

KIC 010657634

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})
010657634-01	OBS	No	1.966433	132.062412	28.3	4.560	11.4	11.7	2.66	6812	1.90	10468.70
010657634-02	OBS	No	0.983072	131.832164	12.5	1.056	8.7	5.2	2.66	6812	0.95	26384.65
010657634-03	OBS	No	0.983001	132.499302	16.2	4.348	9.8	9.7	2.66	6812	1.33	26387.17
010657634-04	OBS	No	99.193181	206.111791	231.4	6.633	9.1	10.0	2.66	6812	4.55	56.17
010657634-05	OBS	No	39.489391	158.936712	121.5	3.971	7.8	6.1	2.66	6812	3.41	191.79

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010657634-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
010657634-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—SAME_NTL_PERIOD
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010657634-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_UNRESOLVED_OFFSET

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

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

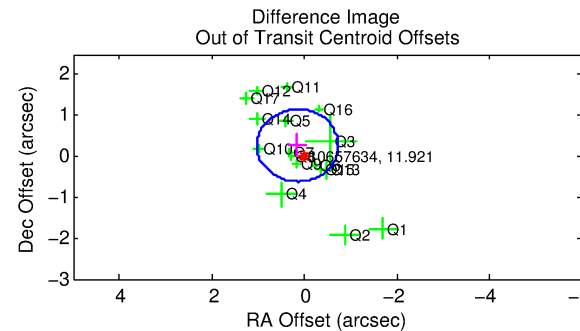
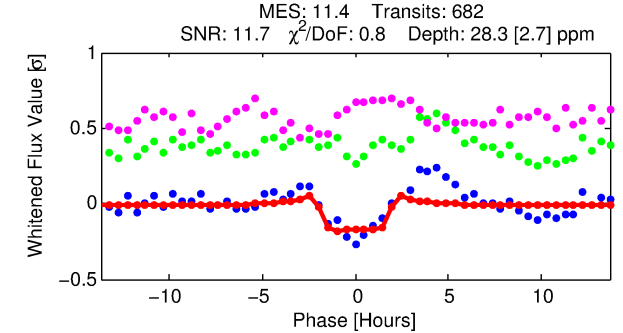
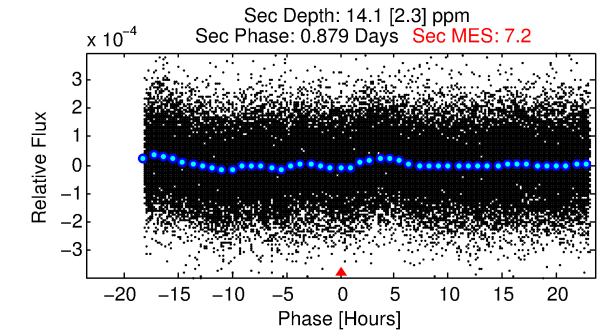
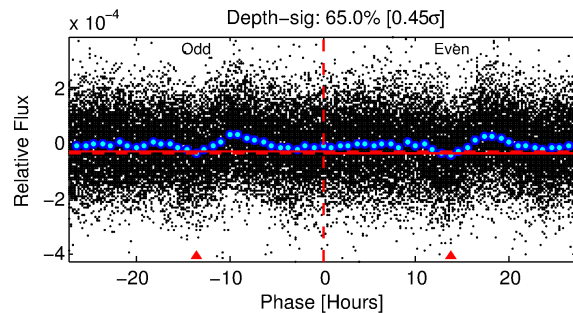
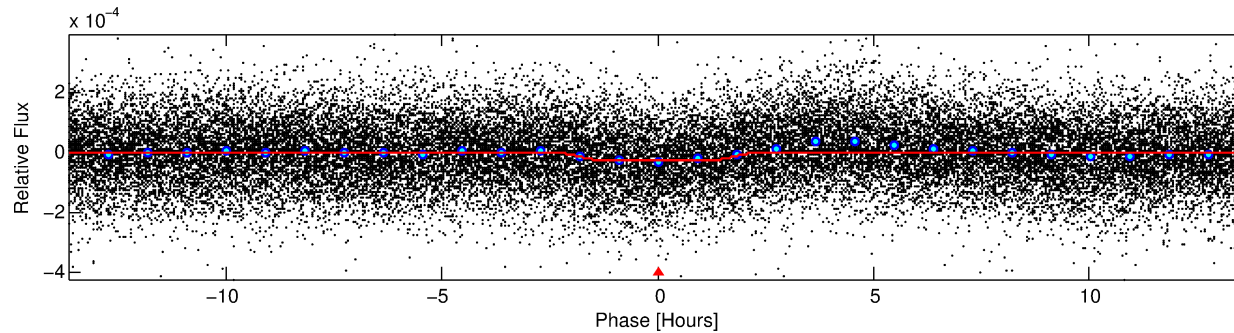
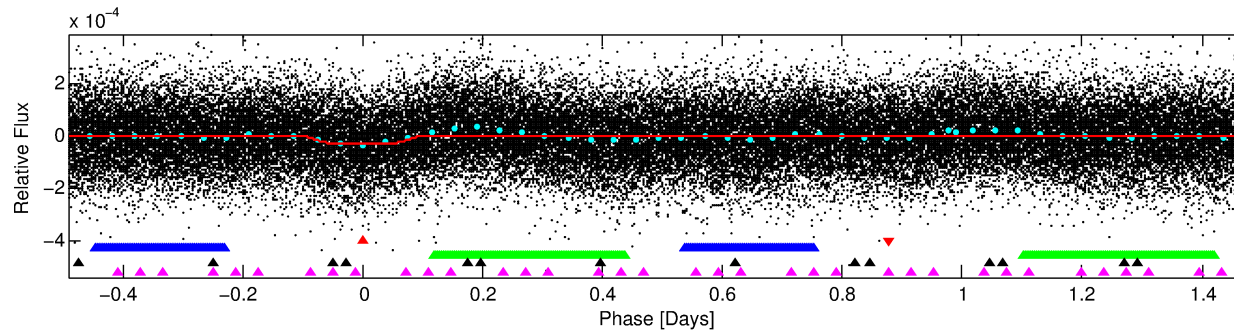
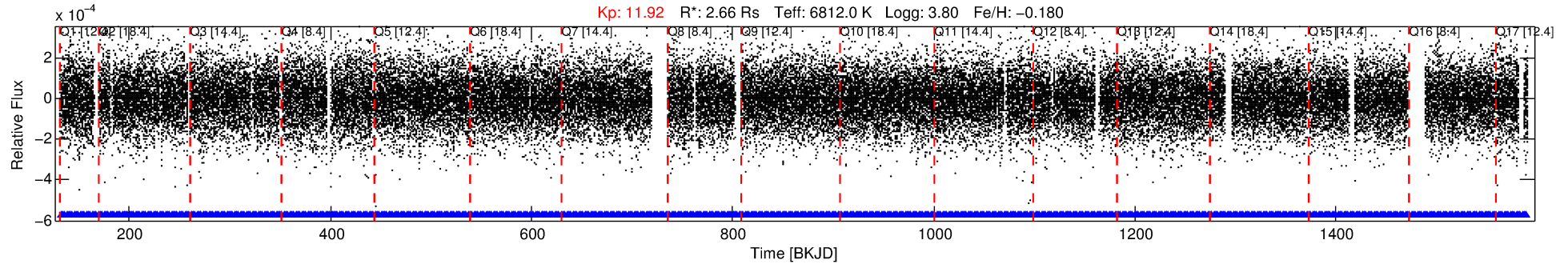
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010657634-01

No Significant Match Found

DV One-Page Summary

KIC: 10657634 Candidate: 1 of 5 Period: 1.966 d



DV Fit Results:

Period = 1.96643 [0.00001] d
Epoch = 132.0624 [0.0035] BKJD
Rp/R* = 0.0065 [0.0004]
a/R* = 1.21 [0.08]
b = 0.98 [0.01]
Seff = 10468.70 [5416.98]
Teq = 2579 [334] K
Rp = 1.90 [0.66] Re
a = 0.0361 [0.0116] AU
Ag = 2.81 [1.53] [1.19 σ]
Teffp = 5164 [305] K [5.72 σ]

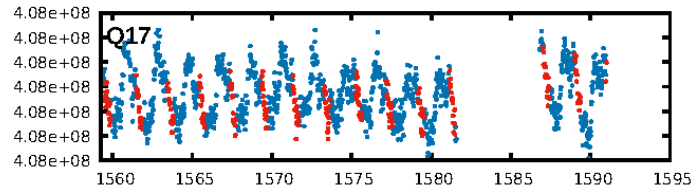
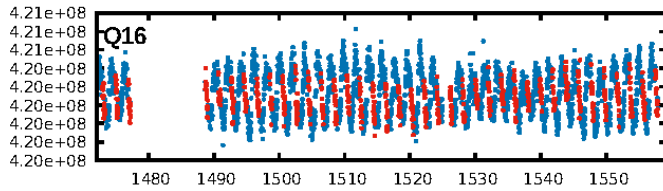
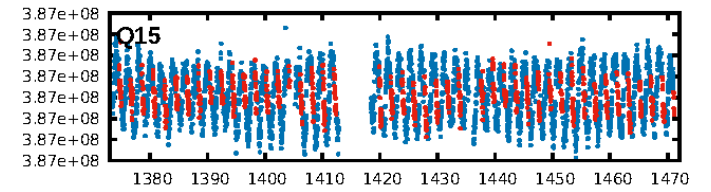
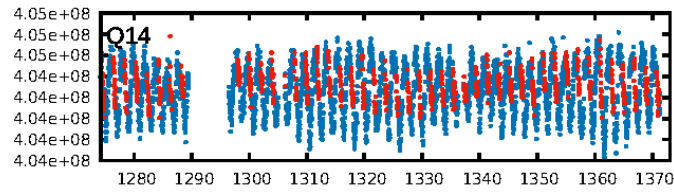
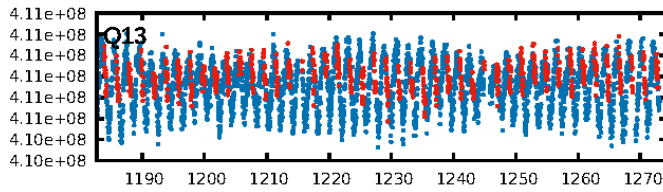
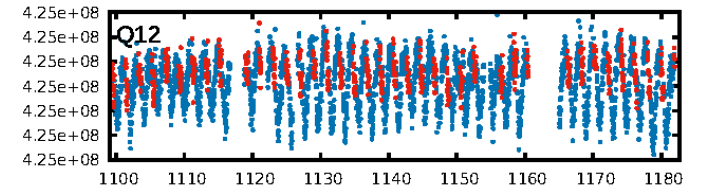
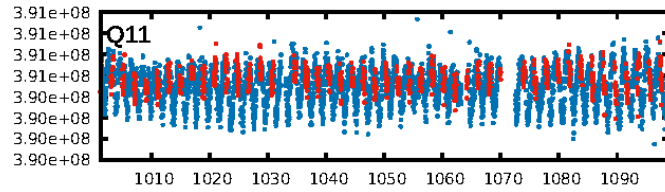
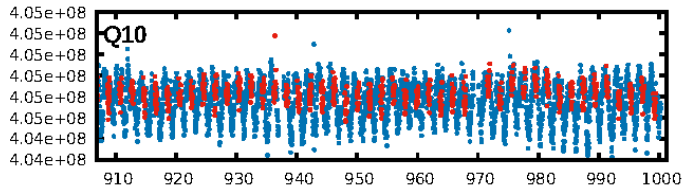
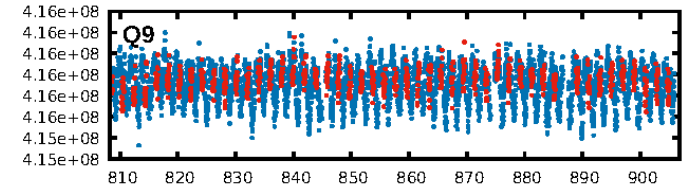
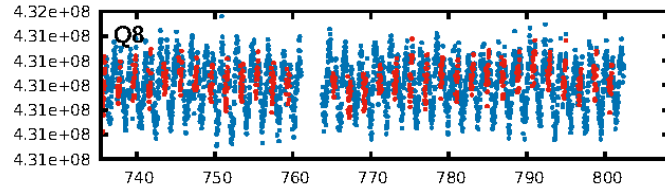
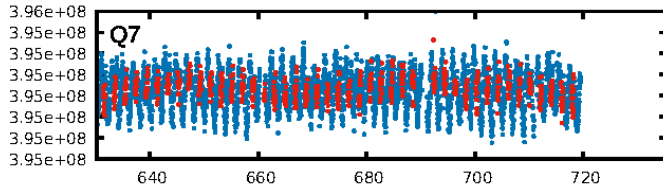
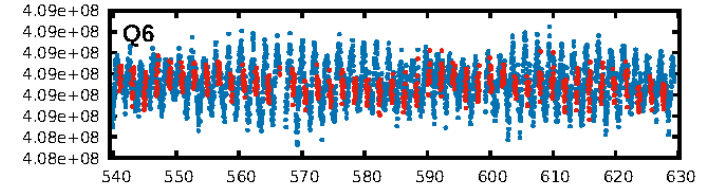
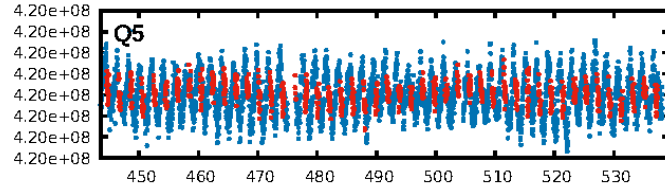
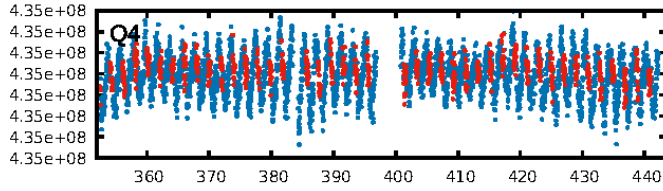
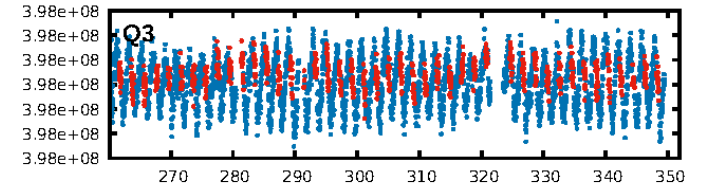
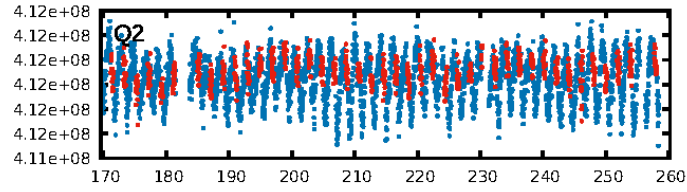
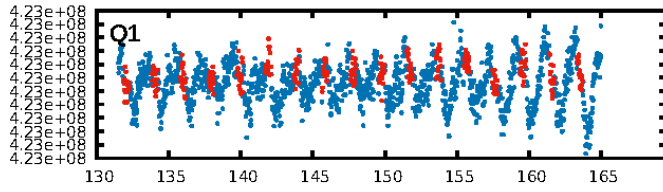
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [5.04 σ]
LongPeriod-sig: 100.0% [148.93 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 5.69e-23
RollingBand-fgt: 1.00 [651/651]
GhostDiagnostic-chr: 4.103
Centroid-sig: 1.8%
Centroid-so: 0.721 arcsec [1.76 σ]
OotOffset-rm: 0.306 arcsec [1.04 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-rm: 0.196 arcsec [0.67 σ]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.82 [14/17]
DiffImageOverlap-fno: 0.00 [0/17]

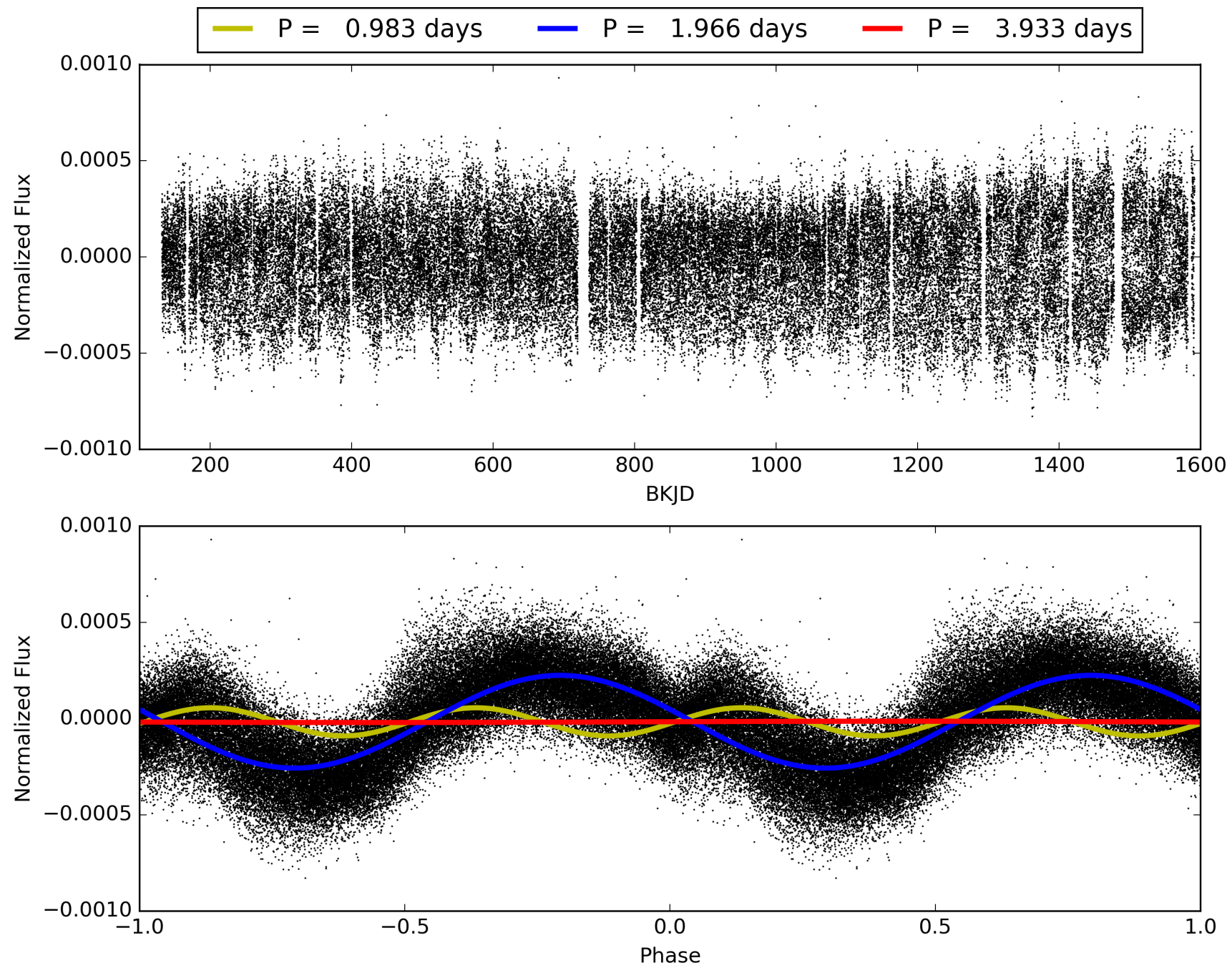
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 010657634-01, PDC Light Curves

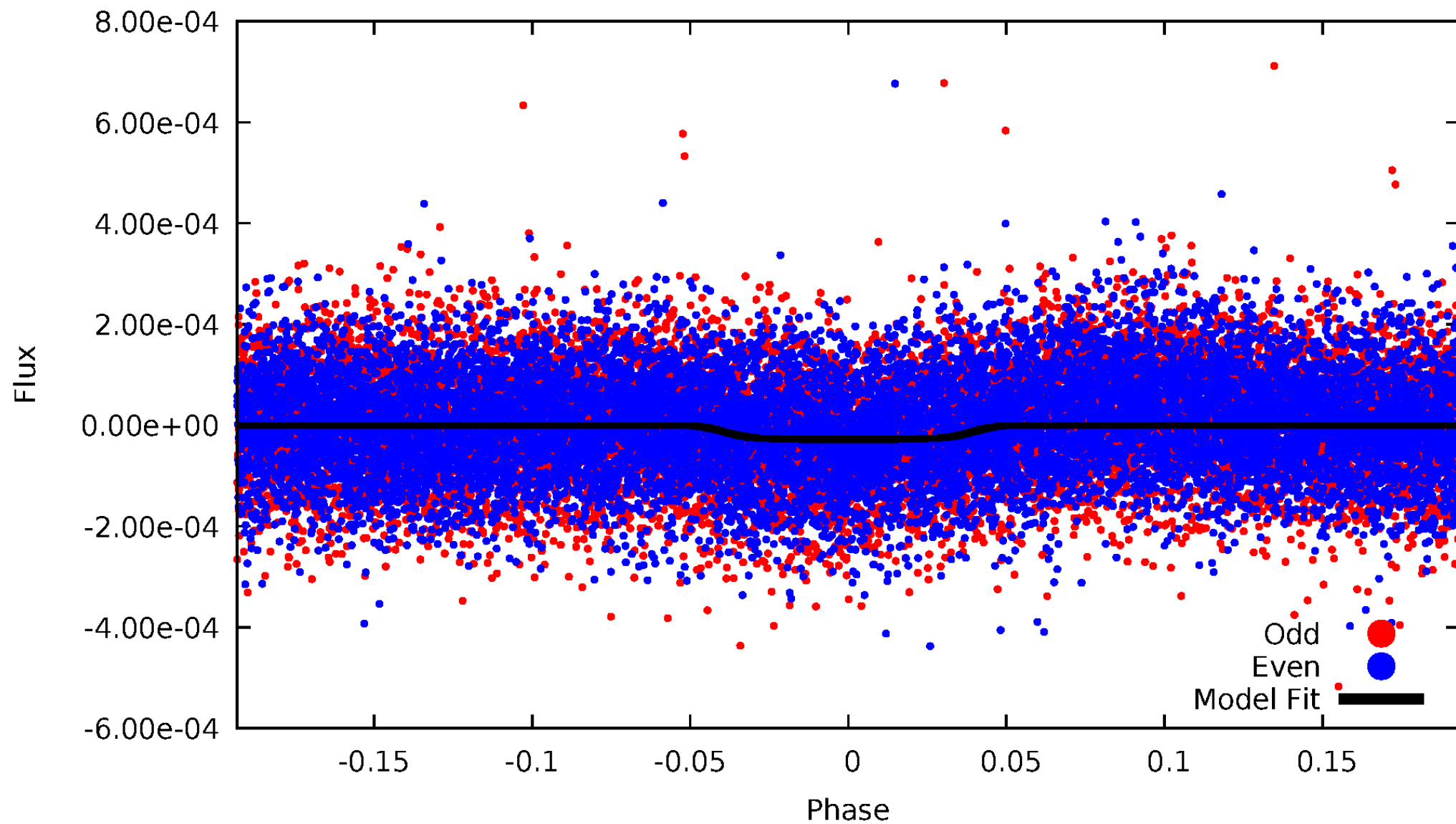


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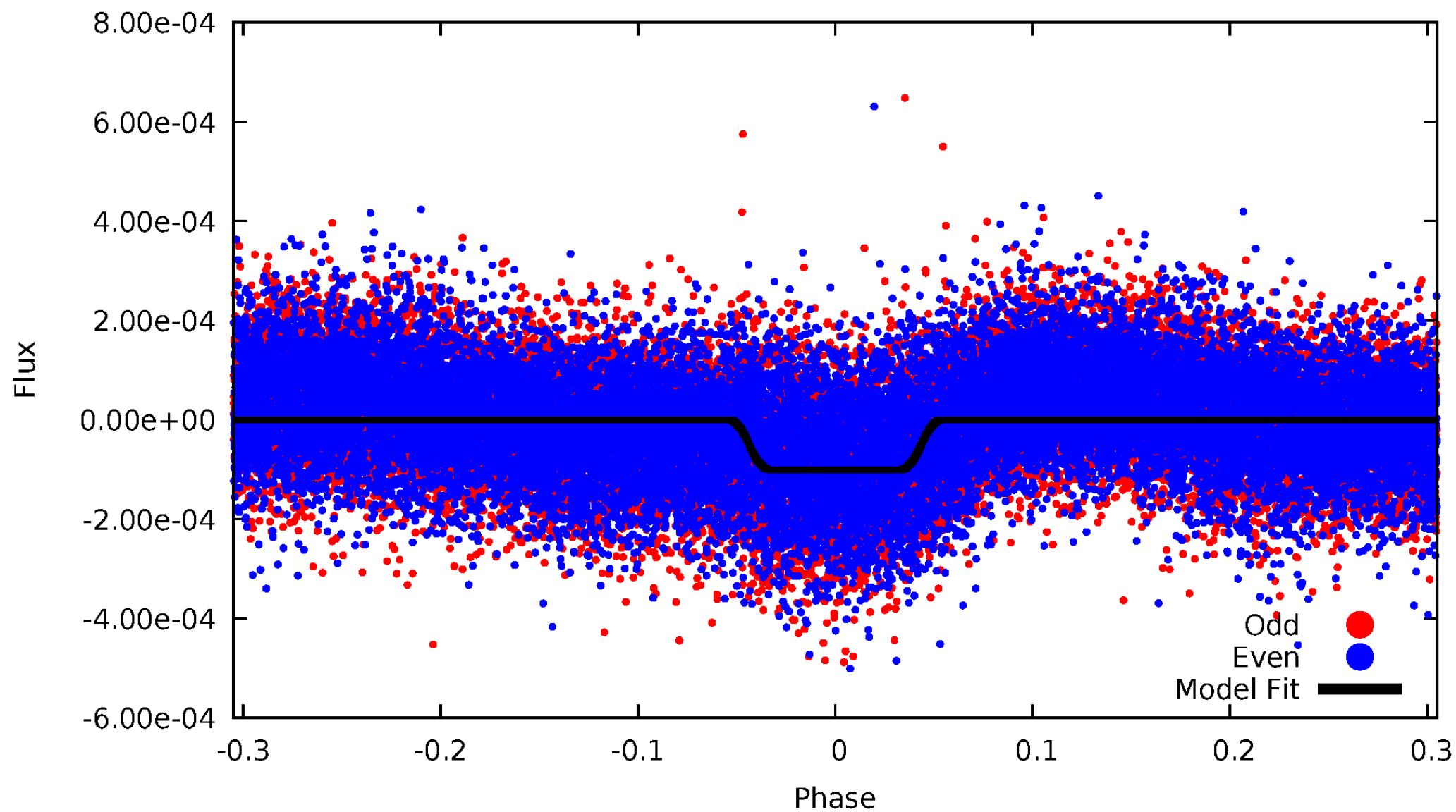
DV Odd/Even

TCE 010657634-01



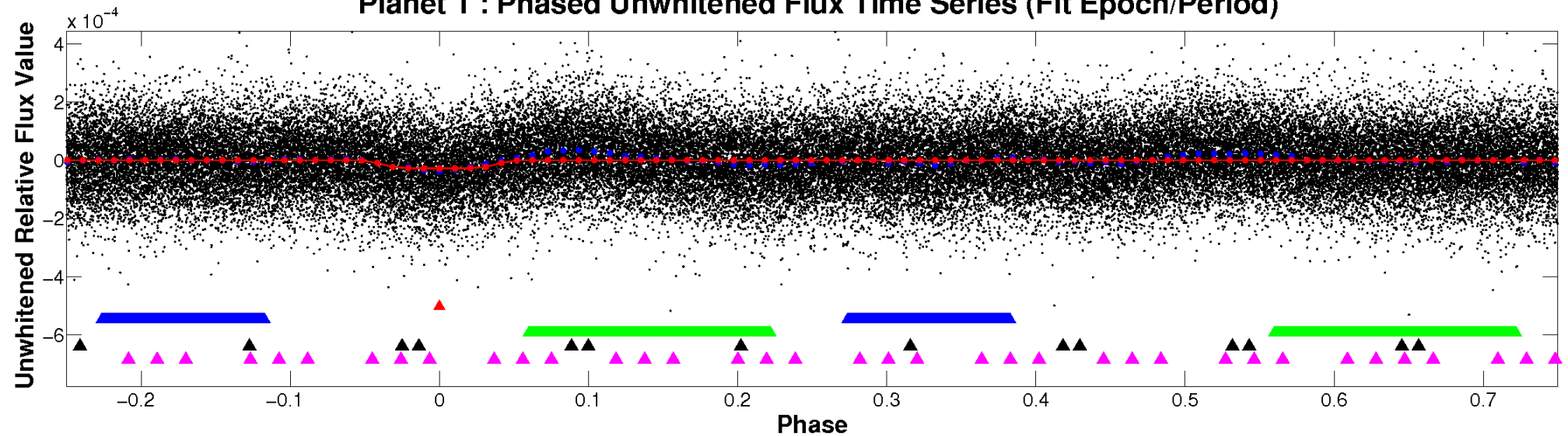
ALT Odd/Even

TCE 010657634-01

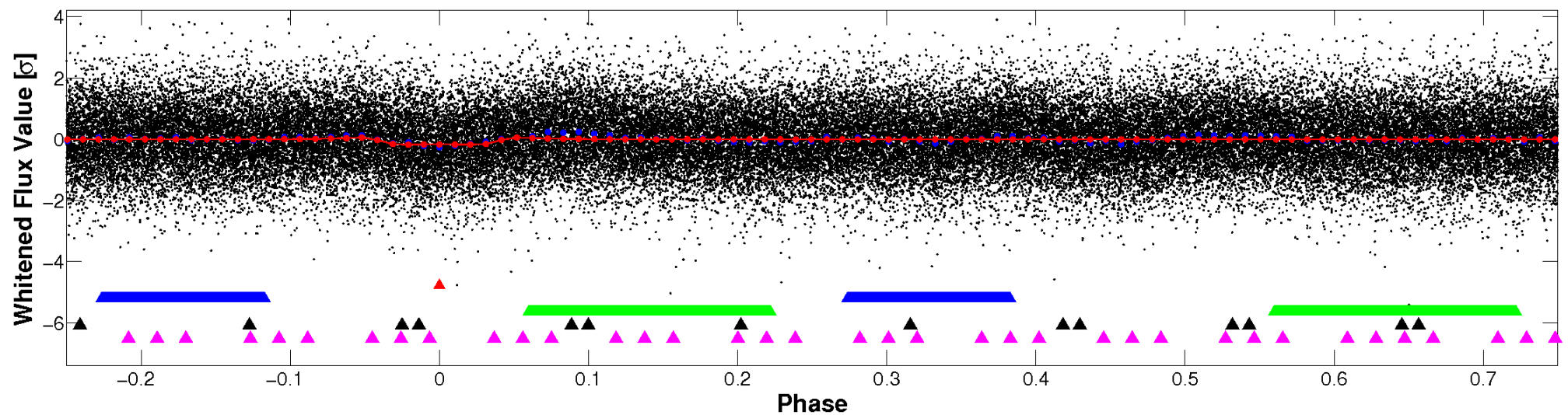


Non-Whitened Vs. Whitened Light Curve

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

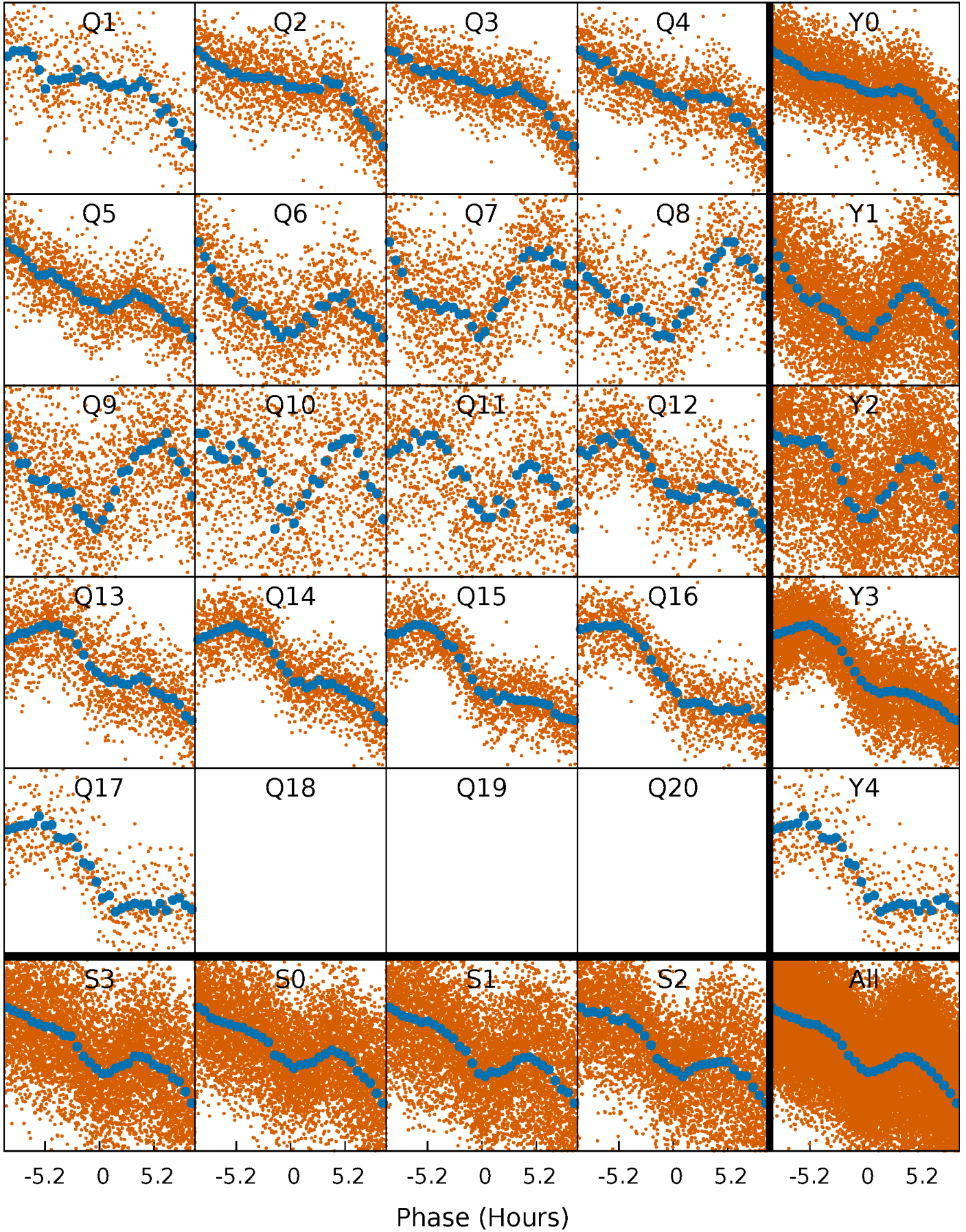


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



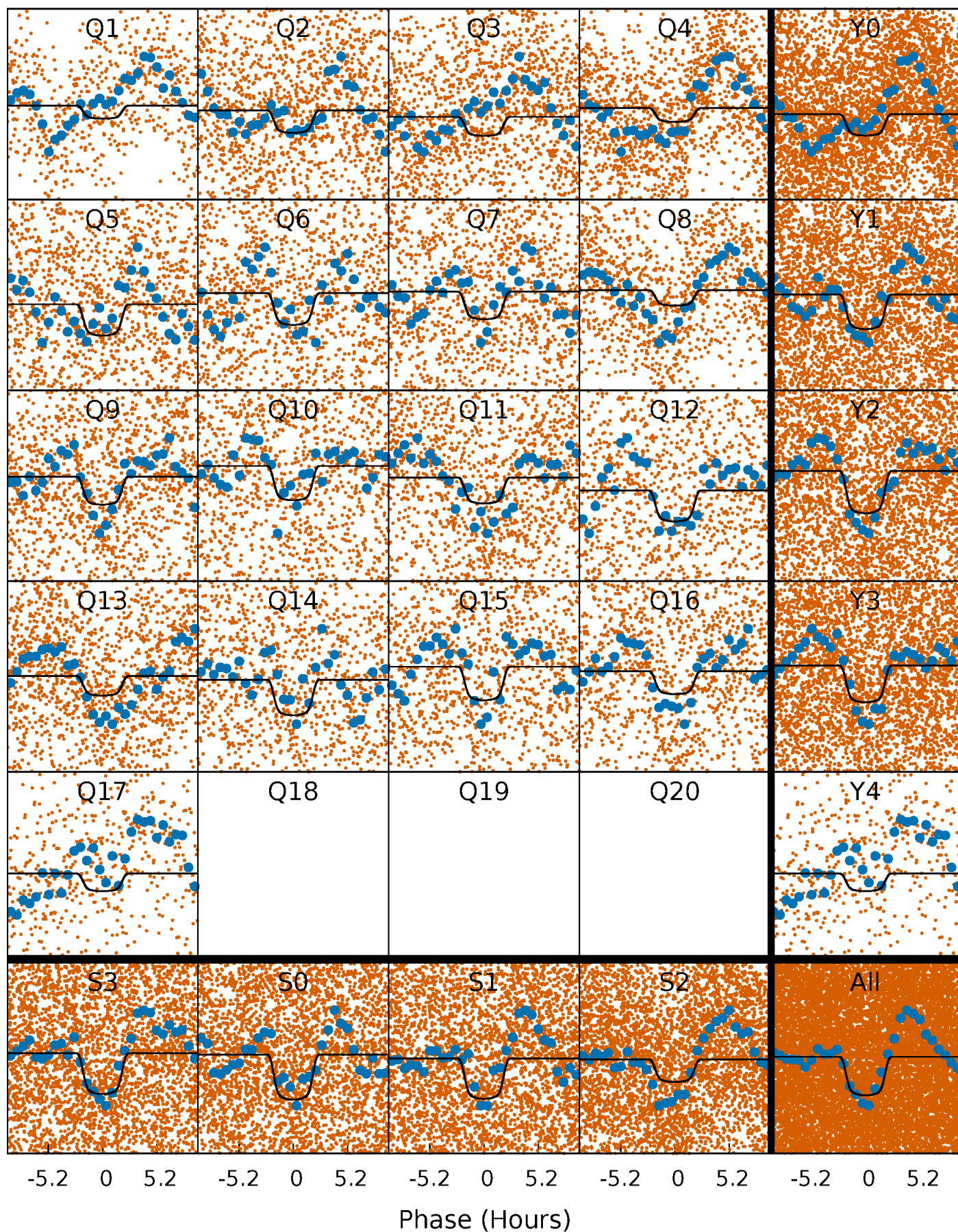
PDC Quarter-Phased Transit Curves

TCE 010657634-01 P= 1.966433 Days $T_0=132.062412$ (BKJD)



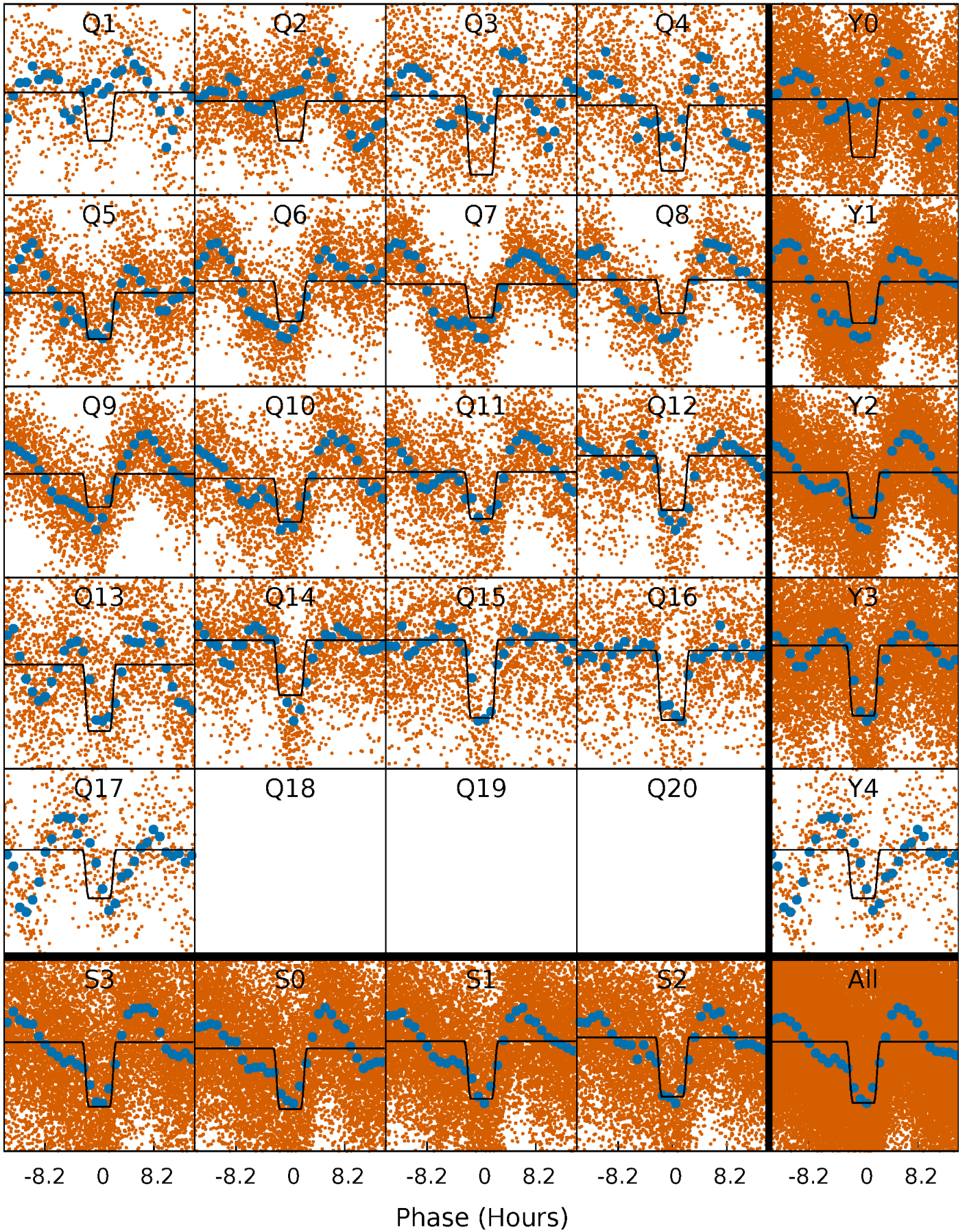
DV Quarter-Phased Transit Curves

TCE 010657634-01 P= 1.966433 Days $T_0=132.062412$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

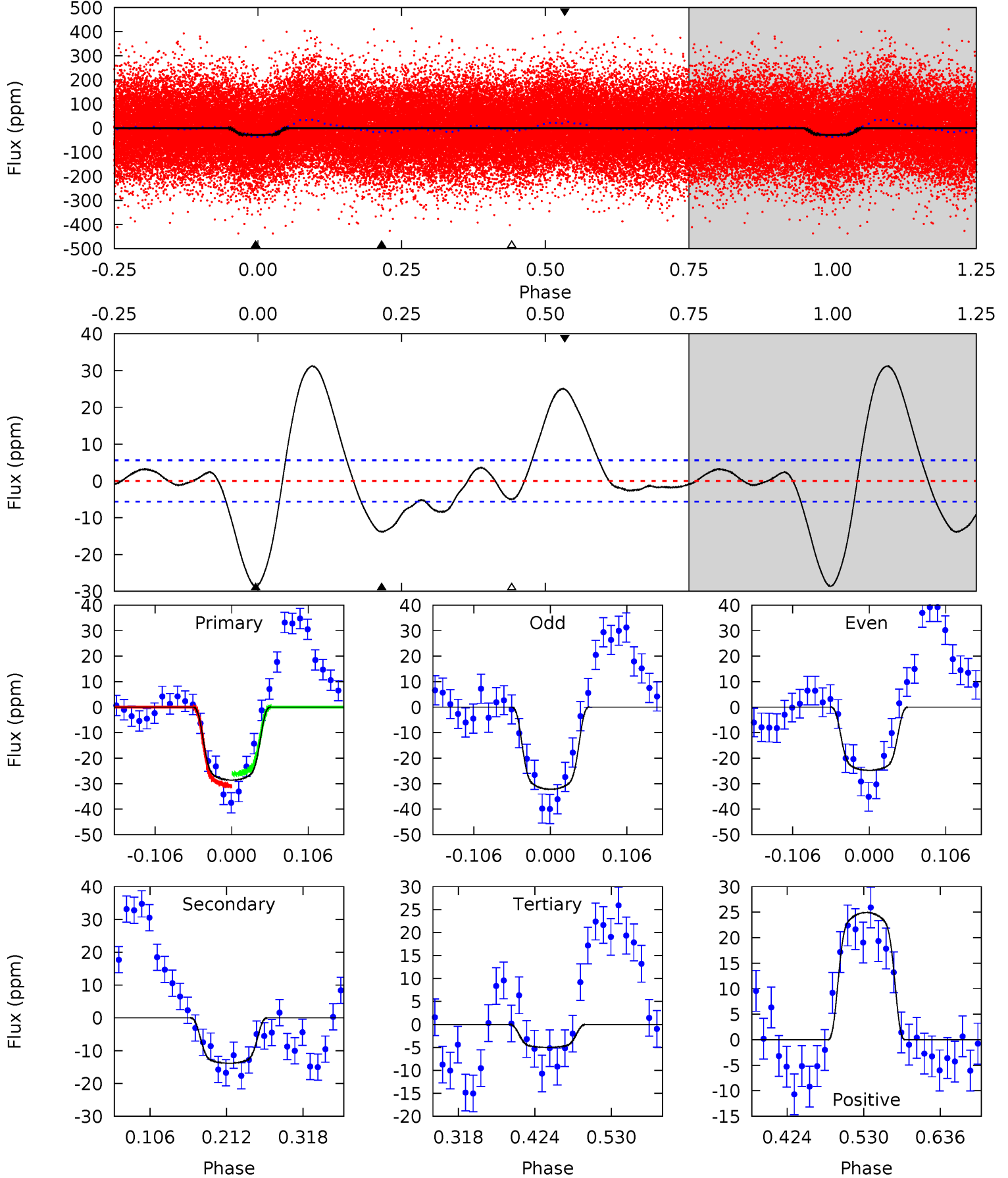
TCE 010657634-01 P= 1.966434 Days $T_0=132.052136$ (BKJD)



DV Model-Shift Uniqueness Test

010657634-01, P = 1.966433 Days, E = 130.095979 Days

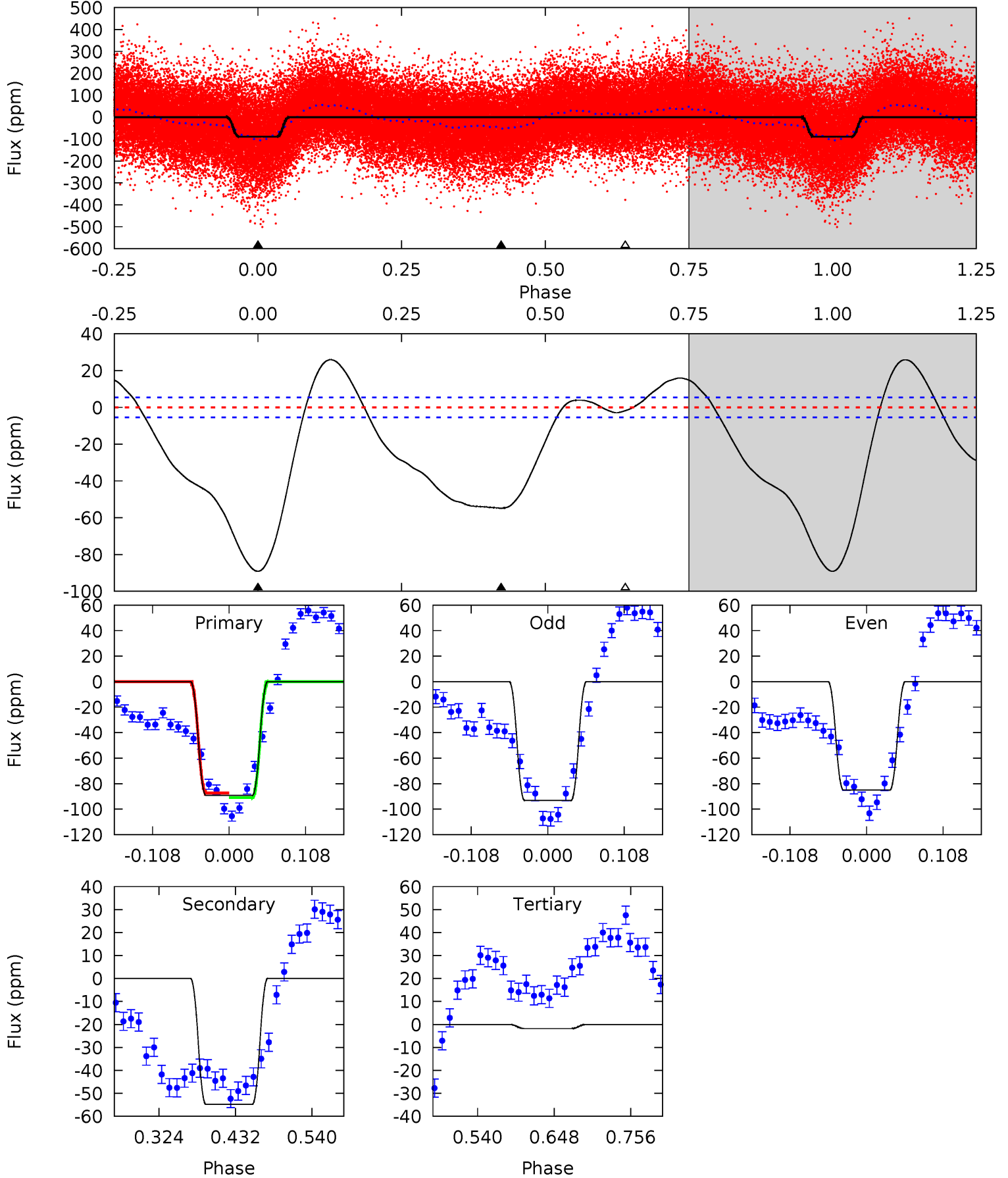
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.2	11.2	4.06	20.2	4.55	1.62	6.93	19.2	2.99	7.17	-9.00	3.01	1.00	0.52	1.80



Alt Model-Shift Uniqueness Test

010657634-01, P = 1.966434 Days, E = 130.085702 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
74.8	46.0	1.51	0	4.55	1.61	16.4	73.3	74.8	44.5	46.0	3.45	0.97	0.23	1.50



Stellar Parameters For KIC 010657634

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6812^{+169}_{-203}	$3.799^{+0.292}_{-0.097}$	$-0.180^{+0.300}_{-0.250}$	$2.662^{+0.493}_{-0.916}$	$1.627^{+0.190}_{-0.353}$	$0.121^{+0.245}_{-0.037}$
	+2%/-3%	+8%/-3%	+167%/-139%	+19%/-34%	+12%/-22%	+202%/-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 010657634-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-14 ± 1	$1.84^{+0.26}_{-0.35}$	3539^{+226}_{-307}	5038^{+241}_{-199}	$2.952^{+1.265}_{-0.711}$
Alt.	-55 ± 1	$2.83^{+0.36}_{-0.54}$	3543^{+215}_{-324}	5746^{+187}_{-182}	$4.914^{+2.201}_{-1.010}$

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

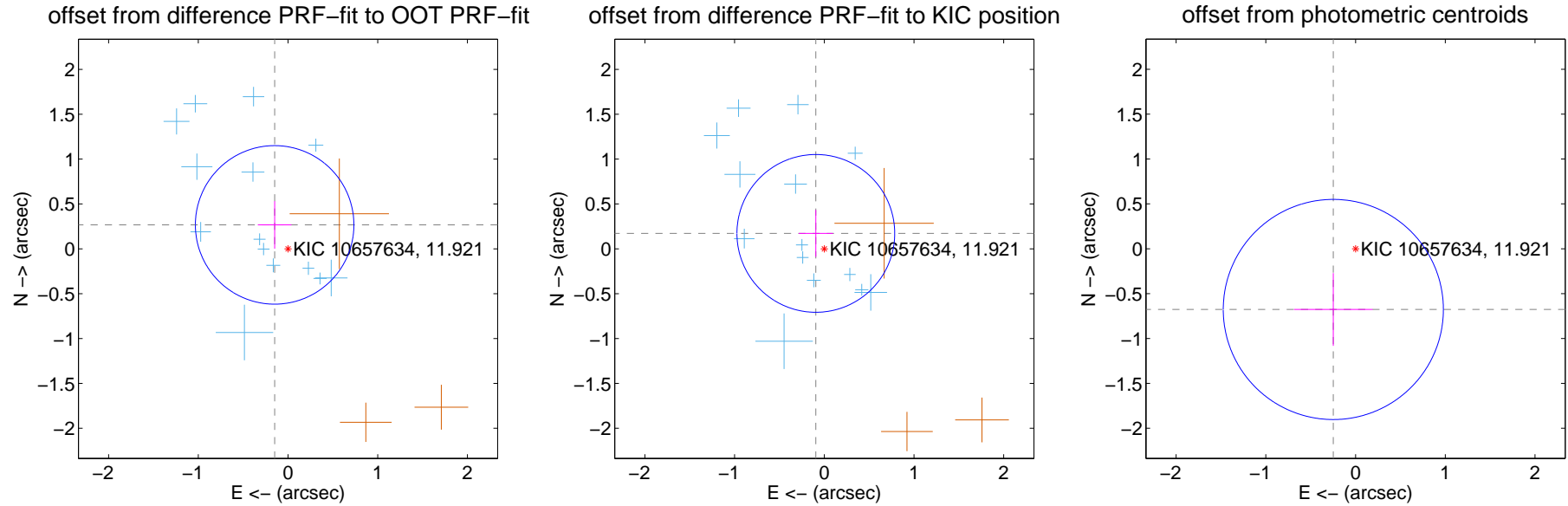
DV Centroid Data

Supplemental centroid analysis for 010657634-01. **Kepler magnitude: 11.92.** Transit SNR 11.69

