

KIC 007050754

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})
007050754-01	OBS	No	1.273608	132.116107	137.2	6.202	8.0	7.5	3.08	6315	7.20	20522.81
007050754-02	OBS	No	1.273589	132.494834	119.5	2.747	9.8	5.8	3.08	6315	3.94	20523.22

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007050754-01	OBS	FP	0.00	1	0	0	0	LPP_DV
007050754-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—MOD_NONUNIQ_ALT—MOD_TER_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 007050754-01

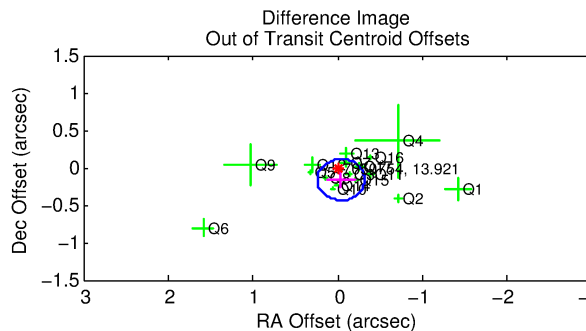
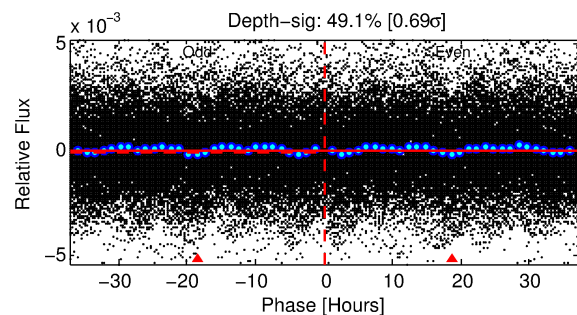
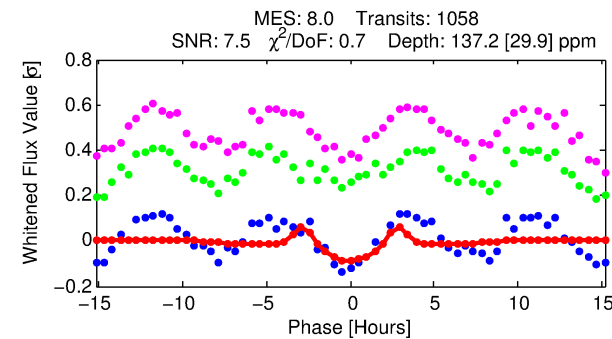
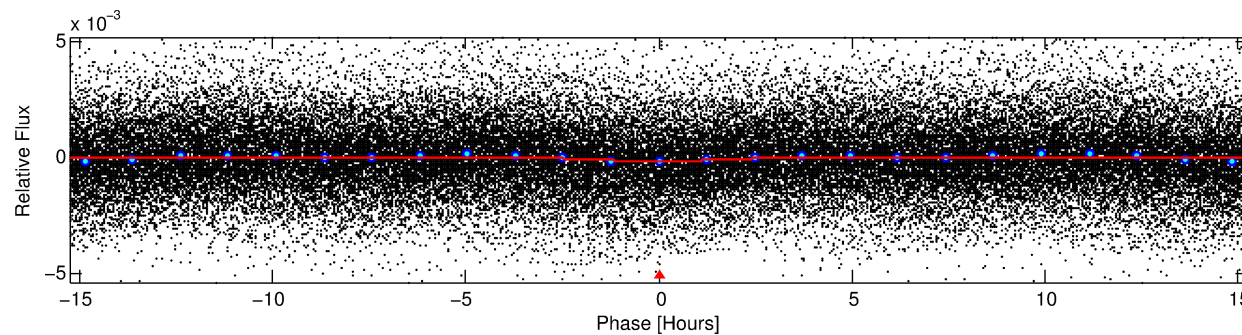
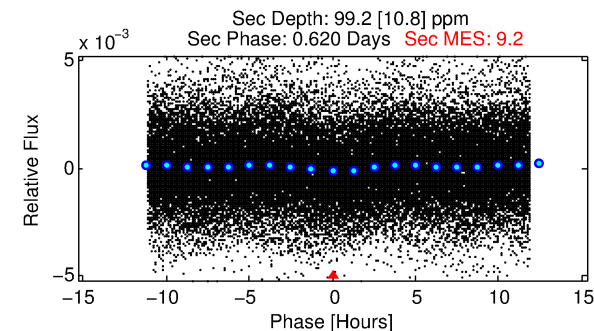
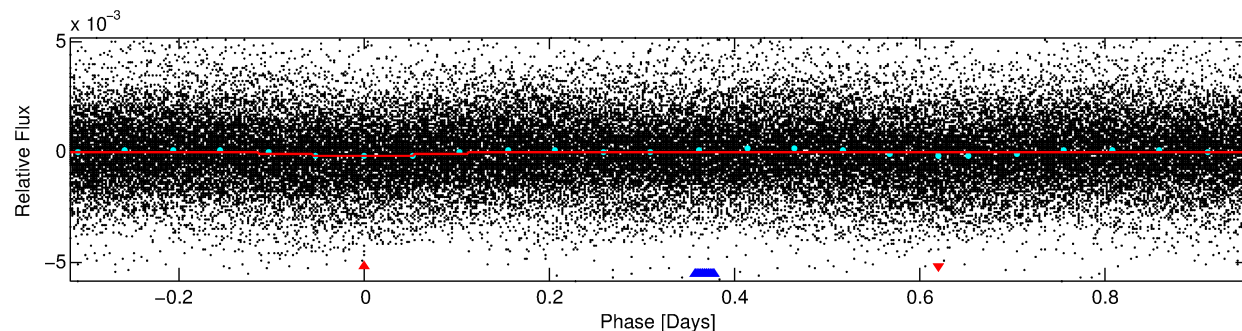
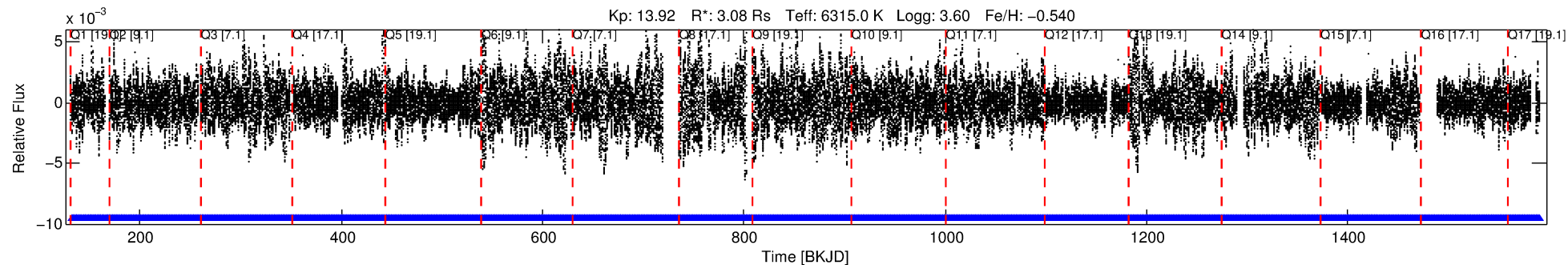
No Significant Match Found

DV One-Page Summary

KIC: 7050754 Candidate: 1 of 2 Period: 1.274 d

KOI: K06816 Corr: No Ephemeris Match

Kp: 13.92 R*: 3.08 Rs Teff: 6315.0 K Logg: 3.60 Fe/H: -0.540



DV Fit Results:

Period = 1.27361 [0.00001] d
Epoch = 132.1161 [0.0052] BKJD
Rp/R* = 0.0214 [0.0177]
a/R* = 1.06 [0.01]
b = 1.00 [0.02]
Seff = 20522.81 [23342.07]
Teq = 3052 [868] K
Rp = 7.20 [7.53] Re
a = 0.0256 [0.0173] AU
Ag = 0.69 [1.39] [-0.22σ]
Teffp = 4304 [1788] K [0.63σ]

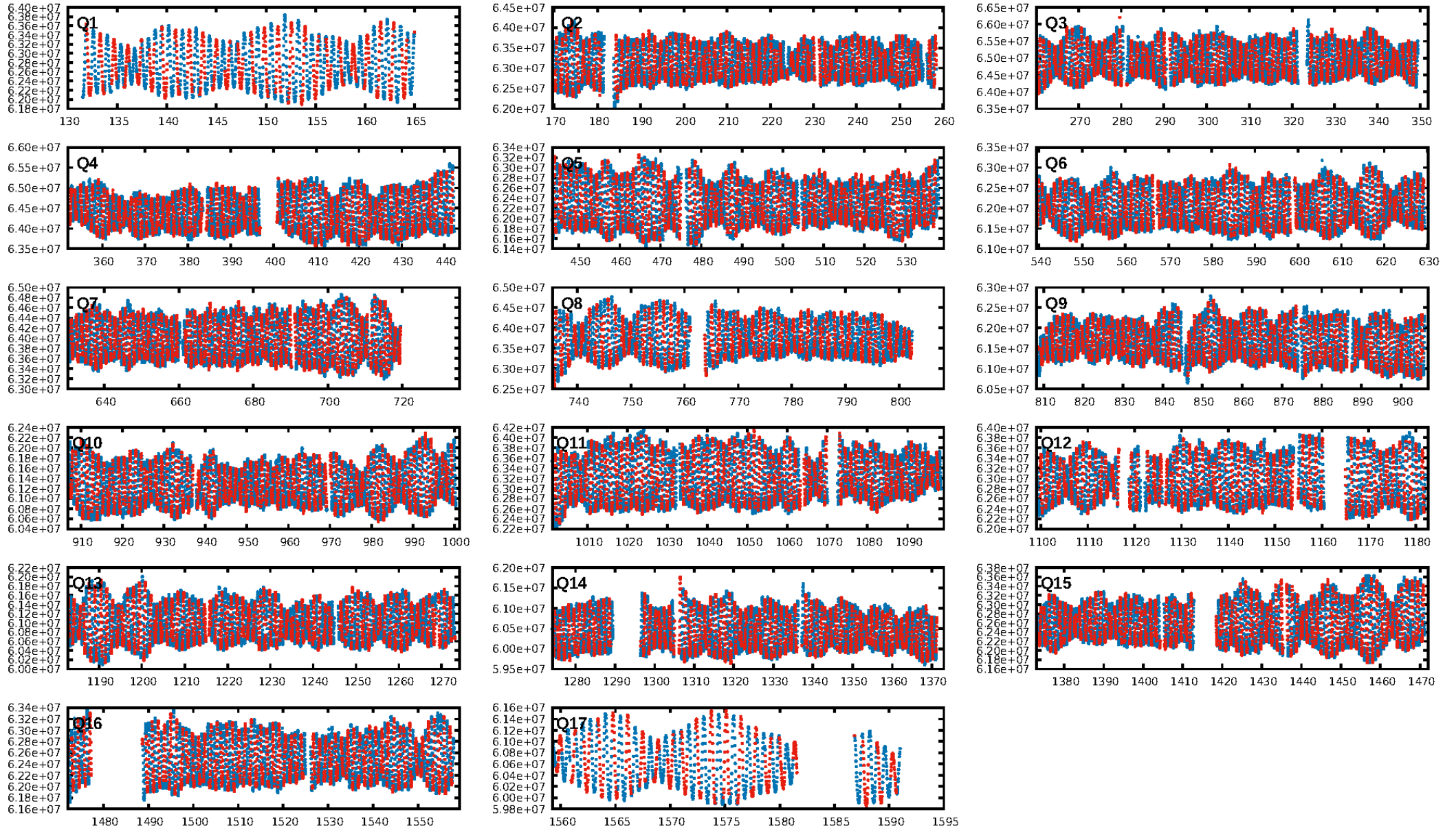
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.05e-13
RollingBand-fgt: 1.00 [1011/1011]
GhostDiagnostic-chr: 8.704
Centroid-sig: 0.0%
Centroid-so: 1.906 arcsec [2.51σ]
OotOffset-rm: 0.165 arcsec [1.79σ]
KicOffset-rm: 0.062 arcsec [0.42σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.53 [9/17]
DiffImageOverlap-fno: 0.00 [0/17]

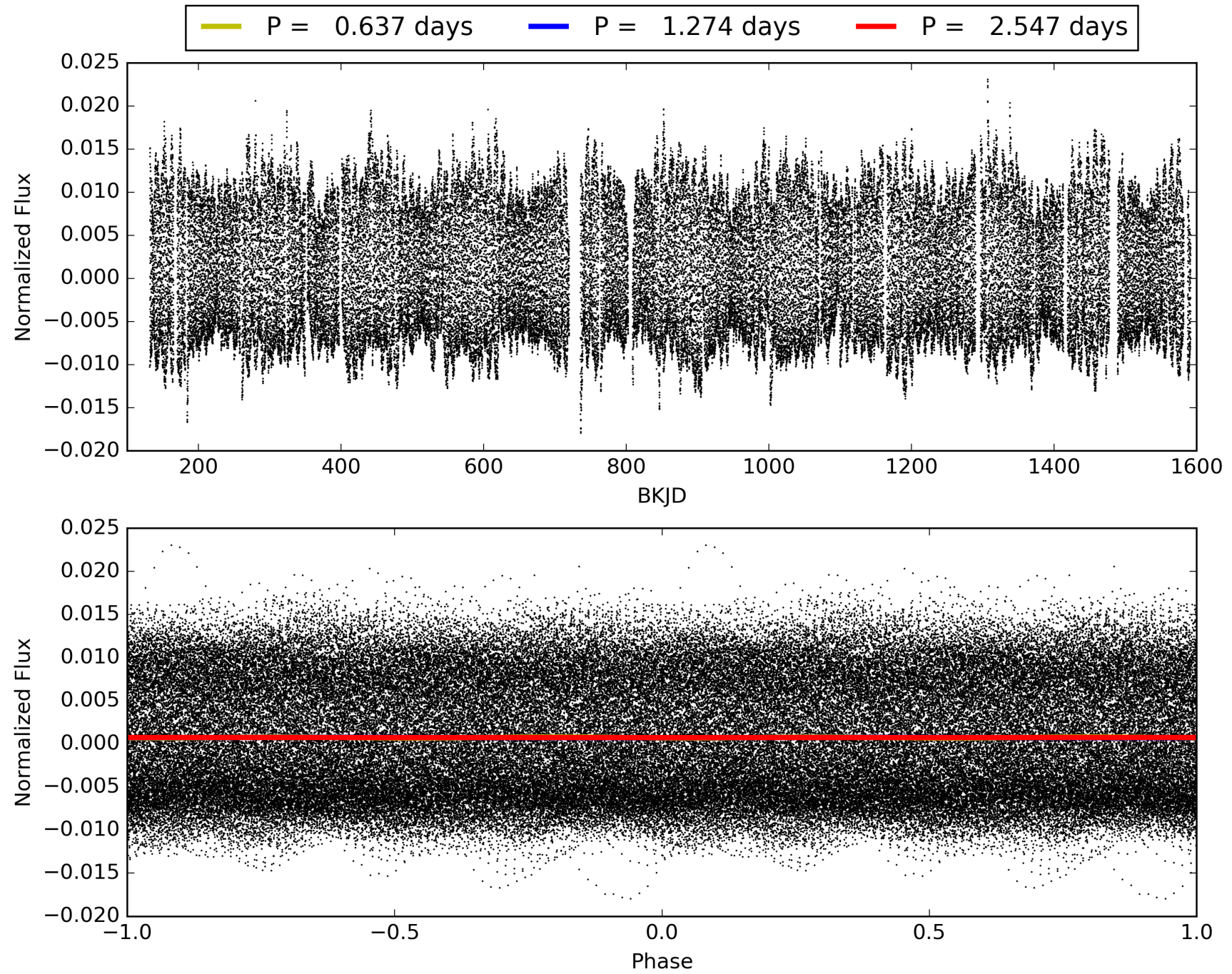
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 14:08:54 Z

