

KIC 006935101

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})
006935101-01	OBS	No	0.618736	131.546413	426.2	0.506	9.6	12.6	1.69	7498	4.49	27825.33
006935101-02	OBS	No	0.618702	131.587029	230.4	6.592	8.6	9.7	1.69	7498	2.61	27827.34

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006935101-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT
006935101-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_FEW_DIFFS

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

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

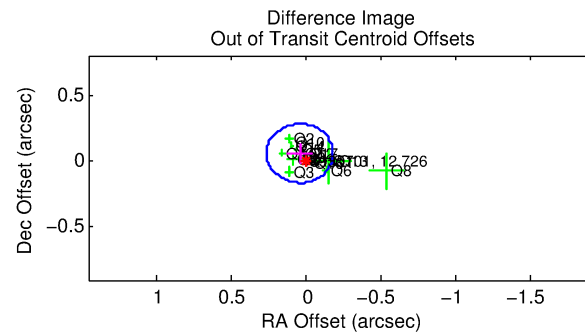
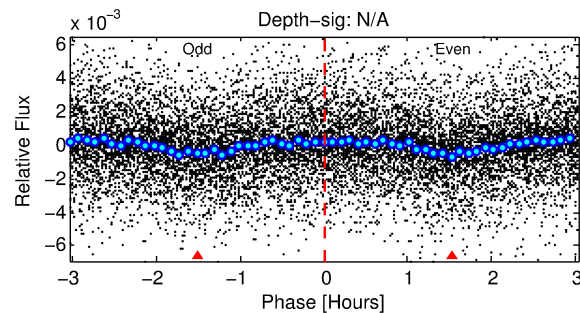
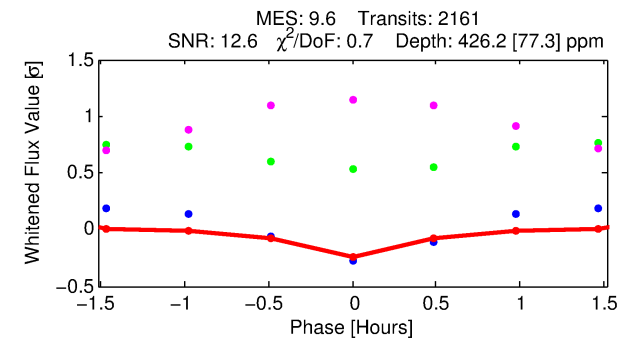
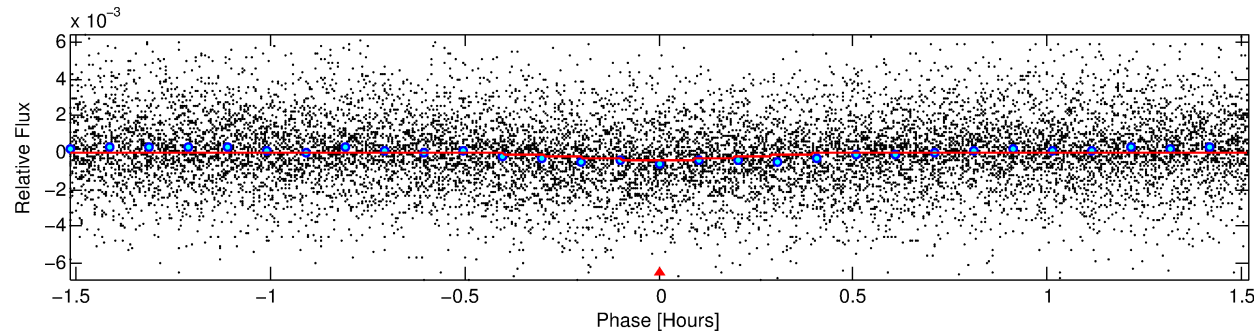
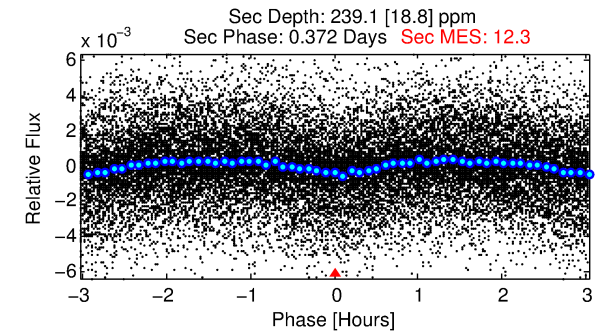
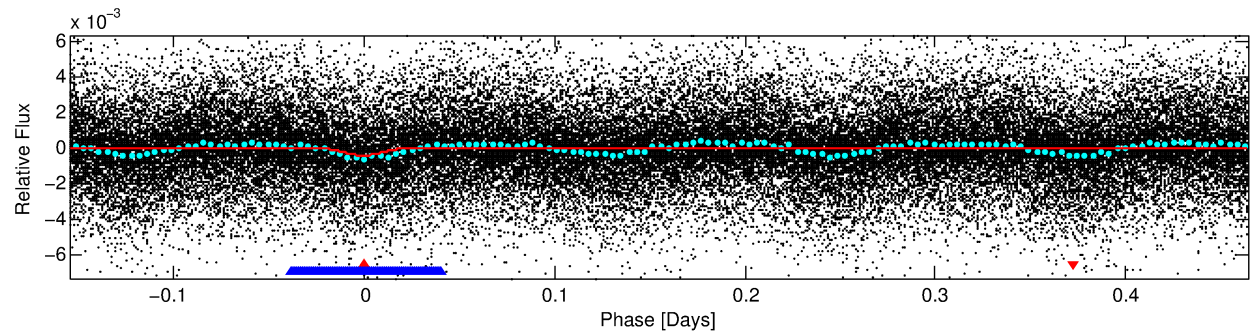
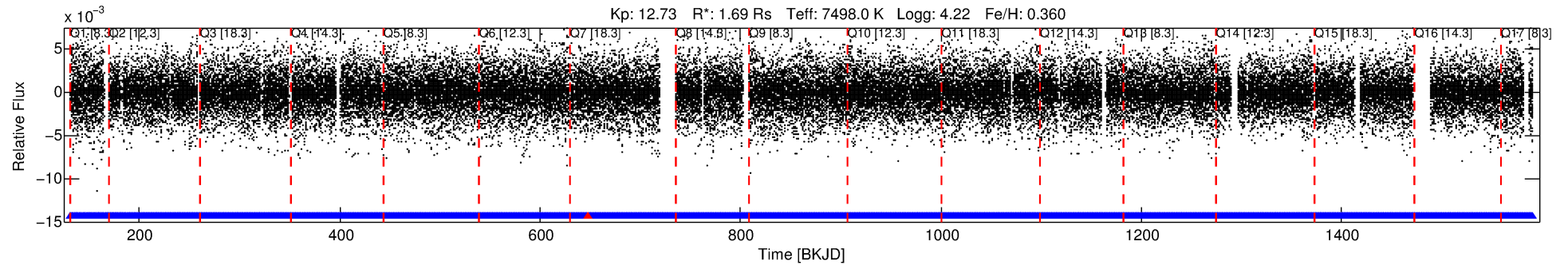
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006935101-01

No Significant Match Found

DV One-Page Summary

KIC: 6935101 Candidate: 1 of 2 Period: 0.619 d



DV Fit Results:

Period = 0.61874 [0.00001] d
Epoch = 131.5464 [0.0013] BKJD
Rp/R* = 0.0243 [0.0116]
a/R* = 4.38 [11.52]
b = 0.92 [0.49]
Seff = 27825.33 [13006.34]
Teq = 3293 [385] K
Rp = 4.49 [2.67] Re
a = 0.0171 [0.0051] AU
Ag = 1.90 [2.00] [0.45σ]
Teffp = 5981 [1459] K [1.78σ]

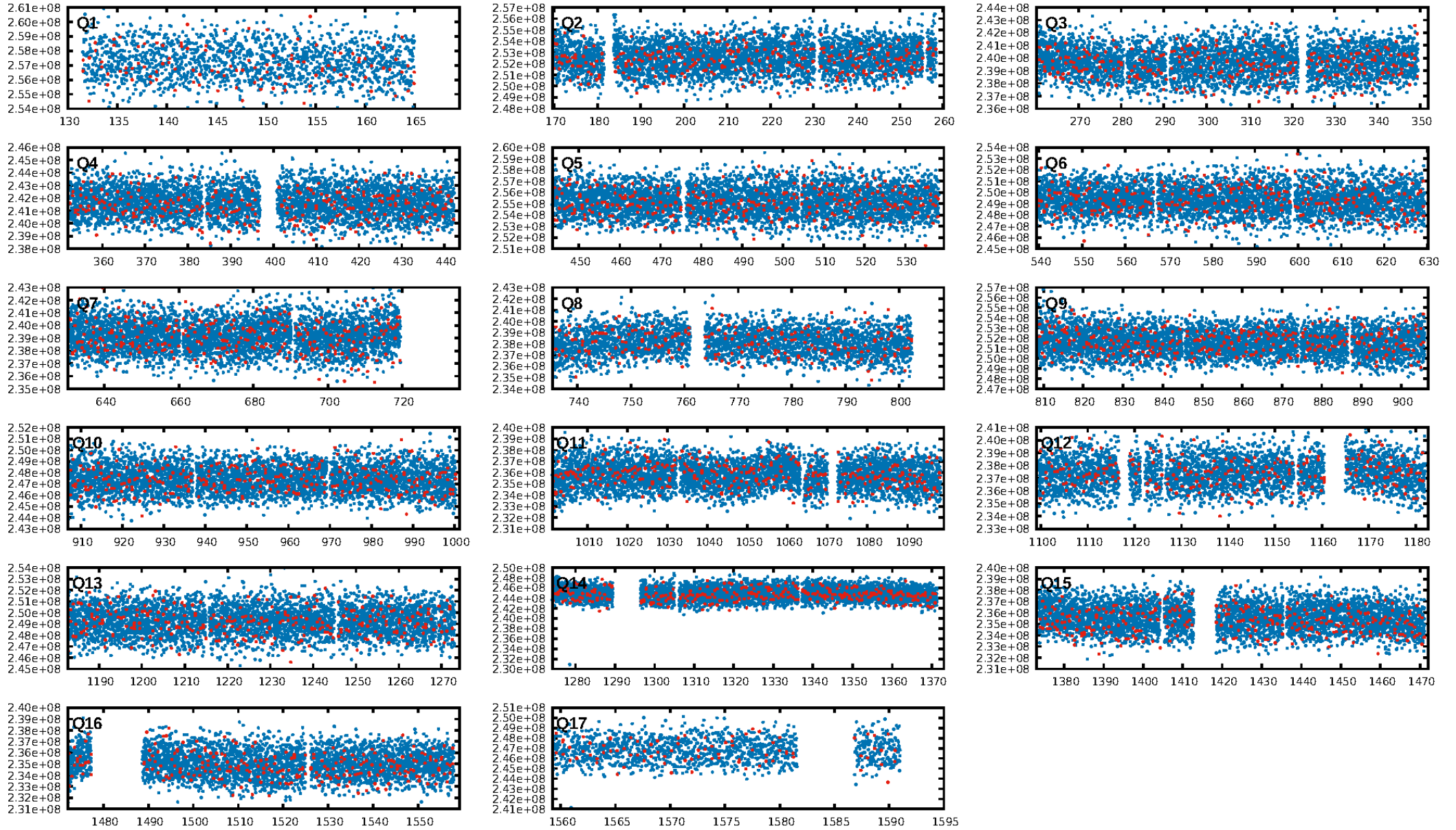
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [2062/2063]
GhostDiagnostic-chr: 1.174
Centroid-sig: 7.2%
Centroid-so: 0.099 arcsec [1.53σ]
OotOffset-rm: 0.069 arcsec [0.93σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-rm: 0.079 arcsec [1.06σ]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.35 [6/17]
DiffImageOverlap-fno: 0.00 [0/17]

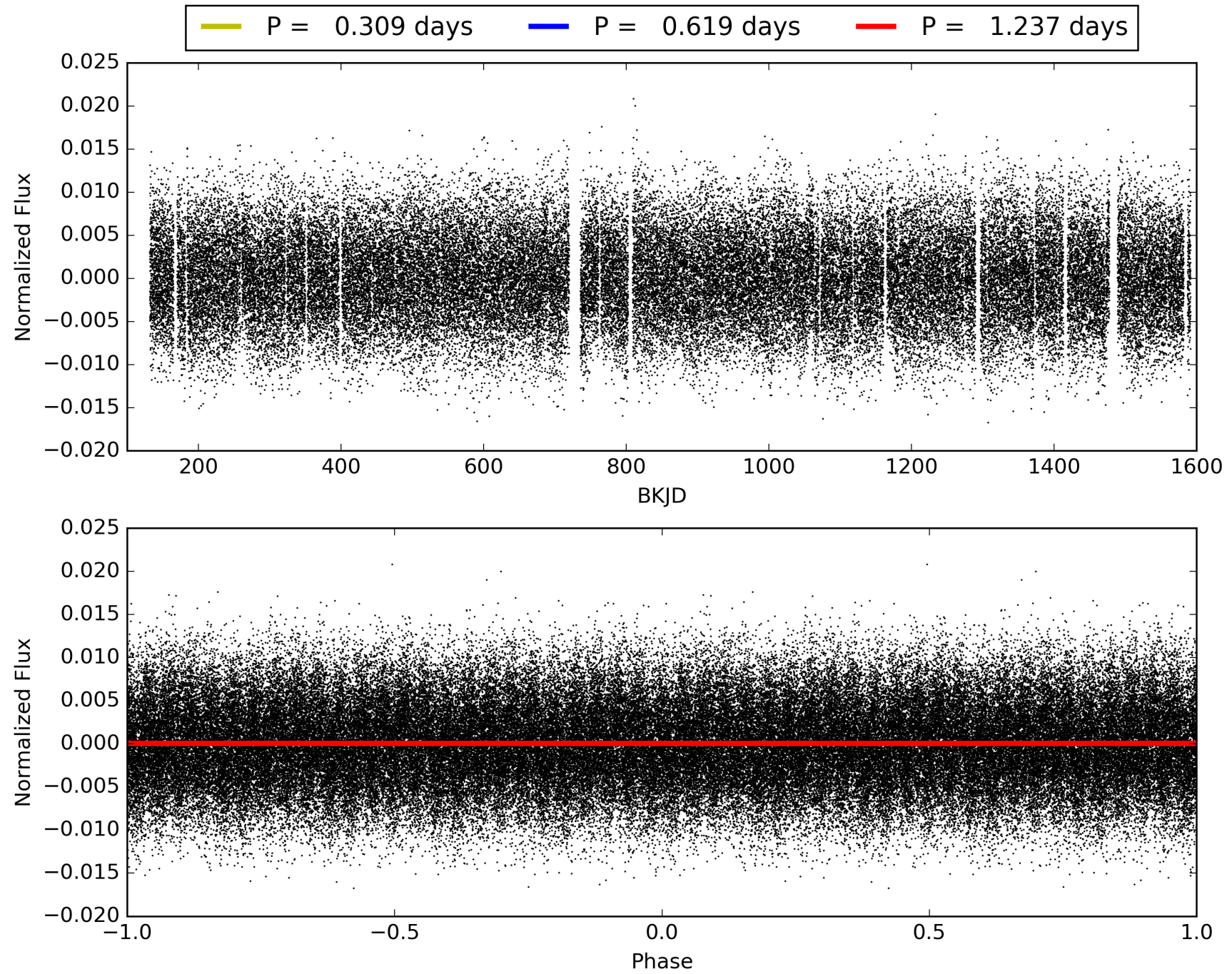
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 21:41:36 Z