There are 14 quarters with good PRF difference image offsets

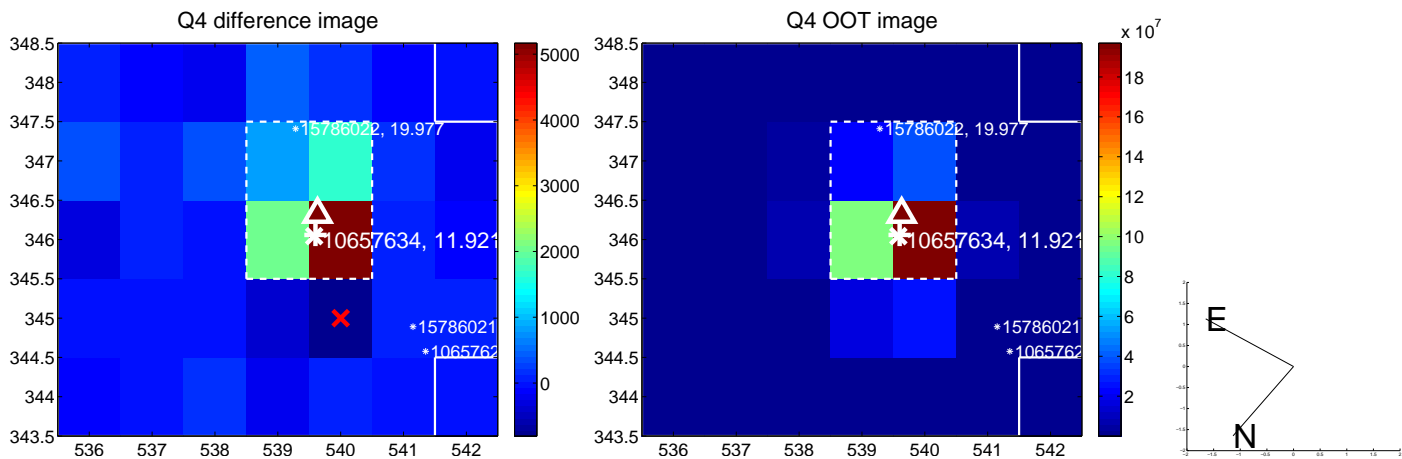
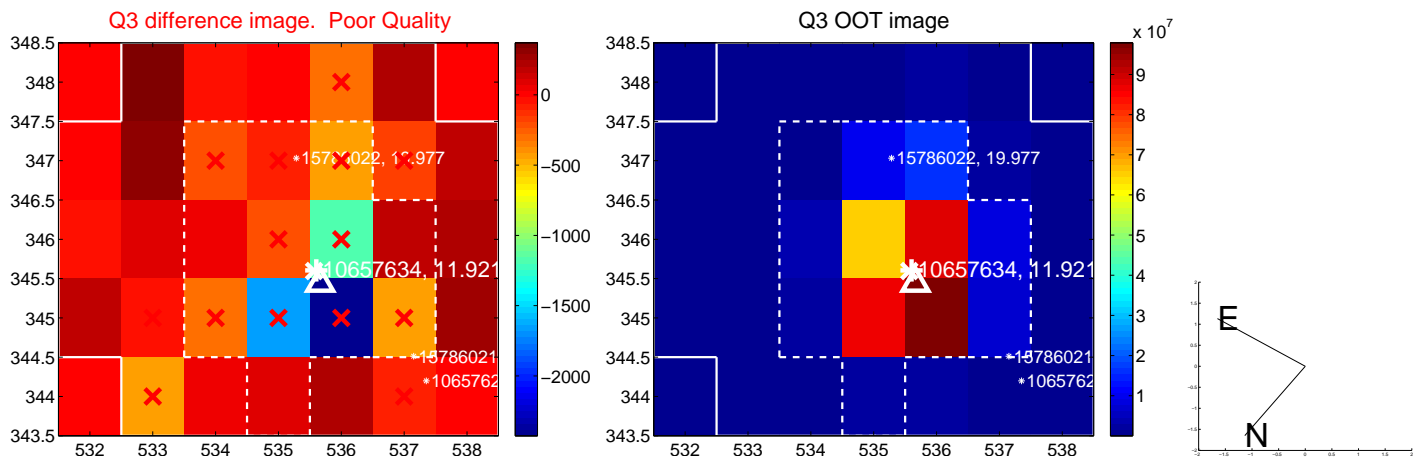
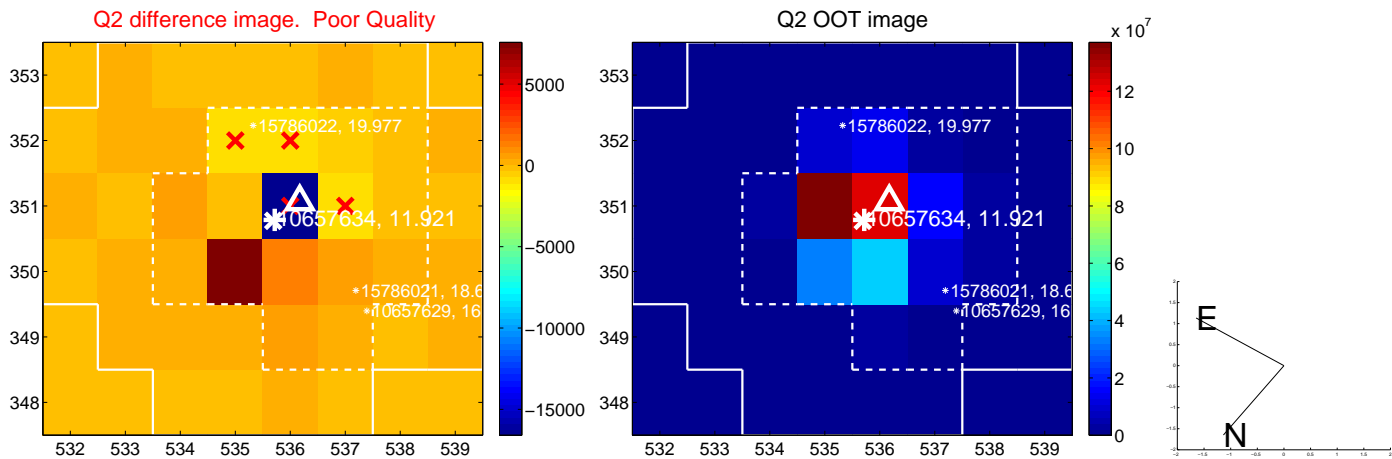
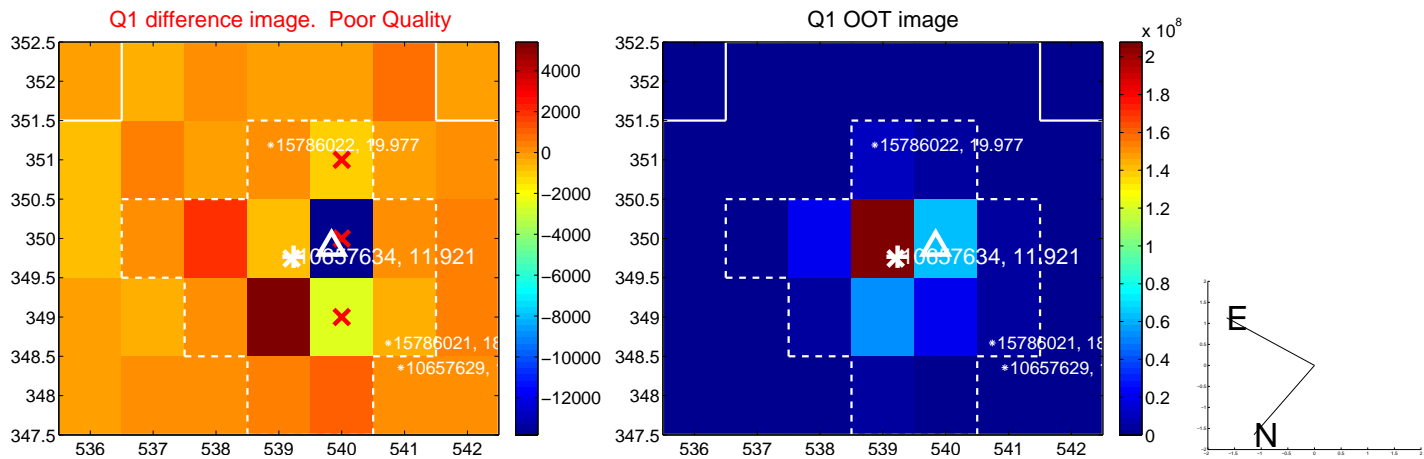
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.306 ± 0.295	1.04	0.149 ± 0.187	0.267 ± 0.265
PRF-fit source offset from KIC position	0.196 ± 0.293	0.67	0.094 ± 0.191	0.172 ± 0.261
photometric centroid source offset	0.72 ± 0.41	1.76	0.25 ± 0.44	-0.68 ± 0.41

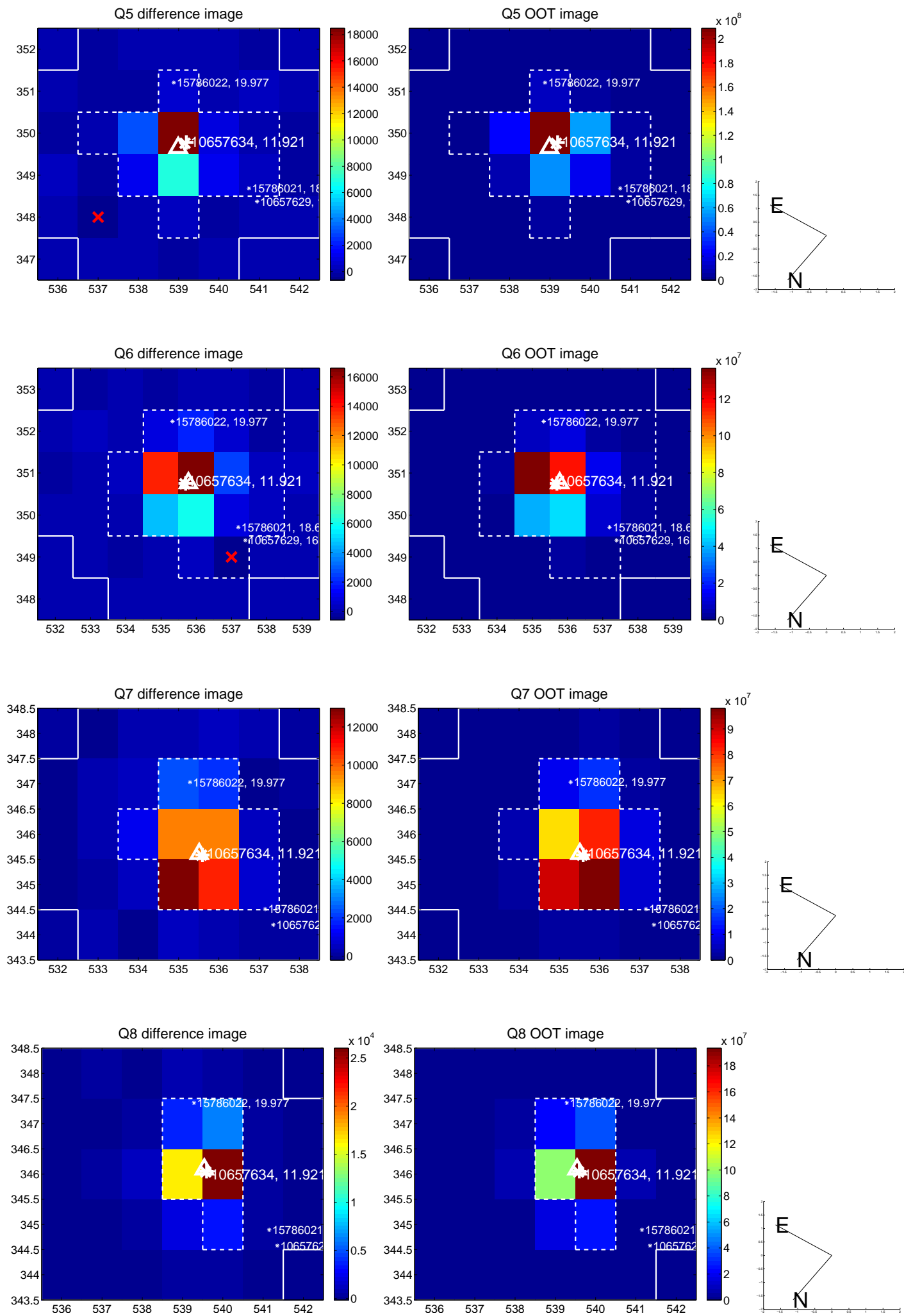


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

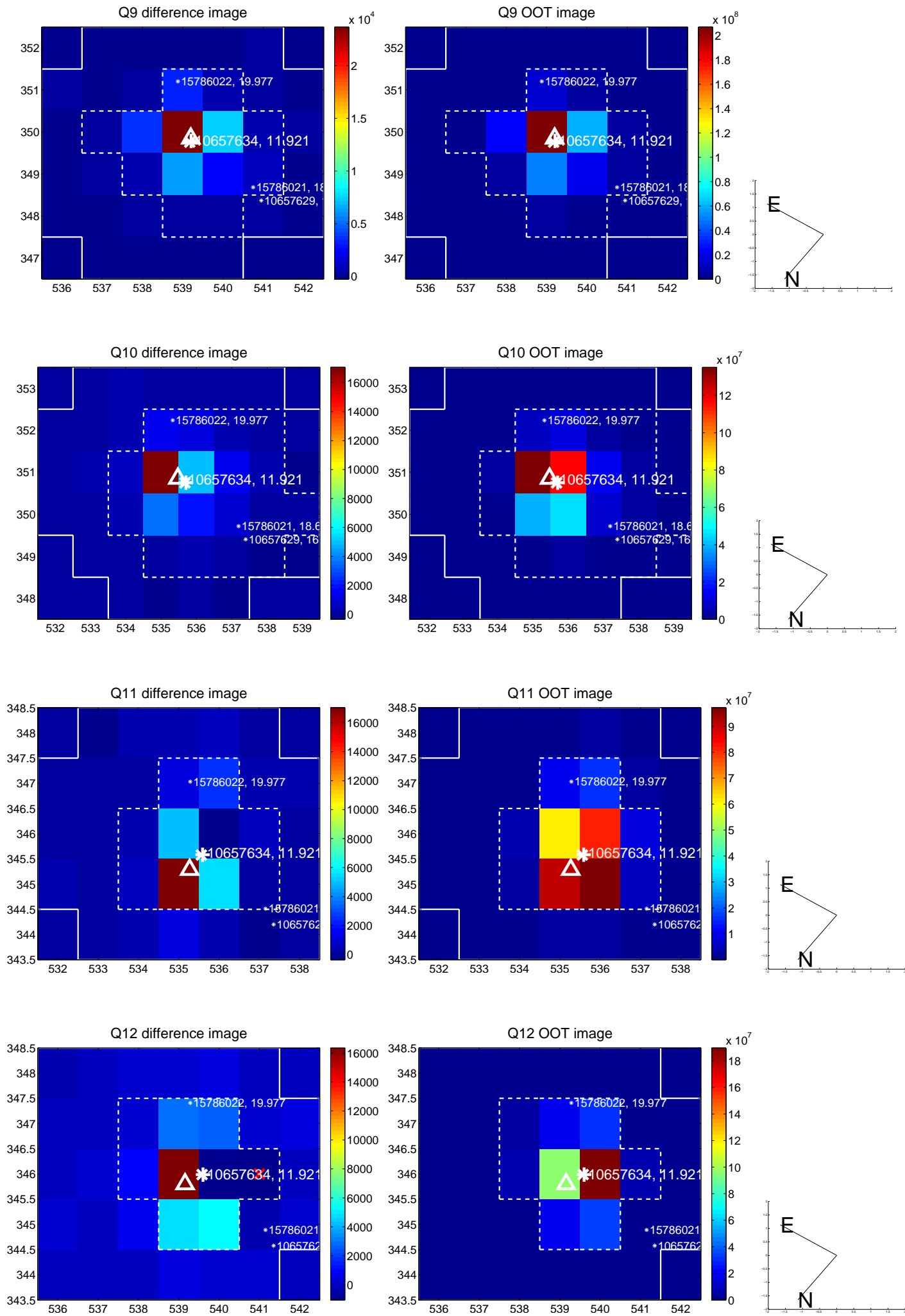
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



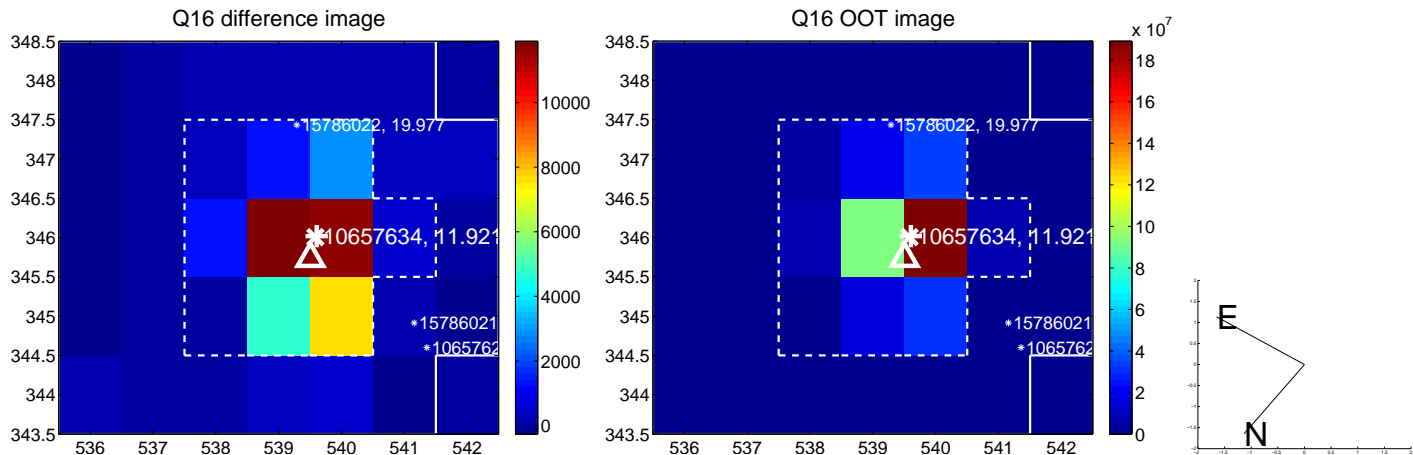
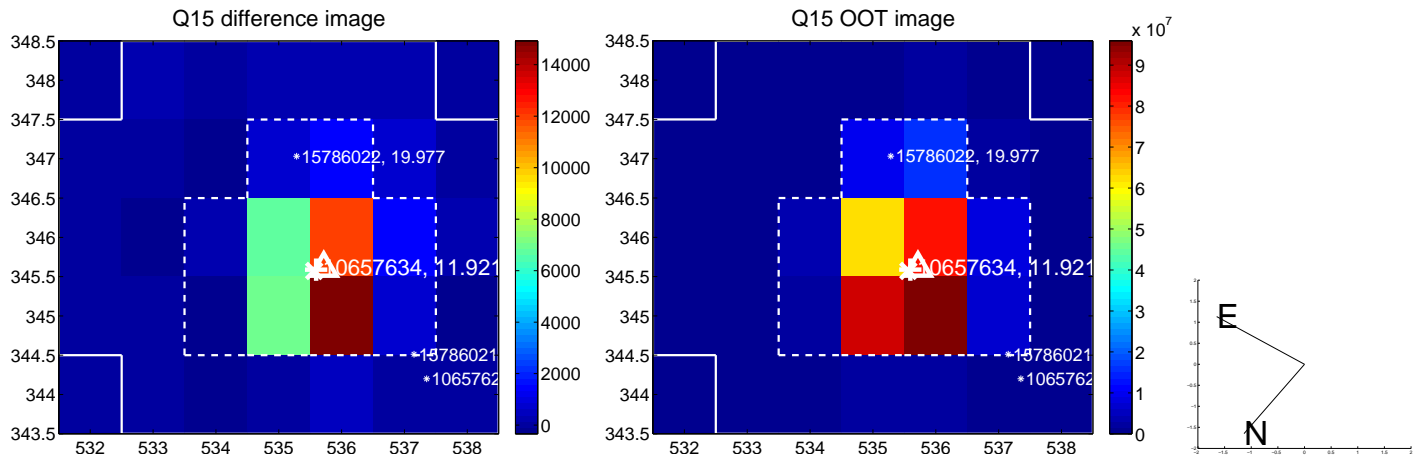
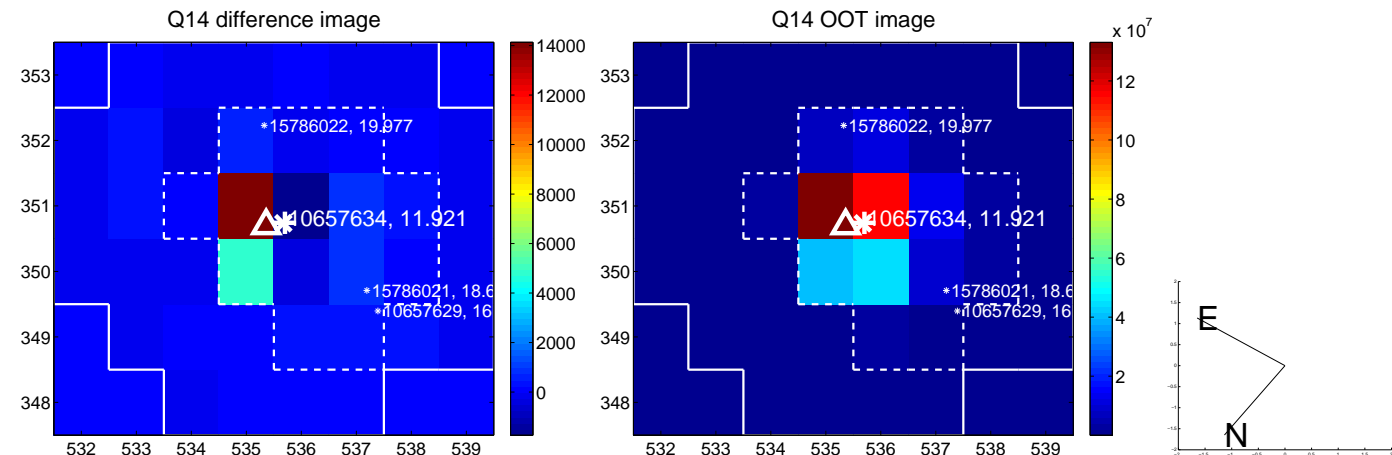
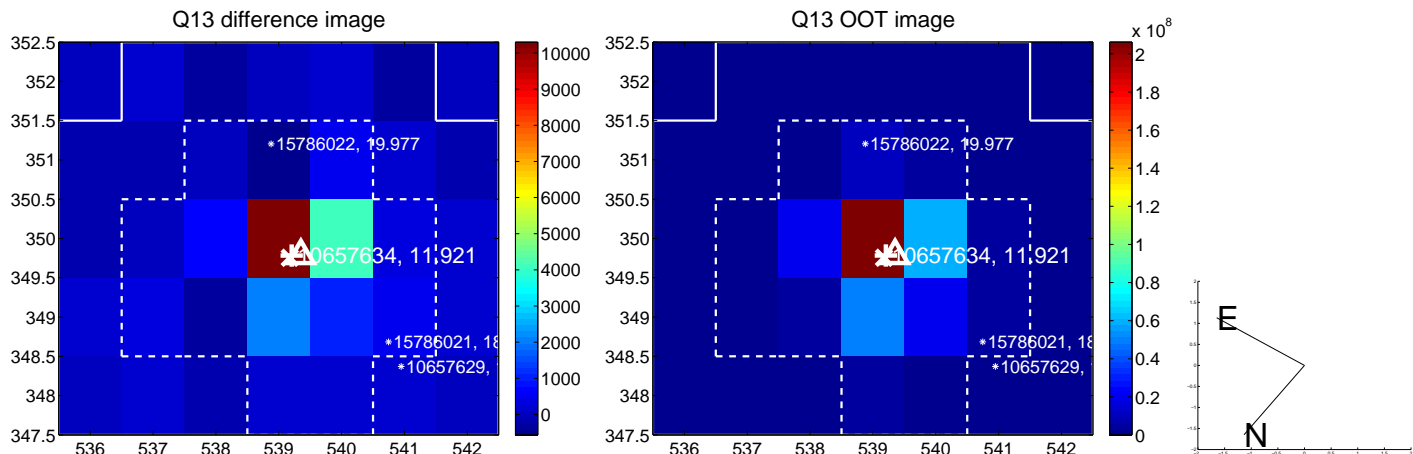
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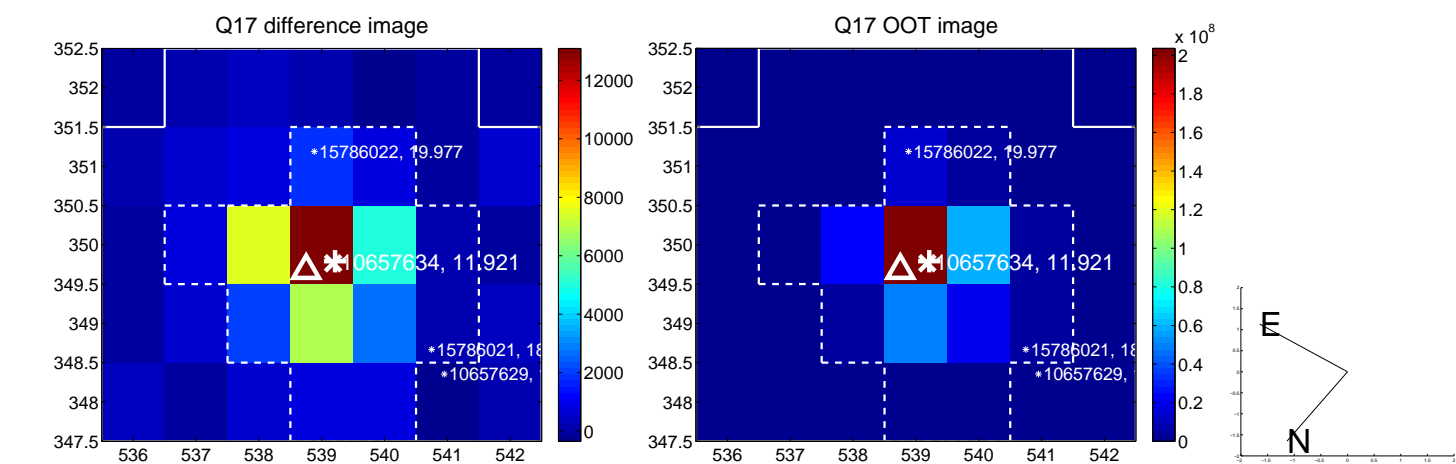
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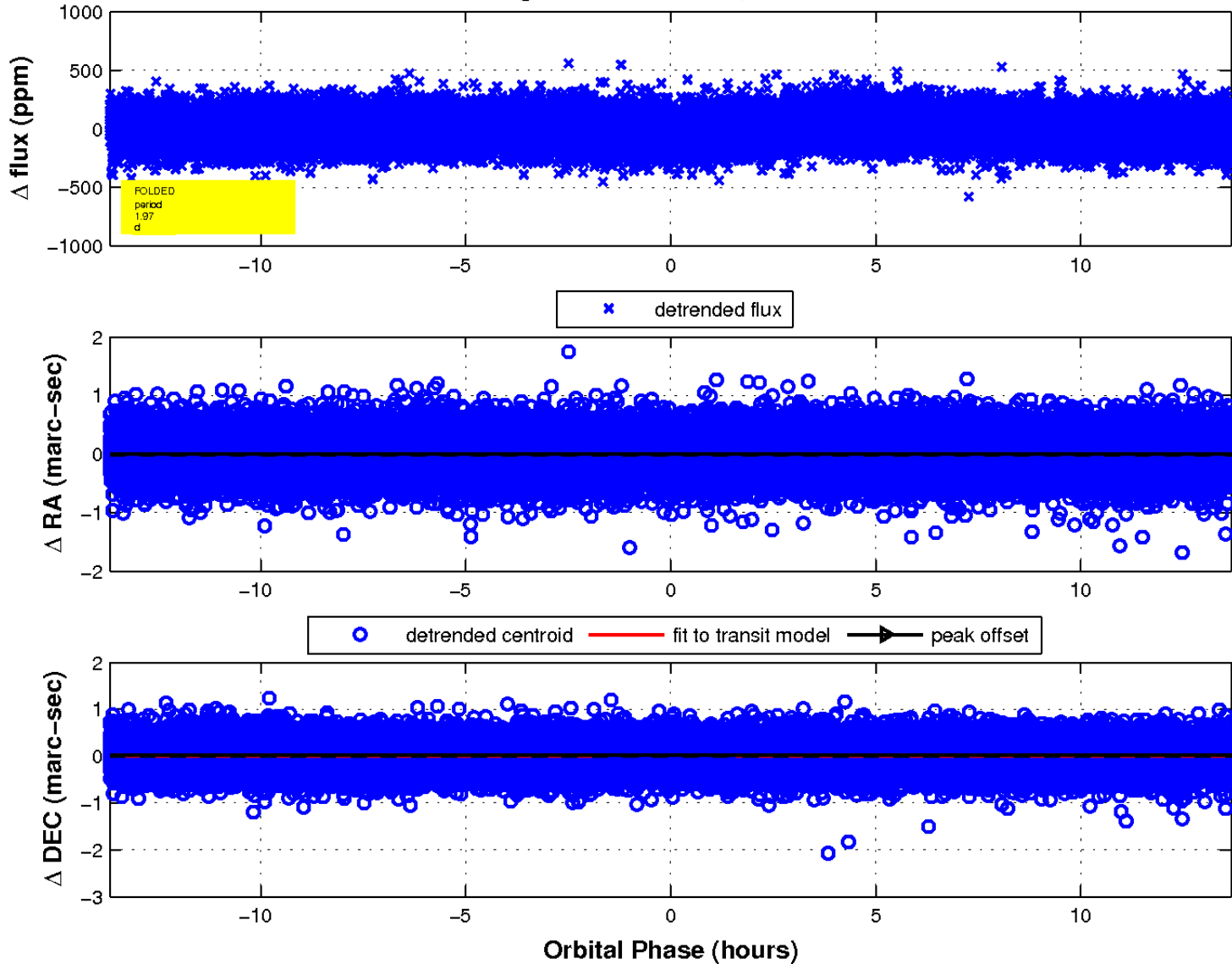
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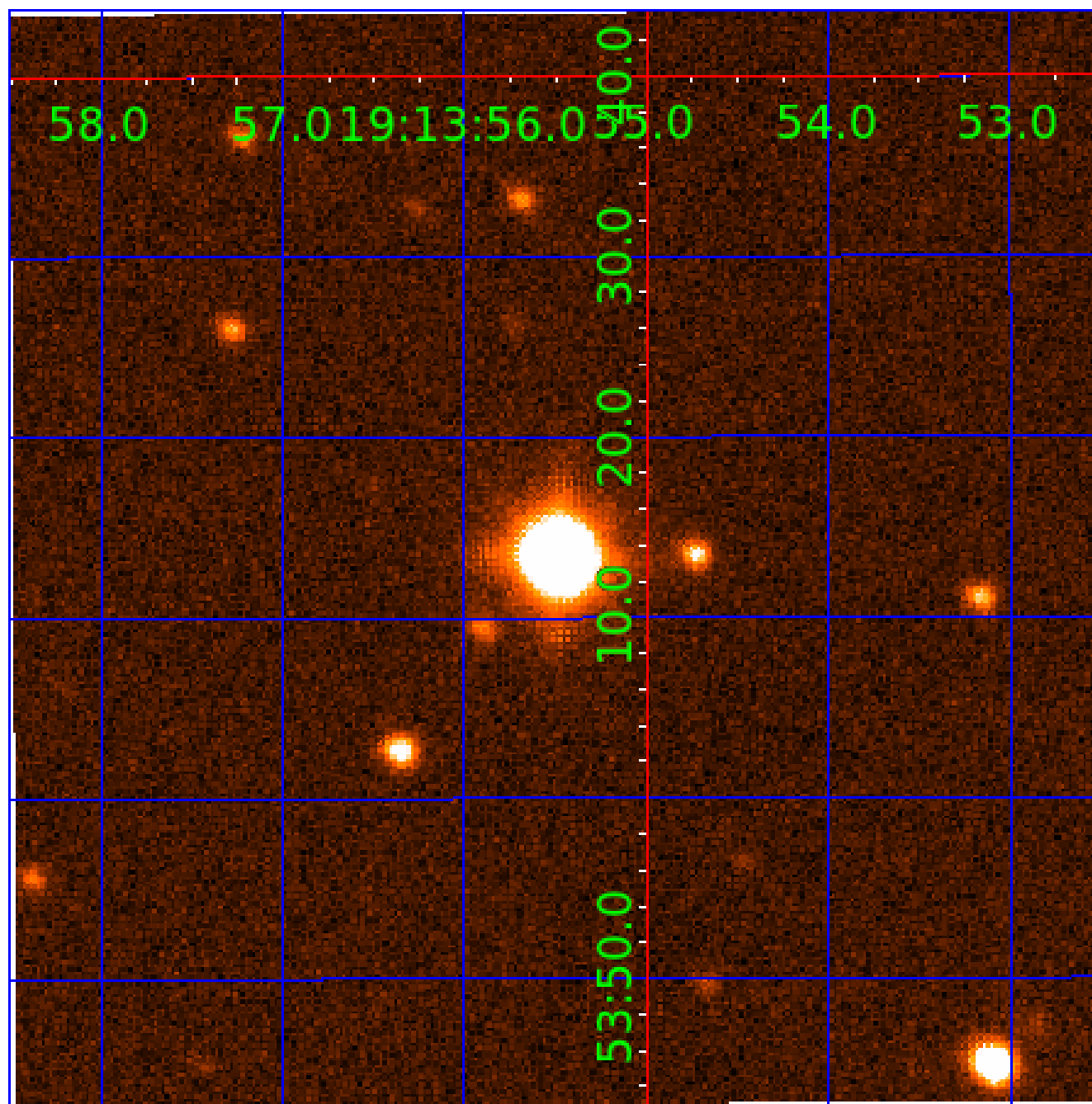


fluxWeightedCentroids, Planet 1 of 5



UKIRT Image

Declination



KIC 010657634

Q1-17 DR25 TCE Parameters

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010657634-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
010657634-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_UNRESOLVED_OFFSET

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

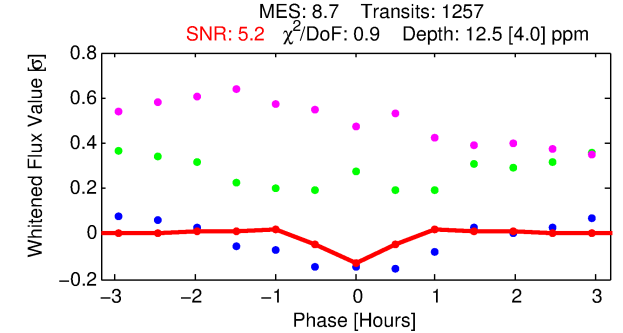
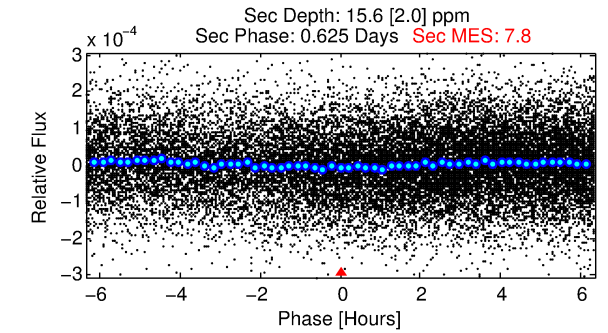
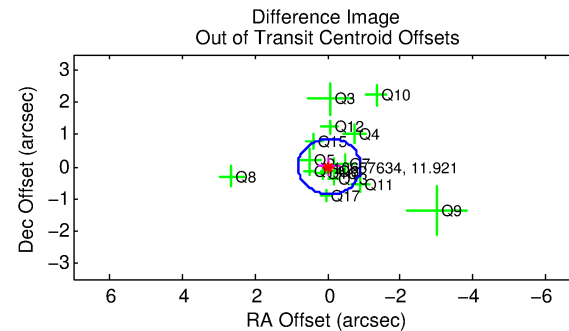
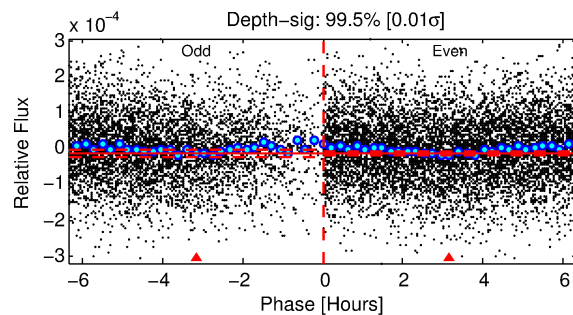
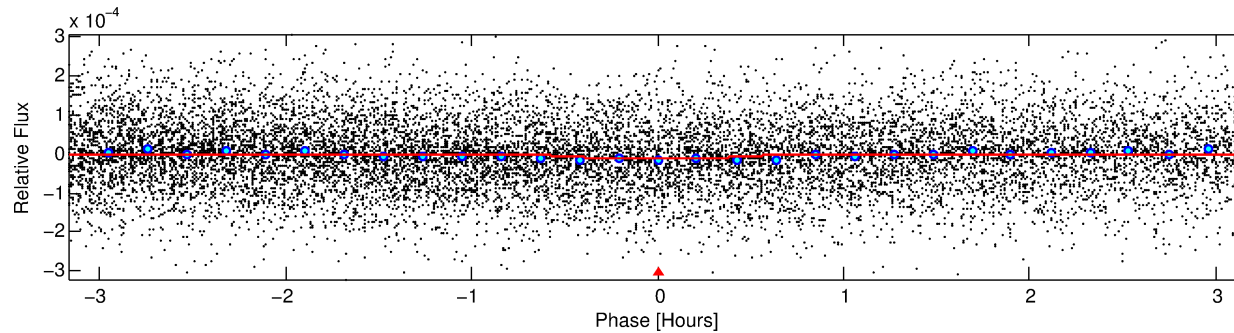
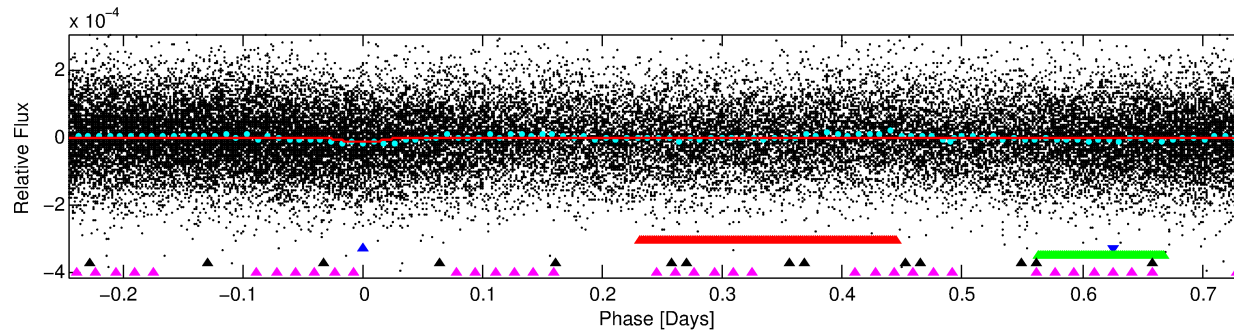
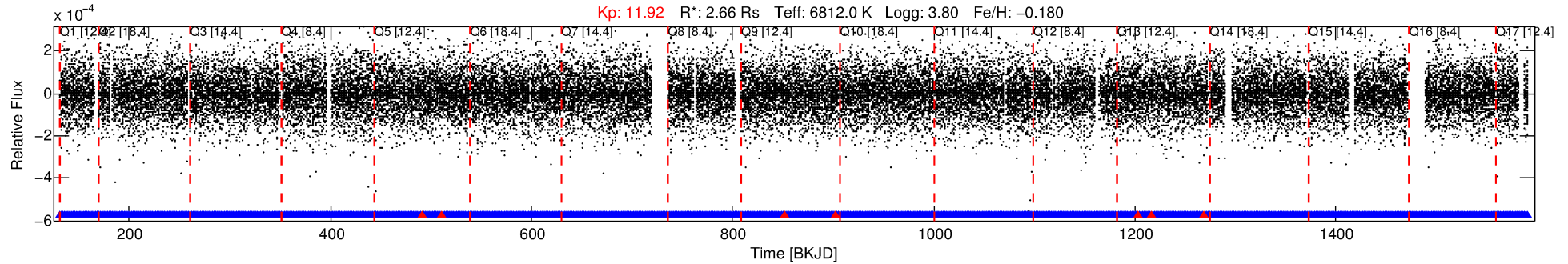
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010657634-02

No Significant Match Found

DV One-Page Summary

KIC: 10657634 Candidate: 2 of 5 Period: 0.983 d



DV Fit Results:

Period = 0.98307 [0.00002] d
Epoch = 131.8322 [0.0031] BKJD
 $R_p/R^* = 0.0033$ [0.0083]
 $a/R^* = 7.13$ [96.98]
 $b = 0.10$ [144.82]
 $\text{Seff} = 26384.65$ [13652.62]
 $T_{\text{eq}} = 3250$ [420] K
 $R_p = 0.95$ [2.43] R_e
 $a = 0.0228$ [0.0073] AU
 $A_g = 4.87$ [24.66] [0.16 σ]
 $T_{\text{eff}} = 7466$ [9400] K [0.45 σ]

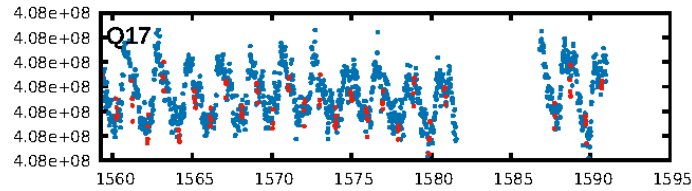
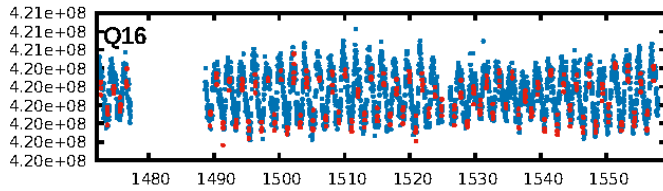
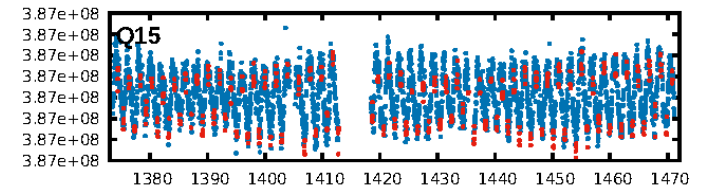
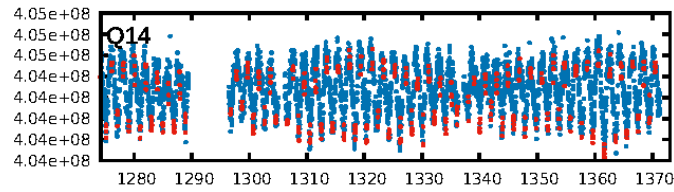
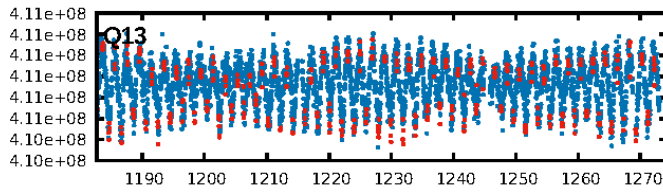
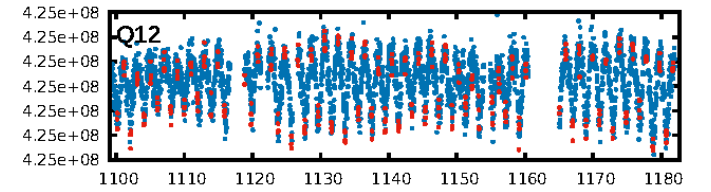
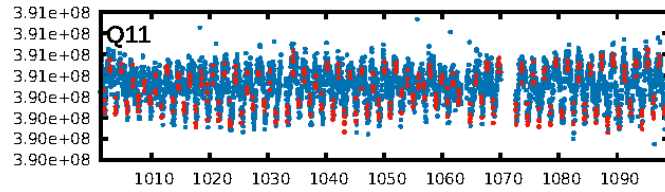
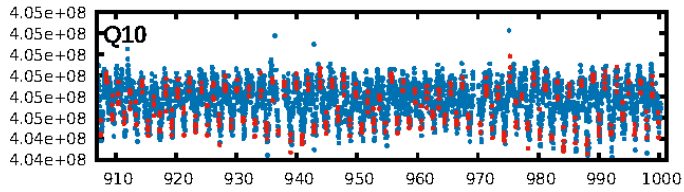
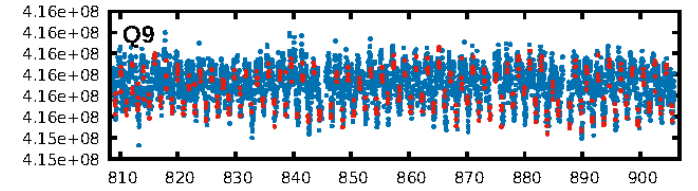
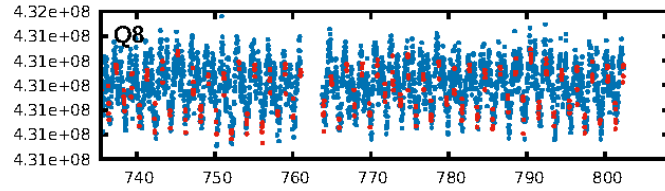
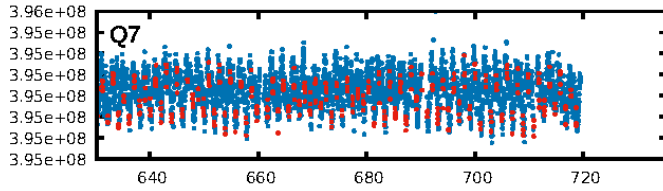
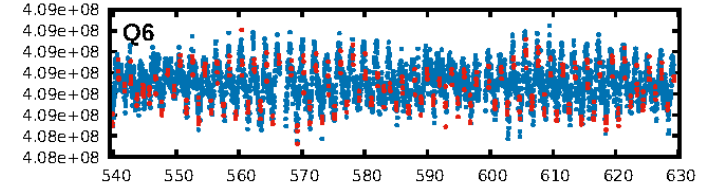
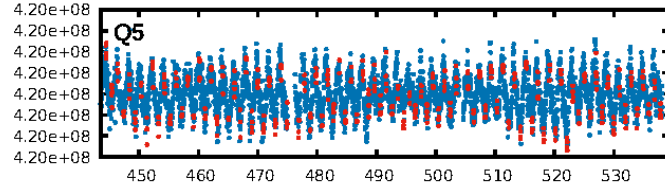
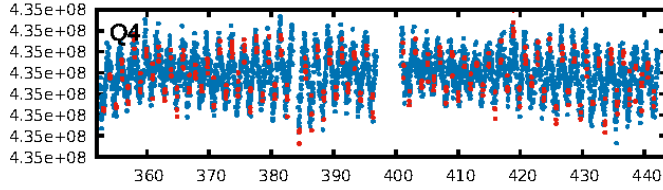
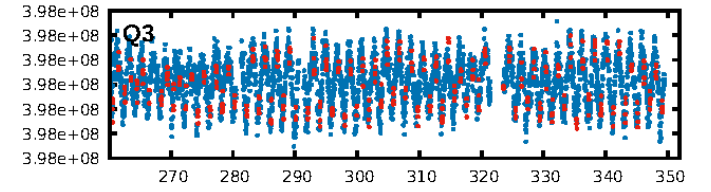
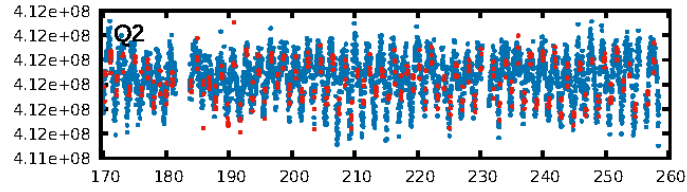
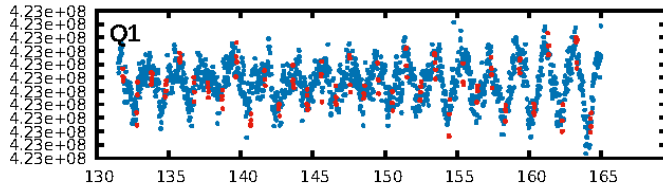
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00 σ]
LongPeriod-sig: 100.0% [5.04 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.45e-15
RollingBand-fgt: 0.99 [1206/1213]
GhostDiagnostic-chr: 6.401
Centroid-sig: 16.6%
Centroid-so: 1.860 arcsec [1.42 σ]
OotOffset-rm: 0.045 arcsec [0.16 σ]
KicOffset-rm: 0.144 arcsec [0.52 σ]
OotOffset-st: 3/4/4/4 [15]
KicOffset-st: 3/4/4/4 [15]
DiffImageQuality-fgm: 0.93 [14/15]
DiffImageOverlap-fno: 1.00 [17/17]

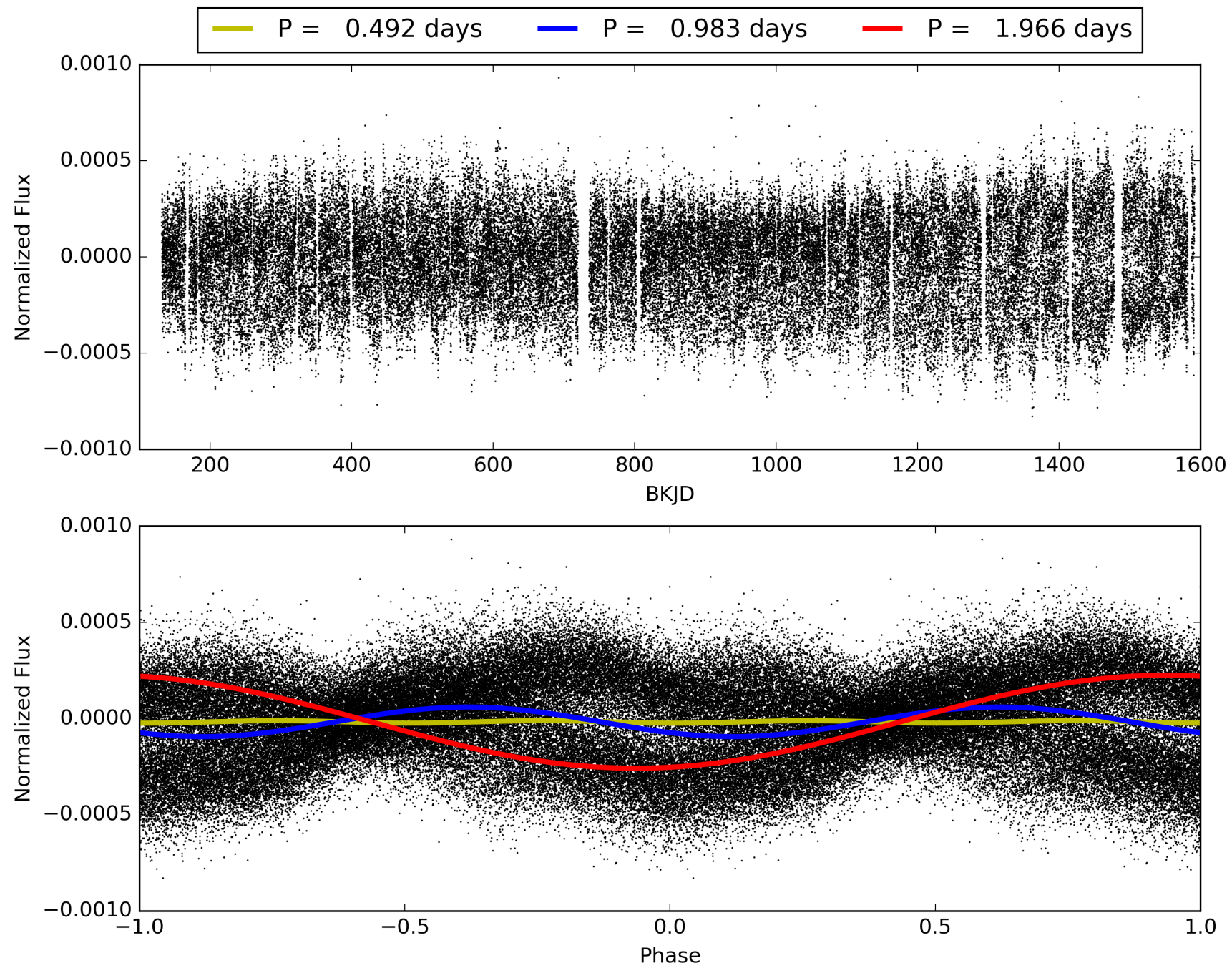
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 02:41:08 Z

