

KIC 007300184

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})
007300184-01	OBS	No	4.277966	134.907925	161.9	13.444	10.6	10.0	1.23	6704	2.58	887.17
007300184-02	OBS	No	4.277684	132.292271	170.5	12.938	9.1	10.3	1.23	6704	2.21	887.24

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007300184-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
007300184-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—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.

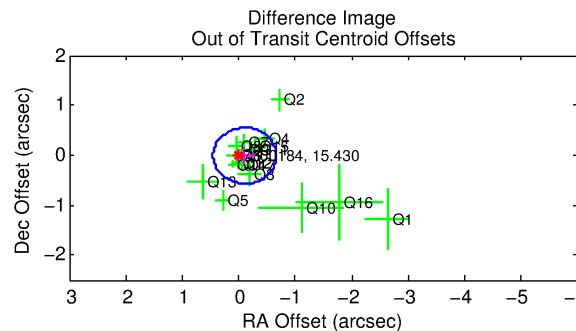
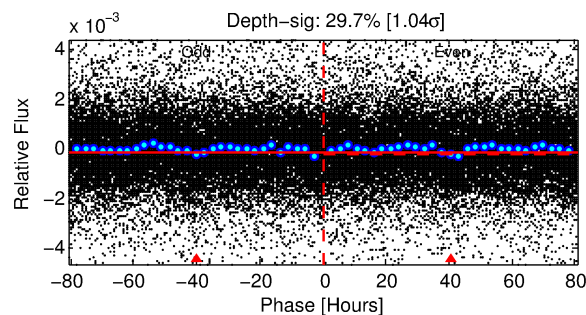
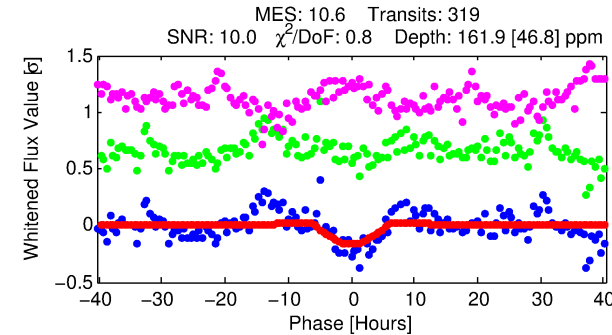
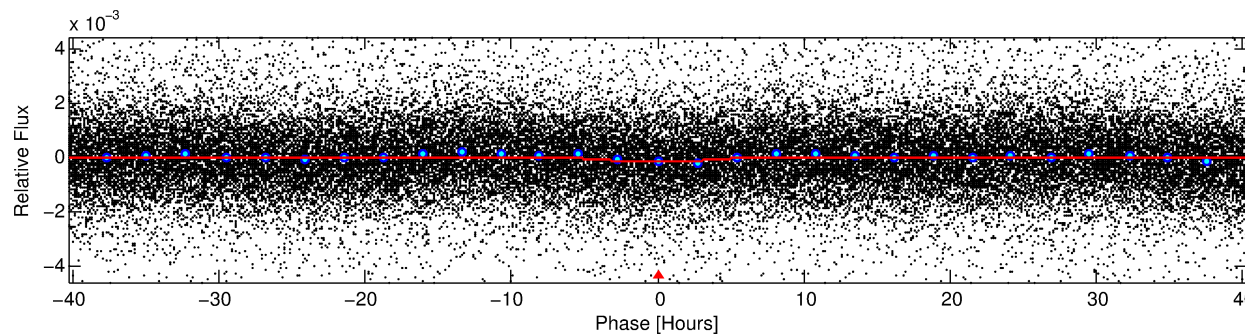
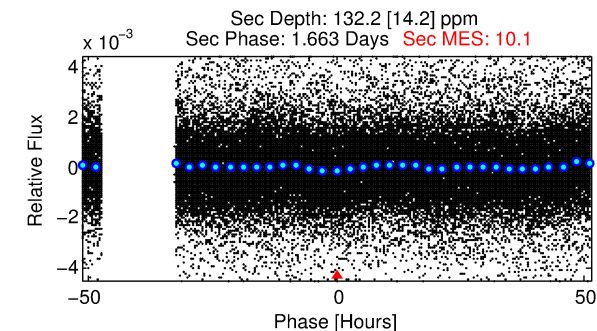
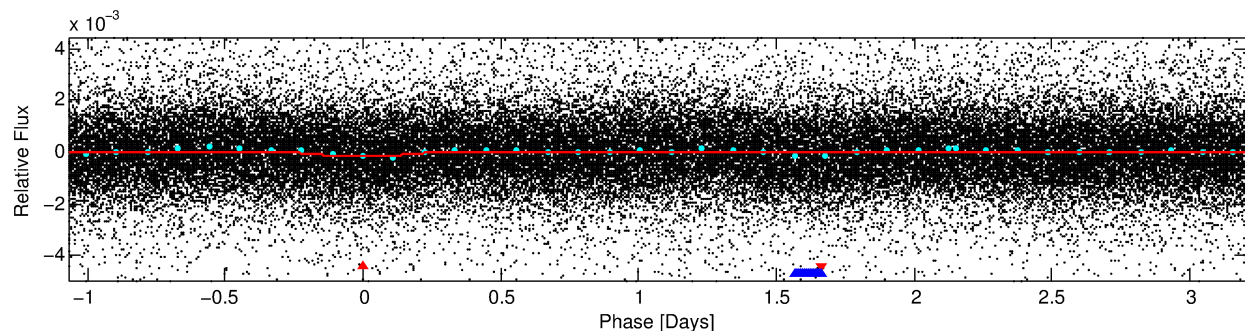
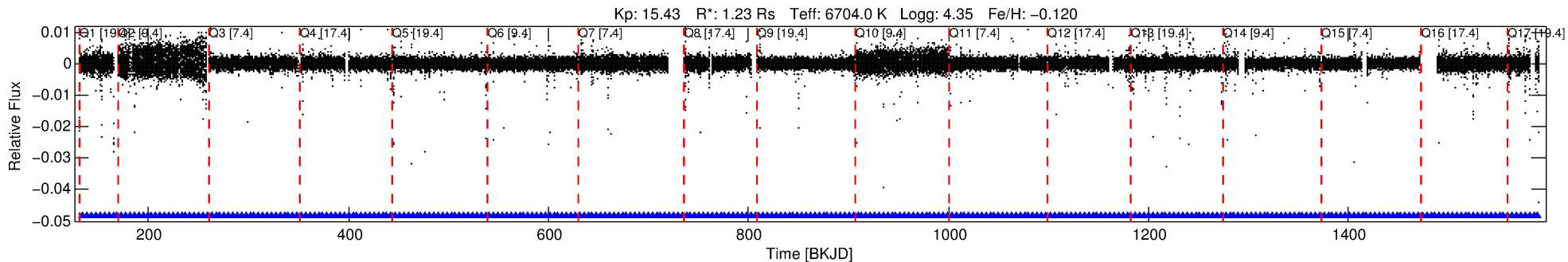
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007300184-01

No Significant Match Found

DV One-Page Summary

KIC: 7300184 Candidate: 1 of 2 Period: 4.278 d



DV Fit Results:

Period = 4.27797 [0.00016] d
Epoch = 134.9079 [0.0311] BKJD
Rp/R* = 0.0193 [0.0260]
a/R* = 1.14 [0.10]
b = 0.99 [0.05]
Seff = 887.17 [332.82]
Teff = 1392 [131] K
Rp = 2.58 [3.56] Re
a = 0.0553 [0.0130] AU
Ag = 33.45 [90.96] [0.36σ]
Teffp = 5174 [3498] K [1.08σ]

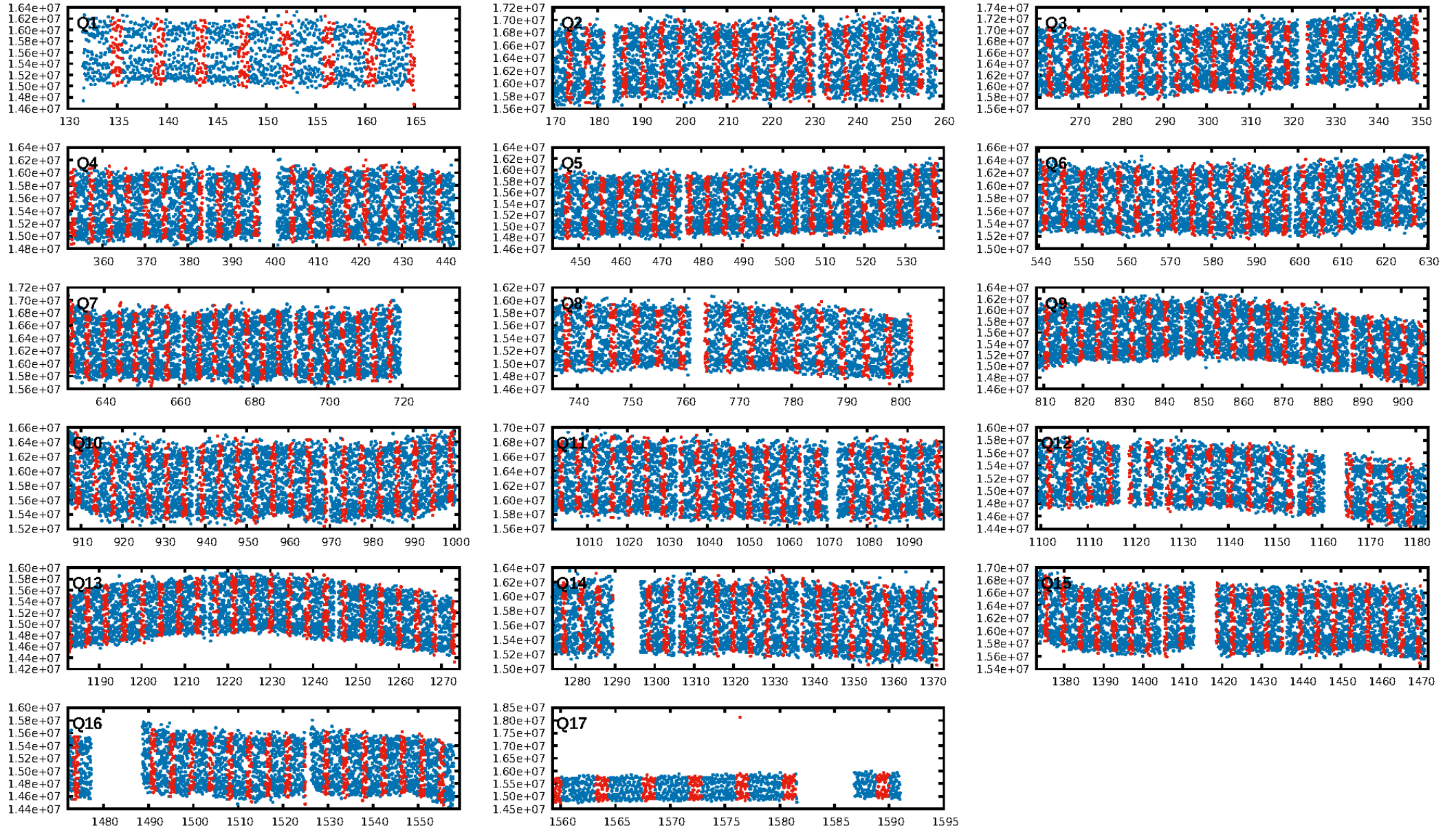
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.07e-20
RollingBand-fgt: 1.00 [304/304]
GhostDiagnostic-chr: 1.765
Centroid-sig: 2.7%
Centroid-so: 0.825 arcsec [1.19σ]
OotOffset-rm: 0.104 arcsec [0.56σ]
KicOffset-rm: 0.036 arcsec [0.18σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.71 [12/17]
DiffImageOverlap-fno: 1.00 [17/17]

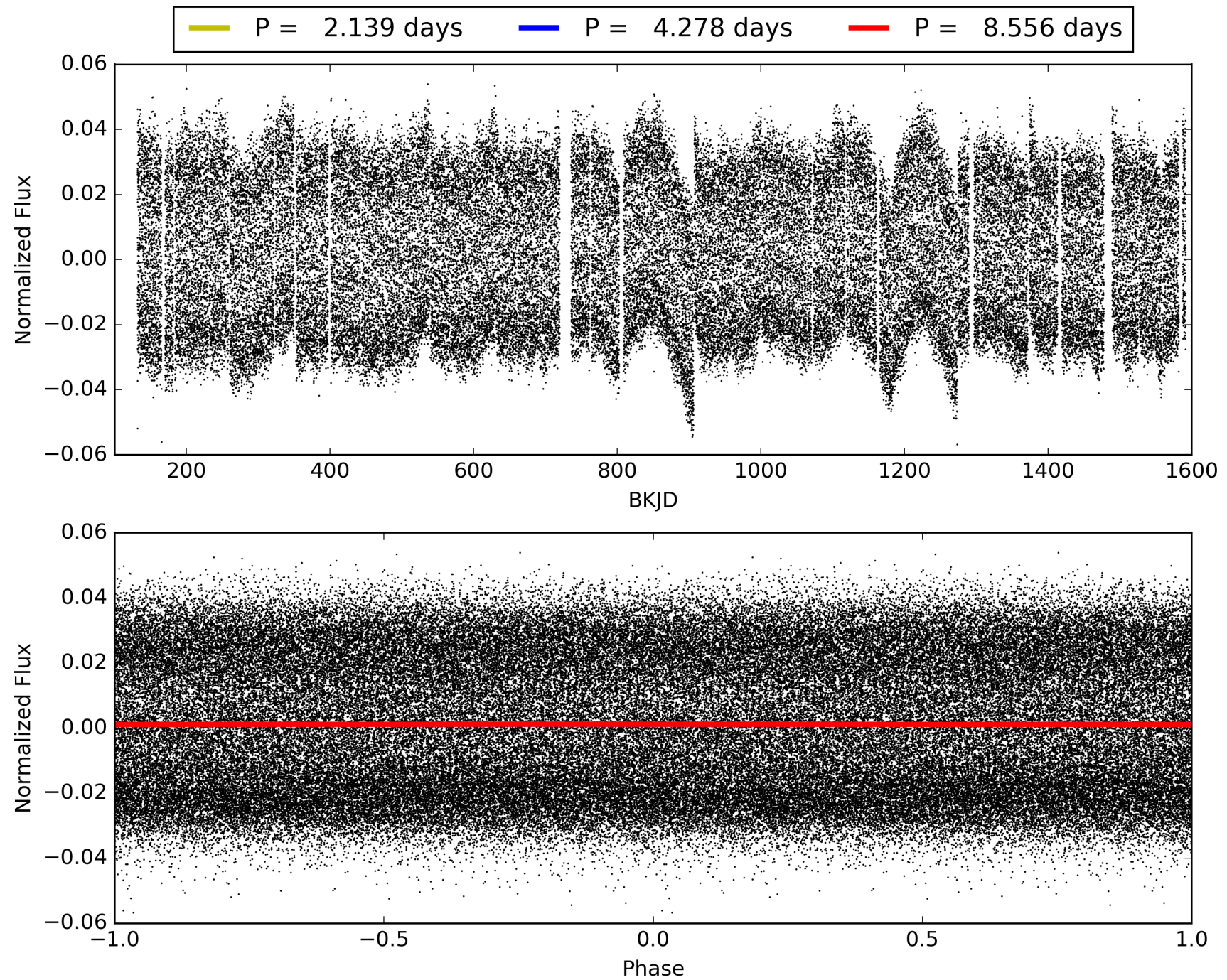
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 21:19:11 Z

