

KIC 006549623

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})
006549623-01	OBS	No	1.328440	132.136240	15.4	1.952	9.6	4.9	3.83	6588	1.85	30847.56
006549623-02	OBS	No	1.328301	132.176545	24.3	9.158	7.9	7.9	3.83	6588	2.04	30851.87
006549623-04	OBS	No	26.765391	132.656906	157.5	4.734	11.3	11.1	3.83	6588	5.59	562.66
006549623-05	OBS	No	53.956704	166.570599	94.9	10.304	11.4	6.0	3.83	6588	4.32	220.94
006549623-06	OBS	No	45.232021	161.430230	191.8	4.494	10.0	9.7	3.83	6588	6.03	279.52
006549623-07	OBS	No	19.648078	136.370609	206.7	1.661	11.0	9.9	3.83	6588	6.45	849.67
006549623-08	OBS	No	31.641250	138.985649	227.6	2.093	9.6	8.1	3.83	6588	6.70	450.13
006549623-09	OBS	No	28.804836	142.439511	168.3	4.657	8.9	9.4	3.83	6588	5.63	510.18

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006549623-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
006549623-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
006549623-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
006549623-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006549623-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006549623-07	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_MEAS
006549623-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006549623-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS

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

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

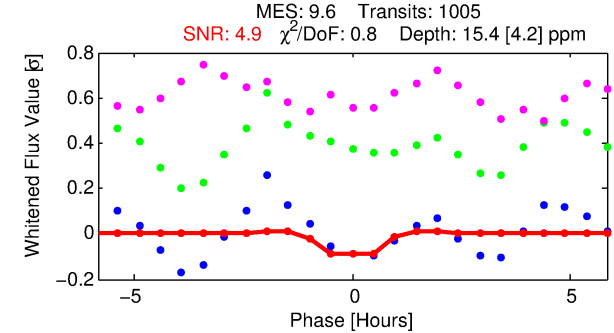
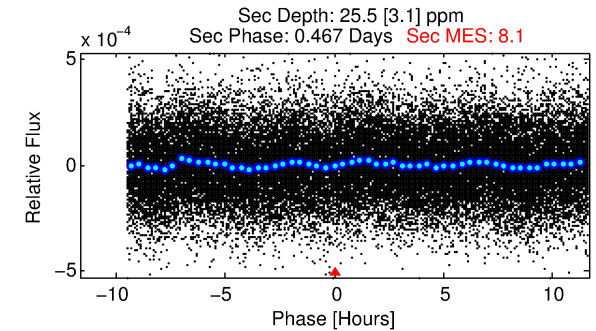
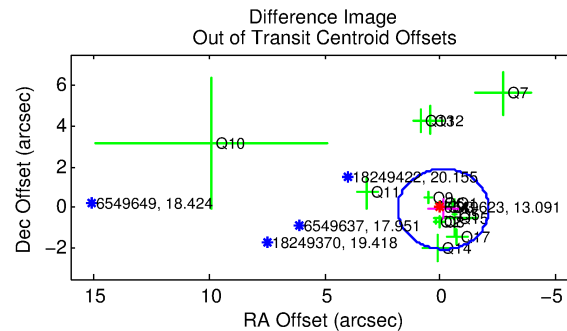
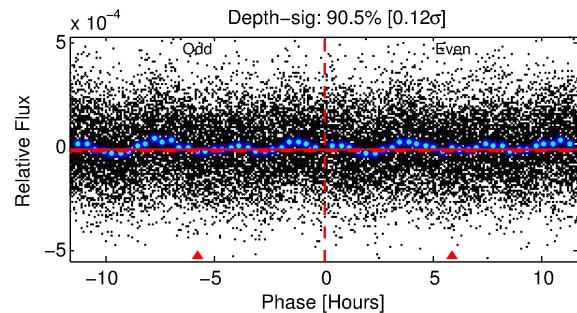
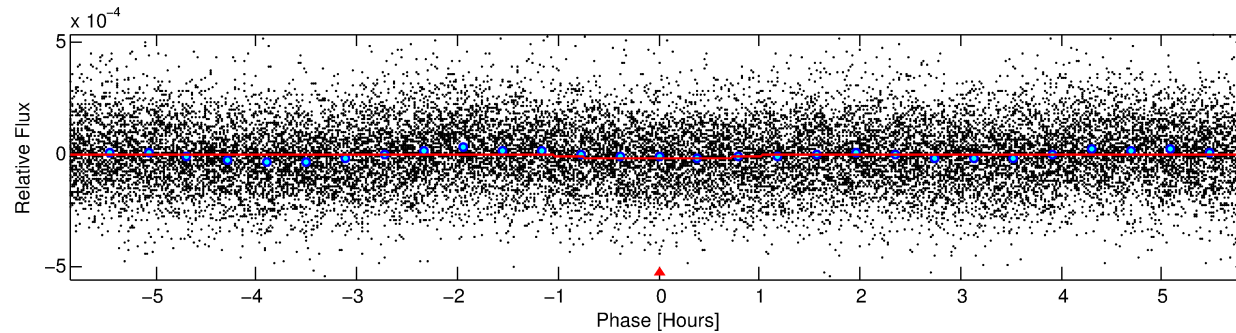
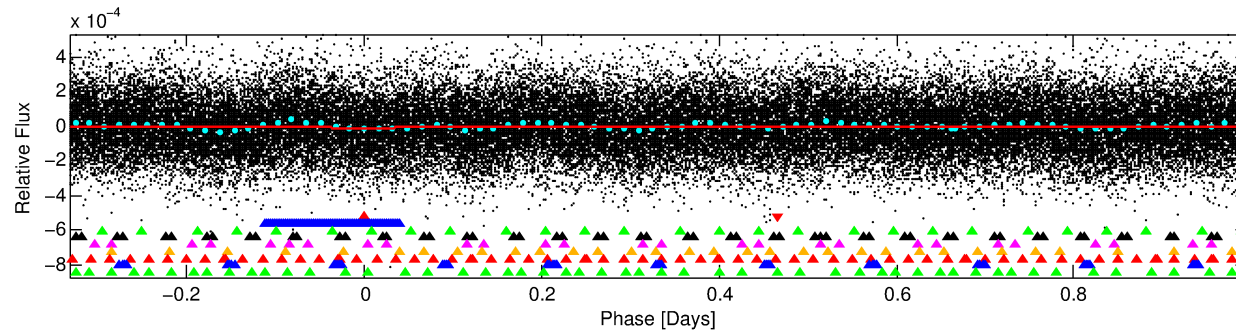
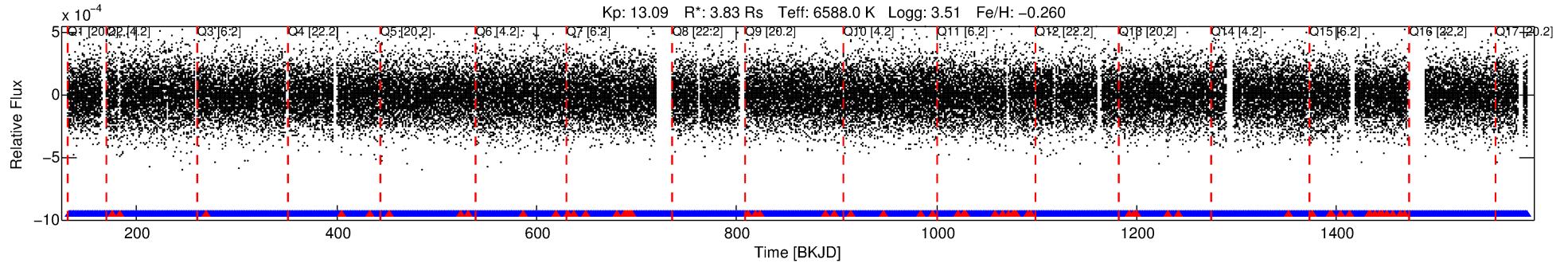
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006549623-01

No Significant Match Found

DV One-Page Summary

KIC: 6549623 Candidate: 1 of 9 Period: 1.328 d



DV Fit Results:

Period = 1.32844 [0.00002] d
Epoch = 132.1362 [0.0049] BKJD
Rp/R* = 0.0044 [0.0023]
a/R* = 1.94 [4.58]
b = 0.95 [0.33]
Seff = 30847.55 [19839.80]
Teq = 3379 [543] K
Rp = 1.86 [1.26] Re
a = 0.0284 [0.0113] AU
Ag = 3.28 [4.06] [0.56 σ]
Teffp = 7032 [1882] K [1.86 σ]

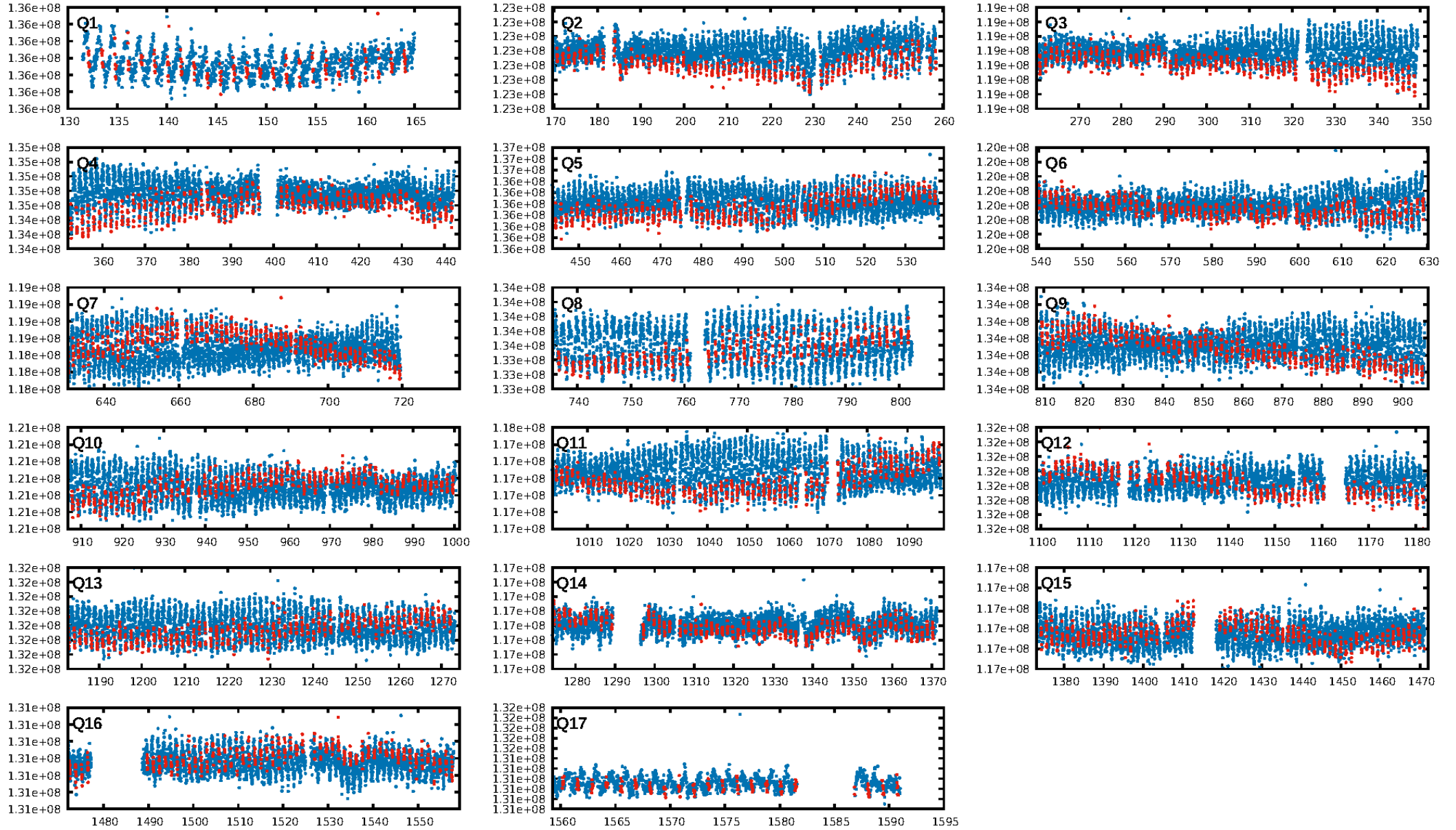
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00 σ]
LongPeriod-sig: 100.0% [171.51 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 7.90e-09
RollingBand-fgt: 0.94 [899/960]
GhostDiagnostic-chr: 0.9085
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.151 arcsec [0.23 σ]
KicOffset-rm: 0.128 arcsec [0.19 σ]
OotOffset-st: 4/4/3/5 [16]
KicOffset-st: 4/4/3/5 [16]
DiffImageQuality-fgm: 0.69 [11/16]
DiffImageOverlap-fno: 0.00 [0/17]

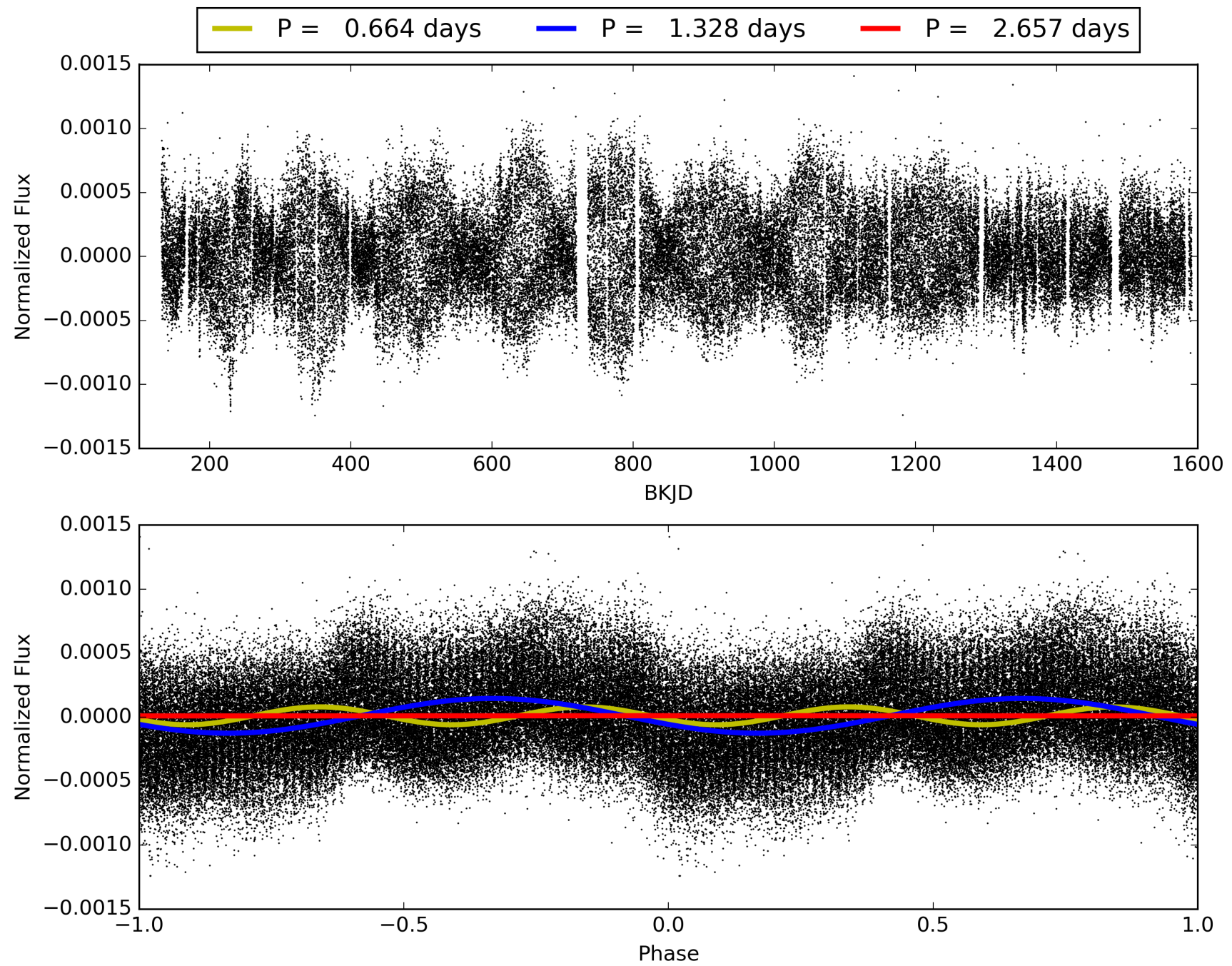
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 07:29:26 Z

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

TCE 006549623-01, PDC Light Curves

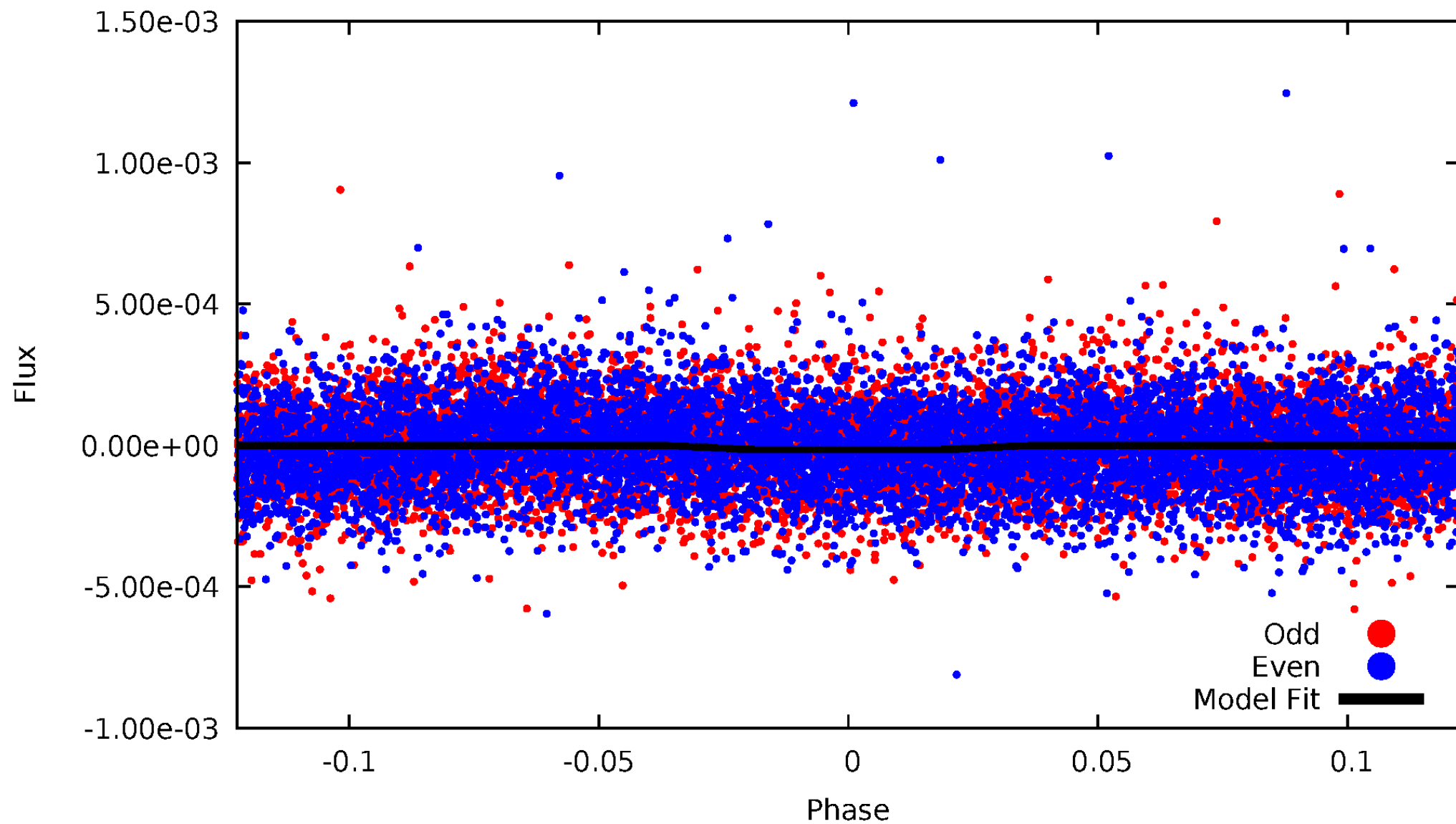


TCE 006549623-01



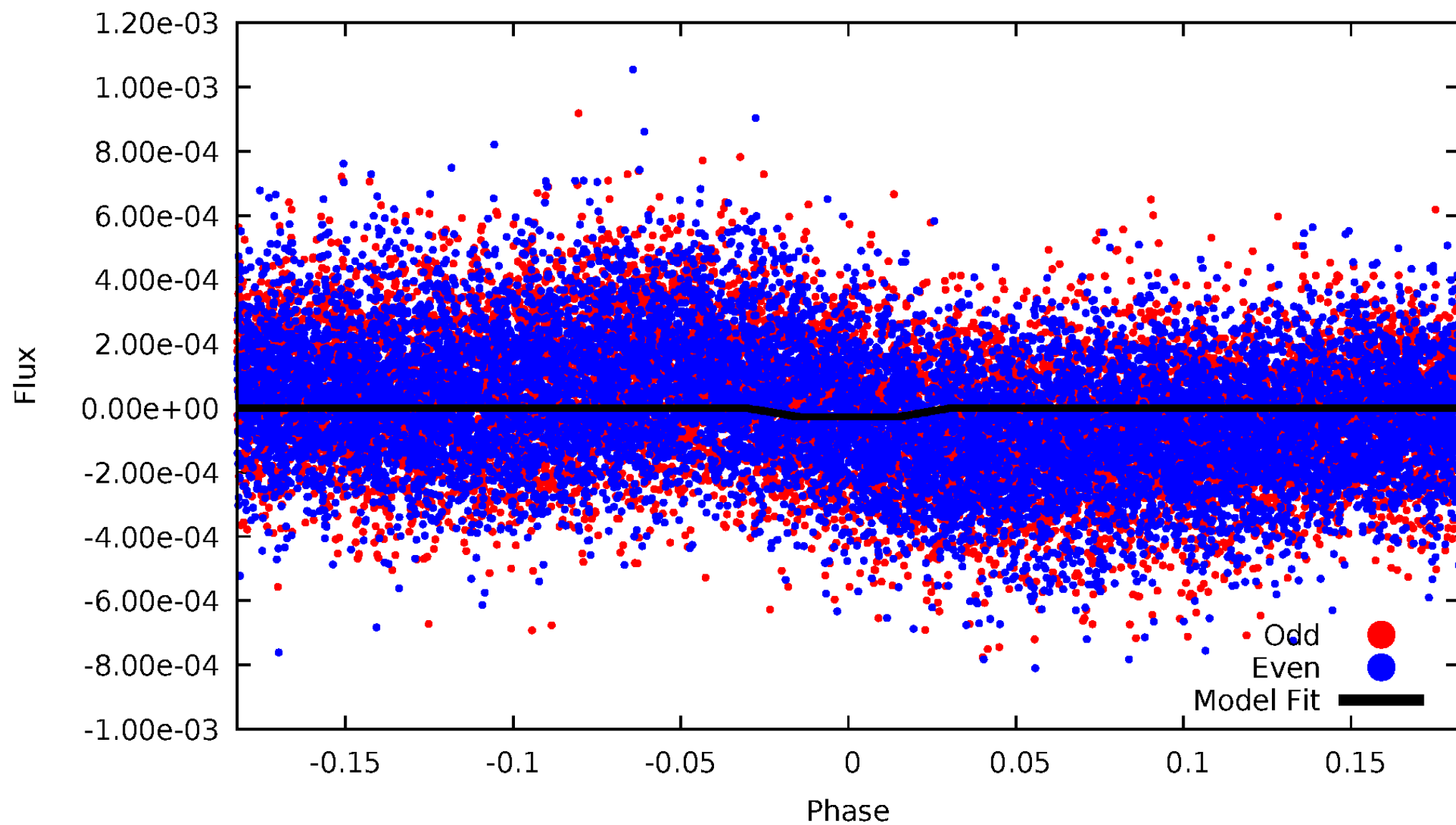
DV Odd/Even

TCE 006549623-01



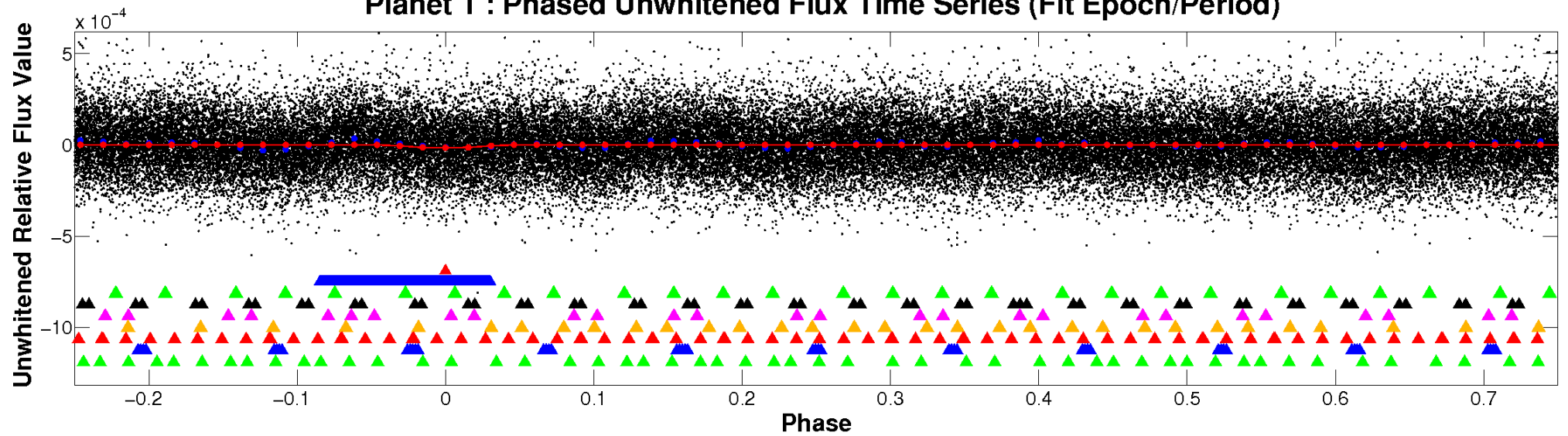
ALT Odd/Even

TCE 006549623-01

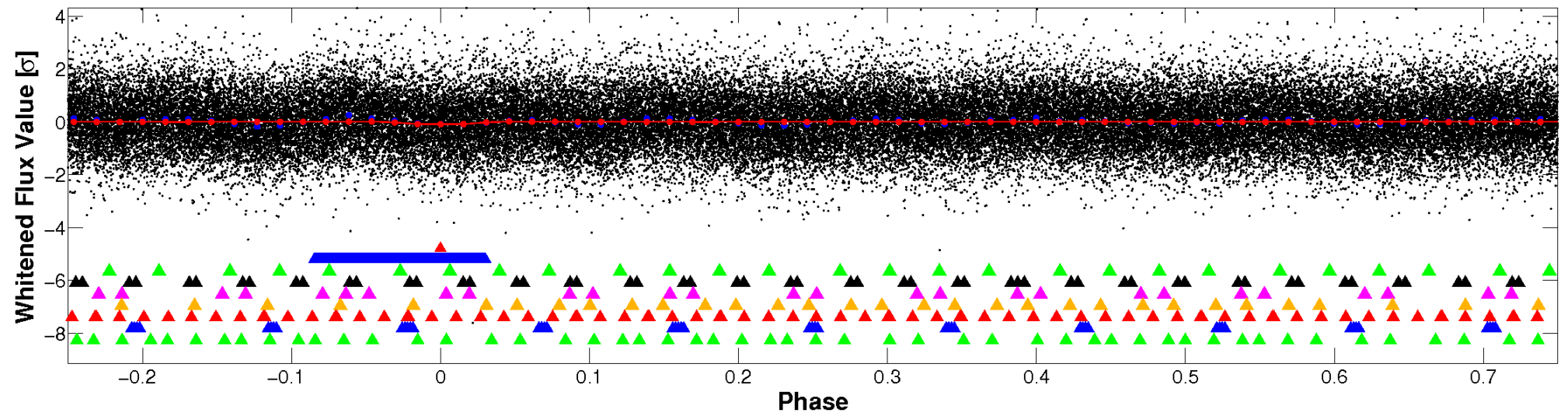


Non-Whitened Vs. Whitened Light Curve

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

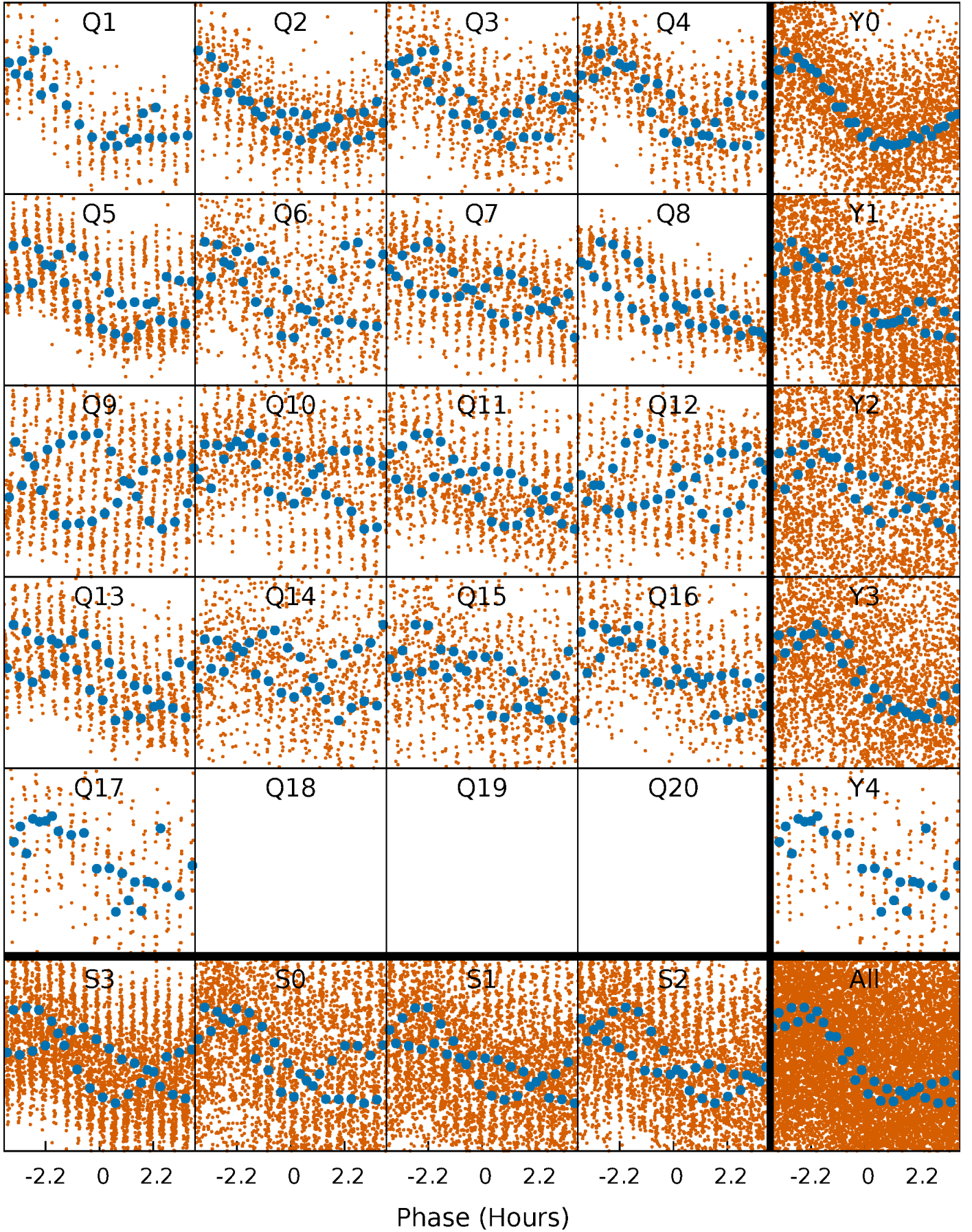


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



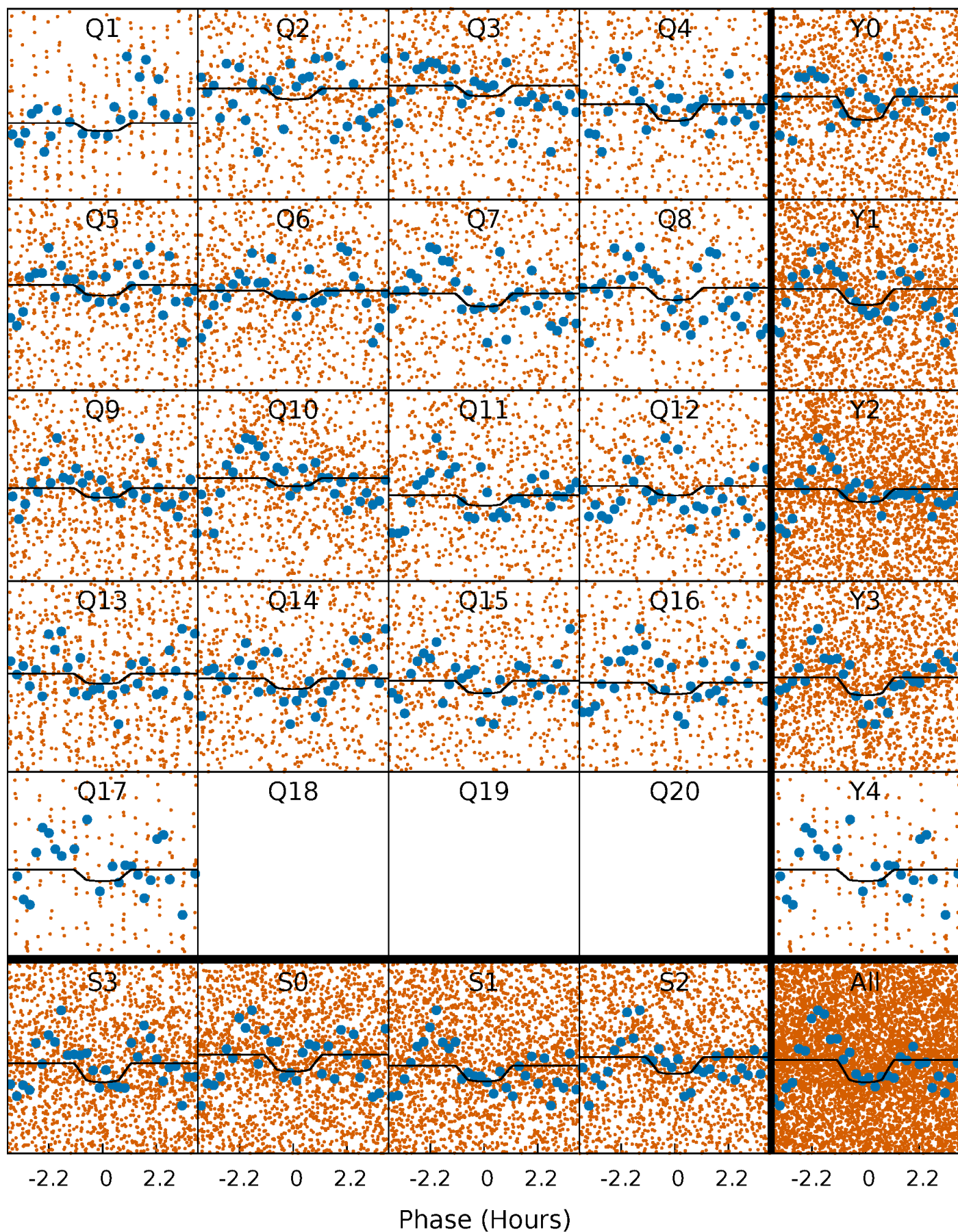
PDC Quarter-Phased Transit Curves

TCE 006549623-01 P= 1.328440 Days $T_0=132.136240$ (BKJD)



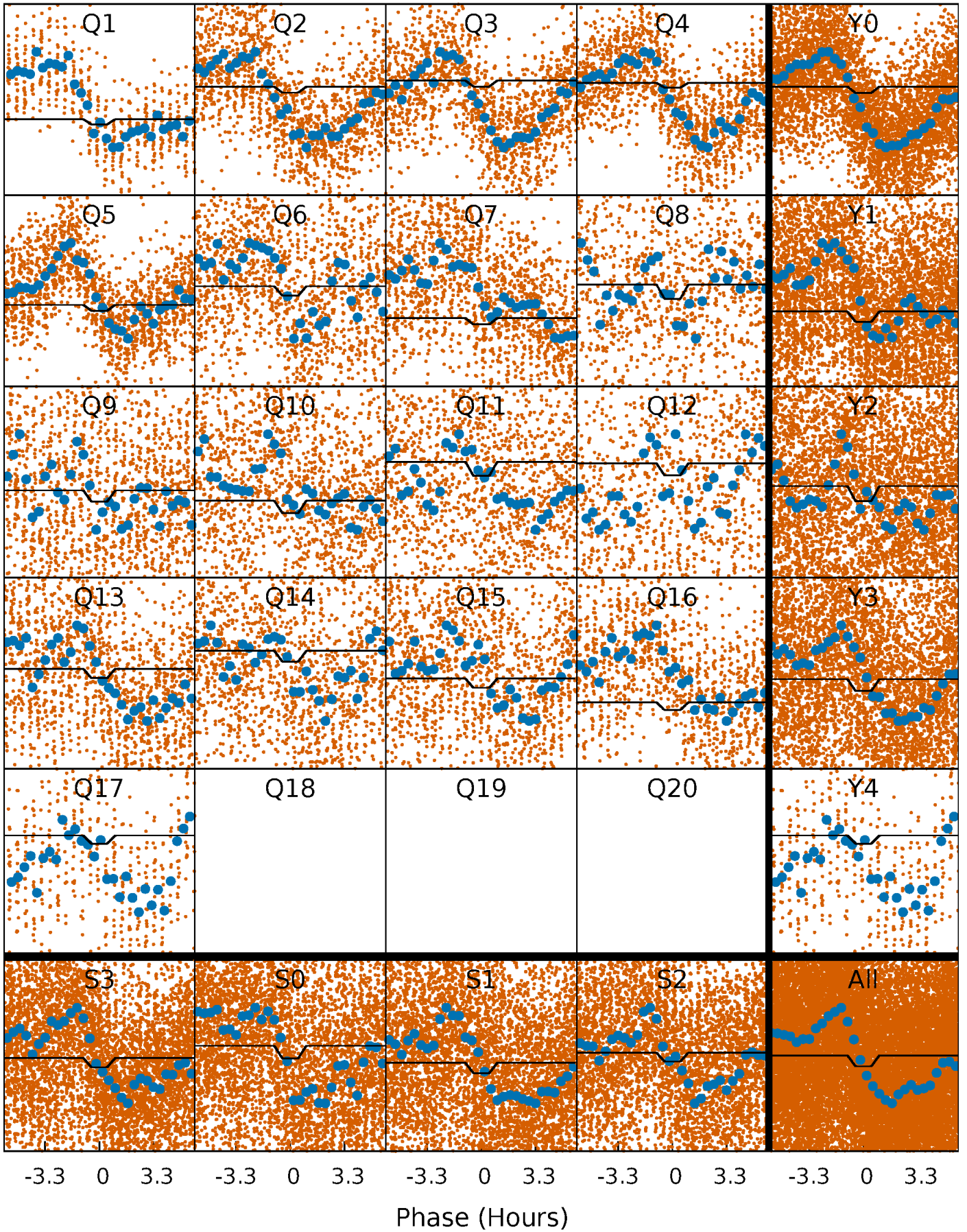
DV Quarter-Phased Transit Curves

TCE 006549623-01 P= 1.328440 Days $T_0=132.136240$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

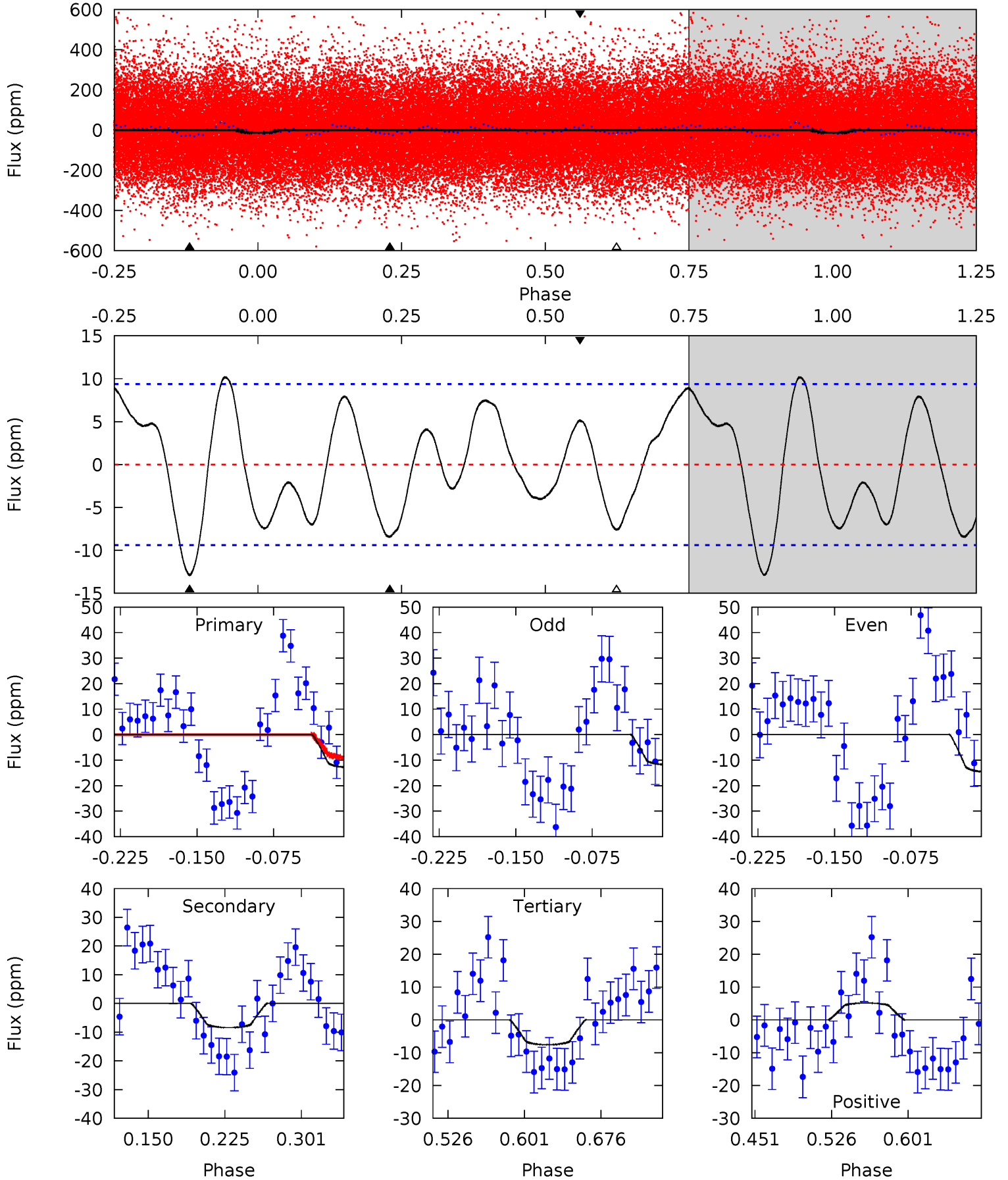
TCE 006549623-01 P= 1.328446 Days $T_0=132.106923$ (BKJD)



DV Model-Shift Uniqueness Test

006549623-01, P = 1.328440 Days, E = 130.807800 Days

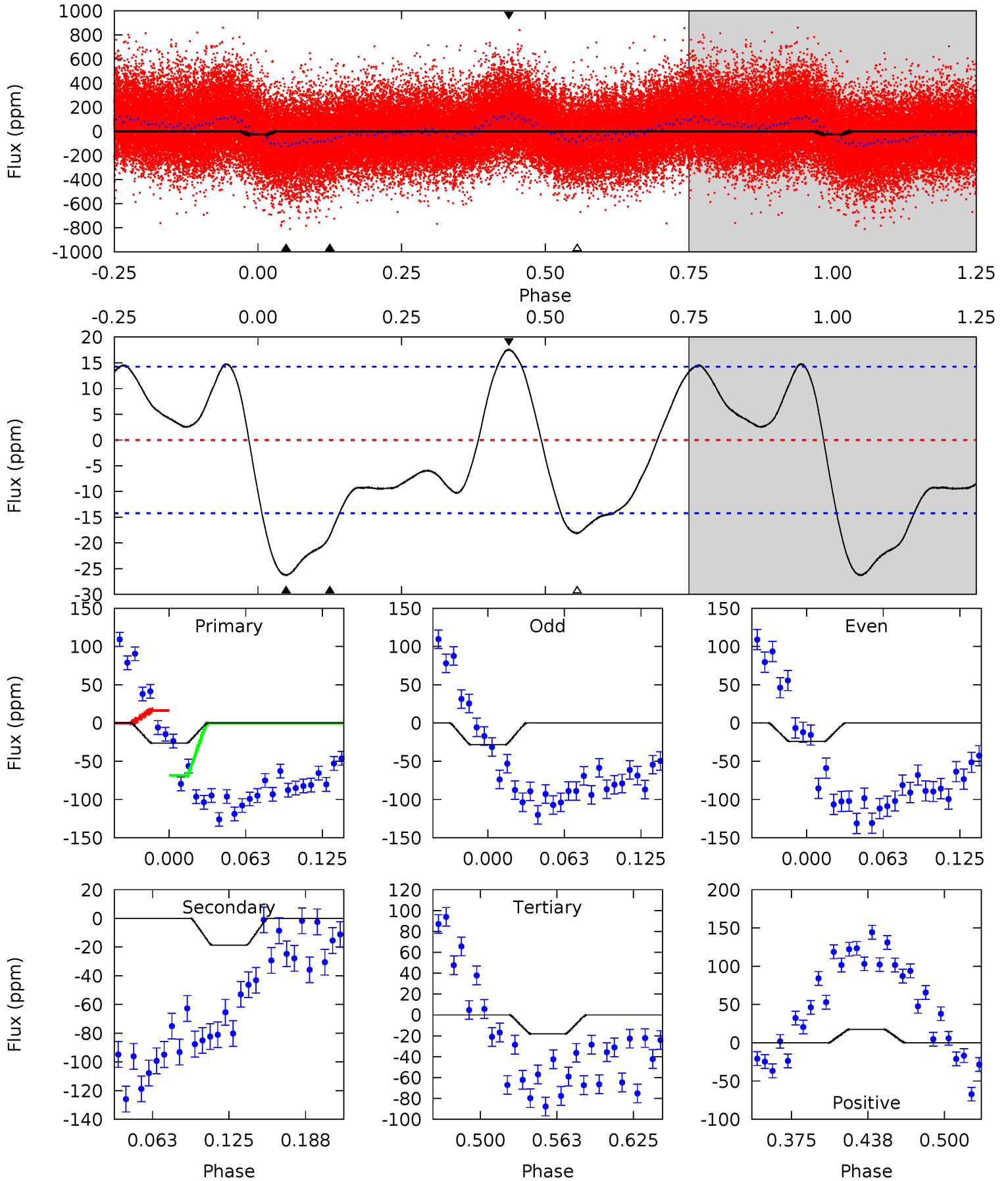
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.34	4.15	3.74	2.52	4.62	1.78	2.38	2.60	3.82	0.41	1.63	0.70	0.98	0.44	2.01



Alt Model-Shift Uniqueness Test

006549623-01, P = 1.328446 Days, E = 130.778477 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.59	6.08	5.93	5.75	4.66	1.86	3.43	2.66	2.84	0.15	0.33	0.70	0.90	0.40	8.88



Stellar Parameters For KIC 006549623

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6588^{+166}_{-199}	$3.507^{+0.368}_{-0.092}$	$-0.260^{+0.350}_{-0.250}$	$3.834^{+0.407}_{-1.626}$	$1.724^{+0.184}_{-0.428}$	$0.043^{+0.133}_{-0.013}$
	+3%/-3%	+10%/-3%	+135%/-96%	+11%/-42%	+11%/-25%	+308%/-30%
Source	PHO1	FLK73	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 006549623-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-8 ± 2	$1.73^{+1.00}_{-0.89}$	4638^{+263}_{-498}	4952^{+2436}_{-1286}	$1.209^{+3.794}_{-0.754}$
Alt.	-19 ± 3	$2.04^{+0.99}_{-0.94}$	4628^{+251}_{-436}	5647^{+2406}_{-1044}	$1.986^{+4.823}_{-1.125}$

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 $A_{obs} \gg 1.0$

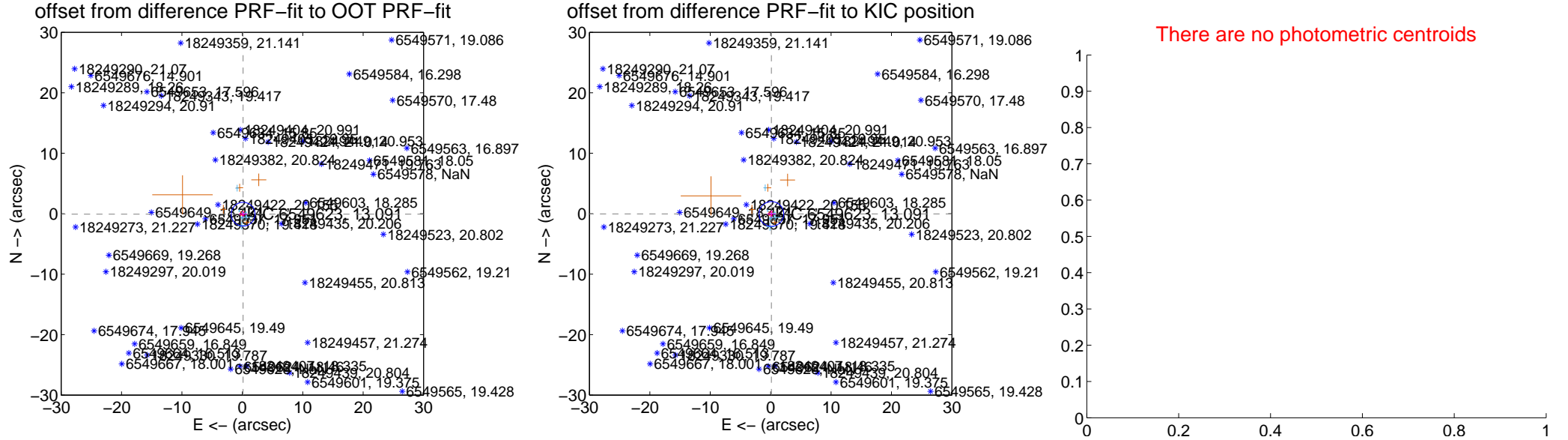
DV Centroid Data

Supplemental centroid analysis for 006549623-01. Kepler magnitude: 13.09. Transit SNR 4.86

There are 11 quarters with good PRF difference image offsets

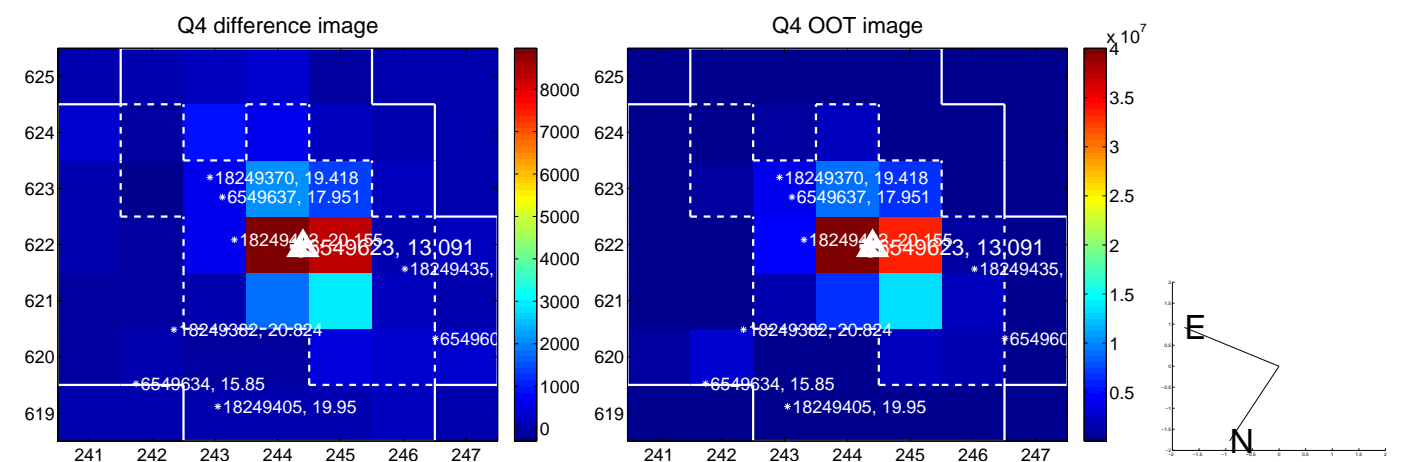
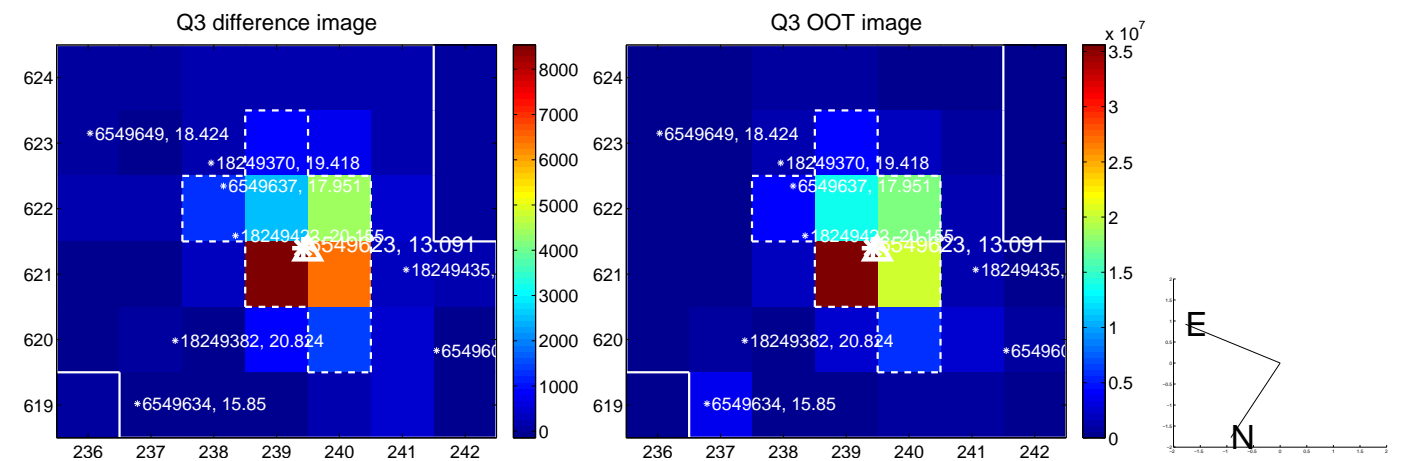
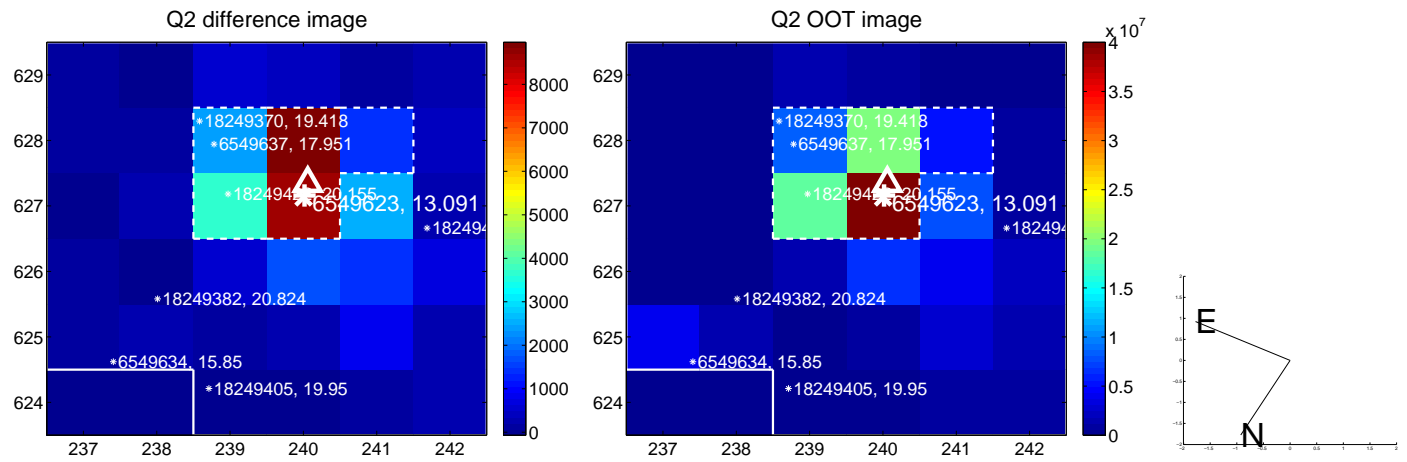
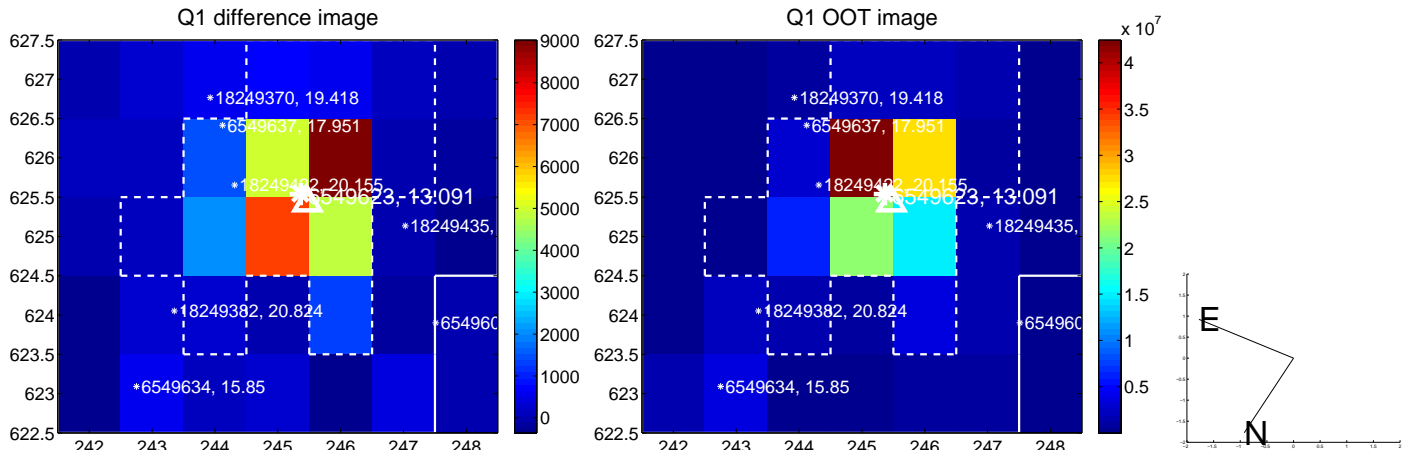
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.151 ± 0.656	0.23	-0.127 ± 0.665	-0.081 ± 0.468
PRF-fit source offset from KIC position	0.128 ± 0.682	0.19	-0.122 ± 0.683	-0.038 ± 0.573
photometric centroid source offset	—	—	—	—

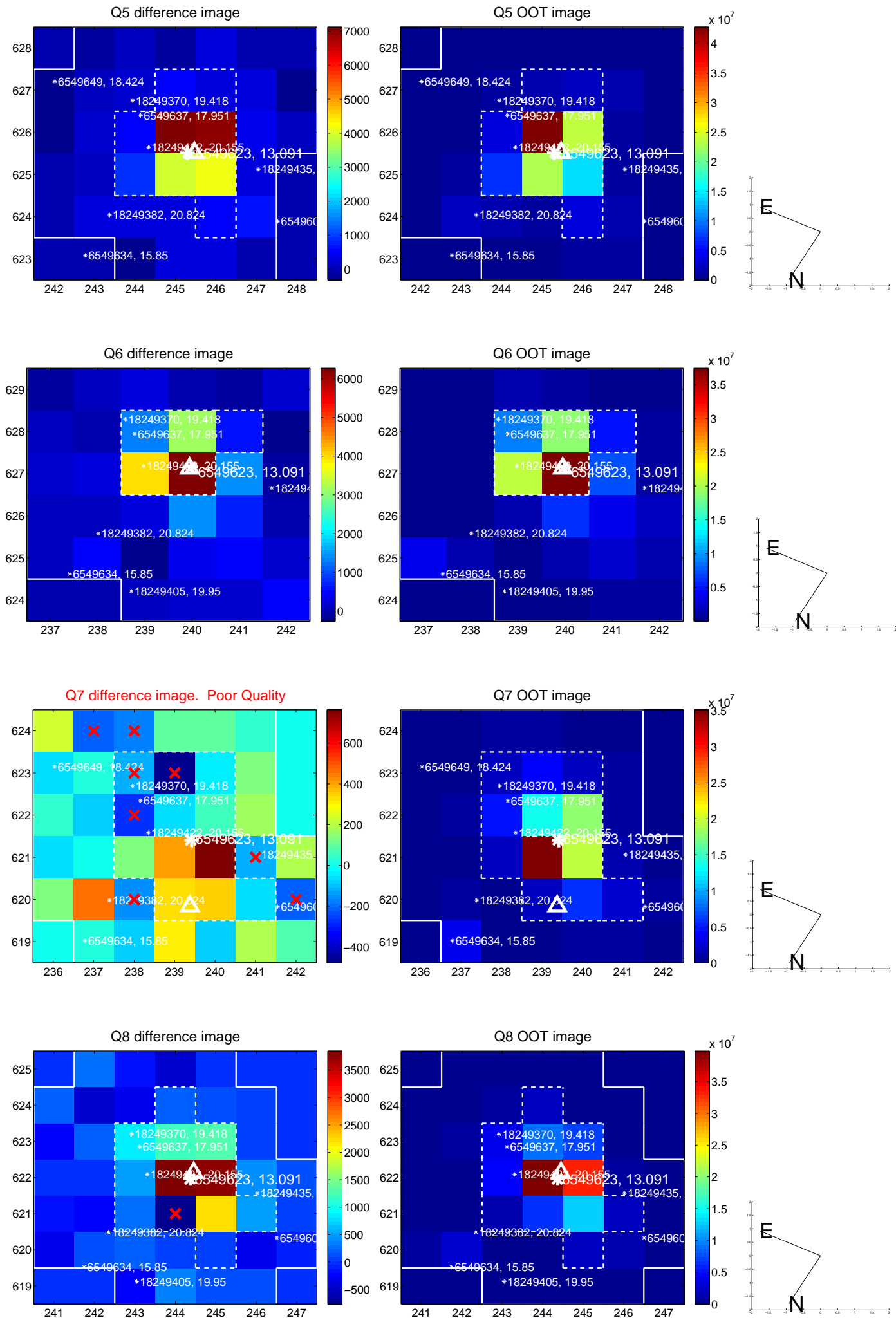


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

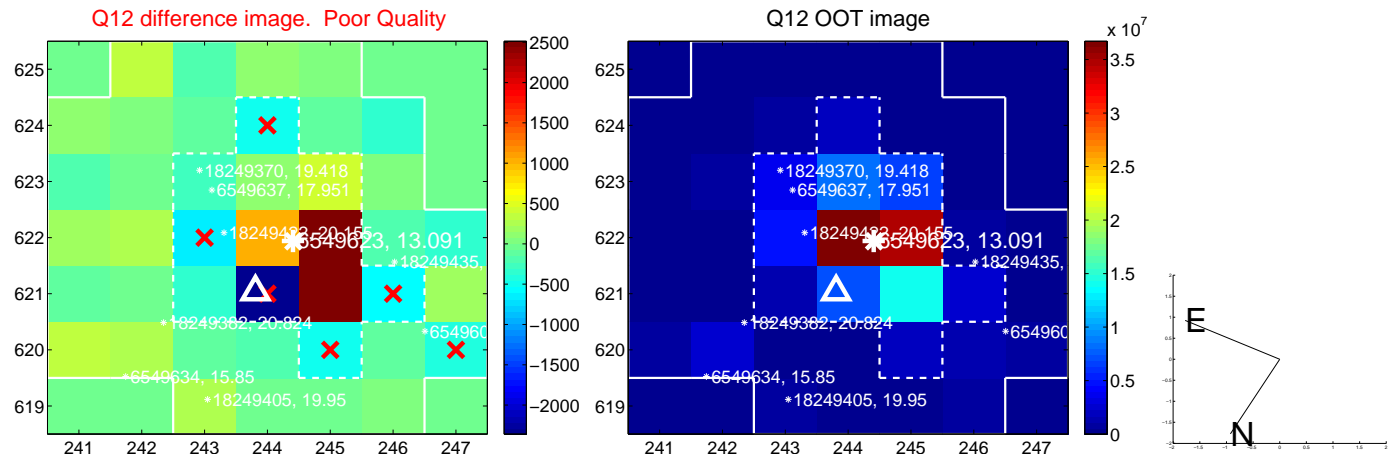
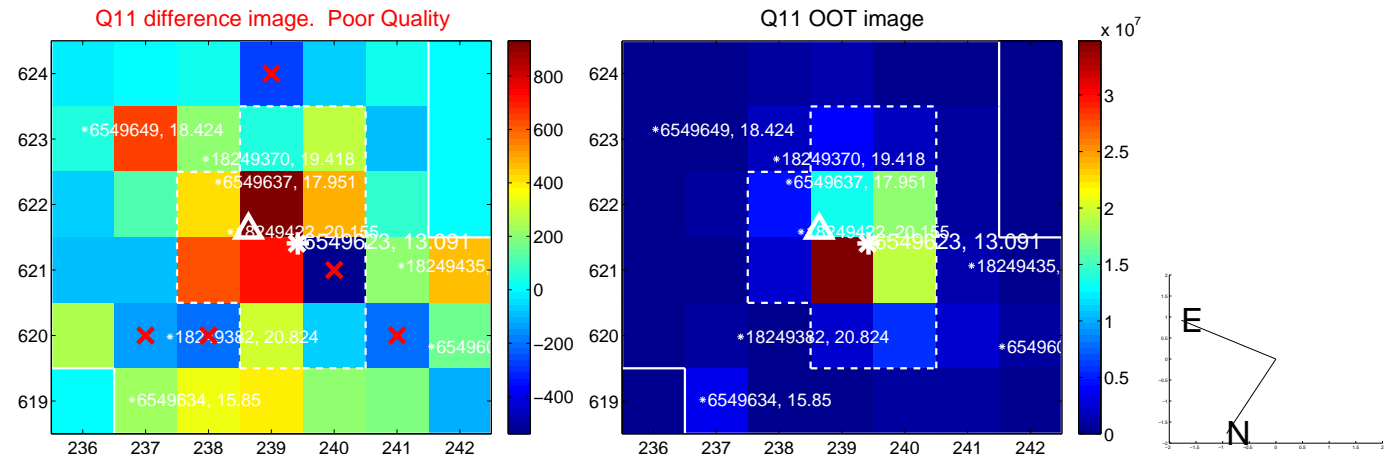
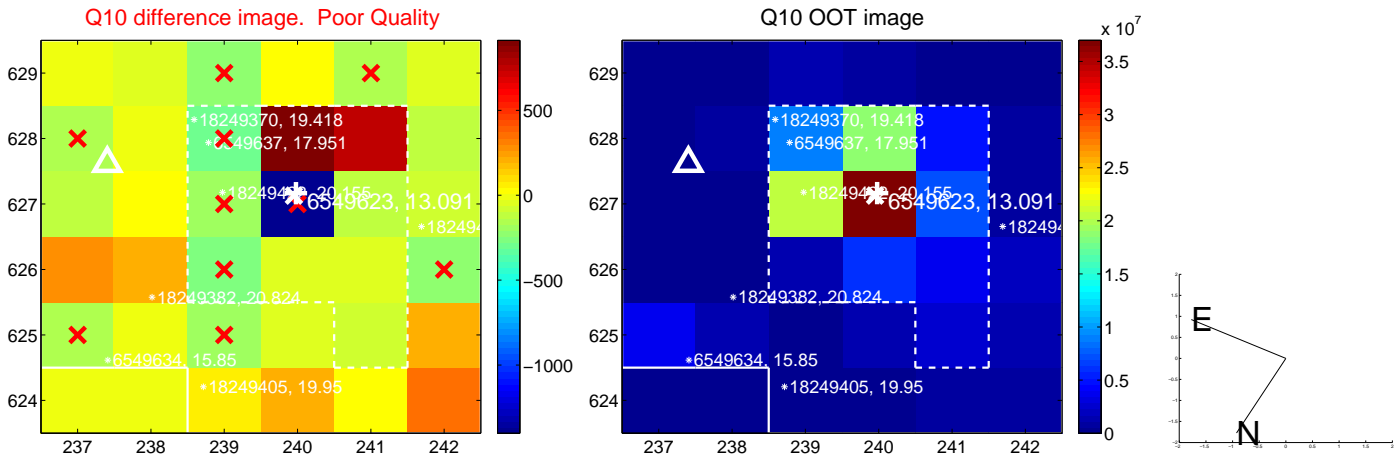
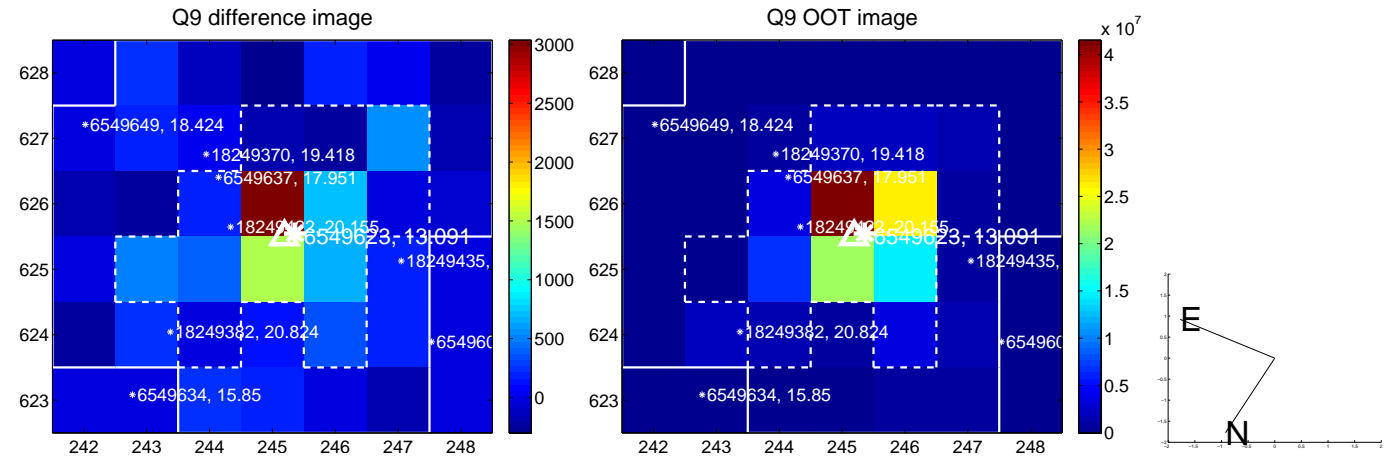
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



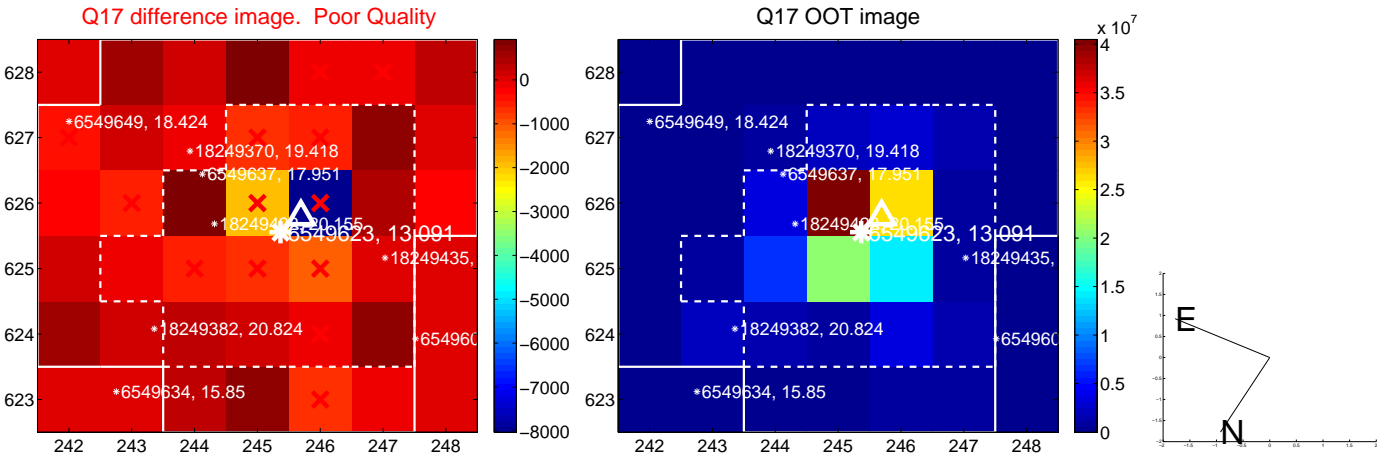
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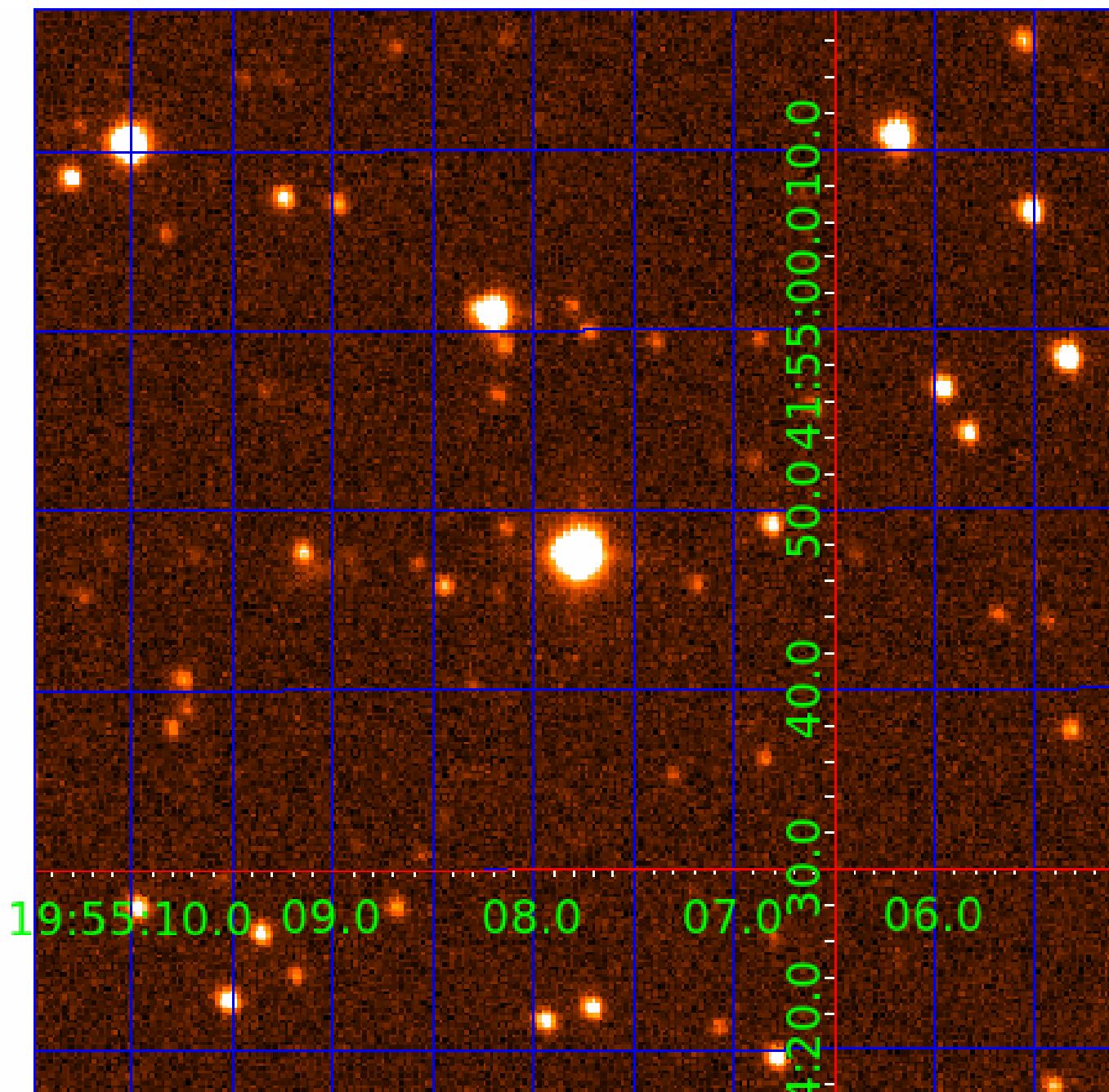
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 006549623

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})
006549623-01	OBS	No	1.328440	132.136240	15.4	1.952	9.6	4.9	3.83	6588	1.85	30847.56
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006549623-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
006549623-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
006549623-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
006549623-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006549623-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006549623-07	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_MEAS
006549623-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006549623-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS