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

TCE 007050754-01, PDC Light Curves

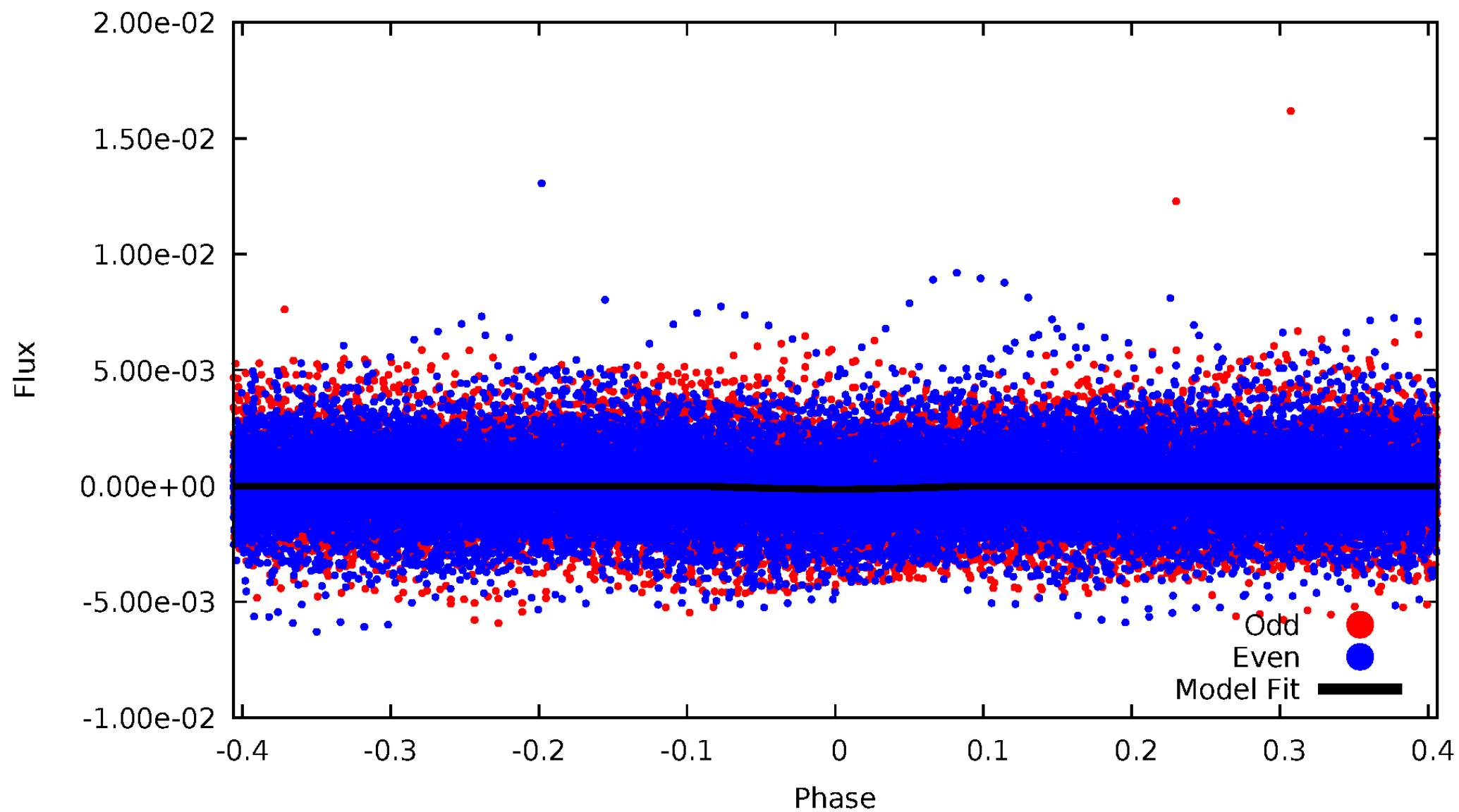


TCE 007050754-01



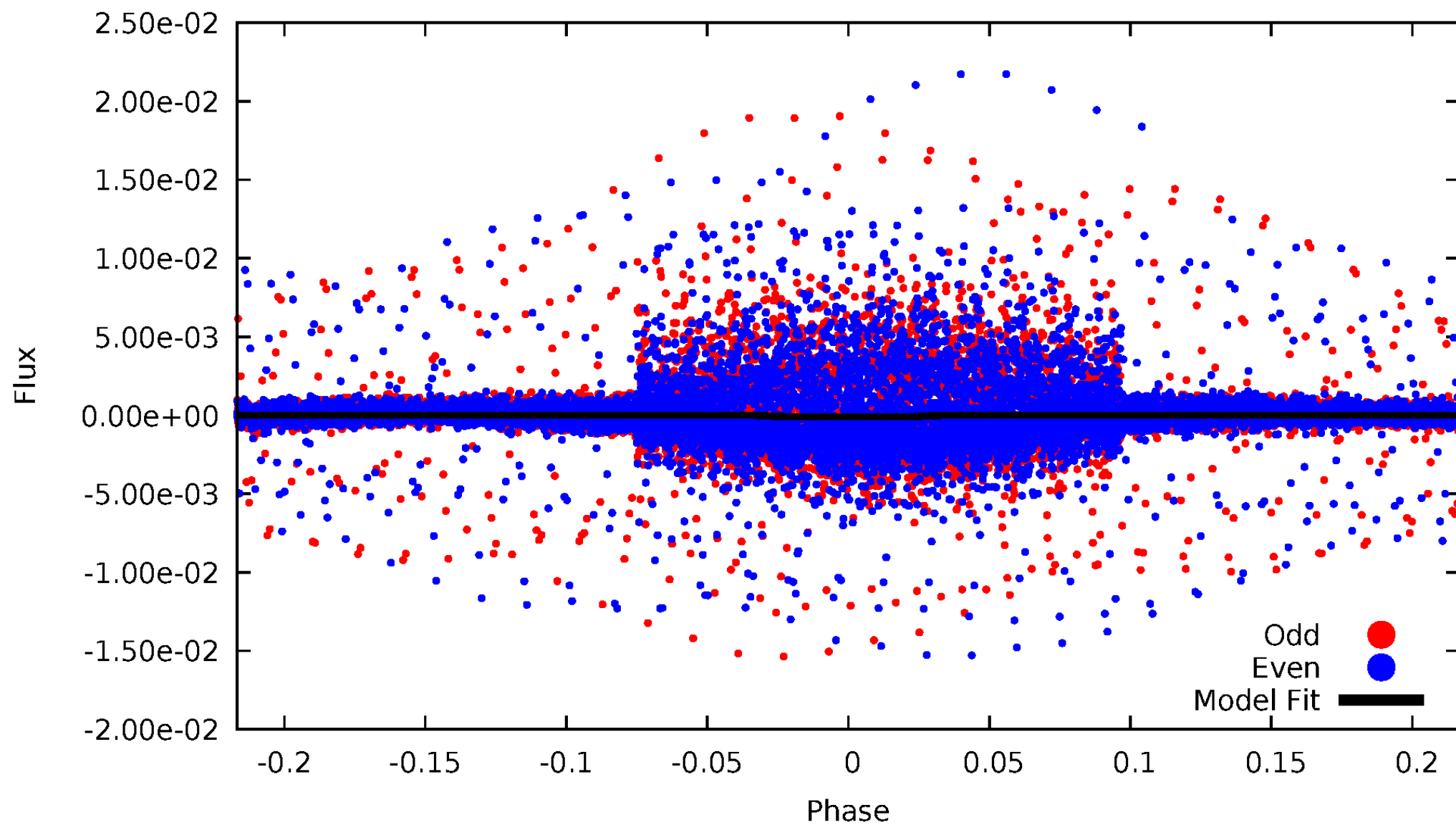
DV Odd/Even

TCE 007050754-01



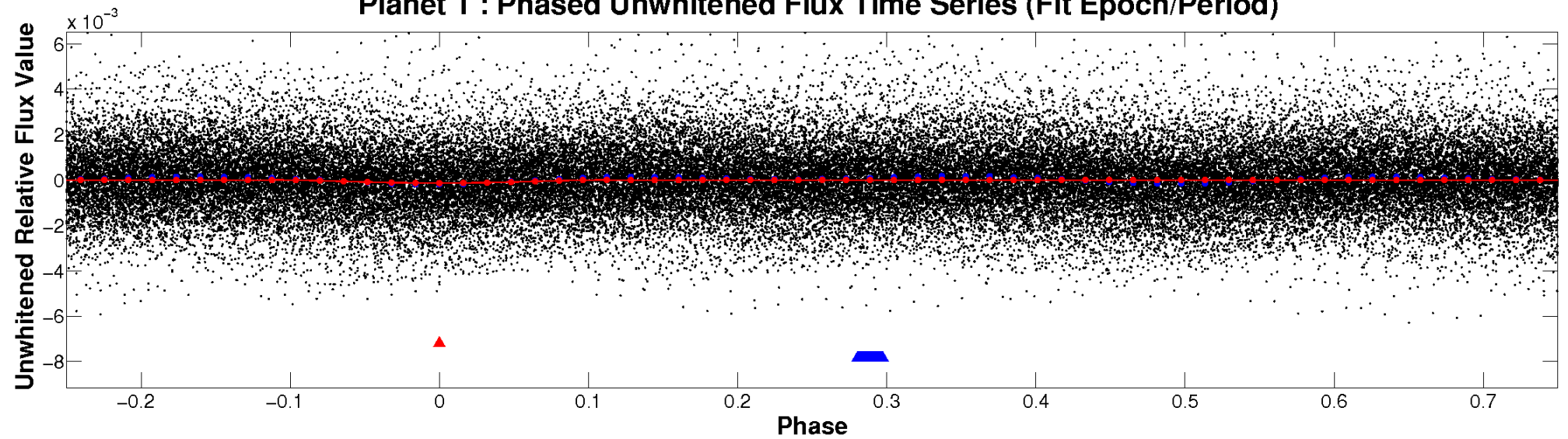
ALT Odd/Even

TCE 007050754-01

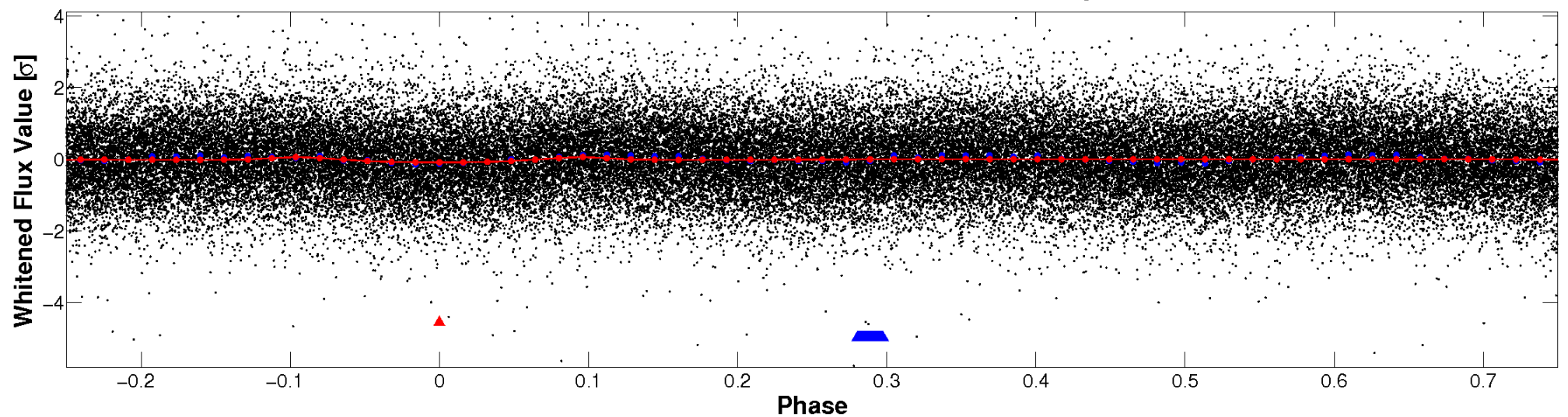


Non-Whitened Vs. Whitened Light Curve

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

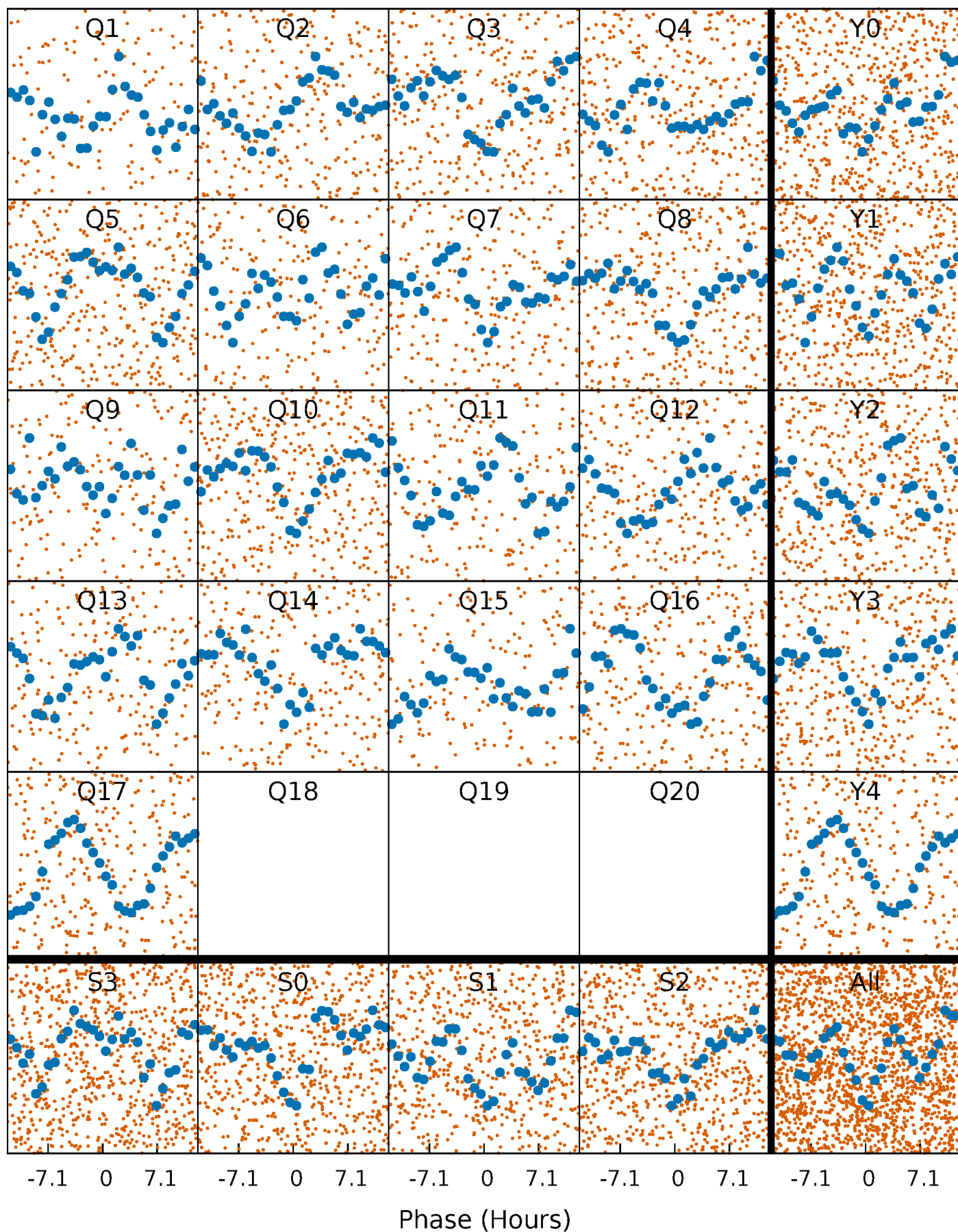


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



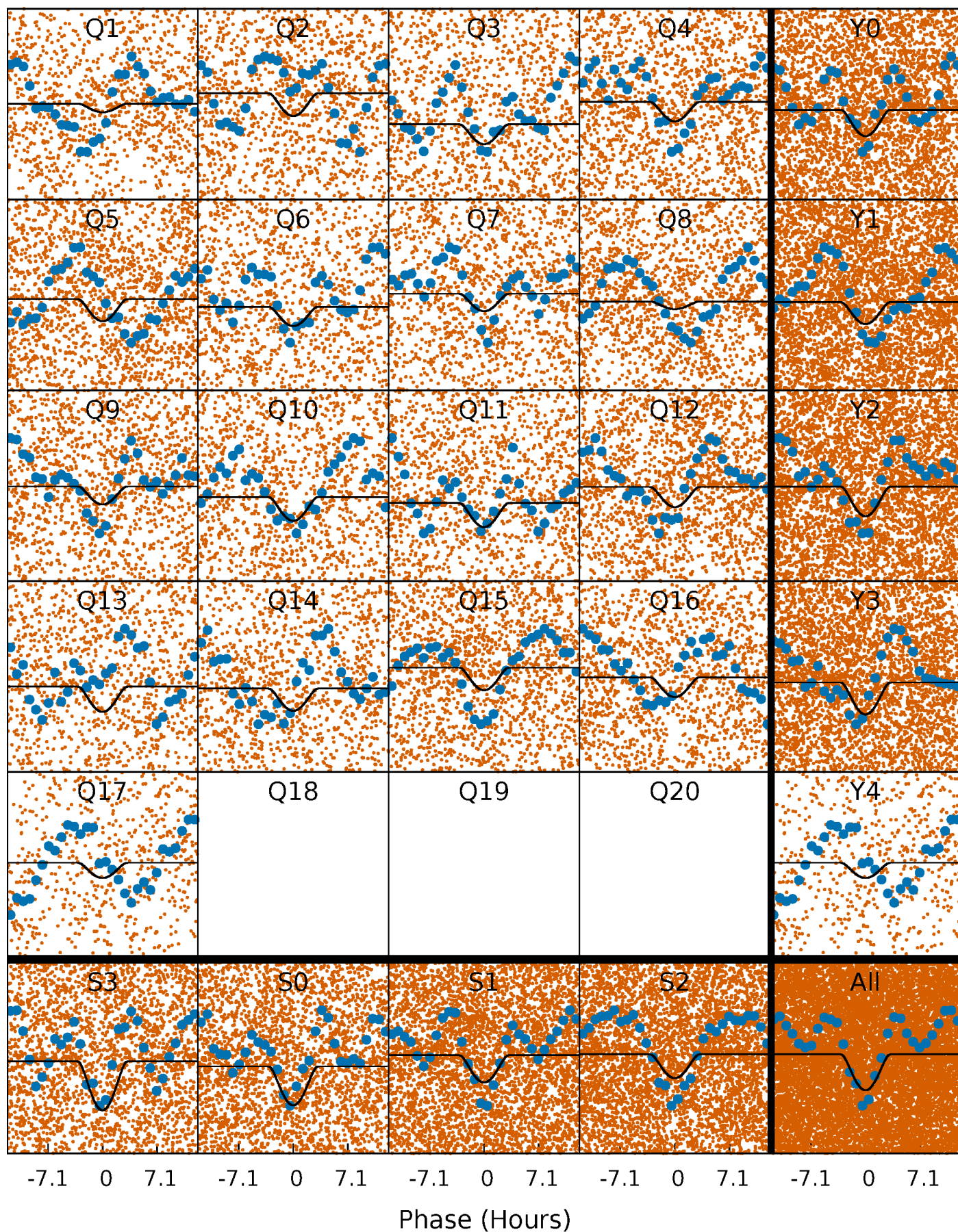
PDC Quarter-Phased Transit Curves

TCE 007050754-01 P= 1.273608 Days $T_0=132.116107$ (BKJD)



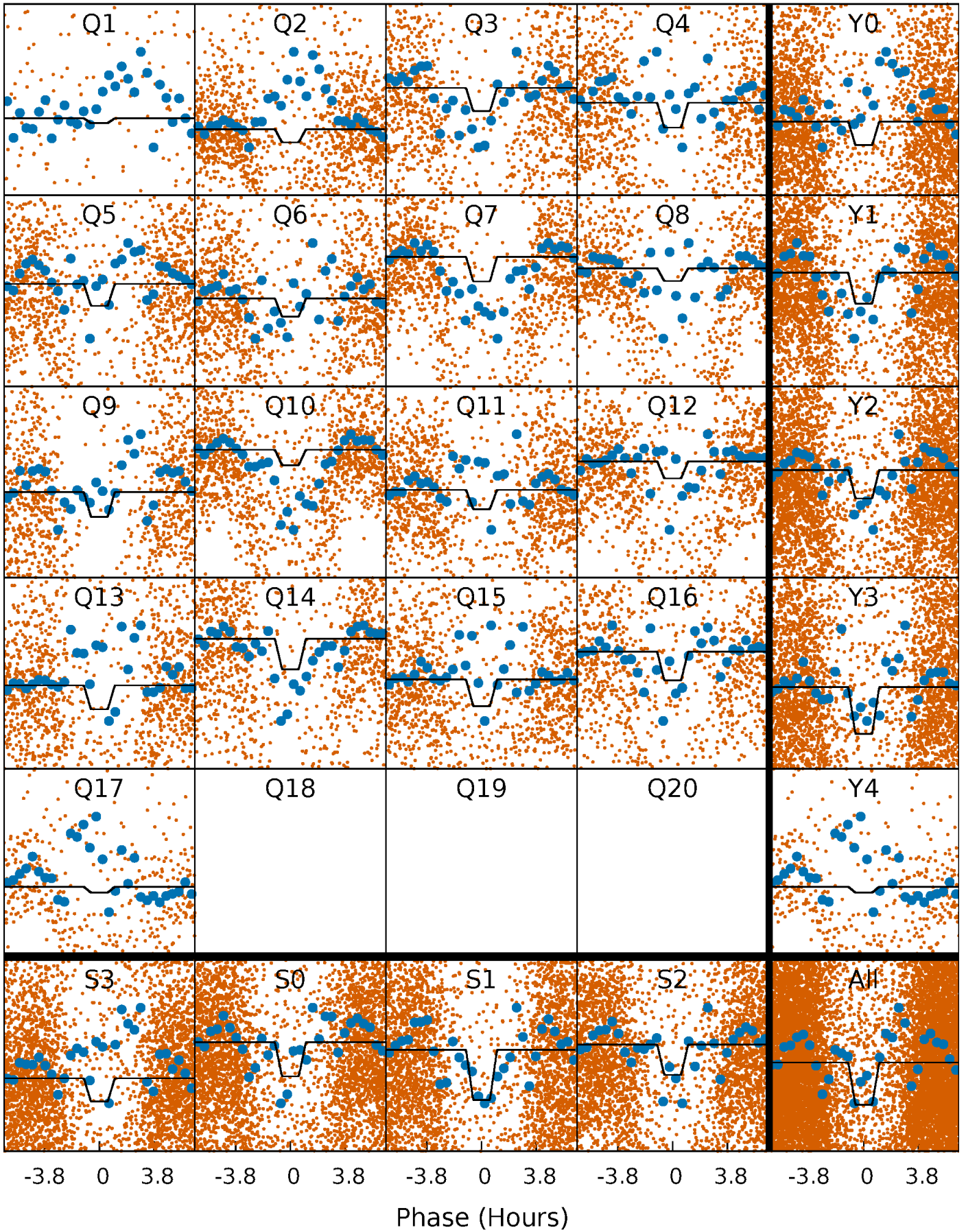
DV Quarter-Phased Transit Curves

TCE 007050754-01 P= 1.273608 Days $T_0=132.116107$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