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

TCE 007300184-01, PDC Light Curves

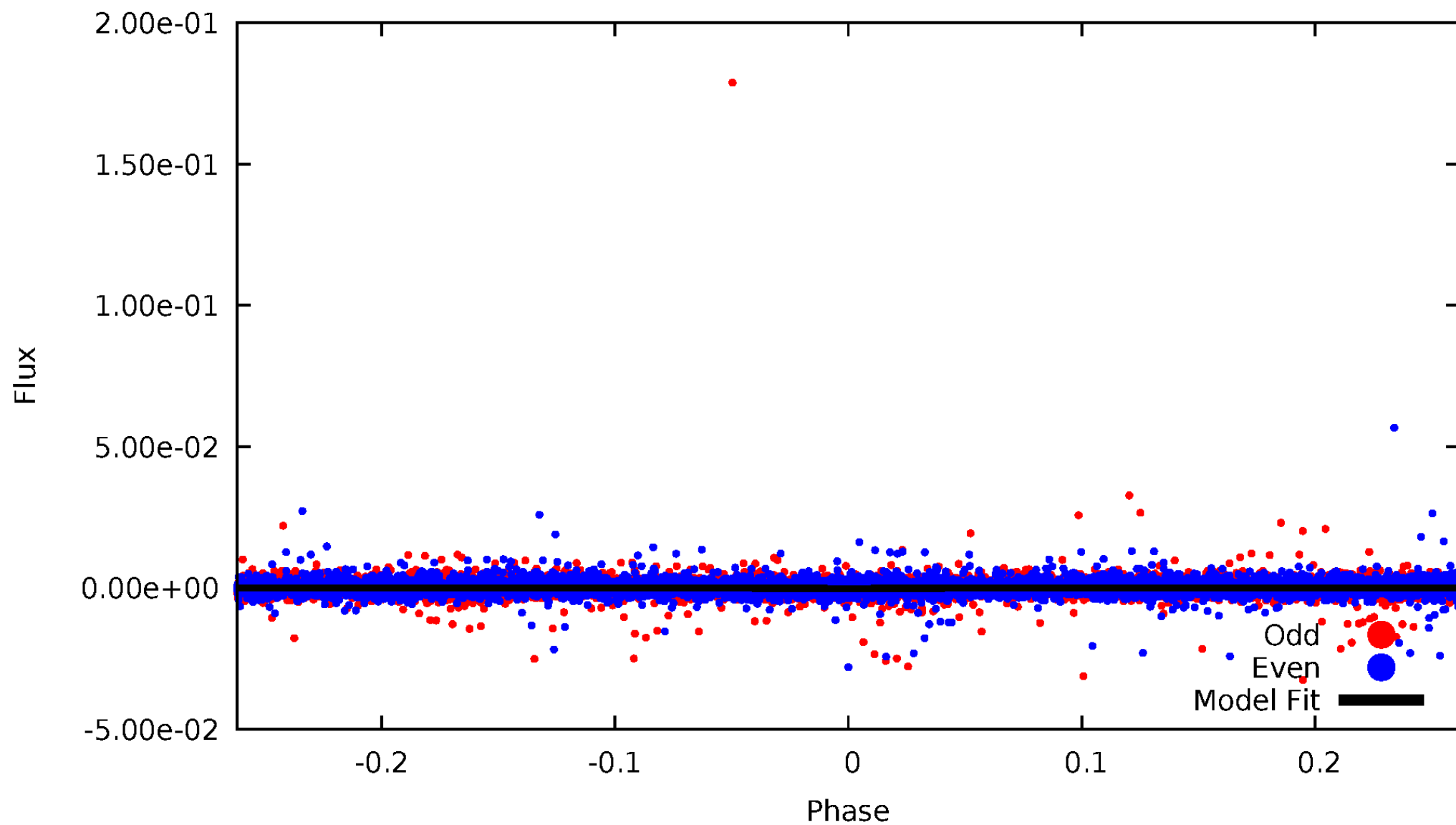


TCE 007300184-01



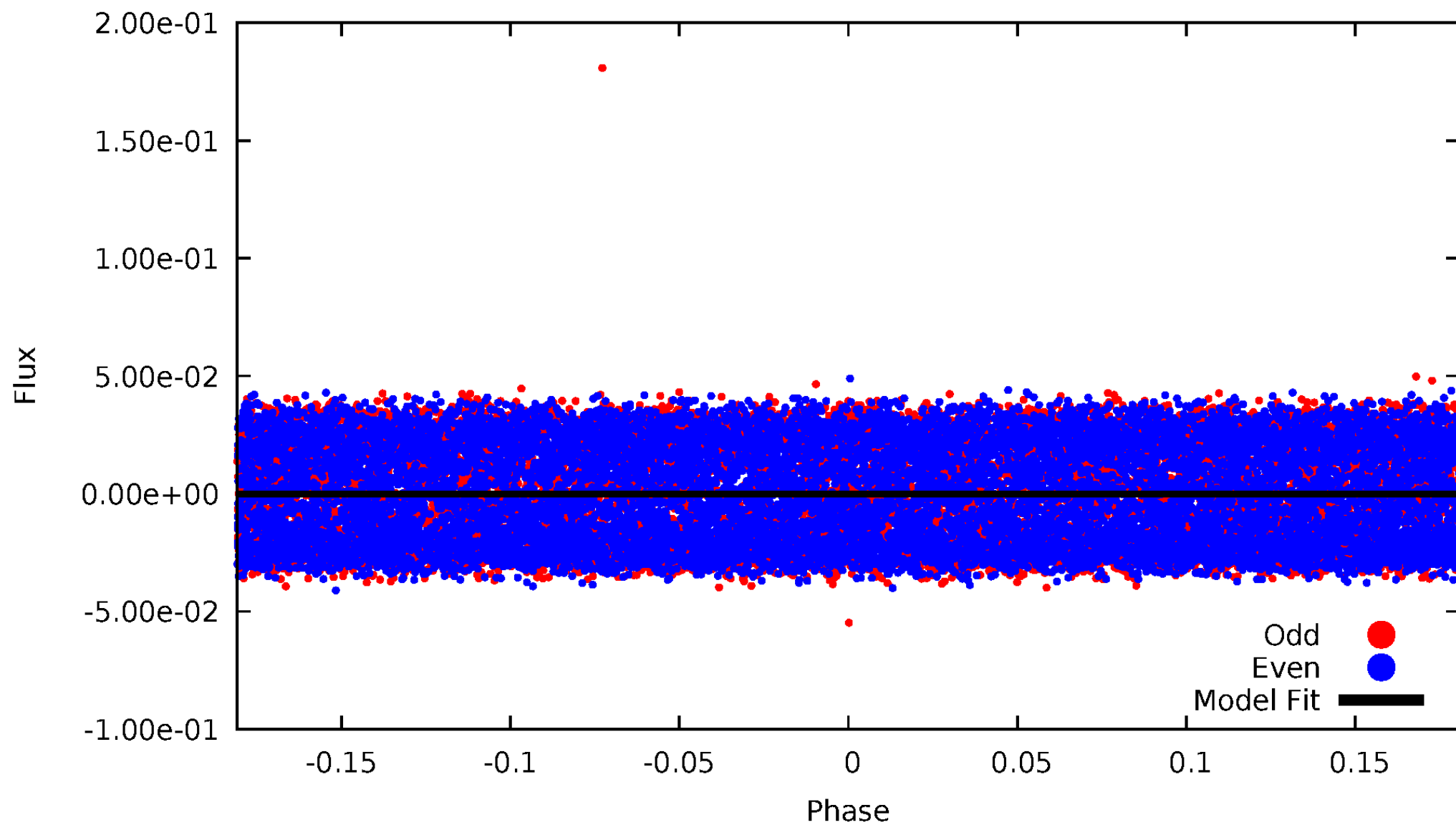
DV Odd/Even

TCE 007300184-01



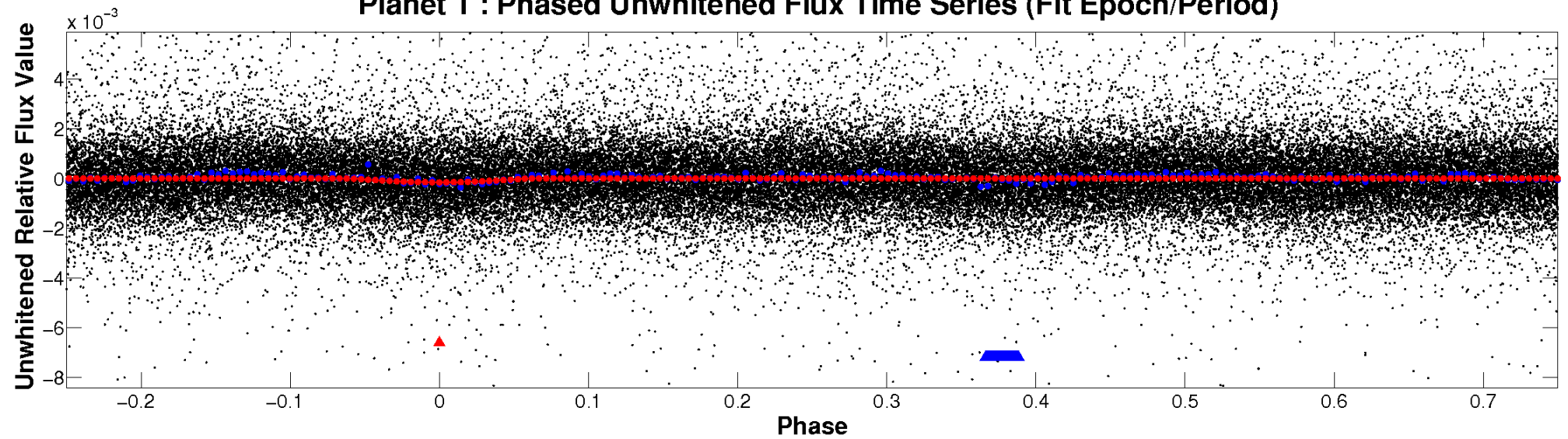
ALT Odd/Even

TCE 007300184-01

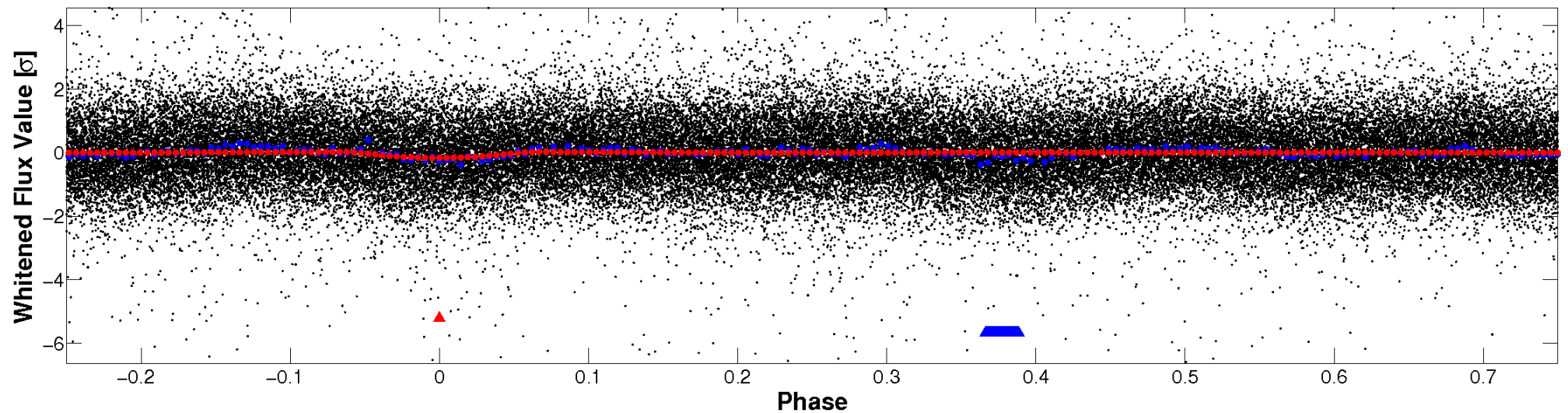


Non-Whitened Vs. Whitened Light Curve

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

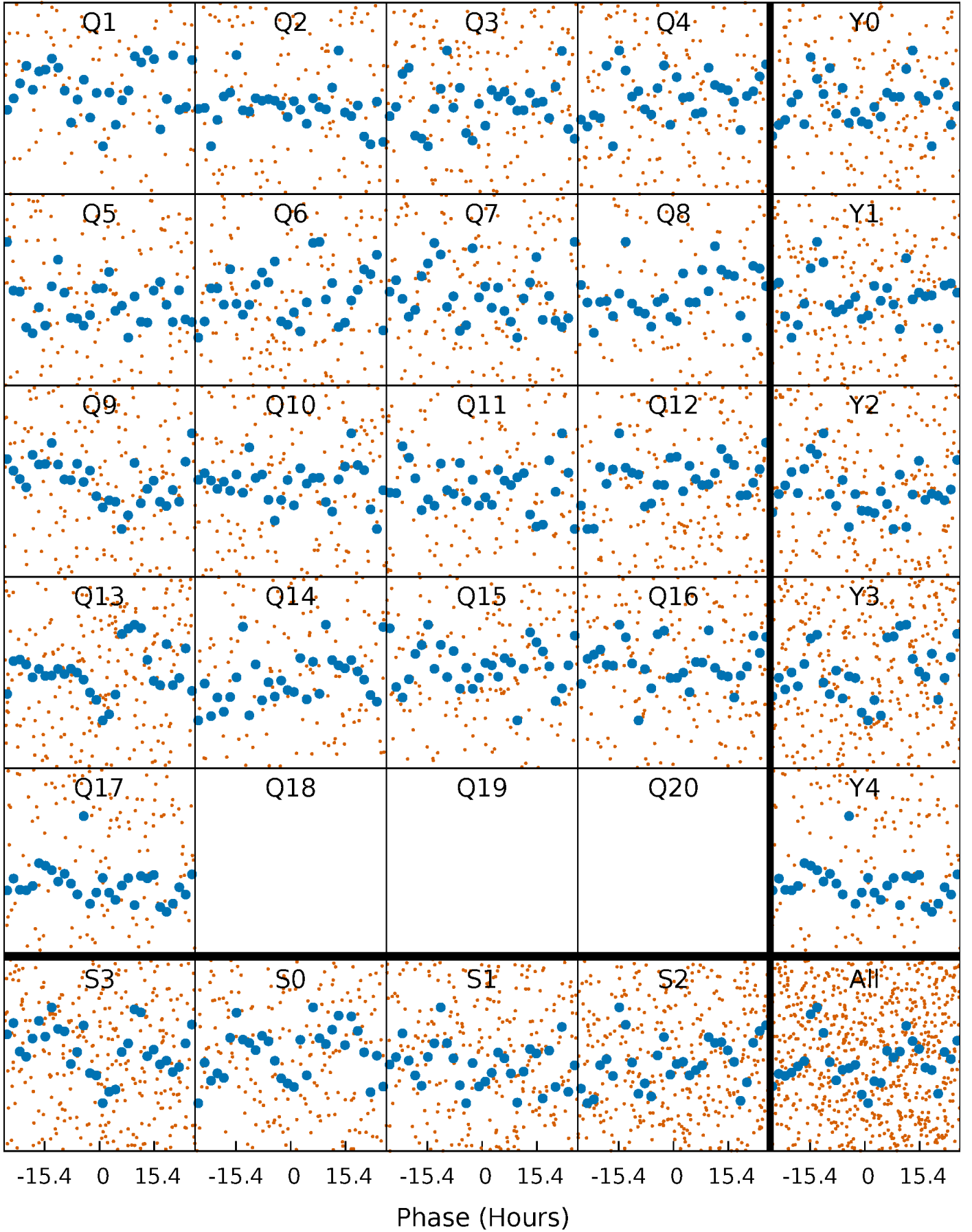


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



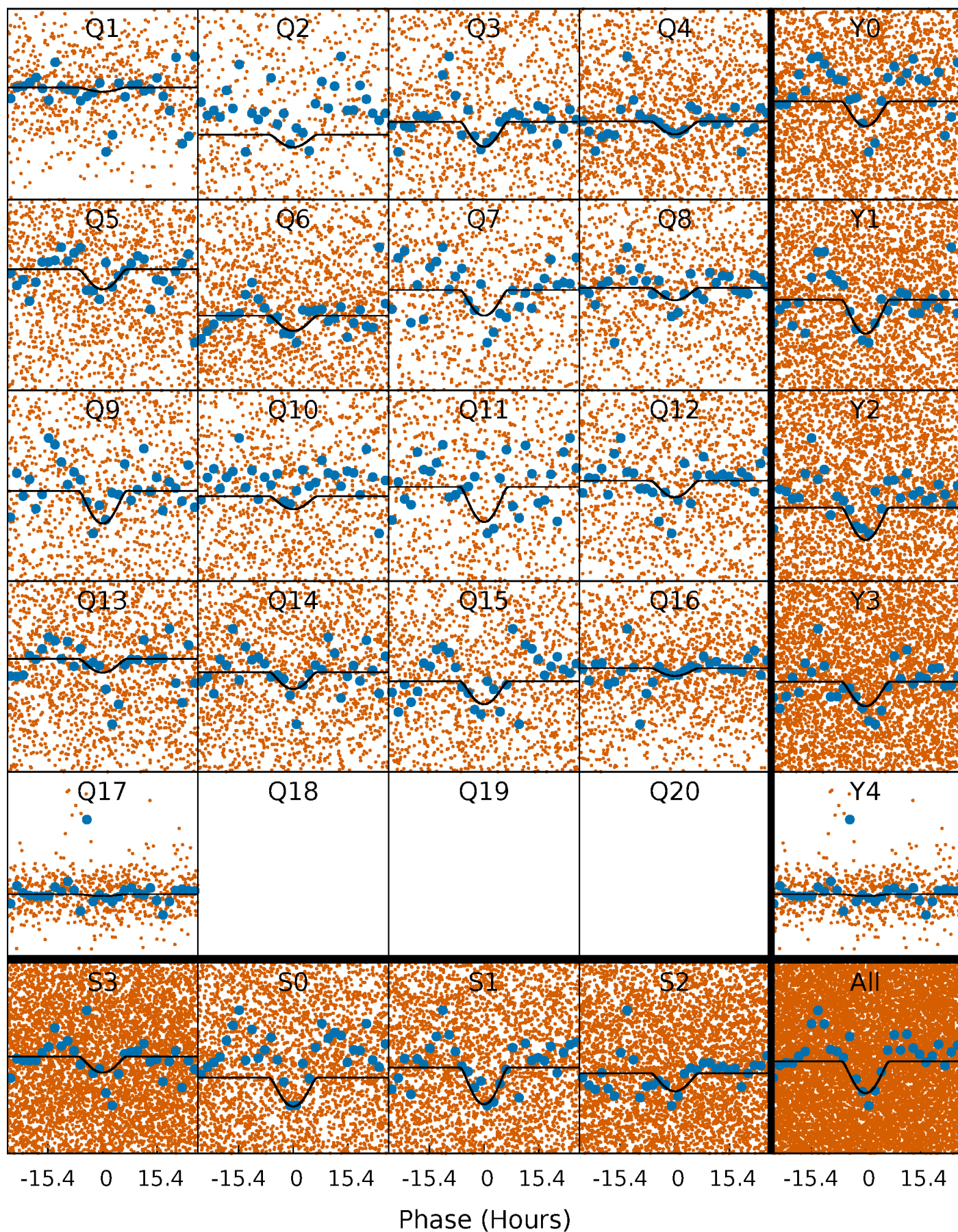
PDC Quarter-Phased Transit Curves

TCE 007300184-01 P= 4.277966 Days $T_0=134.907925$ (BKJD)



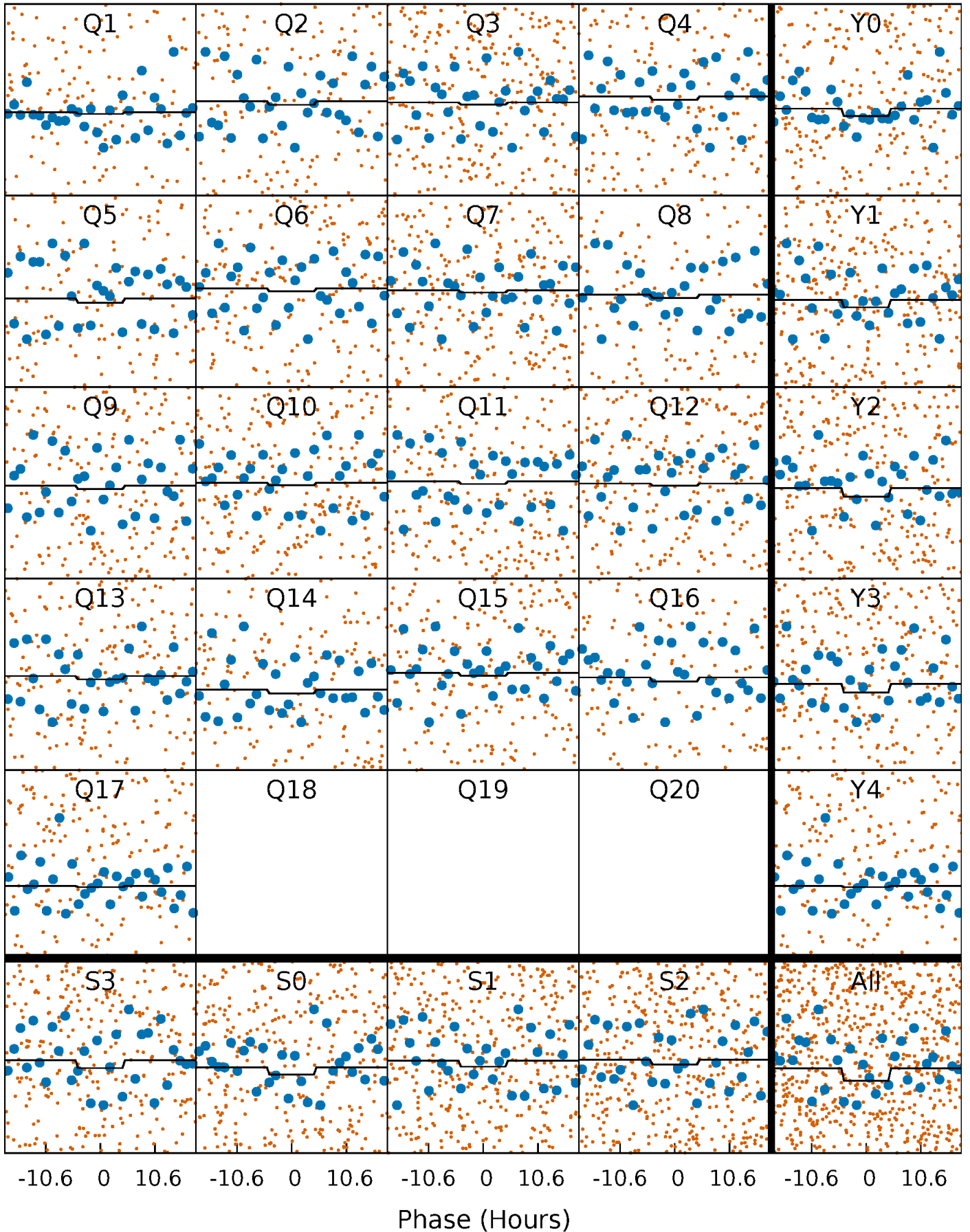
DV Quarter-Phased Transit Curves

TCE 007300184-01 $P = 4.277966$ Days $T_0 = 134.907925$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

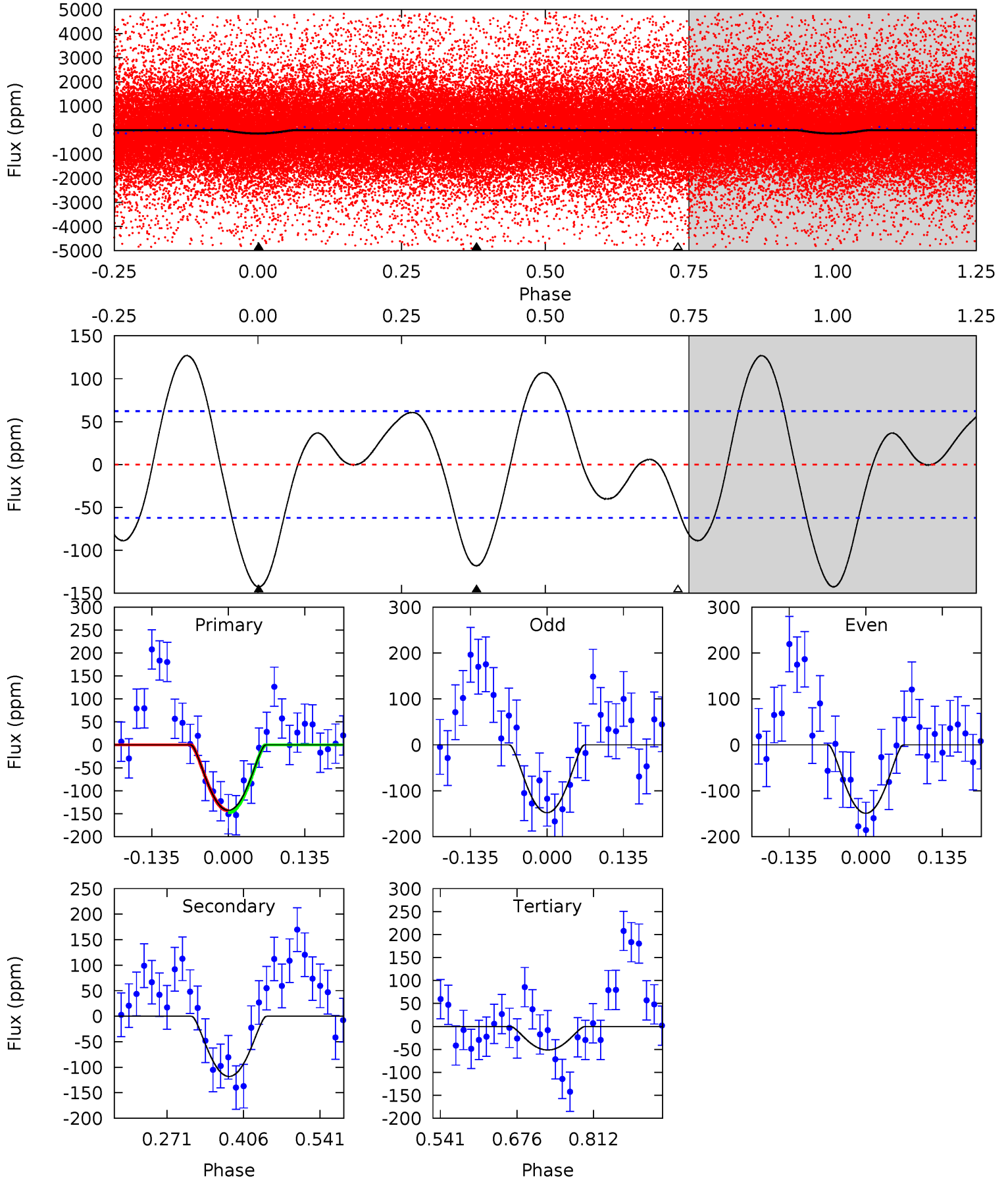
TCE 007300184-01 P= 4.278060 Days $T_0=134.975155$ (BKJD)



DV Model-Shift Uniqueness Test

007300184-01, P = 4.277966 Days, E = 130.629959 Days

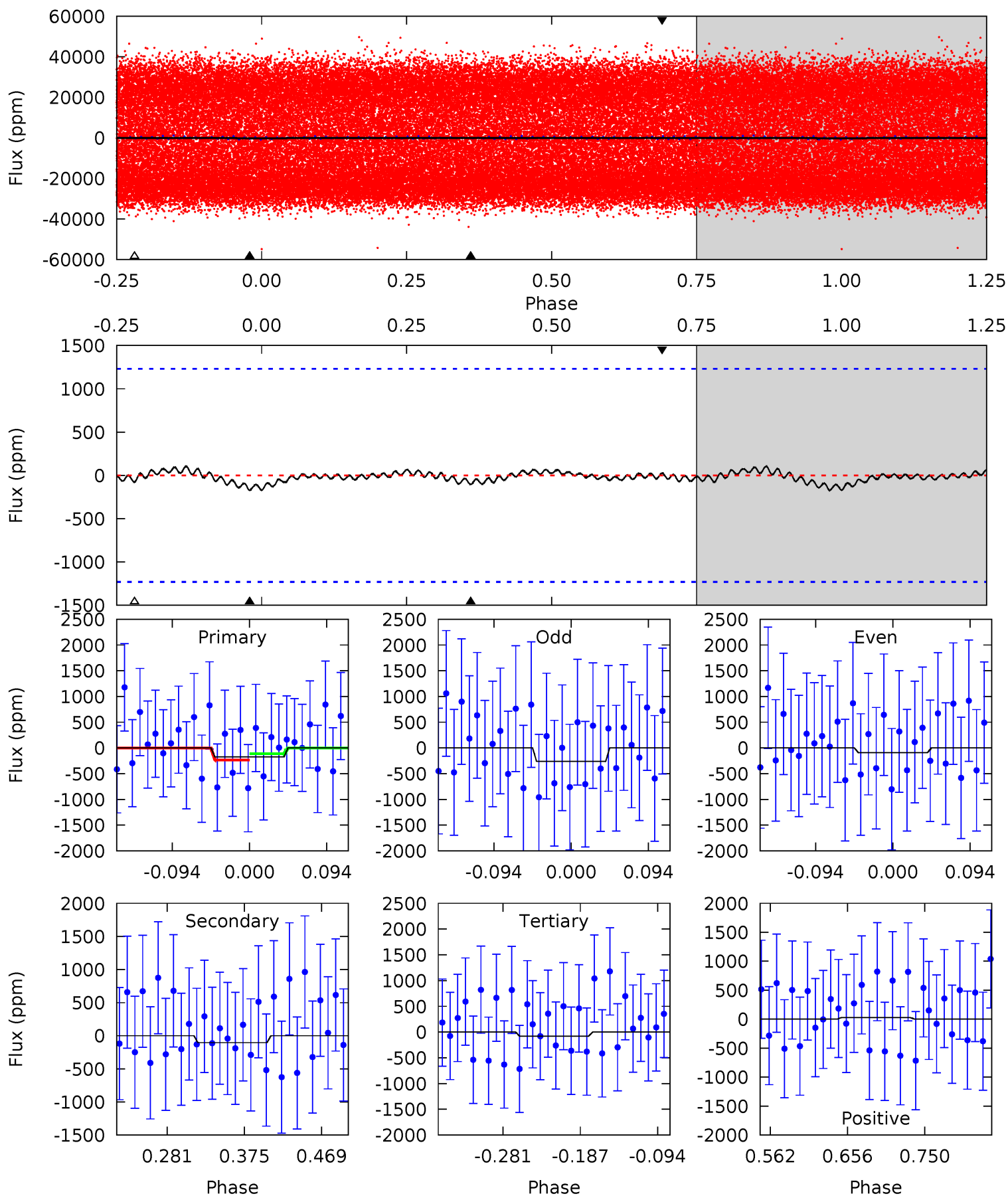
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.3	8.54	3.72	0	4.50	1.49	3.51	6.60	10.3	4.82	8.54	0.04	1.47	0.47	0.17



