

KIC 011084474

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})
011084474-01	OBS	No	0.845653	132.220992	50.3	2.443	16.3	5.1	1.72	5263	1.47	7346.70
011084474-02	OBS	No	0.845683	131.552237	125.3	2.309	11.8	10.4	1.72	5263	2.35	7346.35

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011084474-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—HALO_GHOST
011084474-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD

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

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

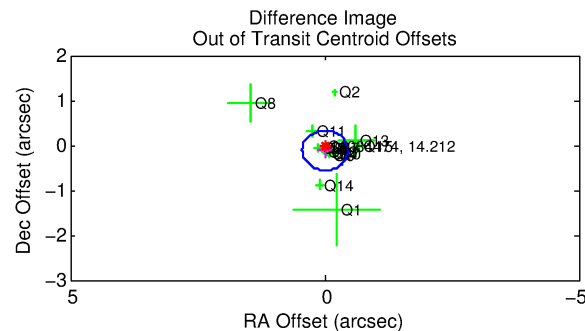
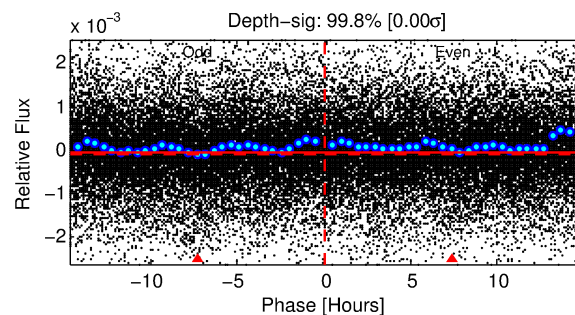
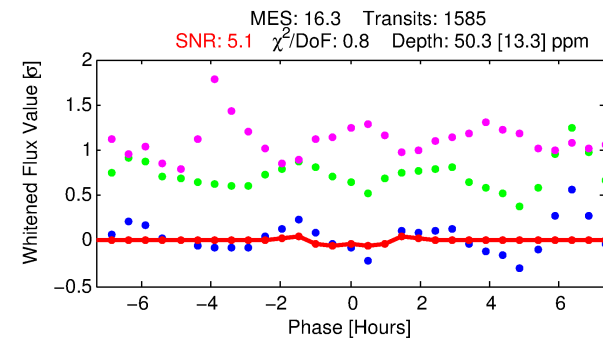
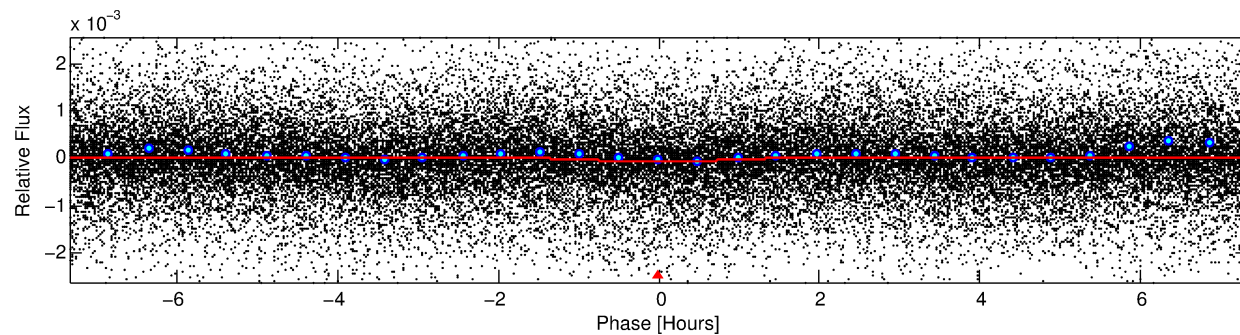
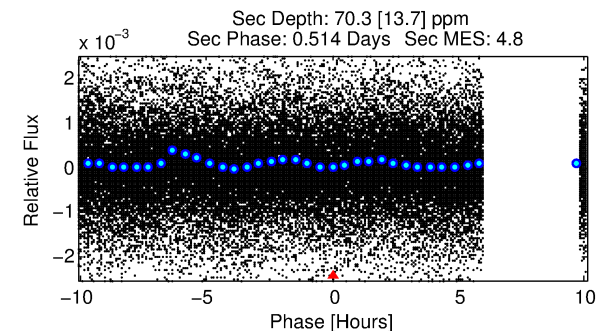
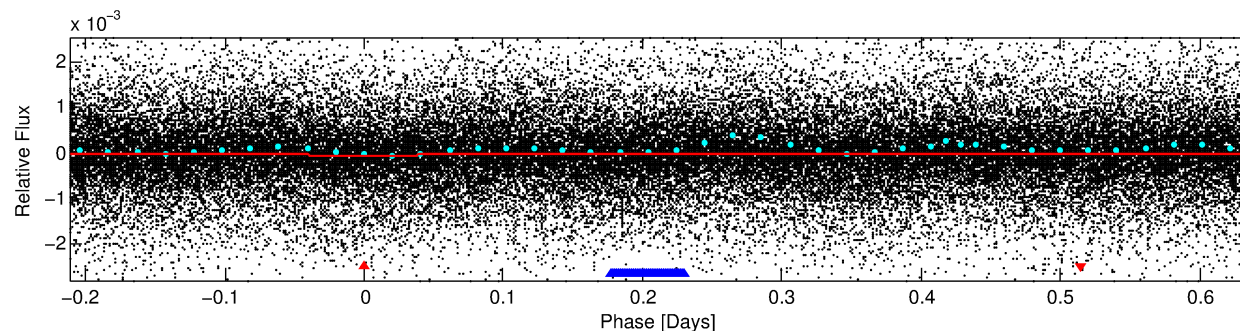
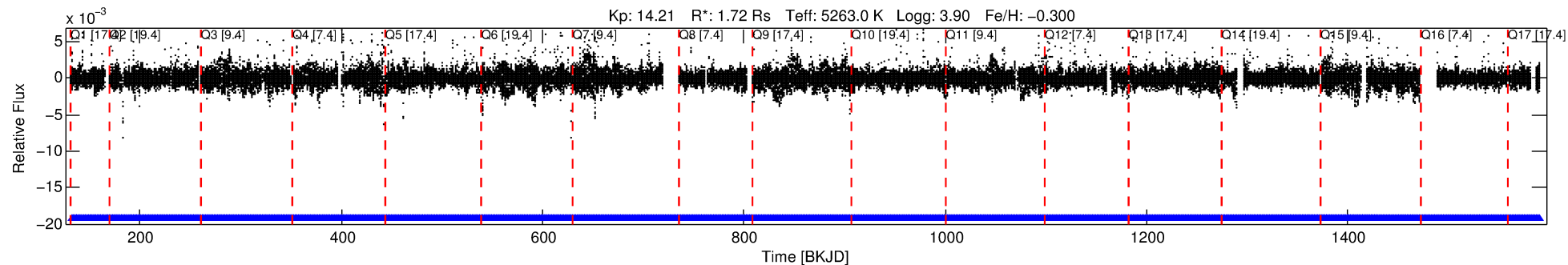
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011084474-01

No Significant Match Found

DV One-Page Summary

KIC: 11084474 Candidate: 1 of 2 Period: 0.846 d



DV Fit Results:

Period = 0.84565 [0.00002] d
Epoch = 132.2210 [0.0029] BKJD
Rp/R* = 0.0078 [0.0047]
a/R* = 1.52 [2.24]
b = 0.90 [0.56]
Seff = 7346.70 [8440.11]
Teq = 2361 [678] K
Rp = 1.47 [1.27] Re
a = 0.0166 [0.0112] AU
Ag = 4.97 [8.26] [0.48σ]
Teffp = 5451 [1651] K [1.73σ]

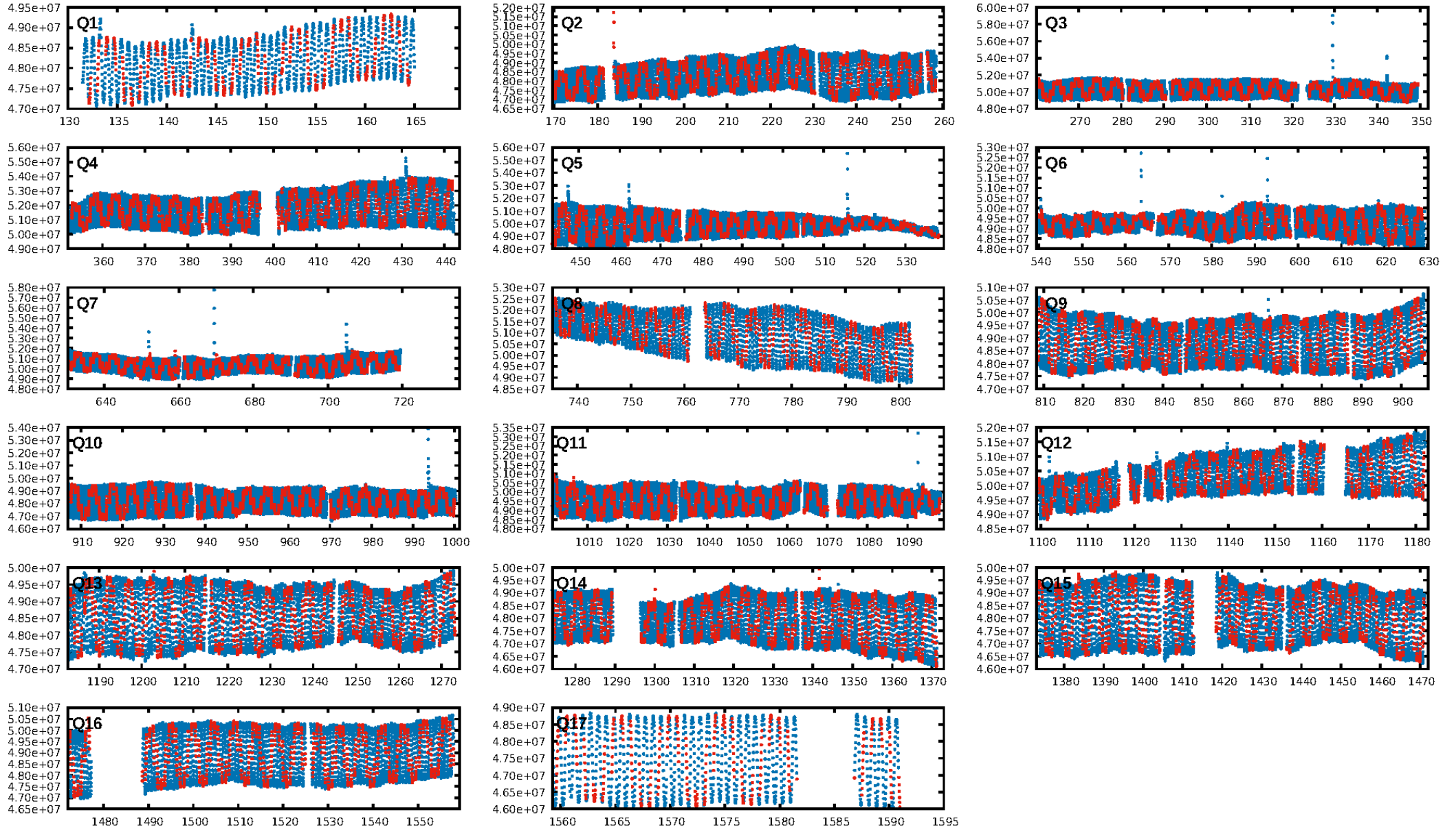
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.70e-52
RollingBand-fgt: 1.00 [1515/1515]
GhostDiagnostic-chr: -0.08629
Centroid-sig: 81.4%
Centroid-so: 0.414 arcsec [0.58σ]
OotOffset-rm: 0.117 arcsec [0.79σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-rm: 0.147 arcsec [0.91σ]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.29 [5/17]
DiffImageOverlap-fno: 0.00 [0/17]

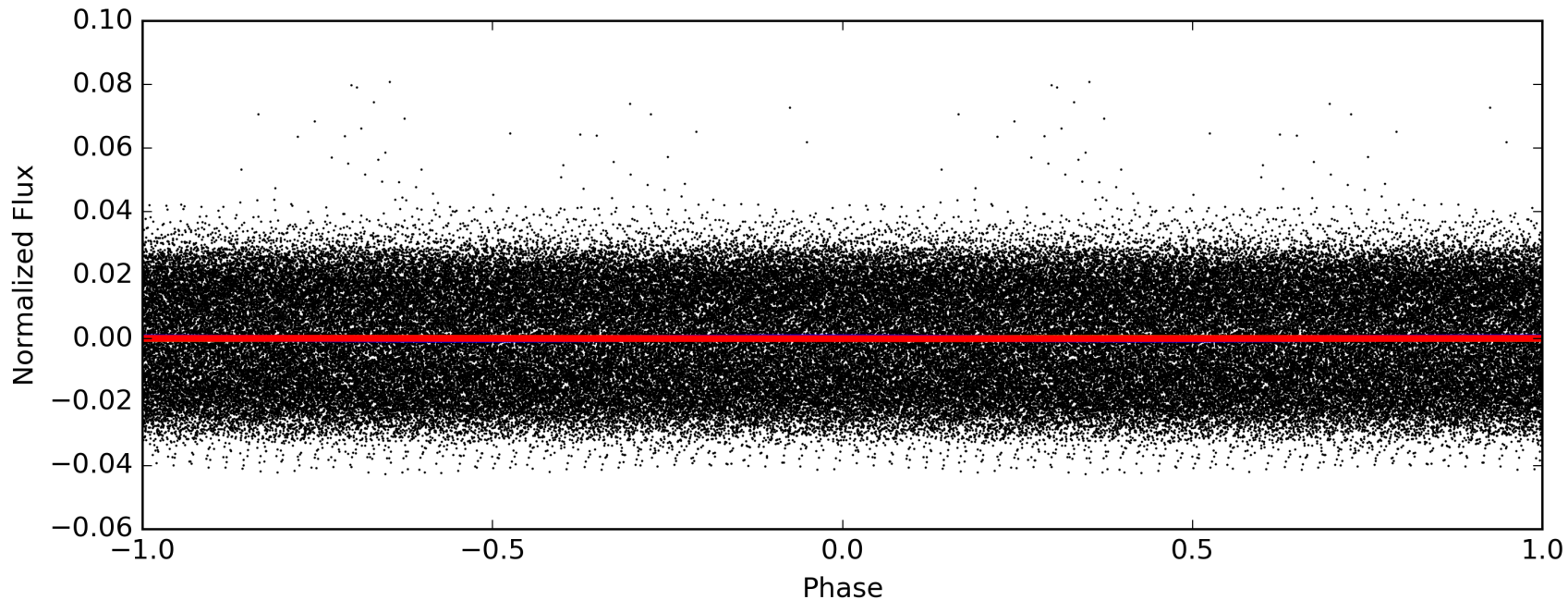
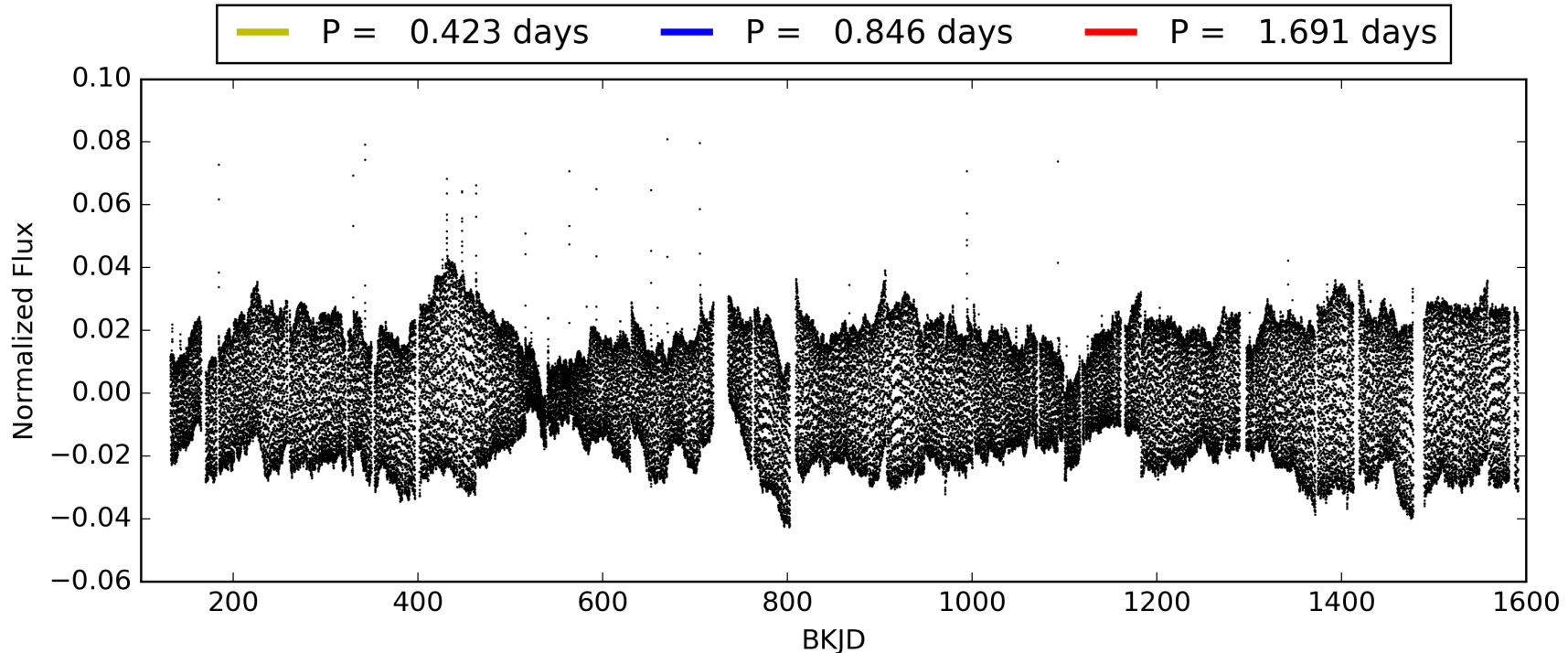
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 15:16:37 Z