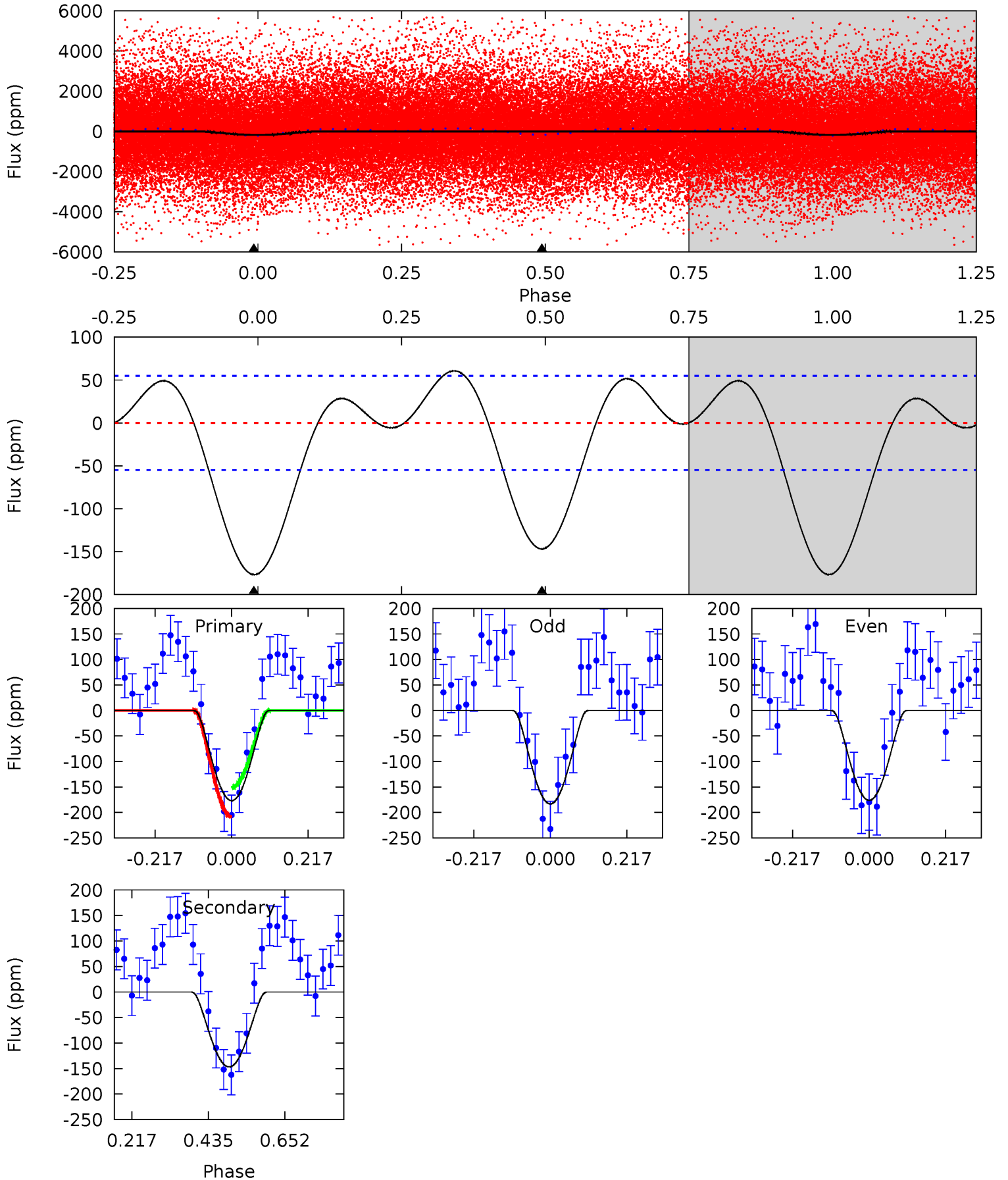
TCE 007050754-01 P= 1.273557 Days $T_0=132.131837$ (BKJD)



DV Model-Shift Uniqueness Test

007050754-01, P = 1.273608 Days, E = 130.842499 Days

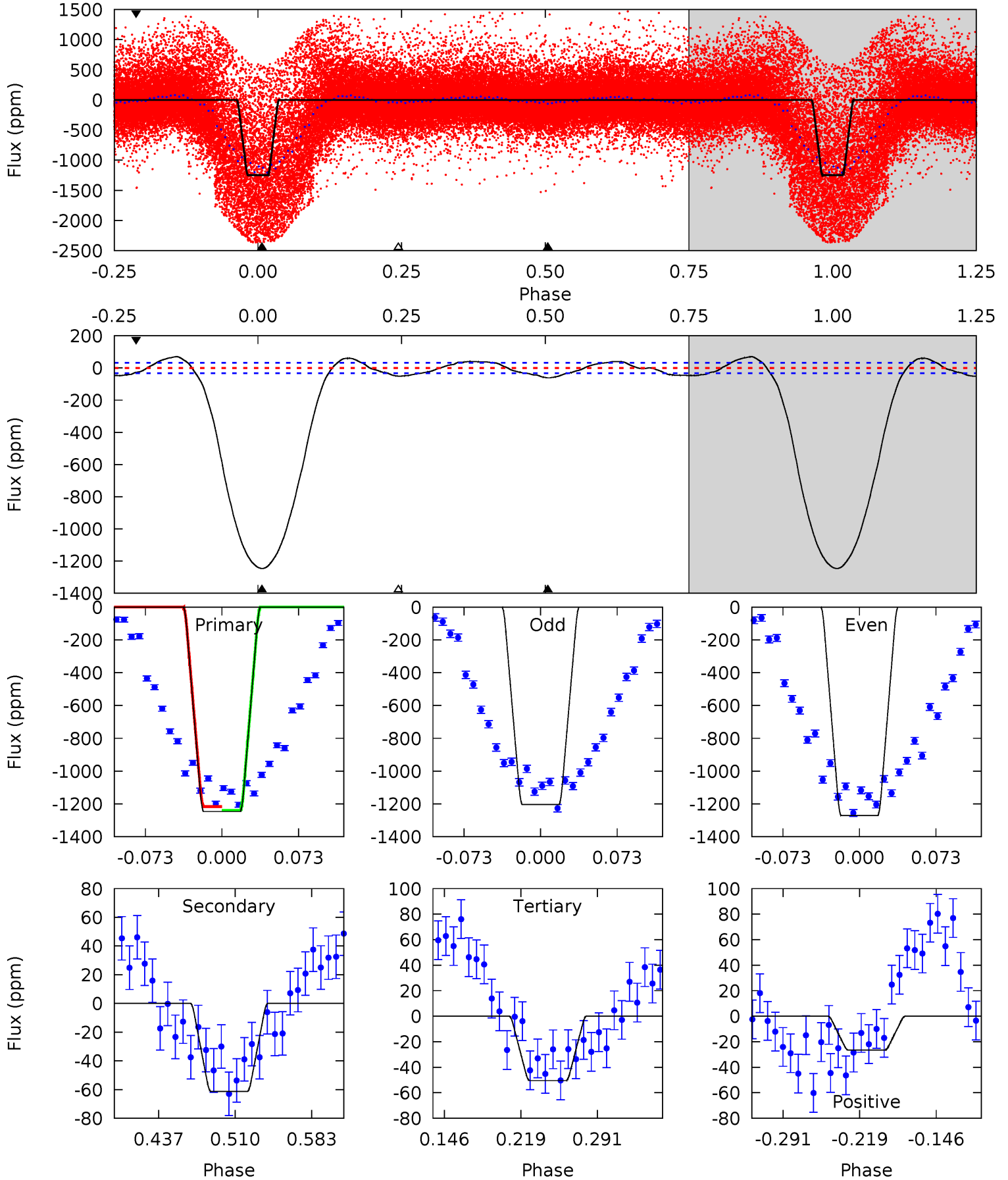
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.2	11.8	0	0	4.40	1.23	0.42	14.2	14.2	11.8	11.8	0.29	0.91	0.26	2.35



Alt Model-Shift Uniqueness Test

007050754-01, P = 1.273557 Days, E = 130.858280 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
178.9	8.79	7.24	-3.82	4.63	1.79	13.4	171.7	182.7	1.55	12.6	4.79	0.05	0.05	1.62



Stellar Parameters For KIC 007050754

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6315^{+227}_{-227}	$3.603^{+0.680}_{-0.128}$	$-0.540^{+0.350}_{-0.300}$	$3.075^{+0.658}_{-1.975}$	$1.381^{+0.193}_{-0.450}$	$0.067^{+0.811}_{-0.027}$
	+4%/-4%	+19%/-4%	+65%/-56%	+21%/-64%	+14%/-33%	+1212%/-40%
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 007050754-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-147 ± 12	$6.75^{+5.63}_{-4.16}$	4105^{+385}_{-660}	4377^{+2556}_{-1502}	$1.169^{+7.310}_{-0.819}$
Alt.	-61 ± 7	$4.61^{+5.69}_{-3.15}$	4153^{+347}_{-640}	4241^{+3573}_{-7420}	$0.990^{+9.777}_{-0.783}$

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 $A_{obs} \gg 1.0$

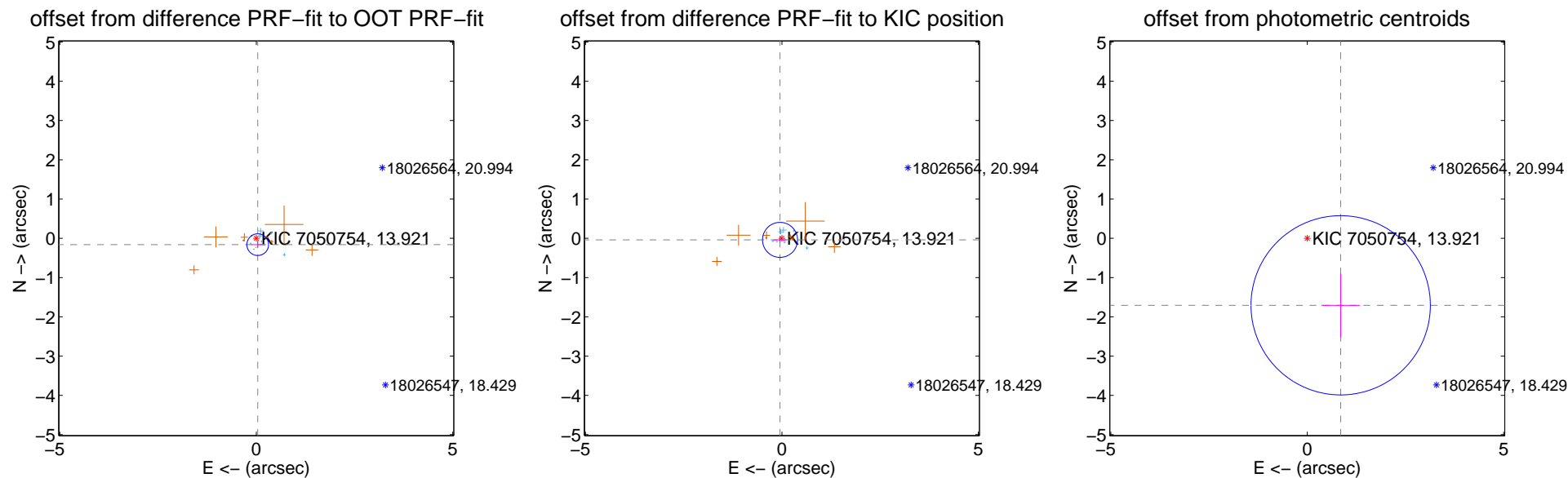
DV Centroid Data

Supplemental centroid analysis for 007050754-01. Kepler magnitude: 13.92. Transit SNR 7.54

There are 9 quarters with good PRF difference image offsets

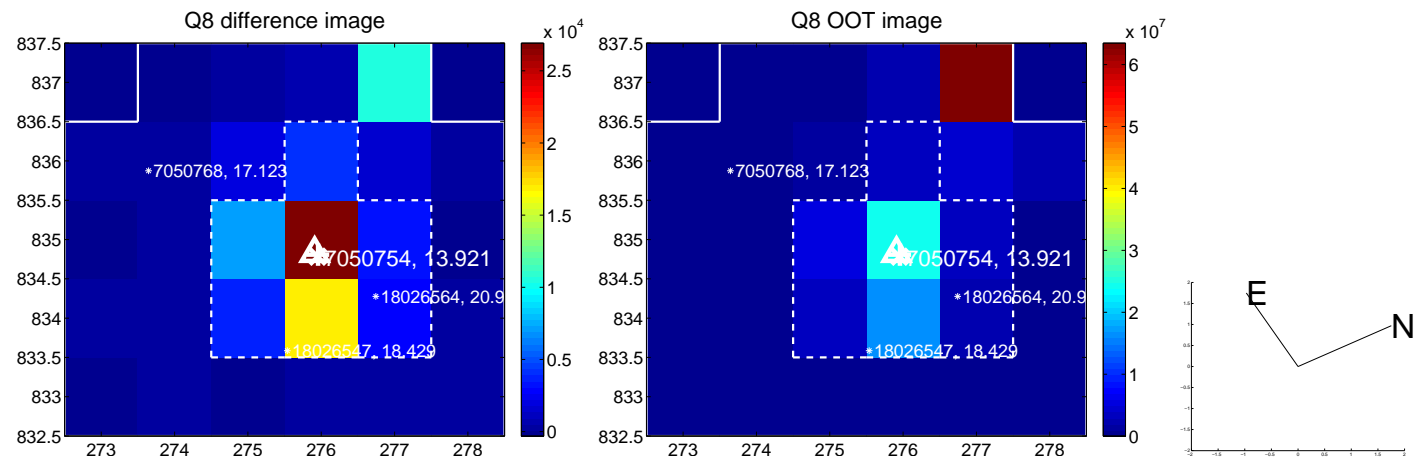
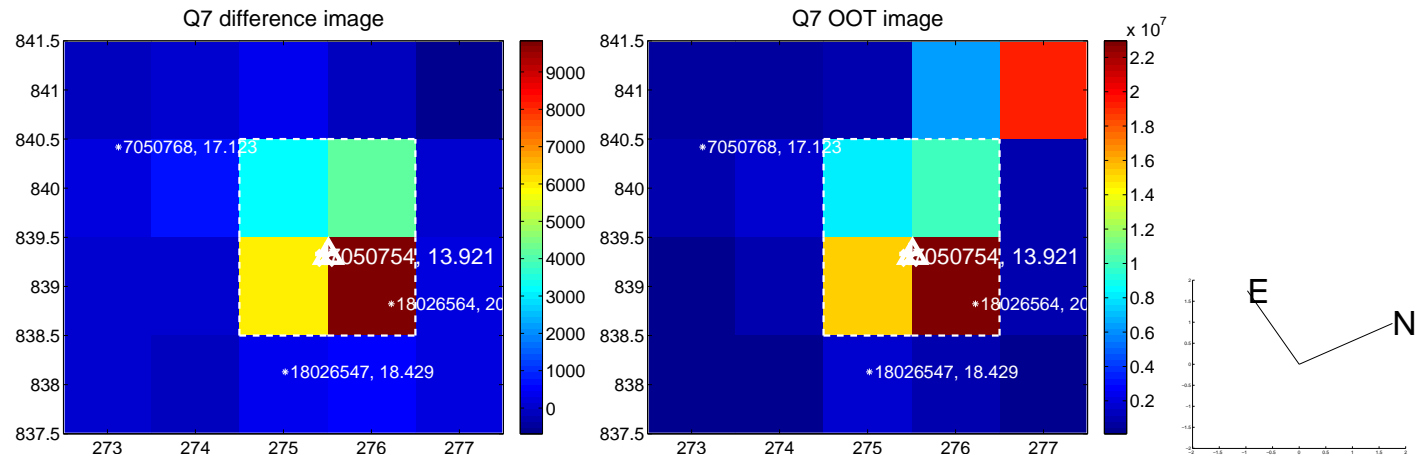
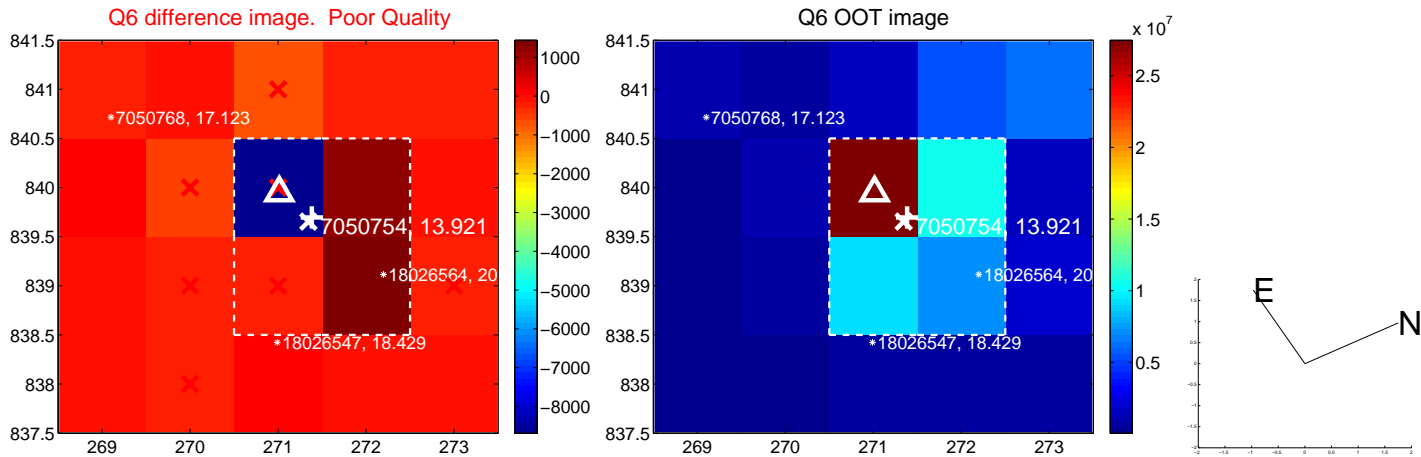
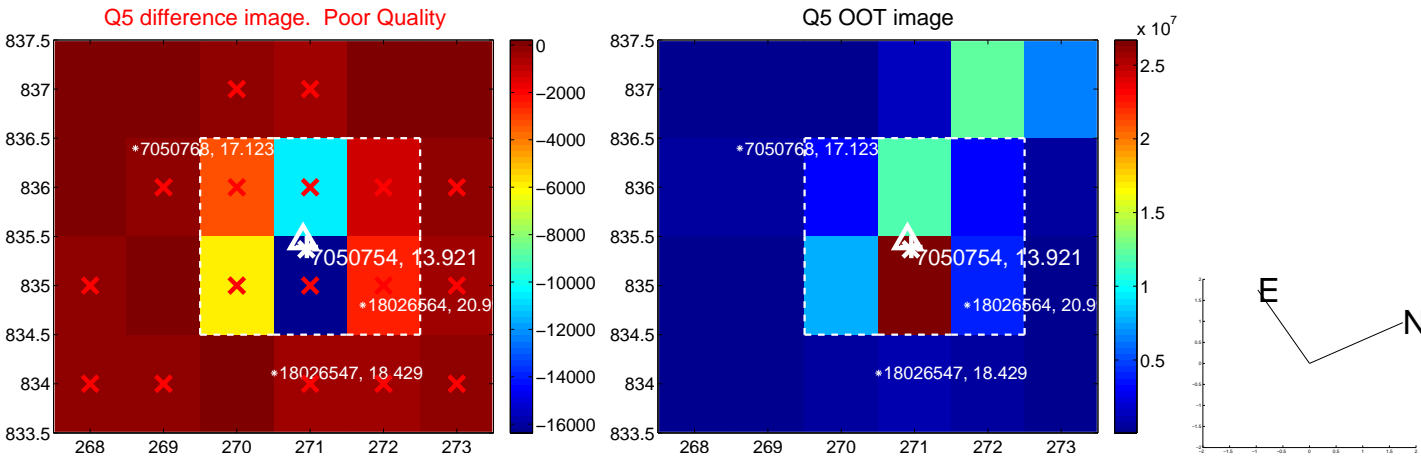
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.165 ± 0.092	1.79	-0.037 ± 0.165	-0.161 ± 0.091
PRF-fit source offset from KIC position	0.062 ± 0.149	0.42	0.048 ± 0.166	-0.039 ± 0.084
photometric centroid source offset	1.91 ± 0.76	2.51	-0.85 ± 0.49	-1.71 ± 0.81

