

KIC 006145098

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})
006145098-01	OBS	No	2.070368	133.310690	23.6	13.723	7.4	4.2	2.66	6587	1.38	8829.81
006145098-02	OBS	No	517.579137	194.423335	461.6	7.280	10.9	7.0	2.66	6587	6.12	5.61
006145098-03	OBS	No	233.719810	213.422052	1185.1	22.819	10.1	10.3	2.66	6587	10.87	16.18

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006145098-01	OBS	FP	0.00	1	0	0	0	LPP_DV
006145098-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT— MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
006145098-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

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

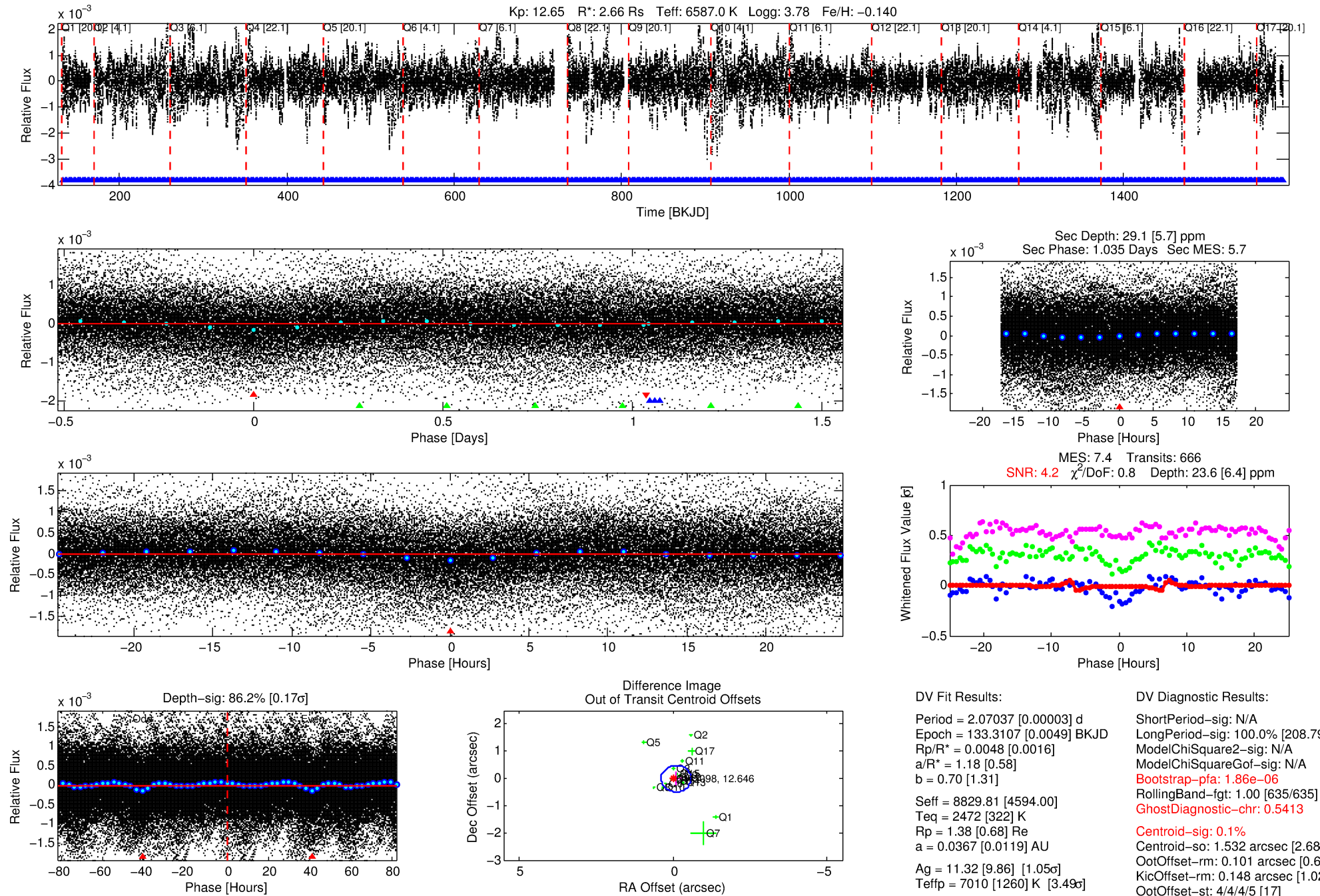
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006145098-01

No Significant Match Found

DV One-Page Summary

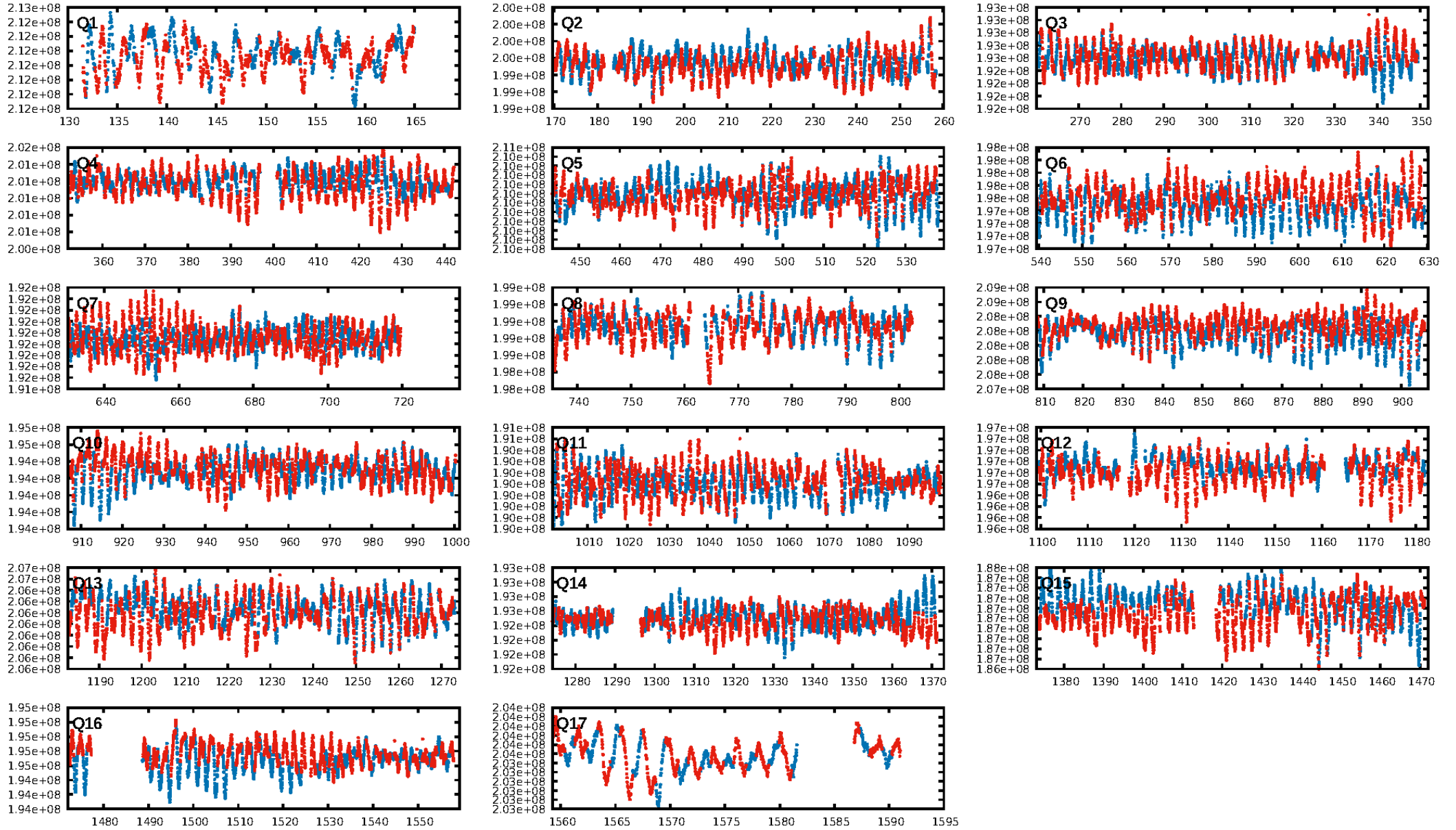
KIC: 6145098 Candidate: 1 of 3 Period: 2.070 d



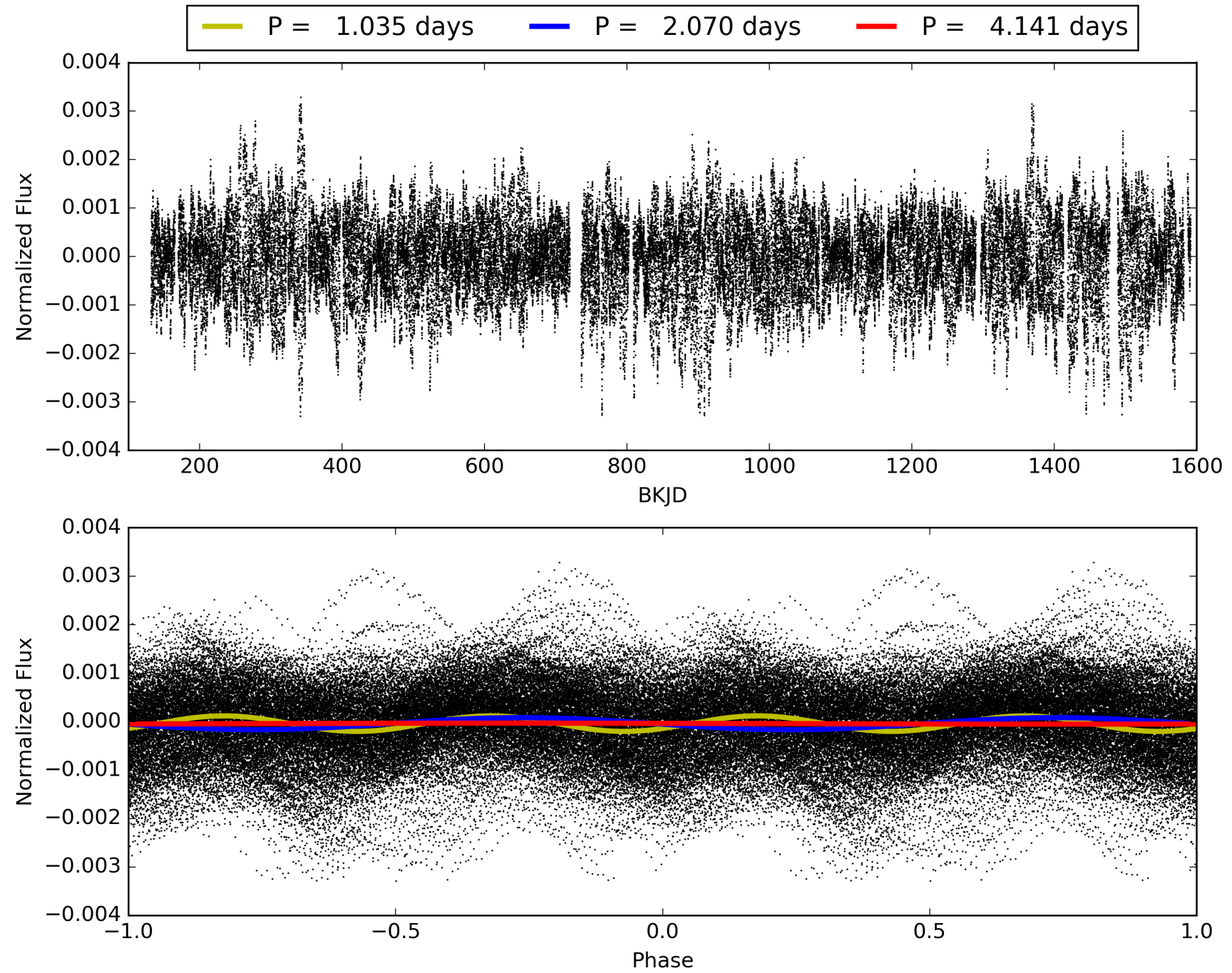
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 21:00:24 Z

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

TCE 006145098-01, PDC Light Curves

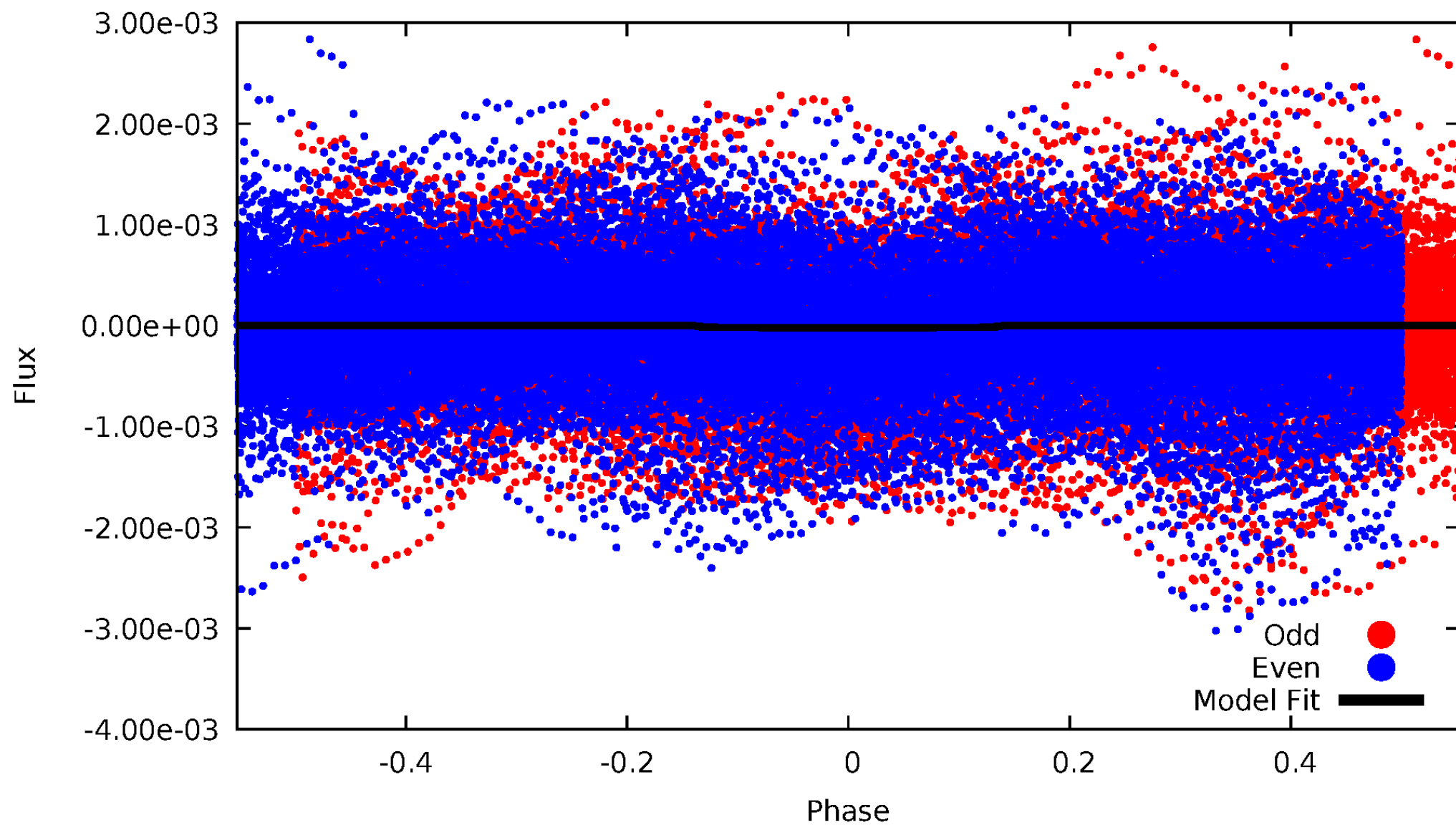


TCE 006145098-01



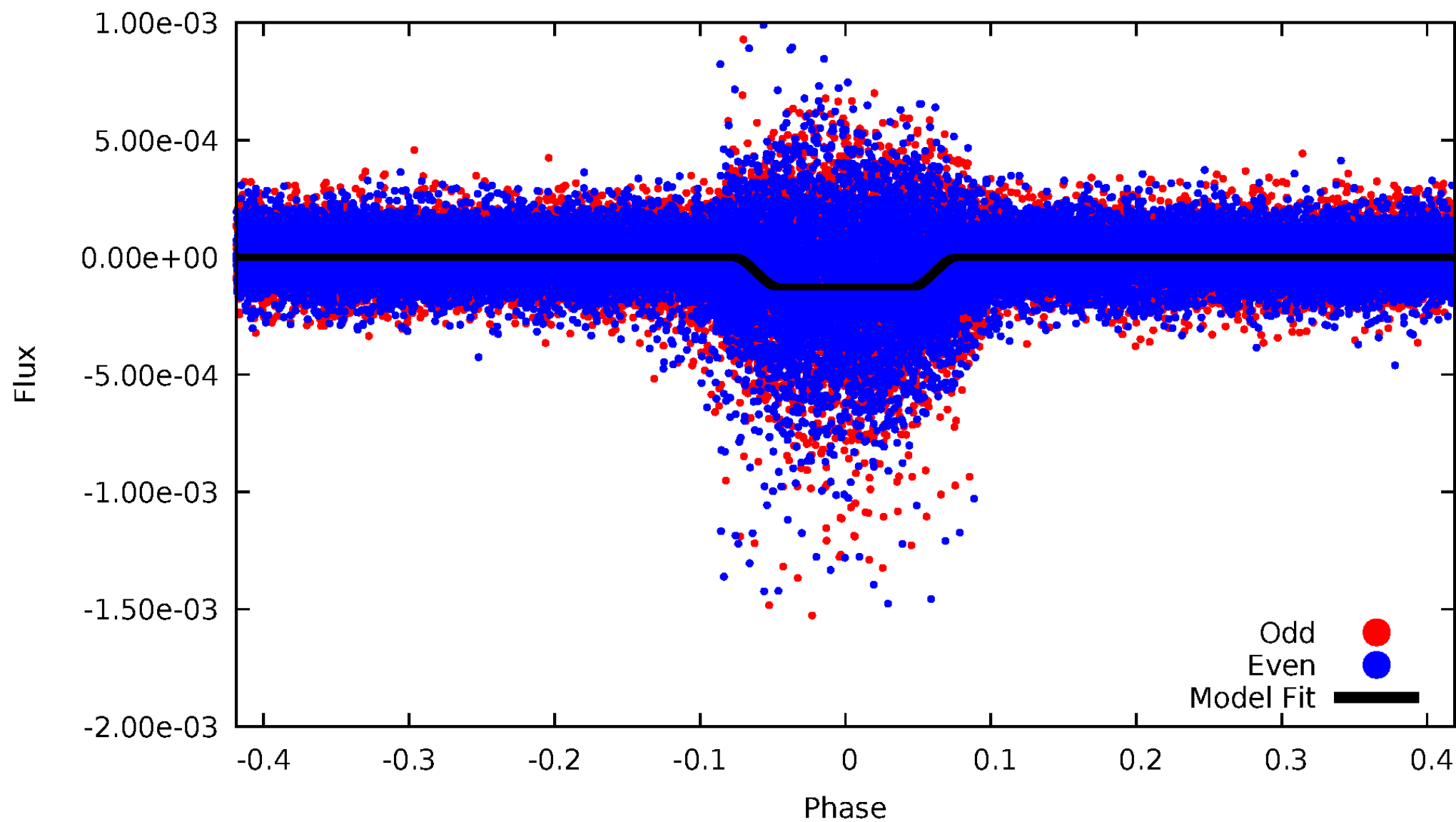
DV Odd/Even

TCE 006145098-01

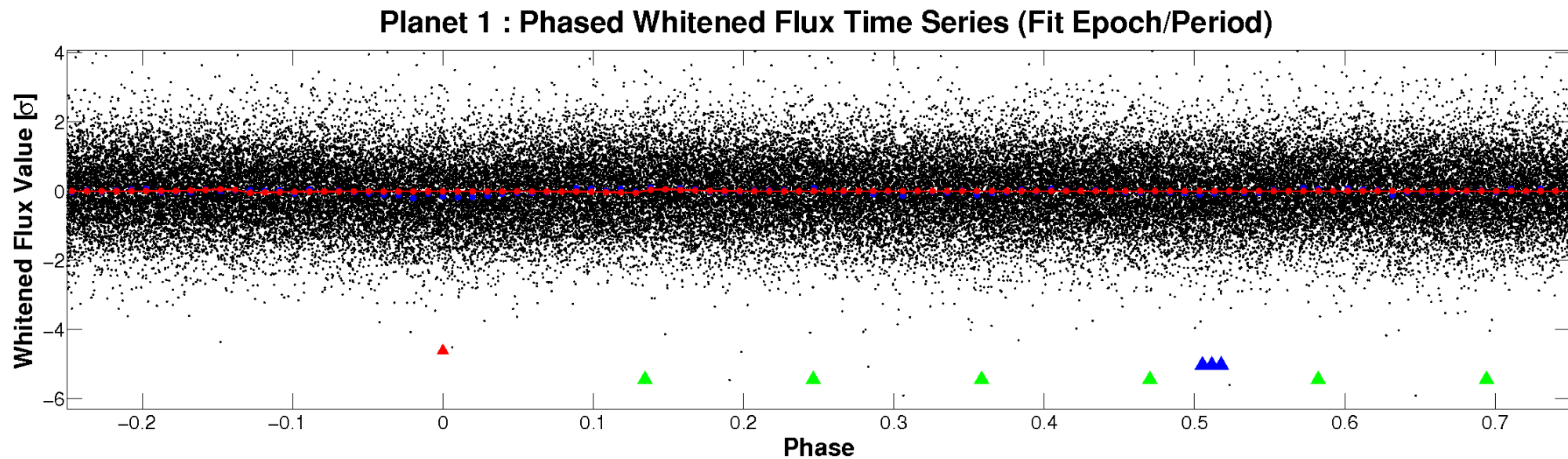
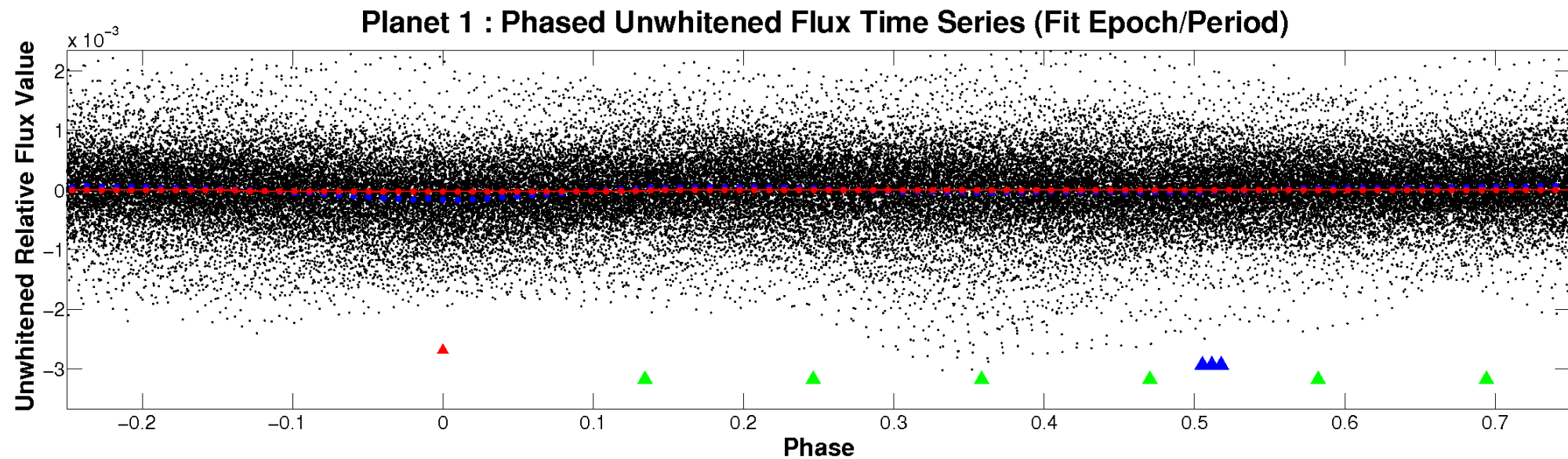