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

TCE 011084474-01, PDC Light Curves

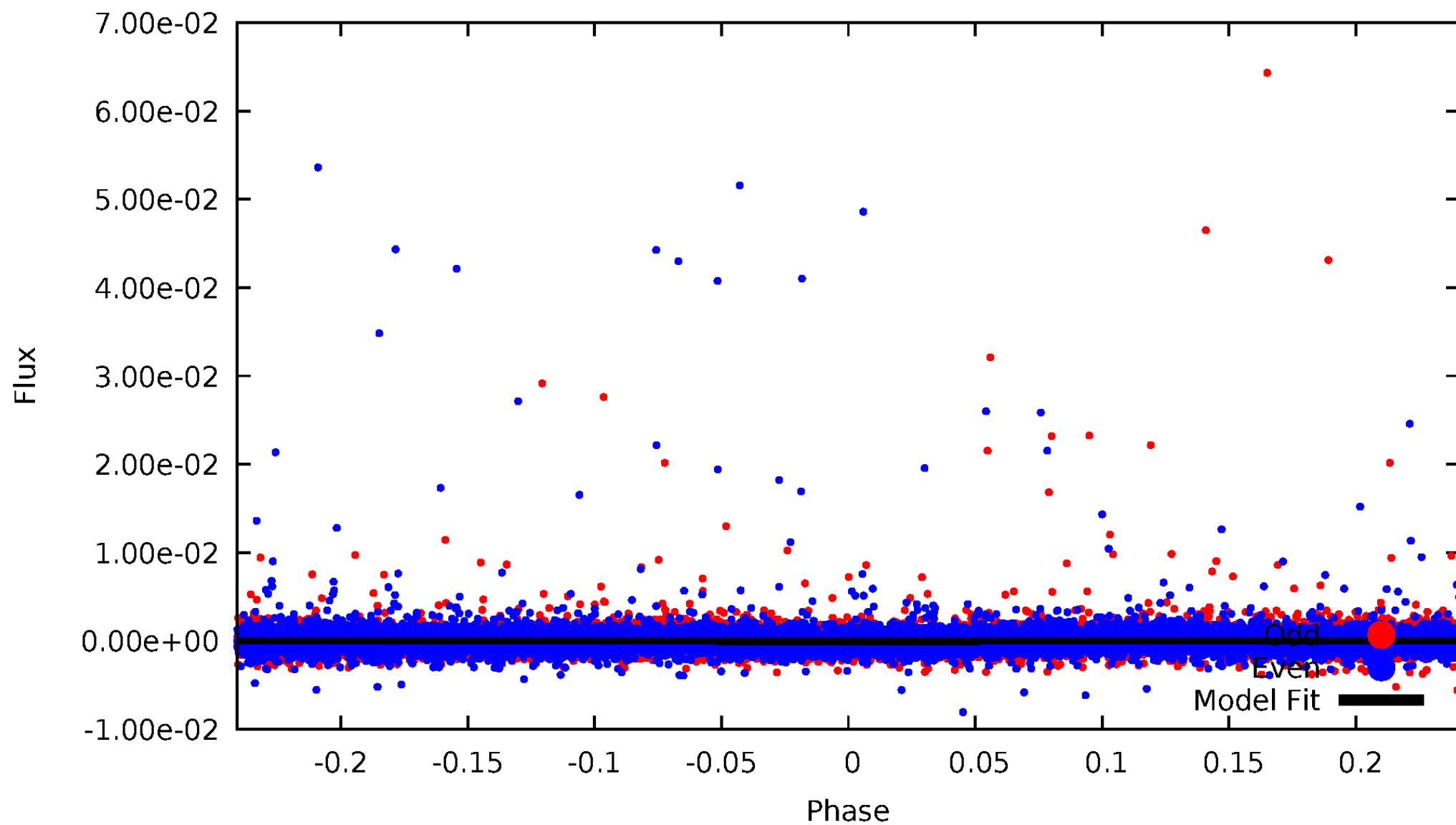


TCE 011084474-01



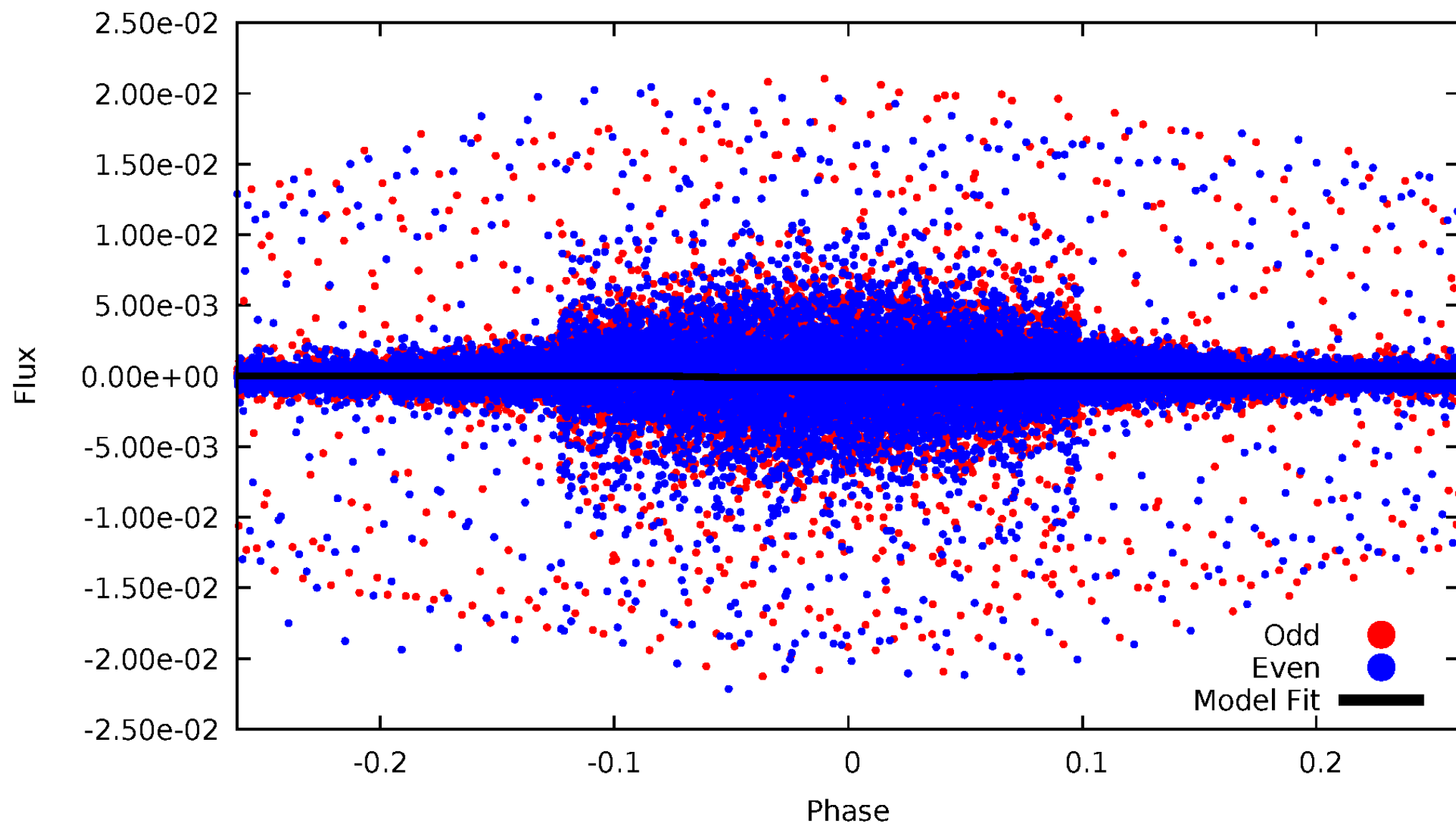
DV Odd/Even

TCE 011084474-01



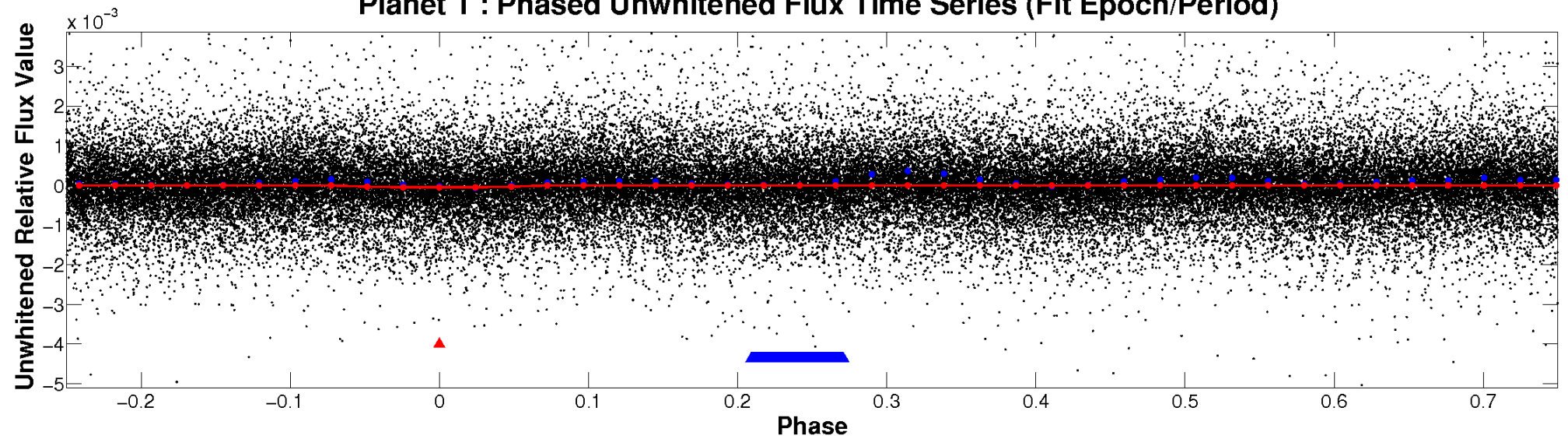
ALT Odd/Even

TCE 011084474-01

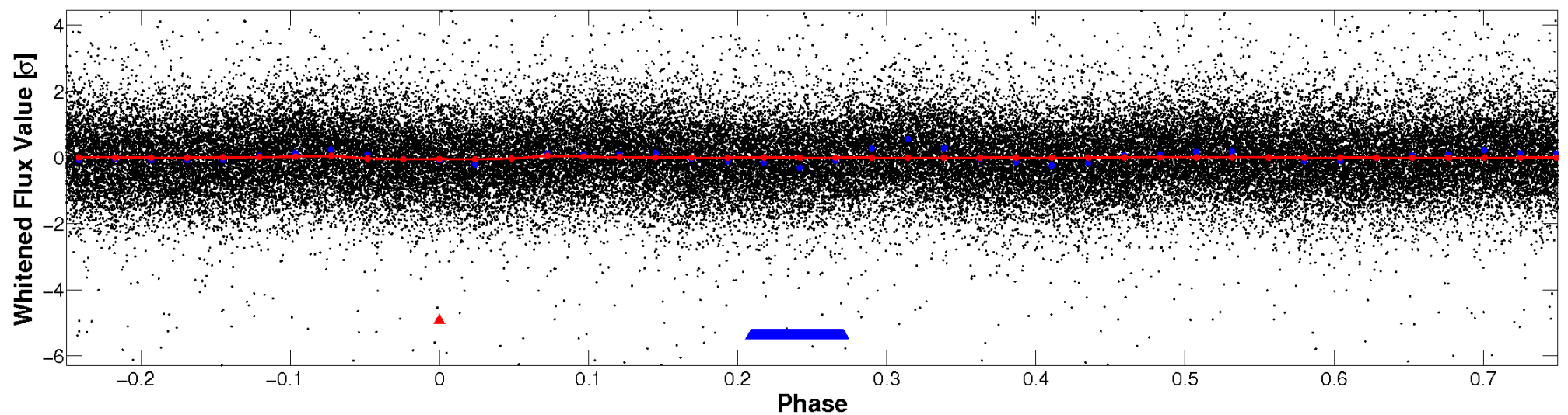


Non-Whitened Vs. Whitened Light Curve

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

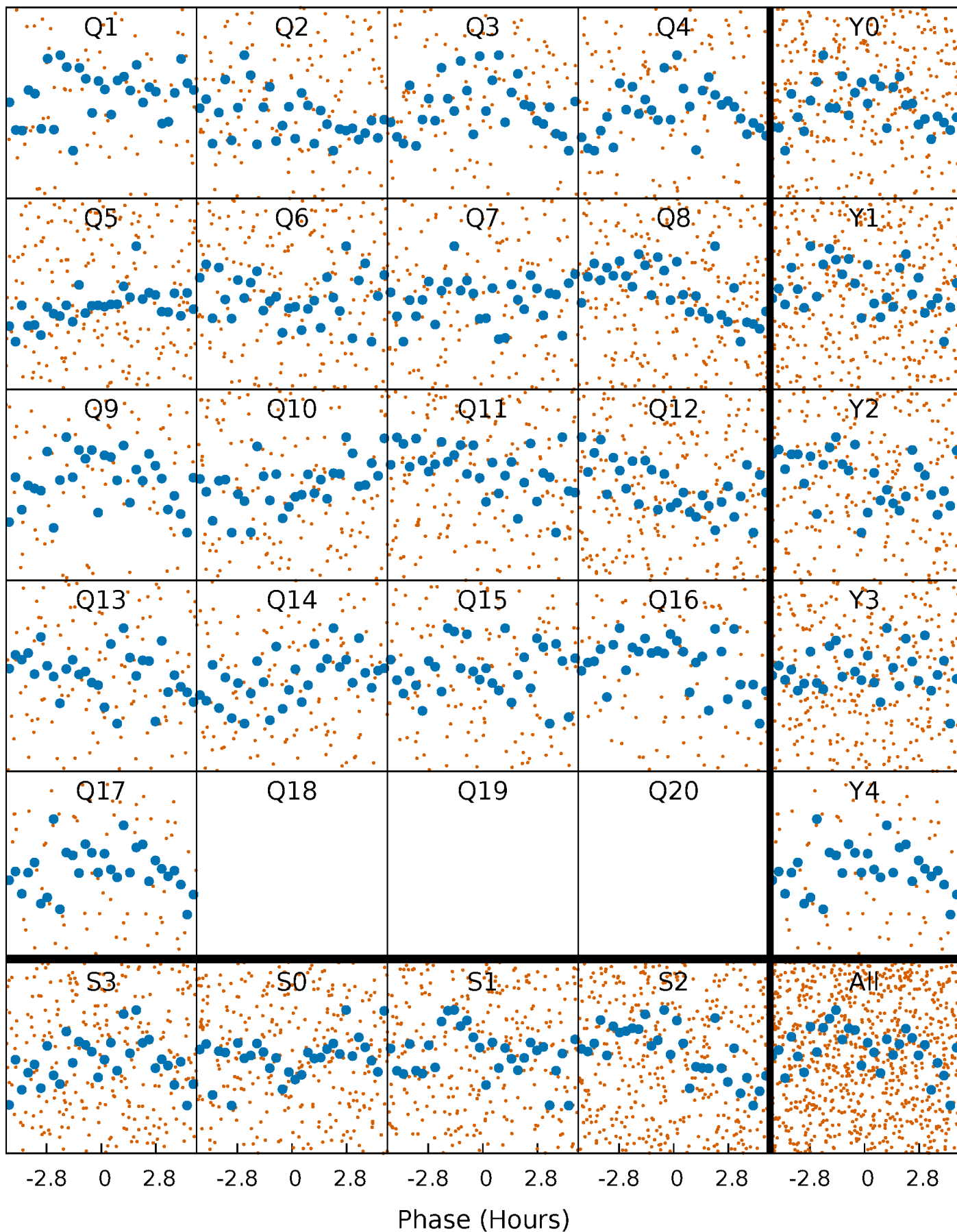


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



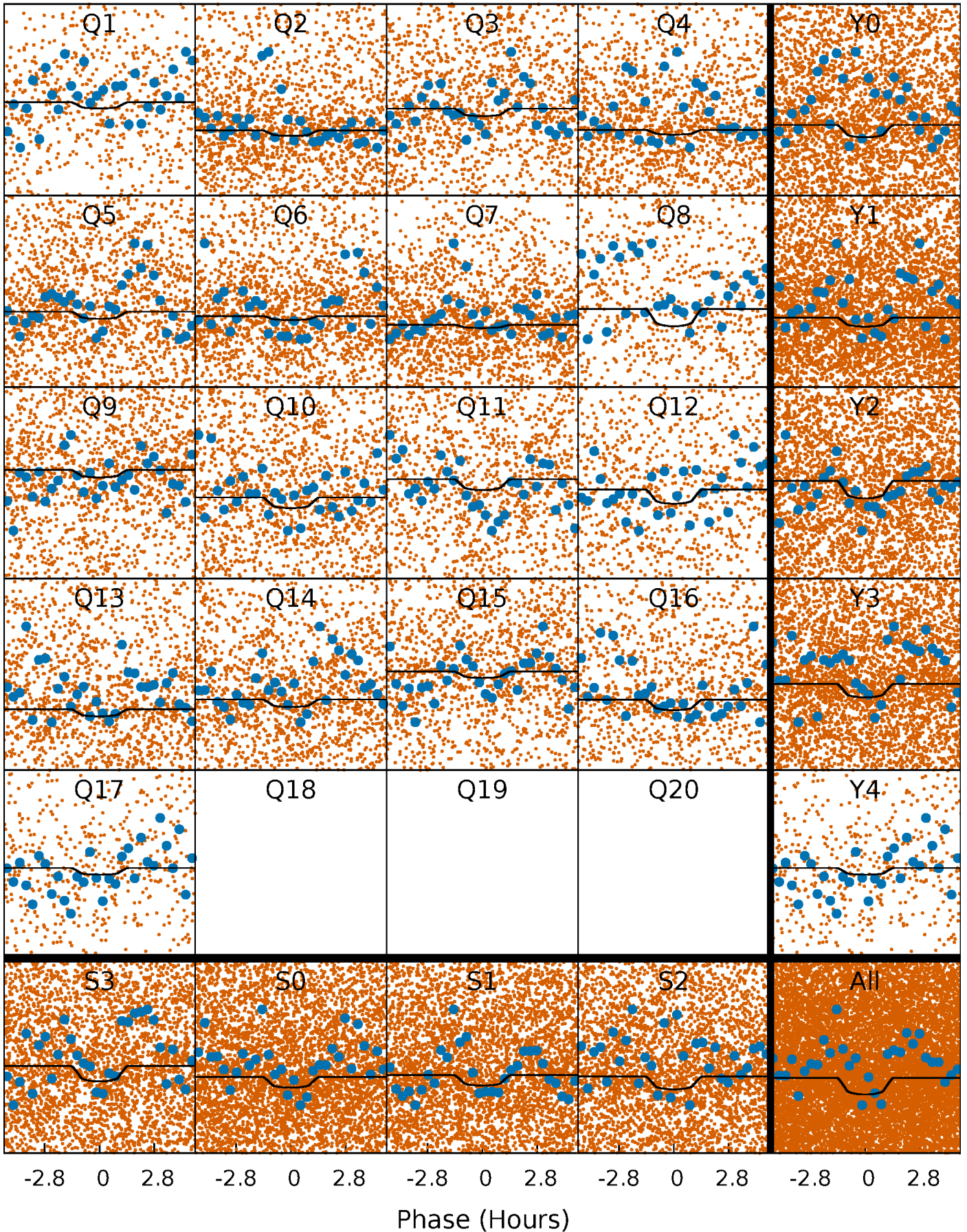
PDC Quarter-Phased Transit Curves

TCE 011084474-01 P= 0.845653 Days $T_0=132.220992$ (BKJD)



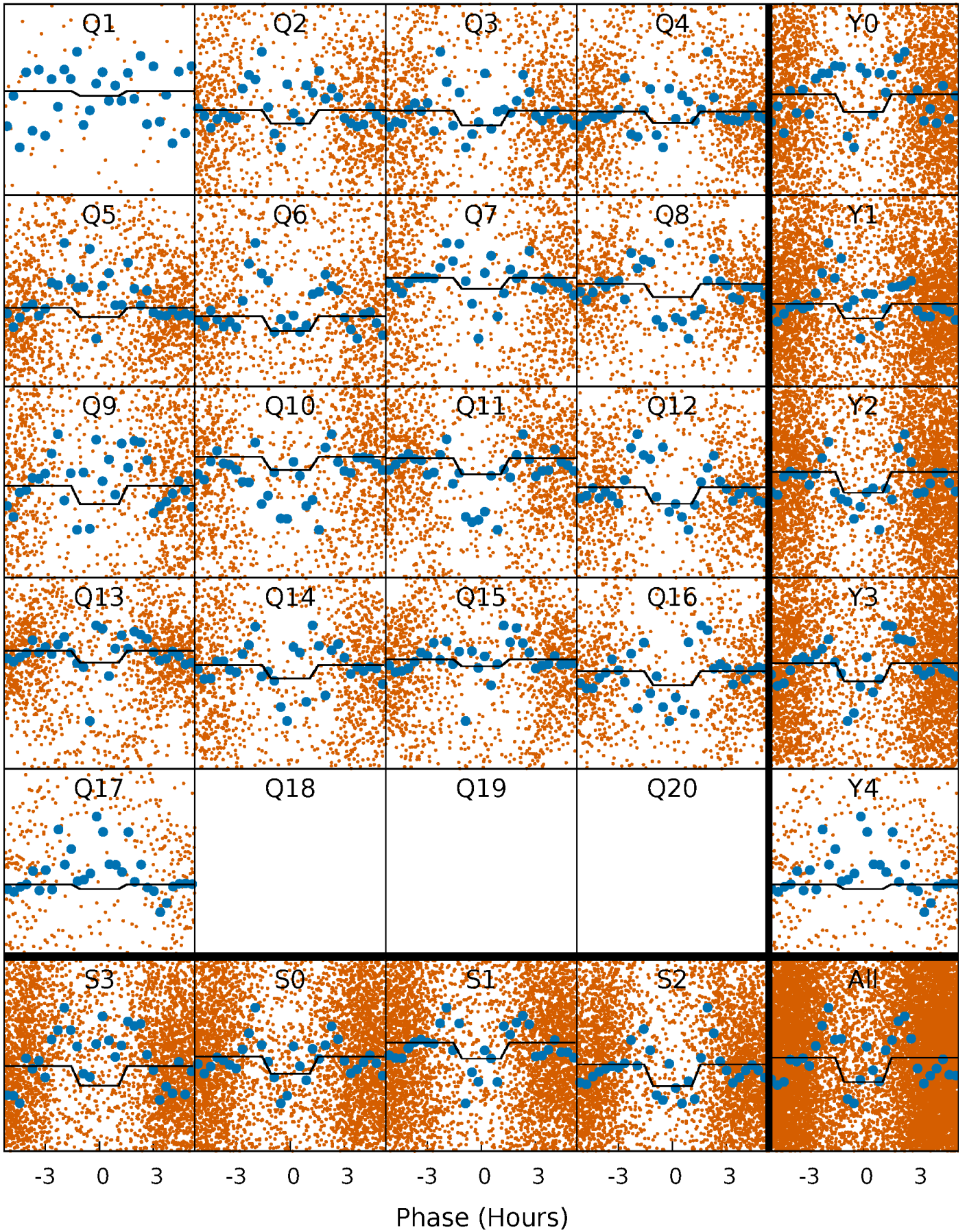
DV Quarter-Phased Transit Curves

TCE 011084474-01 P= 0.845653 Days $T_0=132.220992$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

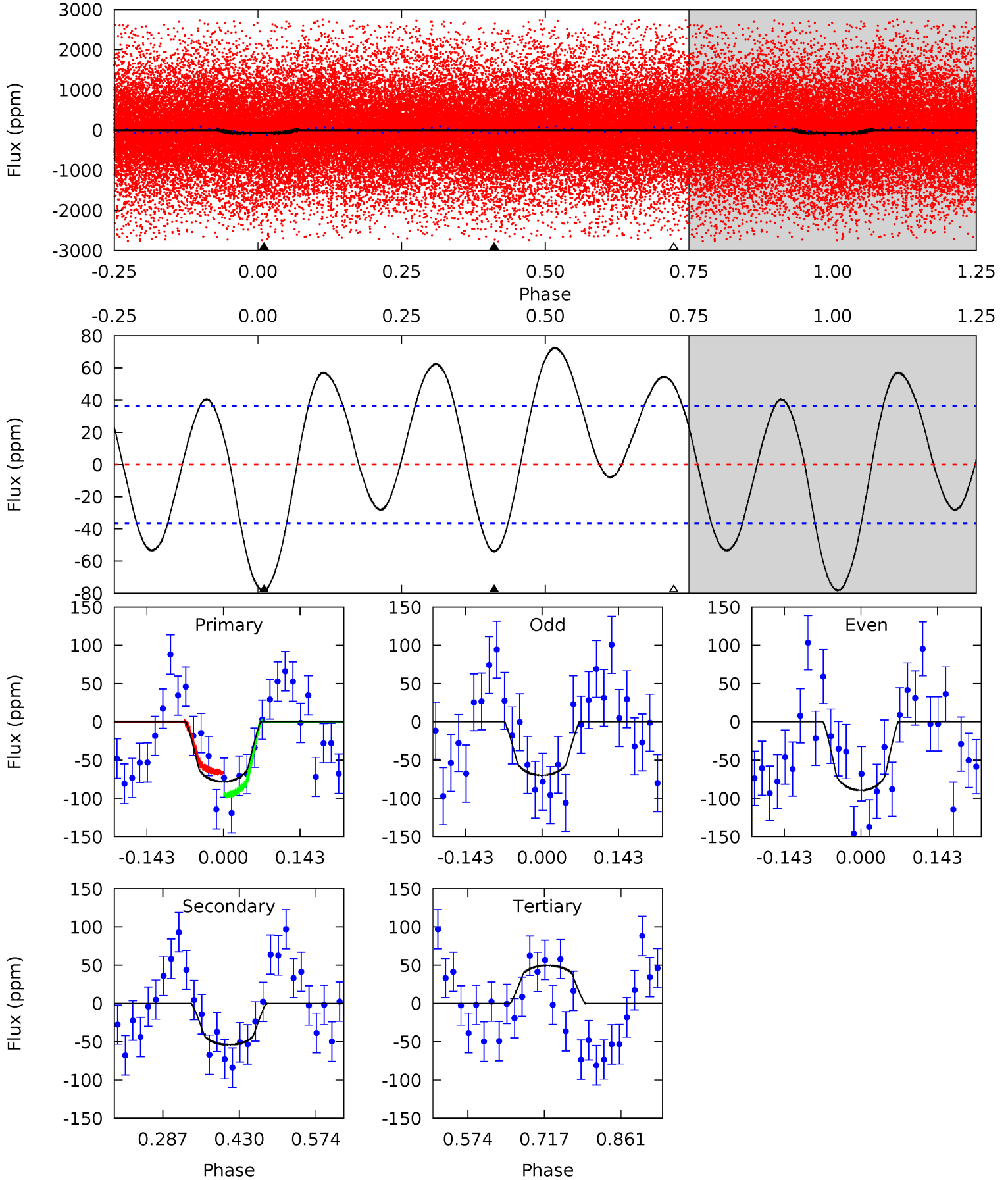
TCE 011084474-01 P= 0.845698 Days $T_0=132.196887$ (BKJD)



