

KIC 006543496

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})
006543496-01	OBS	No	1.648893	132.780370	25.6	7.155	8.8	7.6	2.70	5798	1.57	8247.80
006543496-02	OBS	No	146.162844	190.604219	418.5	2.704	8.1	8.5	2.70	5798	6.19	20.87
006543496-03	OBS	No	195.092496	147.786811	406.8	2.998	7.5	8.0	2.70	5798	6.46	14.20

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006543496-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
006543496-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS
006543496-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—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.

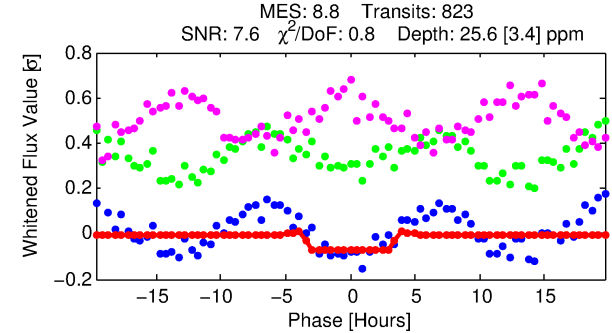
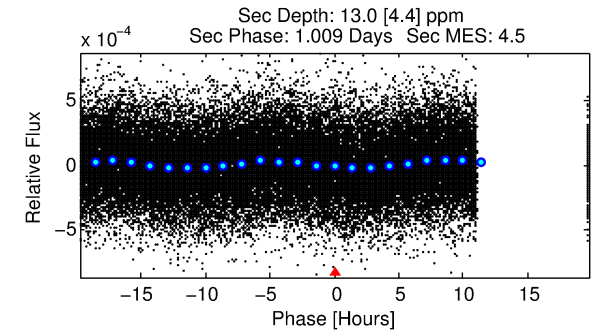
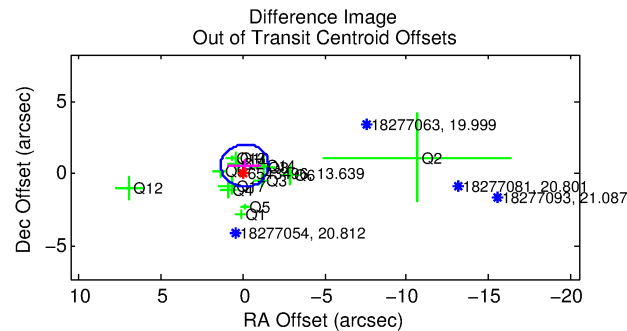
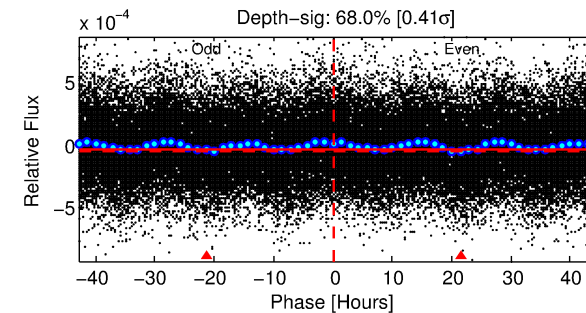
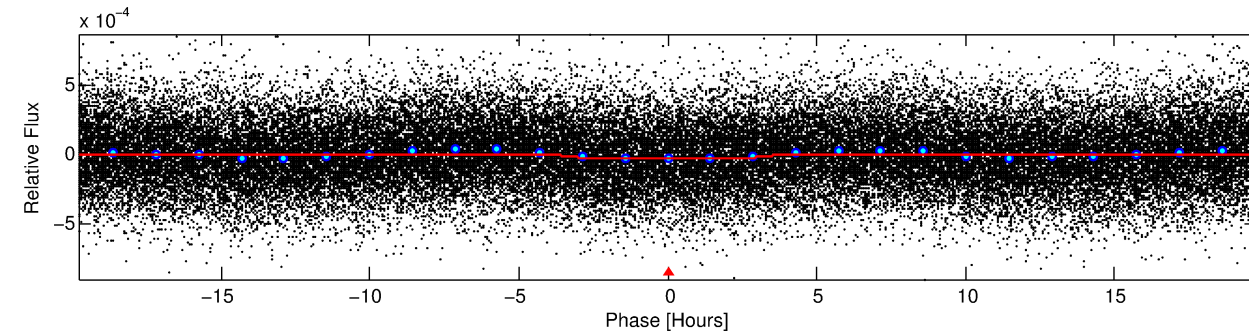
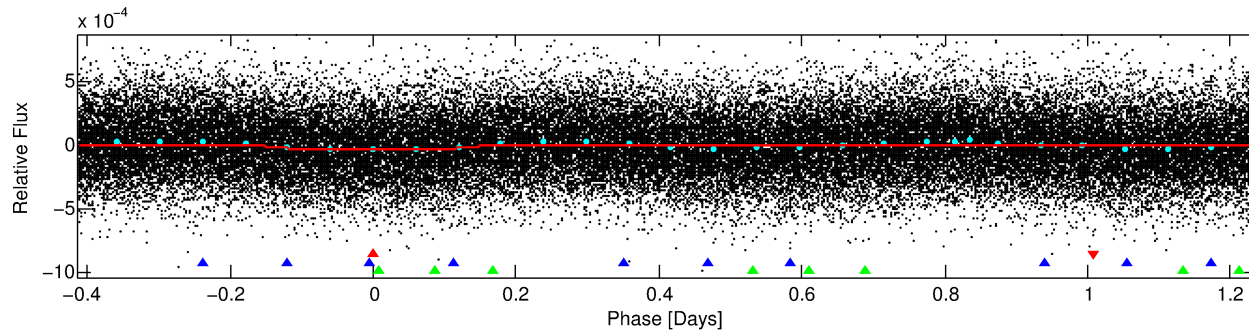
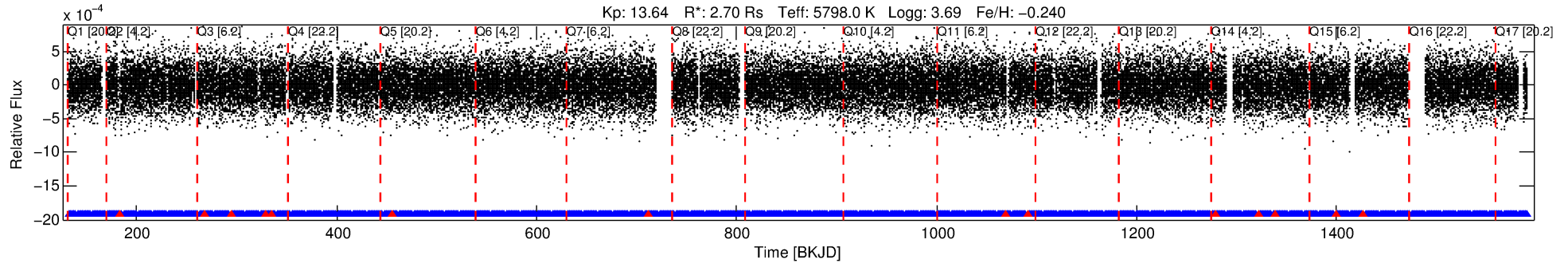
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006543496-01

No Significant Match Found

DV One-Page Summary

KIC: 6543496 Candidate: 1 of 3 Period: 1.649 d



DV Fit Results:

Period = 1.64889 [0.00003] d
Epoch = 132.7804 [0.0072] BKJD
Rp/R* = 0.0053 [0.0025]
a/R* = 1.28 [1.20]
b = 0.87 [0.69]
Seff = 8247.80 [9088.39]
Teq = 2430 [669] K
Rp = 1.57 [1.25] Re
a = 0.0299 [0.0197] AU
Ag = 2.58 [3.85] [0.41 σ]
Teffp = 4763 [1214] K [1.68 σ]

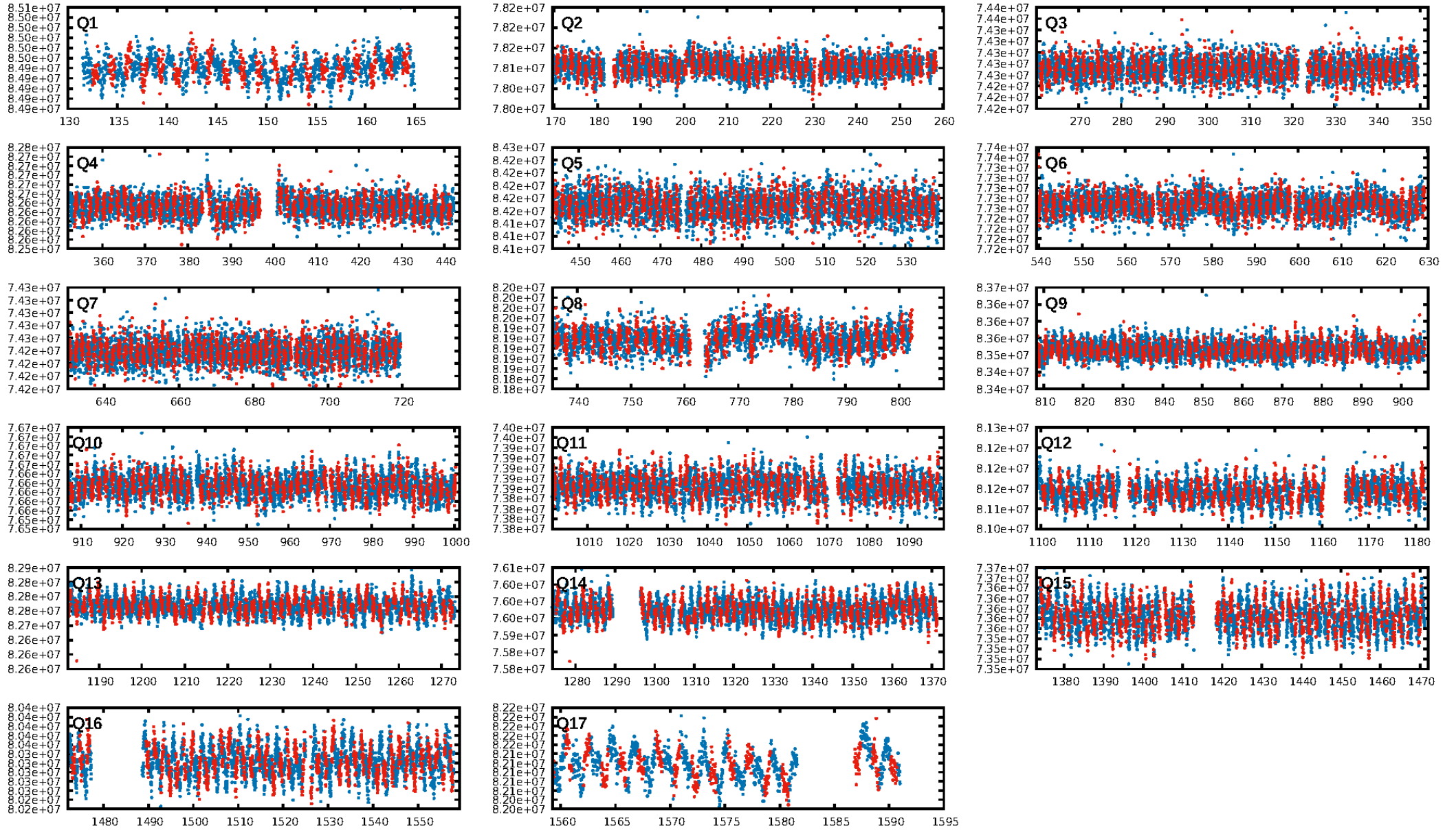
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [453.43 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.72e-13
RollingBand-fgt: 0.98 [773/787]
GhostDiagnostic-chr: 2.592
Centroid-sig: 4.1%
Centroid-so: 1.442 arcsec [1.47 σ]
OotOffset-rm: 0.592 arcsec [1.21 σ]
KicOffset-rm: 0.599 arcsec [1.29 σ]
OotOffset-st: 4/2/3/5 [14]
KicOffset-st: 4/2/3/5 [14]
DiffImageQuality-fgm: 0.79 [11/14]
DiffImageOverlap-fno: 1.00 [17/17]

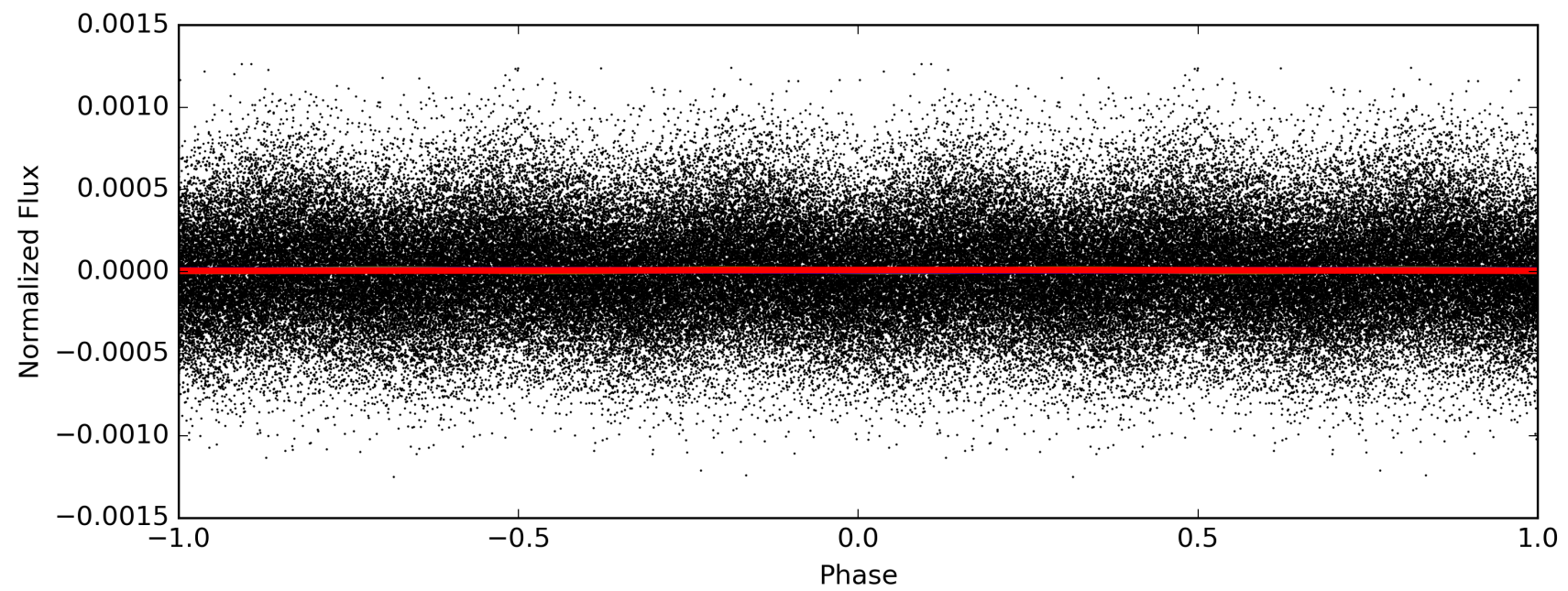
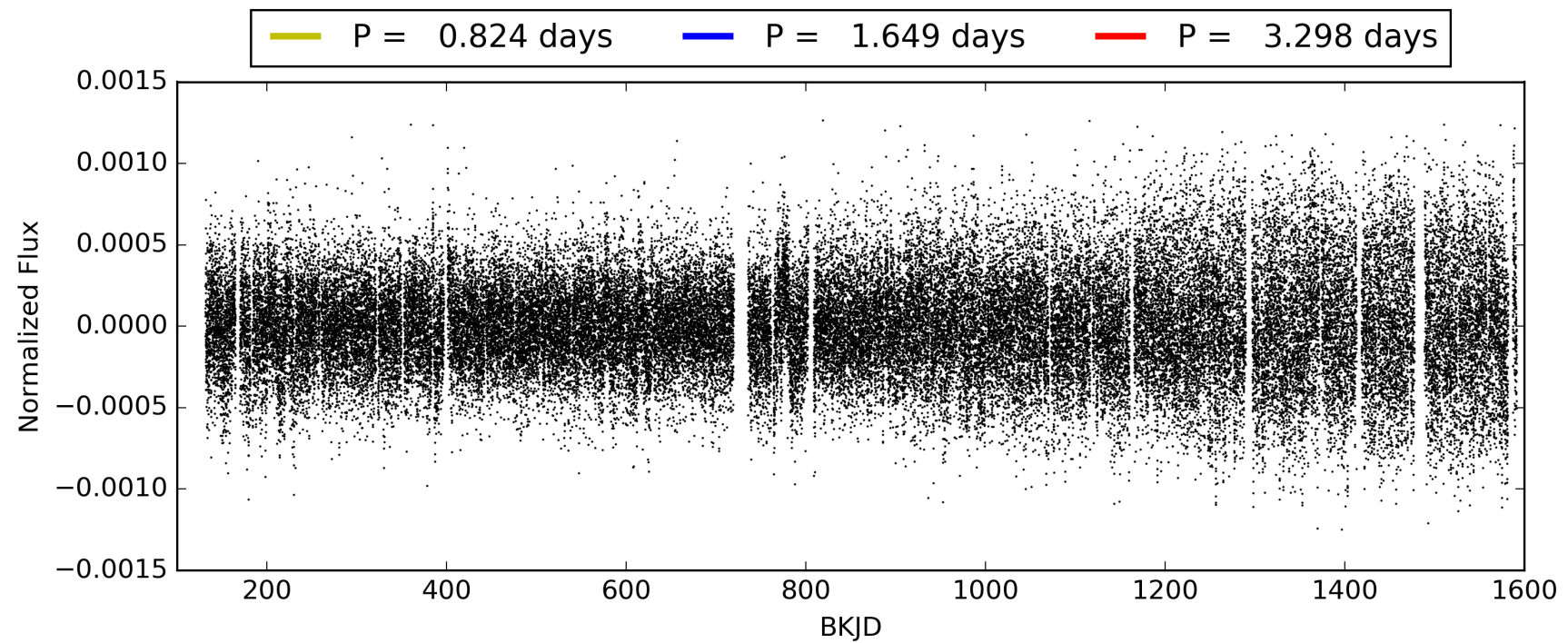
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 05:06:06 Z

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

TCE 006543496-01, PDC Light Curves

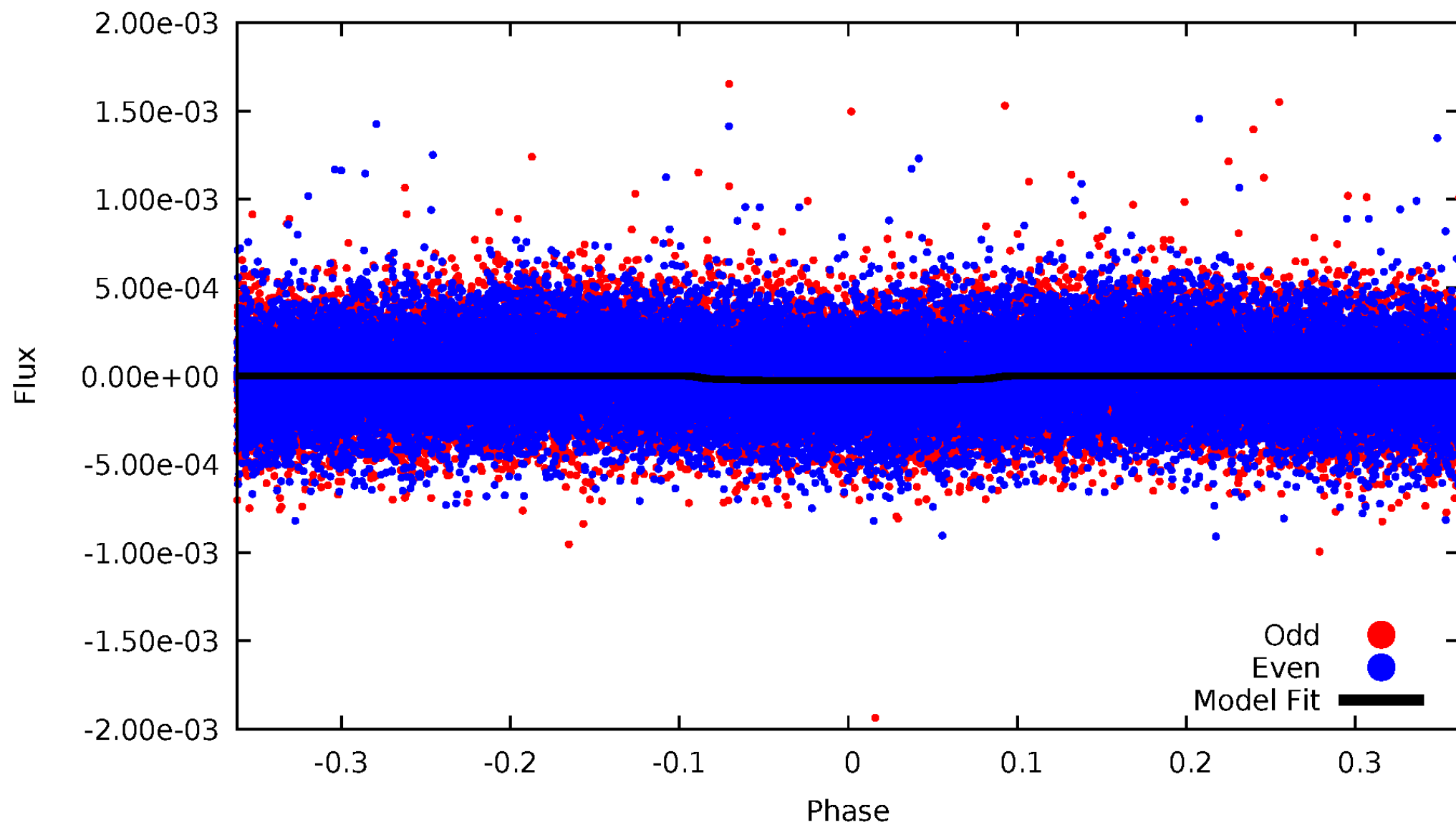


TCE 006543496-01



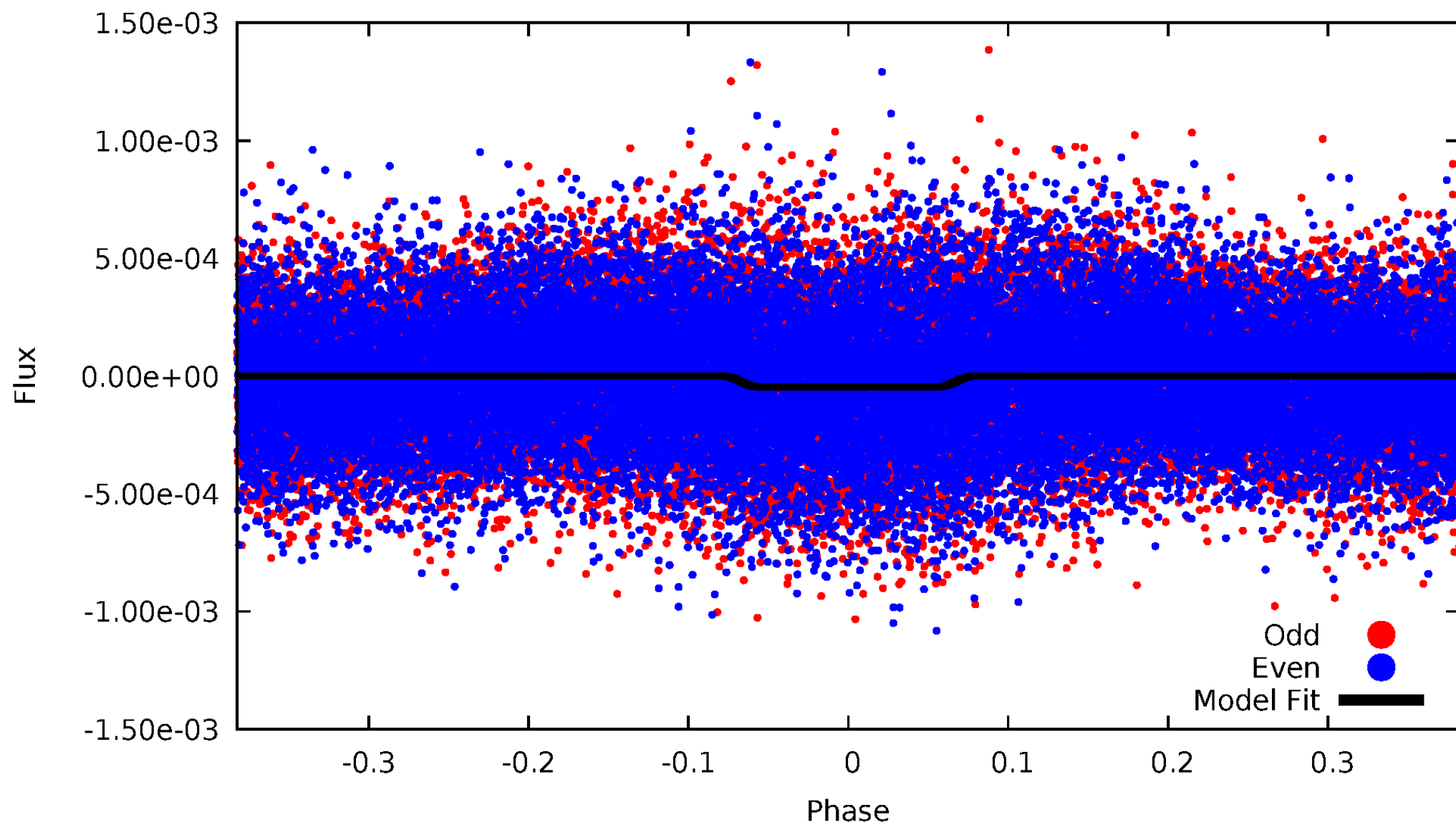
DV Odd/Even

TCE 006543496-01

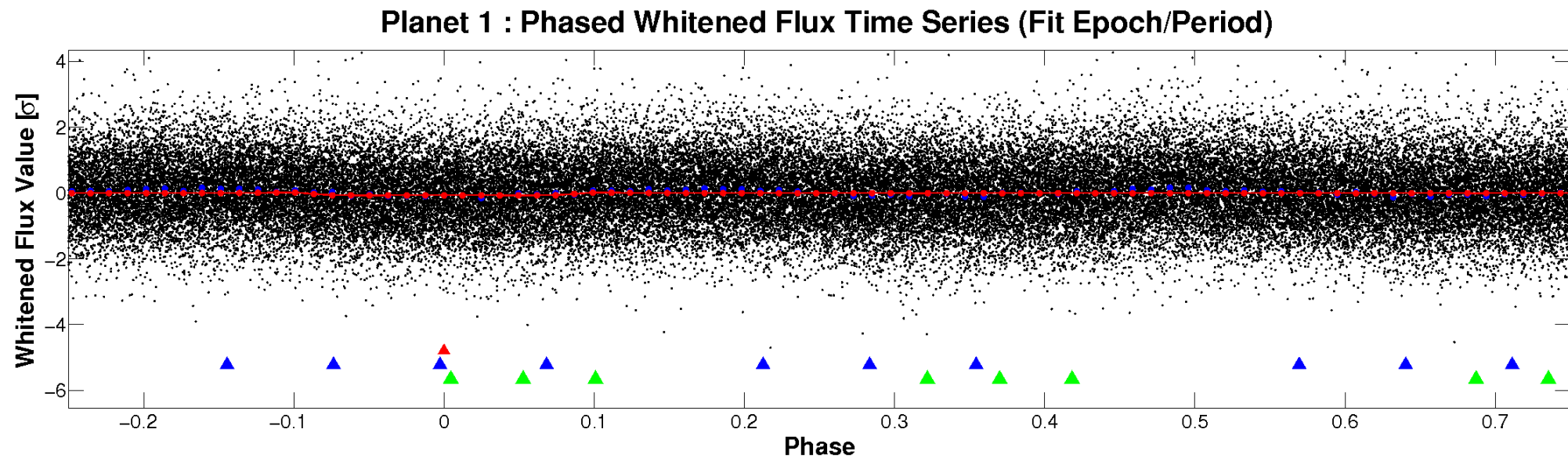
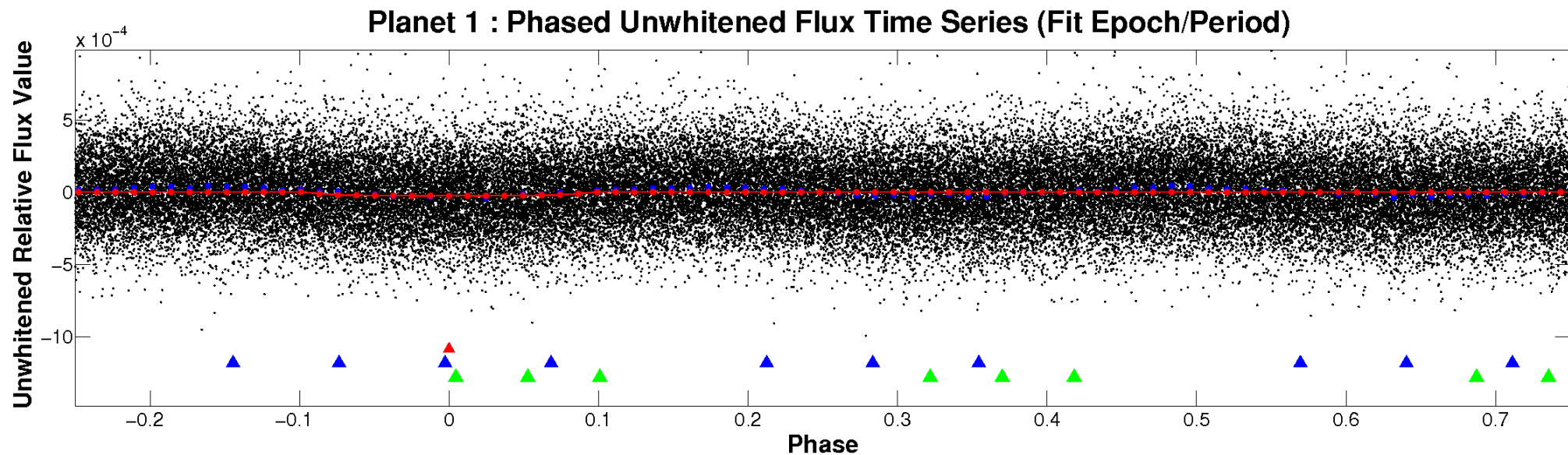