ALT Odd/Even

TCE 006145098-01

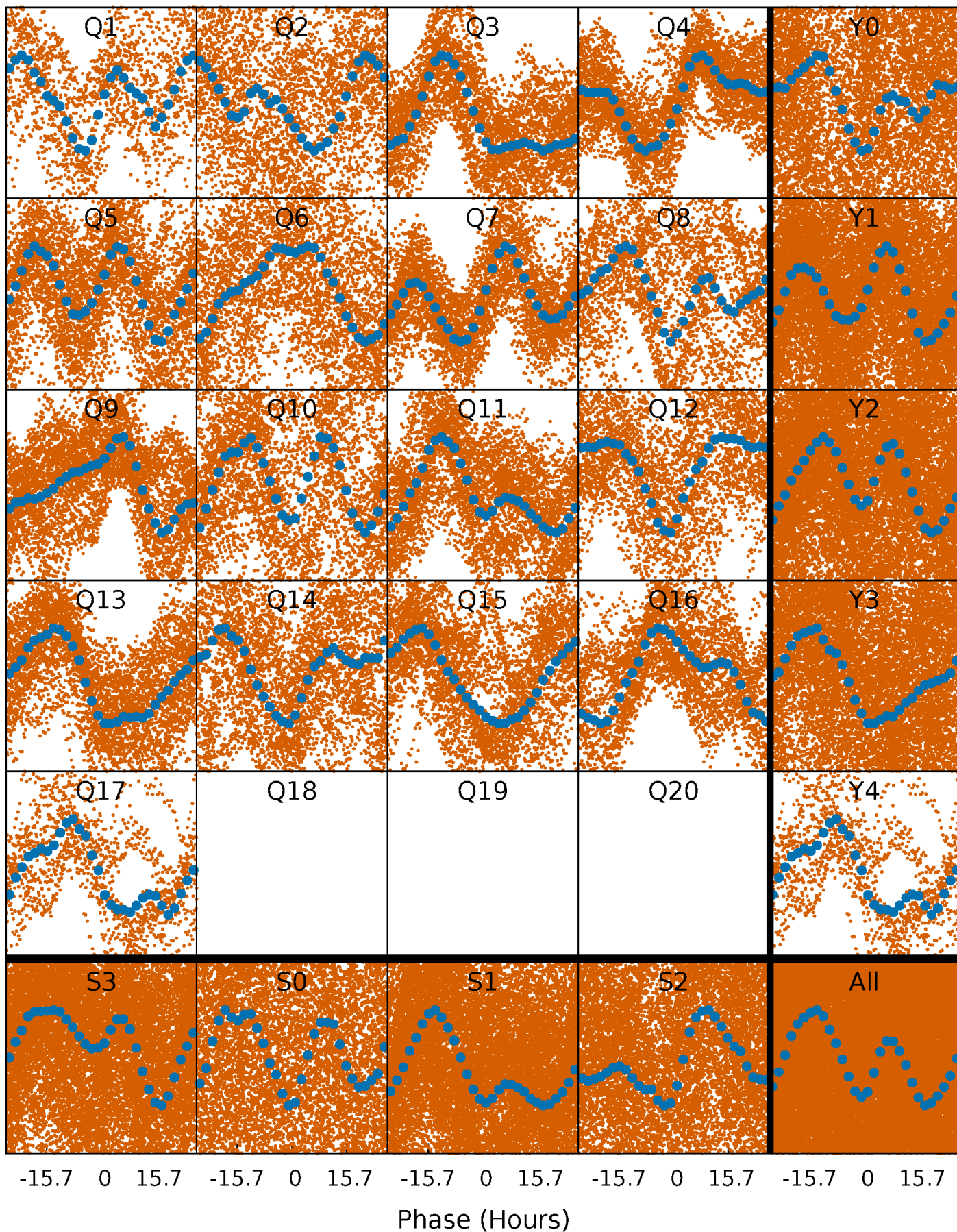


Non-Whitened Vs. Whitened Light Curve



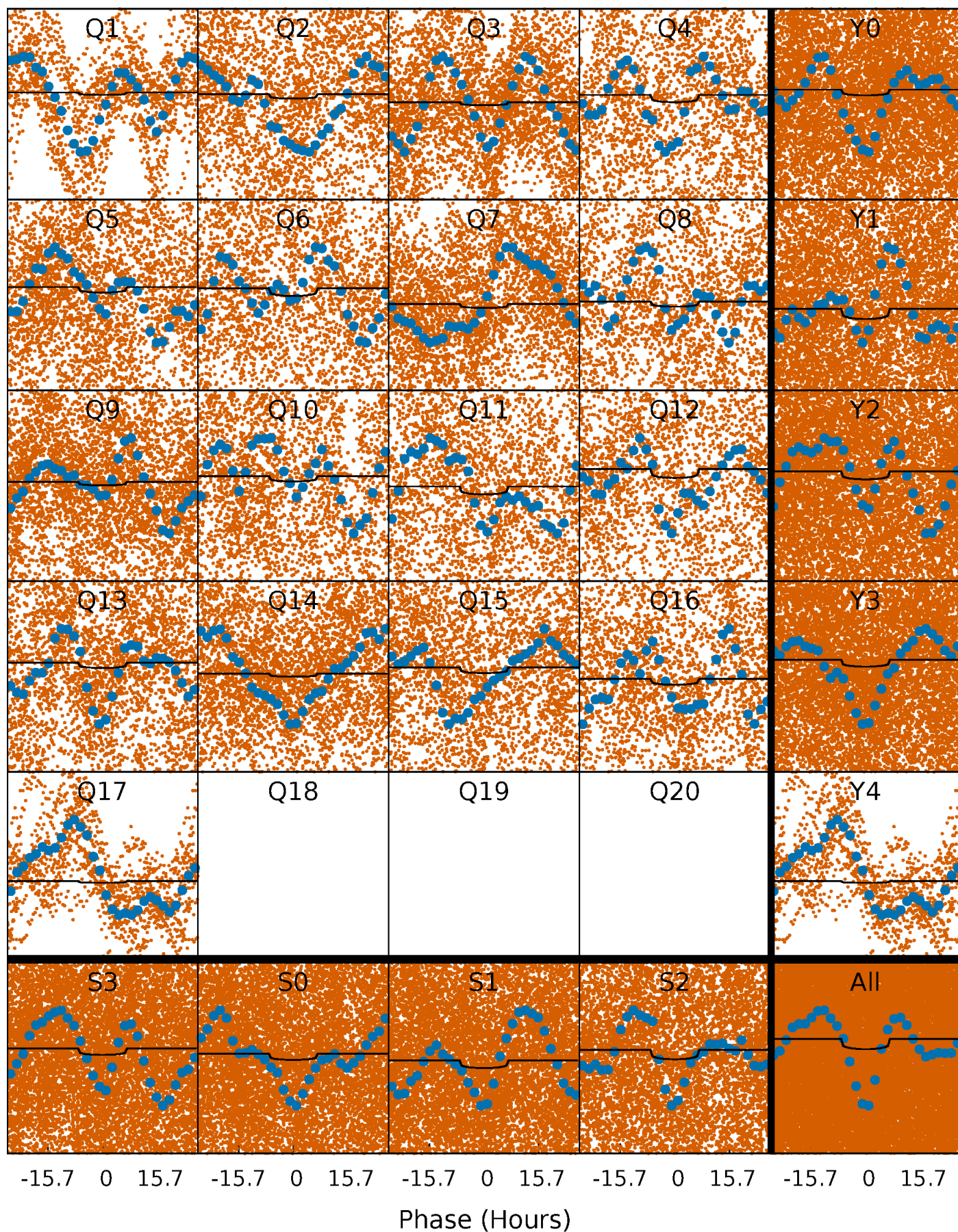
PDC Quarter-Phased Transit Curves

TCE 006145098-01 P= 2.070368 Days $T_0=133.310690$ (BKJD)



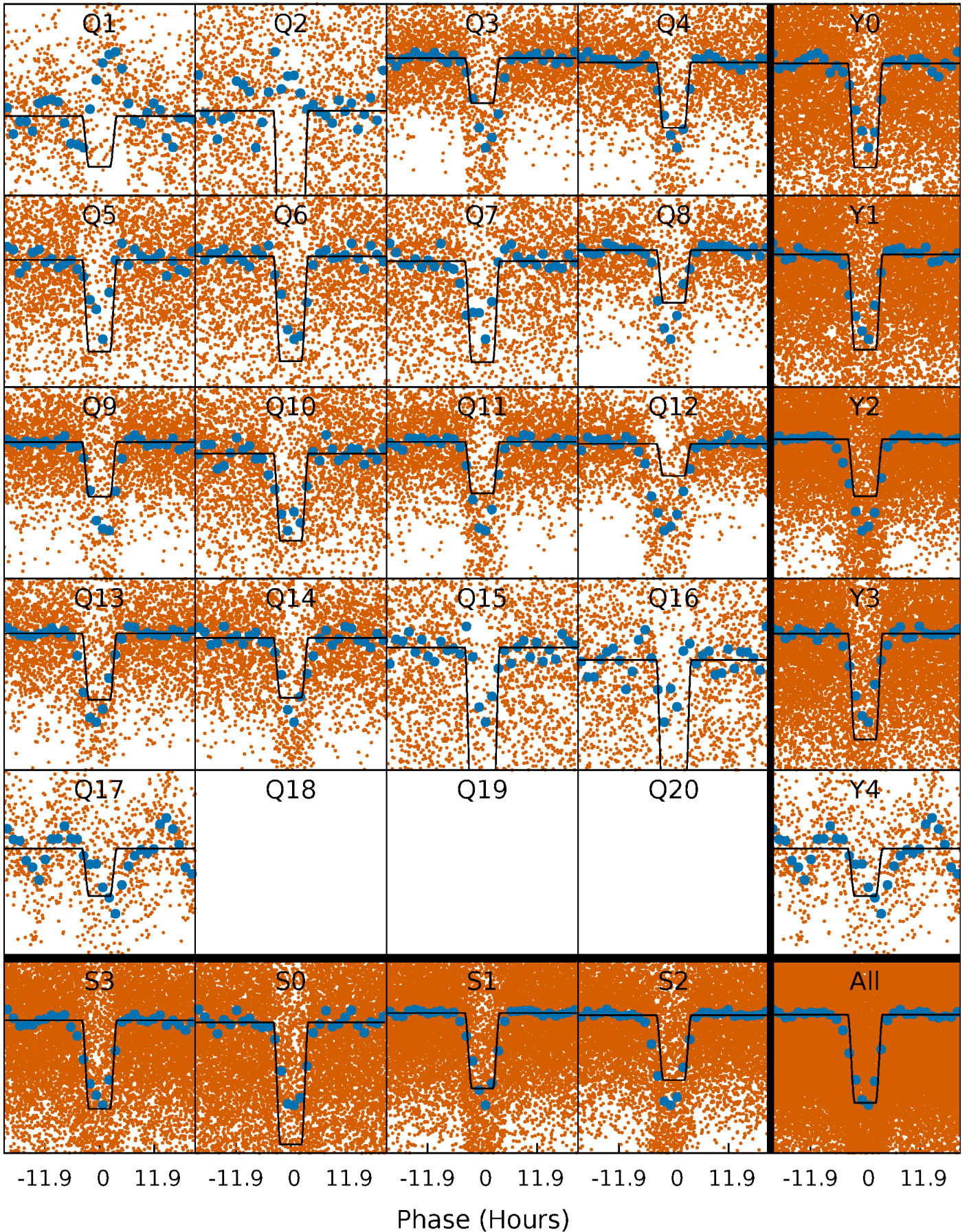
DV Quarter-Phased Transit Curves

TCE 006145098-01 P= 2.070368 Days $T_0=133.310690$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

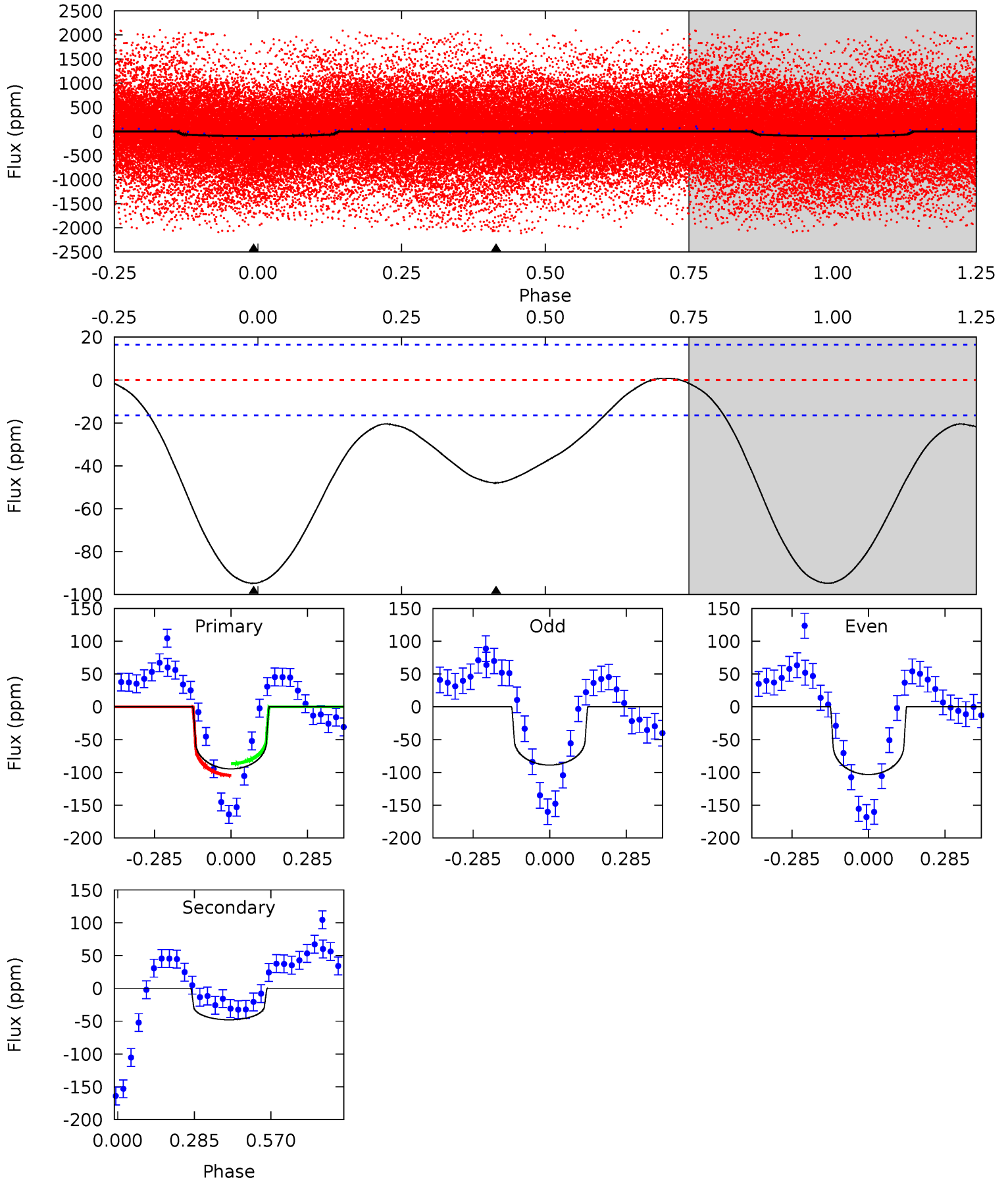
TCE 006145098-01 P= 2.070334 Days $T_0=133.307920$ (BKJD)



DV Model-Shift Uniqueness Test

006145098-01, P = 2.070368 Days, E = 131.240322 Days

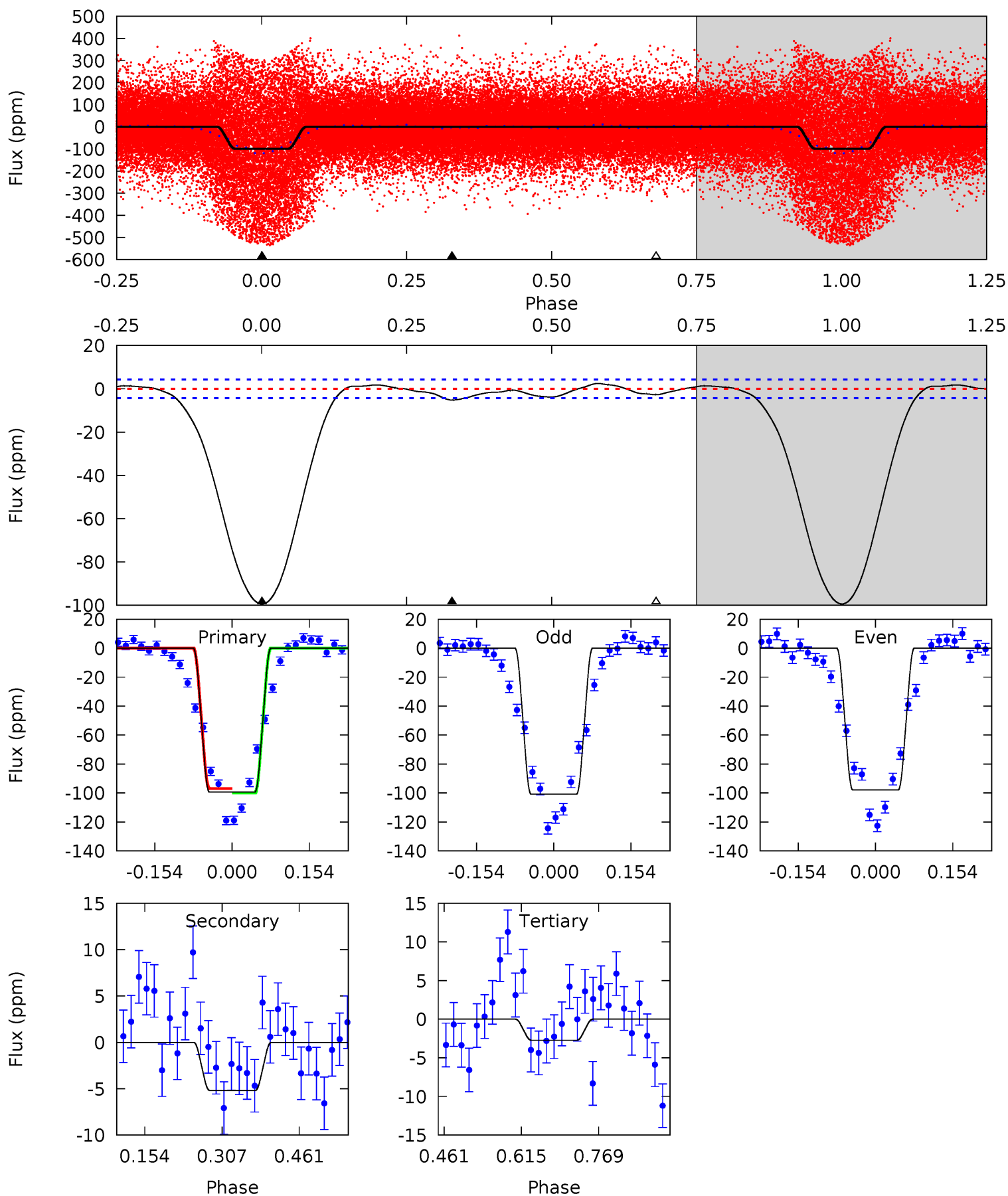
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.0	12.7	0	0	4.34	1.07	0.36	25.0	25.0	12.7	12.7	1.91	1.60	0.01	2.12



Alt Model-Shift Uniqueness Test

006145098-01, P = 2.070334 Days, E = 131.237586 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
103.5	5.41	2.83	0	4.47	1.43	1.86	100.7	103.5	2.58	5.41	1.52	1.09	0.02	0



Stellar Parameters For KIC 006145098

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6587^{+158}_{-197}	$3.777^{+0.292}_{-0.097}$	$-0.140^{+0.300}_{-0.250}$	$2.658^{+0.506}_{-0.939}$	$1.542^{+0.215}_{-0.323}$	$0.116^{+0.235}_{-0.035}$
	+2%/-3%	+8%/-3%	+214%/-179%	+19%/-35%	+14%/-21%	+204%/-31%
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 006145098-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-48 ± 4	$1.28^{+0.53}_{-0.47}$	3387^{+215}_{-299}	8103^{+2910}_{-1347}	21^{+32}_{-11}
Alt.	-5 ± 1	$3.12^{+0.65}_{-0.62}$	3384^{+223}_{-299}	2814^{+433}_{-5348}	$0.395^{+0.222}_{-0.134}$

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 $A_{obs} \gg 1.0$

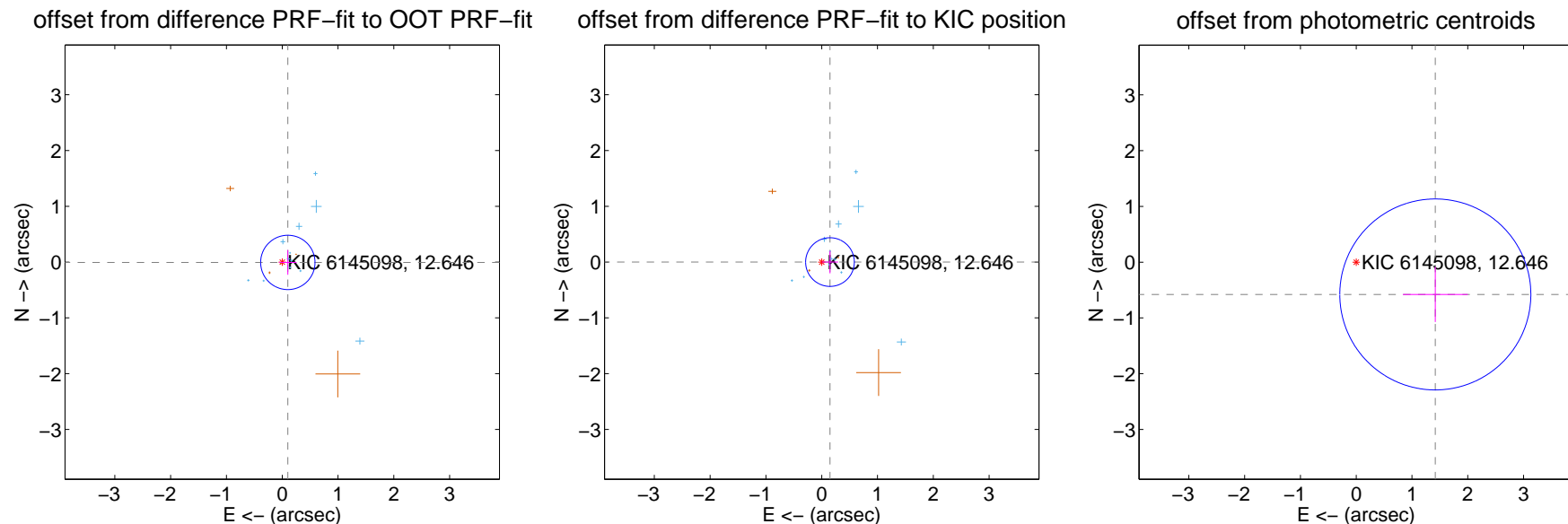
DV Centroid Data

Supplemental centroid analysis for 006145098-01. Kepler magnitude: 12.65. Transit SNR 4.17

There are 12 quarters with good PRF difference image offsets

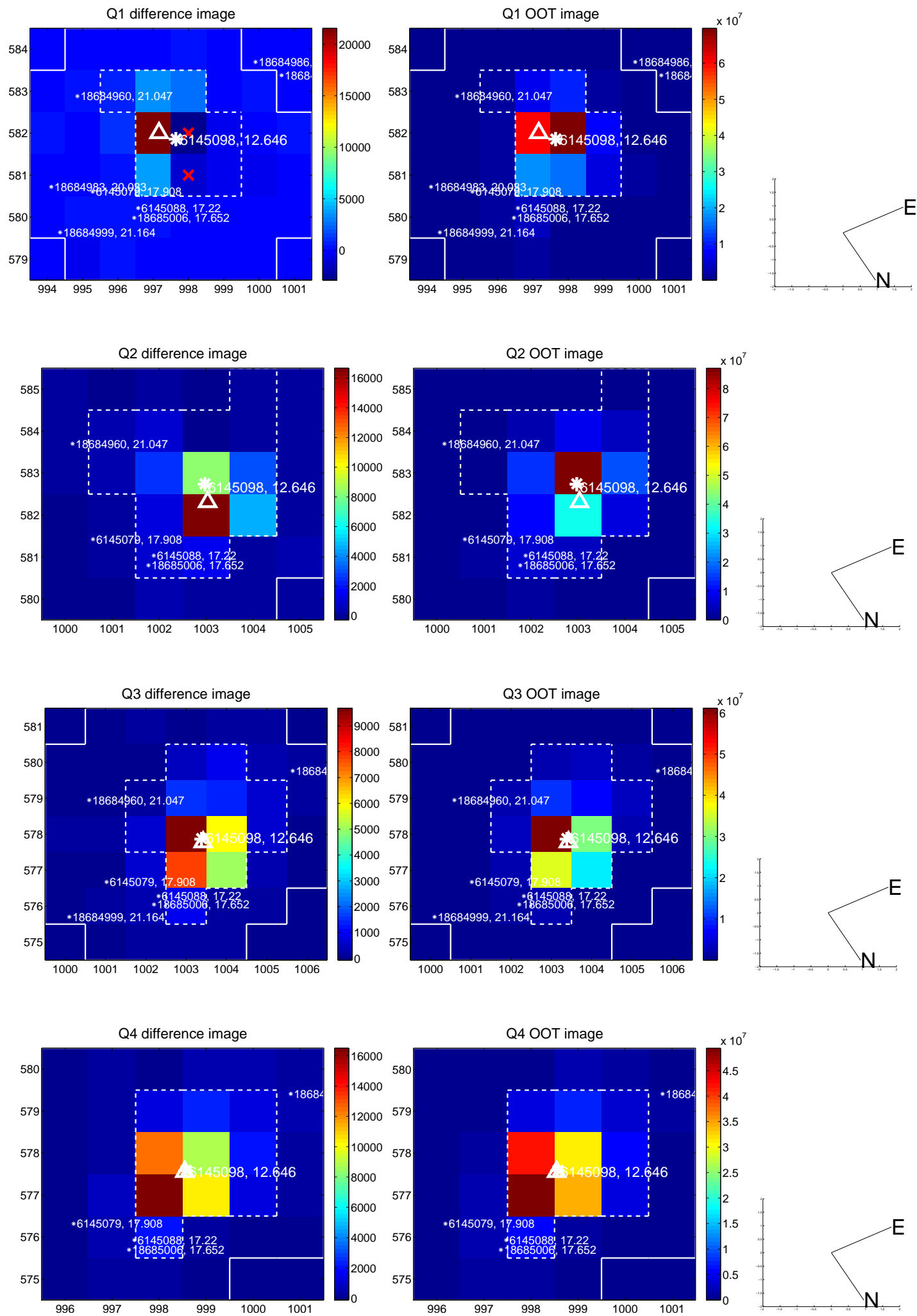
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.101 ± 0.162	0.62	-0.100 ± 0.157	-0.006 ± 0.222
PRF-fit source offset from KIC position	0.148 ± 0.145	1.02	-0.148 ± 0.146	0.000 ± 0.202
photometric centroid source offset	1.53 ± 0.57	2.68	-1.42 ± 0.58	-0.58 ± 0.49

