

KIC 005727964

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})
005727964-01	OBS	No	0.815063	131.886927	0.0	5.544	49.6	0.0	2.05	8124	0.01	38222.85
005727964-02	OBS	No	1.630197	133.129944	217.7	2.000	22.3	-1.0	2.05	8124	3.06	15167.86

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005727964-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV—CENT_NOFITS
005727964-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—SWEET_NTL—LPP_DV—SAME_NTL_PERIOD—CENT_NOFITS—HALO_GHOST

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

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

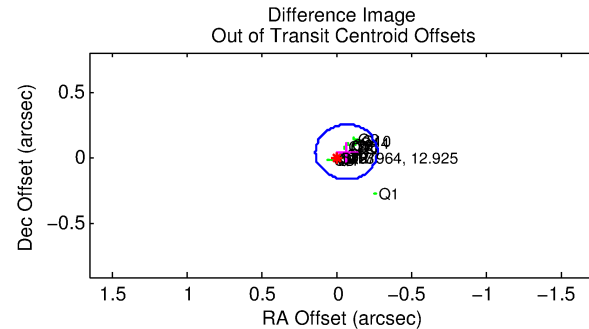
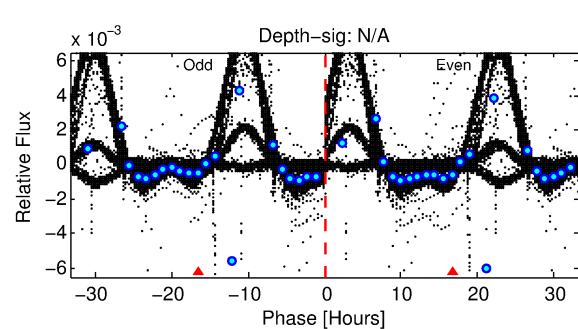
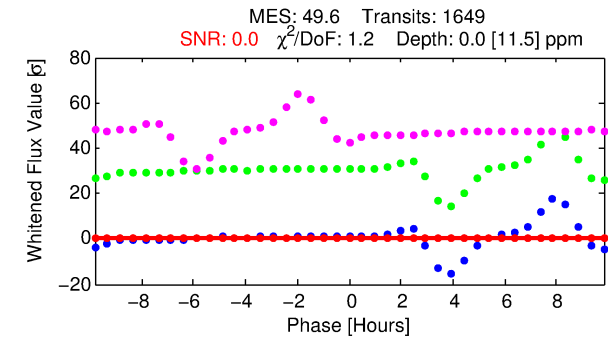
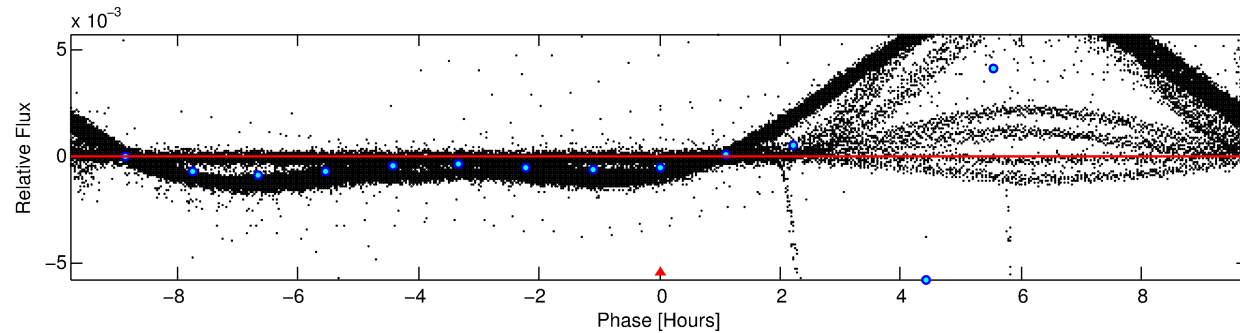
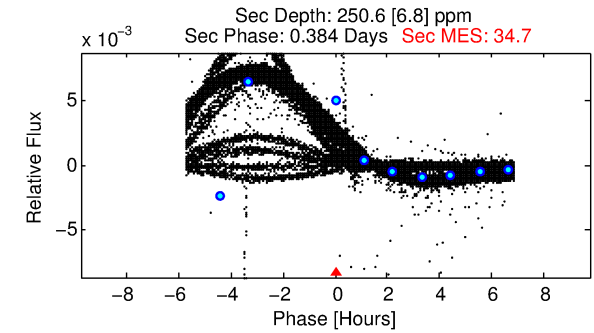
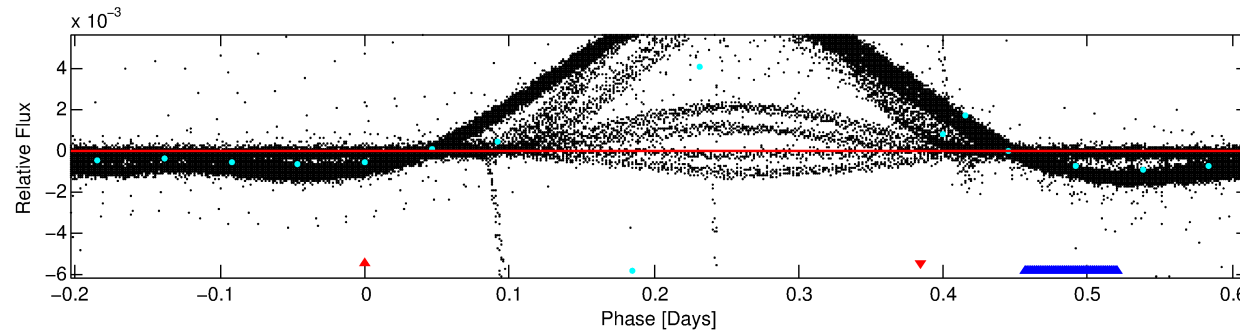
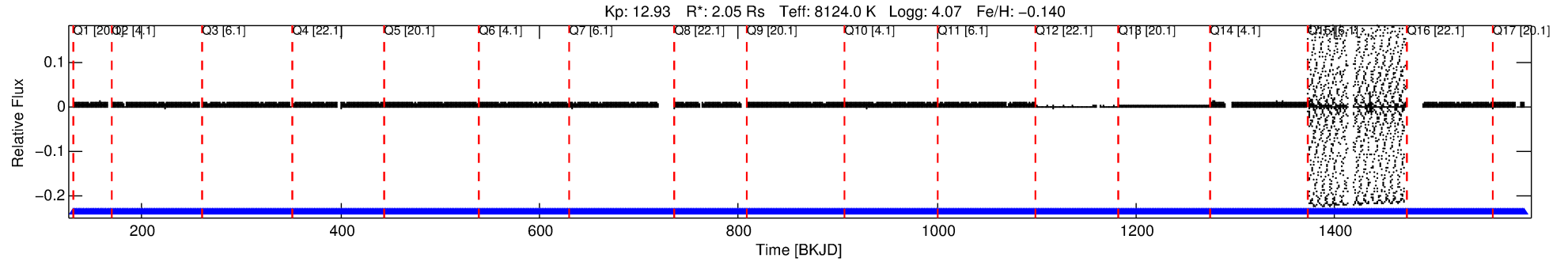
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005727964-01

No Significant Match Found

DV One-Page Summary

KIC: 5727964 Candidate: 1 of 2 Period: 0.815 d



DV Fit Results:

Period = 0.81506 [0.93820] d
Epoch = 131.8869 [116.5799] BKJD
Rp/R* = 0.0000 [0.1931]
a/R* = 1.11 [64.57]
b = 0.81 [246.18]
Seff = 38222.85 [60097.11]
Teff = 3565 [1401] K
Rp = 0.01 [43.12] Re
a = 0.0207 [0.0164] AU
Ag = 1225148.11 [15231054573.15] [0.000]
Teffp = 183398 [570047933] K [0.000]

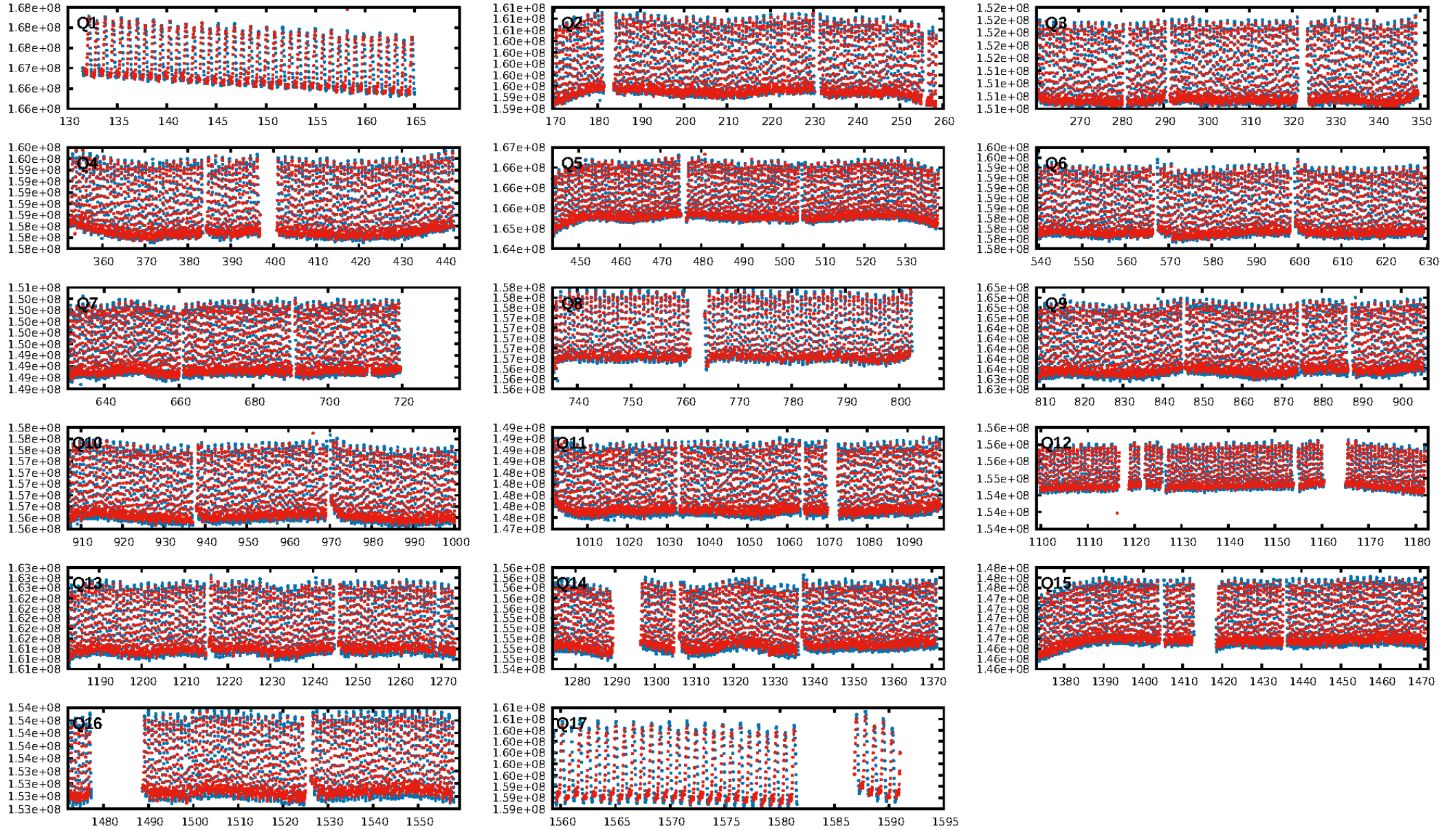
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 99.9% [3.32σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1575/1575]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.083 arcsec [1.20σ]
KicOffset-rm: 0.090 arcsec [1.24σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 0.00 [0/17]

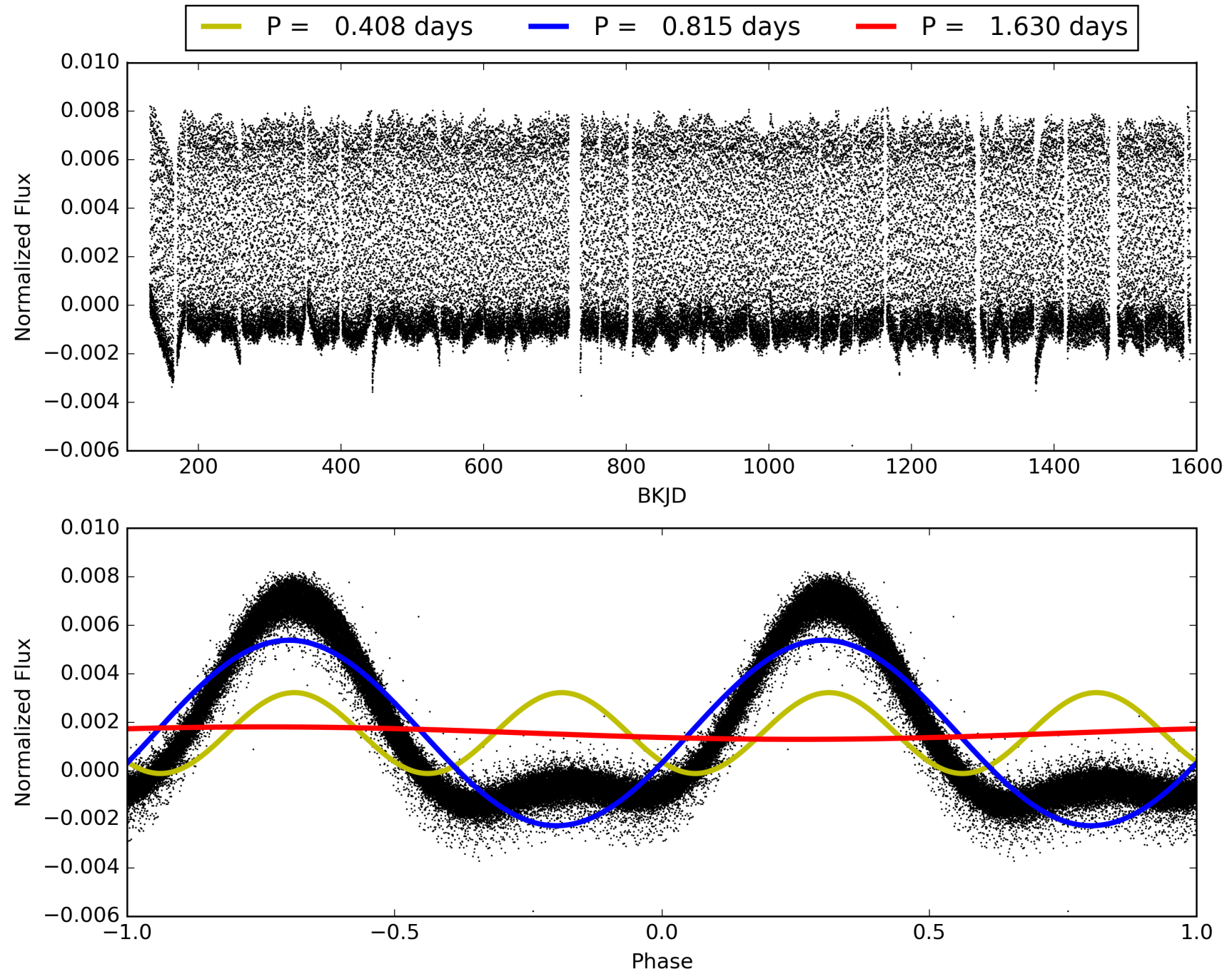
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 08:50:20 Z