ALT Odd/Even

TCE 006543496-01

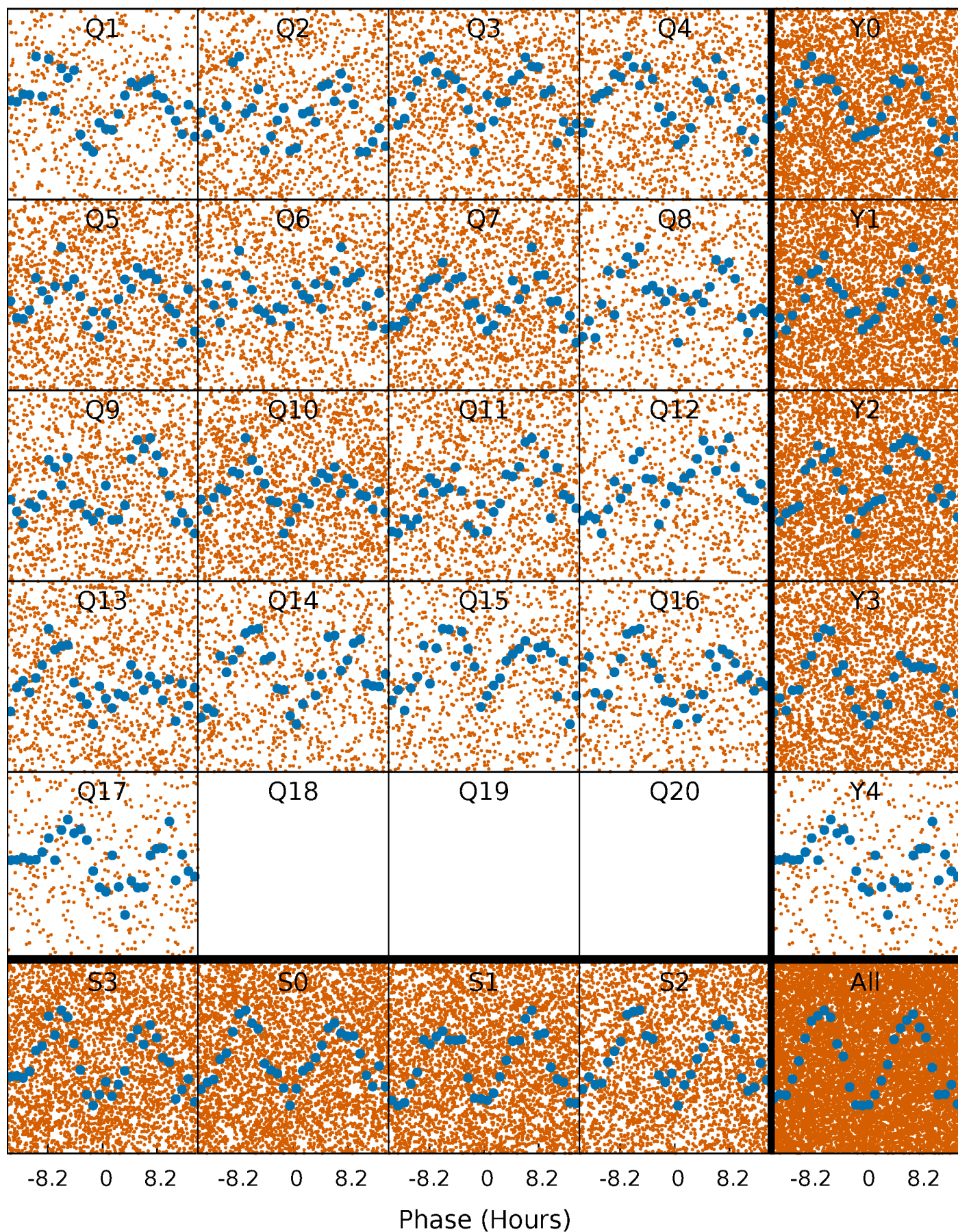


Non-Whitened Vs. Whitened Light Curve



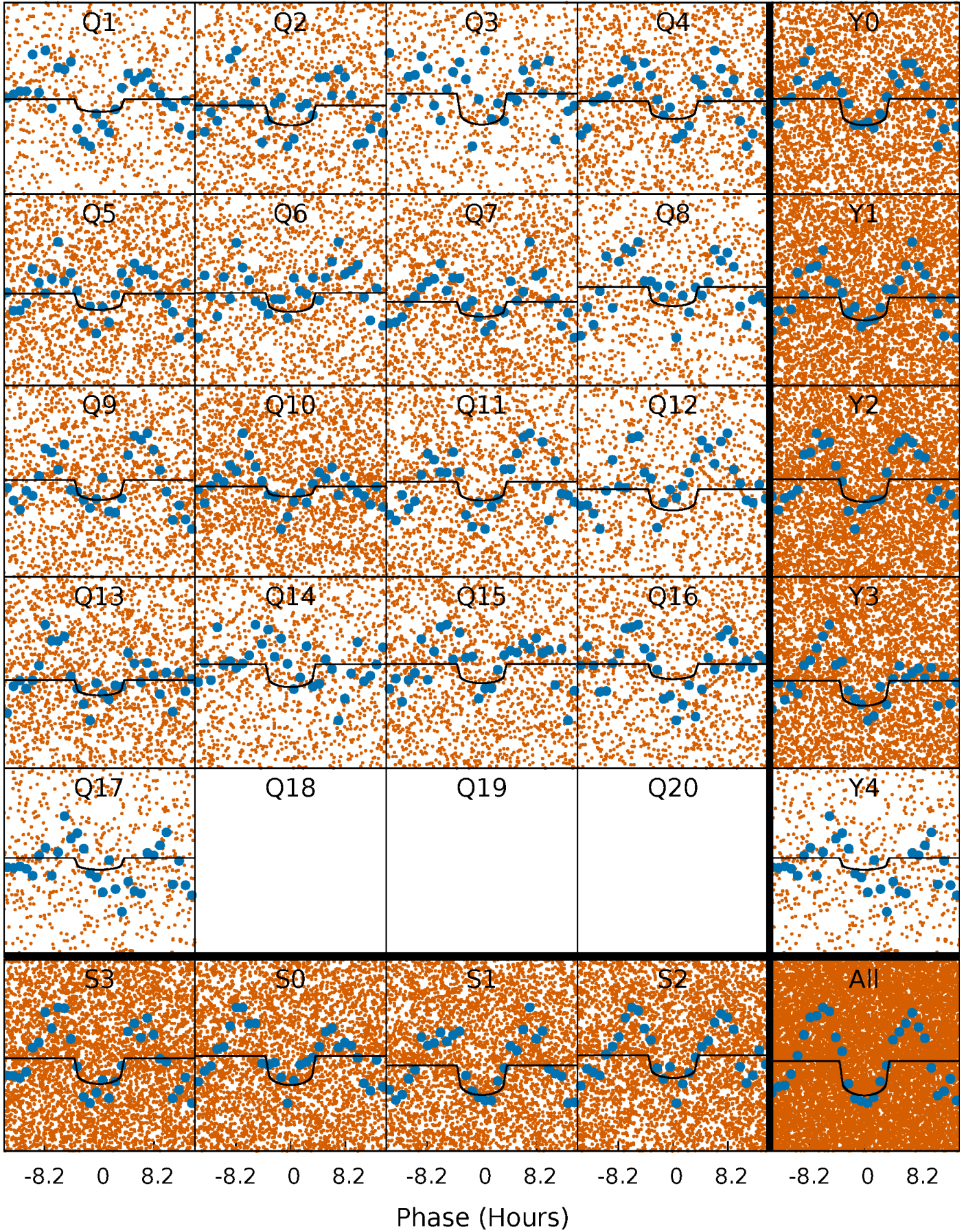
PDC Quarter-Phased Transit Curves

TCE 006543496-01 P= 1.648893 Days $T_0=132.780370$ (BKJD)



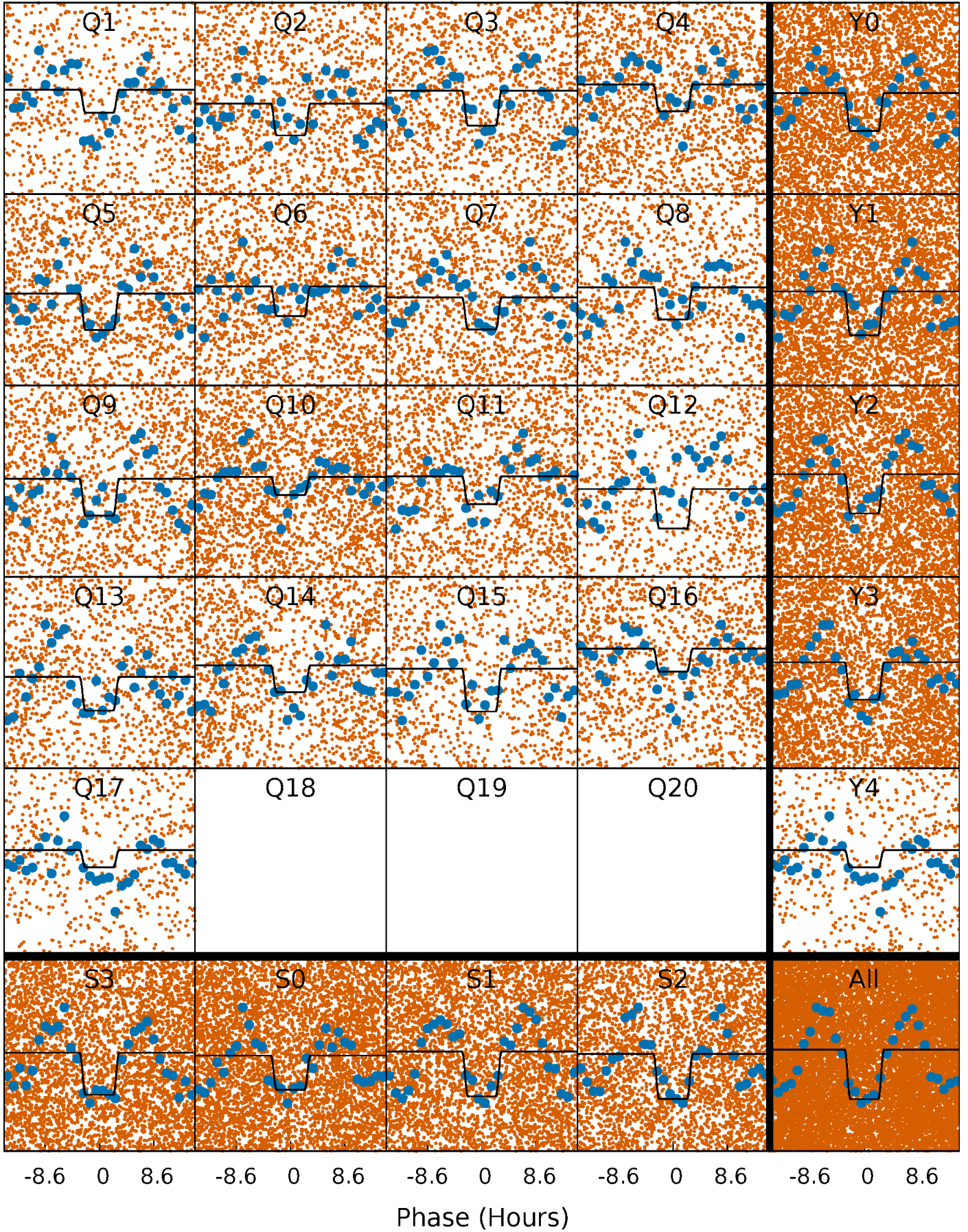
DV Quarter-Phased Transit Curves

TCE 006543496-01 P= 1.648893 Days $T_0=132.780370$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

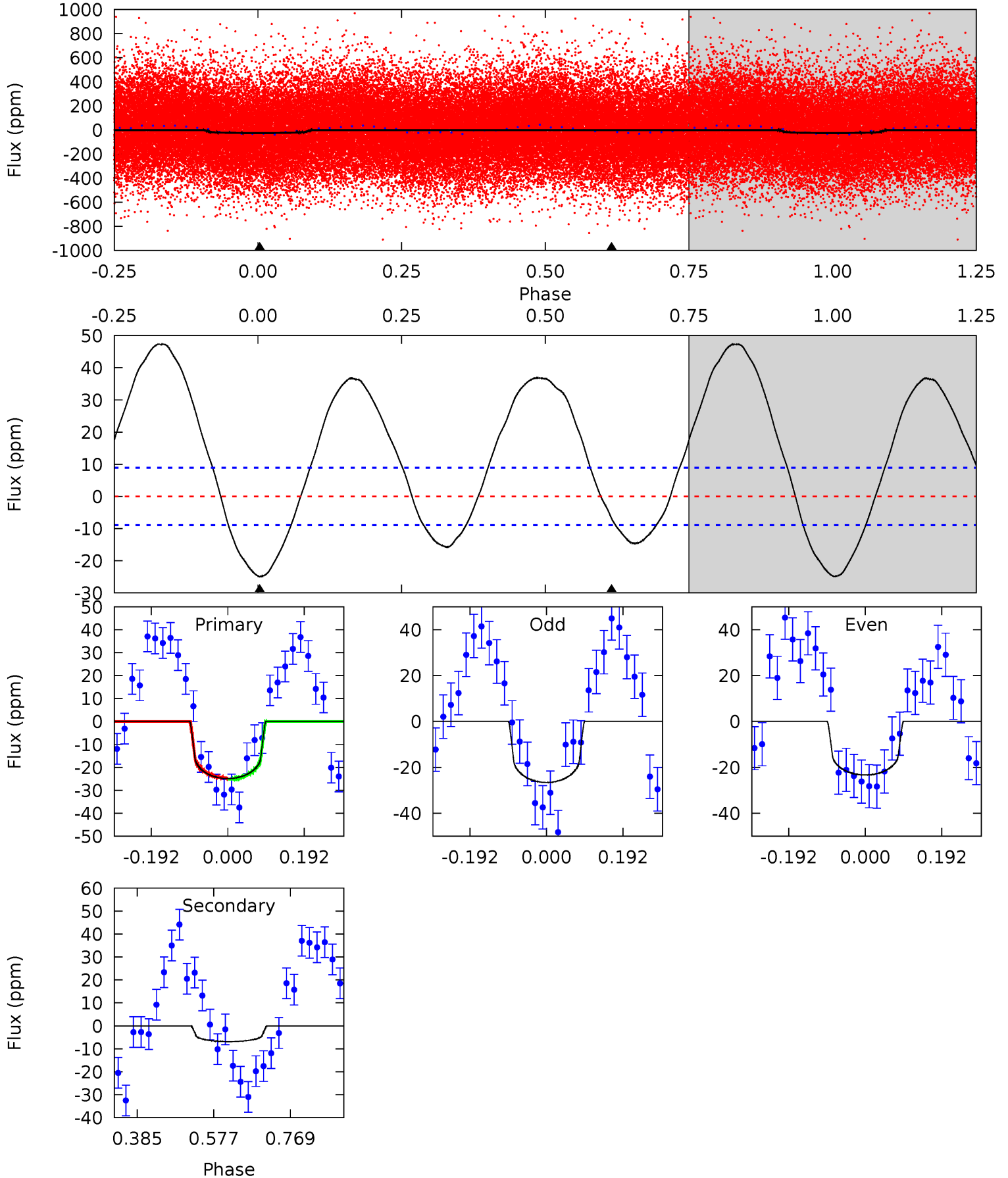
TCE 006543496-01 P= 1.648960 Days $T_0=132.748394$ (BKJD)



DV Model-Shift Uniqueness Test

006543496-01, P = 1.648893 Days, E = 131.131477 Days

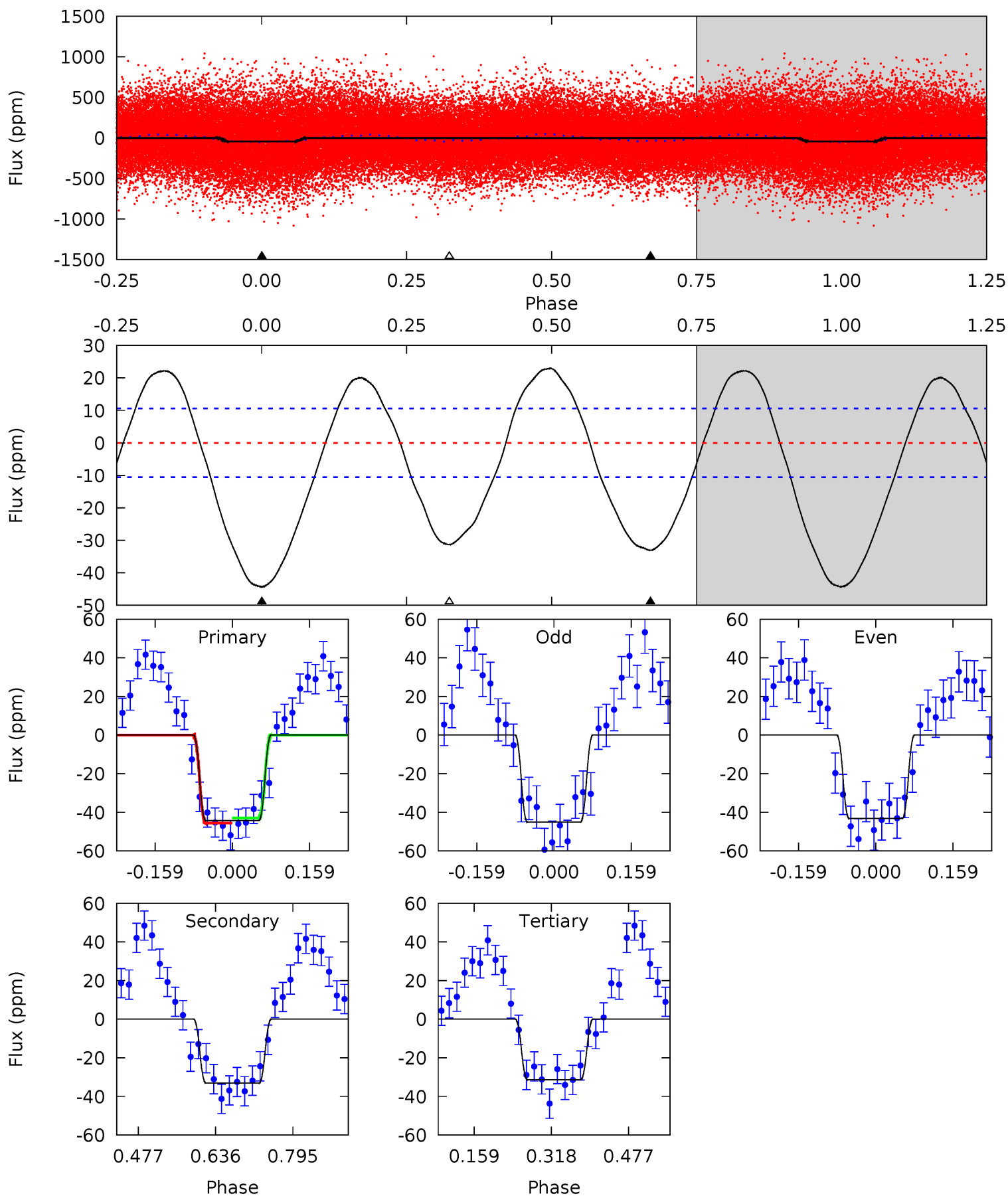
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.4	3.42	0	0	4.43	1.30	7.42	12.4	12.4	3.42	3.42	0.81	1.07	0.66	0.13



Alt Model-Shift Uniqueness Test

006543496-01, P = 1.648960 Days, E = 131.099434 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.7	13.9	13.2	0	4.47	1.41	8.22	5.47	18.7	0.76	13.9	0.39	0.90	0.34	0.56



Stellar Parameters For KIC 006543496

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5798^{+193}_{-158}	$3.693^{+0.656}_{-0.164}$	$-0.240^{+0.300}_{-0.250}$	$2.697^{+0.691}_{-1.728}$	$1.309^{+0.173}_{-0.432}$	$0.094^{+1.015}_{-0.044}$
	+3%/-3%	+18%/-4%	+125%/-104%	+26%/-64%	+13%/-33%	+1079%/-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 006543496-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-7 ± 2	$1.40^{+0.89}_{-0.69}$	3327^{+320}_{-535}	4086^{+1246}_{-852}	$1.682^{+4.917}_{-1.116}$
Alt.	-33 ± 2	$1.81^{+0.88}_{-0.82}$	3372^{+278}_{-580}	5281^{+1354}_{-702}	$4.826^{+11.468}_{-2.570}$

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

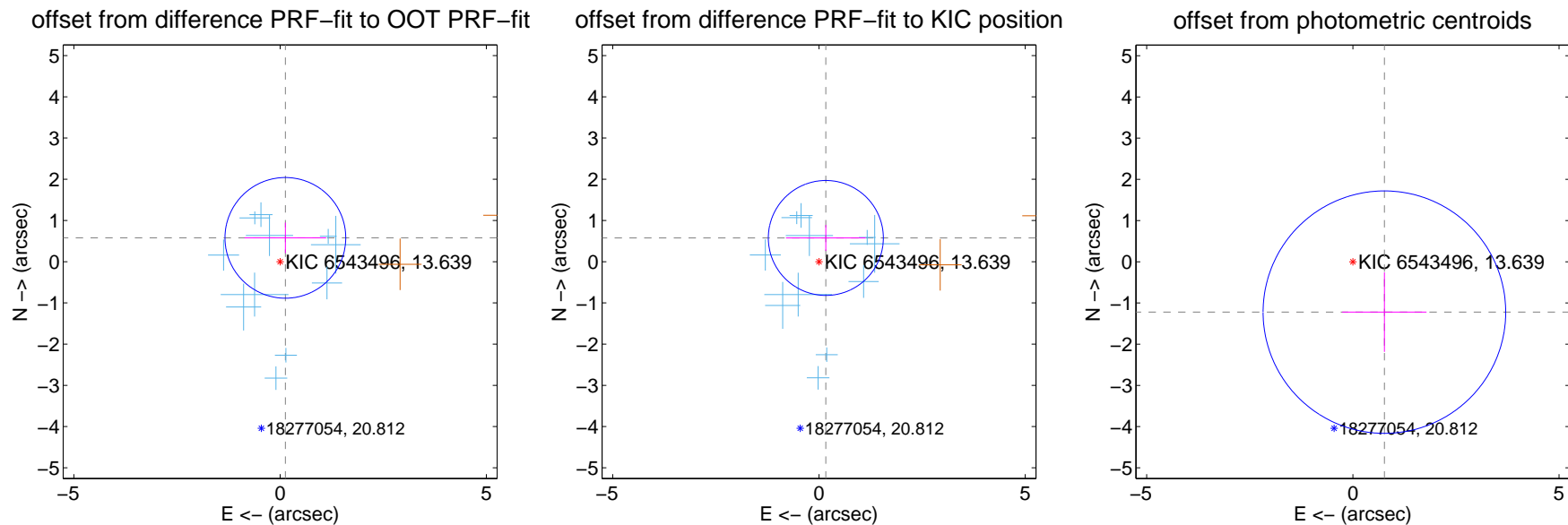
DV Centroid Data

Supplemental centroid analysis for 006543496-01. Kepler magnitude: 13.64. Transit SNR 7.57

There are 11 quarters with good PRF difference image offsets

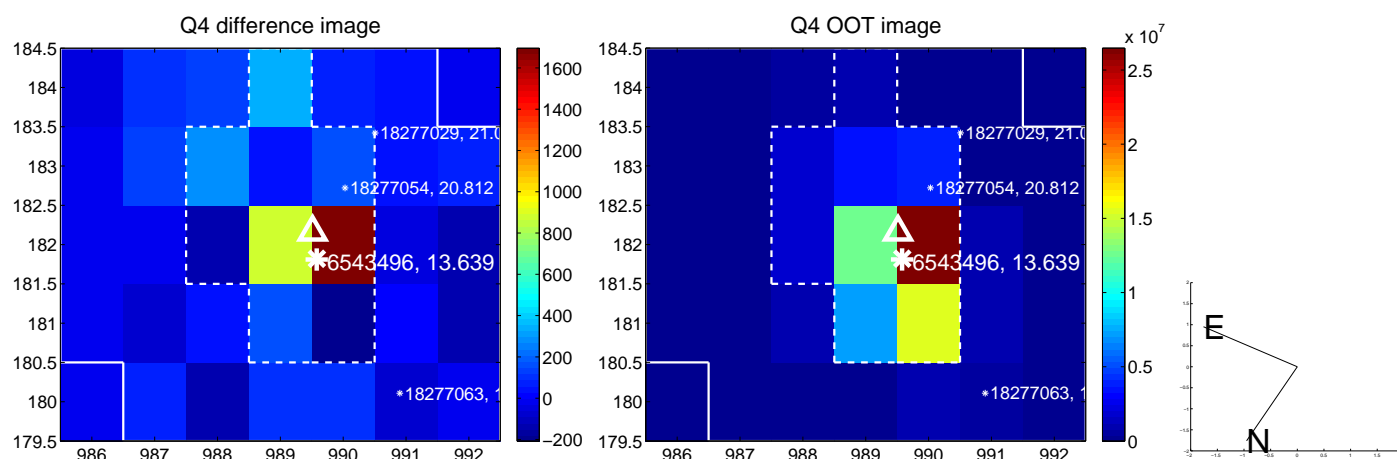
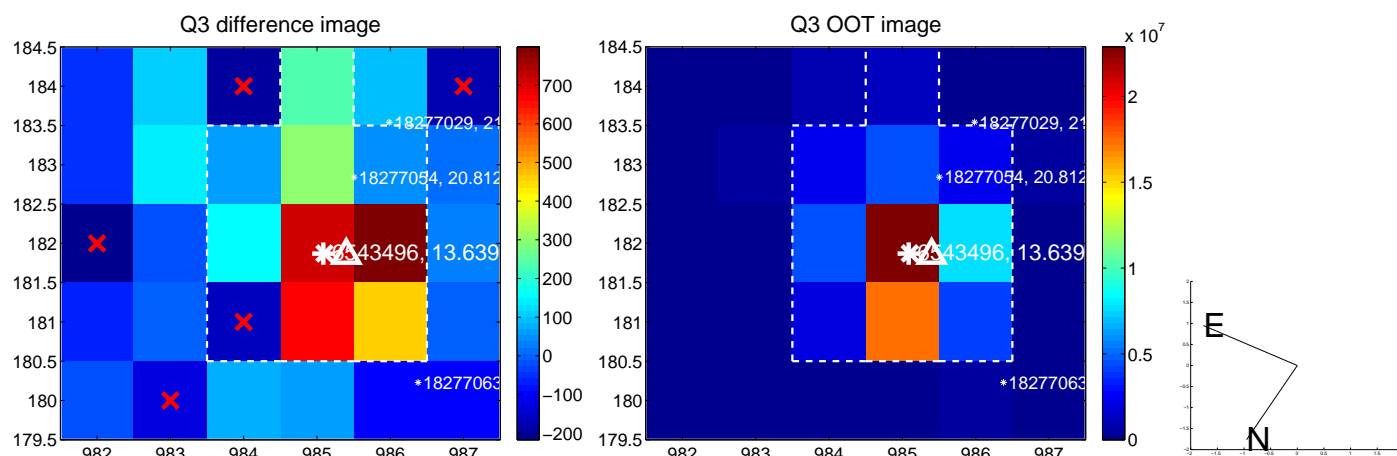
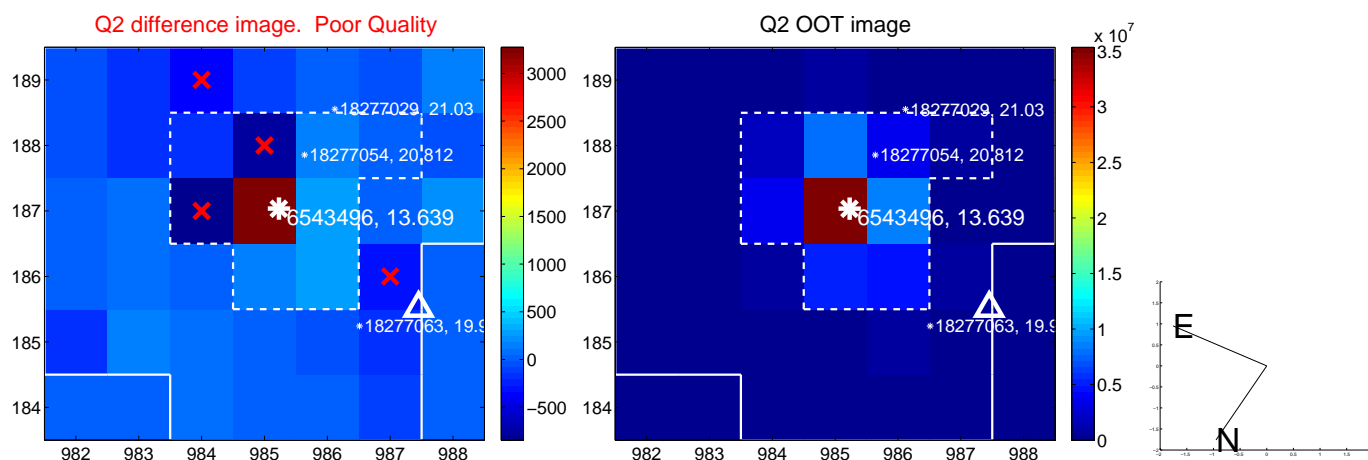
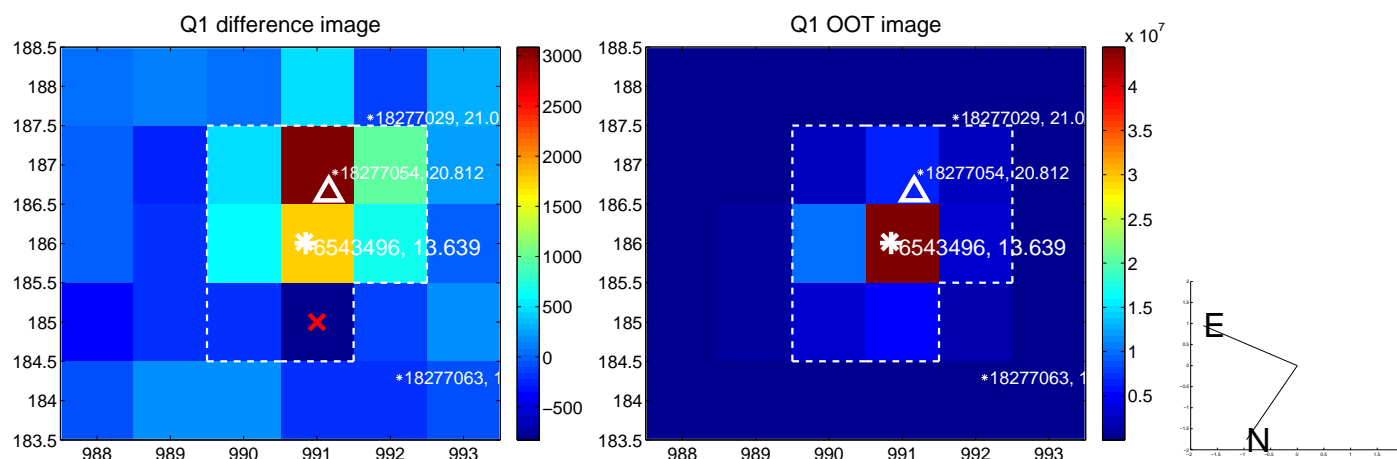
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.592 ± 0.488	1.21	-0.127 ± 0.990	0.578 ± 0.369
PRF-fit source offset from KIC position	0.599 ± 0.465	1.29	-0.166 ± 0.967	0.576 ± 0.315
photometric centroid source offset	1.44 ± 0.98	1.47	-0.76 ± 1.02	-1.22 ± 0.96