Alt Model-Shift Uniqueness Test

007300184-01, P = 4.278060 Days, E = 130.697095 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.65	0.39	0.29	0.10	4.58	1.68	0.13	0.36	0.55	0.09	0.28	0.32	0.84	0.38	0.22



Stellar Parameters For KIC 007300184

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6704^{+164}_{-281}	$4.353^{+0.060}_{-0.180}$	$-0.120^{+0.250}_{-0.300}$	$1.225^{+0.350}_{-0.150}$	$1.244^{+0.174}_{-0.191}$	$0.953^{+0.302}_{-0.450}$
	+2%/-4%	+1%/-4%	+208%/-250%	+29%/-12%	+14%/-15%	+32%/-47%
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 007300184-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-118 ± 14	$3.85^{+2.80}_{-2.48}$	1979^{+123}_{-115}	4361^{+2607}_{-839}	13^{+92}_{-9}
Alt.	-104 ± 269	$3.24^{+3.23}_{-2.12}$	1974^{+132}_{-99}	4161^{+3635}_{-9128}	$9.658^{+131.277}_{-34.968}$

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 $A_{obs} \gg 1.0$

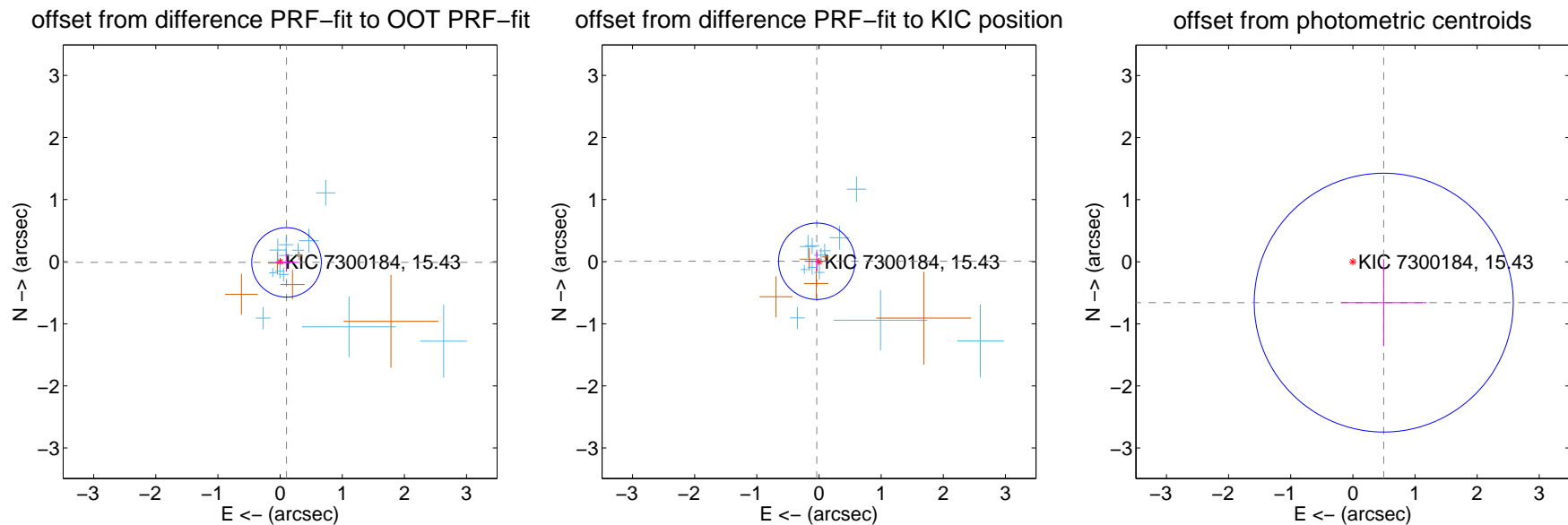
DV Centroid Data

Supplemental centroid analysis for 007300184-01. Kepler magnitude: 15.43. Transit SNR 10.01

There are 12 quarters with good PRF difference image offsets

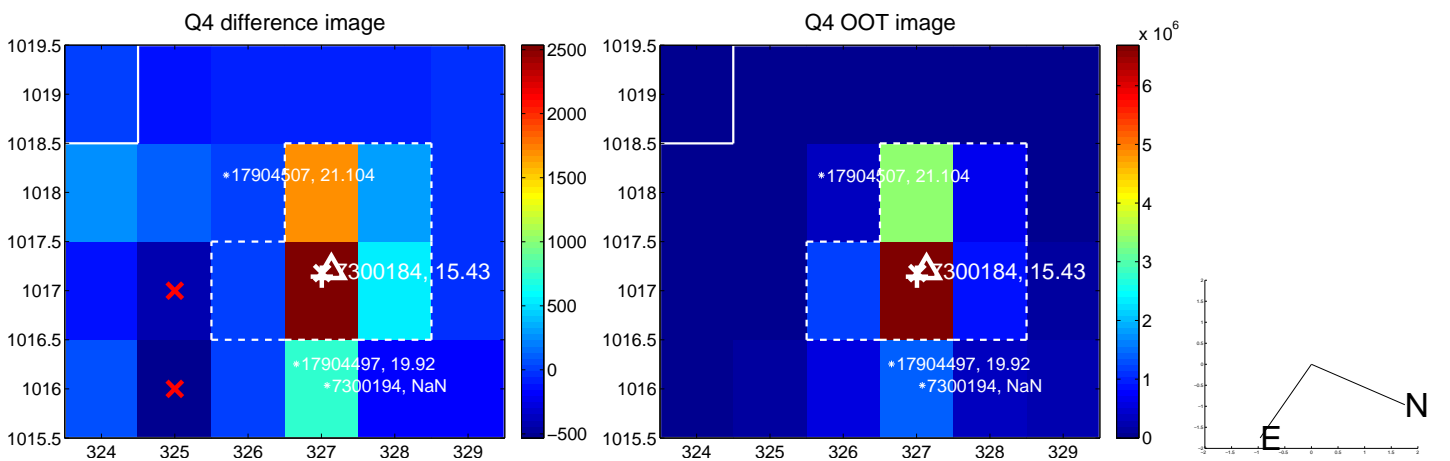
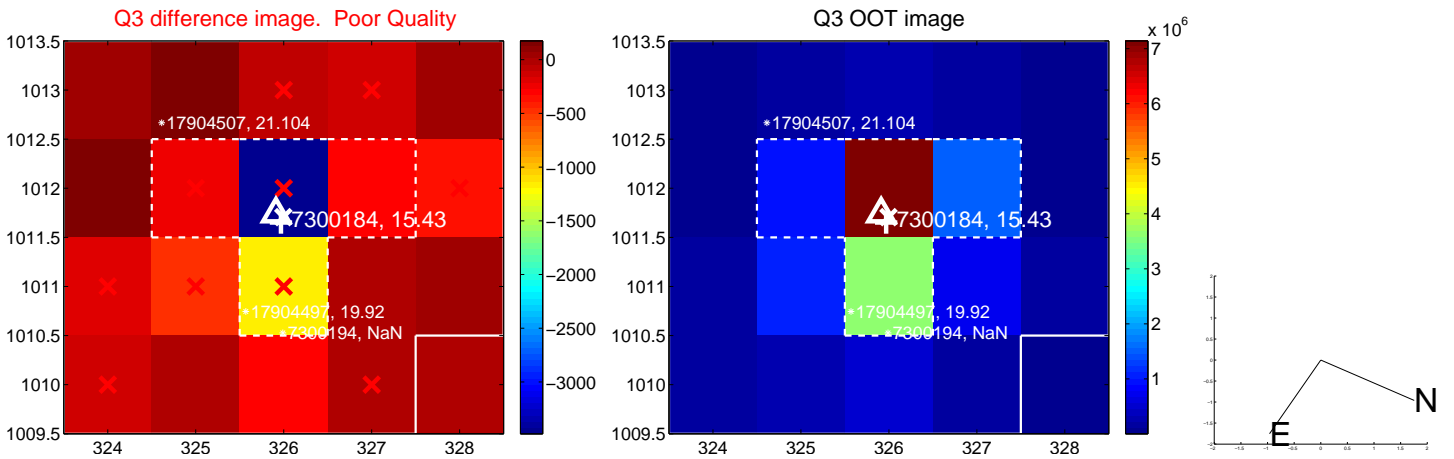
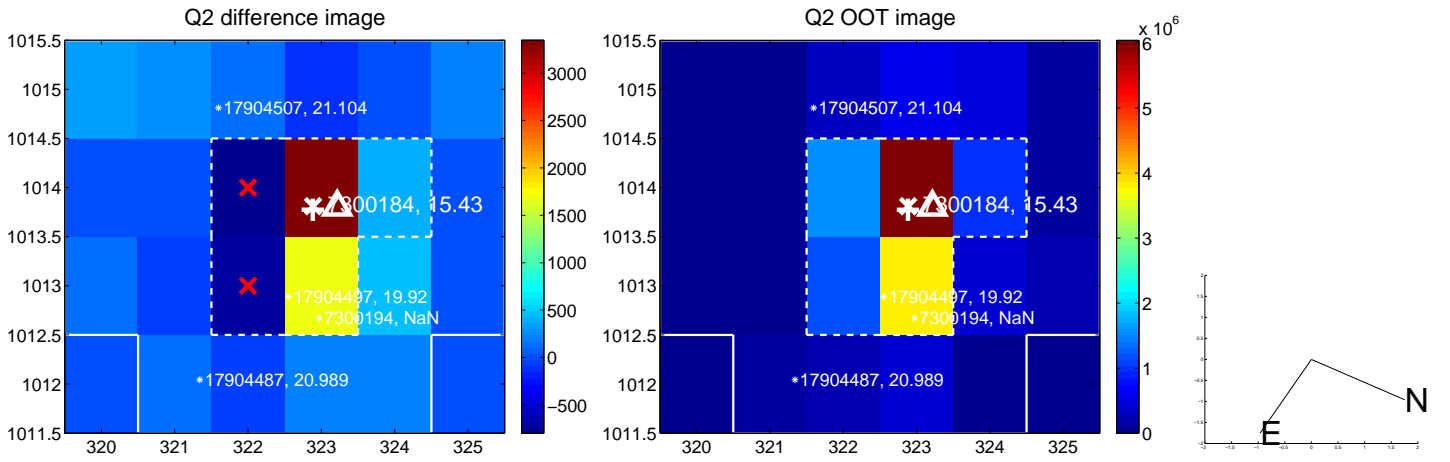
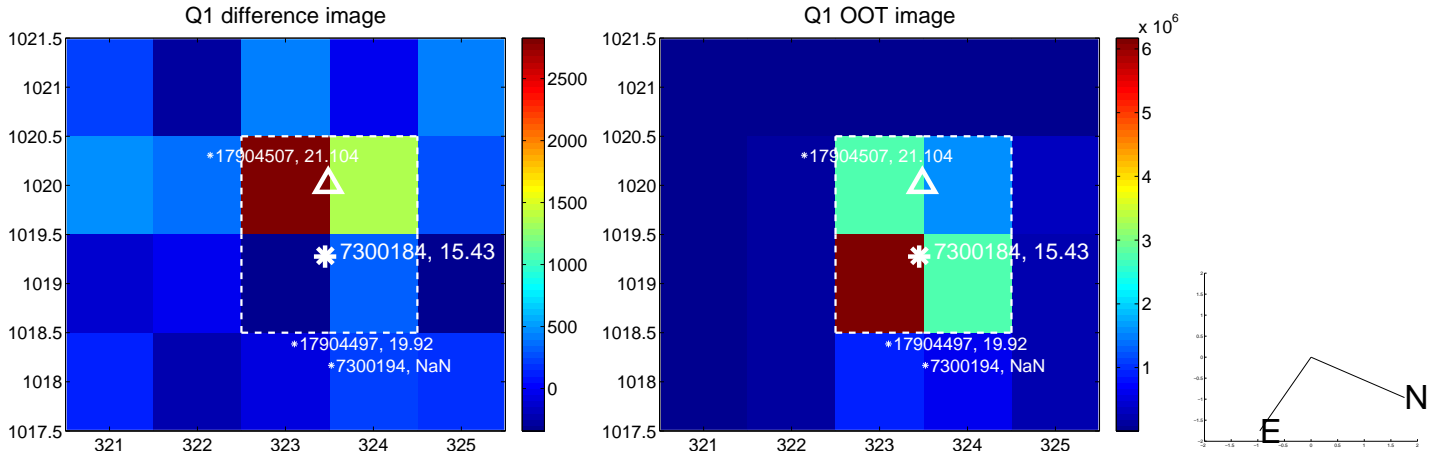
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.104 ± 0.187	0.56	-0.103 ± 0.182	-0.012 ± 0.144
PRF-fit source offset from KIC position	0.036 ± 0.205	0.18	0.035 ± 0.196	0.007 ± 0.153
photometric centroid source offset	0.83 ± 0.69	1.19	-0.50 ± 0.69	-0.66 ± 0.70

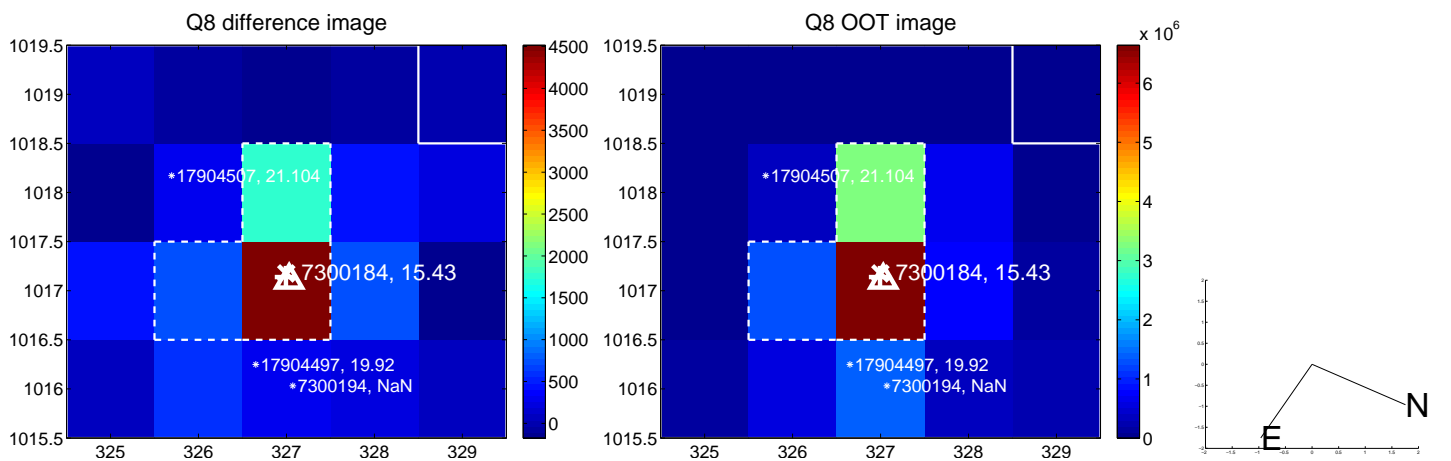
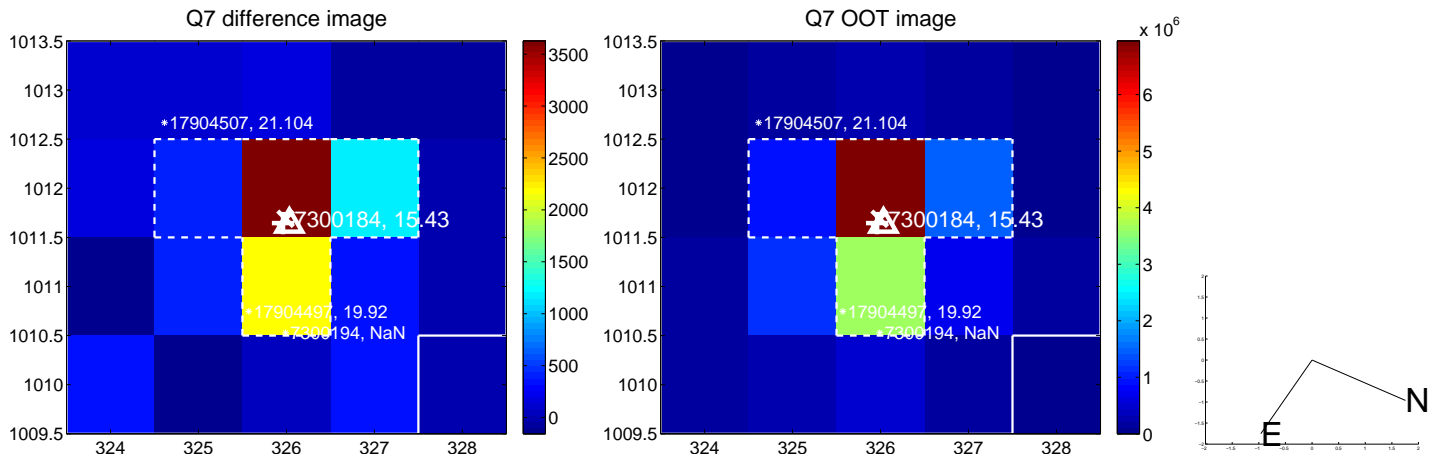
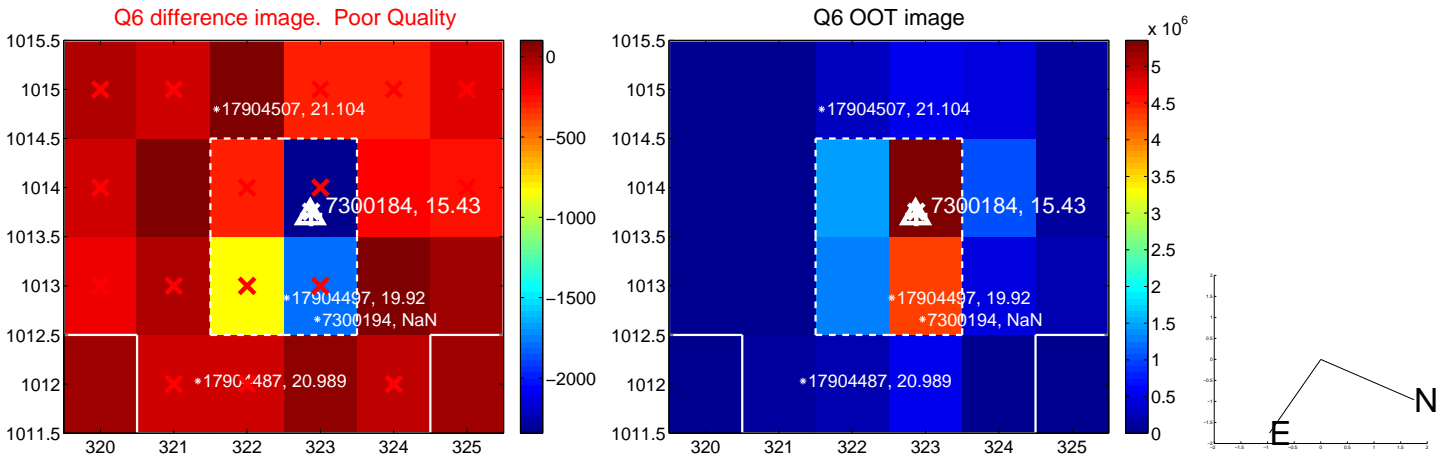
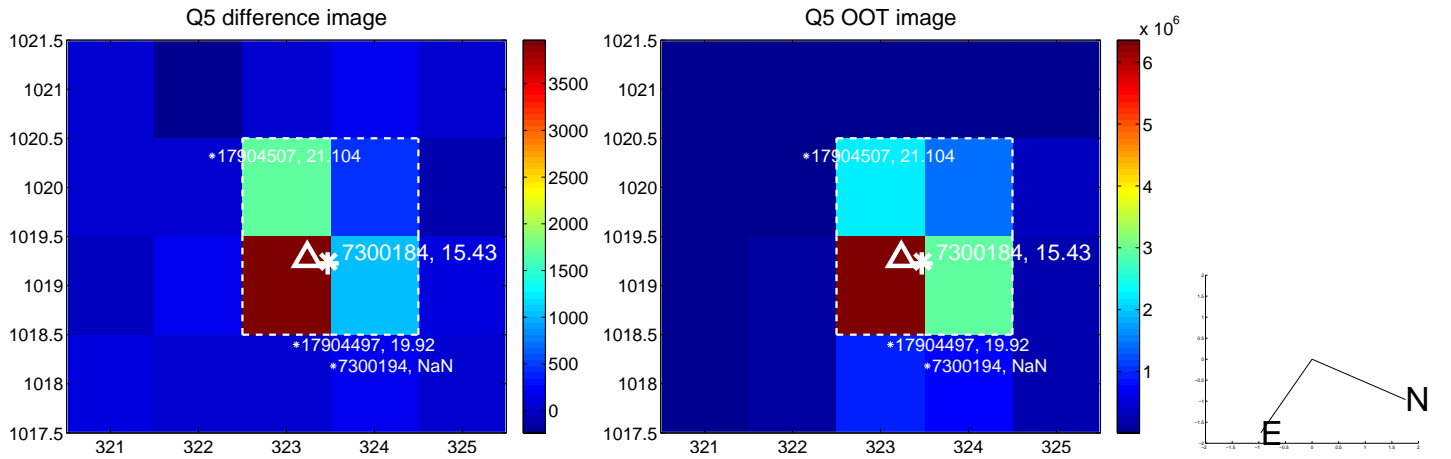


