

KIC 006195556

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})
006195556-01	OBS	No	2.578435	131.698227	196.8	5.481	13.4	13.3	2.12	7135	5.54	5422.75
006195556-02	OBS	No	1.007466	131.924442	106.5	12.090	11.0	13.6	2.12	7135	2.86	18983.96

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006195556-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
006195556-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT

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

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

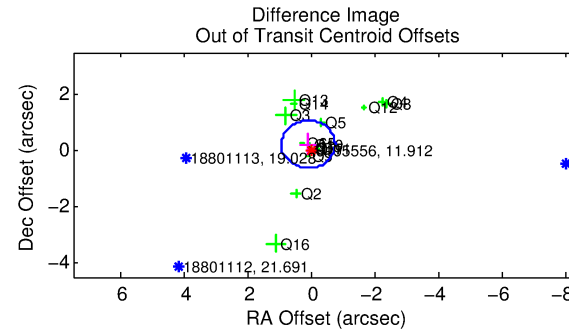
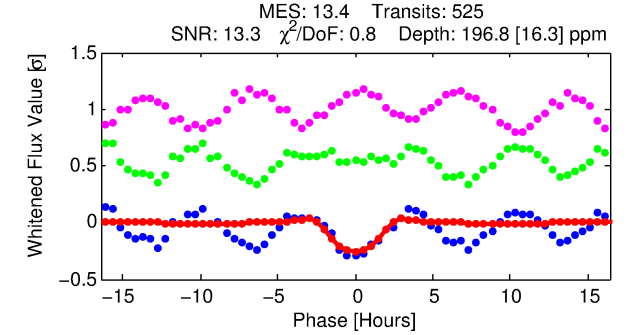
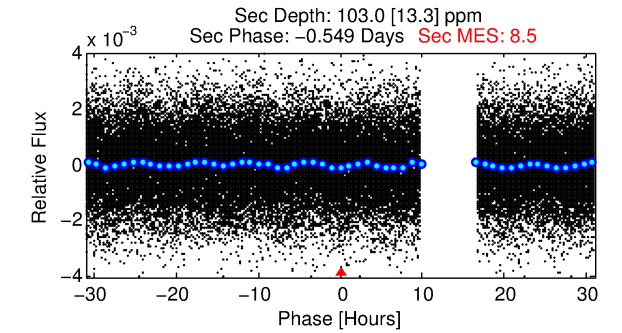
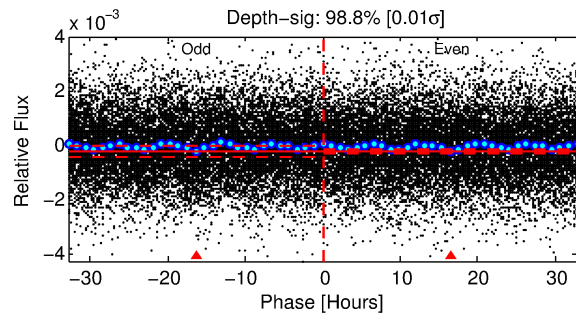
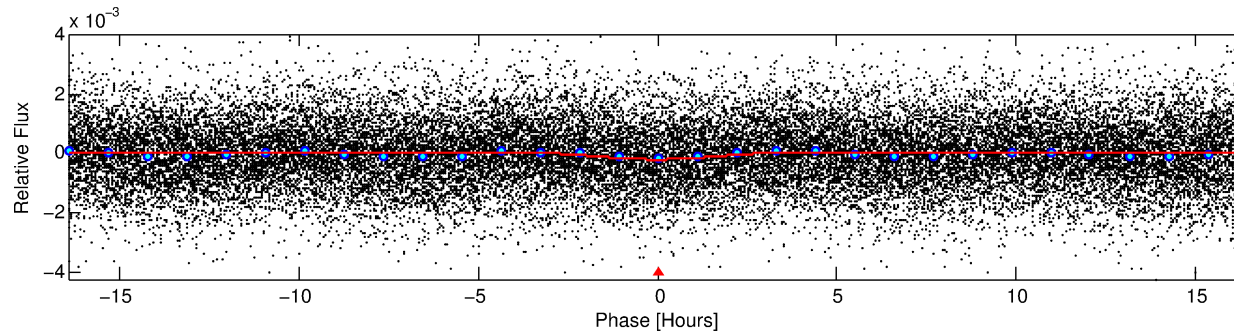
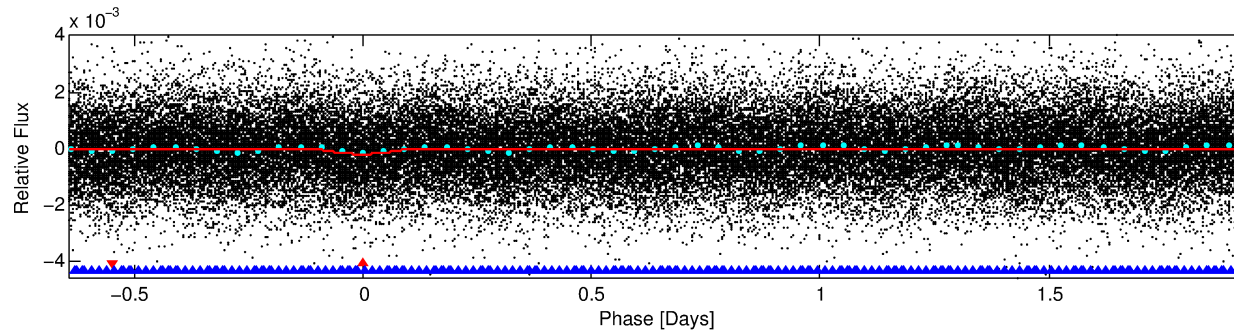
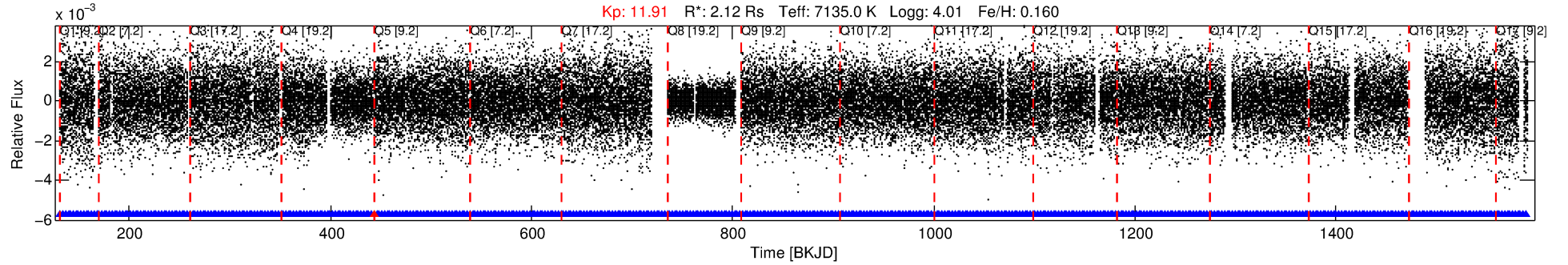
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006195556-01

No Significant Match Found

DV One-Page Summary

KIC: 6195556 Candidate: 1 of 2 Period: 2.578 d



DV Fit Results:

Period = 2.57843 [0.00003] d
Epoch = 131.6982 [0.0078] BKJD
Rp/R* = 0.0239 [0.0485]
a/R* = 1.30 [0.26]
b = 1.00 [0.08]
Seff = 5422.75 [2137.41]
Teq = 2188 [216] K
Rp = 5.54 [11.32] Re
a = 0.0439 [0.0102] AU
Ag = 3.56 [14.47] [0.18 σ]
Teffp = 4646 [4715] K [0.52 σ]

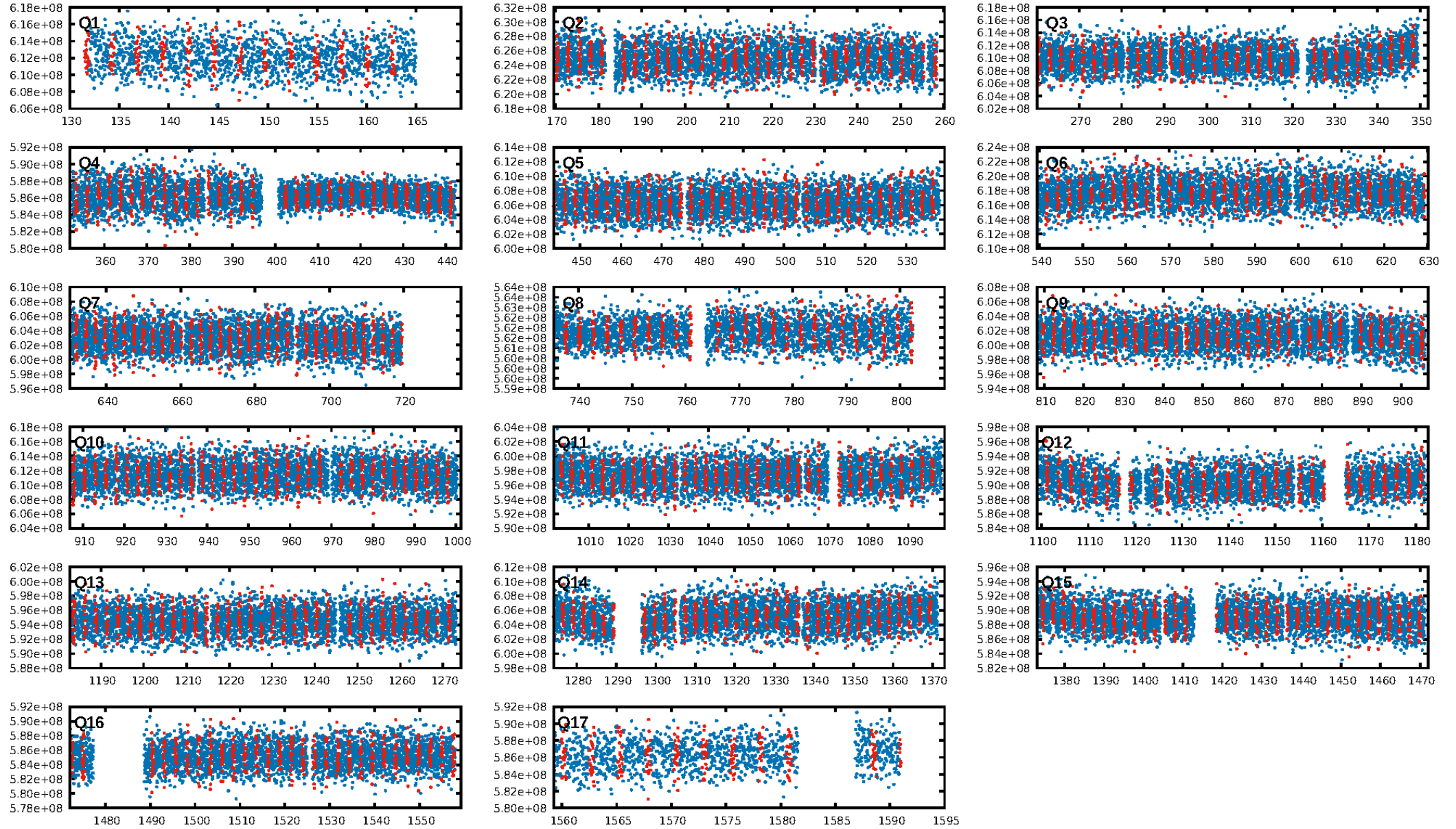
DV Diagnostic Results:

ShortPeriod-sig: 99.5% [2.84 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [500/501]
GhostDiagnostic-chr: 3.283
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.249 arcsec [0.88 σ]
KicOffset-rm: 0.362 arcsec [1.80 σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.81 [13/16]
DiffImageOverlap-fno: 0.00 [0/17]

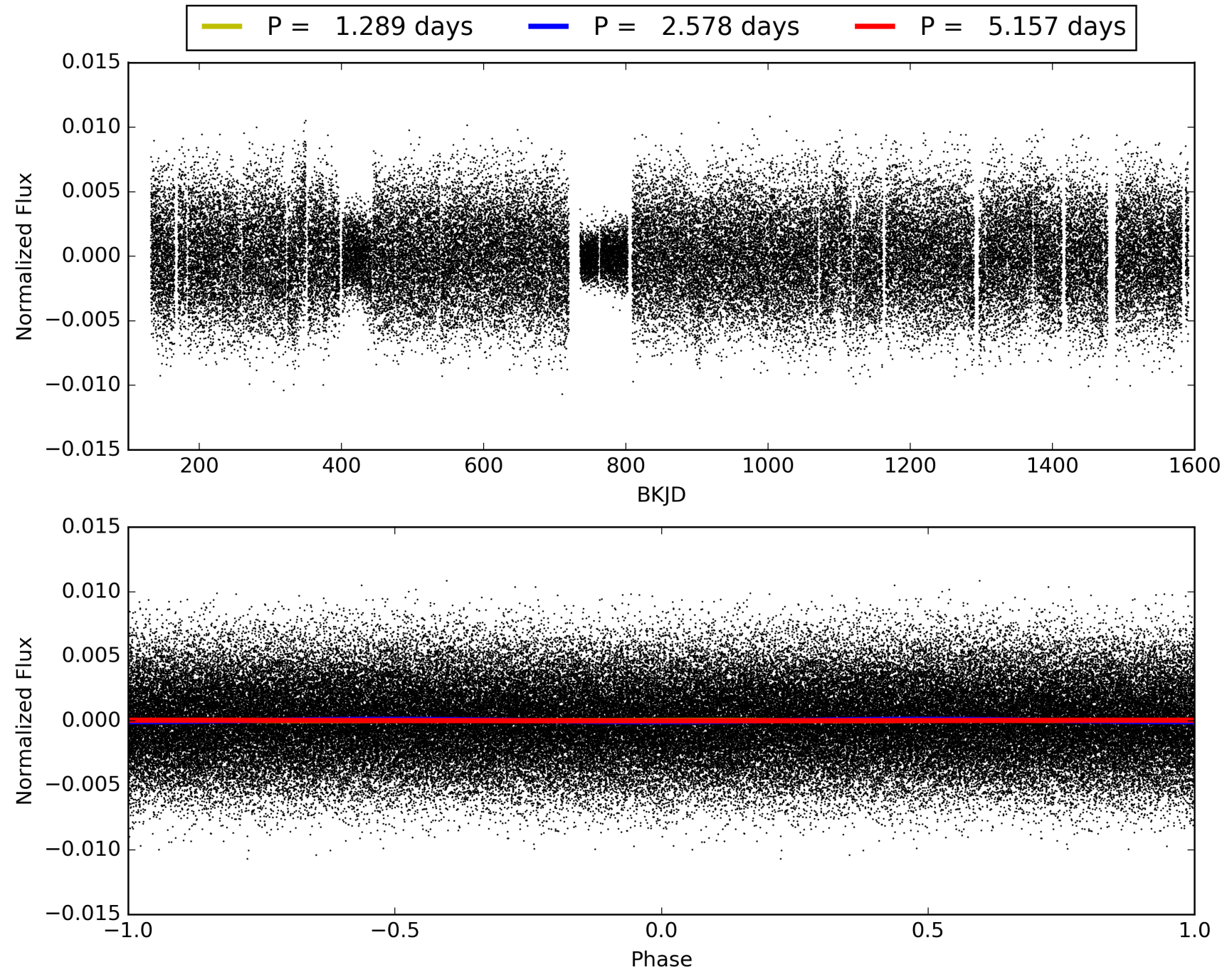
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 006195556-01, PDC Light Curves