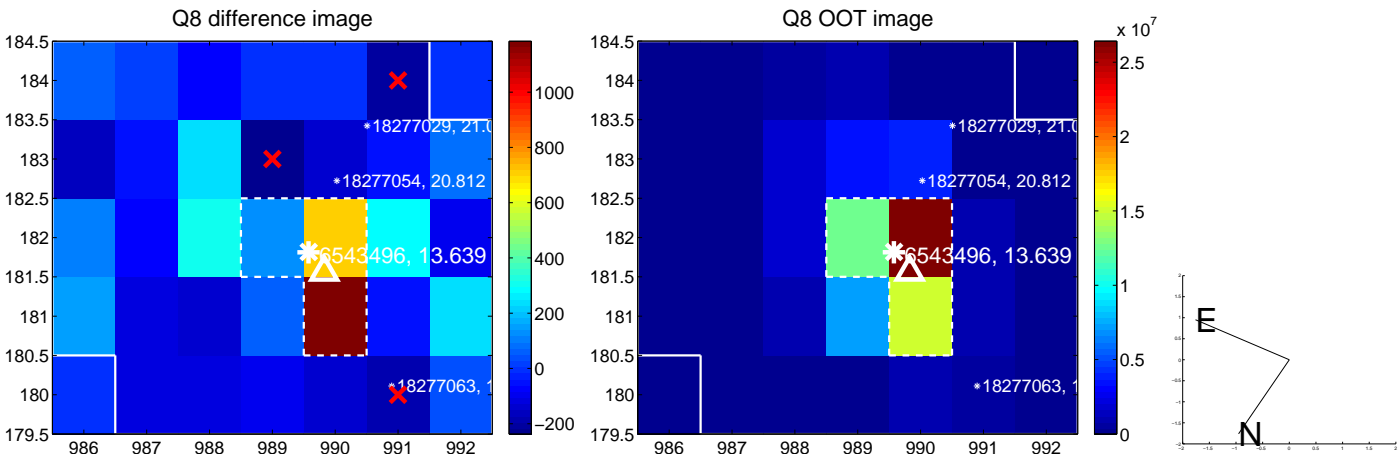
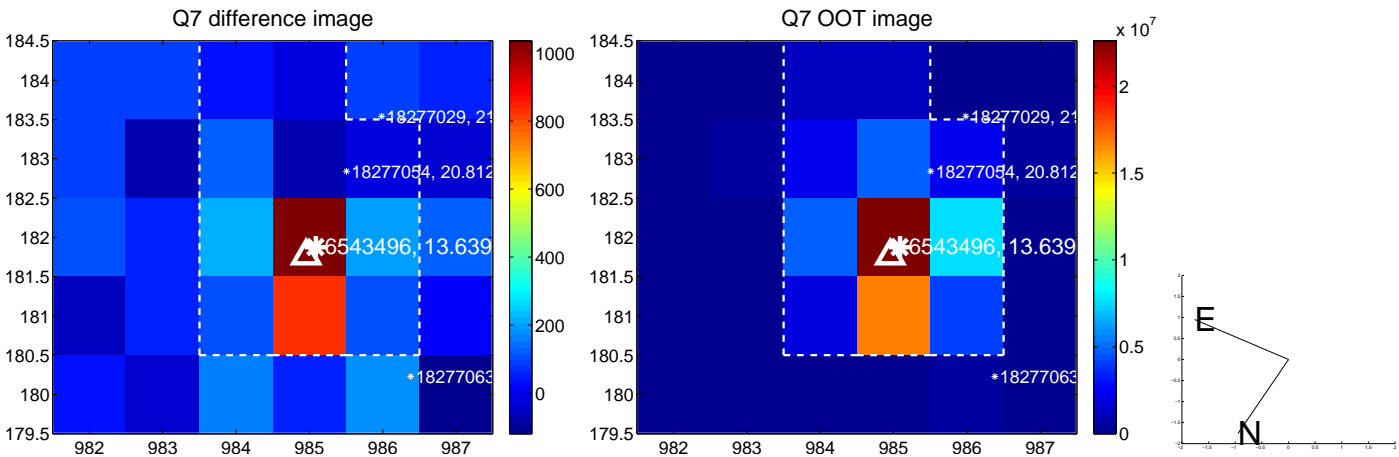
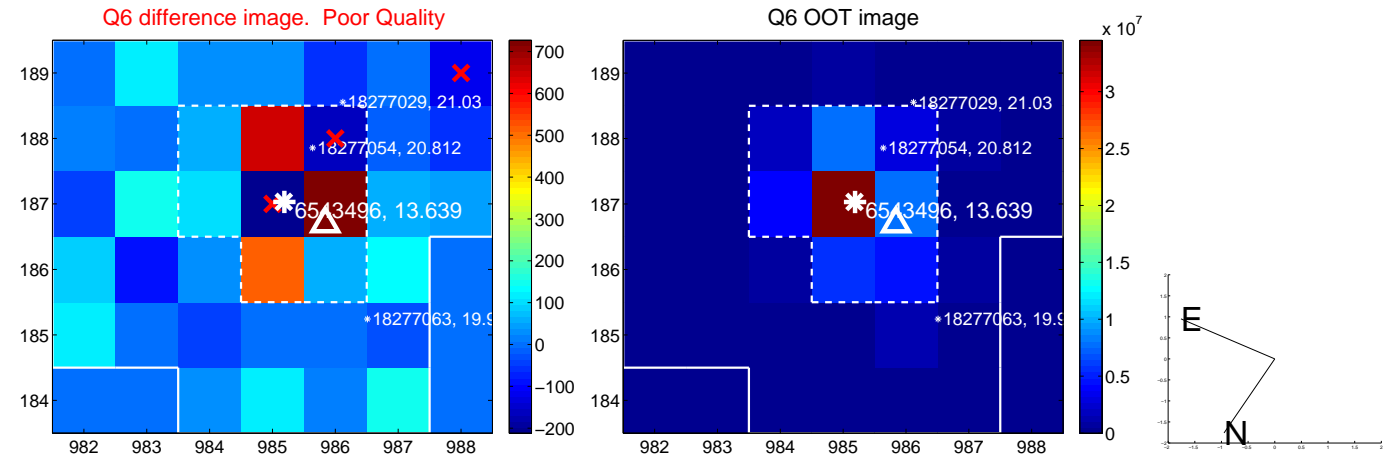
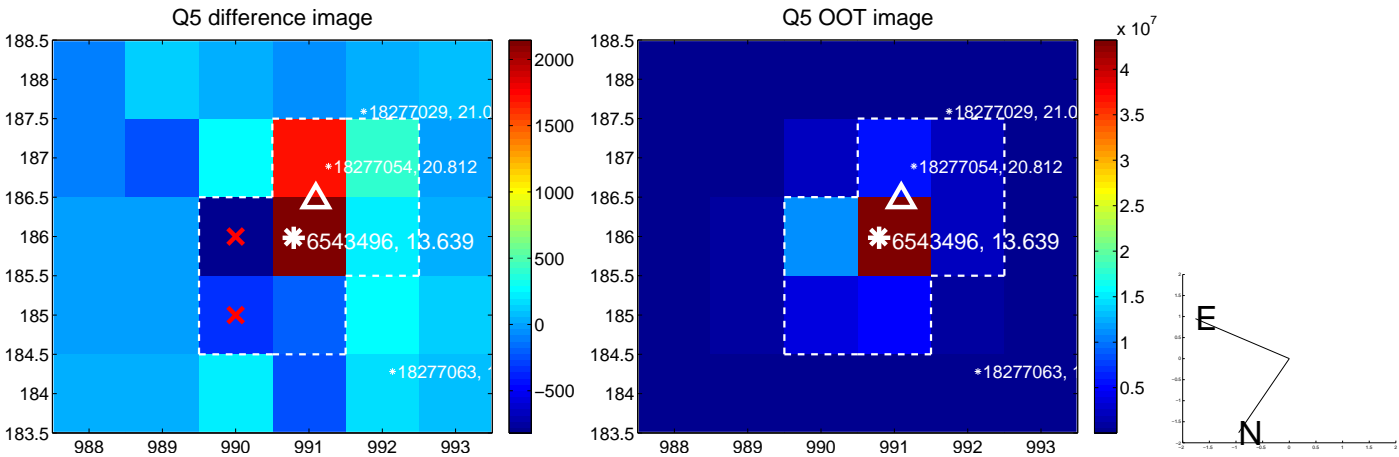


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

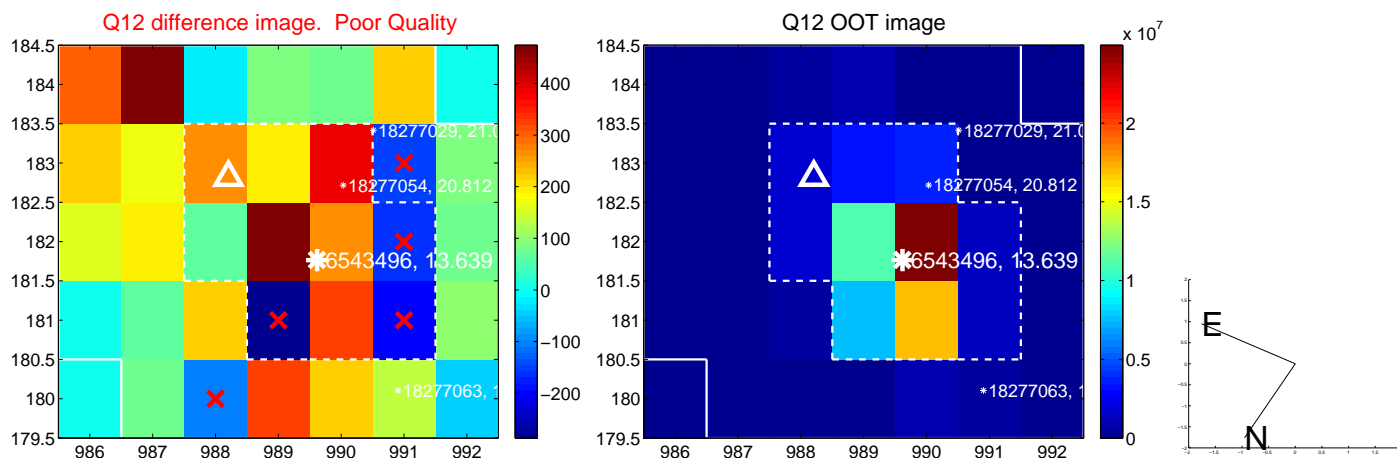
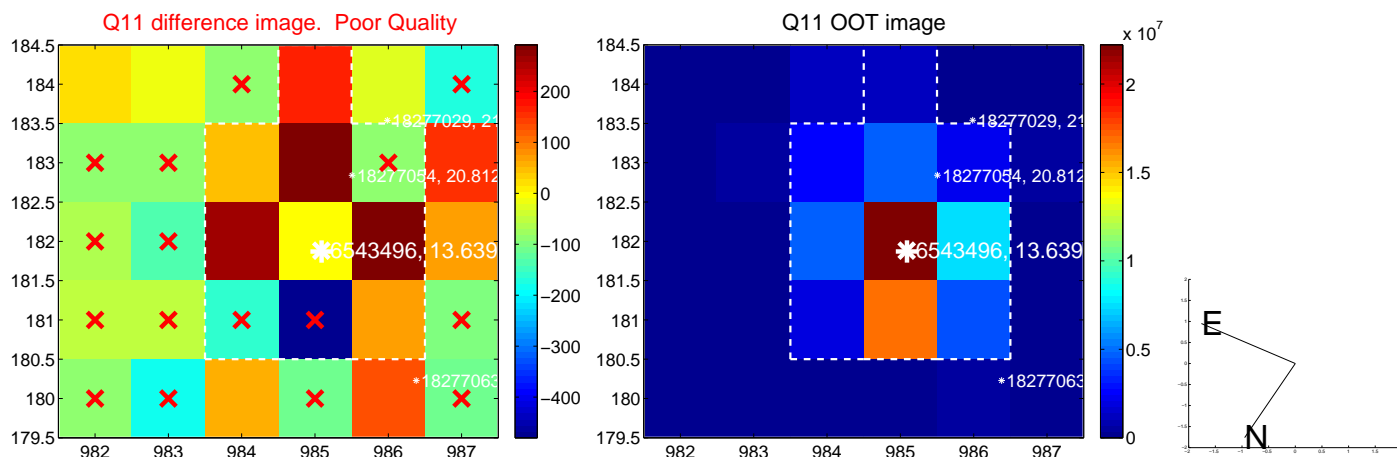
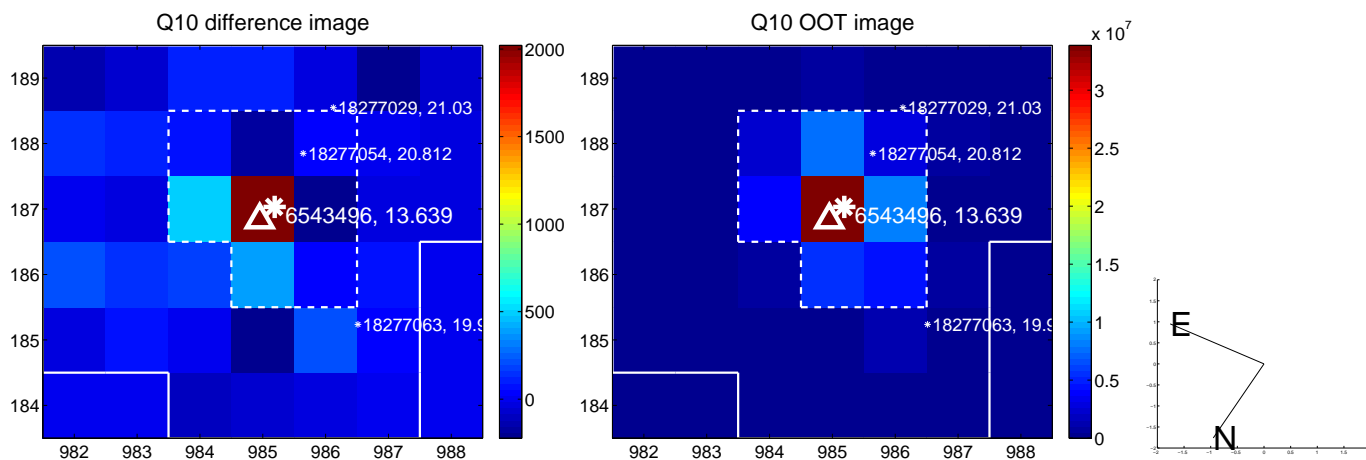
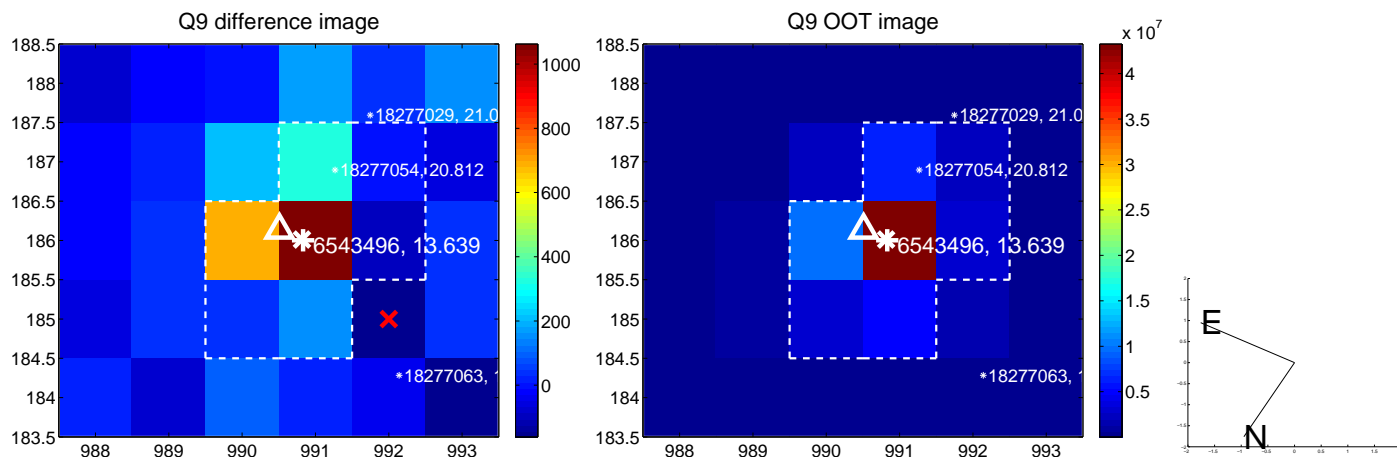
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



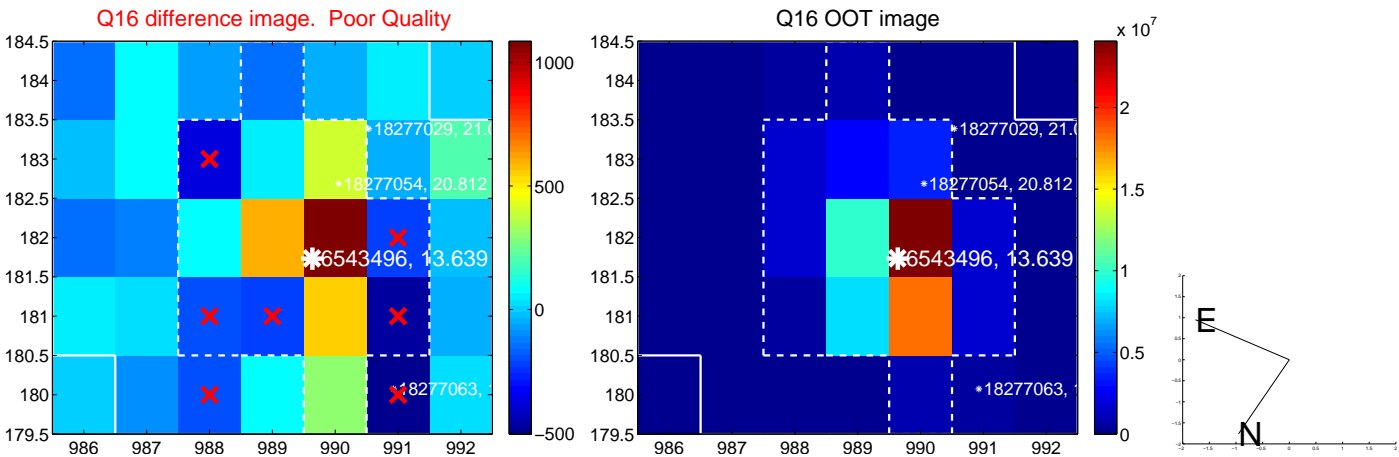
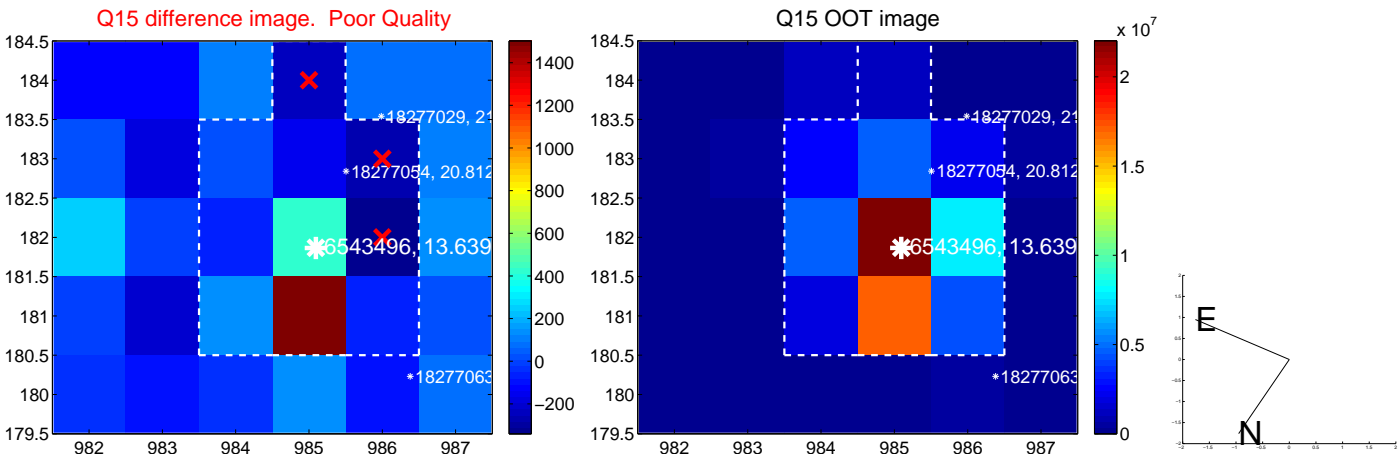
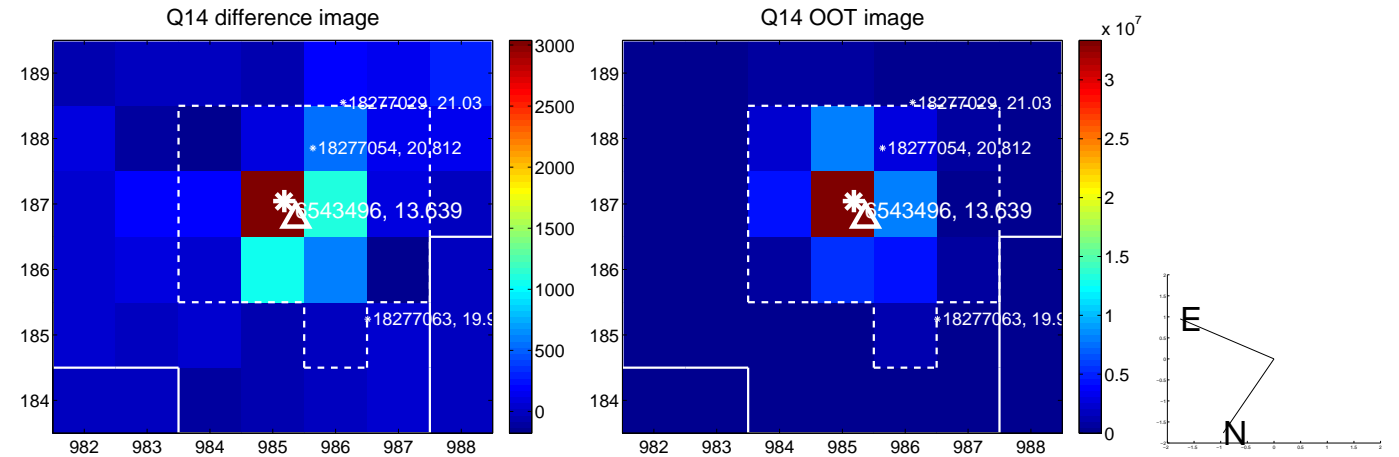
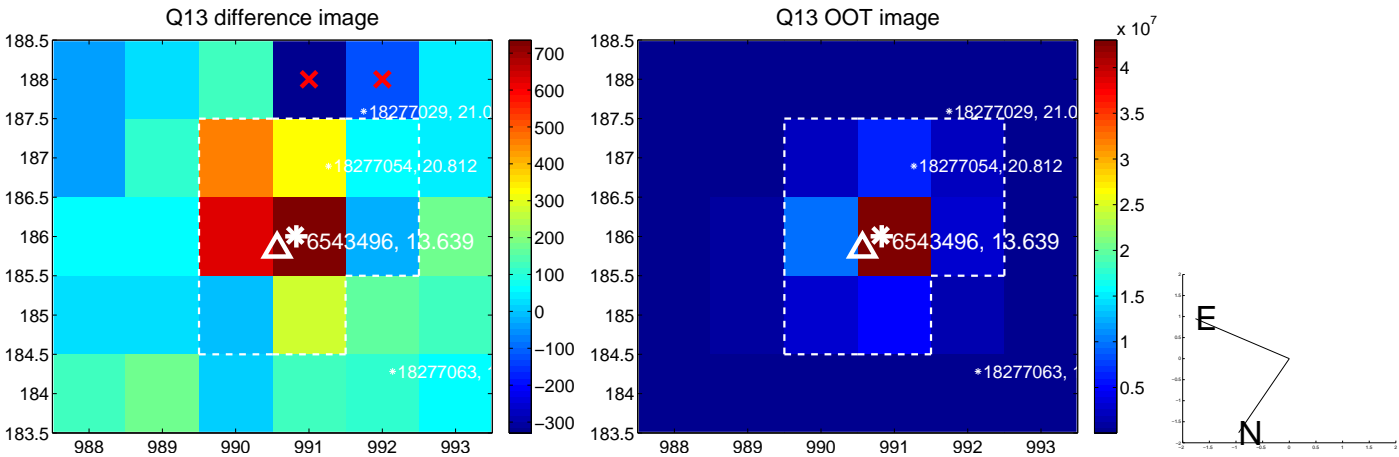
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



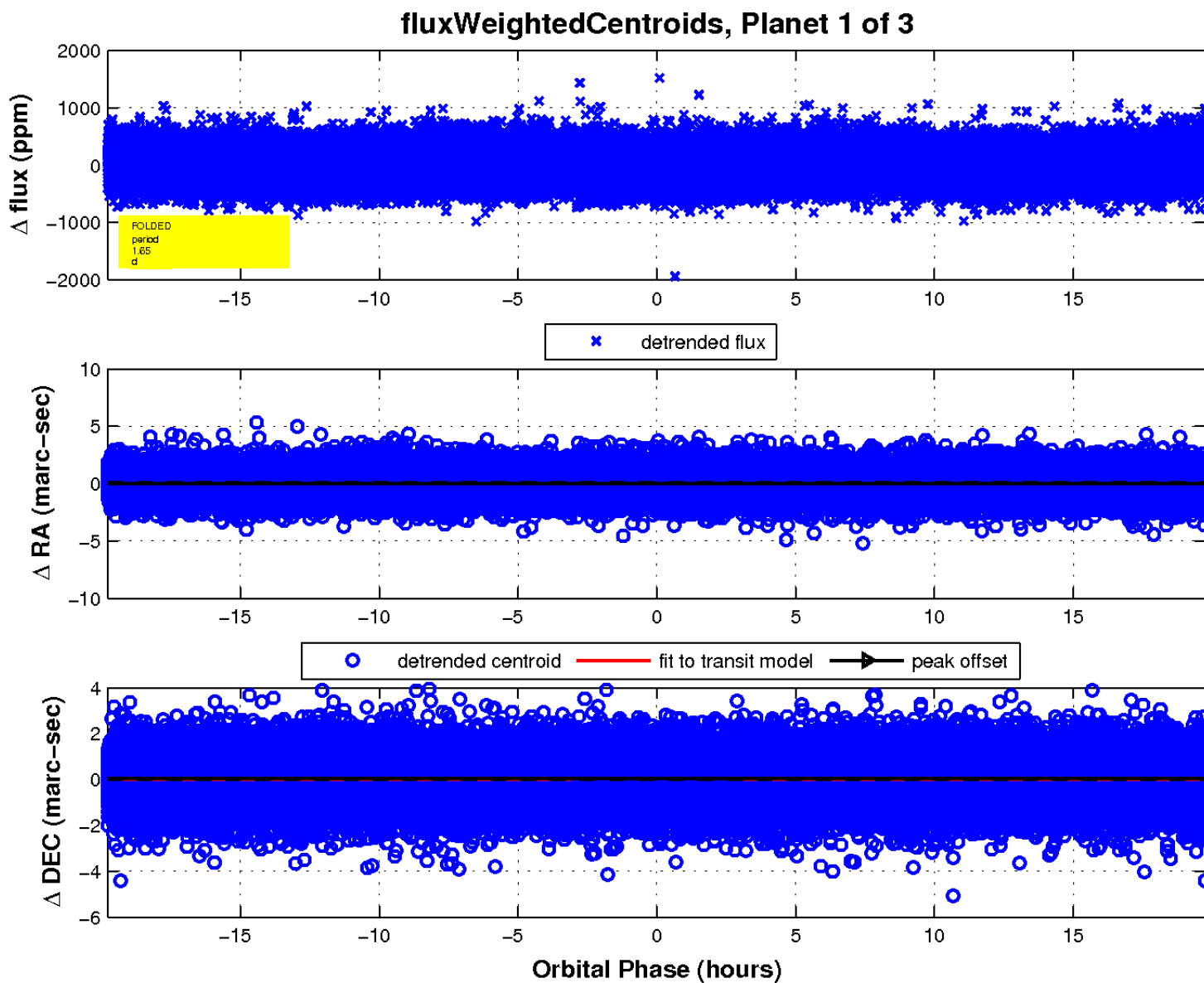
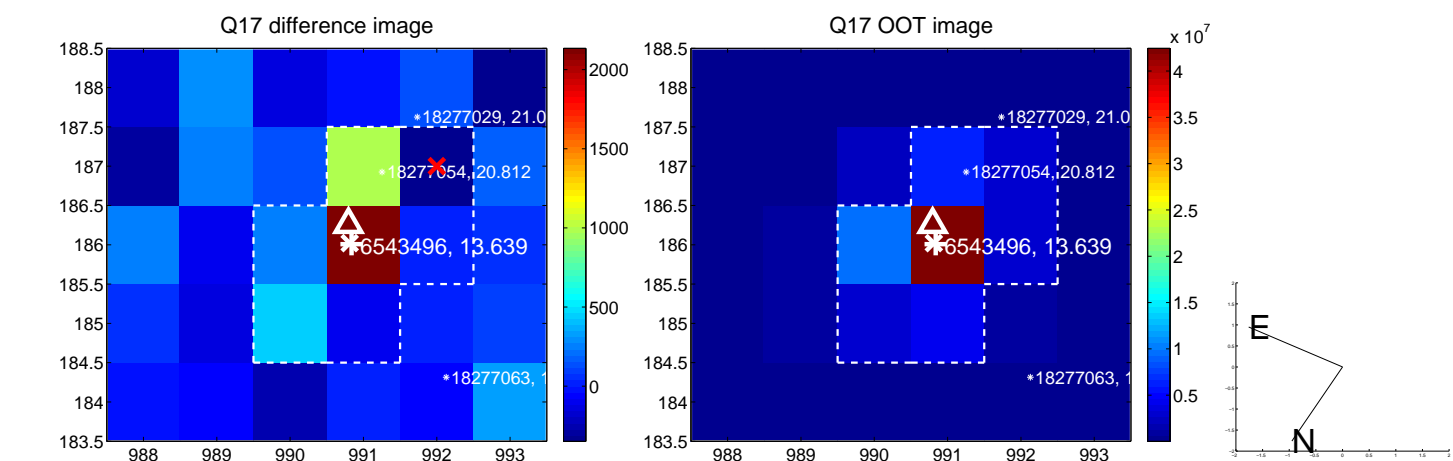
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

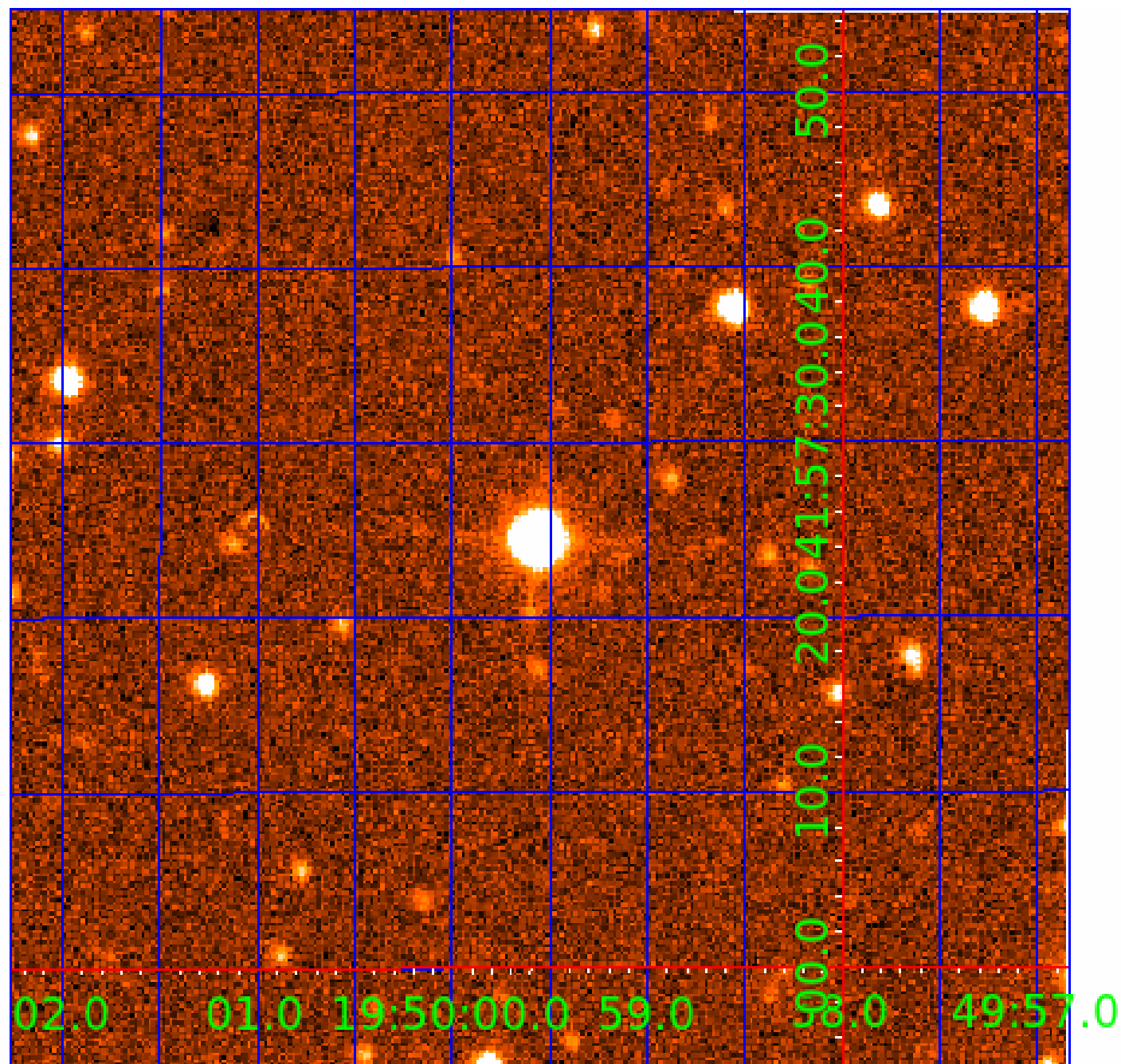


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006543496

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})
006543496-01	OBS	No	1.648893	132.780370	25.6	7.155	8.8	7.6	2.70	5798	1.57	8247.80
006543496-02	OBS	No	146.162844	190.604219	418.5	2.704	8.1	8.5	2.70	5798	6.19	20.87
006543496-03	OBS	No	195.092496	147.786811	406.8	2.998	7.5	8.0	2.70	5798	6.46	14.20

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006543496-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
006543496-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS
006543496-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—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.