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

TCE 006935101-01, PDC Light Curves

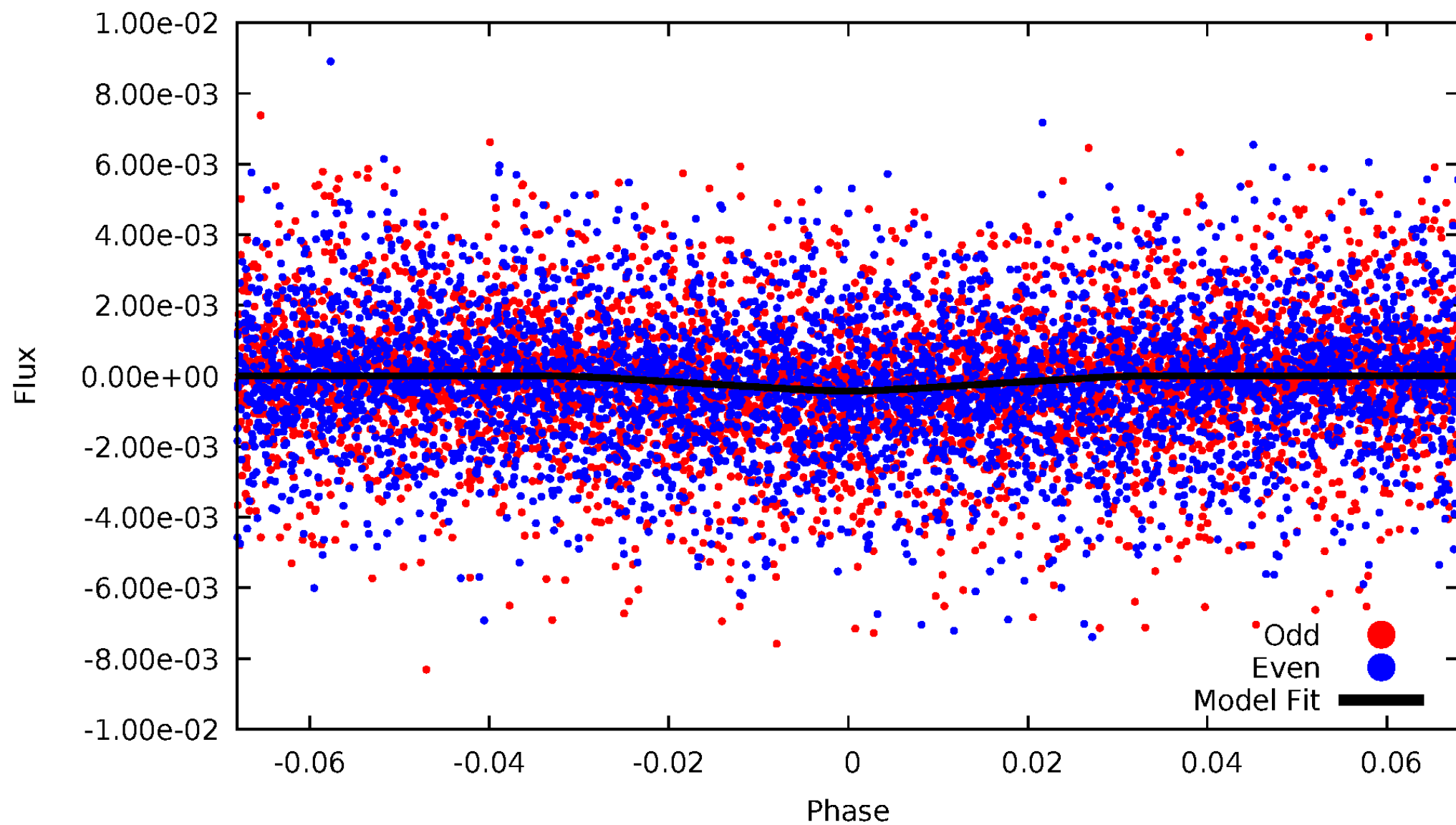


TCE 006935101-01



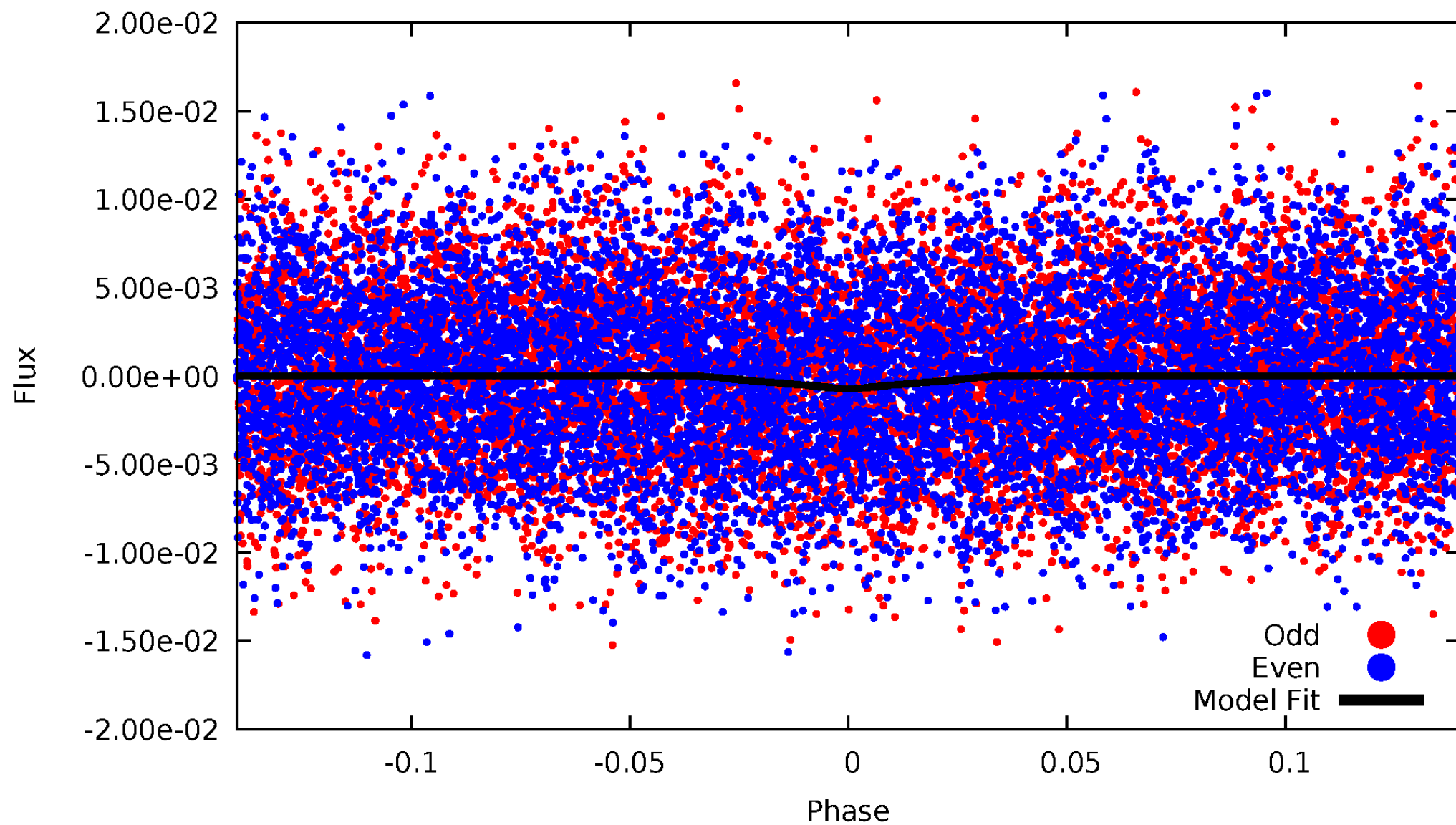
DV Odd/Even

TCE 006935101-01

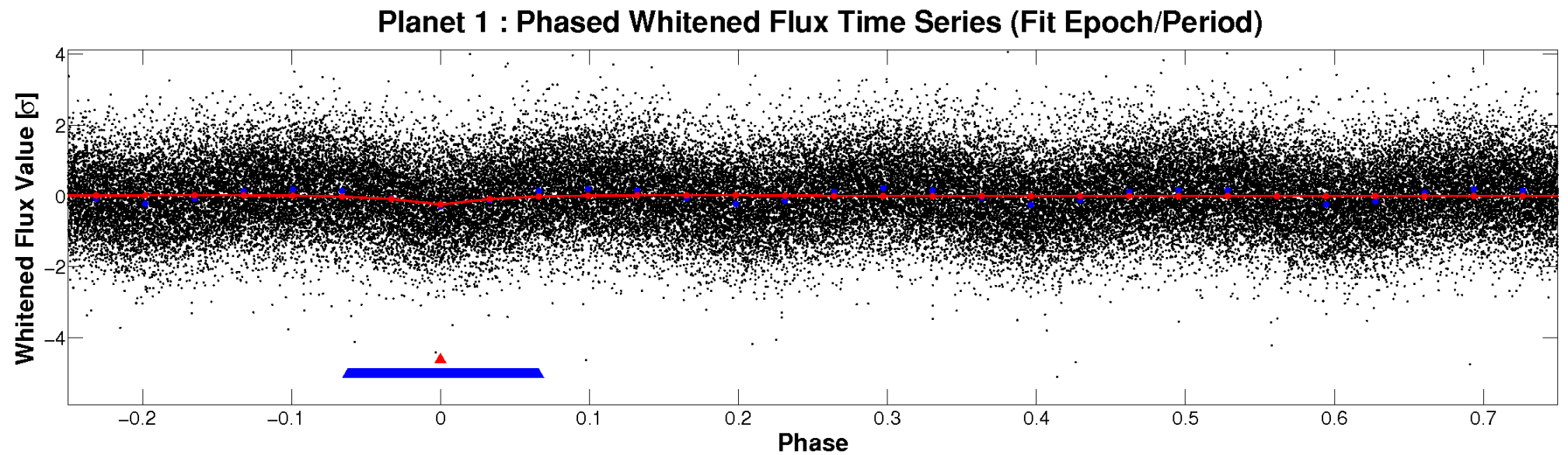
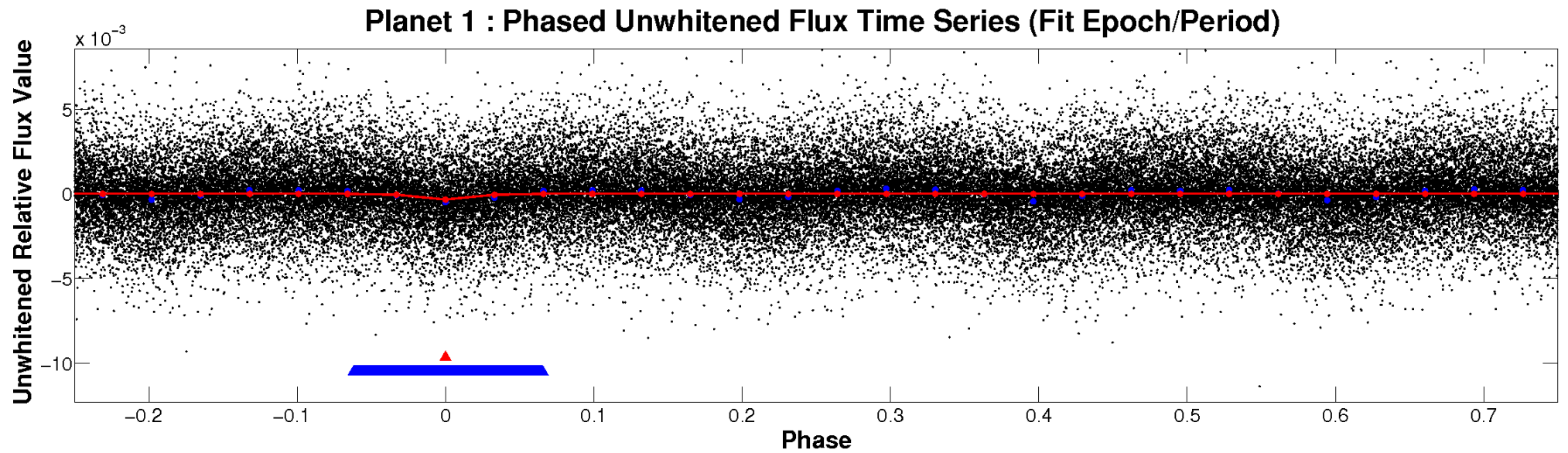


ALT Odd/Even

TCE 006935101-01

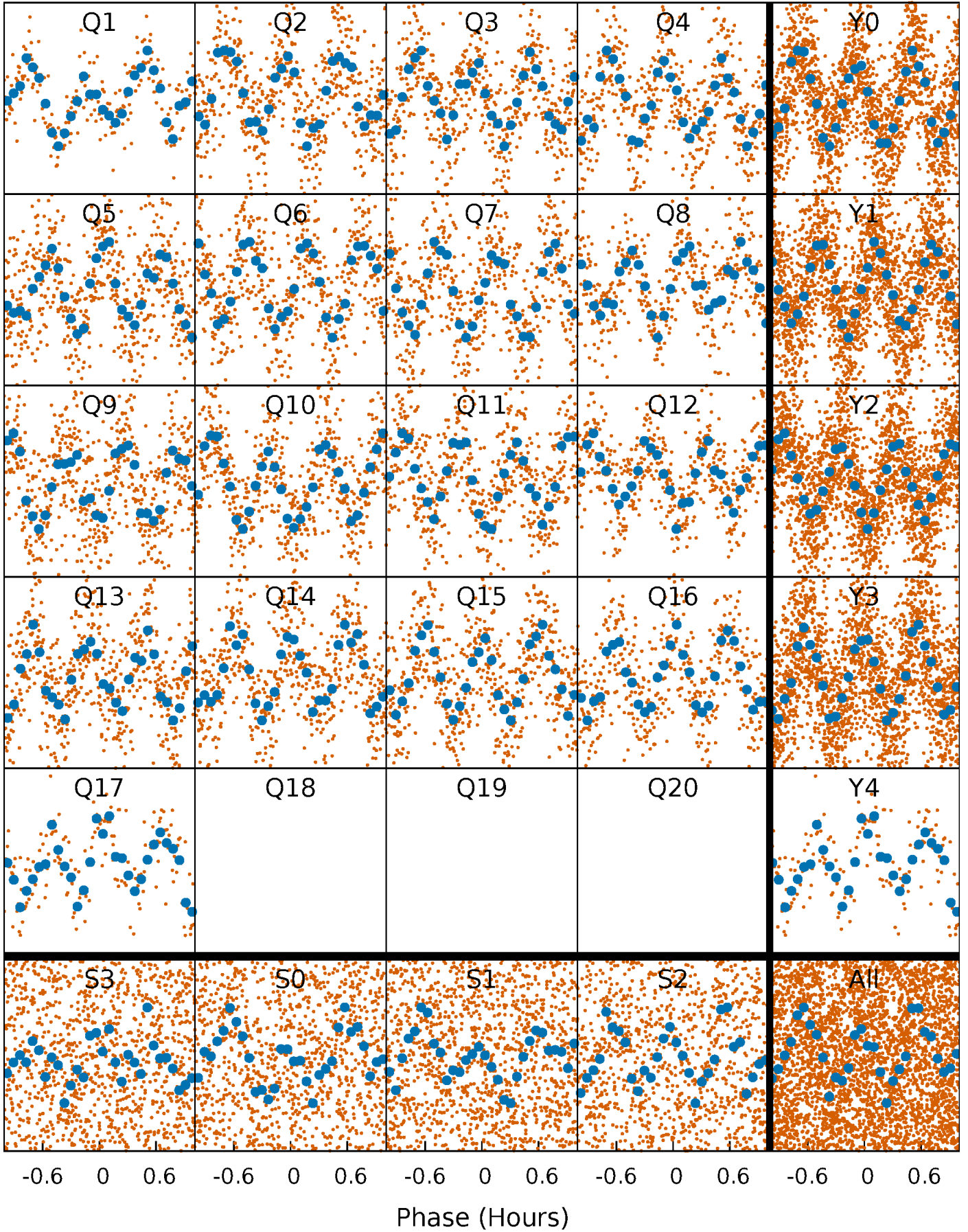


Non-Whitened Vs. Whitened Light Curve



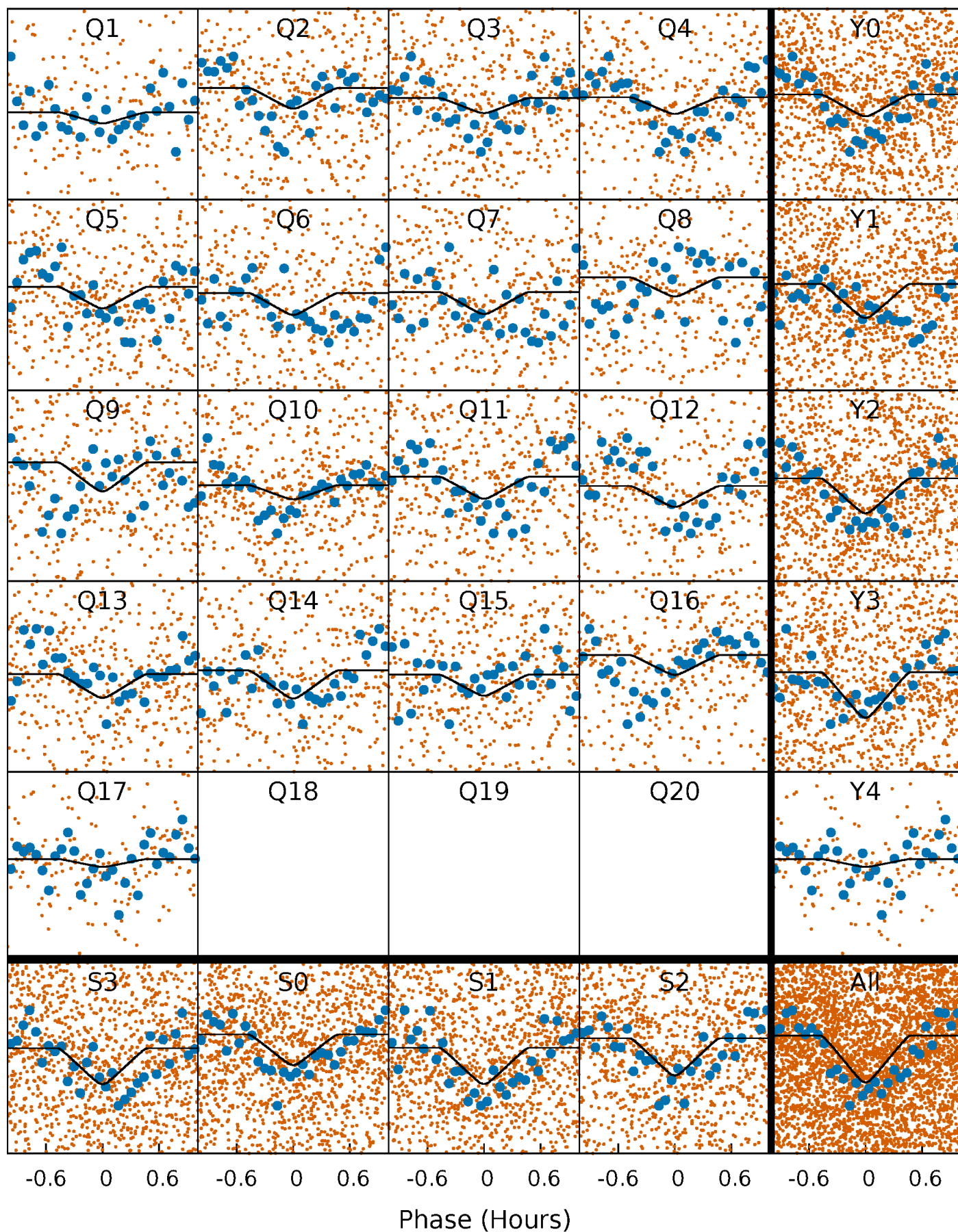
PDC Quarter-Phased Transit Curves

TCE 006935101-01 P= 0.618736 Days $T_0=131.546413$ (BKJD)



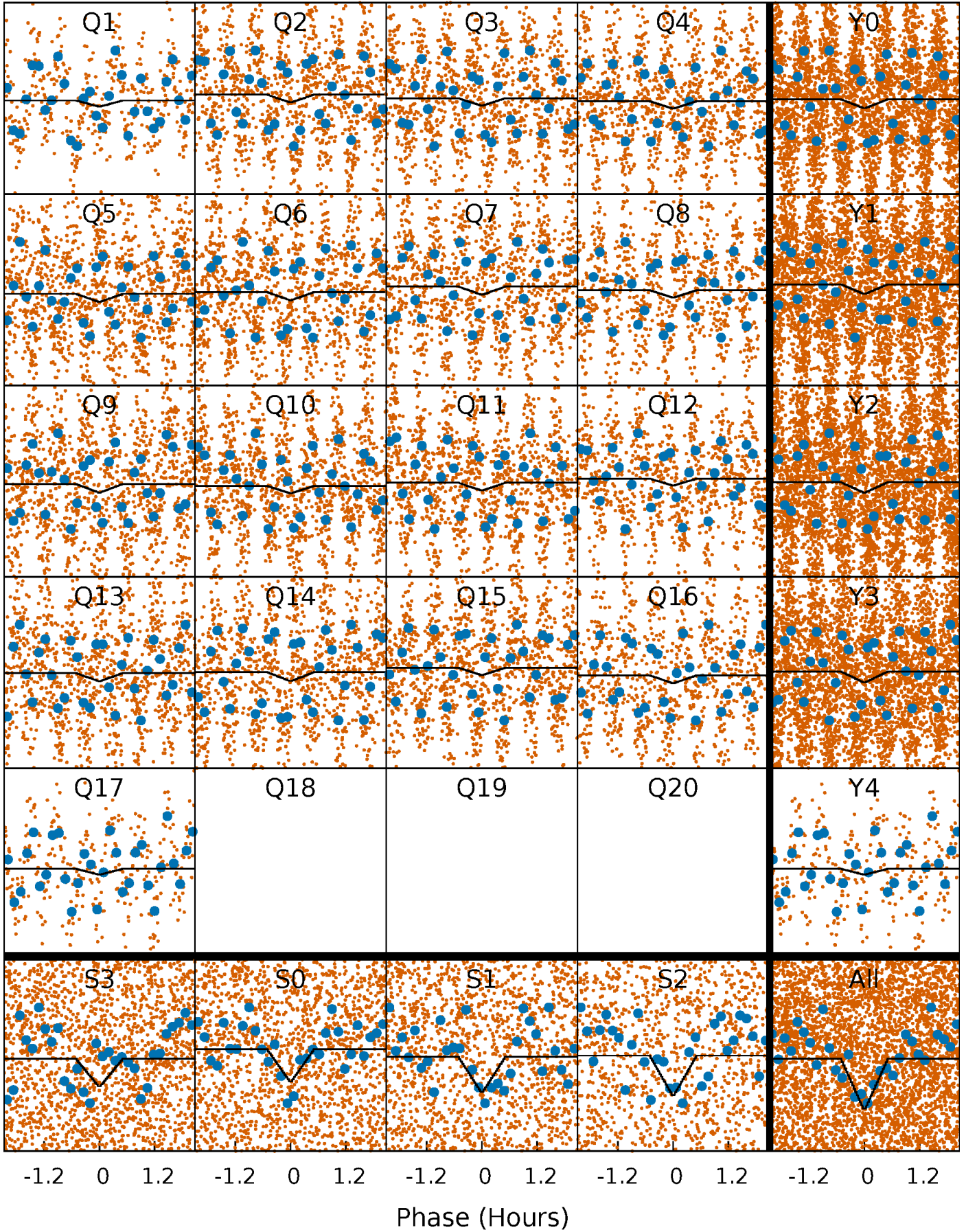
DV Quarter-Phased Transit Curves

TCE 006935101-01 P= 0.618736 Days $T_0=131.546413$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