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

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

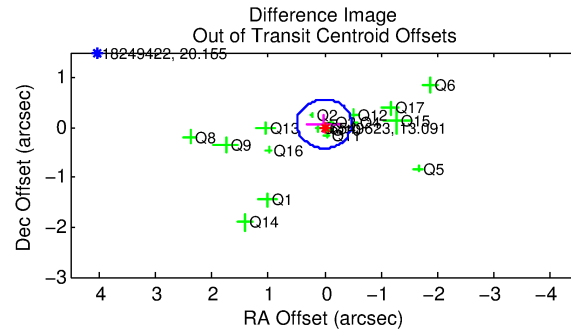
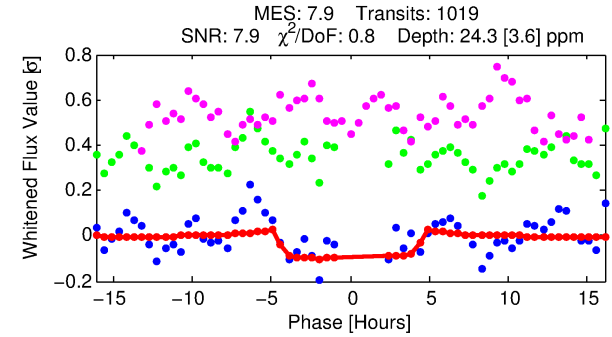
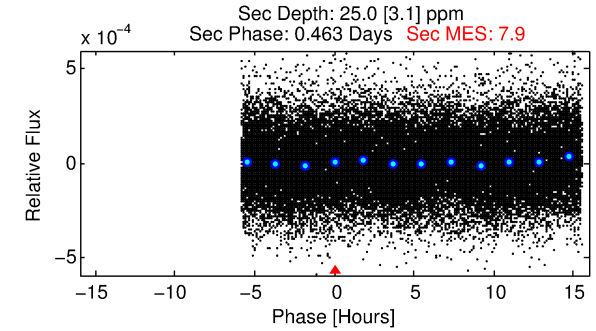
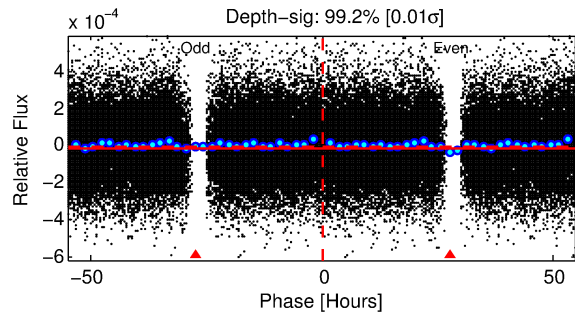
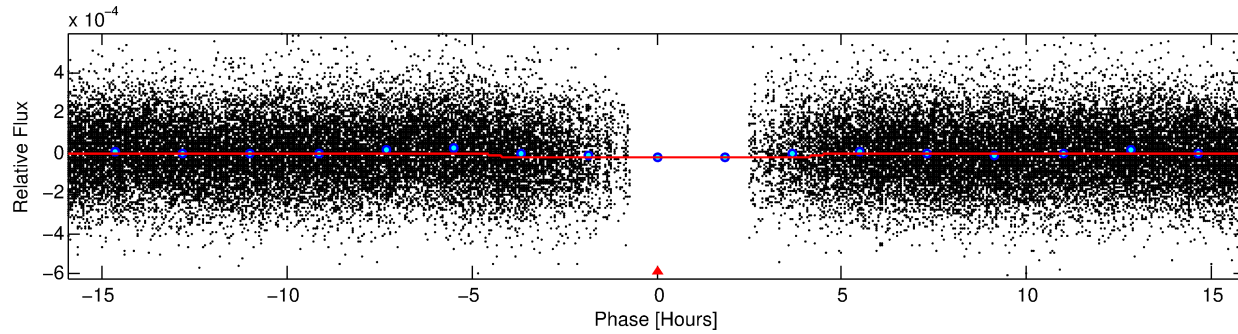
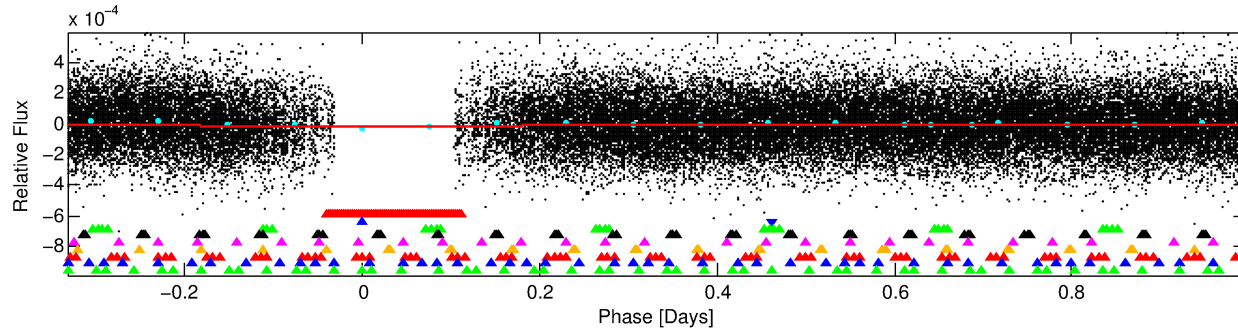
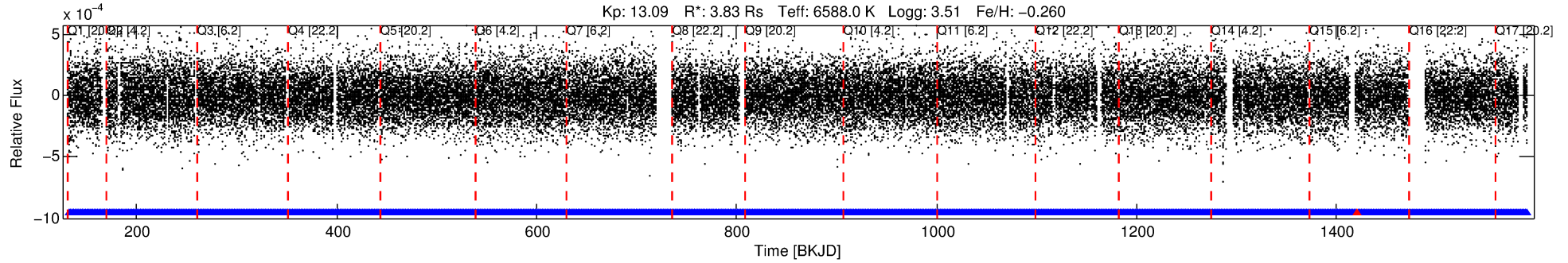
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006549623-02

No Significant Match Found

DV One-Page Summary

KIC: 6549623 Candidate: 2 of 9 Period: 1.328 d



DV Fit Results:

Period = 1.32830 [0.00002] d
Epoch = 132.1765 [0.0051] BKJD
Rp/R* = 0.0049 [0.0024]
a/R* = 1.14 [0.75]
b = 0.73 [1.79]
Seff = 30851.87 [19842.58]
Teff = 3379 [543] K
Rp = 2.04 [1.32] Re
a = 0.0284 [0.0113] AU
Ag = 2.65 [3.10] [0.53σ]
Teffp = 6668 [1652] K [1.89σ]

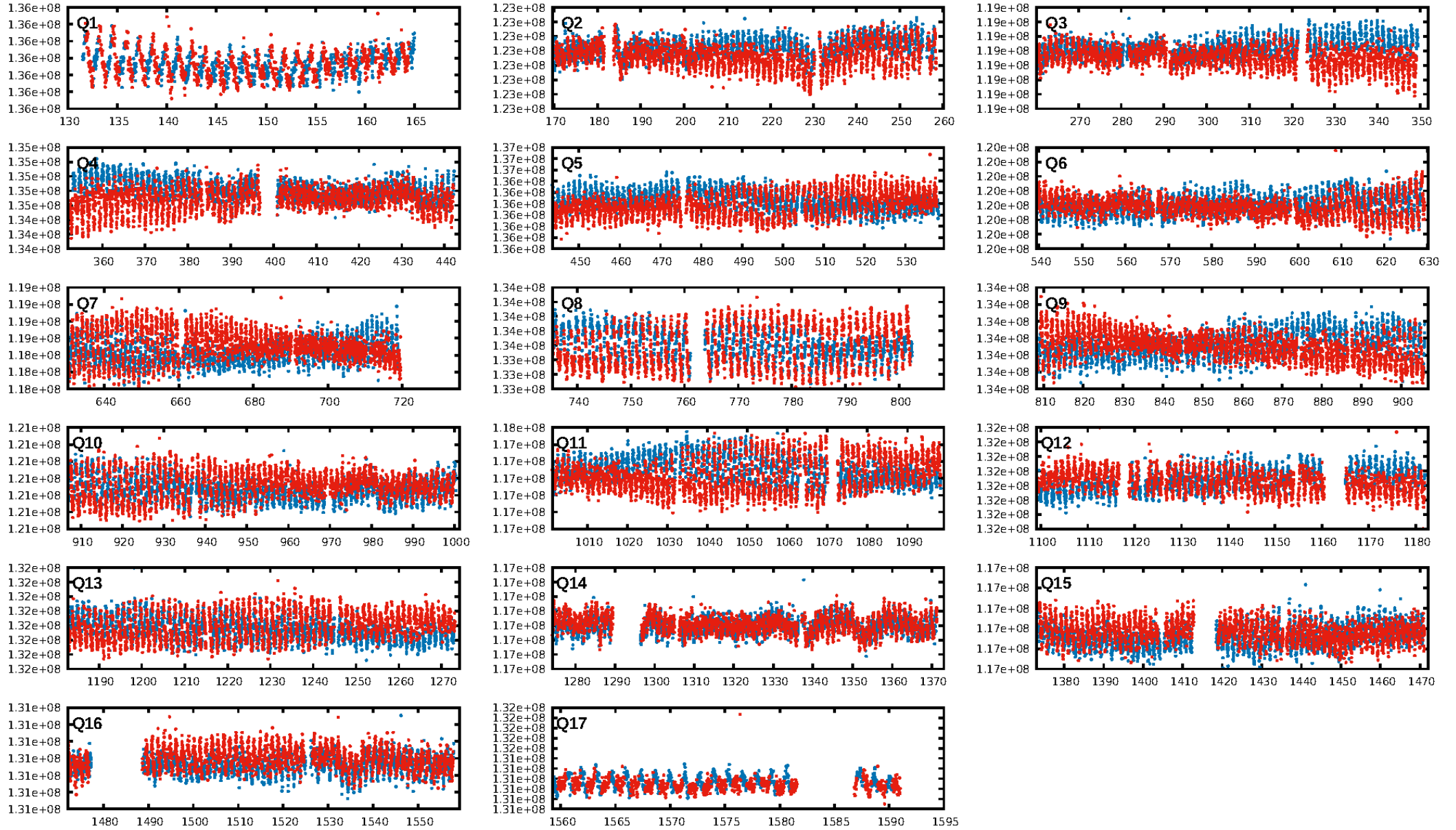
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.43e-06
RollingBand-fgt: 1.00 [973/974]
GhostDiagnostic-chr: -0.6506
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.067 arcsec [0.41σ]
KicOffset-rm: 0.013 arcsec [0.06σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.71 [12/17]
DiffImageOverlap-fno: 0.00 [0/17]

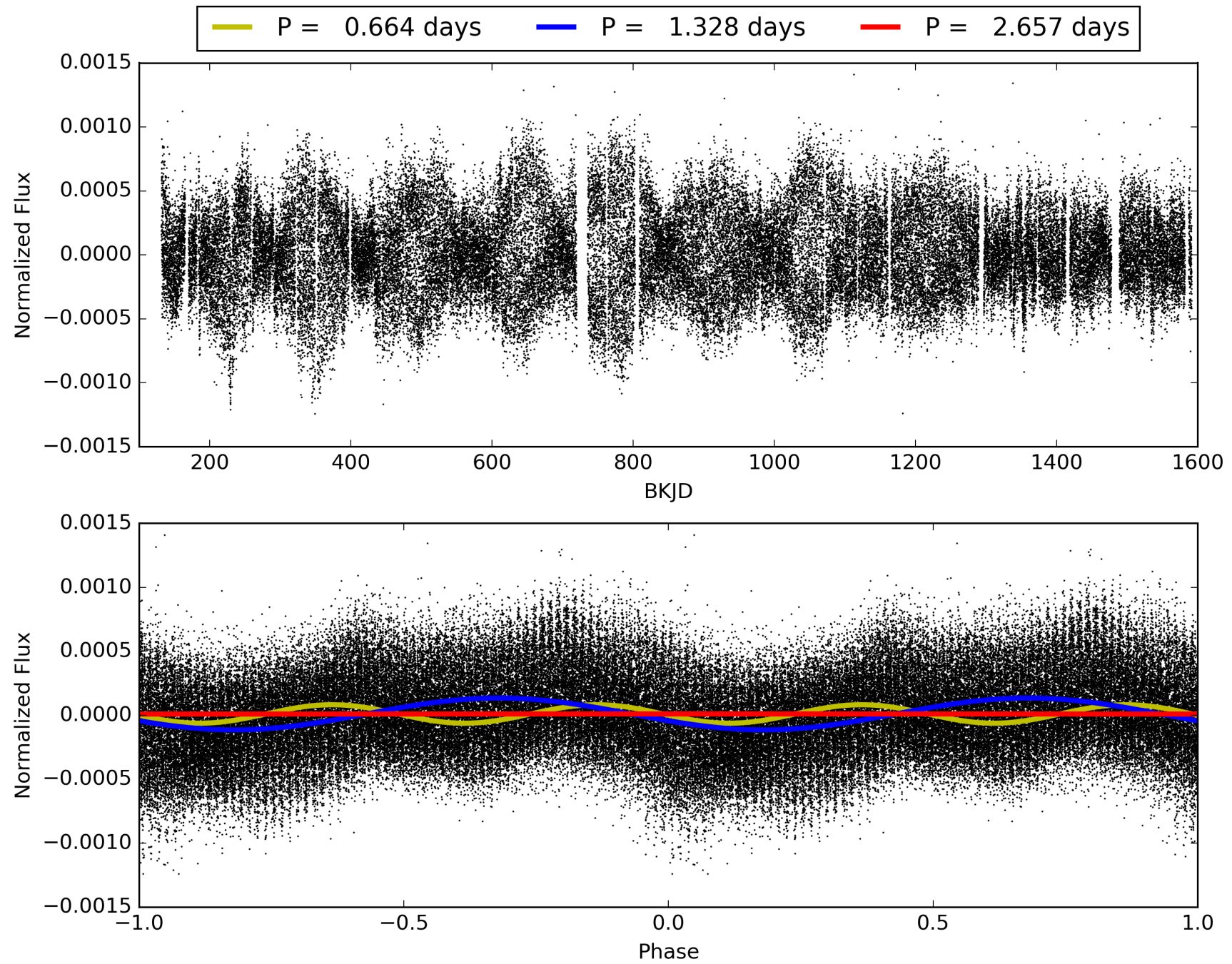
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 07:29:39 Z

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

TCE 006549623-02, PDC Light Curves

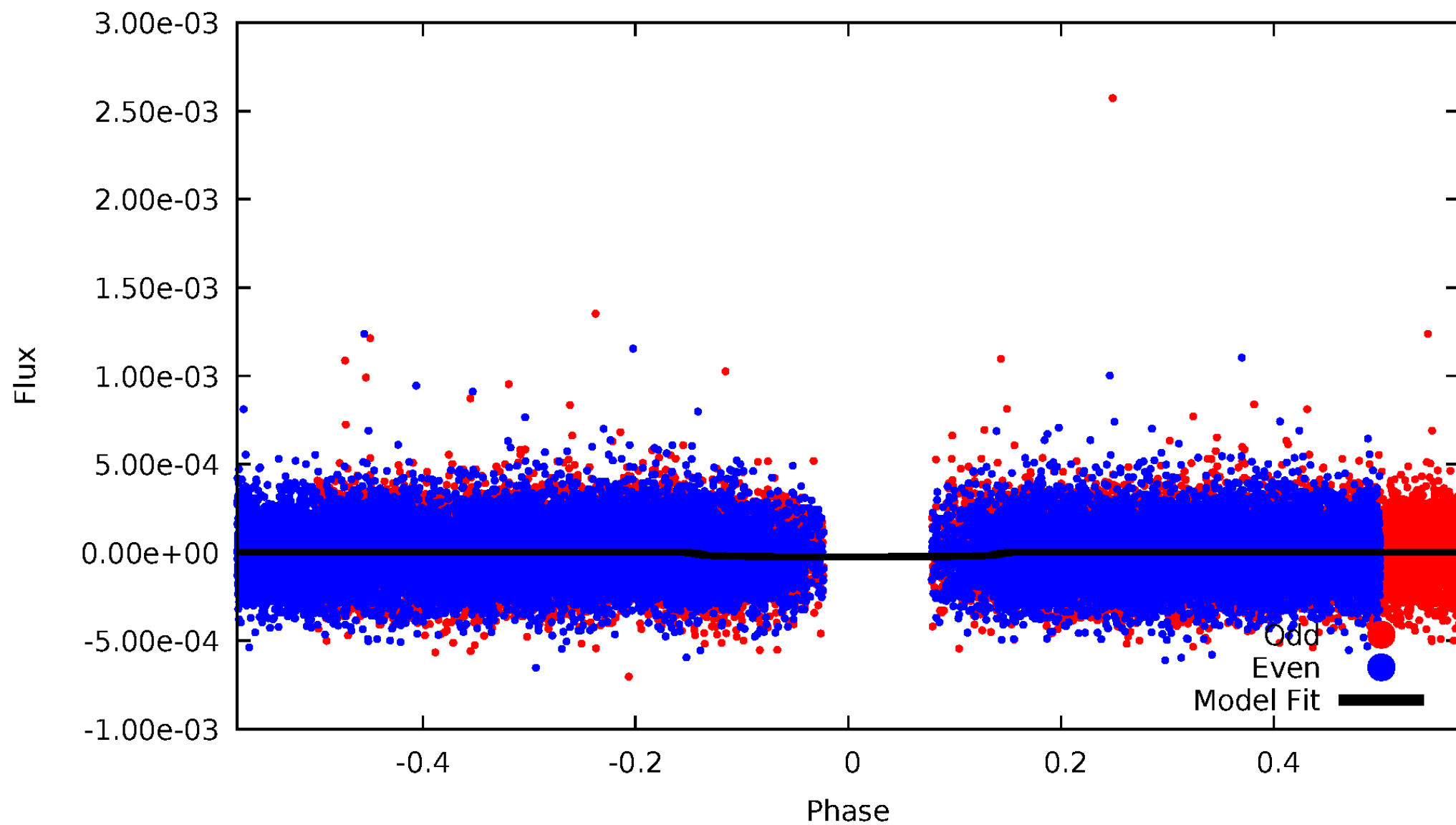


TCE 006549623-02



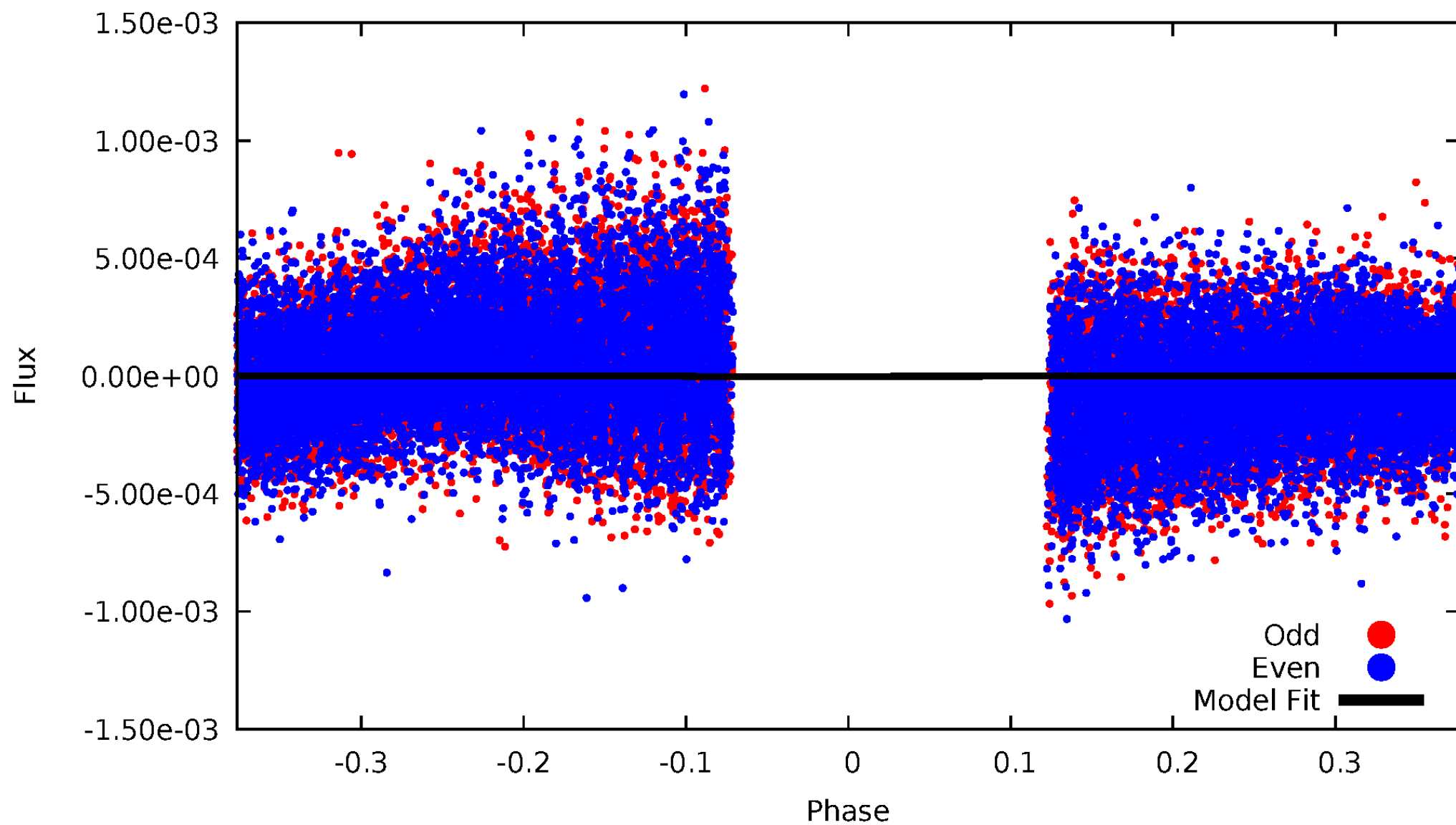
DV Odd/Even

TCE 006549623-02



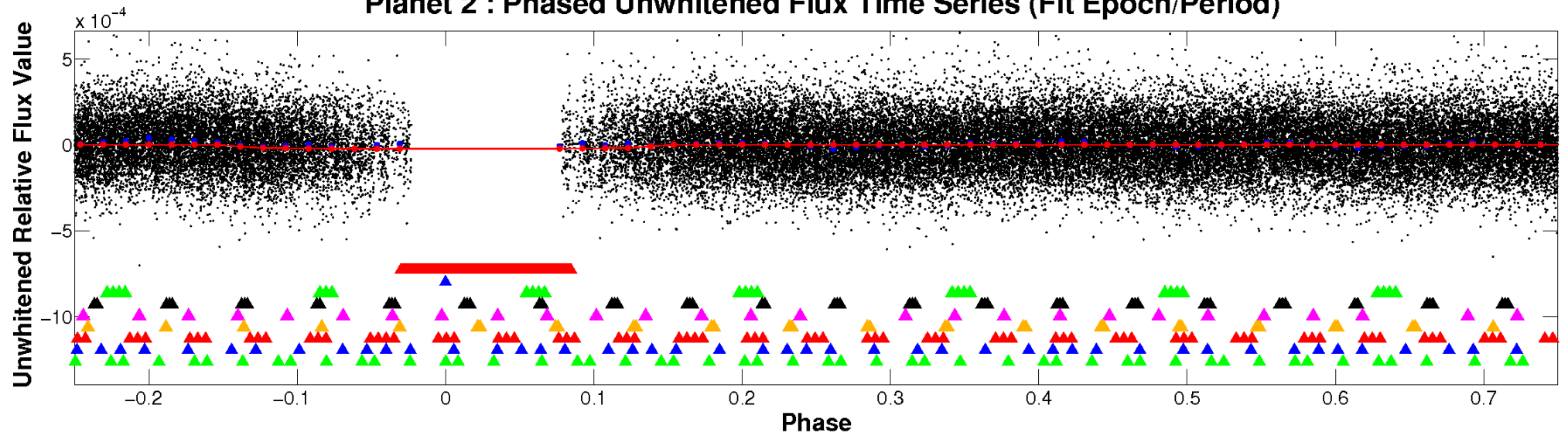
ALT Odd/Even

TCE 006549623-02

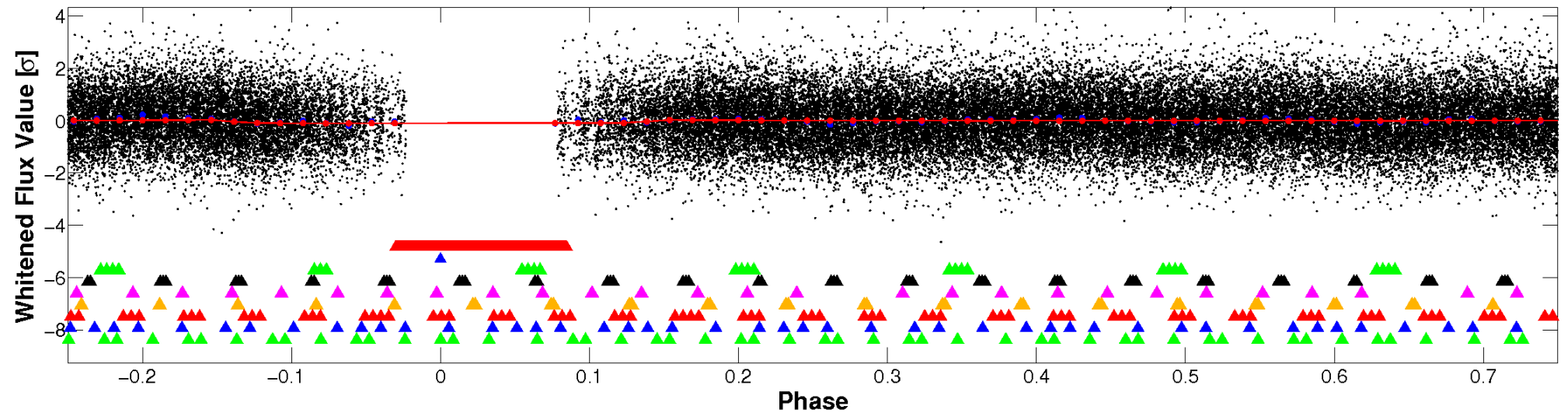


Non-Whitened Vs. Whitened Light Curve

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

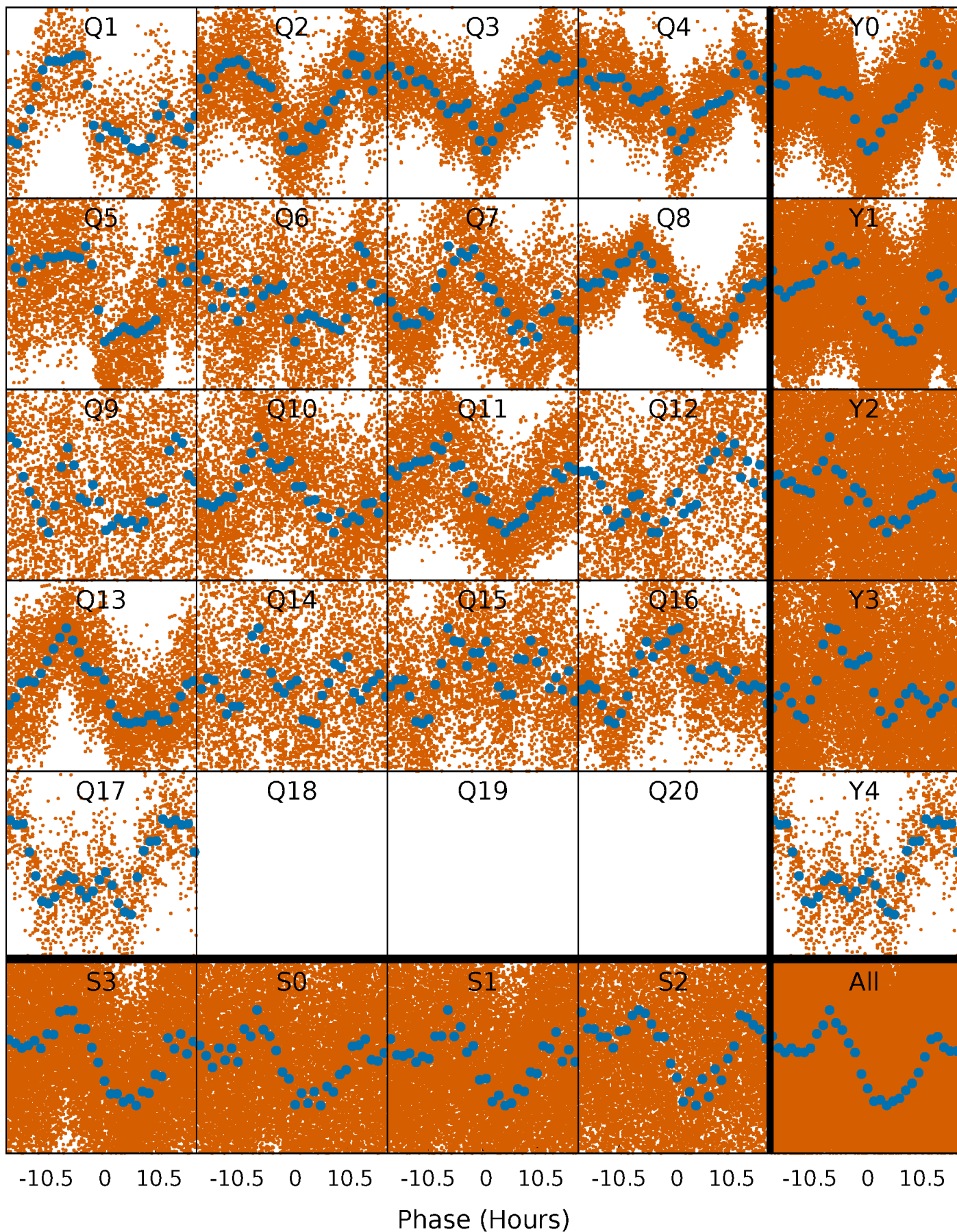


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



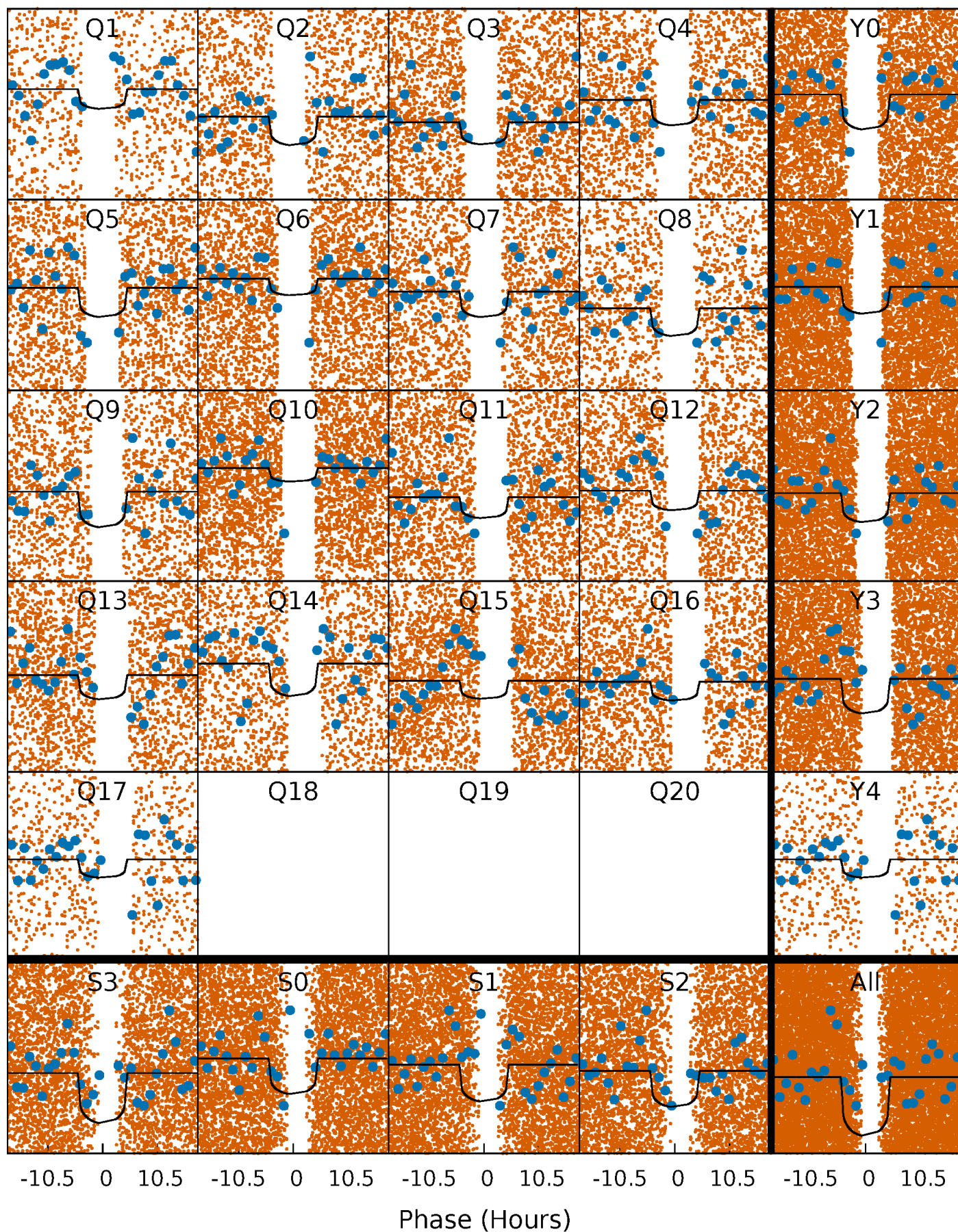
PDC Quarter-Phased Transit Curves

TCE 006549623-02 P= 1.328301 Days $T_0=132.176545$ (BKJD)



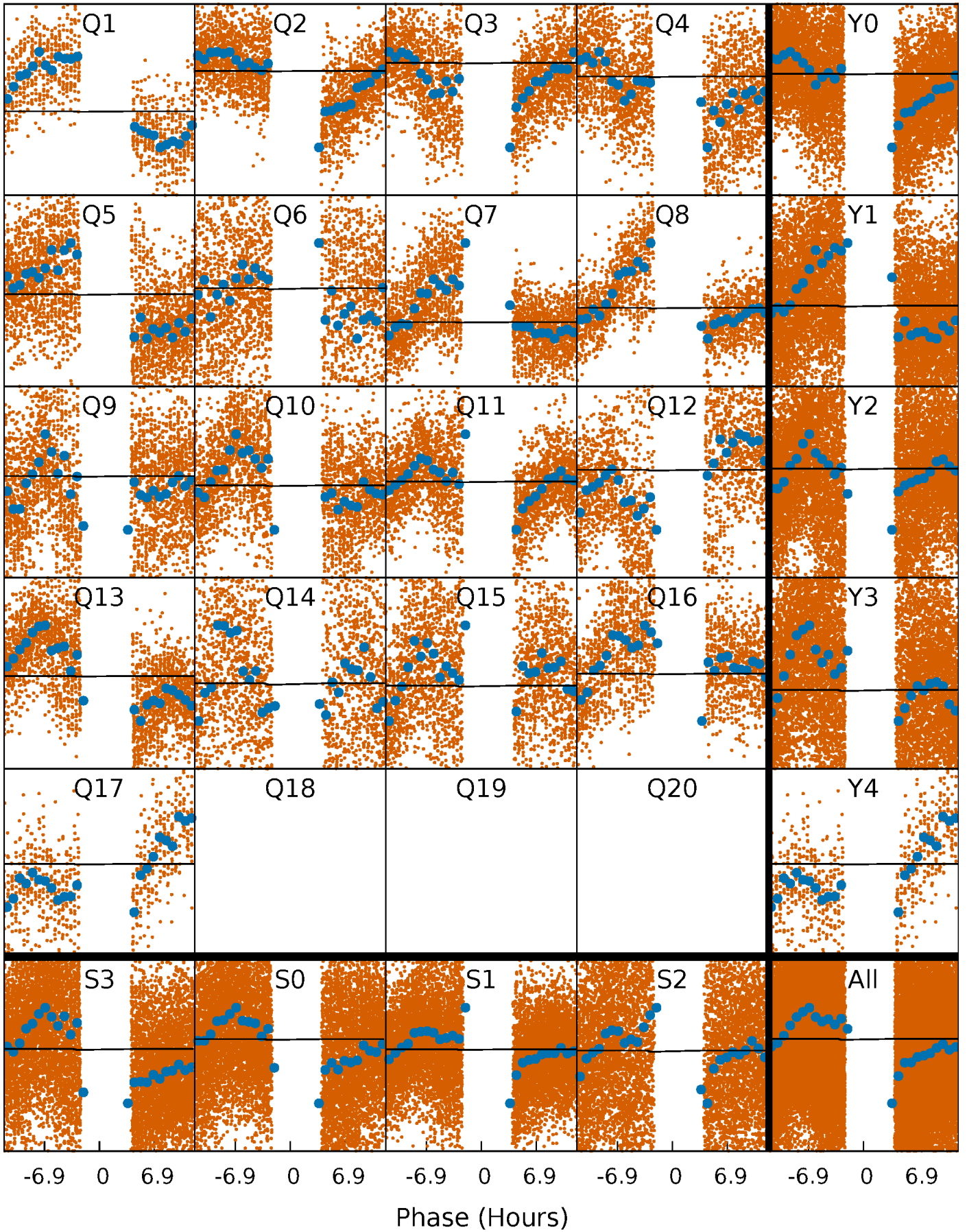
DV Quarter-Phased Transit Curves

TCE 006549623-02 P= 1.328301 Days $T_0=132.176545$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

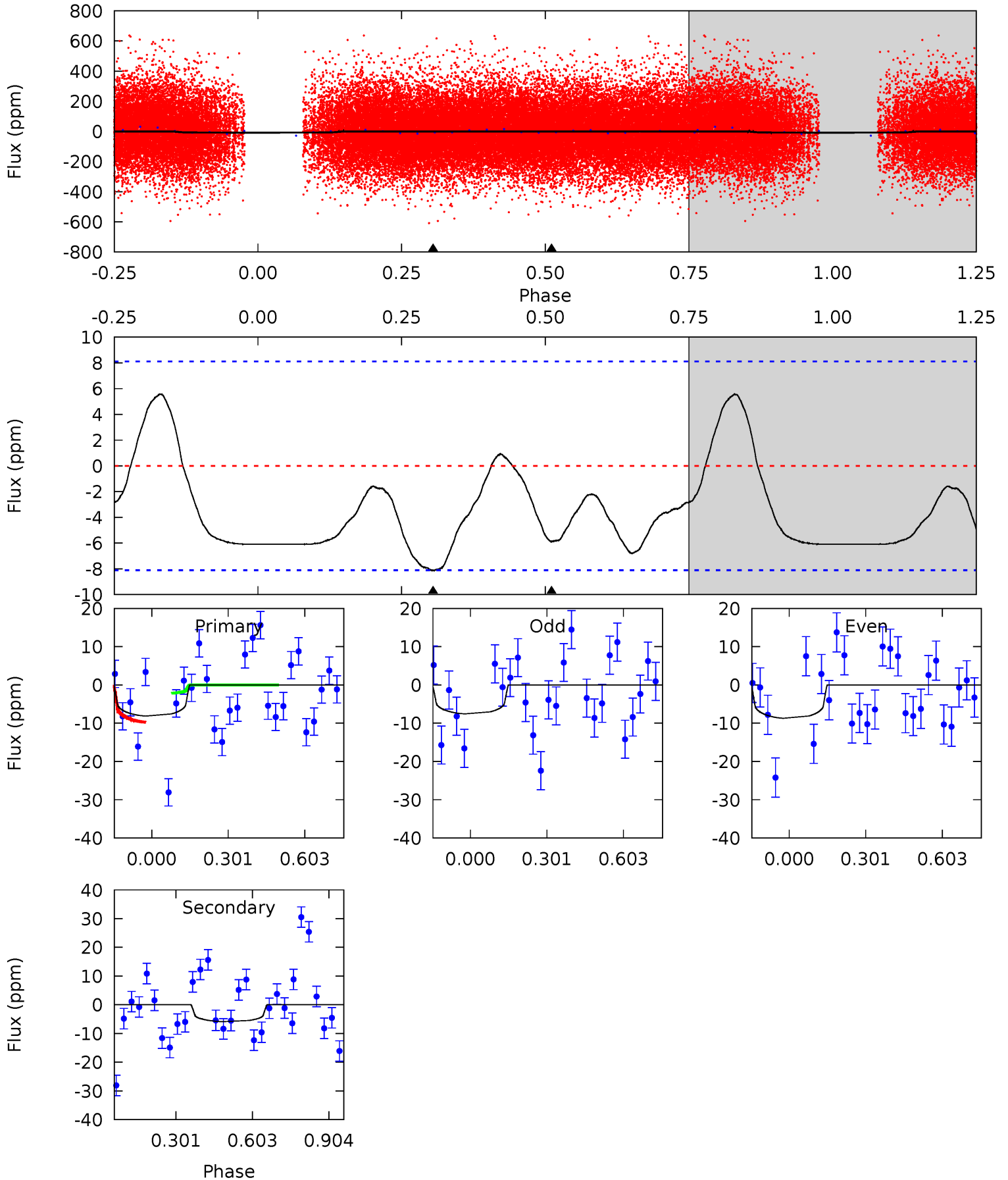
TCE 006549623-02 P= 1.328431 Days $T_0=132.106924$ (BKJD)



DV Model-Shift Uniqueness Test

006549623-02, P = 1.328301 Days, E = 130.848244 Days

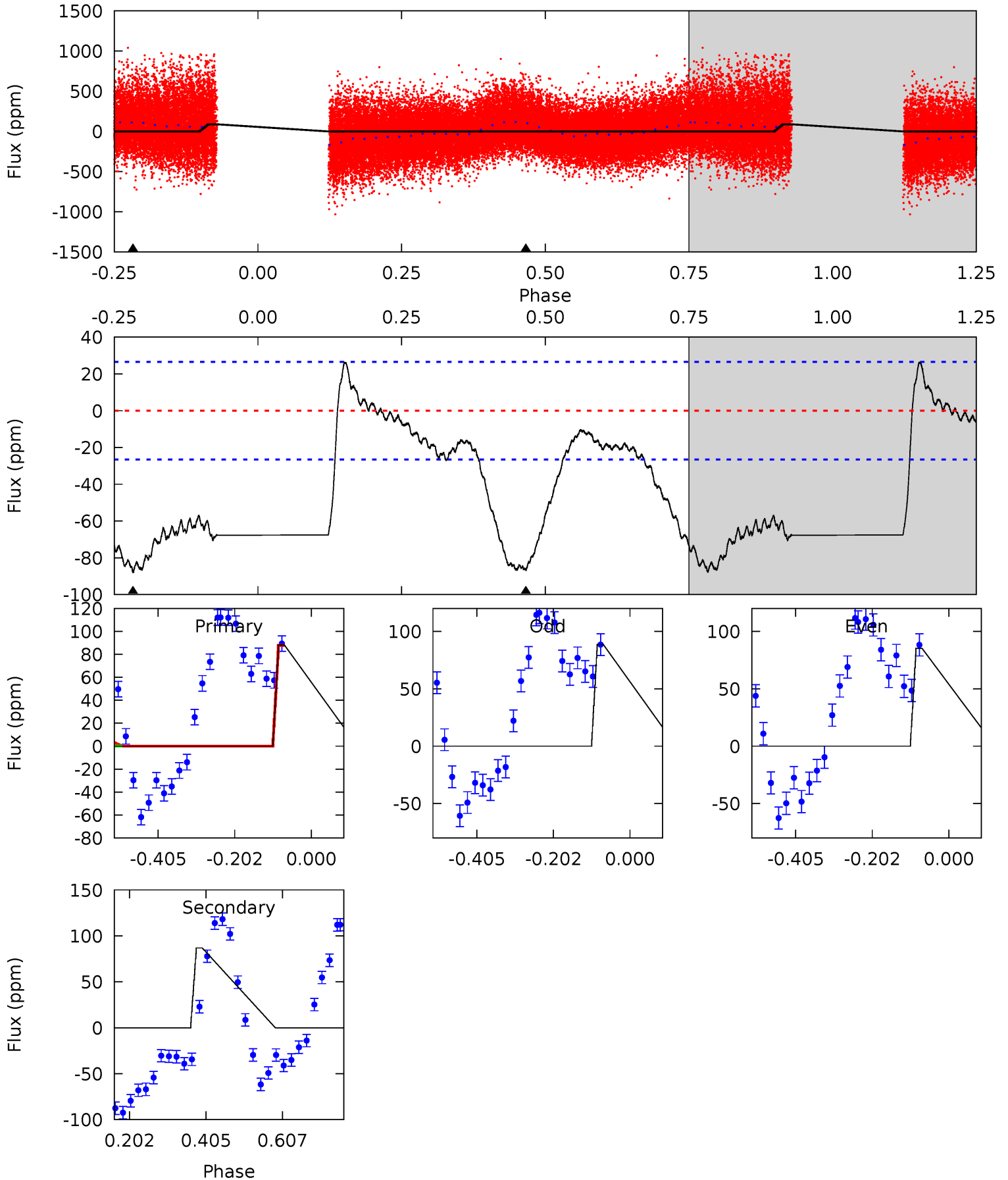
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.34	3.14	0	0	4.33	1.03	2.31	4.34	4.34	3.14	3.14	0.31	0.86	0.41	1.81



Alt Model-Shift Uniqueness Test

006549623-02, P = 1.328431 Days, E = 130.778493 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.7	14.5	0	0	4.41	1.27	2.59	14.7	14.7	14.5	14.5	0.28	0	0.23	0



Stellar Parameters For KIC 006549623

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6588^{+166}_{-199}	$3.507^{+0.368}_{-0.092}$	$-0.260^{+0.350}_{-0.250}$	$3.834^{+0.407}_{-1.626}$	$1.724^{+0.184}_{-0.428}$	$0.043^{+0.133}_{-0.013}$
	+3%/-3%	+10%/-3%	+135%/-96%	+11%/-42%	+11%/-25%	+308%/-30%
Source	PHO1	FLK73	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 006549623-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-6 ± 2	$1.89^{+1.07}_{-0.92}$	4635^{+255}_{-467}	4166^{+1917}_{-7010}	$0.686^{+2.095}_{-0.416}$
Alt.	-87 ± 6	$0.95^{+0.83}_{-0.62}$	4640^{+248}_{-457}	16903^{+53560}_{-6728}	42^{+295}_{-30}

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

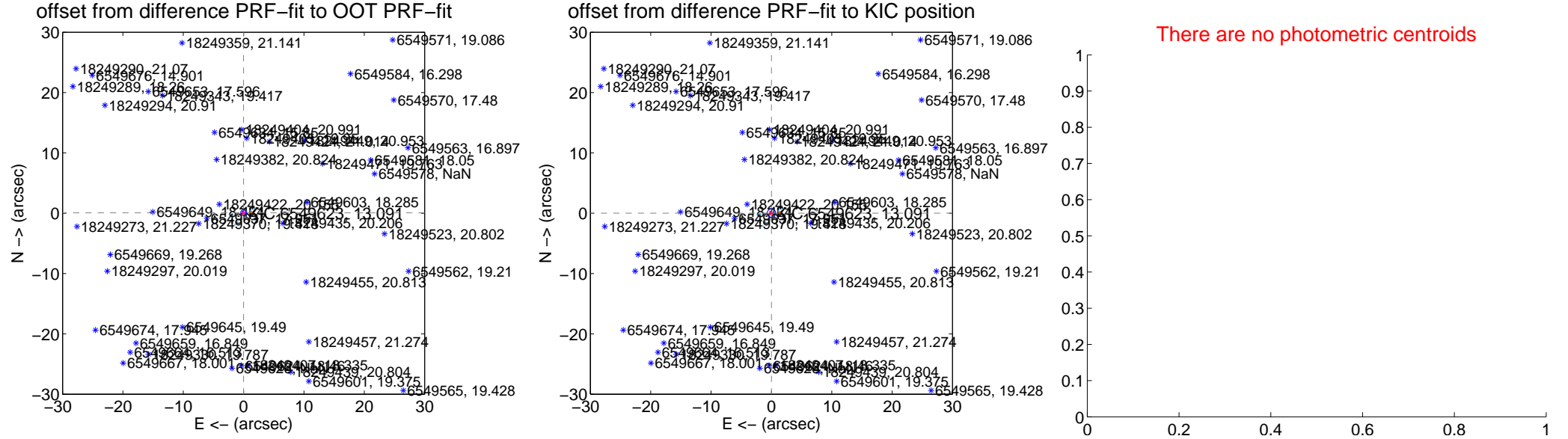
DV Centroid Data

Supplemental centroid analysis for 006549623-02. Kepler magnitude: 13.09. Transit SNR 7.85

There are 12 quarters with good PRF difference image offsets

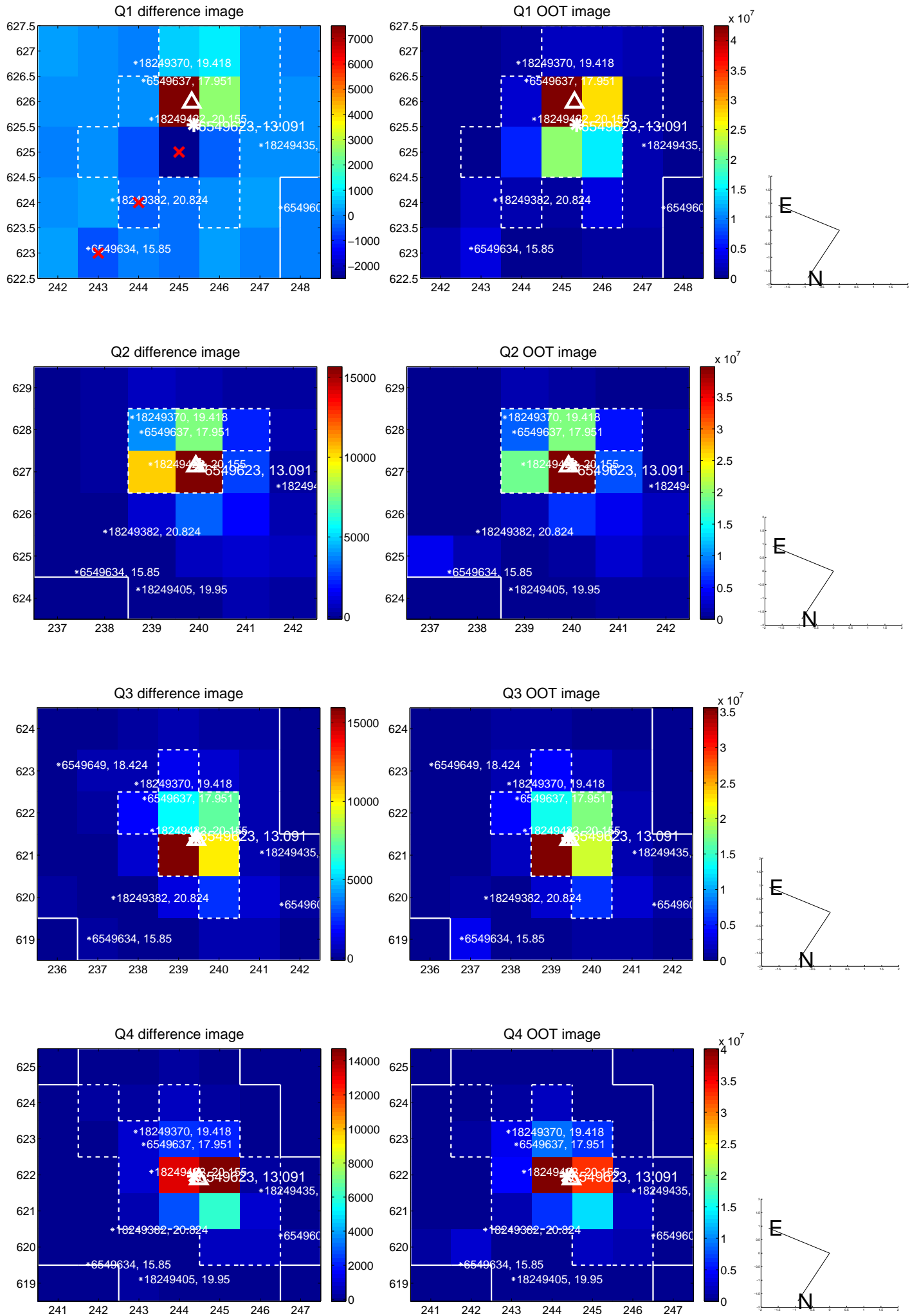
The direct PRF centroid is offset from the target star catalog position by about 0.01 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.067 ± 0.162	0.41	0.008 ± 0.299	0.066 ± 0.174
PRF-fit source offset from KIC position	0.013 ± 0.234	0.06	-0.006 ± 0.279	0.012 ± 0.167
photometric centroid source offset	—	—	—	—

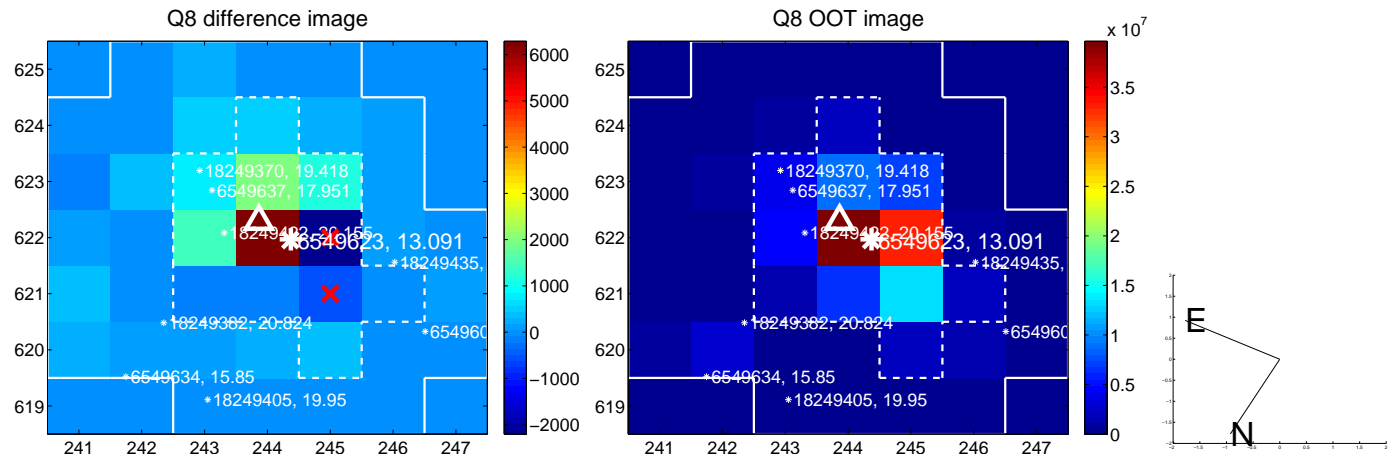
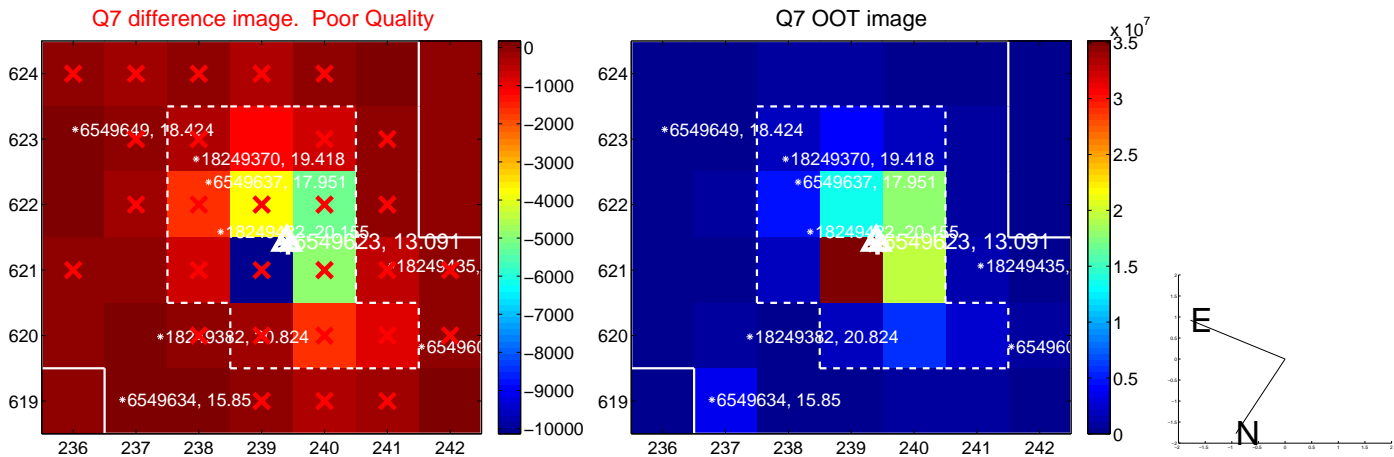
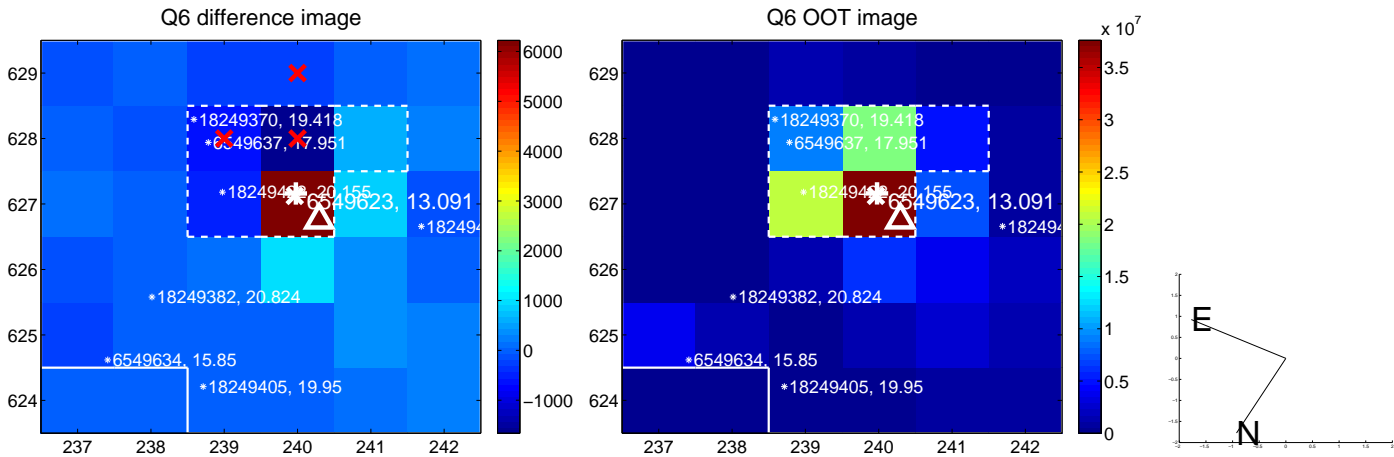
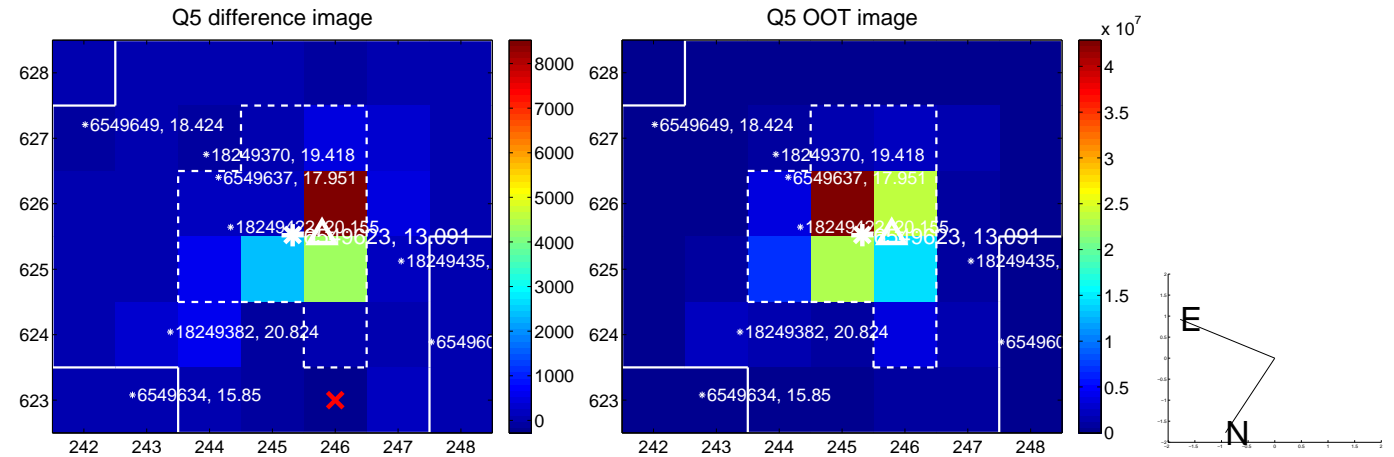


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

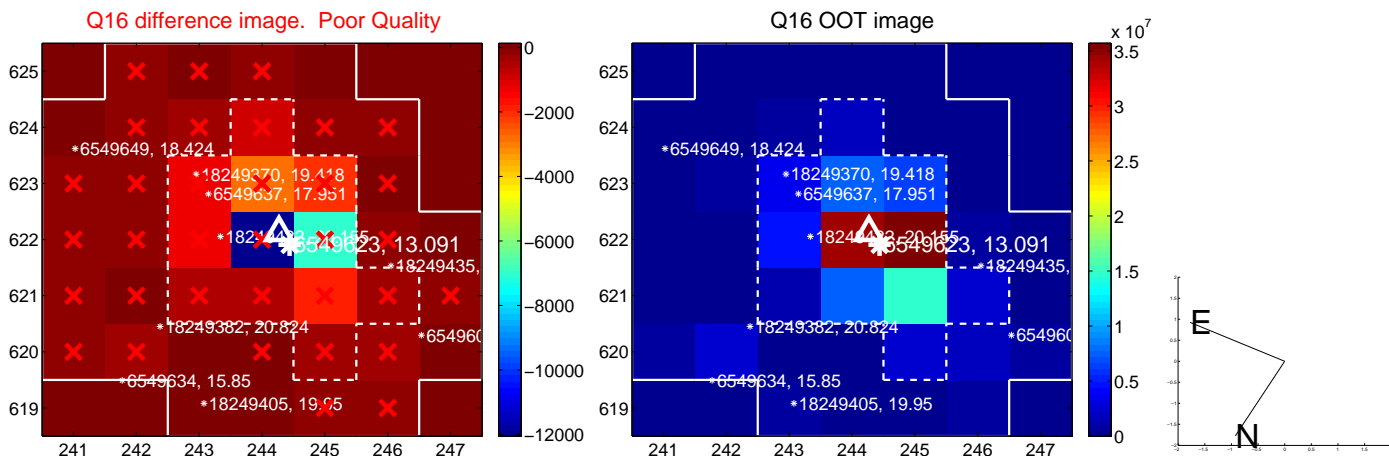
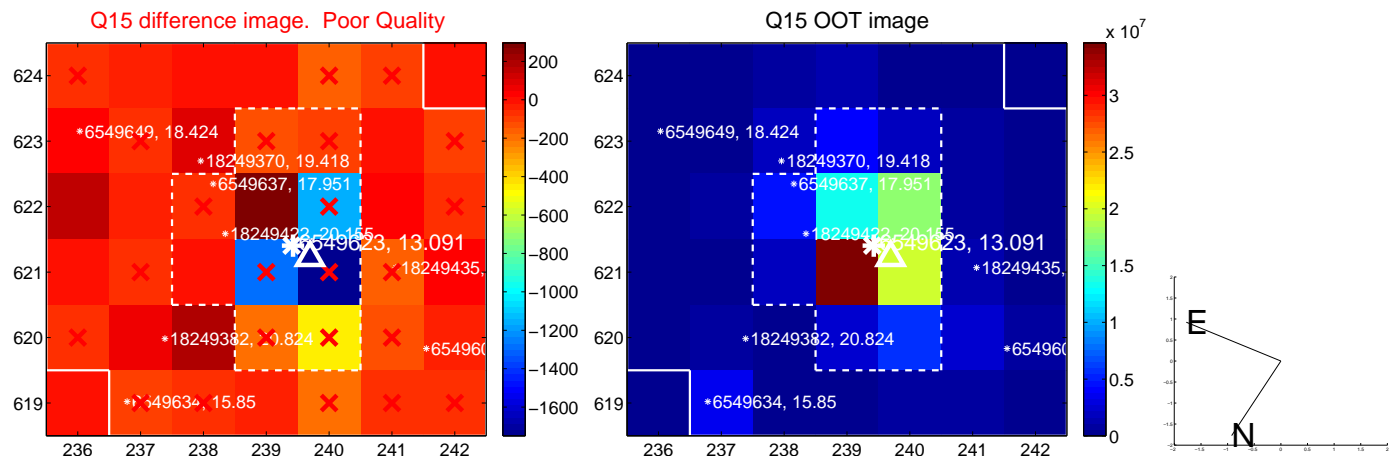
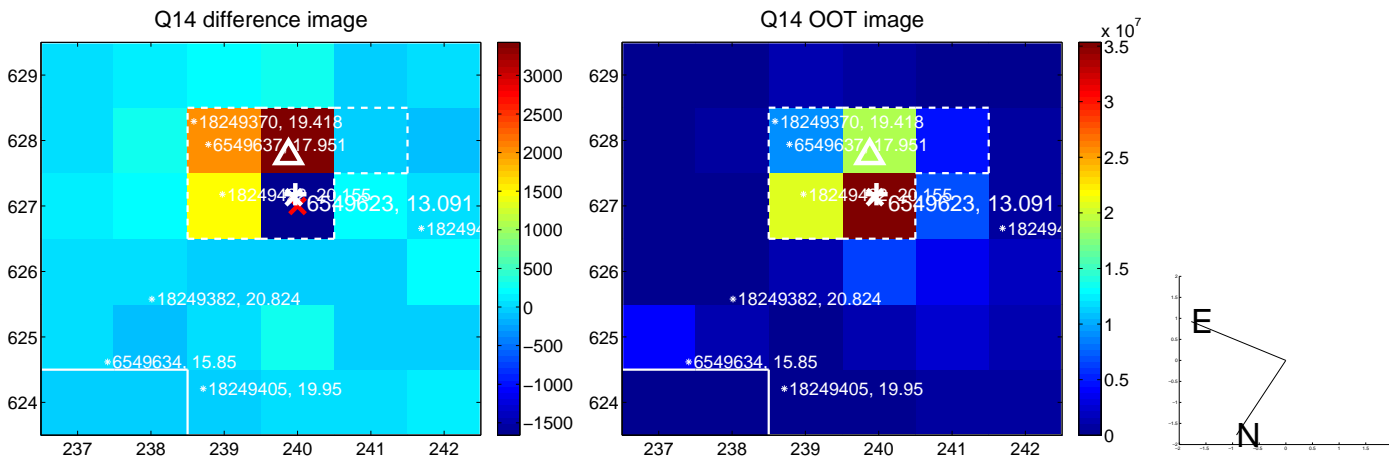
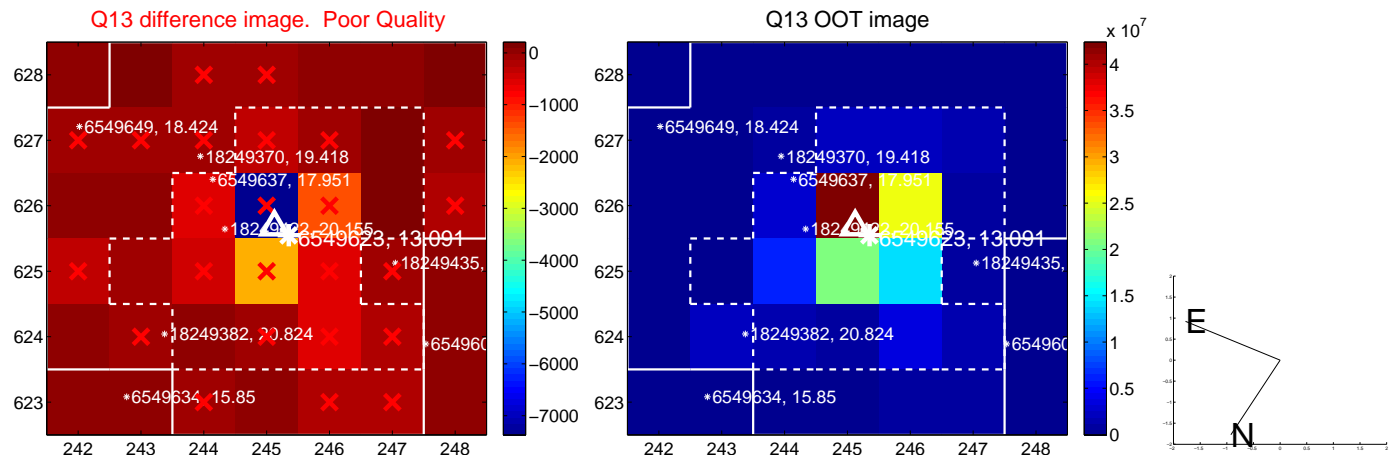
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



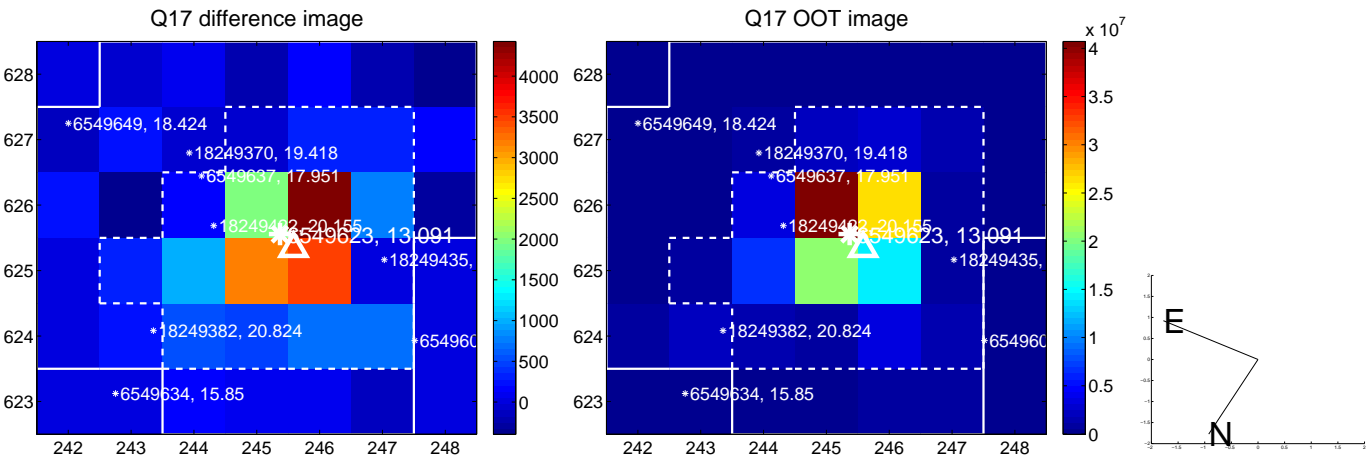
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



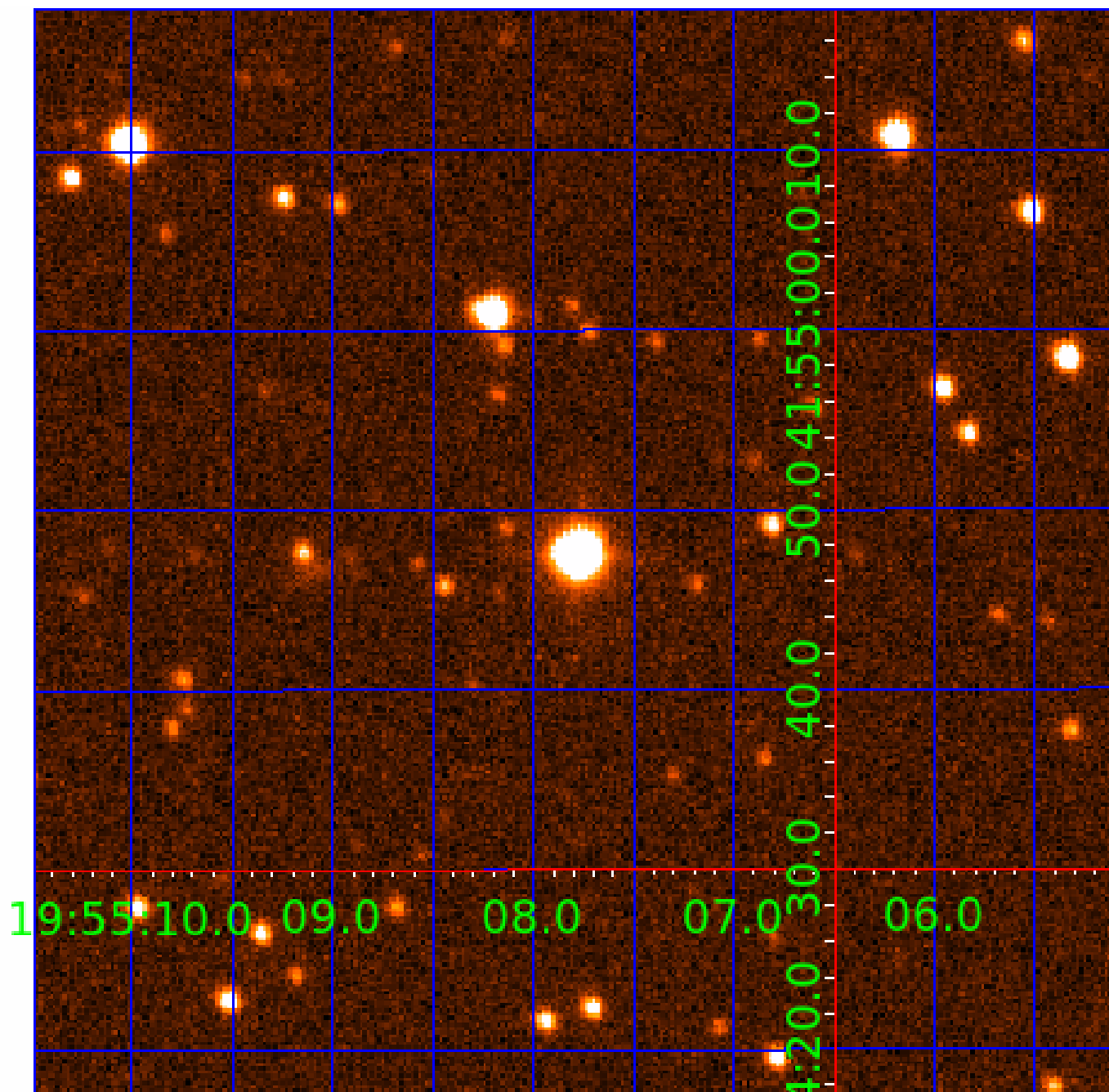
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 006549623

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})
006549623-01	OBS	No	1.328440	132.136240	15.4	1.952	9.6	4.9	3.83	6588	1.85	30847.56
006549623-02	OBS	No	1.328301	132.176545	24.3	9.158	7.9	7.9	3.83	6588	2.04	30851.87
006549623-04	OBS	No	26.765391	132.656906	157.5	4.734	11.3	11.1	3.83	6588	5.59	562.66
006549623-05	OBS	No	53.956704	166.570599	94.9	10.304	11.4	6.0	3.83	6588	4.32	220.94
006549623-06	OBS	No	45.232021	161.430230	191.8	4.494	10.0	9.7	3.83	6588	6.03	279.52
006549623-07	OBS	No	19.648078	136.370609	206.7	1.661	11.0	9.9	3.83	6588	6.45	849.67
006549623-08	OBS	No	31.641250	138.985649	227.6	2.093	9.6	8.1	3.83	6588	6.70	450.13
006549623-09	OBS	No	28.804836	142.439511	168.3	4.657	8.9	9.4	3.83	6588	5.63	510.18

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006549623-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
006549623-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
006549623-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
006549623-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006549623-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006549623-07	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_MEAS
006549623-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006549623-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS

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

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

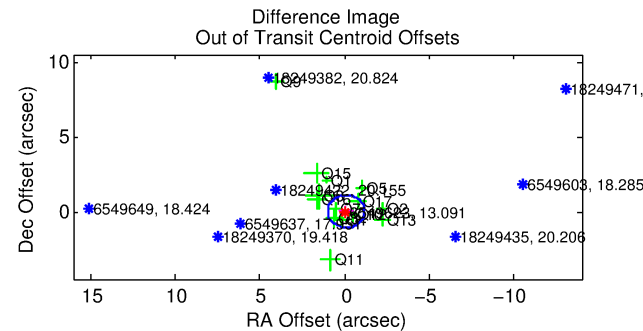
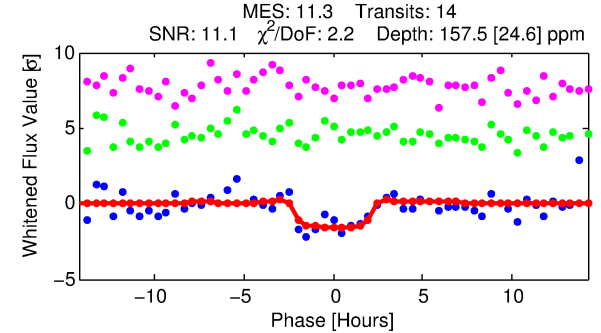
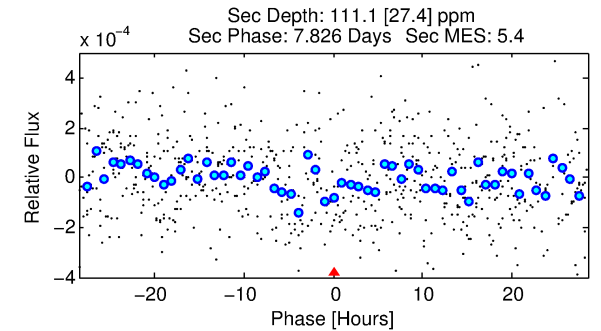
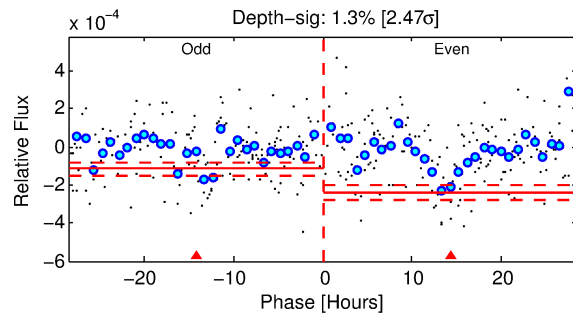
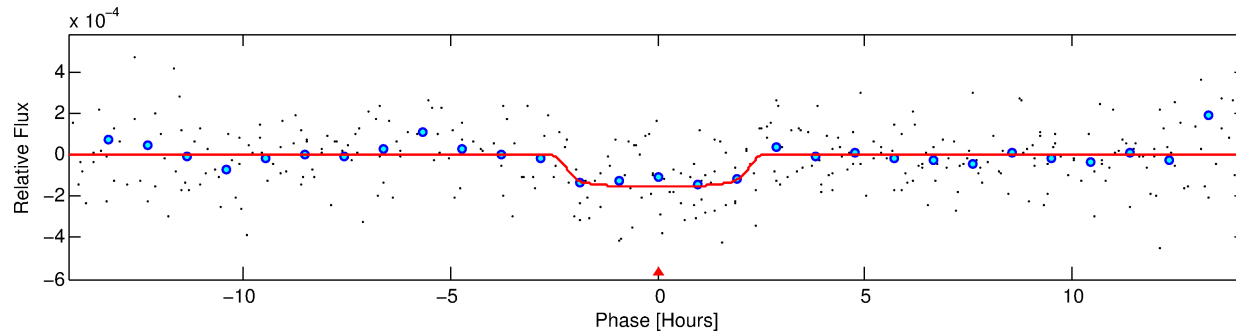
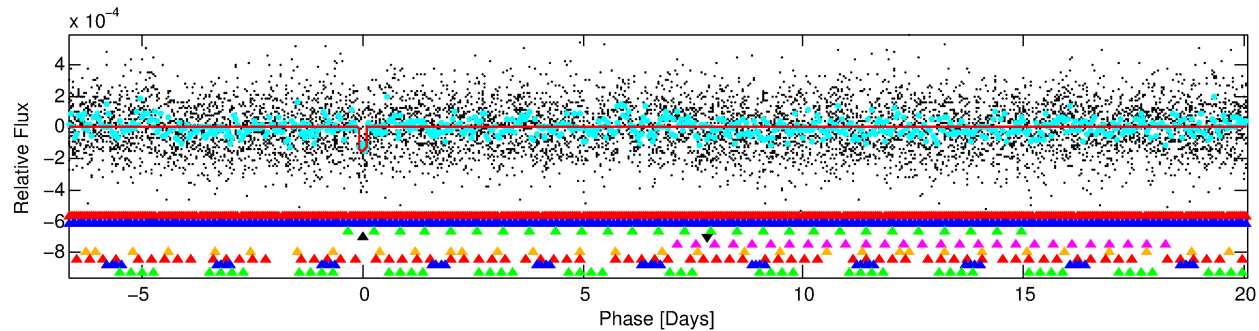
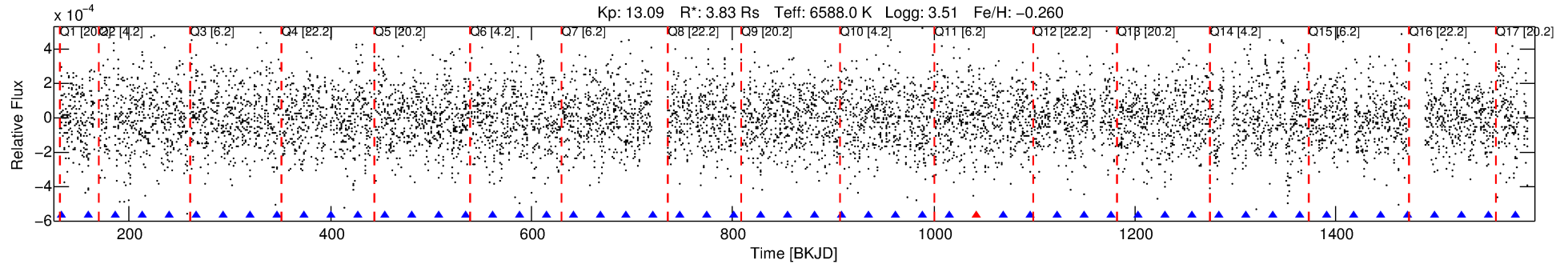
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006549623-04

