

KIC 003242039

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})
003242039-01	OBS	No	1.431010	132.856376	42.8	5.645	8.2	9.2	1.17	6708	1.19	3652.65
003242039-02	OBS	No	134.602496	176.866999	6.7	1.416	7.6	0.1	1.17	6708	0.33	8.54

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003242039-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
003242039-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_SKYE_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—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 003242039-01

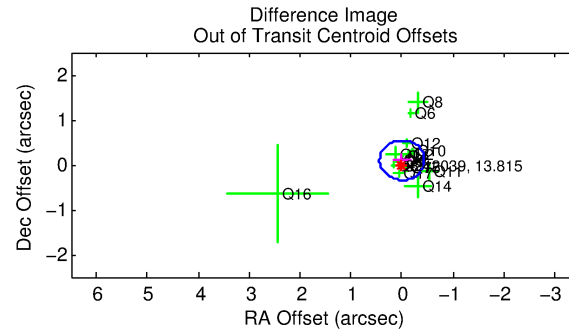
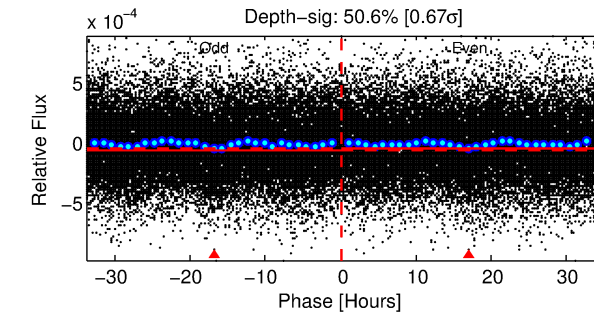
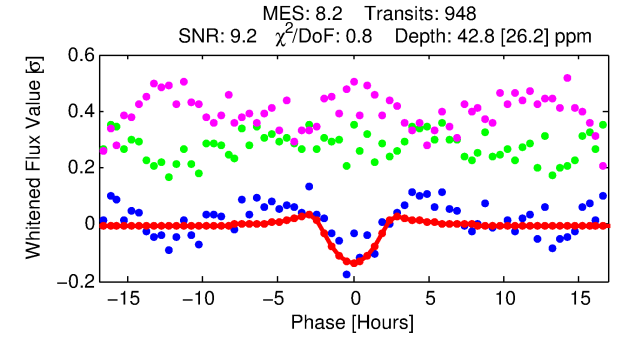
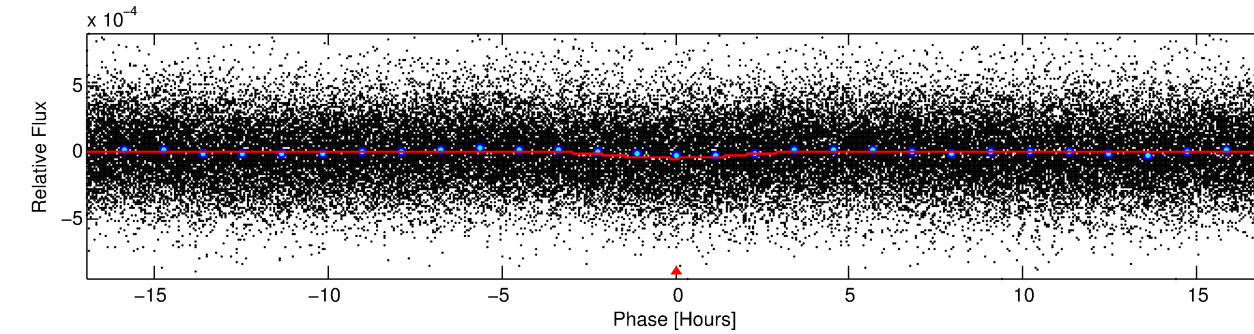
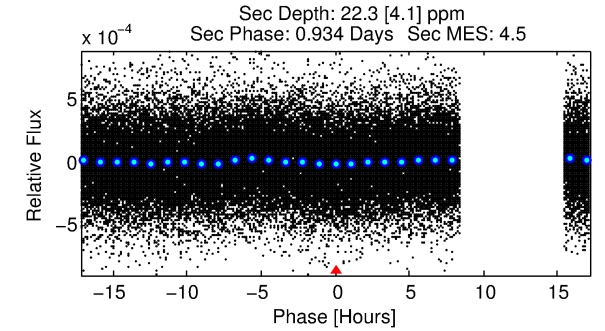
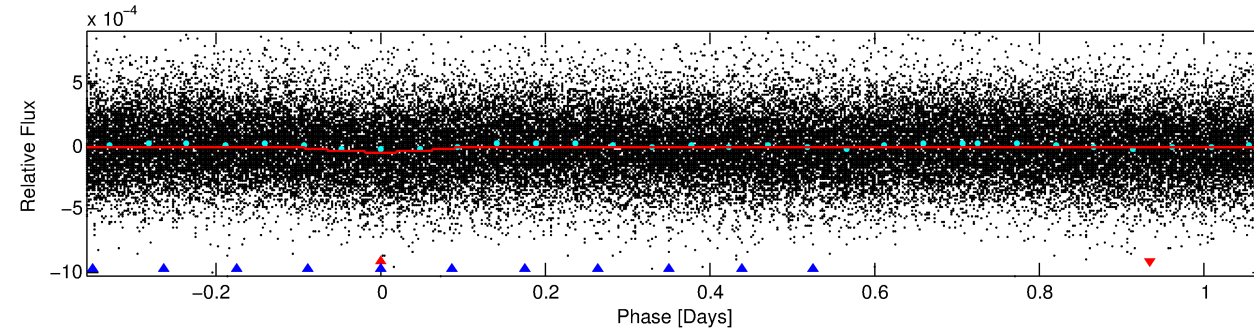
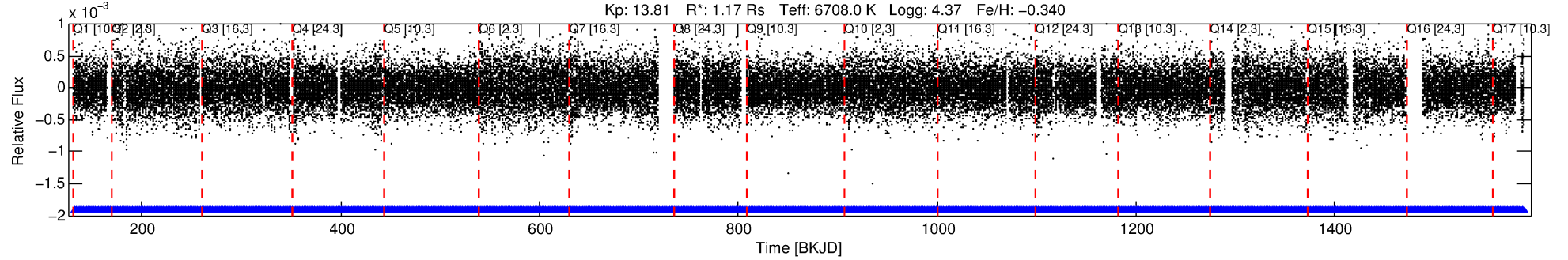
No Significant Match Found

DV One-Page Summary

KIC: 3242039 Candidate: 1 of 2 Period: 1.431 d

KOI: K04969 Corr: No Ephemeris Match

Kp: 13.81 R*: 1.17 Rs Teff: 6708.0 K Logg: 4.37 Fe/H: -0.340



DV Fit Results:

Period = 1.43101 [0.00002] d
Epoch = 132.8564 [0.0082] BKJD
Rp/R* = 0.0093 [0.0055]
a/R* = 1.05 [0.03]
b = 0.99 [0.01]
Seff = 3652.65 [808.18]
Teff = 1982 [110] K
Rp = 1.19 [0.73] Re
a = 0.0261 [0.0037] AU
Ag = 5.98 [7.34] [0.68σ]
Teffp = 4793 [1450] K [1.93σ]

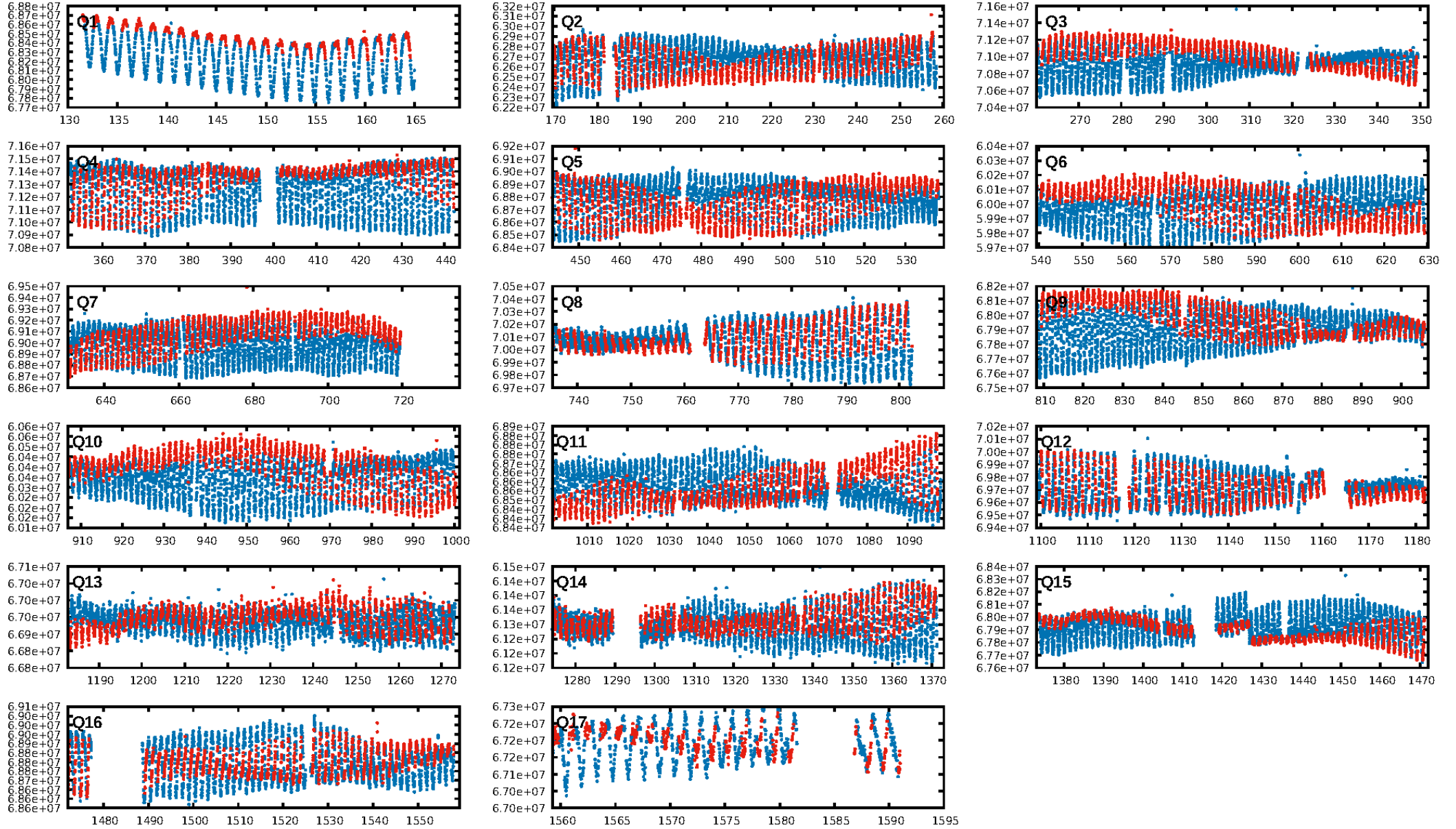
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [549.13σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.66e-12
RollingBand-fgt: 1.00 [904/904]
GhostDiagnostic-chr: 1.273
Centroid-sig: 13.5%
Centroid-so: 0.991 arcsec [1.14σ]
OotOffset-rm: 0.097 arcsec [0.66σ]
KicOffset-rm: 0.162 arcsec [1.34σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.31 [5/16]
DiffImageOverlap-fno: 1.00 [17/17]

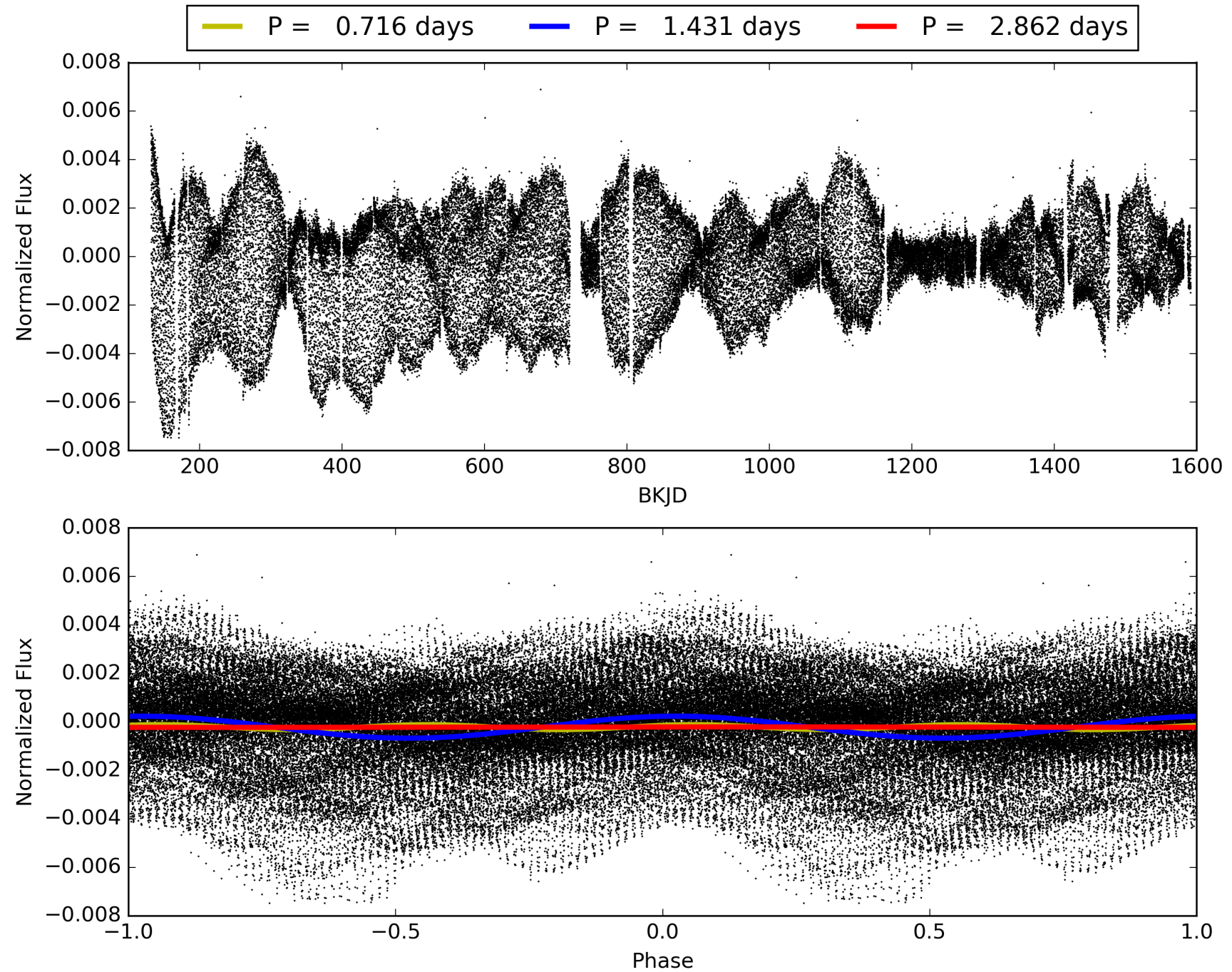
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 02:40:28 Z

