

KIC 008292150

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})
008292150-01	OBS	No	2.237871	133.567053	29.6	7.488	12.4	12.2	2.89	7447	1.88	12531.53
008292150-02	OBS	No	2.237959	132.393047	35.6	6.546	12.4	13.9	2.89	7447	2.06	12530.88

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008292150-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
008292150-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_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.

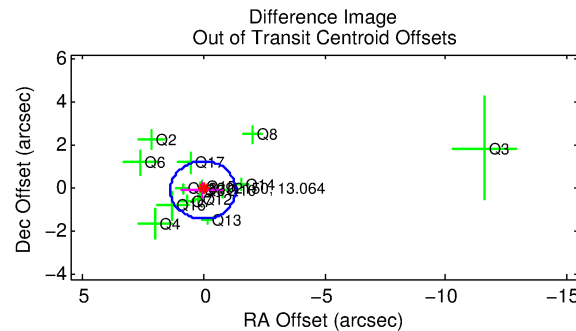
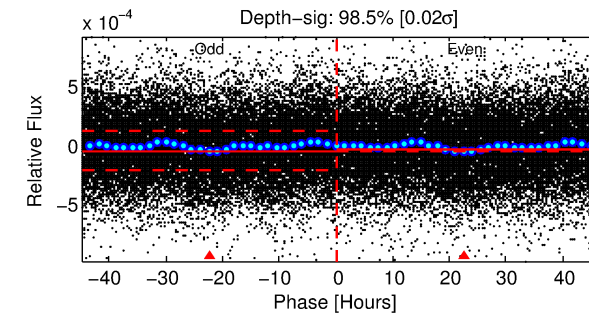
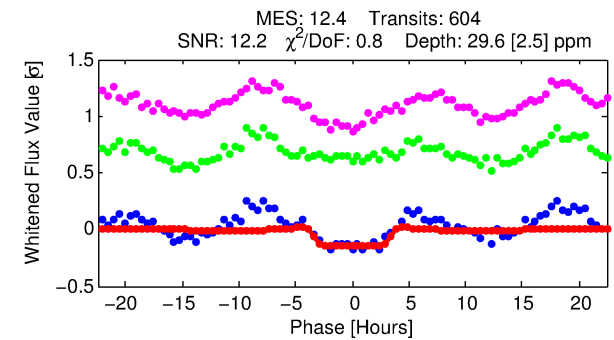
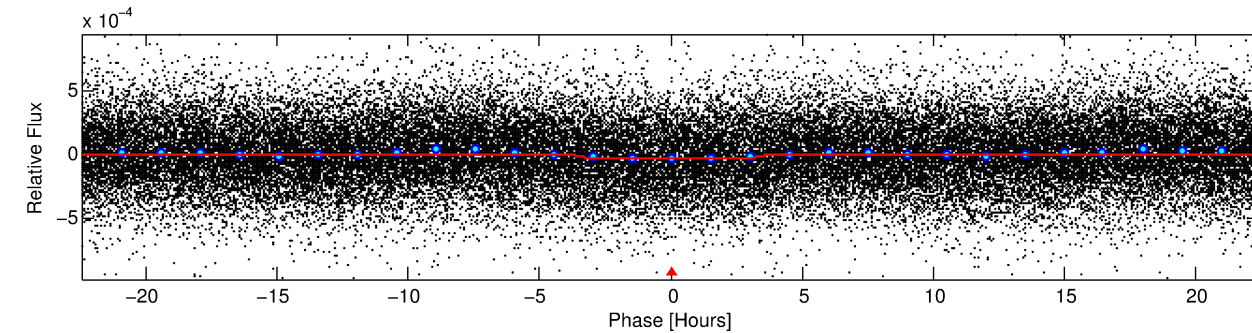
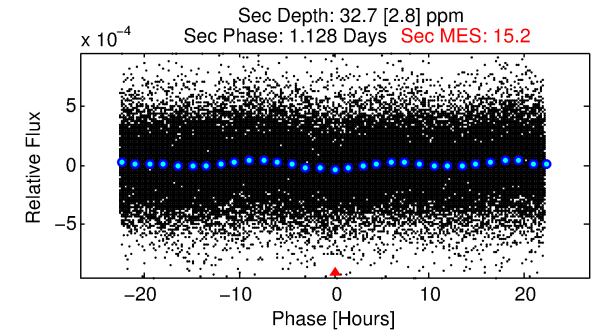
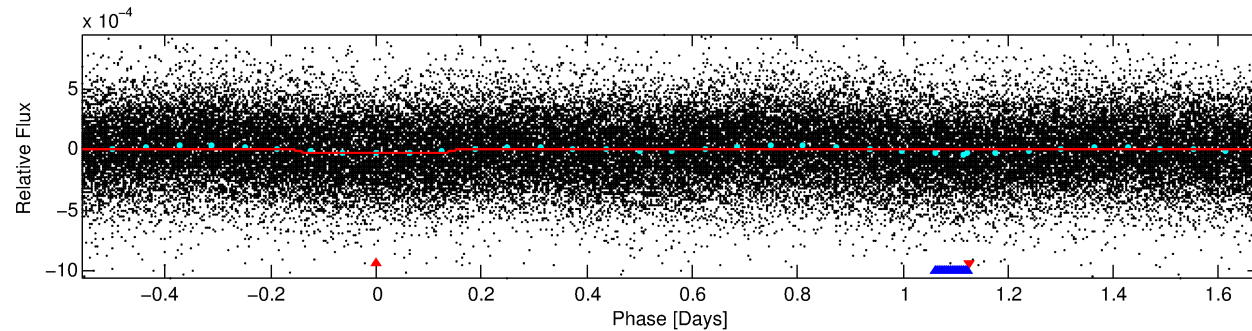
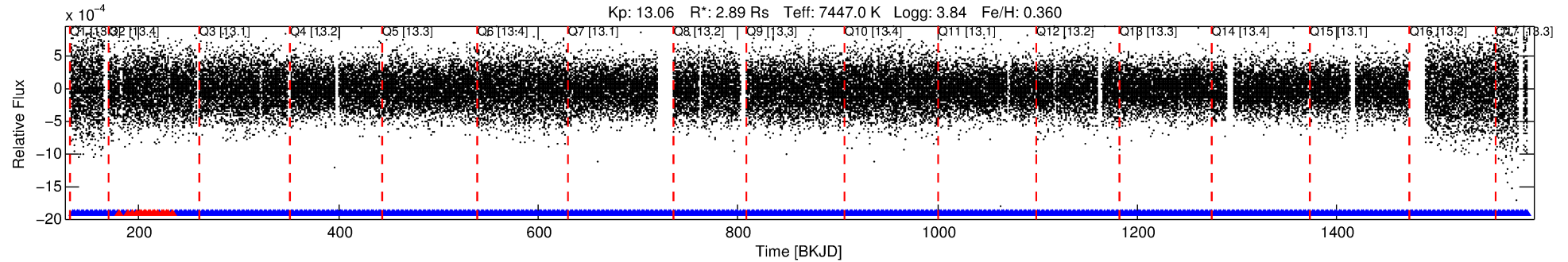
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008292150-01