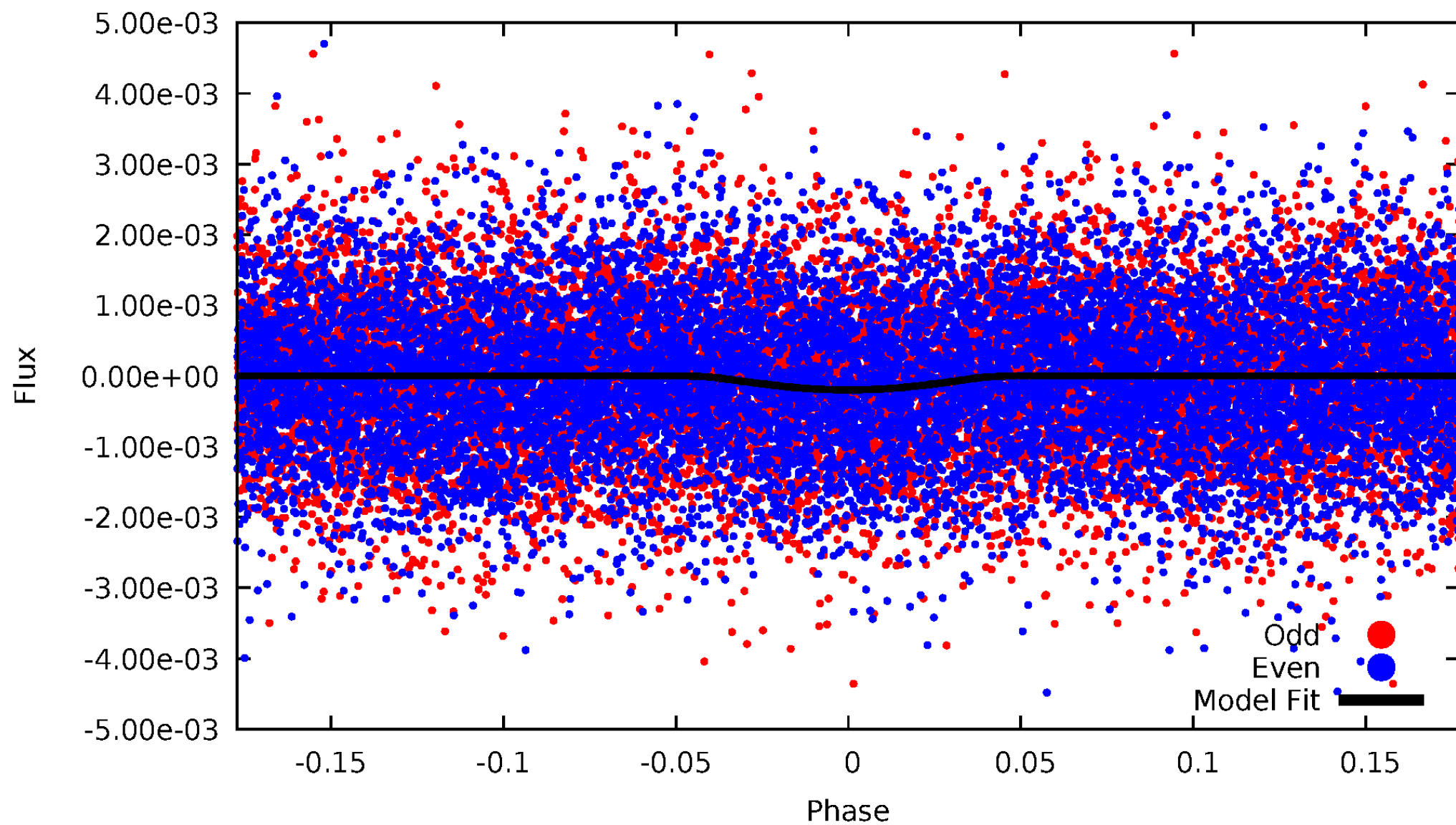


TCE 006195556-01



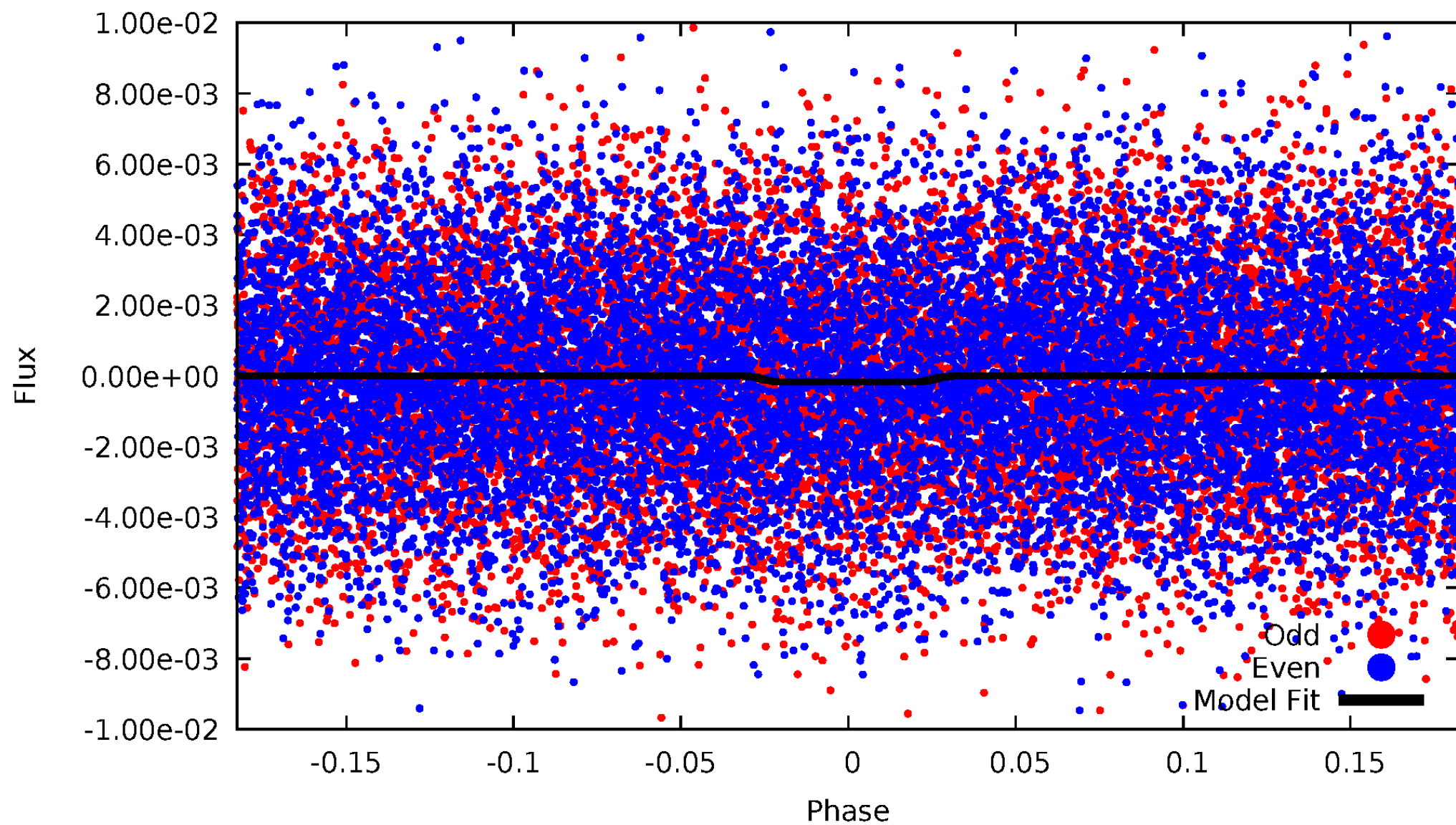
DV Odd/Even

TCE 006195556-01

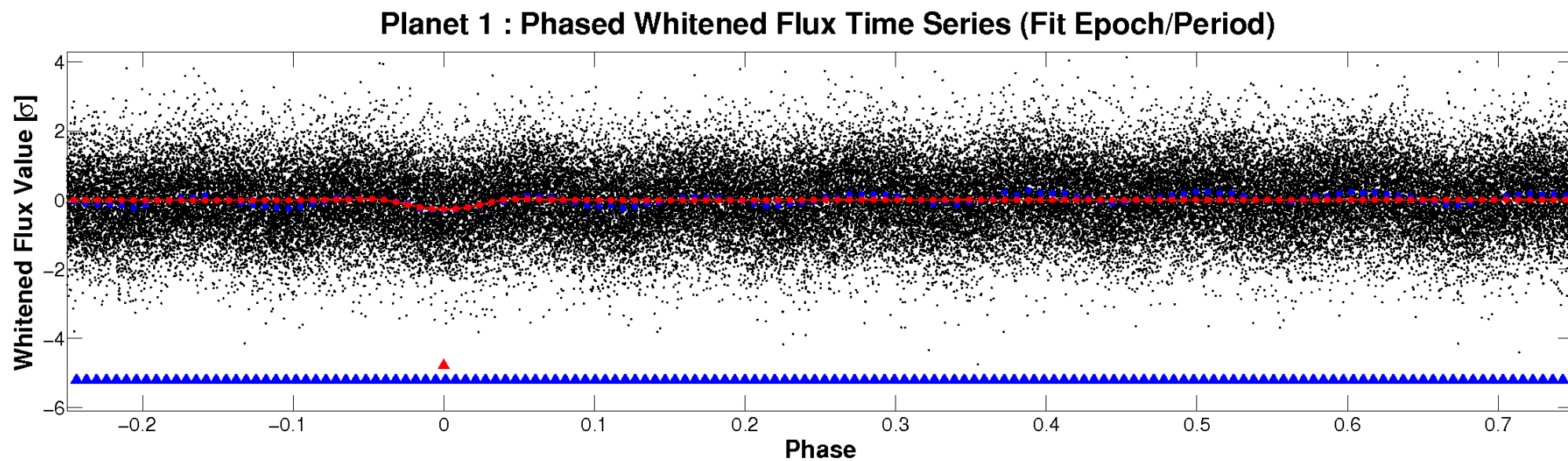
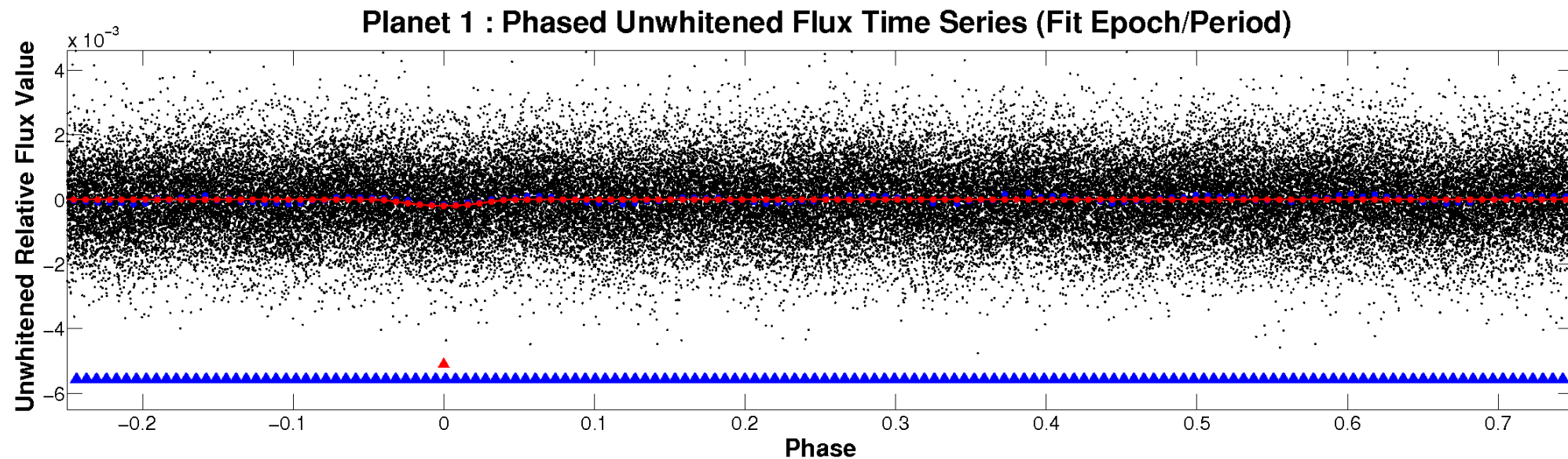


ALT Odd/Even

TCE 006195556-01

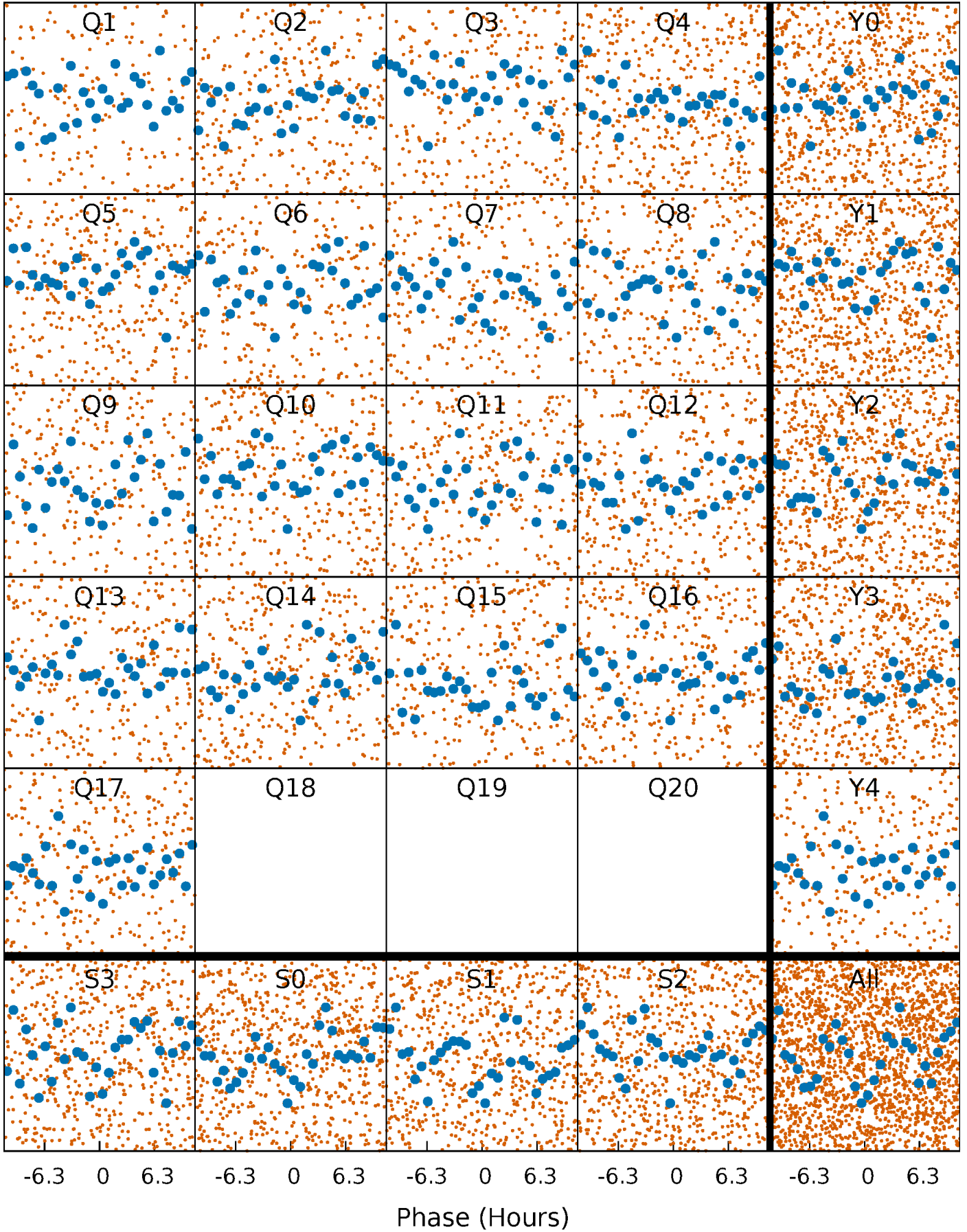


Non-Whitened Vs. Whitened Light Curve



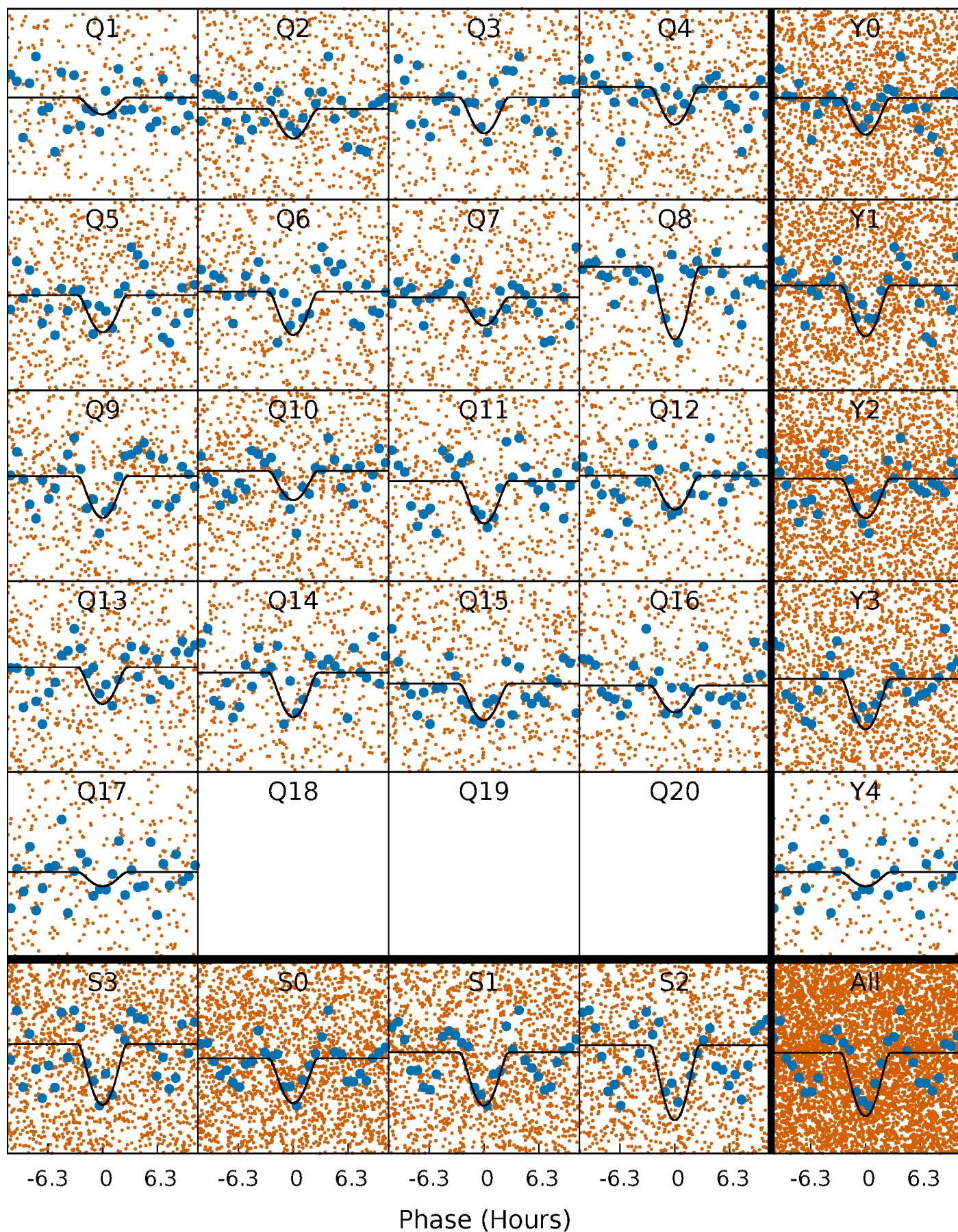
PDC Quarter-Phased Transit Curves

TCE 006195556-01 P= 2.578435 Days $T_0=131.698227$ (BKJD)



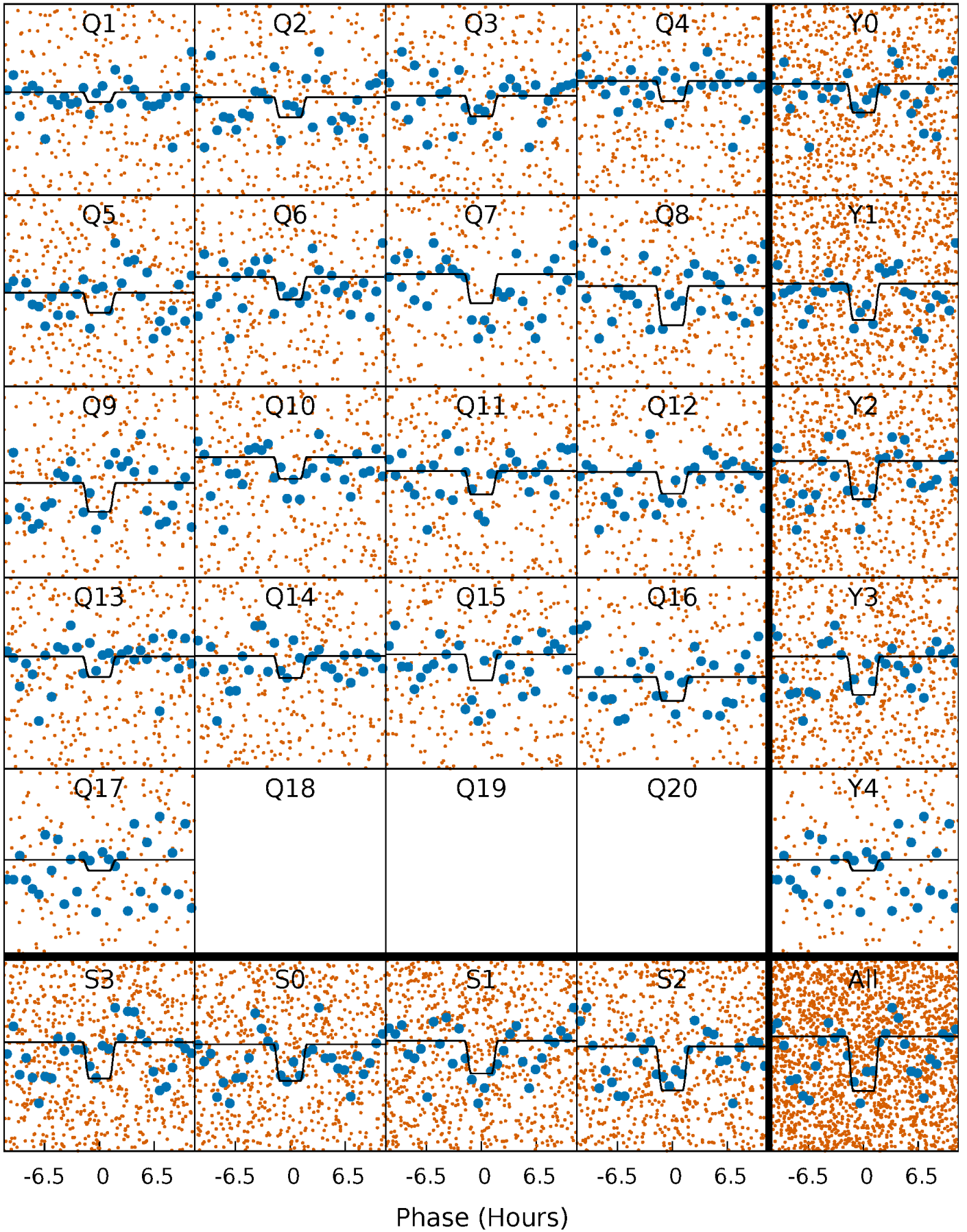
DV Quarter-Phased Transit Curves

TCE 006195556-01 P= 2.578435 Days $T_0=131.698227$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

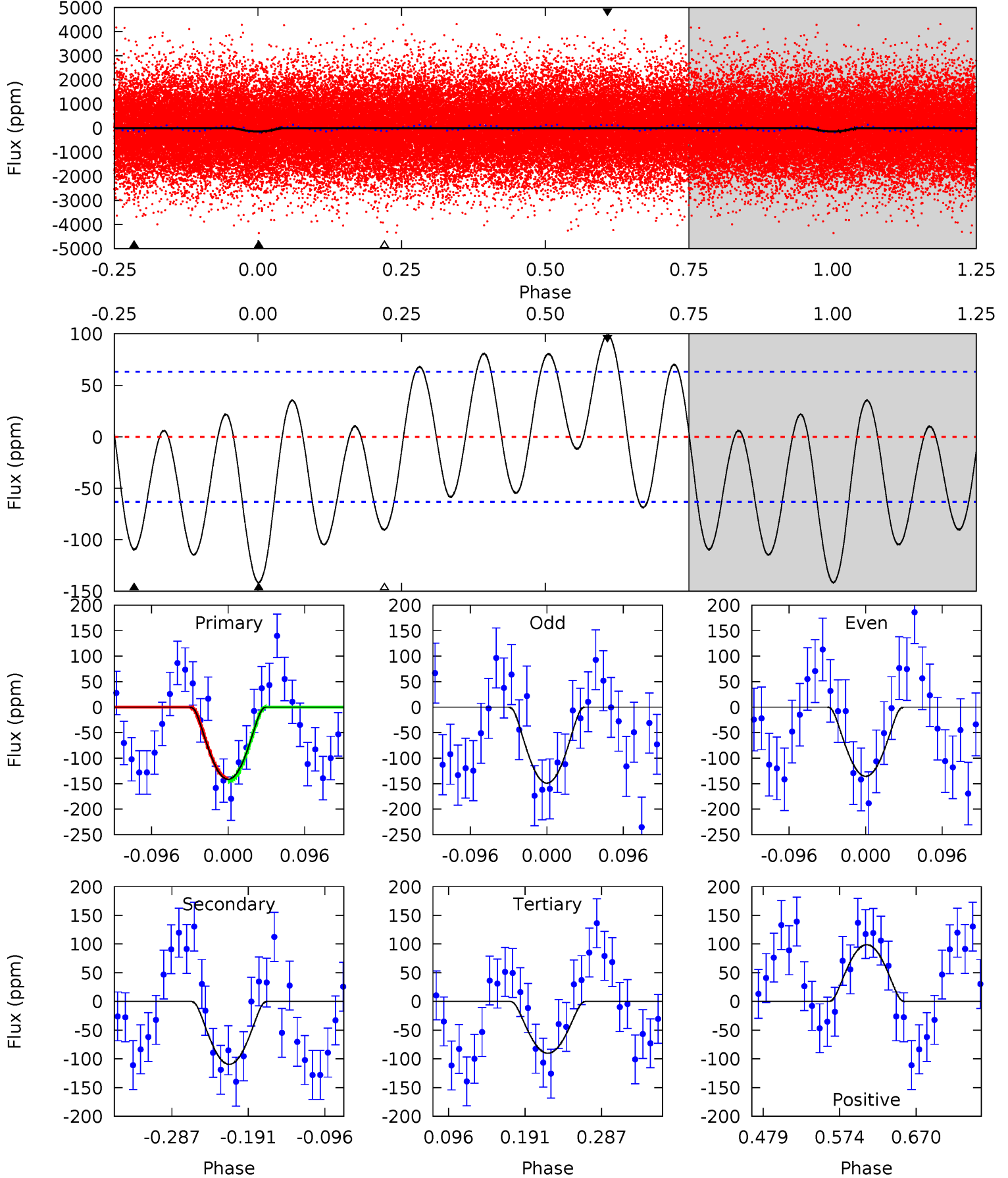
TCE 006195556-01 P= 2.578452 Days $T_0=131.706309$ (BKJD)



