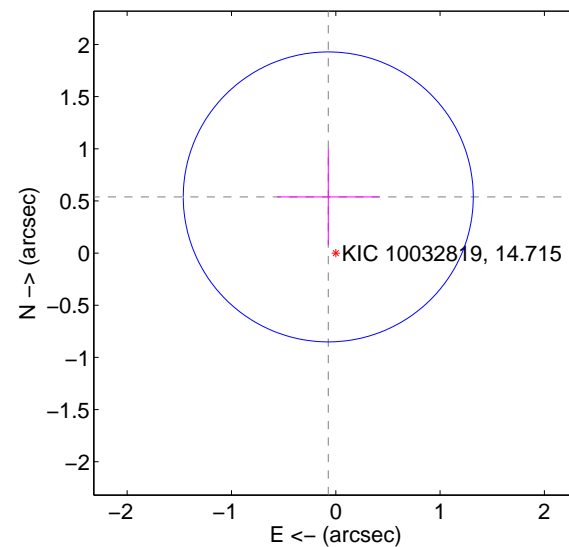
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

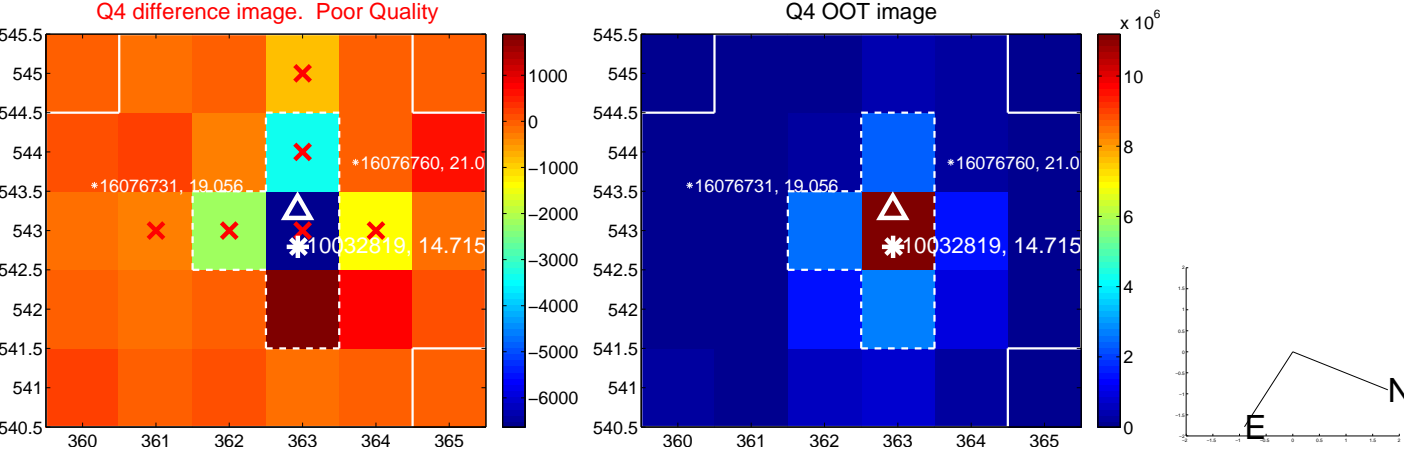
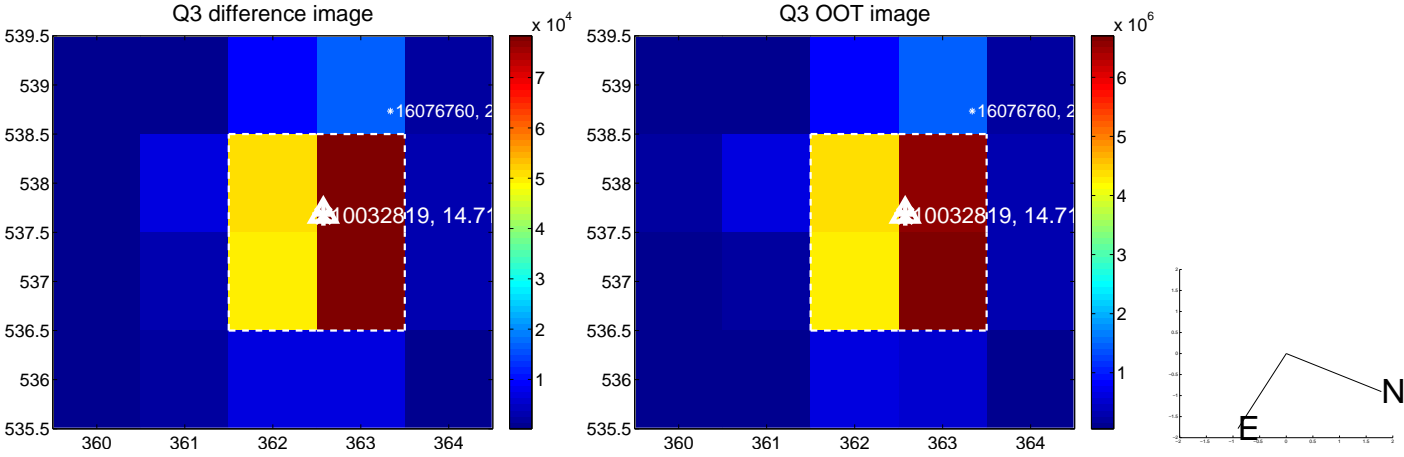
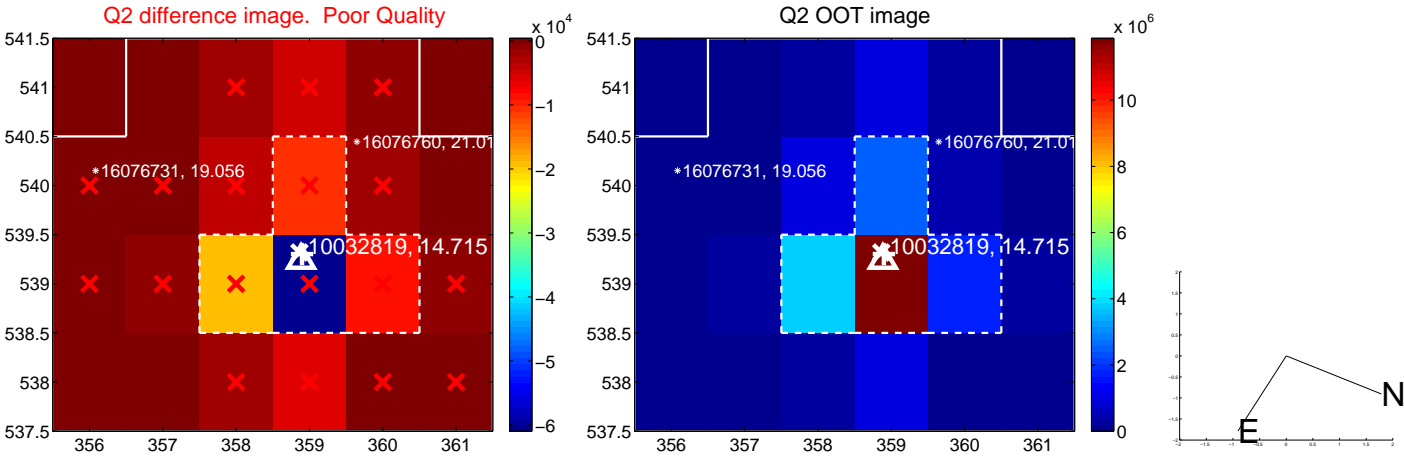
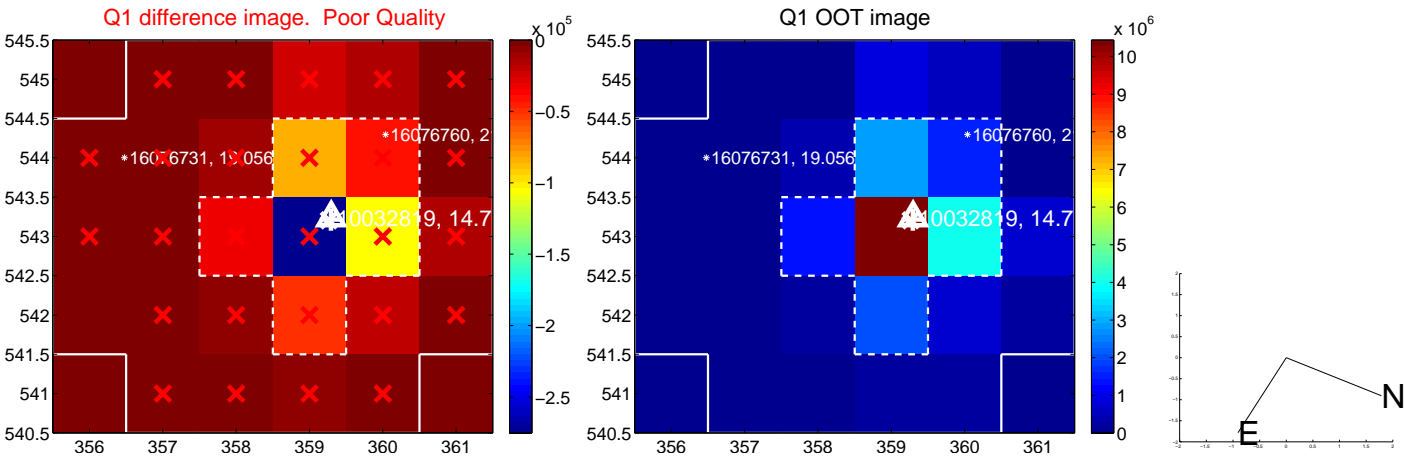


offset from photometric centroids

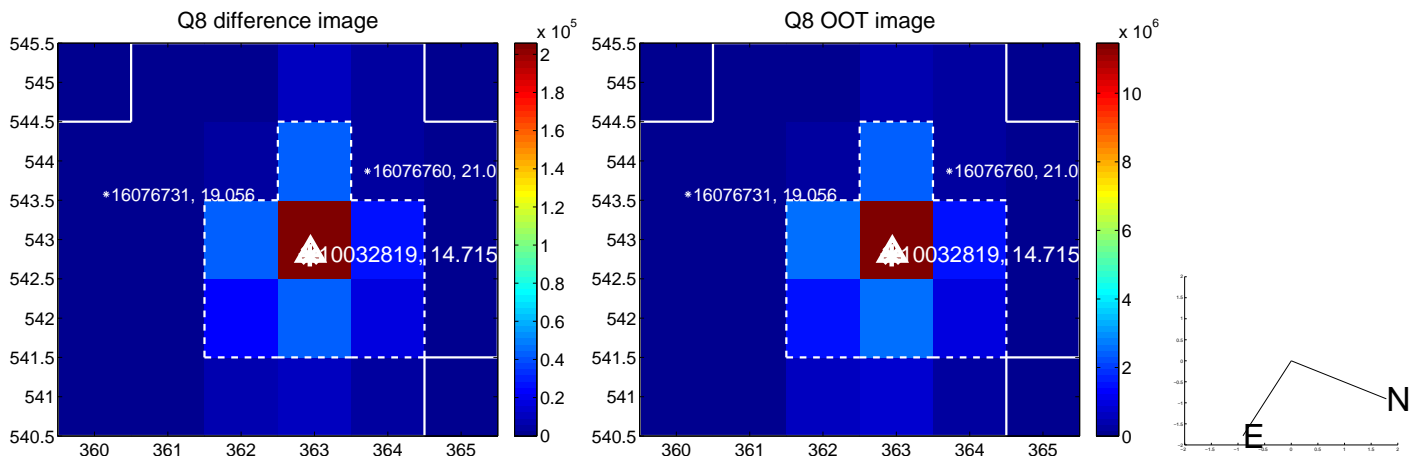
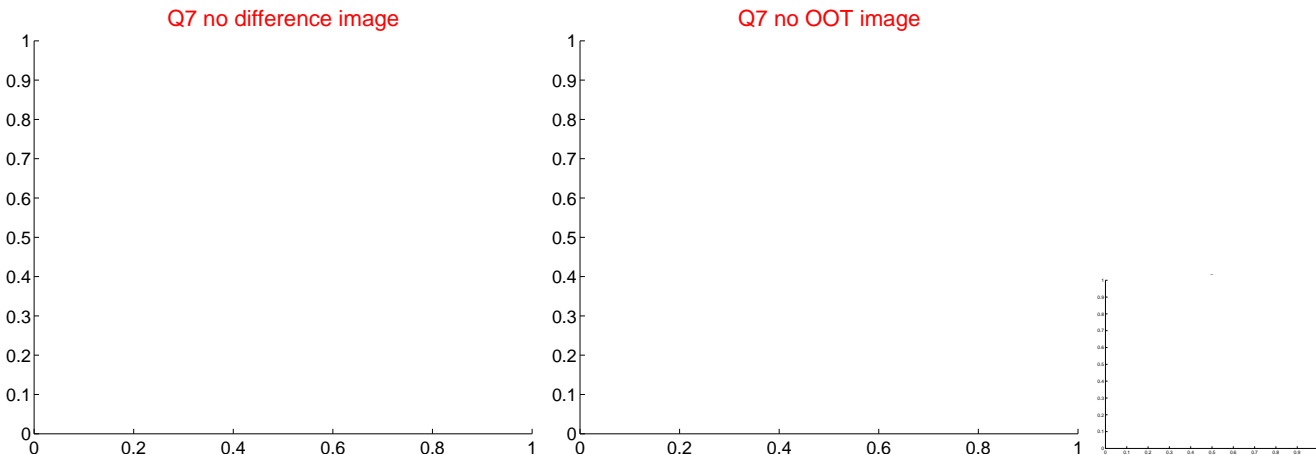
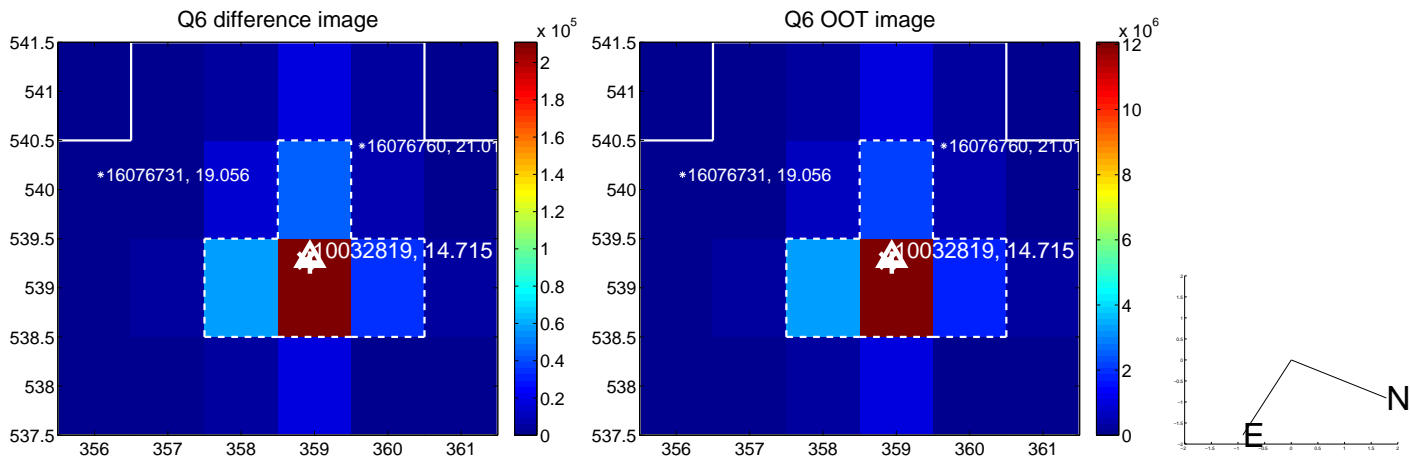
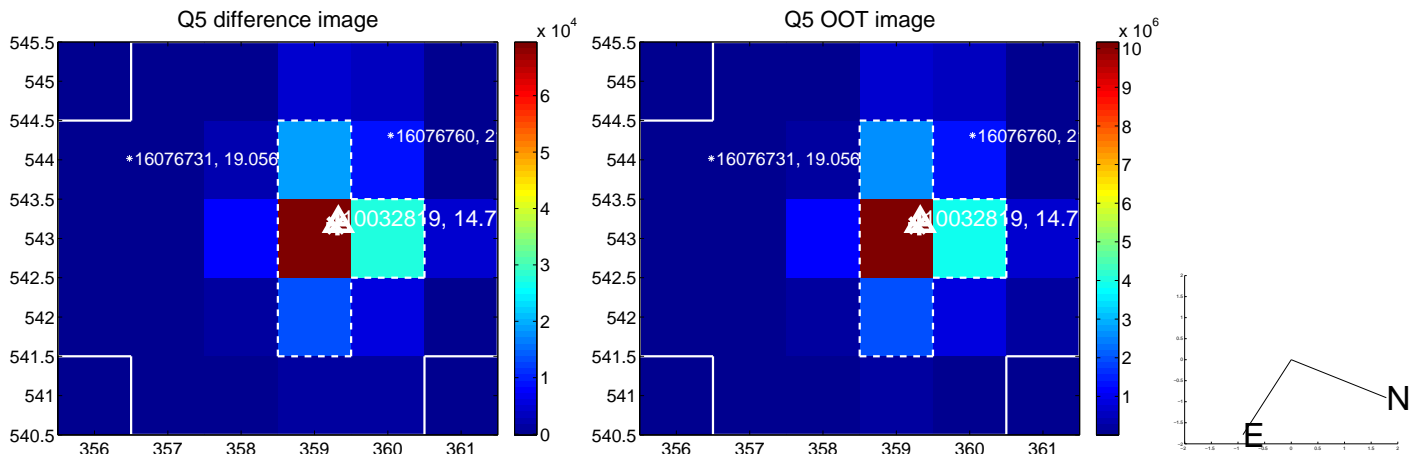


