

KIC 008114921

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})
008114921-01	OBS	No	0.718480	132.256644	3.0	5.137	9.4	1.8	1.26	6539	0.22	9342.15
008114921-02	OBS	No	30.964159	144.817561	364.0	1.270	16.2	14.1	1.26	6539	2.89	61.83
008114921-03	OBS	No	23.438102	150.893227	311.5	1.544	12.1	11.8	1.26	6539	2.58	89.63
008114921-04	OBS	No	23.411955	154.920356	224.5	1.717	12.1	10.1	1.26	6539	2.05	89.76
008114921-05	OBS	No	31.197732	148.643626	198.1	2.068	11.8	8.6	1.26	6539	1.97	61.21
008114921-06	OBS	No	12.770403	140.235996	624.5	1.500	10.6	-1.0	1.26	6539	3.19	201.40
008114921-07	OBS	No	12.642128	135.009331	181.8	1.609	9.4	10.5	1.26	6539	1.94	204.13
008114921-08	OBS	No	24.956031	156.444549	267.6	3.901	9.7	10.5	1.26	6539	3.41	82.43

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008114921-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—CENT_FEW_DIFFS
008114921-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_MEAS
008114921-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
008114921-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
008114921-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—HALO_GHOST
008114921-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
008114921-07	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS—HALO_GHOST
008114921-08	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_MEAS—HALO_GHOST

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

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

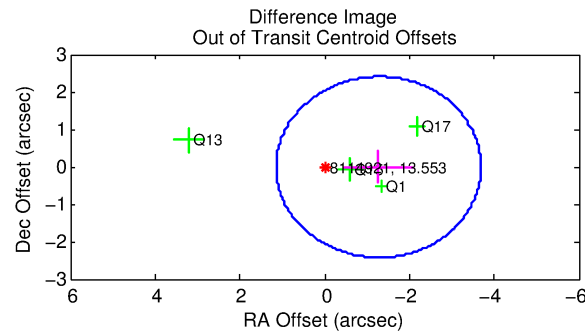
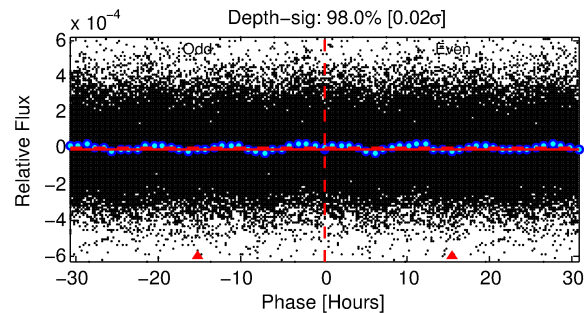
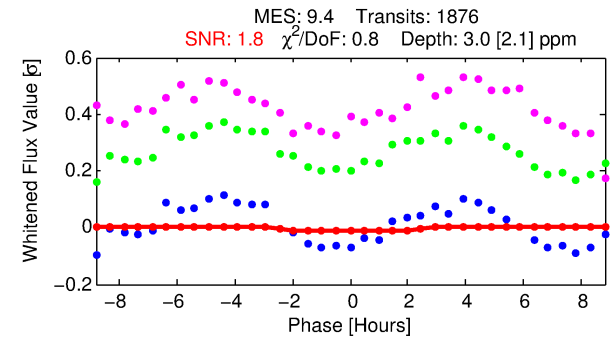
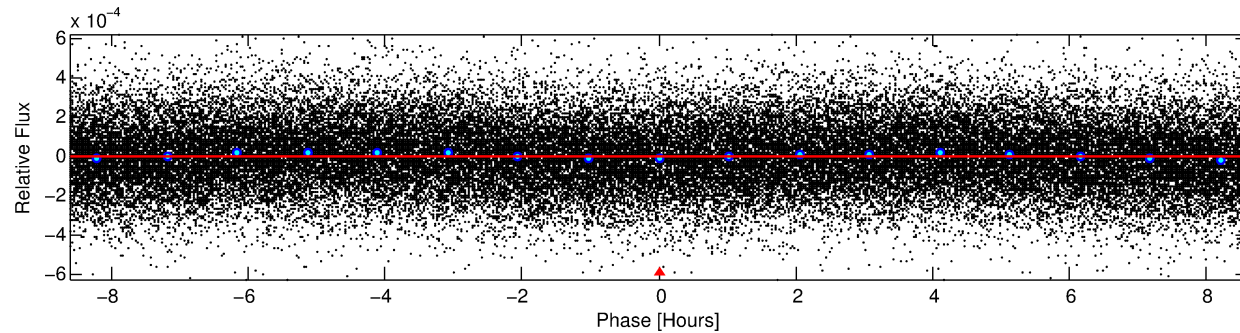
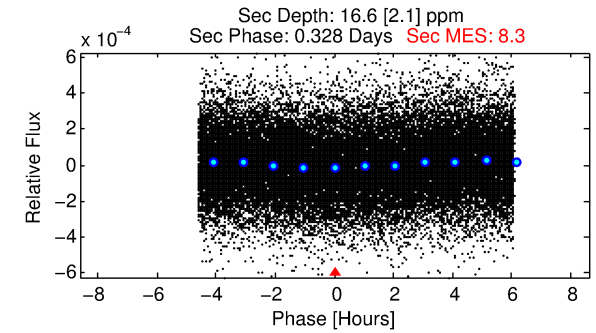
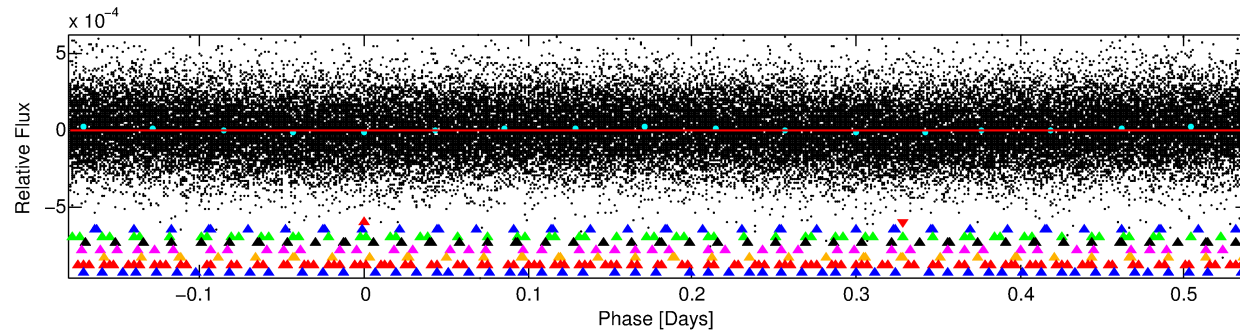
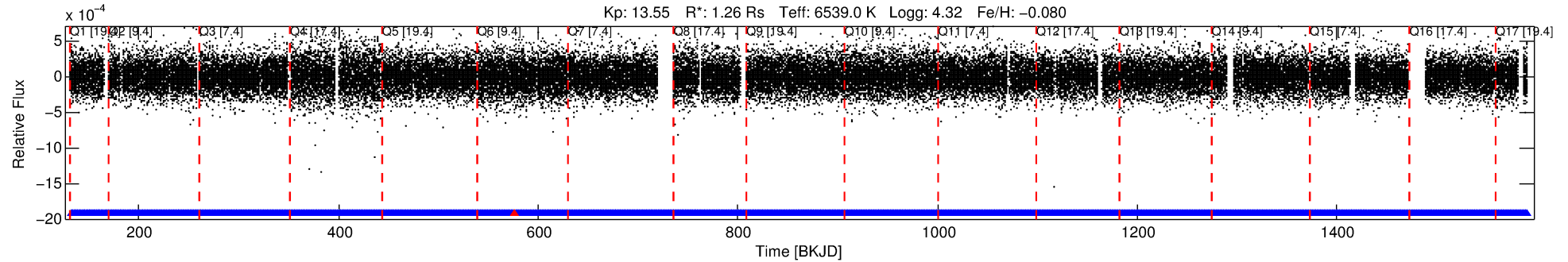
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008114921-01

No Significant Match Found

DV One-Page Summary

KIC: 8114921 Candidate: 1 of 8 Period: 0.718 d



DV Fit Results:

Period = 0.71848 [0.00007] d
Epoch = 132.2566 [0.0275] BKJD
Rp/R* = 0.0016 [0.0079]
a/R* = 1.23 [11.24]
b = 0.22 [113.20]
Seff = 9342.15 [3747.70]
Teq = 2507 [251] K
Rp = 0.22 [1.10] Re
a = 0.0168 [0.0045] AU
Ag = 52.78 [525.01] [0.10σ]
Teffp = 10447 [25964] K [0.31σ]

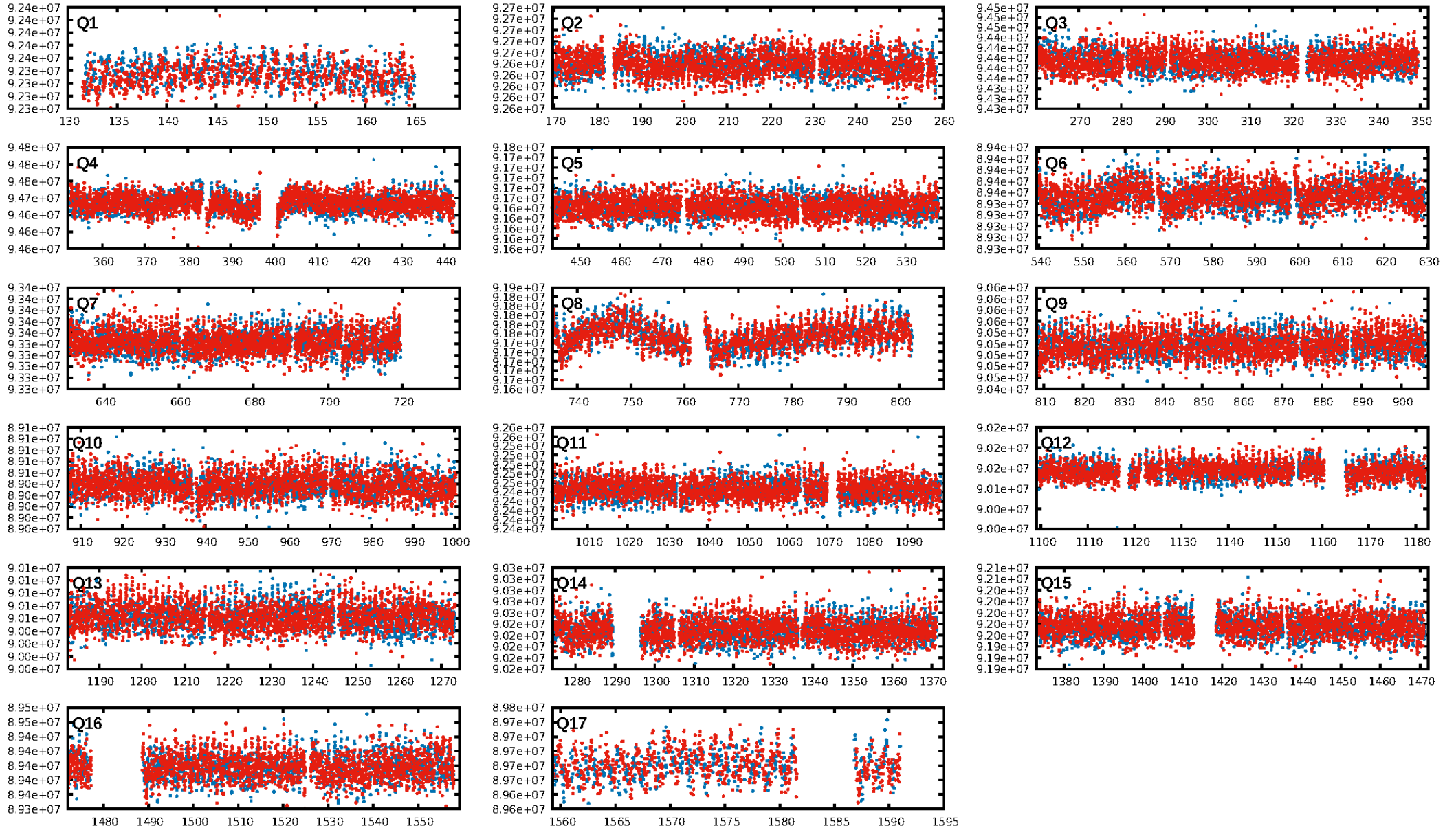
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [53.16σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.63e-18
RollingBand-fgt: 1.00 [1790/1791]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 1.272 arcsec [1.58σ]
KicOffset-rm: 1.350 arcsec [1.35σ]
OotOffset-st: 0/1/0/3 [4]
KicOffset-st: 0/1/0/3 [4]
DiffImageQuality-fgm: 0.25 [1/4]
DiffImageOverlap-fno: 1.00 [17/17]

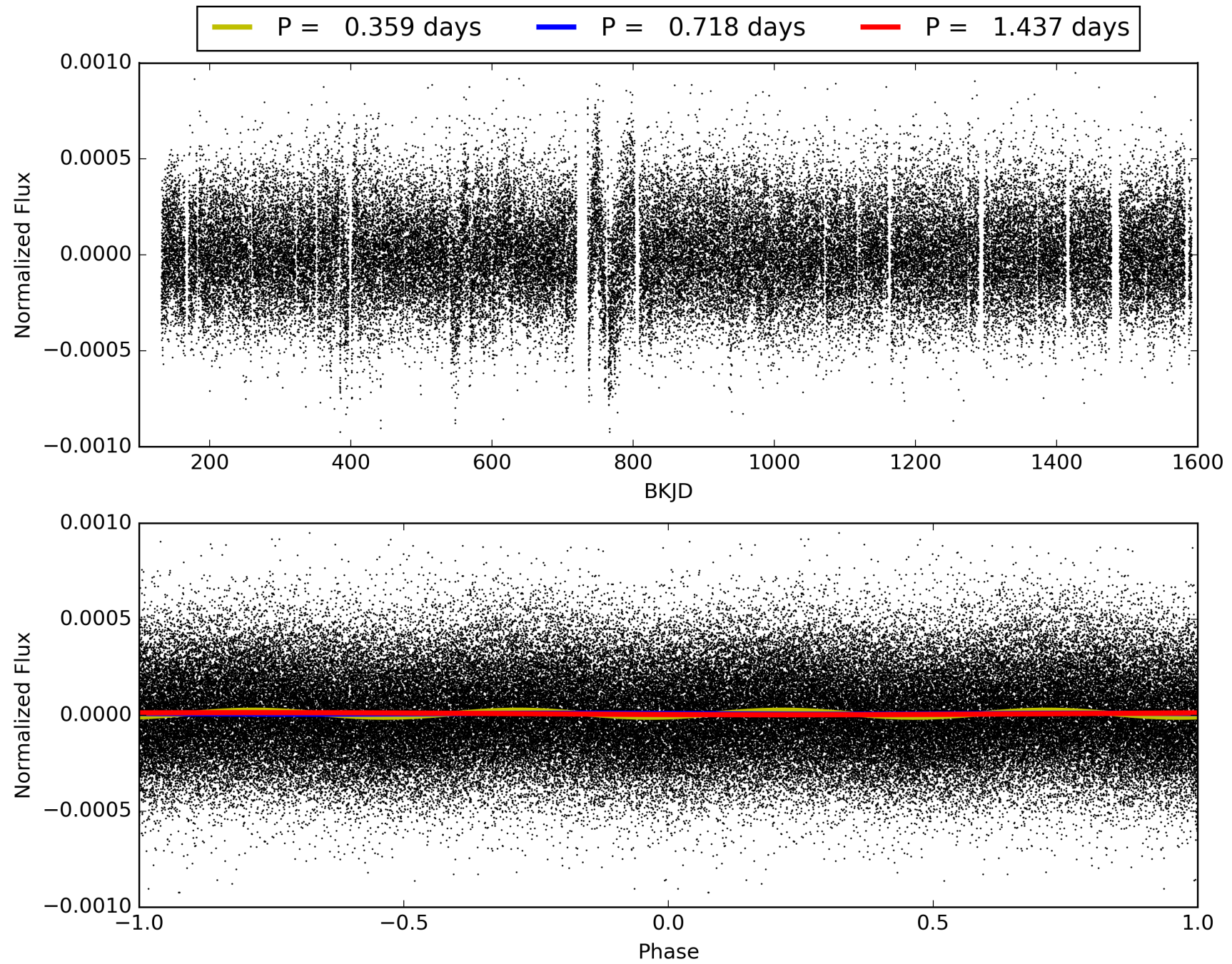
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 05:40:09 Z

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

TCE 008114921-01, PDC Light Curves

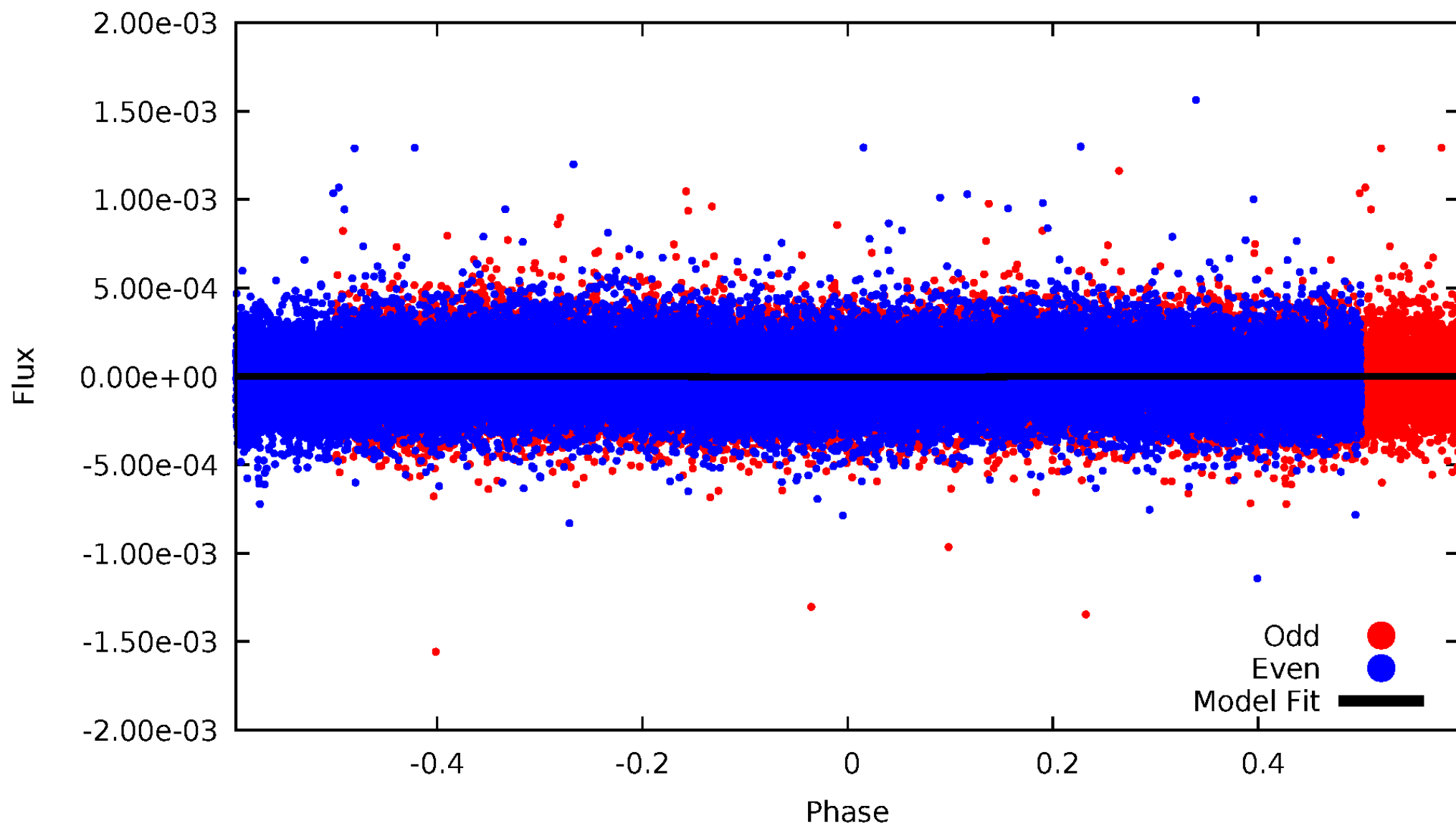


TCE 008114921-01



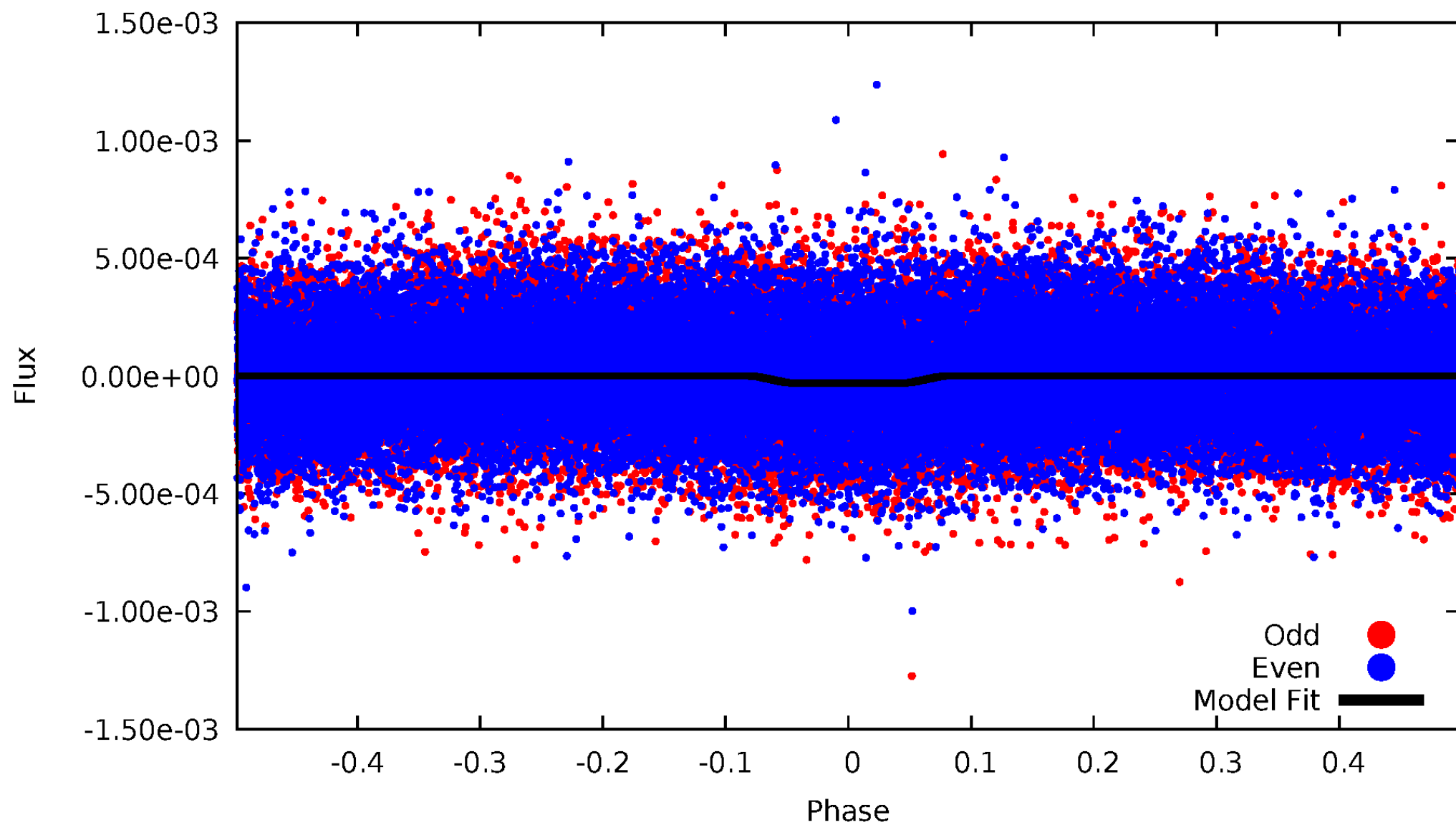
DV Odd/Even

TCE 008114921-01



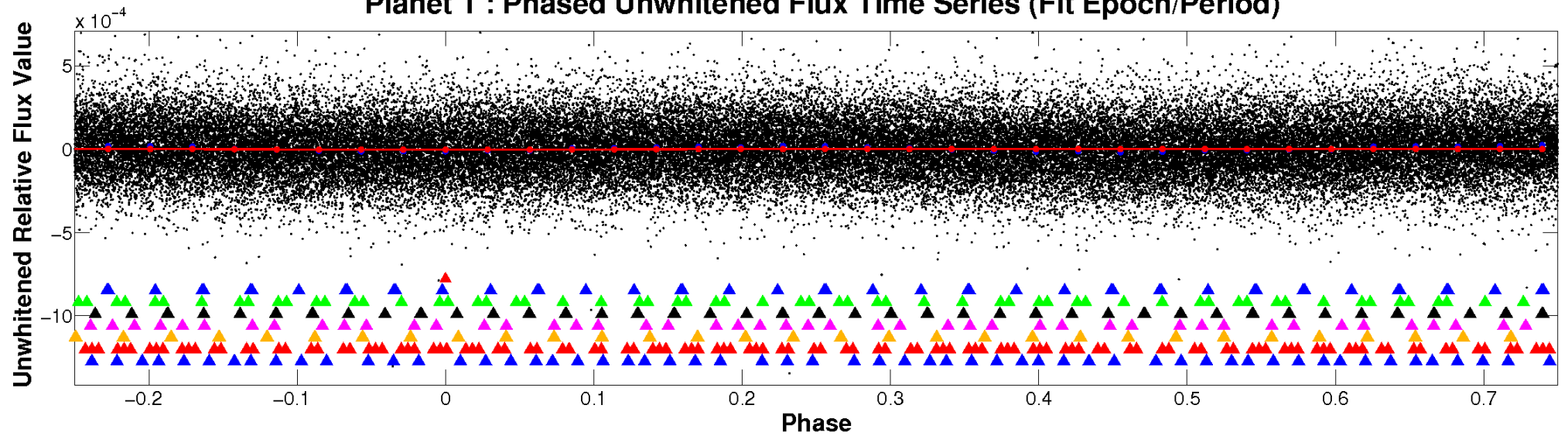
ALT Odd/Even

TCE 008114921-01

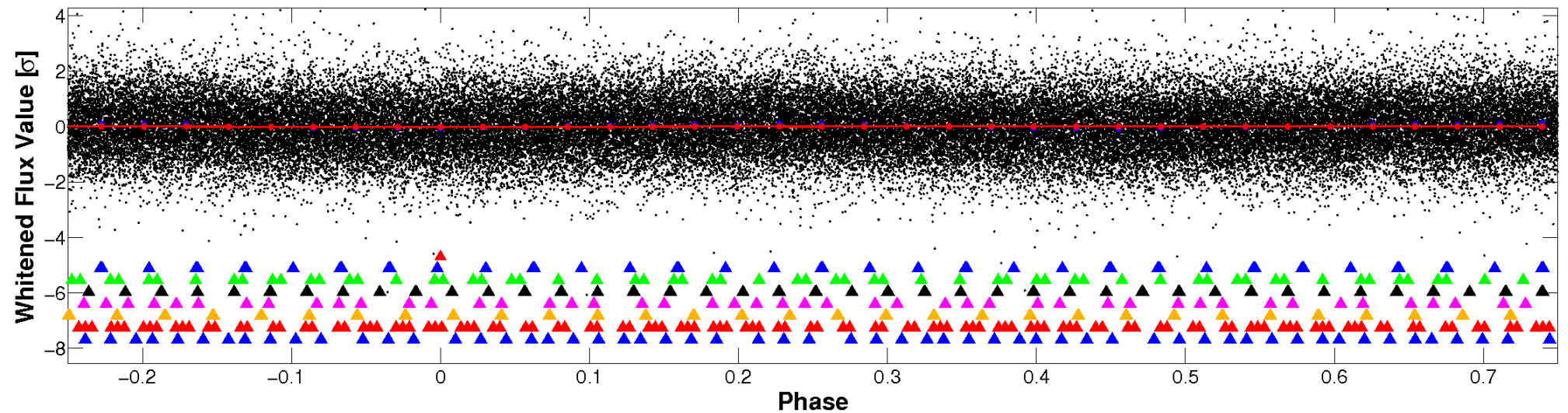


Non-Whitened Vs. Whitened Light Curve

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

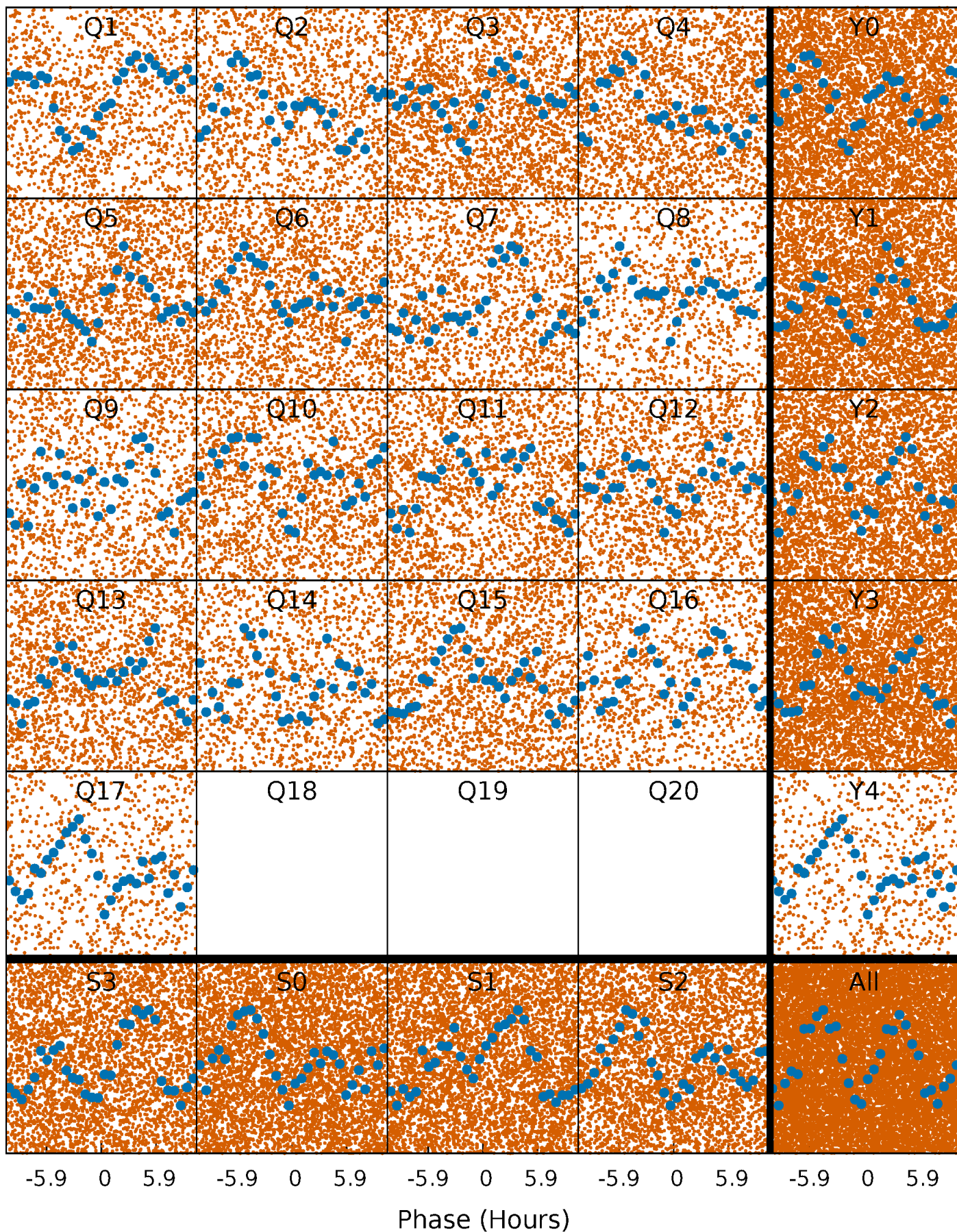


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



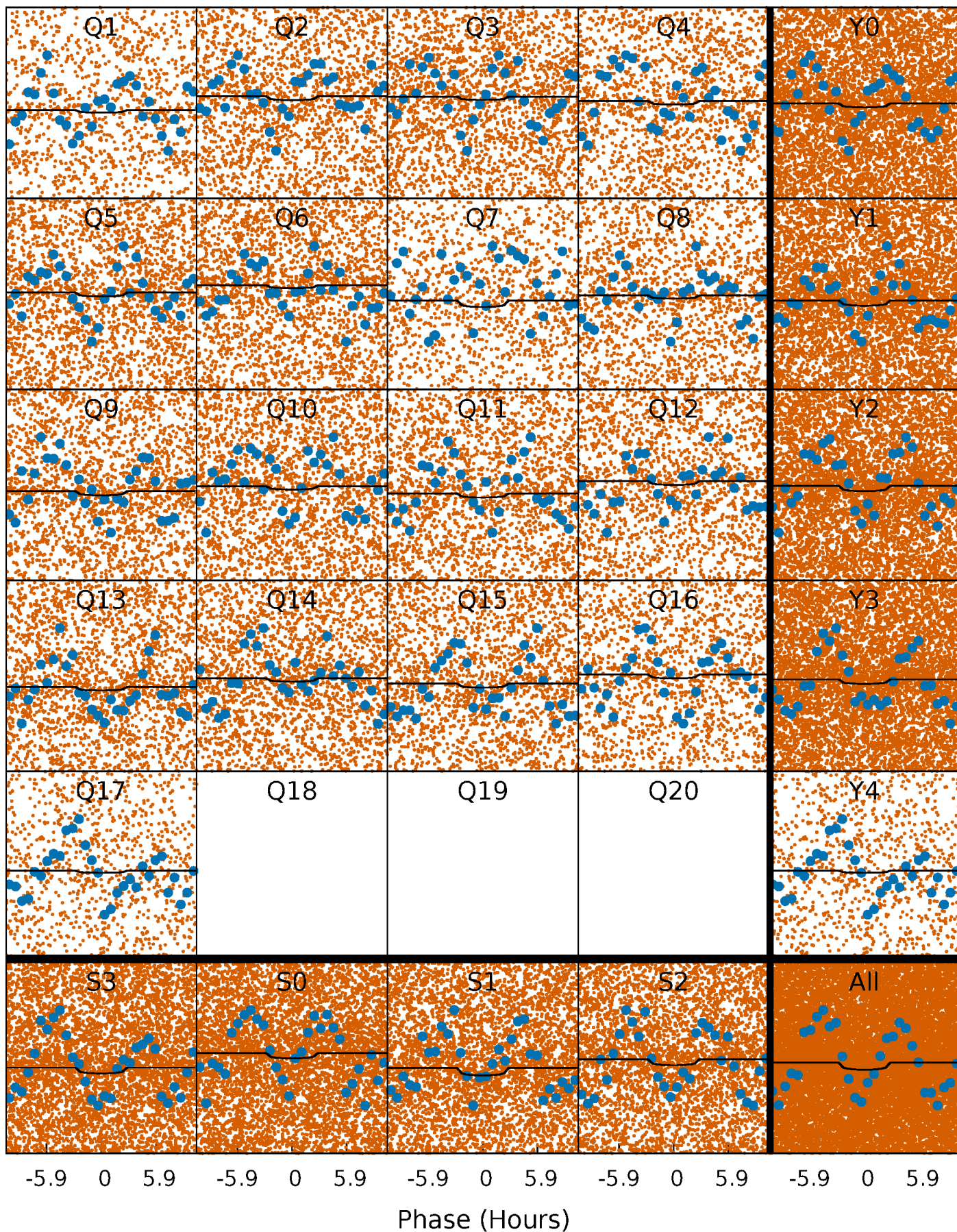
PDC Quarter-Phased Transit Curves

TCE 008114921-01 P= 0.718480 Days $T_0=132.256644$ (BKJD)



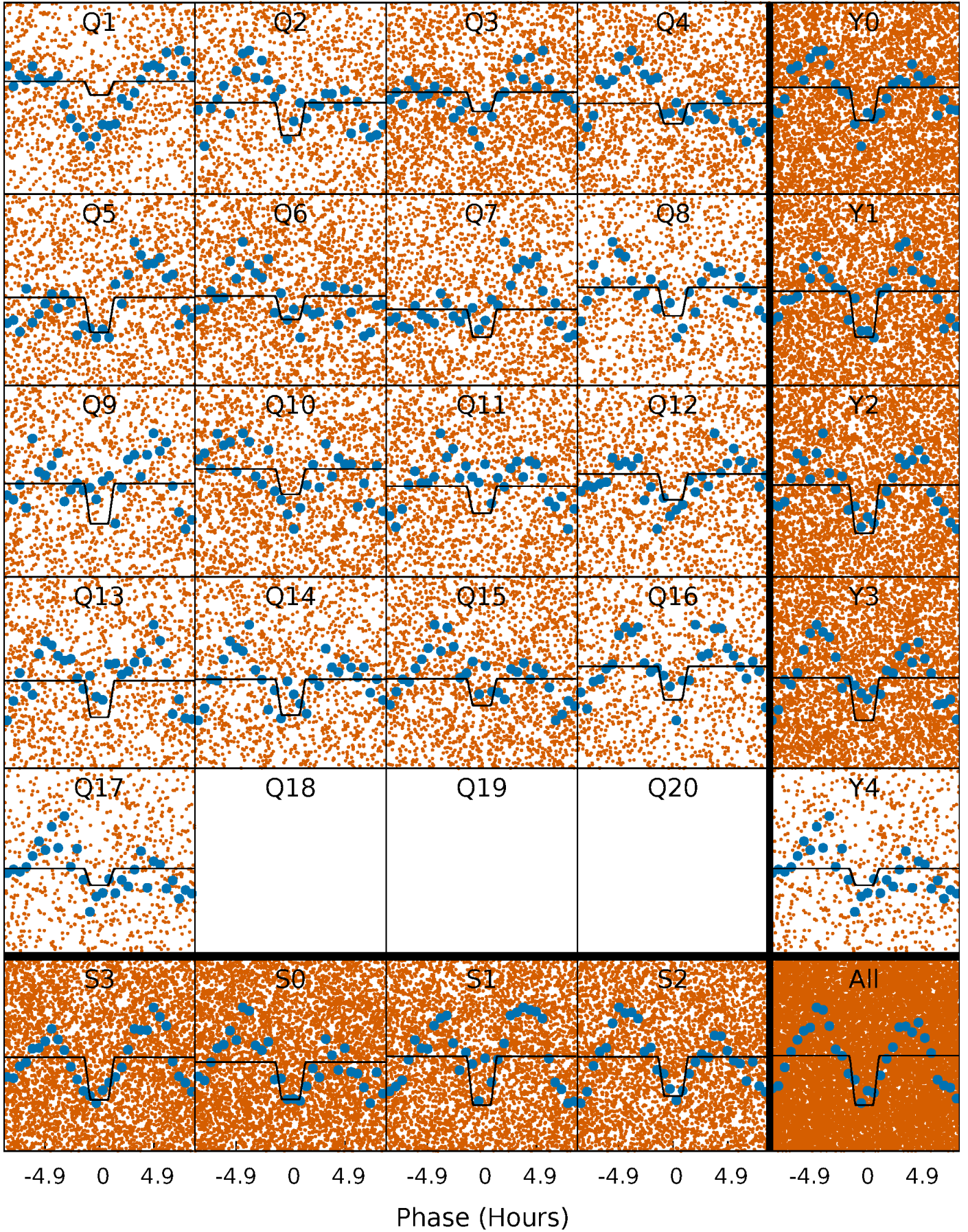
DV Quarter-Phased Transit Curves

TCE 008114921-01 P= 0.718480 Days $T_0=132.256644$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

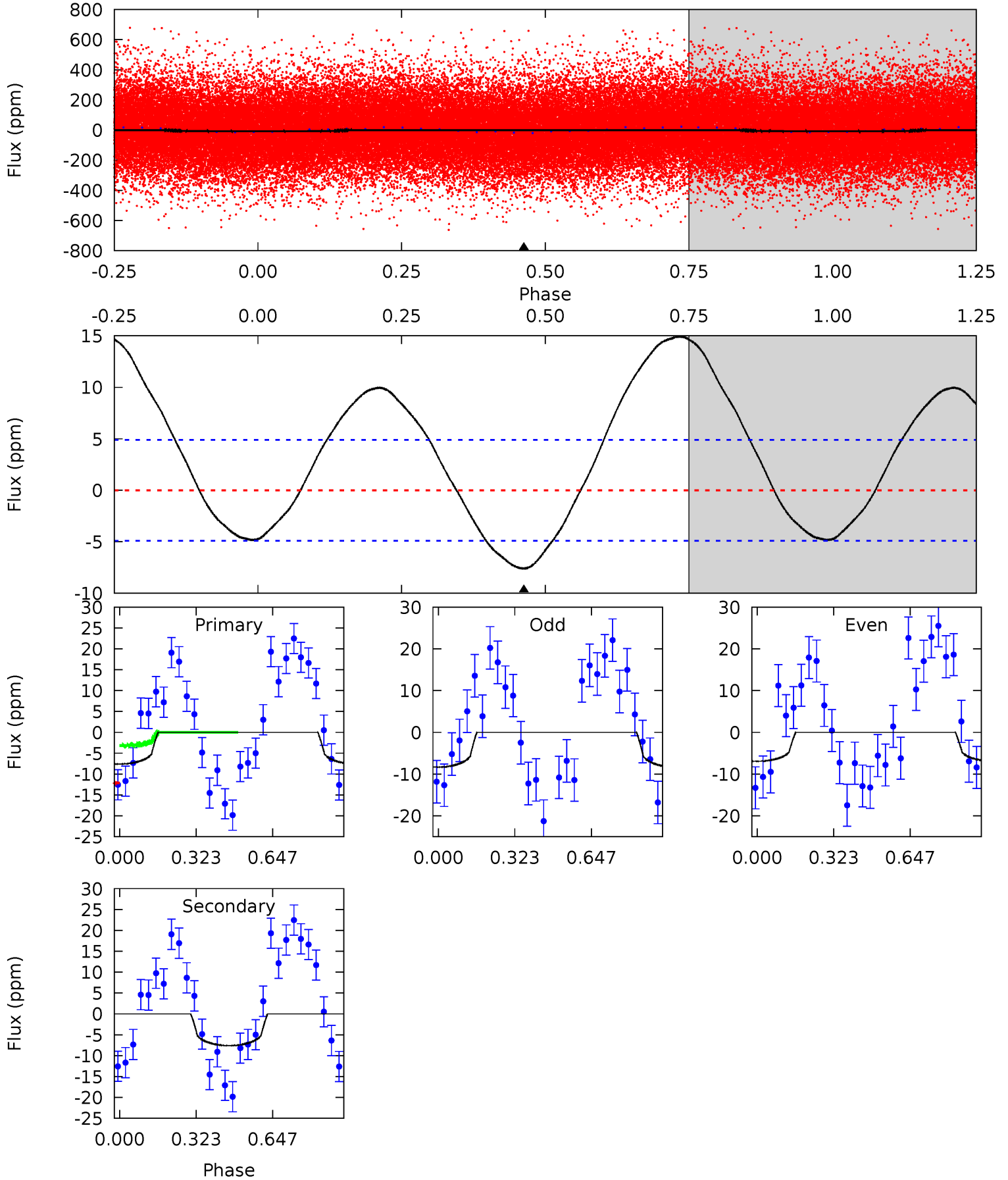
TCE 008114921-01 P= 0.718544 Days $T_0=132.172593$ (BKJD)



DV Model-Shift Uniqueness Test

008114921-01, P = 0.718480 Days, E = 130.819684 Days

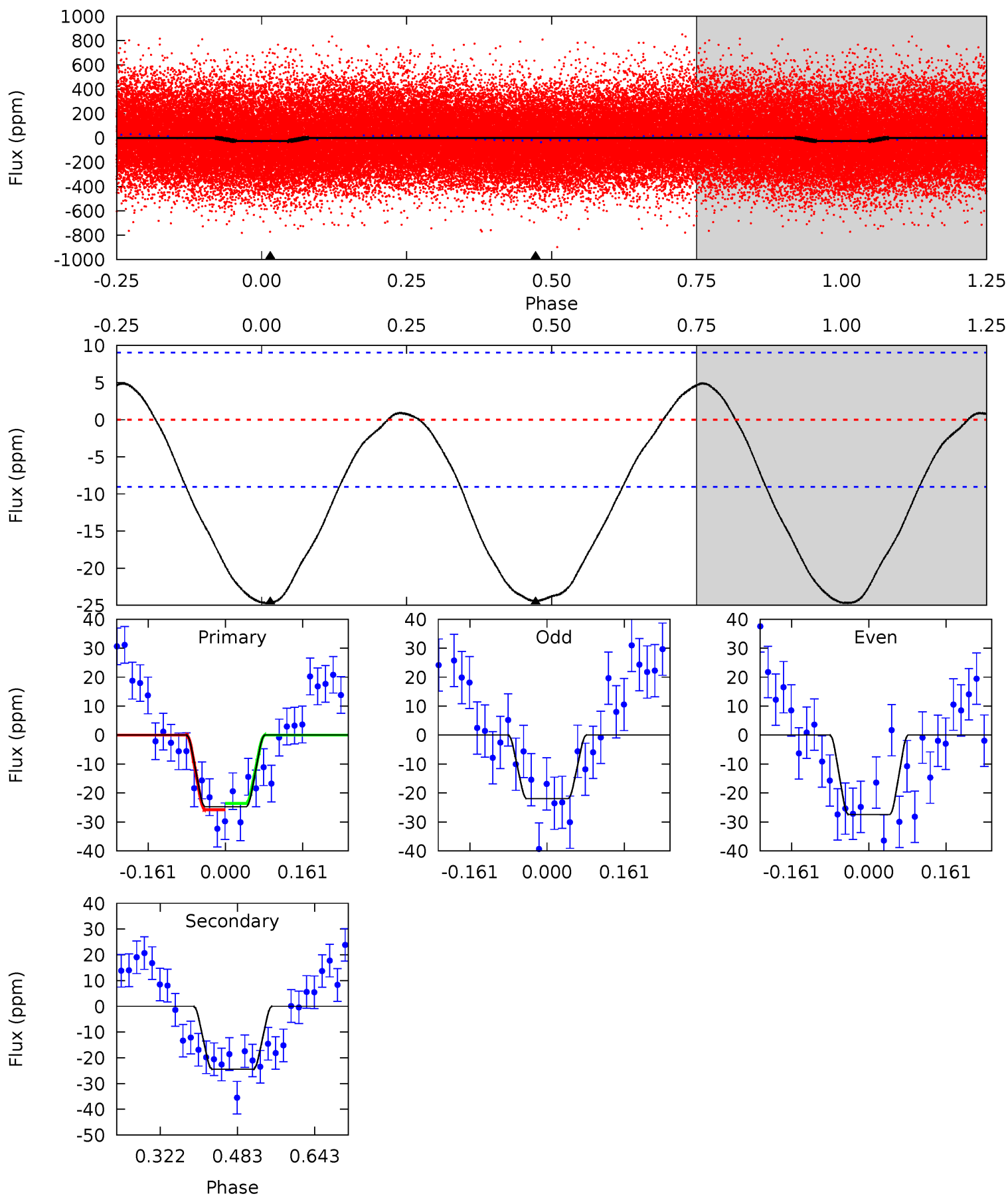
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.68	6.68	0	0	4.31	0.99	4.30	6.68	6.68	6.68	6.68	0.62	0.99	0.66	3.94



Alt Model-Shift Uniqueness Test

008114921-01, P = 0.718544 Days, E = 131.454049 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.2	12.1	0	0	4.46	1.40	1.48	12.2	12.2	12.1	12.1	1.35	0.60	0.17	0.54



Stellar Parameters For KIC 008114921

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6539^{+155}_{-214}	$4.318^{+0.087}_{-0.203}$	$-0.080^{+0.250}_{-0.300}$	$1.265^{+0.410}_{-0.176}$	$1.217^{+0.192}_{-0.157}$	$0.847^{+0.338}_{-0.463}$
	+2%/-3%	+2%/-5%	+312%/-375%	+32%/-14%	+16%/-13%	+40%/-55%
Source	PHO1	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 008114921-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-8 ± 1	$0.86^{+0.98}_{-0.61}$	3527^{+256}_{-168}	4385^{+3760}_{-1834}	$1.646^{+16.259}_{-1.311}$
Alt.	-24 ± 2	$1.16^{+0.97}_{-0.76}$	3542^{+267}_{-194}	5021^{+3826}_{-1254}	$2.728^{+19.694}_{-1.903}$

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

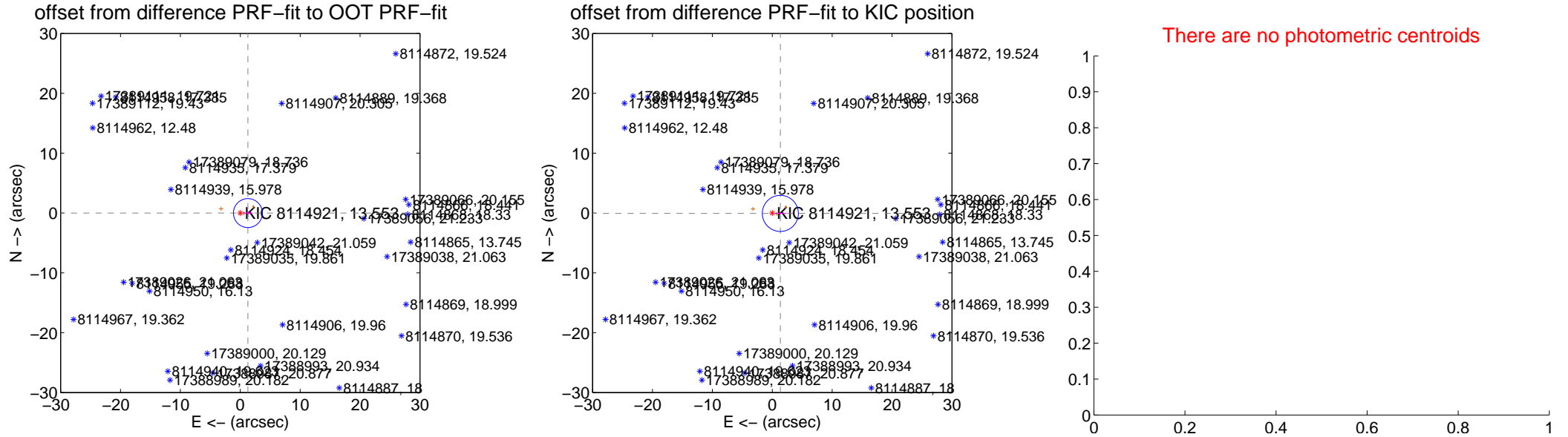
DV Centroid Data

Supplemental centroid analysis for 008114921-01. Kepler magnitude: 13.55. Transit SNR 1.80

There are 1 quarters with good PRF difference image offsets

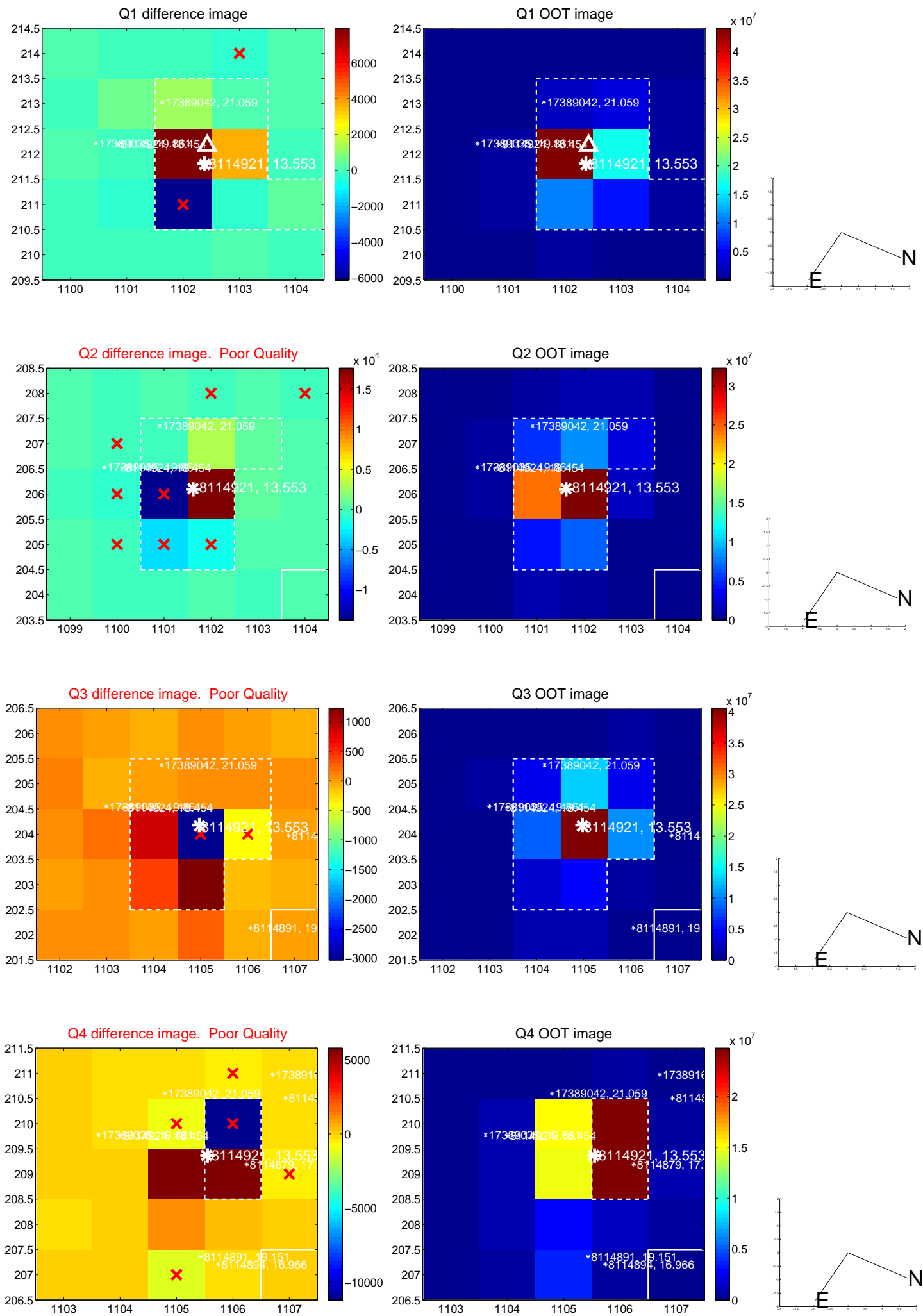
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.272 ± 0.806	1.58	-1.272 ± 0.806	-0.012 ± 0.416
PRF-fit source offset from KIC position	1.350 ± 1.004	1.35	-1.349 ± 1.005	-0.065 ± 0.178
photometric centroid source offset	—	—	—	—

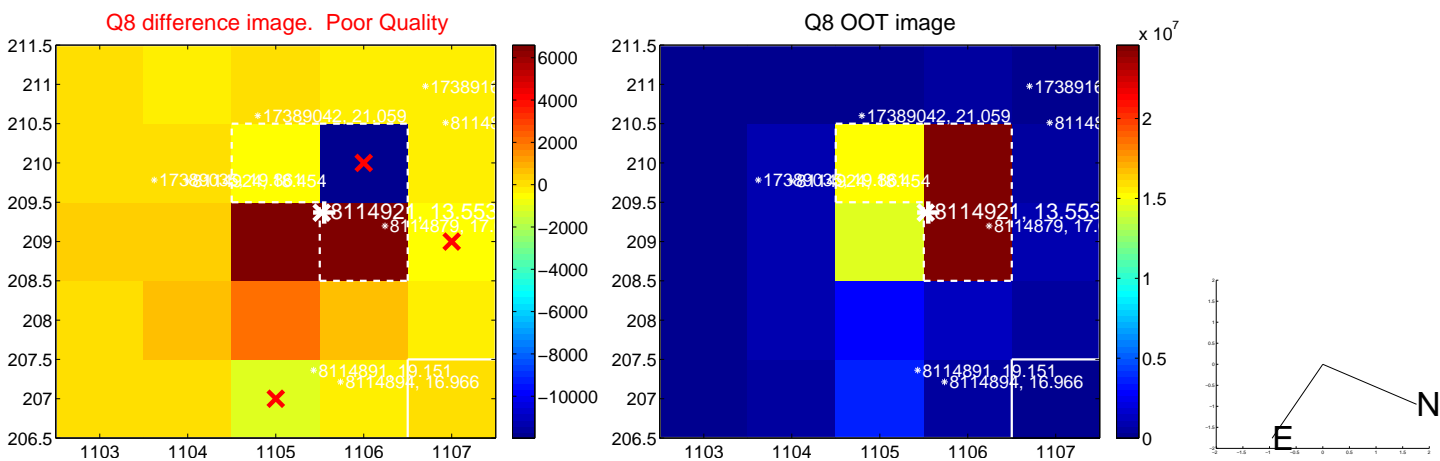
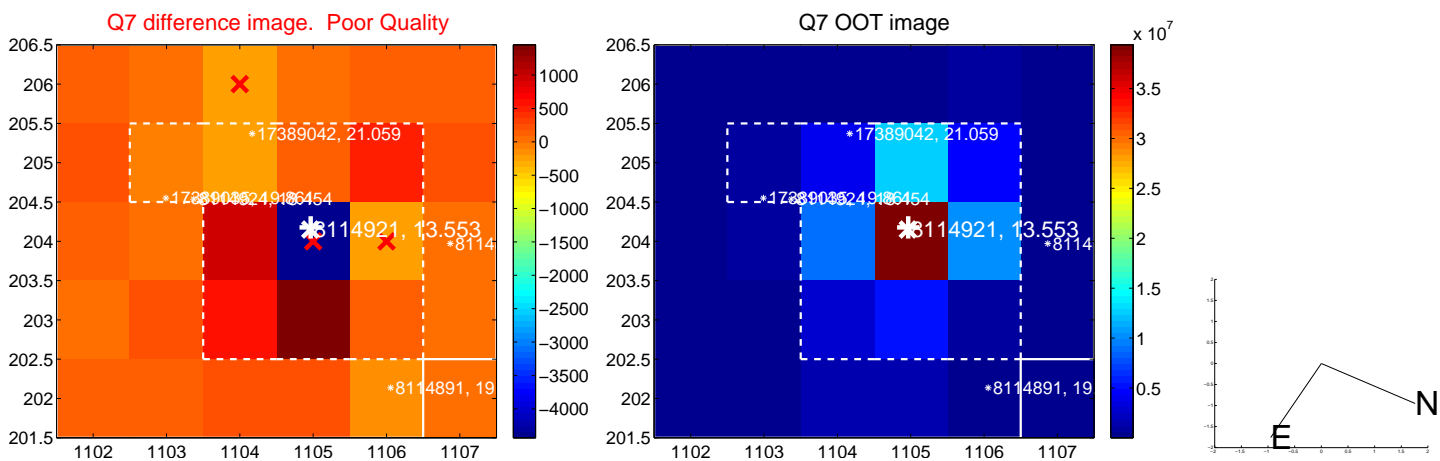
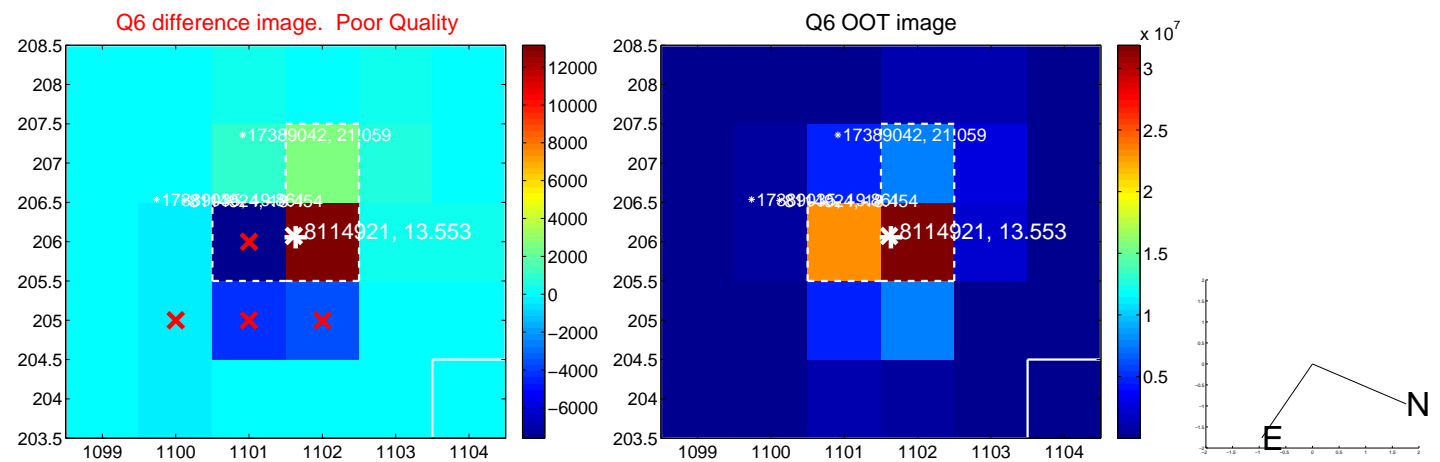
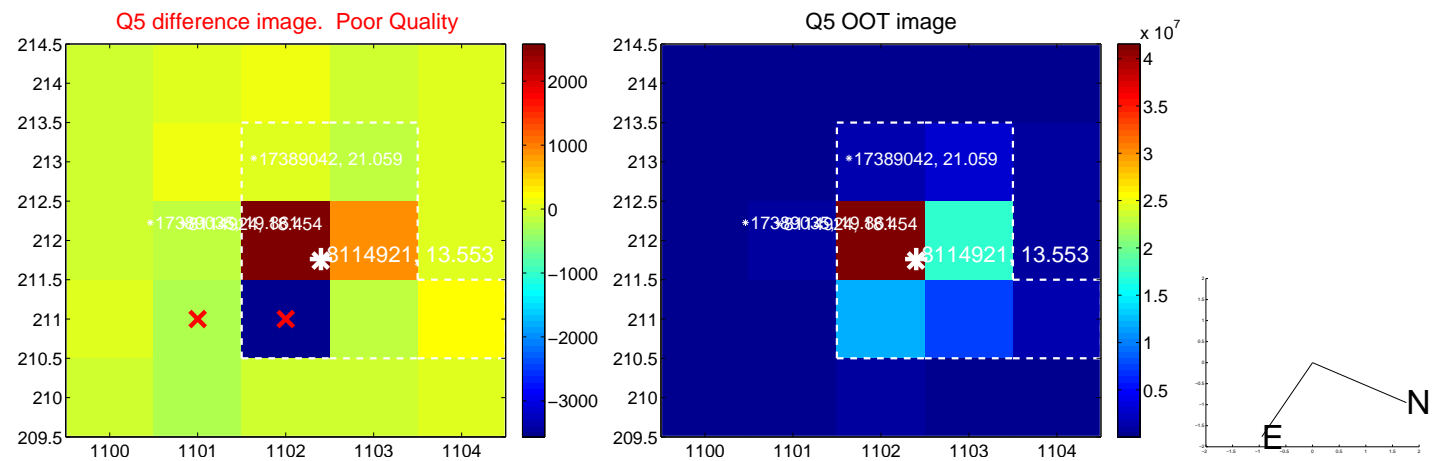


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

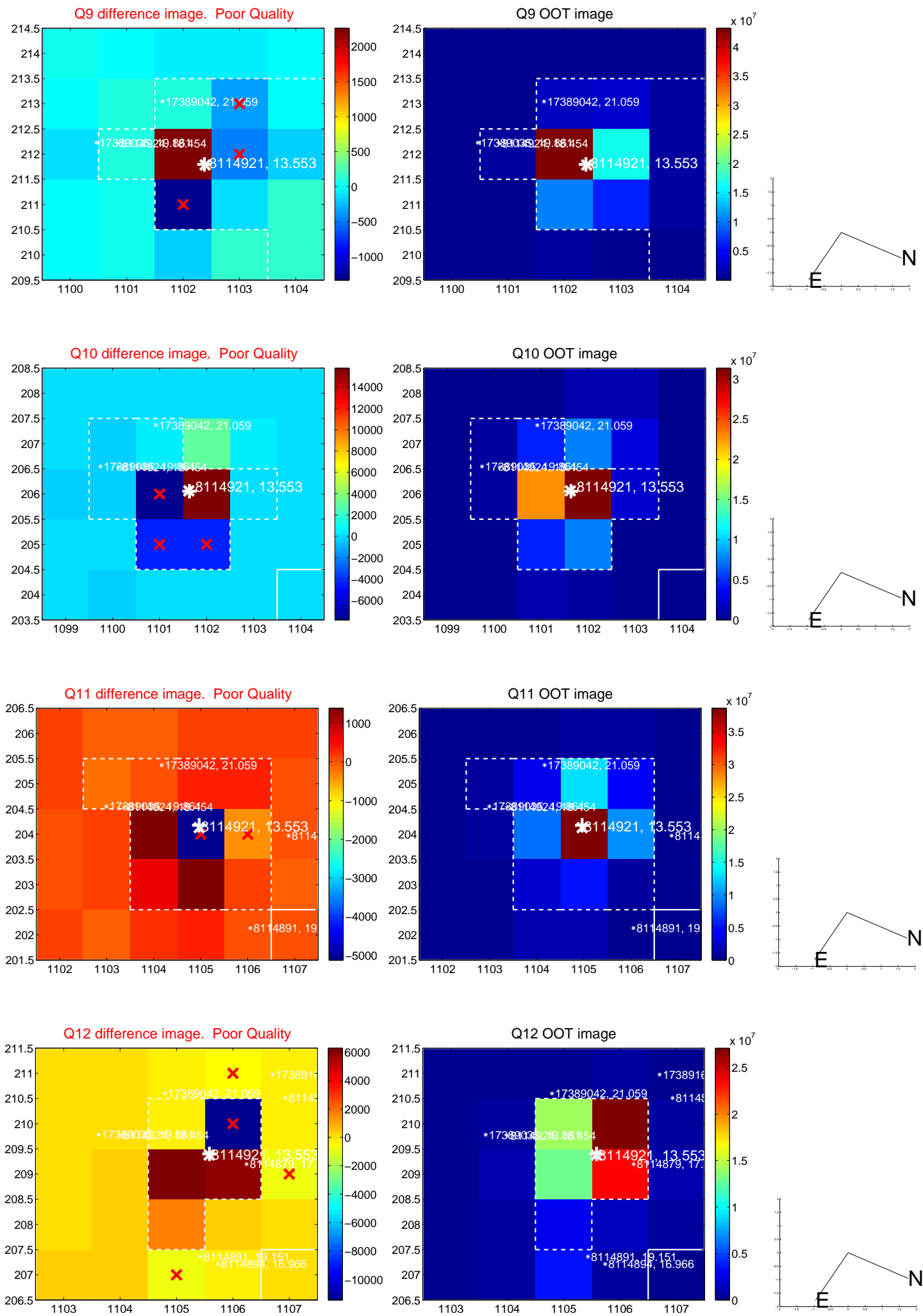
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



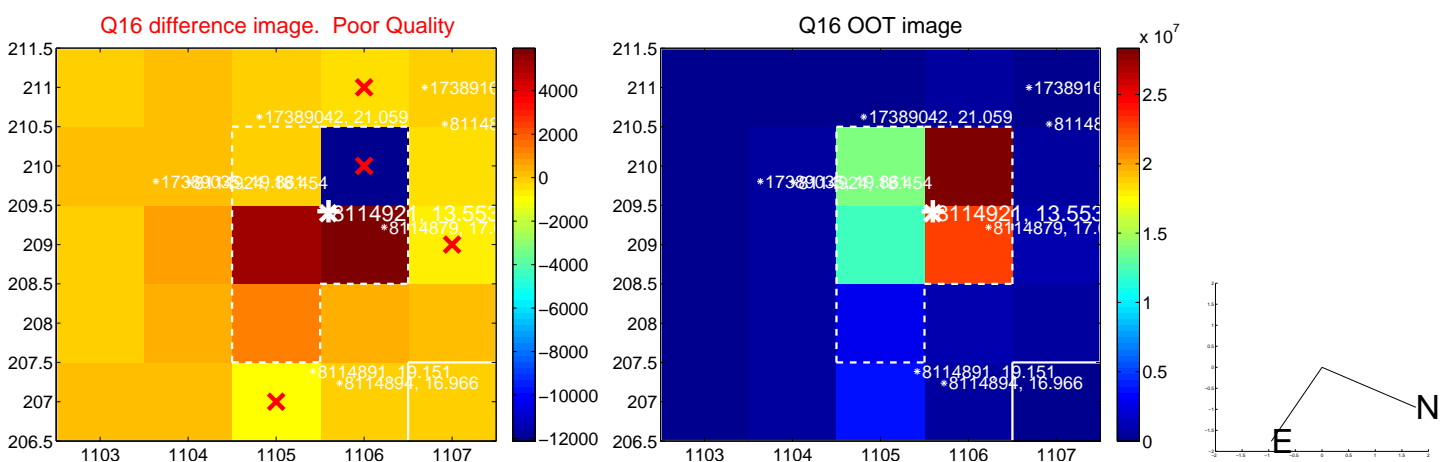
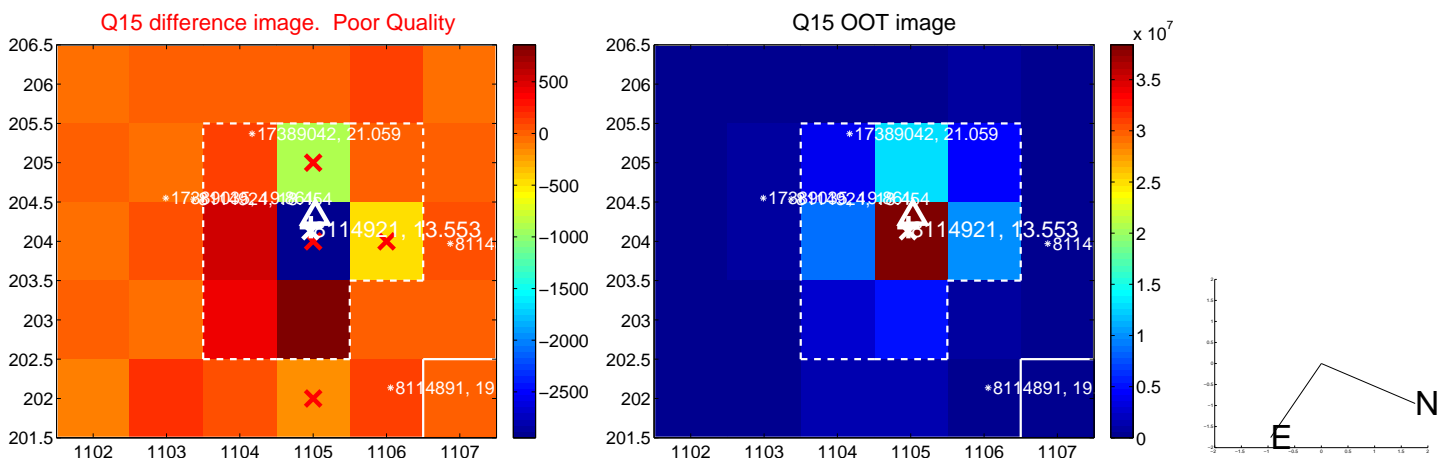
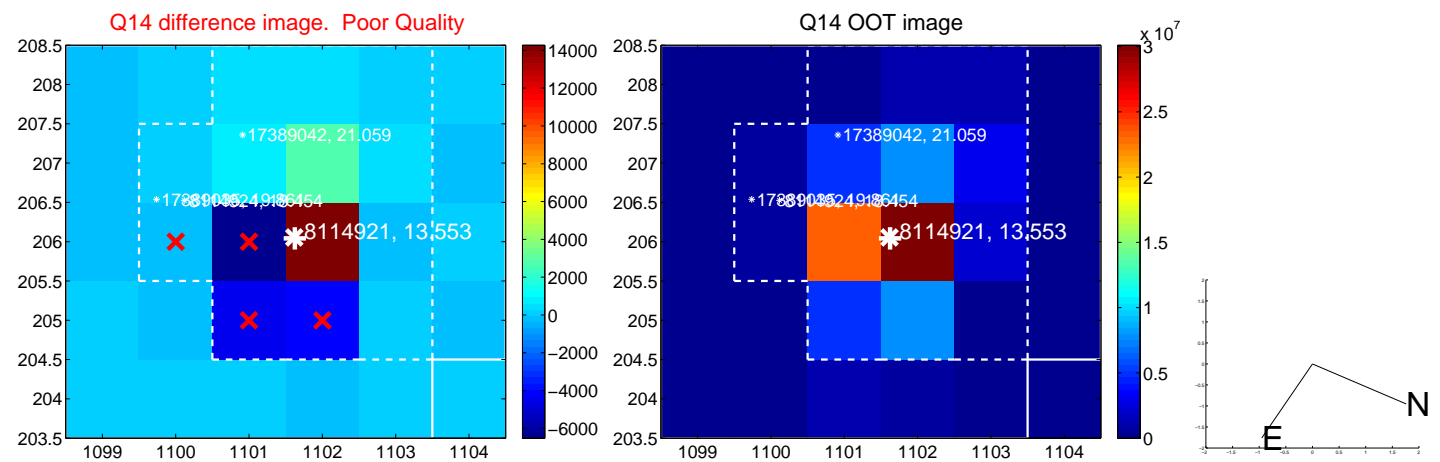
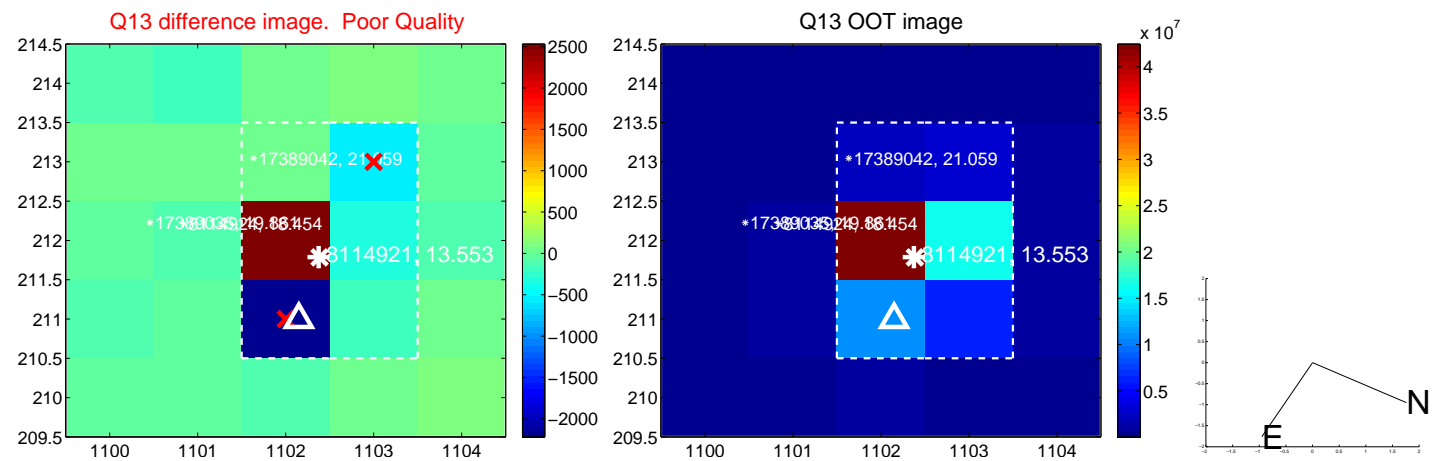
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



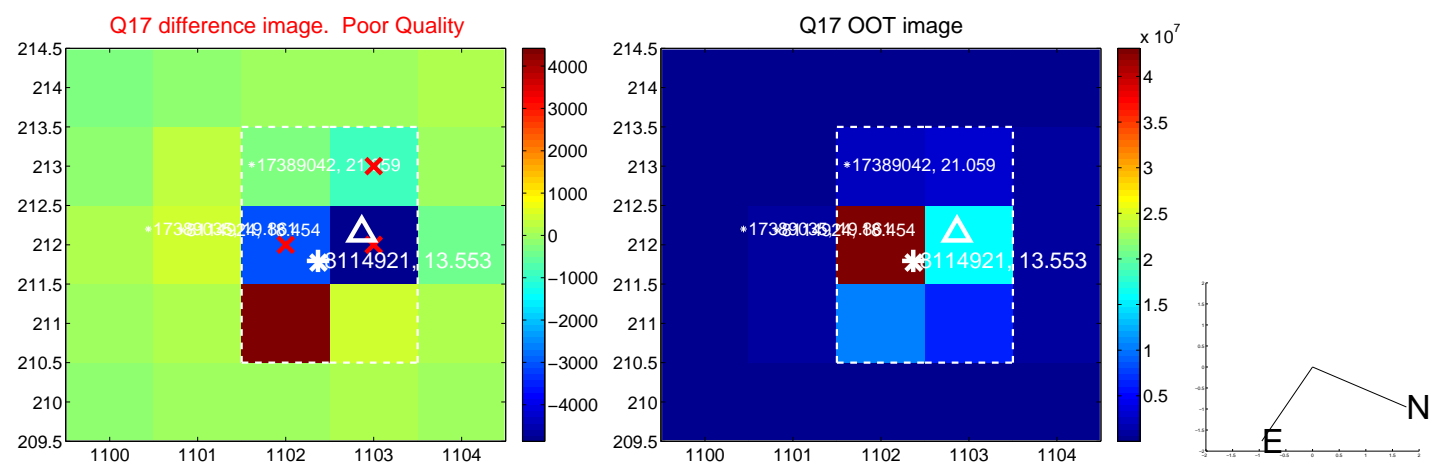
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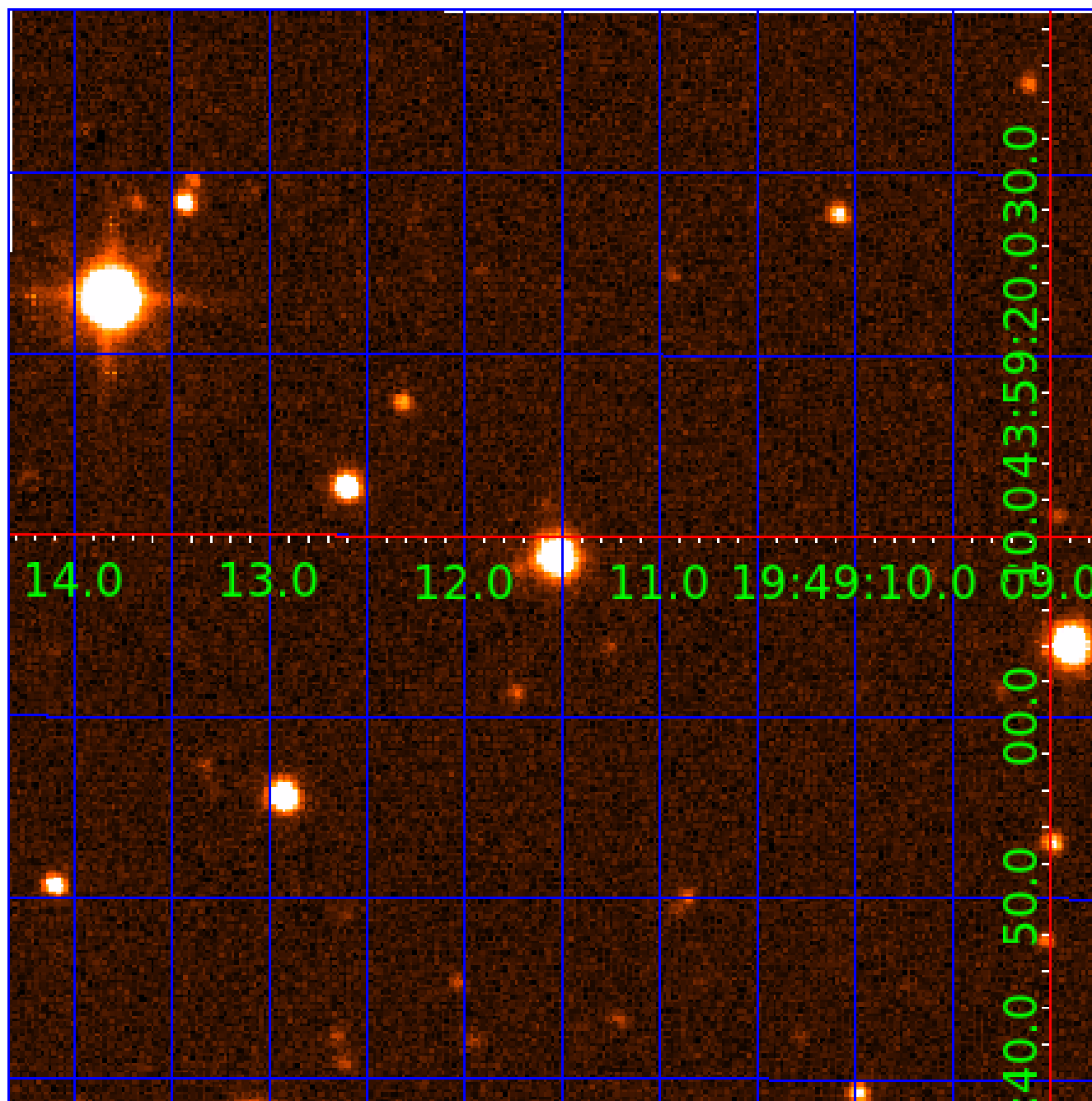
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 008114921