DV Model-Shift Uniqueness Test

006195556-01, P = 2.578435 Days, E = 129.119792 Days

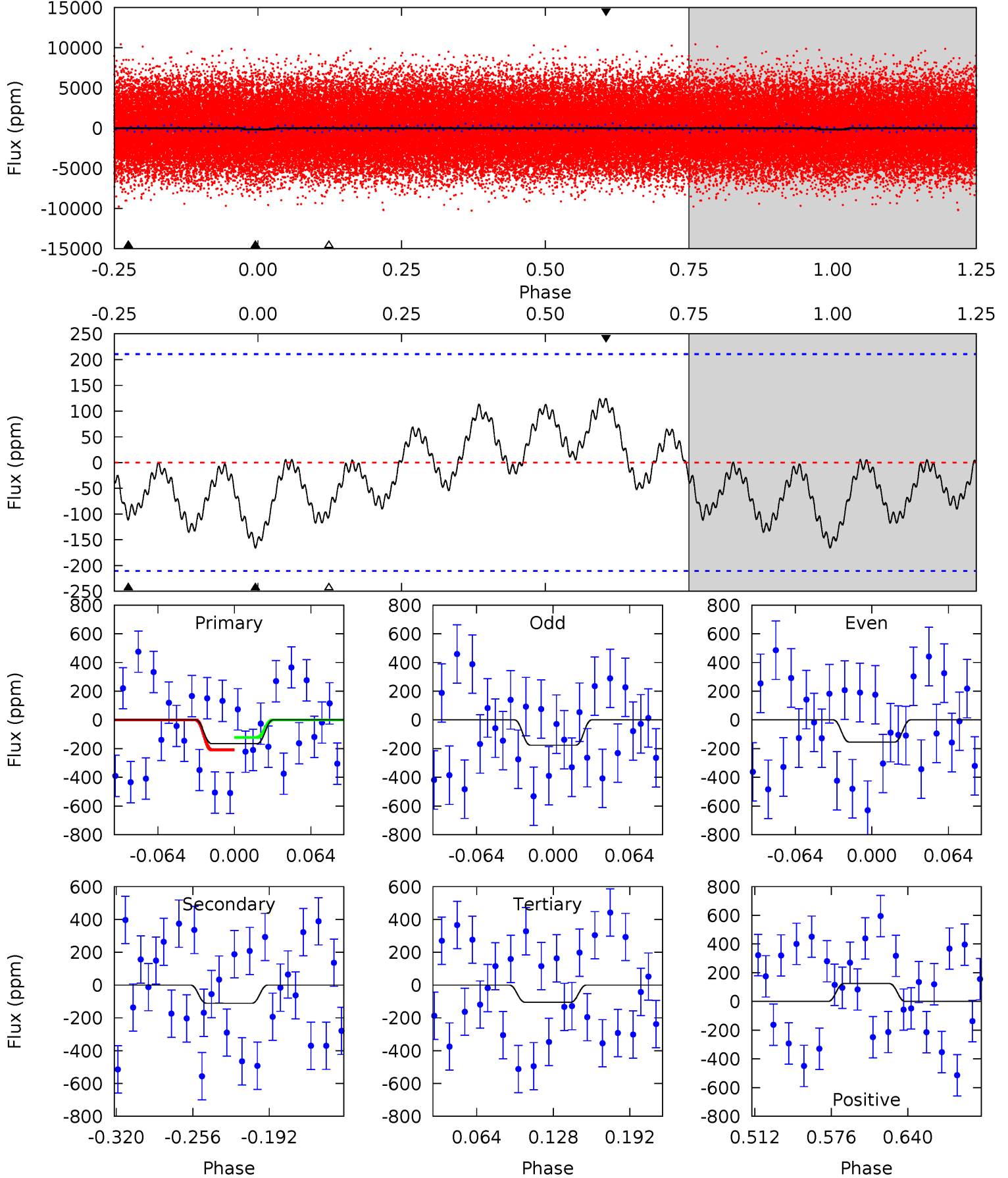
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.3	7.94	6.54	7.17	4.57	1.67	4.18	3.72	3.09	1.39	0.77	0.49	1.11	0.41	0.20



Alt Model-Shift Uniqueness Test

006195556-01, P = 2.578452 Days, E = 129.127857 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.66	2.46	2.32	2.75	4.66	1.85	1.39	1.34	0.91	0.13	-0.30	0.24	0.91	0.43	0.97



Stellar Parameters For KIC 006195556

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7135^{+197}_{-338}	$4.014^{+0.193}_{-0.175}$	$0.160^{+0.150}_{-0.300}$	$2.120^{+0.566}_{-0.510}$	$1.696^{+0.183}_{-0.275}$	$0.251^{+0.265}_{-0.120}$
	+3%/-5%	+5%/-4%	+94%/-188%	+27%/-24%	+11%/-16%	+106%/-48%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 006195556-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-109±14	$10.30^{+9.00}_{-6.65}$	3049^{+221}_{-236}	3581^{+2016}_{-5255}	$1.073^{+7.351}_{-0.774}$
Alt.	-111±45	$8.91^{+8.51}_{-6.12}$	3040^{+223}_{-240}	3814^{+2559}_{-1736}	$1.415^{+12.484}_{-1.103}$

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 $A_{obs} \gg 1.0$

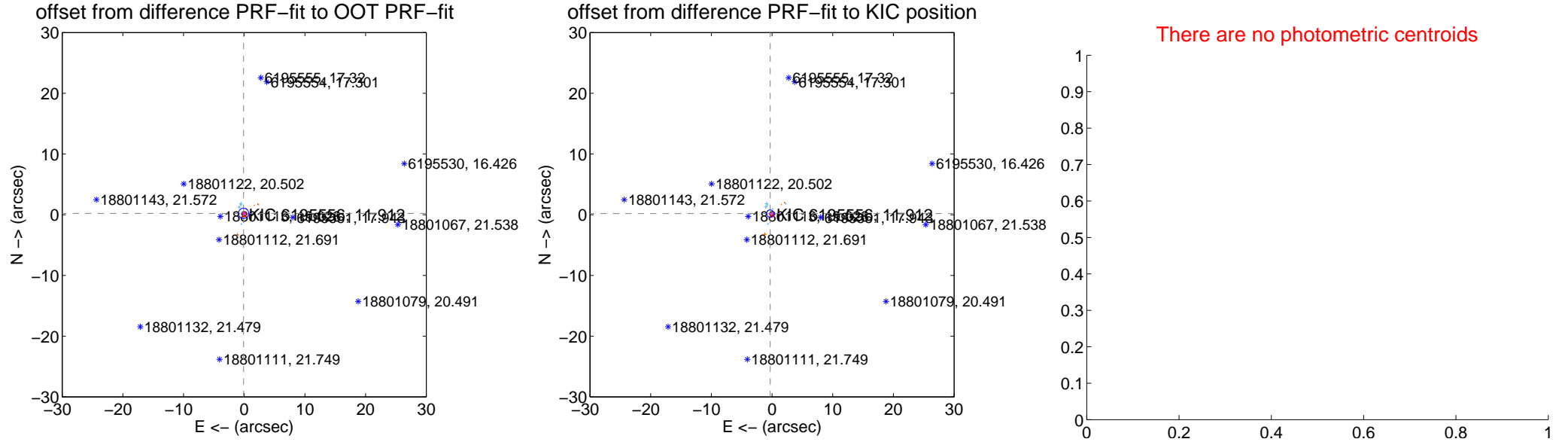
DV Centroid Data

Supplemental centroid analysis for 006195556-01. **Kepler magnitude: 11.91.** Transit SNR 13.28

There are 13 quarters with good PRF difference image offsets

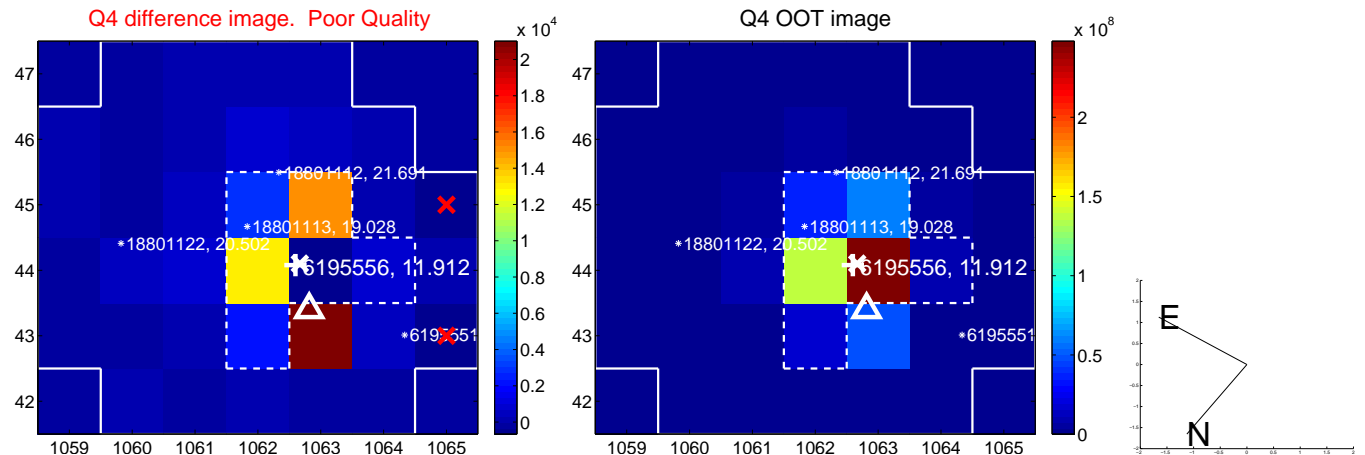
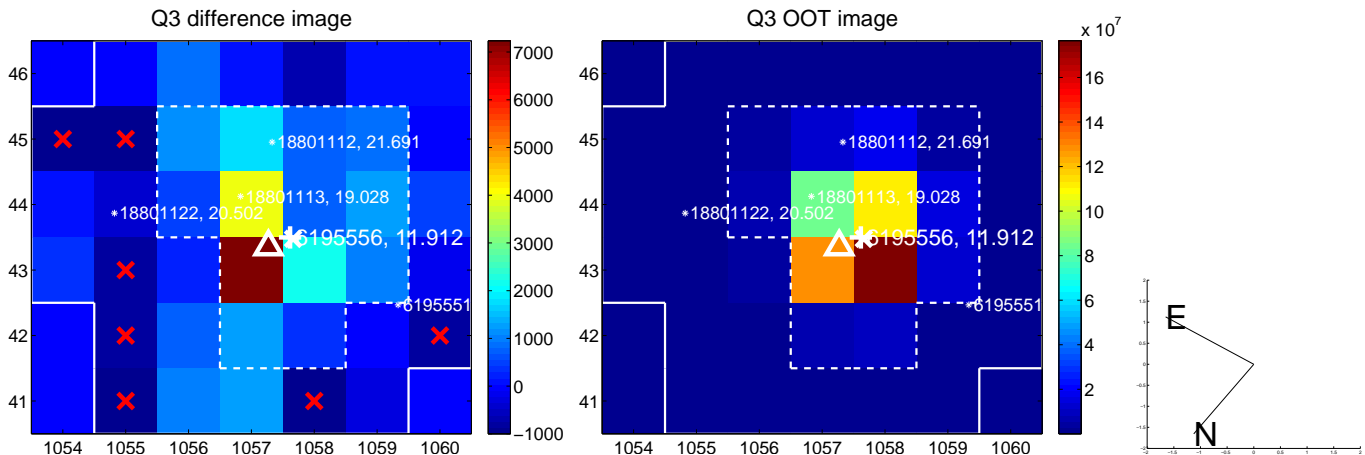
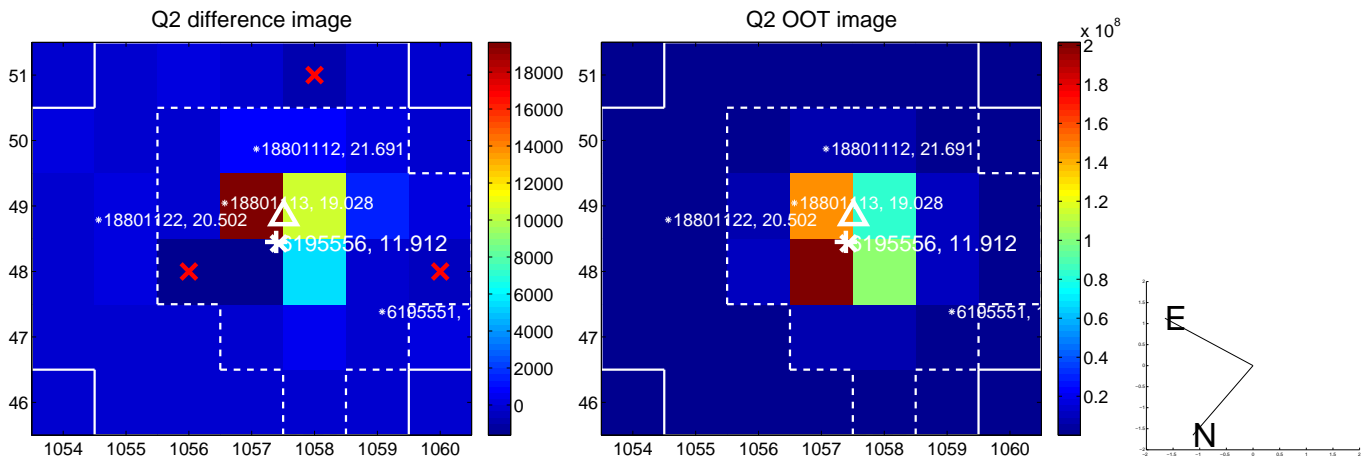
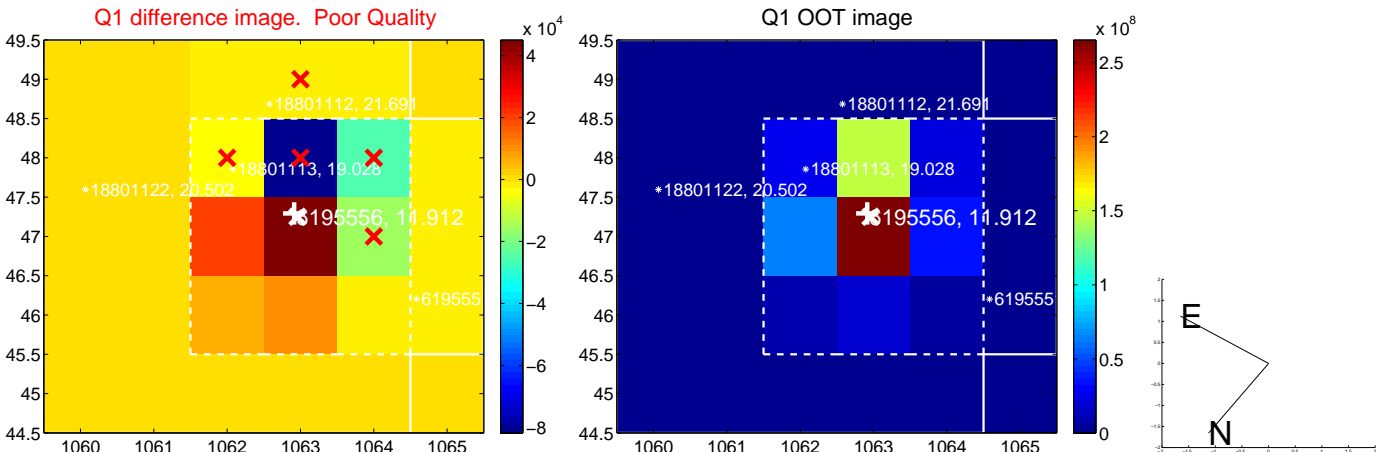
The direct PRF centroid is offset from the target star catalog position by about 0.25 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.249 ± 0.282	0.88	0.108 ± 0.253	0.225 ± 0.355
PRF-fit source offset from KIC position	0.362 ± 0.201	1.80	0.307 ± 0.267	0.191 ± 0.349
photometric centroid source offset	—	—	—	—

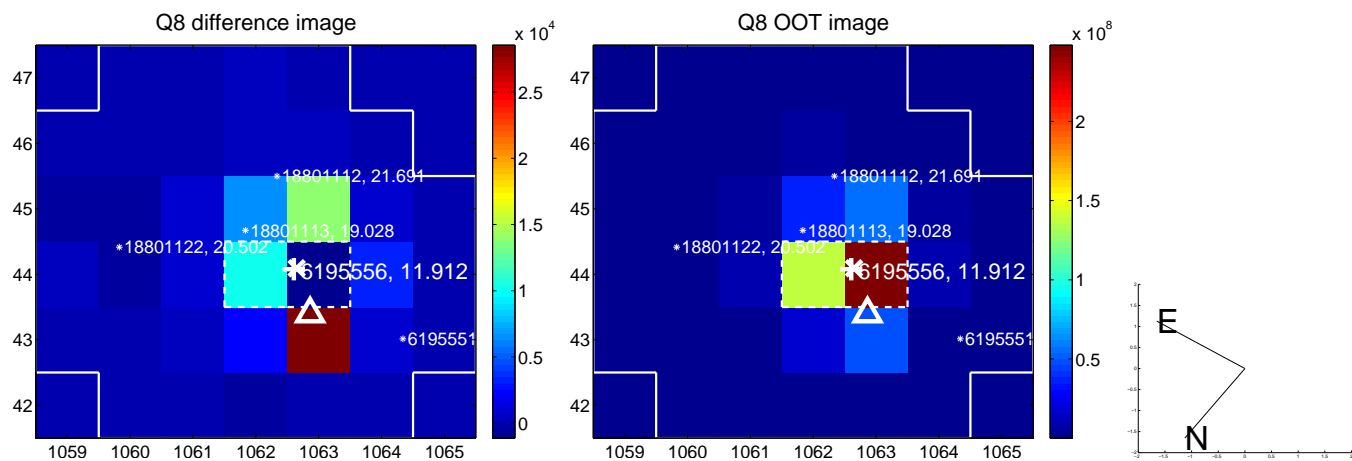
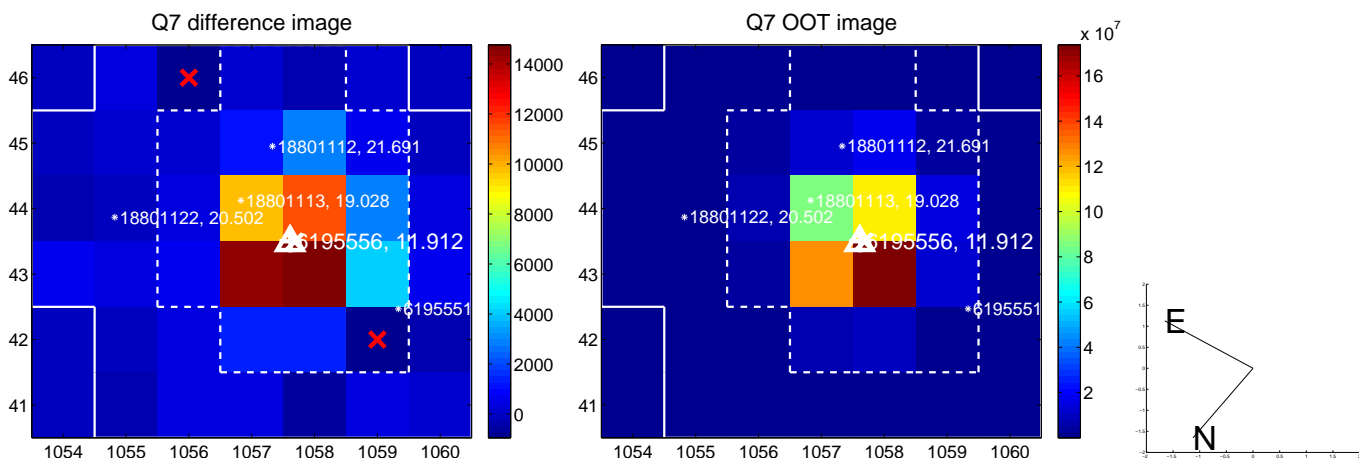
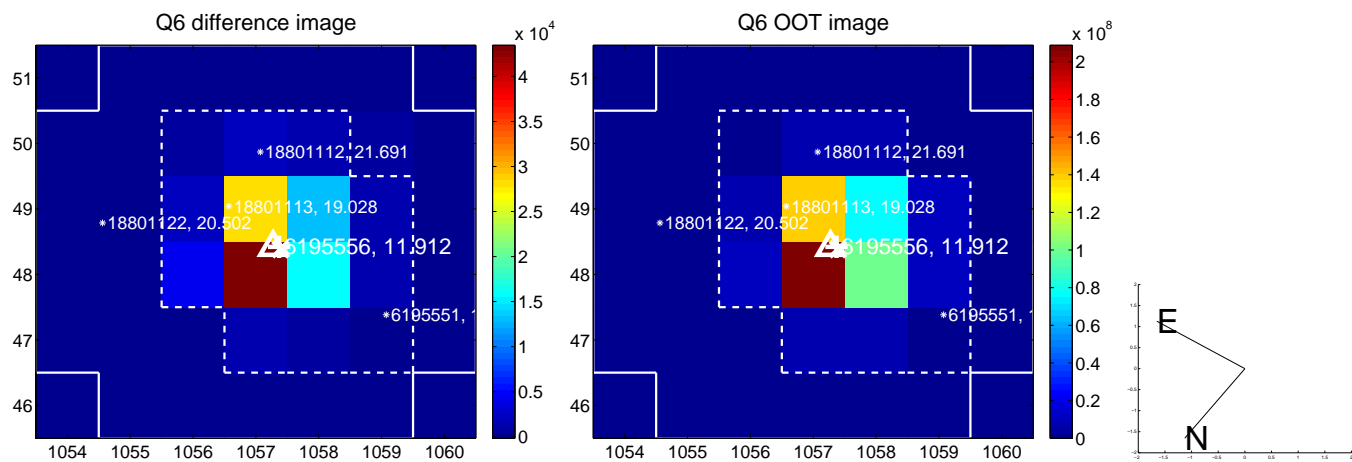
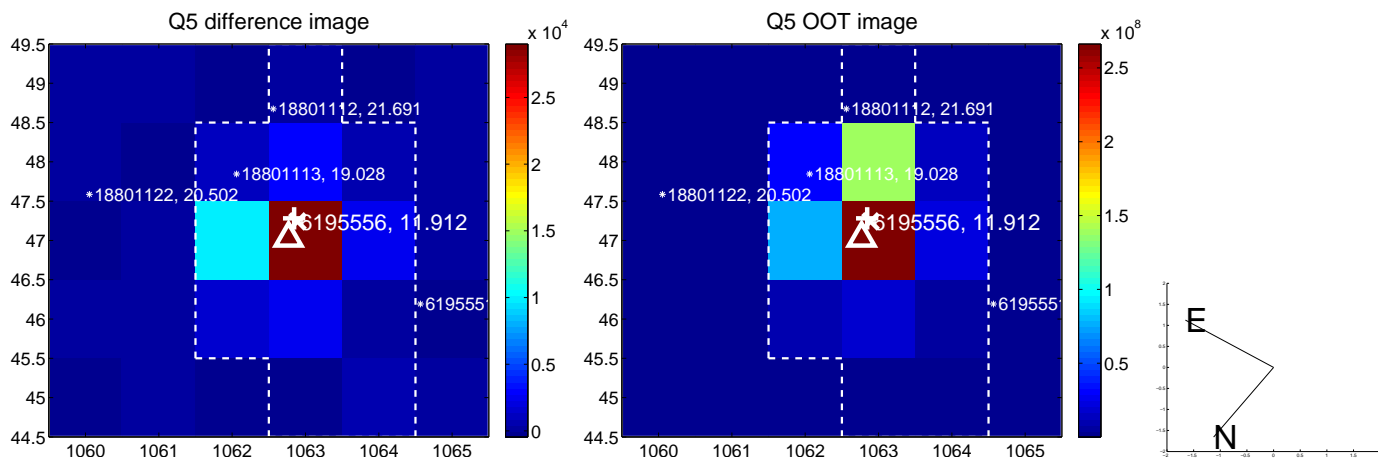