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

TCE 010657634-02, PDC Light Curves

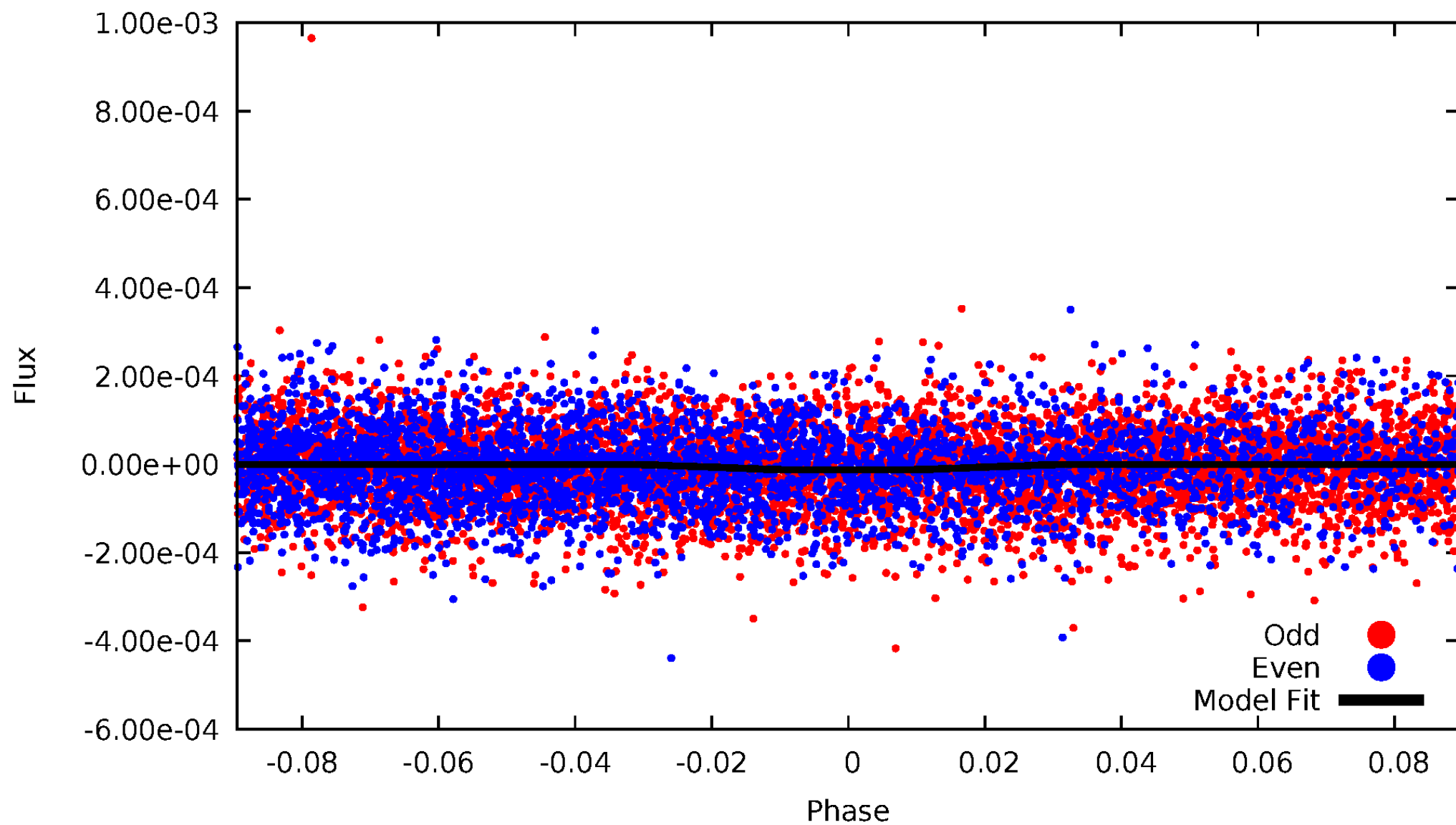


TCE 010657634-02



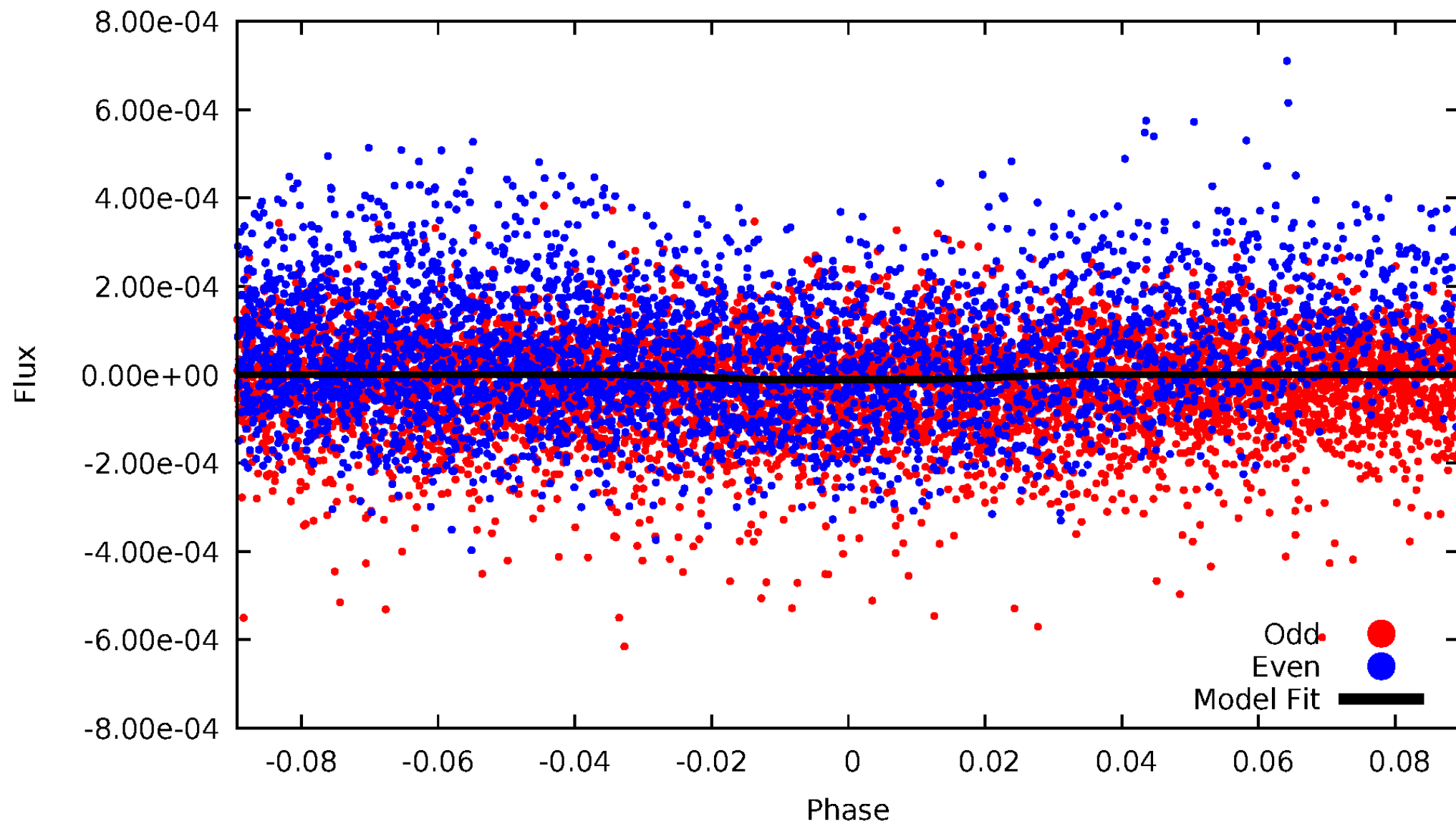
DV Odd/Even

TCE 010657634-02



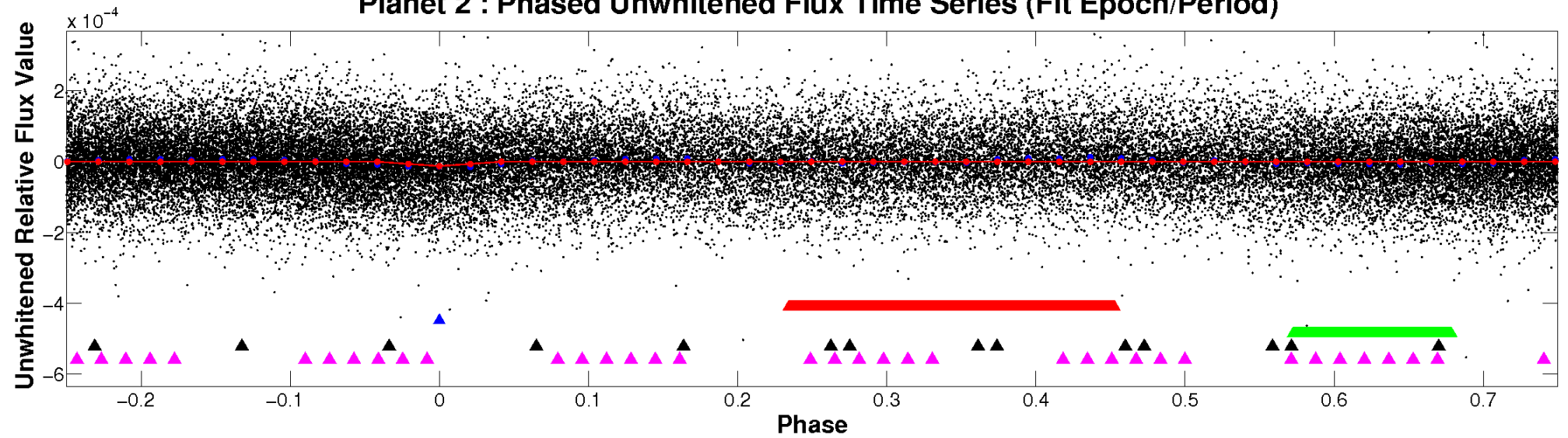
ALT Odd/Even

TCE 010657634-02

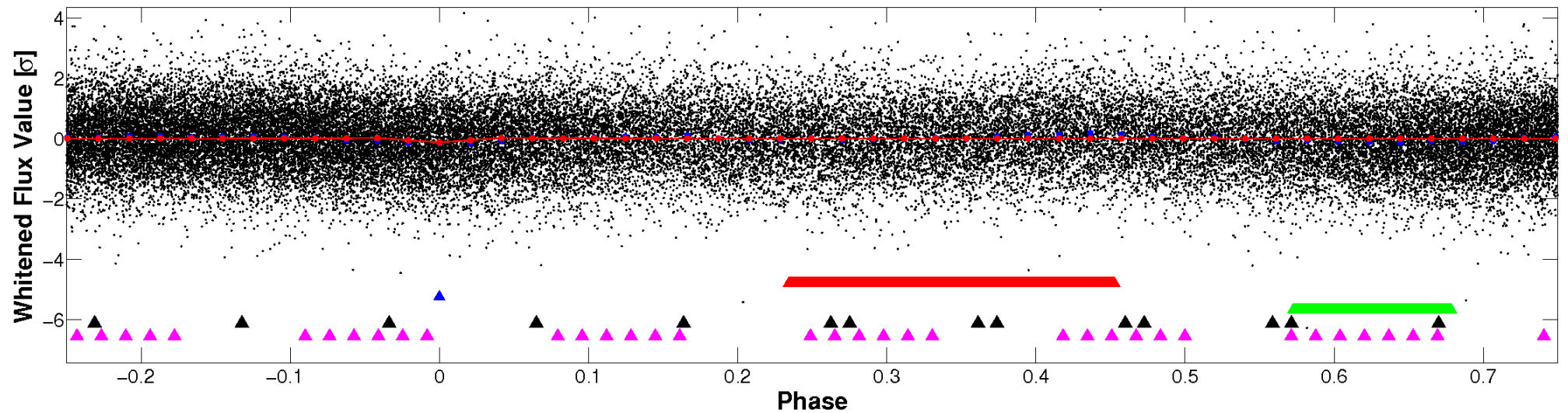


Non-Whitened Vs. Whitened Light Curve

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

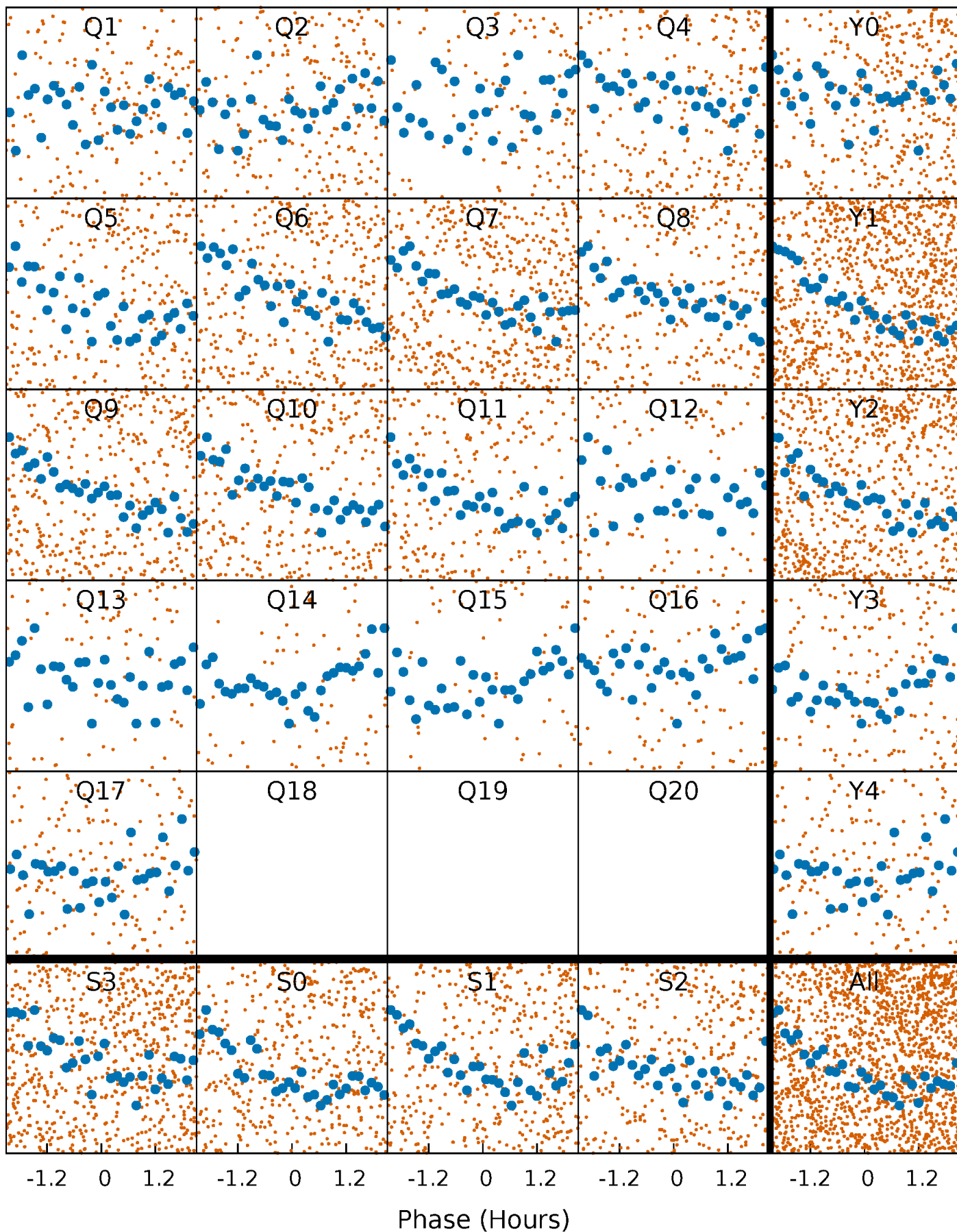


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



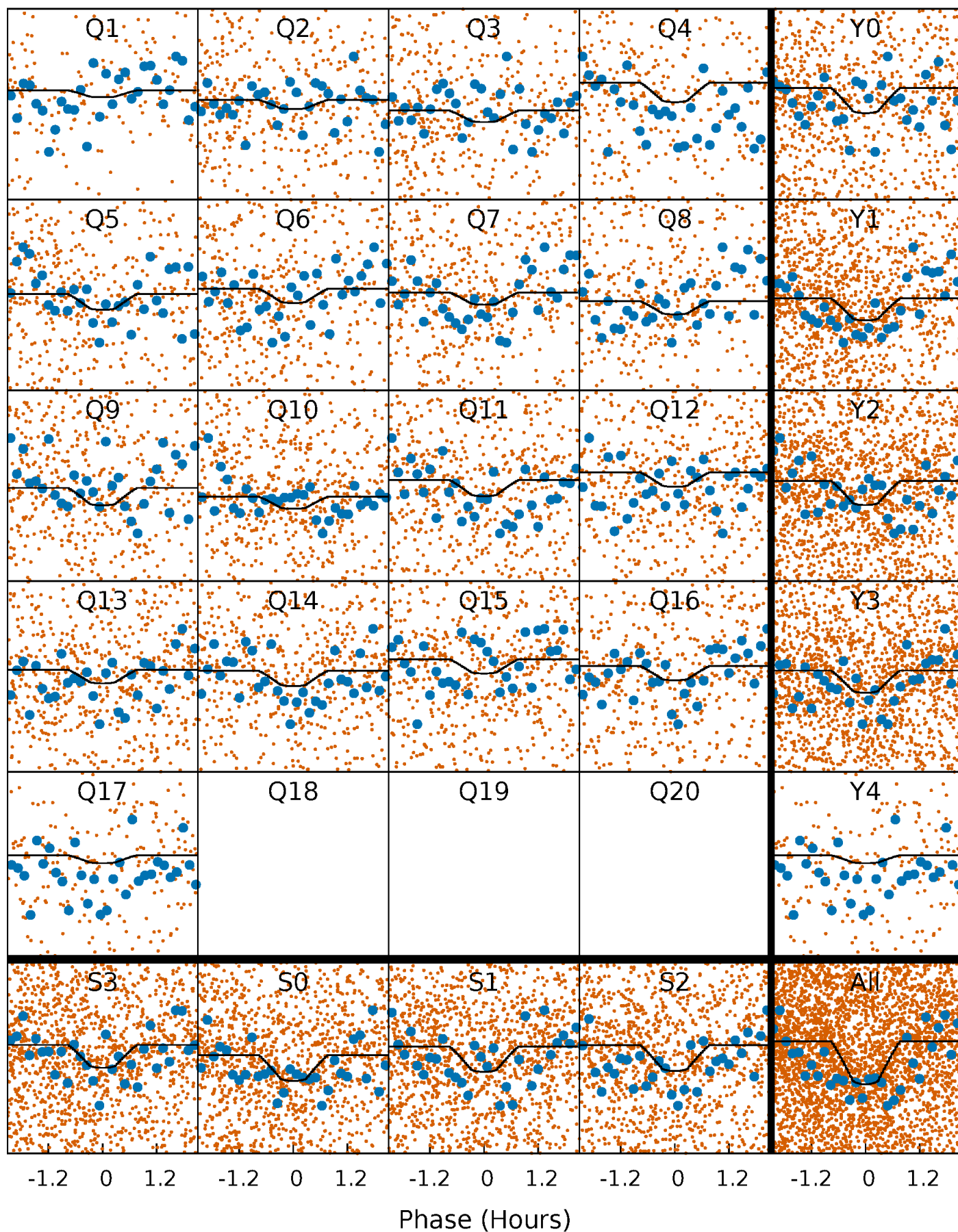
PDC Quarter-Phased Transit Curves

TCE 010657634-02 P= 0.983072 Days $T_0=131.832164$ (BKJD)



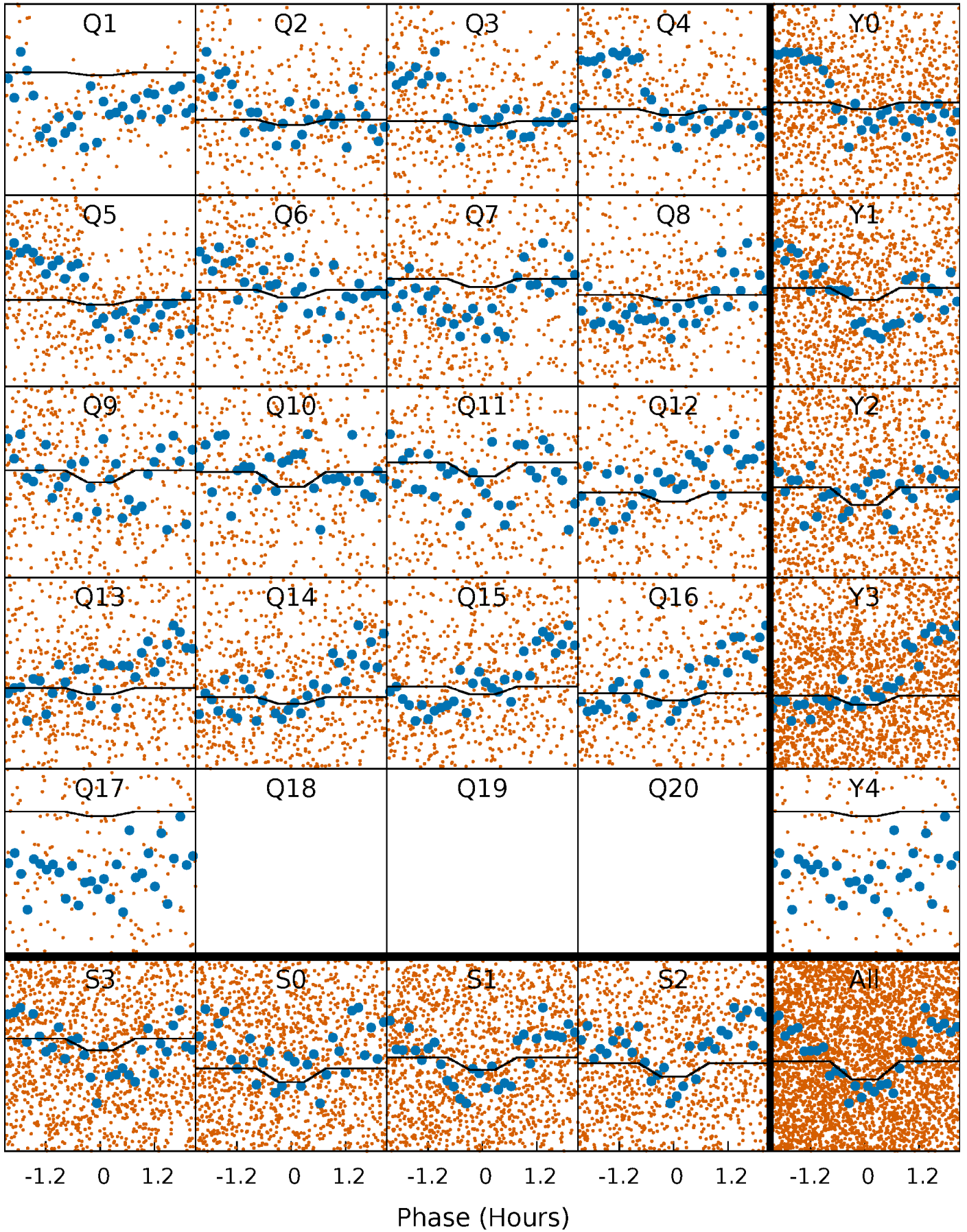
DV Quarter-Phased Transit Curves

TCE 010657634-02 $P = 0.983072$ Days $T_0 = 131.832164$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

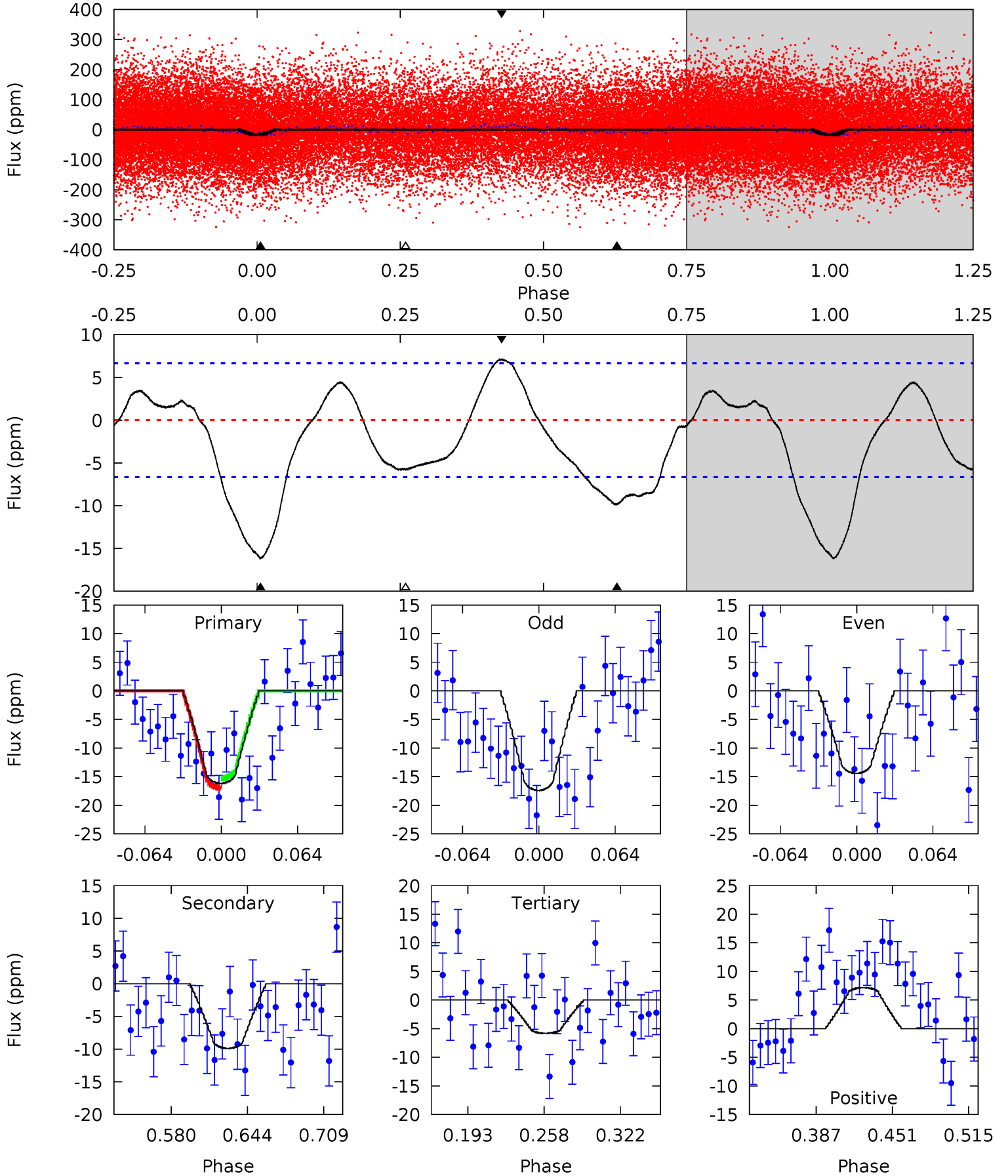
TCE 010657634-02 P= 0.983072 Days $T_0=131.832159$ (BKJD)



DV Model-Shift Uniqueness Test

010657634-02, P = 0.983072 Days, E = 130.849092 Days

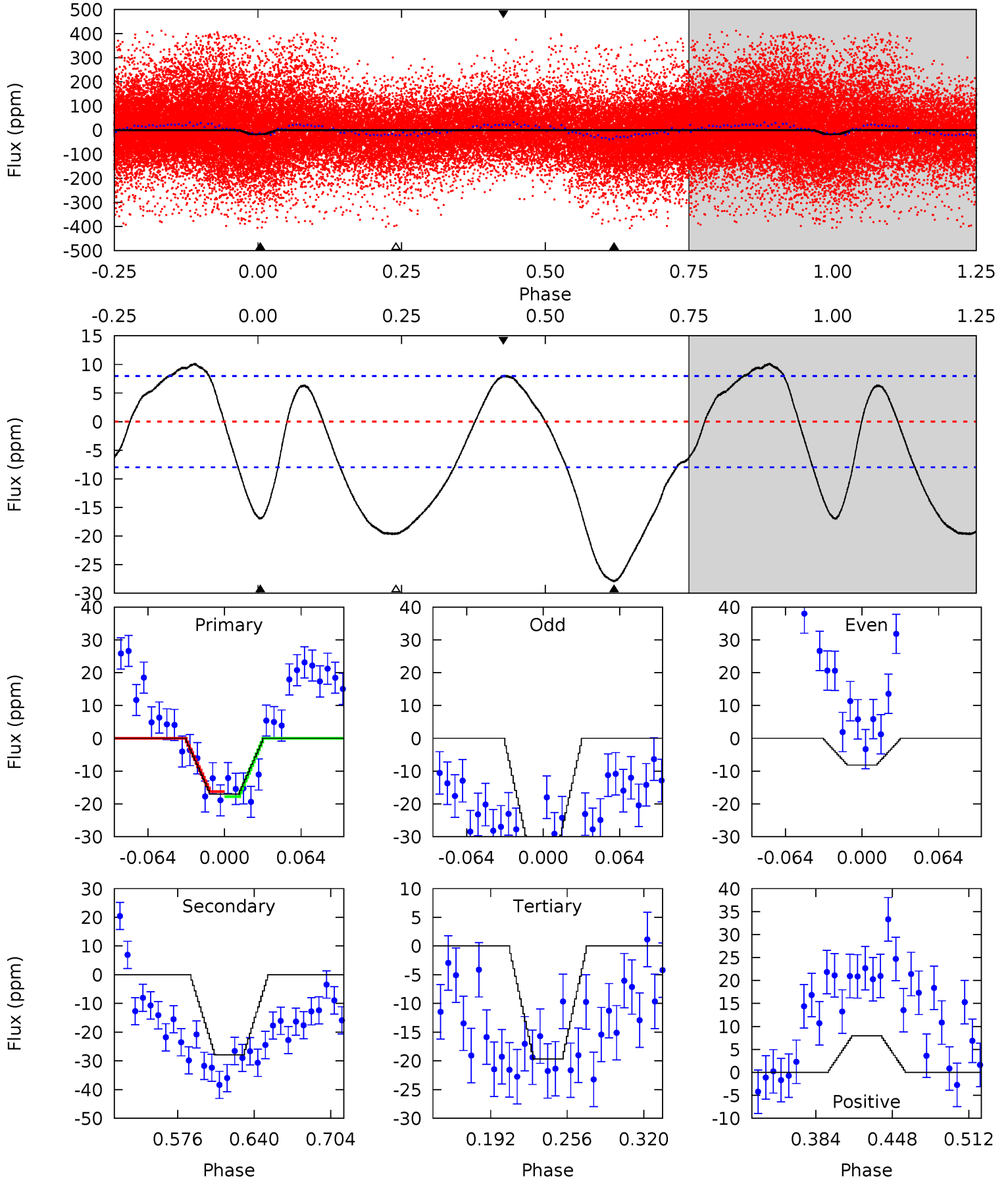
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.3	6.92	4.06	5.01	4.66	1.85	2.50	7.25	6.30	2.85	1.91	1.03	0.95	0.31	0.57



Alt Model-Shift Uniqueness Test

010657634-02, P = 0.983072 Days, E = 130.849087 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.92	16.3	11.5	4.65	4.66	1.85	5.47	-1.57	5.28	4.80	11.6	7.17	1.05	0.27	0.45



Stellar Parameters For KIC 010657634

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6812^{+169}_{-203}	$3.799^{+0.292}_{-0.097}$	$-0.180^{+0.300}_{-0.250}$	$2.662^{+0.493}_{-0.916}$	$1.627^{+0.190}_{-0.353}$	$0.121^{+0.245}_{-0.037}$
	+2%/-3%	+8%/-3%	+167%/-139%	+19%/-34%	+12%/-22%	+202%/-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 010657634-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-10 ± 1	$1.87^{+2.01}_{-1.17}$	4457^{+275}_{-411}	4189^{+3333}_{-7578}	$0.756^{+4.940}_{-0.574}$
Alt.	-28 ± 2	$1.88^{+1.94}_{-1.33}$	4437^{+279}_{-364}	5751^{+7364}_{-1917}	$2.264^{+23.614}_{-1.711}$

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

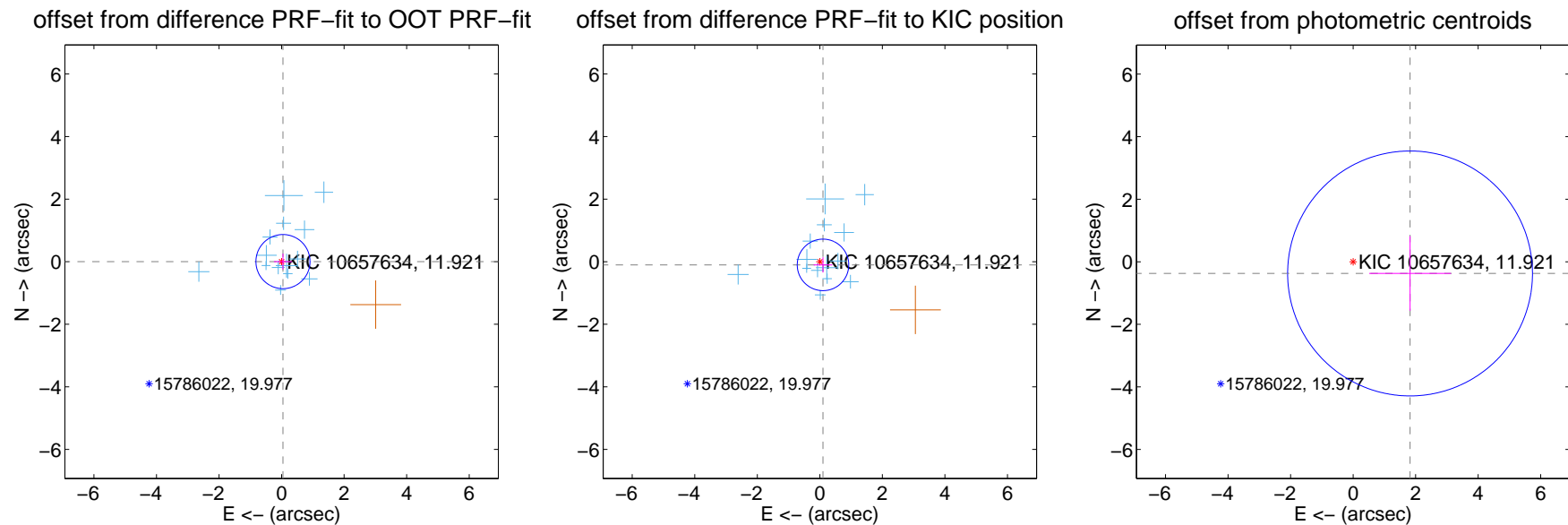
DV Centroid Data

Supplemental centroid analysis for 010657634-02. **Kepler magnitude: 11.92.** Transit SNR 5.23

There are 14 quarters with good PRF difference image offsets

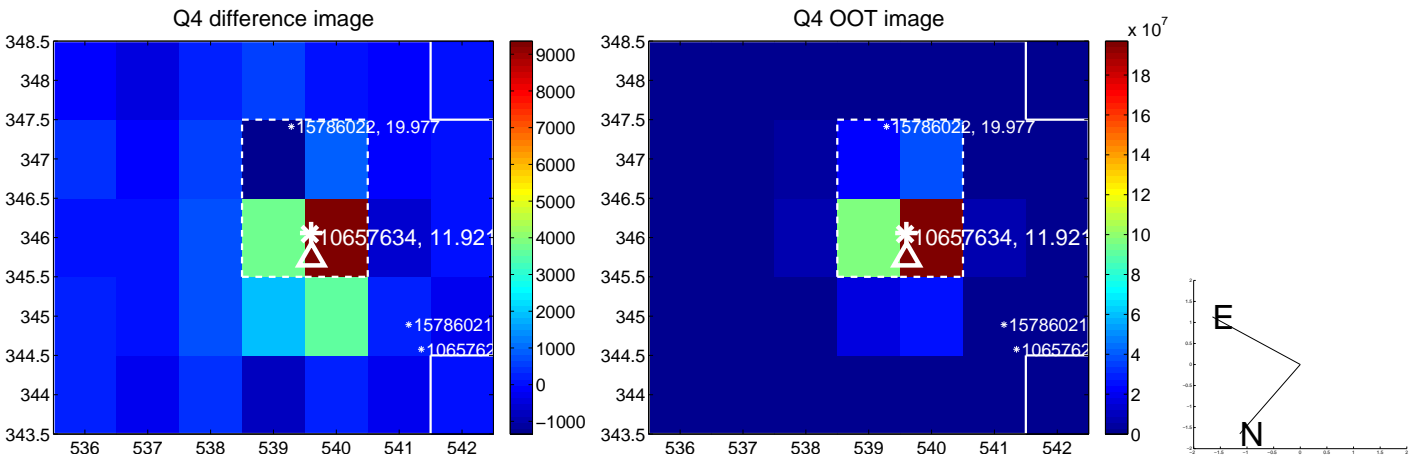
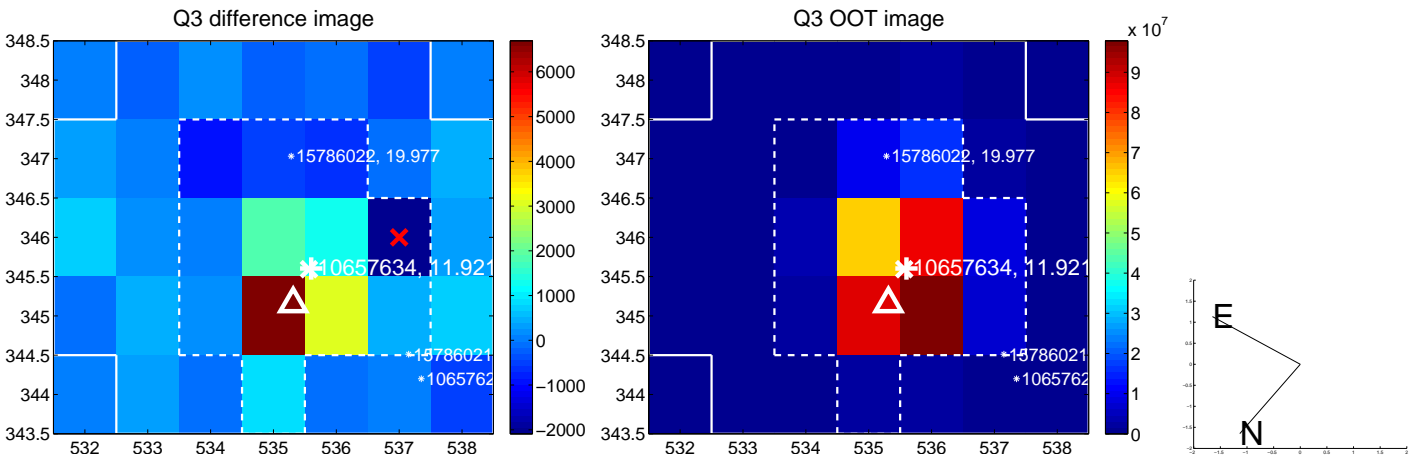
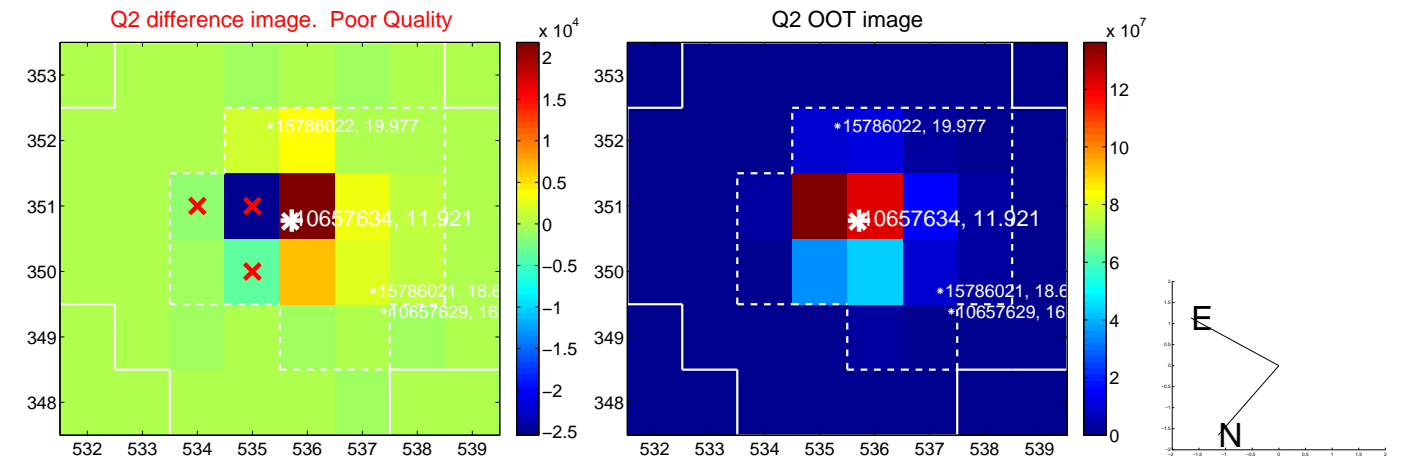
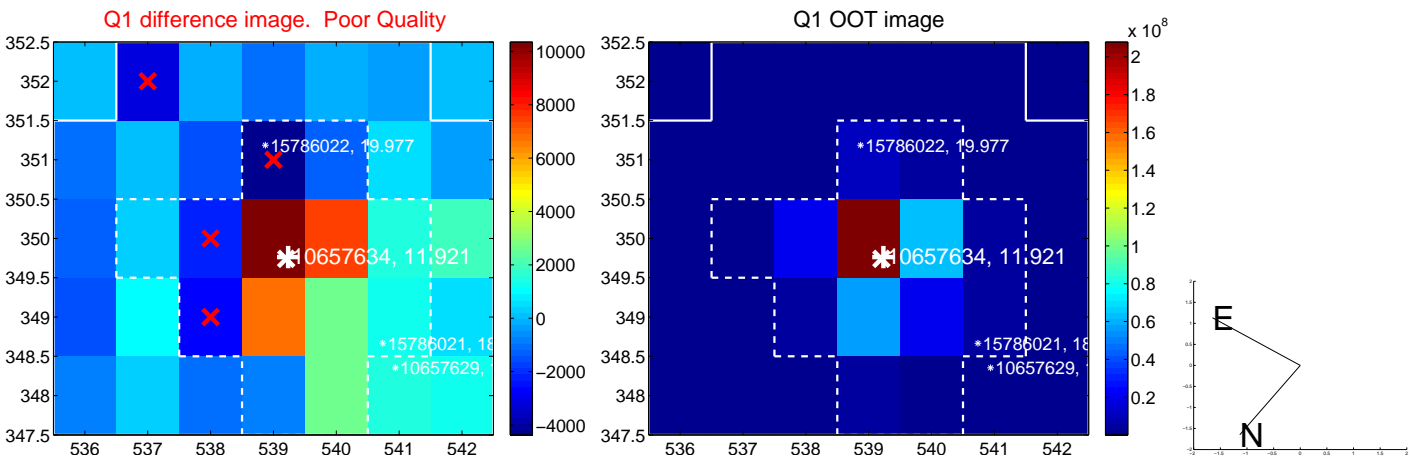
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.045 ± 0.288	0.16	-0.045 ± 0.290	0.003 ± 0.255
PRF-fit source offset from KIC position	0.144 ± 0.275	0.52	-0.101 ± 0.298	-0.102 ± 0.244
photometric centroid source offset	1.86 ± 1.31	1.42	-1.82 ± 1.31	-0.37 ± 1.19

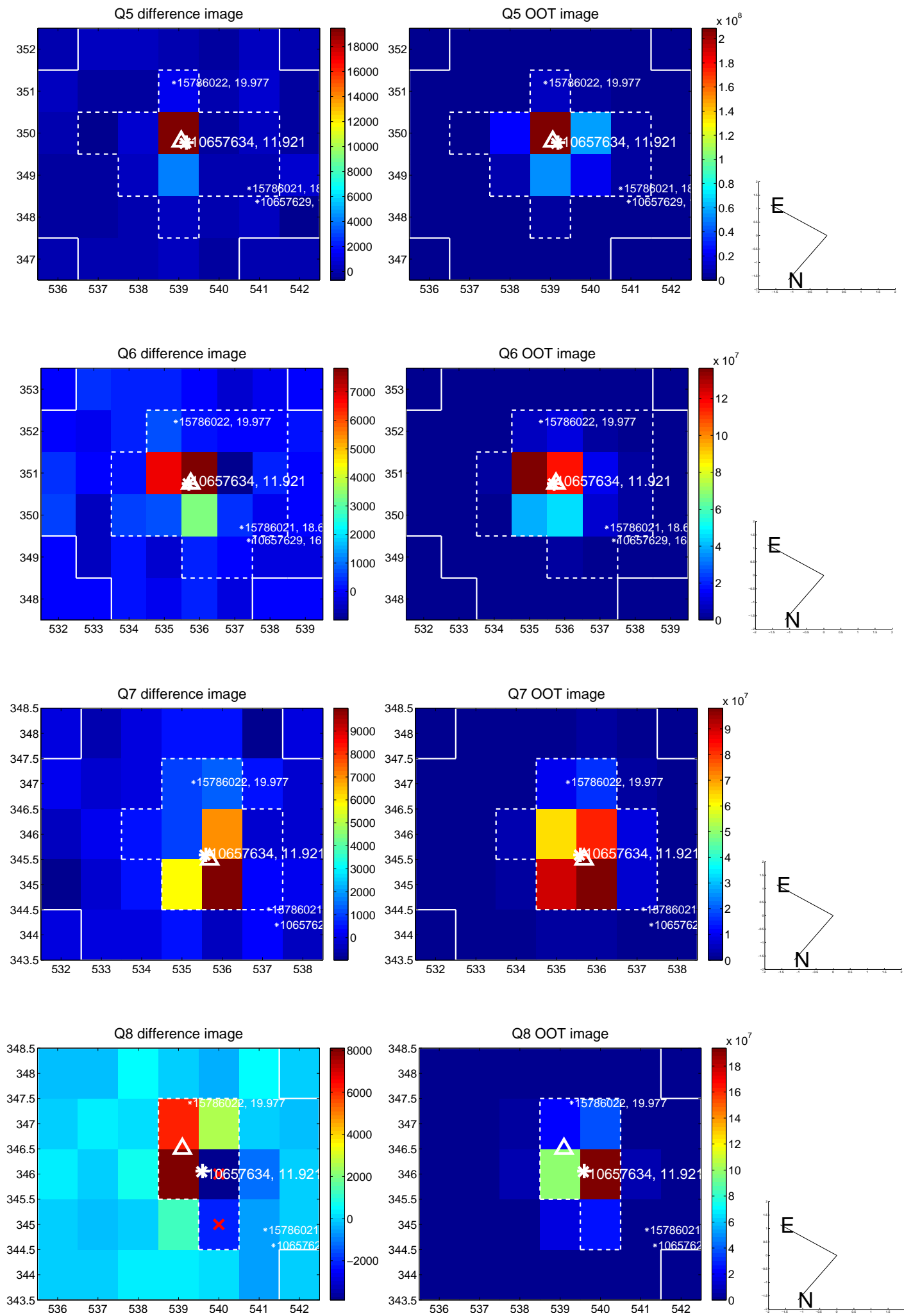


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

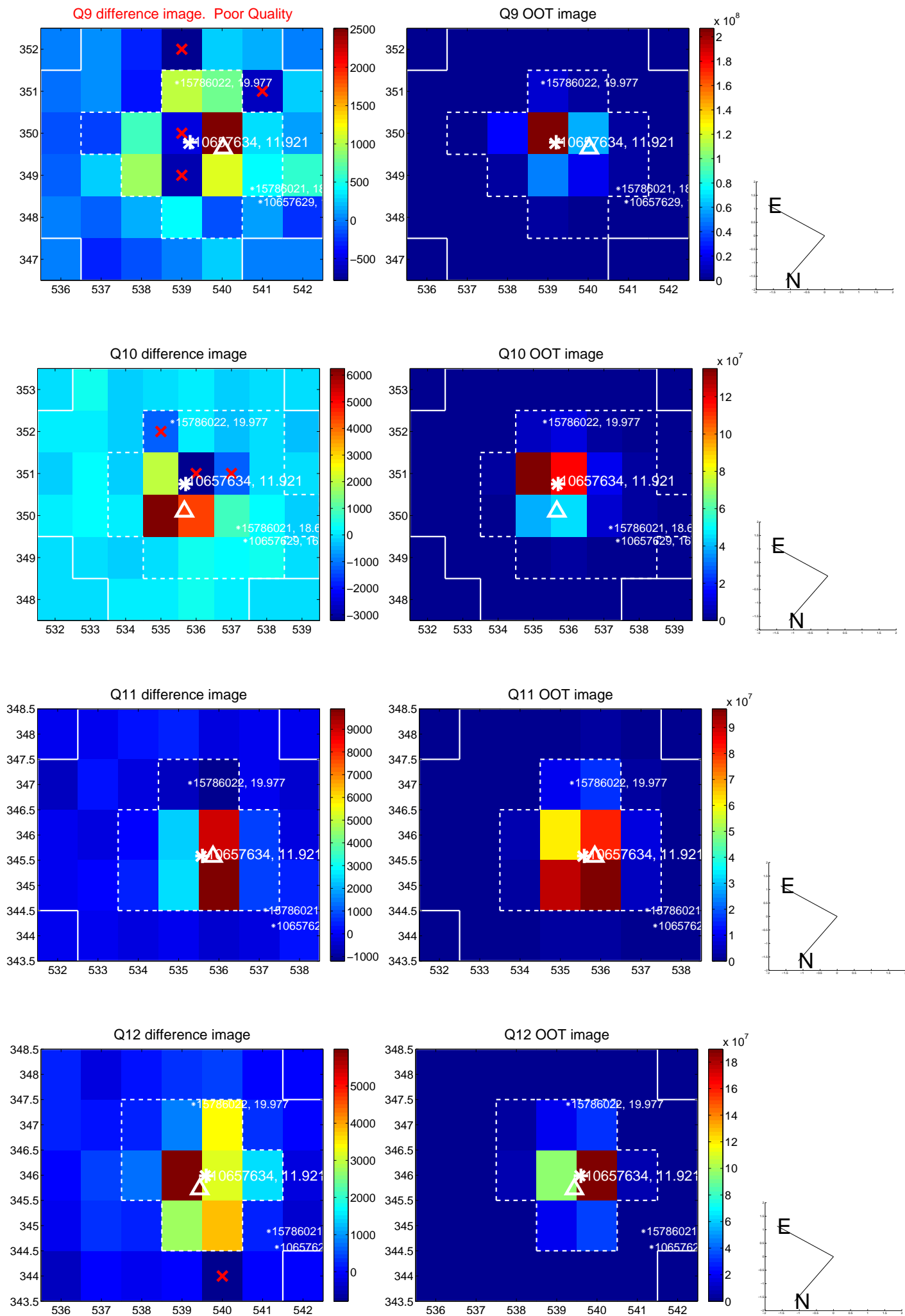
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