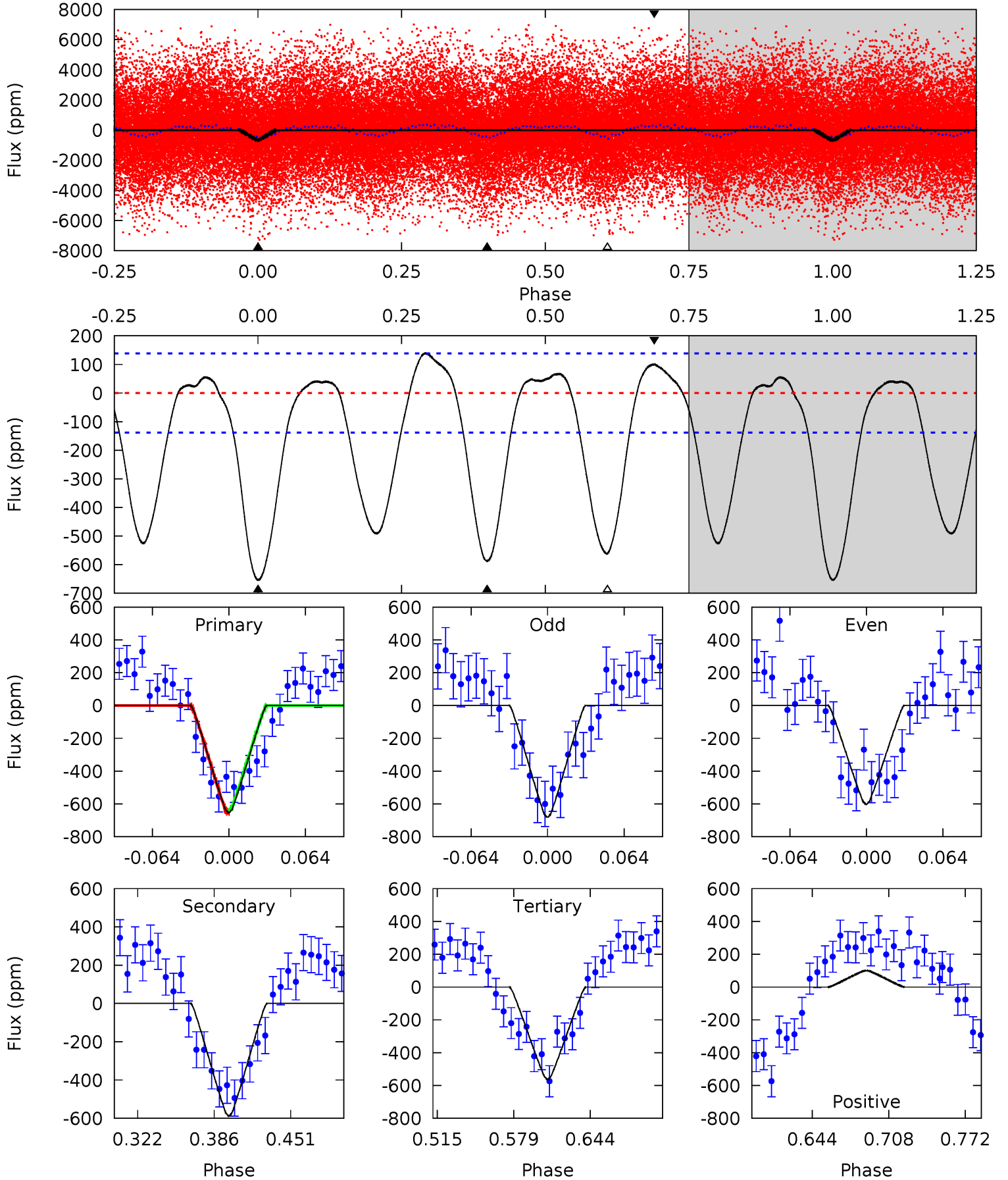
TCE 006935101-01 P= 0.618730 Days $T_0=131.551222$ (BKJD)



DV Model-Shift Uniqueness Test

006935101-01, P = 0.618736 Days, E = 130.927677 Days

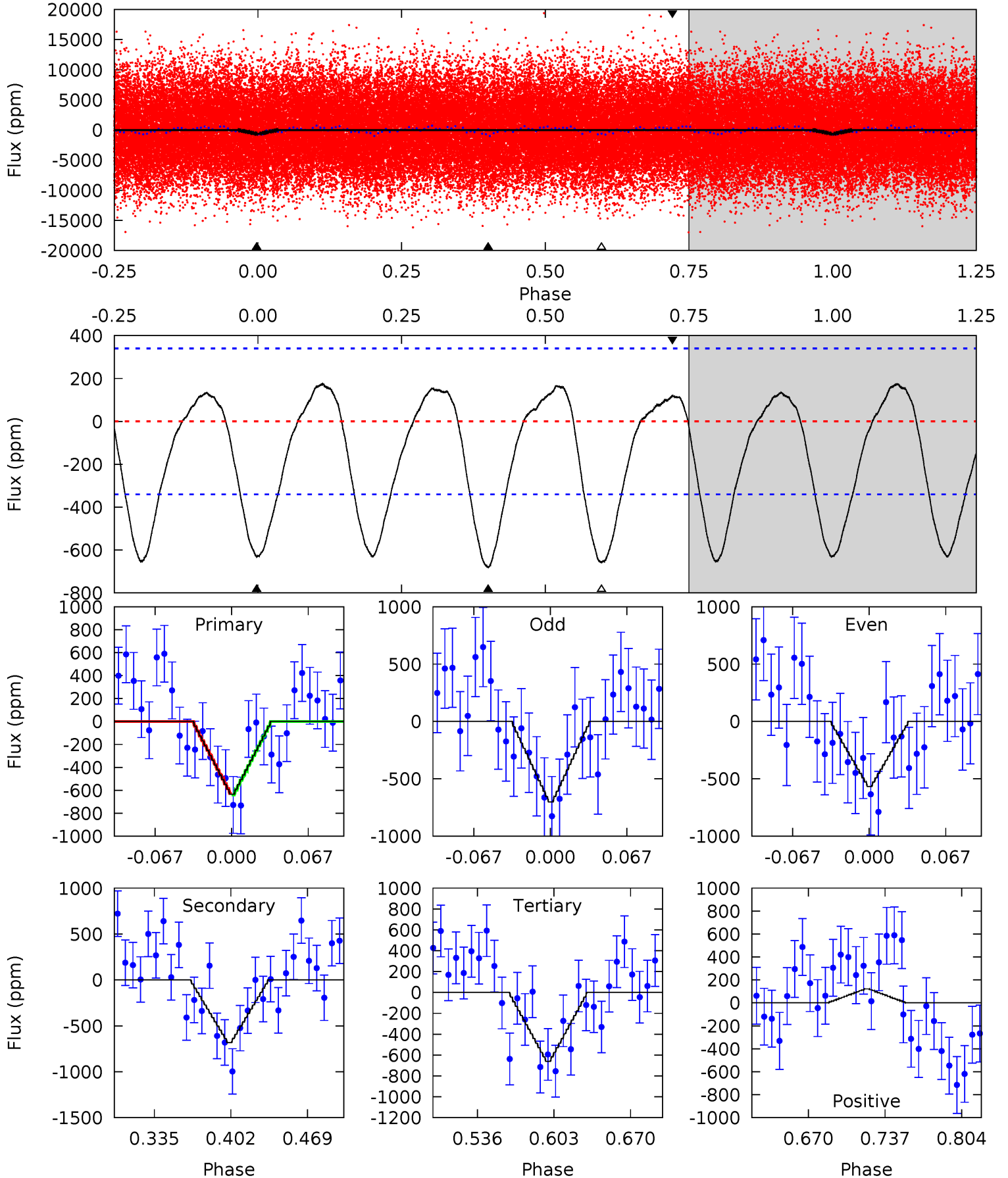
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.0	19.8	18.9	3.38	4.66	1.85	7.13	3.10	18.7	0.86	16.4	1.34	1.11	0.18	0.30



Alt Model-Shift Uniqueness Test

006935101-01, P = 0.618730 Days, E = 130.932492 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.66	9.33	9.04	1.66	4.65	1.83	3.68	-0.38	7.00	0.29	7.67	0.93	0.75	0.21	0.10



Stellar Parameters For KIC 006935101

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7498^{+206}_{-353}	$4.220^{+0.058}_{-0.232}$	$0.360^{+0.050}_{-0.400}$	$1.693^{+0.602}_{-0.161}$	$1.734^{+0.214}_{-0.214}$	$0.503^{+0.116}_{-0.282}$
	+3%/-5%	+1%/-5%	+14%/-111%	+36%/-10%	+12%/-12%	+23%/-56%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 006935101-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-587 ± 30	$4.83^{+2.49}_{-2.20}$	4696^{+361}_{-285}	7168^{+3962}_{-1447}	$3.958^{+9.641}_{-2.221}$
Alt.	-683 ± 73	$5.11^{+2.36}_{-2.30}$	4675^{+382}_{-256}	7337^{+3582}_{-1533}	$4.058^{+9.350}_{-2.144}$

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 $A_{obs} \gg 1.0$

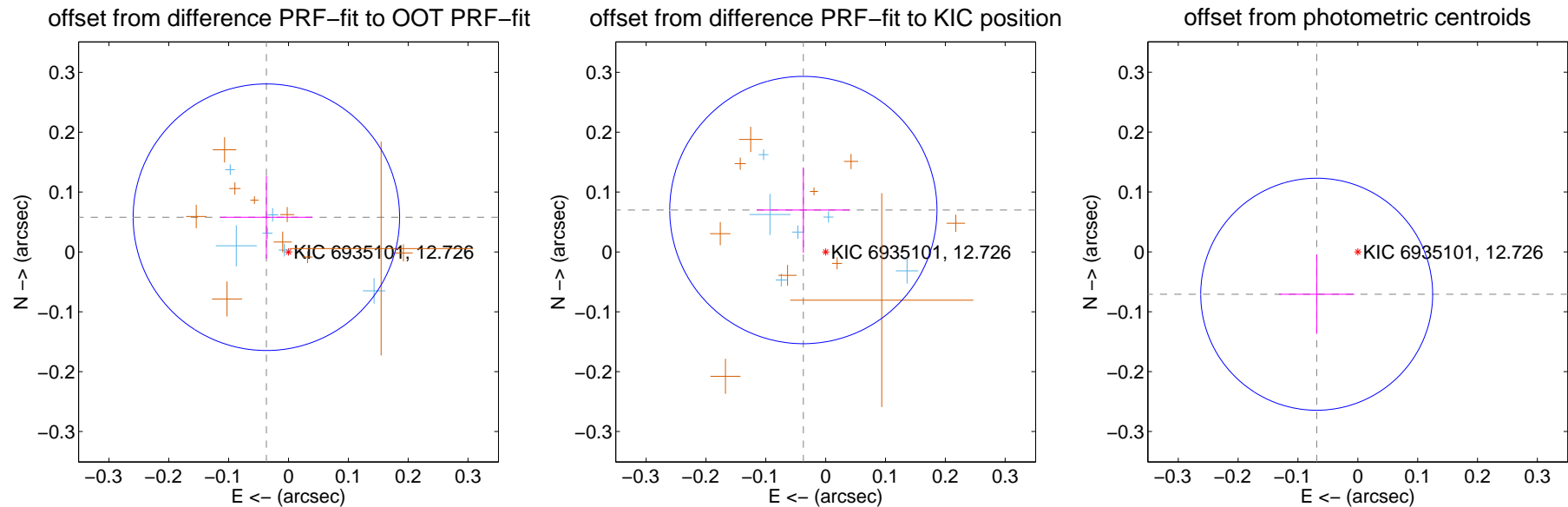
DV Centroid Data

Supplemental centroid analysis for 006935101-01. Kepler magnitude: 12.73. Transit SNR 12.58

There are 6 quarters with good PRF difference image offsets

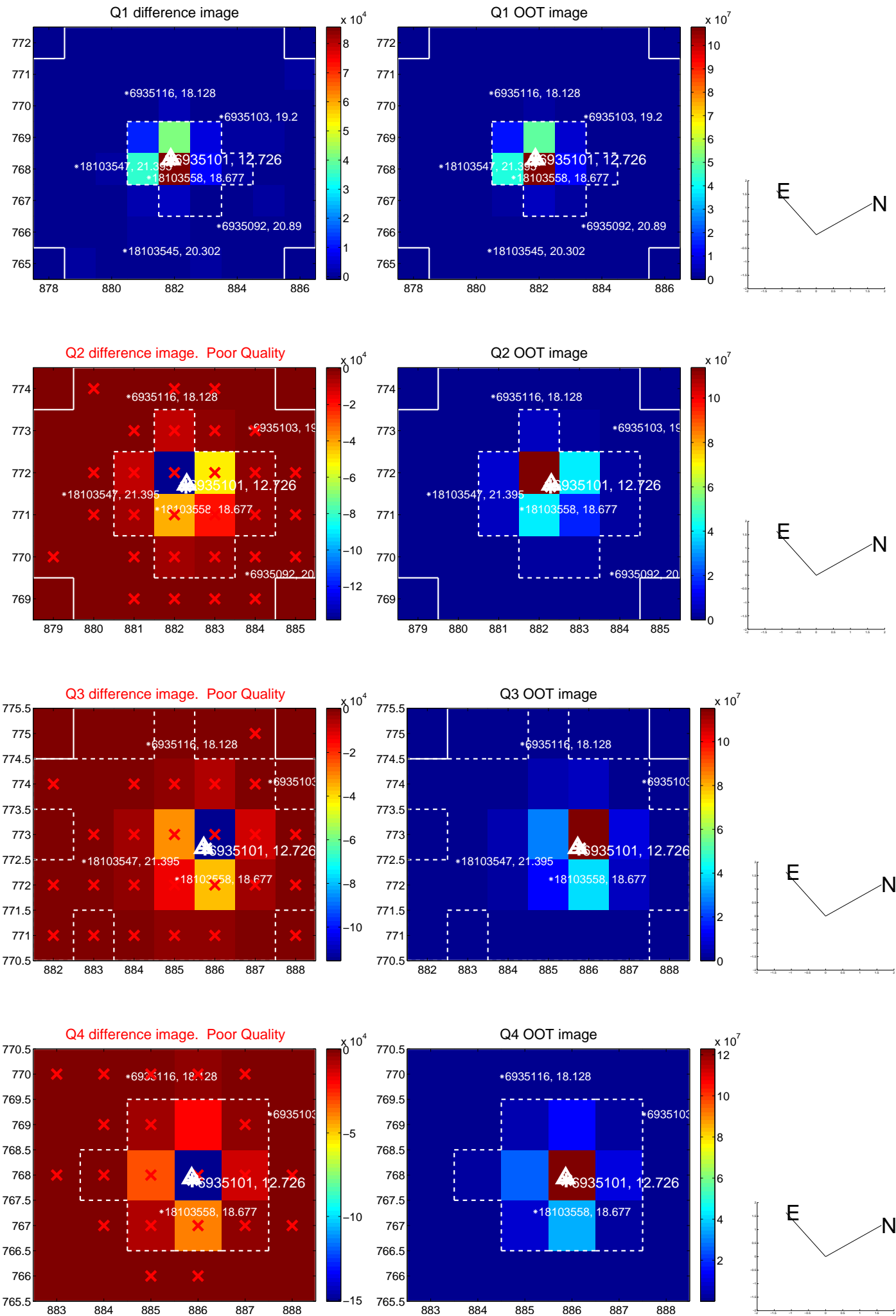
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.069 ± 0.074	0.93	0.037 ± 0.077	0.058 ± 0.069
PRF-fit source offset from KIC position	0.079 ± 0.074	1.06	0.037 ± 0.078	0.070 ± 0.071
photometric centroid source offset	0.10 ± 0.06	1.53	0.07 ± 0.06	-0.07 ± 0.07

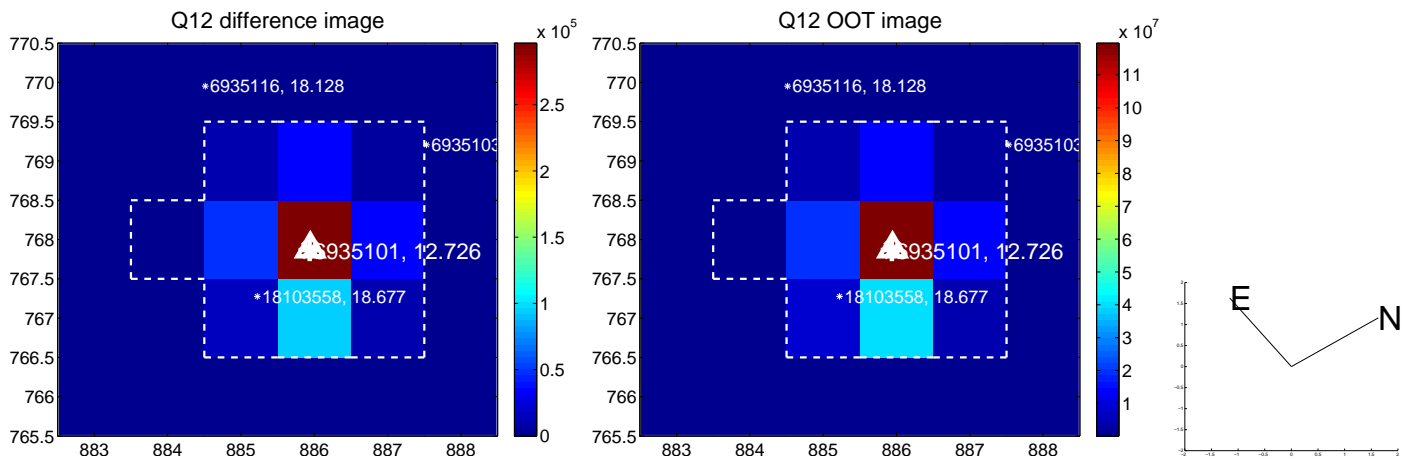
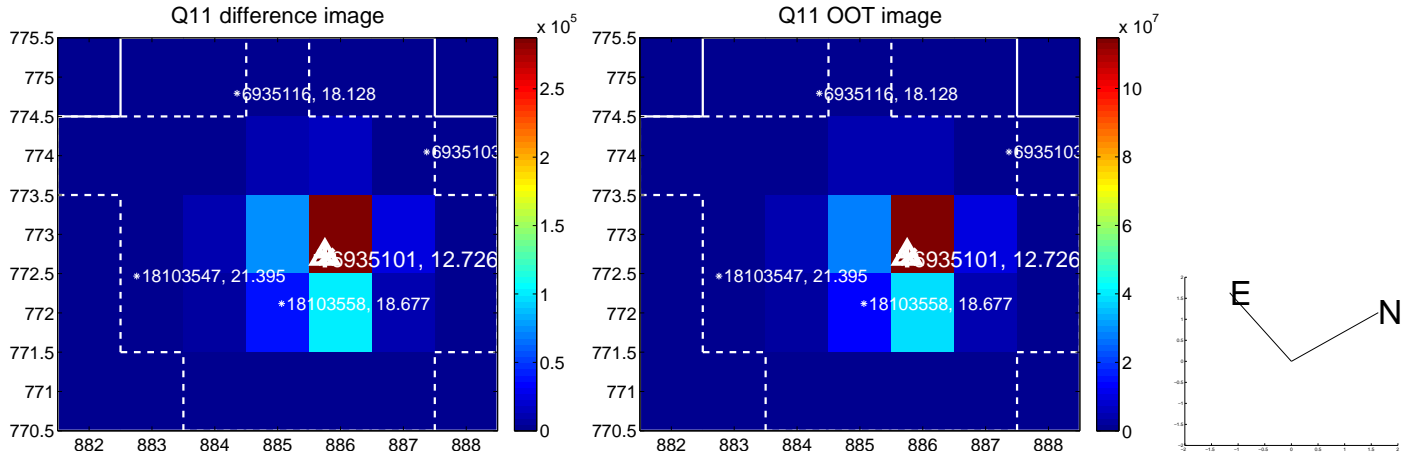
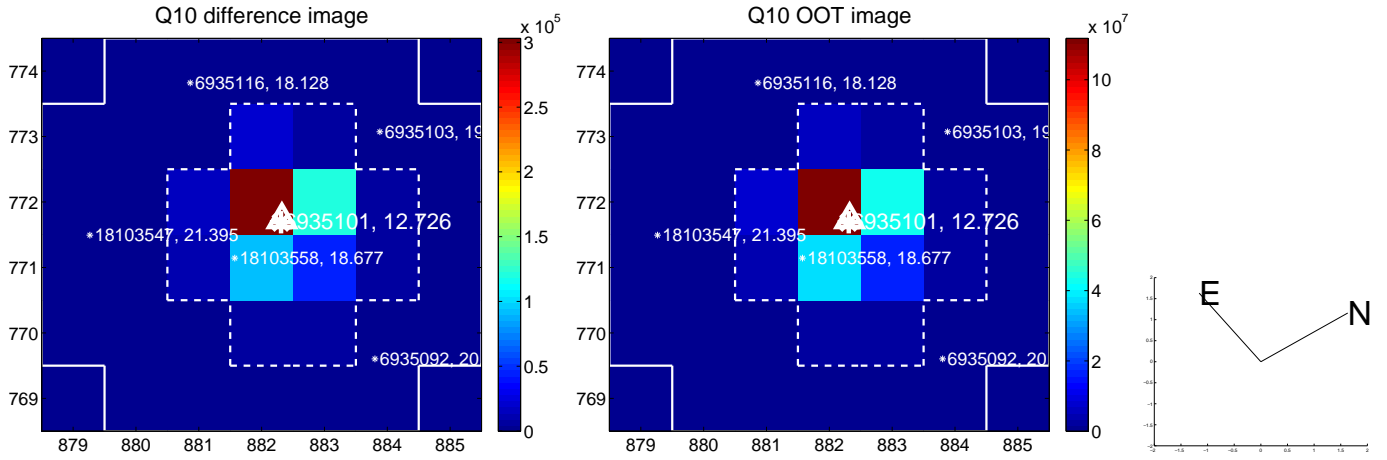
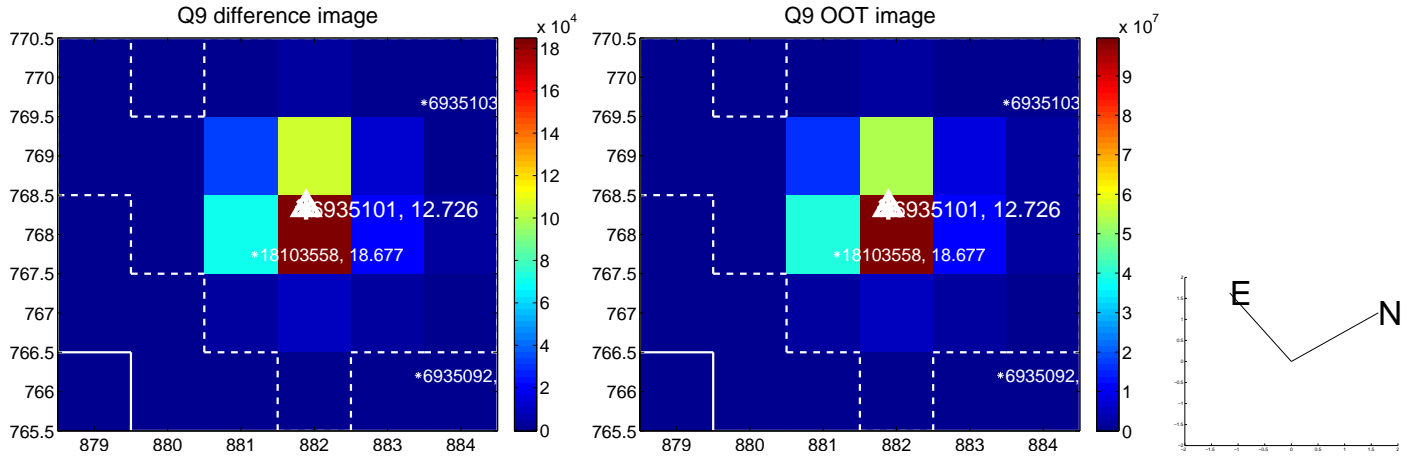