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

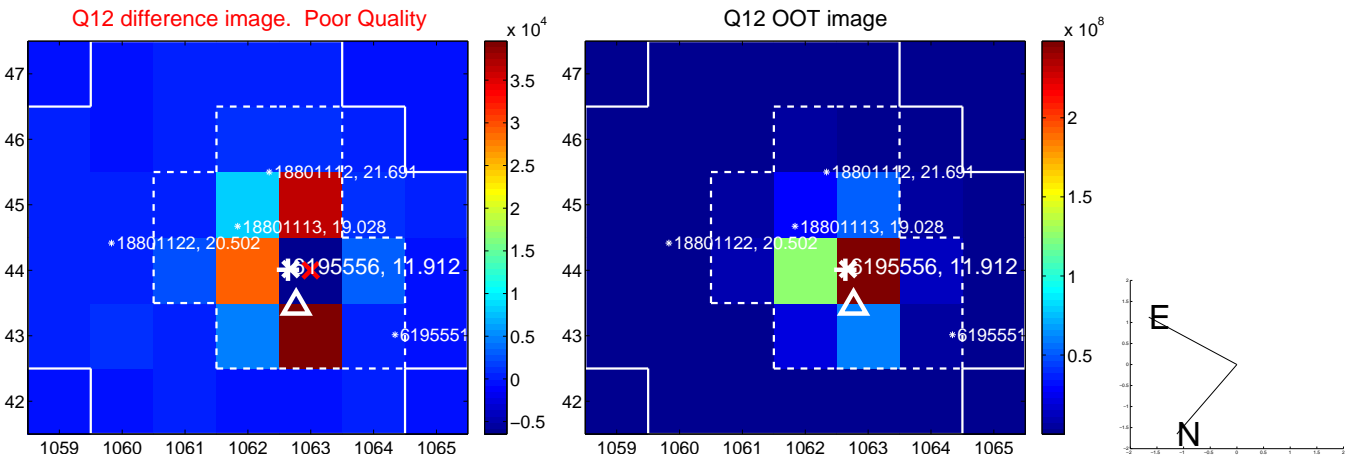
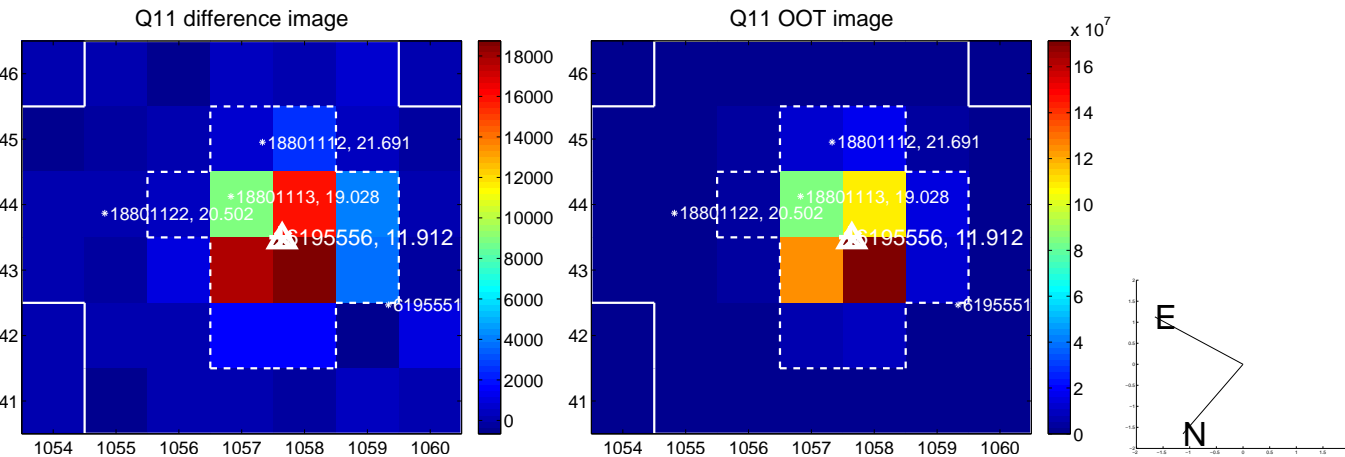
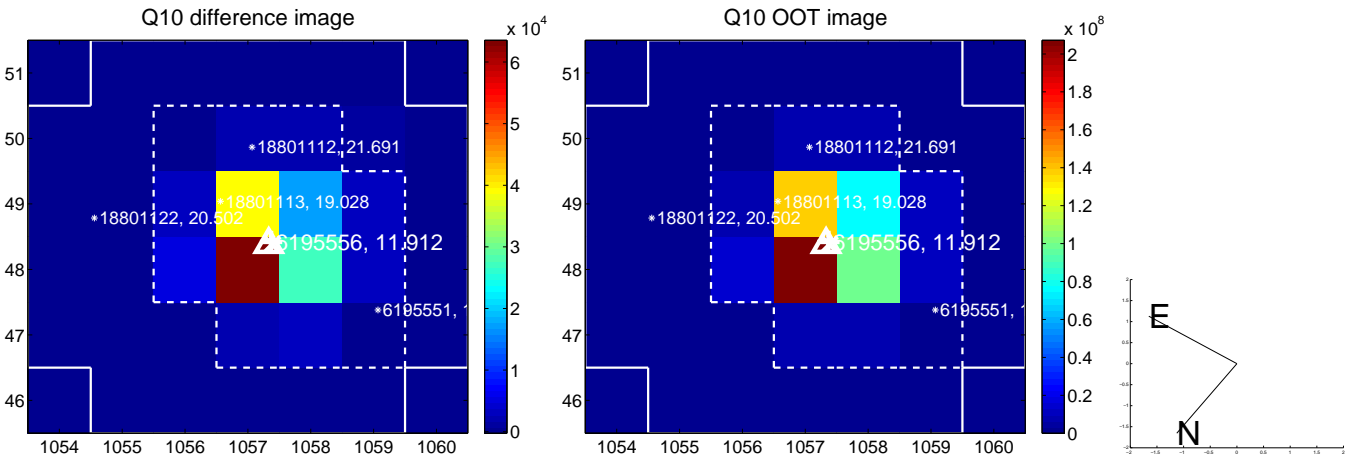
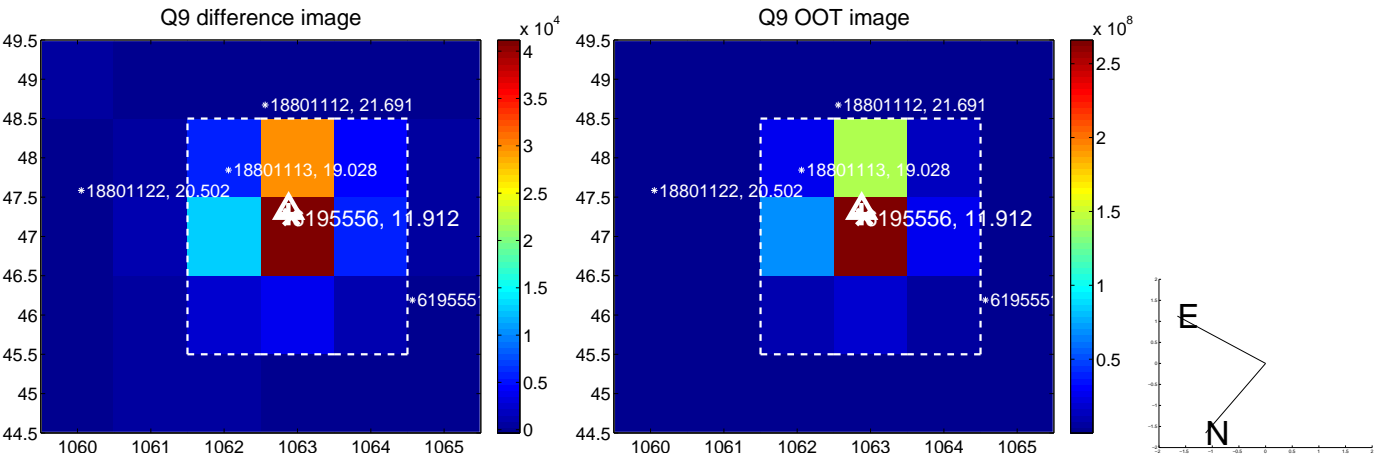
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



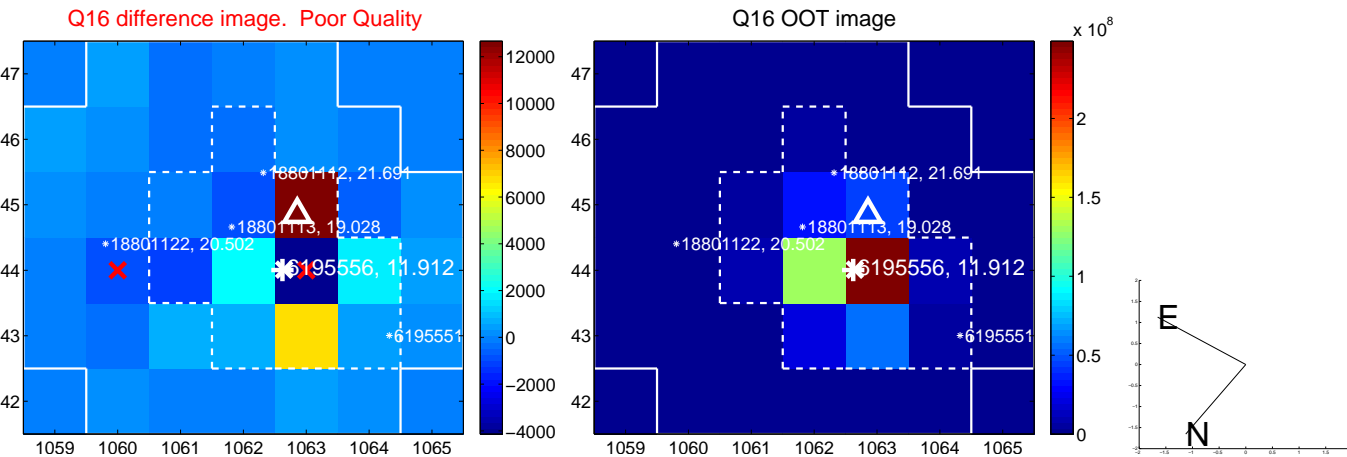
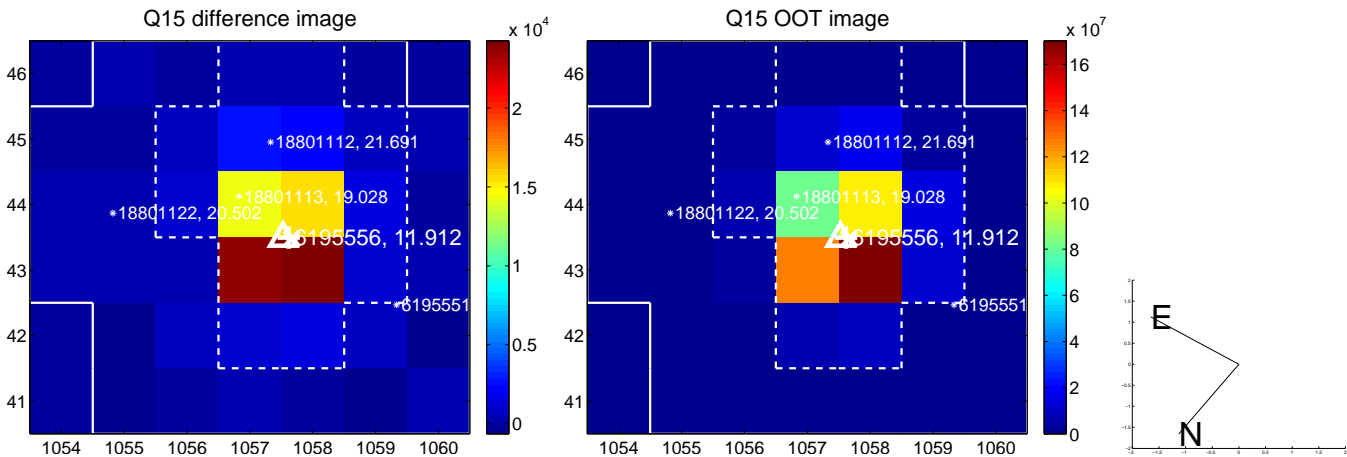
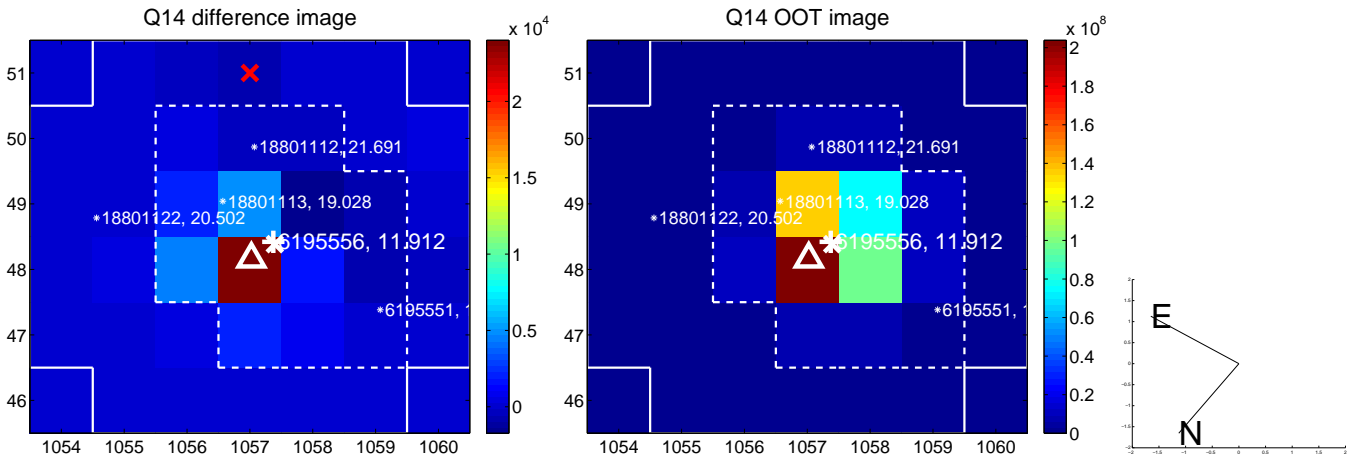
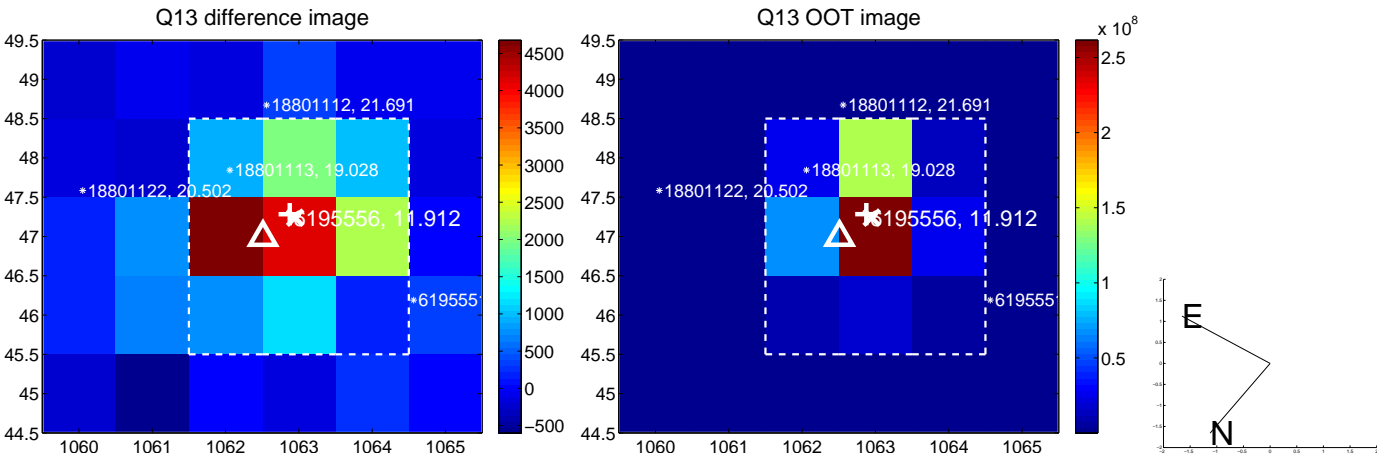
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



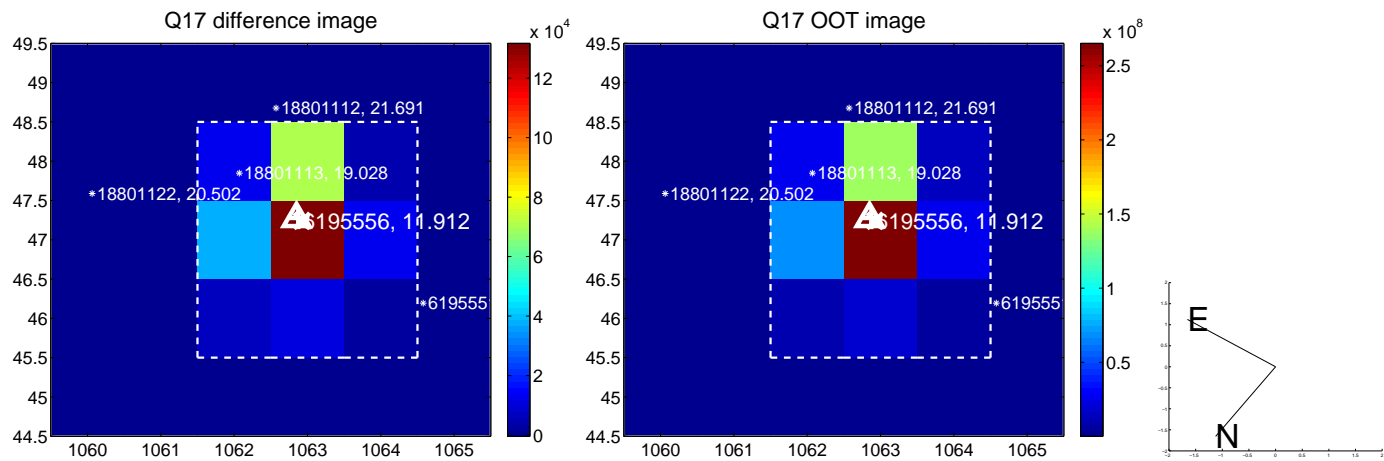
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