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

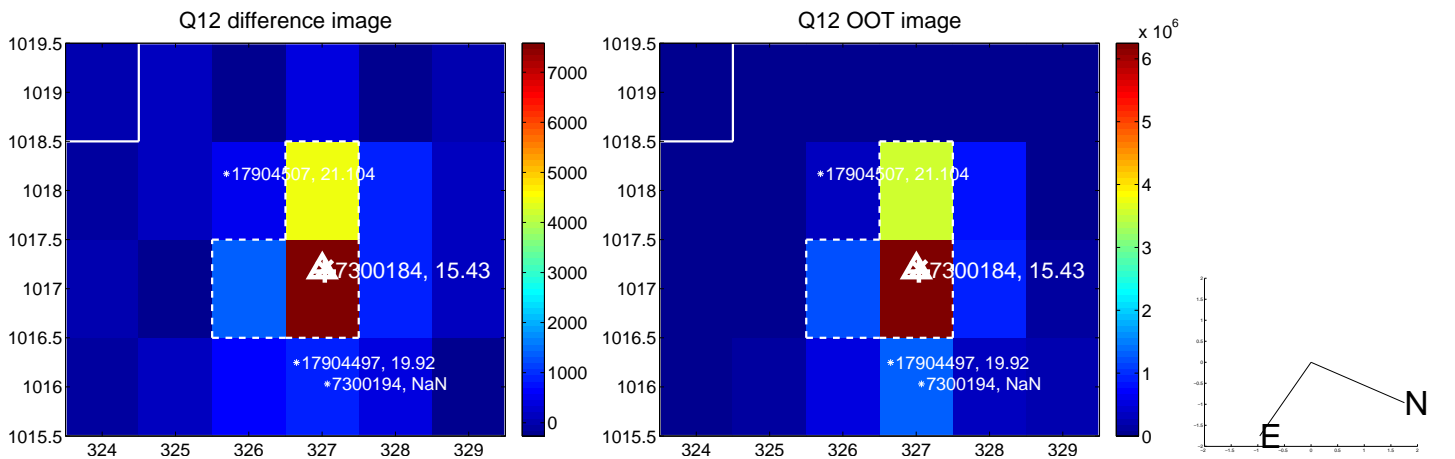
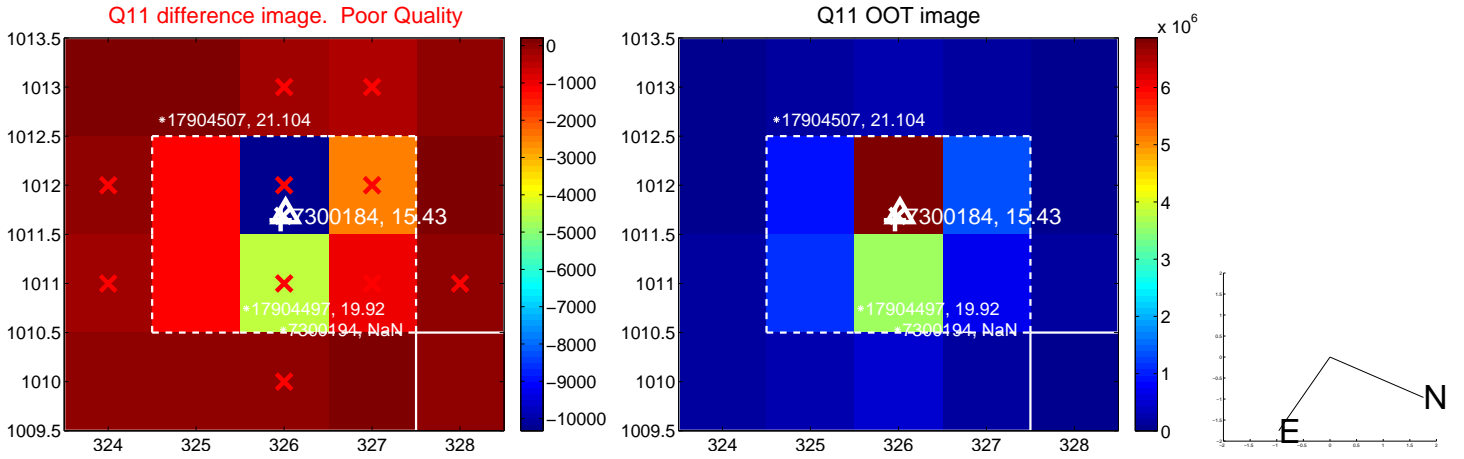
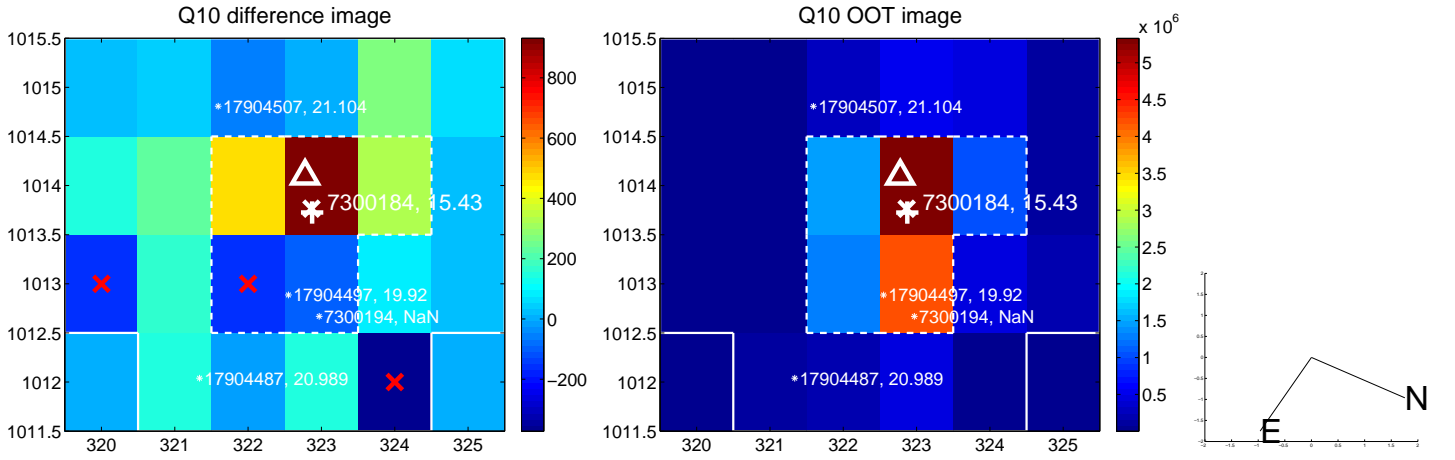
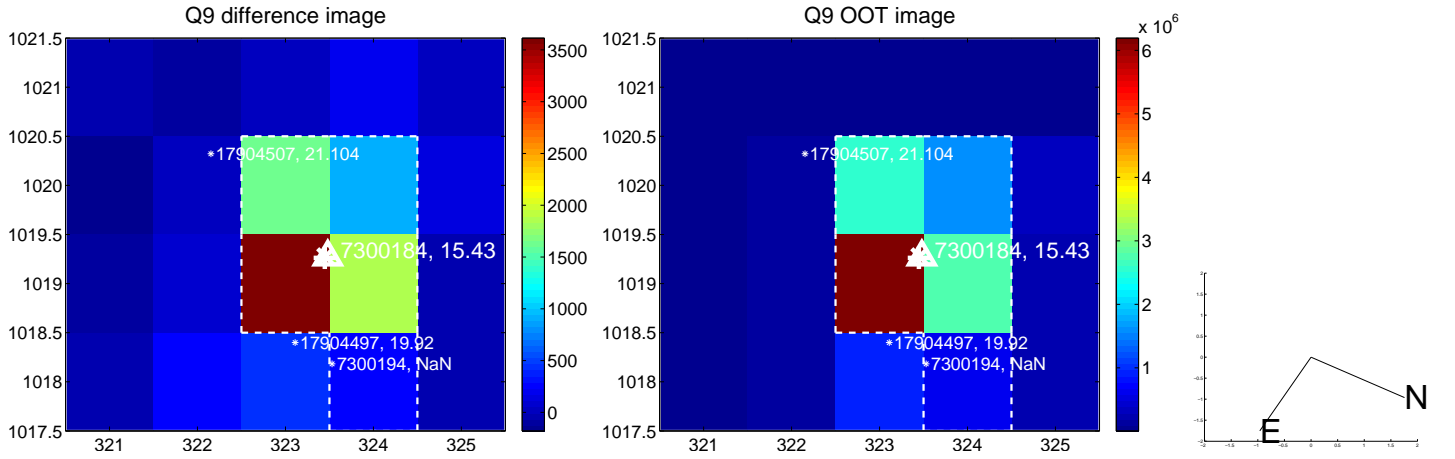
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



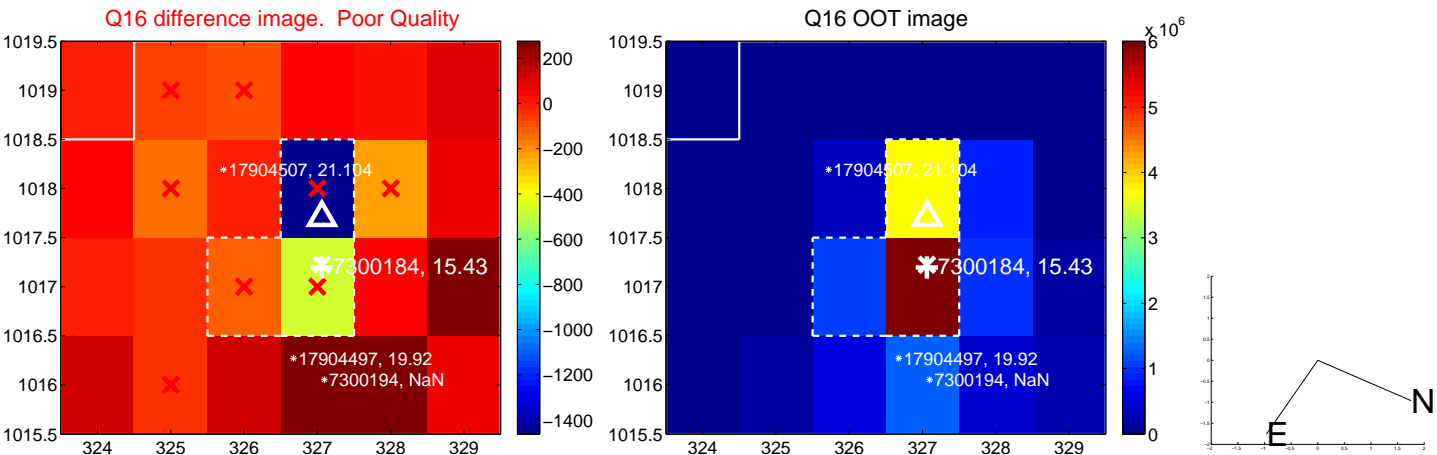
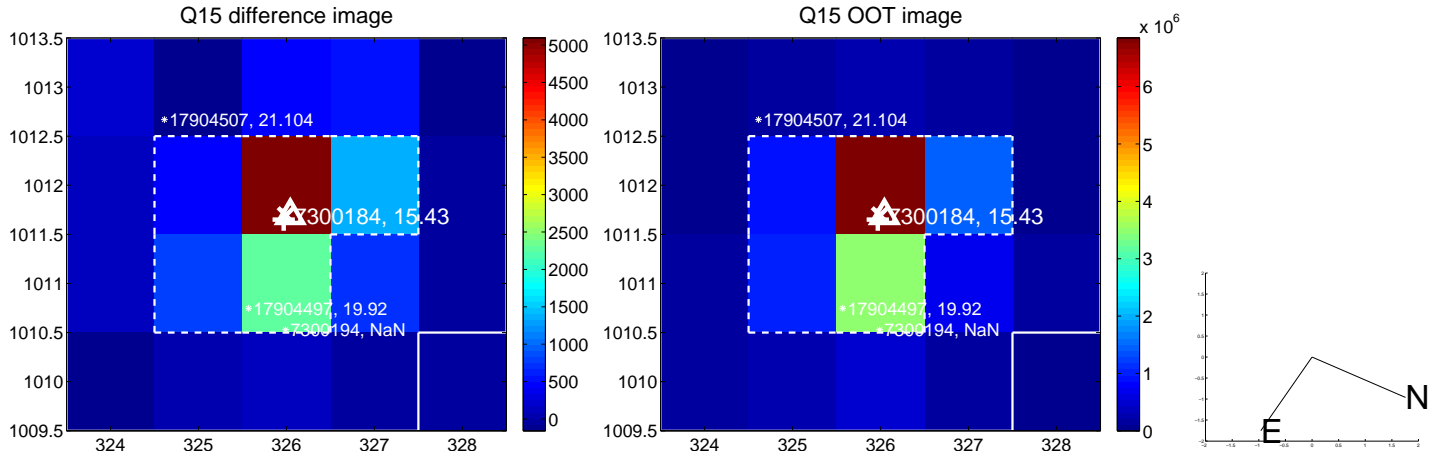
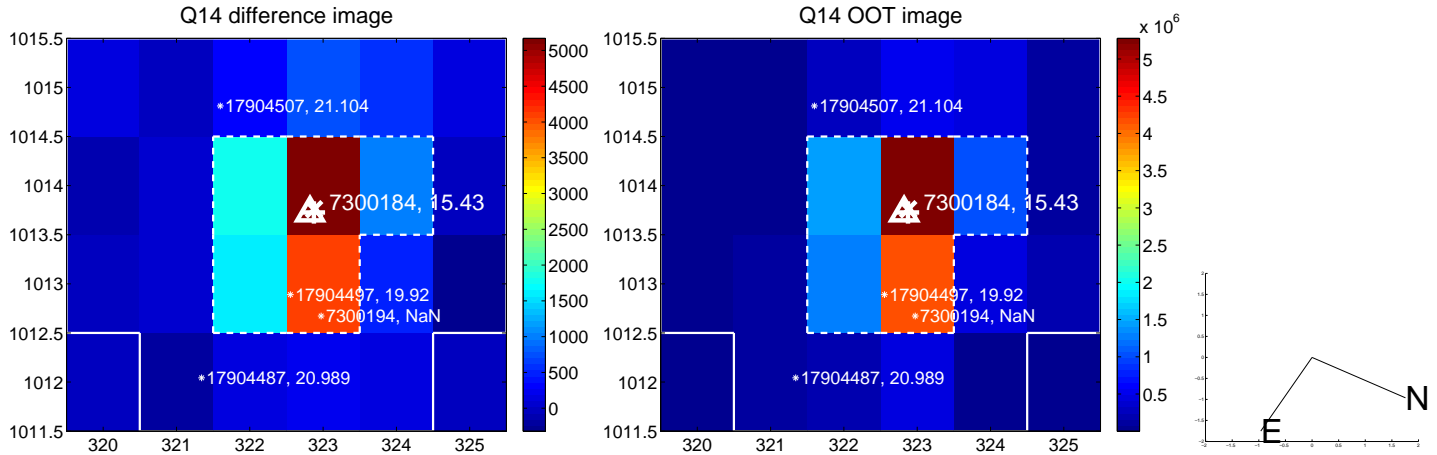
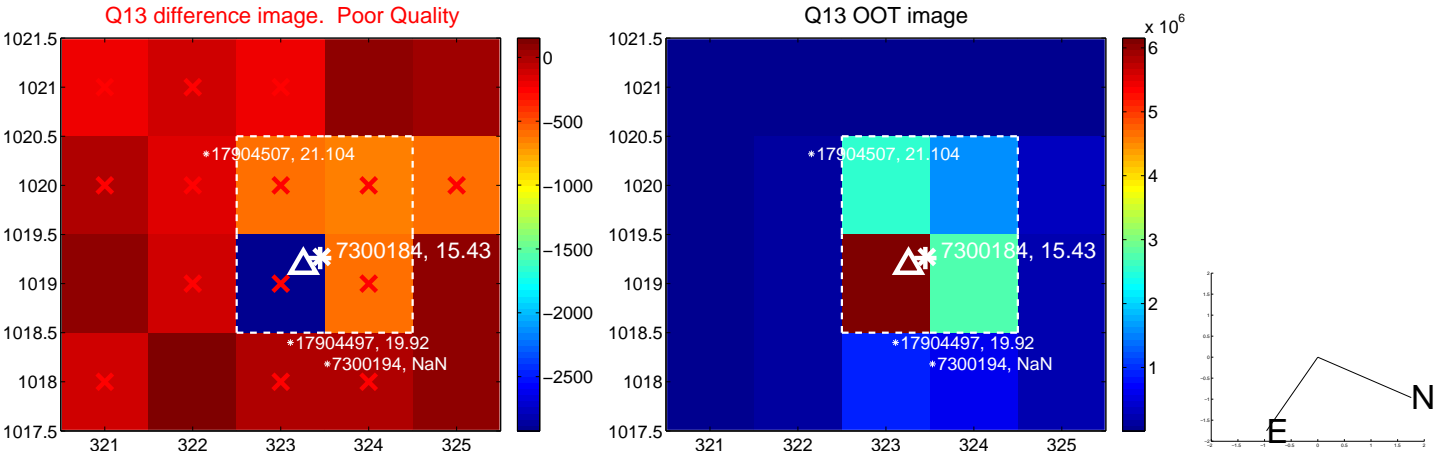
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



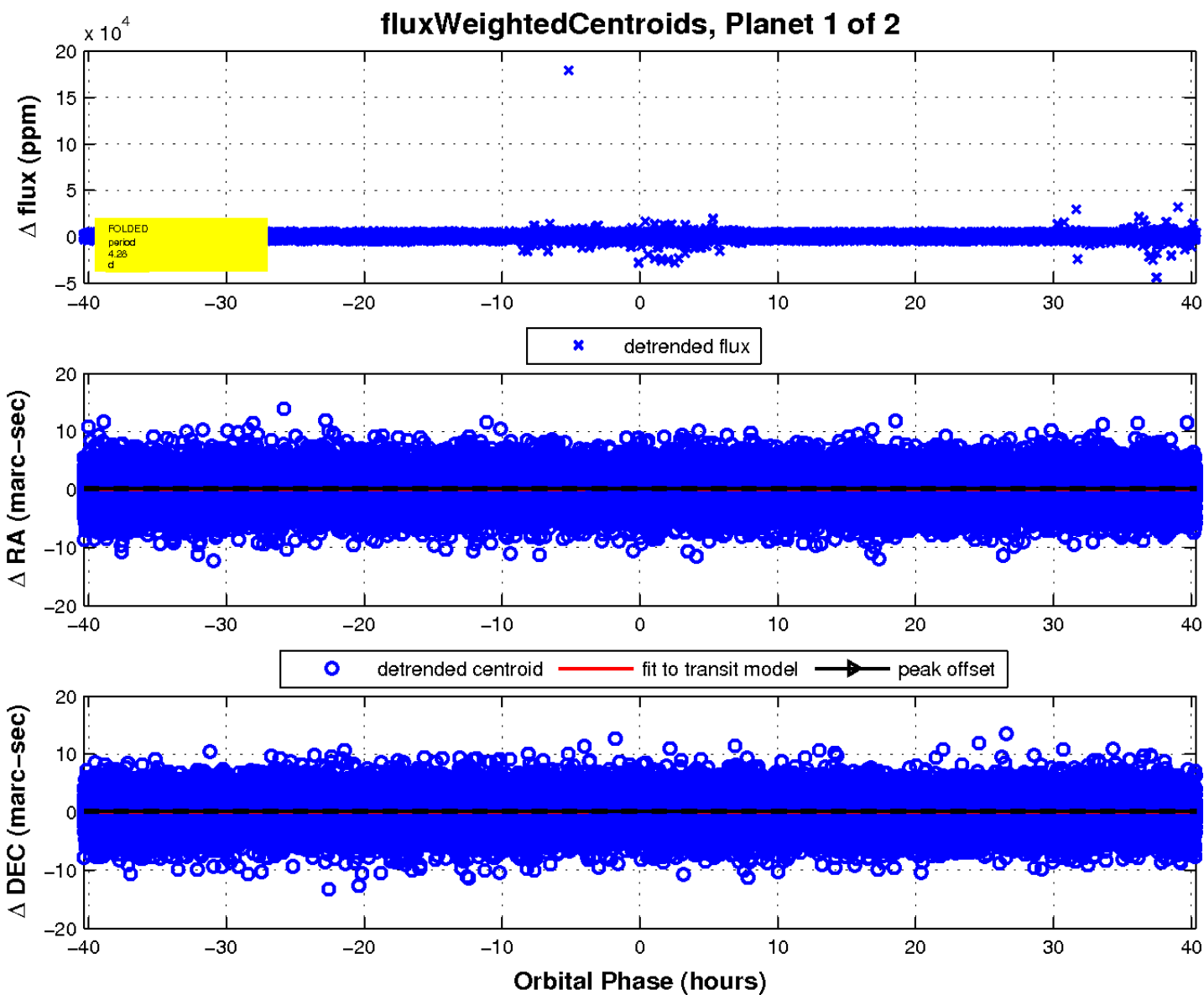
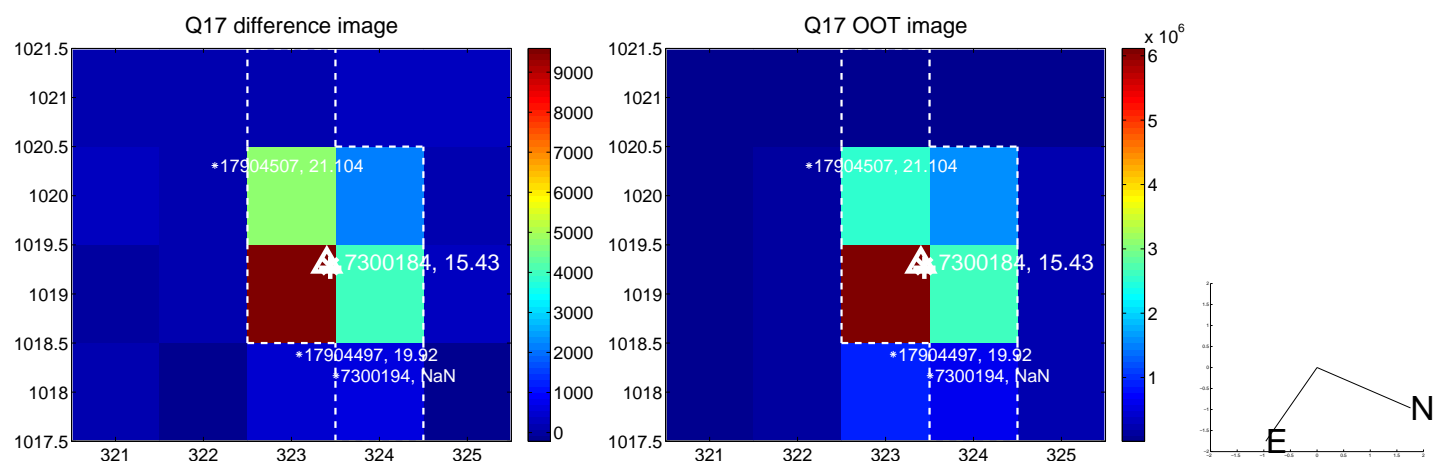
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

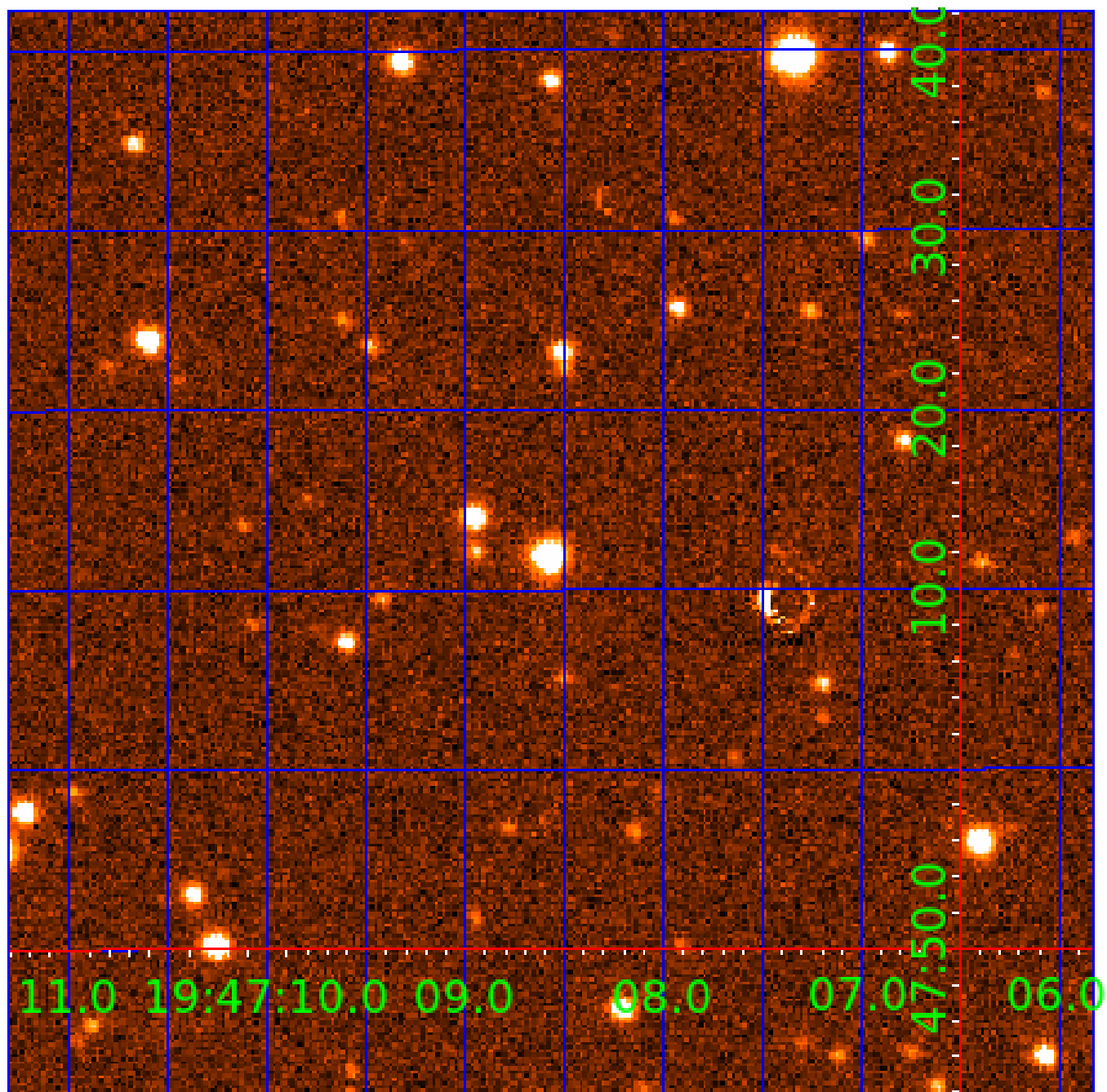


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007300184

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})
007300184-01	OBS	No	4.277966	134.907925	161.9	13.444	10.6	10.0	1.23	6704	2.58	887.17
007300184-02	OBS	No	4.277684	132.292271	170.5	12.938	9.1	10.3	1.23	6704	2.21	887.24

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007300184-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
007300184-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—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.