No Significant Match Found

DV One-Page Summary

KIC: 8292150 Candidate: 1 of 2 Period: 2.238 d



DV Fit Results:

Period = 2.23787 [0.00002] d
Epoch = 133.5671 [0.0068] BKJD
Rp/R* = 0.0060 [0.0014]
a/R* = 1.28 [0.74]
b = 0.94 [0.20]
Seff = 12531.54 [3780.44]
Teq = 2698 [203] K
Rp = 1.88 [0.61] Re
a = 0.0428 [0.0084] AU
Ag = 9.31 [5.21] [1.60σ]
Teffp = 7286 [868] K [5.14σ]

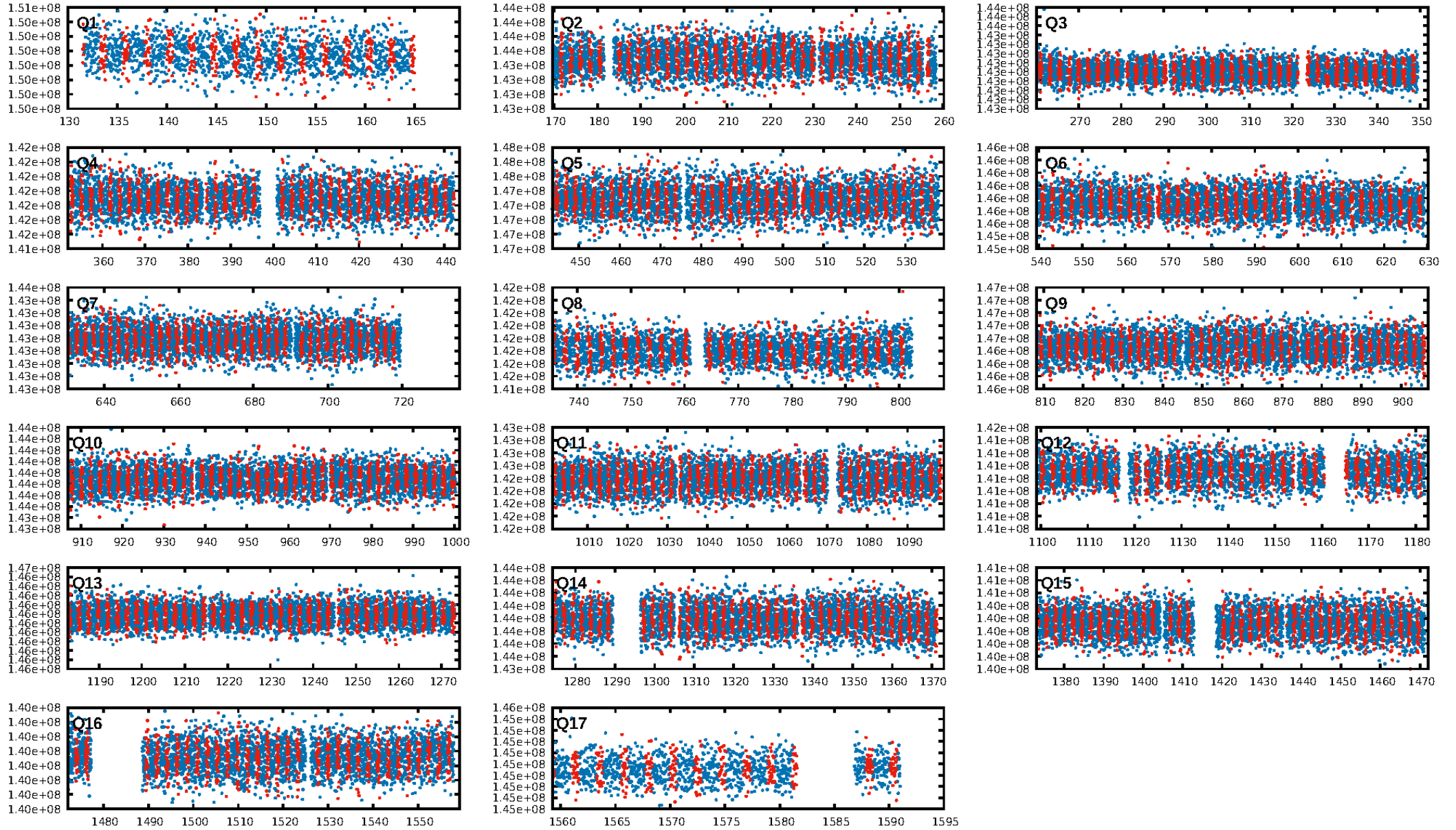
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGoF-sig: N/A
Bootstrap-pfa: 2.00e-38
RollingBand-fgt: 0.97 [558/576]
GhostDiagnostic-chr: 5.019
Centroid-sig: 6.1%
Centroid-so: 1.057 arcsec [1.41σ]
OotOffset-rm: 0.099 arcsec [0.22σ]
OotOffset-st: 4/4/4/3 [15]
KicOffset-rm: 0.105 arcsec [0.16σ]
KicOffset-st: 4/4/4/3 [15]
DiffImageQuality-fgm: 0.87 [13/15]
DiffImageOverlap-fno: 1.00 [17/17]