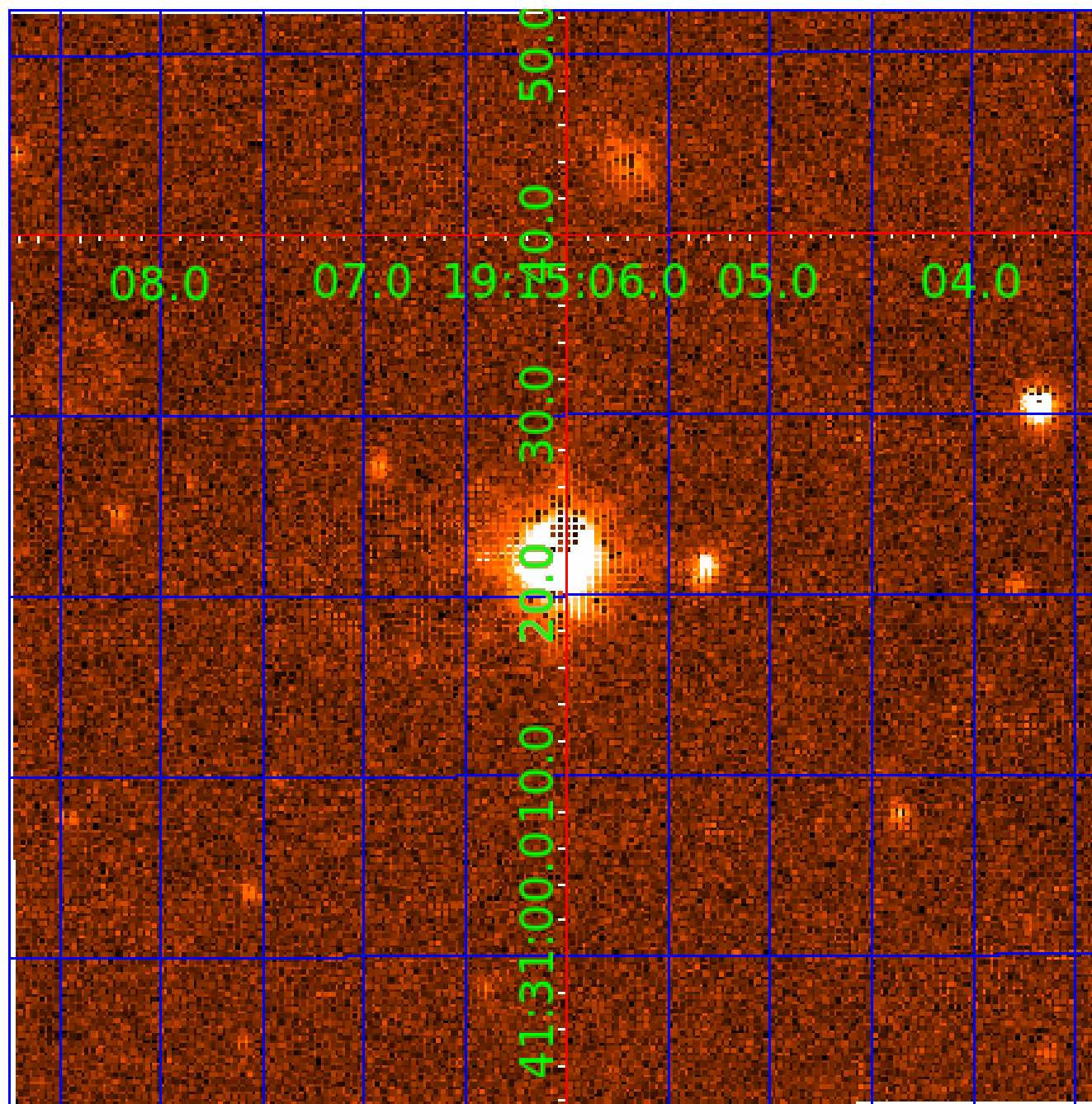
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 006195556

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})
006195556-01	OBS	No	2.578435	131.698227	196.8	5.481	13.4	13.3	2.12	7135	5.54	5422.75
006195556-02	OBS	No	1.007466	131.924442	106.5	12.090	11.0	13.6	2.12	7135	2.86	18983.96

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006195556-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
006195556-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT

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

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

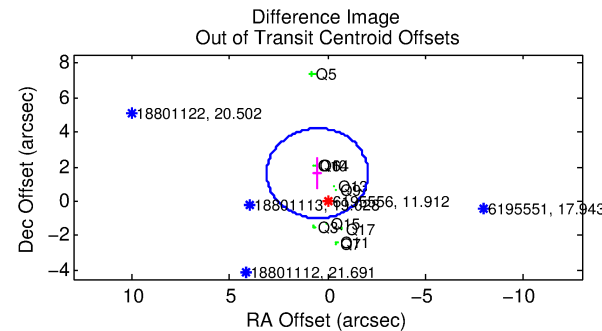
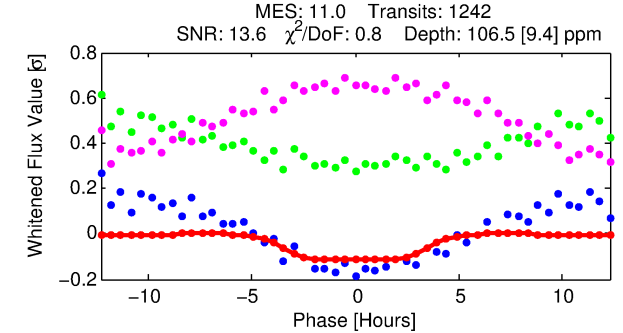
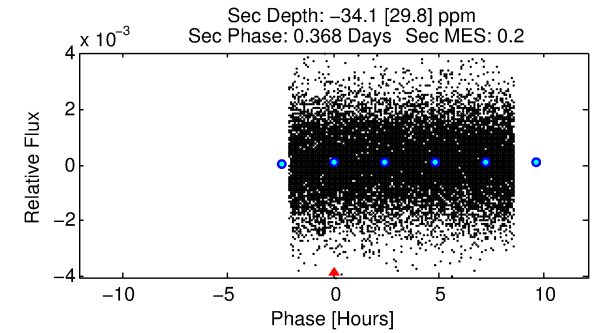
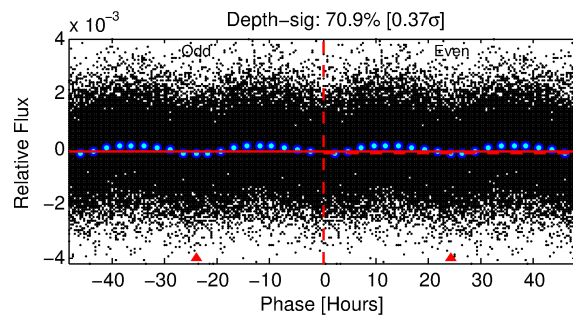
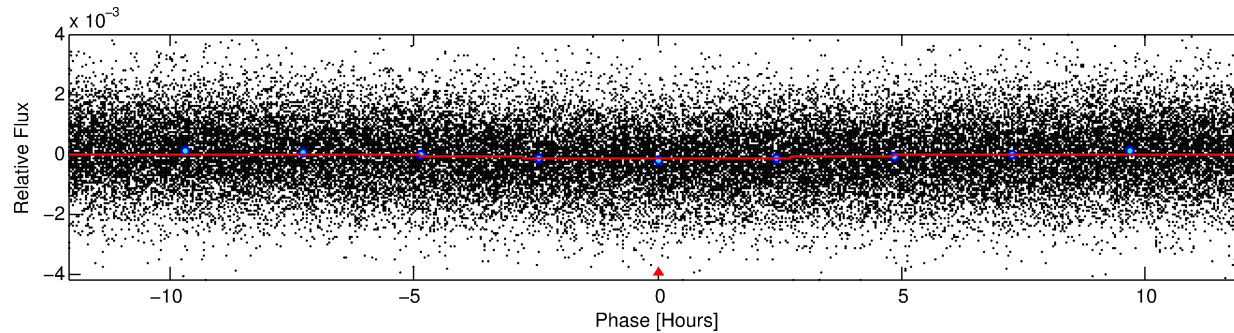
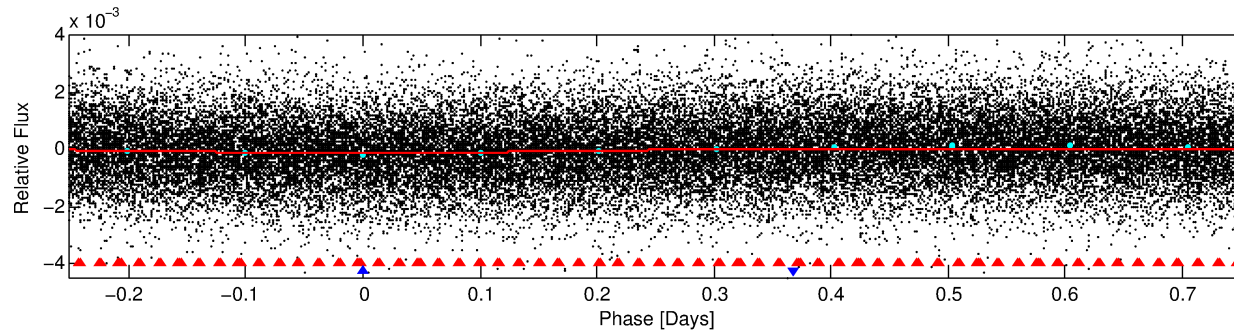
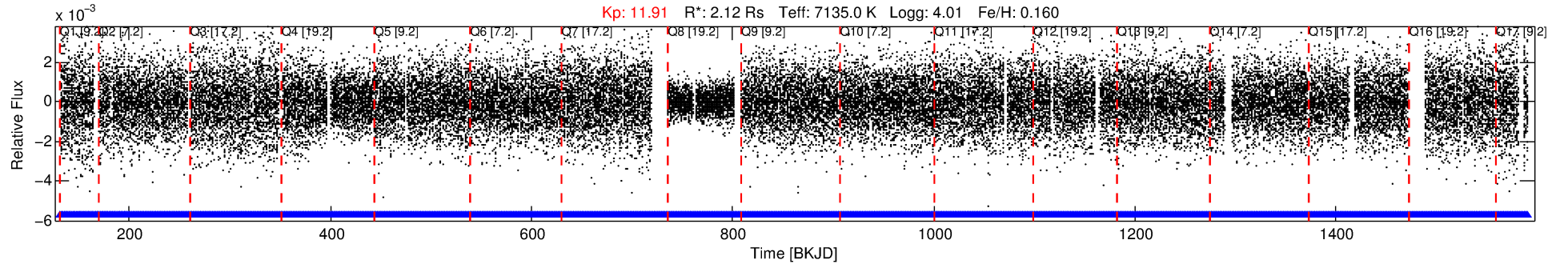
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006195556-02

No Significant Match Found

DV One-Page Summary

KIC: 6195556 Candidate: 2 of 2 Period: 1.007 d



DV Fit Results:

Period = 1.00747 [0.00002] d
Epoch = 131.9244 [0.0151] BKJD
Rp/R* = 0.0124 [0.0007]
a/R* = 1.01 [0.00]
b = 0.98 [0.01]
Seff = 18983.96 [7482.64]
Teq = 2993 [295] K
Rp = 2.86 [0.78] Re
a = 0.0234 [0.0054] AU
Ag = N/A
Teffp = N/A

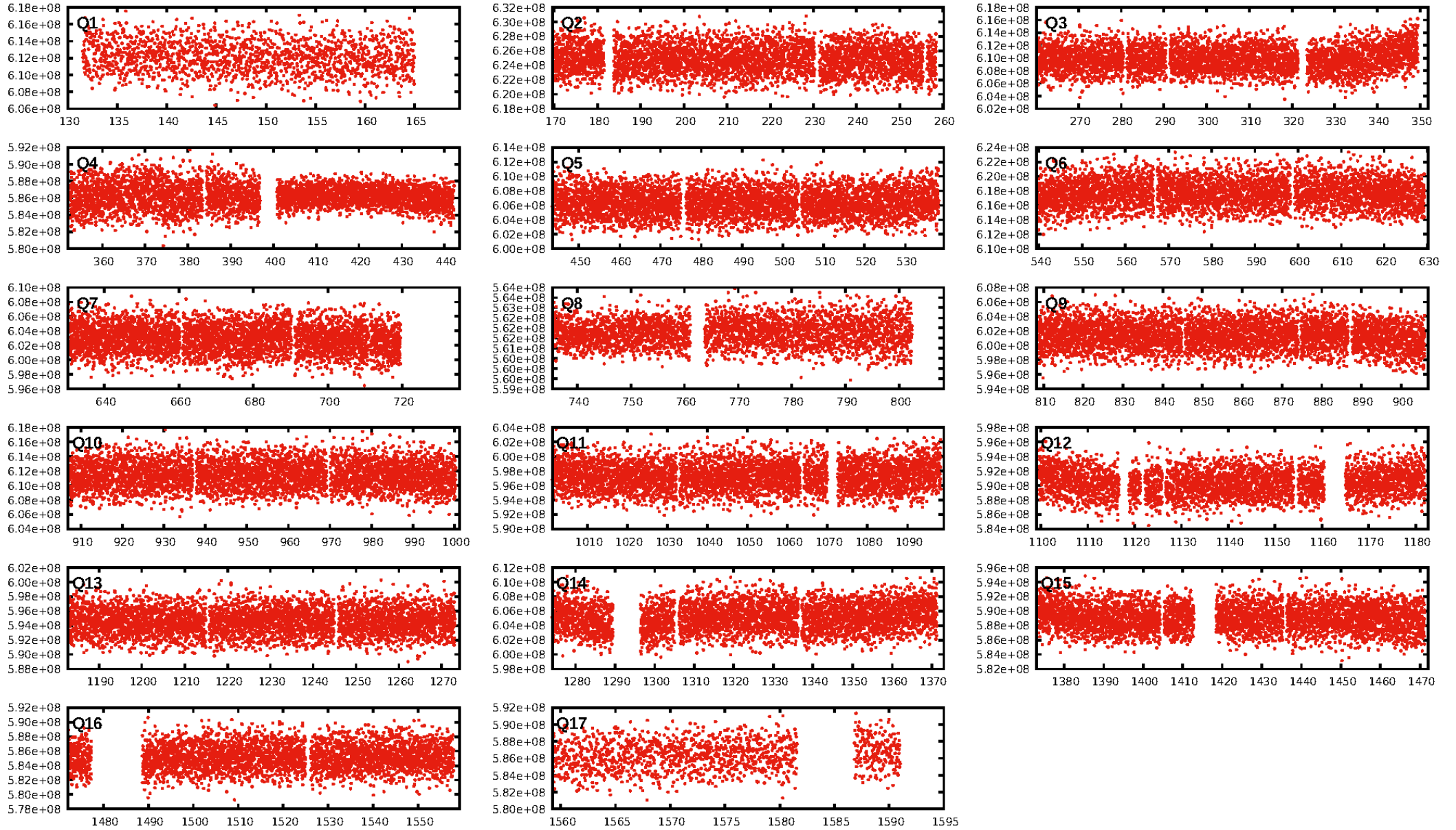
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 99.5% [2.84 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1184/1184]
GhostDiagnostic-chr: 1.611
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 1.693 arcsec [1.96 σ]
KicOffset-rm: 1.703 arcsec [2.16 σ]
OotOffset-st: 3/4/0/4 [11]
KicOffset-st: 3/4/0/4 [11]
DiffImageQuality-fgm: 0.82 [9/11]
DiffImageOverlap-fno: 1.00 [17/17]

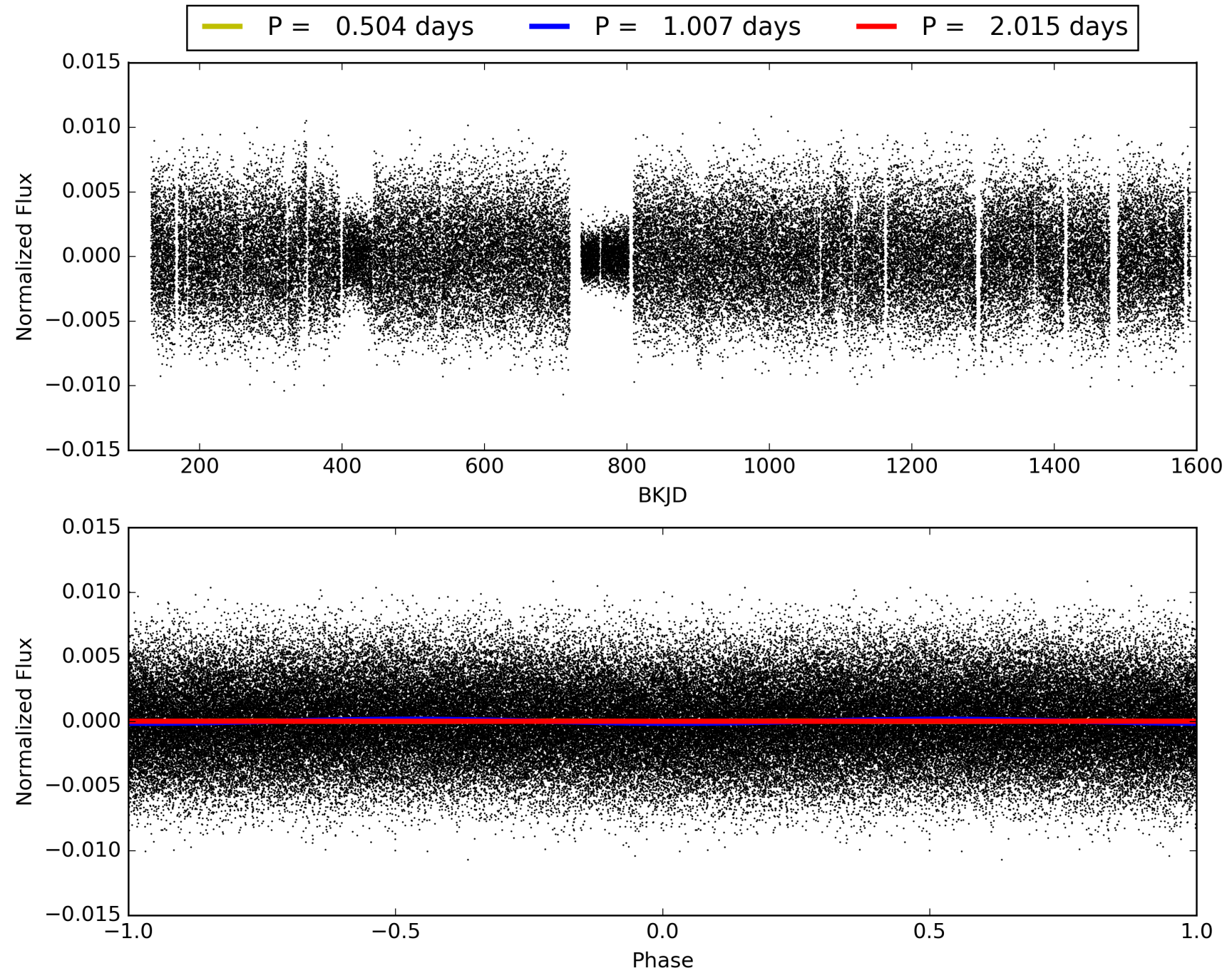
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 19:24:48 Z