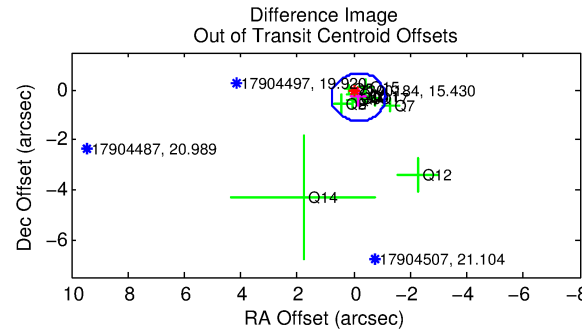
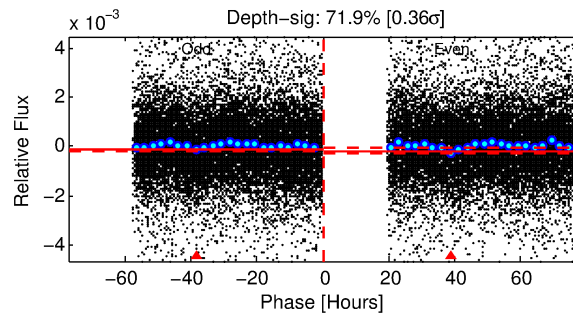
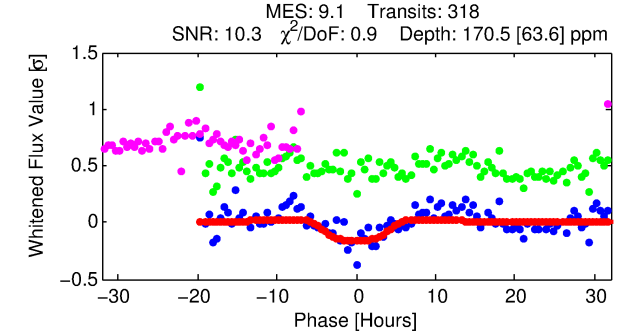
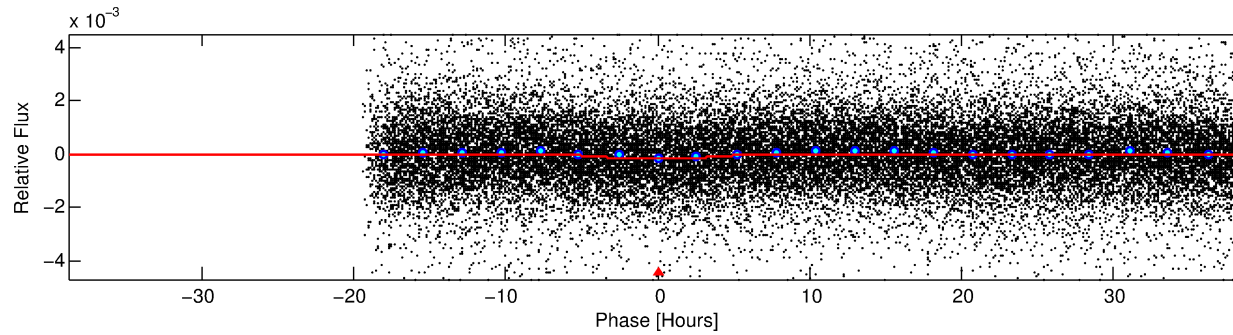
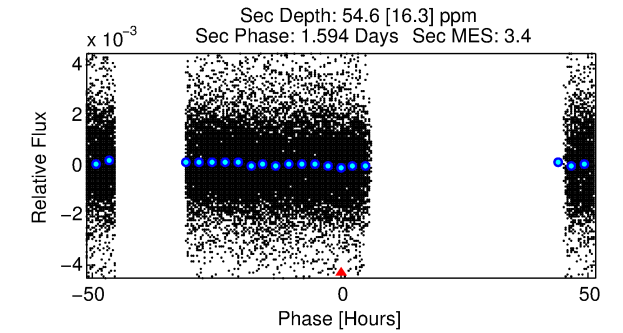
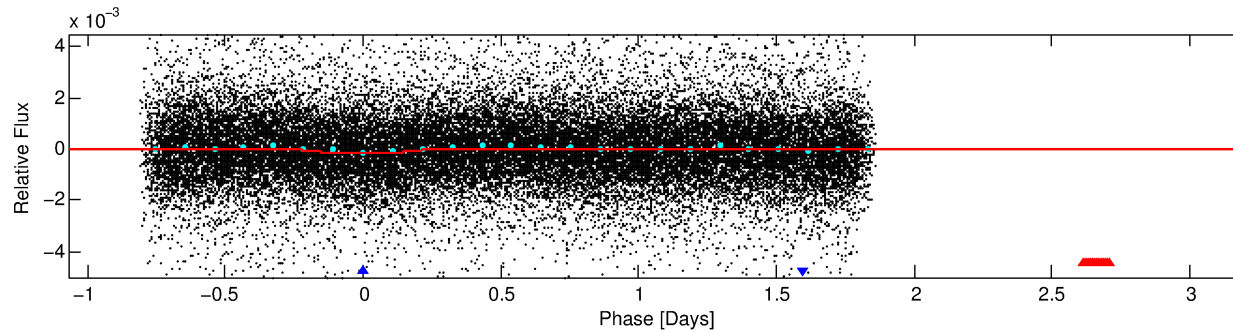
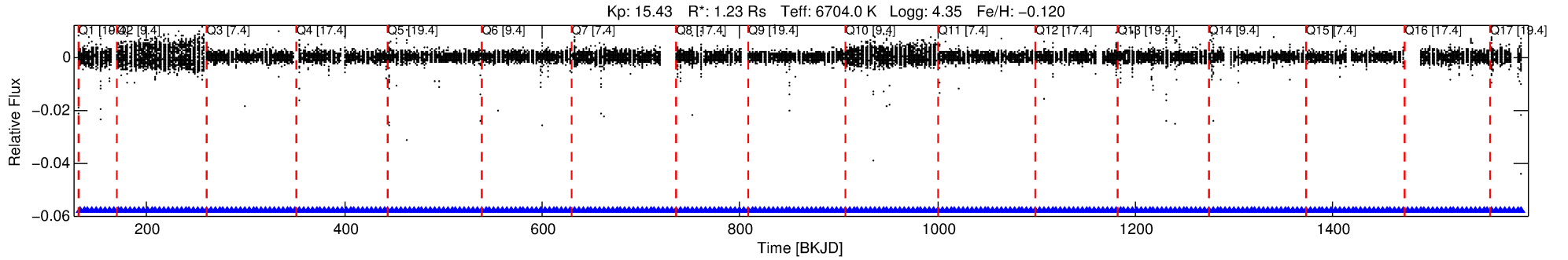
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007300184-02

No Significant Match Found

DV One-Page Summary

KIC: 7300184 Candidate: 2 of 2 Period: 4.278 d



DV Fit Results:

Period = 4.27768 [0.00016] d
Epoch = 132.2923 [0.0301] BKJD
Rp/R* = 0.0165 [0.0055]
a/R* = 1.18 [0.08]
b = 0.99 [0.02]
Seff = 887.24 [332.85]
Teff = 1392 [131] K
Rp = 2.21 [0.97] Re
a = 0.0553 [0.0130] AU
Ag = 18.83 [15.18] [1.17σ]
Teffp = 4482 [842] K [3.63σ]

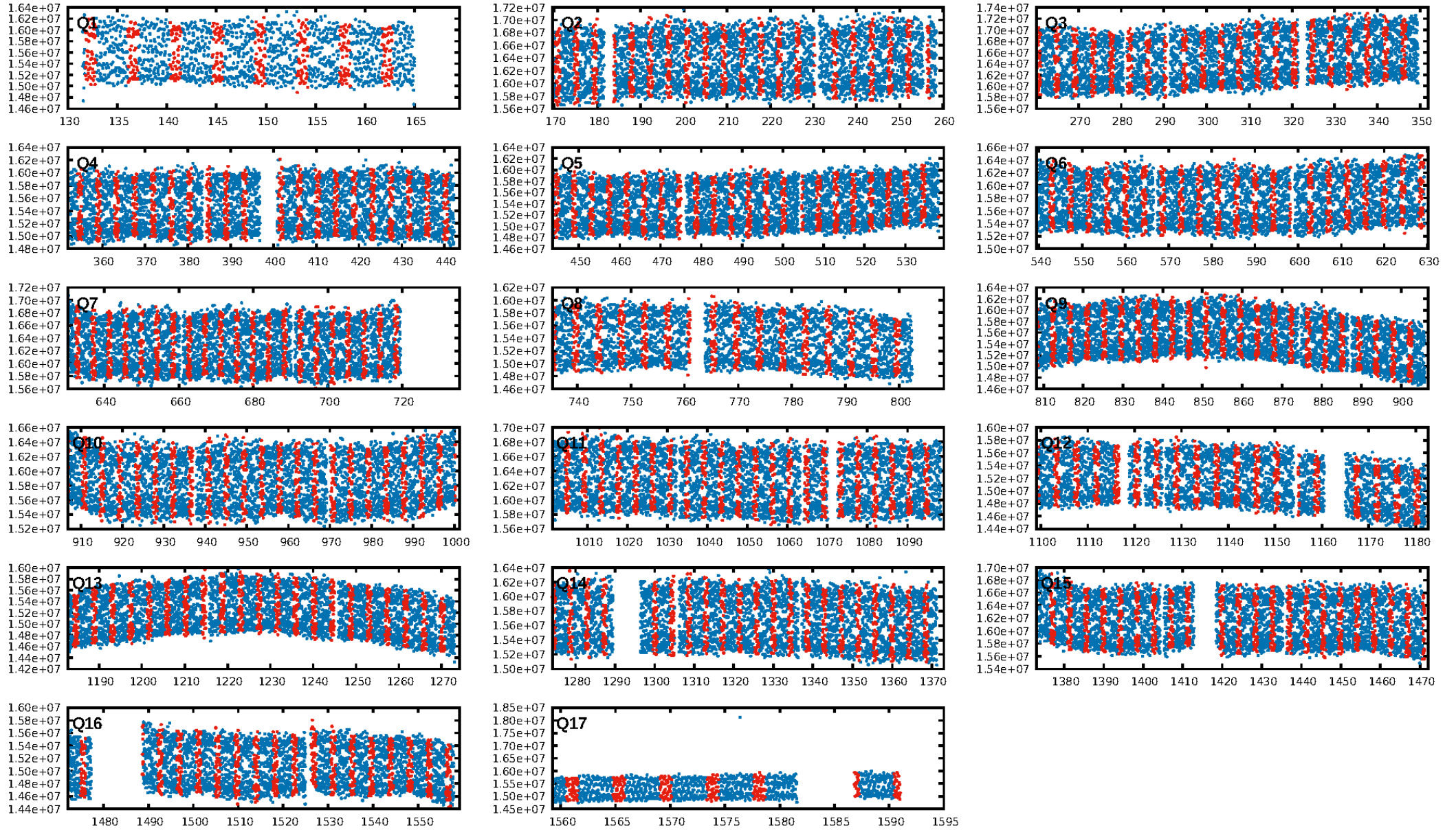
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.20e-15
RollingBand-fgt: 1.00 [303/303]
GhostDiagnostic-chr: 0.6666
Centroid-sig: 32.9%
Centroid-so: 0.334 arcsec [0.51σ]
OotOffset-rm: 0.335 arcsec [1.05σ]
KicOffset-rm: 0.348 arcsec [1.00σ]
OotOffset-st: 2/4/4/3 [13]
KicOffset-st: 2/4/4/3 [13]
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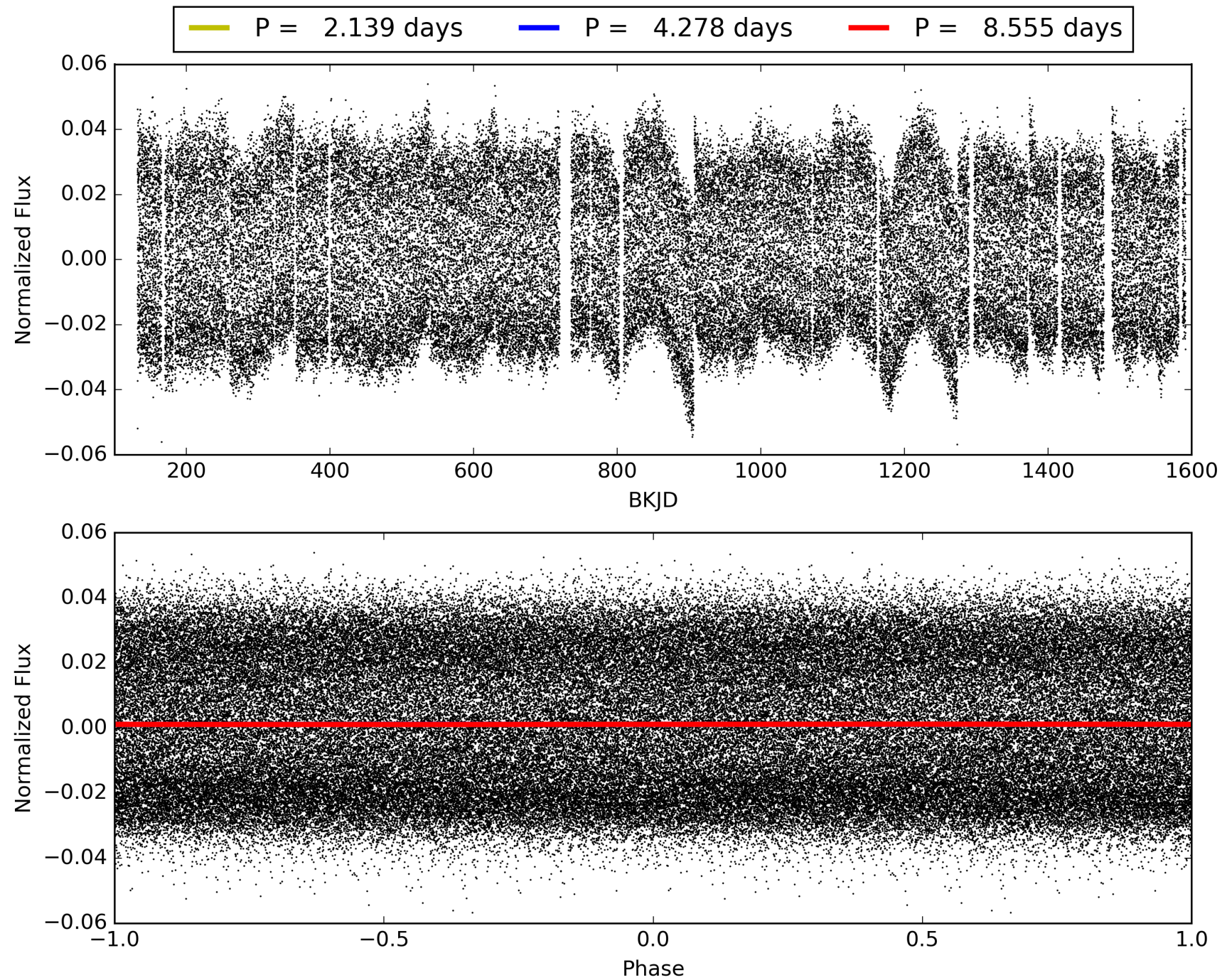
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 21:19:23 Z