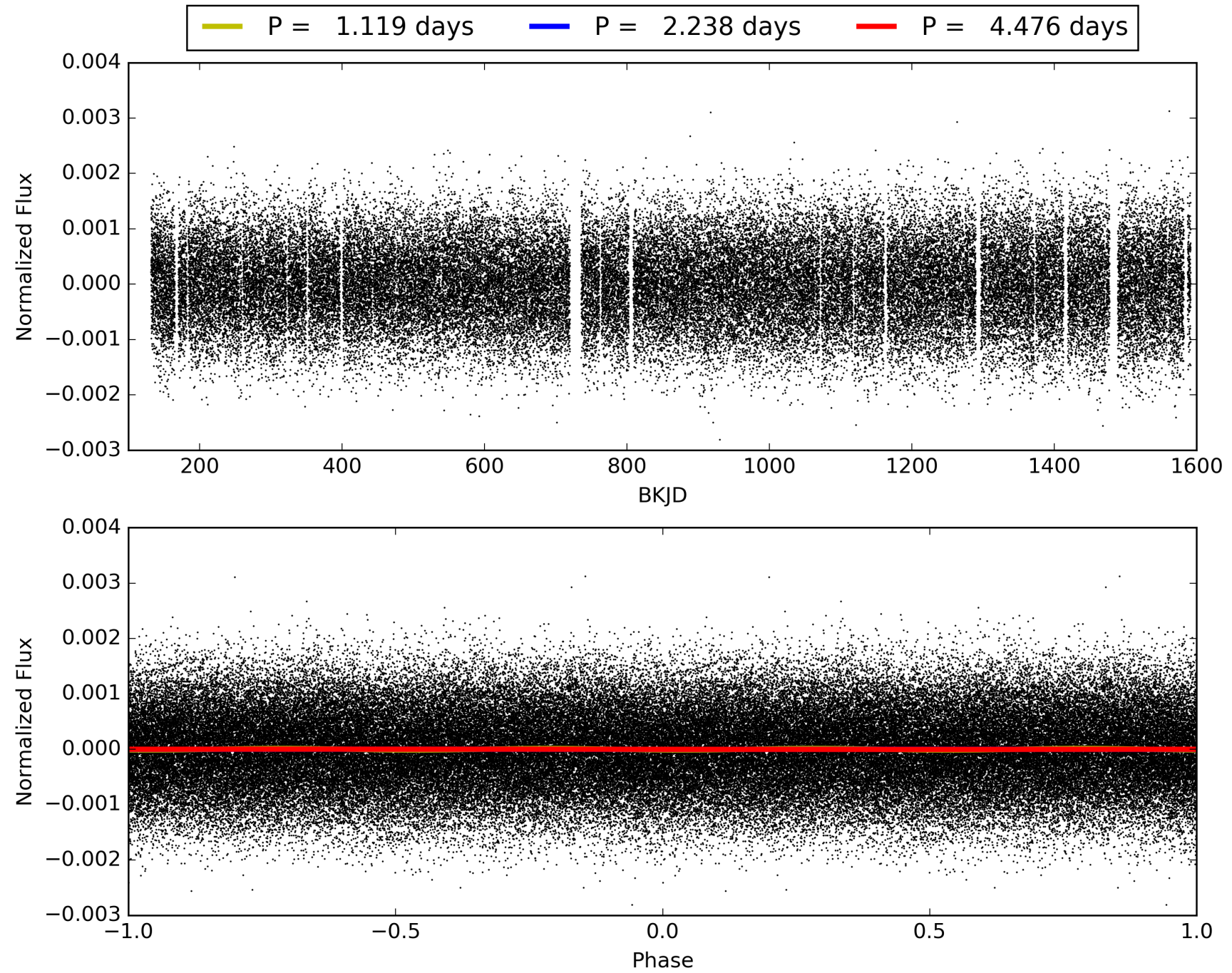
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 23:24:37 Z