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

TCE 005727964-01, PDC Light Curves

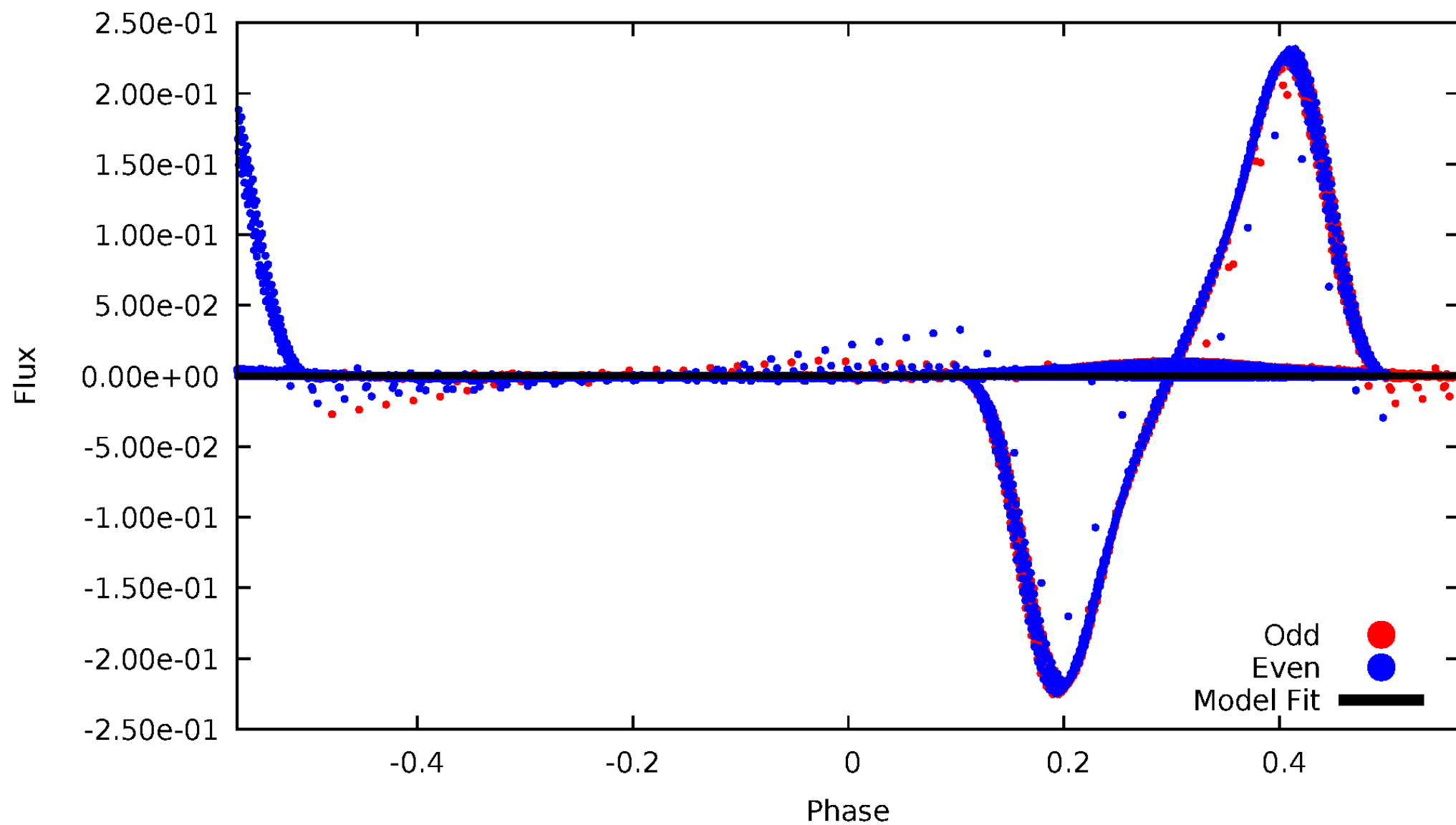


TCE 005727964-01



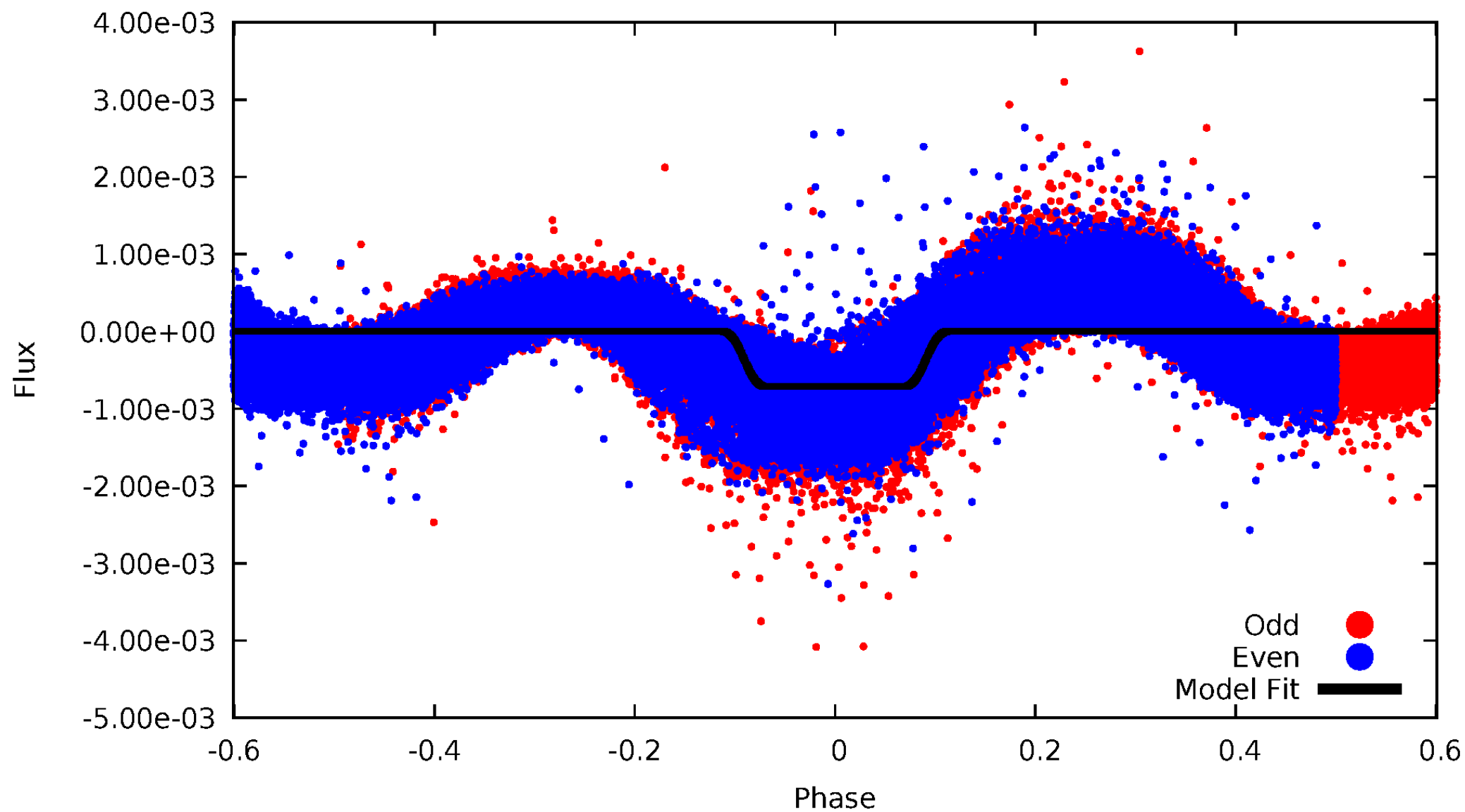
DV Odd/Even

TCE 005727964-01



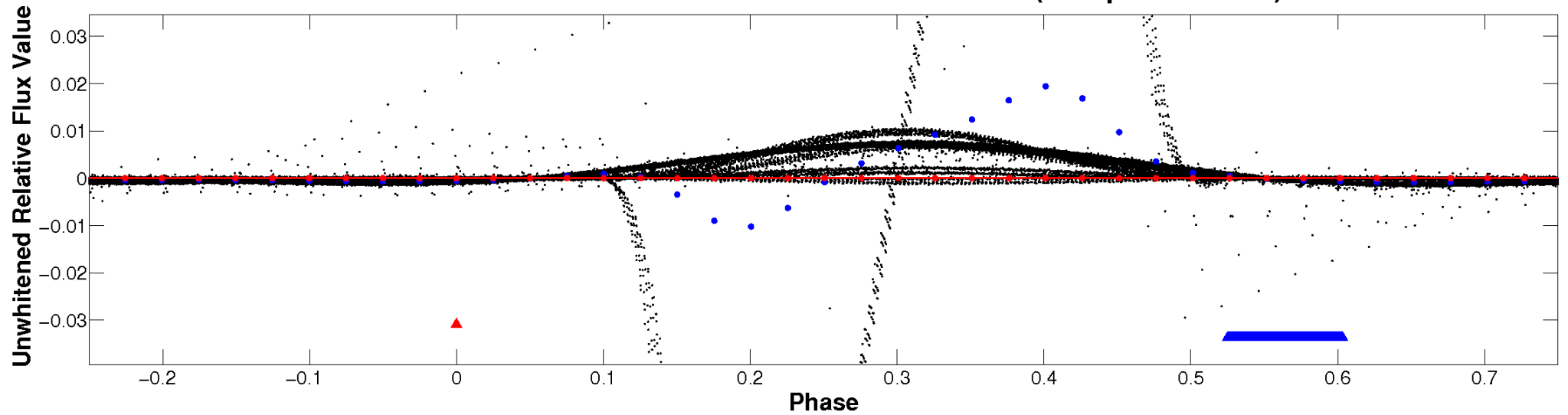
ALT Odd/Even

TCE 005727964-01

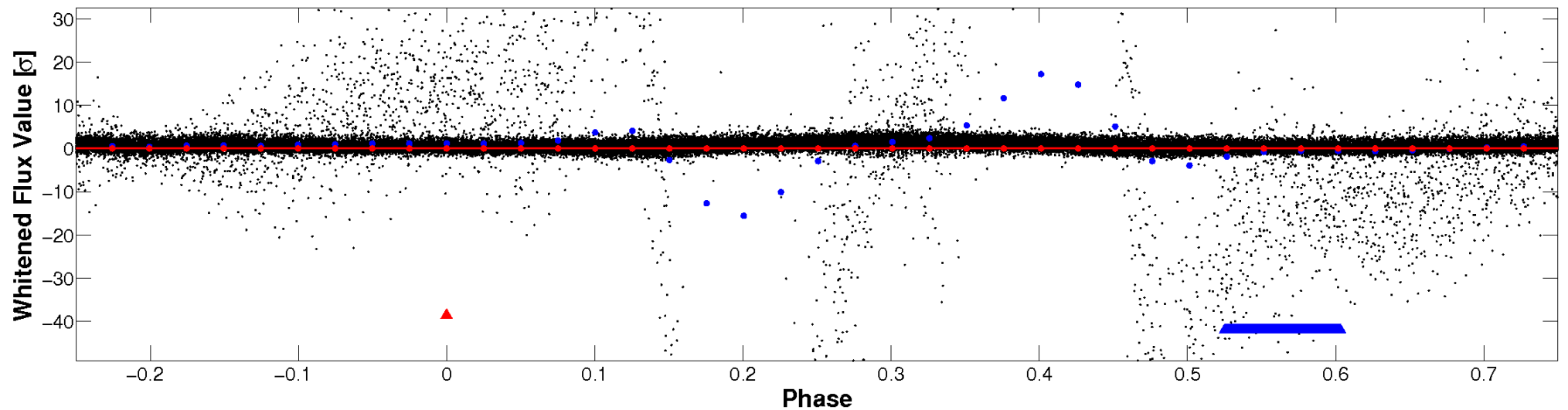


Non-Whitened Vs. Whitened Light Curve

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

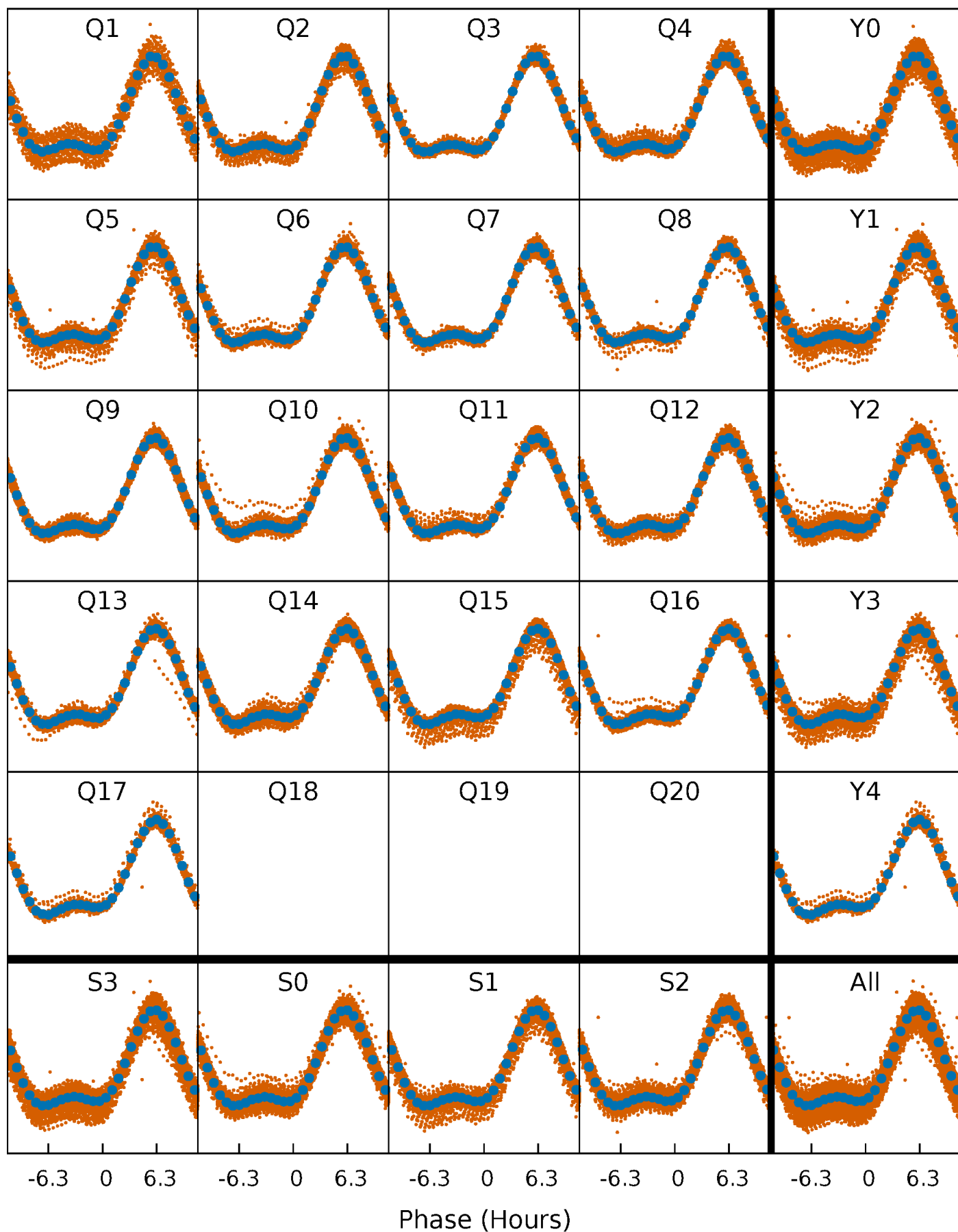


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



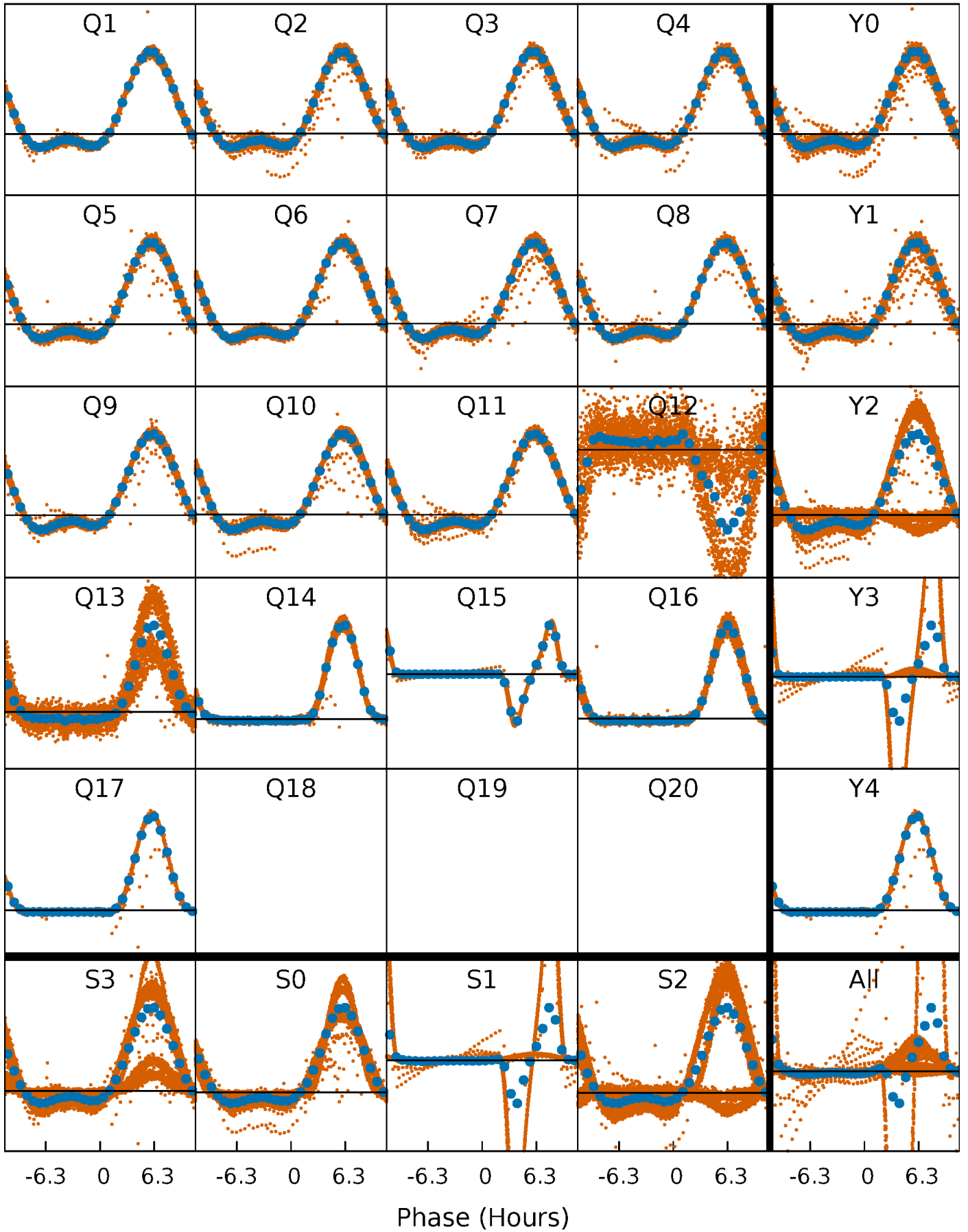
PDC Quarter-Phased Transit Curves

TCE 005727964-01 P= 0.815063 Days $T_0=131.886927$ (BKJD)



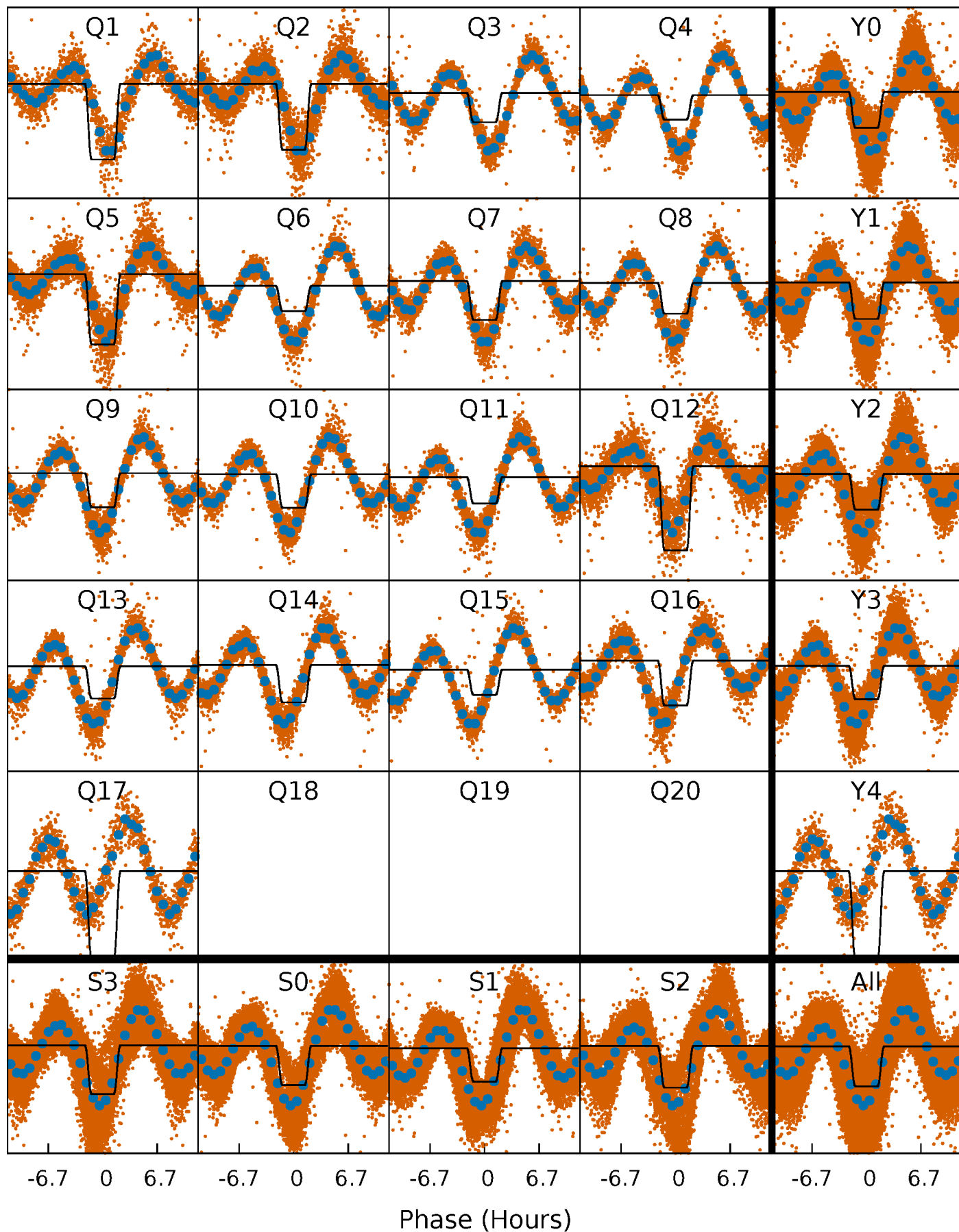
DV Quarter-Phased Transit Curves

TCE 005727964-01 P= 0.815063 Days $T_0=131.886927$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

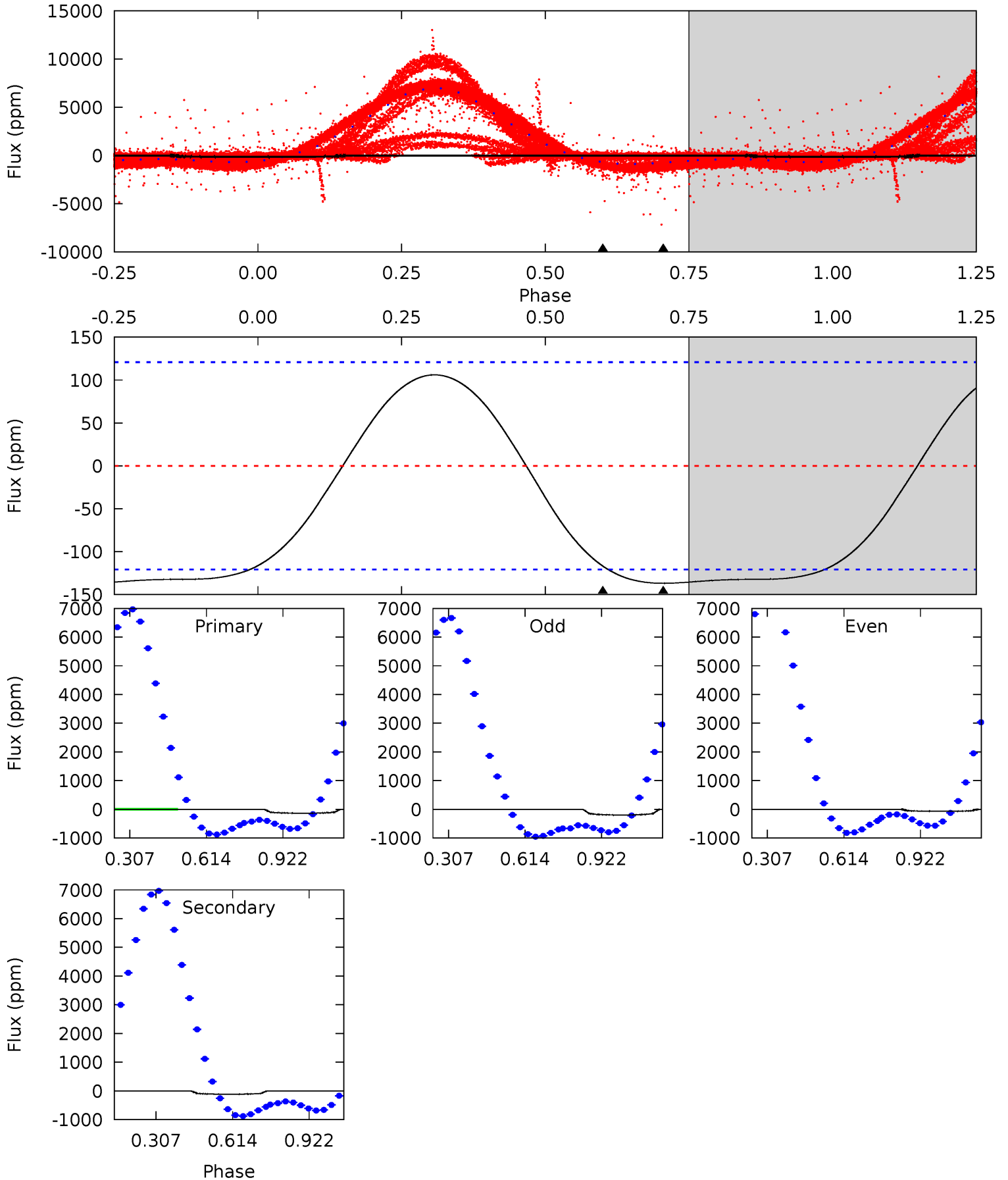
TCE 005727964-01 P= 0.815141 Days $T_0=131.876629$ (BKJD)