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

TCE 007300184-02, PDC Light Curves

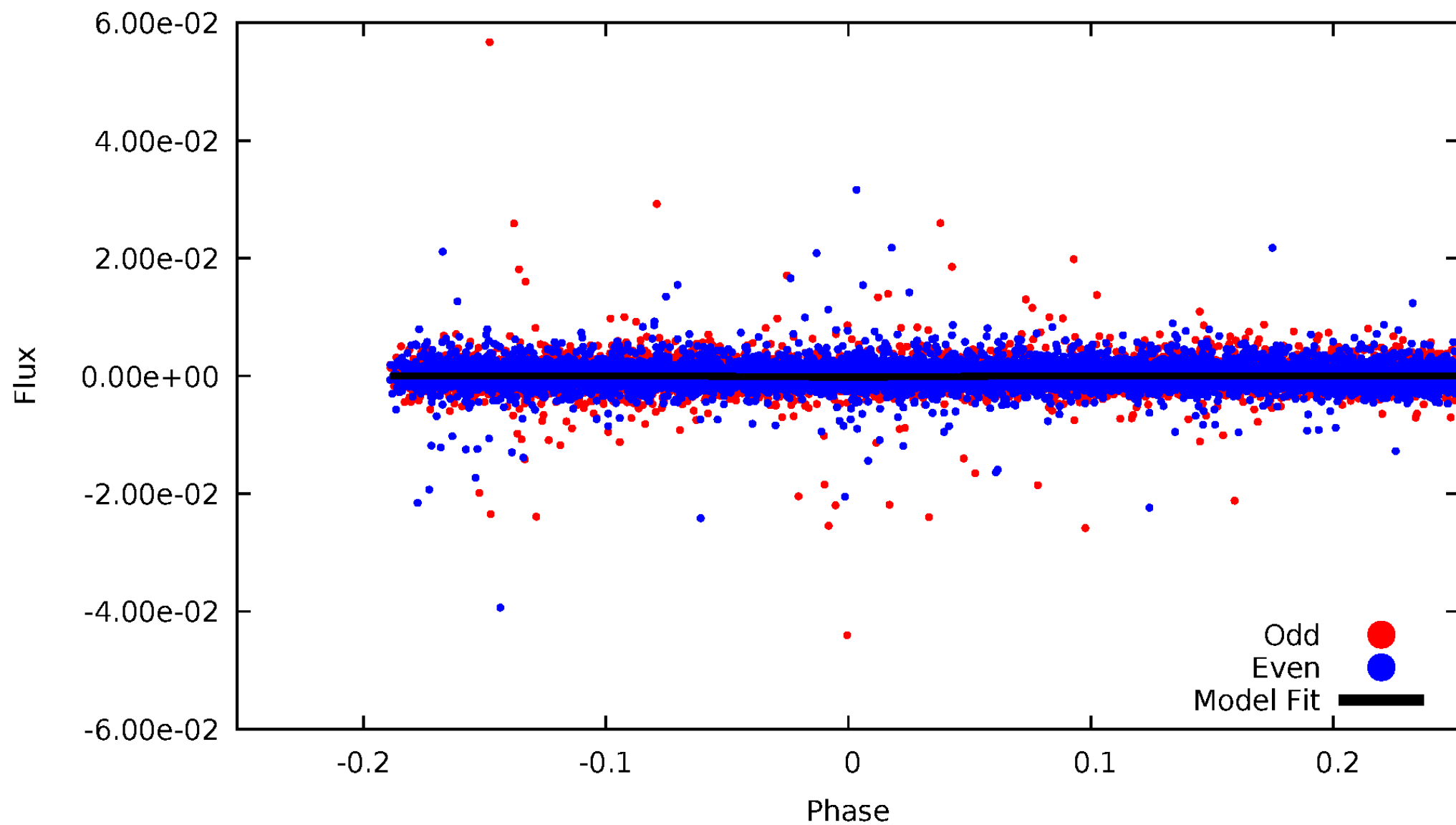


TCE 007300184-02



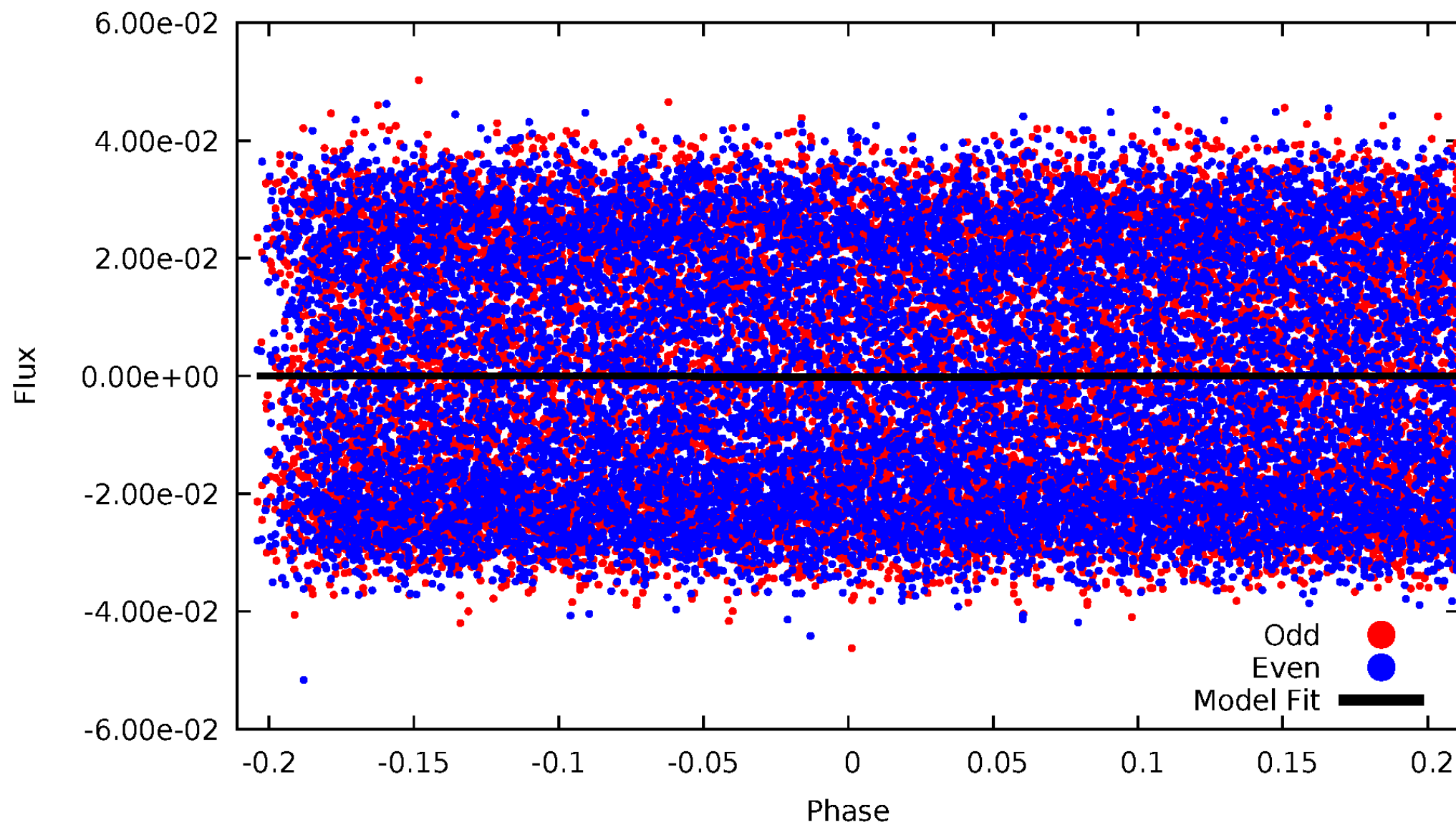
DV Odd/Even

TCE 007300184-02



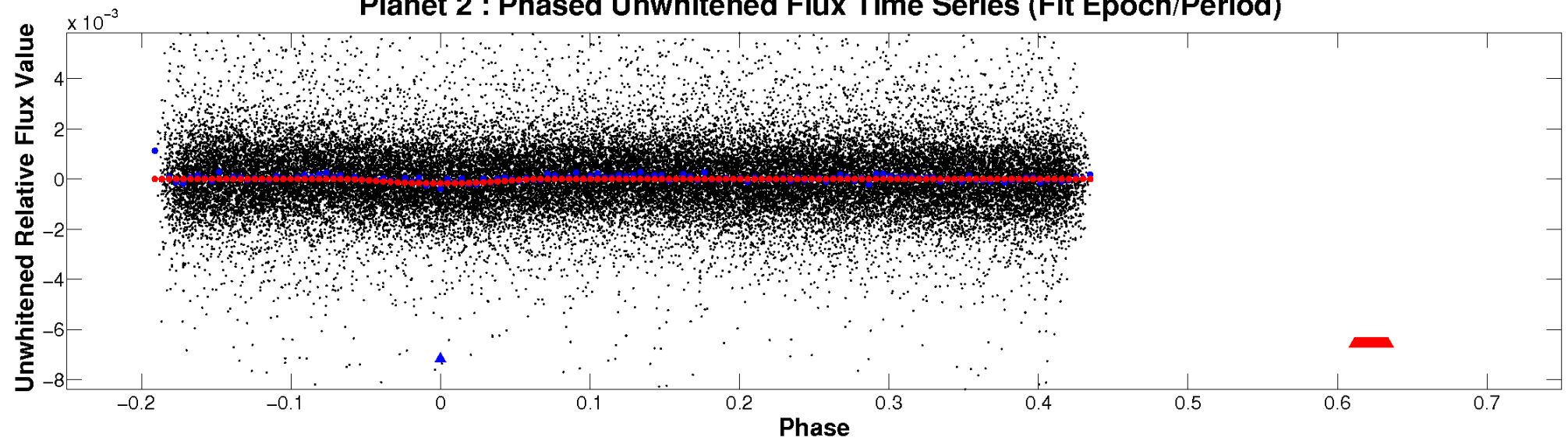
ALT Odd/Even

TCE 007300184-02

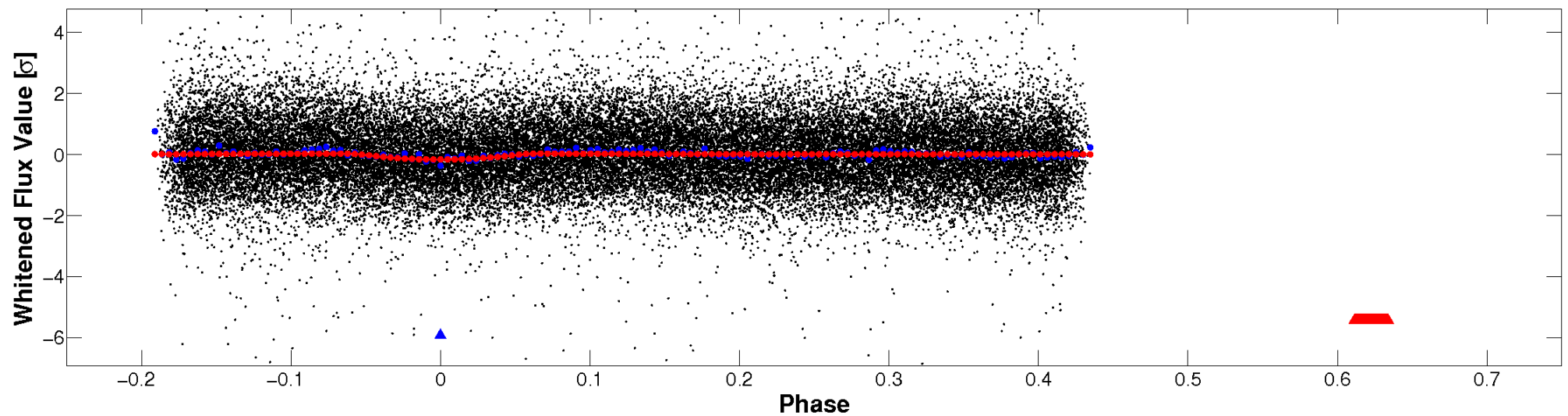


Non-Whitened Vs. Whitened Light Curve

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

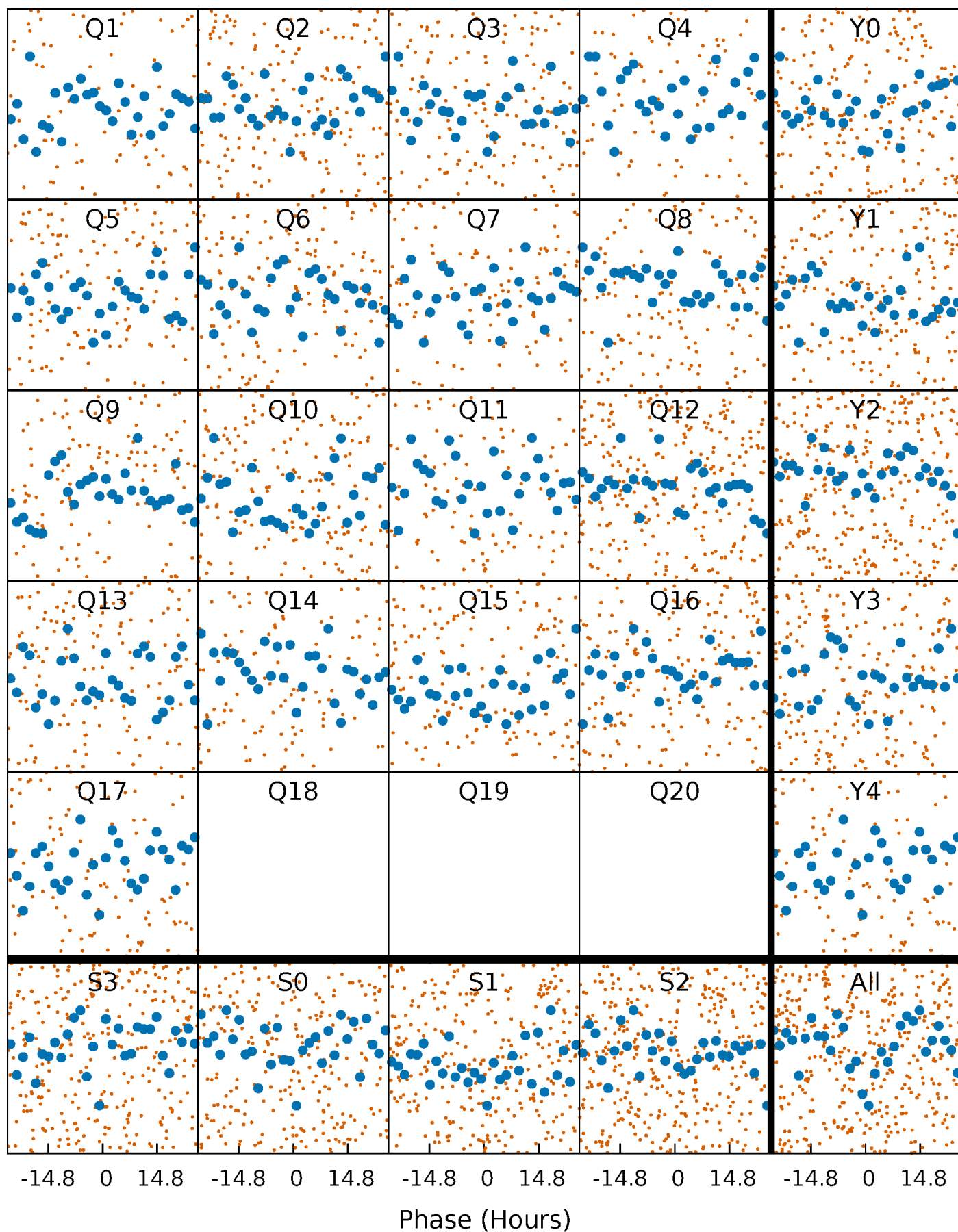


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



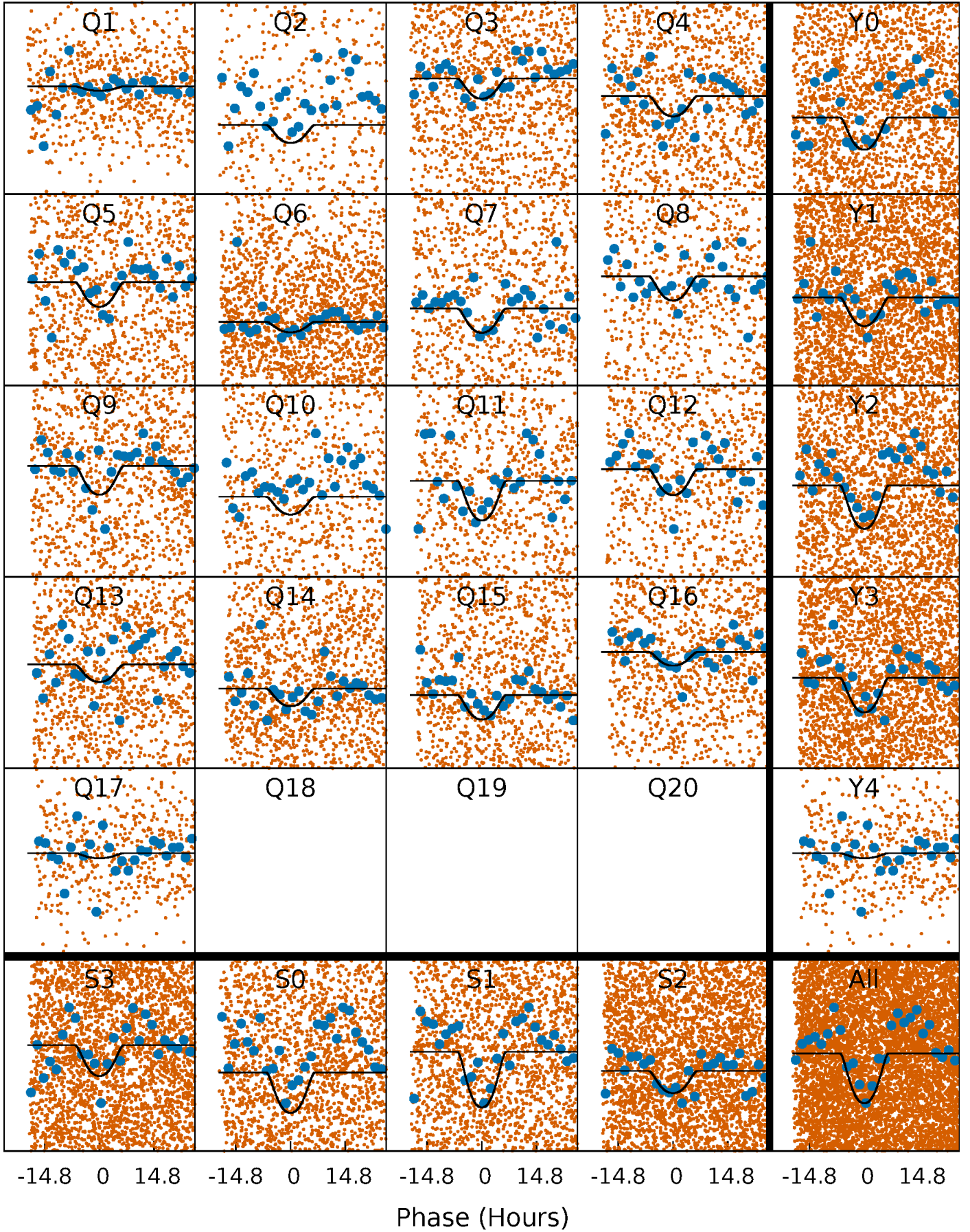
PDC Quarter-Phased Transit Curves

TCE 007300184-02 $P = 4.277684$ Days $T_0 = 132.292271$ (BKJD)



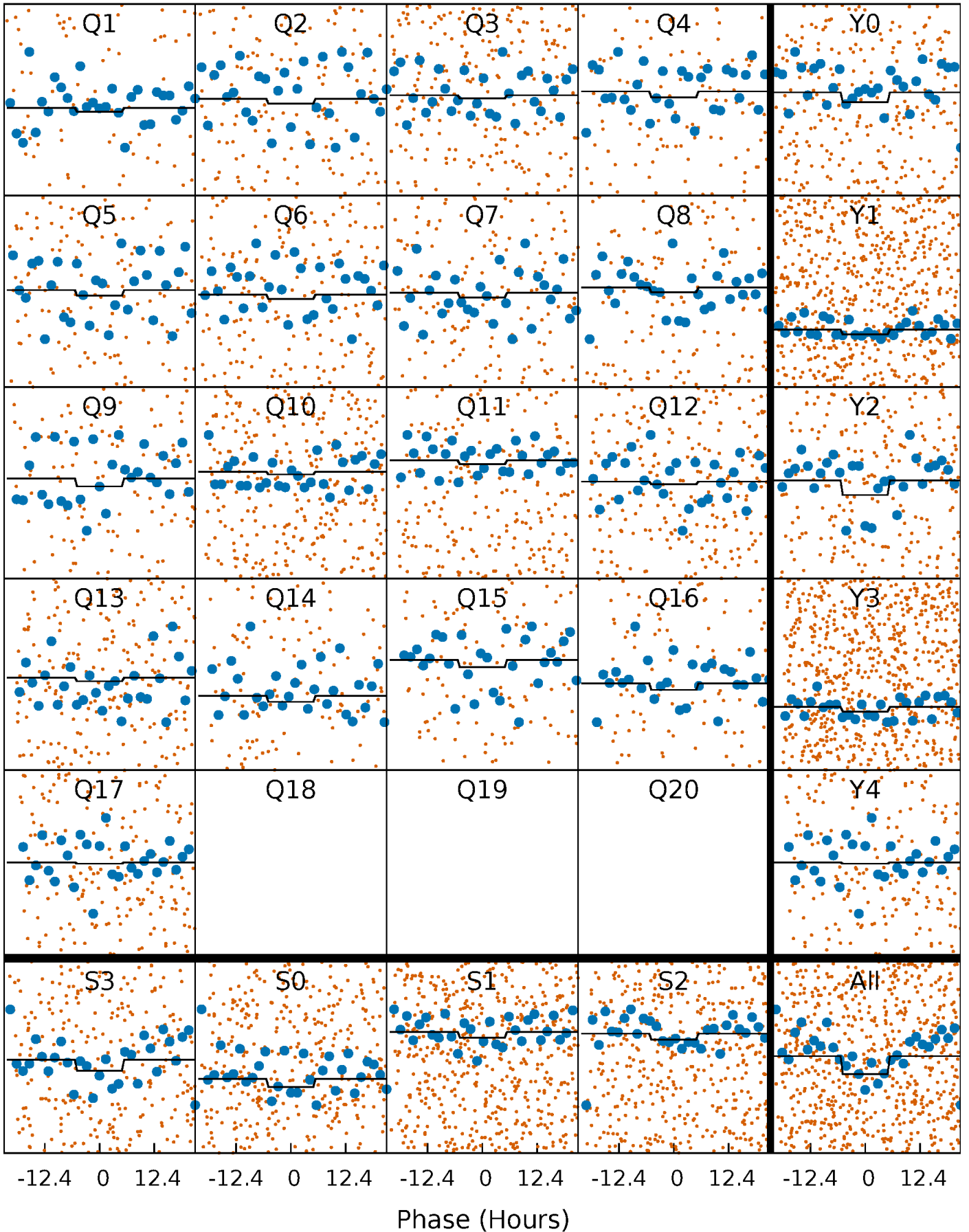
DV Quarter-Phased Transit Curves

TCE 007300184-02 P= 4.277684 Days $T_0=132.292271$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

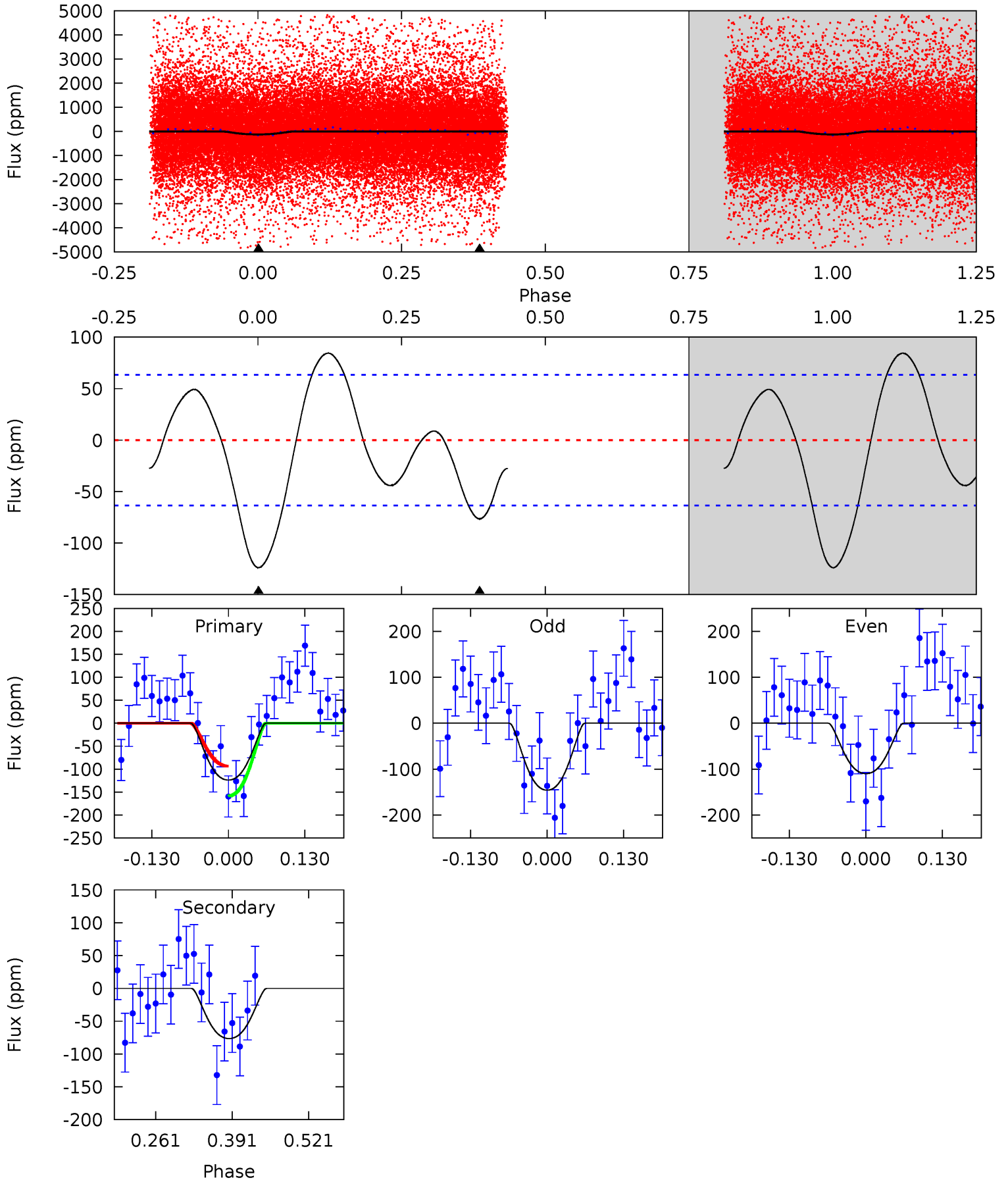
TCE 007300184-02 $P = 4.277592$ Days $T_0 = 132.357421$ (BKJD)