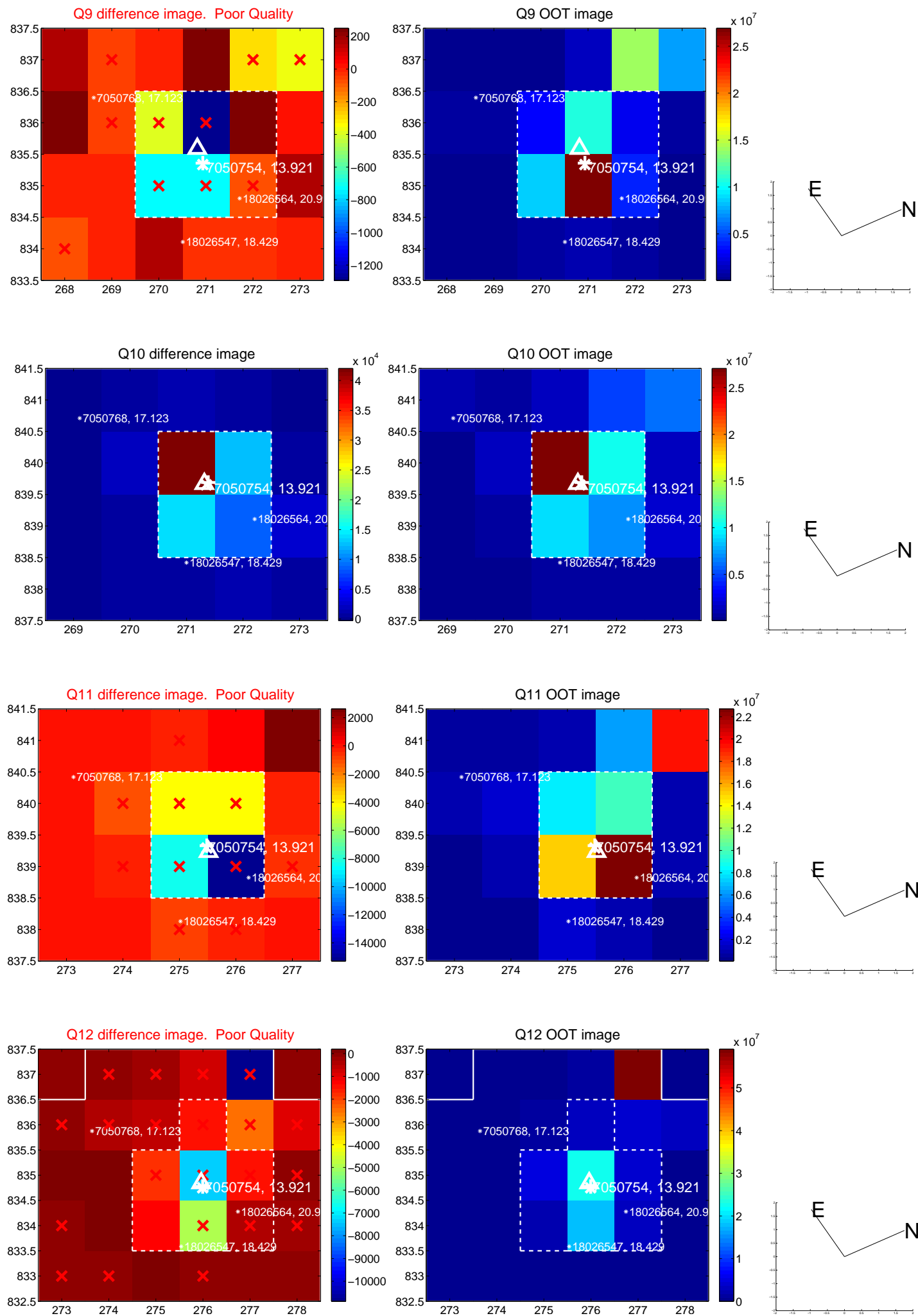


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

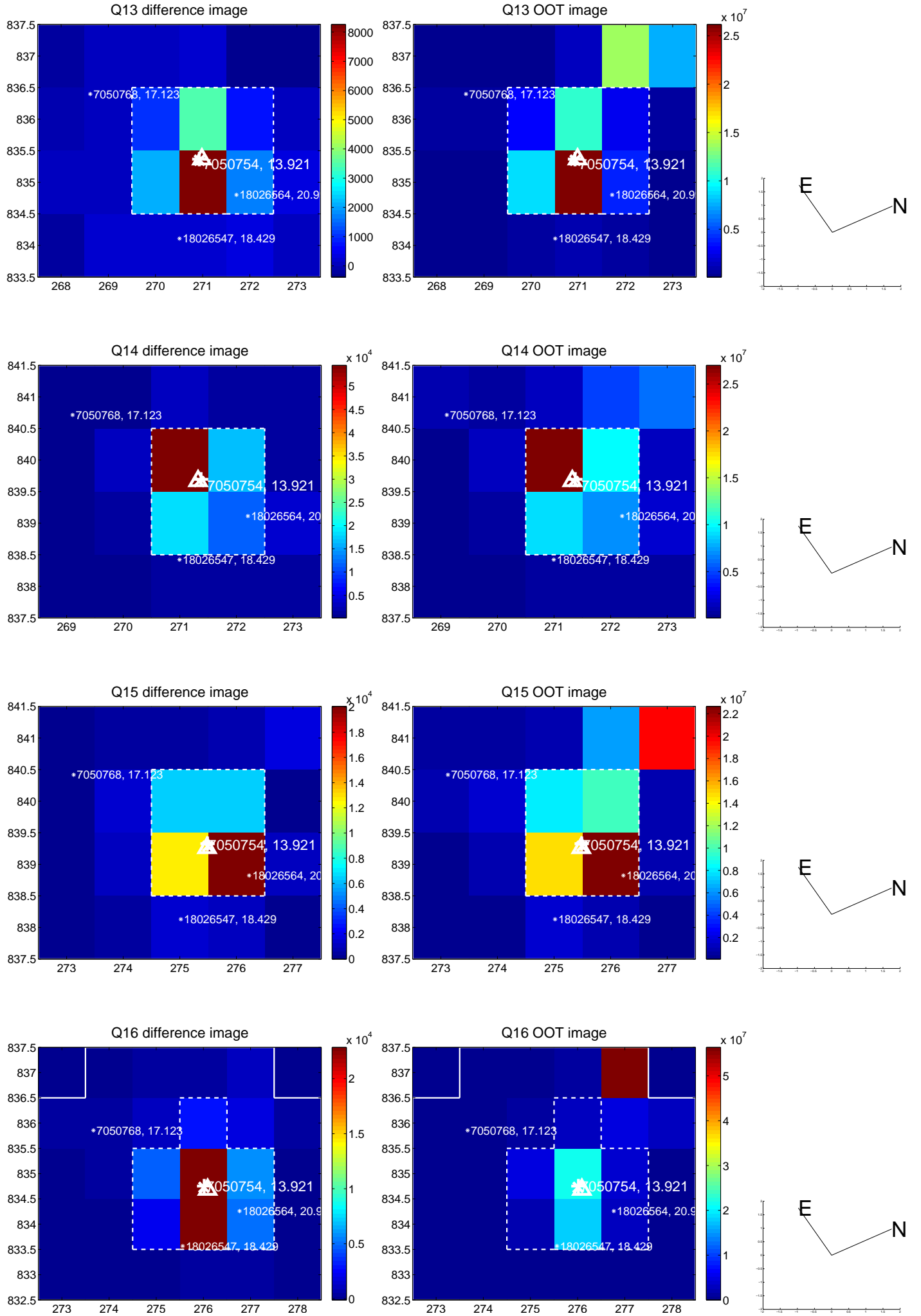
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



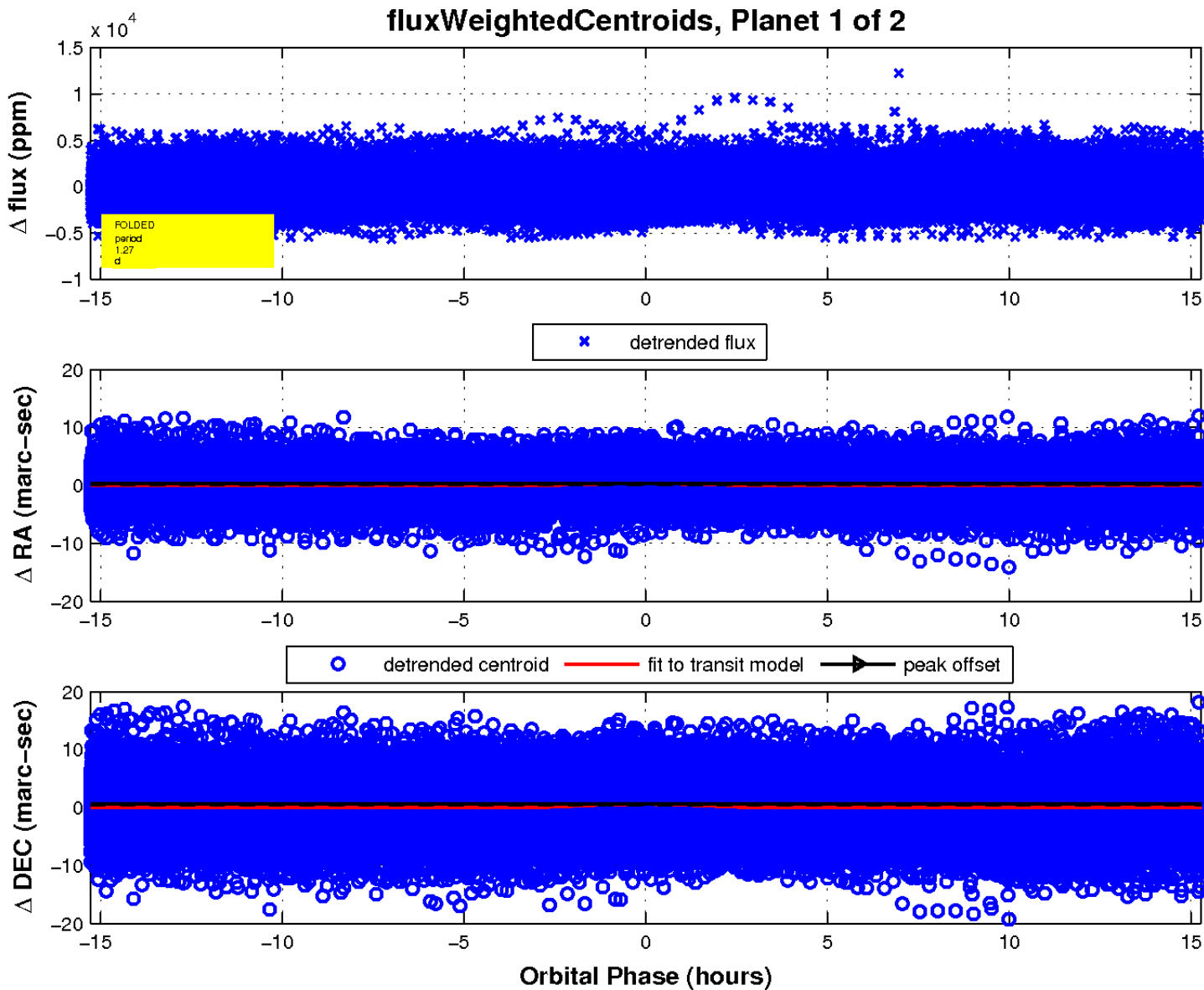
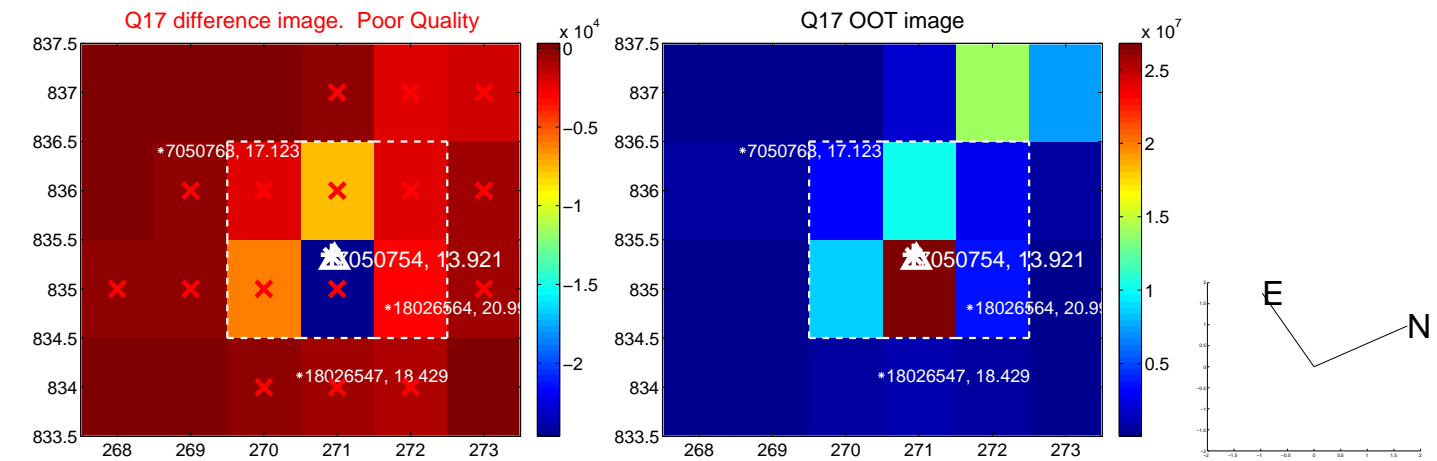
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

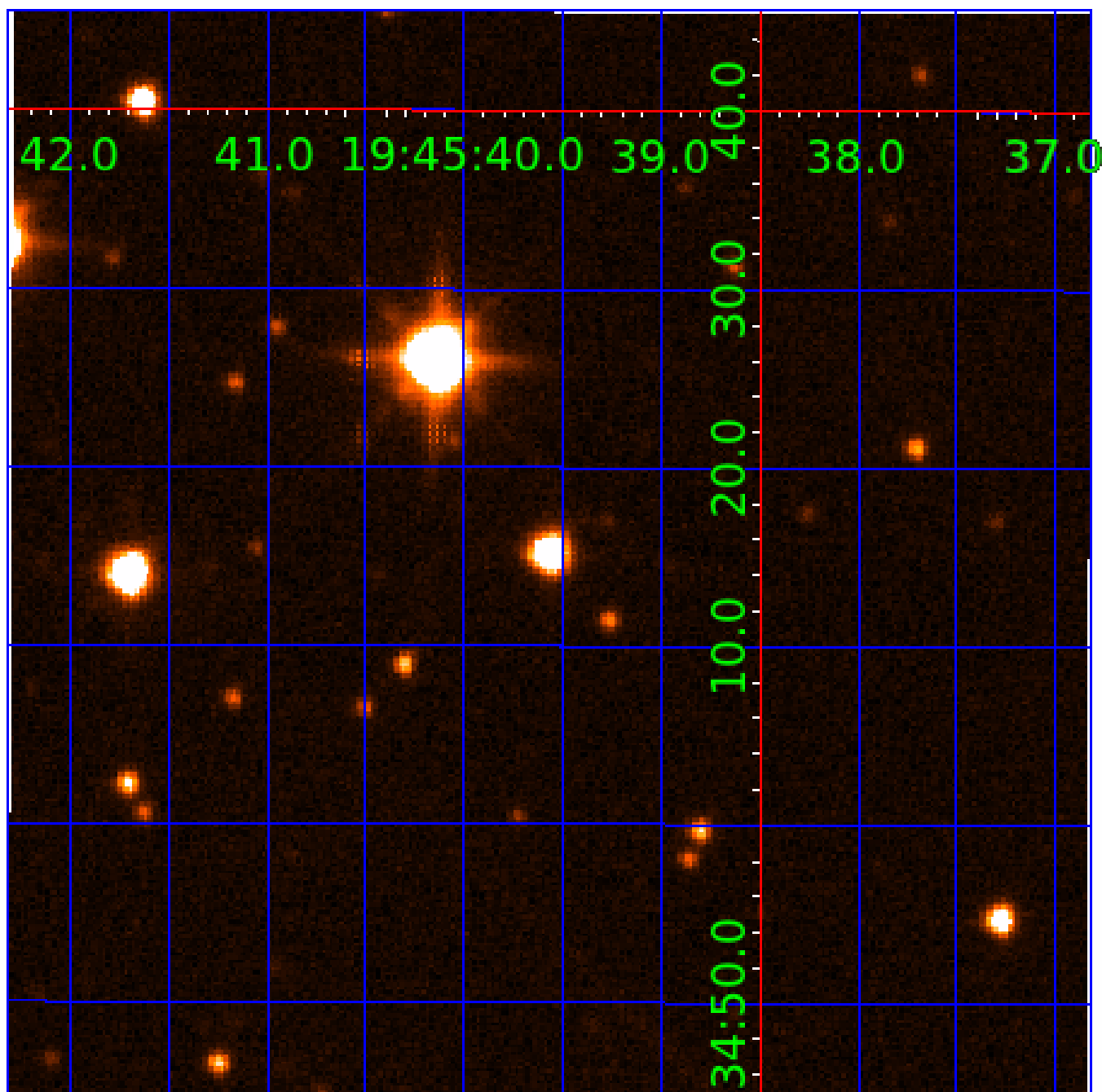


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007050754

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})
007050754-01	OBS	No	1.273608	132.116107	137.2	6.202	8.0	7.5	3.08	6315	7.20	20522.81
007050754-02	OBS	No	1.273589	132.494834	119.5	2.747	9.8	5.8	3.08	6315	3.94	20523.22

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007050754-01	OBS	FP	0.00	1	0	0	0	LPP_DV
007050754-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—MOD_NONUNIQ_ALT—MOD_TER_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.

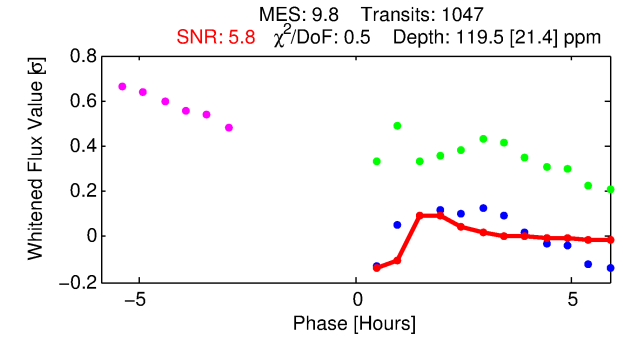
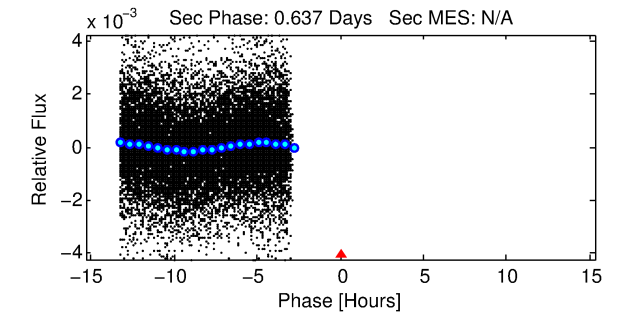
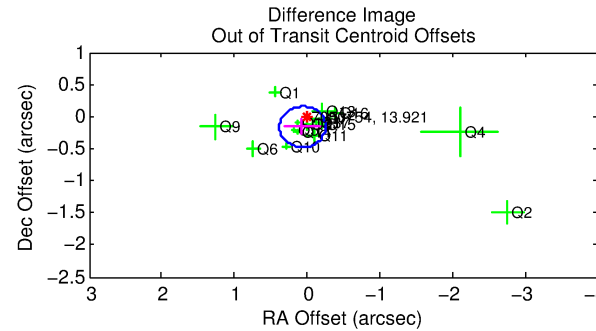
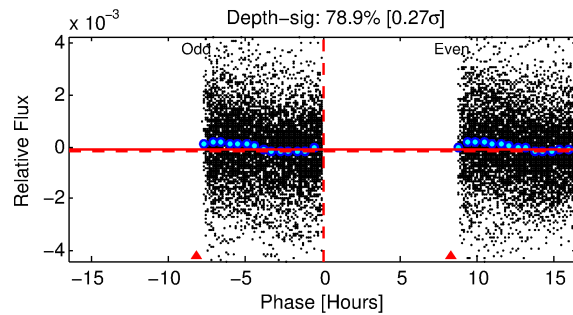
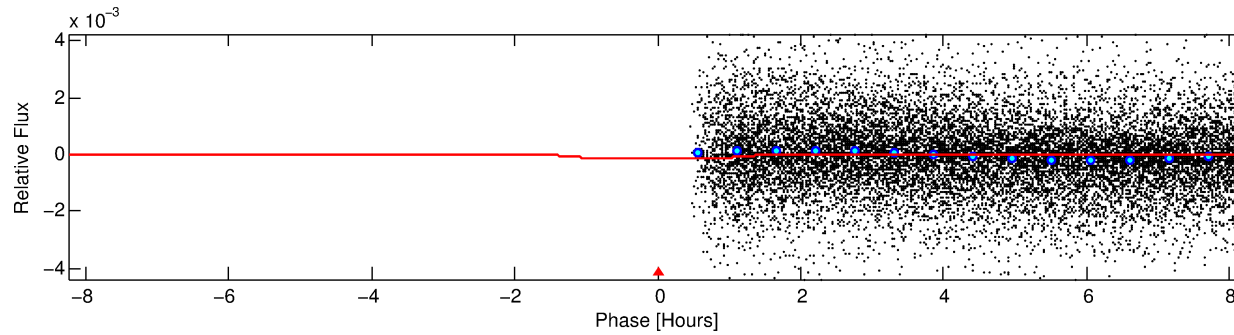
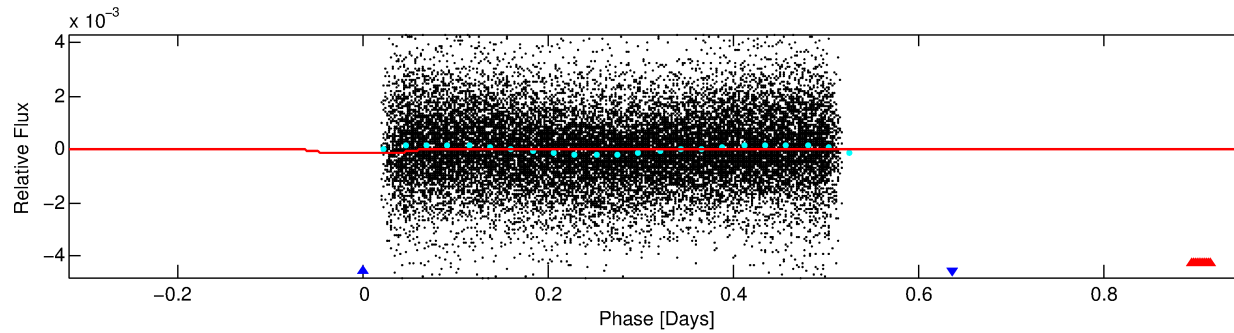
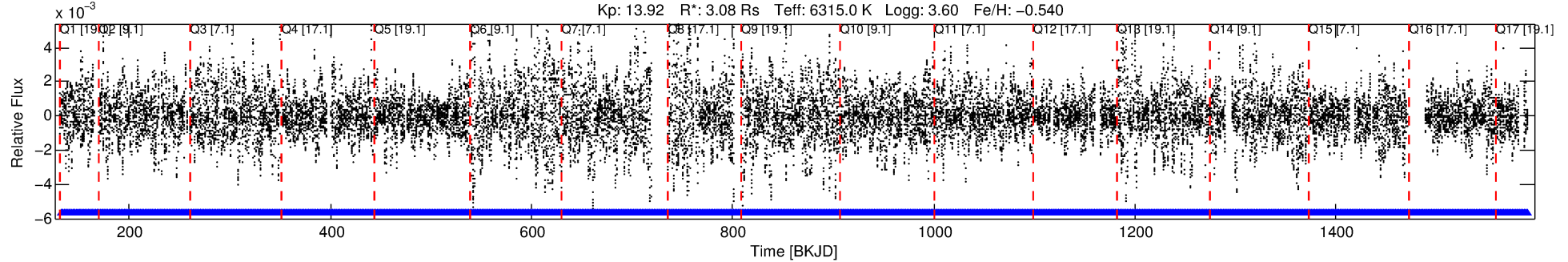
Ephemeris Match Information For 007050754-02