DV Model-Shift Uniqueness Test

005727964-01, P = 0.815063 Days, E = 131.071864 Days

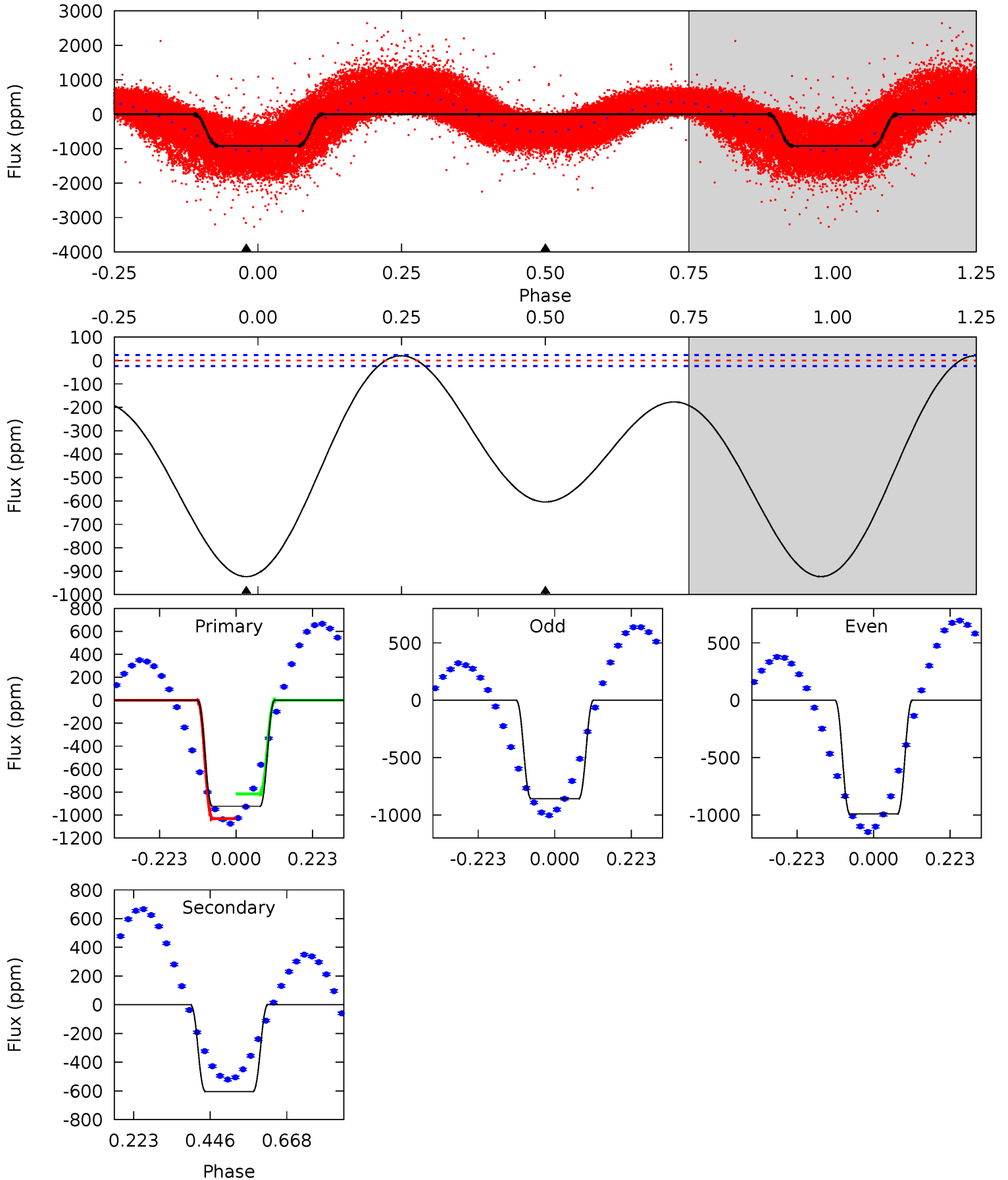
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.90	4.18	0	0	4.32	1.02	2.56	4.90	4.90	4.18	4.18	2.32	1.88	0.44	30.9



Alt Model-Shift Uniqueness Test

005727964-01, P = 0.815141 Days, E = 131.061488 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
171.3	112.1	0	0	4.39	1.22	16.6	171.3	171.3	112.1	112.1	12.1	0.97	0.02	21.7



Stellar Parameters For KIC 005727964

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	8124^{+226}_{-340}	$4.065^{+0.165}_{-0.135}$	$-0.140^{+0.200}_{-0.350}$	$2.046^{+0.431}_{-0.479}$	$1.774^{+0.157}_{-0.291}$	$0.291^{+0.267}_{-0.121}$
	+3%/-4%	+4%/-3%	+143%/-250%	+21%/-23%	+9%/-16%	+92%/-41%
Source	KIC0	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 005727964-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-117 ± 28	$28.93^{+33.28}_{-20.96}$	4561^{+1940}_{-857}	-3633^{+7249}_{-1335}	$0.040^{+0.532}_{-0.035}$
Alt.	-604 ± 5	$29.92^{+34.12}_{-21.11}$	4618^{+1880}_{-914}	-3171^{+8981}_{-1705}	$0.183^{+2.390}_{-0.154}$

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

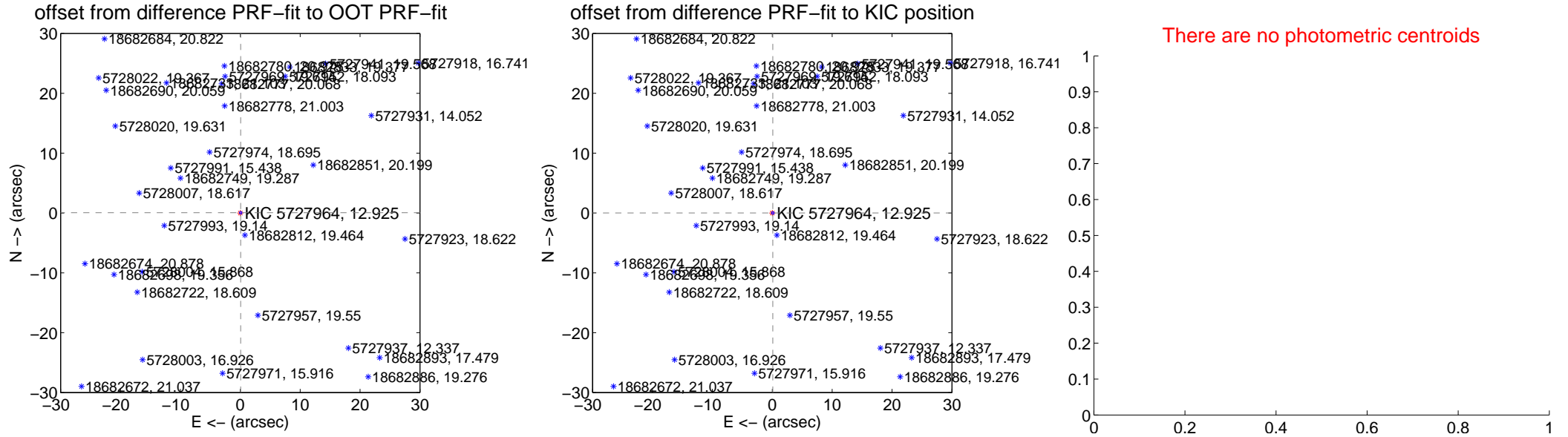
DV Centroid Data

Supplemental centroid analysis for 005727964-01. Kepler magnitude: 12.93. Transit SNR 0.00

There are 17 quarters with good PRF difference image offsets

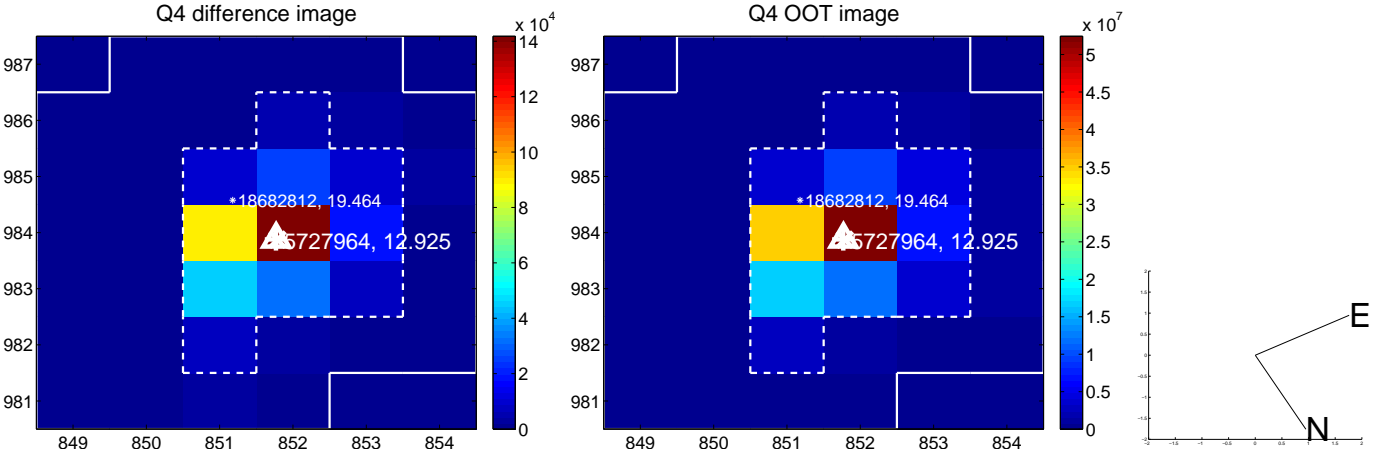
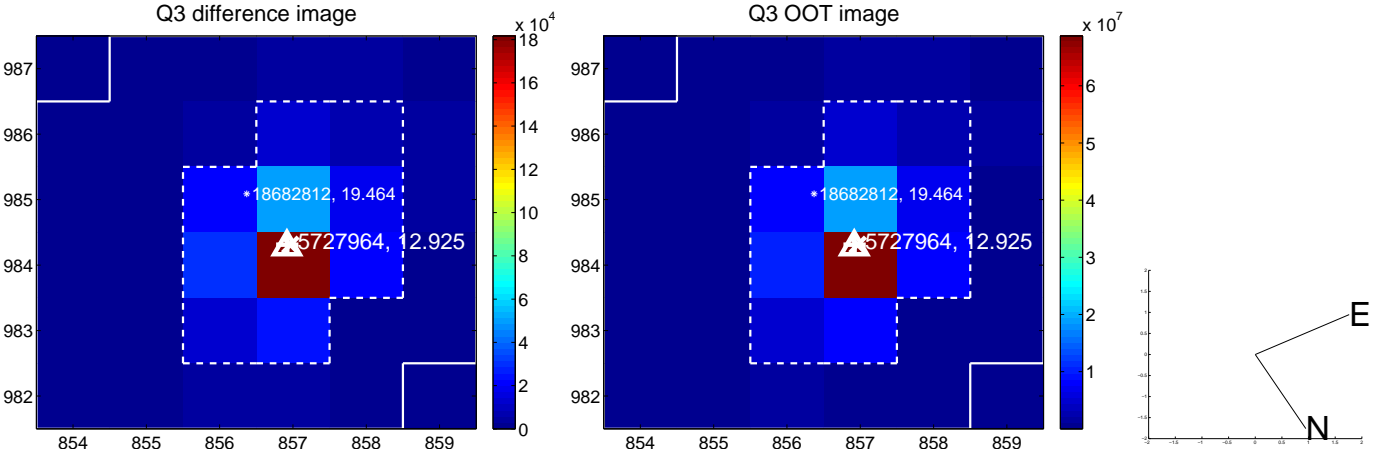
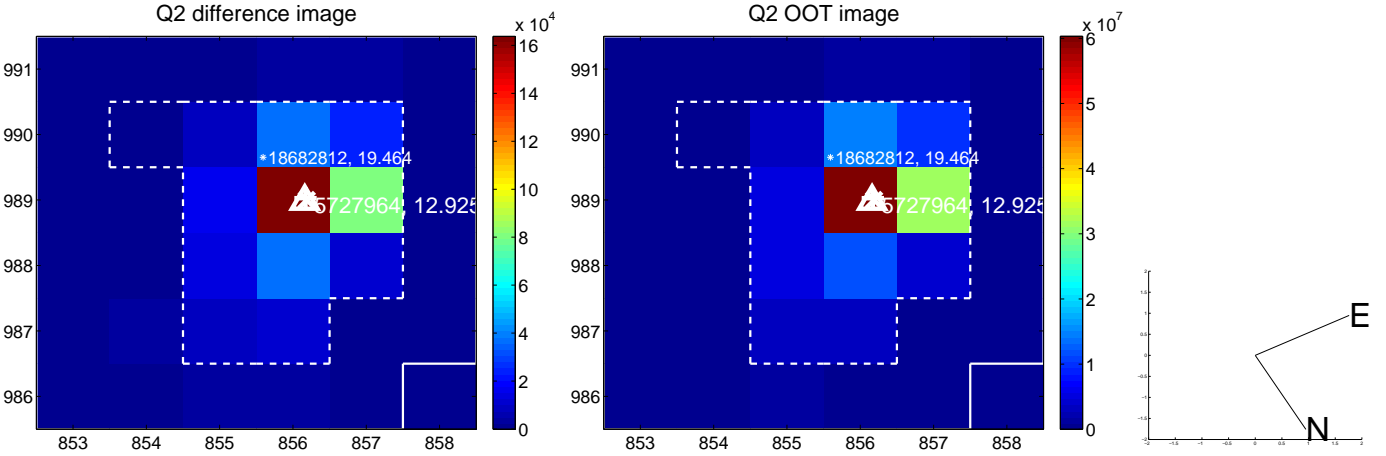
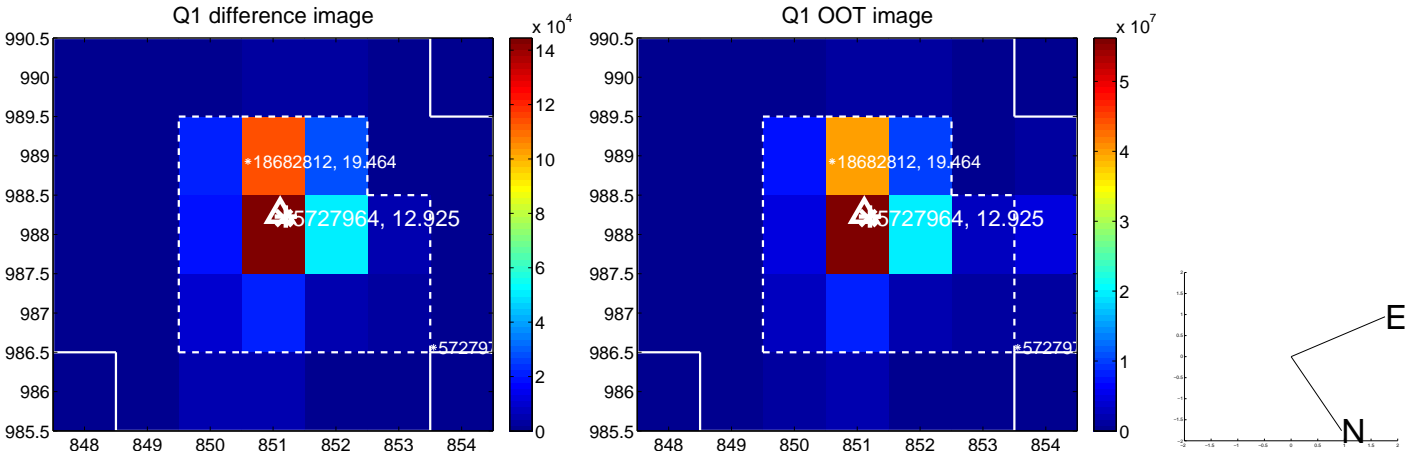
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.083 ± 0.069	1.20	-0.069 ± 0.069	0.045 ± 0.070
PRF-fit source offset from KIC position	0.090 ± 0.072	1.24	-0.089 ± 0.072	0.009 ± 0.069
photometric centroid source offset	—	—	—	—

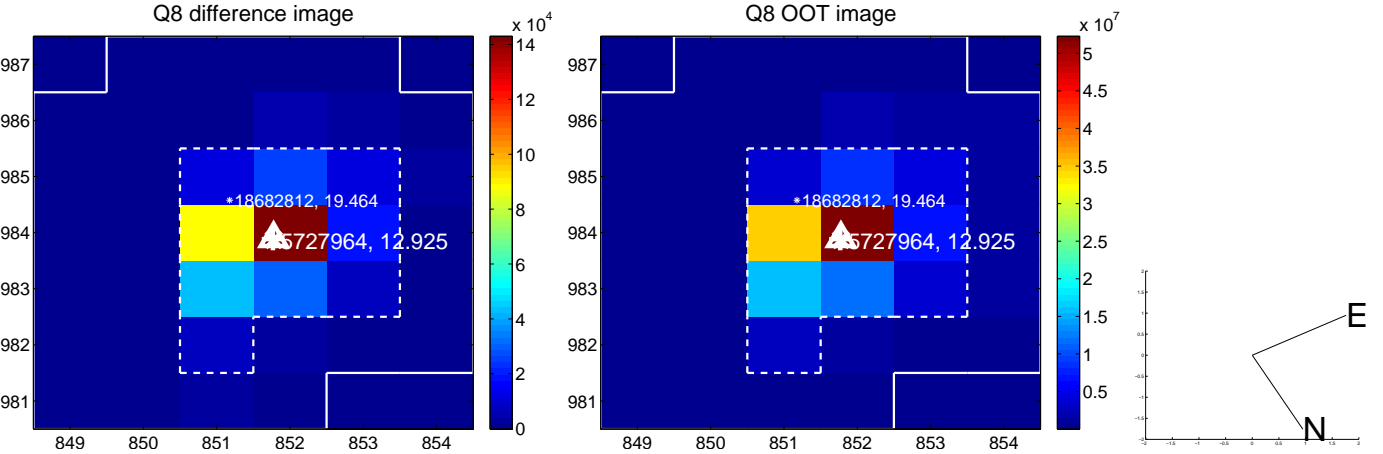
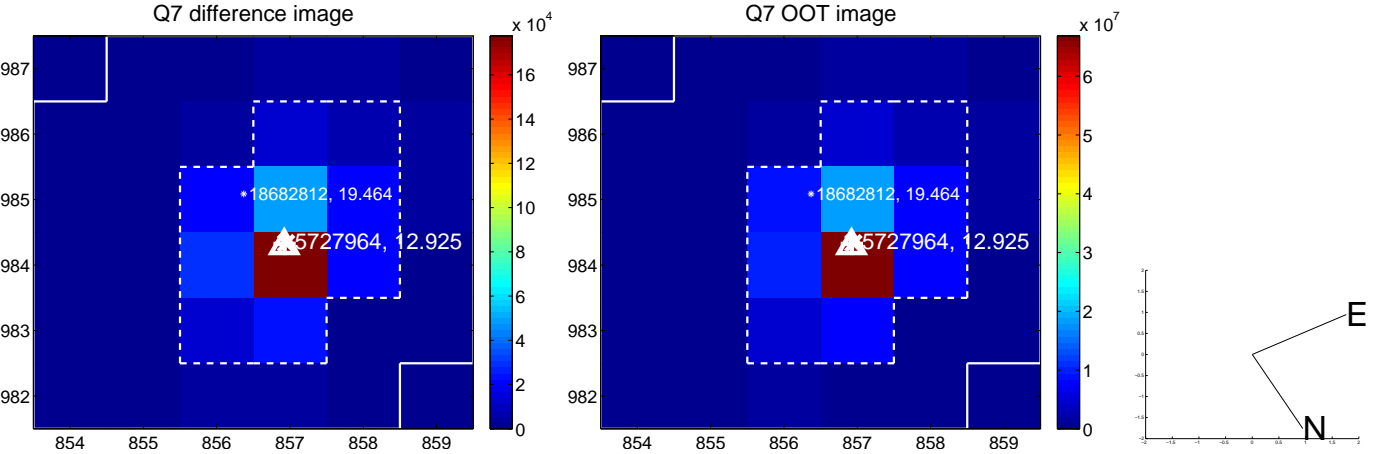
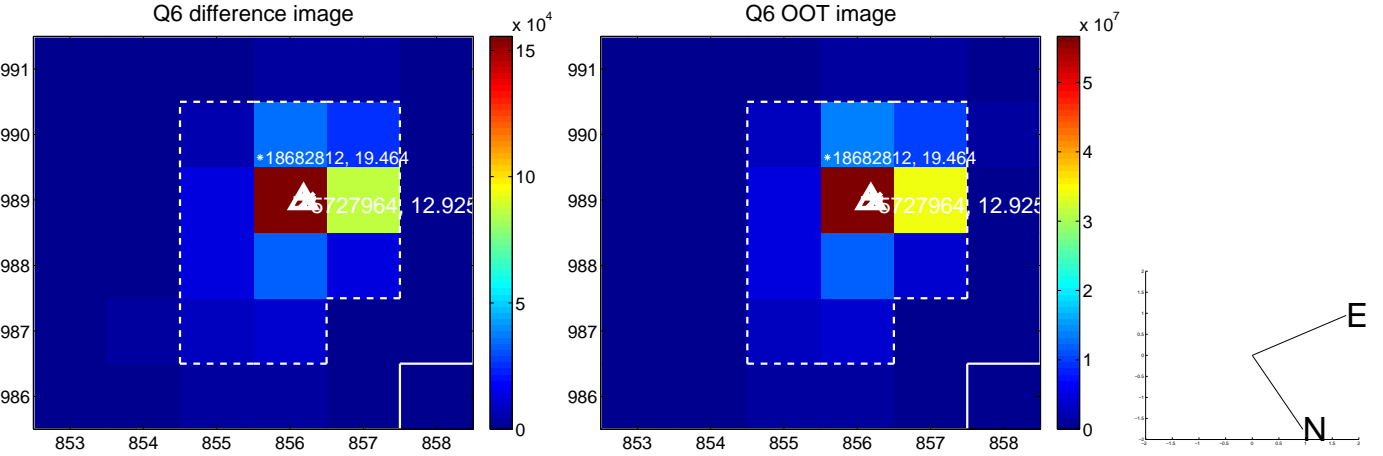
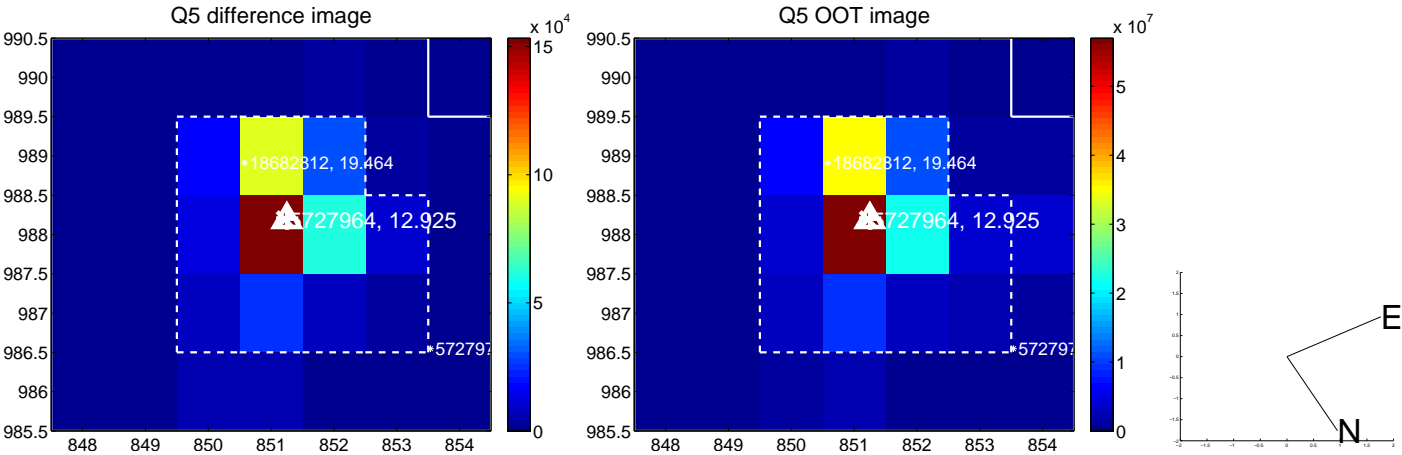