No Significant Match Found

DV One-Page Summary

KIC: 6549623 Candidate: 4 of 9 Period: 26.765 d



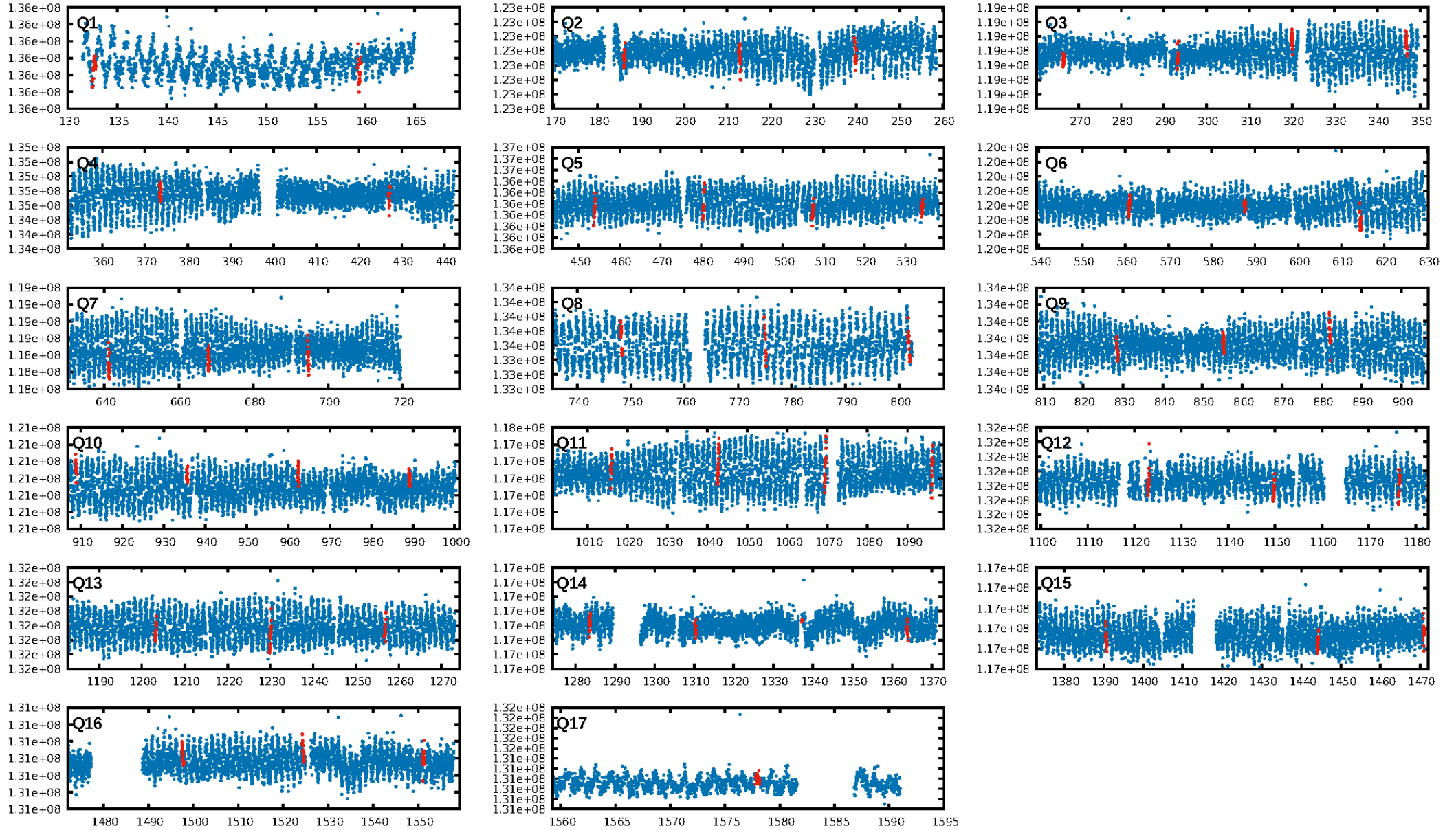
DV Fit Results:

Period = 26.76539 [0.00051] d
Epoch = 132.6569 [0.0158] BKJD
Rp/R* = 0.0134 [0.0066]
a/R* = 20.59 [57.63]
b = 0.89 [0.64]
Seff = 562.66 [361.88]
Teq = 1242 [200] K
Rp = 5.59 [3.63] Re
a = 0.2100 [0.0839] AU
Ag = 86.31 [103.31] [0.83σ]
Teffp = 5853 [1498] K [3.05σ]

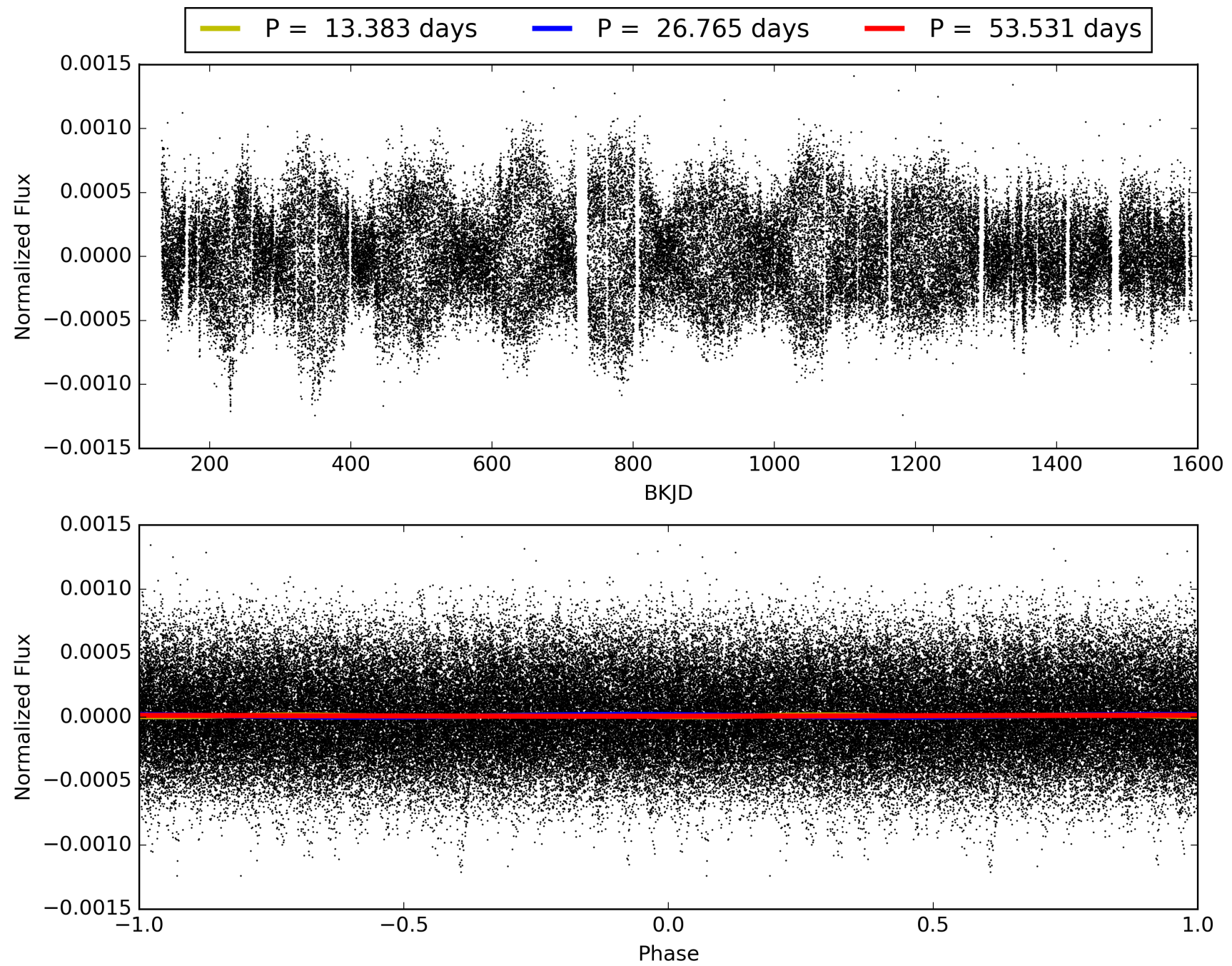
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [34.05σ]
LongPeriod-sig: 100.0% [7.37σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 93.9%
Bootstrap-pfa: 1.24e-15
RollingBand-fgt: 0.92 [11/12]
GhostDiagnostic-chr: -4.963
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.096 arcsec [0.27σ]
KicOffset-rm: 0.126 arcsec [0.22σ]
OotOffset-st: 2/4/4/5 [15]
KicOffset-st: 2/4/4/5 [15]
DiffImageQuality-fgm: 0.40 [6/15]
DiffImageOverlap-fno: 0.29 [5/17]

TCE 006549623-04, PDC Light Curves

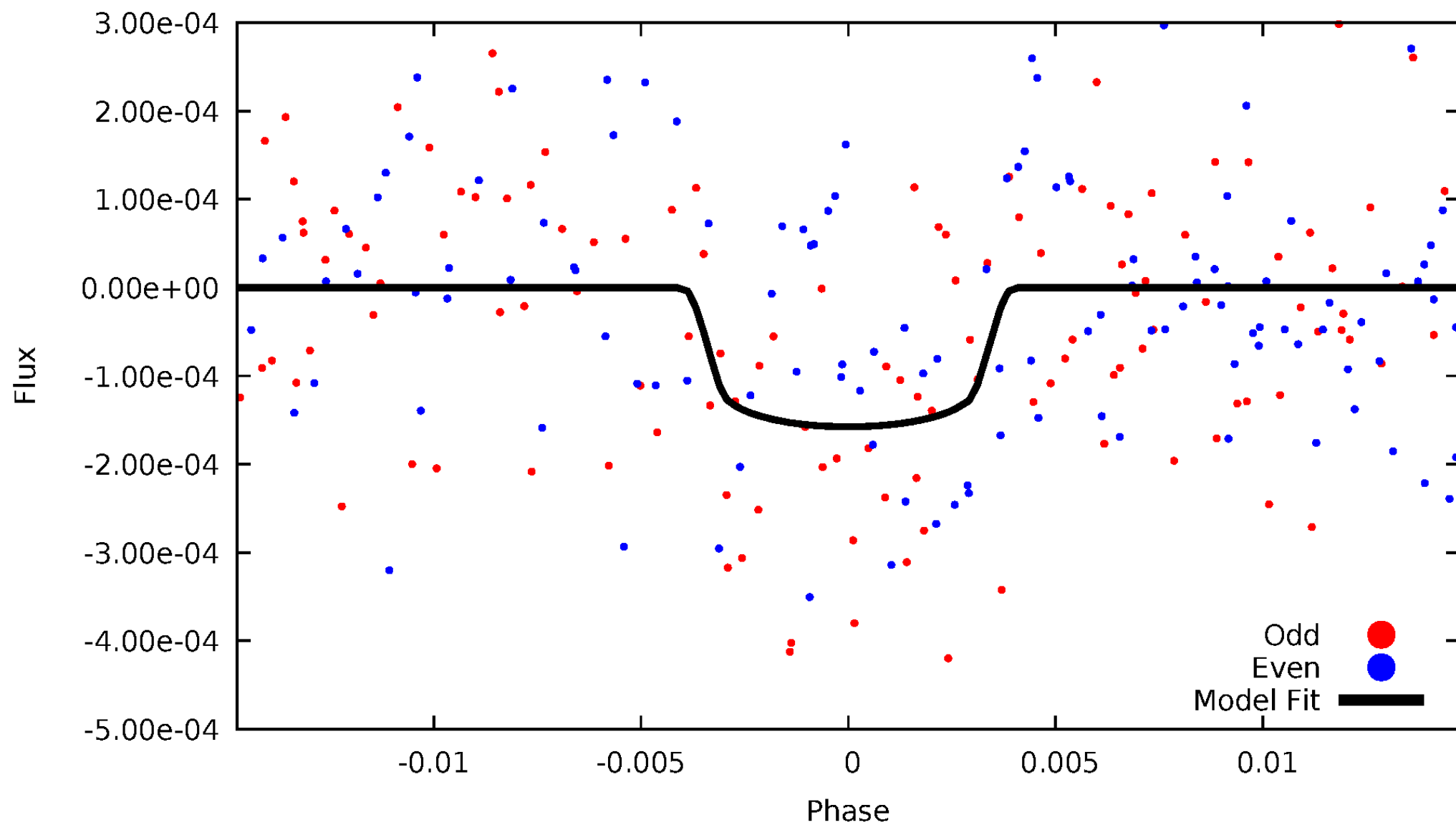


TCE 006549623-04



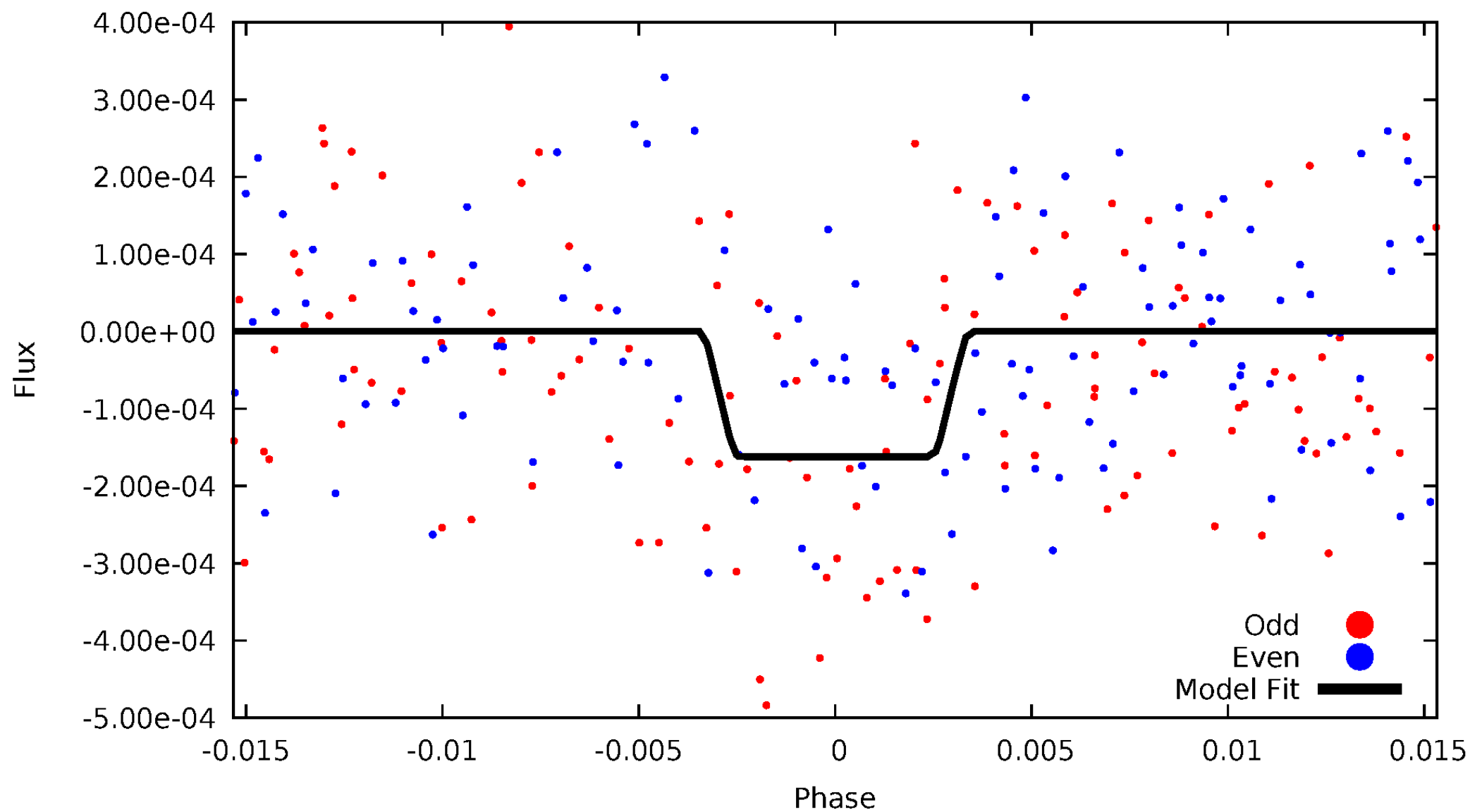
DV Odd/Even

TCE 006549623-04



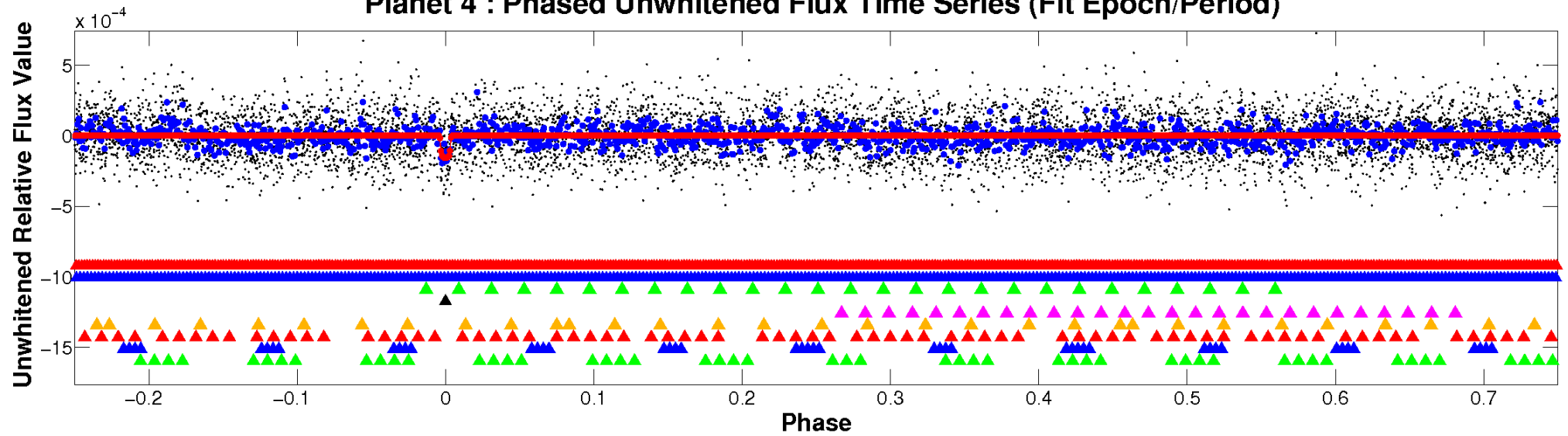
ALT Odd/Even

TCE 006549623-04

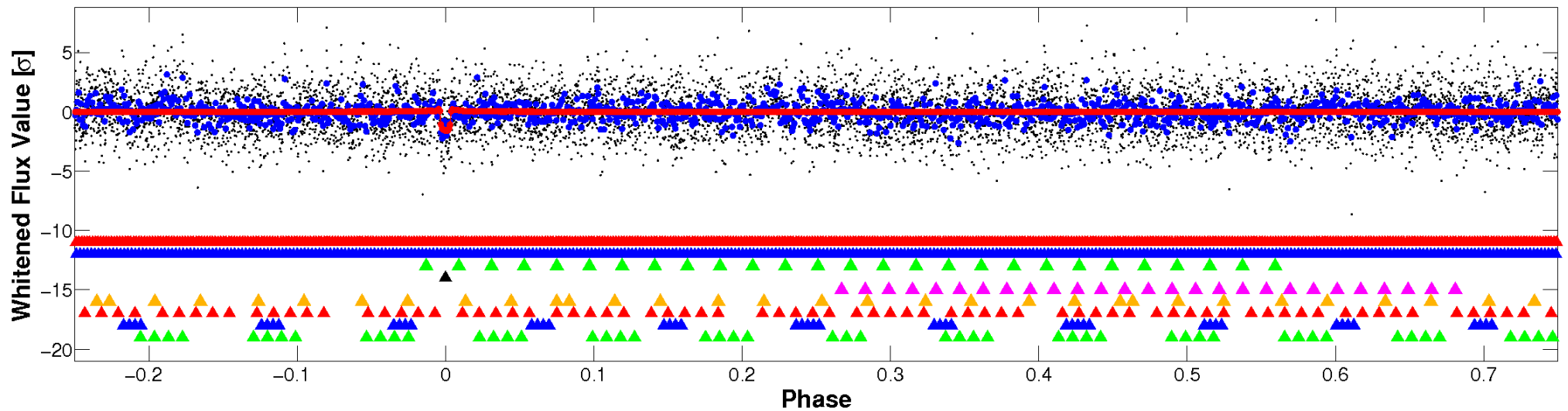


Non-Whitened Vs. Whitened Light Curve

Planet 4 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

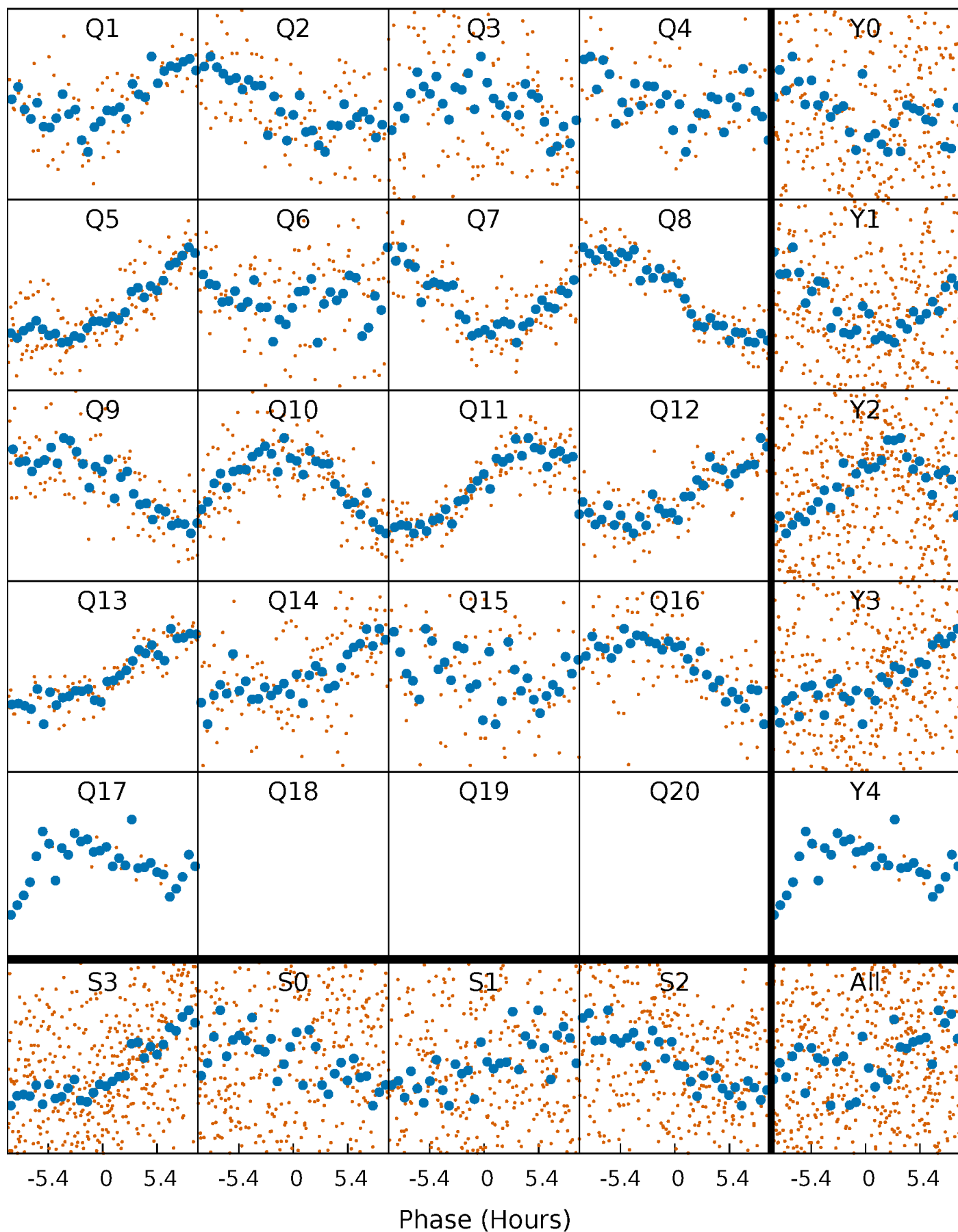


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



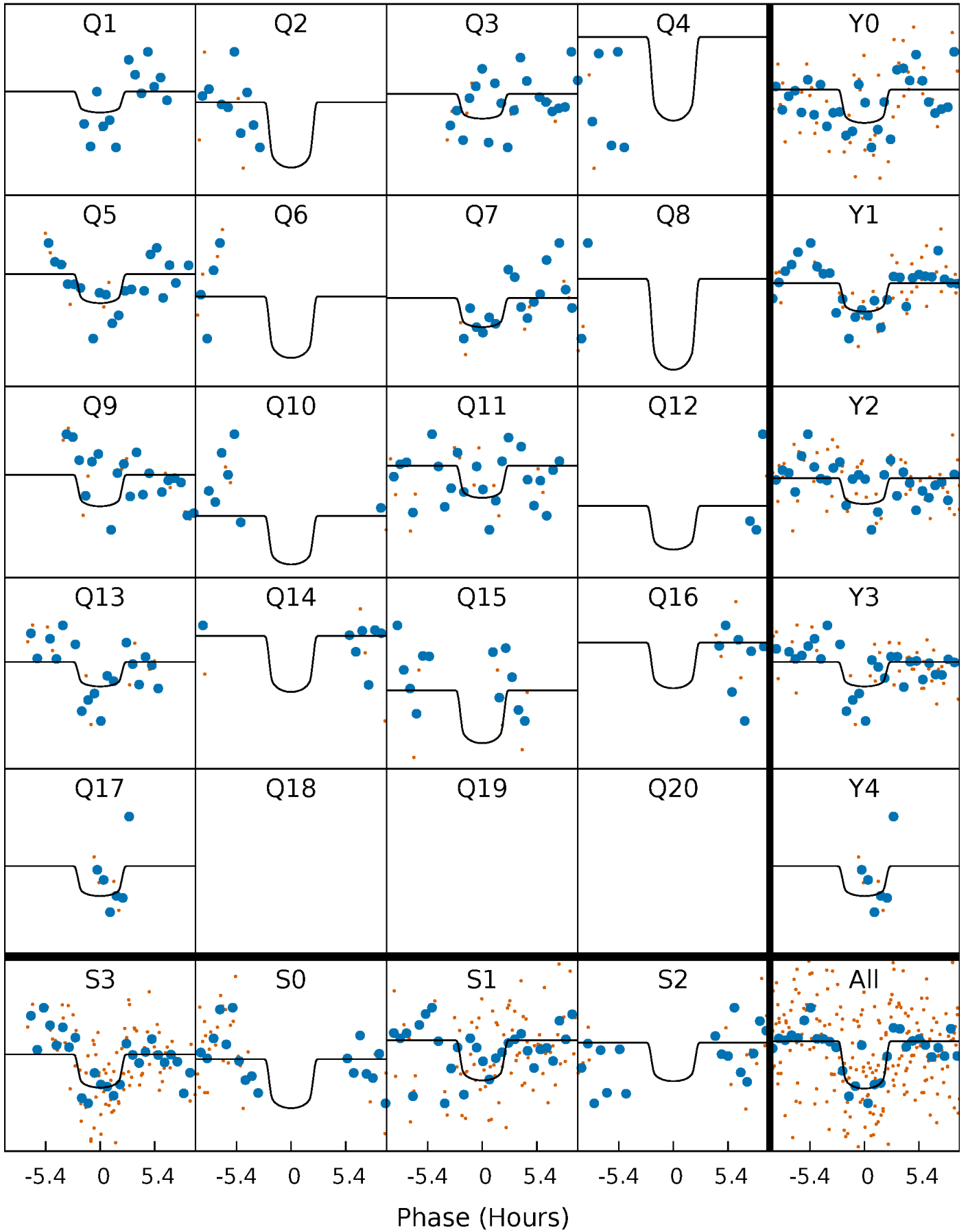
PDC Quarter-Phased Transit Curves

TCE 006549623-04 P= 26.765391 Days $T_0=132.656906$ (BKJD)



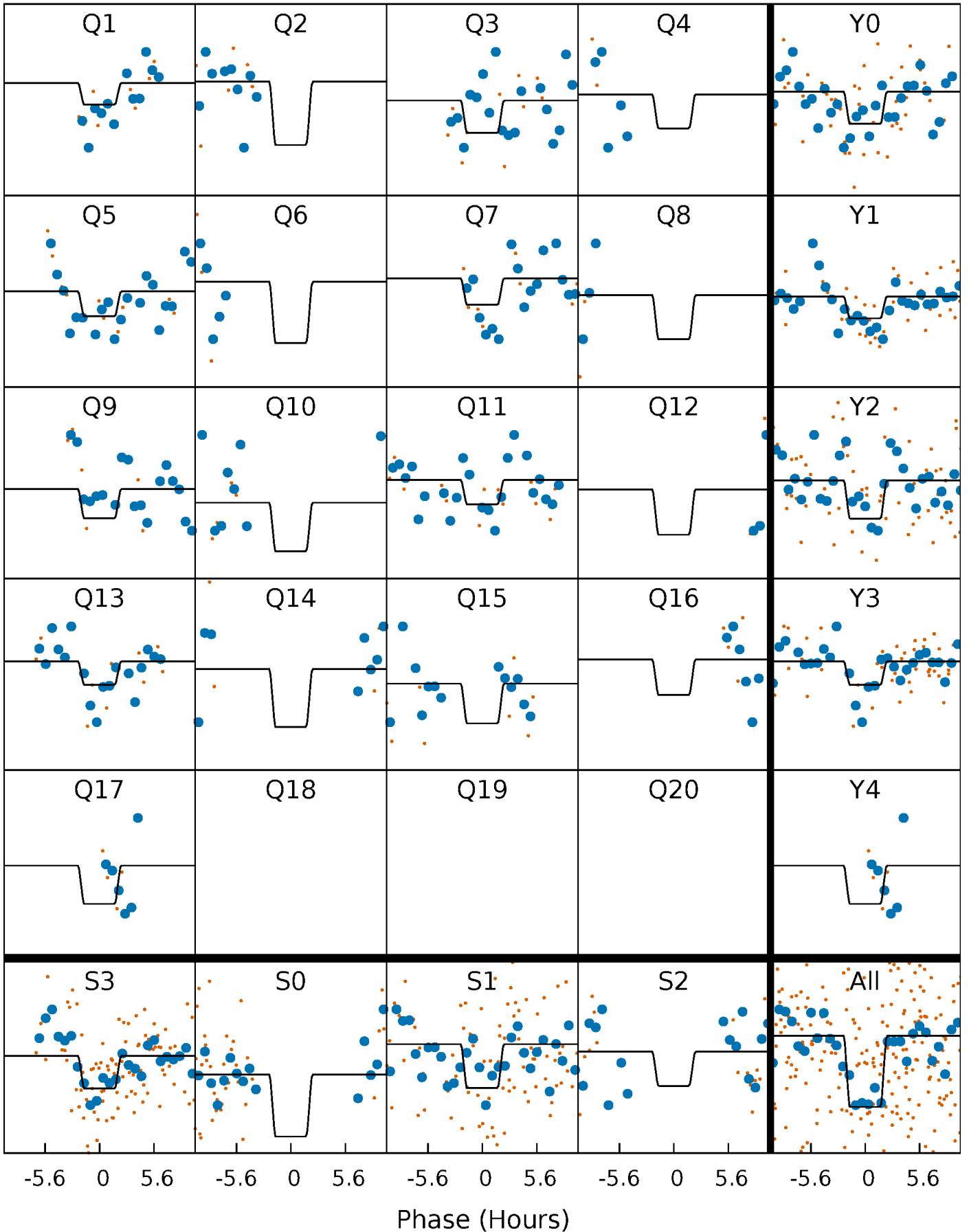
DV Quarter-Phased Transit Curves

TCE 006549623-04 P= 26.765391 Days $T_0=132.656906$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

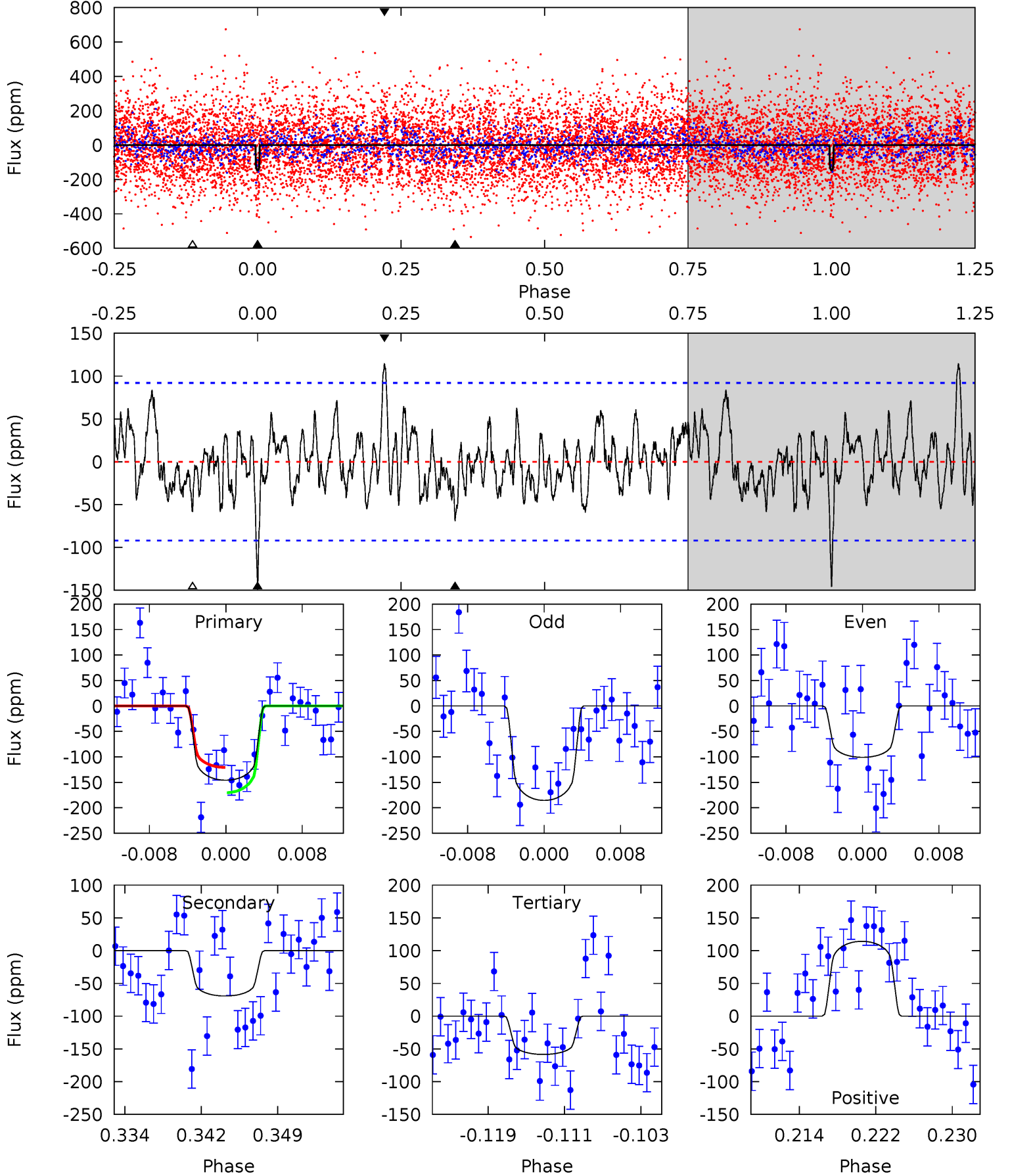
TCE 006549623-04 P= 26.764499 Days $T_0=132.666926$ (BKJD)



DV Model-Shift Uniqueness Test

006549623-04, P = 26.765391 Days, E = 105.891515 Days

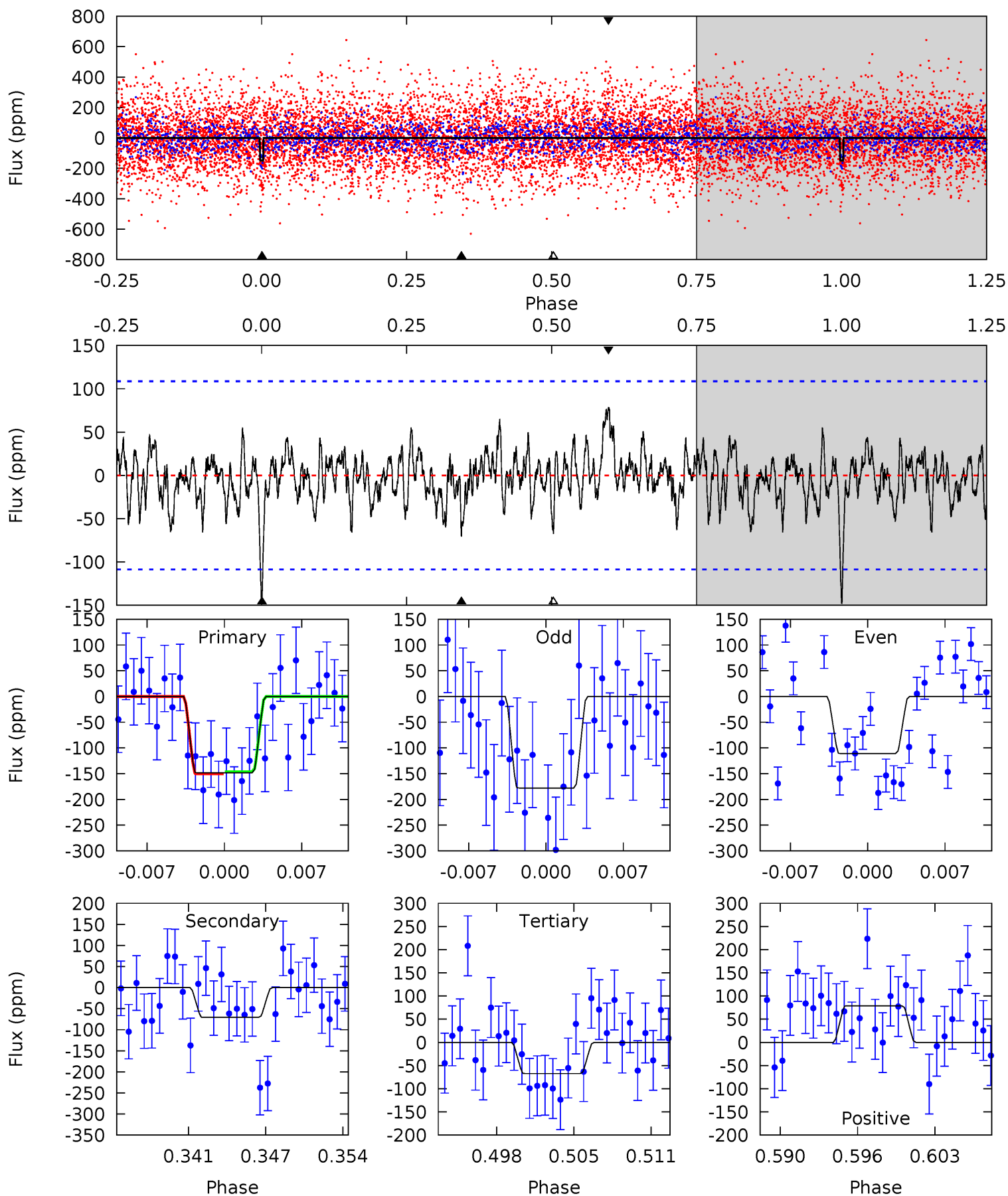
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.03	3.82	3.22	6.29	5.07	2.65	1.60	4.81	1.74	0.60	-2.48	2.33	0.97	0.44	1.36



Alt Model-Shift Uniqueness Test

006549623-04, P = 26.764499 Days, E = 105.902427 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.96	3.32	3.17	3.70	5.11	2.72	1.14	3.79	3.26	0.16	-0.38	1.56	1.52	0.35	0.09



Stellar Parameters For KIC 006549623

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6588^{+166}_{-199}	$3.507^{+0.368}_{-0.092}$	$-0.260^{+0.350}_{-0.250}$	$3.834^{+0.407}_{-1.626}$	$1.724^{+0.184}_{-0.428}$	$0.043^{+0.133}_{-0.013}$
	+3%/-3%	+10%/-3%	+135%/-96%	+11%/-42%	+11%/-25%	+308%/-30%
Source	PHO1	FLK73	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 006549623-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-69 ± 18	$5.05^{+2.89}_{-2.44}$	1705^{+89}_{-164}	5270^{+1827}_{-881}	64^{+162}_{-39}
Alt.	-71 ± 21	$5.01^{+2.95}_{-2.46}$	1708^{+92}_{-185}	5303^{+2005}_{-947}	67^{+169}_{-42}

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 $A_{obs} \gg 1.0$

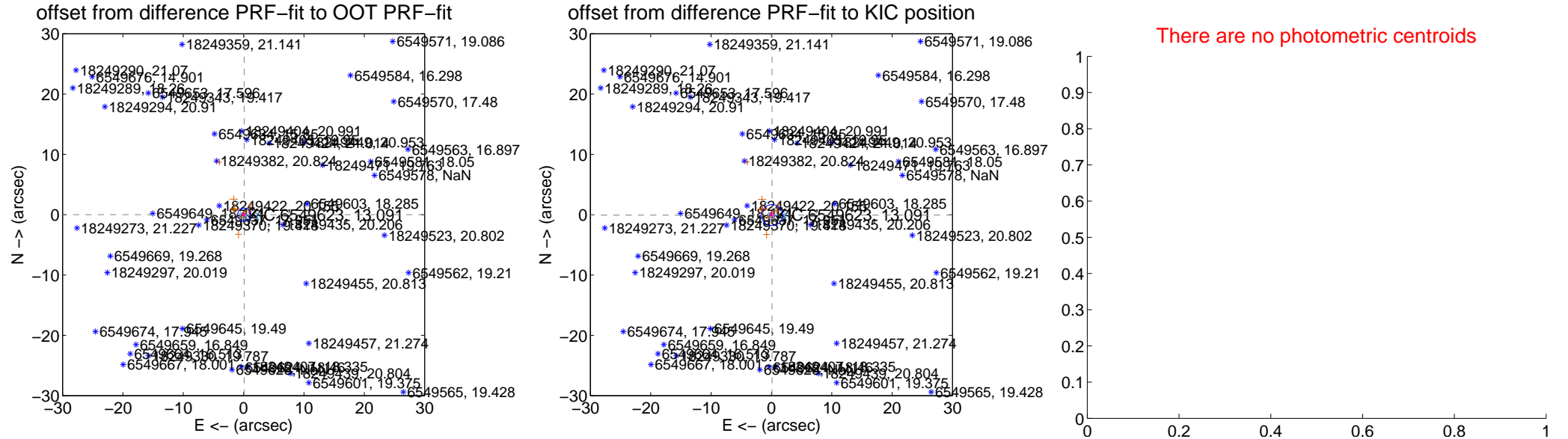
DV Centroid Data

Supplemental centroid analysis for 006549623-04. Kepler magnitude: 13.09. Transit SNR 11.13

There are 6 quarters with good PRF difference image offsets

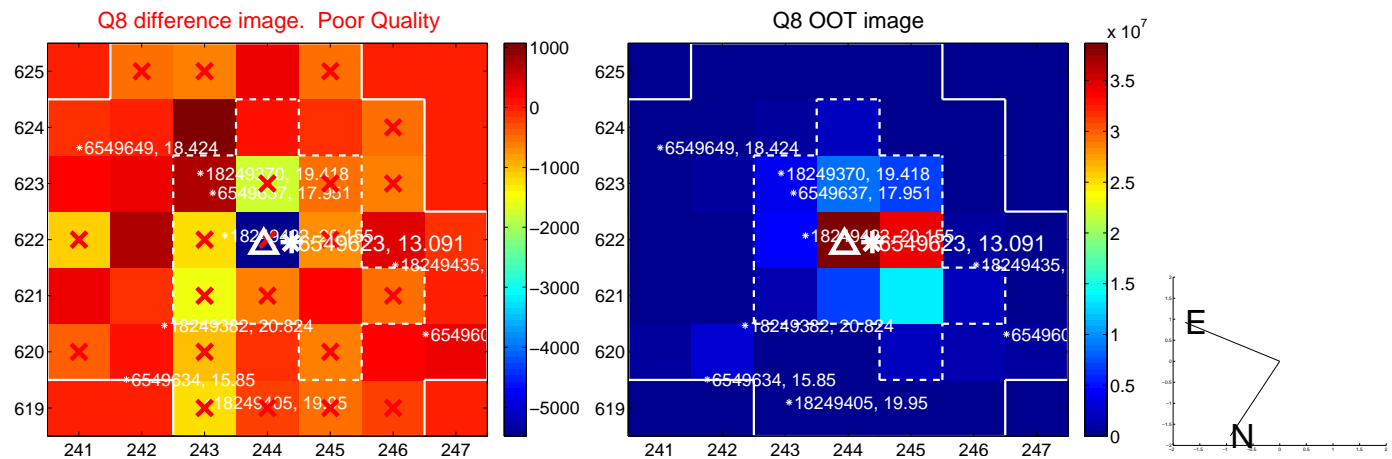
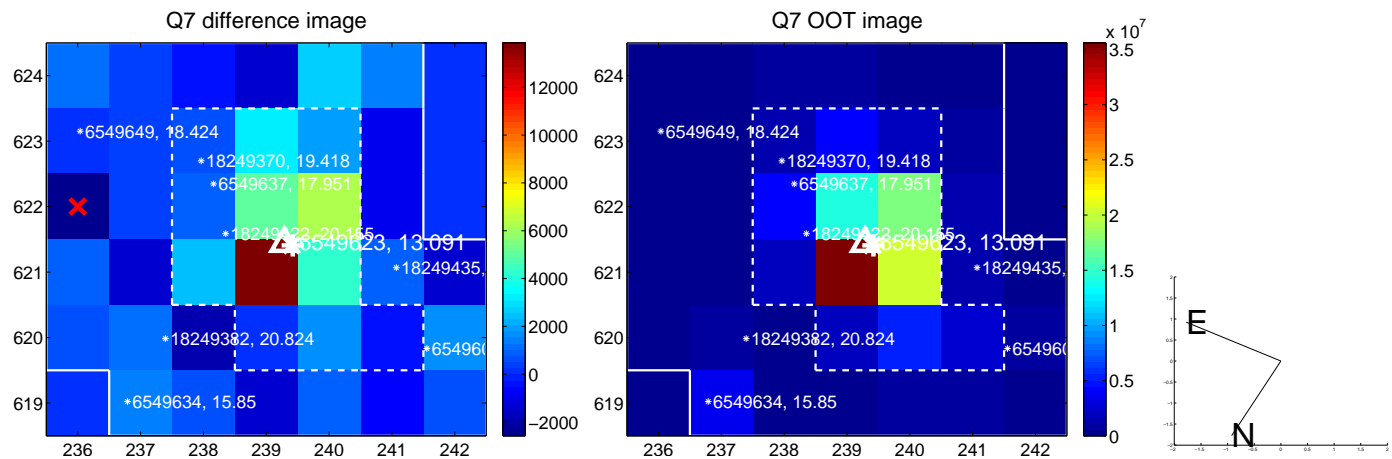
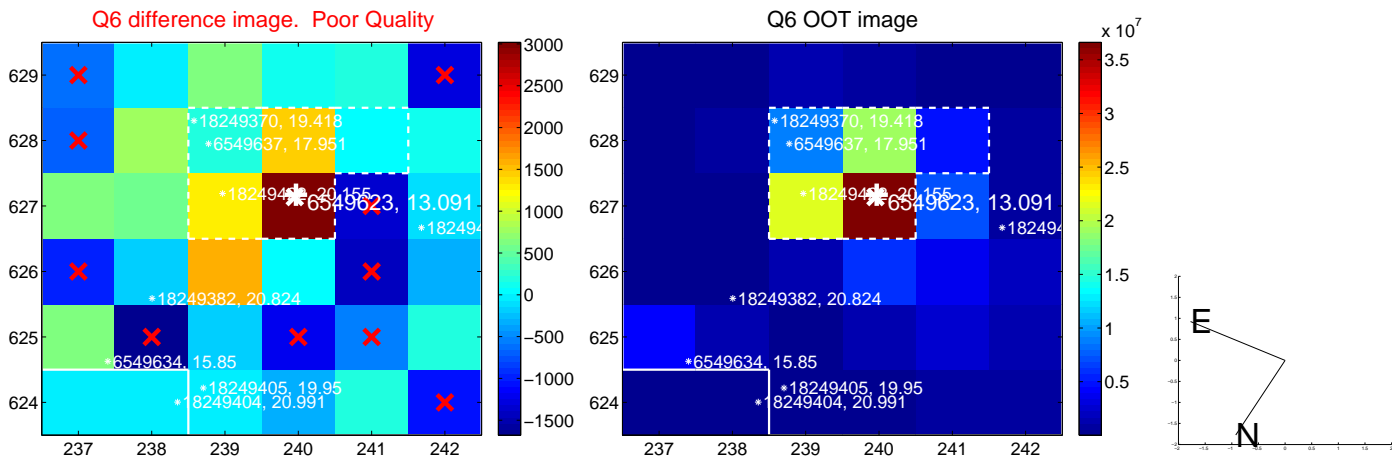
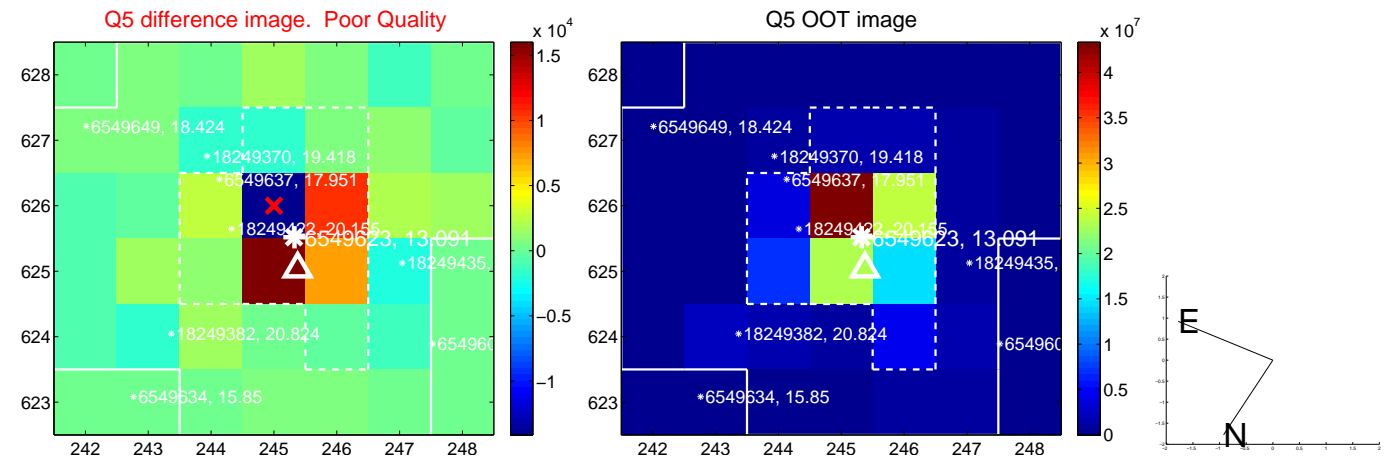
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.096 ± 0.361	0.27	-0.095 ± 0.362	0.014 ± 0.276
PRF-fit source offset from KIC position	0.126 ± 0.582	0.22	-0.108 ± 0.377	-0.066 ± 0.659
photometric centroid source offset	—	—	—	—

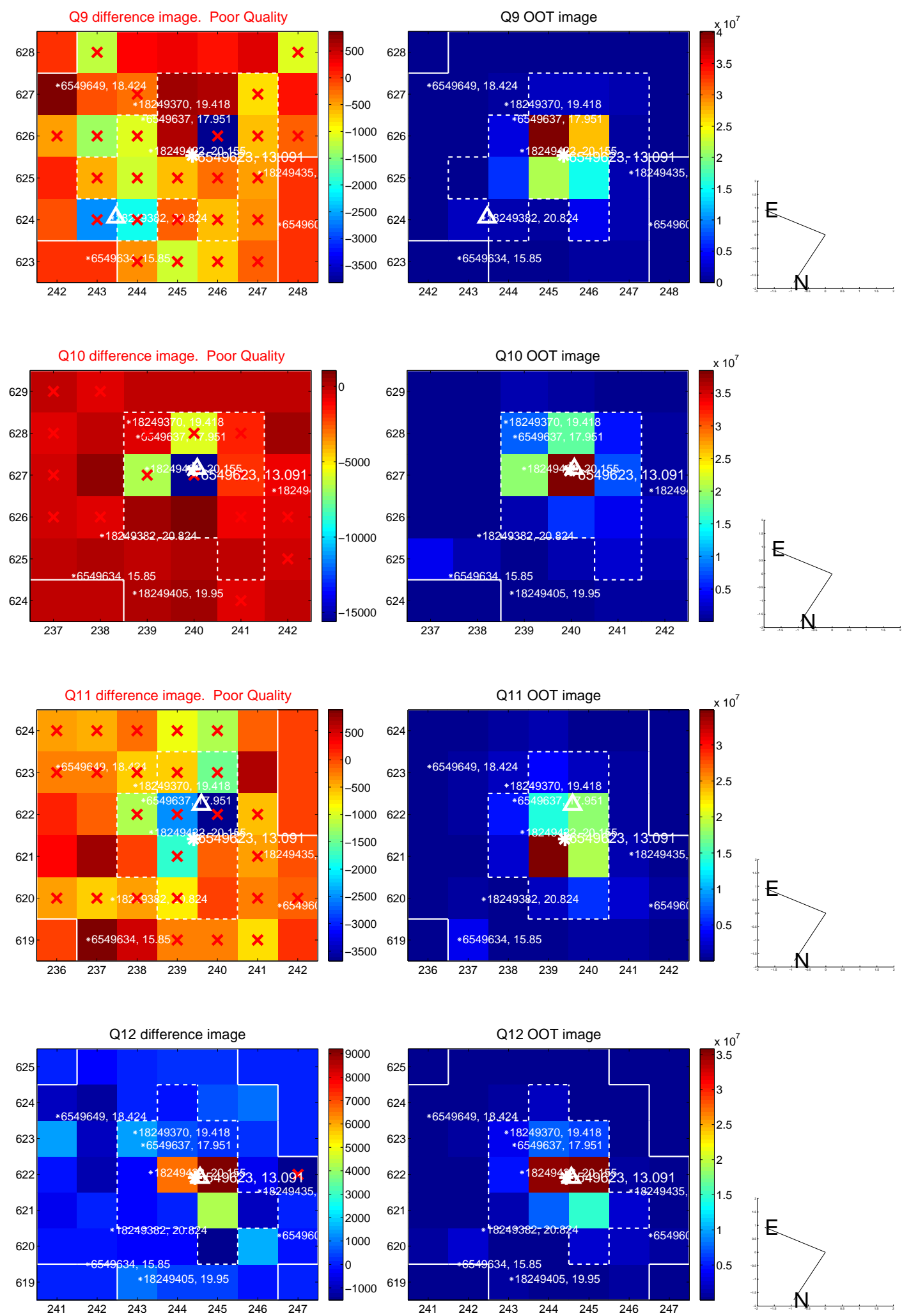


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

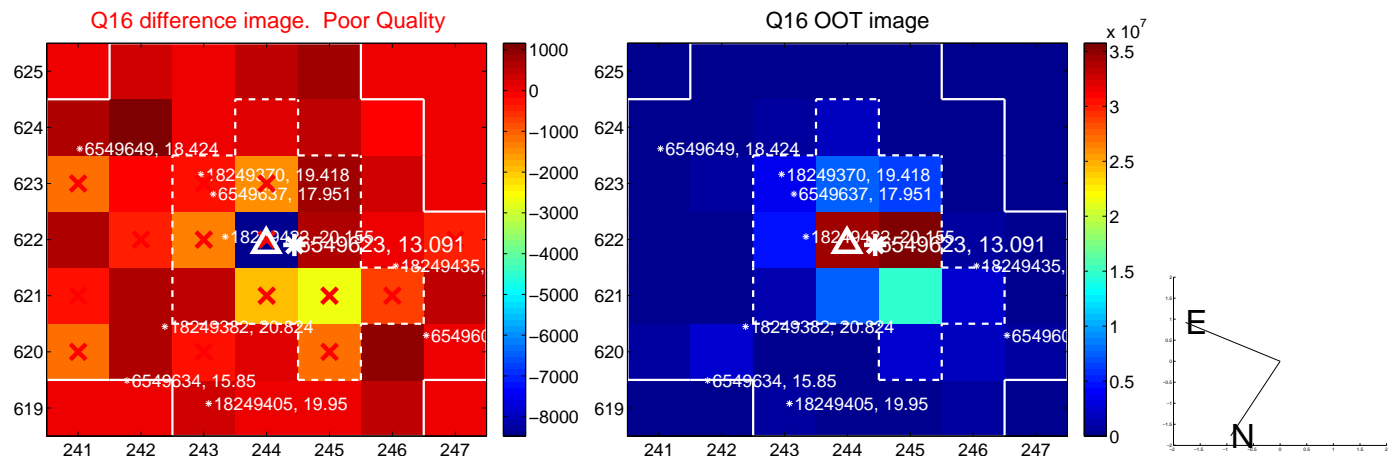
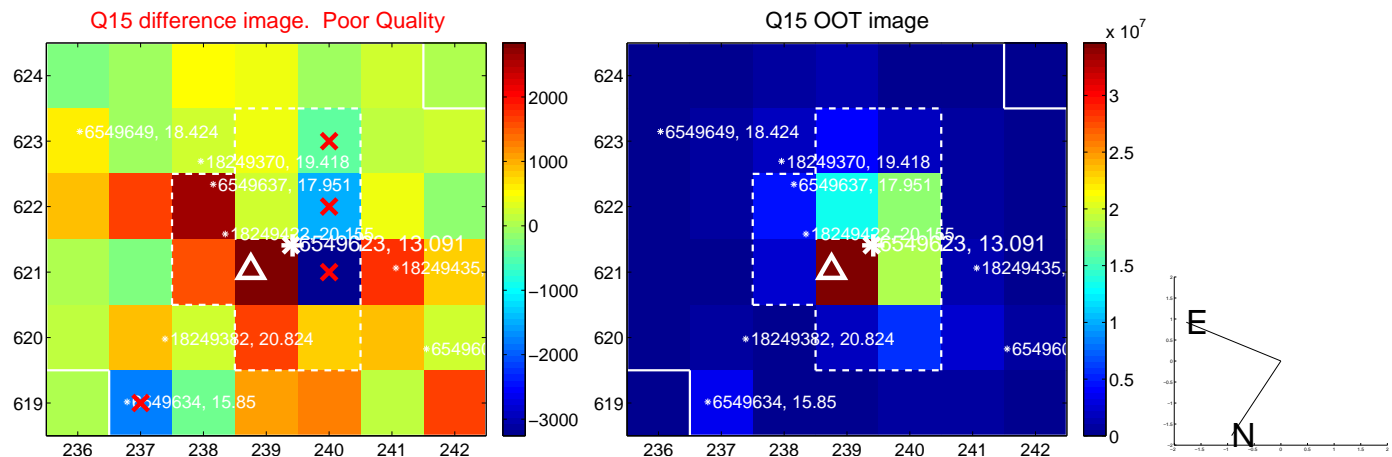
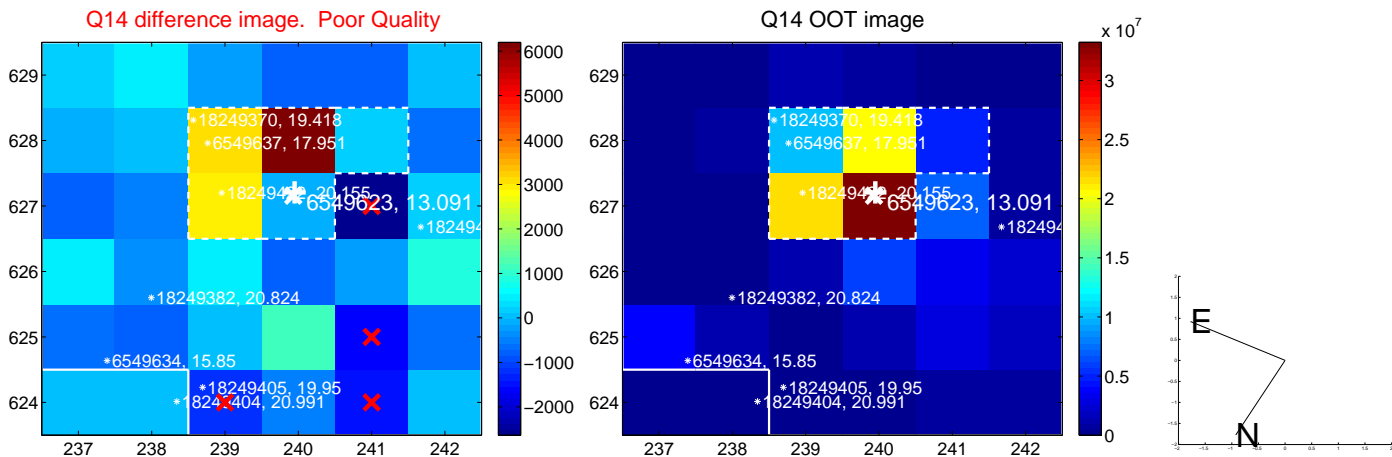
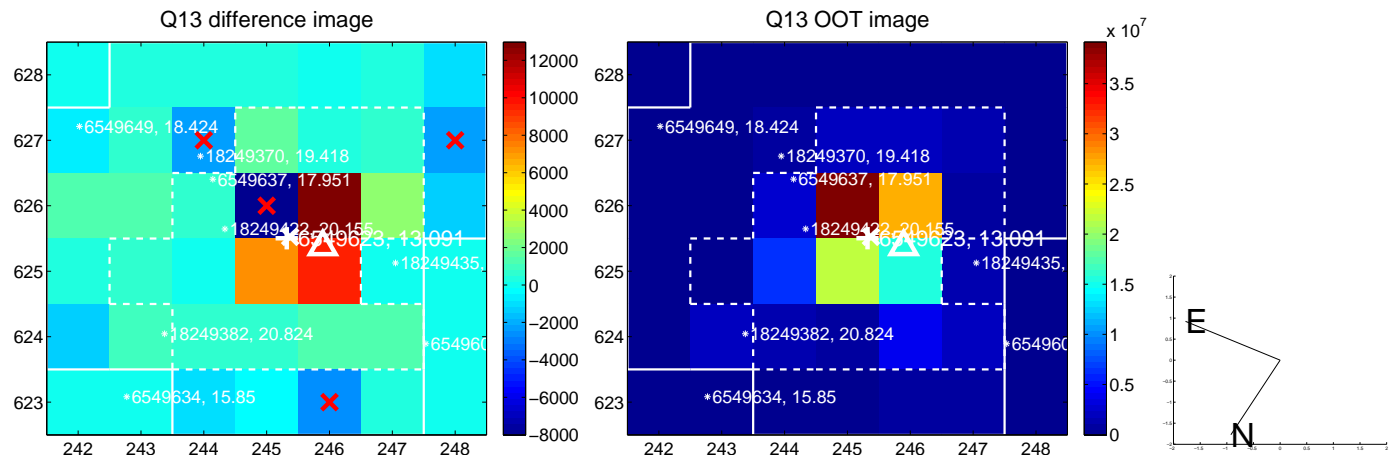
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



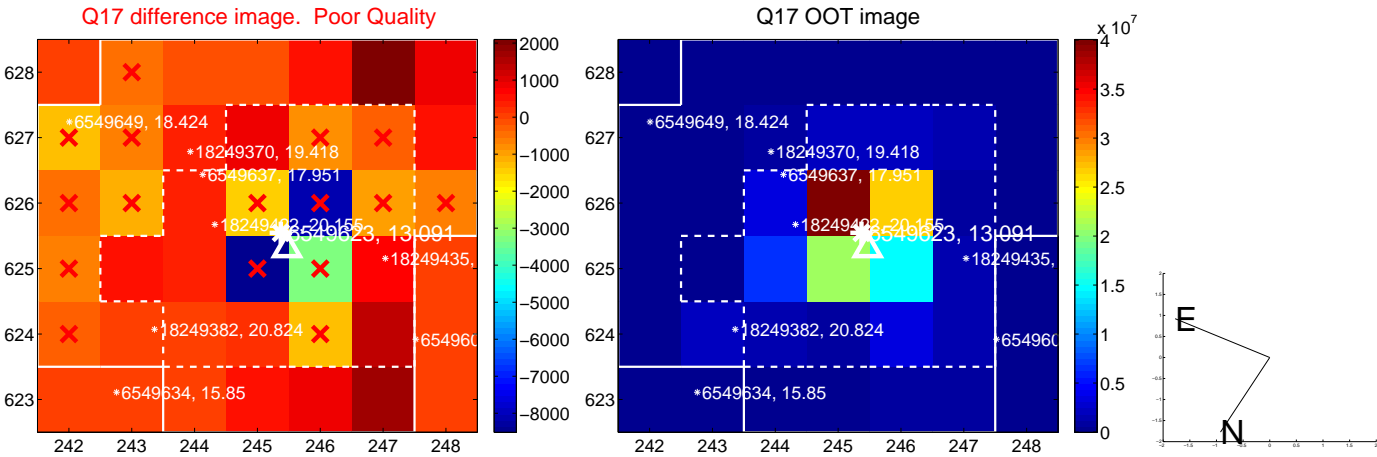
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



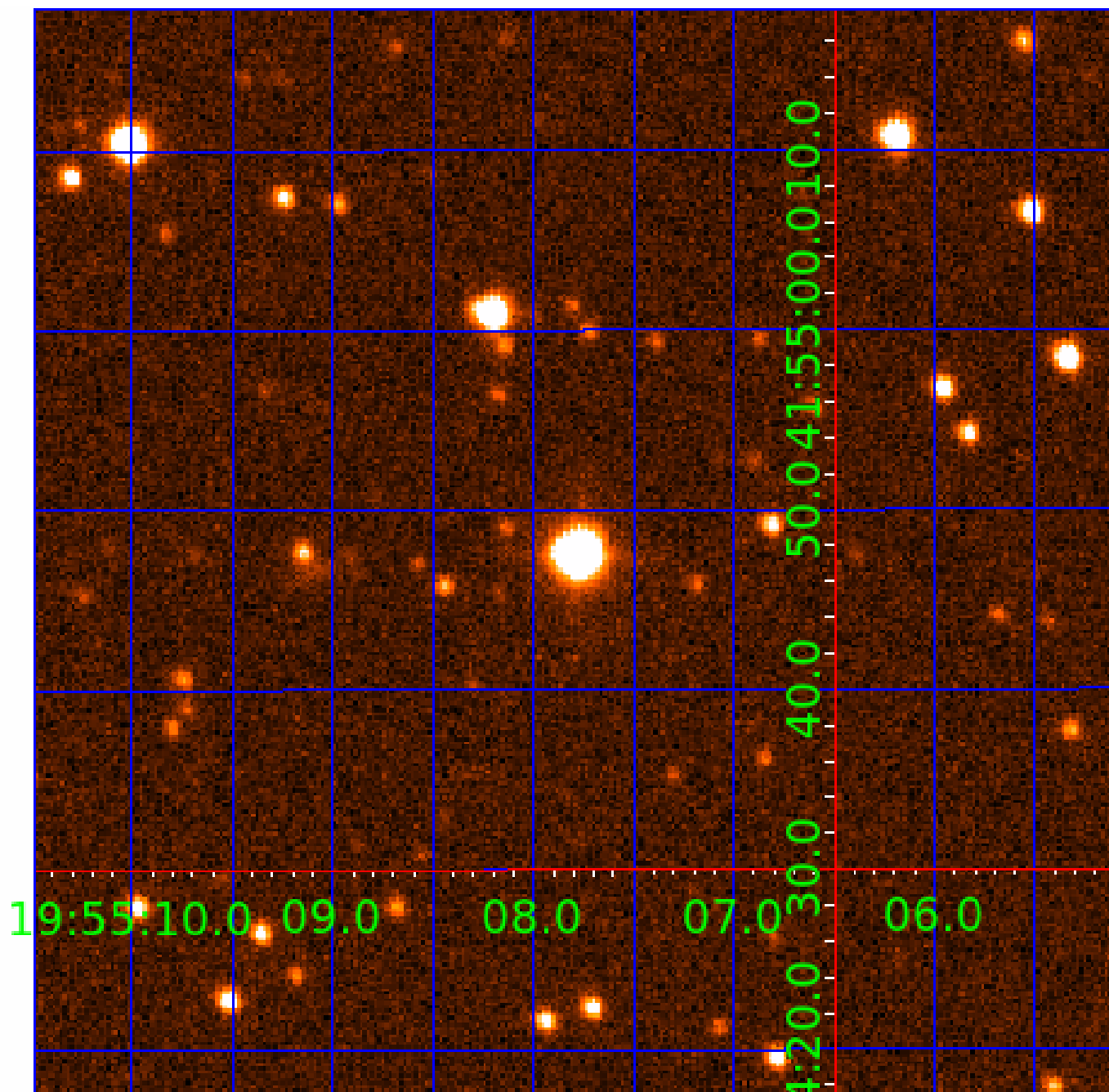
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 006549623

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})
006549623-01	OBS	No	1.328440	132.136240	15.4	1.952	9.6	4.9	3.83	6588	1.85	30847.56
006549623-02	OBS	No	1.328301	132.176545	24.3	9.158	7.9	7.9	3.83	6588	2.04	30851.87
006549623-04	OBS	No	26.765391	132.656906	157.5	4.734	11.3	11.1	3.83	6588	5.59	562.66
006549623-05	OBS	No	53.956704	166.570599	94.9	10.304	11.4	6.0	3.83	6588	4.32	220.94
006549623-06	OBS	No	45.232021	161.430230	191.8	4.494	10.0	9.7	3.83	6588	6.03	279.52
006549623-07	OBS	No	19.648078	136.370609	206.7	1.661	11.0	9.9	3.83	6588	6.45	849.67
006549623-08	OBS	No	31.641250	138.985649	227.6	2.093	9.6	8.1	3.83	6588	6.70	450.13
006549623-09	OBS	No	28.804836	142.439511	168.3	4.657	8.9	9.4	3.83	6588	5.63	510.18

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006549623-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
006549623-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
006549623-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
006549623-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006549623-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006549623-07	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_MEAS
006549623-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006549623-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS

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

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

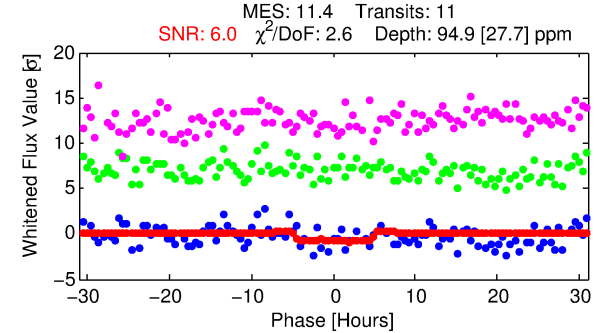
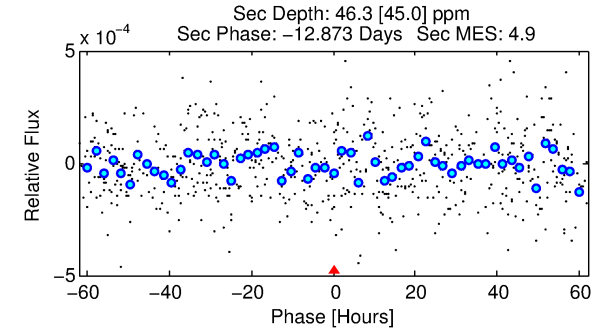
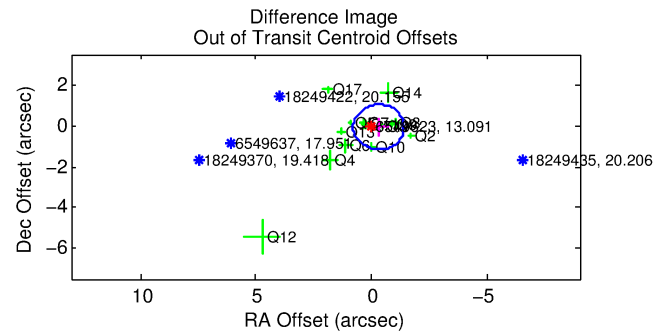
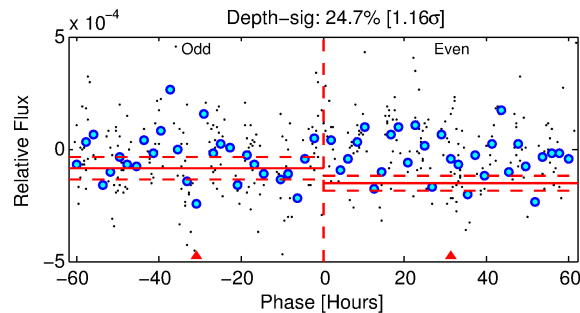
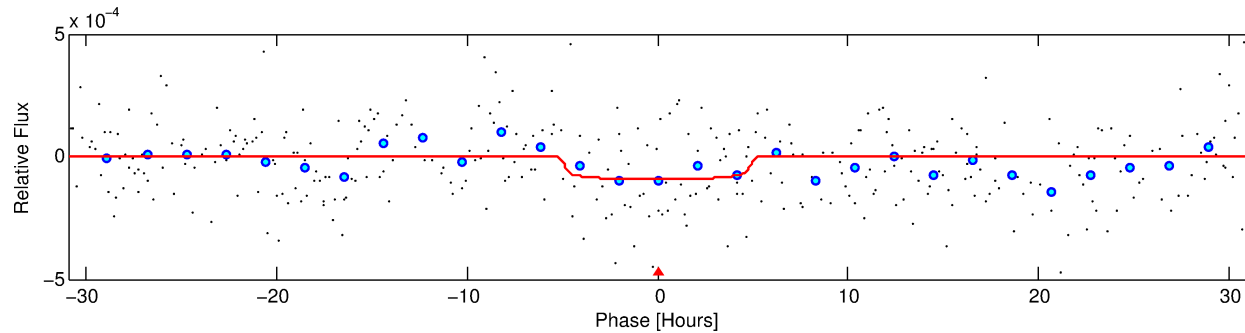
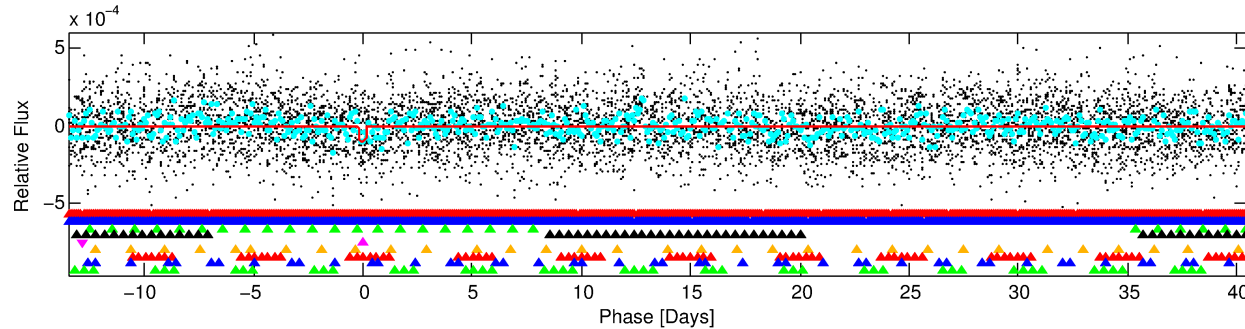
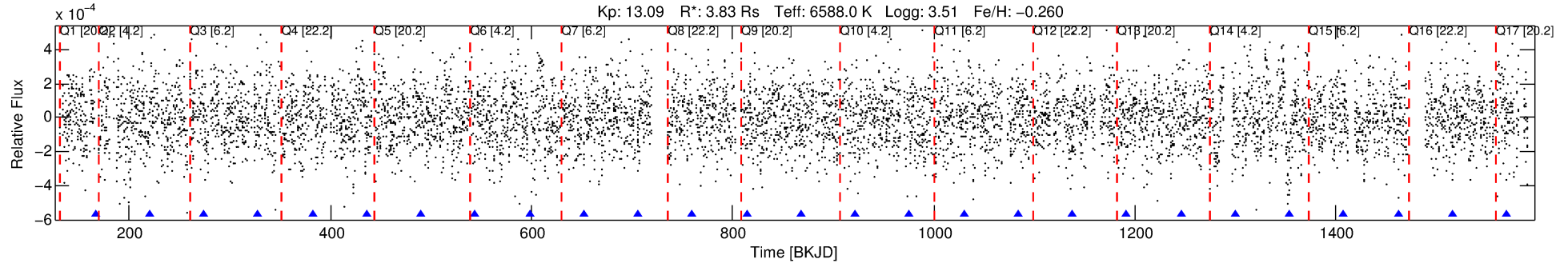
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006549623-05

No Significant Match Found

DV One-Page Summary

KIC: 6549623 Candidate: 5 of 9 Period: 53.957 d



DV Fit Results:

Period = 53.95670 [0.00323] d
Epoch = 166.5706 [0.0460] BKJD
Rp/R* = 0.0103 [0.0051]
a/R* = 19.21 [52.41]
b = 0.89 [0.65]
Seff = 220.94 [142.10]
Teq = 983 [158] K
Rp = 4.32 [2.82] Re
a = 0.3351 [0.1339] AU
Ag = 153.42 [234.21] [0.65 σ]
Teffp = 5349 [1866] K [2.33 σ]