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

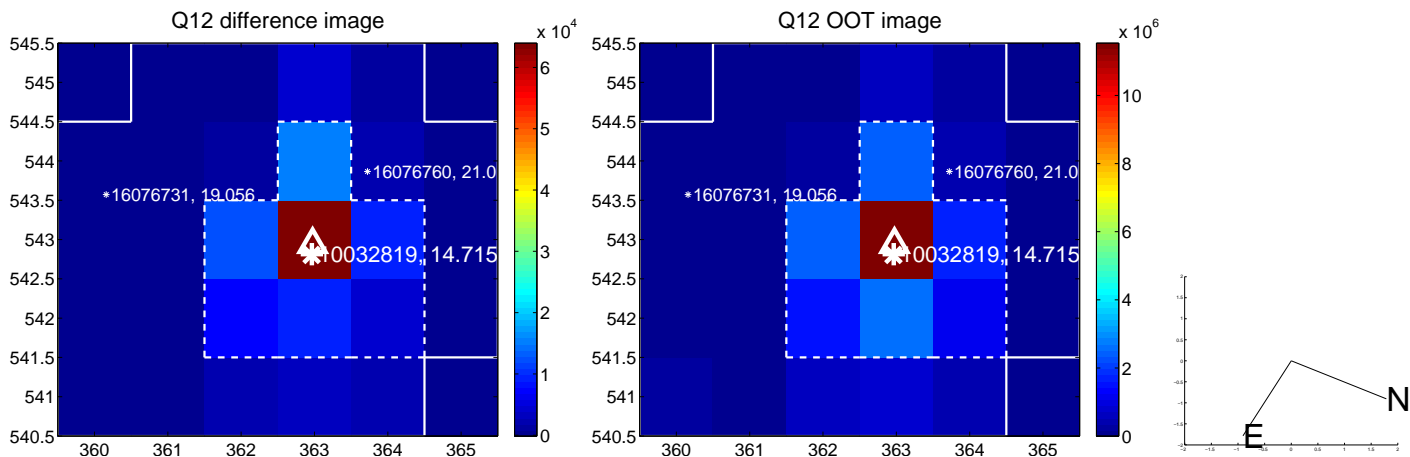
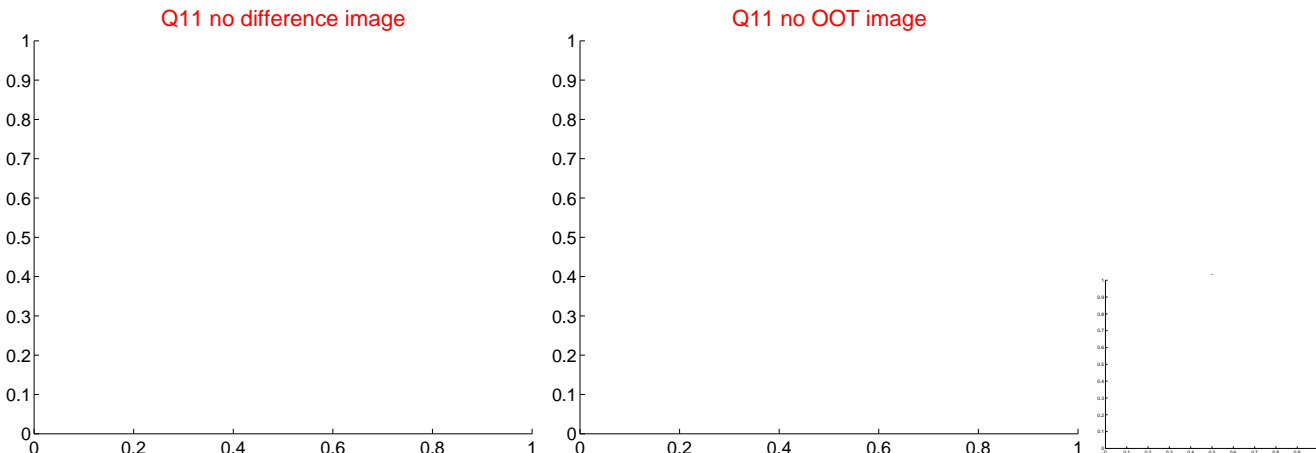
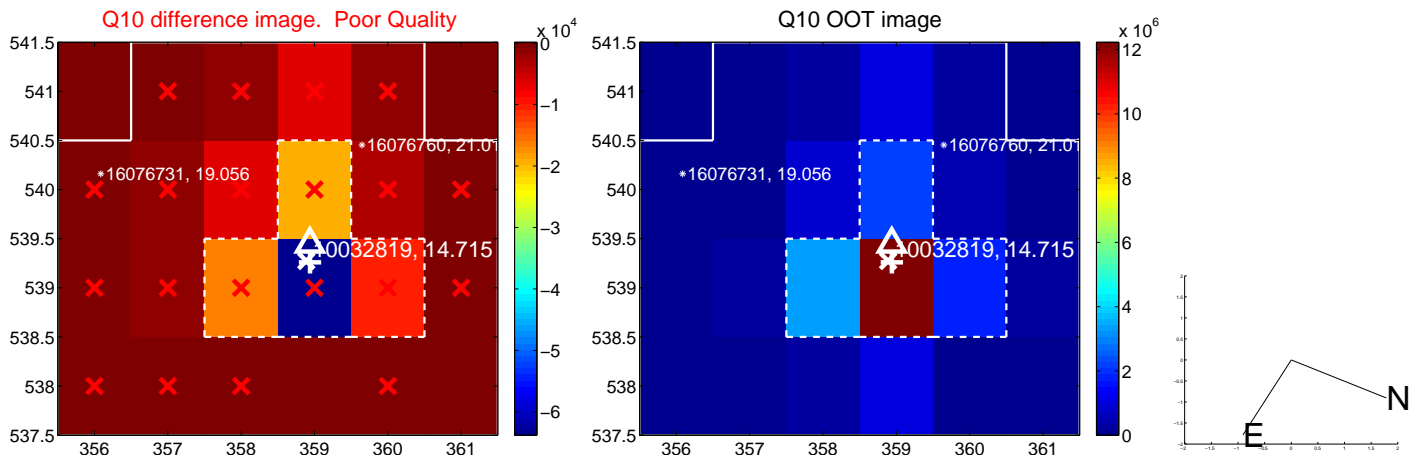
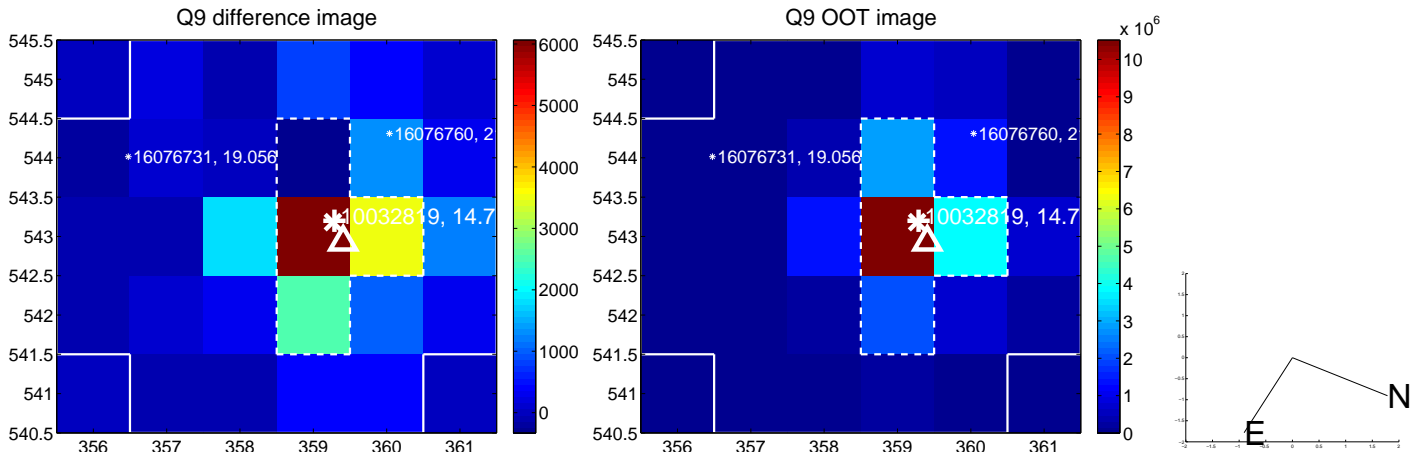
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



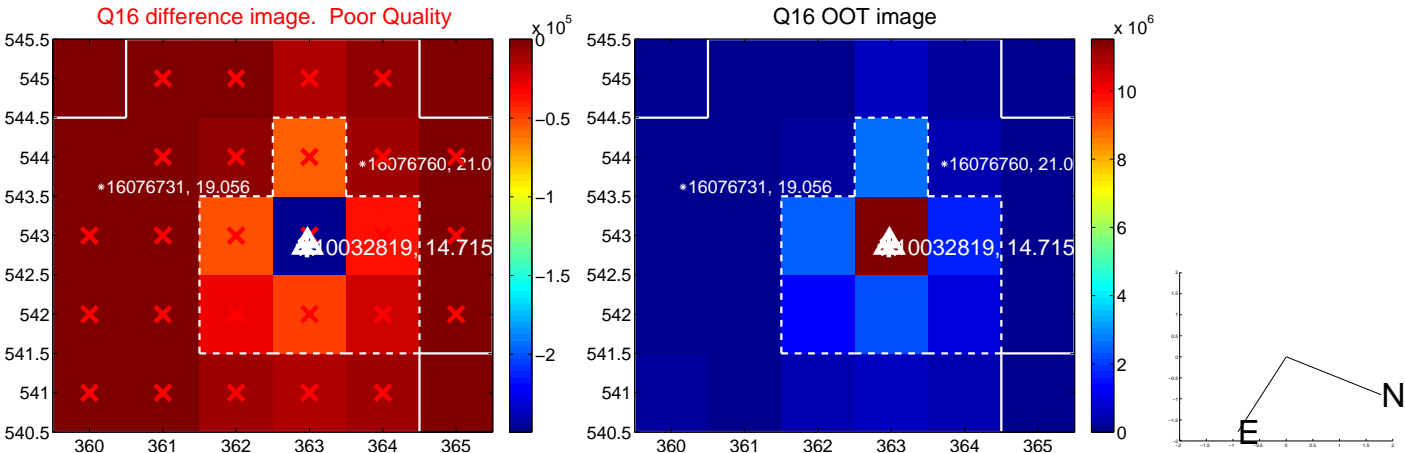
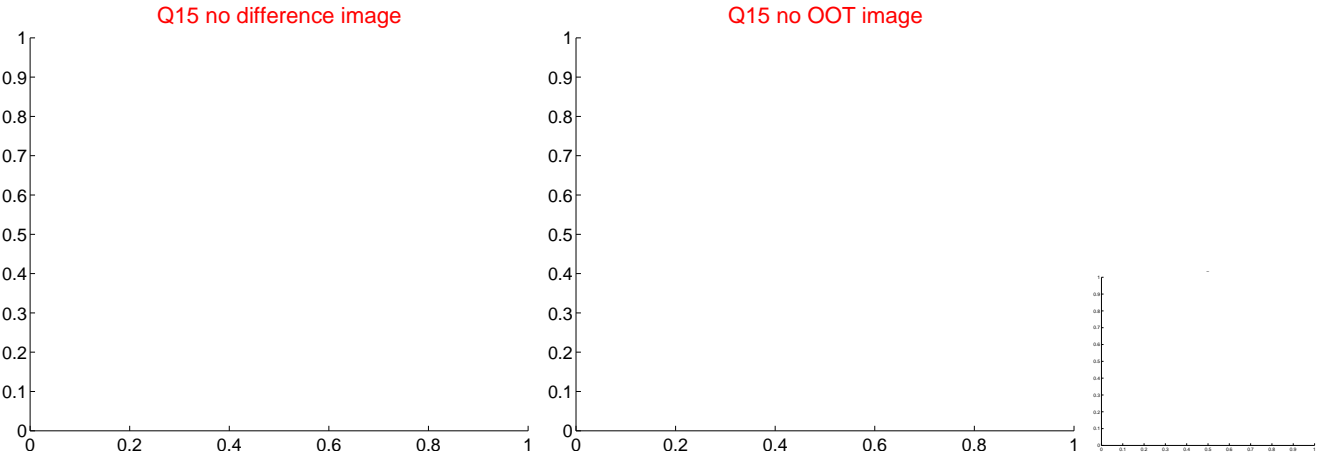
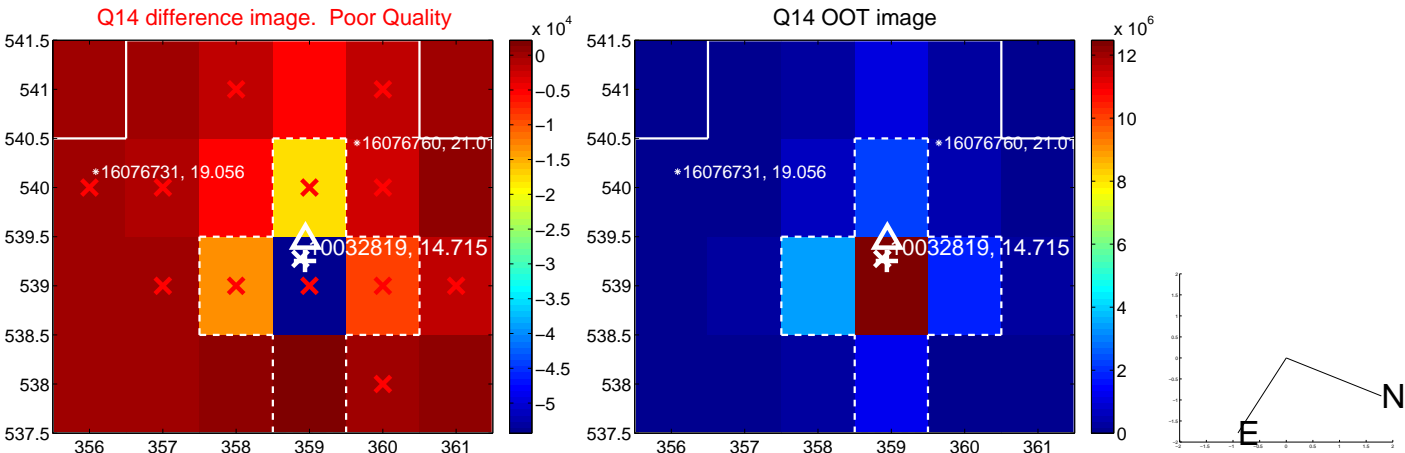
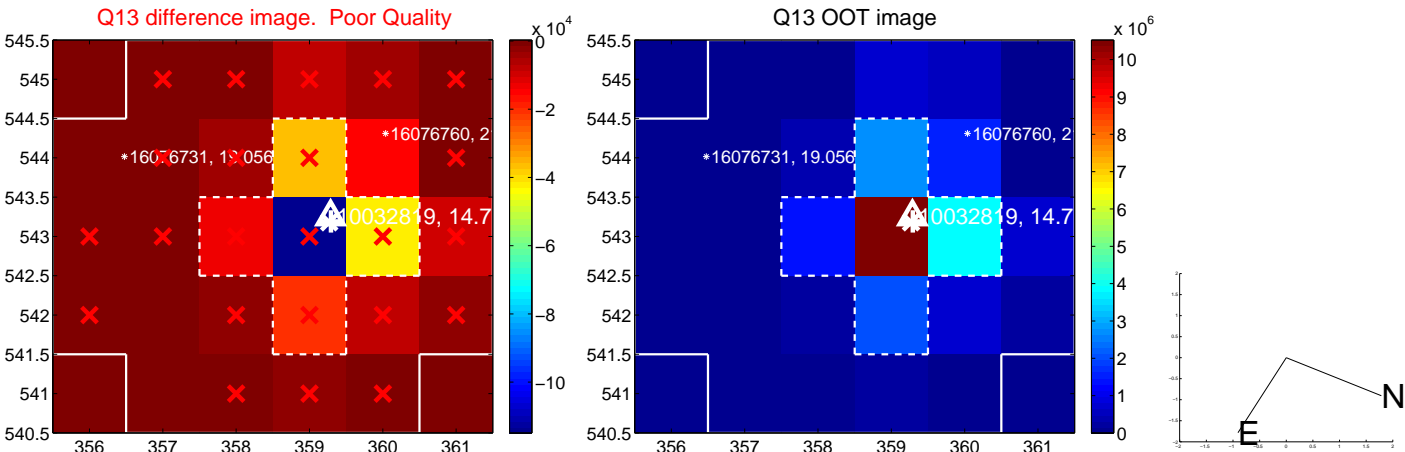
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