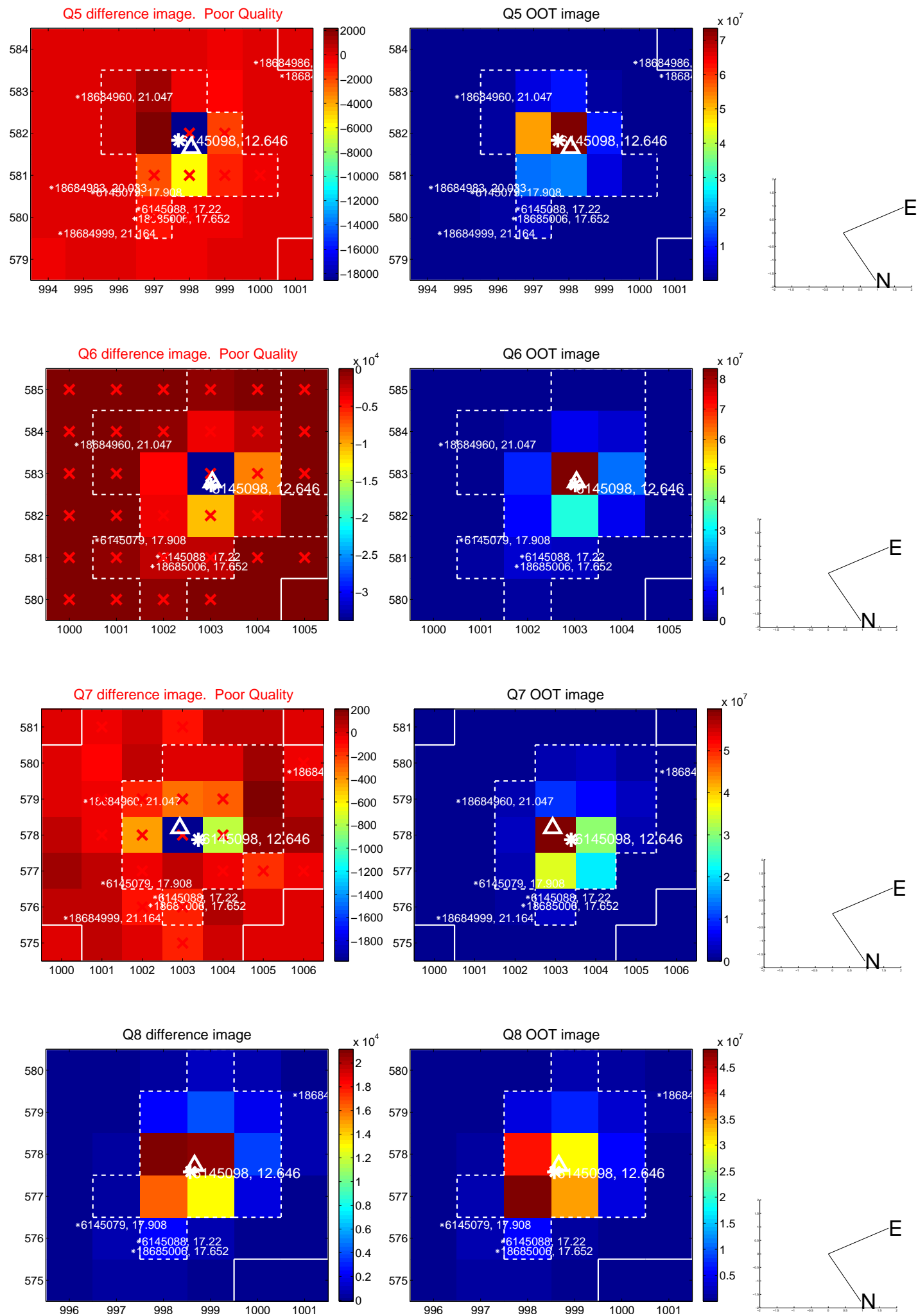


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

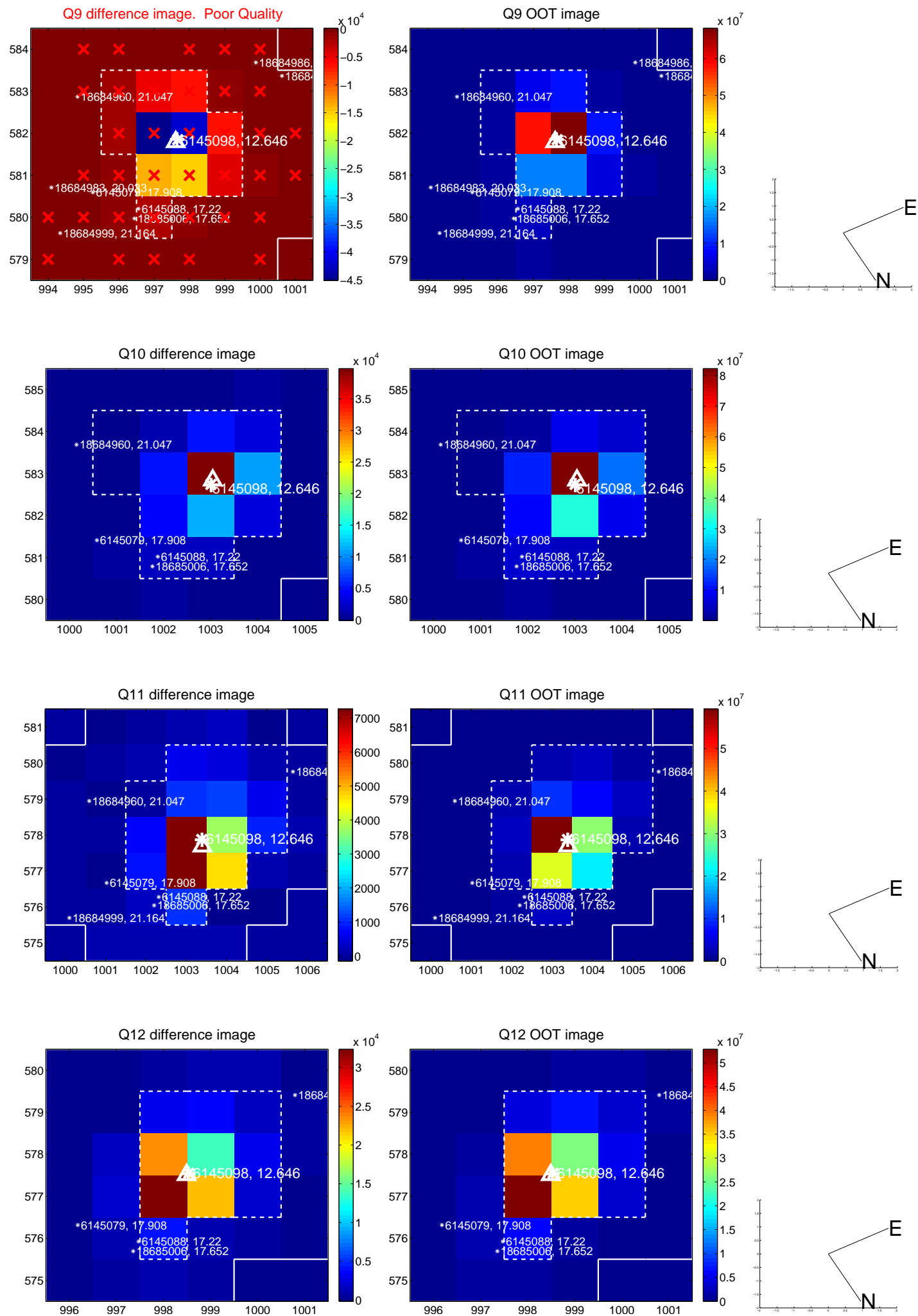
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



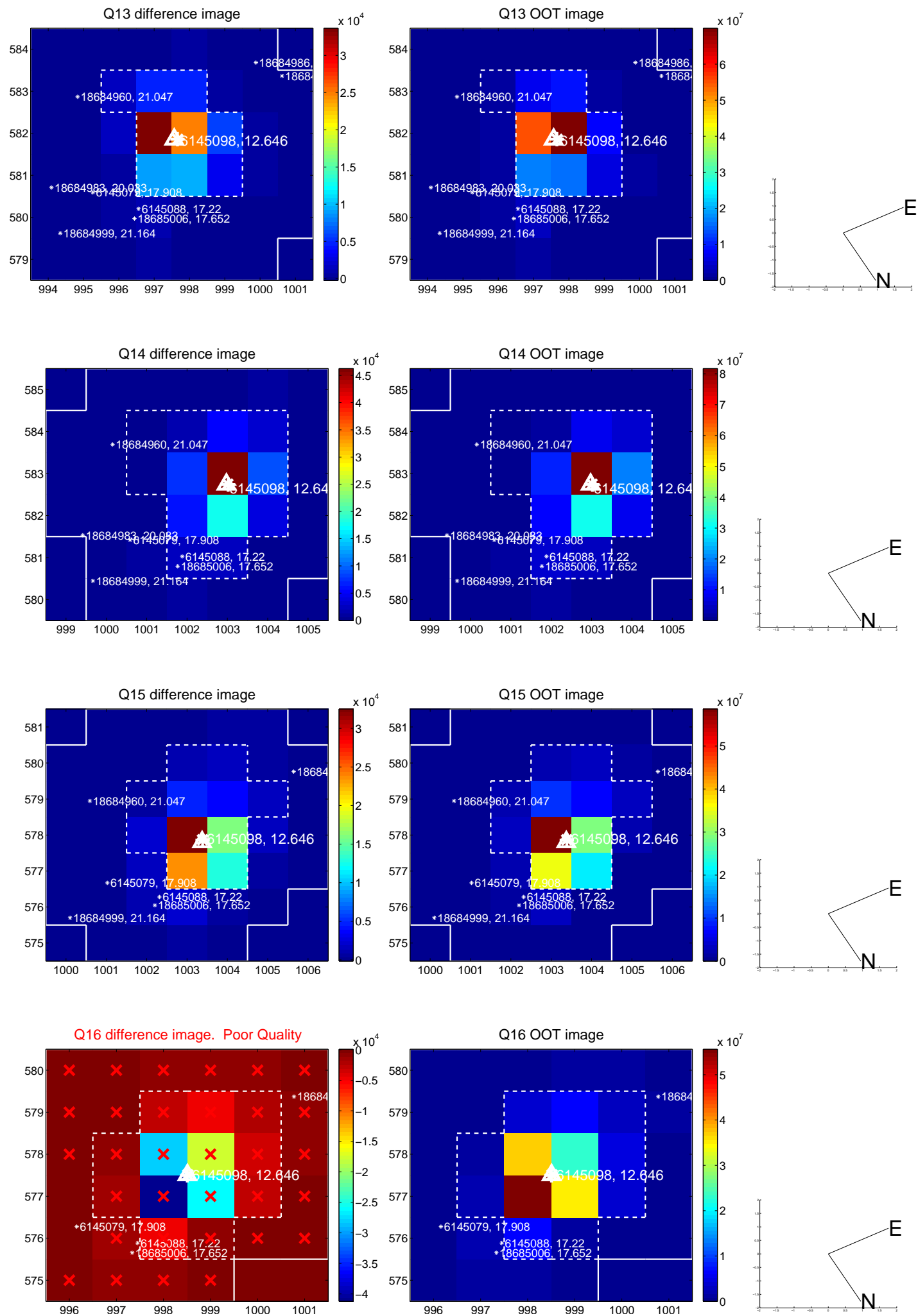
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

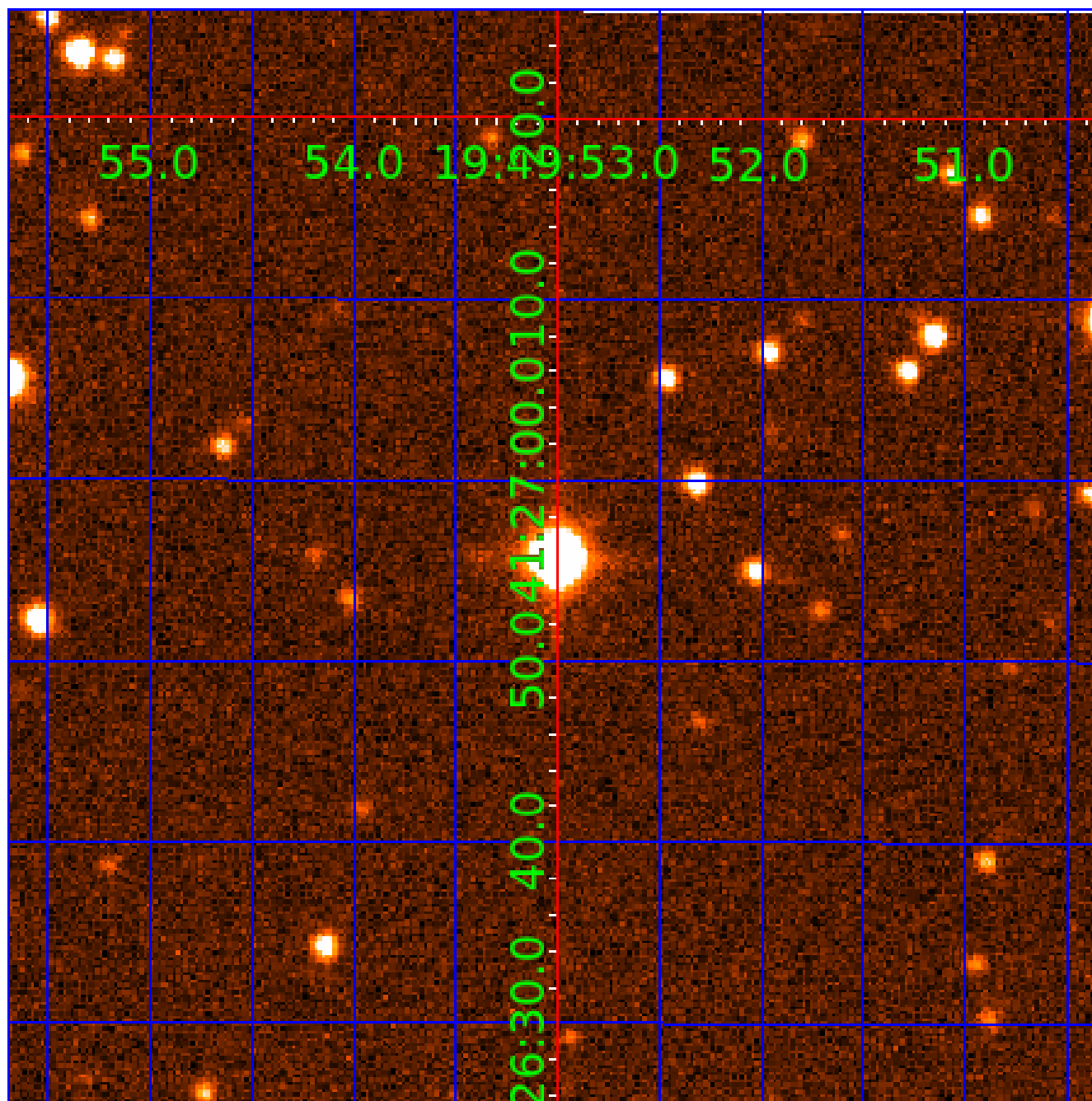


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006145098

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})
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006145098-01	OBS	FP	0.00	1	0	0	0	LPP_DV
006145098-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
006145098-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

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

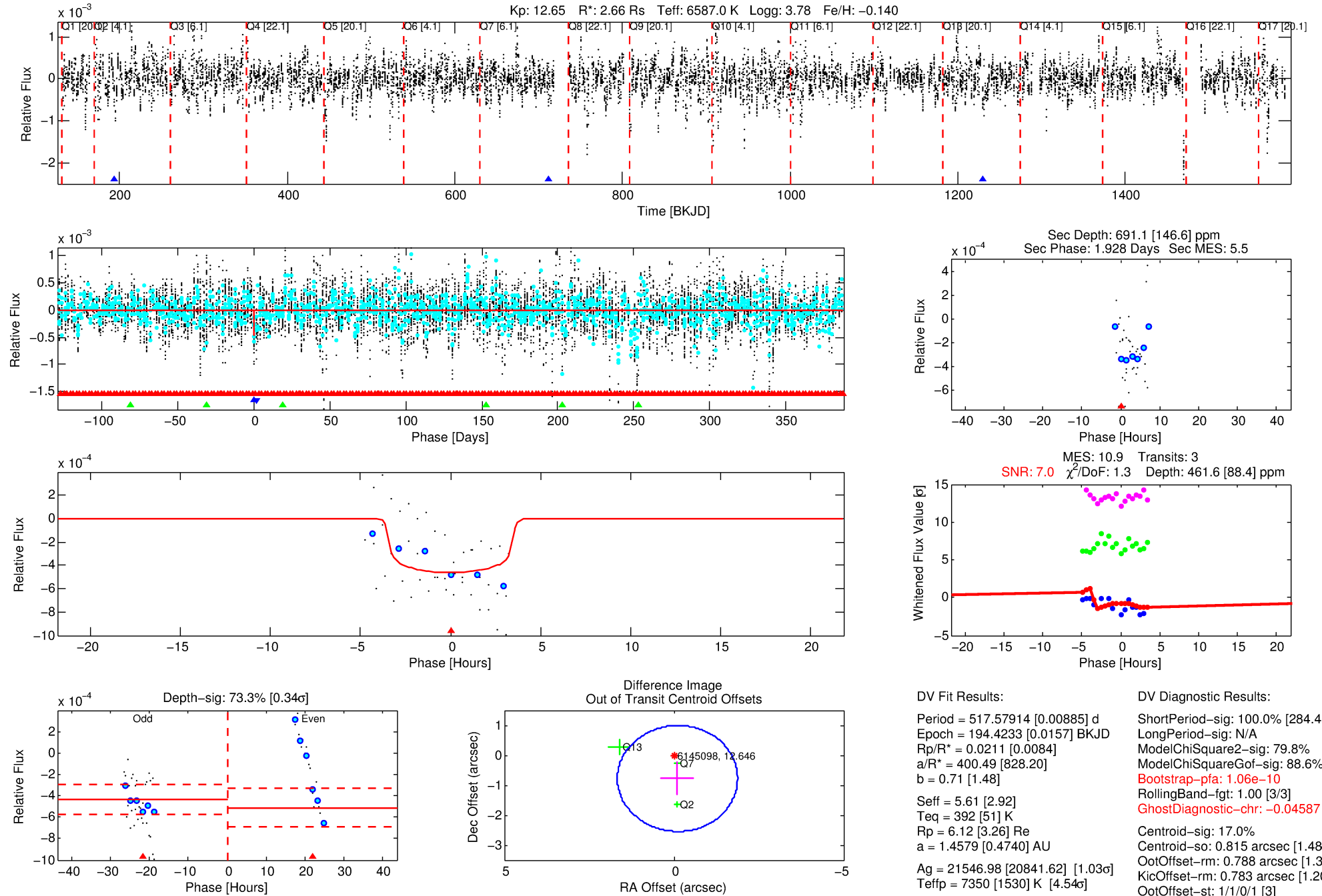
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006145098-02

No Significant Match Found

DV One-Page Summary

KIC: 6145098 Candidate: 2 of 3 Period: 517.579 d



DV Fit Results:

Period = 517.57914 [0.00885] d
Epoch = 194.4233 [0.0157] BKJD
Rp/R* = 0.0211 [0.0084]
a/R* = 400.49 [828.20]
b = 0.71 [1.48]
Seff = 5.61 [2.92]
Teq = 392 [51] K
Rp = 6.12 [3.26] Re
a = 1.4579 [0.4740] AU
Ag = 21546.98 [20841.62] [1.03 σ]
Teffp = 7350 [1530] K [4.54 σ]

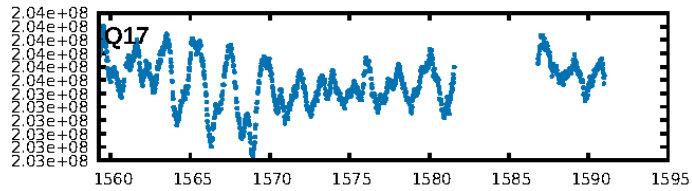
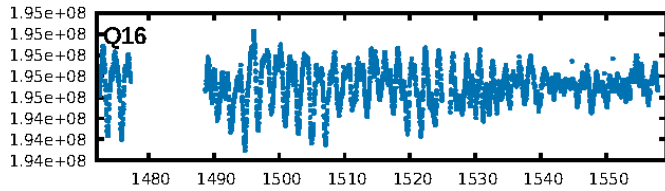
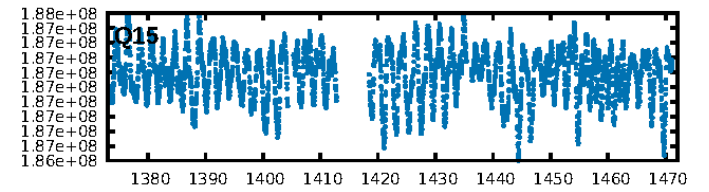
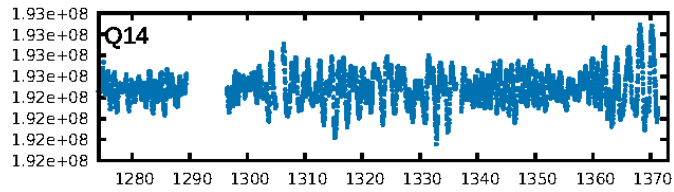
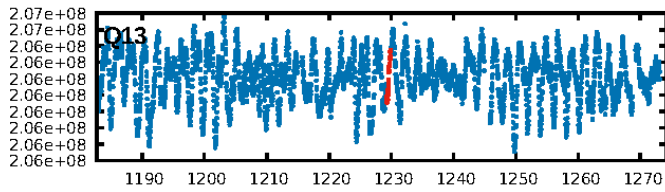
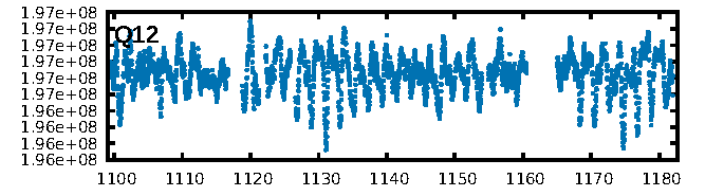
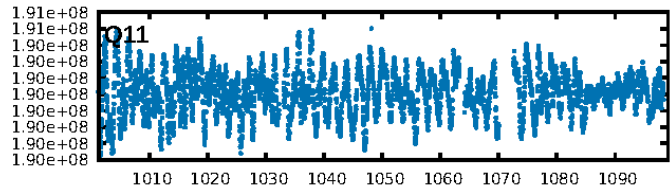
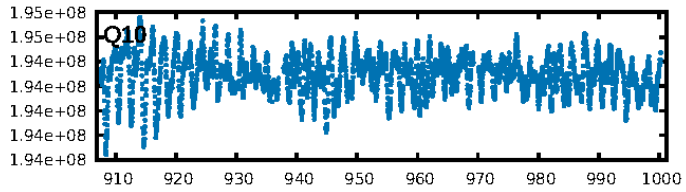
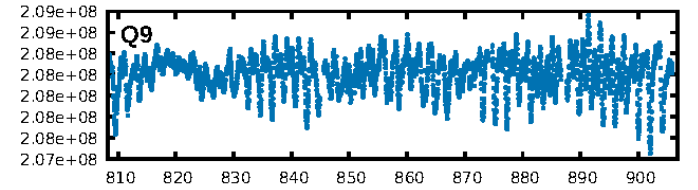
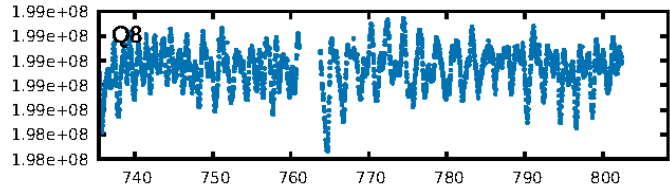
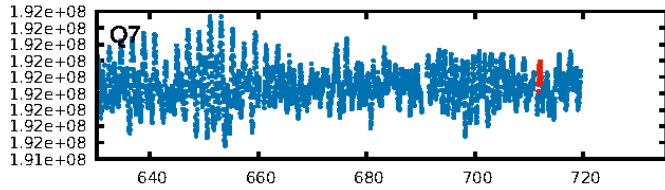
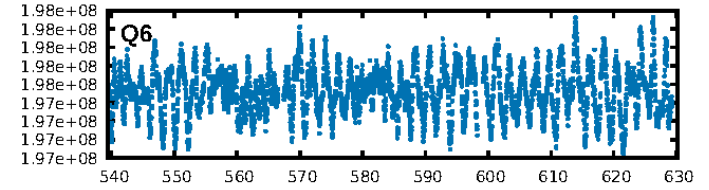
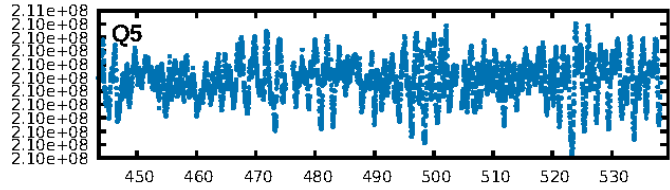
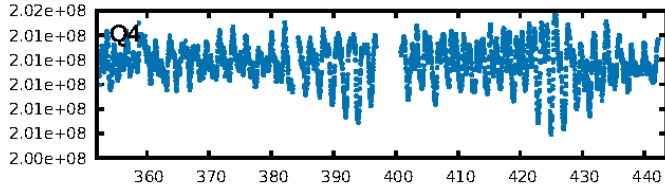
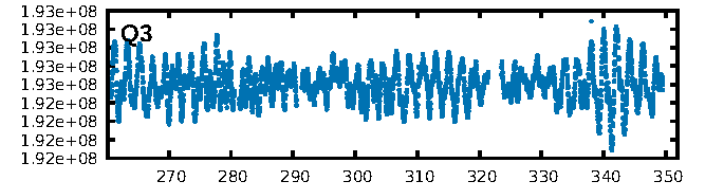
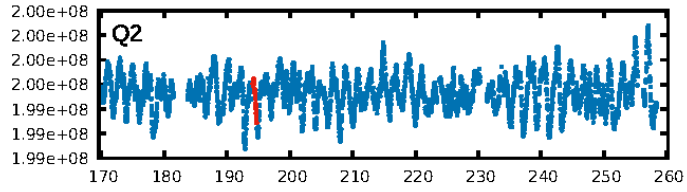
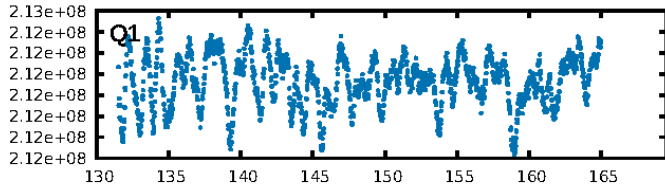
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [284.42 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 79.8%
ModelChiSquareGof-sig: 88.6%
Bootstrap-pfa: 1.06e-10
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.04587
Centroid-sig: 17.0%
Centroid-so: 0.815 arcsec [1.48 σ]
OotOffset-rm: 0.788 arcsec [1.33 σ]
KicOffset-rm: 0.783 arcsec [1.20 σ]
OotOffset-st: 1/1/0/1 [3]
KicOffset-st: 1/1/0/1 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [3/3]

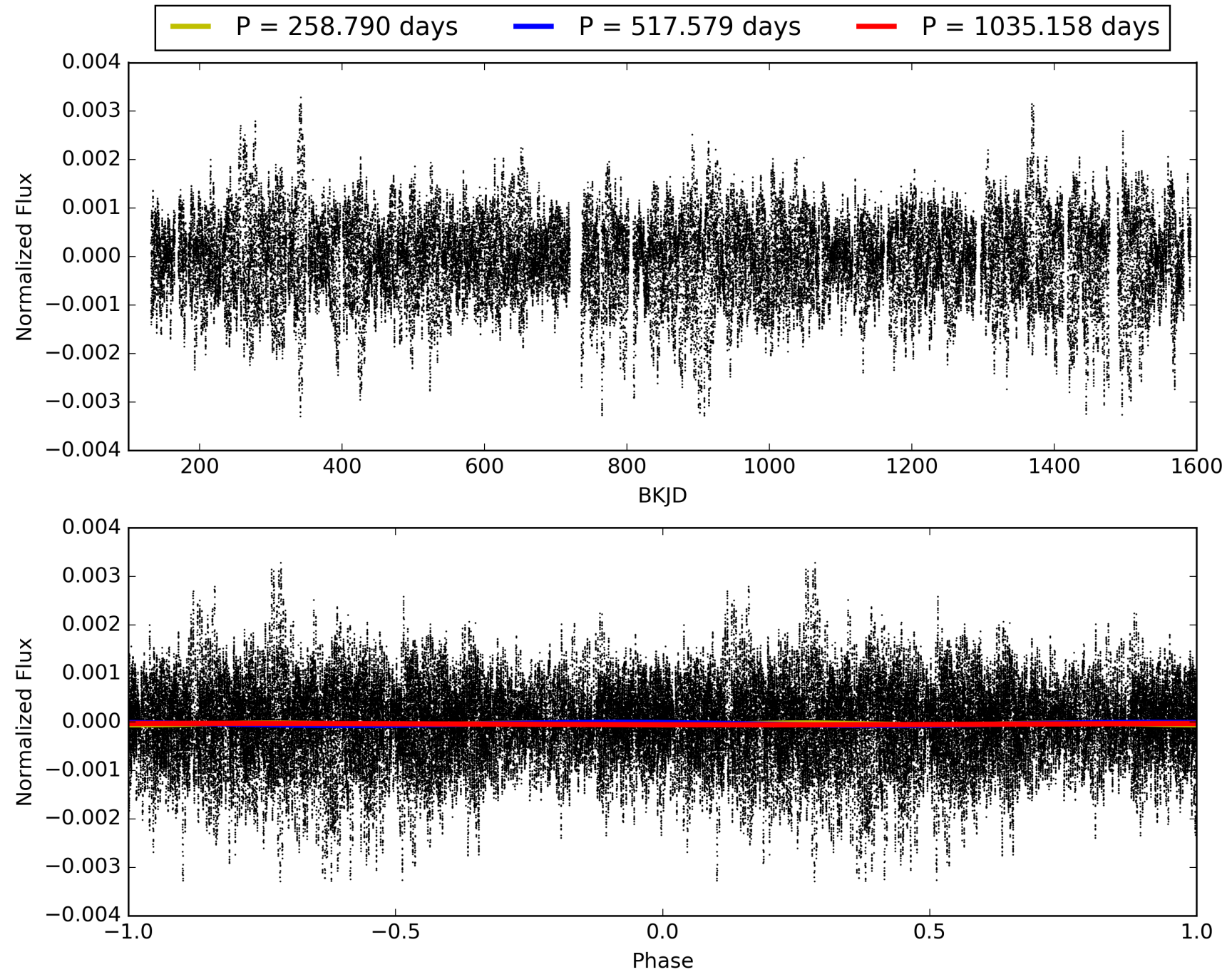
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 21:00:42 Z