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

TCE 006195556-02, PDC Light Curves

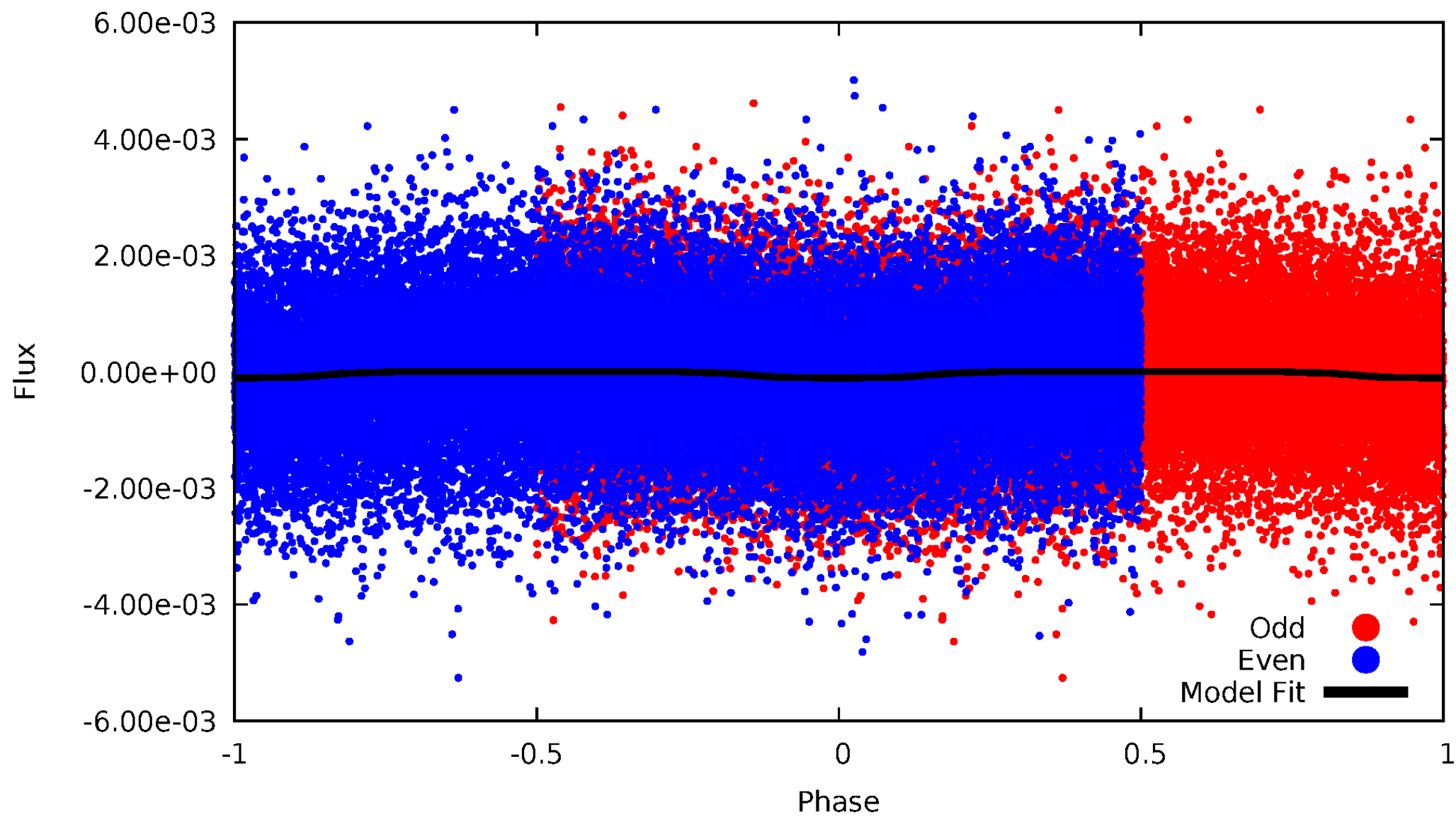


TCE 006195556-02



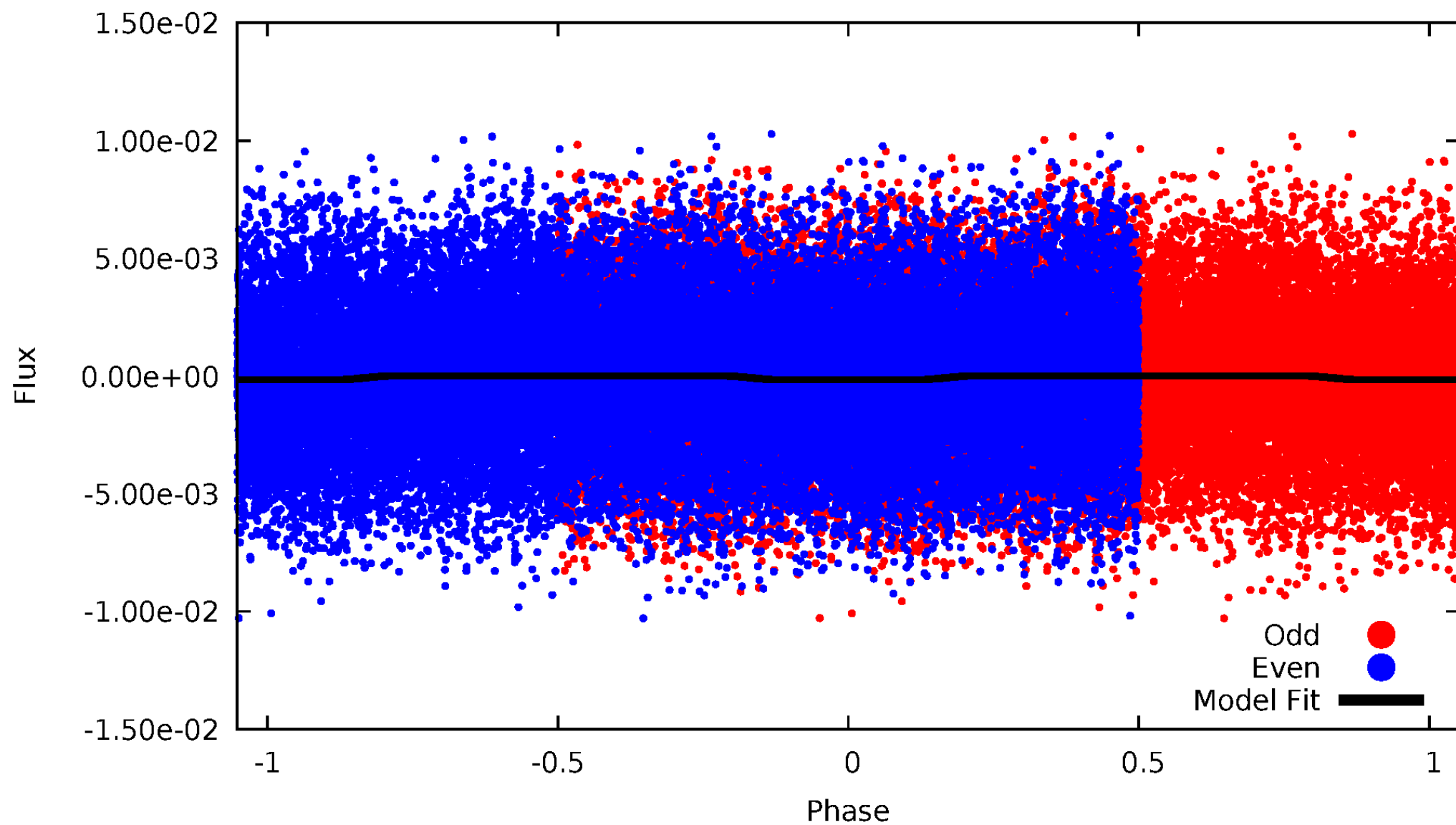
DV Odd/Even

TCE 006195556-02



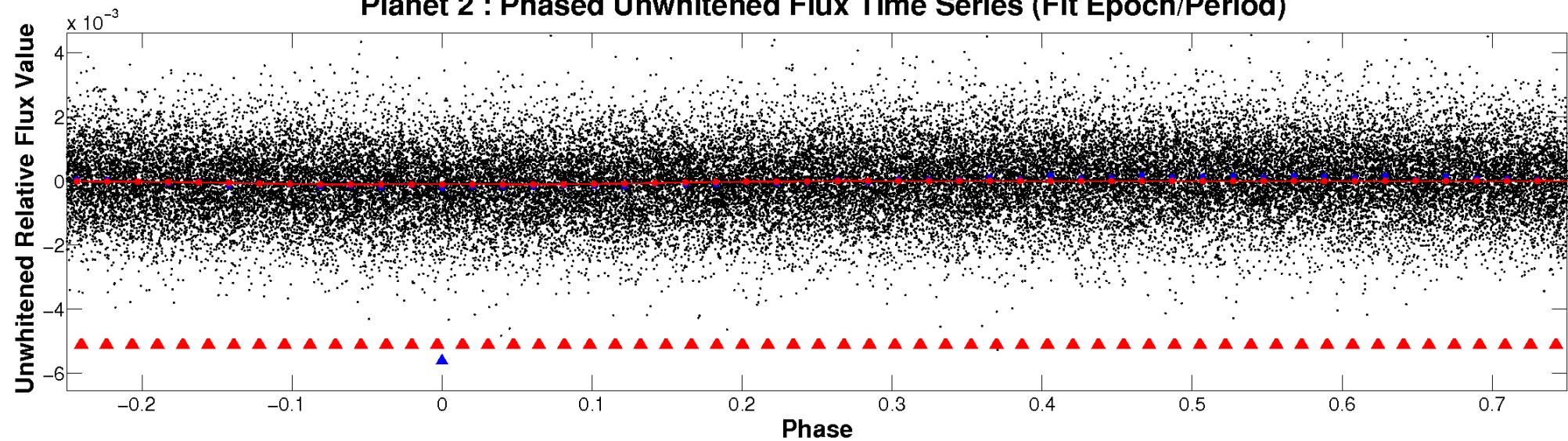
ALT Odd/Even

TCE 006195556-02

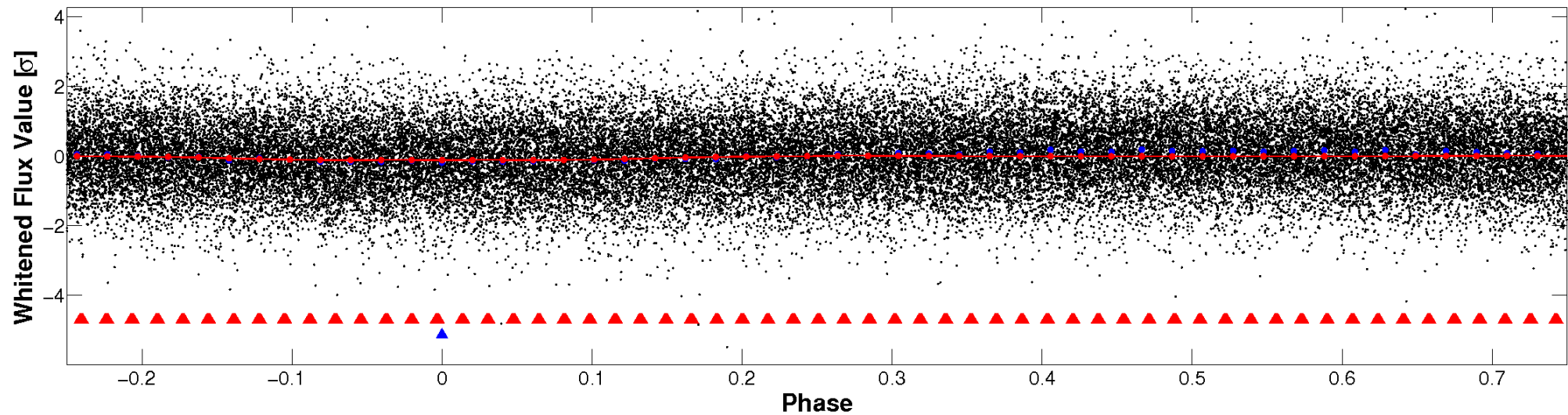


Non-Whitened Vs. Whitened Light Curve

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

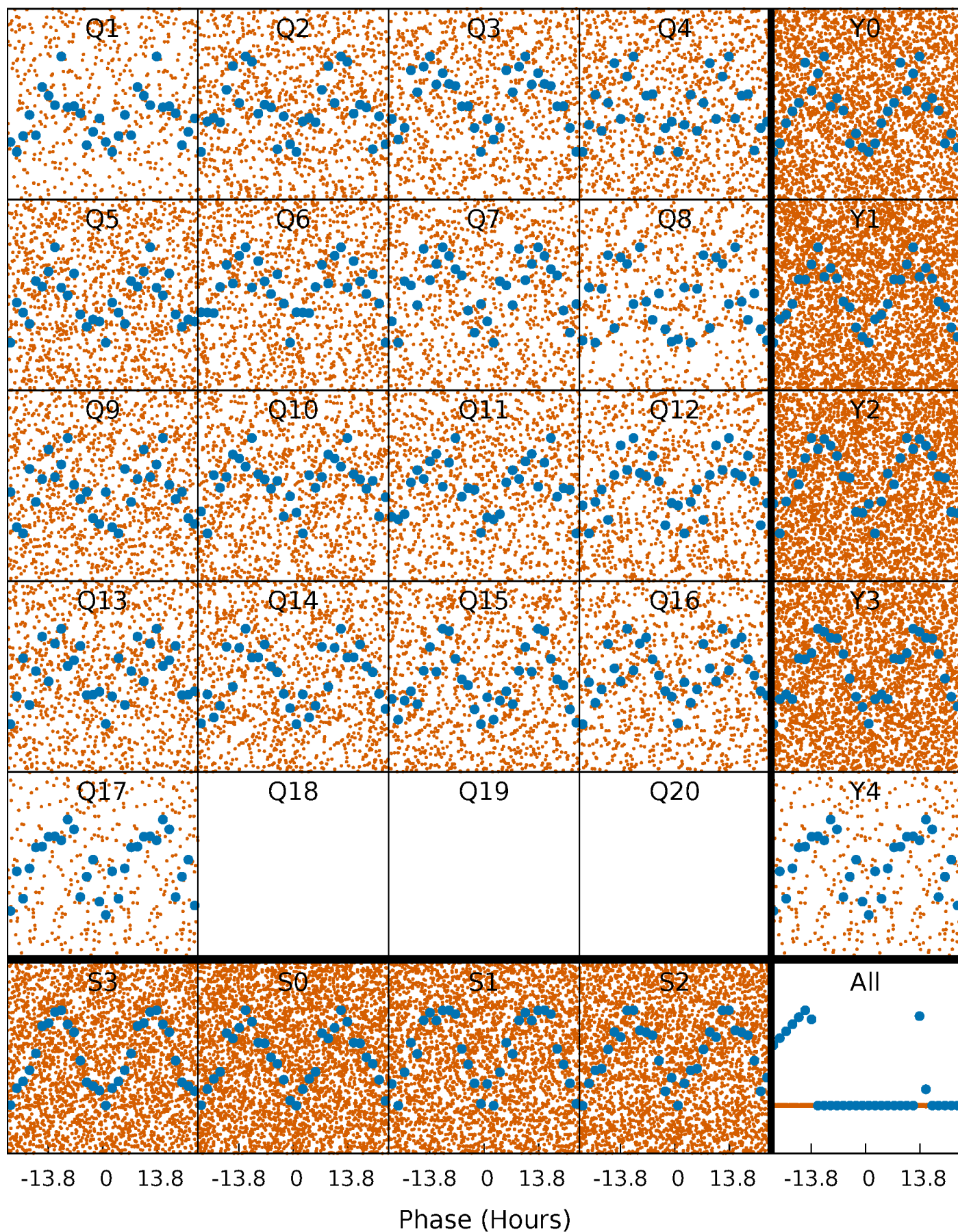


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



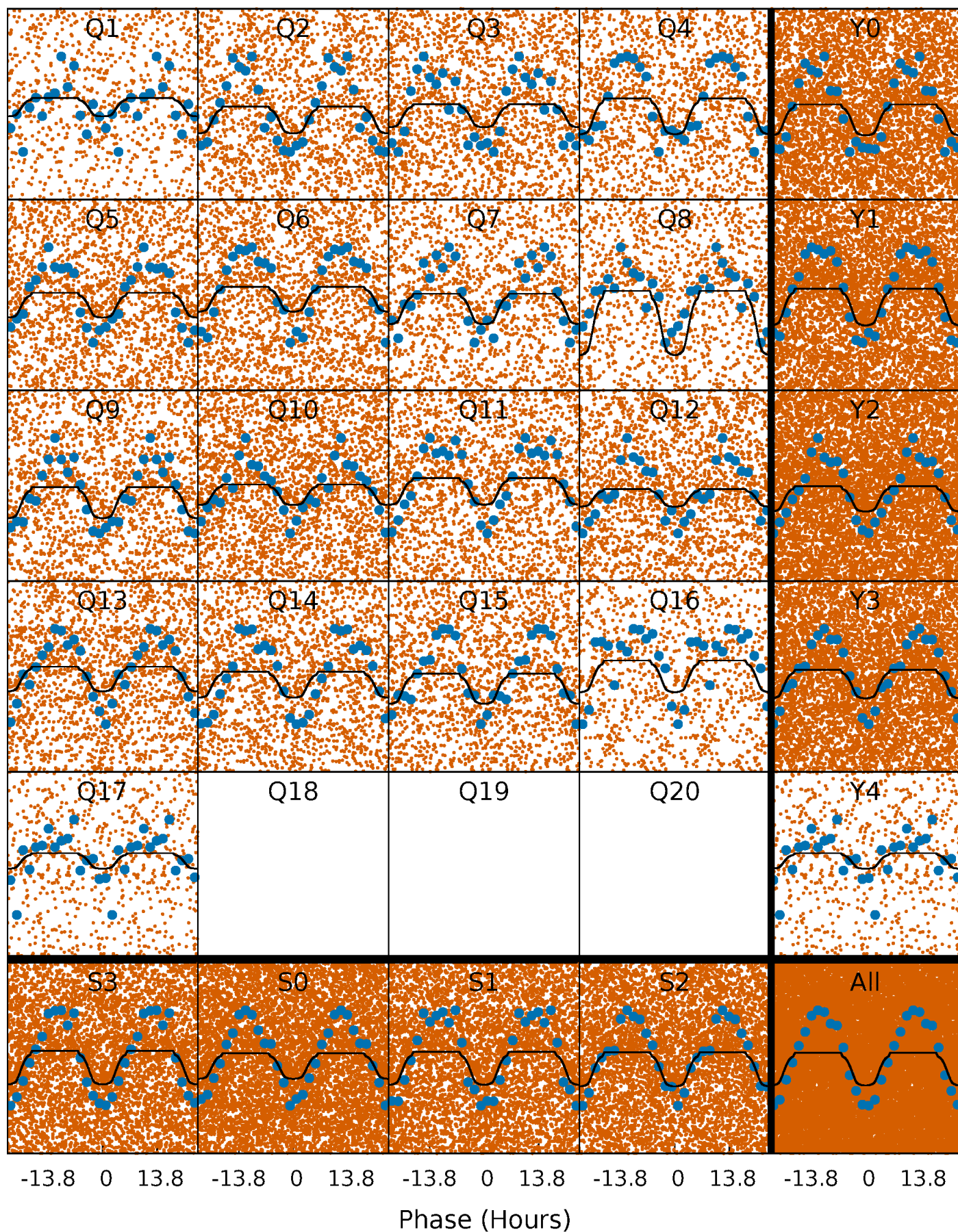
PDC Quarter-Phased Transit Curves

TCE 006195556-02 P= 1.007466 Days $T_0=131.924442$ (BKJD)



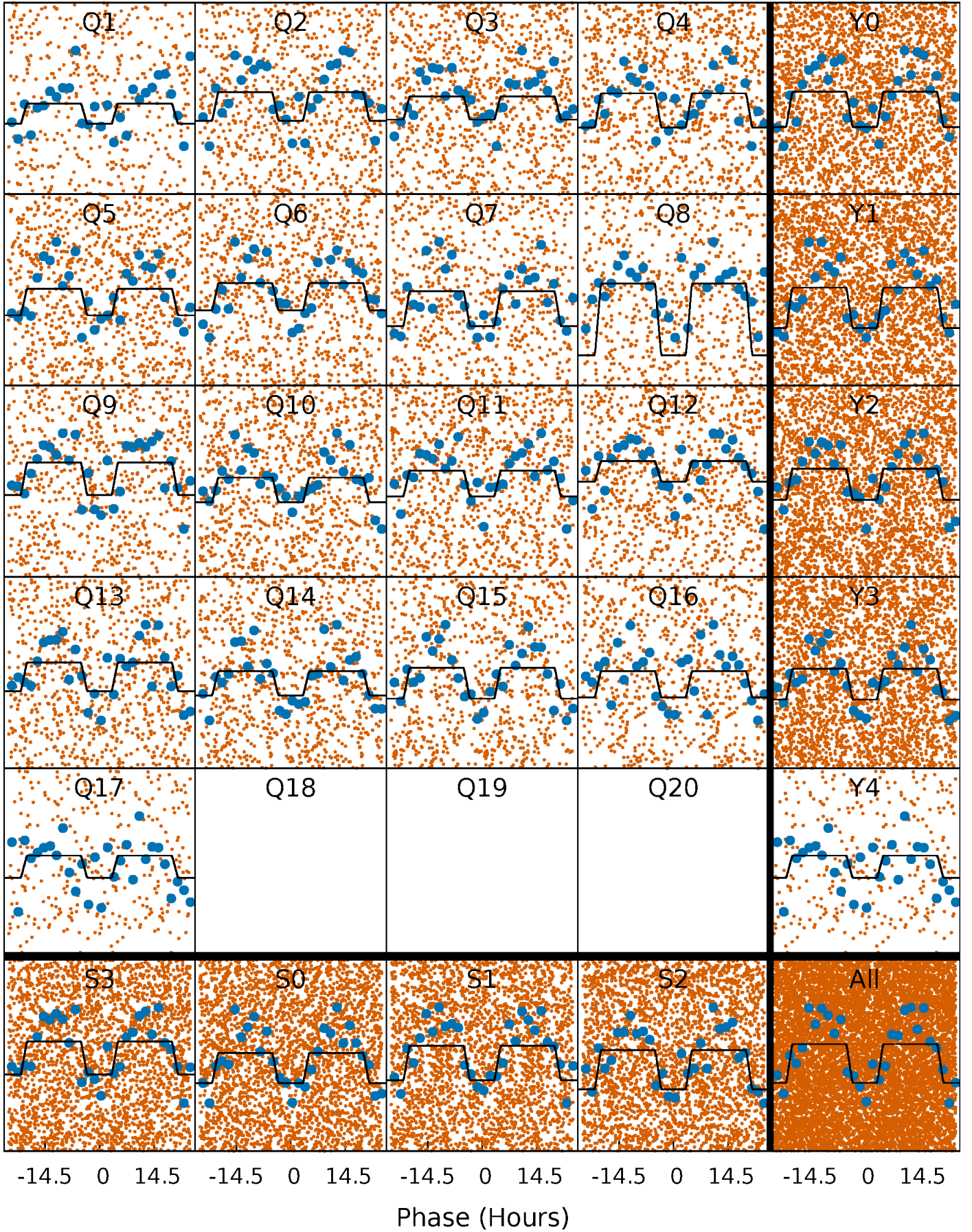
DV Quarter-Phased Transit Curves

TCE 006195556-02 P= 1.007466 Days $T_0=131.924442$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

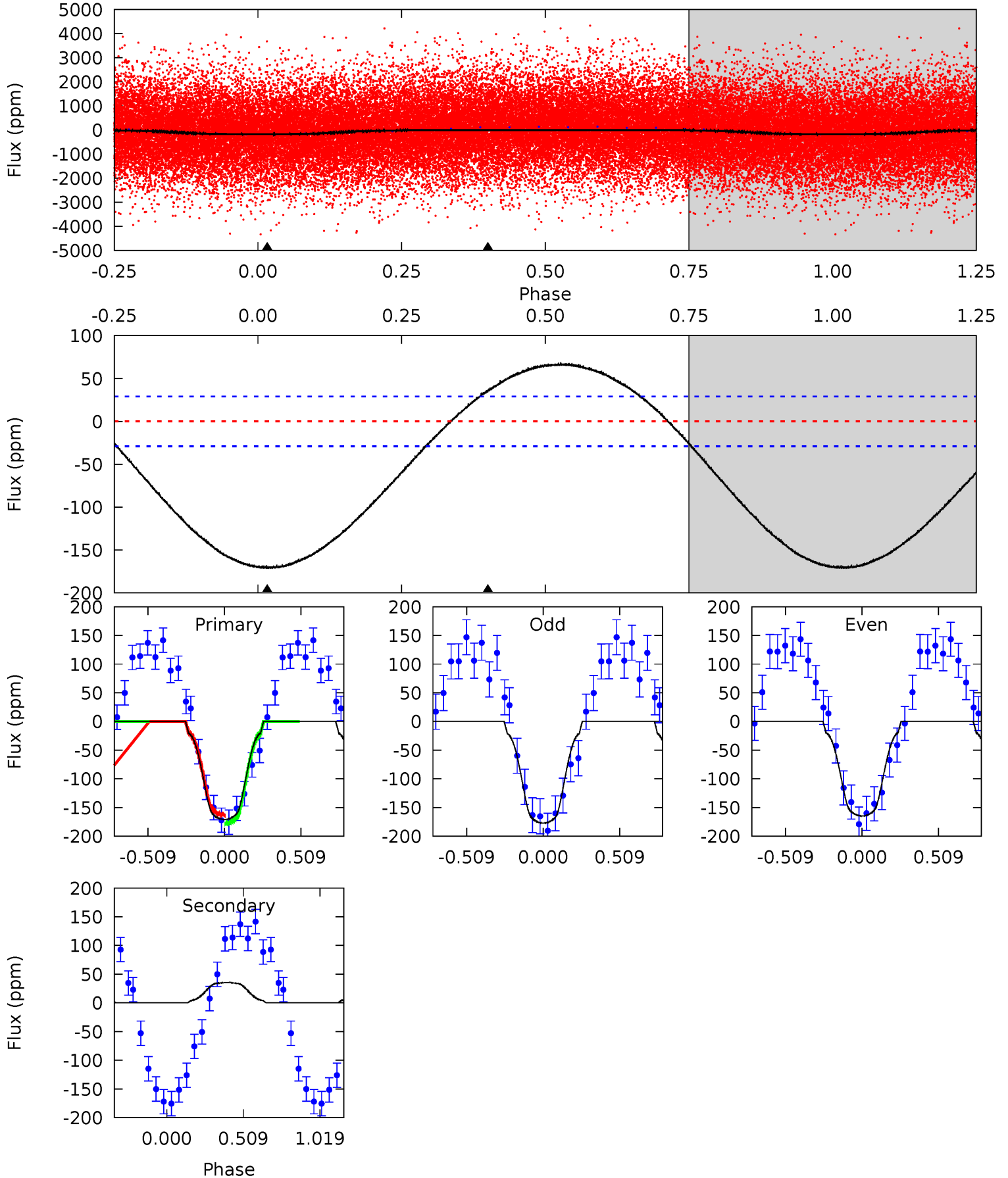
TCE 006195556-02 P= 1.007585 Days $T_0=131.844360$ (BKJD)