DV Model-Shift Uniqueness Test

007300184-02, P = 4.277684 Days, E = 128.014587 Days

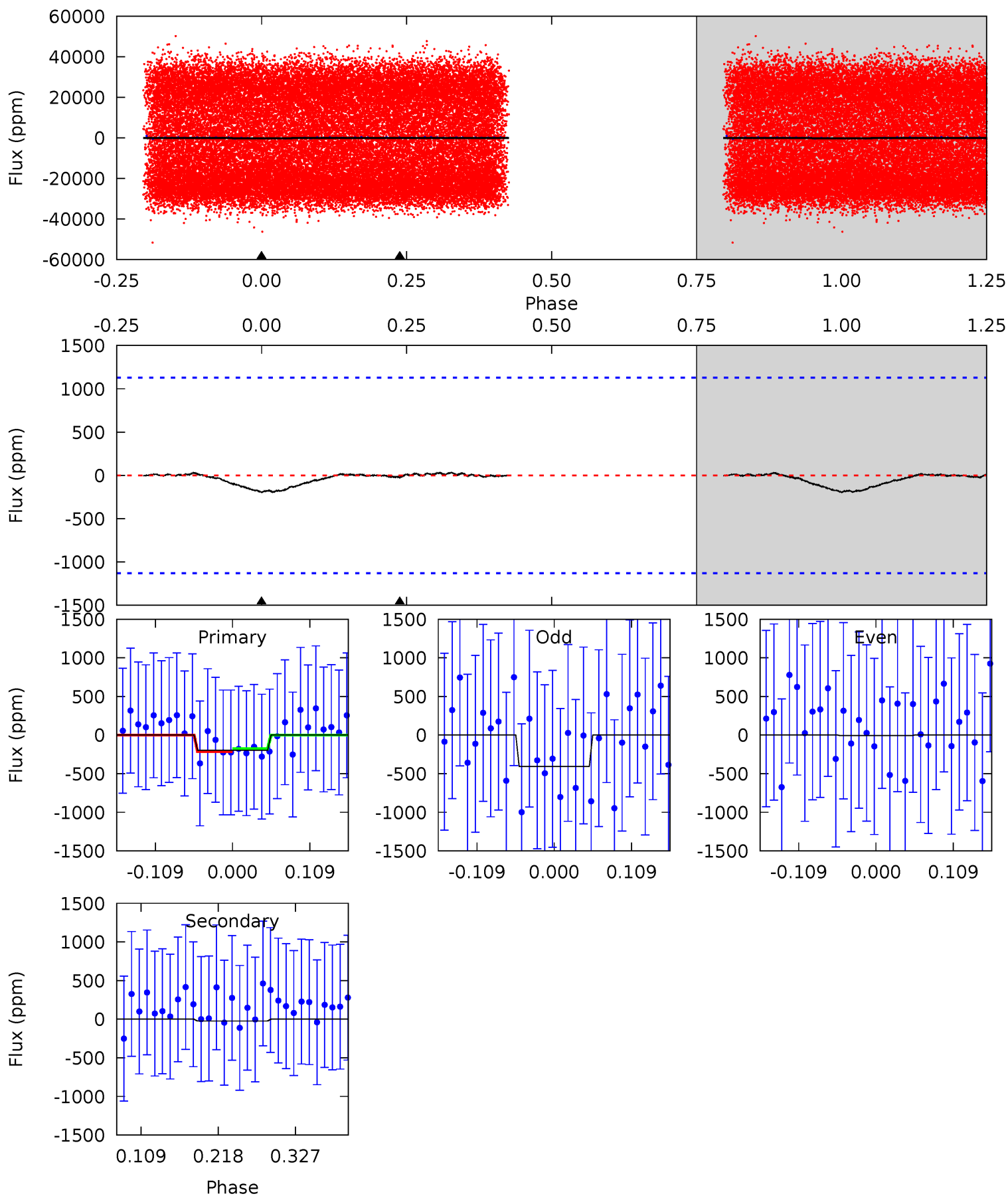
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.81	5.44	0	0	4.51	1.51	2.78	8.81	8.81	5.44	5.44	1.29	0.98	0.41	2.31



Alt Model-Shift Uniqueness Test

007300184-02, P = 4.277592 Days, E = 128.079829 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.79	0.10	0	0	4.55	1.60	0.05	0.79	0.79	0.10	0.10	0.81	1.40	0.14	0.08



Stellar Parameters For KIC 007300184

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6704^{+164}_{-281}	$4.353^{+0.060}_{-0.180}$	$-0.120^{+0.250}_{-0.300}$	$1.225^{+0.350}_{-0.150}$	$1.244^{+0.174}_{-0.191}$	$0.953^{+0.302}_{-0.450}$
	+2%/-4%	+1%/-4%	+208%/-250%	+29%/-12%	+14%/-15%	+32%/-47%
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 007300184-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-77 ± 14	$2.31^{+0.80}_{-0.79}$	1975^{+122}_{-104}	4922^{+1049}_{-608}	24^{+30}_{-12}
Alt.	-24 ± 248	$1.95^{+0.85}_{-0.70}$	1980^{+129}_{-99}	3233^{+4344}_{-10495}	$2.566^{+129.900}_{-119.055}$

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

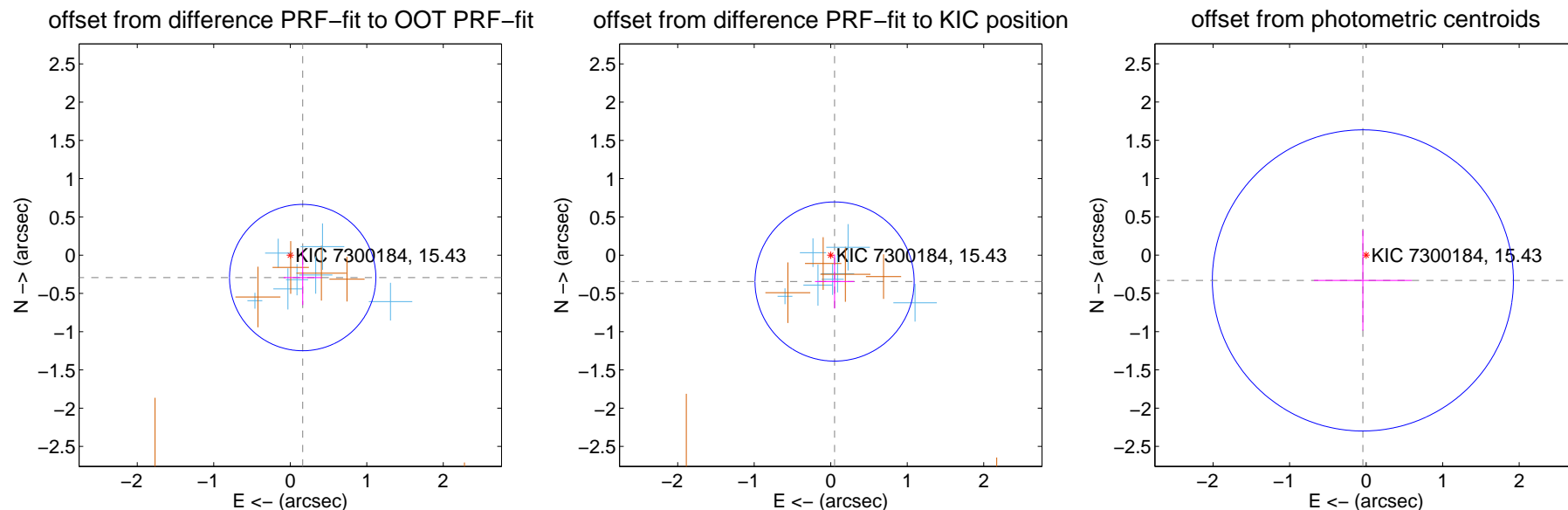
DV Centroid Data

Supplemental centroid analysis for 007300184-02. Kepler magnitude: 15.43. Transit SNR 10.28

There are 7 quarters with good PRF difference image offsets

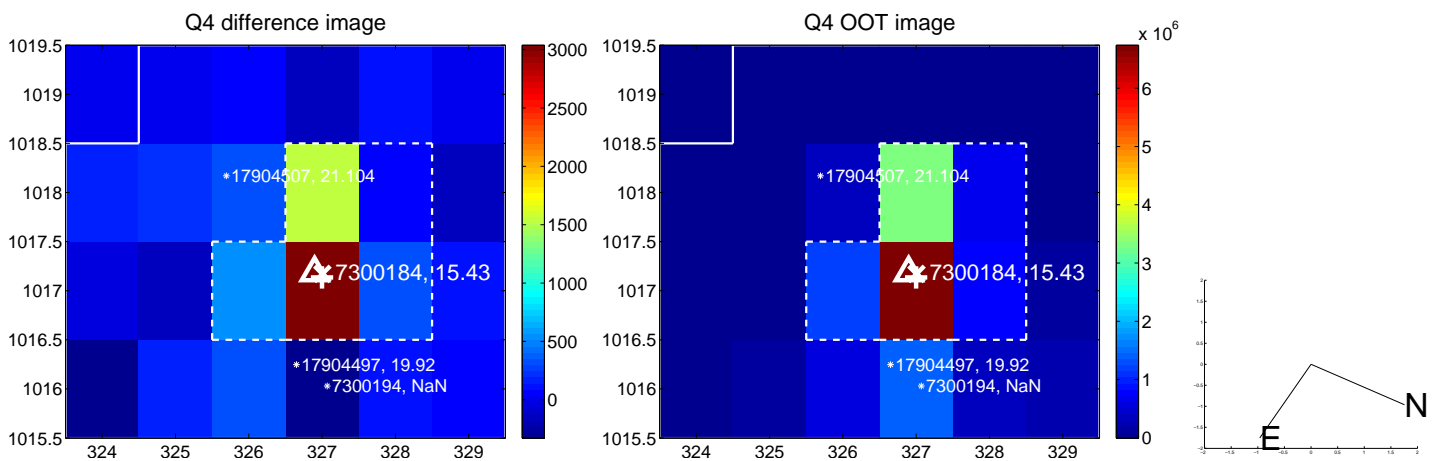
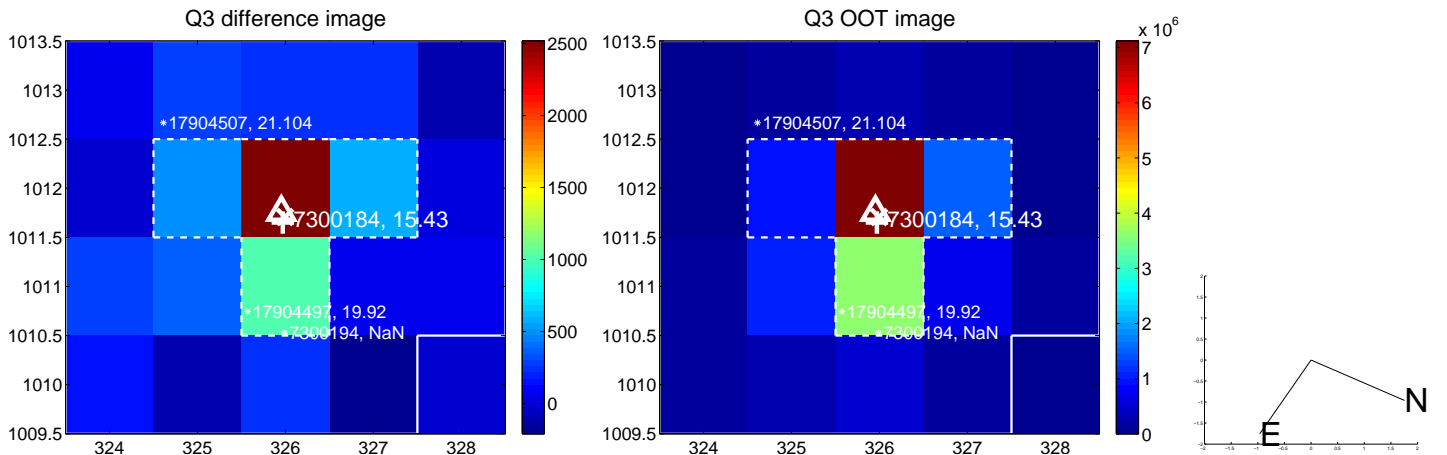
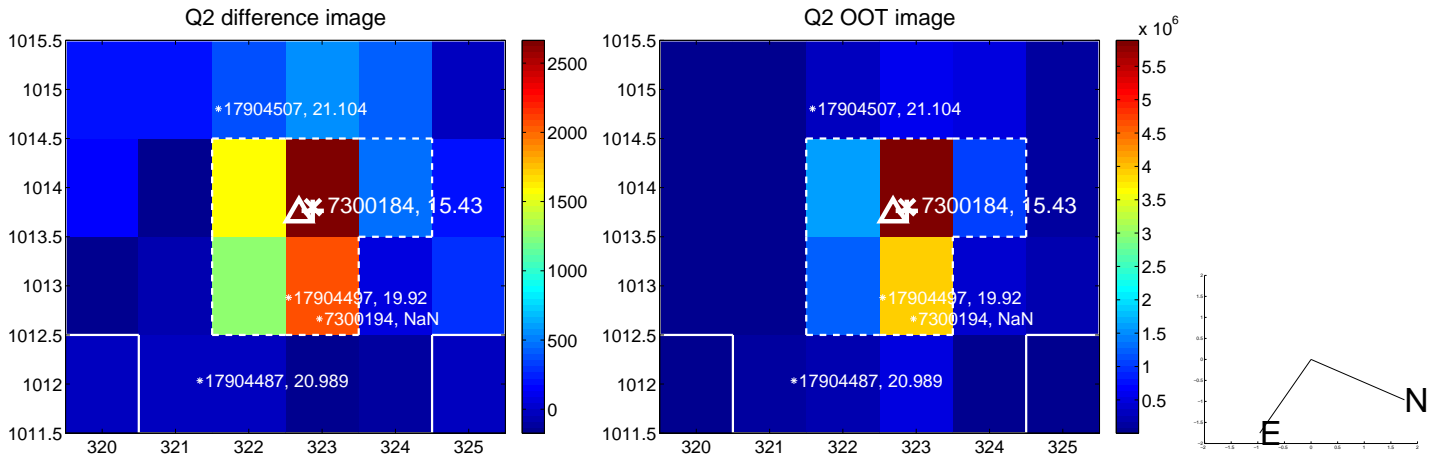
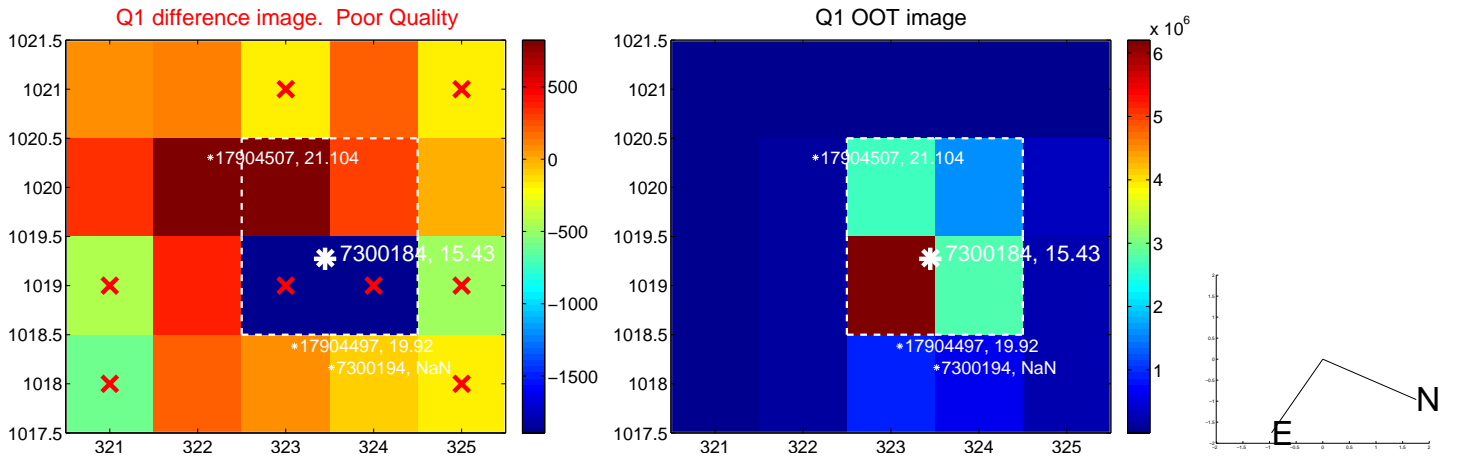
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.335 ± 0.319	1.05	-0.162 ± 0.250	-0.293 ± 0.358
PRF-fit source offset from KIC position	0.348 ± 0.347	1.00	-0.050 ± 0.256	-0.345 ± 0.352
photometric centroid source offset	0.33 ± 0.66	0.51	0.04 ± 0.64	-0.33 ± 0.66

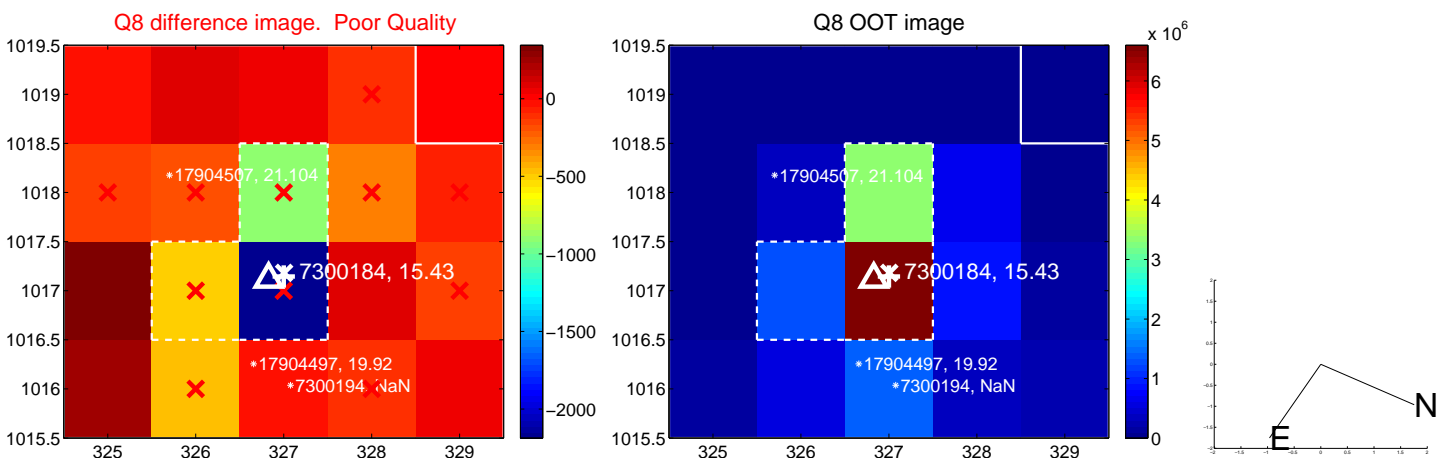
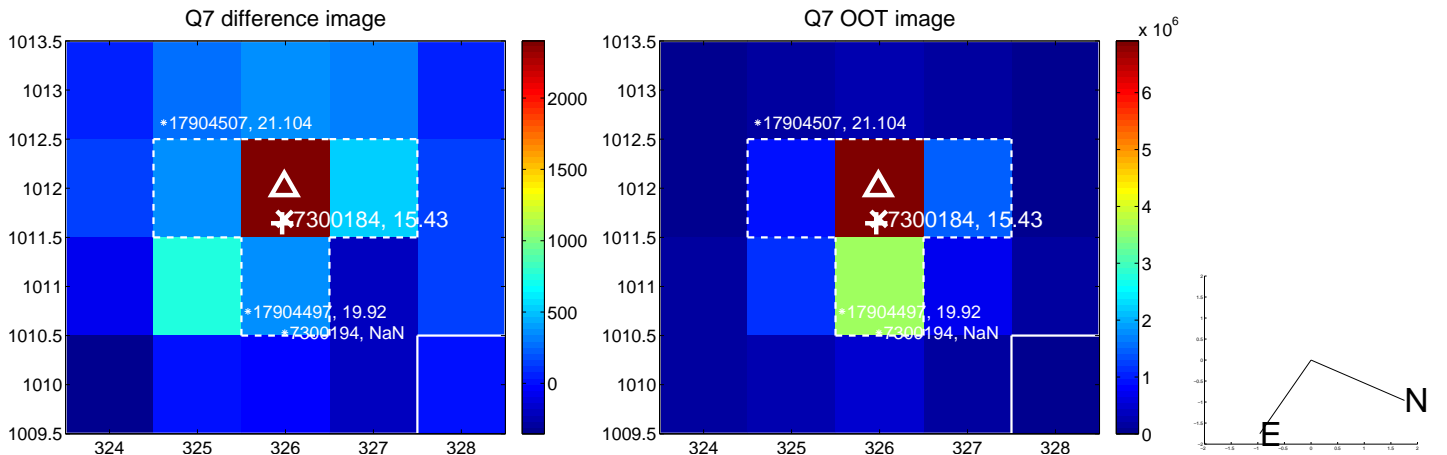
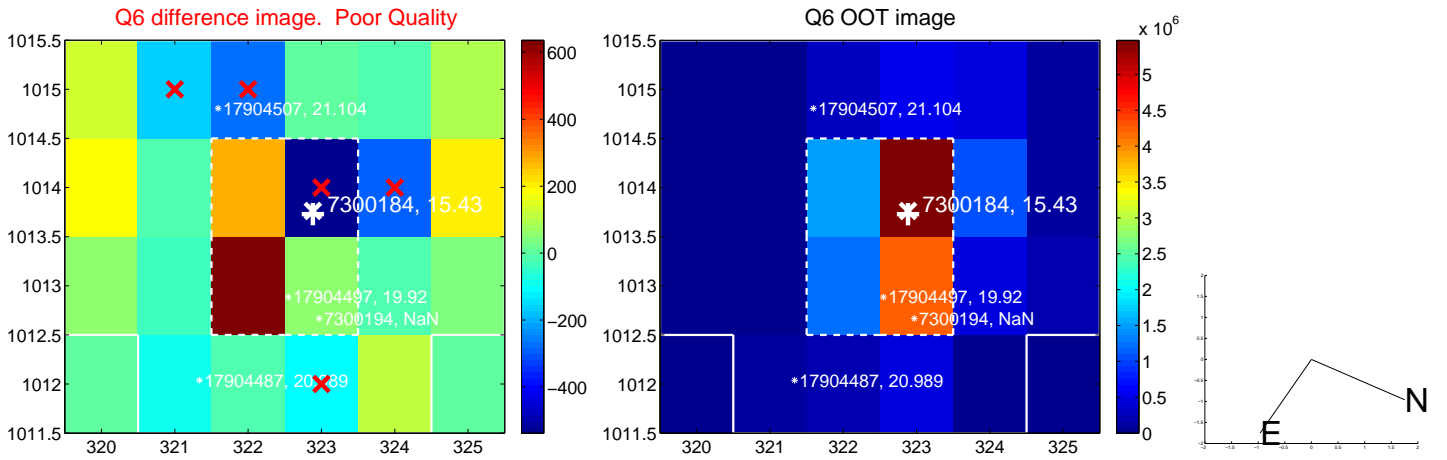
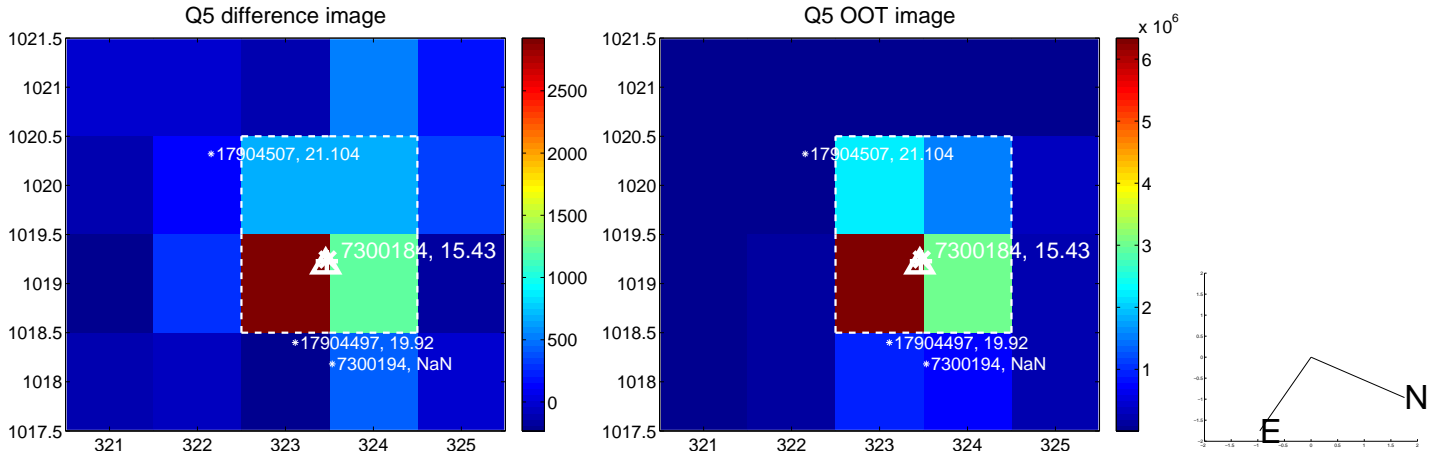