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

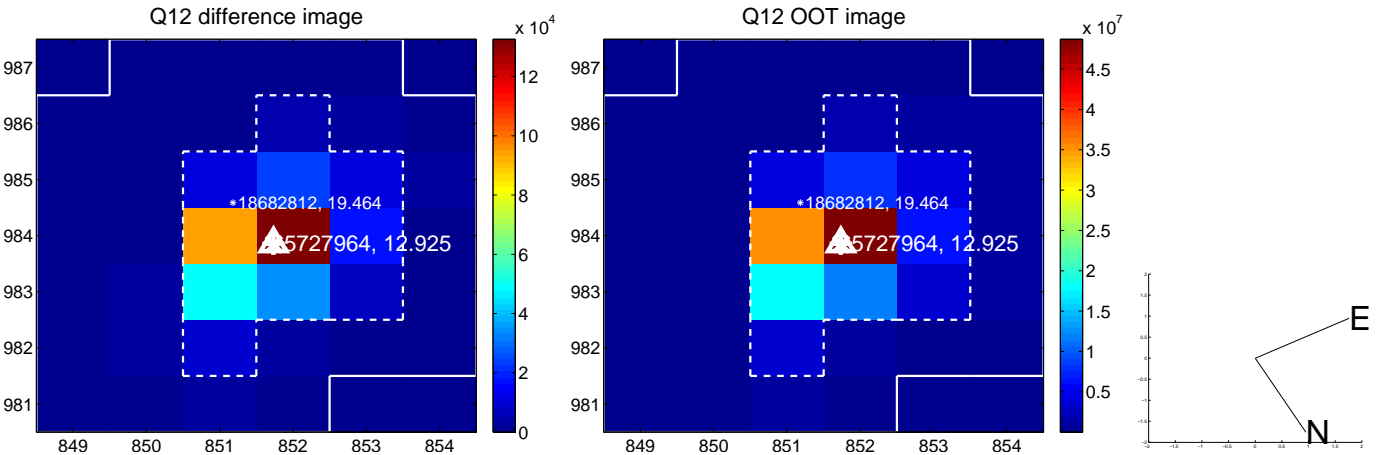
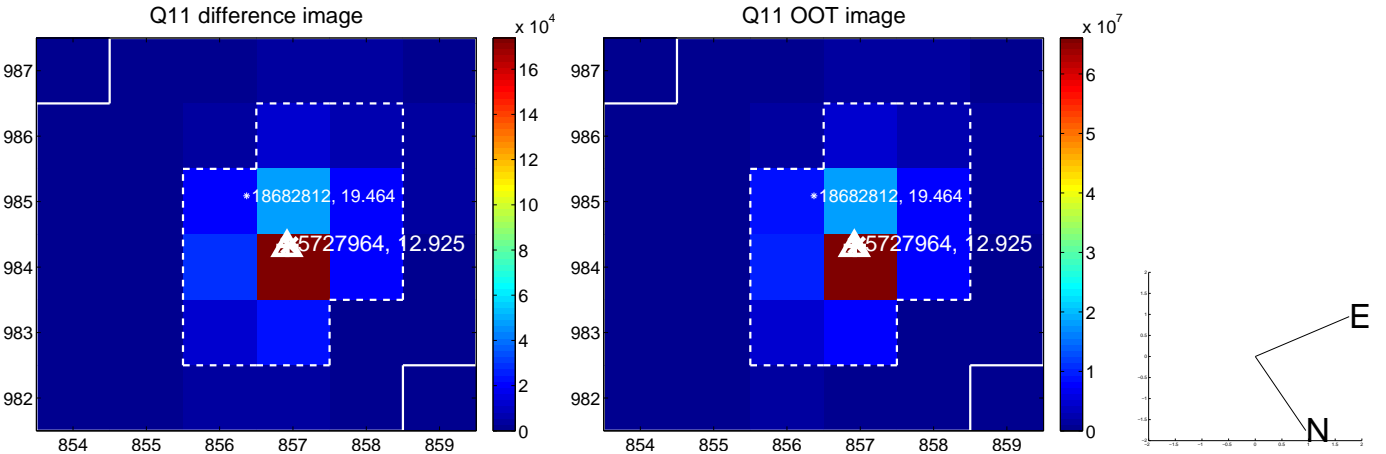
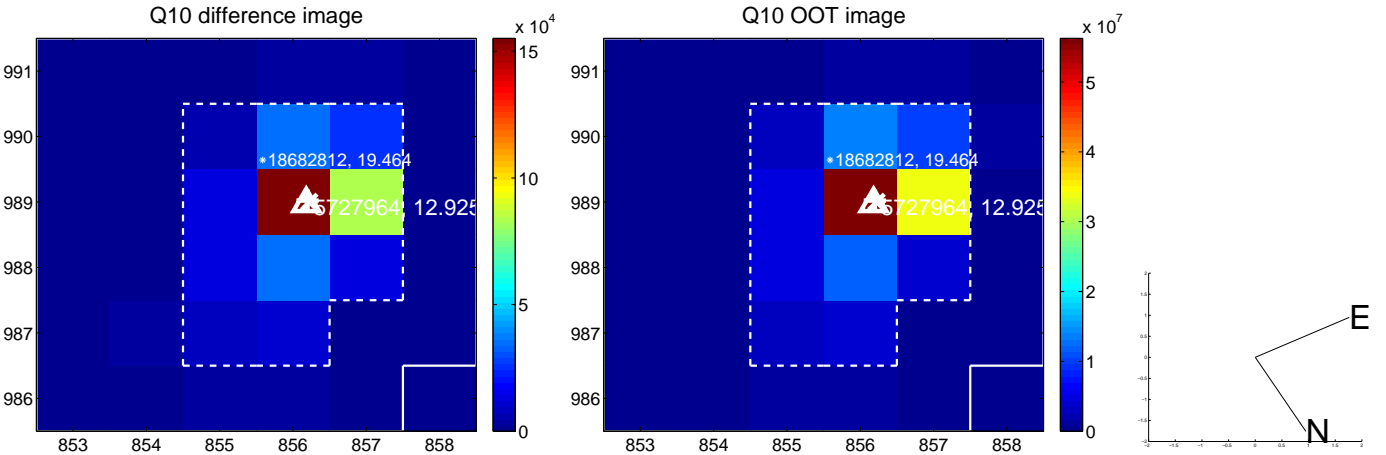
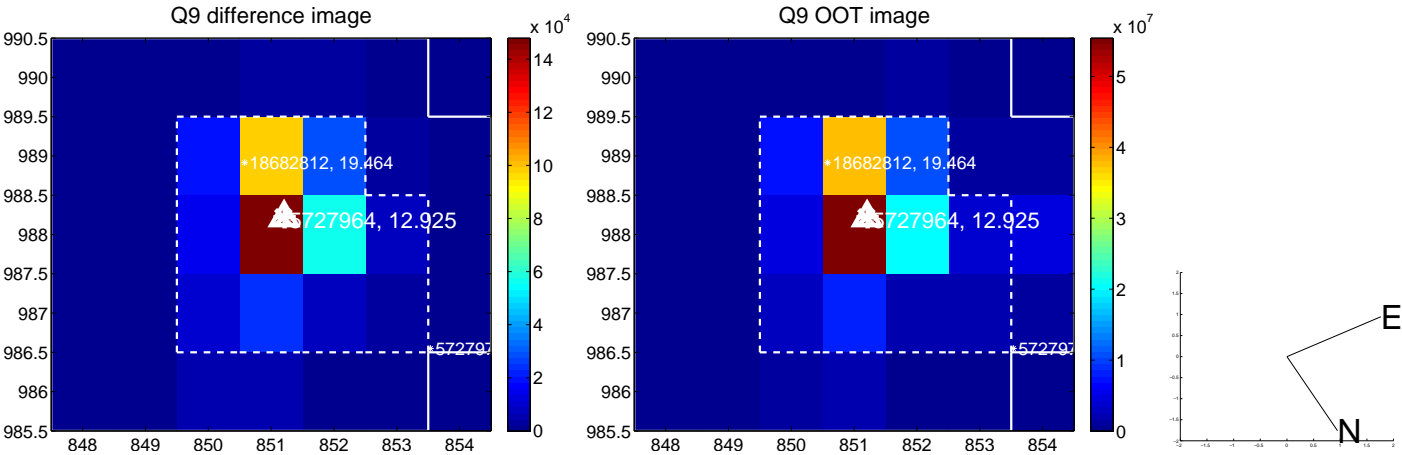
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



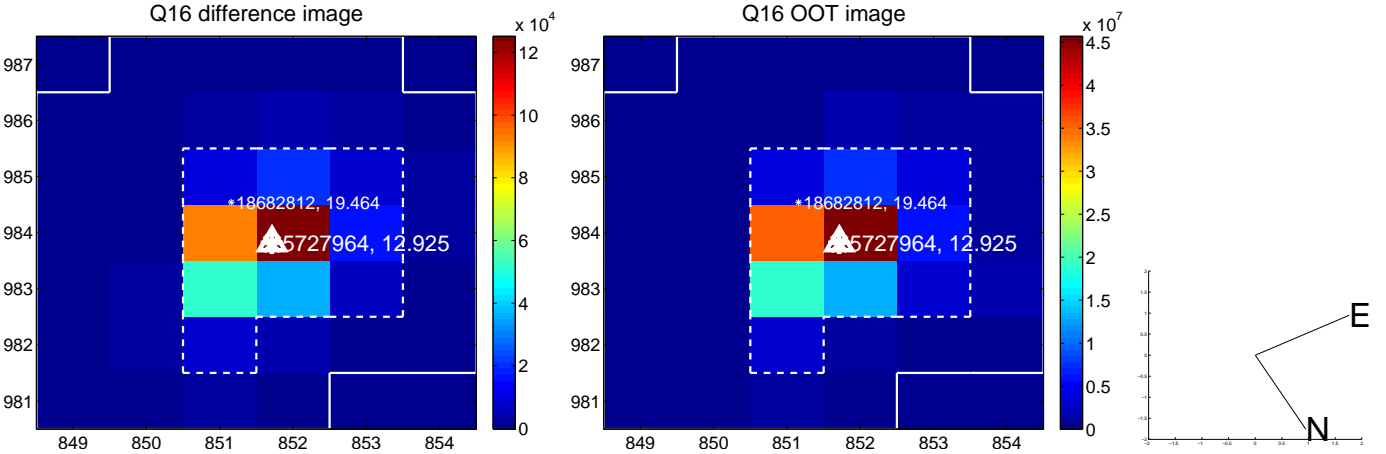
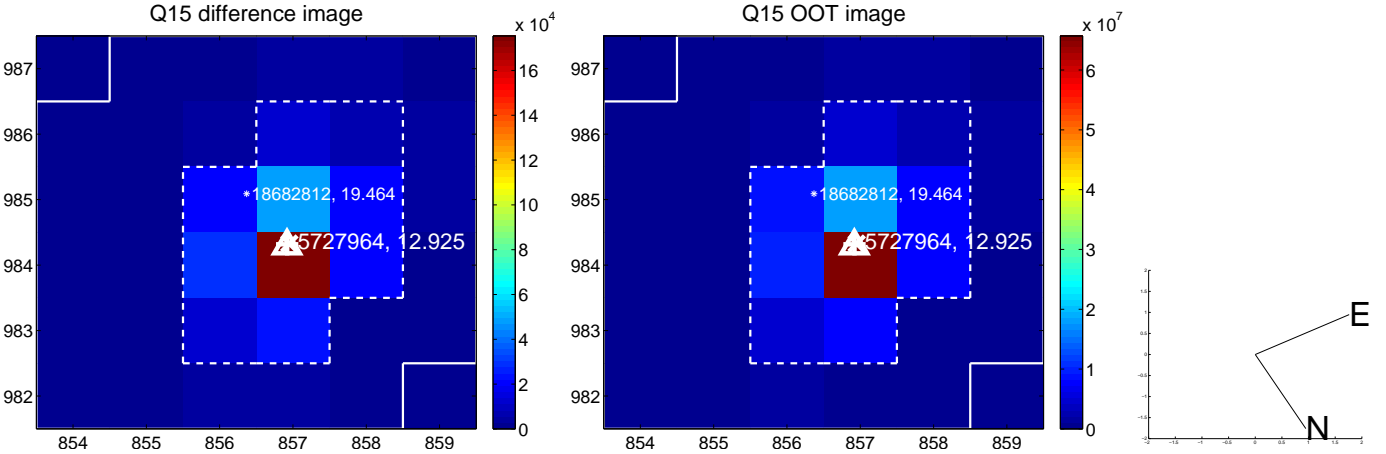
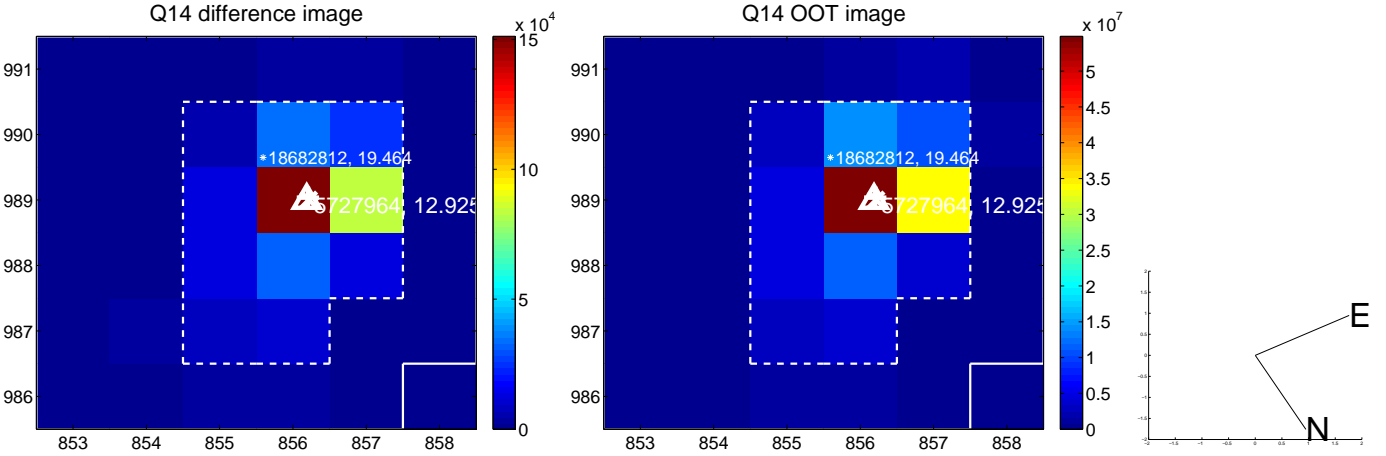
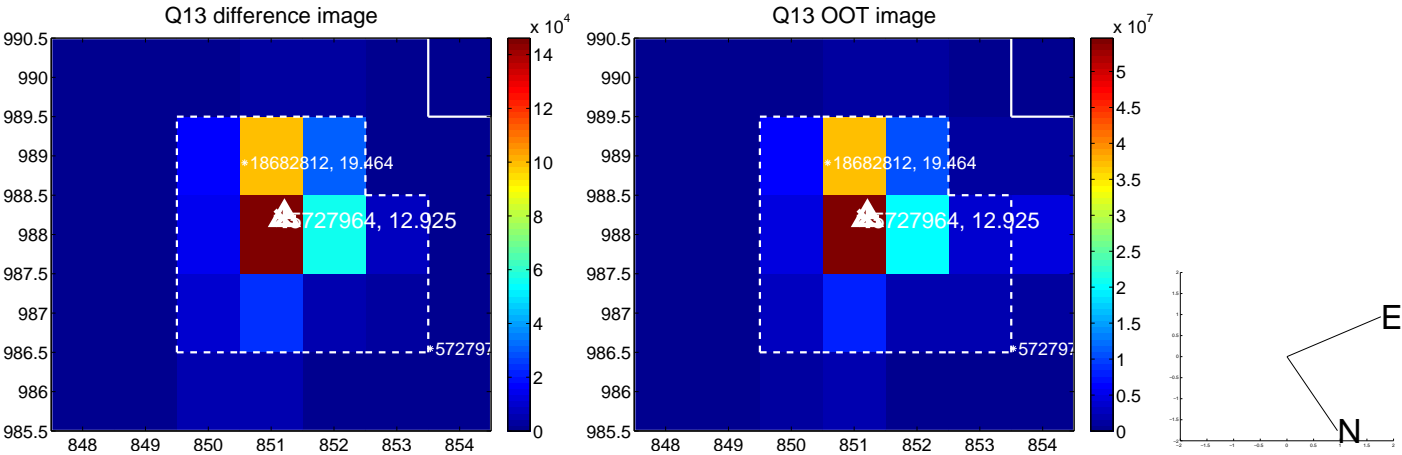
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



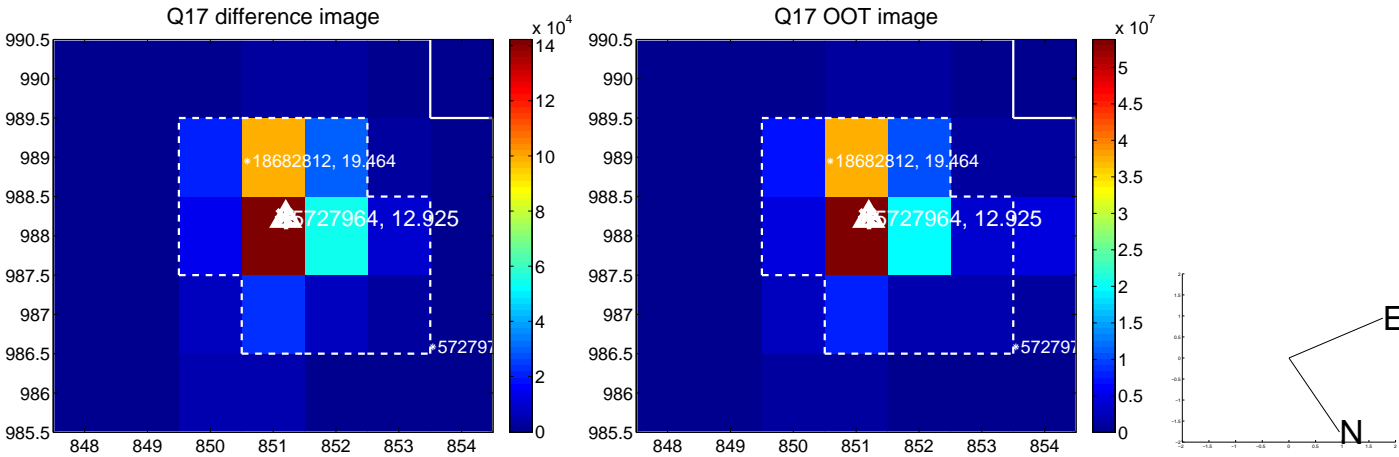
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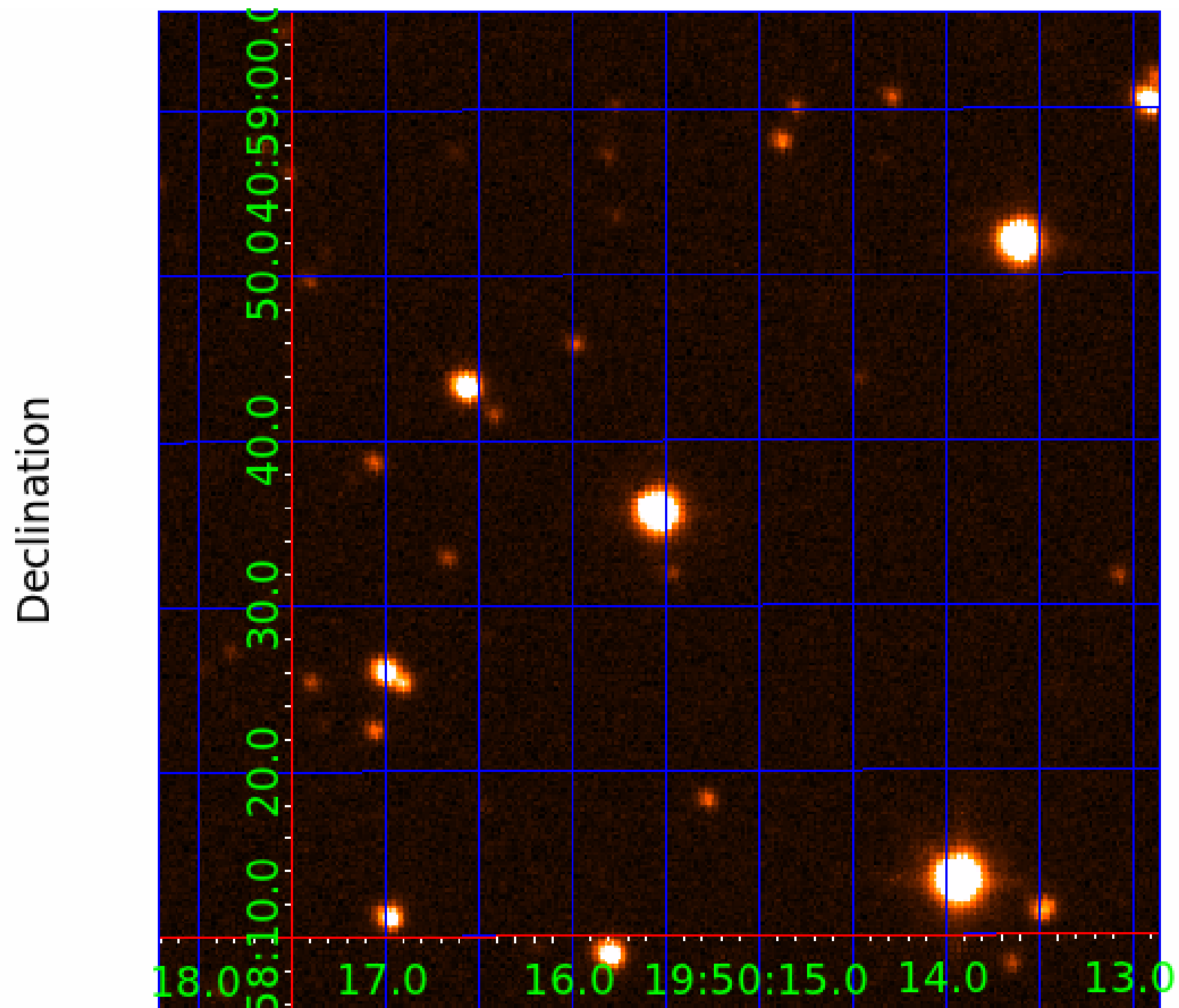


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image



KIC 005727964

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})
005727964-01	OBS	No	0.815063	131.886927	0.0	5.544	49.6	0.0	2.05	8124	0.01	38222.85
005727964-02	OBS	No	1.630197	133.129944	217.7	2.000	22.3	-1.0	2.05	8124	3.06	15167.86

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
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005727964-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—SWEET_NTL—LPP_DV—SAME_NTL_PERIOD—CENT_NOFITS—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.