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

TCE 008292150-01, PDC Light Curves

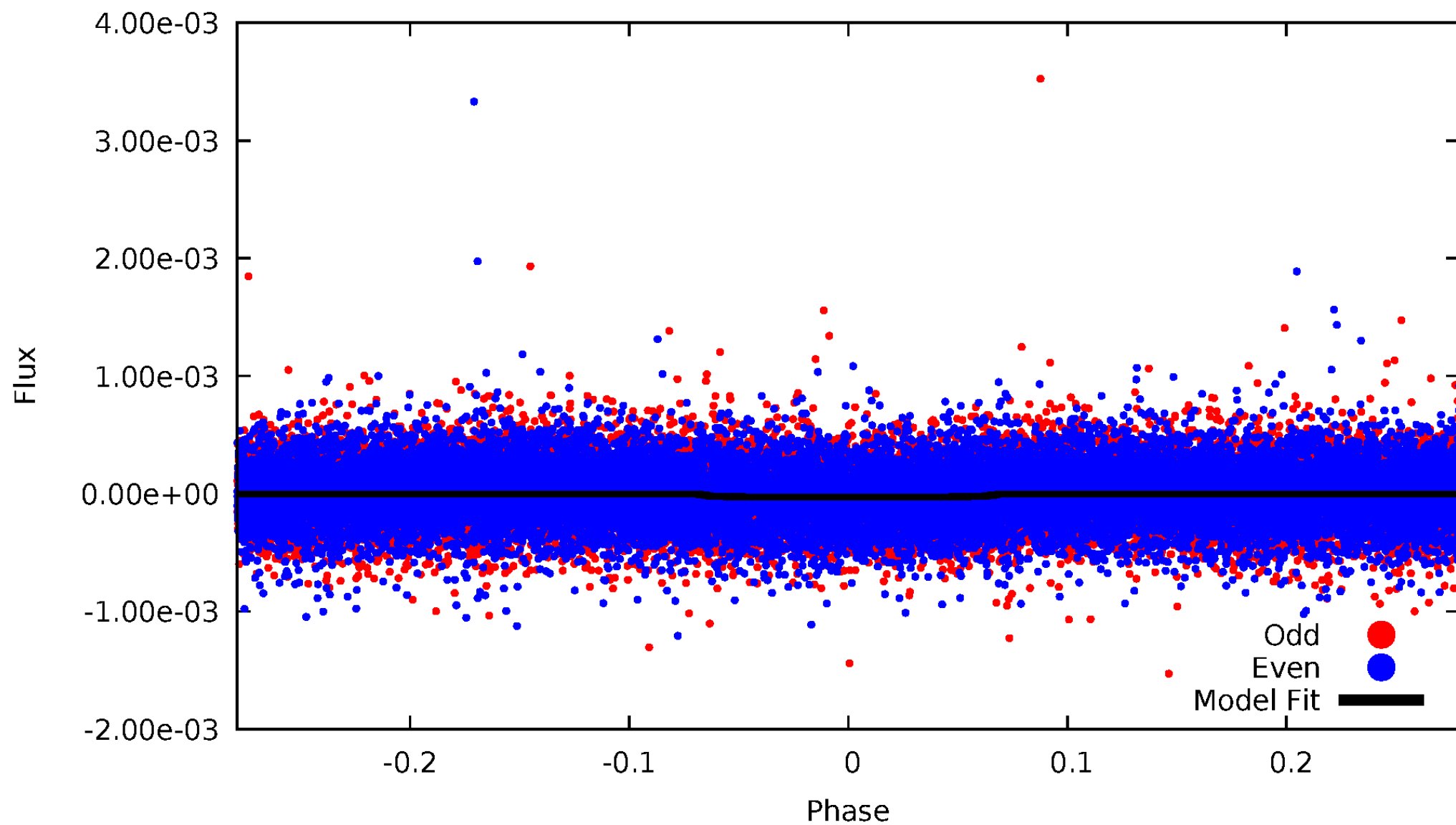


TCE 008292150-01