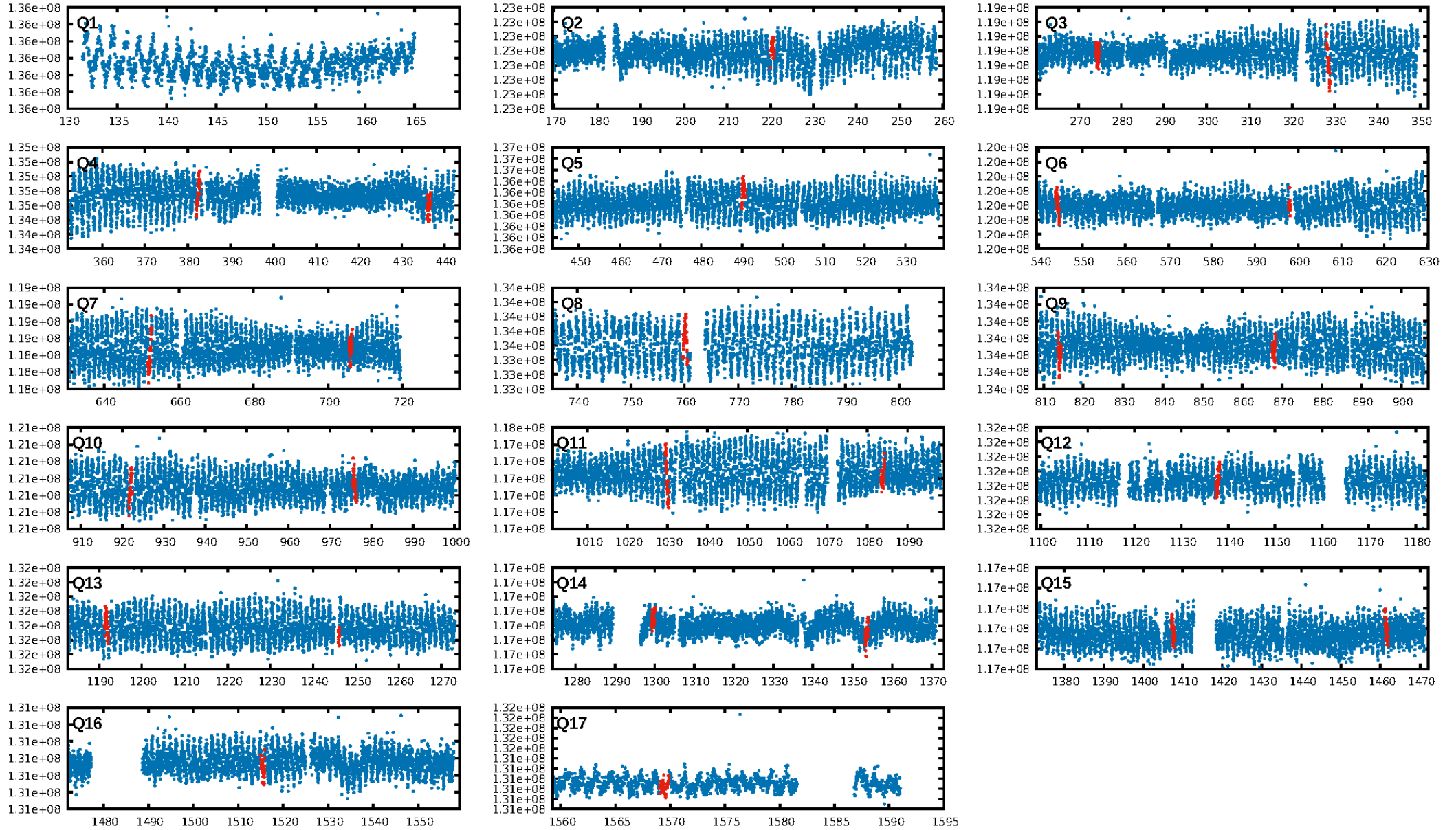
DV Diagnostic Results:

ShortPeriod-sig: 95.7% [2.03 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.02e-31
RollingBand-fgt: 1.00 [11/11]
GhostDiagnostic-chr: -4.625
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.298 arcsec [0.81 σ]
Centroid-so: N/A
OotOffset-st: 4/3/3/4 [14]
KicOffset-rm: 0.248 arcsec [0.67 σ]
OotOffset-st: 4/3/3/4 [14]
KicOffset-st: 4/3/3/4 [14]
DiffImageQuality-fgm: 0.36 [5/14]
DiffImageOverlap-fno: 0.00 [0/15]

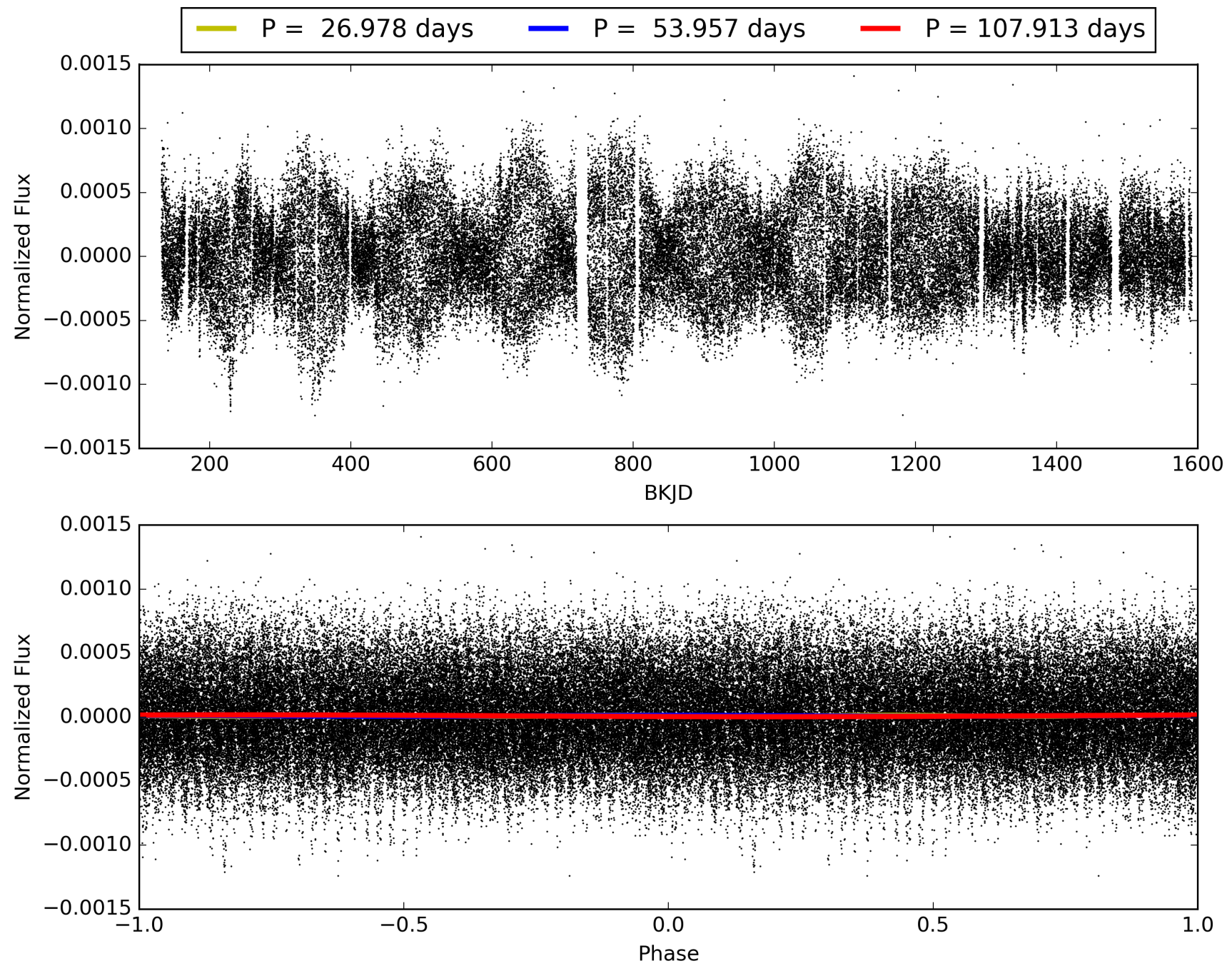
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 07:29:56 Z

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

TCE 006549623-05, PDC Light Curves

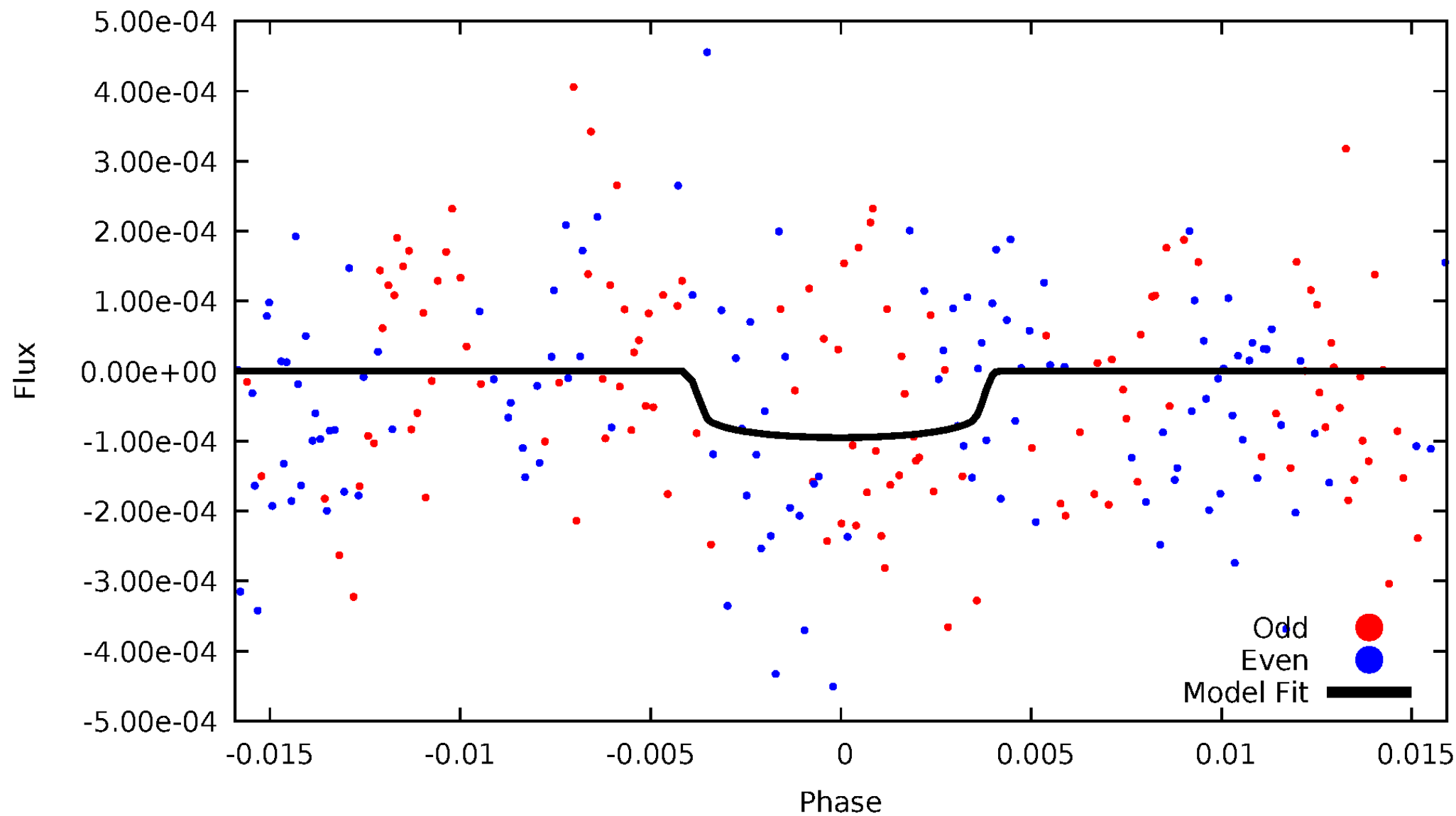


TCE 006549623-05



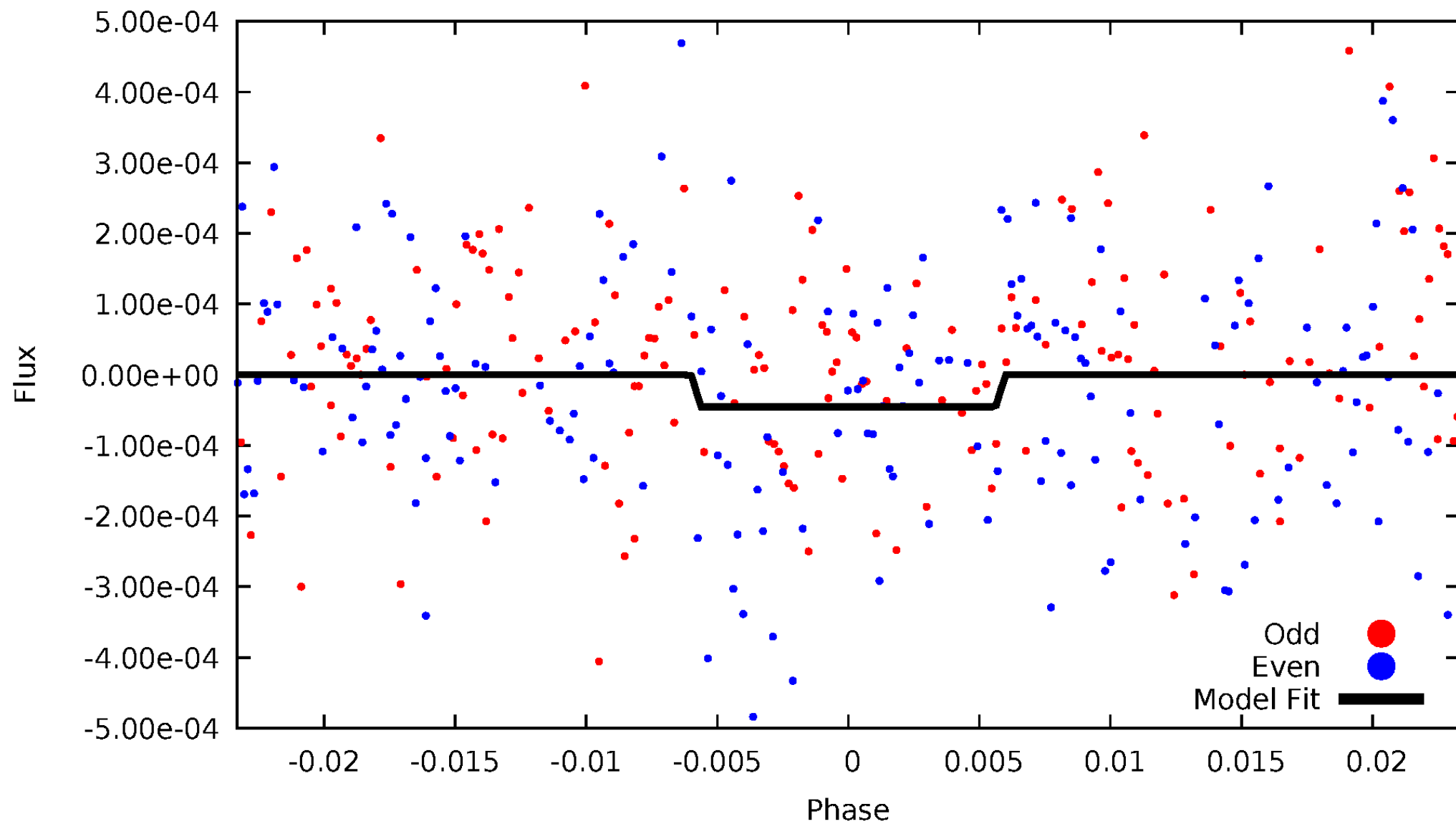
DV Odd/Even

TCE 006549623-05



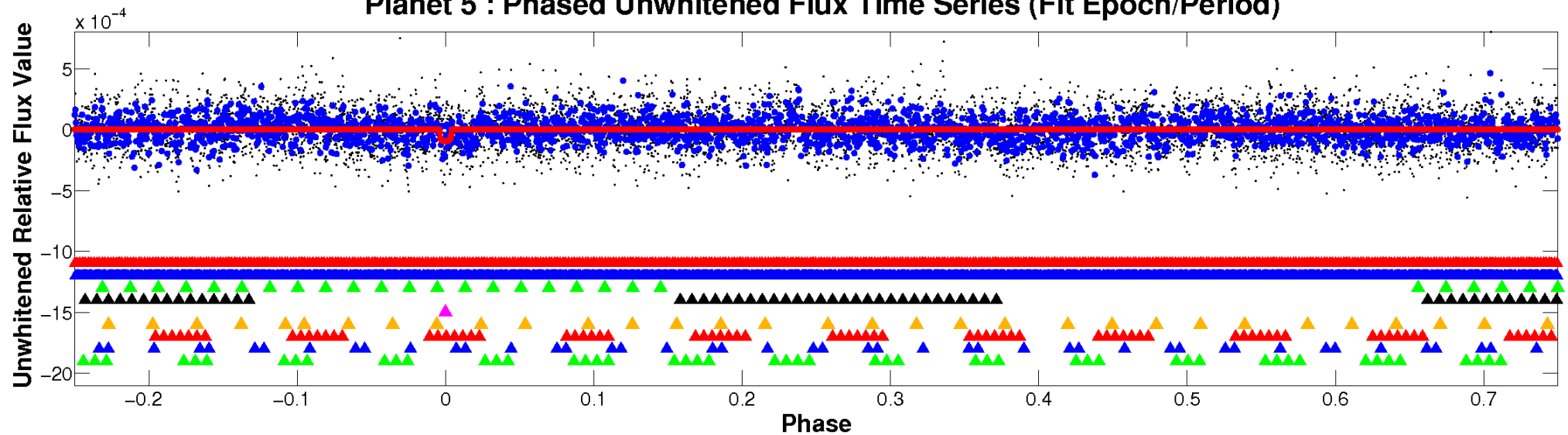
ALT Odd/Even

TCE 006549623-05

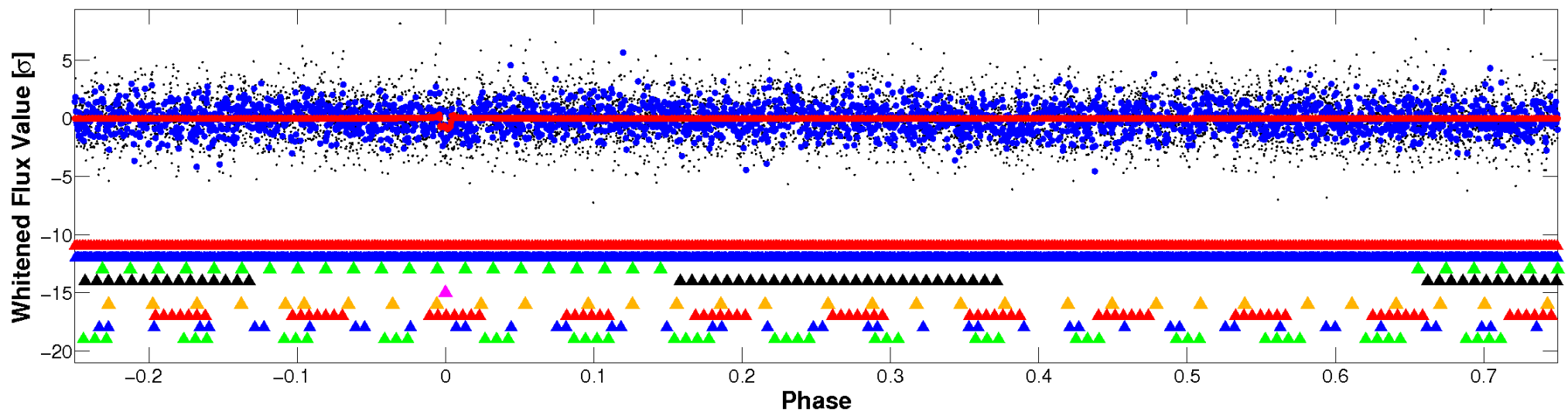


Non-Whitened Vs. Whitened Light Curve

Planet 5 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

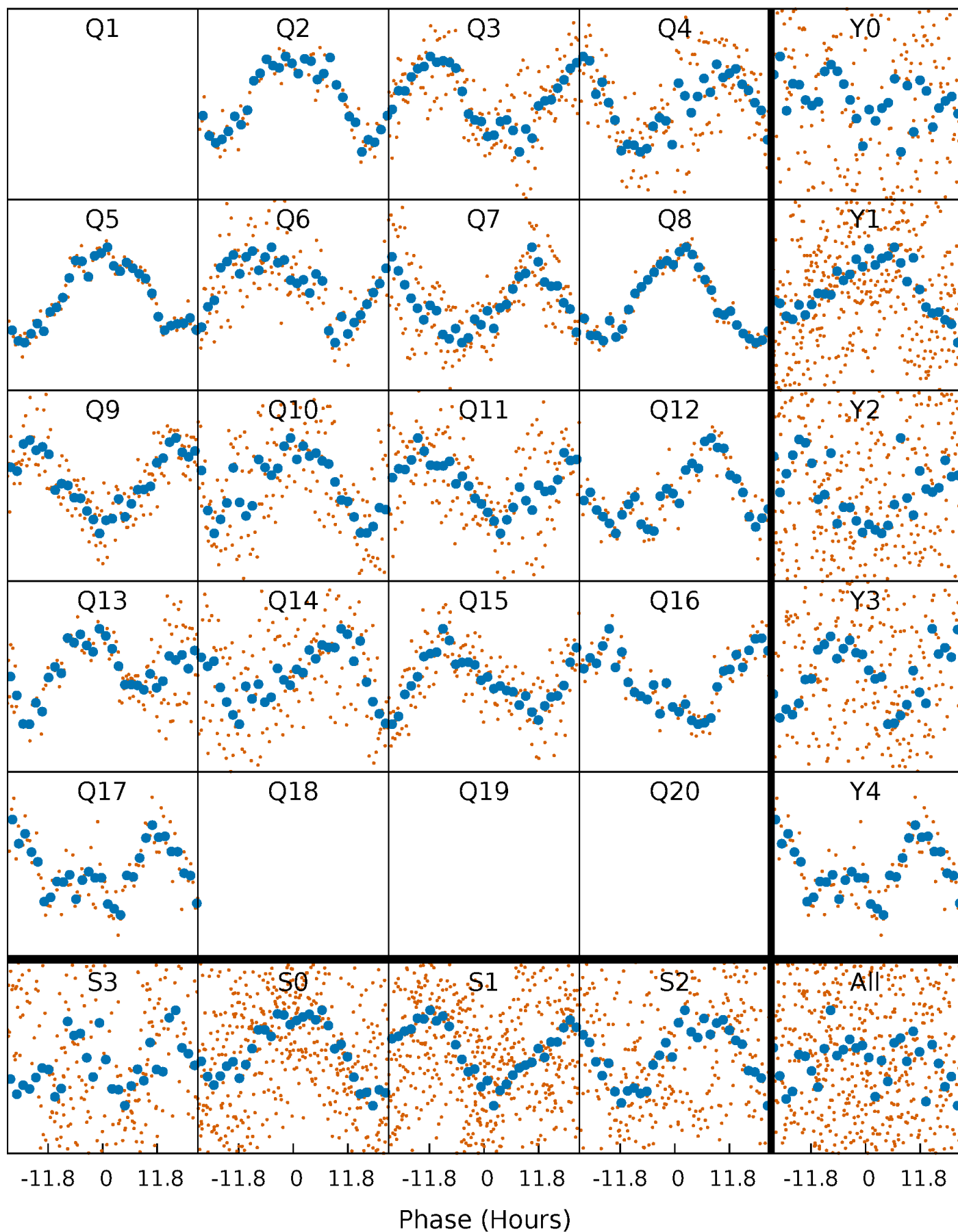


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



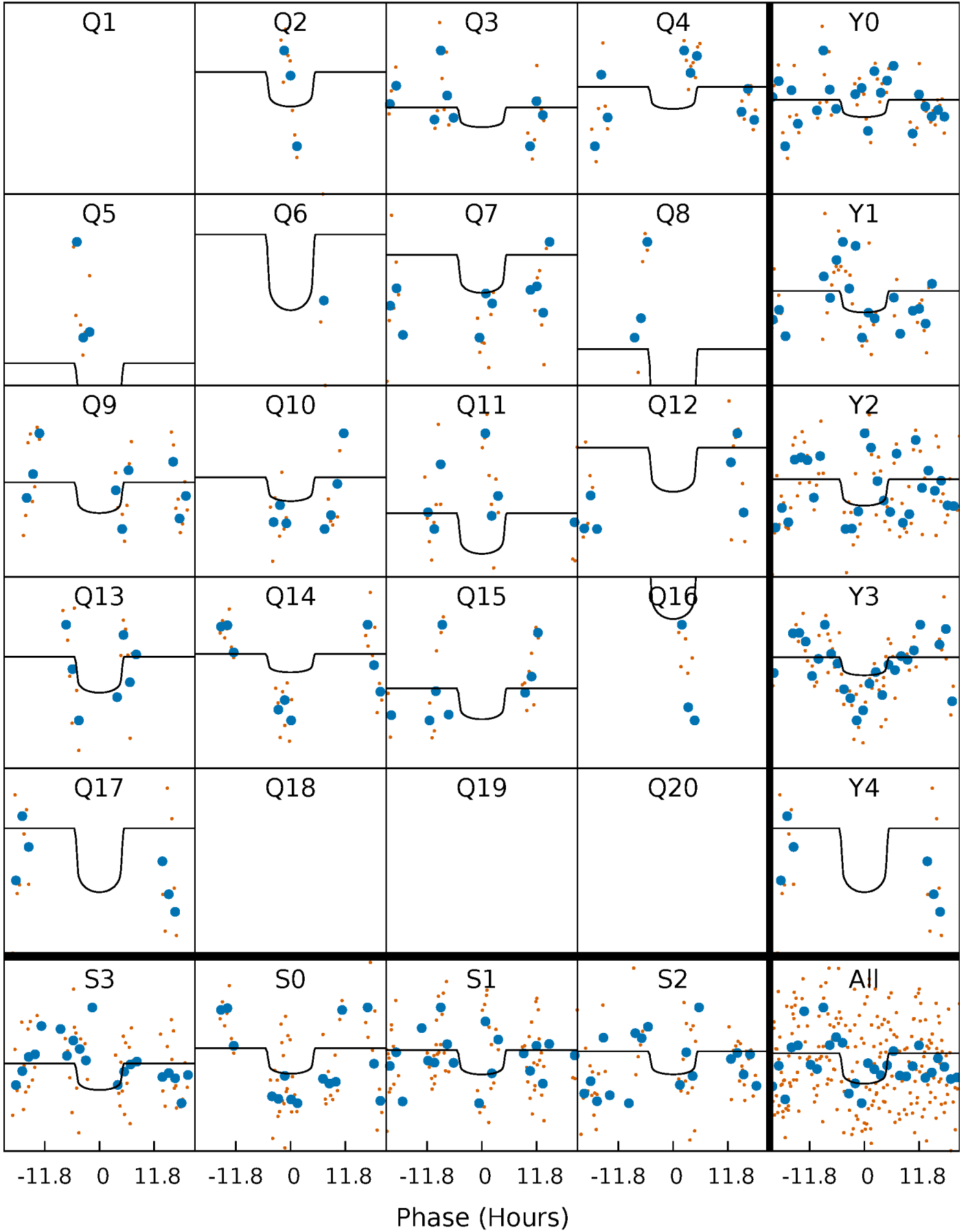
PDC Quarter-Phased Transit Curves

TCE 006549623-05 P= 53.956704 Days $T_0=166.570599$ (BKJD)



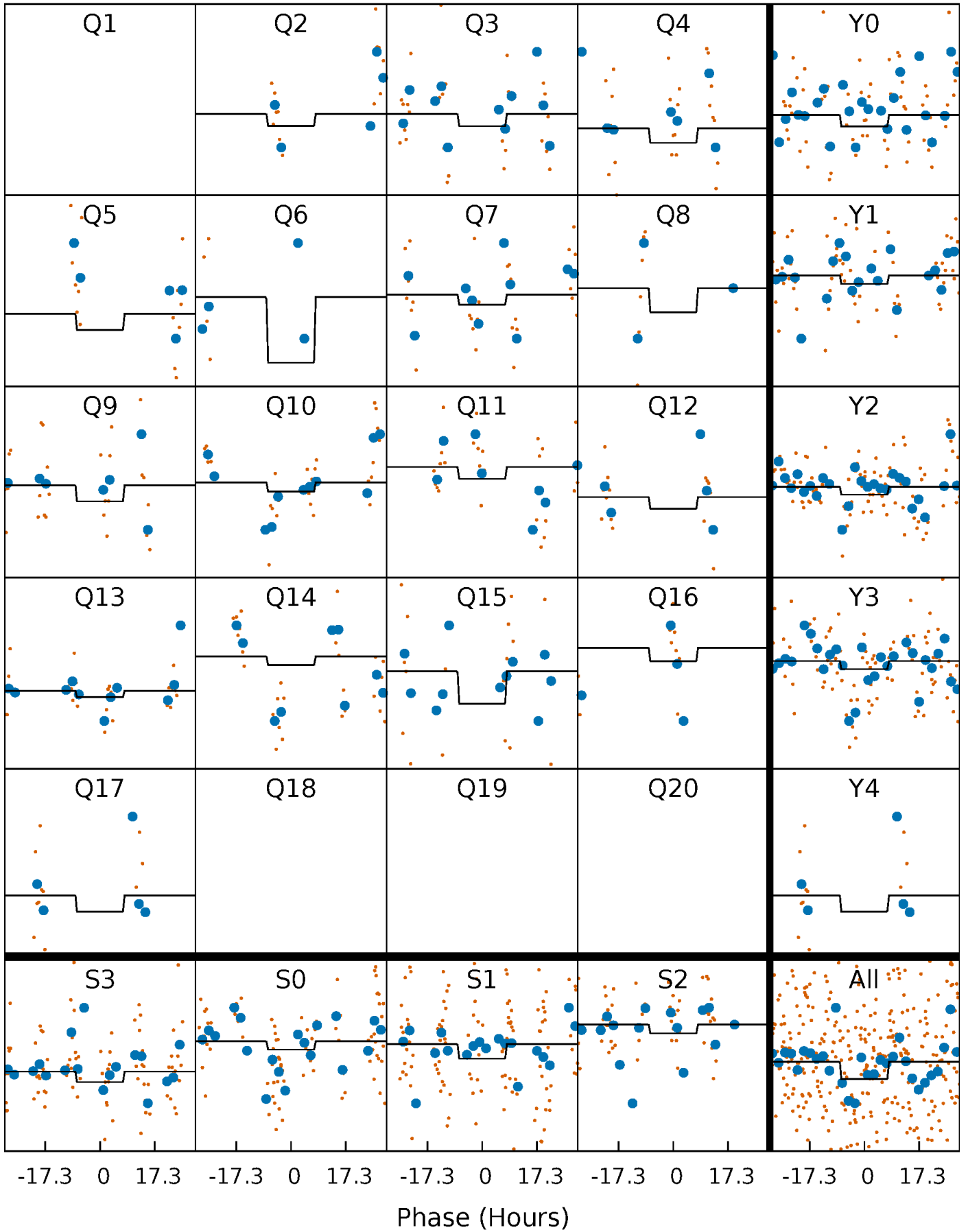
DV Quarter-Phased Transit Curves

TCE 006549623-05 P= 53.956704 Days $T_0=166.570599$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

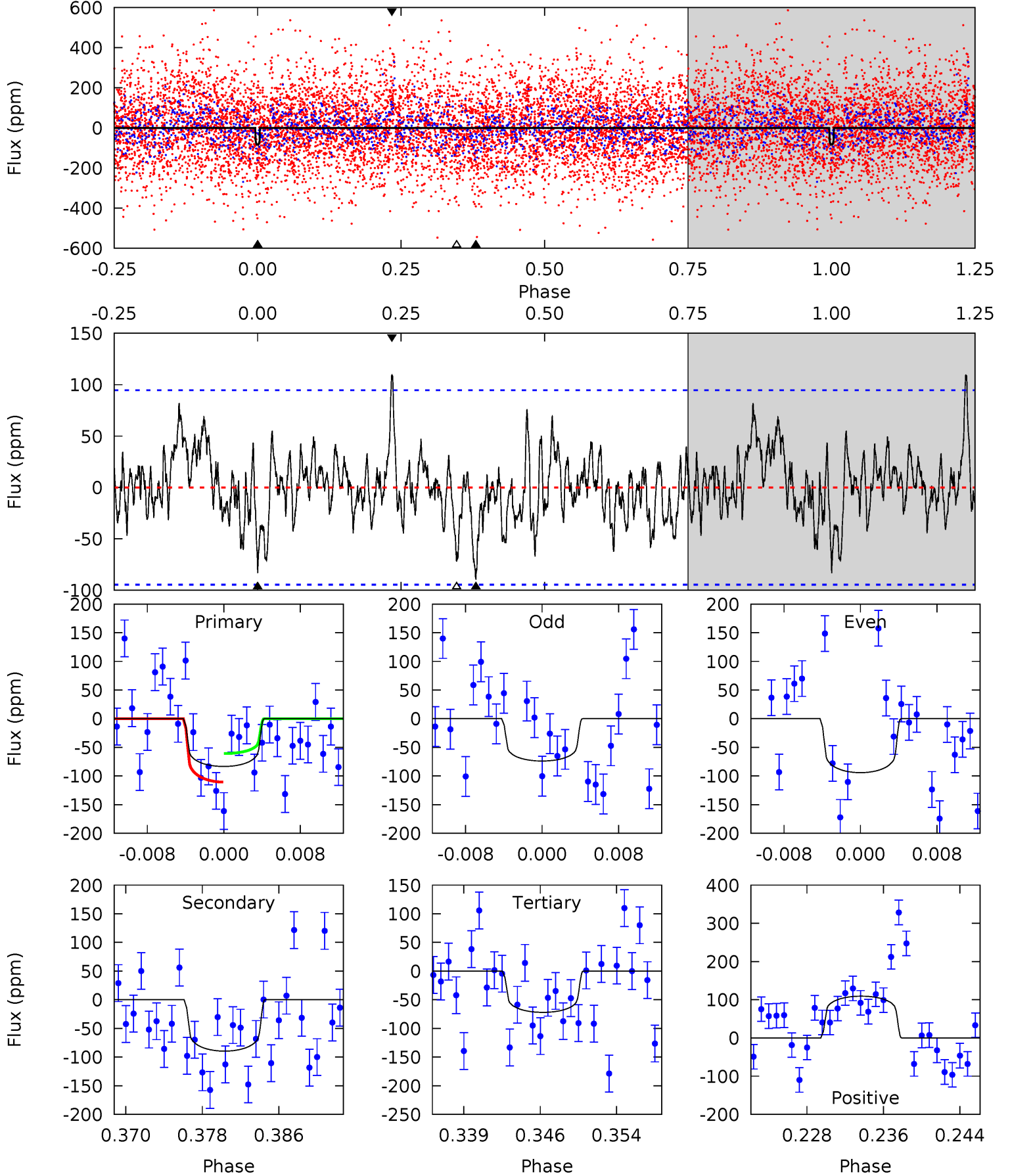
TCE 006549623-05 P= 53.953569 Days $T_0=166.743089$ (BKJD)



DV Model-Shift Uniqueness Test

006549623-05, $P = 53.956704$ Days, $E = 112.613895$ Days

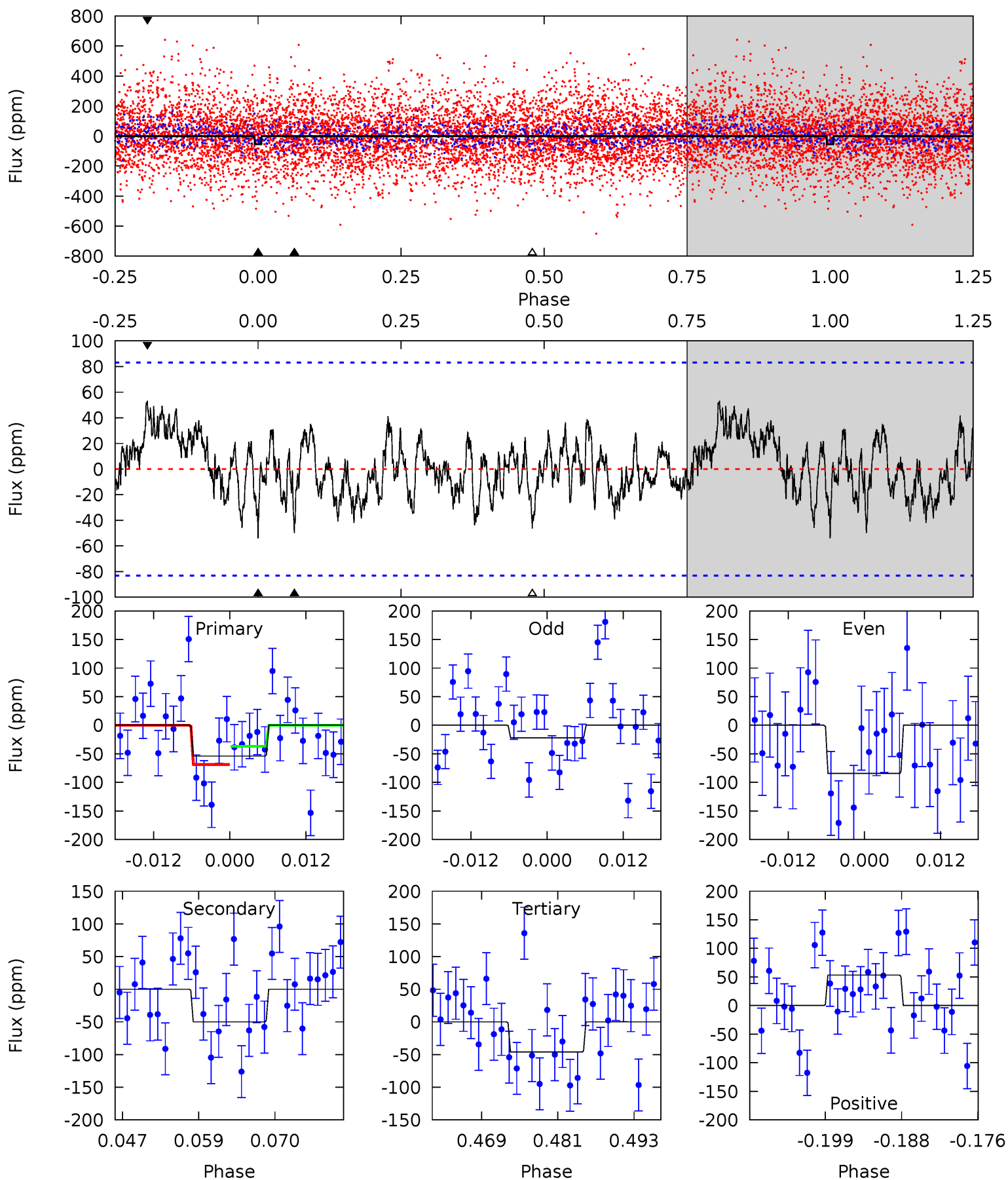
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.47	4.80	3.86	5.87	5.07	2.66	1.48	0.61	-1.39	0.94	-1.06	0.54	1.04	0.55	1.32



Alt Model-Shift Uniqueness Test

006549623-05, P = 53.953569 Days, E = 112.789520 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.25	3.00	2.78	3.20	5.00	2.52	1.14	0.47	0.05	0.22	-0.20	1.85	1.27	0.50	0.95



Stellar Parameters For KIC 006549623

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6588^{+166}_{-199}	$3.507^{+0.368}_{-0.092}$	$-0.260^{+0.350}_{-0.250}$	$3.834^{+0.407}_{-1.626}$	$1.724^{+0.184}_{-0.428}$	$0.043^{+0.133}_{-0.013}$
	+3%/-3%	+10%/-3%	+135%/-96%	+11%/-42%	+11%/-25%	+308%/-30%
Source	PHO1	FLK73	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 006549623-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-90 ± 19	$4.22^{+2.16}_{-2.05}$	1358^{+70}_{-130}	6218^{+2697}_{-1131}	313^{+837}_{-180}
Alt.	-50 ± 17	$2.74^{+2.12}_{-1.56}$	1352^{+69}_{-135}	6418^{+4346}_{-1393}	388^{+1707}_{-266}

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

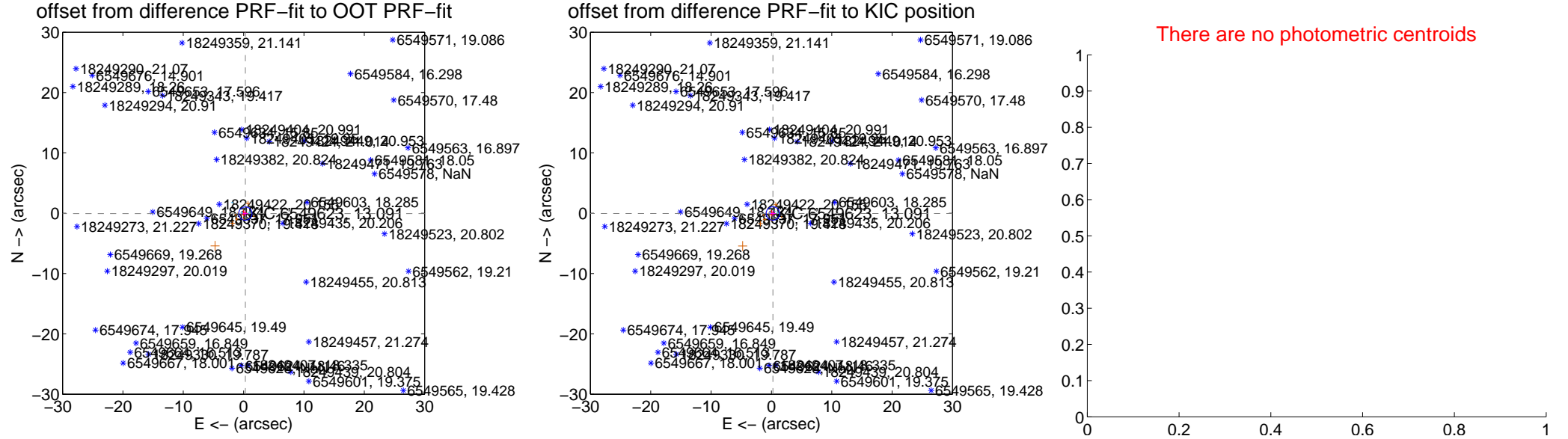
DV Centroid Data

Supplemental centroid analysis for 006549623-05. Kepler magnitude: 13.09. Transit SNR 5.98

There are 5 quarters with good PRF difference image offsets

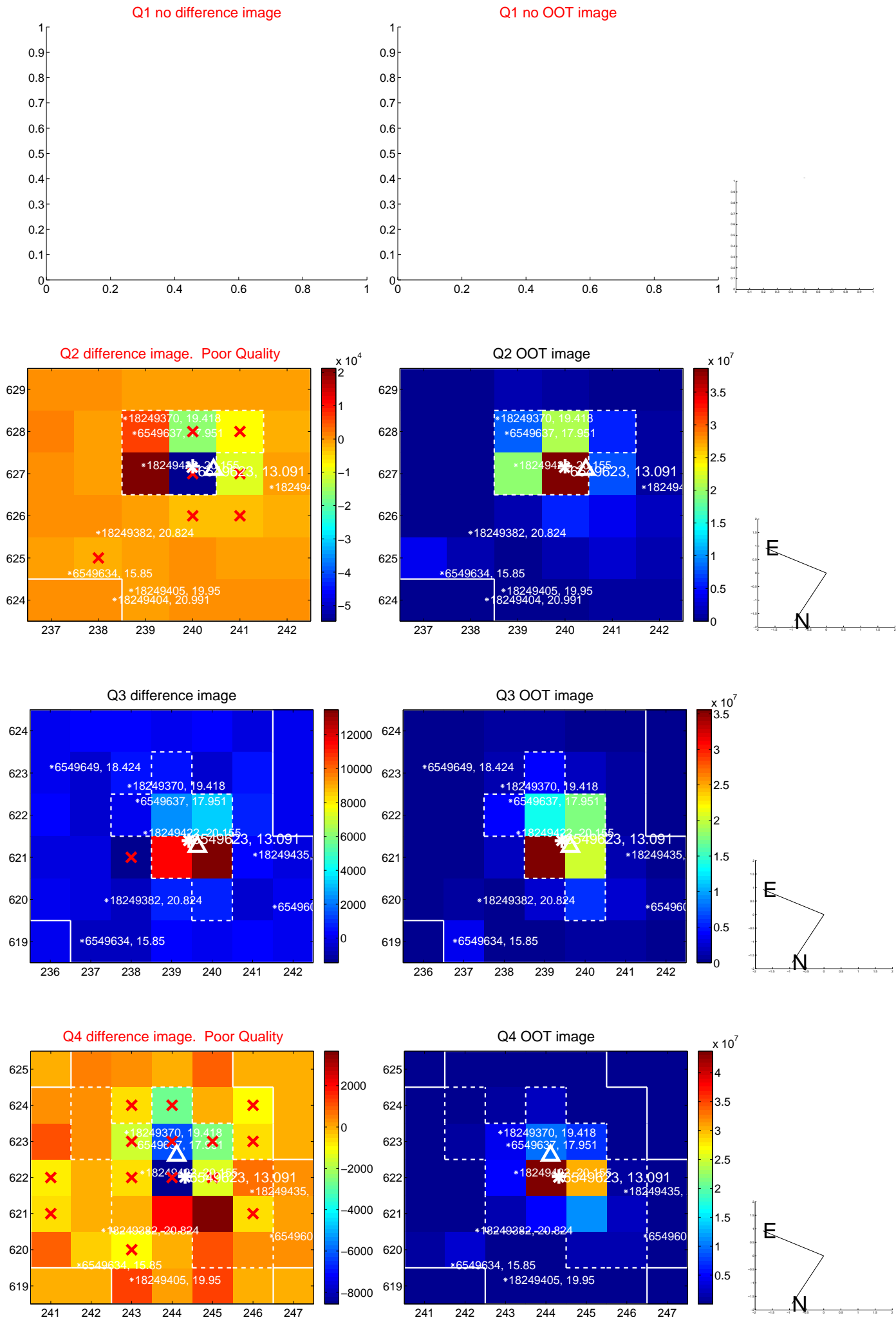
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.298 ± 0.367	0.81	-0.292 ± 0.425	-0.061 ± 0.436
PRF-fit source offset from KIC position	0.248 ± 0.371	0.67	-0.243 ± 0.432	-0.049 ± 0.453
photometric centroid source offset	—	—	—	—

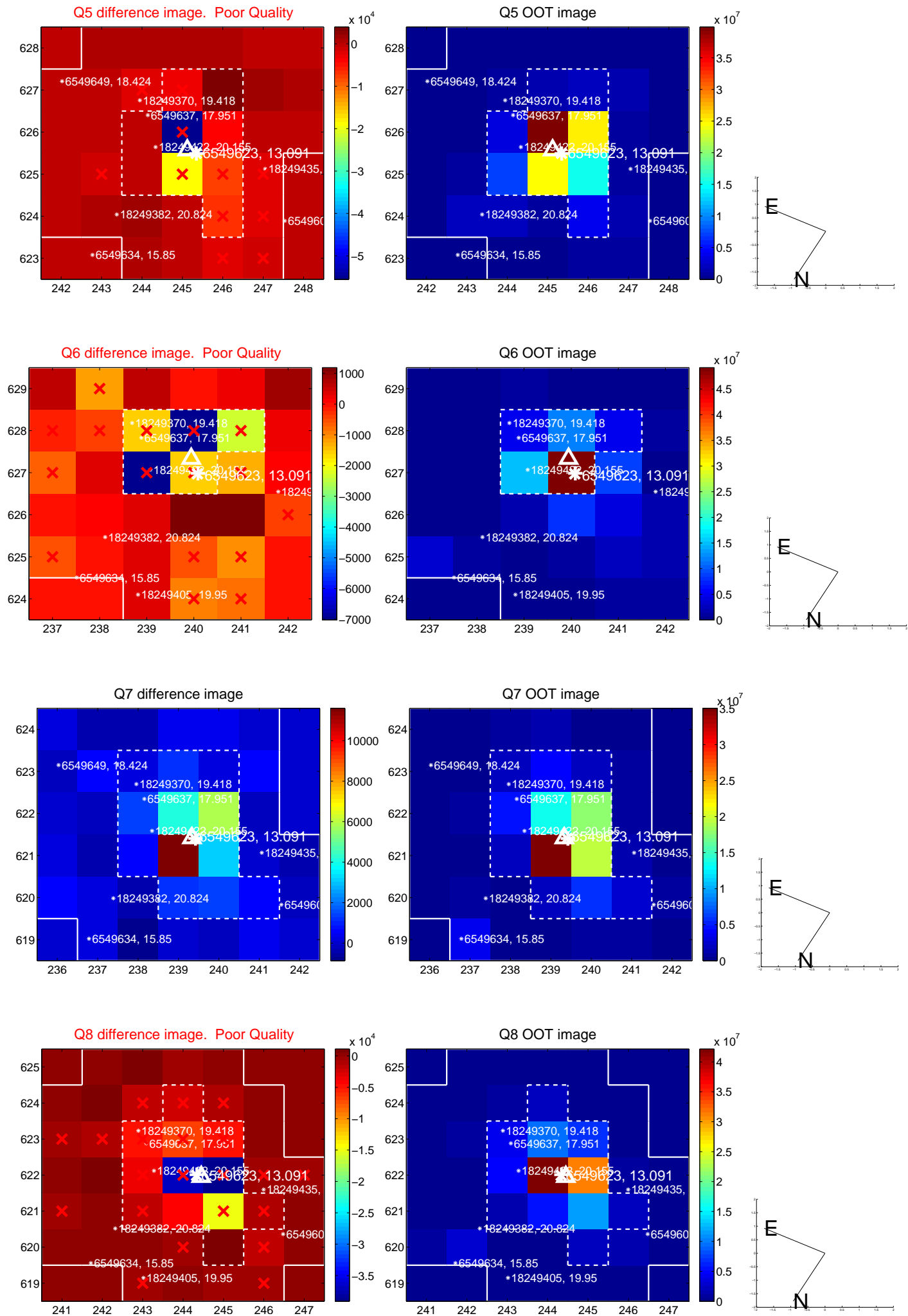


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

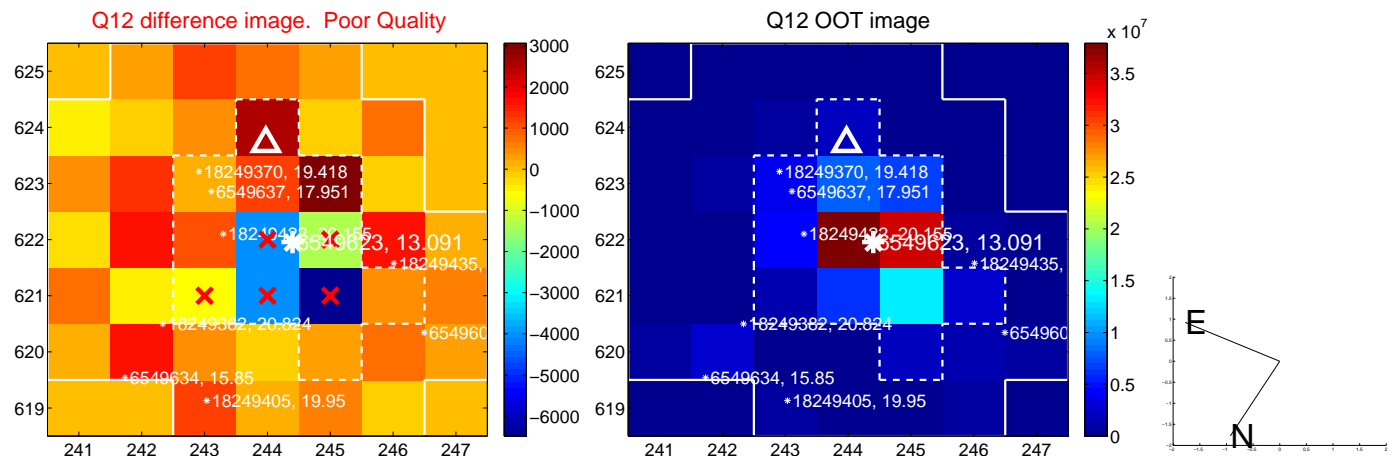
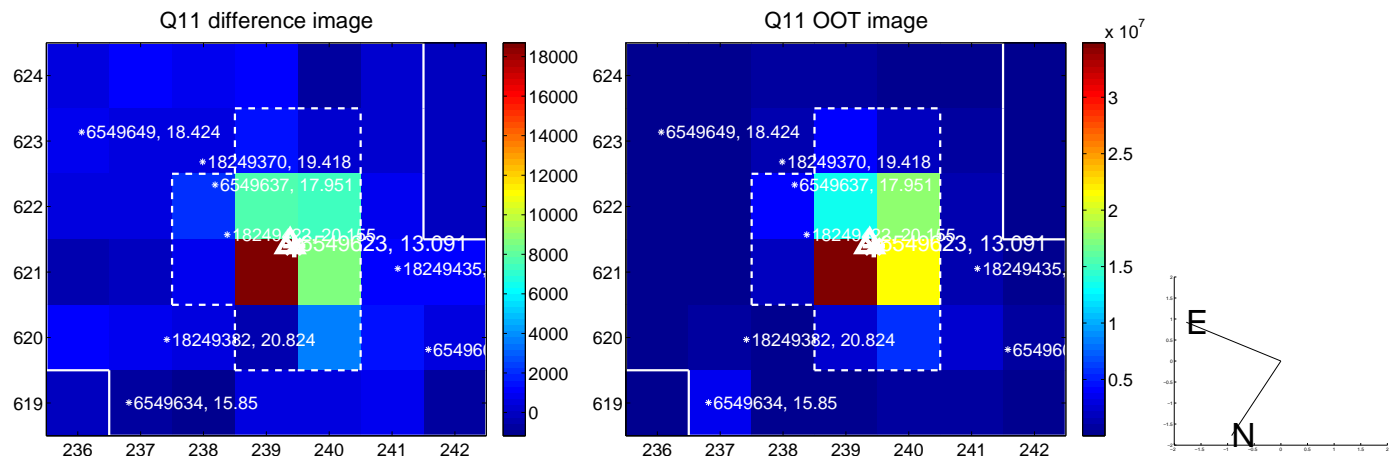
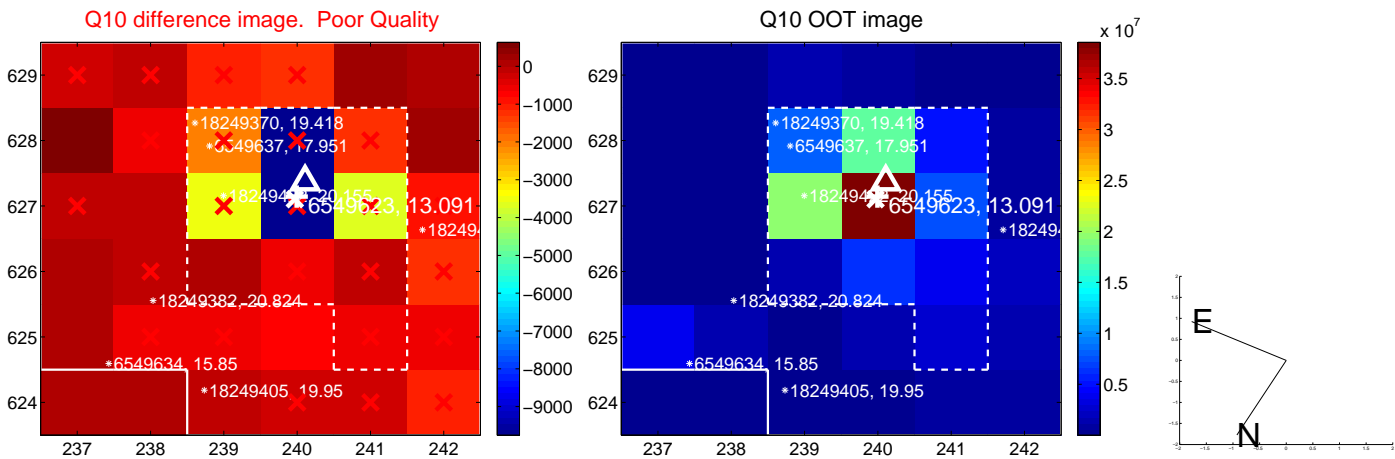
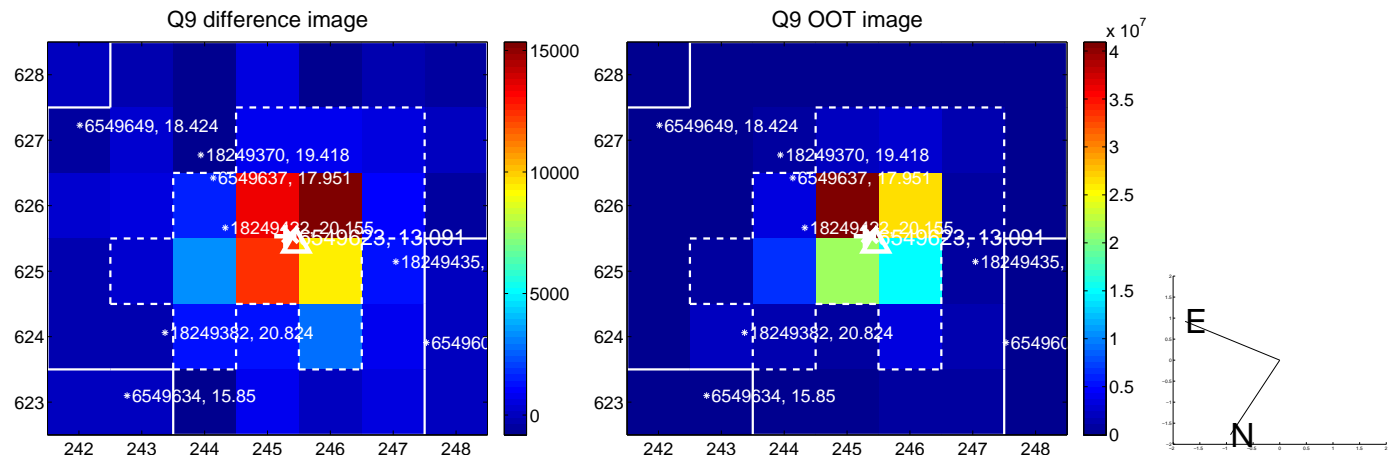
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



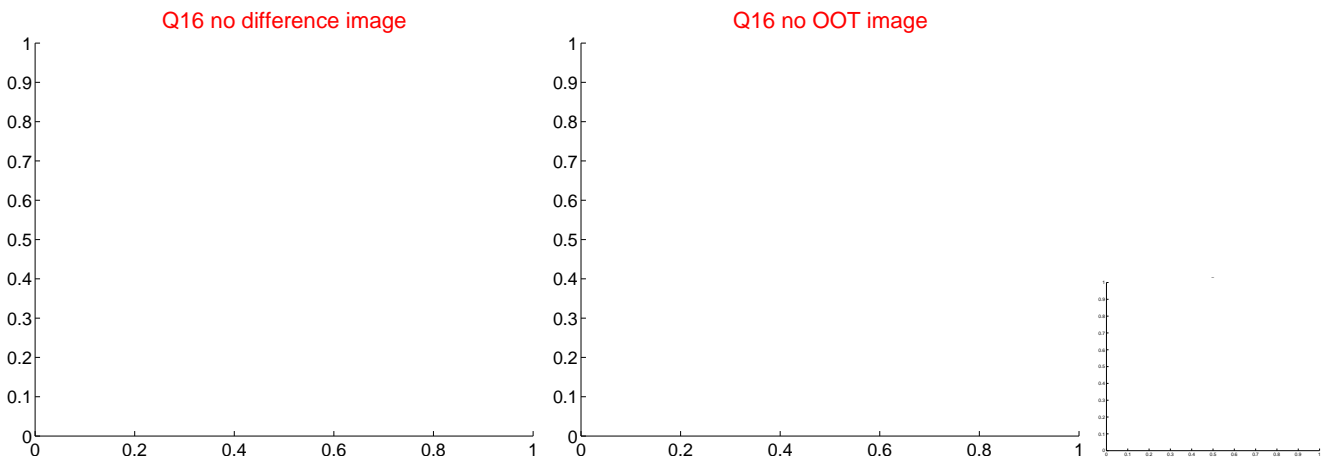
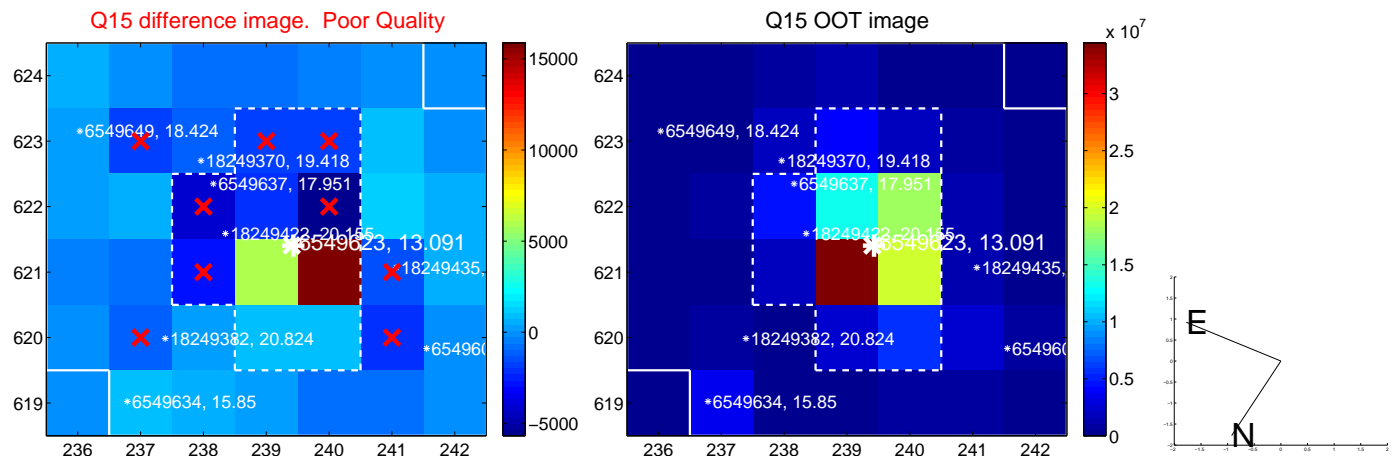
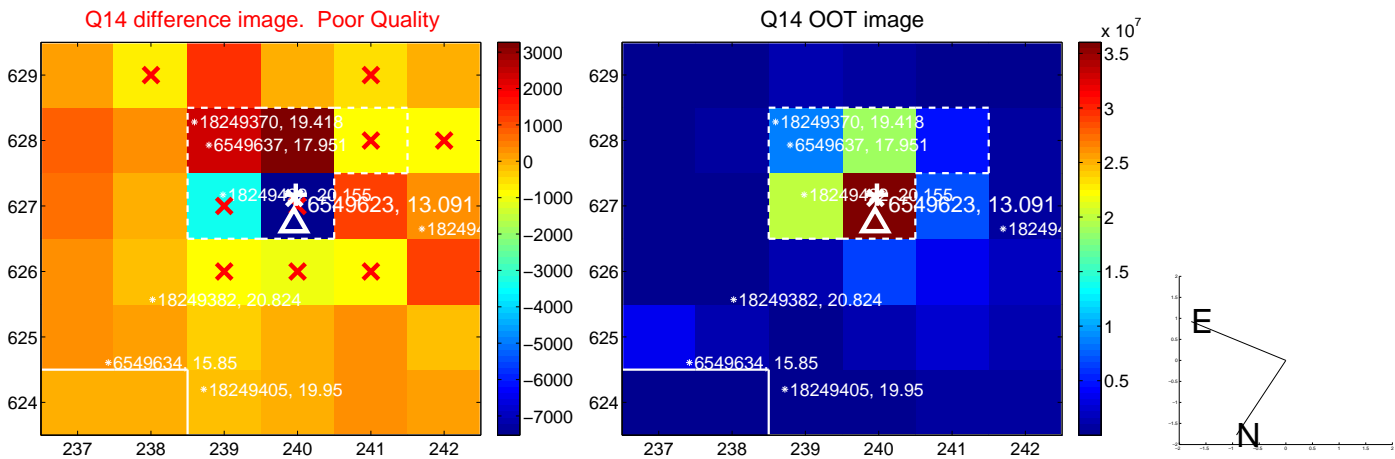
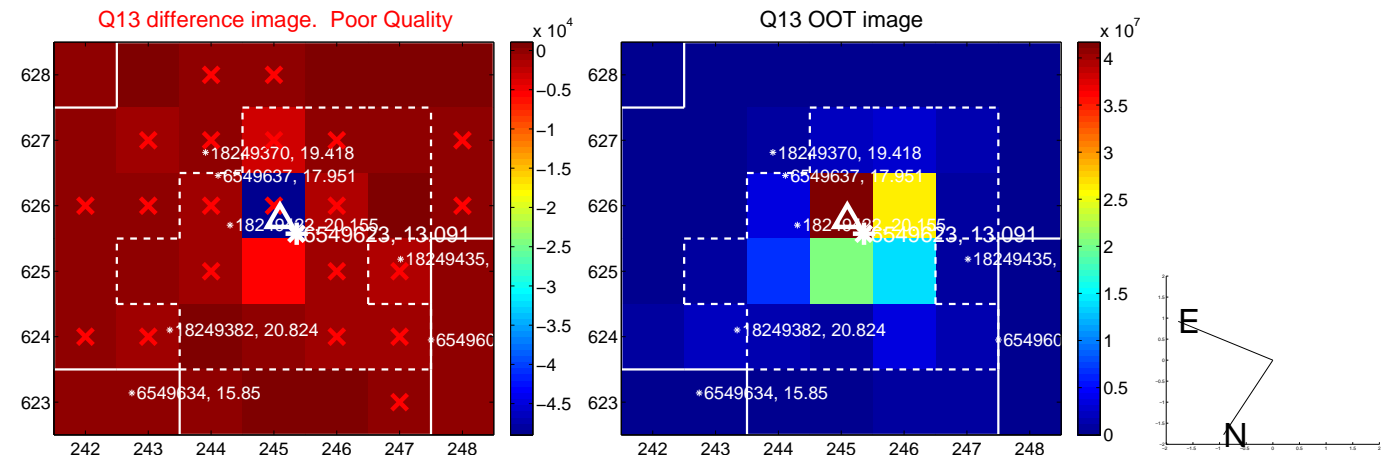
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



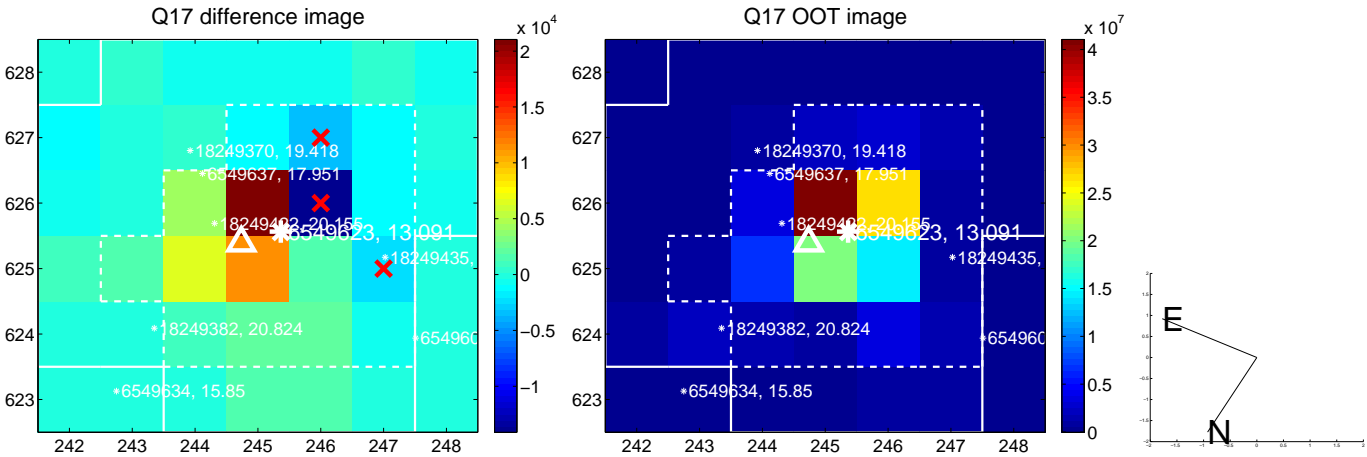
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



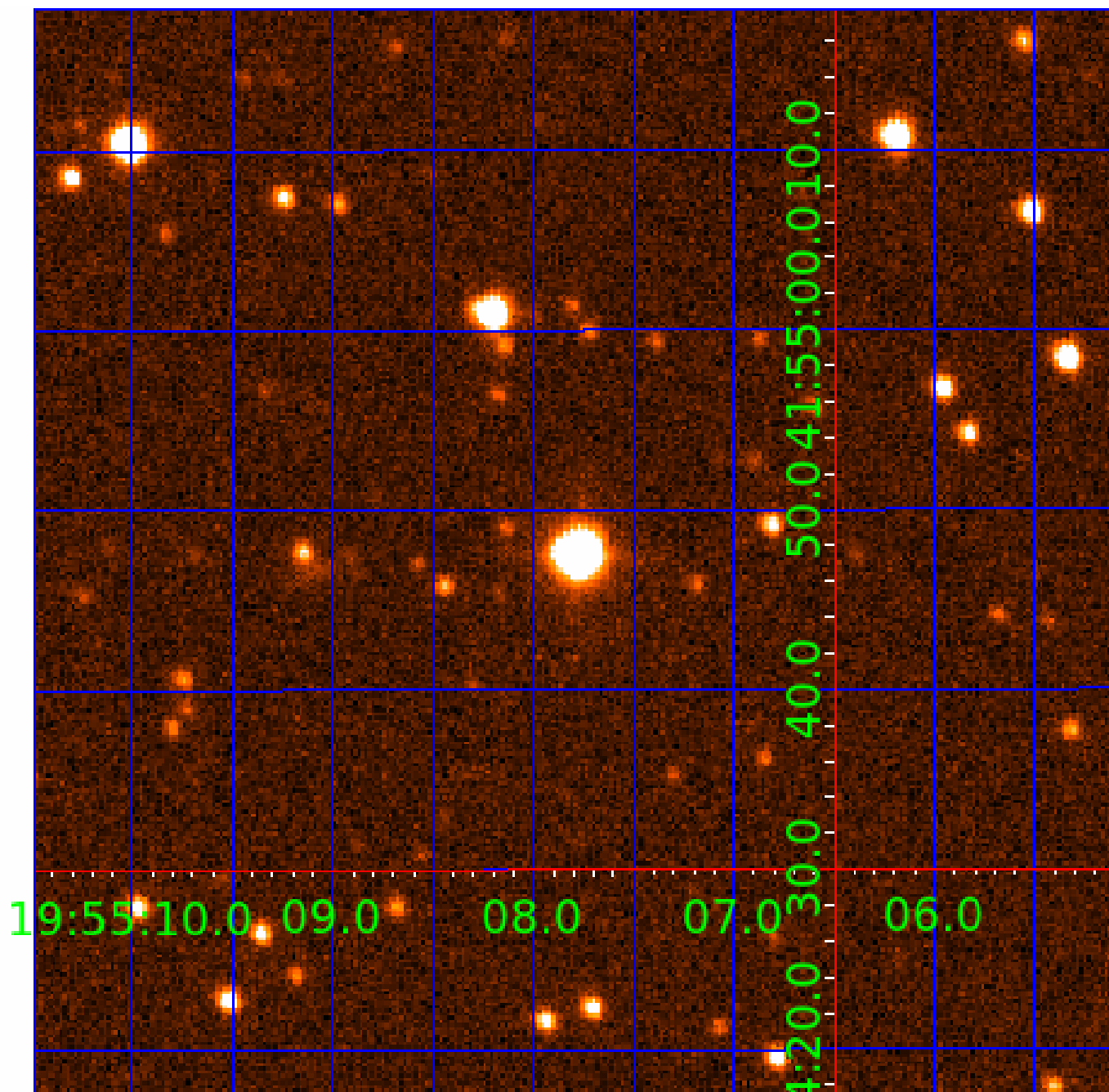
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 006549623

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})
006549623-01	OBS	No	1.328440	132.136240	15.4	1.952	9.6	4.9	3.83	6588	1.85	30847.56
006549623-02	OBS	No	1.328301	132.176545	24.3	9.158	7.9	7.9	3.83	6588	2.04	30851.87
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006549623-05	OBS	No	53.956704	166.570599	94.9	10.304	11.4	6.0	3.83	6588	4.32	220.94
006549623-06	OBS	No	45.232021	161.430230	191.8	4.494	10.0	9.7	3.83	6588	6.03	279.52
006549623-07	OBS	No	19.648078	136.370609	206.7	1.661	11.0	9.9	3.83	6588	6.45	849.67
006549623-08	OBS	No	31.641250	138.985649	227.6	2.093	9.6	8.1	3.83	6588	6.70	450.13
006549623-09	OBS	No	28.804836	142.439511	168.3	4.657	8.9	9.4	3.83	6588	5.63	510.18

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006549623-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
006549623-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
006549623-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
006549623-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006549623-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006549623-07	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_MEAS
006549623-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006549623-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS

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

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

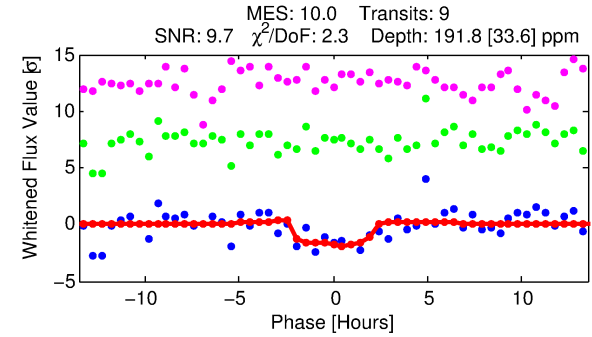
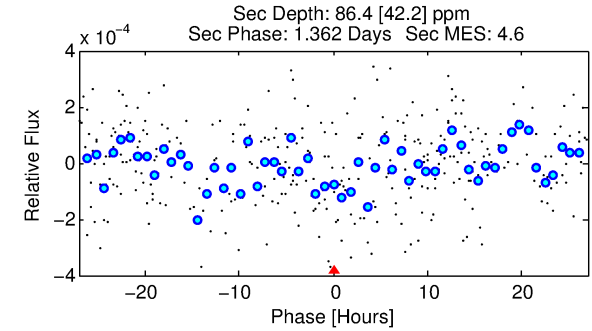
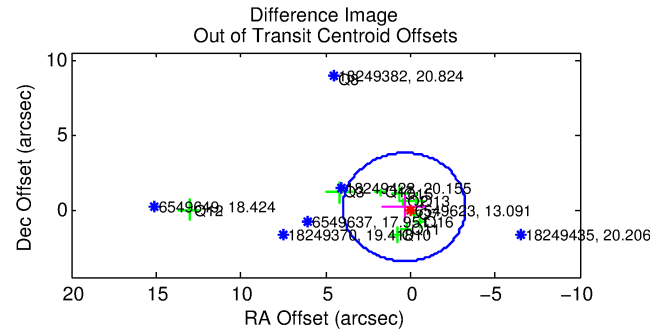
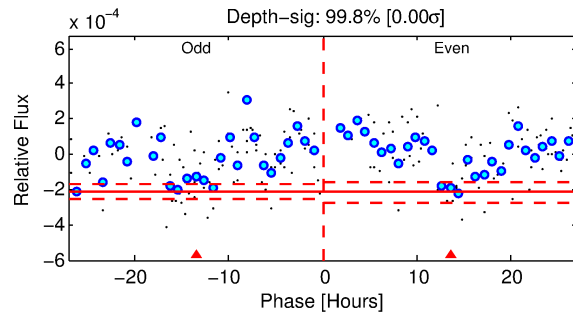
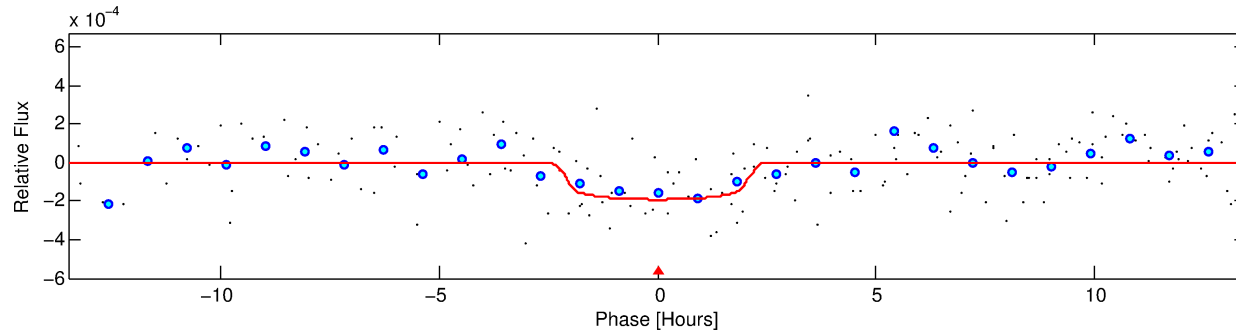
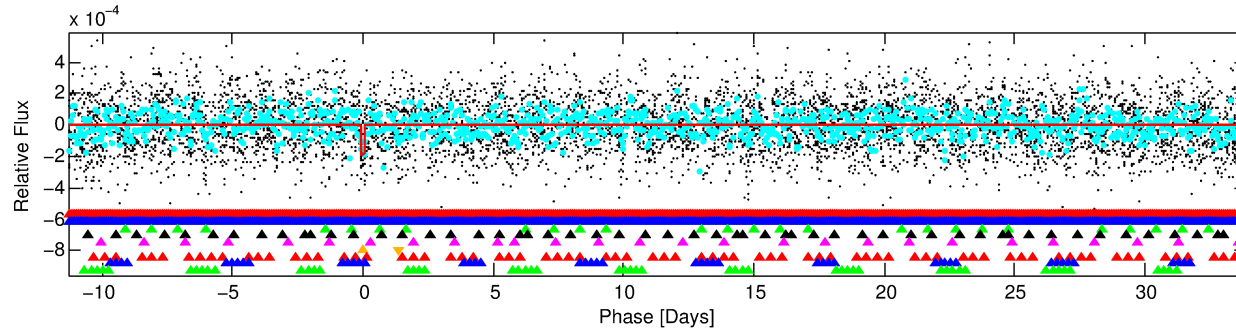
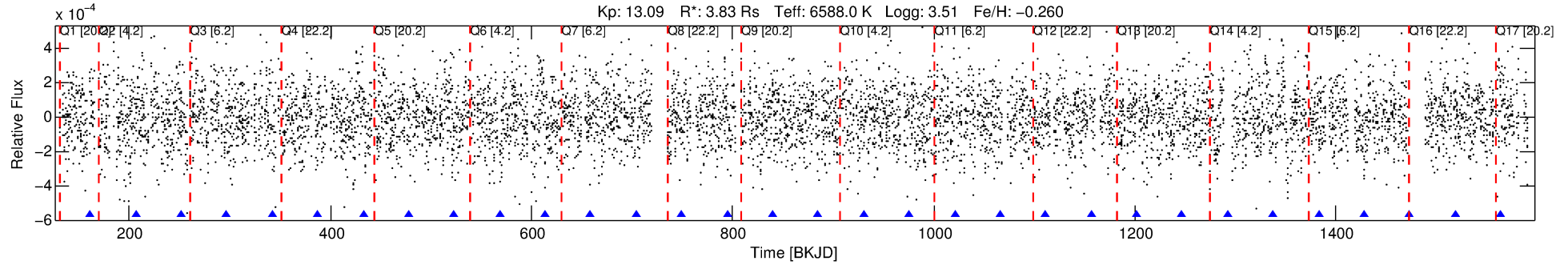
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006549623-06

No Significant Match Found

DV One-Page Summary

KIC: 6549623 Candidate: 6 of 9 Period: 45.232 d



DV Fit Results:

Period = 45.23202 [0.00080] d
Epoch = 161.4302 [0.0156] BKJD
Rp/R* = 0.0144 [0.0083]
a/R* = 41.35 [136.20]
b = 0.86 [1.00]
Seff = 279.52 [179.78]
Teq = 1043 [168] K
Rp = 6.03 [4.32] Re
a = 0.2979 [0.1191] AU
Ag = 116.06 [162.83] [0.71 σ]
Teffp = 5291 [1665] K [2.54 σ]