DV Model-Shift Uniqueness Test

006195556-02, P = 1.007466 Days, E = 131.924442 Days

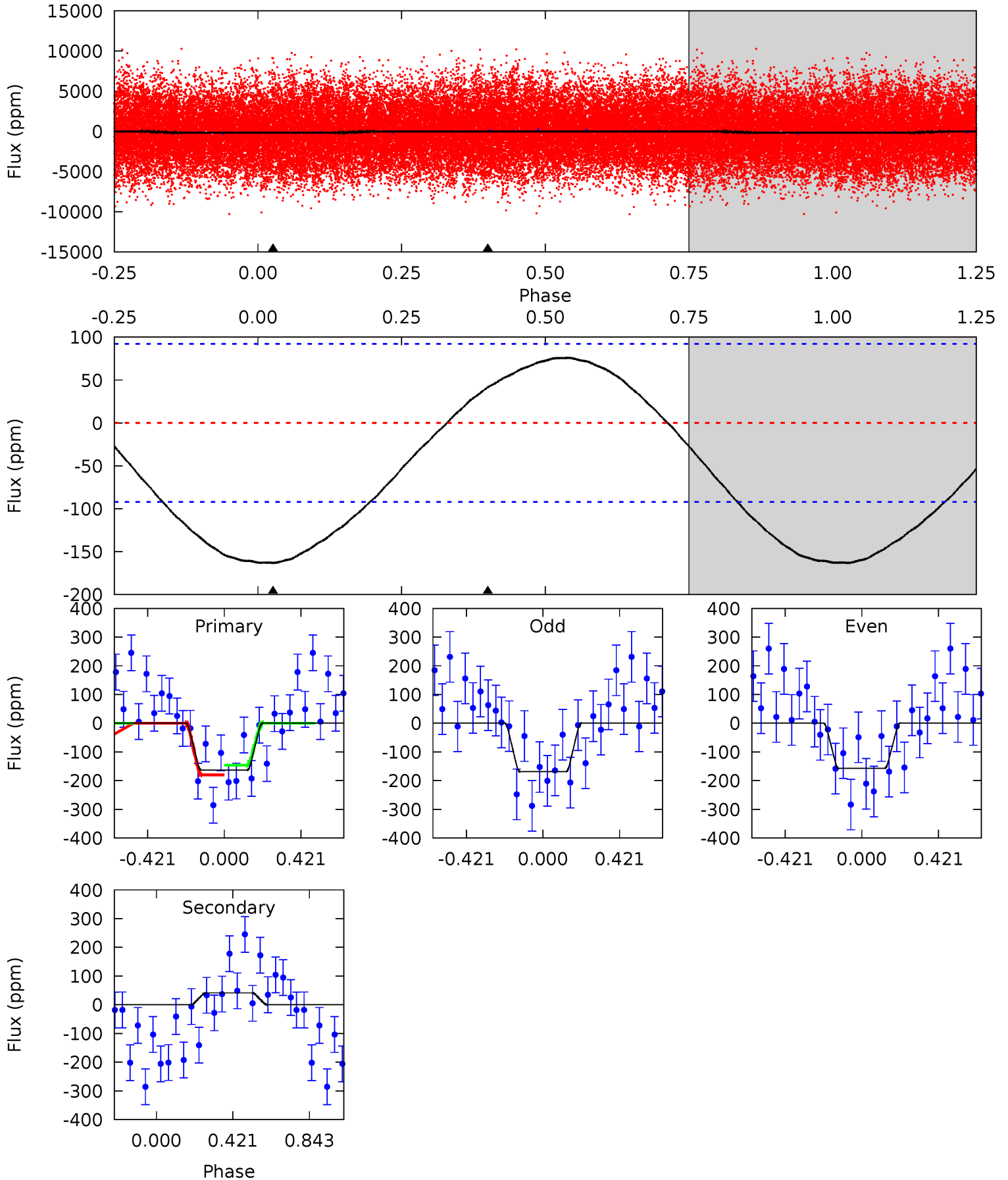
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.8	-5.13	0	0	4.21	0.66	2.84	24.8	24.8	-5.13	-5.13	0.91	1.86	0.29	1.06



Alt Model-Shift Uniqueness Test

006195556-02, P = 1.007585 Days, E = 131.844360 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.53	-1.91	0	0	4.25	0.80	0.97	7.53	7.53	-1.91	-1.91	0.27	1.27	0.32	0.81



Stellar Parameters For KIC 006195556

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7135^{+197}_{-338}	$4.014^{+0.193}_{-0.175}$	$0.160^{+0.150}_{-0.300}$	$2.120^{+0.566}_{-0.510}$	$1.696^{+0.183}_{-0.275}$	$0.251^{+0.265}_{-0.120}$
	+3%/-5%	+5%/-4%	+94%/-188%	+27%/-24%	+11%/-16%	+106%/-48%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 006195556-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	35 ± 7	$2.84^{+0.41}_{-0.43}$	4147^{+305}_{-327}	-5197^{+274}_{-250}	$-1.303^{+0.391}_{-0.562}$
Alt.	41 ± 22	$2.82^{+0.45}_{-0.41}$	4152^{+295}_{-324}	-5330^{+673}_{-506}	$-1.452^{+0.788}_{-1.080}$

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 $A_{obs} \gg 1.0$

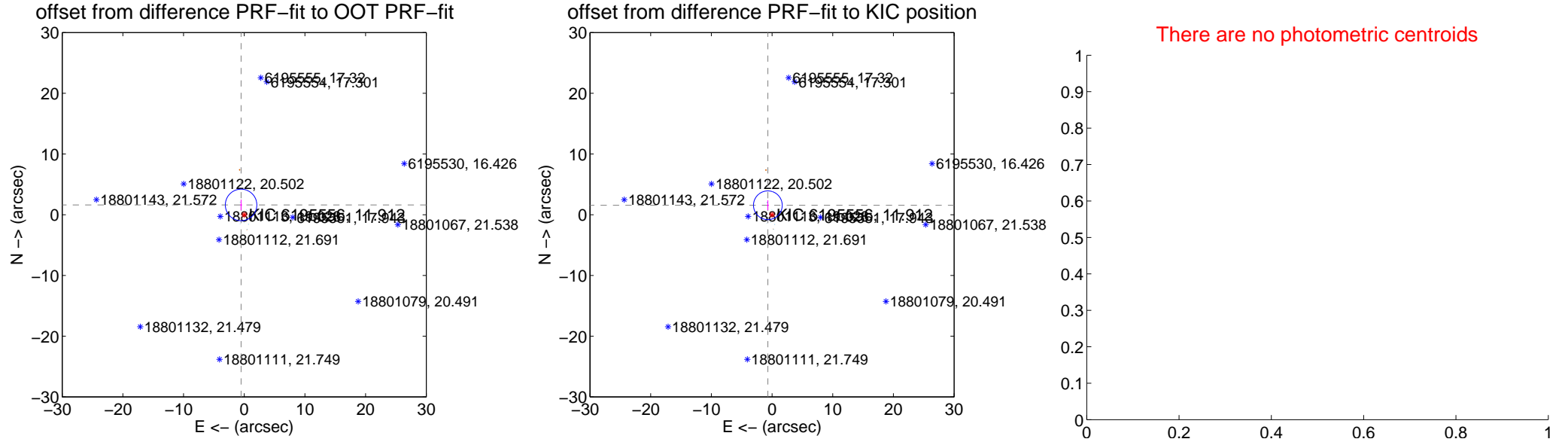
DV Centroid Data

Supplemental centroid analysis for 006195556-02. **Kepler magnitude: 11.91.** Transit SNR 13.60

There are 9 quarters with good PRF difference image offsets

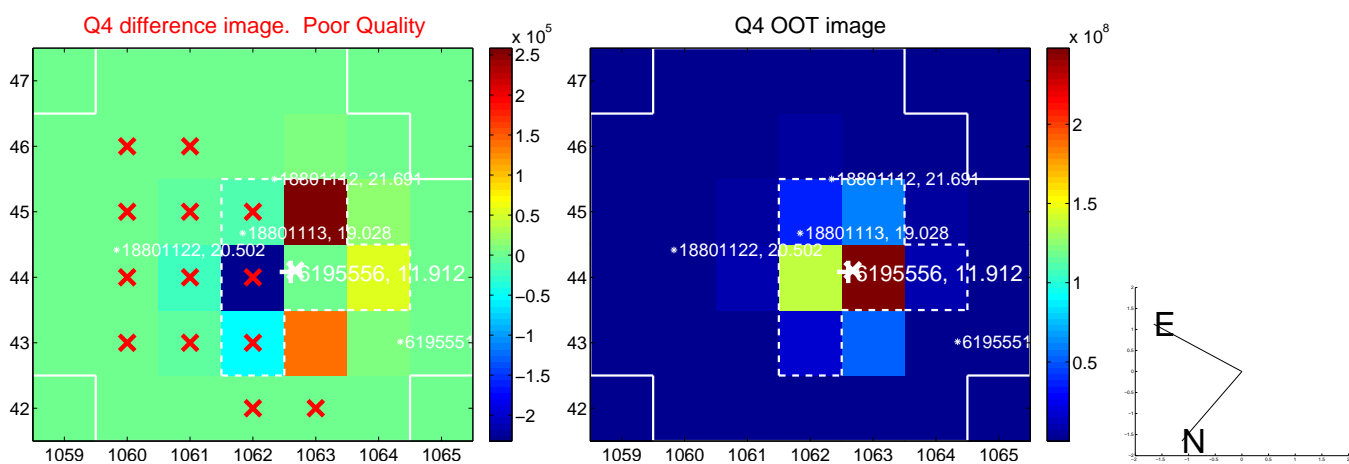
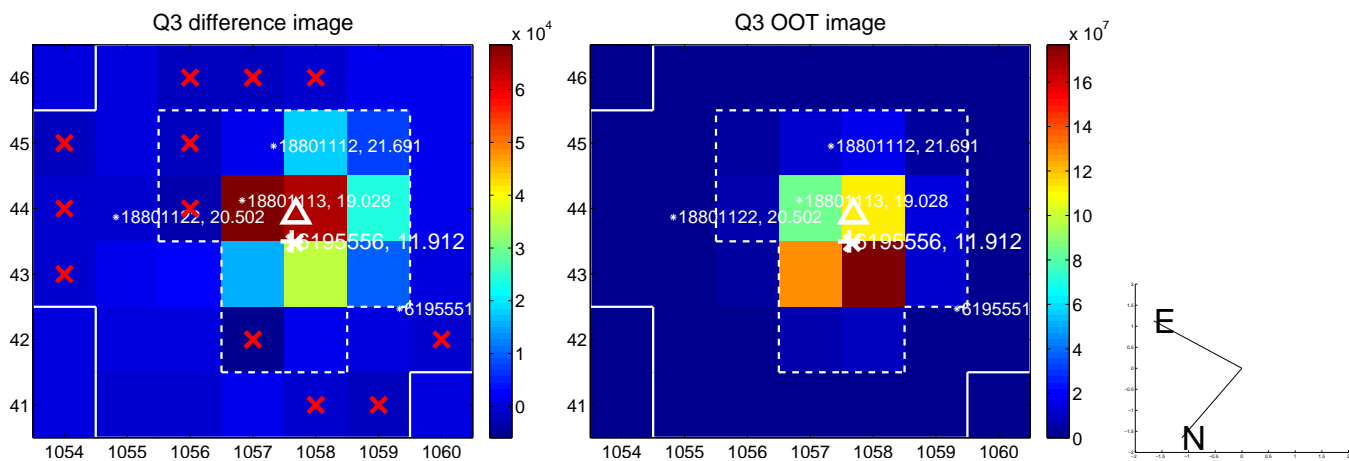
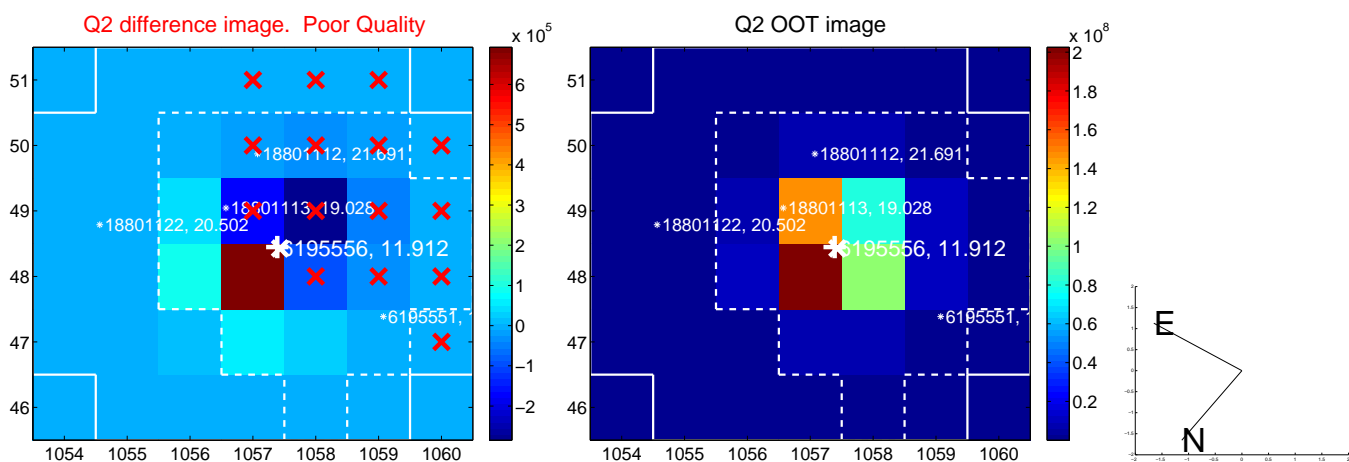
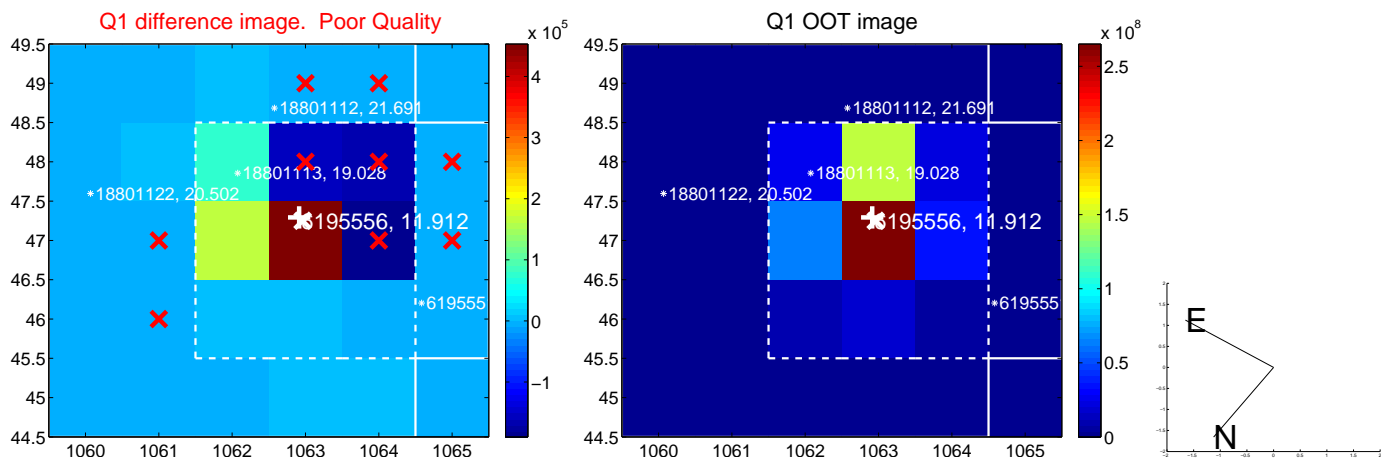
The direct PRF centroid is offset from the target star catalog position by about 0.25 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.693 ± 0.865	1.96	0.518 ± 0.182	1.612 ± 0.874
PRF-fit source offset from KIC position	1.703 ± 0.789	2.16	0.689 ± 0.171	1.557 ± 0.816
photometric centroid source offset	—	—	—	—

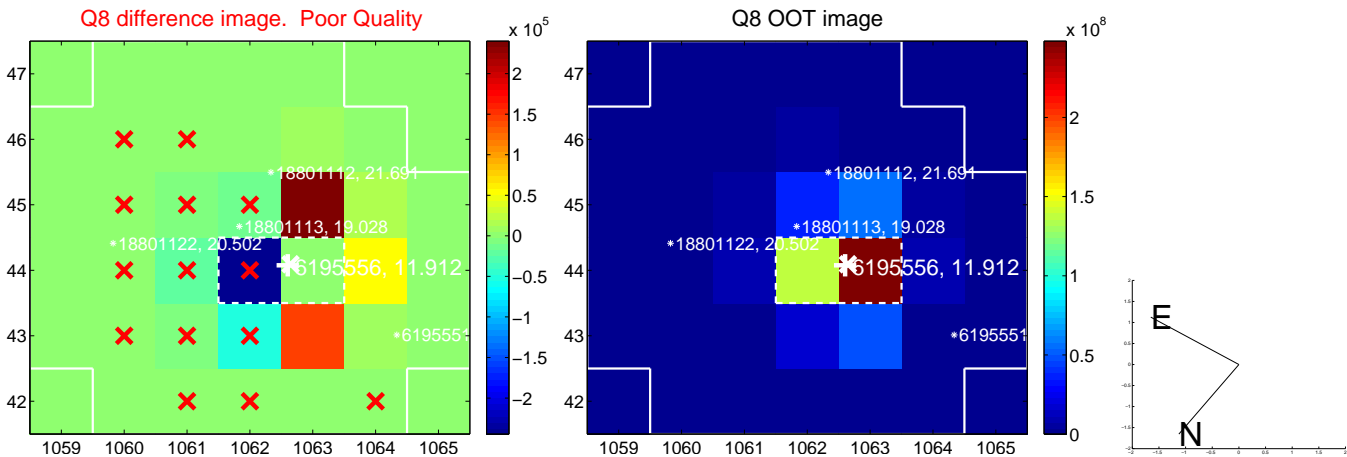
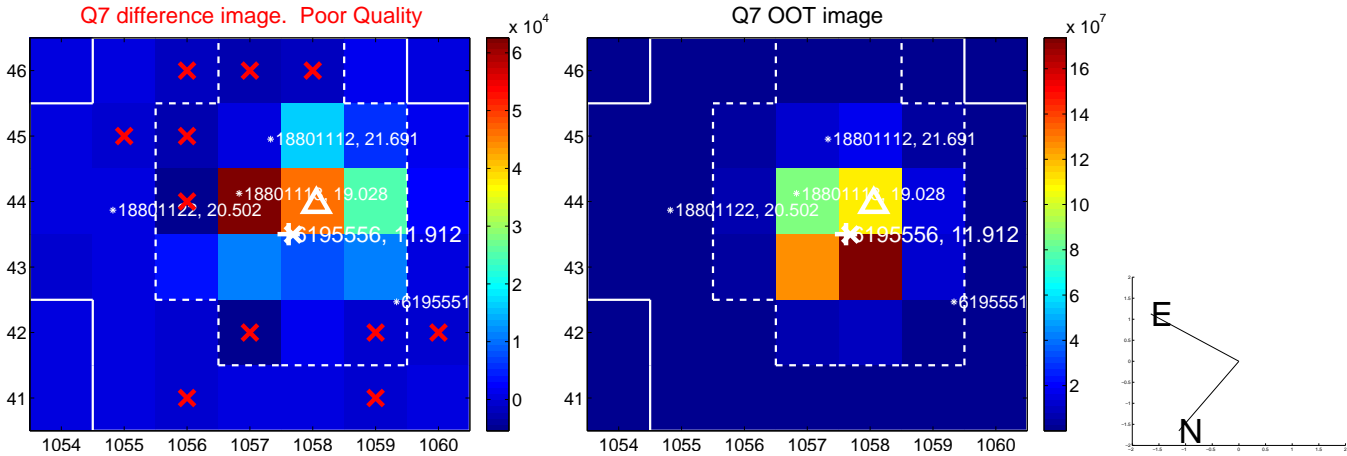
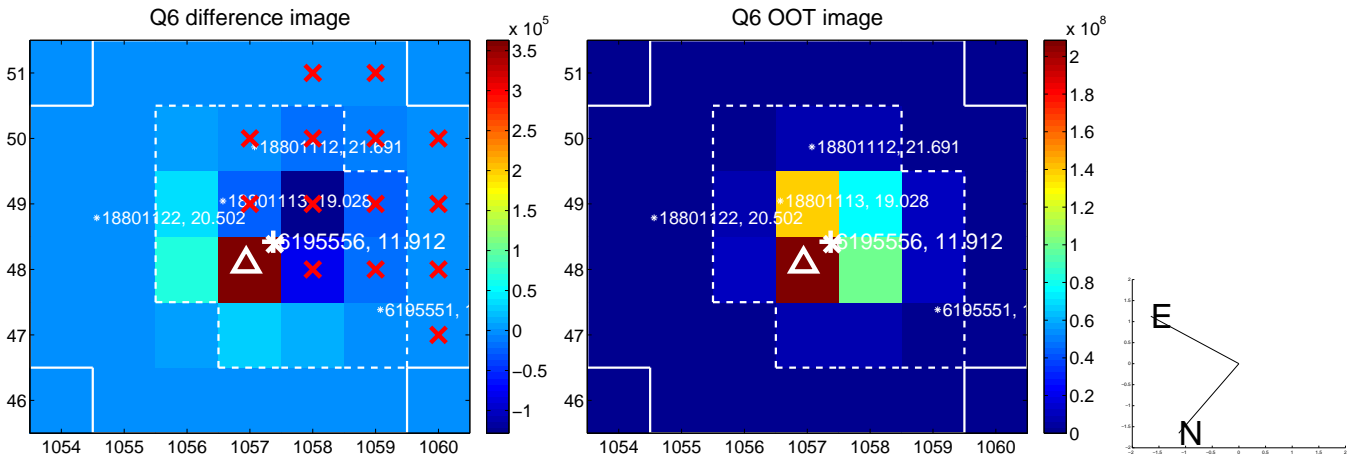
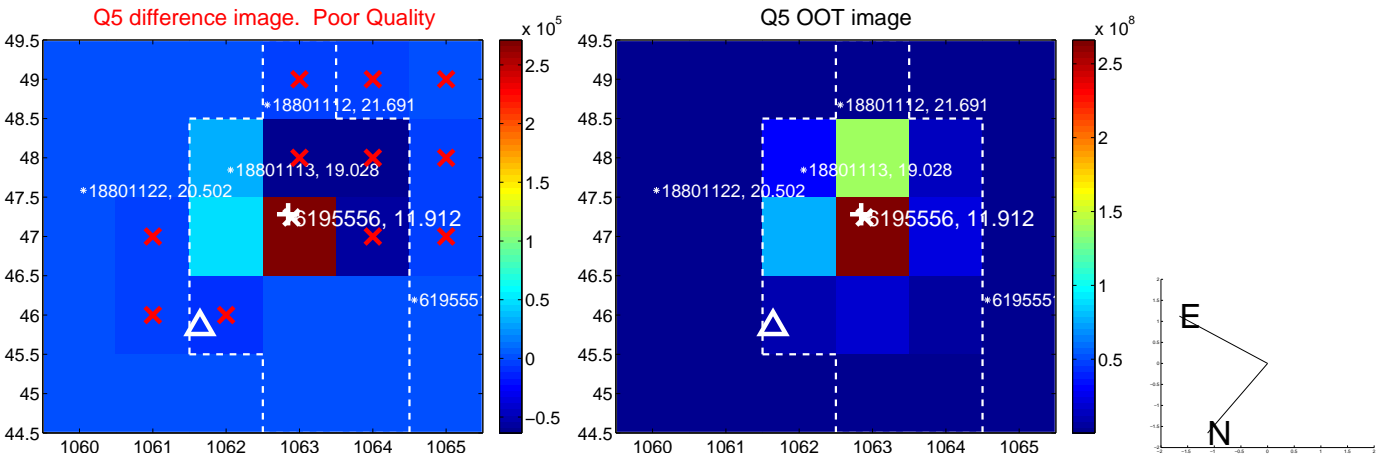