DV Model-Shift Uniqueness Test

011084474-01, P = 0.845653 Days, E = 131.375339 Days

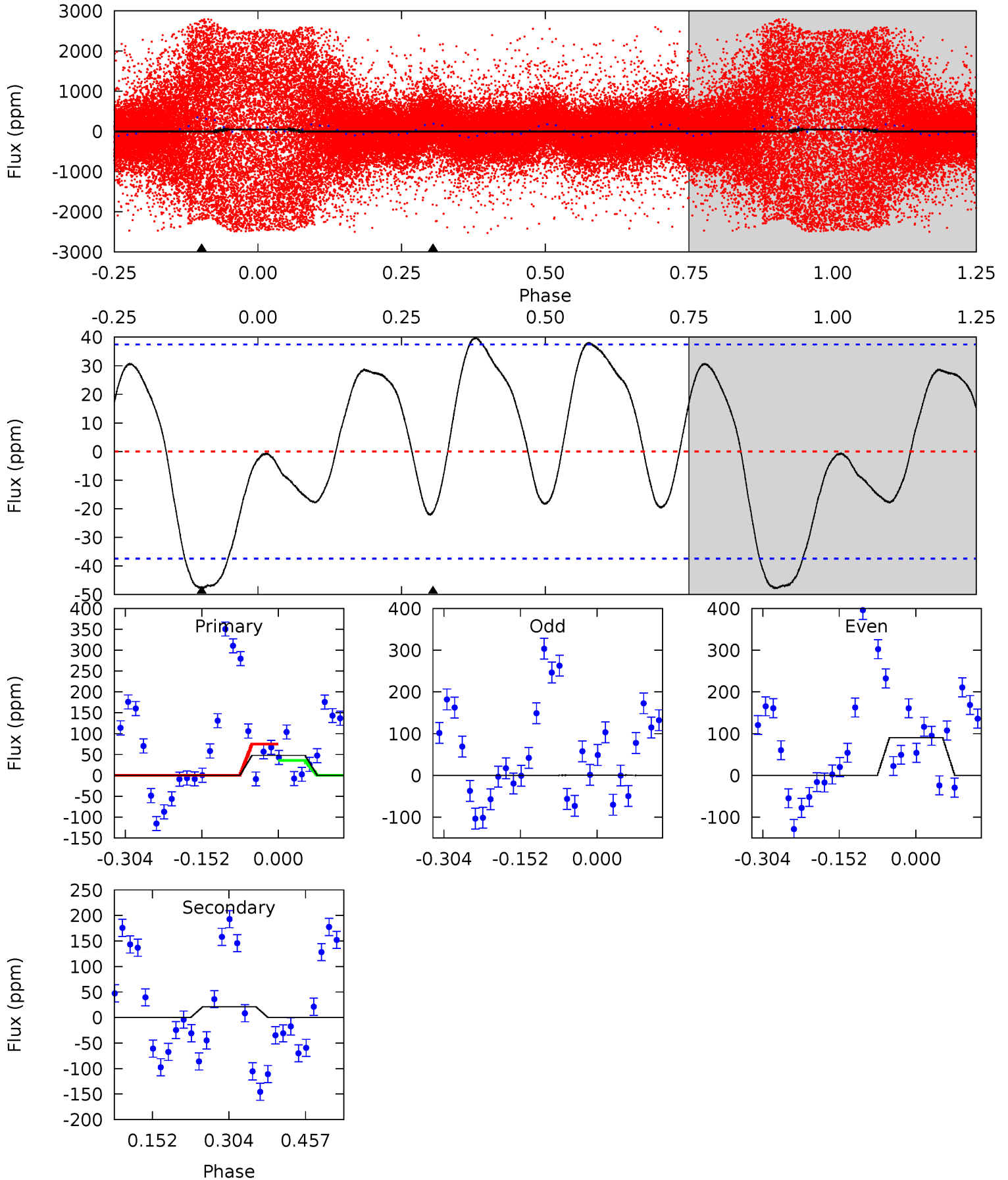
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.66	6.66	-6.11	0	4.49	1.46	3.78	15.8	9.66	12.8	6.66	1.22	0.03	0.48	1.84



Alt Model-Shift Uniqueness Test

011084474-01, P = 0.845698 Days, E = 131.351189 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.72	2.54	0	0	4.48	1.43	2.29	5.72	5.72	2.54	2.54	5.35	-1.76	0.45	1.93



Stellar Parameters For KIC 011084474

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5263^{+158}_{-142}	$3.901^{+0.693}_{-0.297}$	$-0.300^{+0.300}_{-0.300}$	$1.721^{+0.978}_{-1.076}$	$0.861^{+0.092}_{-0.138}$	$0.238^{+2.592}_{-0.148}$
	+3%/-3%	+18%/-8%	+100%/-100%	+57%/-63%	+11%/-16%	+1089%/-62%
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 011084474-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-54 ± 8	$1.33^{+1.07}_{-0.75}$	3226^{+454}_{-515}	4997^{+2338}_{-961}	$4.473^{+18.127}_{-3.096}$
Alt.	-21 ± 8	$1.68^{+1.12}_{-0.82}$	3241^{+464}_{-542}	3654^{+1035}_{-1152}	$1.082^{+3.222}_{-0.735}$

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

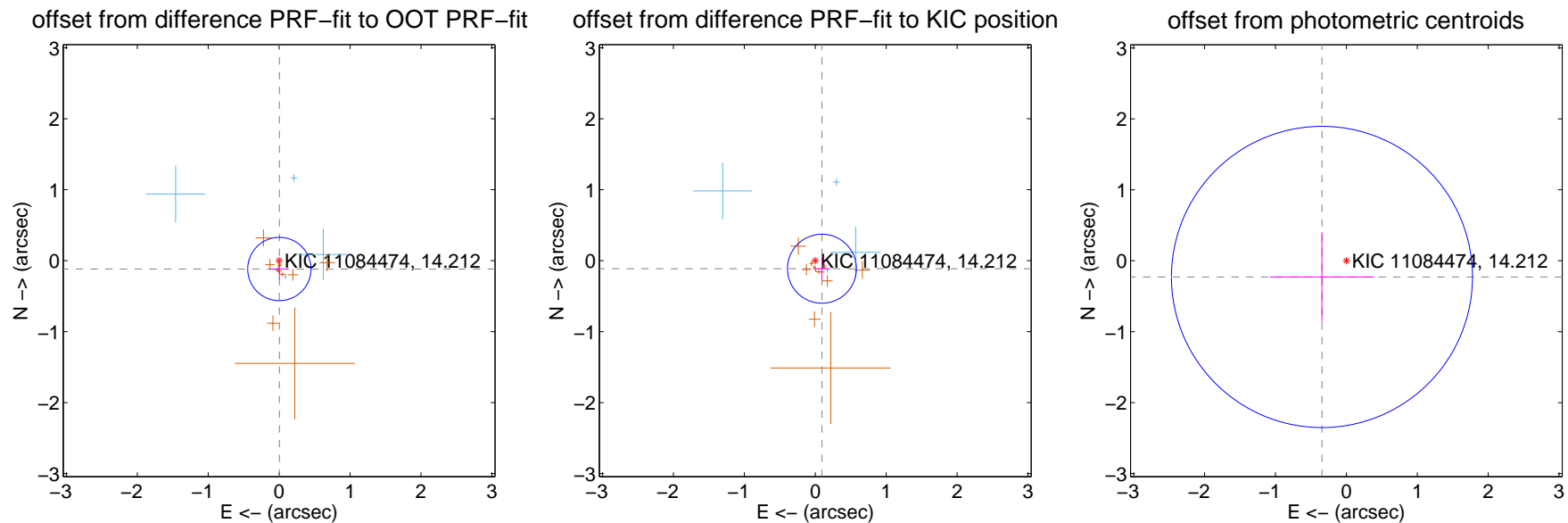
DV Centroid Data

Supplemental centroid analysis for 011084474-01. Kepler magnitude: 14.21. Transit SNR 5.13

There are 5 quarters with good PRF difference image offsets

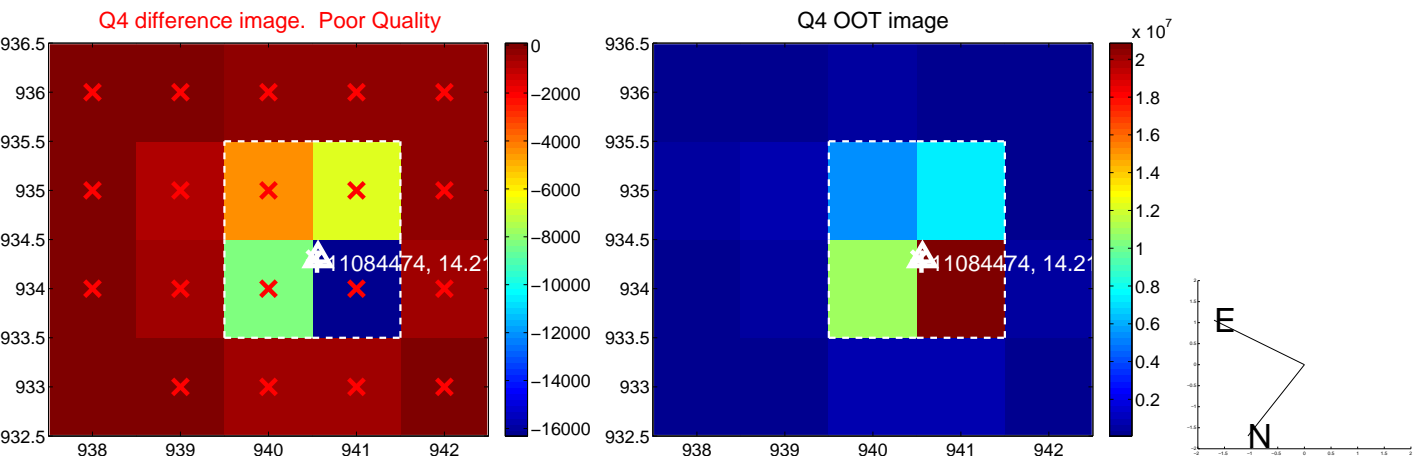
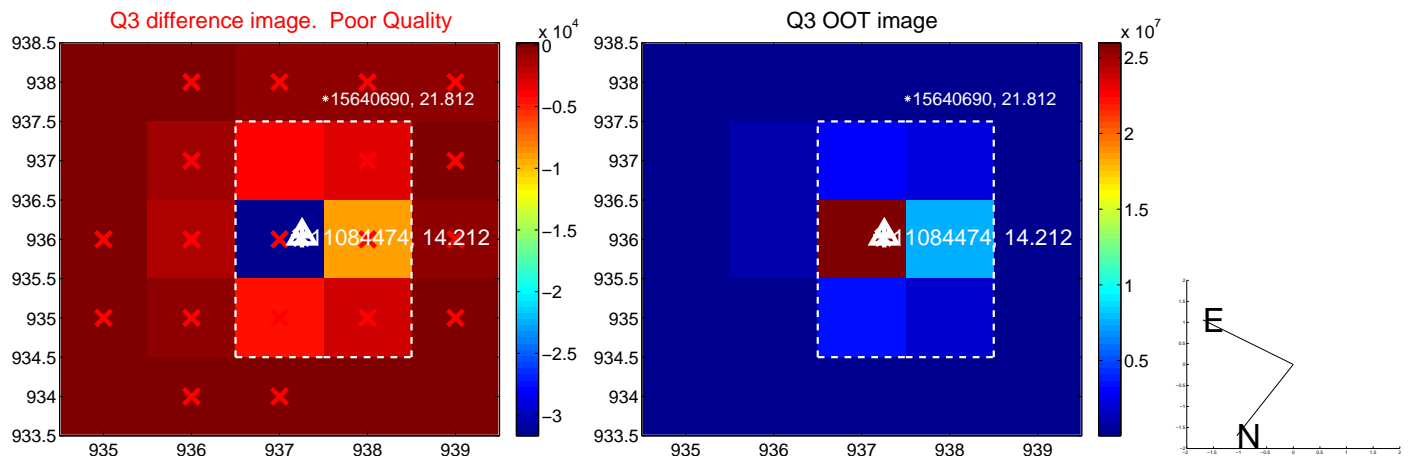
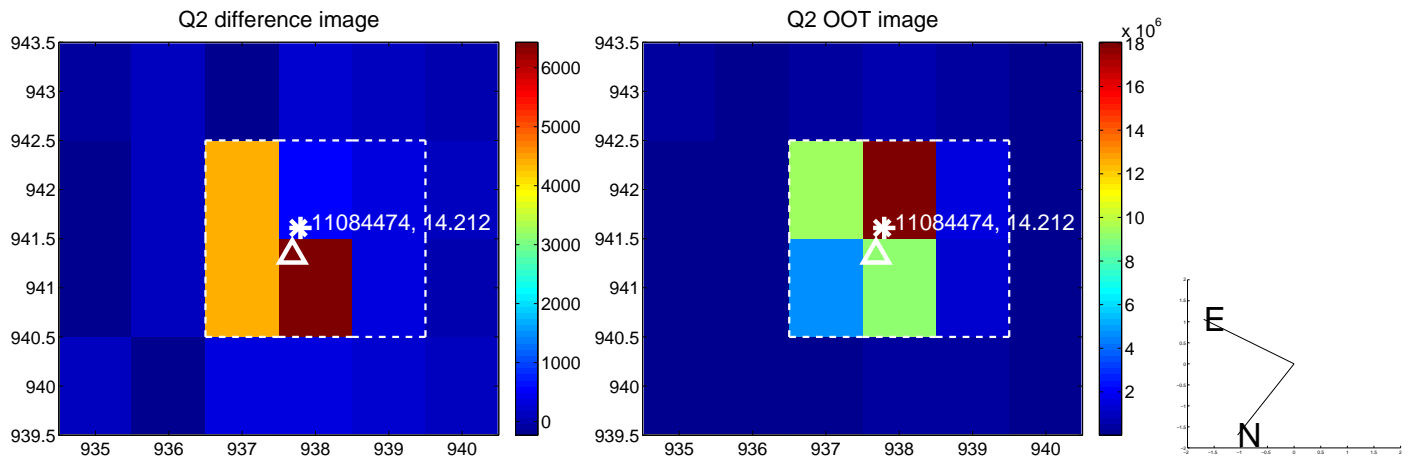
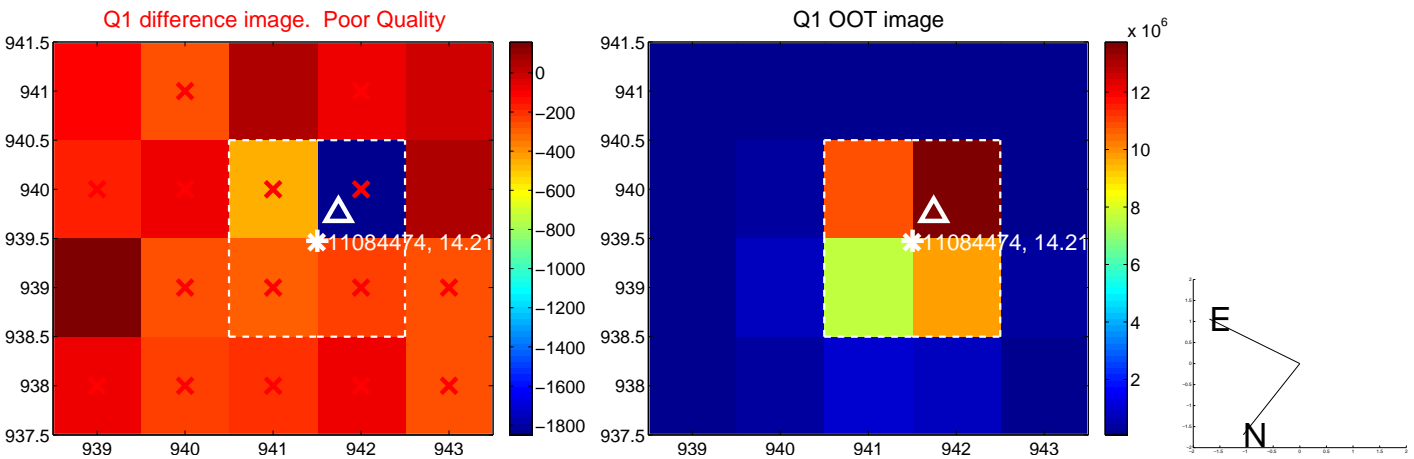
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.117 ± 0.149	0.79	-0.003 ± 0.121	-0.117 ± 0.148
PRF-fit source offset from KIC position	0.147 ± 0.162	0.91	-0.094 ± 0.118	-0.113 ± 0.159
photometric centroid source offset	0.41 ± 0.71	0.58	0.34 ± 0.74	-0.23 ± 0.63

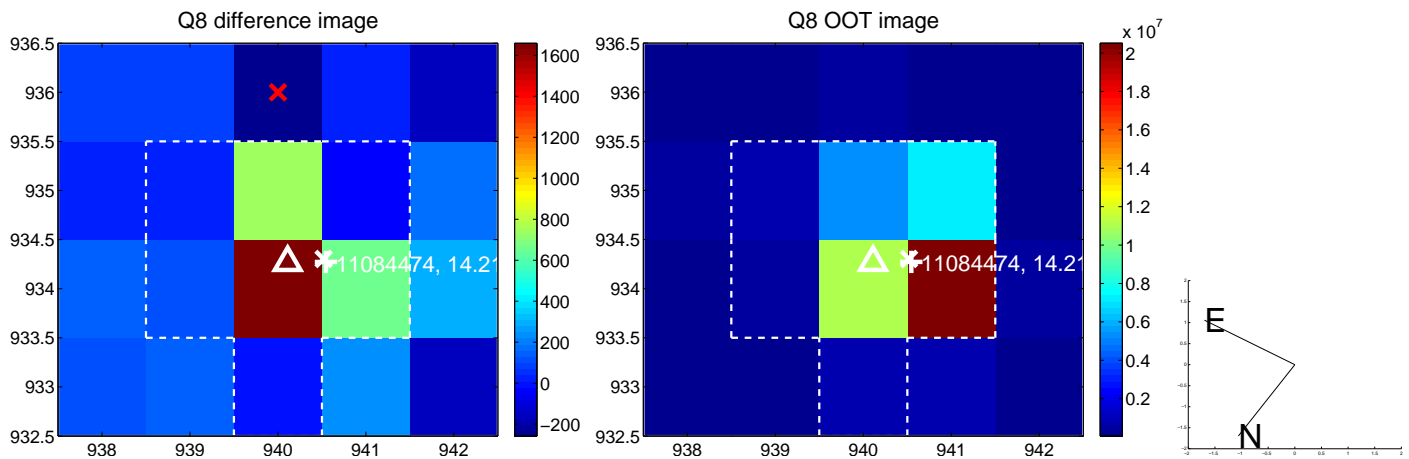
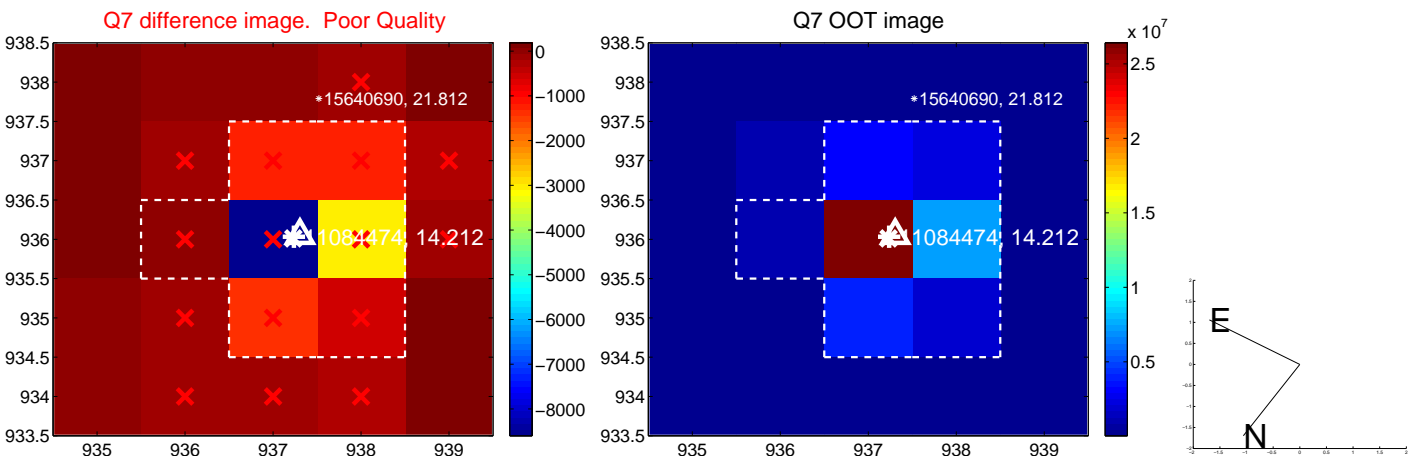
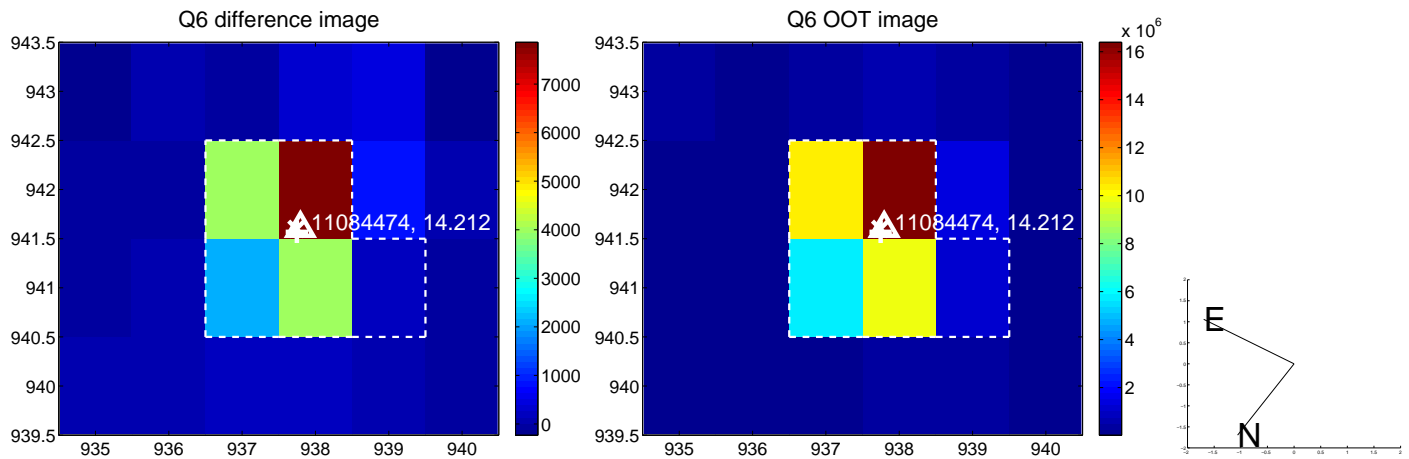
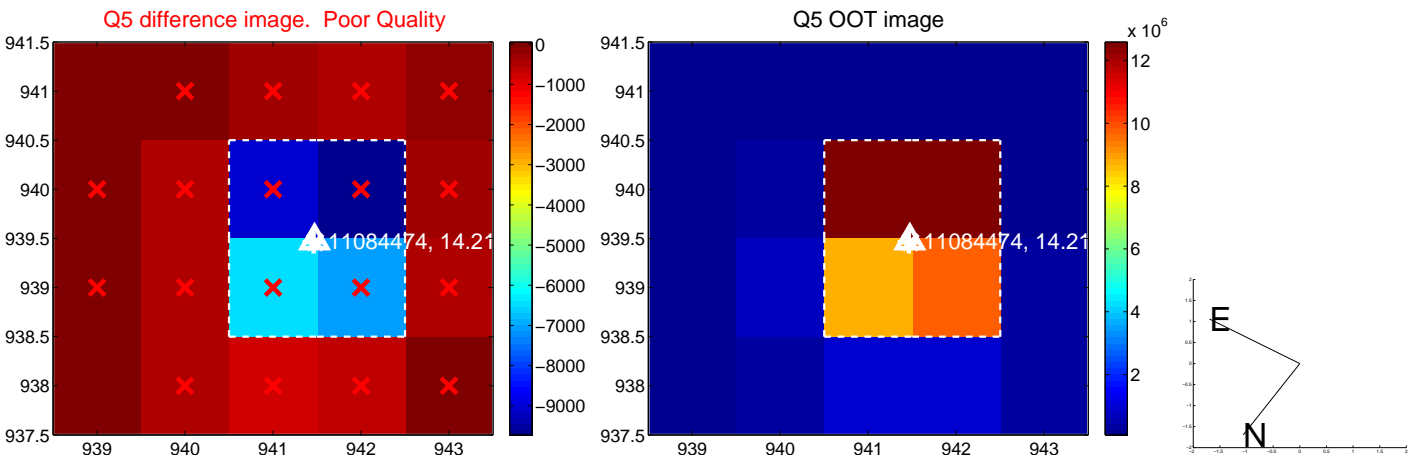