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

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008114921-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_MEAS
008114921-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
008114921-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
008114921-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—HALO_GHOST
008114921-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
008114921-07	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS—HALO_GHOST
008114921-08	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_MEAS—HALO_GHOST

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

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

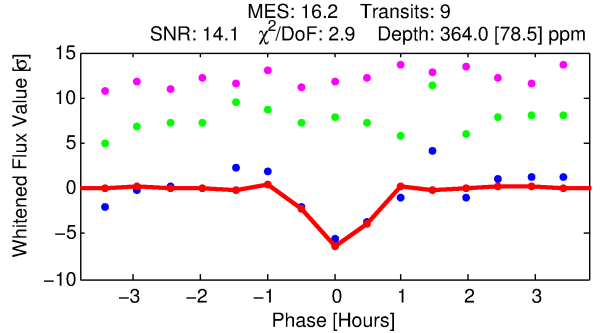
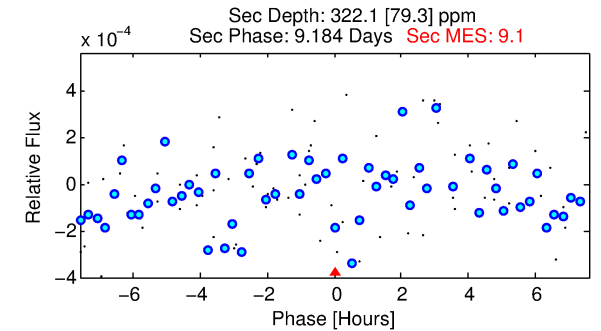
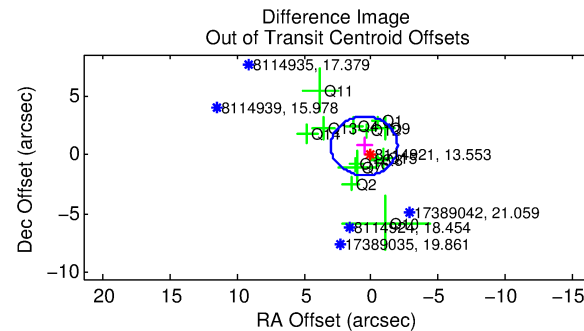
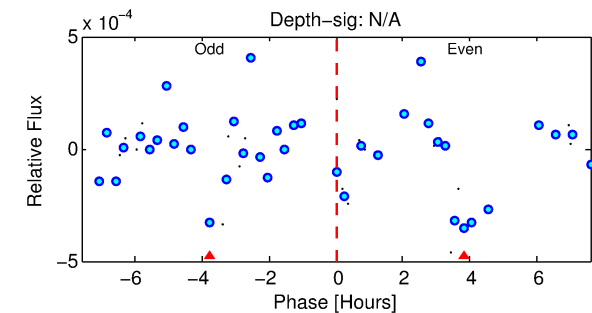
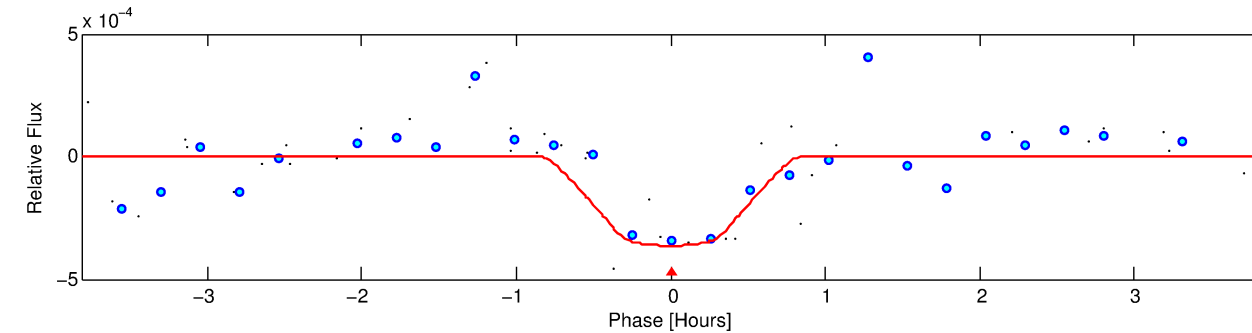
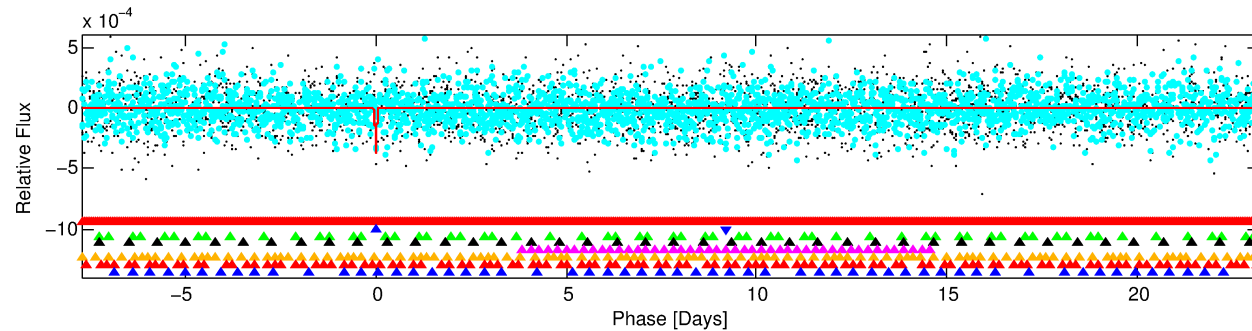
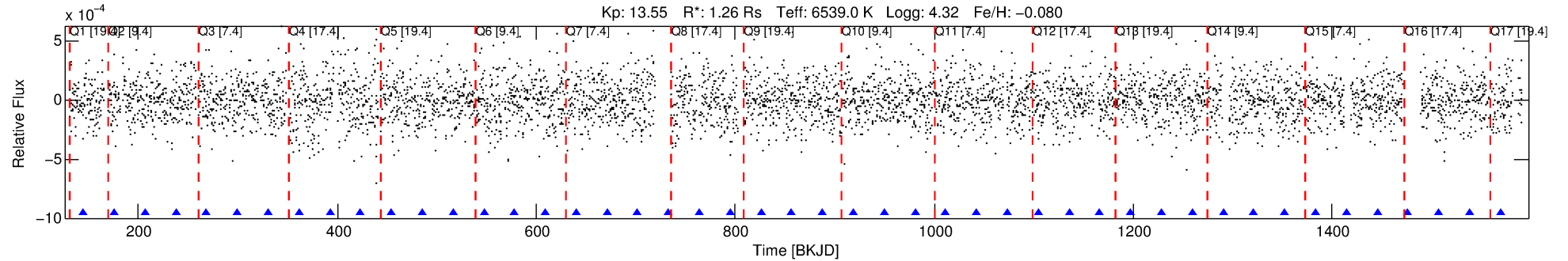
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008114921-02

No Significant Match Found

DV One-Page Summary

KIC: 8114921 Candidate: 2 of 8 Period: 30.964 d



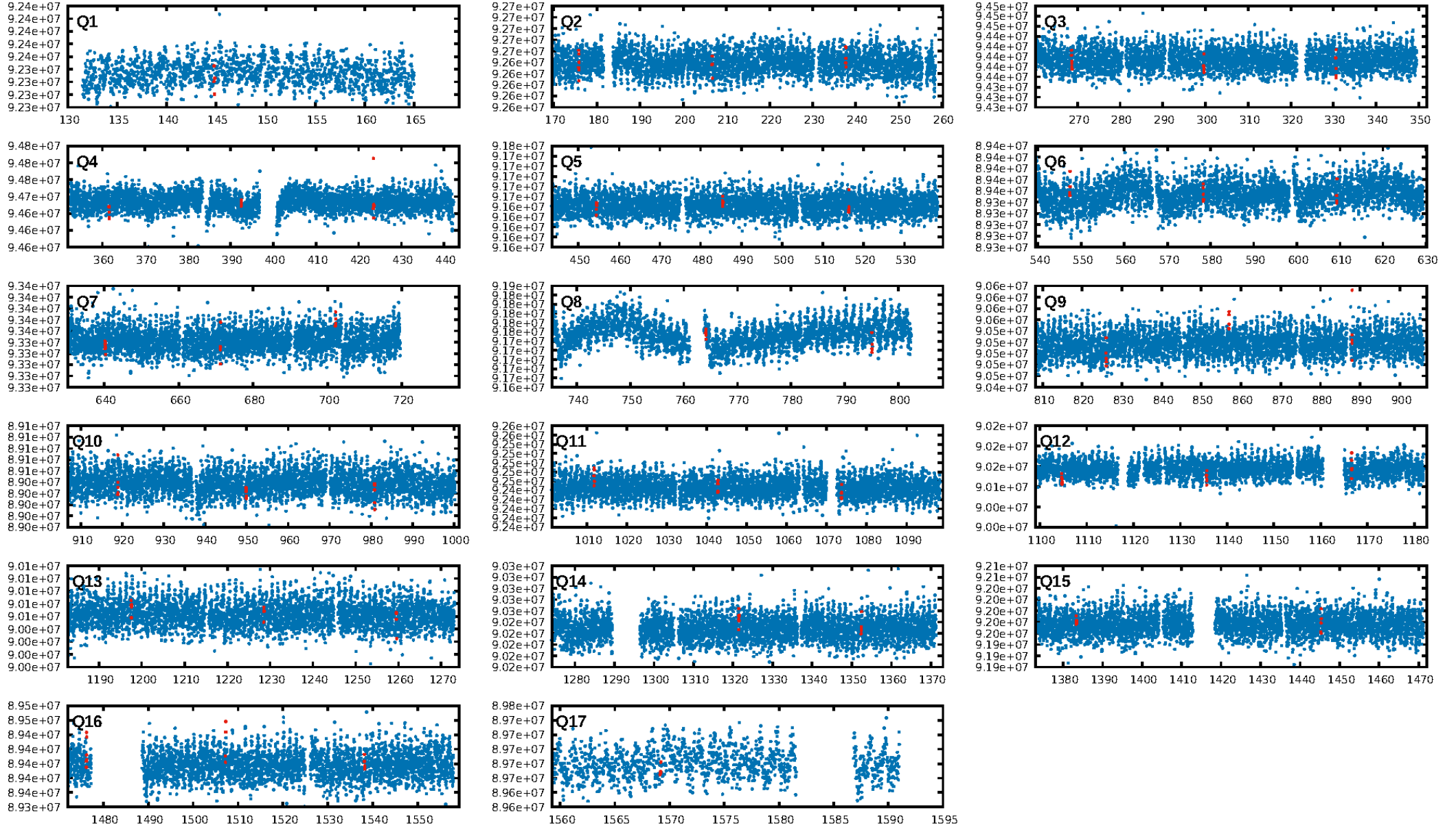
DV Fit Results:

Period = 30.96416 [0.00024] d
Epoch = 144.8176 [0.0049] BKJD
Rp/R* = 0.0209 [0.0160]
a/R* = 82.44 [345.10]
b = 0.92 [0.72]
Seff = 61.83 [24.80]
Teq = 715 [72] K
Rp = 2.89 [2.40] Re
a = 0.2059 [0.0549] AU
Ag = 901.25 [1436.36] [0.63 σ]
Teffp = 6057 [2352] K [2.27 σ]

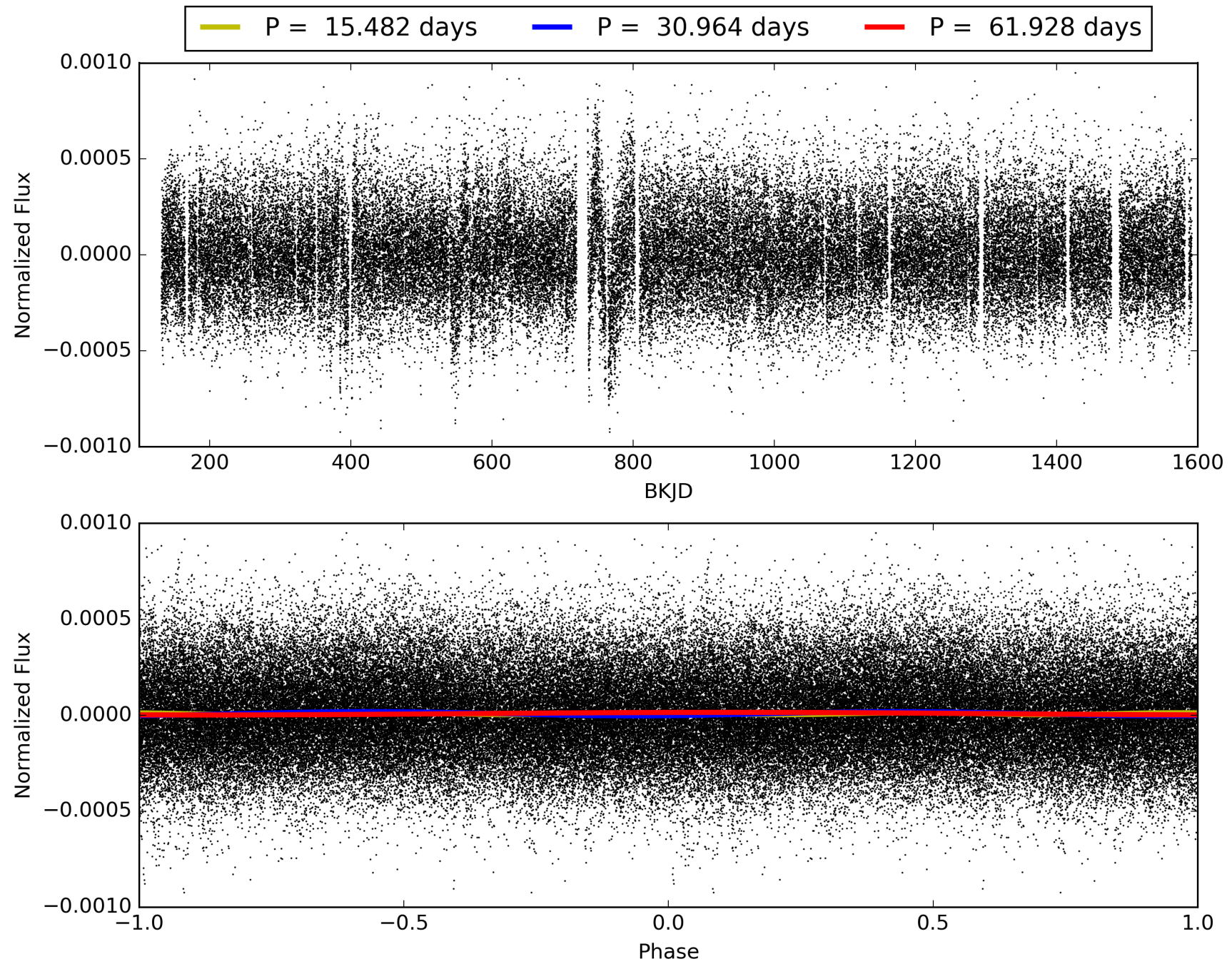
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [35.15 σ]
LongPeriod-sig: 97.9% [2.31 σ]
ModelChiSquare2-sig: 7.0%
ModelChiSquareGof-sig: 73.4%
Bootstrap-pfa: 2.01e-17
RollingBand-fgt: 1.00 [8/8]
GhostDiagnostic-chr: 8.244
Centroid-sig: 9.7%
Centroid-so: 0.653 arcsec [1.29 σ]
OotOffset-rm: 0.916 arcsec [1.10 σ]
KicOffset-rm: 0.886 arcsec [1.12 σ]
OotOffset-st: 3/3/4/3 [13]
KicOffset-st: 3/3/4/3 [13]
DiffImageQuality-fgm: 0.23 [3/13]
DiffImageOverlap-fno: 0.12 [2/17]

TCE 008114921-02, PDC Light Curves

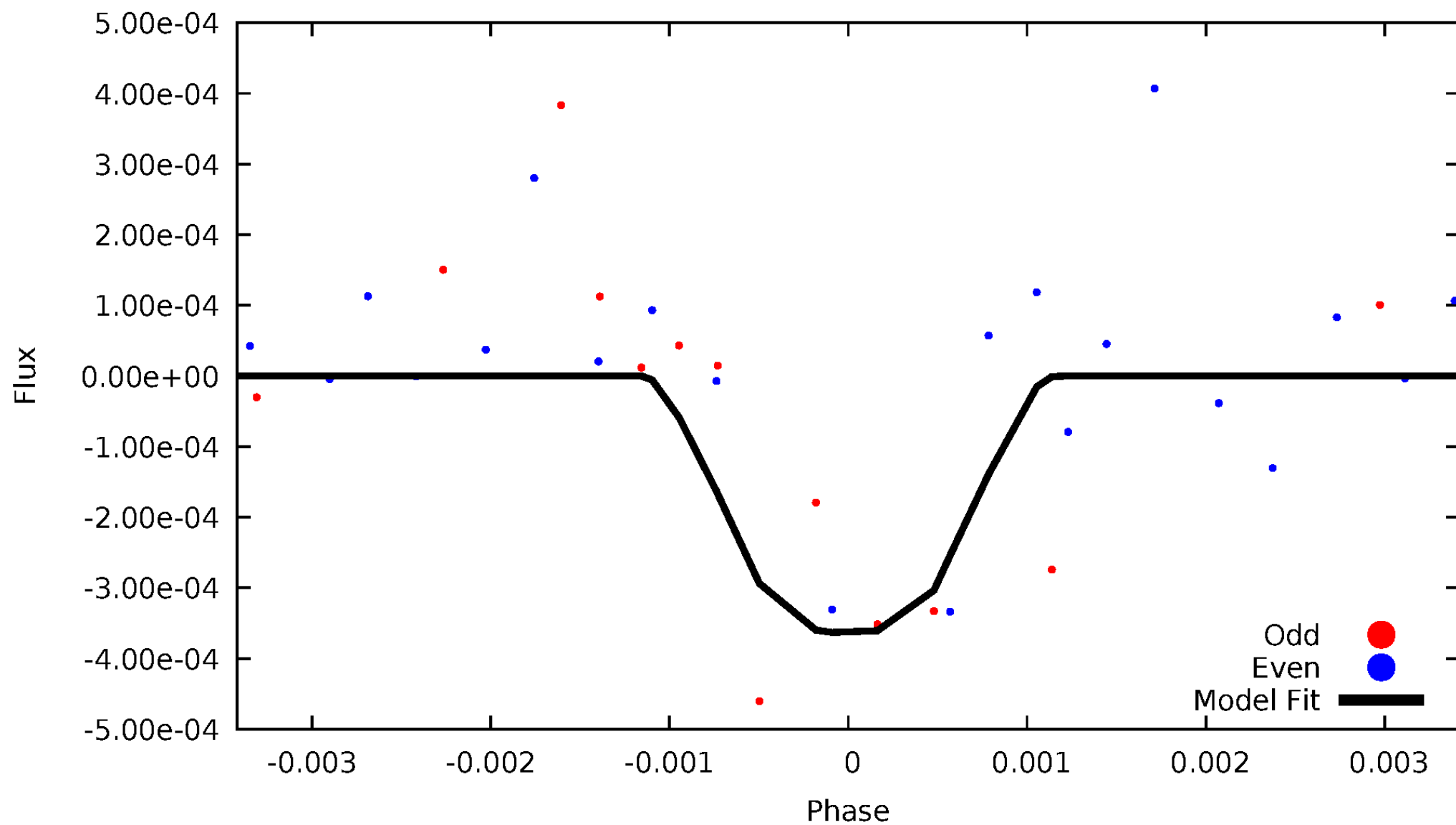


TCE 008114921-02



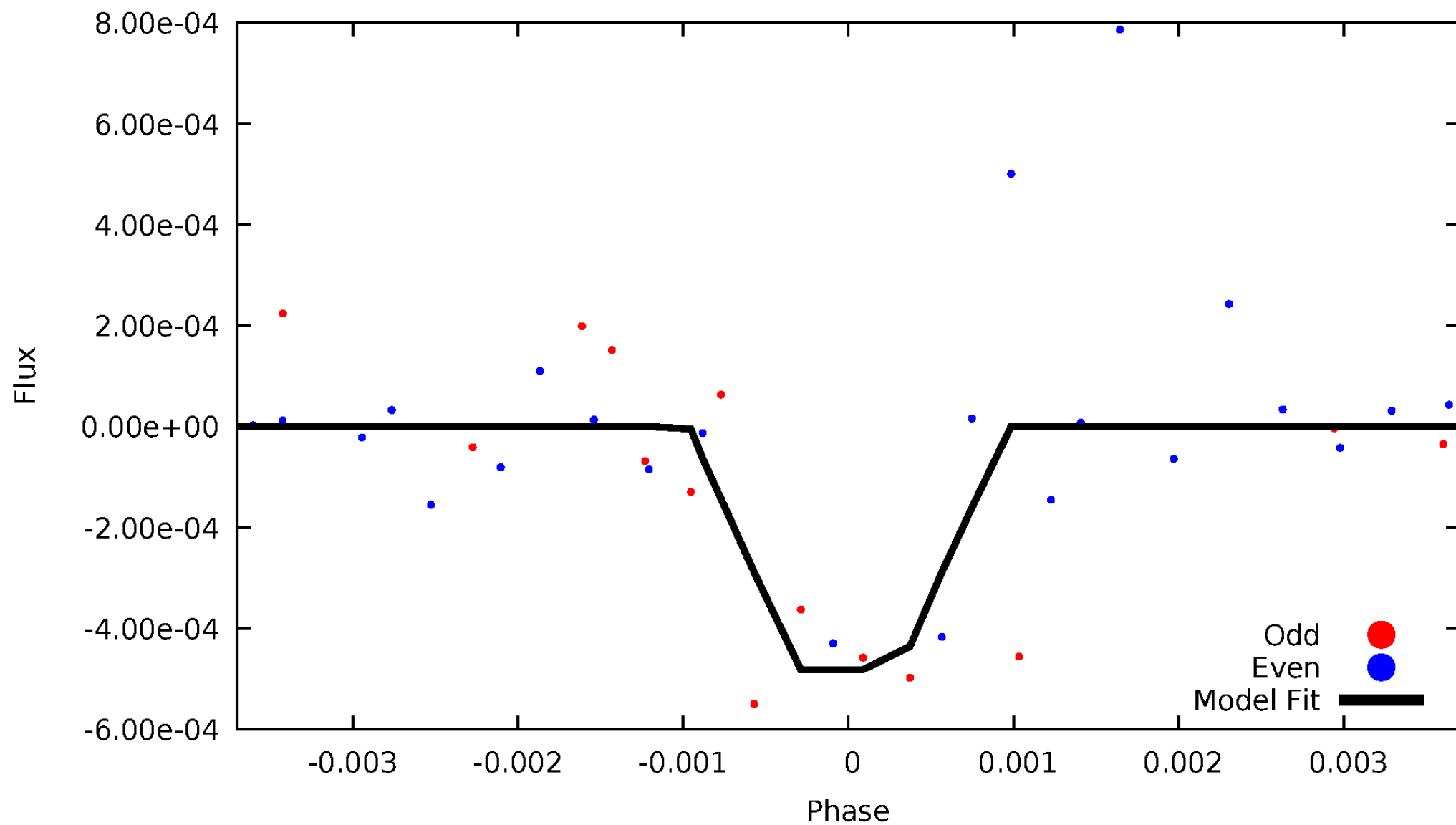
DV Odd/Even

TCE 008114921-02



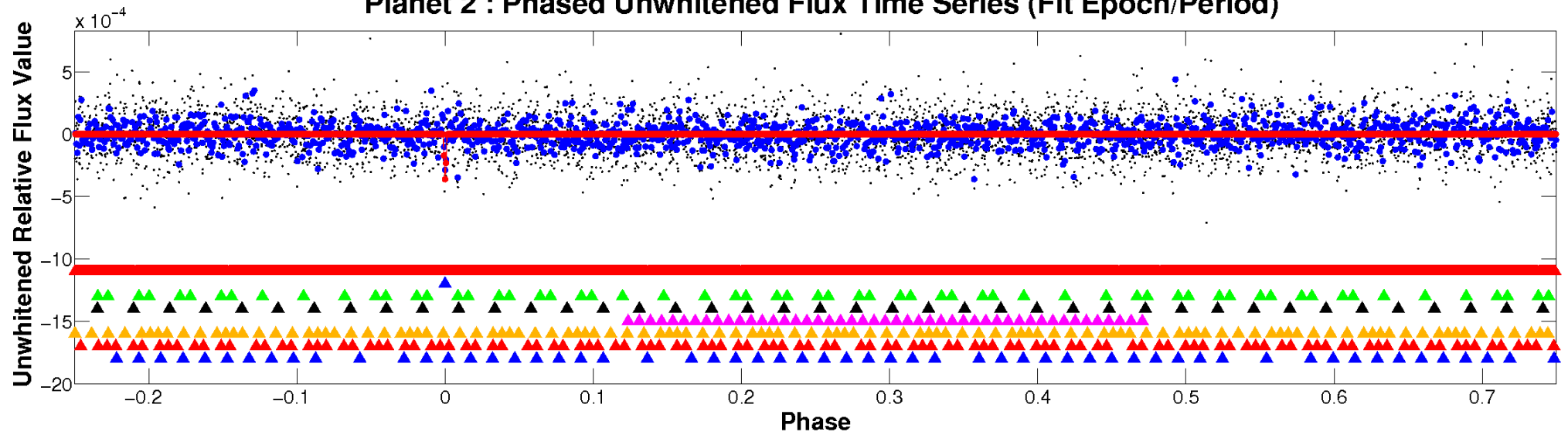
ALT Odd/Even

TCE 008114921-02

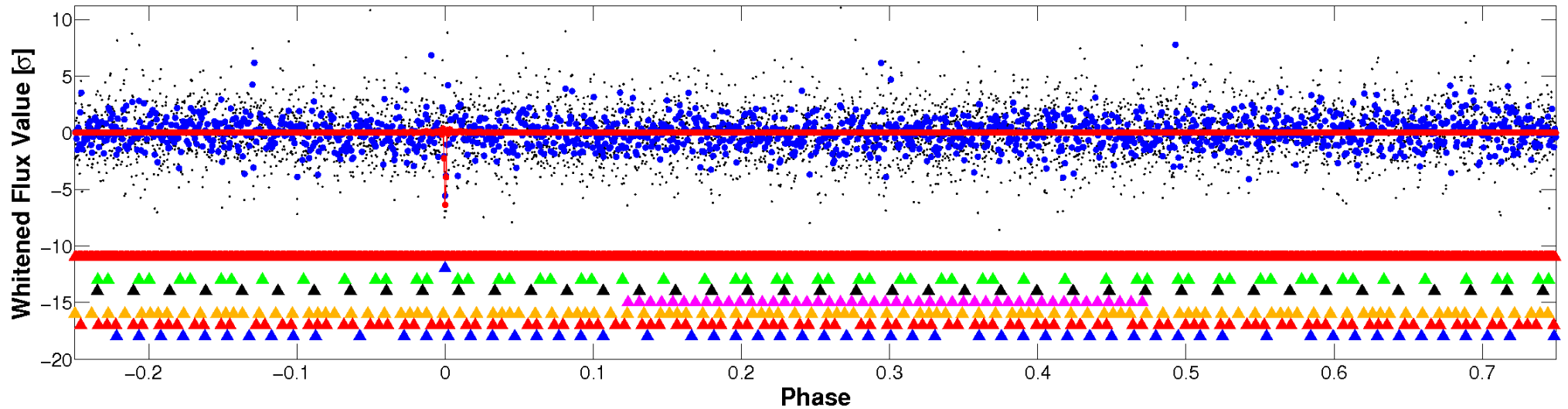


Non-Whitened Vs. Whitened Light Curve

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

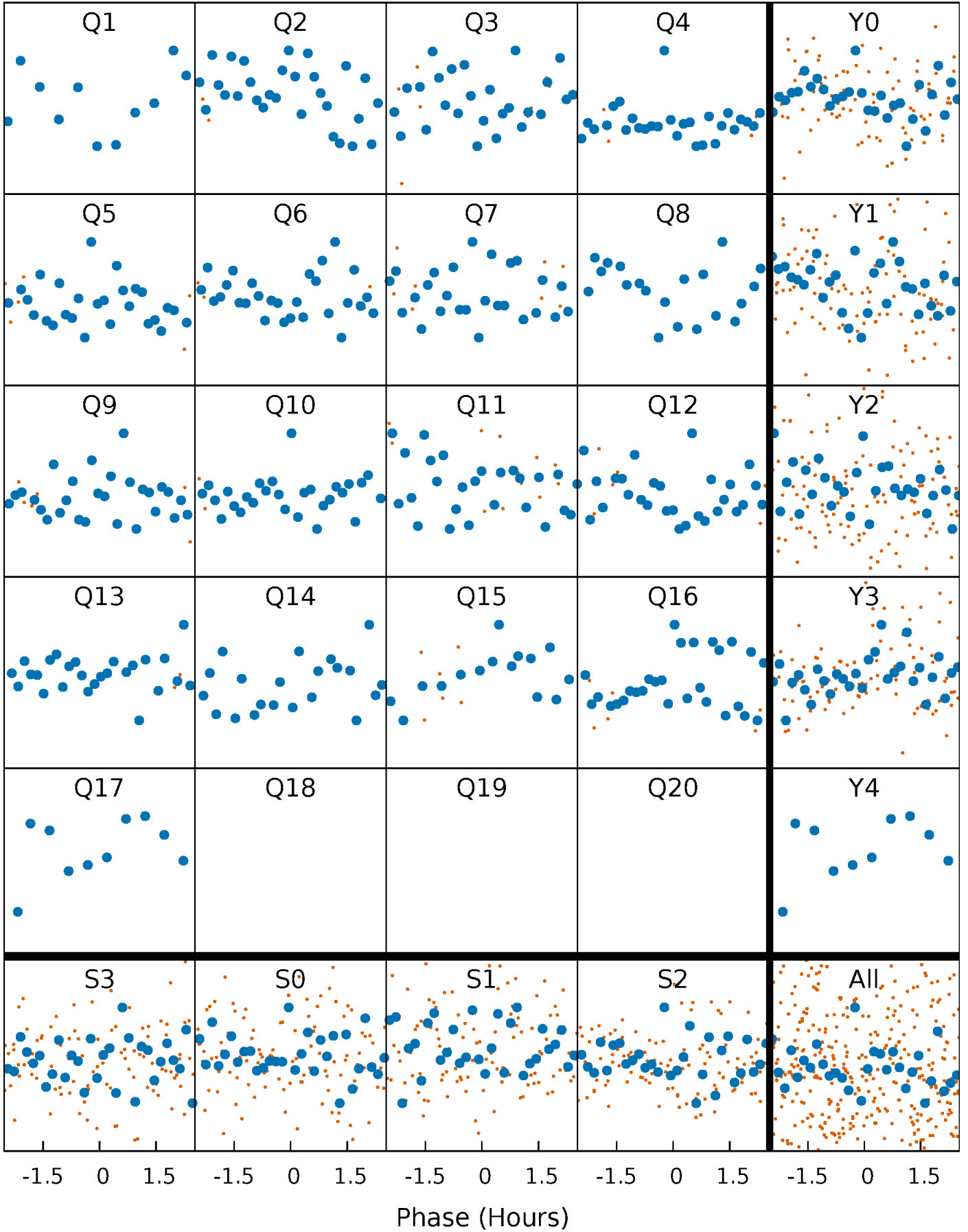


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



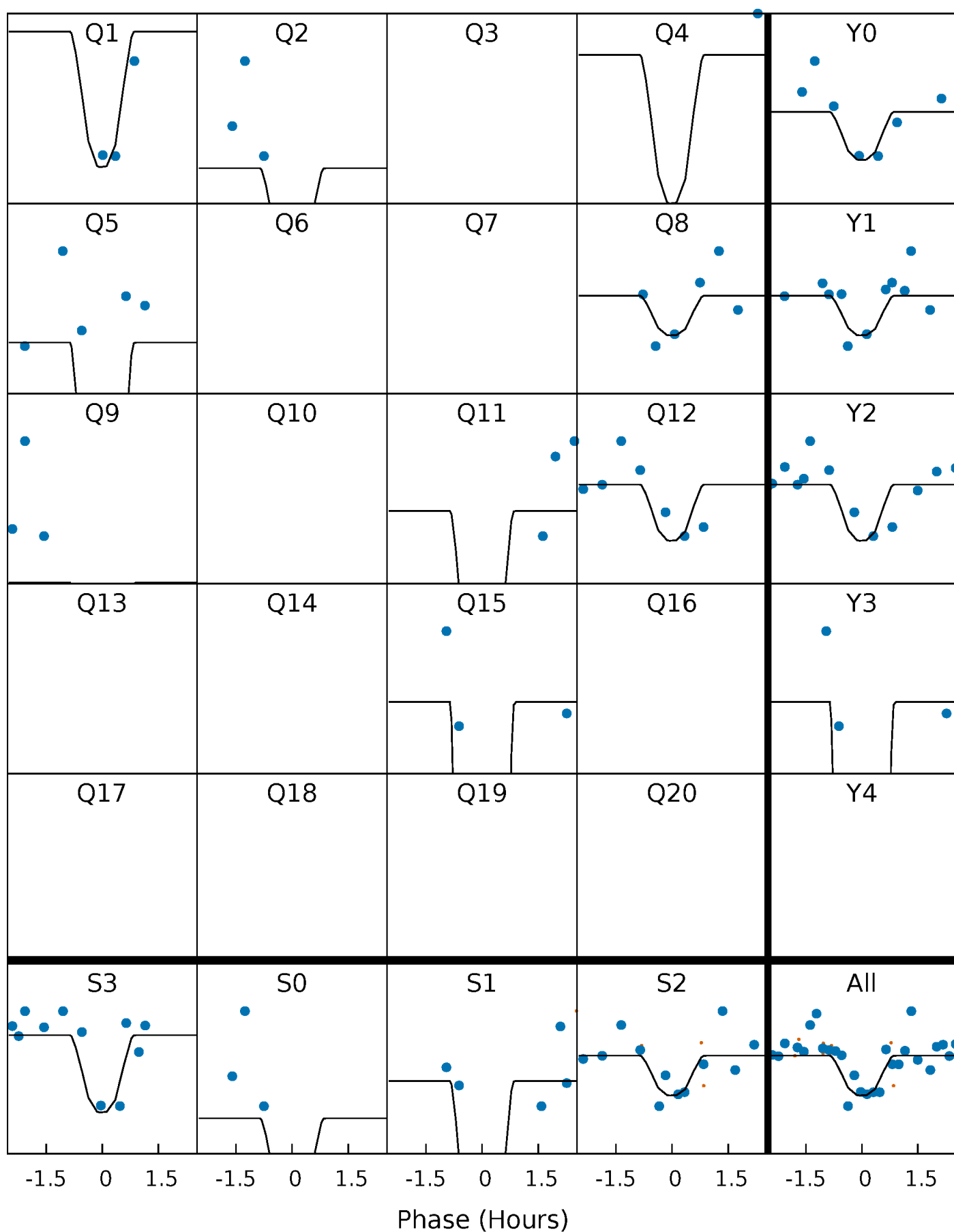
PDC Quarter-Phased Transit Curves

TCE 008114921-02 P= 30.964159 Days $T_0=144.817561$ (BKJD)



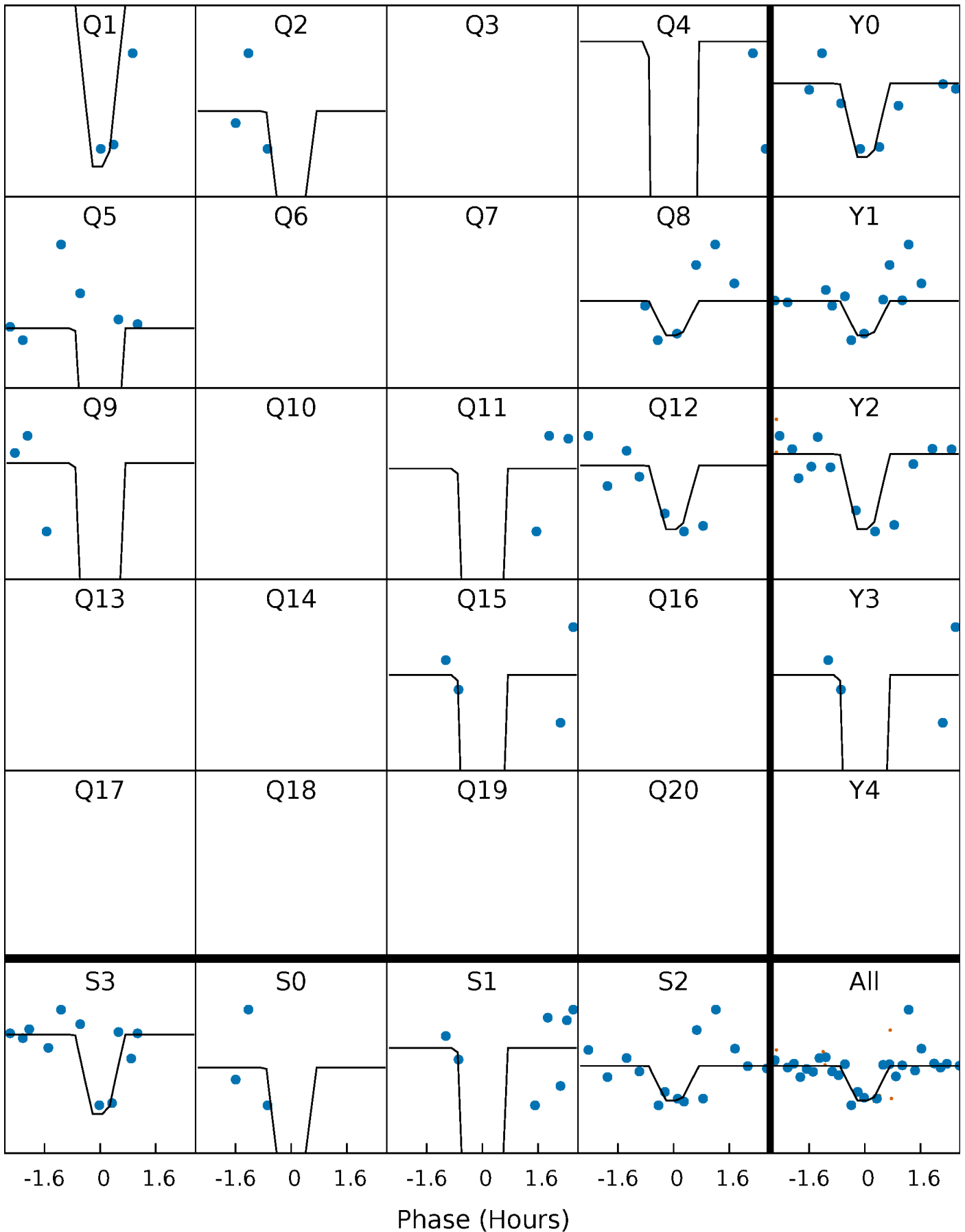
DV Quarter-Phased Transit Curves

TCE 008114921-02 P= 30.964159 Days $T_0=144.817561$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

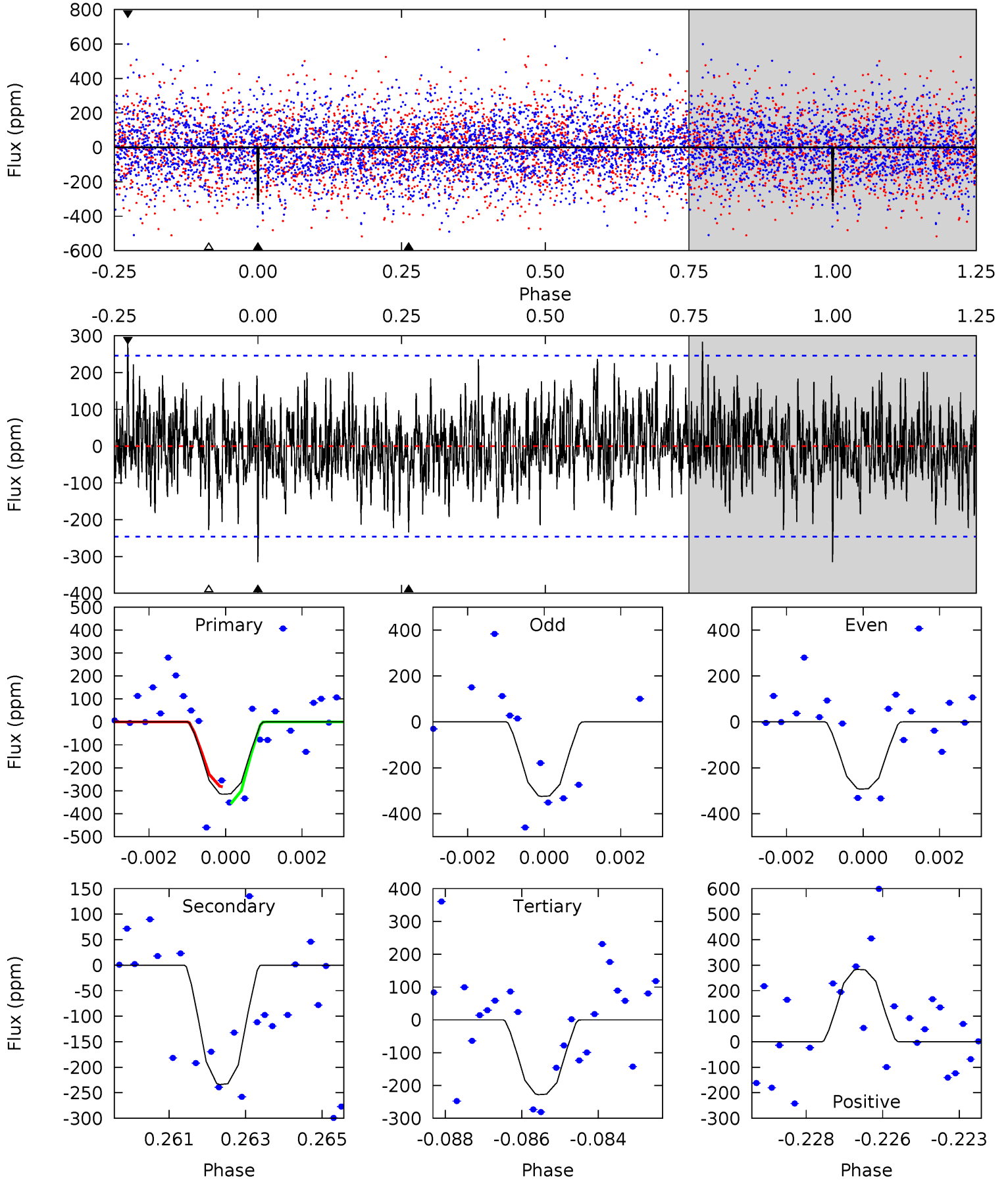
TCE 008114921-02 P= 30.964262 Days $T_0=144.817654$ (BKJD)



DV Model-Shift Uniqueness Test

008114921-02, P = 30.964159 Days, E = 113.853402 Days

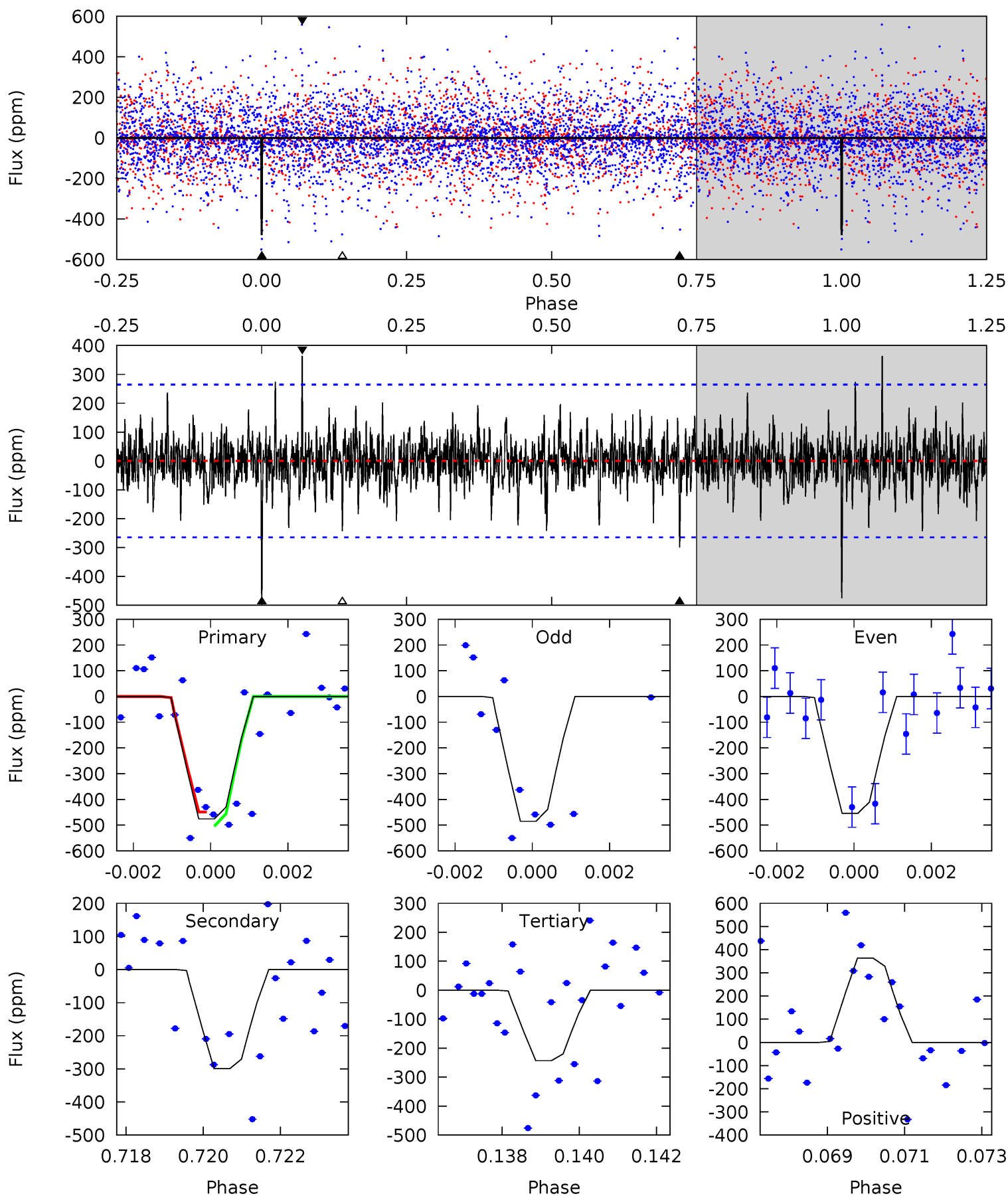
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.79	5.04	4.91	6.10	5.30	3.04	1.62	1.88	0.69	0.13	-1.07	0.36	0.96	0.47	0.81



Alt Model-Shift Uniqueness Test

008114921-02, P = 30.964262 Days, E = 113.853392 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.60	6.05	4.91	7.34	5.34	3.11	1.32	4.69	2.26	1.14	-1.29	0.30	1.02	0.43	0.57



Stellar Parameters For KIC 008114921

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6539^{+155}_{-214}	$4.318^{+0.087}_{-0.203}$	$-0.080^{+0.250}_{-0.300}$	$1.265^{+0.410}_{-0.176}$	$1.217^{+0.192}_{-0.157}$	$0.847^{+0.338}_{-0.463}$
	+2%/-3%	+2%/-5%	+312%/-375%	+32%/-14%	+16%/-13%	+40%/-55%
Source	PHO1	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 008114921-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-234 ± 46	$3.28^{+2.37}_{-1.99}$	1010^{+78}_{-51}	5321^{+3359}_{-1006}	504^{+2531}_{-334}
Alt.	-300 ± 50	$3.44^{+2.22}_{-1.87}$	1010^{+76}_{-52}	5510^{+2825}_{-983}	578^{+2332}_{-368}

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

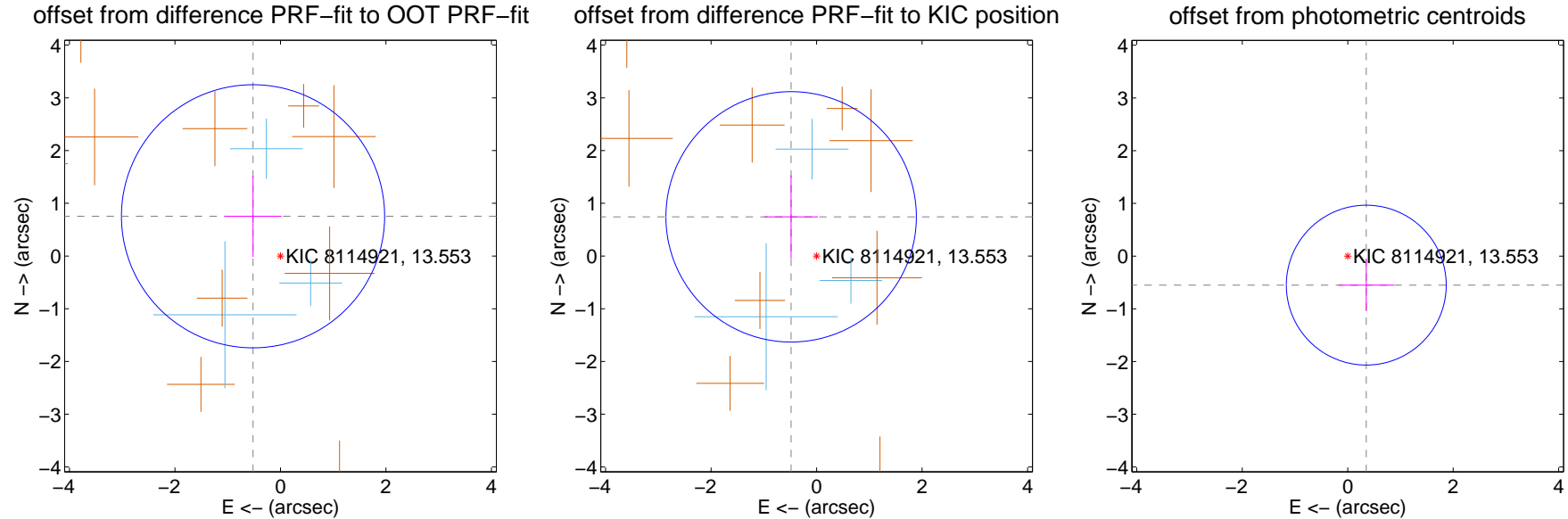
DV Centroid Data

Supplemental centroid analysis for 008114921-02. Kepler magnitude: 13.55. Transit SNR 14.06

There are 3 quarters with good PRF difference image offsets

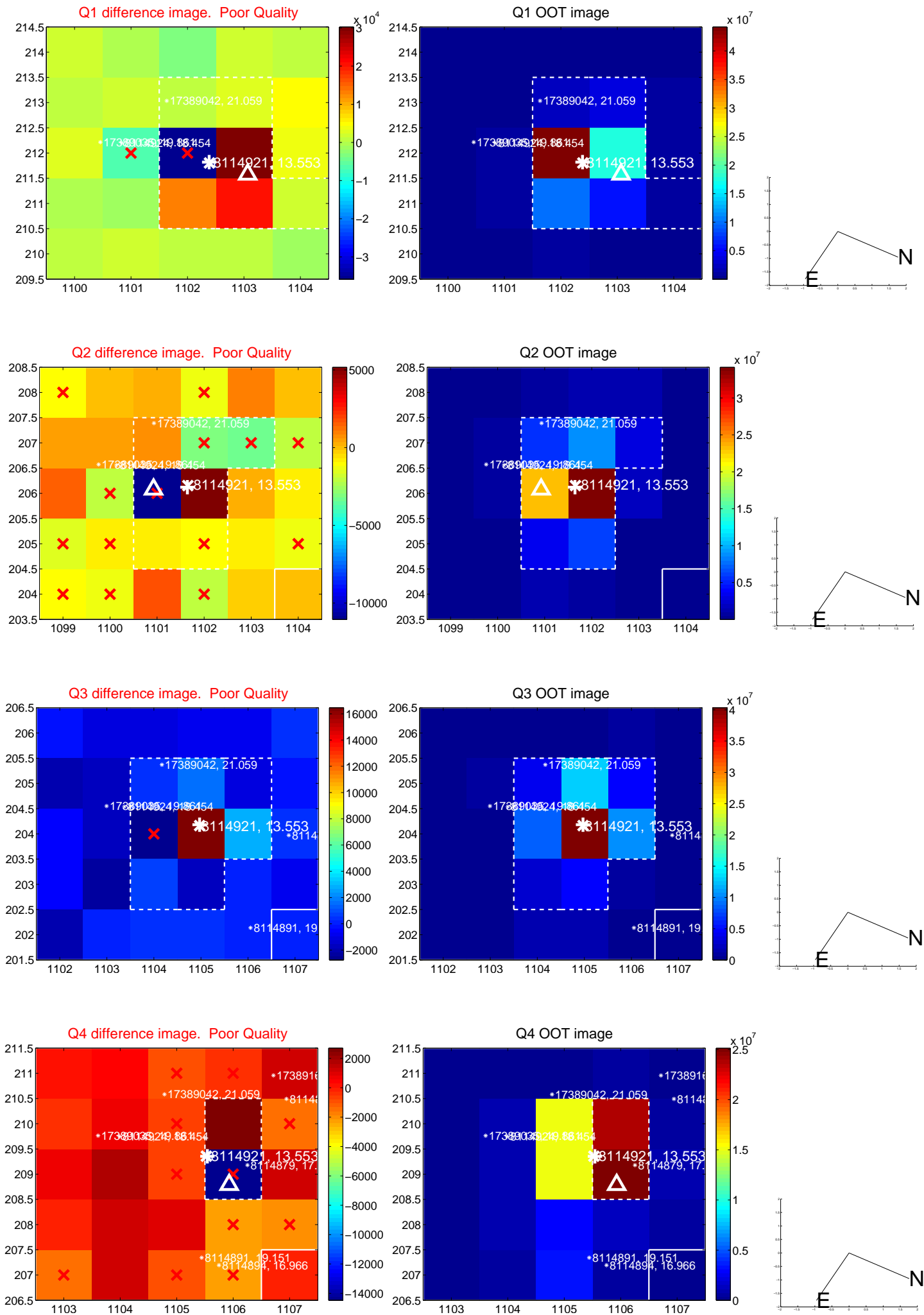
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.916 ± 0.832	1.10	0.520 ± 0.541	0.754 ± 0.770
PRF-fit source offset from KIC position	0.886 ± 0.791	1.12	0.482 ± 0.508	0.743 ± 0.786
photometric centroid source offset	0.65 ± 0.51	1.29	-0.35 ± 0.53	-0.55 ± 0.50

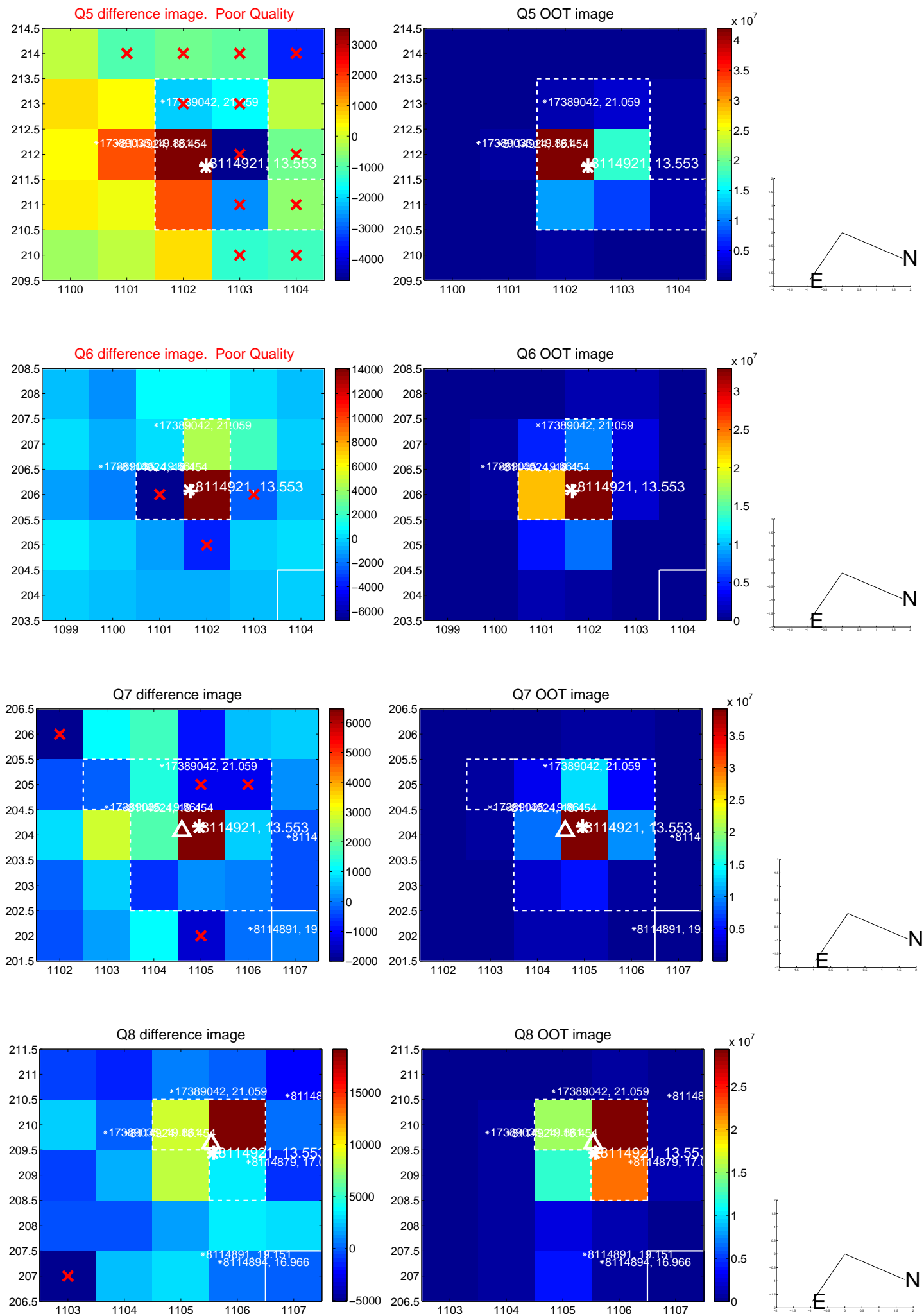


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

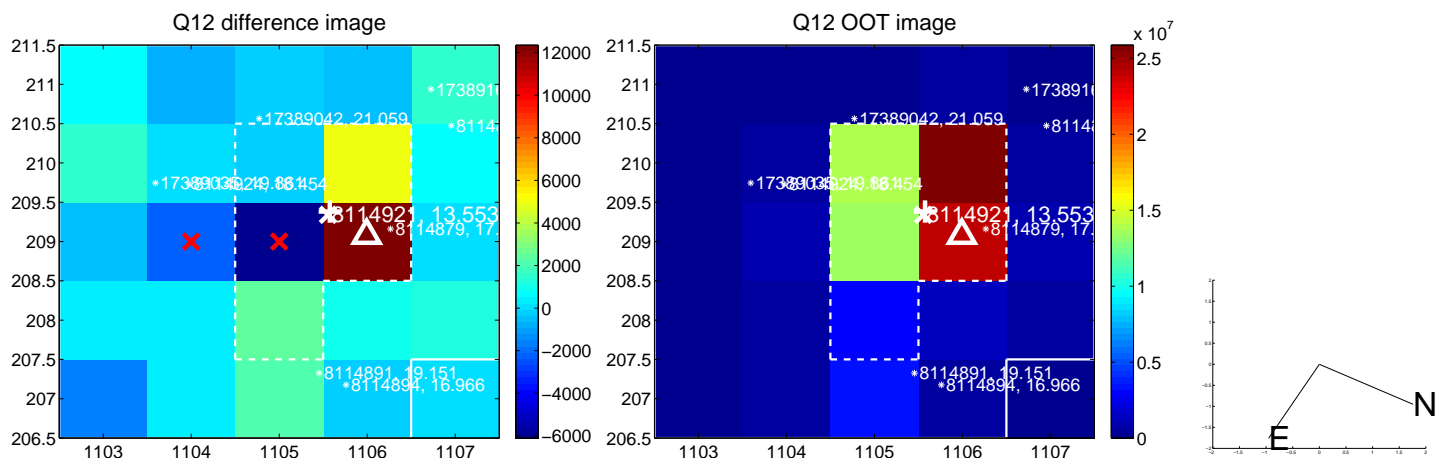
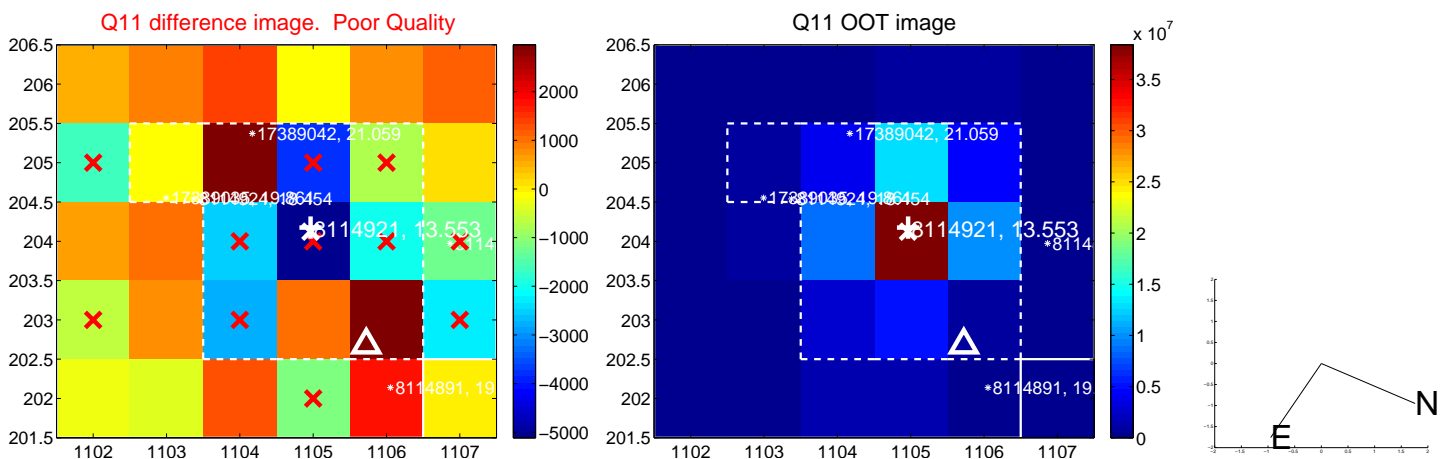
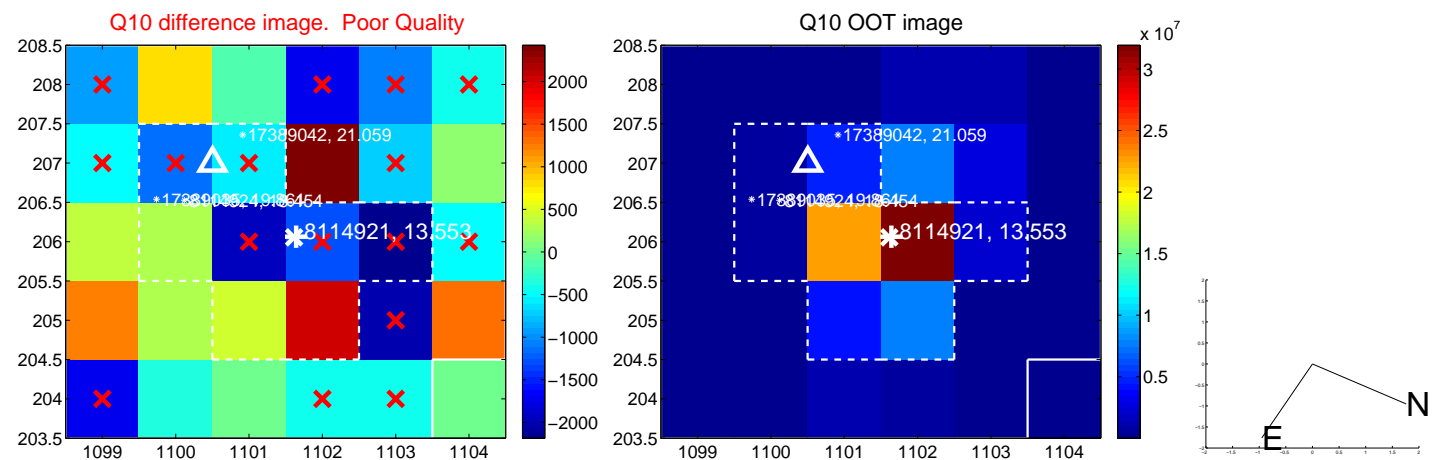
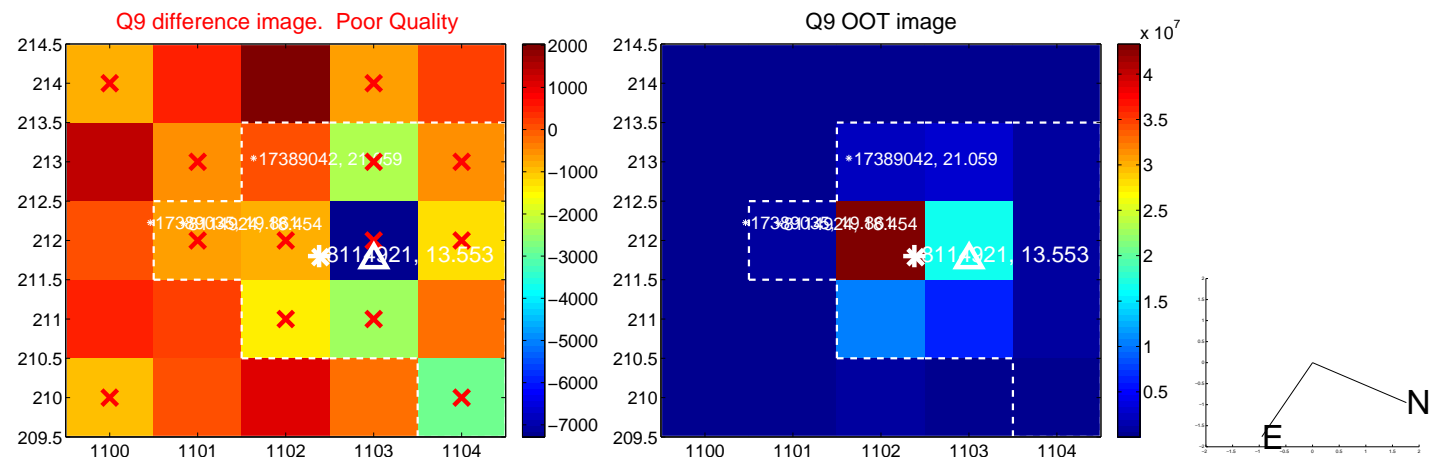
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



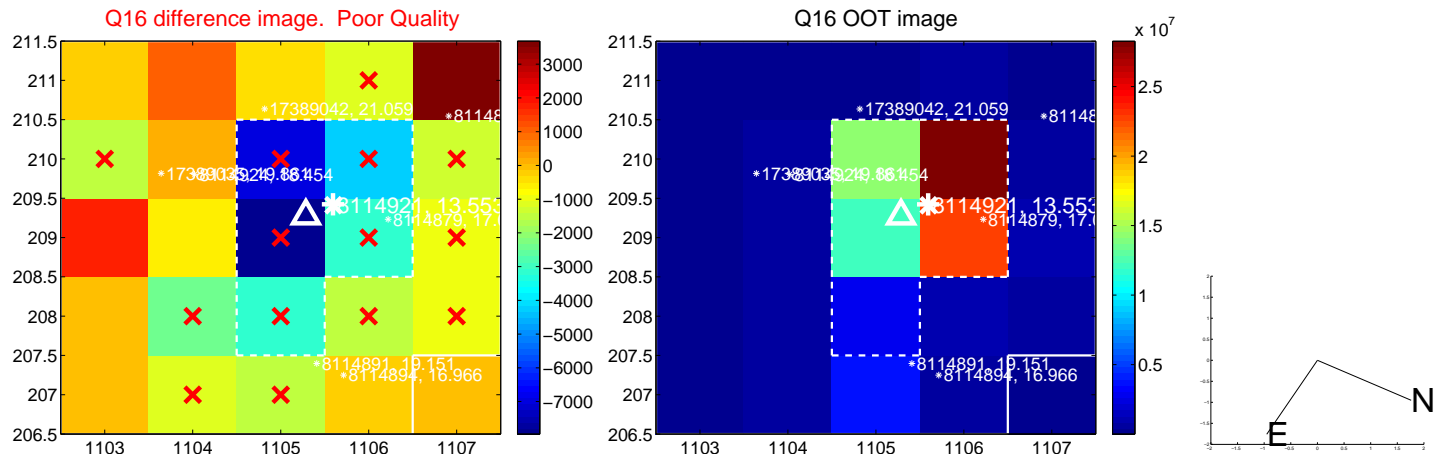
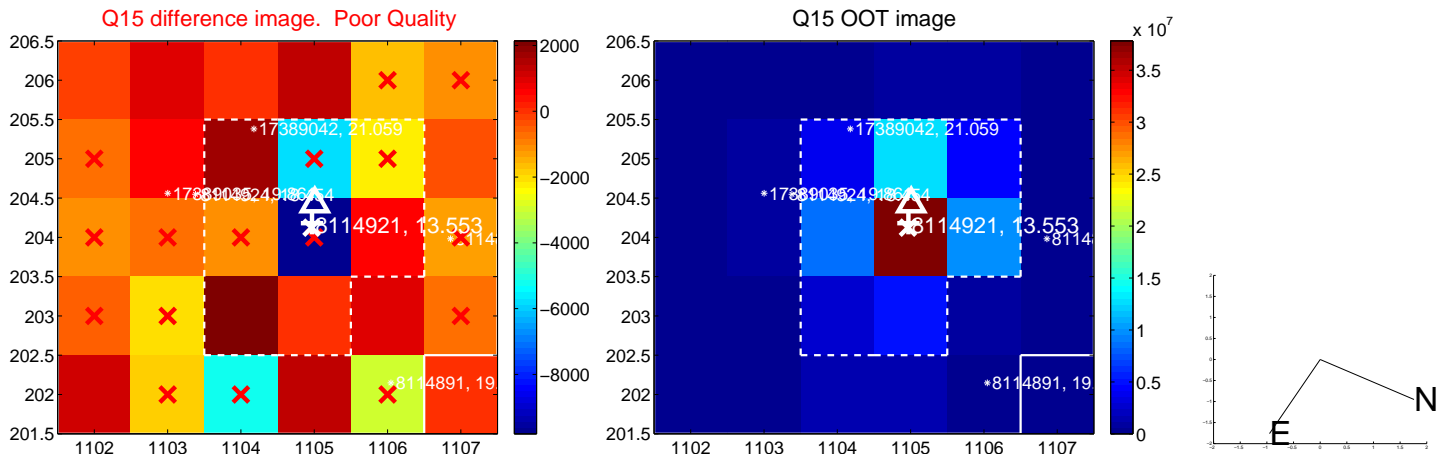
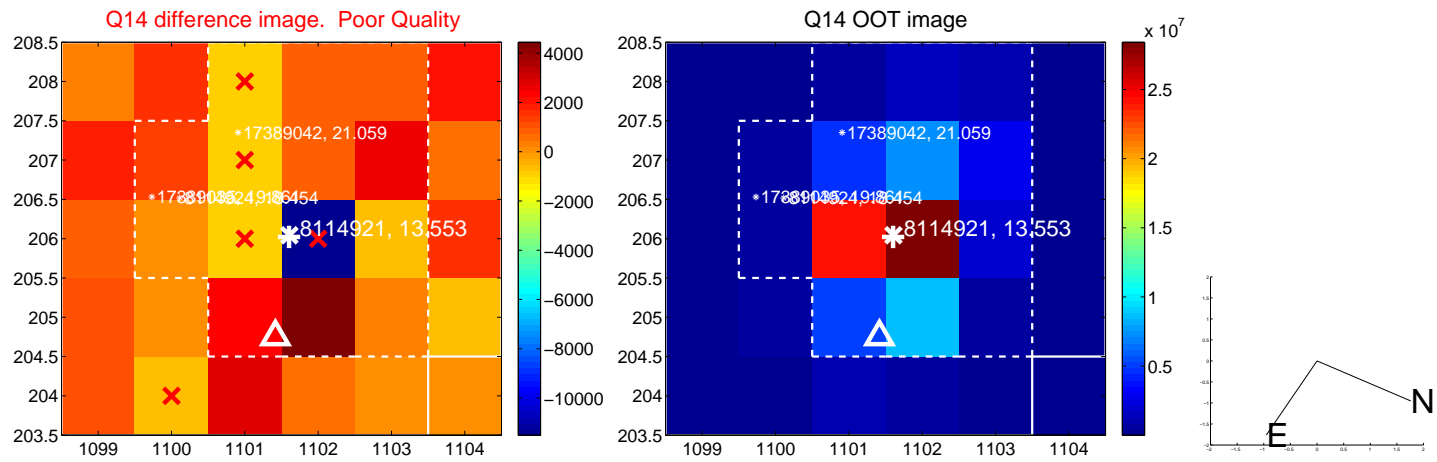
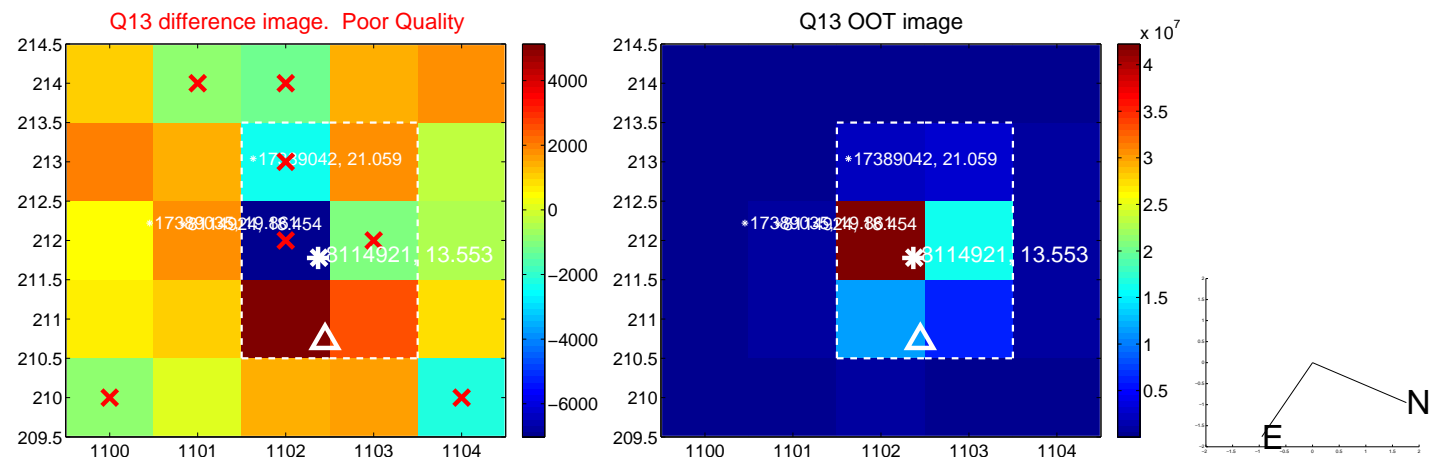
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