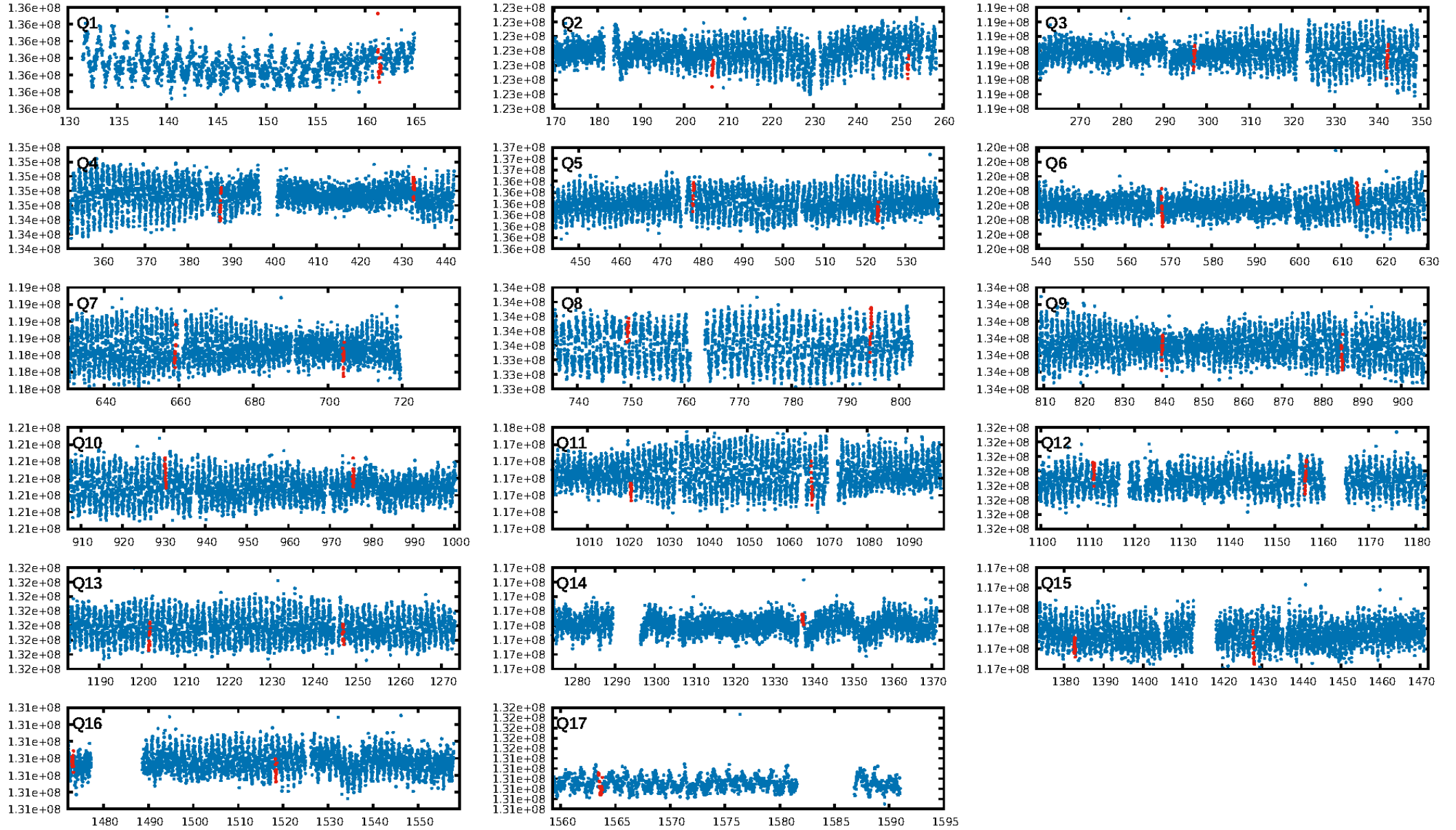
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [65.80 σ]
LongPeriod-sig: 100.0% [24.13 σ]
ModelChiSquare2-sig: 2.7%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 3.31e-18
RollingBand-fgt: 1.00 [9/9]
GhostDiagnostic-chr: 1.597
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.397 arcsec [0.33 σ]
KicOffset-rm: 0.357 arcsec [0.31 σ]
OotOffset-st: 2/4/3/2 [11]
KicOffset-st: 2/4/3/2 [11]
DiffImageQuality-fgm: 0.64 [7/11]
DiffImageOverlap-fno: 0.06 [1/16]

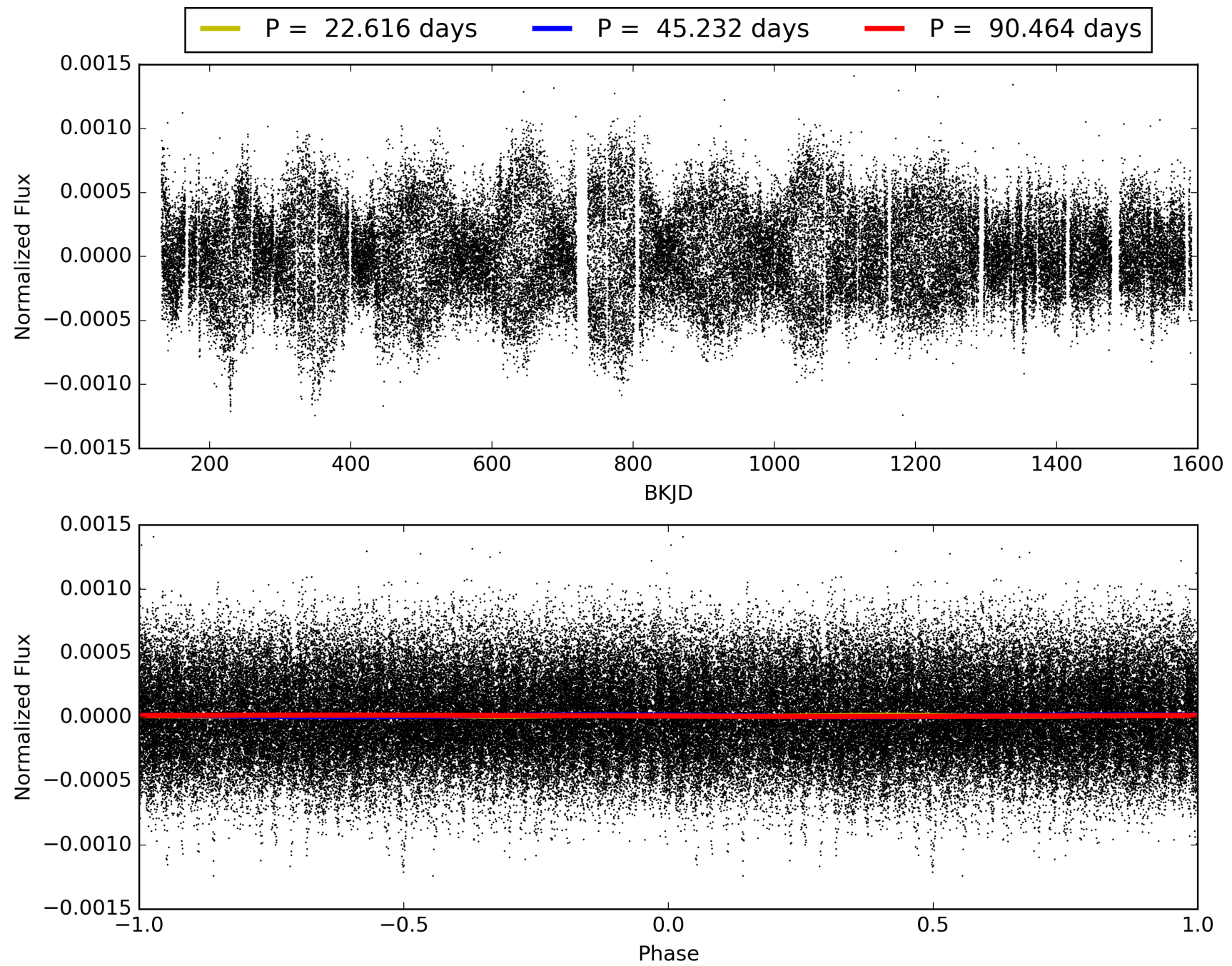
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 07:29:59 Z

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

TCE 006549623-06, PDC Light Curves

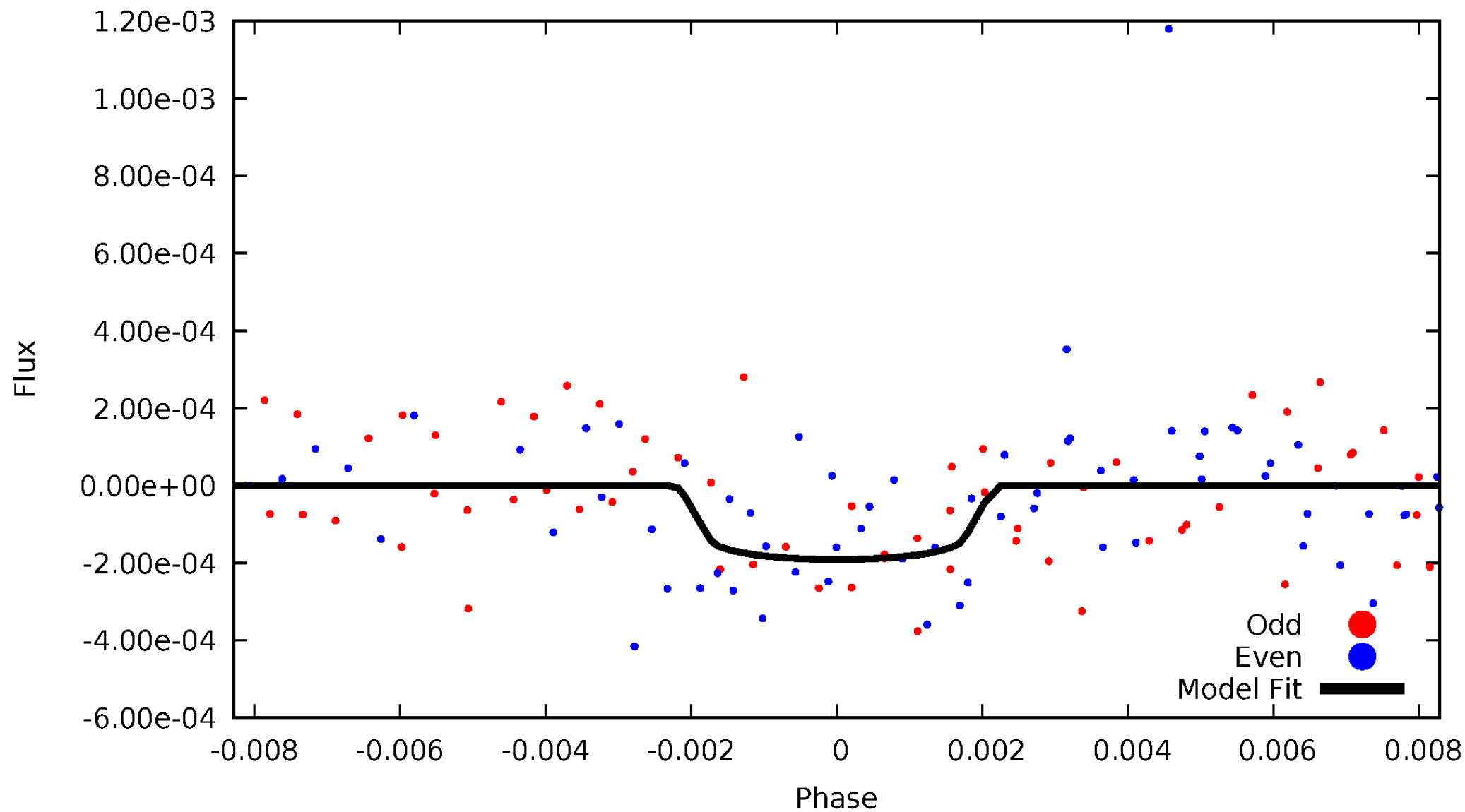


TCE 006549623-06



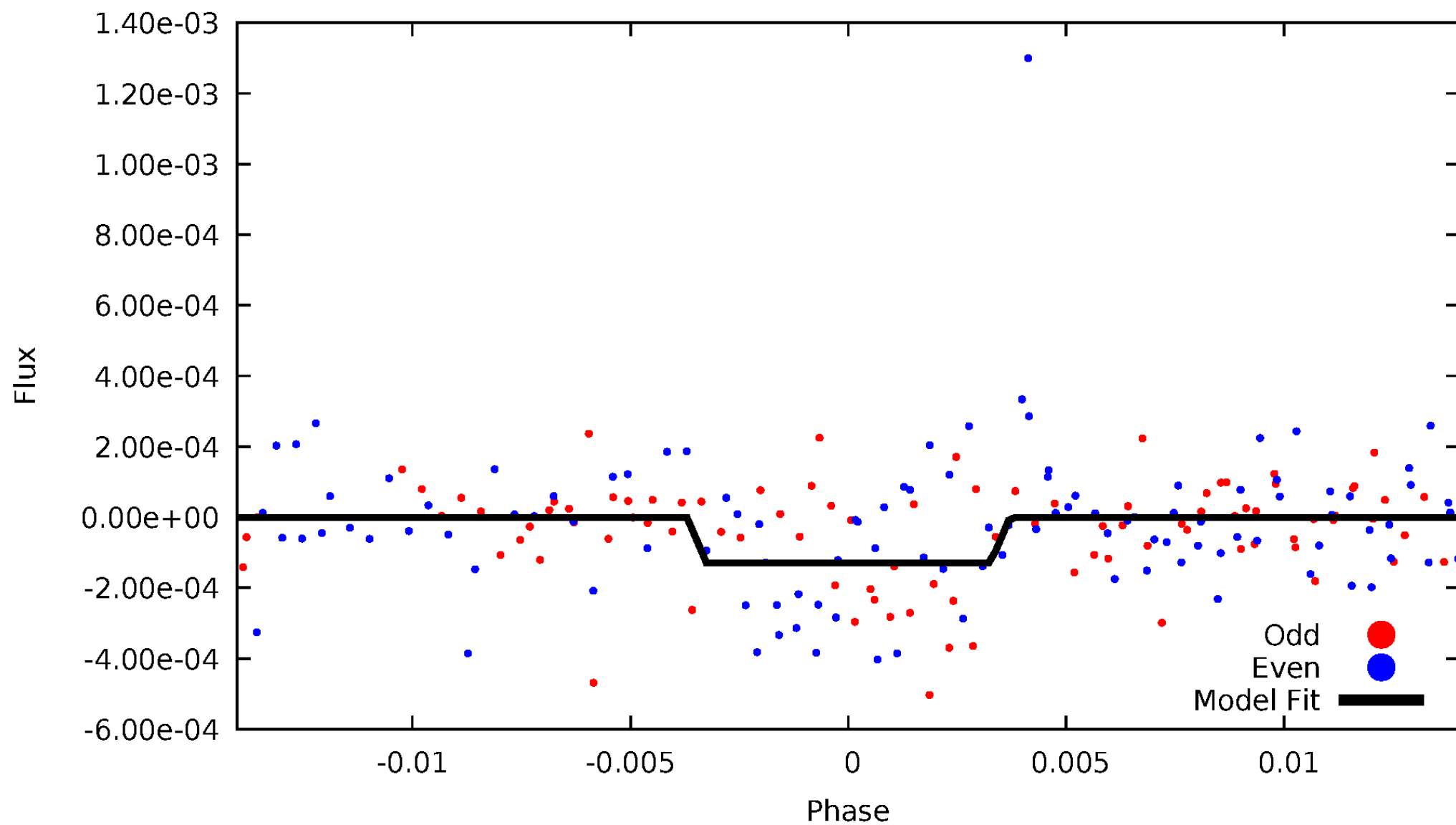
DV Odd/Even

TCE 006549623-06



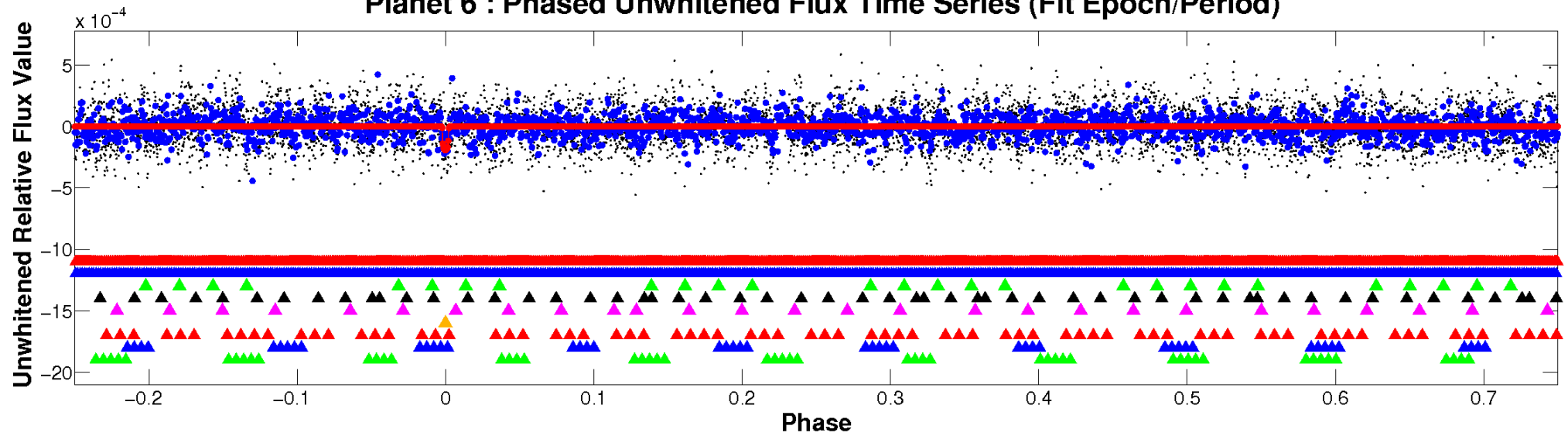
ALT Odd/Even

TCE 006549623-06

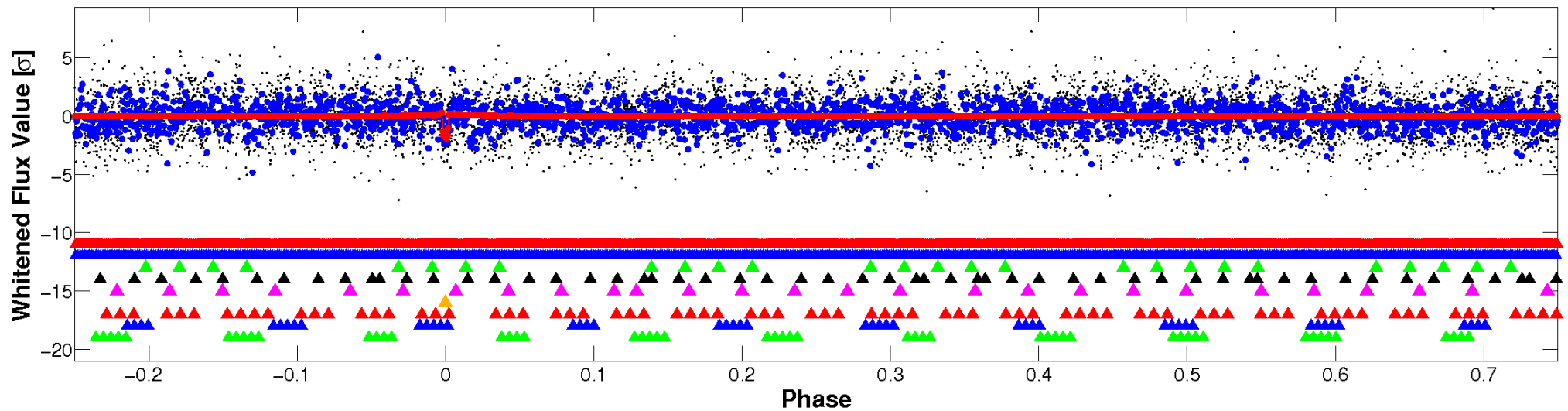


Non-Whitened Vs. Whitened Light Curve

Planet 6 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

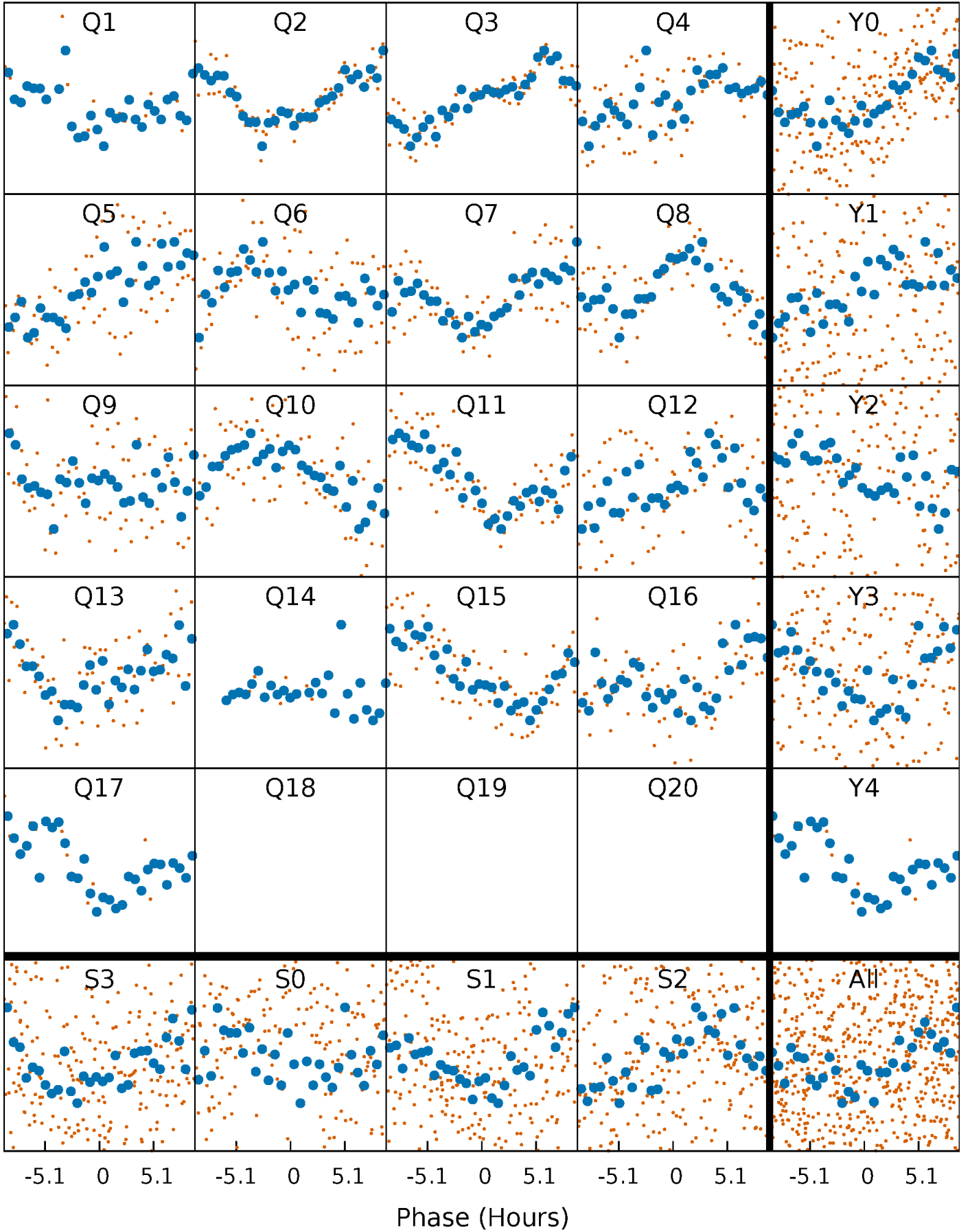


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



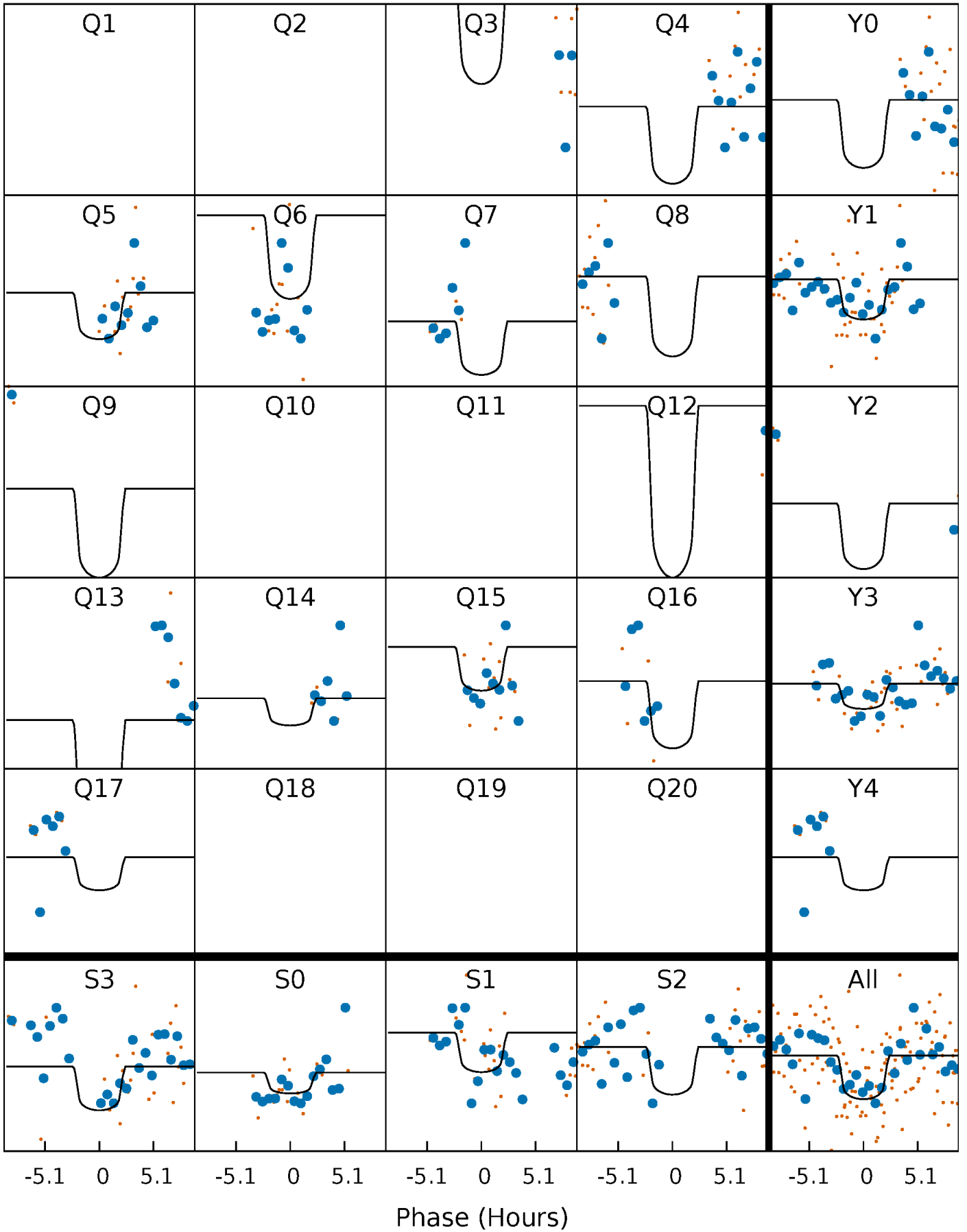
PDC Quarter-Phased Transit Curves

TCE 006549623-06 P= 45.232021 Days $T_0=161.430230$ (BKJD)



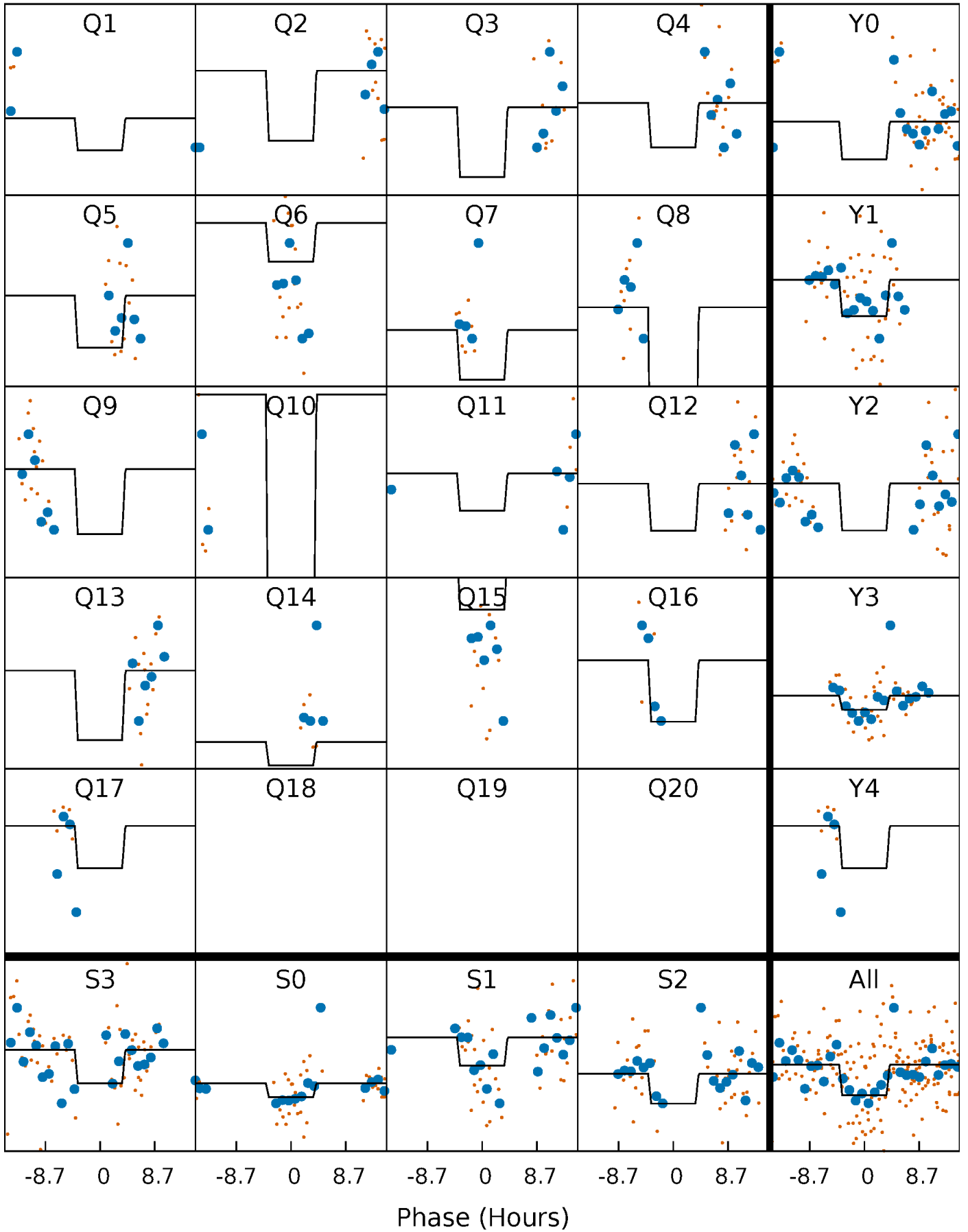
DV Quarter-Phased Transit Curves

TCE 006549623-06 P= 45.232021 Days $T_0=161.430230$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

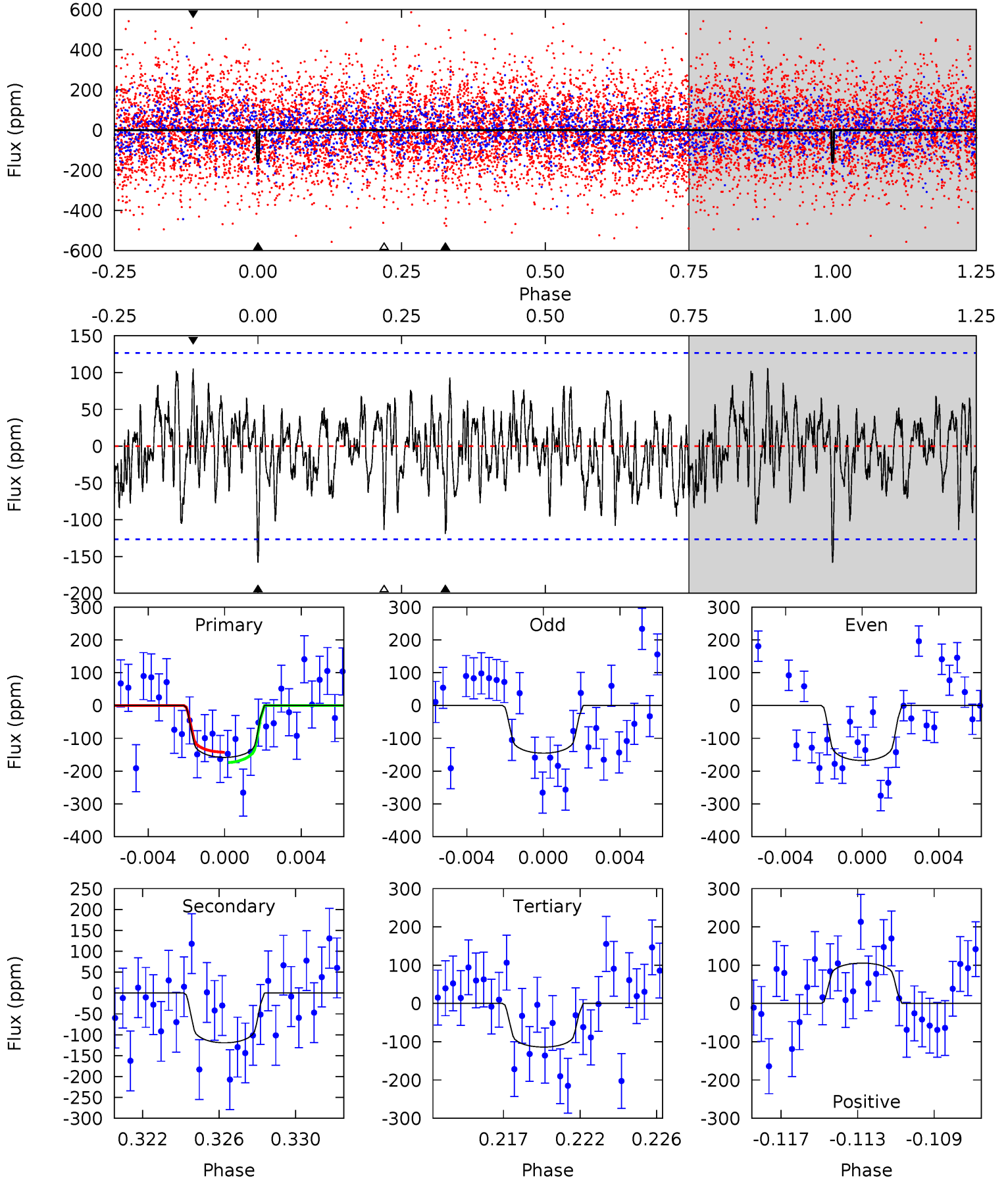
TCE 006549623-06 P= 45.235186 Days $T_0=161.367621$ (BKJD)



DV Model-Shift Uniqueness Test

006549623-06, P = 45.232021 Days, E = 116.198209 Days

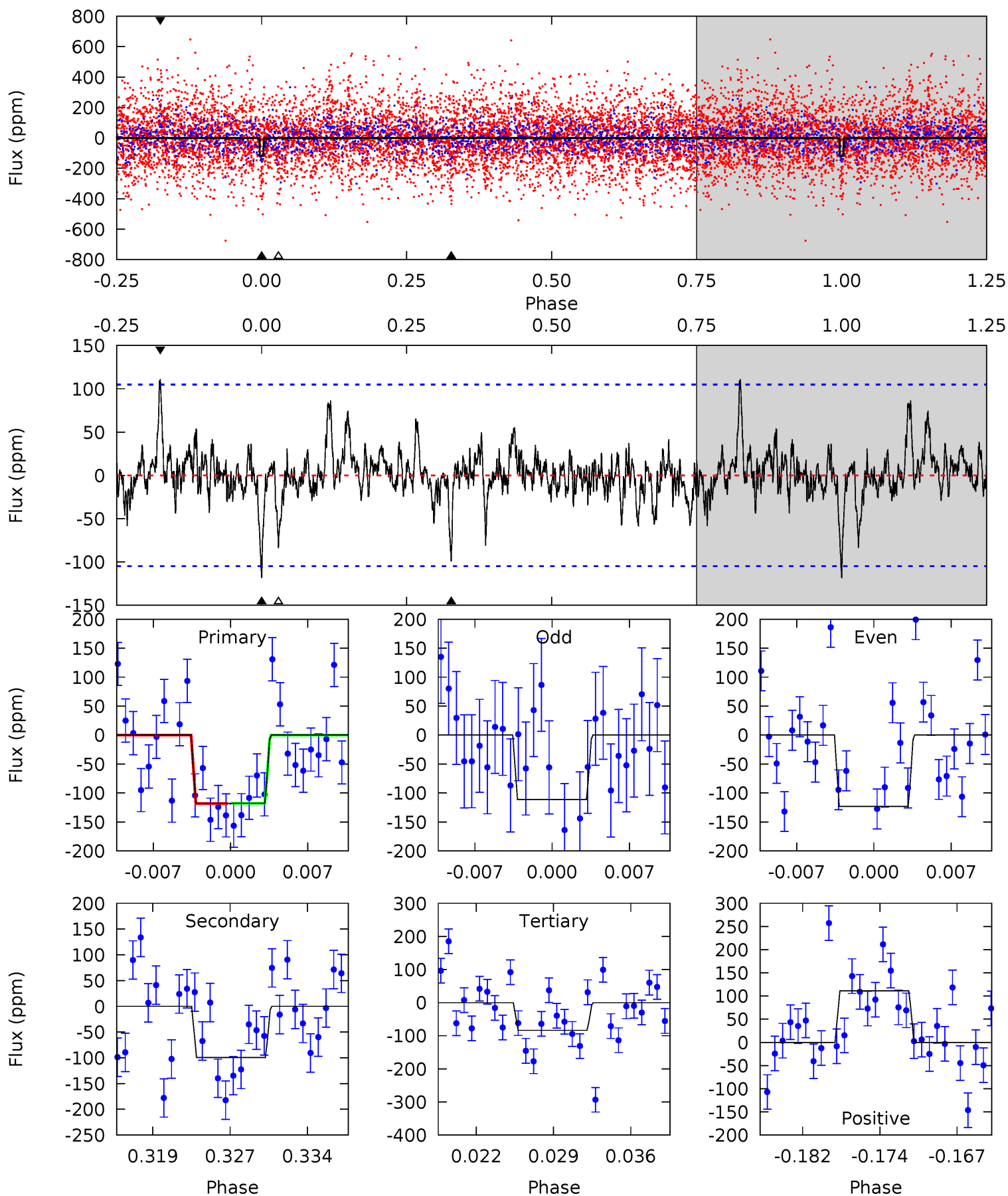
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.48	4.89	4.67	4.32	5.18	2.85	1.57	1.81	2.16	0.22	0.57	0.46	0.72	0.40	0.64



Alt Model-Shift Uniqueness Test

006549623-06, P = 45.235186 Days, E = 116.132435 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.72	4.81	4.06	5.39	5.09	2.68	1.15	1.66	0.33	0.75	-0.58	0.28	0.84	0.49	0.01



Stellar Parameters For KIC 006549623

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6588^{+166}_{-199}	$3.507^{+0.368}_{-0.092}$	$-0.260^{+0.350}_{-0.250}$	$3.834^{+0.407}_{-1.626}$	$1.724^{+0.184}_{-0.428}$	$0.043^{+0.133}_{-0.013}$
	+3%/-3%	+10%/-3%	+135%/-96%	+11%/-42%	+11%/-25%	+308%/-30%
Source	PHO1	FLK73	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 006549623-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-119 ± 24	$5.73^{+3.36}_{-3.09}$	1430^{+82}_{-139}	5646^{+2719}_{-981}	175^{+606}_{-107}
Alt.	-99 ± 21	$4.59^{+3.45}_{-2.64}$	1429^{+86}_{-148}	5967^{+3823}_{-1234}	229^{+990}_{-157}

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 $A_{obs} \gg 1.0$

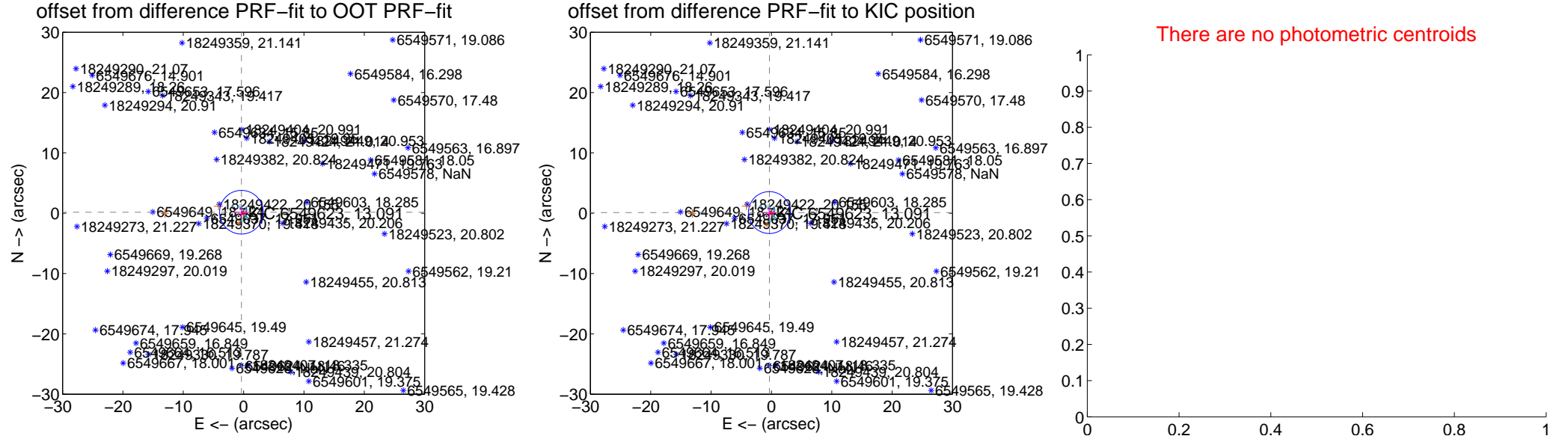
DV Centroid Data

Supplemental centroid analysis for 006549623-06. Kepler magnitude: 13.09. Transit SNR 9.73

There are 7 quarters with good PRF difference image offsets

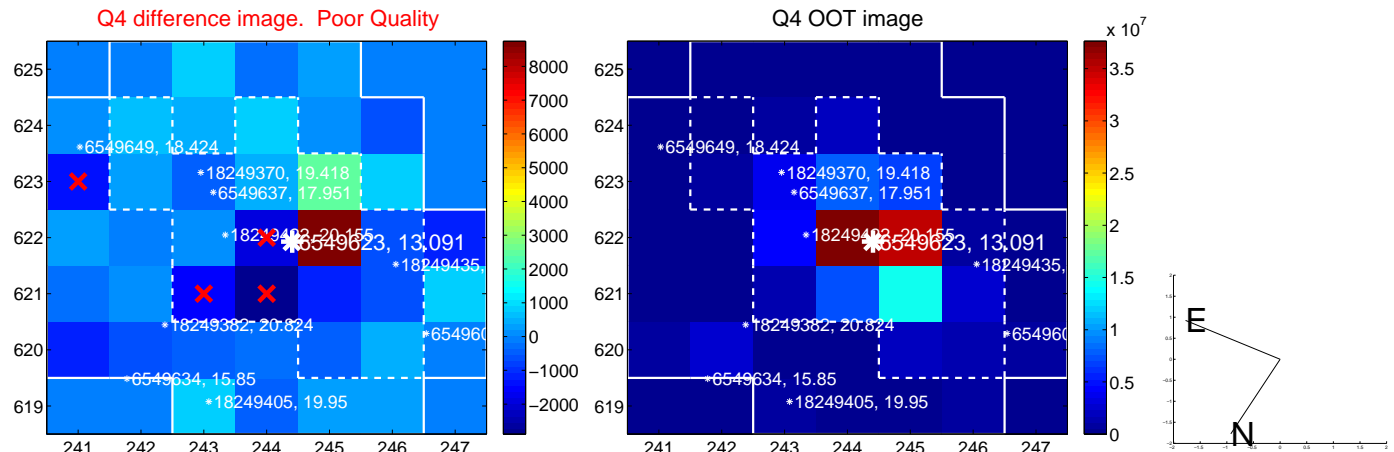
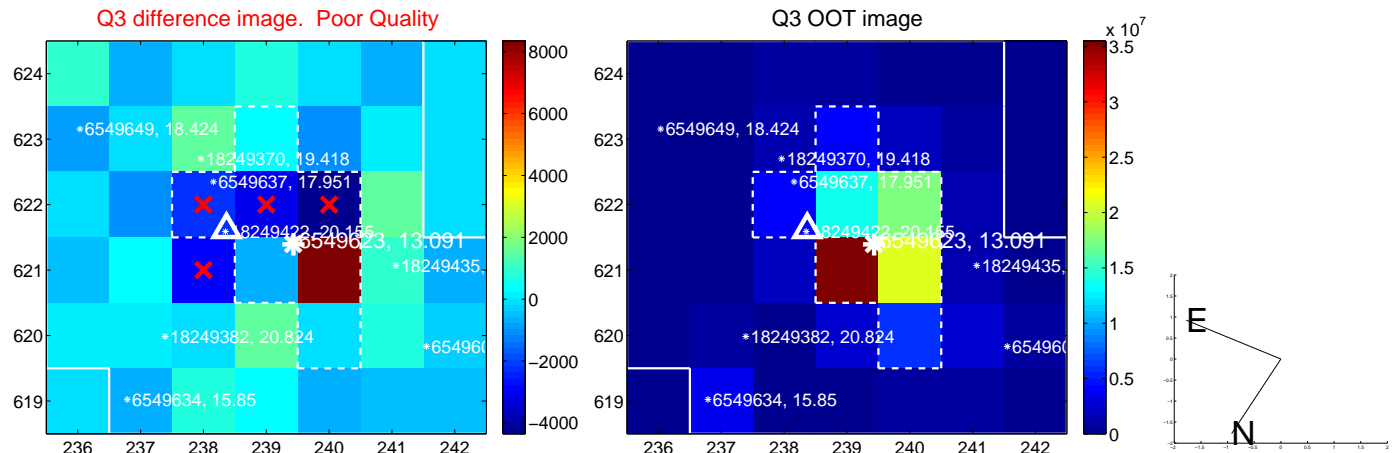
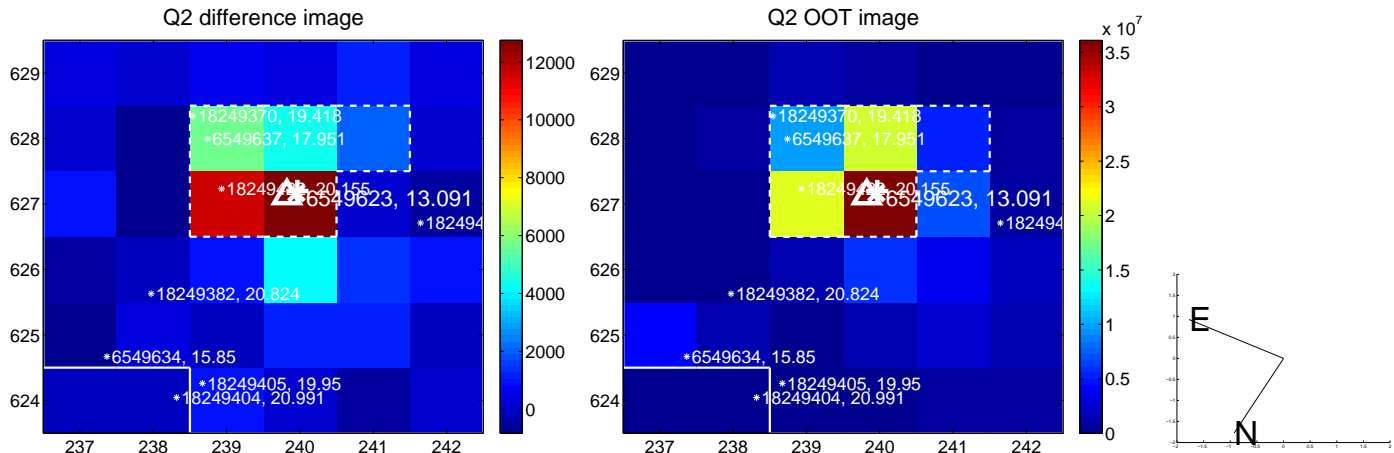
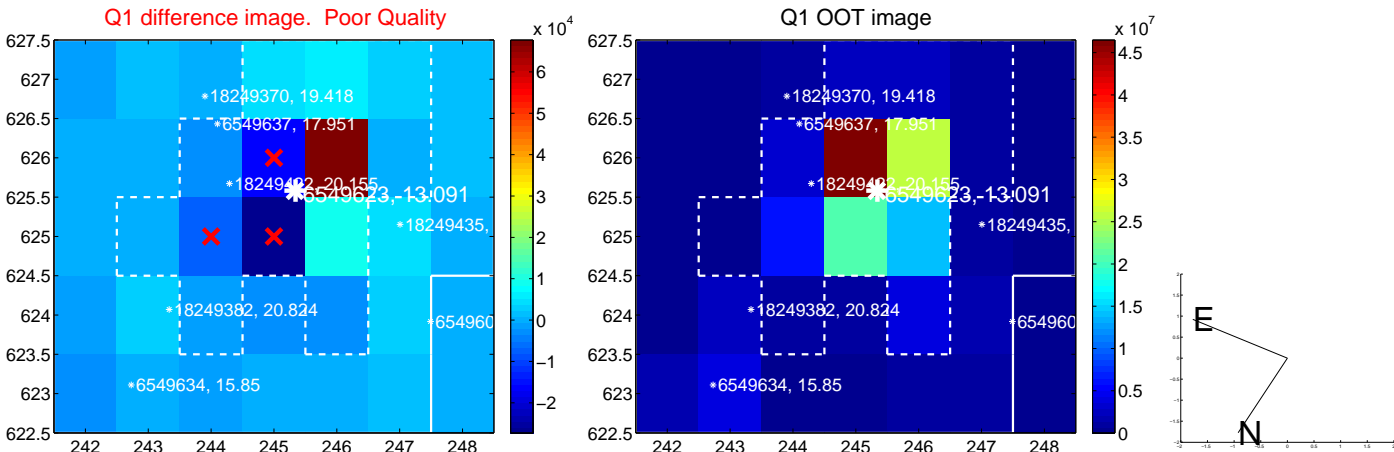
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.397 ± 1.206	0.33	0.361 ± 1.246	0.166 ± 0.821
PRF-fit source offset from KIC position	0.357 ± 1.157	0.31	0.340 ± 1.147	0.108 ± 0.831
photometric centroid source offset	—	—	—	—

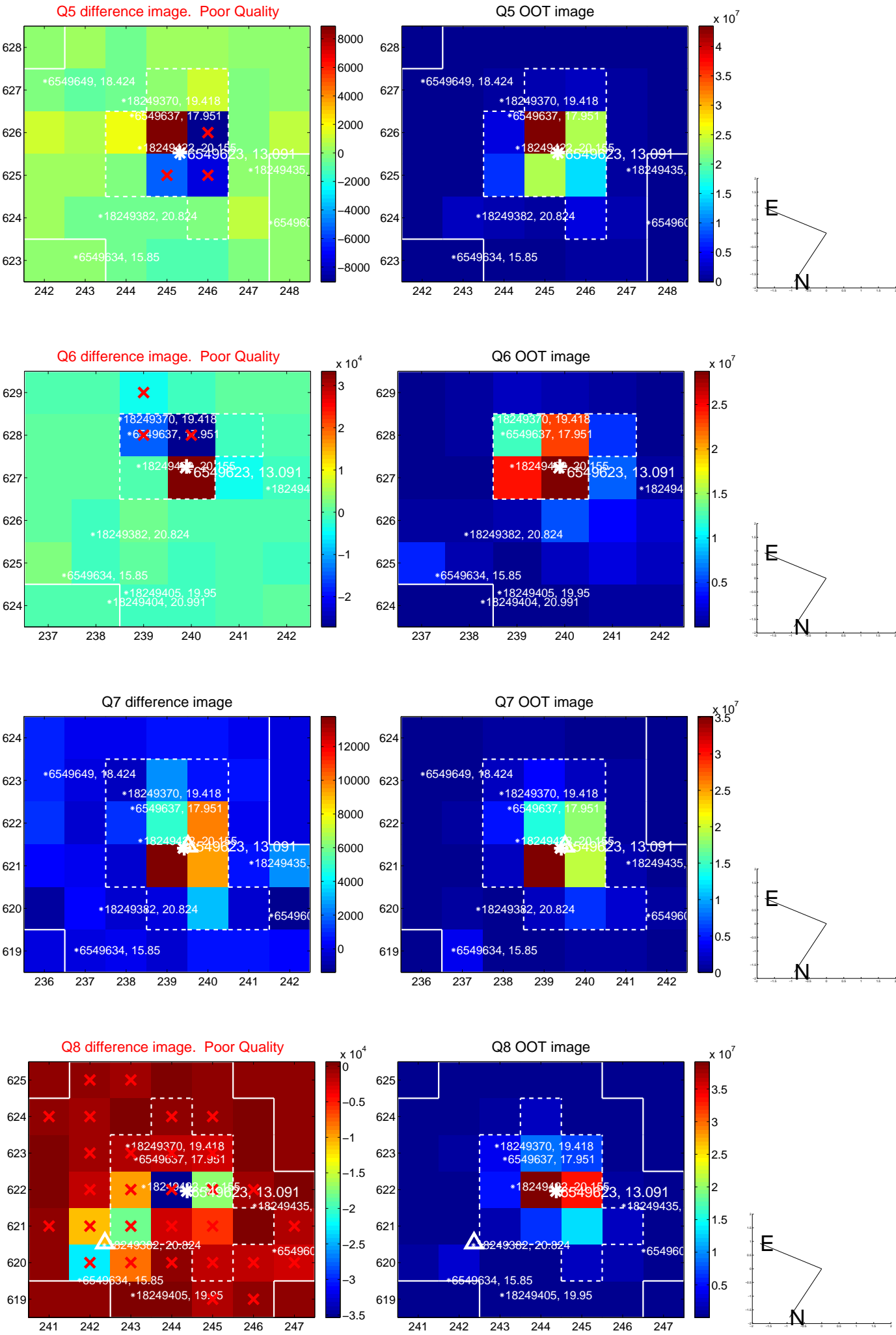


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

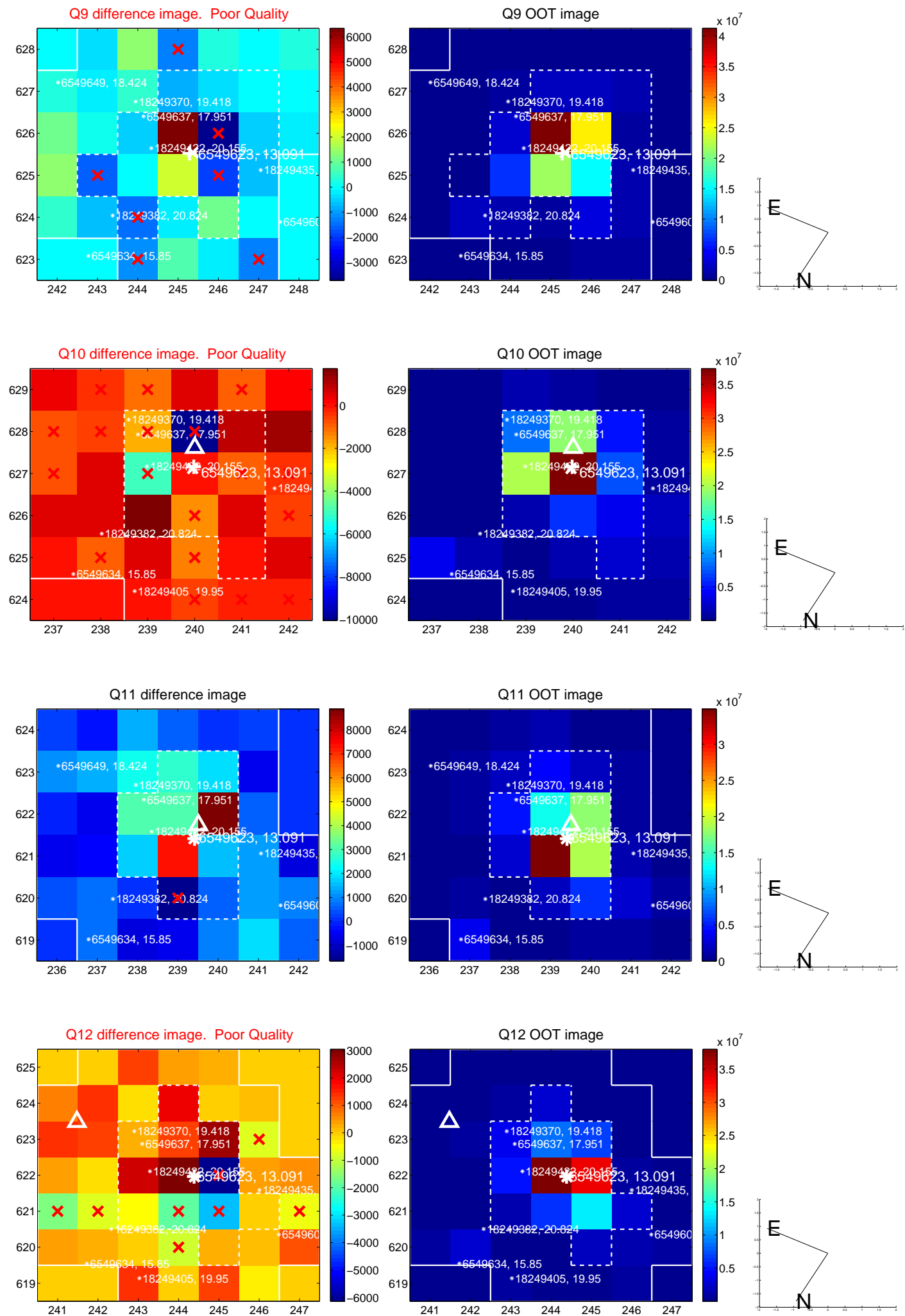
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



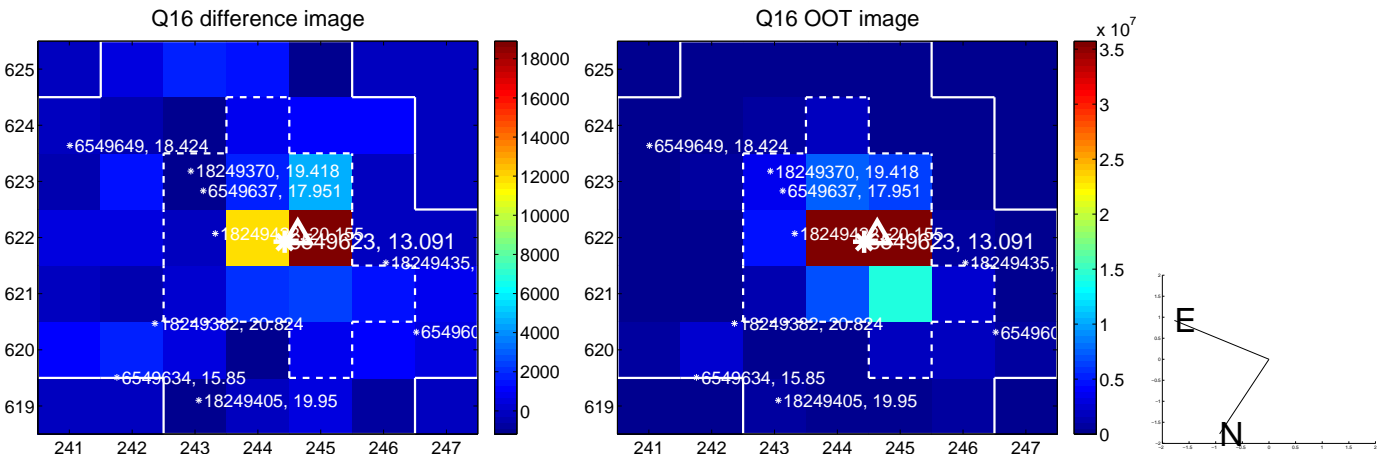
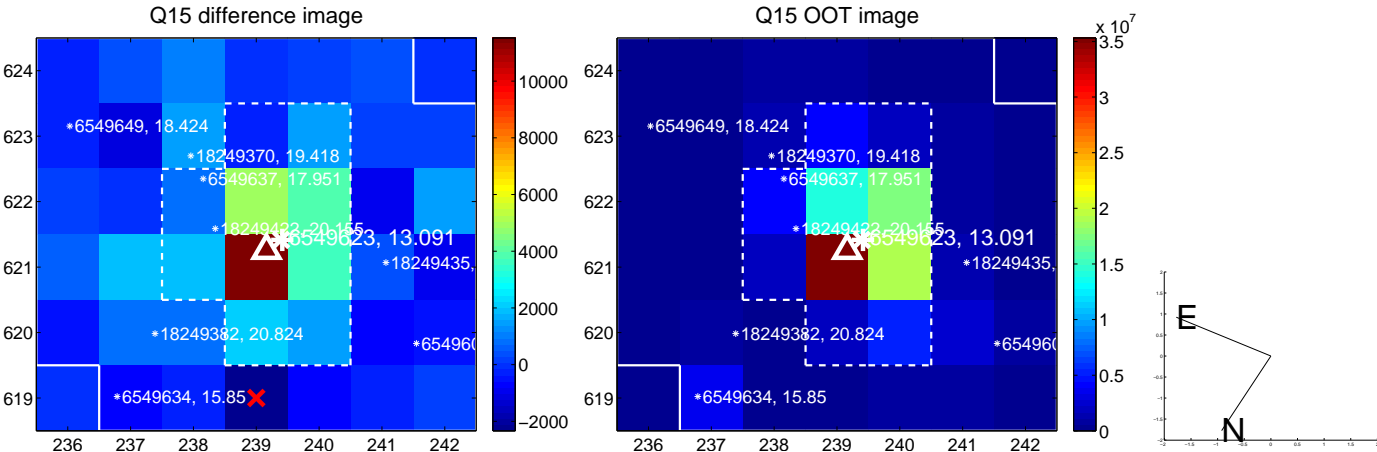
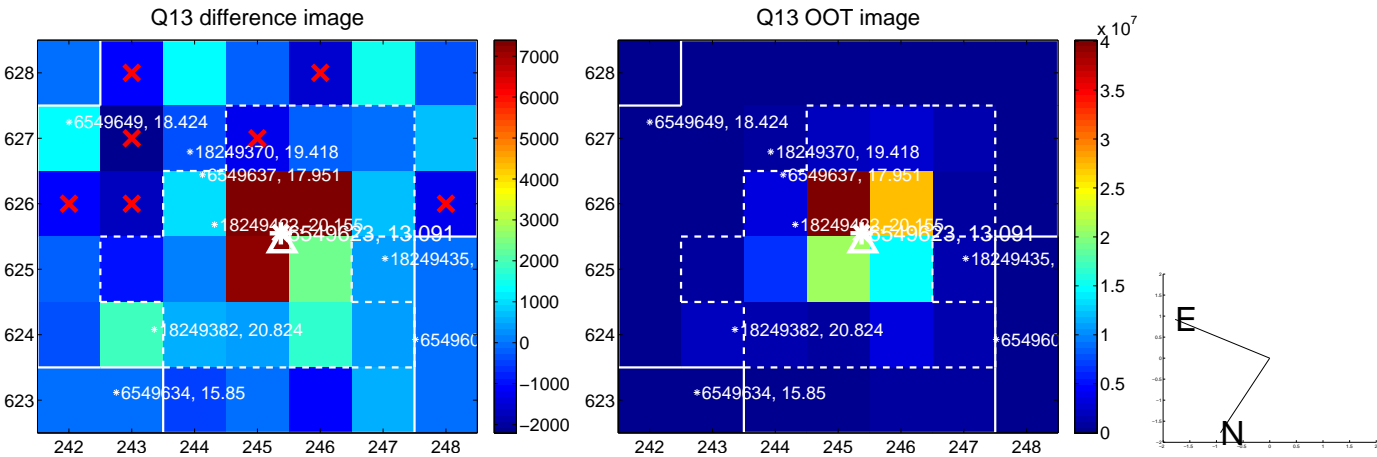
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



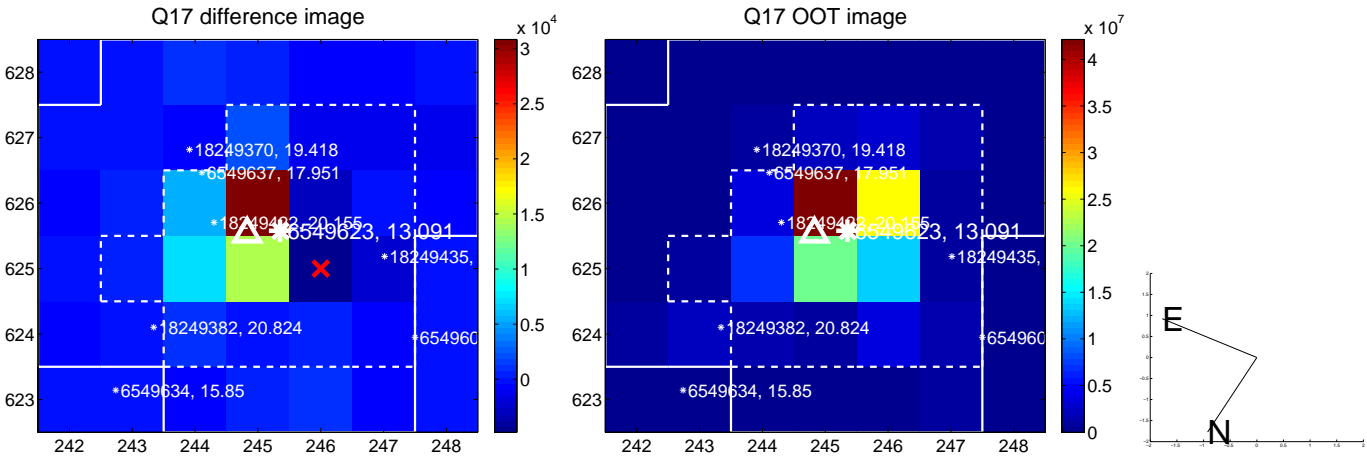
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



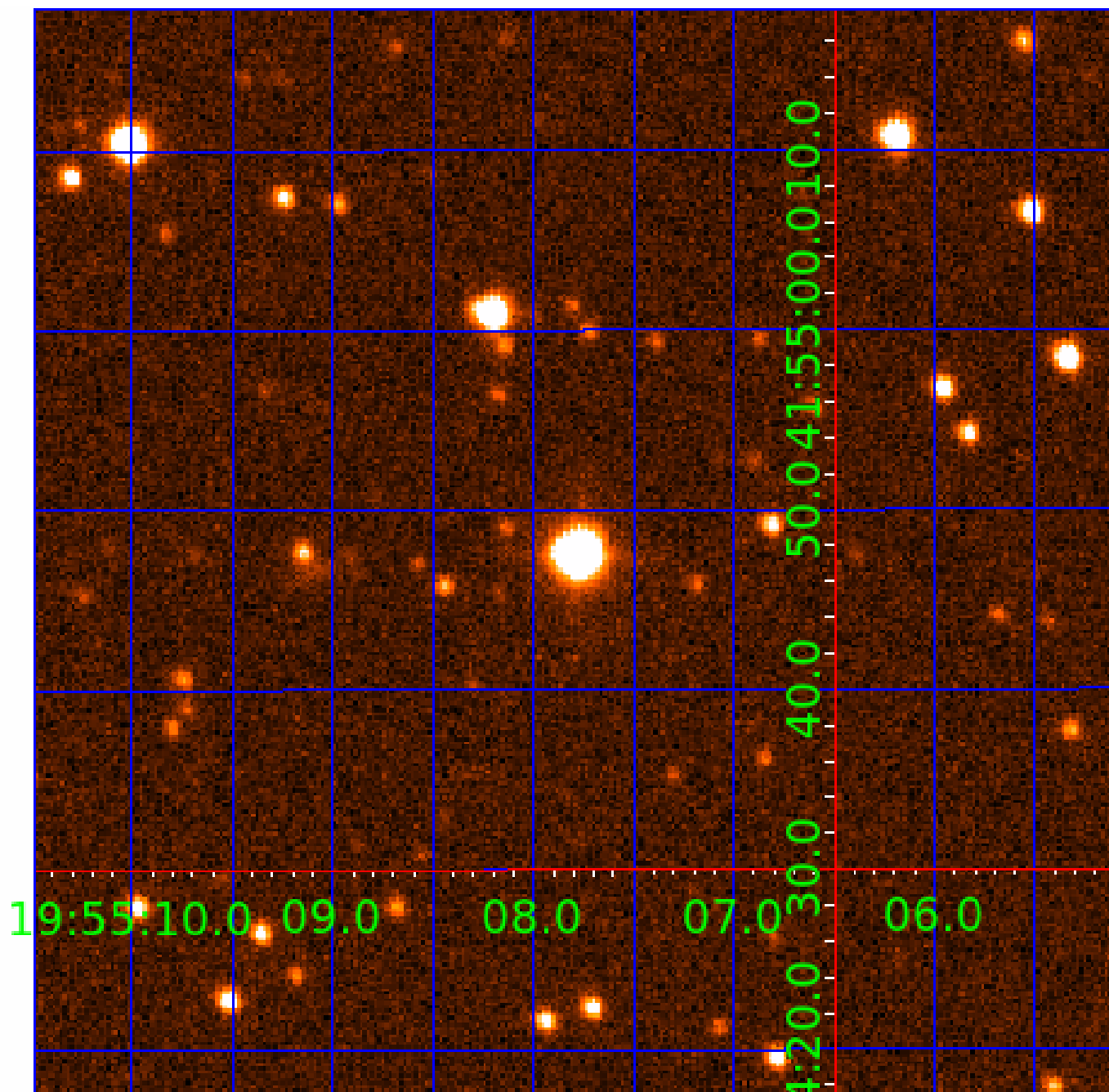
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 006549623

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})
006549623-01	OBS	No	1.328440	132.136240	15.4	1.952	9.6	4.9	3.83	6588	1.85	30847.56
006549623-02	OBS	No	1.328301	132.176545	24.3	9.158	7.9	7.9	3.83	6588	2.04	30851.87
006549623-04	OBS	No	26.765391	132.656906	157.5	4.734	11.3	11.1	3.83	6588	5.59	562.66
006549623-05	OBS	No	53.956704	166.570599	94.9	10.304	11.4	6.0	3.83	6588	4.32	220.94
006549623-06	OBS	No	45.232021	161.430230	191.8	4.494	10.0	9.7	3.83	6588	6.03	279.52
006549623-07	OBS	No	19.648078	136.370609	206.7	1.661	11.0	9.9	3.83	6588	6.45	849.67
006549623-08	OBS	No	31.641250	138.985649	227.6	2.093	9.6	8.1	3.83	6588	6.70	450.13
006549623-09	OBS	No	28.804836	142.439511	168.3	4.657	8.9	9.4	3.83	6588	5.63	510.18

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006549623-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
006549623-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
006549623-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
006549623-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006549623-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006549623-07	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_MEAS
006549623-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006549623-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS

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

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

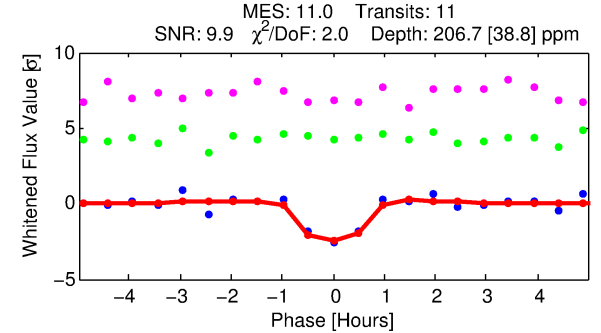
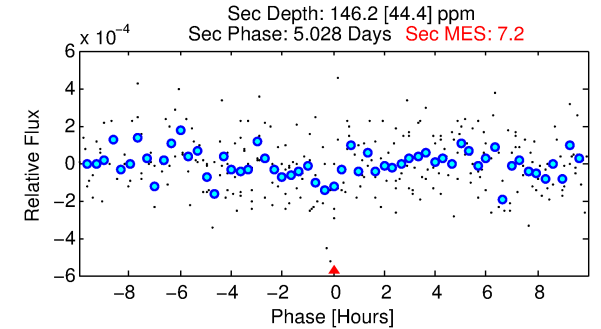
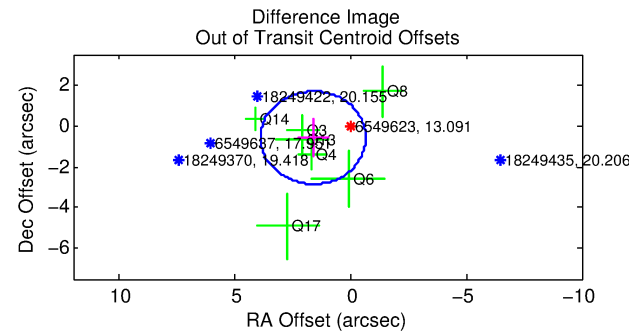
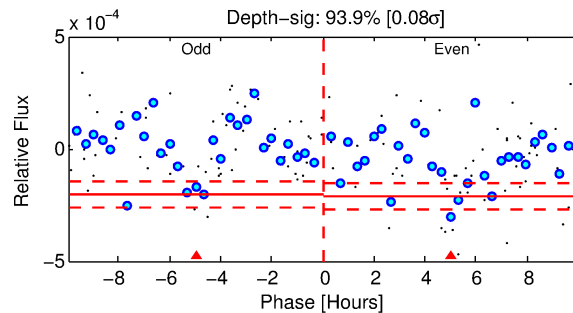
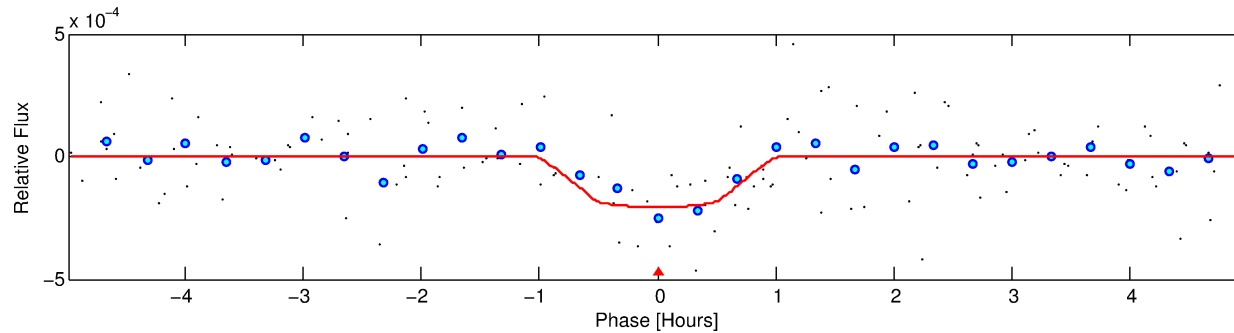
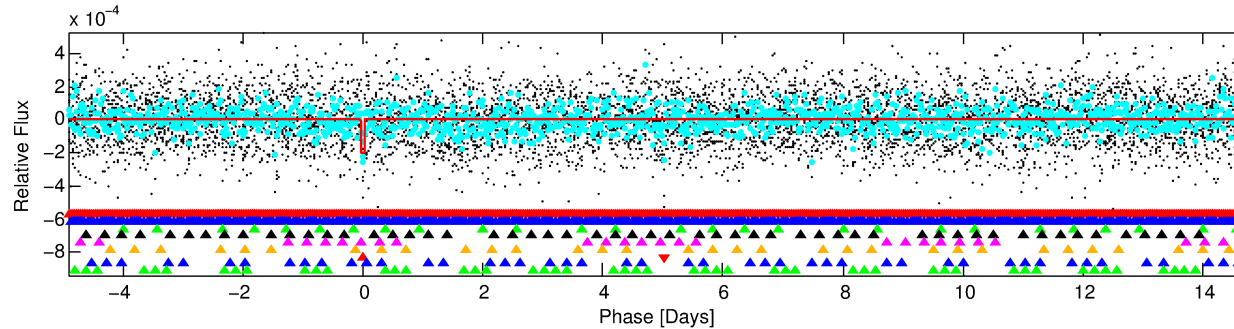
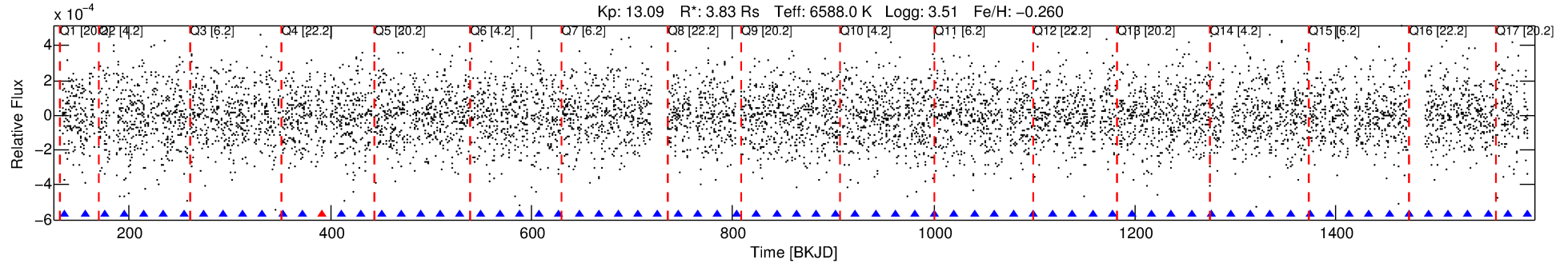
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006549623-07

No Significant Match Found

DV One-Page Summary

KIC: 6549623 Candidate: 7 of 9 Period: 19.648 d



DV Fit Results:

Period = 19.64808 [0.00019] d
Epoch = 136.3706 [0.0076] BKJD
Rp/R* = 0.0154 [0.0192]
a/R* = 42.34 [307.27]
b = 0.90 [1.54]
Seff = 849.67 [546.47]
Teq = 1377 [221] K
Rp = 6.45 [8.47] Re
a = 0.1709 [0.0683] AU
Ag = 56.50 [145.96] [0.38 σ]
Teffp = 5836 [3659] K [1.22 σ]