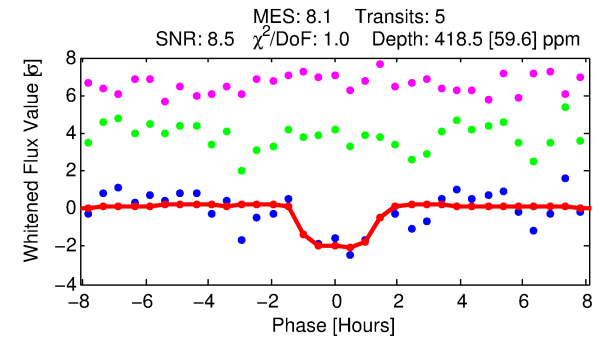
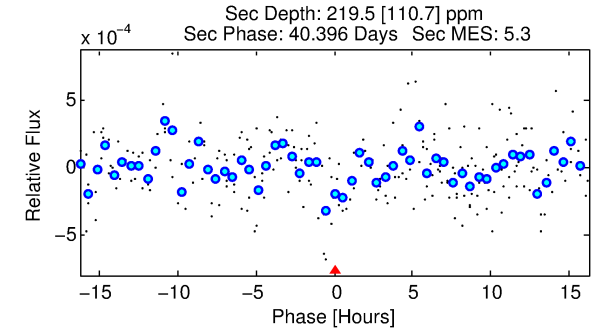
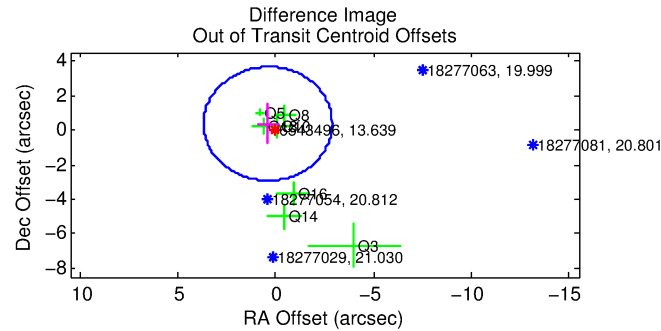
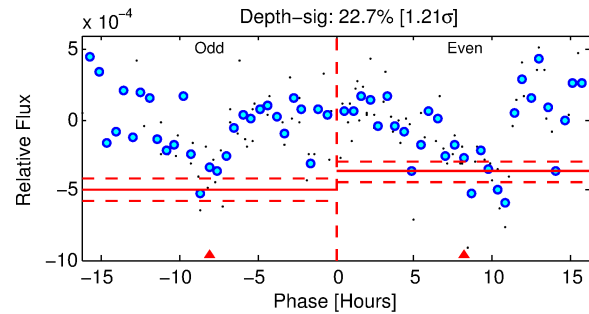
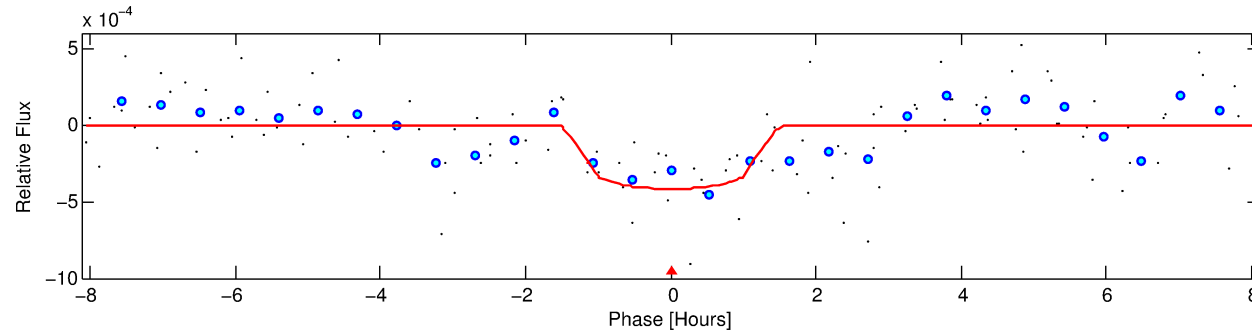
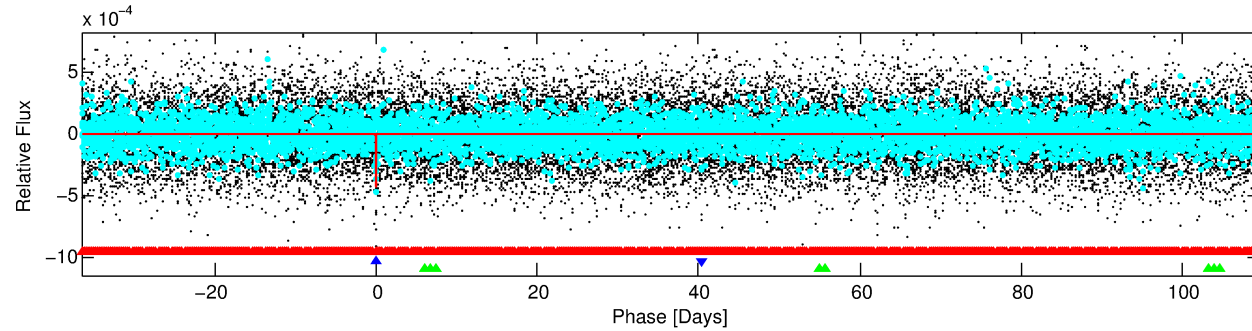
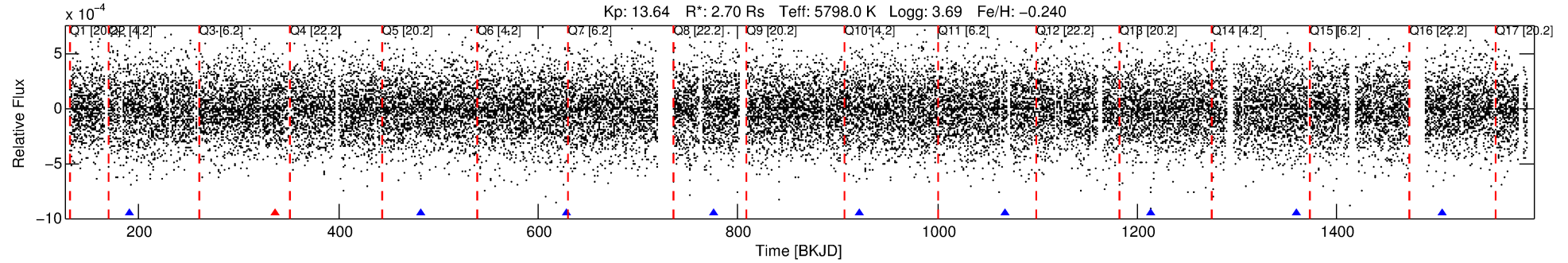
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006543496-02

No Significant Match Found

DV One-Page Summary

KIC: 6543496 Candidate: 2 of 3 Period: 146.163 d



DV Fit Results:

Period = 146.16284 [0.00230] d
Epoch = 190.6042 [0.0100] BKJD
Rp/R* = 0.0210 [0.0284]
a/R* = 250.18 [1605.30]
b = 0.82 [2.58]
Seff = 20.87 [22.99]
Teq = 545 [150] K
Rp = 6.19 [9.25] Re
a = 0.5941 [0.3923] AU
Ag = 1113.50 [3295.13] [0.34σ]
Teffp = 4868 [3350] K [1.29σ]

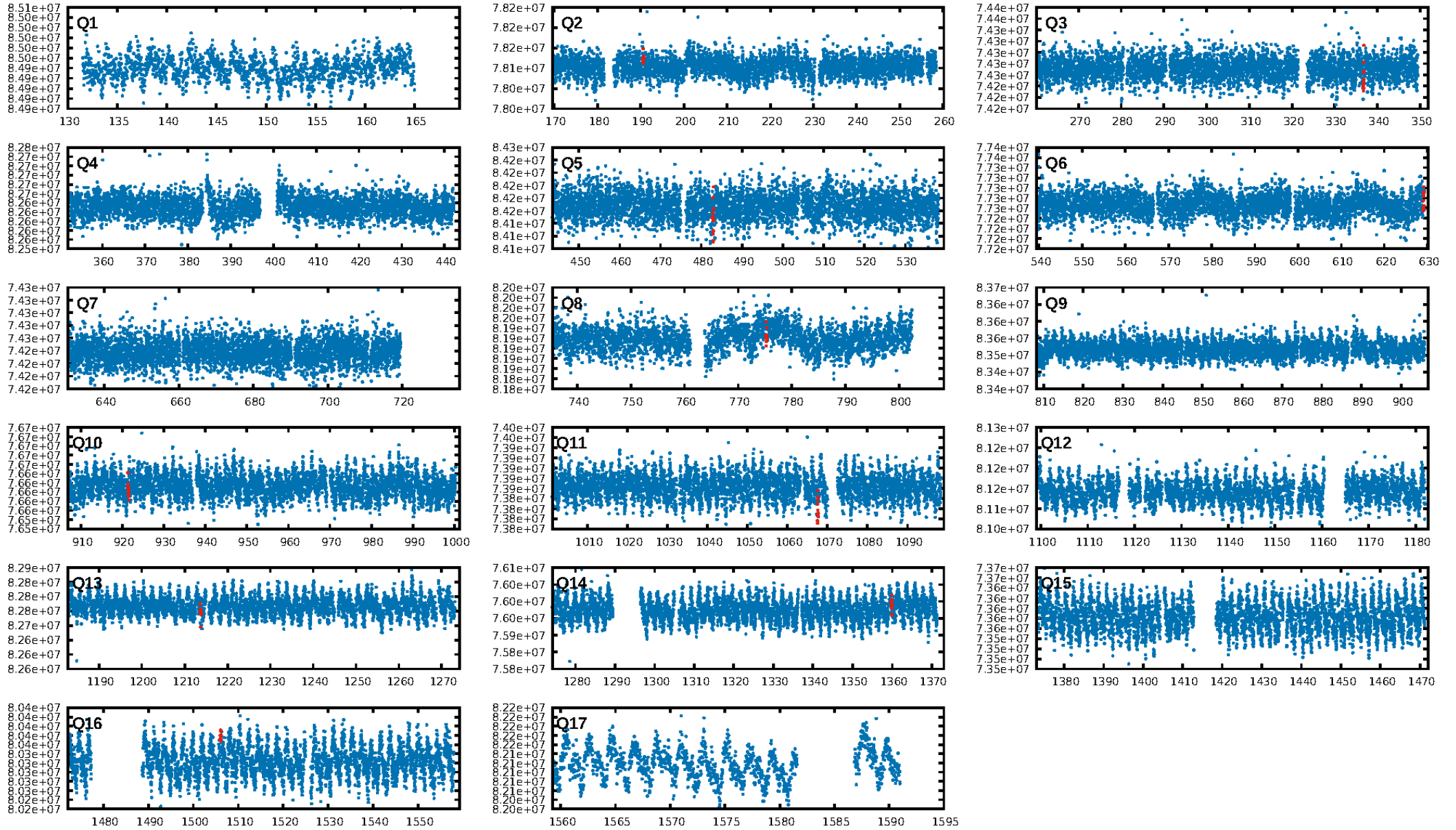
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [453.43σ]
LongPeriod-sig: 100.0% [290.88σ]
ModelChiSquare2-sig: 25.9%
ModelChiSquareGof-sig: 99.6%
Bootstrap-pfa: 1.19e-10
RollingBand-fgt: 0.80 [4/5]
GhostDiagnostic-chr: 2.904
Centroid-sig: 89.9%
Centroid-so: 0.323 arcsec [0.35σ]
OotOffset-rm: 0.545 arcsec [0.50σ]
KicOffset-rm: 0.515 arcsec [0.59σ]
OotOffset-st: 2/1/2/2 [7]
KicOffset-st: 2/1/2/2 [7]
DiffImageQuality-fgm: 0.57 [4/7]
DiffImageOverlap-fno: 0.56 [5/9]

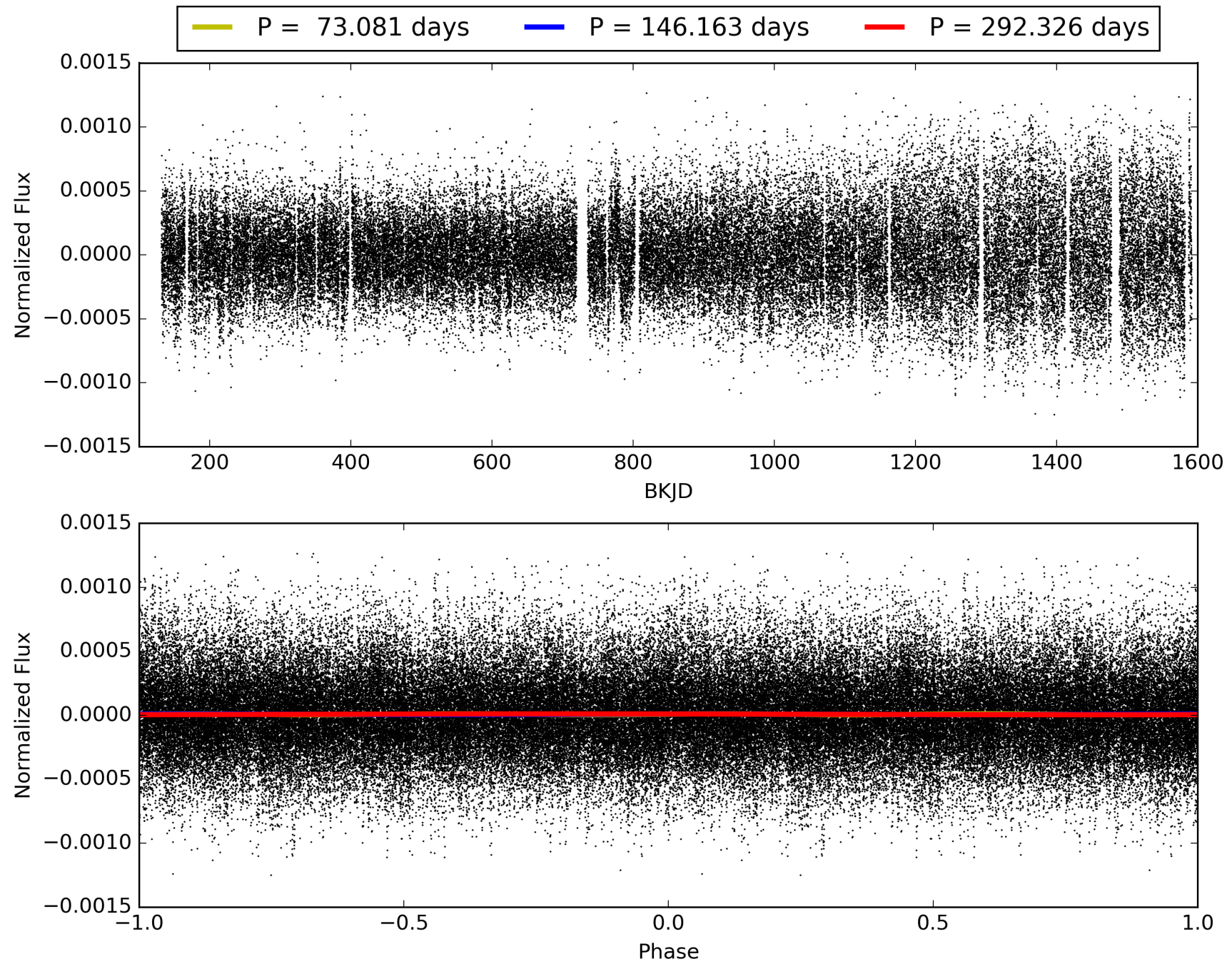
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 05:06:18 Z