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

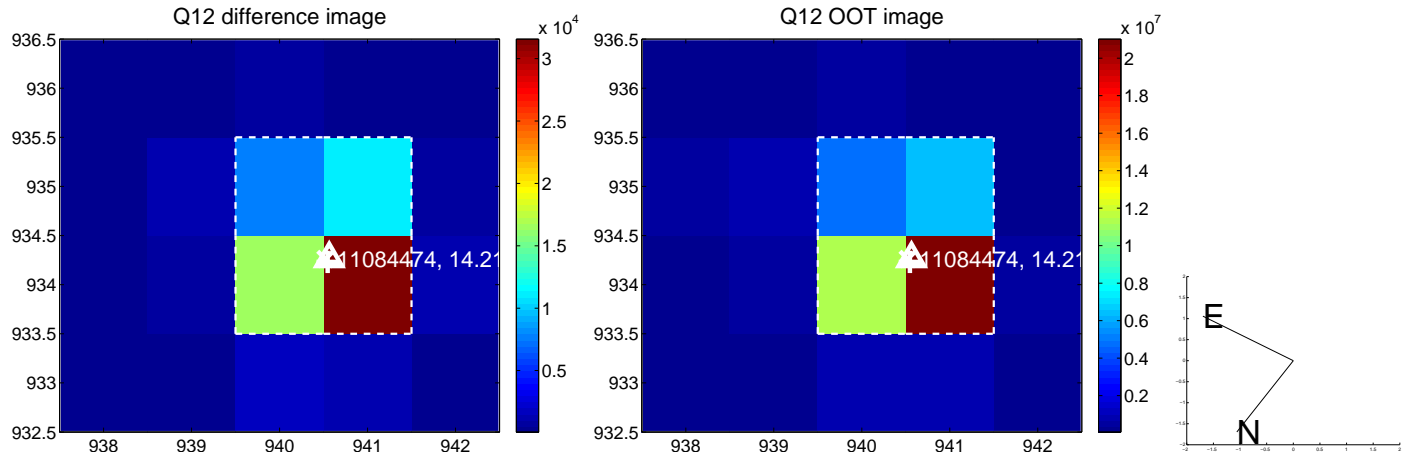
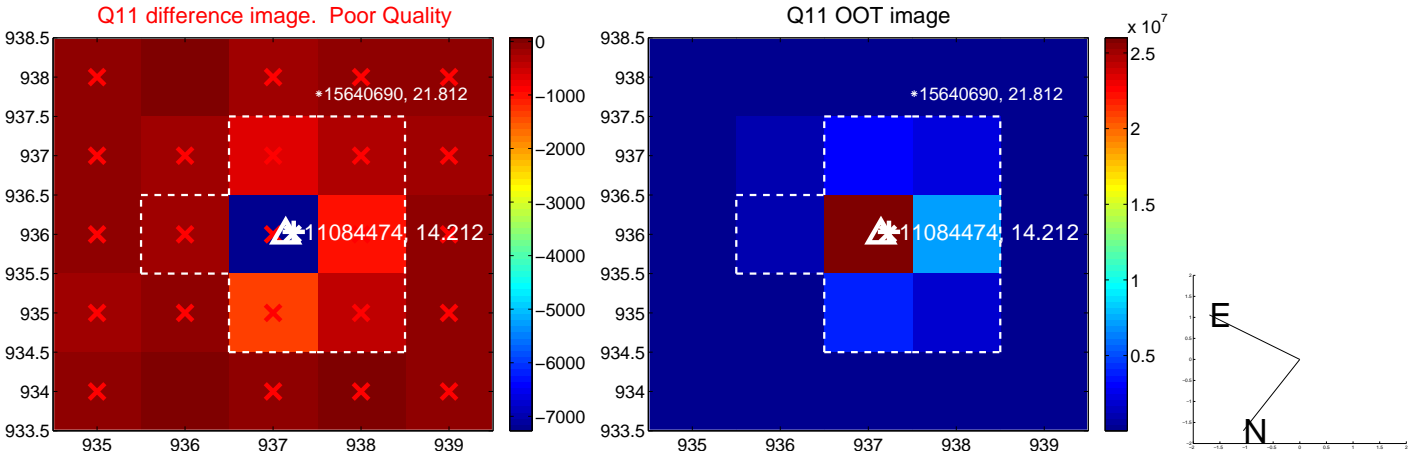
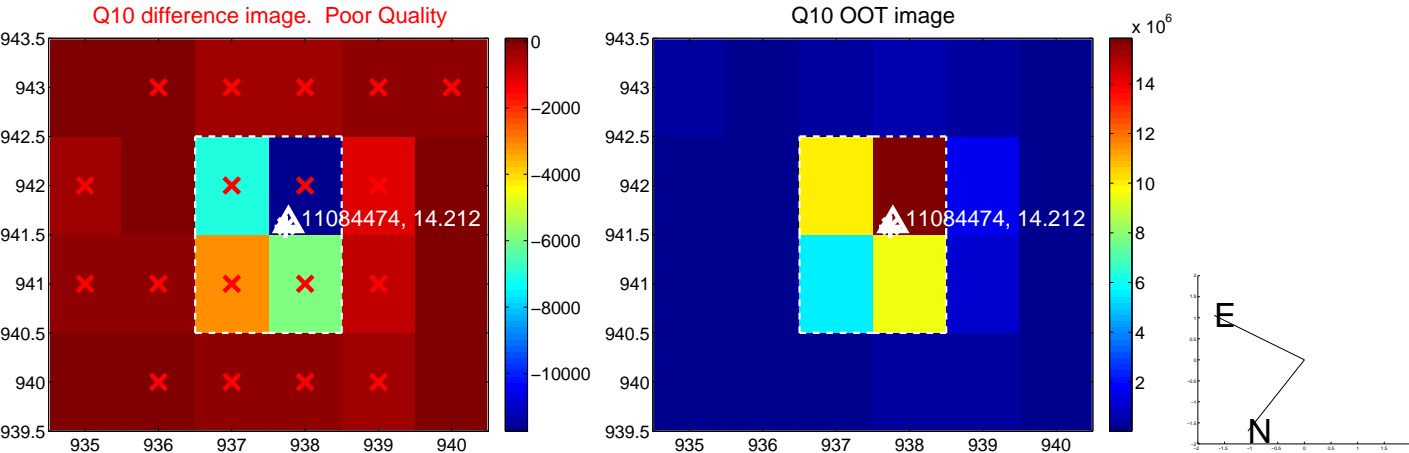
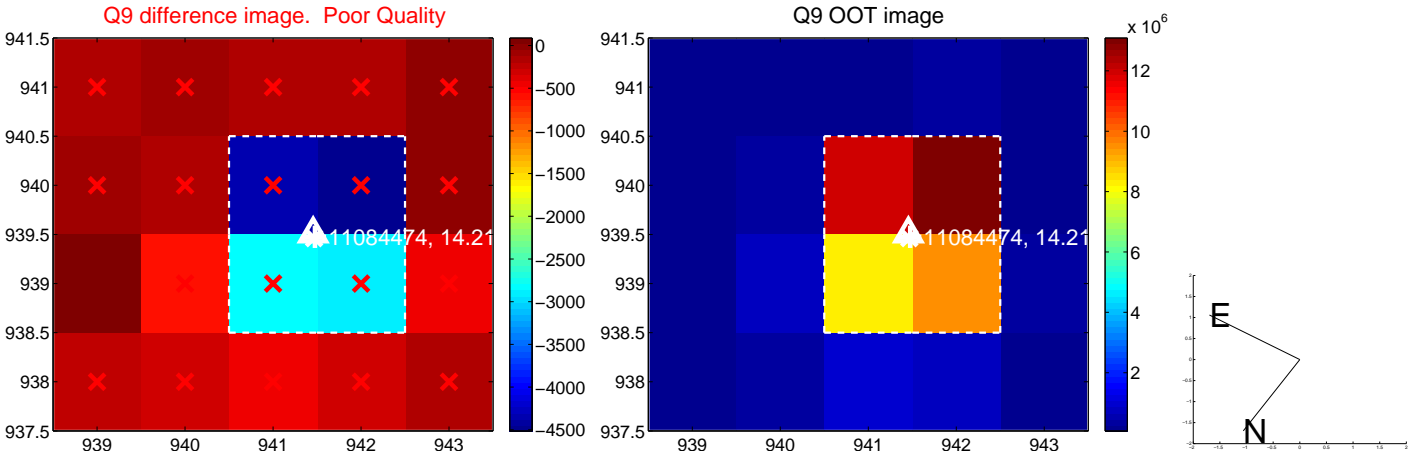
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



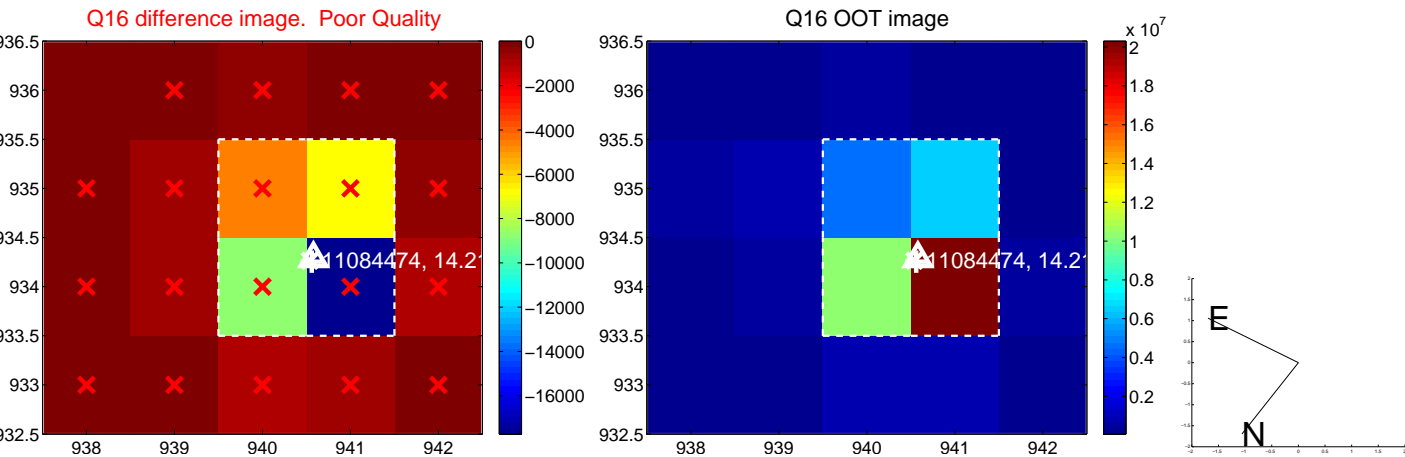
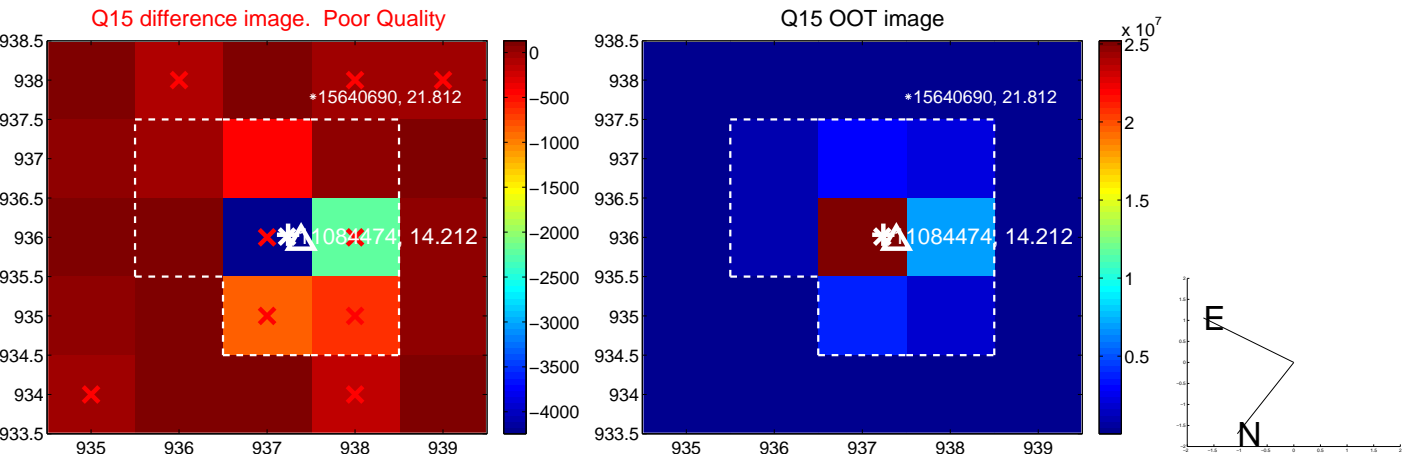
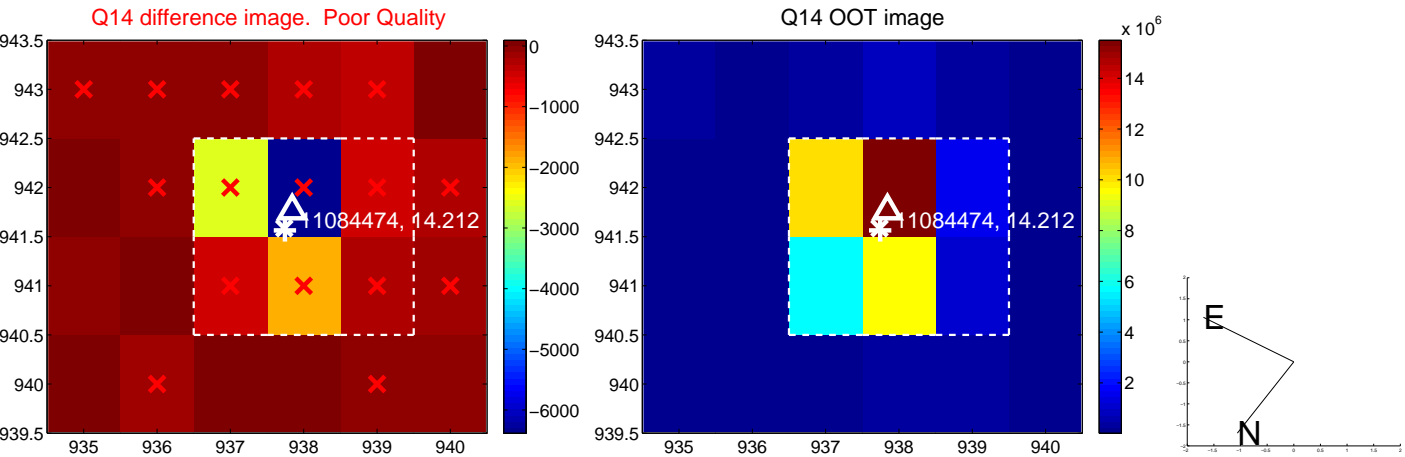
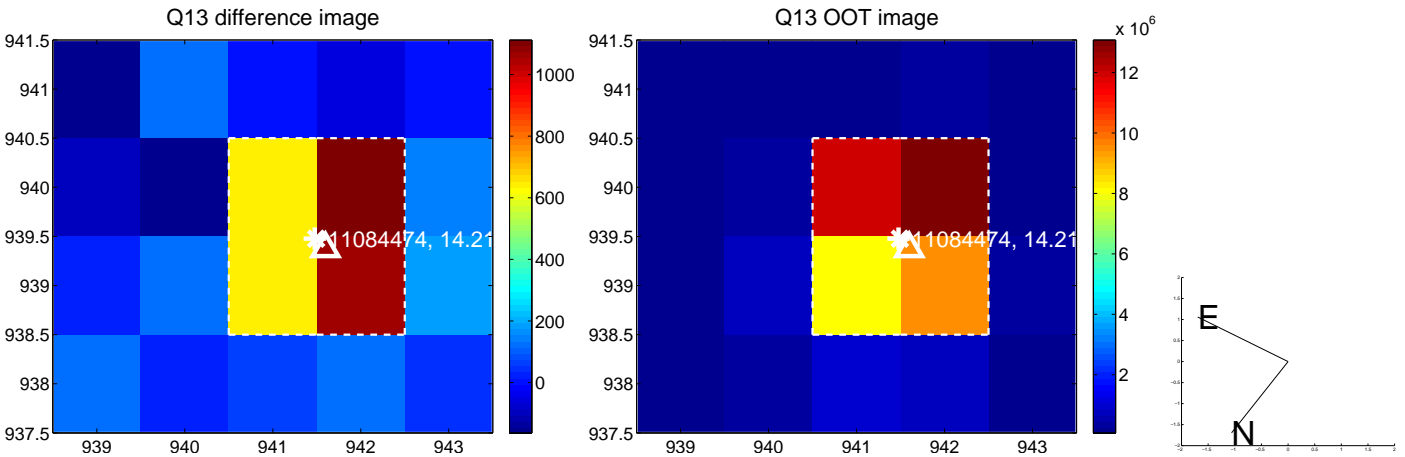
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



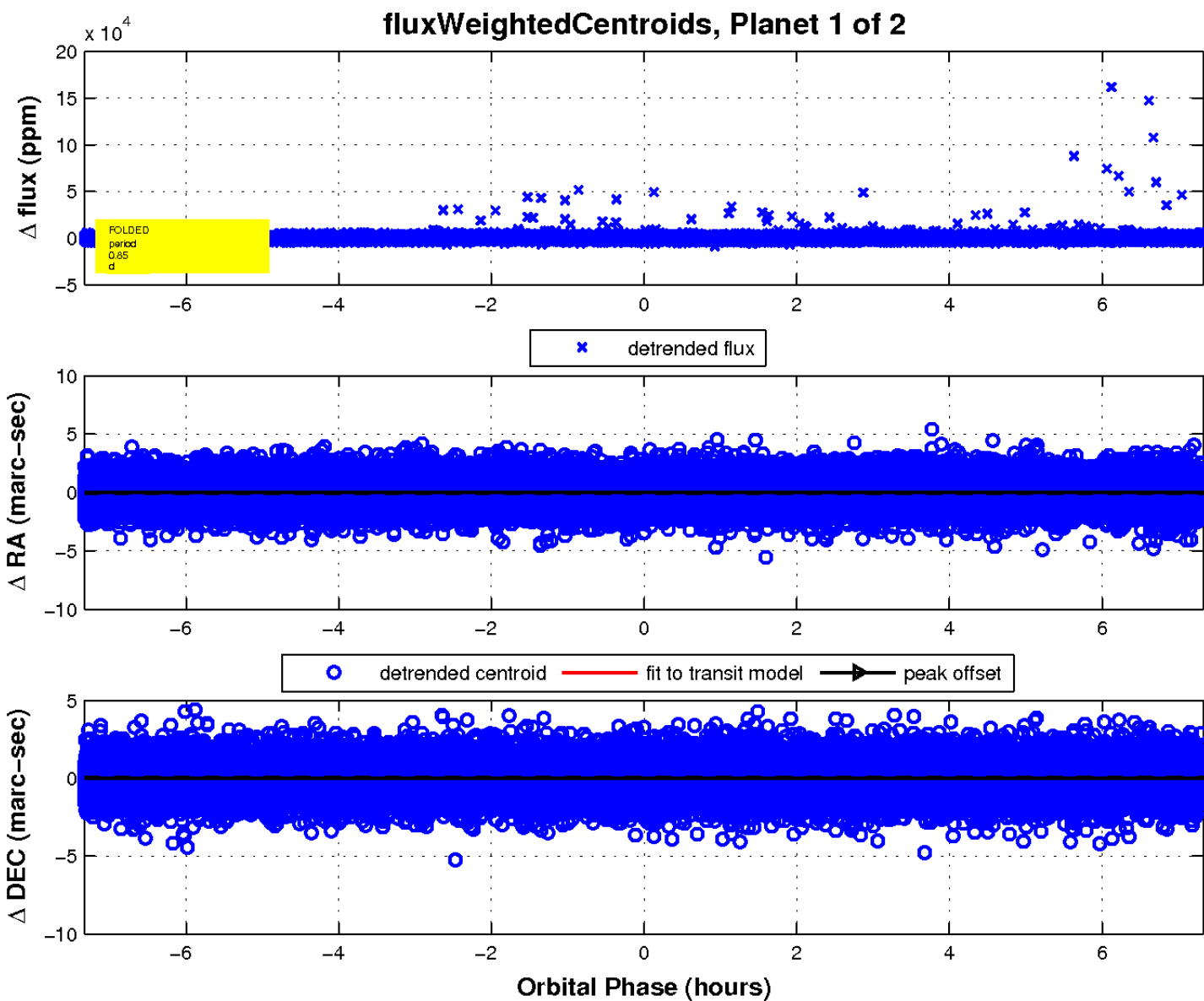
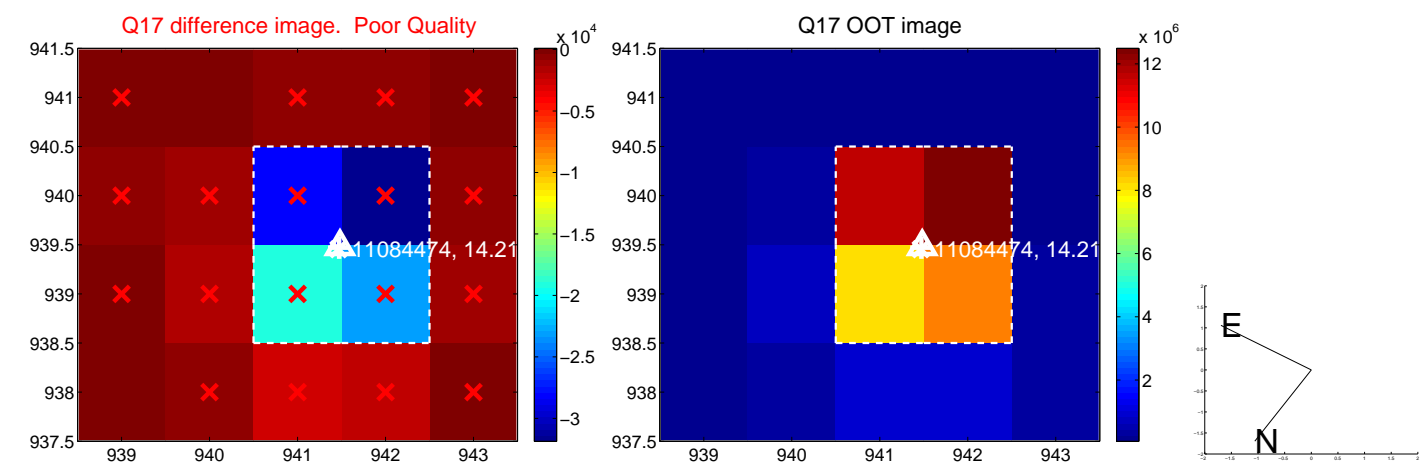
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