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

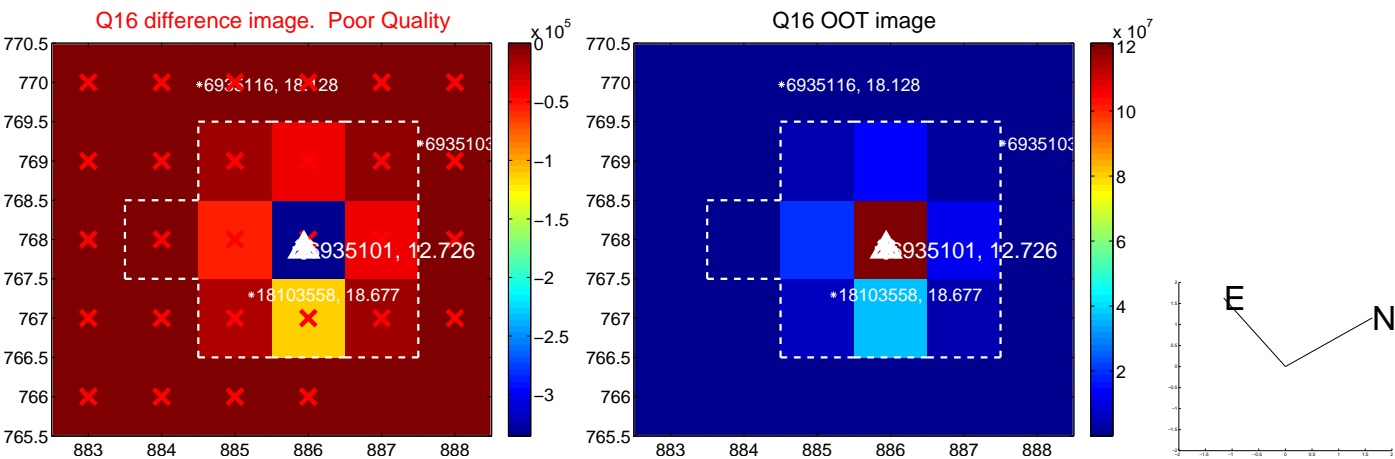
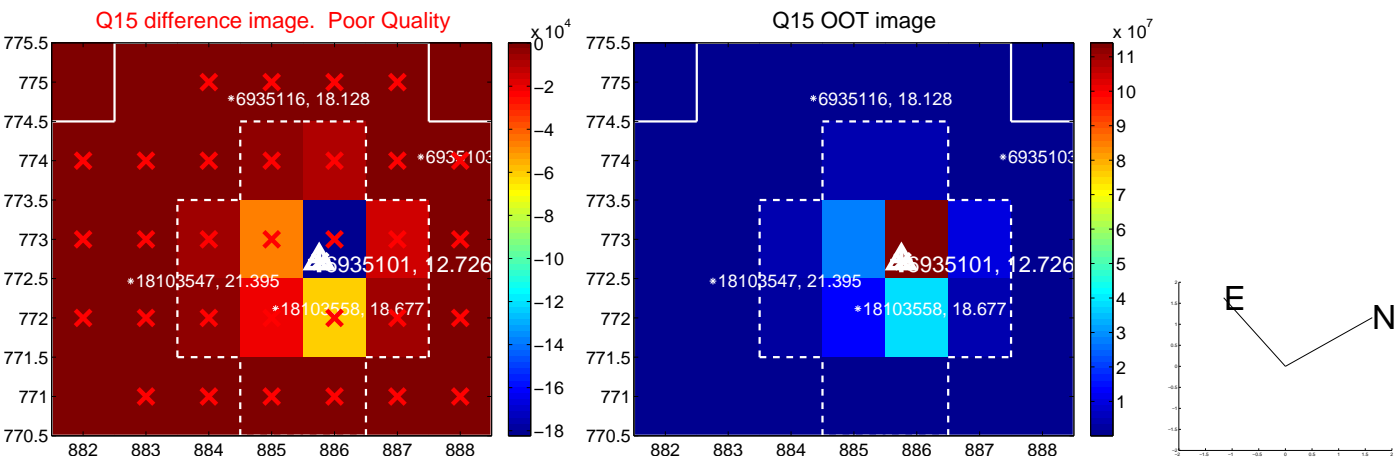
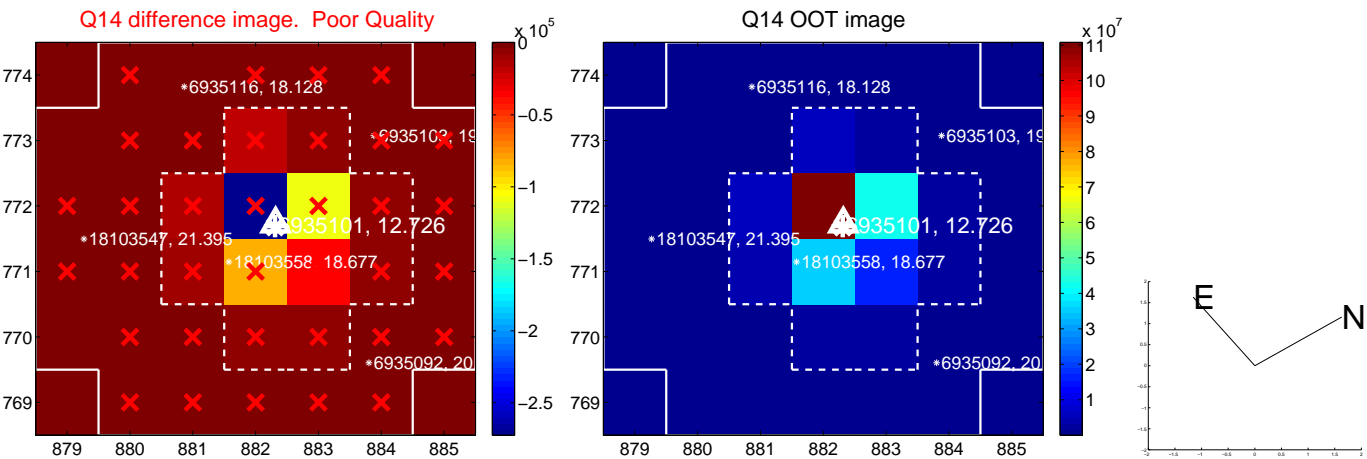
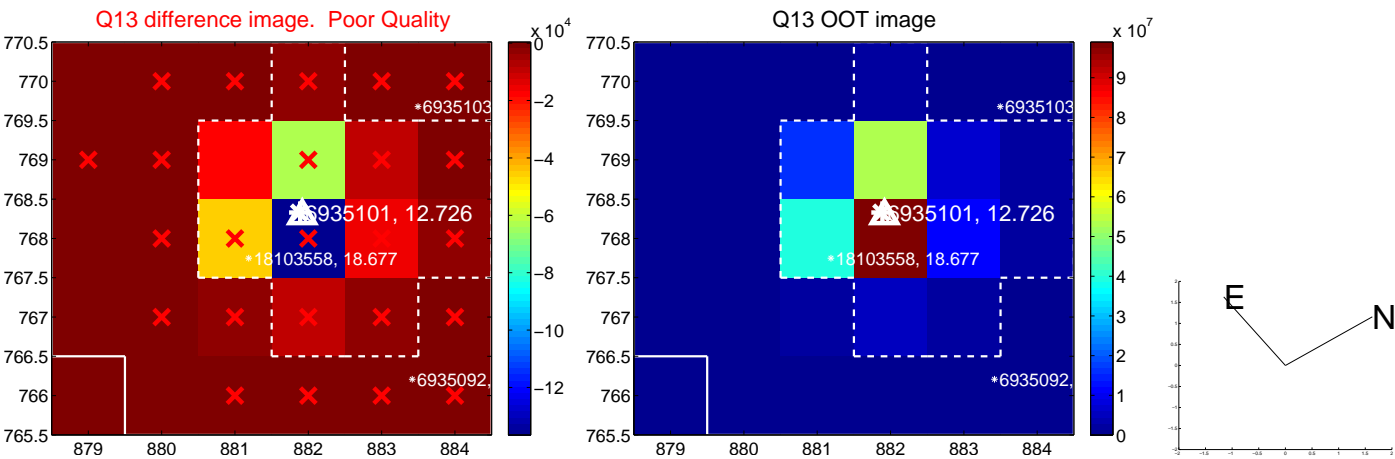
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



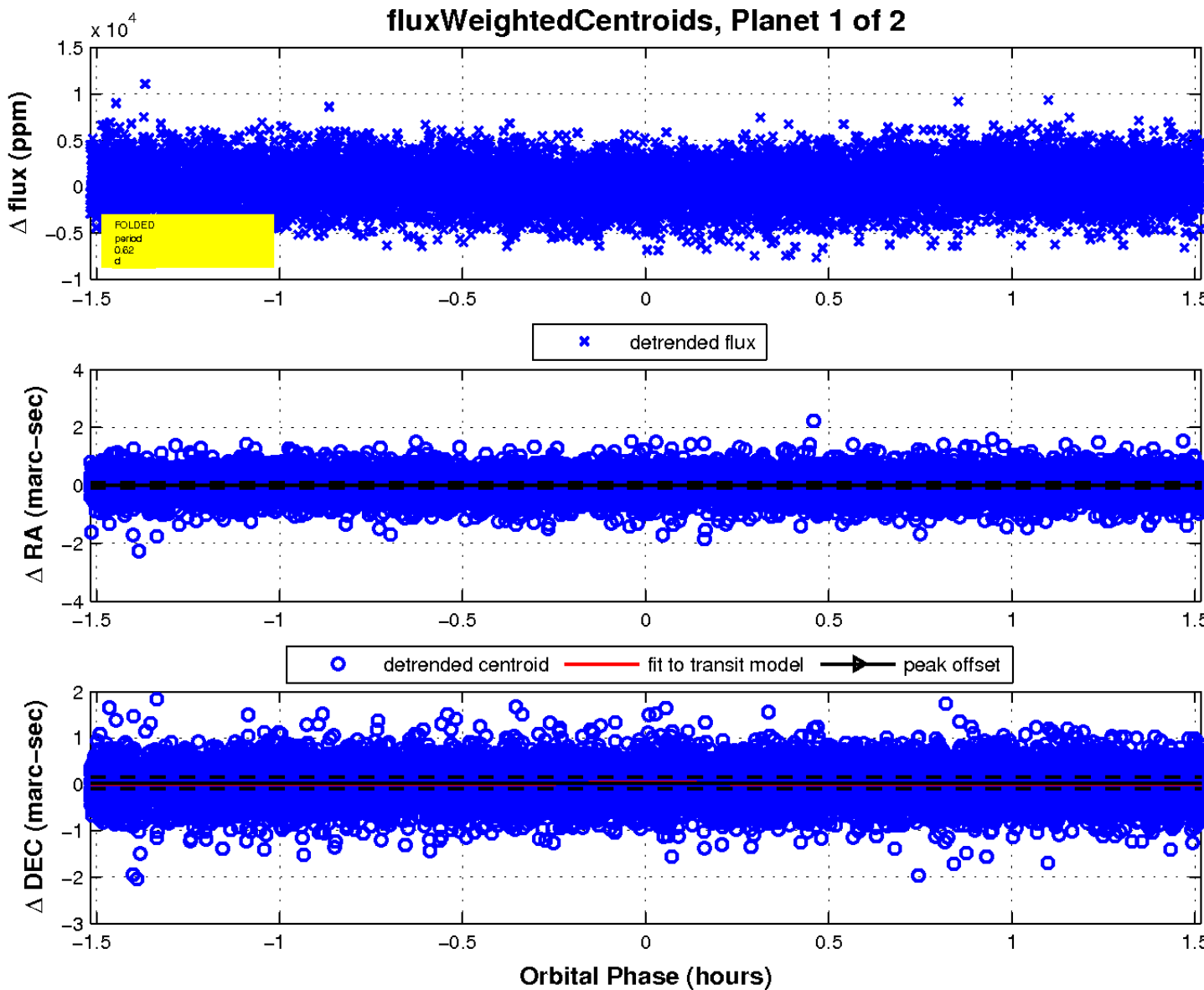
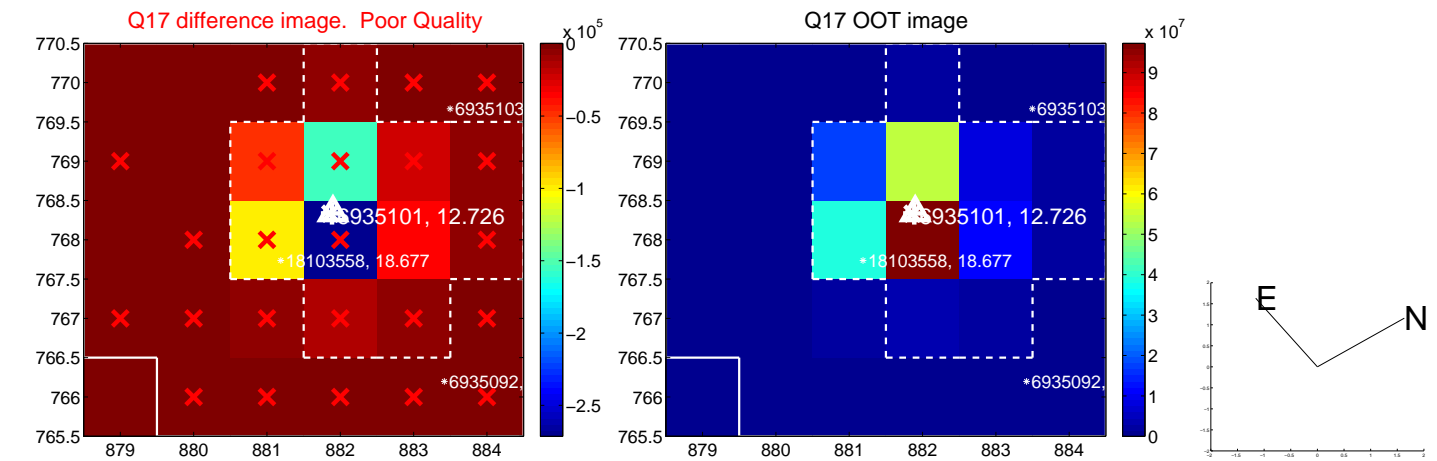
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

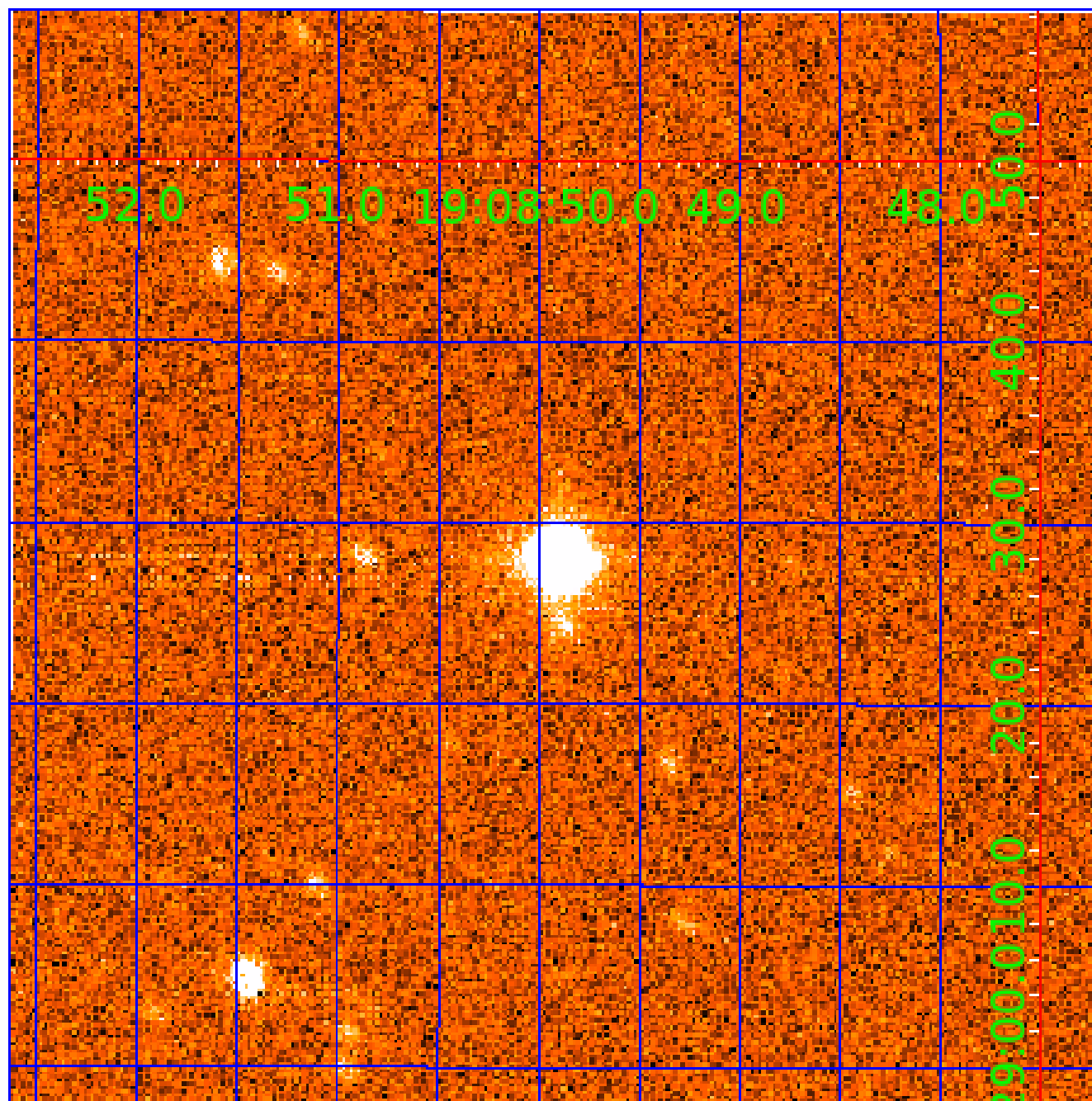


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006935101

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})
006935101-01	OBS	No	0.618736	131.546413	426.2	0.506	9.6	12.6	1.69	7498	4.49	27825.33
006935101-02	OBS	No	0.618702	131.587029	230.4	6.592	8.6	9.7	1.69	7498	2.61	27827.34