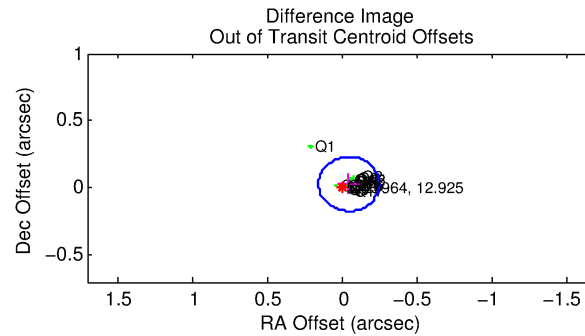
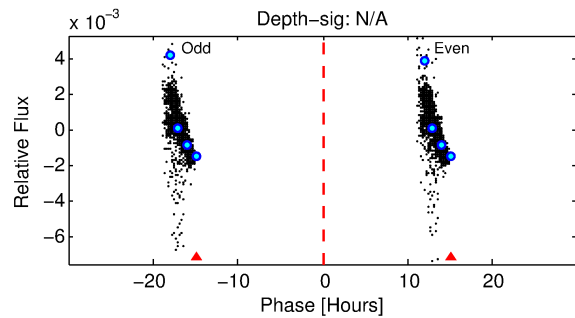
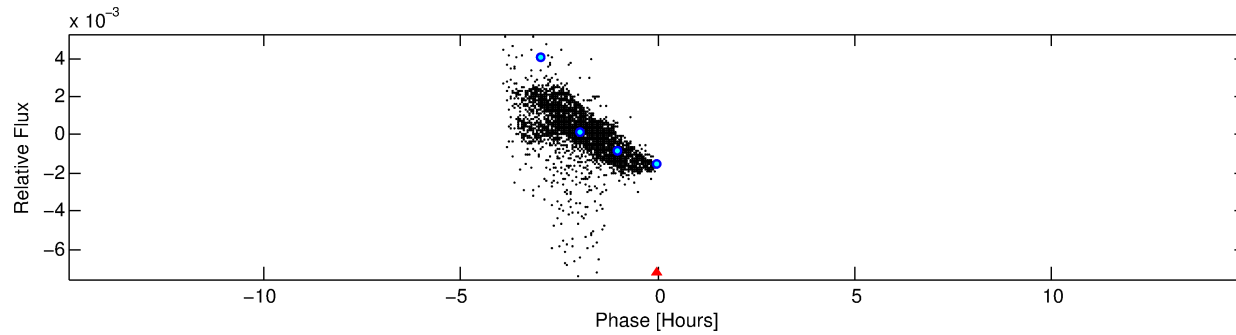
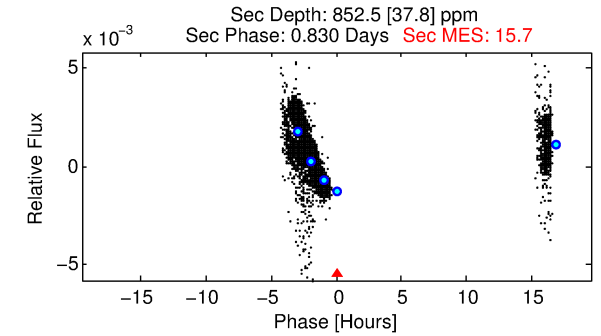
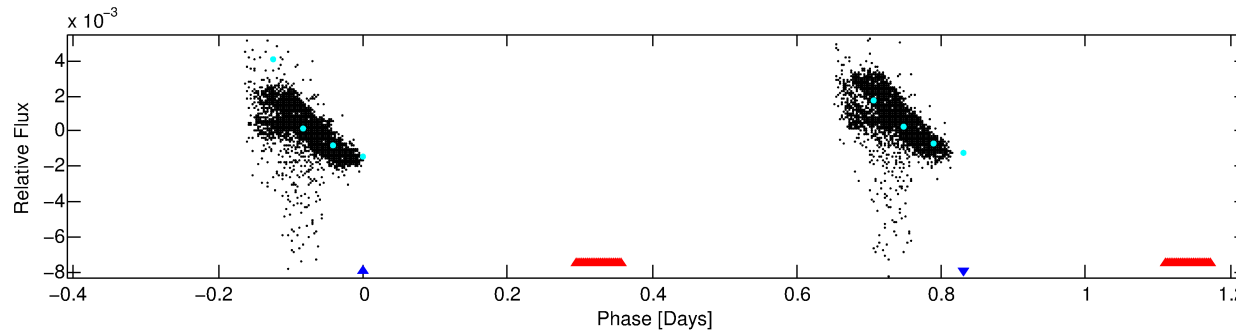
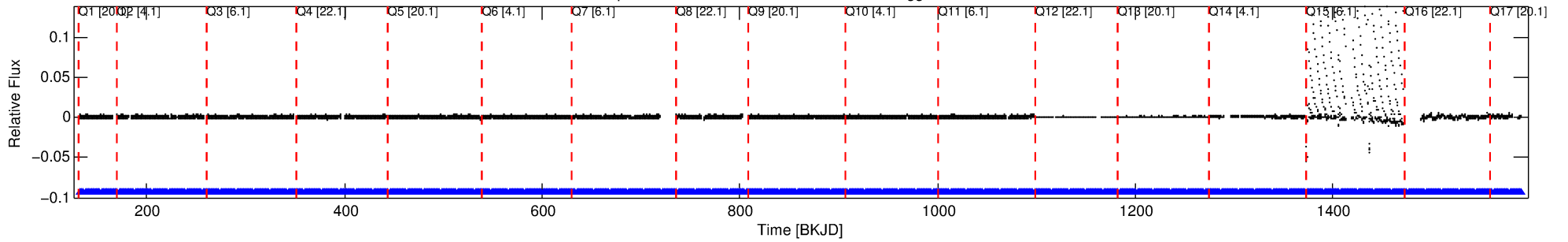
Ephemeris Match Information For 005727964-02

No Significant Match Found

DV One-Page Summary

KIC: 5727964 Candidate: 2 of 2 Period: 1.630 d

Kp: 12.93 R*: 2.05 Rs Teff: 8124.0 K Logg: 4.07 Fe/H: -0.140



TPS TCE Results:

Period = 1.63020 d
Epoch = 133.1299 BKJD

DV fit results are unavailable

DV Diagnostic Results:

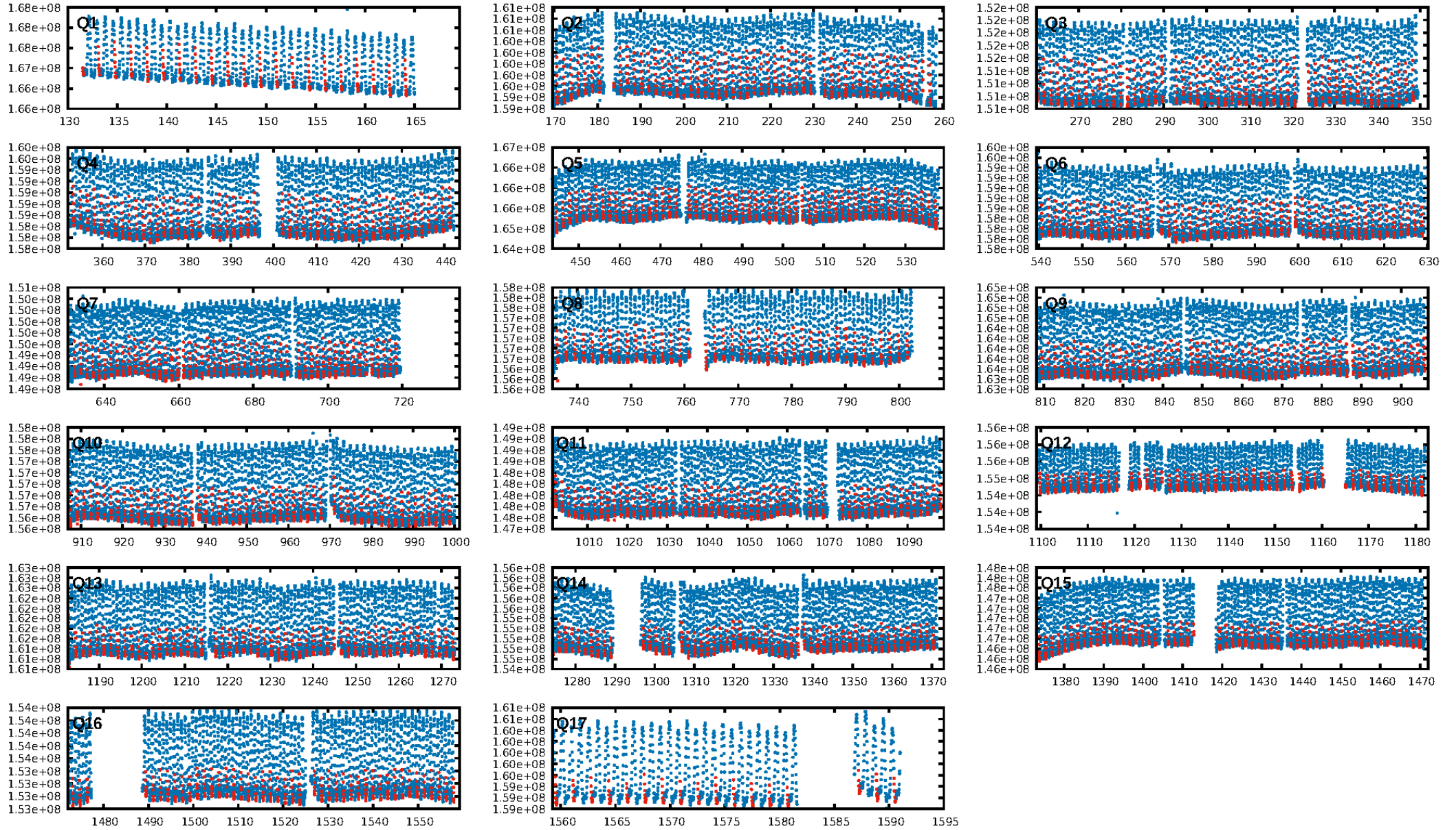
ShortPeriod-sig: 99.9% [3.32σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [785/785]
GhostDiagnostic-chr: 0.1381

Centroid-sig: 0.7%
Centroid-so: 0.172 arcsec [16.70σ]
OotOffset-rm: 0.057 arcsec [0.84σ]
KicOffset-rm: 0.066 arcsec [0.90σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 0.00 [0/17]

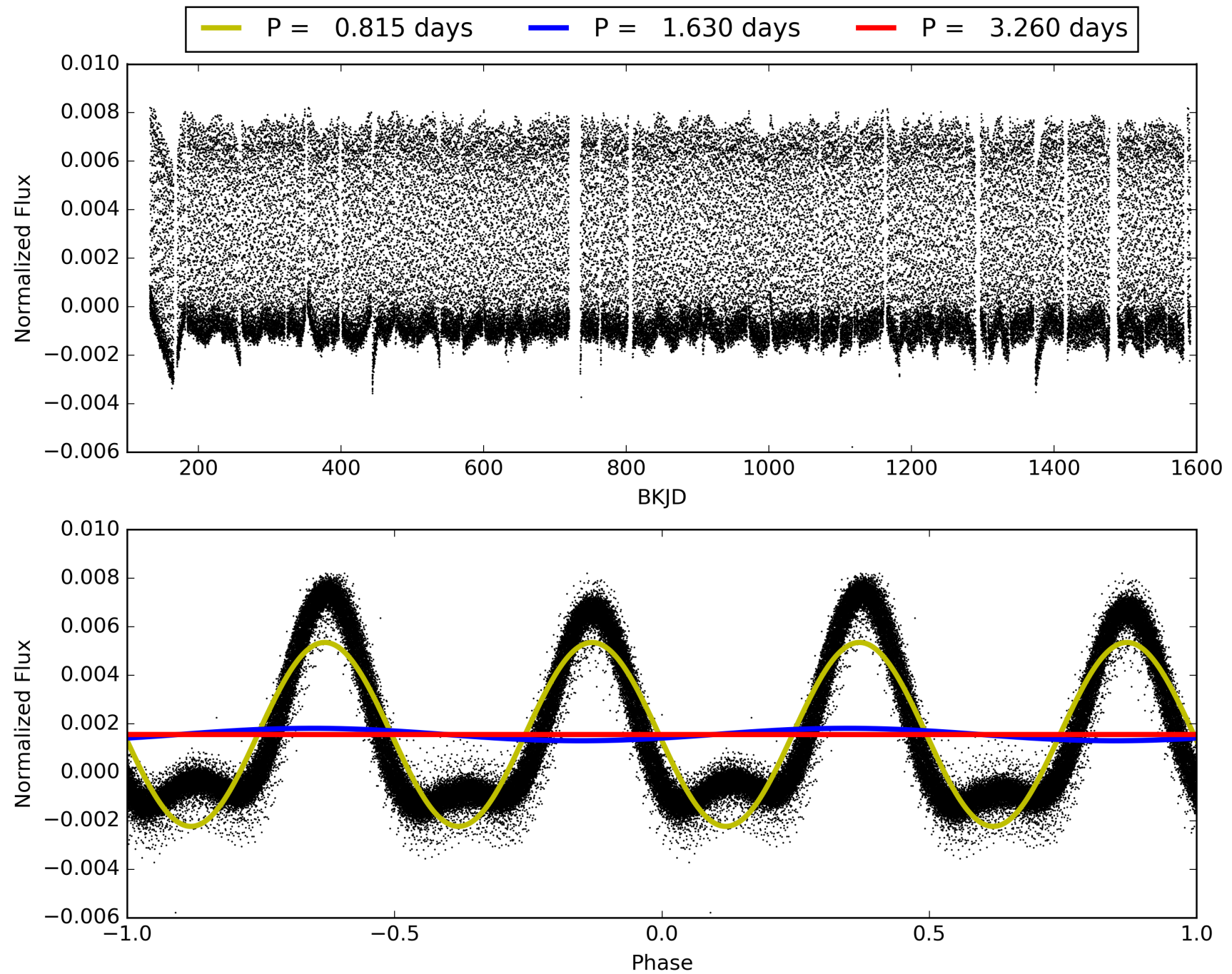
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 005727964-02, PDC Light Curves