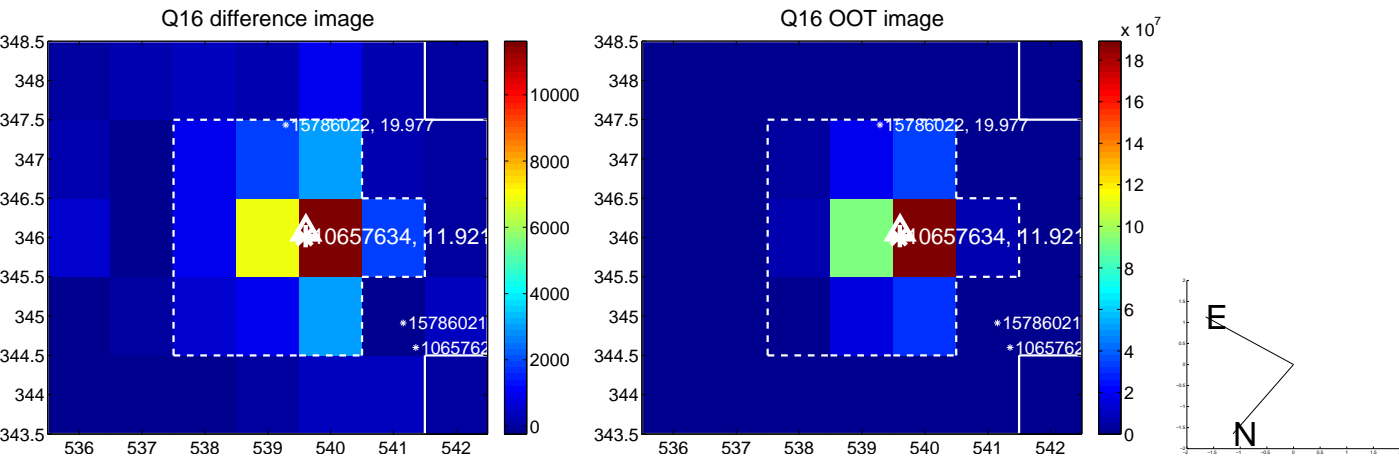
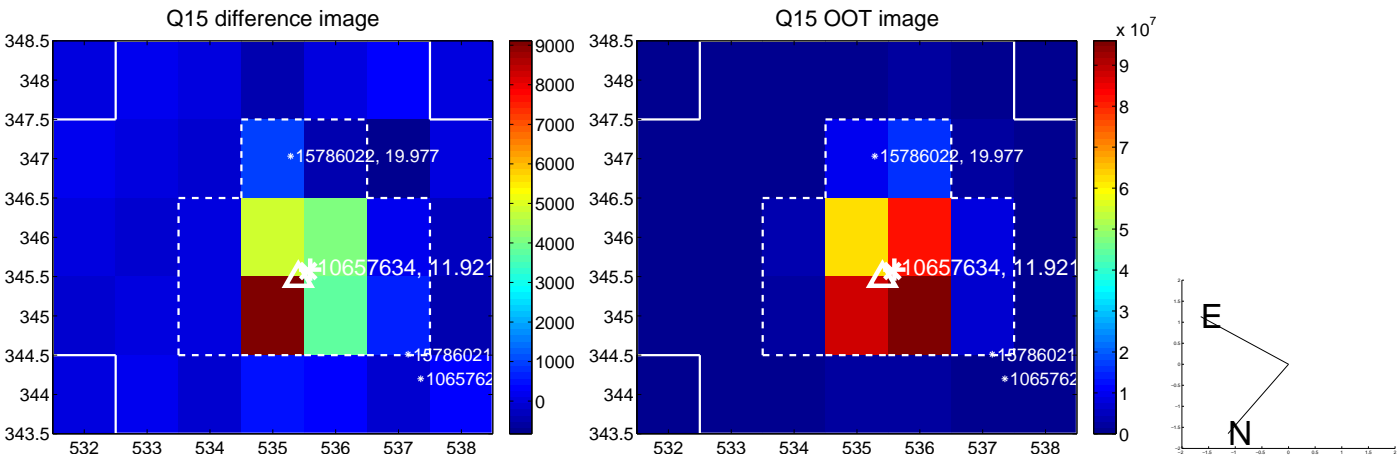
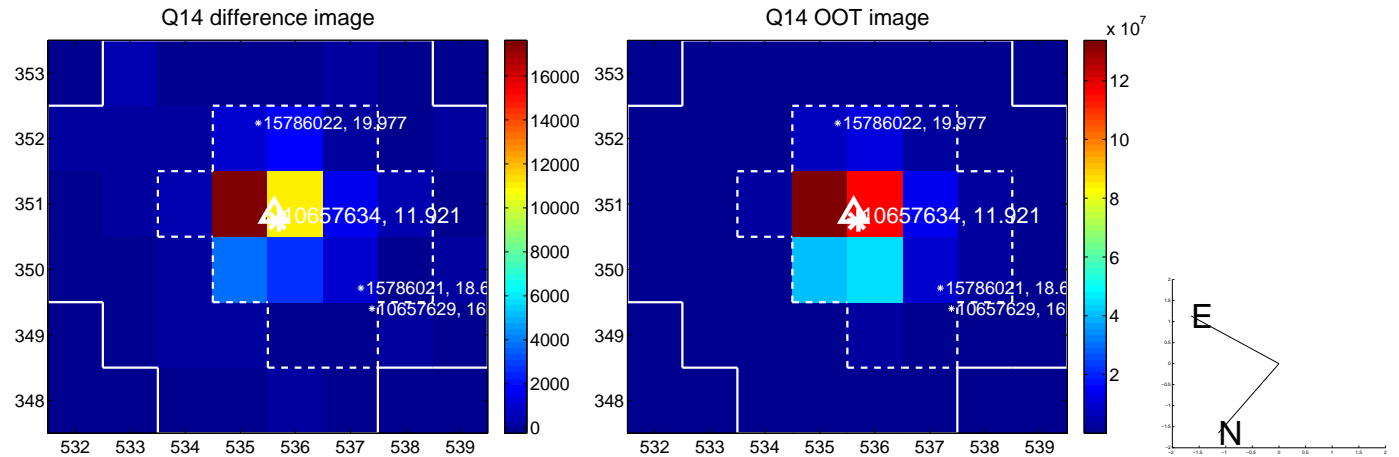
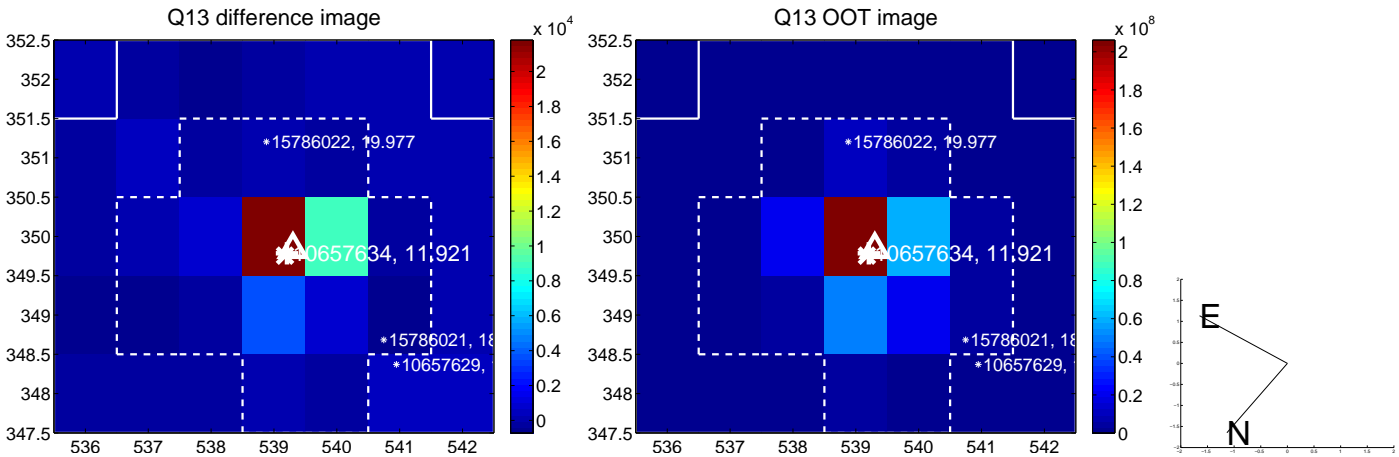
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



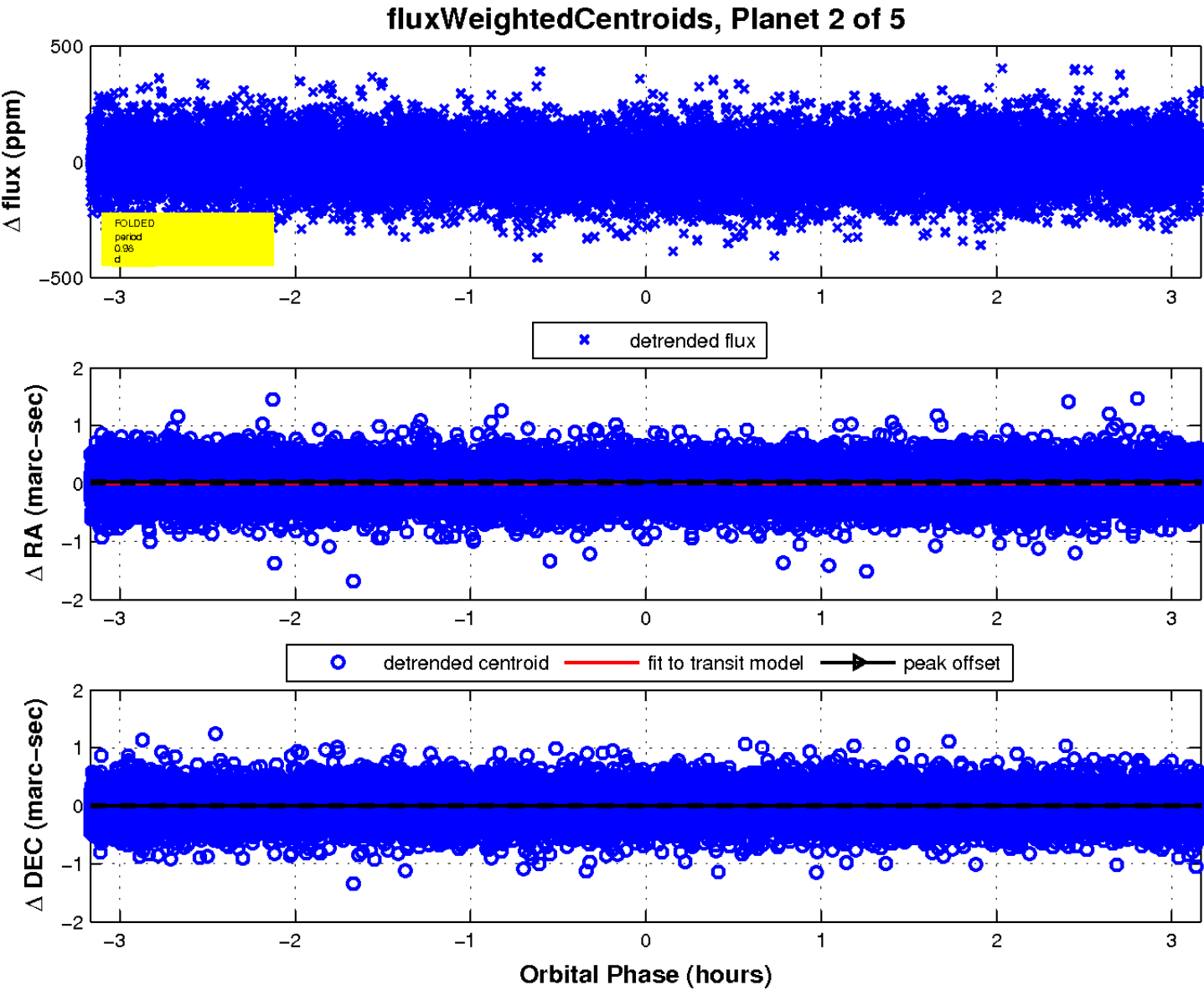
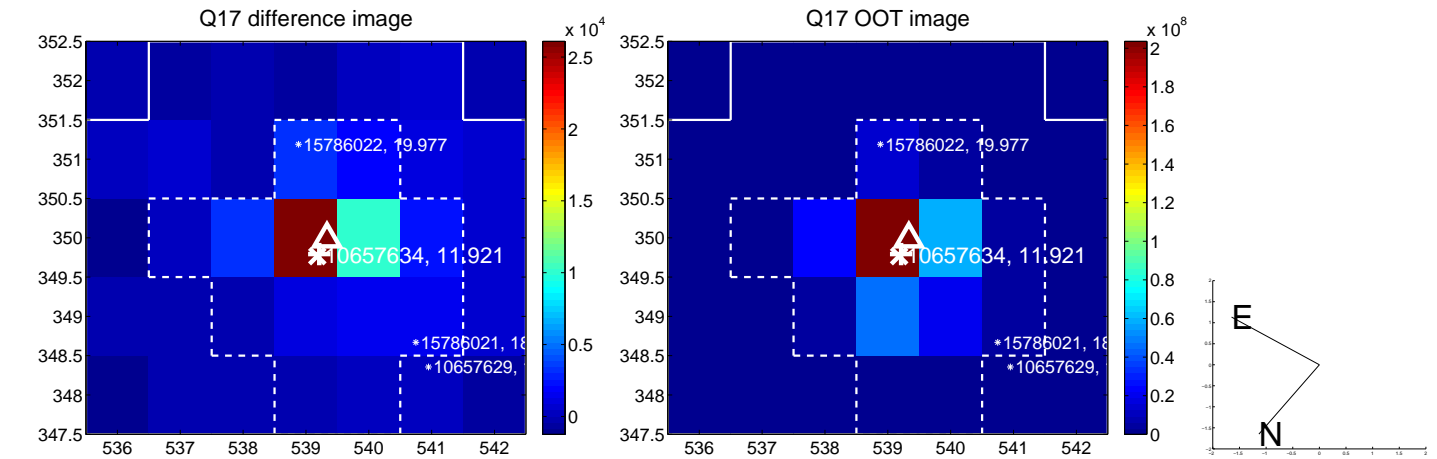
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

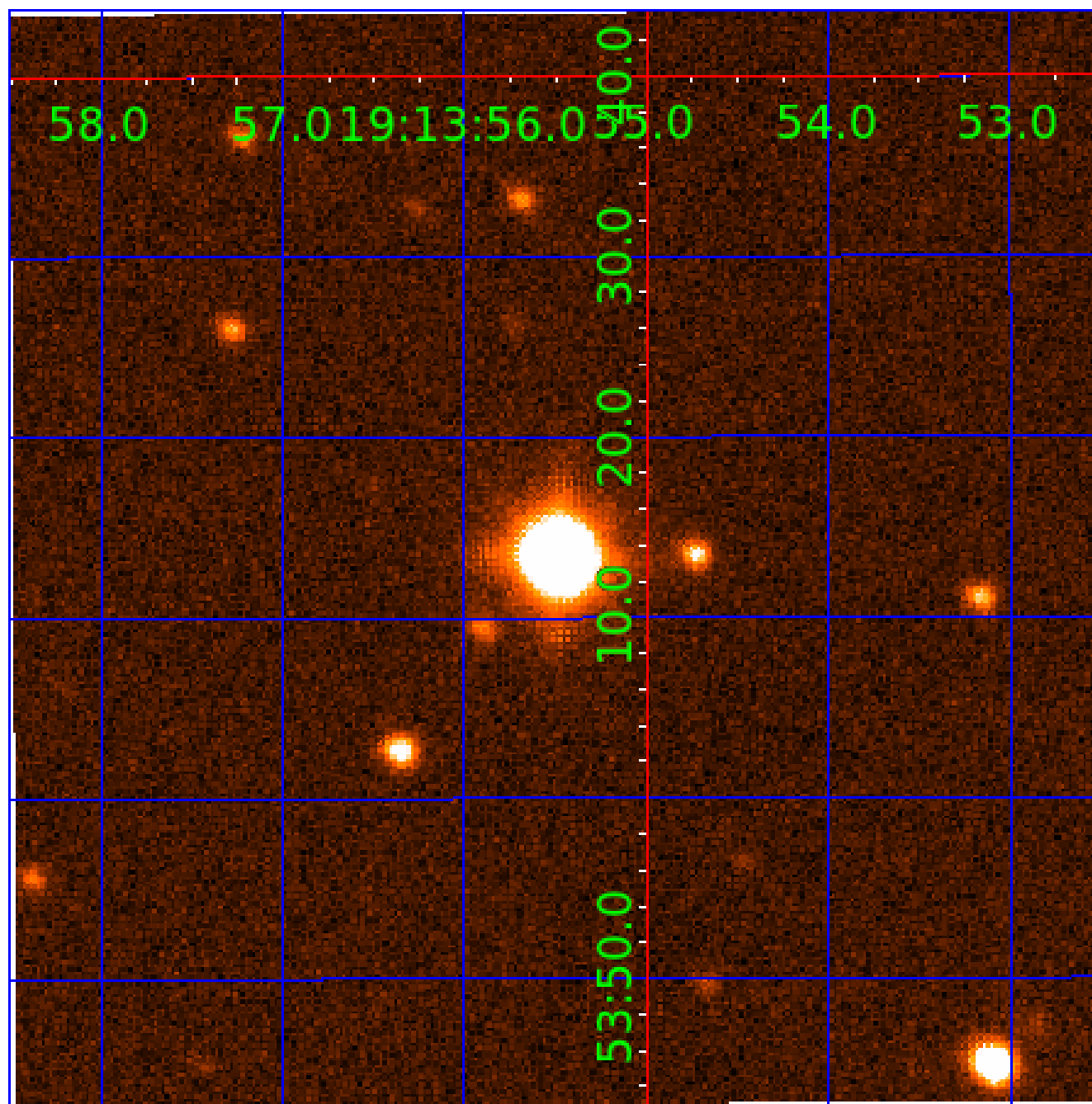


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010657634

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})
010657634-01	OBS	No	1.966433	132.062412	28.3	4.560	11.4	11.7	2.66	6812	1.90	10468.70
010657634-02	OBS	No	0.983072	131.832164	12.5	1.056	8.7	5.2	2.66	6812	0.95	26384.65
010657634-03	OBS	No	0.983001	132.499302	16.2	4.348	9.8	9.7	2.66	6812	1.33	26387.17
010657634-04	OBS	No	99.193181	206.111791	231.4	6.633	9.1	10.0	2.66	6812	4.55	56.17
010657634-05	OBS	No	39.489391	158.936712	121.5	3.971	7.8	6.1	2.66	6812	3.41	191.79

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010657634-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
010657634-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—SAME_NTL_PERIOD
010657634-03	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
010657634-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
010657634-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_UNRESOLVED_OFFSET

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

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

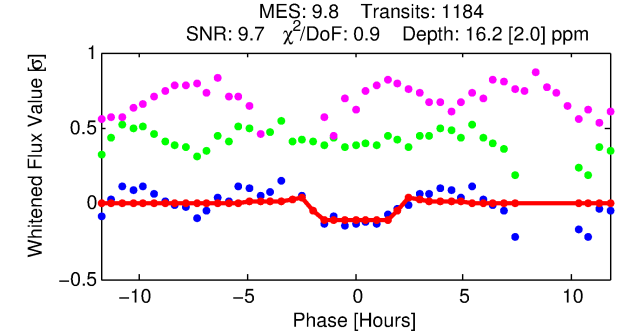
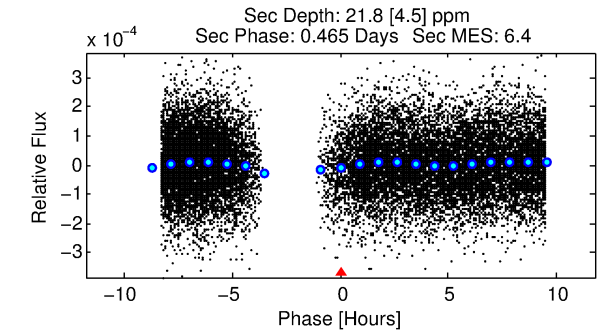
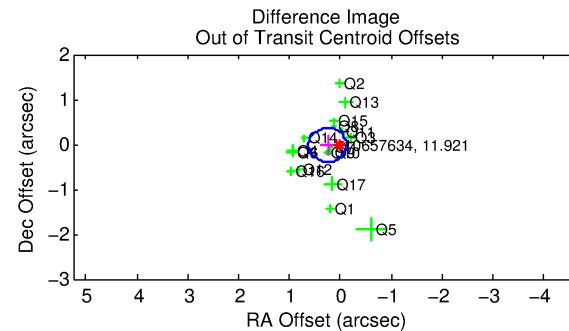
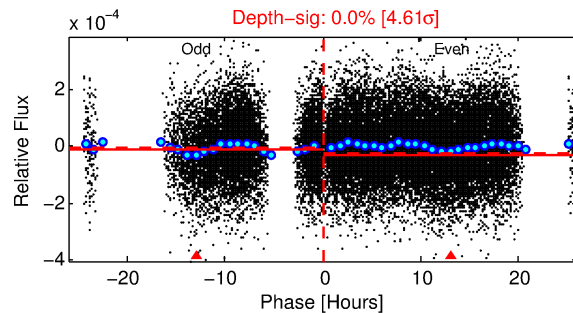
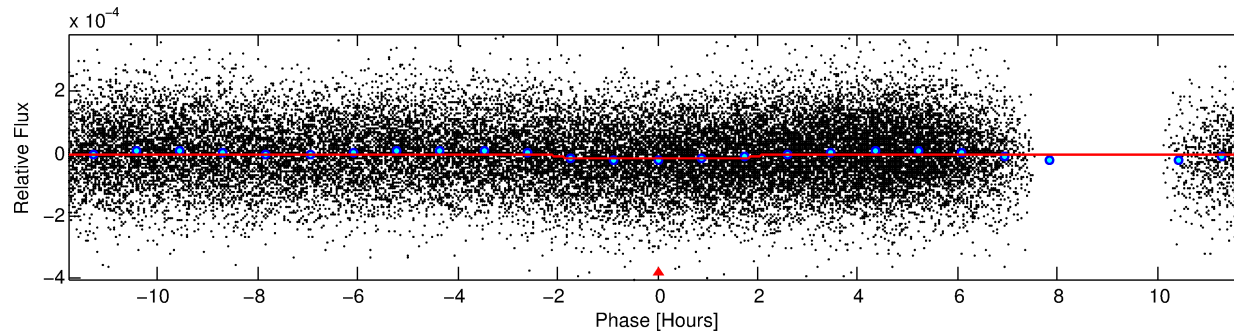
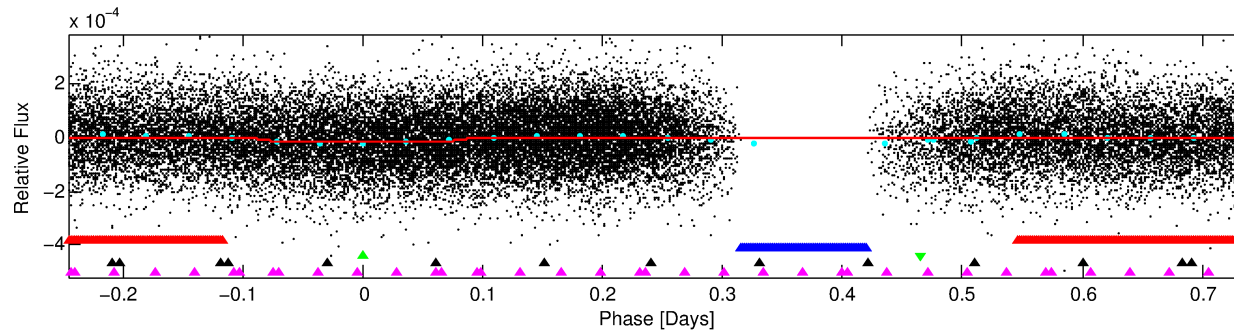
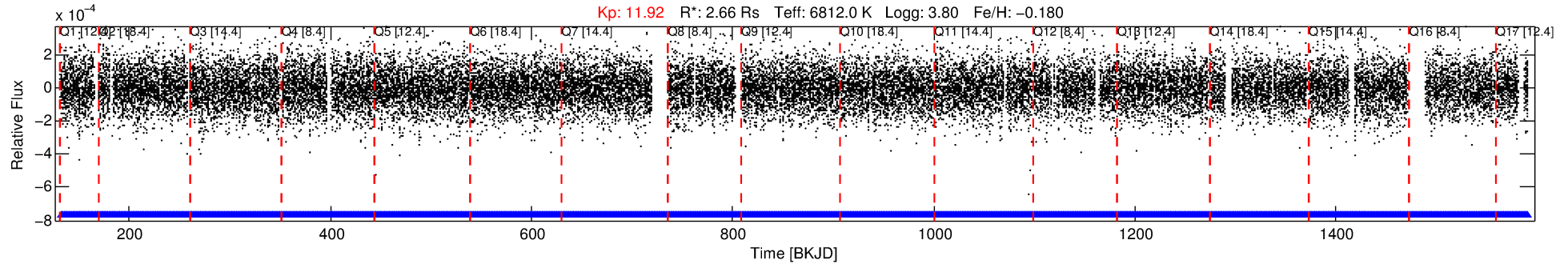
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010657634-03

No Significant Match Found

DV One-Page Summary

KIC: 10657634 Candidate: 3 of 5 Period: 0.983 d



DV Fit Results:

Period = 0.98300 [0.00001] d
Epoch = 132.4993 [0.0038] BKJD
Rp/R* = 0.0046 [0.0010]
a/R* = 1.11 [0.29]
b = 0.96 [0.12]
Seff = 26387.17 [13653.93]
Teq = 3250 [420] K
Rp = 1.33 [0.55] Re
a = 0.0228 [0.0073] AU
Ag = 3.52 [2.50] [1.01 σ]
Teffp = 6882 [885] K [3.71 σ]

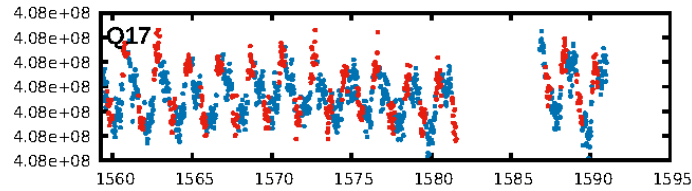
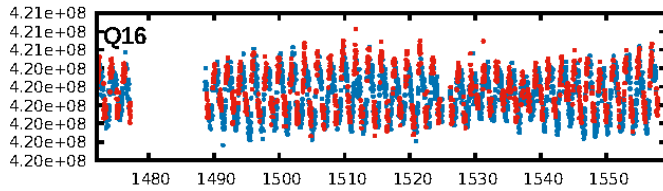
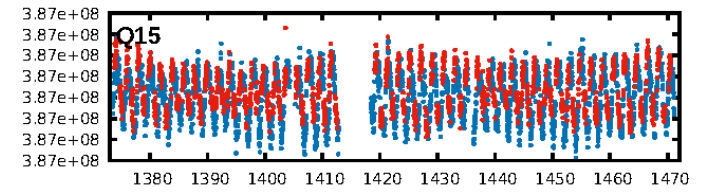
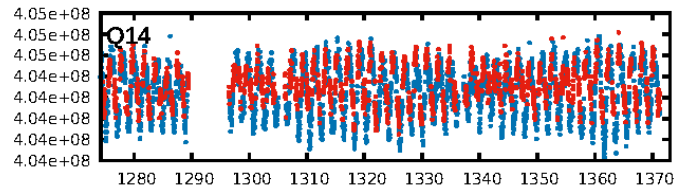
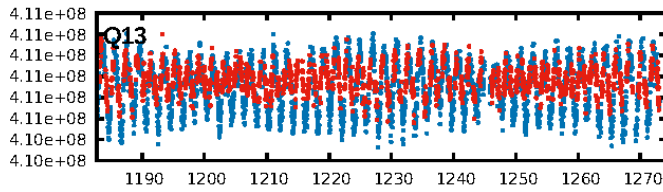
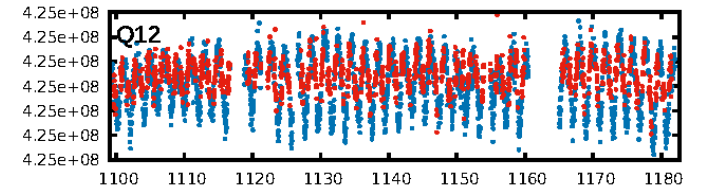
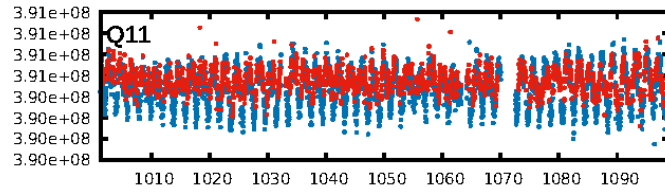
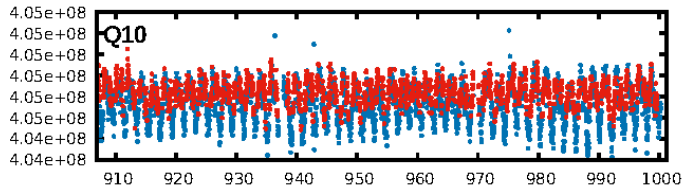
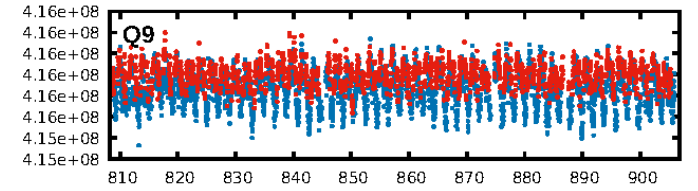
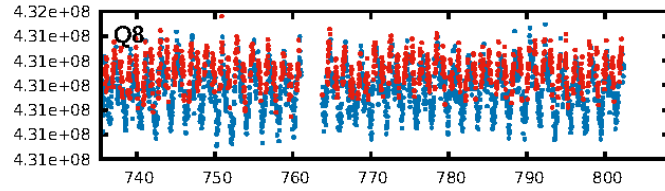
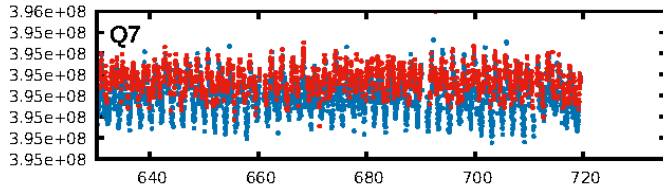
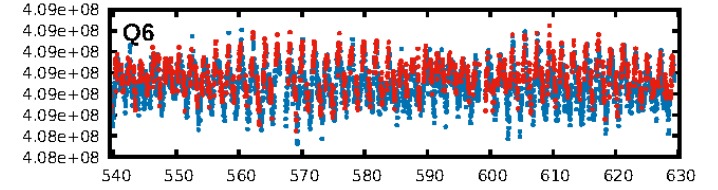
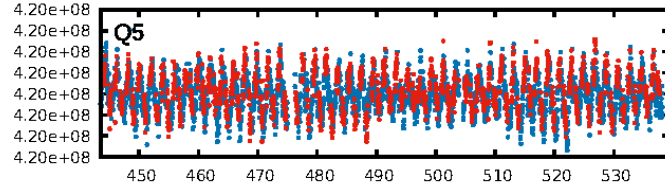
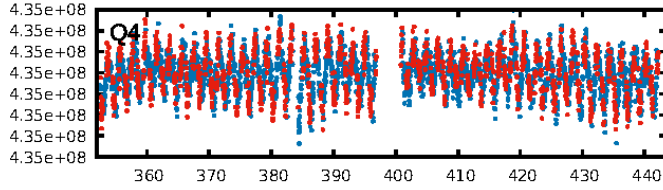
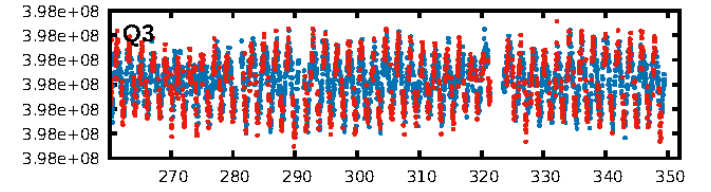
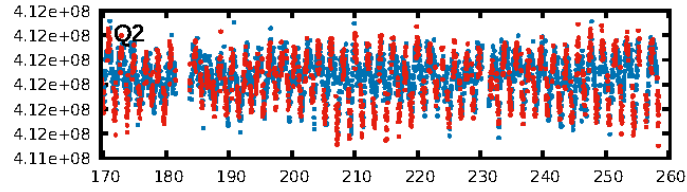
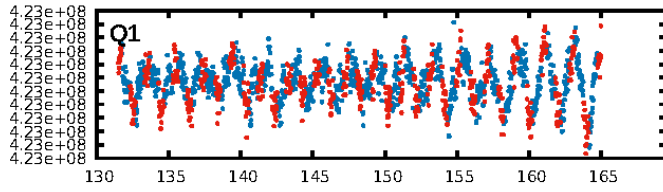
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.76e-22
RollingBand-fgt: 1.00 [1136/1136]
GhostDiagnostic-chr: 5.99
Centroid-sig: 75.3%
Centroid-so: 0.237 arcsec [0.47 σ]
OotOffset-rm: 0.250 arcsec [2.00 σ]
KicOffset-rm: 0.223 arcsec [1.48 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.29 [5/17]
DiffImageOverlap-fno: 0.00 [0/17]

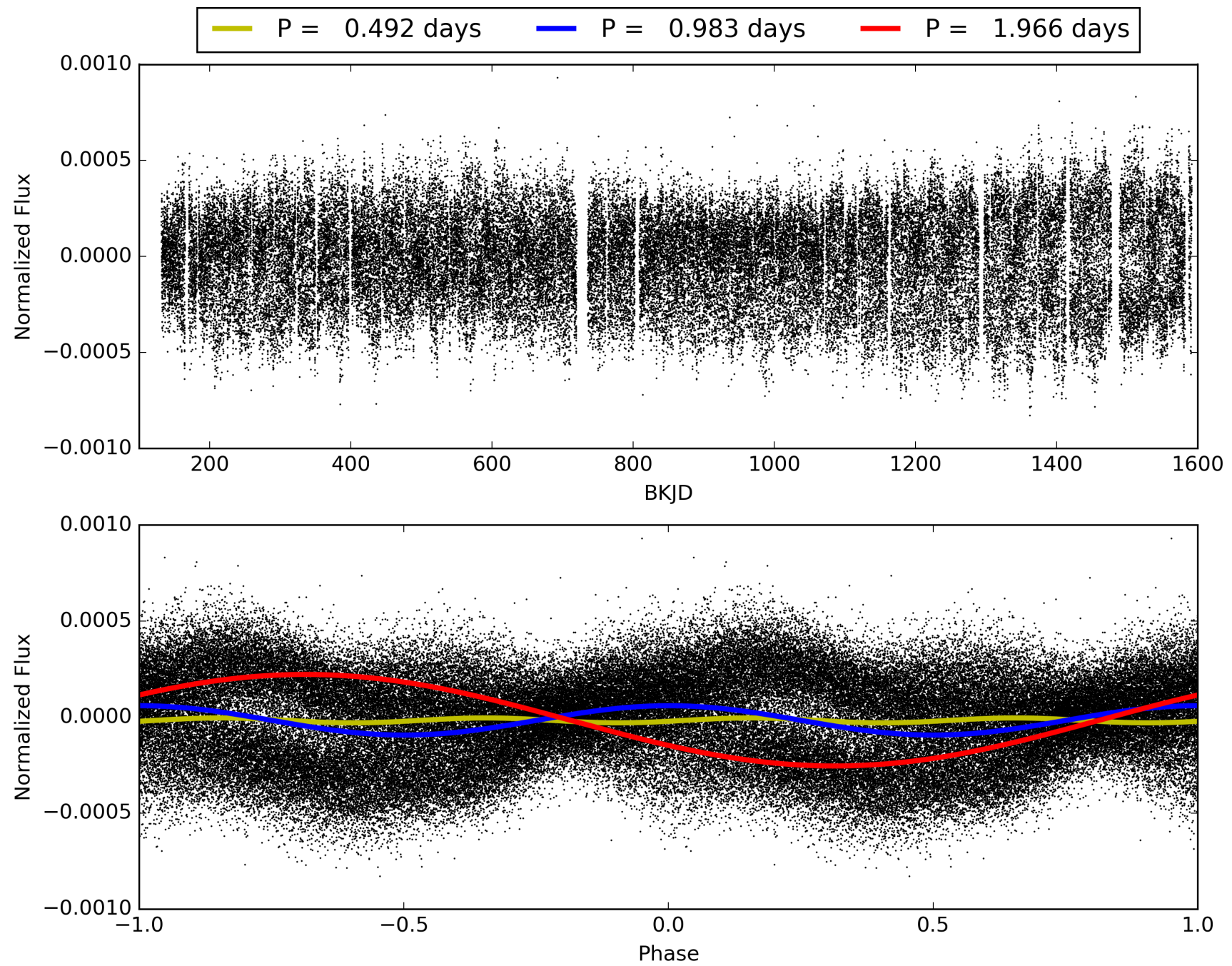
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 02:41:17 Z

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

TCE 010657634-03, PDC Light Curves

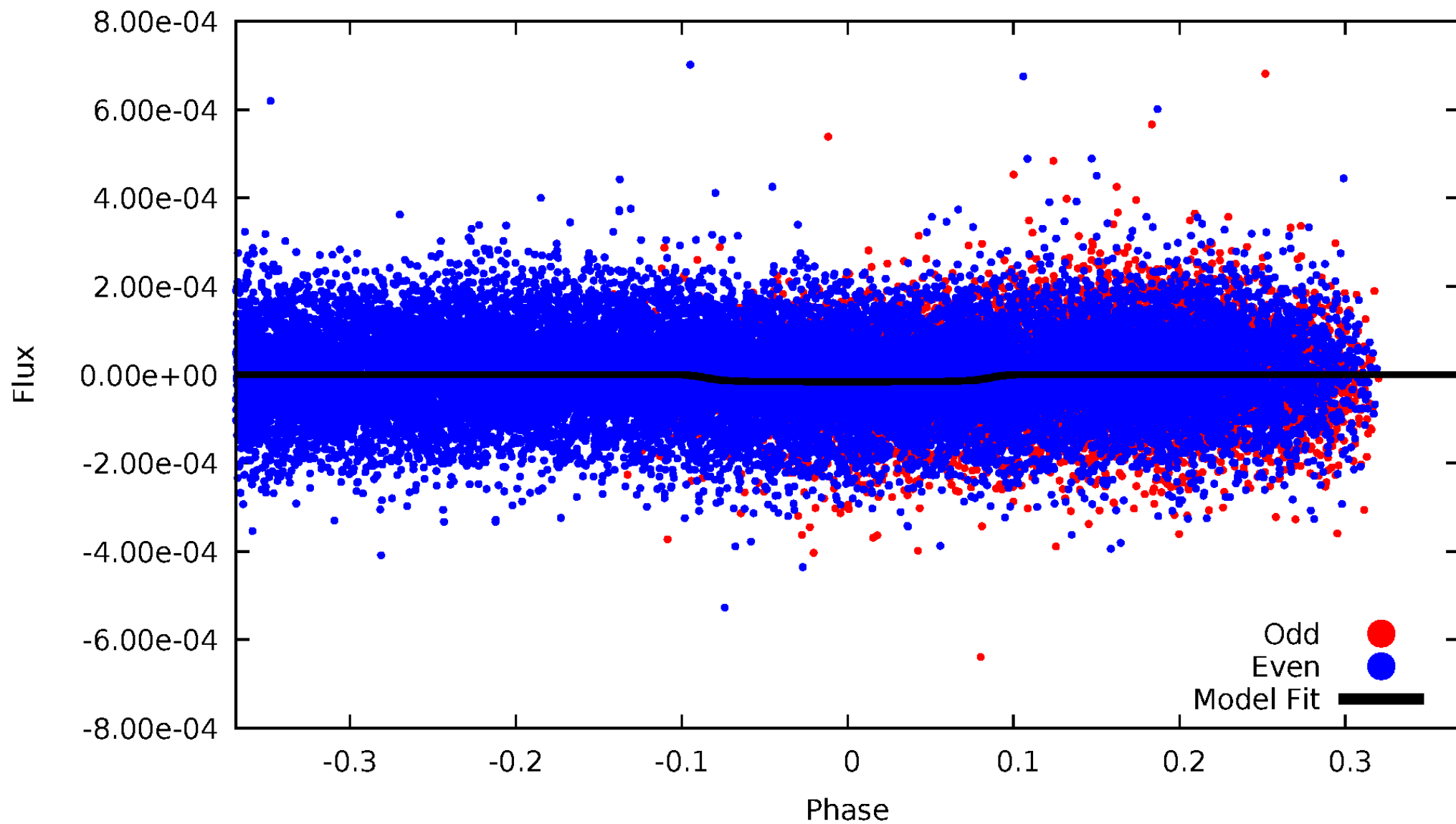


TCE 010657634-03



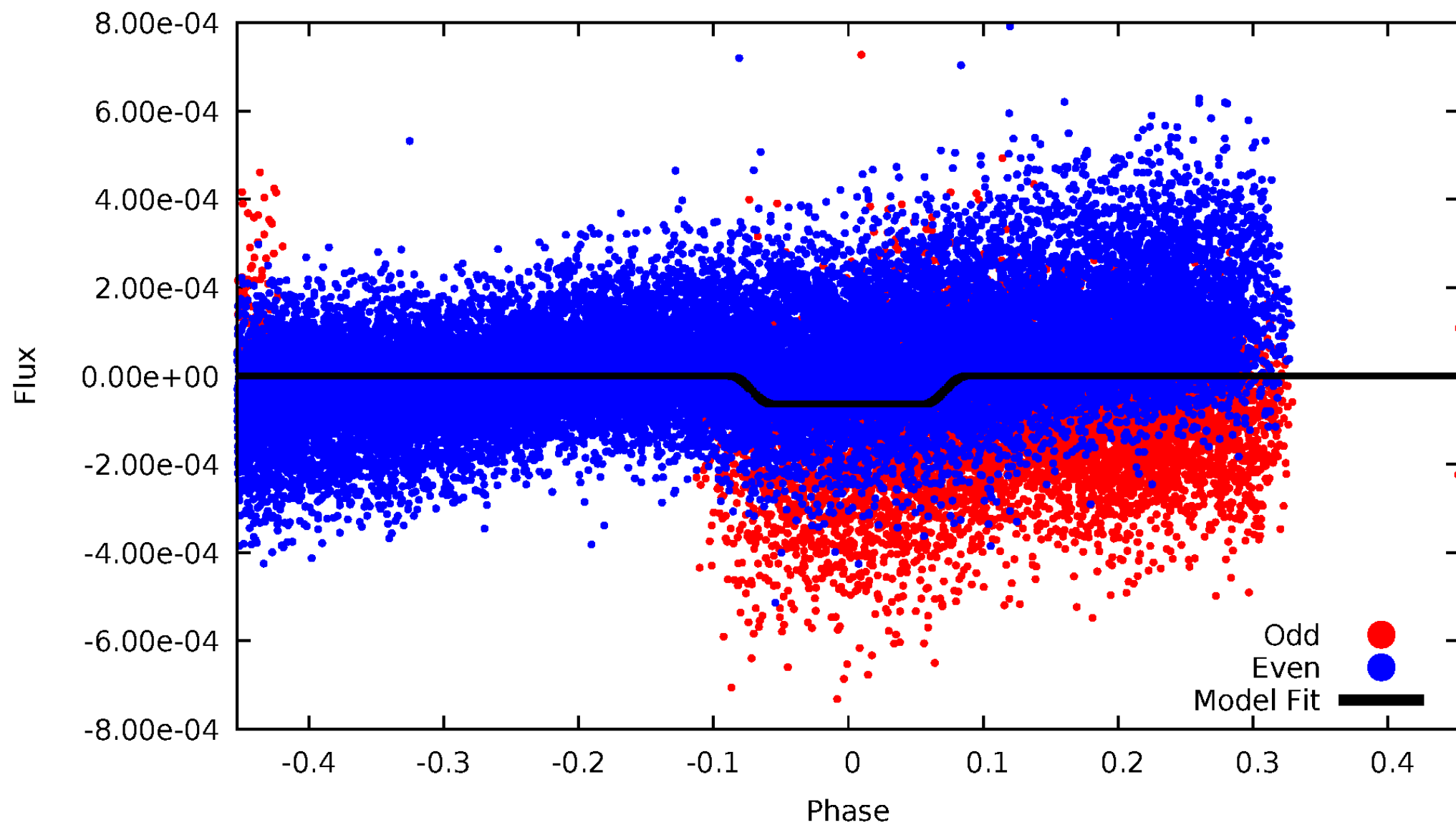
DV Odd/Even

TCE 010657634-03



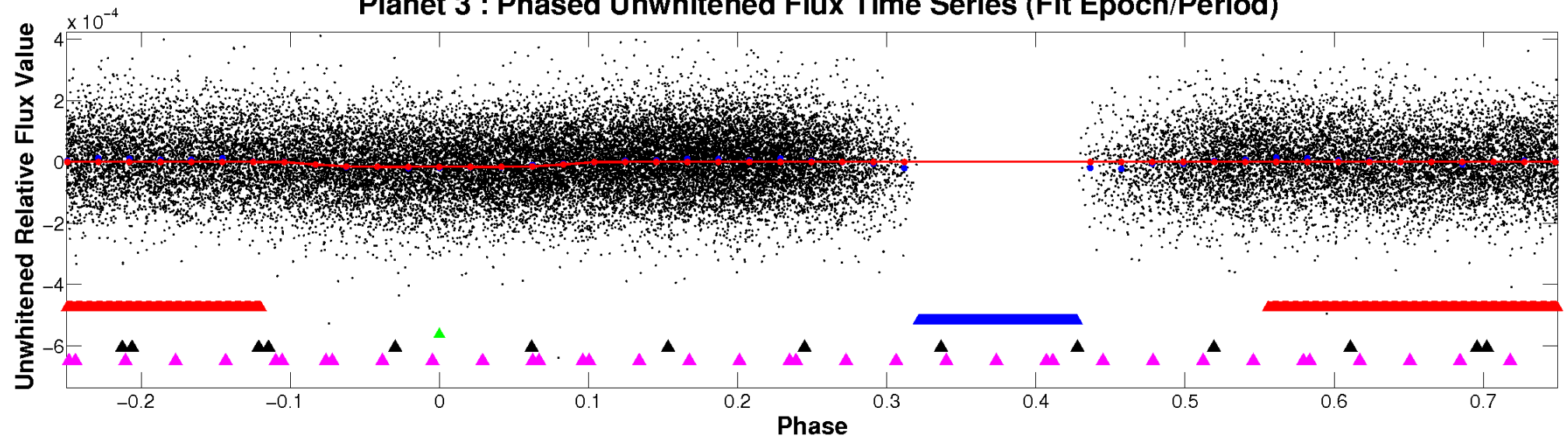
ALT Odd/Even

TCE 010657634-03

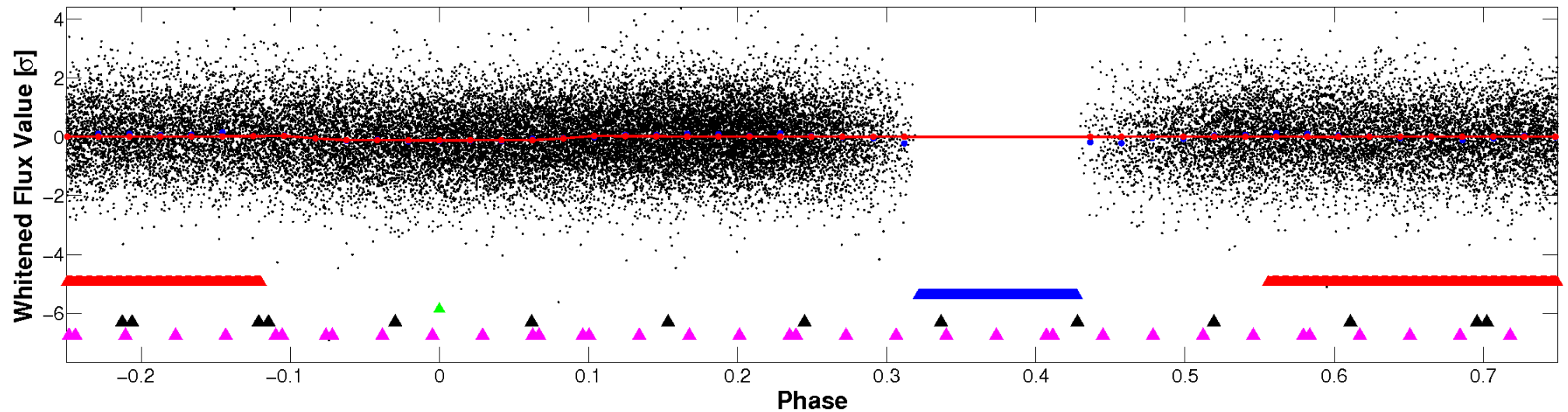


Non-Whitened Vs. Whitened Light Curve

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

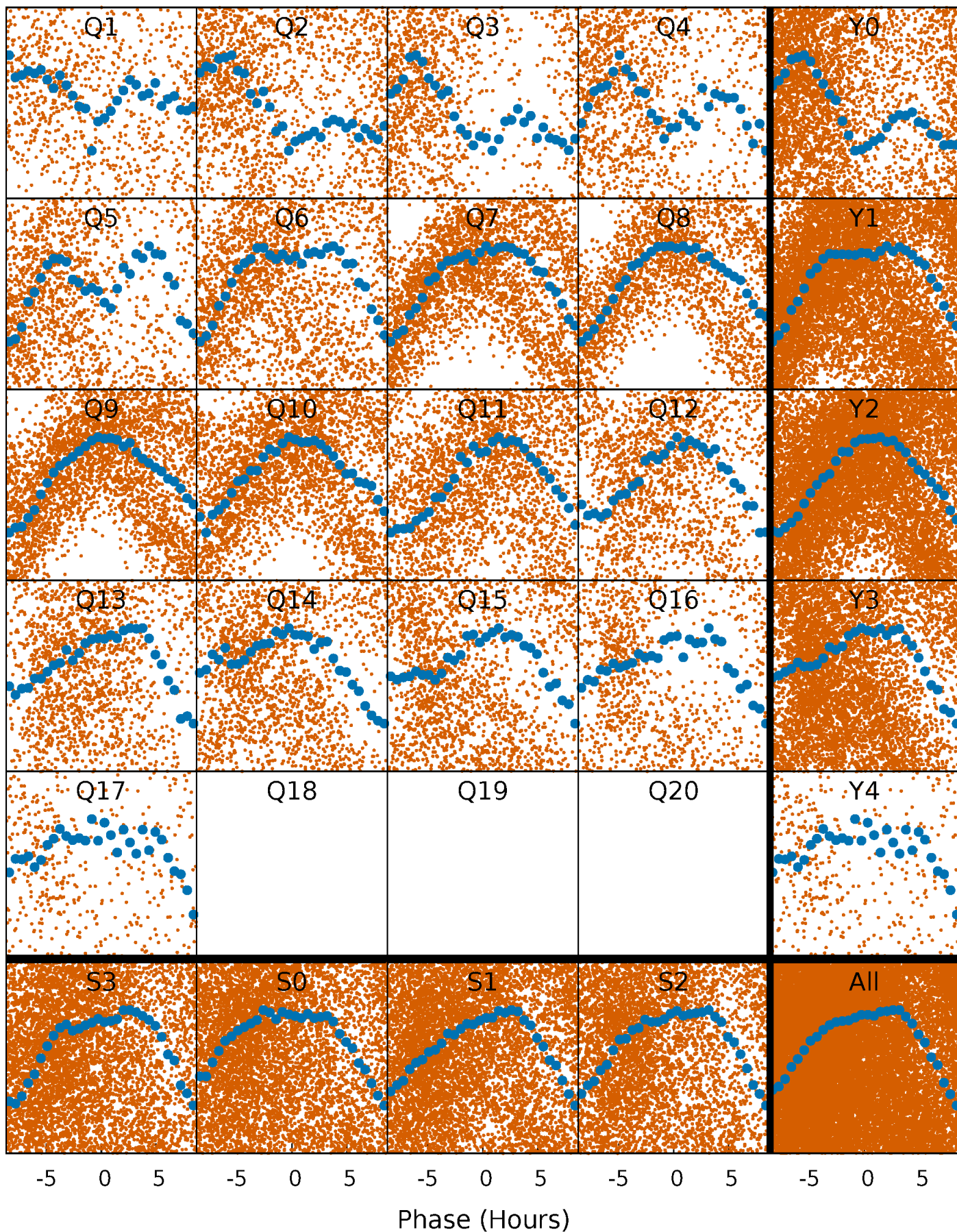


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



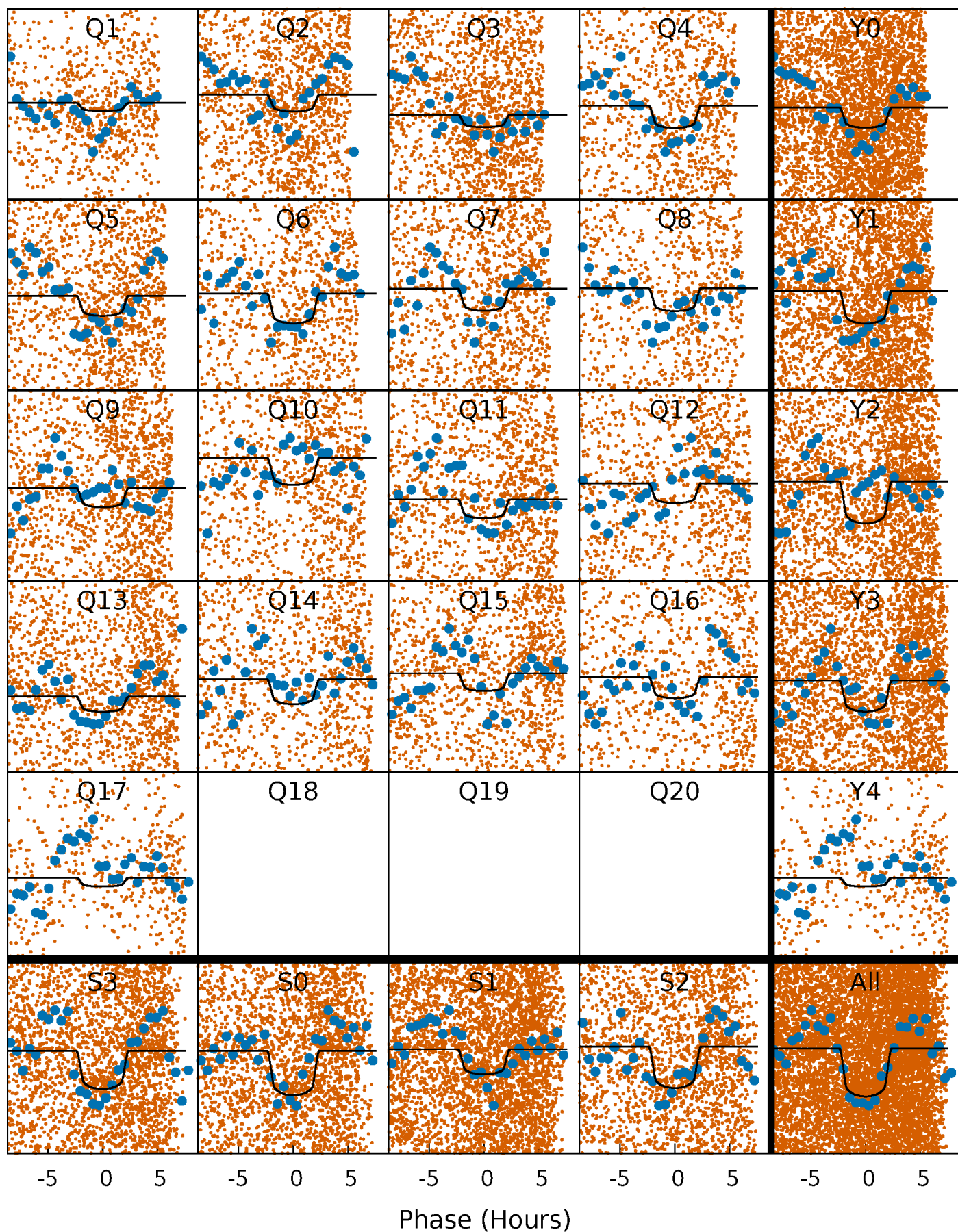
PDC Quarter-Phased Transit Curves

TCE 010657634-03 P= 0.983001 Days $T_0=132.499302$ (BKJD)