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

TCE 003242039-01, PDC Light Curves

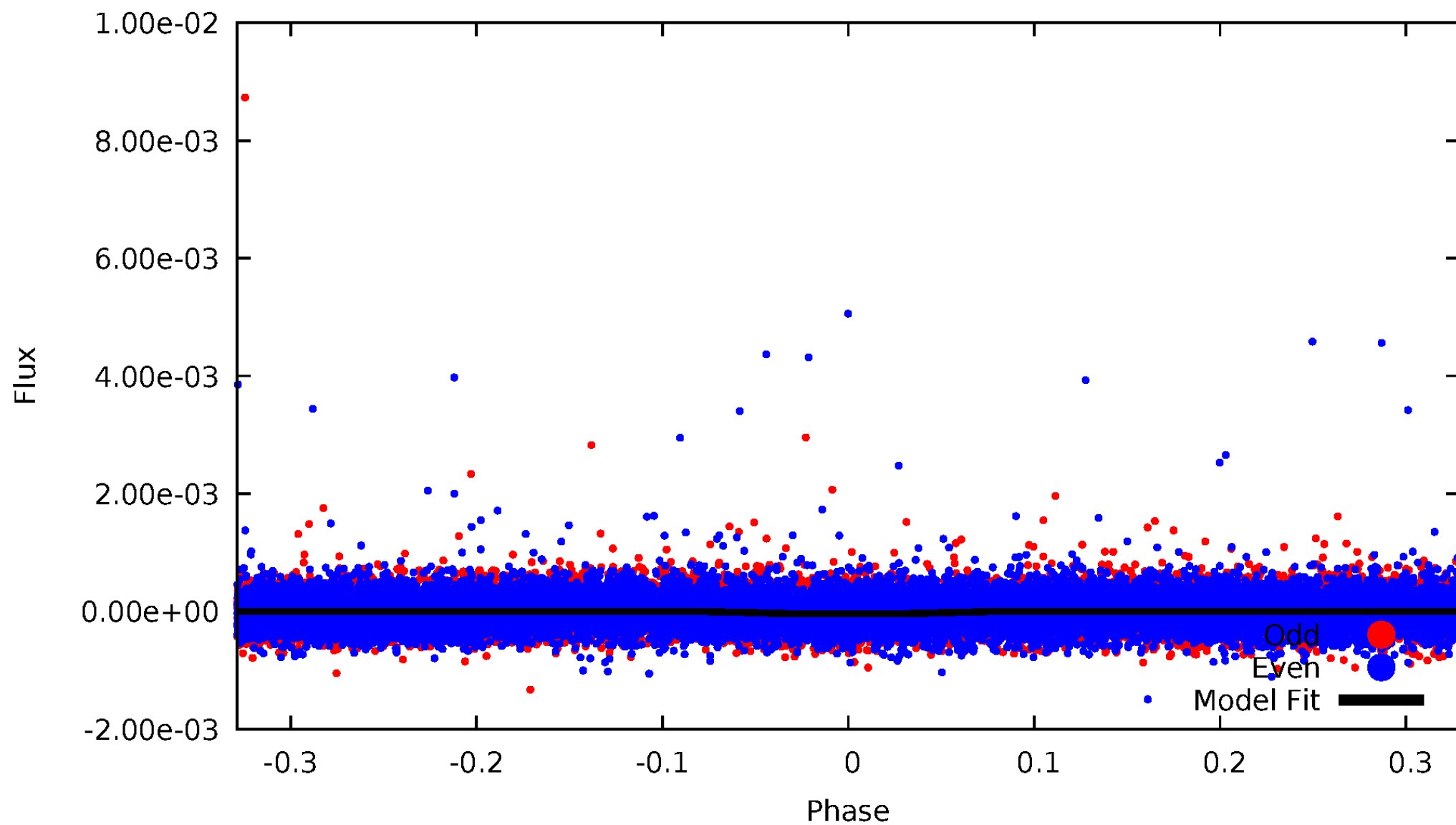


TCE 003242039-01



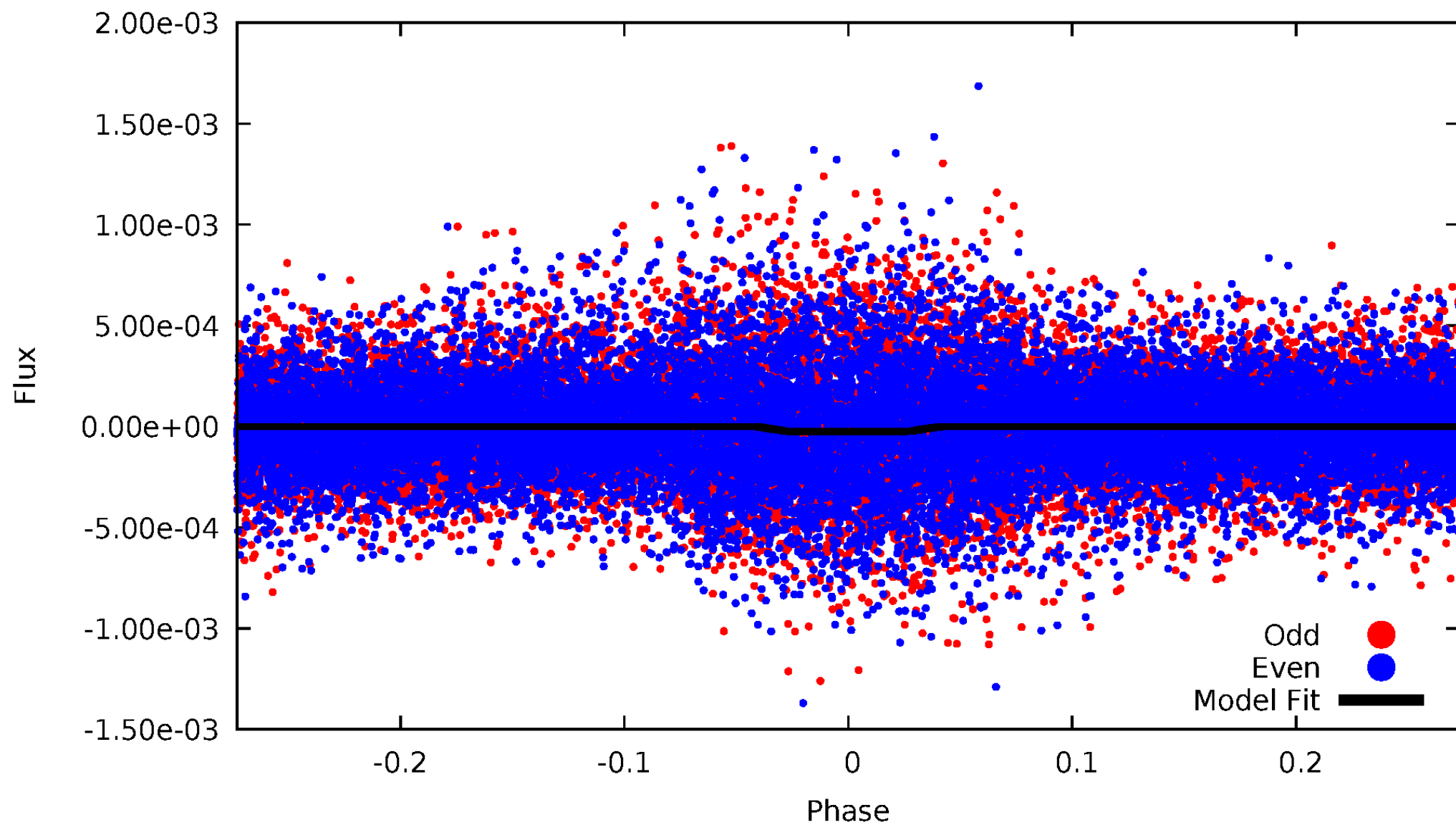
DV Odd/Even

TCE 003242039-01

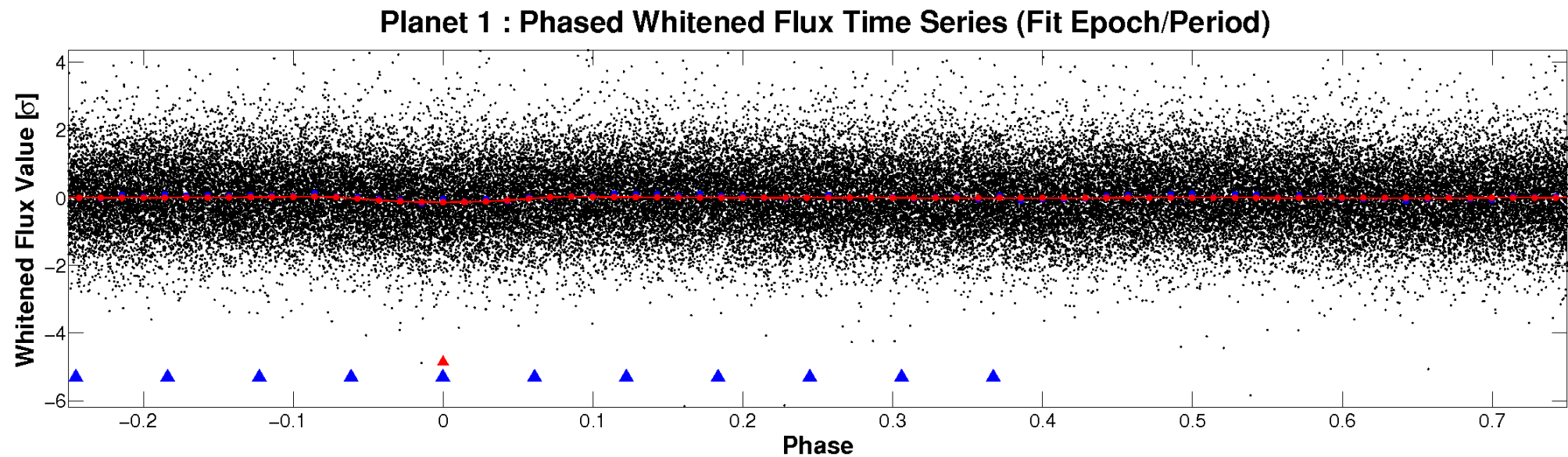
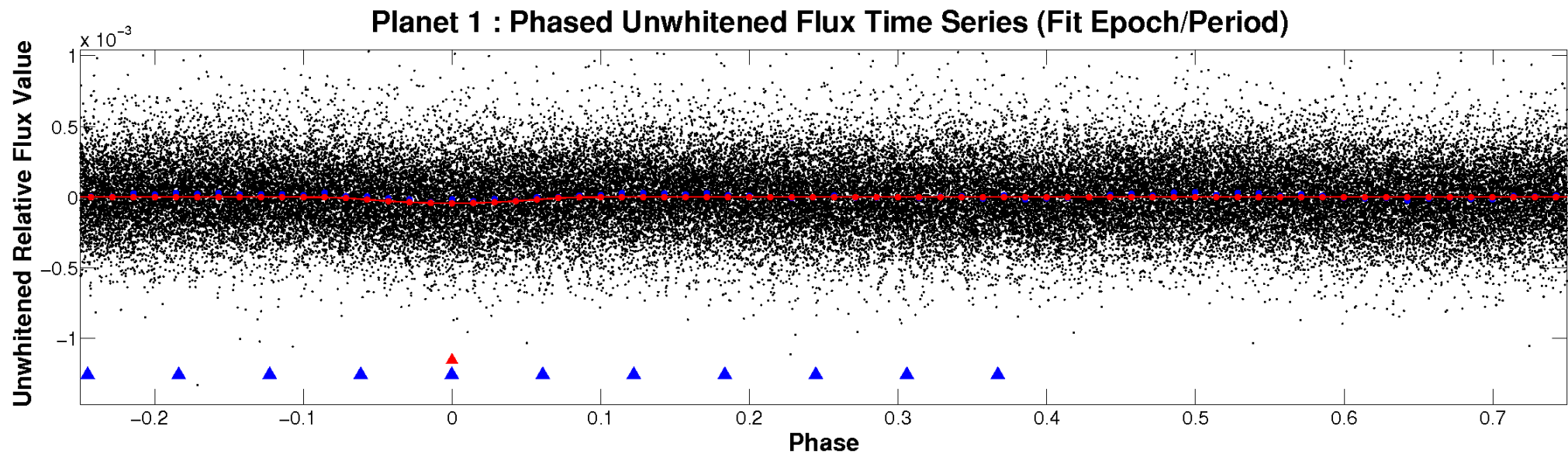


ALT Odd/Even

TCE 003242039-01

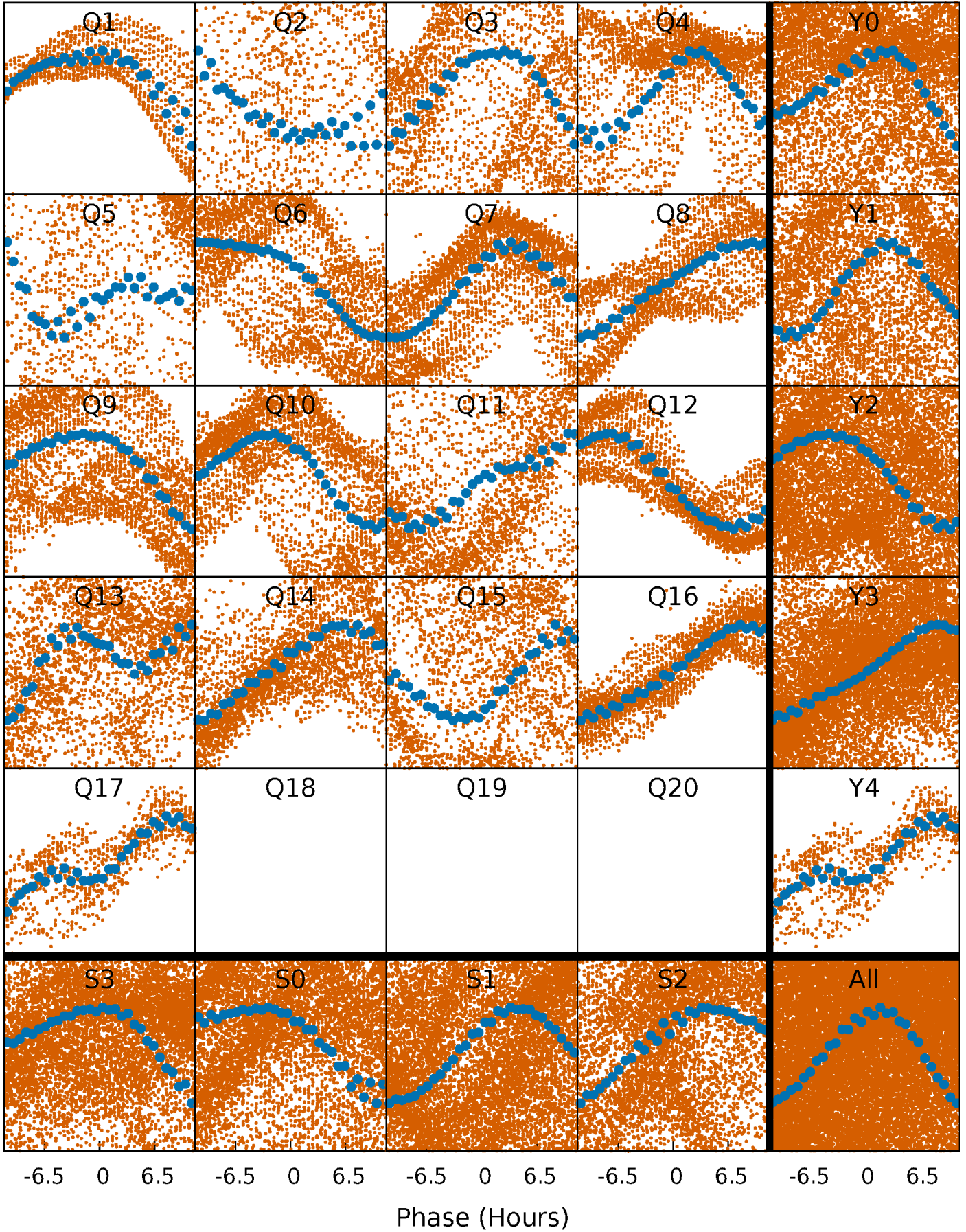


Non-Whitened Vs. Whitened Light Curve



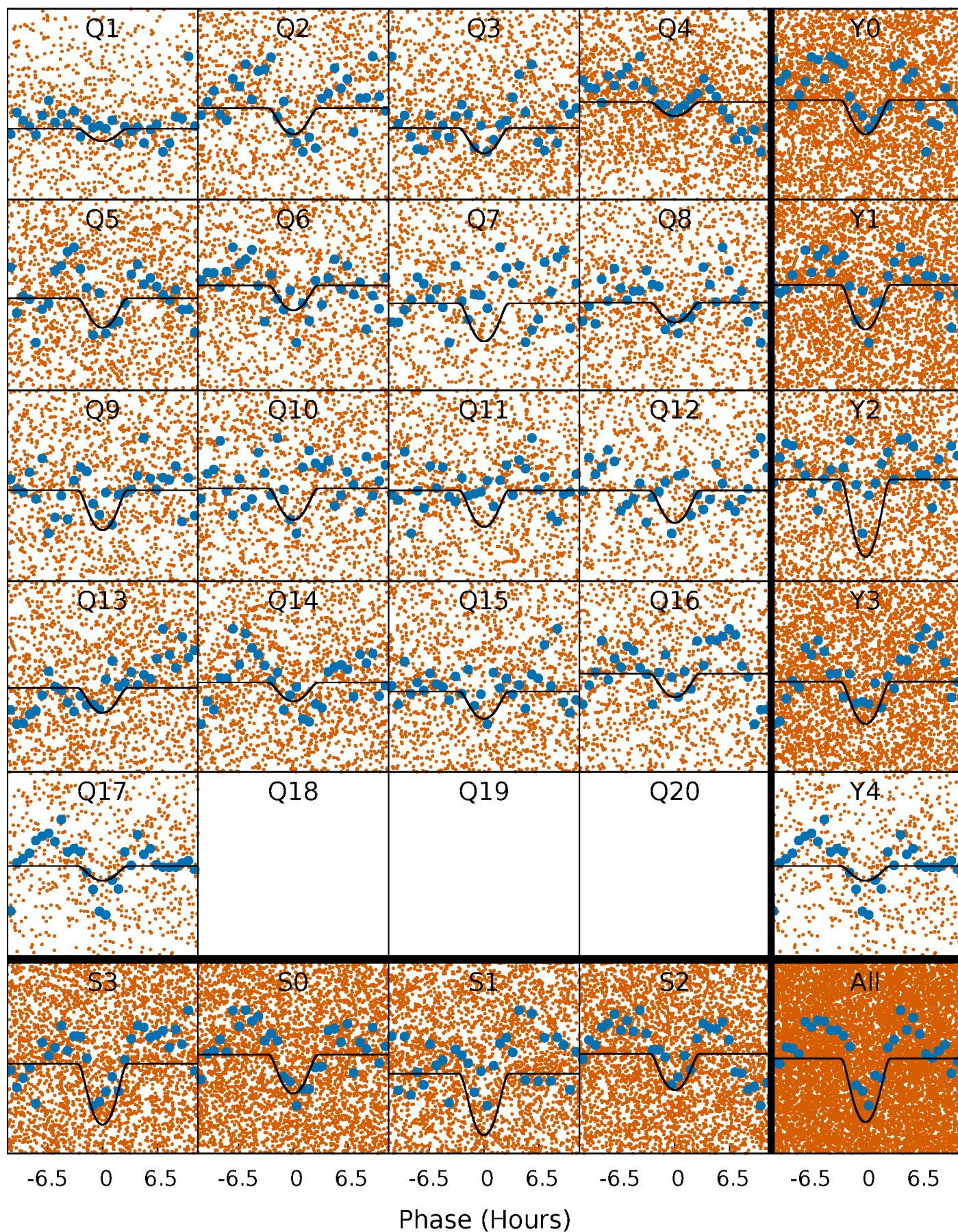
PDC Quarter-Phased Transit Curves

TCE 003242039-01 P= 1.431009 Days $T_0=132.856376$ (BKJD)



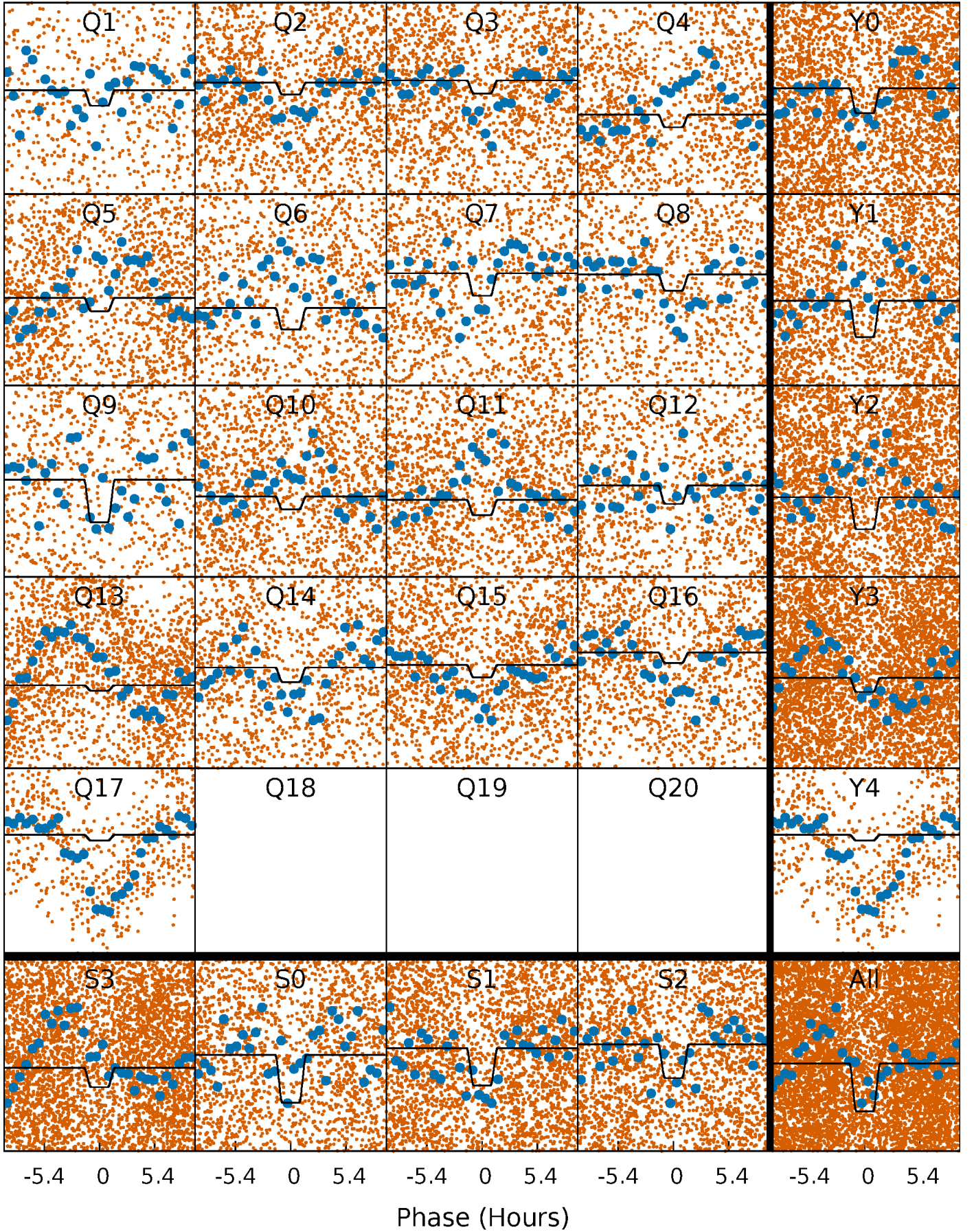
DV Quarter-Phased Transit Curves

TCE 003242039-01 P= 1.431009 Days $T_0=132.856376$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

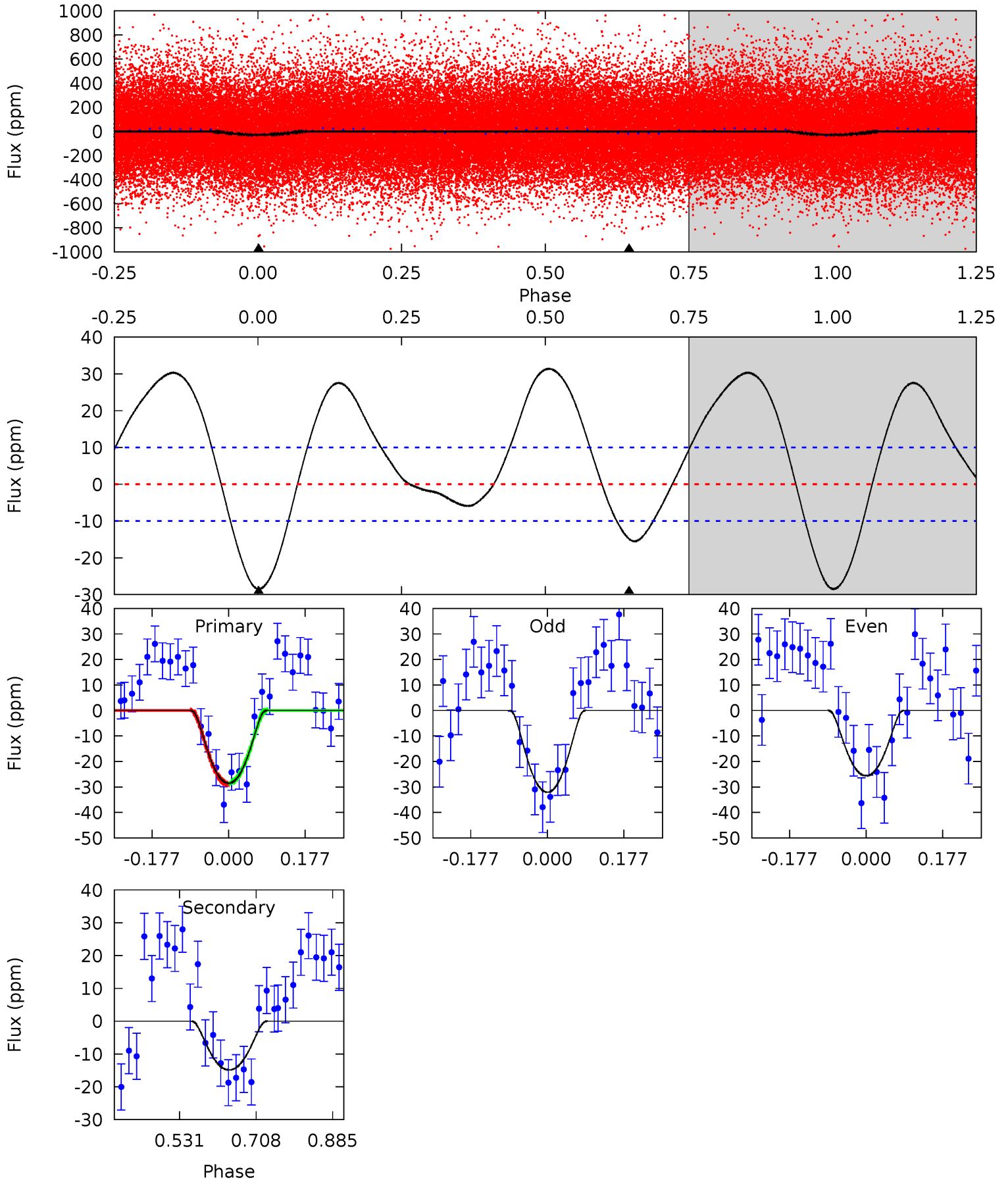
TCE 003242039-01 P= 1.430987 Days $T_0=132.859319$ (BKJD)