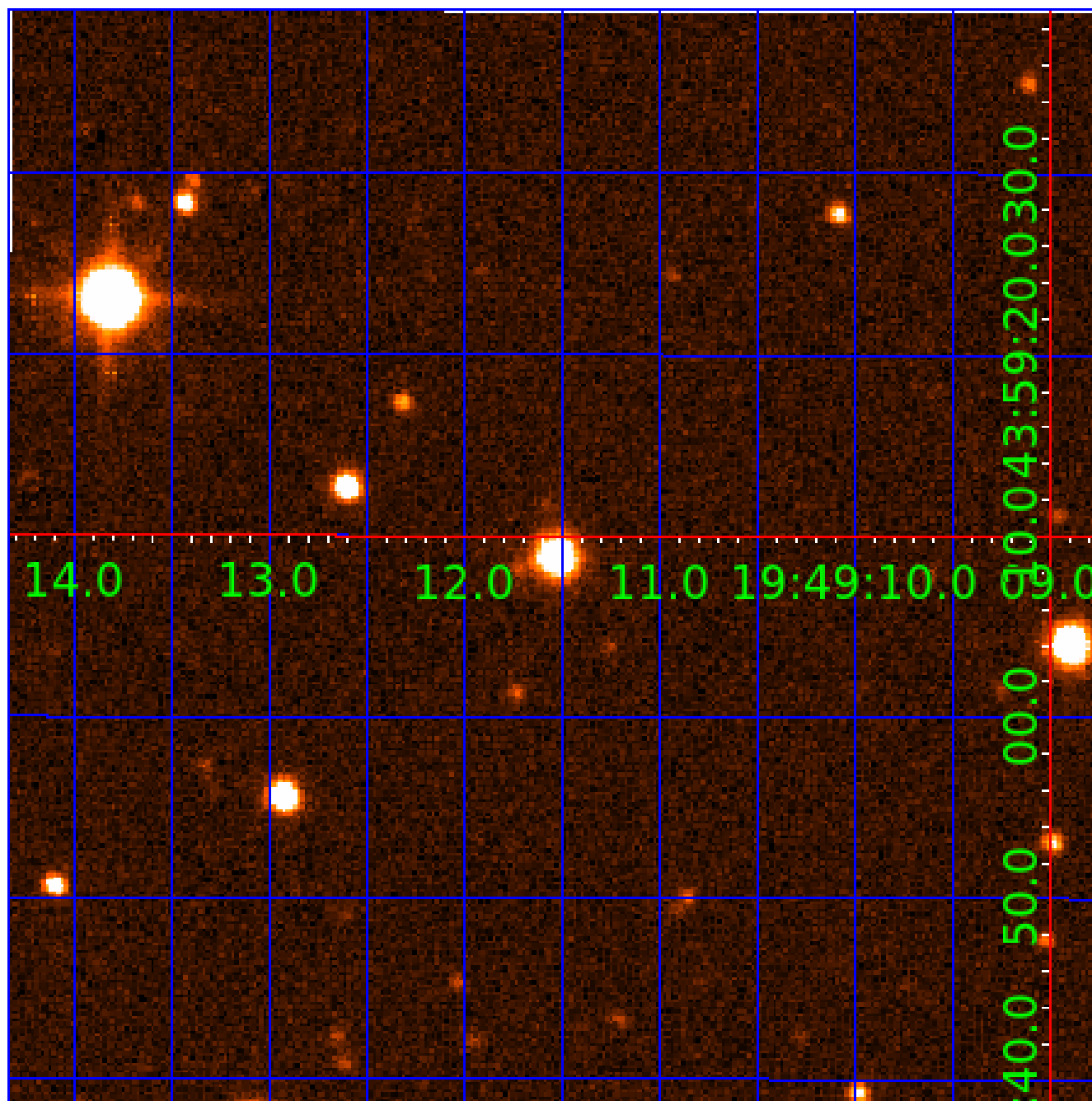


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008114921

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})
008114921-01	OBS	No	0.718480	132.256644	3.0	5.137	9.4	1.8	1.26	6539	0.22	9342.15
008114921-02	OBS	No	30.964159	144.817561	364.0	1.270	16.2	14.1	1.26	6539	2.89	61.83
008114921-03	OBS	No	23.438102	150.893227	311.5	1.544	12.1	11.8	1.26	6539	2.58	89.63
008114921-04	OBS	No	23.411955	154.920356	224.5	1.717	12.1	10.1	1.26	6539	2.05	89.76
008114921-05	OBS	No	31.197732	148.643626	198.1	2.068	11.8	8.6	1.26	6539	1.97	61.21
008114921-06	OBS	No	12.770403	140.235996	624.5	1.500	10.6	-1.0	1.26	6539	3.19	201.40
008114921-07	OBS	No	12.642128	135.009331	181.8	1.609	9.4	10.5	1.26	6539	1.94	204.13
008114921-08	OBS	No	24.956031	156.444549	267.6	3.901	9.7	10.5	1.26	6539	3.41	82.43

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008114921-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—CENT_FEW_DIFFS
008114921-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_MEAS
008114921-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
008114921-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
008114921-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—HALO_GHOST
008114921-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
008114921-07	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS—HALO_GHOST
008114921-08	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_MEAS—HALO_GHOST

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

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

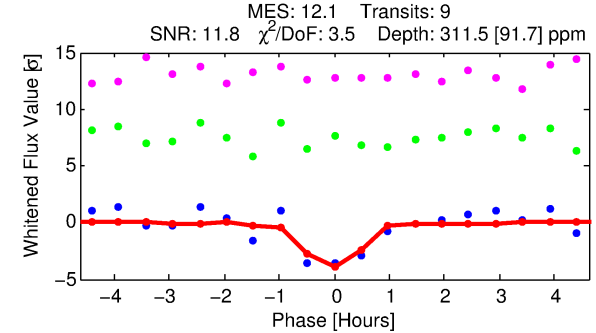
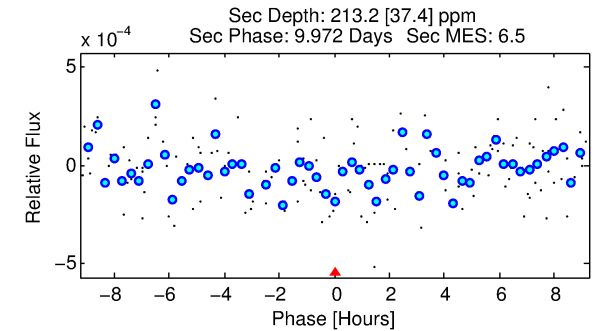
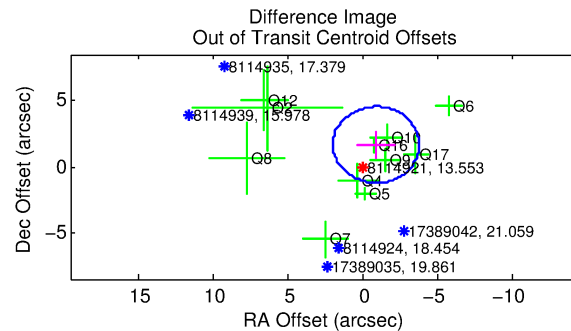
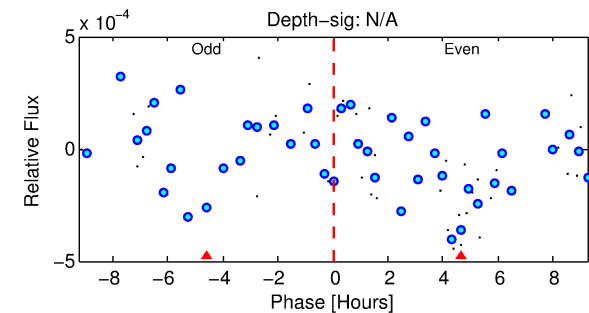
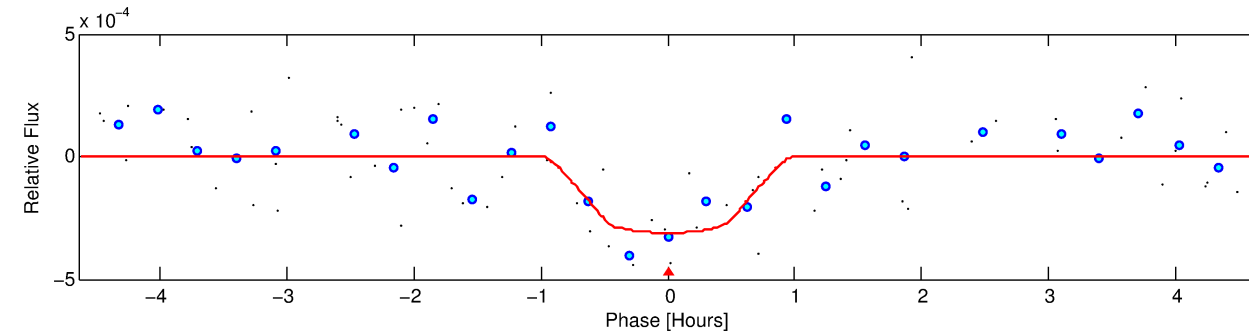
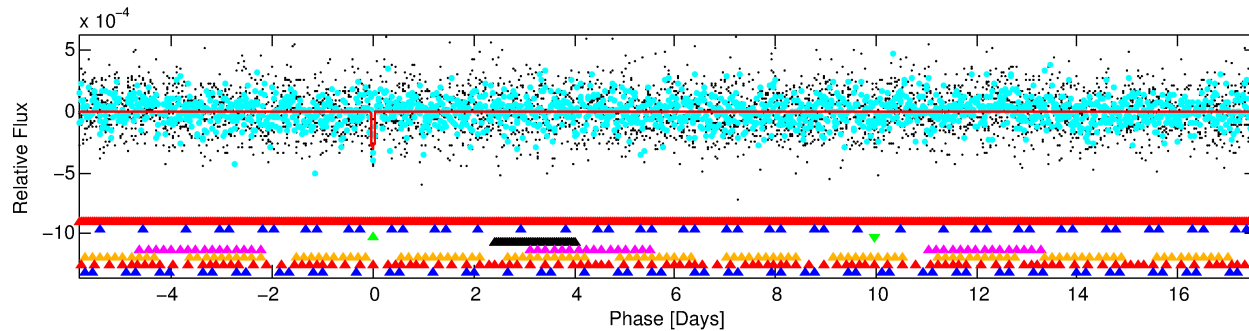
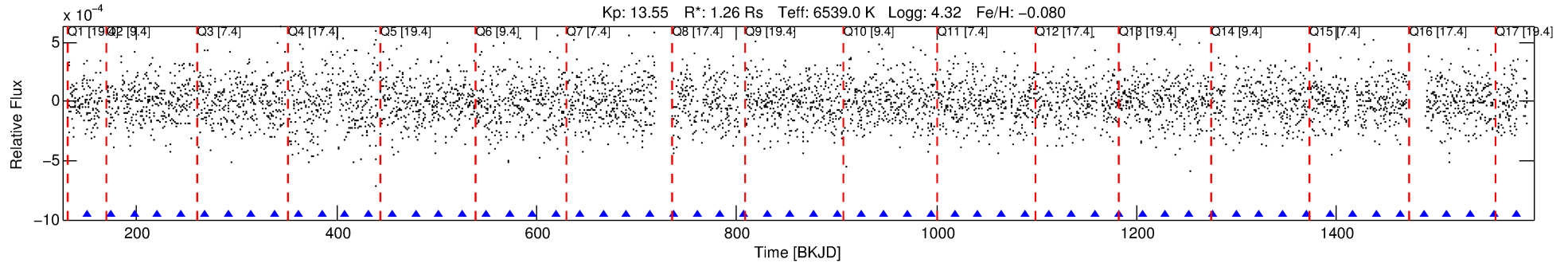
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008114921-03

No Significant Match Found

DV One-Page Summary

KIC: 8114921 Candidate: 3 of 8 Period: 23.438 d



DV Fit Results:

Period = 23.43810 [0.00029] d
Epoch = 150.8932 [0.0076] BKJD
Rp/R* = 0.0187 [0.0418]
a/R* = 59.15 [733.58]
b = 0.88 [3.19]
Seff = 89.63 [35.95]
Teq = 785 [79] K
Rp = 2.58 [5.83] Re
a = 0.1710 [0.0456] AU
Ag = 514.82 [2311.80] [0.22 σ]
Teffp = 5778 [6466] K [0.77 σ]

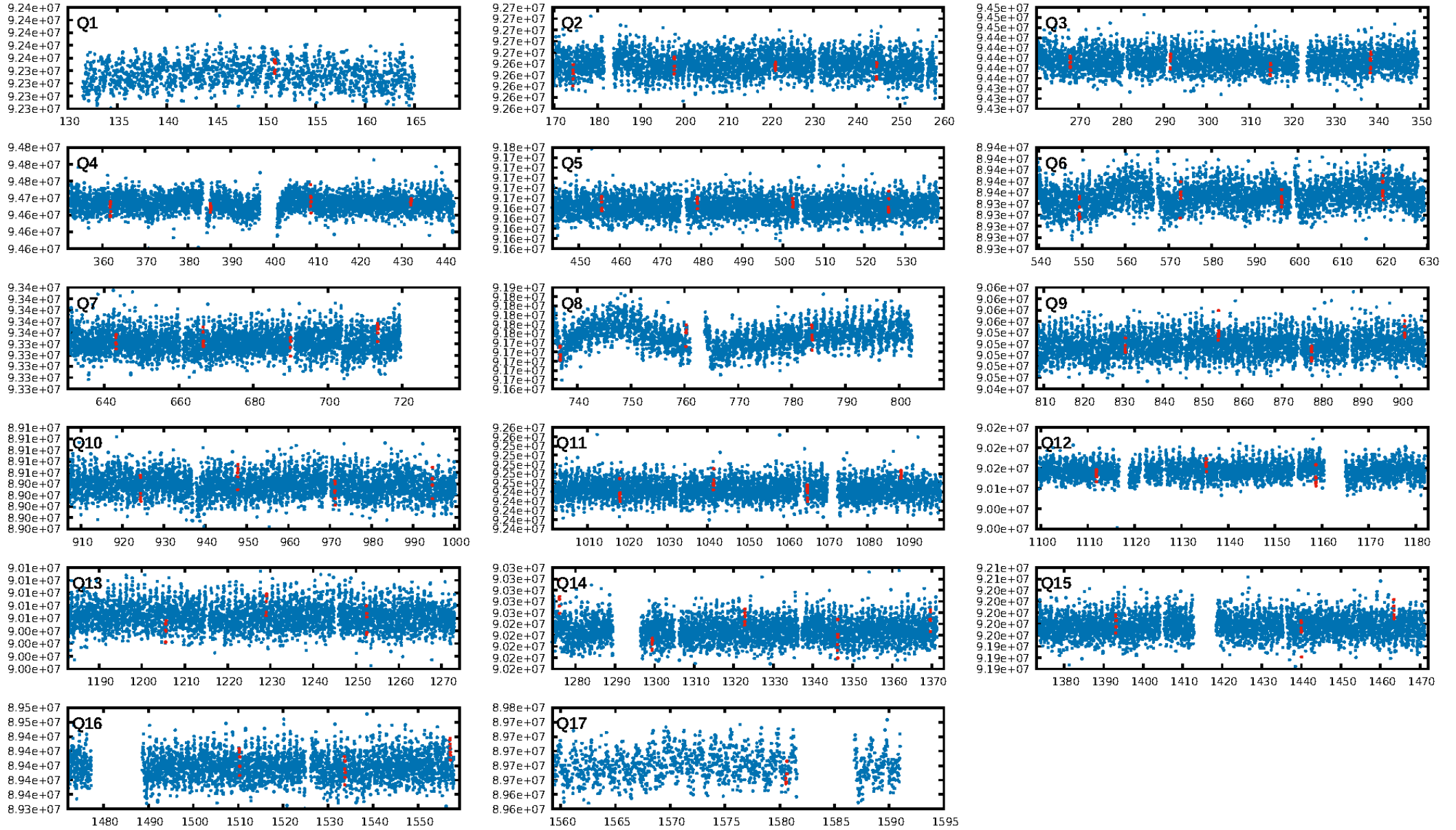
DV Diagnostic Results:

ShortPeriod-sig: 21.4% [0.27 σ]
LongPeriod-sig: 100.0% [8.68 σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 58.7%
Bootstrap-pfa: 8.55e-11
RollingBand-fgt: 1.00 [9/9]
GhostDiagnostic-chr: -1.308
Centroid-sig: 0.1%
Centroid-so: 1.092 arcsec [2.35 σ]
OotOffset-rm: 1.898 arcsec [1.97 σ]
KicOffset-rm: 1.922 arcsec [1.91 σ]
OotOffset-st: 3/1/4/3 [11]
KicOffset-st: 3/1/4/3 [11]
DiffImageQuality-fgm: 0.09 [1/11]
DiffImageOverlap-fno: 0.12 [2/17]

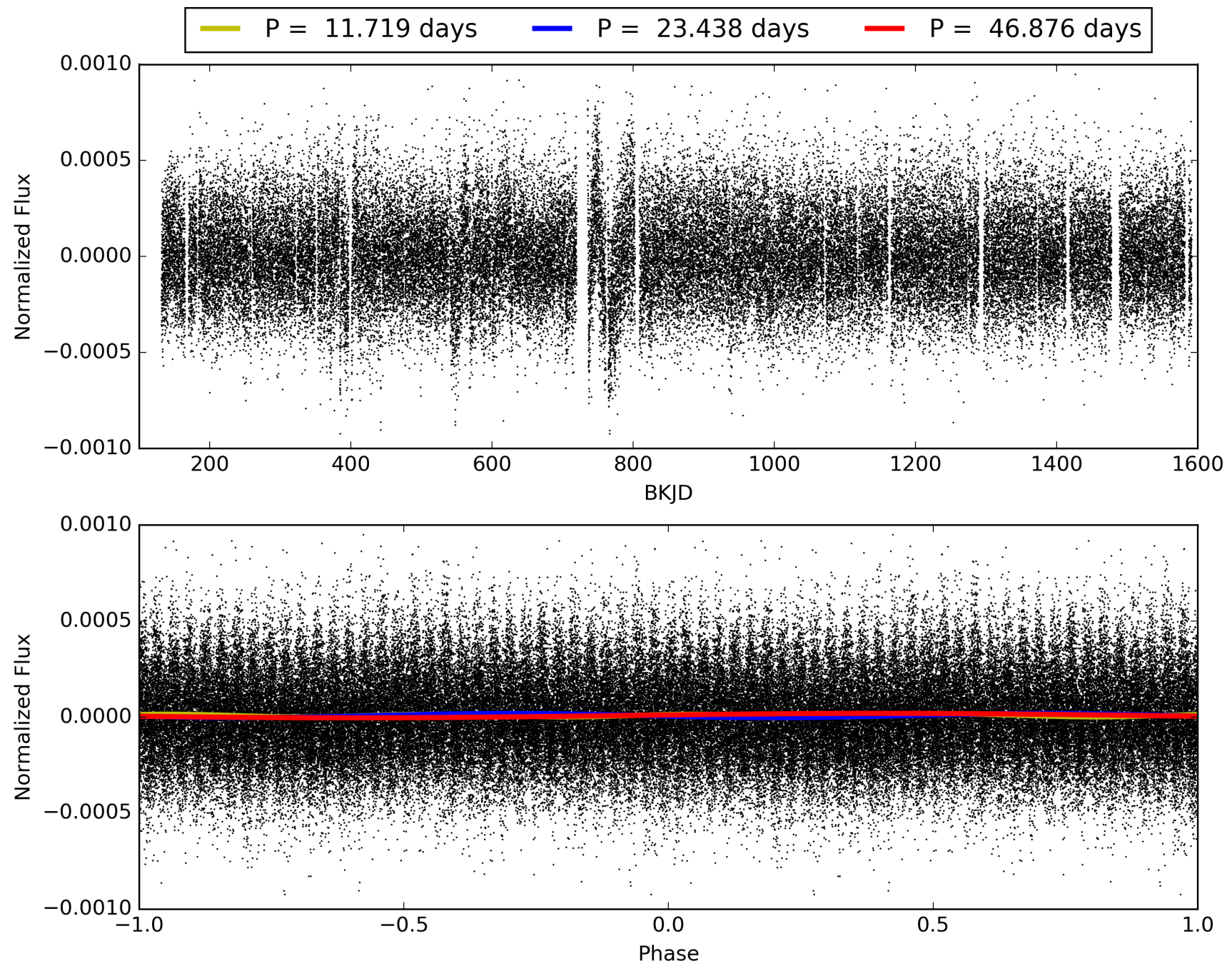
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 05:40:23 Z

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

TCE 008114921-03, PDC Light Curves

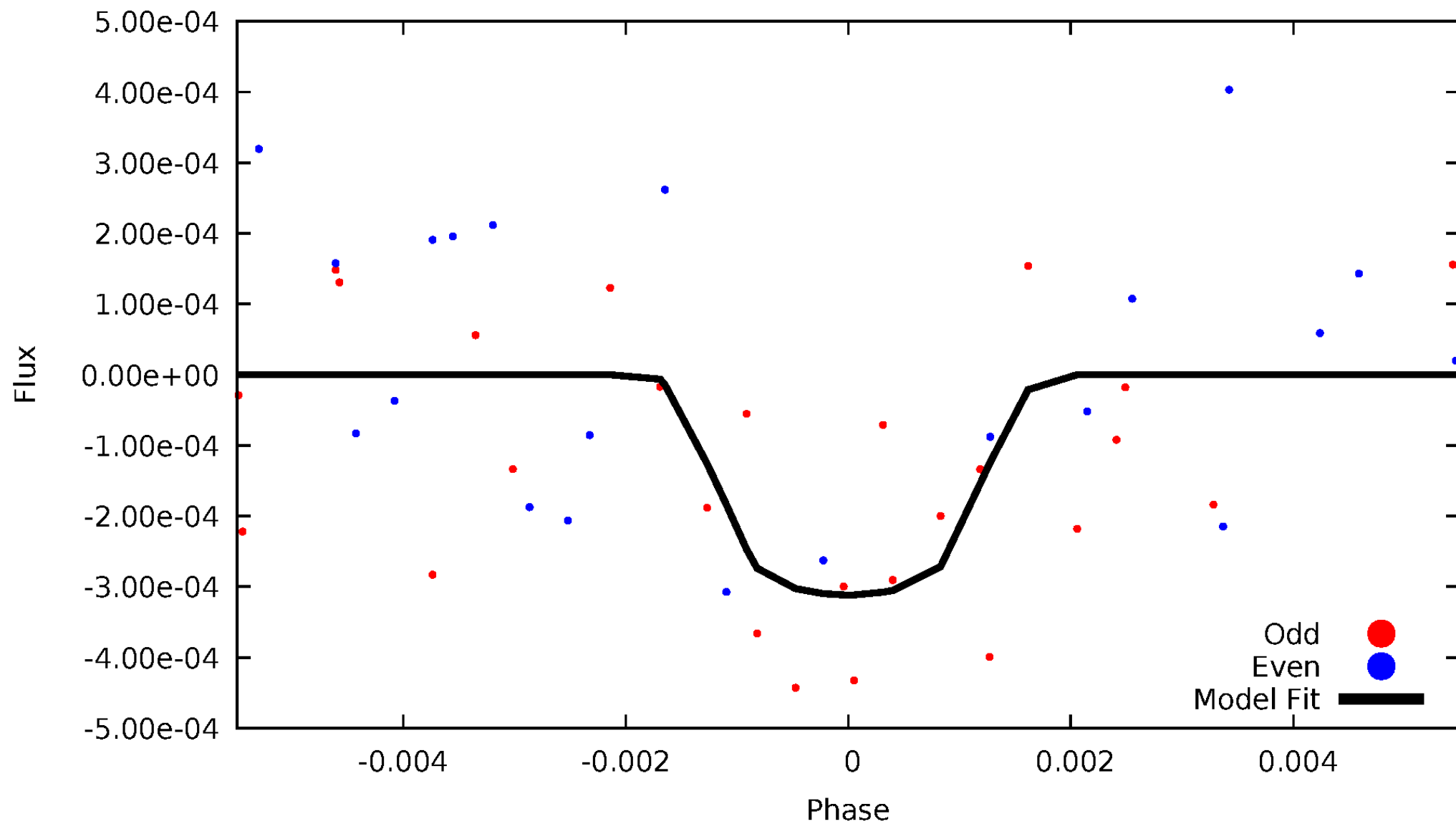


TCE 008114921-03



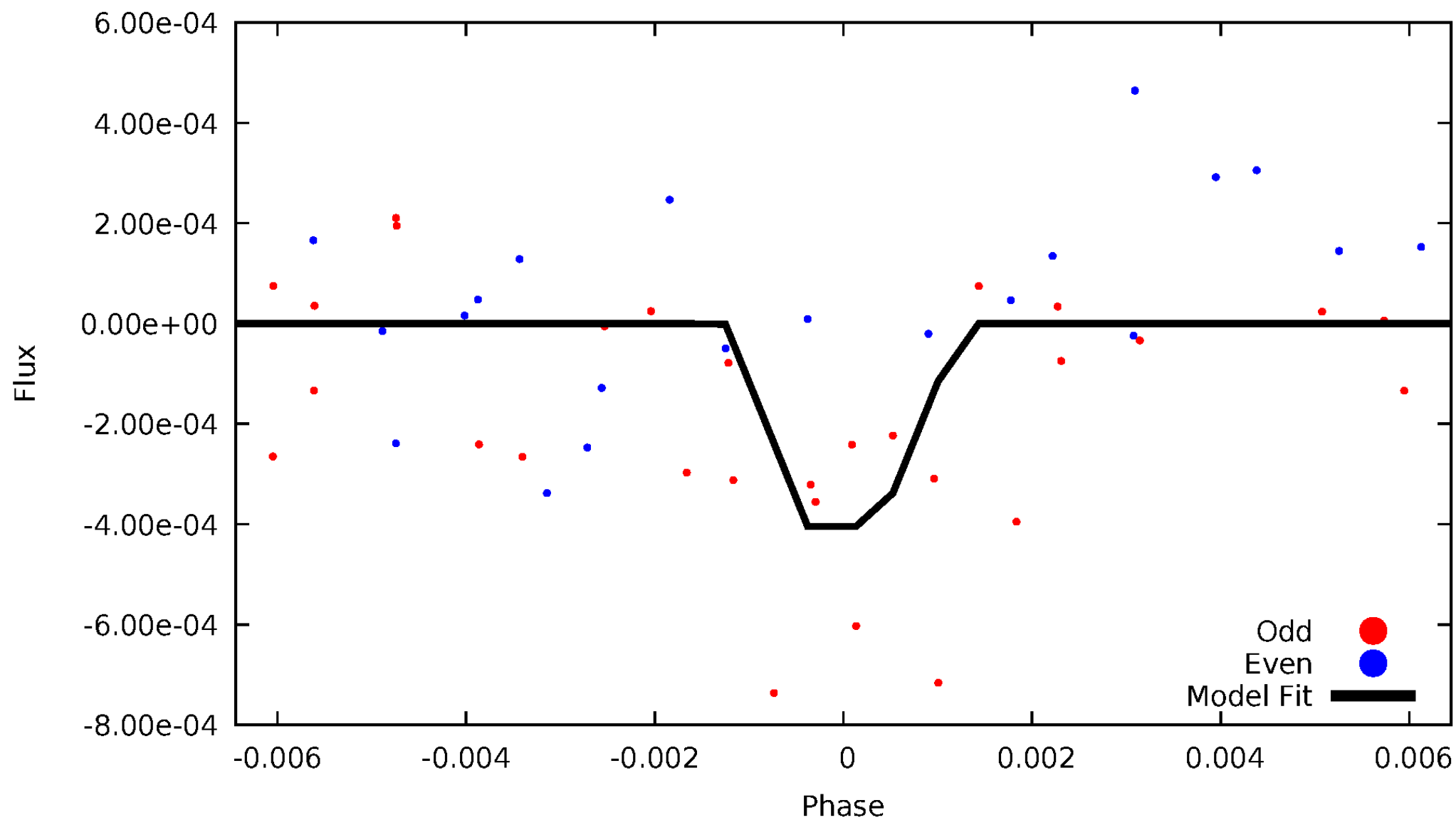
DV Odd/Even

TCE 008114921-03

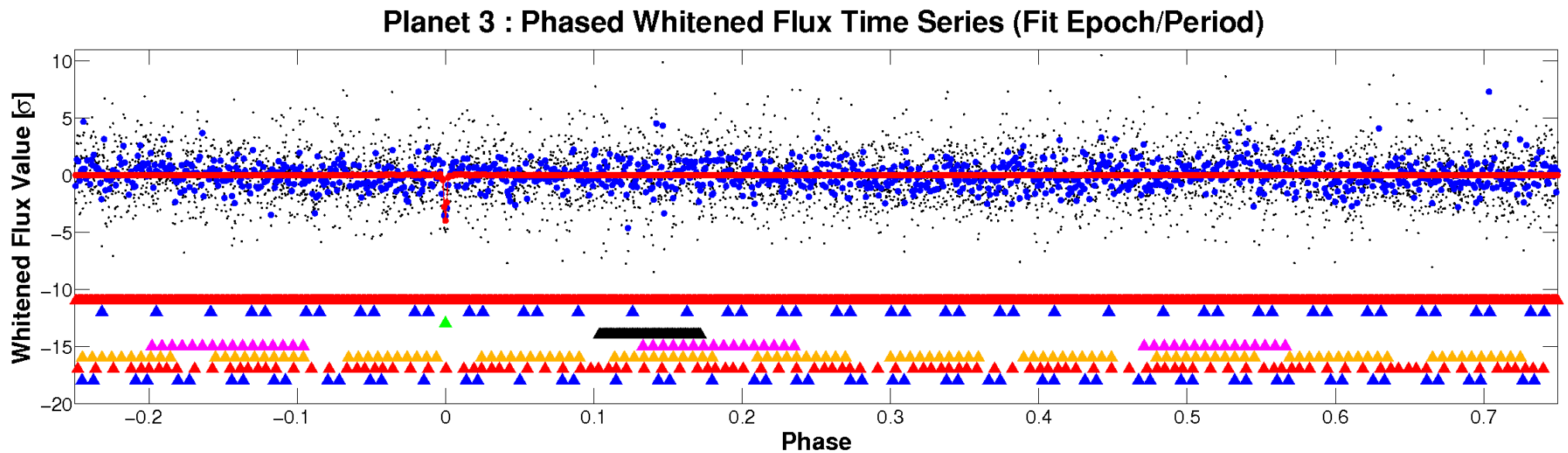
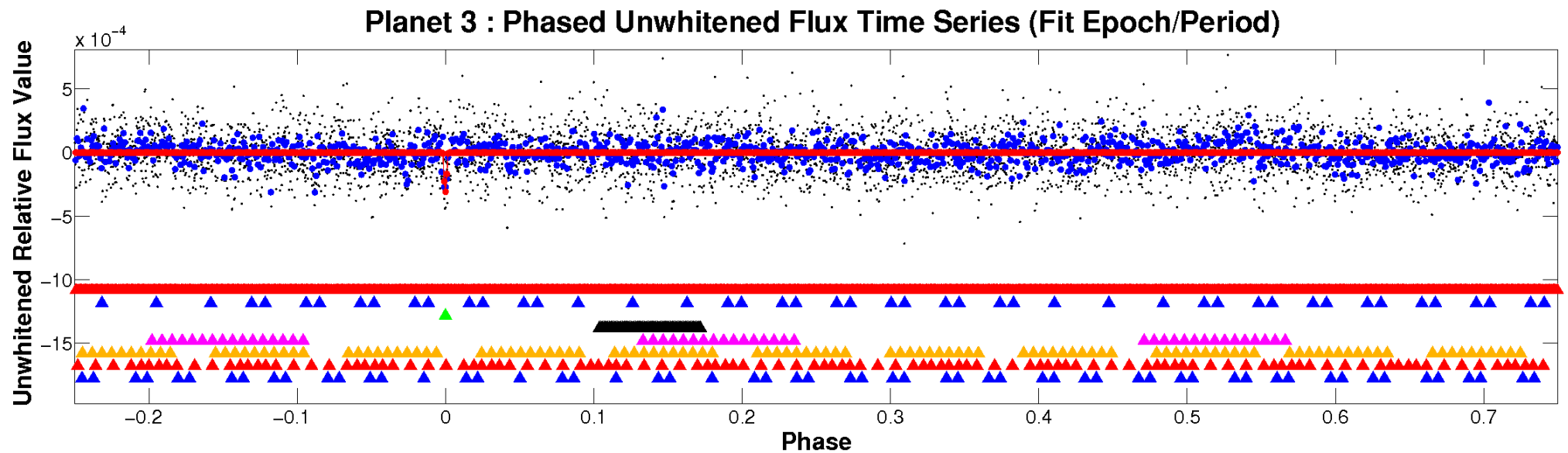


ALT Odd/Even

TCE 008114921-03

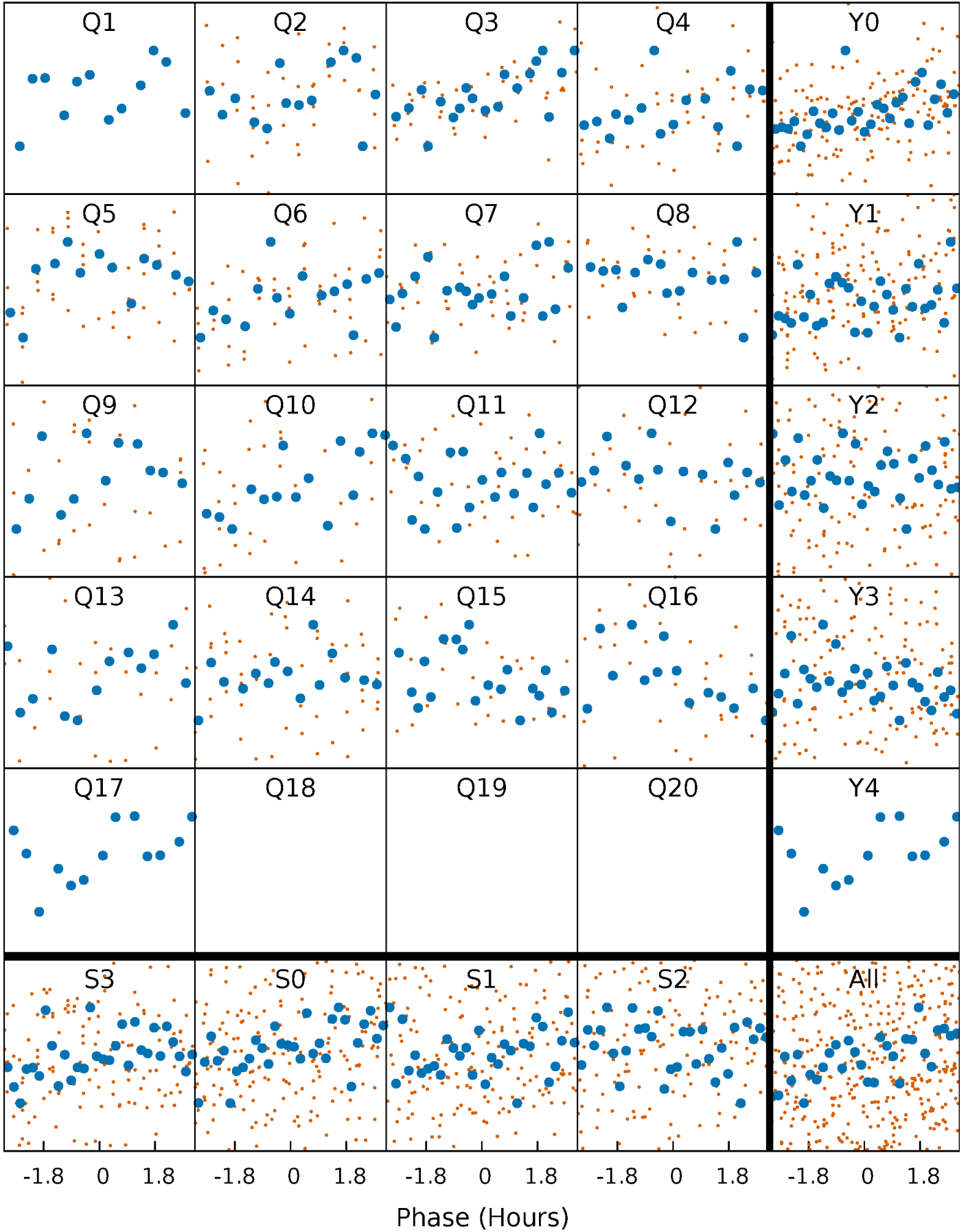


Non-Whitened Vs. Whitened Light Curve



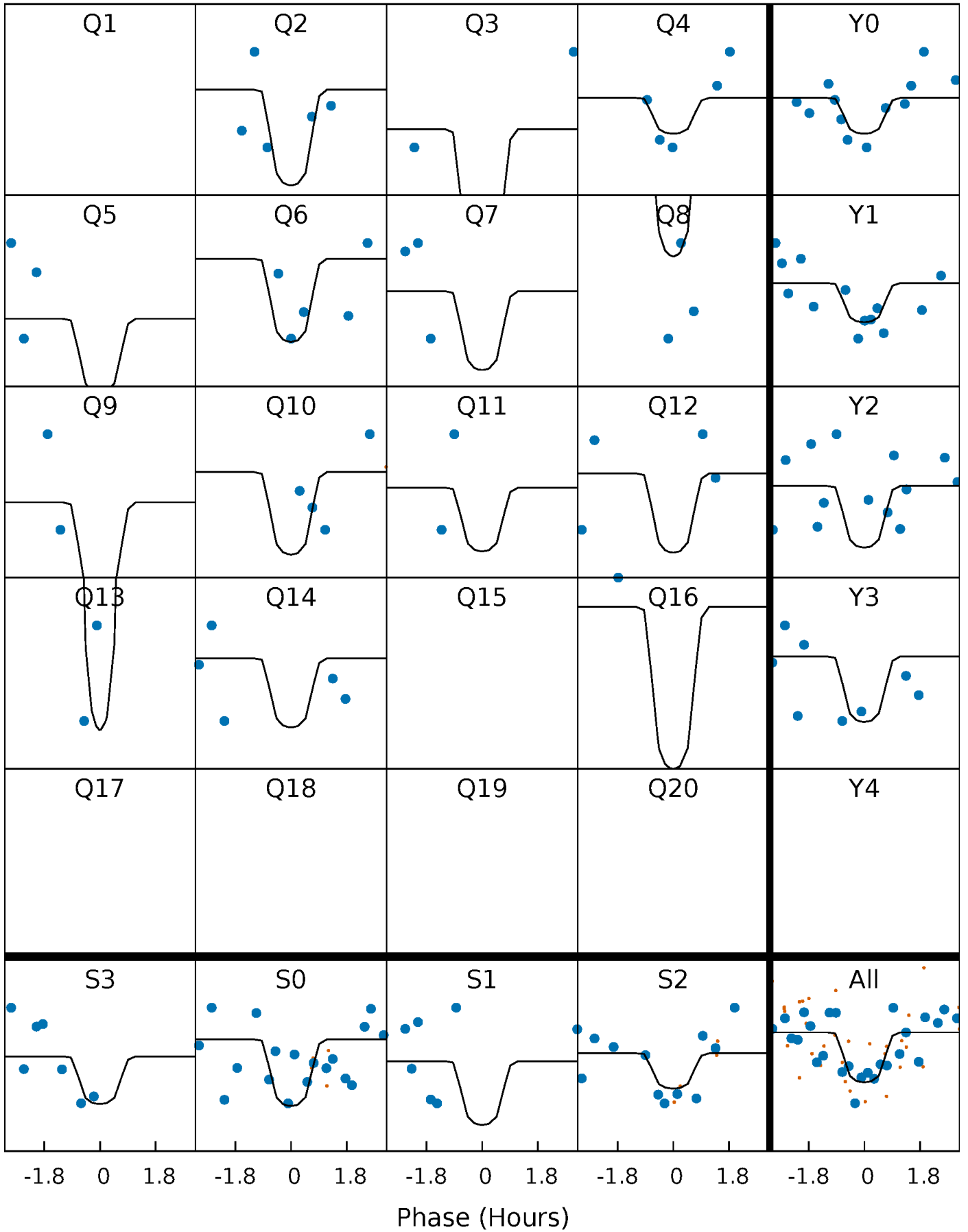
PDC Quarter-Phased Transit Curves

TCE 008114921-03 P= 23.438102 Days $T_0=150.893227$ (BKJD)



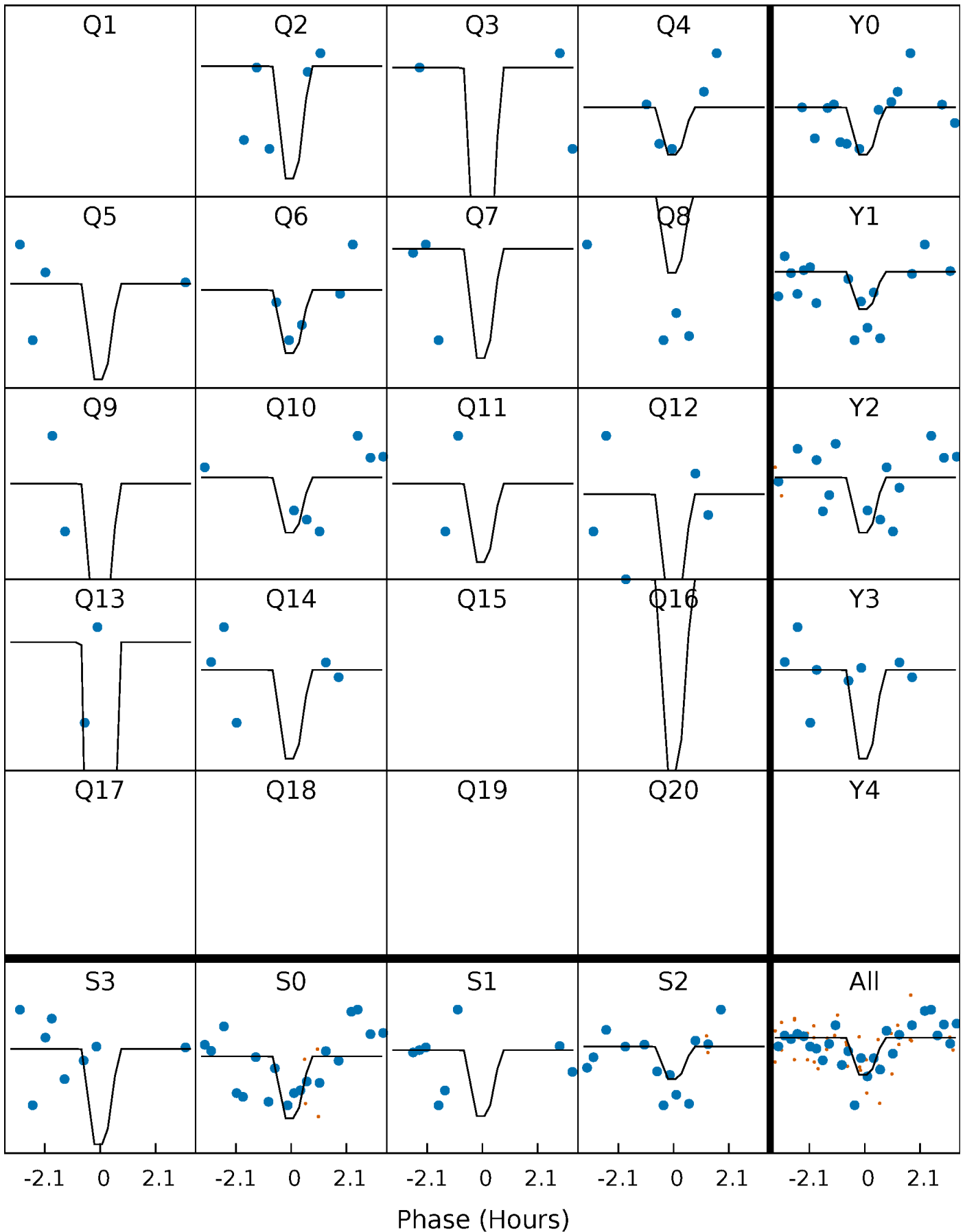
DV Quarter-Phased Transit Curves

TCE 008114921-03 P= 23.438102 Days $T_0=150.893227$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

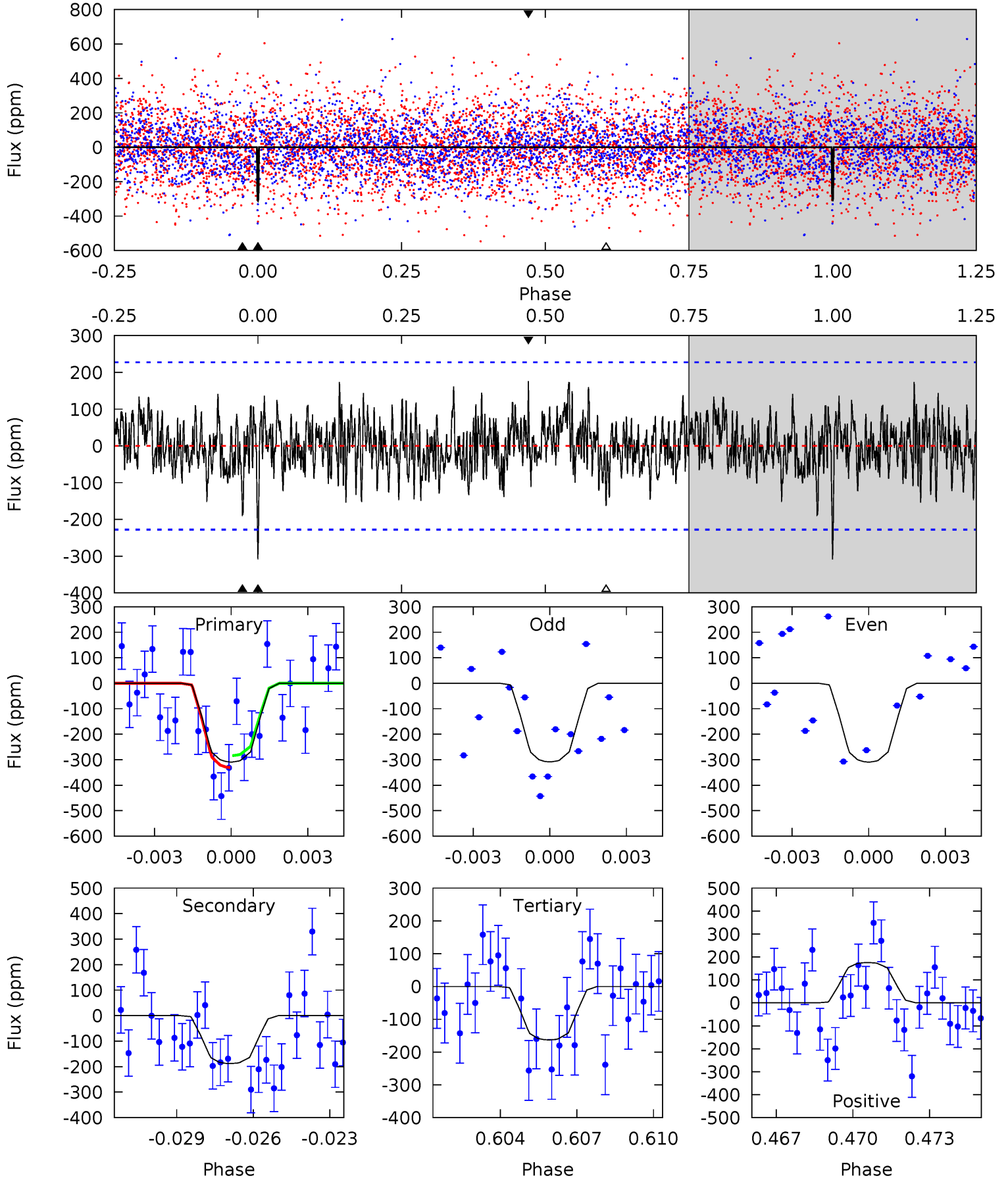
TCE 008114921-03 P= 23.437979 Days $T_0=150.902465$ (BKJD)



DV Model-Shift Uniqueness Test

008114921-03, P = 23.438102 Days, E = 127.455125 Days

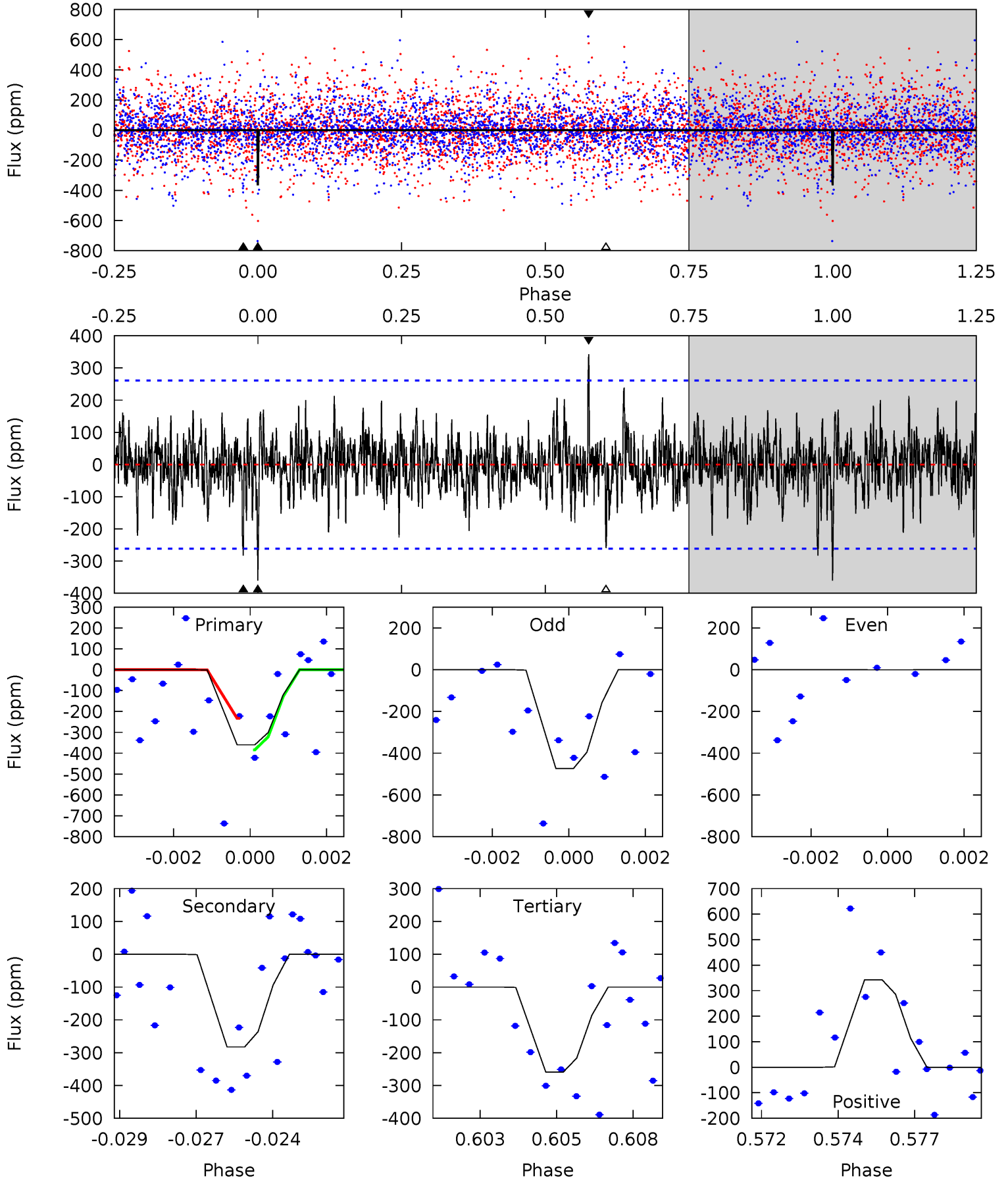
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.11	4.33	3.75	4.05	5.24	2.94	1.30	3.36	3.06	0.57	0.28	0.01	0.91	0.36	0.54



Alt Model-Shift Uniqueness Test

008114921-03, P = 23.437979 Days, E = 127.464486 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.31	5.74	5.26	6.96	5.31	3.06	1.36	2.05	0.35	0.48	-1.22	3.81	1.20	0.49	1.47



Stellar Parameters For KIC 008114921

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6539^{+155}_{-214}	$4.318^{+0.087}_{-0.203}$	$-0.080^{+0.250}_{-0.300}$	$1.265^{+0.410}_{-0.176}$	$1.217^{+0.192}_{-0.157}$	$0.847^{+0.338}_{-0.463}$
	+2%/-3%	+2%/-5%	+312%/-375%	+32%/-14%	+16%/-13%	+40%/-55%
Source	PHO1	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 008114921-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-188 ± 43	$5.13^{+4.77}_{-3.52}$	1107^{+76}_{-51}	4270^{+2951}_{-873}	116^{+1051}_{-86}
Alt.	-283 ± 49	$5.26^{+4.79}_{-3.47}$	1112^{+81}_{-64}	4612^{+3174}_{-980}	164^{+1138}_{-120}

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 $A_{obs} \gg 1.0$

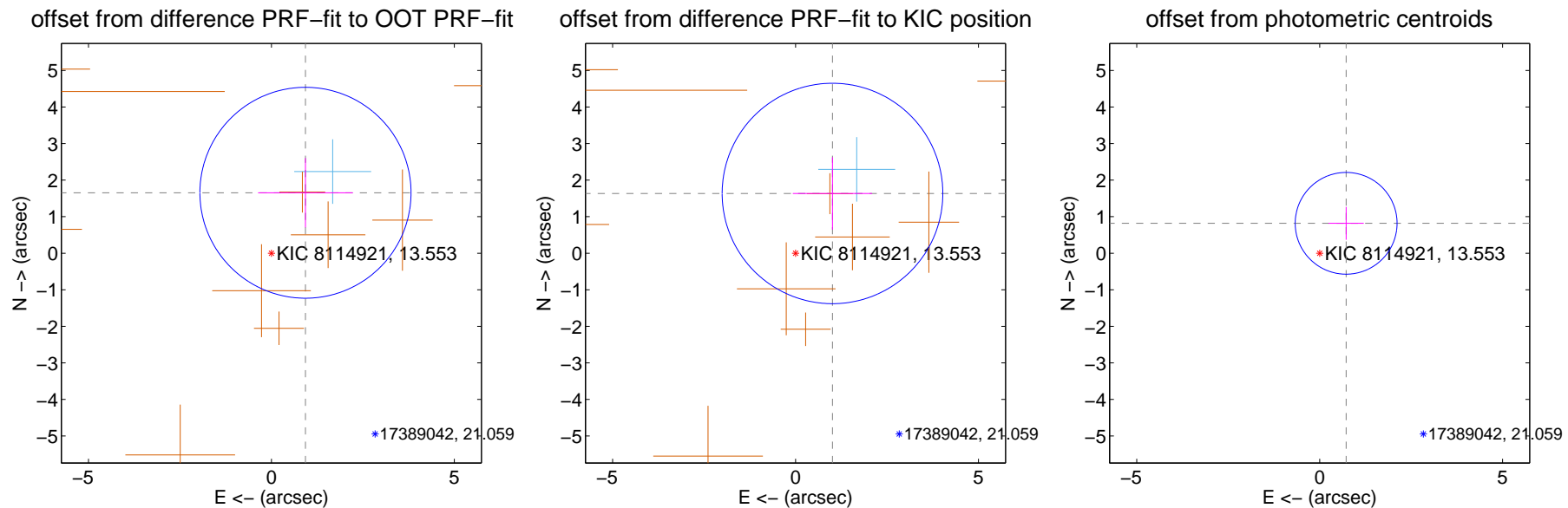
DV Centroid Data

Supplemental centroid analysis for 008114921-03. Kepler magnitude: 13.55. Transit SNR 11.78

There are 1 quarters with good PRF difference image offsets

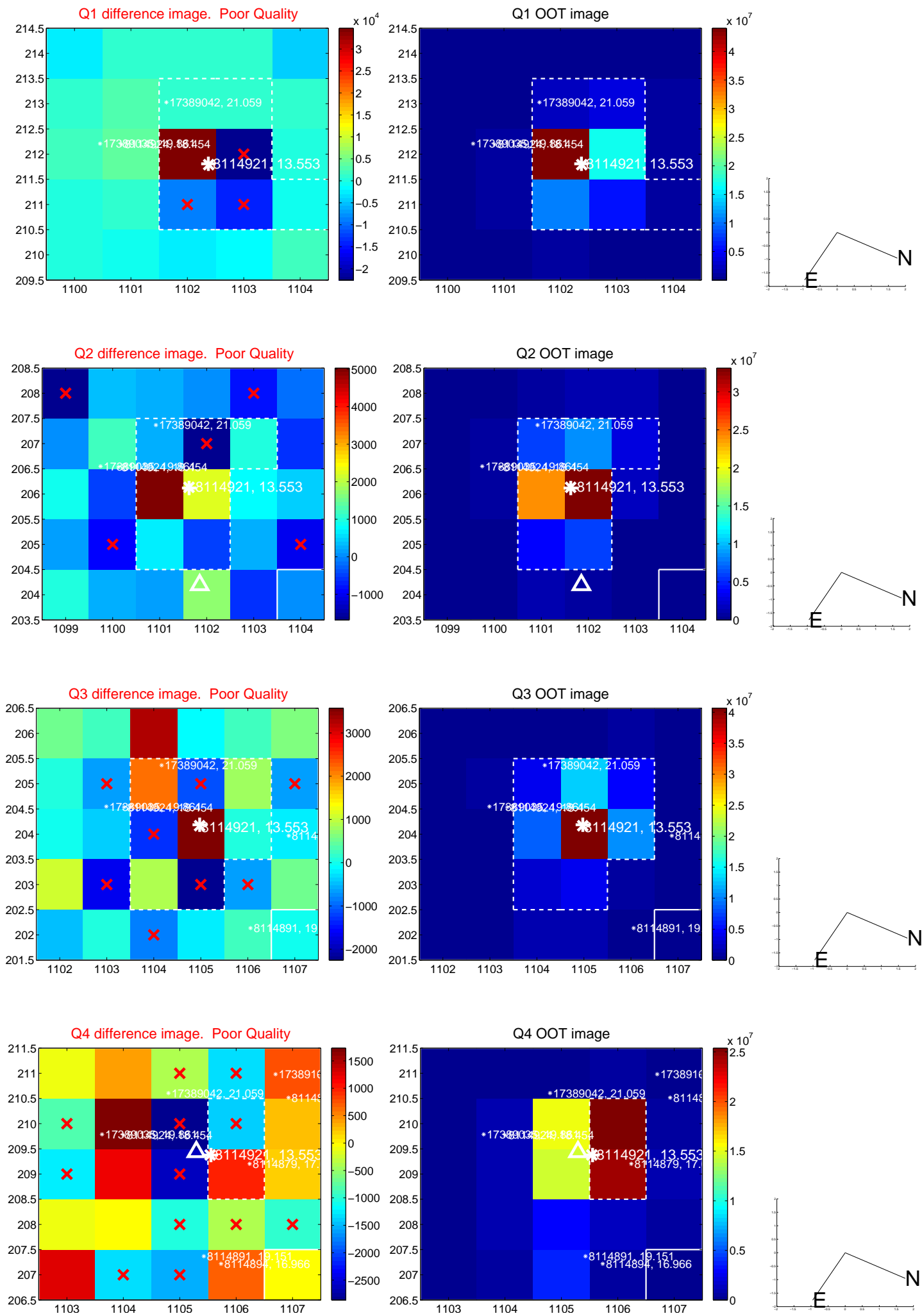
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.898 ± 0.962	1.97	-0.931 ± 1.295	1.655 ± 0.949
PRF-fit source offset from KIC position	1.922 ± 1.005	1.91	-1.010 ± 1.084	1.635 ± 0.990
photometric centroid source offset	1.09 ± 0.46	2.35	-0.72 ± 0.48	0.82 ± 0.45

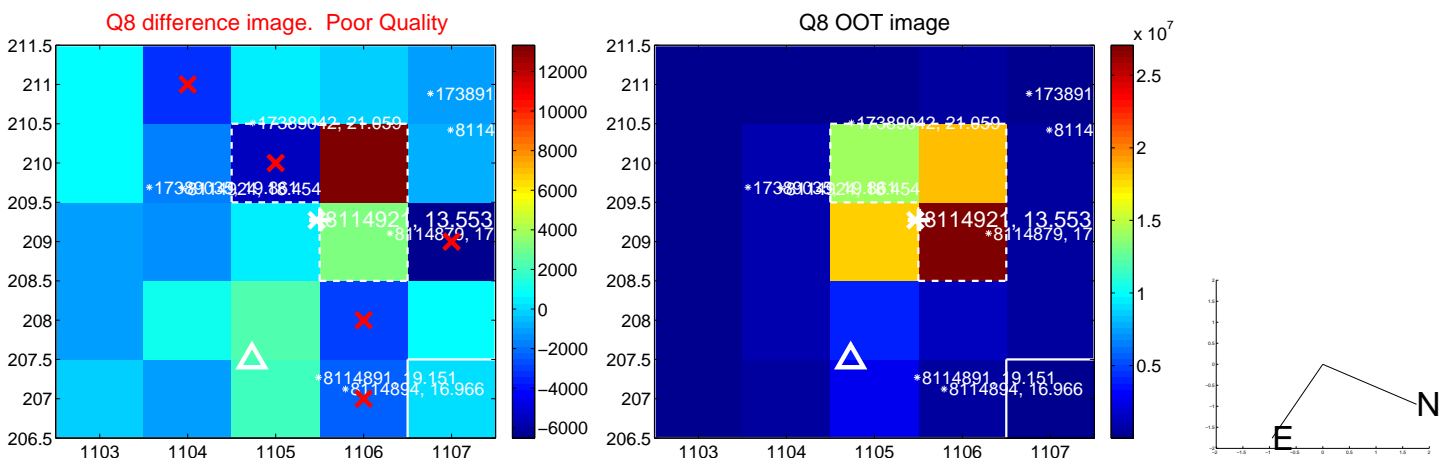
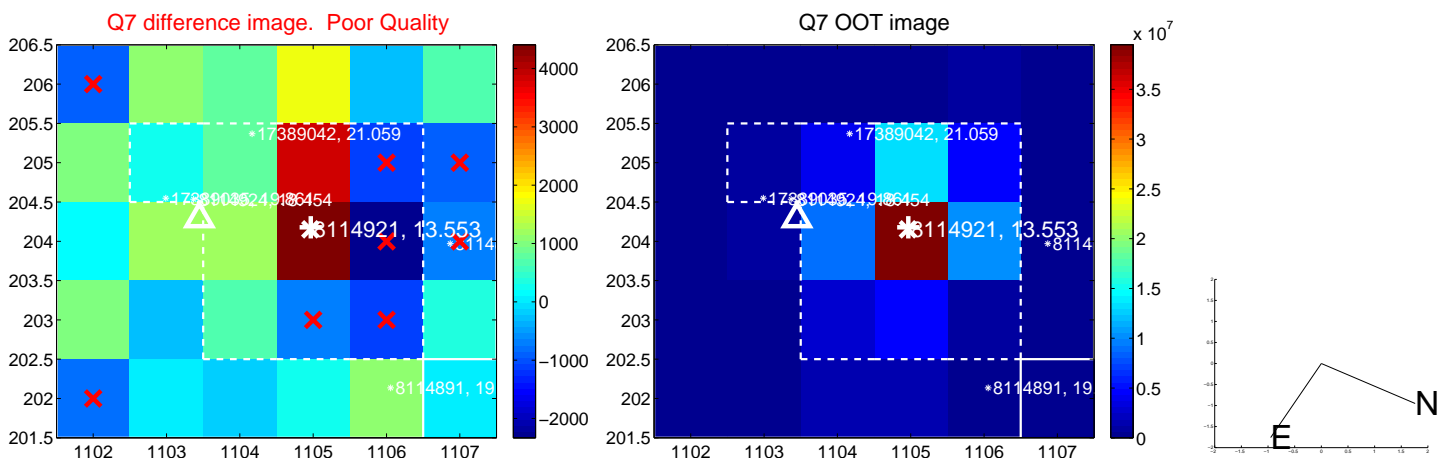
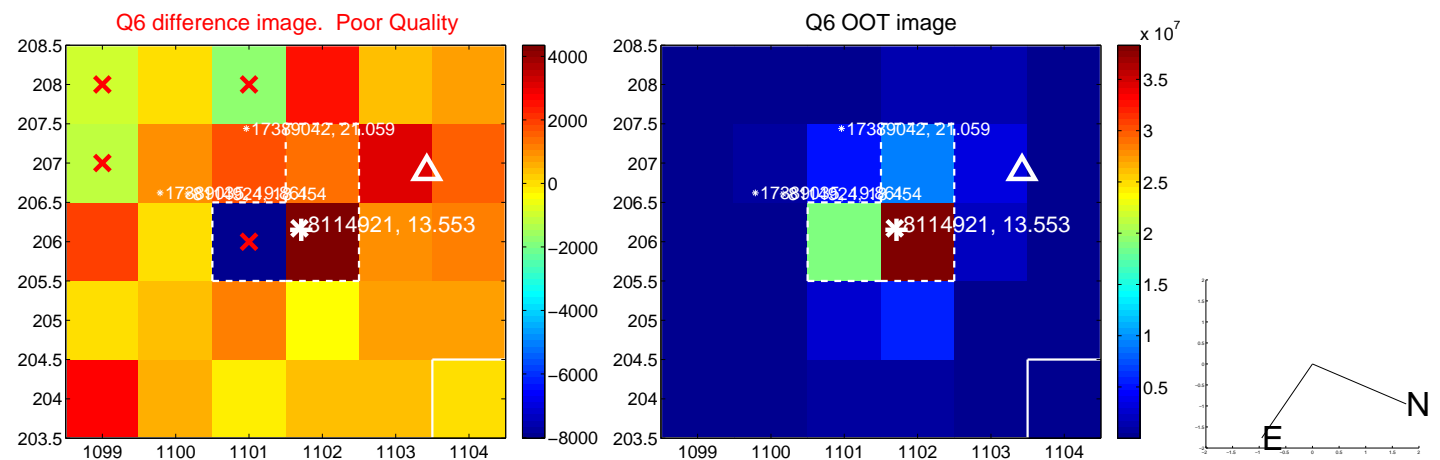
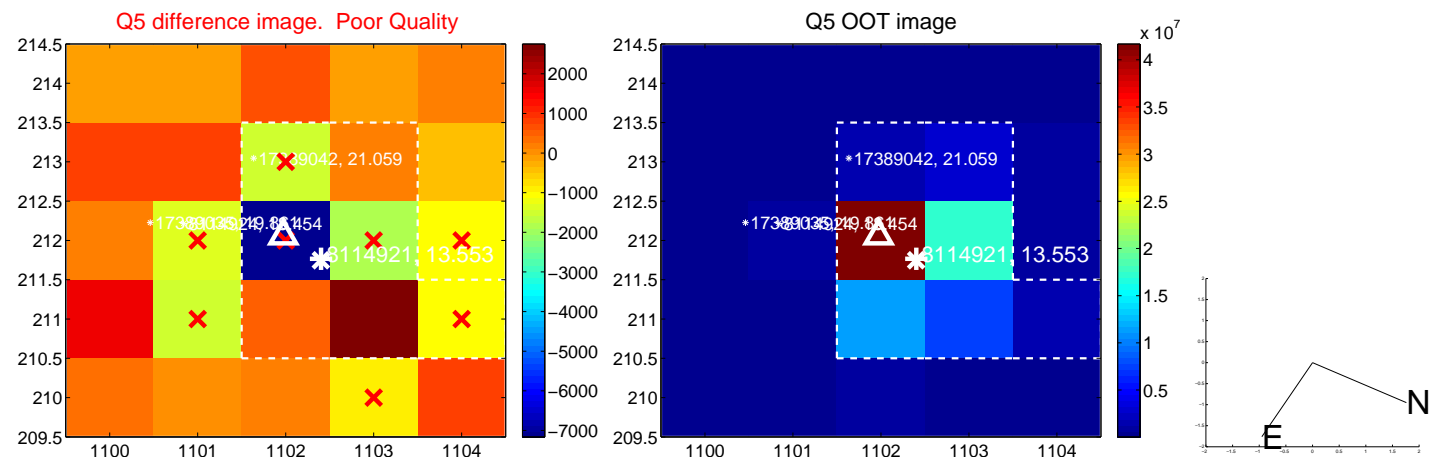


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

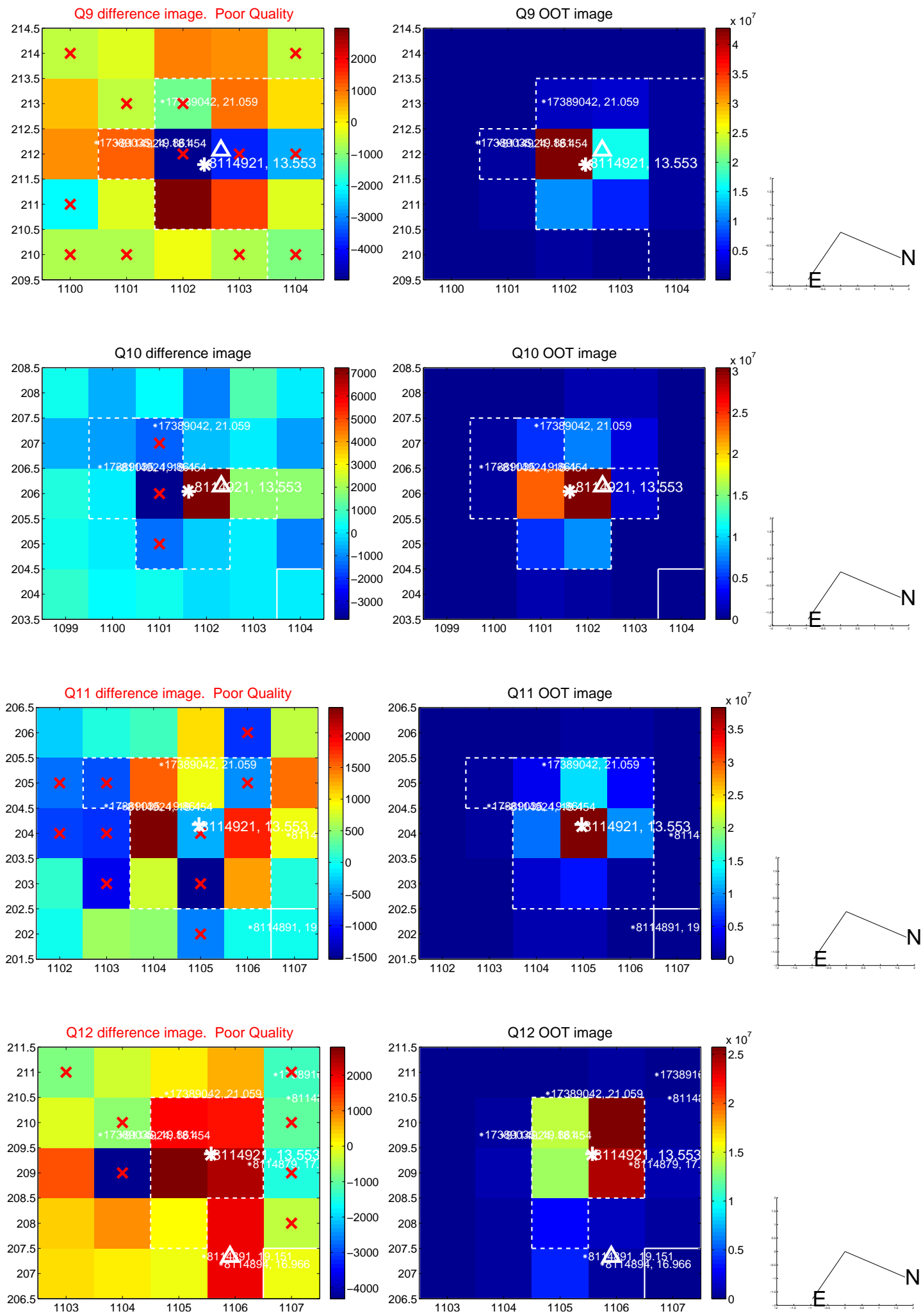
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



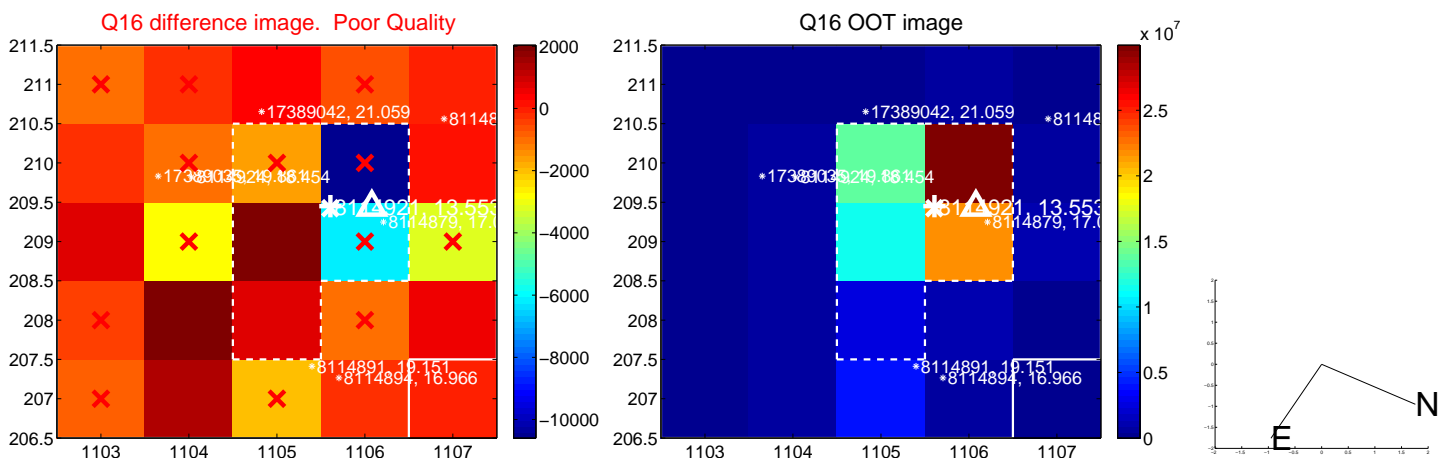
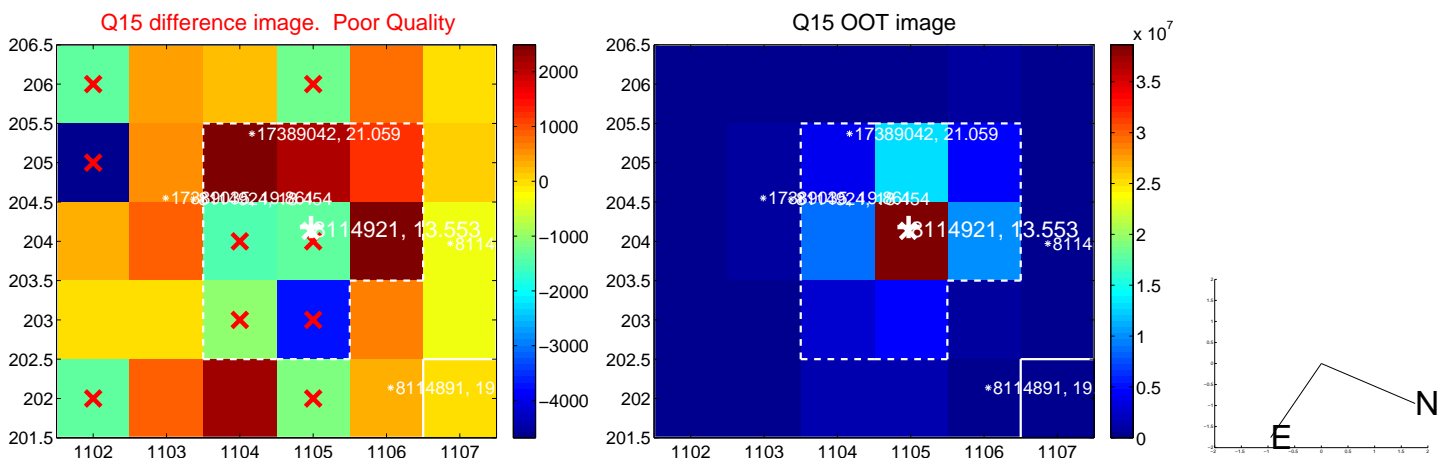
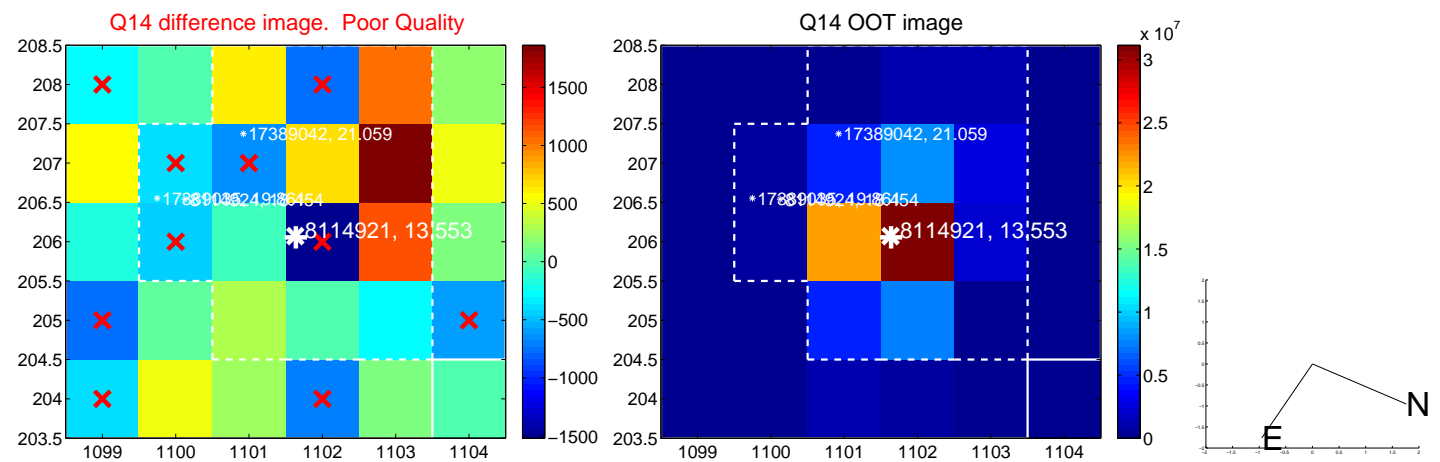
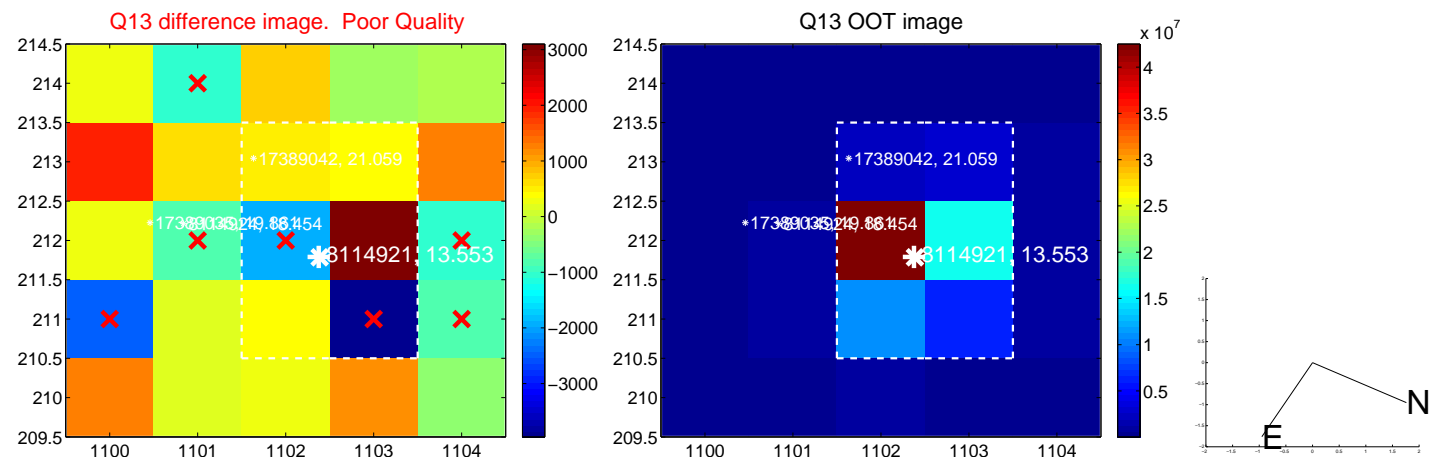
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