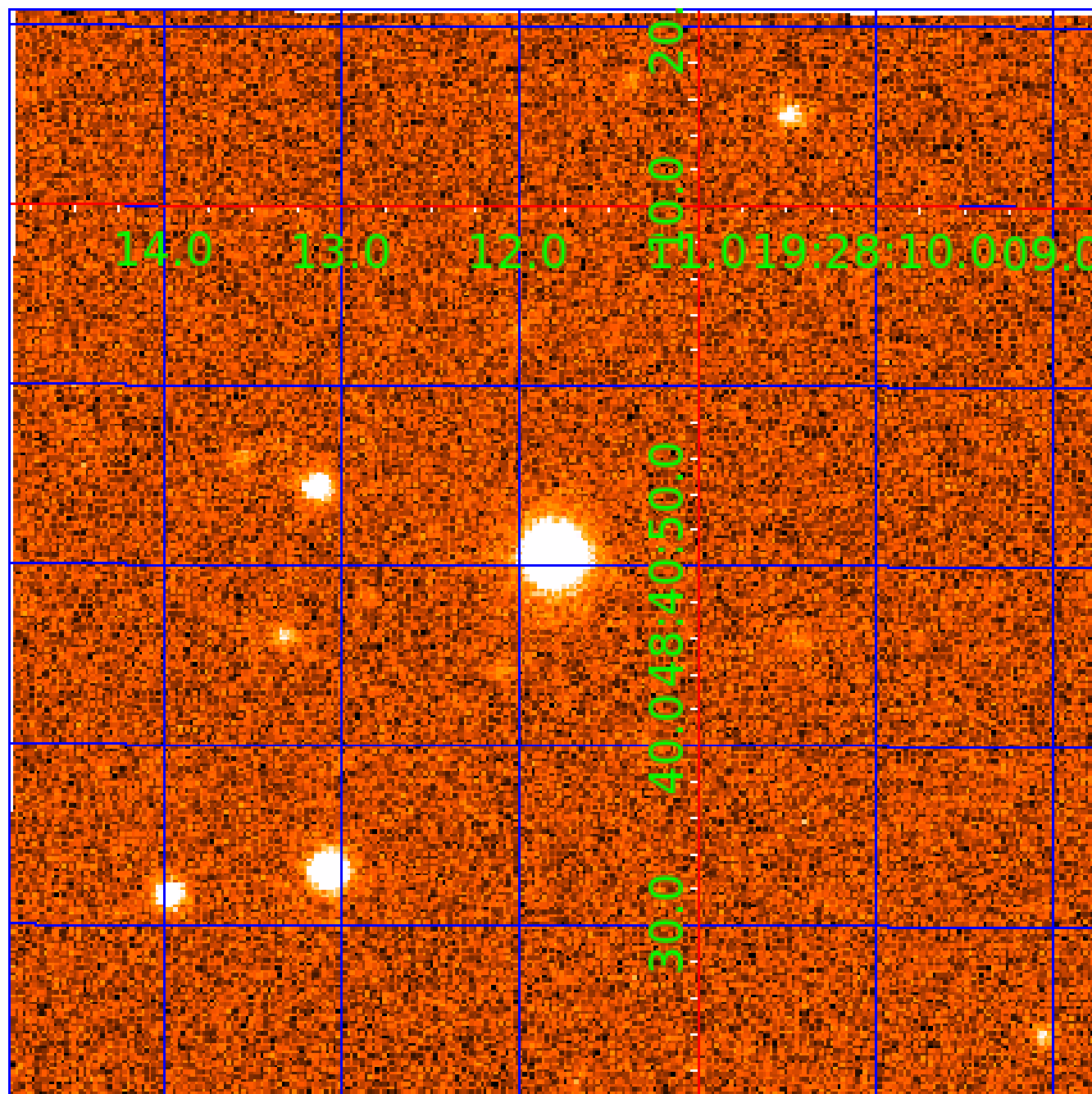


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011084474

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})
011084474-01	OBS	No	0.845653	132.220992	50.3	2.443	16.3	5.1	1.72	5263	1.47	7346.70
011084474-02	OBS	No	0.845683	131.552237	125.3	2.309	11.8	10.4	1.72	5263	2.35	7346.35

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011084474-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—HALO_GHOST
011084474-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD

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

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

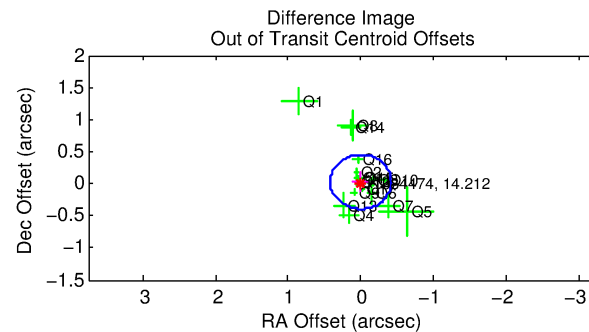
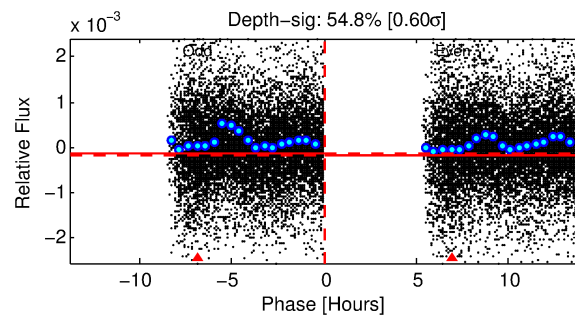
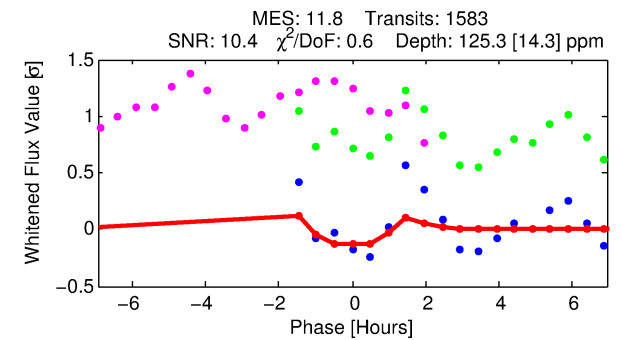
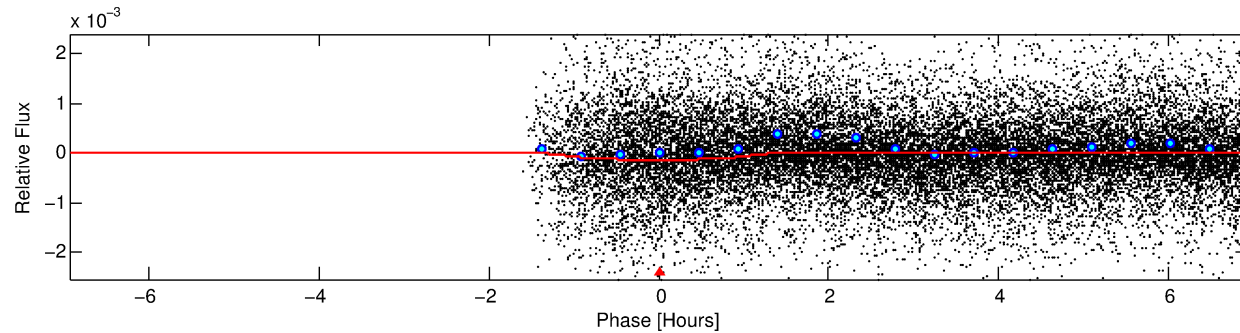
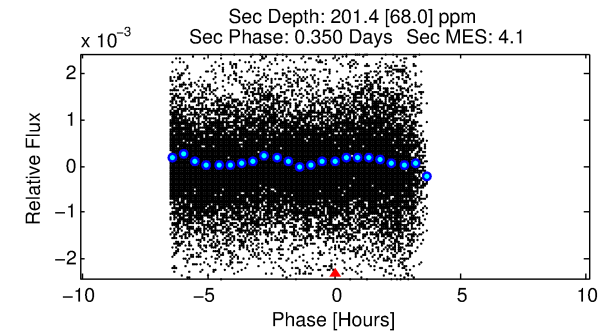
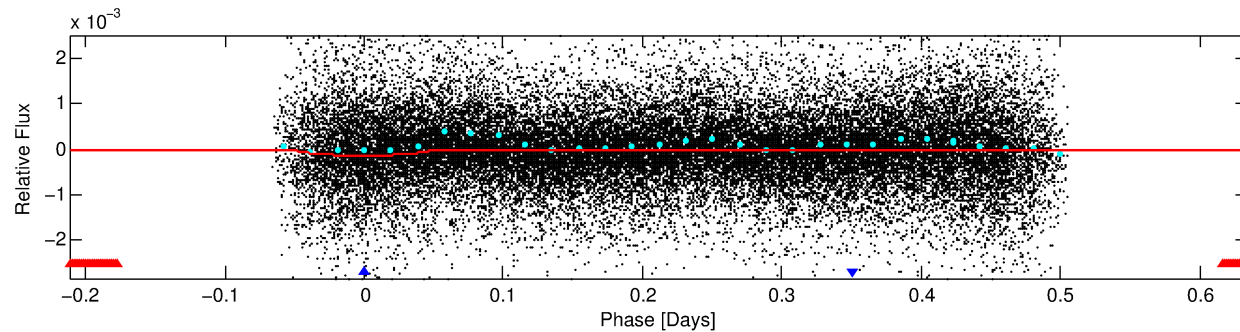
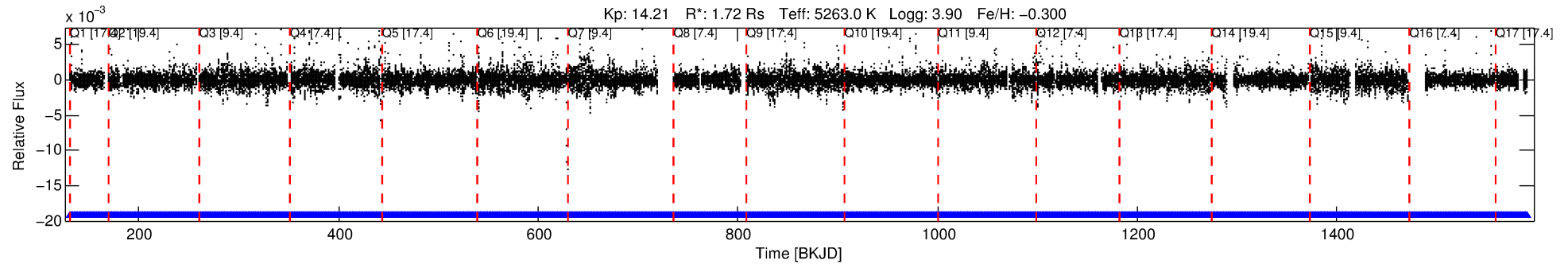
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011084474-02

No Significant Match Found

DV One-Page Summary

KIC: 11084474 Candidate: 2 of 2 Period: 0.846 d



DV Fit Results:

Period = 0.84568 [0.00001] d
Epoch = 131.5522 [0.0016] BKJD
Rp/R* = 0.0125 [0.0043]
a/R* = 1.56 [1.38]
b = 0.91 [0.29]
Seff = 7346.35 [8439.71]
Teq = 2361 [678] K
Rp = 2.35 [1.68] Re
a = 0.0166 [0.0112] AU
Ag = 5.58 [7.71] [0.59σ]
Teffp = 5611 [1098] K [2.52σ]

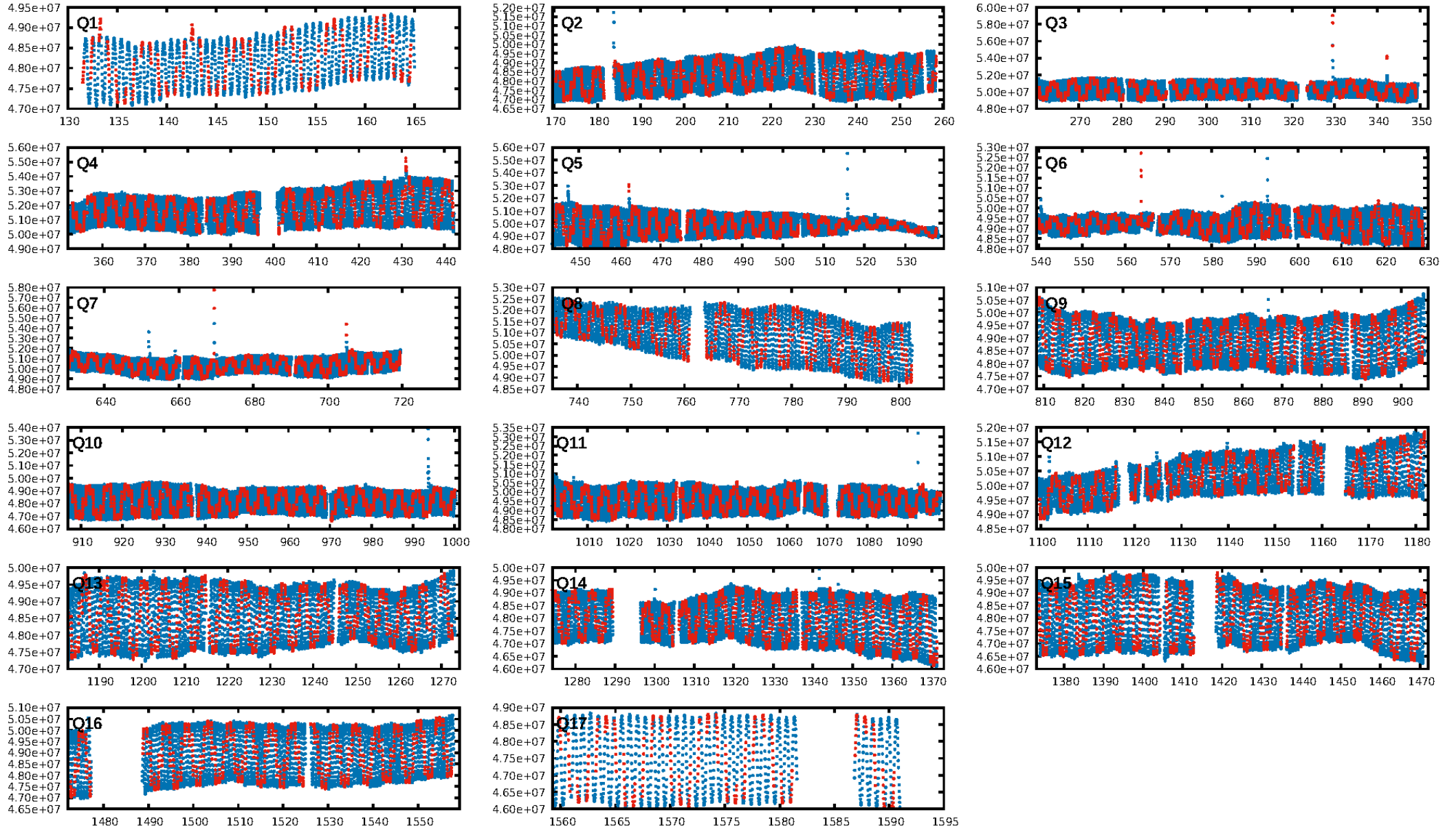
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.33e-29
RollingBand-fgt: 1.00 [1512/1512]
GhostDiagnostic-chr: 6.167
Centroid-sig: 0.6%
Centroid-so: 0.627 arcsec [2.27σ]
OotOffset-rm: 0.029 arcsec [0.20σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-rm: 0.028 arcsec [0.24σ]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.71 [12/17]
DiffImageOverlap-fno: 0.00 [0/17]

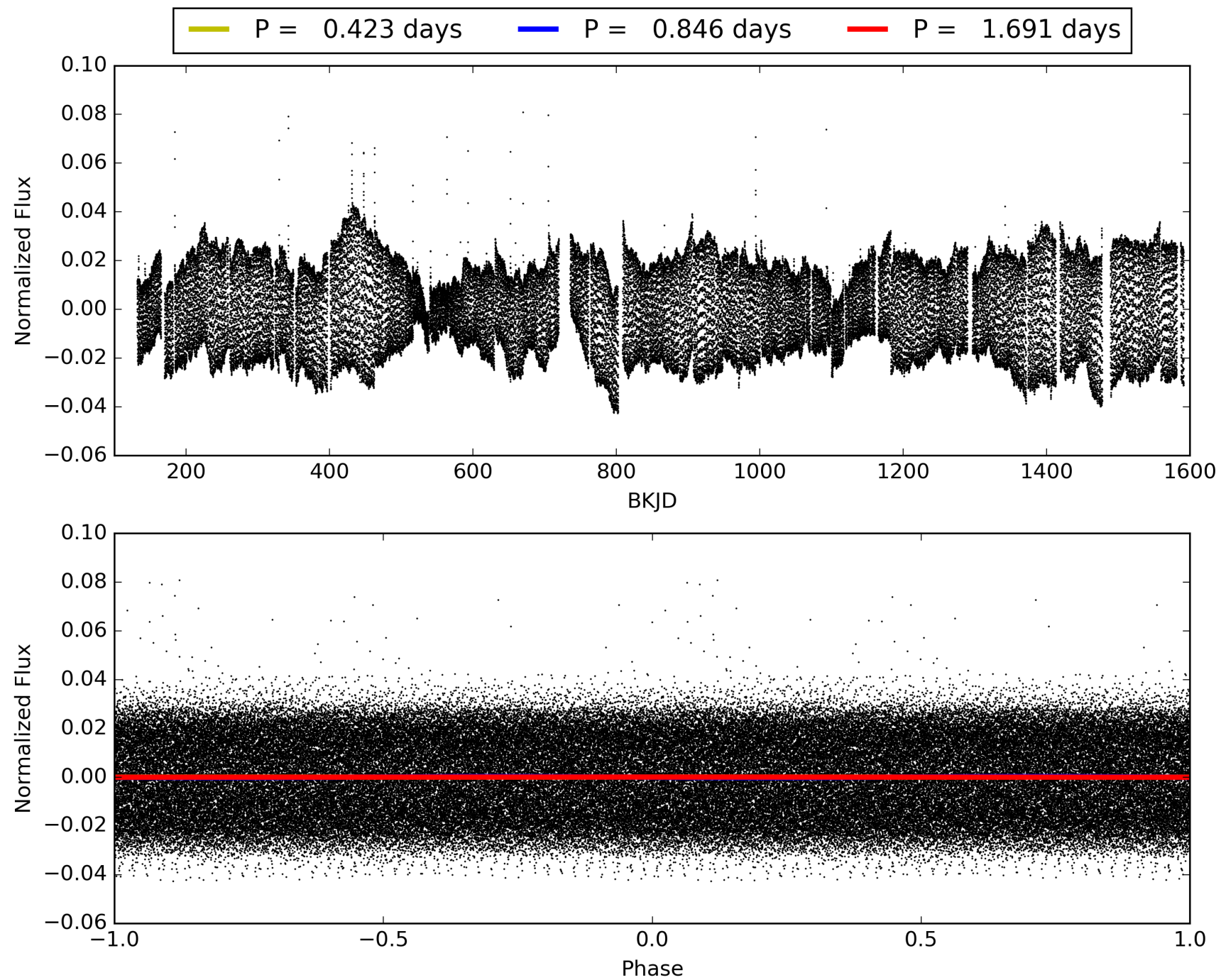
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 15:16:49 Z