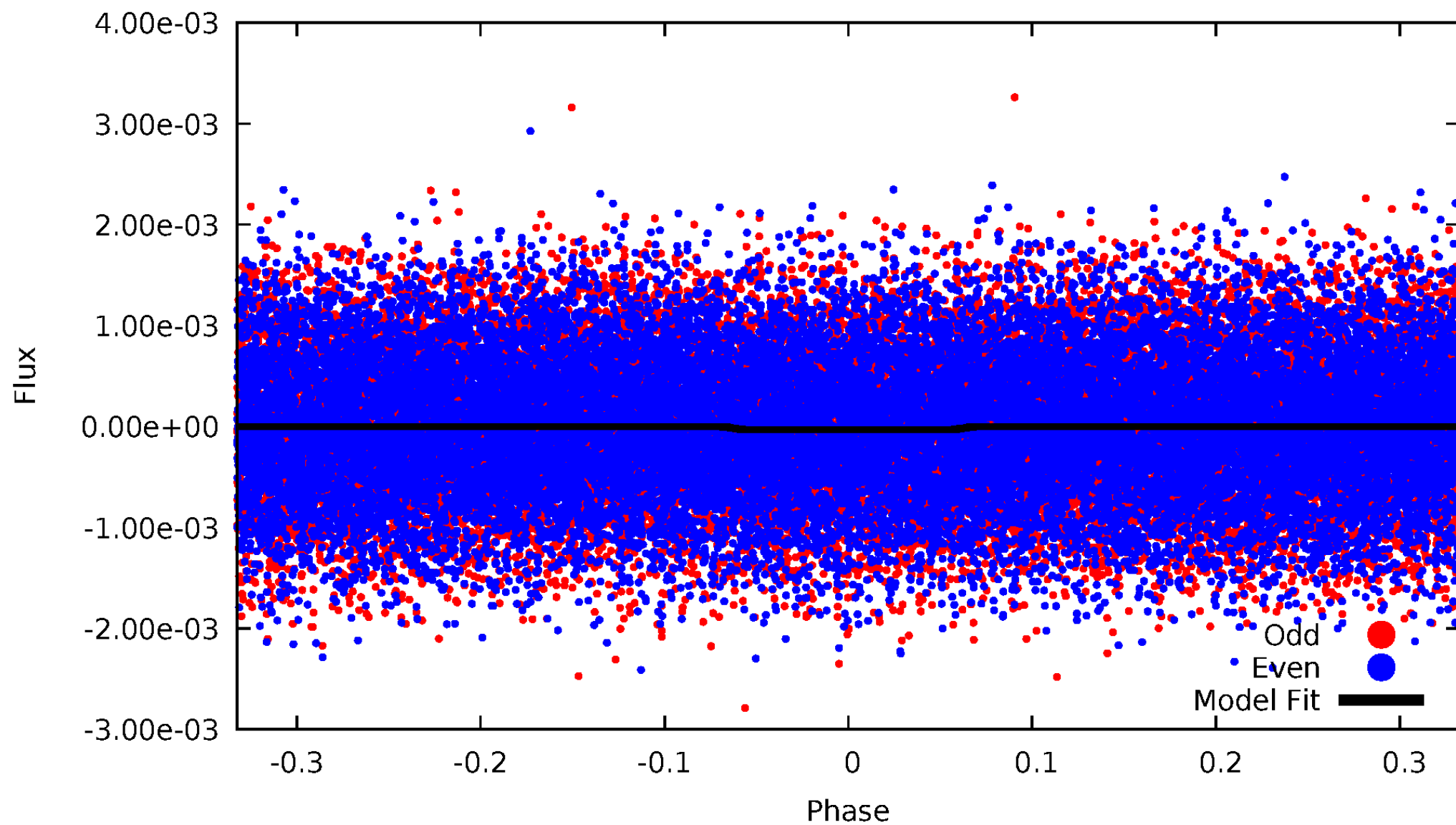
DV Odd/Even

TCE 008292150-01

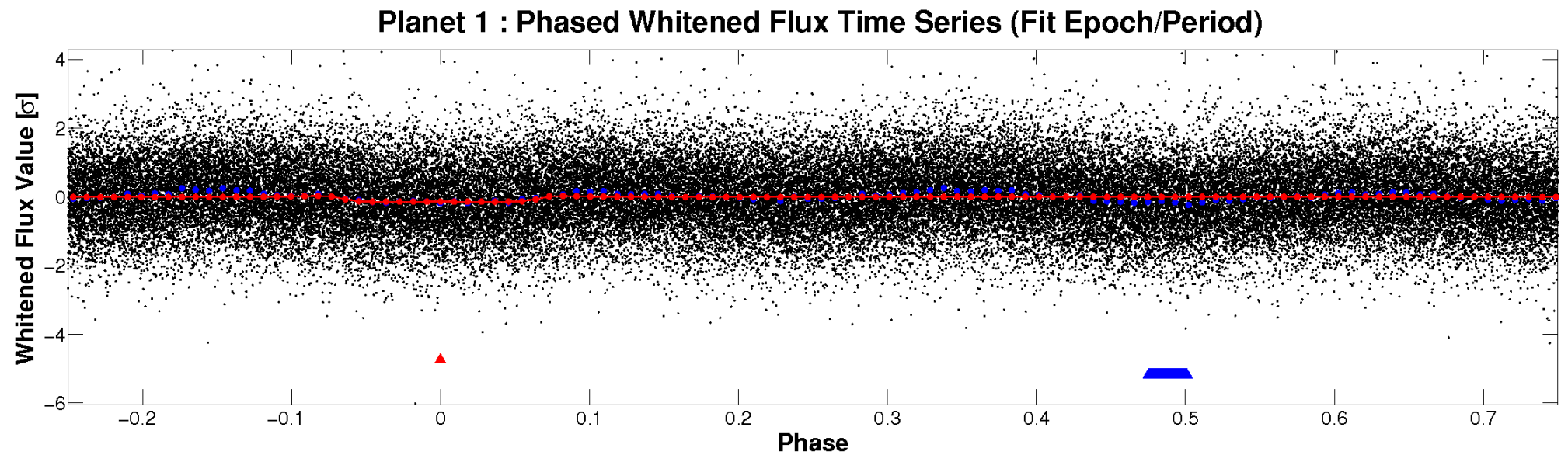
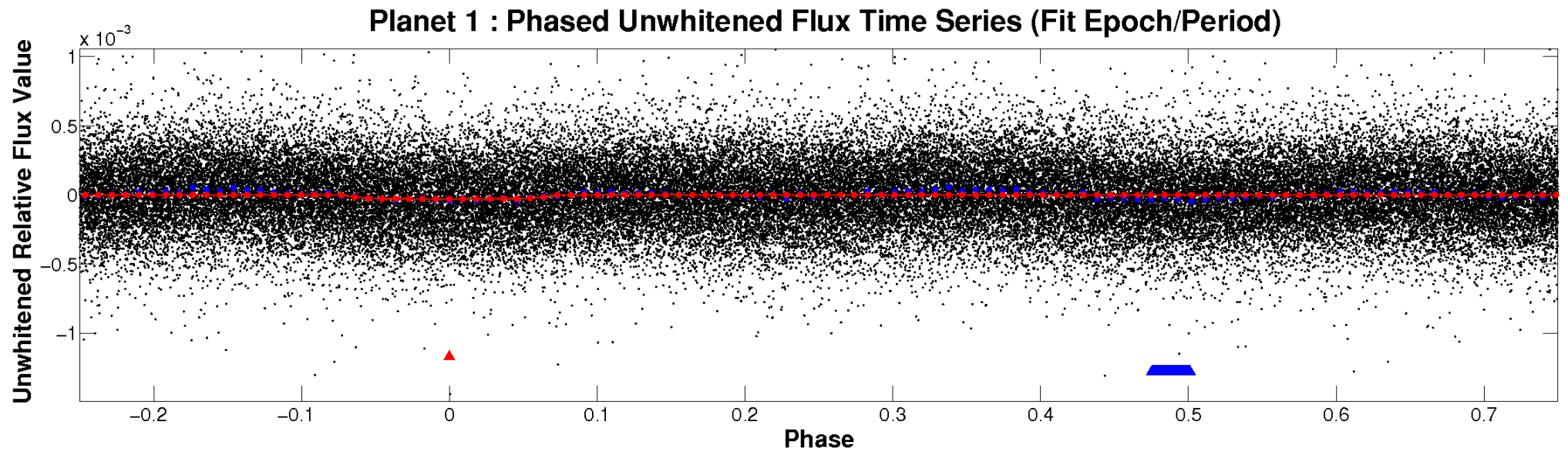