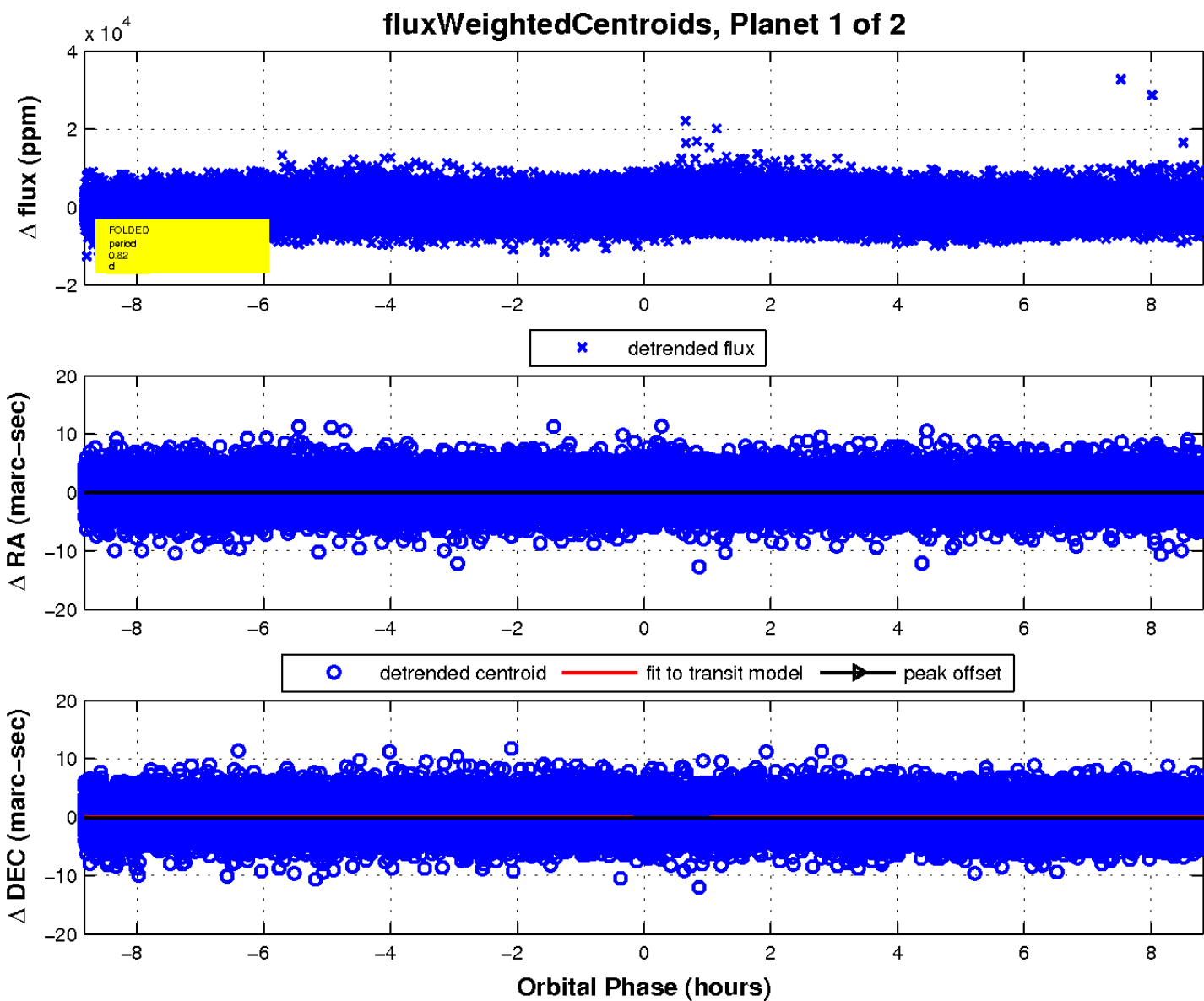
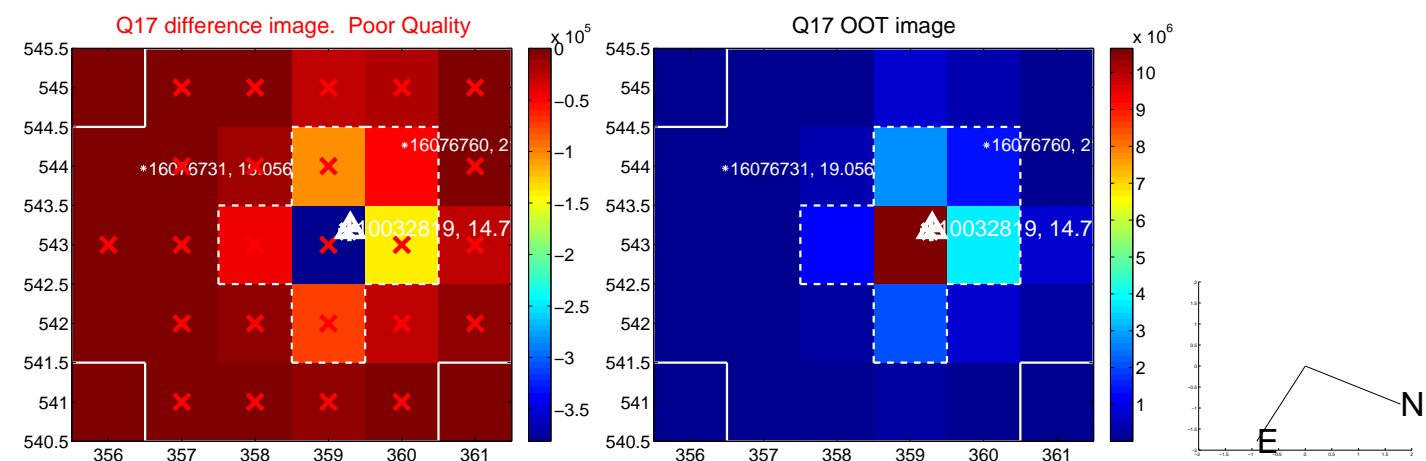
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



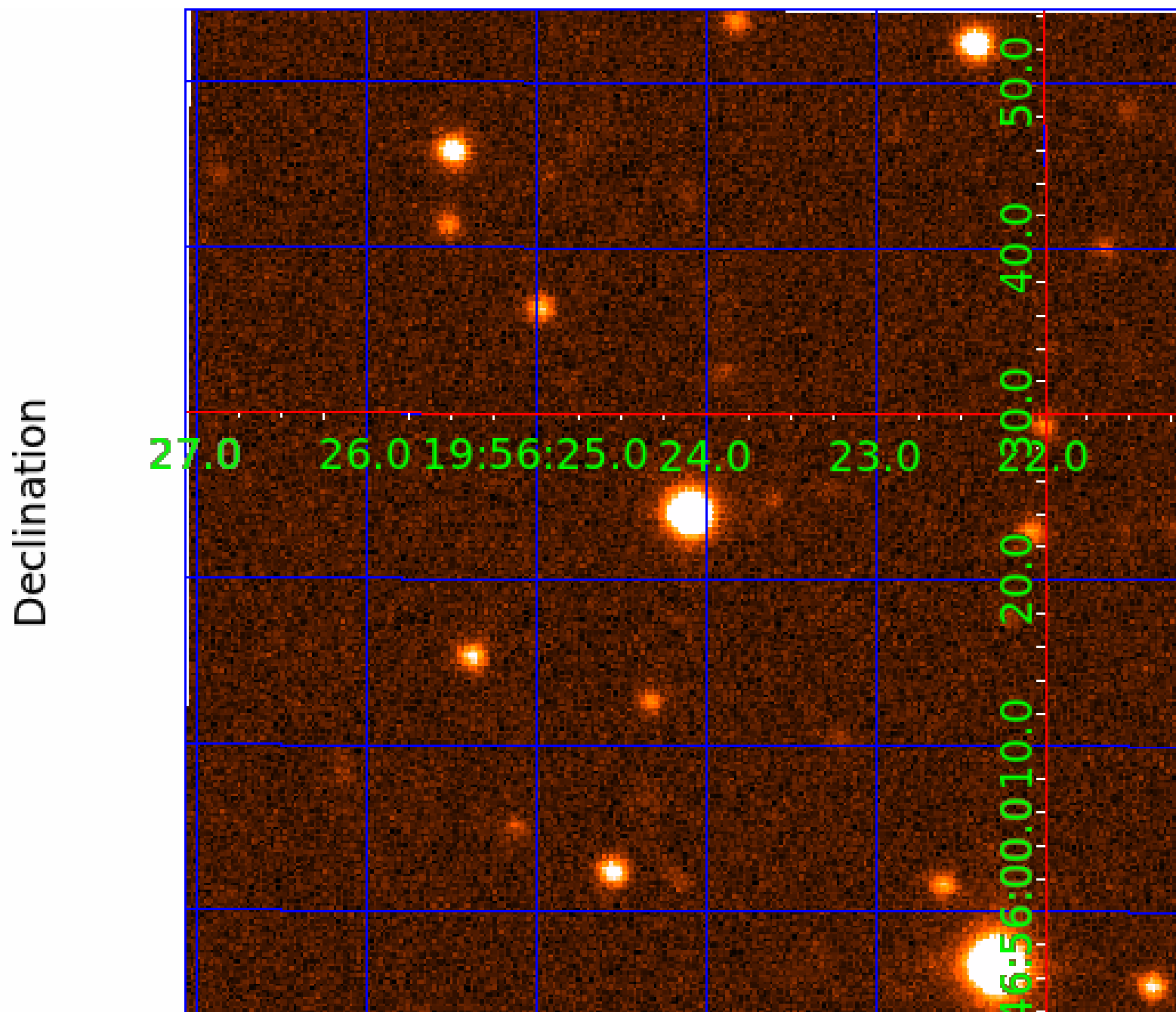
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 010032819

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})
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010032819-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_NOFITS
010032819-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT

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

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

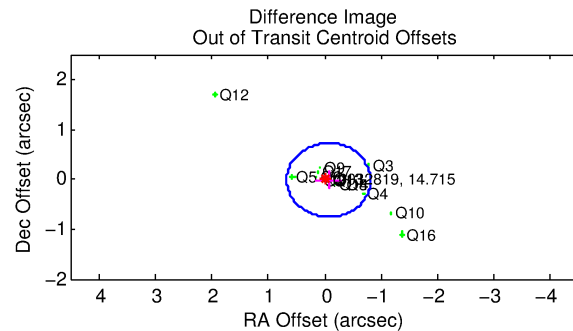
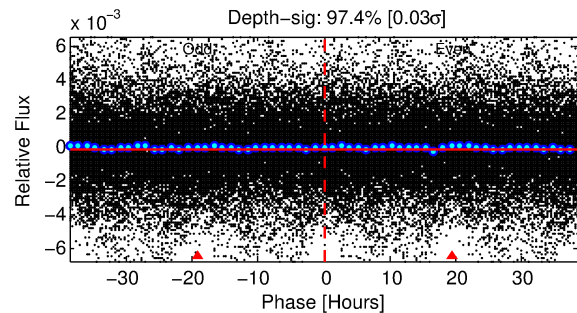
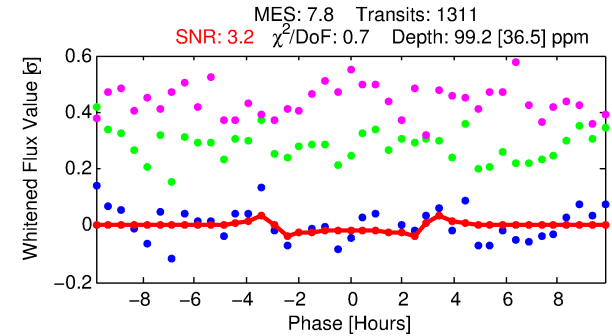
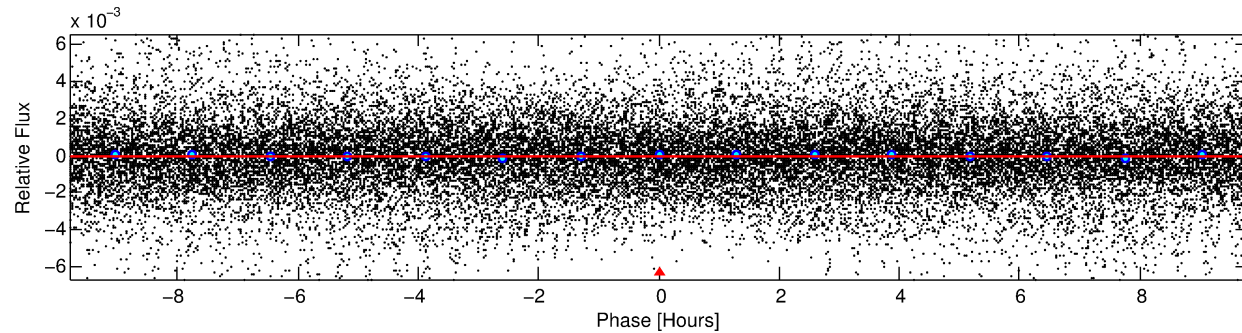
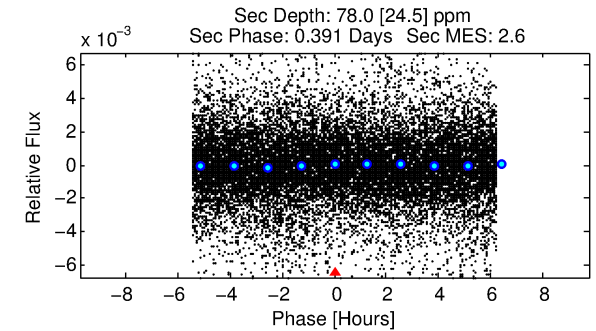
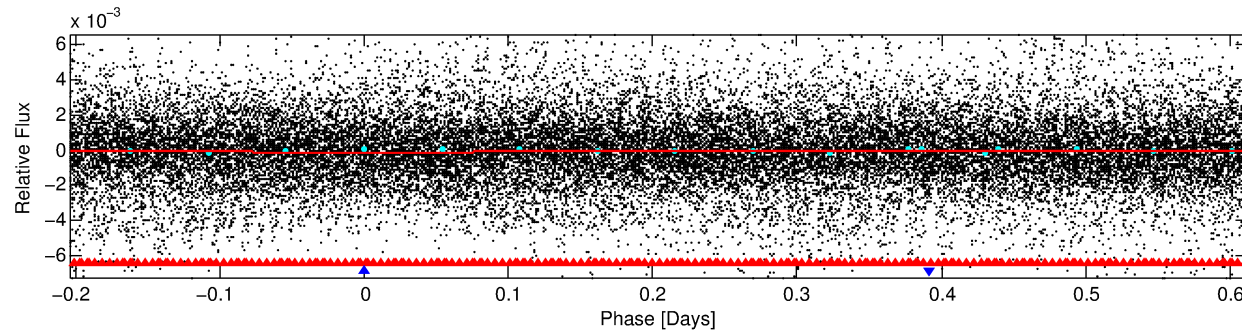
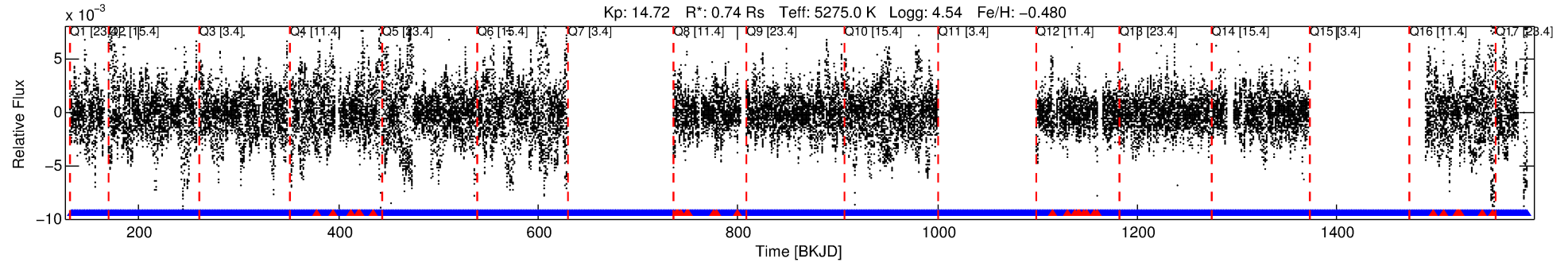
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010032819-02