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

TCE 011084474-02, PDC Light Curves

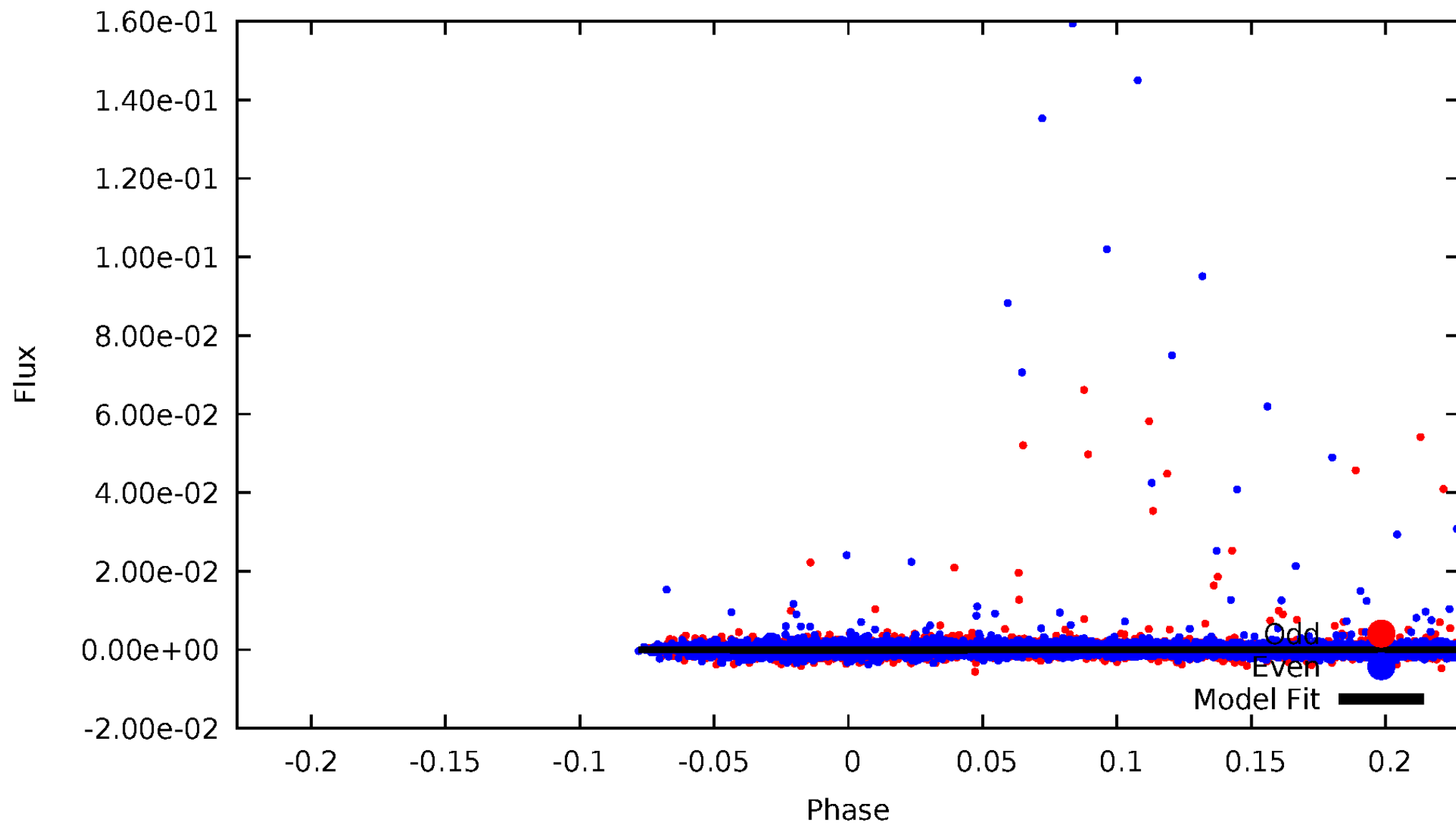


TCE 011084474-02



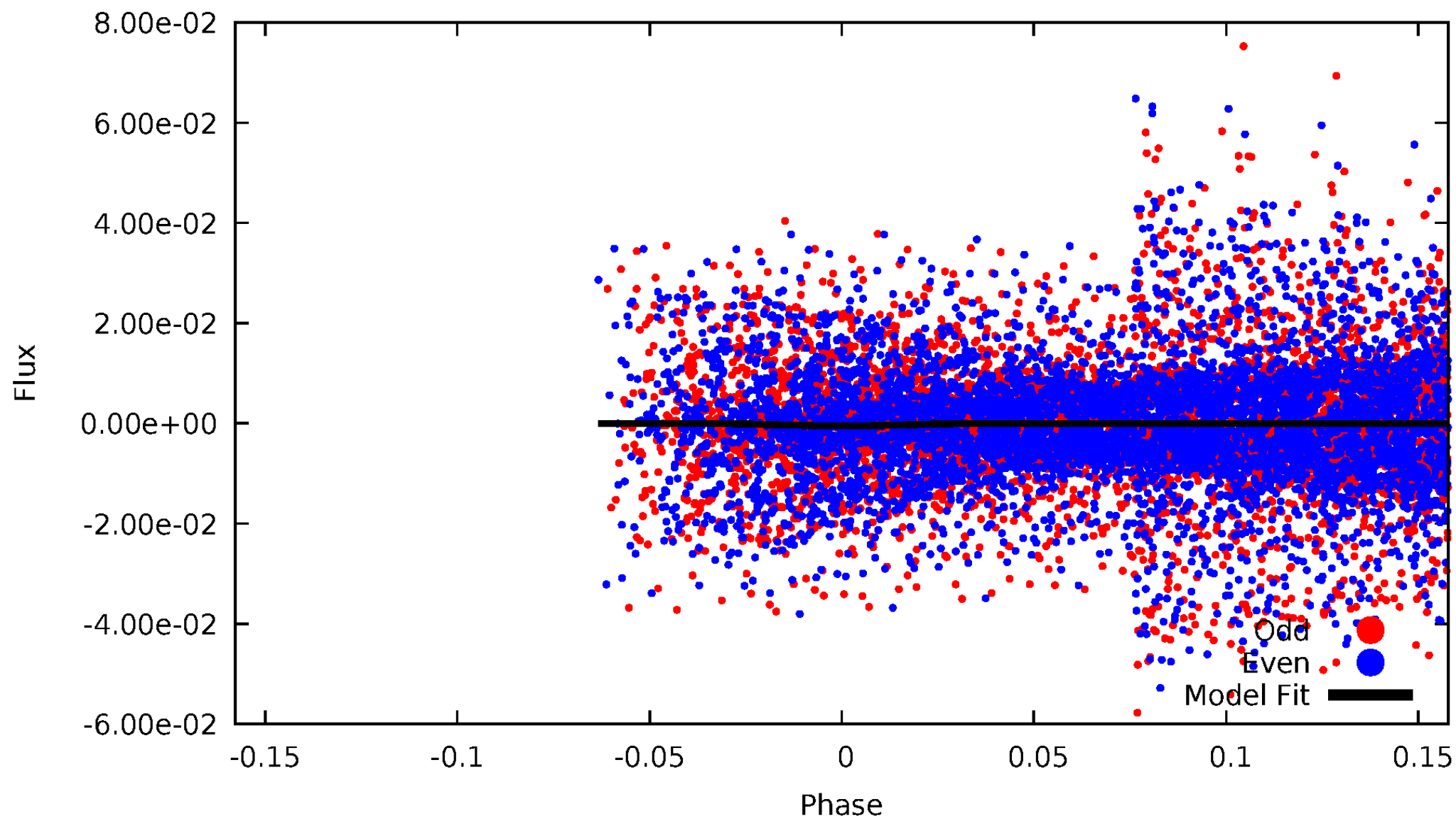
DV Odd/Even

TCE 011084474-02



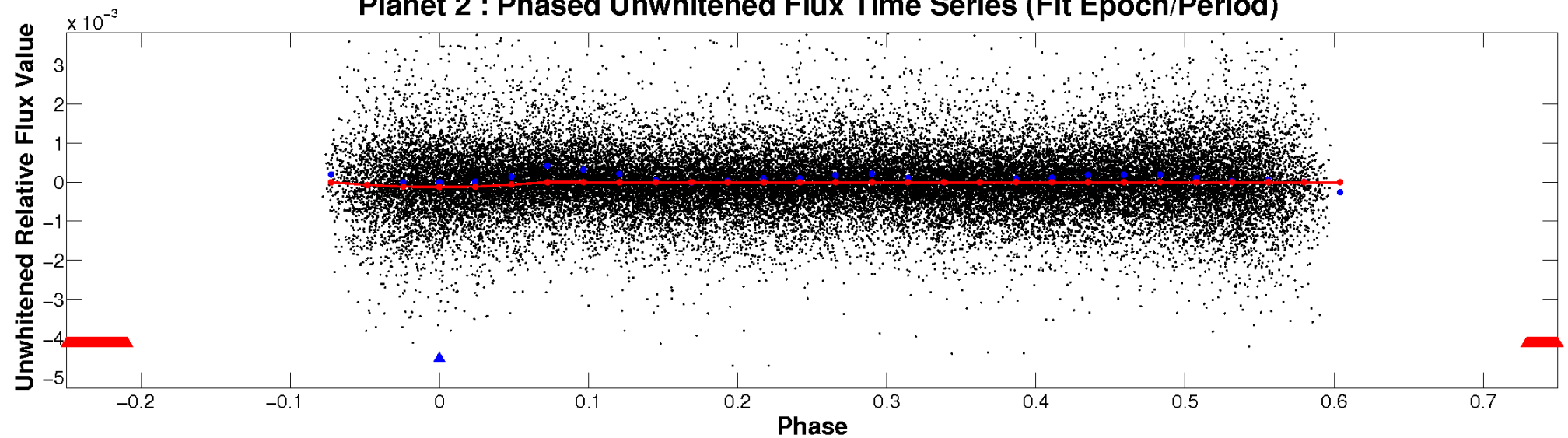
ALT Odd/Even

TCE 011084474-02

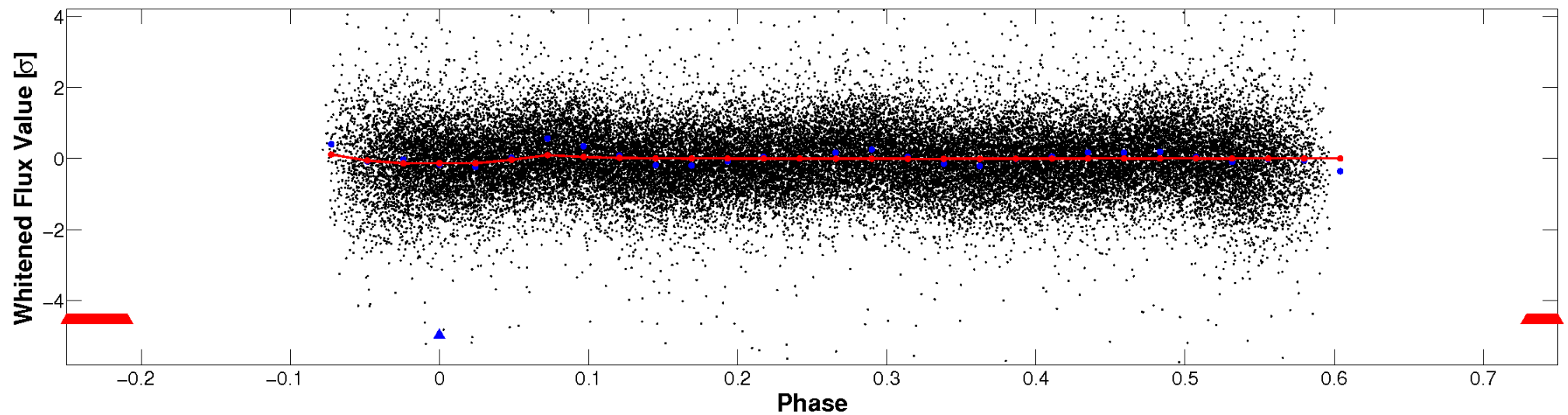


Non-Whitened Vs. Whitened Light Curve

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

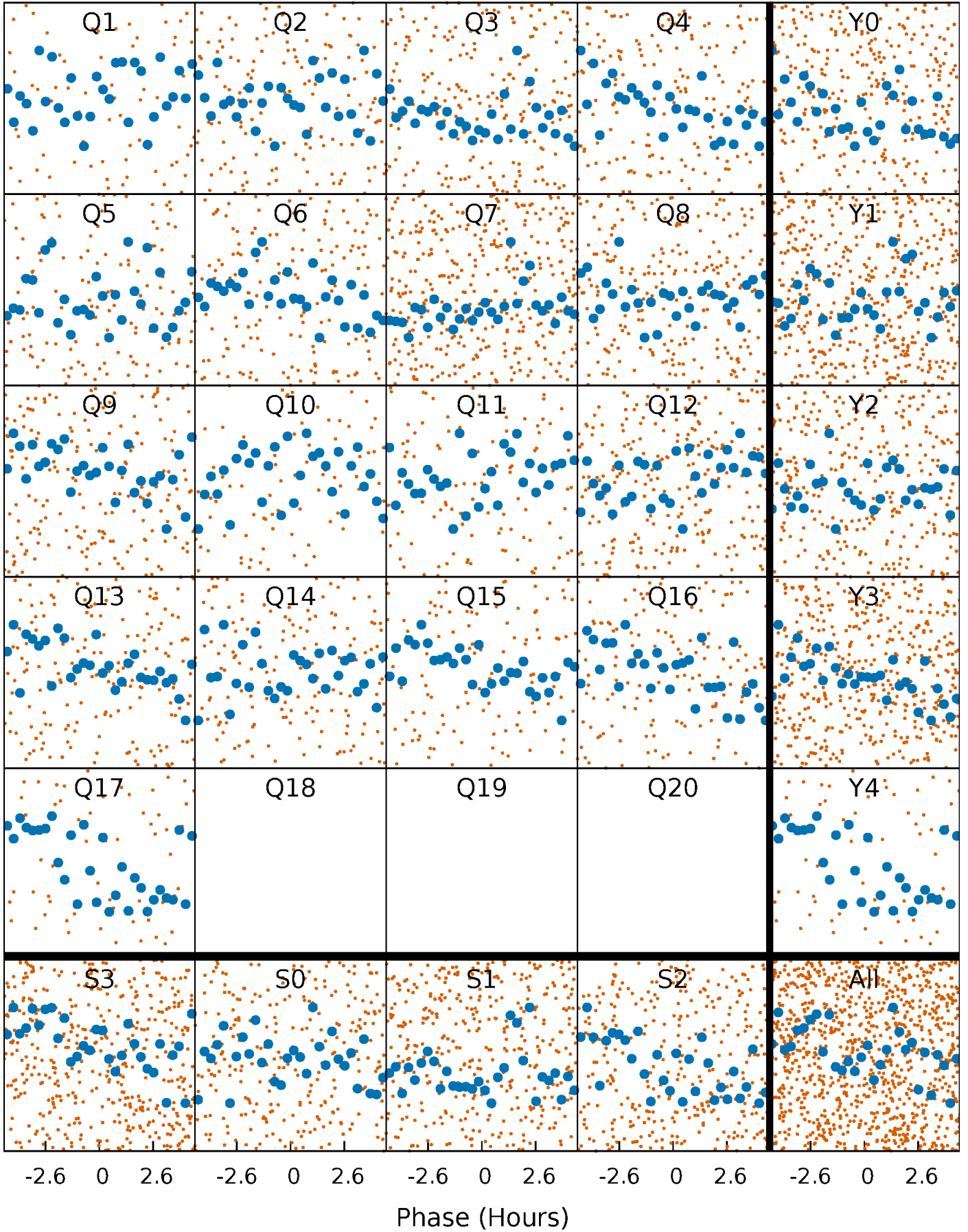


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



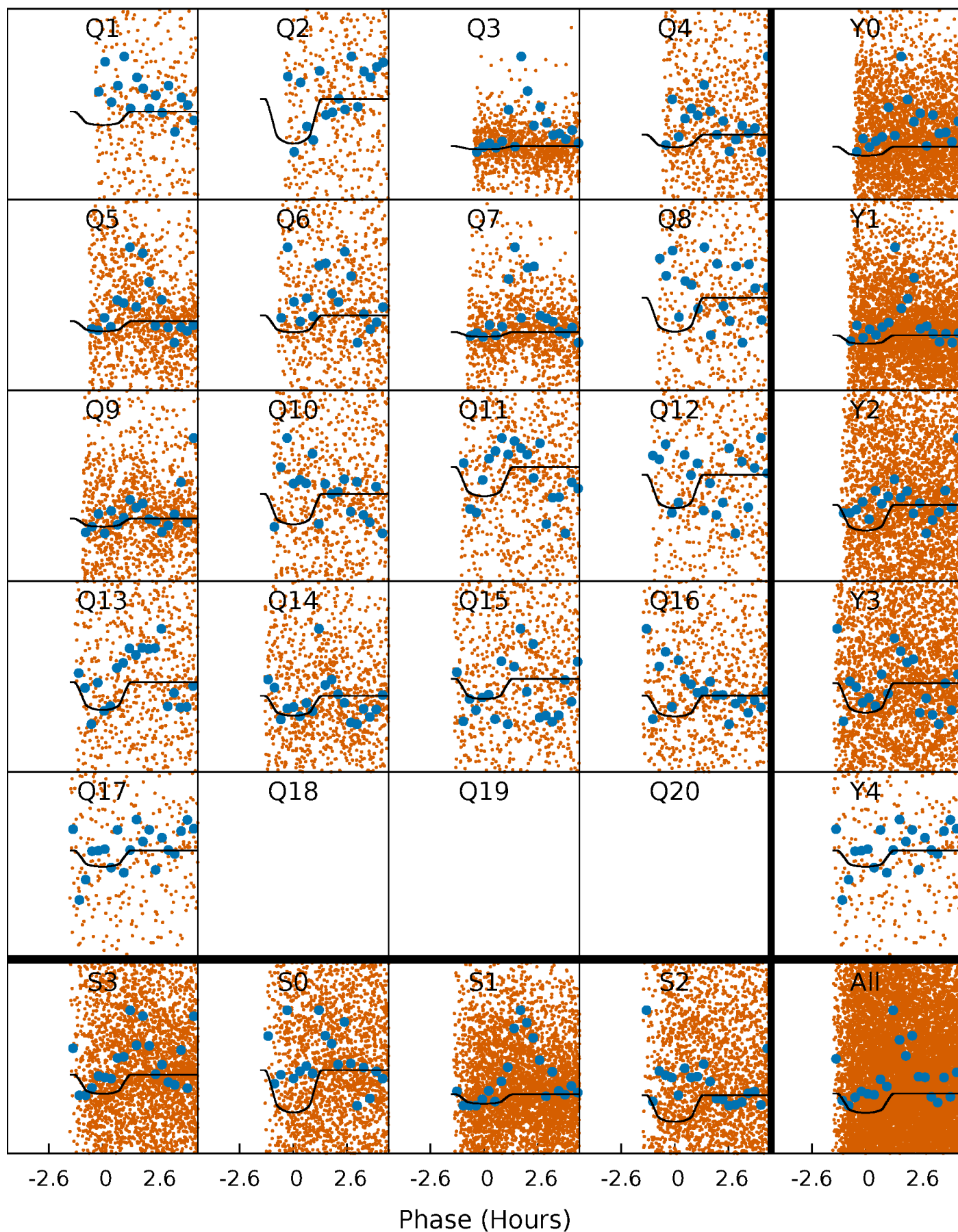
PDC Quarter-Phased Transit Curves

TCE 011084474-02 P= 0.845683 Days $T_0=131.552237$ (BKJD)



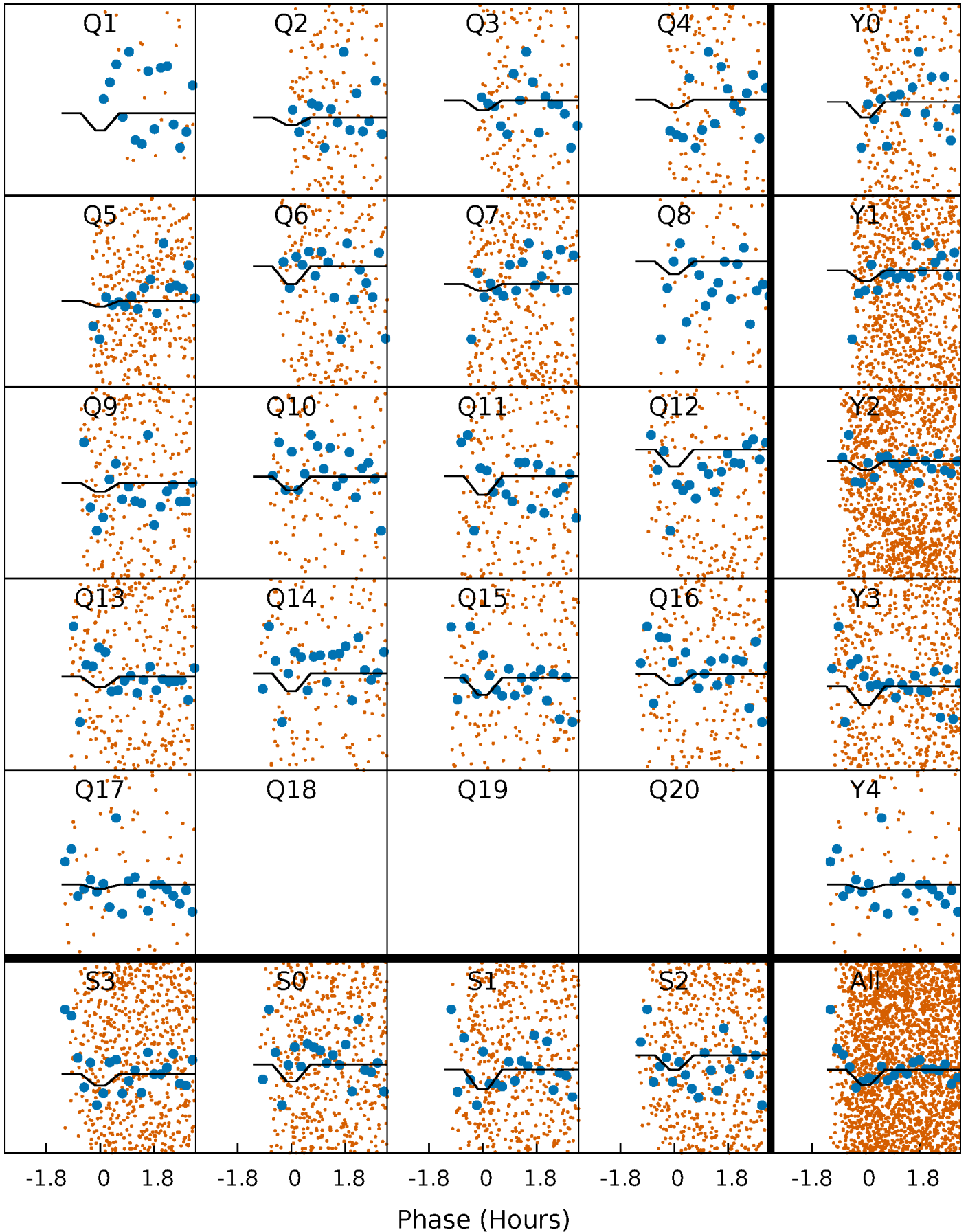
DV Quarter-Phased Transit Curves

TCE 011084474-02 P= 0.845683 Days $T_0=131.552237$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