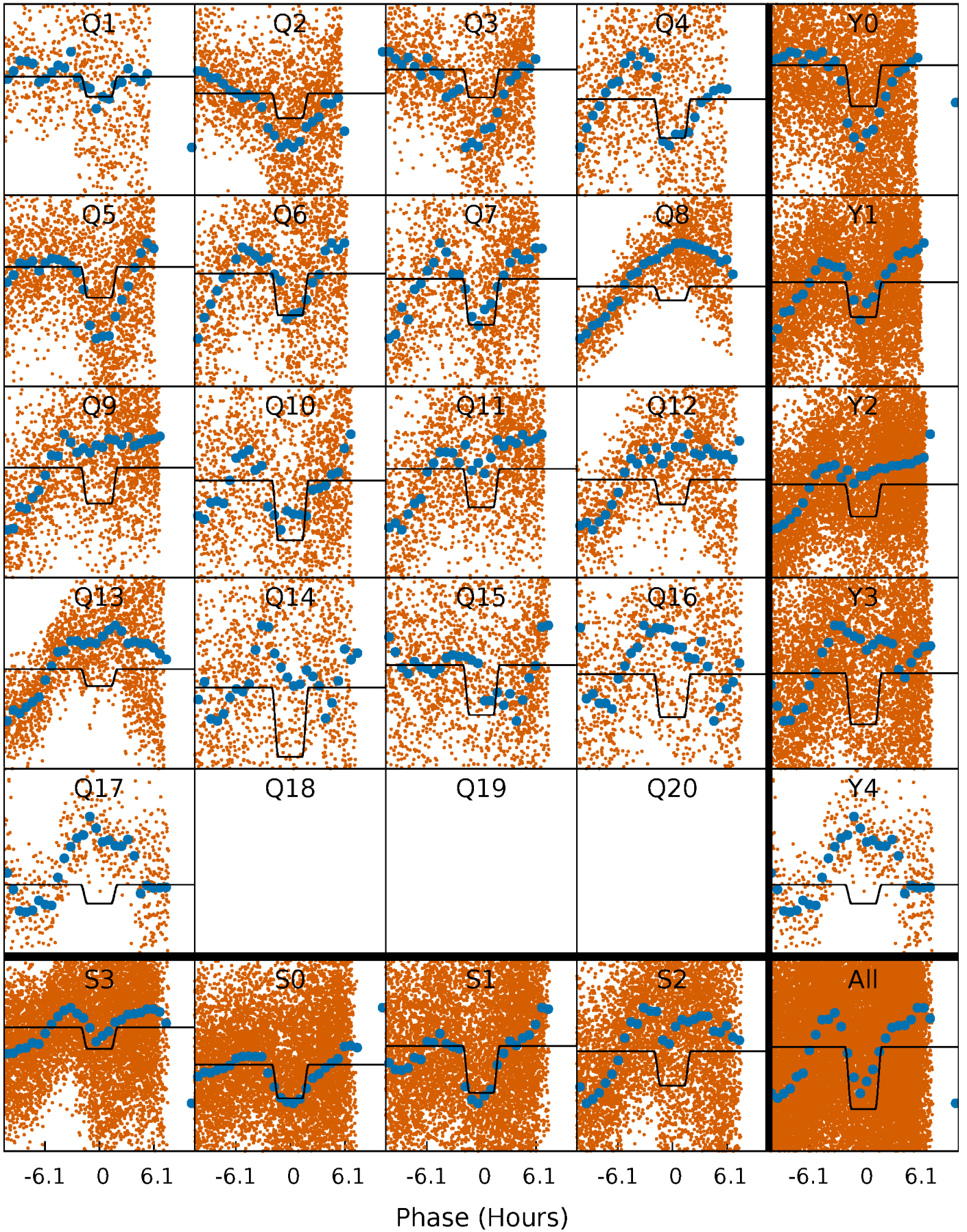
DV Quarter-Phased Transit Curves

TCE 010657634-03 P= 0.983001 Days $T_0=132.499302$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

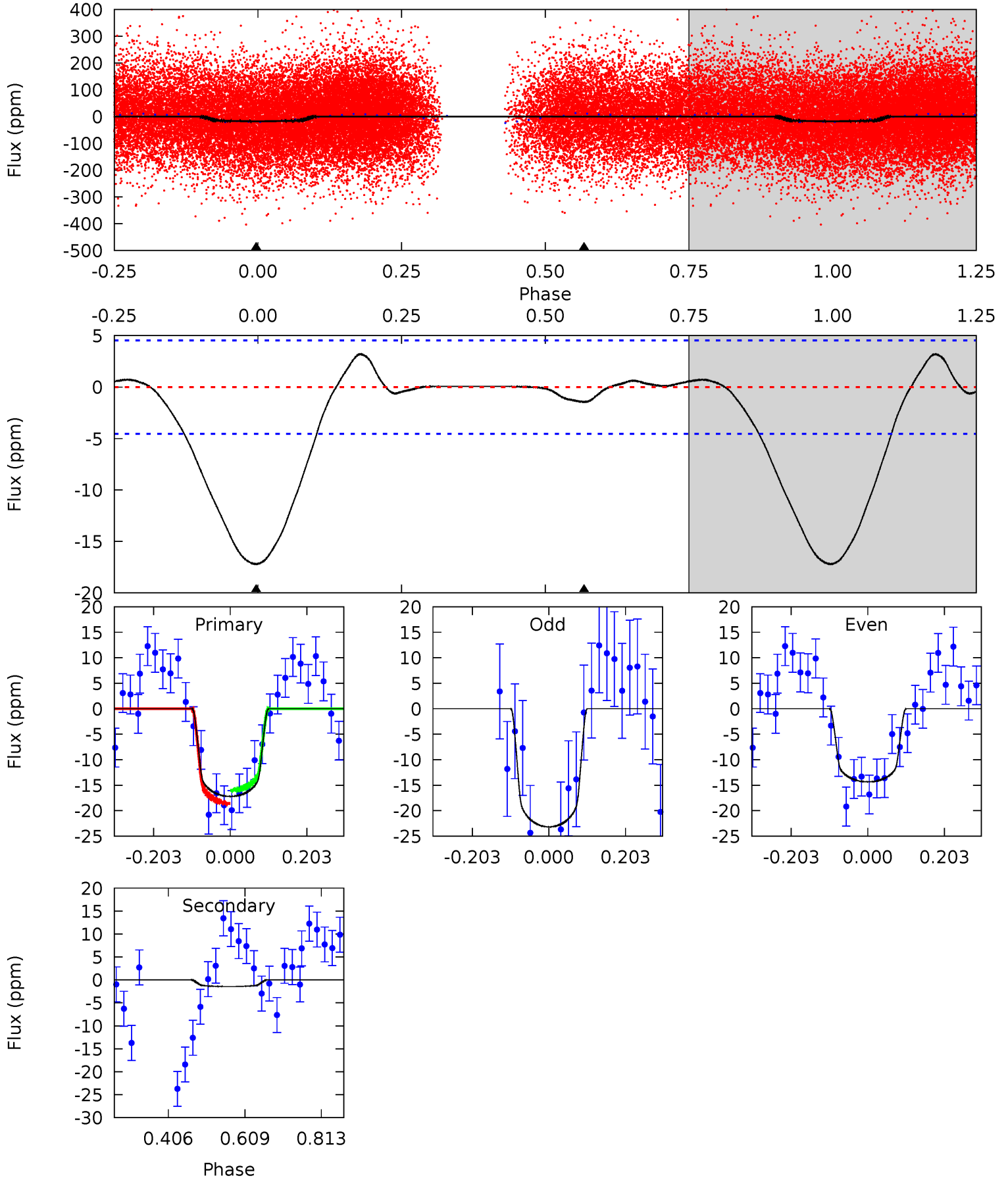
TCE 010657634-03 P= 0.983010 Days $T_0=132.476777$ (BKJD)



DV Model-Shift Uniqueness Test

010657634-03, P = 0.983001 Days, E = 130.533300 Days

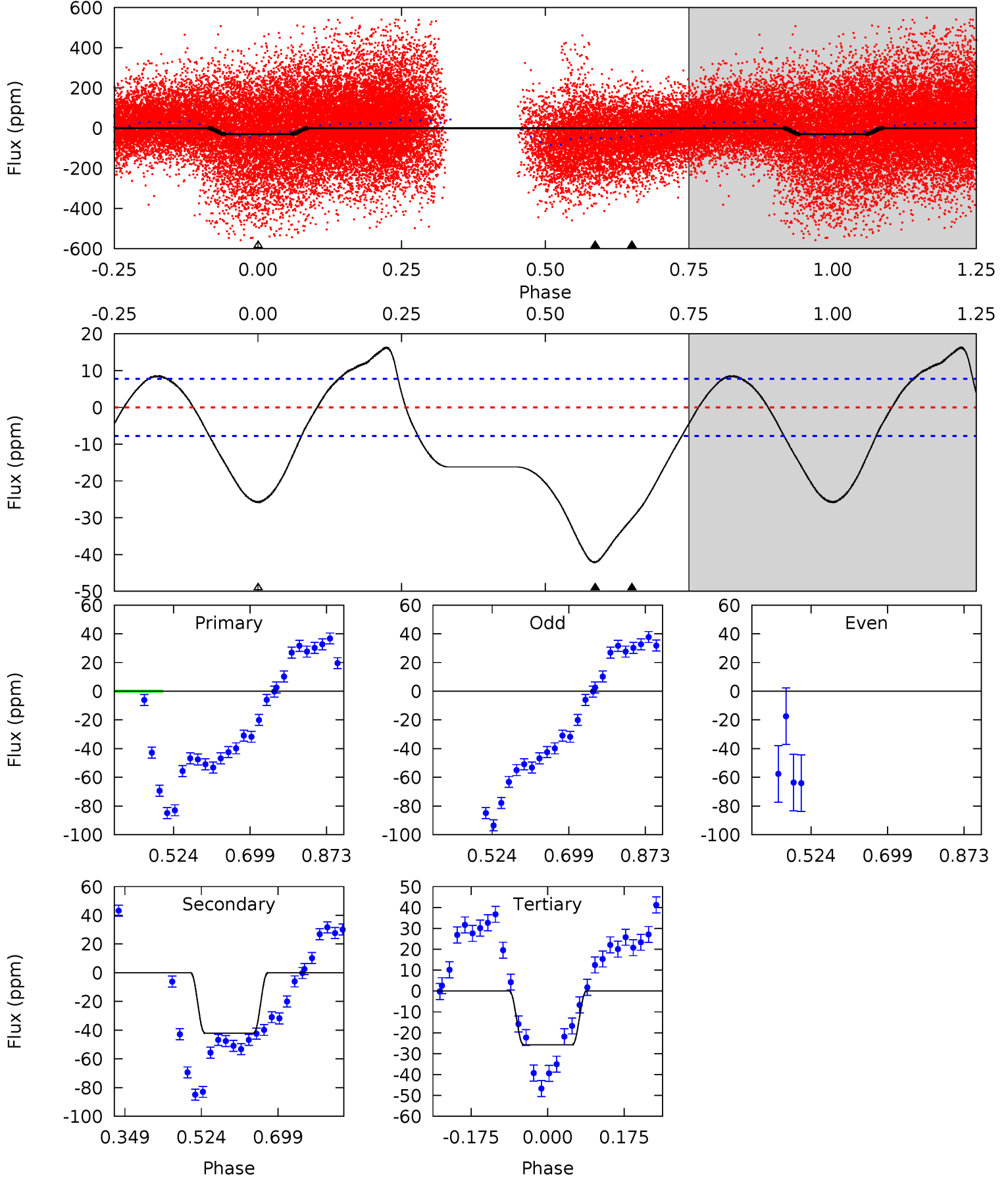
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.7	1.40	0	0	4.41	1.27	0.66	16.7	16.7	1.40	1.40	4.00	1.07	0.16	1.27



Alt Model-Shift Uniqueness Test

010657634-03, P = 0.983010 Days, E = 131.493767 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.3	24.1	14.8	0	4.45	1.36	7.56	2.56	17.3	9.35	24.1	47.3	2.08	0.28	1.84



Stellar Parameters For KIC 010657634

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6812^{+169}_{-203}	$3.799^{+0.292}_{-0.097}$	$-0.180^{+0.300}_{-0.250}$	$2.662^{+0.493}_{-0.916}$	$1.627^{+0.190}_{-0.353}$	$0.121^{+0.245}_{-0.037}$
	+2%/-3%	+8%/-3%	+167%/-139%	+19%/-34%	+12%/-22%	+202%/-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 010657634-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1 ± 1	$1.26^{+0.36}_{-0.34}$	4443^{+274}_{-386}	-2987^{+6723}_{-831}	$0.250^{+0.300}_{-0.177}$
Alt.	-42 ± 2	$2.21^{+0.42}_{-0.47}$	4465^{+268}_{-387}	5945^{+452}_{-440}	$2.475^{+1.375}_{-0.741}$

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 $A_{obs} \gg 1.0$

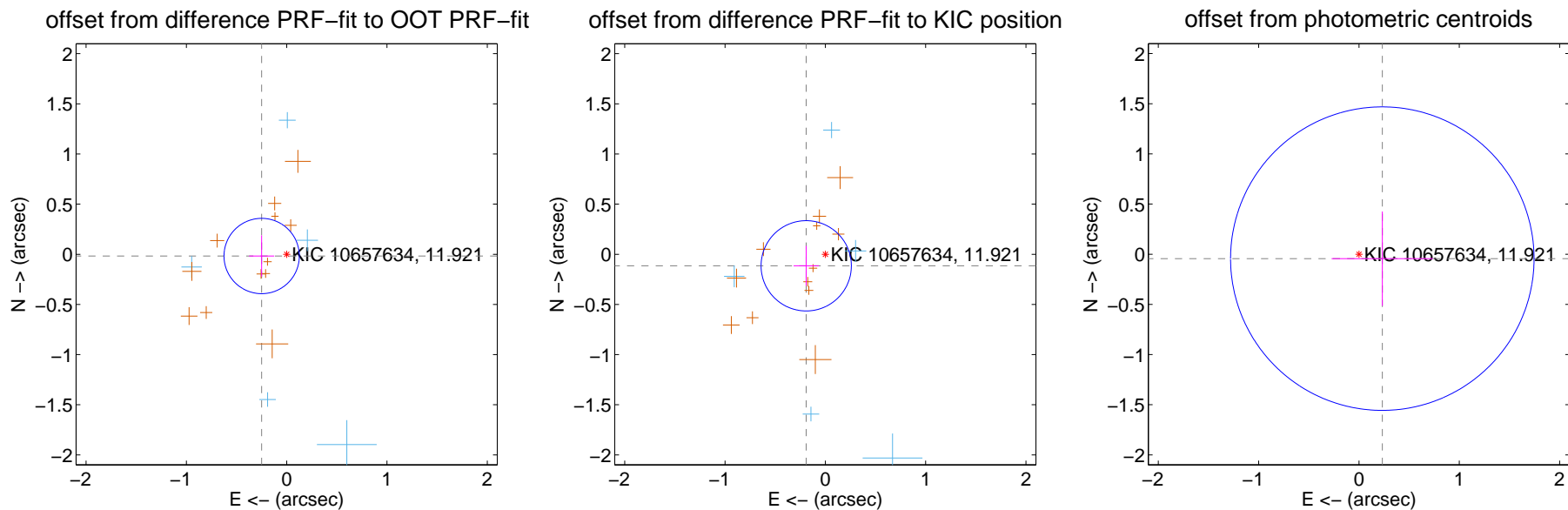
DV Centroid Data

Supplemental centroid analysis for 010657634-03. **Kepler magnitude: 11.92.** Transit SNR 9.72

There are 5 quarters with good PRF difference image offsets

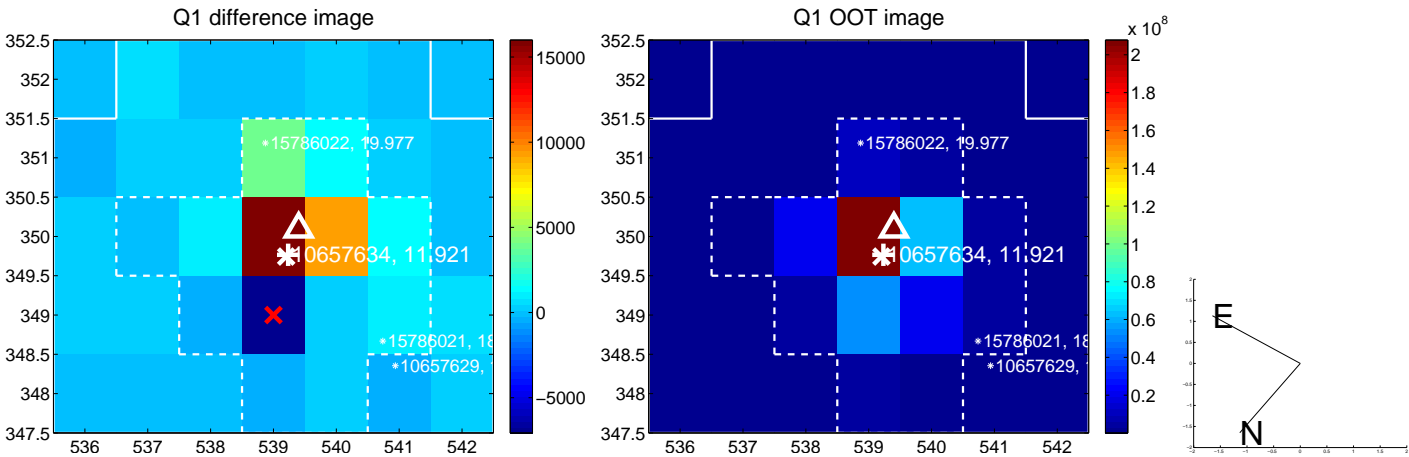
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.250 ± 0.125	2.00	0.250 ± 0.125	-0.017 ± 0.205
PRF-fit source offset from KIC position	0.223 ± 0.150	1.48	0.191 ± 0.126	-0.115 ± 0.199
photometric centroid source offset	0.24 ± 0.50	0.47	-0.23 ± 0.51	-0.04 ± 0.47

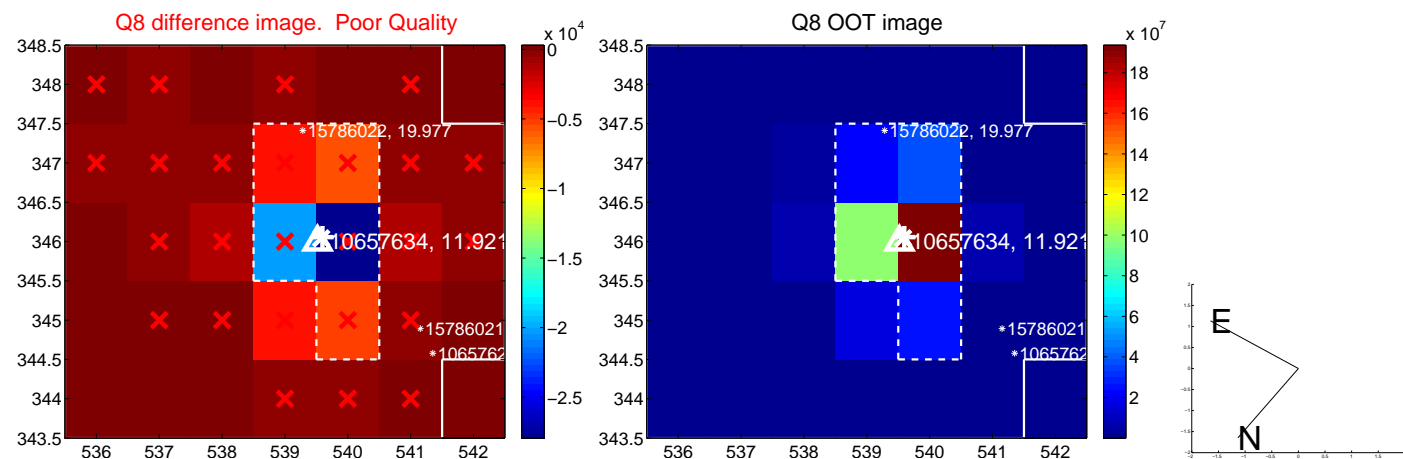
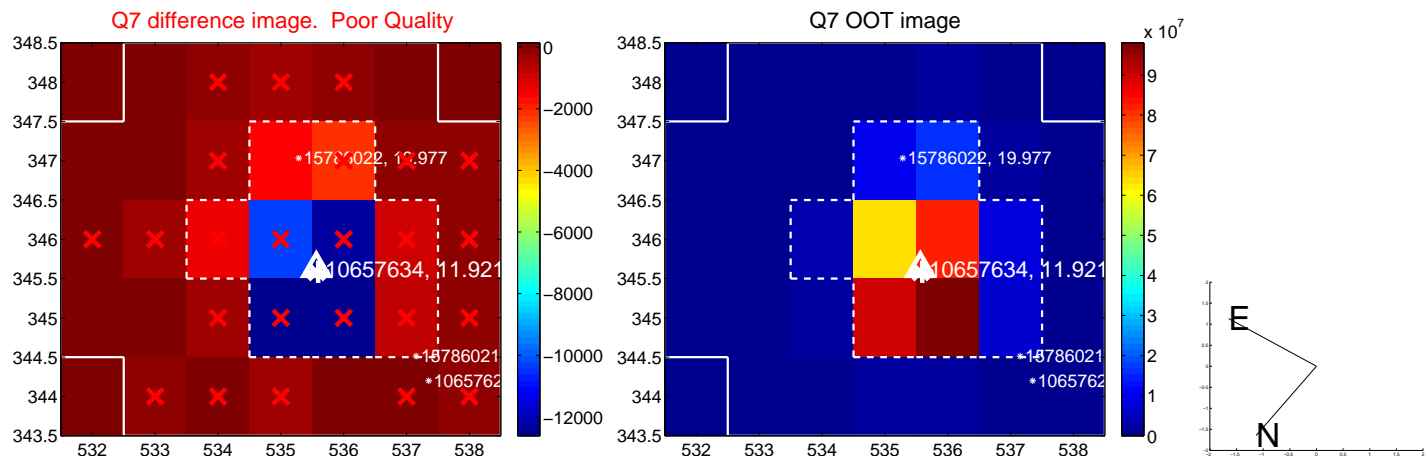
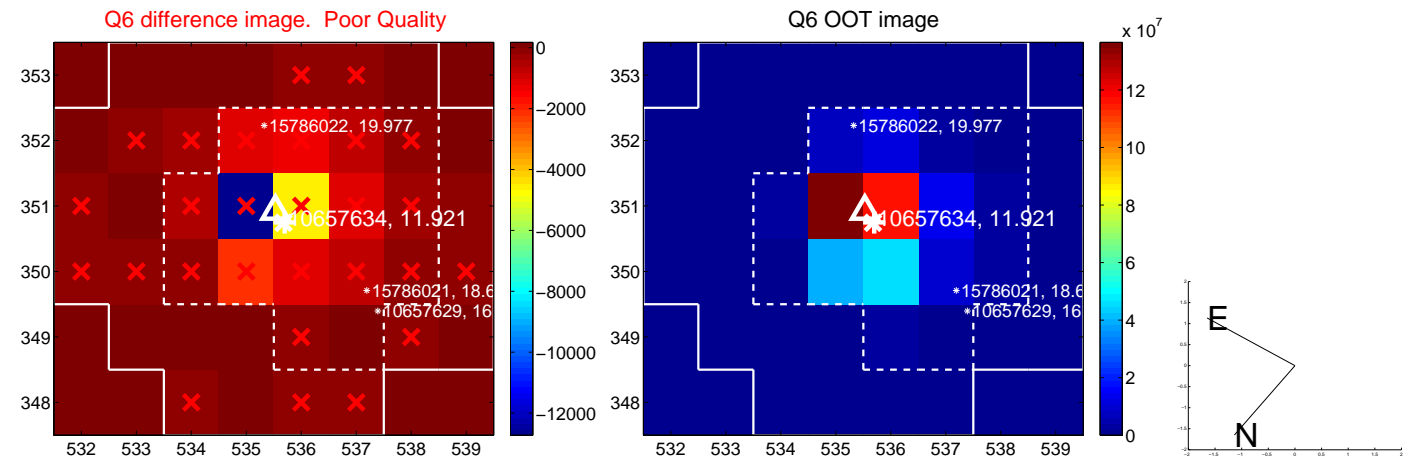
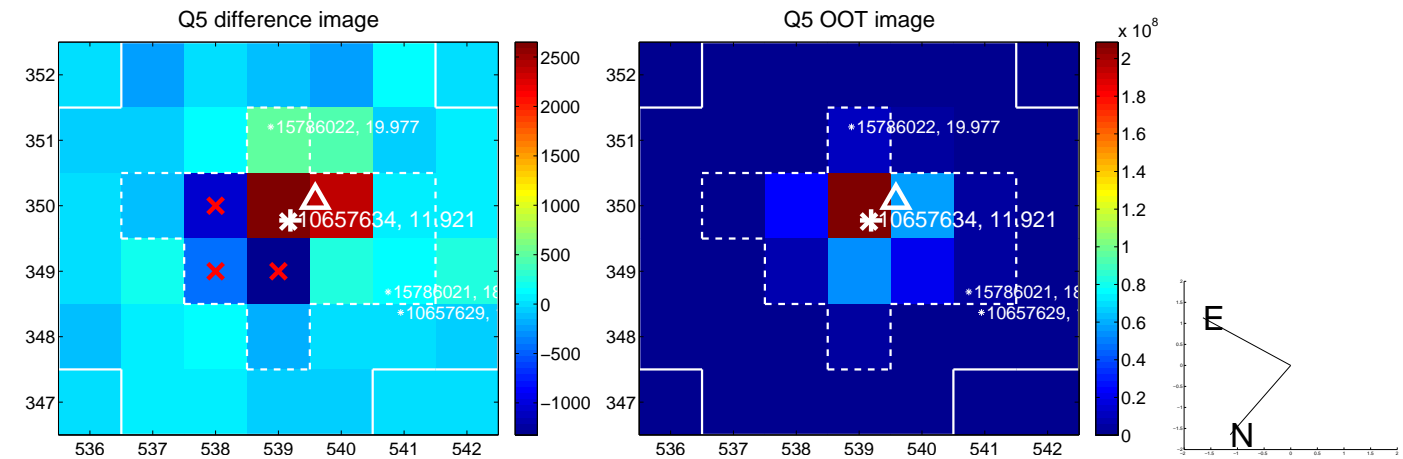


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

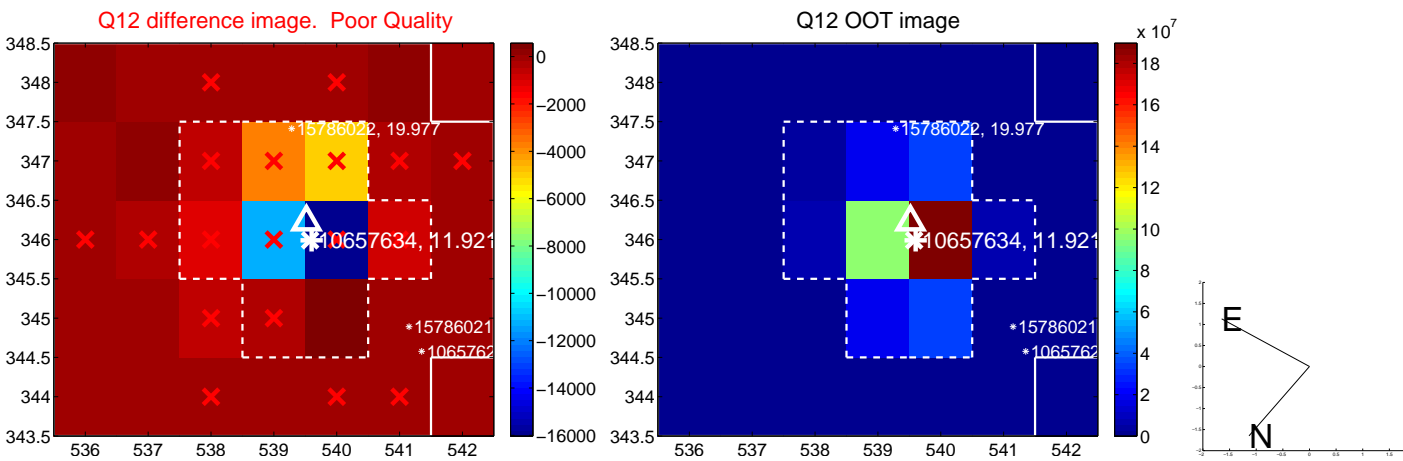
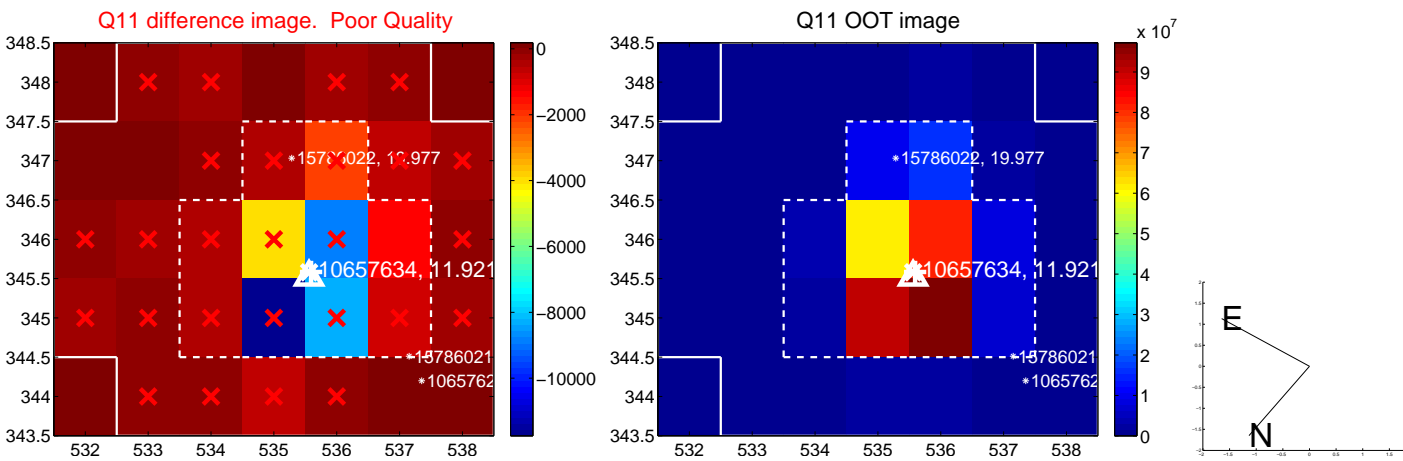
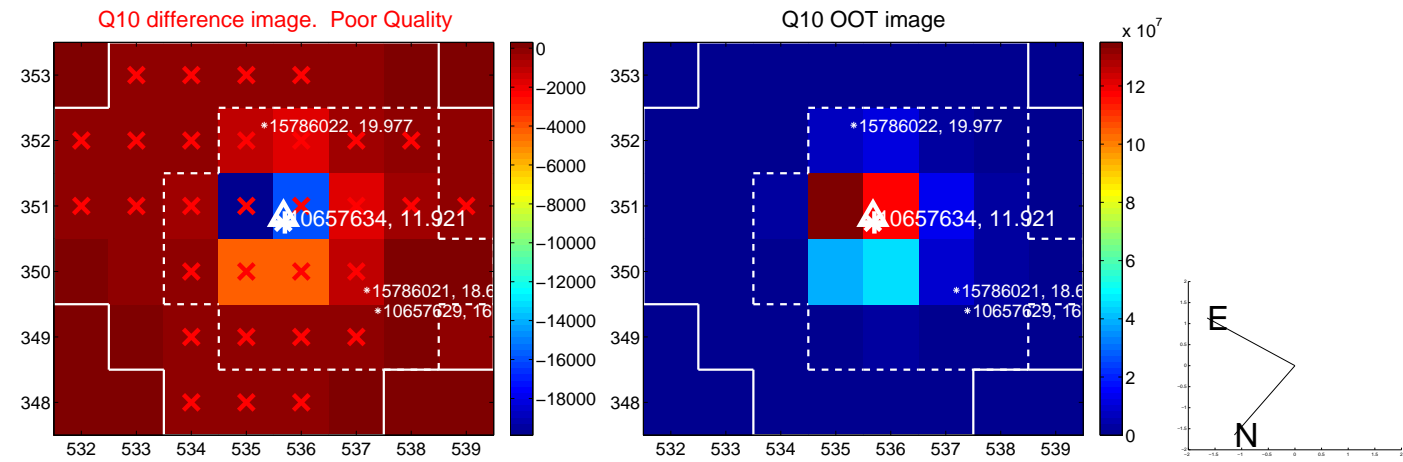
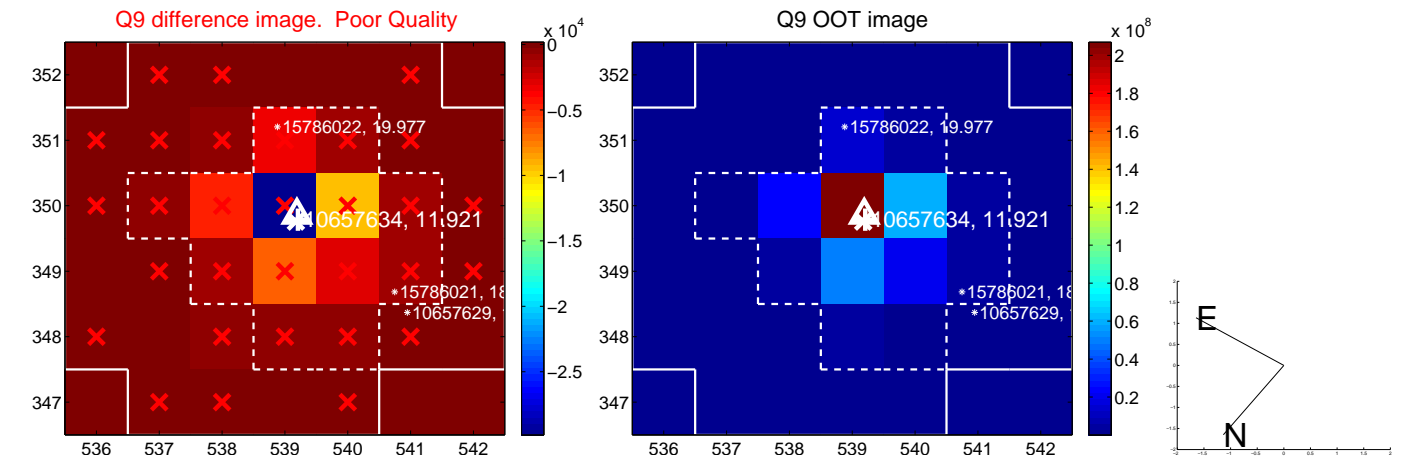
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



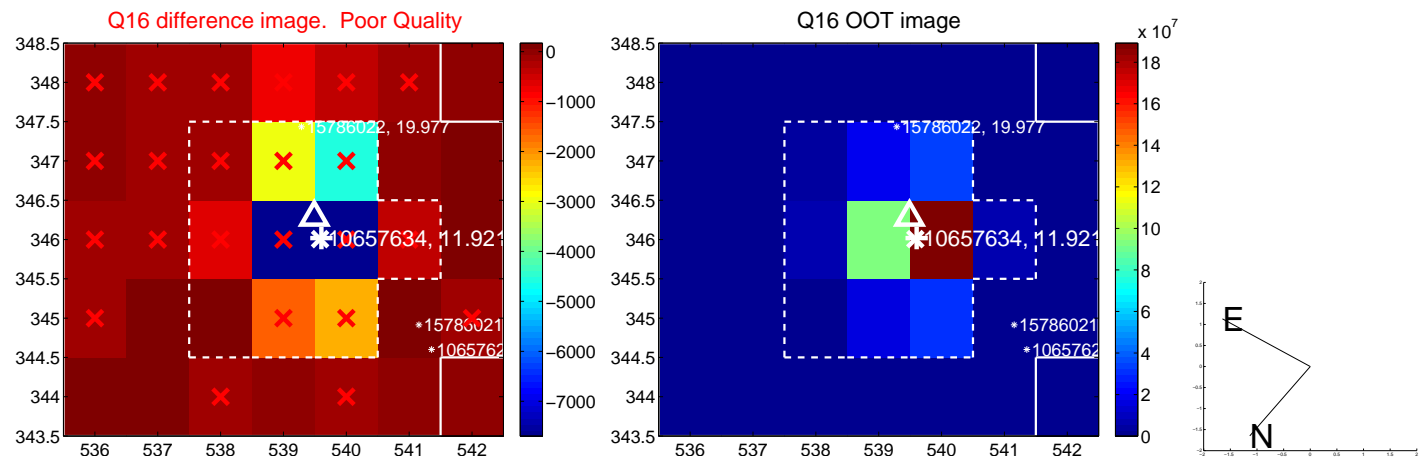
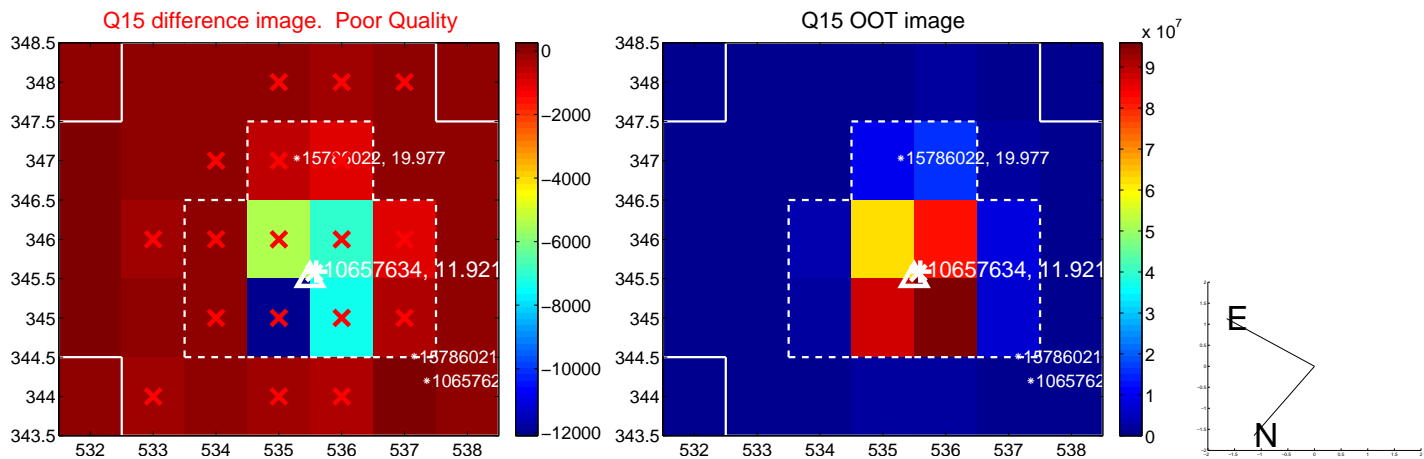
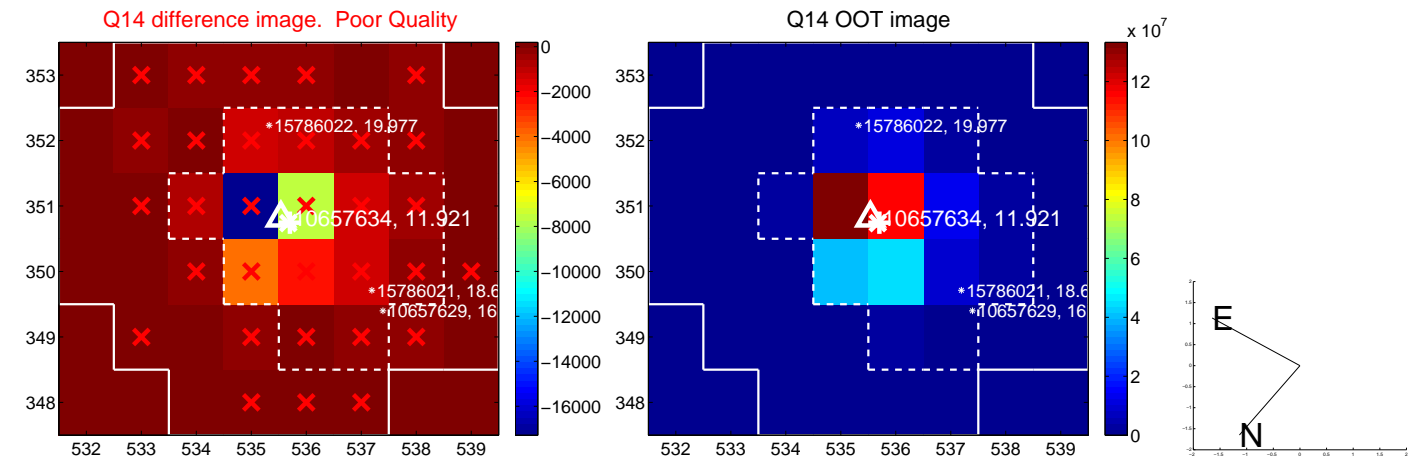
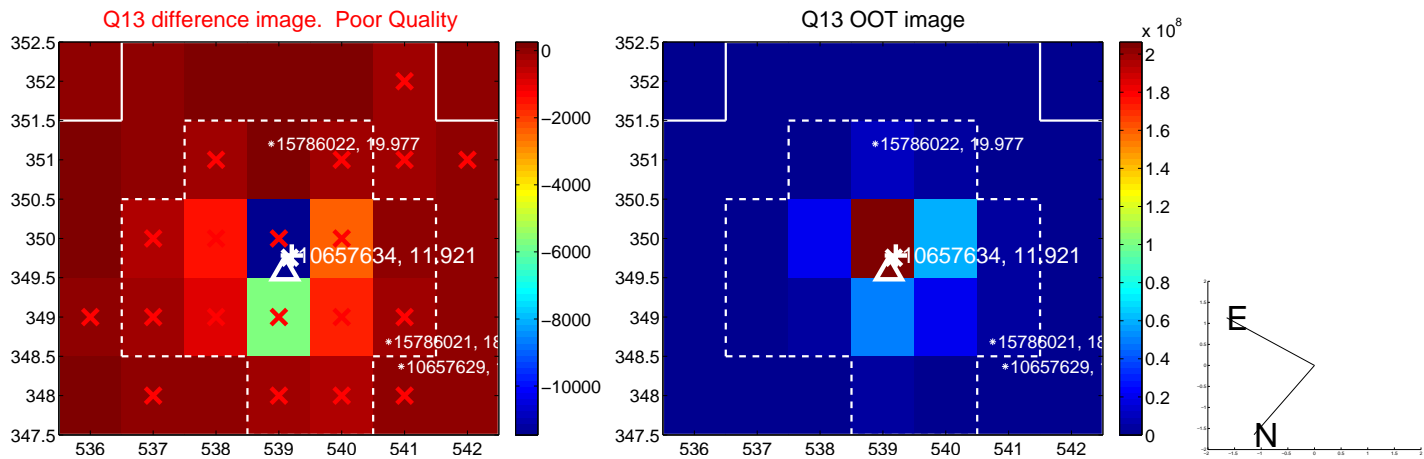
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



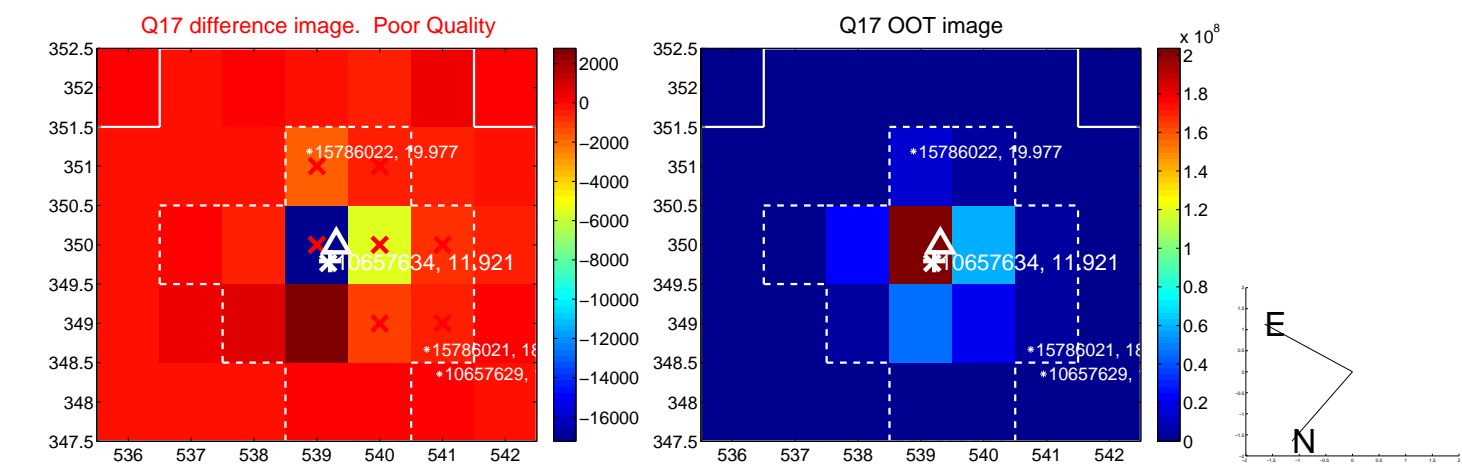
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



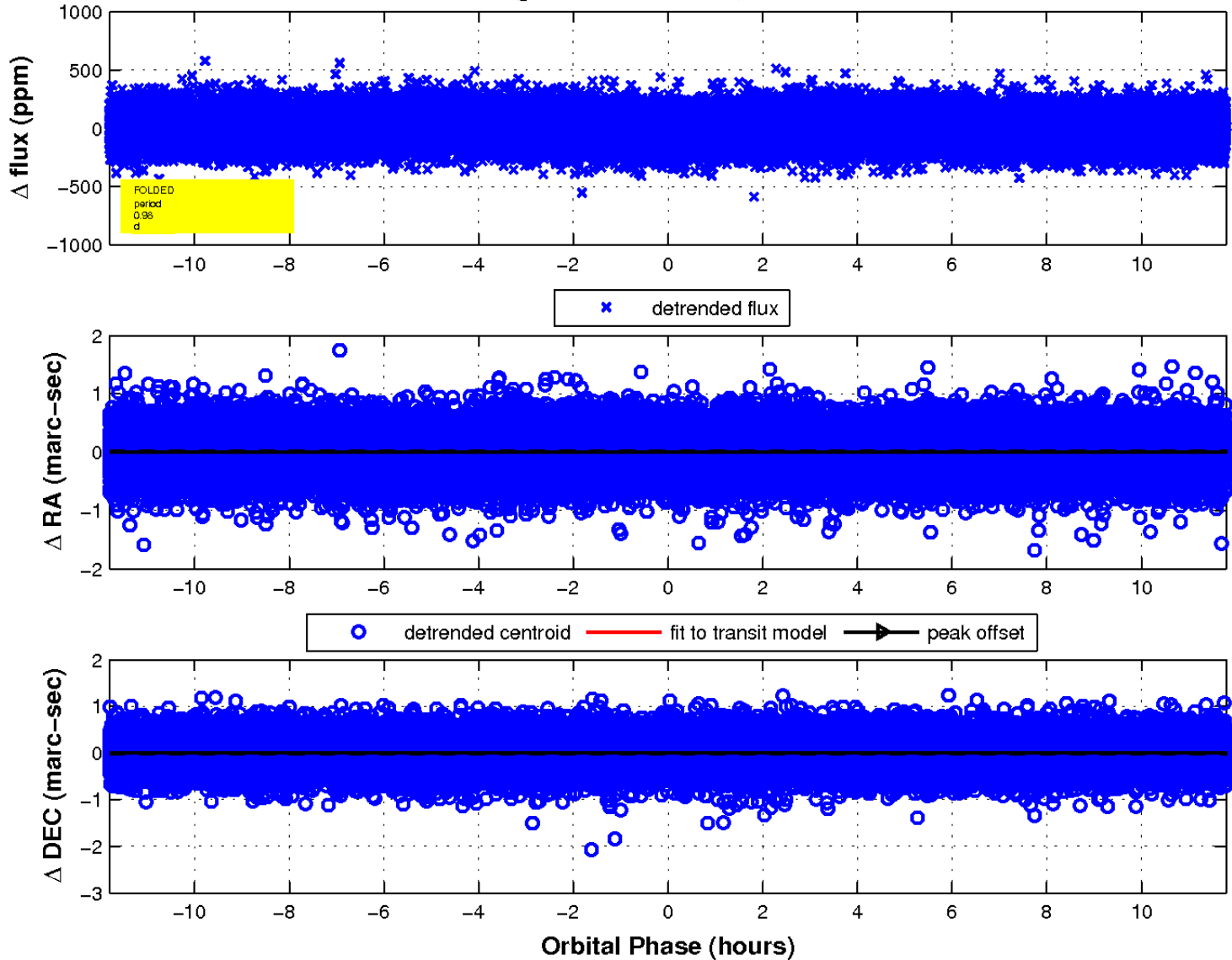
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

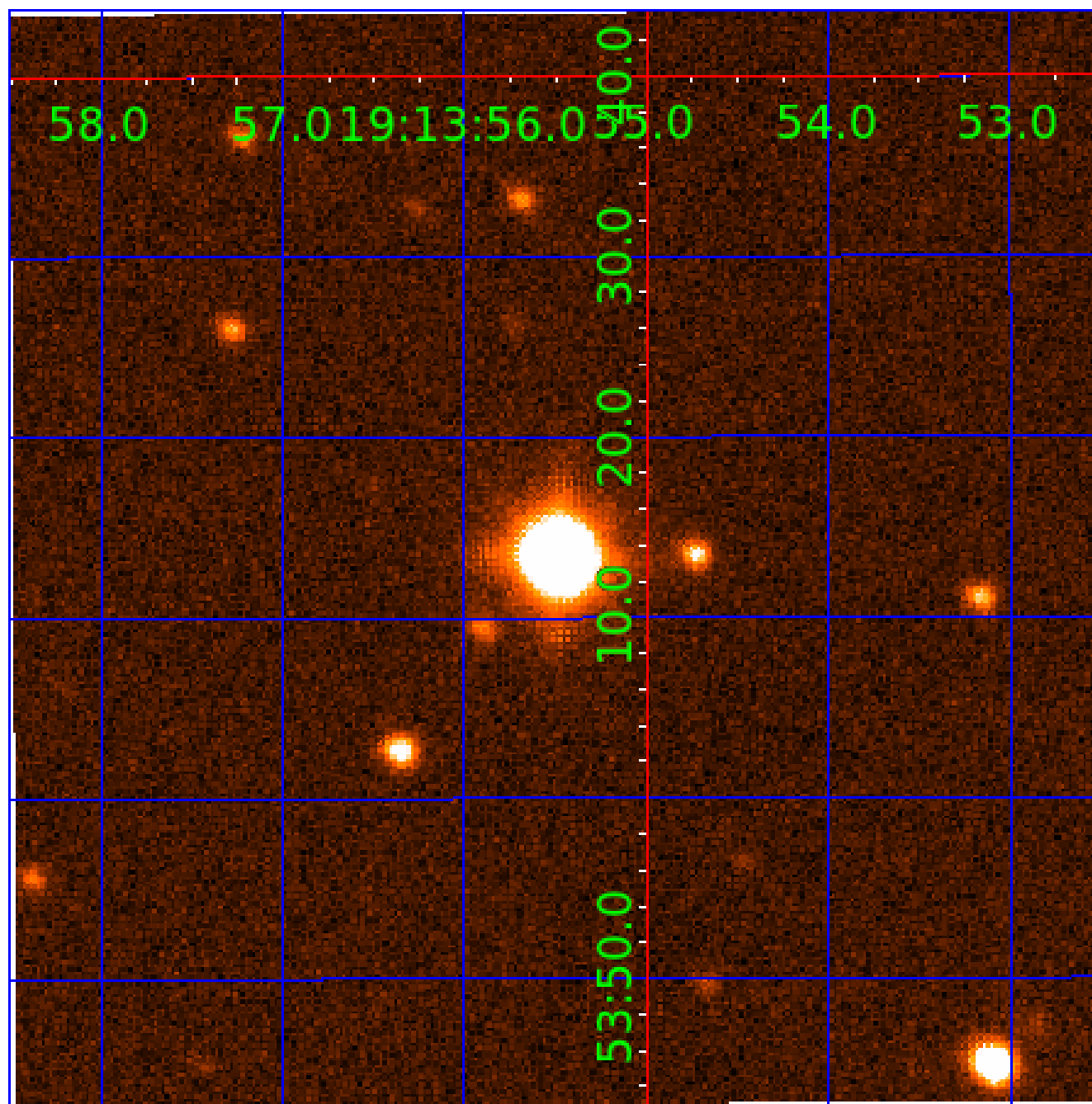


fluxWeightedCentroids, Planet 3 of 5



UKIRT Image

Declination



KIC 010657634

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})
010657634-01	OBS	No	1.966433	132.062412	28.3	4.560	11.4	11.7	2.66	6812	1.90	10468.70
010657634-02	OBS	No	0.983072	131.832164	12.5	1.056	8.7	5.2	2.66	6812	0.95	26384.65
010657634-03	OBS	No	0.983001	132.499302	16.2	4.348	9.8	9.7	2.66	6812	1.33	26387.17
010657634-04	OBS	No	99.193181	206.111791	231.4	6.633	9.1	10.0	2.66	6812	4.55	56.17
010657634-05	OBS	No	39.489391	158.936712	121.5	3.971	7.8	6.1	2.66	6812	3.41	191.79