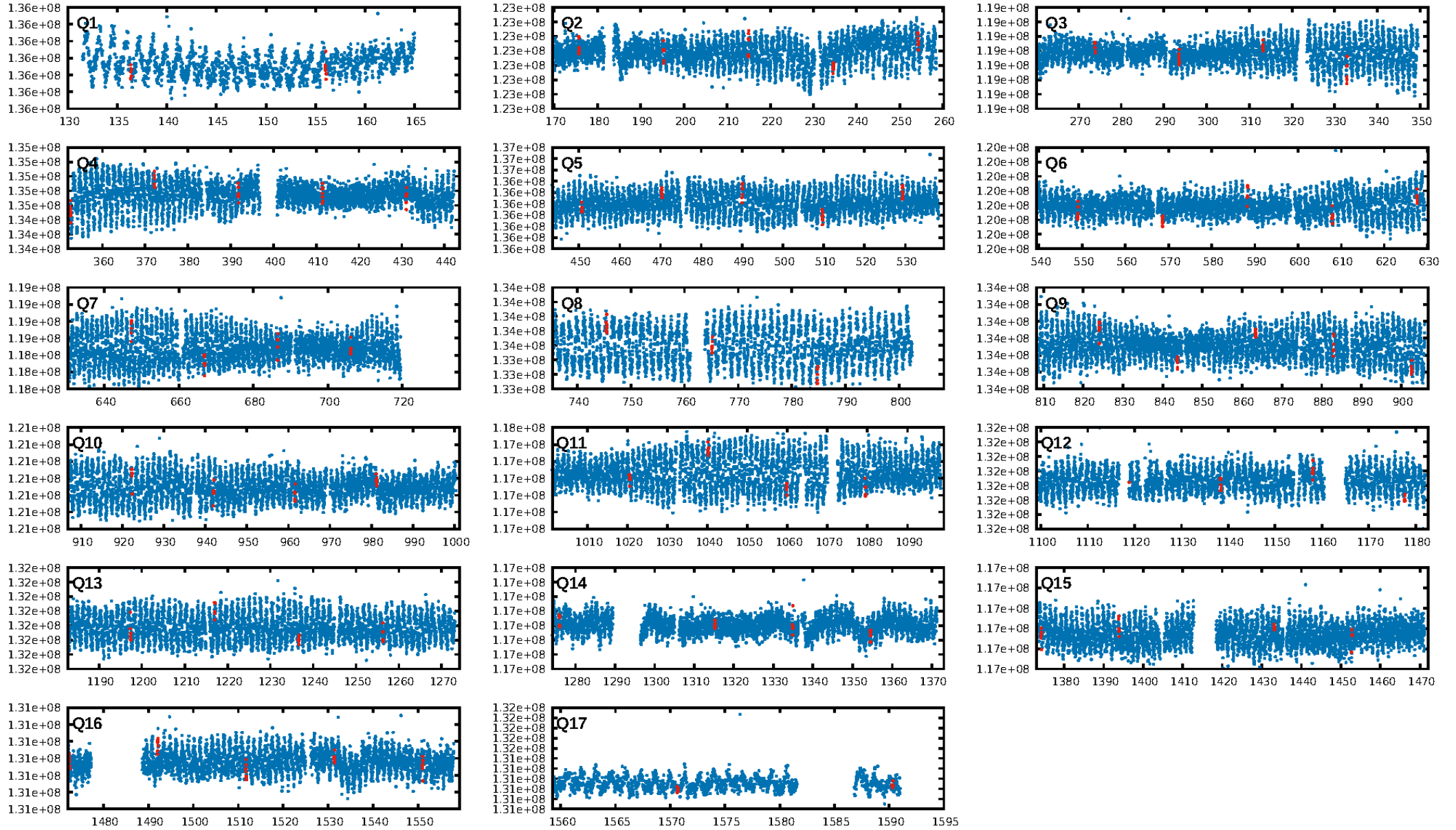
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [171.51 σ]
LongPeriod-sig: 100.0% [34.05 σ]
ModelChiSquare2-sig: 0.3%
ModelChiSquareGof-sig: 66.2%
Bootstrap-pfa: 6.00e-11
RollingBand-fgt: 0.91 [10/11]
GhostDiagnostic-chr: -0.2855
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 1.730 arcsec [2.28 σ]
KicOffset-rm: 1.722 arcsec [2.36 σ]
OotOffset-st: 2/1/2/2 [7]
KicOffset-st: 2/1/2/2 [7]
DiffImageQuality-fgm: 0.29 [2/7]
DiffImageOverlap-fno: 0.82 [14/17]

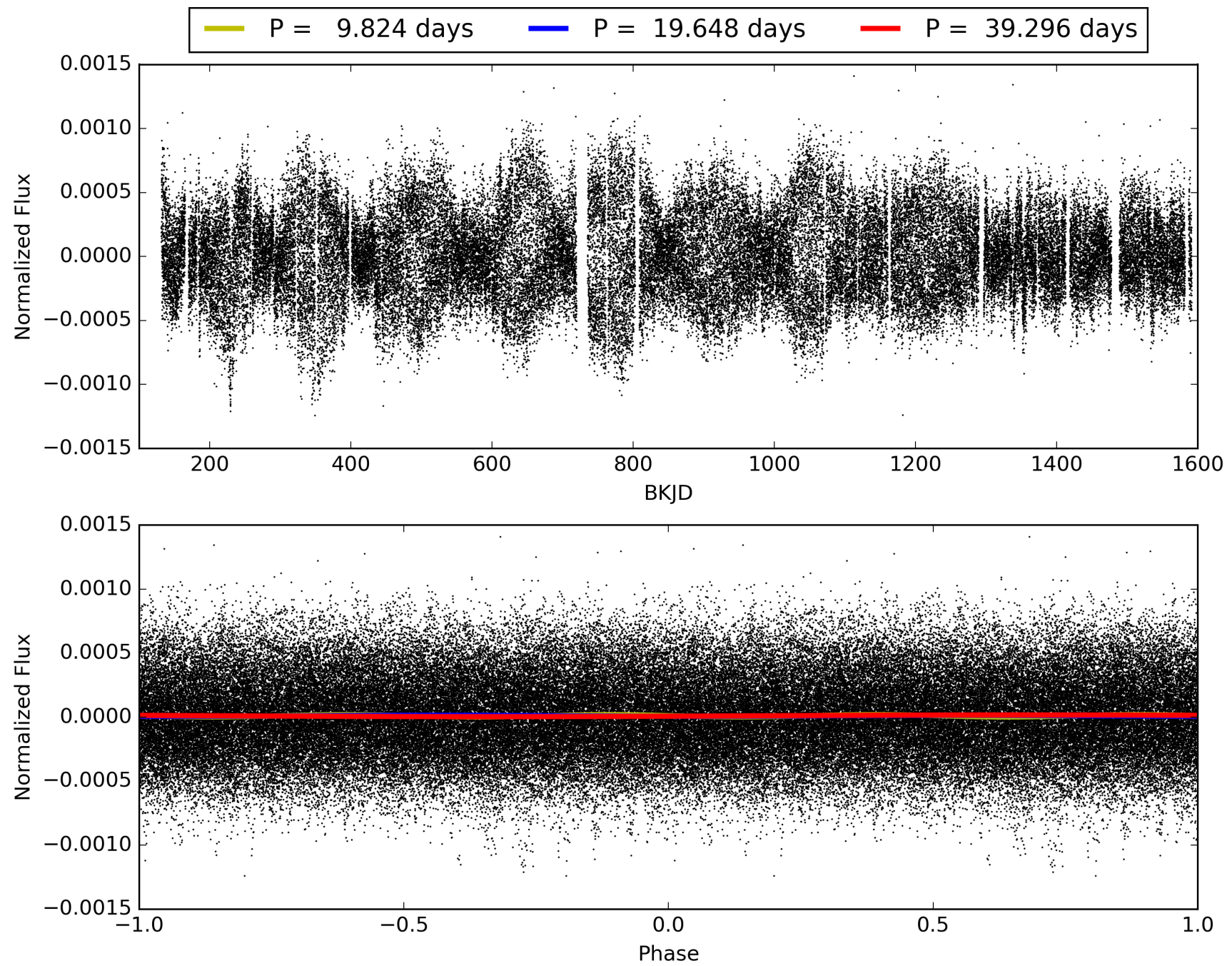
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 07:30:03 Z

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

TCE 006549623-07, PDC Light Curves

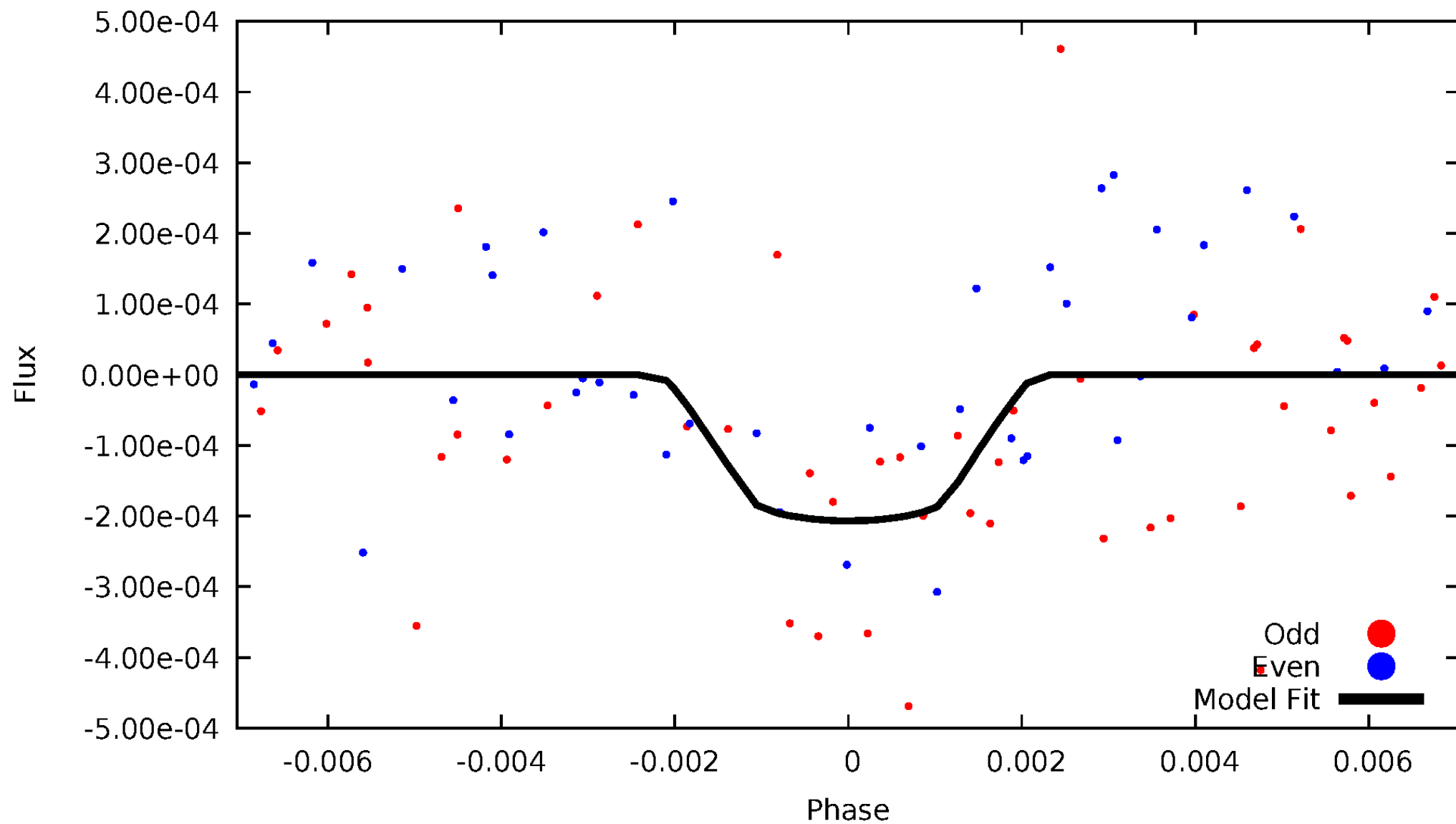


TCE 006549623-07



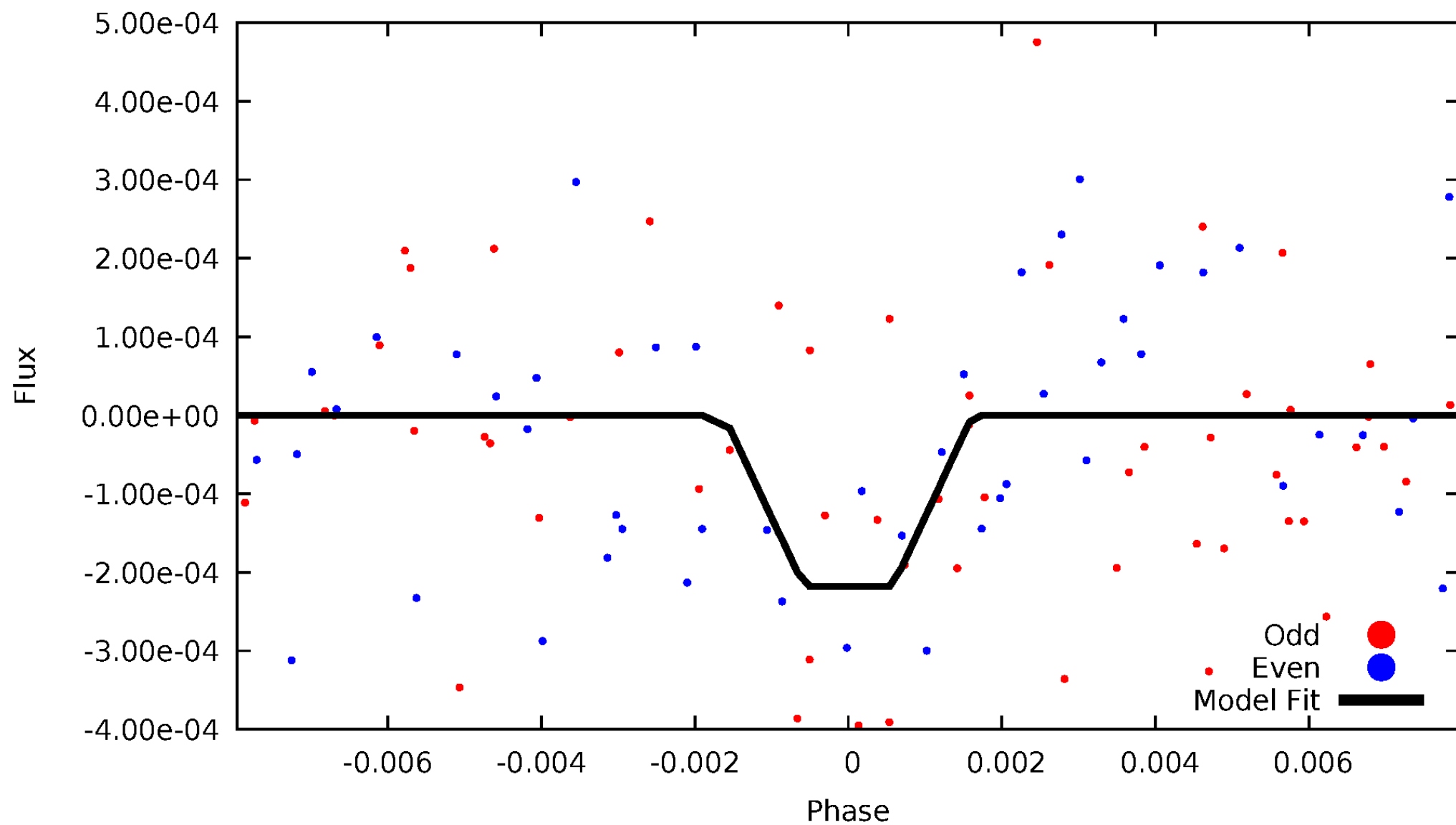
DV Odd/Even

TCE 006549623-07



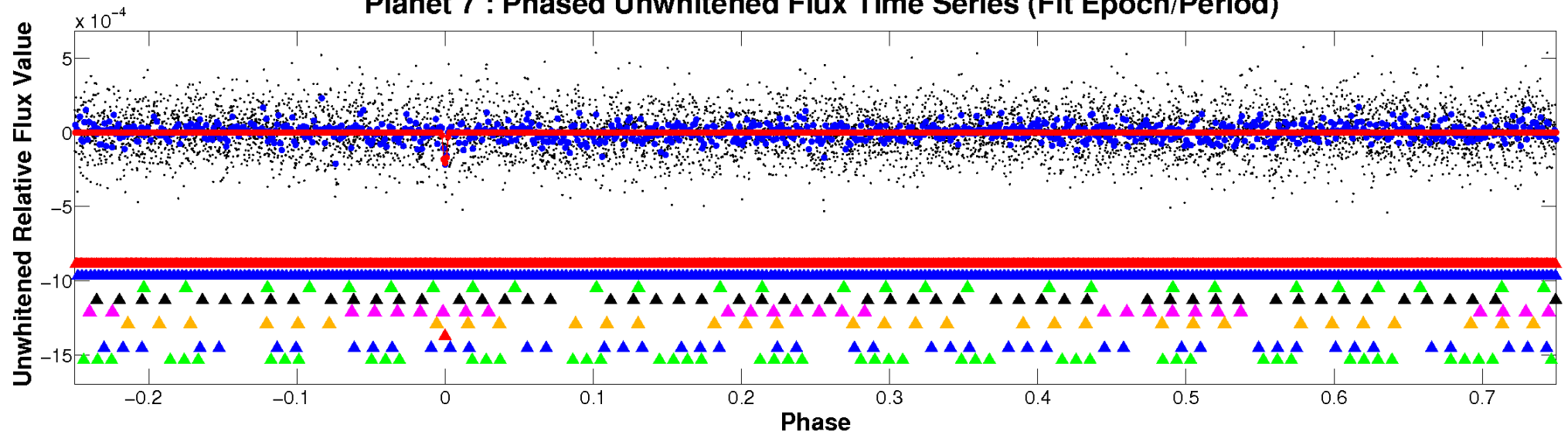
ALT Odd/Even

TCE 006549623-07

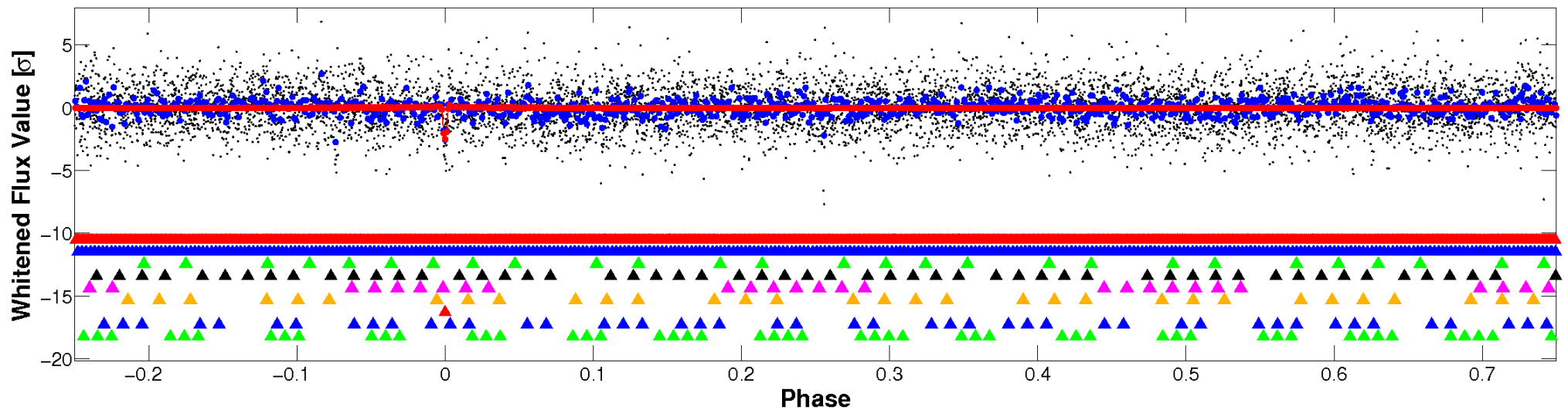


Non-Whitened Vs. Whitened Light Curve

Planet 7 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

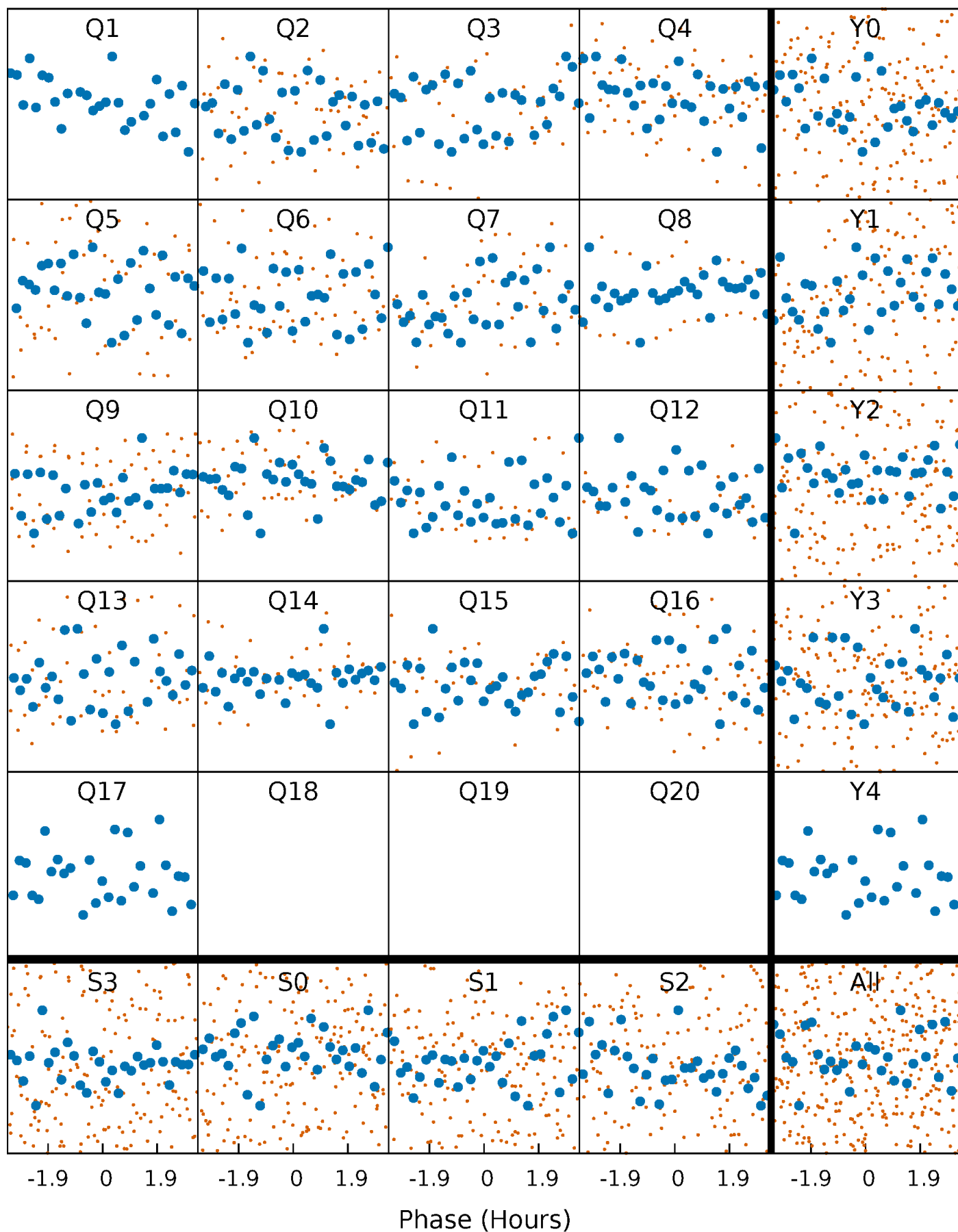


Planet 7 : Phased Whitened Flux Time Series (Fit Epoch/Period)



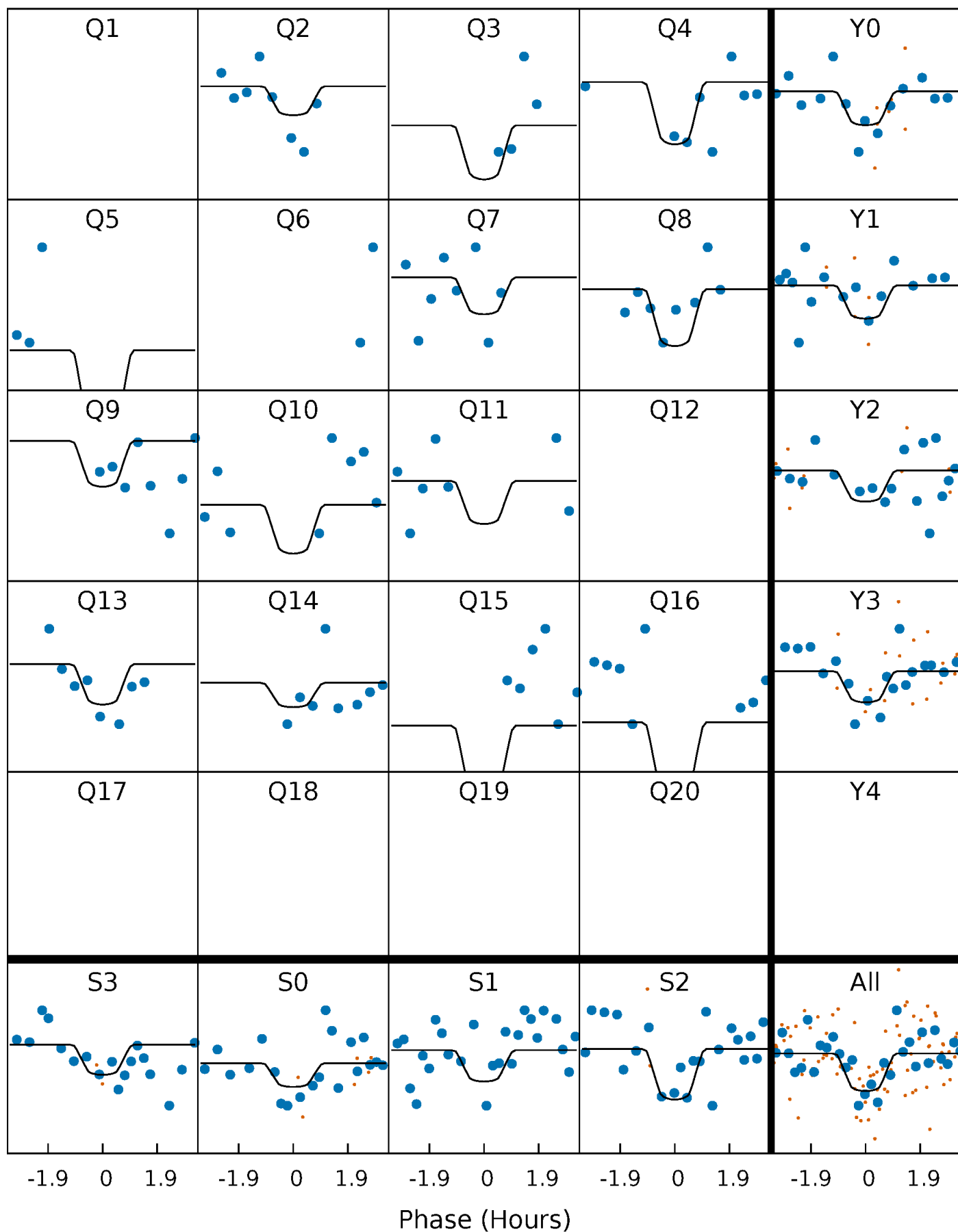
PDC Quarter-Phased Transit Curves

TCE 006549623-07 P= 19.648078 Days $T_0=136.370609$ (BKJD)



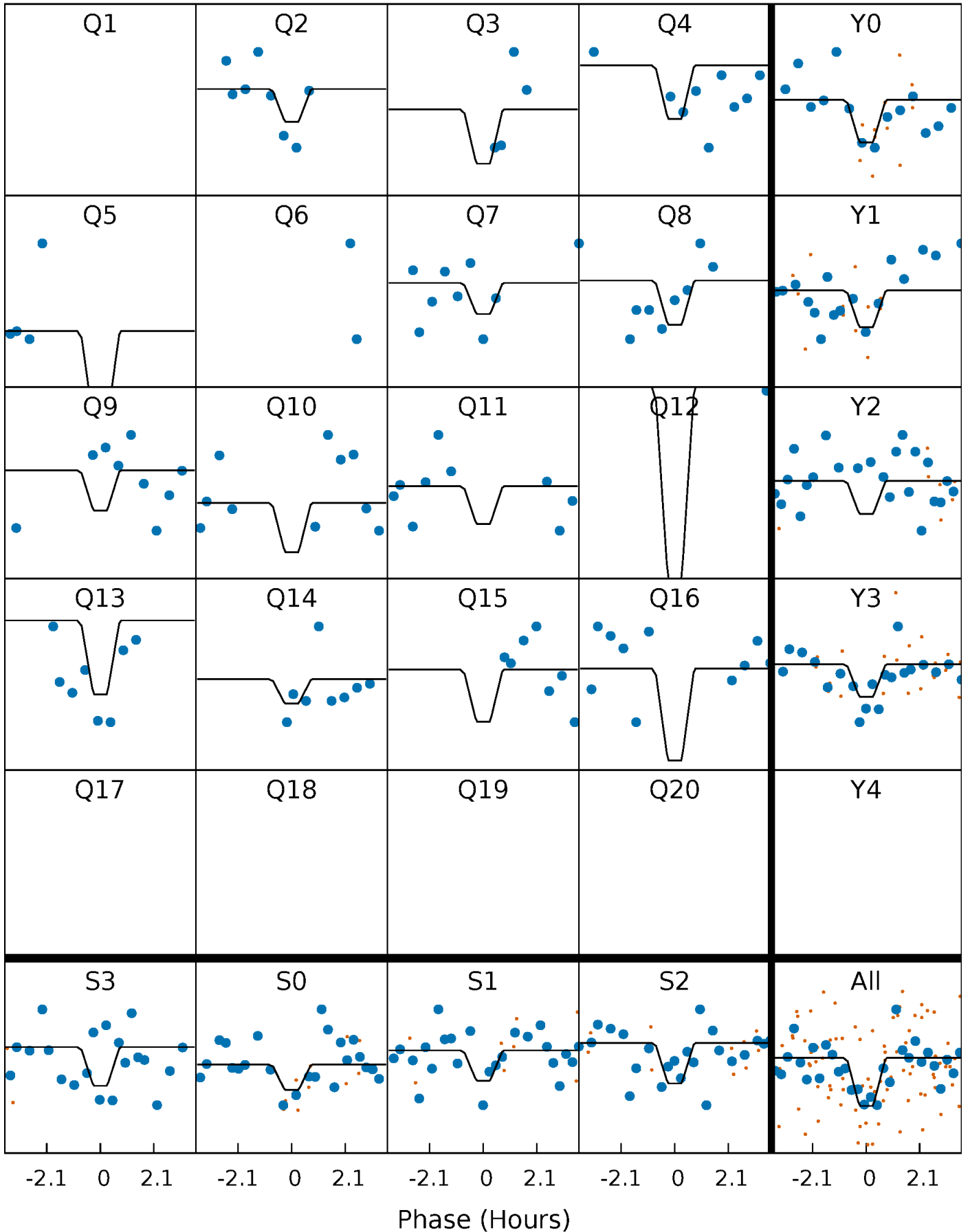
DV Quarter-Phased Transit Curves

TCE 006549623-07 P= 19.648078 Days $T_0=136.370609$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

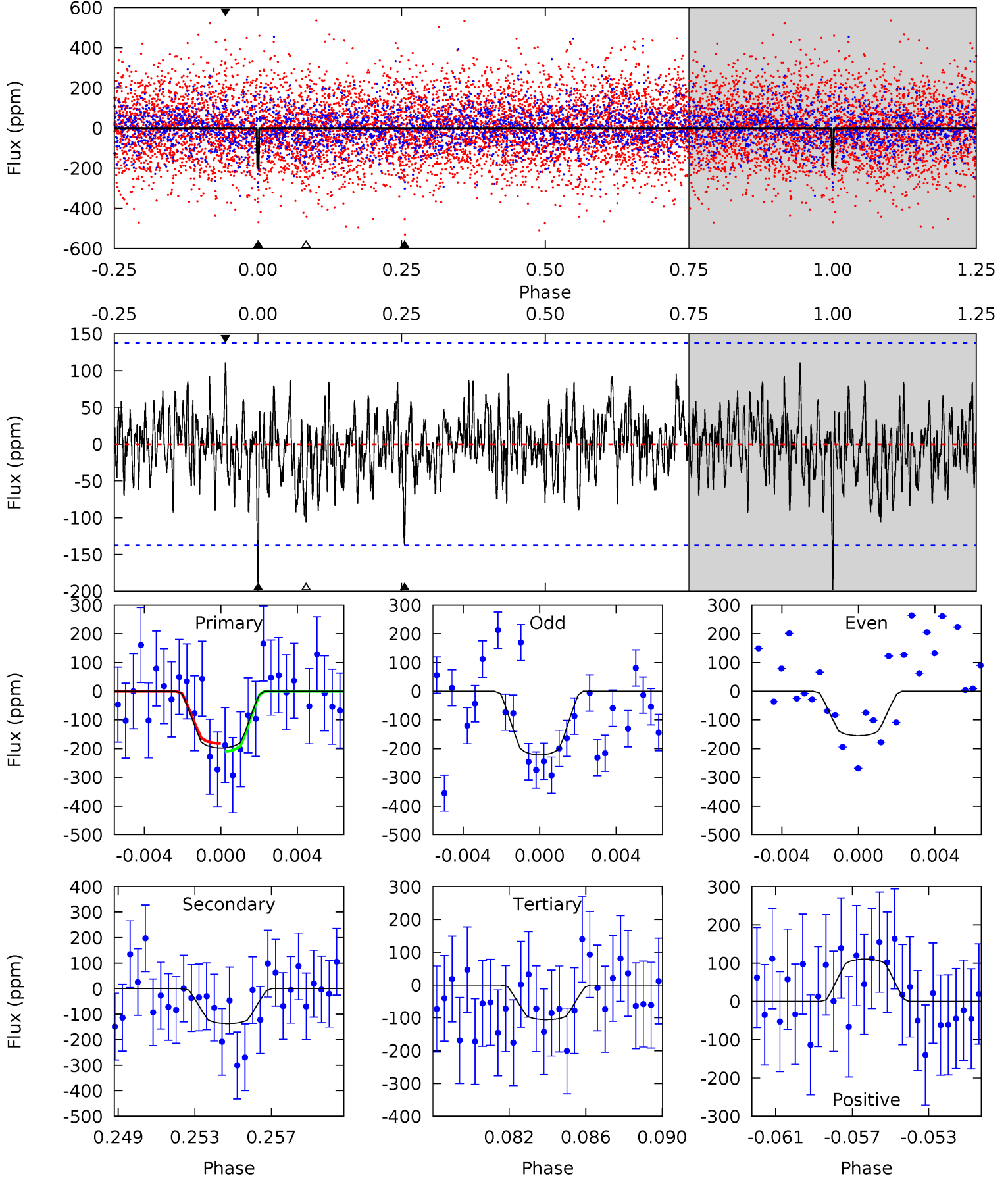
TCE 006549623-07 P= 19.648021 Days $T_0=136.373873$ (BKJD)



DV Model-Shift Uniqueness Test

006549623-07, P = 19.648078 Days, E = 116.722531 Days

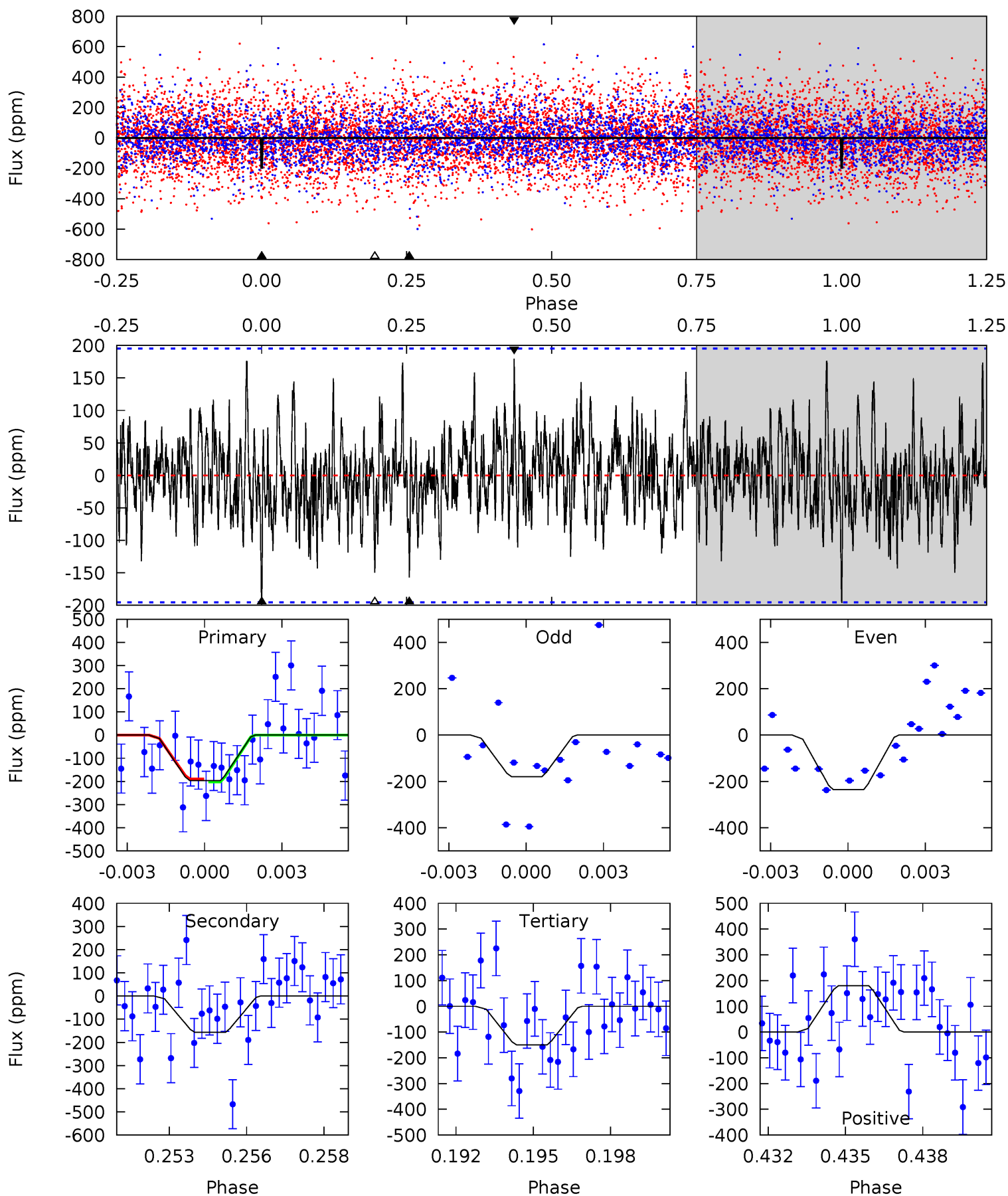
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.48	5.16	3.99	4.19	5.20	2.87	1.32	3.49	3.29	1.17	0.97	1.24	1.11	0.36	0.53



Alt Model-Shift Uniqueness Test

006549623-07, P = 19.648021 Days, E = 116.725852 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.30	4.24	4.05	4.85	5.28	3.01	1.37	1.26	0.45	0.19	-0.61	0.73	0.97	0.48	0.16



Stellar Parameters For KIC 006549623

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6588^{+166}_{-199}	$3.507^{+0.368}_{-0.092}$	$-0.260^{+0.350}_{-0.250}$	$3.834^{+0.407}_{-1.626}$	$1.724^{+0.184}_{-0.428}$	$0.043^{+0.133}_{-0.013}$
	+3%/-3%	+10%/-3%	+135%/-96%	+11%/-42%	+11%/-25%	+308%/-30%
Source	PHO1	FLK73	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 006549623-07 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-137 ± 26	$7.73^{+6.85}_{-5.17}$	1895^{+110}_{-183}	5042^{+3643}_{-1052}	36^{+258}_{-26}
Alt.	-157 ± 37	$8.19^{+6.87}_{-5.44}$	1895^{+104}_{-195}	5136^{+4178}_{-1131}	39^{+297}_{-28}

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 $A_{obs} \gg 1.0$

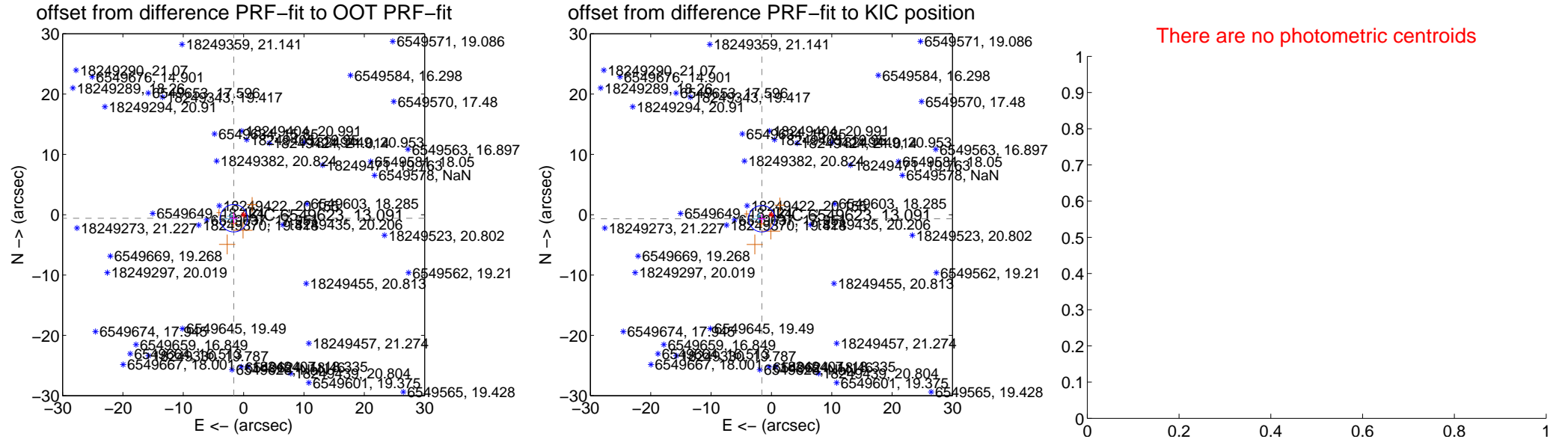
DV Centroid Data

Supplemental centroid analysis for 006549623-07. Kepler magnitude: 13.09. Transit SNR 9.92

There are 2 quarters with good PRF difference image offsets

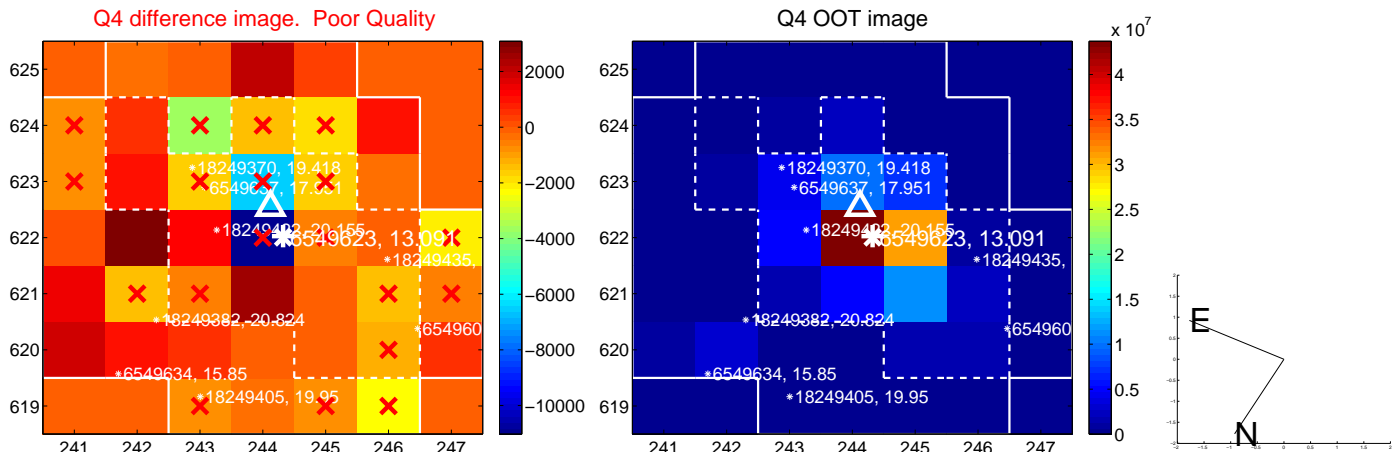
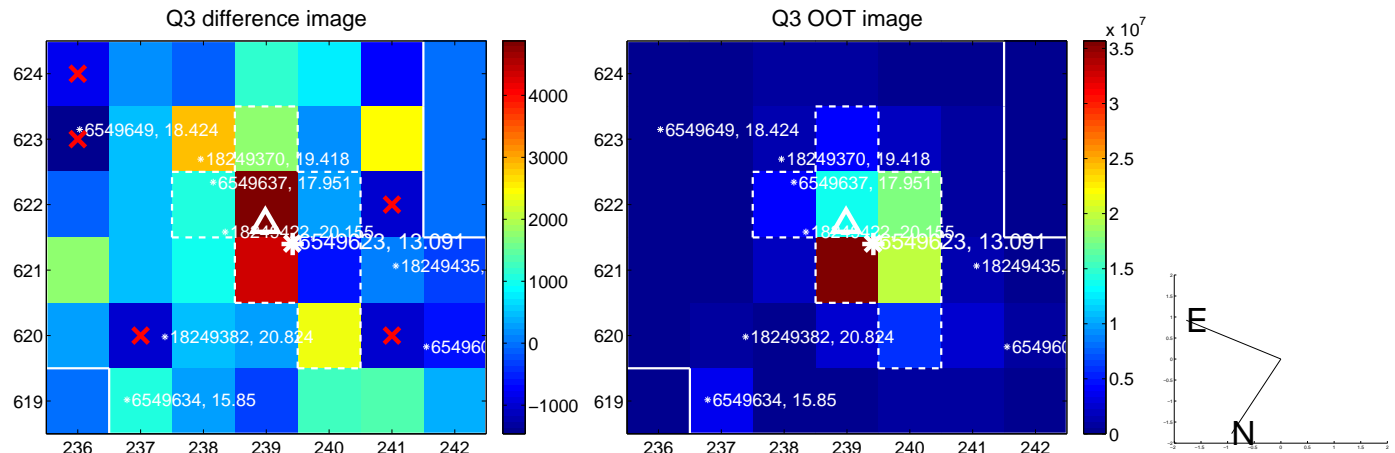
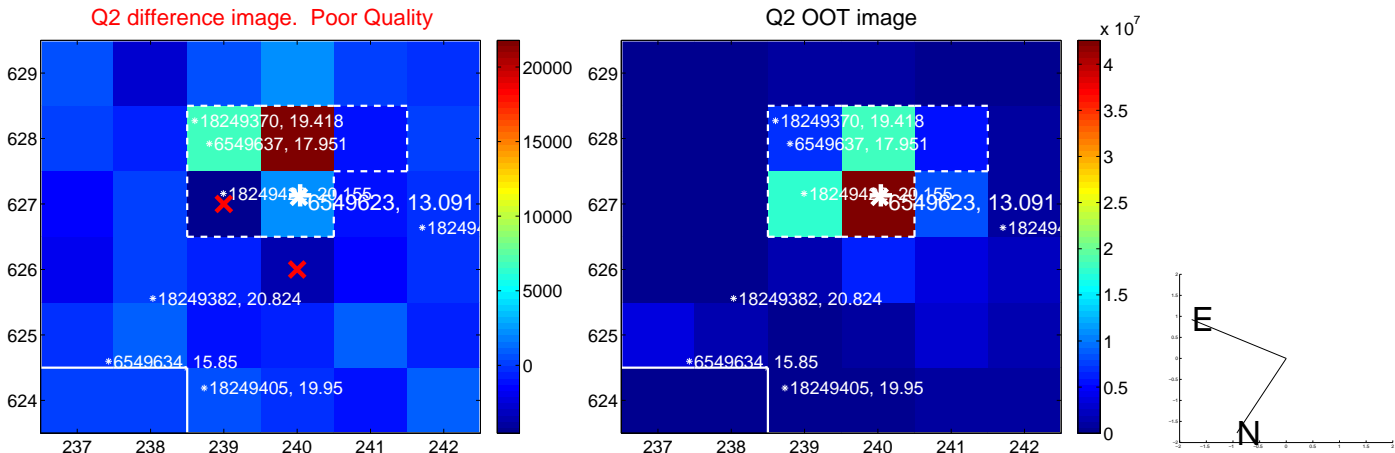
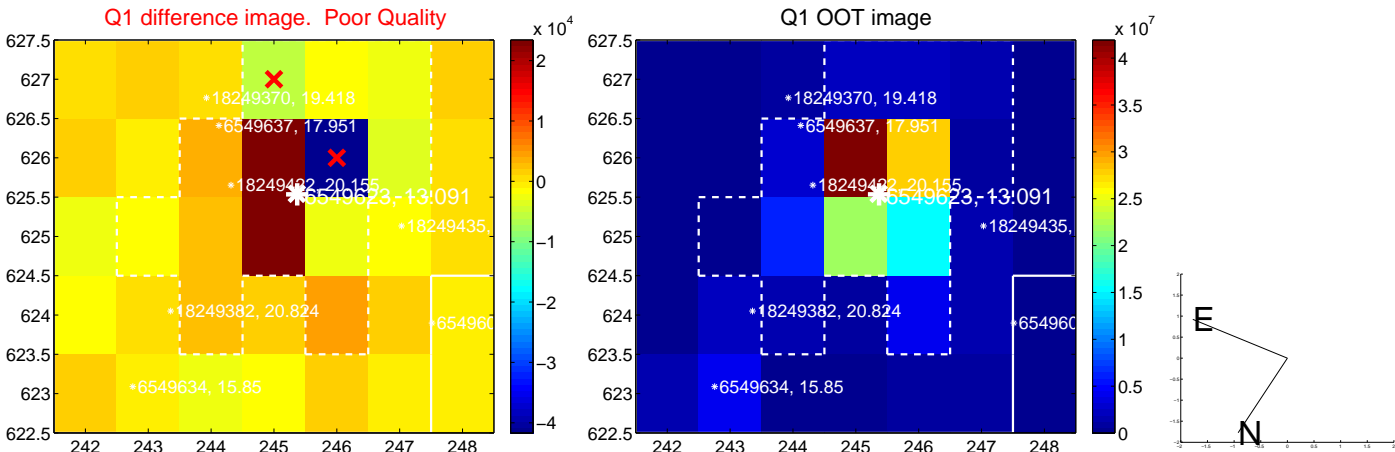
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.730 ± 0.757	2.28	1.629 ± 0.652	-0.583 ± 0.922
PRF-fit source offset from KIC position	1.722 ± 0.730	2.36	1.587 ± 0.621	-0.668 ± 0.748
photometric centroid source offset	—	—	—	—

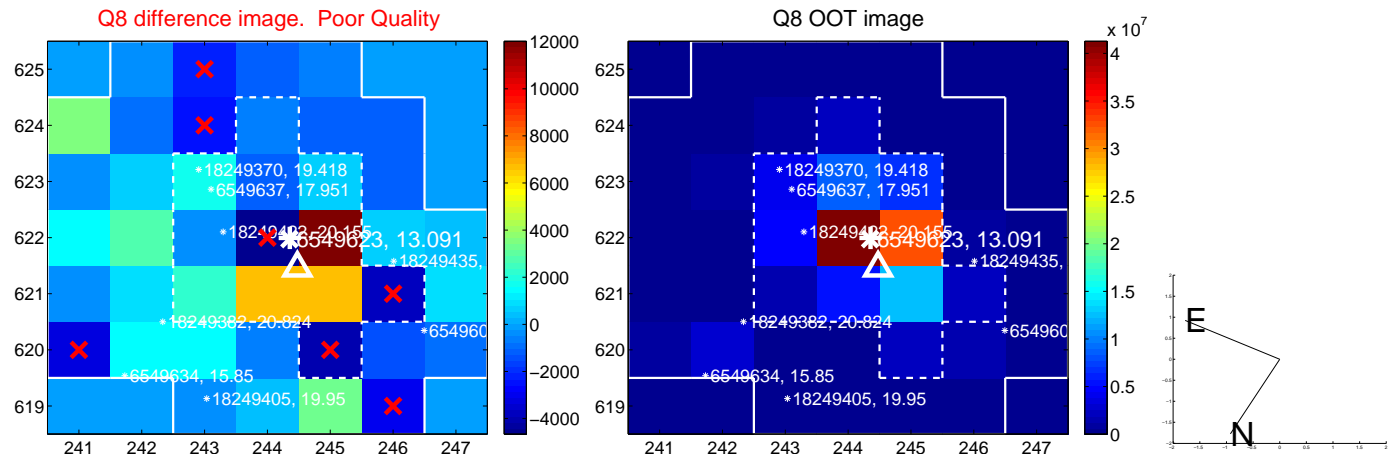
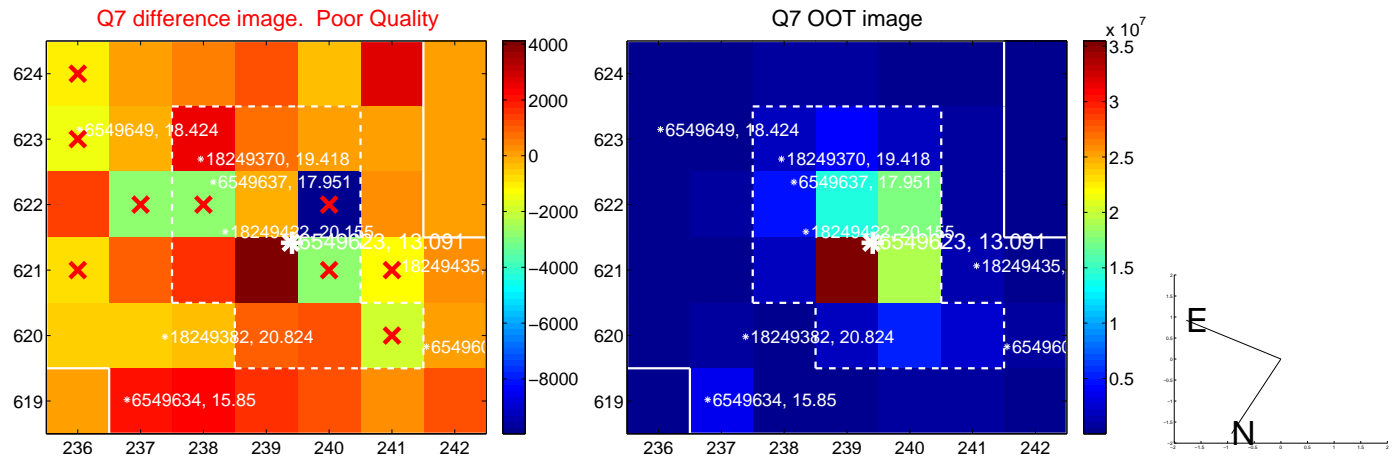
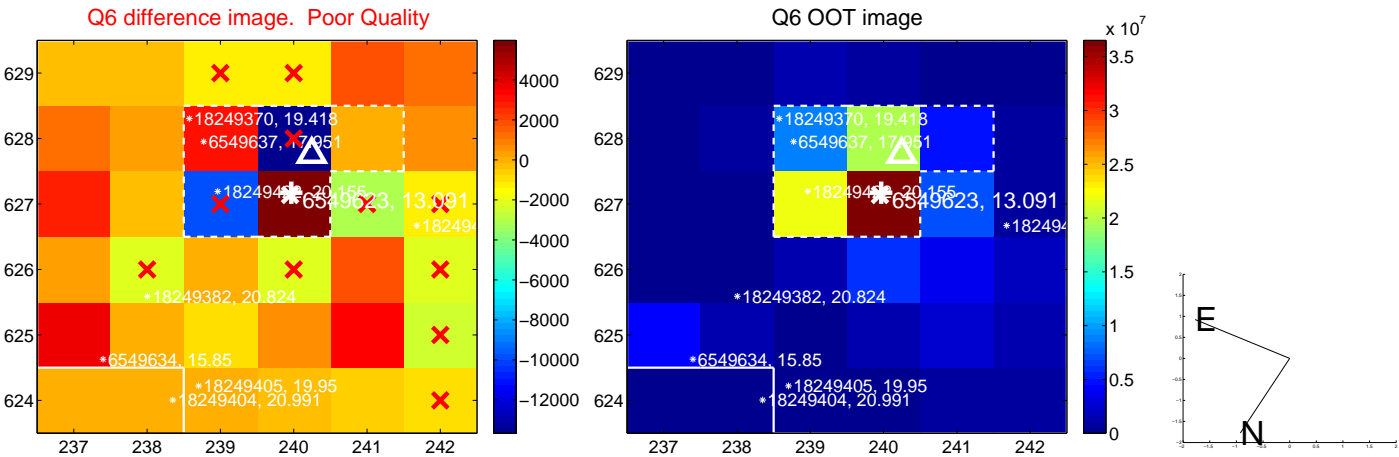
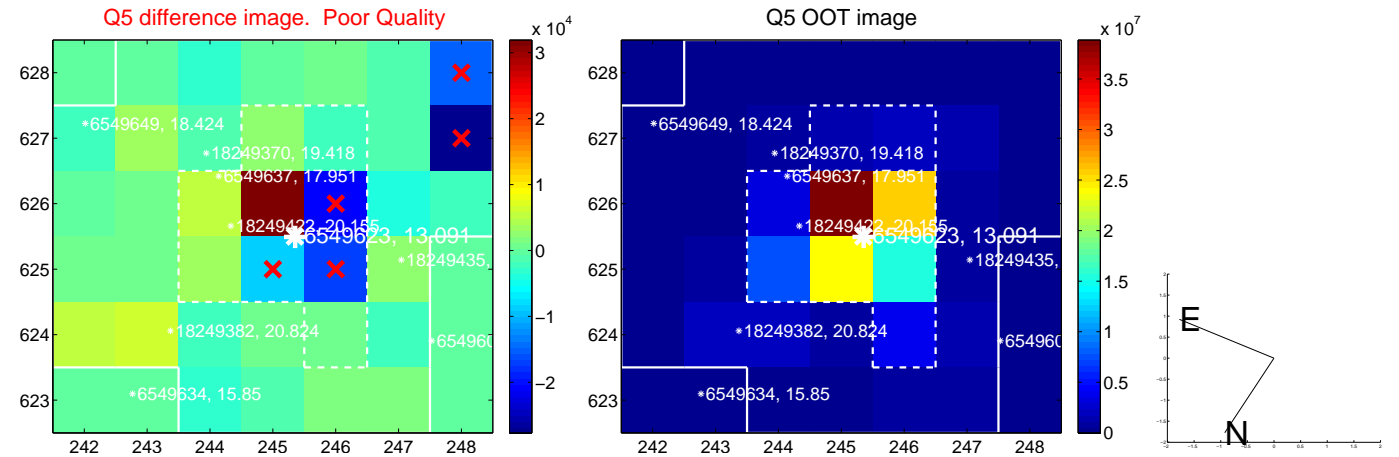


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

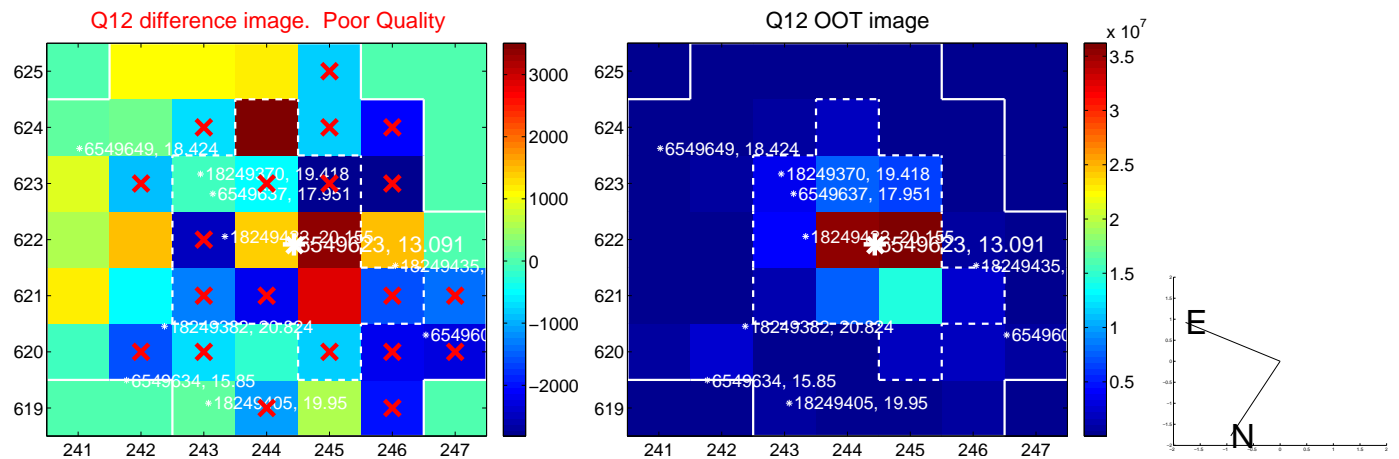
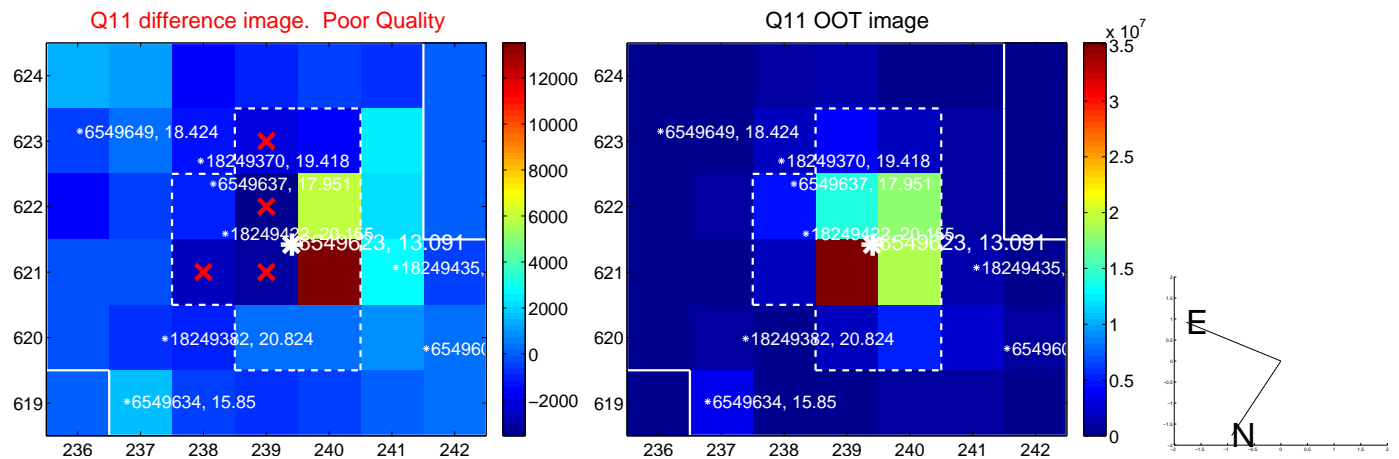
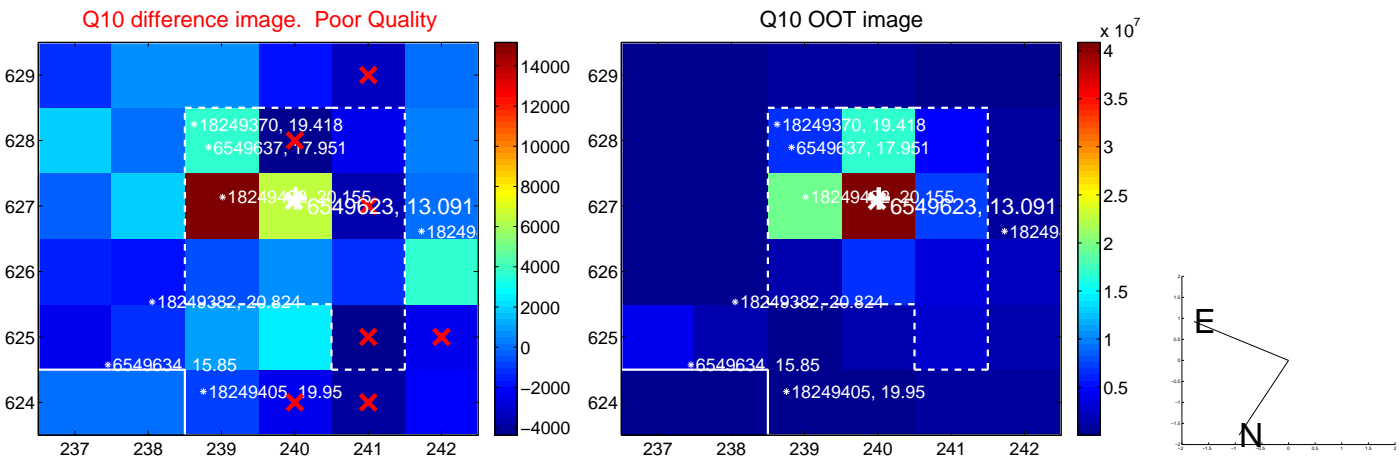
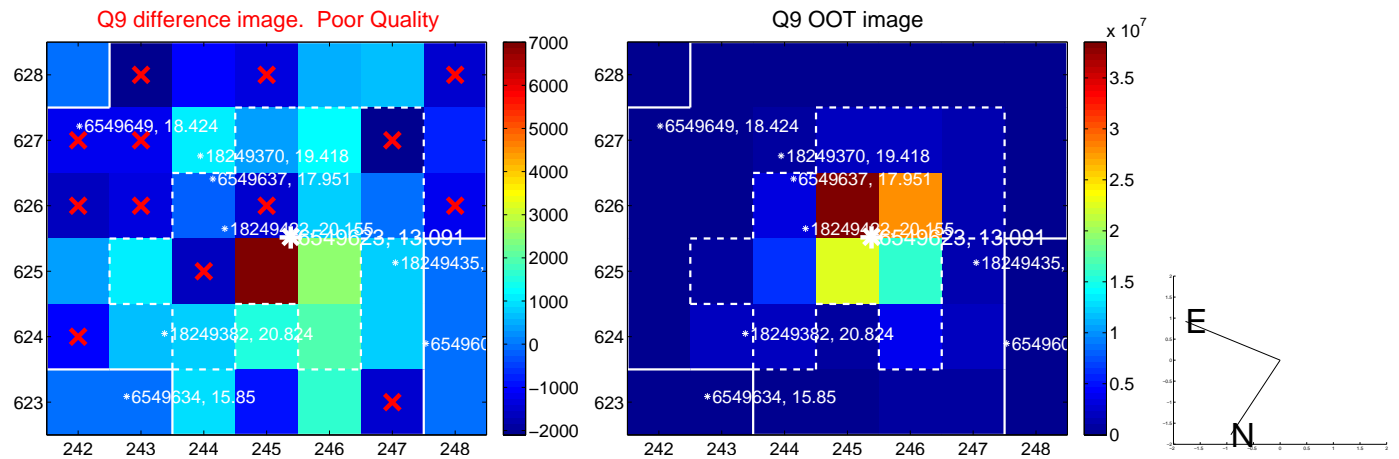
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



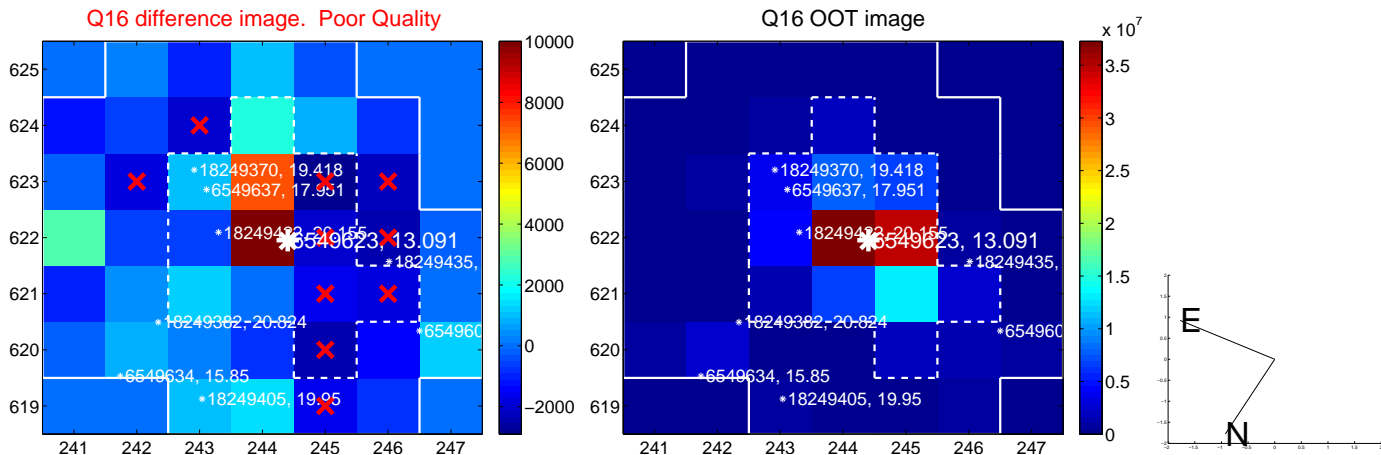
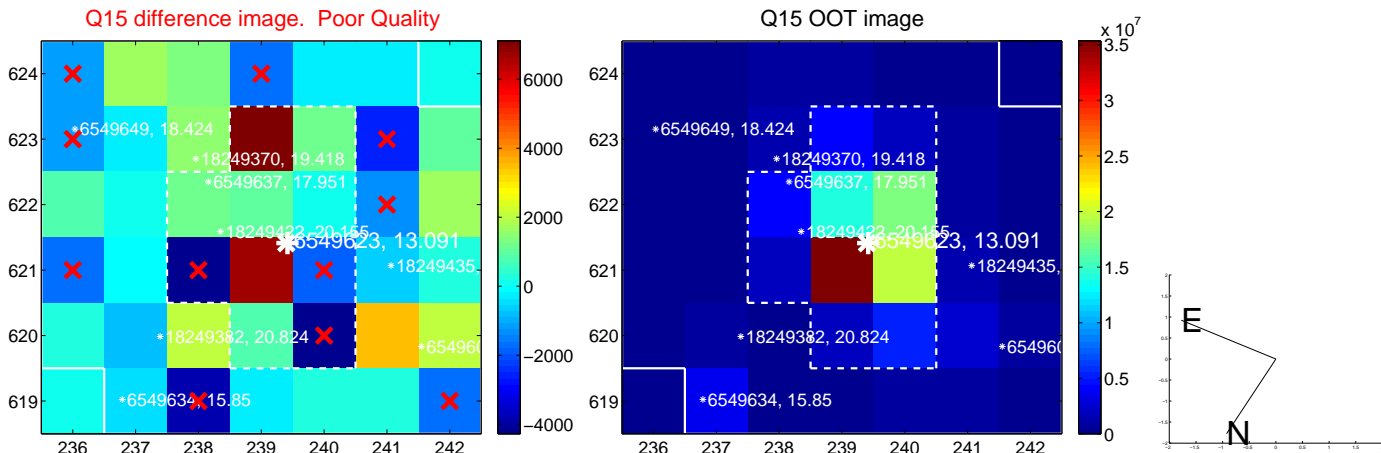
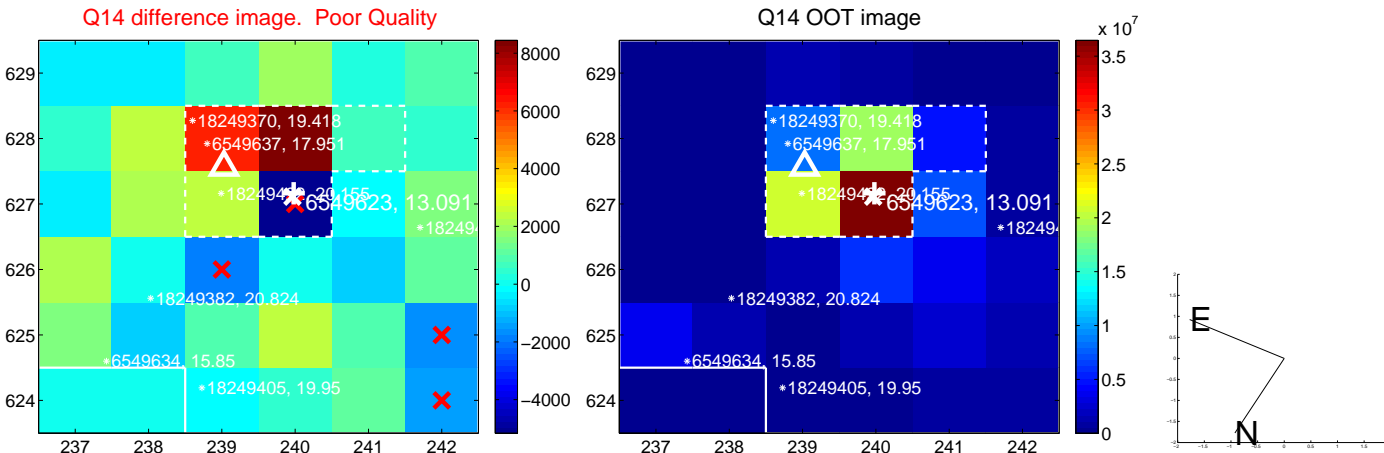
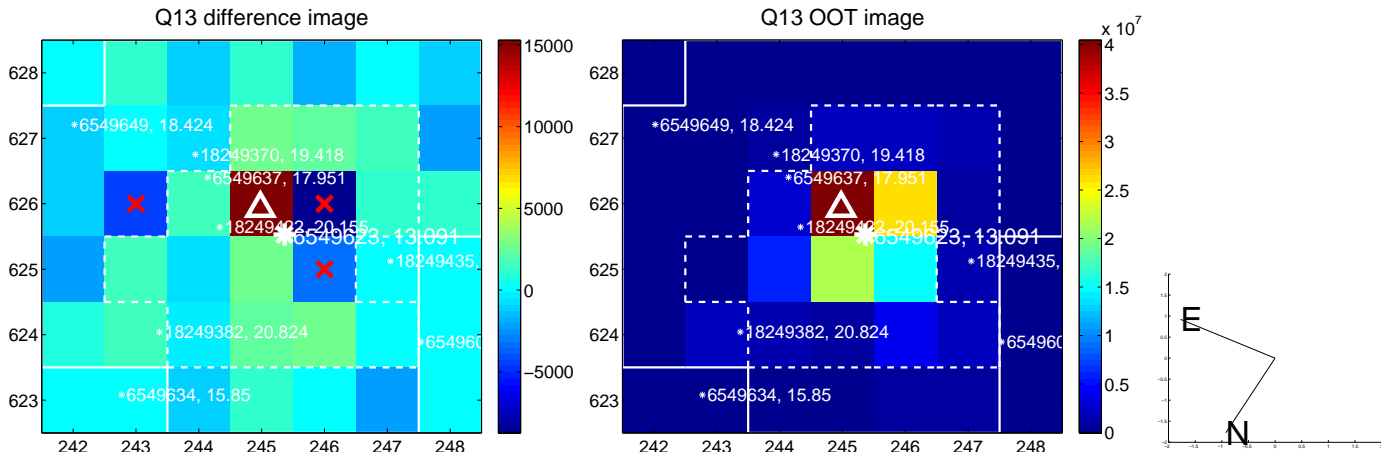
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



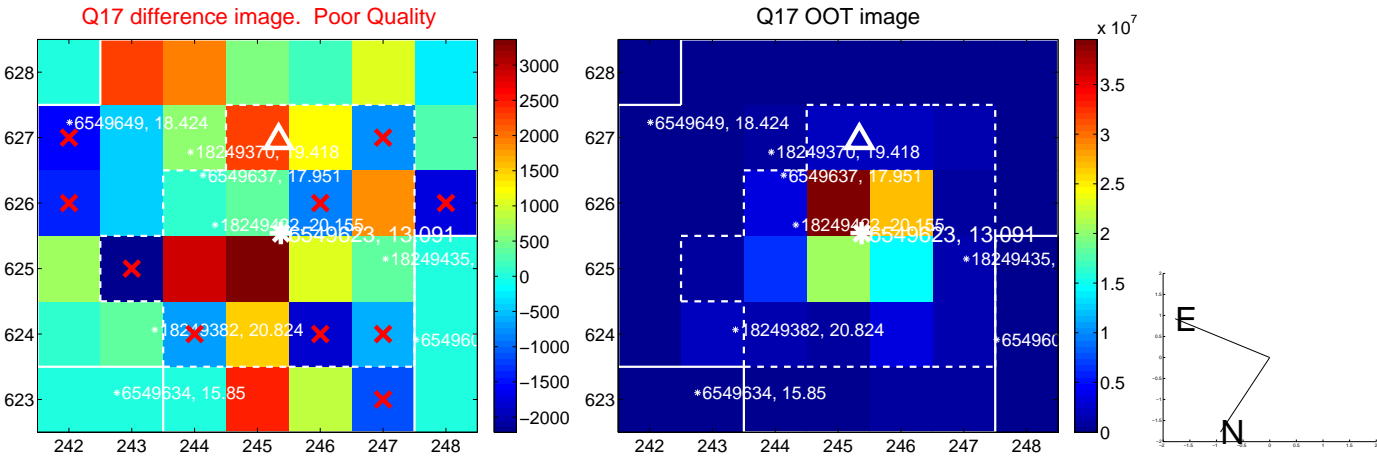
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



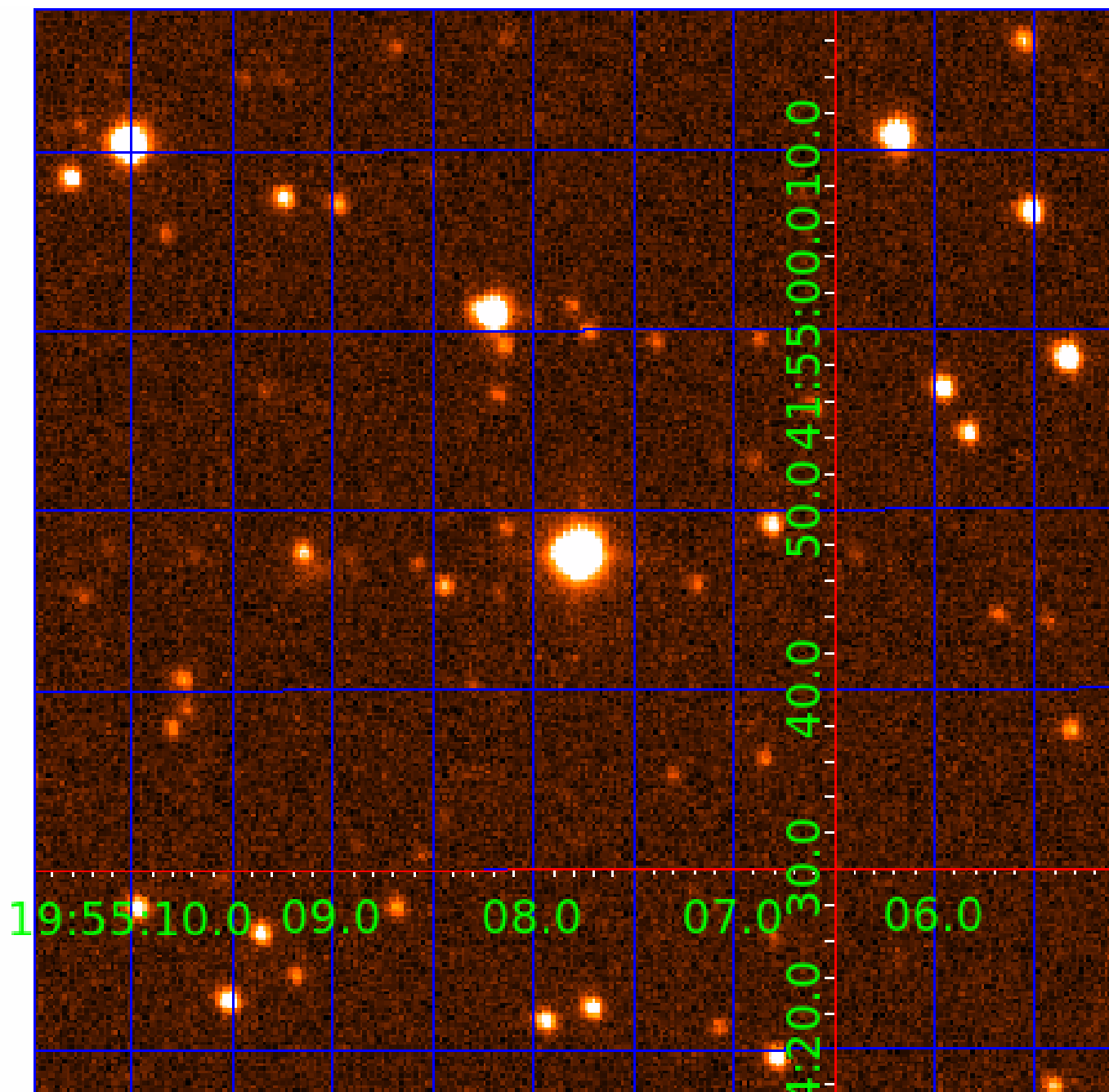
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 006549623