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

TCE 006145098-02, PDC Light Curves

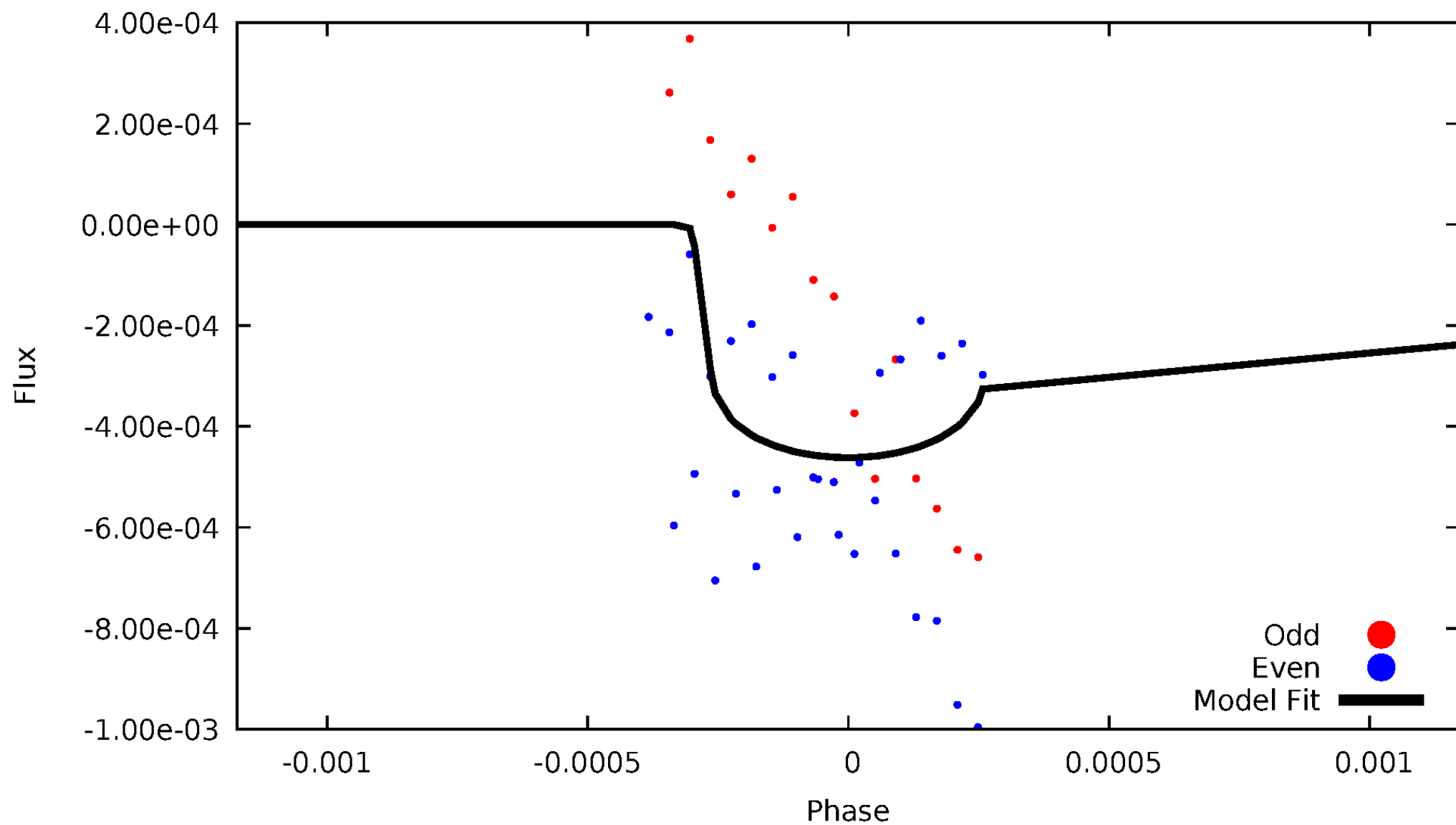


TCE 006145098-02



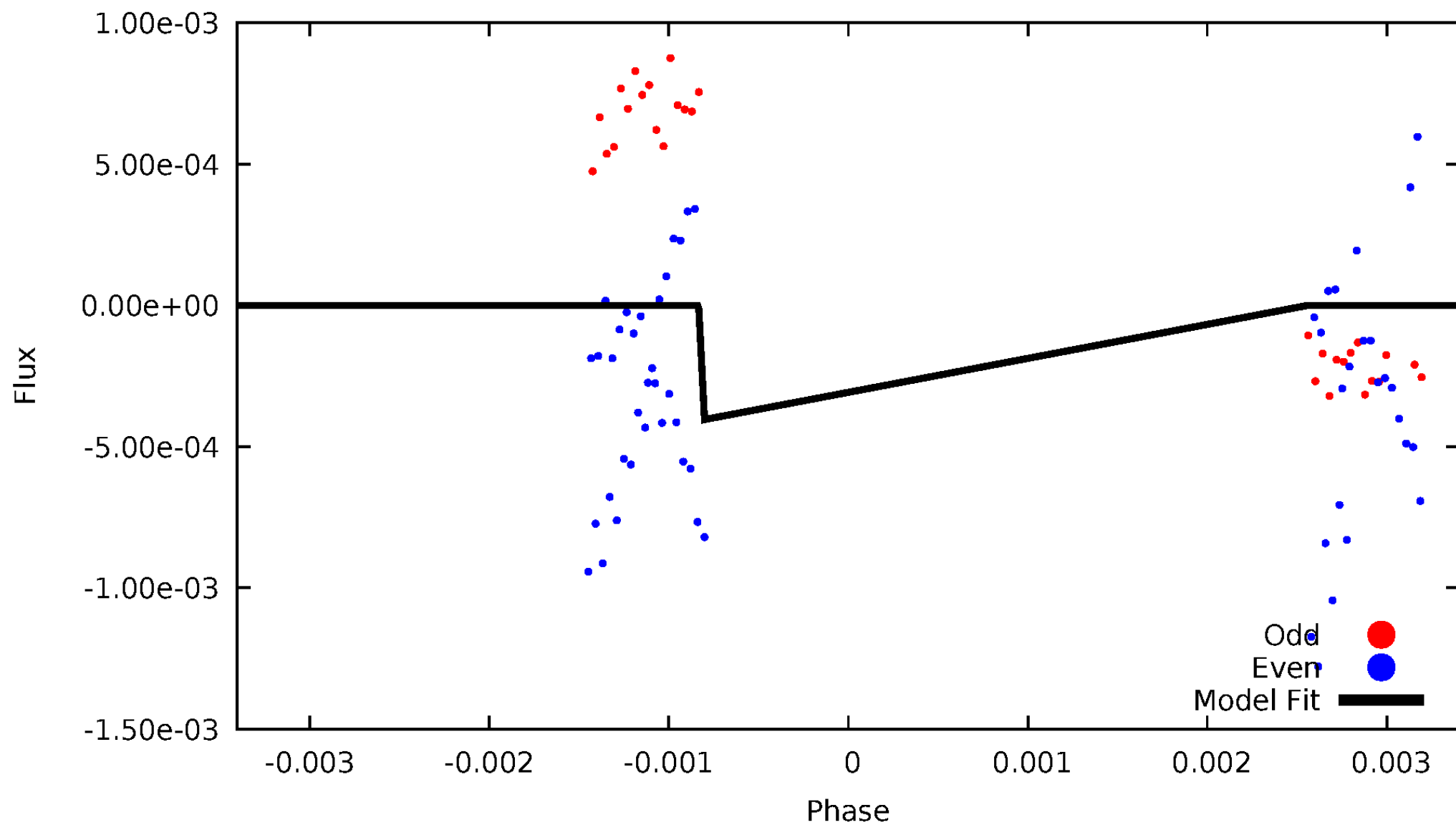
DV Odd/Even

TCE 006145098-02



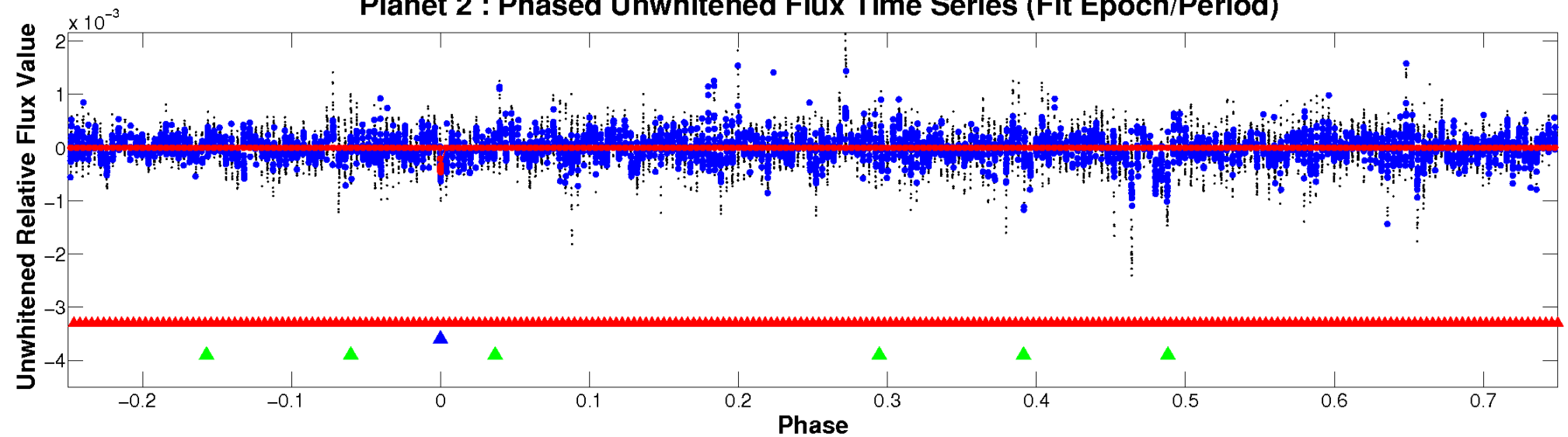
ALT Odd/Even

TCE 006145098-02

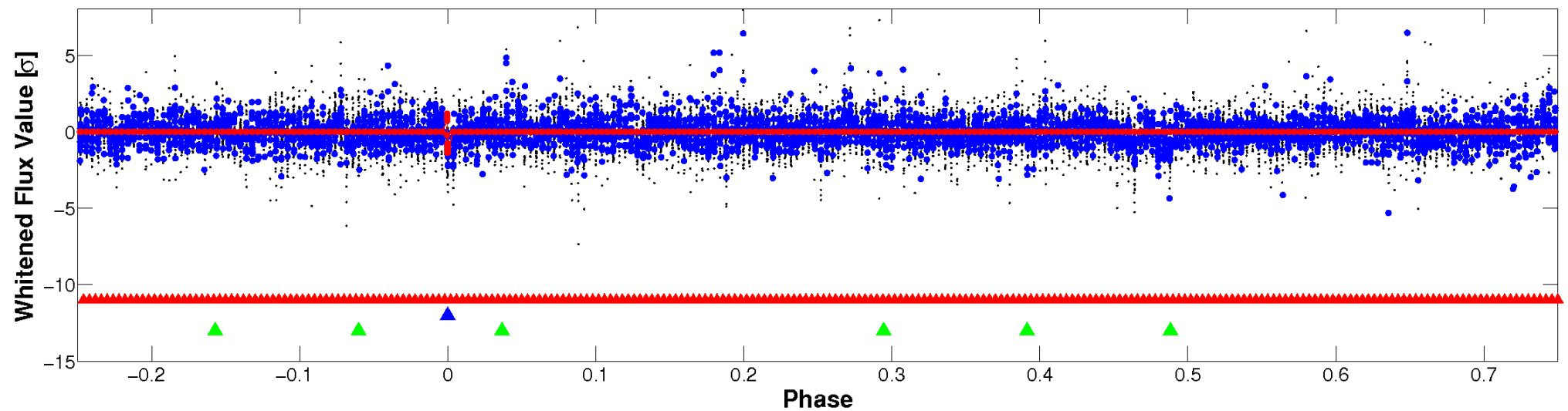


Non-Whitened Vs. Whitened Light Curve

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

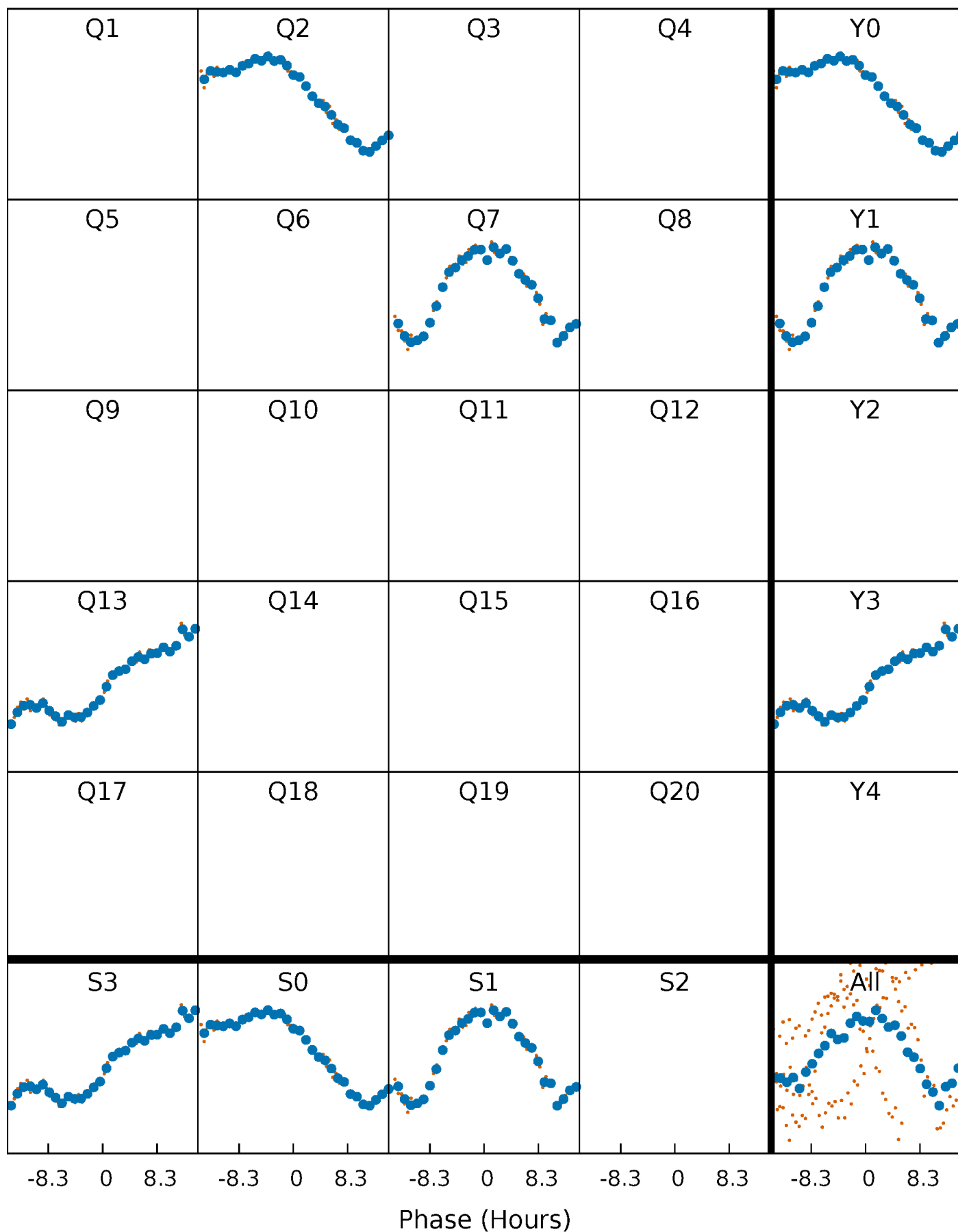


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



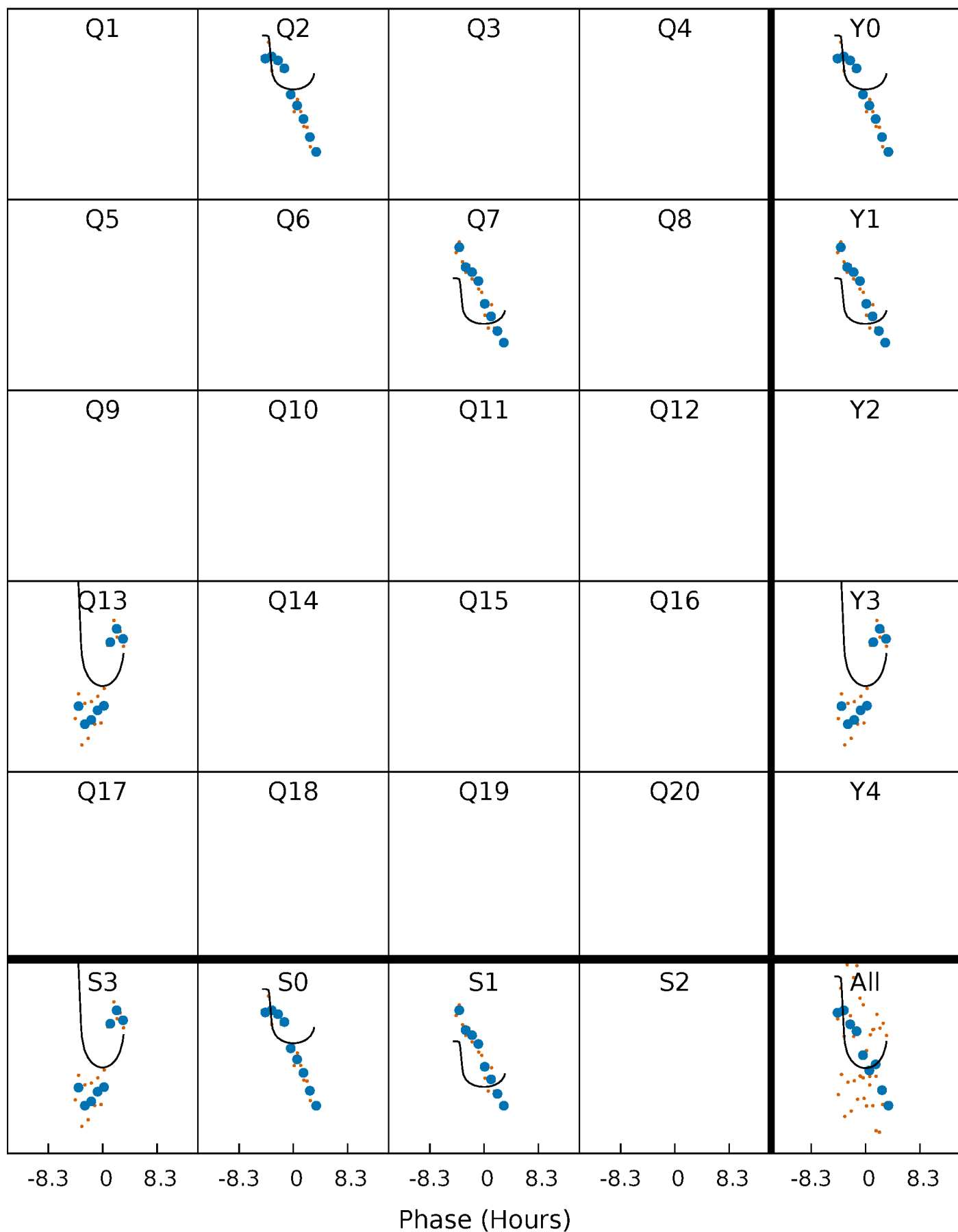
PDC Quarter-Phased Transit Curves

TCE 006145098-02 P=517.579137 Days $T_0=194.423335$ (BKJD)



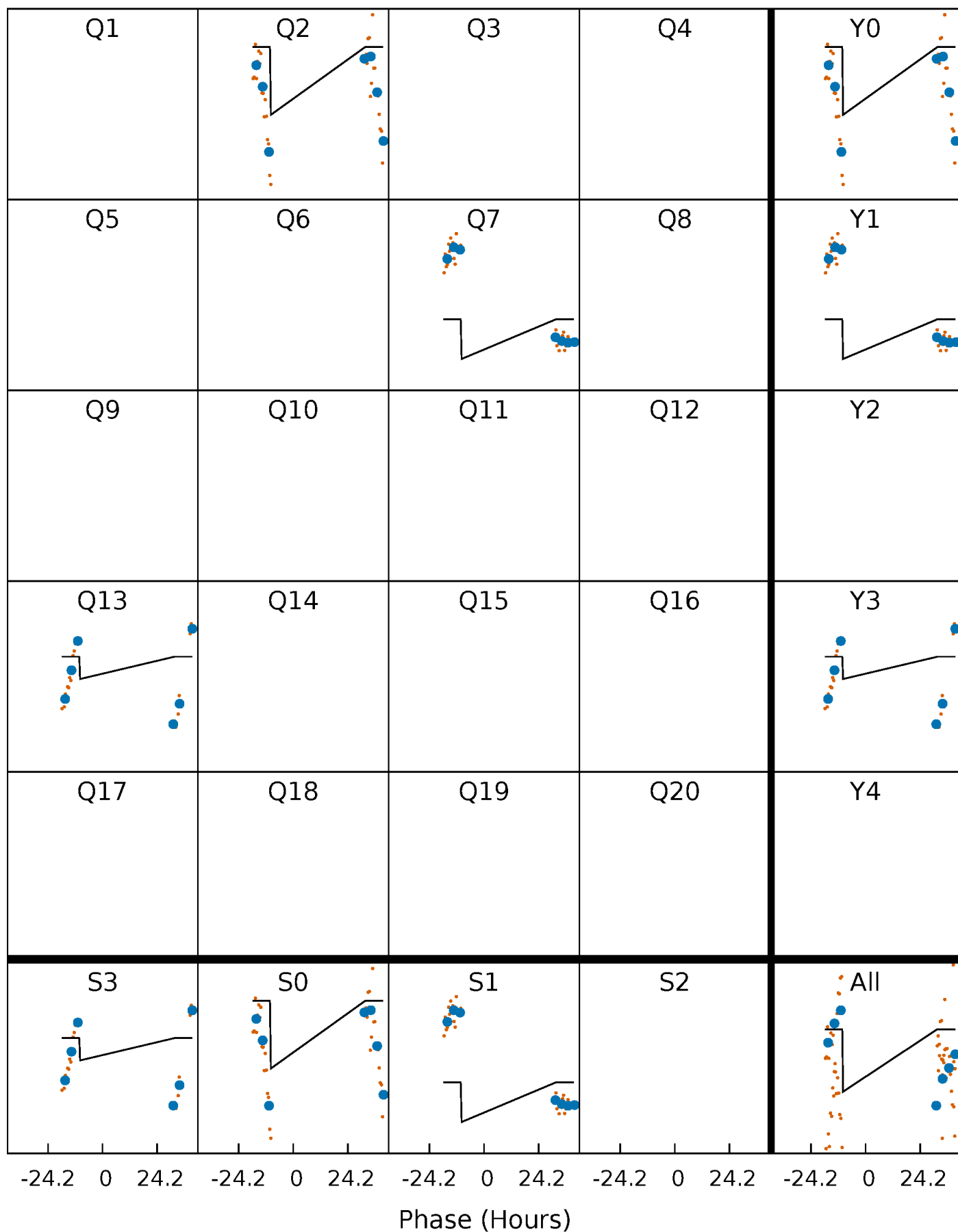
DV Quarter-Phased Transit Curves

TCE 006145098-02 P=517.579137 Days $T_0=194.423335$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

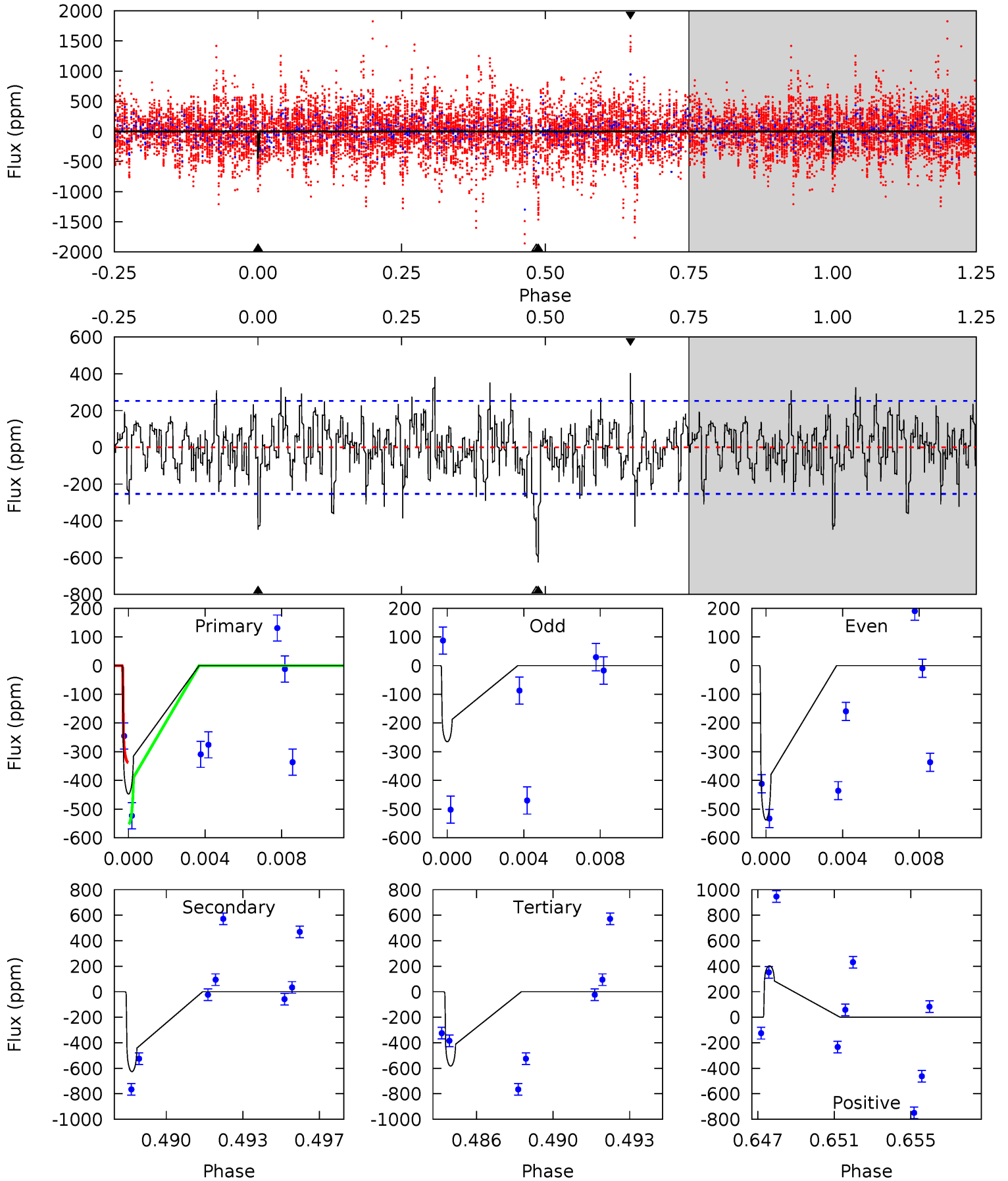
TCE 006145098-02 P=517.595697 Days $T_0=194.966510$ (BKJD)