DV Model-Shift Uniqueness Test

003242039-01, P = 1.431009 Days, E = 131.425367 Days

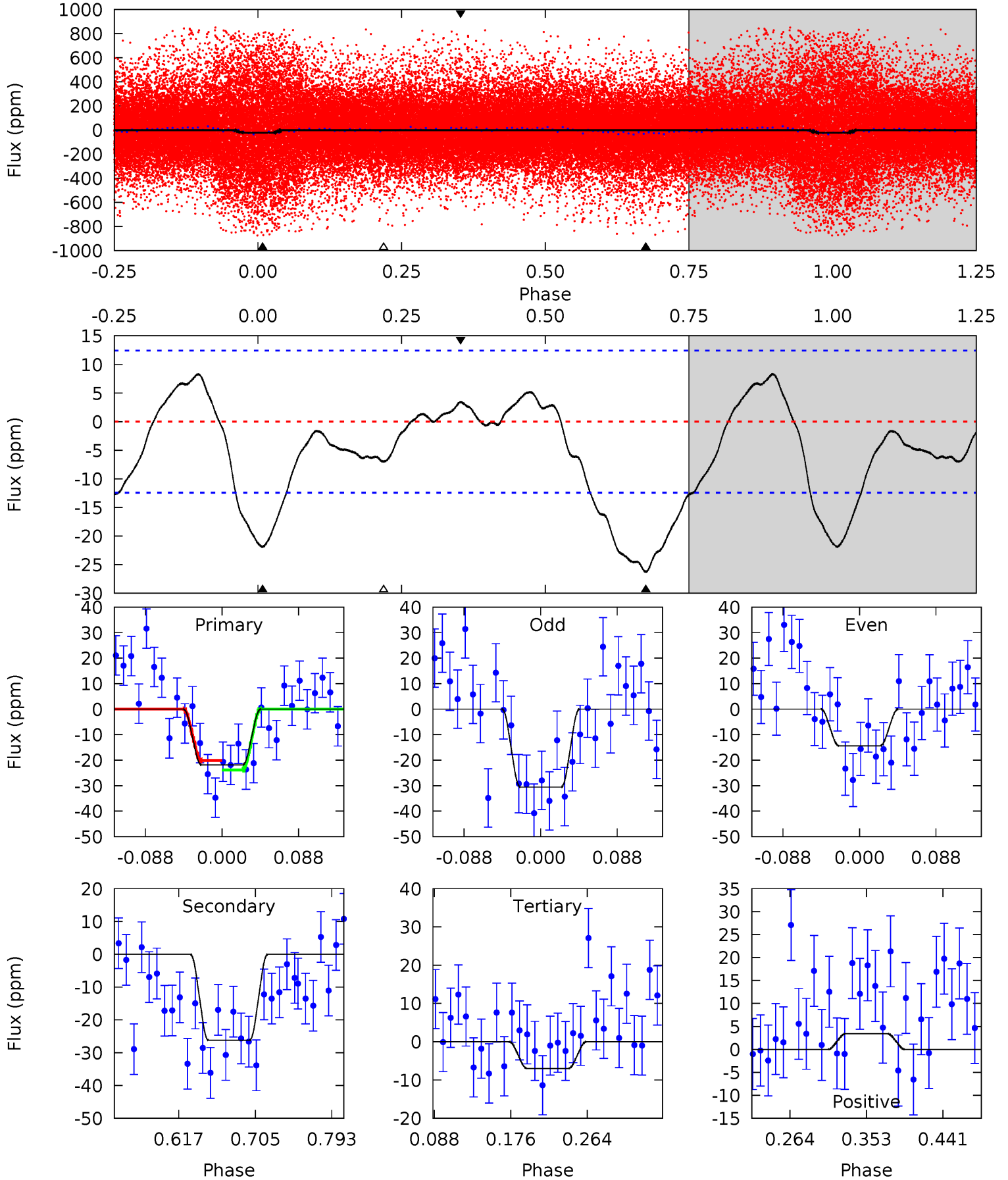
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.7	6.61	0	0	4.44	1.35	3.65	12.7	12.7	6.61	6.61	1.43	0.74	0.52	0



Alt Model-Shift Uniqueness Test

003242039-01, P = 1.430987 Days, E = 131.428332 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.10	9.71	2.58	1.27	4.59	1.71	1.81	5.52	6.83	7.13	8.44	2.98	0.55	0.24	0.68



Stellar Parameters For KIC 003242039

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6708^{+69}_{-1}	$4.365^{+0.040}_{-0.120}$	$-0.340^{+0.150}_{-0.150}$	$1.173^{+0.189}_{-0.081}$	$1.170^{+0.074}_{-0.082}$	$1.020^{+0.153}_{-0.369}$
	+1%/-0%	+1%/-3%	+44%/-44%	+16%/-7%	+6%/-7%	+15%/-36%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 003242039-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-15 ± 2	$1.23^{+0.70}_{-0.63}$	2778^{+112}_{-87}	4374^{+1751}_{-740}	$3.631^{+12.201}_{-2.114}$
Alt.	-26 ± 3	$0.79^{+0.62}_{-0.48}$	2786^{+99}_{-89}	6058^{+4650}_{-1395}	16^{+79}_{-11}

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

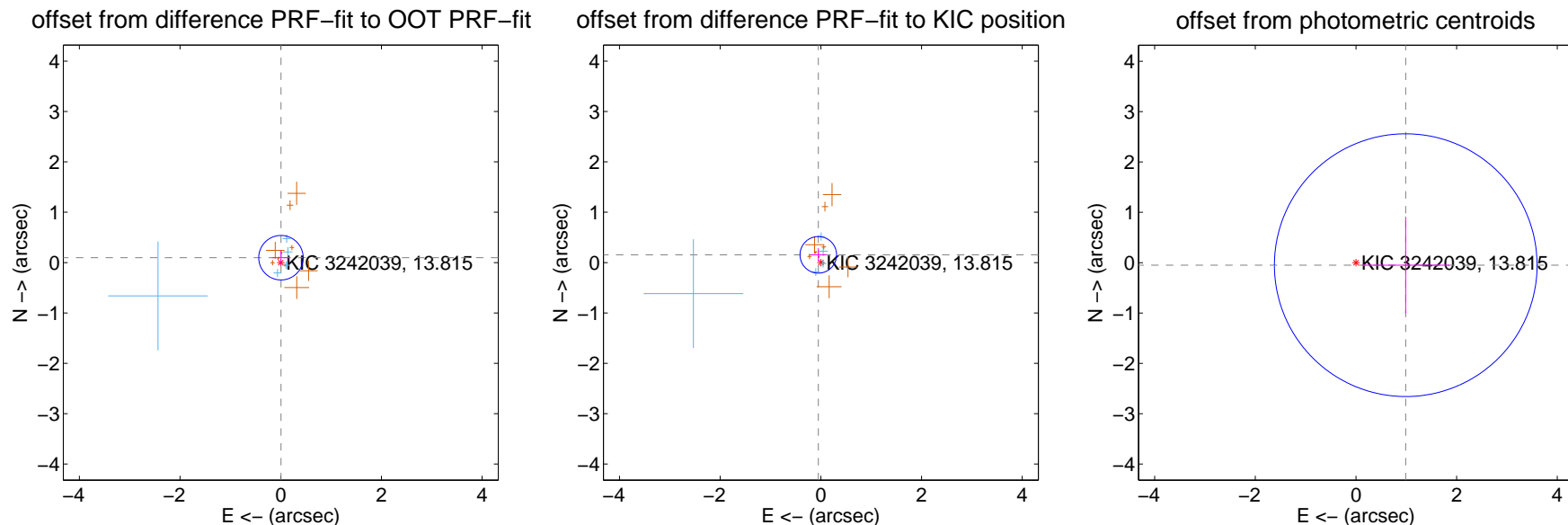
DV Centroid Data

Supplemental centroid analysis for 003242039-01. Kepler magnitude: 13.81. Transit SNR 9.19

There are 5 quarters with good PRF difference image offsets

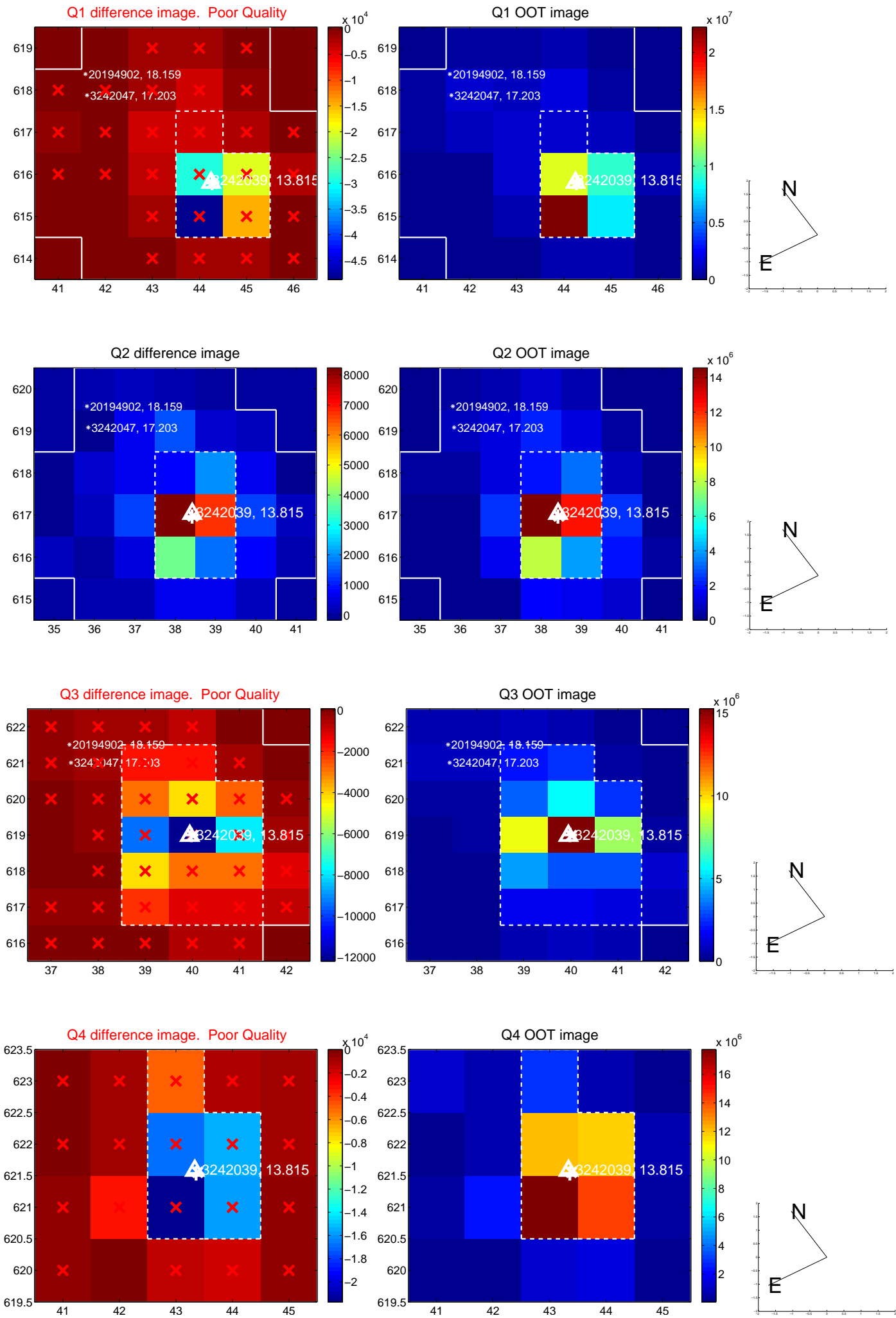
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.097 ± 0.147	0.66	-0.004 ± 0.179	0.097 ± 0.144
PRF-fit source offset from KIC position	0.162 ± 0.121	1.34	0.051 ± 0.154	0.154 ± 0.131
photometric centroid source offset	0.99 ± 0.87	1.14	-0.99 ± 0.87	-0.05 ± 0.96

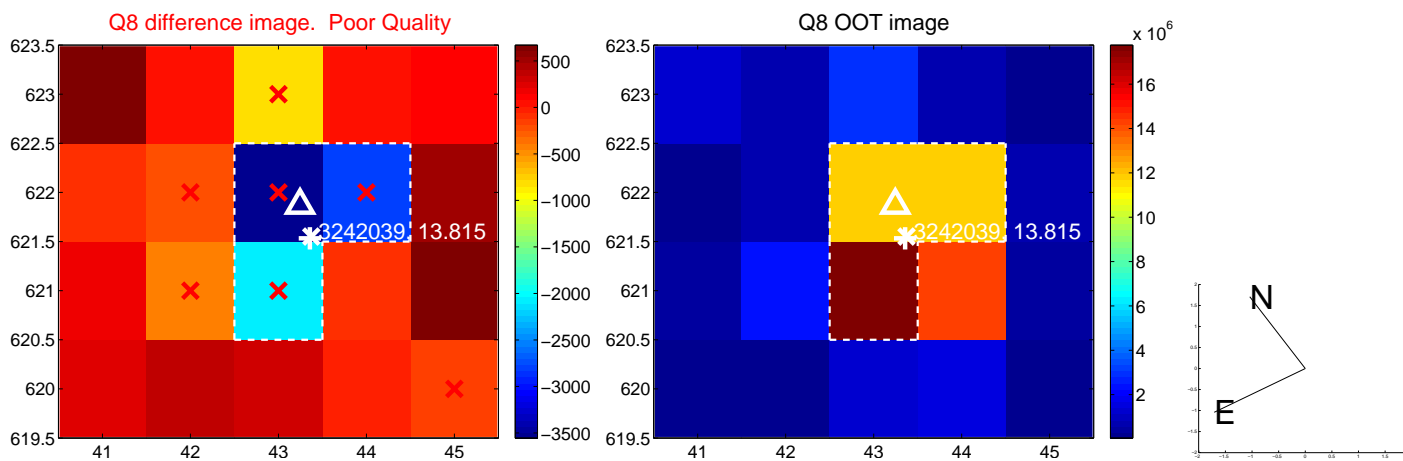
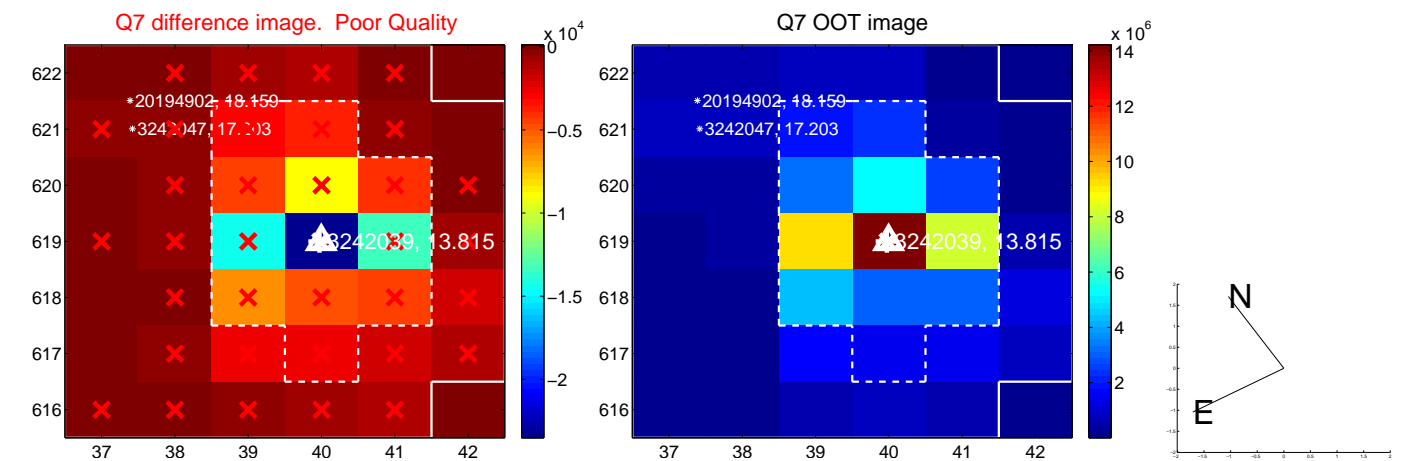
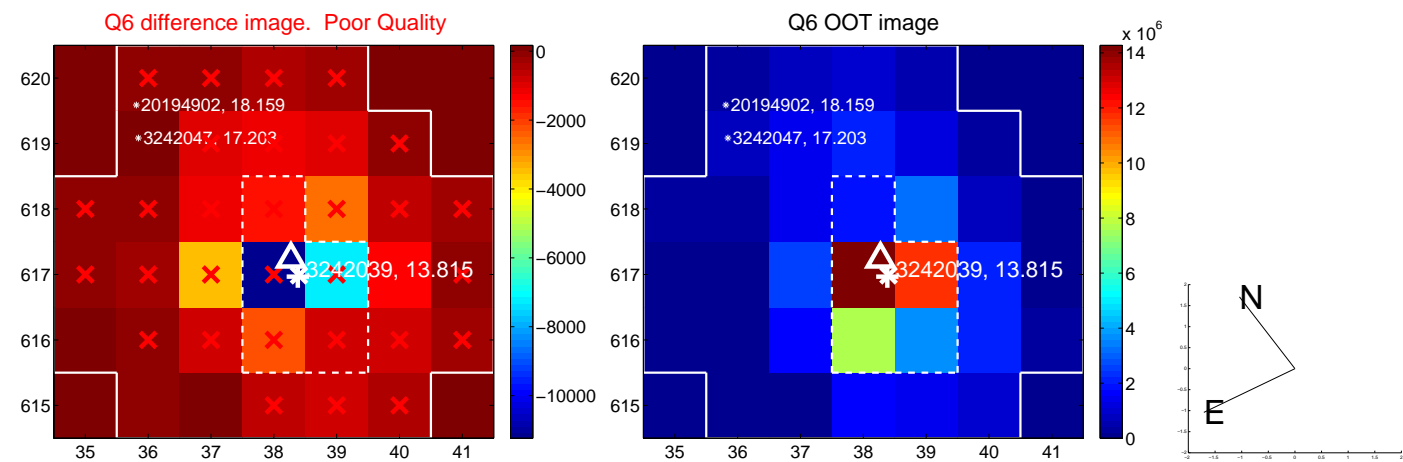
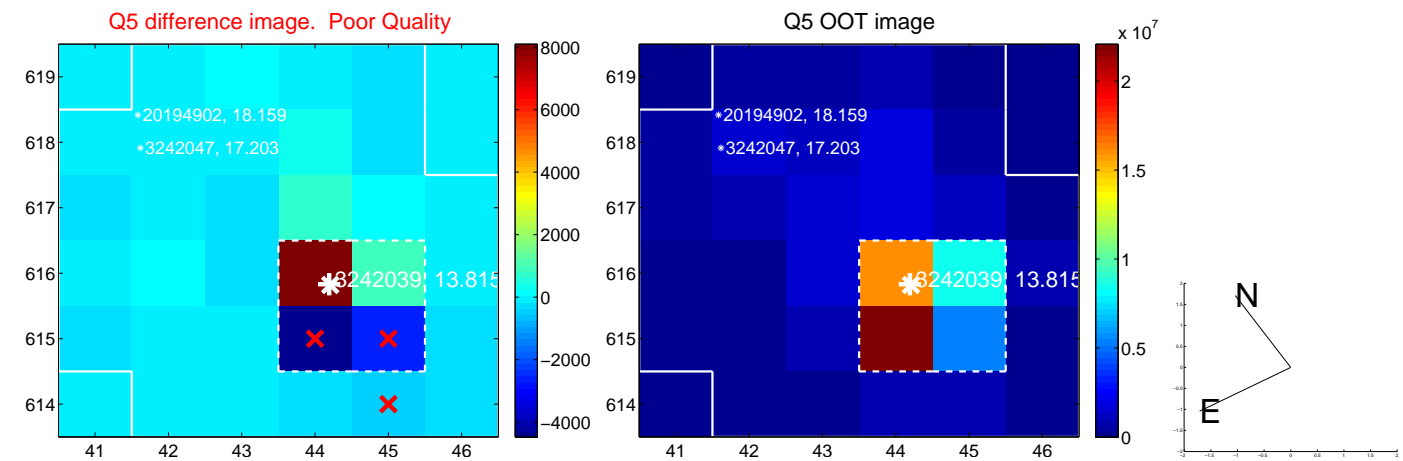