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

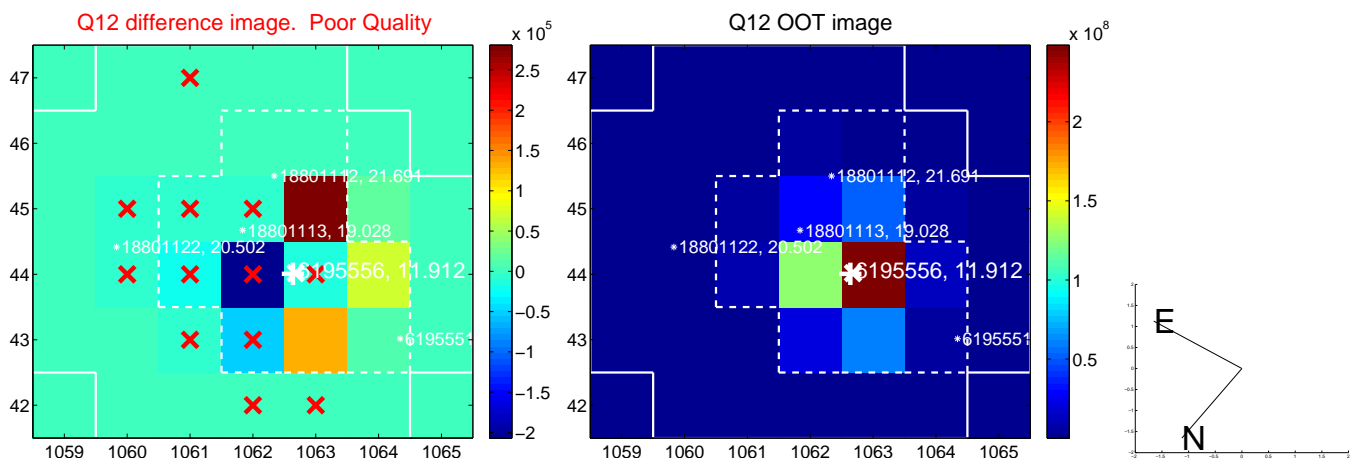
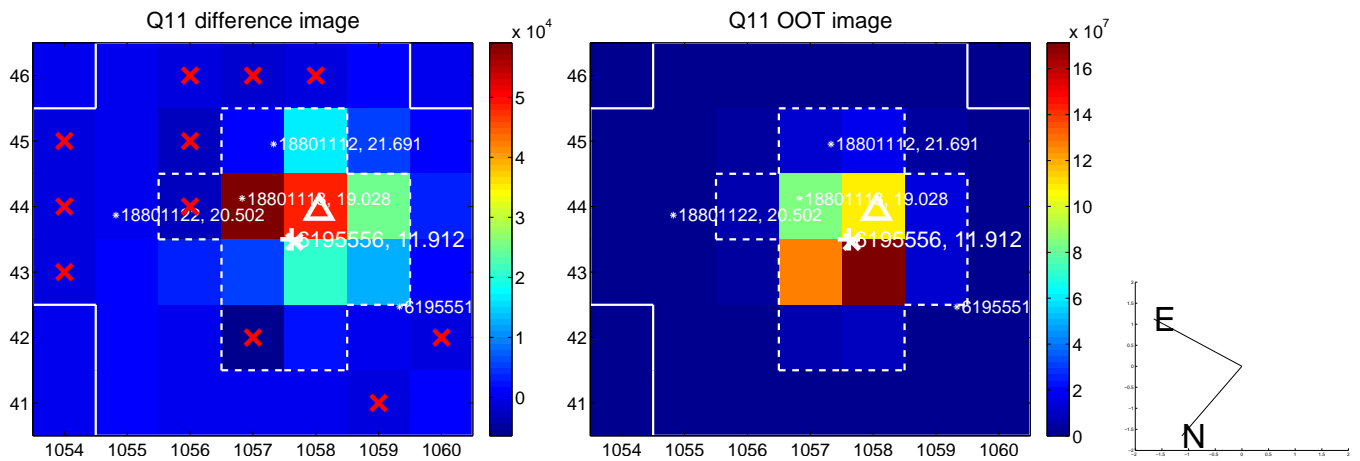
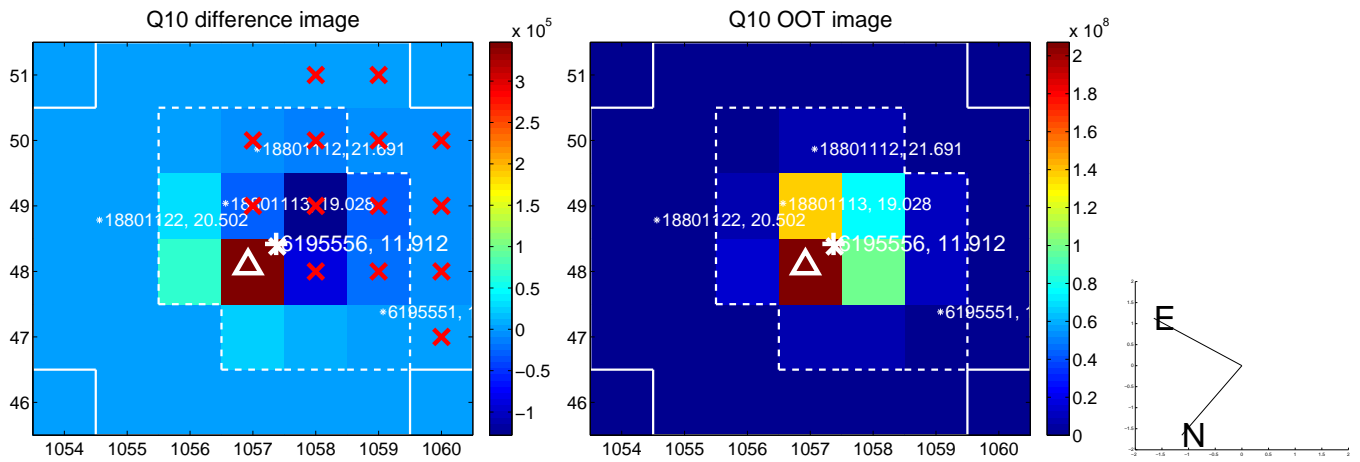
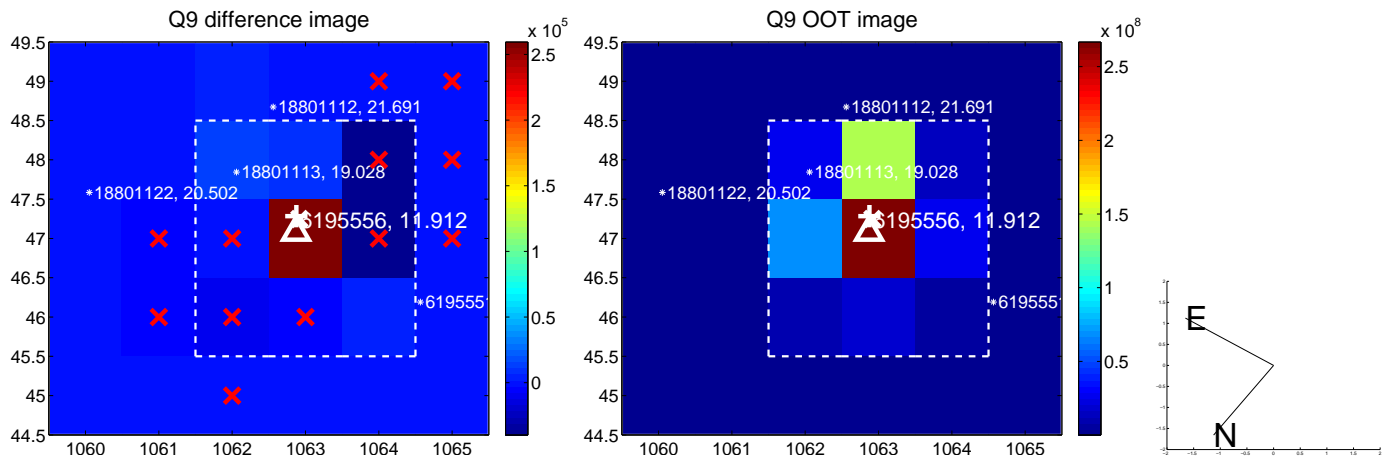
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



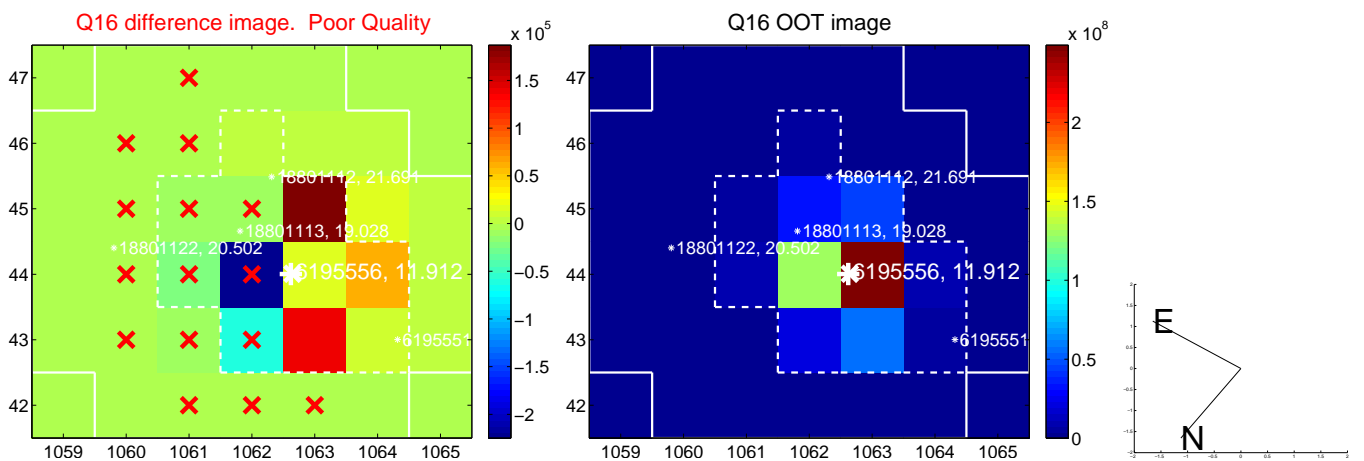
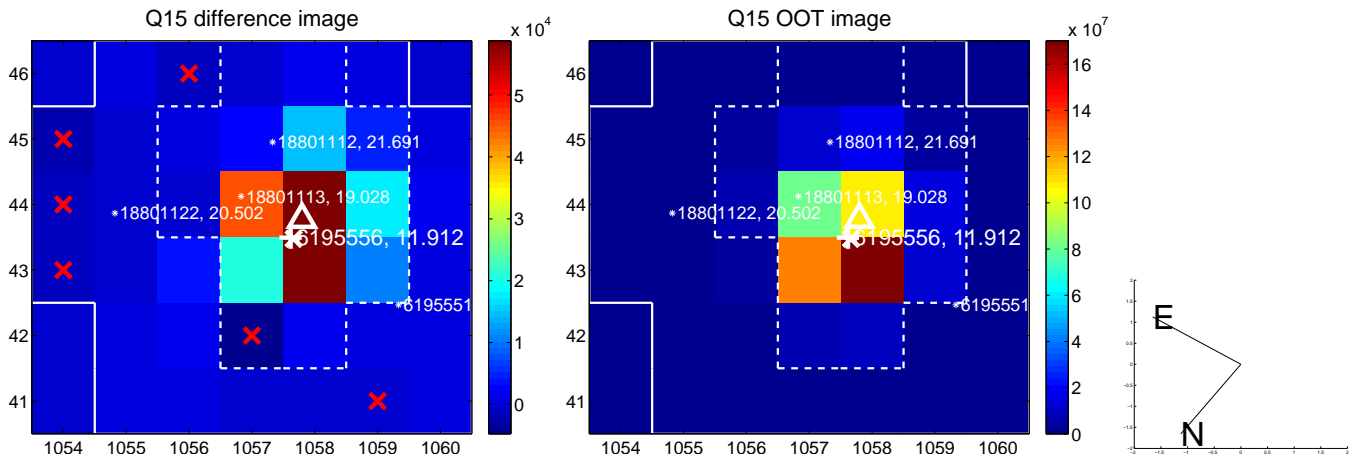
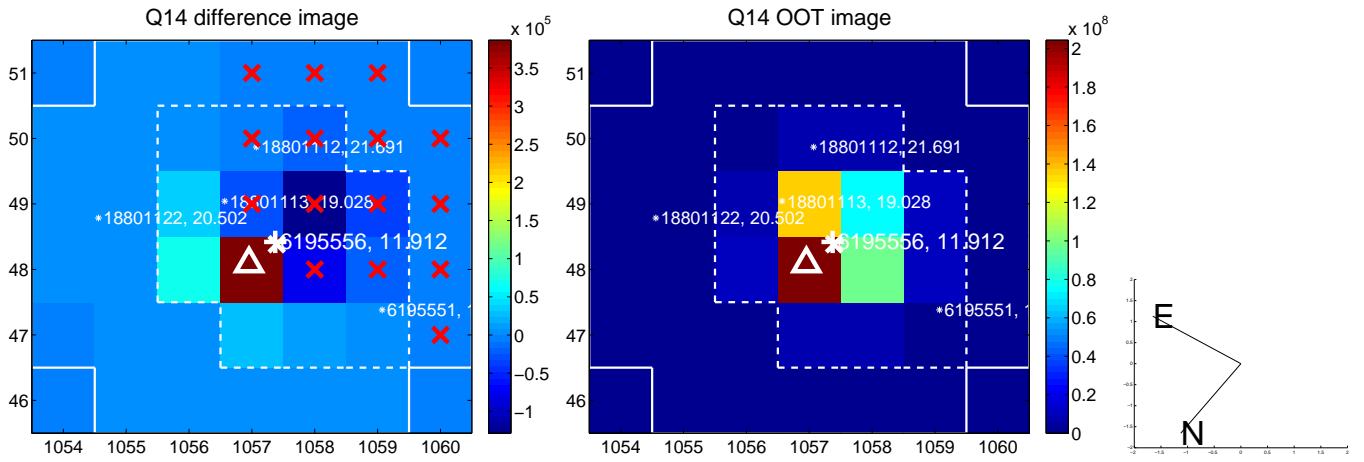
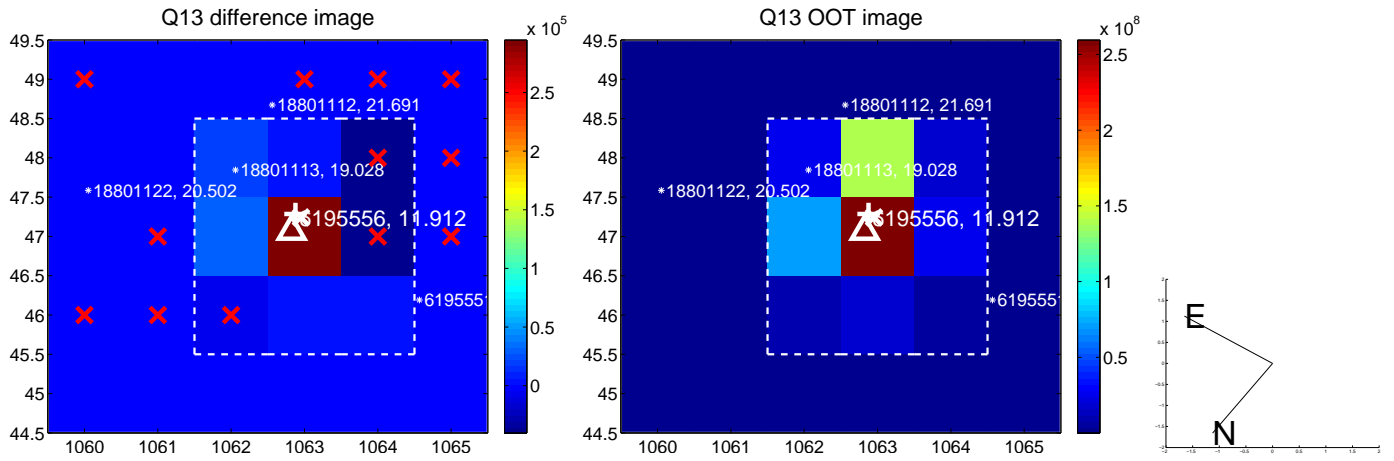
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



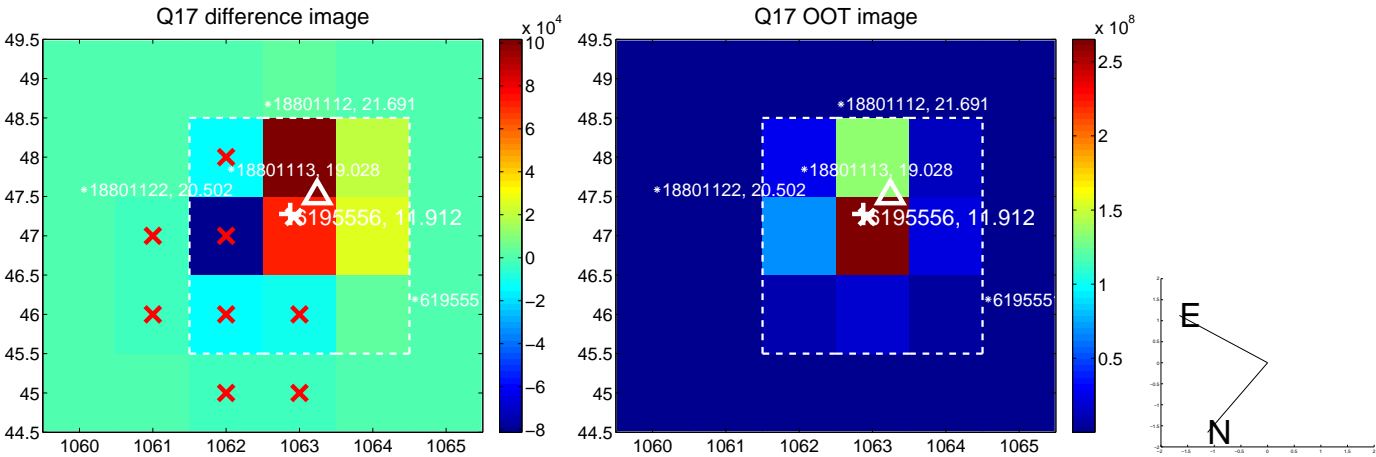
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