DV Model-Shift Uniqueness Test

006145098-02, P = 517.579137 Days, E = 194.423335 Days

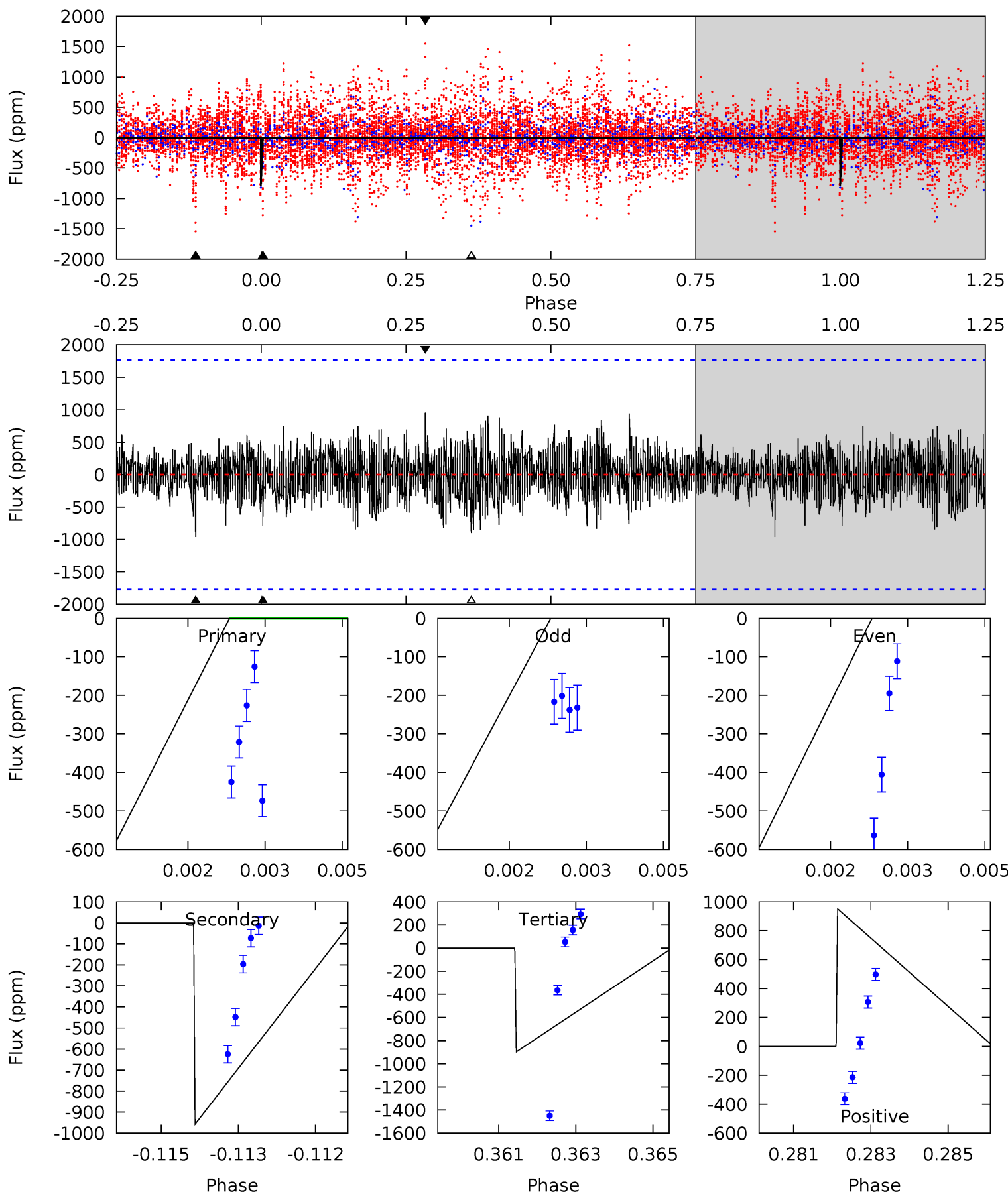
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.20	12.9	12.0	8.29	5.20	2.88	2.50	-2.78	0.91	0.90	4.59	2.55	0.93	0.39	2.23



Alt Model-Shift Uniqueness Test

006145098-02, P = 517.595697 Days, E = 194.966510 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.41	2.90	2.72	2.89	5.36	3.14	0.62	-0.31	-0.47	0.18	0.02	0.15	0	0.50	0



Stellar Parameters For KIC 006145098

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6587^{+158}_{-197}	$3.777^{+0.292}_{-0.097}$	$-0.140^{+0.300}_{-0.250}$	$2.658^{+0.506}_{-0.939}$	$1.542^{+0.215}_{-0.323}$	$0.116^{+0.235}_{-0.035}$
	+2%/-3%	+8%/-3%	+214%/-179%	+19%/-35%	+14%/-21%	+204%/-31%
Source	PHO1	FLK73	KIC0	DSEP		

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 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 006145098-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-626 ± 49	$5.64^{+2.63}_{-2.25}$	537^{+31}_{-48}	7161^{+2822}_{-1154}	22571^{+41000}_{-11761}
Alt.	-958 ± 330	$17.17^{+3.96}_{-3.71}$	536^{+34}_{-49}	4710^{+493}_{-413}	3698^{+2722}_{-1519}

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

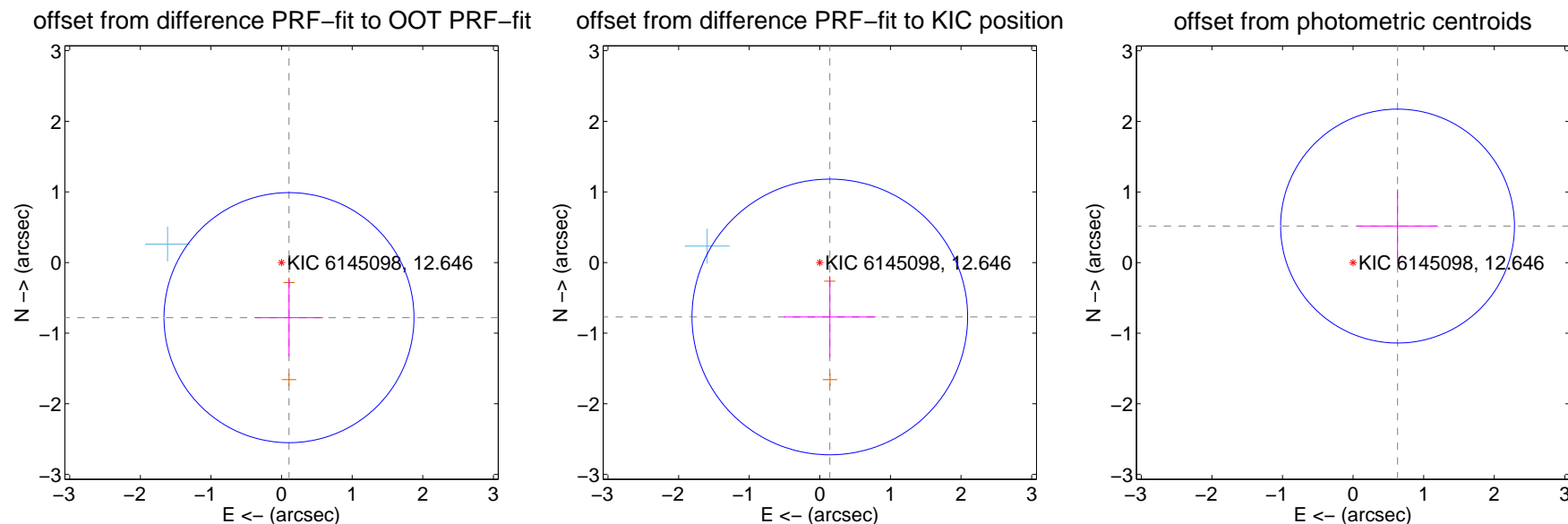
DV Centroid Data

Supplemental centroid analysis for 006145098-02. Kepler magnitude: 12.65. Transit SNR 7.04

There are 1 quarters with good PRF difference image offsets

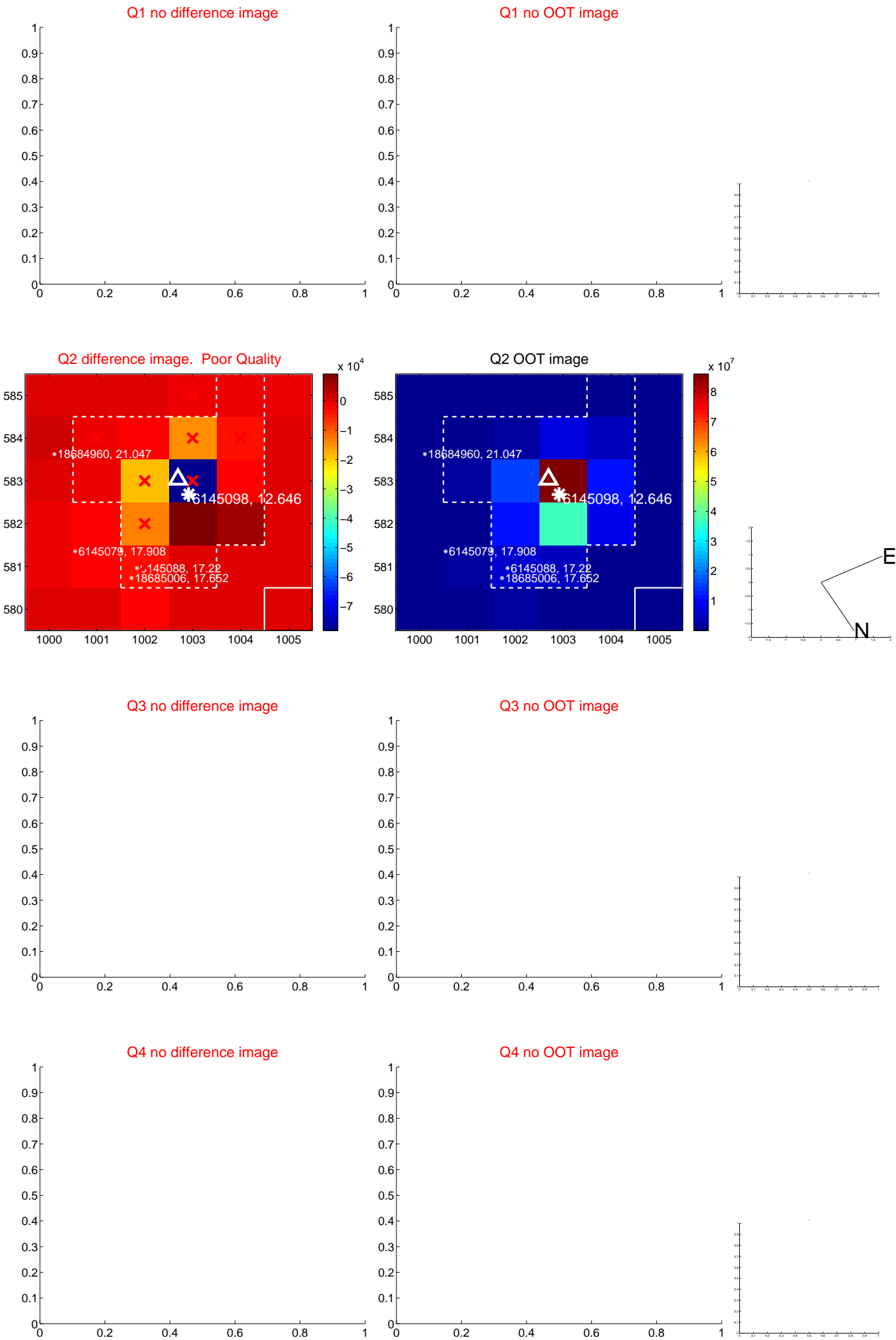
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.788 ± 0.590	1.33	-0.105 ± 0.482	-0.780 ± 0.547
PRF-fit source offset from KIC position	0.783 ± 0.651	1.20	-0.141 ± 0.651	-0.771 ± 0.571
photometric centroid source offset	0.81 ± 0.55	1.48	-0.63 ± 0.57	0.52 ± 0.52

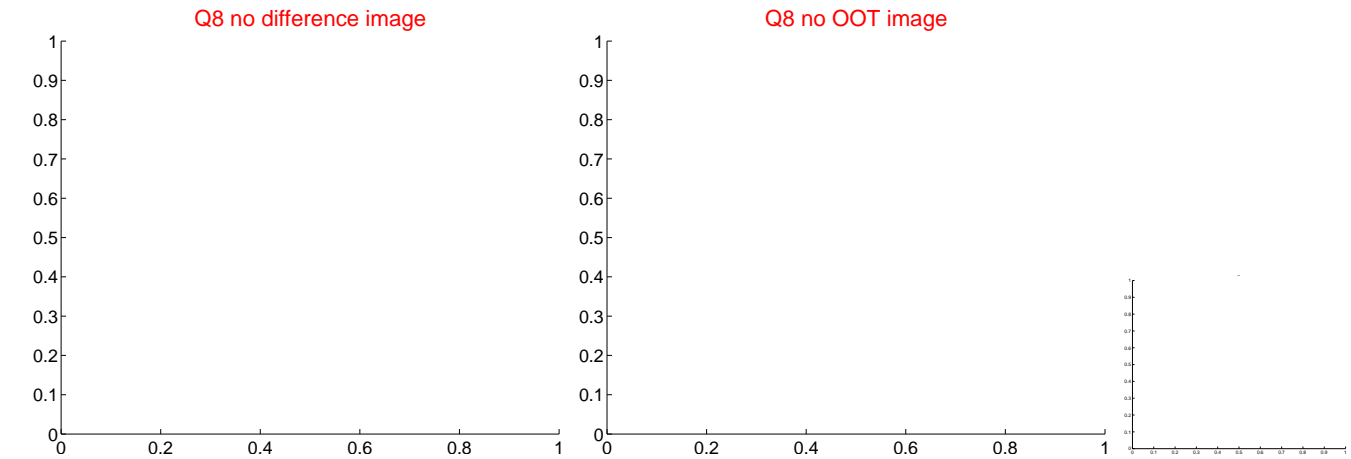
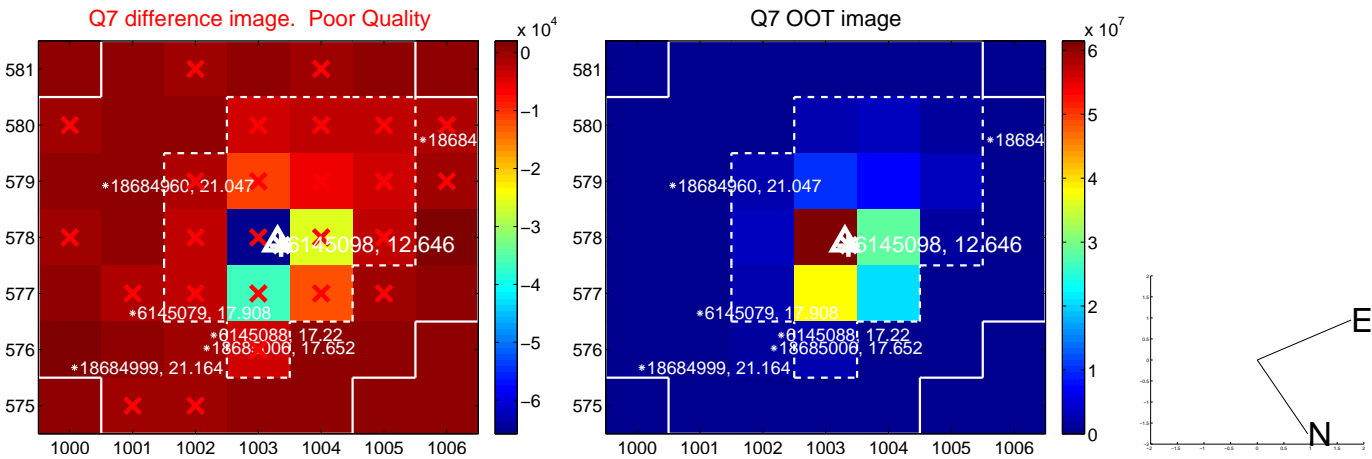
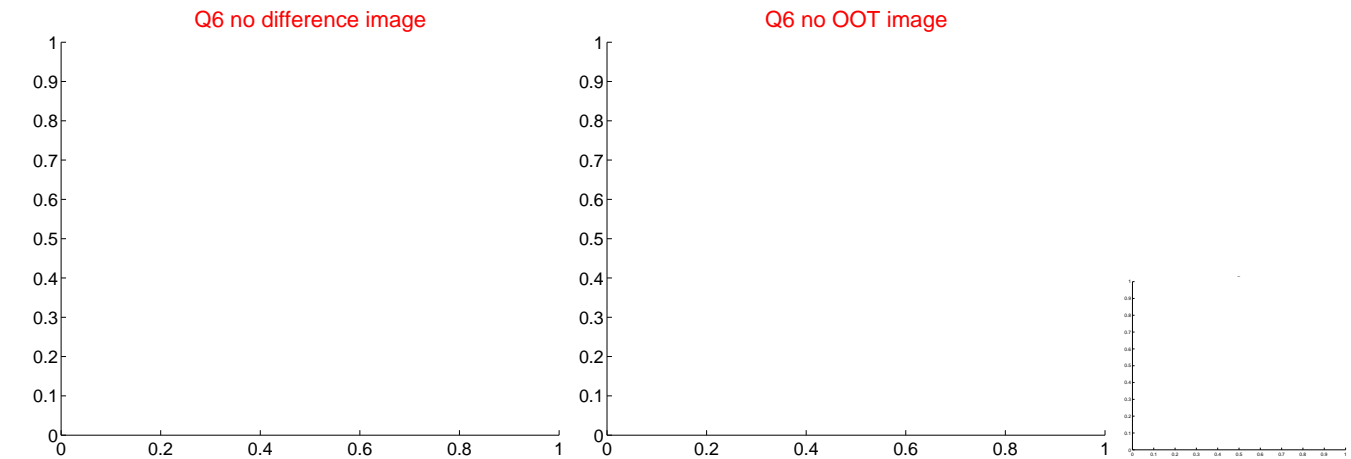
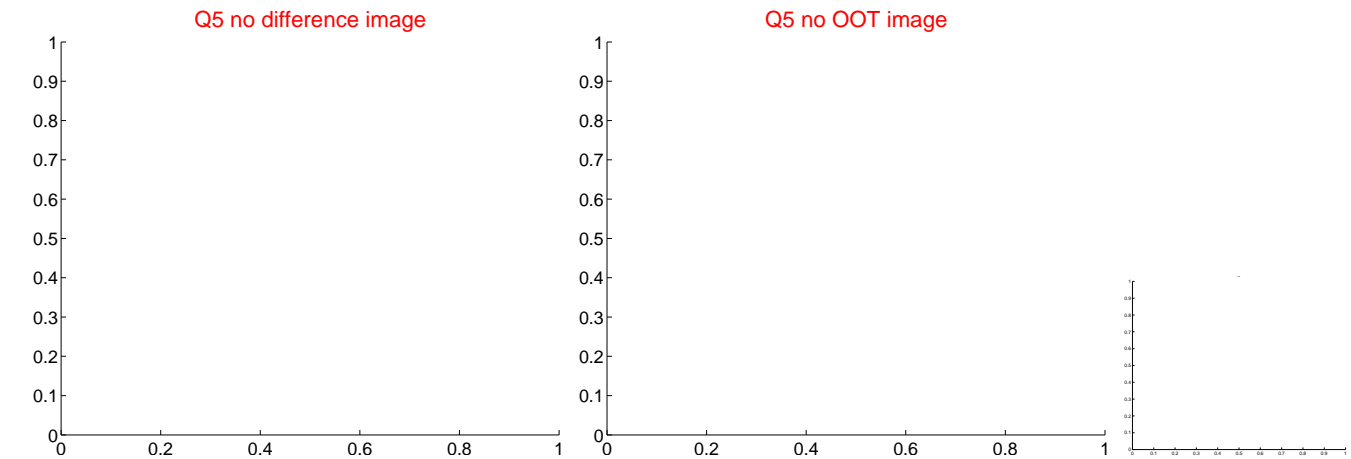


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



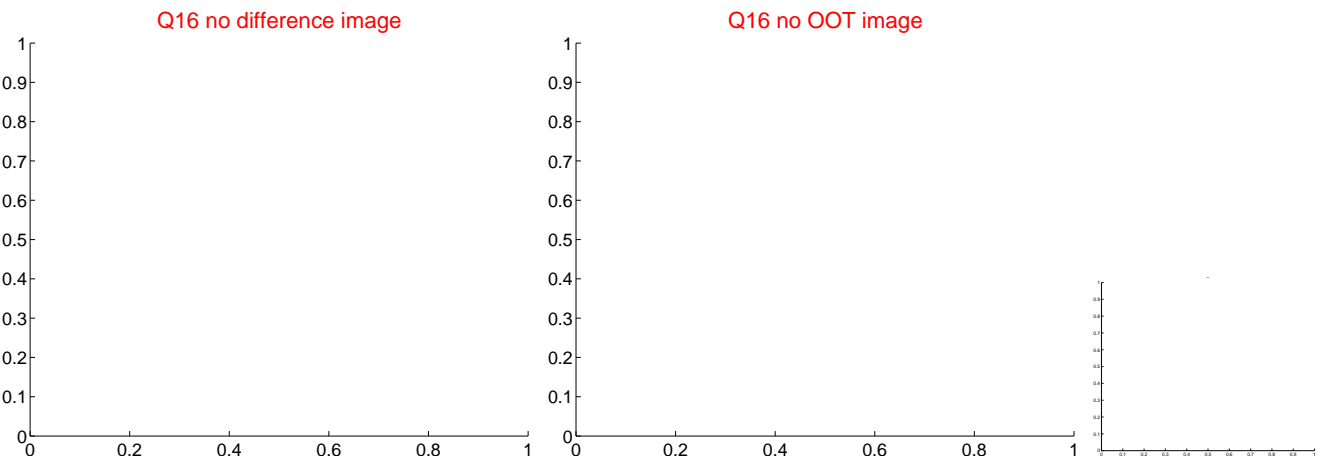
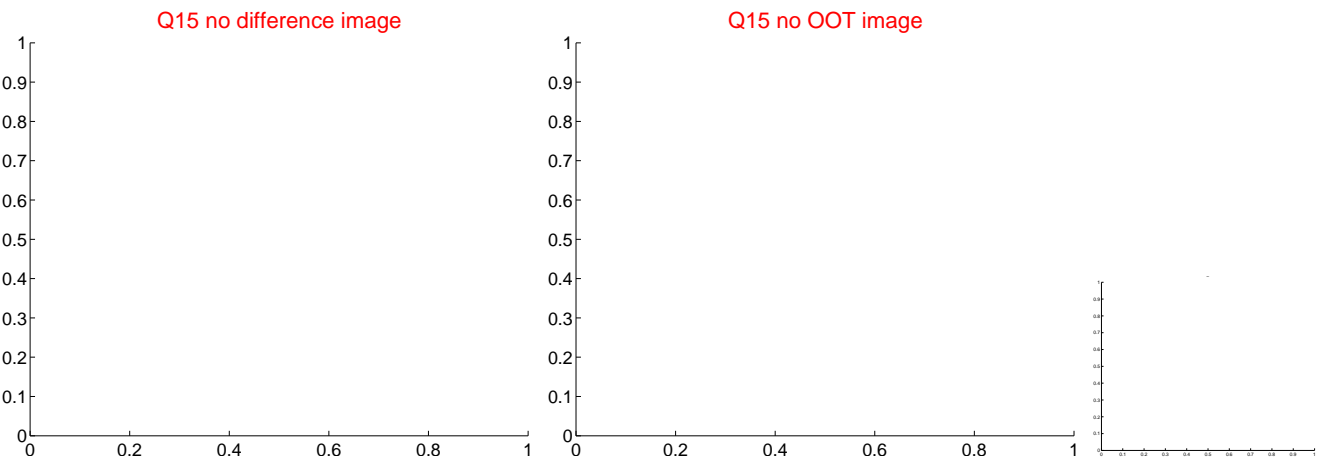
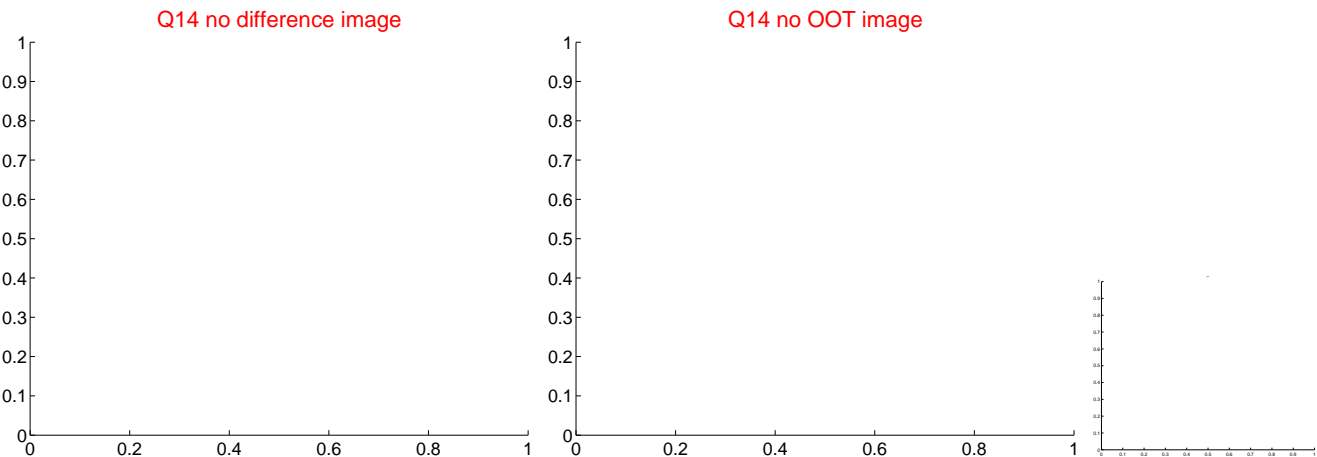
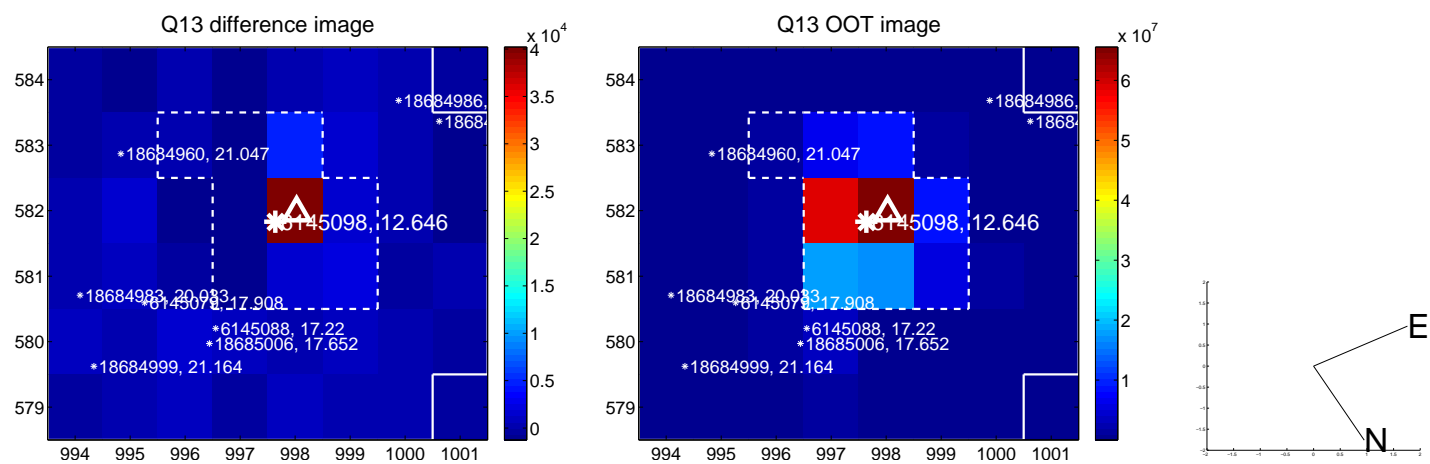
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