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

TCE 006543496-02, PDC Light Curves

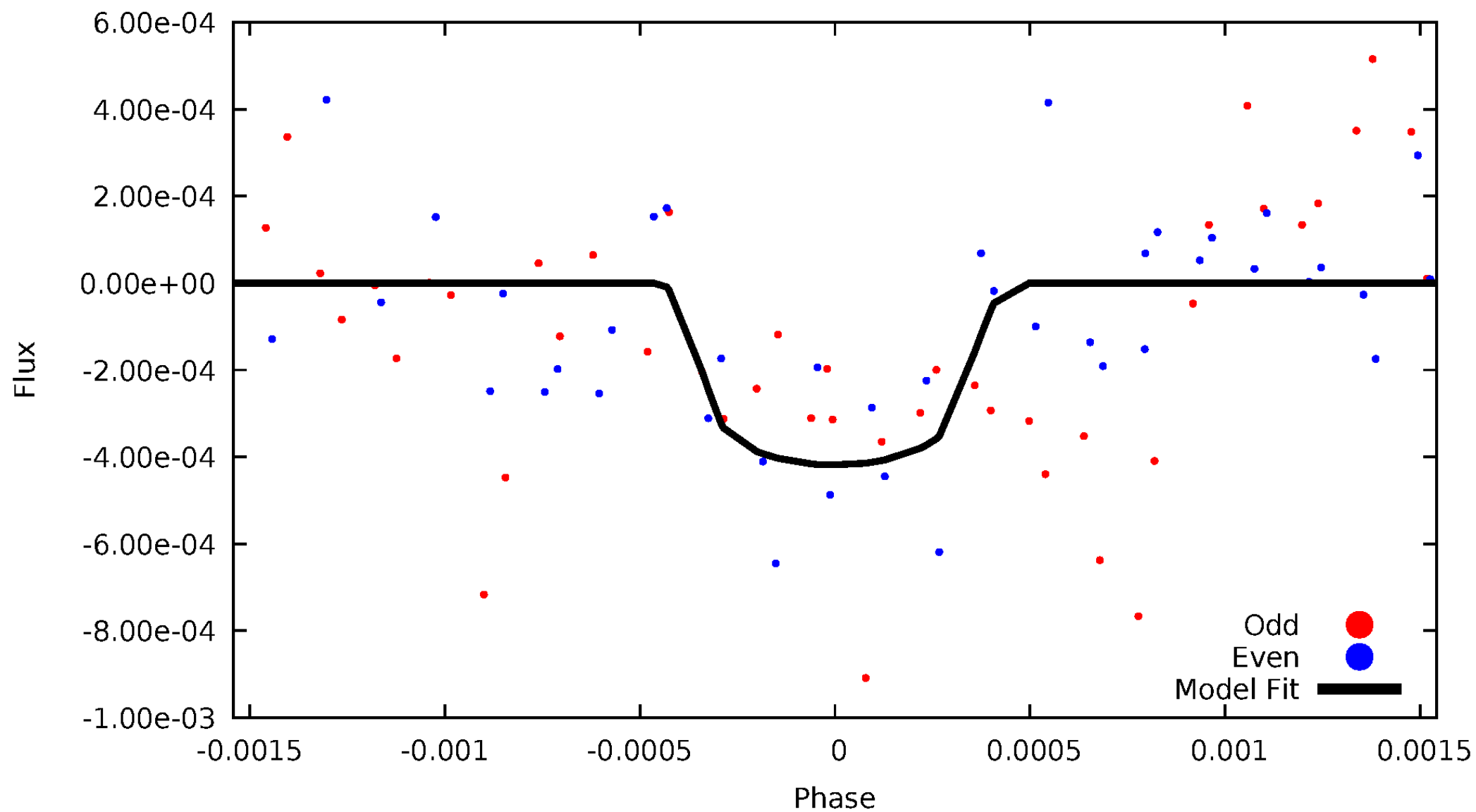


TCE 006543496-02



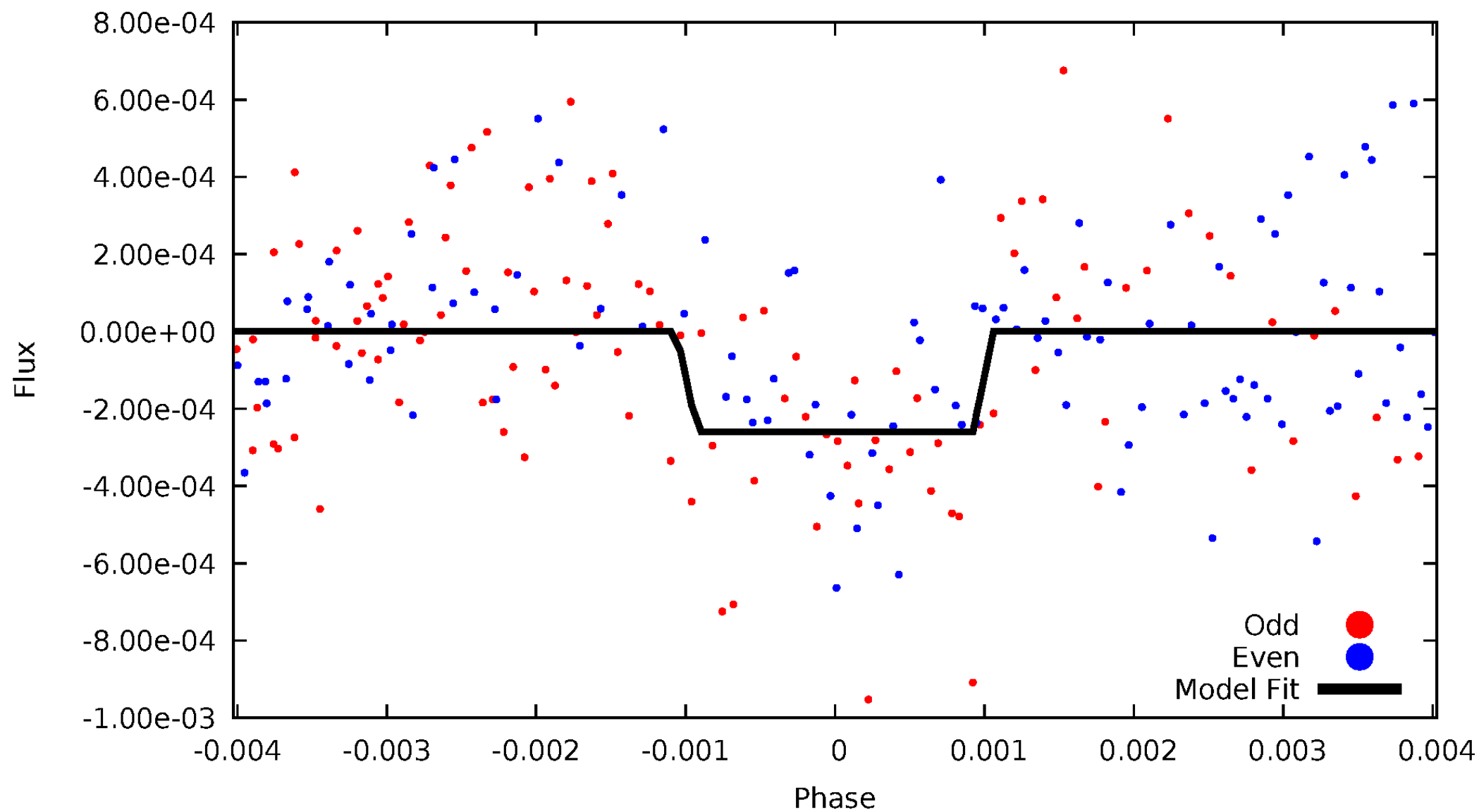
DV Odd/Even

TCE 006543496-02



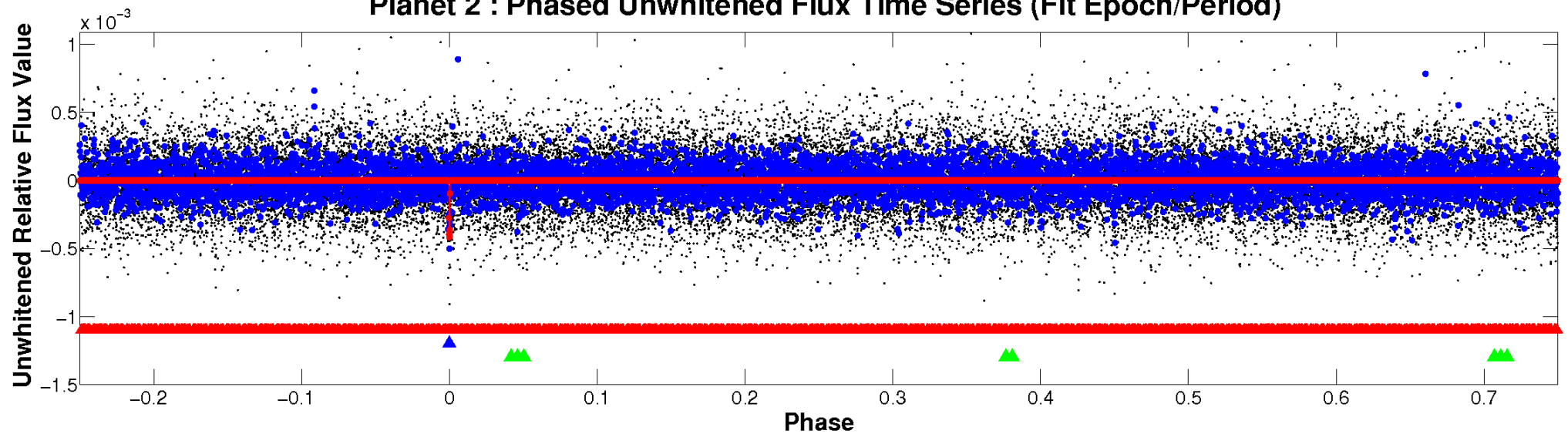
ALT Odd/Even

TCE 006543496-02

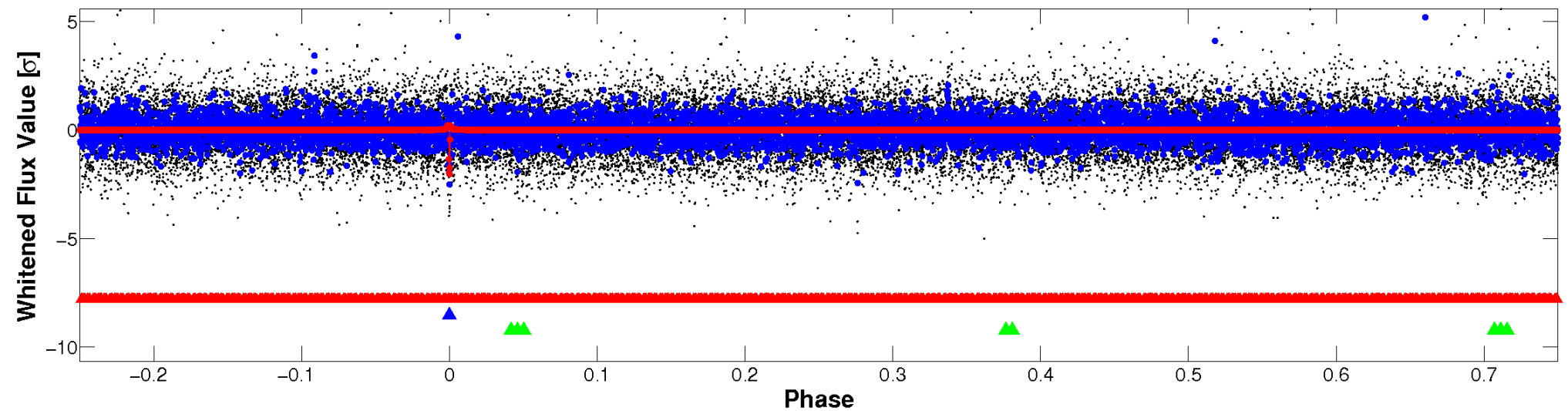


Non-Whitened Vs. Whitened Light Curve

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

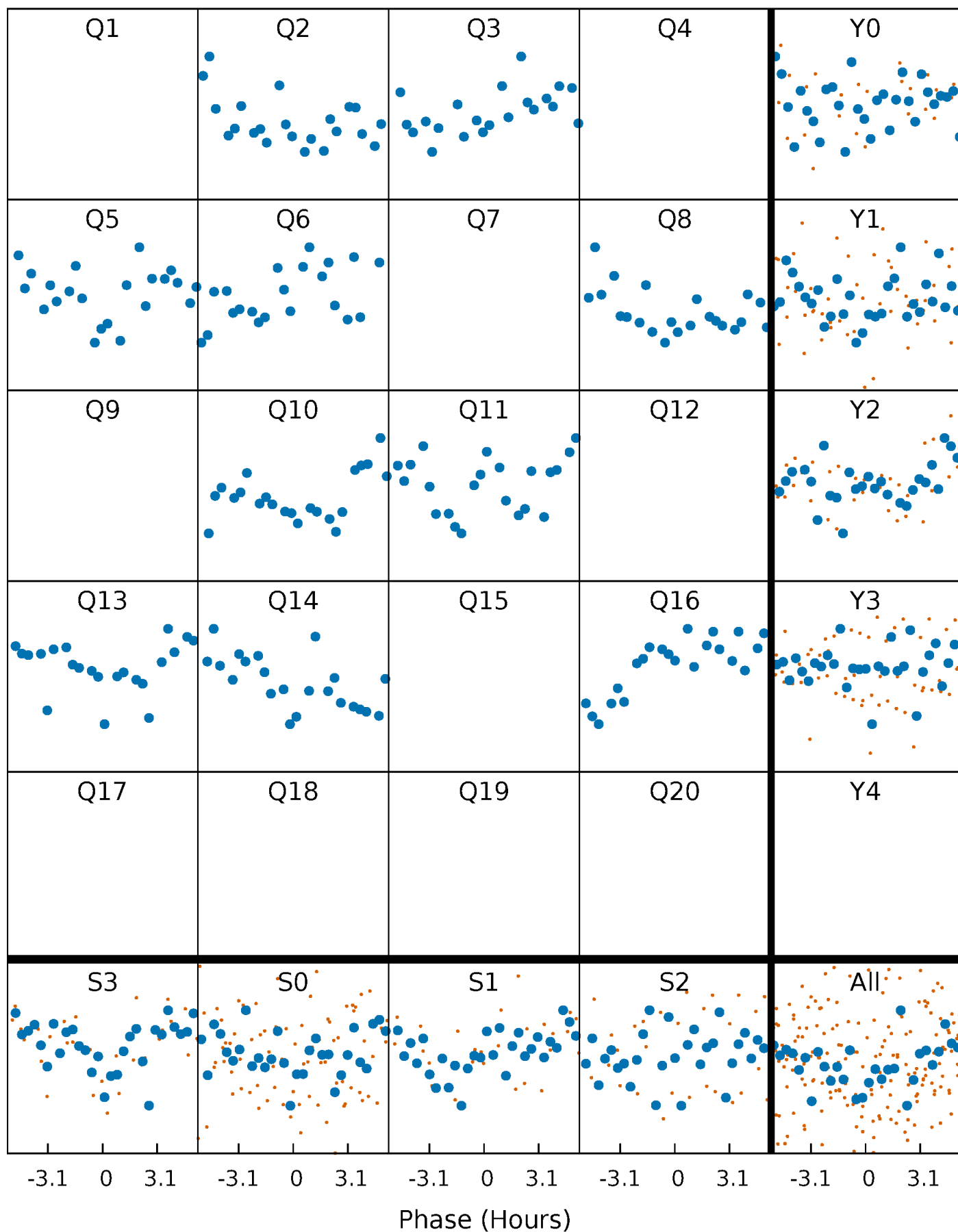


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



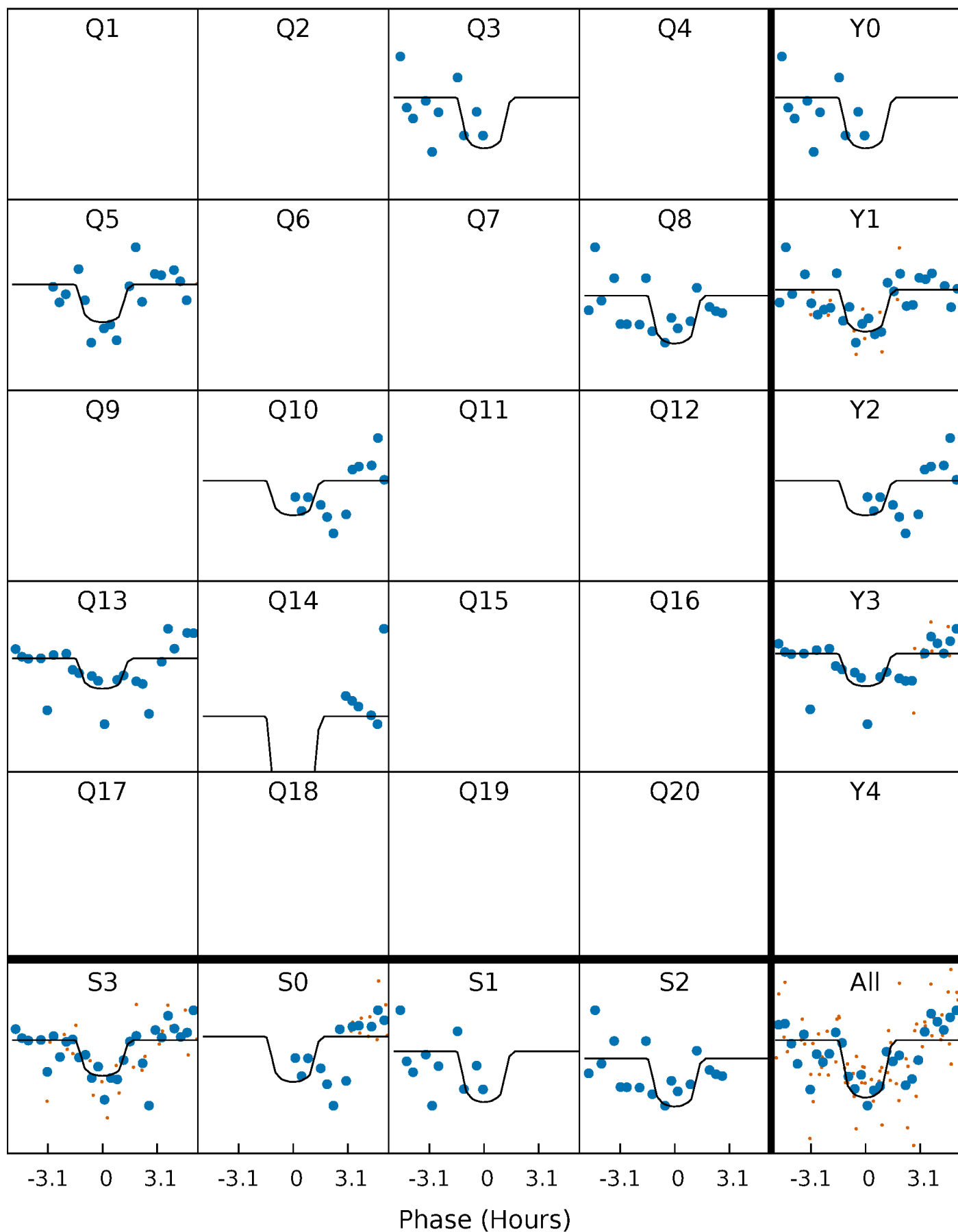
PDC Quarter-Phased Transit Curves

TCE 006543496-02 $P=146.162844$ Days $T_0=190.604219$ (BKJD)



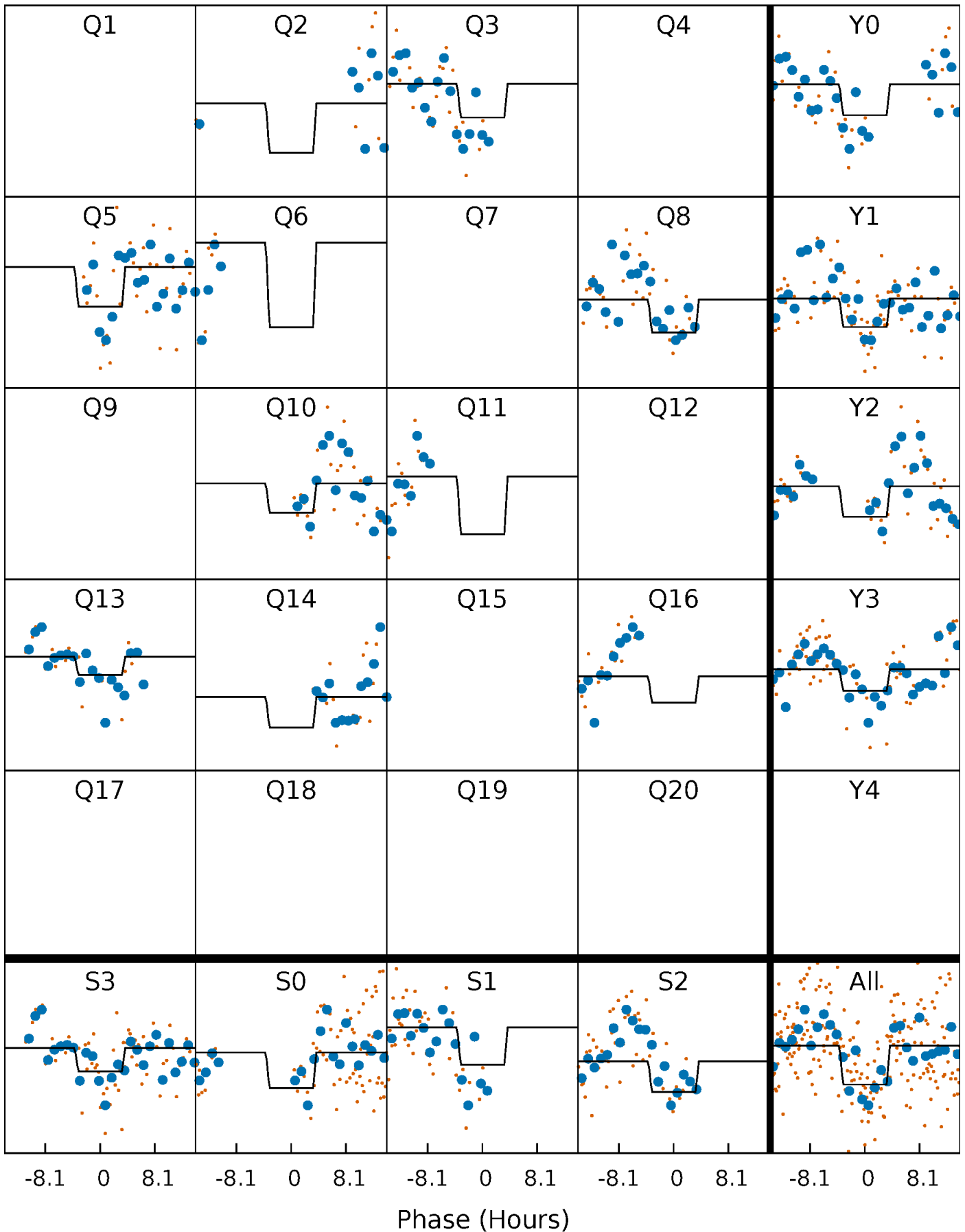
DV Quarter-Phased Transit Curves

TCE 006543496-02 P=146.162844 Days $T_0=190.604219$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

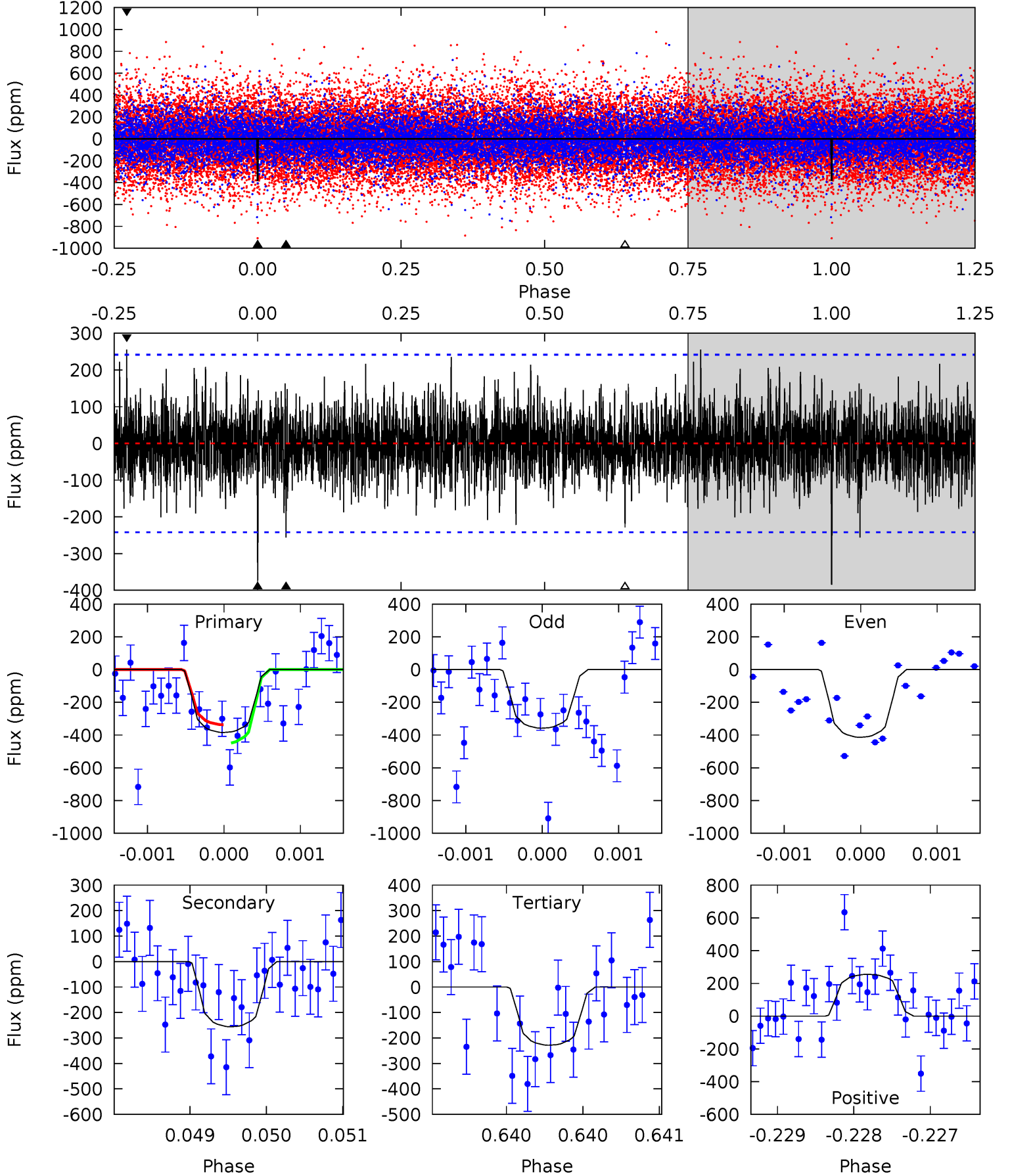
TCE 006543496-02 P=146.163333 Days $T_0=190.579734$ (BKJD)



DV Model-Shift Uniqueness Test

006543496-02, P = 146.162844 Days, E = 44.441375 Days

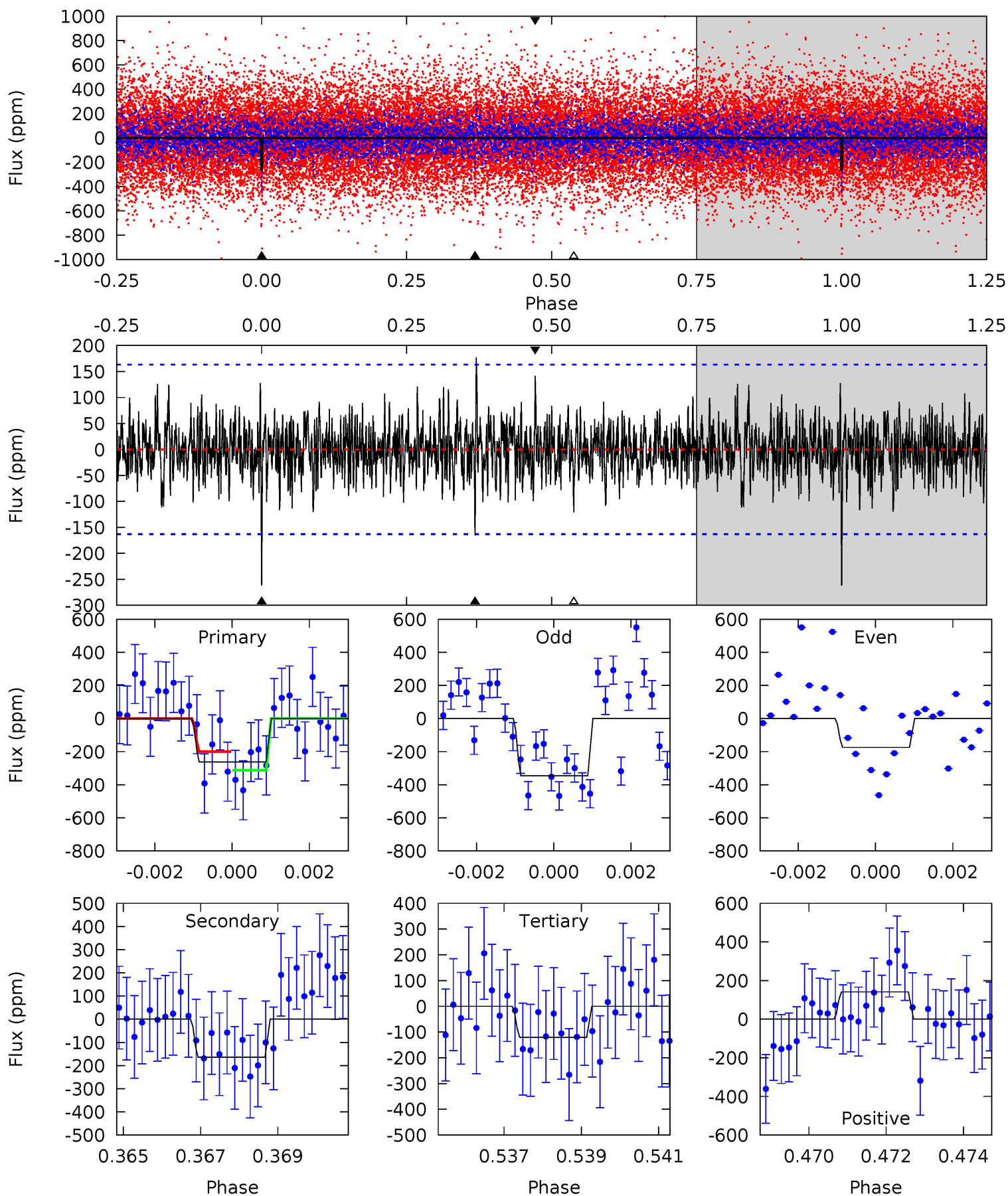
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.72	5.81	5.18	5.79	5.48	3.34	1.45	3.54	2.93	0.63	0.02	0.63	1.22	0.40	1.26



Alt Model-Shift Uniqueness Test

006543496-02, P = 146.163333 Days, E = 44.416401 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.53	5.35	3.94	4.61	5.32	3.08	1.28	4.59	3.92	1.41	0.74	2.80	1.10	0.40	1.81



Stellar Parameters For KIC 006543496

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5798^{+193}_{-158}	$3.693^{+0.656}_{-0.164}$	$-0.240^{+0.300}_{-0.250}$	$2.697^{+0.691}_{-1.728}$	$1.309^{+0.173}_{-0.432}$	$0.094^{+1.015}_{-0.044}$
	+3%/-3%	+18%/-4%	+125%/-104%	+26%/-64%	+13%/-33%	+1079%/-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 006543496-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-256 ± 44	$7.97^{+6.61}_{-5.29}$	747^{+67}_{-124}	4397^{+2451}_{-807}	777^{+5614}_{-547}
Alt.	-164 ± 31	$6.85^{+6.76}_{-4.52}$	742^{+72}_{-122}	4224^{+2568}_{-804}	634^{+4800}_{-465}

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

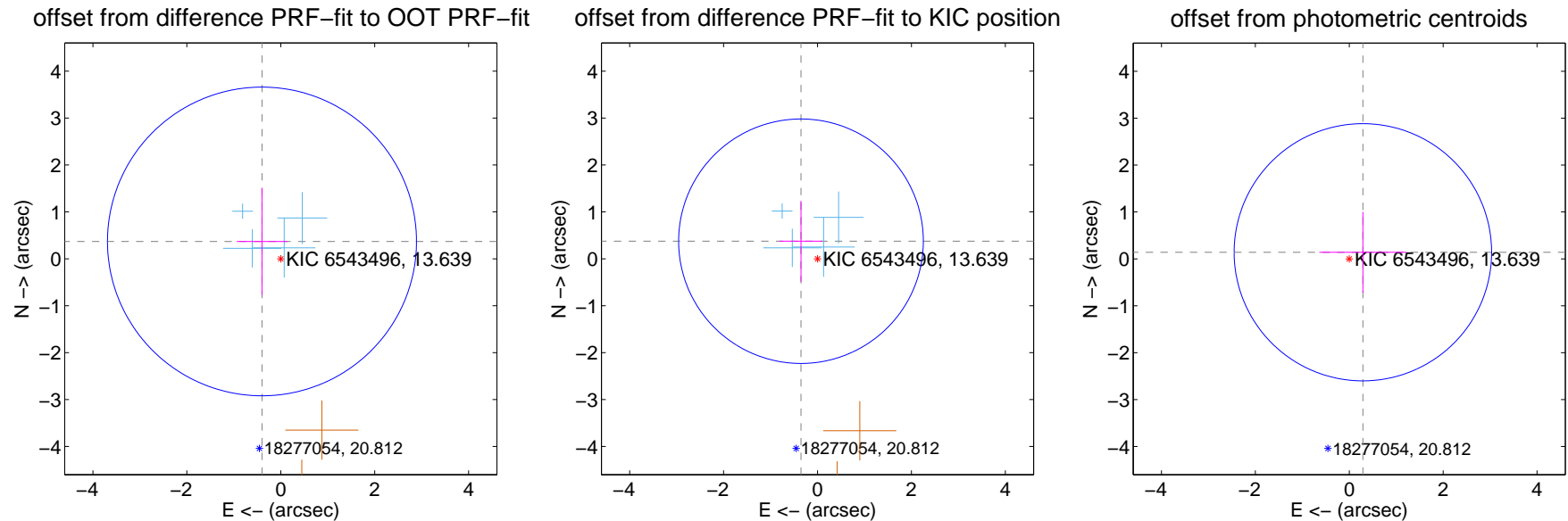
DV Centroid Data

Supplemental centroid analysis for 006543496-02. Kepler magnitude: 13.64. Transit SNR 8.51

There are 4 quarters with good PRF difference image offsets

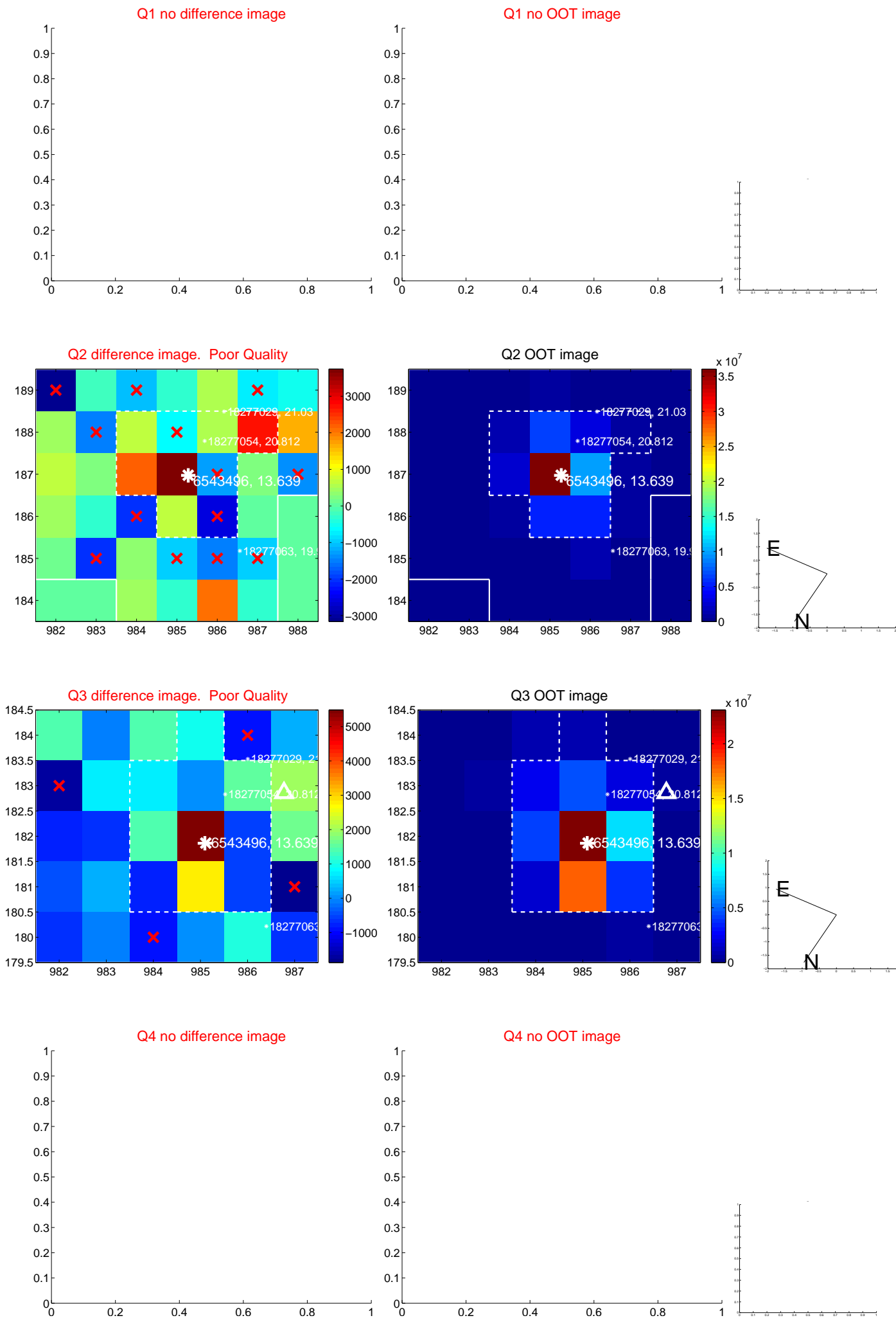
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.545 ± 1.097	0.50	0.400 ± 0.540	0.370 ± 1.138
PRF-fit source offset from KIC position	0.515 ± 0.869	0.59	0.352 ± 0.458	0.375 ± 0.861
photometric centroid source offset	0.32 ± 0.91	0.35	-0.29 ± 0.93	0.14 ± 0.86

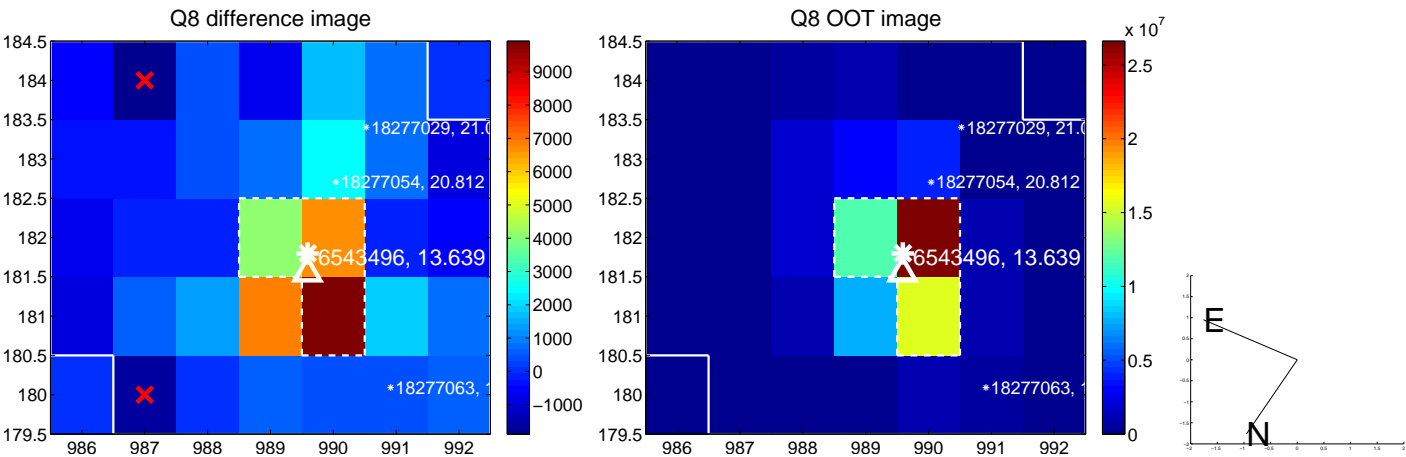
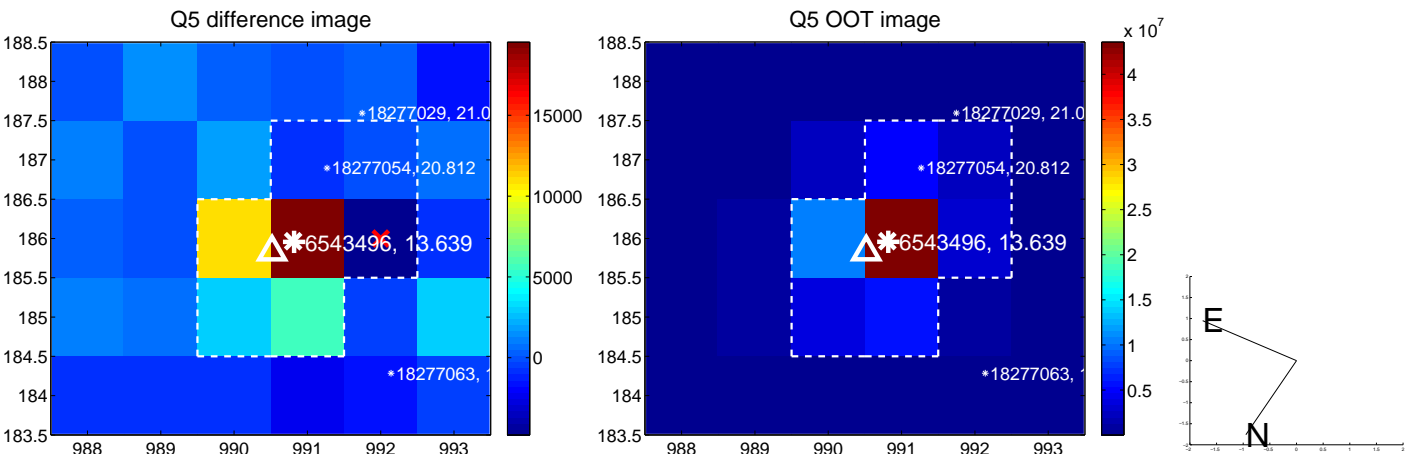


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

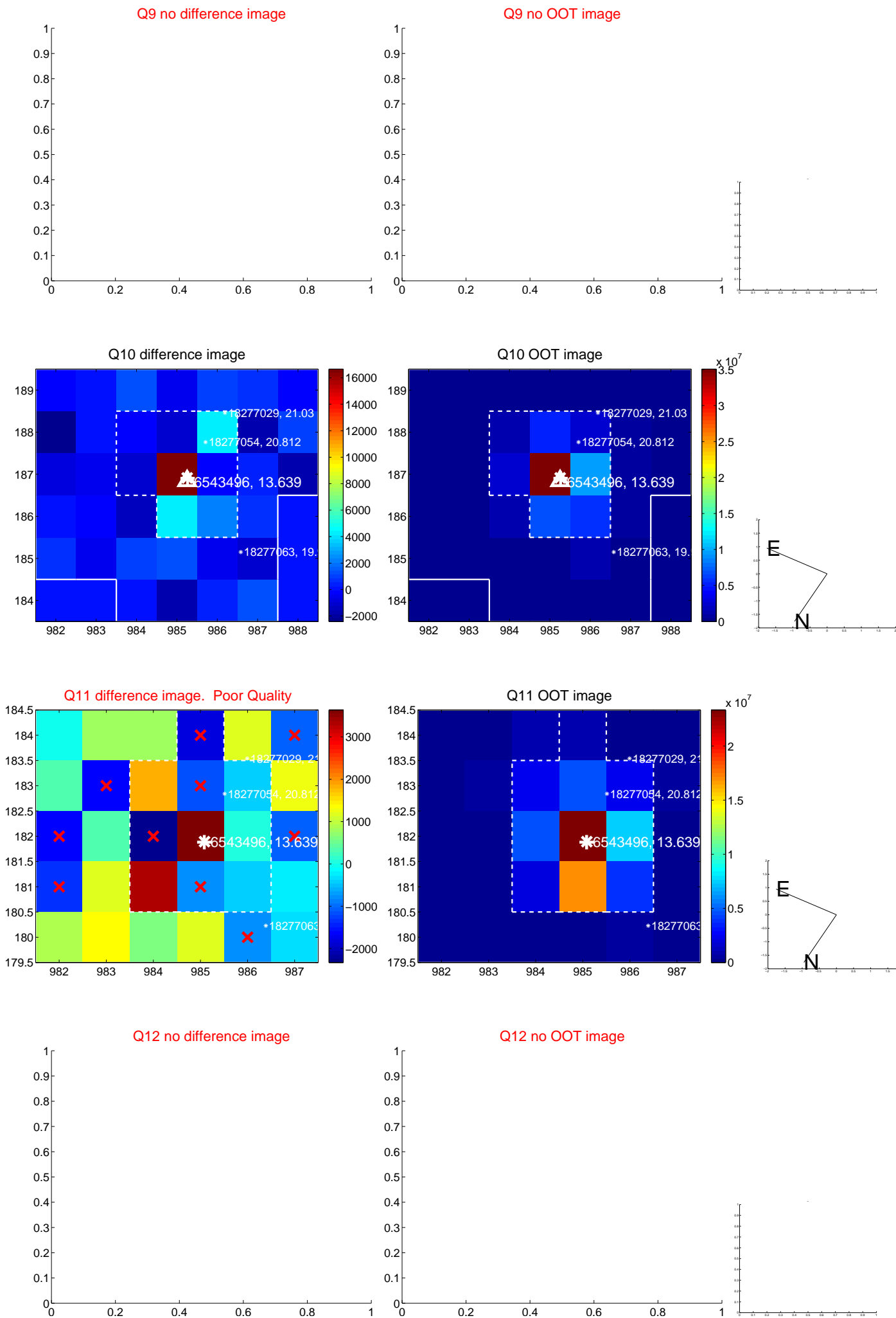
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