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006935101-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT
006935101-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_FEW_DIFFS

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

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

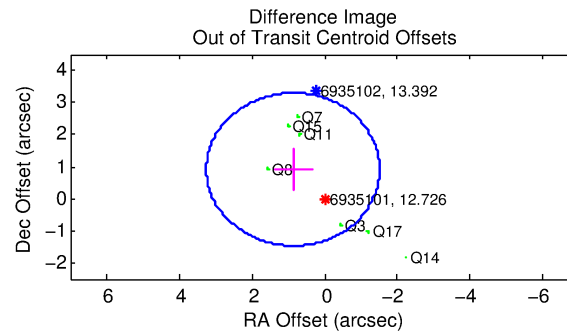
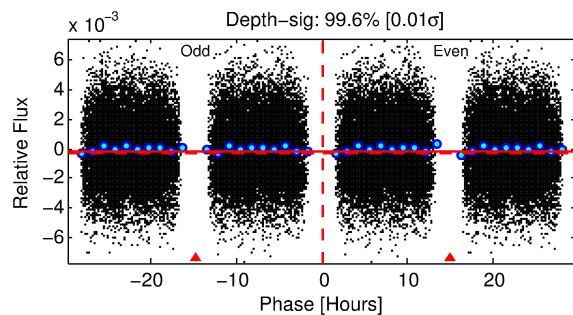
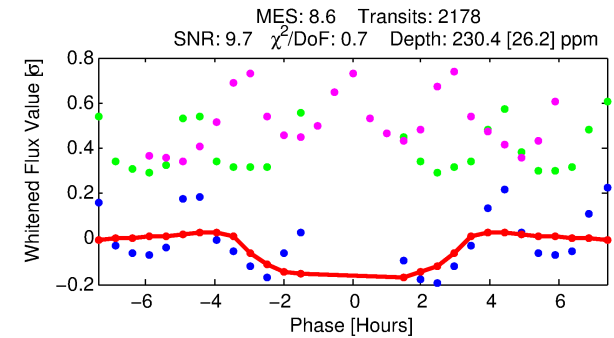
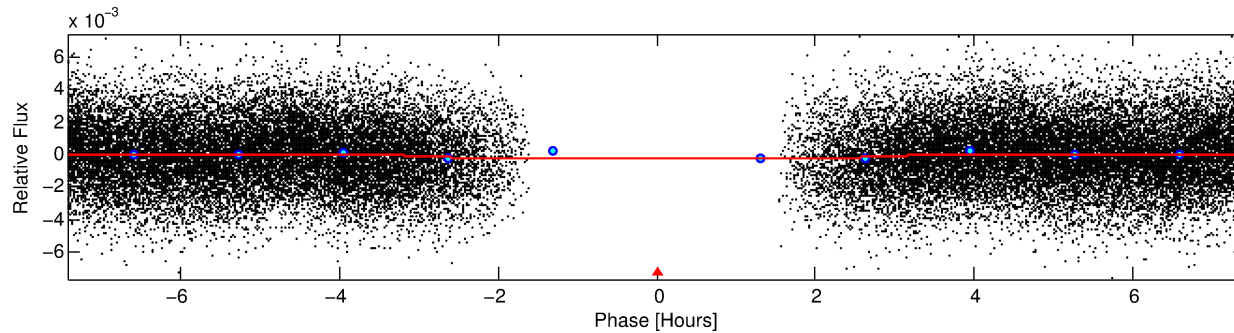
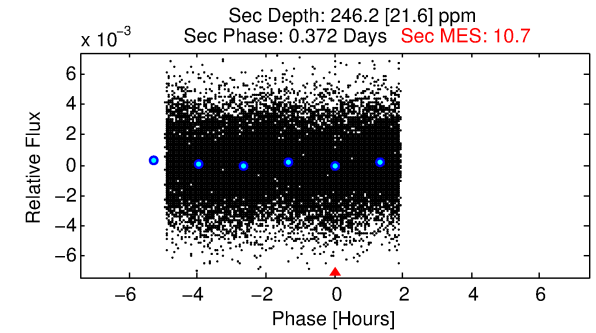
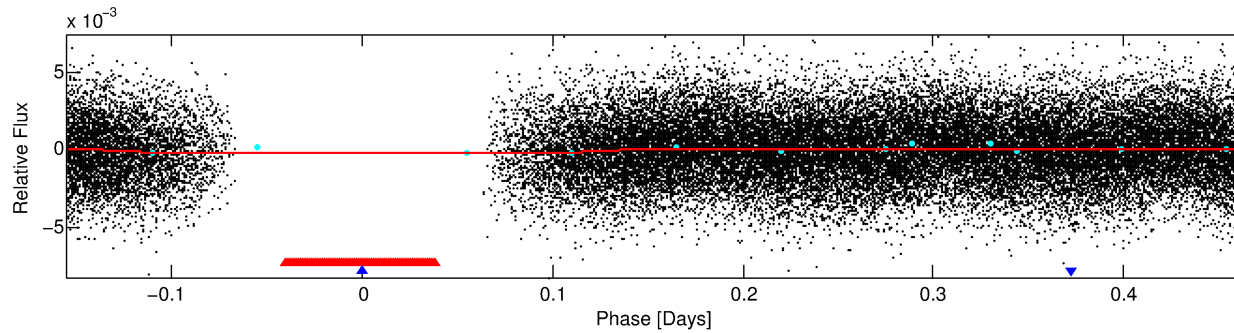
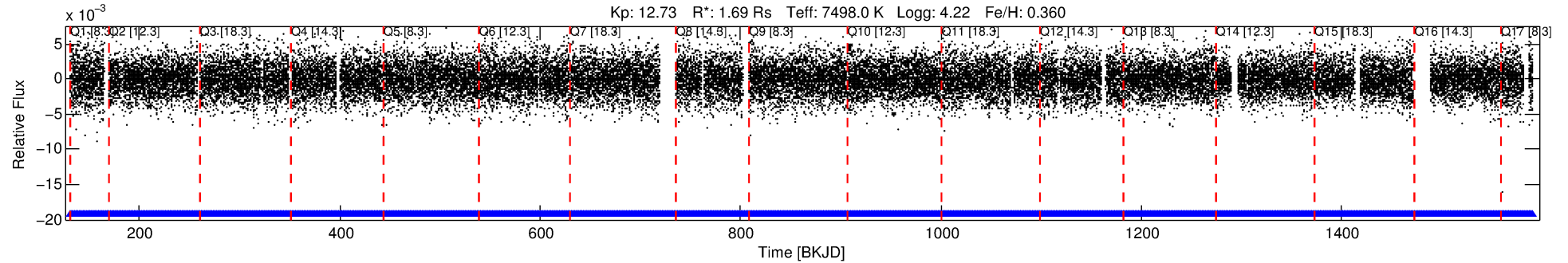
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006935101-02

No Significant Match Found

DV One-Page Summary

KIC: 6935101 Candidate: 2 of 2 Period: 0.619 d



DV Fit Results:

Period = 0.61870 [0.00001] d
Epoch = 131.5870 [0.0035] BKJD
Rp/R* = 0.0141 [0.0065]
a/R* = 1.03 [0.15]
b = 0.09 [31.10]
Seff = 27827.34 [13007.28]
Teq = 3293 [385] K
Rp = 2.61 [1.52] Re
a = 0.0171 [0.0051] AU
Ag = 5.81 [5.92] [0.81σ]
Teffp = 7904 [1866] K [2.42σ]

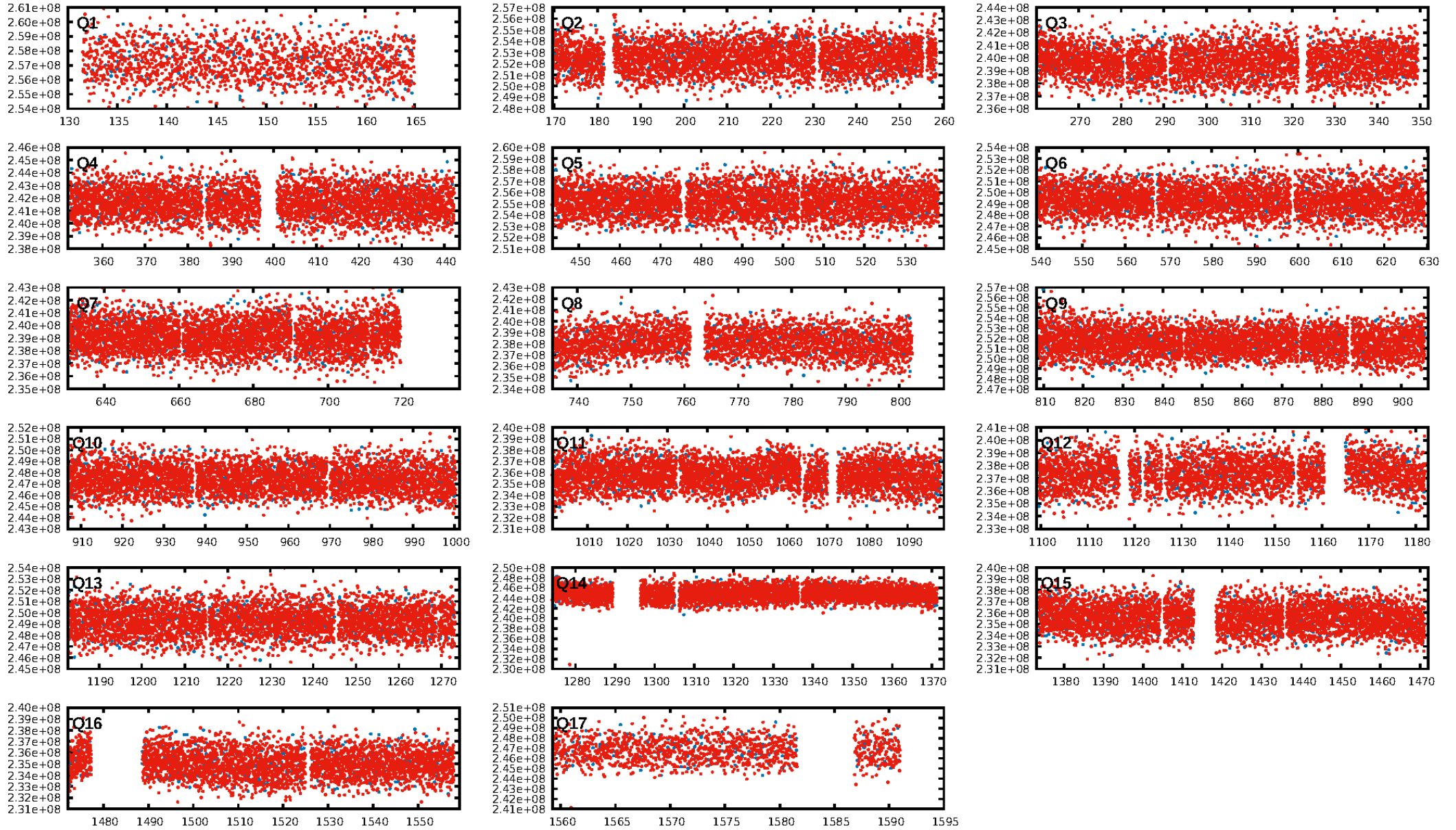
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [2081/2081]
GhostDiagnostic-chr: 0.39
Centroid-sig: 95.4%
Centroid-so: 0.080 arcsec [2.44σ]
OotOffset-rm: 1.263 arcsec [1.59σ]
KicOffset-rm: 1.294 arcsec [1.64σ]
OotOffset-st: 1/4/1/1 [7]
KicOffset-st: 1/4/1/1 [7]
DiffImageQuality-fgm: 0.29 [2/7]
DiffImageOverlap-fno: 0.00 [0/17]

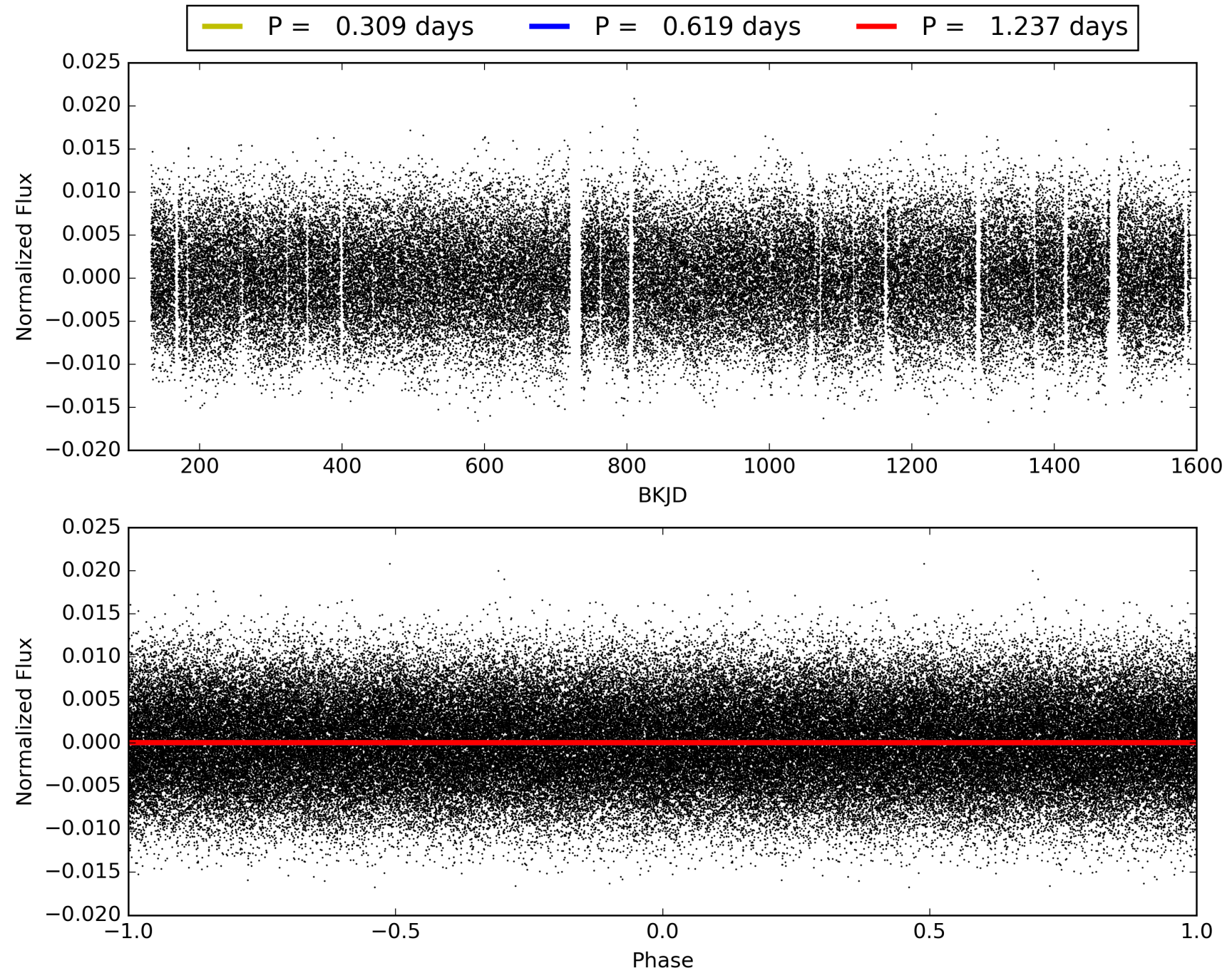
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 21:41:50 Z