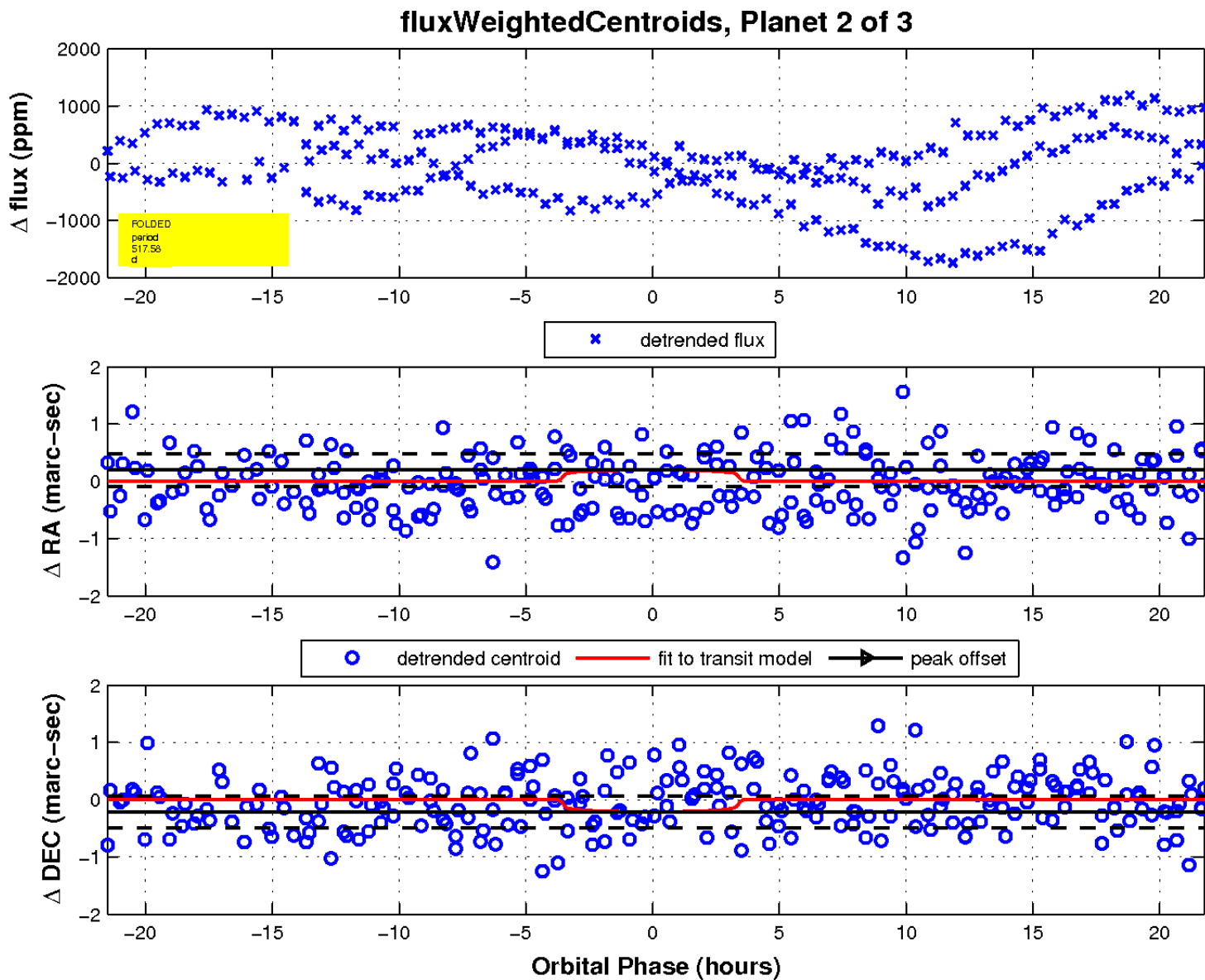
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

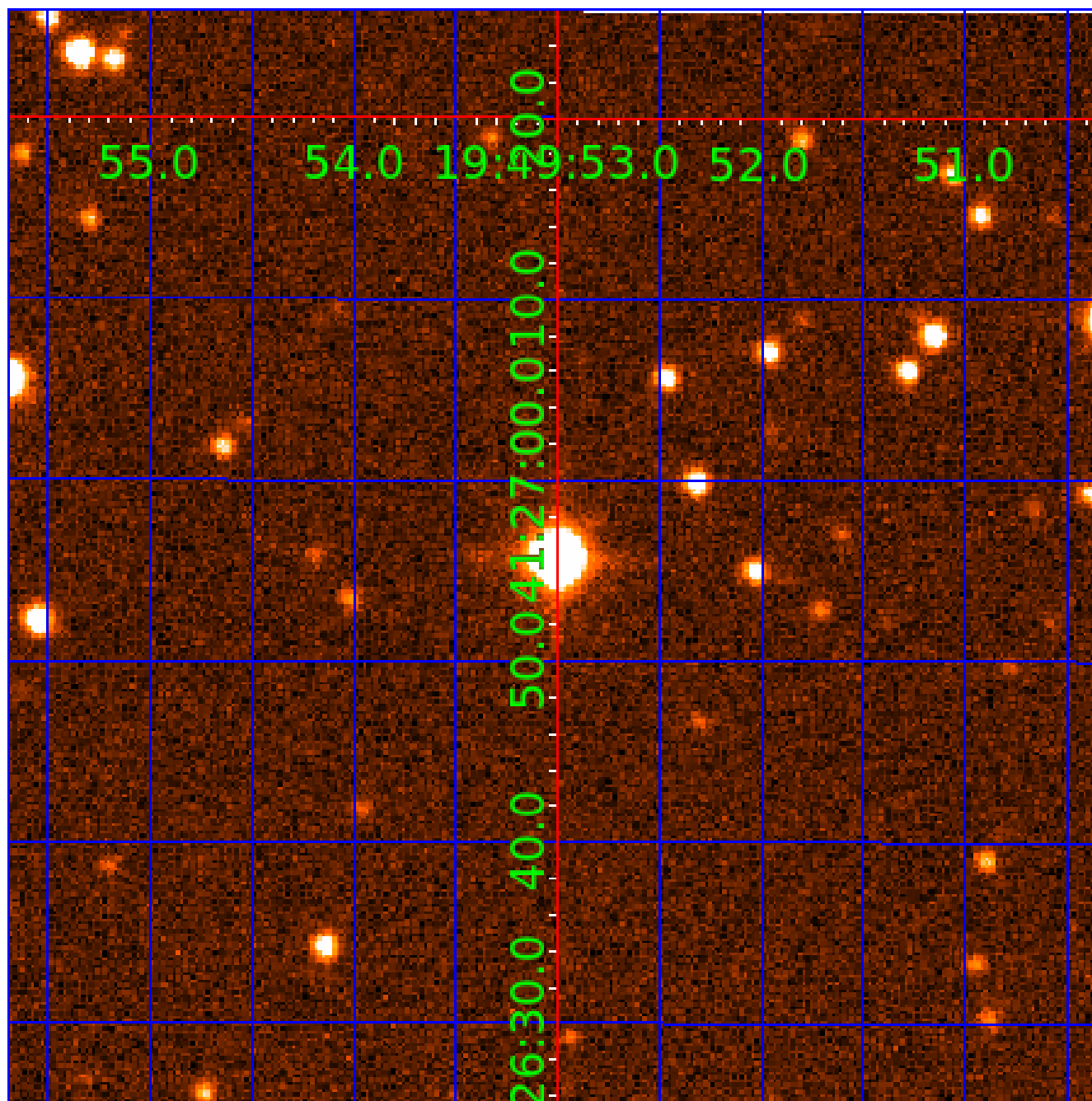


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006145098

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})
006145098-01	OBS	No	2.070368	133.310690	23.6	13.723	7.4	4.2	2.66	6587	1.38	8829.81
006145098-02	OBS	No	517.579137	194.423335	461.6	7.280	10.9	7.0	2.66	6587	6.12	5.61
006145098-03	OBS	No	233.719810	213.422052	1185.1	22.819	10.1	10.3	2.66	6587	10.87	16.18

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006145098-01	OBS	FP	0.00	1	0	0	0	LPP_DV
006145098-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
006145098-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

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

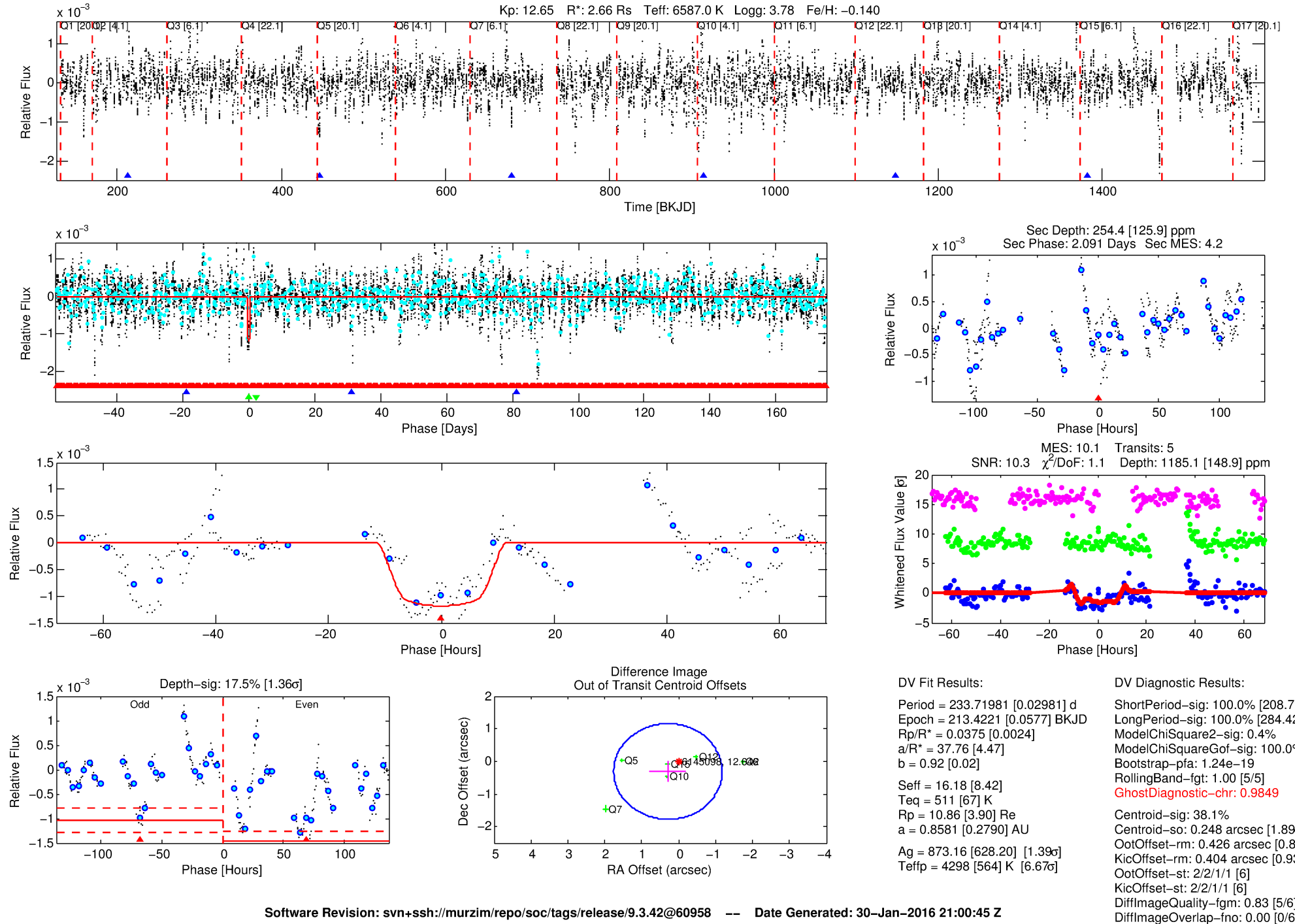
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006145098-03

No Significant Match Found

DV One-Page Summary

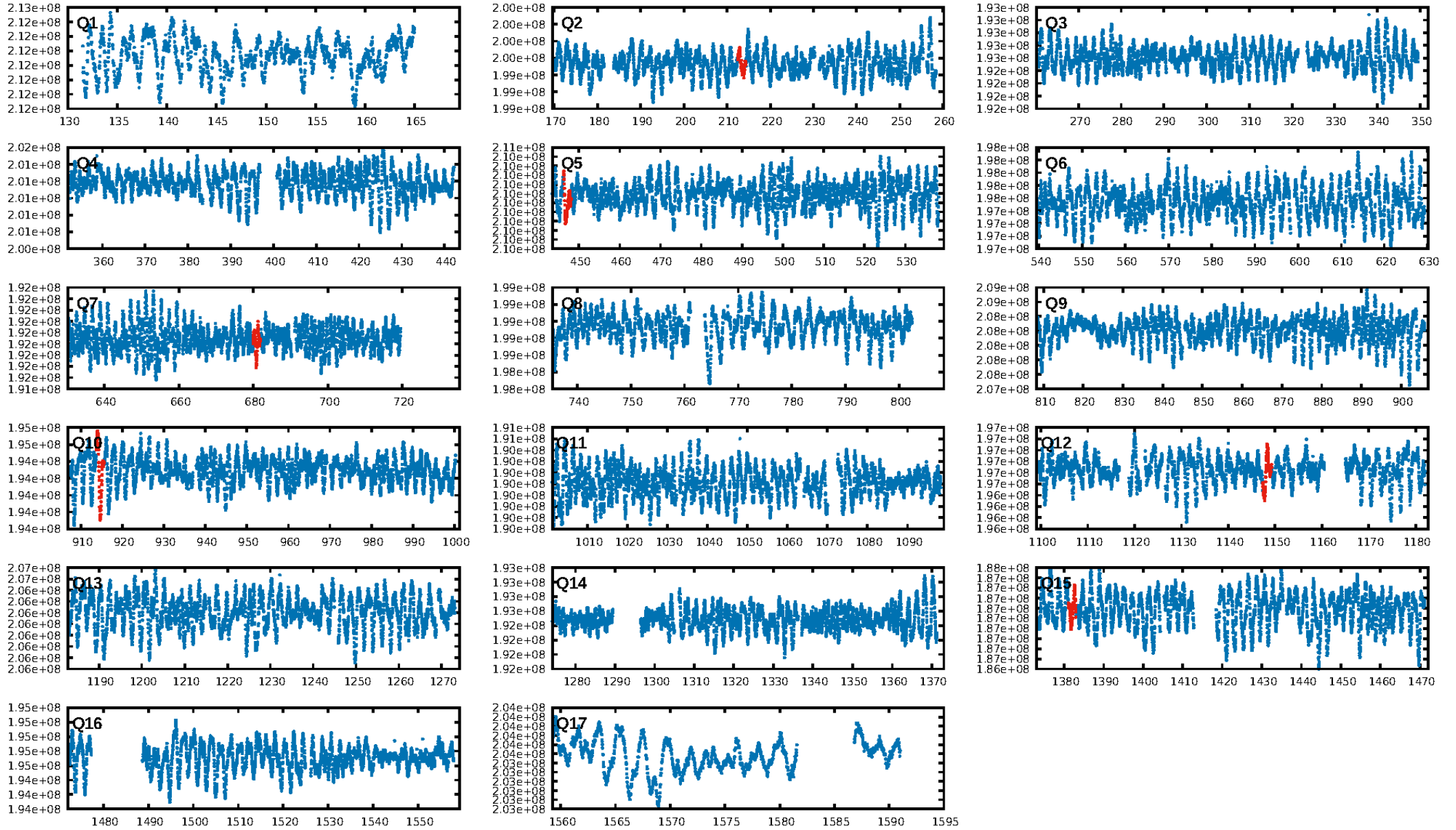
KIC: 6145098 Candidate: 3 of 3 Period: 233.720 d



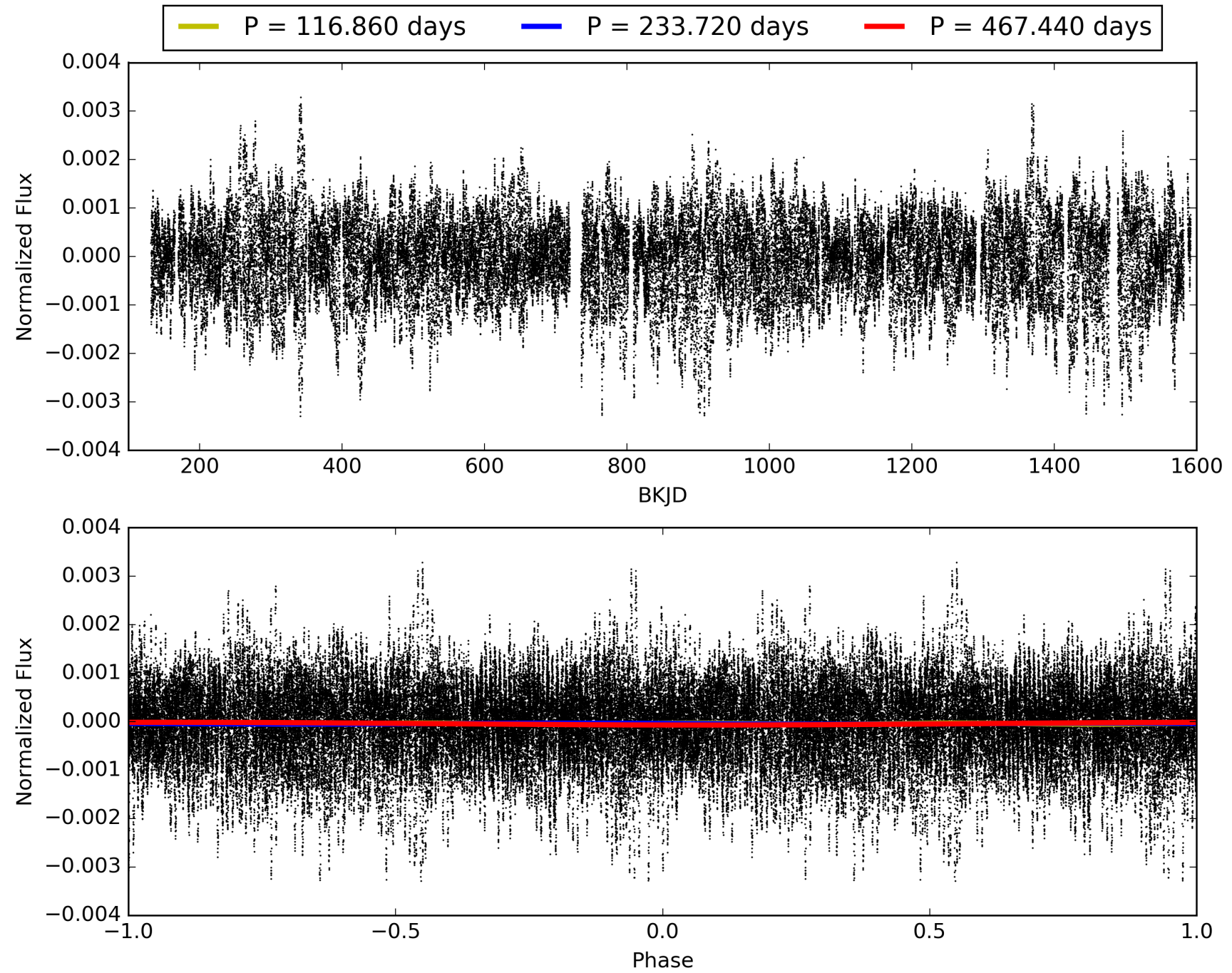
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 21:00:45 Z