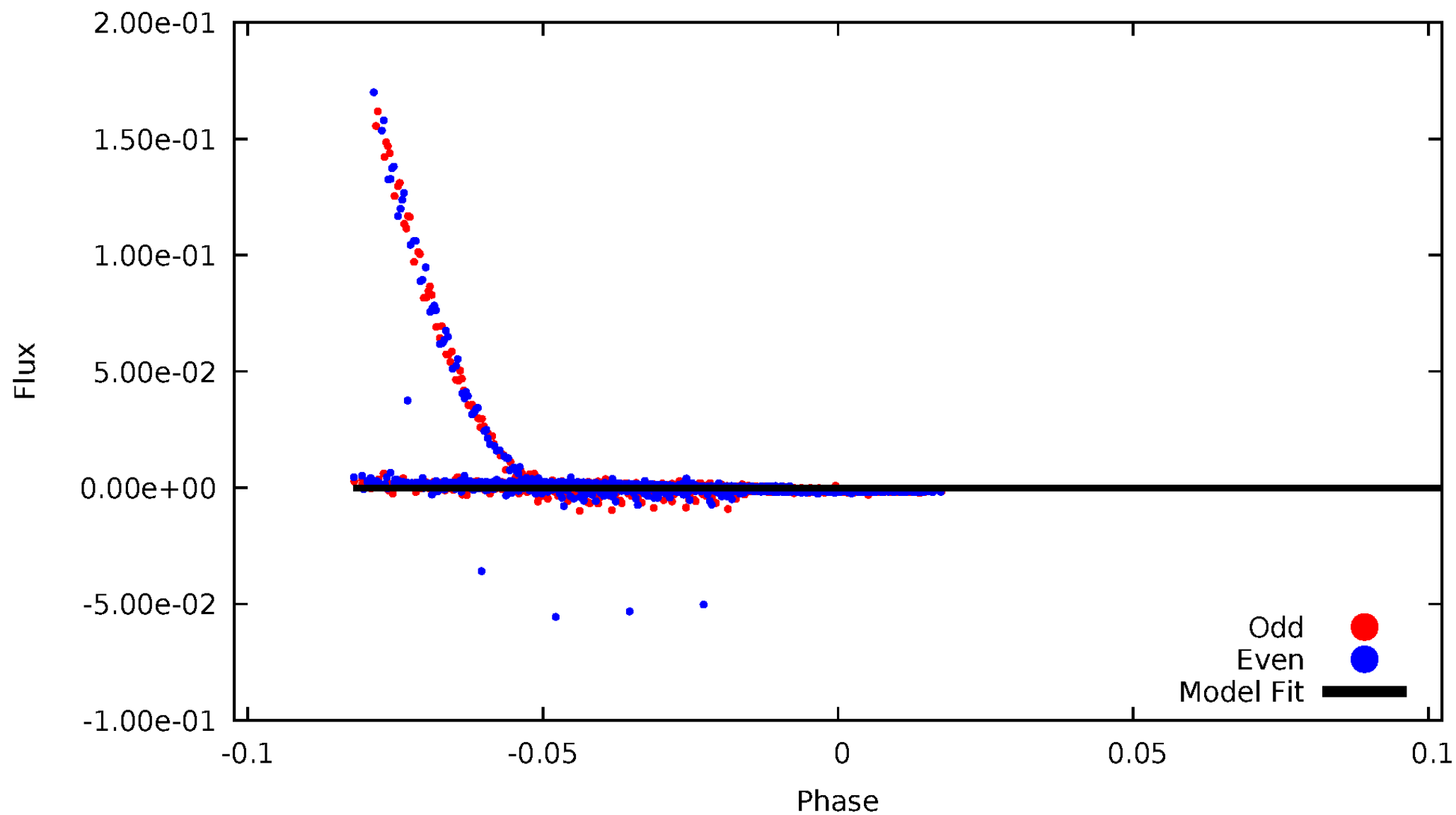


TCE 005727964-02



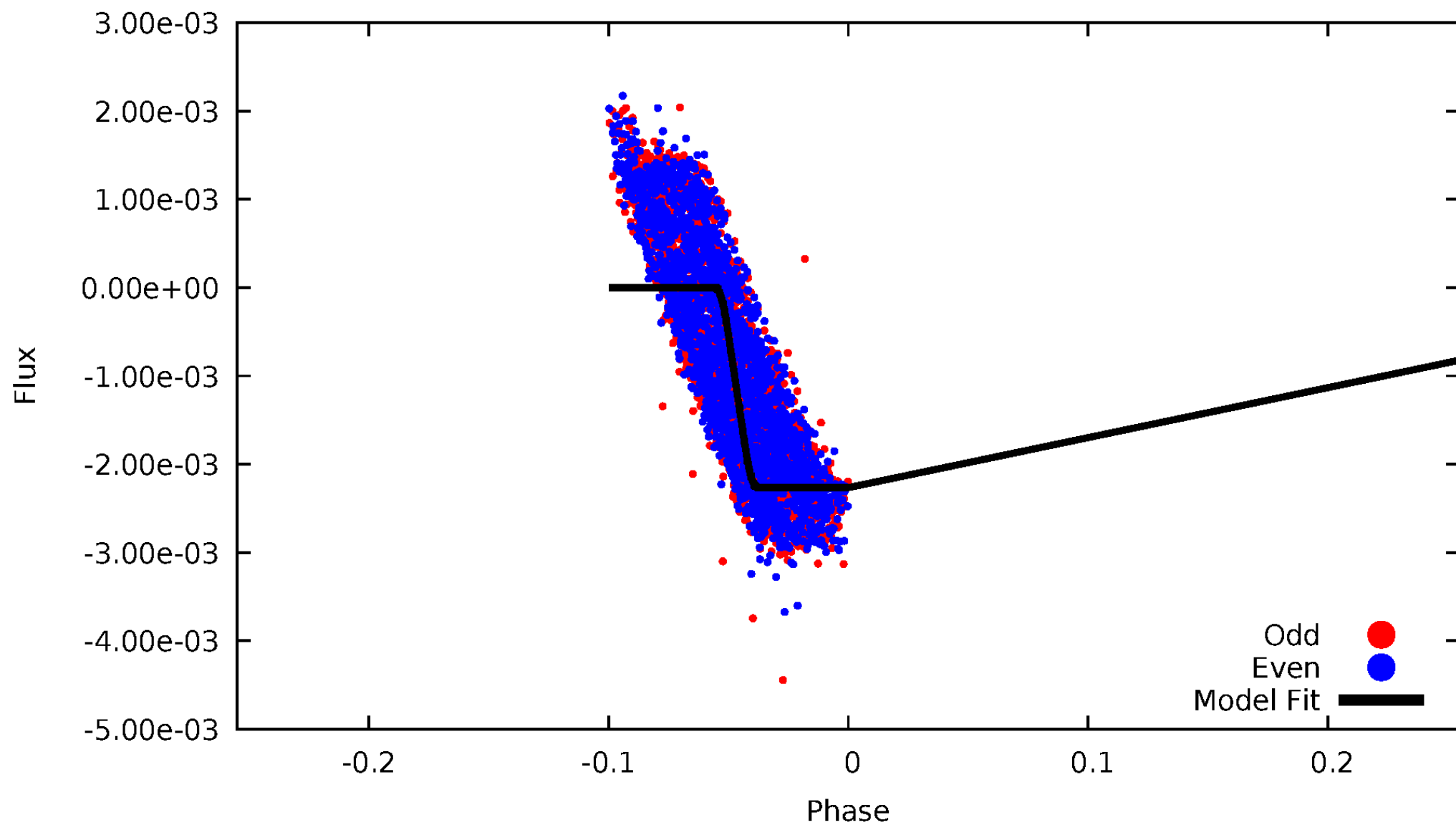
DV Odd/Even

TCE 005727964-02



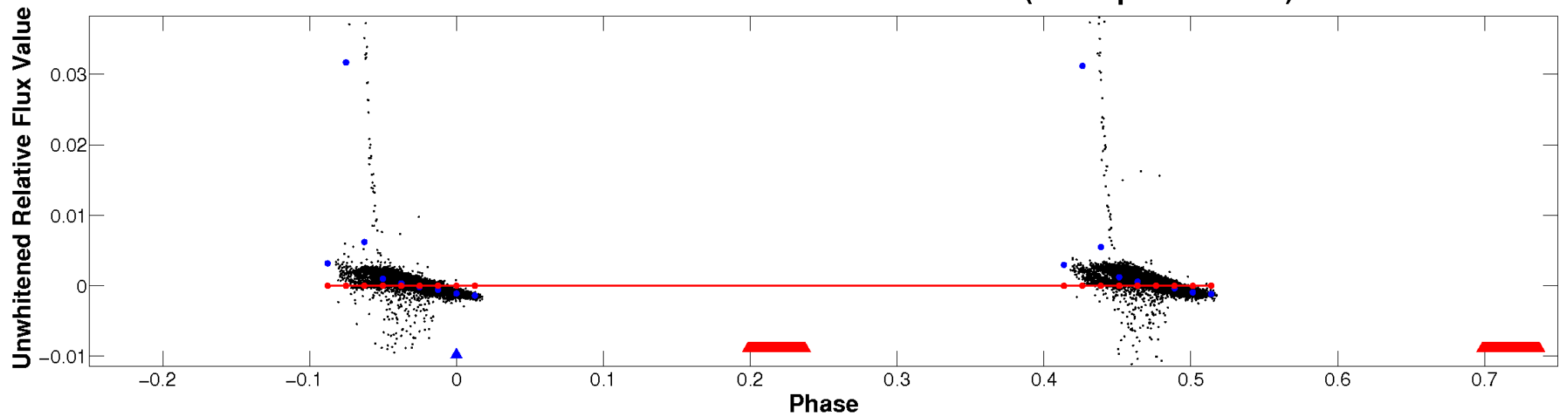
ALT Odd/Even

TCE 005727964-02

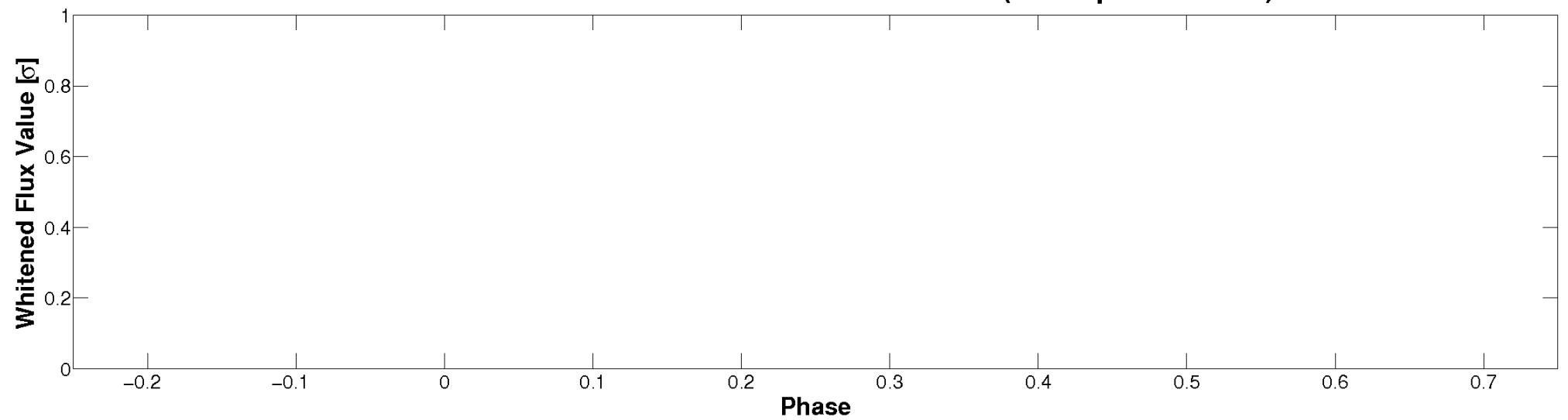


Non-Whitened Vs. Whitened Light Curve

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

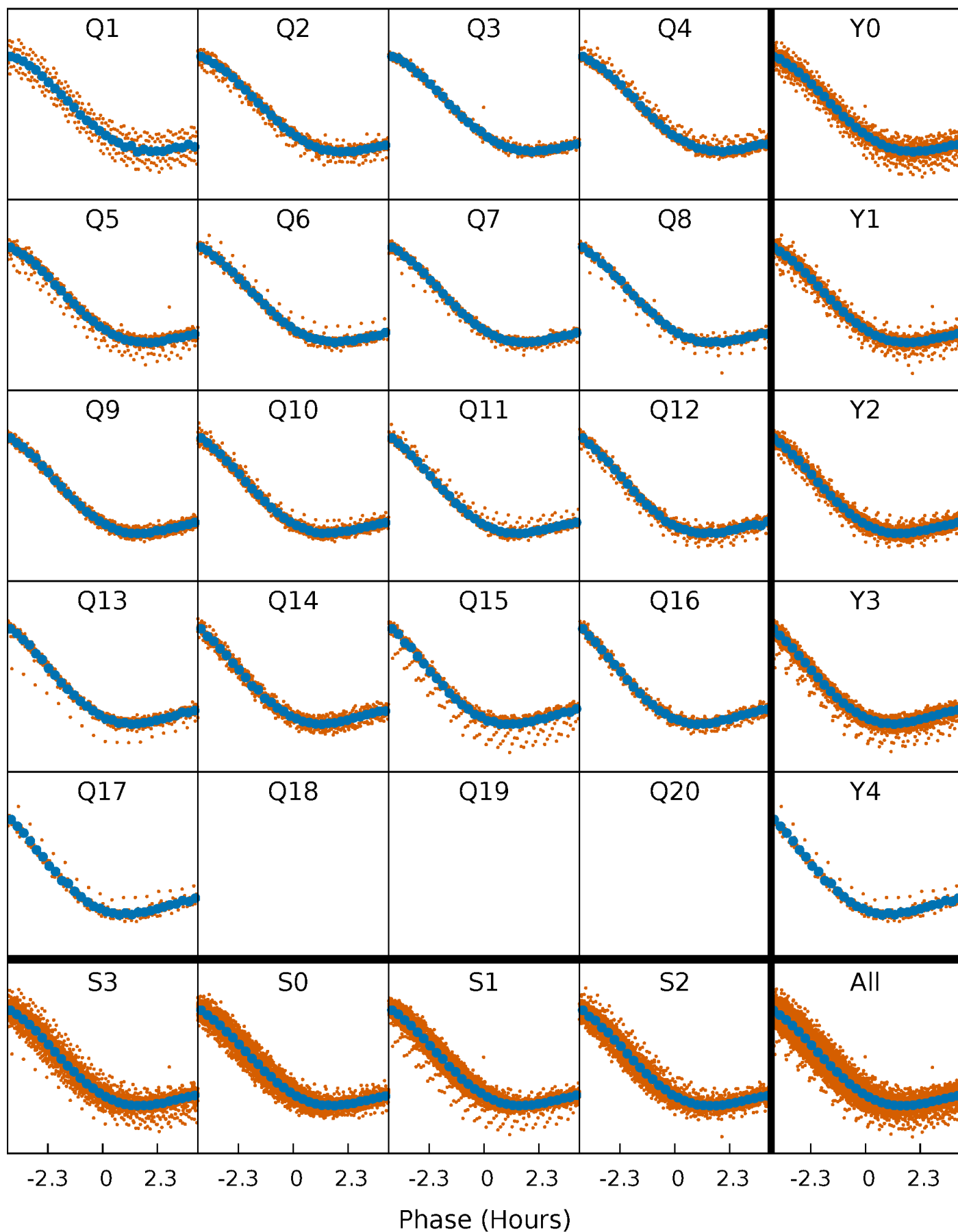


Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)



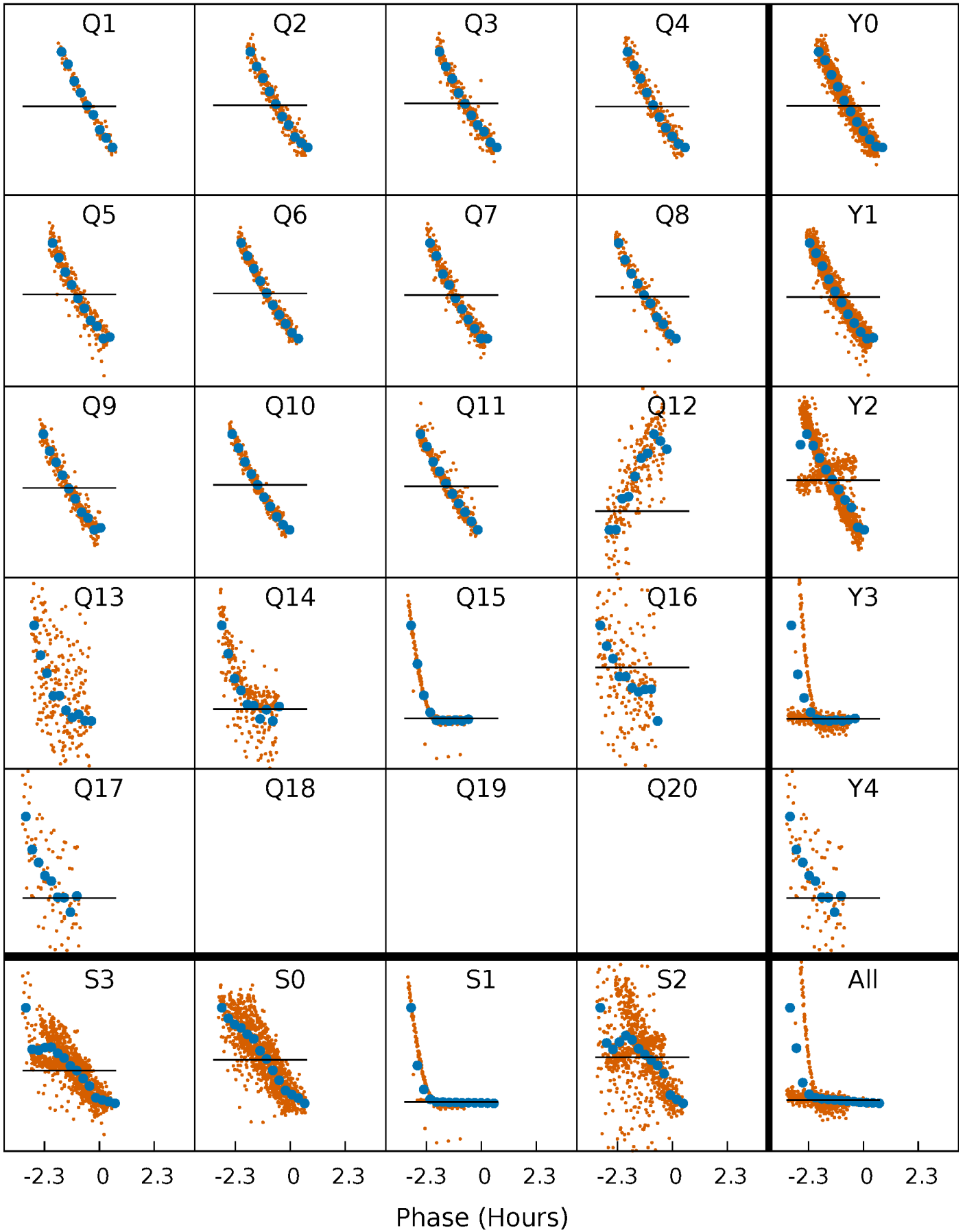
PDC Quarter-Phased Transit Curves

TCE 005727964-02 P= 1.630197 Days $T_0=133.129944$ (BKJD)



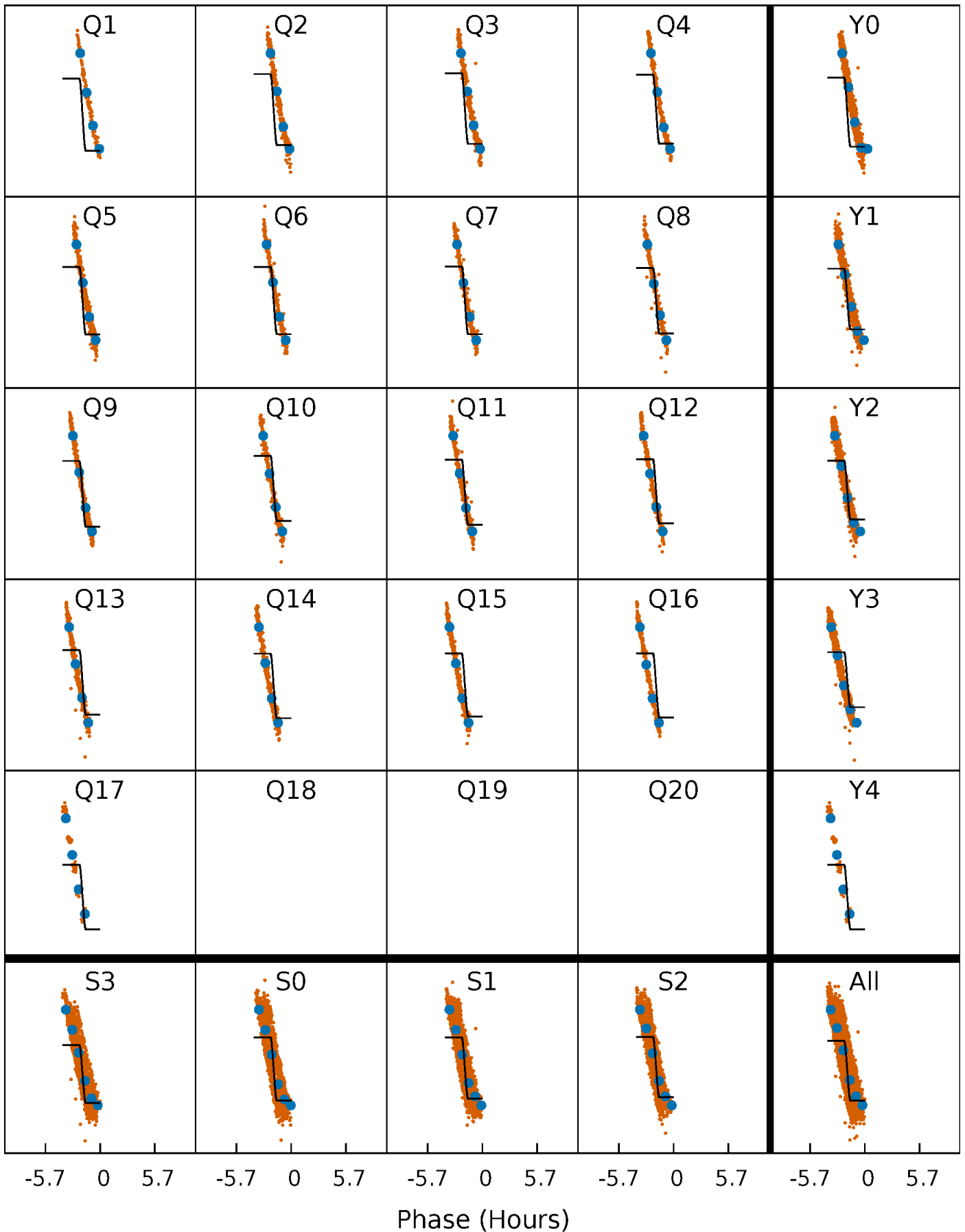
DV Quarter-Phased Transit Curves

TCE 005727964-02 P= 1.630197 Days $T_0=133.129944$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

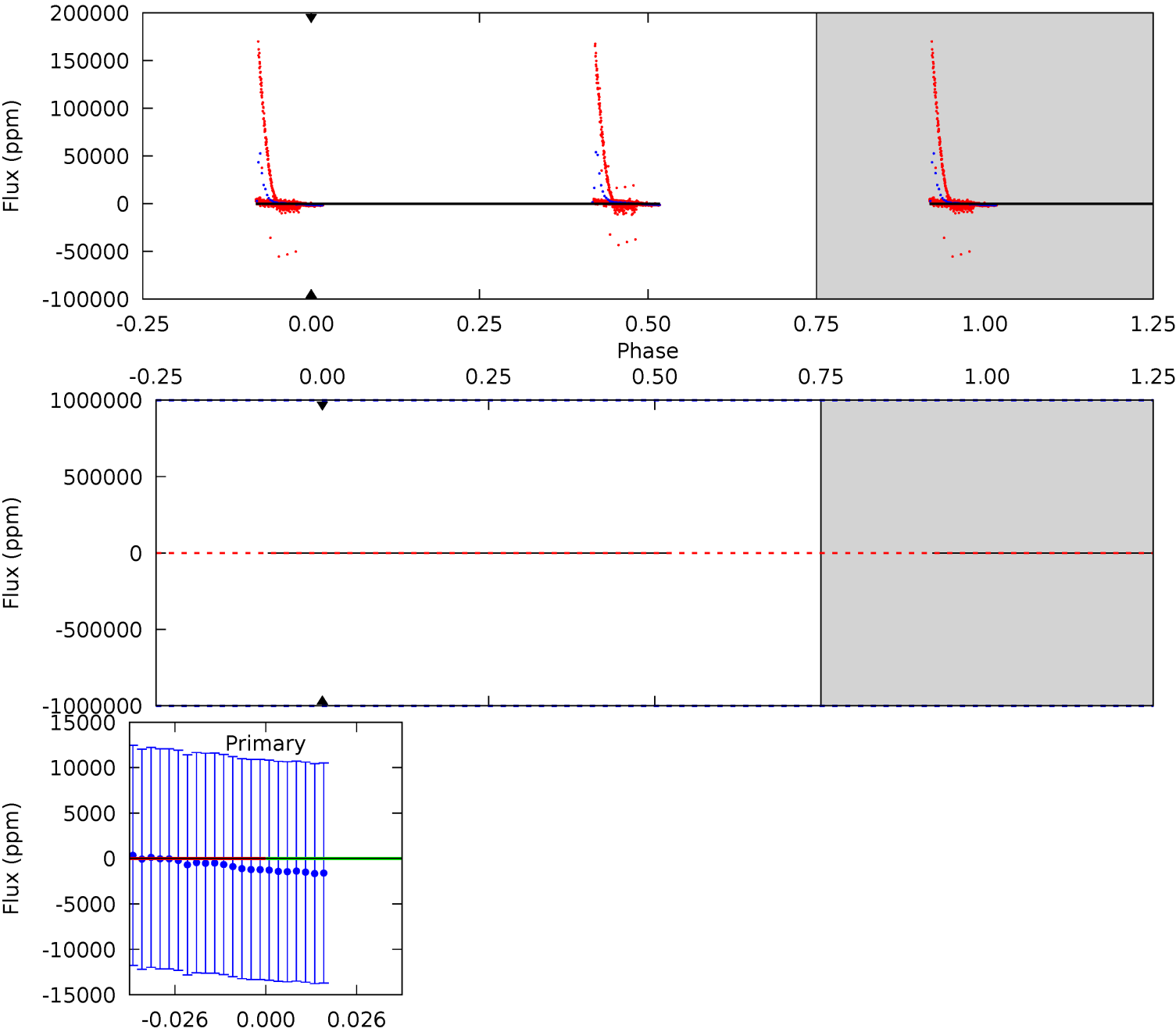
TCE 005727964-02 $P = 1.630197$ Days $T_0 = 133.158827$ (BKJD)