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

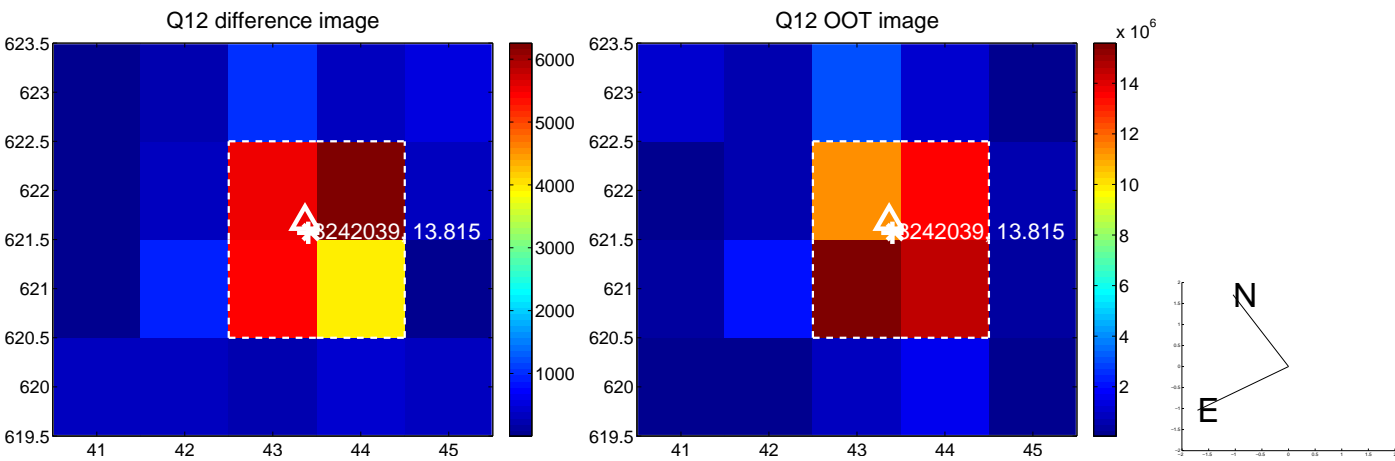
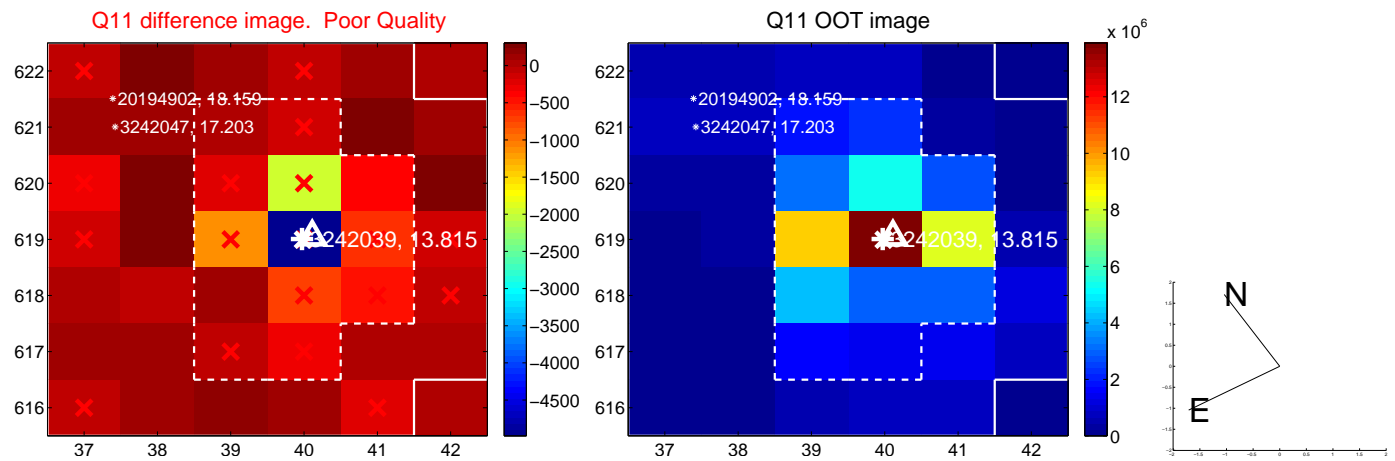
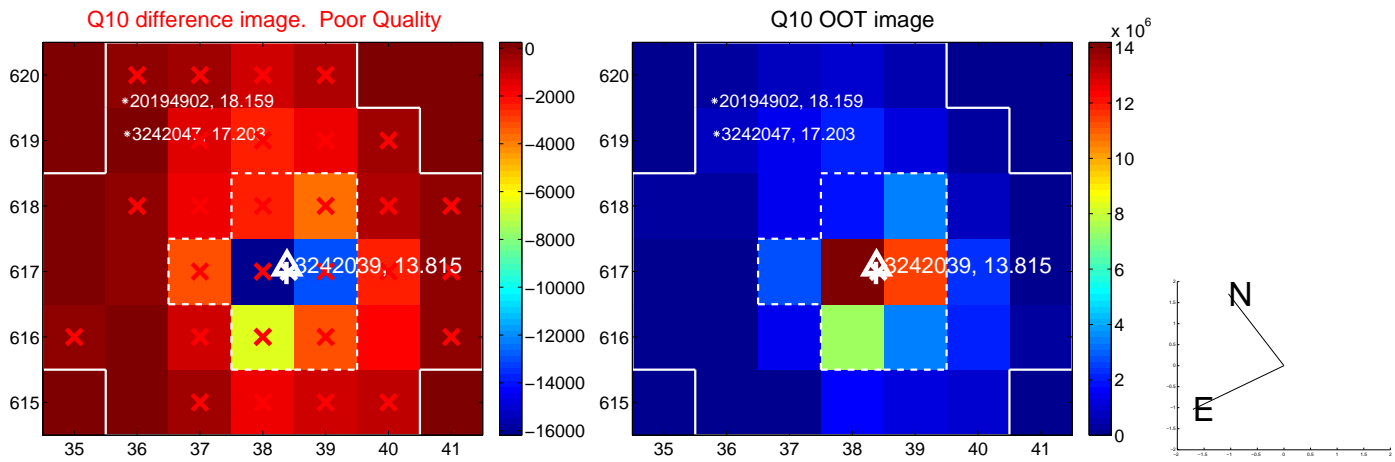
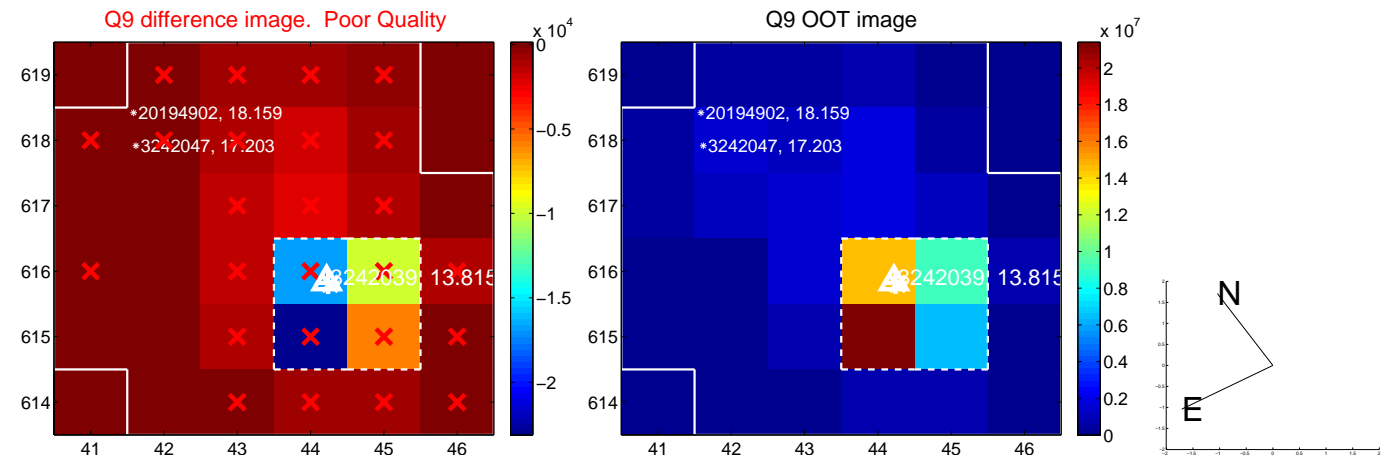
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



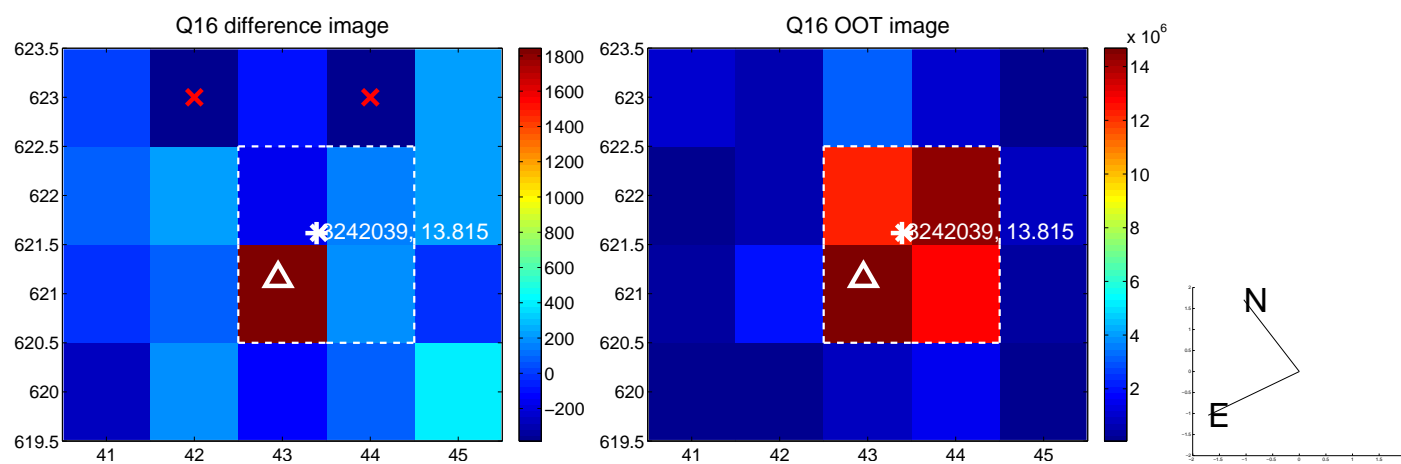
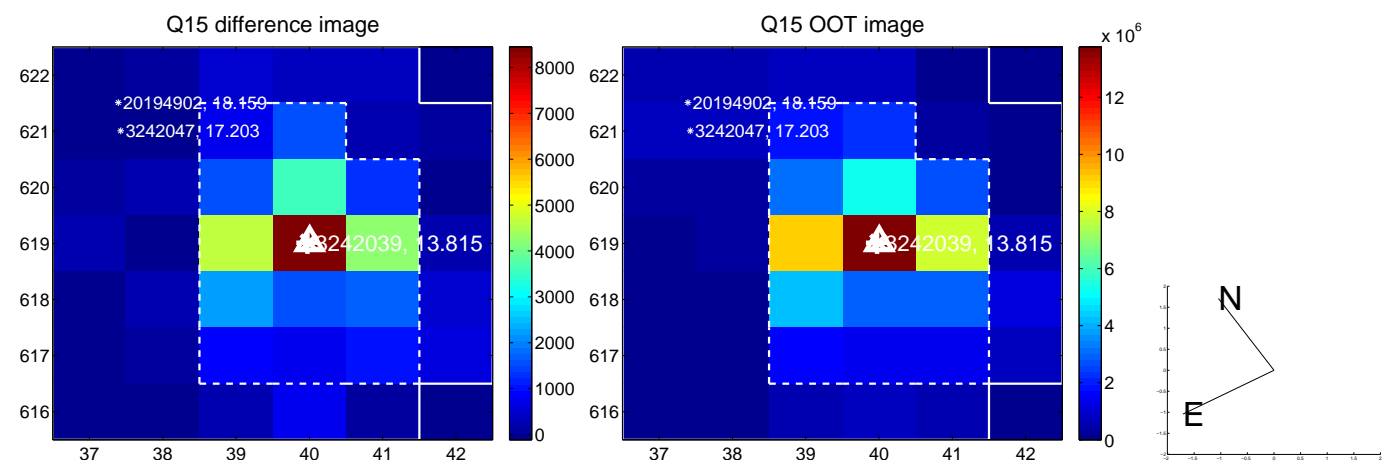
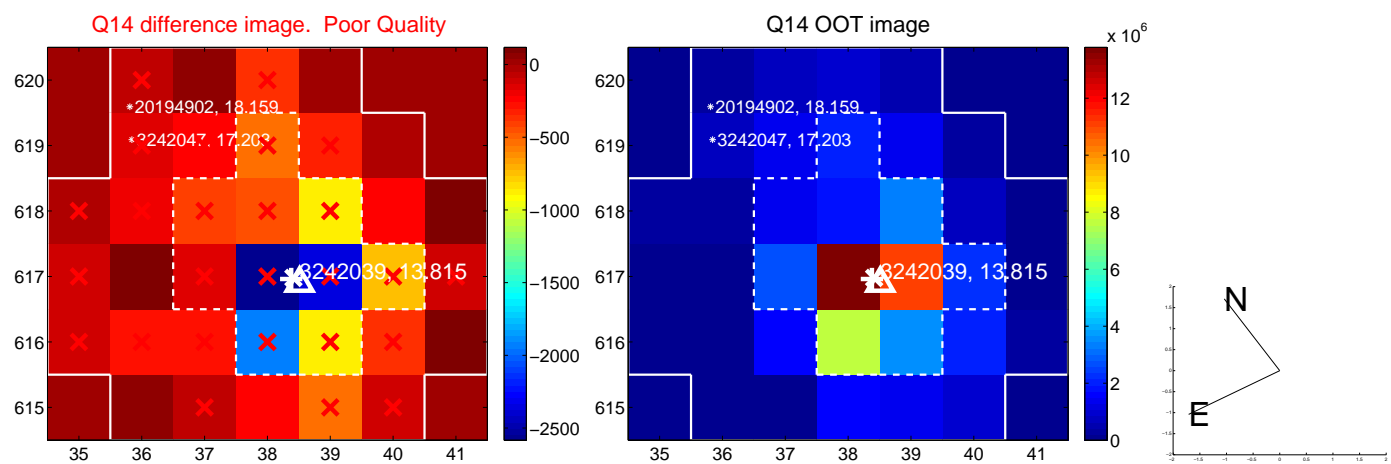
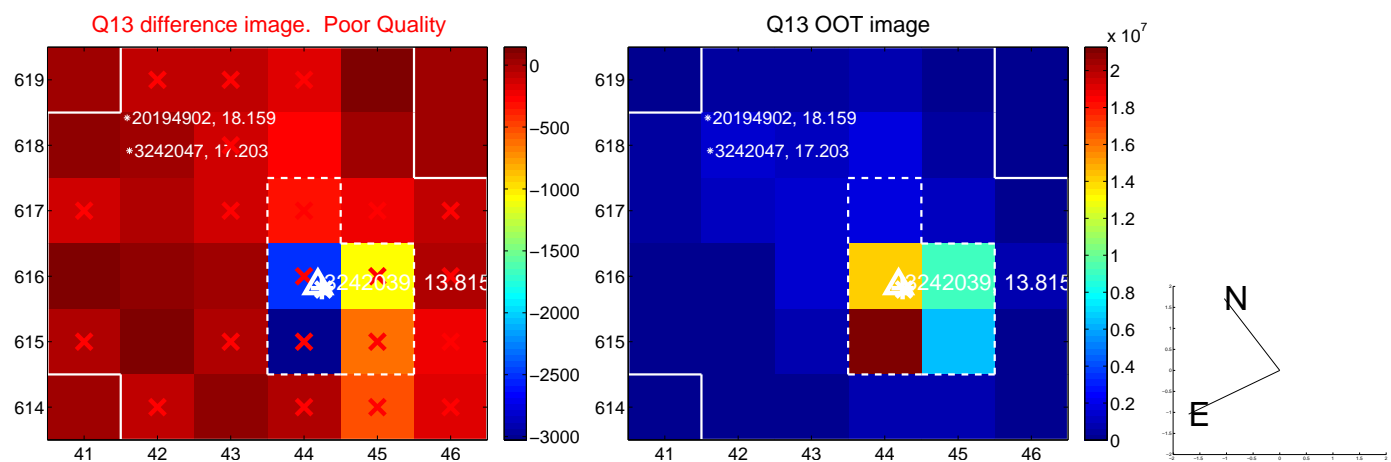
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



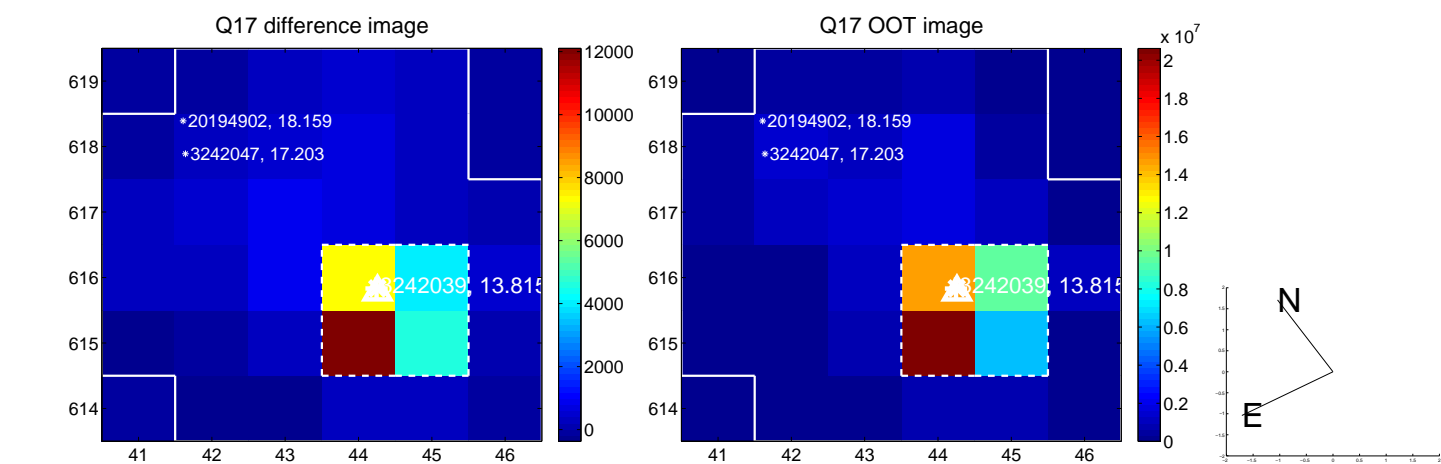
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



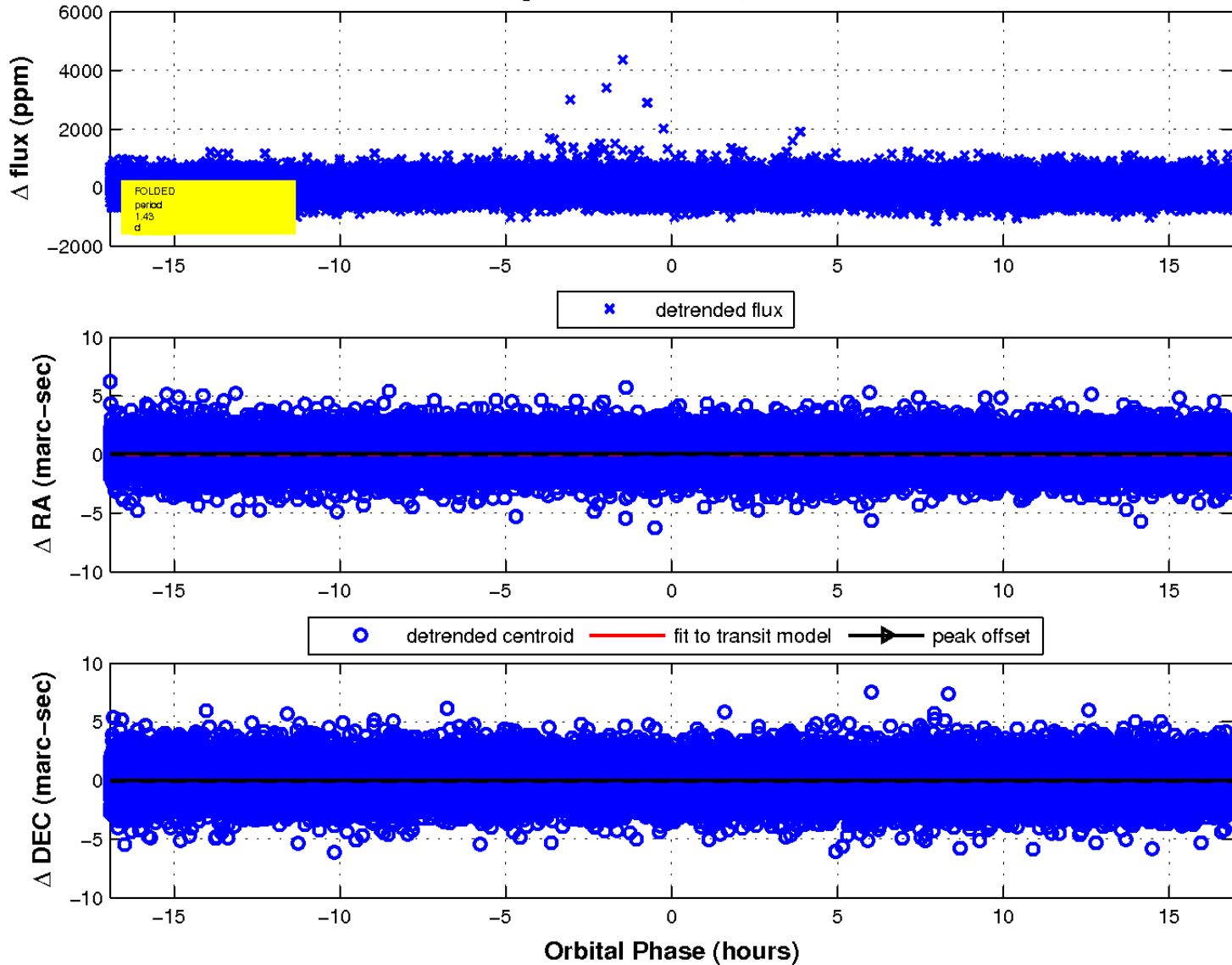
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

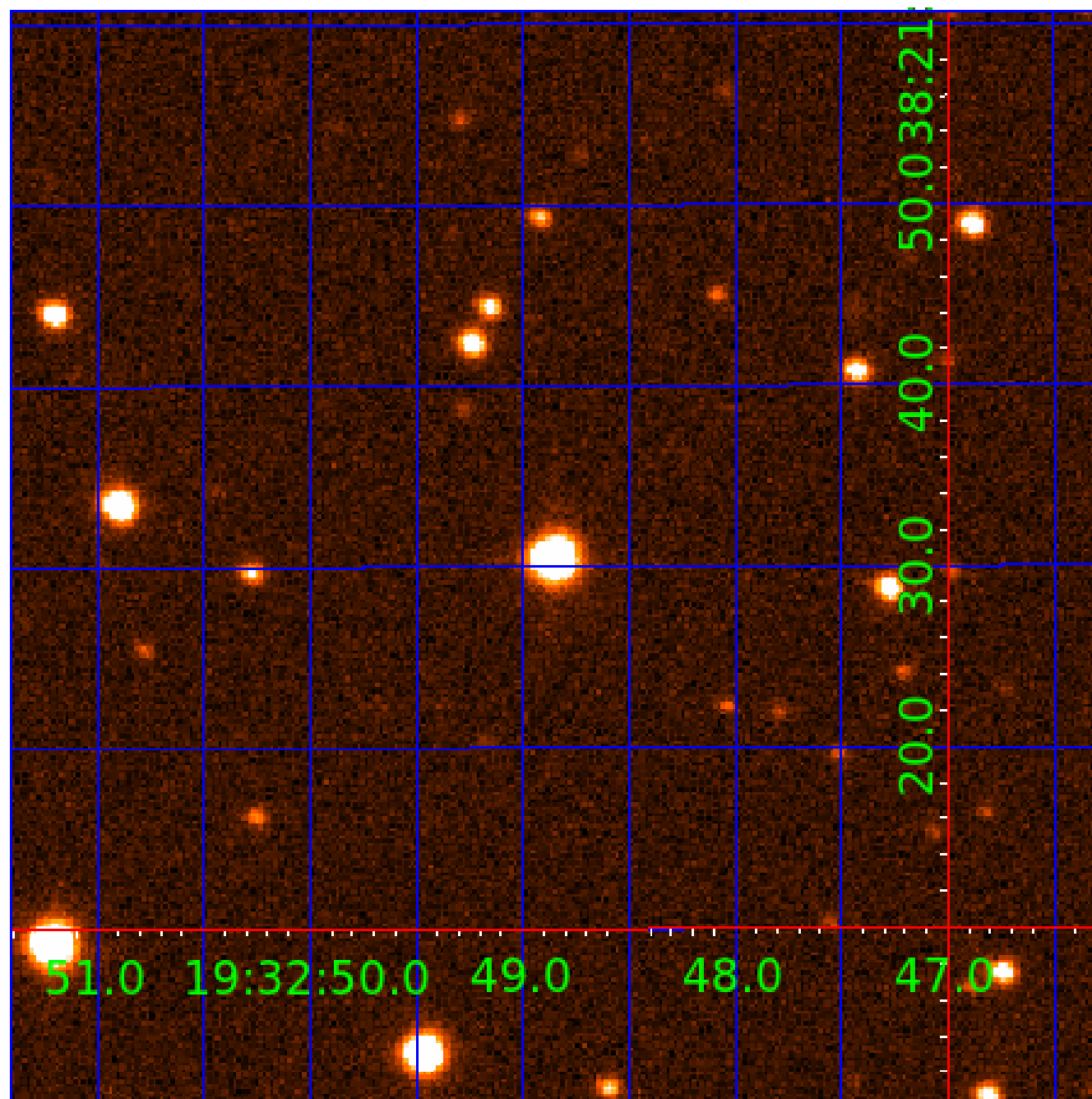


fluxWeightedCentroids, Planet 1 of 2



UKIRT Image

Declination



KIC 003242039

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R_{\star} (R_{\odot})	T_{\star} (K)	R_p (R_{\oplus})	S_p (S_{\oplus})
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Robovetter Results

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003242039-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_SKYE_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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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.