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

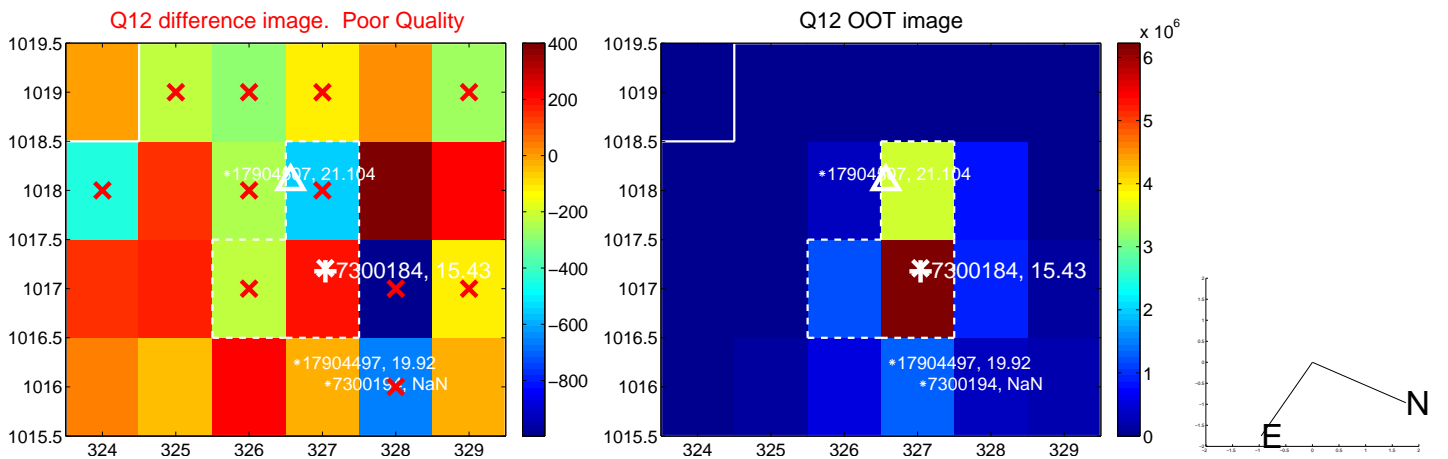
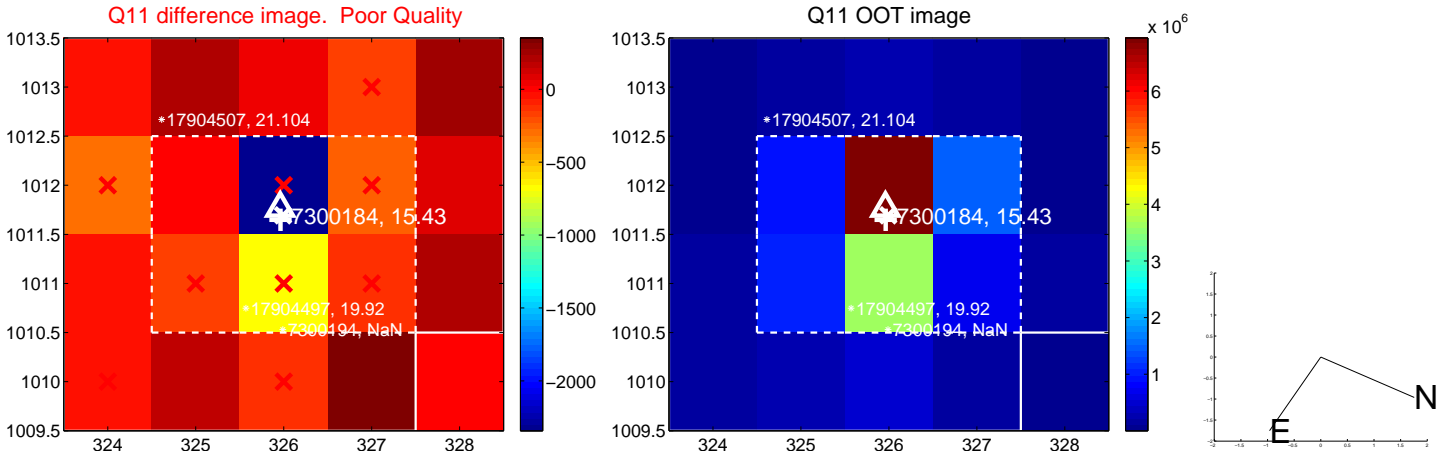
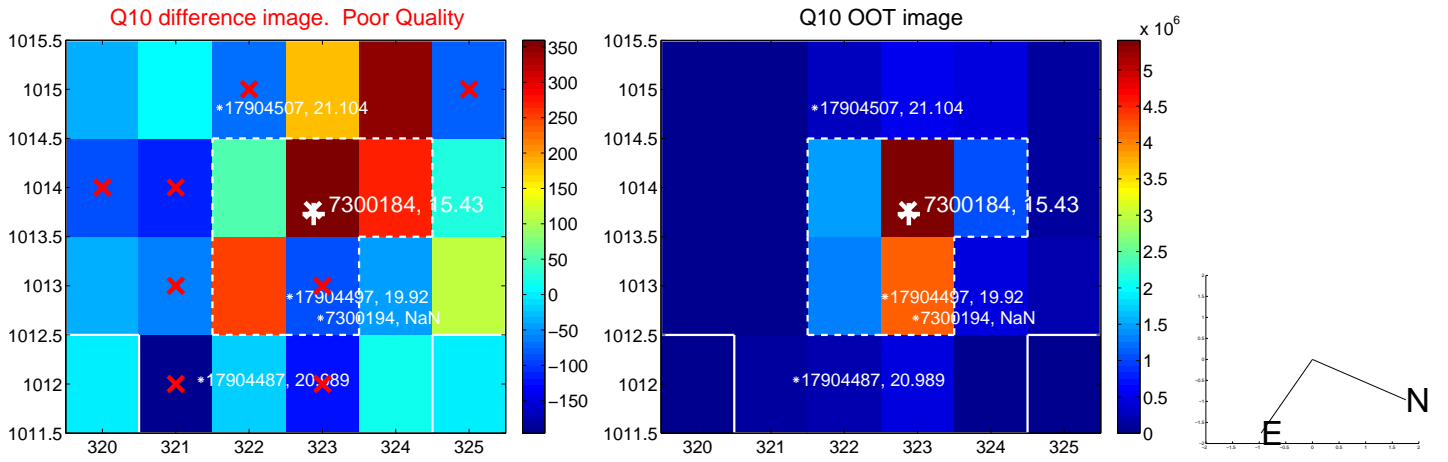
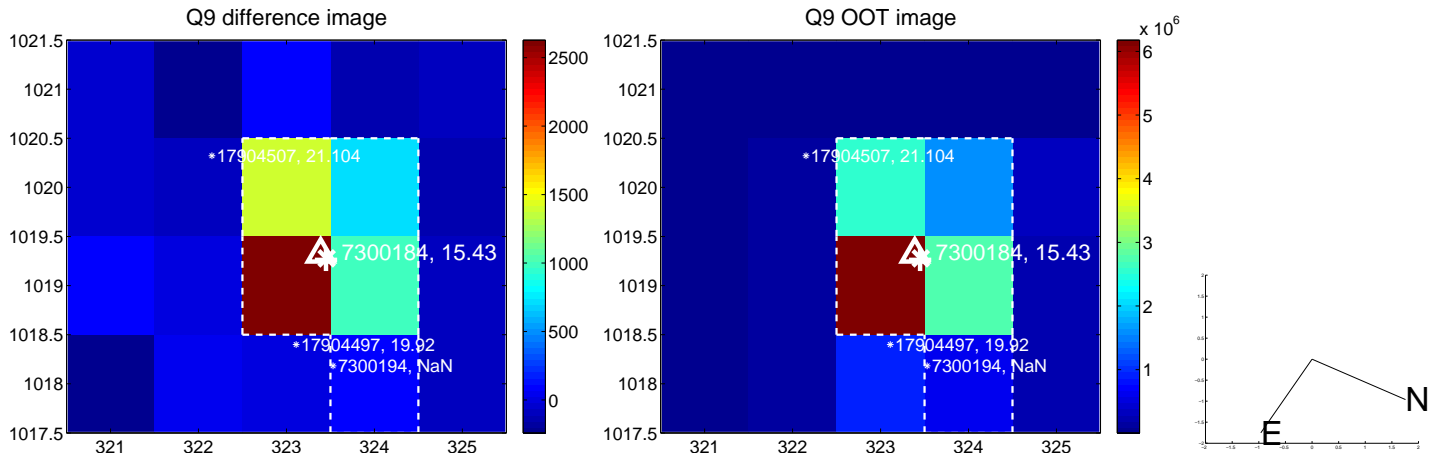
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



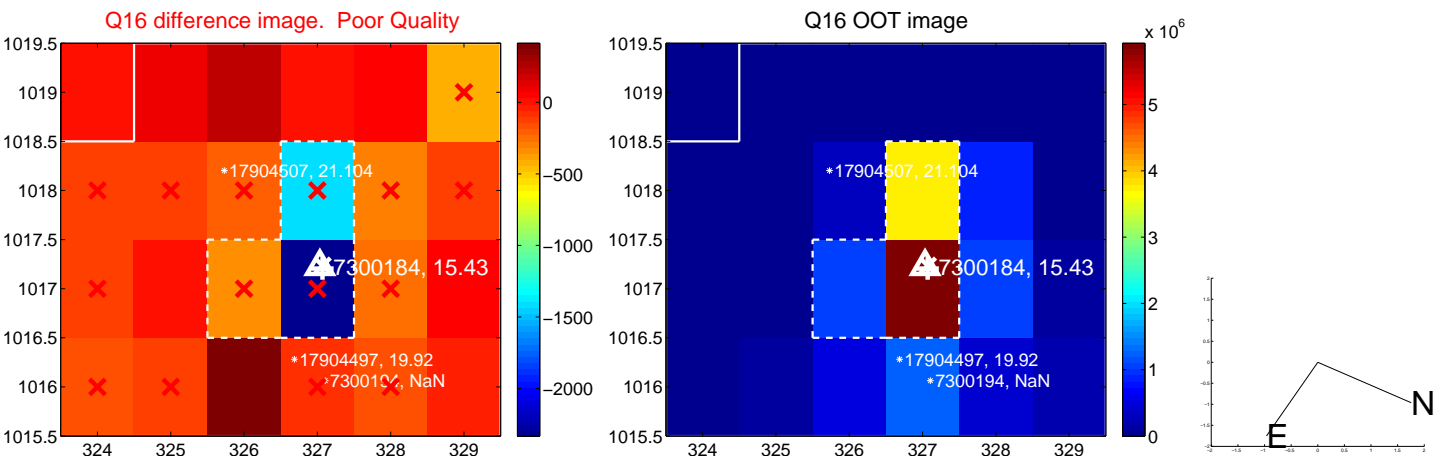
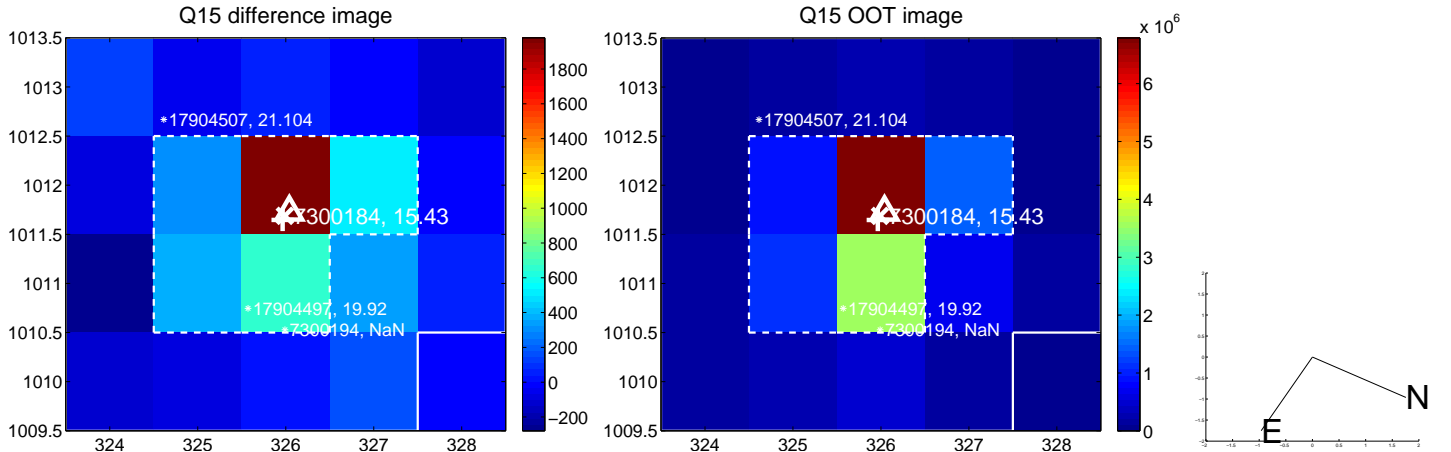
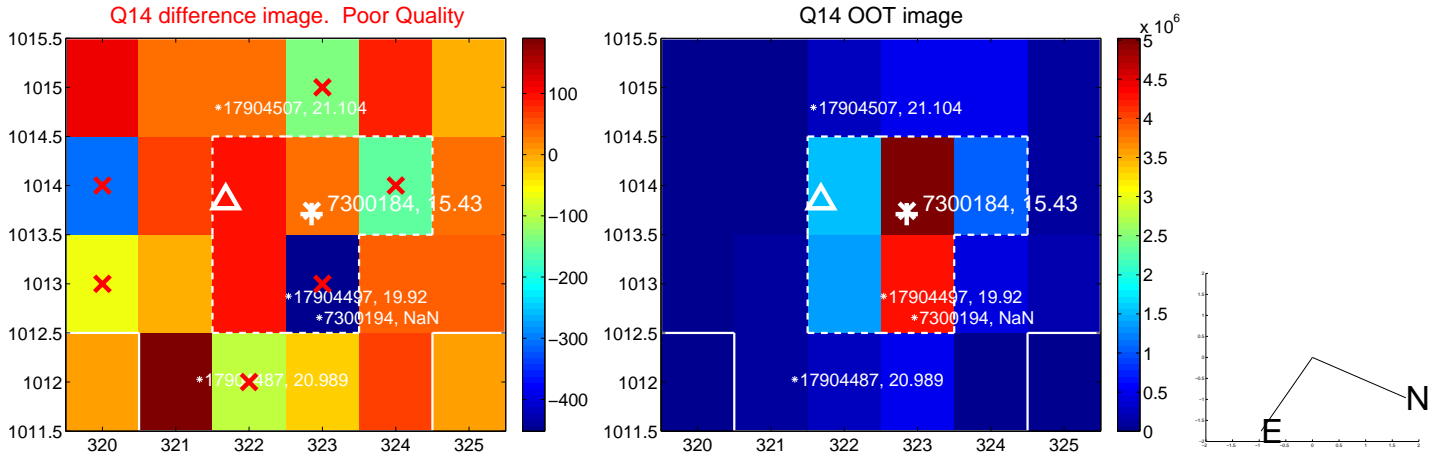
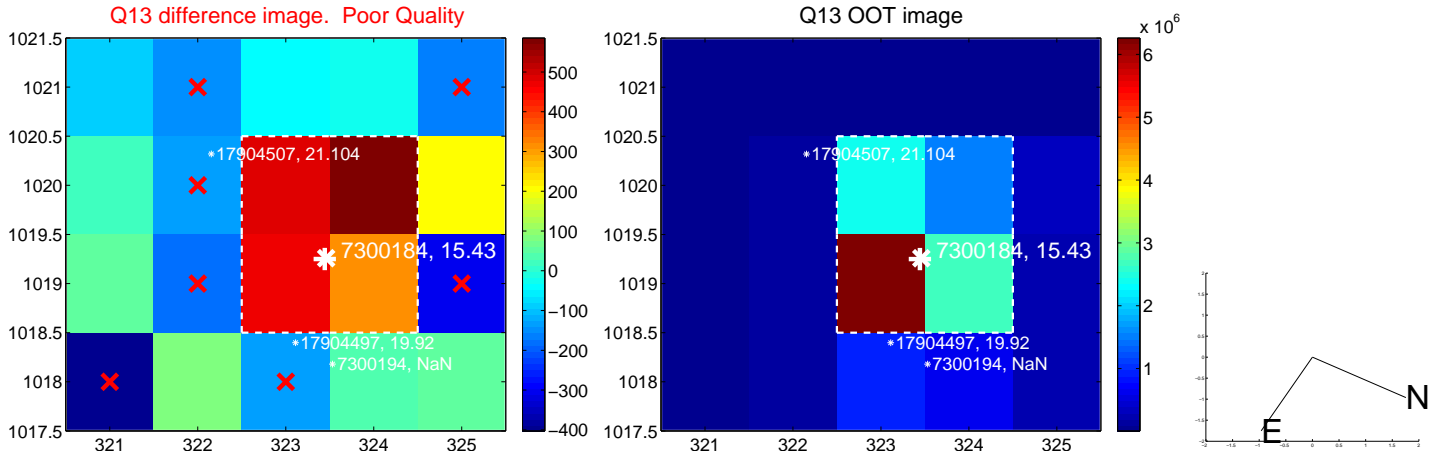
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



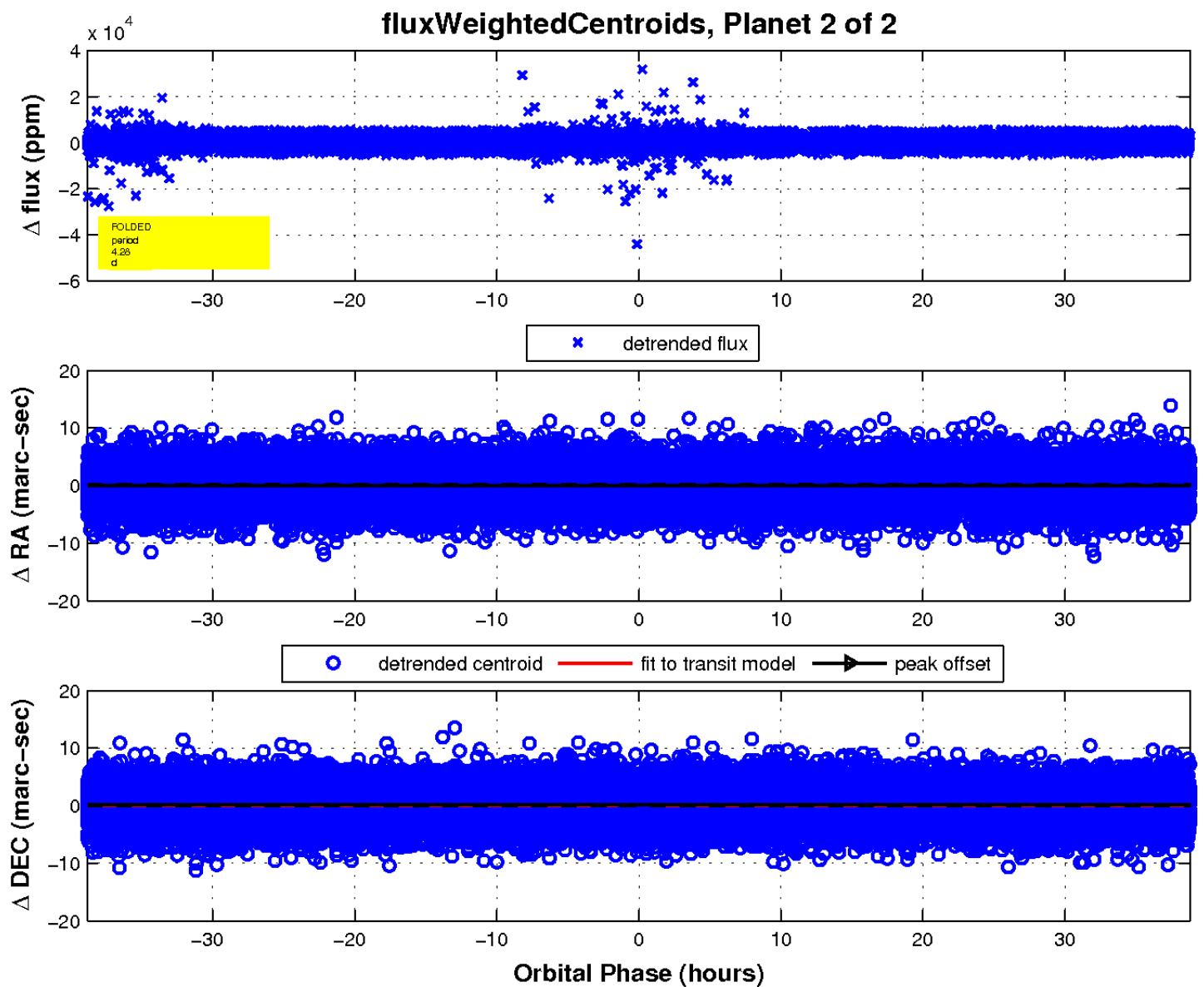
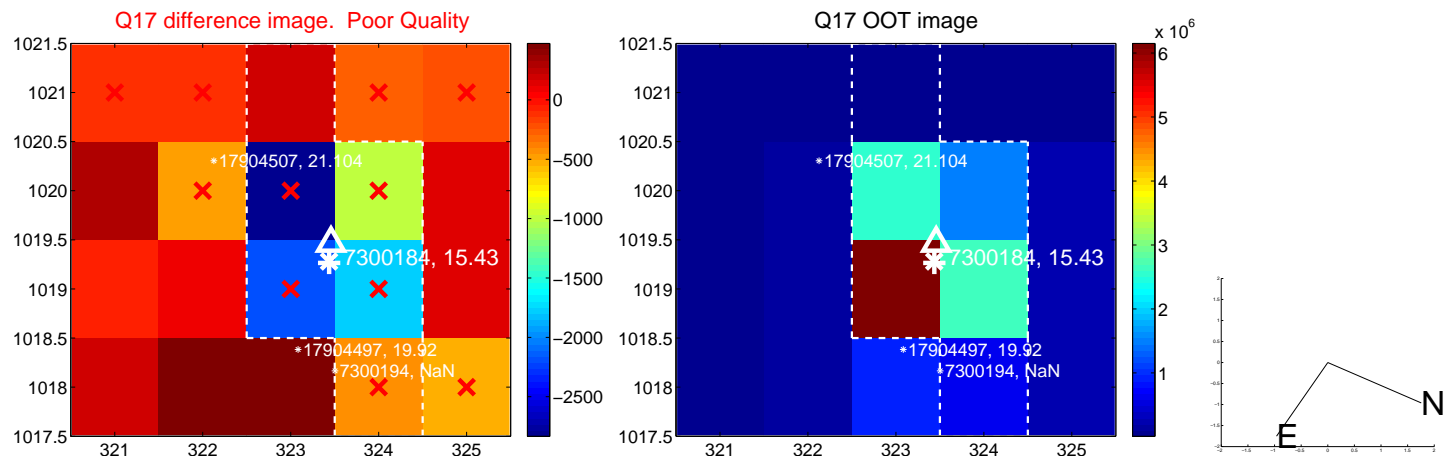
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