DV Model-Shift Uniqueness Test

005727964-02, P = 1.630197 Days, E = 131.499747 Days

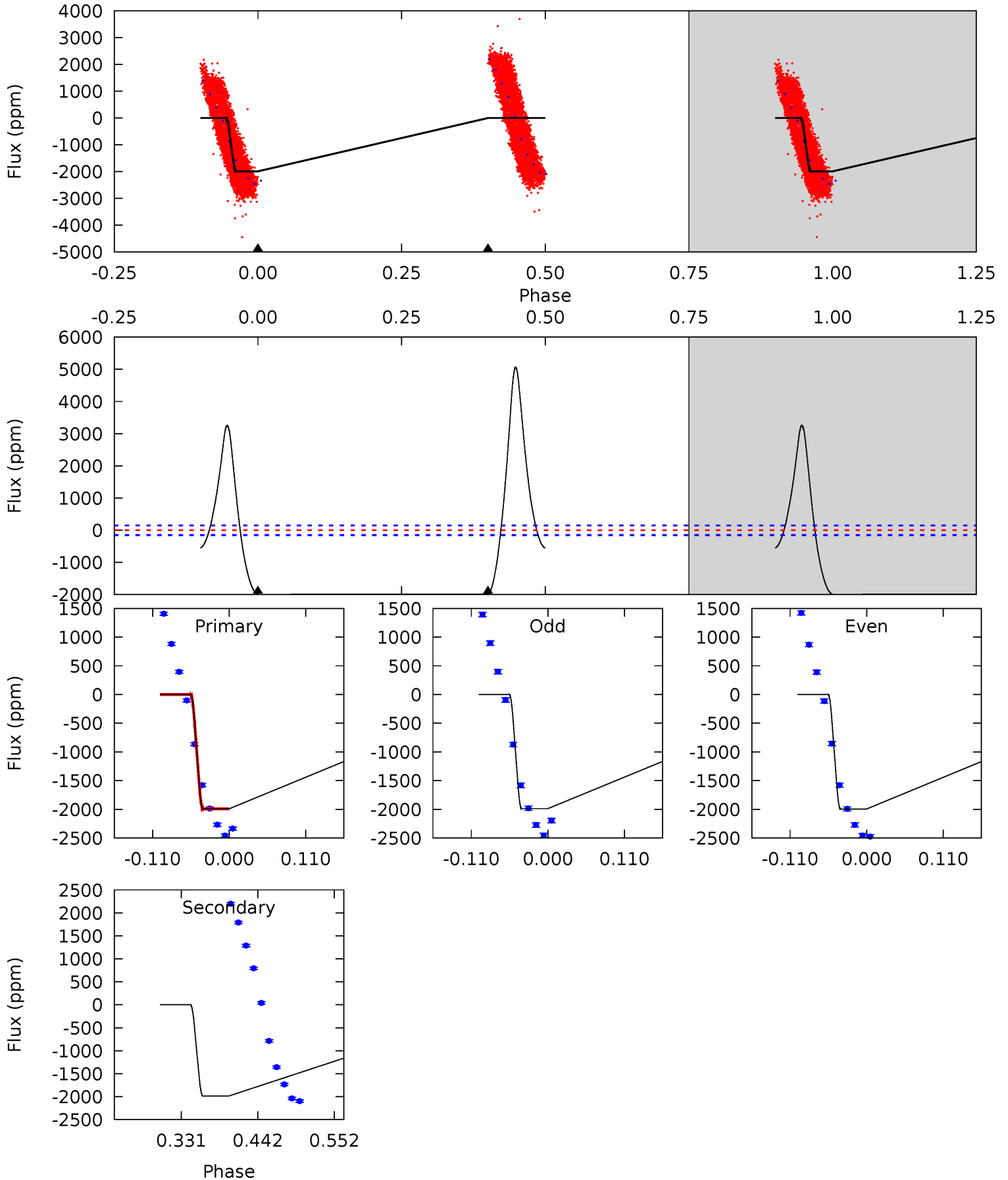
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

005727964-02, P = 1.630197 Days, E = 129.898433 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
60.4	60.2	0	0	4.54	1.60	9.30	60.4	60.4	60.2	60.2	0.09	0	0.72	0



Stellar Parameters For KIC 005727964

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	8124^{+226}_{-340}	$4.065^{+0.165}_{-0.135}$	$-0.140^{+0.200}_{-0.350}$	$2.046^{+0.431}_{-0.479}$	$1.774^{+0.157}_{-0.291}$	$0.291^{+0.267}_{-0.121}$
	+3%/-4%	+4%/-3%	+143%/-250%	+21%/-23%	+9%/-16%	+92%/-41%
Source	KIC0	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 005727964-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$15.79^{+16.62}_{-10.76}$	3942^{+256}_{-284}	3407^{+47888}_{-50391}	$0.550^{+450.043}_{-369.682}$
Alt.	-1985 ± 33	$18.96^{+18.35}_{-12.72}$	3929^{+252}_{-279}	5483^{+5573}_{-1530}	$3.164^{+26.724}_{-2.328}$

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 $A_{obs} \gg 1.0$

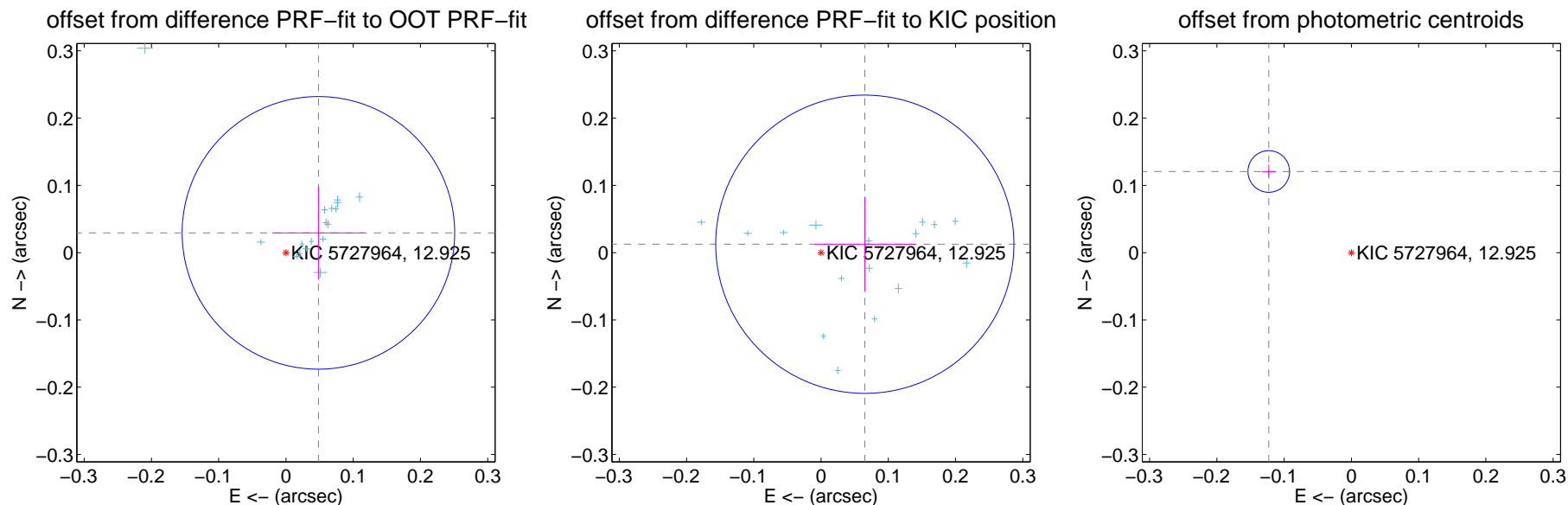
DV Centroid Data

Supplemental centroid analysis for 005727964-02. Kepler magnitude: 12.93. Transit SNR -1.00

There are 17 quarters with good PRF difference image offsets

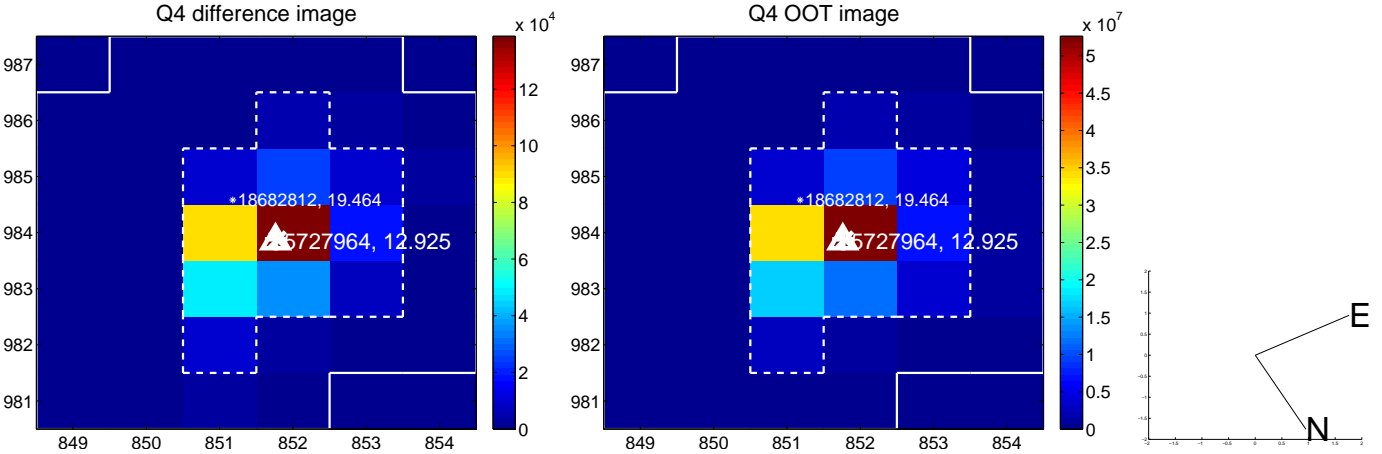
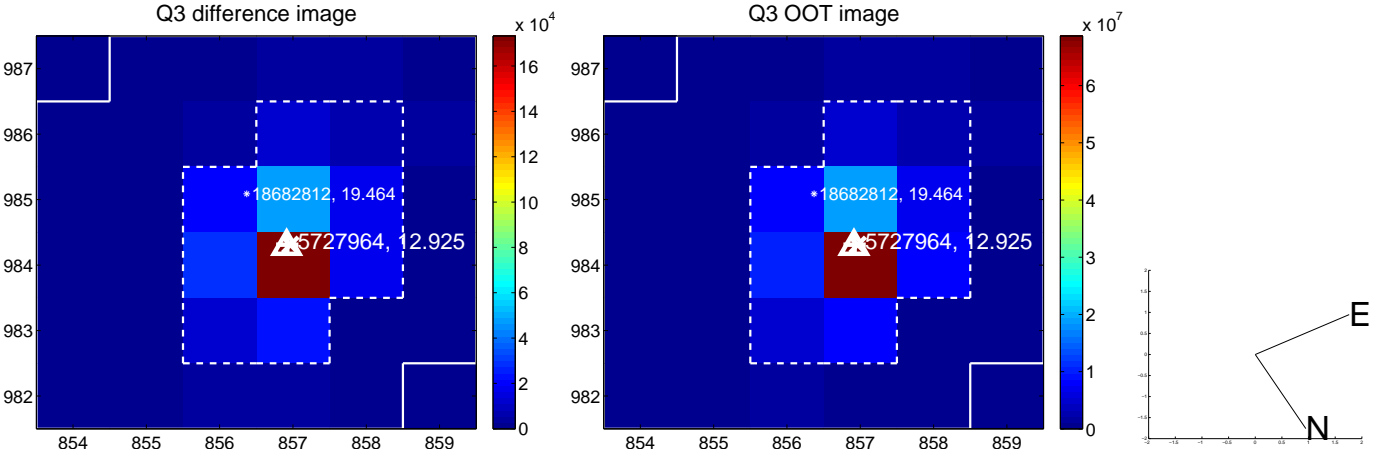
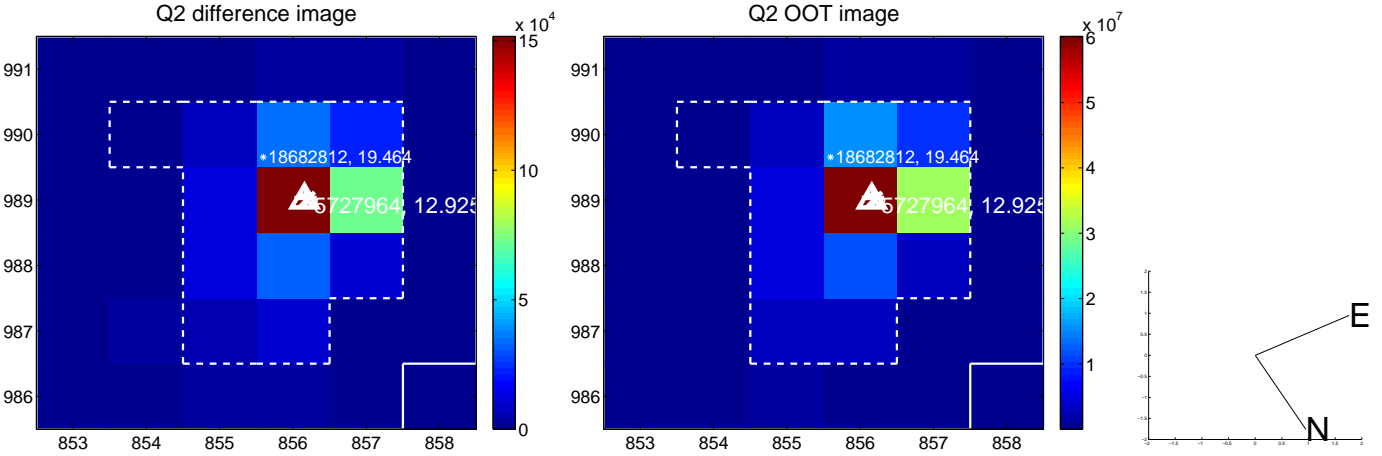
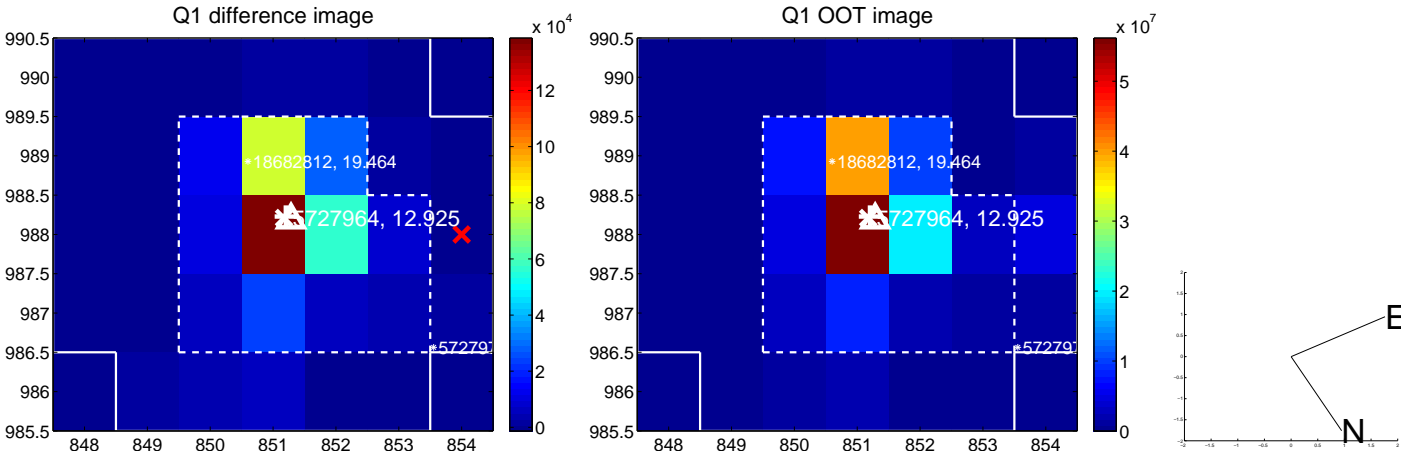
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.057 ± 0.068	0.84	-0.048 ± 0.069	0.029 ± 0.069
PRF-fit source offset from KIC position	0.066 ± 0.074	0.90	-0.065 ± 0.075	0.013 ± 0.071
photometric centroid source offset	0.17 ± 0.01	16.70	0.12 ± 0.01	0.12 ± 0.01