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

TCE 006145098-03, PDC Light Curves

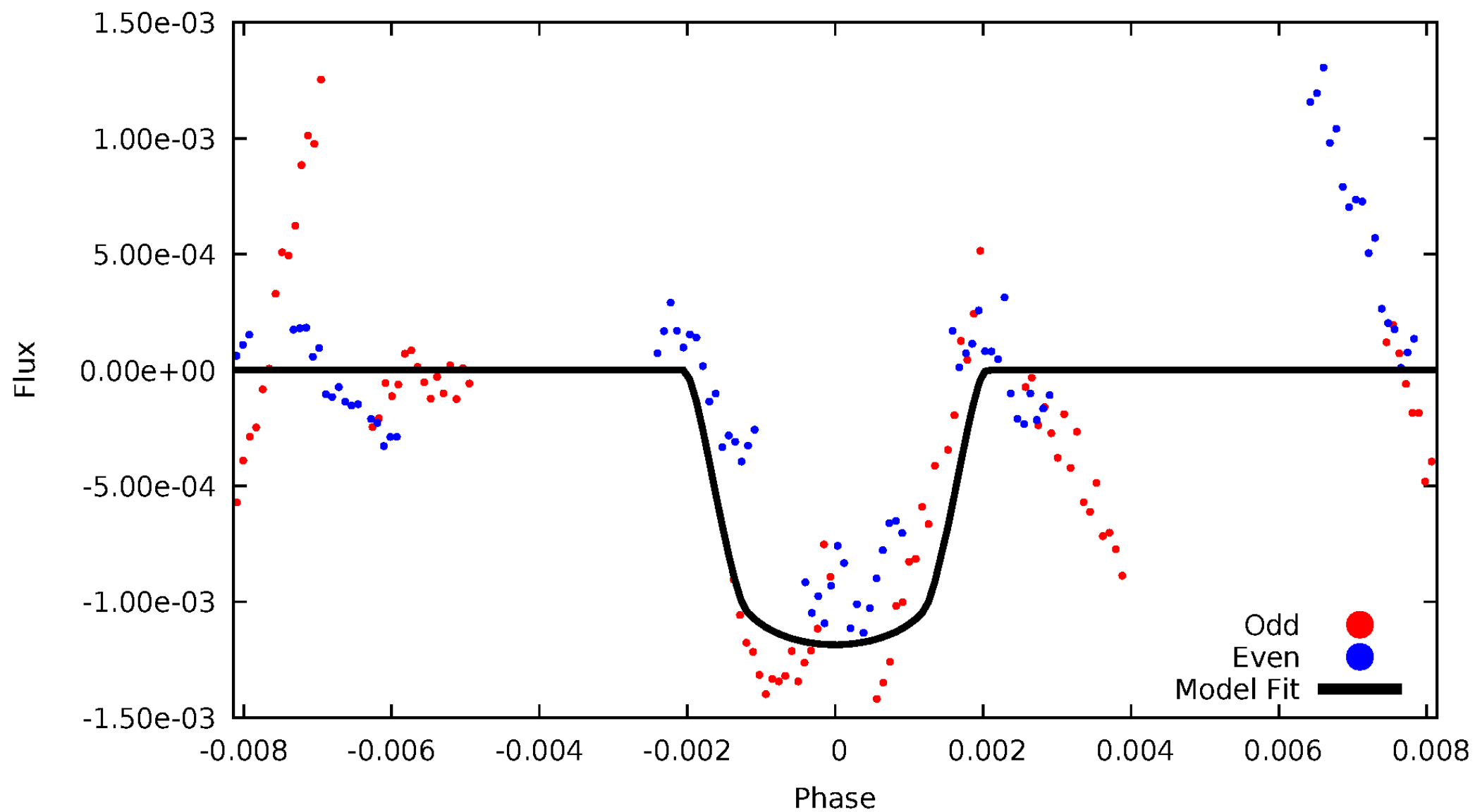


TCE 006145098-03



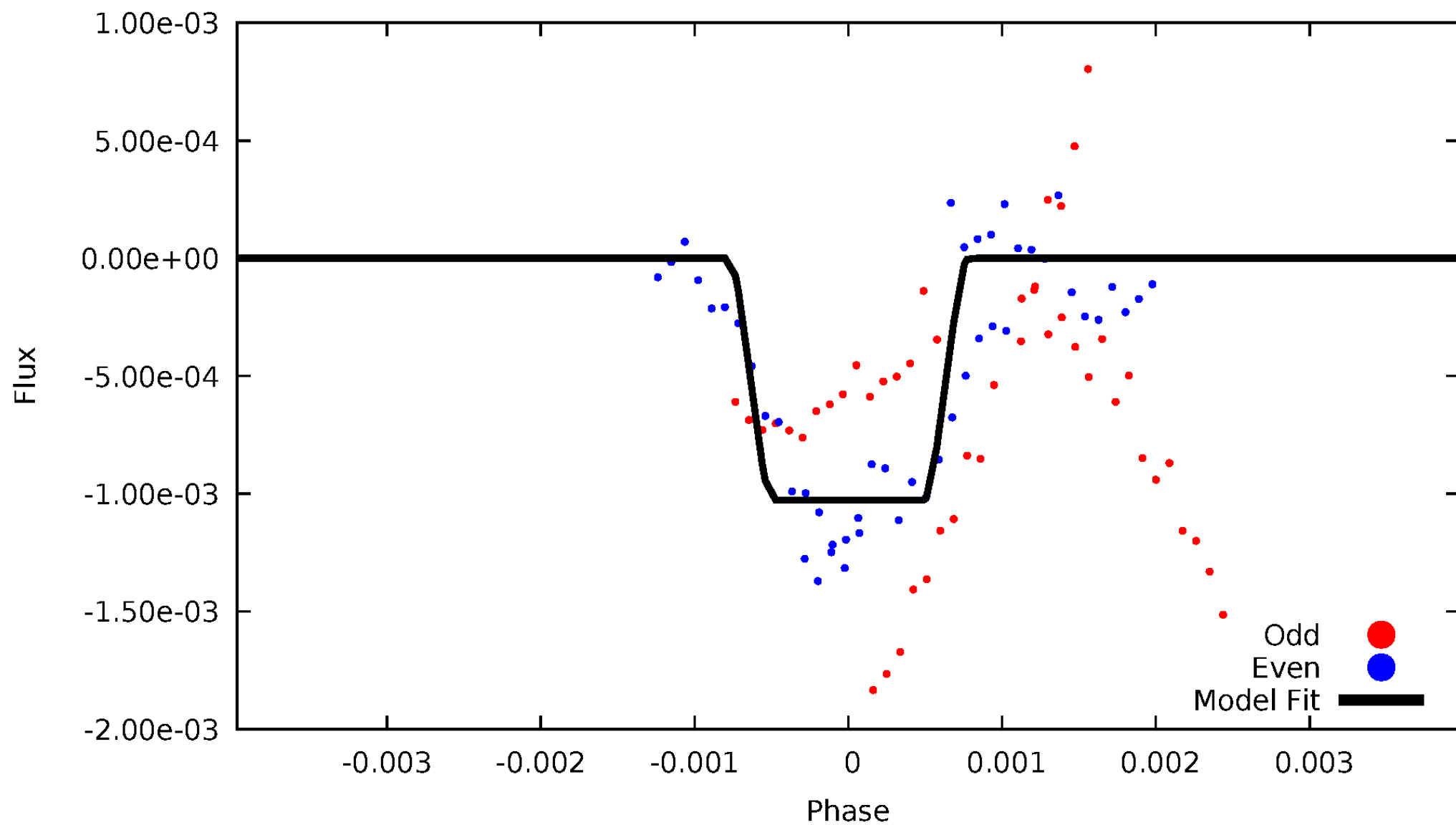
DV Odd/Even

TCE 006145098-03



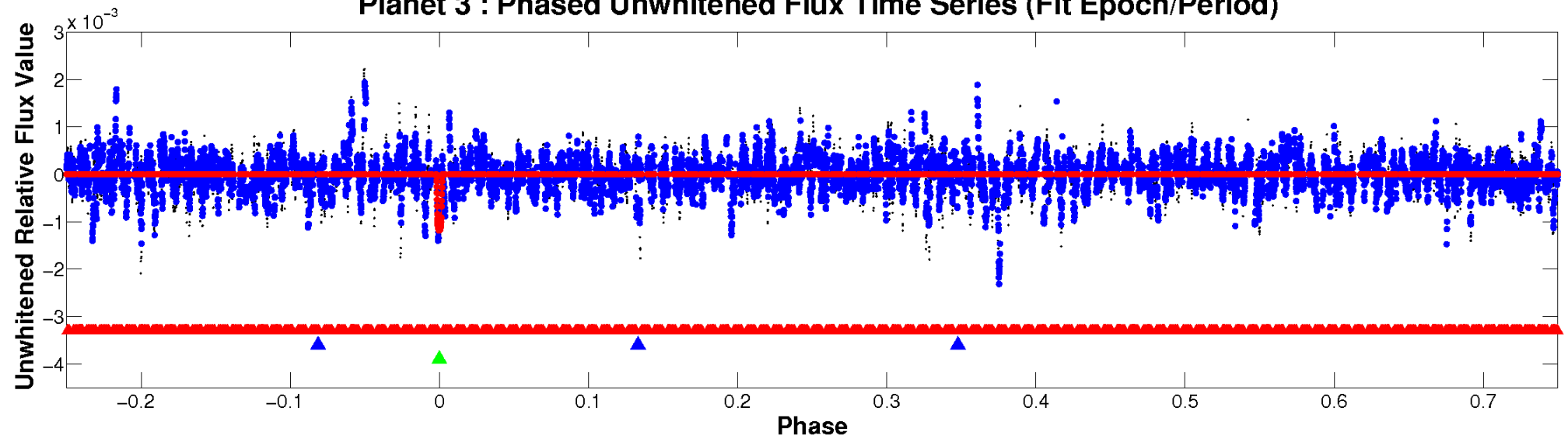
ALT Odd/Even

TCE 006145098-03

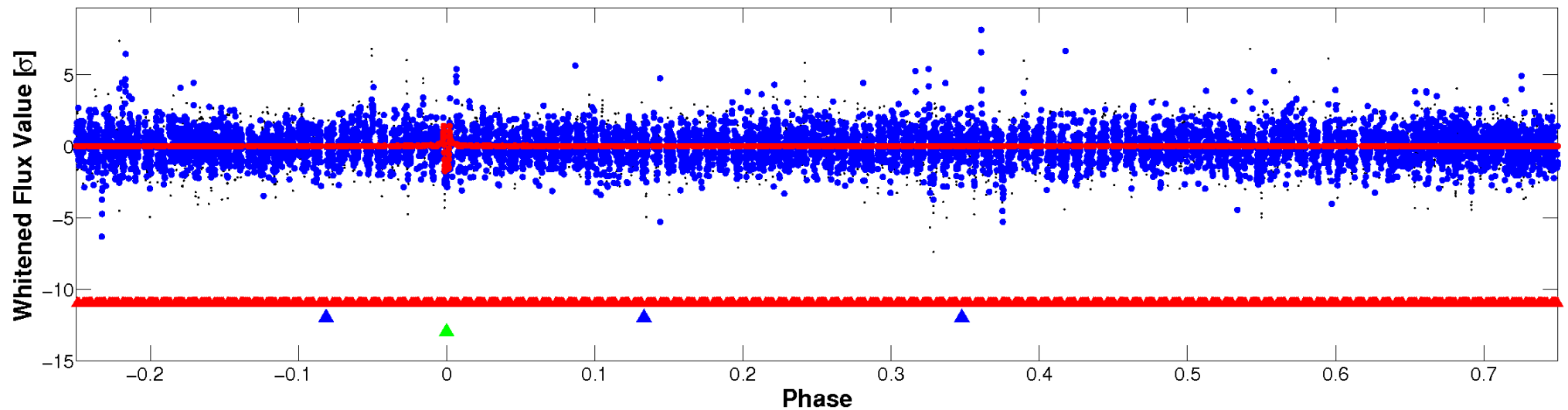


Non-Whitened Vs. Whitened Light Curve

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



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



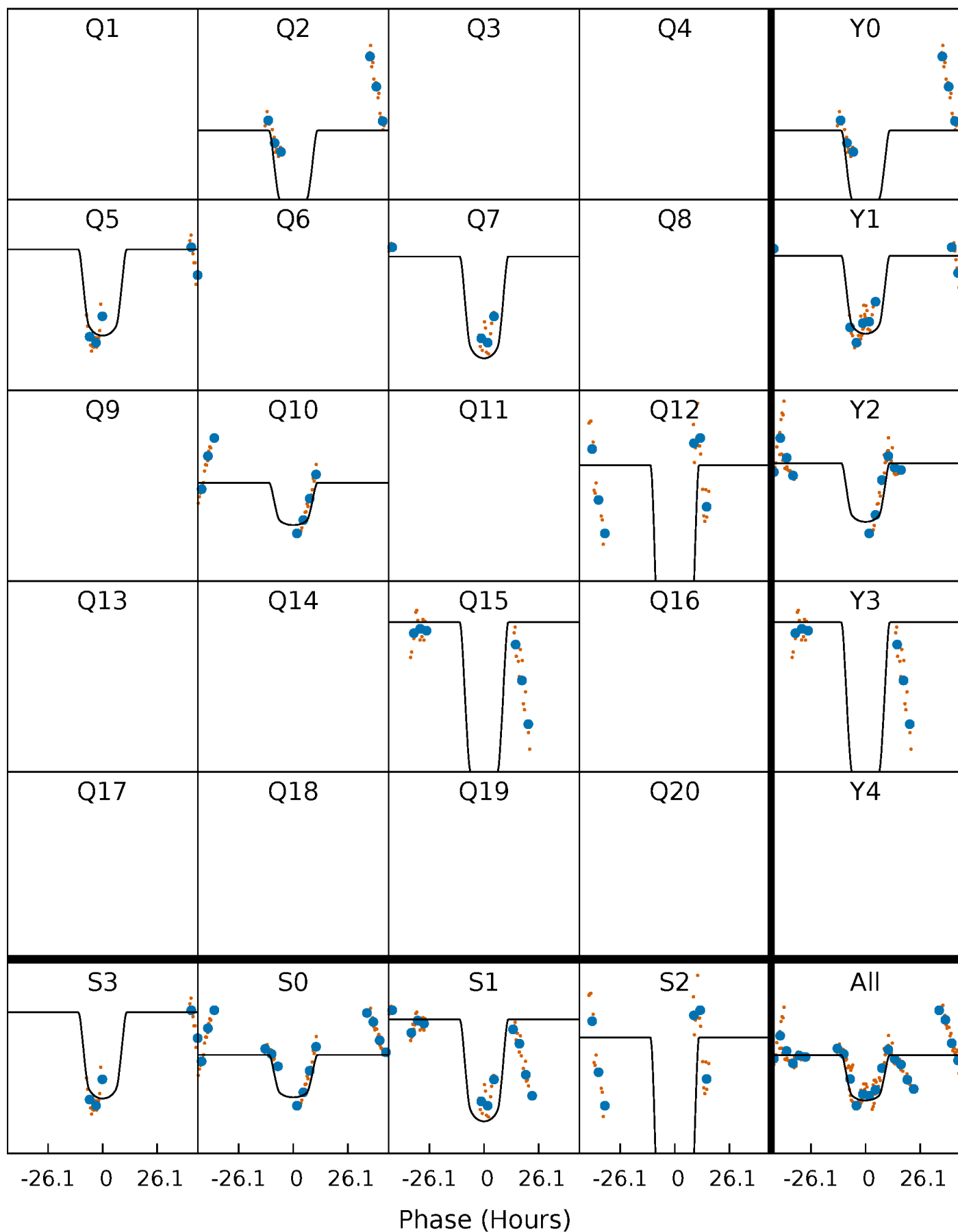
PDC Quarter-Phased Transit Curves

TCE 006145098-03 $P=233.719810$ Days $T_0=213.422052$ (BKJD)



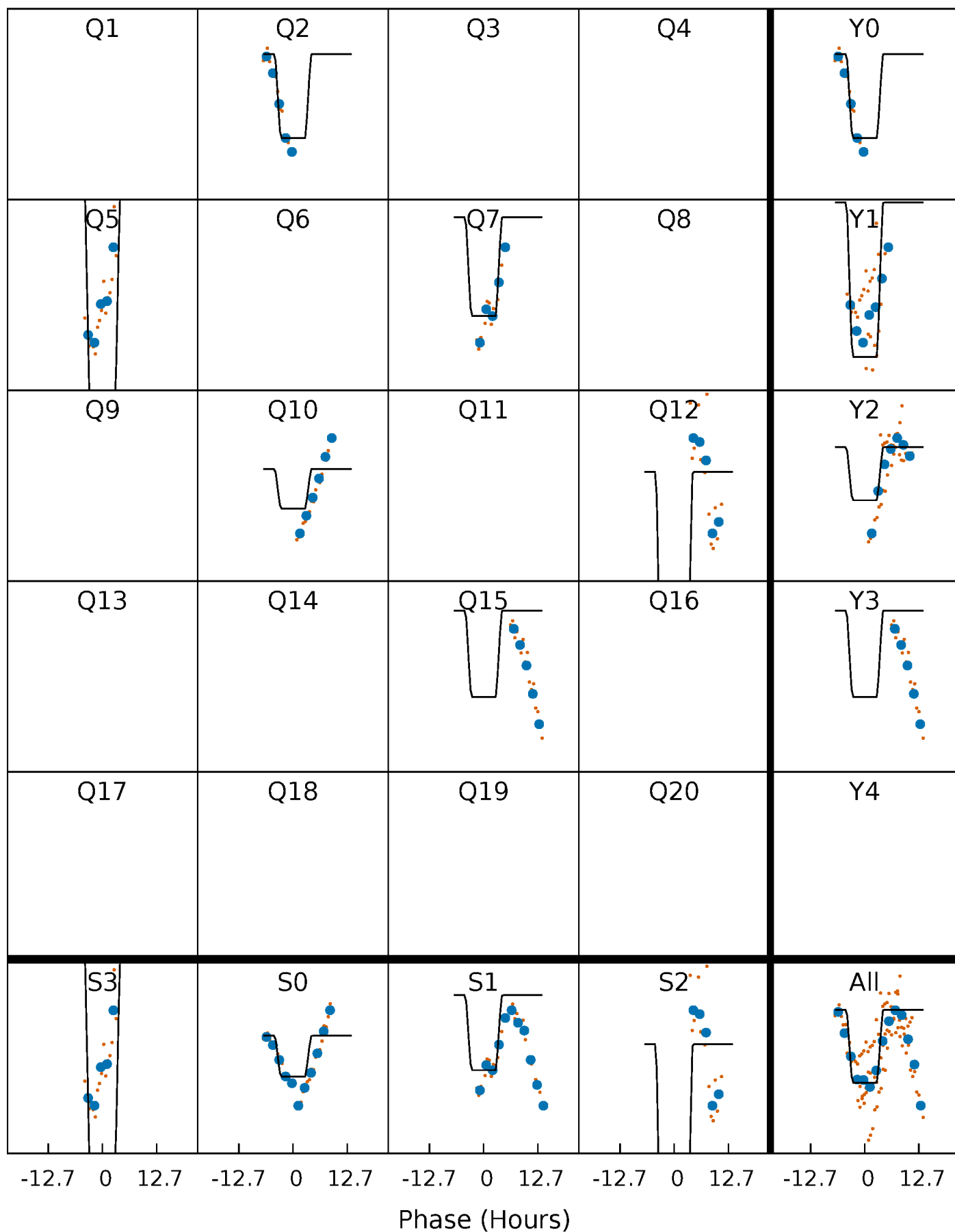
DV Quarter-Phased Transit Curves

TCE 006145098-03 P=233.719810 Days $T_0=213.422052$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

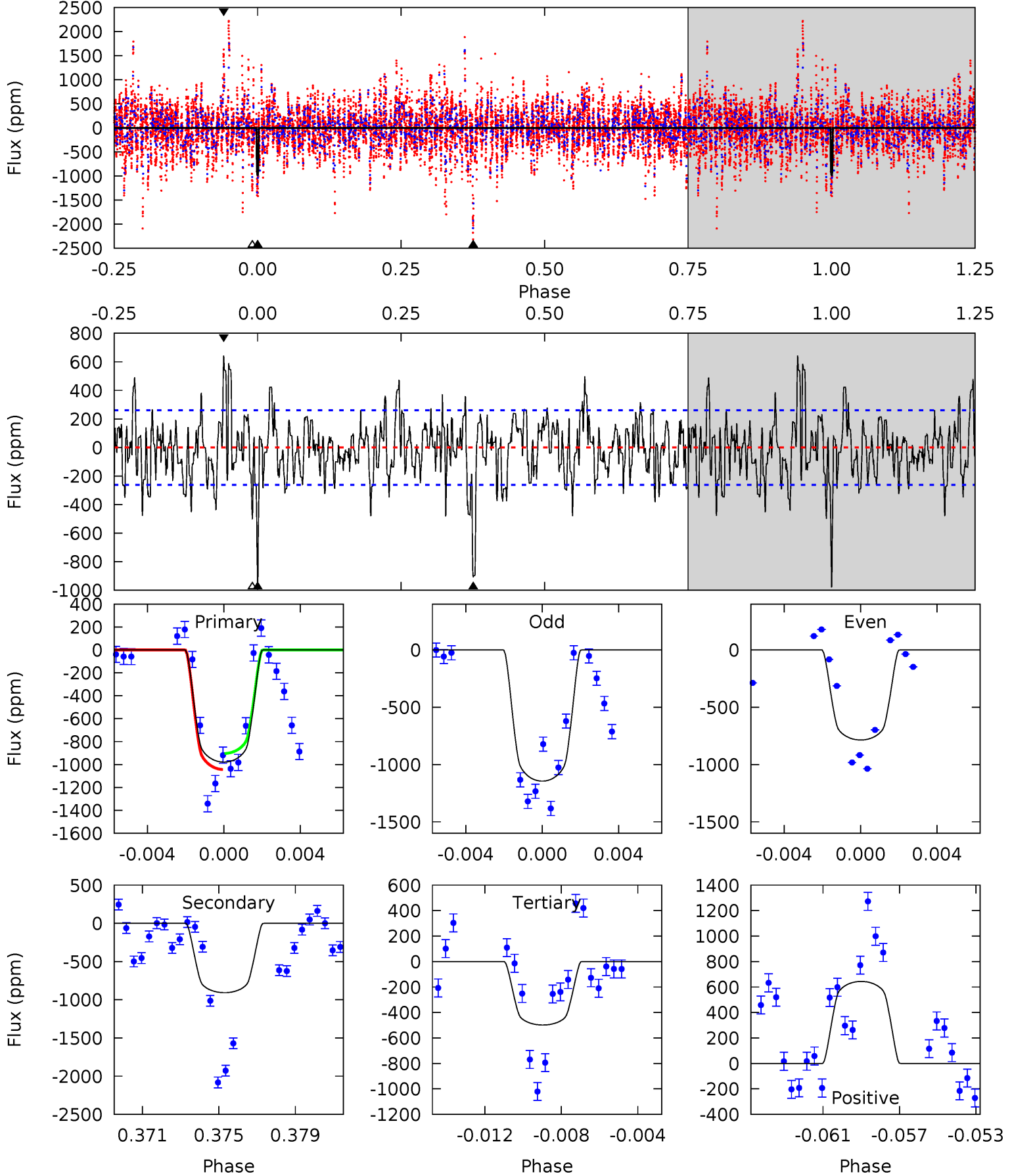
TCE 006145098-03 P=233.841661 Days $T_0=213.150508$ (BKJD)



DV Model-Shift Uniqueness Test

006145098-03, P = 233.719810 Days, E = 213.422052 Days

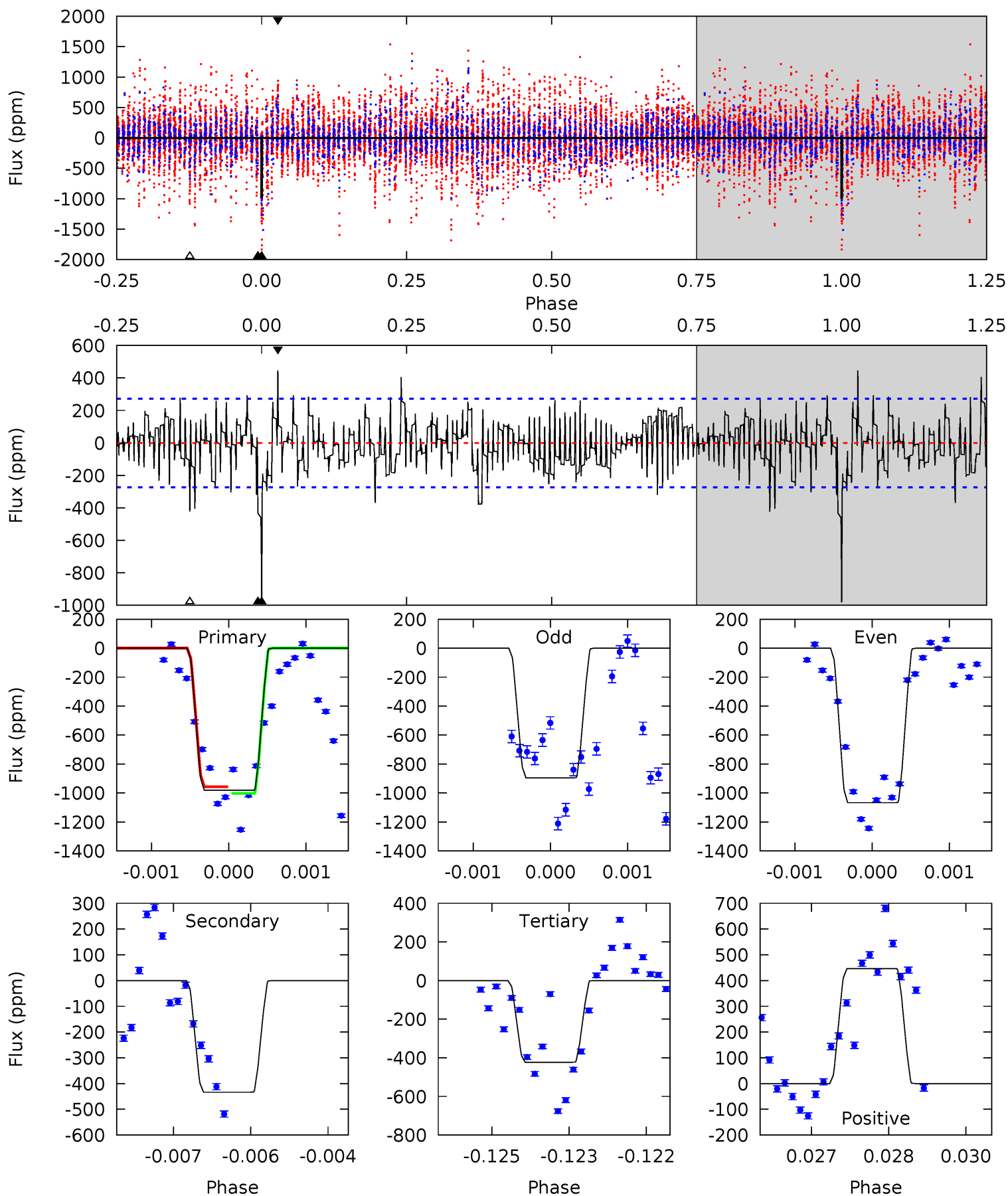
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.5	18.1	9.92	12.8	5.20	2.87	3.47	9.57	6.67	8.15	5.25	3.59	0.70	0.40	1.40



Alt Model-Shift Uniqueness Test

006145098-03, P = 233.841661 Days, E = 213.150508 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.3	8.55	8.34	8.80	5.38	3.18	2.32	11.0	10.5	0.21	-0.25	1.65	0.73	0.31	0.46



Stellar Parameters For KIC 006145098

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6587^{+158}_{-197}	$3.777^{+0.292}_{-0.097}$	$-0.140^{+0.300}_{-0.250}$	$2.658^{+0.506}_{-0.939}$	$1.542^{+0.215}_{-0.323}$	$0.116^{+0.235}_{-0.035}$
	+2%/-3%	+8%/-3%	+214%/-179%	+19%/-35%	+14%/-21%	+204%/-31%
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 006145098-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-907 ± 50	$10.47^{+1.51}_{-2.00}$	700^{+42}_{-60}	5898^{+246}_{-256}	3404^{+1428}_{-791}
Alt.	-433 ± 51	$8.88^{+1.44}_{-1.71}$	698^{+44}_{-61}	5336^{+255}_{-233}	2244^{+1142}_{-594}

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

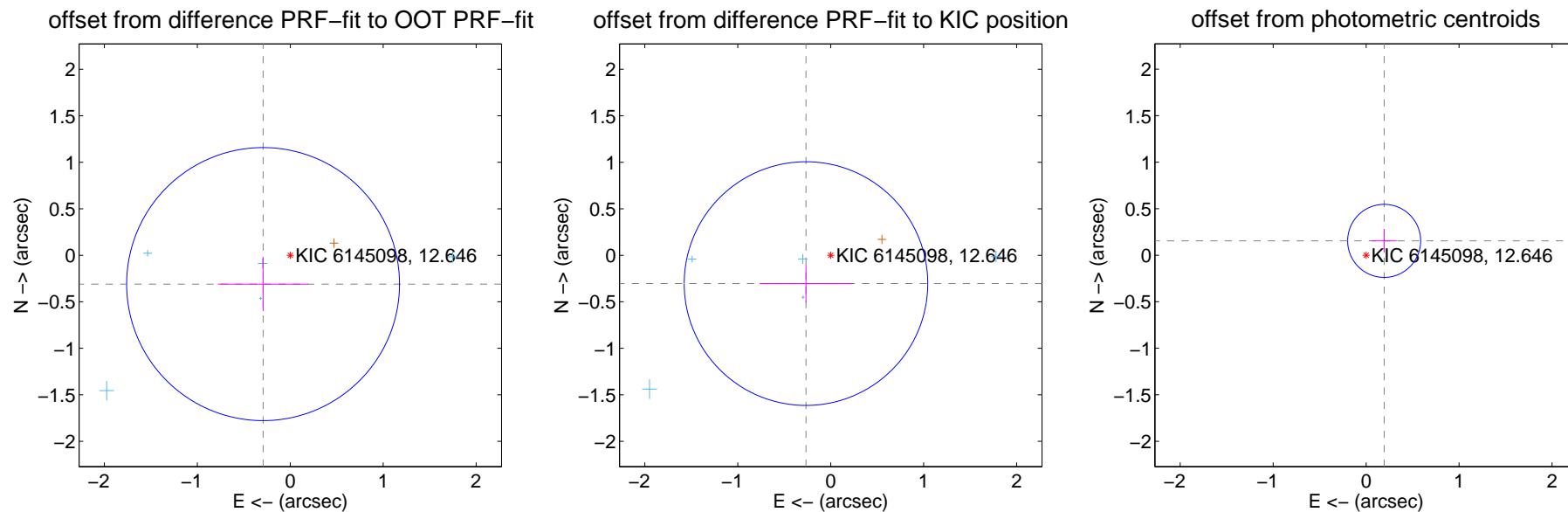
DV Centroid Data

Supplemental centroid analysis for 006145098-03. Kepler magnitude: 12.65. Transit SNR 10.26

There are 5 quarters with good PRF difference image offsets

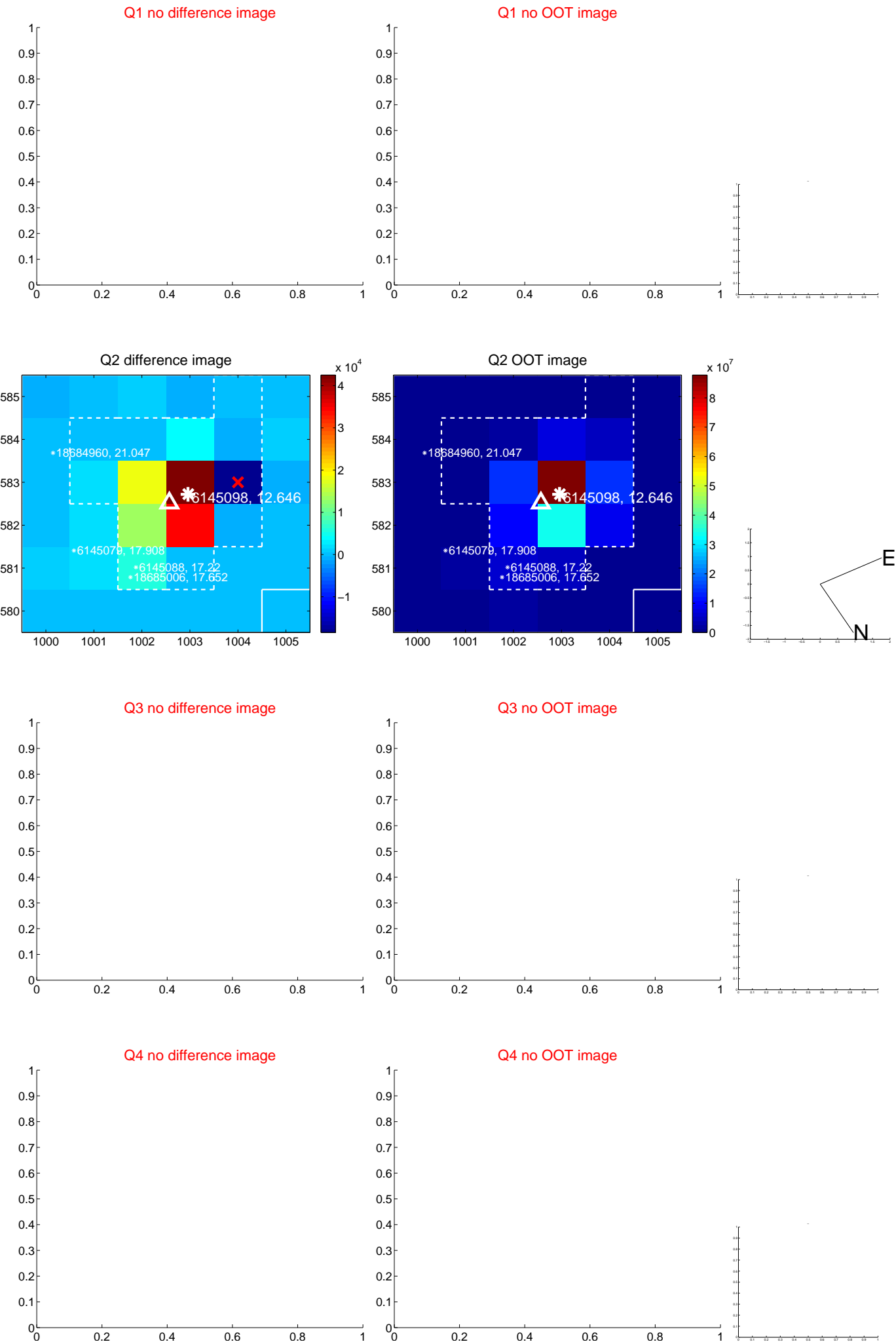
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.426 ± 0.489	0.87	0.293 ± 0.486	-0.310 ± 0.291
PRF-fit source offset from KIC position	0.404 ± 0.437	0.93	0.266 ± 0.500	-0.304 ± 0.201
photometric centroid source offset	0.25 ± 0.13	1.89	-0.19 ± 0.13	0.15 ± 0.13