No Significant Match Found

DV One-Page Summary

KIC: 10032819 Candidate: 2 of 2 Period: 0.817 d



DV Fit Results:

Period = 0.81665 [0.00003] d
Epoch = 132.0883 [0.0052] BKJD
Rp/R* = 0.0109 [0.0031]
a/R* = 1.05 [0.08]
b = 0.90 [0.18]
Seff = 1671.75 [342.42]
Teq = 1630 [83] K
Rp = 0.89 [0.27] Re
a = 0.0152 [0.0017] AU
Ag = 12.50 [8.28] [1.39σ]
Teffp = 4740 [773] K [4.00σ]

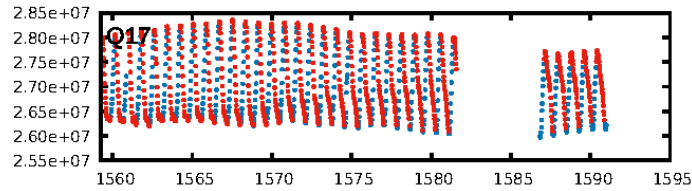
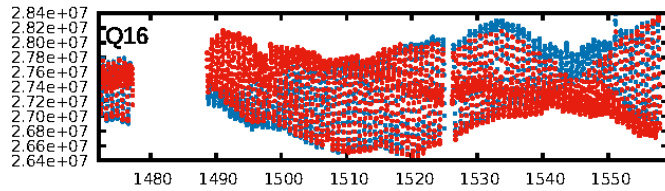
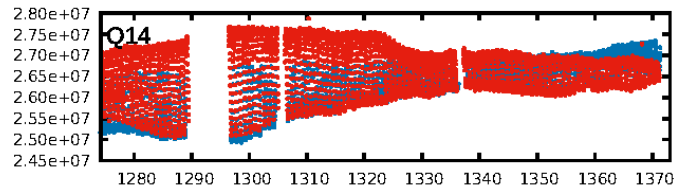
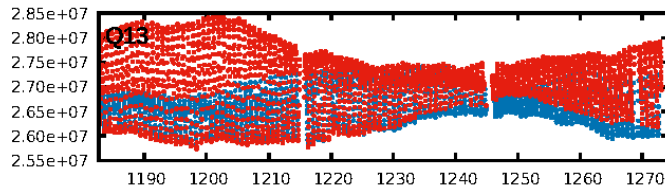
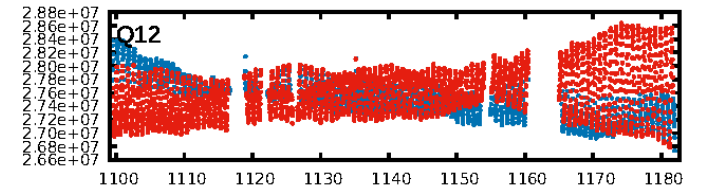
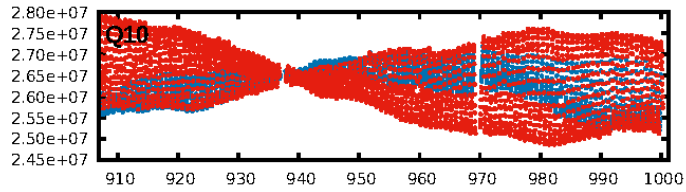
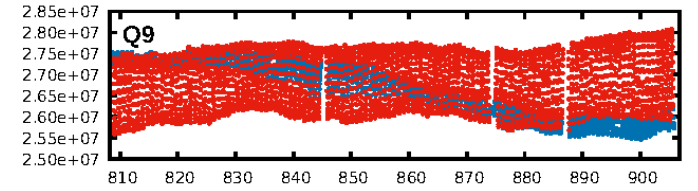
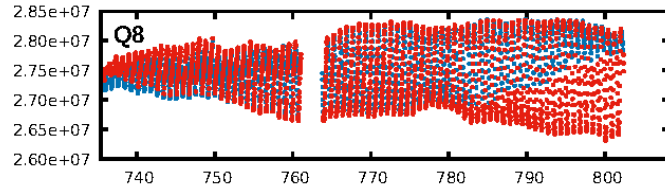
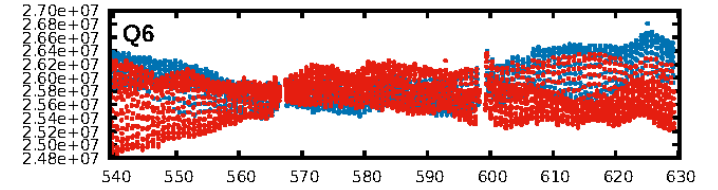
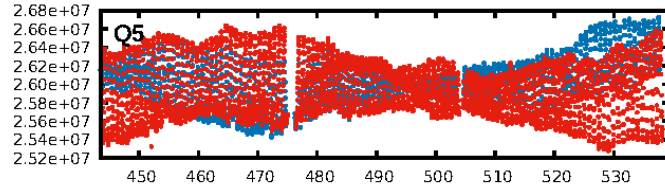
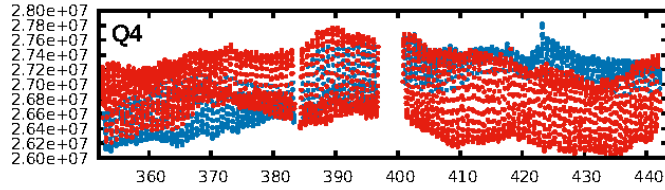
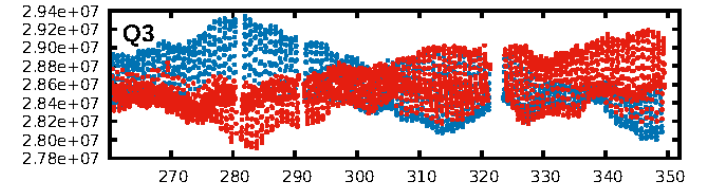
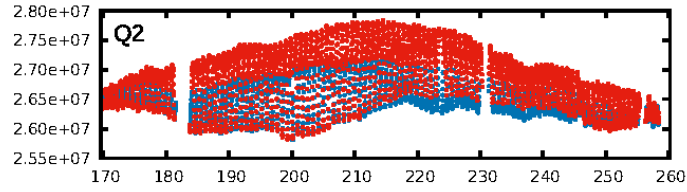
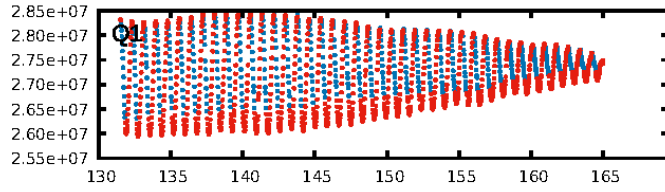
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 1.4% [0.02σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGoF-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.97 [1206/1238]
GhostDiagnostic-chr: -0.7375
Centroid-sig: 4.7%
Centroid-so: 1.059 arcsec [1.63σ]
OotOffset-rm: 0.071 arcsec [0.29σ]
KicOffset-rm: 0.169 arcsec [1.58σ]
OotOffset-st: 4/1/4/5 [14]
KicOffset-st: 4/1/4/5 [14]
DiffImageQuality-fgm: 0.57 [8/14]
DiffImageOverlap-fno: 0.00 [0/14]

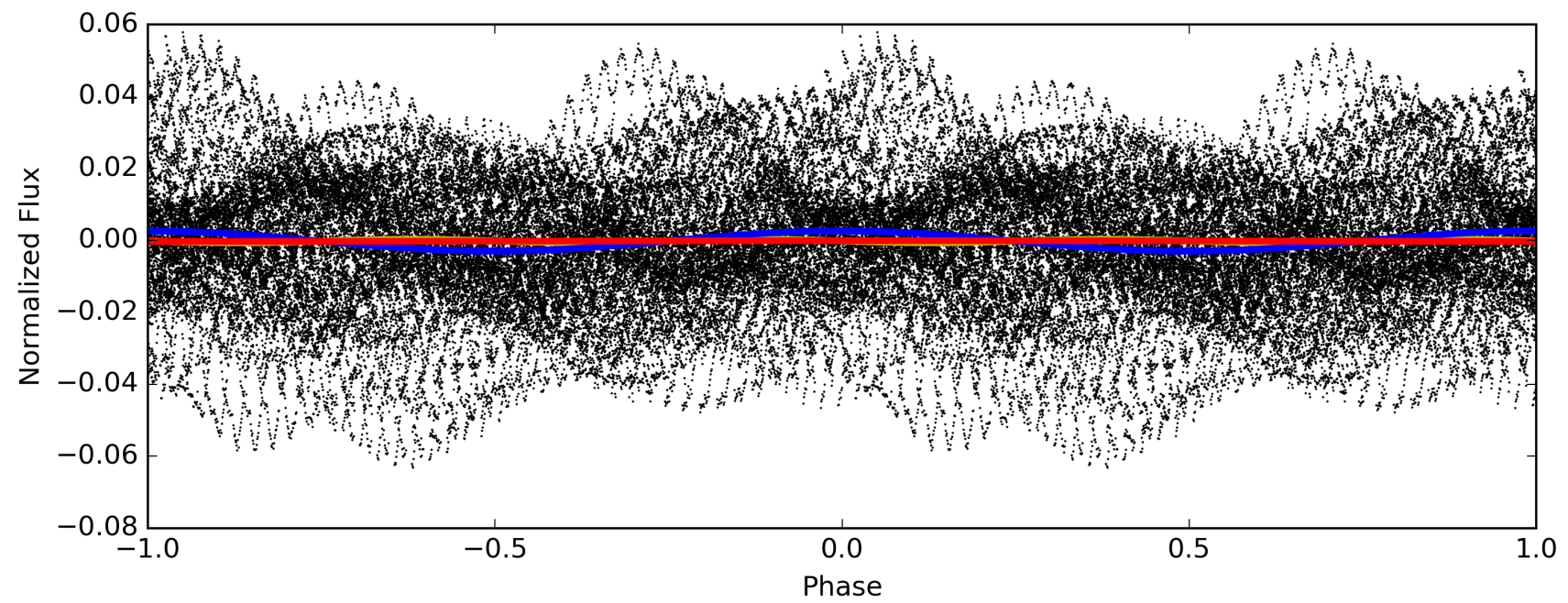
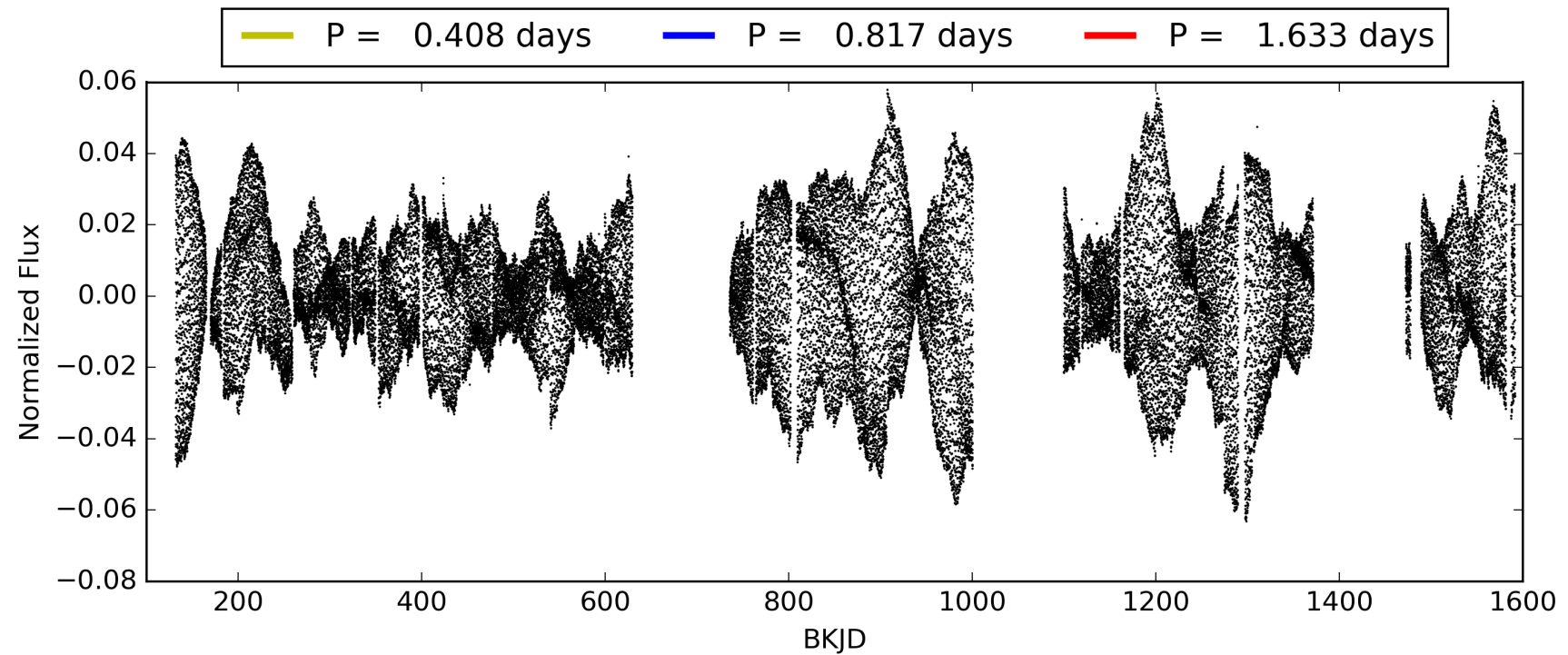
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 04:26:28 Z