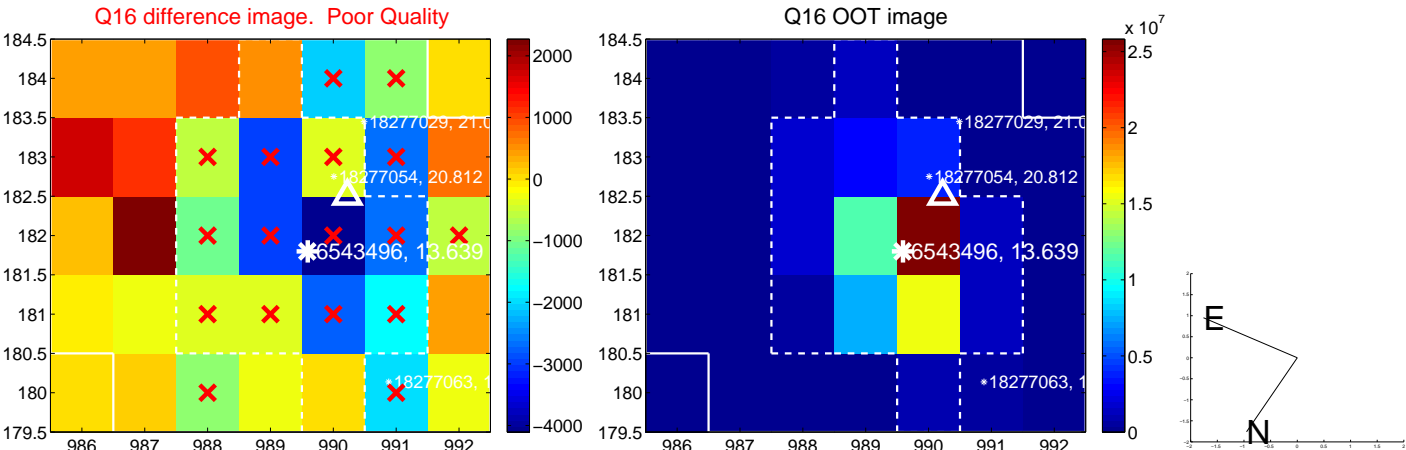
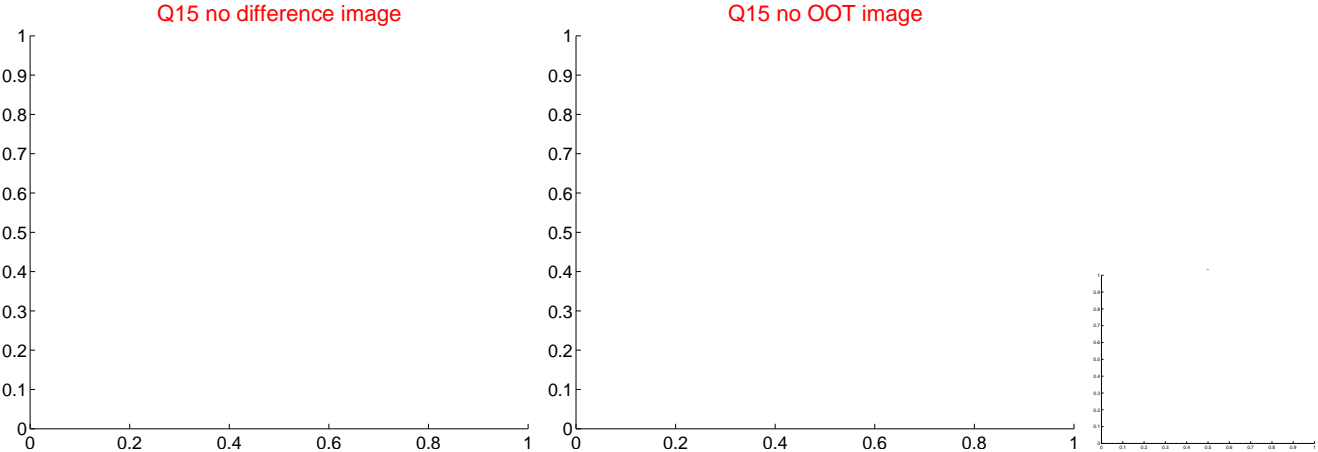
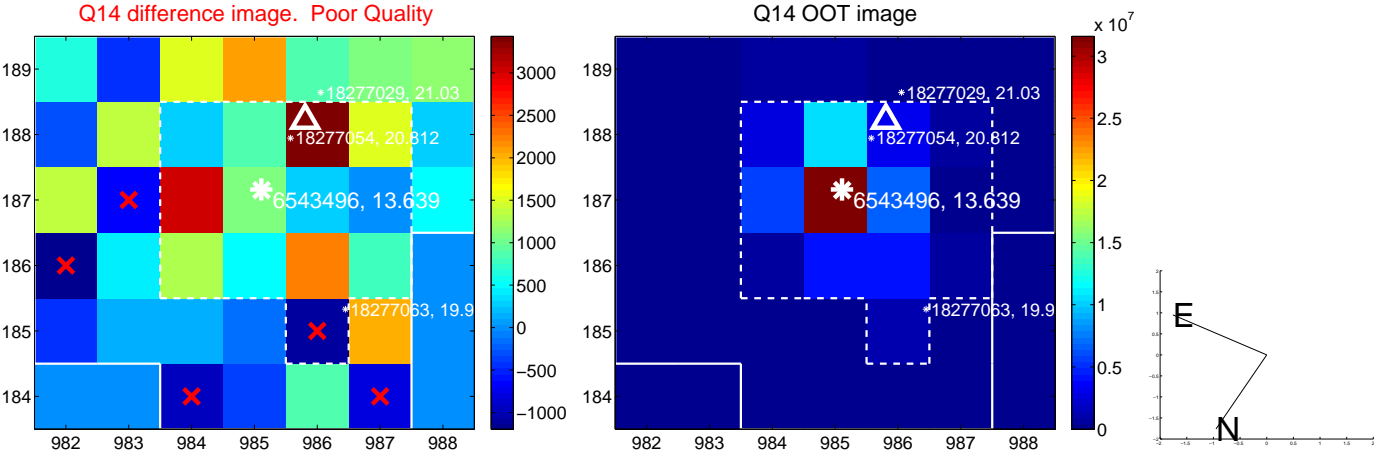
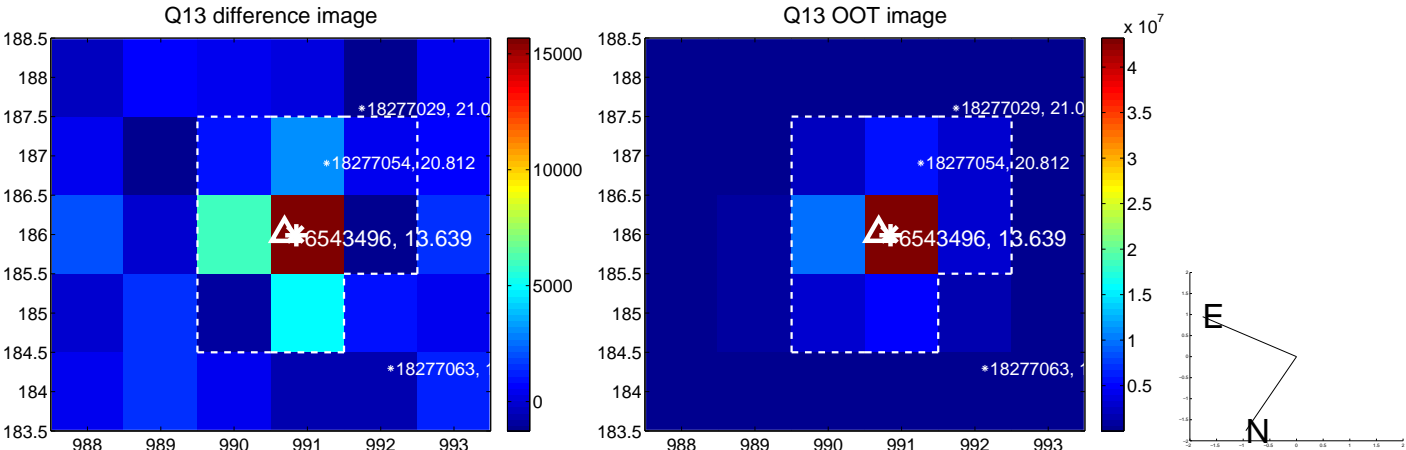
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



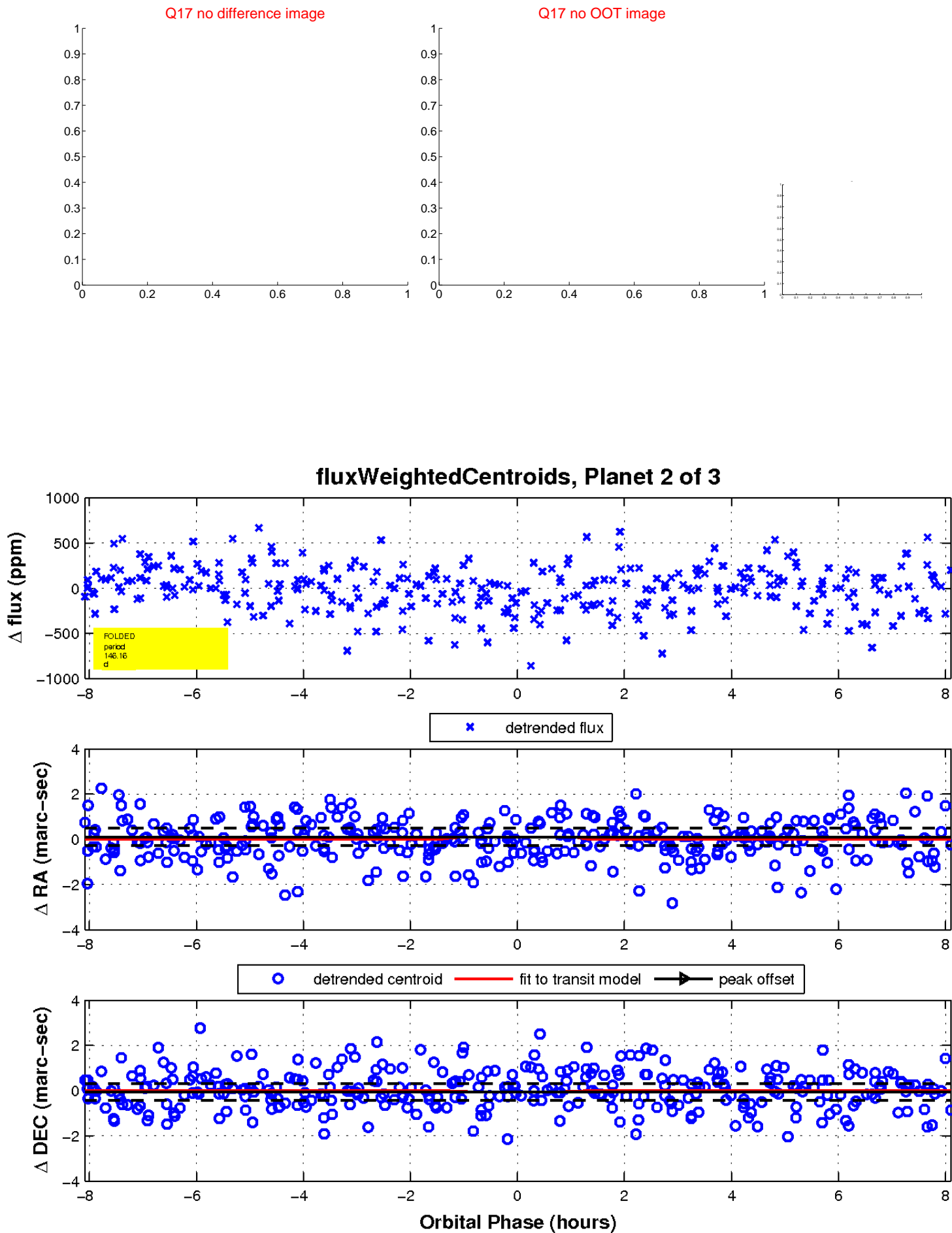
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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

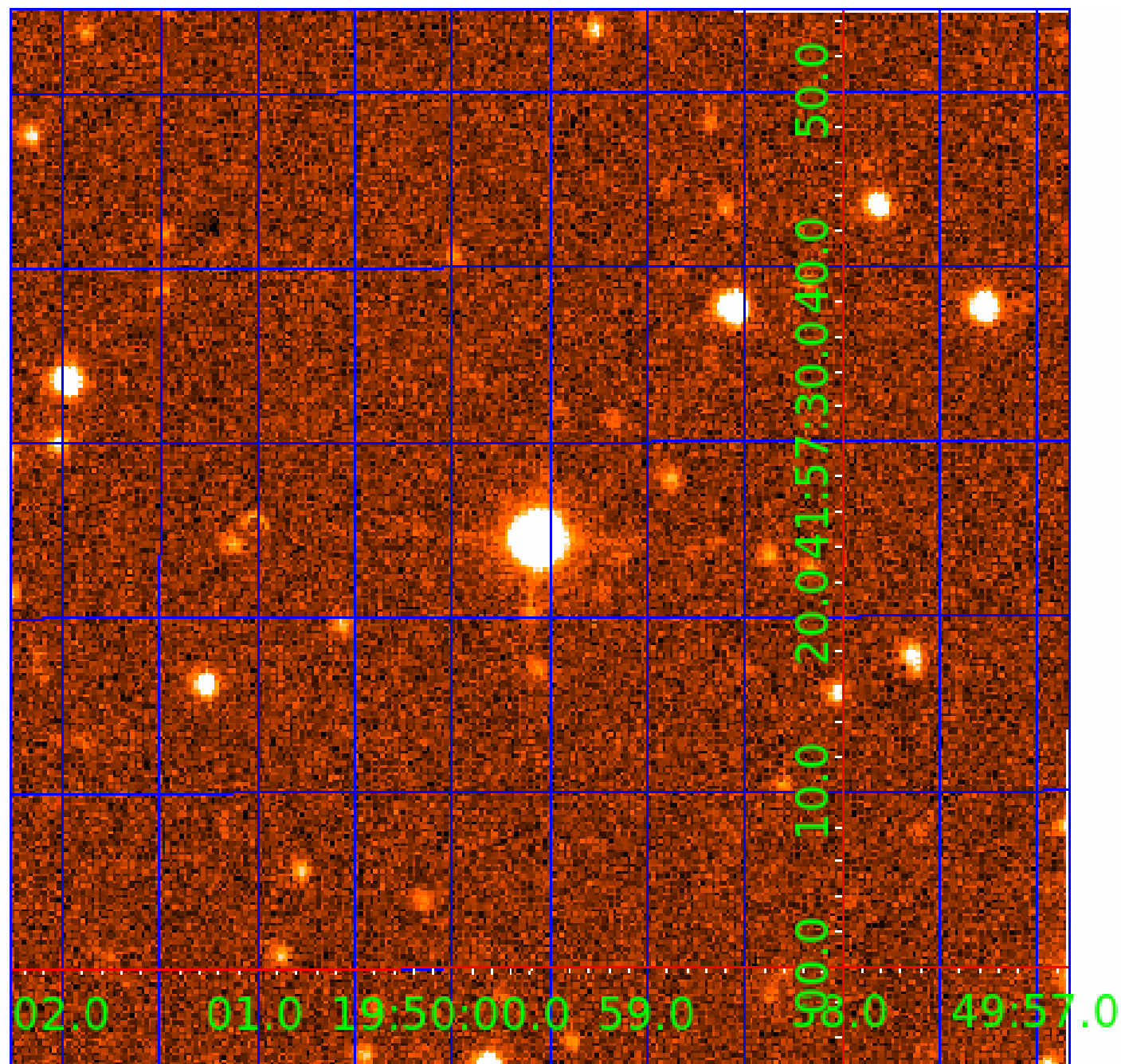


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006543496

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})
006543496-01	OBS	No	1.648893	132.780370	25.6	7.155	8.8	7.6	2.70	5798	1.57	8247.80
006543496-02	OBS	No	146.162844	190.604219	418.5	2.704	8.1	8.5	2.70	5798	6.19	20.87
006543496-03	OBS	No	195.092496	147.786811	406.8	2.998	7.5	8.0	2.70	5798	6.46	14.20

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006543496-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
006543496-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS
006543496-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—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.

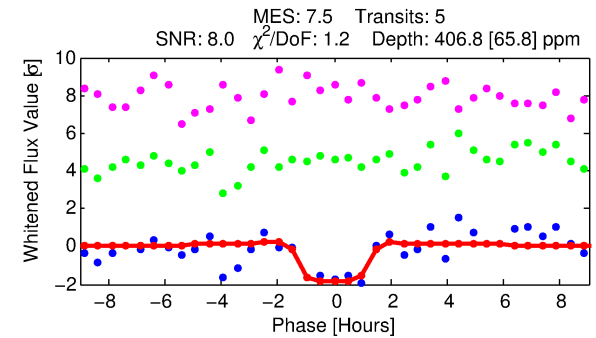
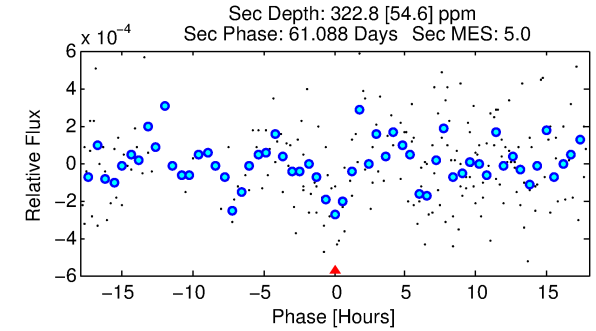
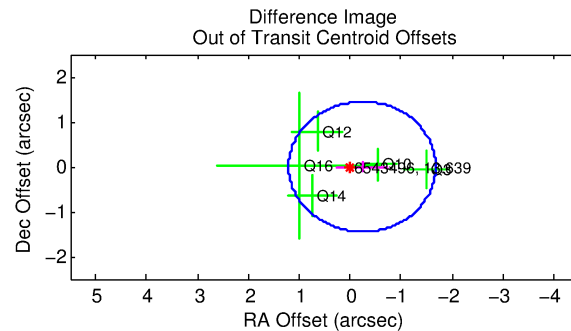
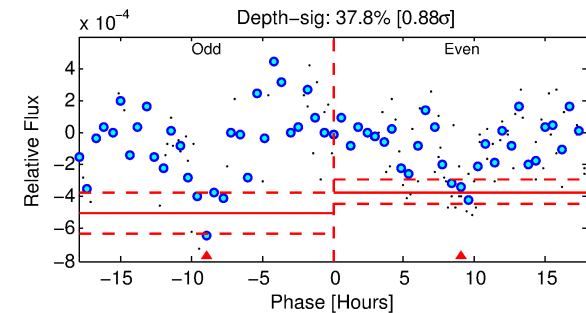
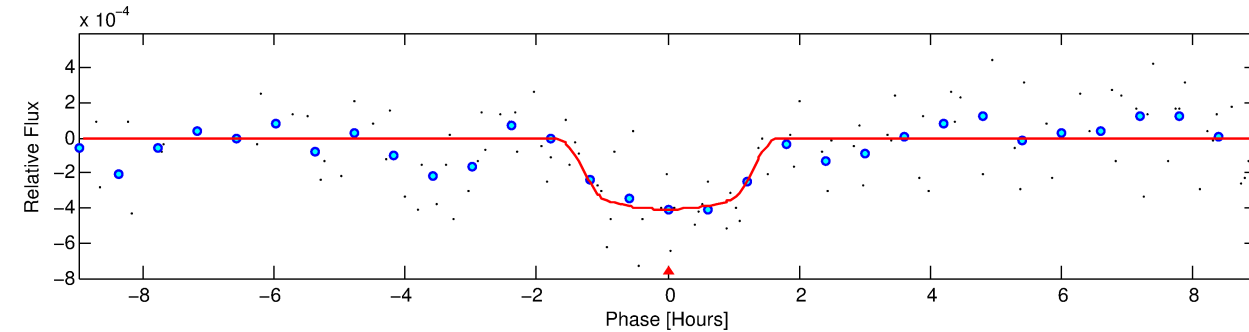
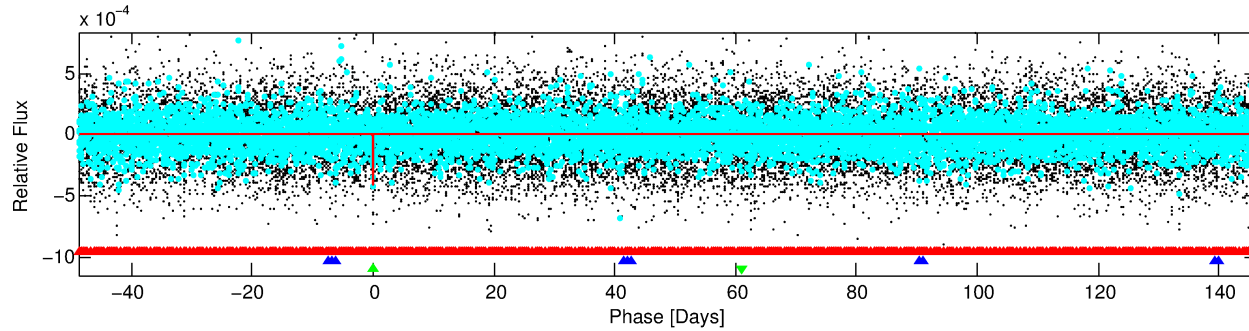
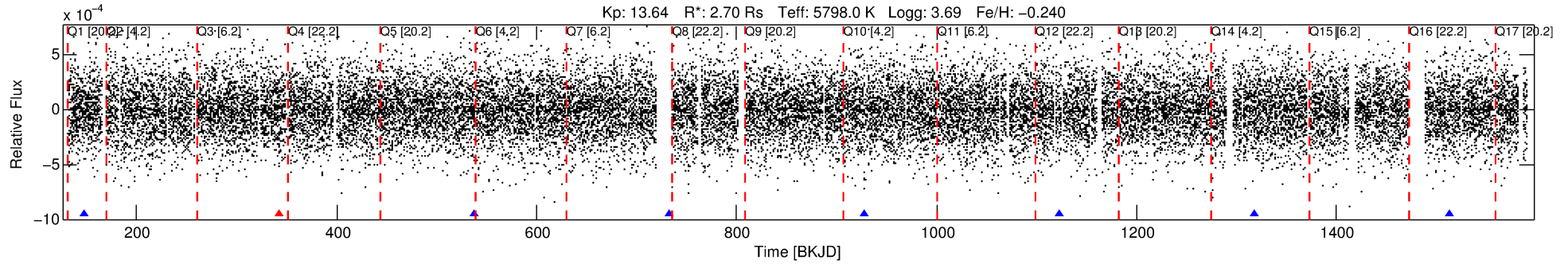
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006543496-03

No Significant Match Found

DV One-Page Summary

KIC: 6543496 Candidate: 3 of 3 Period: 195.092 d



DV Fit Results:

Period = 195.09250 [0.00219] d
Epoch = 147.7868 [0.0096] BKJD
Rp/R* = 0.0219 [0.0094]
a/R* = 237.69 [475.67]
b = 0.90 [0.42]
Seff = 14.20 [15.65]
Teq = 495 [136] K
Rp = 6.46 [4.97] Re
a = 0.7202 [0.4755] AU
Ag = 2207.64 [3085.89] [0.72 σ]
Teffp = 5246 [1155] K [4.09 σ]

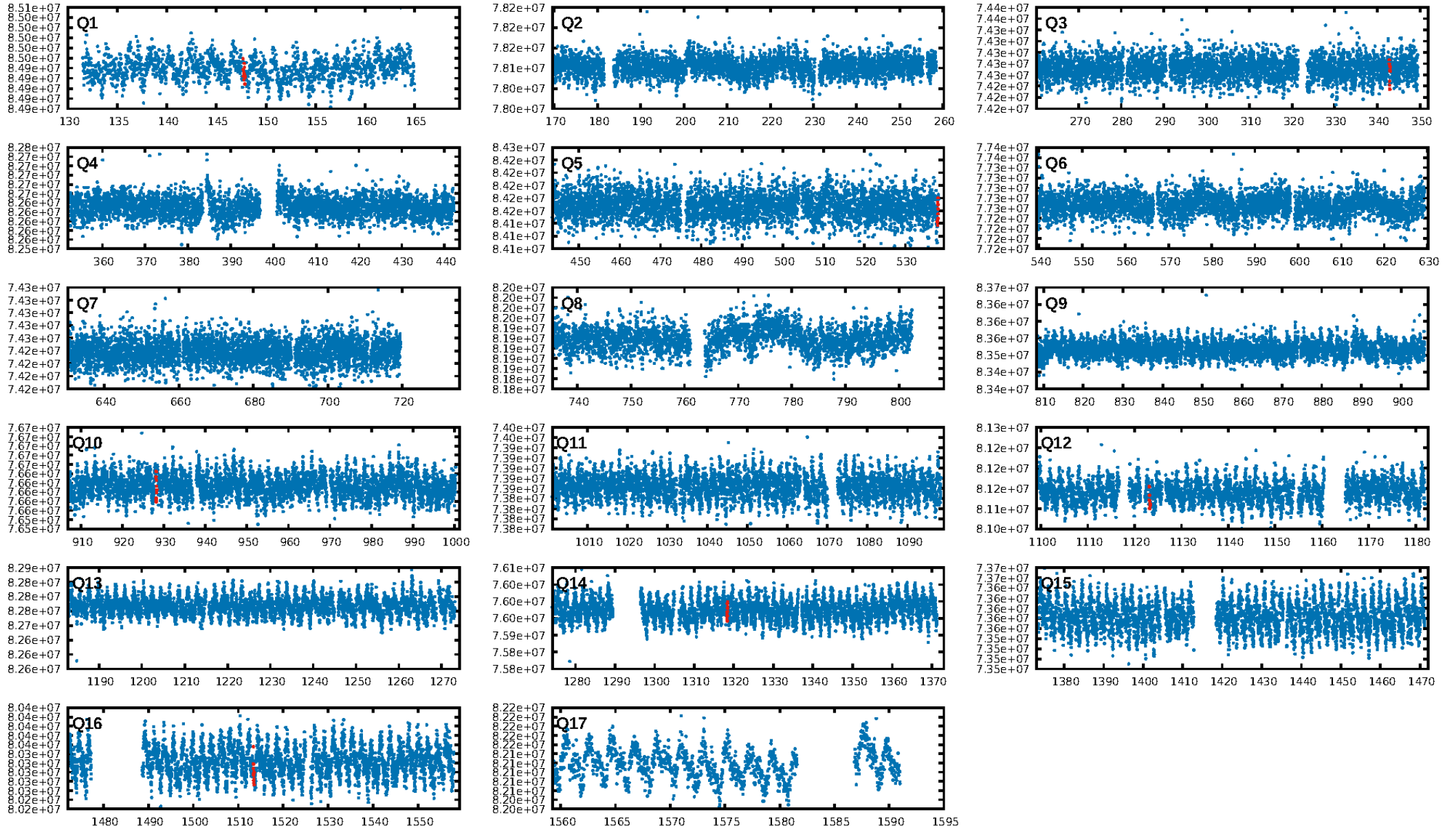
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [290.88 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 23.2%
ModelChiSquareGof-sig: 99.8%
Bootstrap-pfa: 1.68e-09
RollingBand-fgt: 0.80 [4/5]
GhostDiagnostic-chr: 3.849
Centroid-sig: 30.9%
Centroid-so: 1.330 arcsec [1.17 σ]
OotOffset-rm: 0.238 arcsec [0.49 σ]
KicOffset-rm: 0.262 arcsec [0.52 σ]
OotOffset-st: 2/1/2/0 [5]
KicOffset-st: 2/1/2/0 [5]
DiffImageQuality-fgm: 0.80 [4/5]
DiffImageOverlap-fno: 0.67 [4/6]

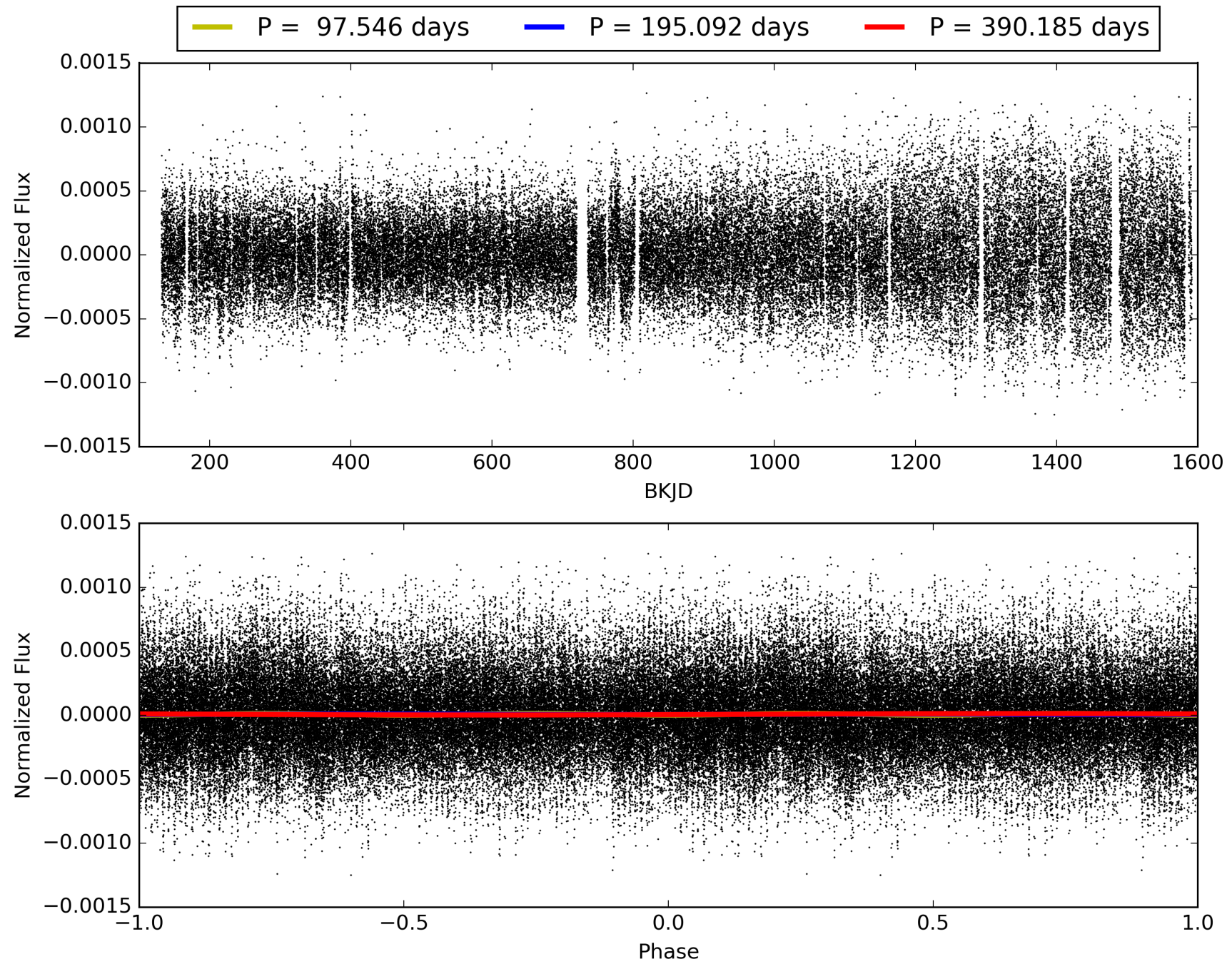
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 05:06:26 Z