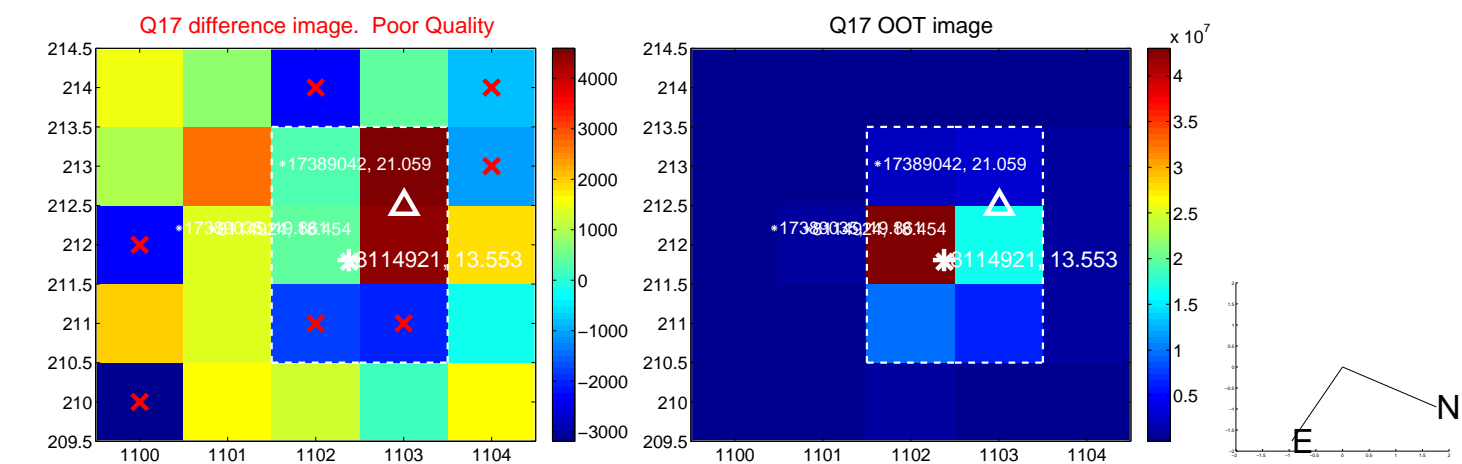
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



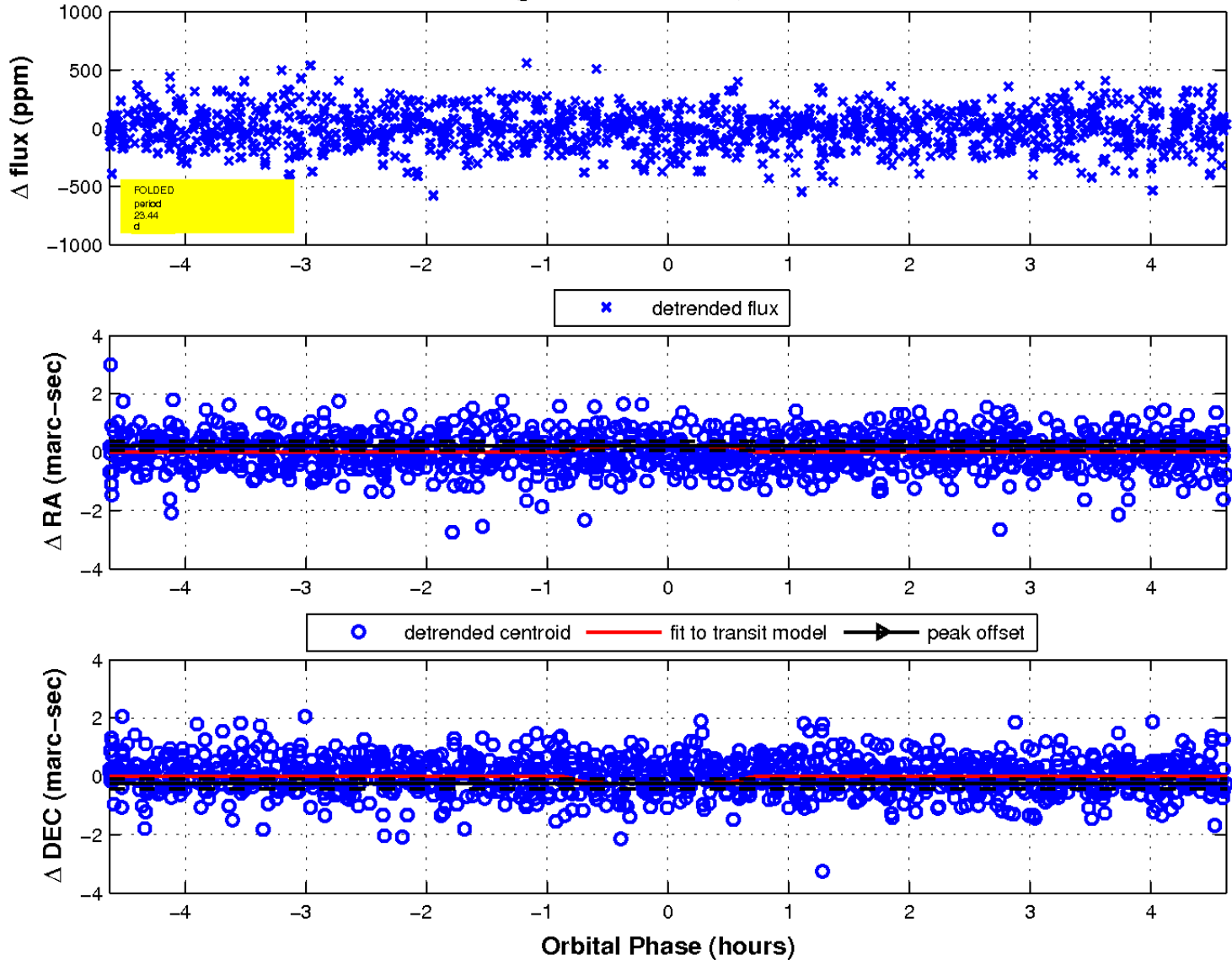
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

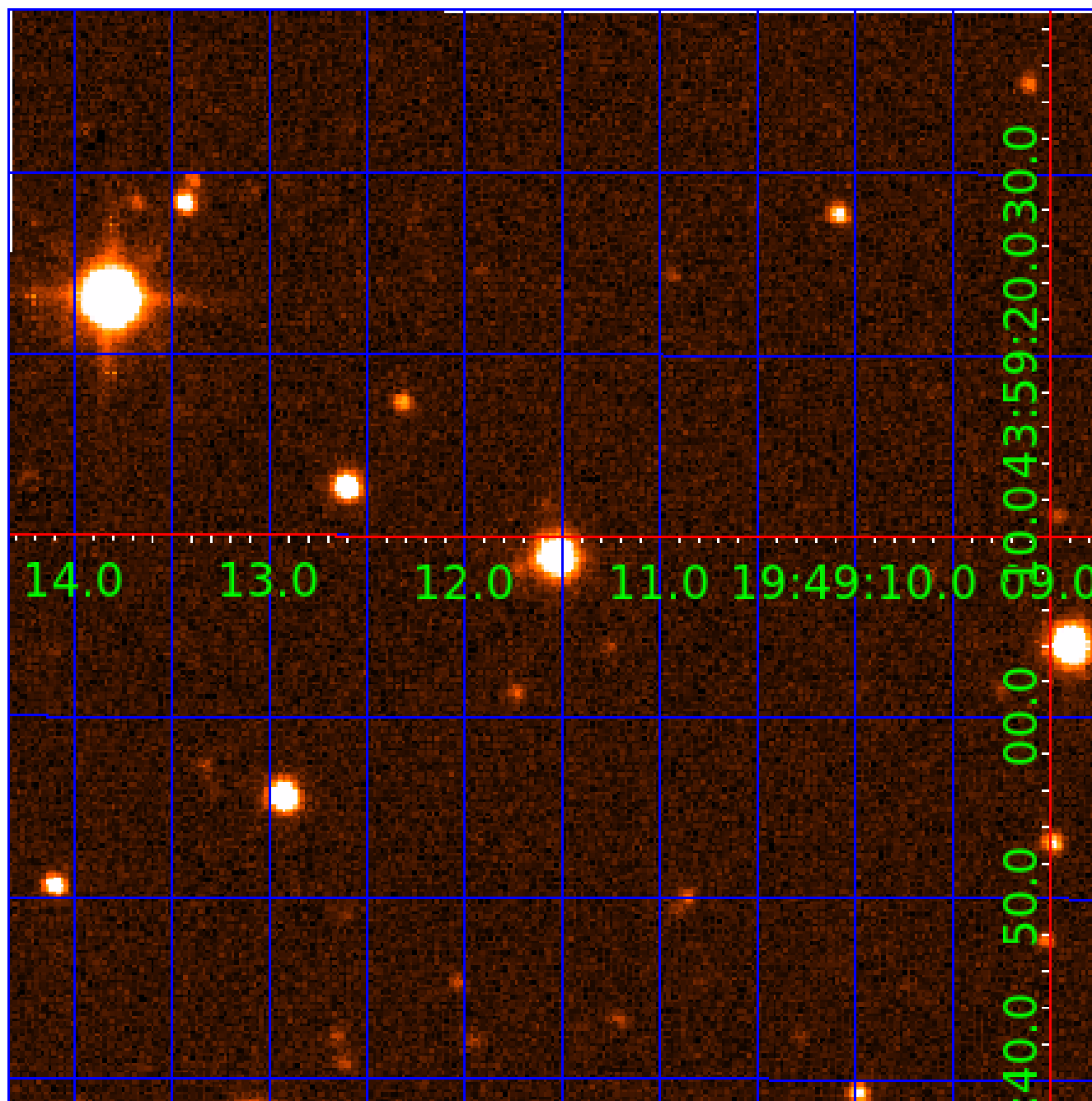


fluxWeightedCentroids, Planet 3 of 8



UKIRT Image

Declination



KIC 008114921

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})
008114921-01	OBS	No	0.718480	132.256644	3.0	5.137	9.4	1.8	1.26	6539	0.22	9342.15
008114921-02	OBS	No	30.964159	144.817561	364.0	1.270	16.2	14.1	1.26	6539	2.89	61.83
008114921-03	OBS	No	23.438102	150.893227	311.5	1.544	12.1	11.8	1.26	6539	2.58	89.63
008114921-04	OBS	No	23.411955	154.920356	224.5	1.717	12.1	10.1	1.26	6539	2.05	89.76
008114921-05	OBS	No	31.197732	148.643626	198.1	2.068	11.8	8.6	1.26	6539	1.97	61.21
008114921-06	OBS	No	12.770403	140.235996	624.5	1.500	10.6	-1.0	1.26	6539	3.19	201.40
008114921-07	OBS	No	12.642128	135.009331	181.8	1.609	9.4	10.5	1.26	6539	1.94	204.13
008114921-08	OBS	No	24.956031	156.444549	267.6	3.901	9.7	10.5	1.26	6539	3.41	82.43

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008114921-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—CENT_FEW_DIFFS
008114921-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_MEAS
008114921-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
008114921-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
008114921-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—HALO_GHOST
008114921-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
008114921-07	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS—HALO_GHOST
008114921-08	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_MEAS—HALO_GHOST

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

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

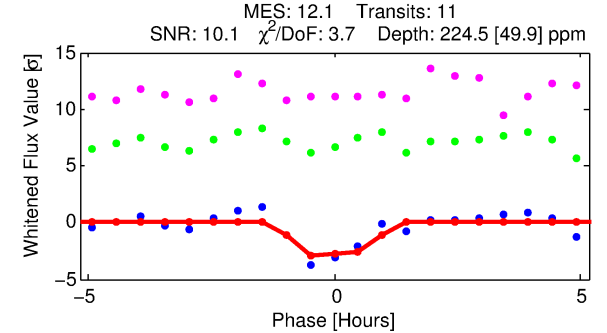
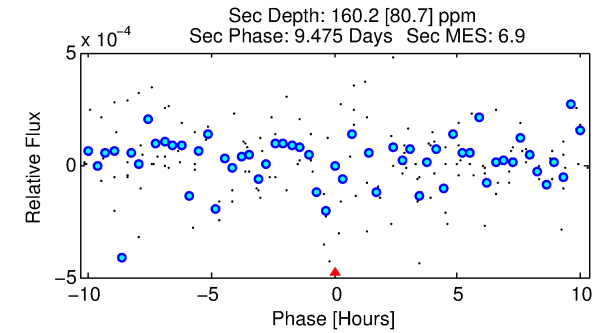
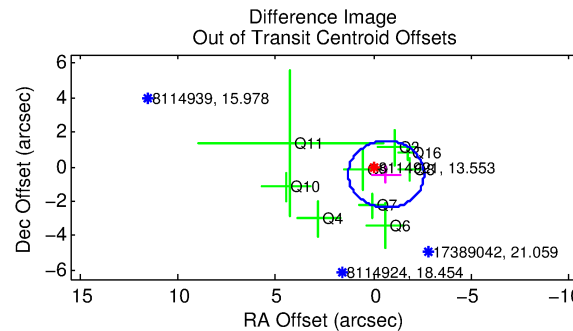
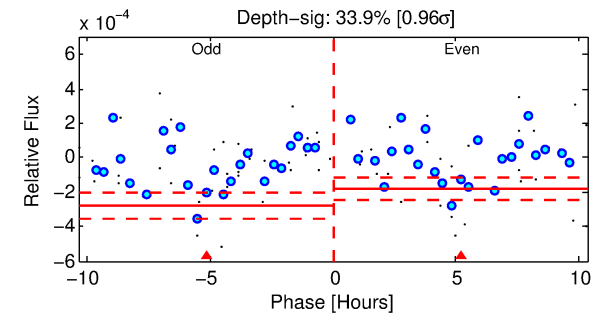
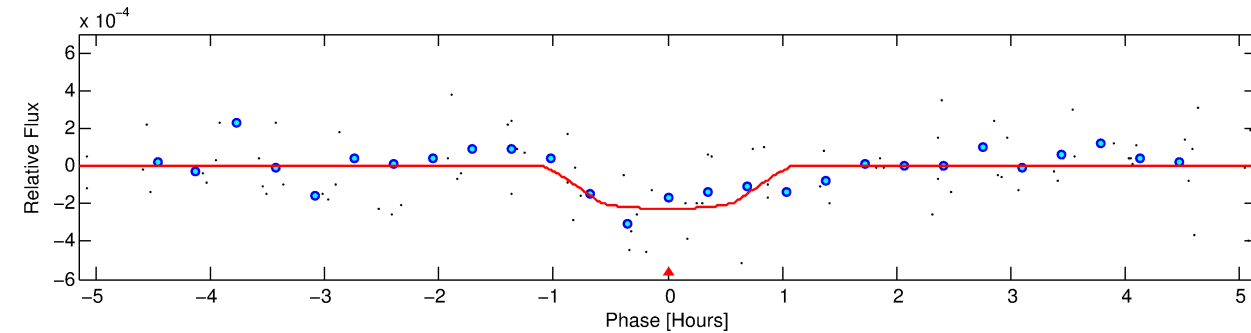
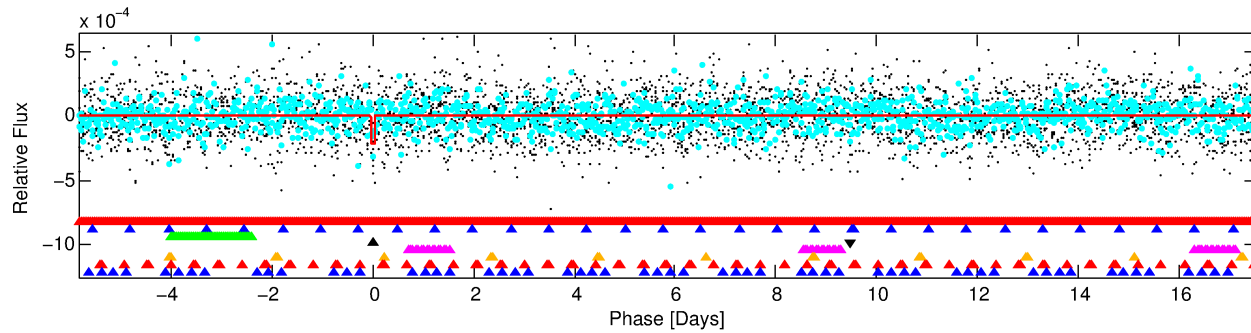
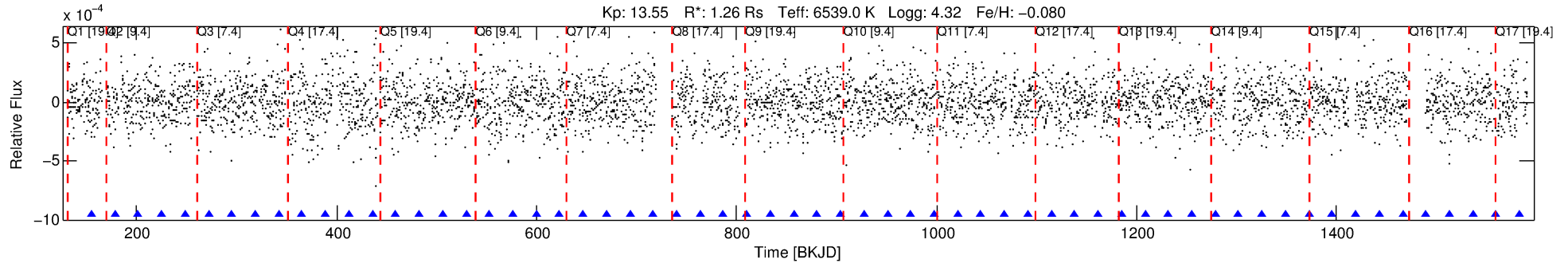
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008114921-04

No Significant Match Found

DV One-Page Summary

KIC: 8114921 Candidate: 4 of 8 Period: 23.412 d



DV Fit Results:

Period = 23.41195 [0.00035] d
Epoch = 154.9204 [0.0117] BKJD
Rp/R* = 0.0148 [0.0296]
a/R* = 74.18 [810.68]
b = 0.72 [7.30]
Seff = 89.76 [36.01]
Teq = 785 [79] K
Rp = 2.05 [4.14] Re
a = 0.1709 [0.0455] AU
Ag = 615.20 [2486.75] [0.25 σ]
Teffp = 6044 [6084] K [0.86 σ]

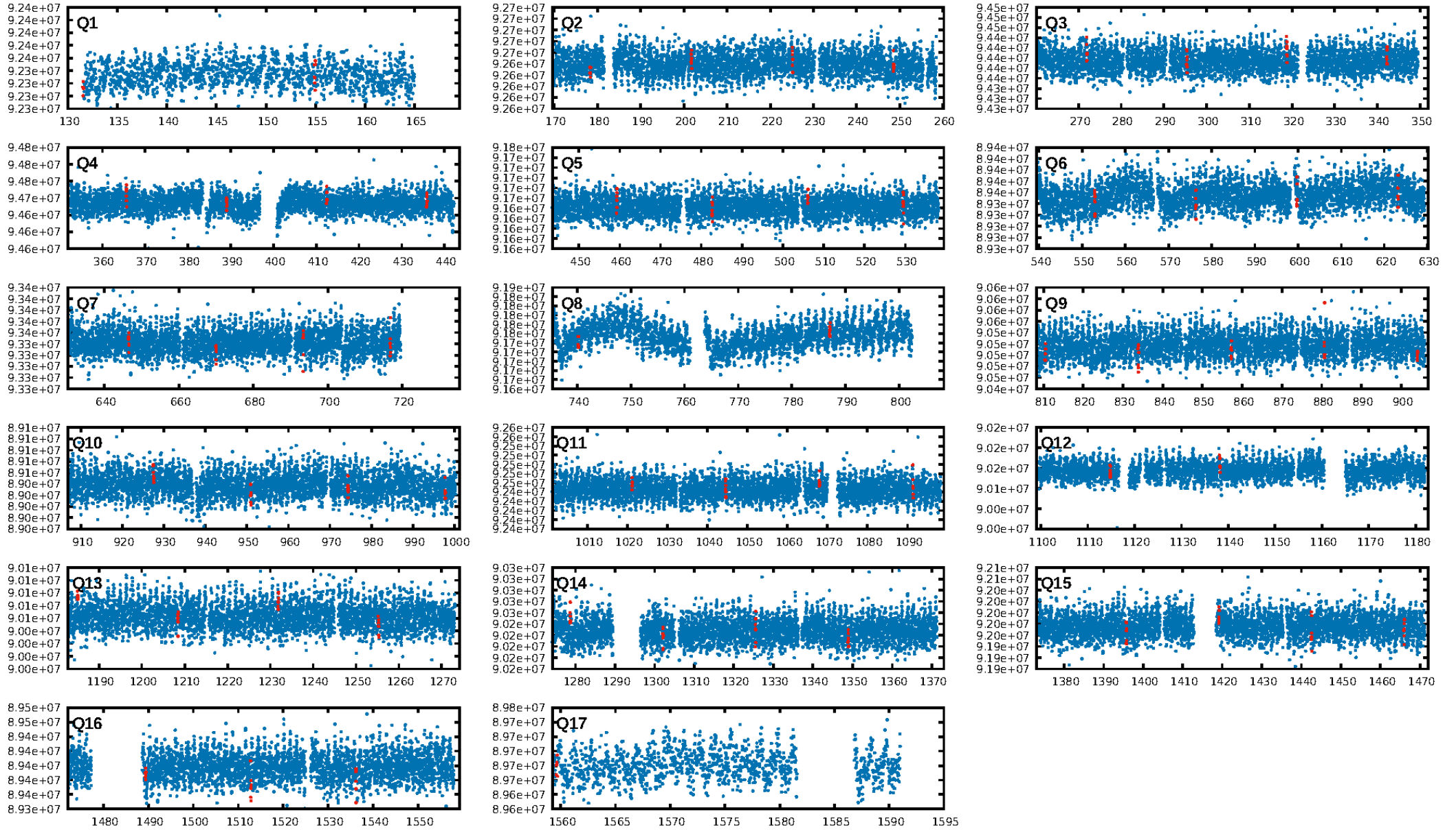
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [112.01 σ]
LongPeriod-sig: 21.4% [0.27 σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.9%
Bootstrap-pfa: 6.28e-11
RollingBand-fgt: 1.00 [10/10]
GhostDiagnostic-chr: 1.441
Centroid-sig: 2.6%
Centroid-so: 1.045 arcsec [1.75 σ]
OotOffset-rm: 0.779 arcsec [1.21 σ]
KicOffset-rm: 0.814 arcsec [1.21 σ]
OotOffset-st: 2/3/3/1 [9]
KicOffset-st: 2/3/3/1 [9]
DiffImageQuality-fgm: 0.44 [4/9]
DiffImageOverlap-fno: 0.06 [1/16]

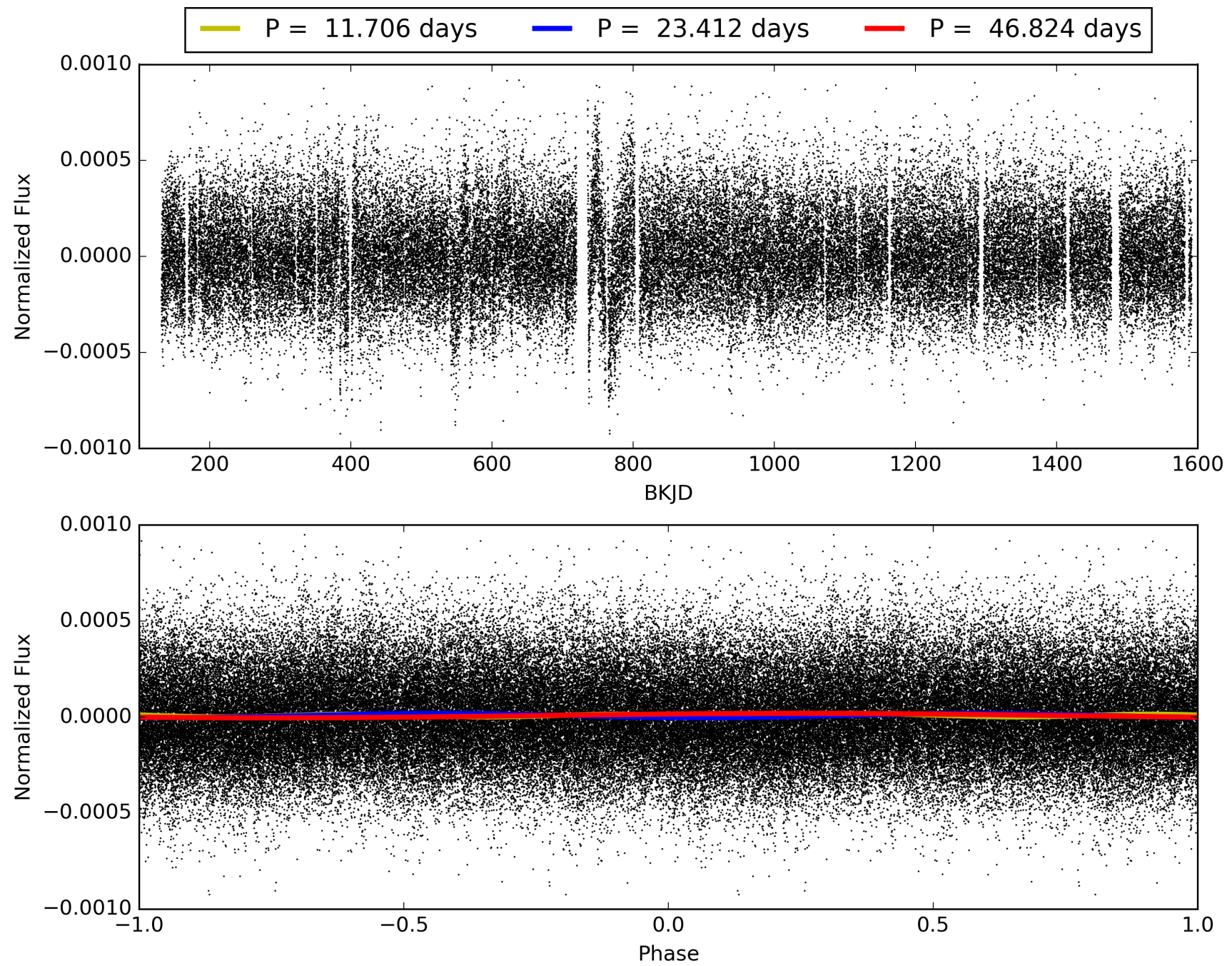
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 05:40:27 Z

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

TCE 008114921-04, PDC Light Curves

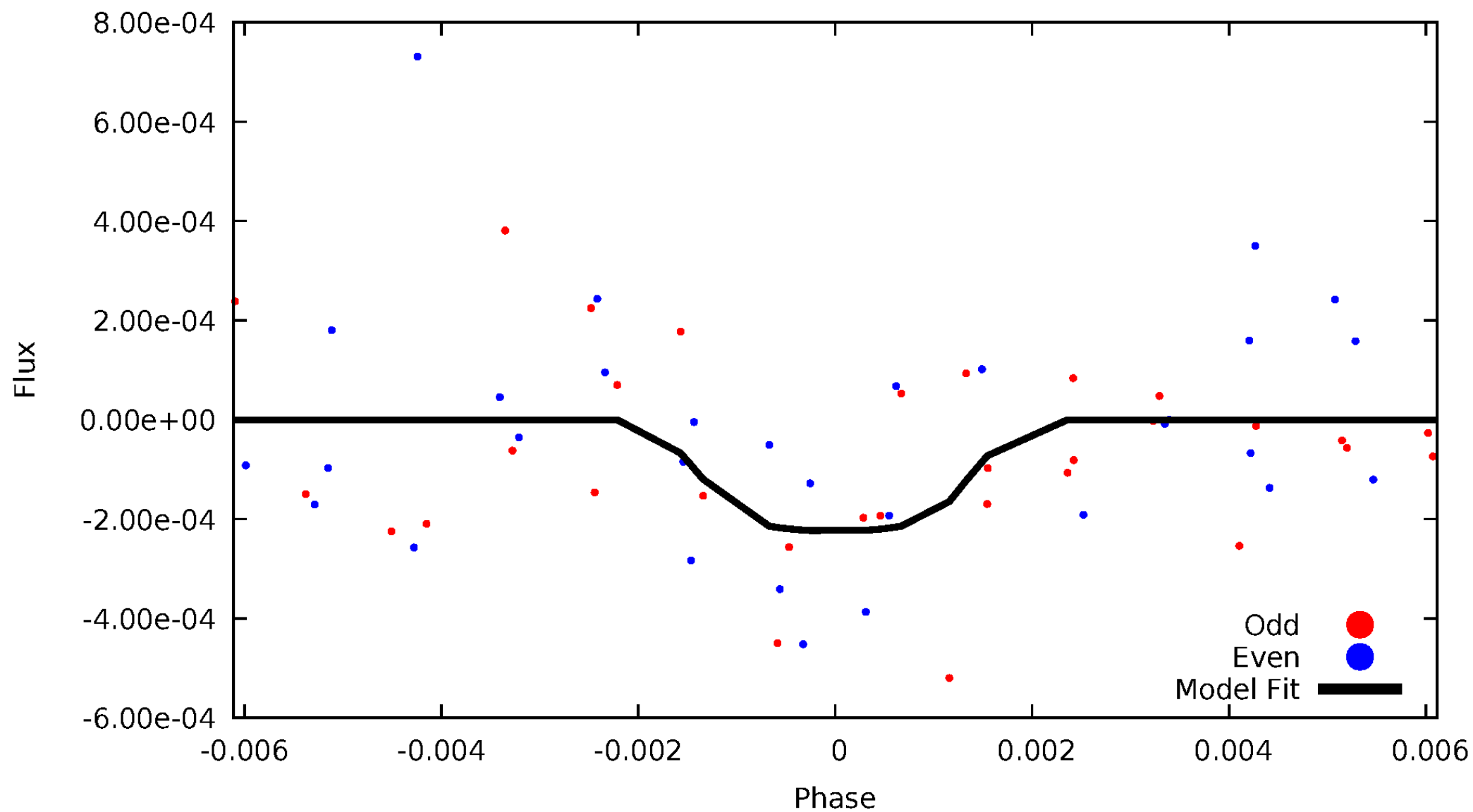


TCE 008114921-04



DV Odd/Even

TCE 008114921-04

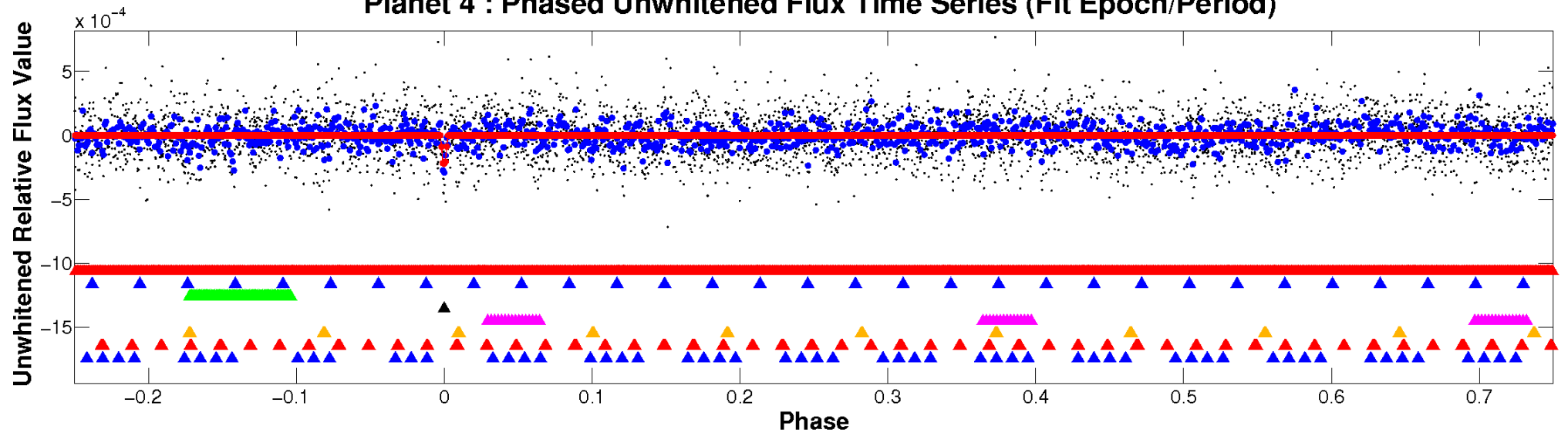


ALT Odd/Even

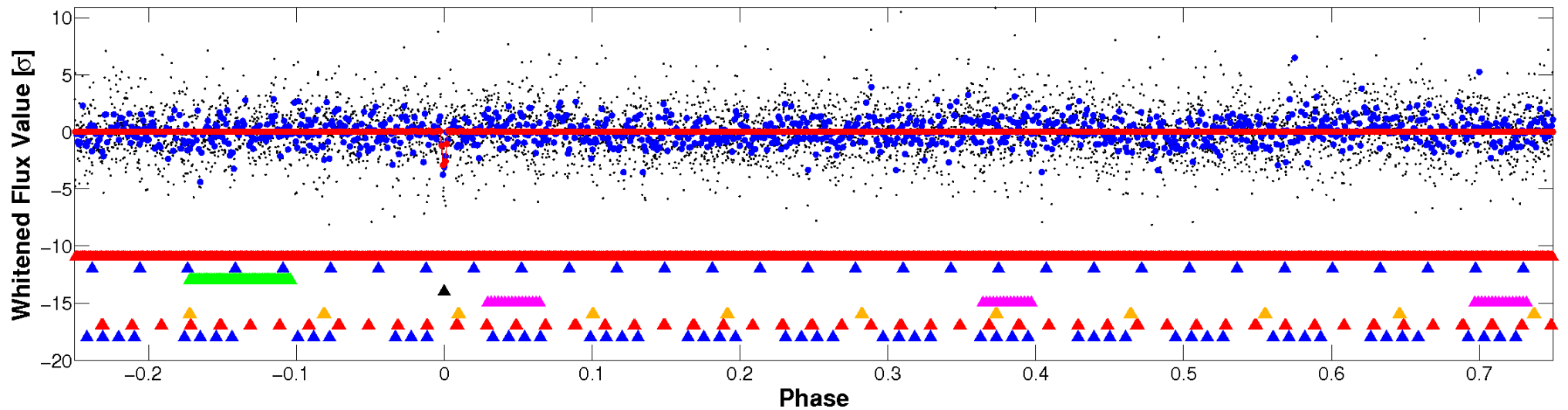
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

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

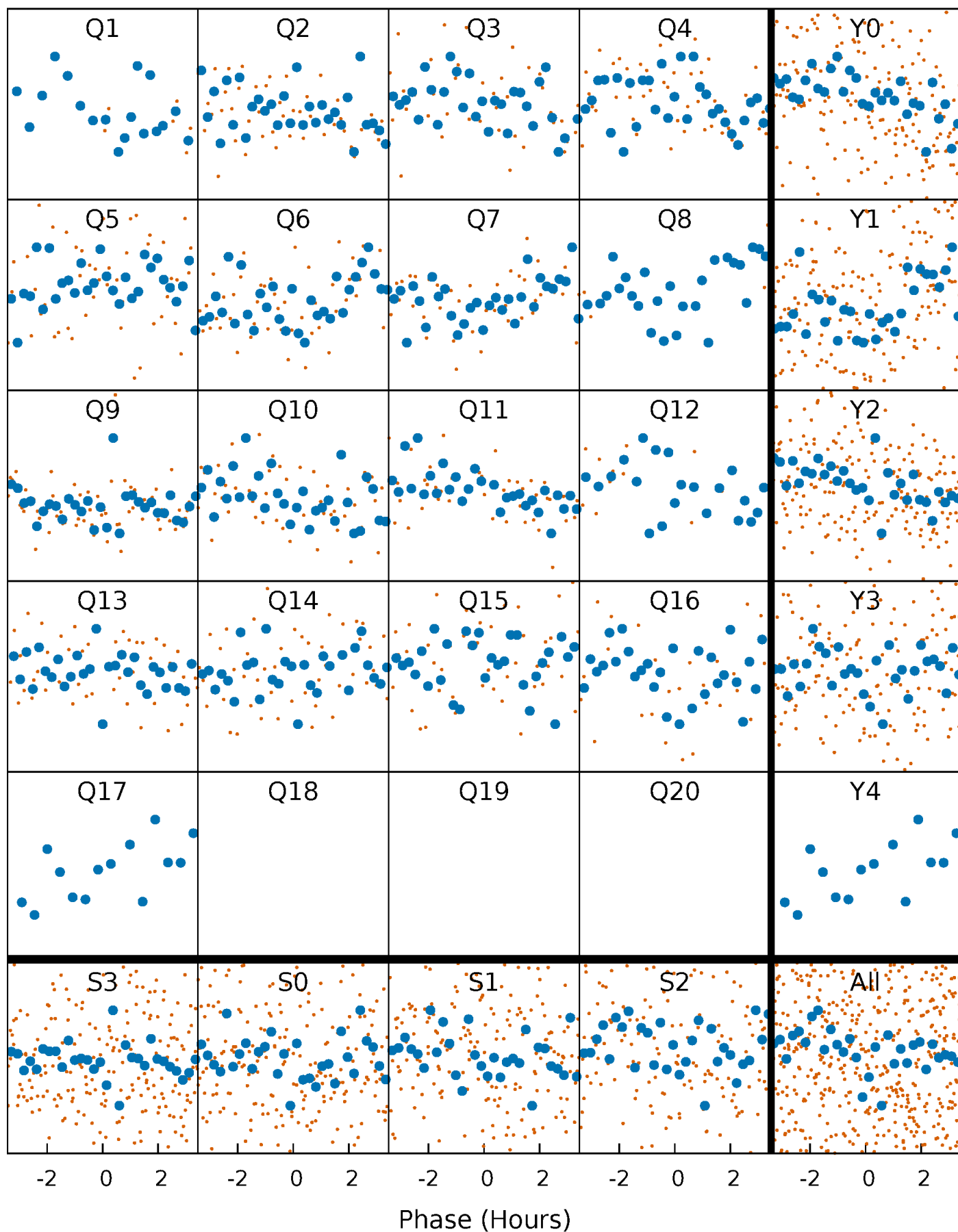


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



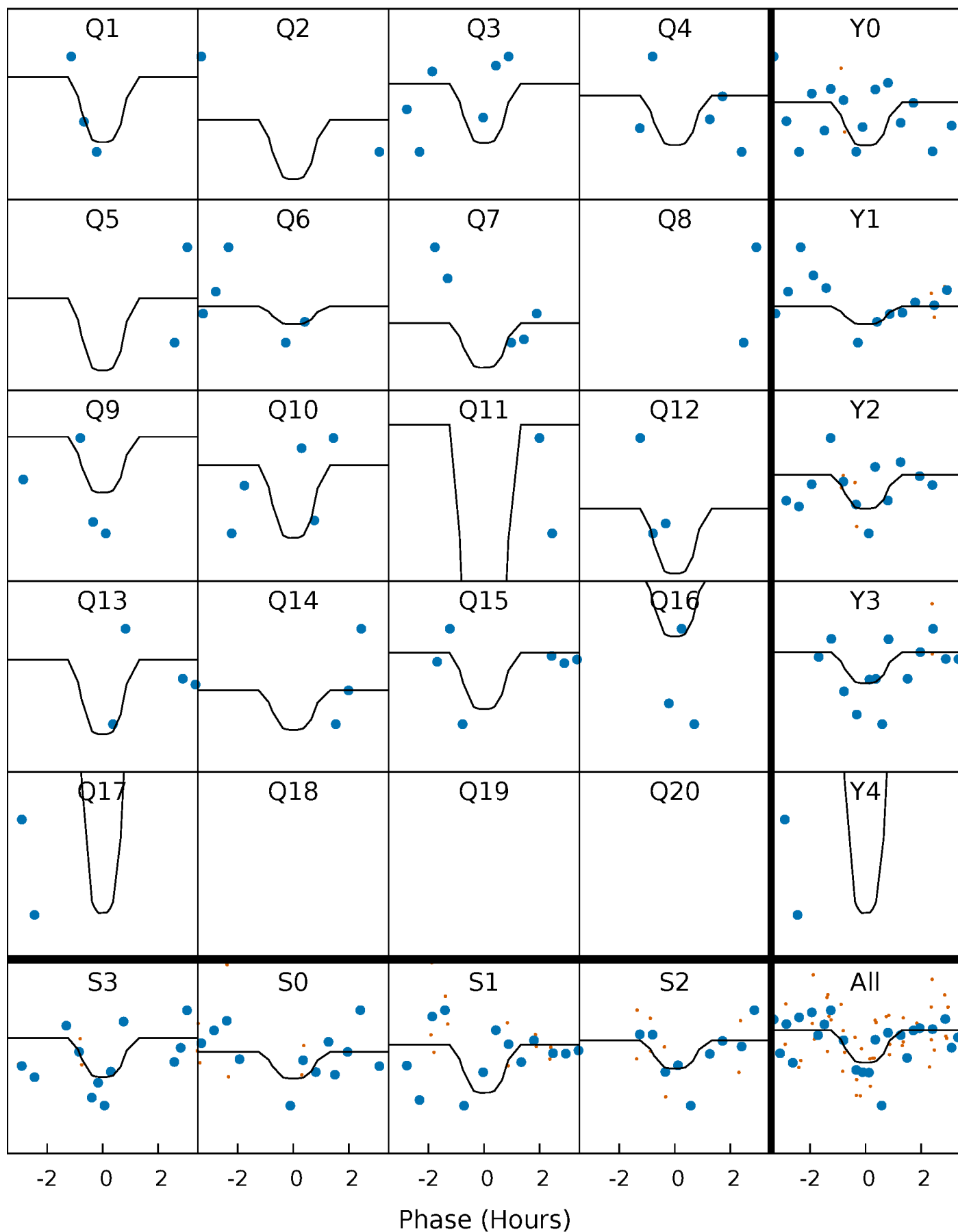
PDC Quarter-Phased Transit Curves

TCE 008114921-04 P= 23.411955 Days $T_0=154.920356$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 008114921-04 P= 23.411955 Days $T_0=154.920356$ (BKJD)

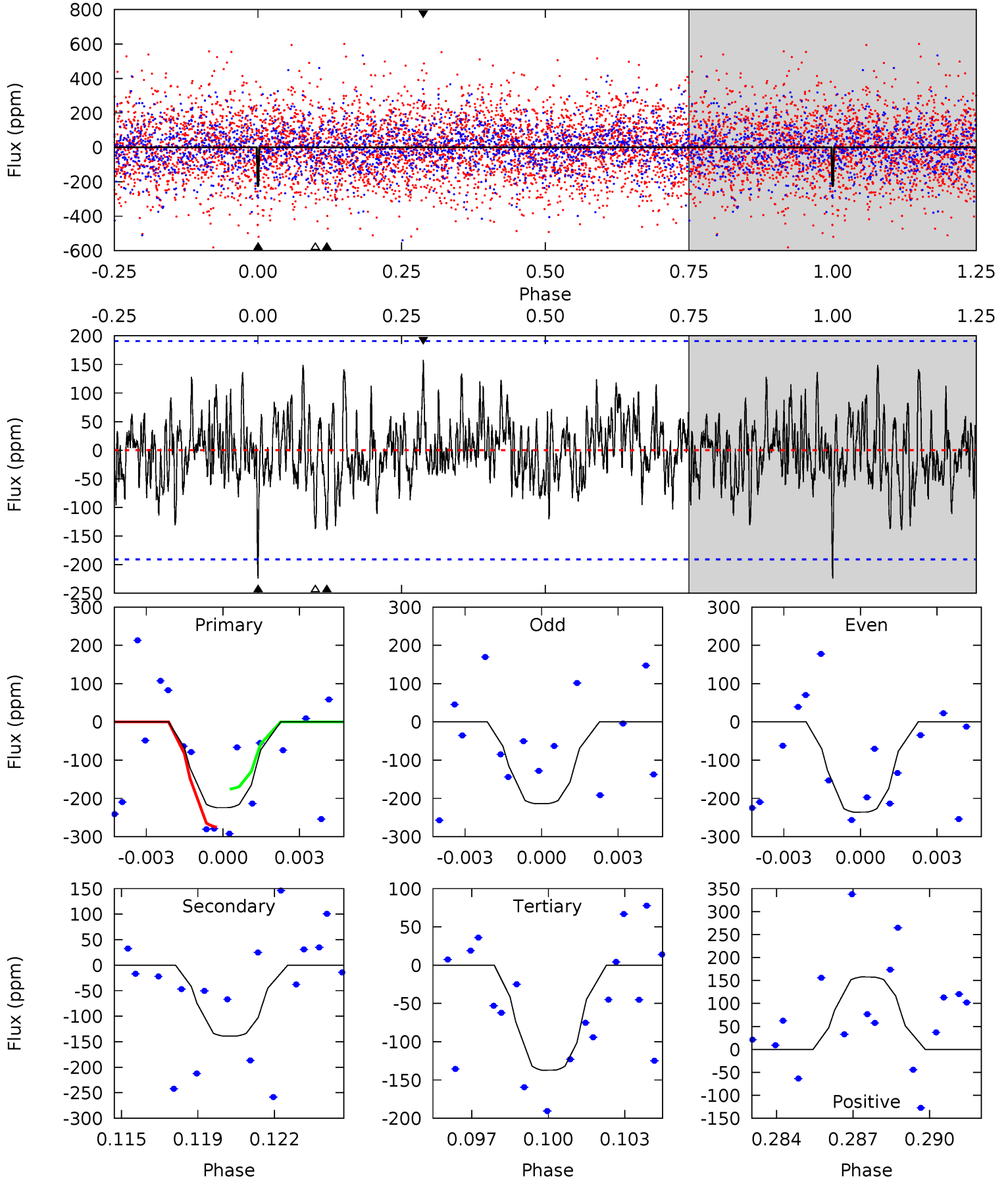


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

008114921-04, P = 23.411955 Days, E = 131.508401 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.16	3.82	3.77	4.33	5.25	2.96	1.29	2.39	1.83	0.05	-0.51	0.30	1.03	0.41	1.37



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 008114921

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6539^{+155}_{-214}	$4.318^{+0.087}_{-0.203}$	$-0.080^{+0.250}_{-0.300}$	$1.265^{+0.410}_{-0.176}$	$1.217^{+0.192}_{-0.157}$	$0.847^{+0.338}_{-0.463}$
	+2%/-3%	+2%/-5%	+312%/-375%	+32%/-14%	+16%/-13%	+40%/-55%
Source	PHO1	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 008114921-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-139 ± 36	$3.70^{+3.40}_{-2.50}$	1112^{+79}_{-60}	4582^{+3347}_{-980}	160^{+1294}_{-120}
Alt.	N/A	N/A	N/A	N/A	N/A

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 $A_{obs} \gg 1.0$

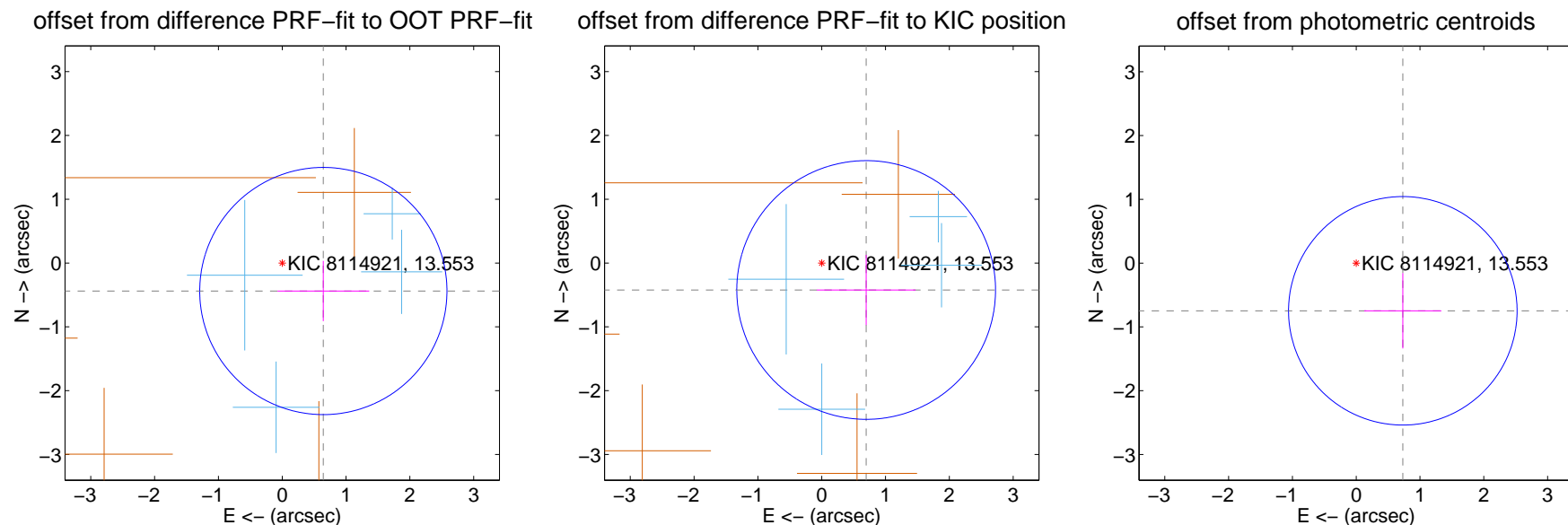
DV Centroid Data

Supplemental centroid analysis for 008114921-04. Kepler magnitude: 13.55. Transit SNR 10.14

There are 4 quarters with good PRF difference image offsets

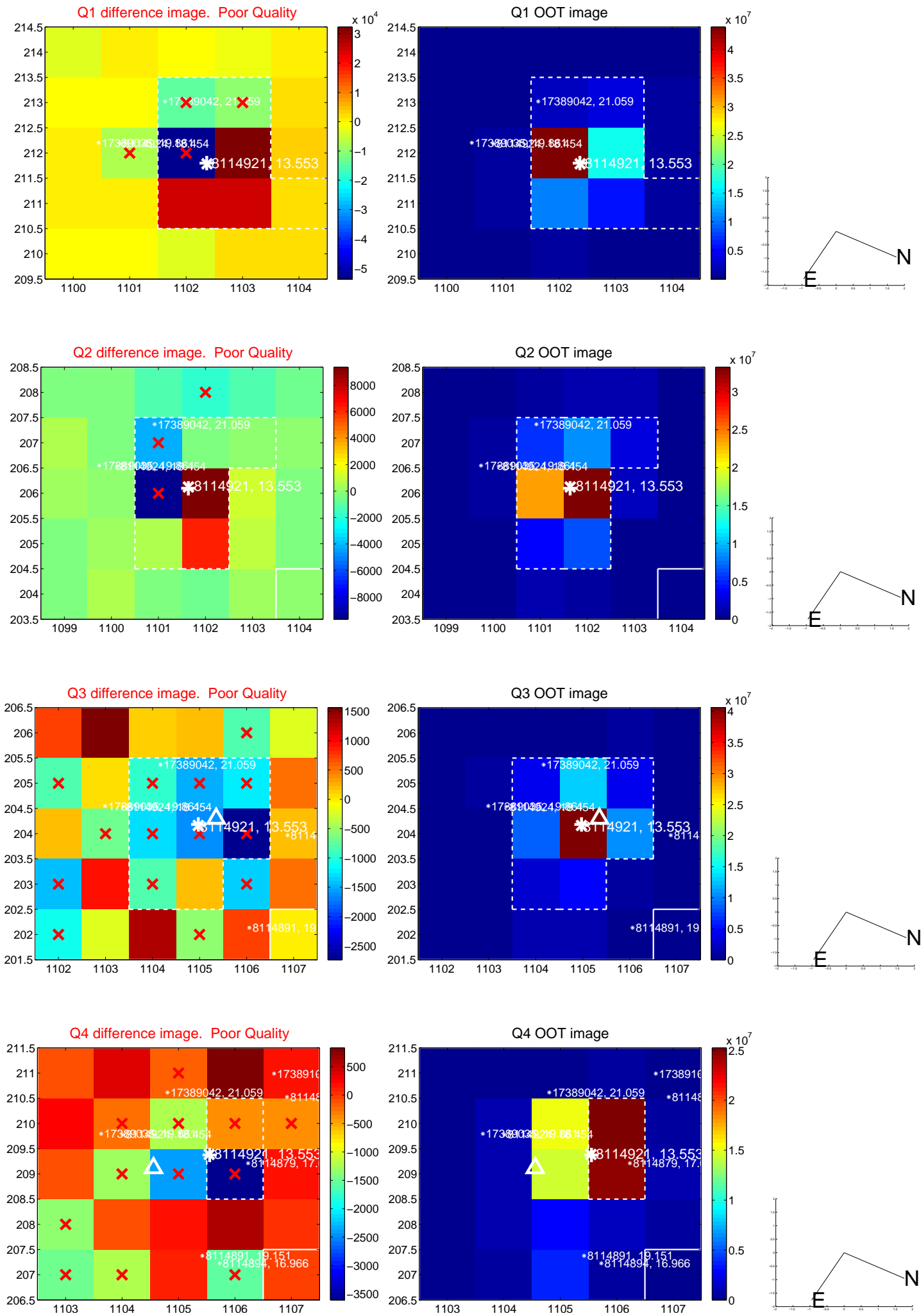
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.779 ± 0.646	1.21	-0.644 ± 0.719	-0.439 ± 0.473
PRF-fit source offset from KIC position	0.814 ± 0.676	1.21	-0.696 ± 0.775	-0.422 ± 0.550
photometric centroid source offset	1.05 ± 0.60	1.75	-0.73 ± 0.60	-0.75 ± 0.59

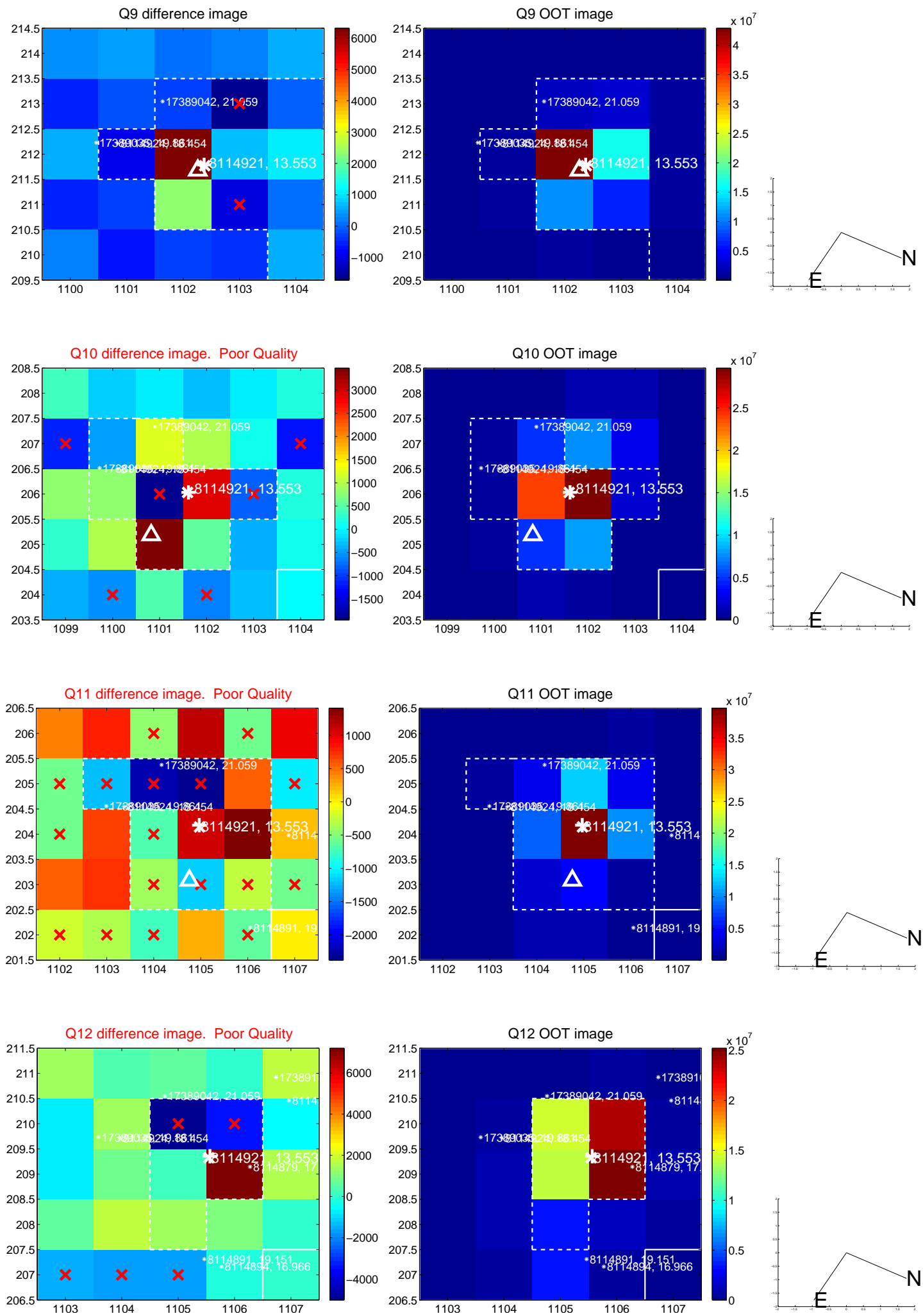


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

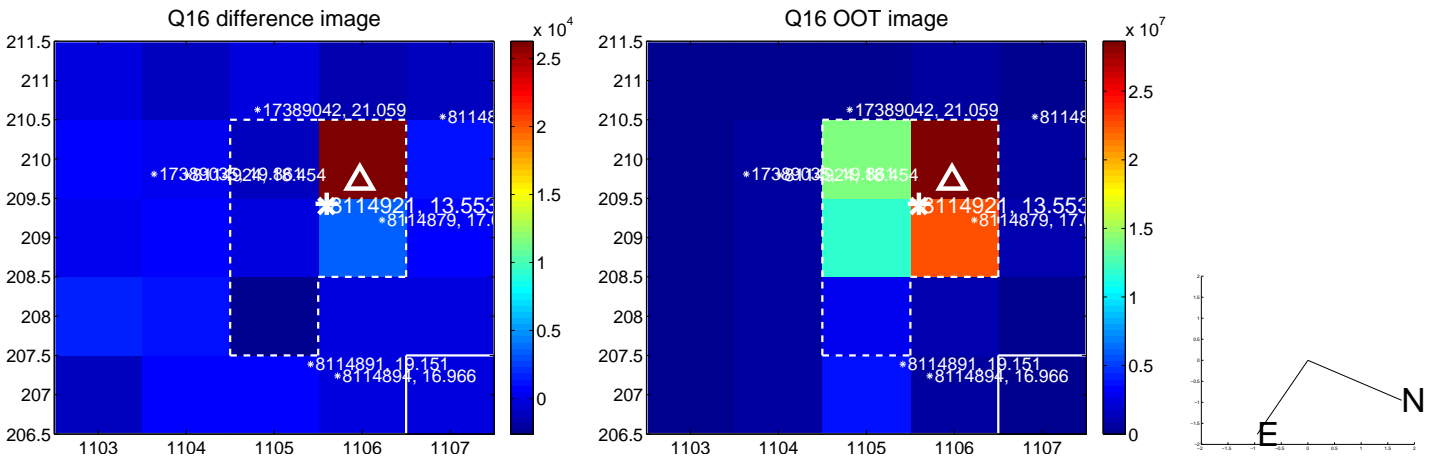
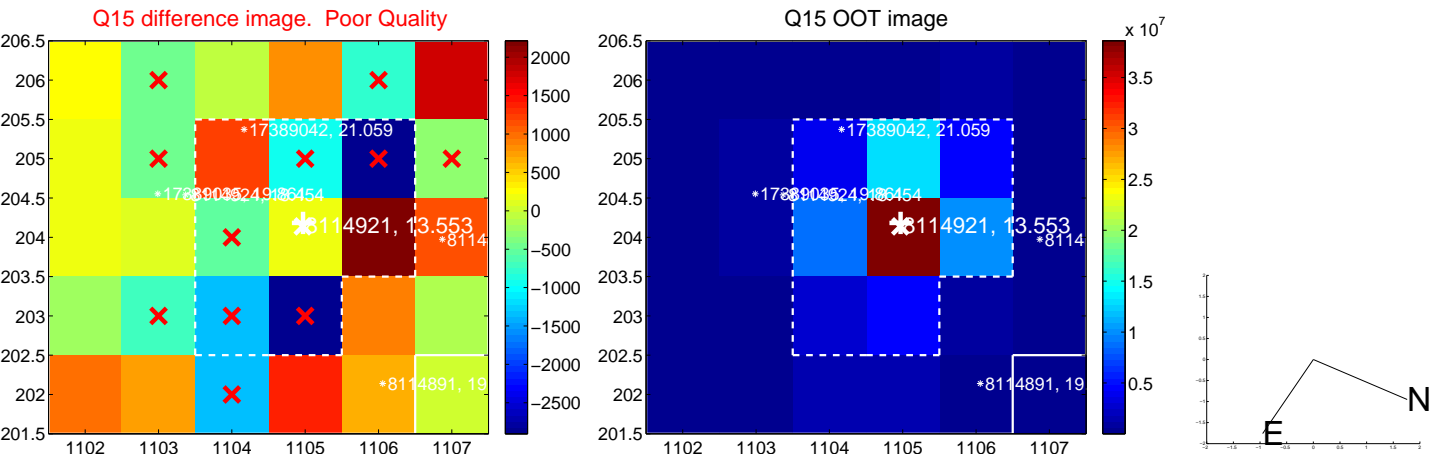
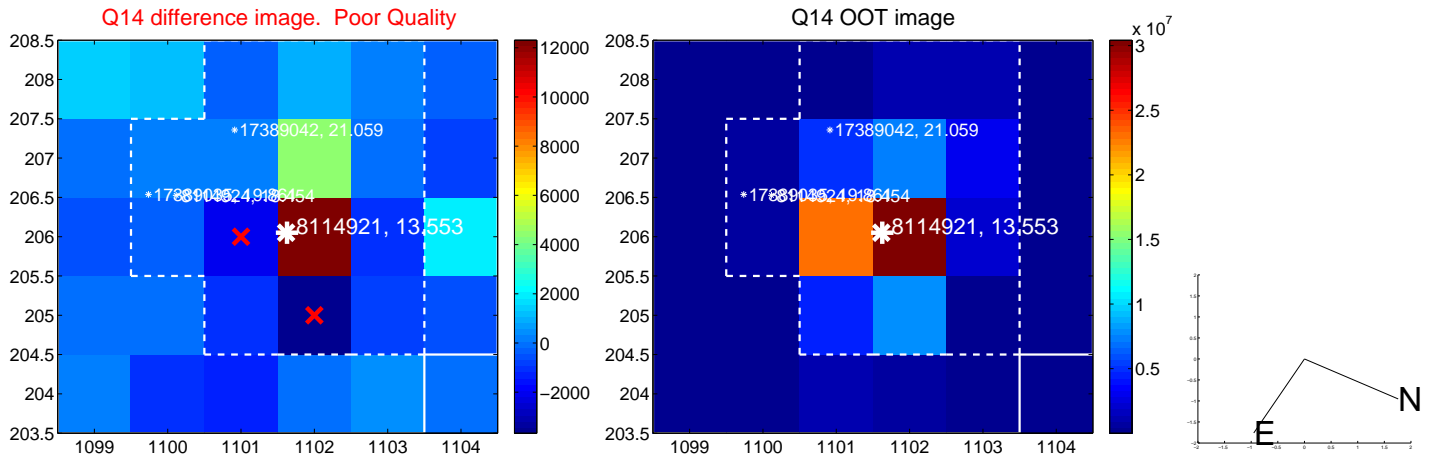
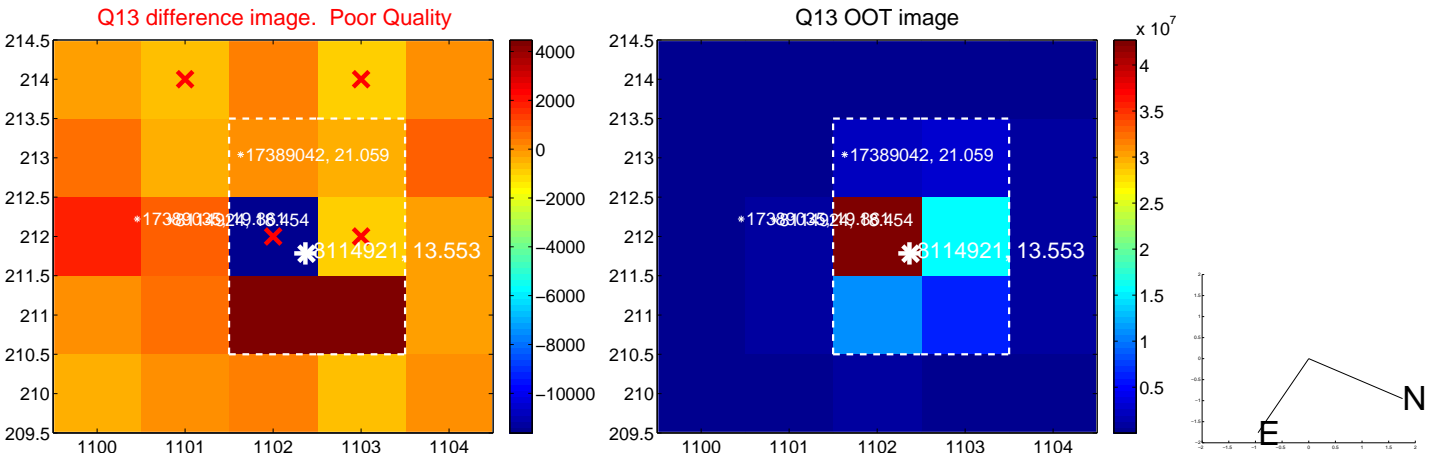
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



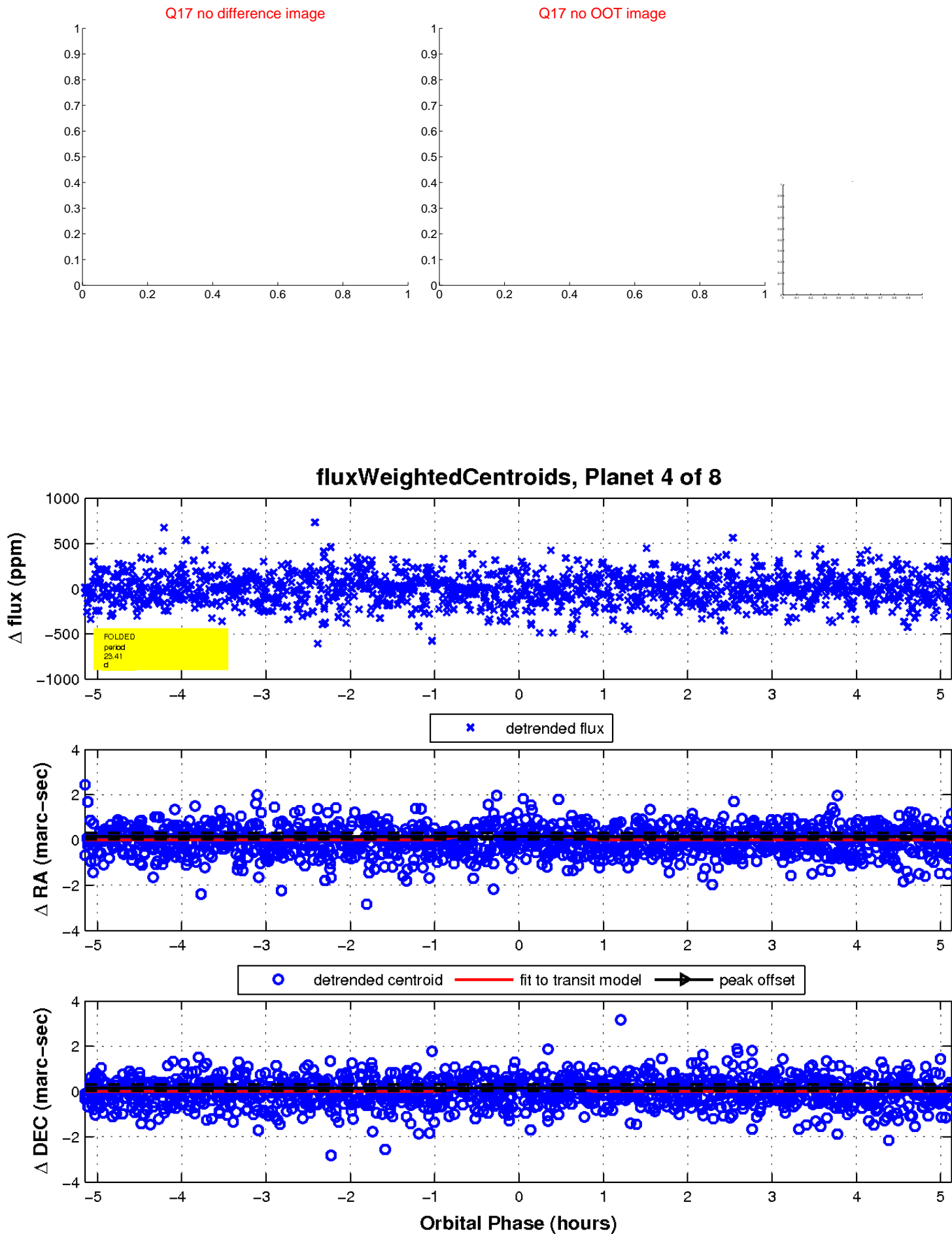
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

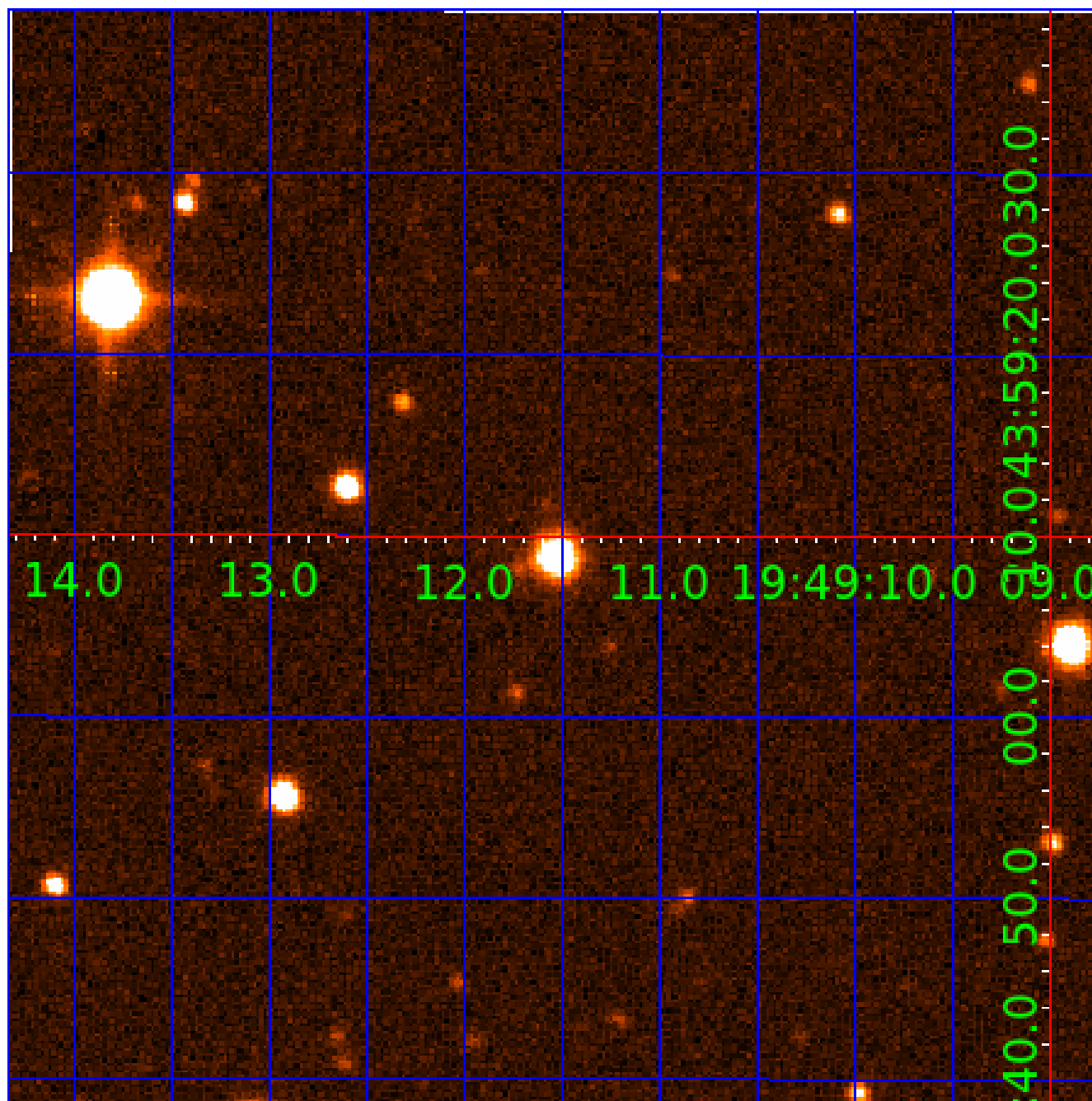


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008114921

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})
008114921-01	OBS	No	0.718480	132.256644	3.0	5.137	9.4	1.8	1.26	6539	0.22	9342.15
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008114921-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—CENT_FEW_DIFFS
008114921-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_MEAS
008114921-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
008114921-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
008114921-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—HALO_GHOST
008114921-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
008114921-07	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS—HALO_GHOST
008114921-08	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_MEAS—HALO_GHOST

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

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

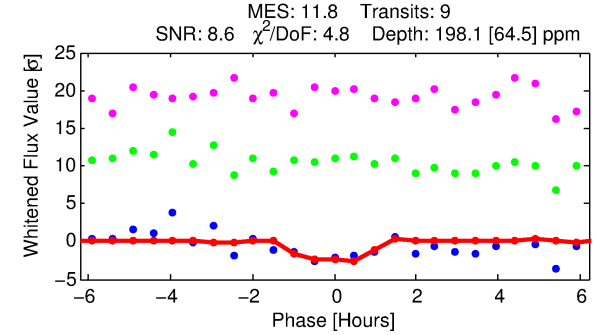
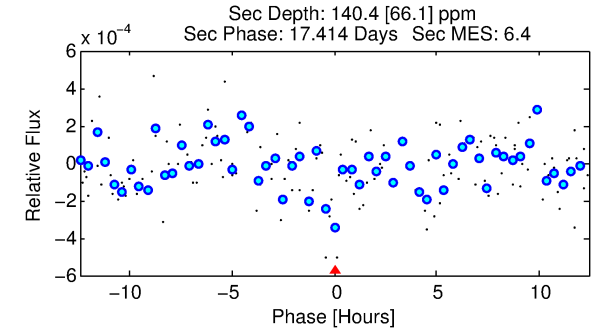
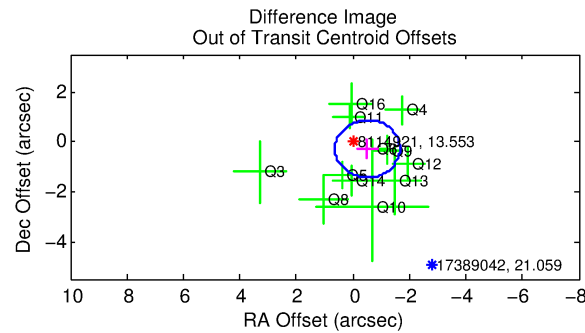
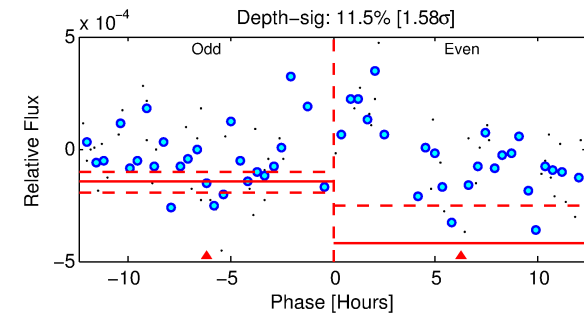
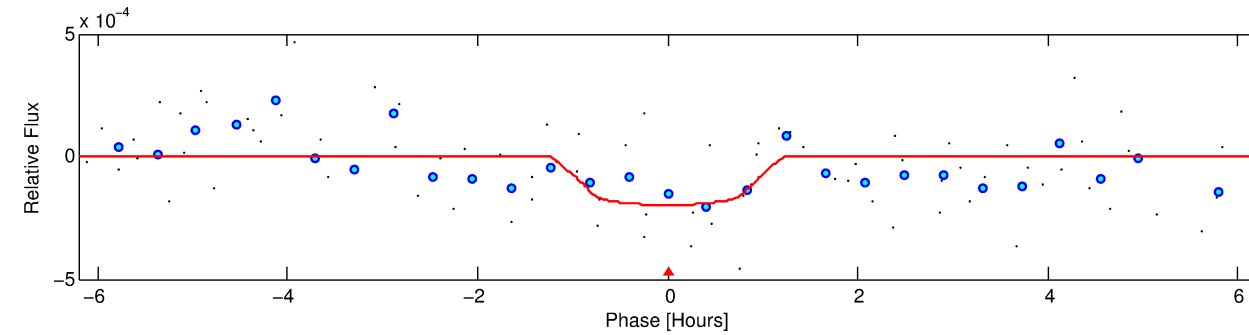
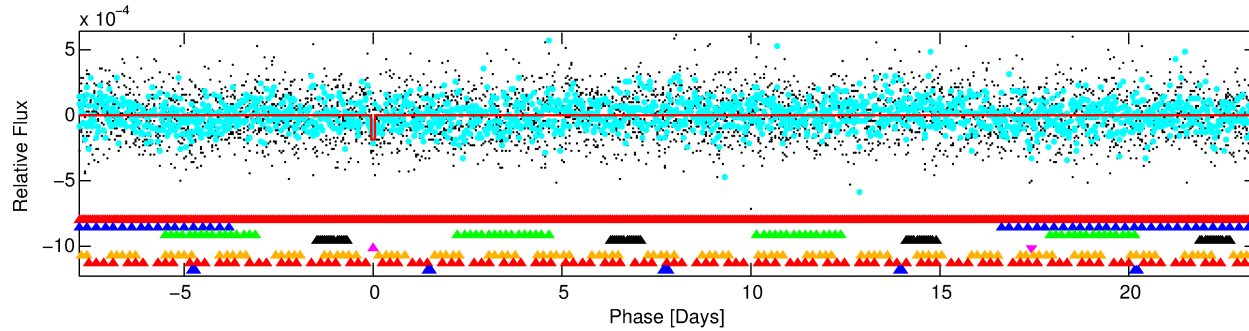
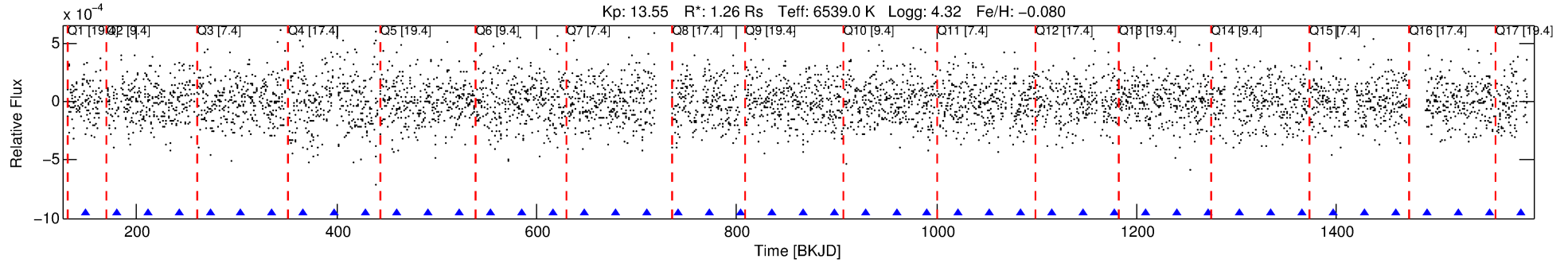
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008114921-05

No Significant Match Found

DV One-Page Summary

KIC: 8114921 Candidate: 5 of 8 Period: 31.198 d



DV Fit Results:

Period = 31.19773 [0.00069] d
Epoch = 148.6436 [0.0189] BKJD
Rp/R* = 0.0143 [0.0268]
a/R* = 71.62 [725.16]
b = 0.80 [4.59]
Seff = 61.21 [24.56]
Teff = 713 [72] K
Rp = 1.97 [3.75] Re
a = 0.2069 [0.0551] AU
Ag = 851.18 [3235.34] [0.26 σ]
Teffp = 5956 [5635] K [0.93 σ]

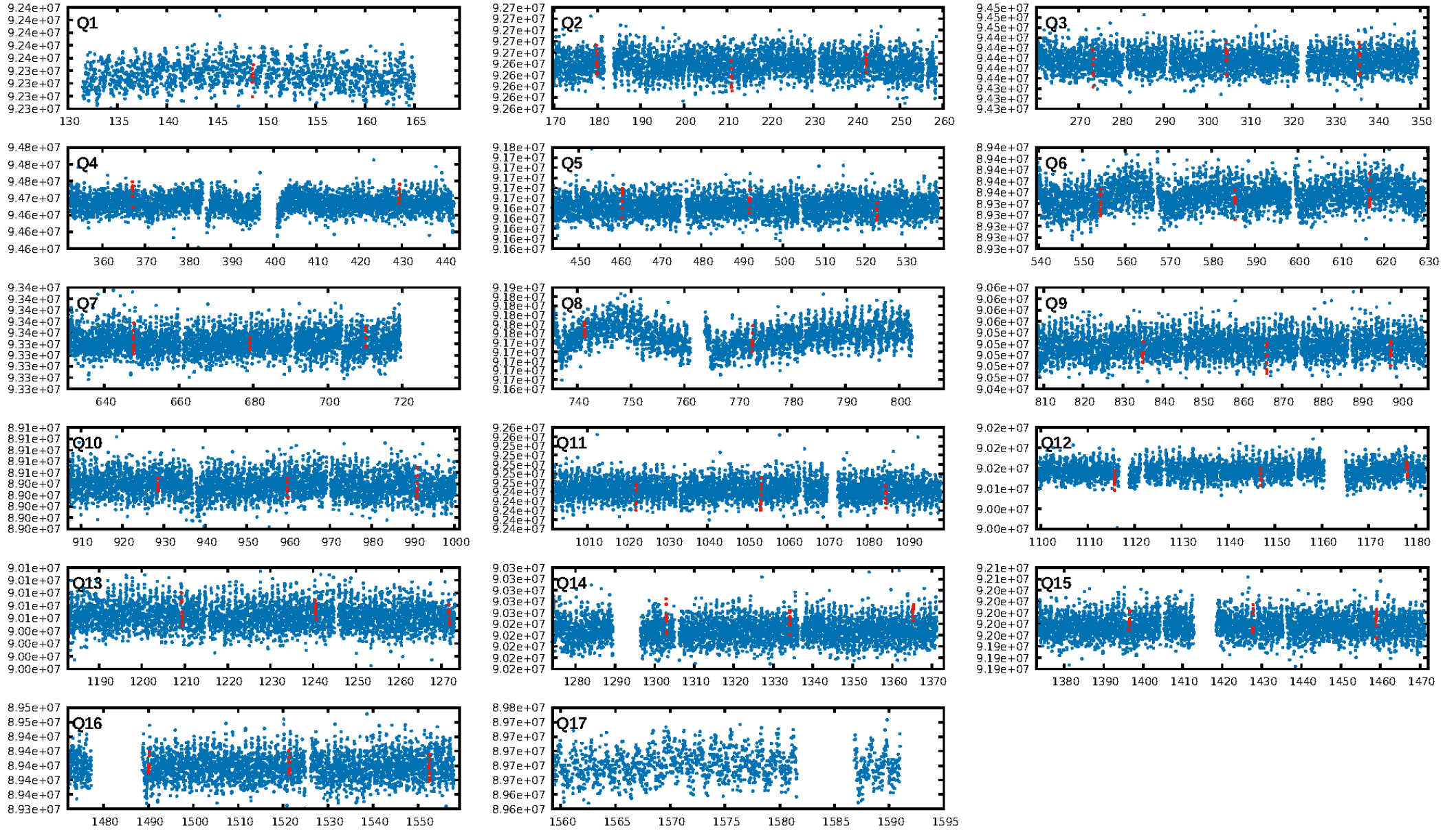
DV Diagnostic Results:

ShortPeriod-sig: 97.9% [2.31 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 9.9%
Bootstrap-pfa: 7.05e-13
RollingBand-fgt: 1.00 [9/9]
GhostDiagnostic-chr: 0.08146
Centroid-sig: 16.1%
Centroid-so: 0.977 arcsec [1.36 σ]
OotOffset-rm: 0.586 arcsec [1.53 σ]
KicOffset-rm: 0.606 arcsec [1.62 σ]
OotOffset-st: 3/2/4/3 [12]
KicOffset-st: 3/2/4/3 [12]
DiffImageQuality-fgm: 0.58 [7/12]
DiffImageOverlap-fno: 0.00 [0/16]

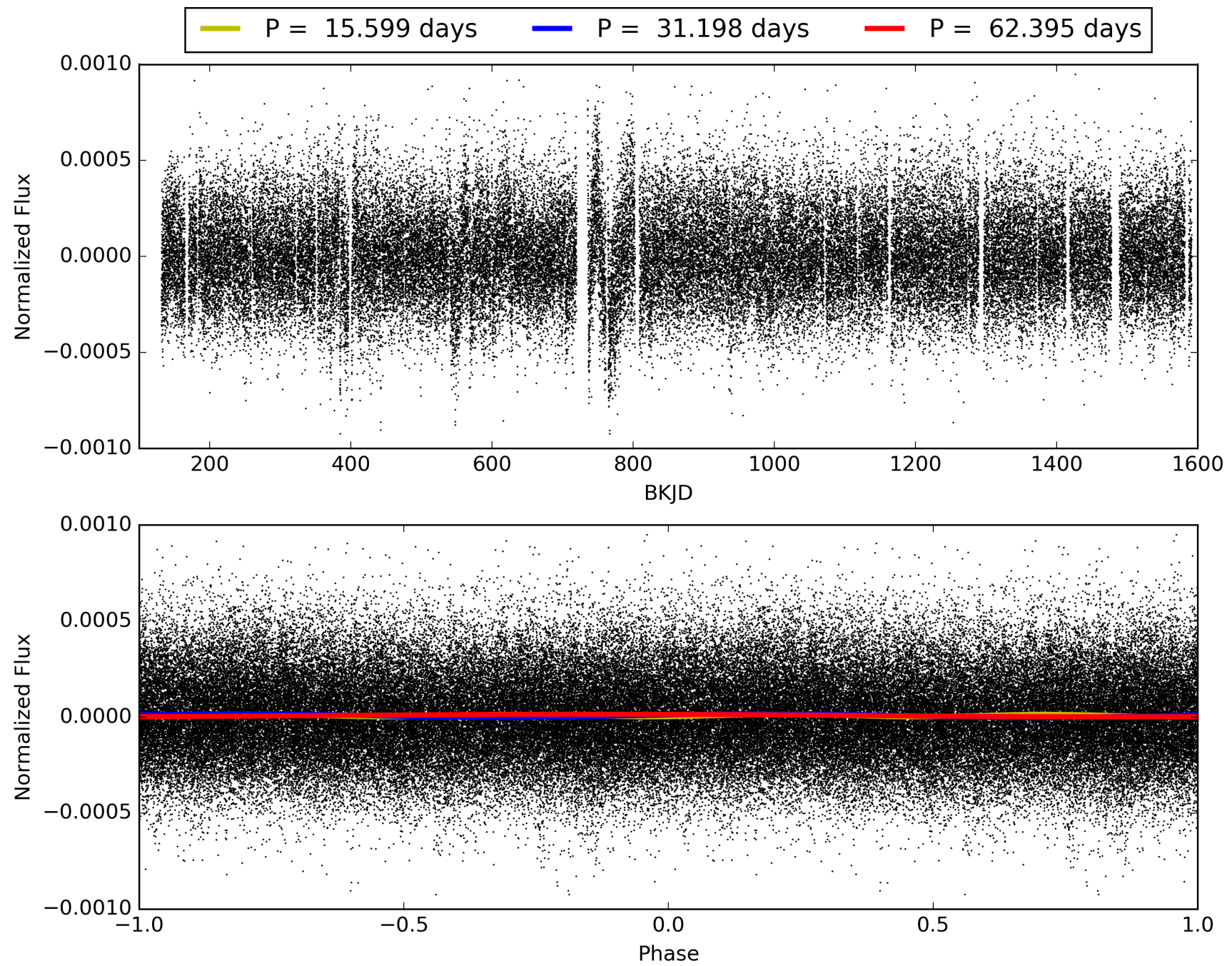
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 05:40:30 Z

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

TCE 008114921-05, PDC Light Curves

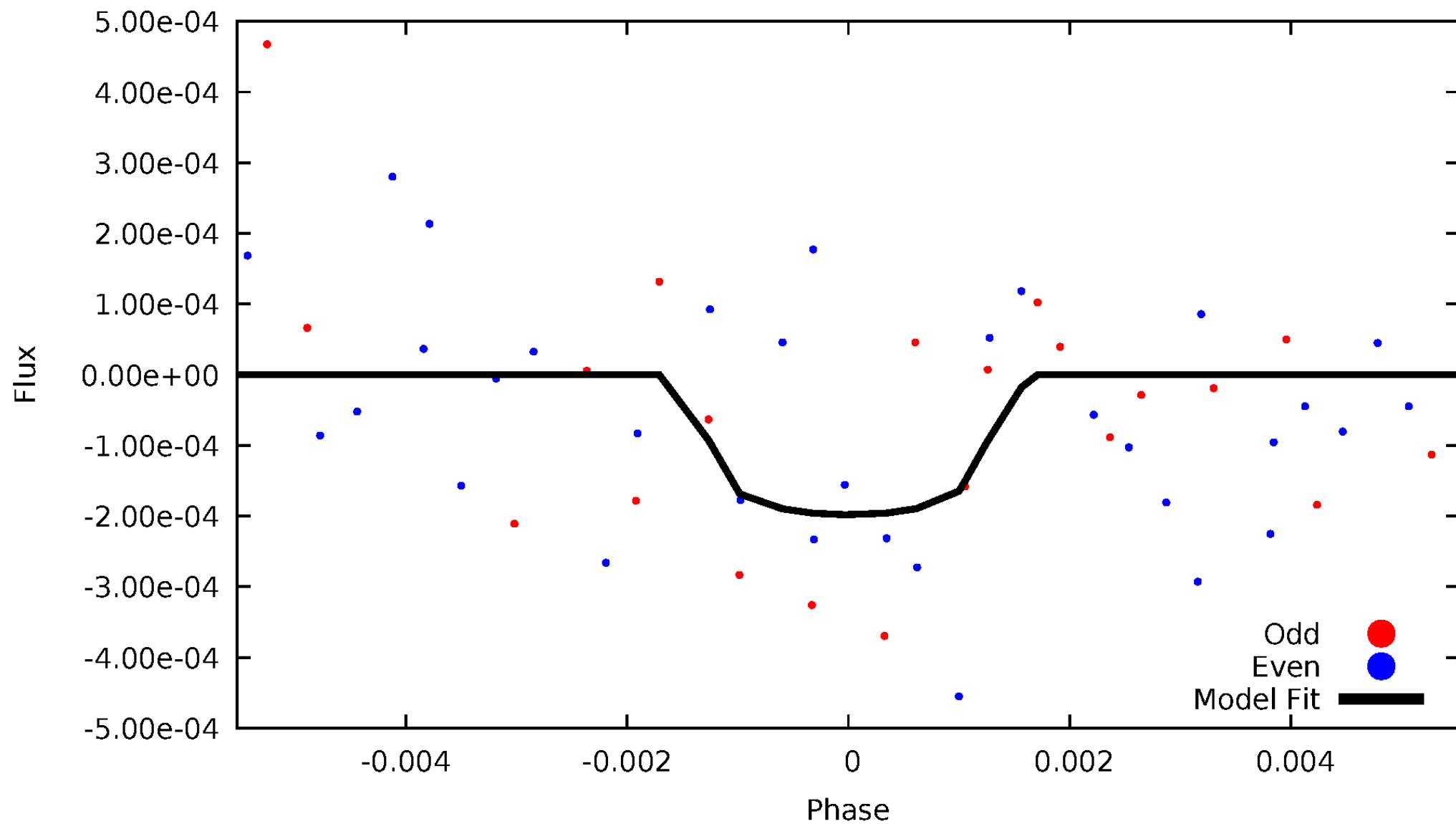


TCE 008114921-05



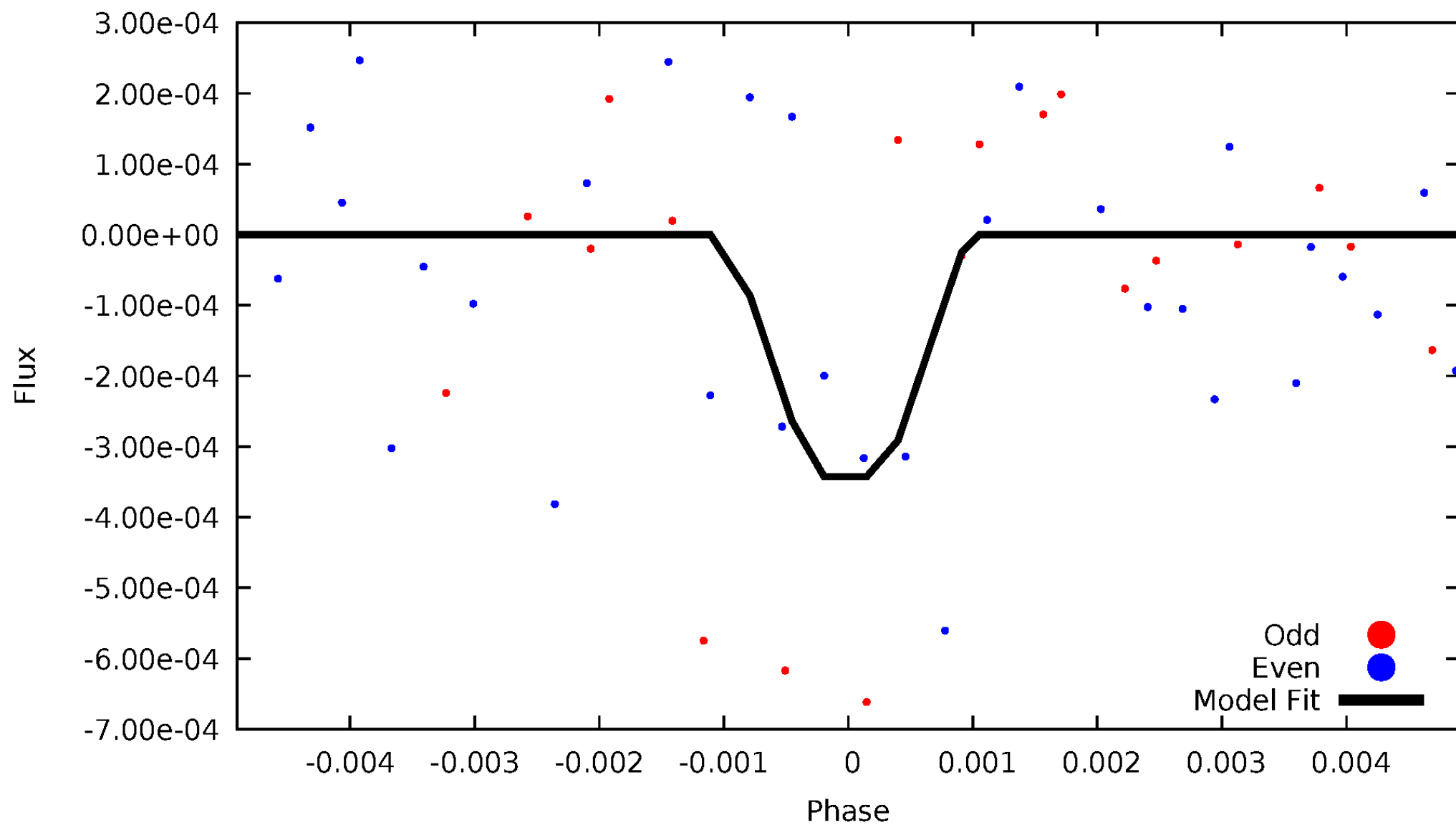
DV Odd/Even

TCE 008114921-05



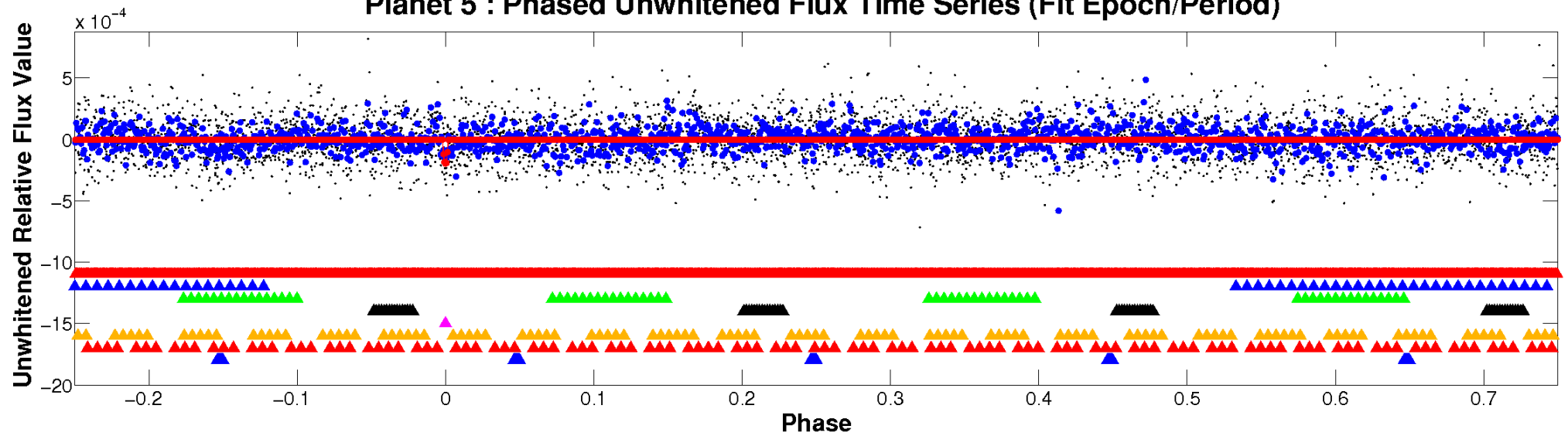
ALT Odd/Even

TCE 008114921-05

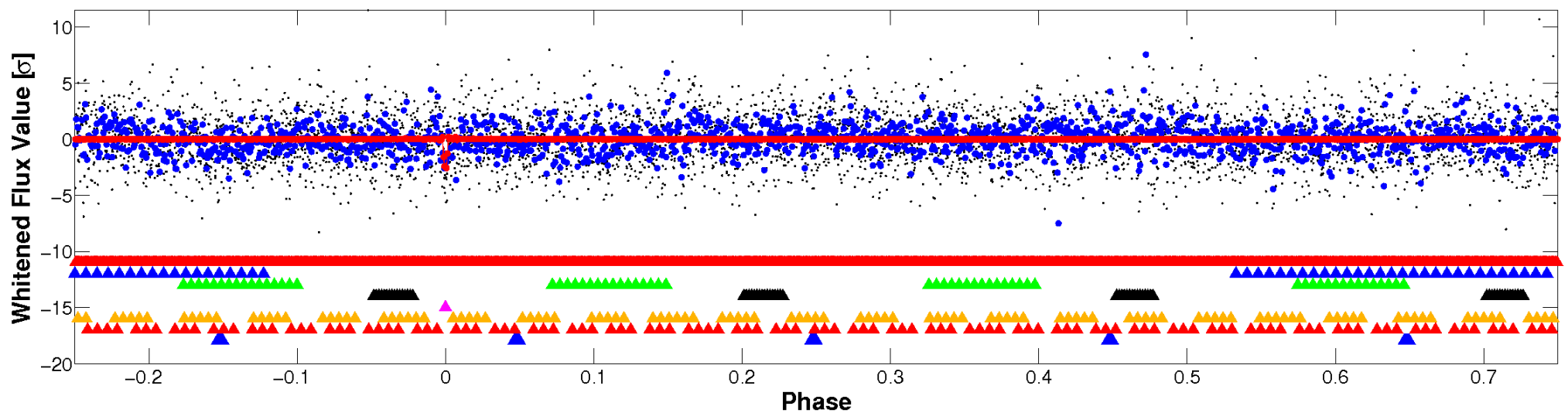


Non-Whitened Vs. Whitened Light Curve

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

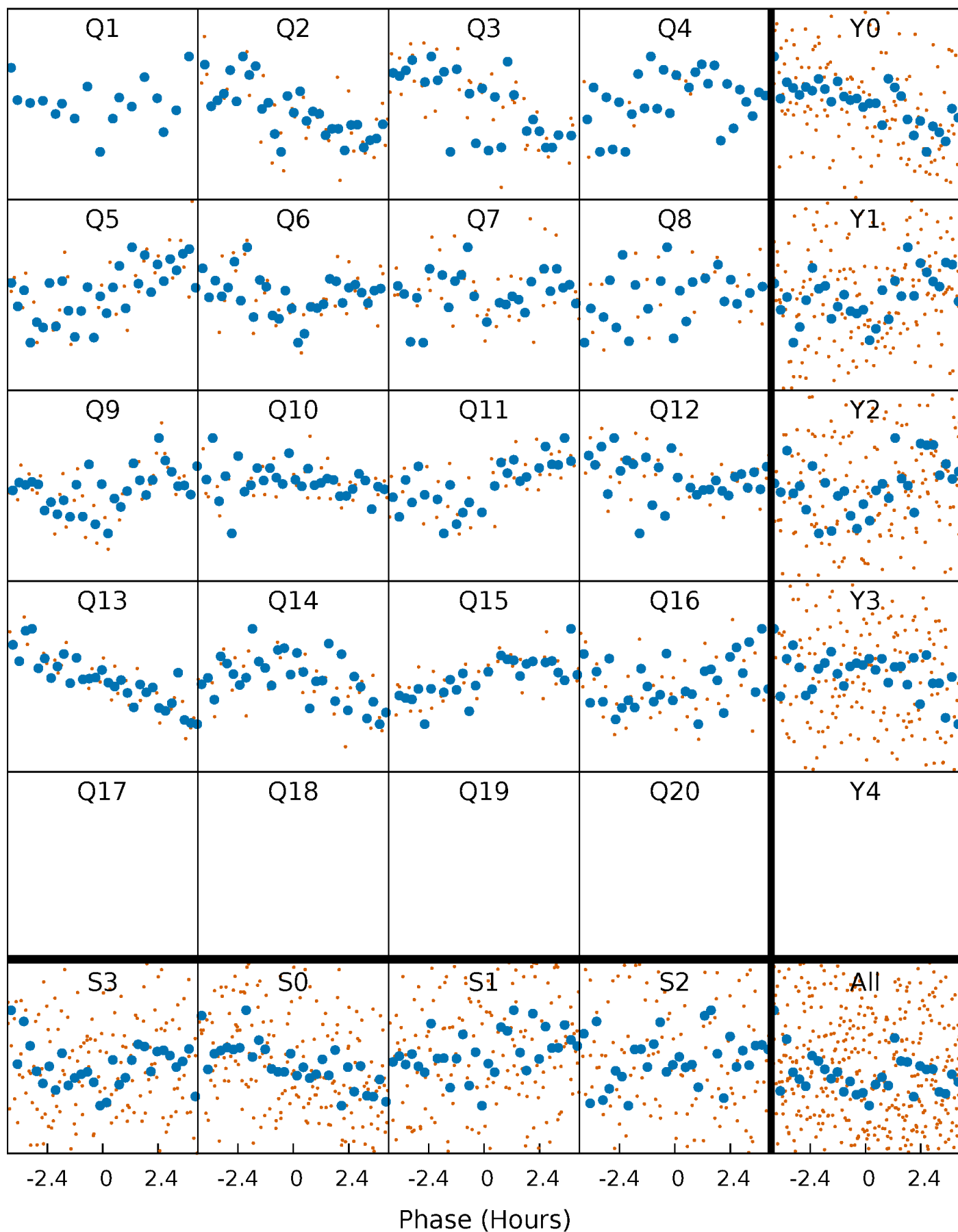


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



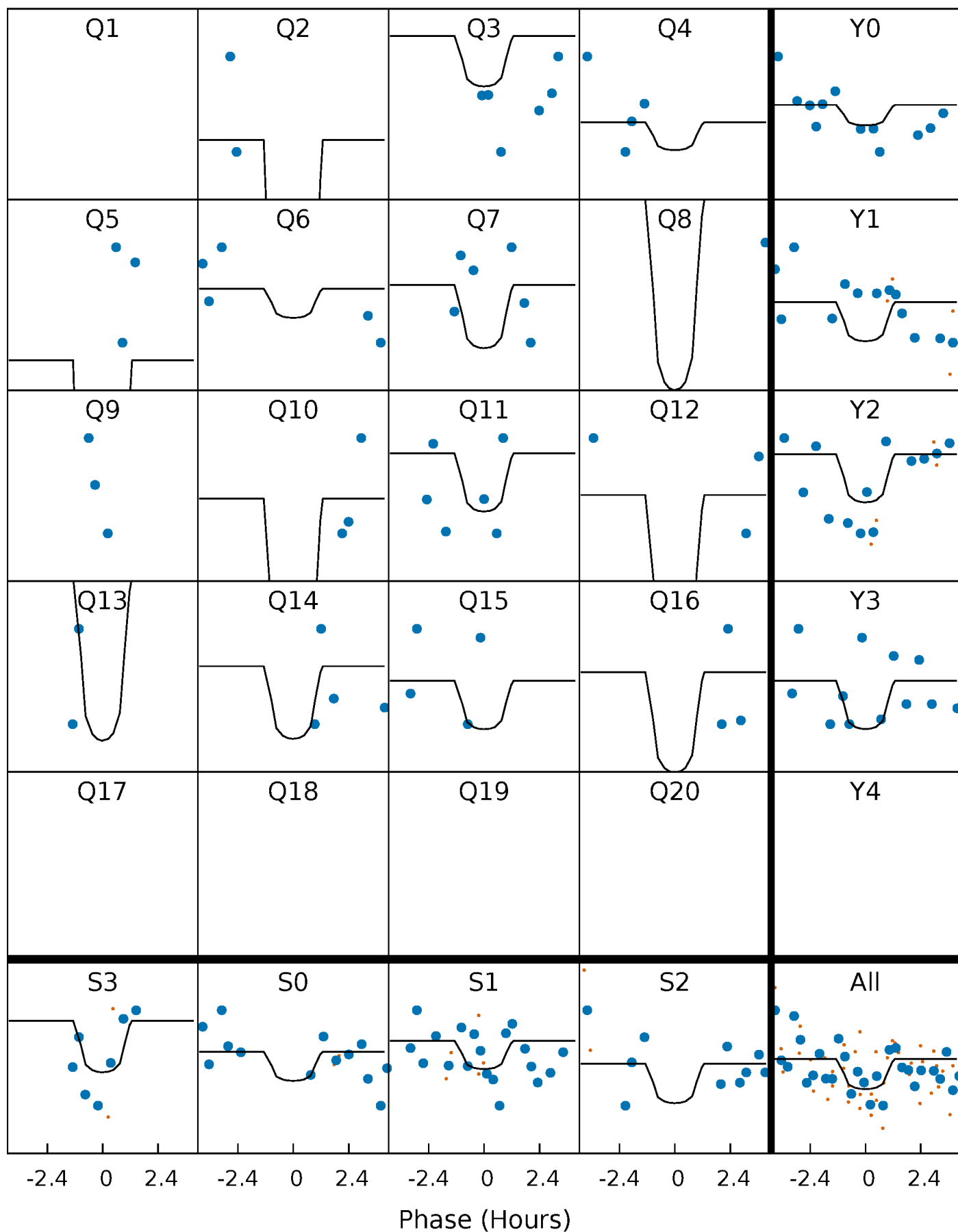
PDC Quarter-Phased Transit Curves

TCE 008114921-05 $P = 31.197732$ Days $T_0 = 148.643626$ (BKJD)



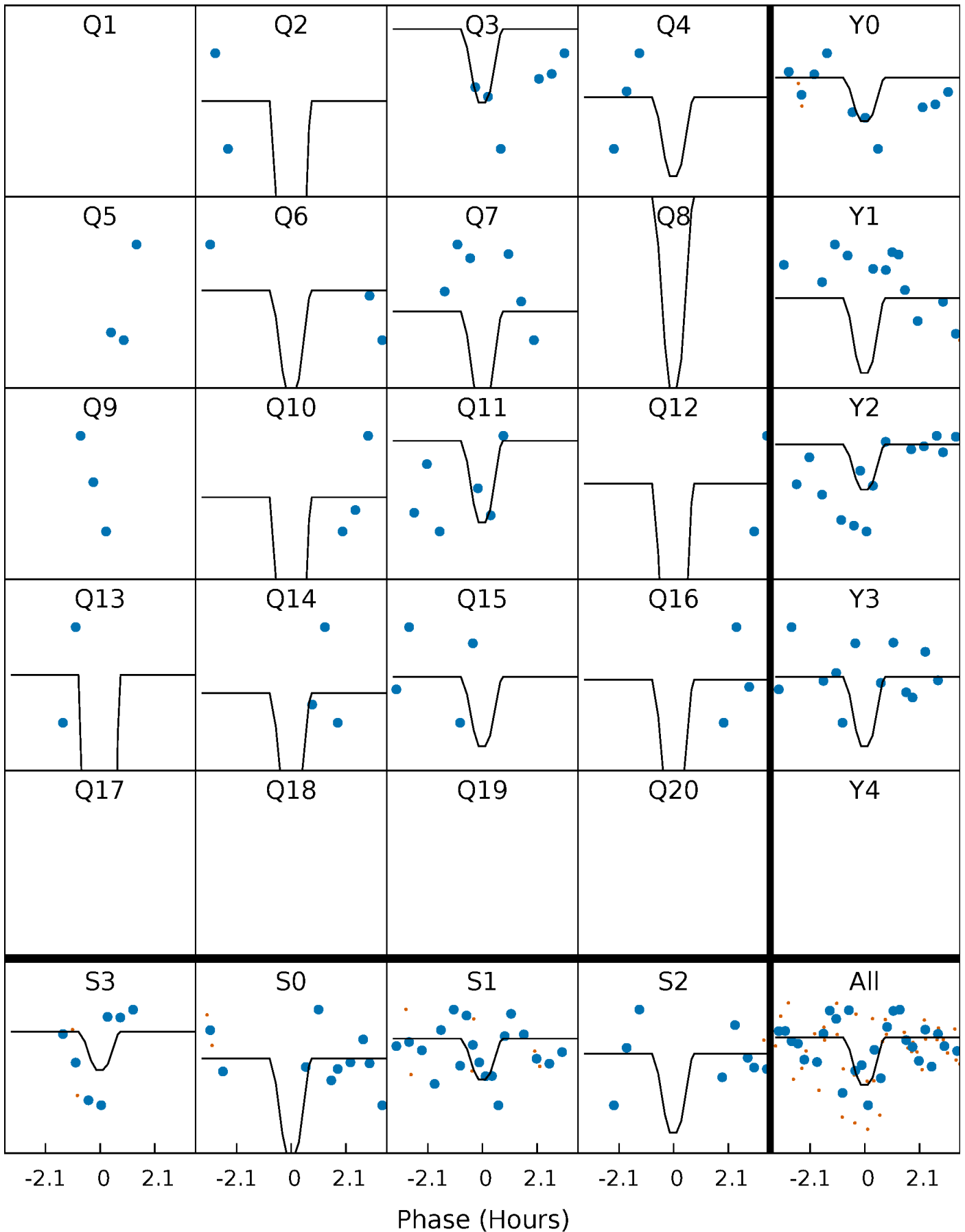
DV Quarter-Phased Transit Curves

TCE 008114921-05 P= 31.197732 Days $T_0=148.643626$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

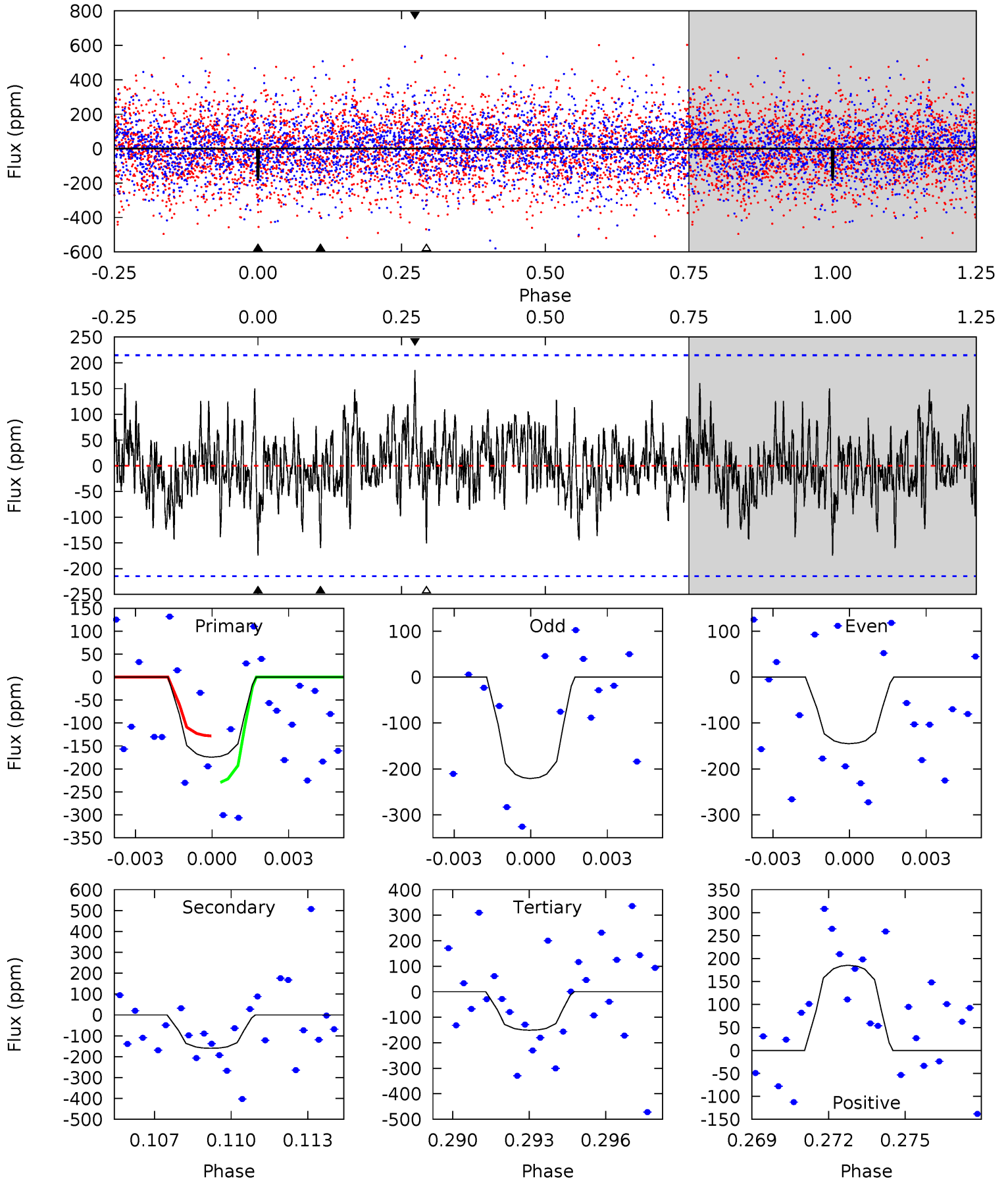
TCE 008114921-05 $P = 31.197659$ Days $T_0 = 148.650867$ (BKJD)



DV Model-Shift Uniqueness Test

008114921-05, P = 31.197732 Days, E = 117.445894 Days

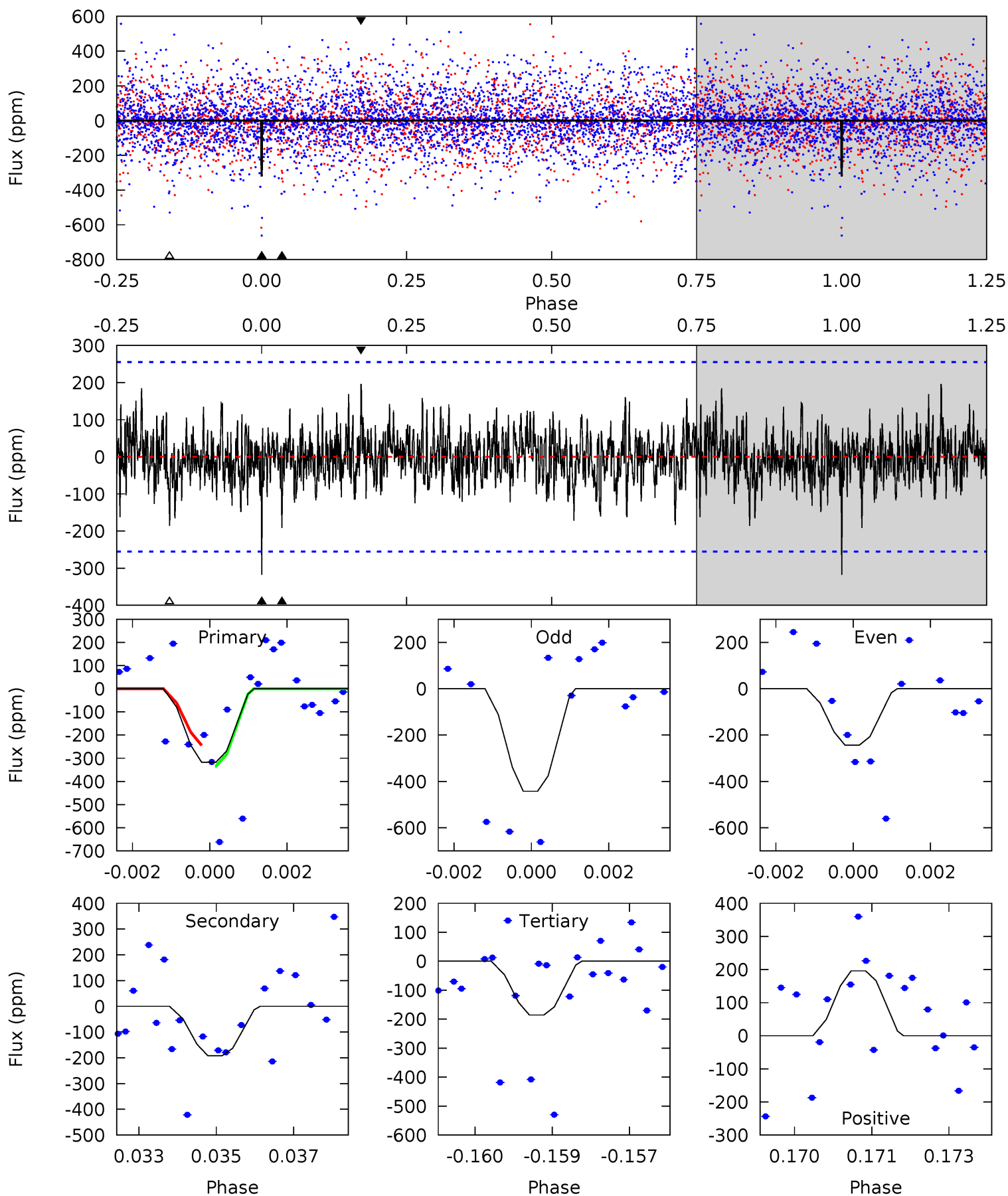
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.28	3.92	3.69	4.54	5.25	2.97	1.21	0.58	-0.26	0.23	-0.62	0.90	1.39	0.51	1.23



Alt Model-Shift Uniqueness Test

008114921-05, P = 31.197659 Days, E = 117.453208 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.64	4.01	3.88	4.10	5.34	3.11	1.15	2.76	2.54	0.13	-0.09	2.06	1.12	0.38	0.90



Stellar Parameters For KIC 008114921

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6539^{+155}_{-214}	$4.318^{+0.087}_{-0.203}$	$-0.080^{+0.250}_{-0.300}$	$1.265^{+0.410}_{-0.176}$	$1.217^{+0.192}_{-0.157}$	$0.847^{+0.338}_{-0.463}$
	+2%/-3%	+2%/-5%	+312%/-375%	+32%/-14%	+16%/-13%	+40%/-55%
Source	PHO1	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 008114921-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-160 ± 41	$3.52^{+3.31}_{-2.26}$	1006^{+74}_{-51}	4844^{+3442}_{-1105}	321^{+2246}_{-244}
Alt.	-192 ± 48	$3.75^{+3.67}_{-2.57}$	1006^{+83}_{-49}	4807^{+4028}_{-1059}	311^{+2827}_{-227}

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 $A_{obs} \gg 1.0$

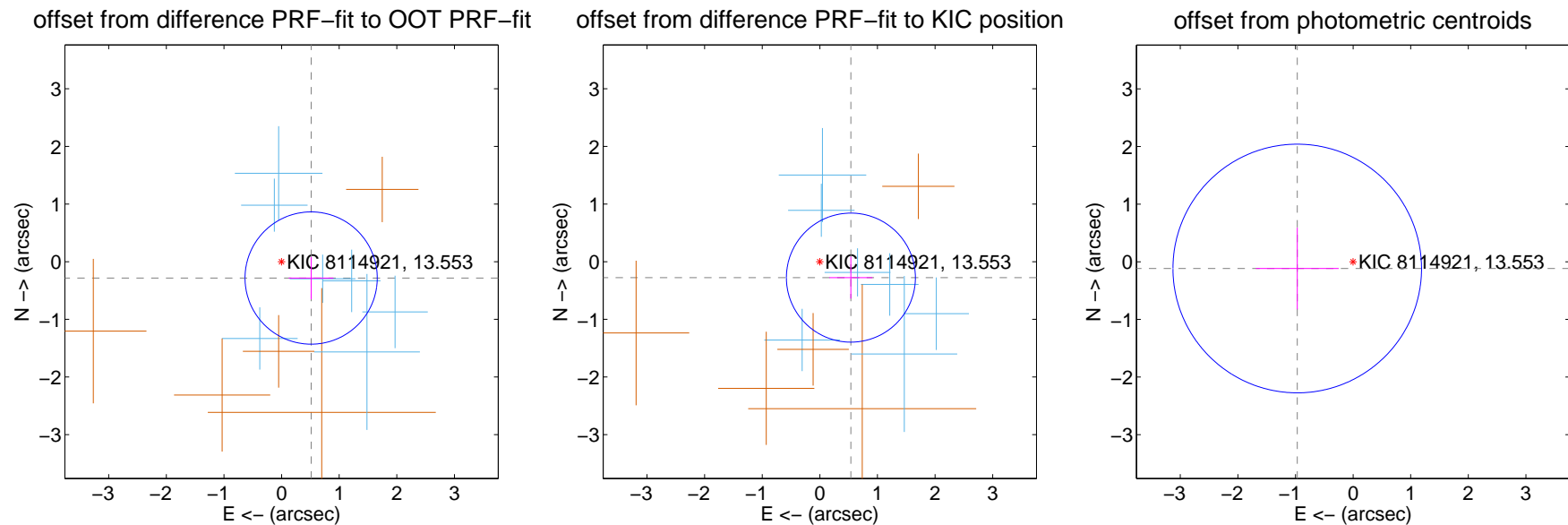
DV Centroid Data

Supplemental centroid analysis for 008114921-05. Kepler magnitude: 13.55. Transit SNR 8.60

There are 7 quarters with good PRF difference image offsets

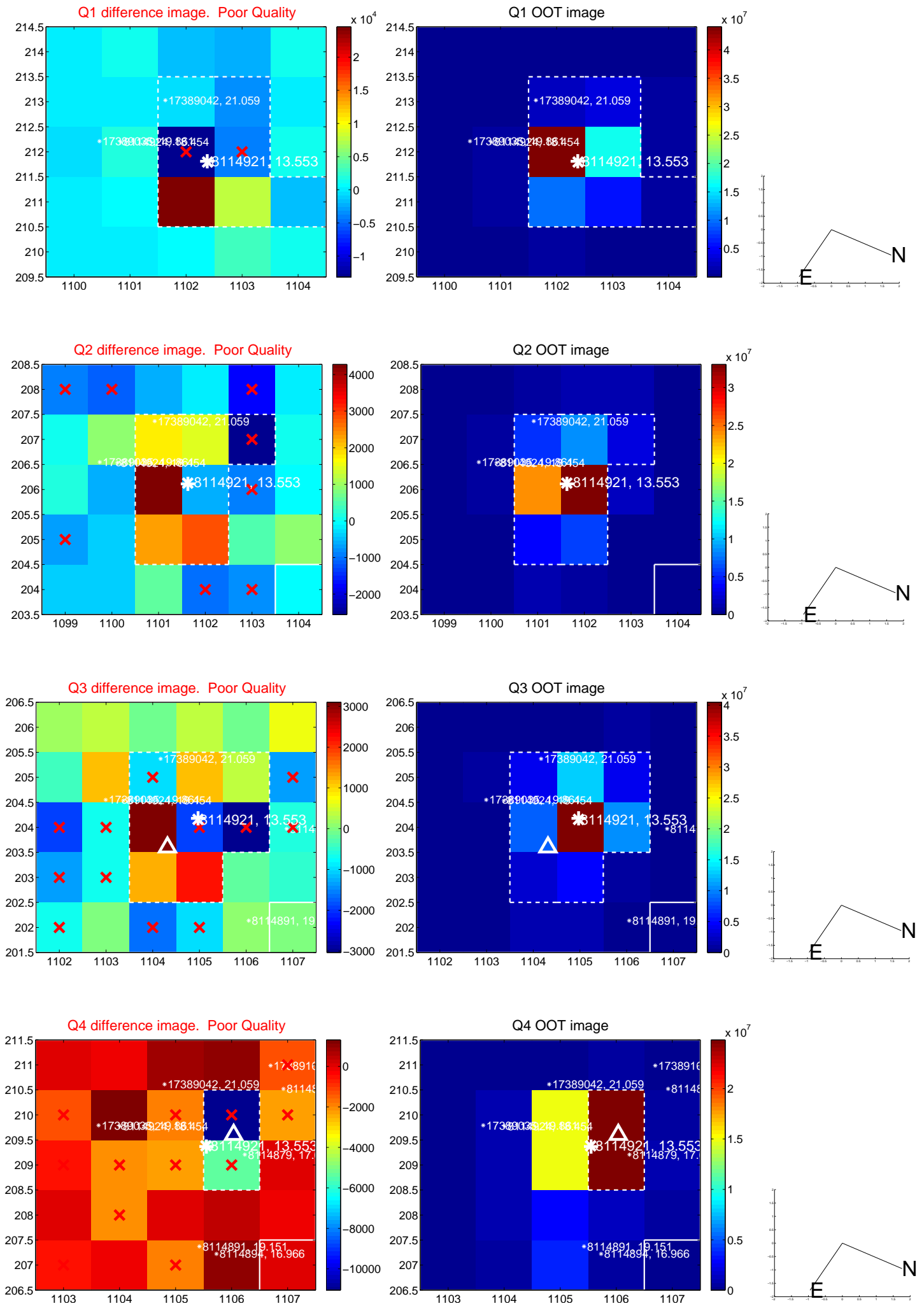
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.586 ± 0.382	1.53	-0.513 ± 0.387	-0.283 ± 0.367
PRF-fit source offset from KIC position	0.606 ± 0.373	1.62	-0.539 ± 0.375	-0.276 ± 0.364
photometric centroid source offset	0.98 ± 0.72	1.36	0.97 ± 0.72	-0.12 ± 0.71

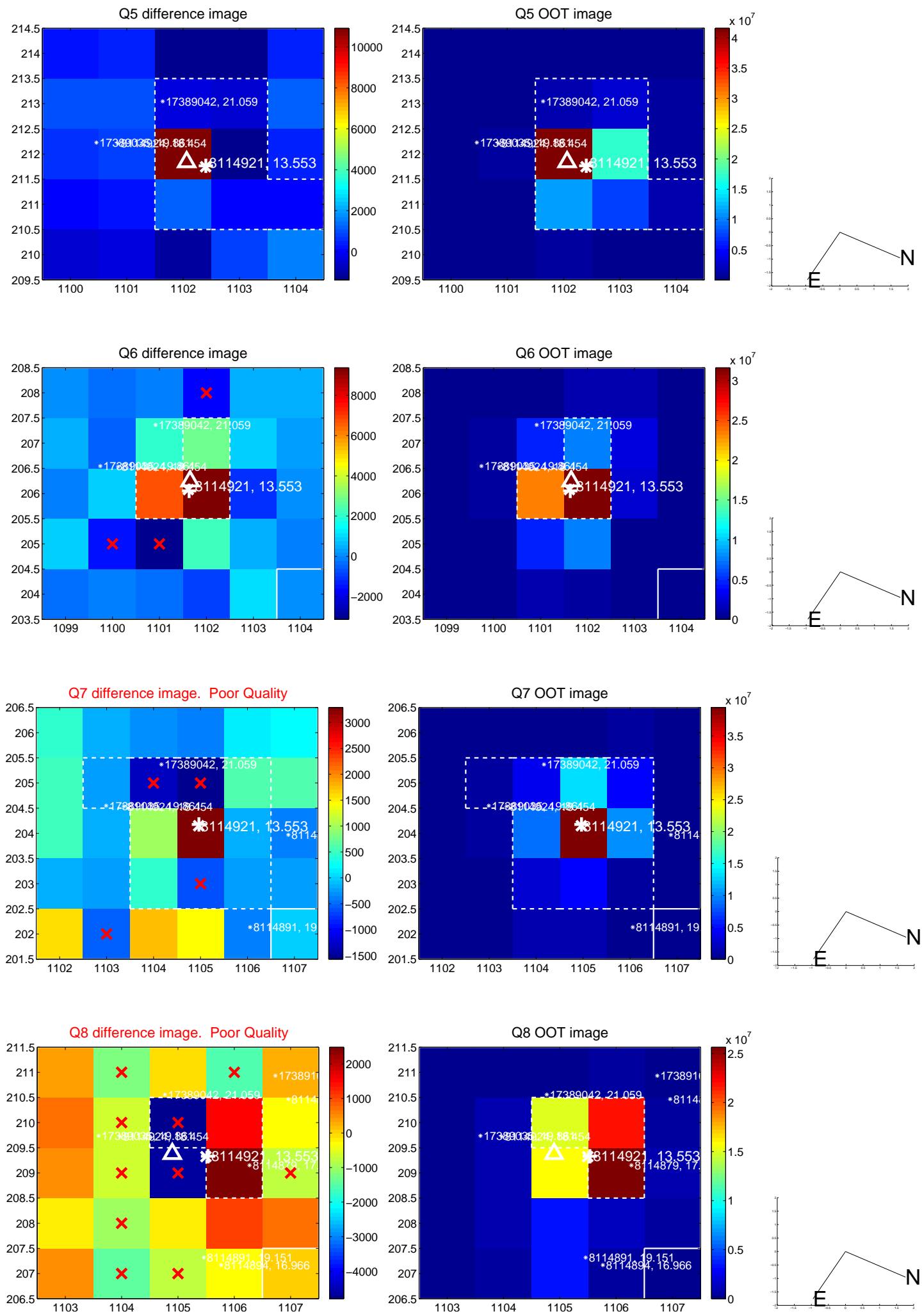


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

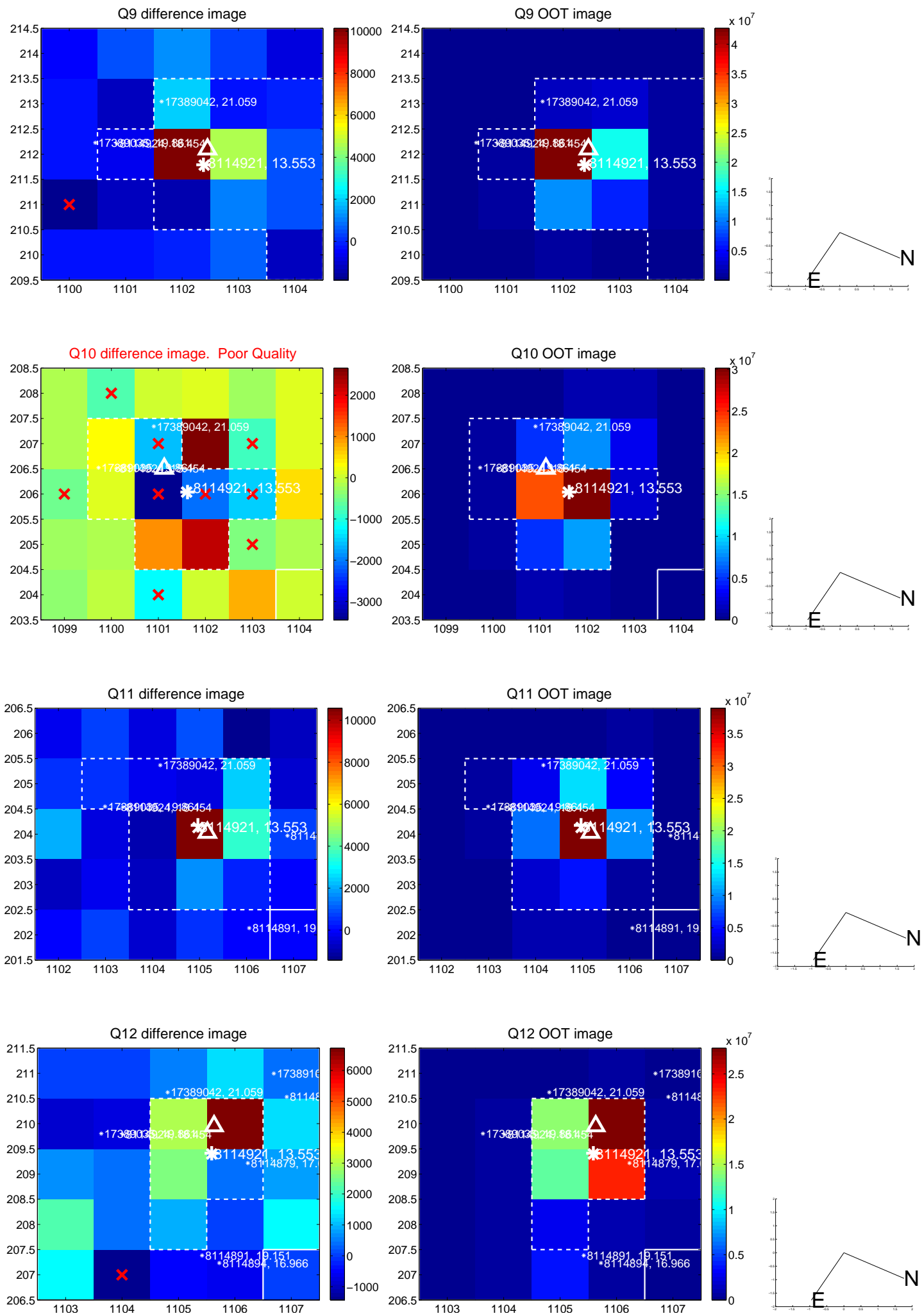
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



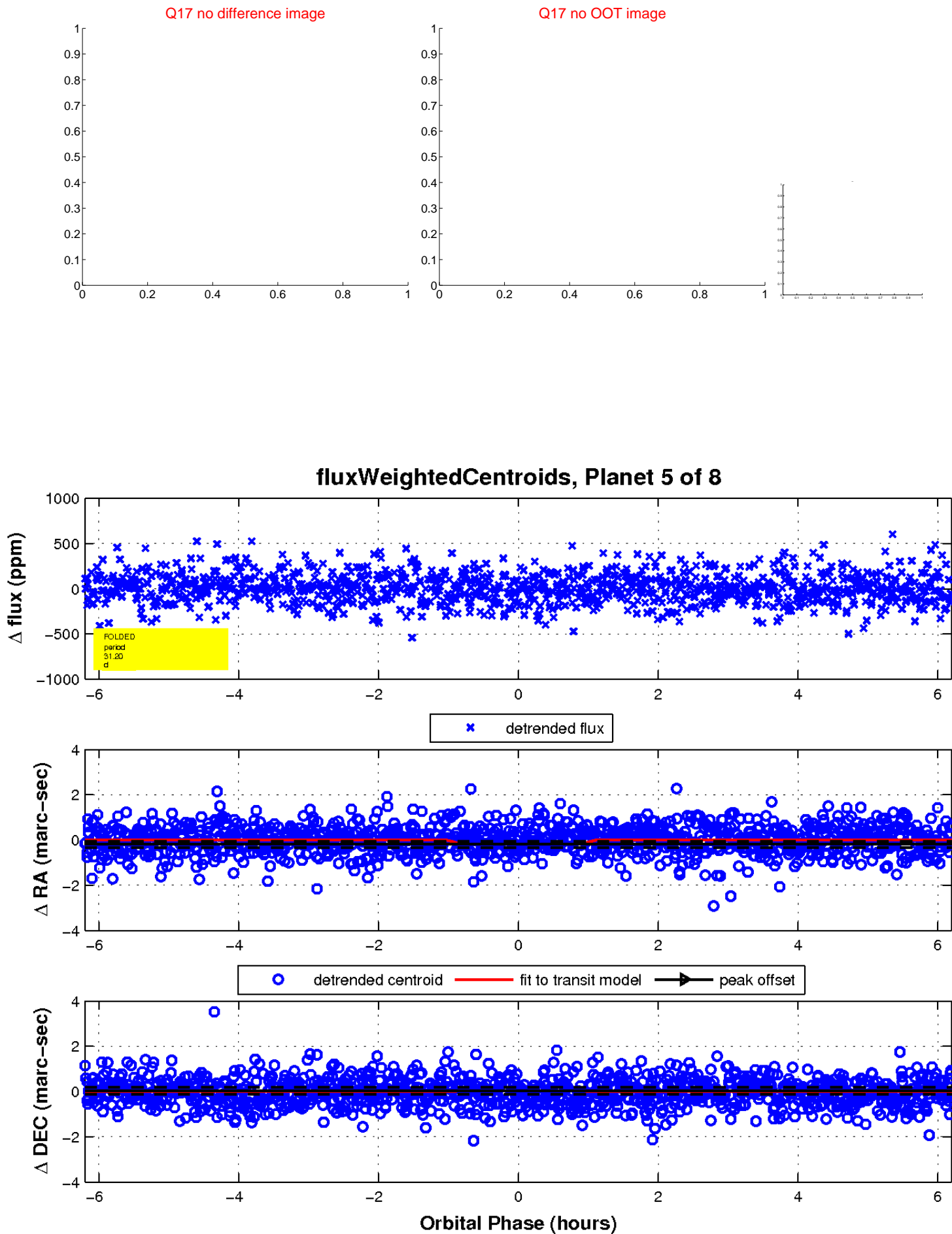
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

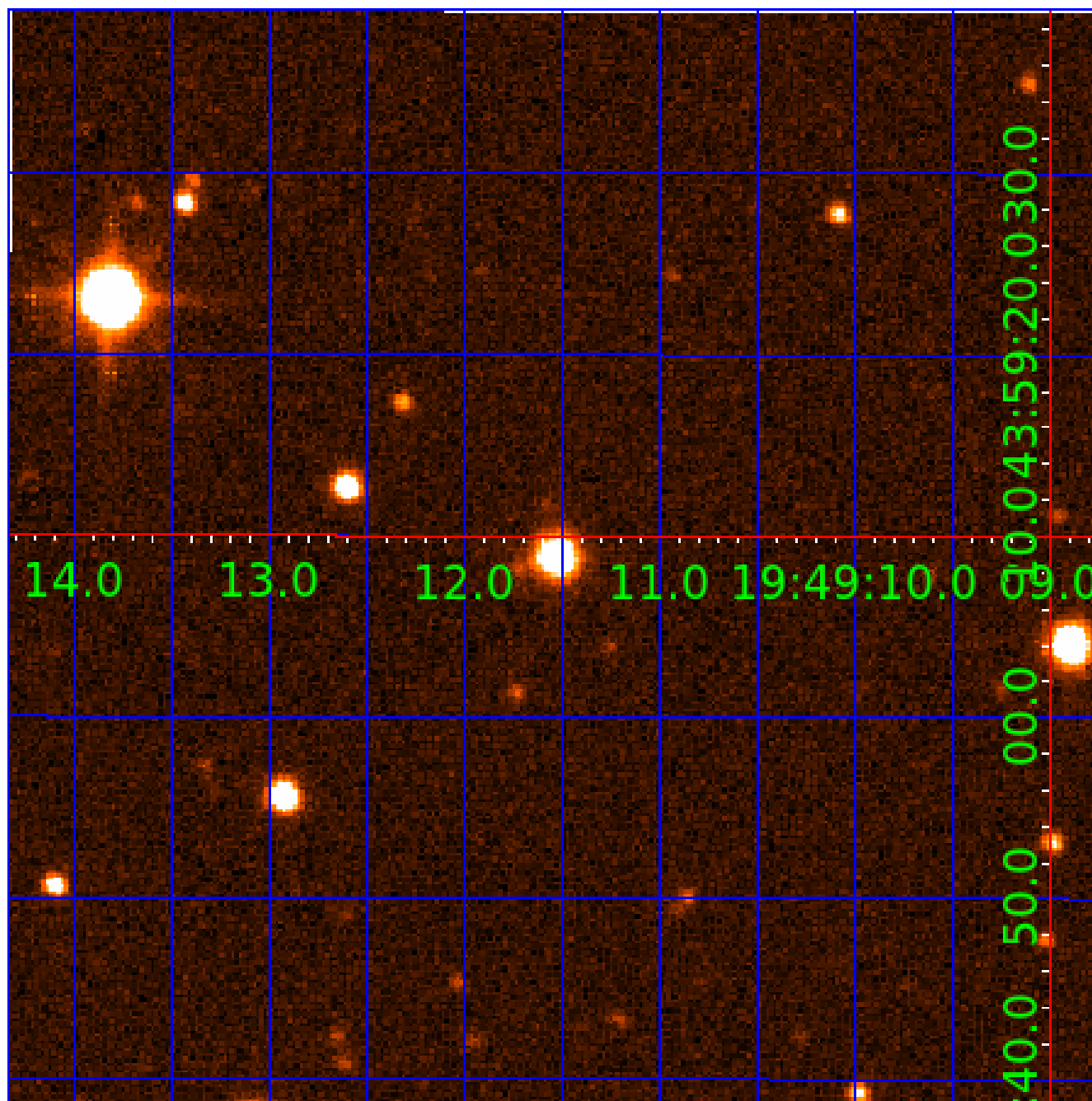


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008114921

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})
008114921-01	OBS	No	0.718480	132.256644	3.0	5.137	9.4	1.8	1.26	6539	0.22	9342.15
008114921-02	OBS	No	30.964159	144.817561	364.0	1.270	16.2	14.1	1.26	6539	2.89	61.83
008114921-03	OBS	No	23.438102	150.893227	311.5	1.544	12.1	11.8	1.26	6539	2.58	89.63
008114921-04	OBS	No	23.411955	154.920356	224.5	1.717	12.1	10.1	1.26	6539	2.05	89.76
008114921-05	OBS	No	31.197732	148.643626	198.1	2.068	11.8	8.6	1.26	6539	1.97	61.21
008114921-06	OBS	No	12.770403	140.235996	624.5	1.500	10.6	-1.0	1.26	6539	3.19	201.40
008114921-07	OBS	No	12.642128	135.009331	181.8	1.609	9.4	10.5	1.26	6539	1.94	204.13
008114921-08	OBS	No	24.956031	156.444549	267.6	3.901	9.7	10.5	1.26	6539	3.41	82.43

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008114921-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—CENT_FEW_DIFFS
008114921-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_MEAS
008114921-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
008114921-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
008114921-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—HALO_GHOST
008114921-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
008114921-07	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS—HALO_GHOST
008114921-08	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_MEAS—HALO_GHOST

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

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

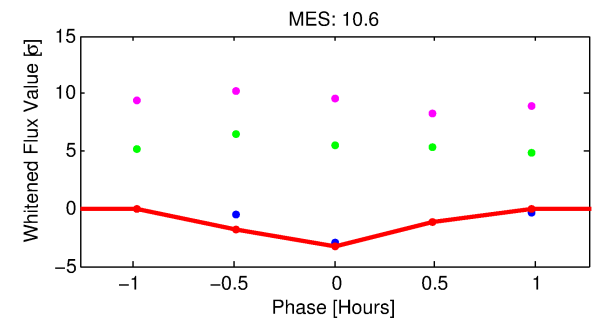
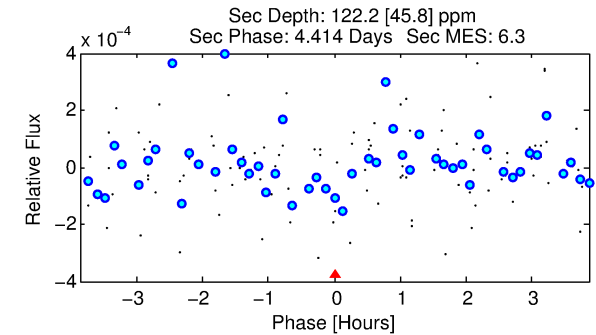
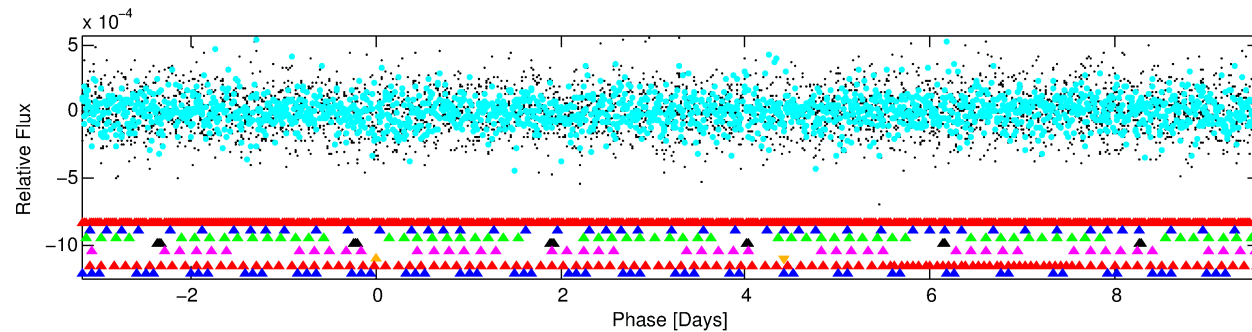
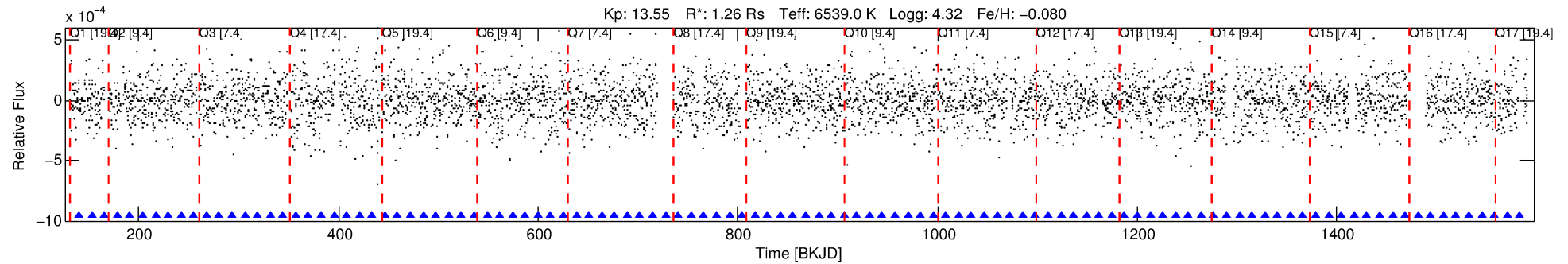
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008114921-06

No Significant Match Found

DV One-Page Summary

KIC: 8114921 Candidate: 6 of 8 Period: 12.770 d



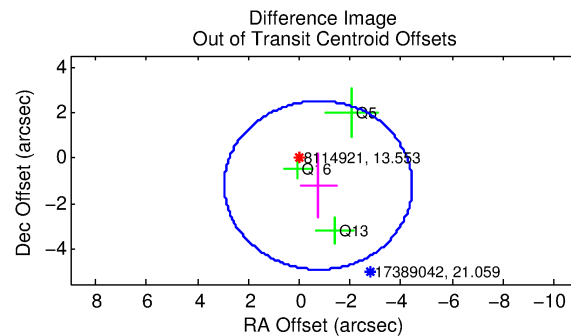
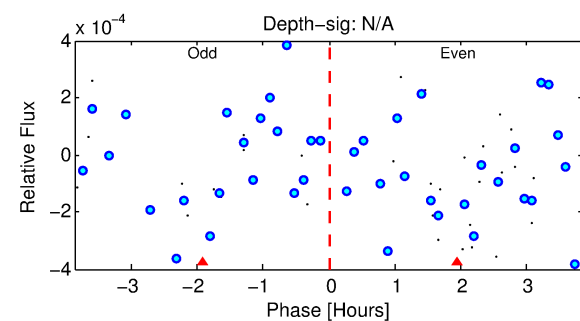
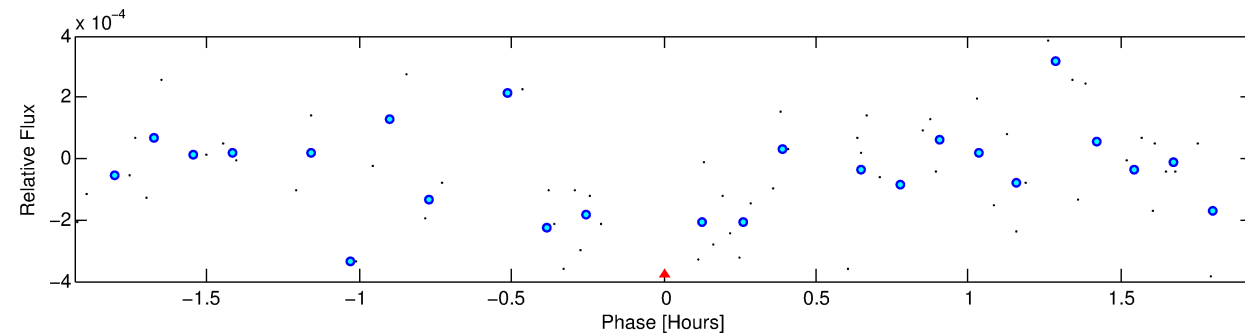
TPS TCE Results:

Period = 12.77040 d
Epoch = 140.2360 BKJD

DV fit results are unavailable

DV Diagnostic Results:

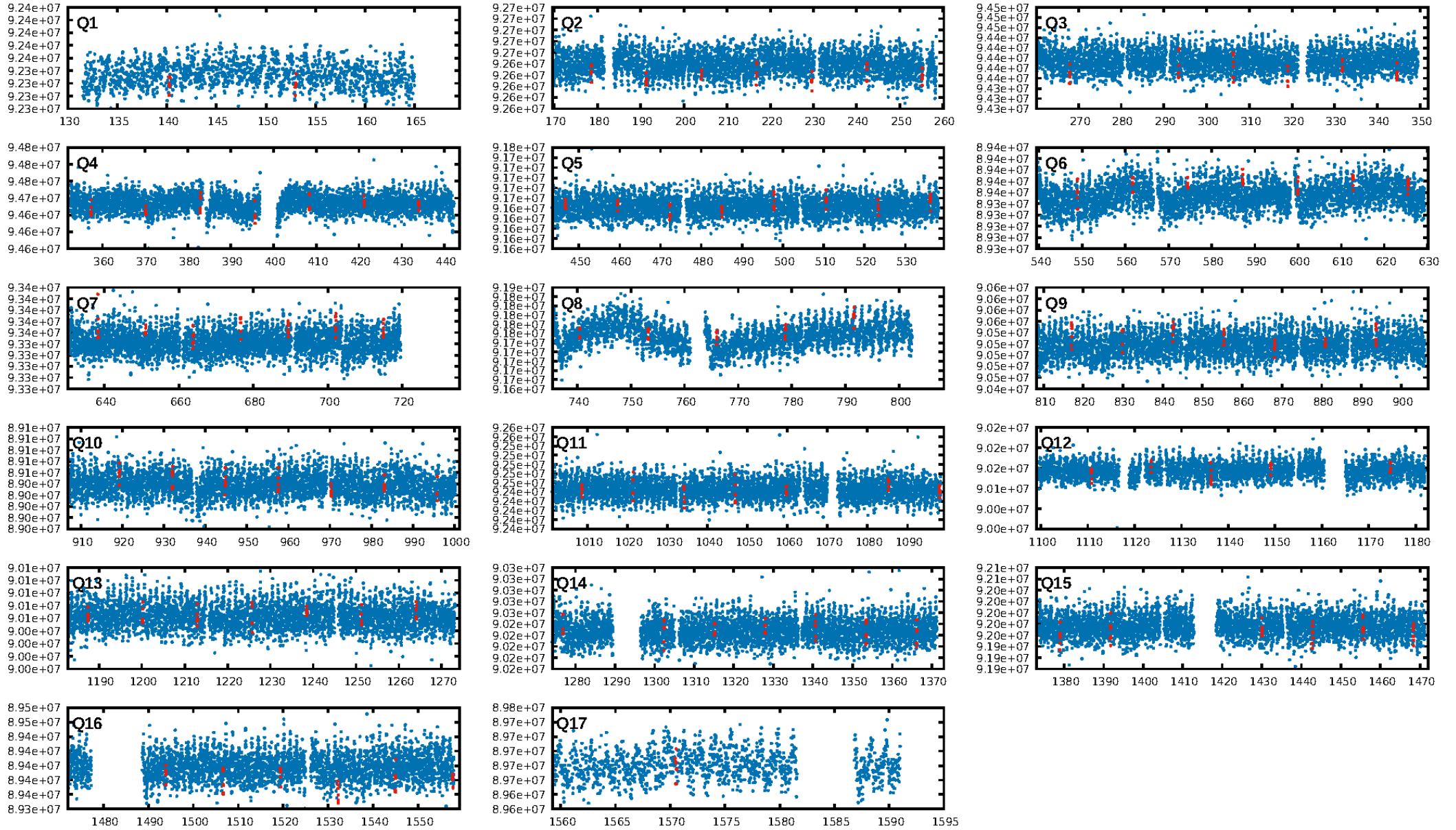
ShortPeriod-sig: 83.8% [1.40 σ]
LongPeriod-sig: 100.0% [112.01 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.13e-09
RollingBand-fgt: 1.00 [14/14]
GhostDiagnostic-chr: 0.4428
Centroid-sig: 70.2%
Centroid-so: 0.380 arcsec [0.63 σ]
OotOffset-rm: 1.396 arcsec [1.13 σ]
KicOffset-rm: 1.467 arcsec [1.21 σ]
OotOffset-st: 0/0/1/2 [3]
KicOffset-st: 0/0/1/2 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 0.20 [2/10]



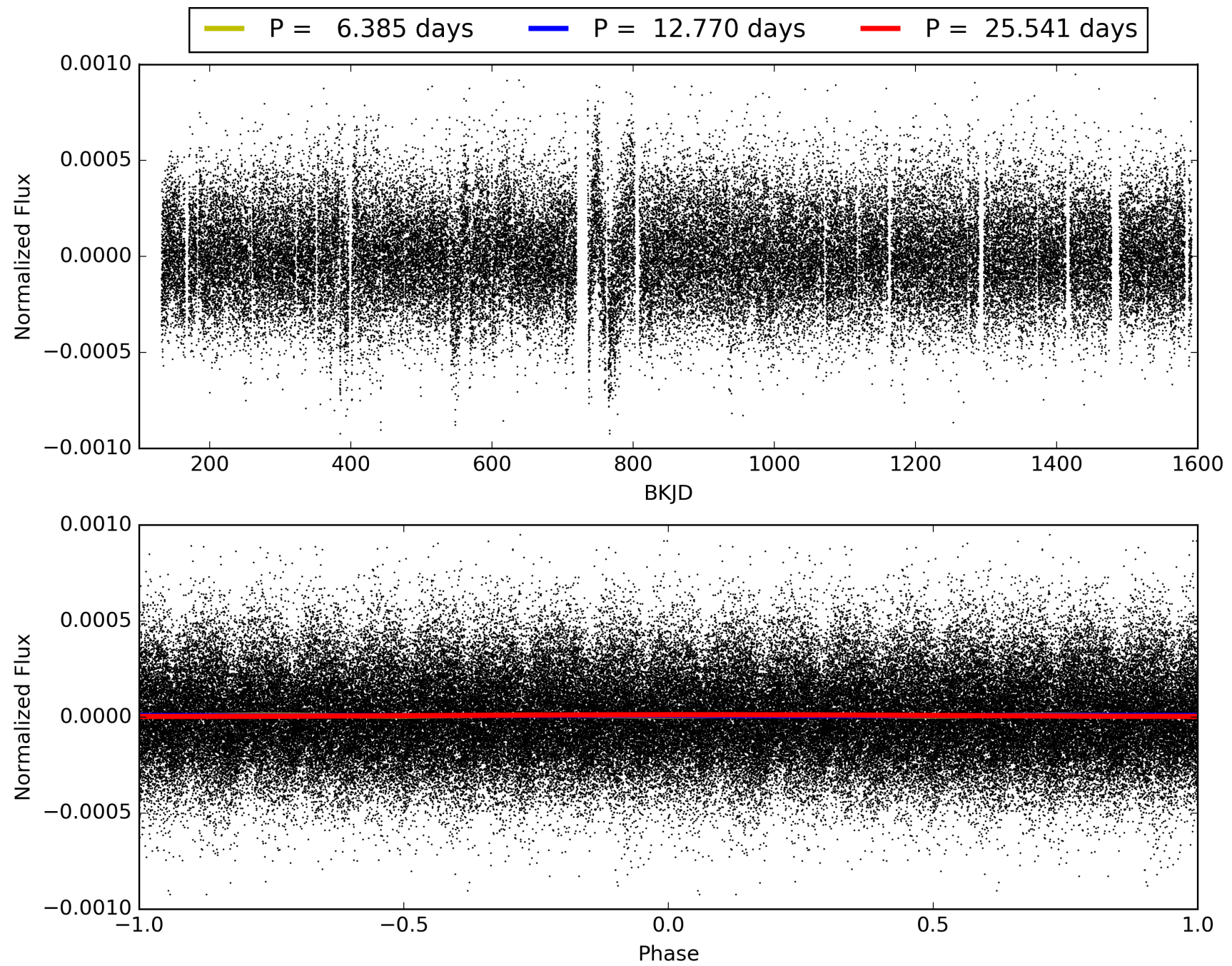
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 05:40:33 Z