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

TCE 006935101-02, PDC Light Curves

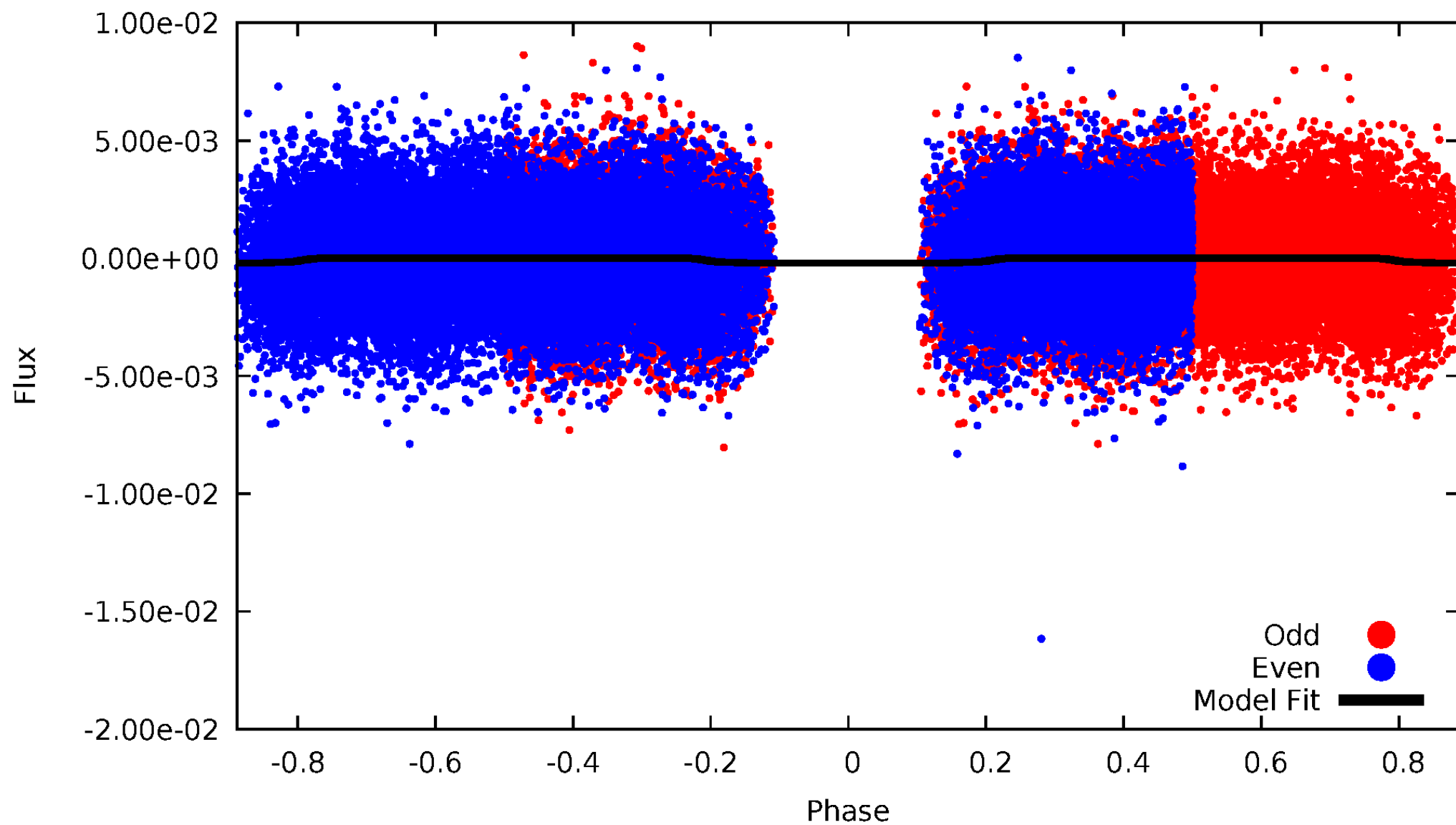


TCE 006935101-02



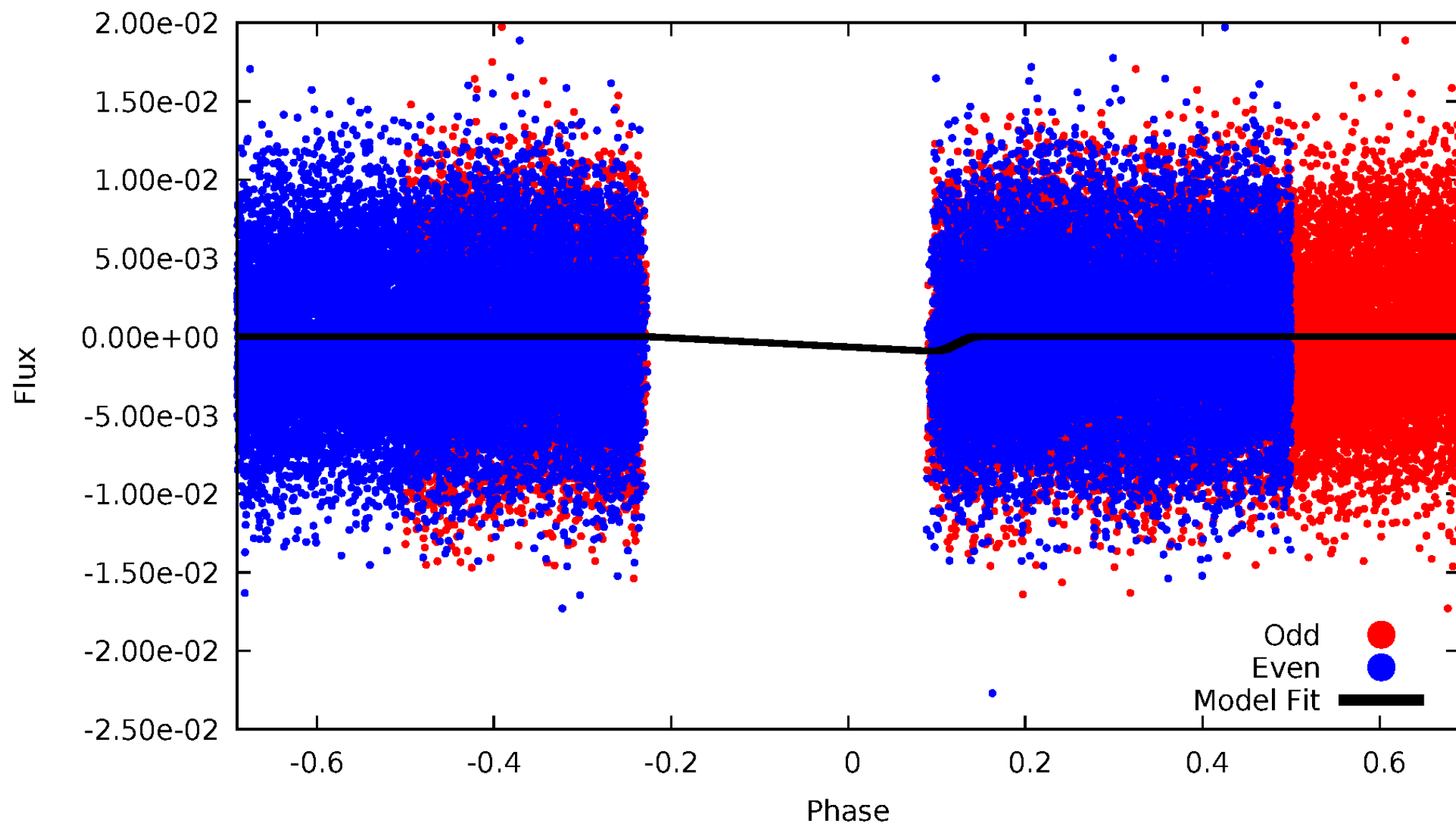
DV Odd/Even

TCE 006935101-02



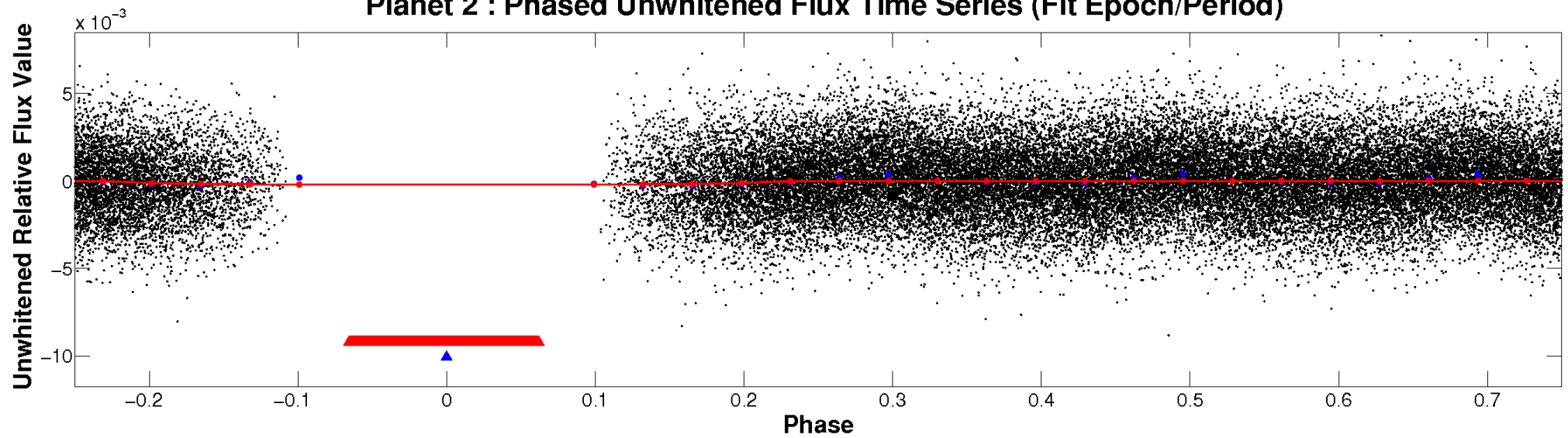
ALT Odd/Even

TCE 006935101-02

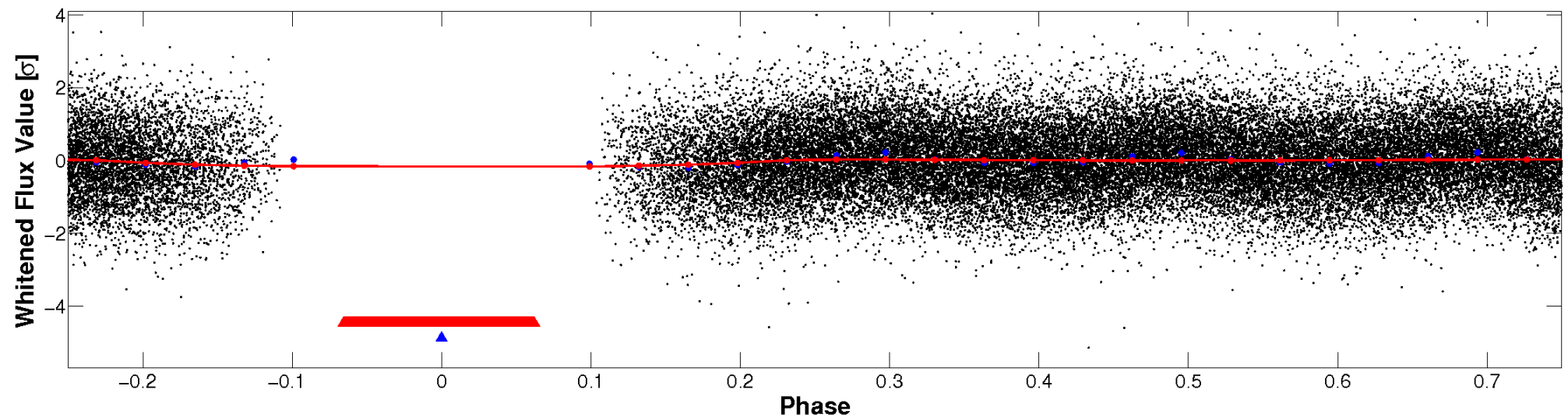


Non-Whitened Vs. Whitened Light Curve

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

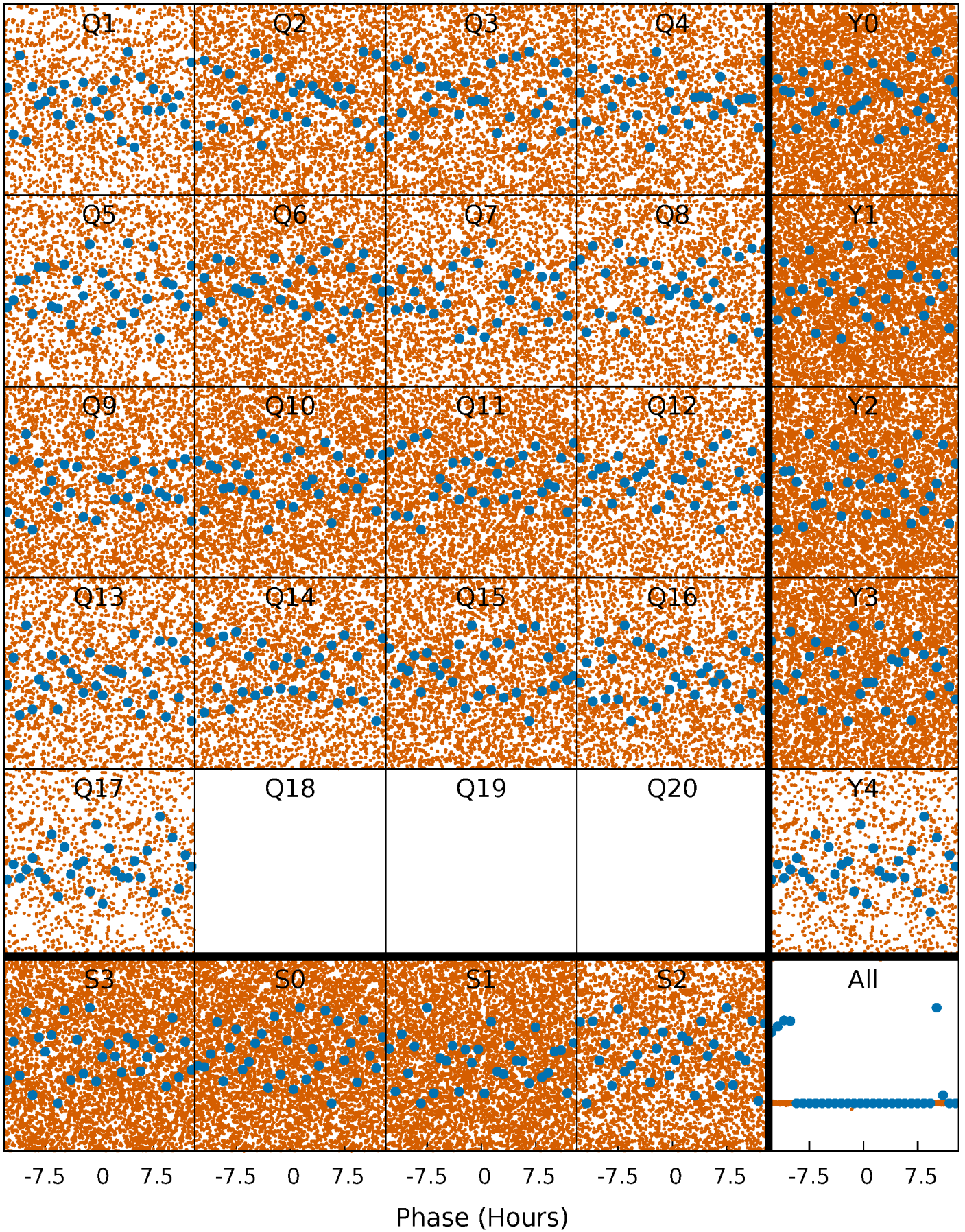


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



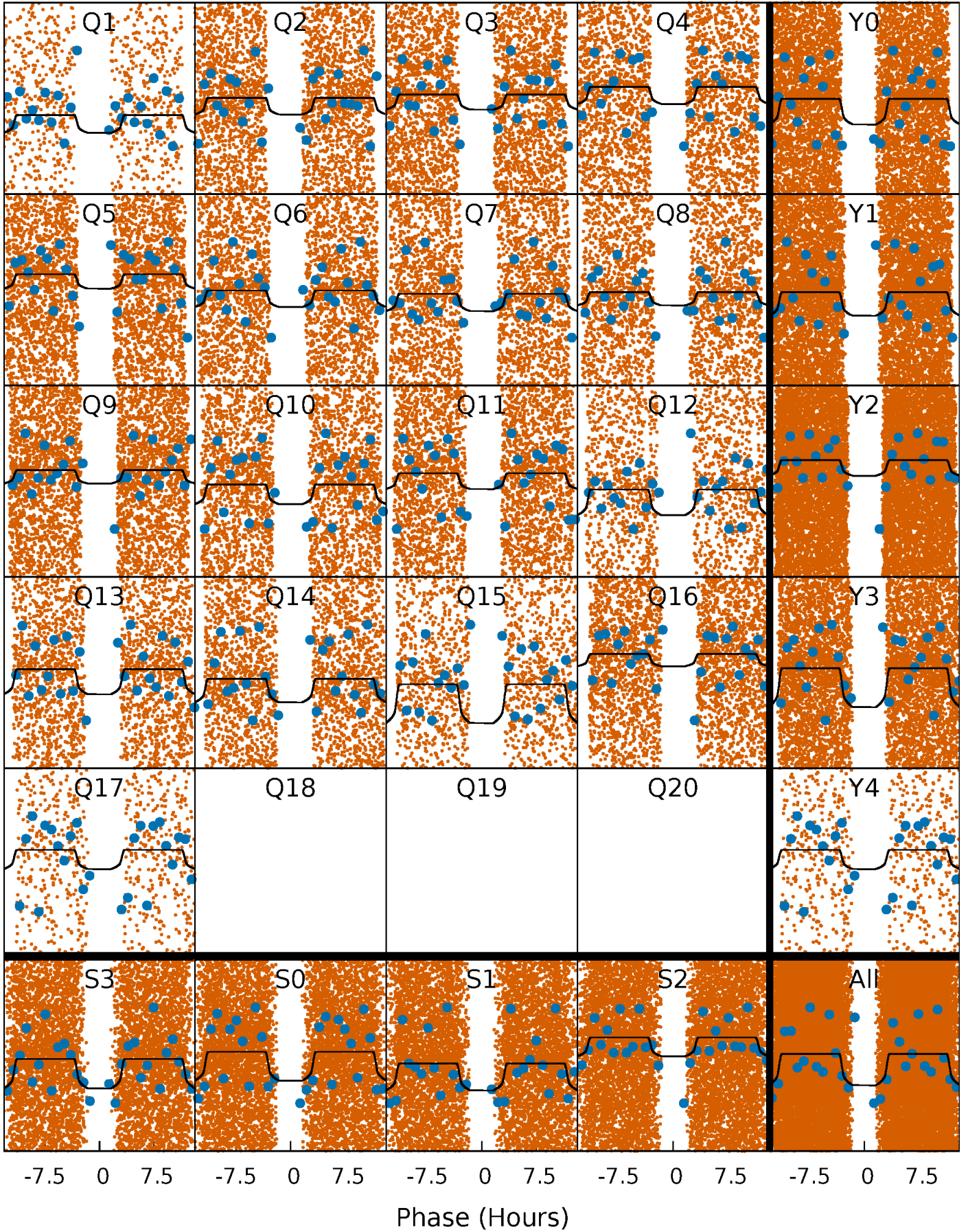
PDC Quarter-Phased Transit Curves

TCE 006935101-02 P= 0.618702 Days $T_0=131.587029$ (BKJD)



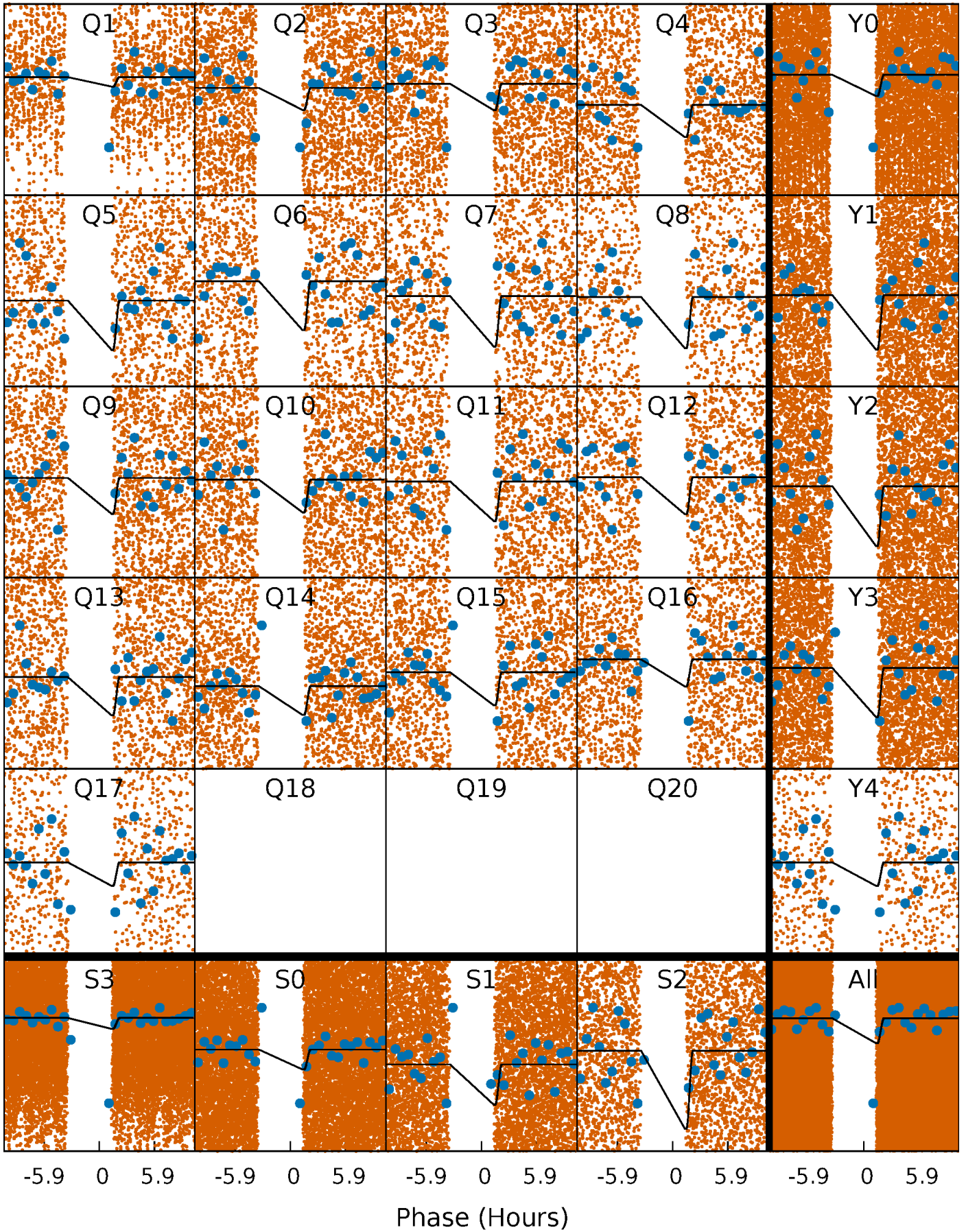
DV Quarter-Phased Transit Curves

TCE 006935101-02 P= 0.618702 Days $T_0=131.587029$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