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})
006549623-01	OBS	No	1.328440	132.136240	15.4	1.952	9.6	4.9	3.83	6588	1.85	30847.56
006549623-02	OBS	No	1.328301	132.176545	24.3	9.158	7.9	7.9	3.83	6588	2.04	30851.87
006549623-04	OBS	No	26.765391	132.656906	157.5	4.734	11.3	11.1	3.83	6588	5.59	562.66
006549623-05	OBS	No	53.956704	166.570599	94.9	10.304	11.4	6.0	3.83	6588	4.32	220.94
006549623-06	OBS	No	45.232021	161.430230	191.8	4.494	10.0	9.7	3.83	6588	6.03	279.52
006549623-07	OBS	No	19.648078	136.370609	206.7	1.661	11.0	9.9	3.83	6588	6.45	849.67
006549623-08	OBS	No	31.641250	138.985649	227.6	2.093	9.6	8.1	3.83	6588	6.70	450.13
006549623-09	OBS	No	28.804836	142.439511	168.3	4.657	8.9	9.4	3.83	6588	5.63	510.18

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006549623-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
006549623-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
006549623-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
006549623-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006549623-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006549623-07	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_MEAS
006549623-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006549623-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS

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

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

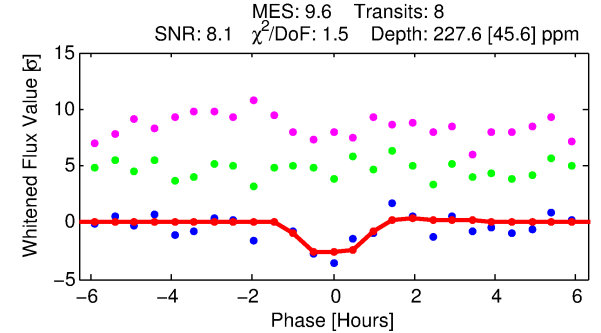
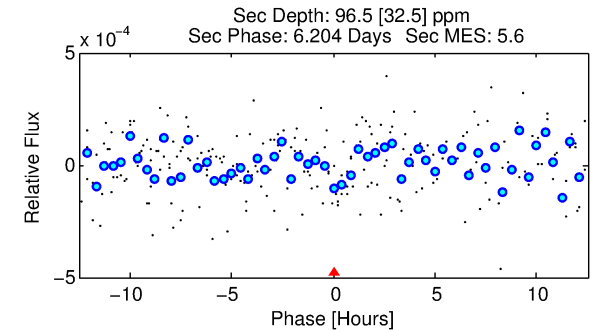
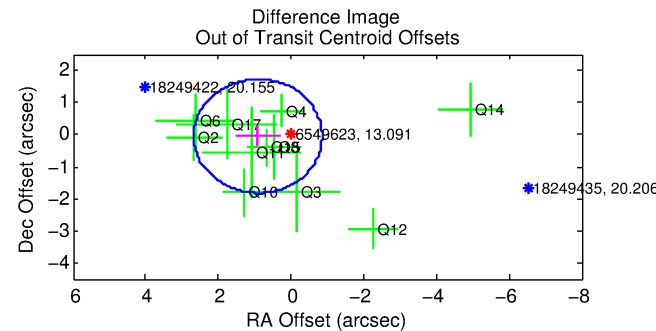
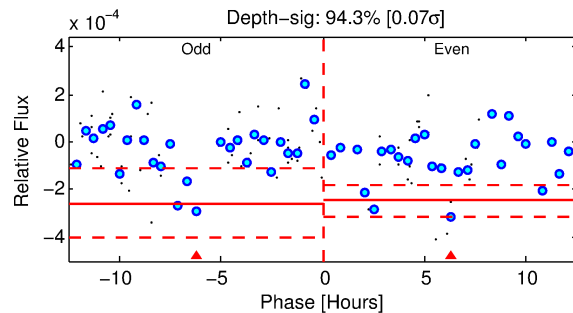
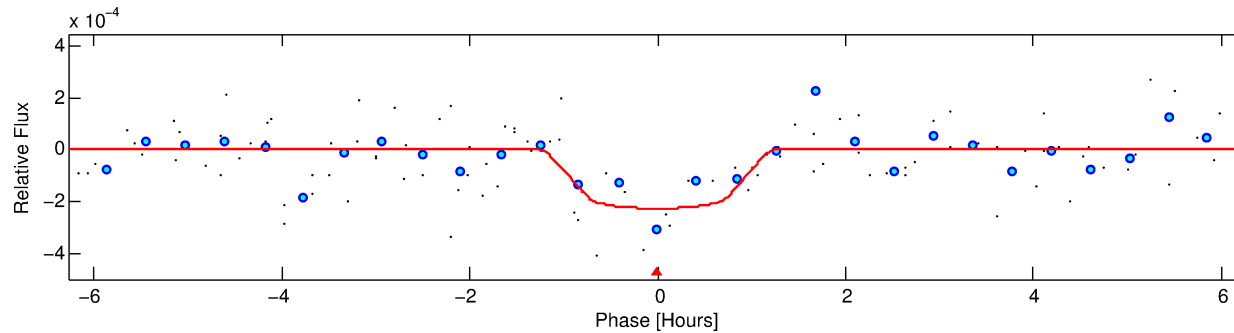
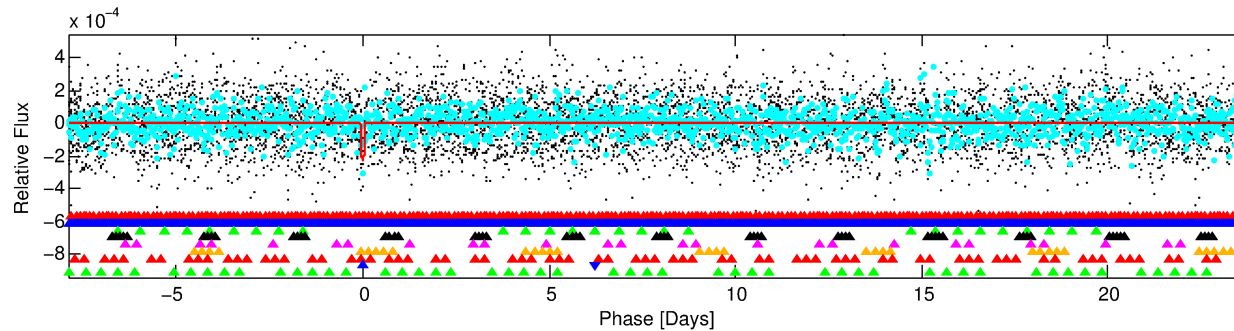
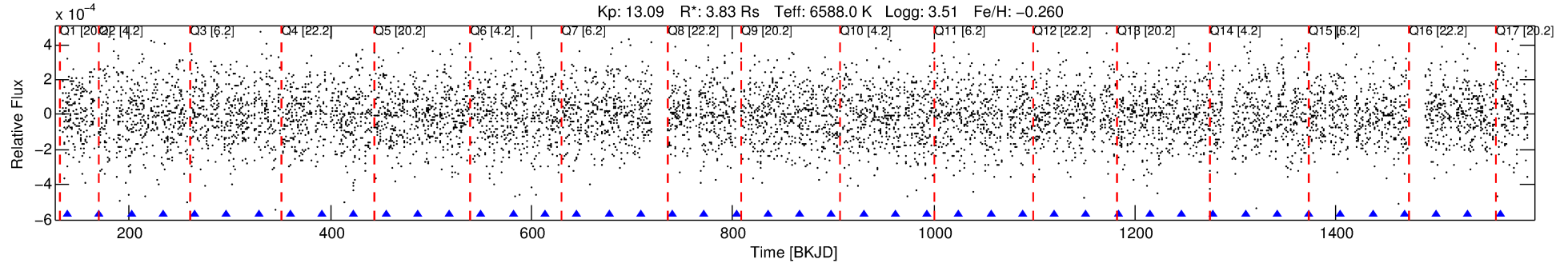
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006549623-08

No Significant Match Found

DV One-Page Summary

KIC: 6549623 Candidate: 8 of 9 Period: 31.641 d



DV Fit Results:

Period = 31.64125 [0.00032] d
Epoch = 138.9856 [0.0095] BKJD
Rp/R* = 0.0160 [0.0284]
a/R* = 56.59 [592.30]
b = 0.89 [2.48]
Seff = 450.13 [289.50]
Teq = 1175 [189] K
Rp = 6.70 [12.20] Re
a = 0.2348 [0.0938] AU
Ag = 65.13 [235.15] [0.27 σ]
Teffp = 5159 [4587] K [0.87 σ]

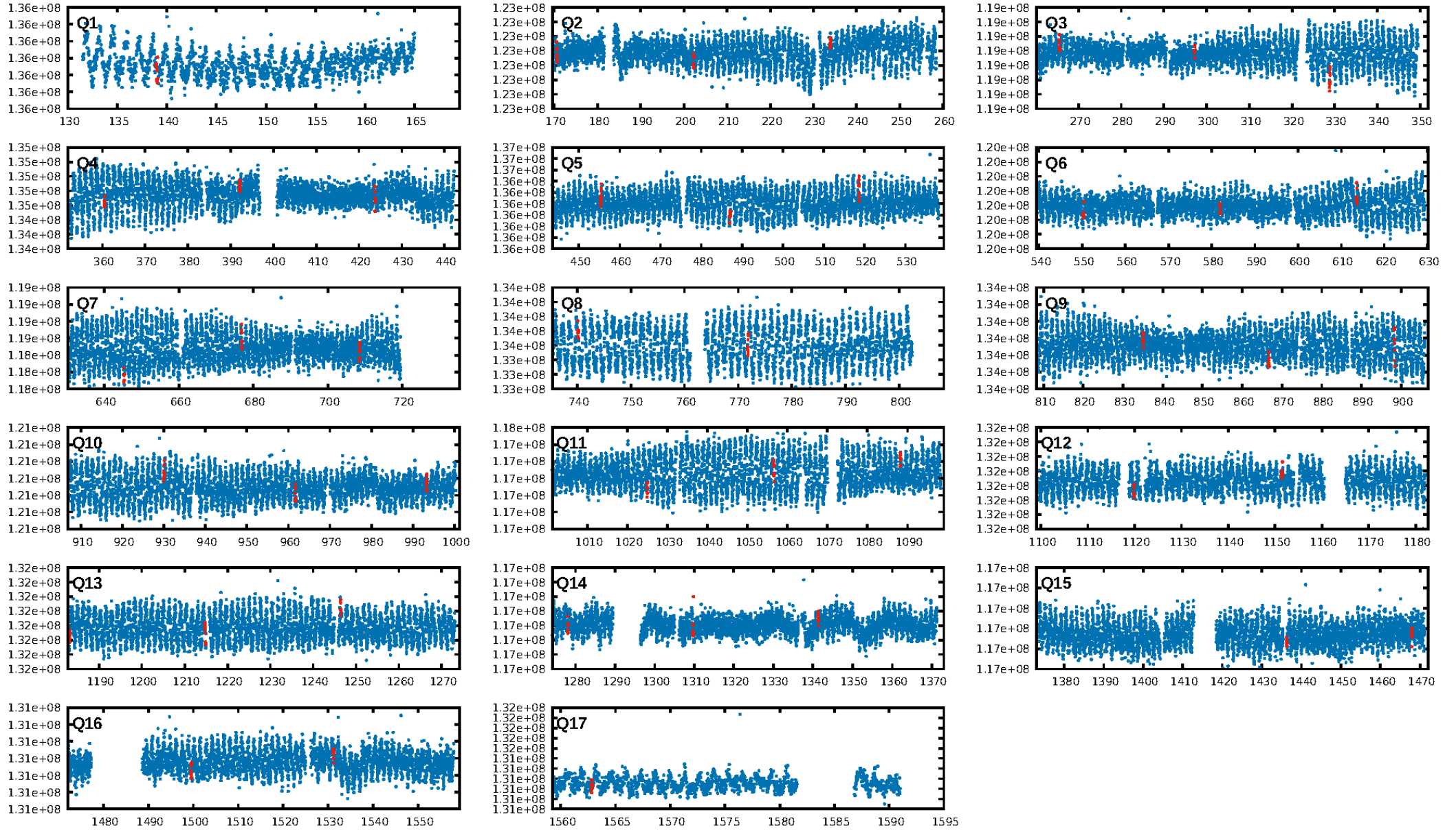
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [13.33 σ]
LongPeriod-sig: 100.0% [65.80 σ]
ModelChiSquare2-sig: 18.6%
ModelChiSquareGof-sig: 98.4%
Bootstrap-pfa: 1.97e-08
RollingBand-fgt: 1.00 [8/8]
GhostDiagnostic-chr: 21.34
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.917 arcsec [1.55 σ]
KicOffset-rm: 0.898 arcsec [1.39 σ]
OotOffset-st: 4/3/3/1 [11]
KicOffset-st: 4/3/3/1 [11]
DiffImageQuality-fgm: 0.36 [4/11]
DiffImageOverlap-fno: 0.53 [9/17]

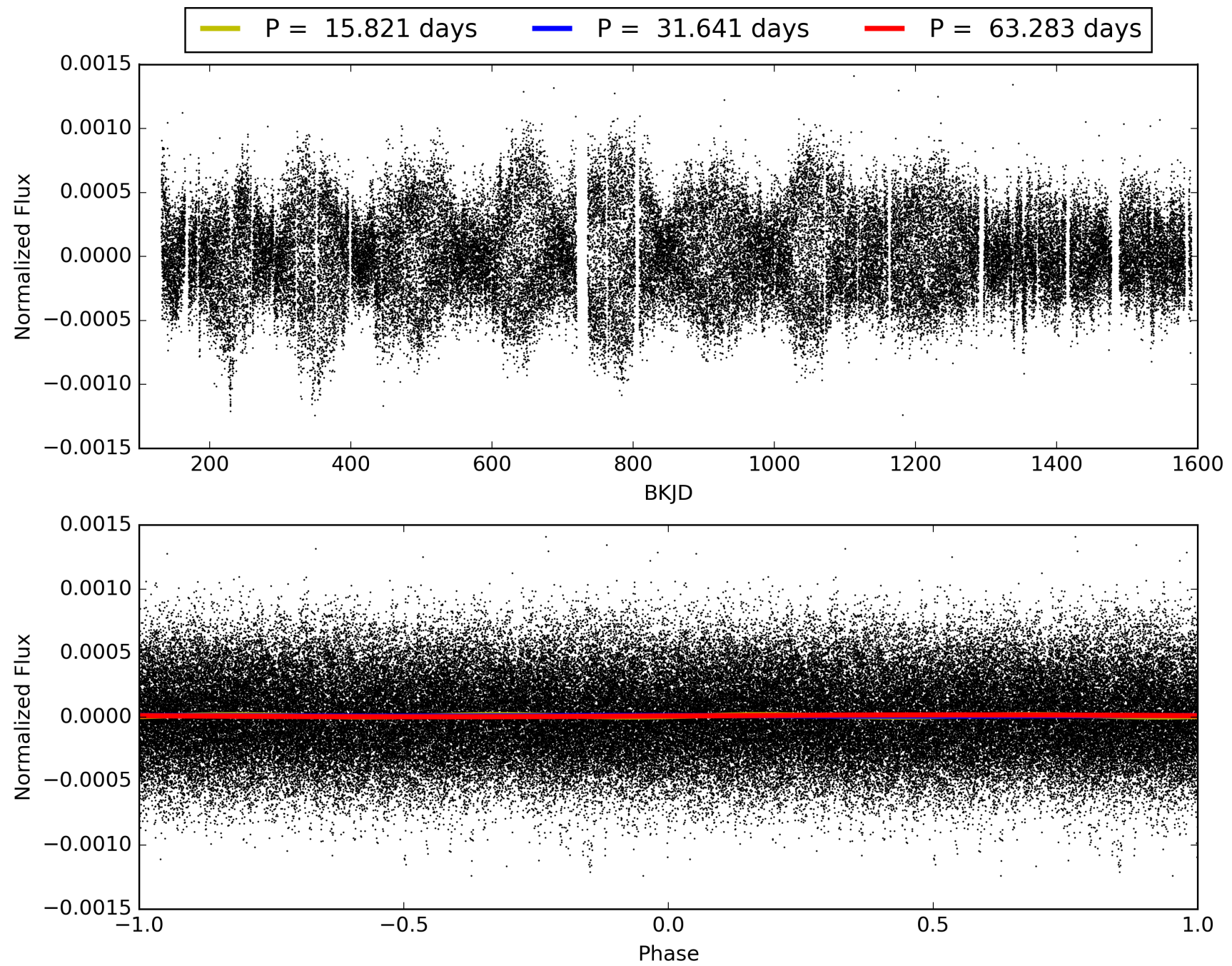
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 07:30:06 Z

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

TCE 006549623-08, PDC Light Curves

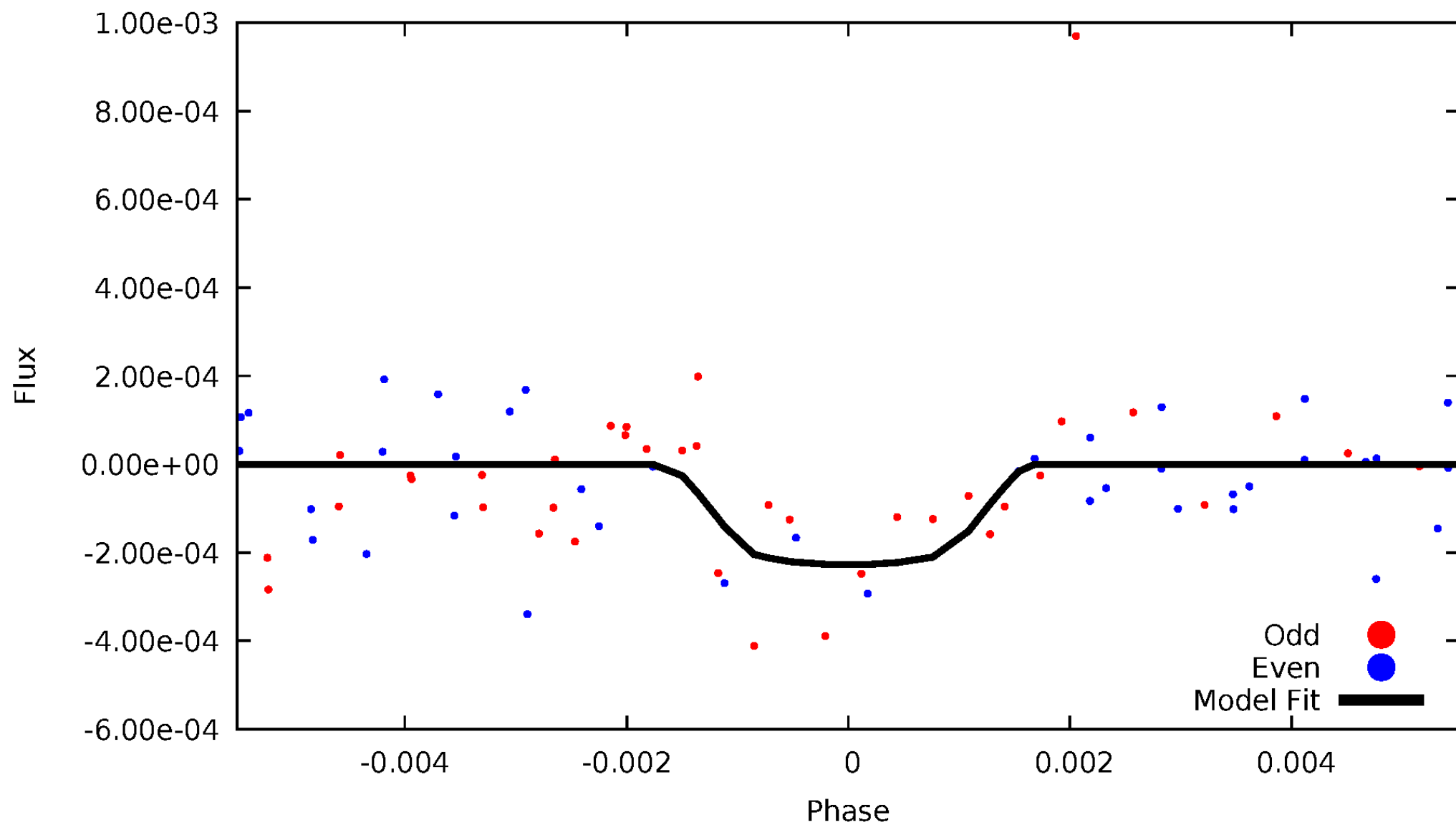


TCE 006549623-08



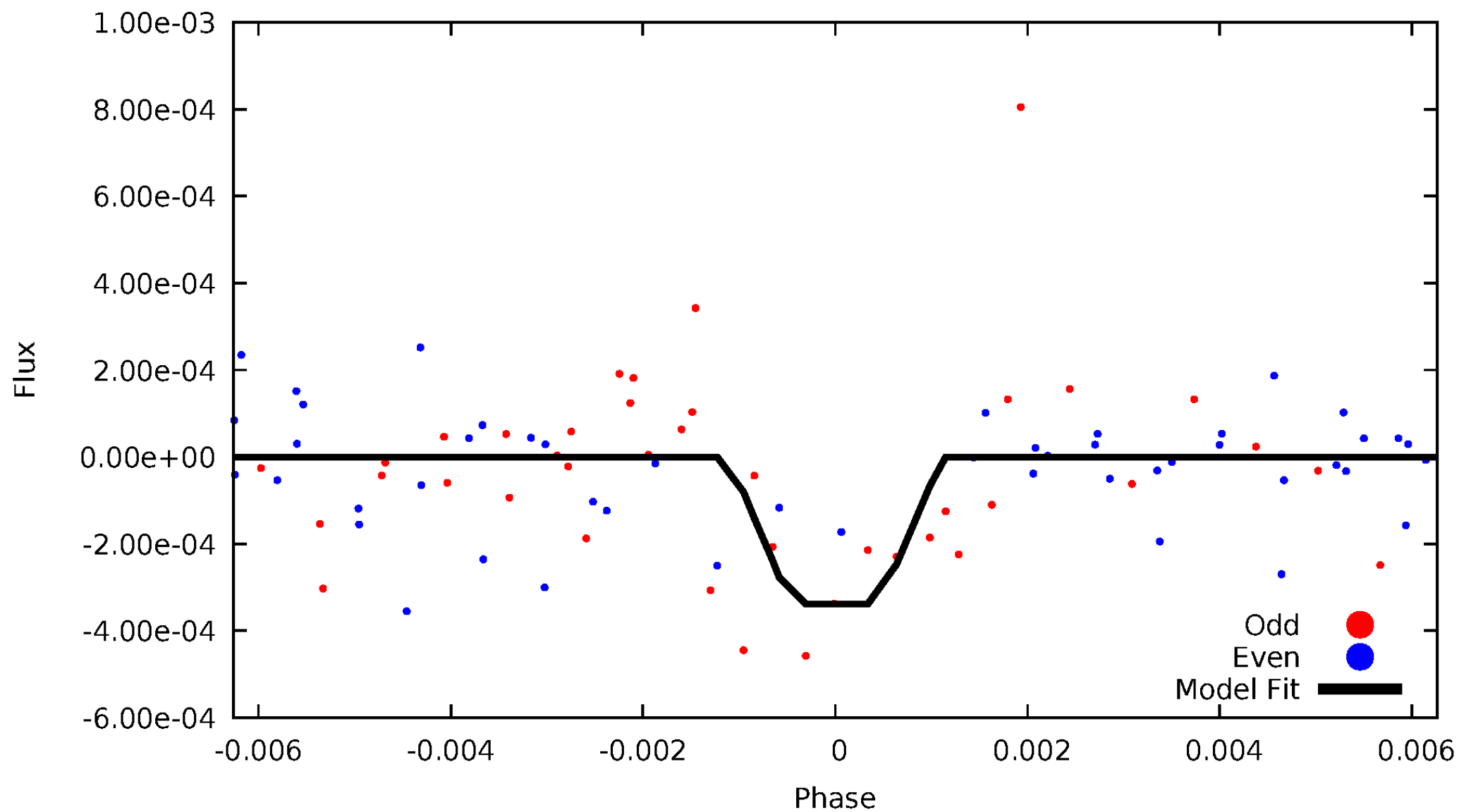
DV Odd/Even

TCE 006549623-08



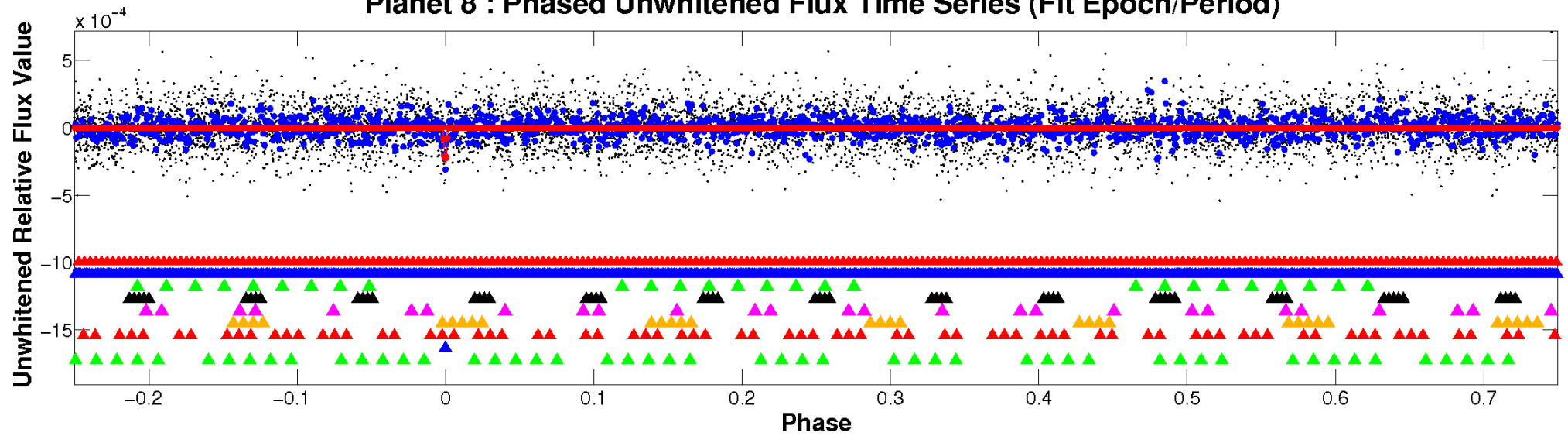
ALT Odd/Even

TCE 006549623-08

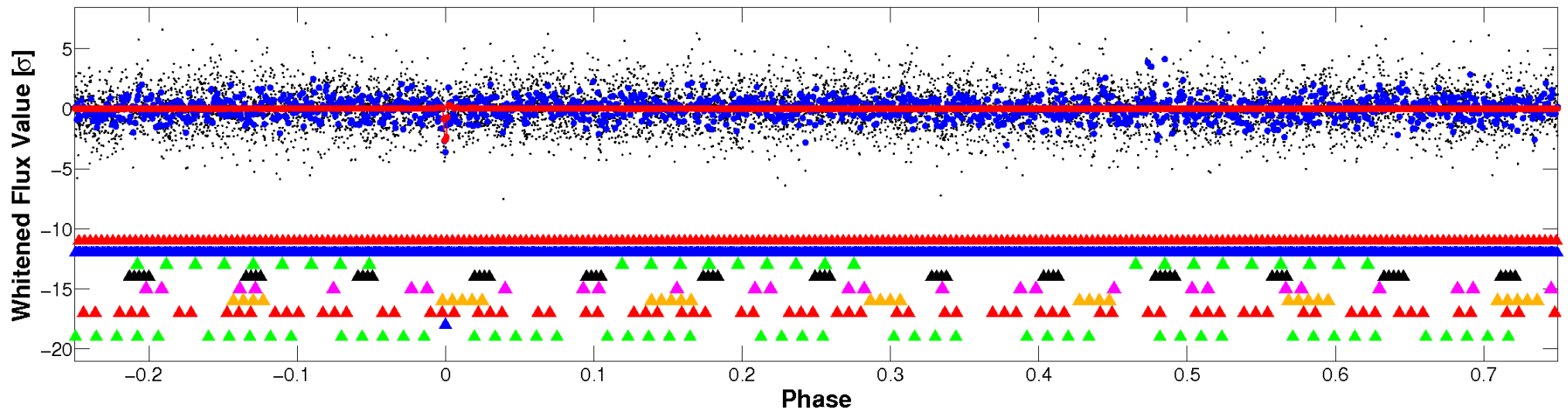


Non-Whitened Vs. Whitened Light Curve

Planet 8 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

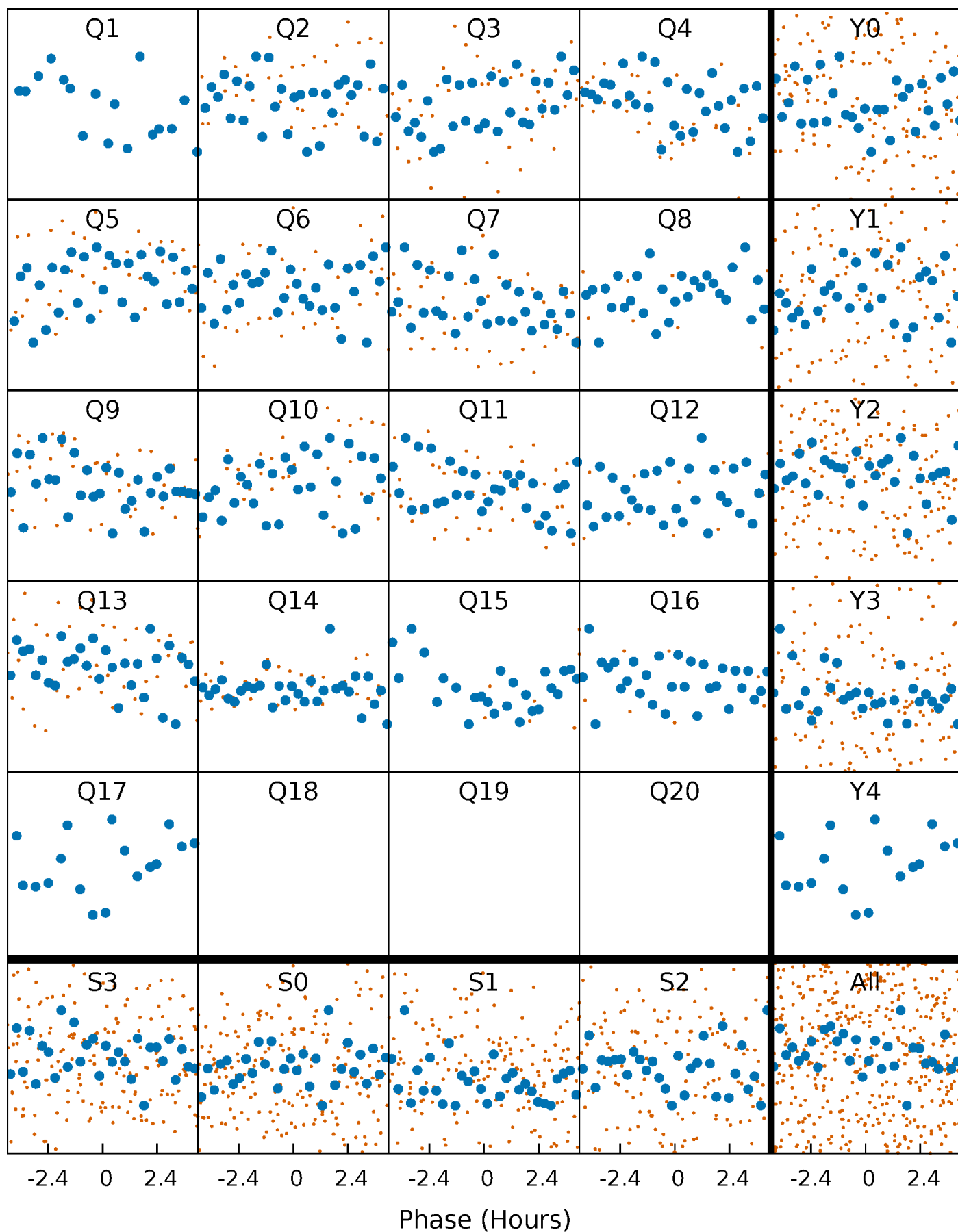


Planet 8 : Phased Whitened Flux Time Series (Fit Epoch/Period)



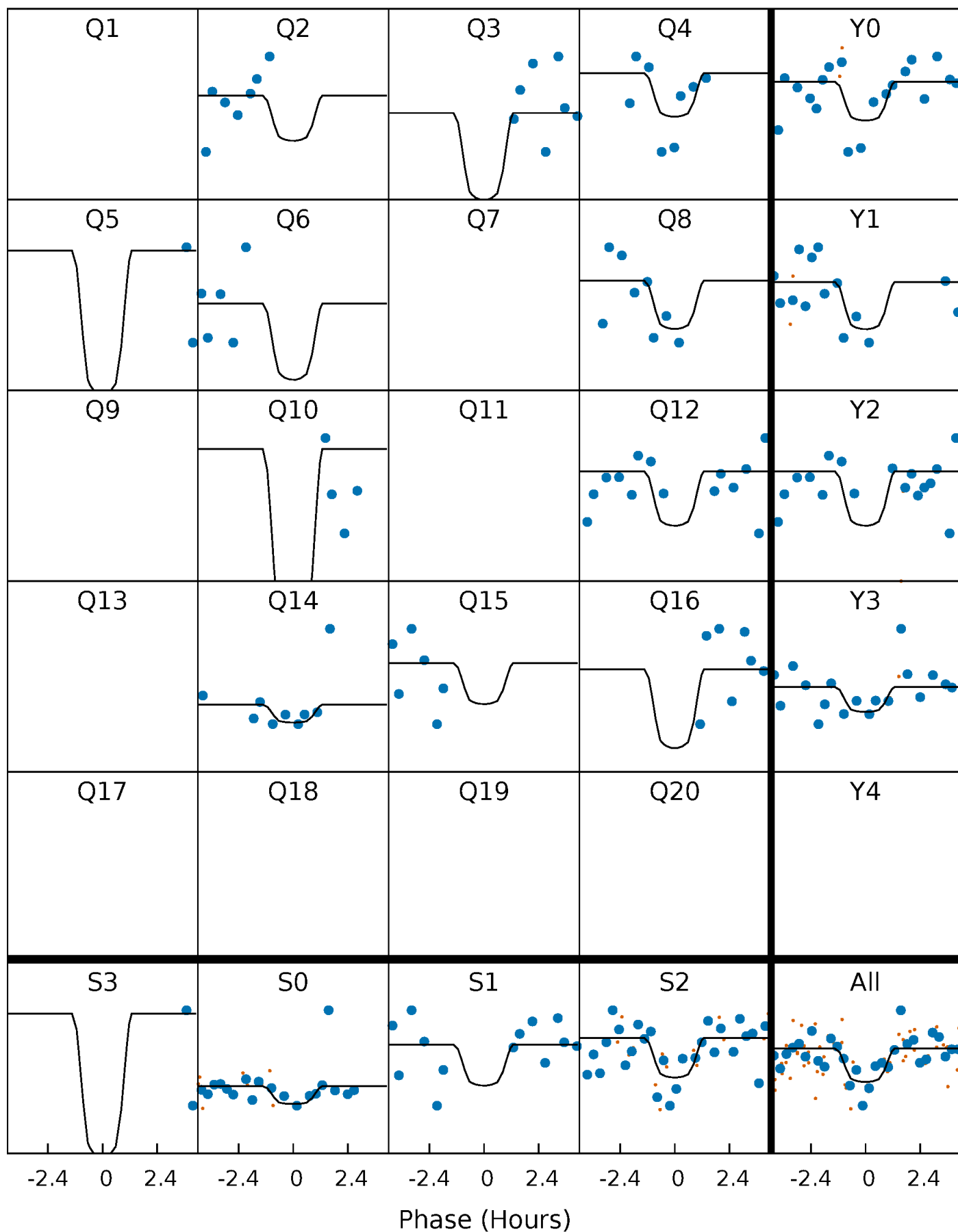
PDC Quarter-Phased Transit Curves

TCE 006549623-08 P= 31.641250 Days $T_0=138.985649$ (BKJD)



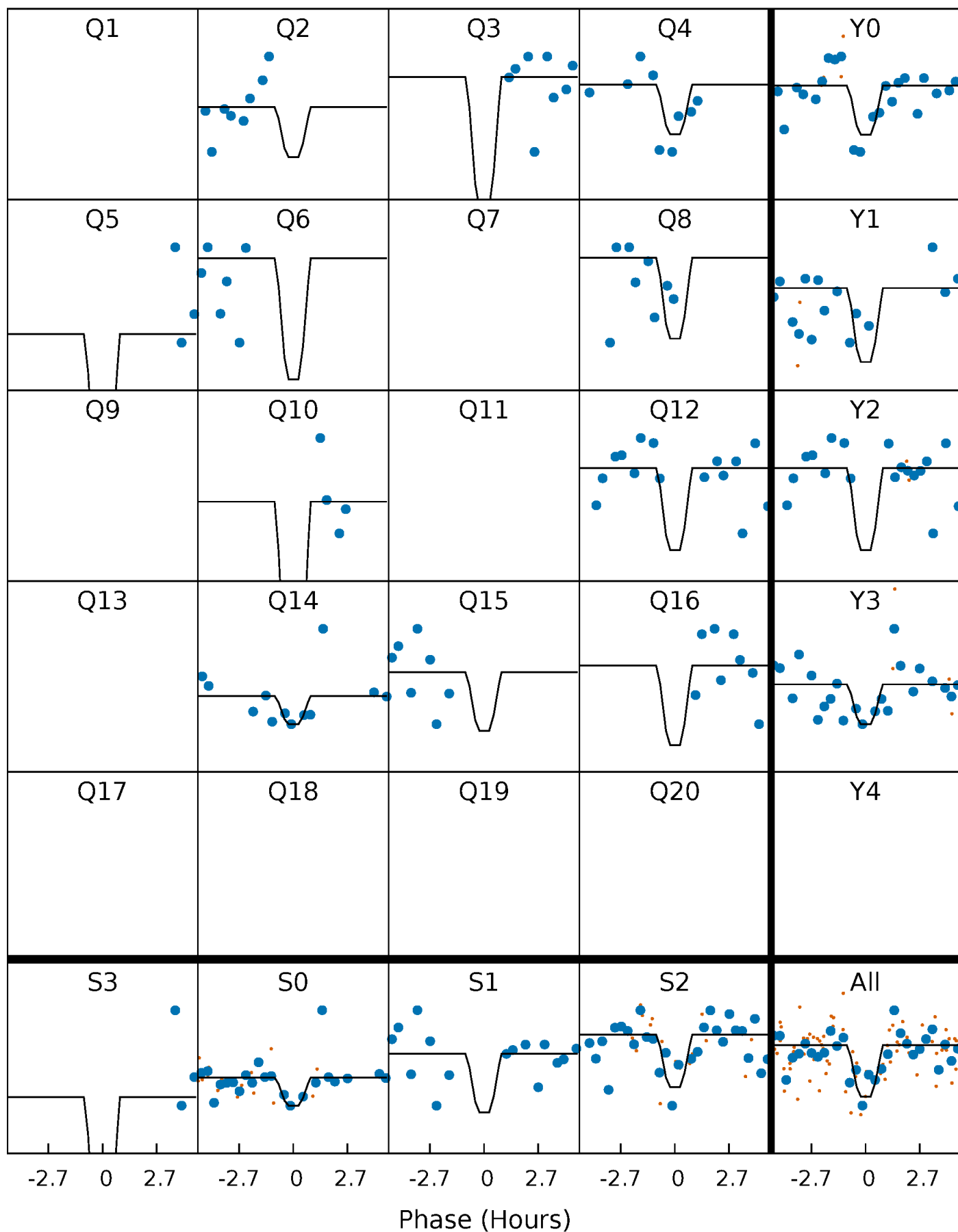
DV Quarter-Phased Transit Curves

TCE 006549623-08 P= 31.641250 Days $T_0=138.985649$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

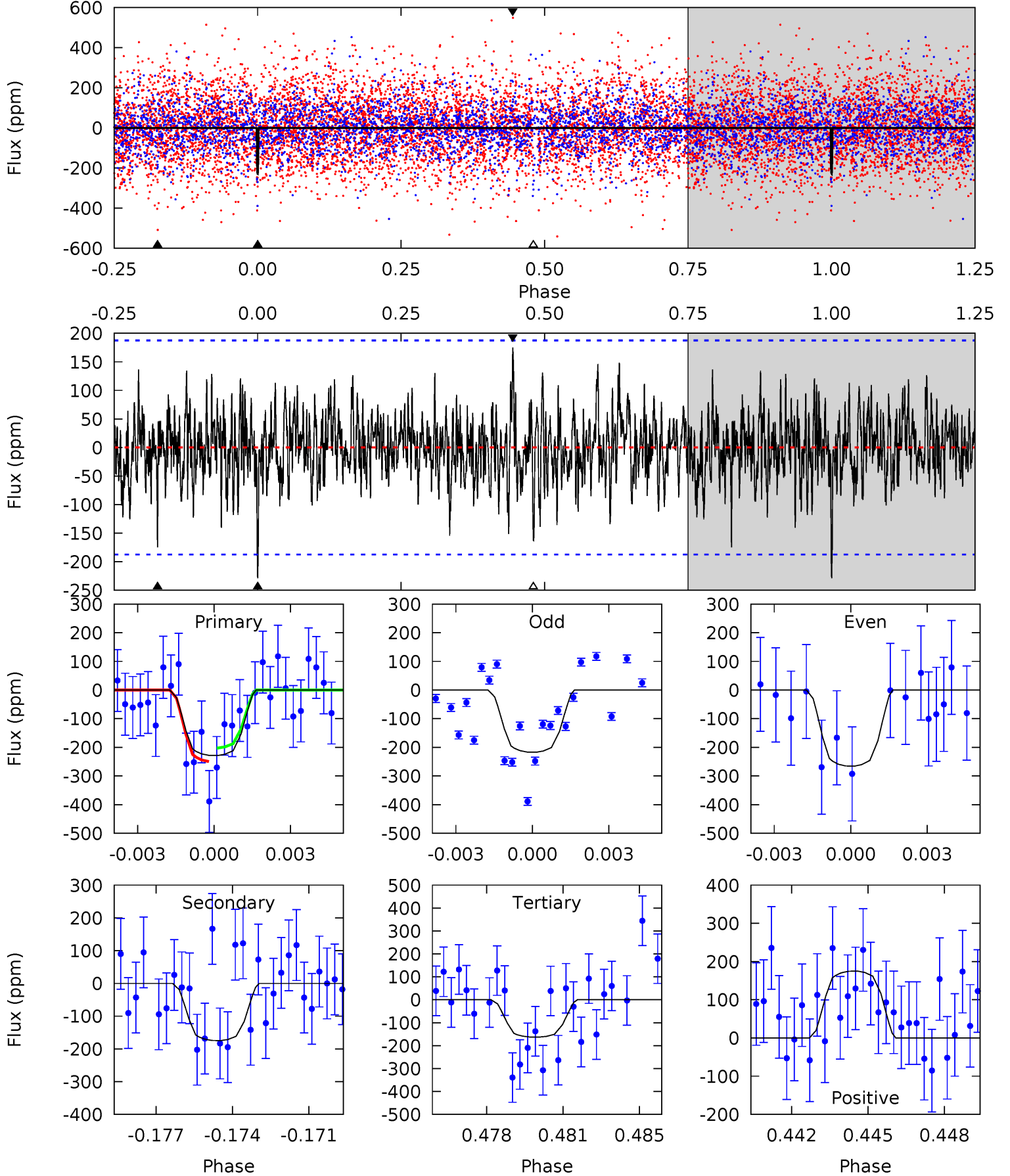
TCE 006549623-08 P= 31.641276 Days $T_0=138.988646$ (BKJD)



DV Model-Shift Uniqueness Test

006549623-08, P = 31.641250 Days, E = 107.344399 Days

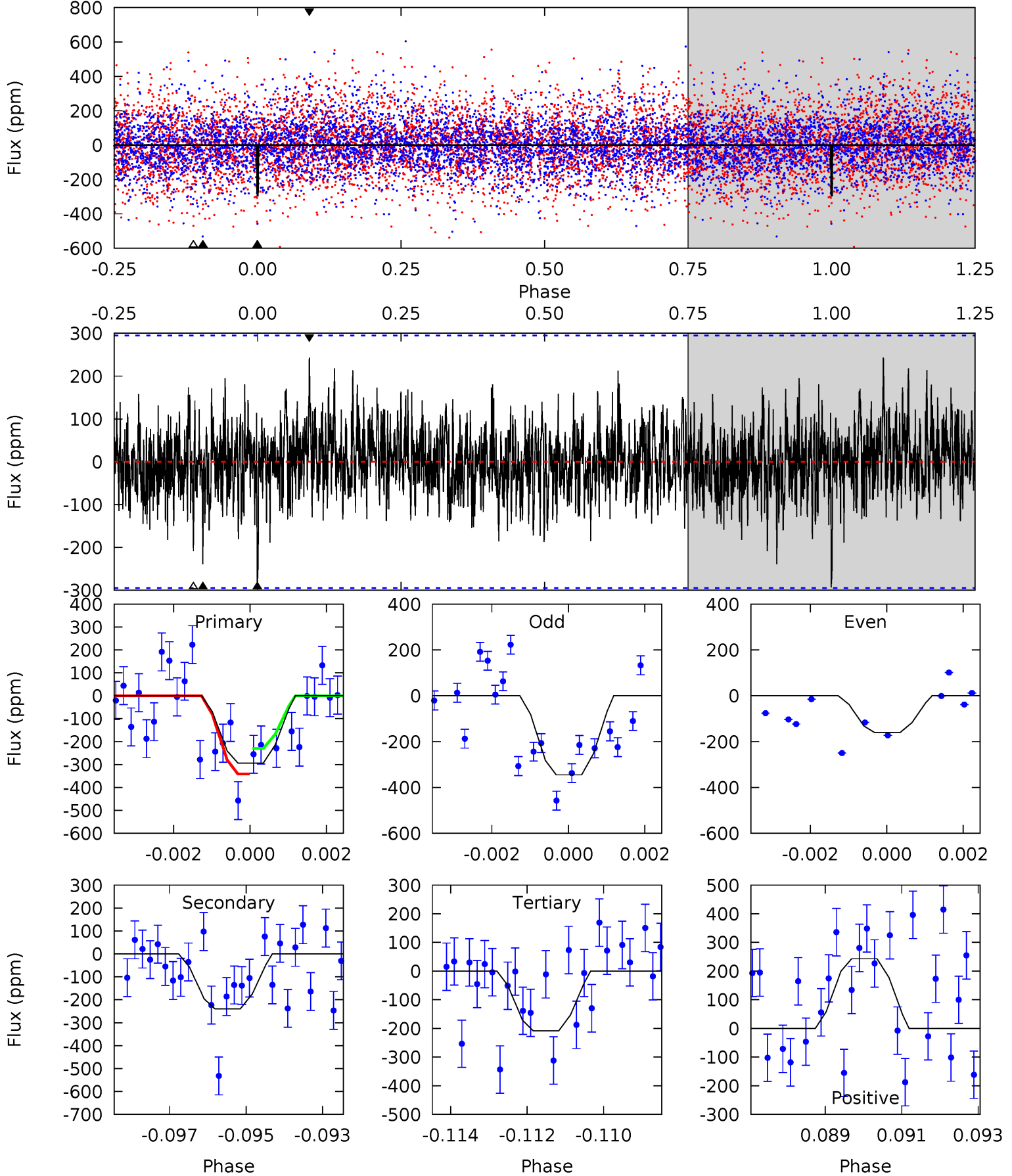
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.41	4.90	4.57	4.90	5.25	2.96	1.36	1.84	1.51	0.33	-0.01	0.59	0.89	0.43	0.66



Alt Model-Shift Uniqueness Test

006549623-08, P = 31.641276 Days, E = 107.347370 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.31	4.33	3.78	4.40	5.33	3.10	1.15	1.53	0.91	0.55	-0.07	1.45	0.90	0.45	0.98



Stellar Parameters For KIC 006549623

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6588^{+166}_{-199}	$3.507^{+0.368}_{-0.092}$	$-0.260^{+0.350}_{-0.250}$	$3.834^{+0.407}_{-1.626}$	$1.724^{+0.184}_{-0.428}$	$0.043^{+0.133}_{-0.013}$
	+3%/-3%	+10%/-3%	+135%/-96%	+11%/-42%	+11%/-25%	+308%/-30%
Source	PHO1	FLK73	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 006549623-08 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-175 ± 36	$9.99^{+9.67}_{-7.00}$	1613^{+90}_{-152}	4807^{+4331}_{-1066}	51^{+501}_{-38}
Alt.	-239 ± 55	$11.39^{+9.39}_{-7.44}$	1613^{+80}_{-162}	4857^{+3584}_{-998}	55^{+422}_{-39}

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 $A_{obs} \gg 1.0$

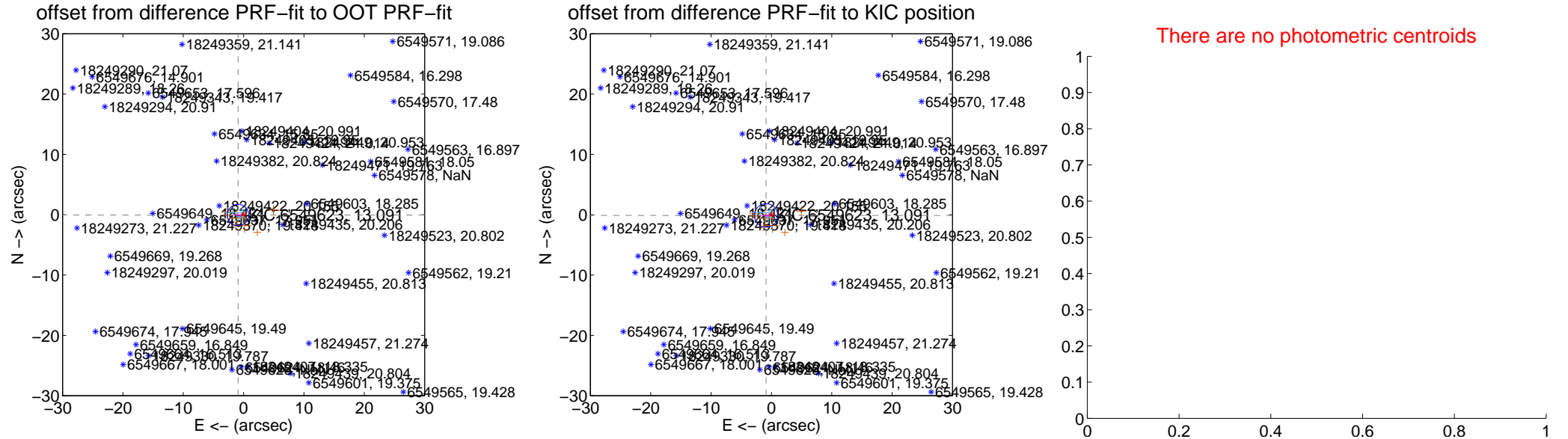
DV Centroid Data

Supplemental centroid analysis for 006549623-08. Kepler magnitude: 13.09. Transit SNR 8.12

There are 4 quarters with good PRF difference image offsets

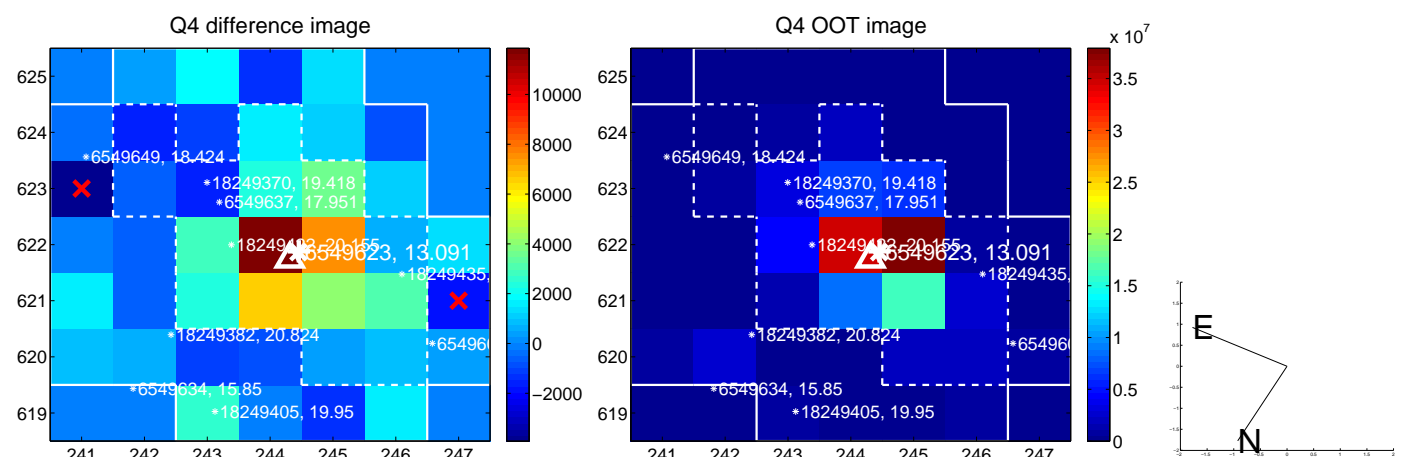
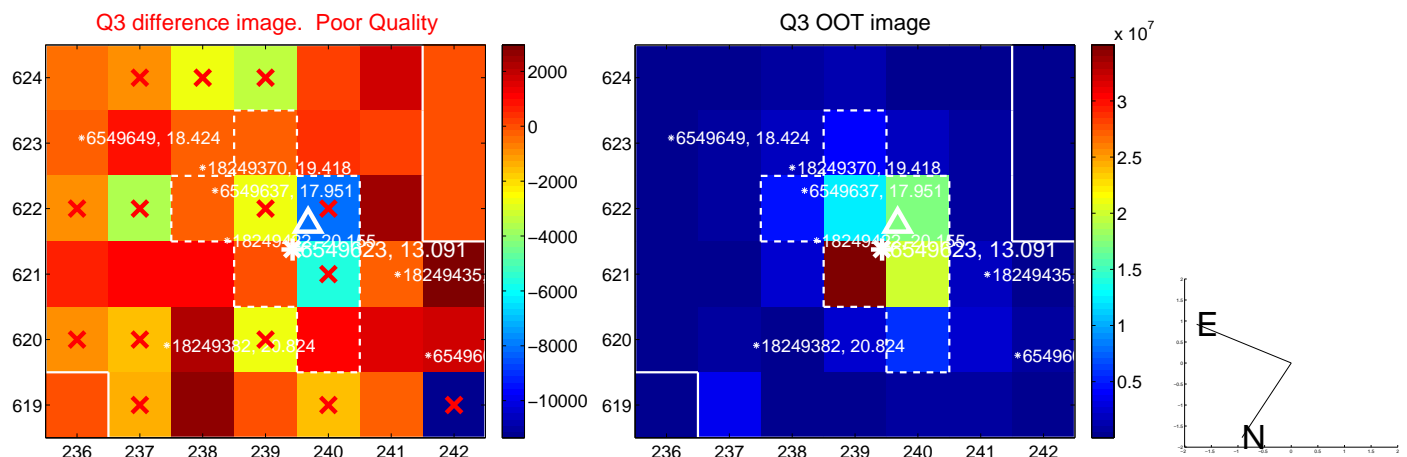
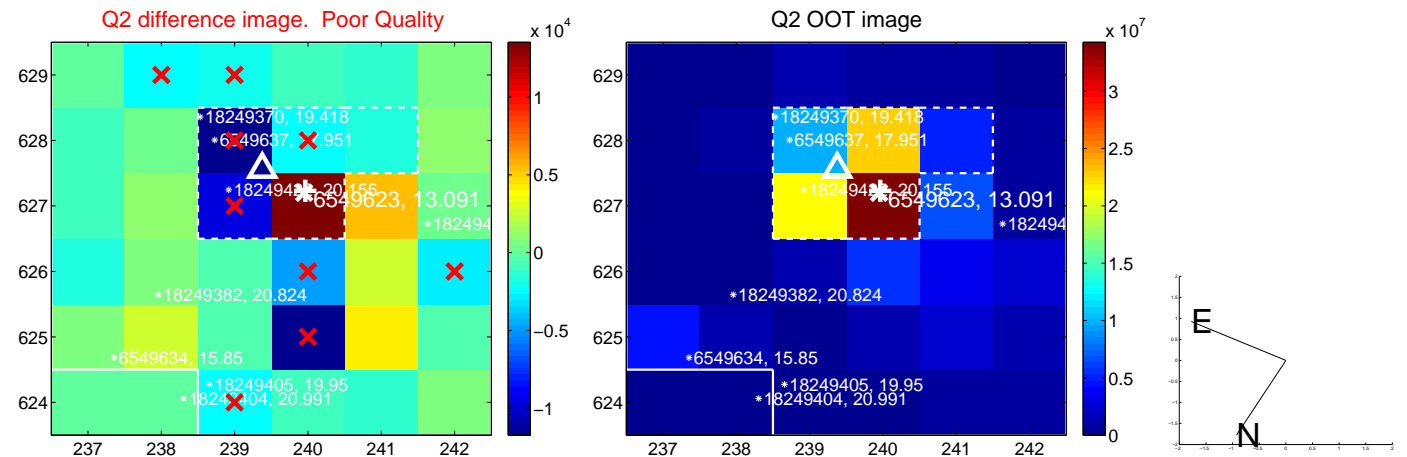
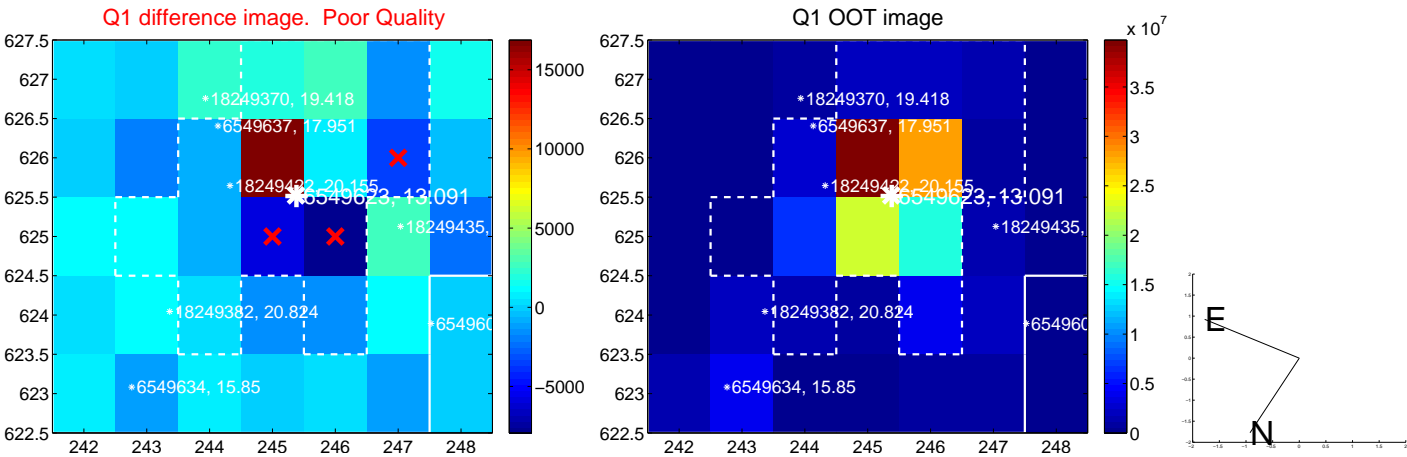
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.917 ± 0.590	1.55	0.916 ± 0.593	-0.050 ± 0.285
PRF-fit source offset from KIC position	0.898 ± 0.647	1.39	0.889 ± 0.660	-0.126 ± 0.358
photometric centroid source offset	—	—	—	—

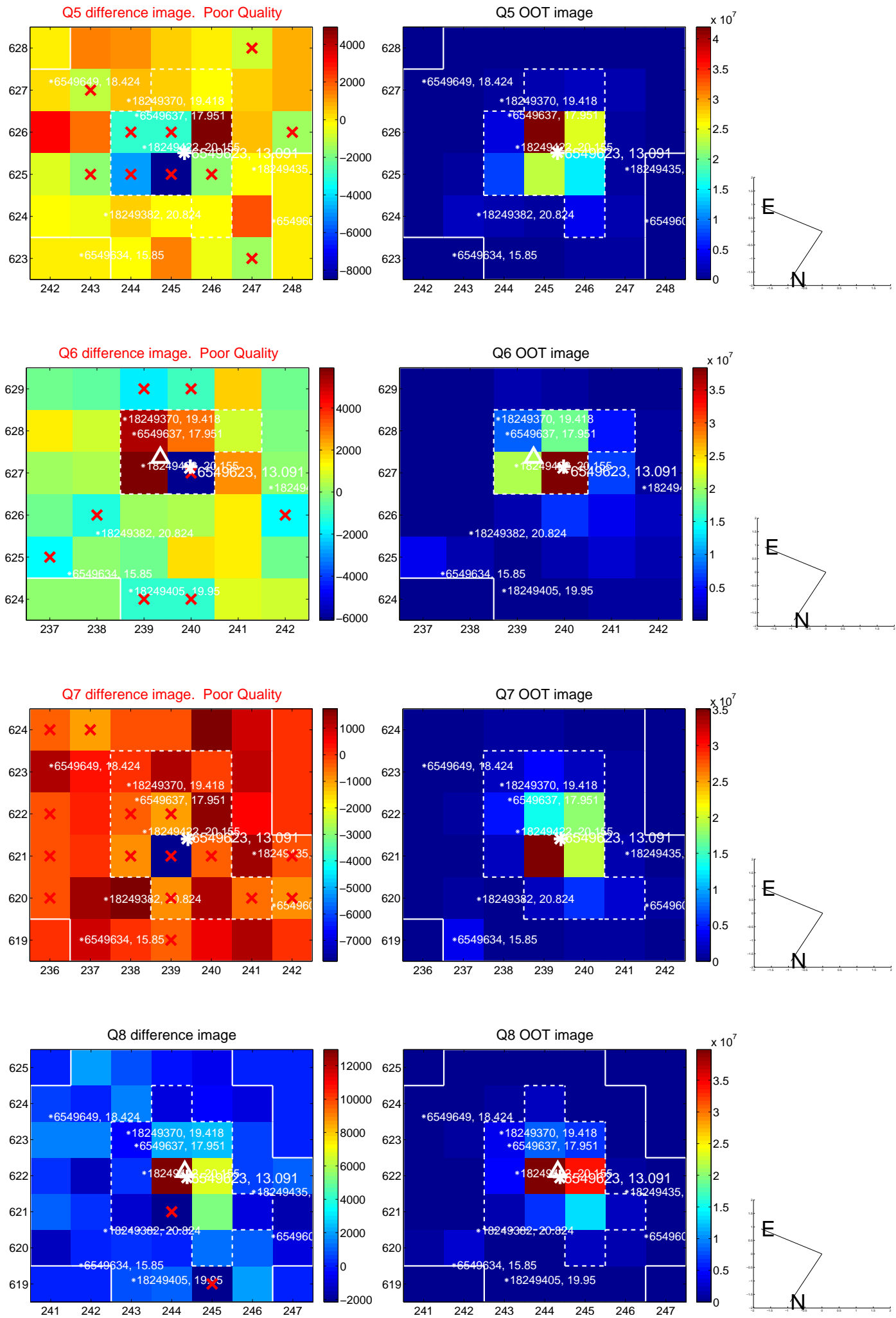


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

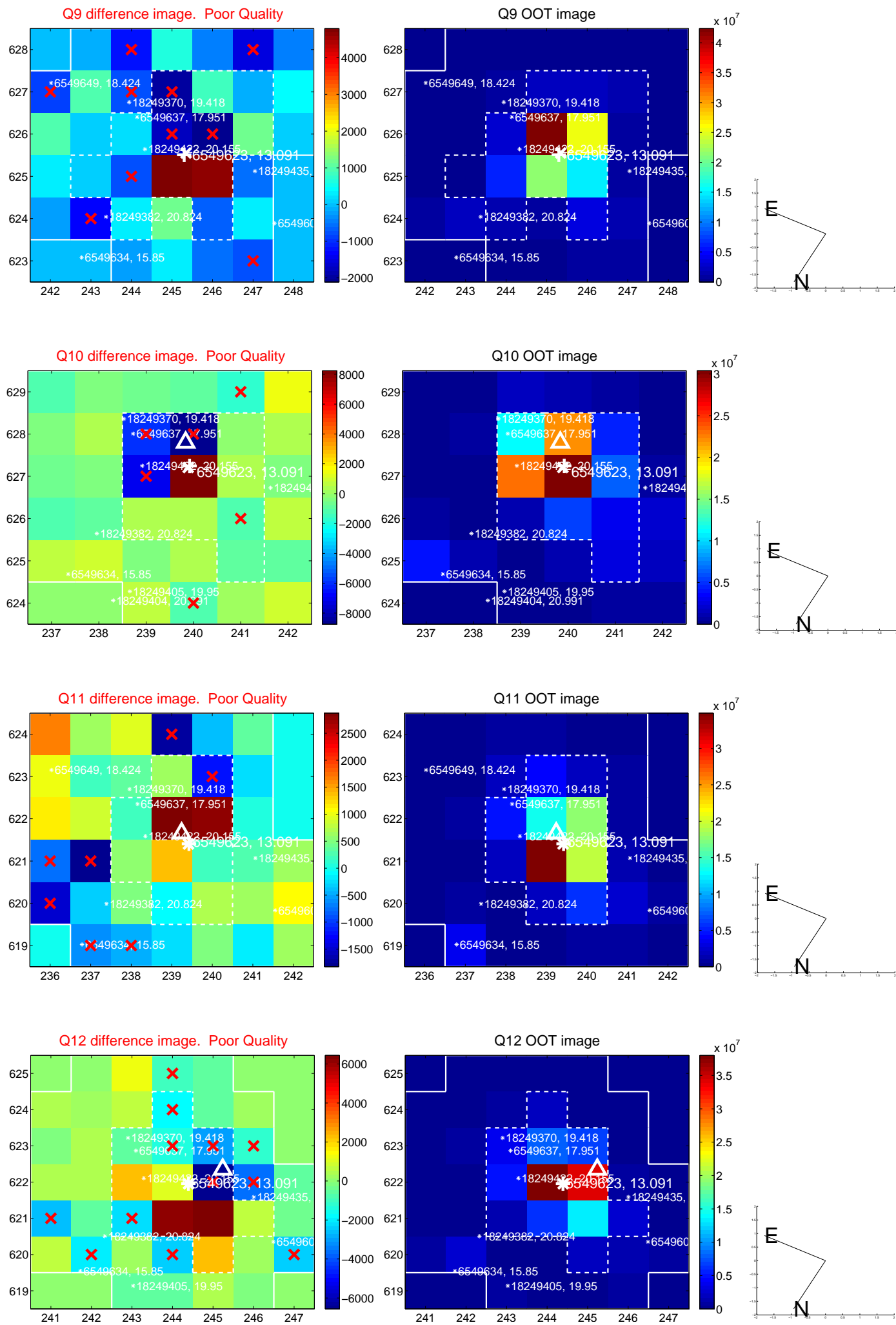
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



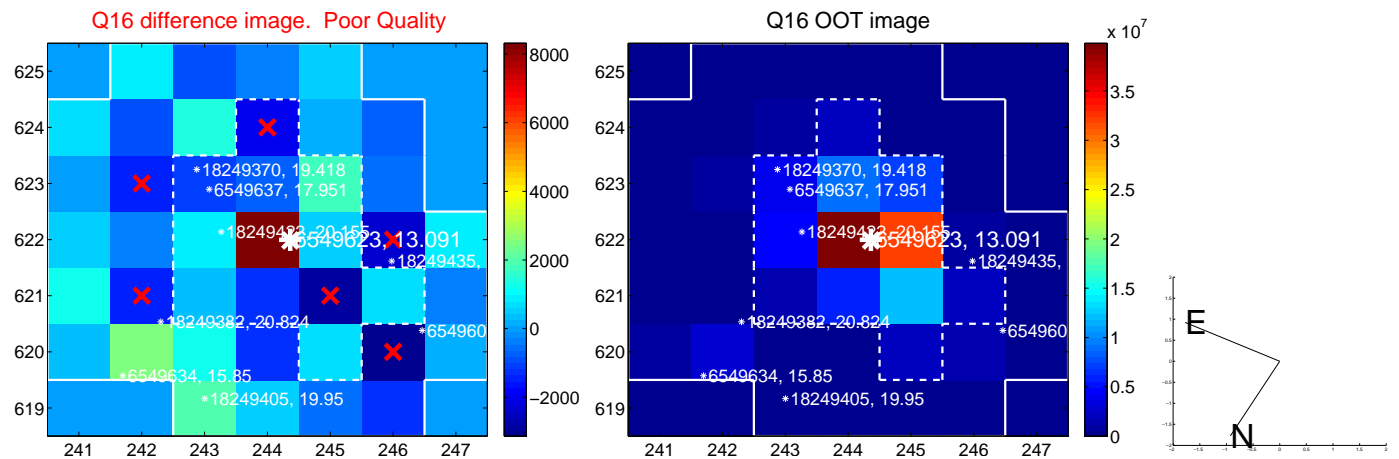
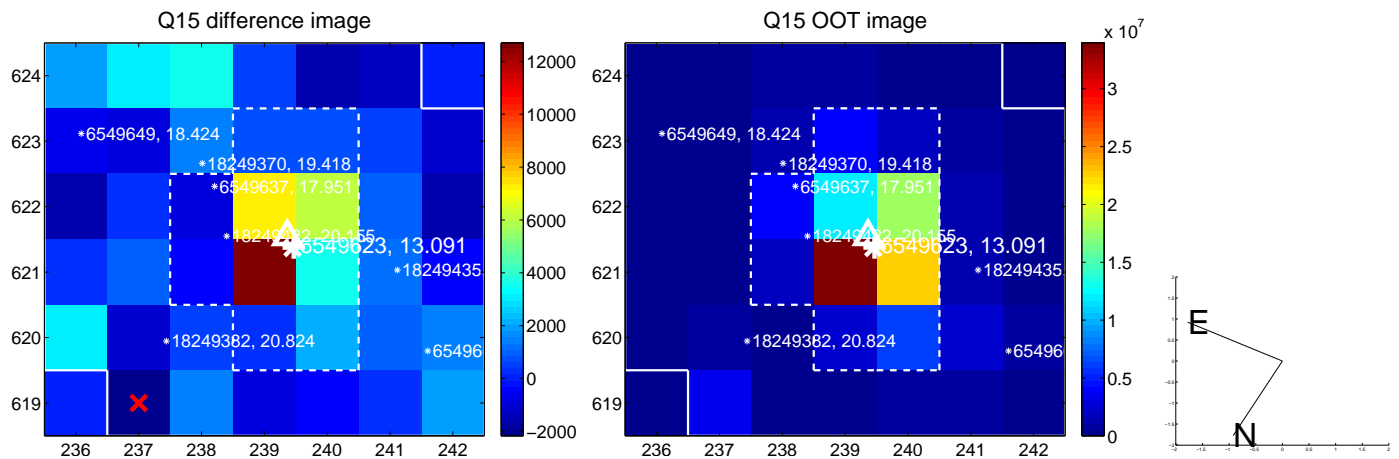
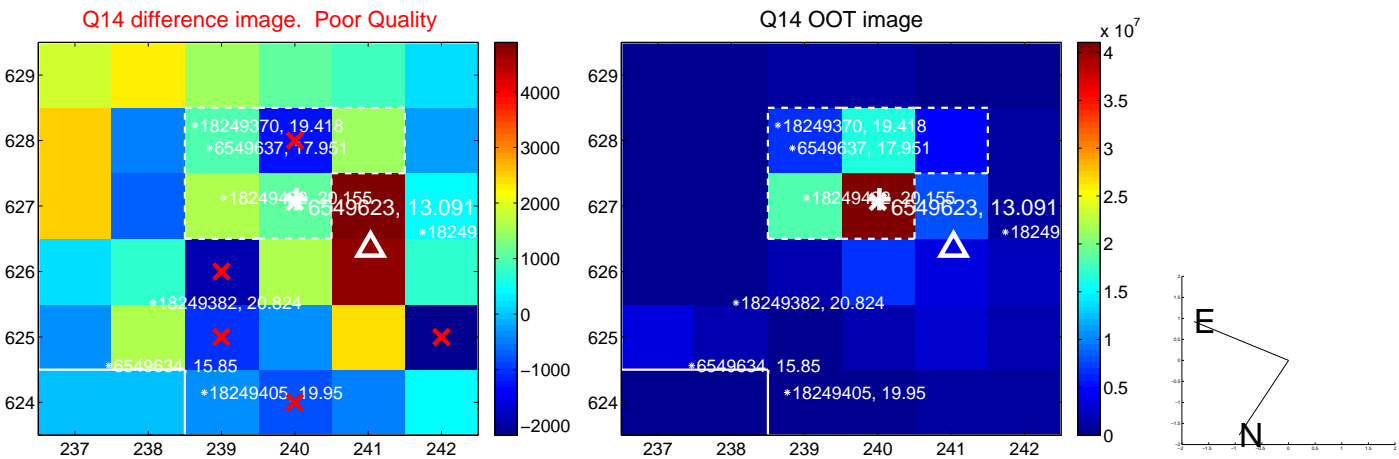
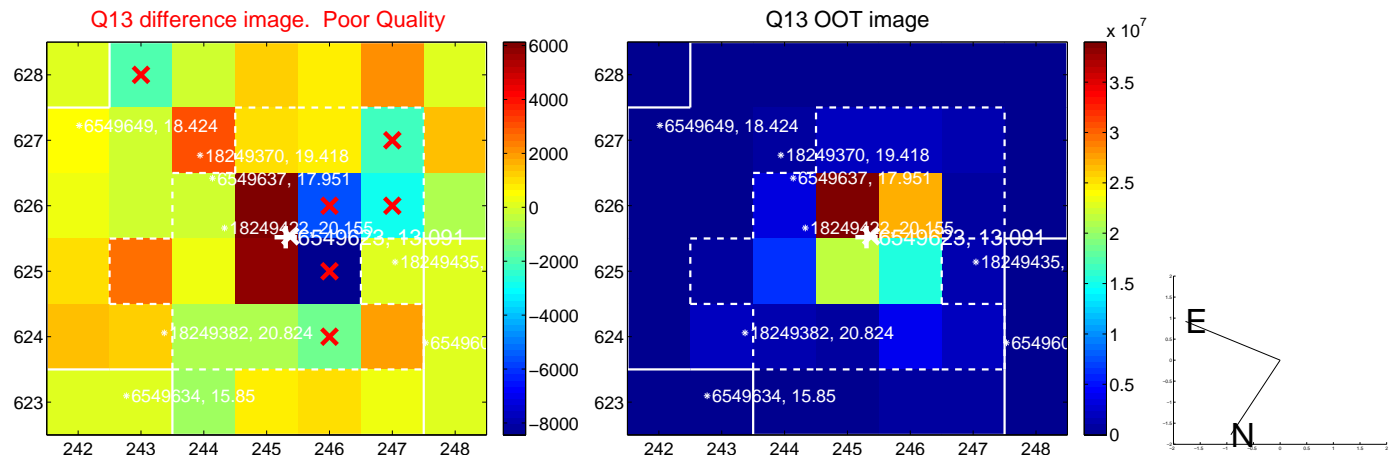
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



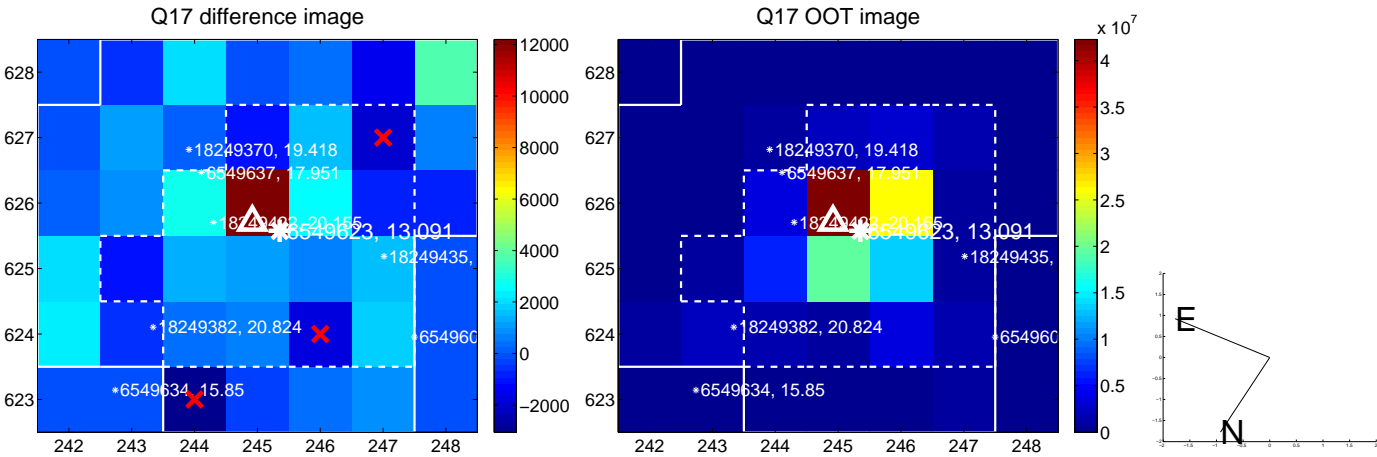
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