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

TCE 008114921-06, PDC Light Curves

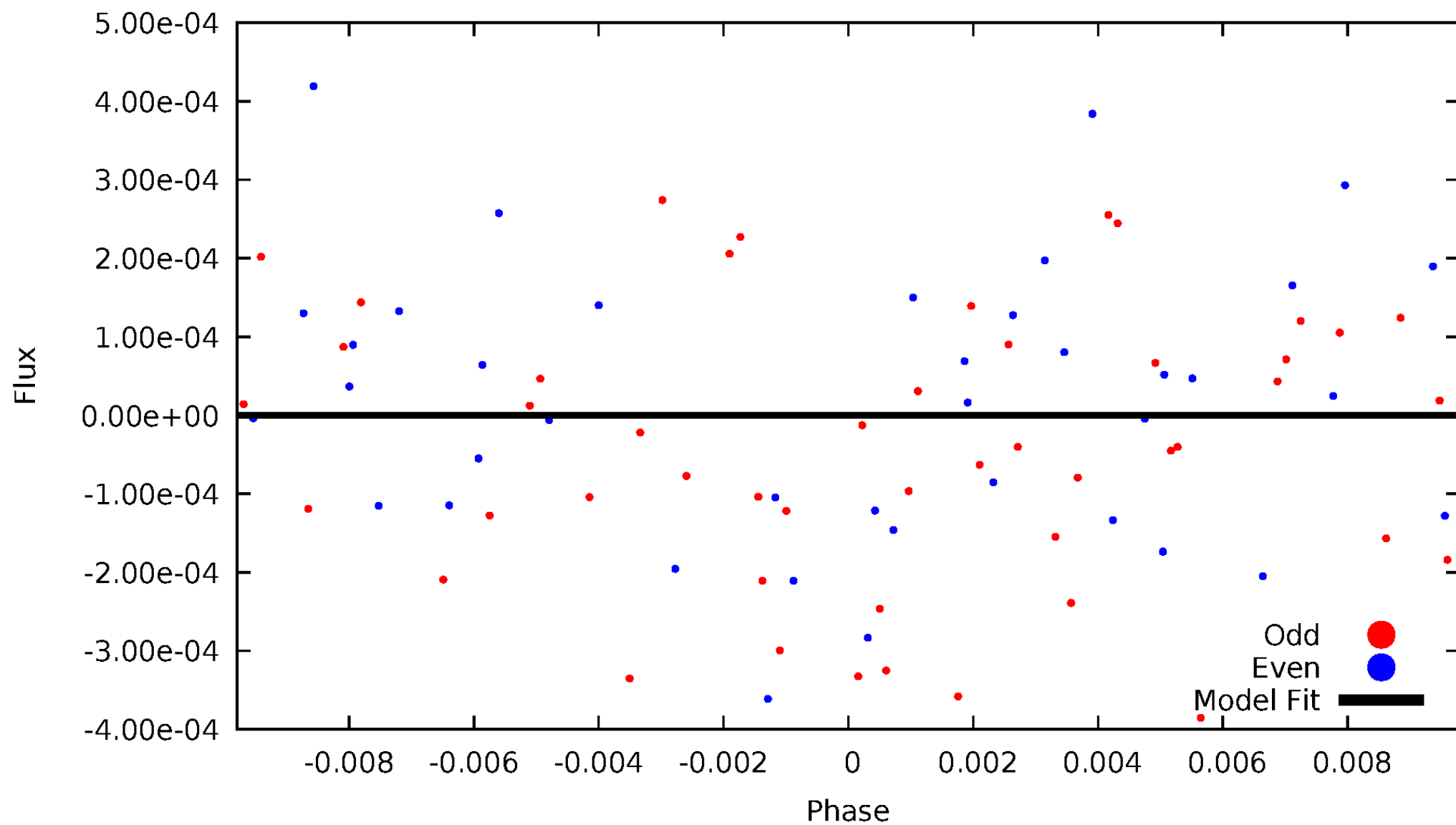


TCE 008114921-06



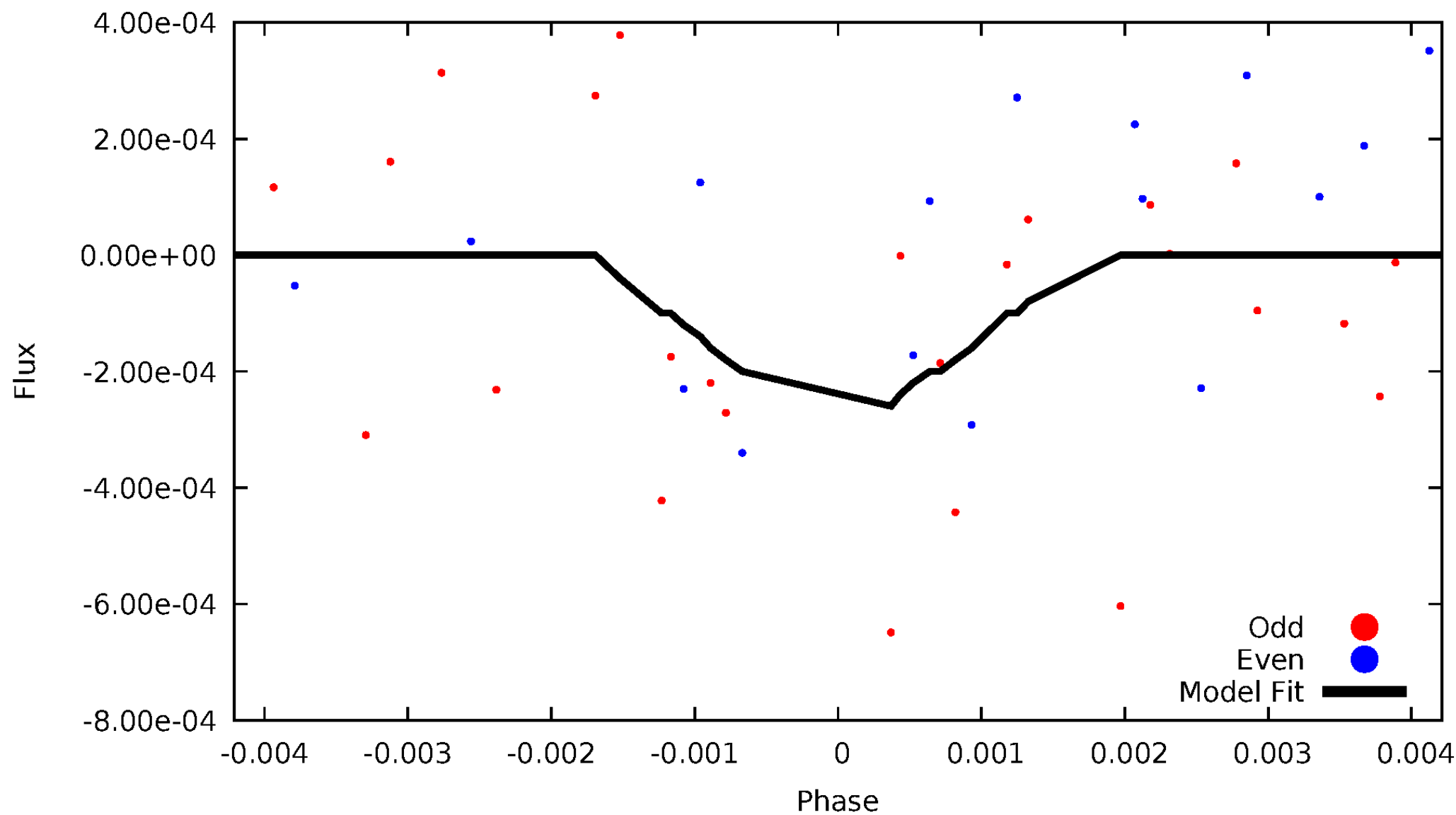
DV Odd/Even

TCE 008114921-06



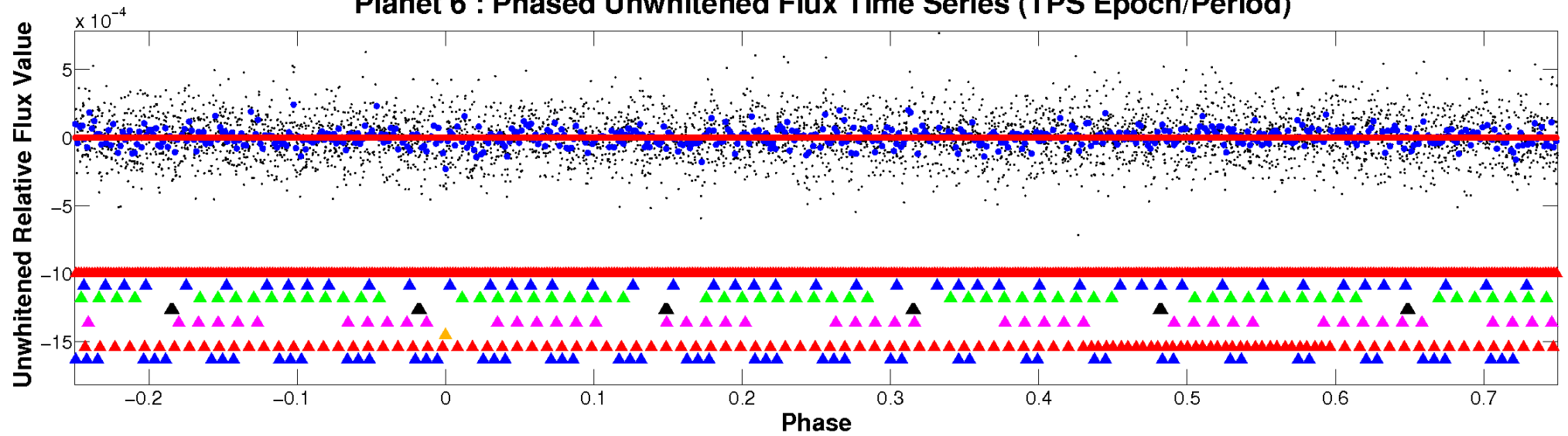
ALT Odd/Even

TCE 008114921-06

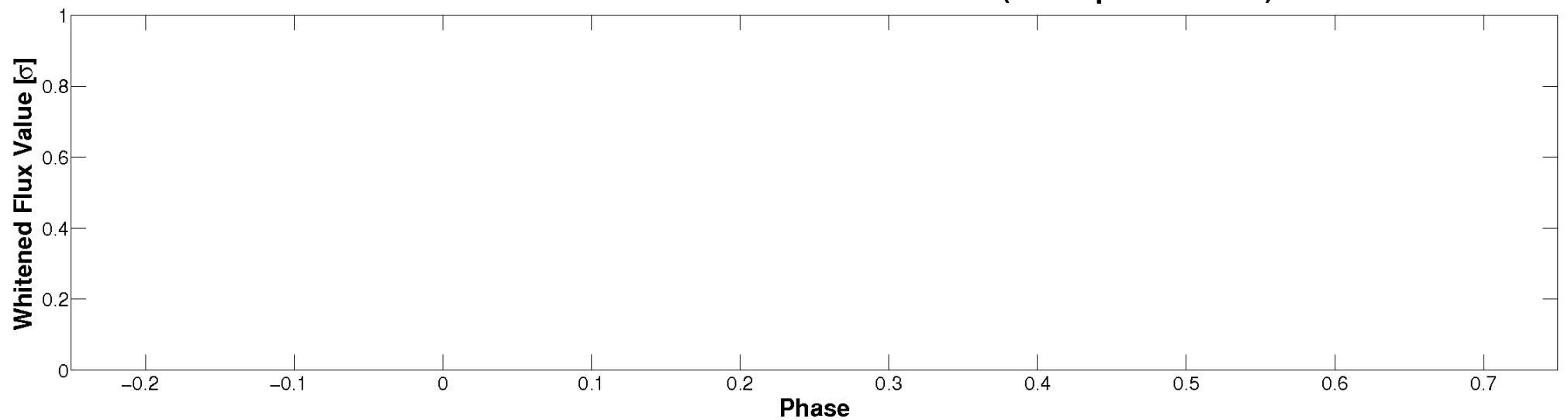


Non-Whitened Vs. Whitened Light Curve

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

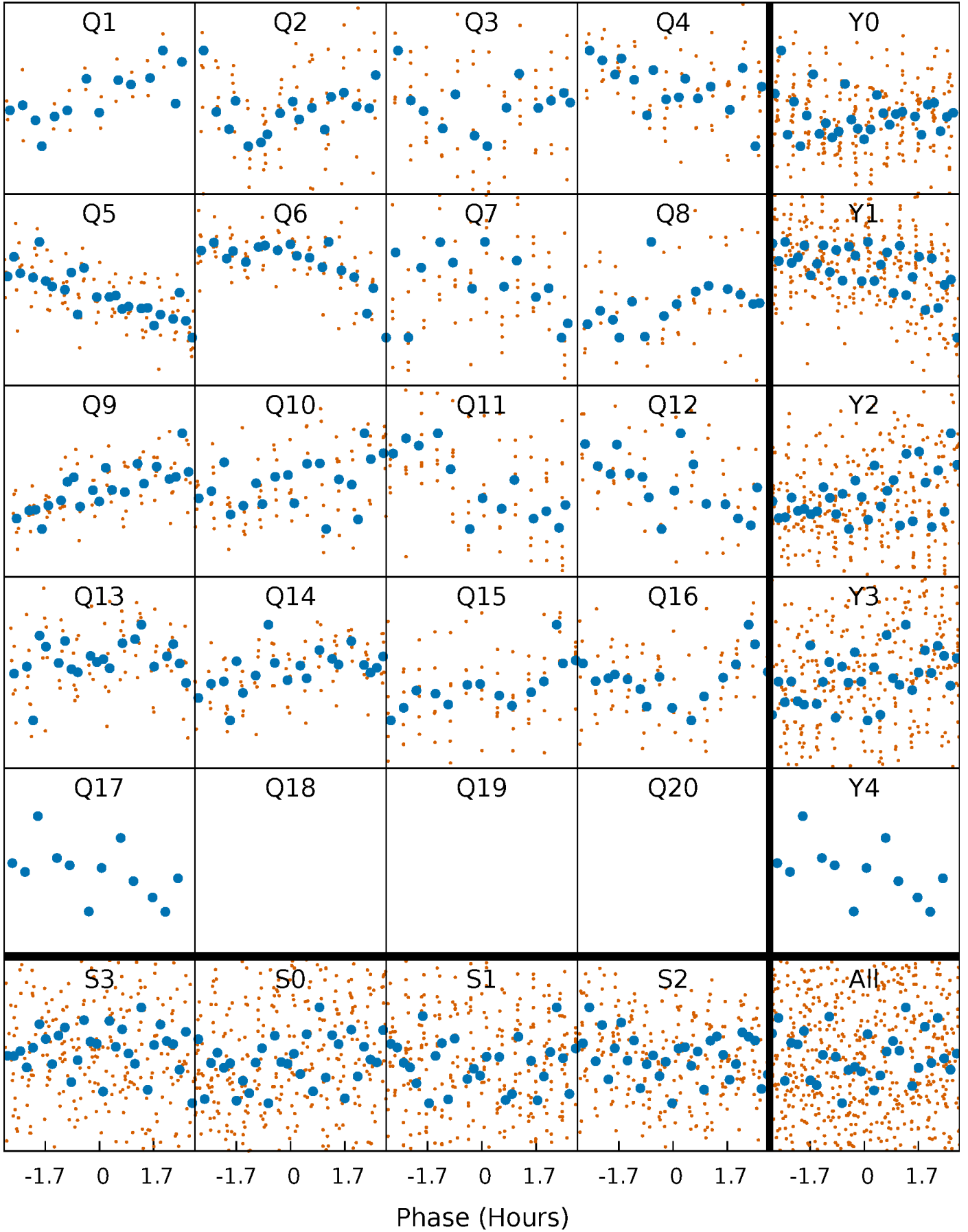


Planet 6 : Phased Whitened Flux Time Series (TPS Epoch/Period)



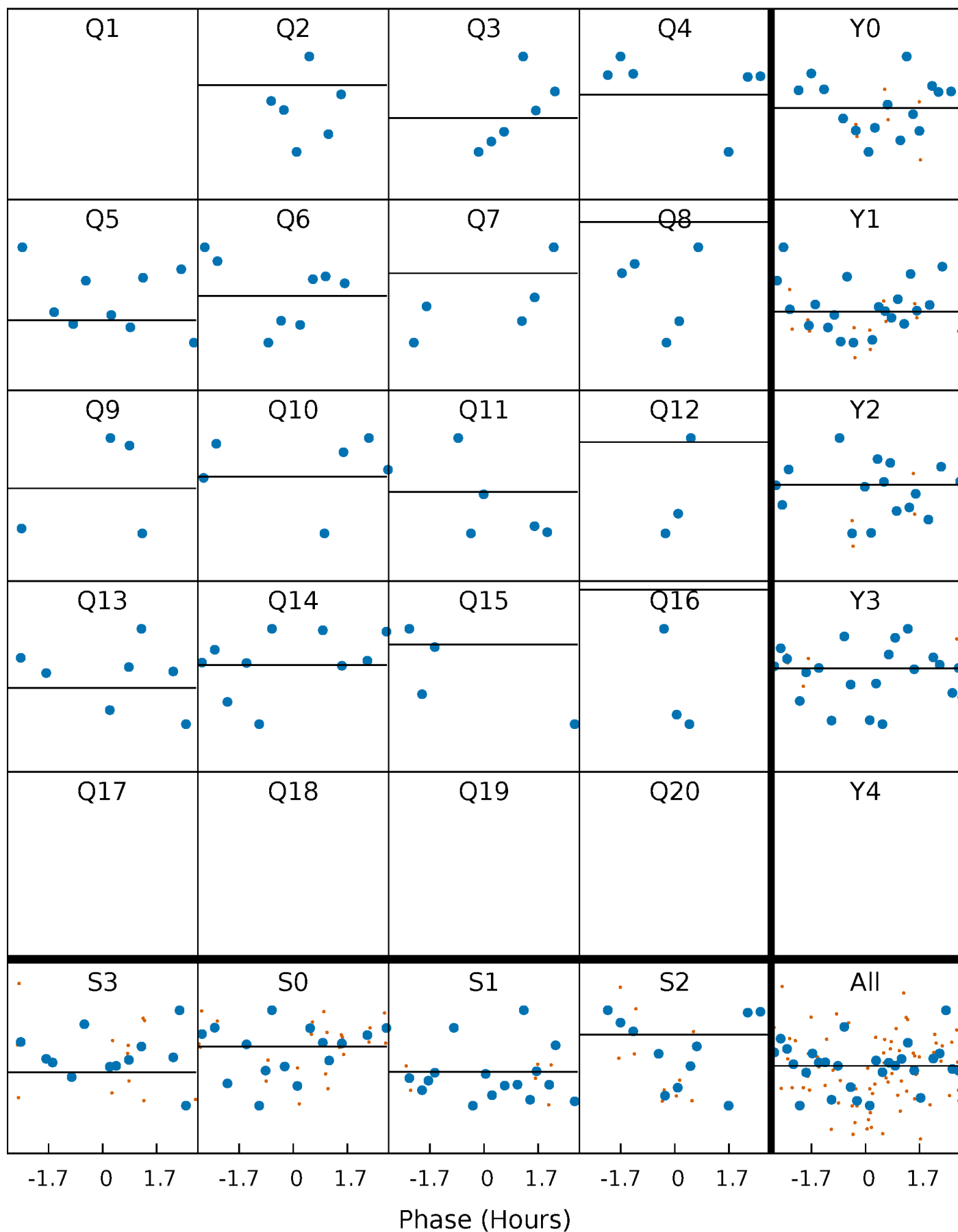
PDC Quarter-Phased Transit Curves

TCE 008114921-06 P= 12.770403 Days $T_0=140.235996$ (BKJD)



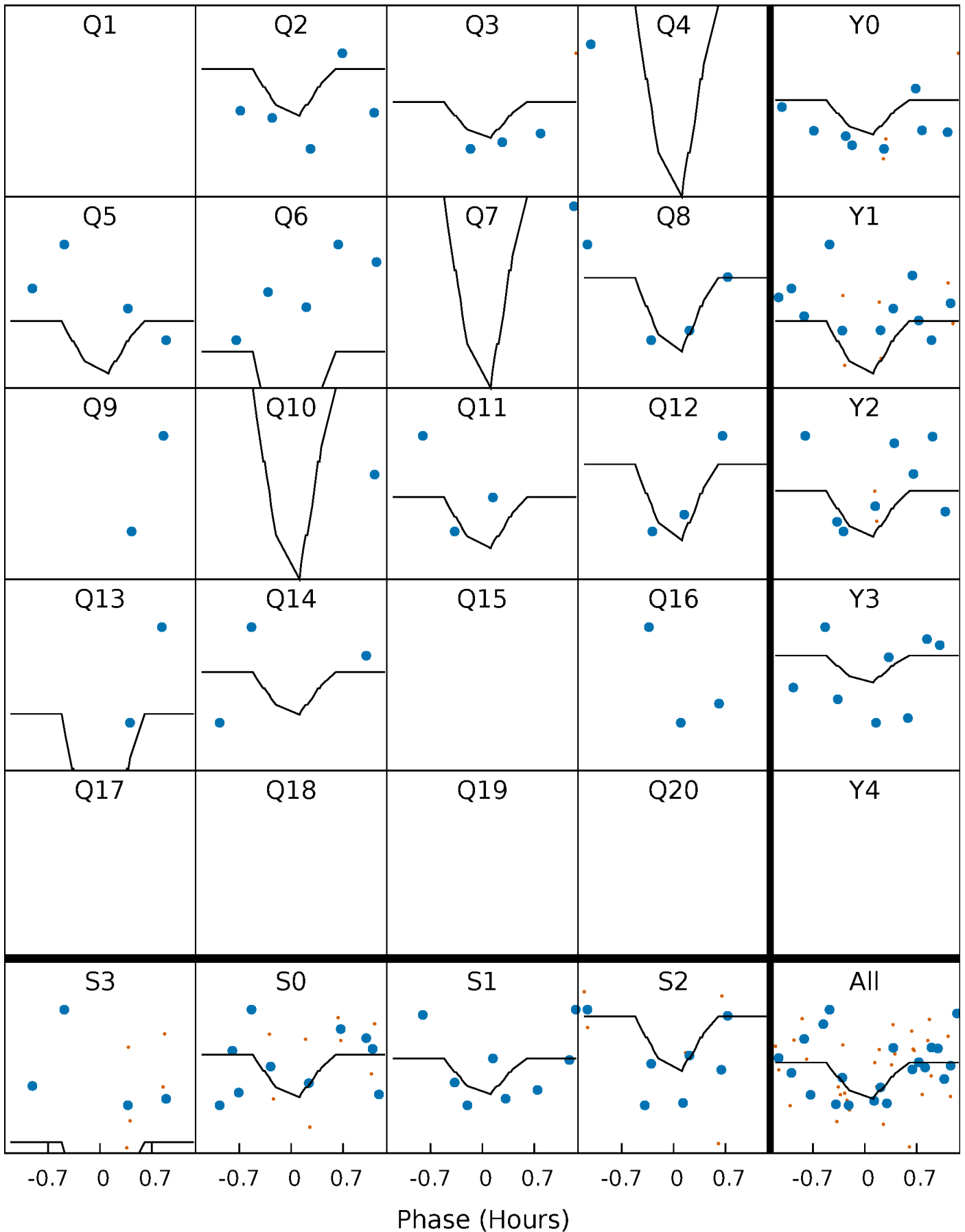
DV Quarter-Phased Transit Curves

TCE 008114921-06 P= 12.770403 Days $T_0=140.235996$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

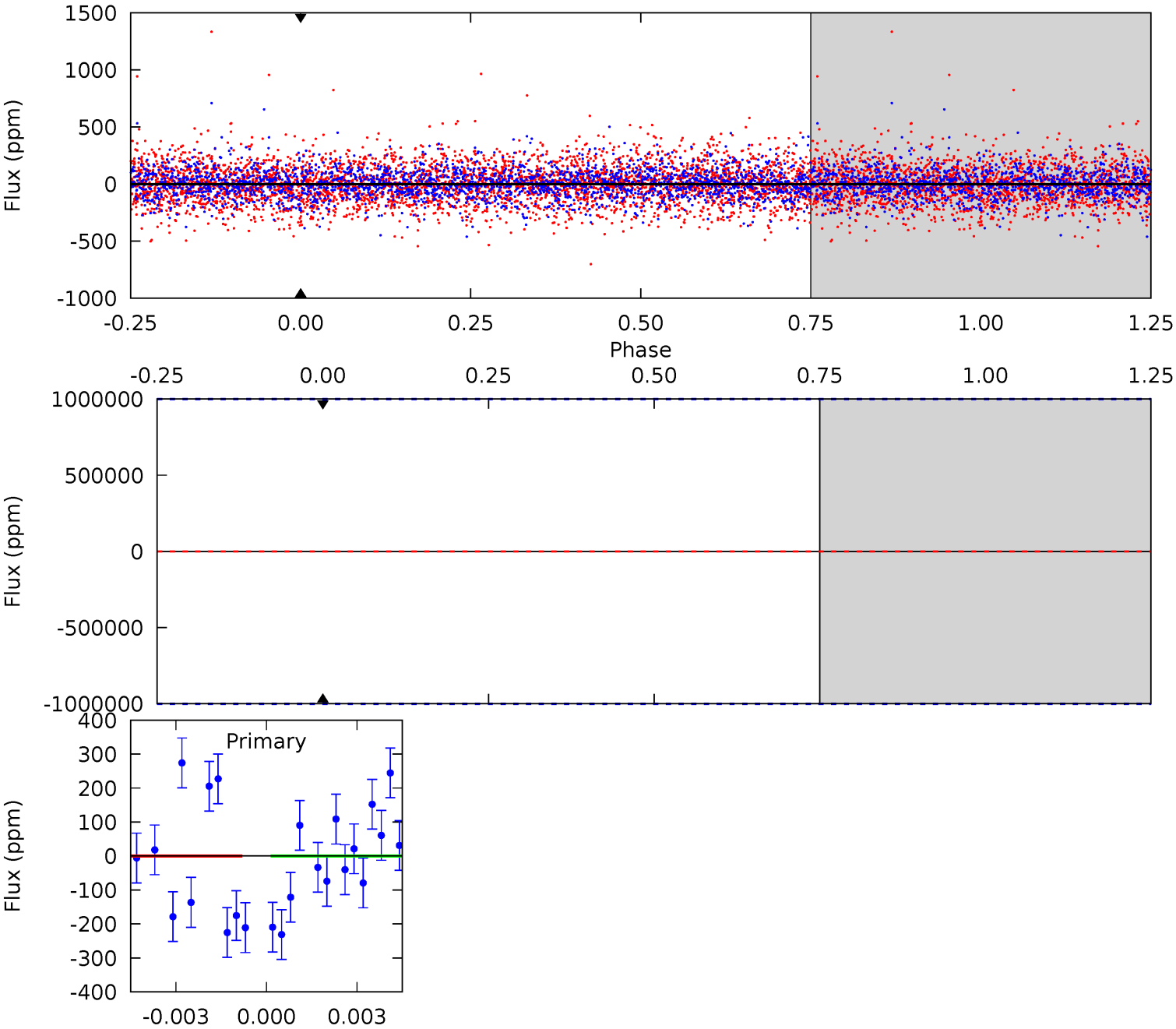
TCE 008114921-06 P= 12.770403 Days $T_0=140.233294$ (BKJD)



DV Model-Shift Uniqueness Test

008114921-06, P = 12.770403 Days, E = 127.465593 Days

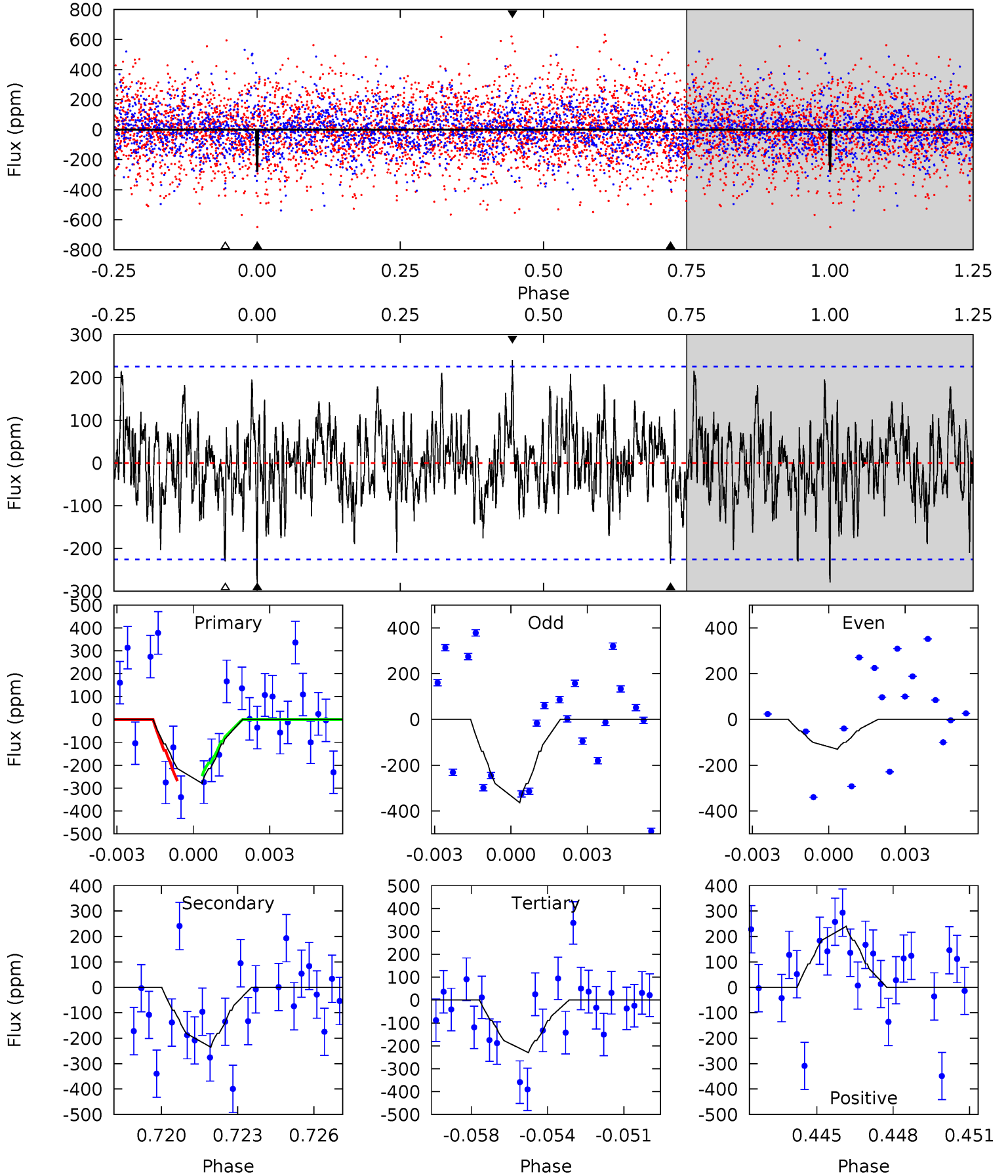
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

008114921-06, $P = 12.770403$ Days, $E = 127.462891$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.49	5.47	5.34	5.58	5.24	2.95	1.64	1.15	0.91	0.13	-0.11	2.71	1.07	0.46	0.25



Stellar Parameters For KIC 008114921

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6539^{+155}_{-214}	$4.318^{+0.087}_{-0.203}$	$-0.080^{+0.250}_{-0.300}$	$1.265^{+0.410}_{-0.176}$	$1.217^{+0.192}_{-0.157}$	$0.847^{+0.338}_{-0.463}$
	+2%/-3%	+2%/-5%	+312%/-375%	+32%/-14%	+16%/-13%	+40%/-55%
Source	PHO1	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 008114921-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$11.78^{+10.84}_{-8.52}$	1363^{+97}_{-77}	-4939^{+36506}_{-18367}	$-88.665^{+14129.182}_{-8028.504}$
Alt.	-235 ± 43	$10.31^{+10.83}_{-7.17}$	1358^{+108}_{-76}	3511^{+1817}_{-703}	16^{+142}_{-12}

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

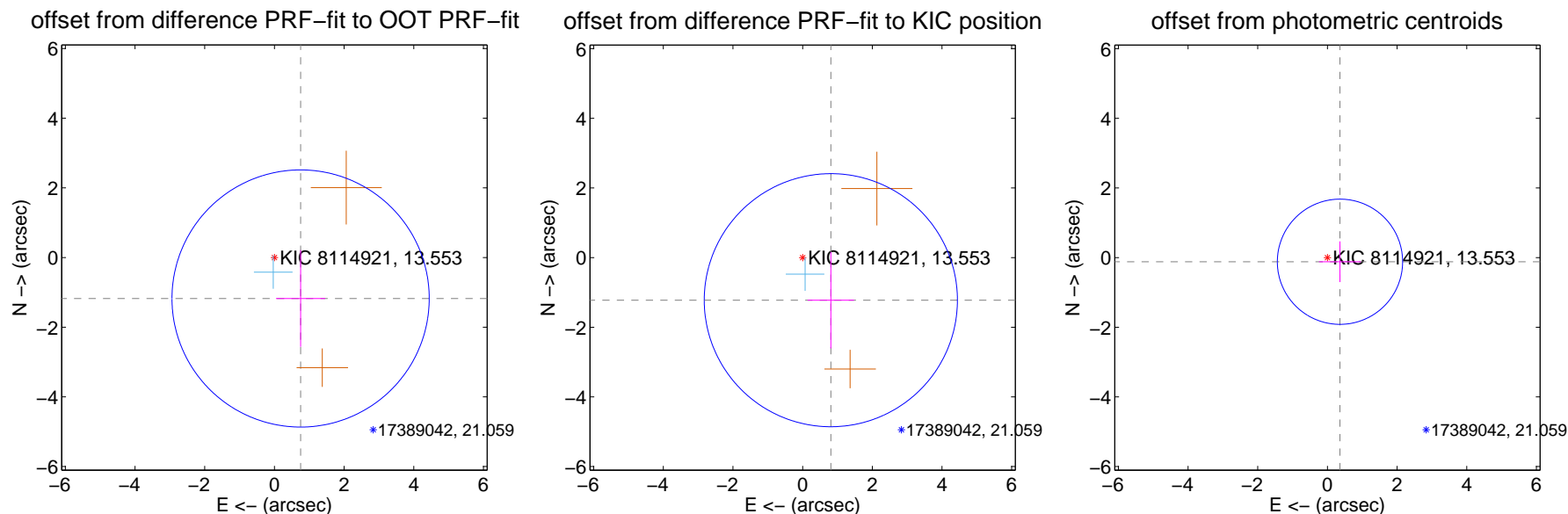
DV Centroid Data

Supplemental centroid analysis for 008114921-06. Kepler magnitude: 13.55. Transit SNR -1.00

There are 1 quarters with good PRF difference image offsets

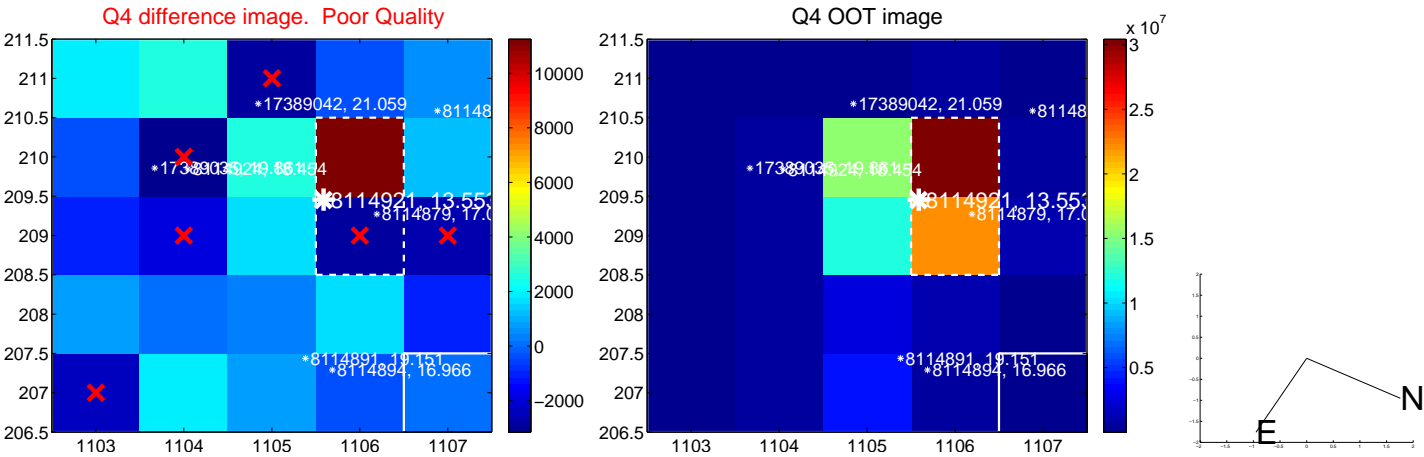
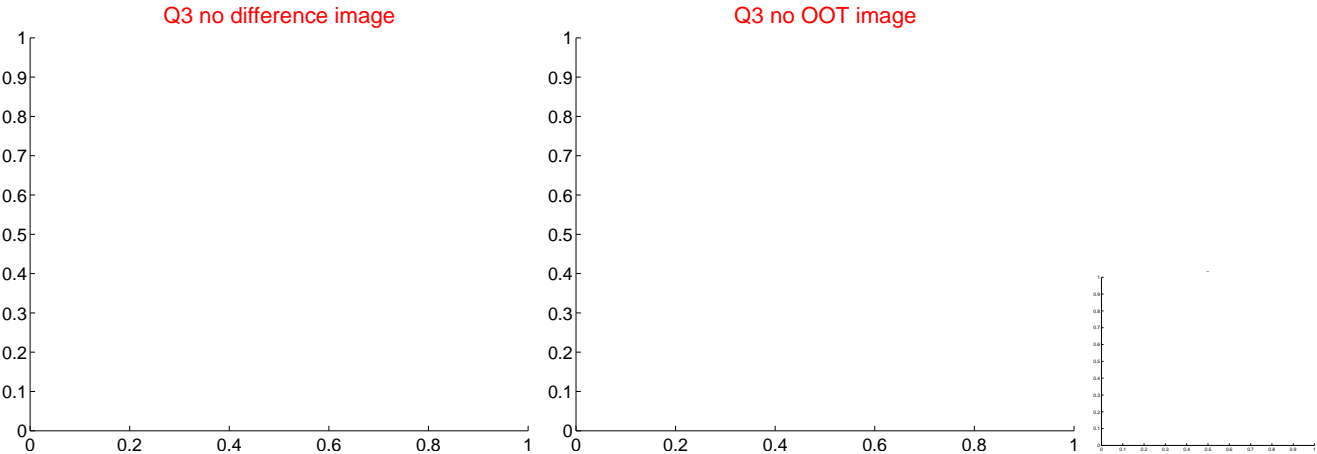
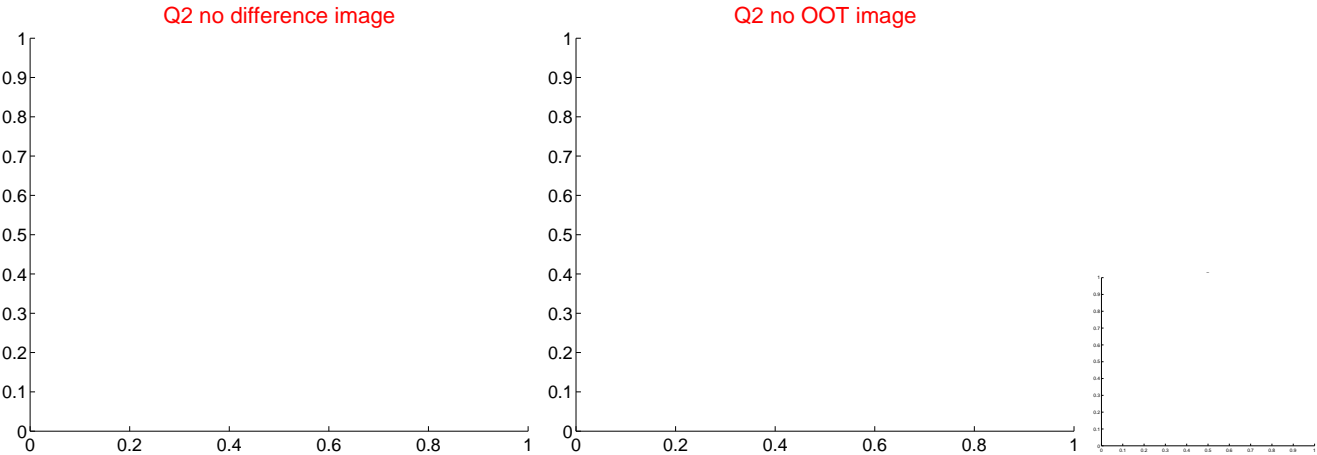
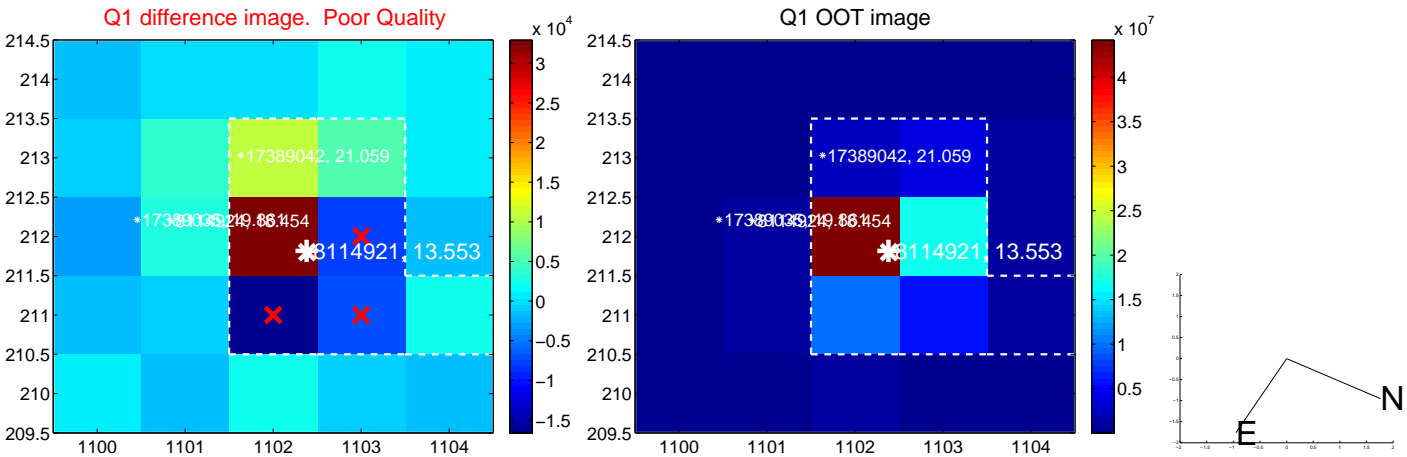
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.396 ± 1.231	1.13	-0.752 ± 0.707	-1.176 ± 1.389
PRF-fit source offset from KIC position	1.467 ± 1.212	1.21	-0.809 ± 0.666	-1.224 ± 1.384
photometric centroid source offset	0.38 ± 0.60	0.63	-0.36 ± 0.60	-0.12 ± 0.58

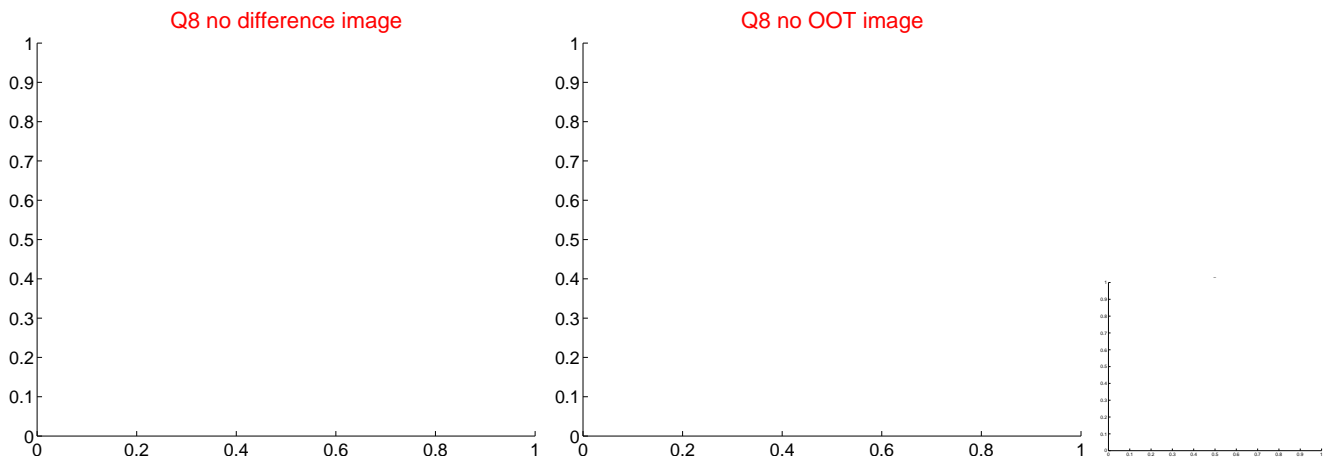
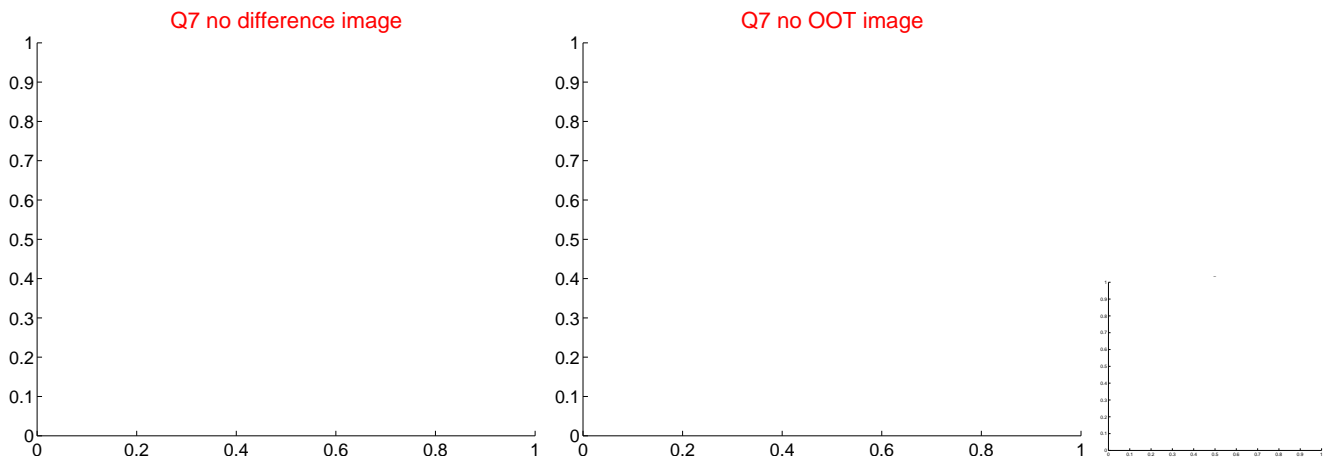
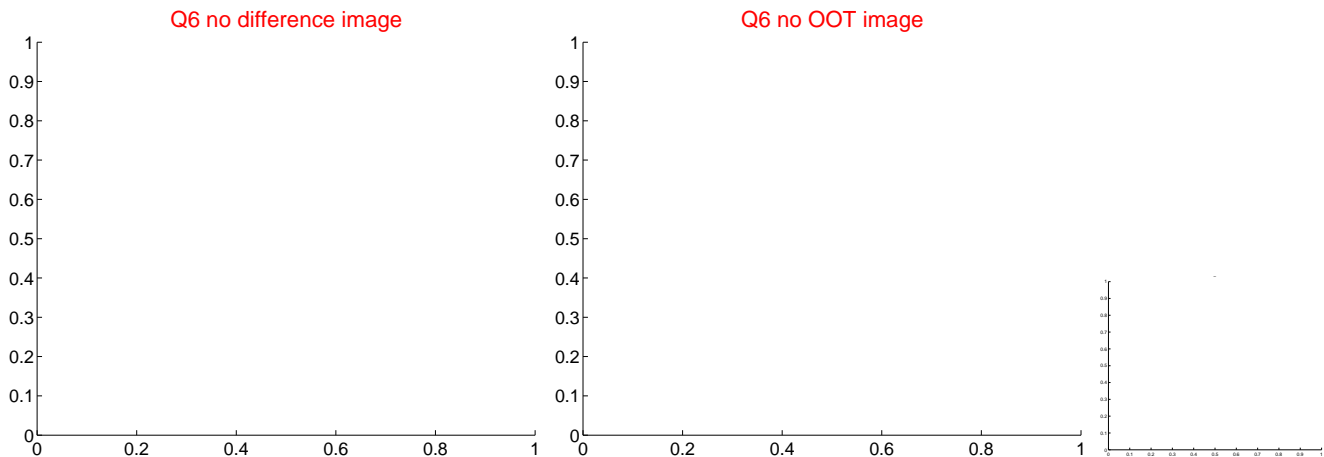
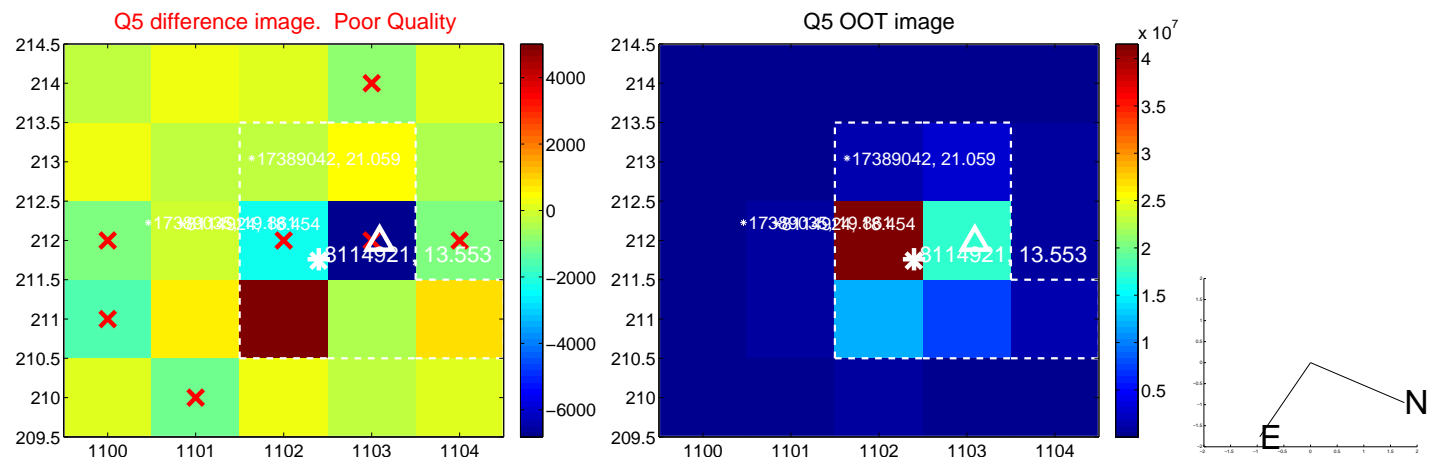


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

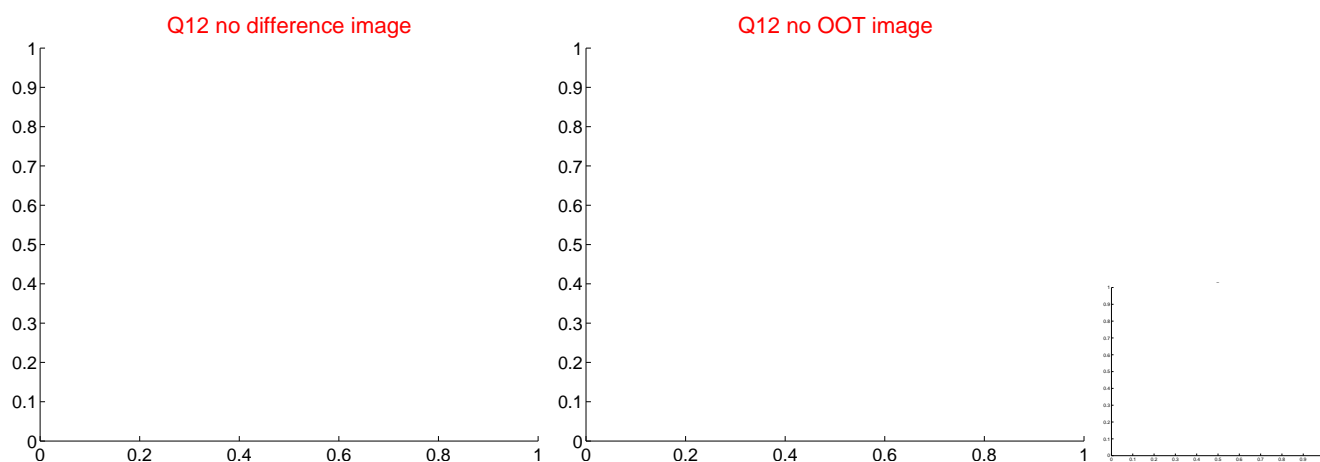
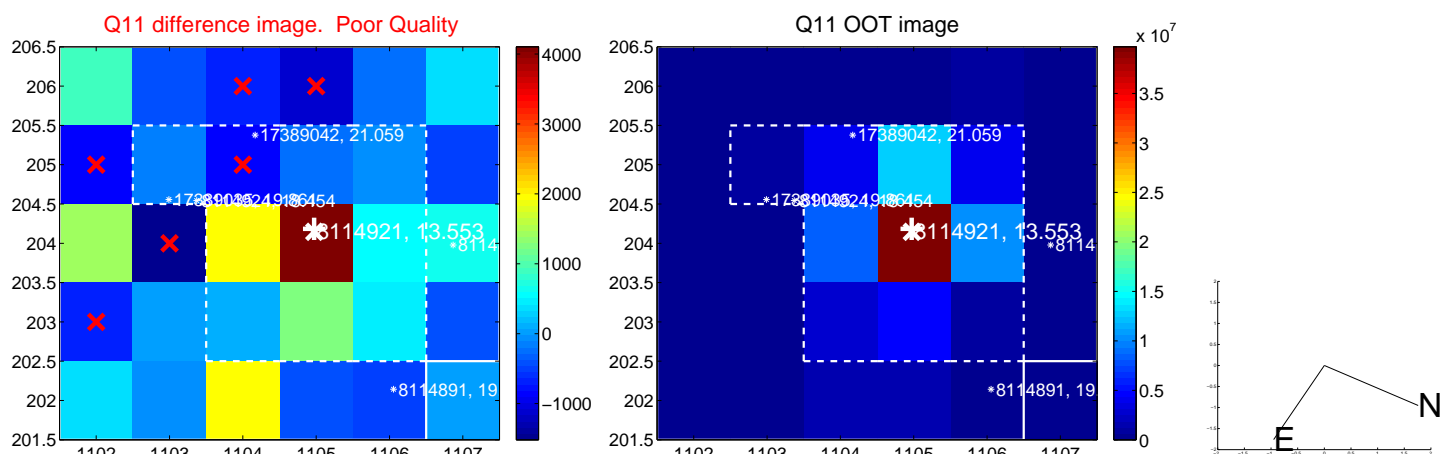
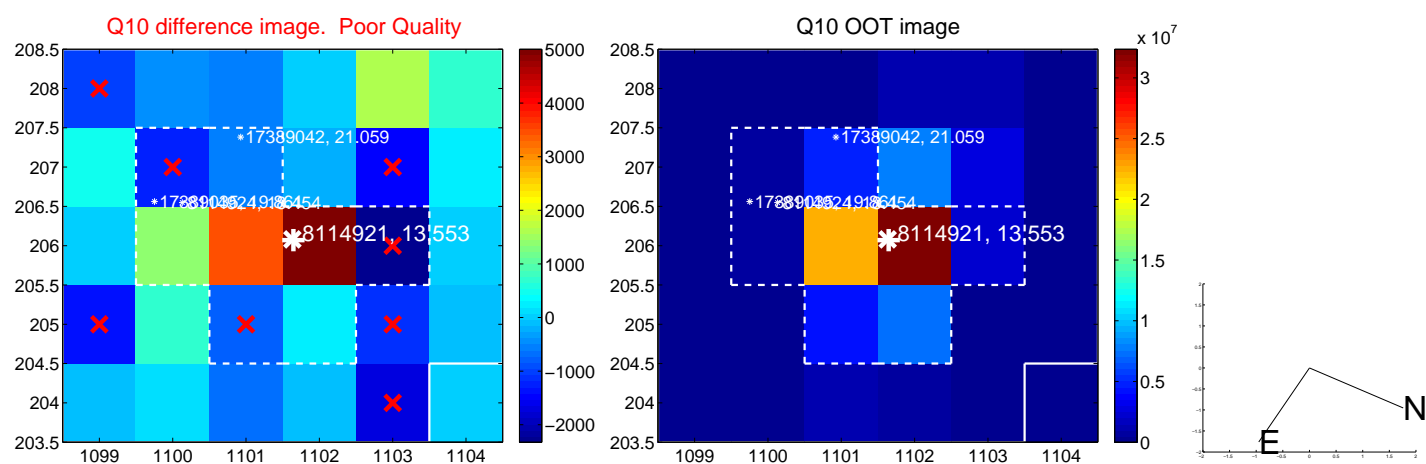
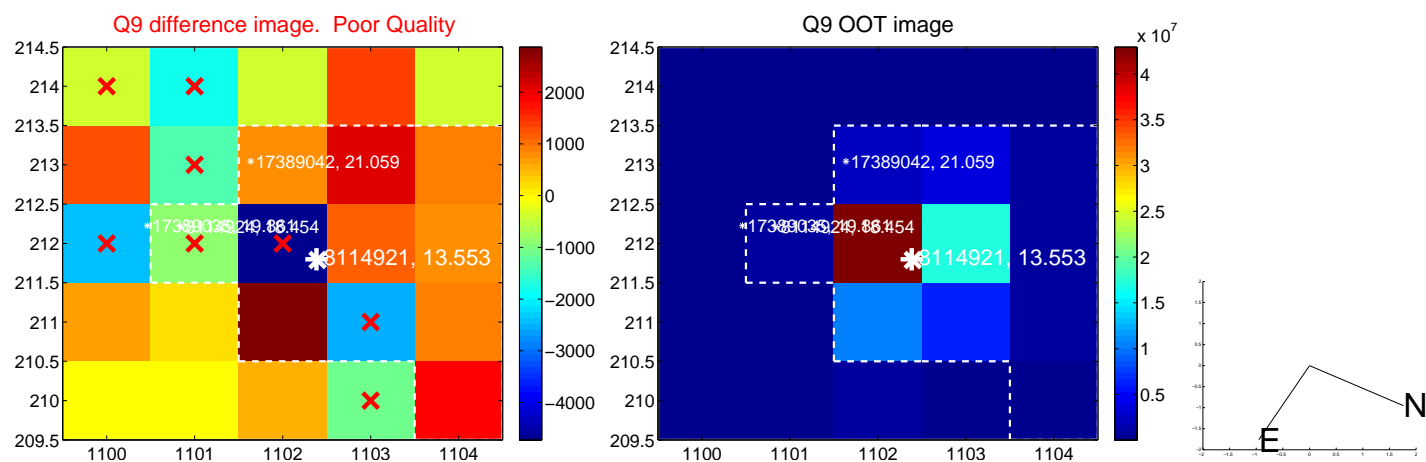
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



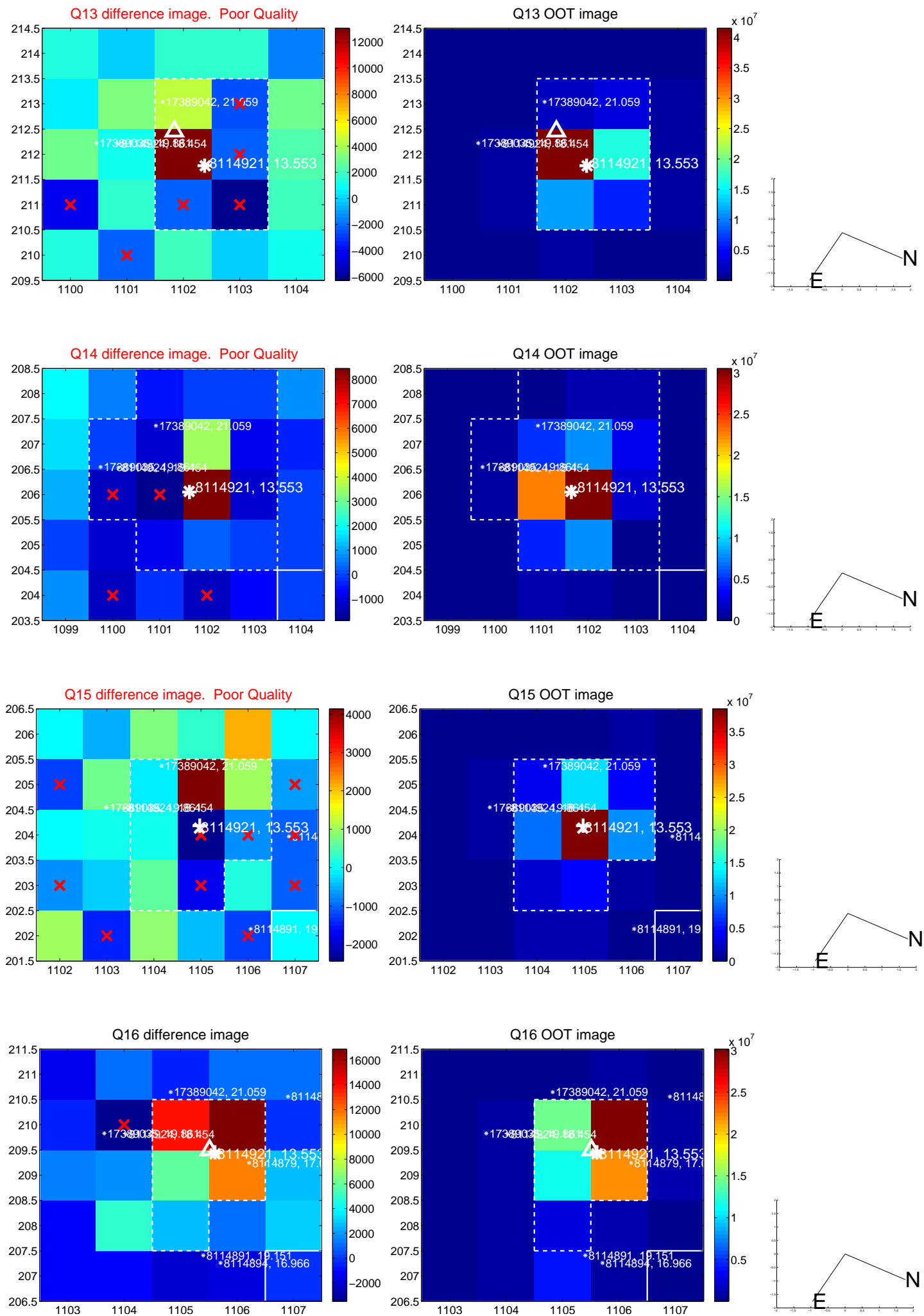
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



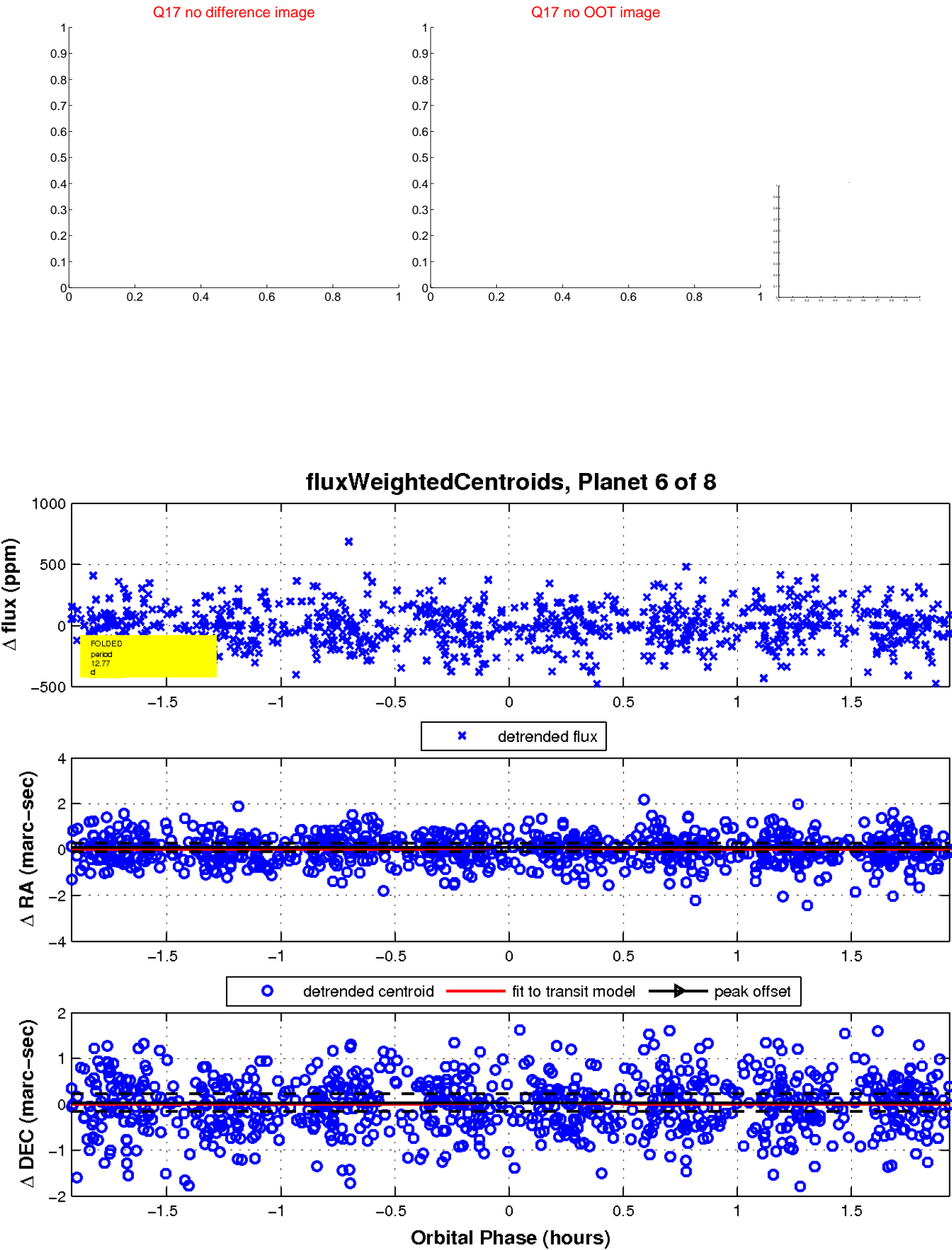
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

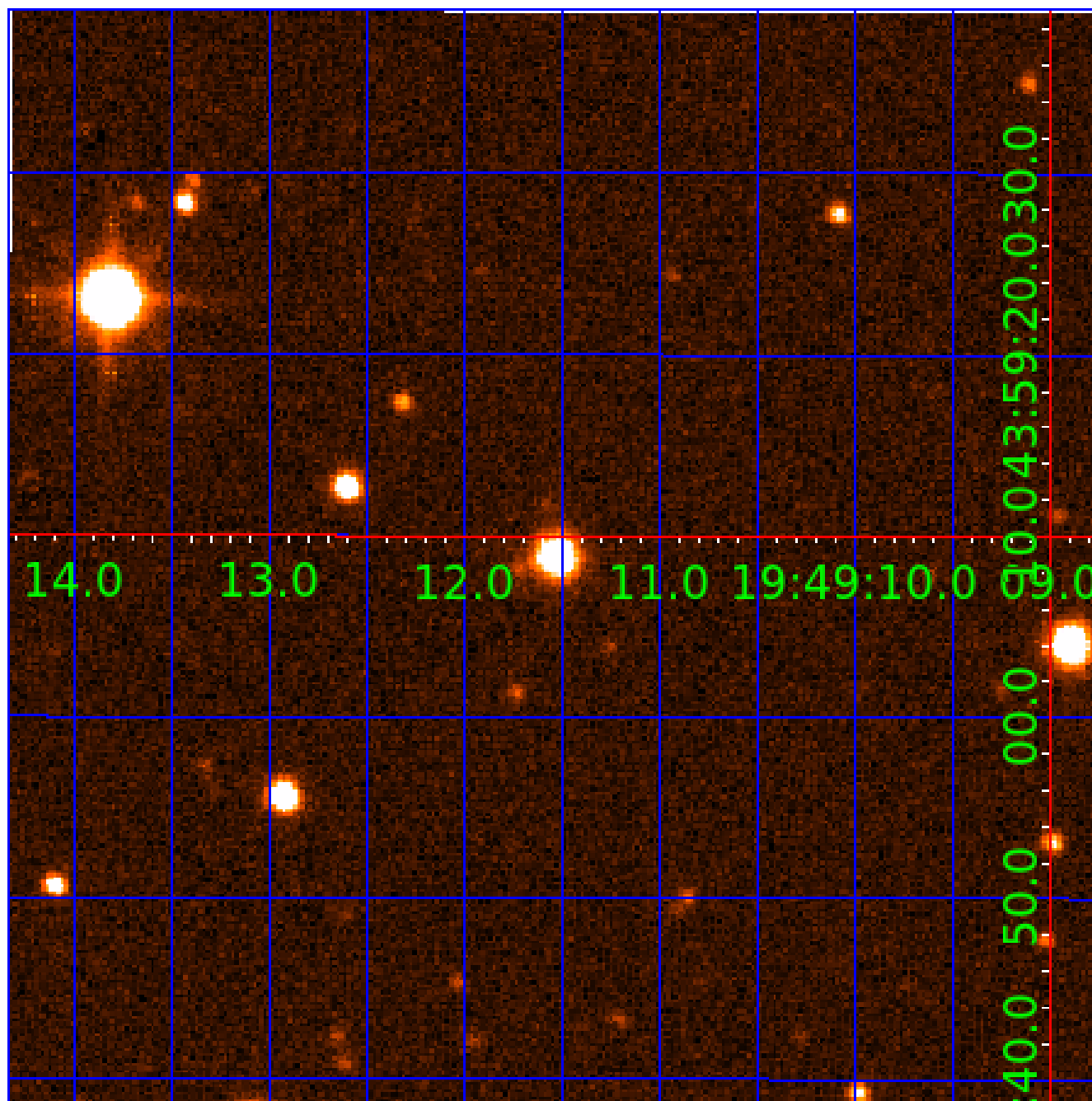


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008114921

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})
008114921-01	OBS	No	0.718480	132.256644	3.0	5.137	9.4	1.8	1.26	6539	0.22	9342.15
008114921-02	OBS	No	30.964159	144.817561	364.0	1.270	16.2	14.1	1.26	6539	2.89	61.83
008114921-03	OBS	No	23.438102	150.893227	311.5	1.544	12.1	11.8	1.26	6539	2.58	89.63
008114921-04	OBS	No	23.411955	154.920356	224.5	1.717	12.1	10.1	1.26	6539	2.05	89.76
008114921-05	OBS	No	31.197732	148.643626	198.1	2.068	11.8	8.6	1.26	6539	1.97	61.21
008114921-06	OBS	No	12.770403	140.235996	624.5	1.500	10.6	-1.0	1.26	6539	3.19	201.40
008114921-07	OBS	No	12.642128	135.009331	181.8	1.609	9.4	10.5	1.26	6539	1.94	204.13
008114921-08	OBS	No	24.956031	156.444549	267.6	3.901	9.7	10.5	1.26	6539	3.41	82.43

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008114921-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—CENT_FEW_DIFFS
008114921-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_MEAS
008114921-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
008114921-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
008114921-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—HALO_GHOST
008114921-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
008114921-07	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS—HALO_GHOST
008114921-08	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_MEAS—HALO_GHOST

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

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

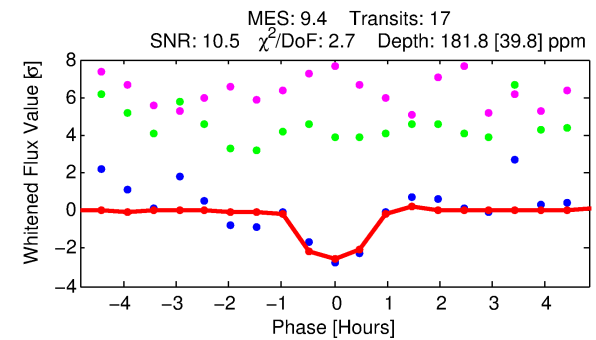
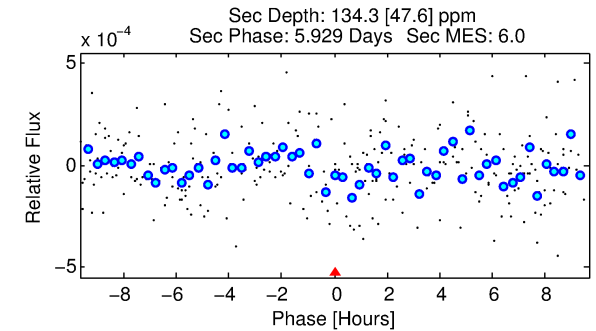
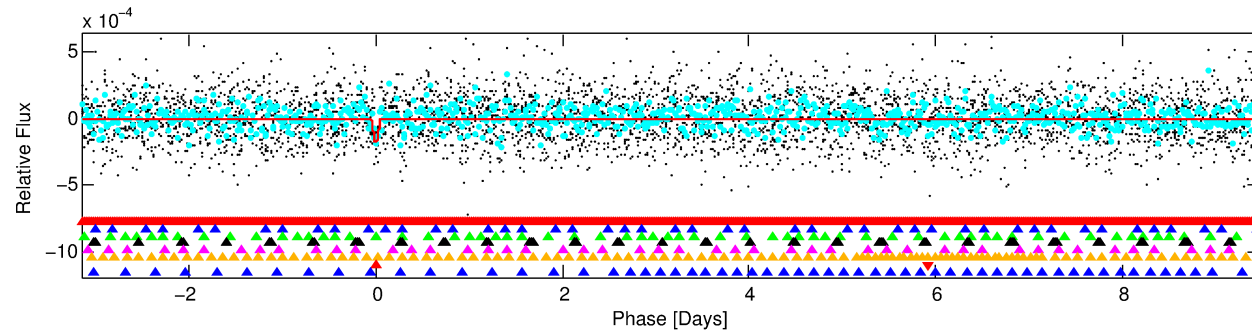
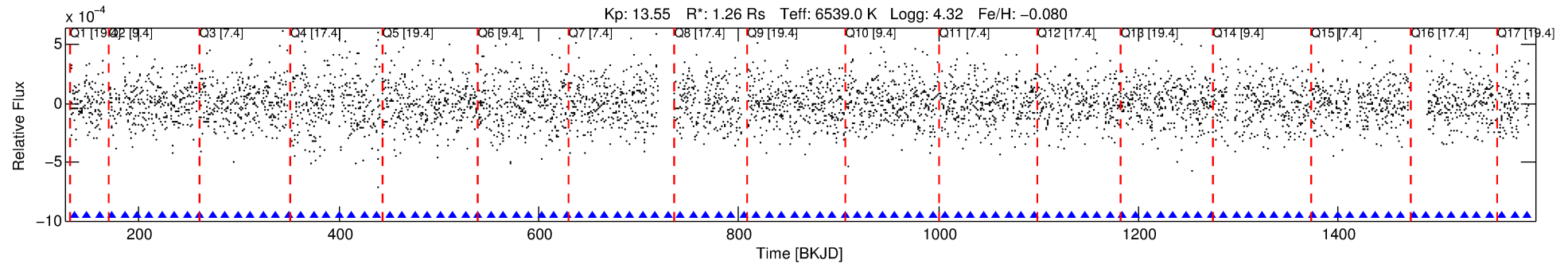
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008114921-07

No Significant Match Found

DV One-Page Summary

KIC: 8114921 Candidate: 7 of 8 Period: 12.642 d

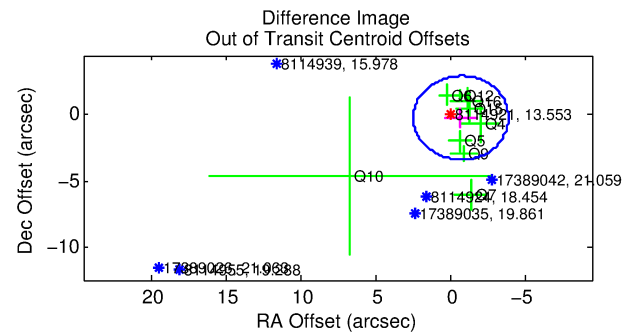
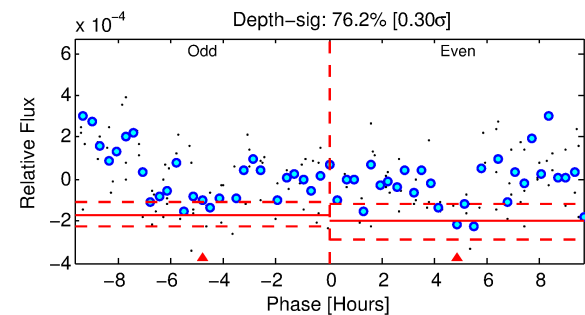
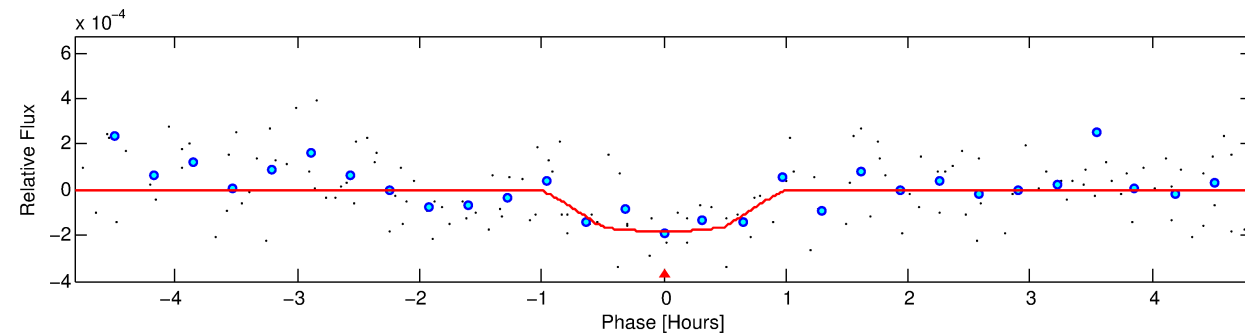


DV Fit Results:

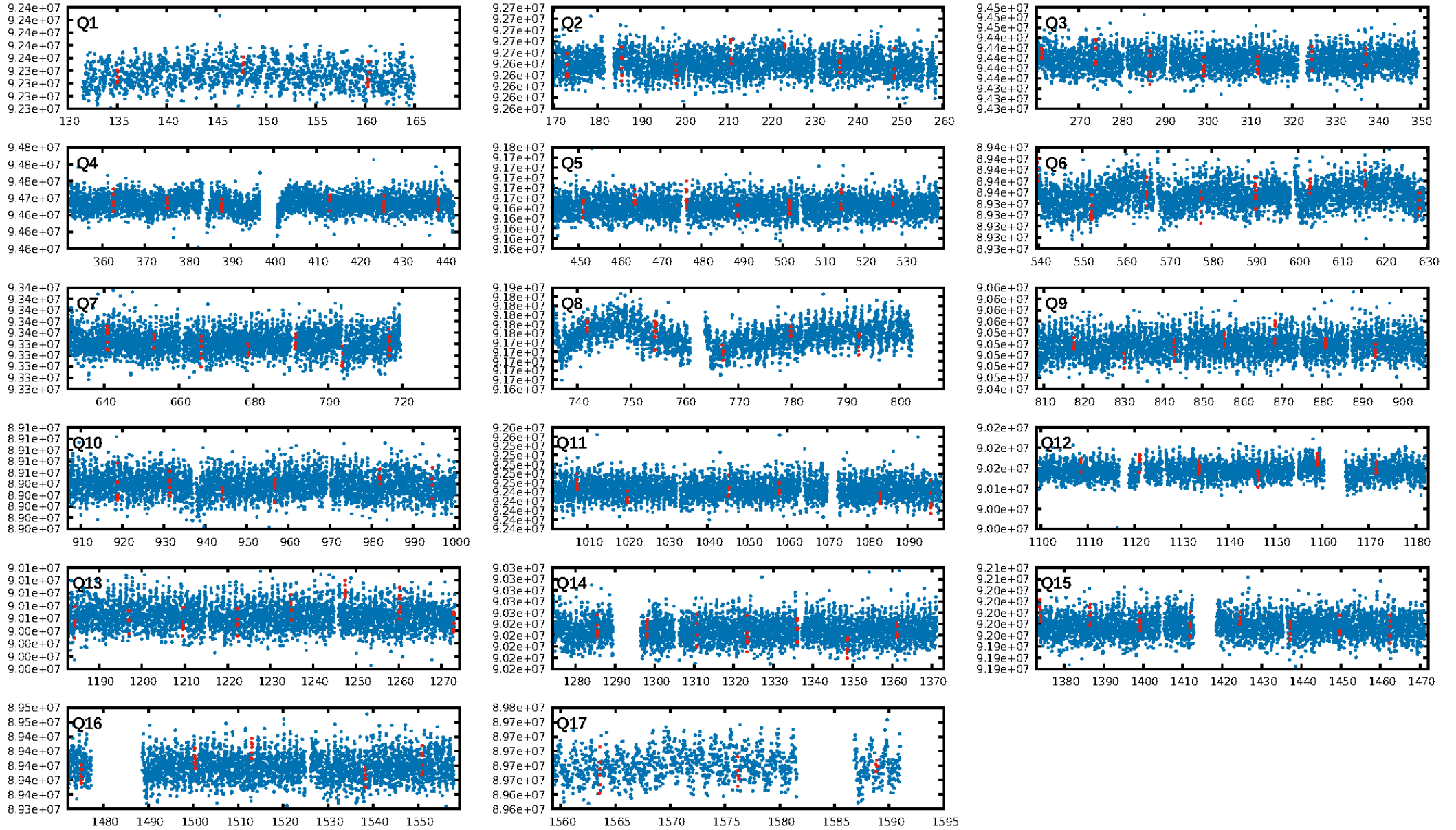
Period = 12.64213 [0.00015] d
Epoch = 135.0093 [0.0098] BKJD
Rp/R* = 0.0140 [0.0157]
a/R* = 32.90 [204.26]
b = 0.85 [2.00]
Seff = 204.13 [81.89]
Teq = 964 [97] K
Rp = 1.94 [2.26] Re
a = 0.1133 [0.0302] AU
Ag = 252.97 [581.76] [0.43σ]
Teffp = 5943 [3376] K [1.47σ]

DV Diagnostic Results:

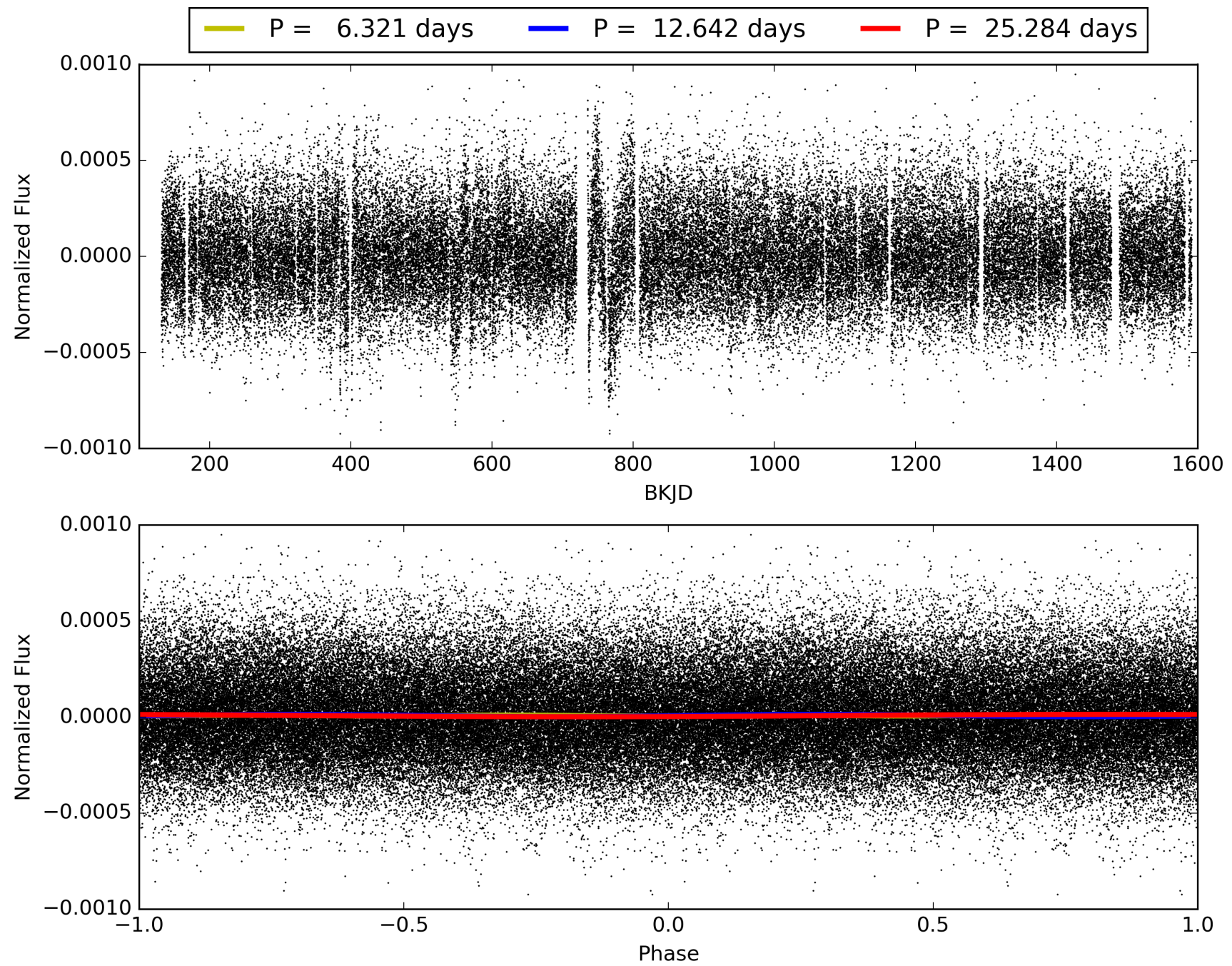
ShortPeriod-sig: 100.0% [53.16σ]
LongPeriod-sig: 83.8% [1.40σ]
ModelChiSquare2-sig: 0.3%
ModelChiSquareGof-sig: 89.9%
Bootstrap-pfa: 4.56e-10
RollingBand-fgt: 1.00 [17/17]
GhostDiagnostic-chr: 0.1254
Centroid-sig: 38.4%
Centroid-so: 0.428 arcsec [0.76σ]
OotOffset-rm: 0.773 arcsec [0.73σ]
OotOffset-st: 2/2/3/2 [9]
KicOffset-rm: 0.859 arcsec [0.81σ]
KicOffset-st: 2/2/3/2 [9]
DiffImageQuality-fgm: 0.22 [2/9]
DiffImageOverlap-fno: 0.24 [4/17]



TCE 008114921-07, PDC Light Curves

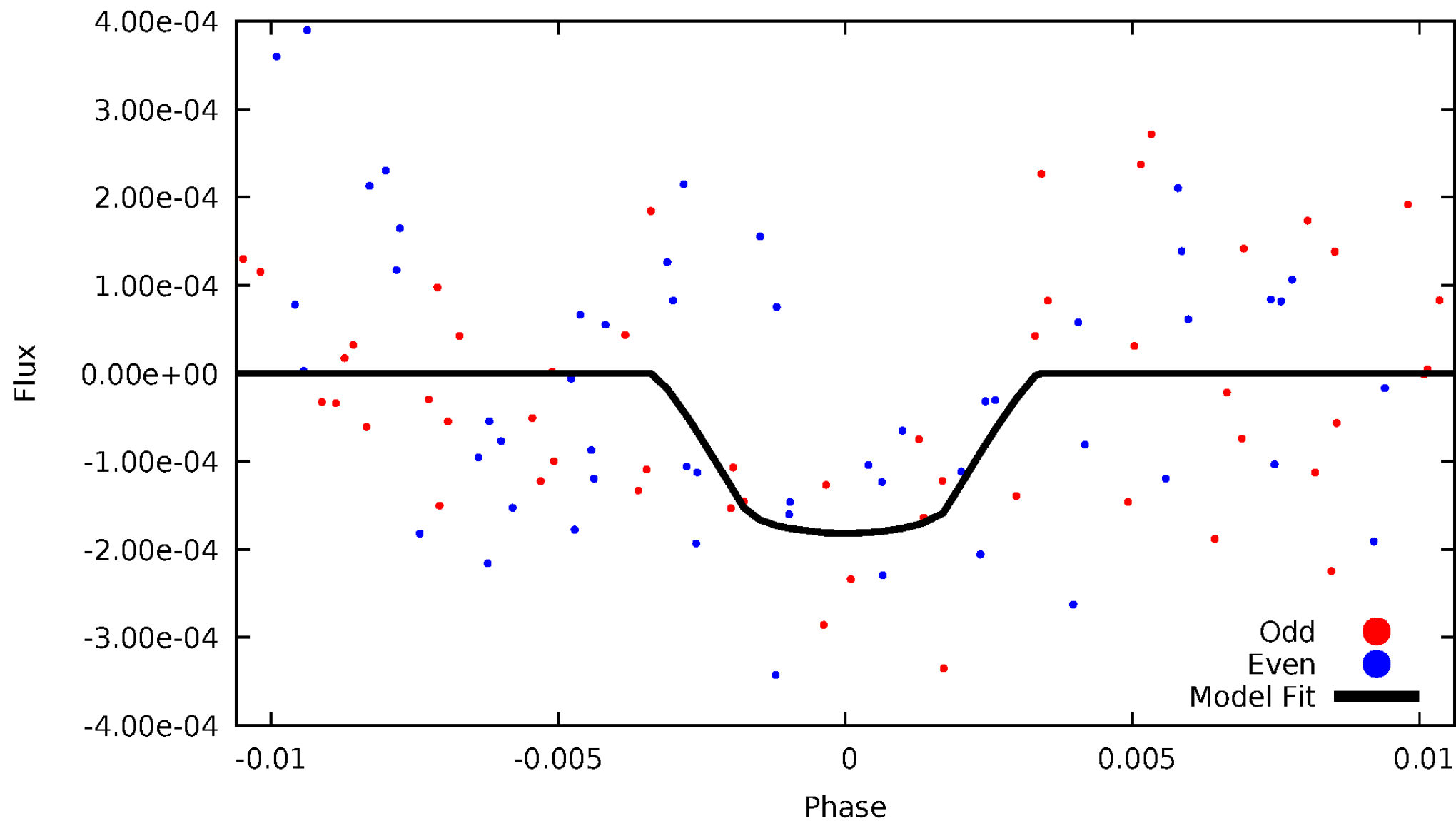


TCE 008114921-07



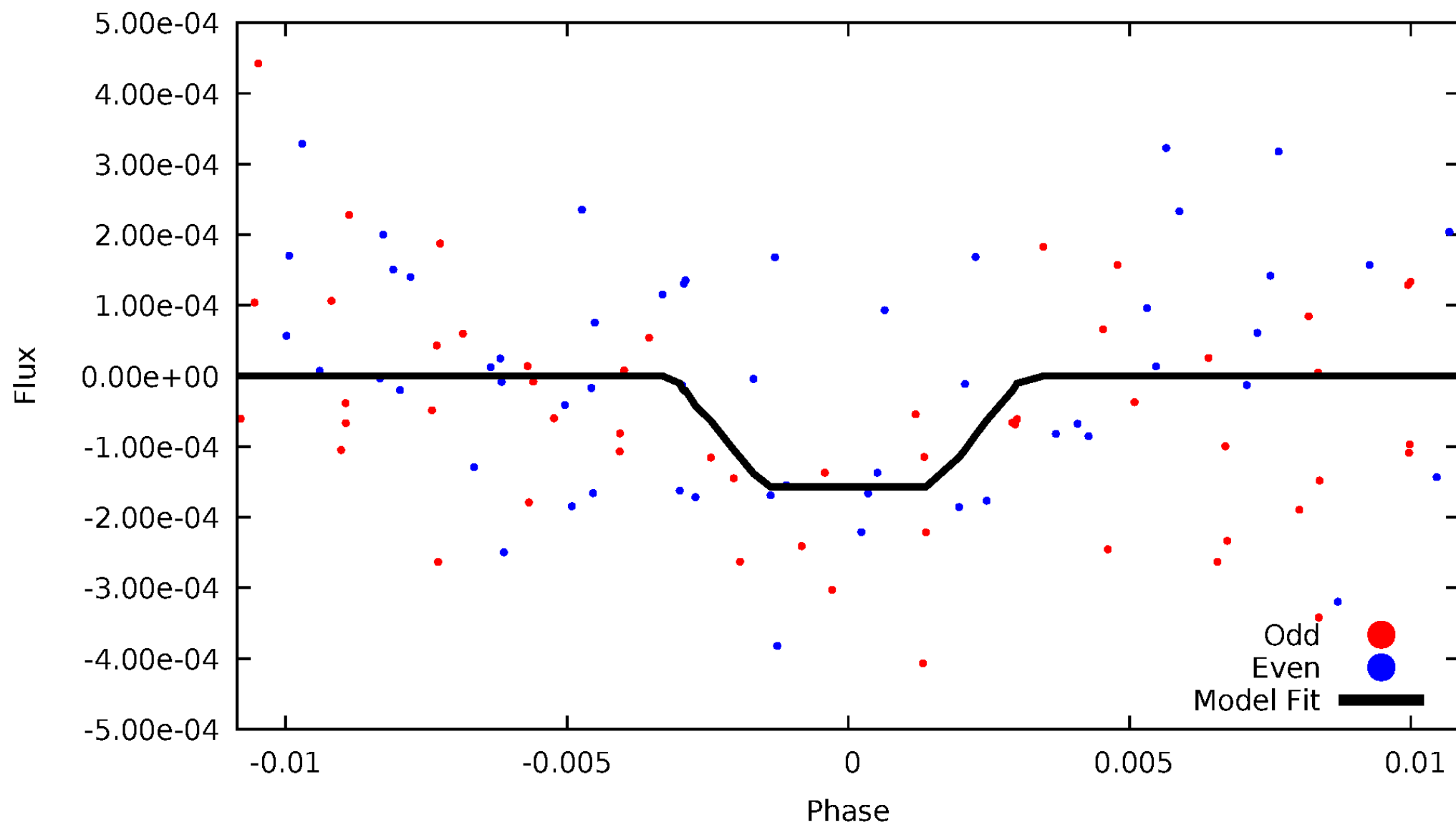
DV Odd/Even

TCE 008114921-07



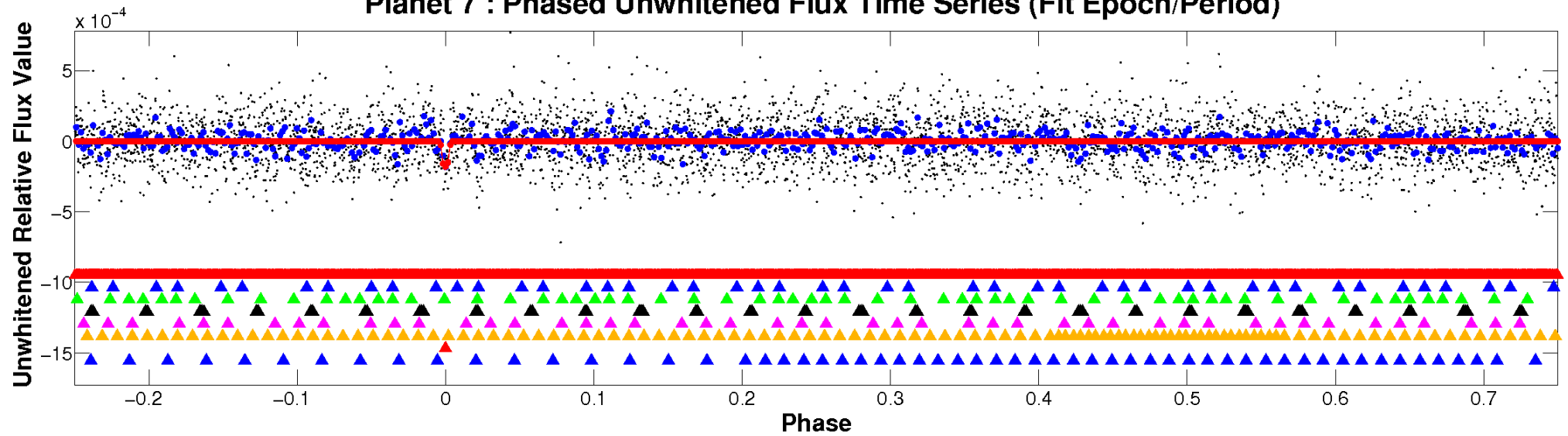
ALT Odd/Even

TCE 008114921-07

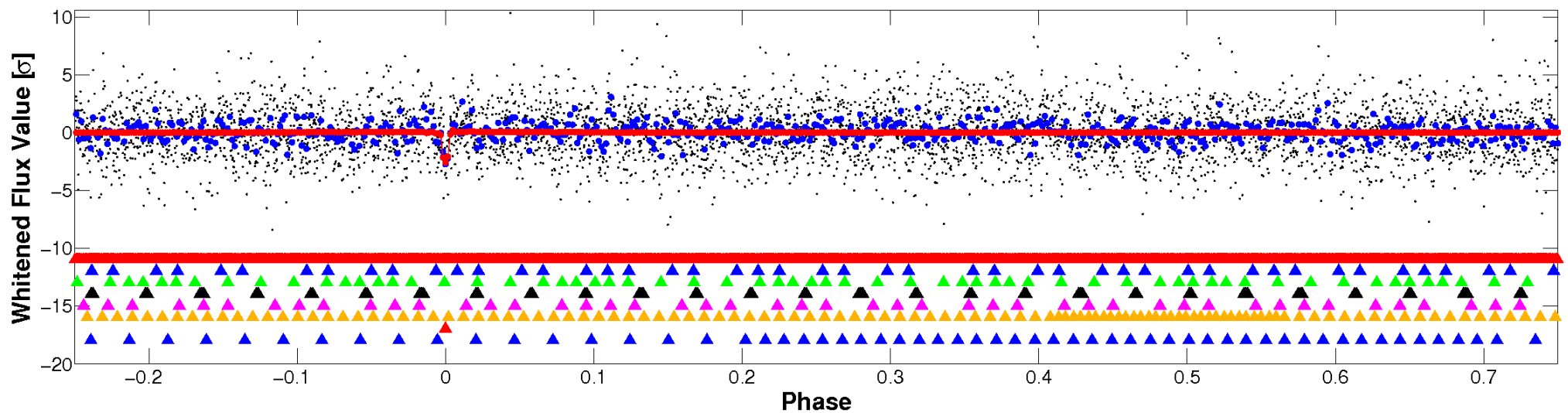


Non-Whitened Vs. Whitened Light Curve

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

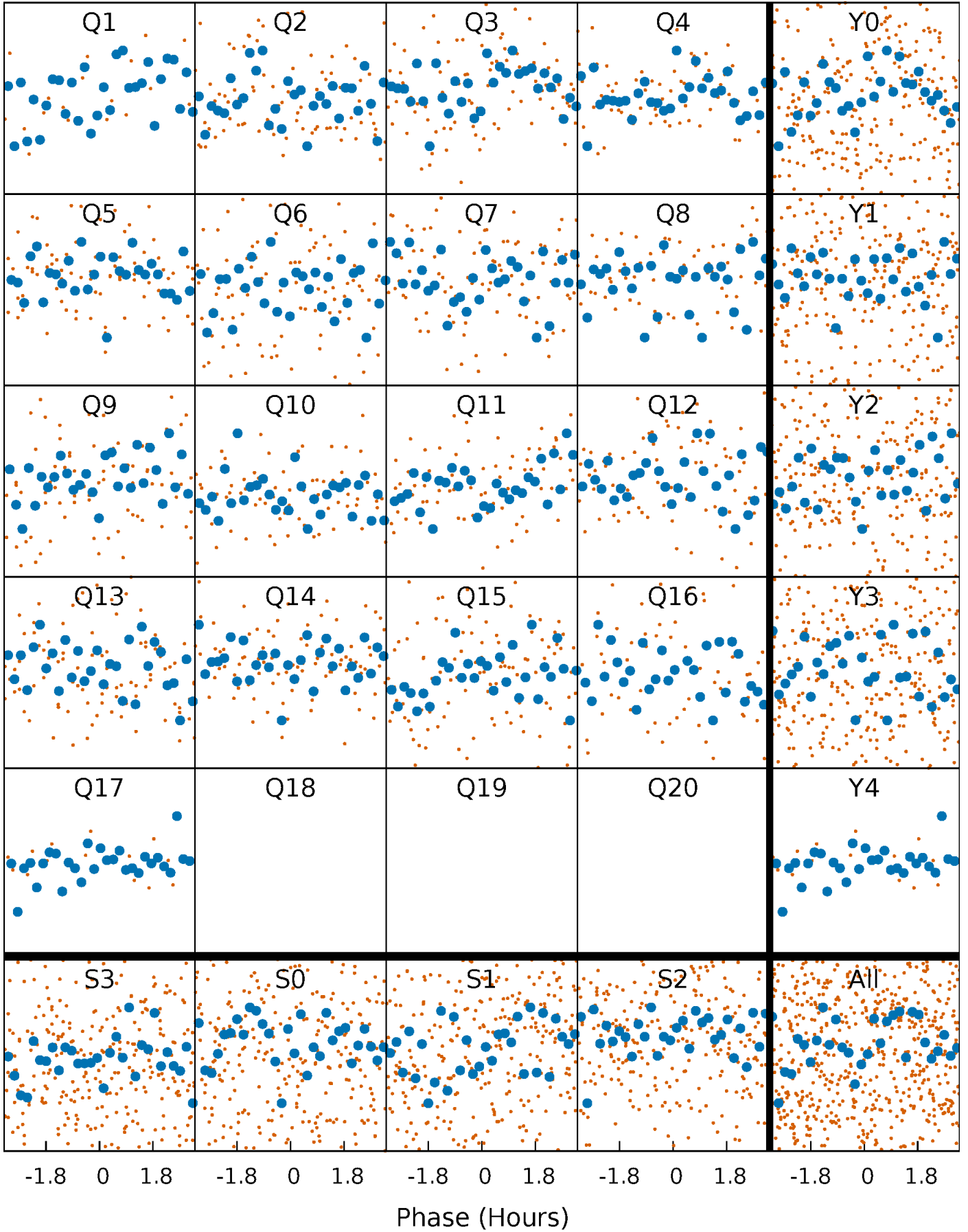


Planet 7 : Phased Whitened Flux Time Series (Fit Epoch/Period)



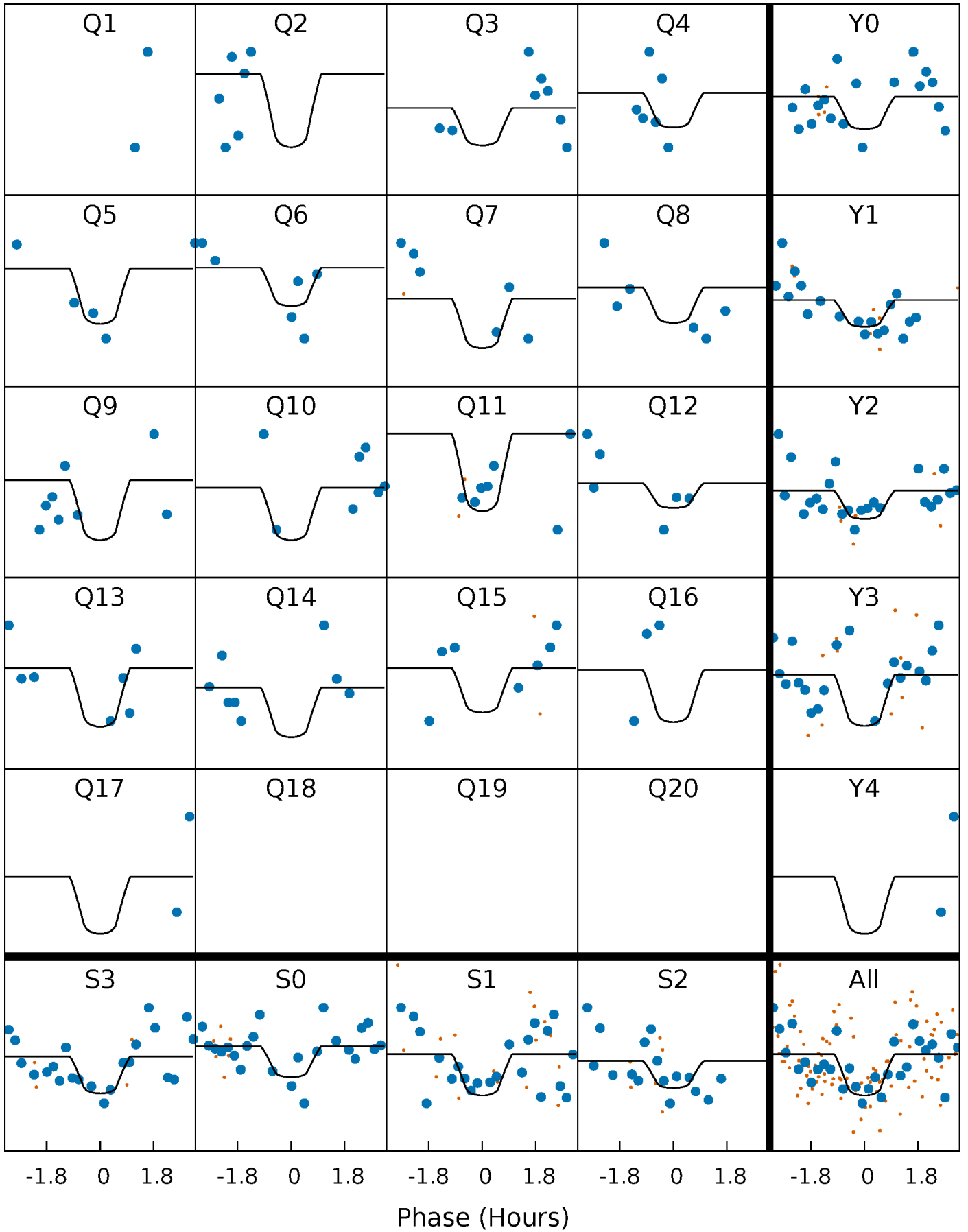
PDC Quarter-Phased Transit Curves

TCE 008114921-07 P= 12.642128 Days $T_0=135.009331$ (BKJD)



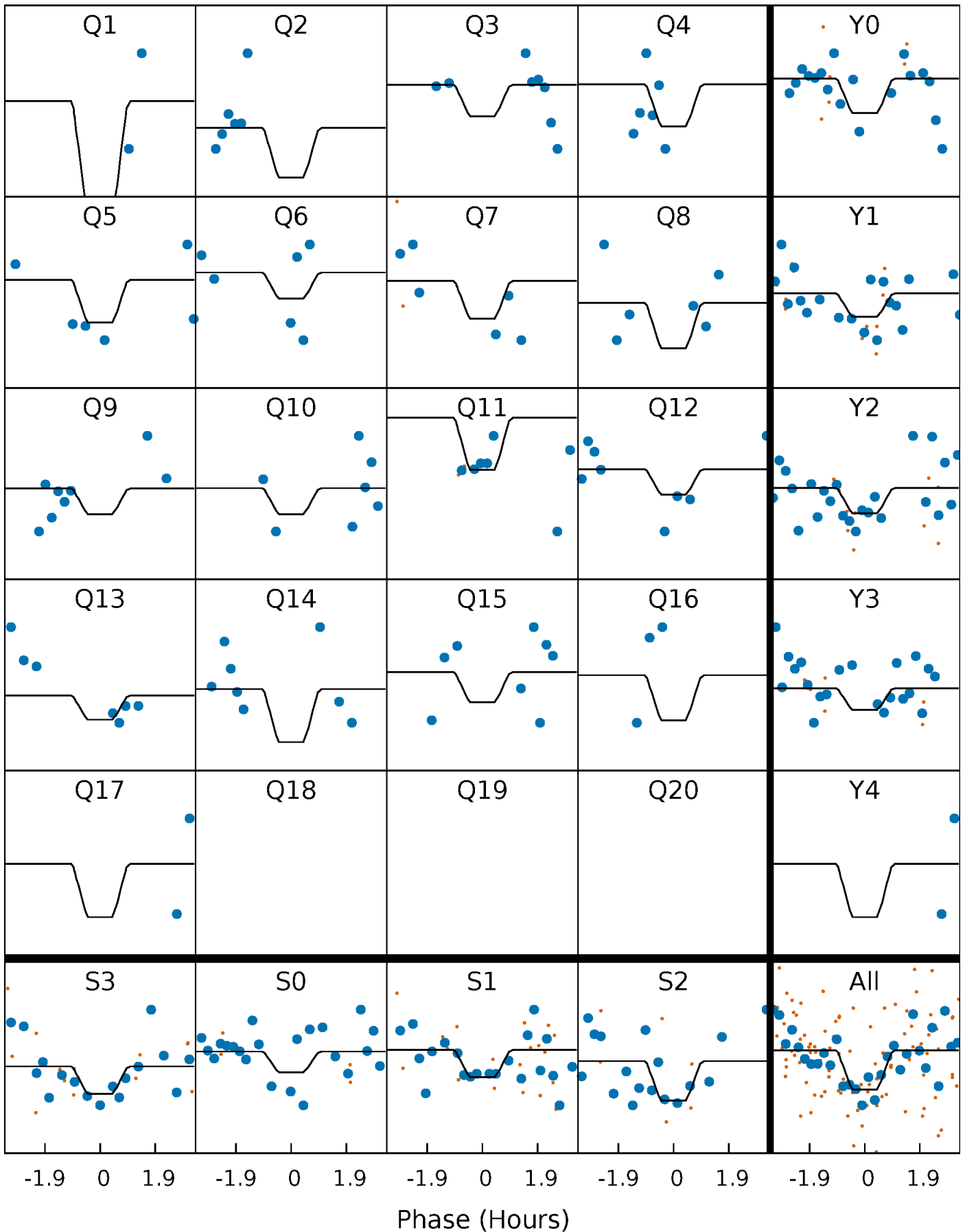
DV Quarter-Phased Transit Curves

TCE 008114921-07 P= 12.642128 Days $T_0=135.009331$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

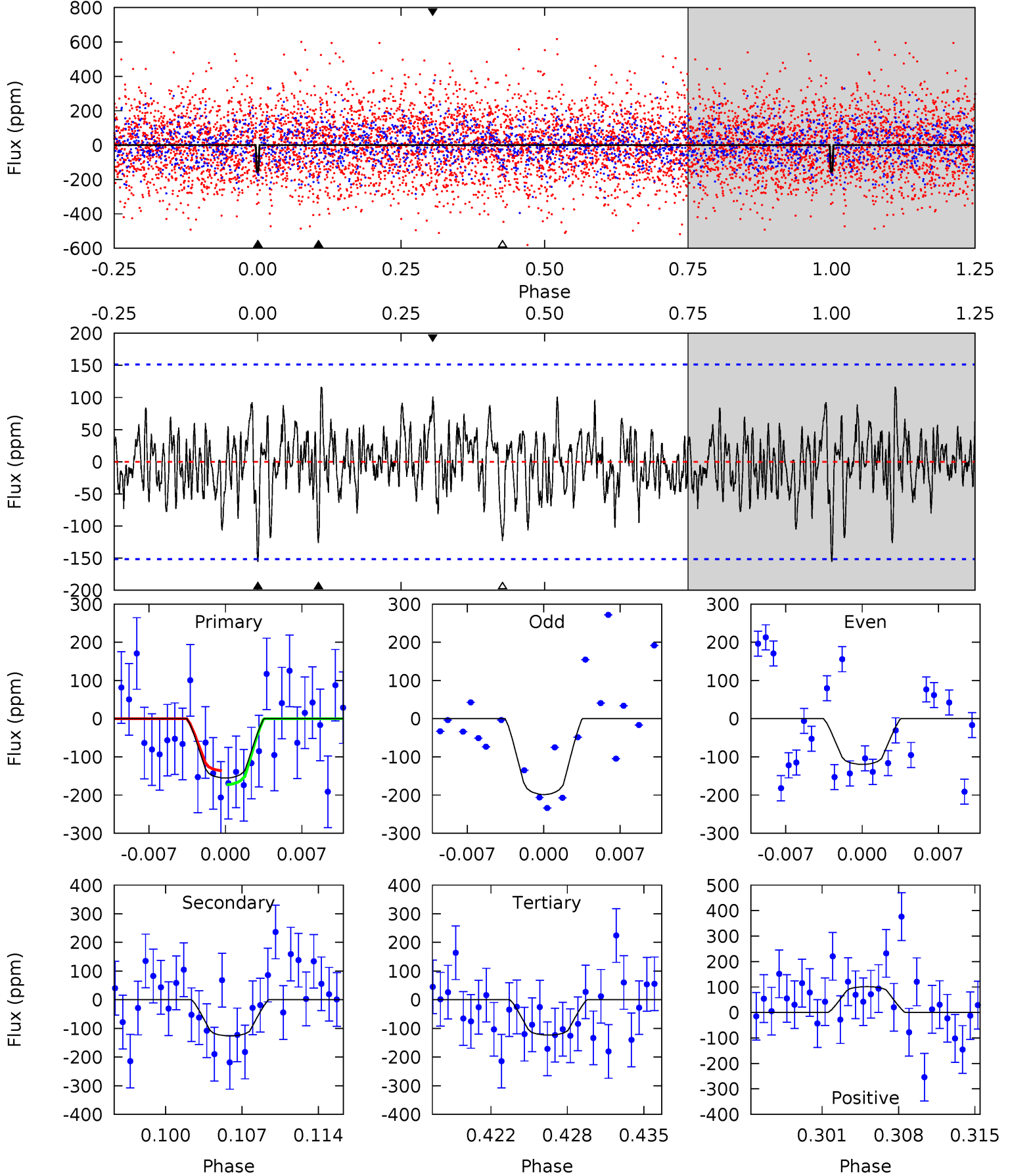
TCE 008114921-07 P= 12.642039 Days $T_0=135.017117$ (BKJD)



DV Model-Shift Uniqueness Test

008114921-07, P = 12.642128 Days, E = 122.367203 Days

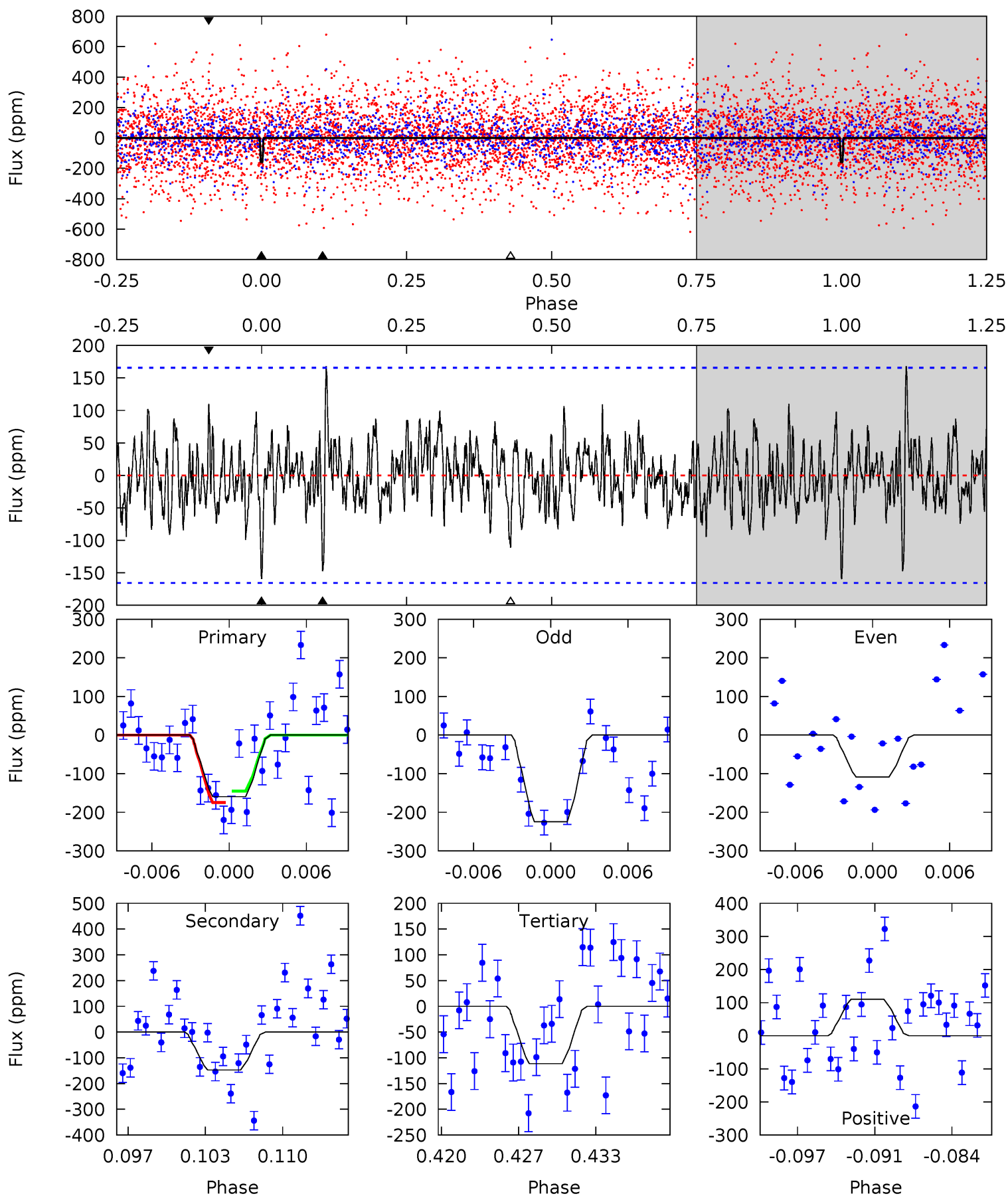
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.24	4.25	4.15	3.42	5.10	2.71	1.29	1.08	1.82	0.10	0.83	1.30	0.74	0.43	0.61



Alt Model-Shift Uniqueness Test

008114921-07, P = 12.642039 Days, E = 122.375078 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.92	4.54	3.43	3.39	5.11	2.72	1.20	1.49	1.53	1.11	1.16	1.79	0.76	0.51	0.46



Stellar Parameters For KIC 008114921

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6539^{+155}_{-214}	$4.318^{+0.087}_{-0.203}$	$-0.080^{+0.250}_{-0.300}$	$1.265^{+0.410}_{-0.176}$	$1.217^{+0.192}_{-0.157}$	$0.847^{+0.338}_{-0.463}$
	+2%/-3%	+2%/-5%	+312%/-375%	+32%/-14%	+16%/-13%	+40%/-55%
Source	PHO1	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 008114921-07 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-126 ± 30	$2.44^{+2.10}_{-1.56}$	1361^{+97}_{-69}	5305^{+4175}_{-1175}	147^{+990}_{-107}
Alt.	-147 ± 32	$2.36^{+2.04}_{-1.57}$	1359^{+98}_{-70}	5533^{+4758}_{-1225}	178^{+1376}_{-126}

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 $A_{obs} \gg 1.0$

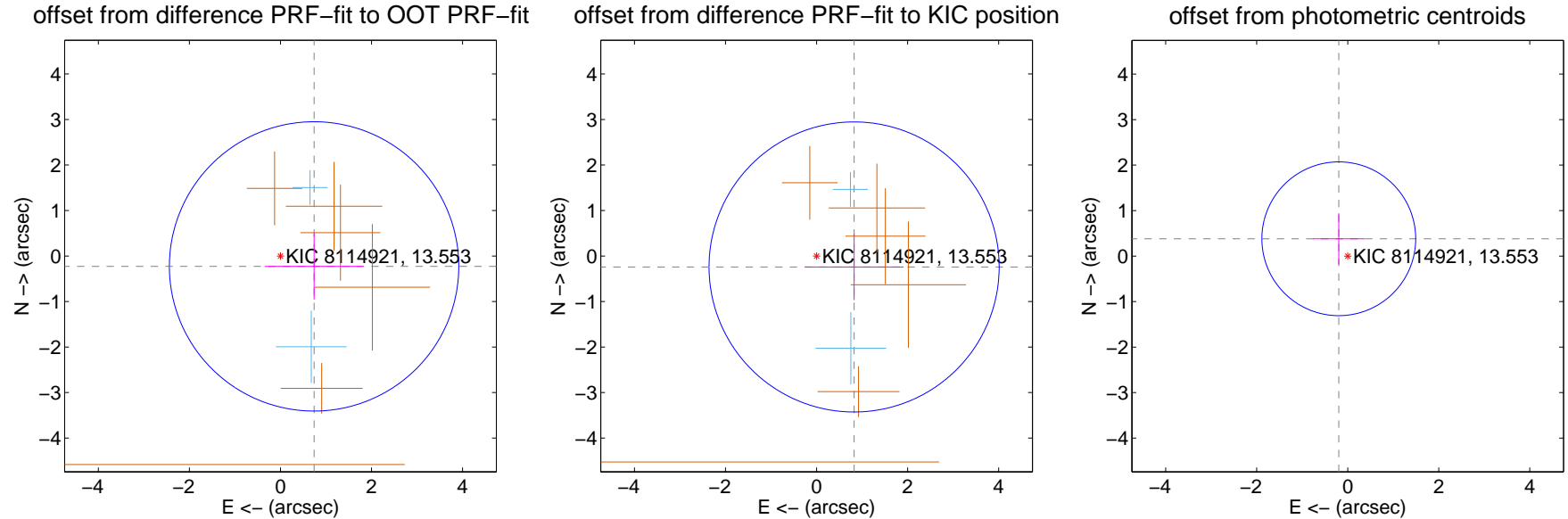
DV Centroid Data

Supplemental centroid analysis for 008114921-07. Kepler magnitude: 13.55. Transit SNR 10.52

There are 2 quarters with good PRF difference image offsets

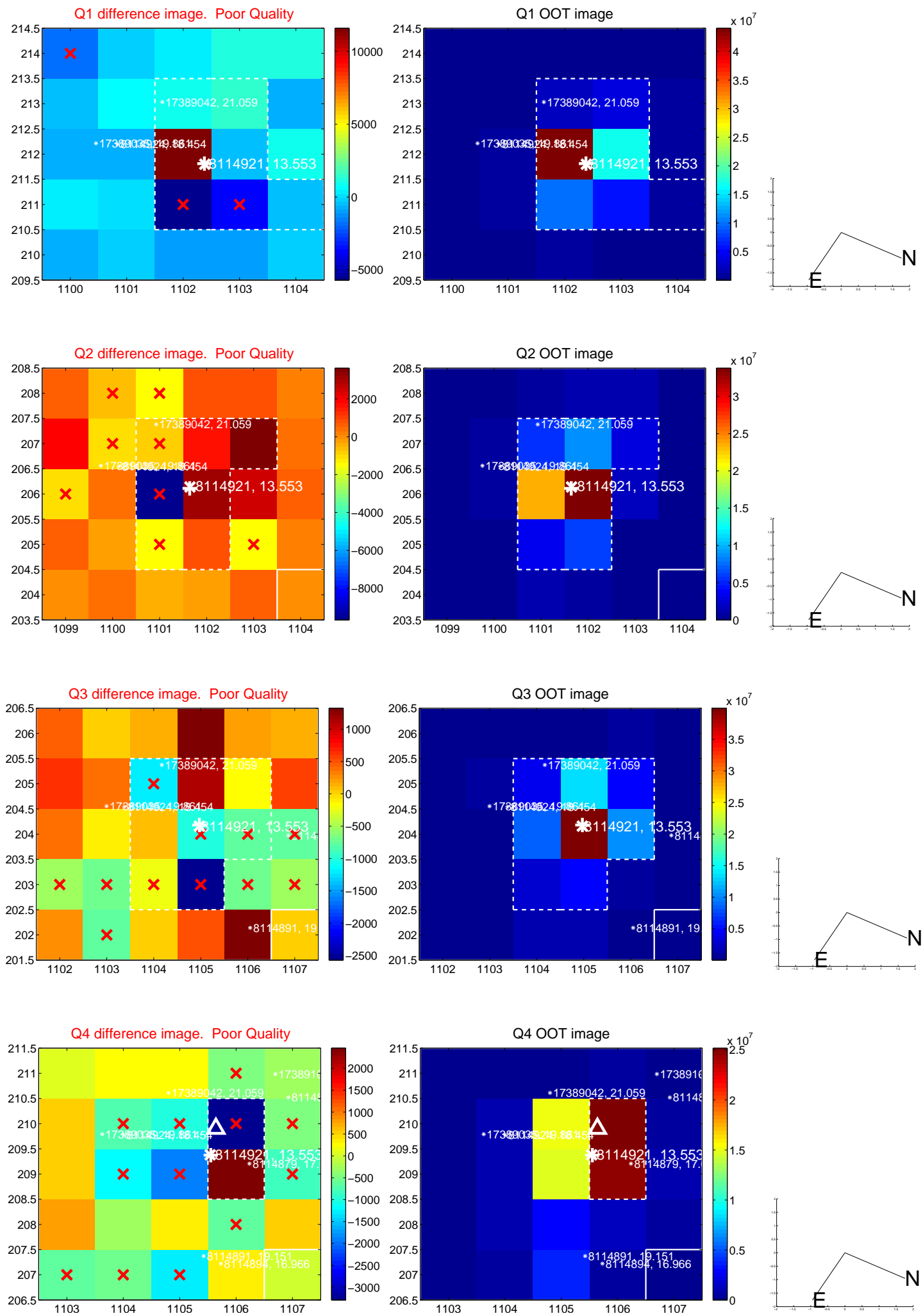
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.773 ± 1.059	0.73	-0.738 ± 1.086	-0.228 ± 0.728
PRF-fit source offset from KIC position	0.859 ± 1.062	0.81	-0.824 ± 1.086	-0.240 ± 0.728
photometric centroid source offset	0.43 ± 0.56	0.76	0.20 ± 0.57	0.38 ± 0.56

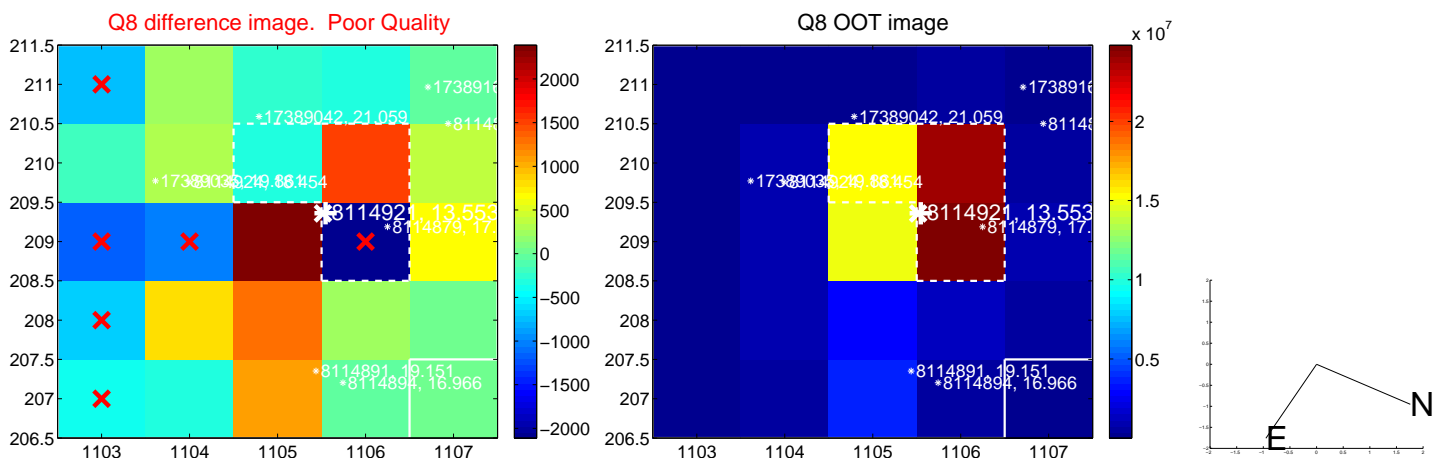
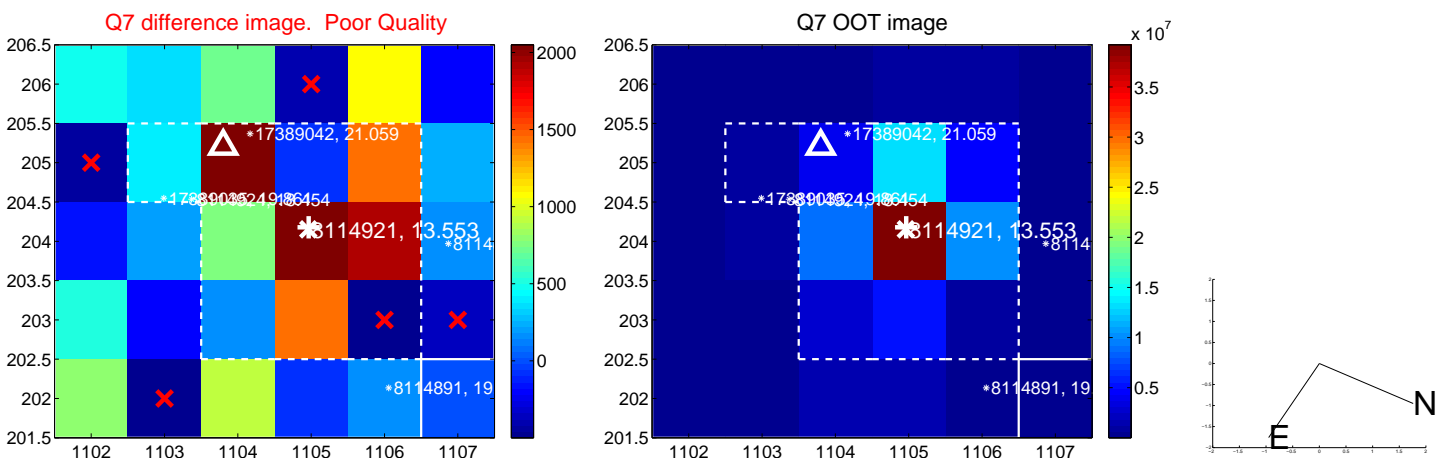
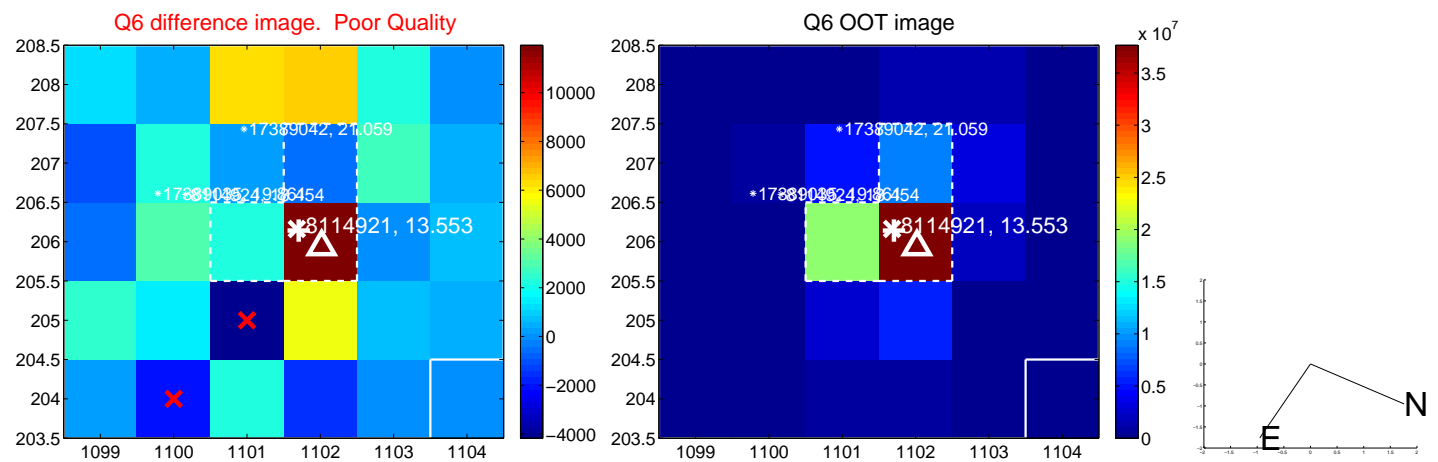
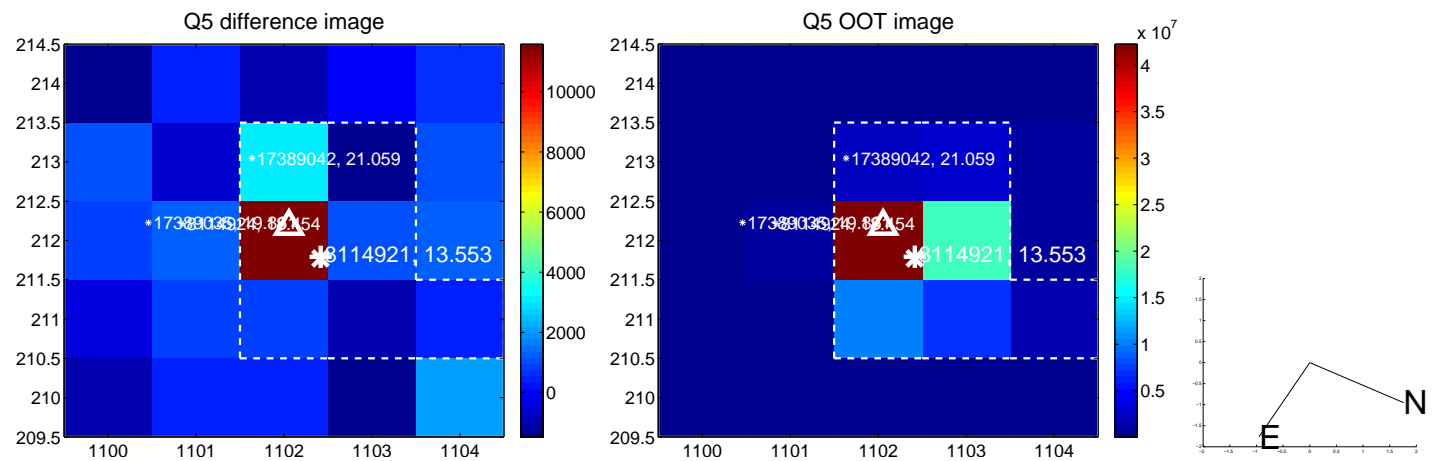


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

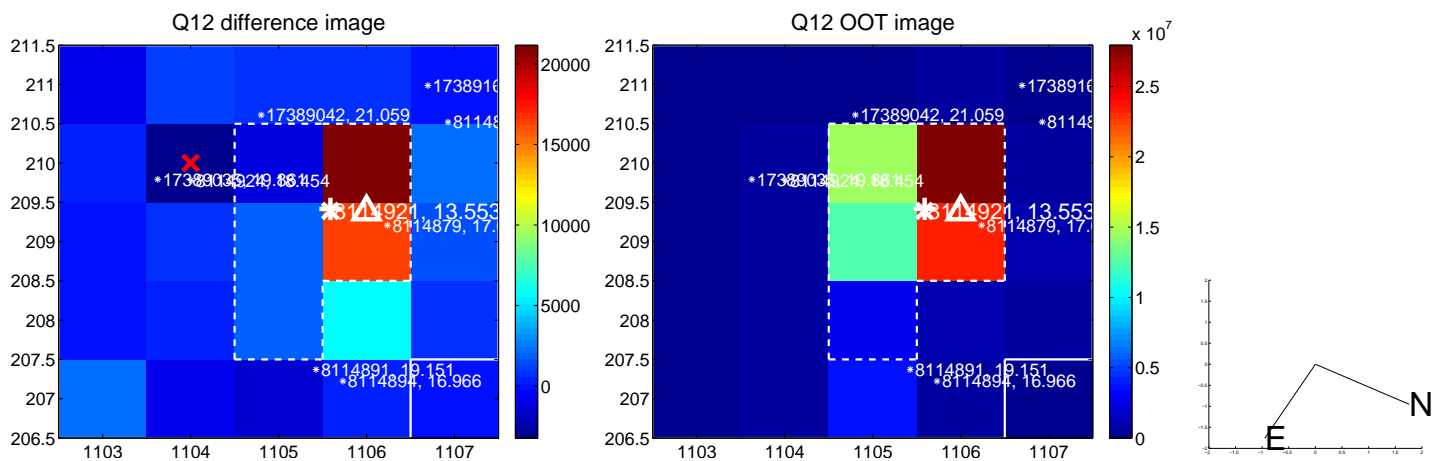
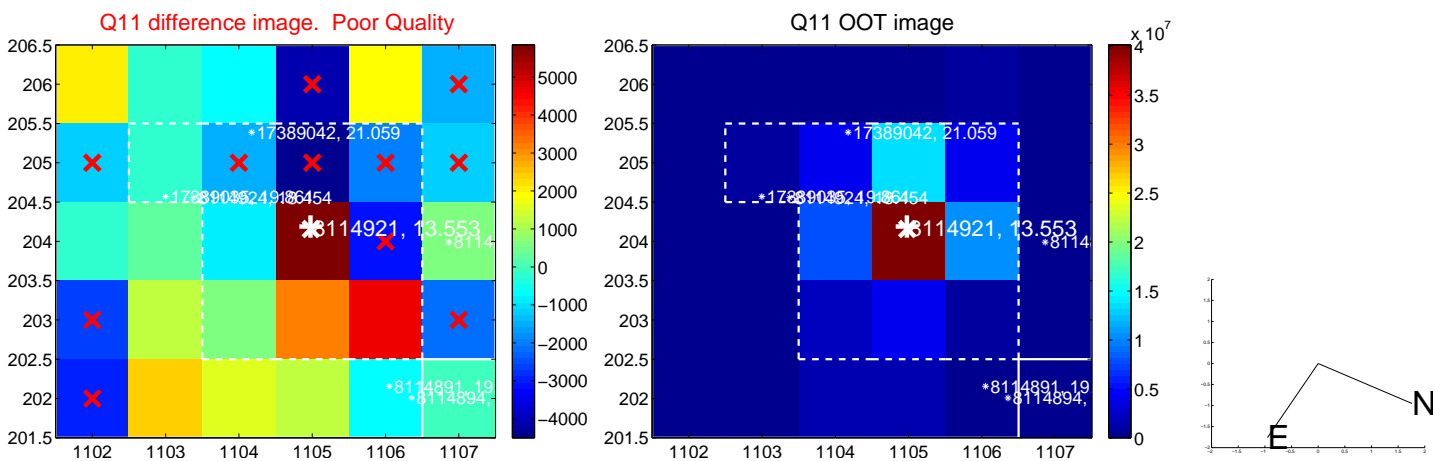
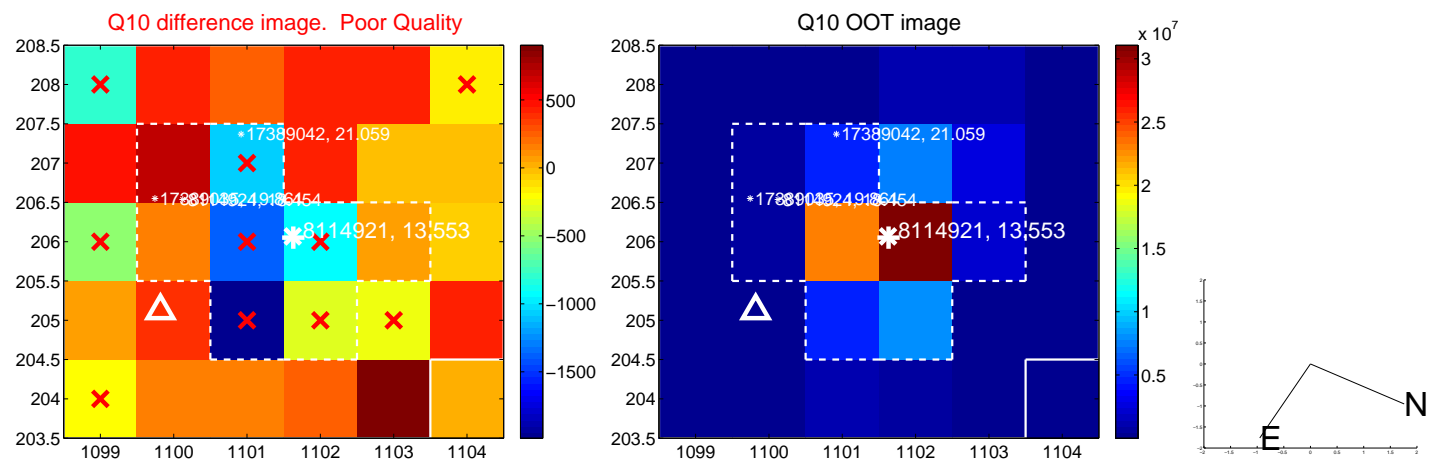
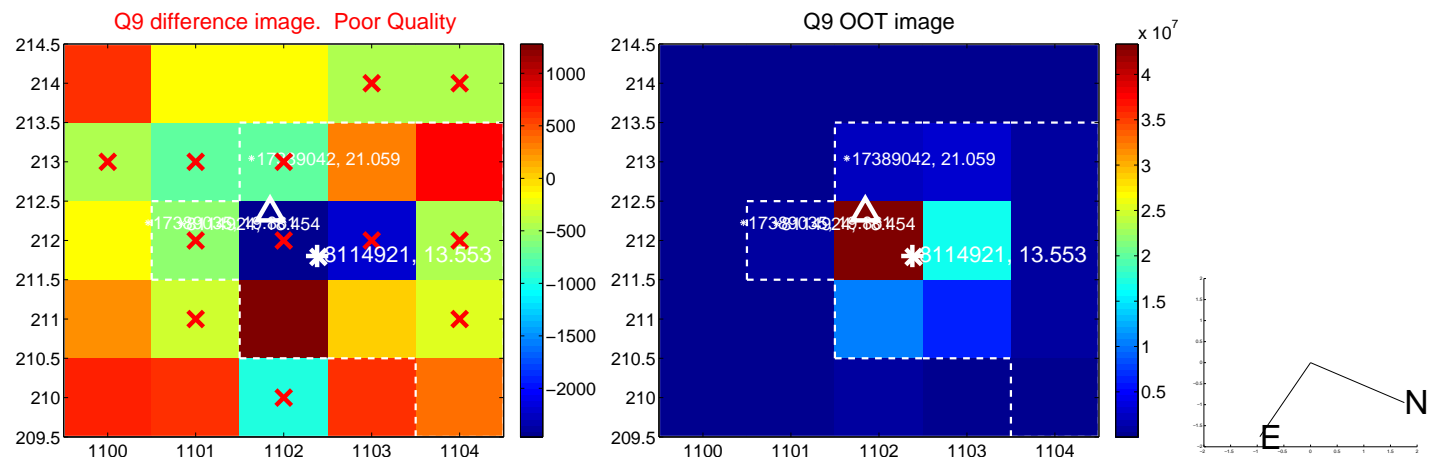
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



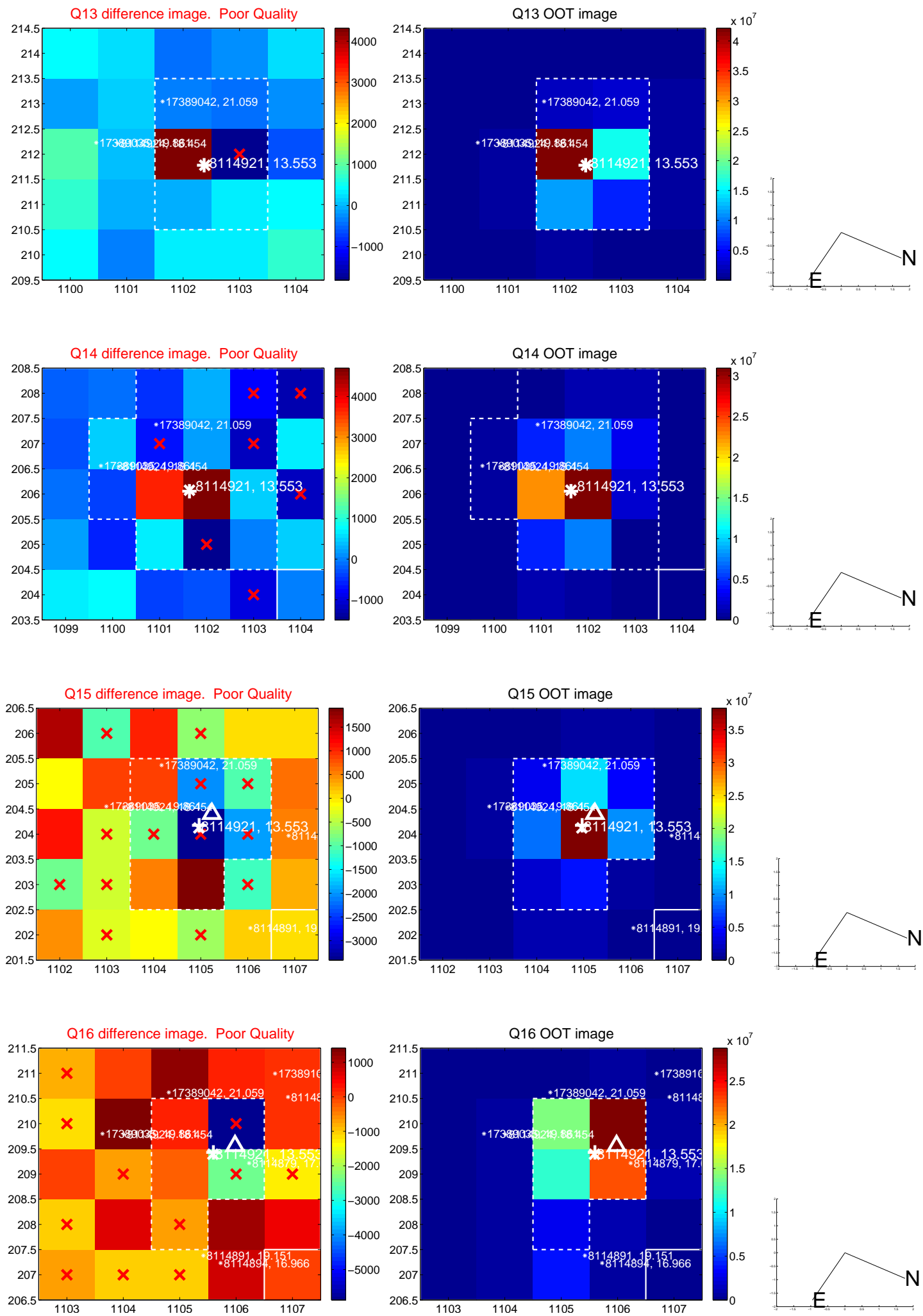
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



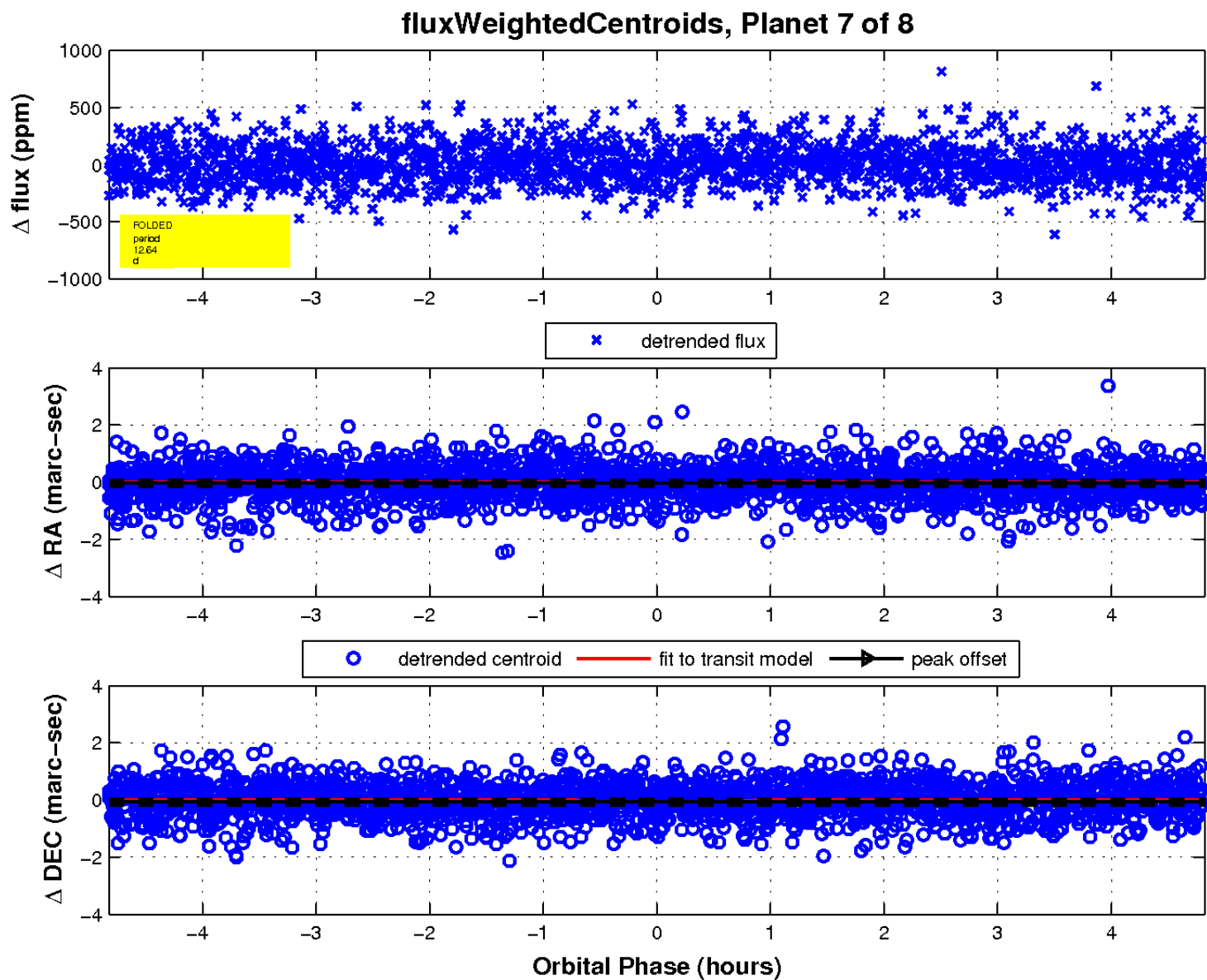
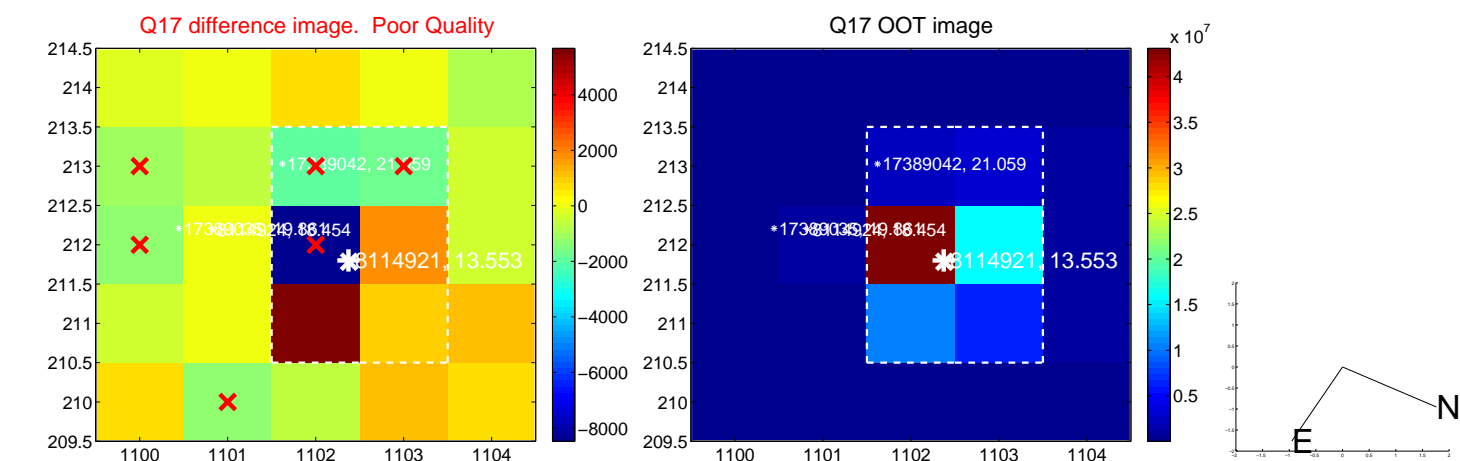
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

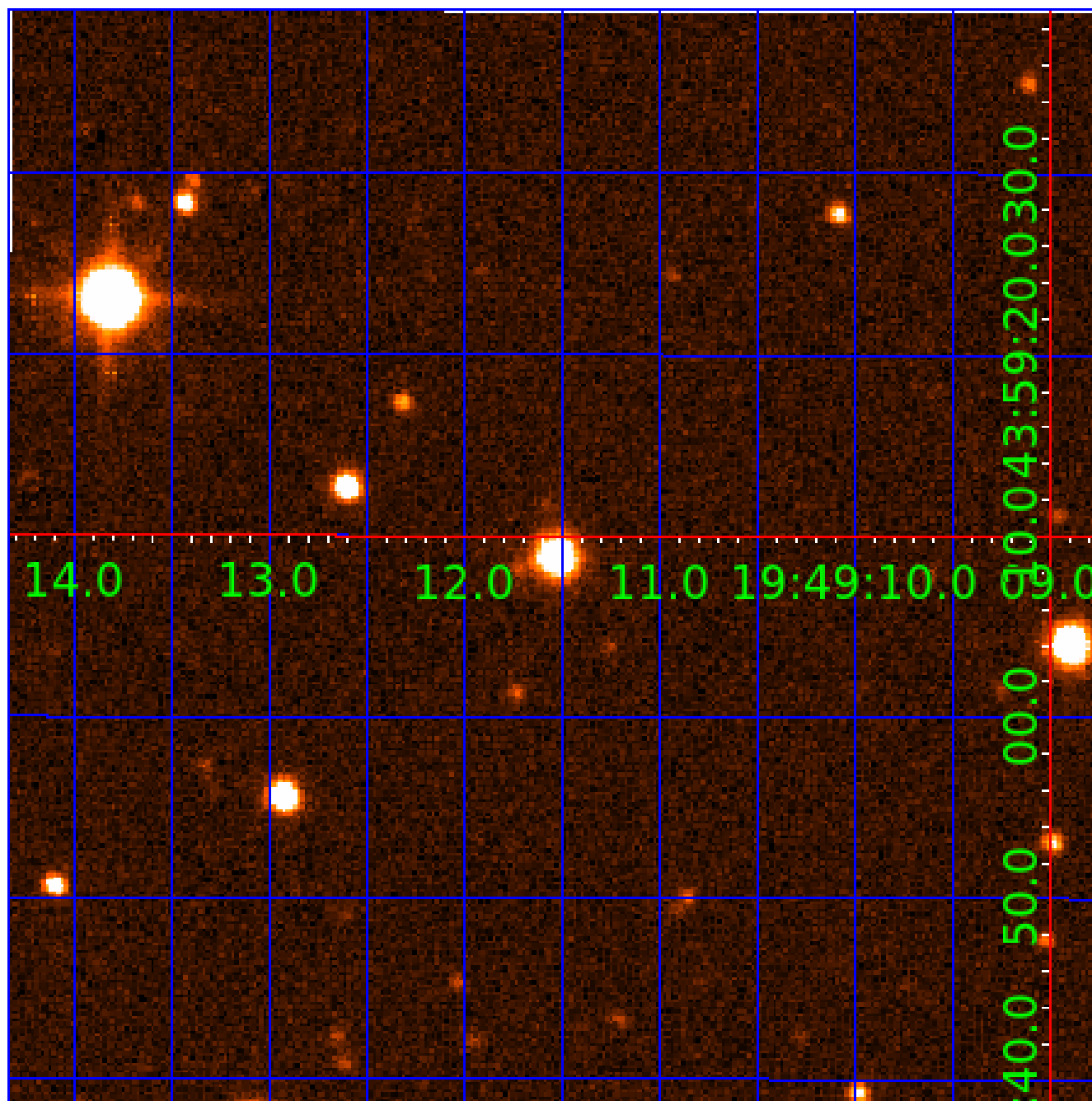


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008114921

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})
008114921-01	OBS	No	0.718480	132.256644	3.0	5.137	9.4	1.8	1.26	6539	0.22	9342.15
008114921-02	OBS	No	30.964159	144.817561	364.0	1.270	16.2	14.1	1.26	6539	2.89	61.83
008114921-03	OBS	No	23.438102	150.893227	311.5	1.544	12.1	11.8	1.26	6539	2.58	89.63
008114921-04	OBS	No	23.411955	154.920356	224.5	1.717	12.1	10.1	1.26	6539	2.05	89.76
008114921-05	OBS	No	31.197732	148.643626	198.1	2.068	11.8	8.6	1.26	6539	1.97	61.21
008114921-06	OBS	No	12.770403	140.235996	624.5	1.500	10.6	-1.0	1.26	6539	3.19	201.40
008114921-07	OBS	No	12.642128	135.009331	181.8	1.609	9.4	10.5	1.26	6539	1.94	204.13
008114921-08	OBS	No	24.956031	156.444549	267.6	3.901	9.7	10.5	1.26	6539	3.41	82.43

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008114921-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—CENT_FEW_DIFFS
008114921-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_MEAS
008114921-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
008114921-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
008114921-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—HALO_GHOST
008114921-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
008114921-07	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS—HALO_GHOST
008114921-08	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_MEAS—HALO_GHOST