No Significant Match Found

DV One-Page Summary

KIC: 7050754 Candidate: 2 of 2 Period: 1.274 d
KOI: K06816 Corr: No Ephemeris Match

Kp: 13.92 R*: 3.08 Rs Teff: 6315.0 K Logg: 3.60 Fe/H: -0.540



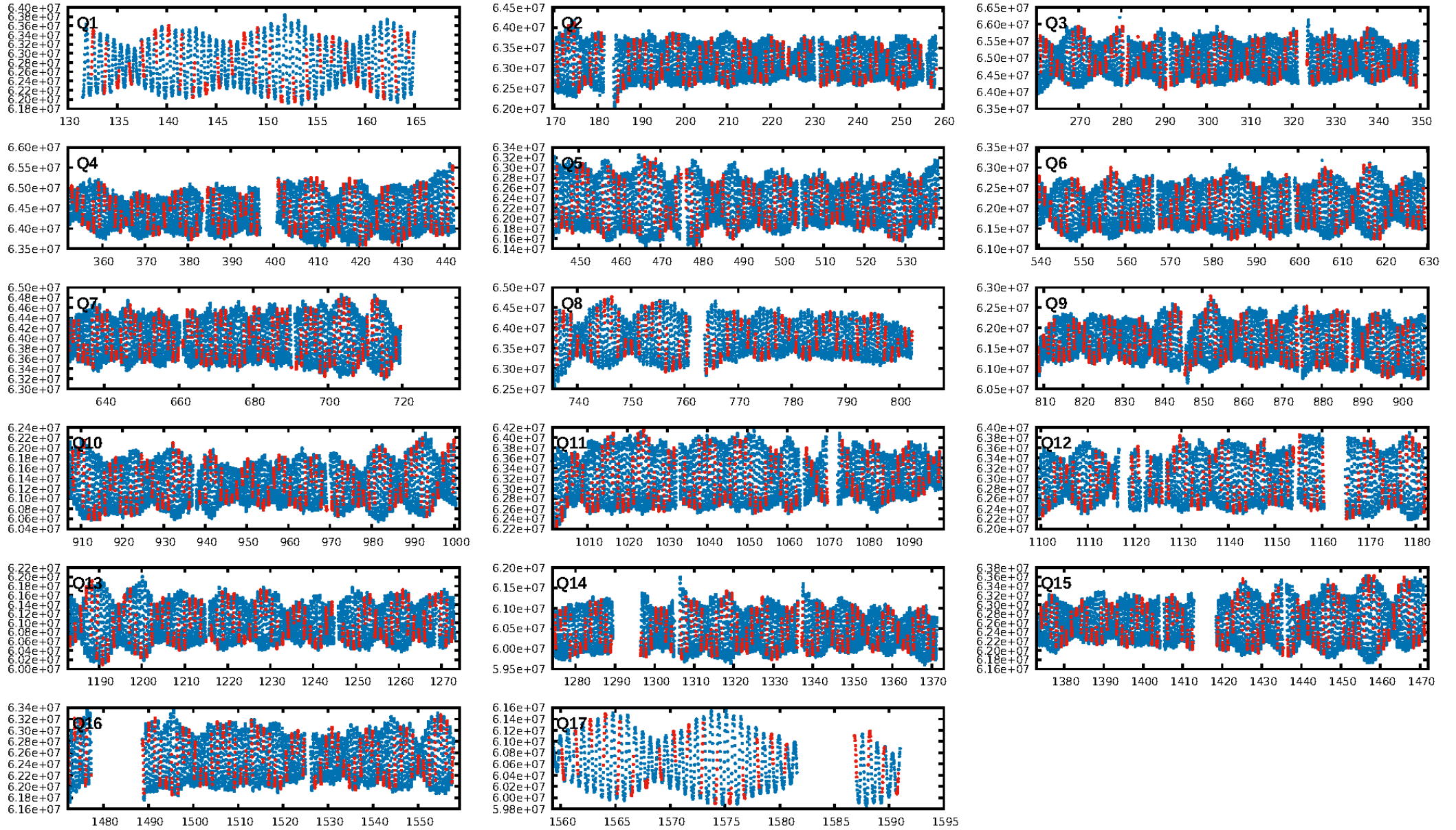
DV Fit Results:

Period = 1.27359 [0.00001] d
Epoch = 132.4948 [0.0107] BKJD
Rp/R* = 0.0117 [0.0047]
a/R* = 1.87 [3.05]
b = 0.90 [0.44]
Seff = 20523.22 [23342.53]
Teq = 3052 [868] K
Rp = 3.94 [2.98] Re
a = 0.0256 [0.0173] AU

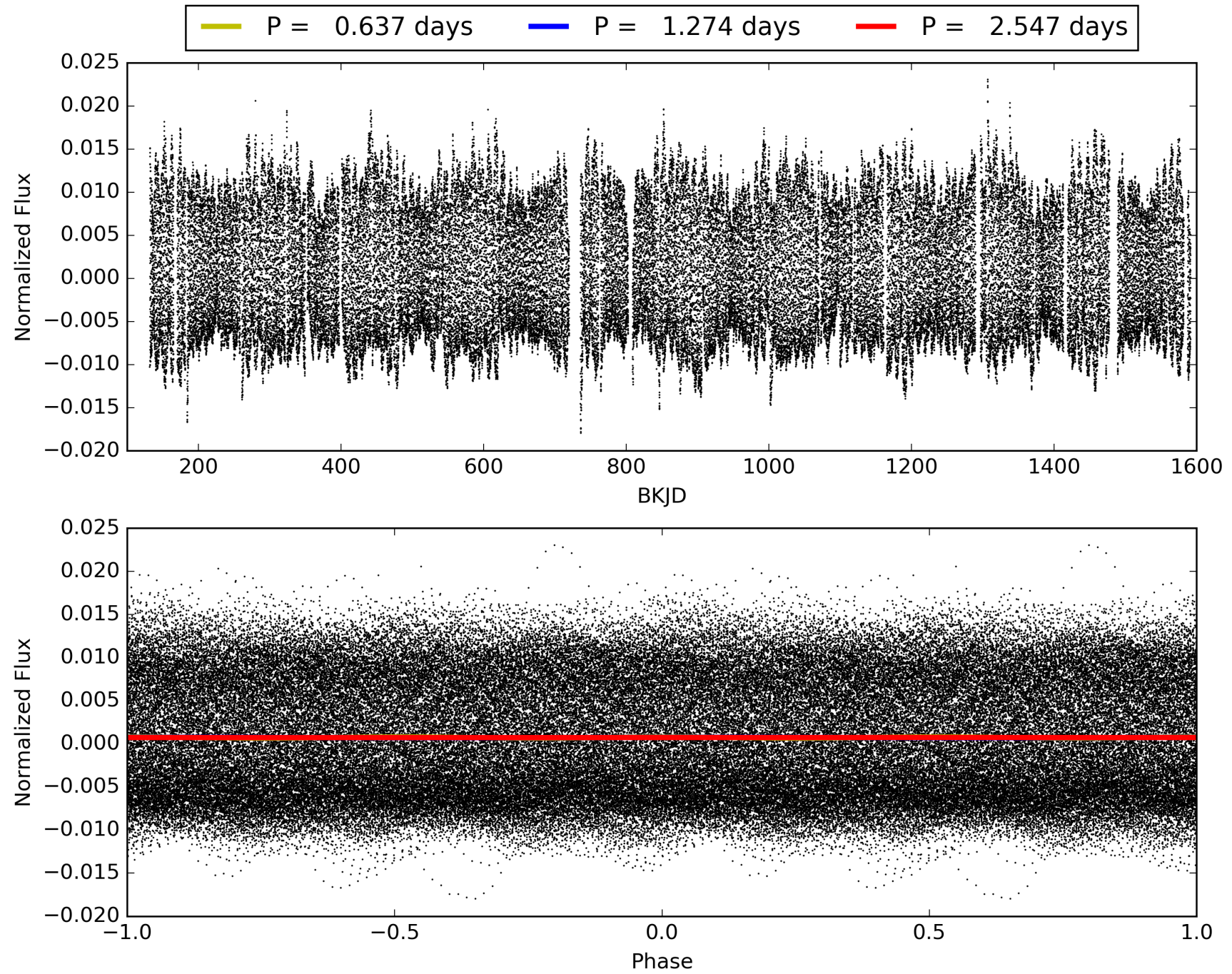
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 7.32e-17
RollingBand-fgt: 1.00 [1000/1000]
GhostDiagnostic-chr: 3.105
Centroid-sig: 5.5%
Centroid-so: 1.836 arcsec [3.17σ]
OotOffset-rm: 0.174 arcsec [1.64σ]
KicOffset-rm: 0.168 arcsec [0.94σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.41 [7/17]
DiffImageOverlap-fno: 0.00 [0/17]