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

TCE 010032819-02, PDC Light Curves

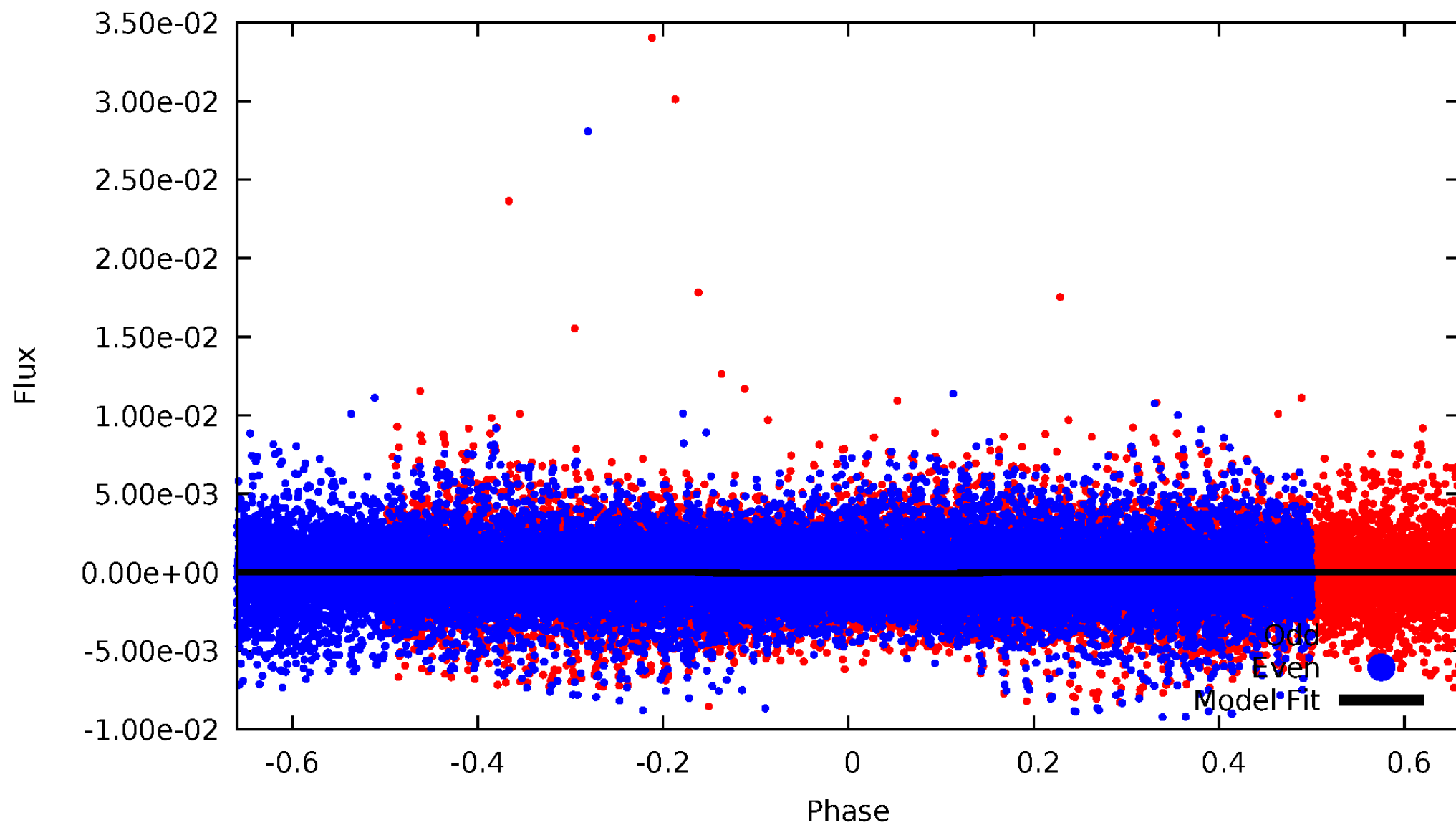


TCE 010032819-02



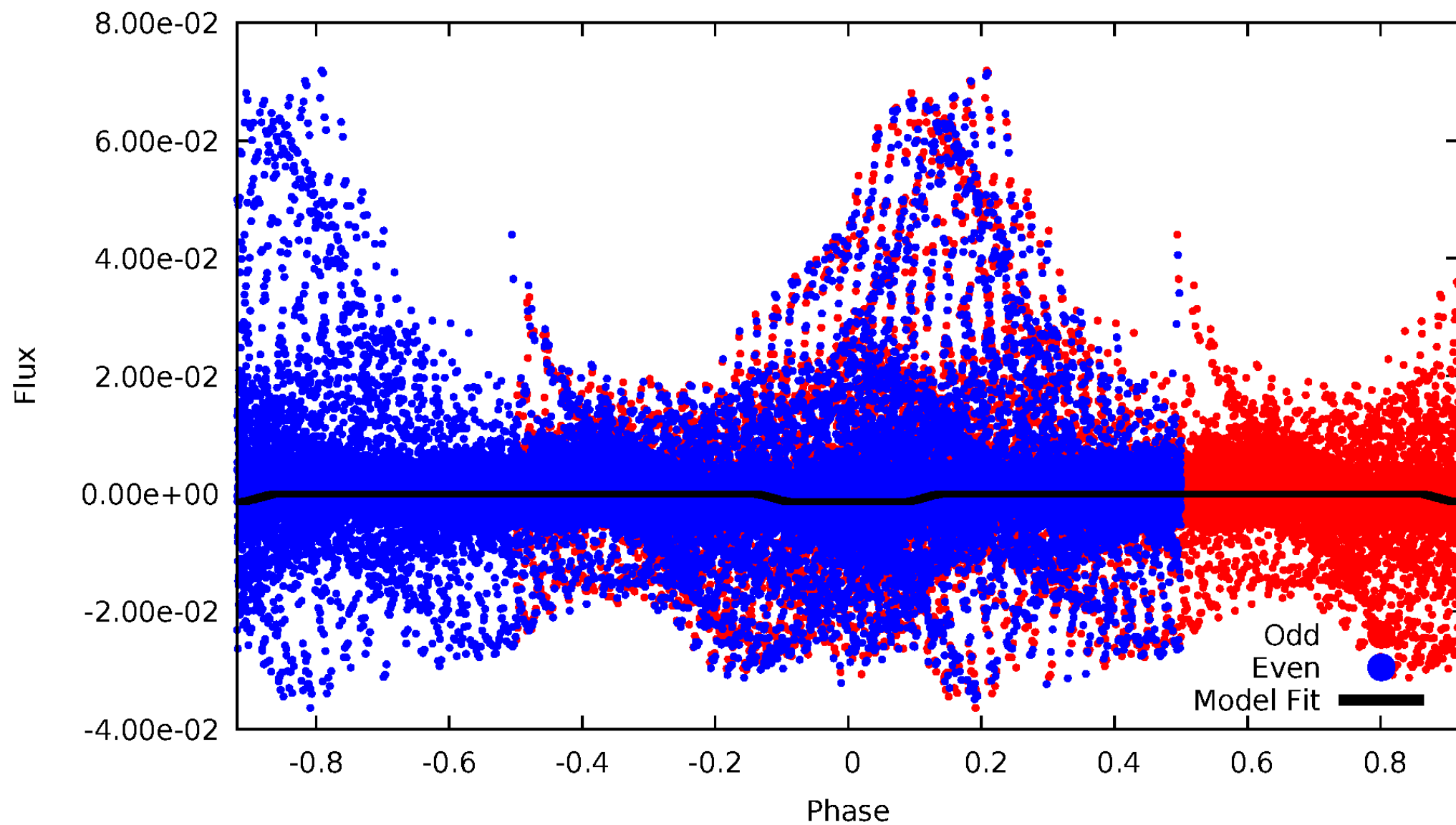
DV Odd/Even

TCE 010032819-02



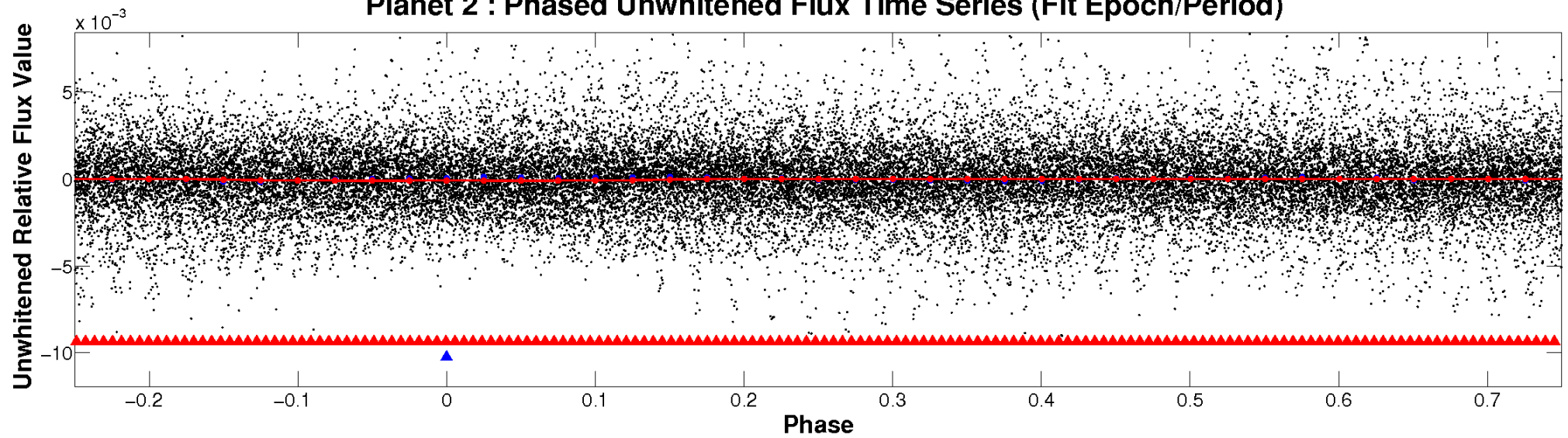
ALT Odd/Even

TCE 010032819-02

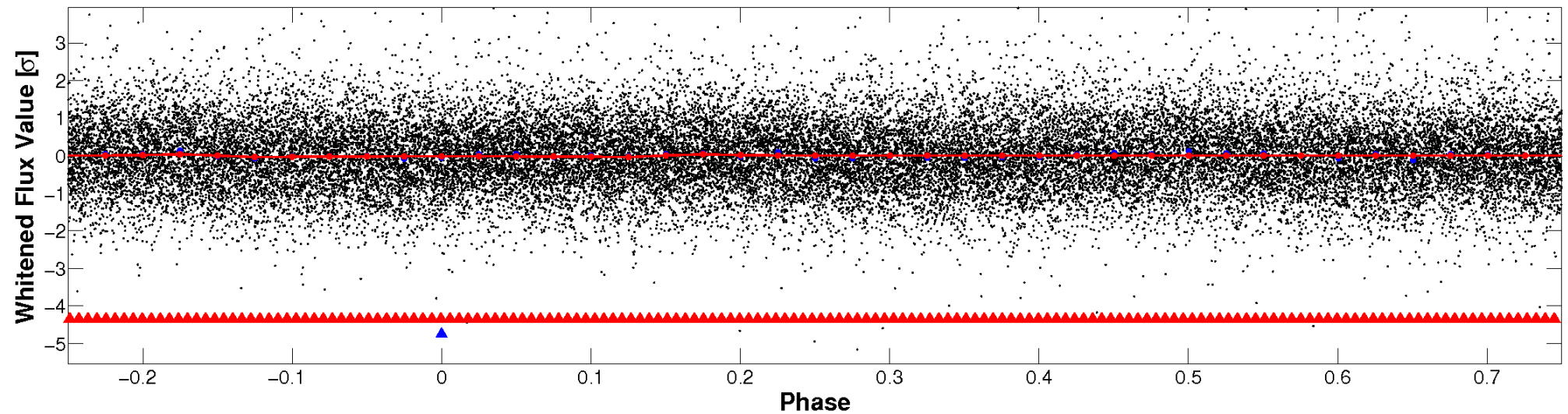


Non-Whitened Vs. Whitened Light Curve

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

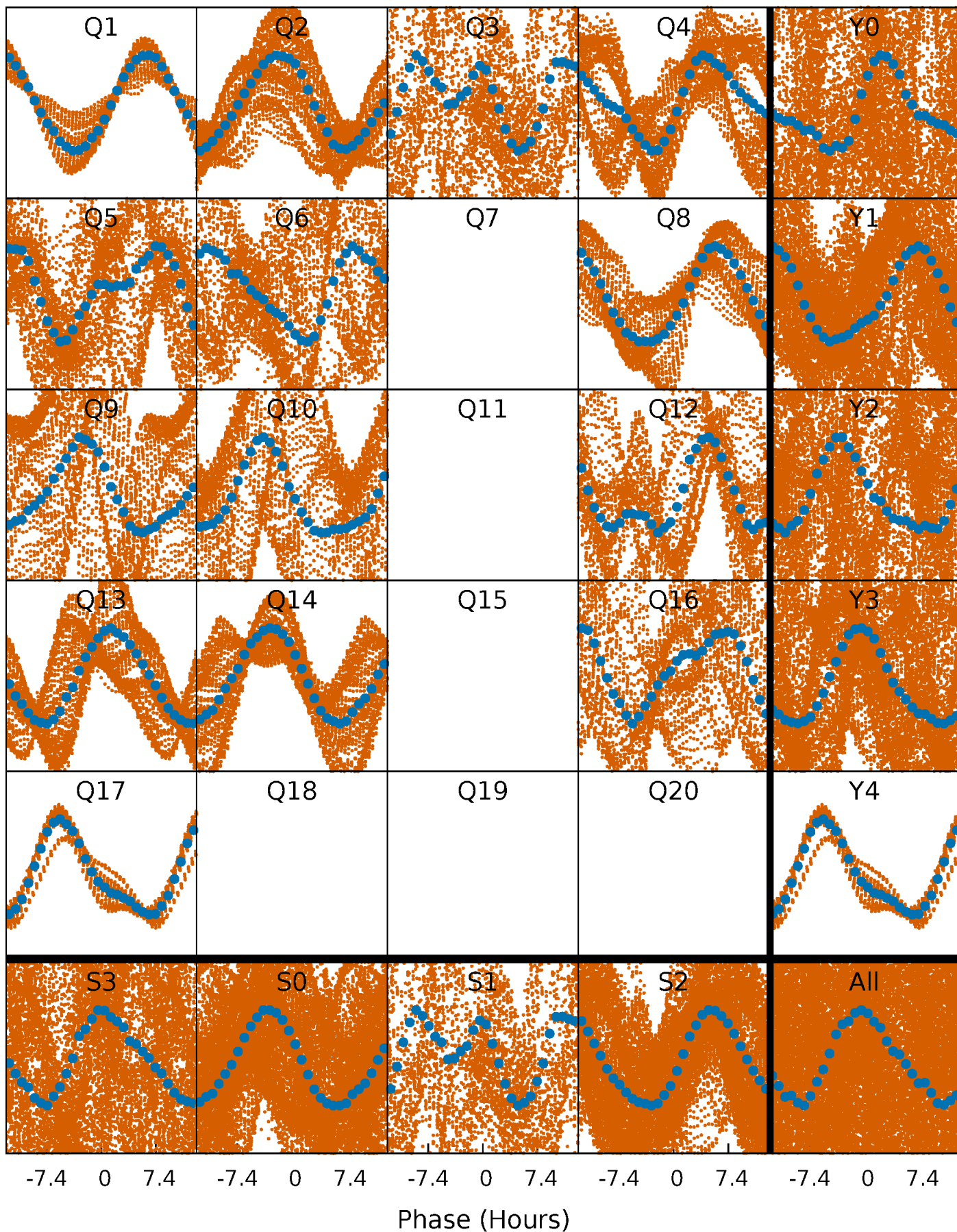


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



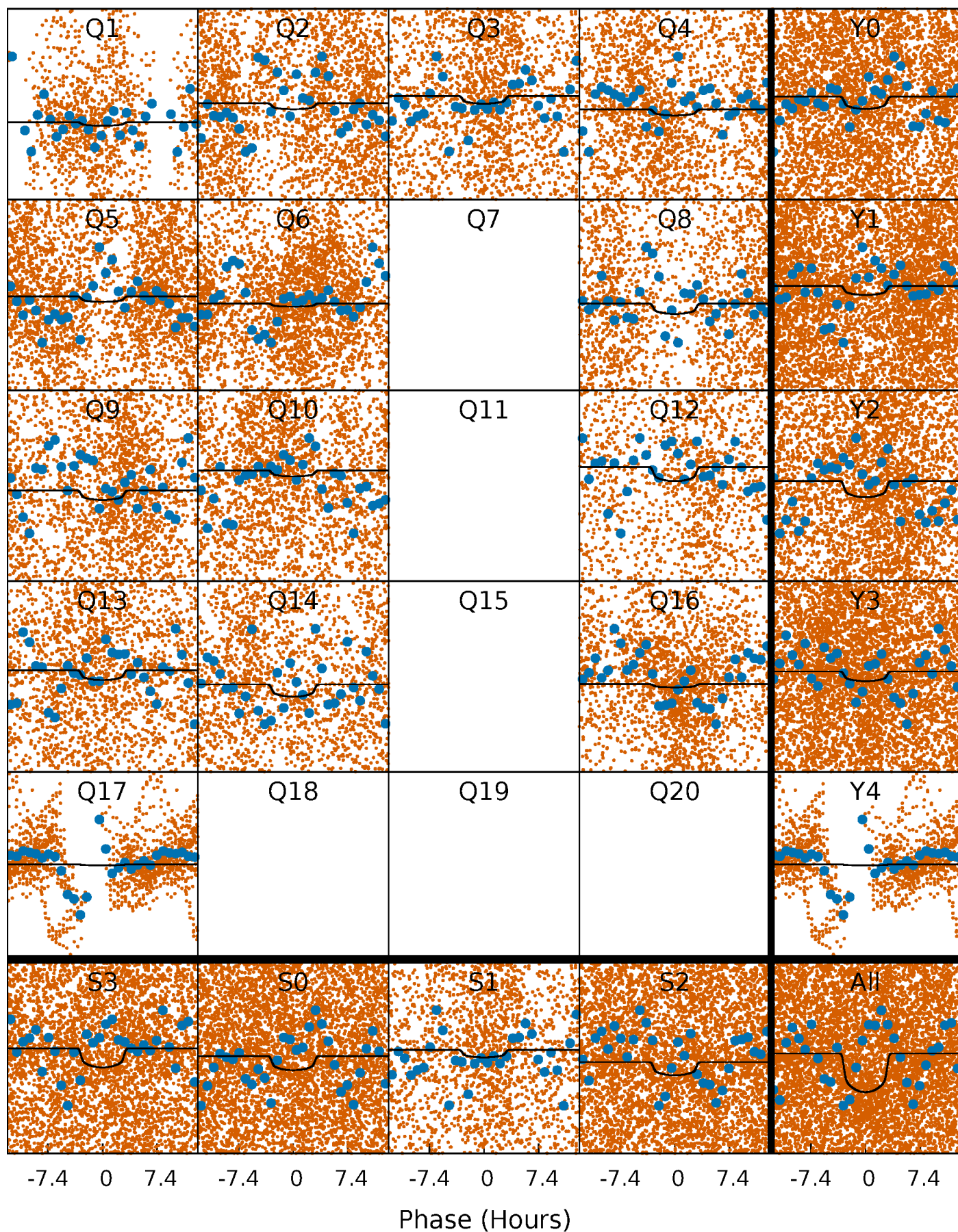
PDC Quarter-Phased Transit Curves

TCE 010032819-02 P= 0.816652 Days $T_0=132.088274$ (BKJD)