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

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

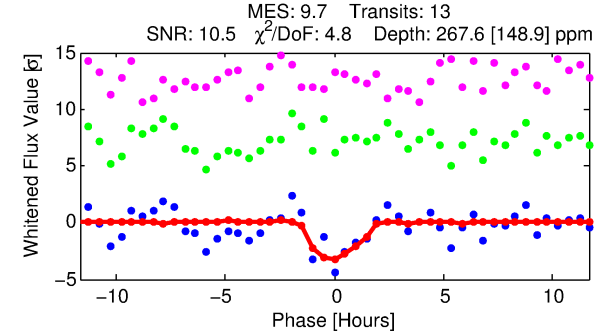
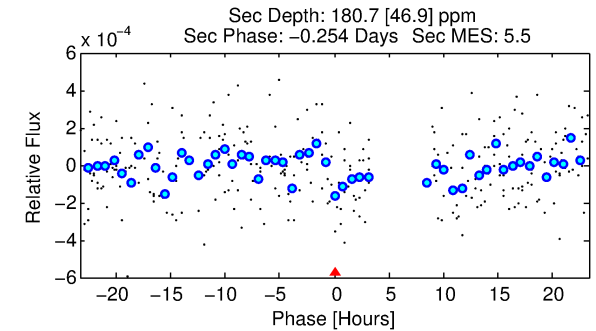
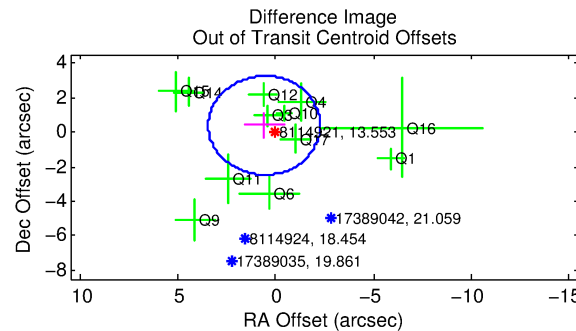
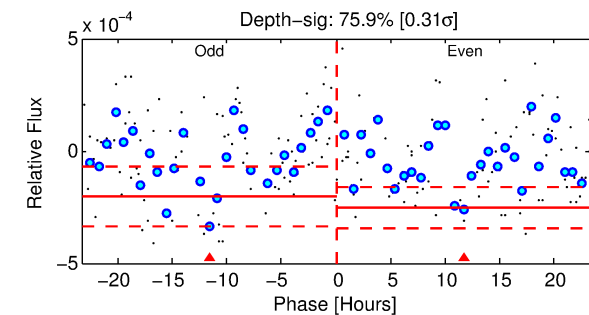
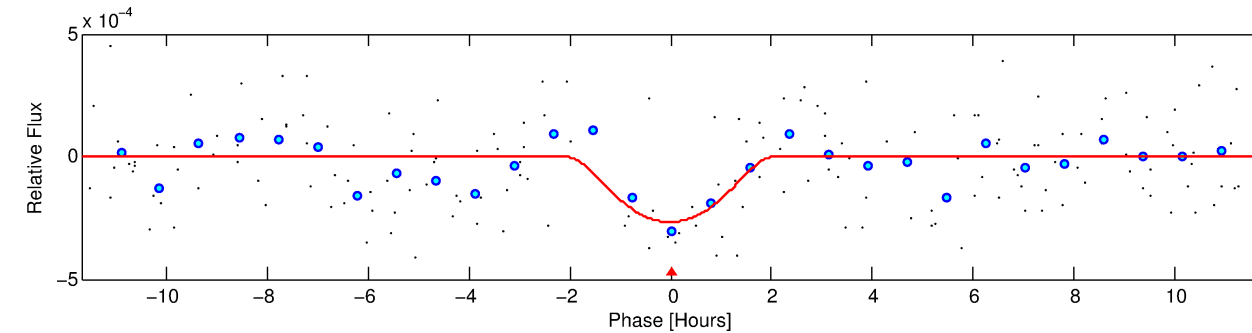
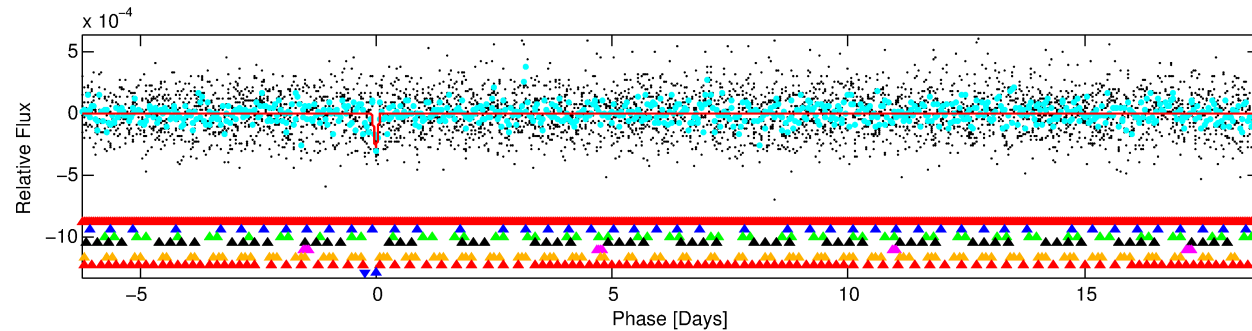
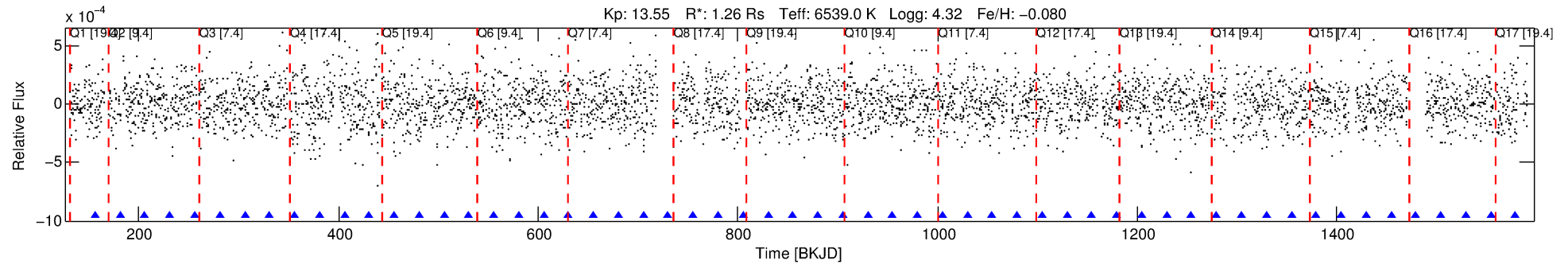
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008114921-08

No Significant Match Found

DV One-Page Summary

KIC: 8114921 Candidate: 8 of 8 Period: 24.956 d



DV Fit Results:

Period = 24.95603 [0.00054] d
Epoch = 156.4445 [0.0187] BKJD
Rp/R* = 0.0247 [0.0976]
a/R* = 12.55 [17.74]
b = 0.99 [0.17]
Seff = 82.43 [33.07]
Teq = 768 [77] K
Rp = 3.41 [13.51] Re
a = 0.1783 [0.0475] AU
Ag = 271.62 [2148.52] [0.13 σ]
Teffp = 4823 [9527] K [0.43 σ]

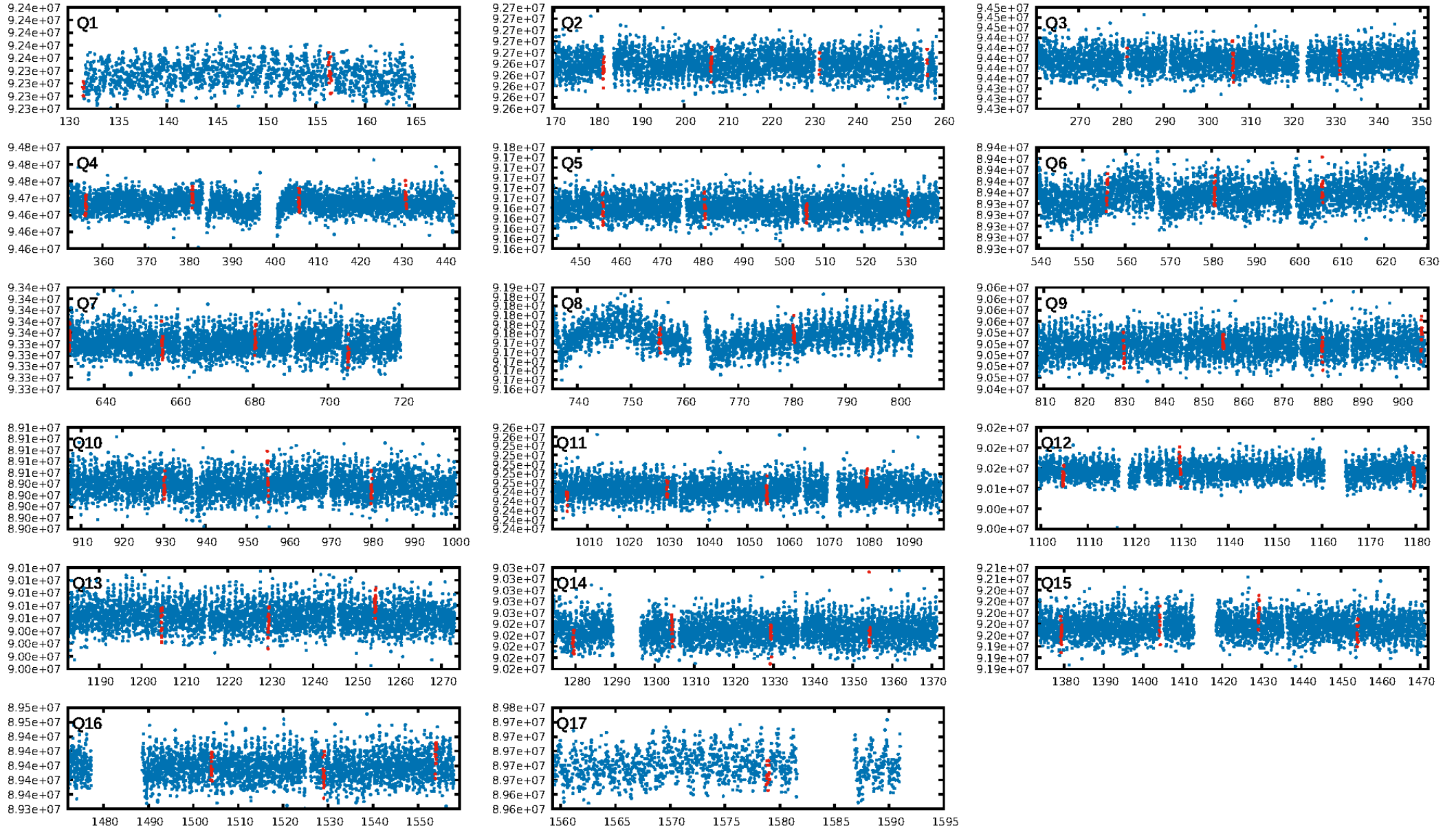
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [8.68 σ]
LongPeriod-sig: 100.0% [35.15 σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 99.8%
Bootstrap-pfa: 8.59e-10
RollingBand-fgt: 1.00 [12/12]
GhostDiagnostic-chr: -0.2321
Centroid-sig: 0.8%
Centroid-so: 0.959 arcsec [2.07 σ]
OotOffset-rm: 0.702 arcsec [0.74 σ]
KicOffset-rm: 0.664 arcsec [0.73 σ]
OotOffset-st: 3/3/3/3 [12]
KicOffset-st: 3/3/3/3 [12]
DiffImageQuality-fgm: 0.25 [3/12]
DiffImageOverlap-fno: 0.00 [0/17]

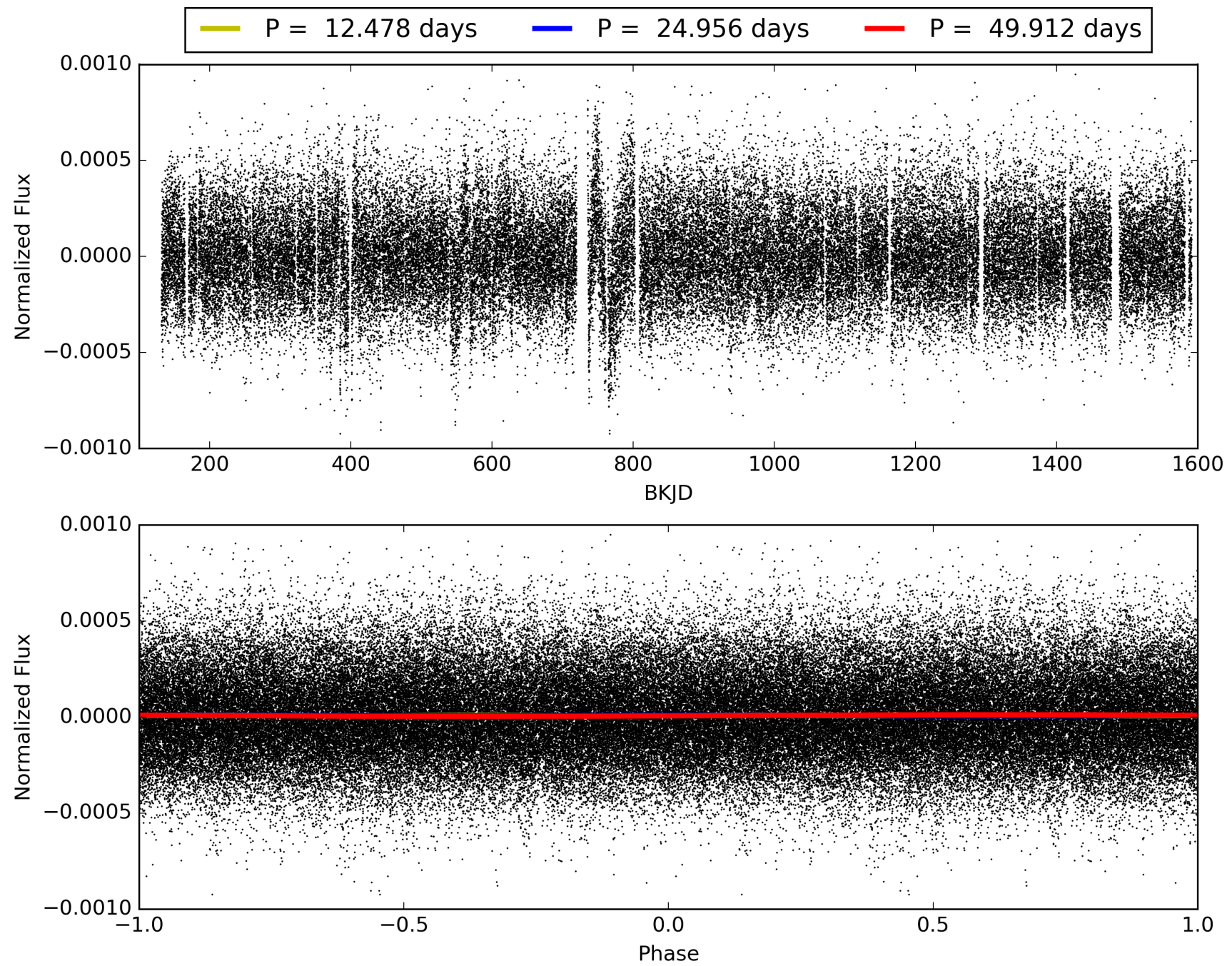
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 05:40:39 Z

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

TCE 008114921-08, PDC Light Curves

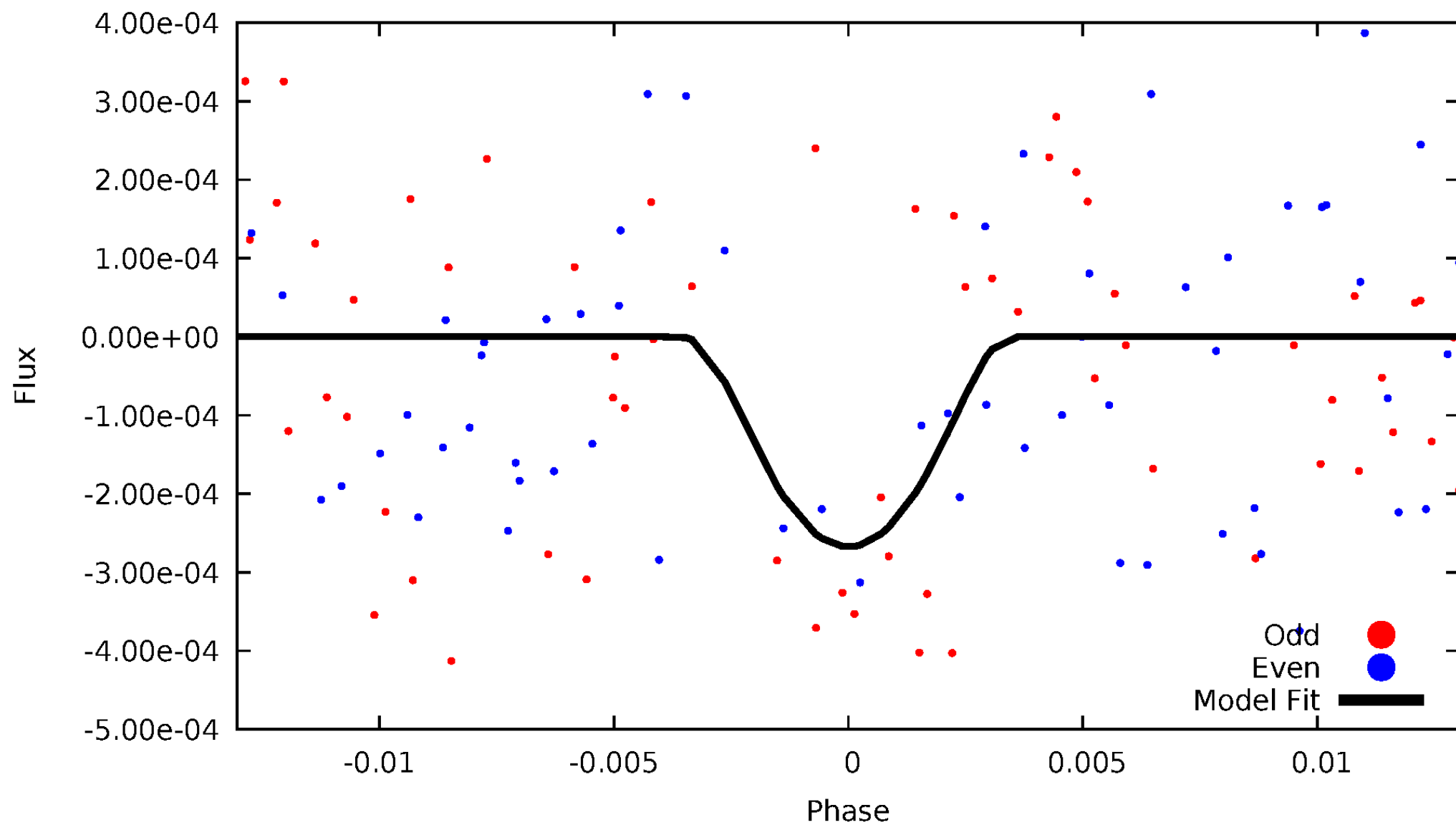


TCE 008114921-08



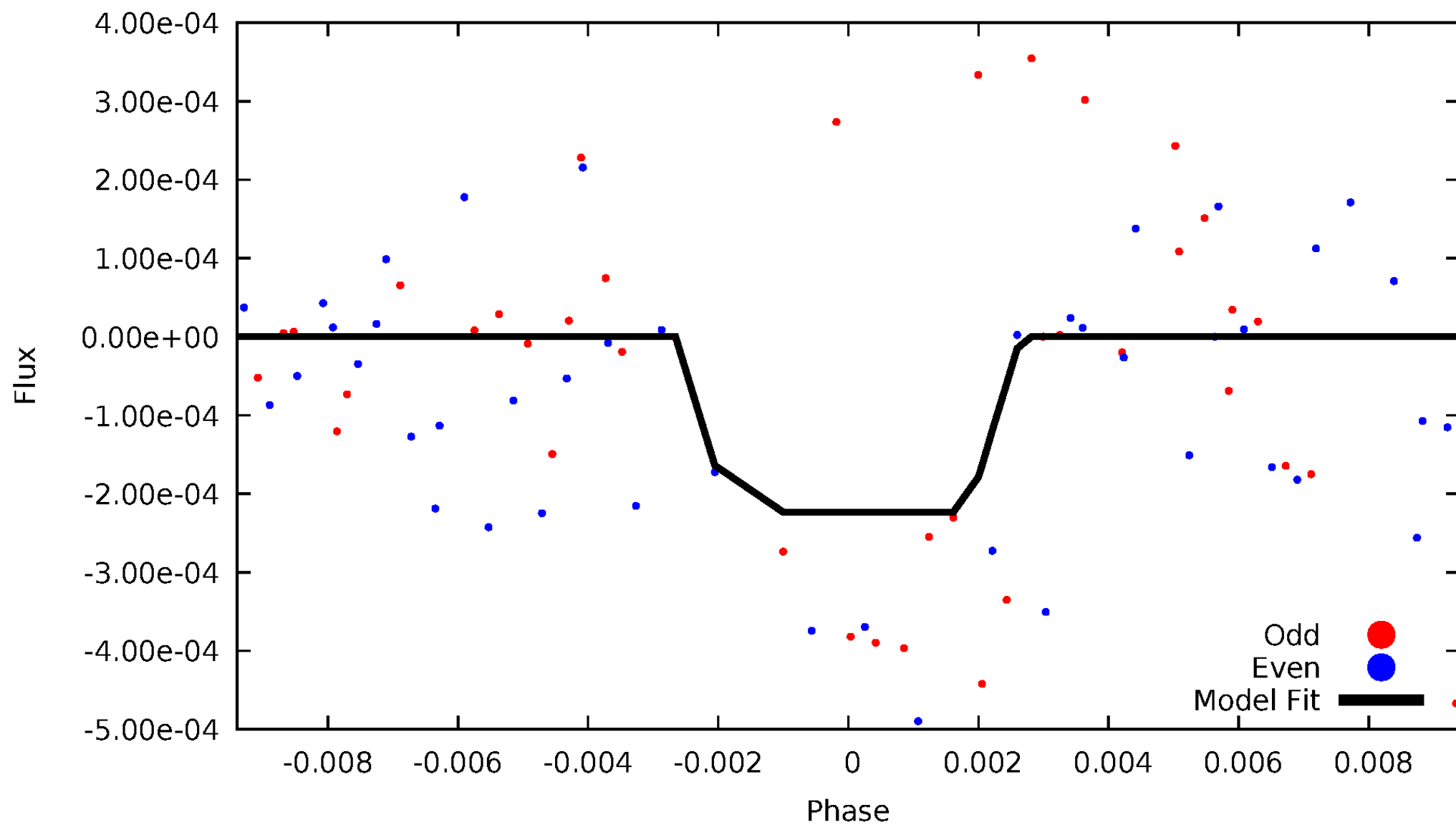
DV Odd/Even

TCE 008114921-08



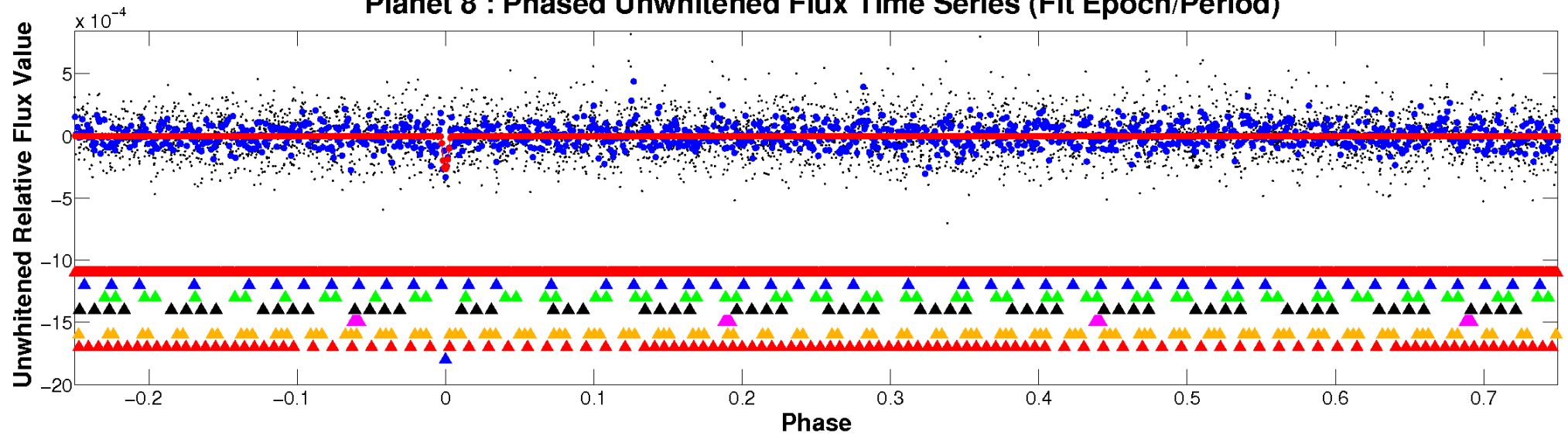
ALT Odd/Even

TCE 008114921-08

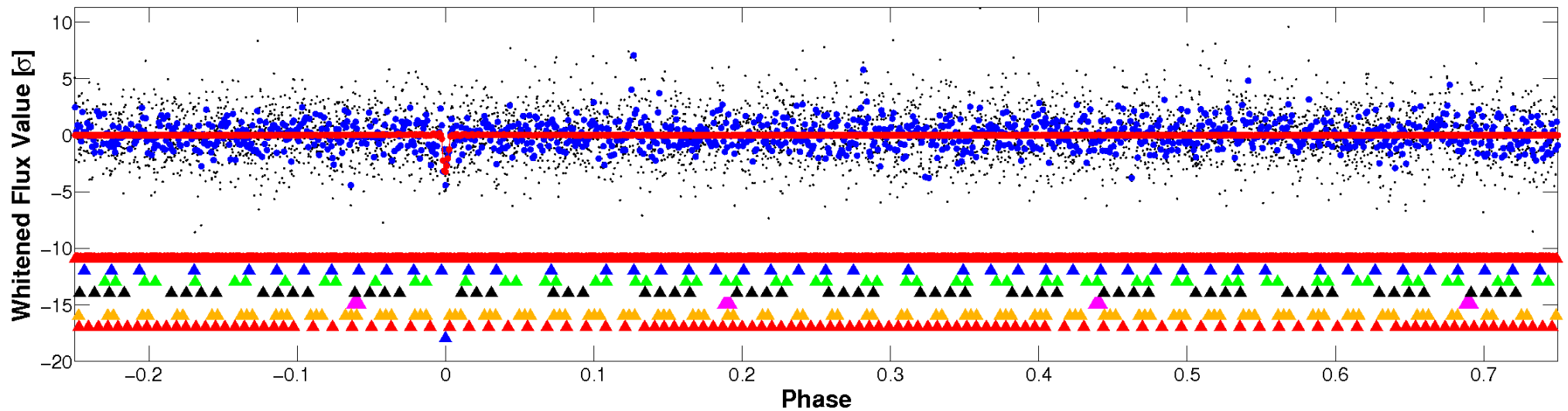


Non-Whitened Vs. Whitened Light Curve

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

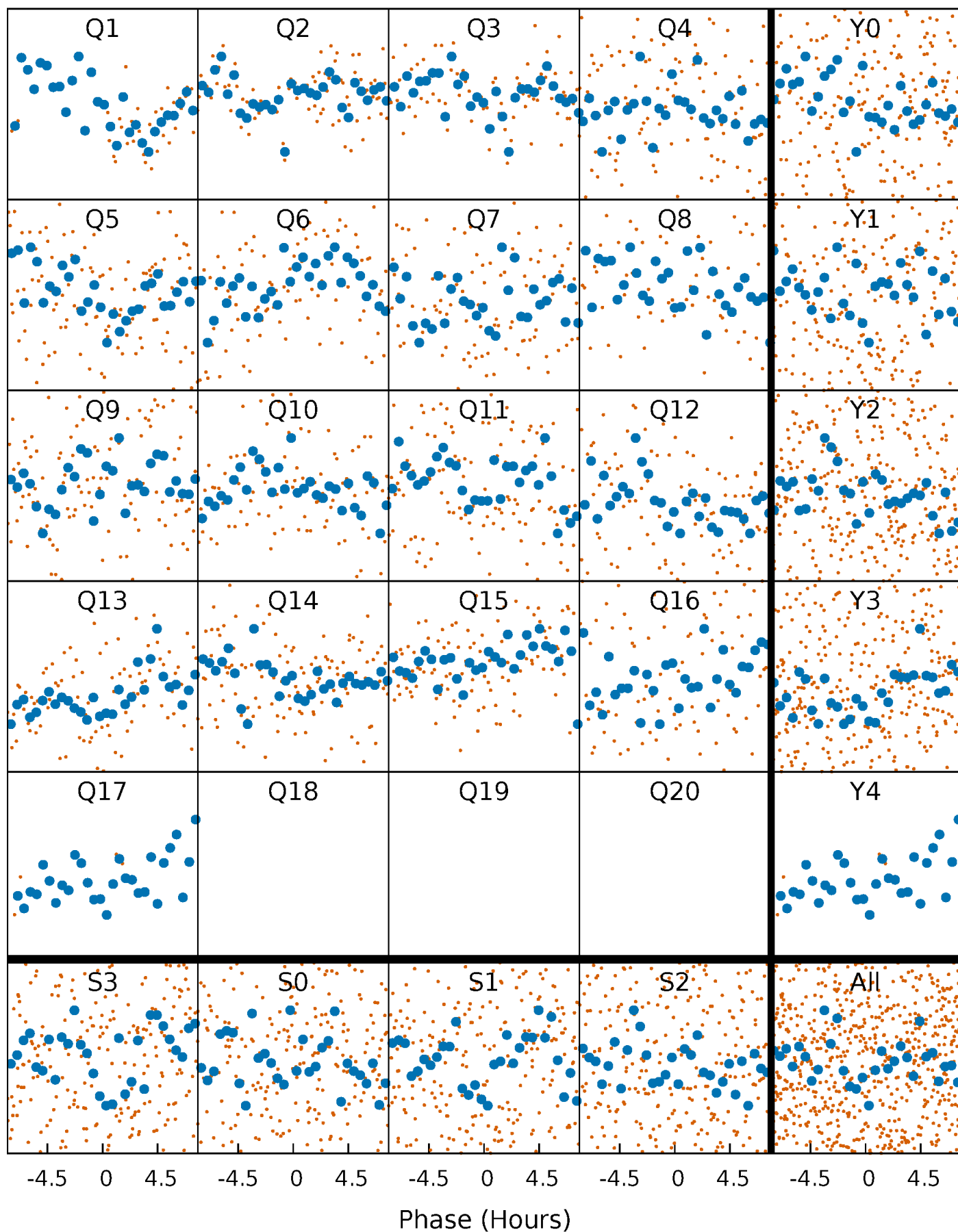


Planet 8 : Phased Whitened Flux Time Series (Fit Epoch/Period)



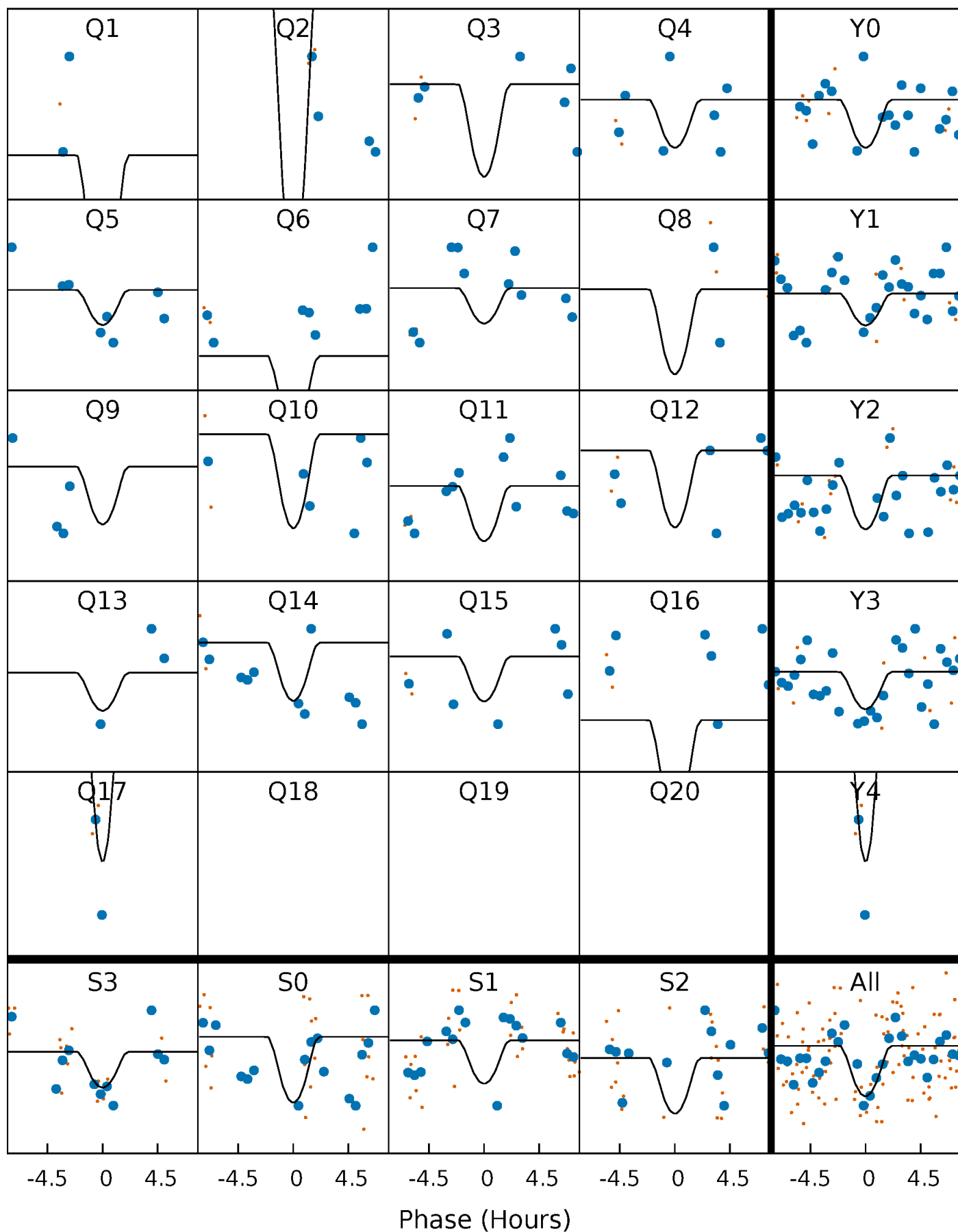
PDC Quarter-Phased Transit Curves

TCE 008114921-08 P= 24.956031 Days $T_0=156.444549$ (BKJD)



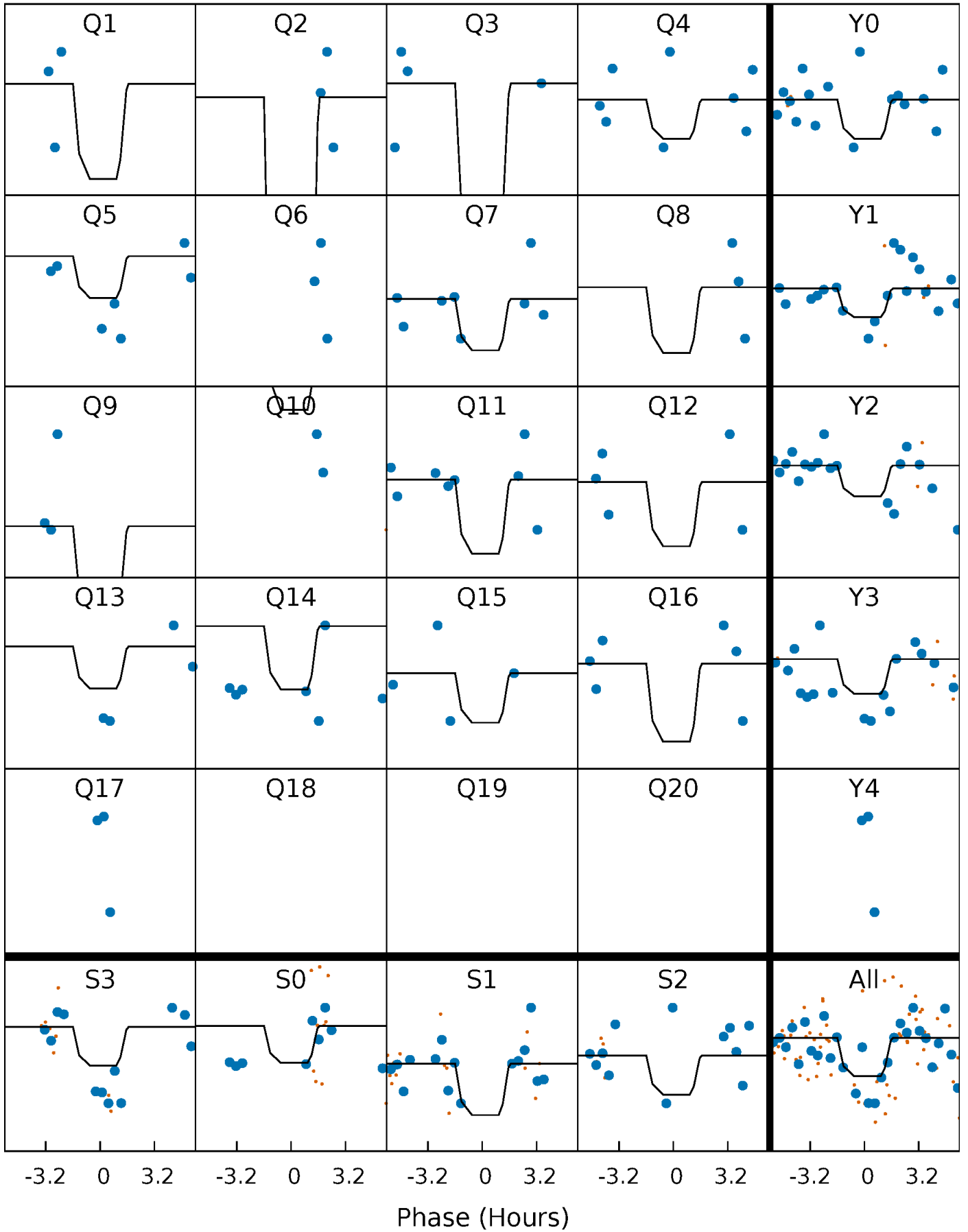
DV Quarter-Phased Transit Curves

TCE 008114921-08 P= 24.956031 Days $T_0=156.444549$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

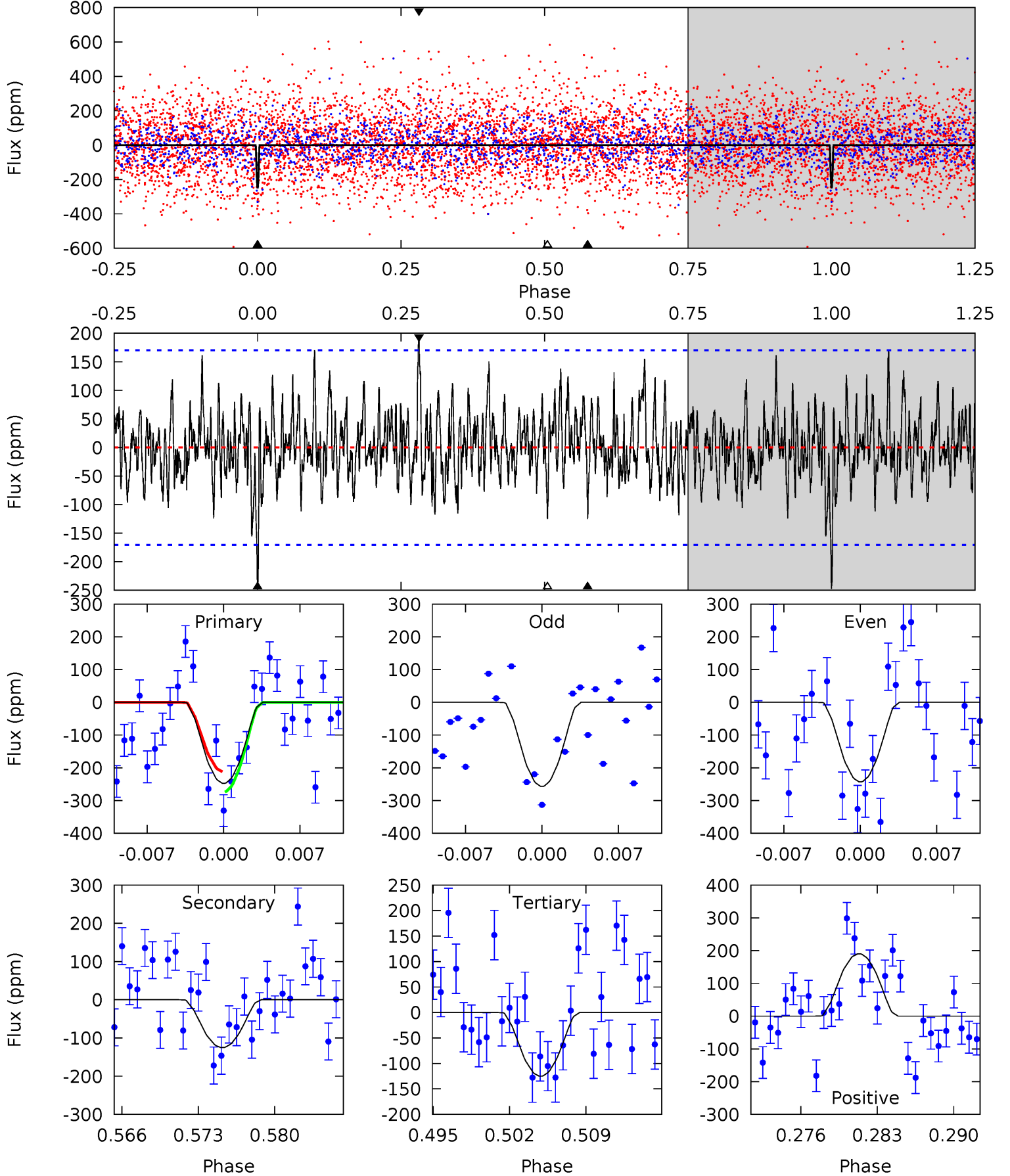
TCE 008114921-08 P= 24.955877 Days $T_0=156.432864$ (BKJD)



DV Model-Shift Uniqueness Test

008114921-08, P = 24.956031 Days, E = 131.488518 Days

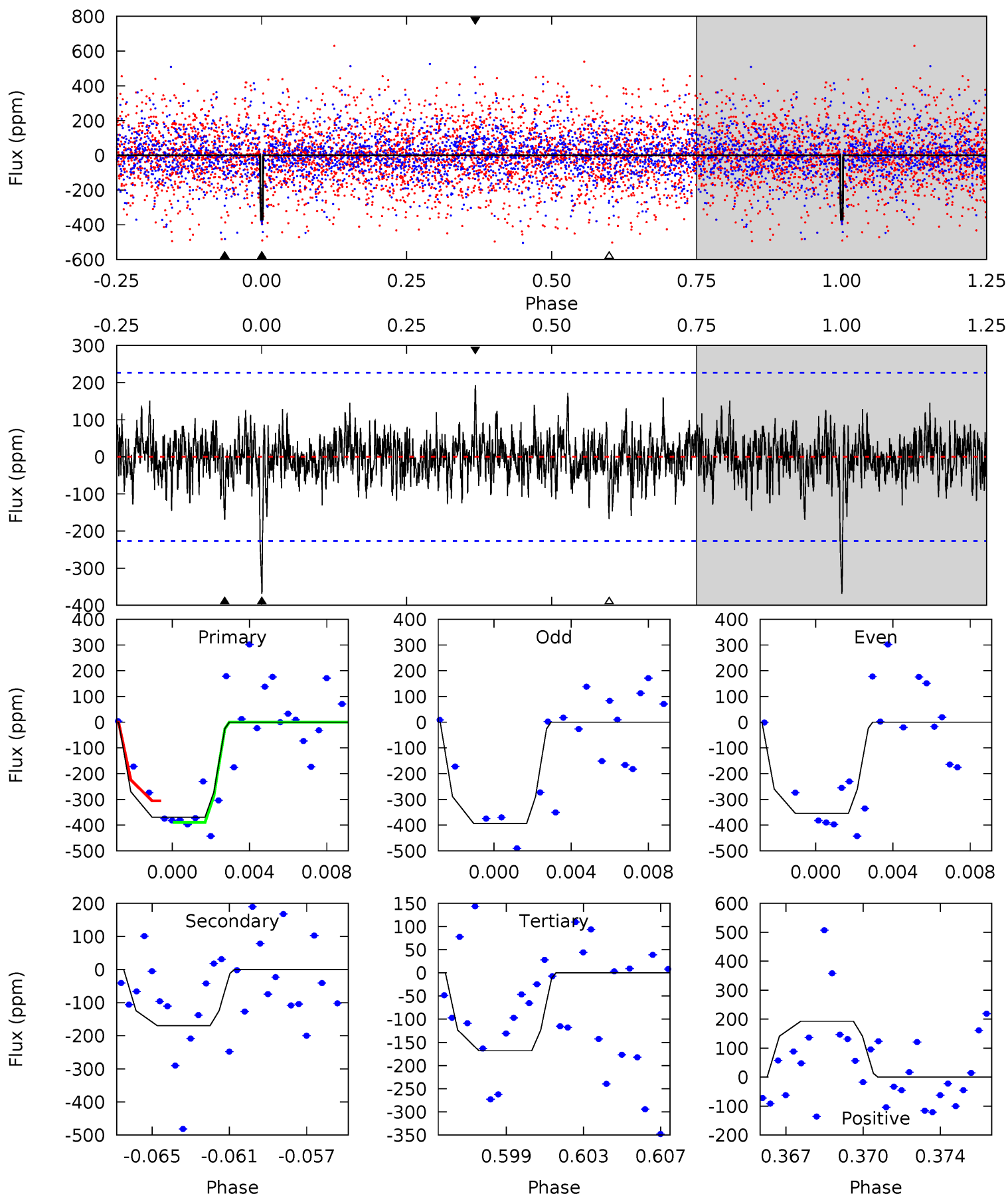
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.39	3.74	3.73	5.68	5.09	2.69	1.53	3.66	1.71	0.01	-1.94	0.20	0.45	0.43	0.85



Alt Model-Shift Uniqueness Test

008114921-08, P = 24.955877 Days, E = 131.476987 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.47	3.89	3.86	4.42	5.21	2.89	1.10	4.61	4.05	0.03	-0.53	0.45	0.78	0.34	0



Stellar Parameters For KIC 008114921

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6539^{+155}_{-214}	$4.318^{+0.087}_{-0.203}$	$-0.080^{+0.250}_{-0.300}$	$1.265^{+0.410}_{-0.176}$	$1.217^{+0.192}_{-0.157}$	$0.847^{+0.338}_{-0.463}$
	+2%/-3%	+2%/-5%	+312%/-375%	+32%/-14%	+16%/-13%	+40%/-55%
Source	PHO1	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 008114921-08 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-125 ± 33	$10.68^{+11.35}_{-7.34}$	1087^{+79}_{-59}	3102^{+1535}_{-592}	19^{+172}_{-15}
Alt.	-170 ± 44	$9.91^{+10.91}_{-7.11}$	1085^{+87}_{-55}	3361^{+2002}_{-663}	29^{+362}_{-23}

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 $A_{obs} \gg 1.0$

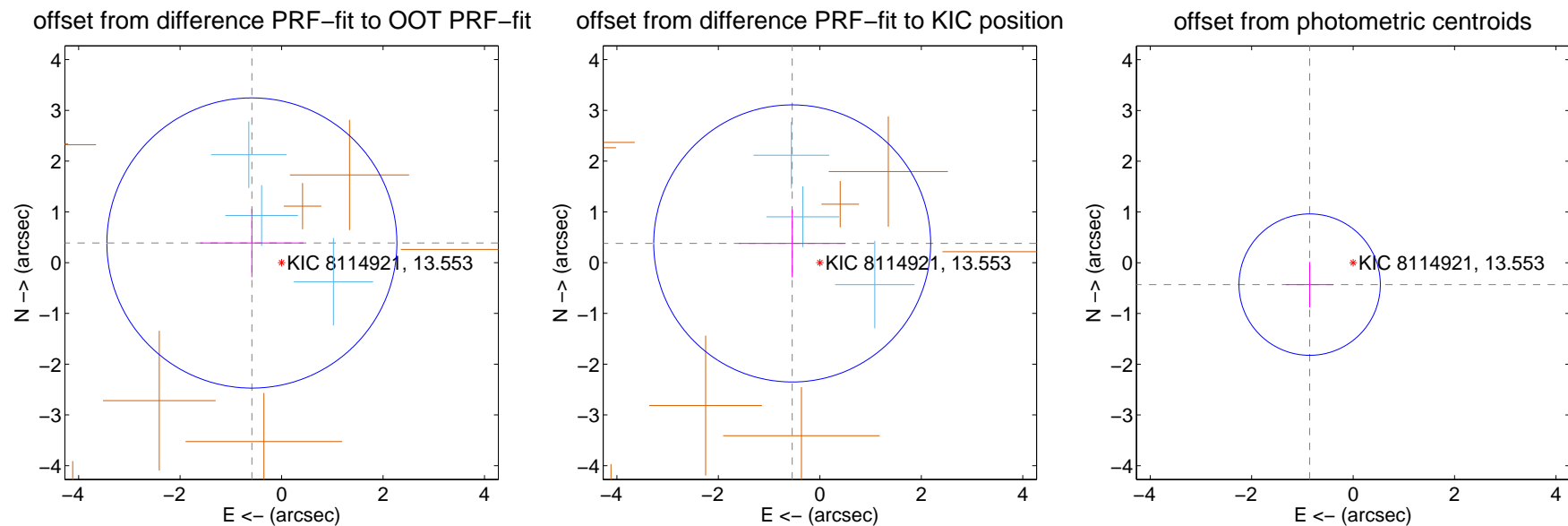
DV Centroid Data

Supplemental centroid analysis for 008114921-08. Kepler magnitude: 13.55. Transit SNR 10.52

There are 3 quarters with good PRF difference image offsets

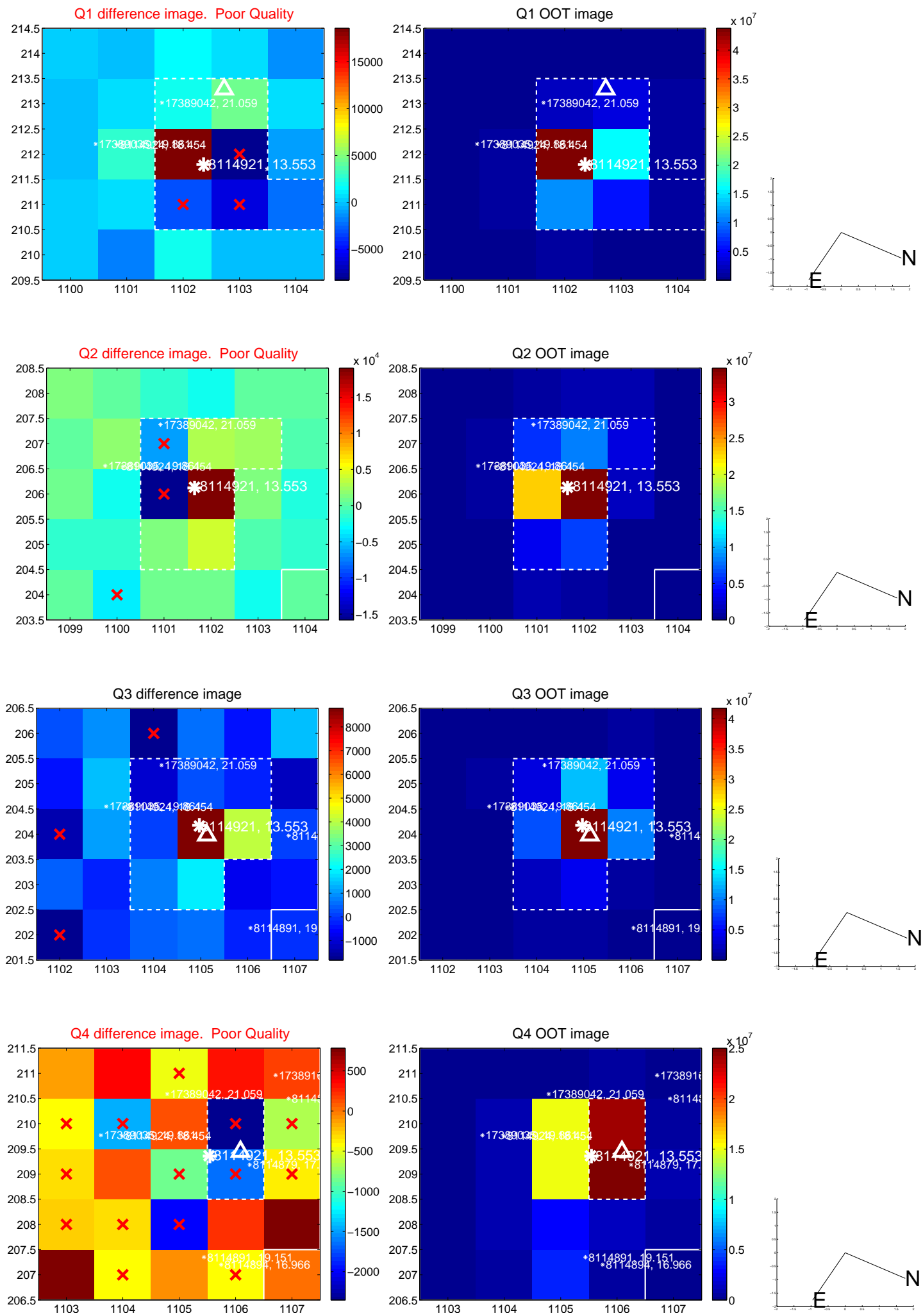
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.702 ± 0.953	0.74	0.585 ± 1.018	0.387 ± 0.673
PRF-fit source offset from KIC position	0.664 ± 0.910	0.73	0.545 ± 1.054	0.378 ± 0.669
photometric centroid source offset	0.96 ± 0.46	2.07	0.86 ± 0.47	-0.43 ± 0.45

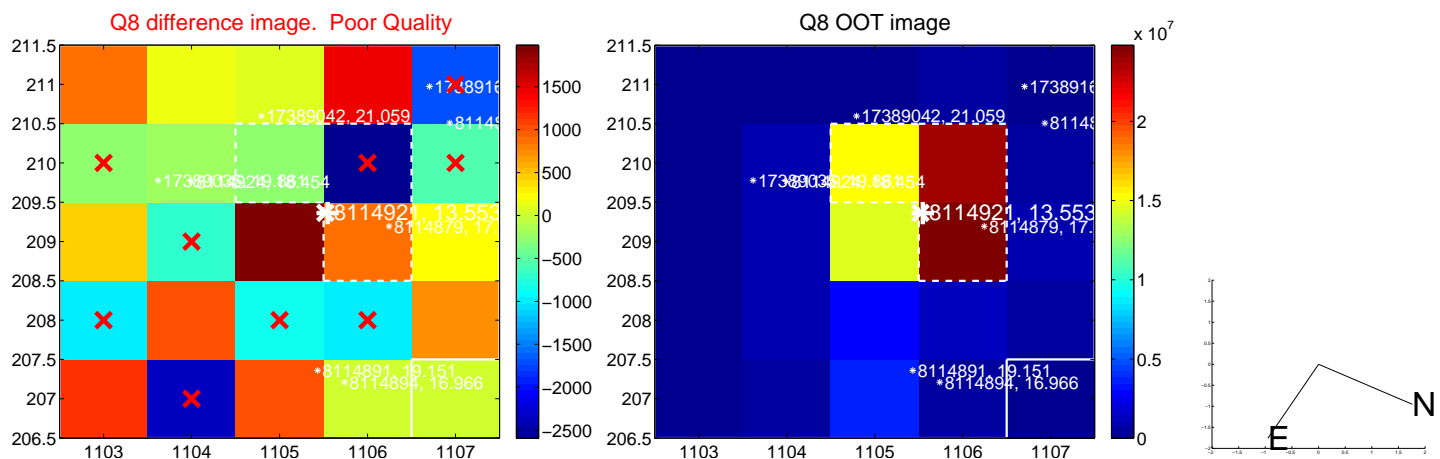
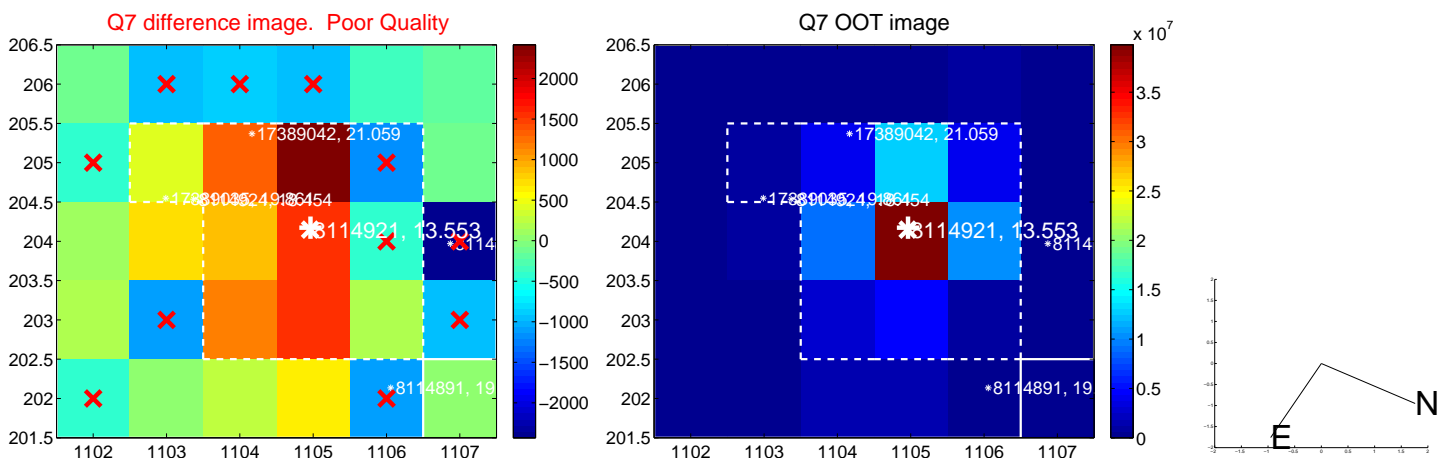
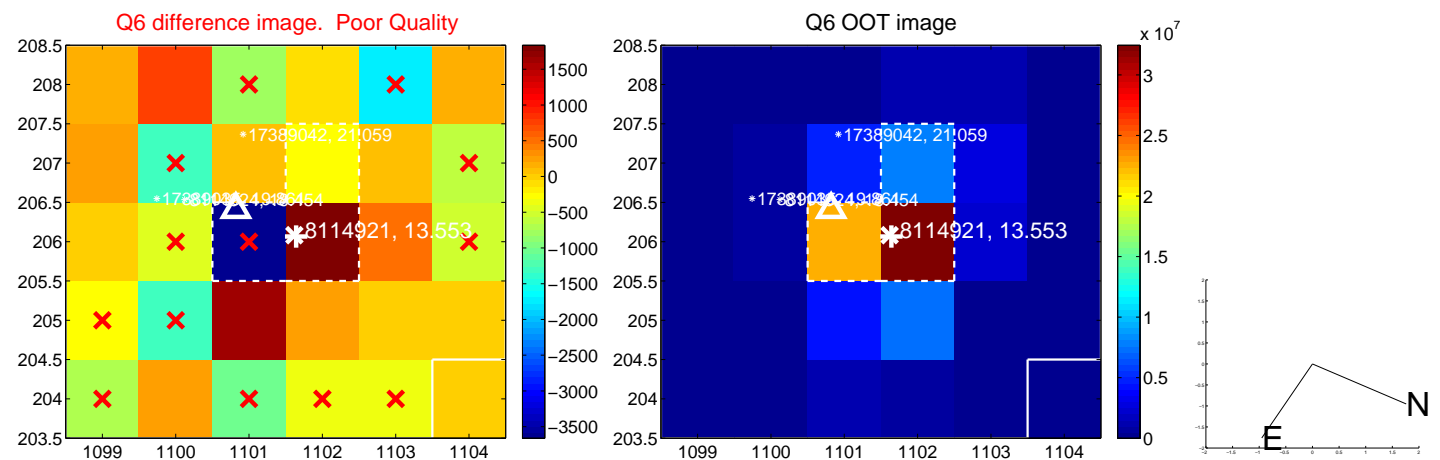
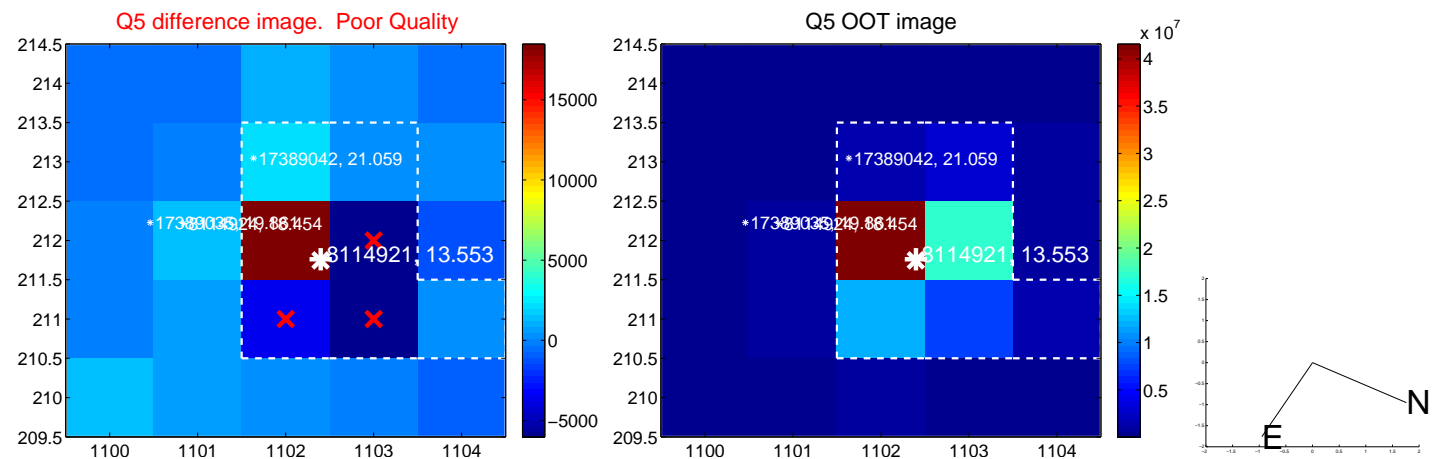


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

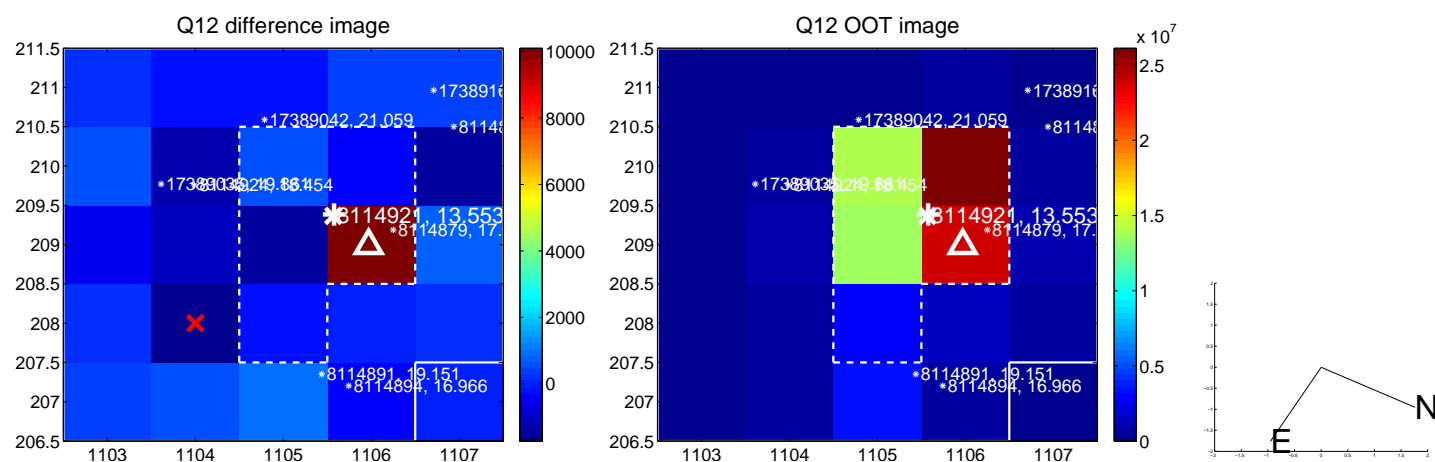
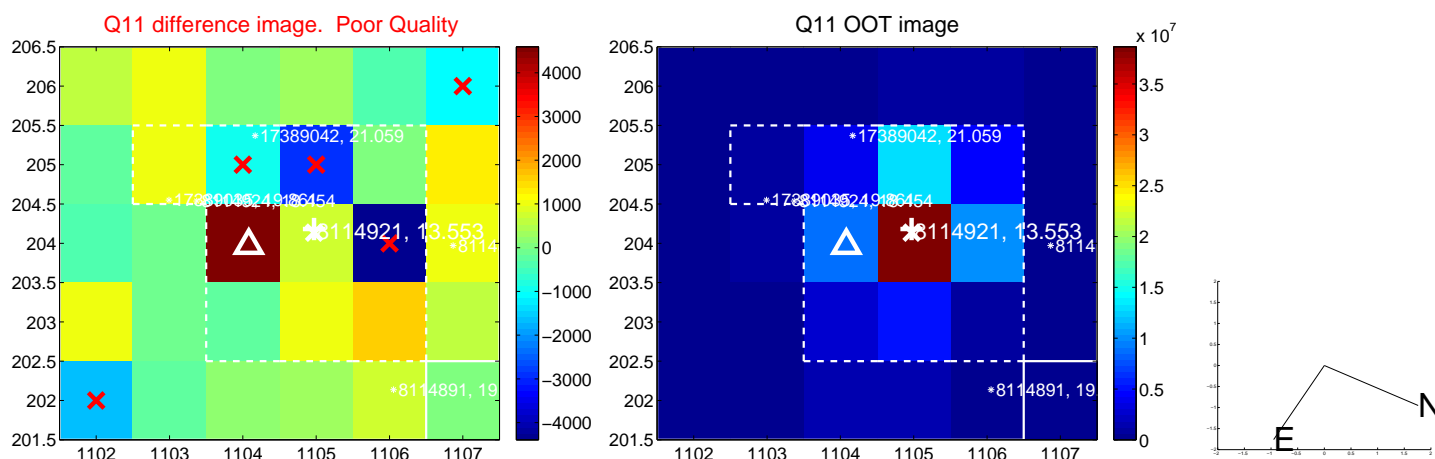
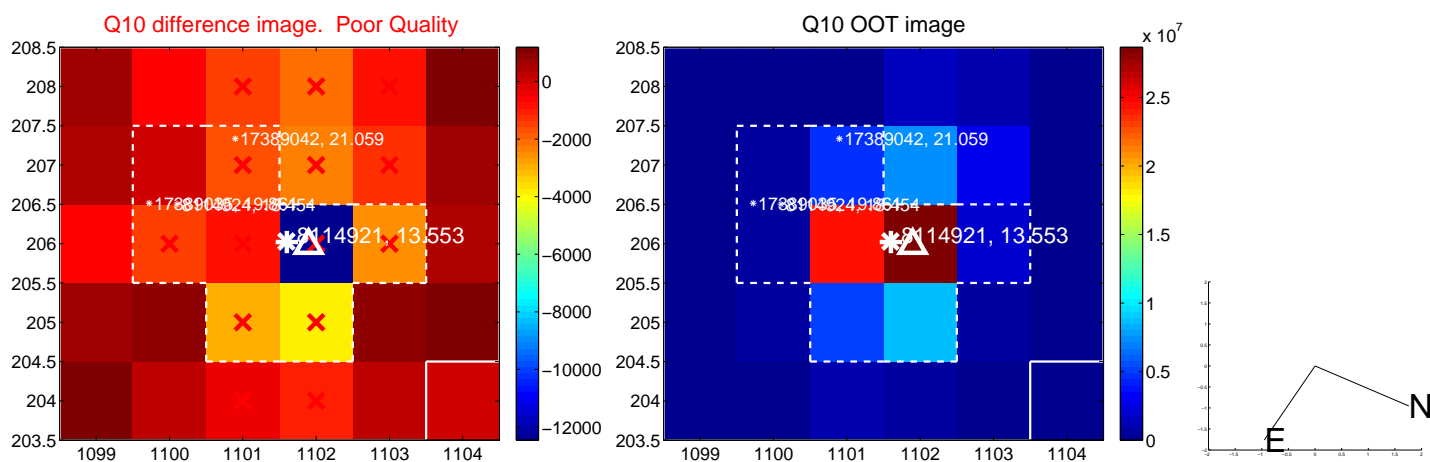
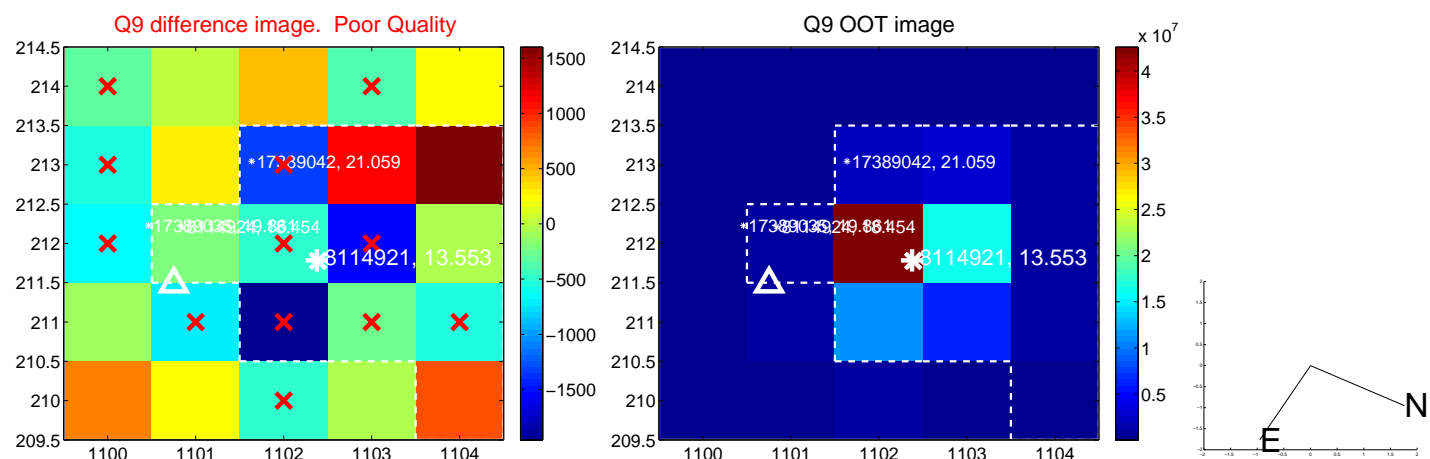
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



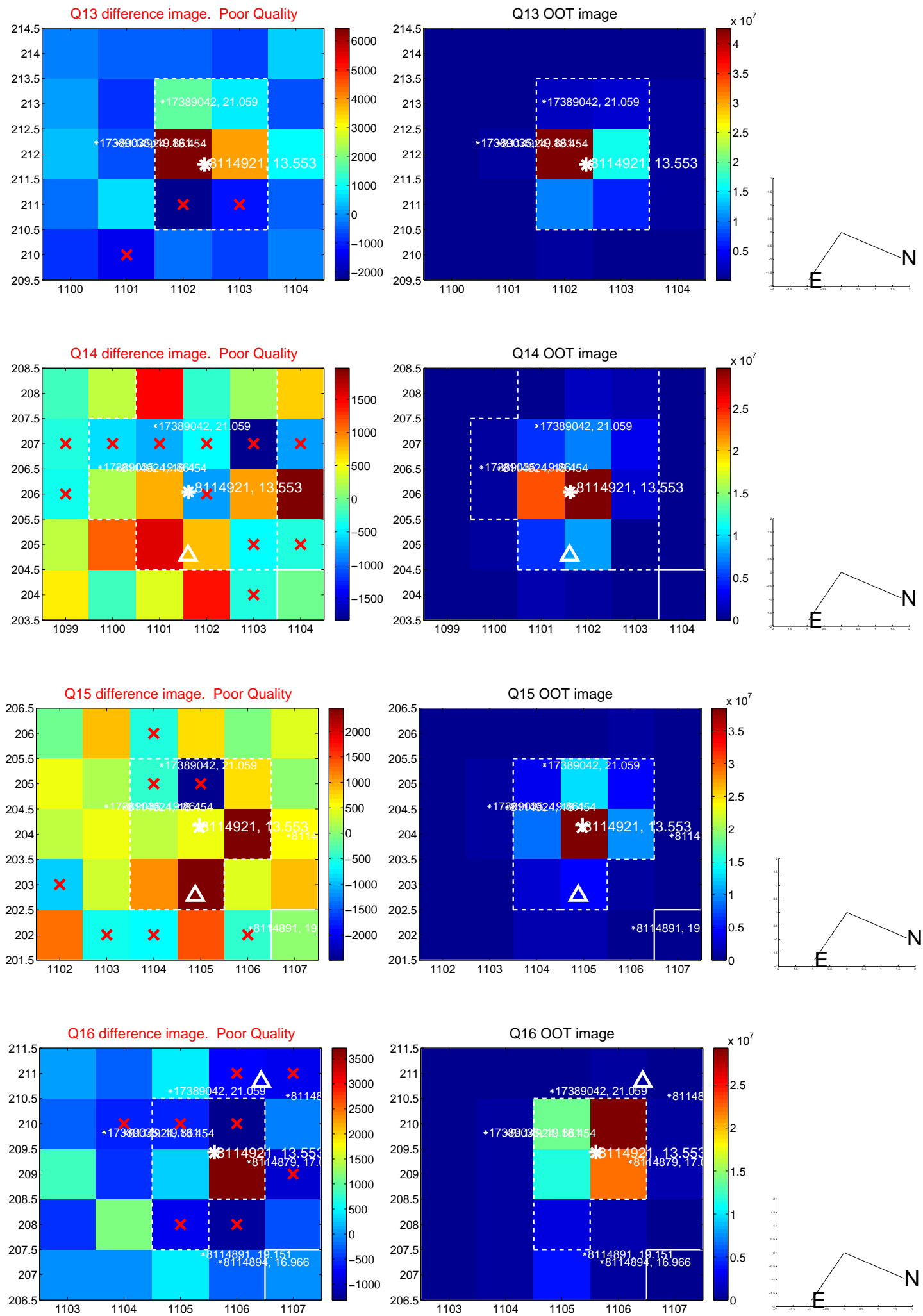
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



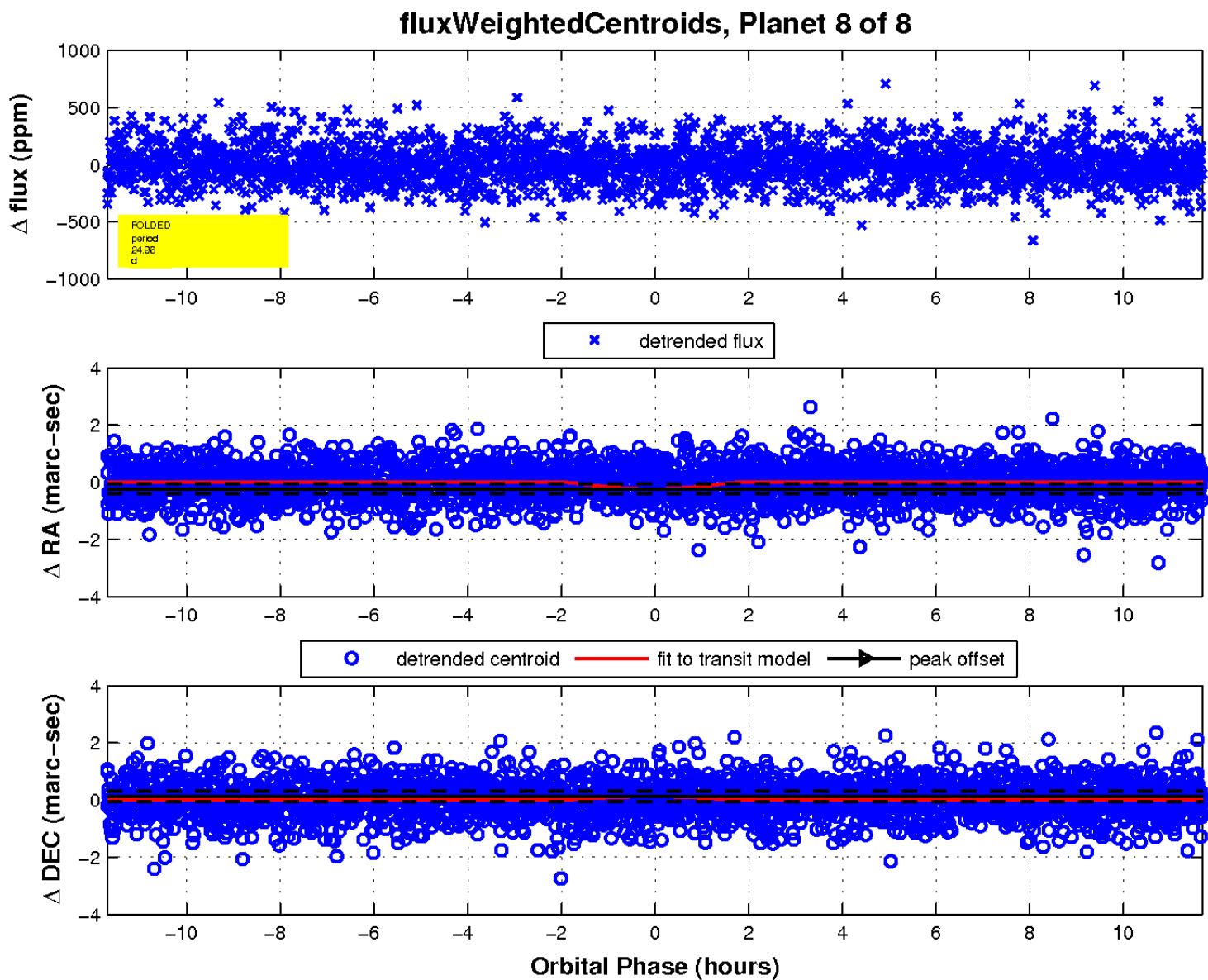
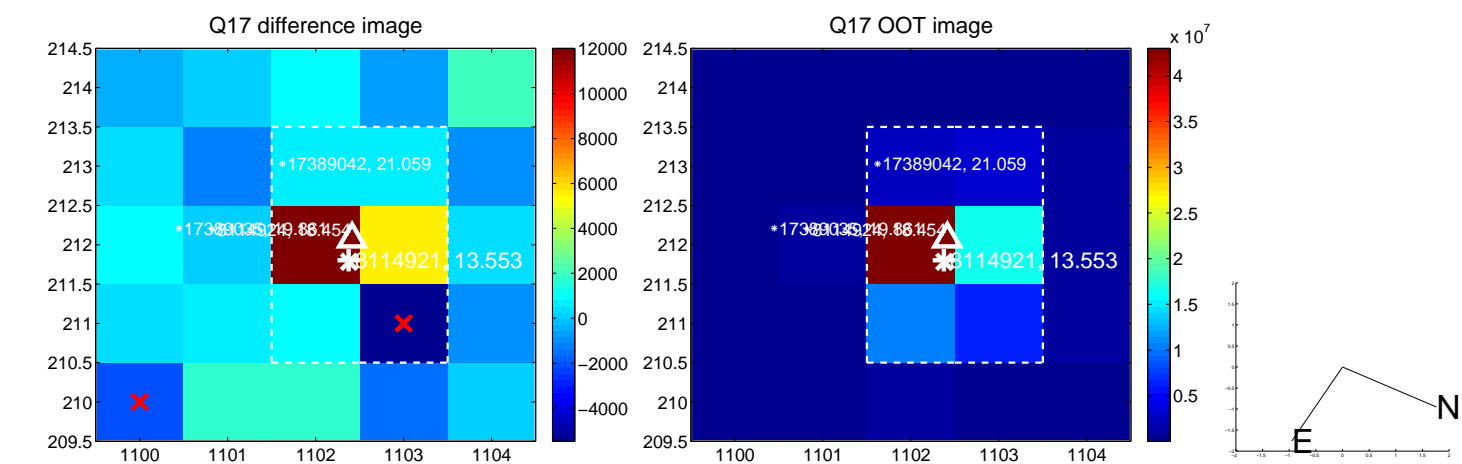
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