ALT Odd/Even

TCE 008292150-01

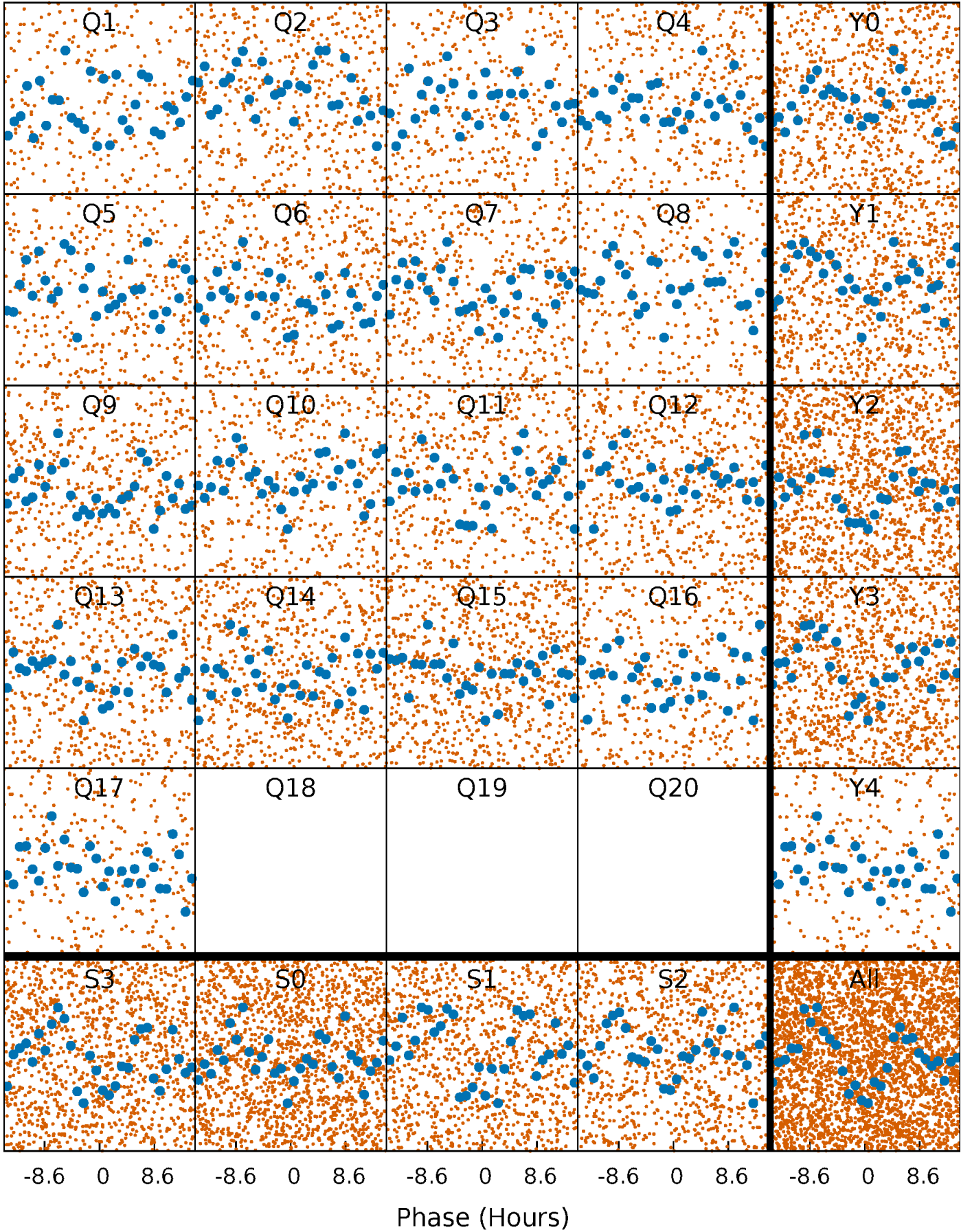


Non-Whitened Vs. Whitened Light Curve



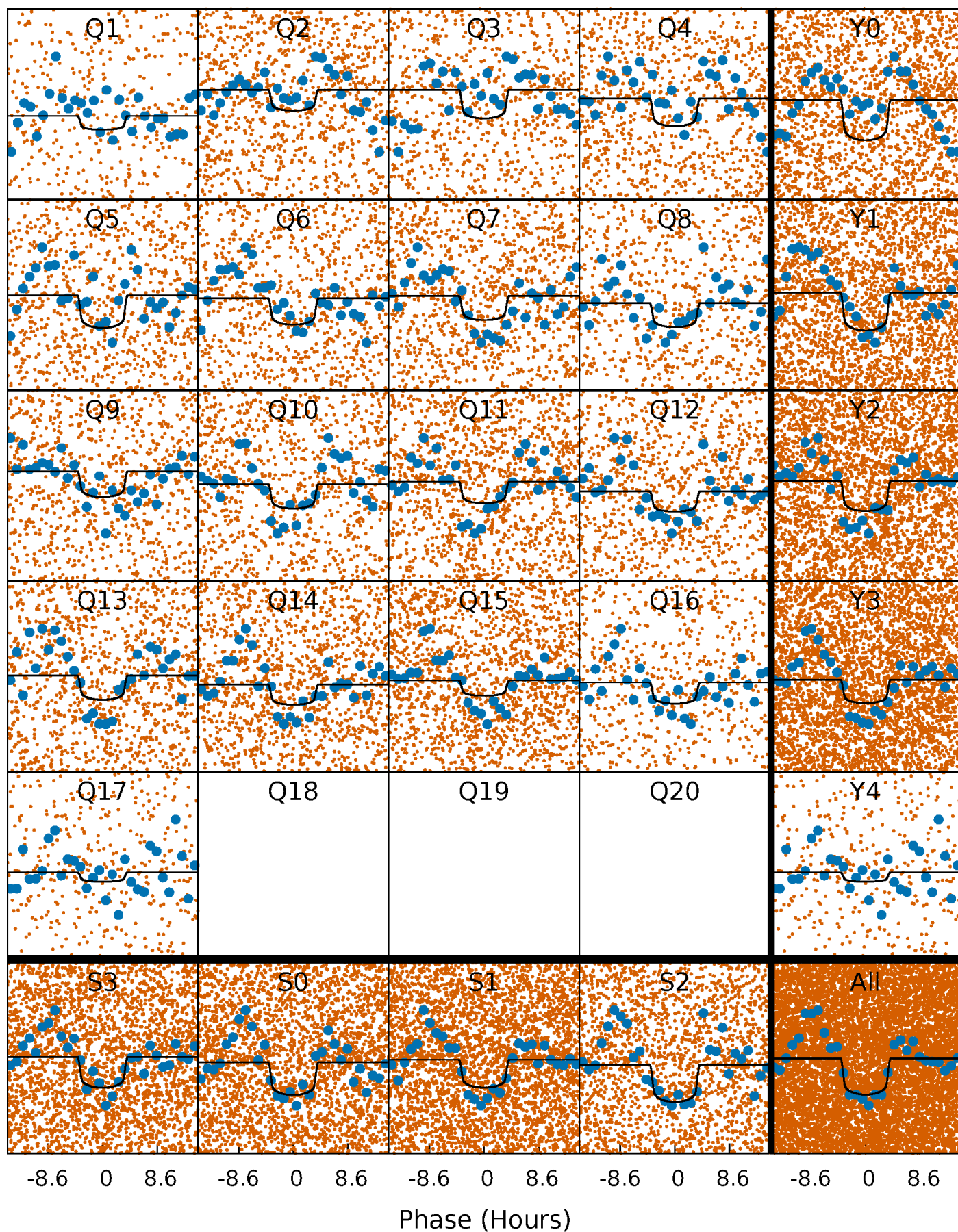
PDC Quarter-Phased Transit Curves

TCE 008292150-01 P= 2.237871 Days $T_0=133.567053$ (BKJD)



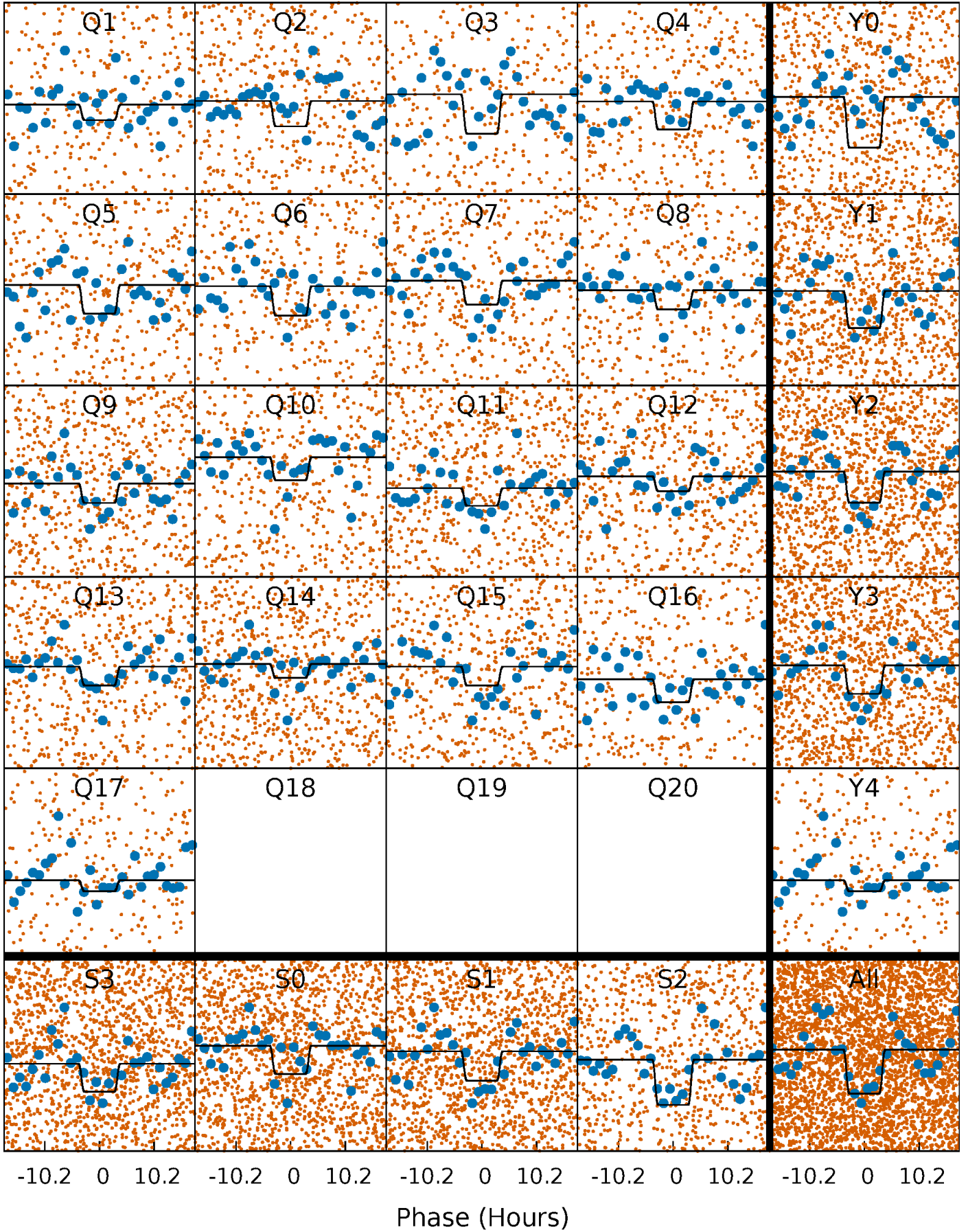
DV Quarter-Phased Transit Curves

TCE 008292150-01 P= 2.237871 Days $T_0=133.567053$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