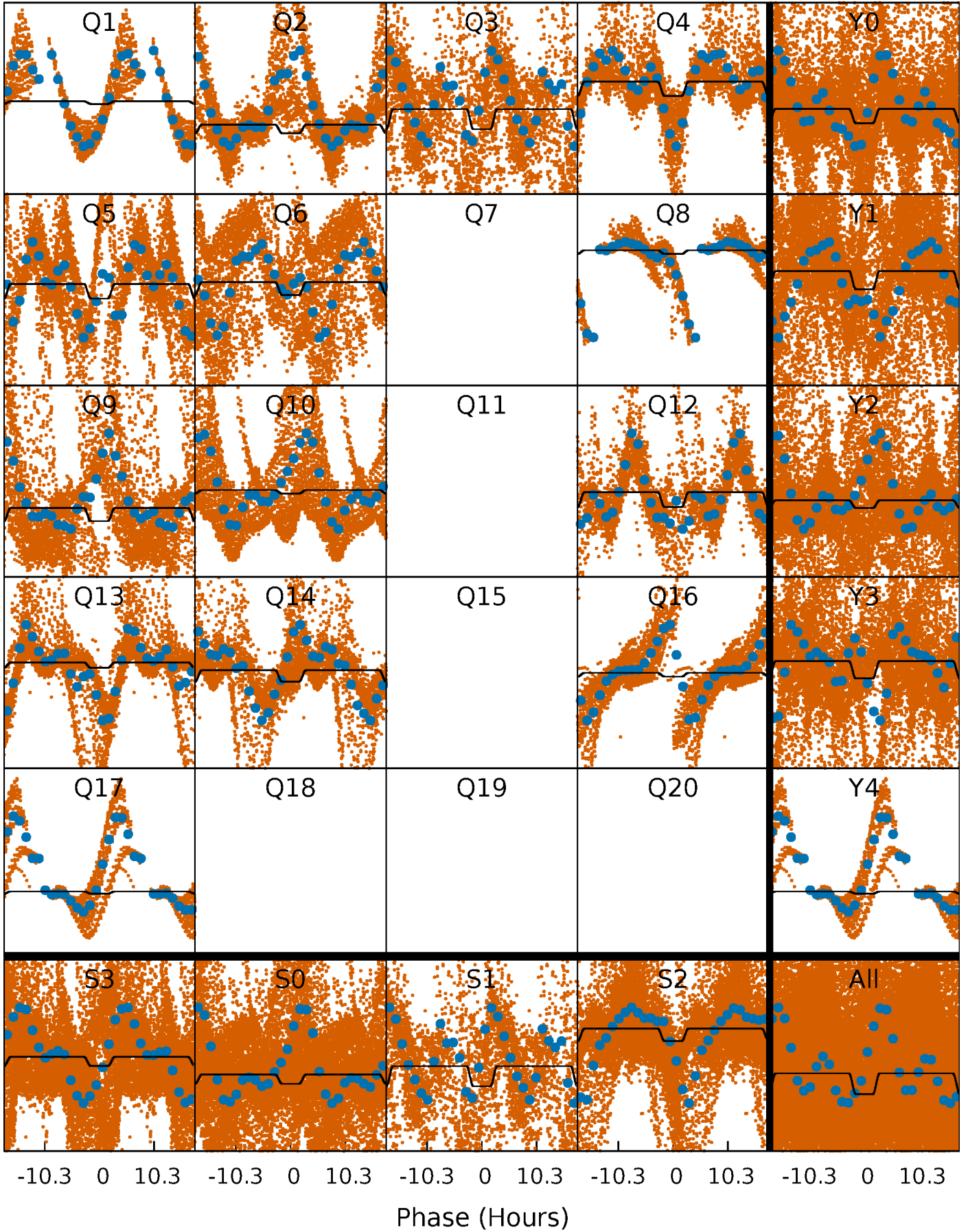
DV Quarter-Phased Transit Curves

TCE 010032819-02 P= 0.816652 Days $T_0=132.088274$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

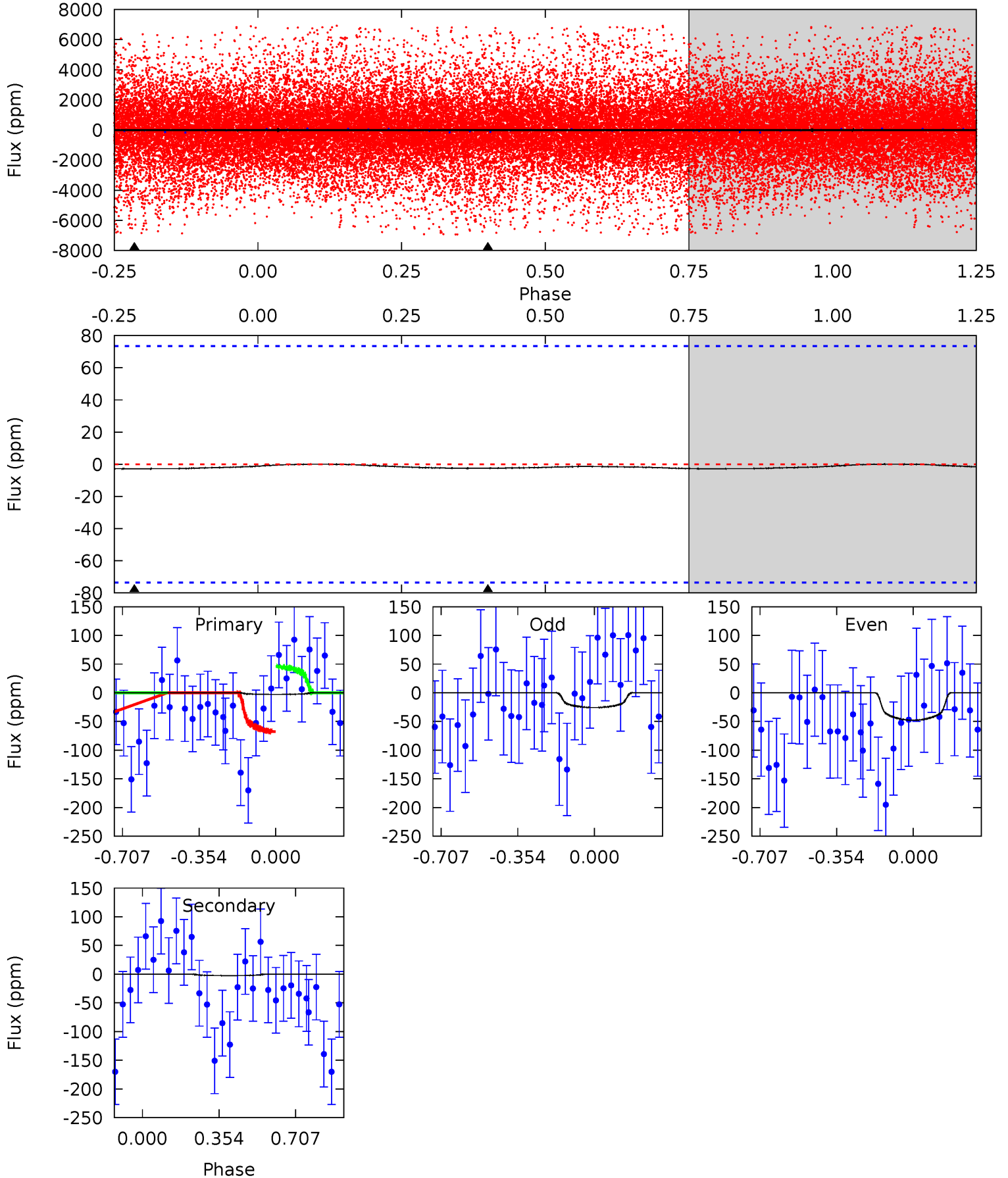
TCE 010032819-02 P= 0.816441 Days $T_0=132.049341$ (BKJD)



DV Model-Shift Uniqueness Test

010032819-02, P = 0.816652 Days, E = 131.271622 Days

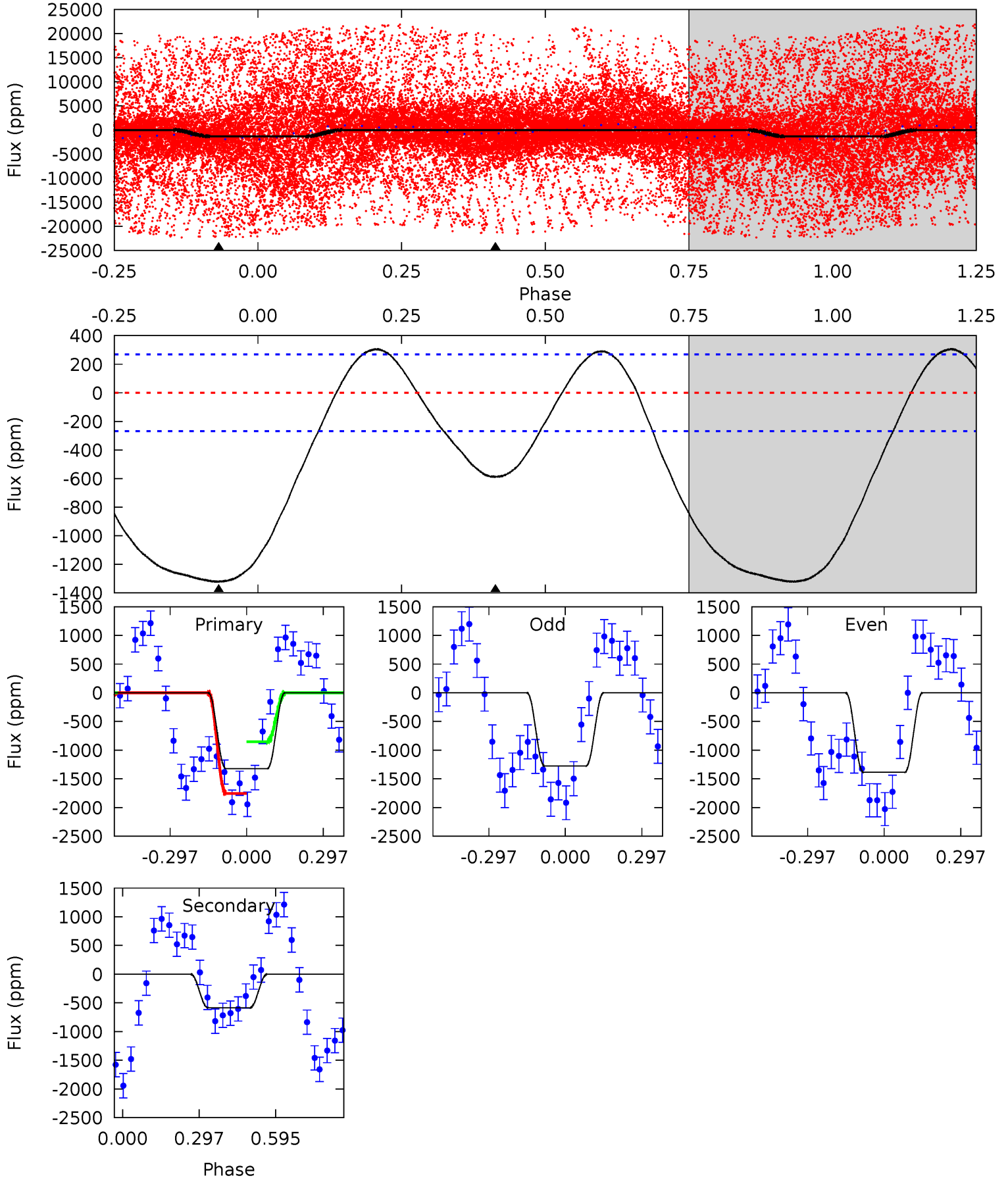
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.16	0.14	0	0	4.29	0.93	0.01	0.16	0.16	0.14	0.14	0.63	169.2	0.02	0.64



Alt Model-Shift Uniqueness Test

010032819-02, P = 0.816441 Days, E = 131.232900 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.3	9.48	0	0	4.33	1.04	3.66	21.3	21.3	9.48	9.48	0.91	-1.30	0.19	5.44



Stellar Parameters For KIC 010032819

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5275^{+158}_{-158}	$4.538^{+0.094}_{-0.068}$	$-0.480^{+0.350}_{-0.300}$	$0.745^{+0.084}_{-0.092}$	$0.700^{+0.099}_{-0.040}$	$2.379^{+0.985}_{-0.545}$
	+3%/-3%	+2%/-1%	+73%/-62%	+11%/-12%	+14%/-6%	+41%/-23%
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 010032819-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-2 ± 17	$0.88^{+0.27}_{-0.26}$	2272^{+101}_{-105}	2699^{+1122}_{-6351}	$0.664^{+3.177}_{-3.164}$
Alt.	-587 ± 62	$3.03^{+0.32}_{-0.34}$	2267^{+96}_{-96}	4401^{+209}_{-196}	$8.329^{+2.206}_{-1.623}$

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

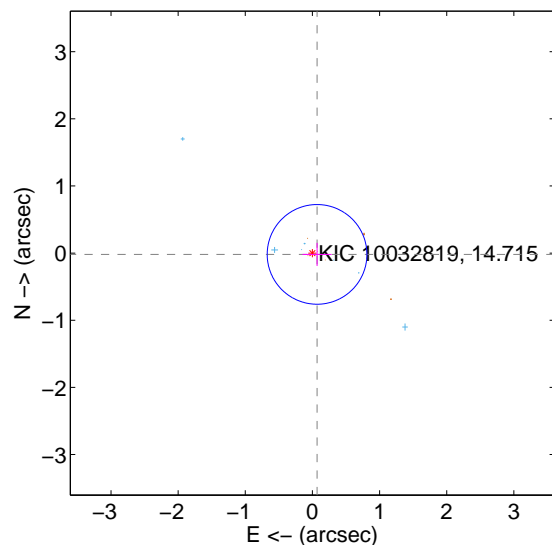
Supplemental centroid analysis for 010032819-02. Kepler magnitude: 14.71. Transit SNR 3.24

There are 8 quarters with good PRF difference image offsets

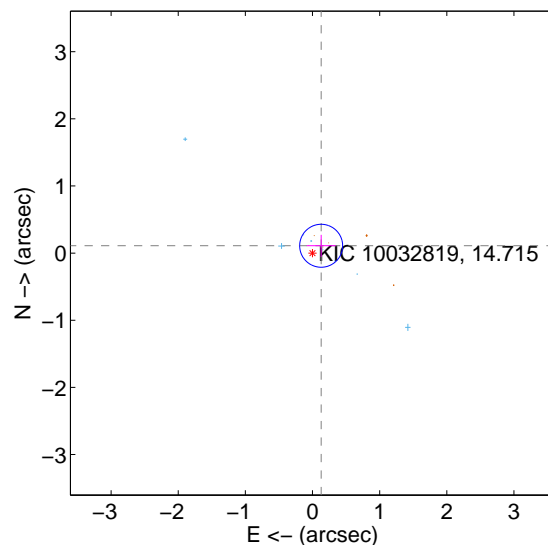
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.071 ± 0.247	0.29	-0.069 ± 0.217	-0.019 ± 0.172
PRF-fit source offset from KIC position	0.169 ± 0.107	1.58	-0.129 ± 0.215	0.109 ± 0.163
photometric centroid source offset	1.06 ± 0.65	1.63	-1.06 ± 0.65	-0.04 ± 0.60

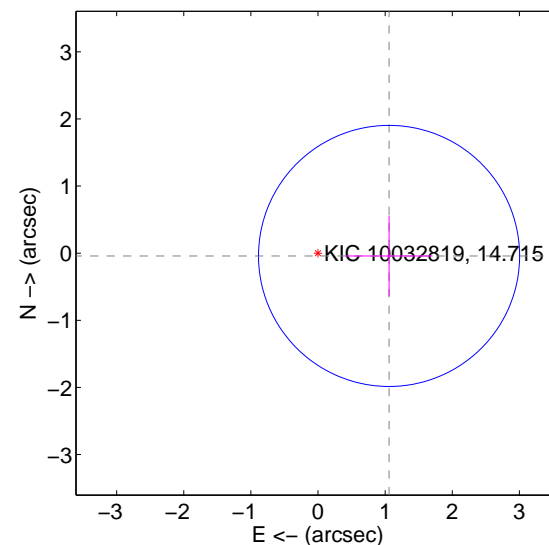
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