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010657634-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
010657634-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—SAME_NTL_PERIOD
010657634-03	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
010657634-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
010657634-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_UNRESOLVED_OFFSET

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

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

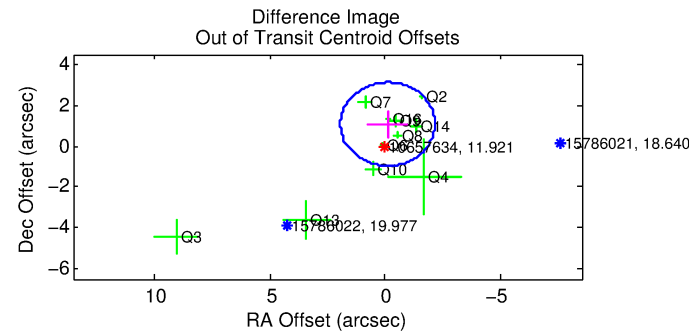
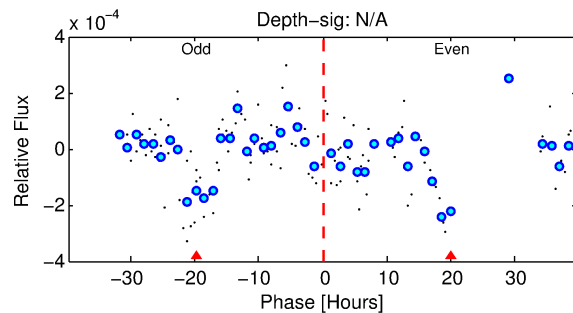
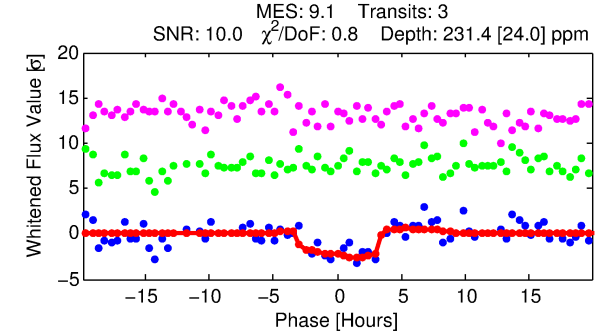
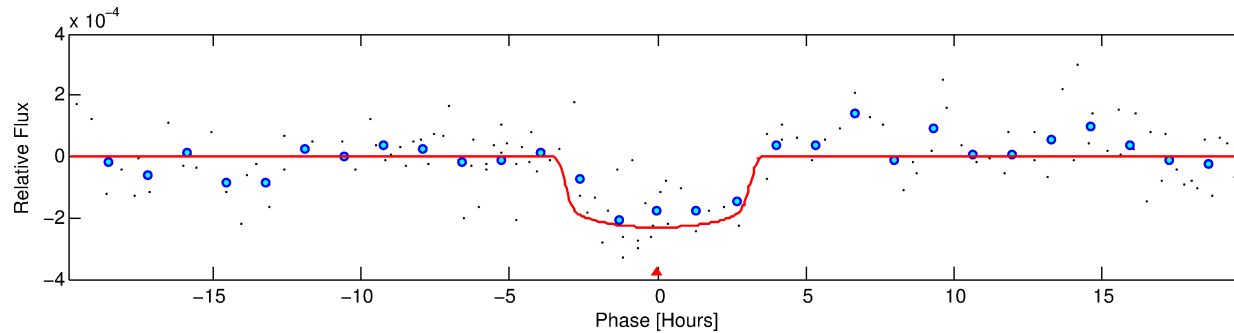
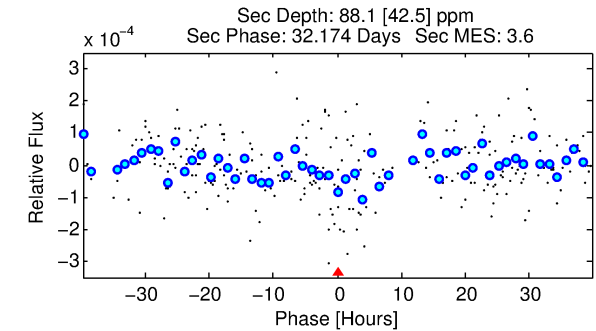
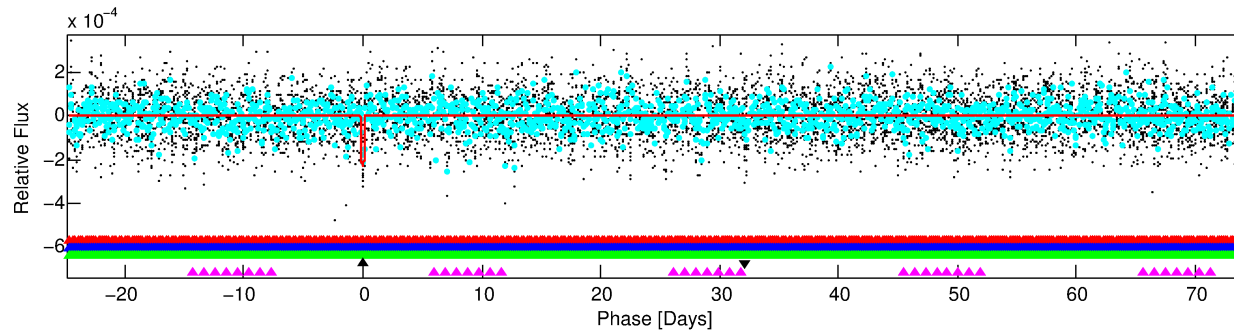
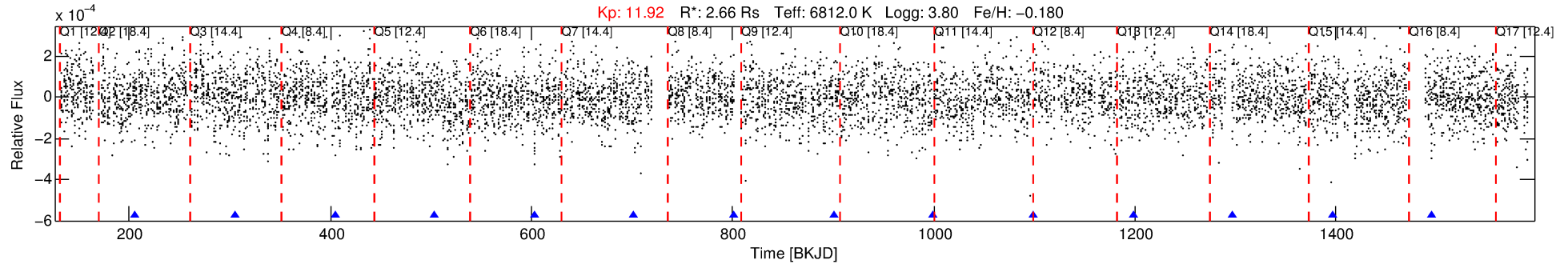
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010657634-04

No Significant Match Found

DV One-Page Summary

KIC: 10657634 Candidate: 4 of 5 Period: 99.193 d



DV Fit Results:

Period = 99.19318 [0.00164] d
Epoch = 206.1118 [0.0123] BKJD
Rp/R* = 0.0156 [0.0070]
a/R* = 65.08 [171.71]
b = 0.84 [0.93]
Seff = 56.17 [29.06]
Teq = 698 [90] K
Rp = 4.55 [2.58] Re
a = 0.4934 [0.1582] AU
Ag = 570.87 [650.35] [0.88σ]
Teffp = 5276 [1357] K [3.37σ]

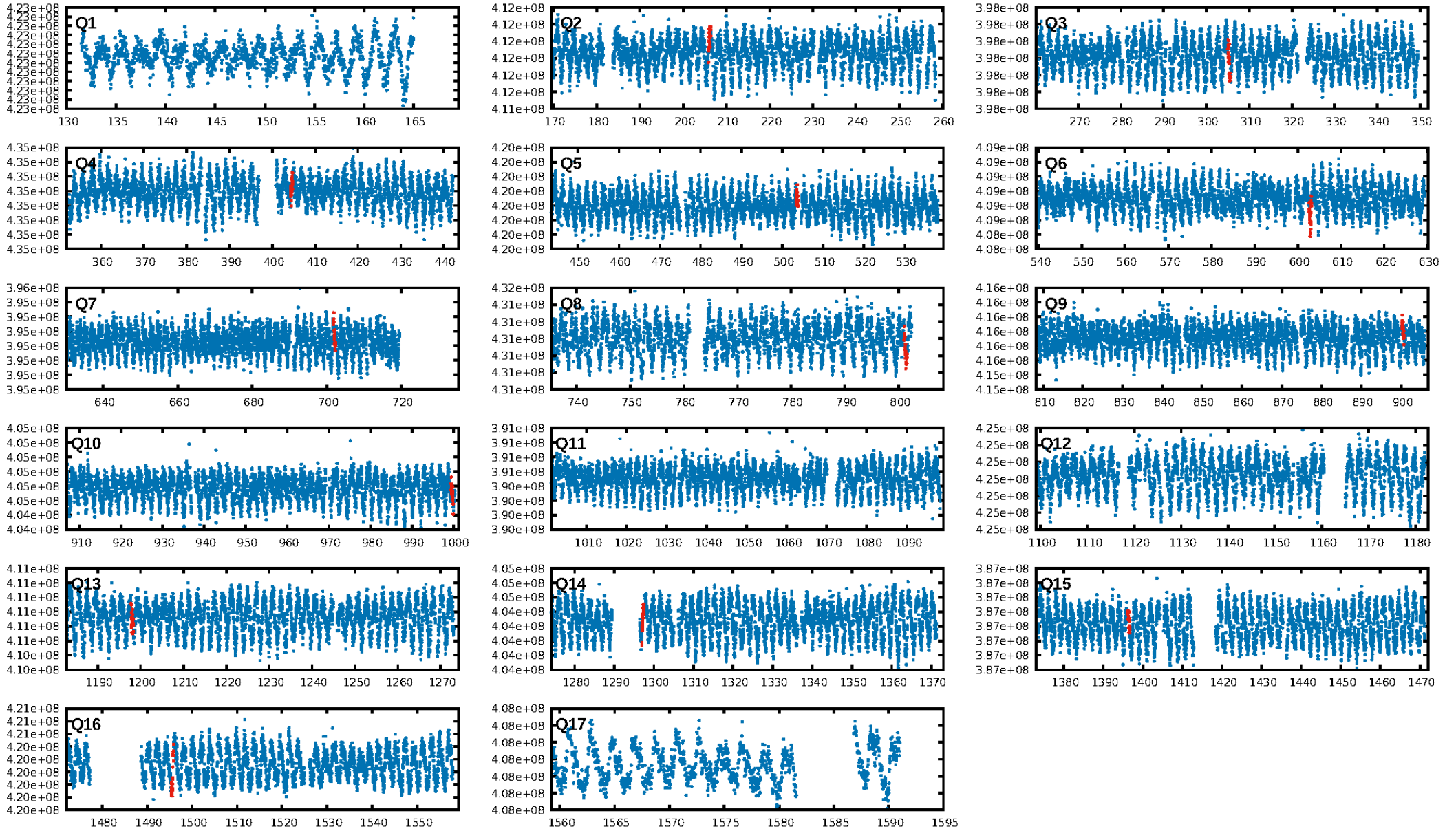
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [185.35σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 51.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.67e-11
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.639
Centroid-sig: 54.0%
Centroid-so: 0.273 arcsec [0.91σ]
OotOffset-rm: 1.090 arcsec [1.60σ]
OotOffset-st: 4/2/3/2 [11]
KicOffset-rm: 1.022 arcsec [1.45σ]
KicOffset-st: 4/2/3/2 [11]
DiffImageQuality-fgm: 0.36 [4/11]
DiffImageOverlap-fno: 0.00 [0/11]

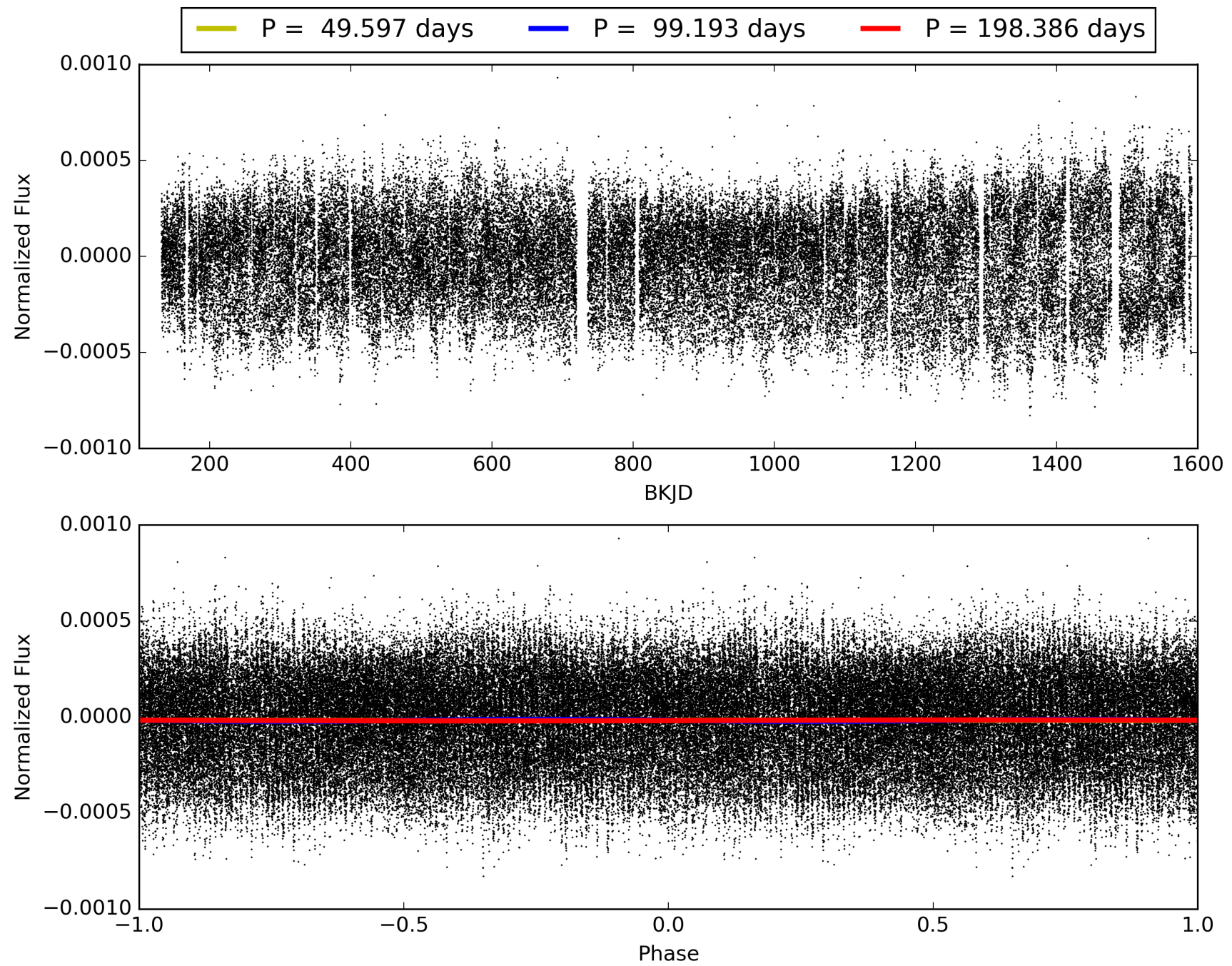
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 02:41:24 Z

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

TCE 010657634-04, PDC Light Curves

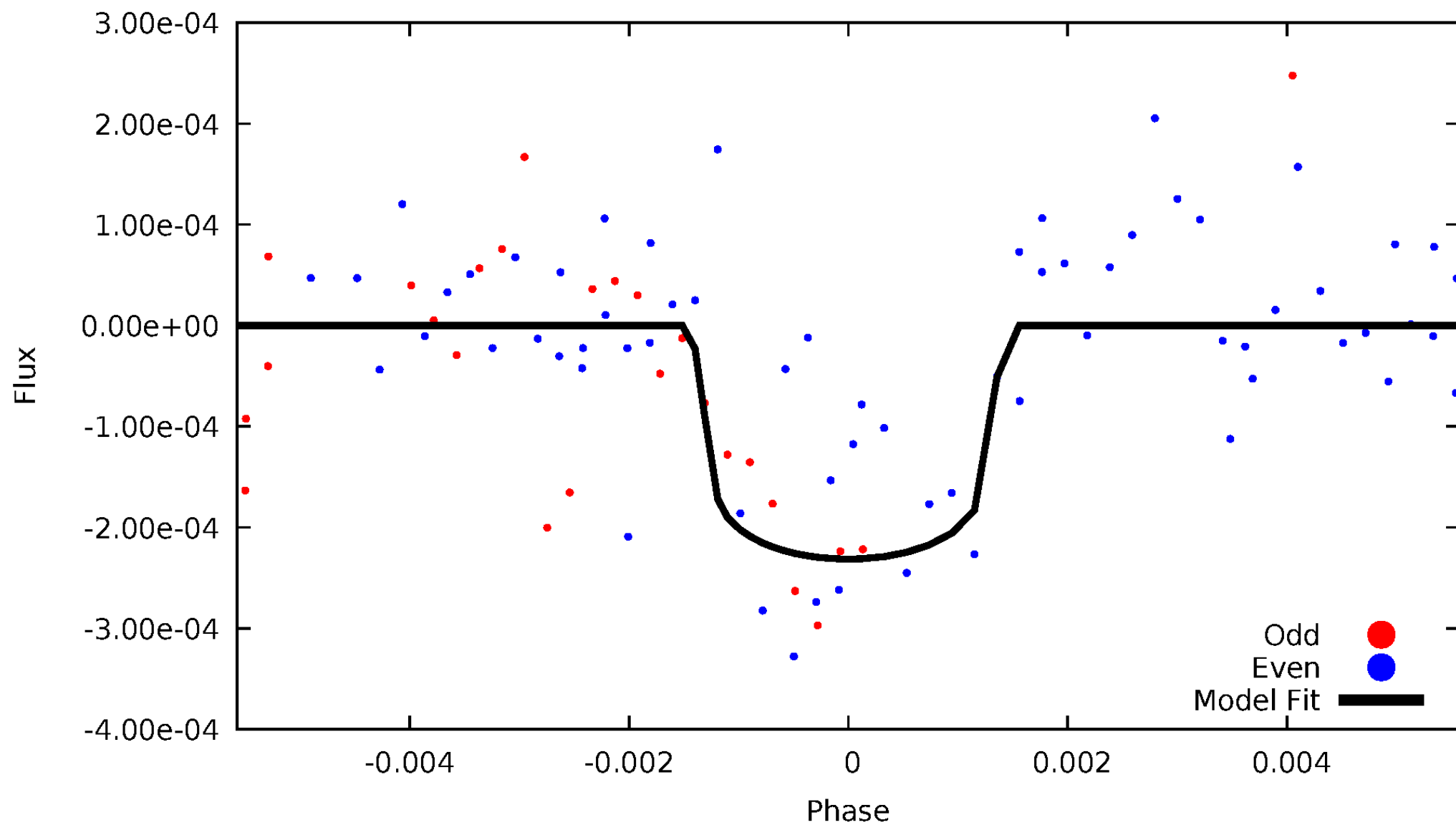


TCE 010657634-04



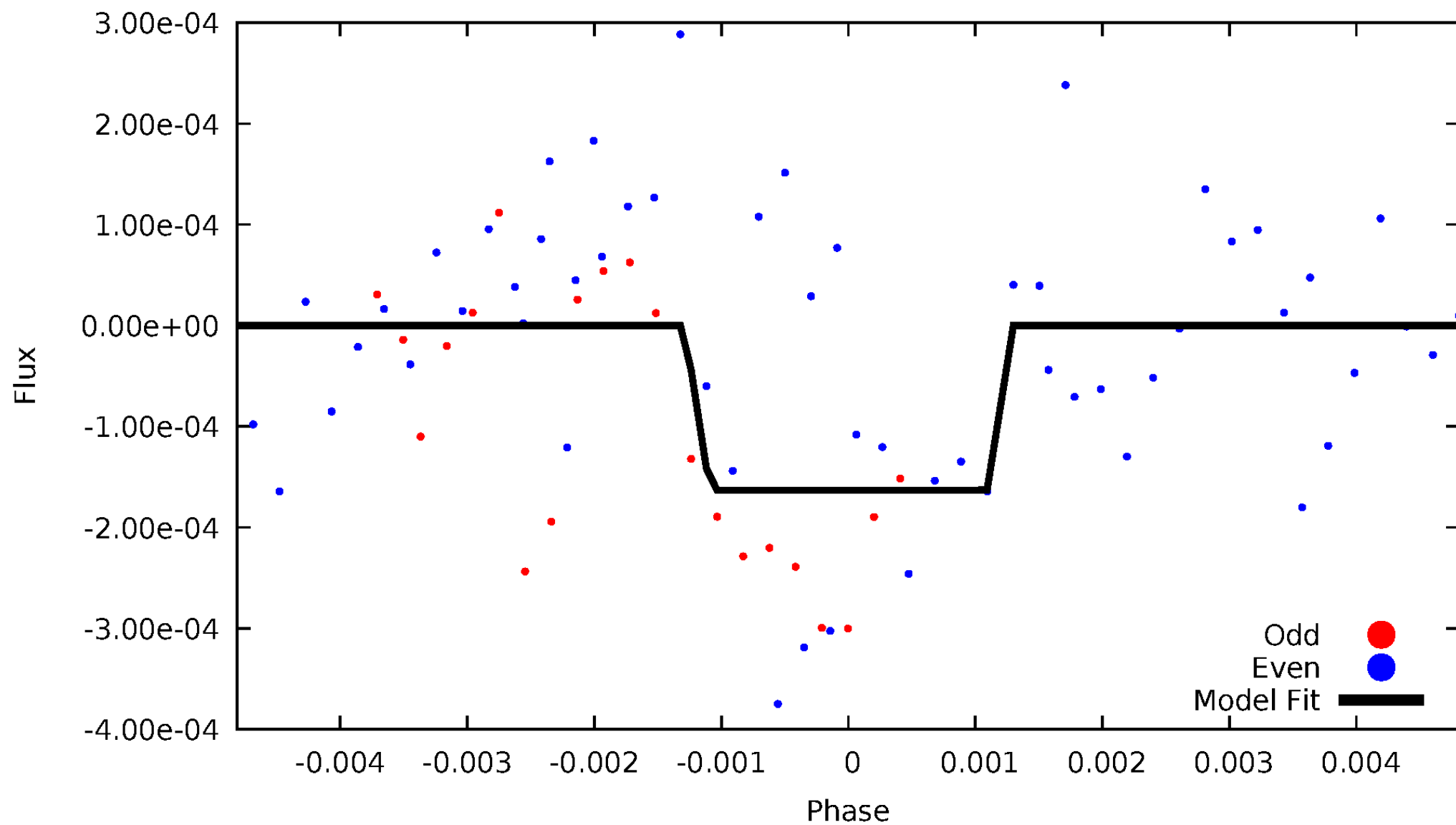
DV Odd/Even

TCE 010657634-04



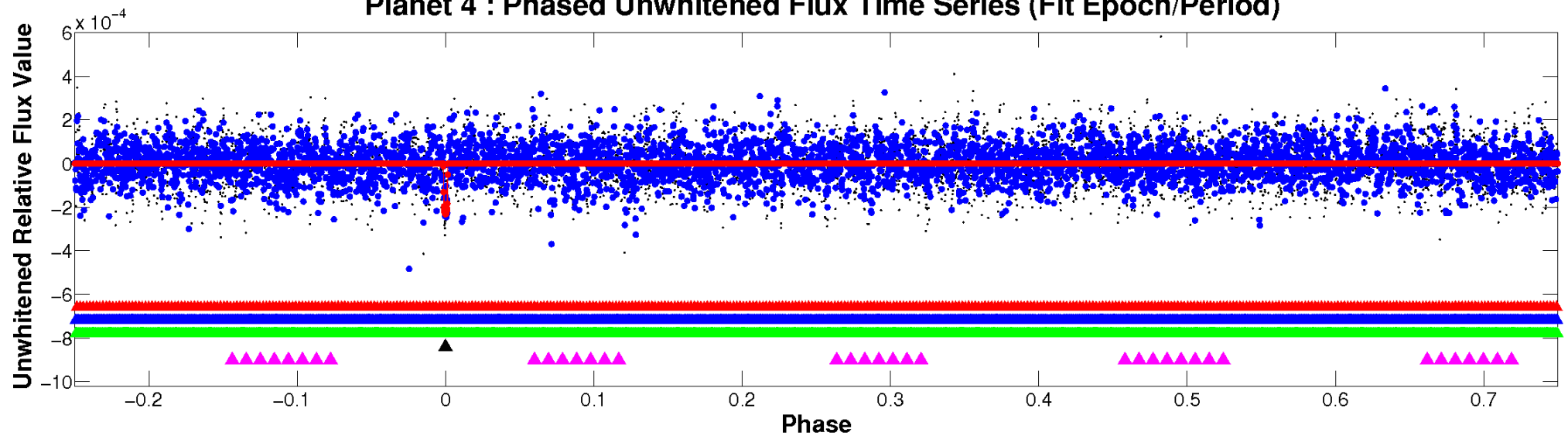
ALT Odd/Even

TCE 010657634-04

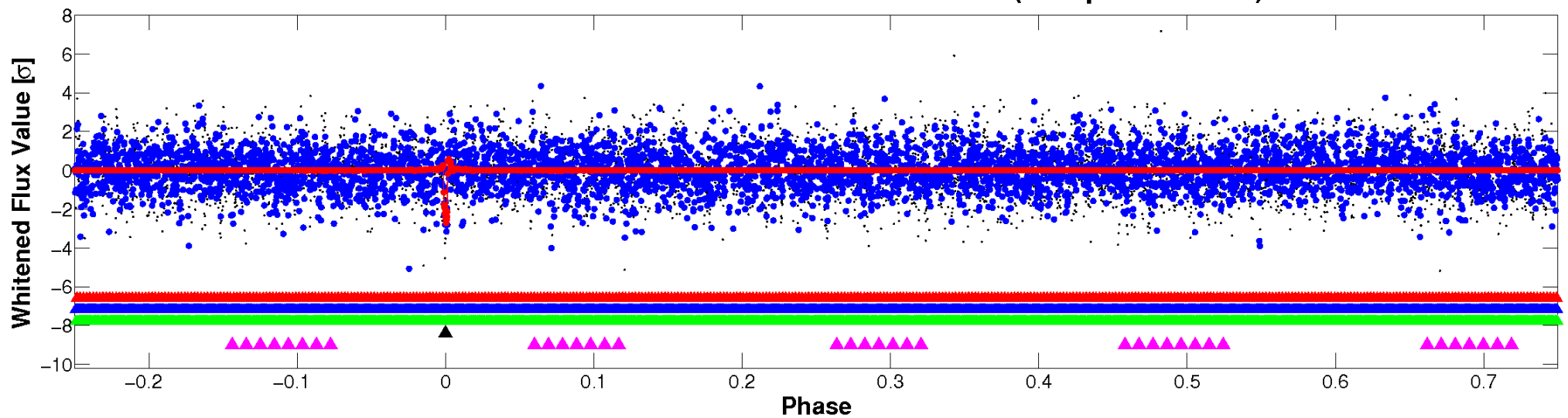


Non-Whitened Vs. Whitened Light Curve

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

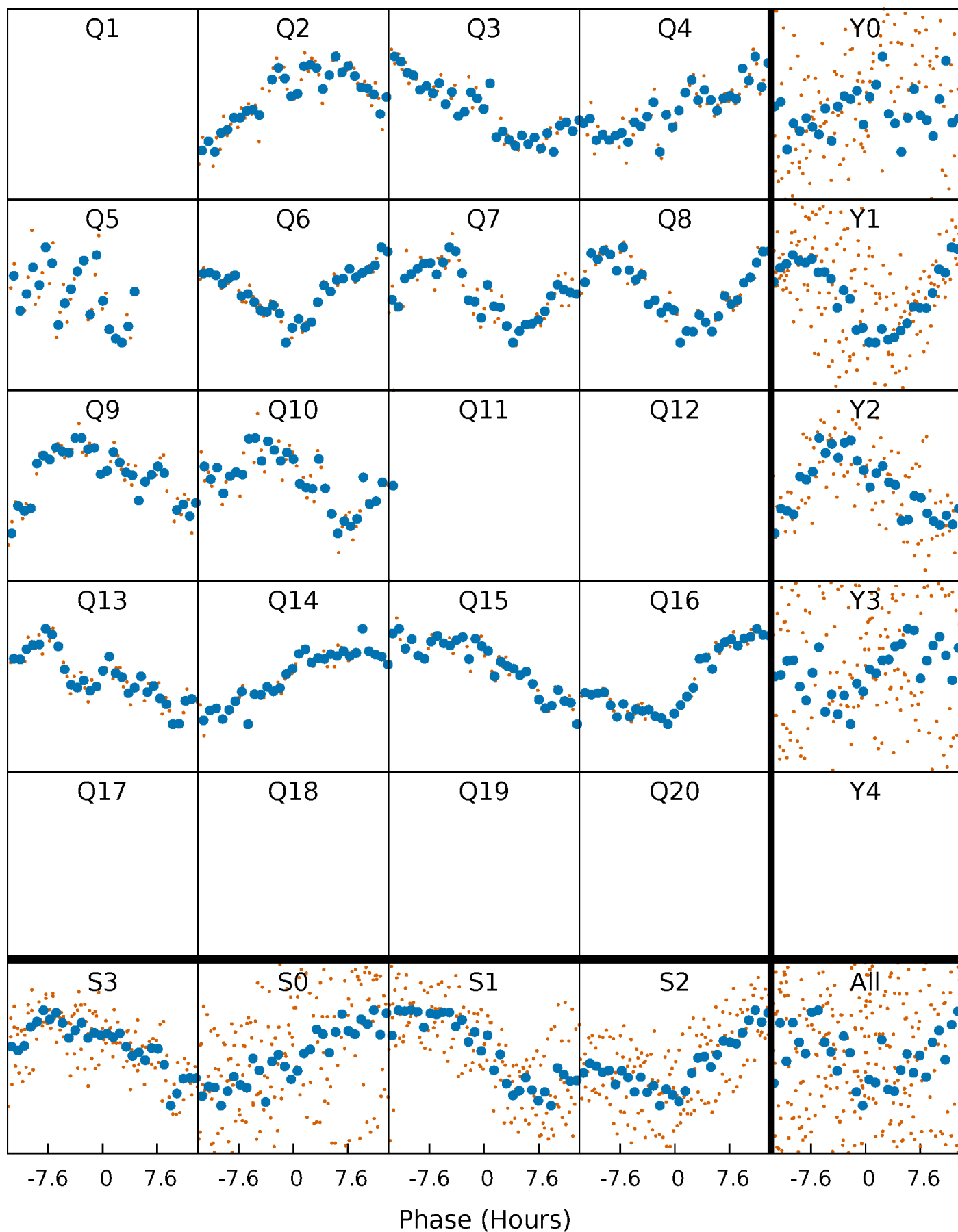


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



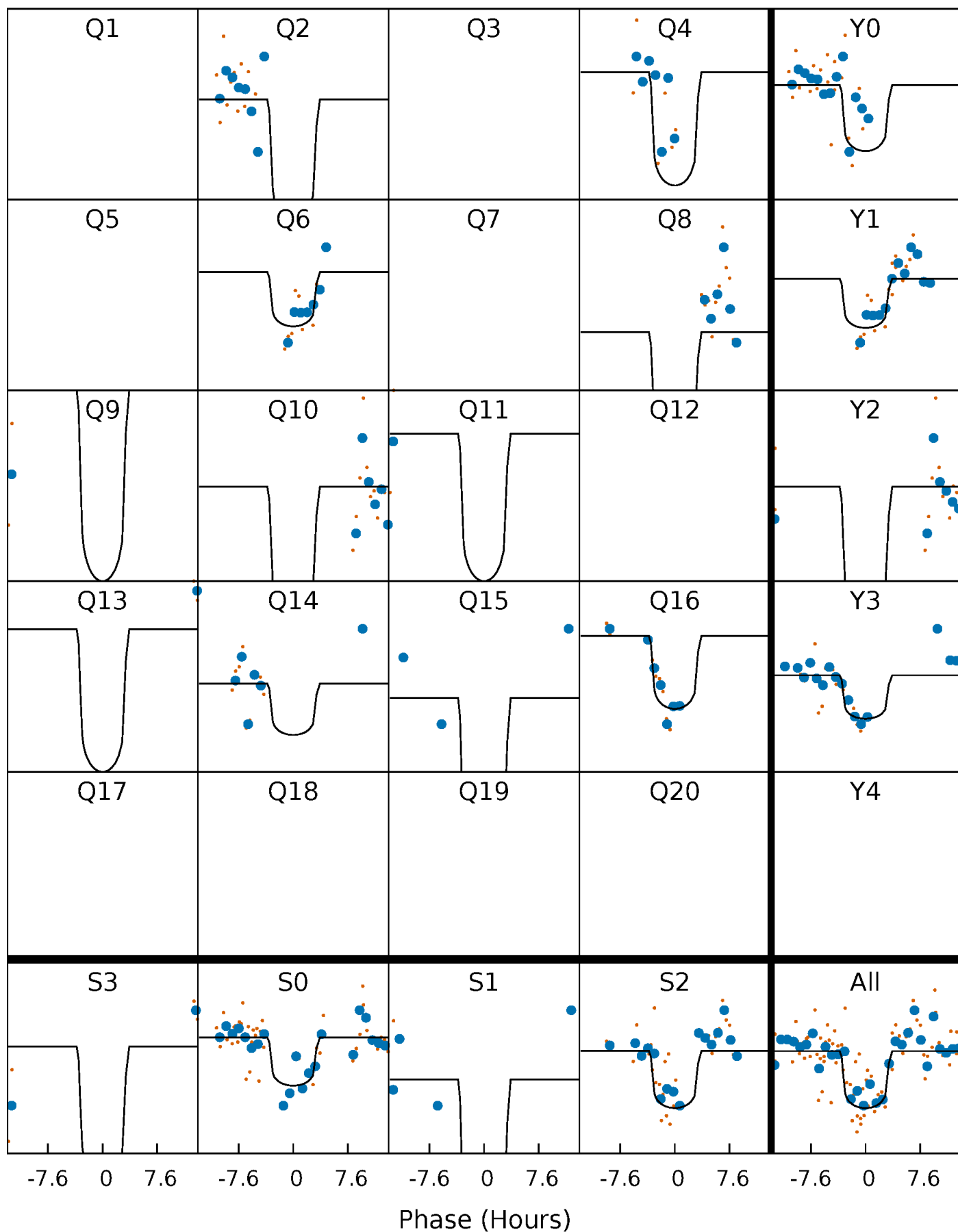
PDC Quarter-Phased Transit Curves

TCE 010657634-04 P= 99.193181 Days $T_0=206.111791$ (BKJD)



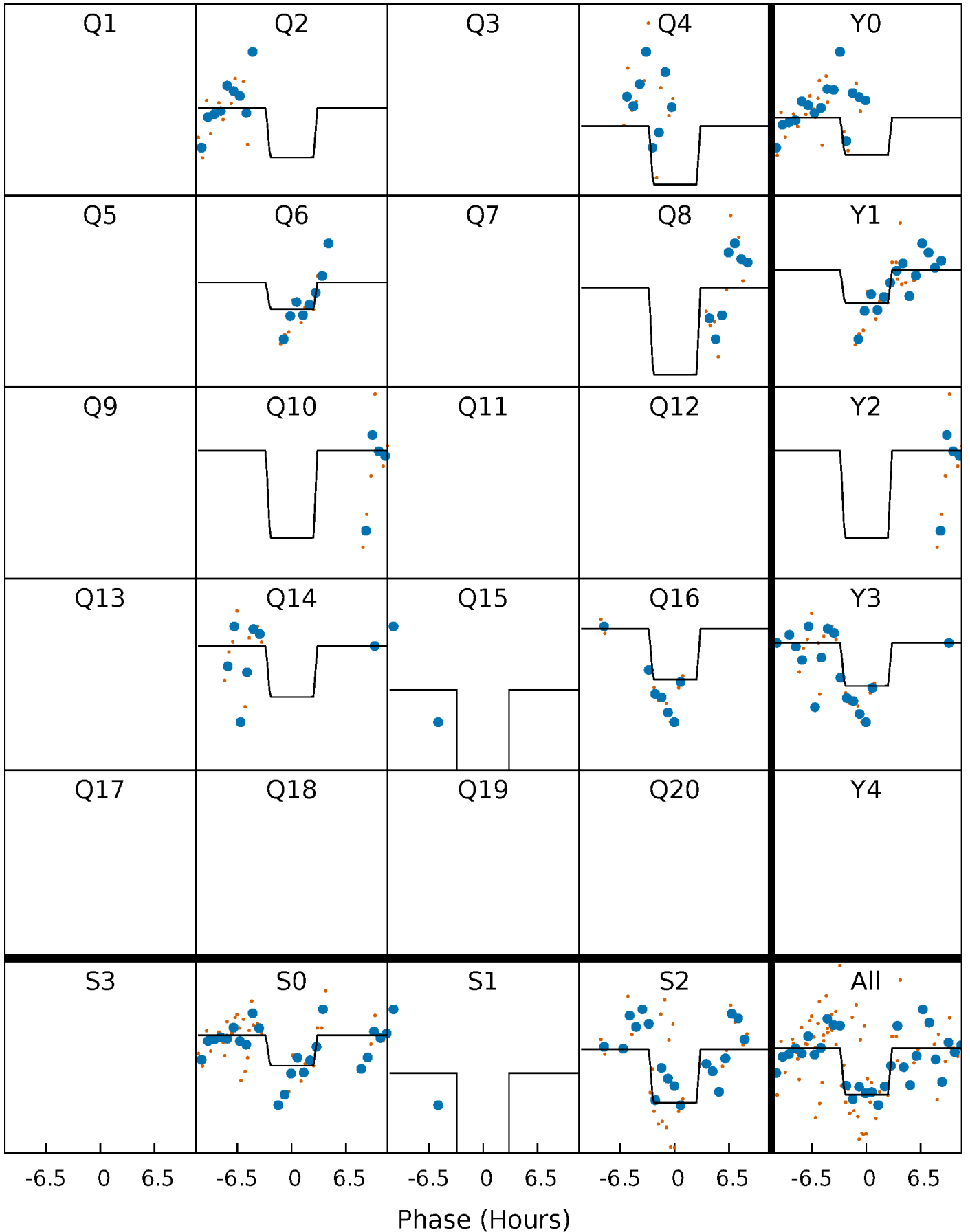
DV Quarter-Phased Transit Curves

TCE 010657634-04 P= 99.193181 Days $T_0=206.111791$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

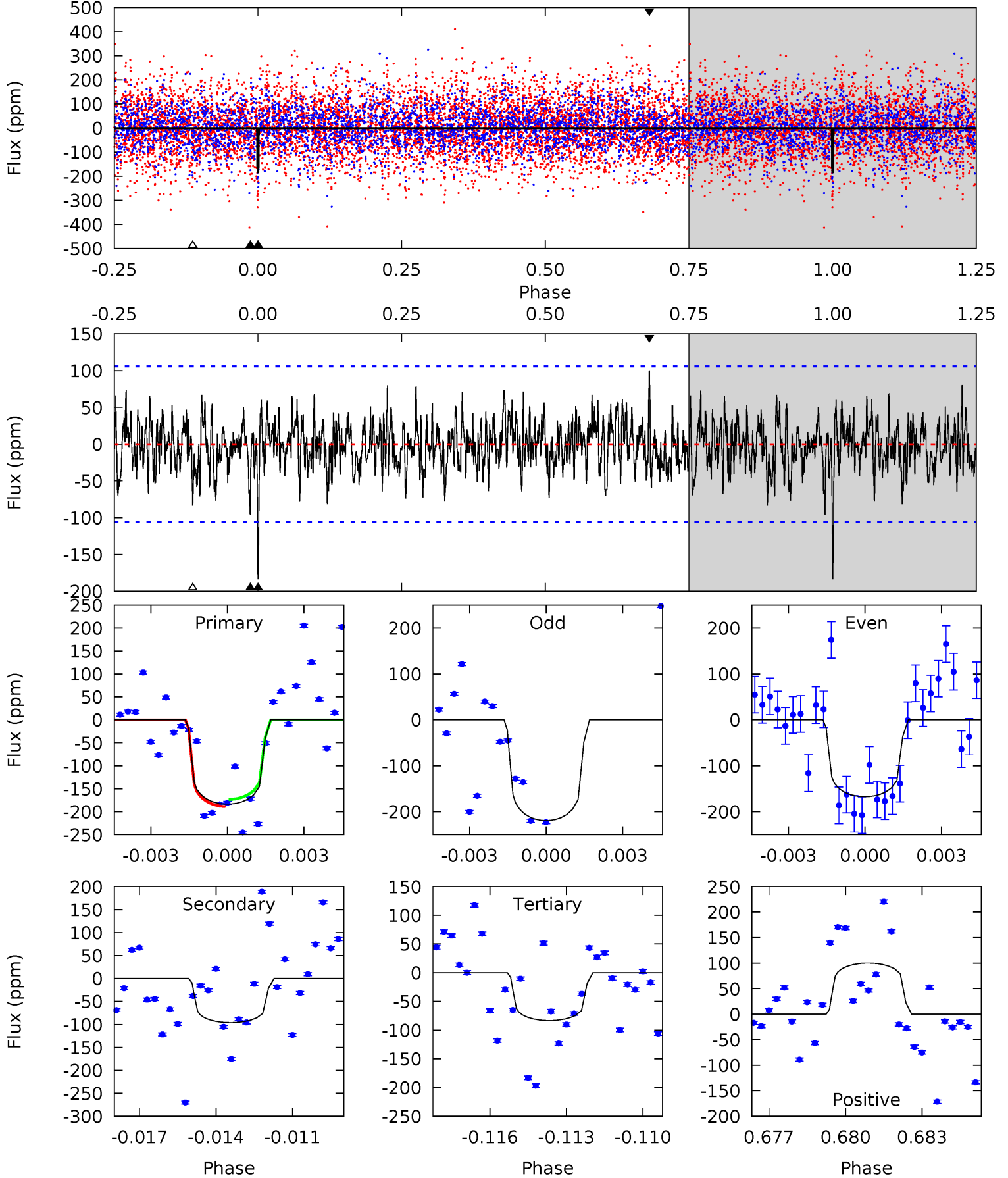
TCE 010657634-04 P= 99.189508 Days $T_0=206.132173$ (BKJD)



DV Model-Shift Uniqueness Test

010657634-04, P = 99.193181 Days, E = 106.918610 Days

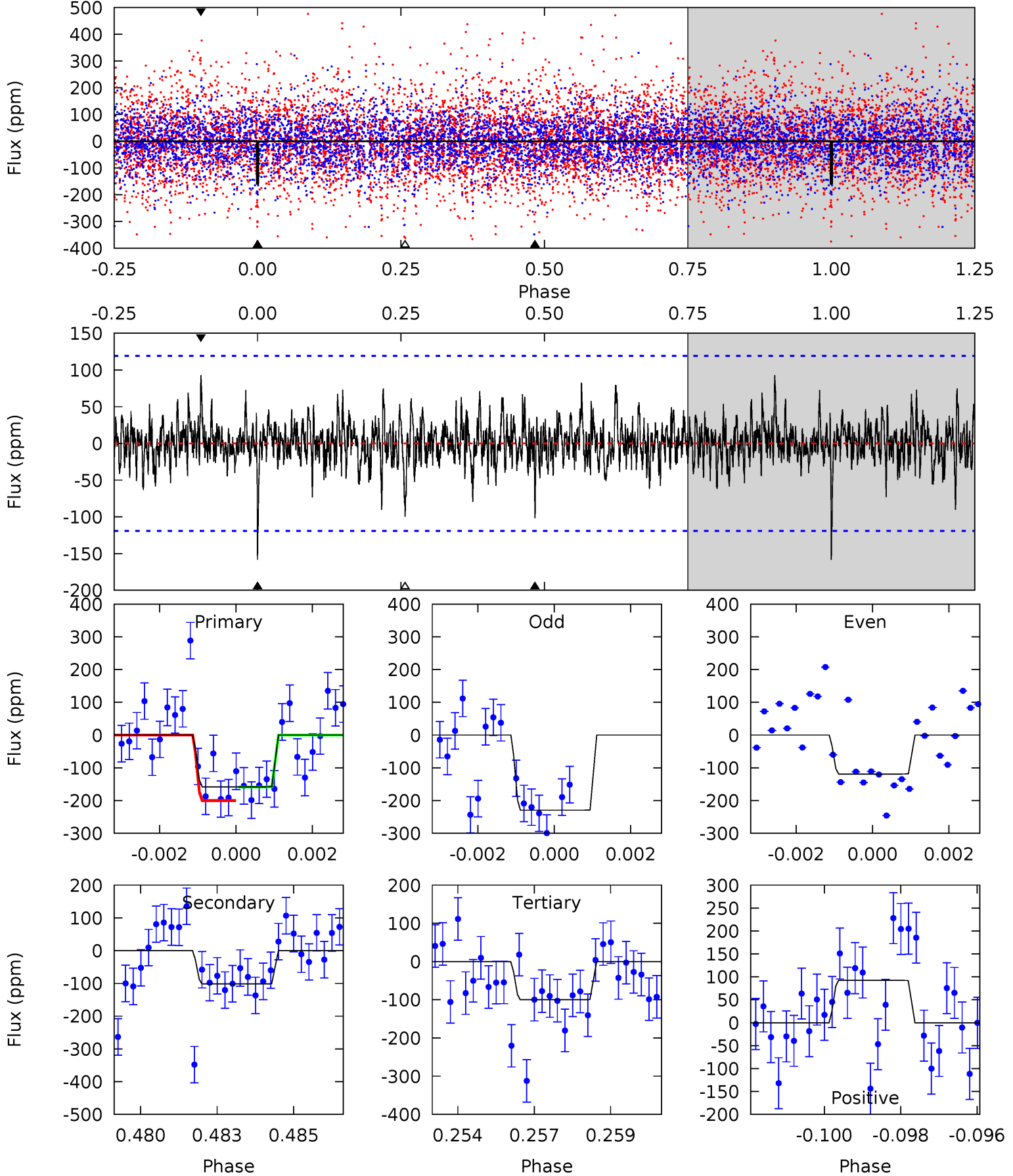
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.14	4.78	4.15	4.99	5.27	2.99	1.41	4.99	4.15	0.63	-0.21	1.23	0.83	0.35	0.36



Alt Model-Shift Uniqueness Test

010657634-04, P = 99.189508 Days, E = 106.942665 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.03	4.52	4.44	4.10	5.30	3.04	1.07	2.60	2.93	0.08	0.41	2.36	0.65	0.37	0.84



Stellar Parameters For KIC 010657634

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6812^{+169}_{-203}	$3.799^{+0.292}_{-0.097}$	$-0.180^{+0.300}_{-0.250}$	$2.662^{+0.493}_{-0.916}$	$1.627^{+0.190}_{-0.353}$	$0.121^{+0.245}_{-0.037}$
	+2%/-3%	+8%/-3%	+167%/-139%	+19%/-34%	+12%/-22%	+202%/-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 010657634-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-96 ± 20	$4.25^{+2.23}_{-2.01}$	957^{+56}_{-82}	5354^{+1796}_{-794}	710^{+1752}_{-407}
Alt.	-102 ± 22	$3.61^{+1.98}_{-1.87}$	956^{+58}_{-89}	5870^{+2650}_{-1029}	1015^{+3475}_{-613}

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

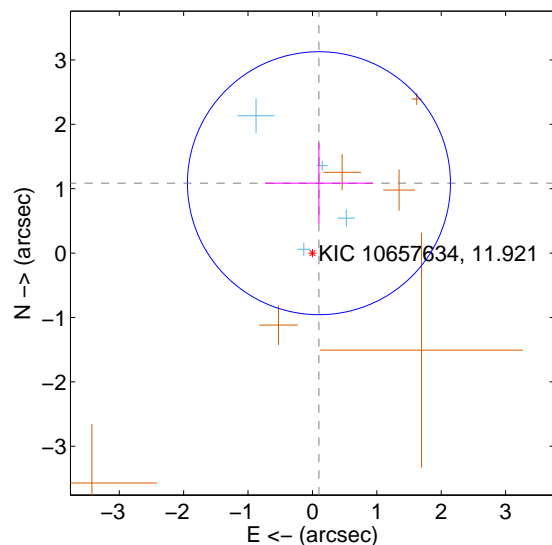
Supplemental centroid analysis for 010657634-04. **Kepler magnitude: 11.92.** Transit SNR 9.95

There are 4 quarters with good PRF difference image offsets

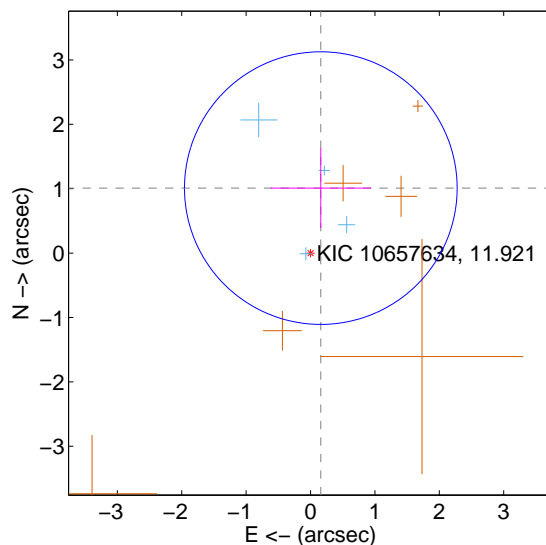
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.090 ± 0.681	1.60	-0.101 ± 0.840	1.085 ± 0.624
PRF-fit source offset from KIC position	1.022 ± 0.706	1.45	-0.160 ± 0.782	1.010 ± 0.620
photometric centroid source offset	0.27 ± 0.30	0.91	-0.08 ± 0.31	-0.26 ± 0.30

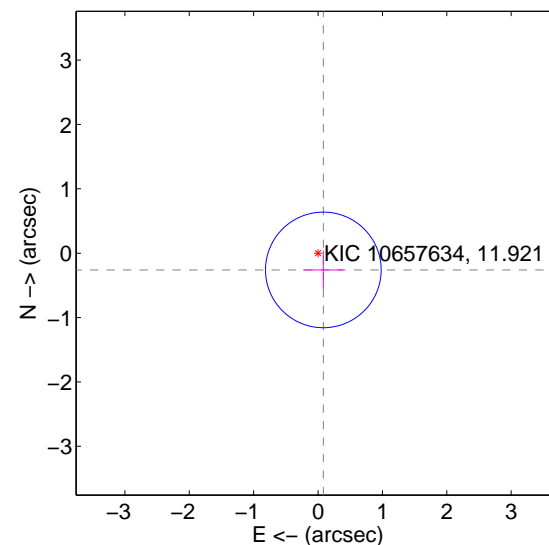
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