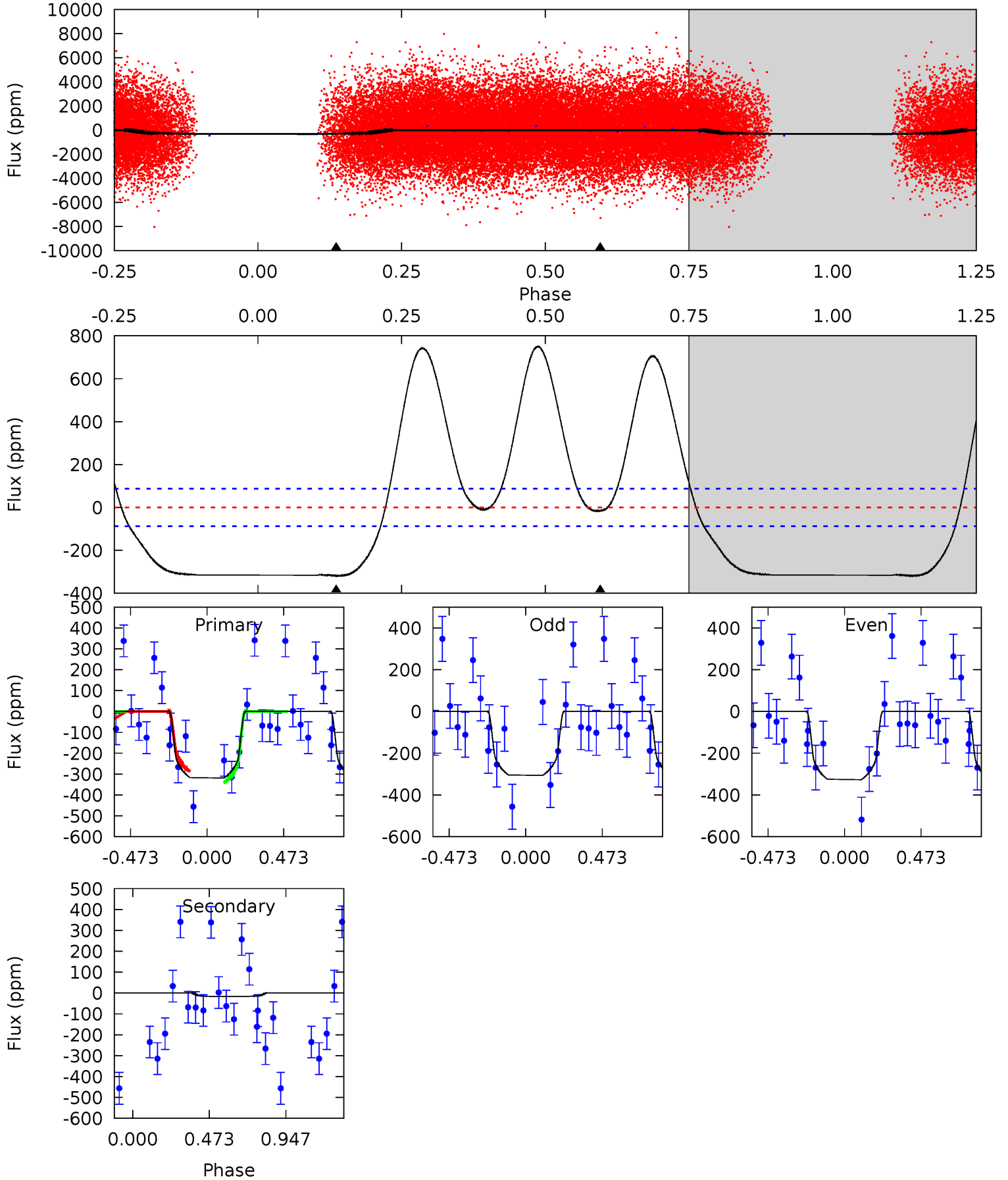
TCE 006935101-02 P= 0.618730 Days $T_0=131.595857$ (BKJD)



DV Model-Shift Uniqueness Test

006935101-02, P = 0.618702 Days, E = 131.587029 Days

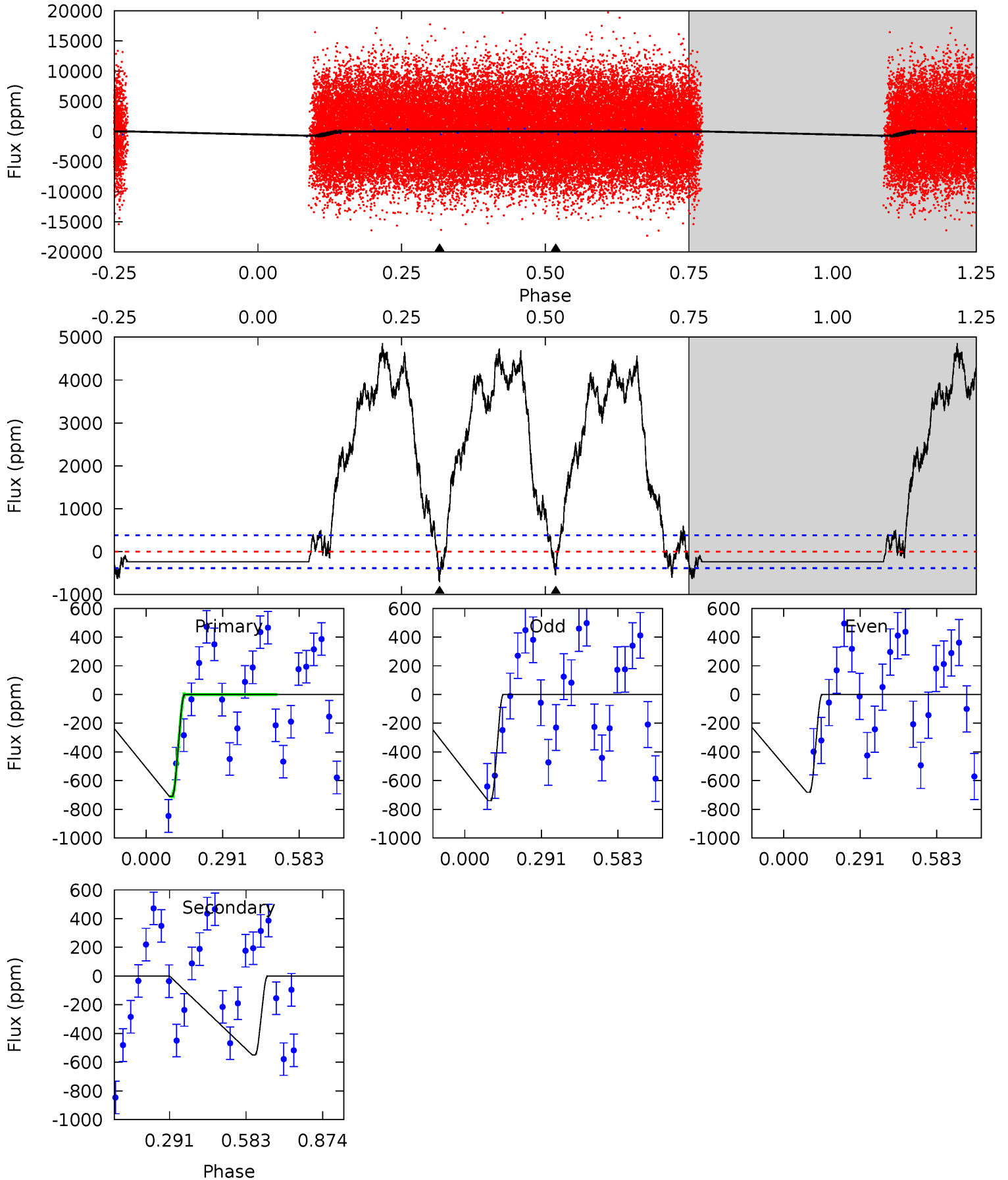
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.4	0.81	0	0	4.23	0.72	8.13	15.4	15.4	0.81	0.81	0.50	1.09	0.70	1.34



Alt Model-Shift Uniqueness Test

006935101-02, P = 0.618730 Days, E = 131.595857 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.04	6.21	0	0	4.34	1.05	3.32	8.04	8.04	6.21	6.21	0.33	0.79	0.87	0



Stellar Parameters For KIC 006935101

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7498^{+206}_{-353}	$4.220^{+0.058}_{-0.232}$	$0.360^{+0.050}_{-0.400}$	$1.693^{+0.602}_{-0.161}$	$1.734^{+0.214}_{-0.214}$	$0.503^{+0.116}_{-0.282}$
	+3%/-5%	+1%/-5%	+14%/-111%	+36%/-10%	+12%/-12%	+23%/-56%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 006935101-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-17 ± 21	$2.79^{+1.34}_{-1.25}$	4674^{+370}_{-271}	-2782^{+7866}_{-1566}	$0.272^{+0.968}_{-0.342}$
Alt.	-549 ± 88	$5.81^{+1.56}_{-1.38}$	4669^{+375}_{-263}	6254^{+1104}_{-756}	$2.575^{+1.932}_{-1.078}$

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 $A_{obs} \gg 1.0$

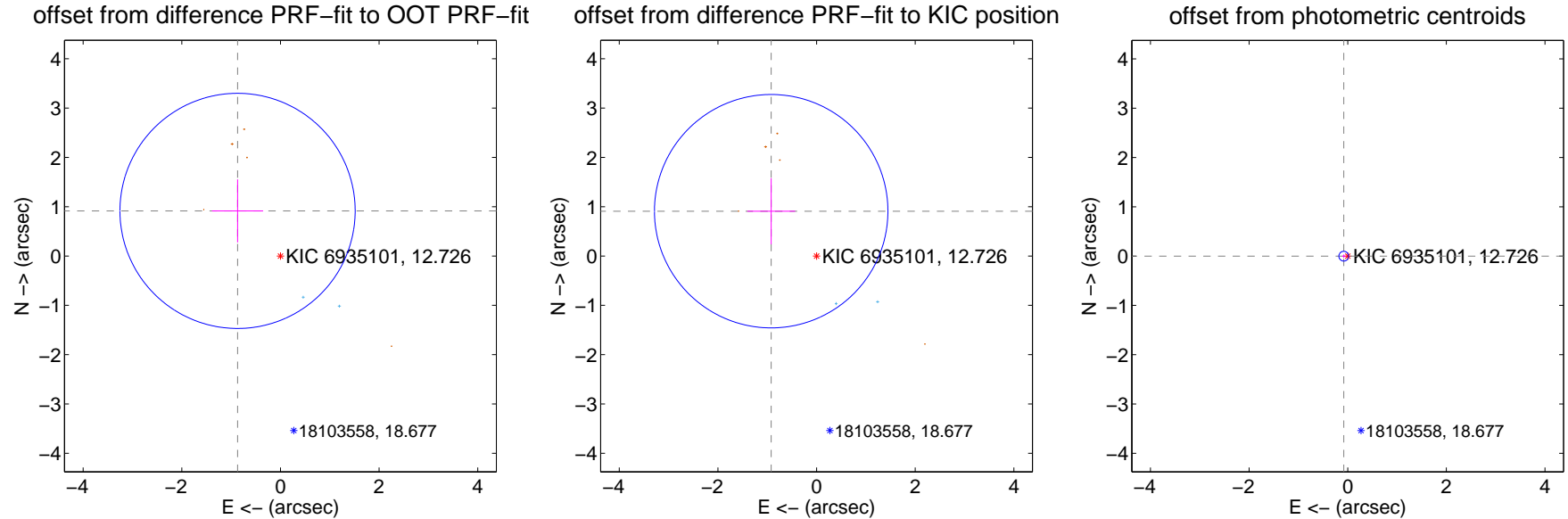
DV Centroid Data

Supplemental centroid analysis for 006935101-02. Kepler magnitude: 12.73. Transit SNR 9.66

There are 2 quarters with good PRF difference image offsets

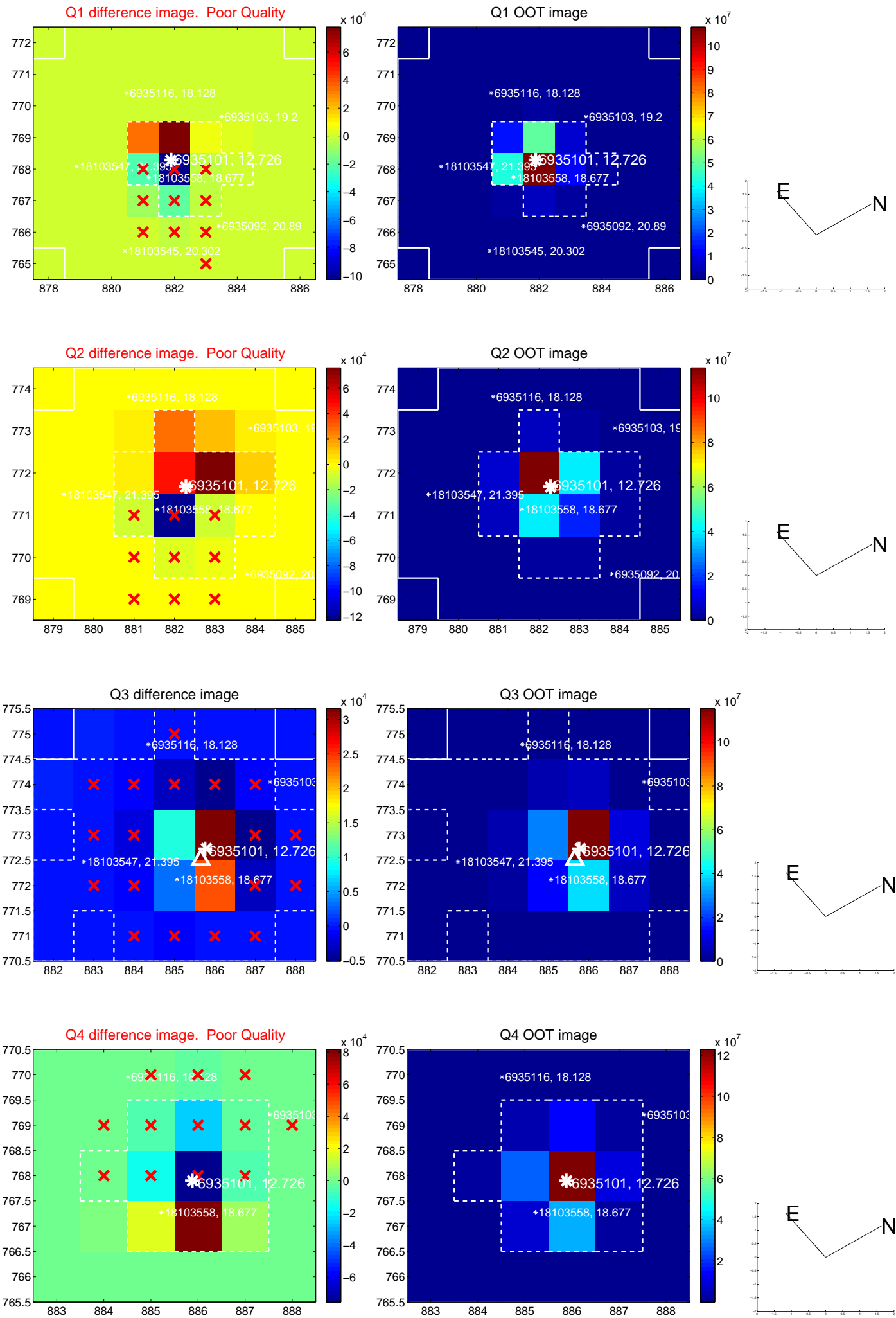
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.263 ± 0.795	1.59	0.870 ± 0.519	0.915 ± 0.639
PRF-fit source offset from KIC position	1.294 ± 0.789	1.64	0.920 ± 0.486	0.909 ± 0.671
photometric centroid source offset	0.08 ± 0.03	2.44	0.08 ± 0.03	-0.00 ± 0.03

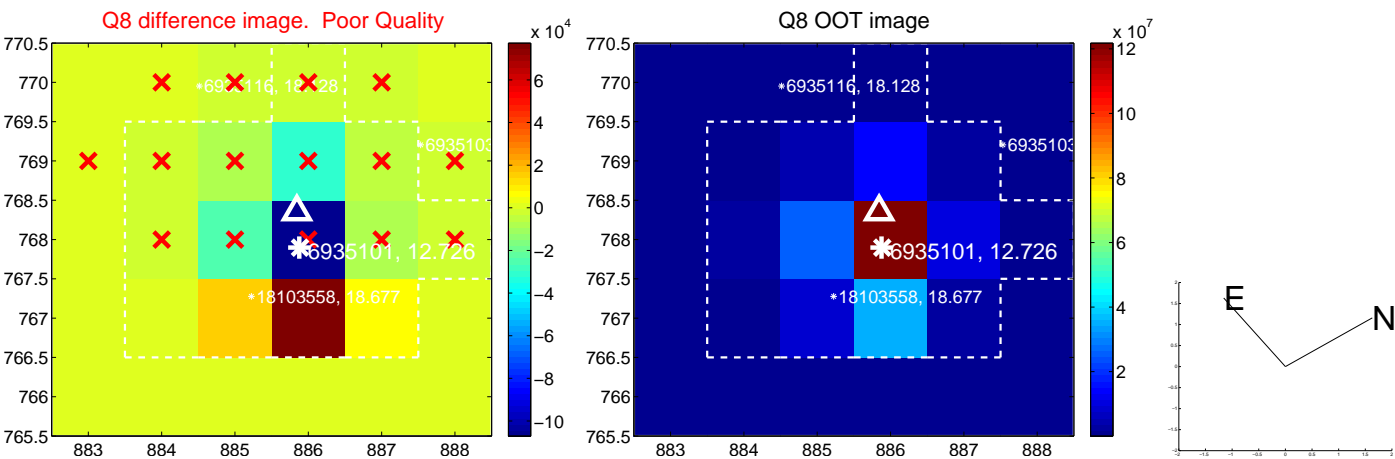
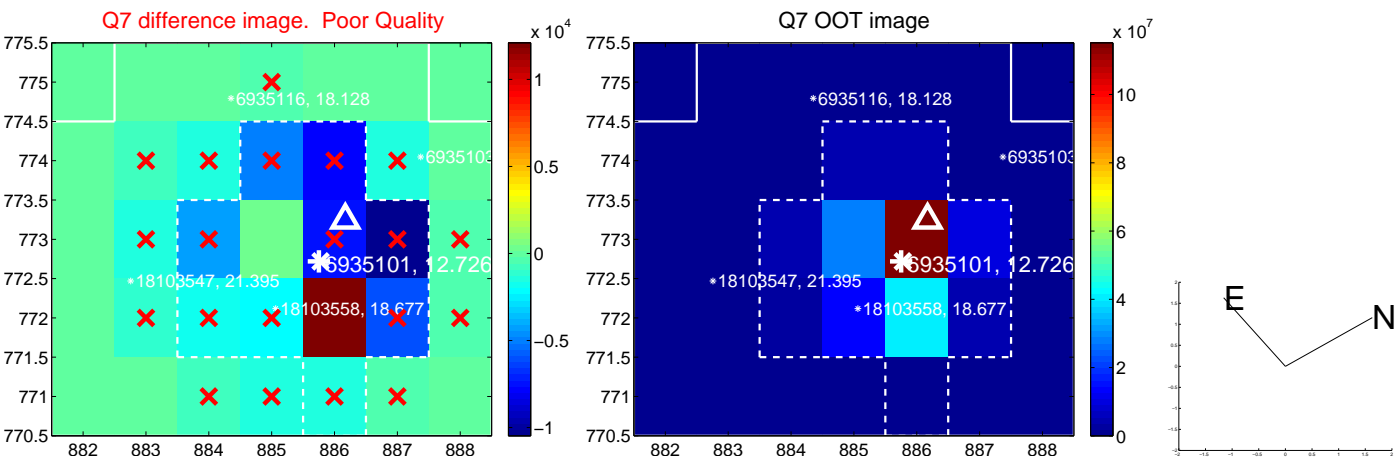
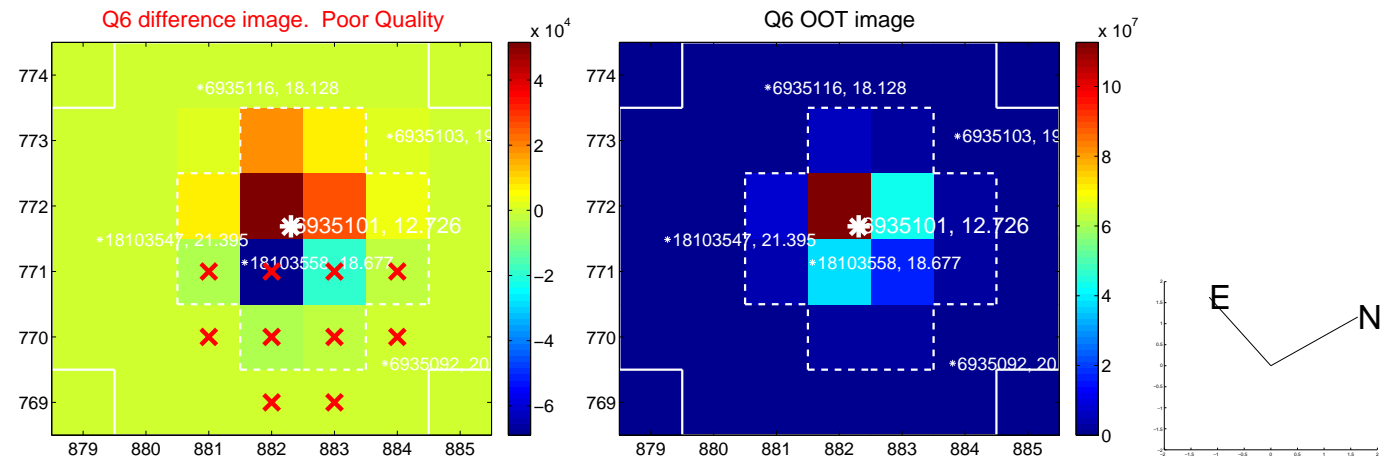
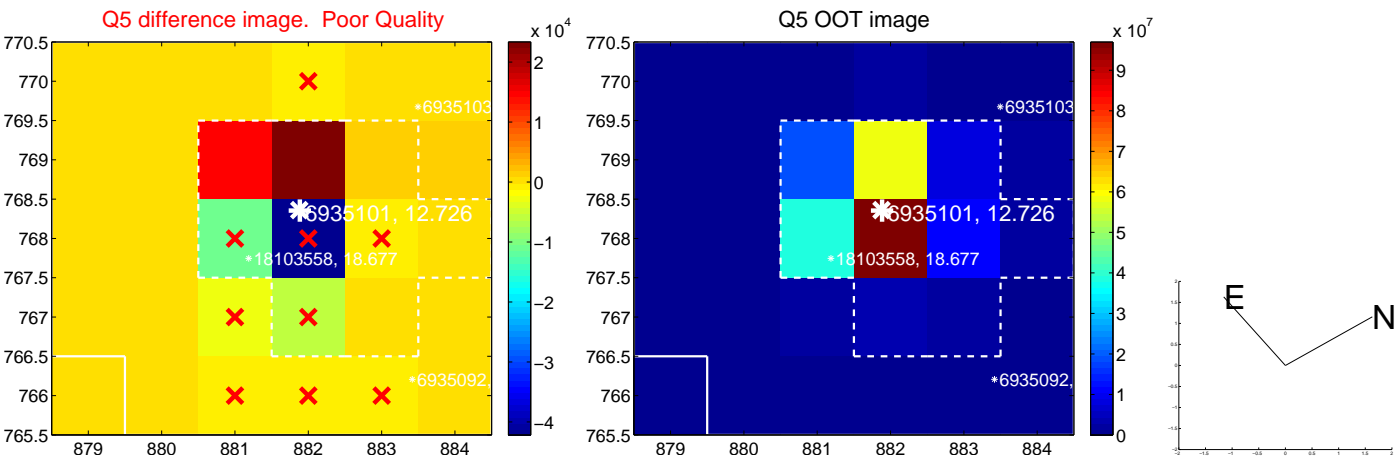