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

TCE 006543496-03, PDC Light Curves

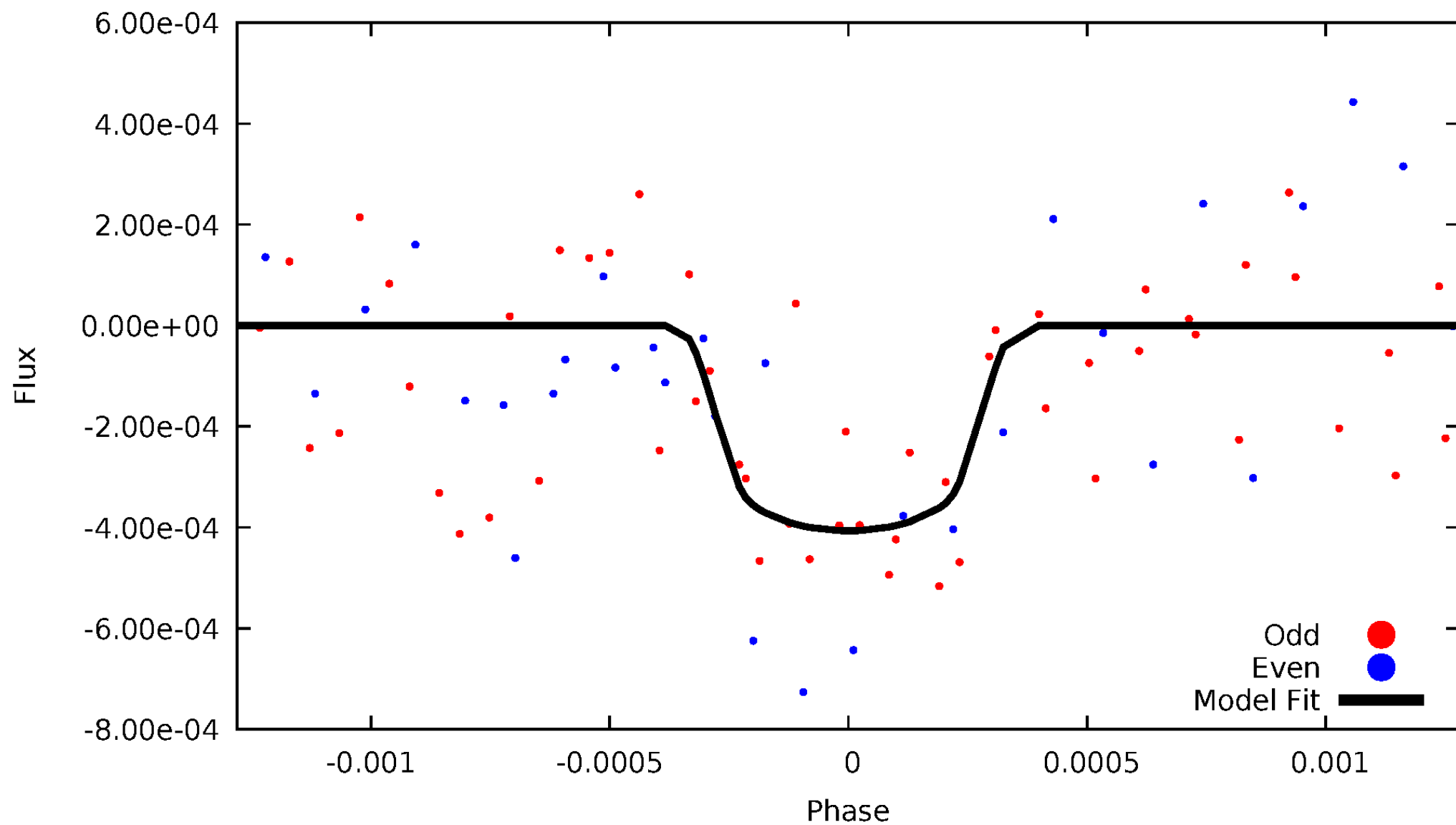


TCE 006543496-03



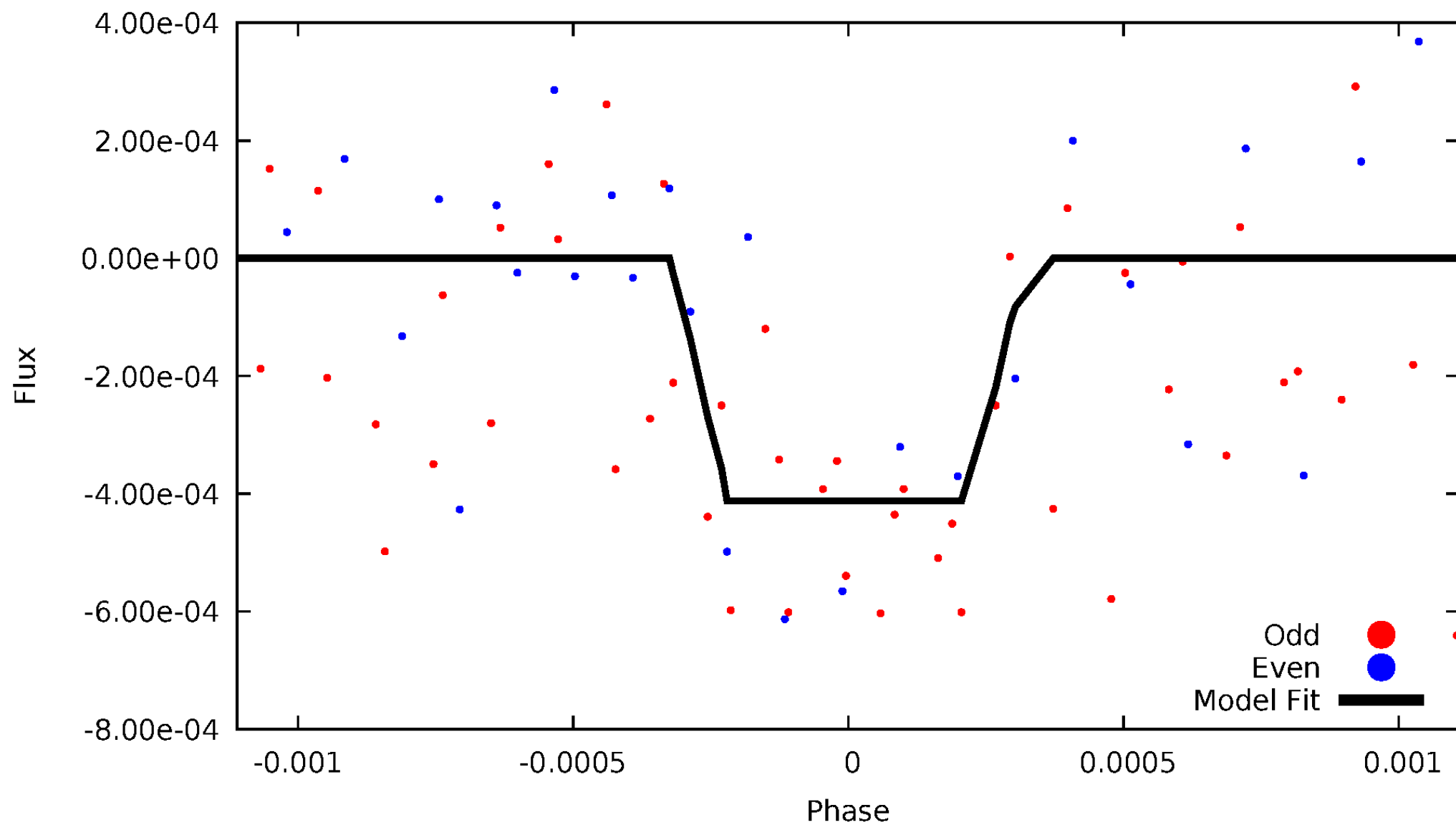
DV Odd/Even

TCE 006543496-03



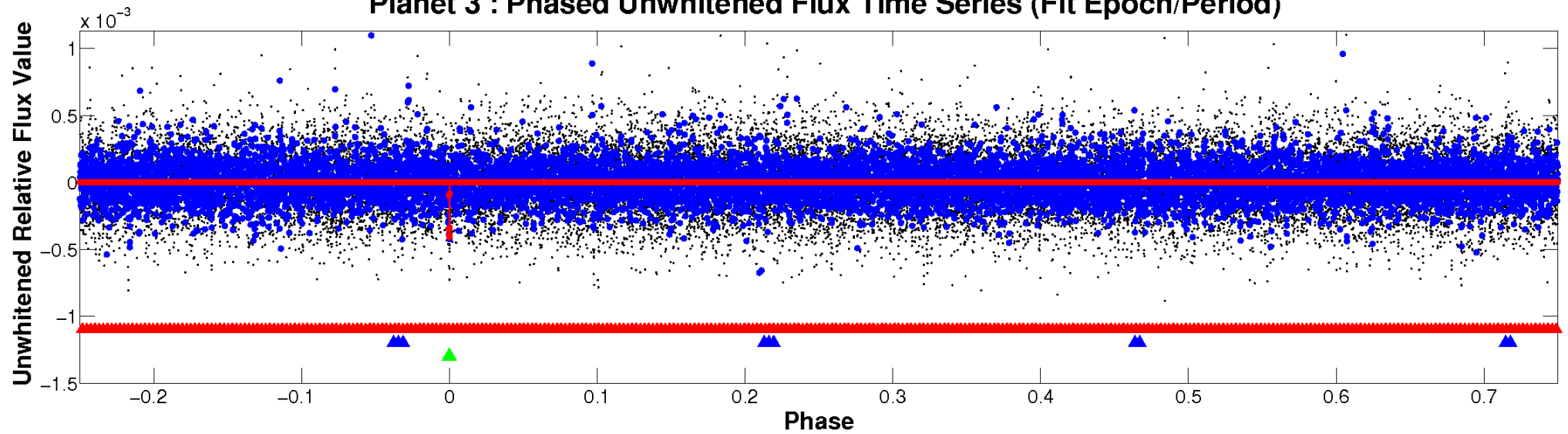
ALT Odd/Even

TCE 006543496-03

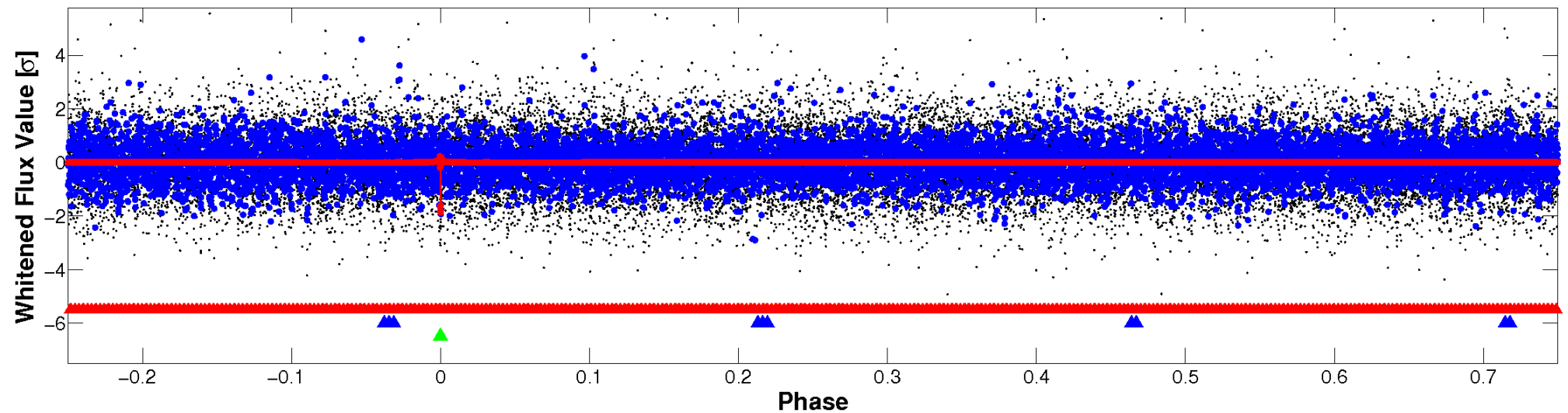


Non-Whitened Vs. Whitened Light Curve

Planet 3 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

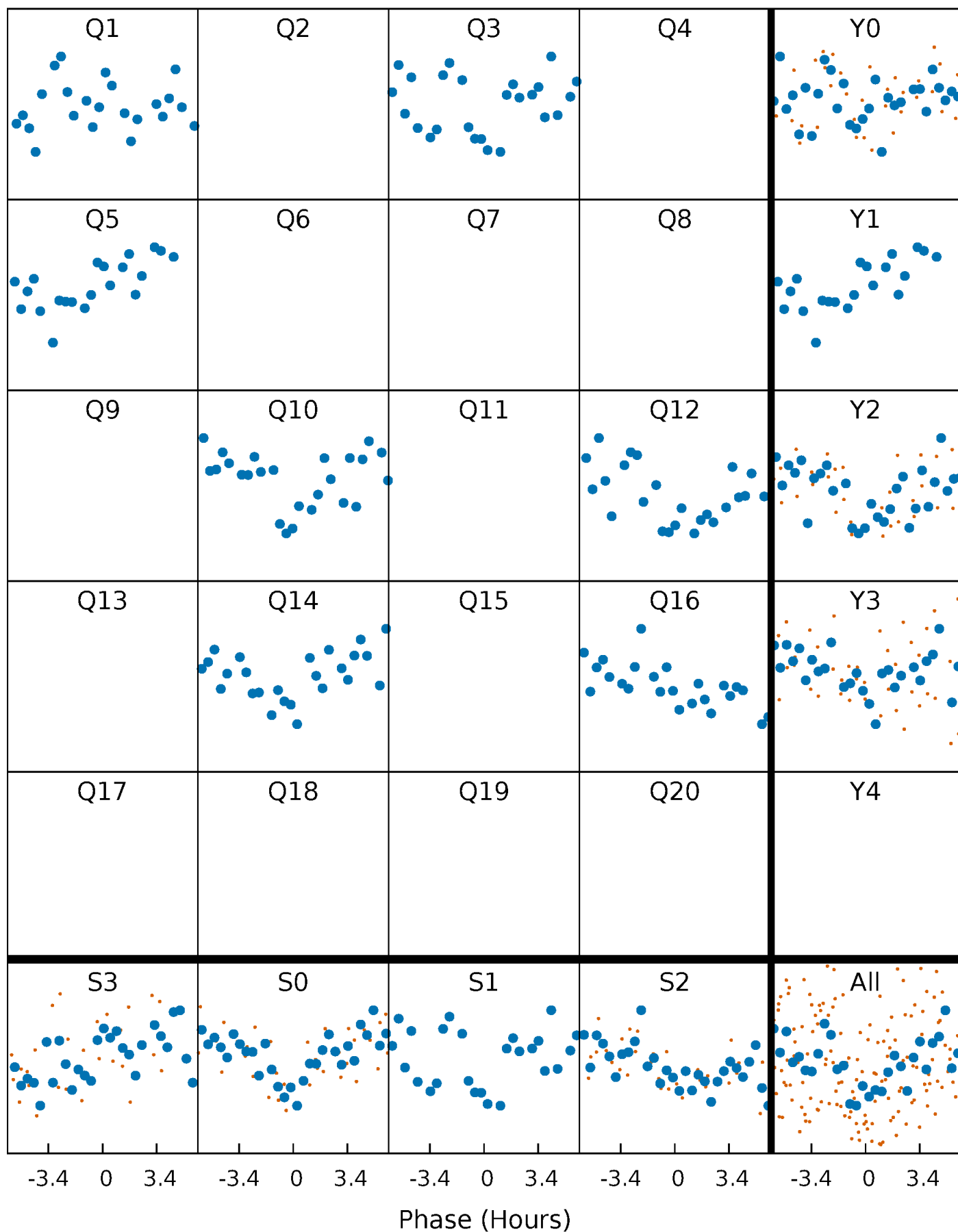


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



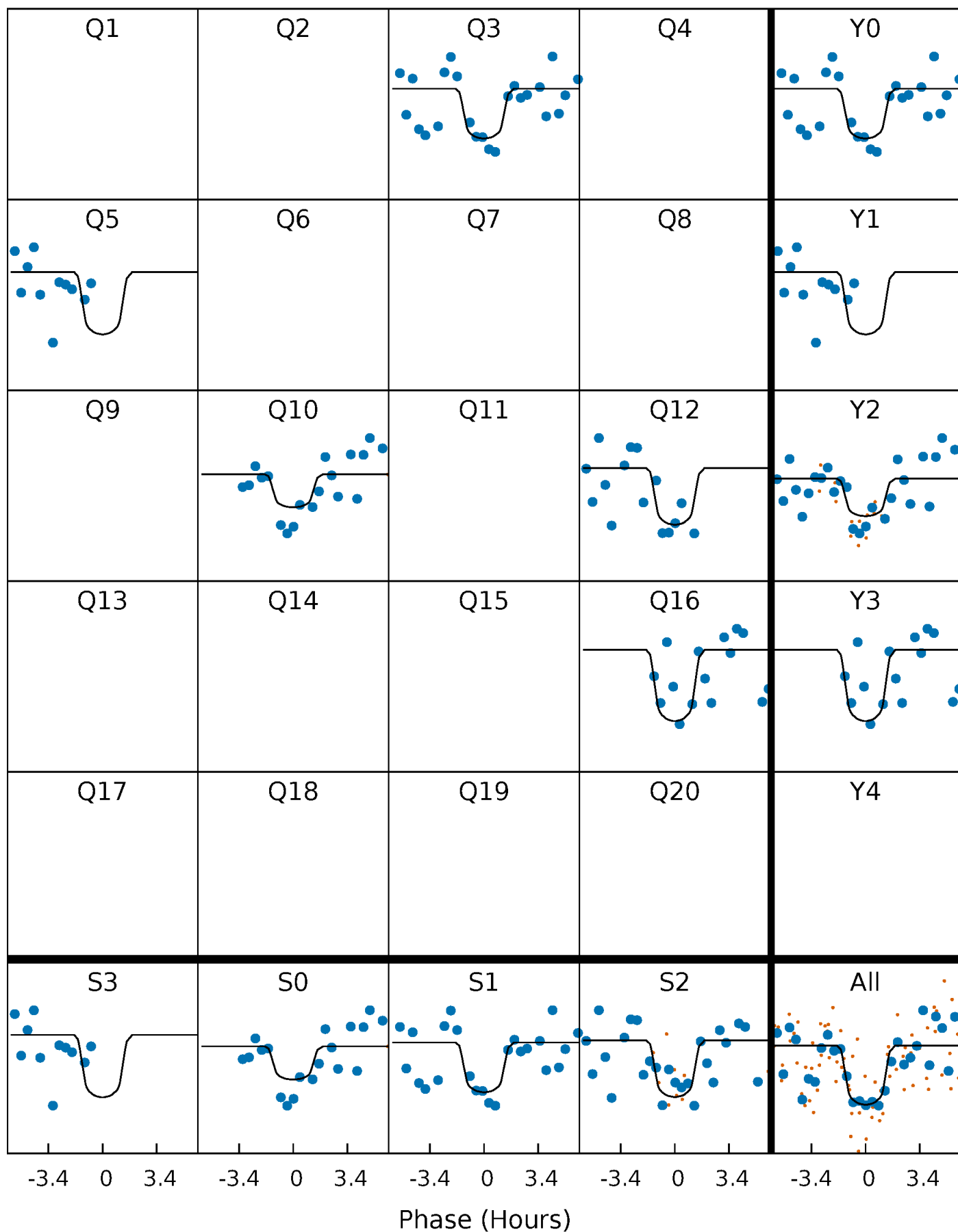
PDC Quarter-Phased Transit Curves

TCE 006543496-03 P=195.092496 Days $T_0=147.786811$ (BKJD)



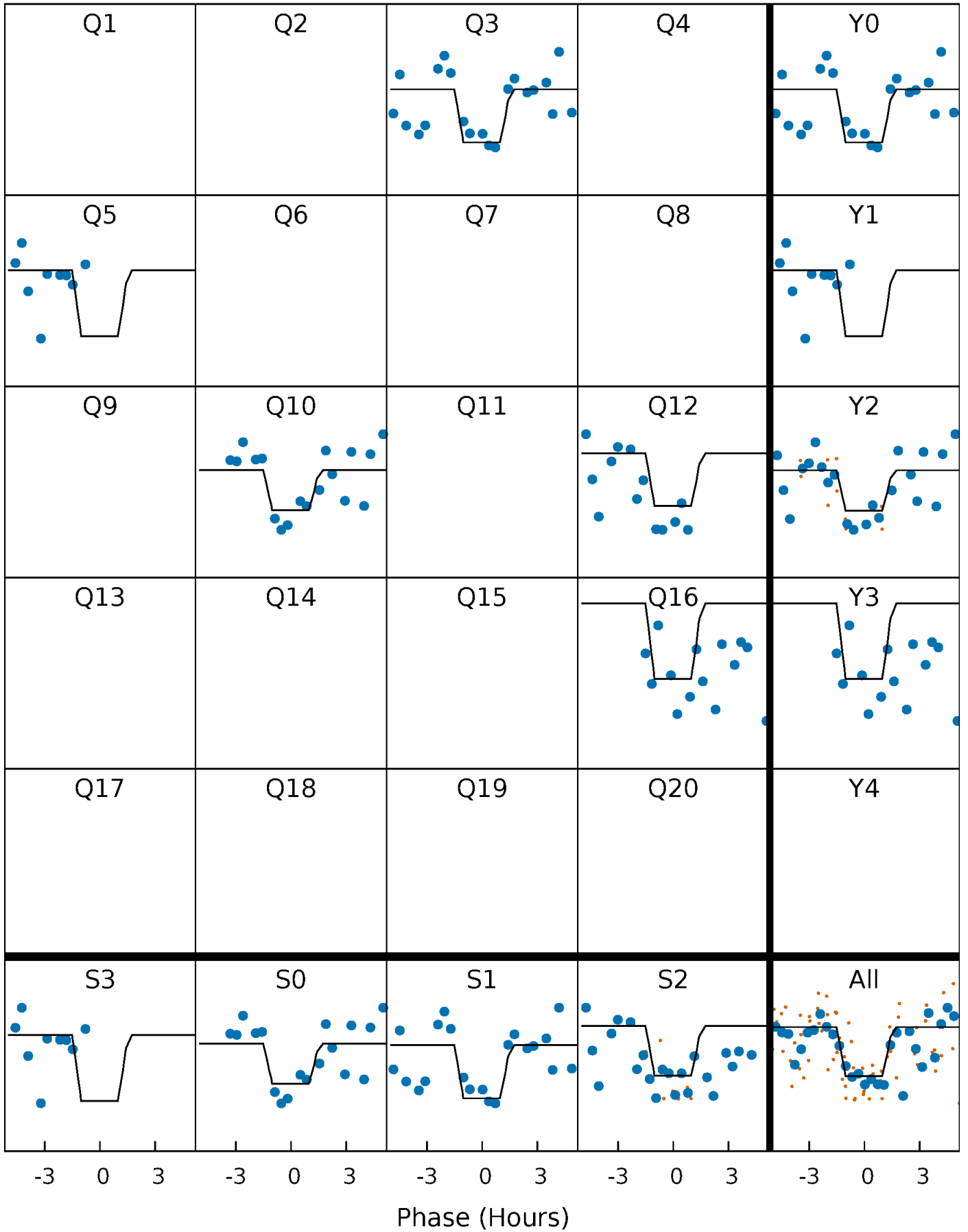
DV Quarter-Phased Transit Curves

TCE 006543496-03 $P=195.092496$ Days $T_0=147.786811$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

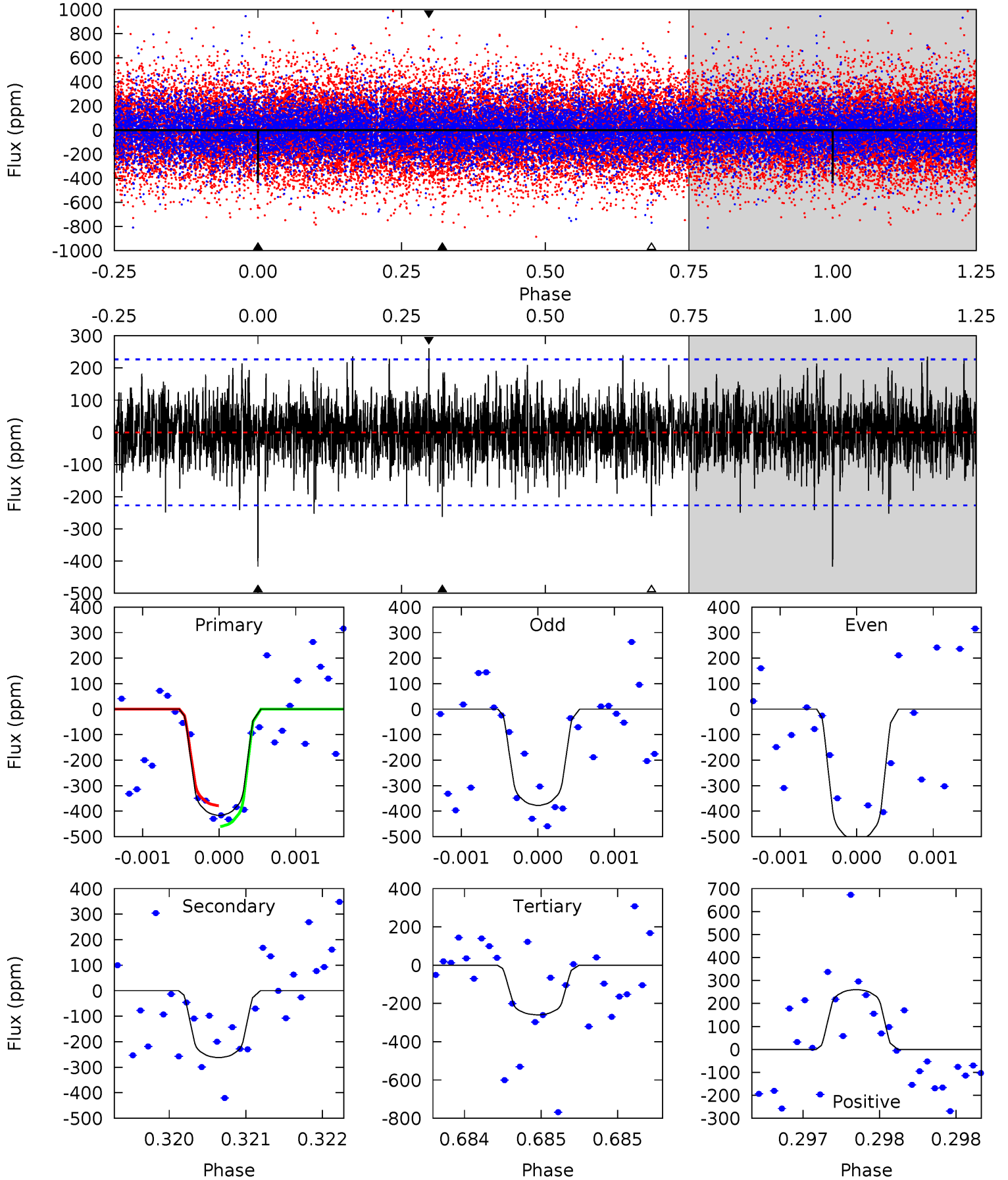
TCE 006543496-03 P=195.093771 Days $T_0=147.785857$ (BKJD)



DV Model-Shift Uniqueness Test

006543496-03, P = 195.092496 Days, E = 147.786811 Days

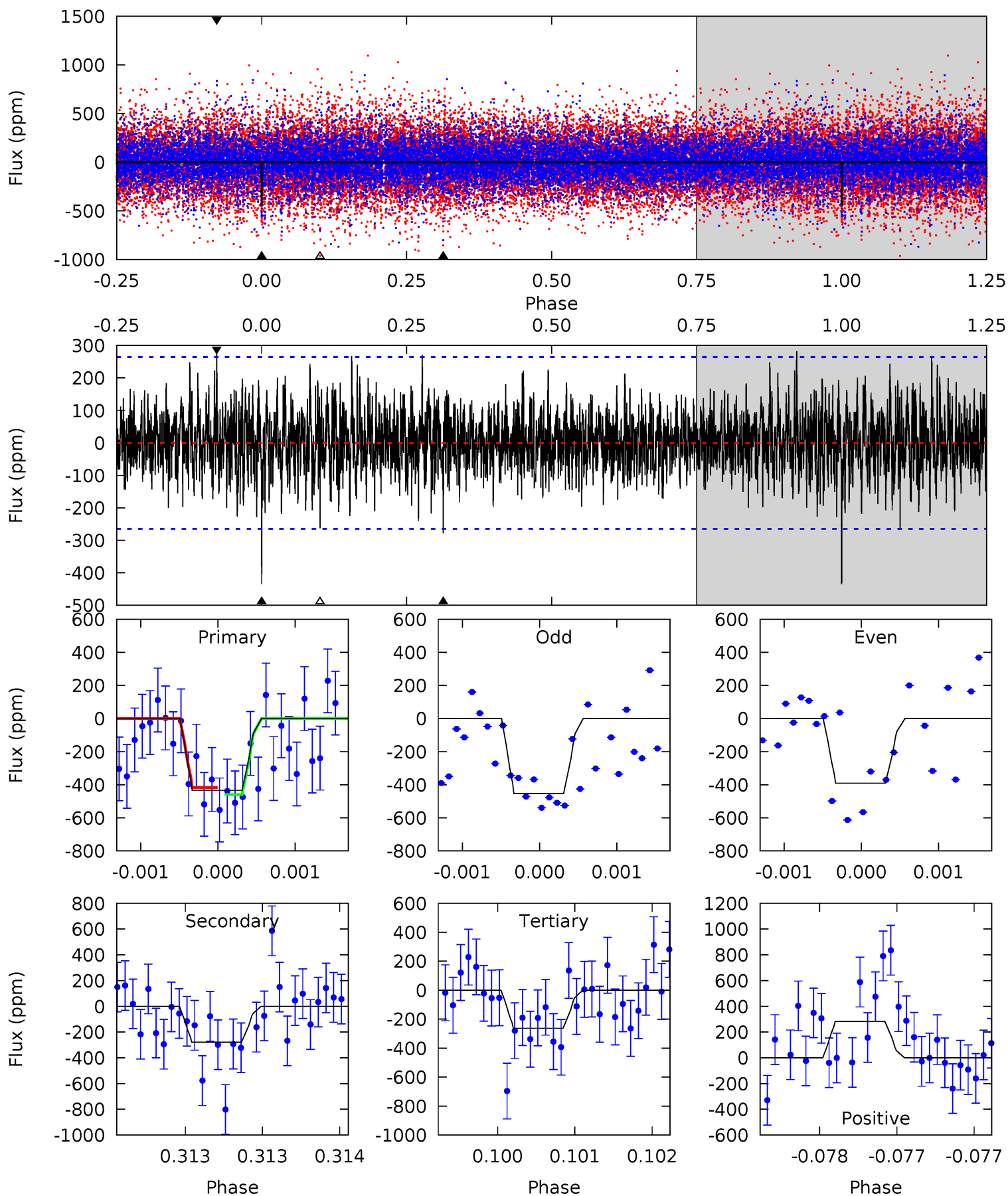
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.1	6.37	6.30	6.33	5.51	3.38	1.62	3.82	3.79	0.07	0.04	1.53	0.86	0.38	0.99