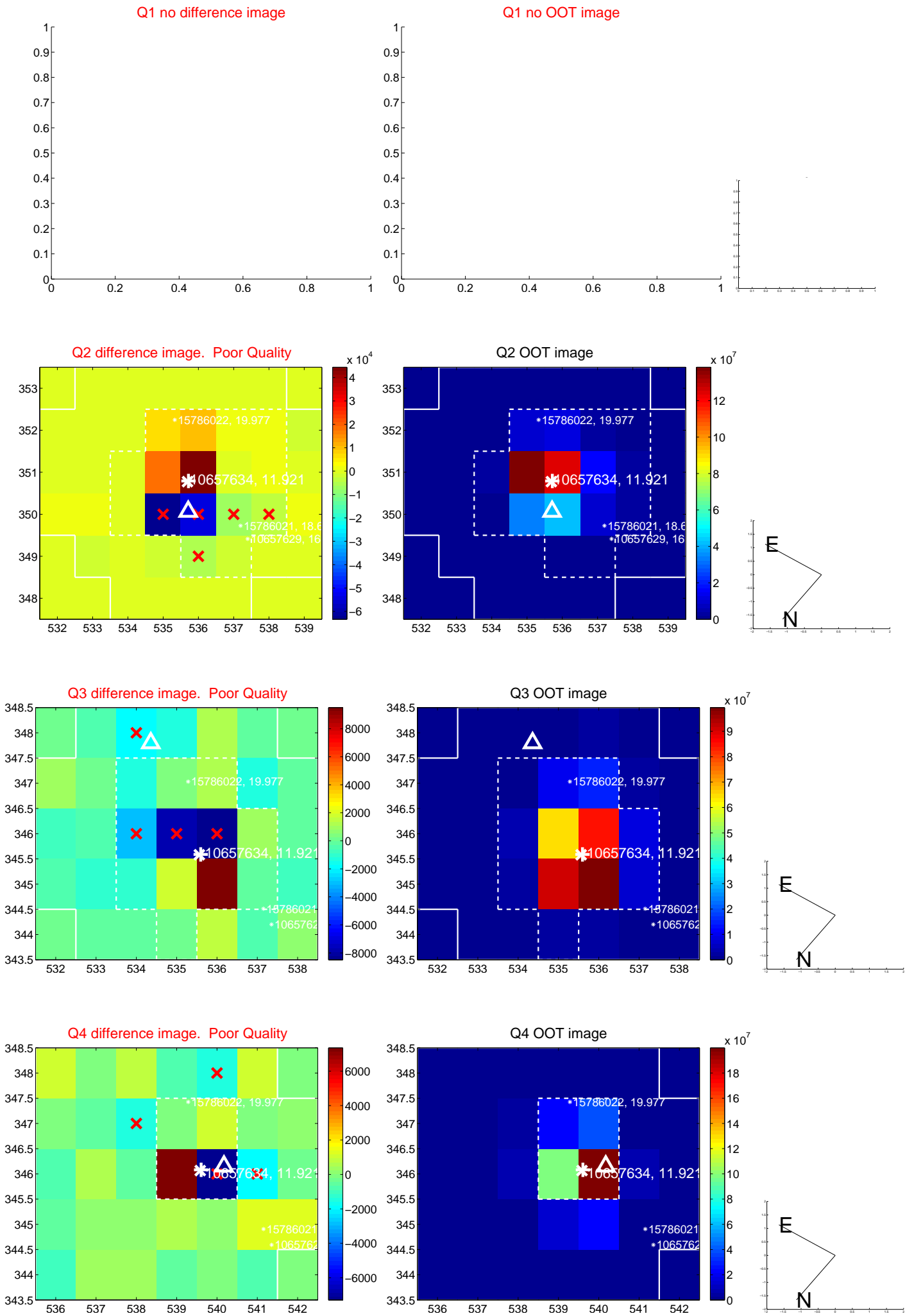


offset from photometric centroids

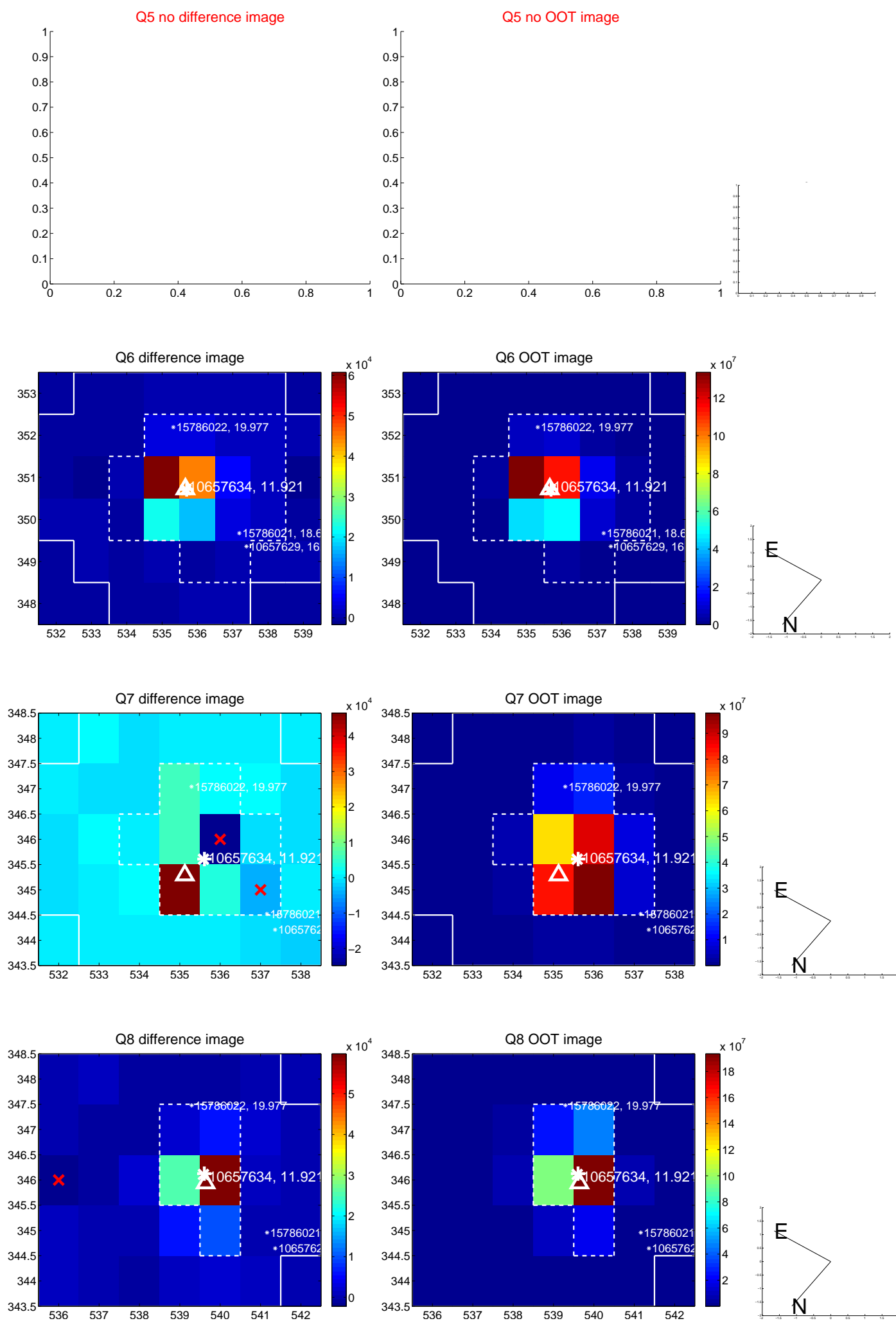


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

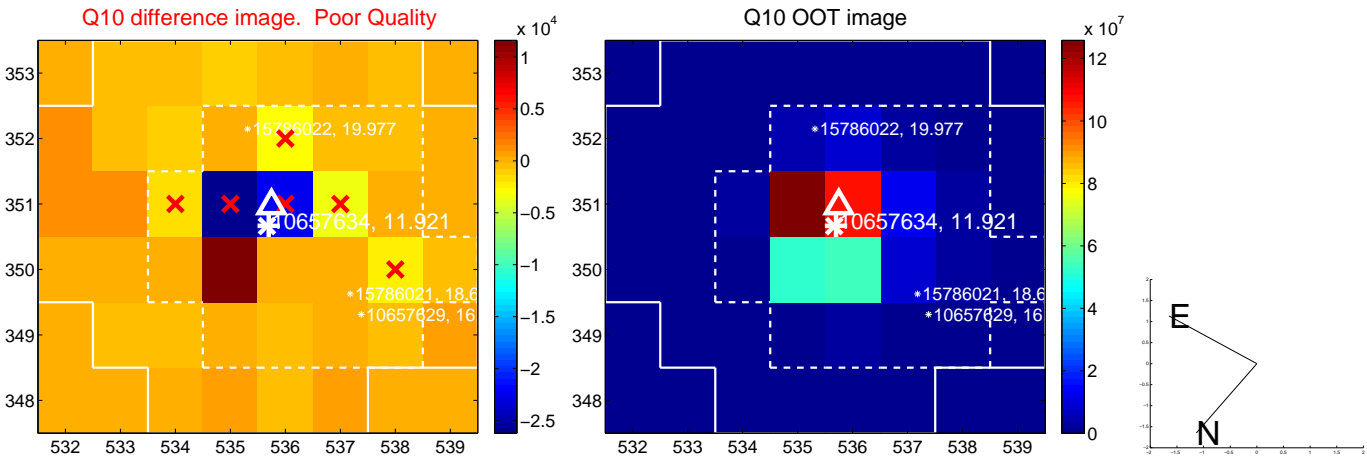
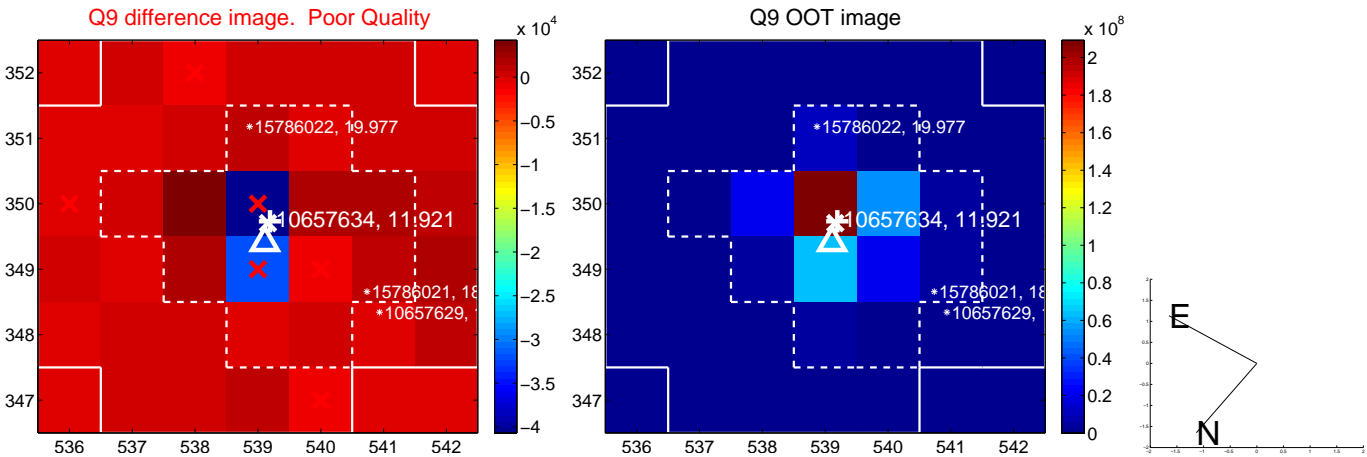
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



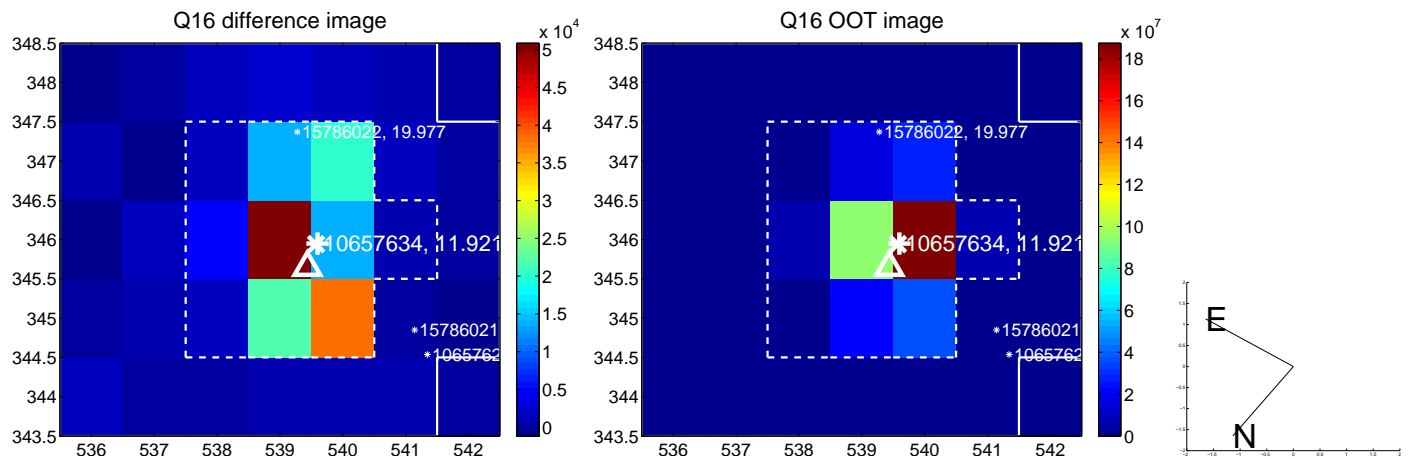
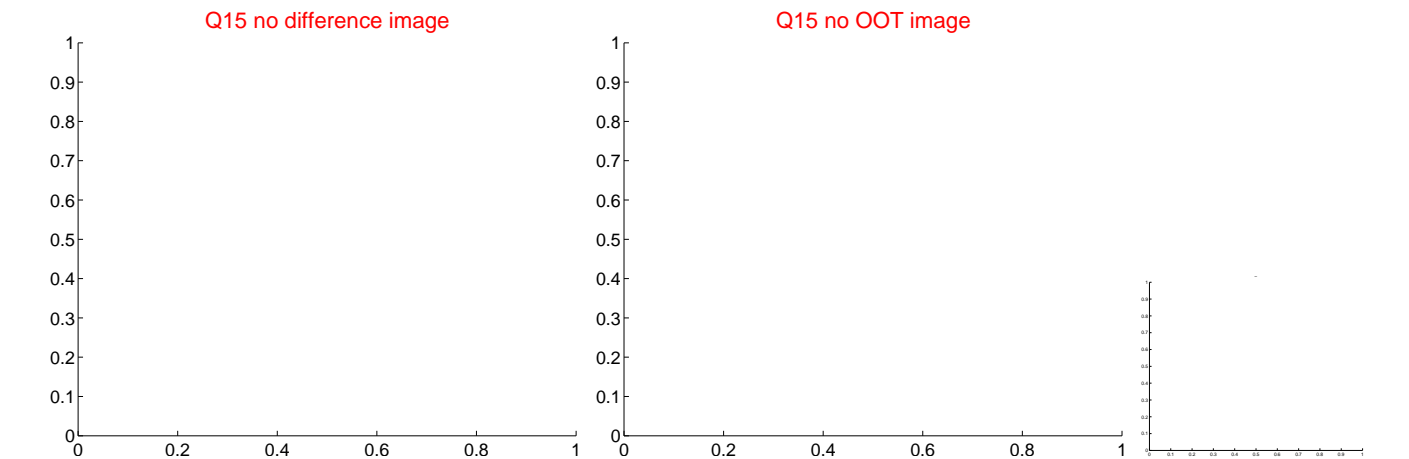
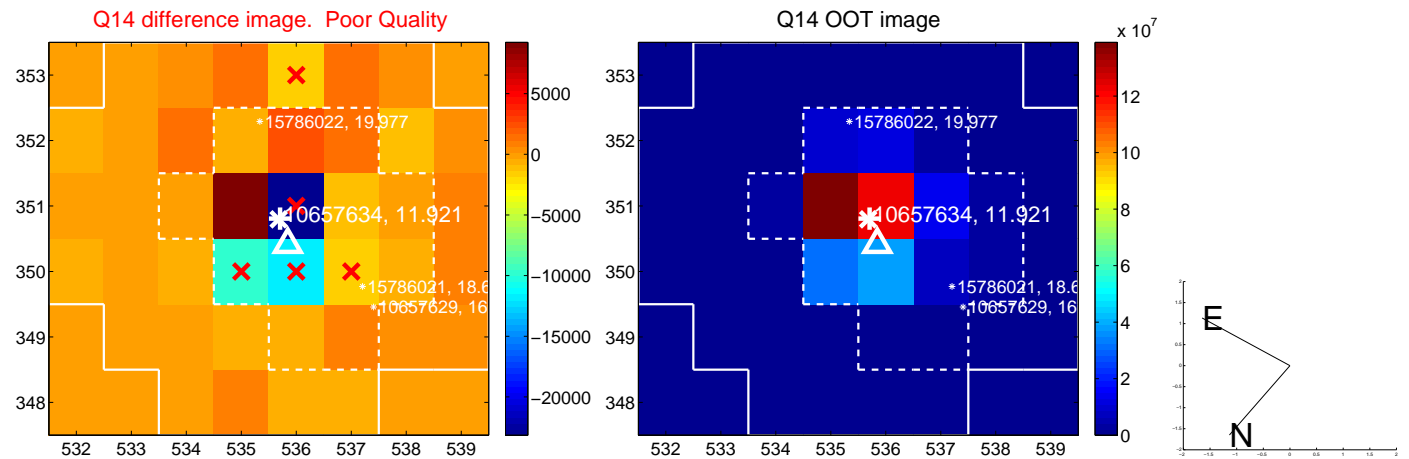
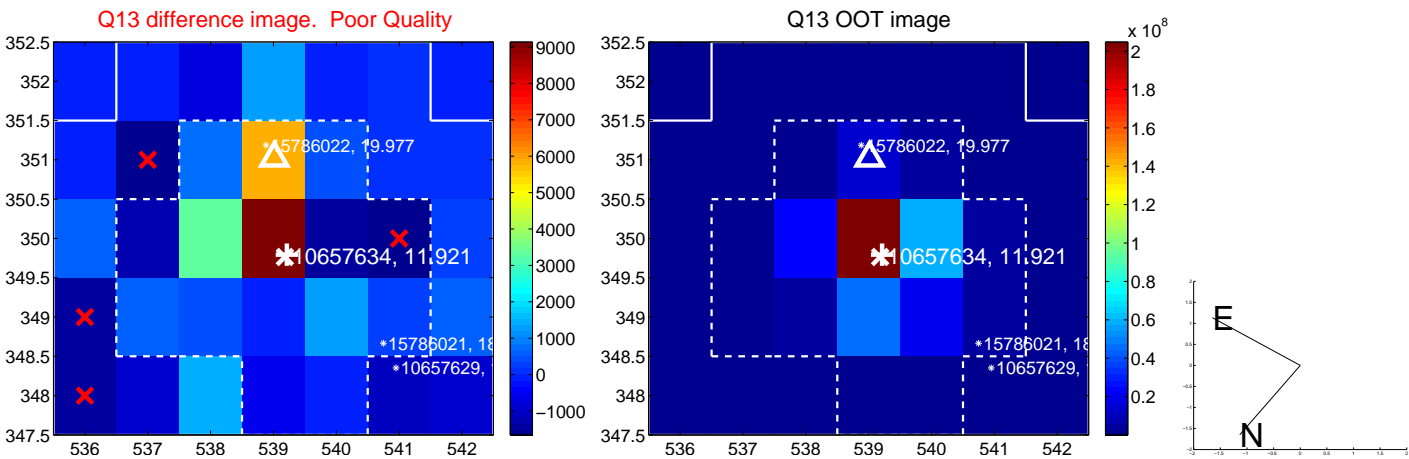
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



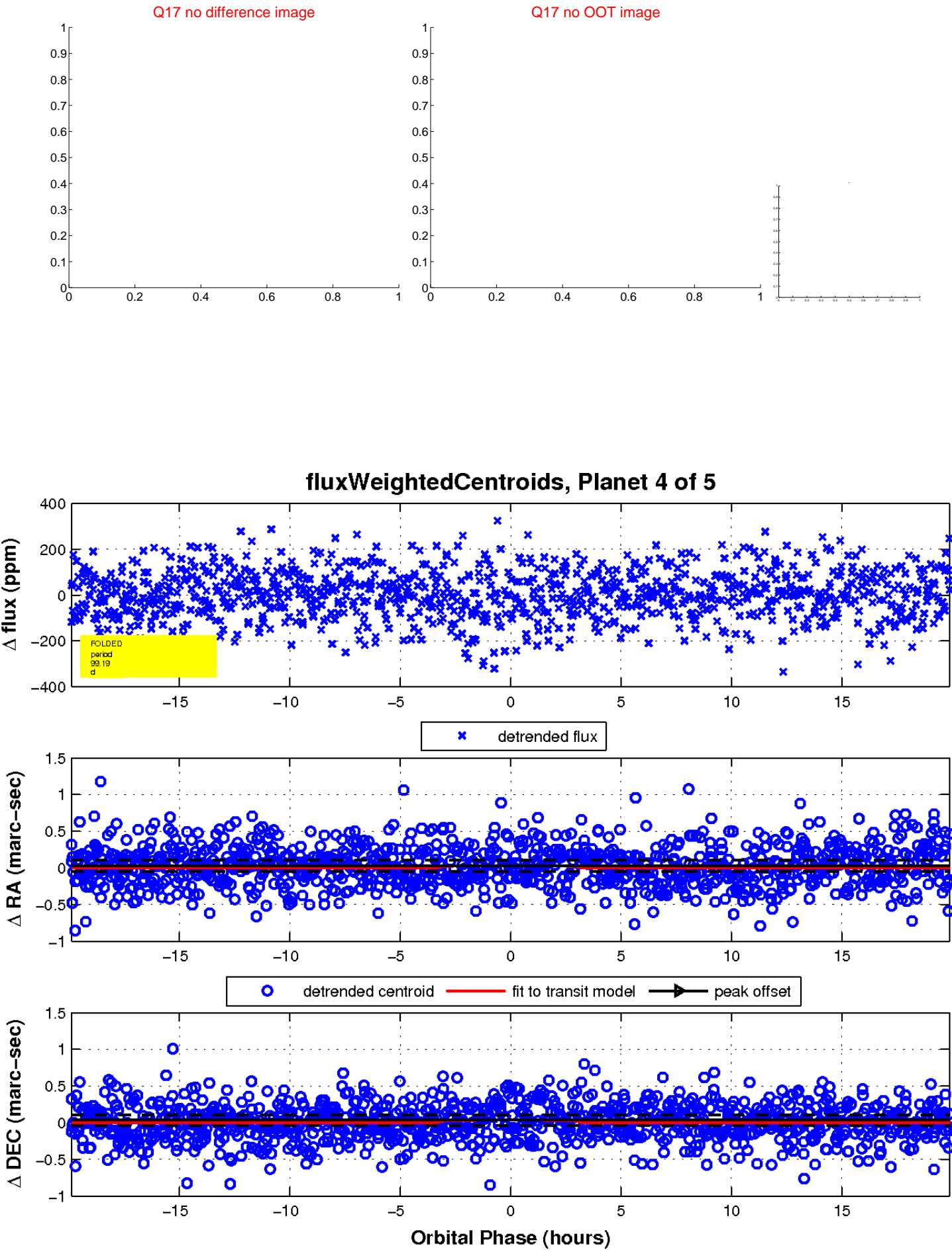
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

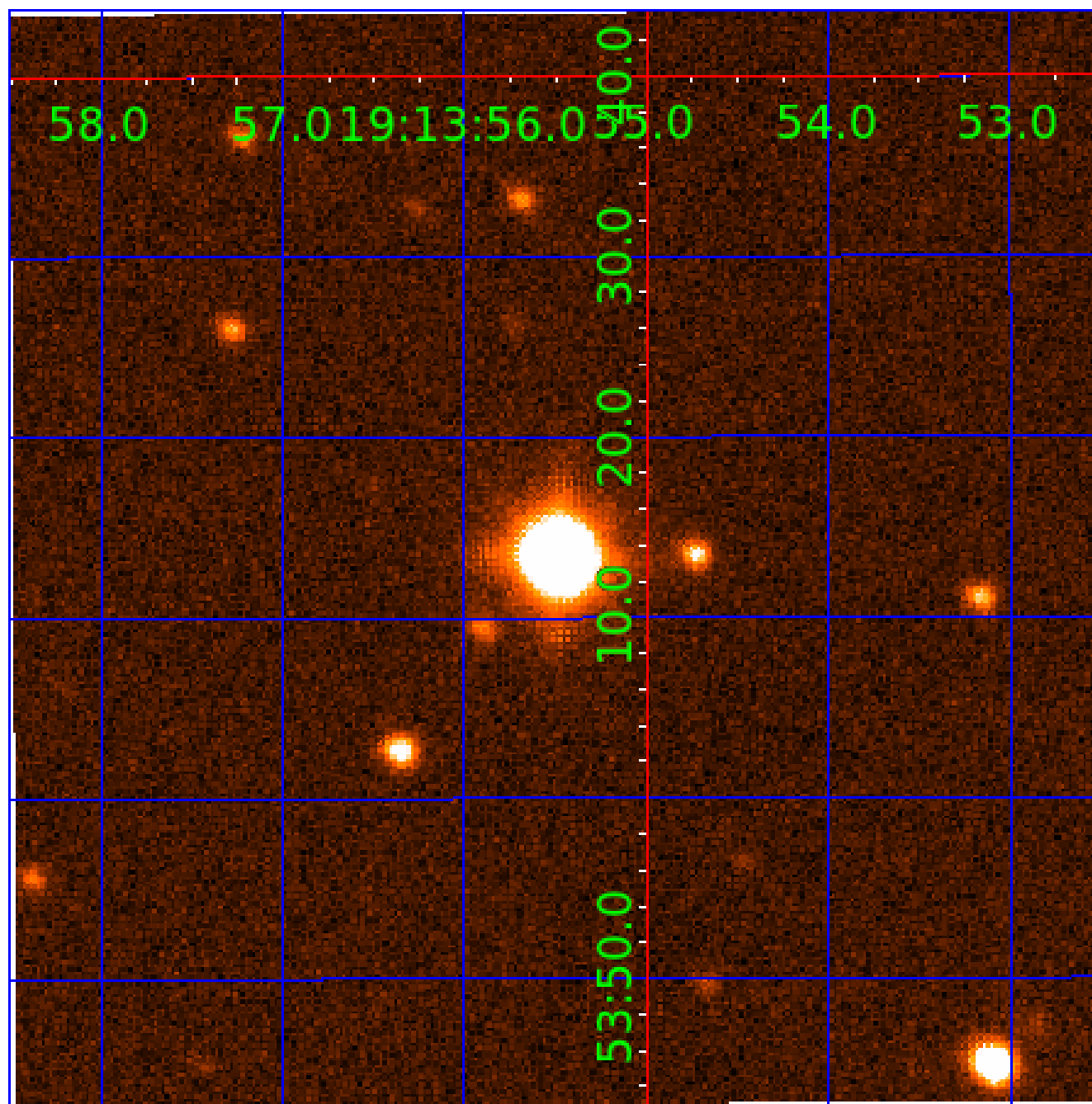


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010657634

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})
010657634-01	OBS	No	1.966433	132.062412	28.3	4.560	11.4	11.7	2.66	6812	1.90	10468.70
010657634-02	OBS	No	0.983072	131.832164	12.5	1.056	8.7	5.2	2.66	6812	0.95	26384.65
010657634-03	OBS	No	0.983001	132.499302	16.2	4.348	9.8	9.7	2.66	6812	1.33	26387.17
010657634-04	OBS	No	99.193181	206.111791	231.4	6.633	9.1	10.0	2.66	6812	4.55	56.17
010657634-05	OBS	No	39.489391	158.936712	121.5	3.971	7.8	6.1	2.66	6812	3.41	191.79

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010657634-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
010657634-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—SAME_NTL_PERIOD
010657634-03	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
010657634-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
010657634-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_UNRESOLVED_OFFSET

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

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

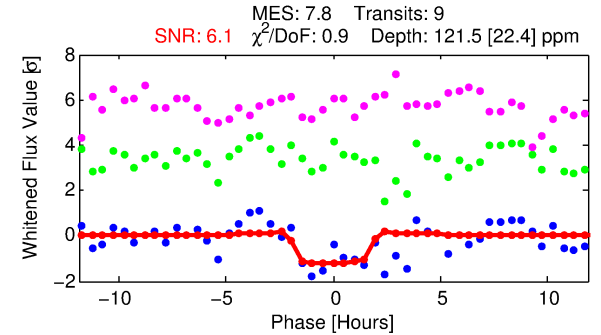
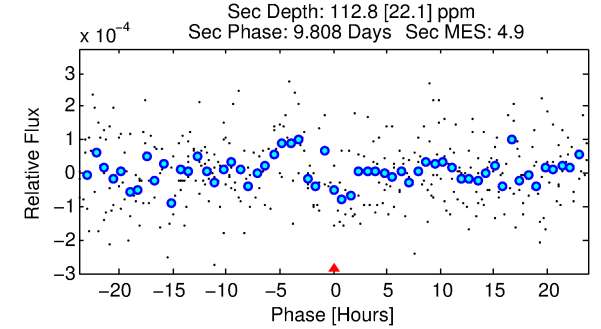
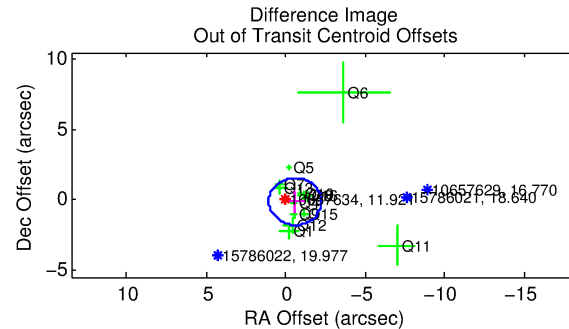
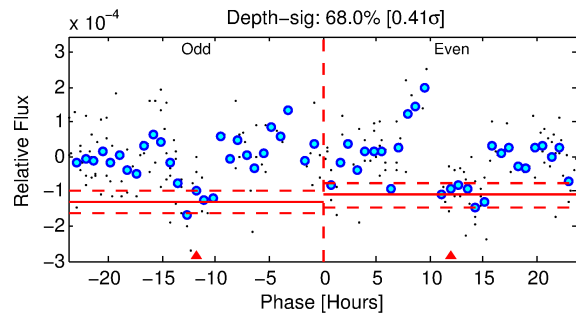
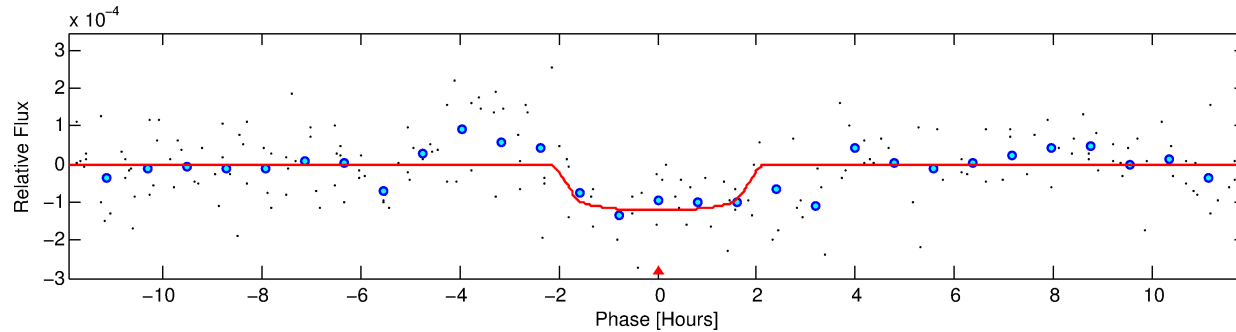
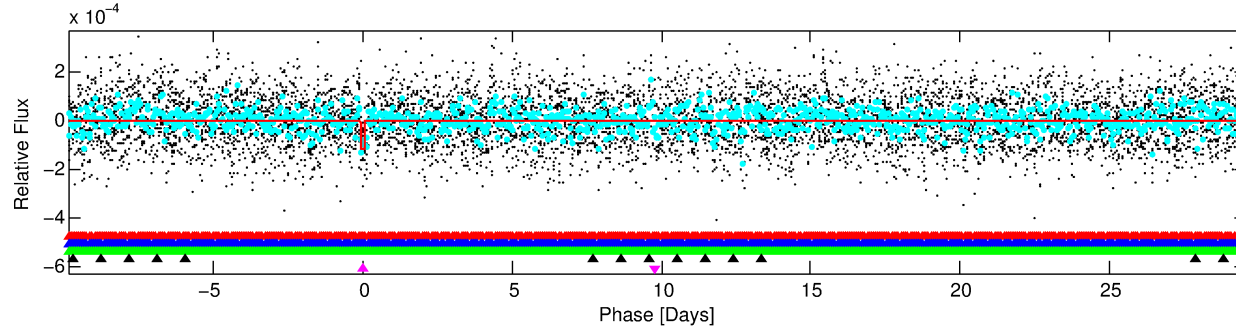
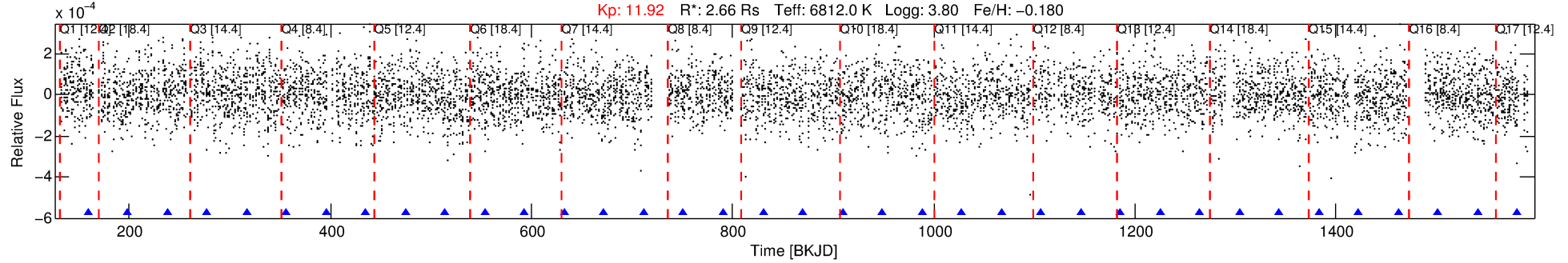
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010657634-05

No Significant Match Found

DV One-Page Summary

KIC: 10657634 Candidate: 5 of 5 Period: 39.489 d



DV Fit Results:

Period = 39.48939 [0.00066] d
Epoch = 158.9367 [0.0155] BKJD
Rp/R* = 0.0117 [0.0073]
a/R* = 35.26 [130.15]
b = 0.90 [0.80]
Seff = 191.79 [99.24]
Teq = 949 [123] K
Rp = 3.41 [2.43] Re
a = 0.2670 [0.0856] AU
Ag = 379.73 [516.49] [0.73 σ]
Teffp = 6476 [2055] K [2.69 σ]

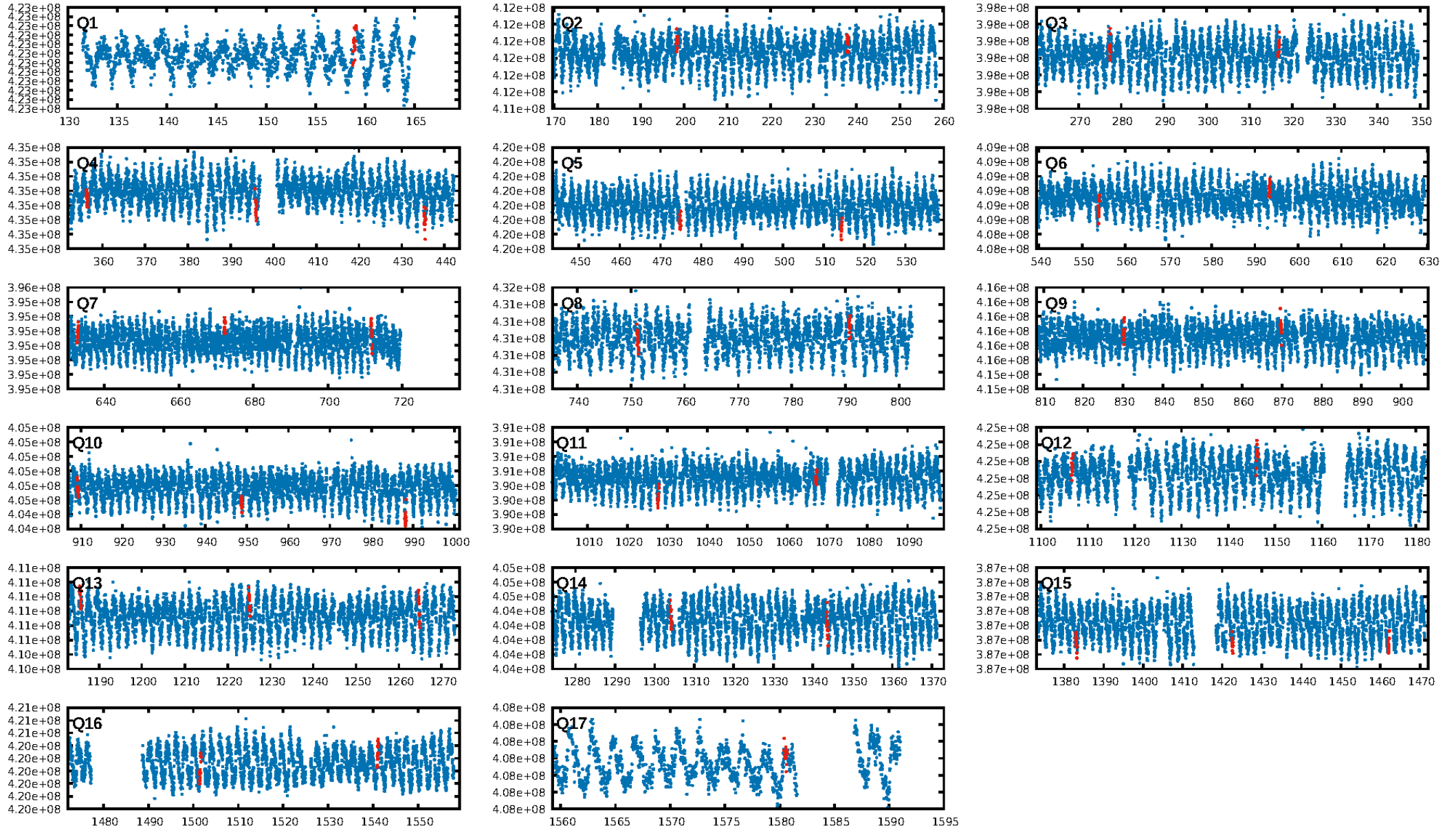
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [148.93 σ]
LongPeriod-sig: 100.0% [185.35 σ]
ModelChiSquare2-sig: 93.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 9.77e-11
RollingBand-fgt: 1.00 [9/9]
GhostDiagnostic-chr: -0.3792
Centroid-sig: 27.5%
Centroid-so: 0.473 arcsec [1.08 σ]
OotOffset-rm: 0.599 arcsec [1.08 σ]
OotOffset-st: 2/3/4/4 [13]
KicOffset-rm: 0.687 arcsec [1.38 σ]
KicOffset-st: 2/3/4/4 [13]
DiffImageQuality-fgm: 0.38 [5/13]
DiffImageOverlap-fno: 0.00 [0/17]

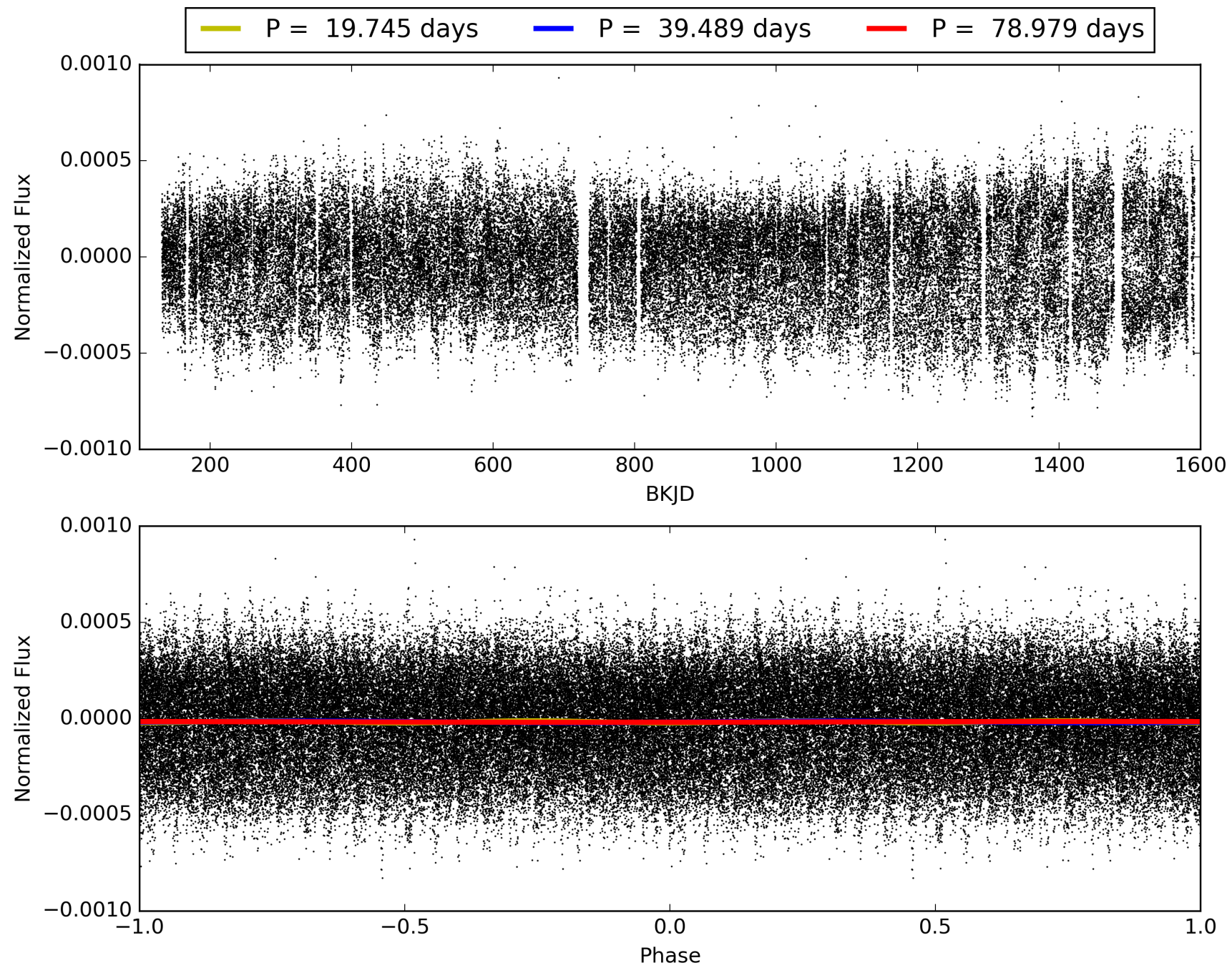
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 02:41:28 Z

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

TCE 010657634-05, PDC Light Curves

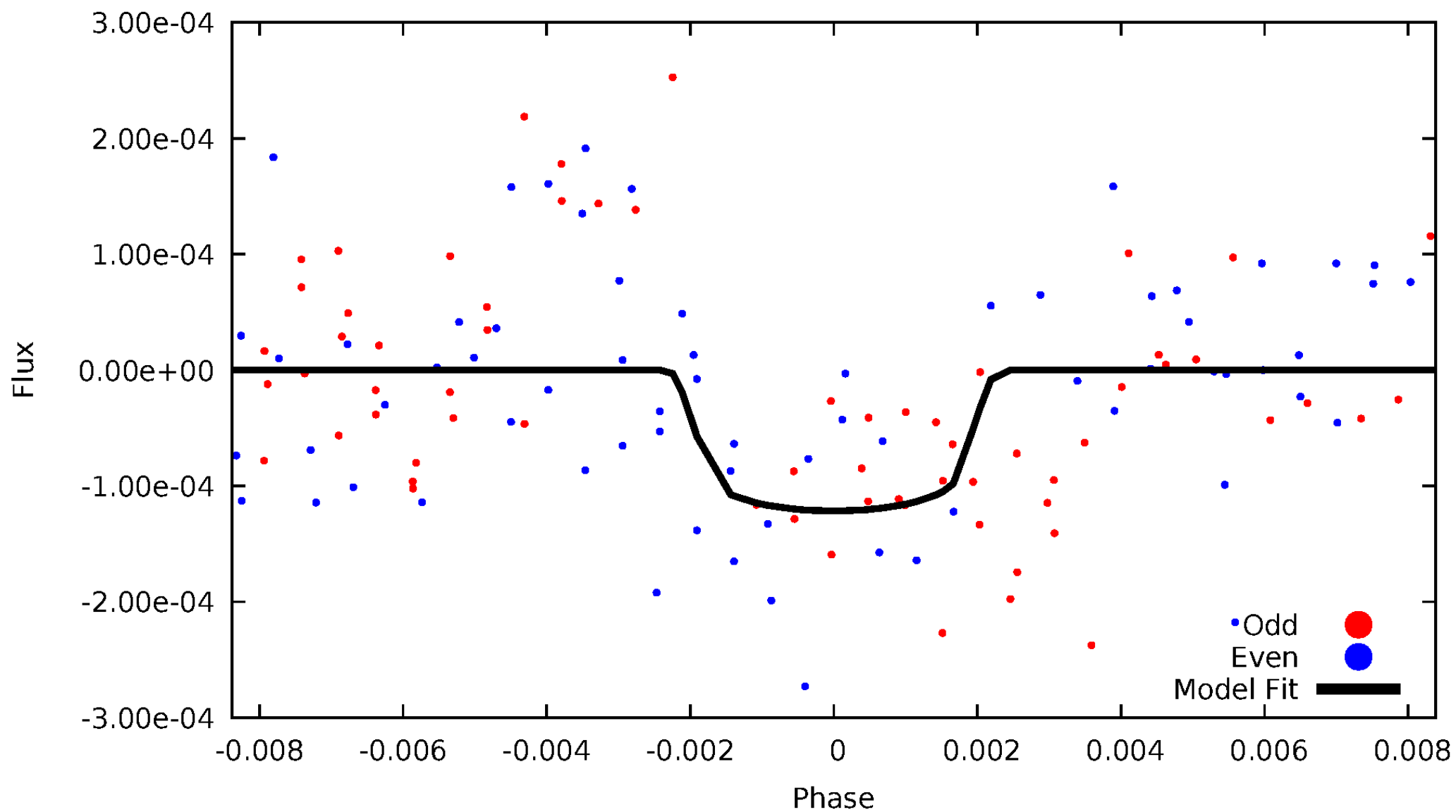


TCE 010657634-05



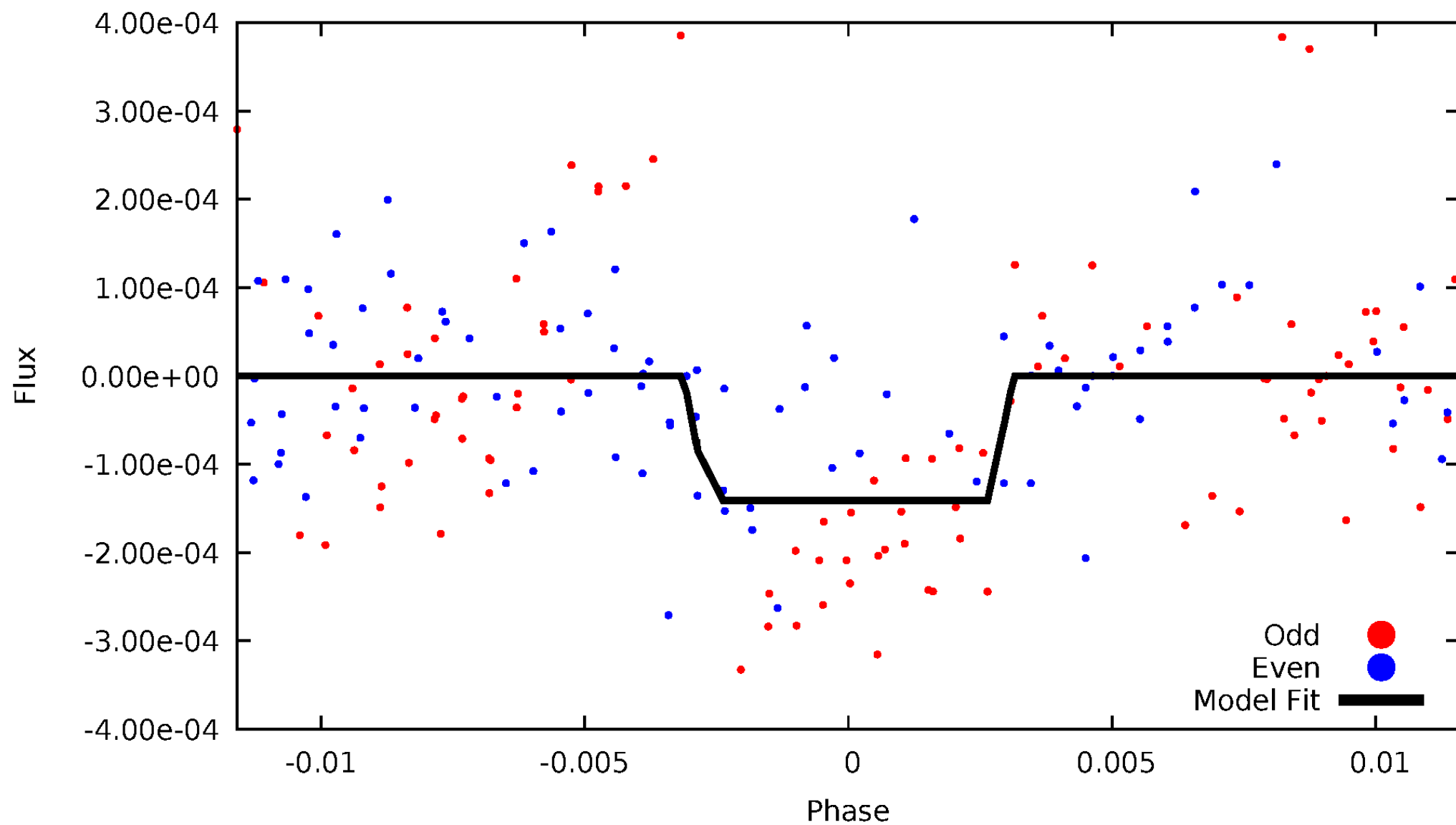
DV Odd/Even

TCE 010657634-05



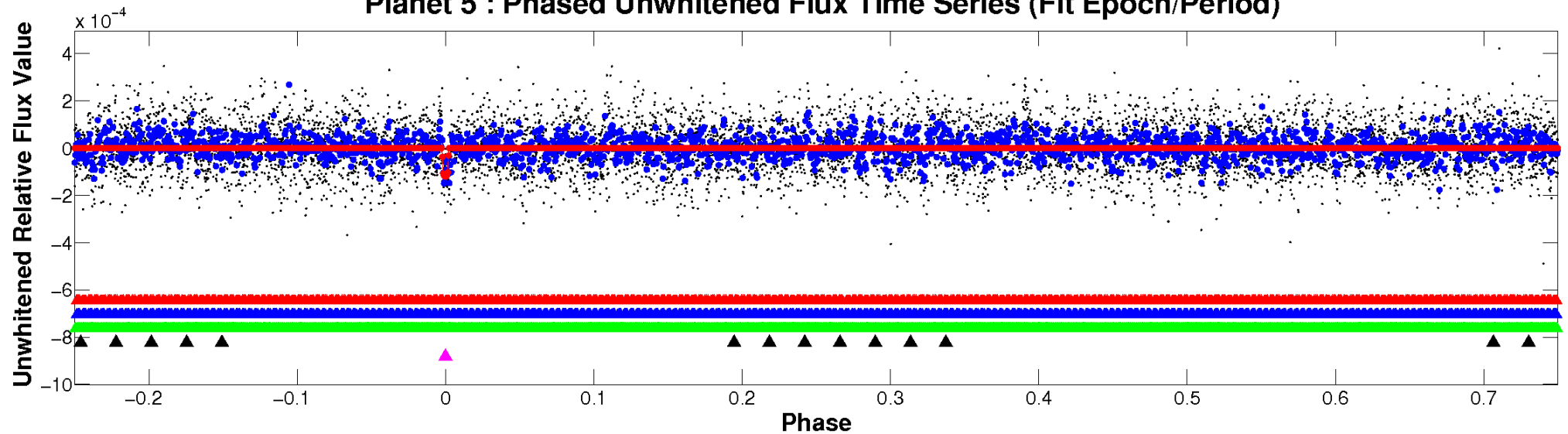
ALT Odd/Even

TCE 010657634-05

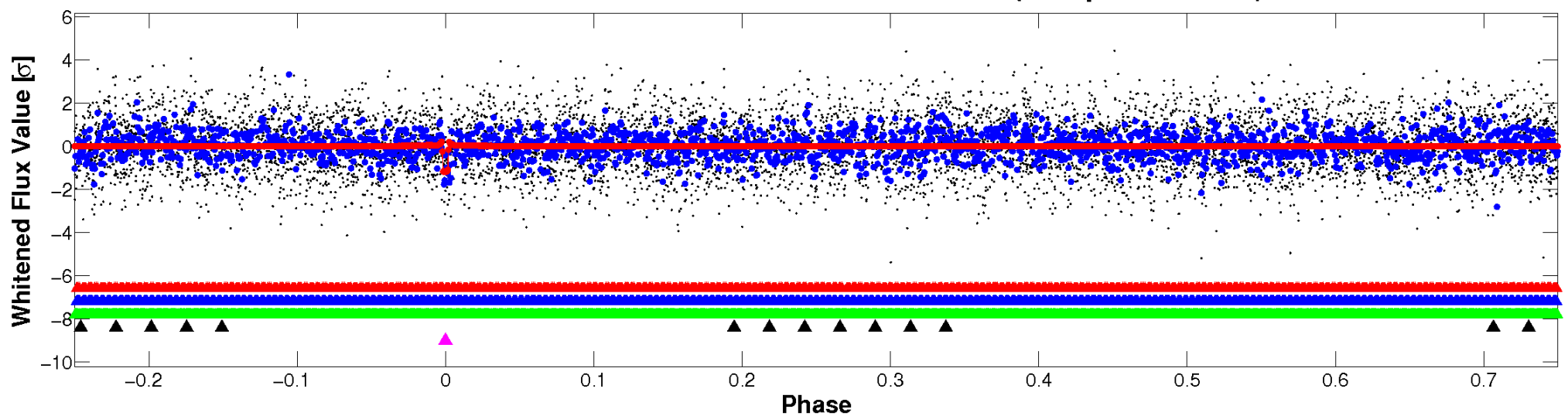


Non-Whitened Vs. Whitened Light Curve

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

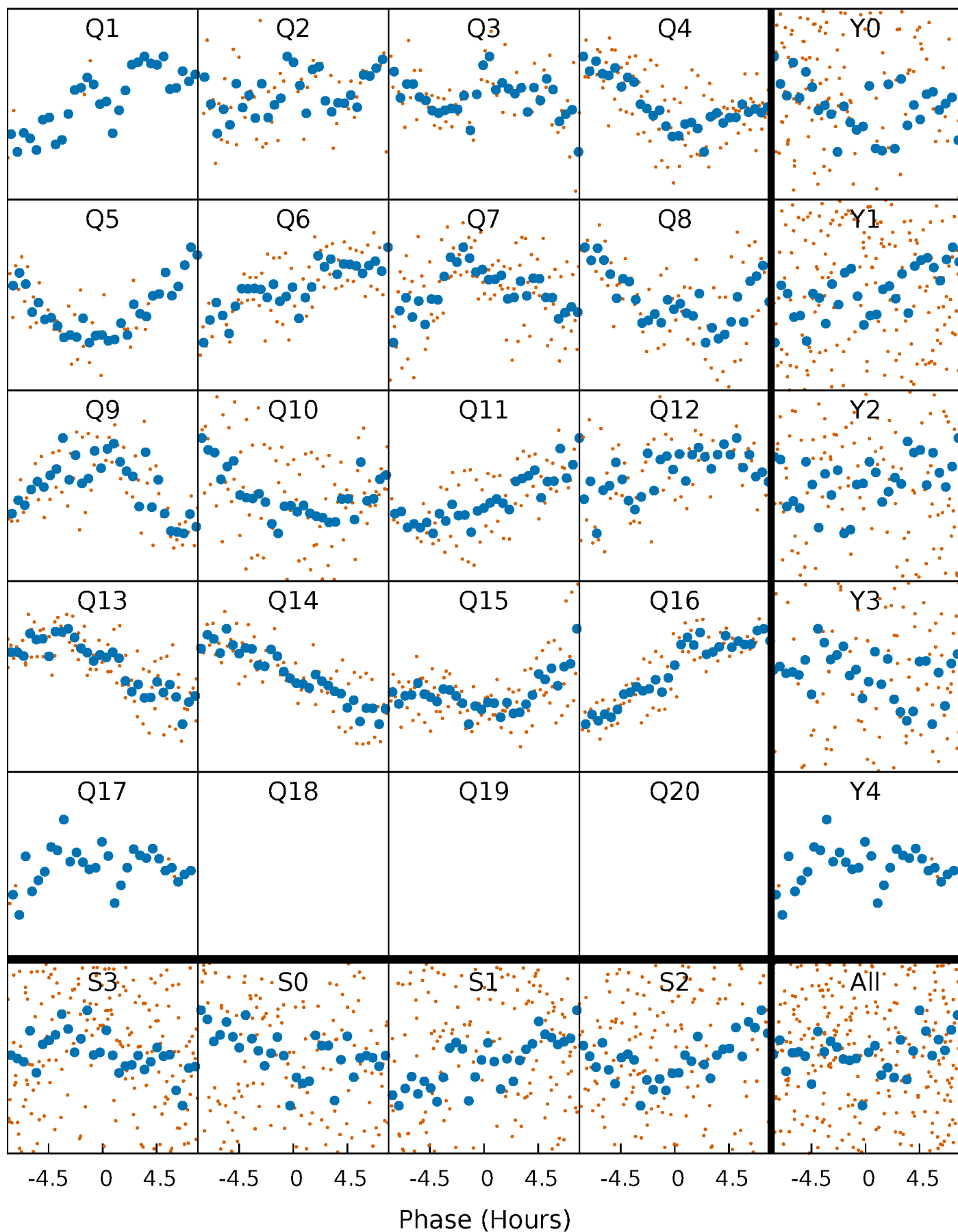


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



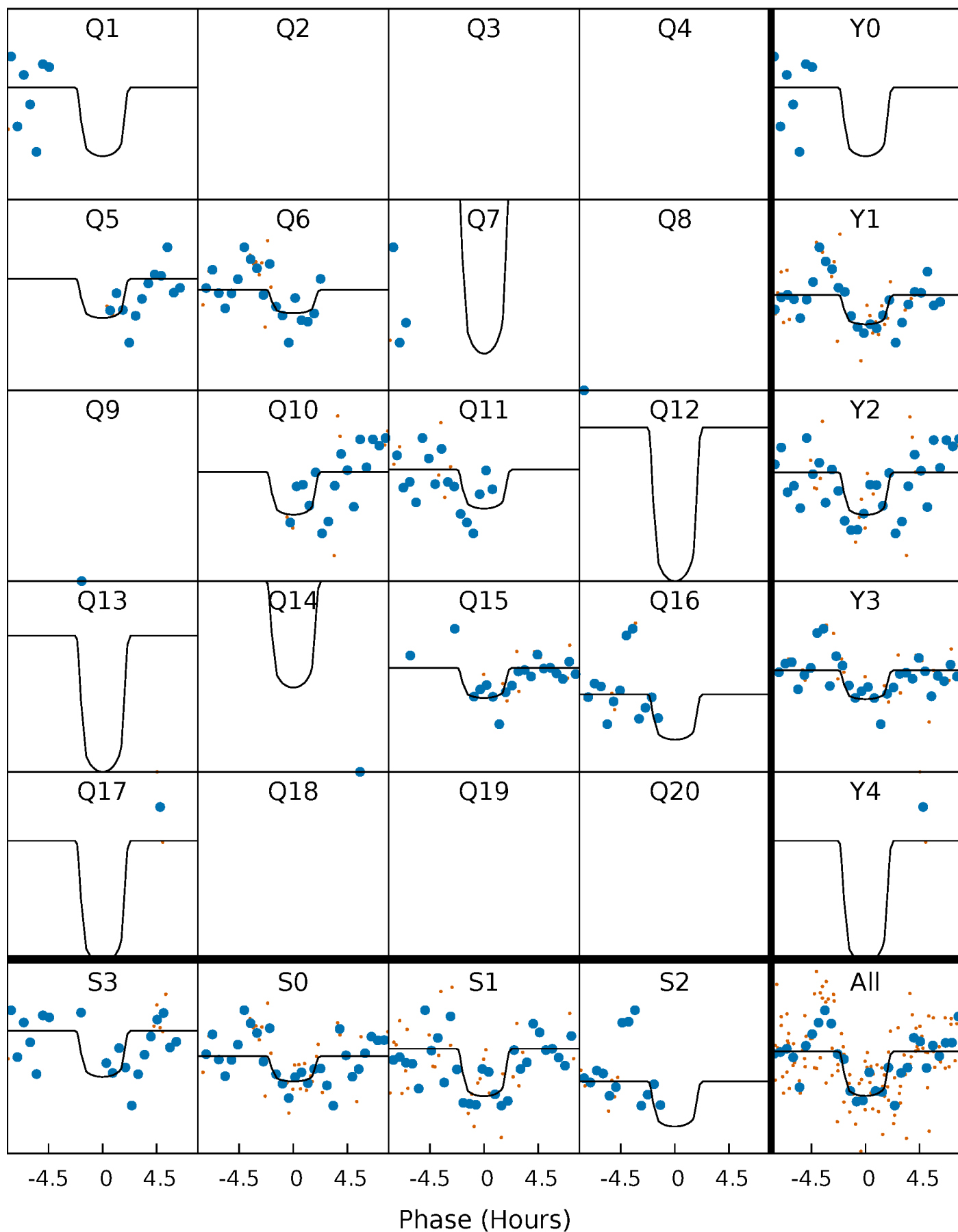
PDC Quarter-Phased Transit Curves

TCE 010657634-05 $P = 39.489391$ Days $T_0 = 158.936712$ (BKJD)