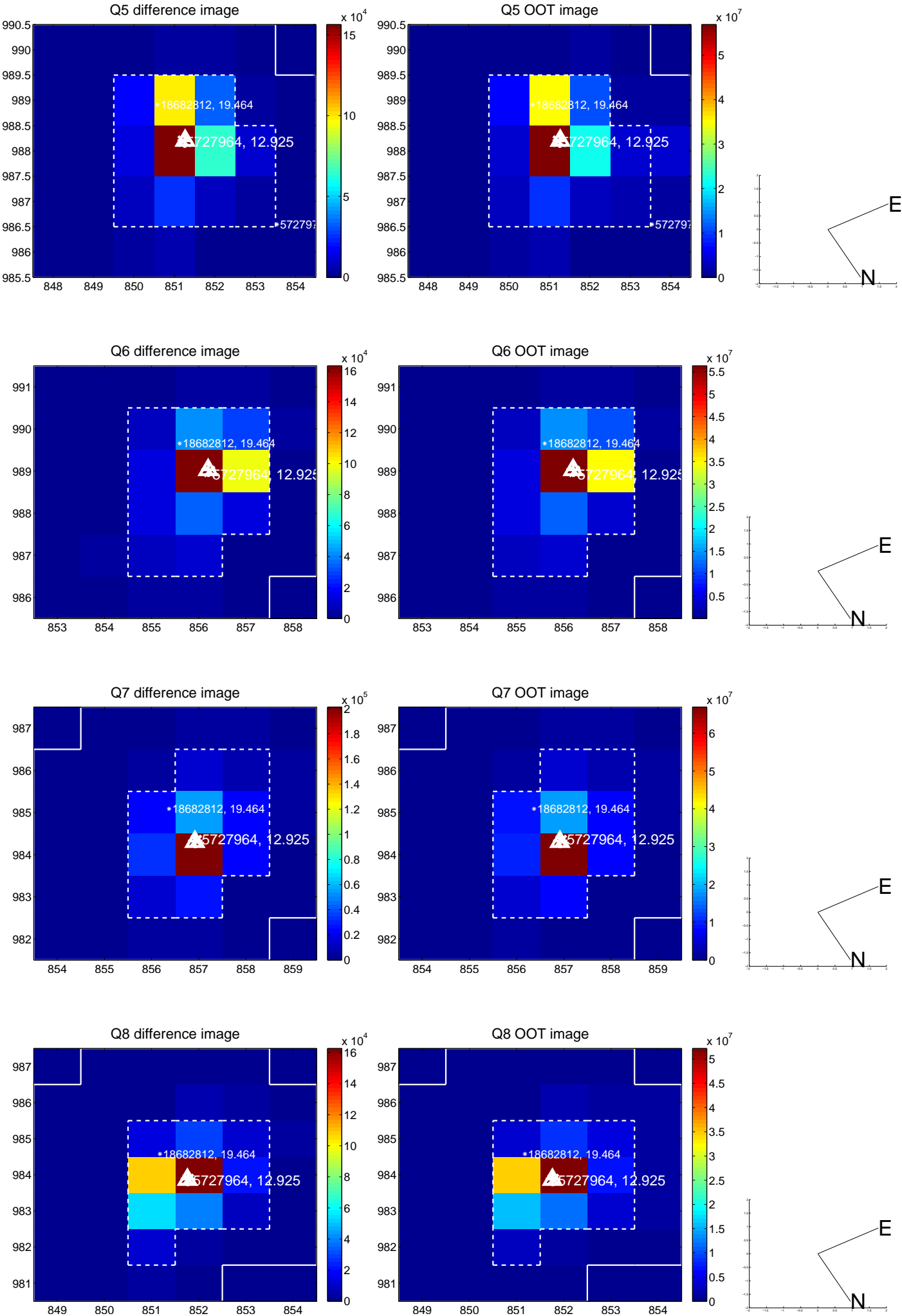


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

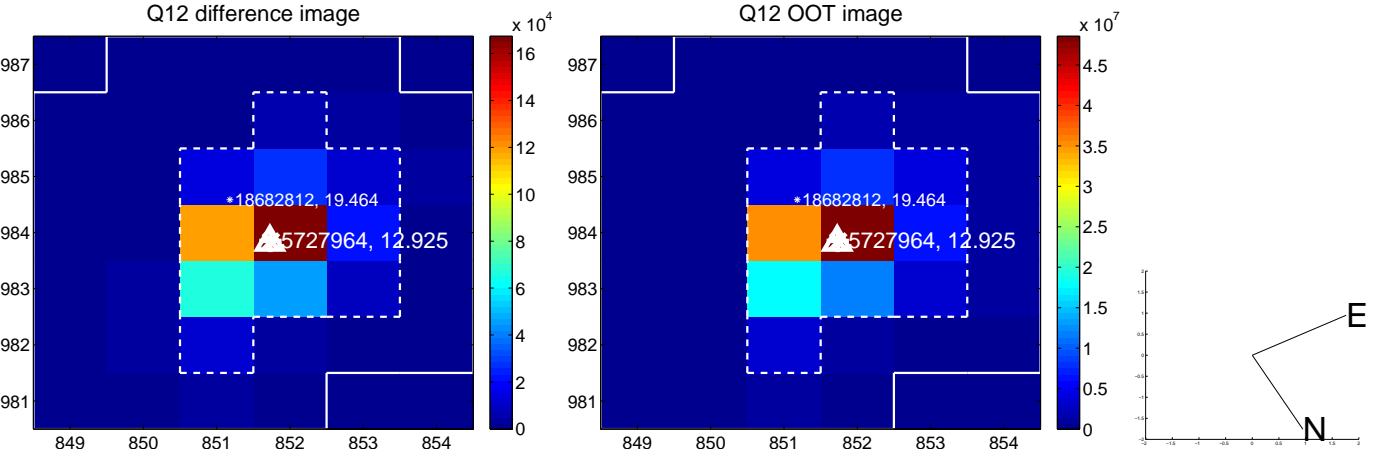
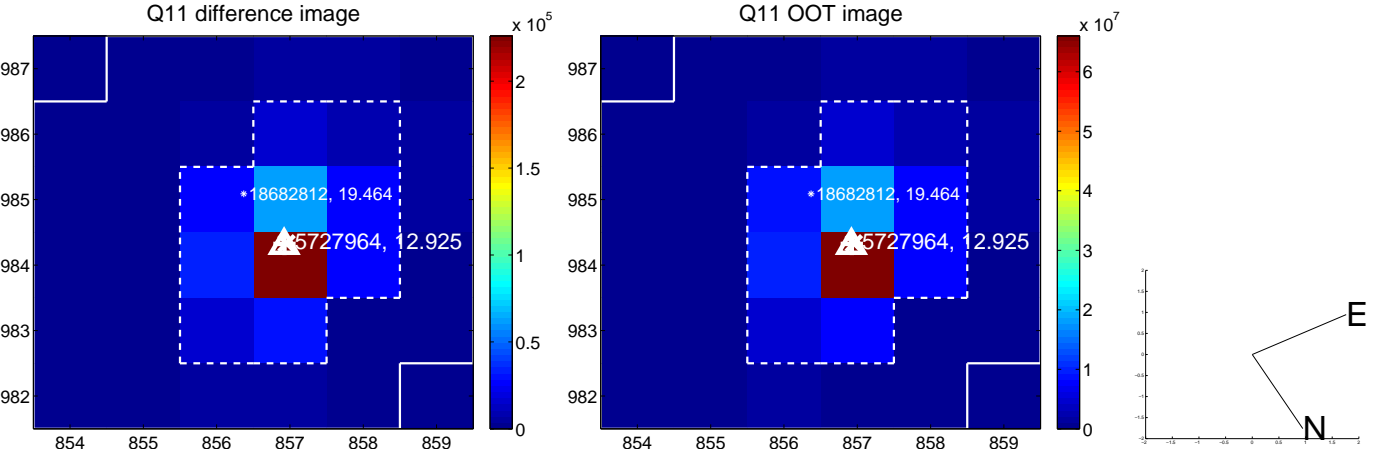
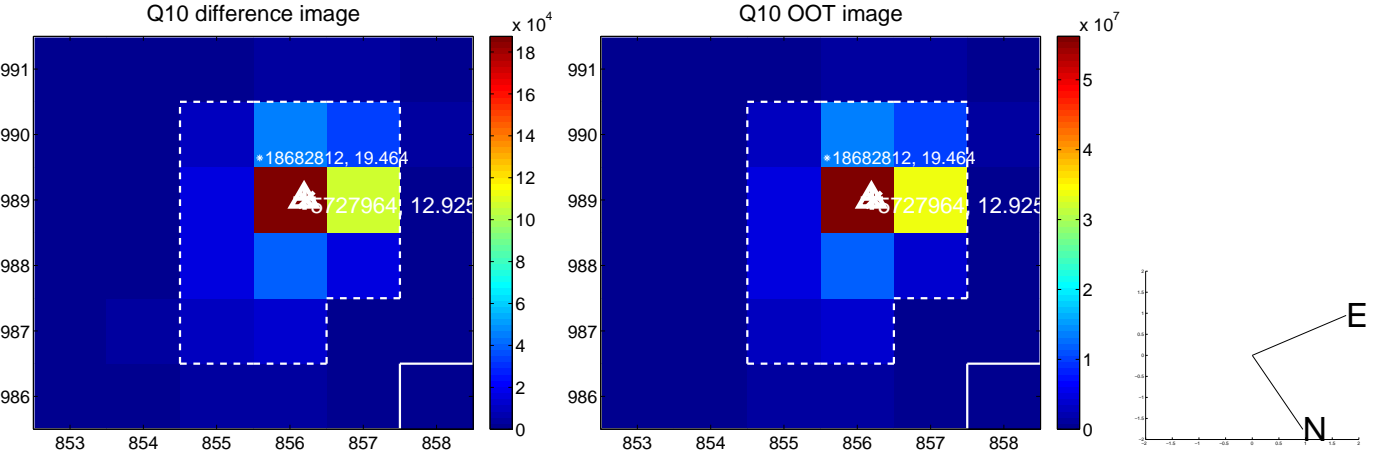
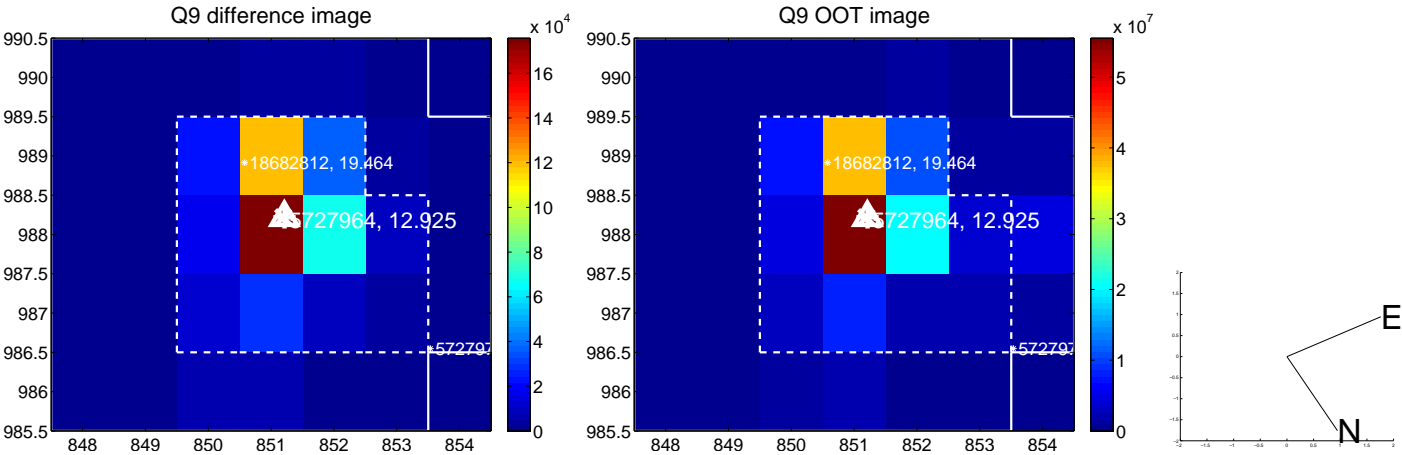
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



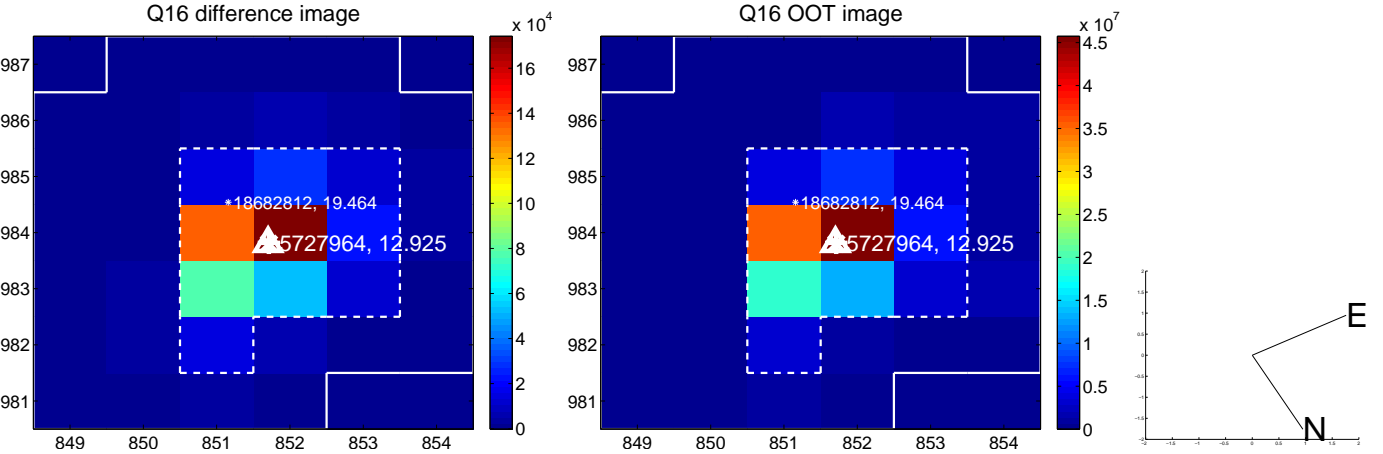
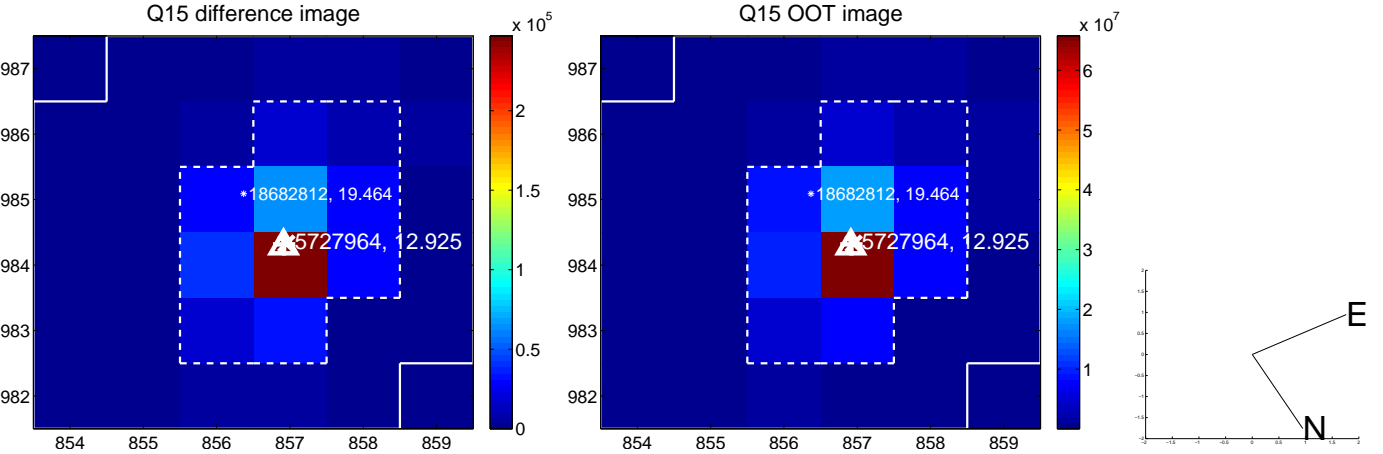
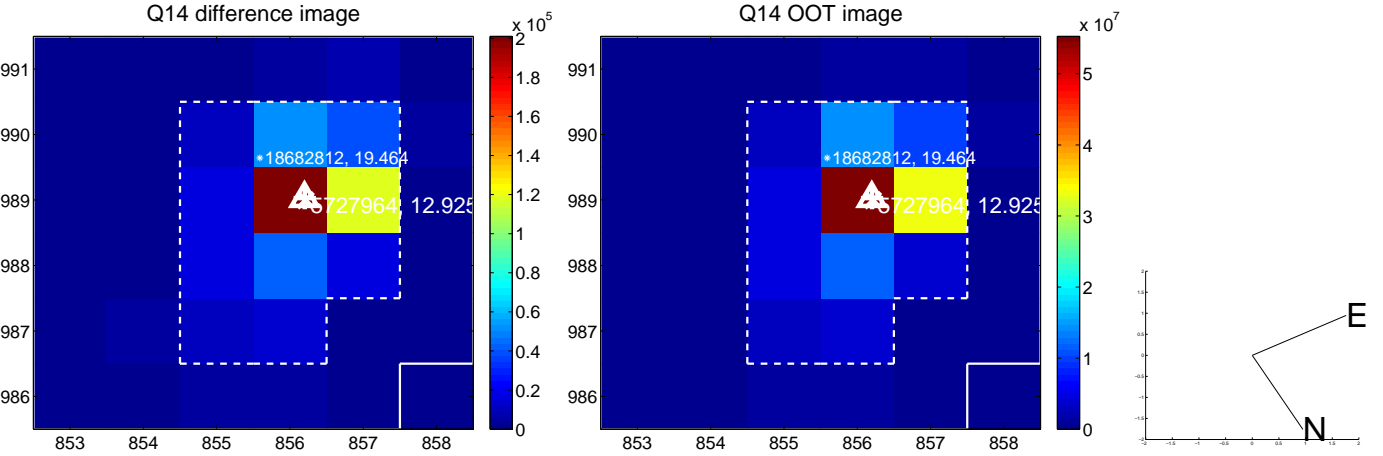
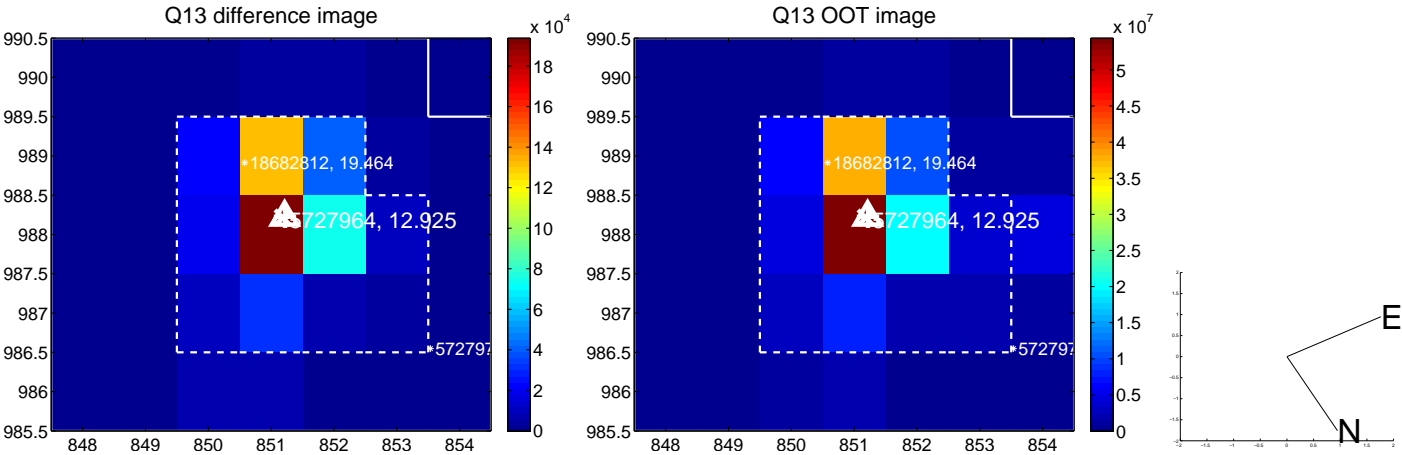
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



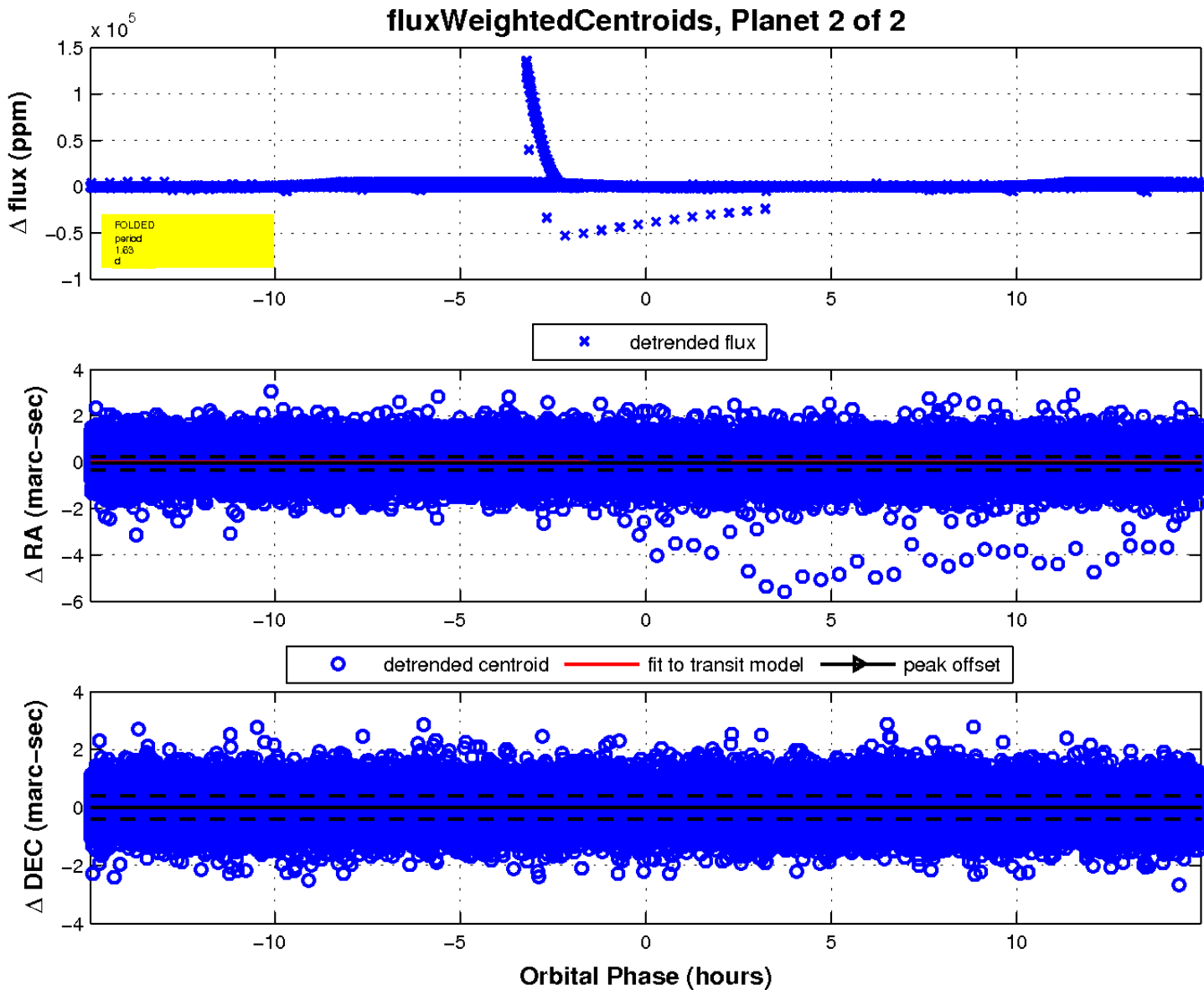
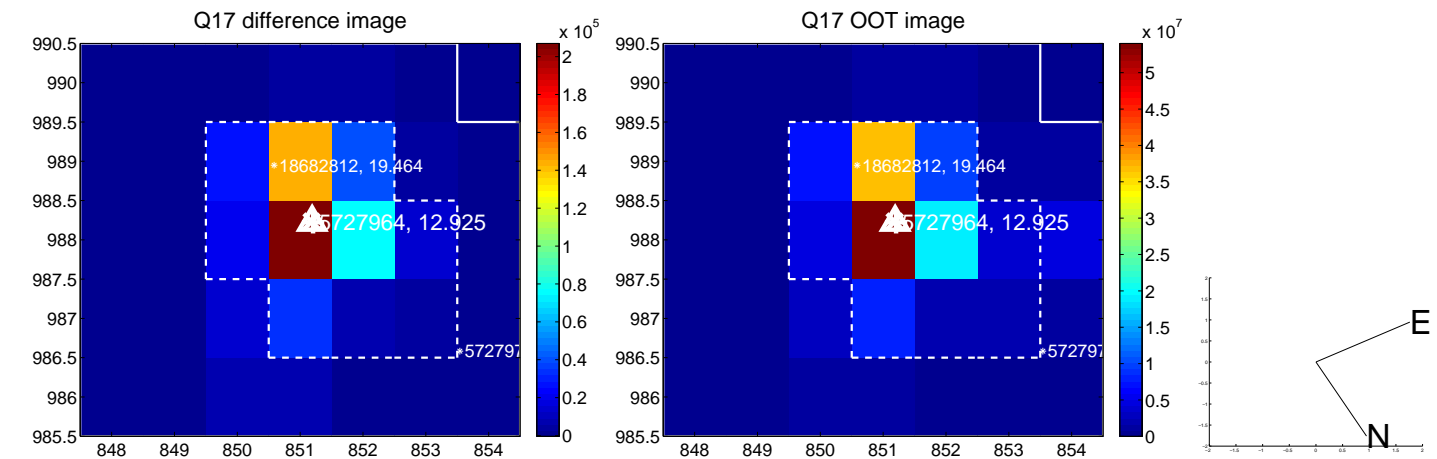
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