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

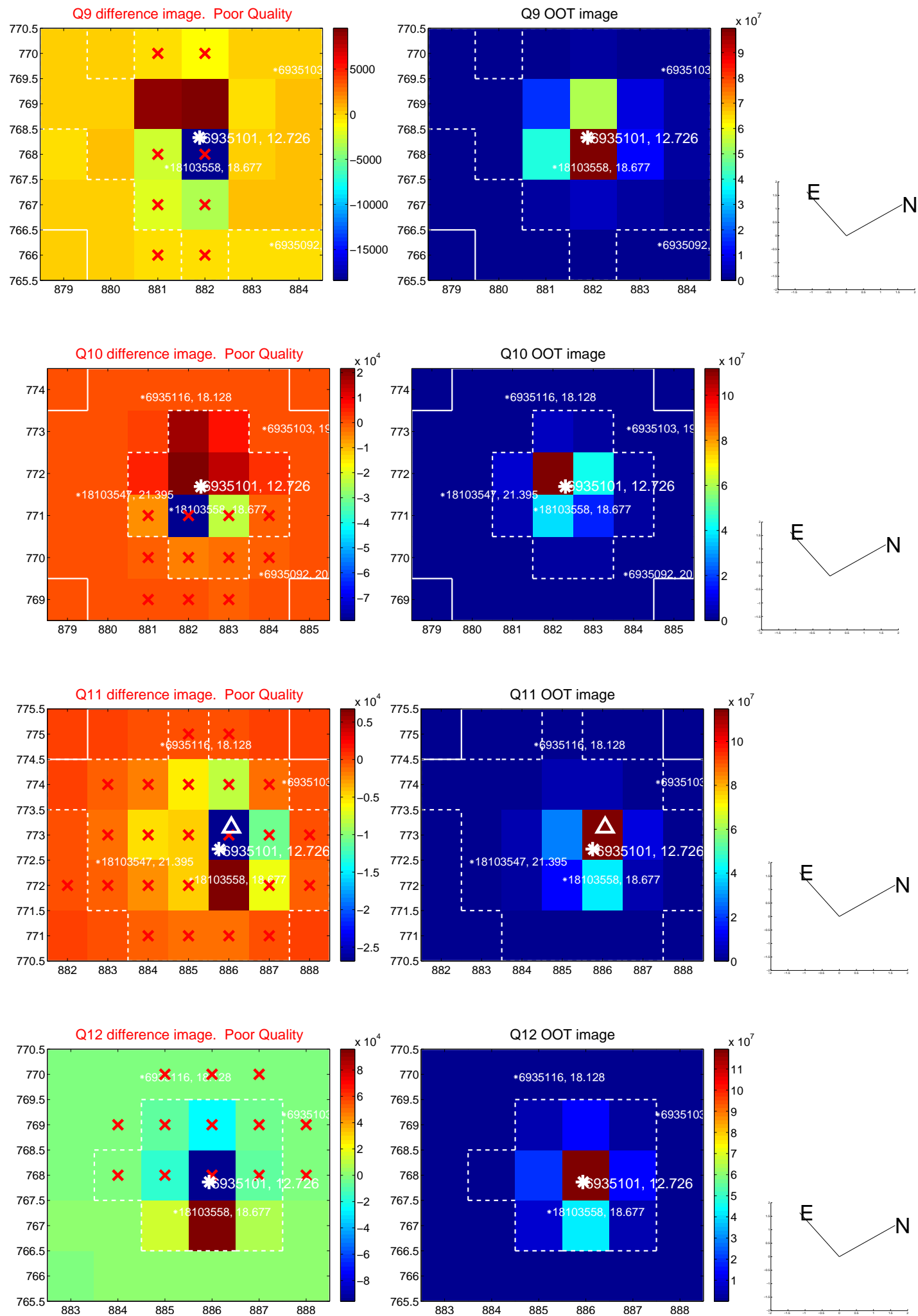
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



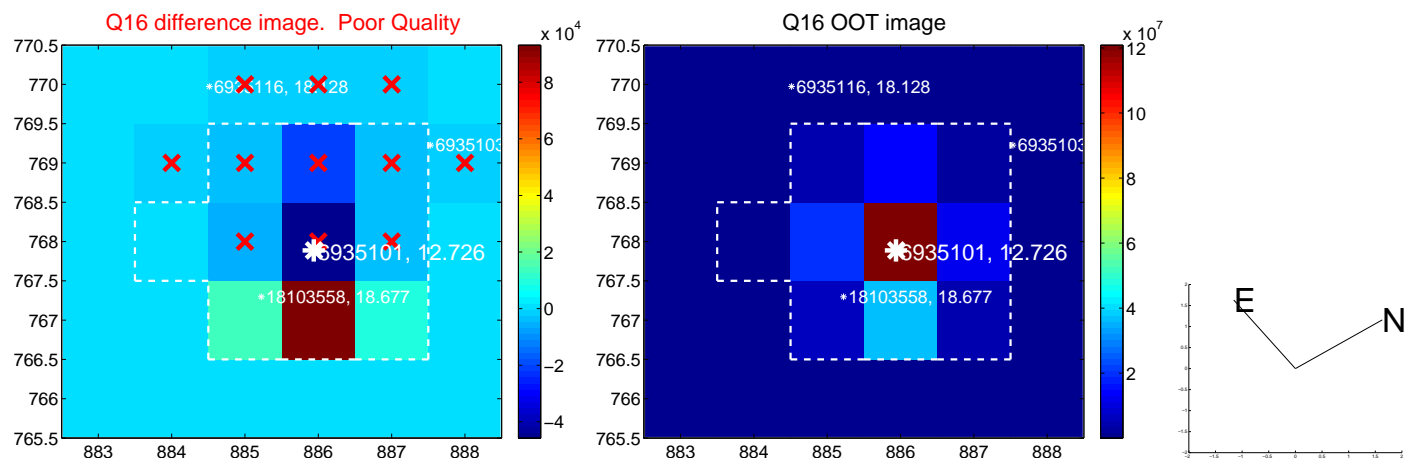
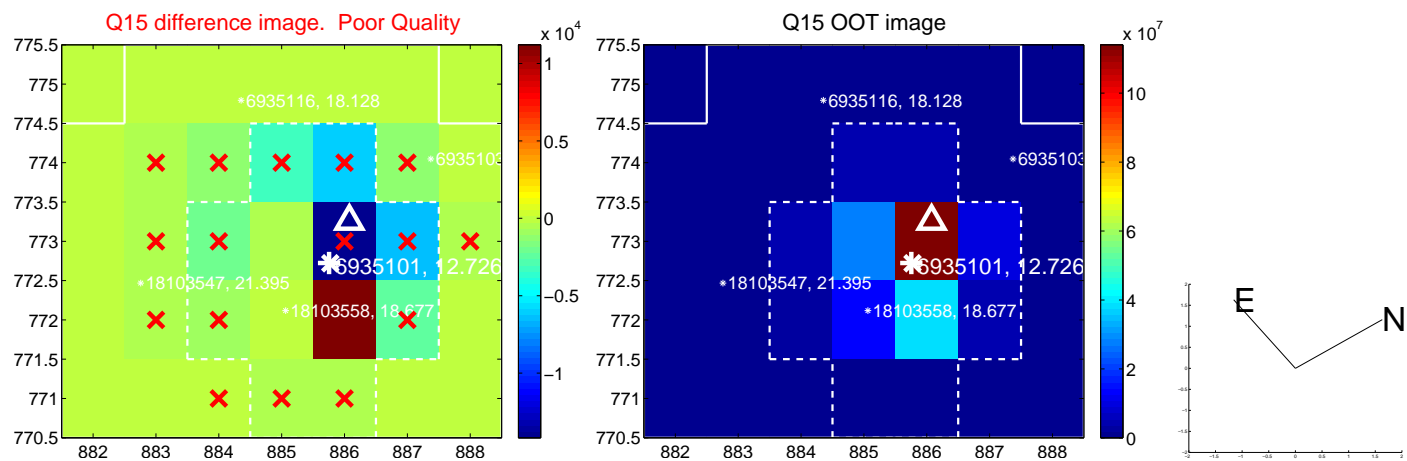
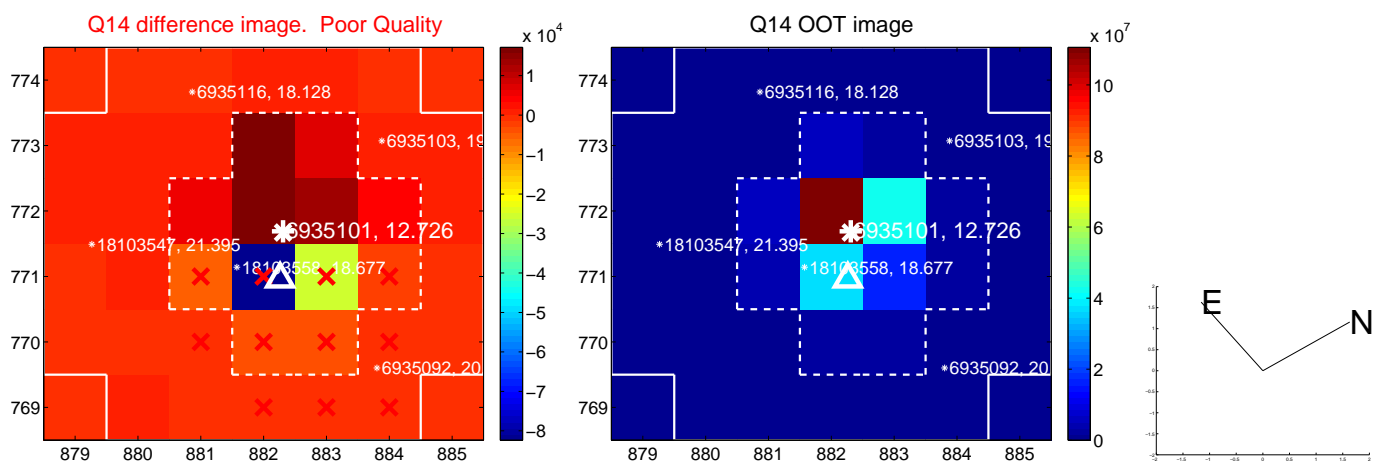
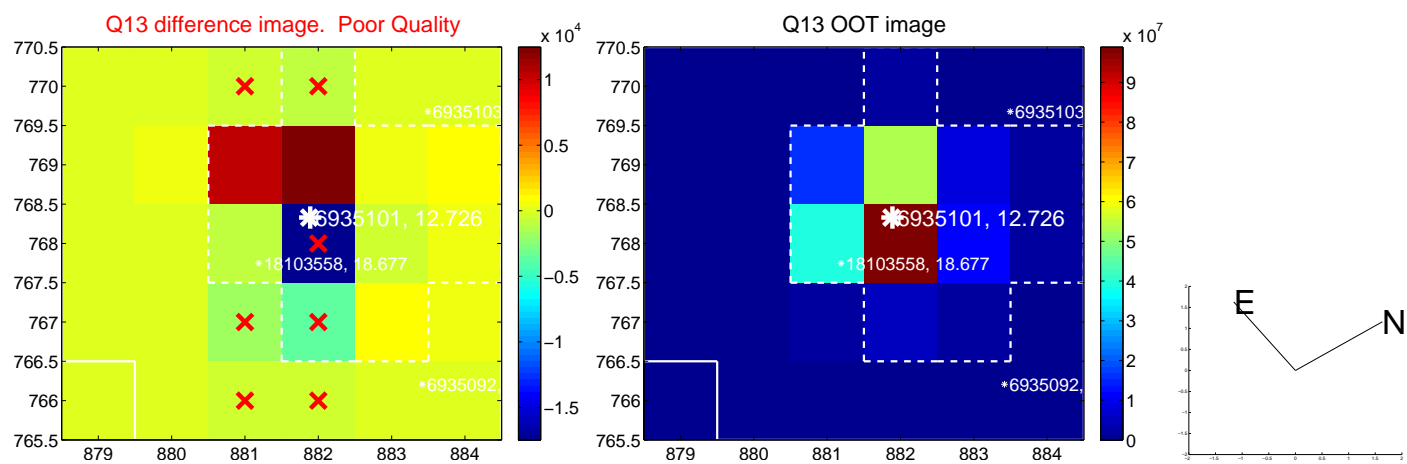
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



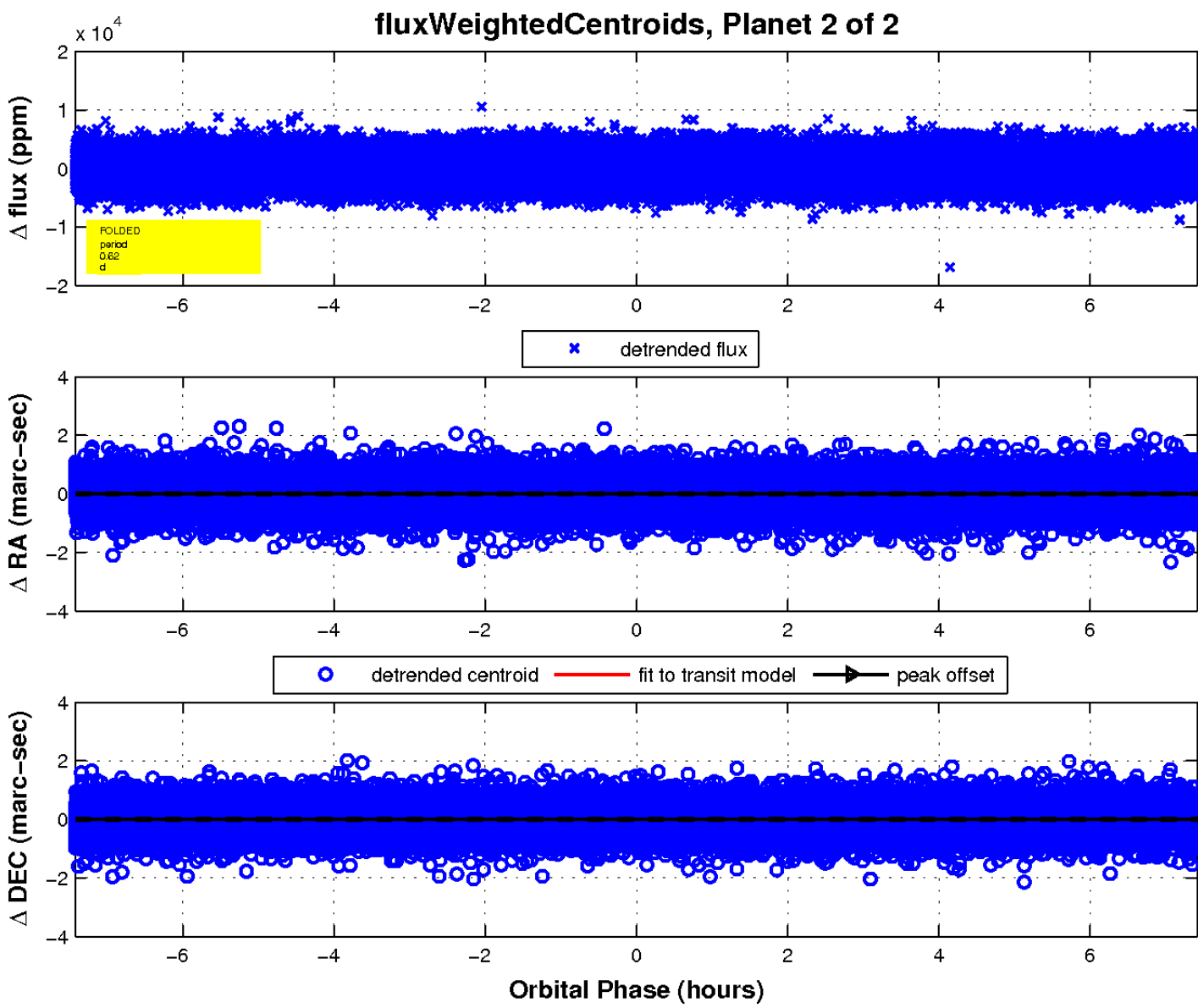
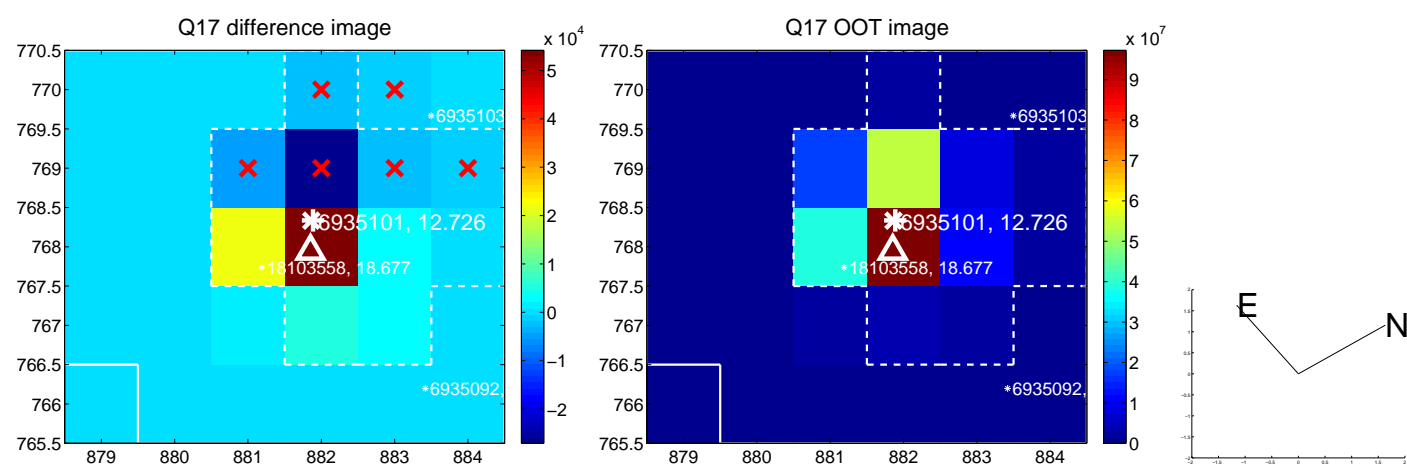
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