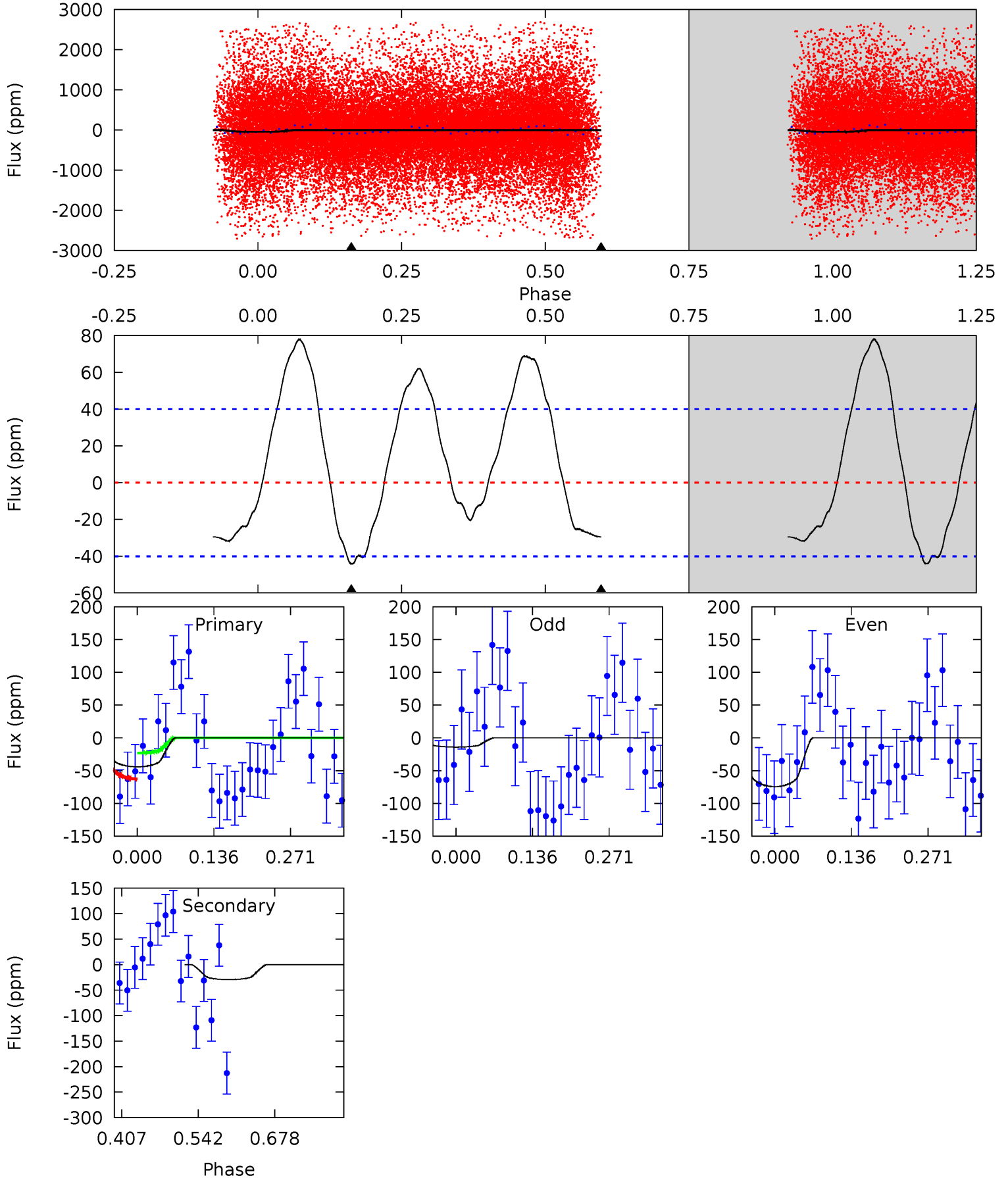
TCE 011084474-02 $P = 0.845684$ Days $T_0 = 131.537857$ (BKJD)



DV Model-Shift Uniqueness Test

011084474-02, P = 0.845683 Days, E = 131.552237 Days

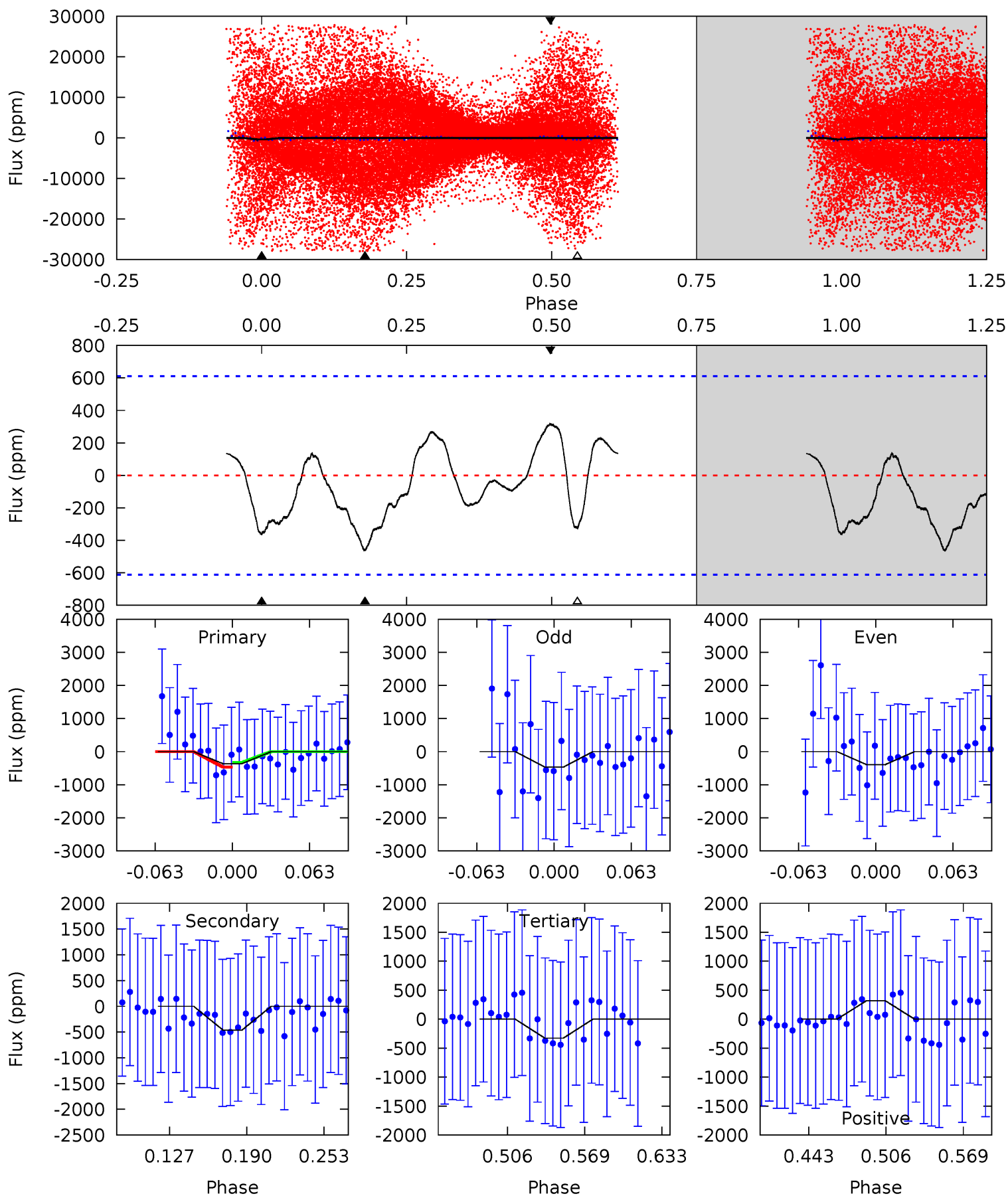
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.97	3.31	0	0	4.50	1.49	2.99	4.97	4.97	3.31	3.31	3.41	-0.37	0.64	1.98



Alt Model-Shift Uniqueness Test

011084474-02, P = 0.845684 Days, E = 131.537857 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.79	3.54	2.49	2.43	4.66	1.86	1.24	0.30	0.36	1.05	1.11	0.27	1.61	0.41	0.45



Stellar Parameters For KIC 011084474

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5263^{+158}_{-142}	$3.901^{+0.693}_{-0.297}$	$-0.300^{+0.300}_{-0.300}$	$1.721^{+0.978}_{-1.076}$	$0.861^{+0.092}_{-0.138}$	$0.238^{+2.592}_{-0.148}$
	+3%/-3%	+18%/-8%	+100%/-100%	+57%/-63%	+11%/-16%	+1089%/-62%
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 011084474-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-30 ± 9	$2.13^{+1.22}_{-0.87}$	3229^{+492}_{-504}	3526^{+768}_{-838}	$0.933^{+1.698}_{-0.559}$
Alt.	-464 ± 131	$3.74^{+1.42}_{-1.26}$	3225^{+517}_{-508}	5239^{+673}_{-609}	$4.825^{+6.402}_{-2.422}$

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

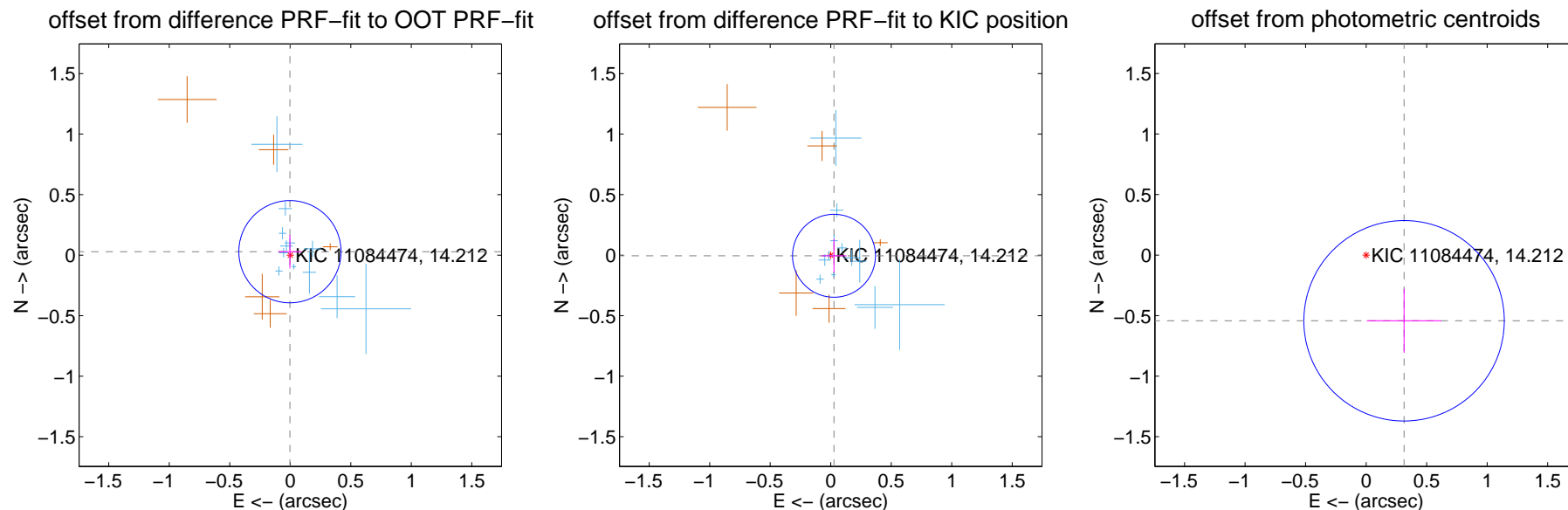
DV Centroid Data

Supplemental centroid analysis for 011084474-02. Kepler magnitude: 14.21. Transit SNR 10.45

There are 12 quarters with good PRF difference image offsets

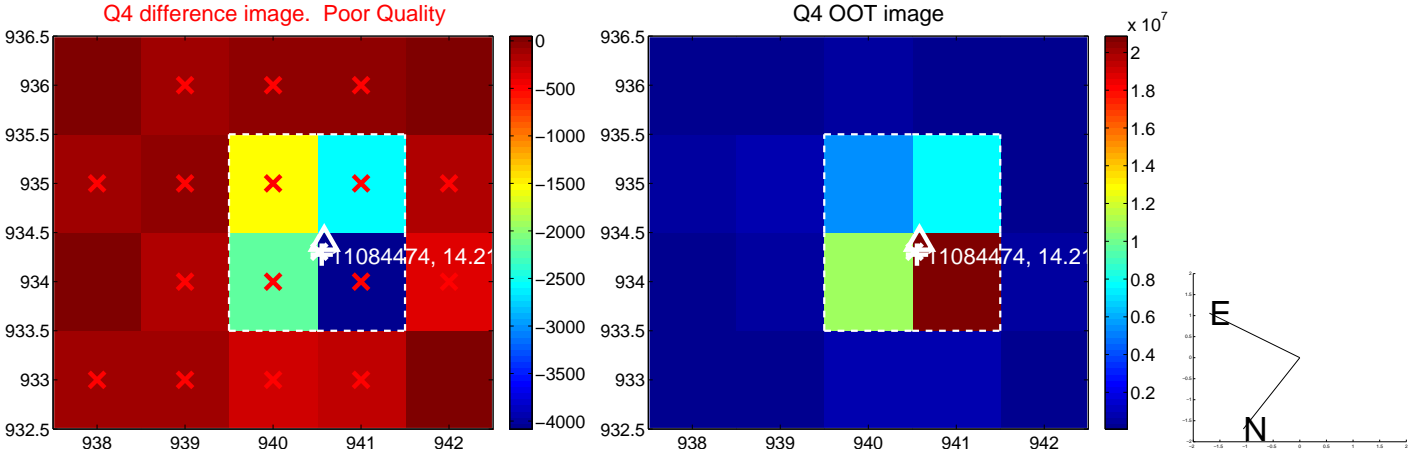
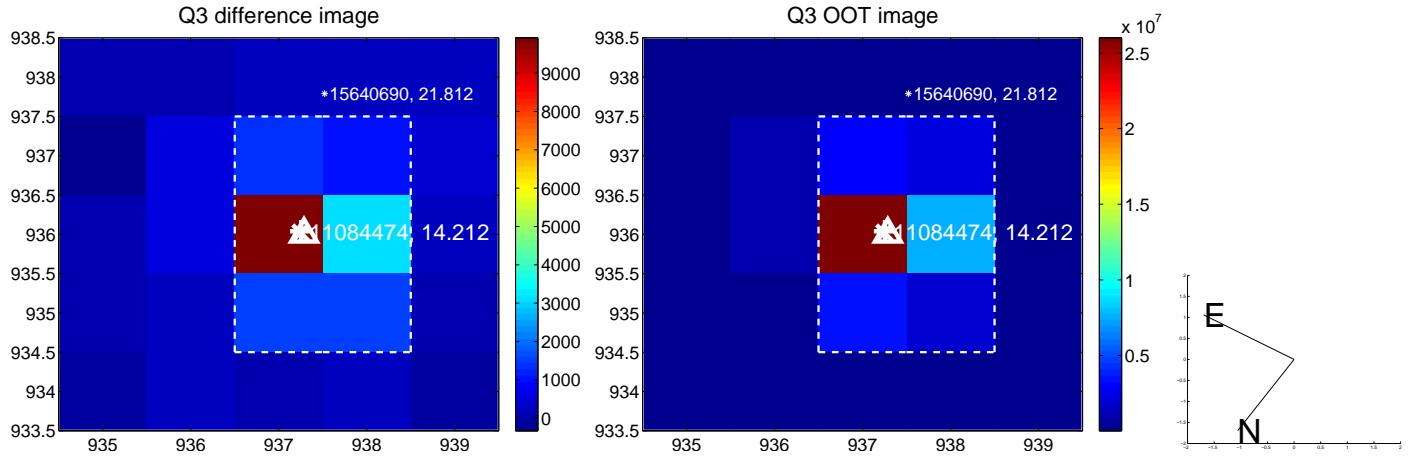
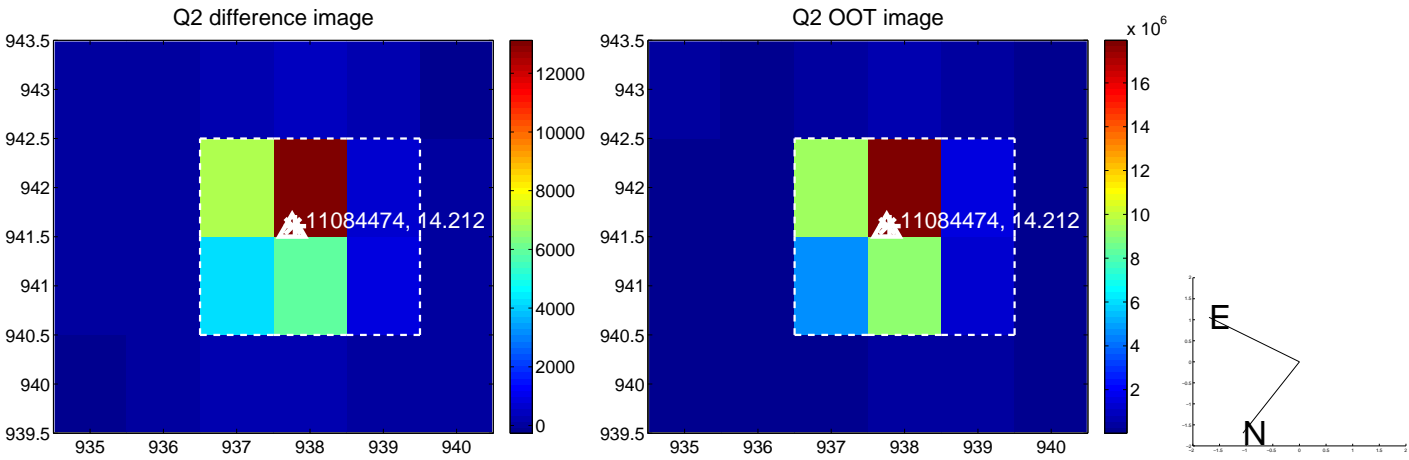
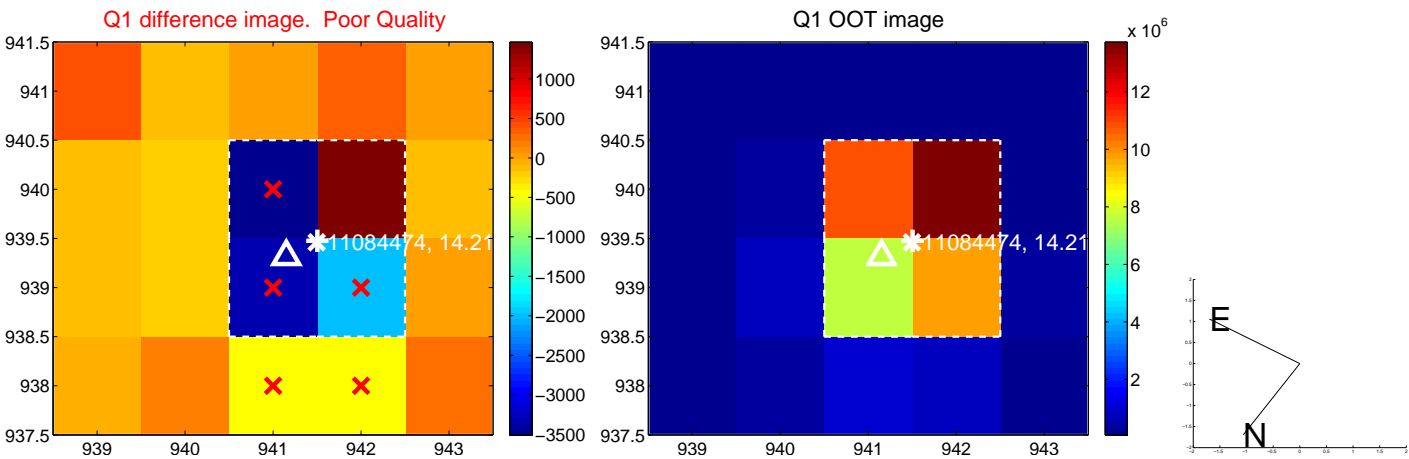
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.029 ± 0.141	0.20	0.003 ± 0.096	0.029 ± 0.138
PRF-fit source offset from KIC position	0.028 ± 0.114	0.24	-0.027 ± 0.103	-0.005 ± 0.140
photometric centroid source offset	0.63 ± 0.28	2.27	-0.31 ± 0.31	-0.54 ± 0.26