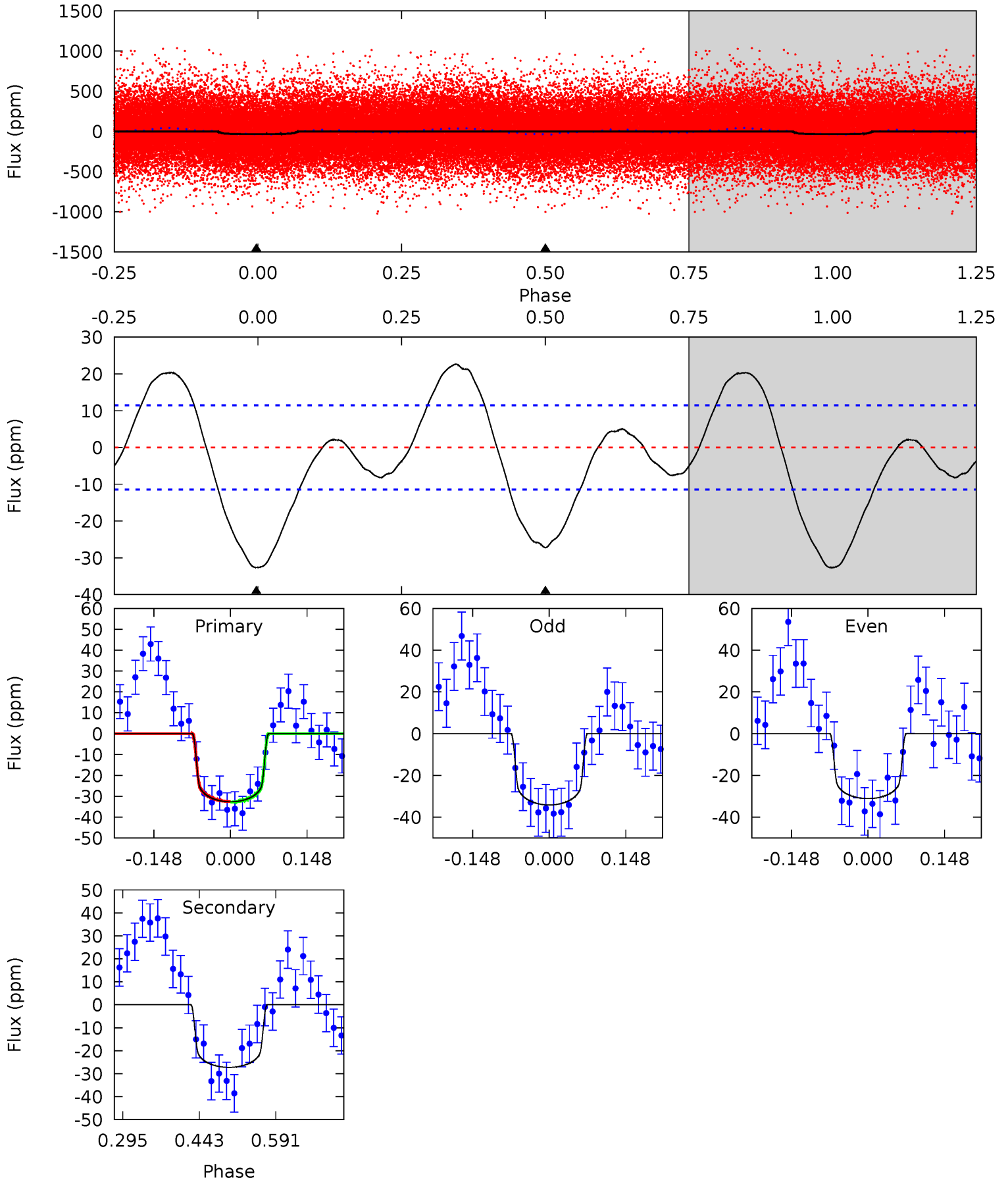
TCE 008292150-01 P= 2.237925 Days $T_0=133.544800$ (BKJD)