Alt Model-Shift Uniqueness Test

006543496-03, P = 195.093771 Days, E = 147.785857 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.06	5.81	5.47	5.89	5.52	3.41	1.53	3.59	3.17	0.34	-0.08	0.62	0.84	0.39	0.44



Stellar Parameters For KIC 006543496

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5798^{+193}_{-158}	$3.693^{+0.656}_{-0.164}$	$-0.240^{+0.300}_{-0.250}$	$2.697^{+0.691}_{-1.728}$	$1.309^{+0.173}_{-0.432}$	$0.094^{+1.015}_{-0.044}$
	+3%/-3%	+18%/-4%	+125%/-104%	+26%/-64%	+13%/-33%	+1079%/-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 006543496-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-262 ± 41	$5.67^{+3.17}_{-2.62}$	677^{+56}_{-107}	5085^{+1519}_{-729}	2338^{+5370}_{-1389}
Alt.	-278 ± 48	$5.26^{+3.24}_{-2.57}$	679^{+61}_{-107}	5246^{+1669}_{-743}	2745^{+7391}_{-1662}

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

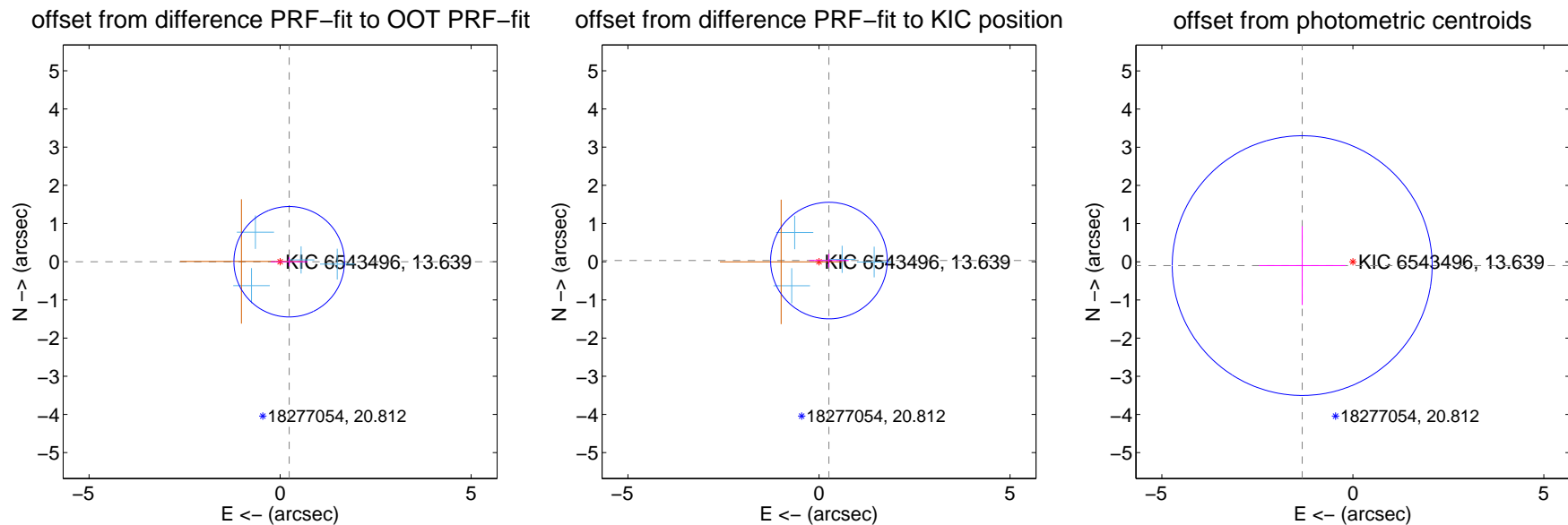
DV Centroid Data

Supplemental centroid analysis for 006543496-03. Kepler magnitude: 13.64. Transit SNR 8.00

There are 4 quarters with good PRF difference image offsets

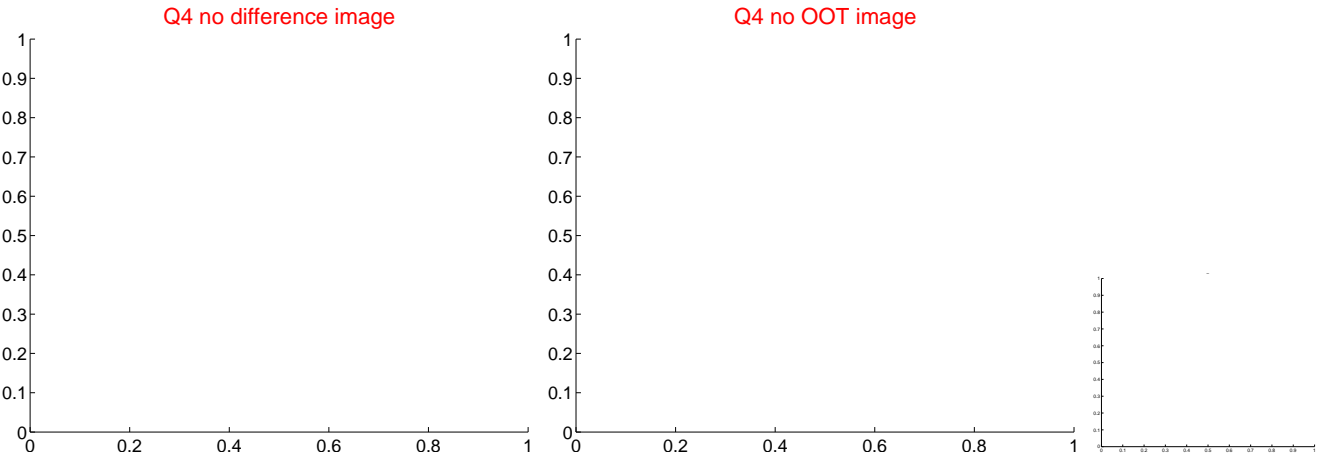
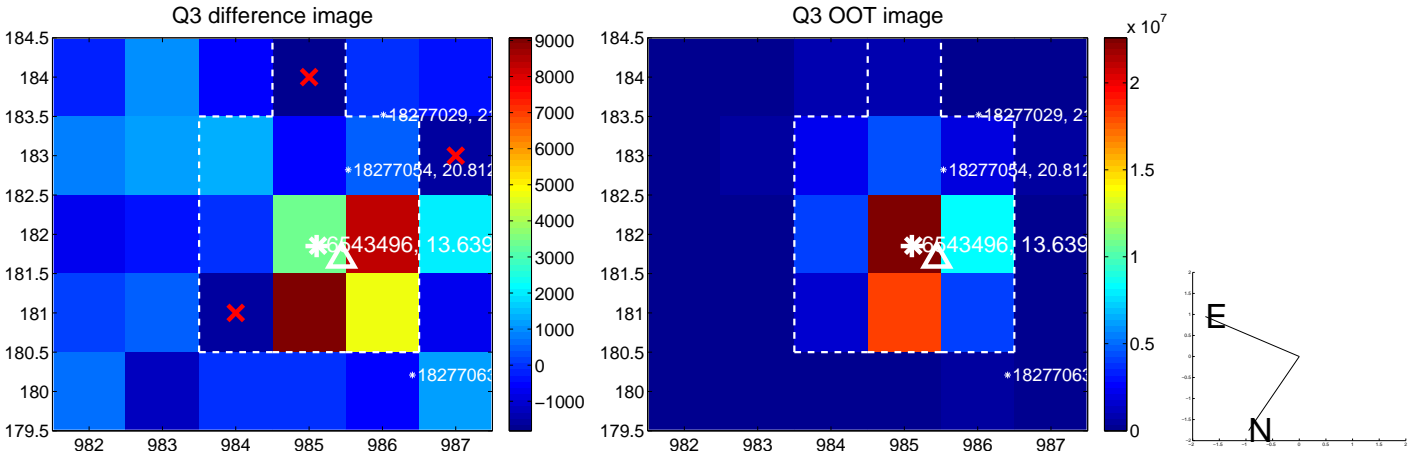
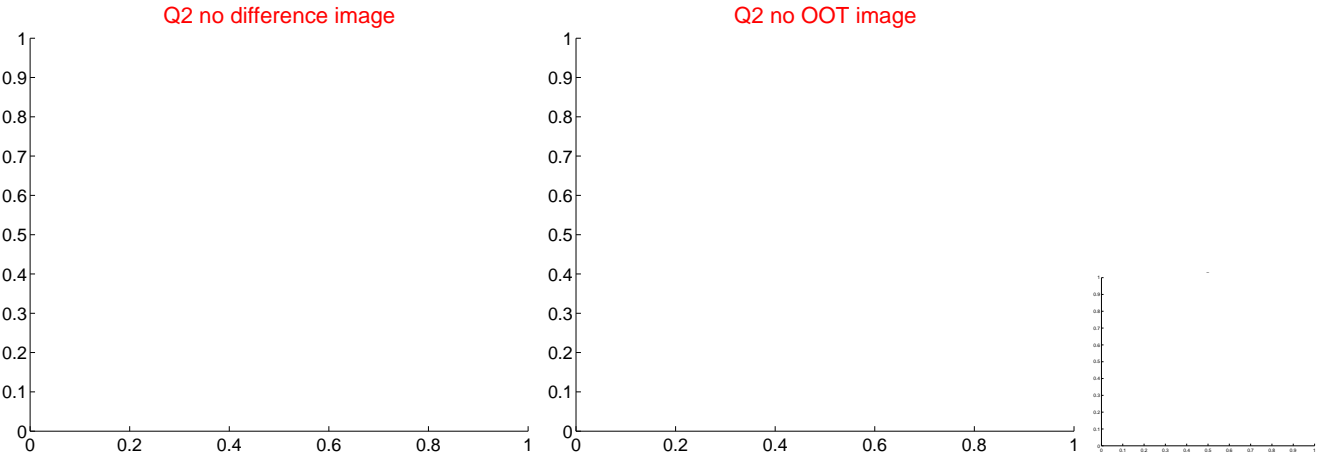
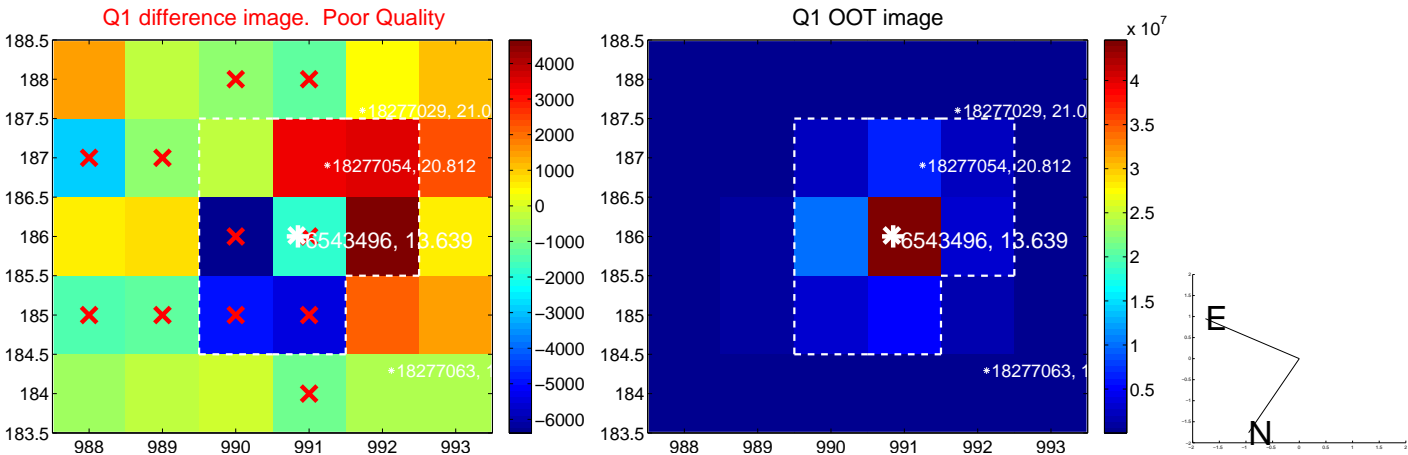
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.238 ± 0.482	0.49	-0.238 ± 0.482	-0.001 ± 0.120
PRF-fit source offset from KIC position	0.262 ± 0.509	0.52	-0.261 ± 0.516	0.030 ± 0.179
photometric centroid source offset	1.33 ± 1.13	1.17	1.33 ± 1.13	-0.10 ± 1.03

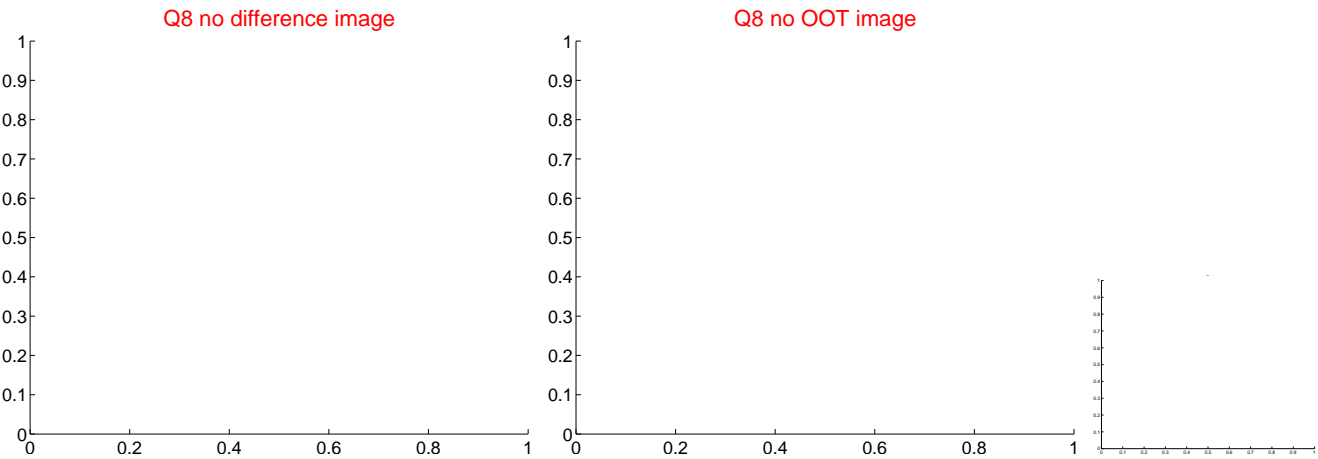
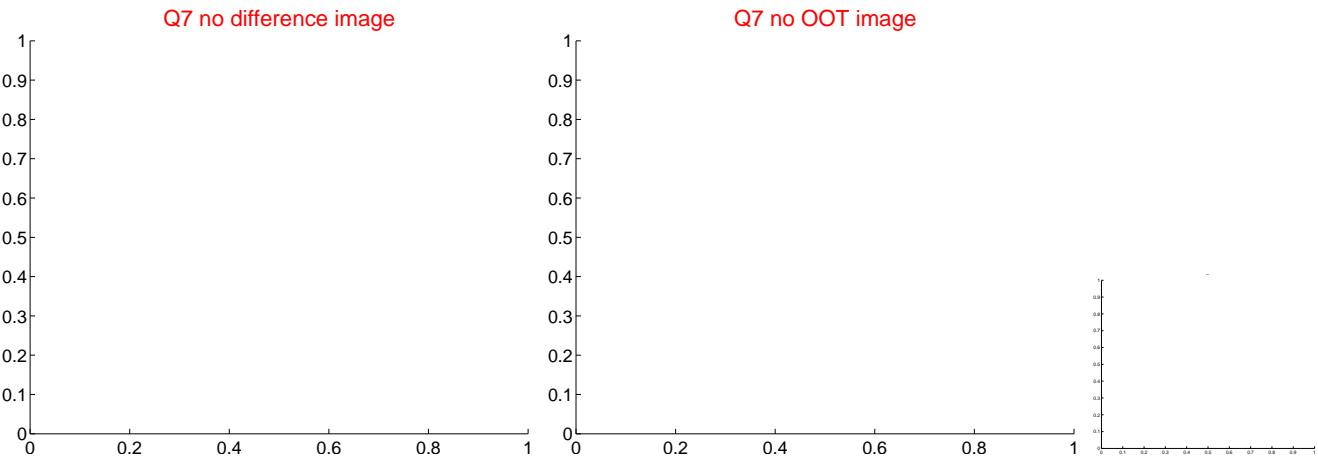
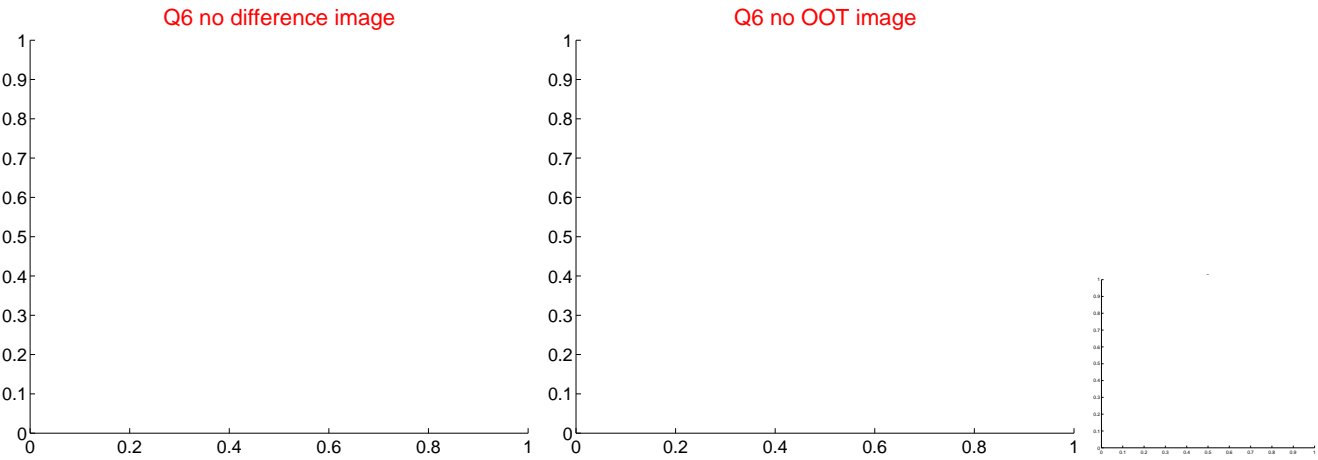
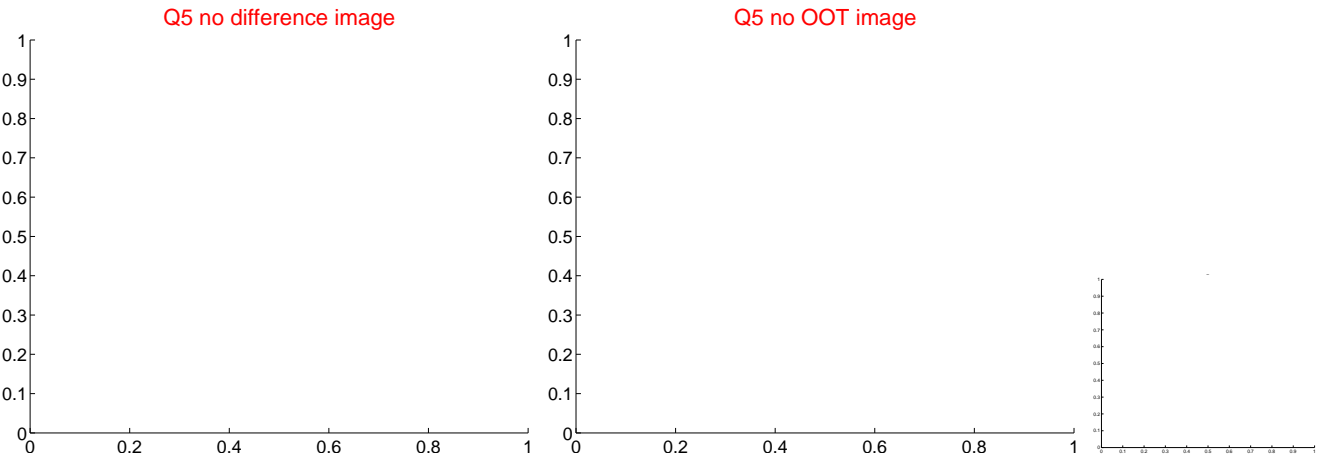


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

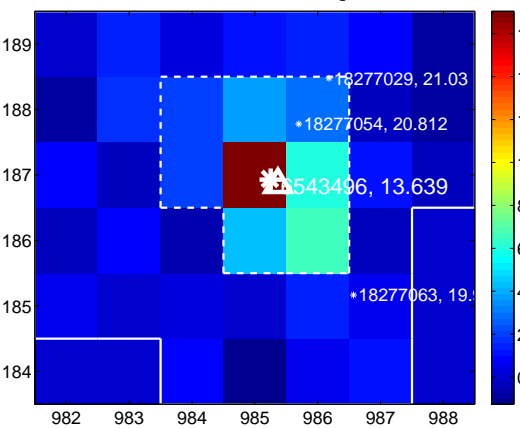
Q9 no difference image



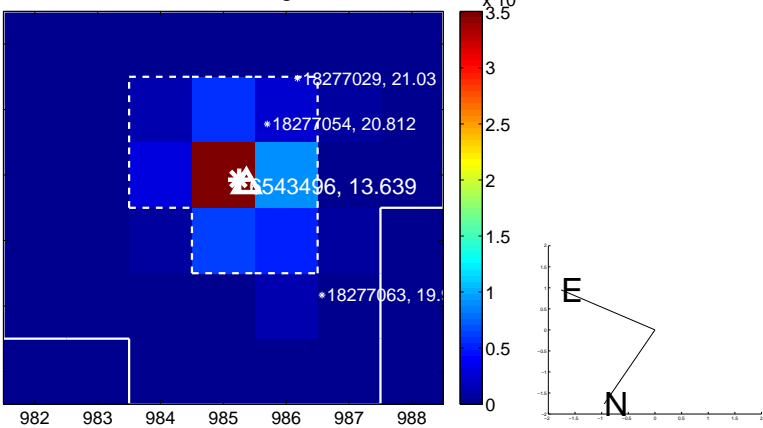
Q9 no OOT image



Q10 difference image



Q10 OOT image



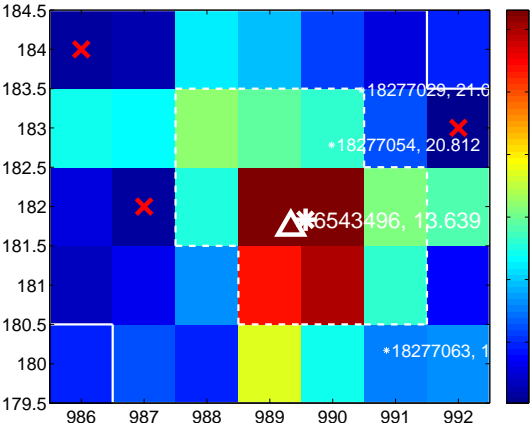
Q11 no difference image



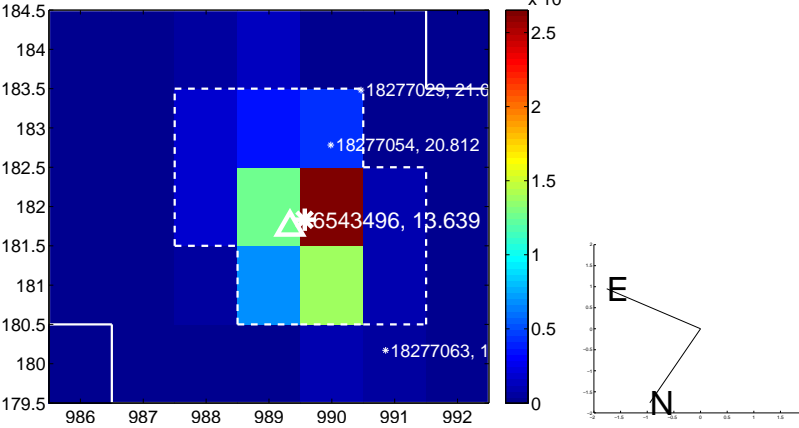
Q11 no OOT image



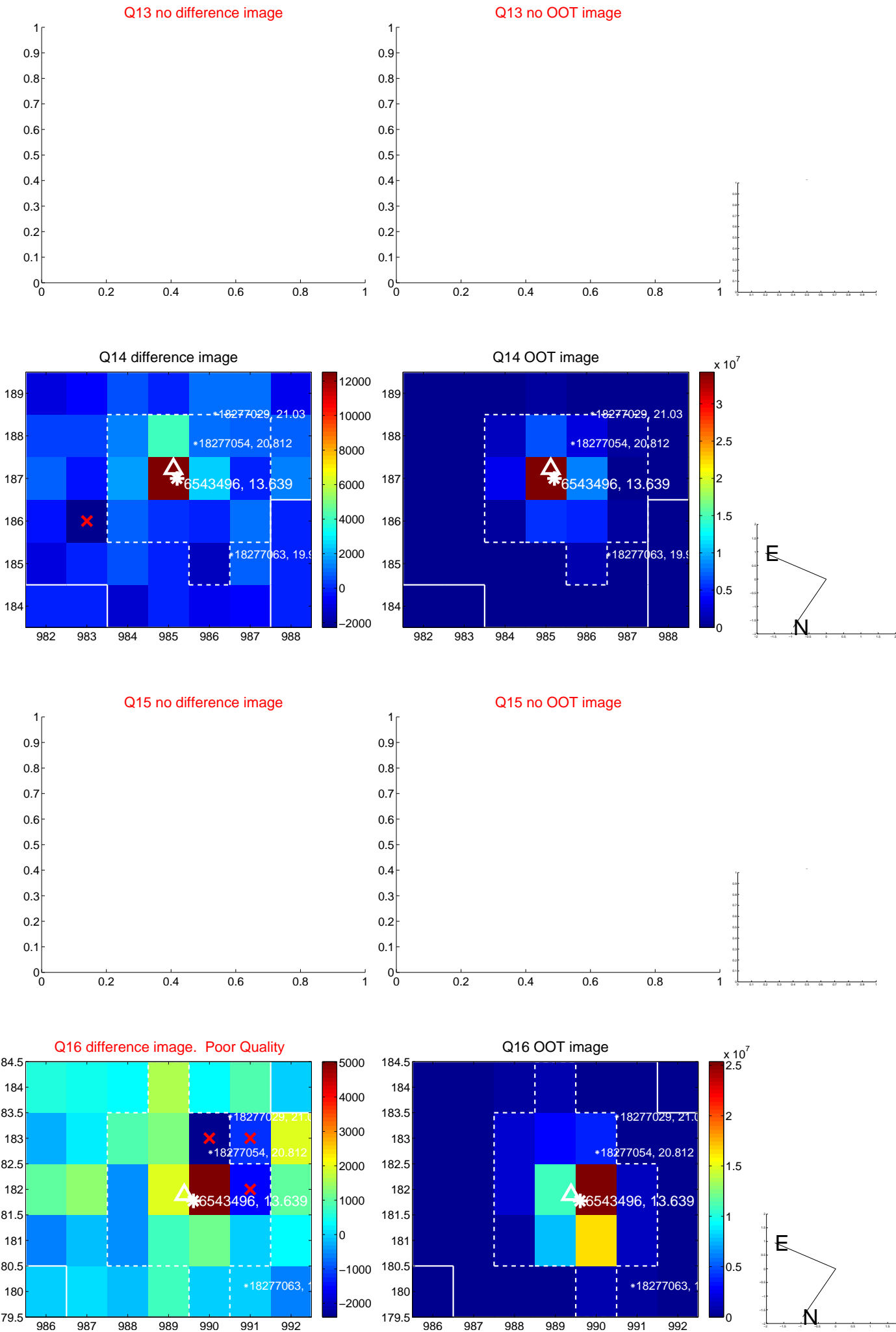
Q12 difference image



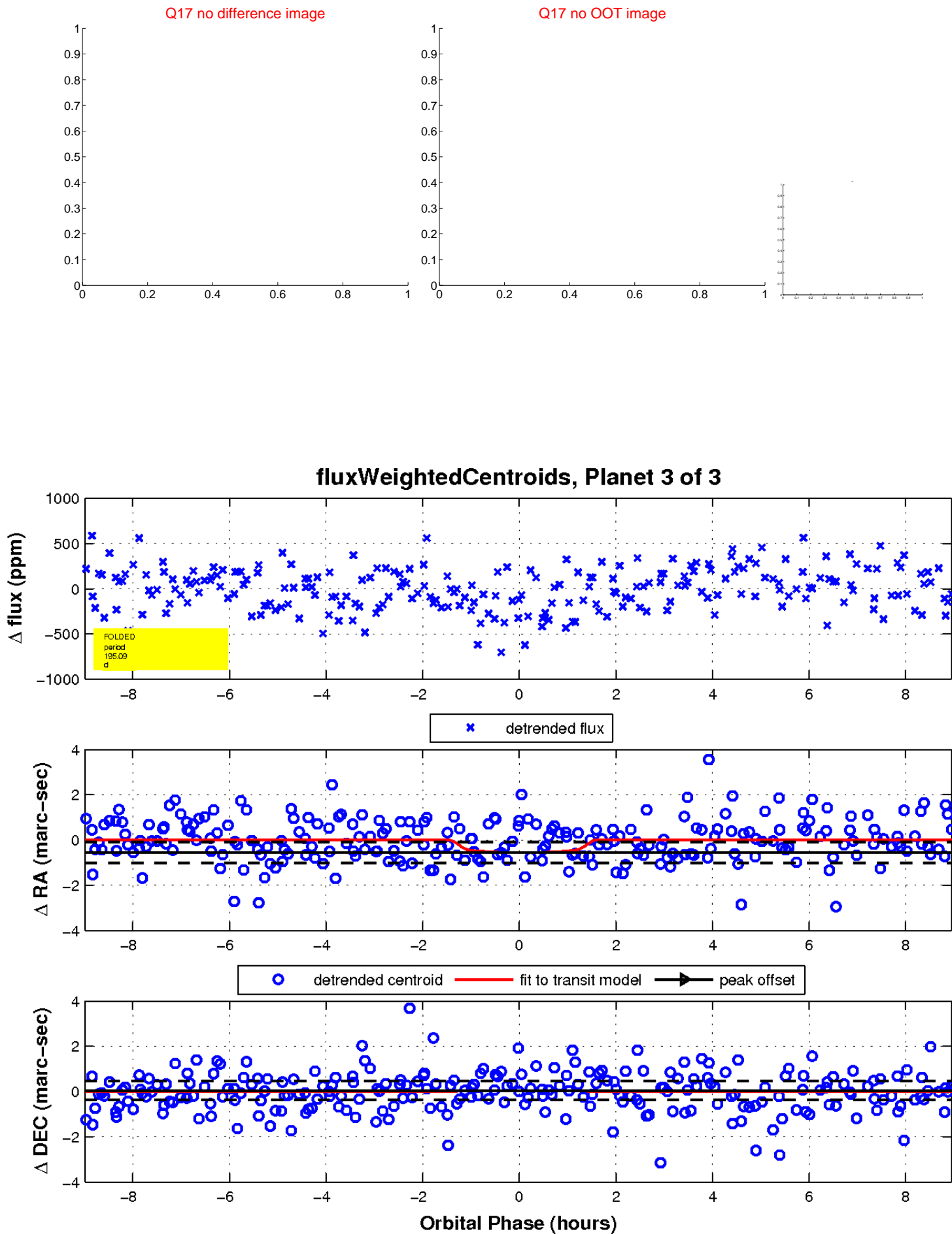
Q12 OOT image



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