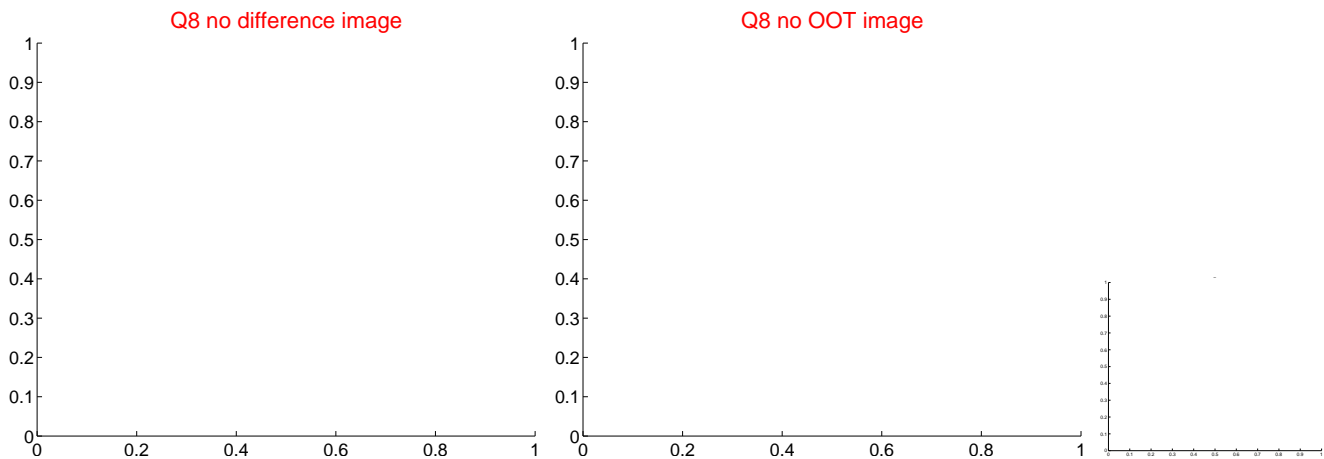
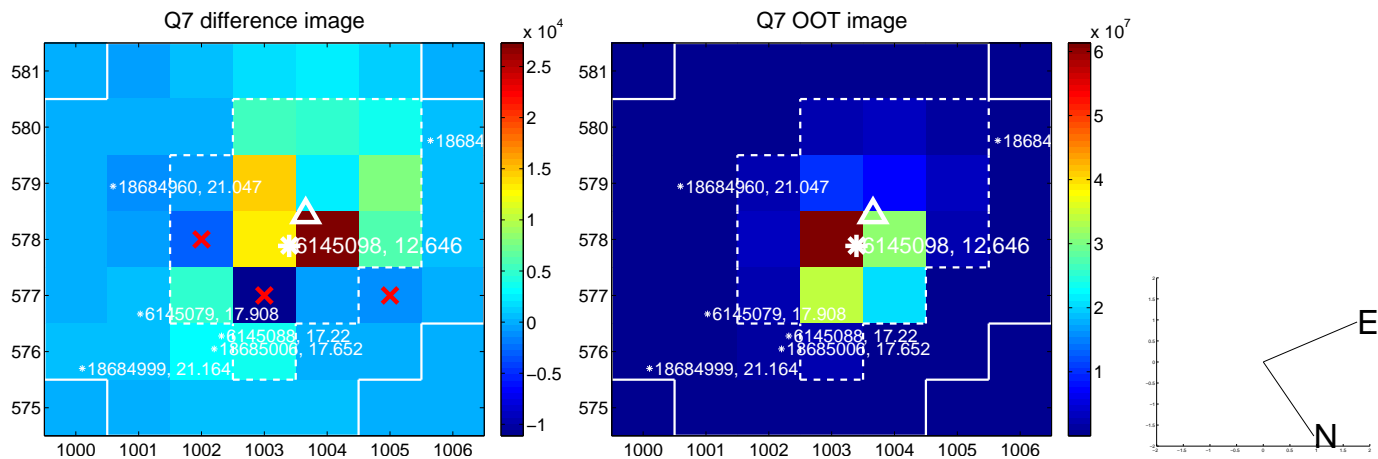
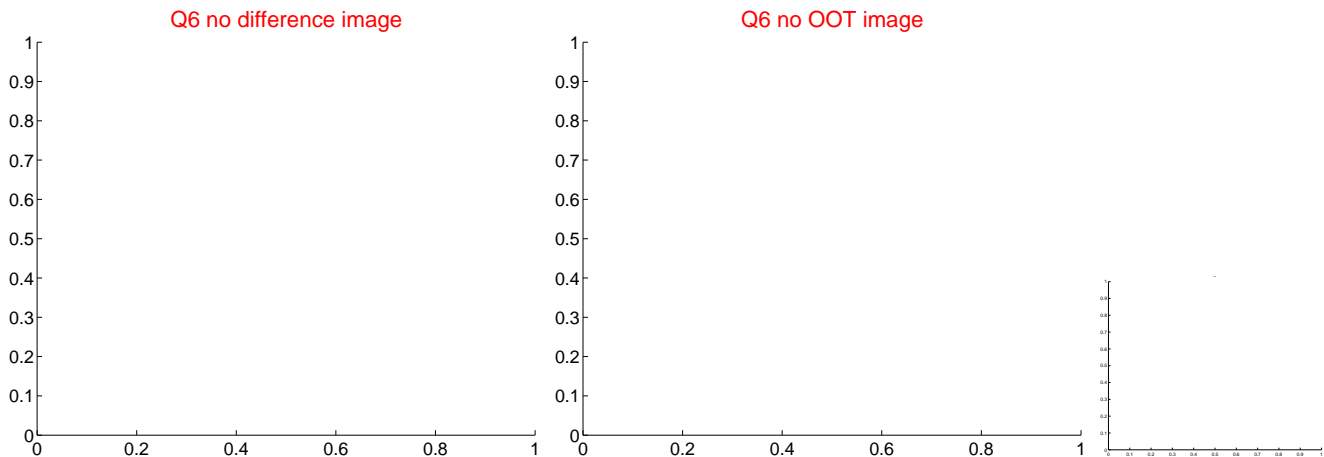
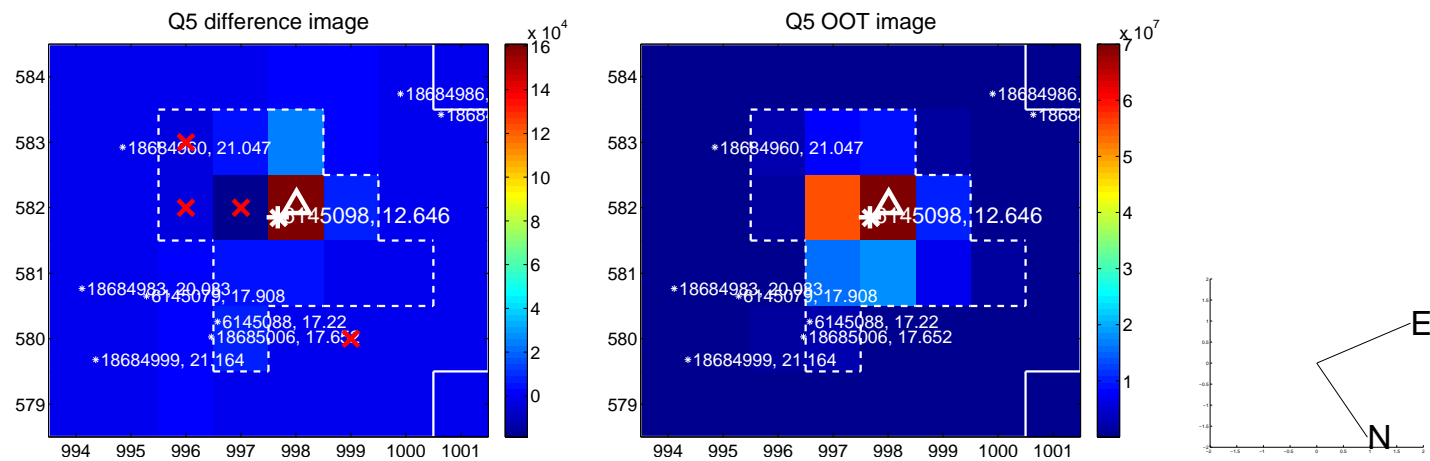


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

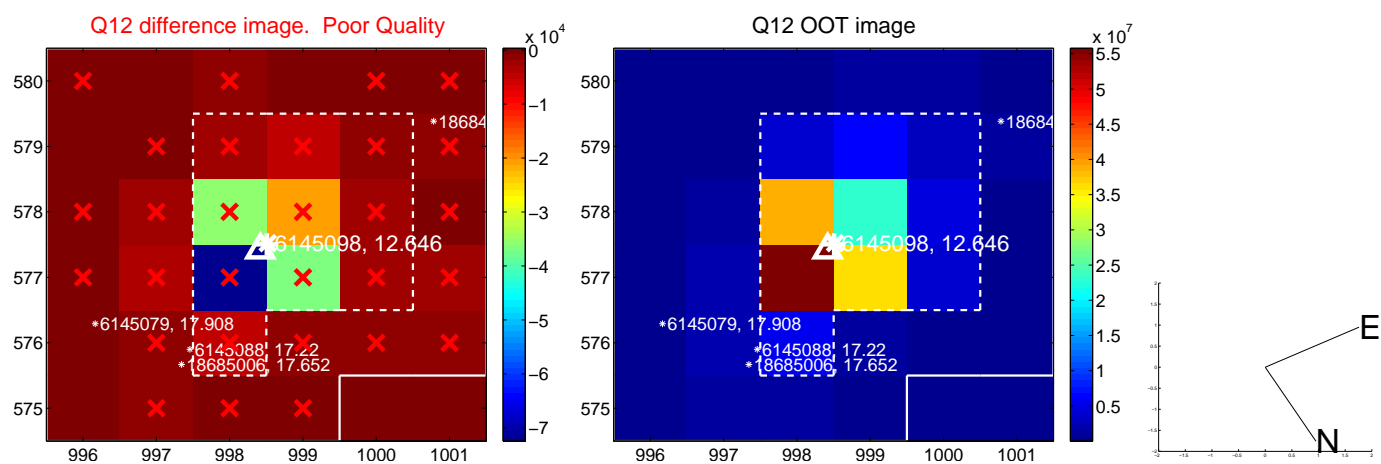
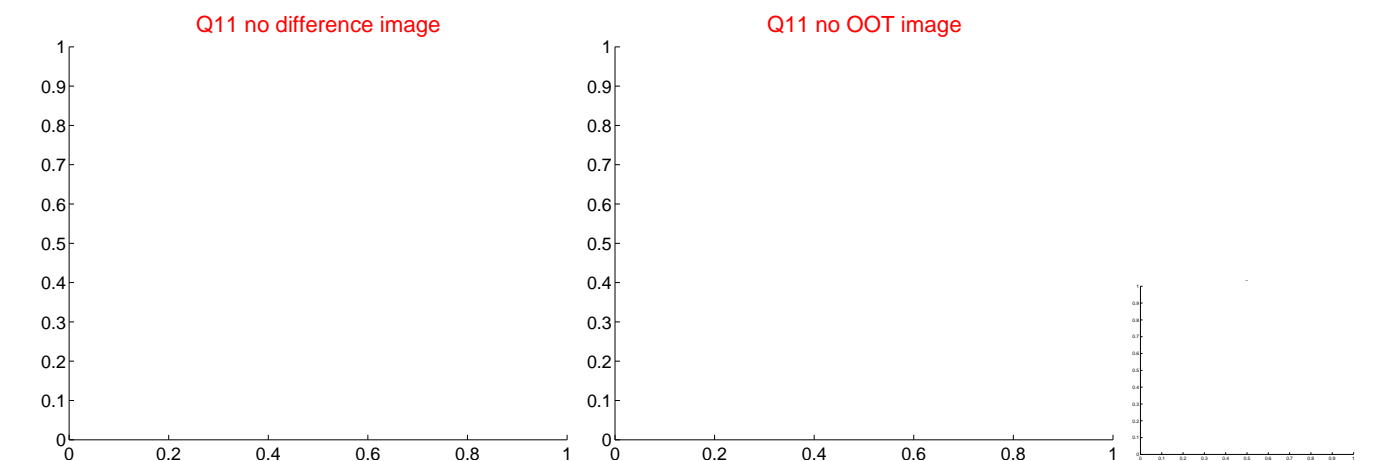
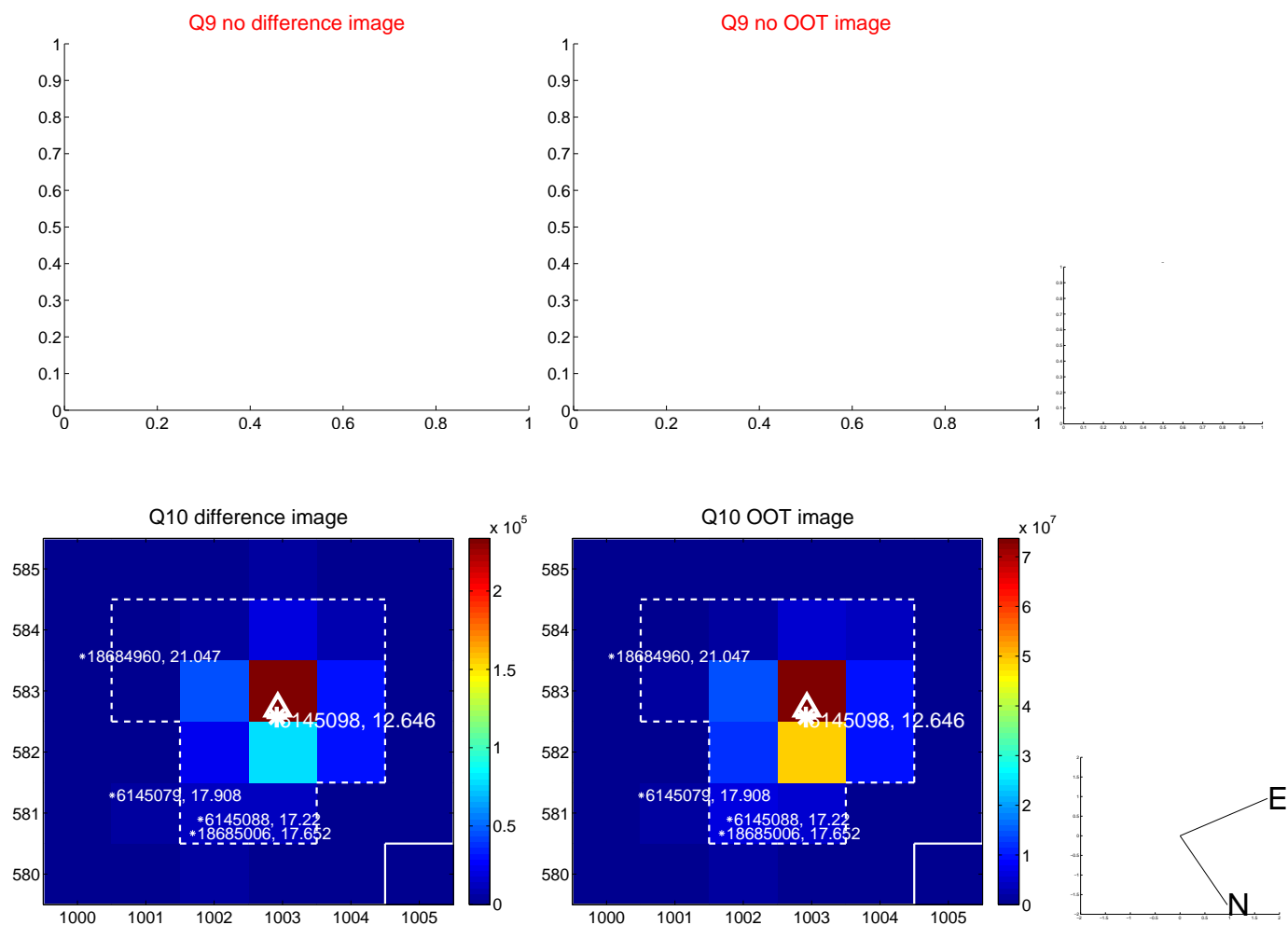
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



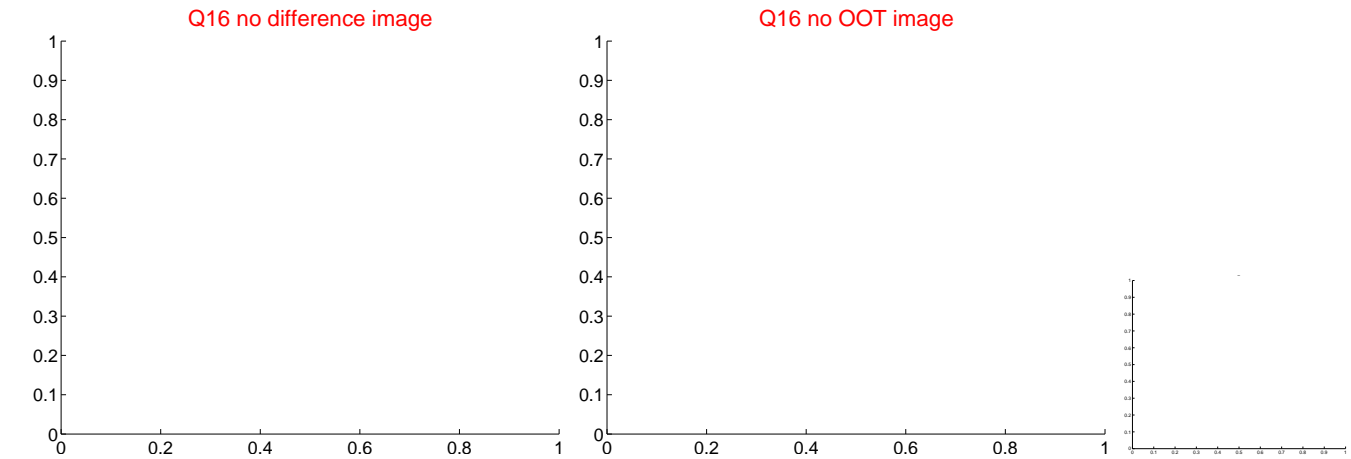
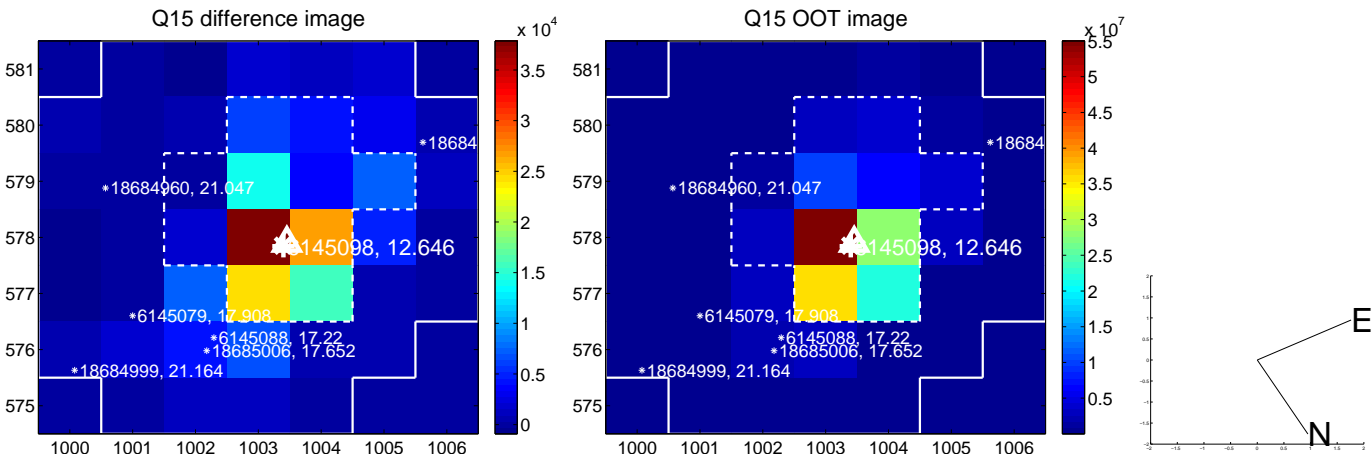
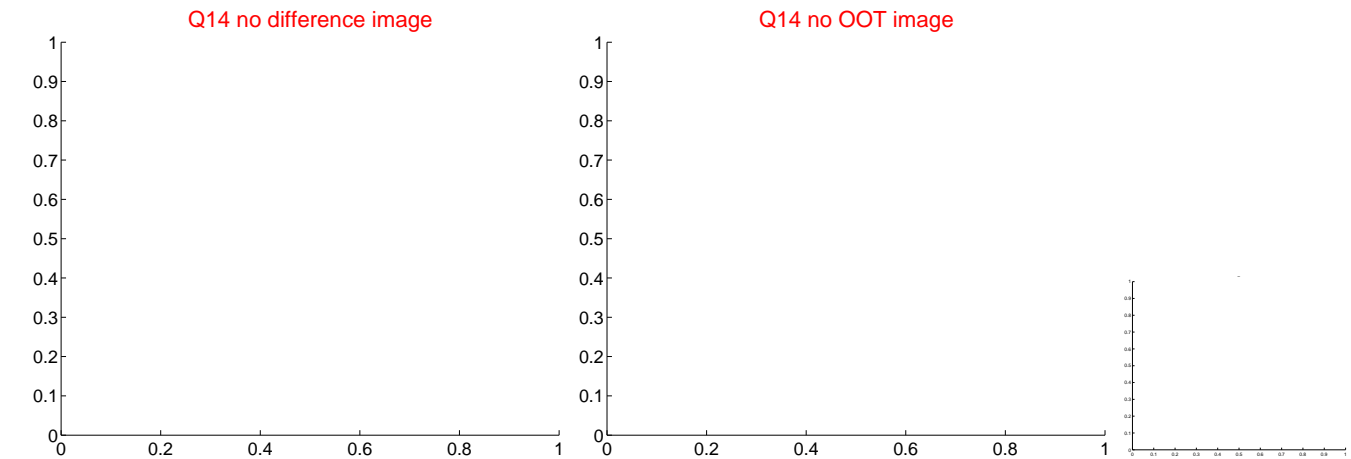
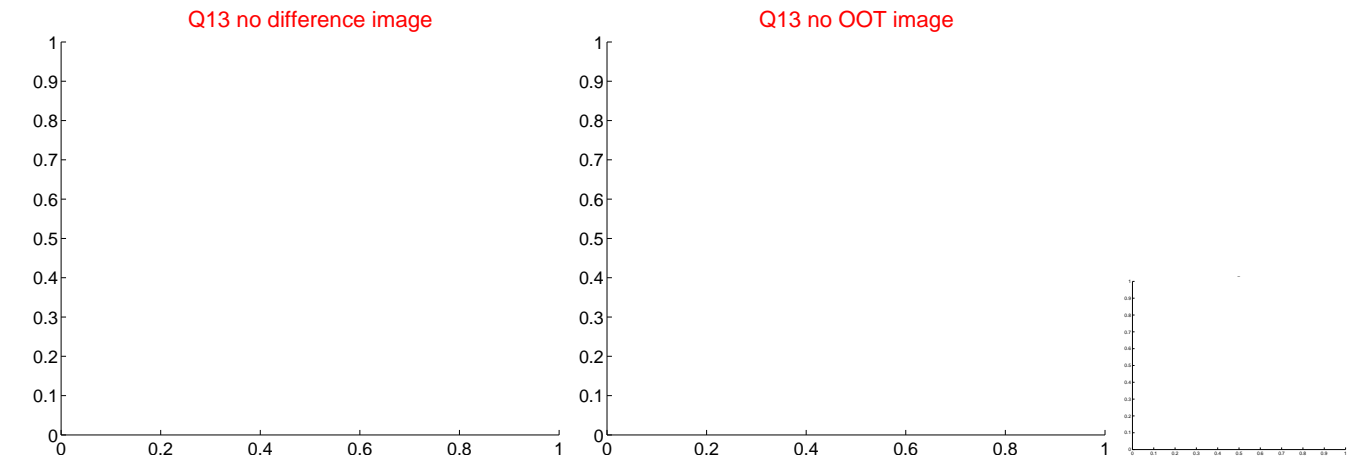
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



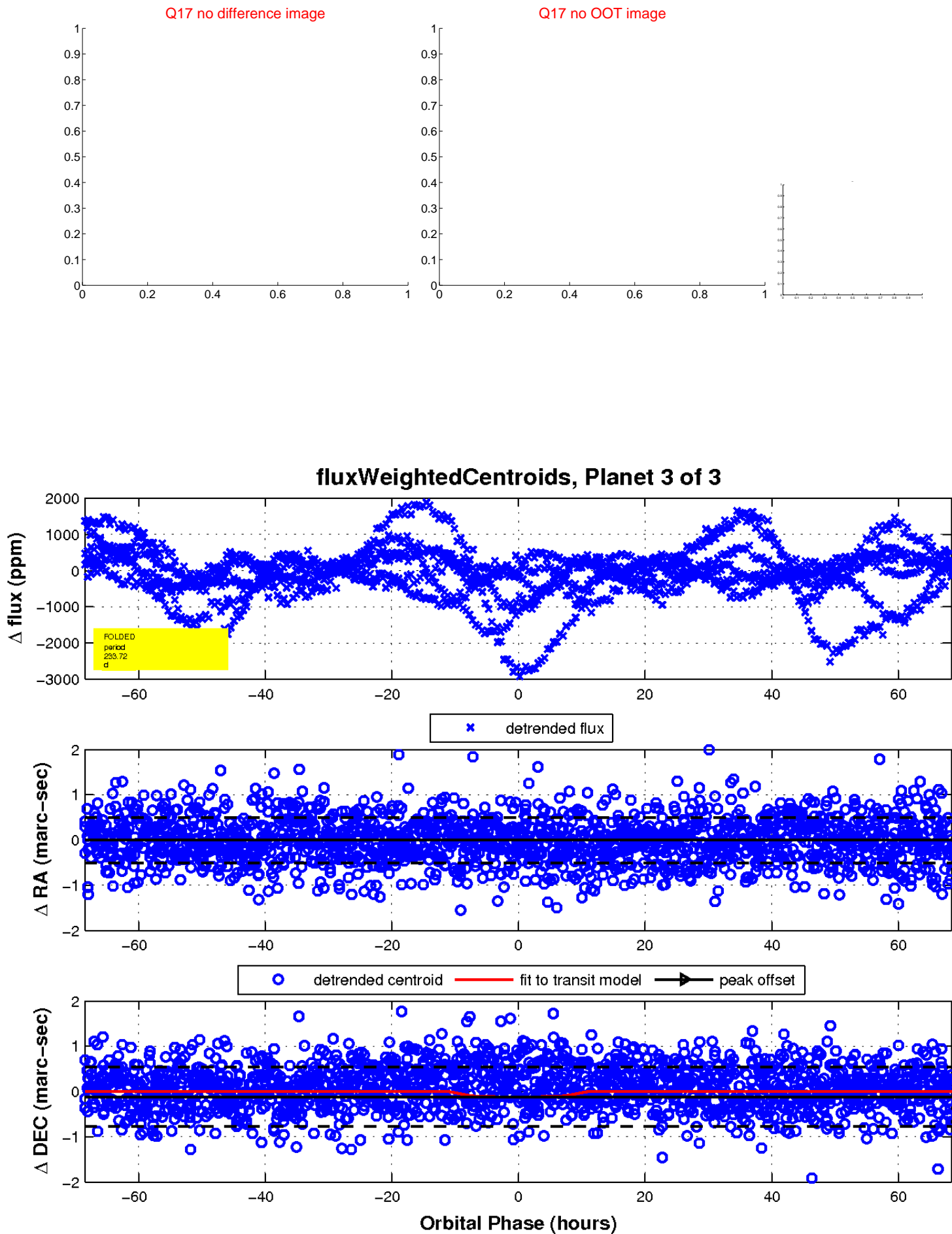
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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



UKIRT Image

Declination