TCE 007050754-02, PDC Light Curves

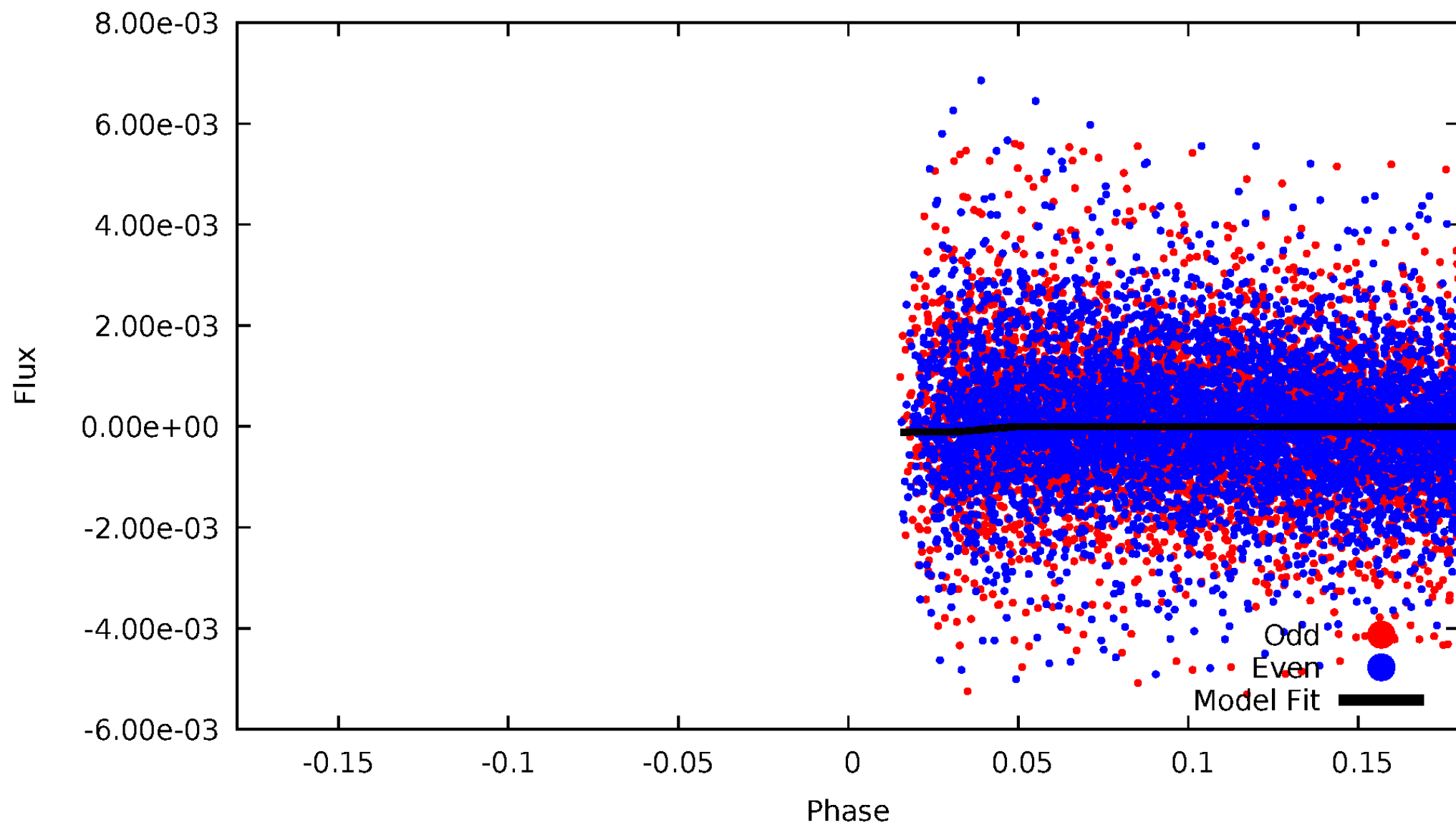


TCE 007050754-02



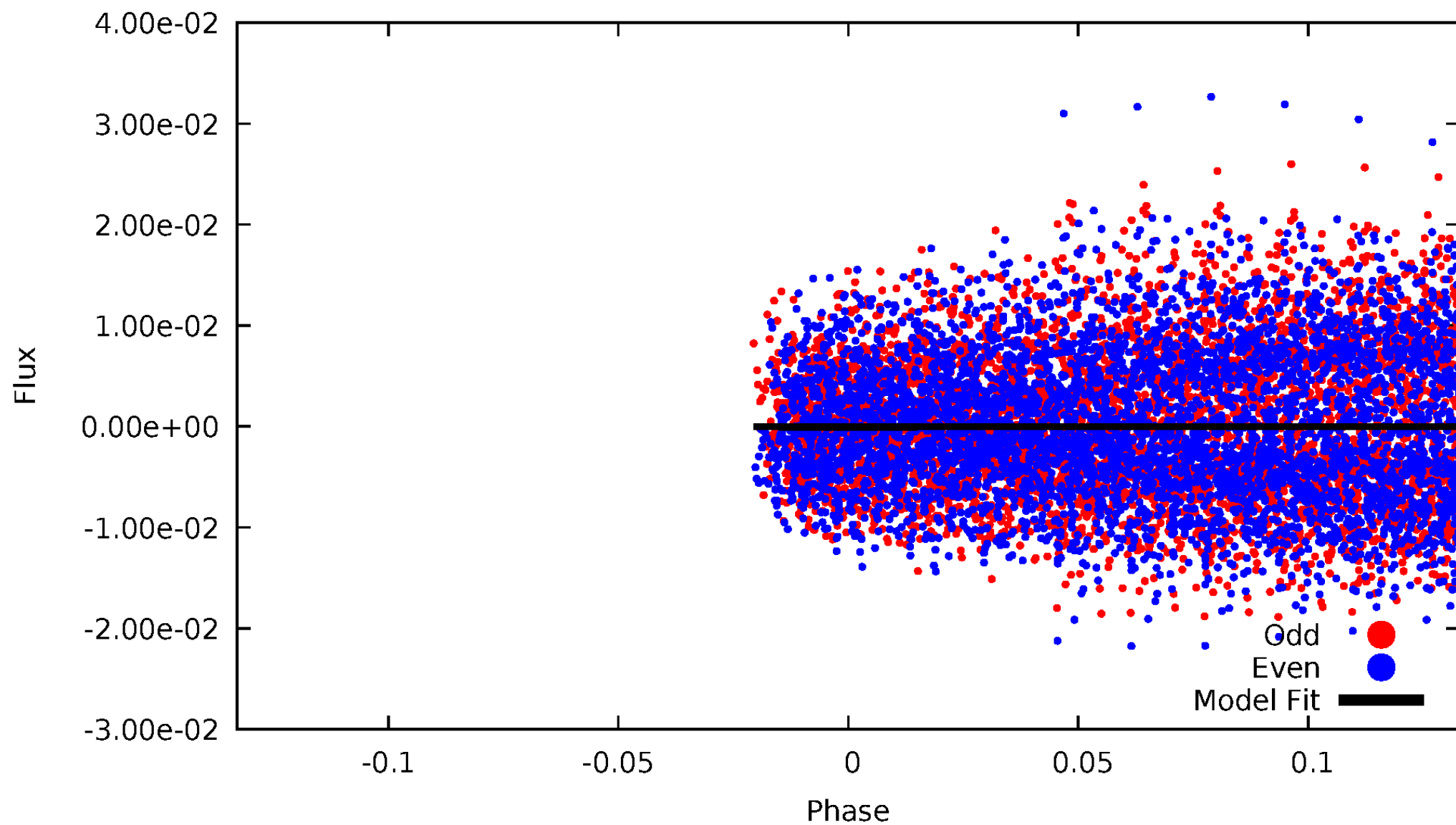
DV Odd/Even

TCE 007050754-02



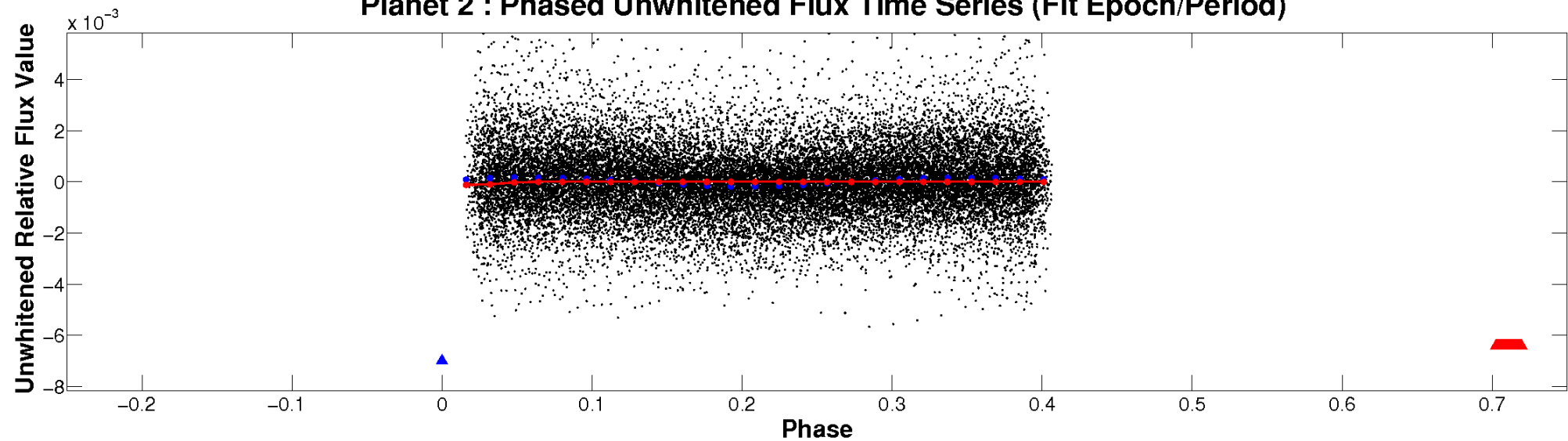
ALT Odd/Even

TCE 007050754-02

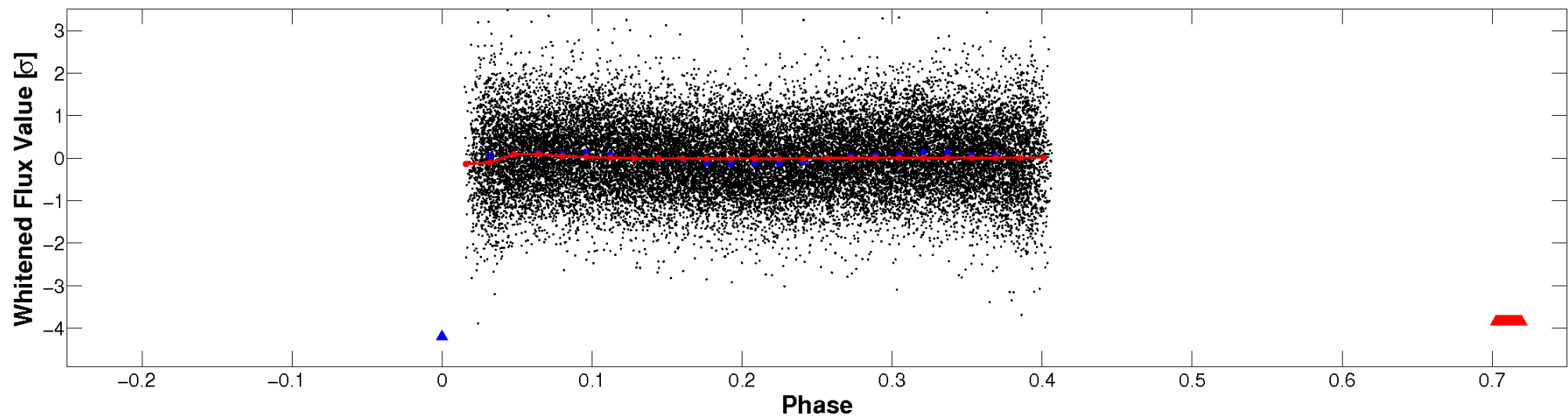


Non-Whitened Vs. Whitened Light Curve

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

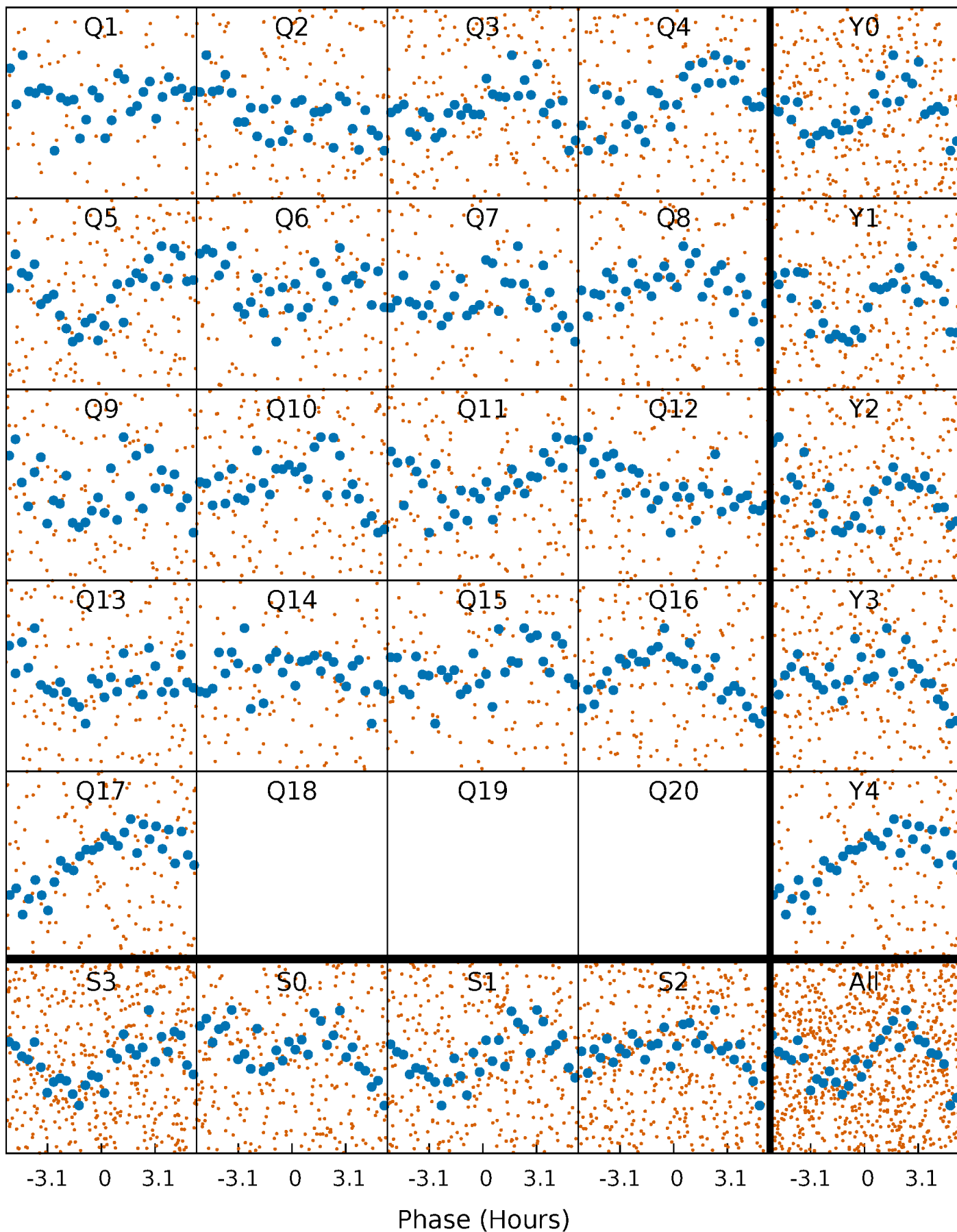


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



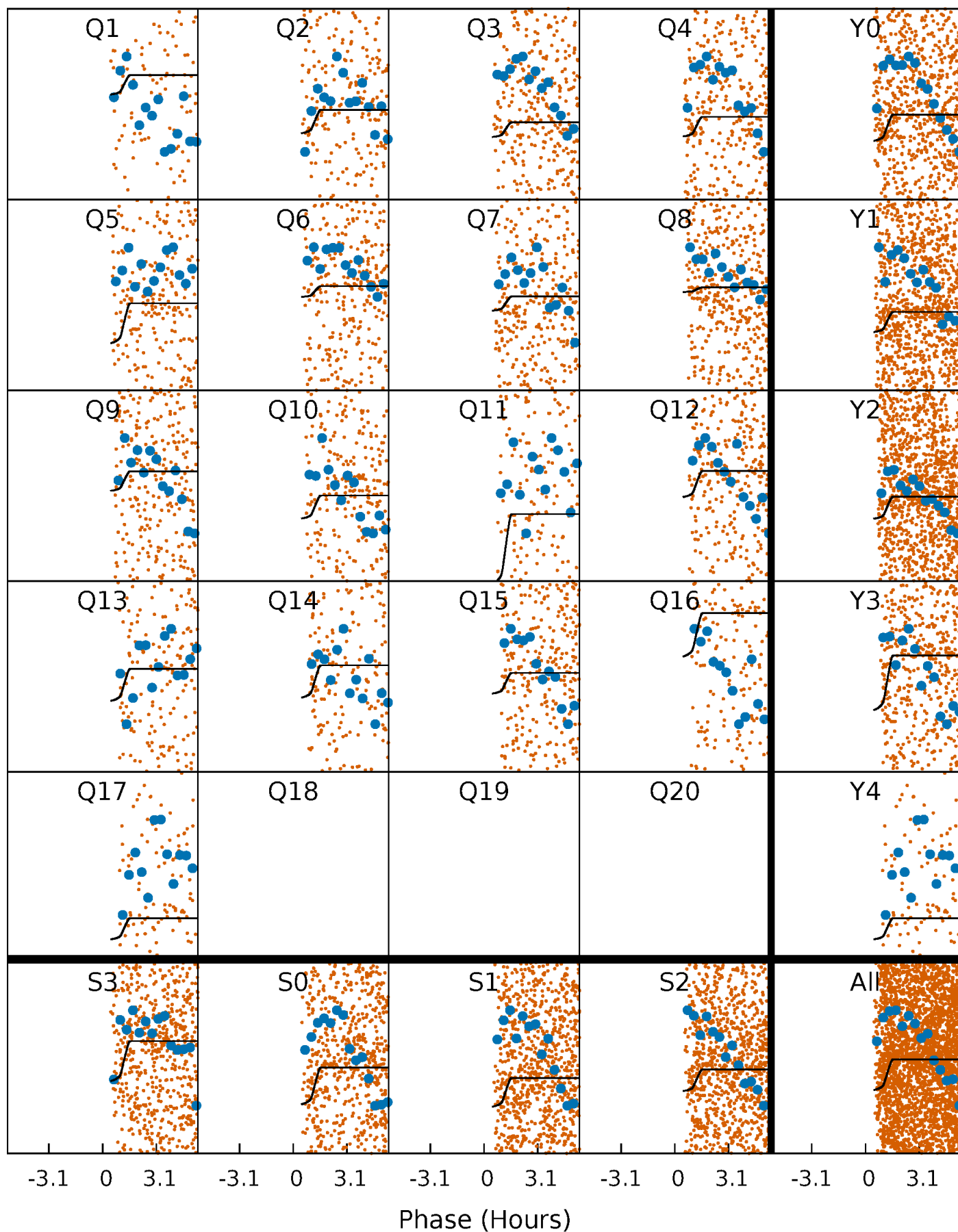
PDC Quarter-Phased Transit Curves

TCE 007050754-02 P= 1.273589 Days $T_0=132.494834$ (BKJD)



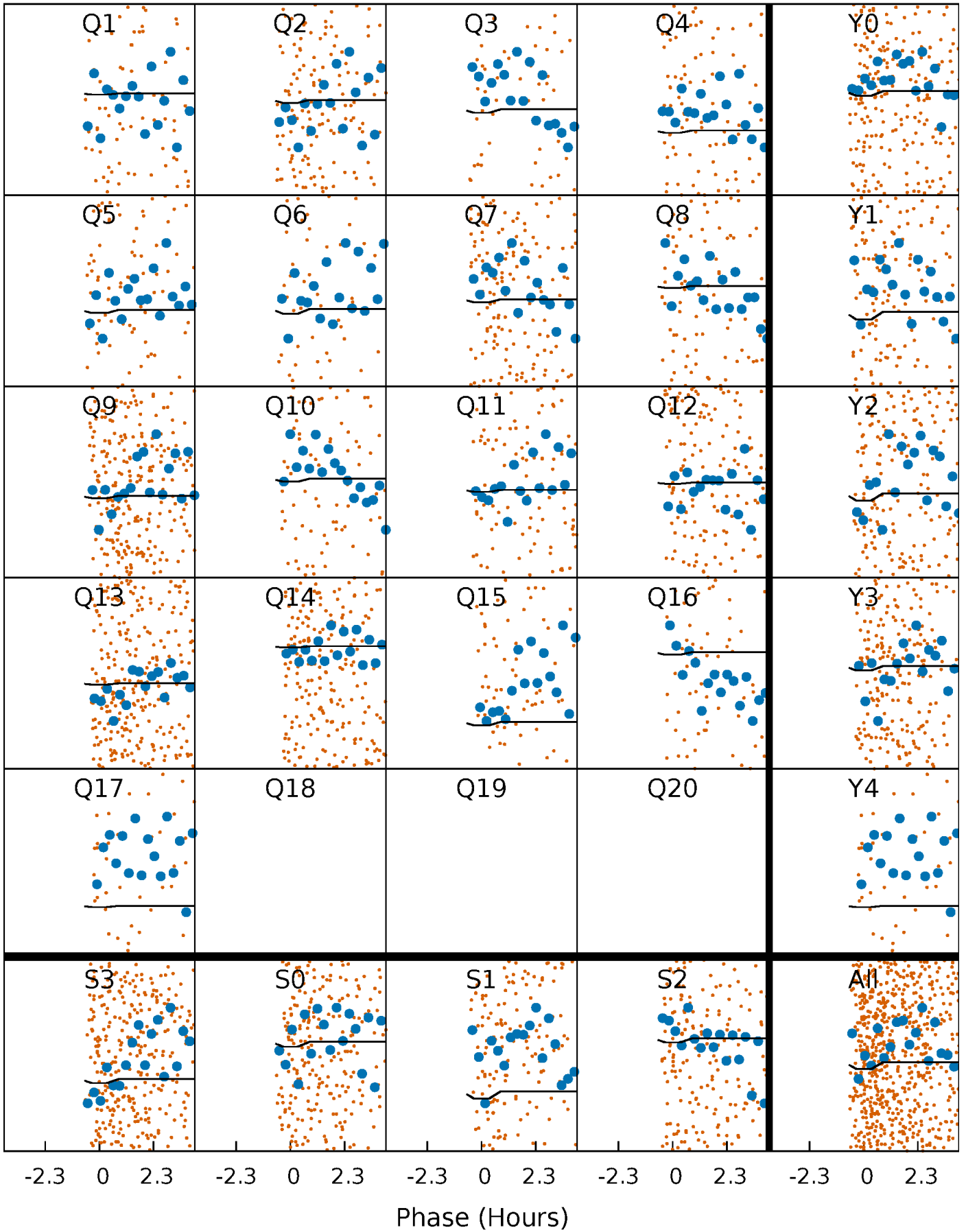
DV Quarter-Phased Transit Curves

TCE 007050754-02 $P = 1.273589$ Days $T_0 = 132.494834$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

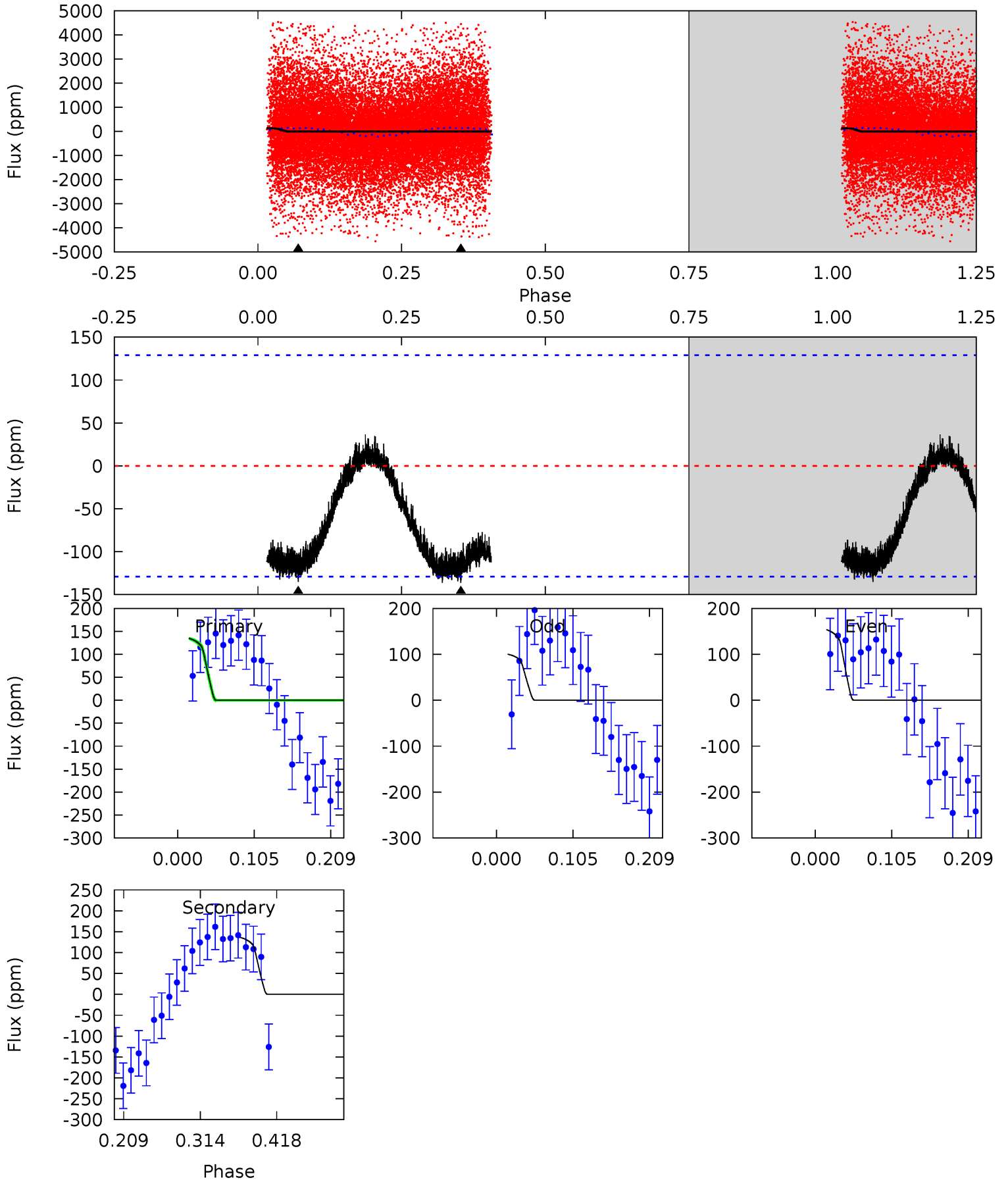
TCE 007050754-02 P= 1.273593 Days $T_0=132.540491$ (BKJD)



DV Model-Shift Uniqueness Test

007050754-02, P = 1.273589 Days, E = 131.221245 Days

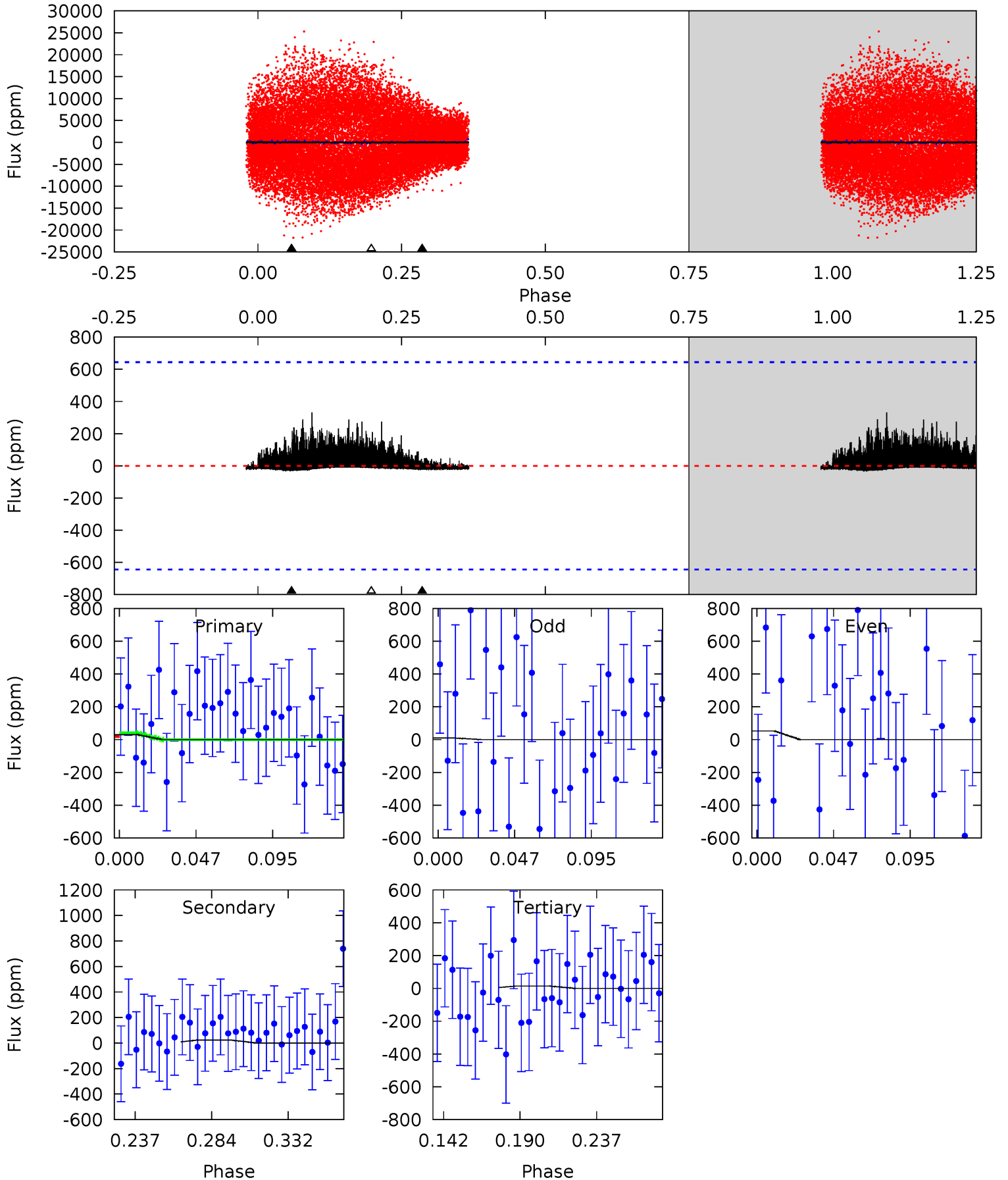
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.77	4.81	0	0	4.56	1.62	0.58	4.77	4.77	4.81	4.81	0.94	-31.2	0.21	0