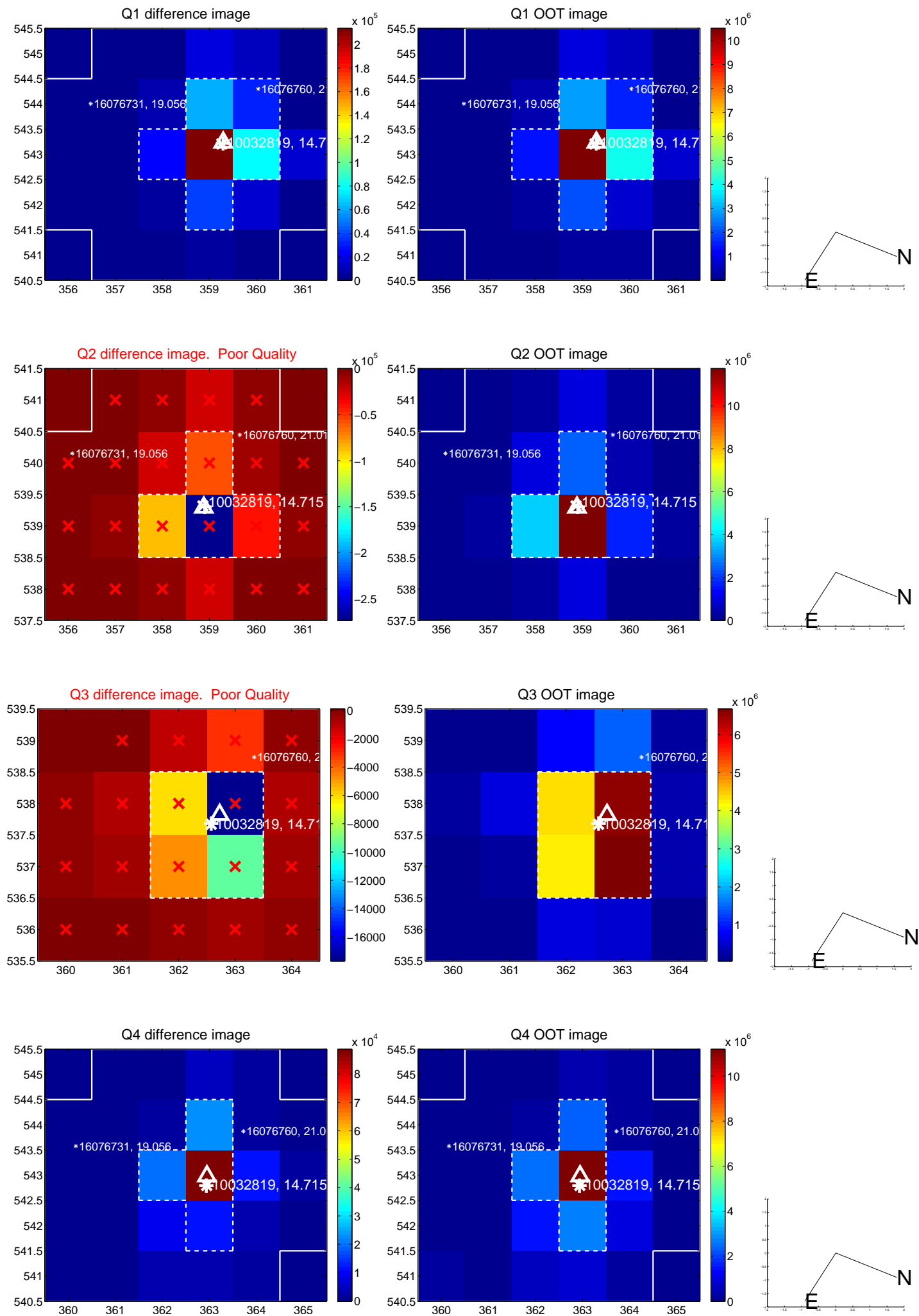


offset from photometric centroids

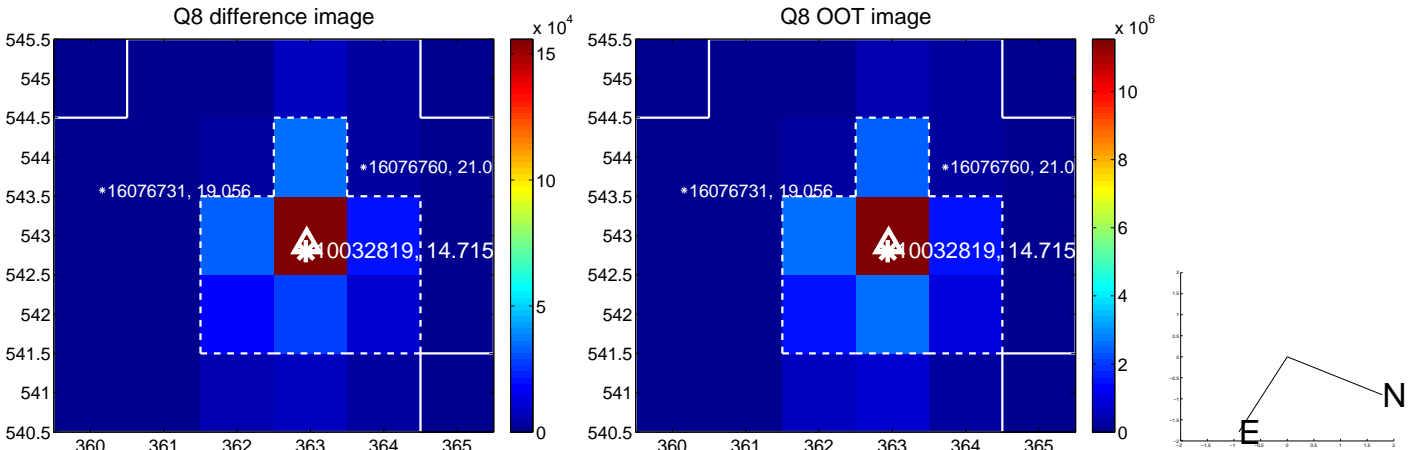
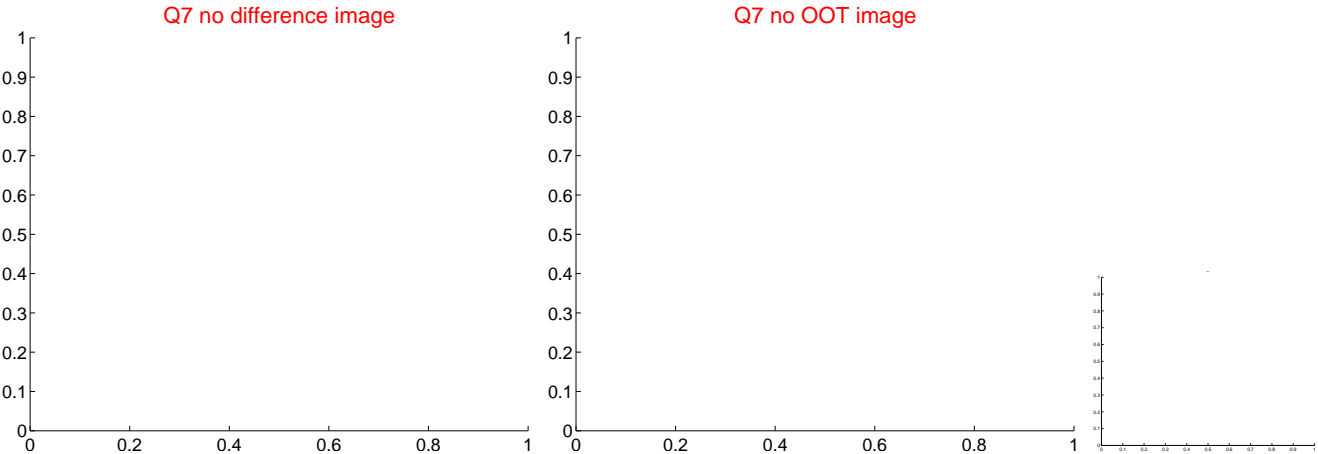
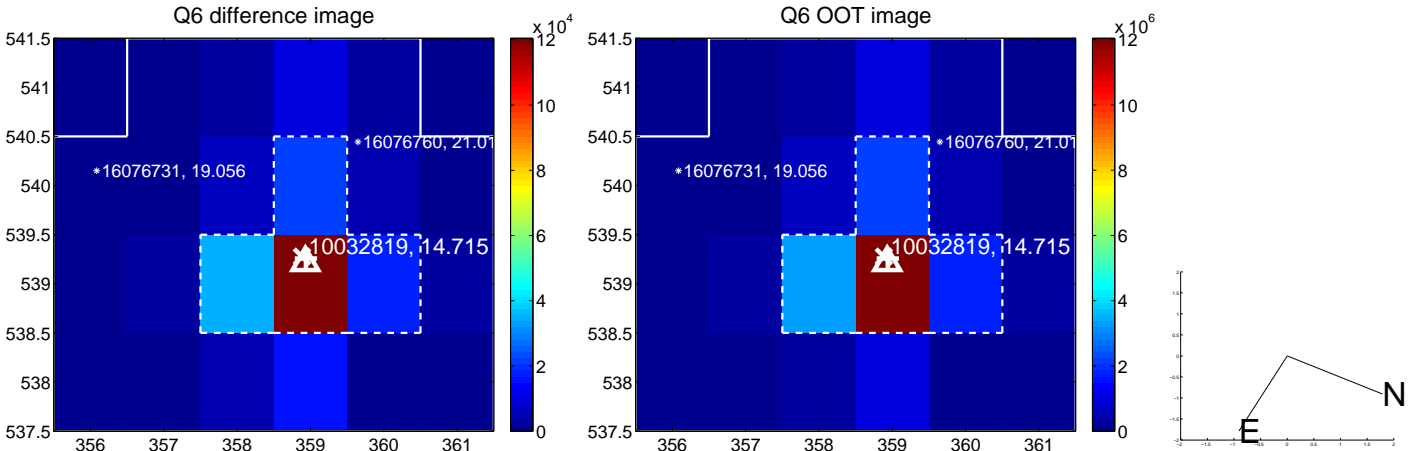
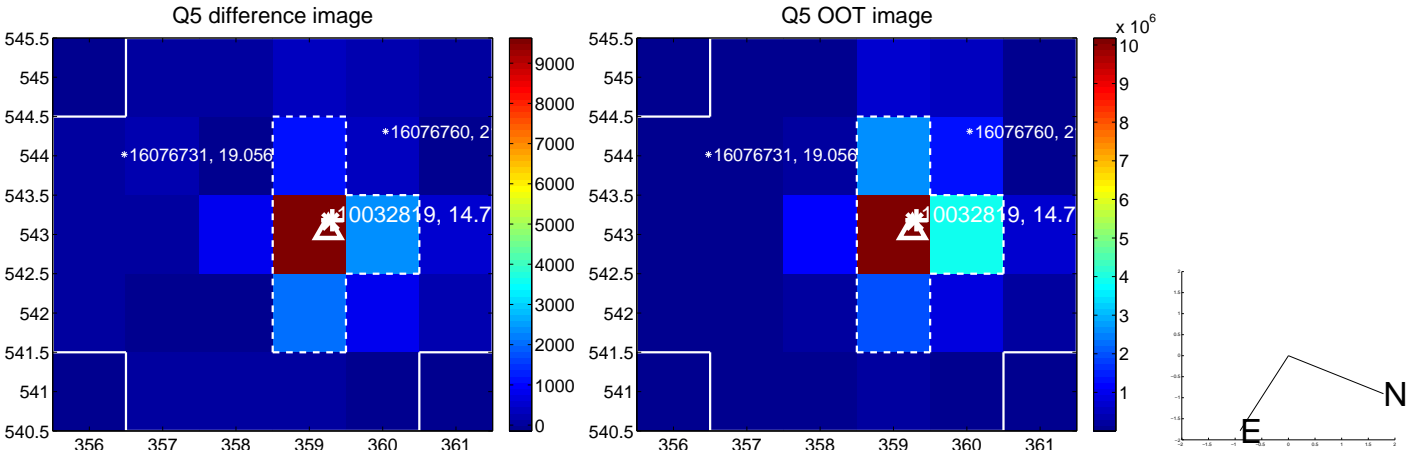


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

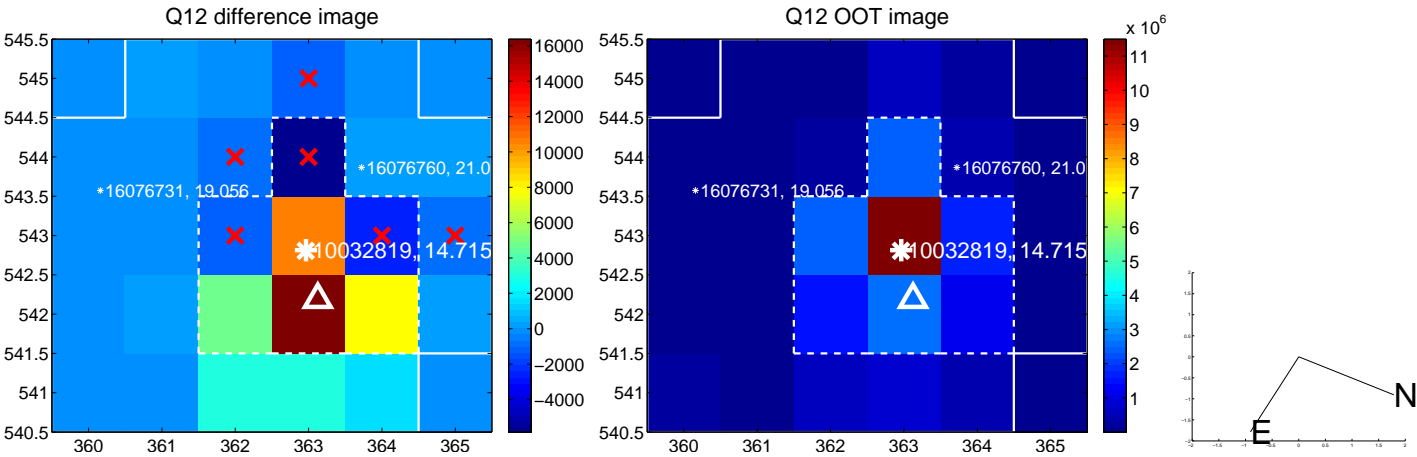
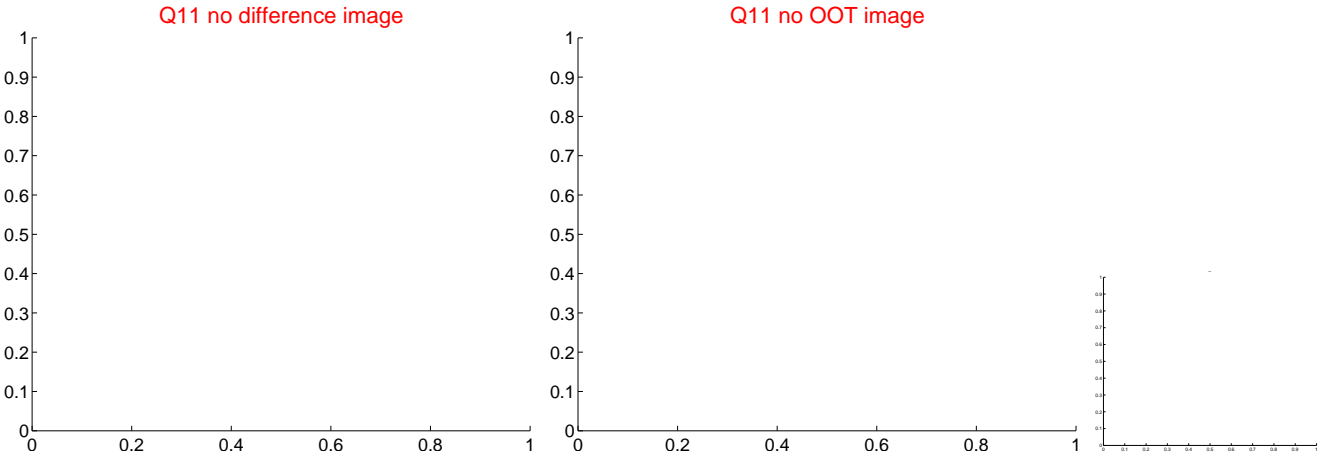
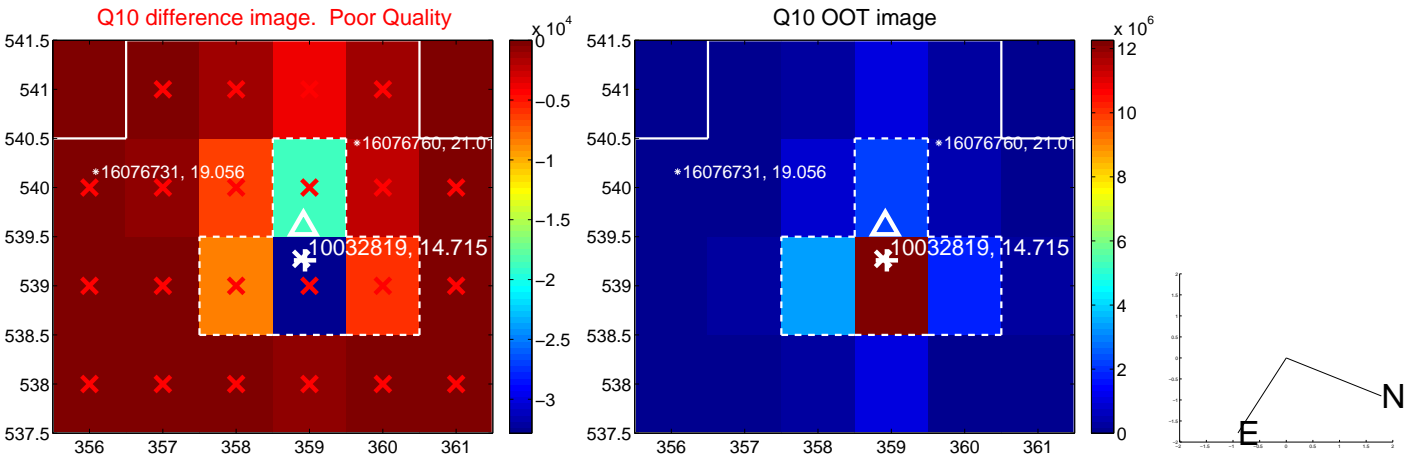
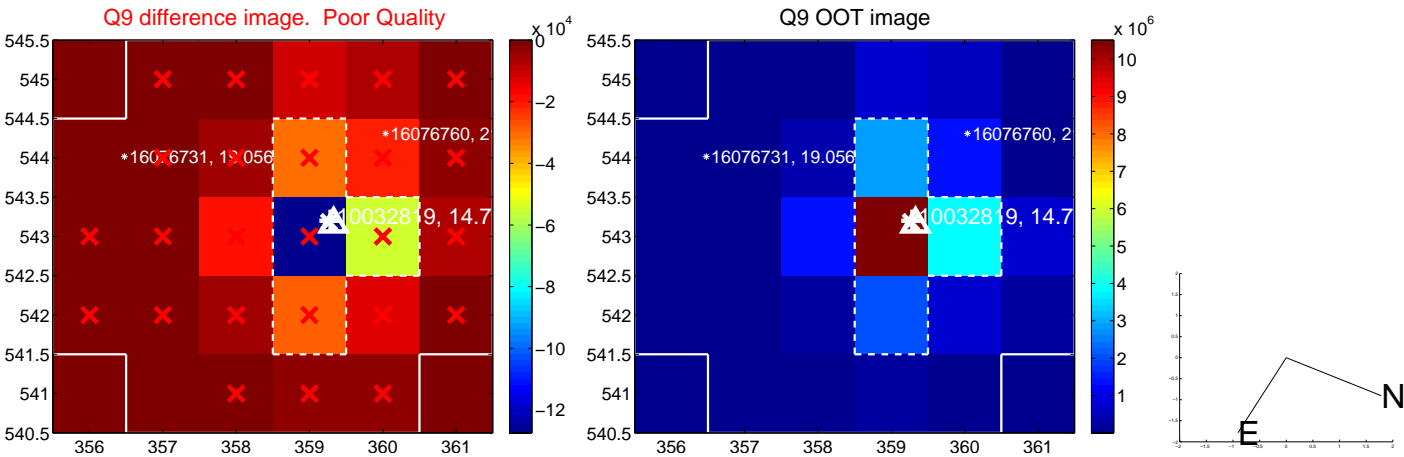
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