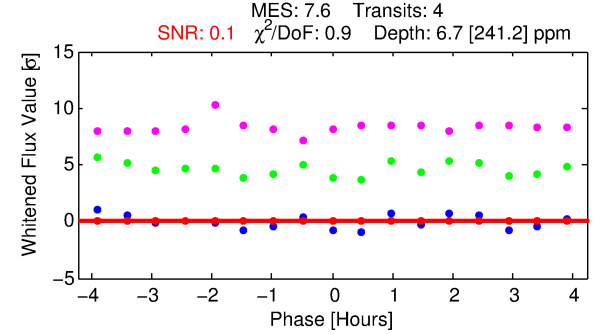
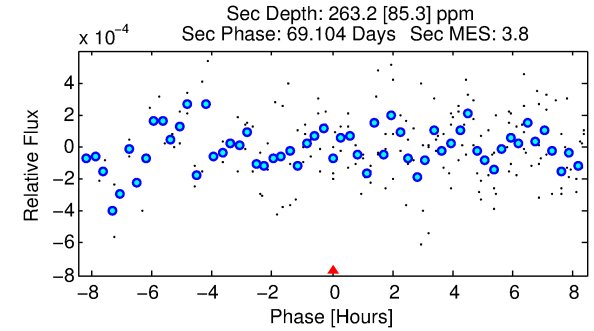
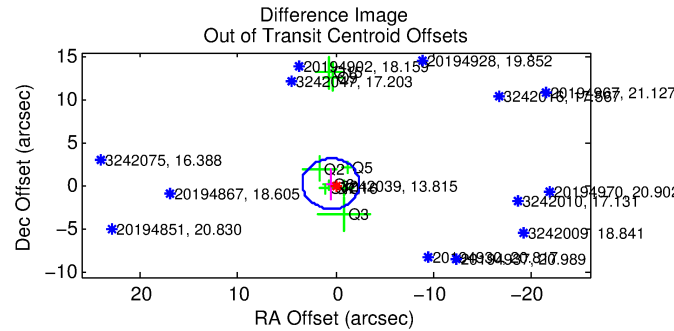
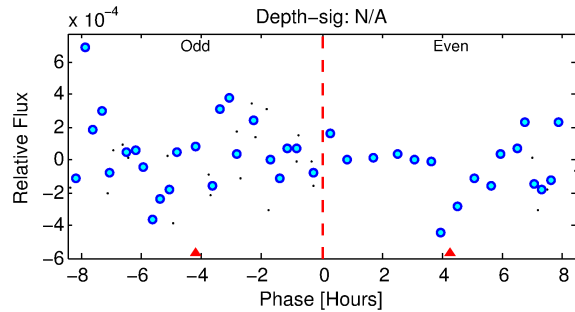
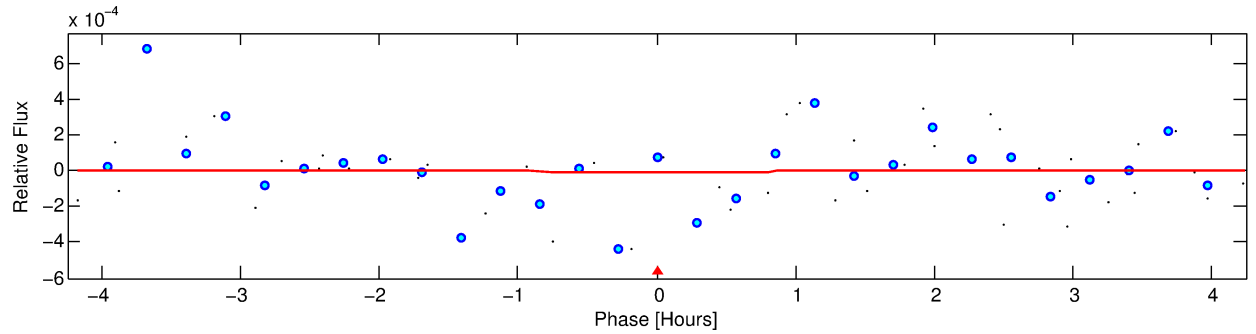
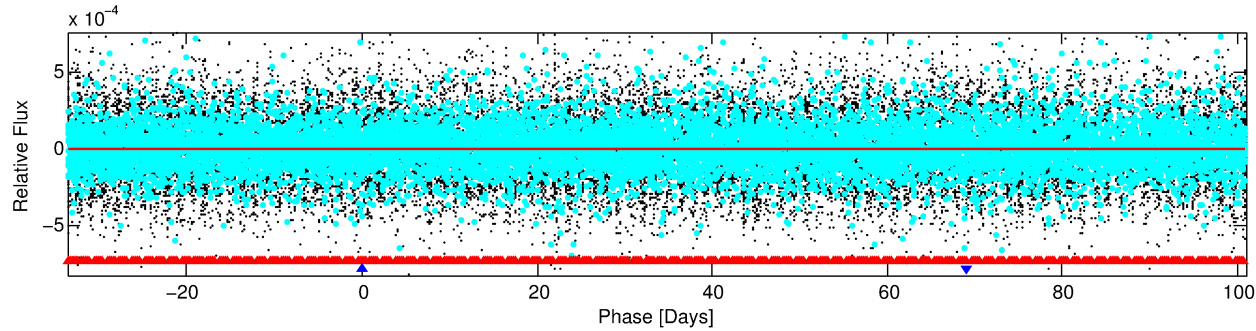
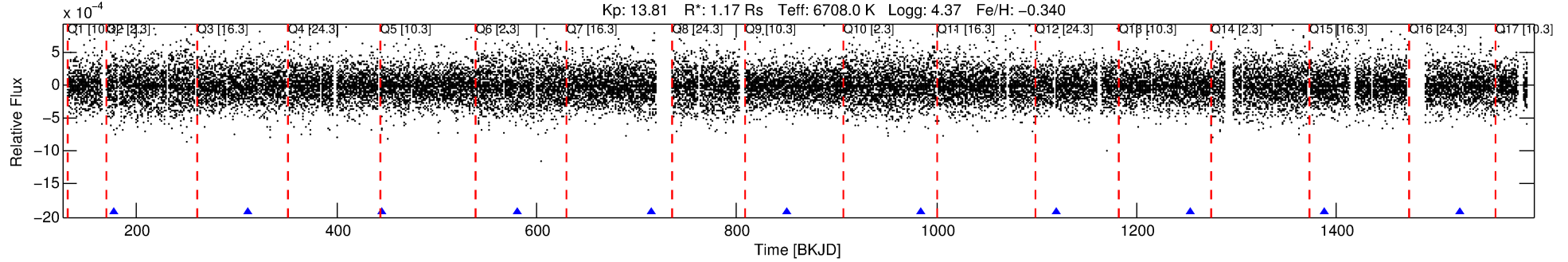
Ephemeris Match Information For 003242039-02

No Significant Match Found

DV One-Page Summary

KIC: 3242039 Candidate: 2 of 2 Period: 134.602 d
KOI: K04969 Corr: No Ephemeris Match

Kp: 13.81 R*: 1.17 Rs Teff: 6708.0 K Logg: 4.37 Fe/H: -0.340



DV Fit Results:

Period = 134.60250 [0.18146] d
Epoch = 176.8670 [1.9294] BKJD
Rp/R* = 0.0026 [0.0873]
a/R* = 462.92 [144799.24]
b = 0.77 [116.78]
Seff = 8.54 [1.89]
Teq = 436 [24] K
Rp = 0.33 [11.17] Re
a = 0.5407 [0.0765] AU
Ag = 382857.10 [25727286.82] [0.01σ]
Teffp = 16764 [281625] K [0.06σ]

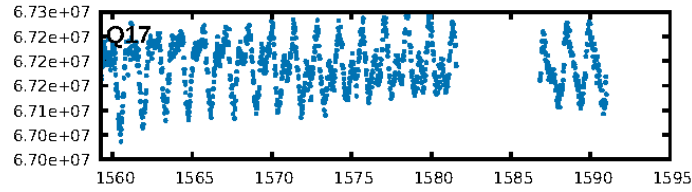
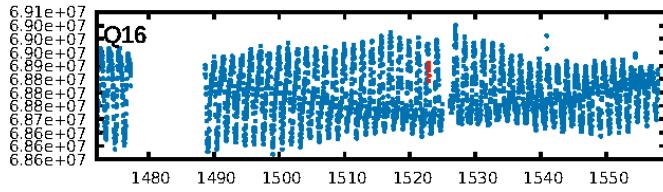
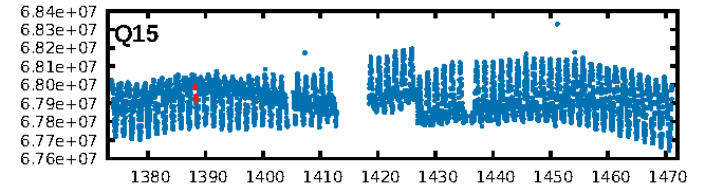
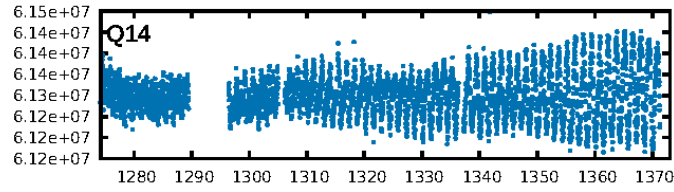
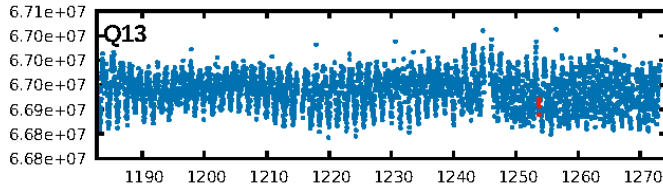
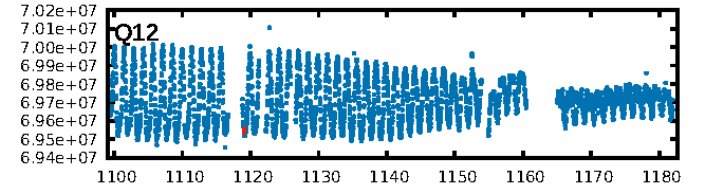
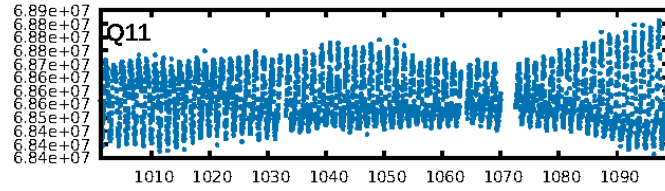
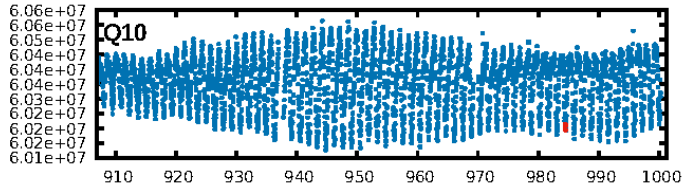
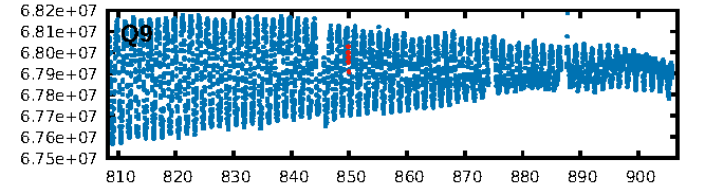
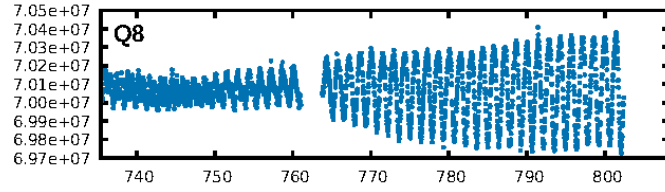
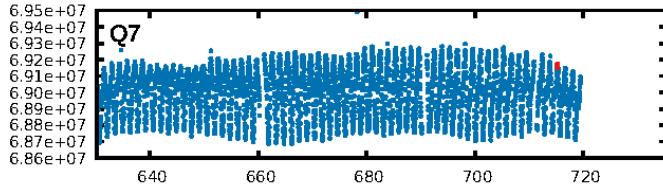
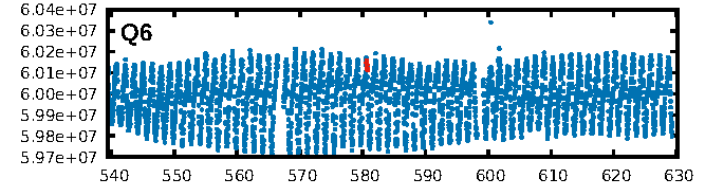
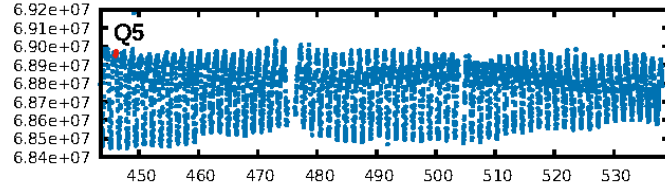
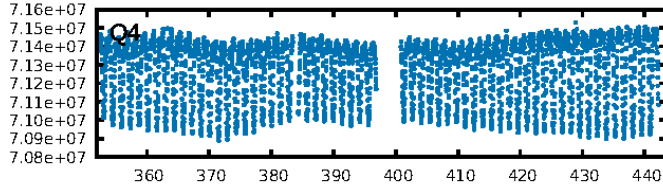
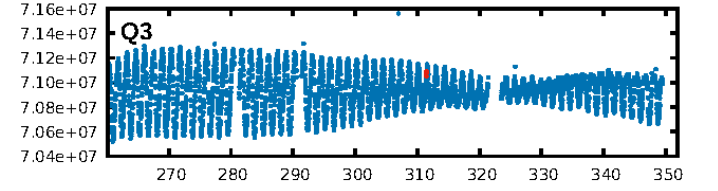
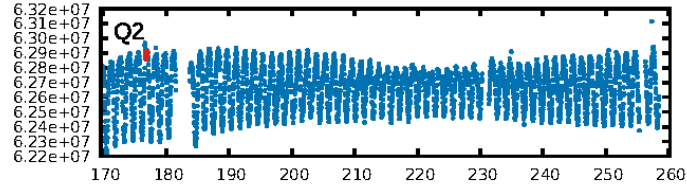
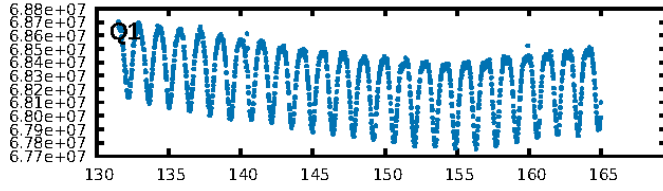
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [549.13σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 28.6%
ModelChiSquareGof-sig: 95.8%
Bootstrap-pfa: 9.13e-11
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 0.9489
Centroid-sig: 51.0%
Centroid-so: 60.401 arcsec [0.72σ]
OotOffset-rm: 0.573 arcsec [0.59σ]
OotOffset-st: 3/3/1/2 [9]
KicOffset-rm: 0.637 arcsec [0.70σ]
KicOffset-st: 3/3/1/2 [9]
DiffImageQuality-fgm: 0.11 [1/9]
DiffImageOverlap-fno: 0.27 [3/11]

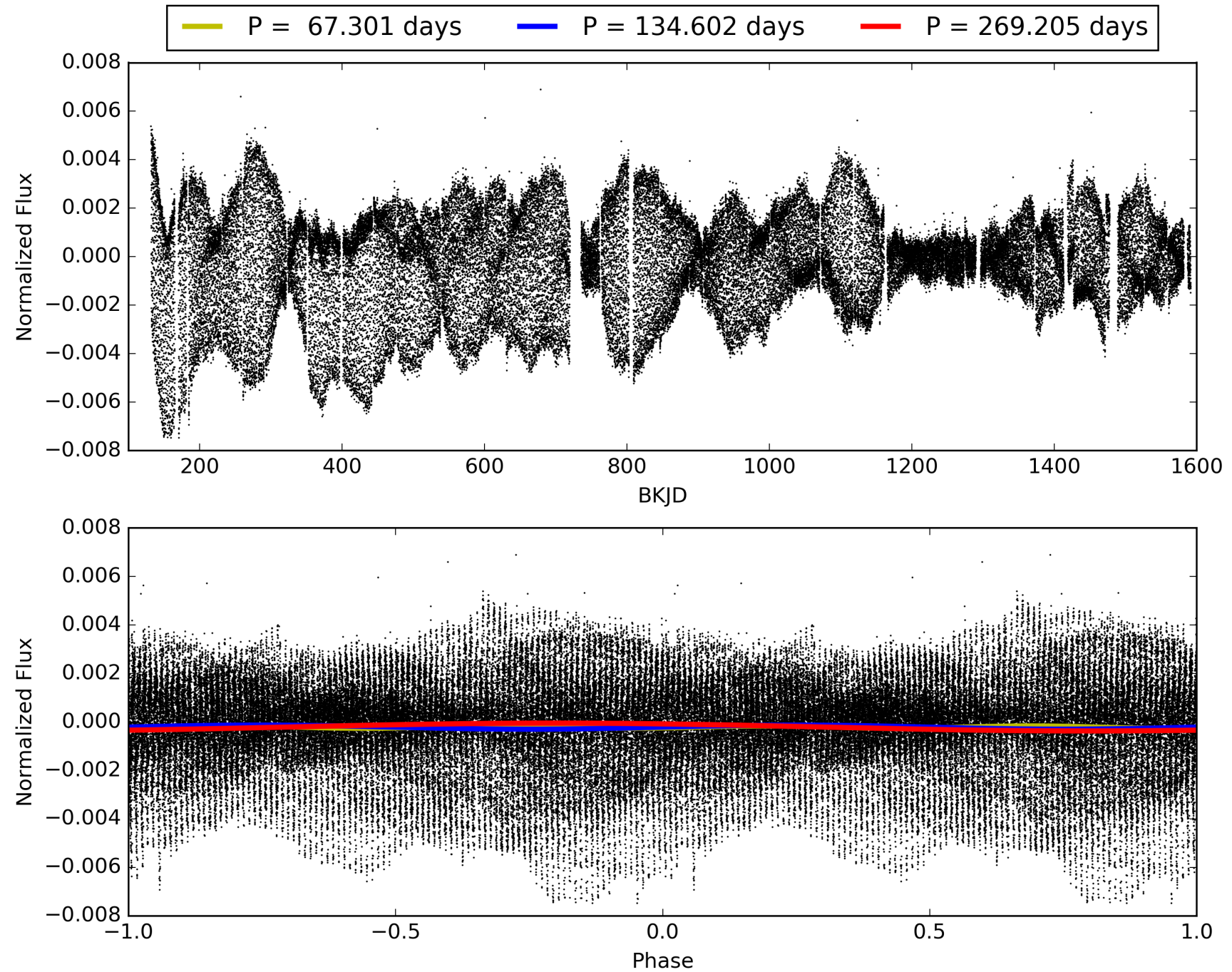
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 02:40:43 Z