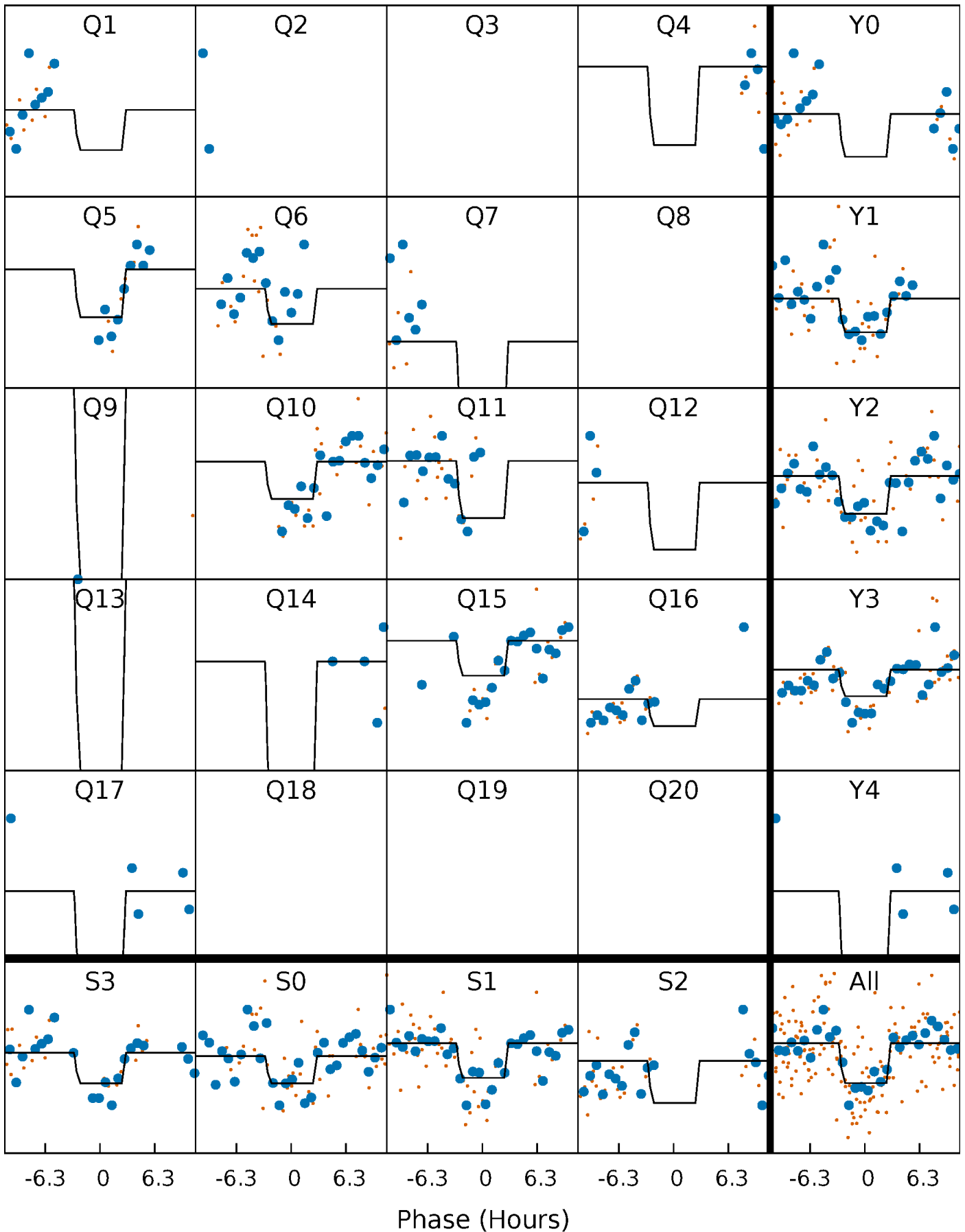
DV Quarter-Phased Transit Curves

TCE 010657634-05 $P = 39.489391$ Days $T_0 = 158.936712$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

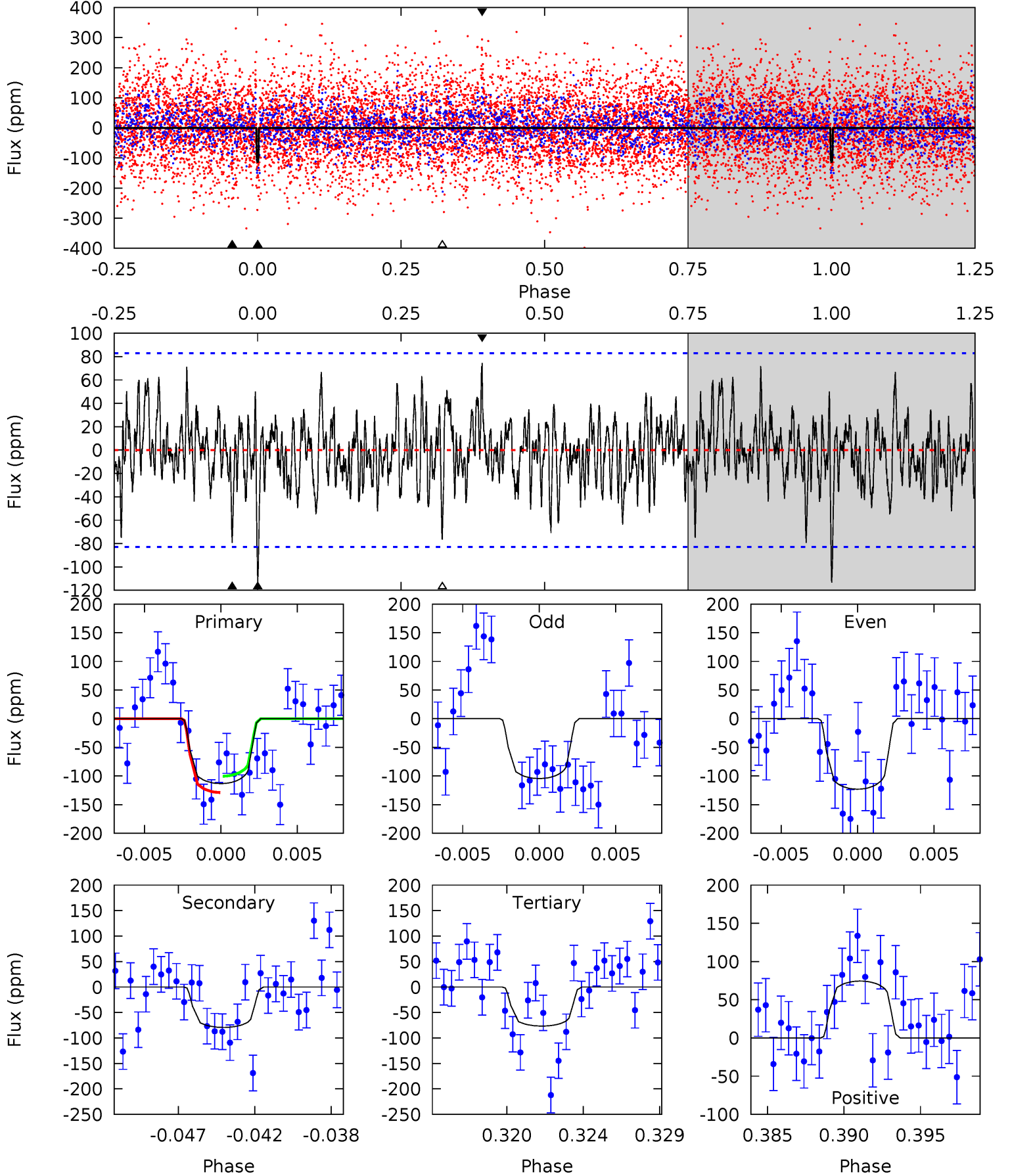
TCE 010657634-05 P= 39.489430 Days $T_0=158.973397$ (BKJD)



DV Model-Shift Uniqueness Test

010657634-05, P = 39.489391 Days, E = 119.447321 Days

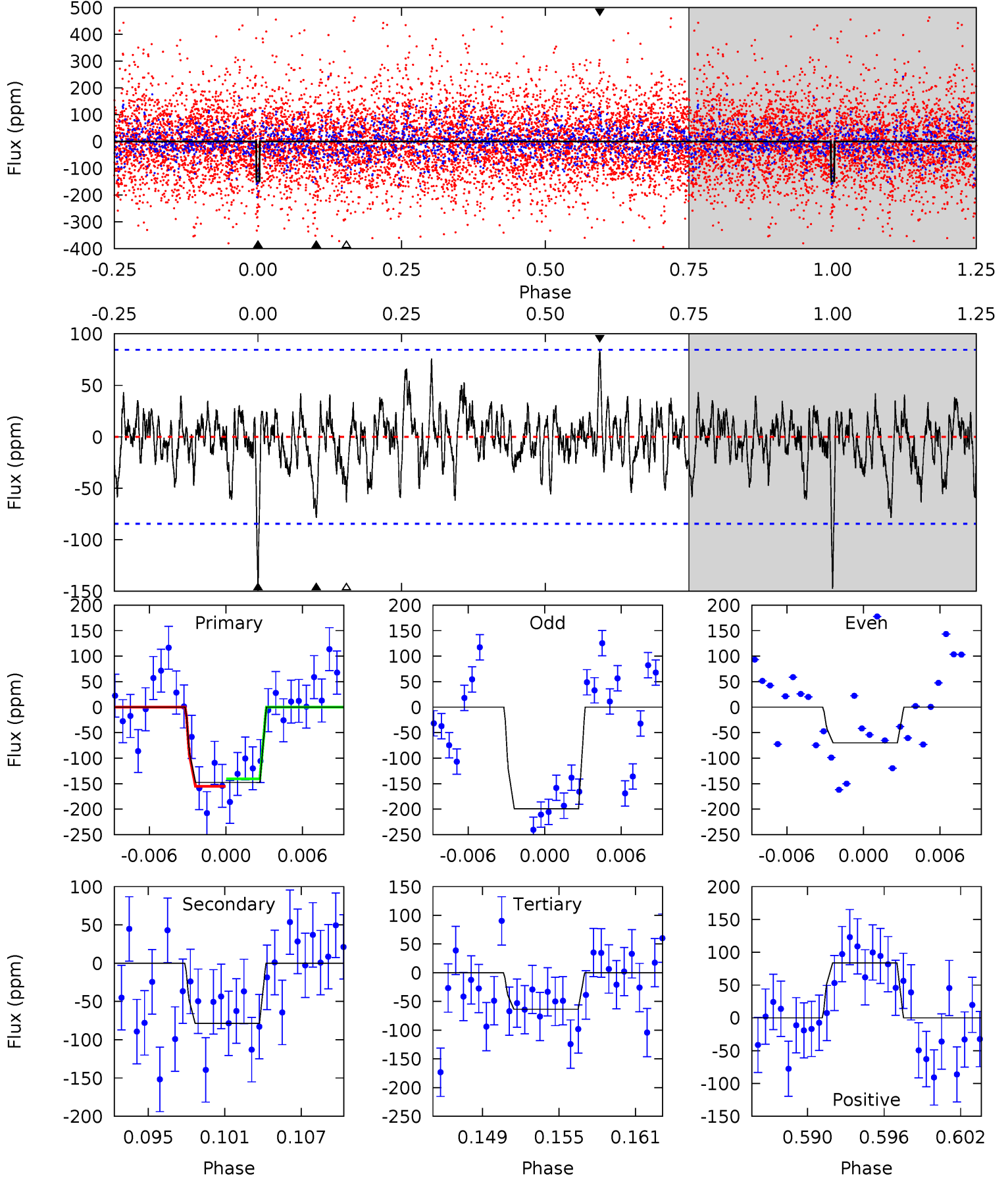
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.06	4.94	4.78	4.64	5.17	2.83	1.45	2.28	2.42	0.16	0.30	0.58	1.01	0.40	0.88



Alt Model-Shift Uniqueness Test

010657634-05, P = 39.489430 Days, E = 119.483967 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.95	4.77	3.86	5.09	5.12	2.75	1.31	5.09	3.86	0.91	-0.31	3.75	1.12	0.36	0.45



Stellar Parameters For KIC 010657634

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6812^{+169}_{-203}	$3.799^{+0.292}_{-0.097}$	$-0.180^{+0.300}_{-0.250}$	$2.662^{+0.493}_{-0.916}$	$1.627^{+0.190}_{-0.353}$	$0.121^{+0.245}_{-0.037}$
	+2%/-3%	+8%/-3%	+167%/-139%	+19%/-34%	+12%/-22%	+202%/-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 010657634-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-79 ± 16	$3.14^{+2.06}_{-1.64}$	1298^{+80}_{-104}	5874^{+3242}_{-1113}	296^{+1067}_{-185}
Alt.	-79 ± 16	$3.36^{+2.08}_{-1.82}$	1300^{+78}_{-105}	5727^{+2975}_{-1037}	279^{+984}_{-180}

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

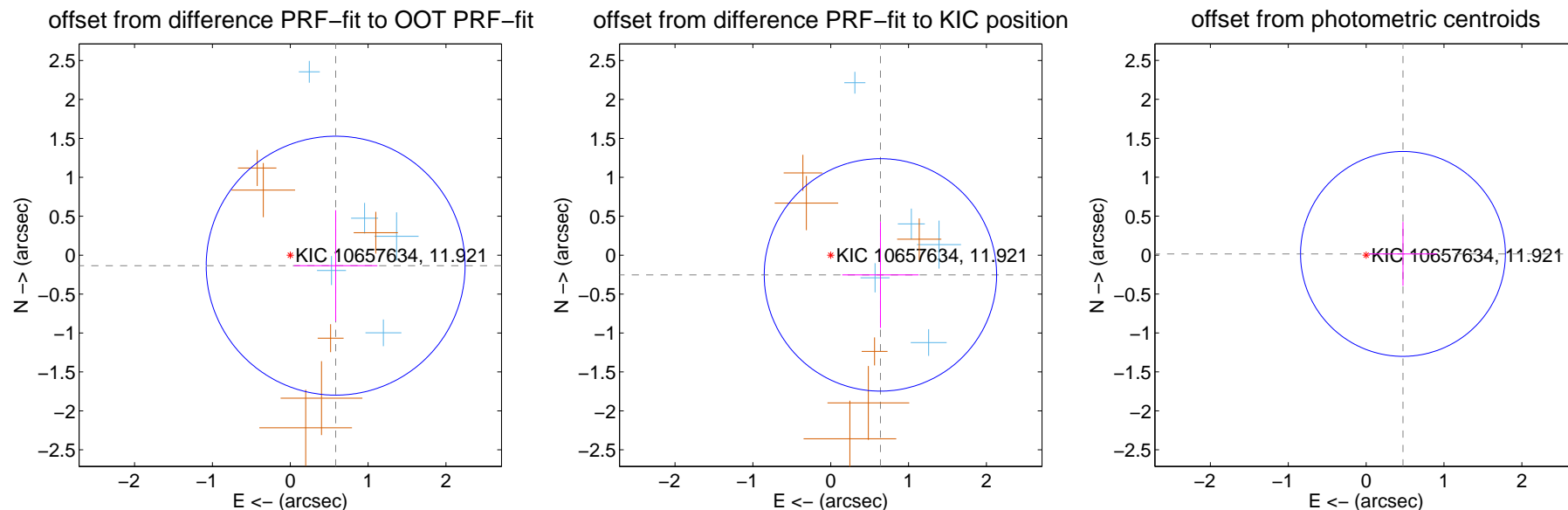
DV Centroid Data

Supplemental centroid analysis for 010657634-05. **Kepler magnitude: 11.92.** Transit SNR 6.12

There are 5 quarters with good PRF difference image offsets

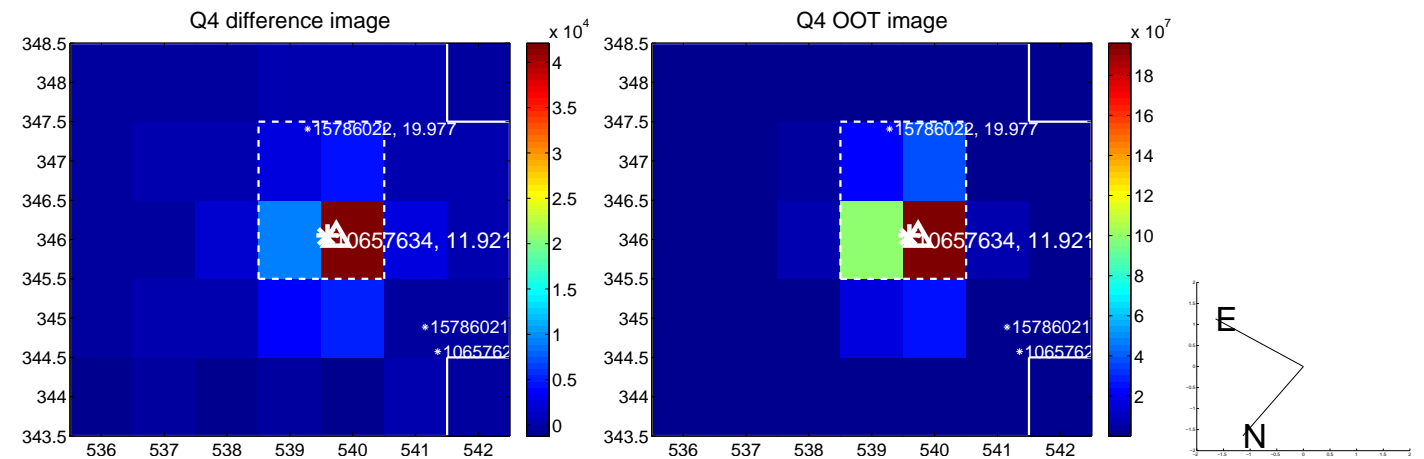
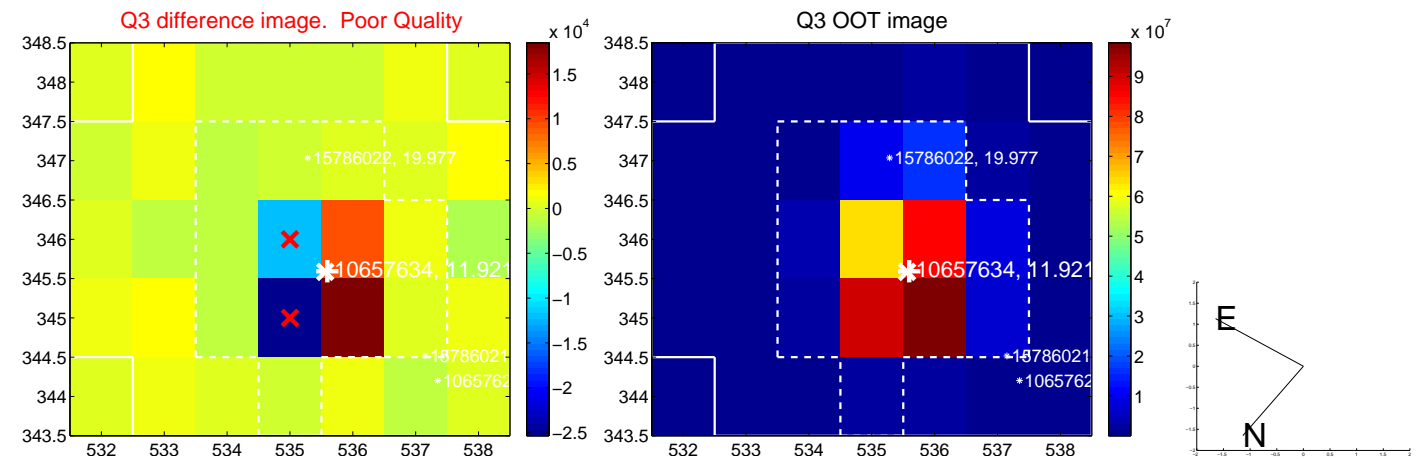
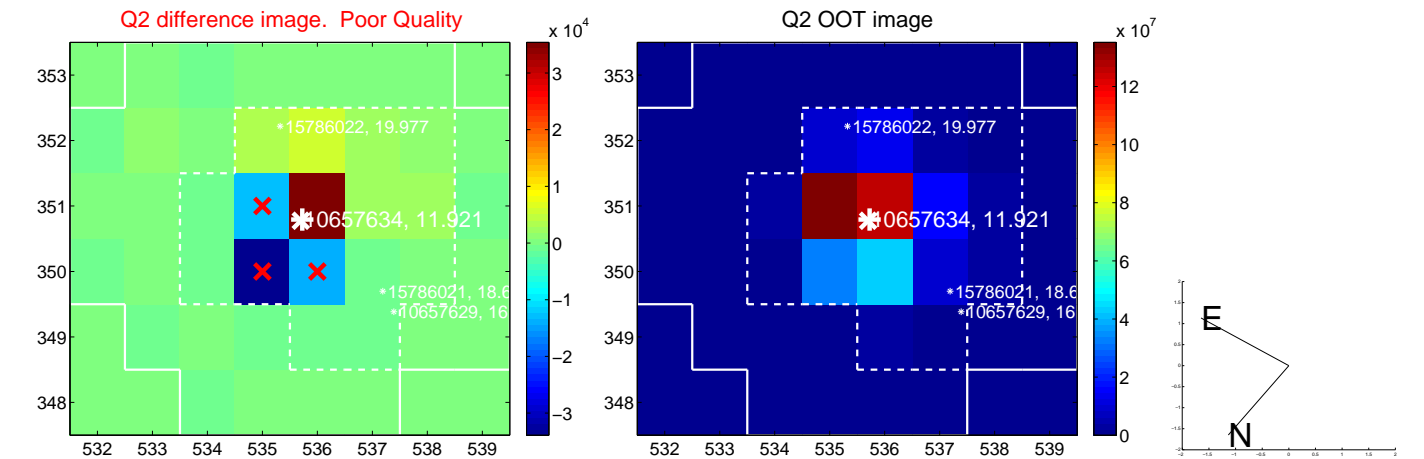
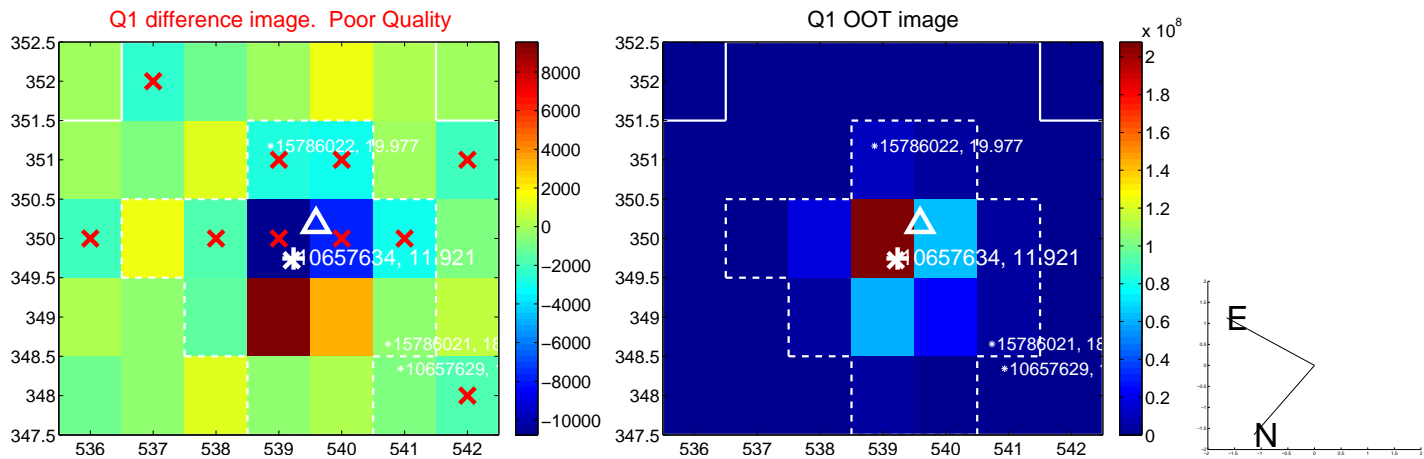
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.599 ± 0.554	1.08	-0.583 ± 0.537	-0.135 ± 0.713
PRF-fit source offset from KIC position	0.687 ± 0.498	1.38	-0.639 ± 0.491	-0.254 ± 0.681
photometric centroid source offset	0.47 ± 0.44	1.08	-0.47 ± 0.44	0.02 ± 0.41

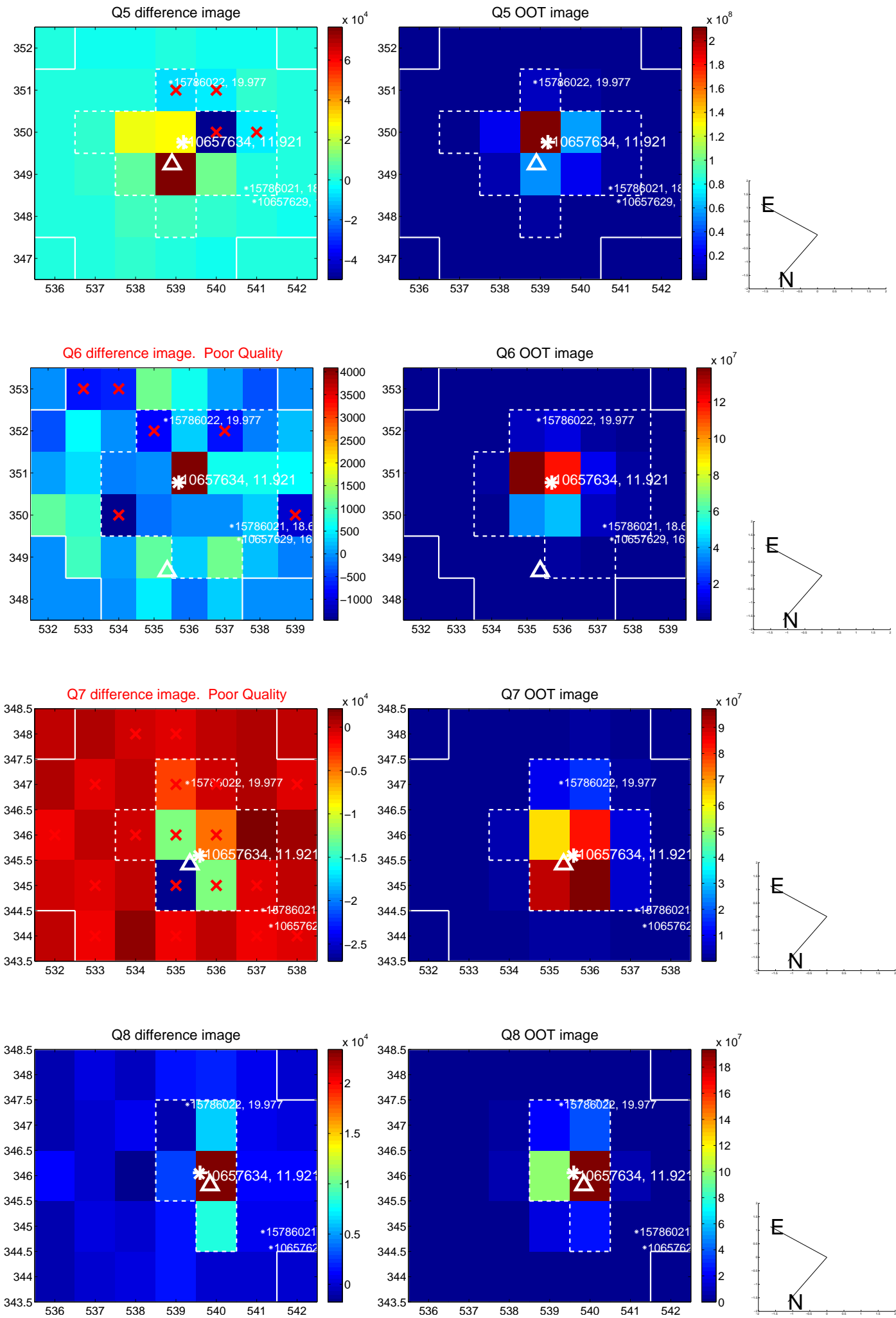


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

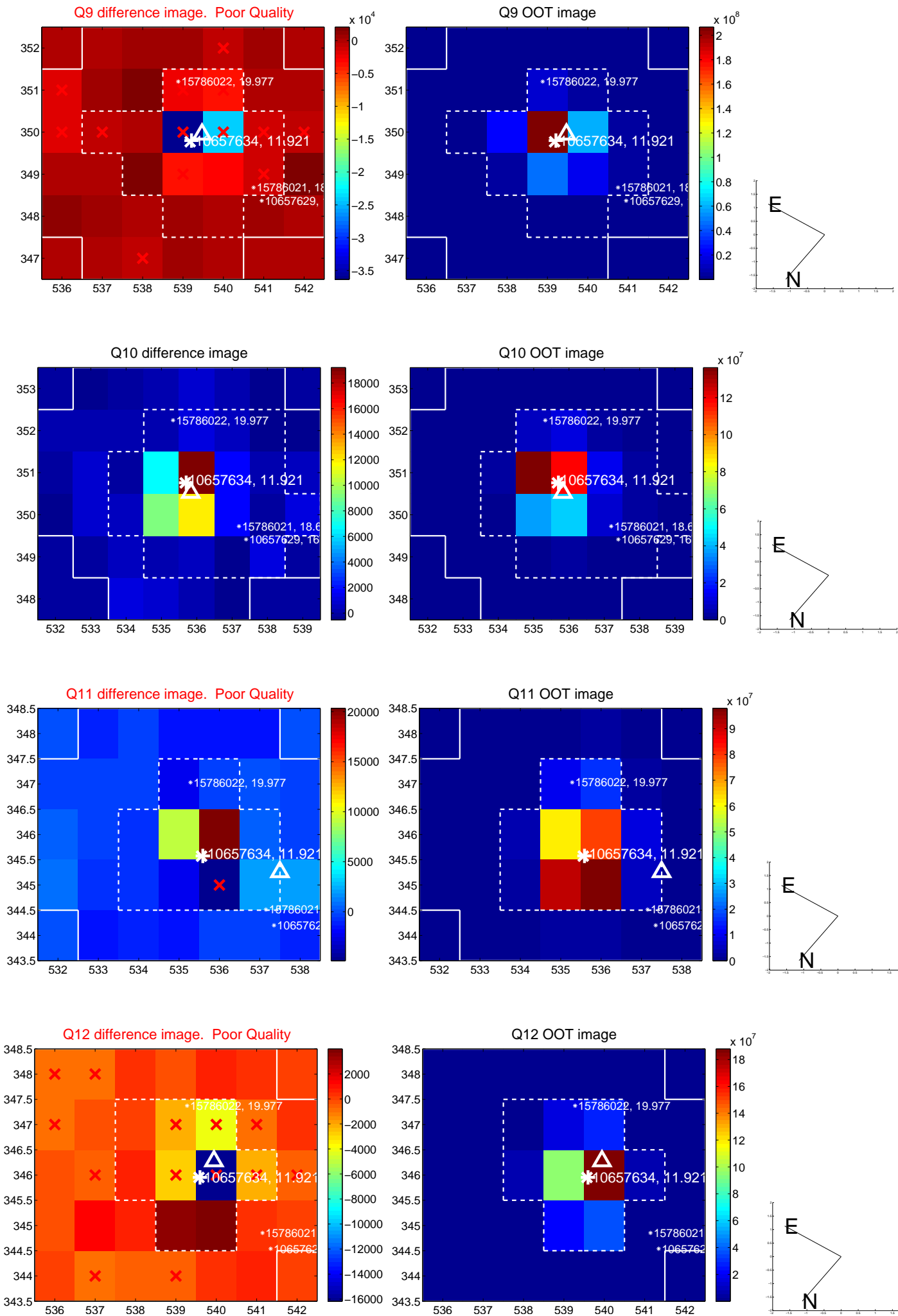
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



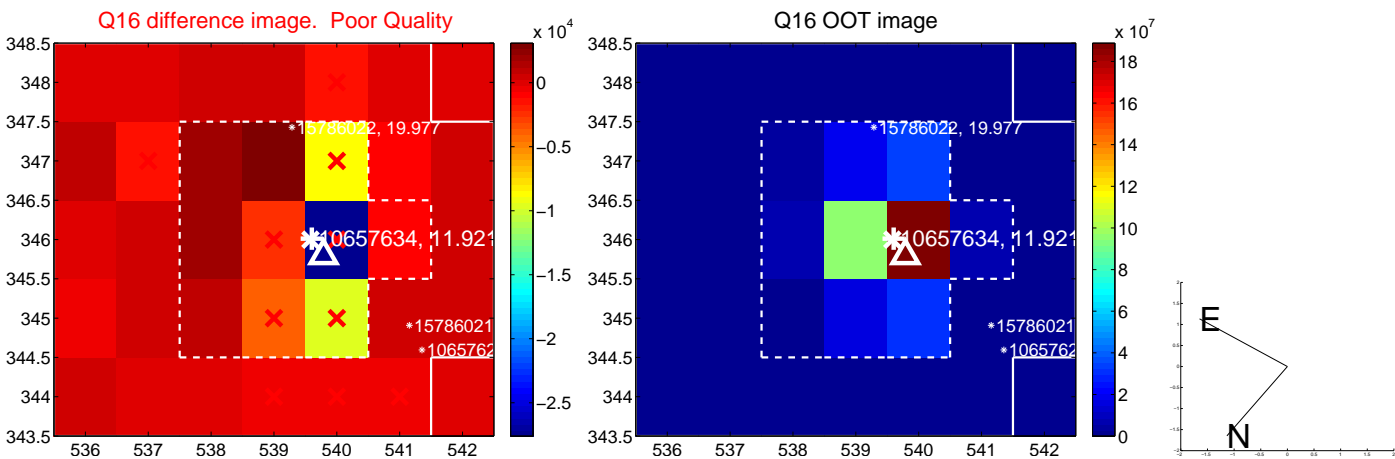
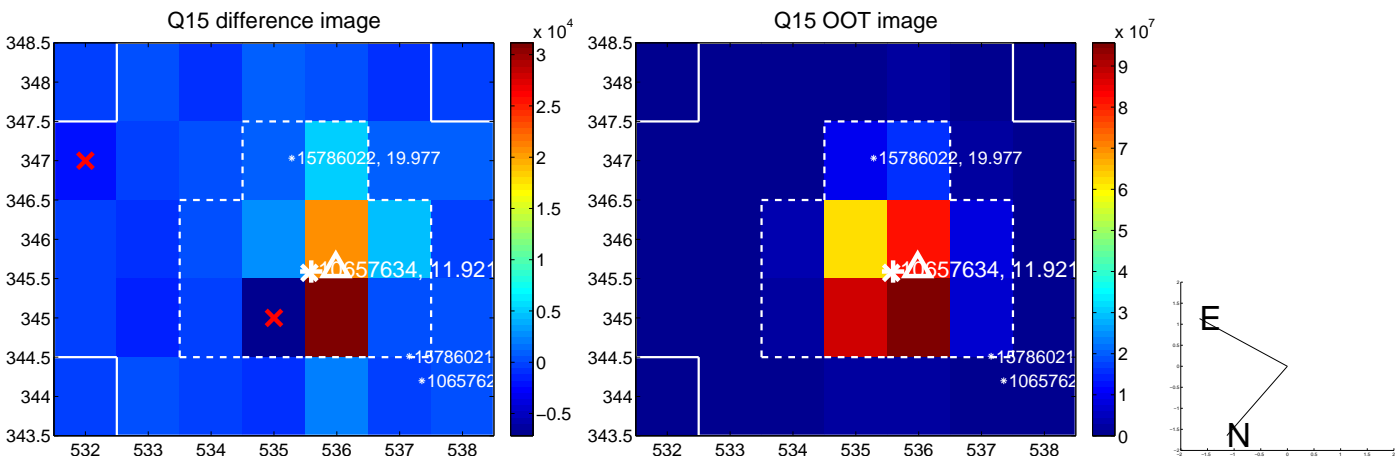
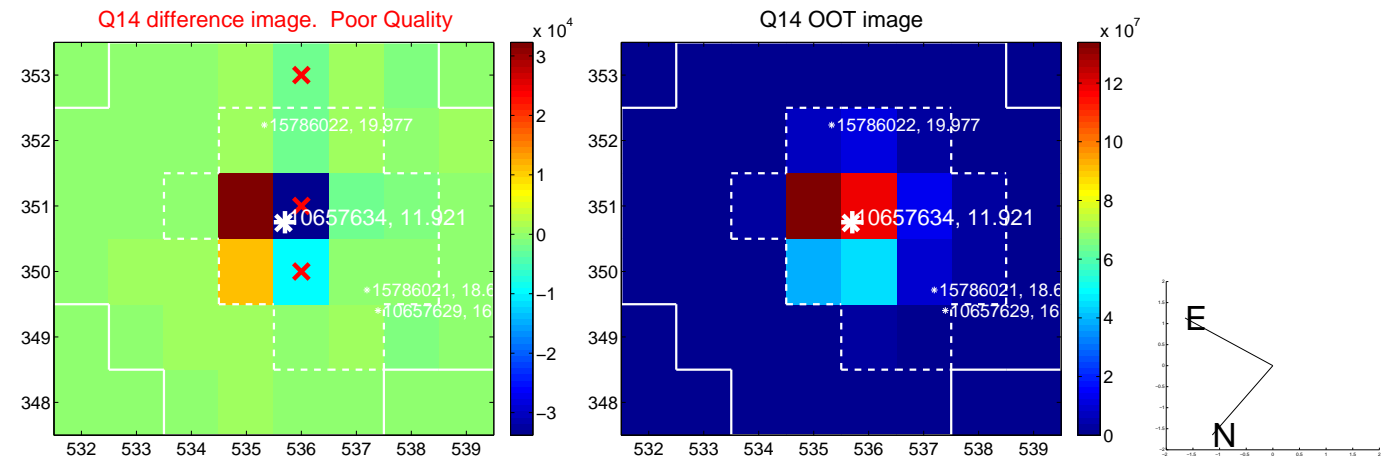
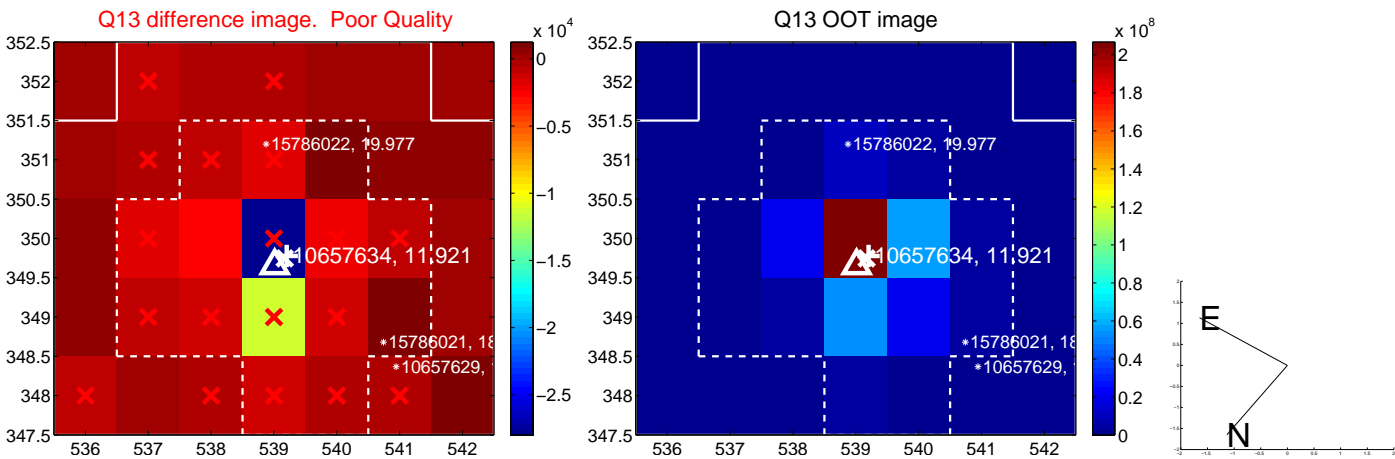
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



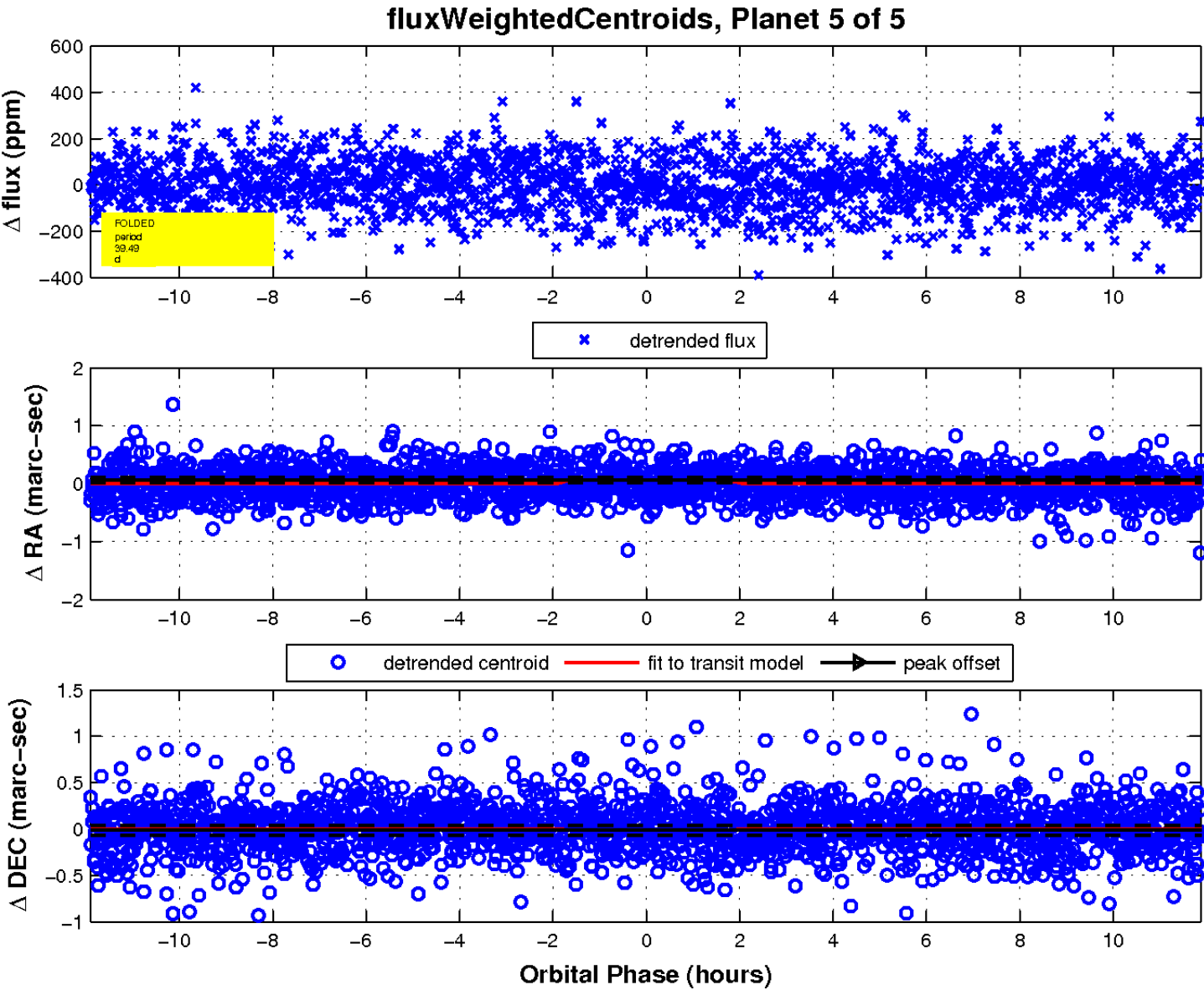
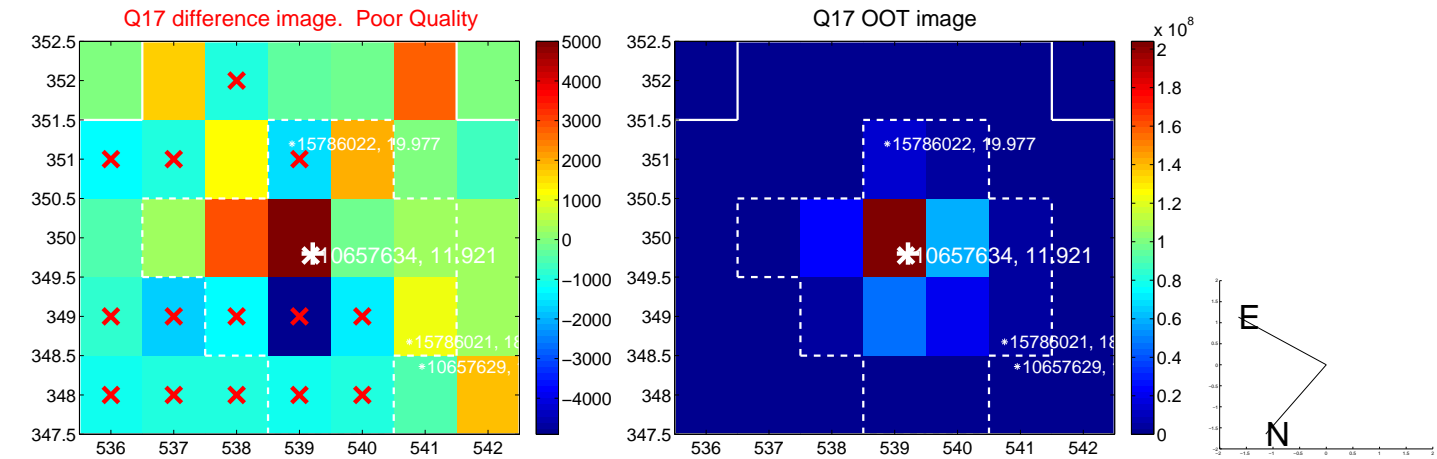
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