Alt Model-Shift Uniqueness Test

007050754-02, P = 1.273593 Days, E = 131.266898 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.23	0.17	0.10	0	4.72	1.98	0.26	0.12	0.23	0.07	0.17	0.16	-0.22	0.91	0.10



Stellar Parameters For KIC 007050754

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6315^{+227}_{-227}	$3.603^{+0.680}_{-0.128}$	$-0.540^{+0.350}_{-0.300}$	$3.075^{+0.658}_{-1.975}$	$1.381^{+0.193}_{-0.450}$	$0.067^{+0.811}_{-0.027}$
	+4%/-4%	+19%/-4%	+65%/-56%	+21%/-64%	+14%/-33%	+1212%/-40%
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 007050754-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-136 ± 28	$3.44^{+1.92}_{-1.59}$	4168^{+356}_{-688}	6180^{+2001}_{-1107}	$4.009^{+9.354}_{-2.362}$
Alt.	-23 ± 136	$2.06^{+1.57}_{-1.25}$	4150^{+367}_{-669}	4230^{+6030}_{-12890}	$0.907^{+18.823}_{-13.765}$

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

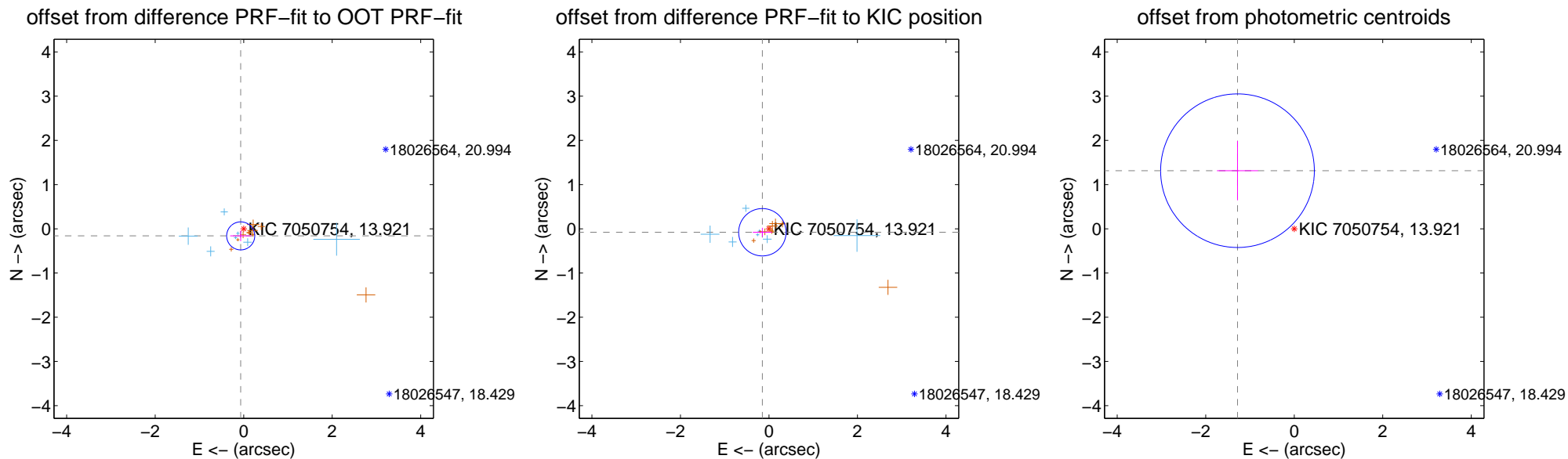
DV Centroid Data

Supplemental centroid analysis for 007050754-02. Kepler magnitude: 13.92. Transit SNR 5.84

There are 7 quarters with good PRF difference image offsets

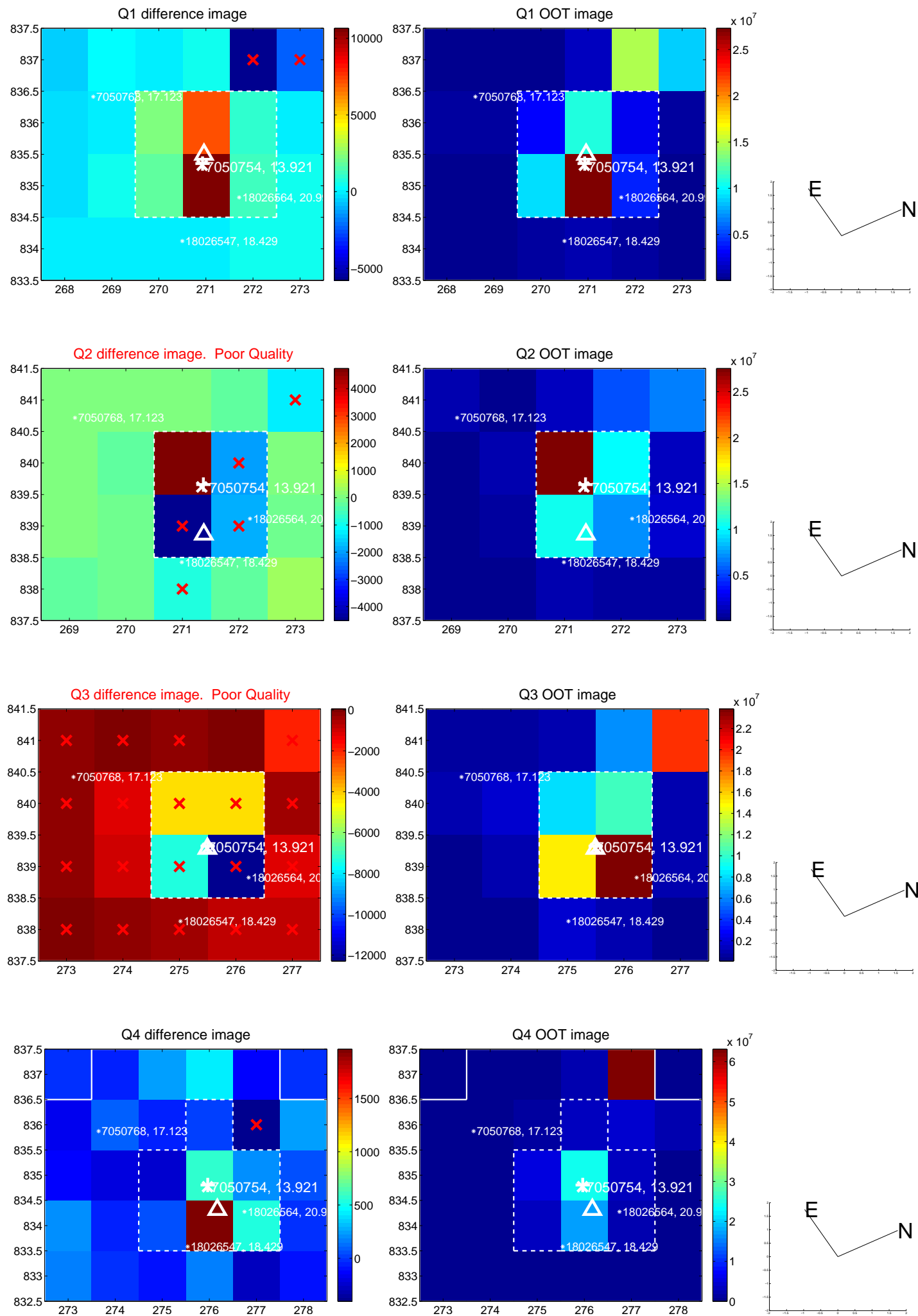
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.174 ± 0.106	1.64	0.067 ± 0.238	-0.160 ± 0.118
PRF-fit source offset from KIC position	0.168 ± 0.179	0.94	0.149 ± 0.216	-0.078 ± 0.102
photometric centroid source offset	1.84 ± 0.58	3.17	1.28 ± 0.46	1.31 ± 0.67

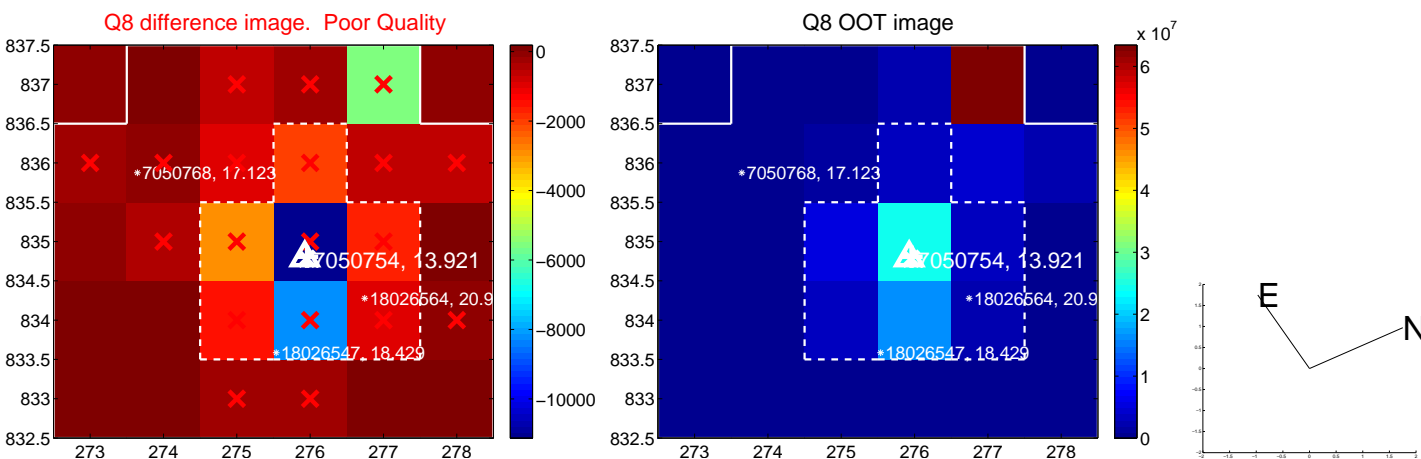
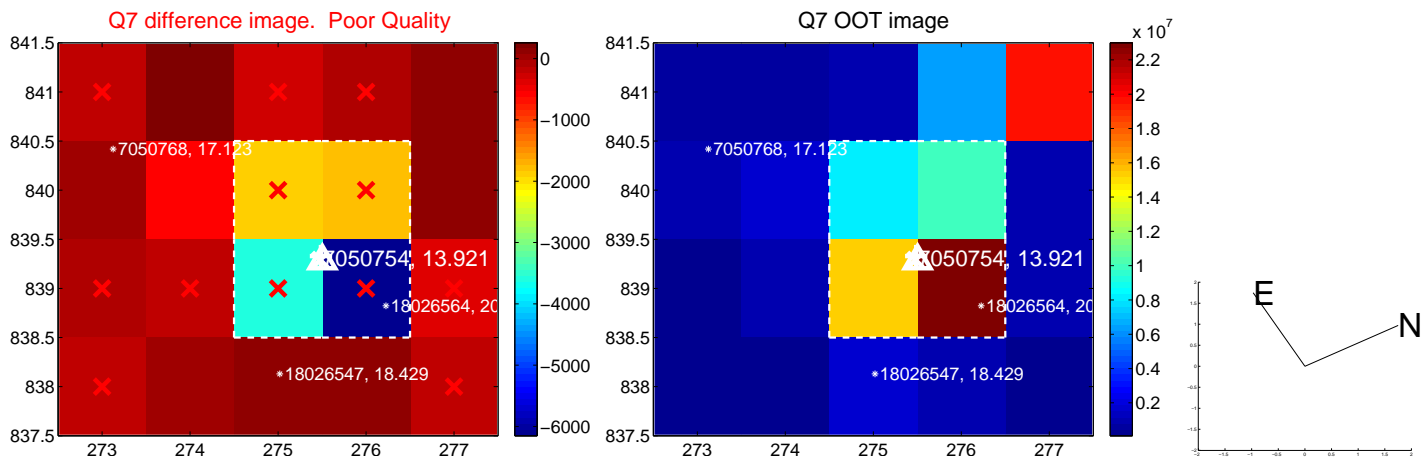
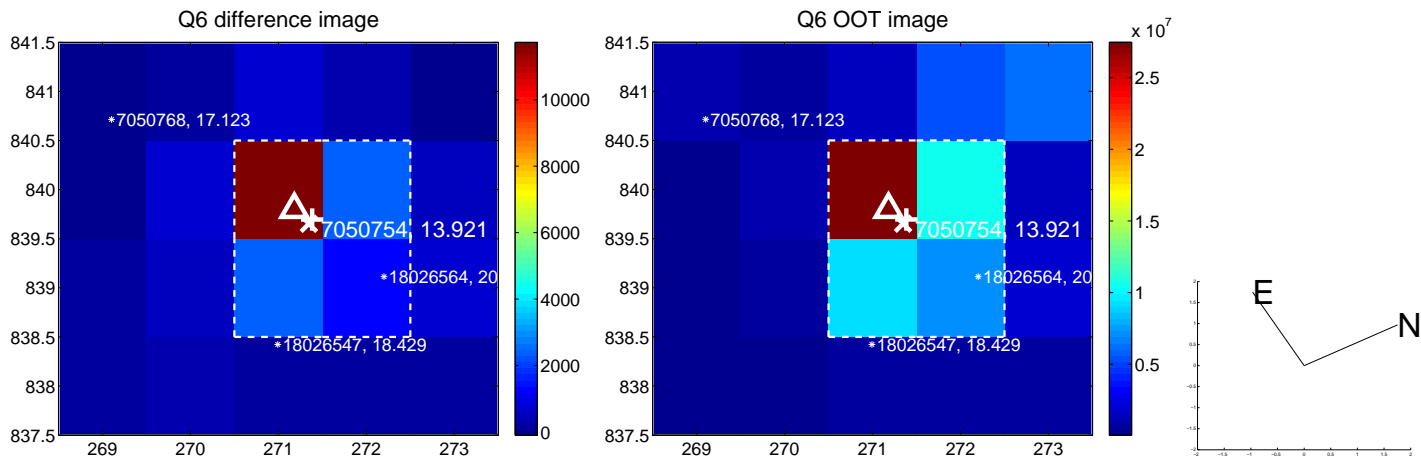
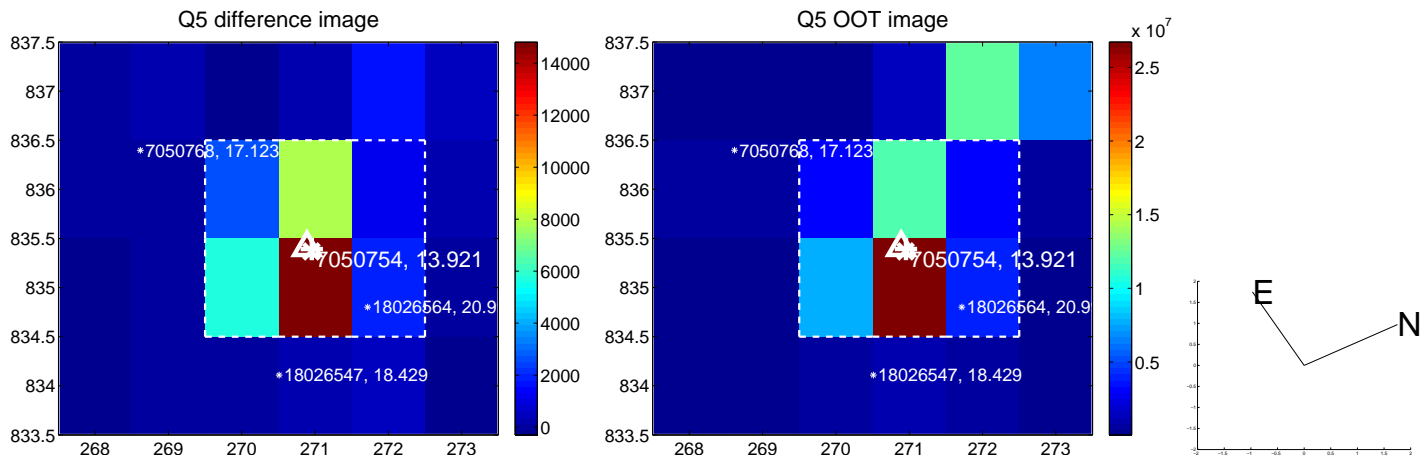