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

TCE 003242039-02, PDC Light Curves

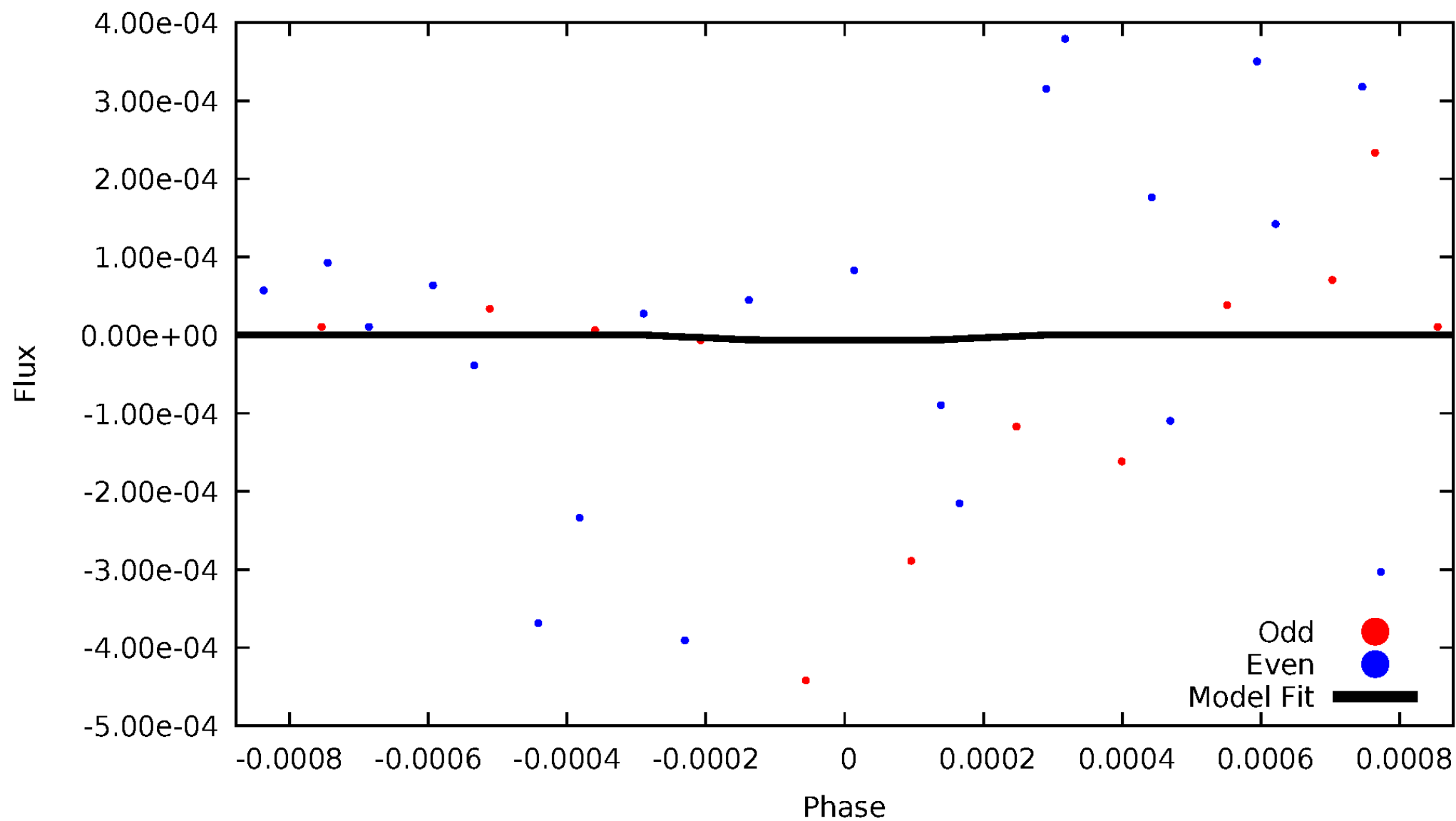


TCE 003242039-02



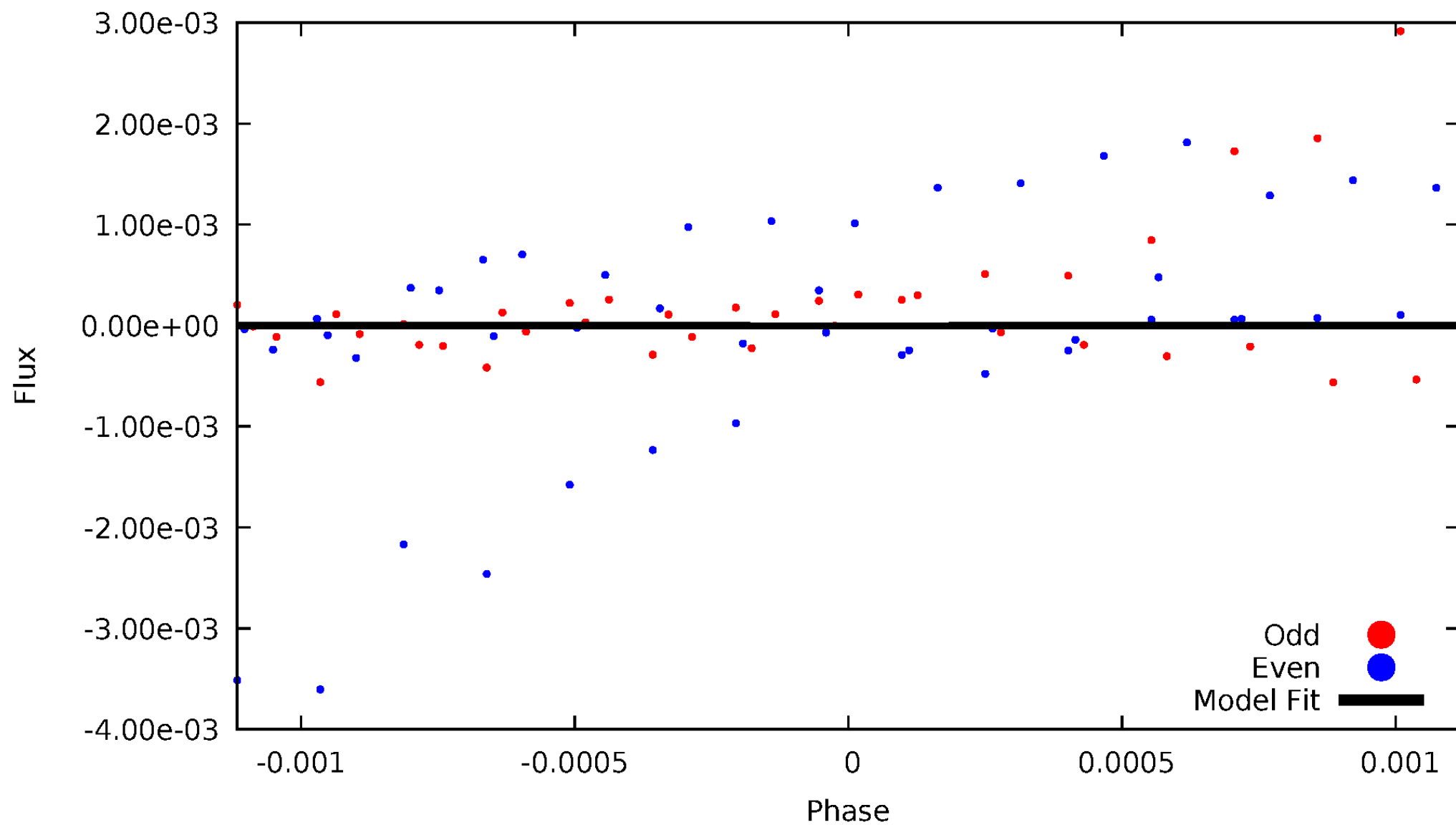
DV Odd/Even

TCE 003242039-02



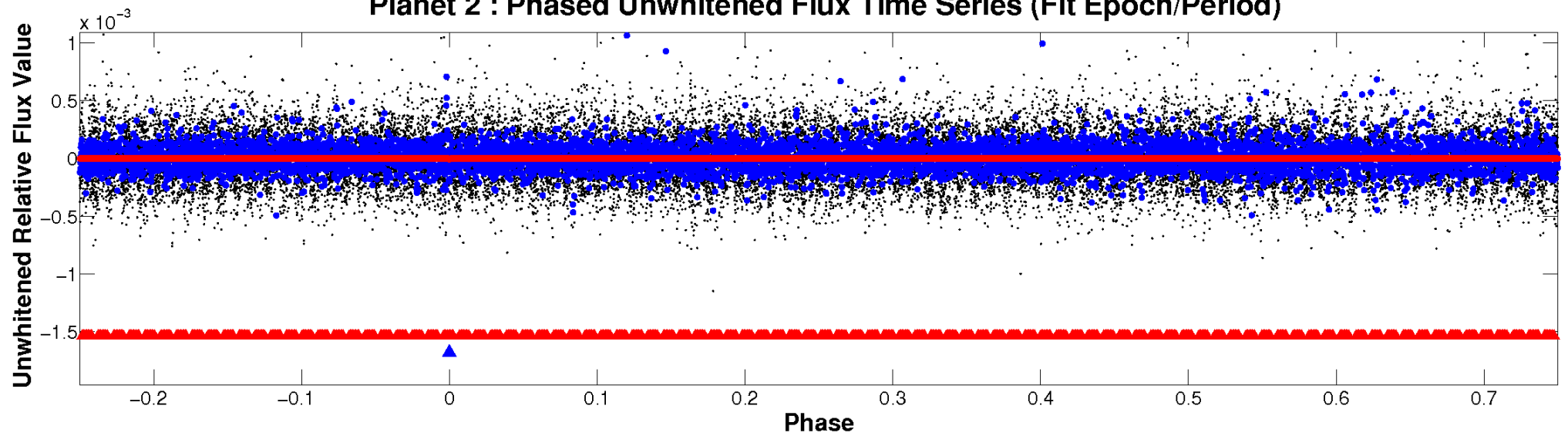
ALT Odd/Even

TCE 003242039-02

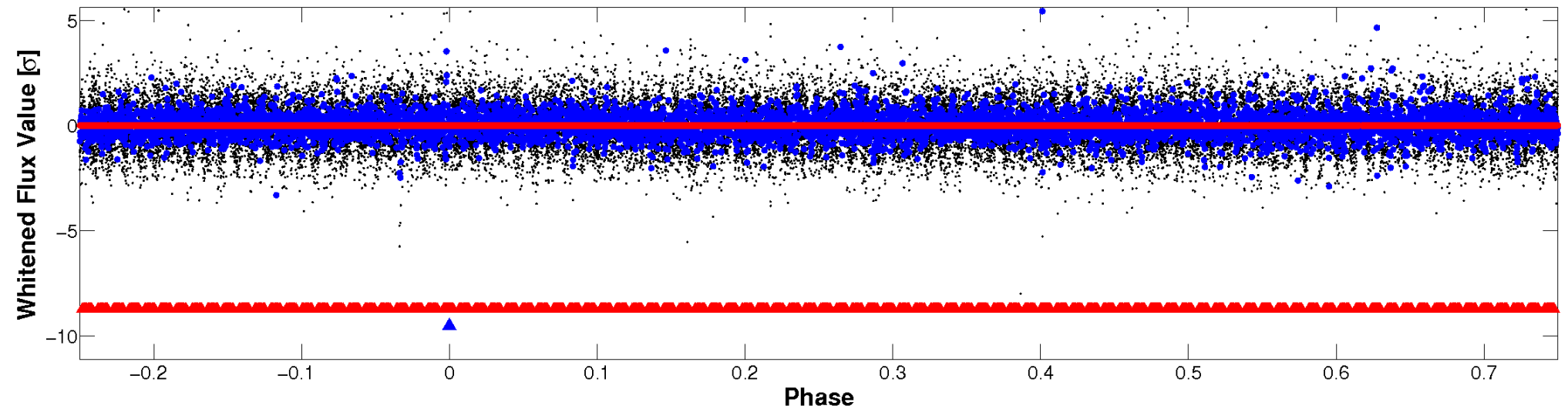


Non-Whitened Vs. Whitened Light Curve

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

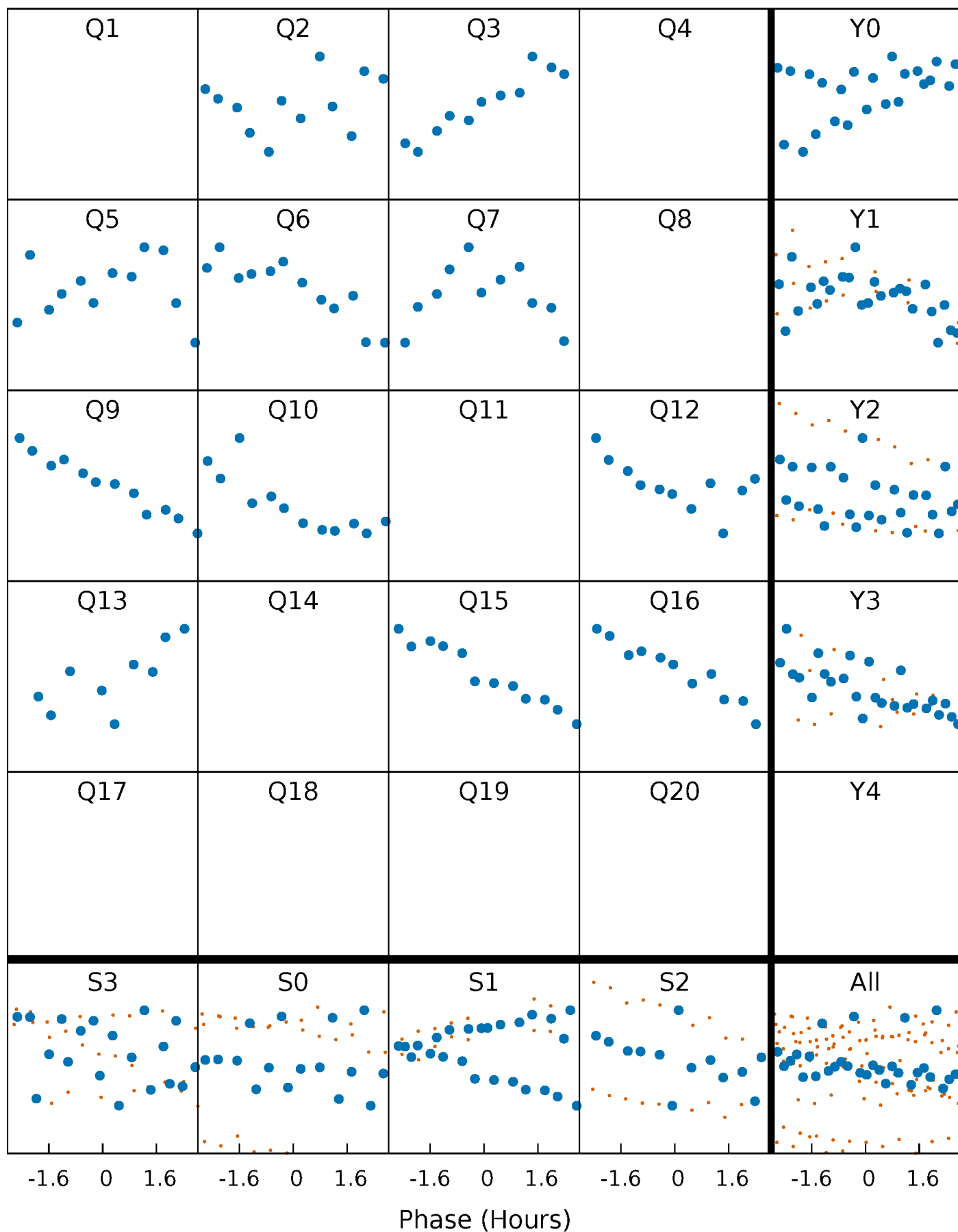


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



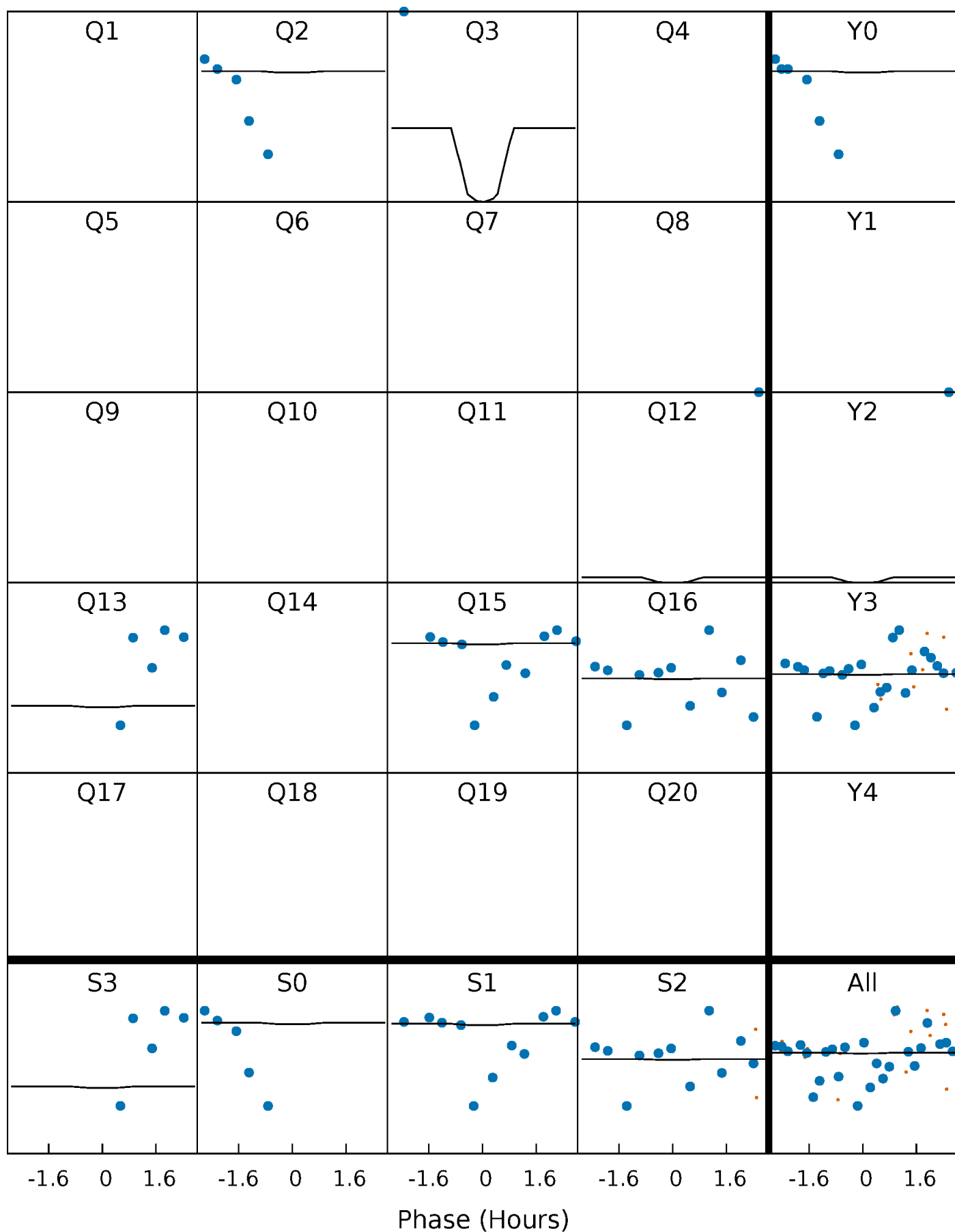
PDC Quarter-Phased Transit Curves

TCE 003242039-02 P=134.602496 Days $T_0=176.866999$ (BKJD)



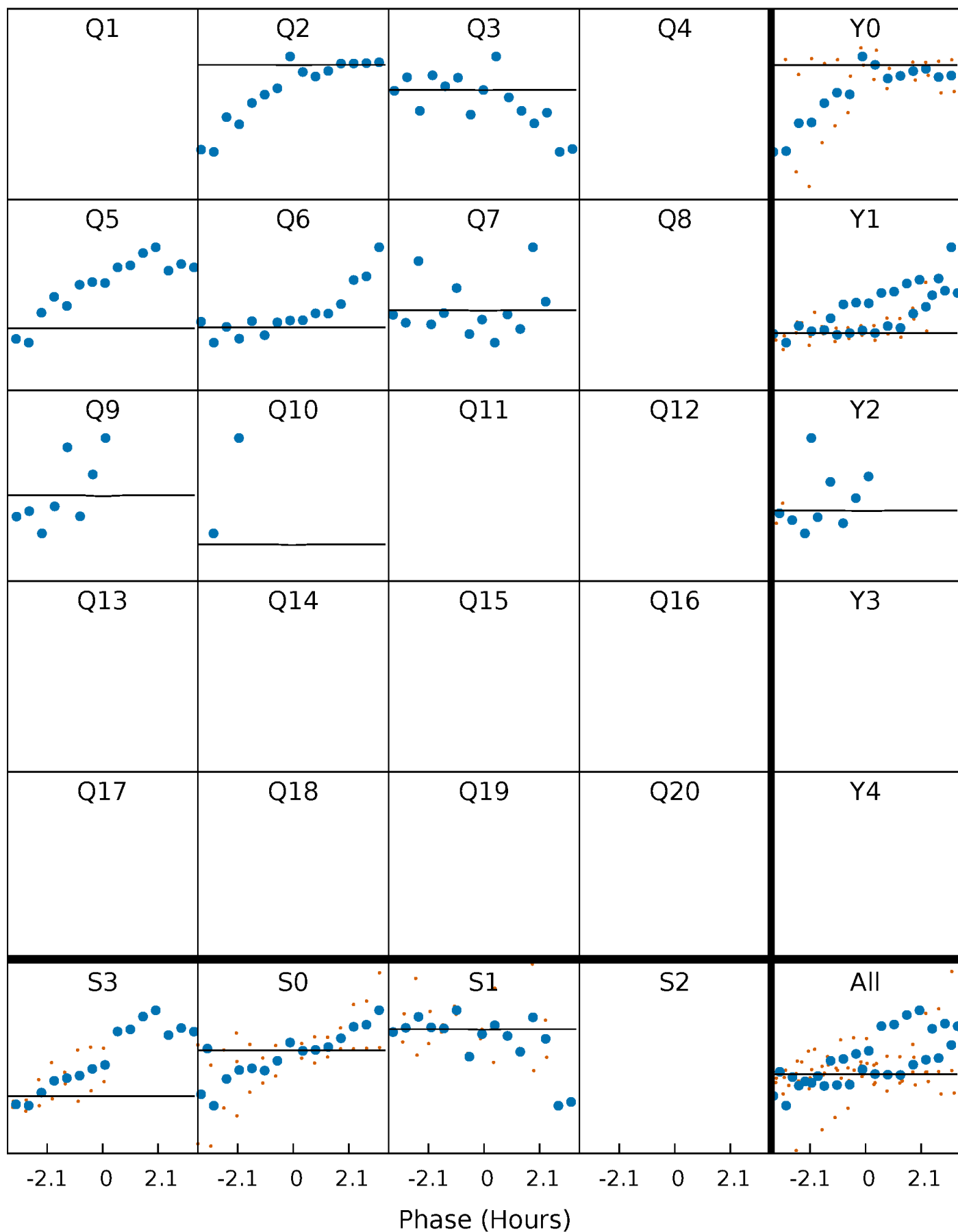
DV Quarter-Phased Transit Curves

TCE 003242039-02 P=134.602496 Days $T_0=176.866999$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