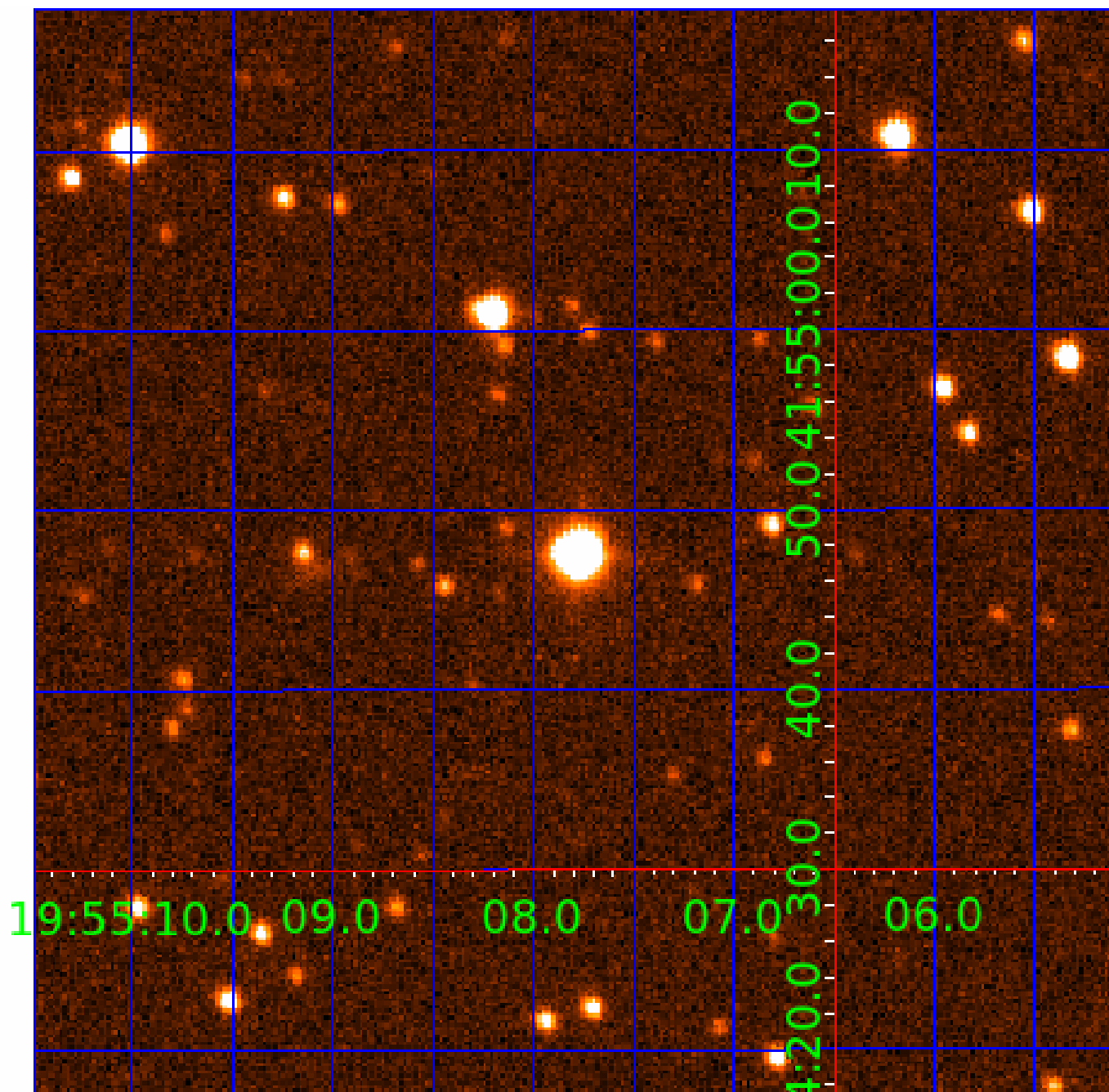
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 006549623

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})
006549623-01	OBS	No	1.328440	132.136240	15.4	1.952	9.6	4.9	3.83	6588	1.85	30847.56
006549623-02	OBS	No	1.328301	132.176545	24.3	9.158	7.9	7.9	3.83	6588	2.04	30851.87
006549623-04	OBS	No	26.765391	132.656906	157.5	4.734	11.3	11.1	3.83	6588	5.59	562.66
006549623-05	OBS	No	53.956704	166.570599	94.9	10.304	11.4	6.0	3.83	6588	4.32	220.94
006549623-06	OBS	No	45.232021	161.430230	191.8	4.494	10.0	9.7	3.83	6588	6.03	279.52
006549623-07	OBS	No	19.648078	136.370609	206.7	1.661	11.0	9.9	3.83	6588	6.45	849.67
006549623-08	OBS	No	31.641250	138.985649	227.6	2.093	9.6	8.1	3.83	6588	6.70	450.13
006549623-09	OBS	No	28.804836	142.439511	168.3	4.657	8.9	9.4	3.83	6588	5.63	510.18

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006549623-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
006549623-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
006549623-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
006549623-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006549623-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006549623-07	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_MEAS
006549623-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006549623-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS

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

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

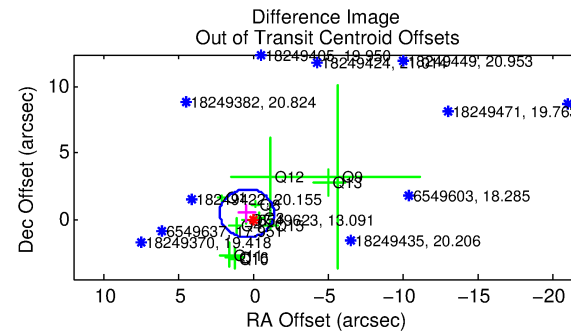
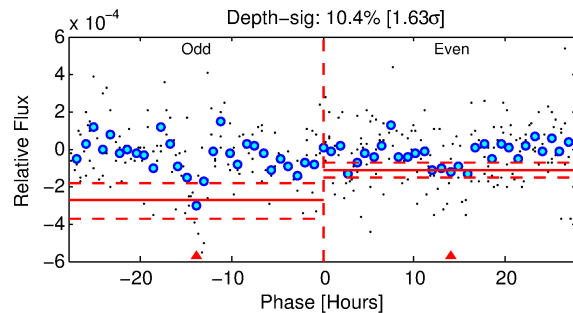
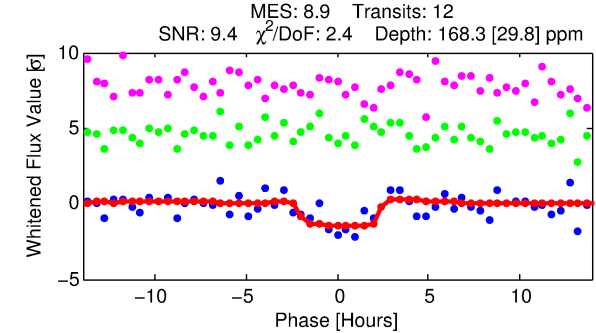
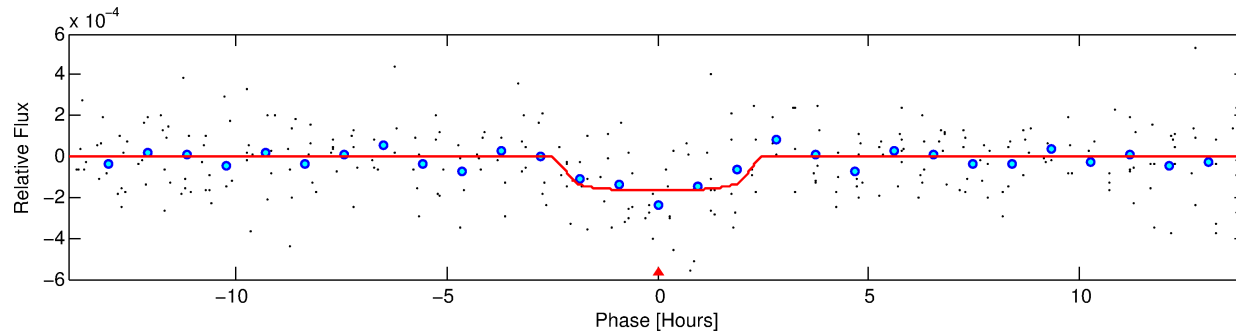
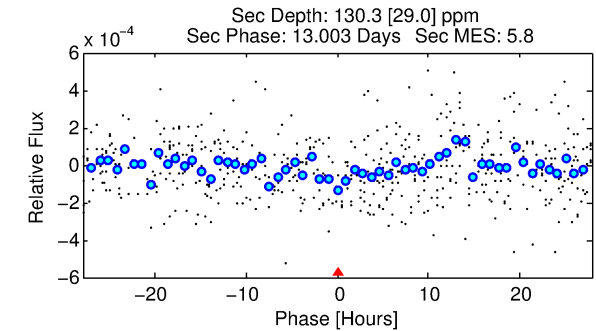
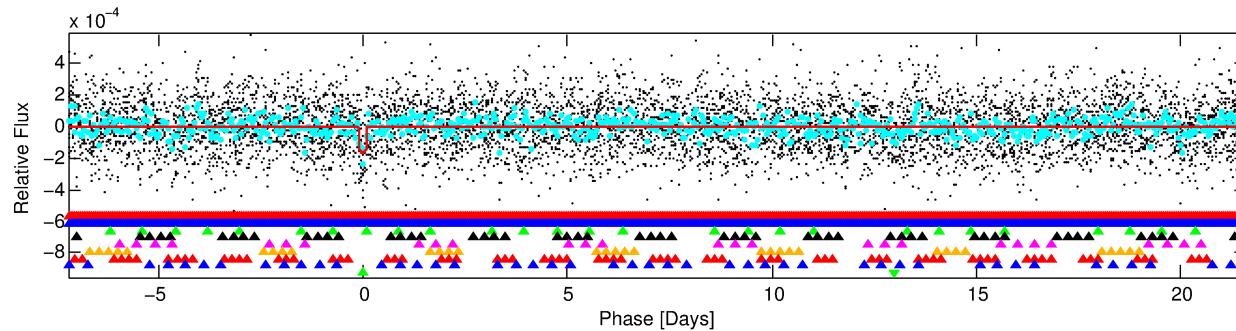
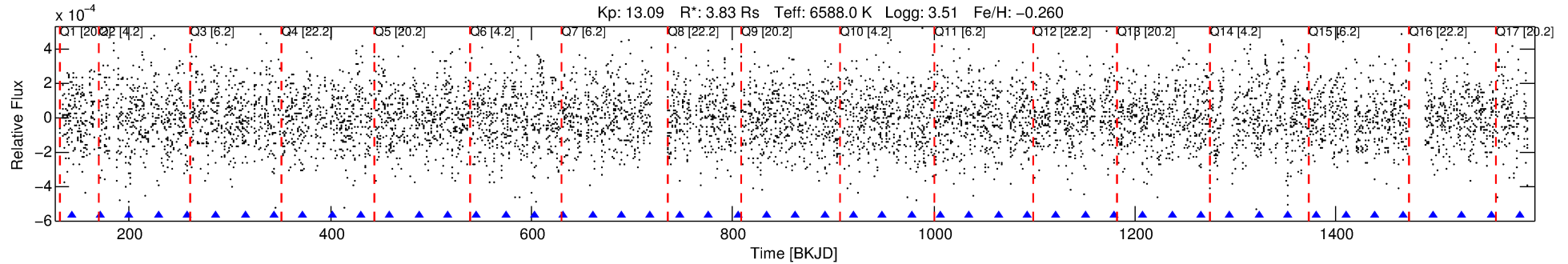
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006549623-09

No Significant Match Found

DV One-Page Summary

KIC: 6549623 Candidate: 9 of 9 Period: 28.805 d



DV Fit Results:

Period = 28.80484 [0.00057] d
Epoch = 142.4395 [0.0159] BKJD
Rp/R* = 0.0135 [0.0234]
a/R* = 25.82 [262.65]
b = 0.85 [3.27]
Seff = 510.18 [328.13]
Teq = 1212 [195] K
Rp = 5.63 [10.10] Re
a = 0.2205 [0.0881] AU
Ag = 110.00 [390.47] [0.28σ]
Teffp = 6068 [5302] K [0.92σ]

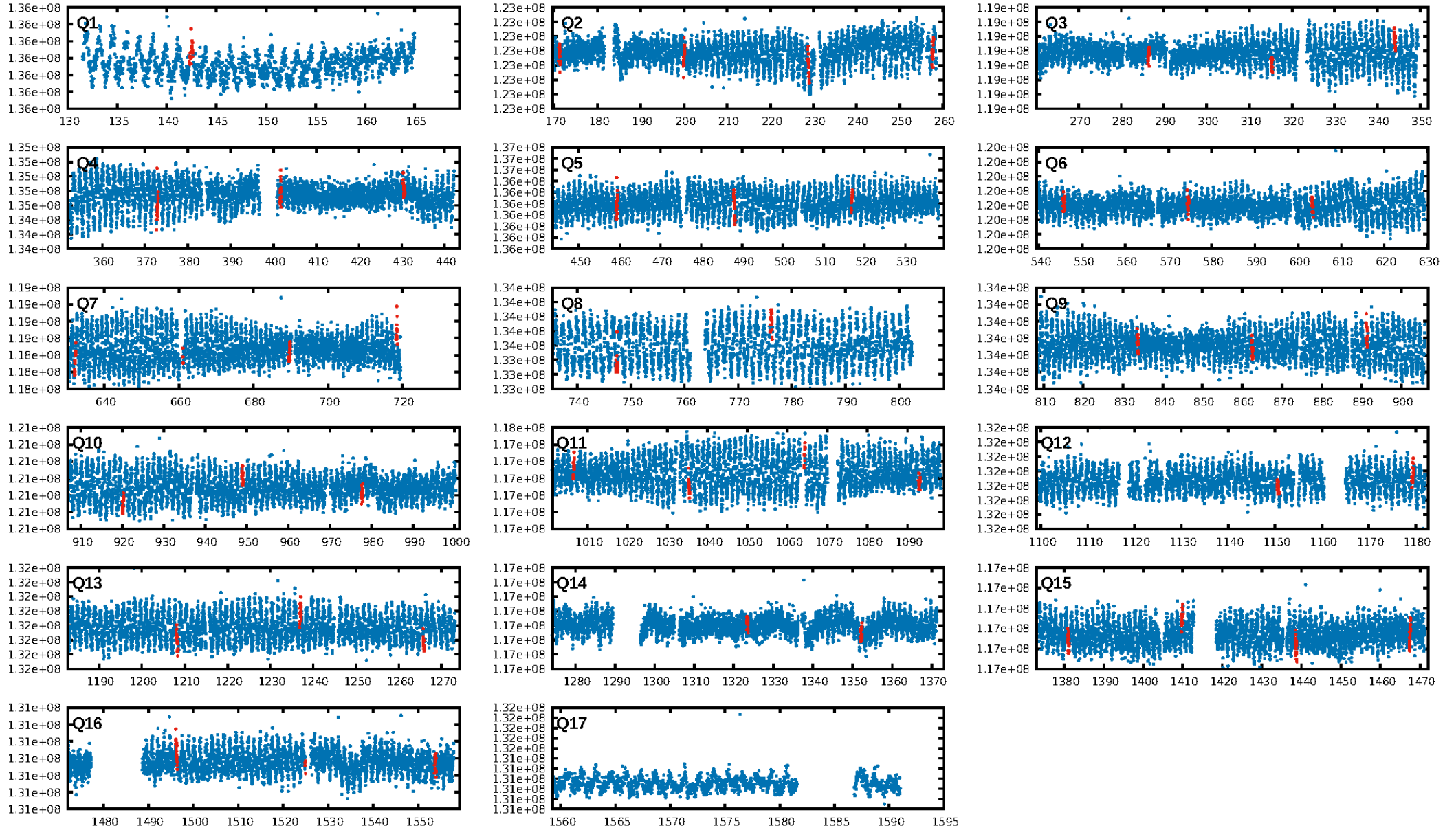
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [7.37σ]
LongPeriod-sig: 100.0% [13.33σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 88.8%
Bootstrap-pfa: 1.54e-12
RollingBand-fgt: 1.00 [12/12]
GhostDiagnostic-chr: 1.262
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.614 arcsec [1.02σ]
Centroid-so: N/A
KicOffset-rm: 0.576 arcsec [0.96σ]
OotOffset-st: 1/4/4/3 [12]
KicOffset-st: 1/4/4/3 [12]
DiffImageQuality-fgm: 0.25 [3/12]
DiffImageOverlap-fno: 0.19 [3/16]

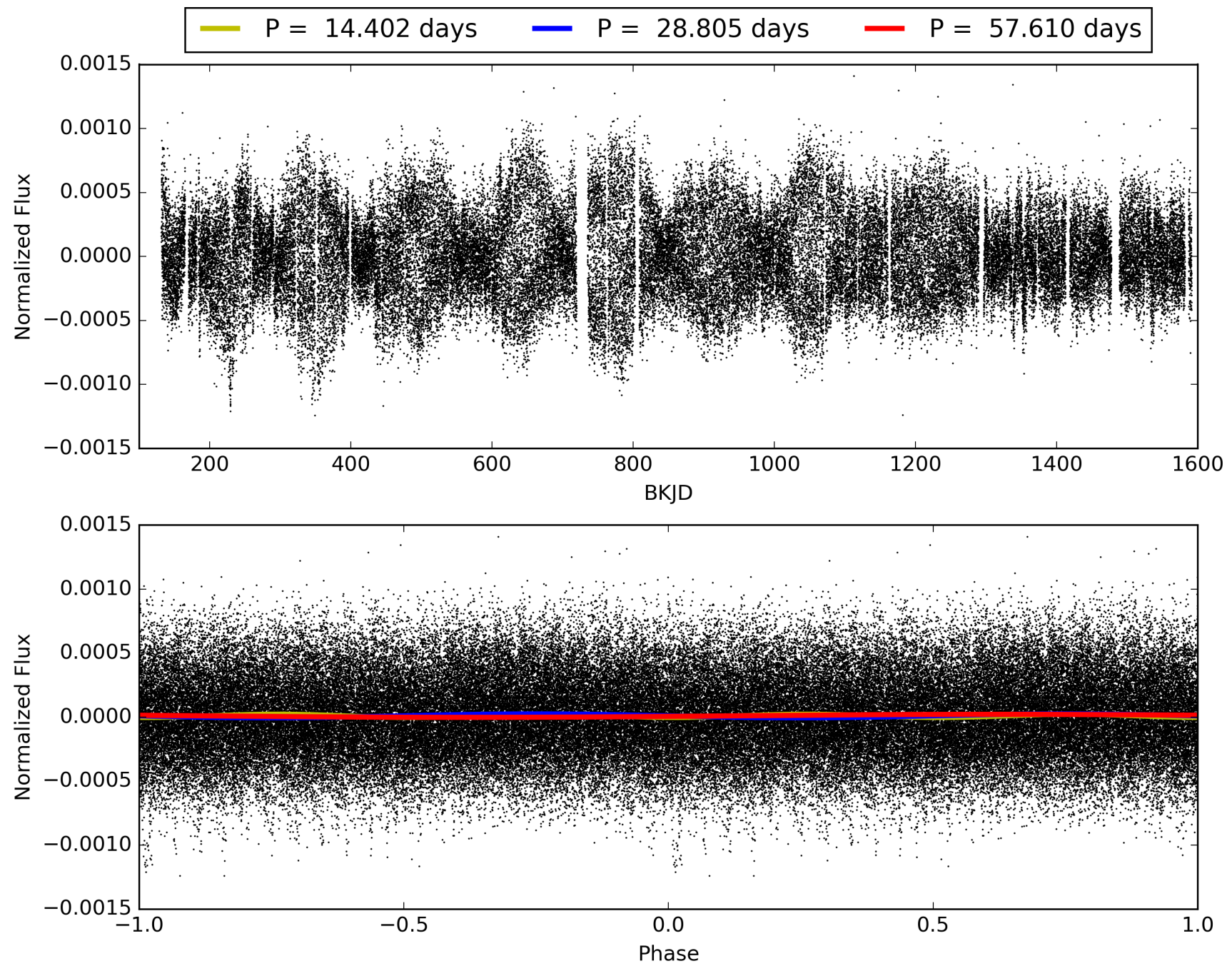
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 07:30:09 Z

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

TCE 006549623-09, PDC Light Curves

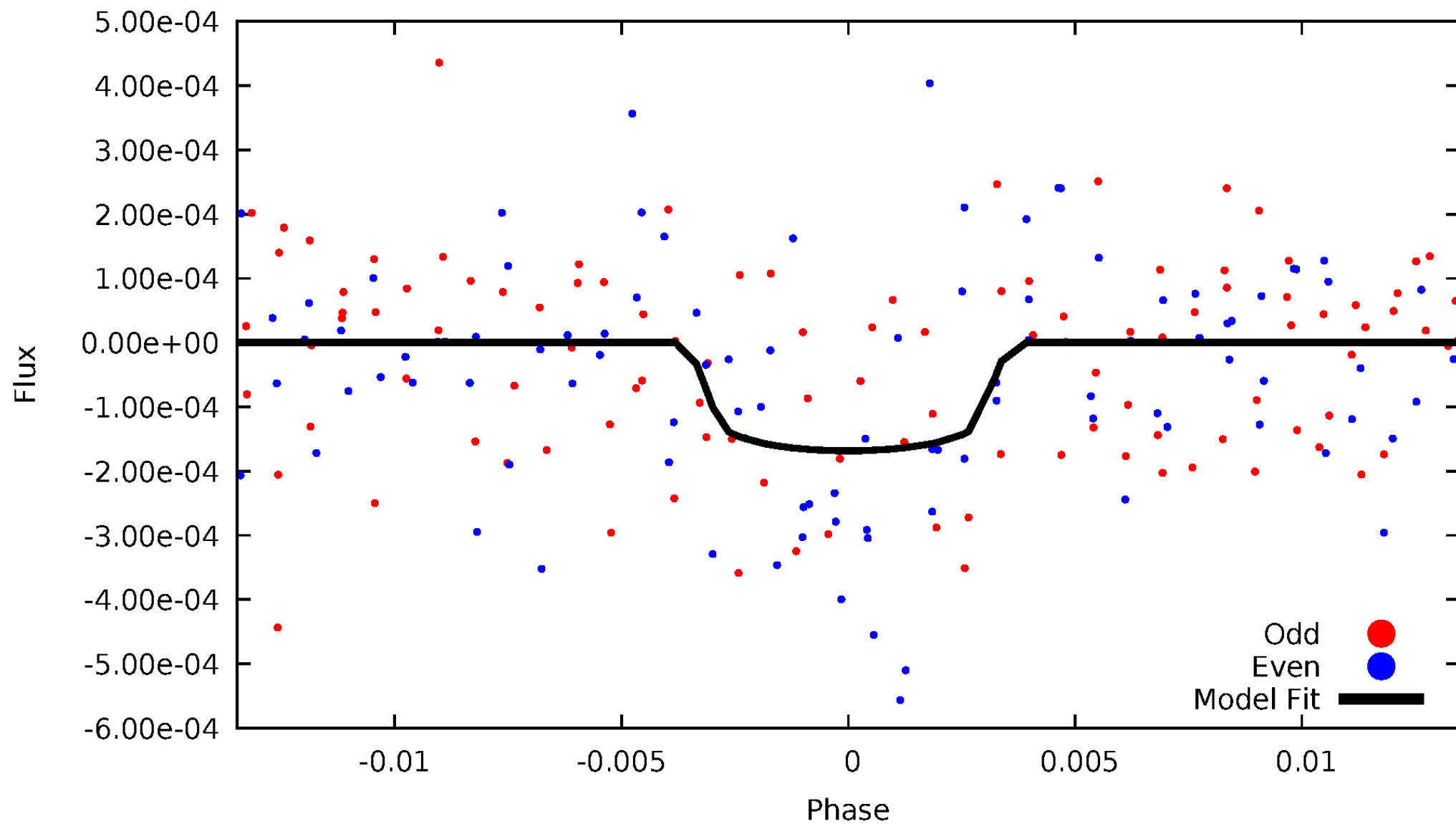


TCE 006549623-09



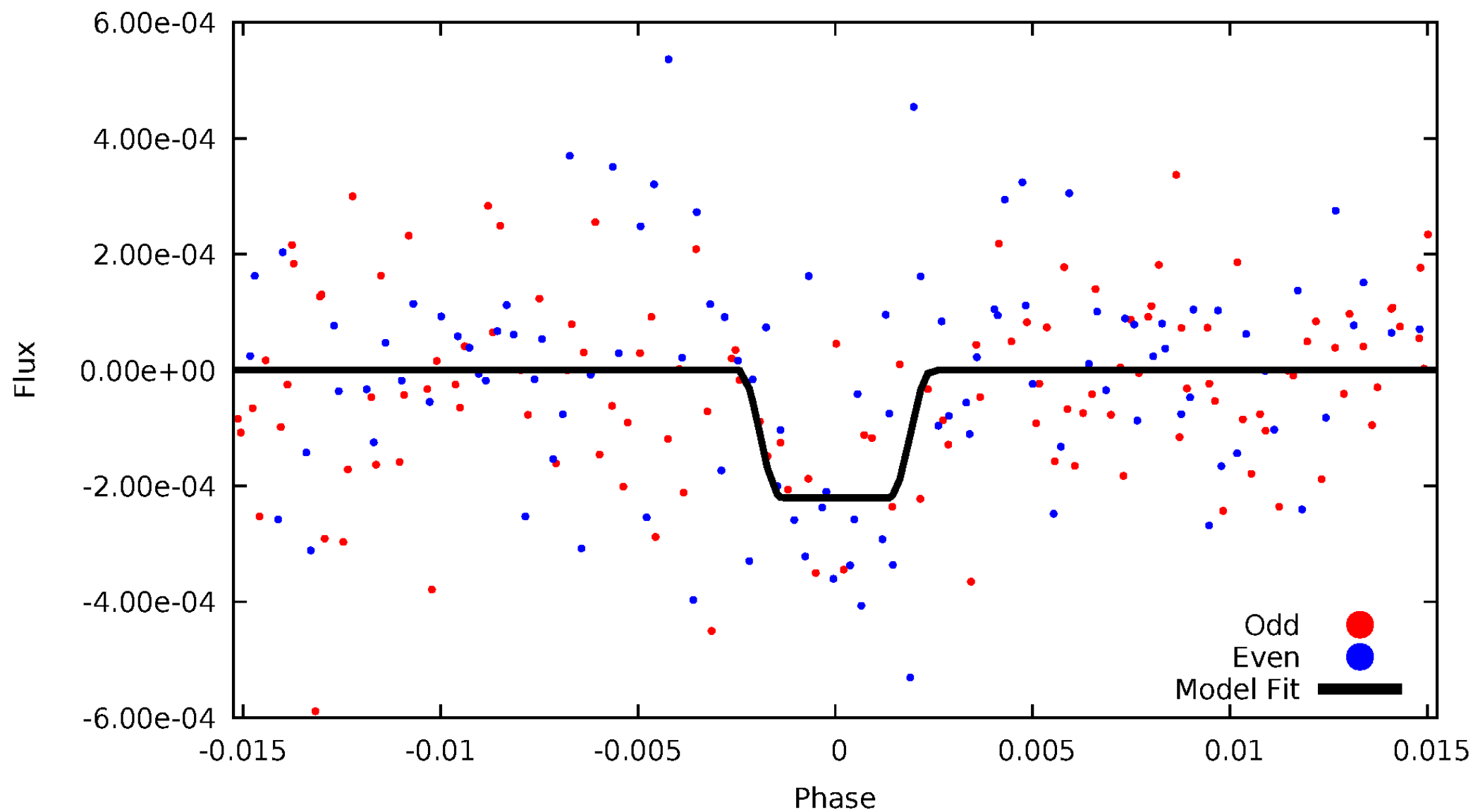
DV Odd/Even

TCE 006549623-09



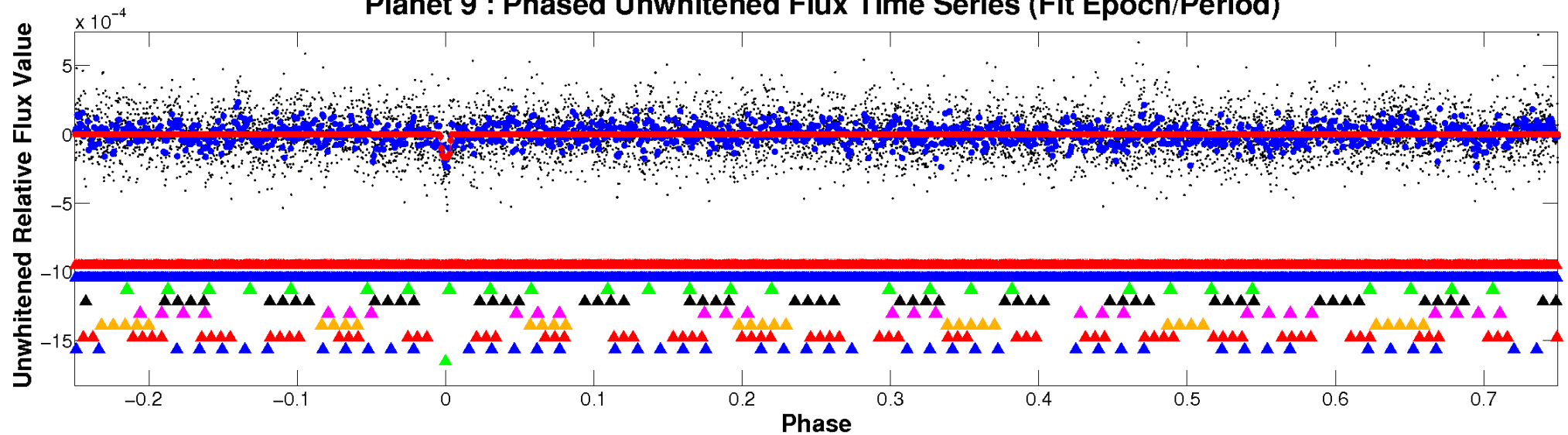
ALT Odd/Even

TCE 006549623-09

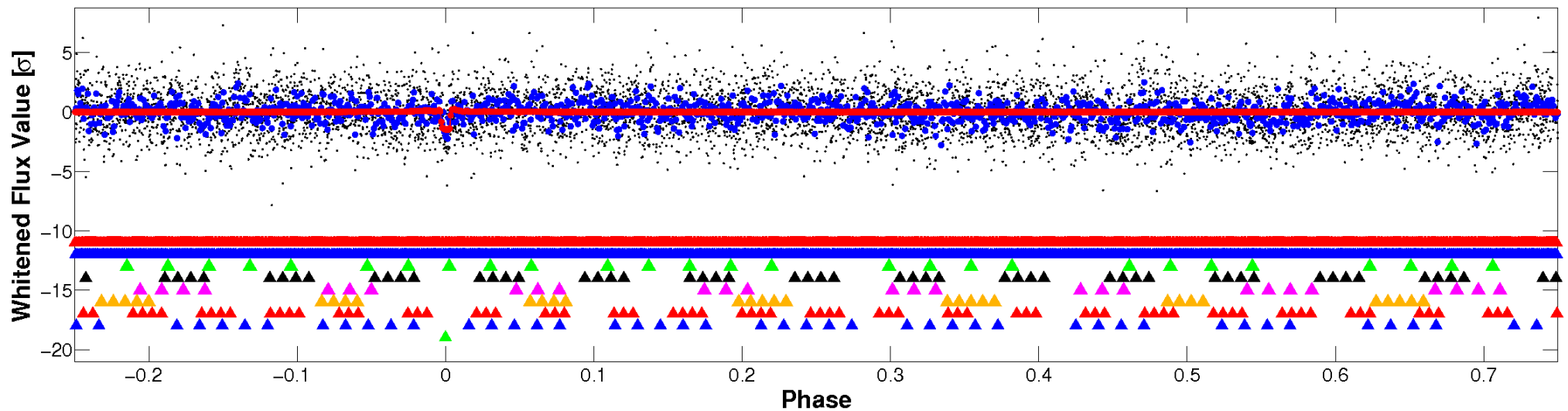


Non-Whitened Vs. Whitened Light Curve

Planet 9 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

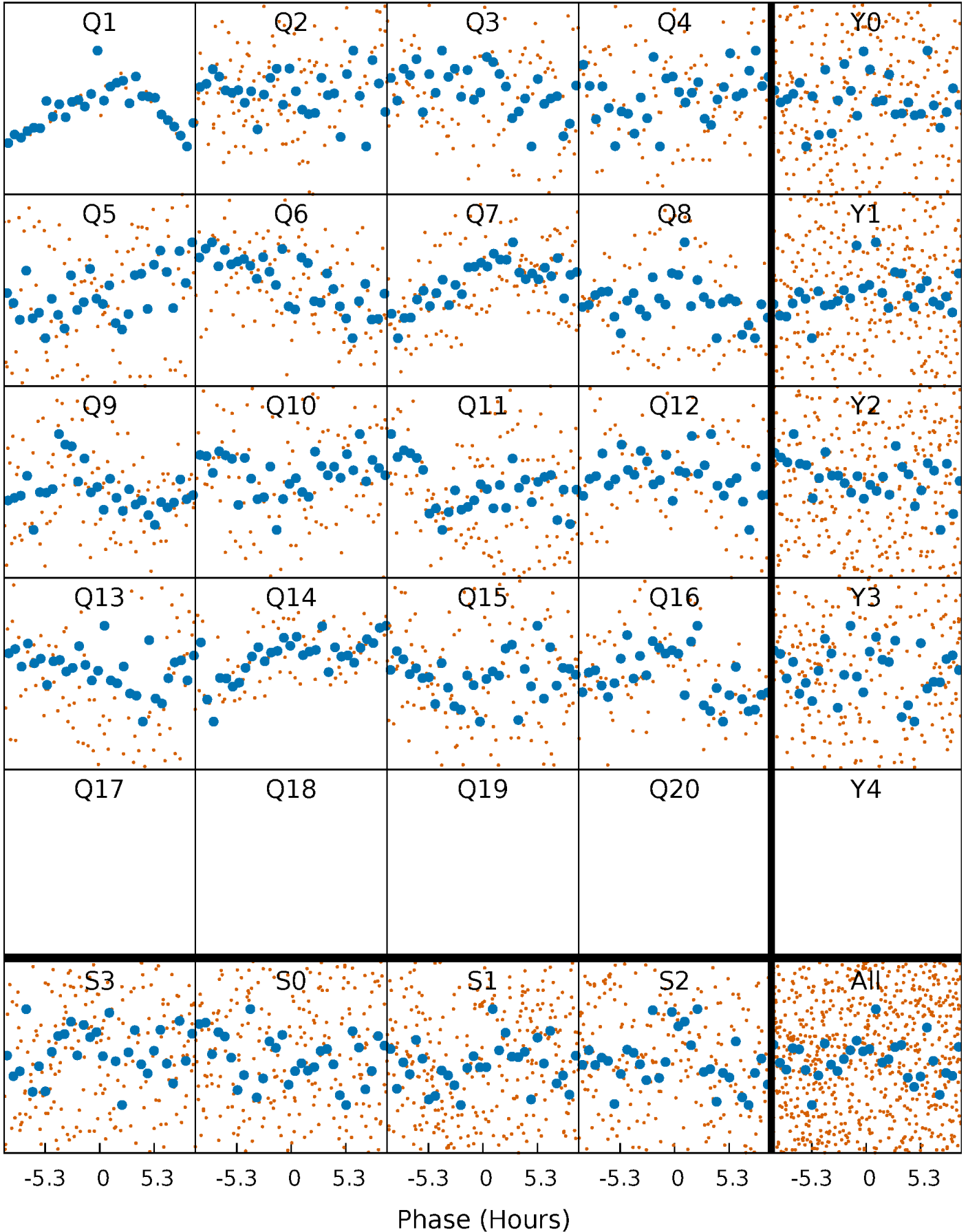


Planet 9 : Phased Whitened Flux Time Series (Fit Epoch/Period)



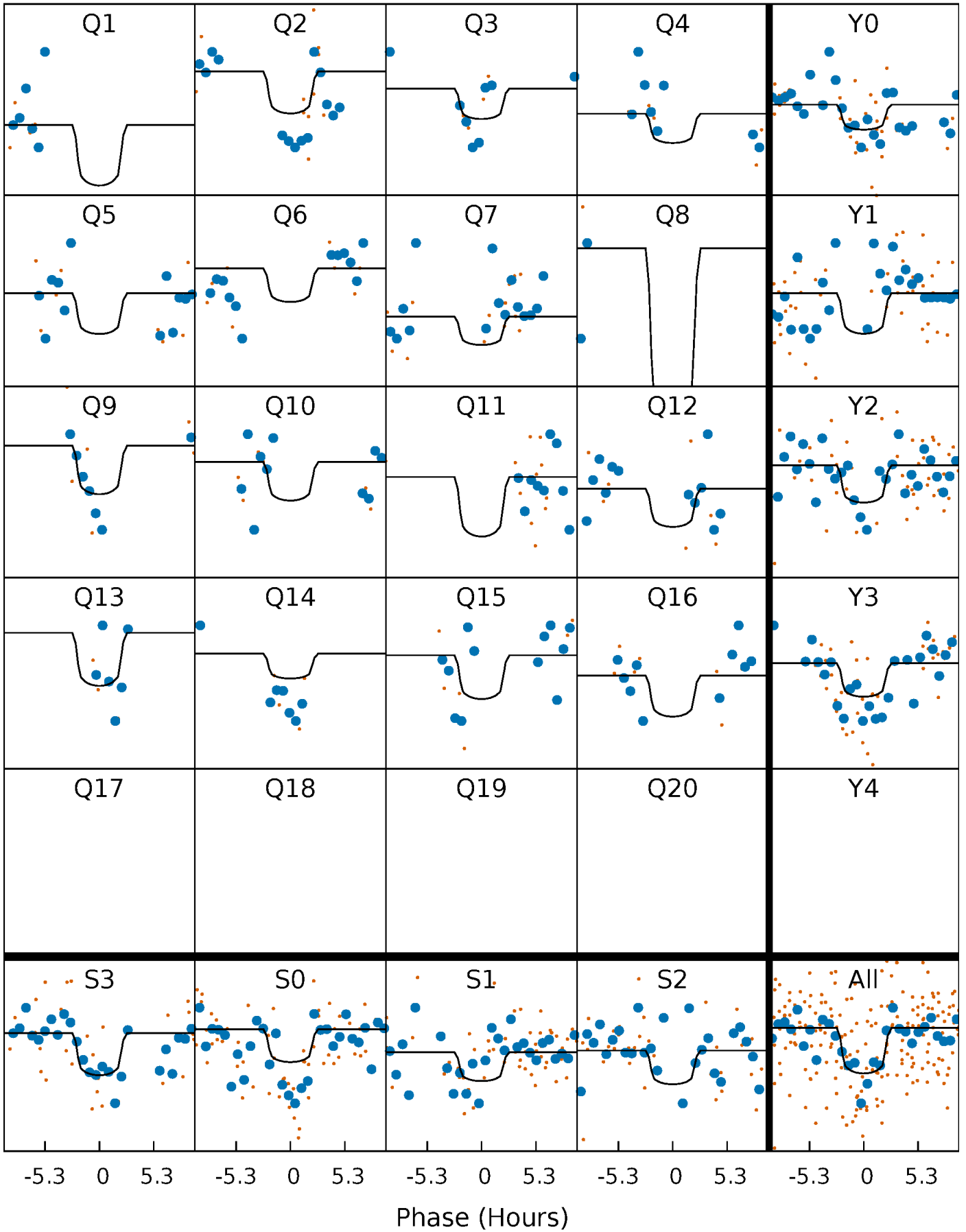
PDC Quarter-Phased Transit Curves

TCE 006549623-09 P= 28.804836 Days $T_0=142.439511$ (BKJD)



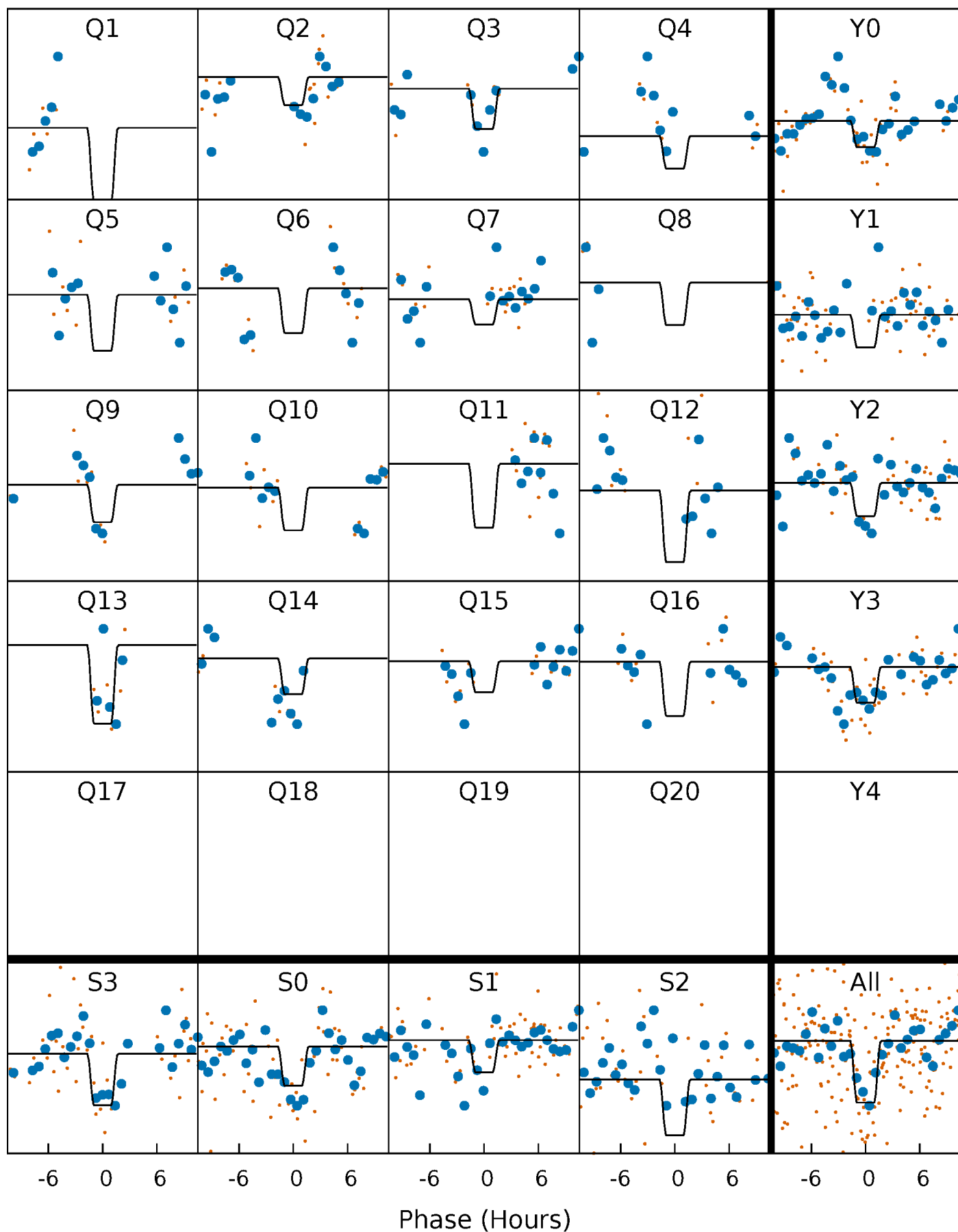
DV Quarter-Phased Transit Curves

TCE 006549623-09 P= 28.804836 Days $T_0=142.439511$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

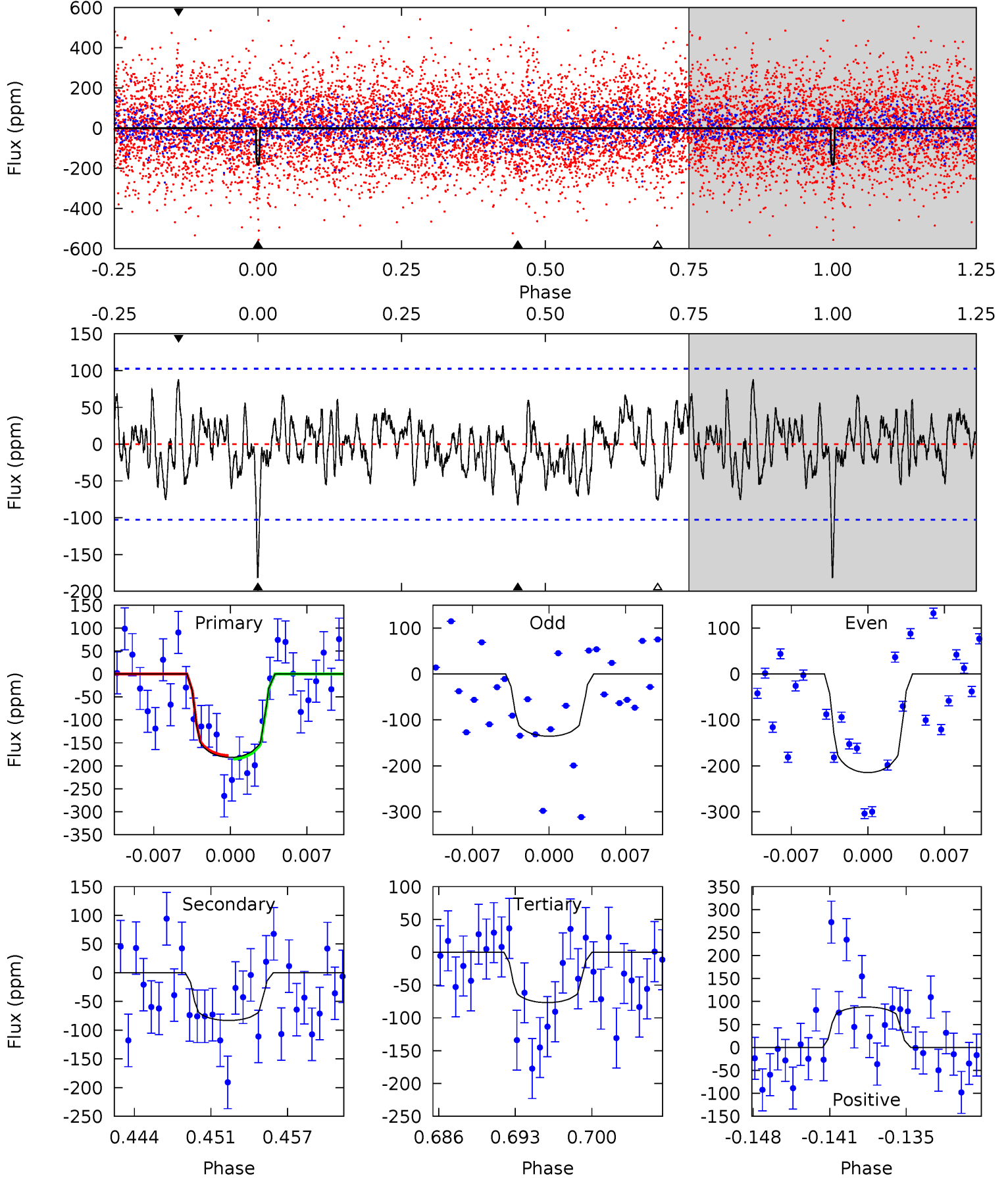
TCE 006549623-09 P= 28.805874 Days $T_0=142.413342$ (BKJD)



DV Model-Shift Uniqueness Test

006549623-09, P = 28.804836 Days, E = 113.634675 Days

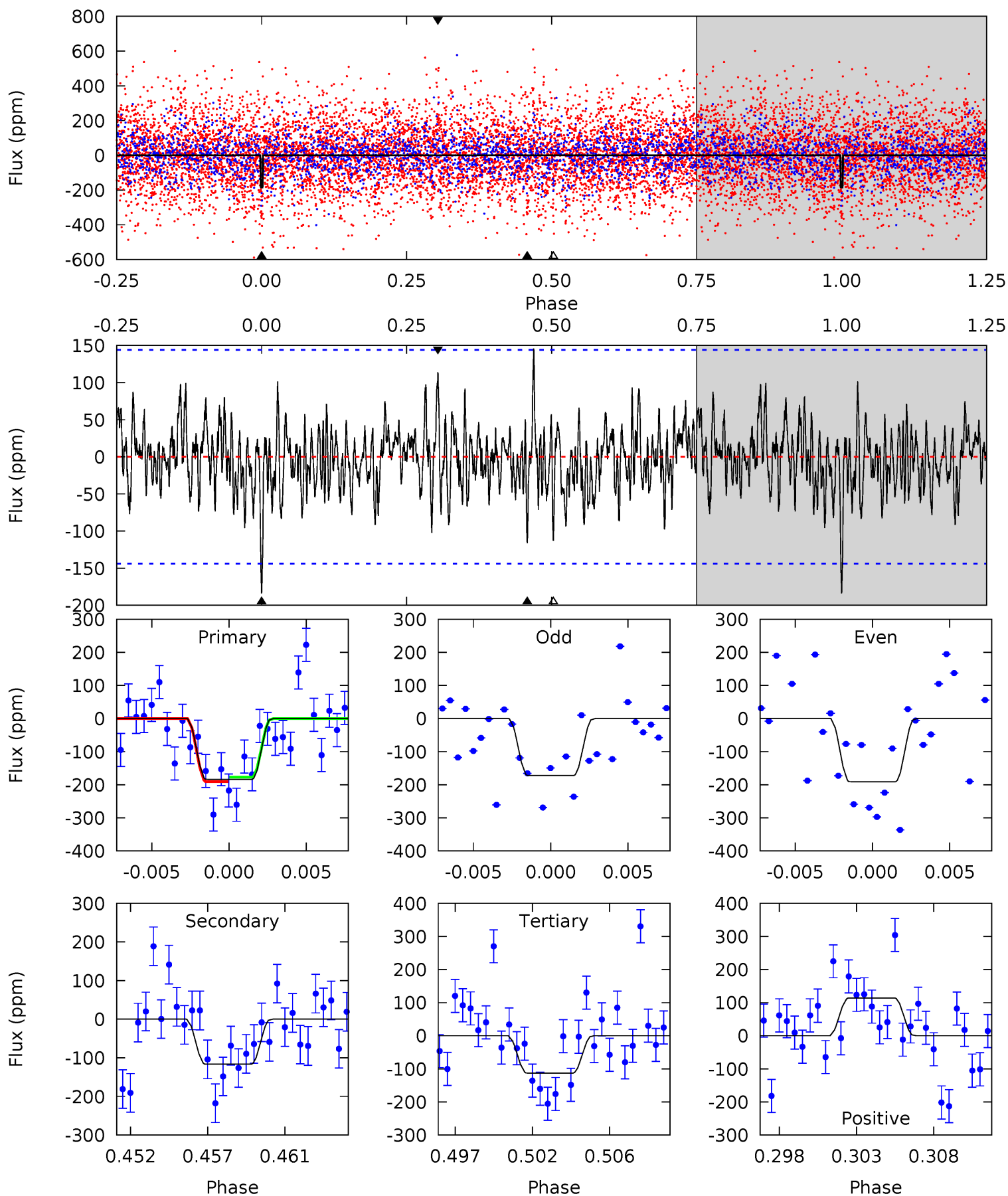
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.02	4.13	3.82	4.37	5.10	2.71	1.47	5.21	4.65	0.32	-0.24	1.95	0.83	0.33	0.20



Alt Model-Shift Uniqueness Test

006549623-09, P = 28.805874 Days, E = 113.607468 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.60	4.18	4.06	4.10	5.18	2.84	1.35	2.55	2.51	0.13	0.09	0.33	0.80	0.44	0.24



Stellar Parameters For KIC 006549623

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6588^{+166}_{-199}	$3.507^{+0.368}_{-0.092}$	$-0.260^{+0.350}_{-0.250}$	$3.834^{+0.407}_{-1.626}$	$1.724^{+0.184}_{-0.428}$	$0.043^{+0.133}_{-0.013}$
	+3%/-3%	+10%/-3%	+135%/-96%	+11%/-42%	+11%/-25%	+308%/-30%
Source	PHO1	FLK73	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 006549623-09 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-83 ± 20	$8.43^{+7.99}_{-5.65}$	1661^{+95}_{-169}	4440^{+3017}_{-939}	31^{+264}_{-23}
Alt.	-116 ± 28	$9.12^{+8.08}_{-6.19}$	1664^{+93}_{-176}	4603^{+3346}_{-960}	37^{+336}_{-27}

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 $A_{obs} \gg 1.0$

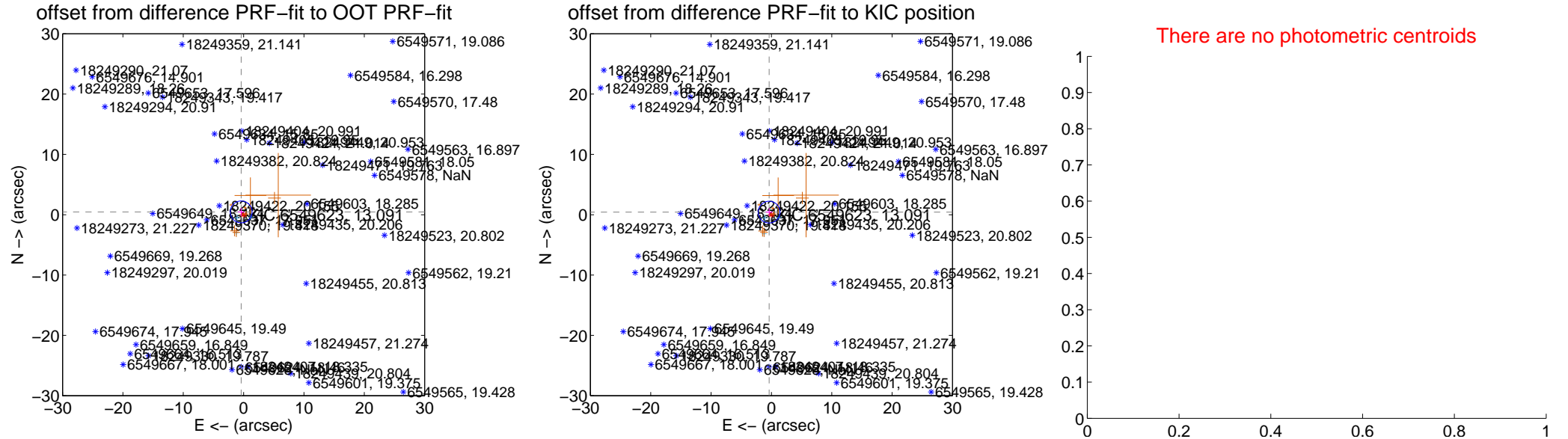
DV Centroid Data

Supplemental centroid analysis for 006549623-09. Kepler magnitude: 13.09. Transit SNR 9.37

There are 3 quarters with good PRF difference image offsets

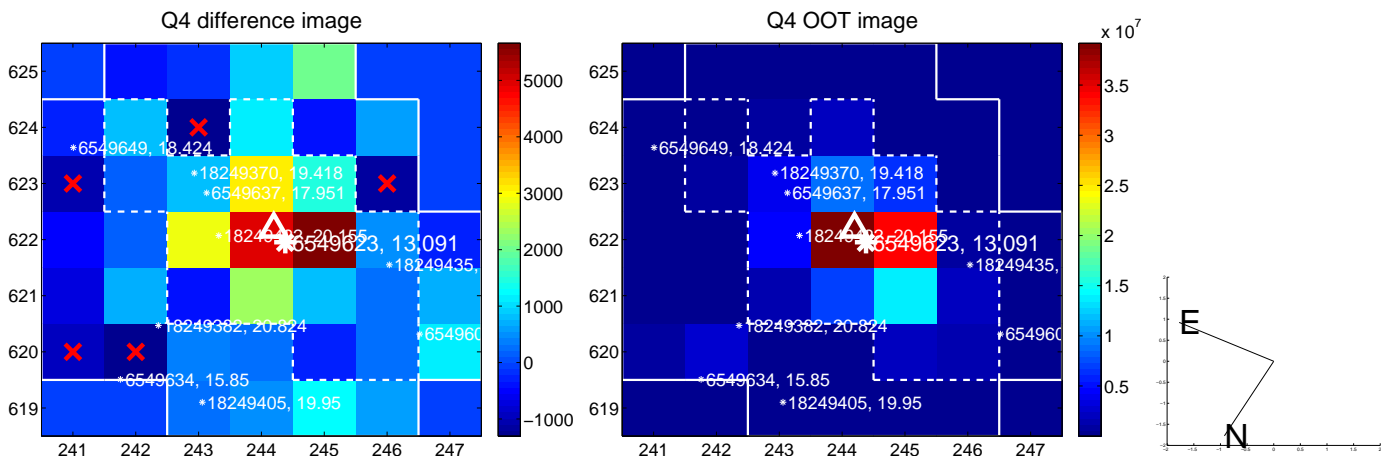
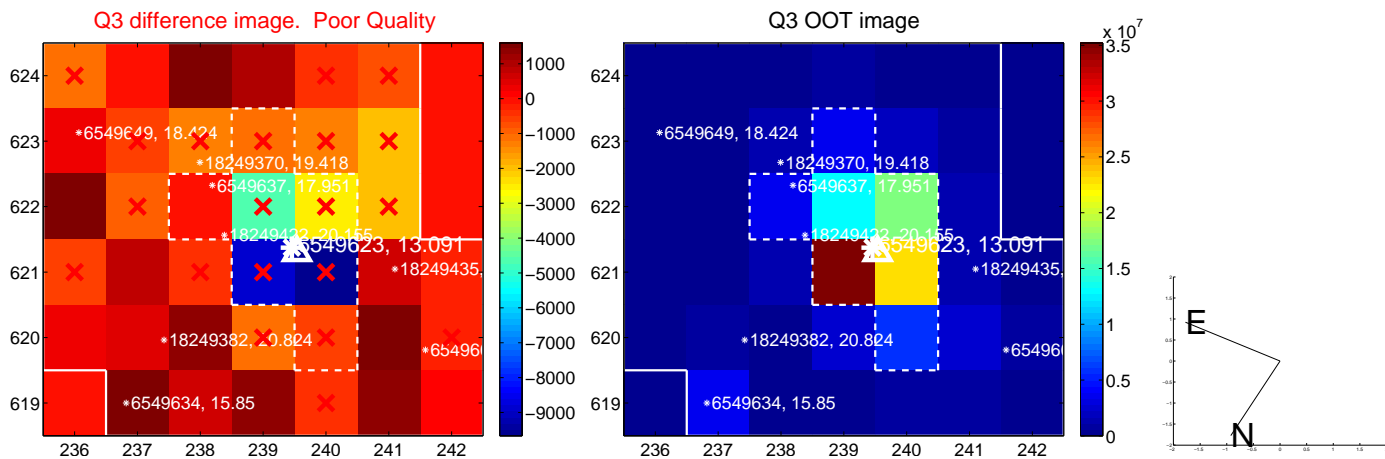
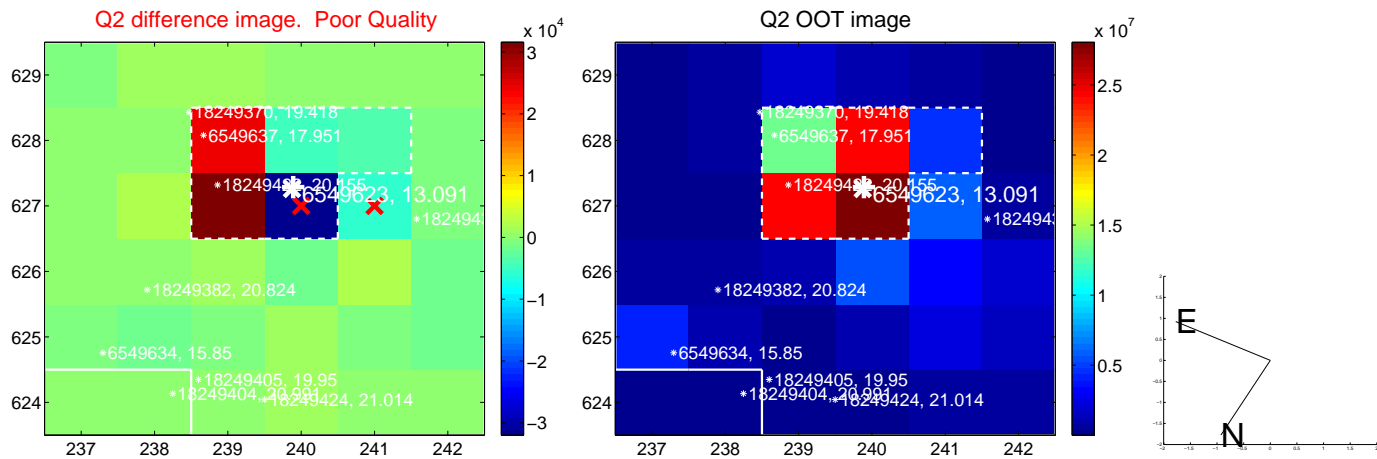
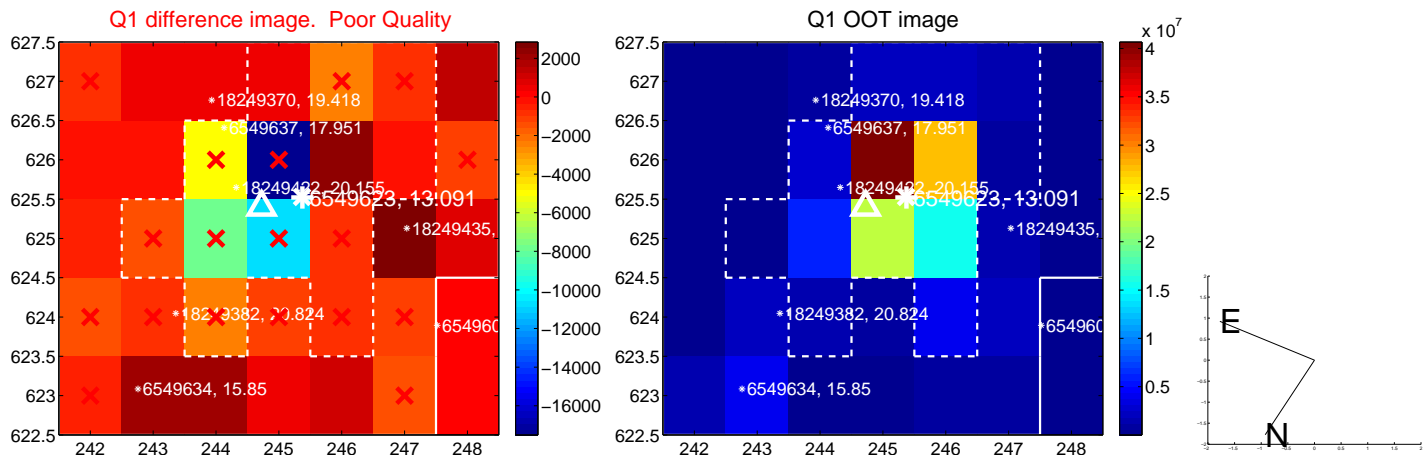
The direct PRF centroid is offset from the target star catalog position by about 0.01 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.614 ± 0.604	1.02	0.399 ± 0.526	0.466 ± 0.656
PRF-fit source offset from KIC position	0.576 ± 0.602	0.96	0.383 ± 0.526	0.431 ± 0.656
photometric centroid source offset	—	—	—	—

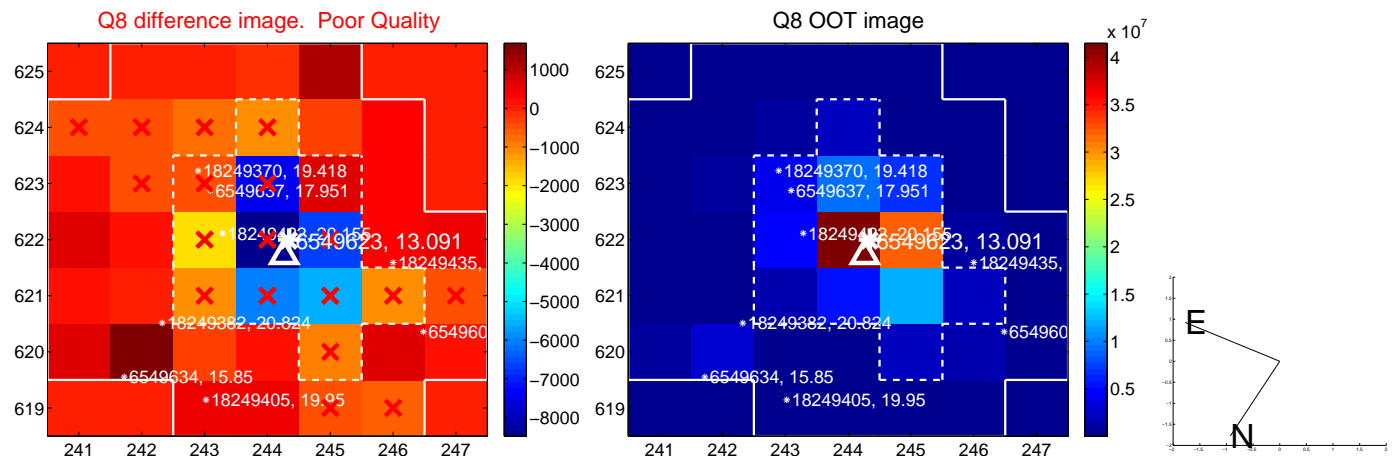
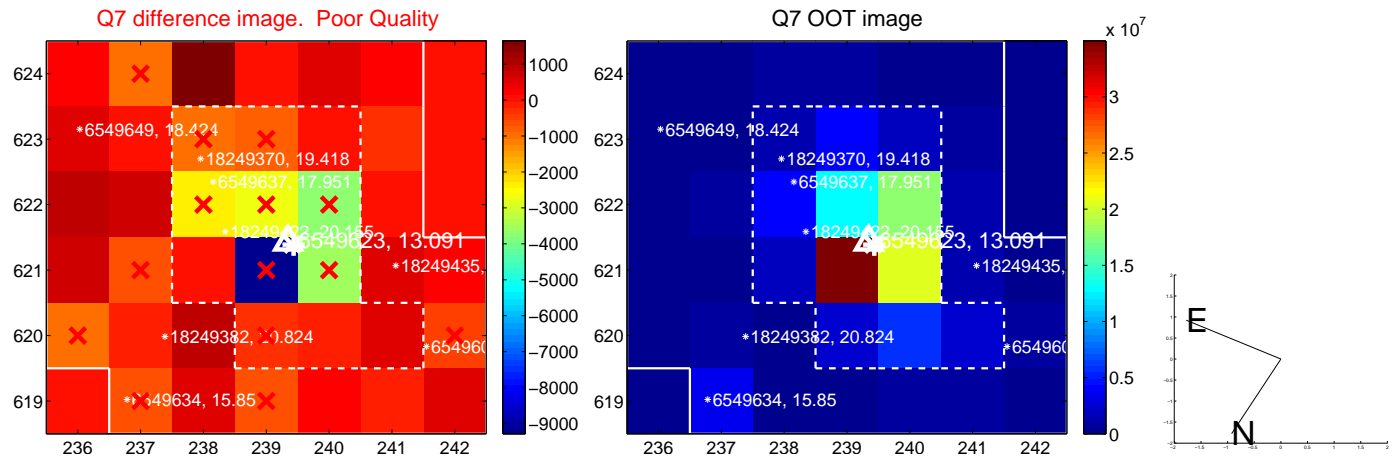
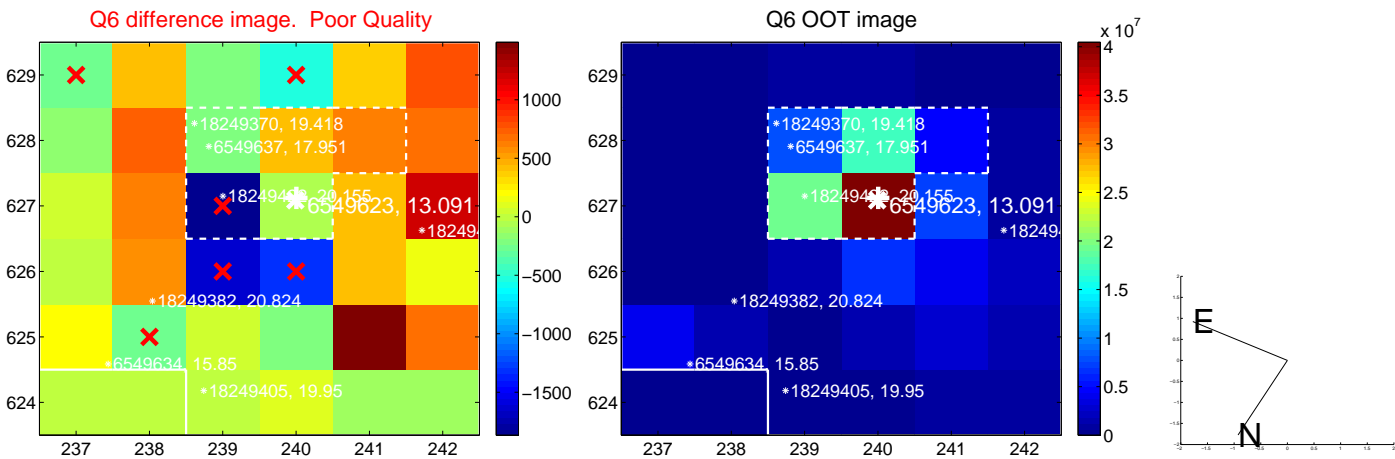
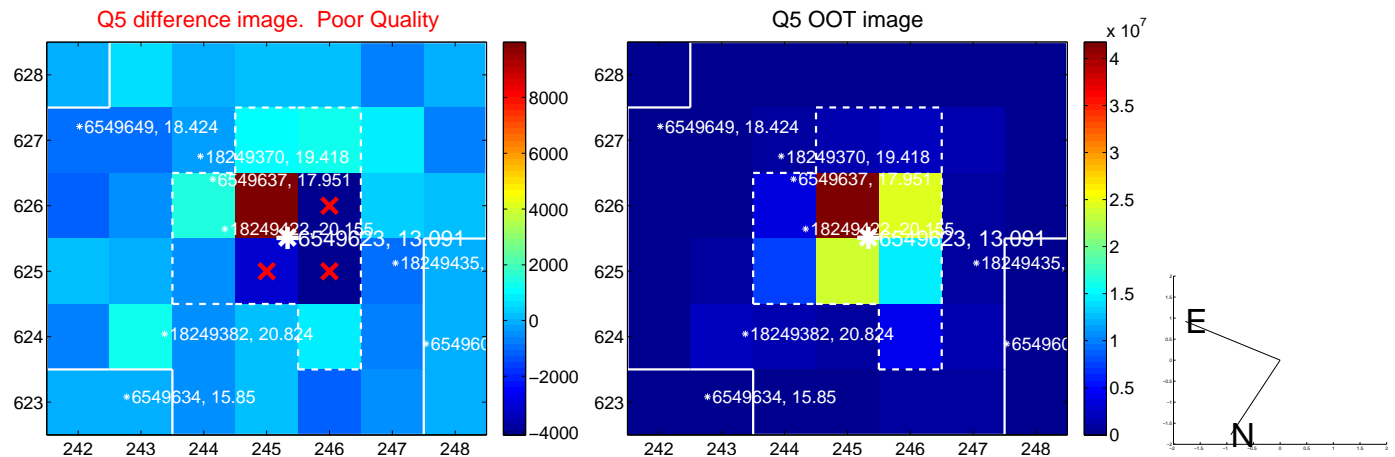


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

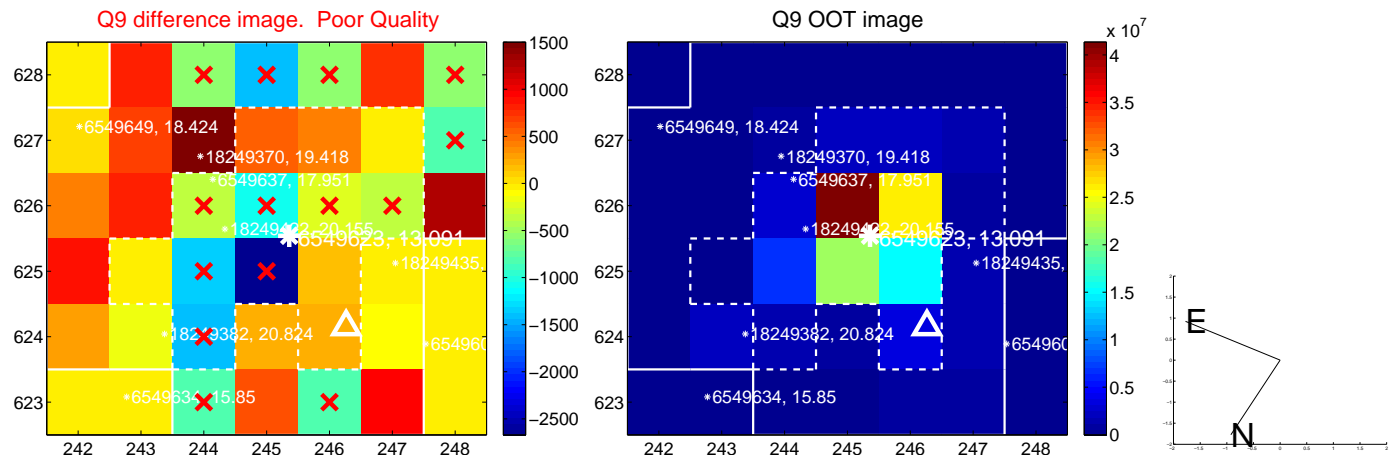
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



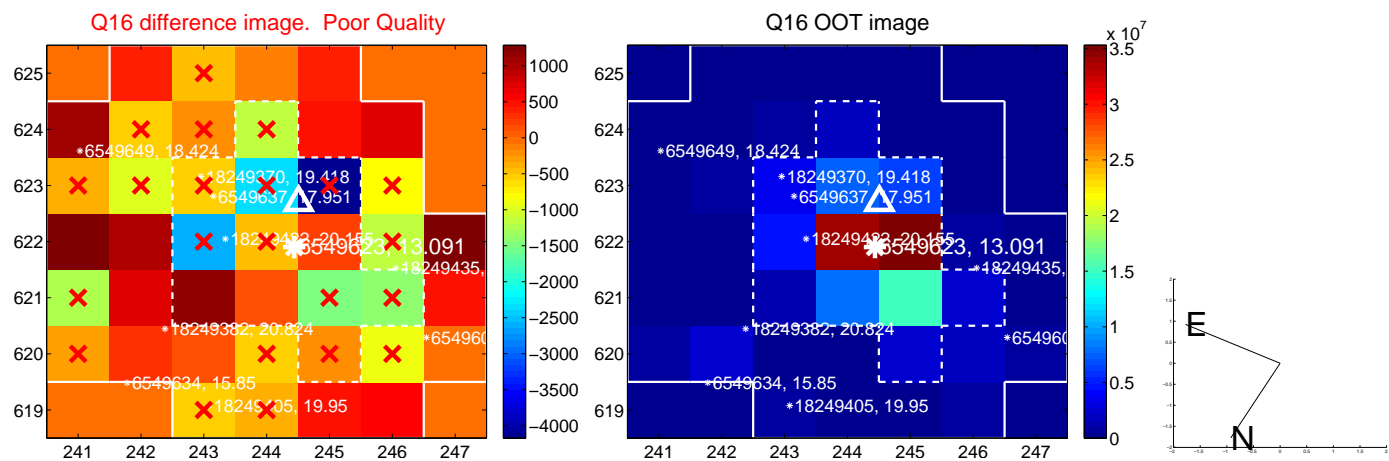
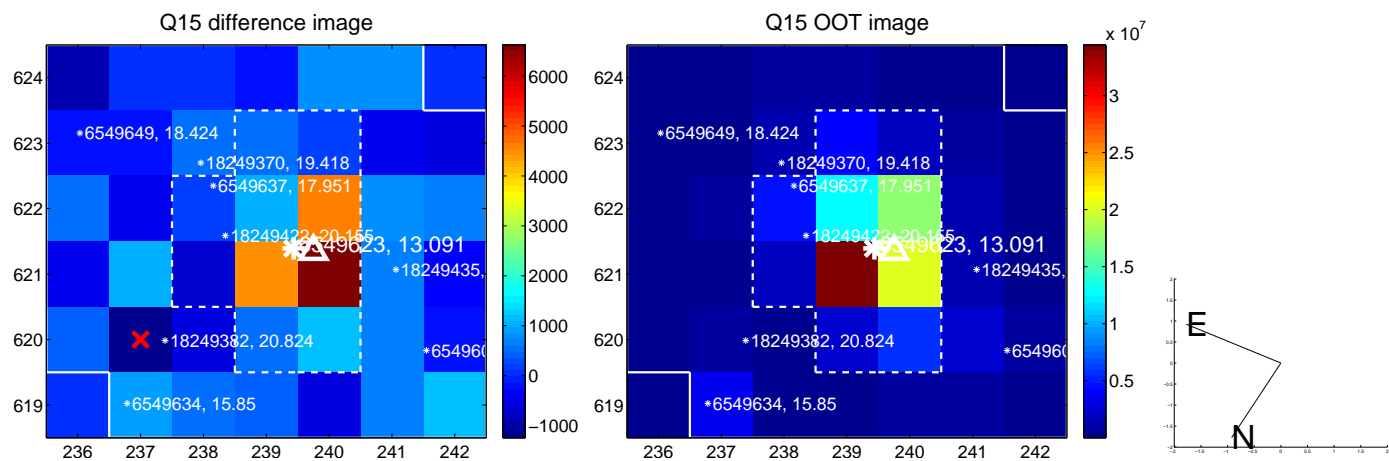
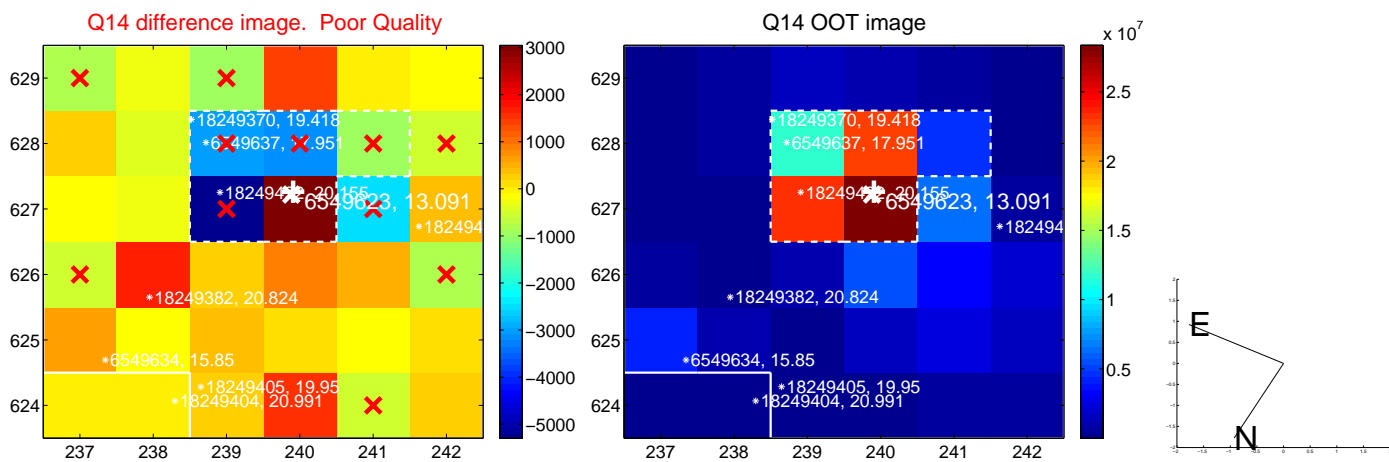
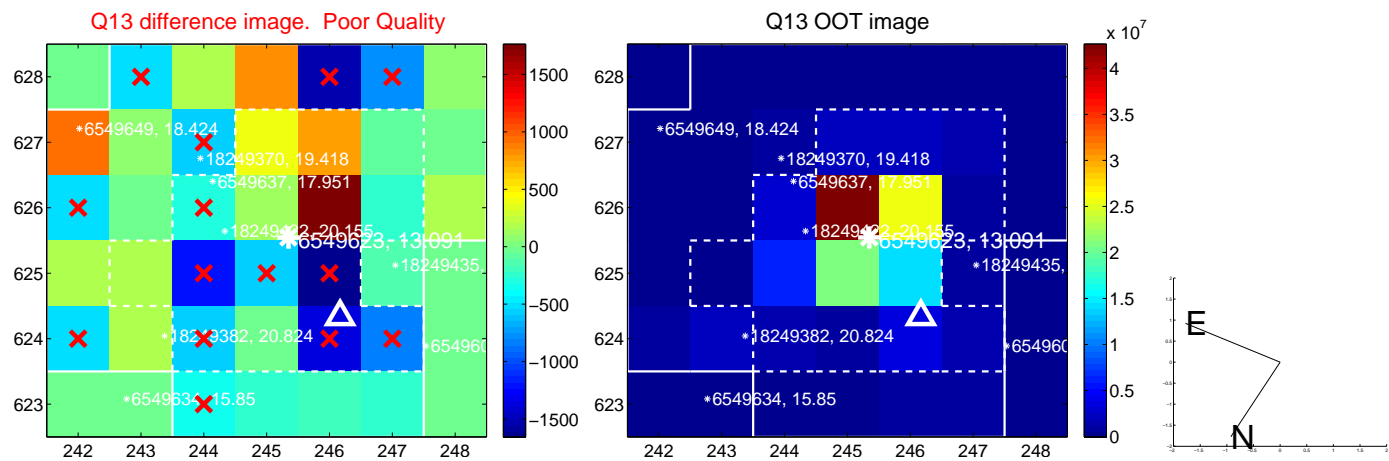
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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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