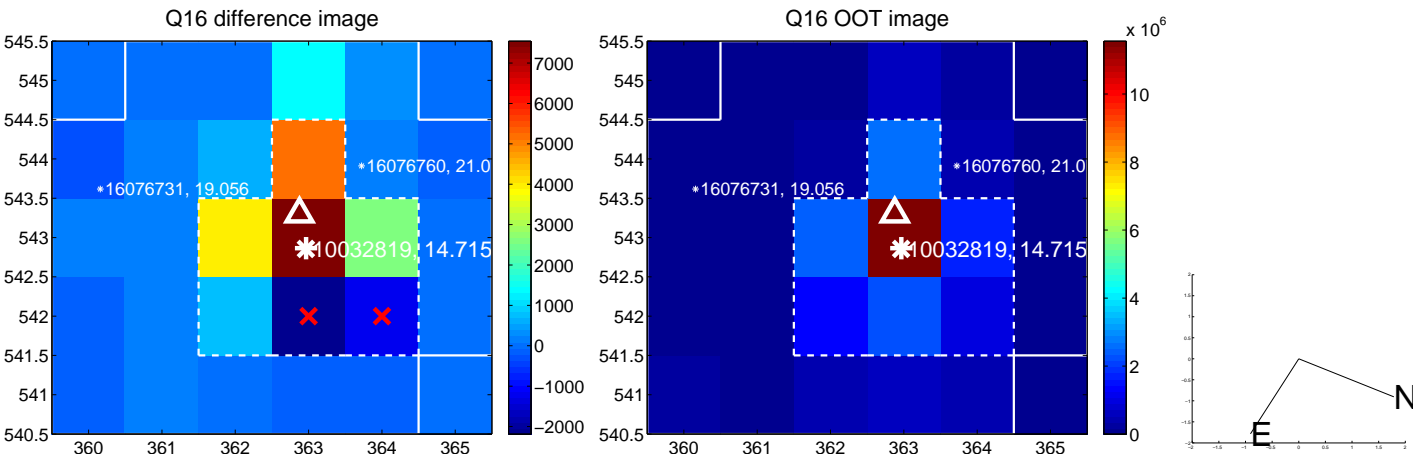
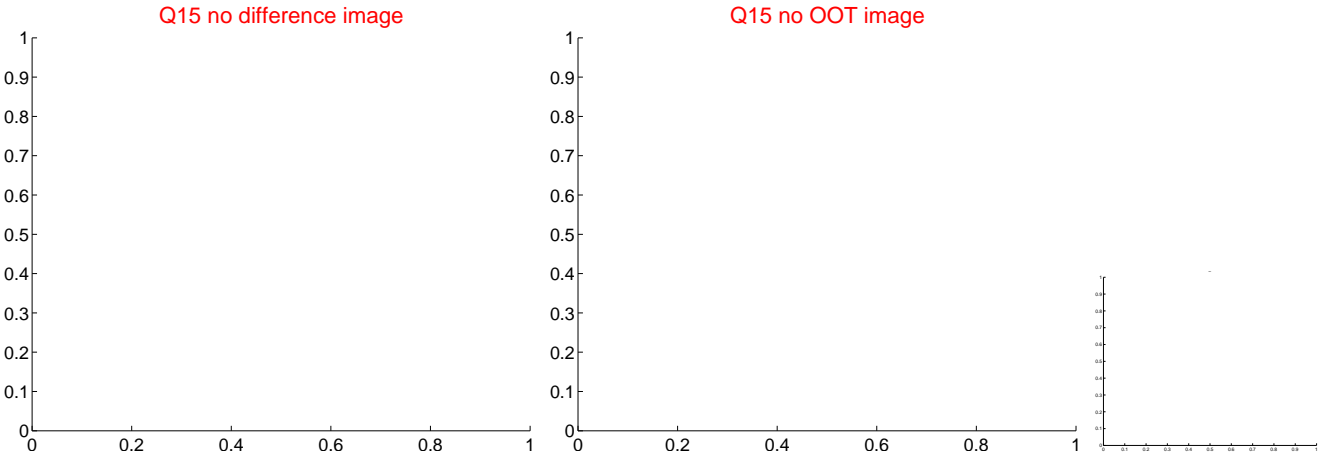
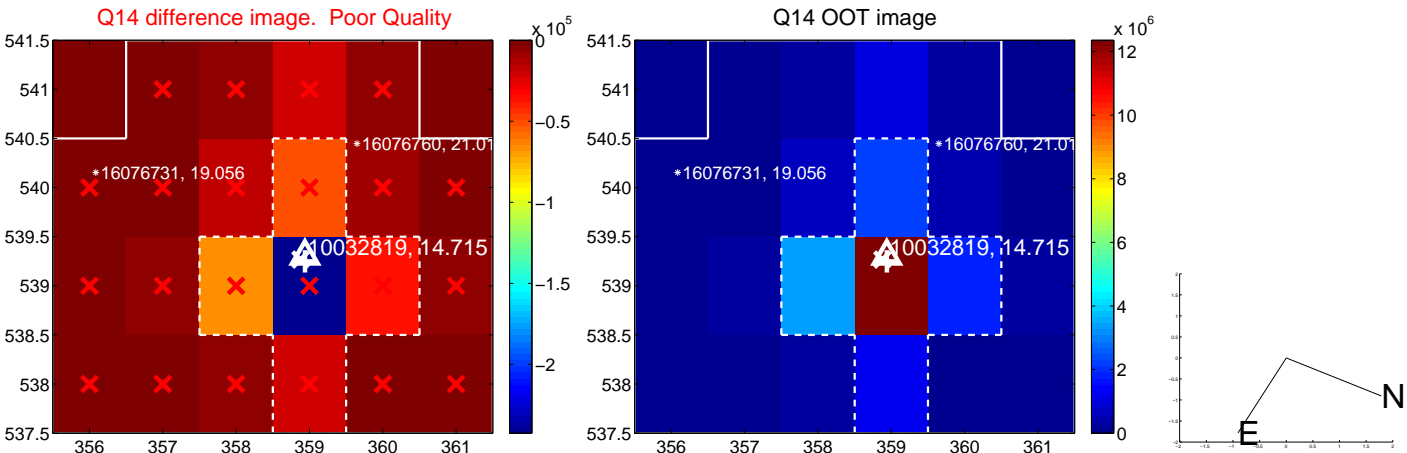
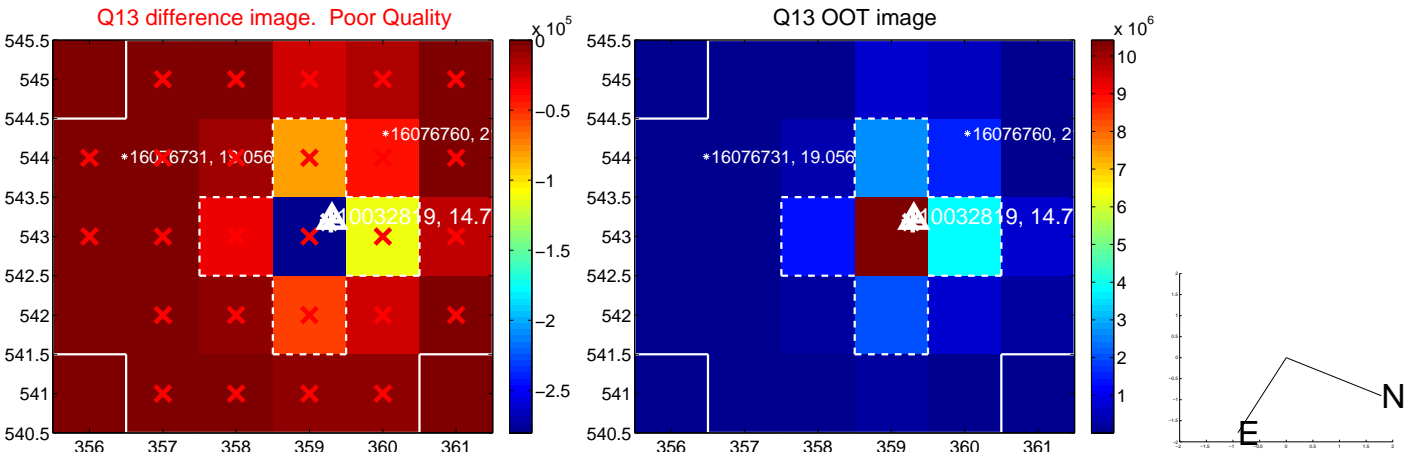
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



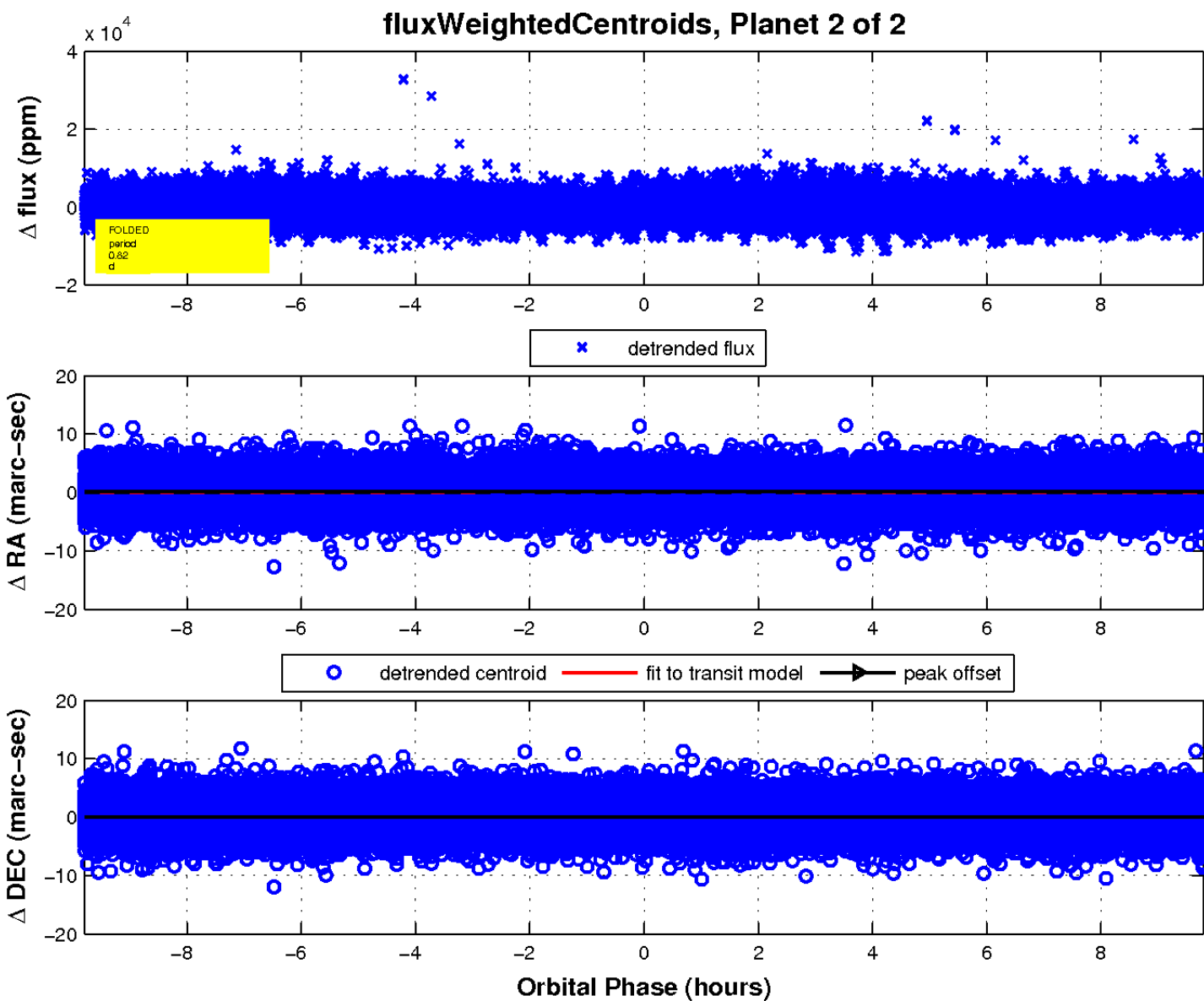
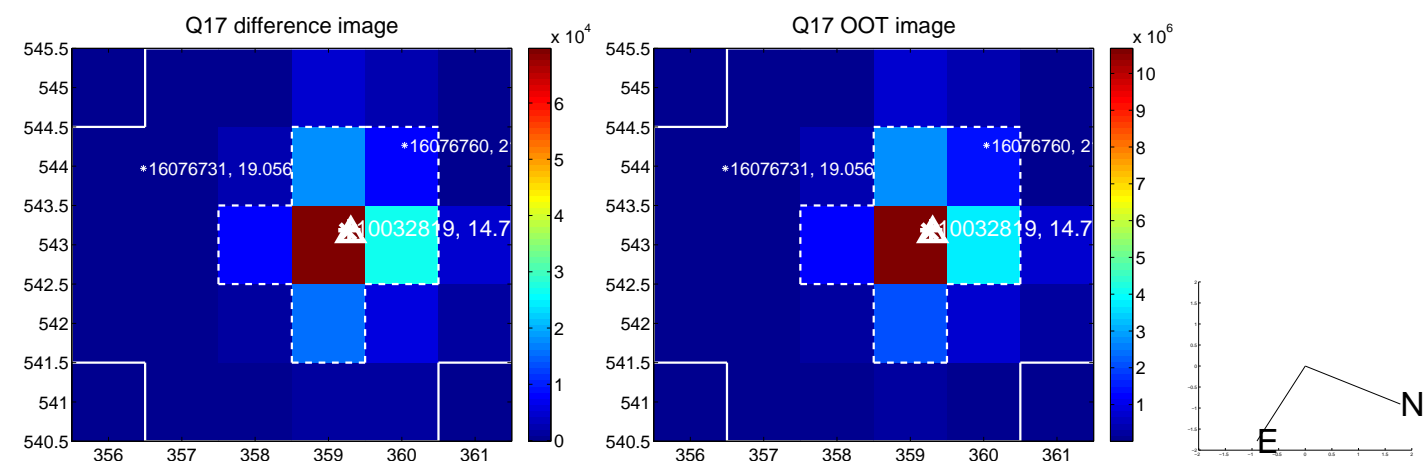
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