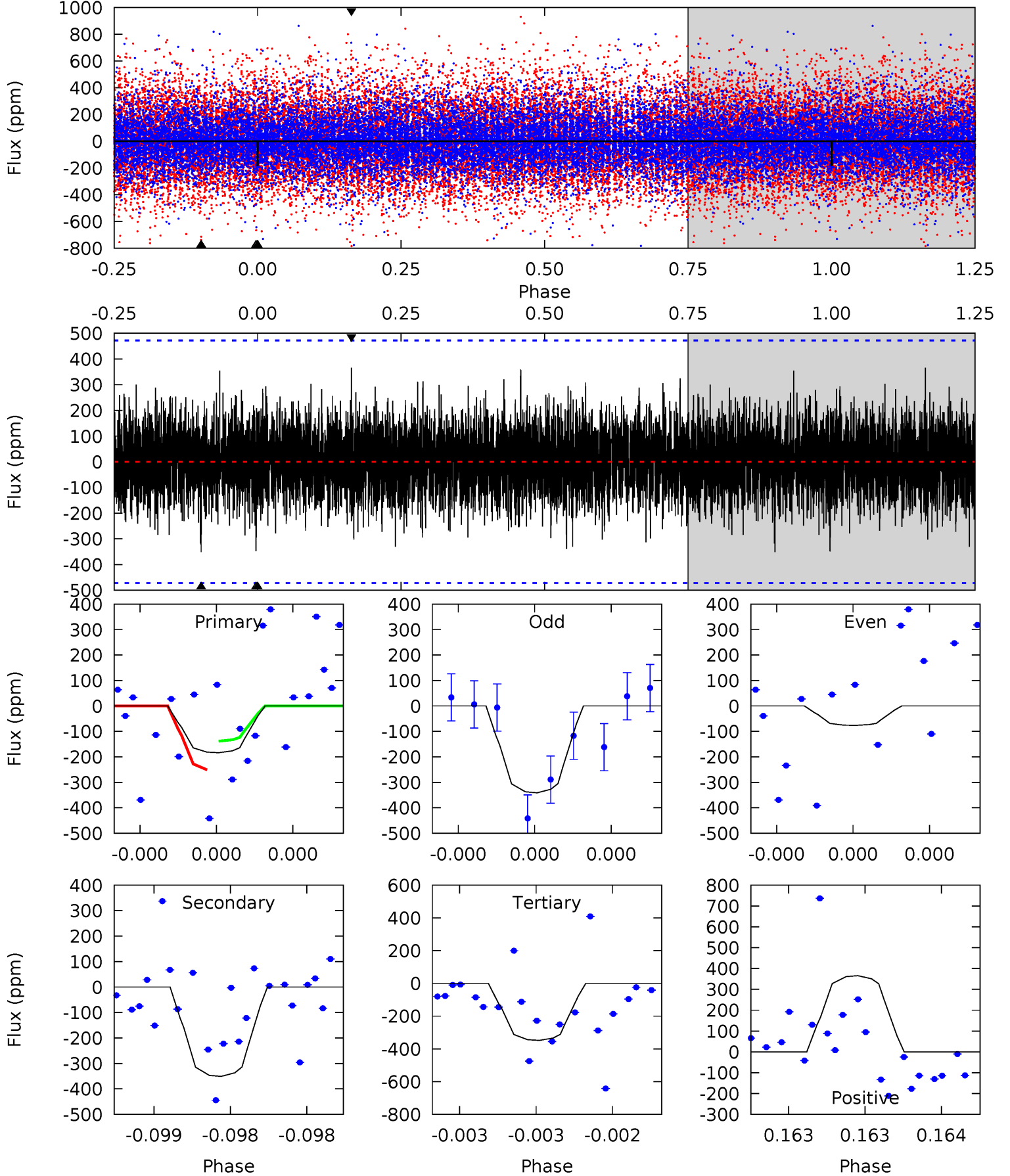
TCE 003242039-02 P=134.609921 Days $T_0=176.373270$ (BKJD)



DV Model-Shift Uniqueness Test

003242039-02, P = 134.602496 Days, E = 42.264503 Days

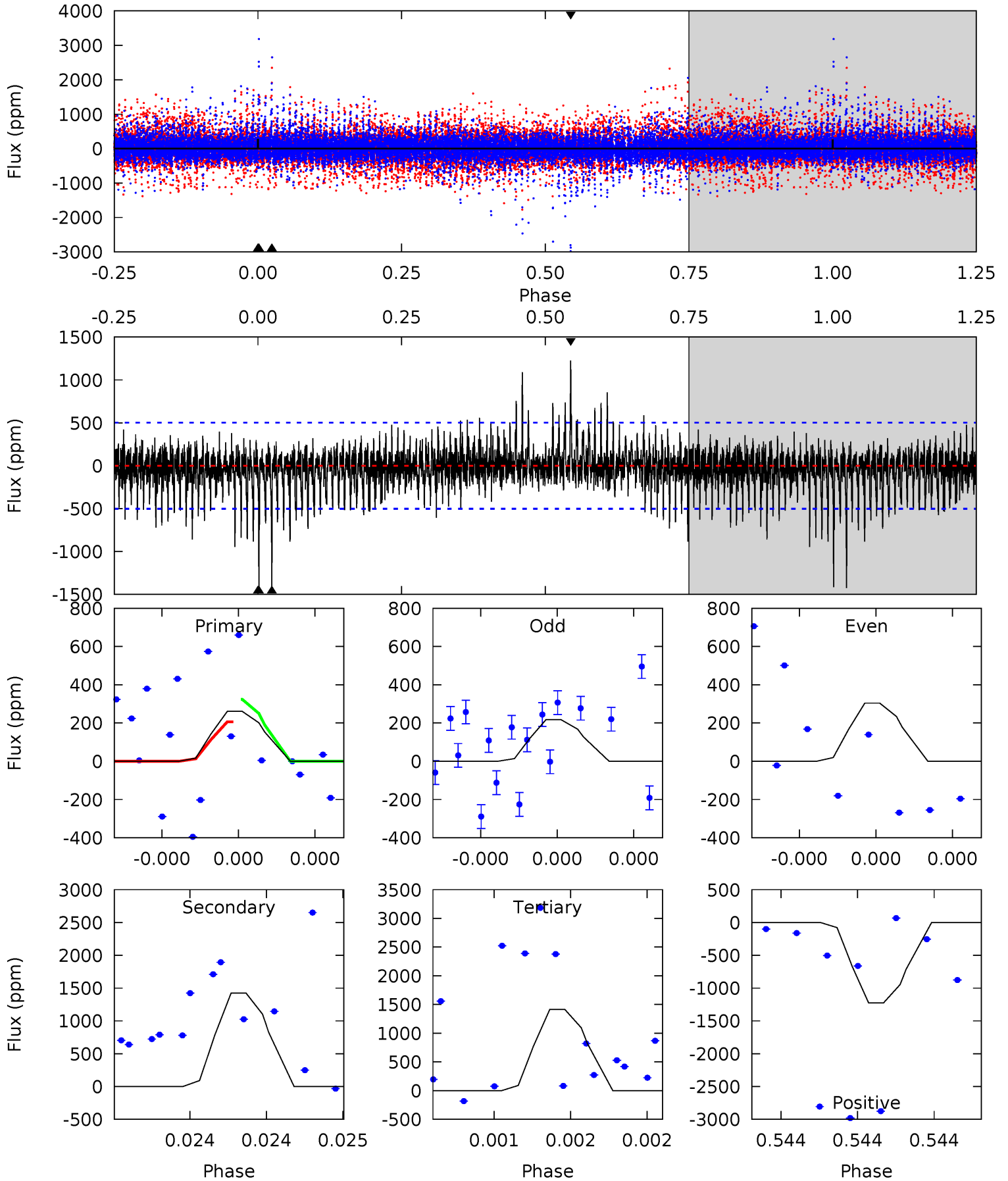
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.17	4.16	4.12	4.33	5.59	3.51	1.08	-1.95	-2.15	0.04	-0.17	1.47	1.00	0.51	0.63



Alt Model-Shift Uniqueness Test

003242039-02, P = 134.609921 Days, E = 41.763349 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.92	16.0	15.9	13.7	5.63	3.56	1.87	-12.9	-10.8	0.11	2.24	0.43	1.80	0.46	0.66



Stellar Parameters For KIC 003242039

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6708^{+69}_{-1}	$4.365^{+0.040}_{-0.120}$	$-0.340^{+0.150}_{-0.150}$	$1.173^{+0.189}_{-0.081}$	$1.170^{+0.074}_{-0.082}$	$1.020^{+0.153}_{-0.369}$
	+1%/-0%	+1%/-3%	+44%/-44%	+16%/-7%	+6%/-7%	+15%/-36%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 003242039-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-351 ± 84	$7.75^{+8.83}_{-5.33}$	612^{+24}_{-20}	4065^{+2638}_{-913}	924^{+8359}_{-725}
Alt.	-1424 ± 89	$7.76^{+8.45}_{-5.65}$	610^{+24}_{-21}	5332^{+6227}_{-1339}	3926^{+49846}_{-3040}

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 $A_{obs} \gg 1.0$

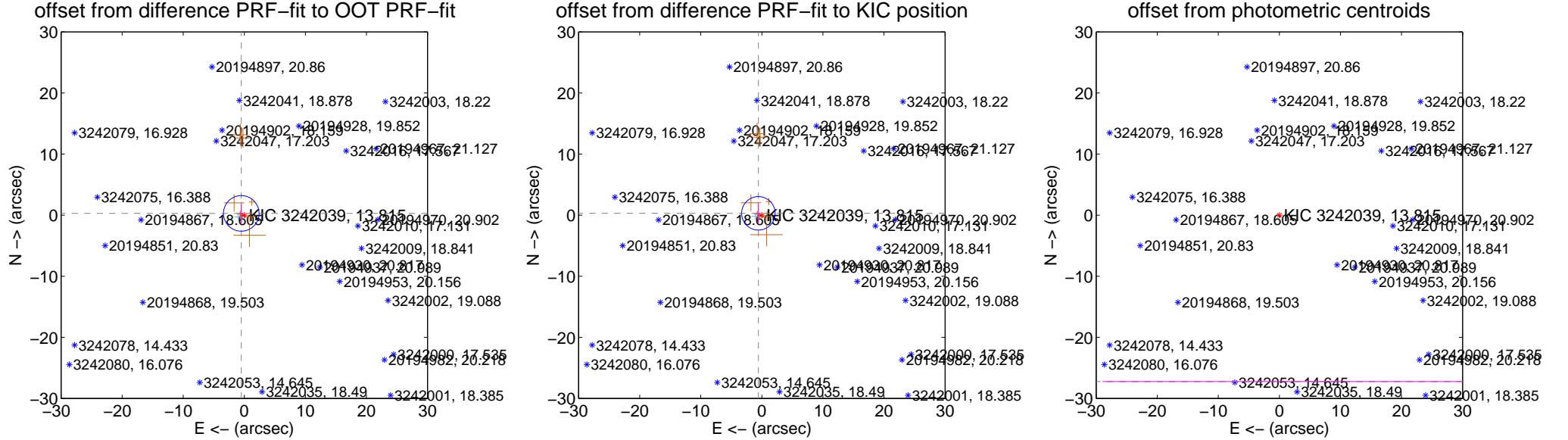
DV Centroid Data

Supplemental centroid analysis for 003242039-02. Kepler magnitude: 13.81. Transit SNR 0.06

There are 1 quarters with good PRF difference image offsets

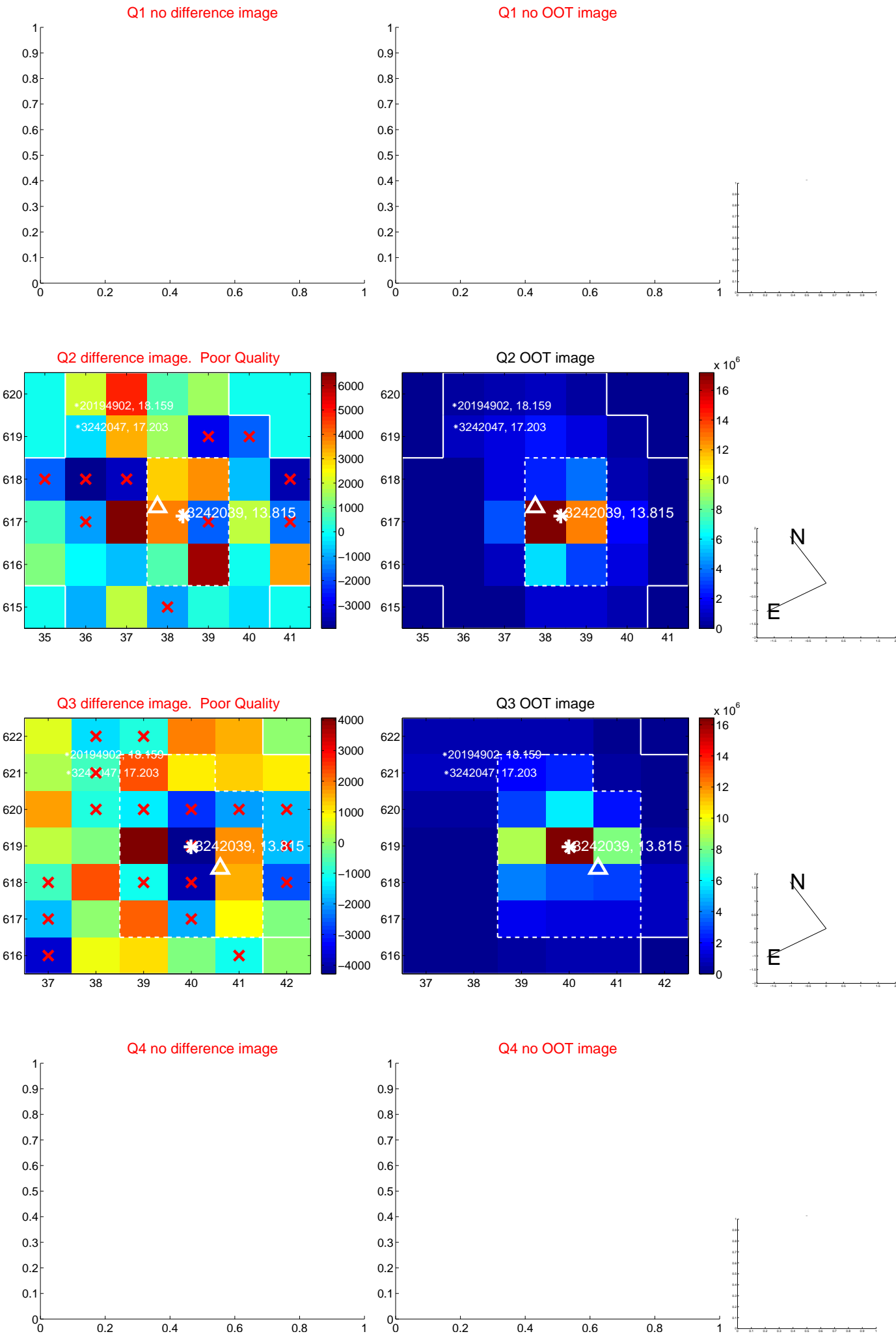
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.573 ± 0.971	0.59	0.495 ± 0.311	0.288 ± 1.768
PRF-fit source offset from KIC position	0.637 ± 0.914	0.70	0.562 ± 0.268	0.300 ± 1.791
photometric centroid source offset	60.41 ± 83.82	0.72	-53.91 ± 82.87	-27.25 ± 87.43

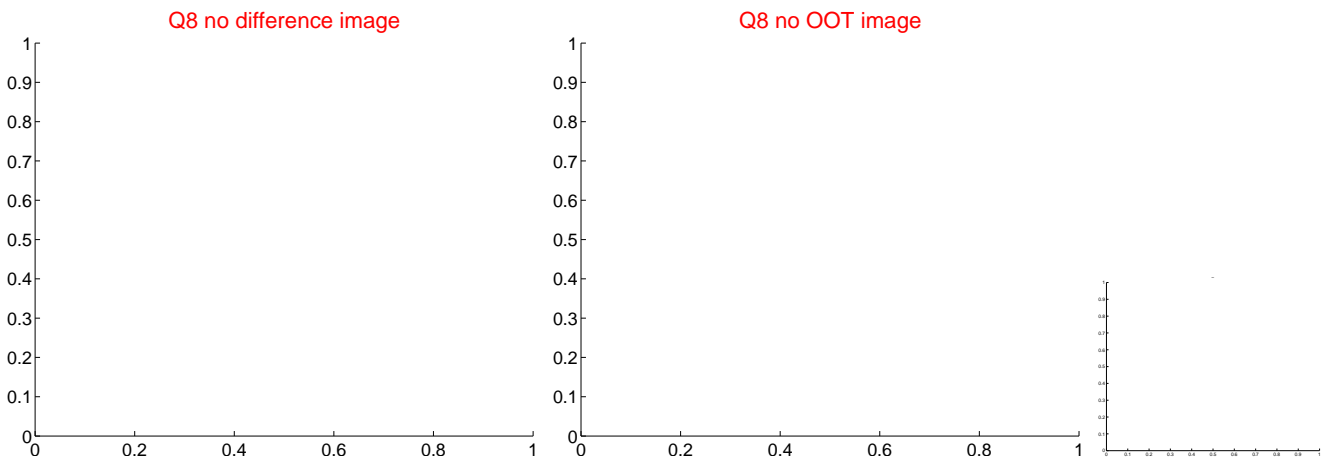
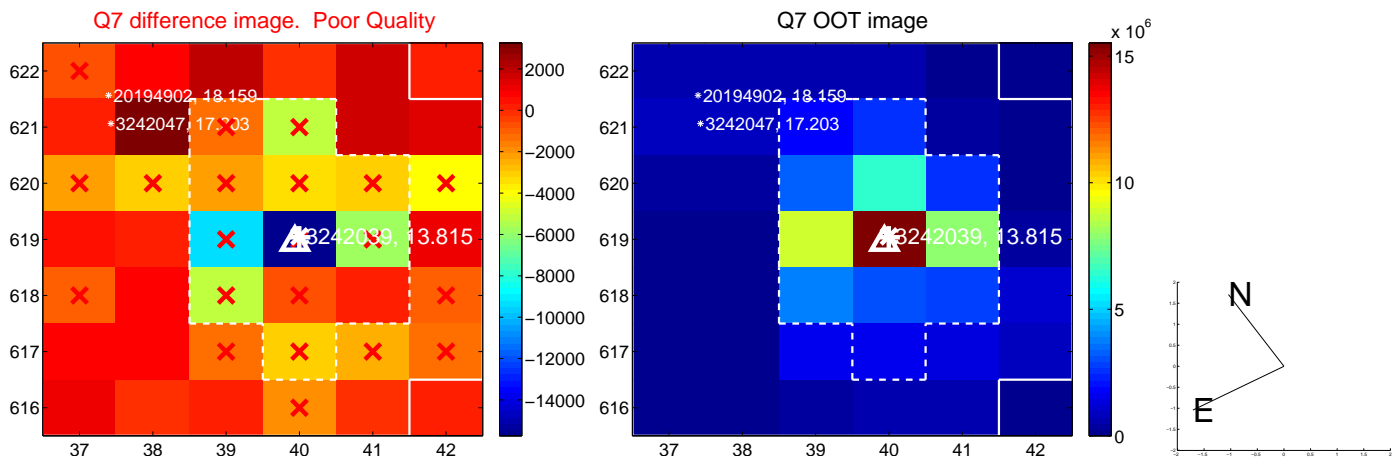
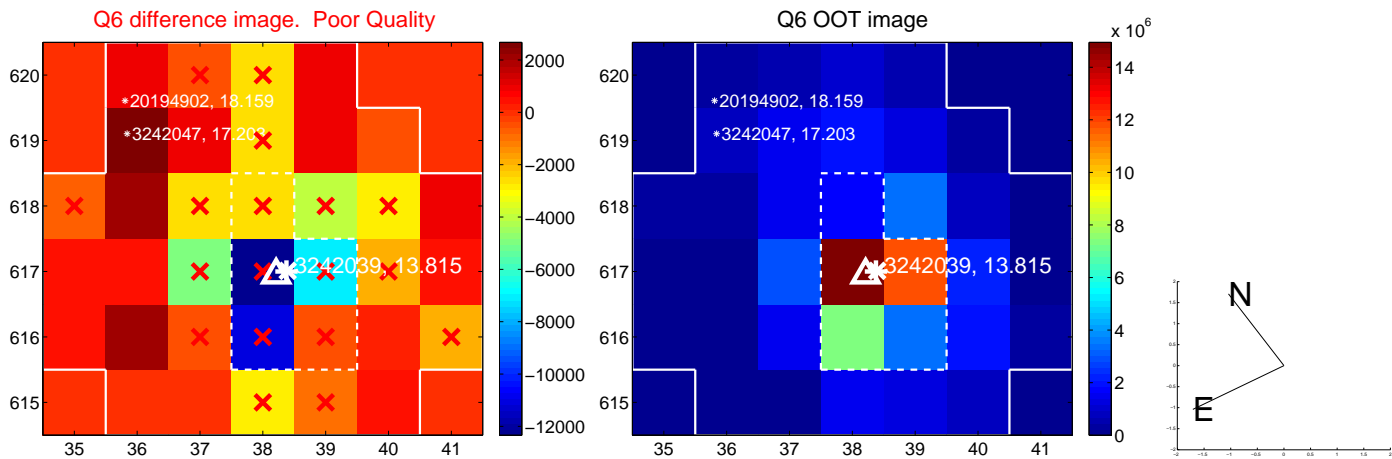
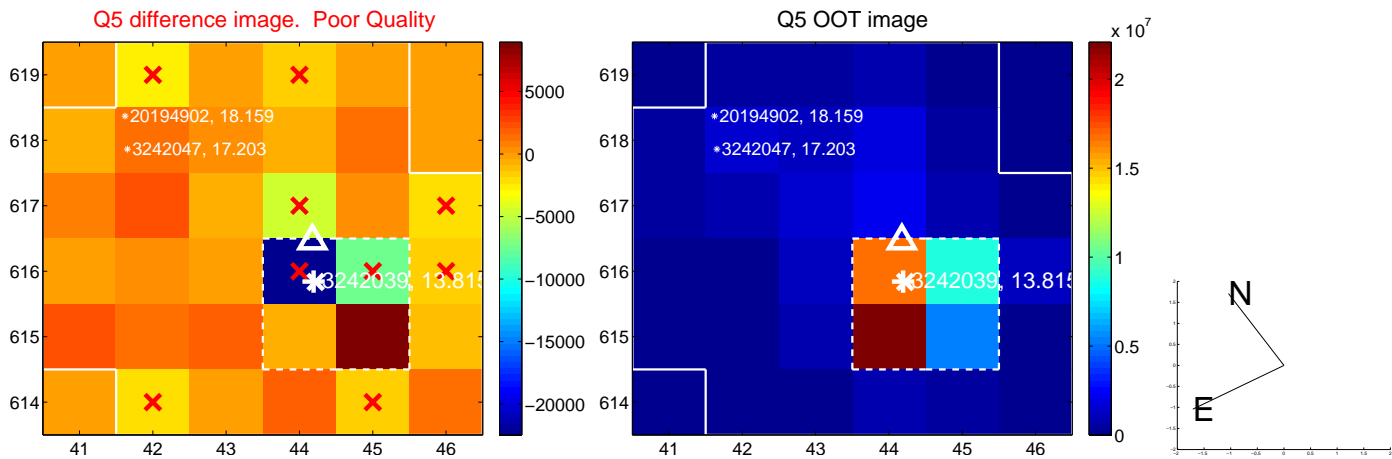