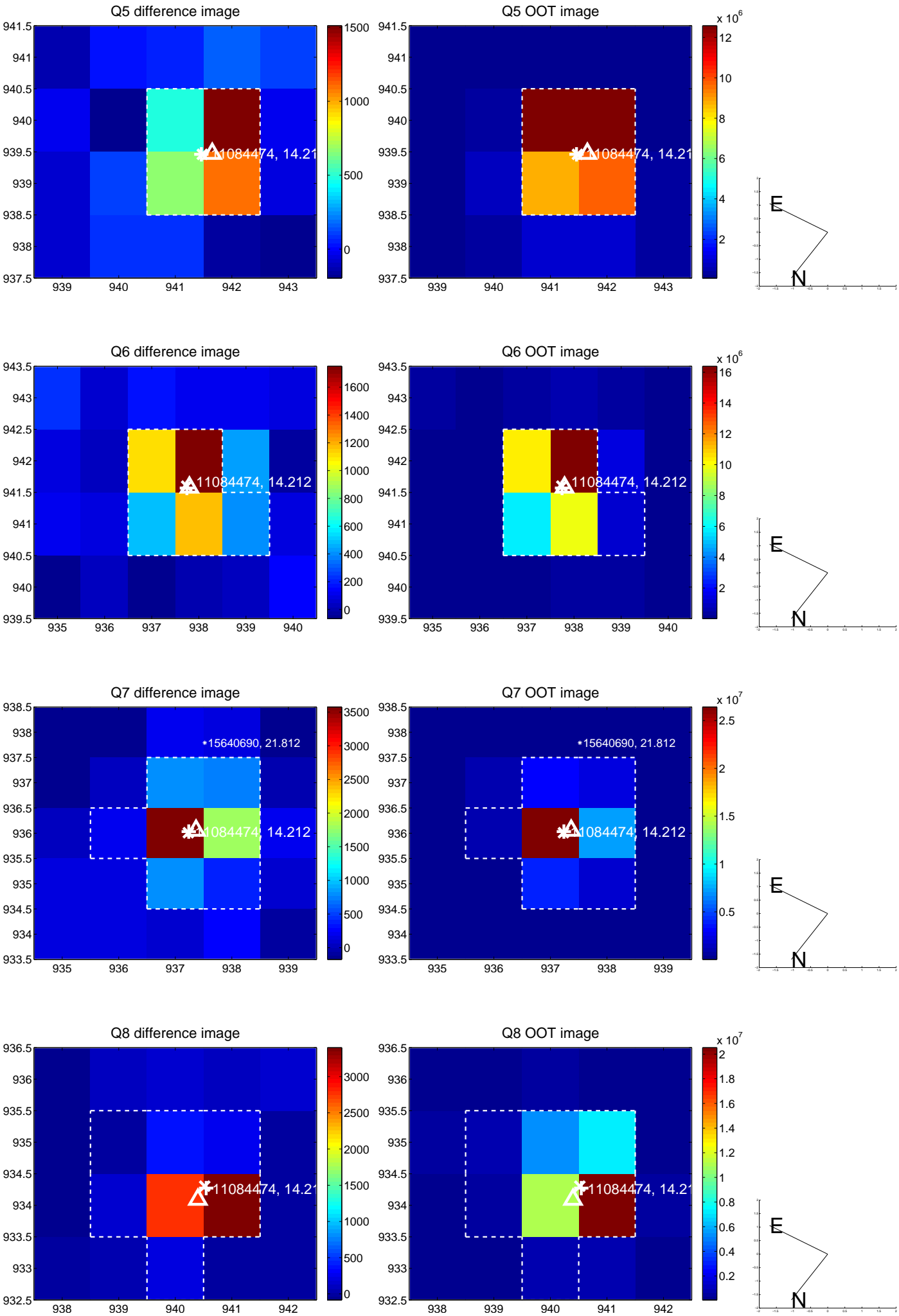


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

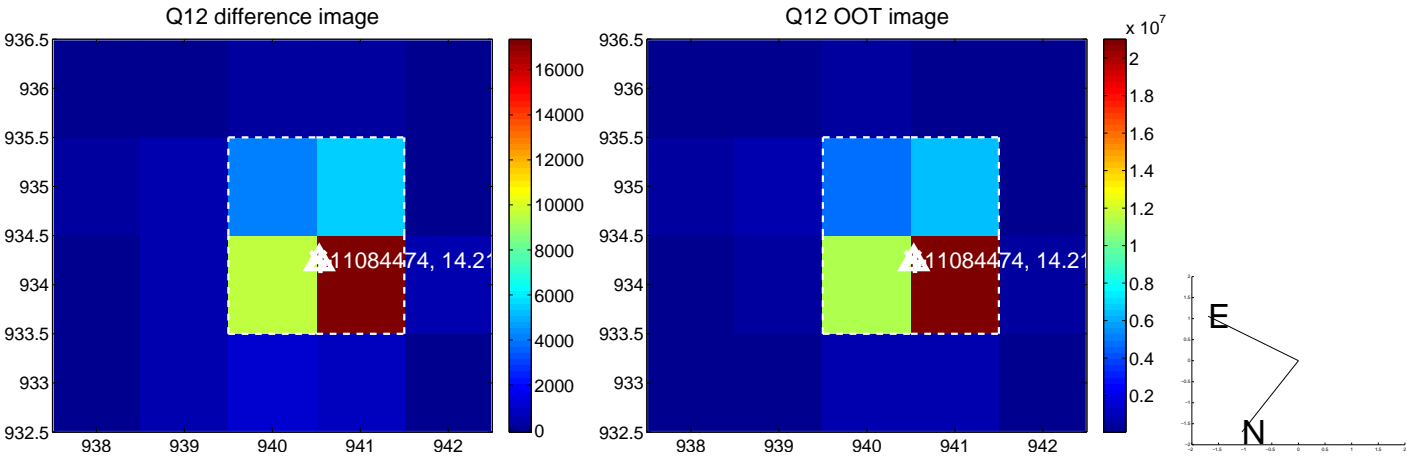
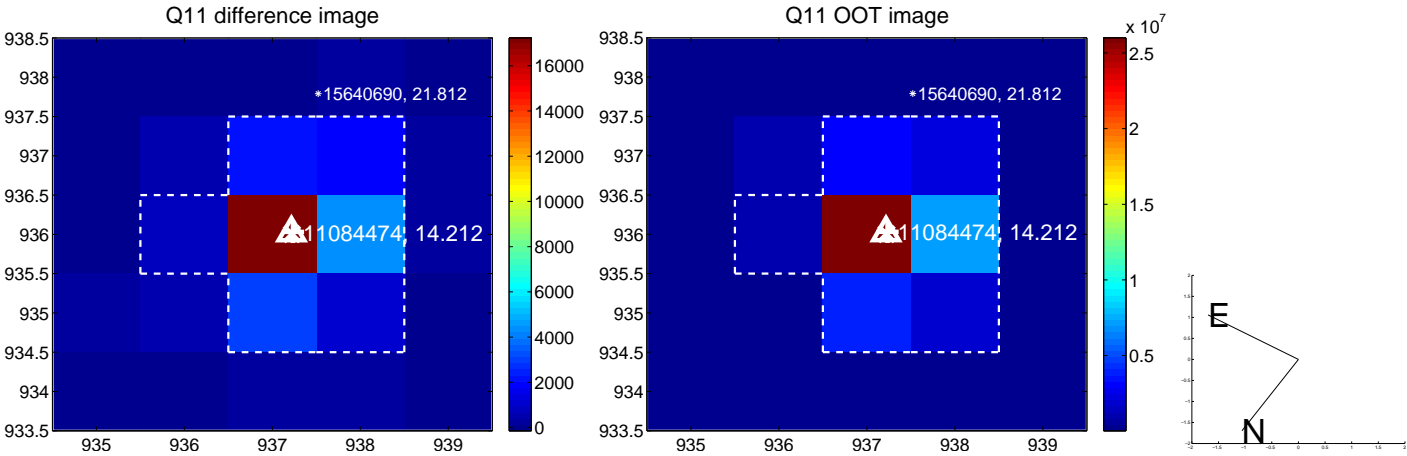
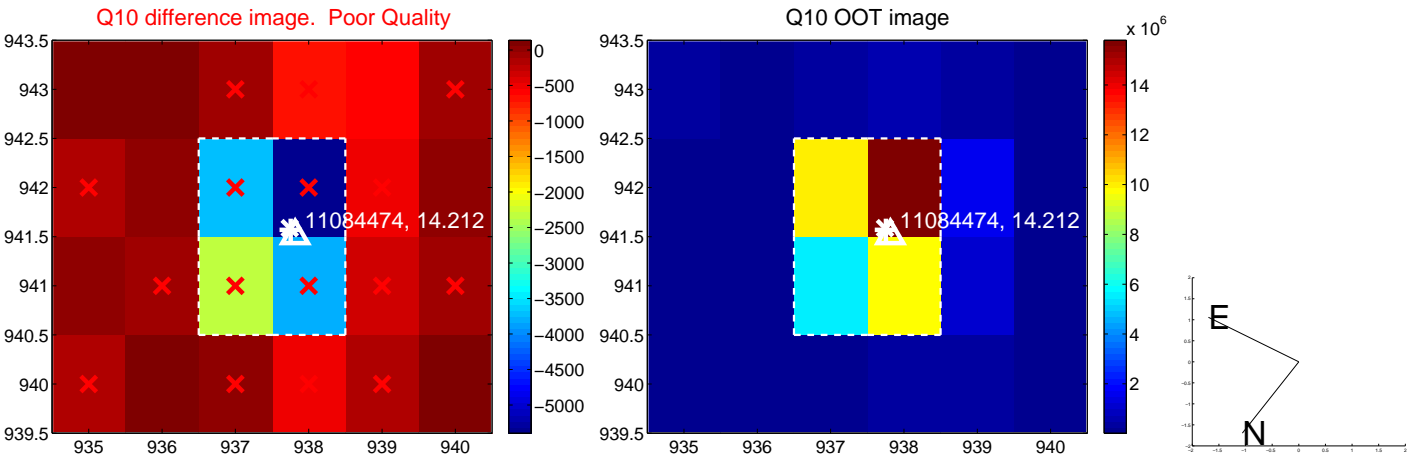
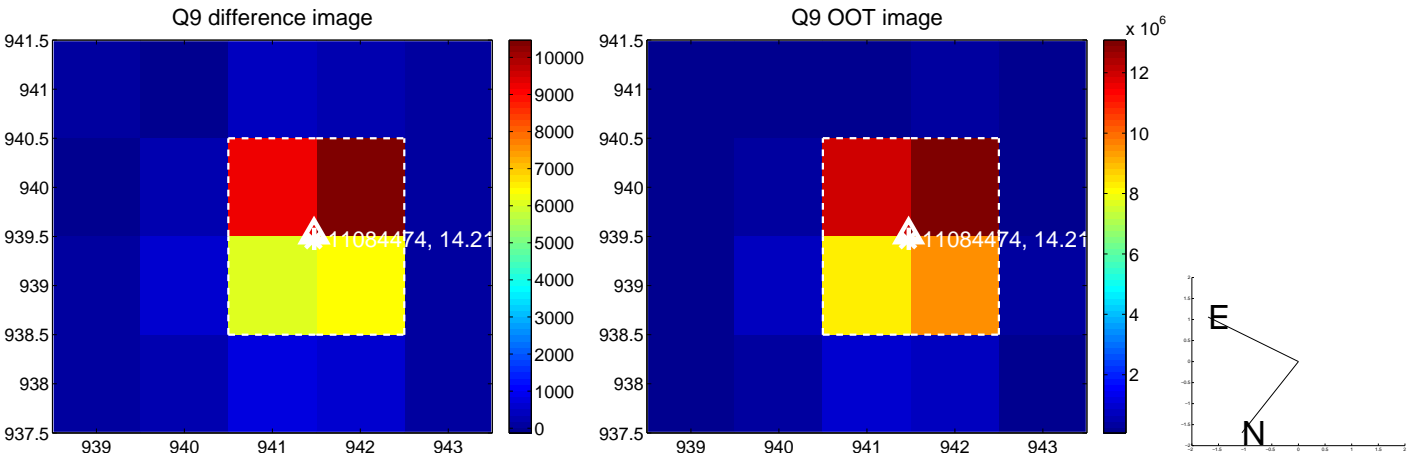
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



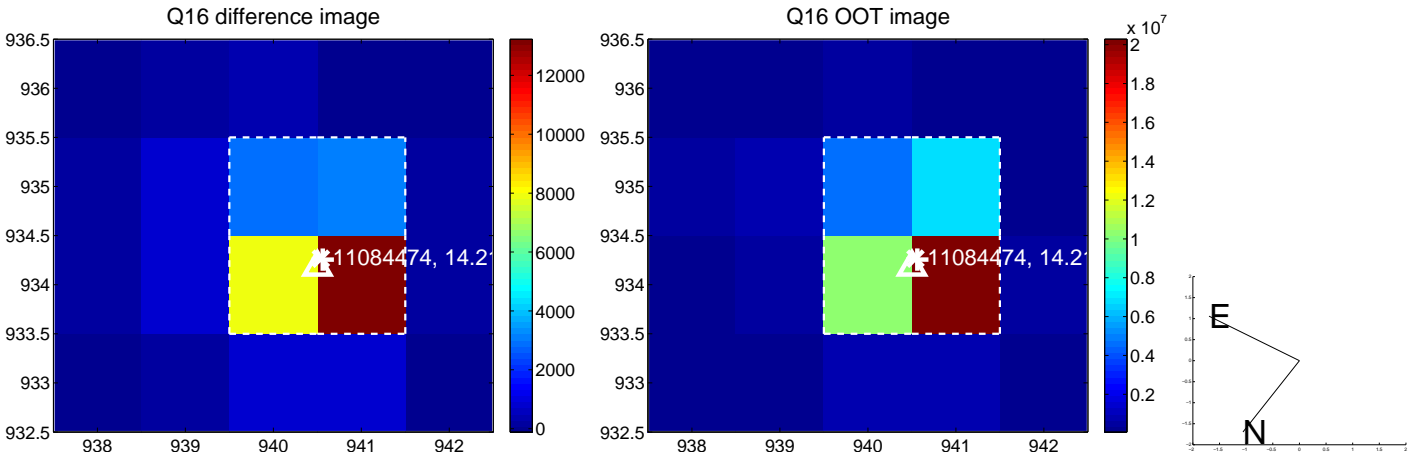
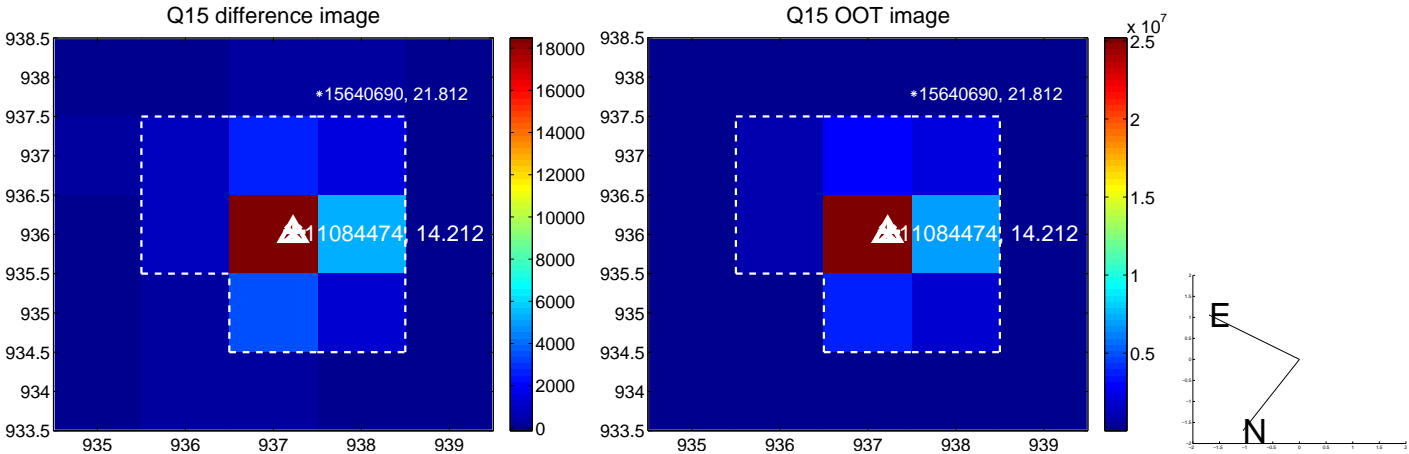
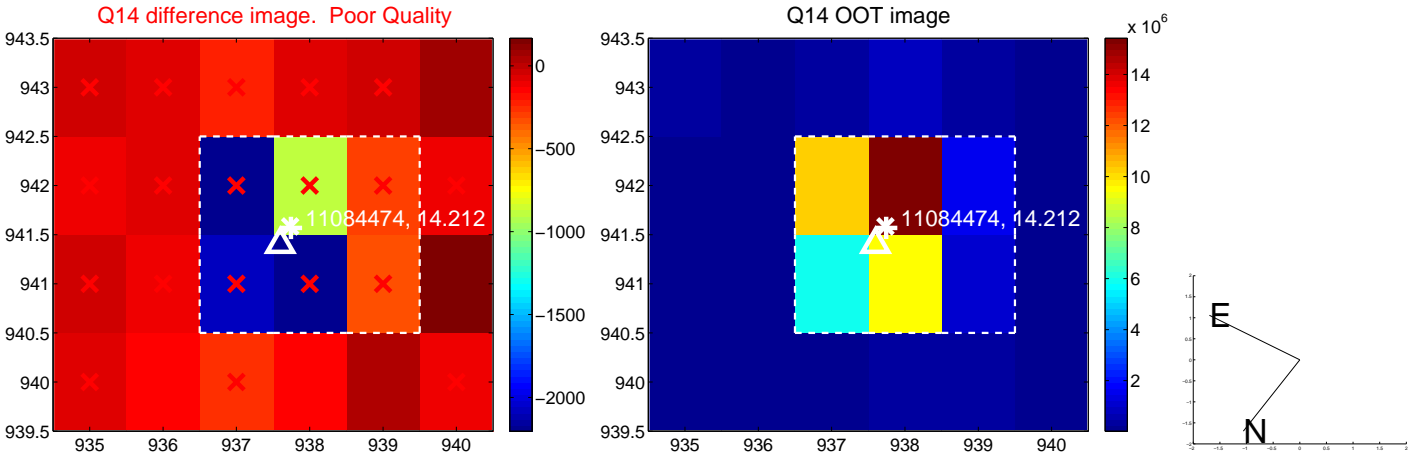
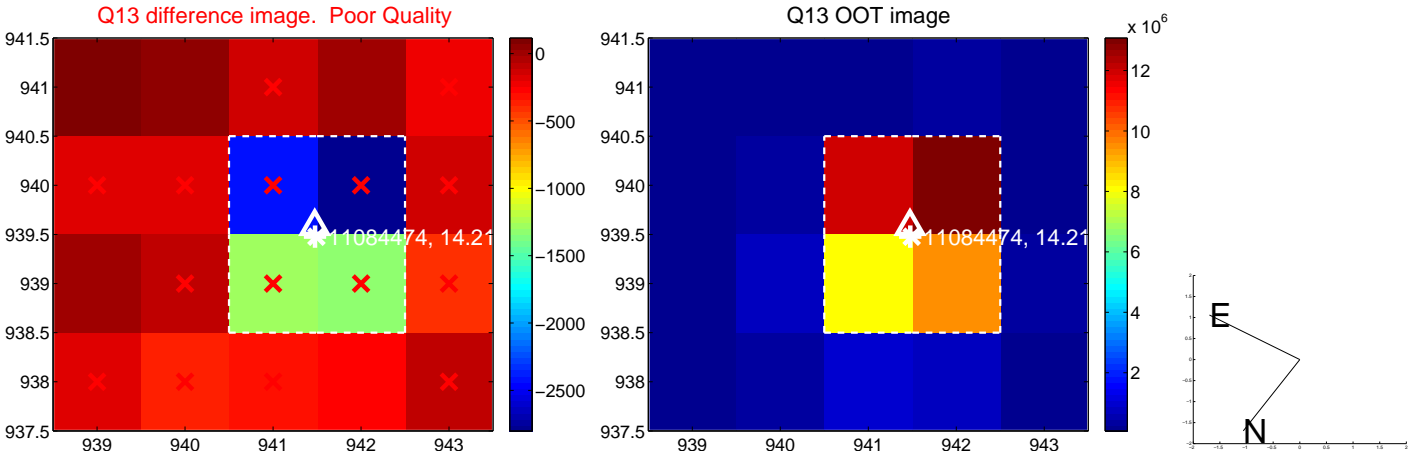
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



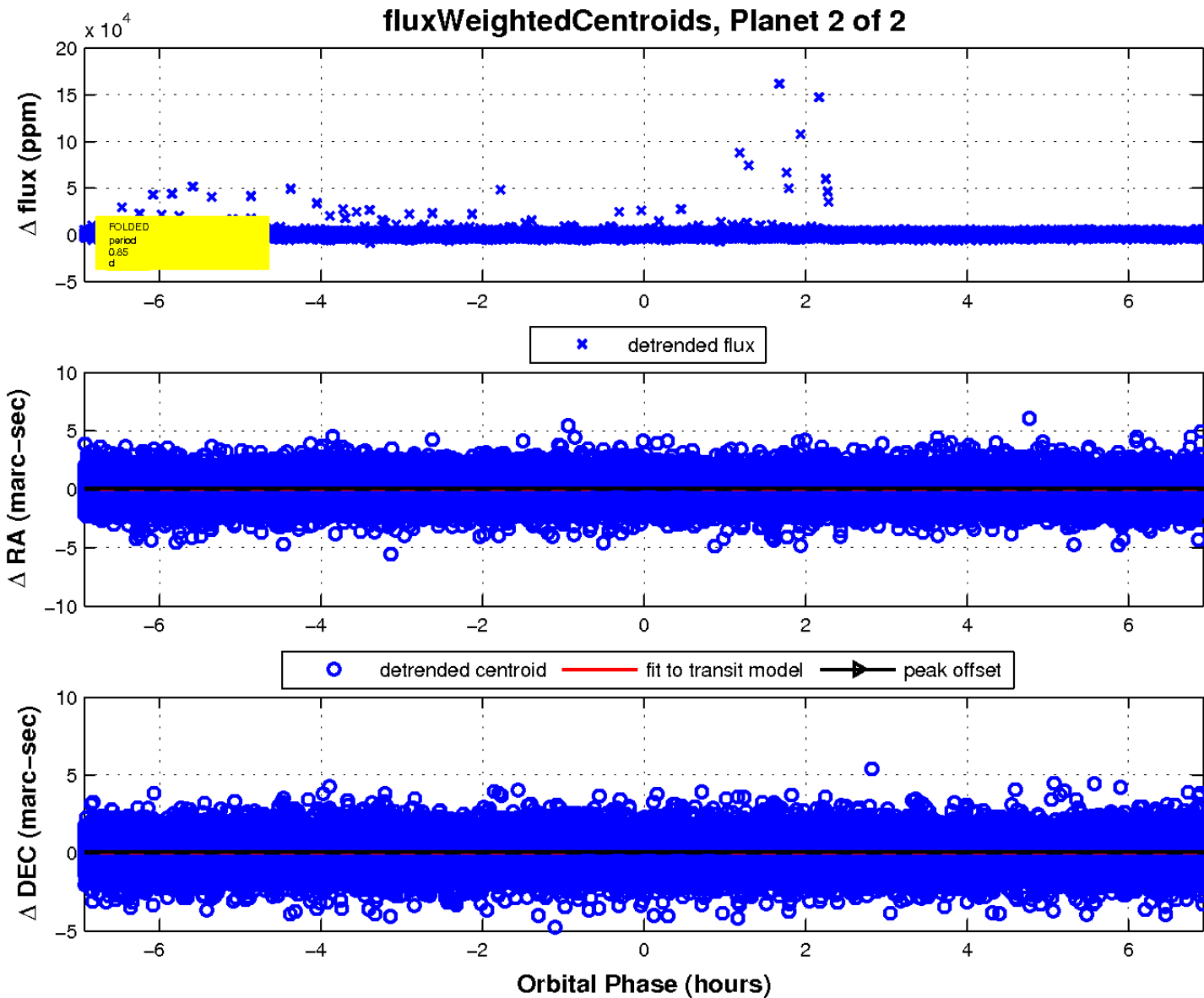
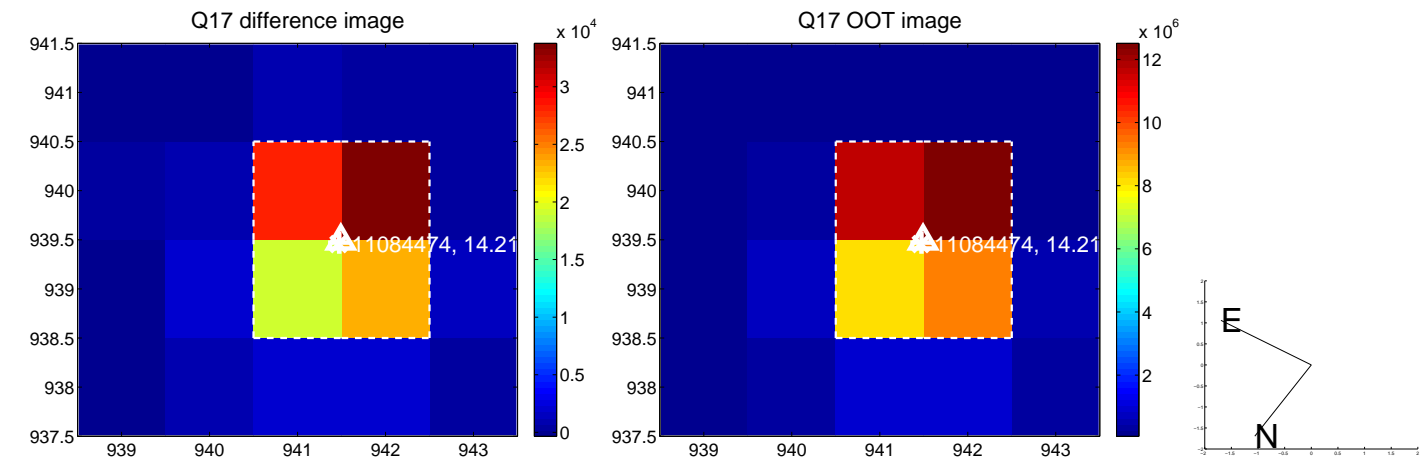
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