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

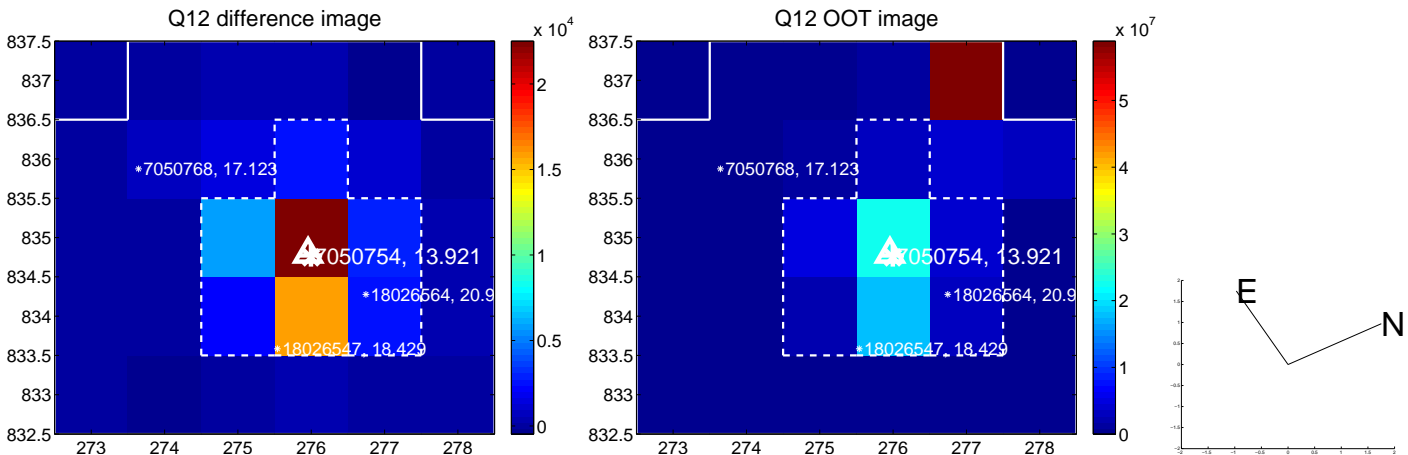
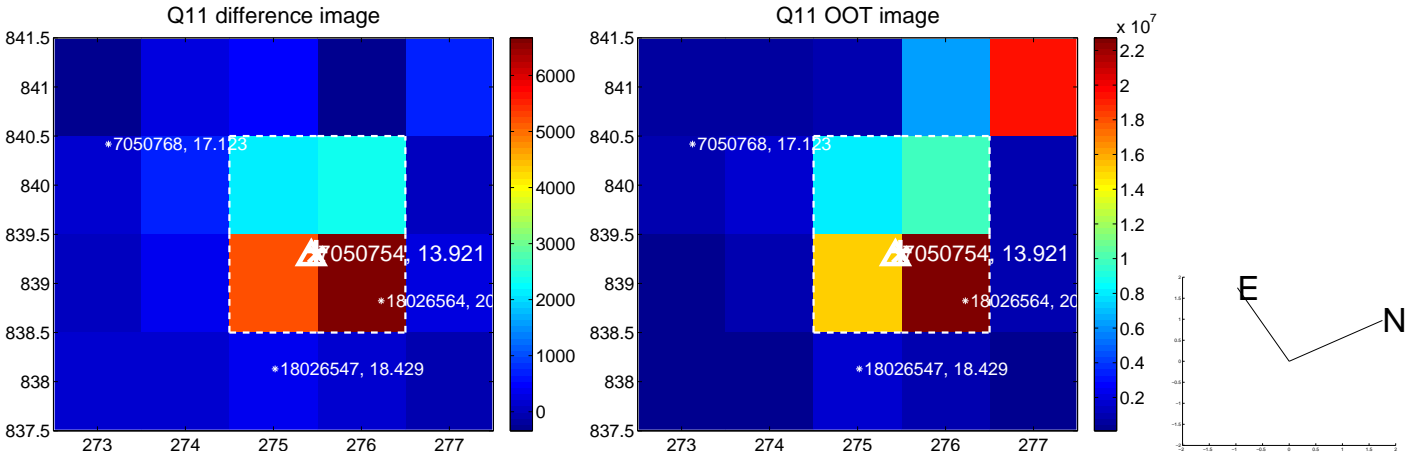
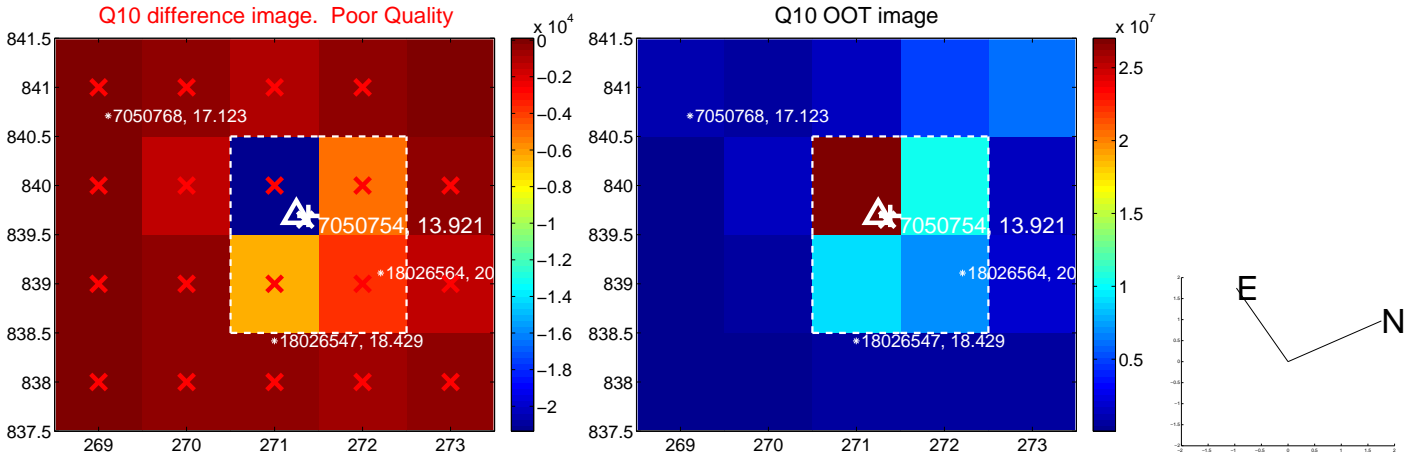
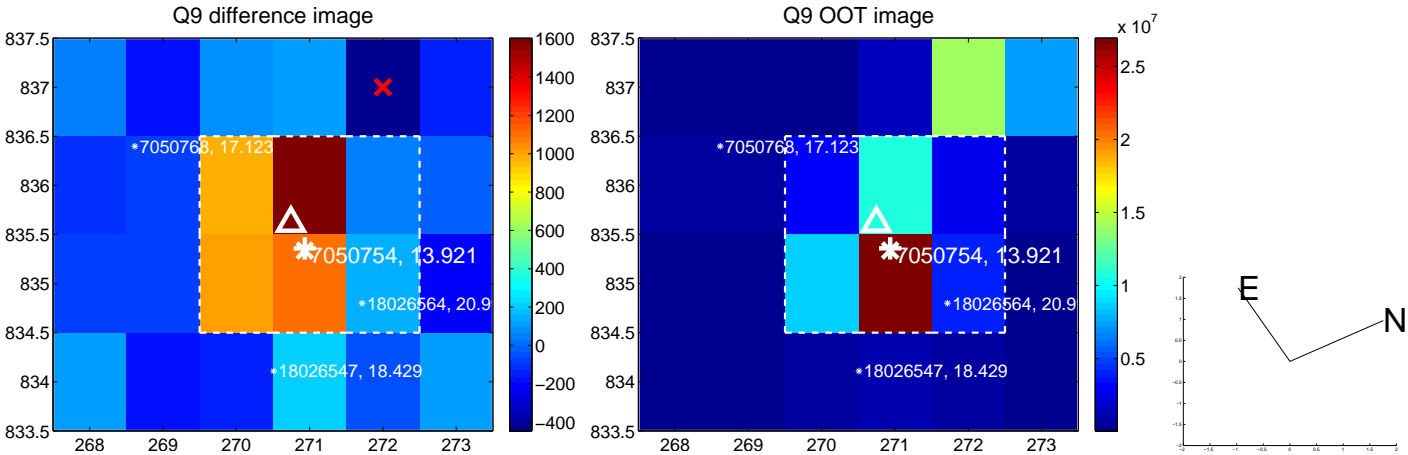
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



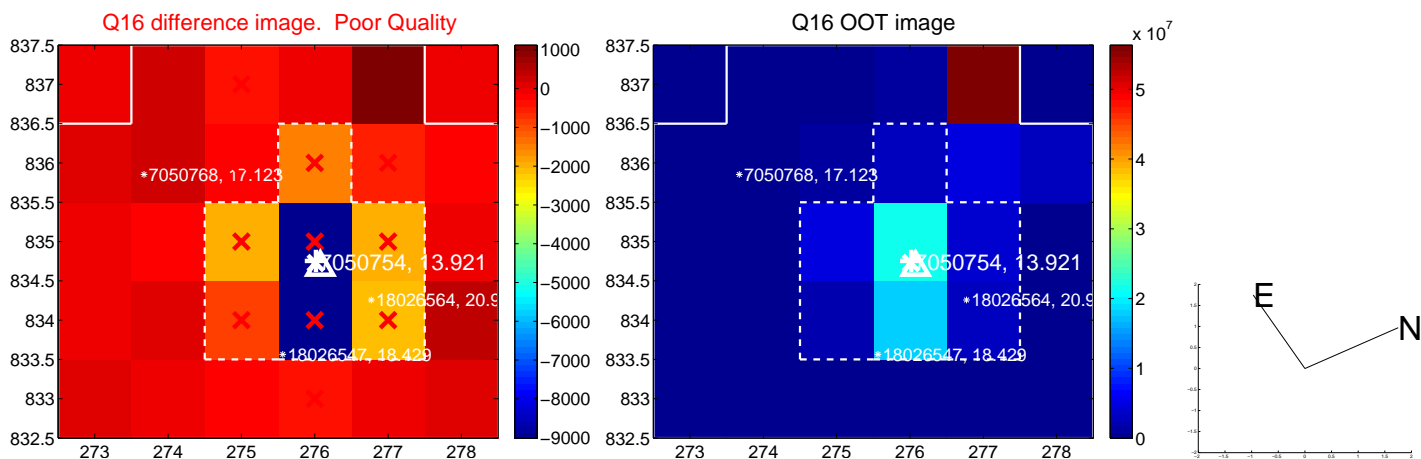
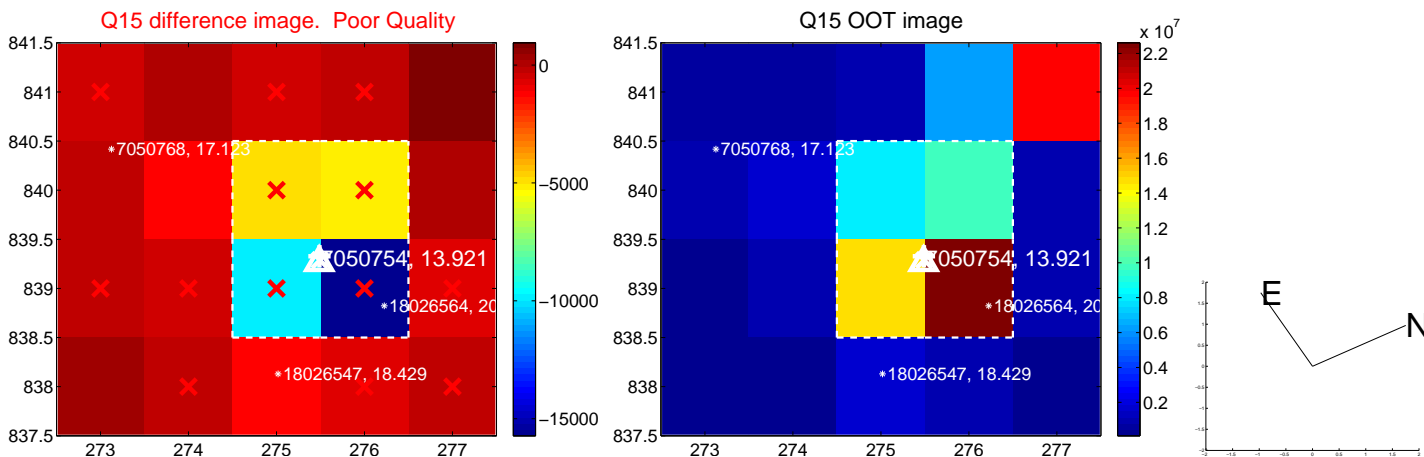
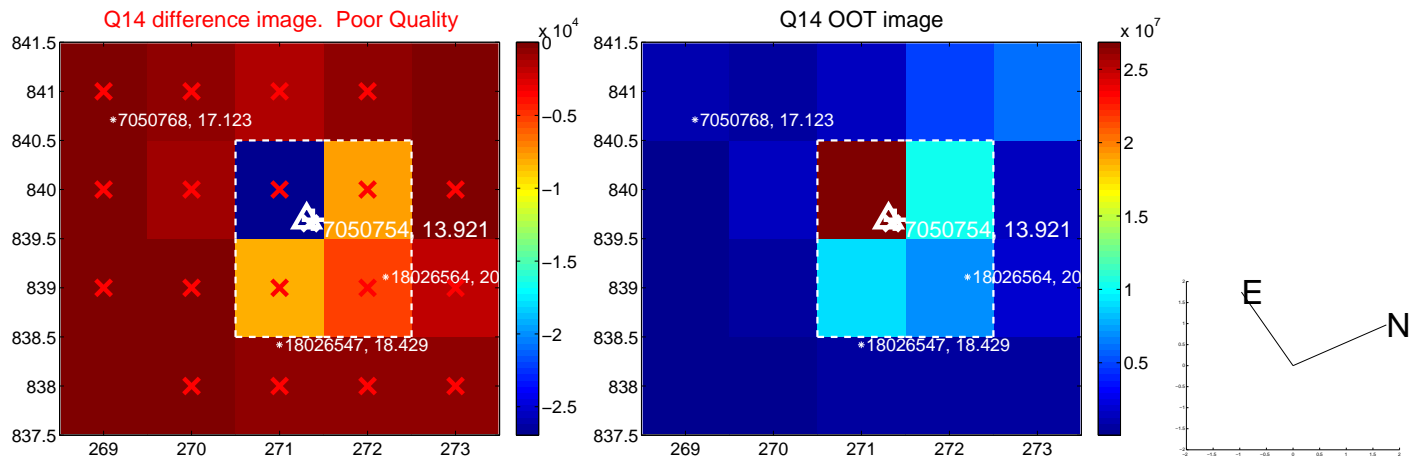
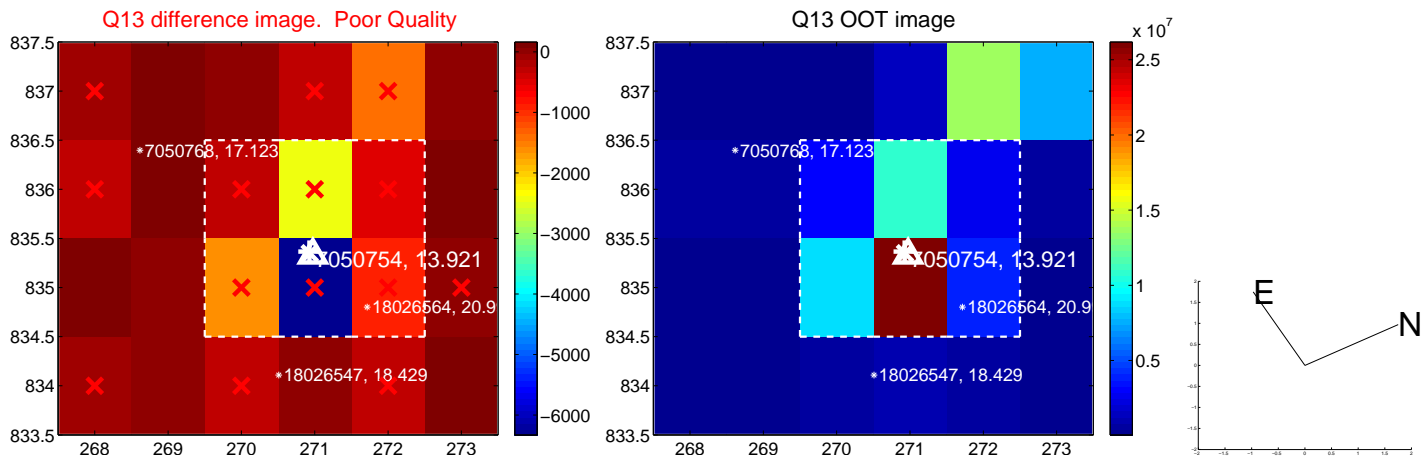
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



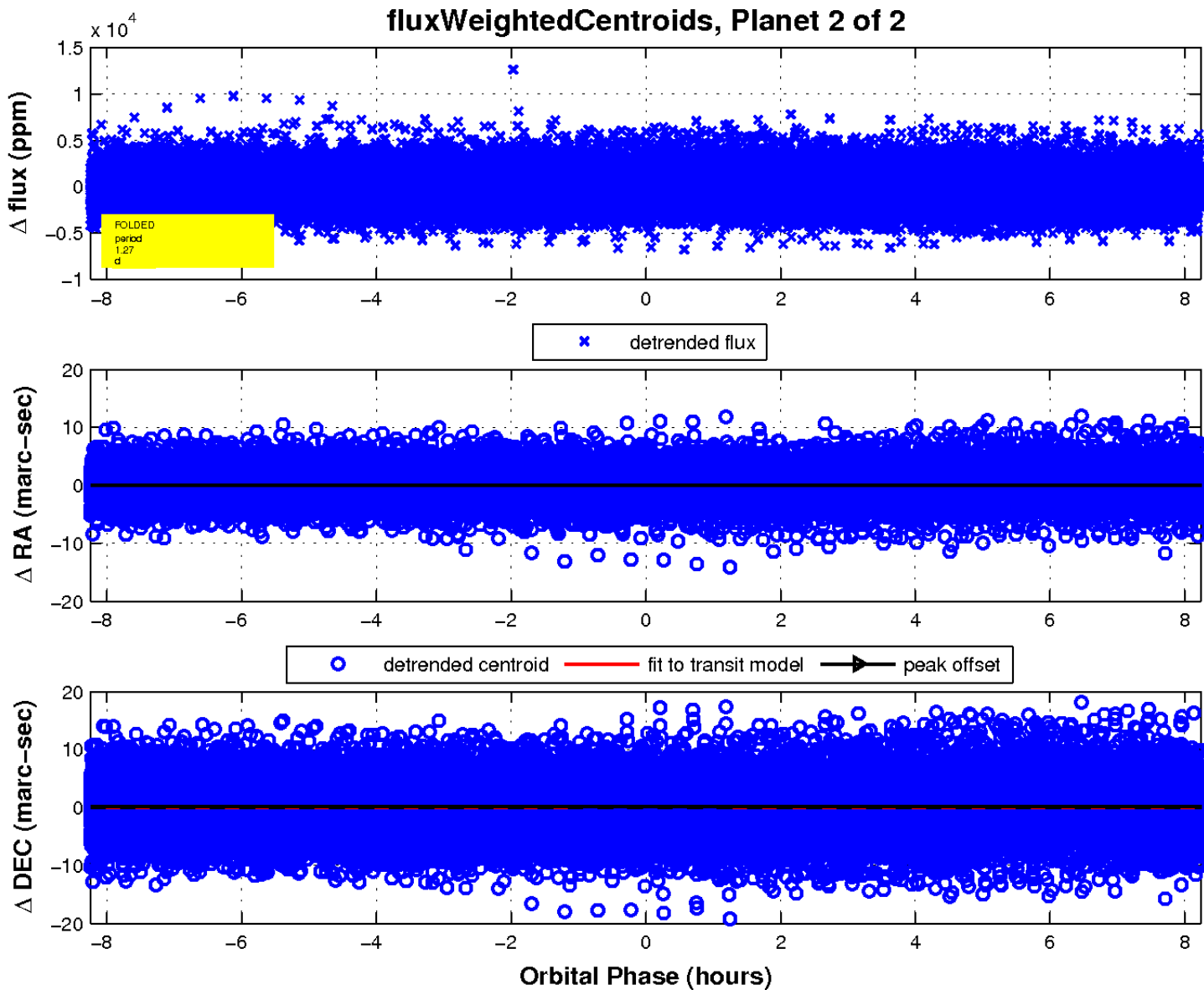
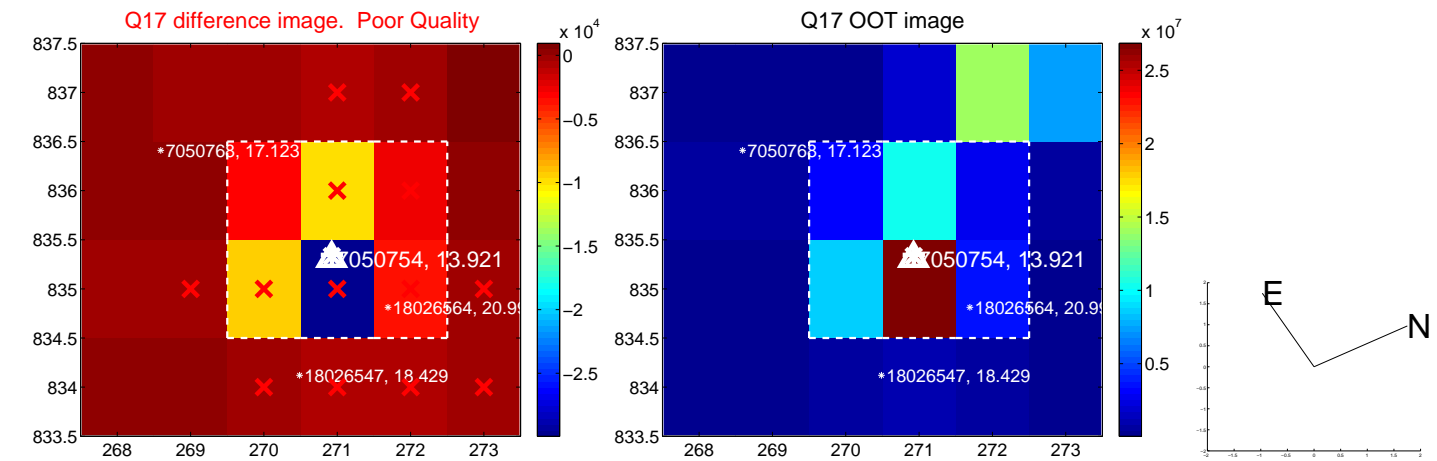
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