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

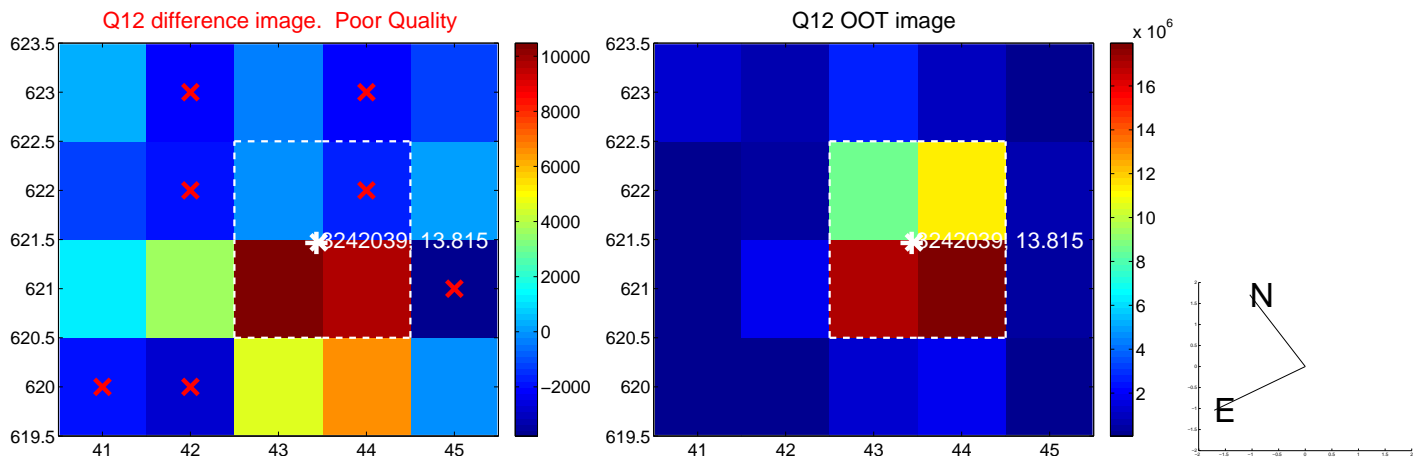
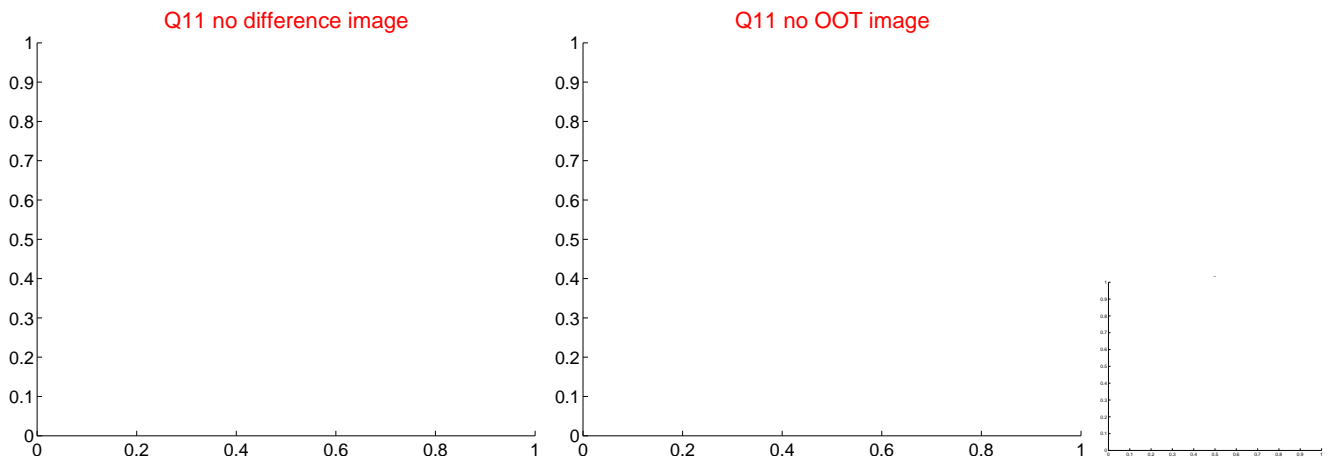
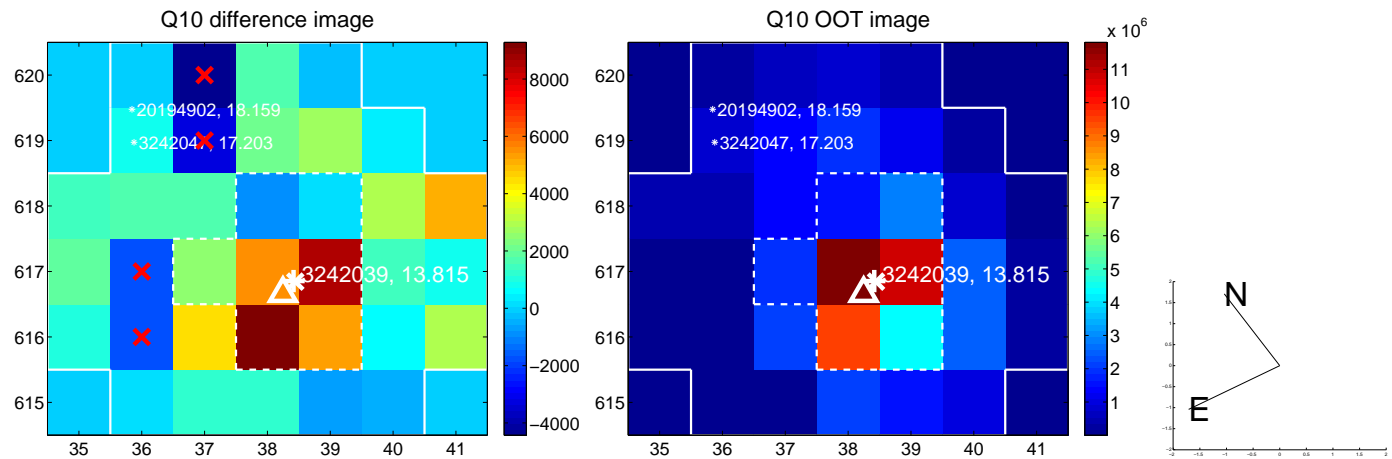
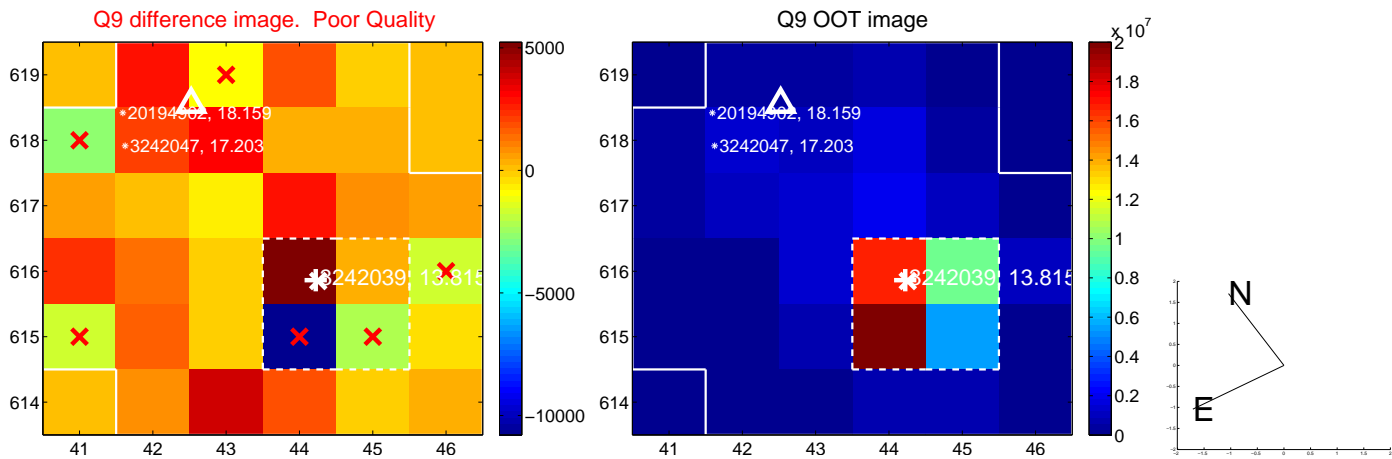
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



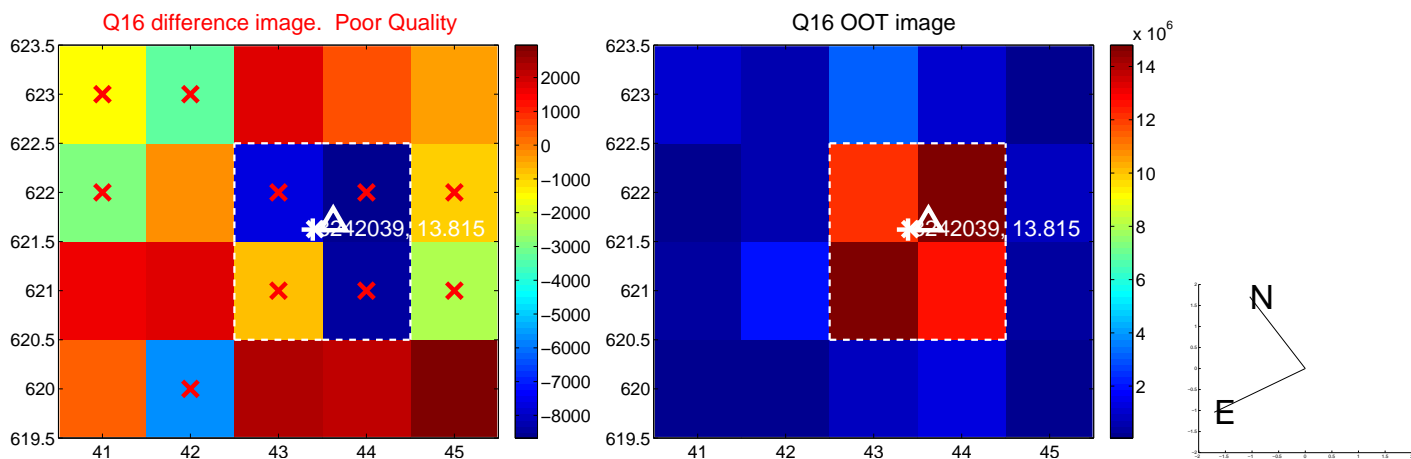
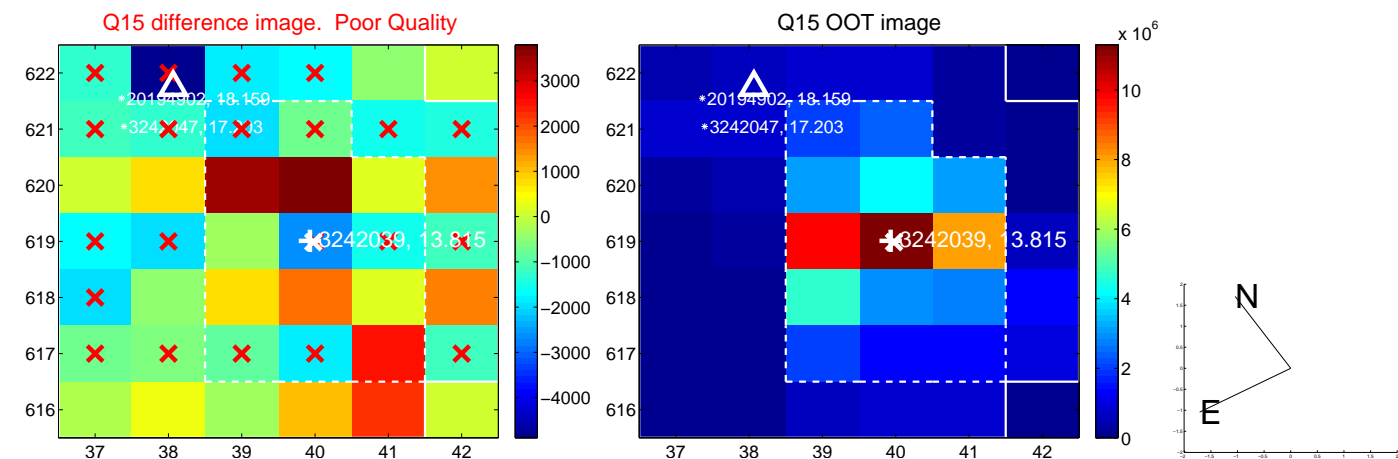
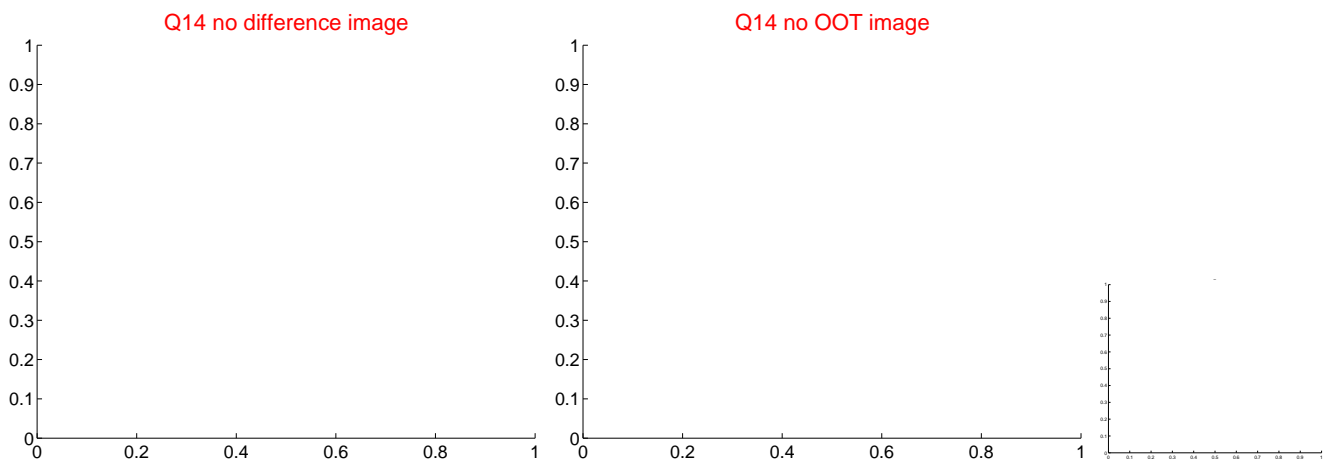
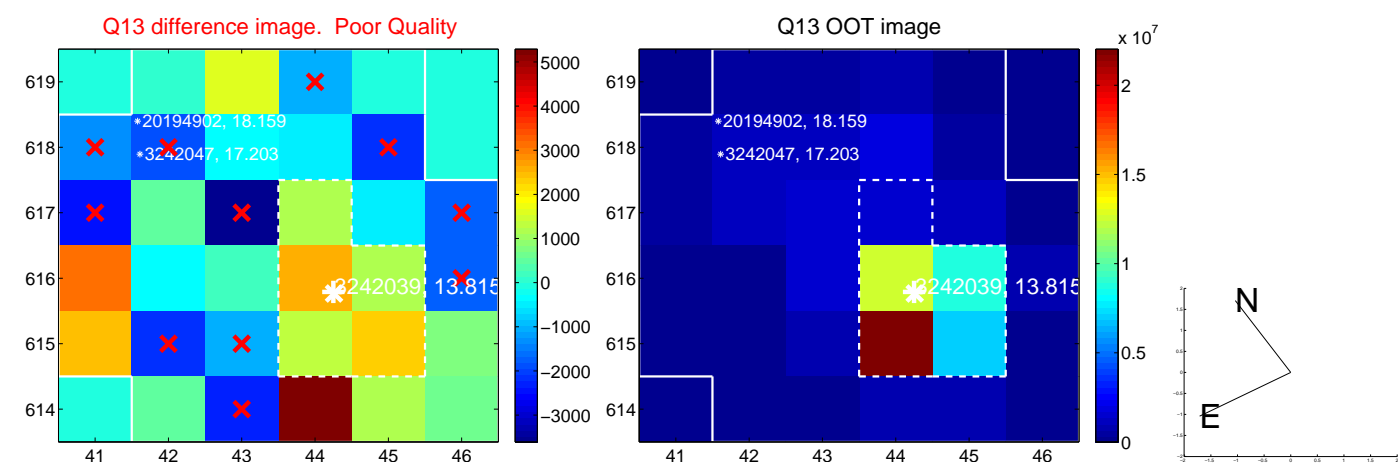
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



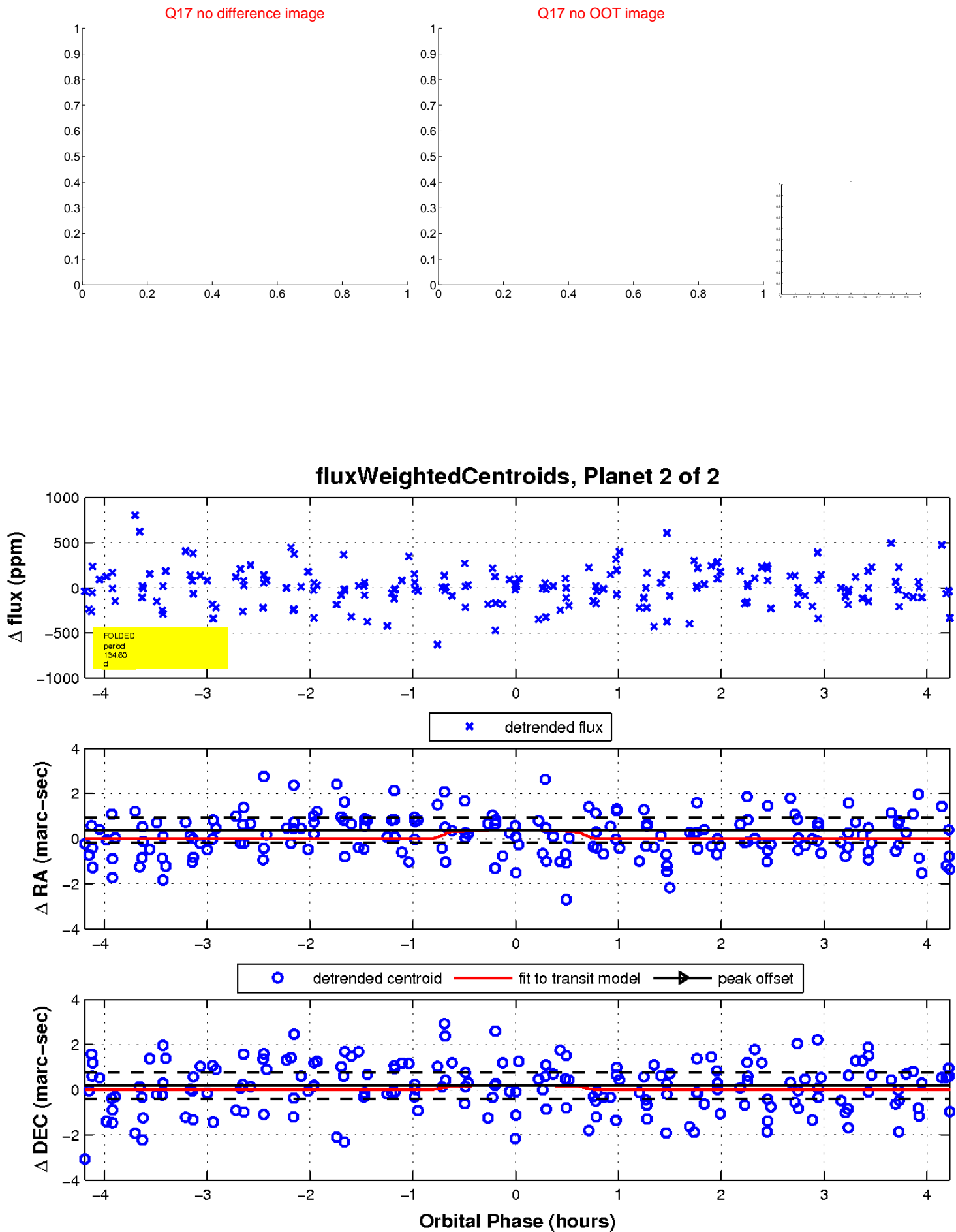
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