DV Model-Shift Uniqueness Test

008292150-01, P = 2.237871 Days, E = 131.329182 Days

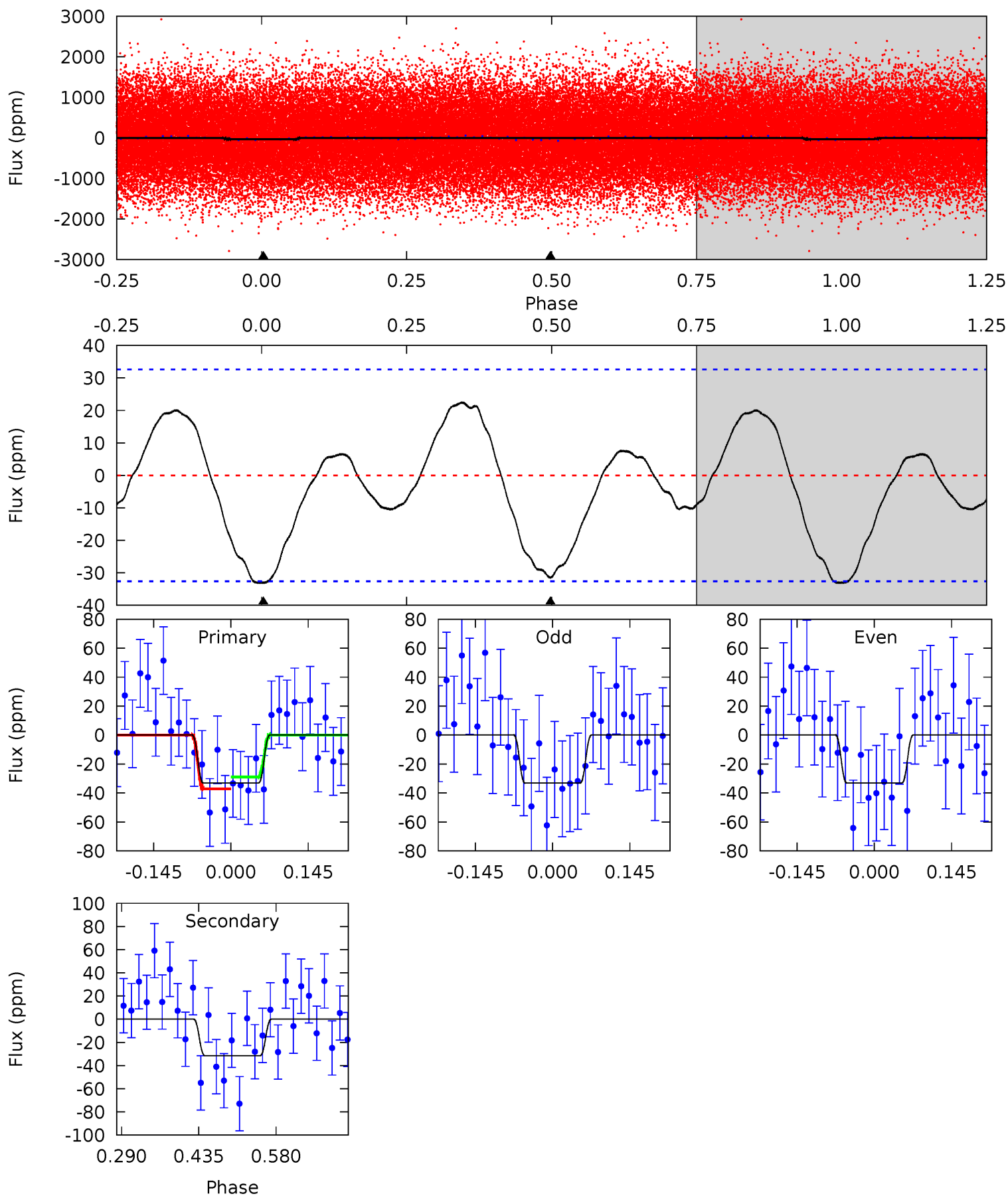
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.8	10.7	0	0	4.48	1.45	4.01	12.8	12.8	10.7	10.7	0.60	0.90	0.41	0.05



Alt Model-Shift Uniqueness Test

008292150-01, P = 2.237925 Days, E = 131.306875 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.54	4.33	0	0	4.49	1.46	1.48	4.54	4.54	4.33	4.33	0.00	0.90	0.40	0.56



Stellar Parameters For KIC 008292150

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7447^{+74}_{-96}	$3.837^{+0.168}_{-0.112}$	$0.360^{+0.050}_{-0.150}$	$2.887^{+0.524}_{-0.640}$	$2.085^{+0.174}_{-0.213}$	$0.122^{+0.103}_{-0.041}$
	+1%/-1%	+4%/-3%	+14%/-42%	+18%/-22%	+8%/-10%	+84%/-33%
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 008292150-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-27 ± 3	$1.84^{+0.48}_{-0.44}$	3749^{+179}_{-199}	6833^{+1147}_{-757}	$8.113^{+5.857}_{-2.973}$
Alt.	-31 ± 7	$1.82^{+0.45}_{-0.47}$	3769^{+167}_{-207}	7176^{+1451}_{-902}	$9.552^{+7.703}_{-3.940}$

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

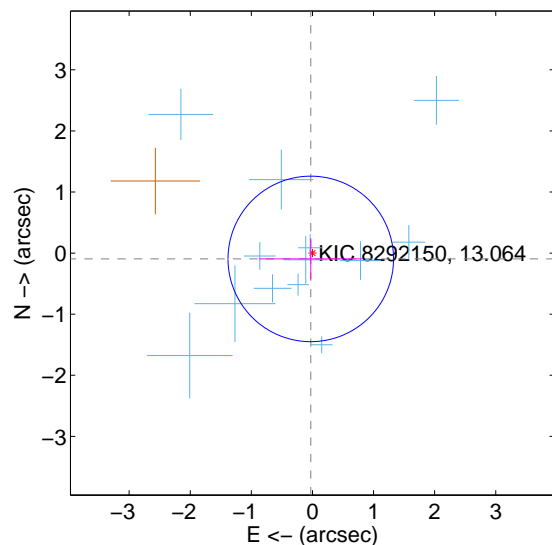
Supplemental centroid analysis for 008292150-01. Kepler magnitude: 13.06. Transit SNR 12.21

There are 13 quarters with good PRF difference image offsets

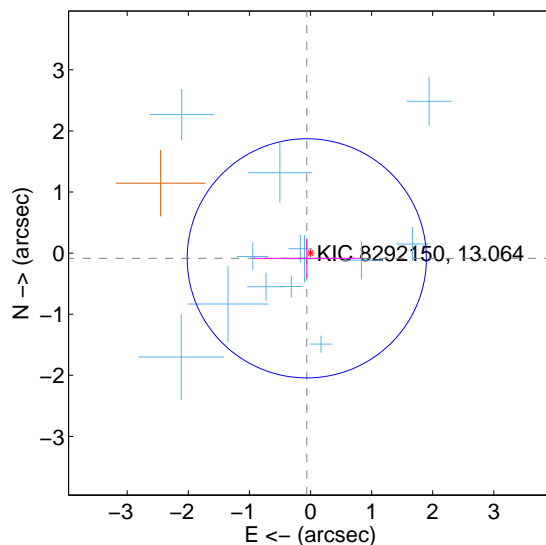
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.099 ± 0.452	0.22	0.027 ± 0.849	-0.095 ± 0.333
PRF-fit source offset from KIC position	0.105 ± 0.652	0.16	0.061 ± 0.874	-0.086 ± 0.326
photometric centroid source offset	1.06 ± 0.75	1.41	0.49 ± 0.68	0.94 ± 0.76

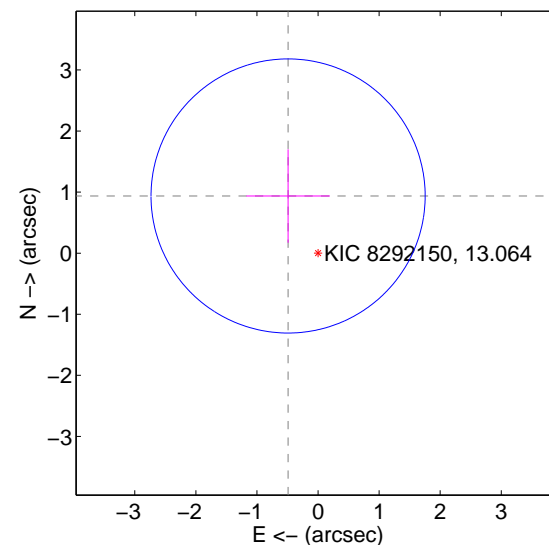
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

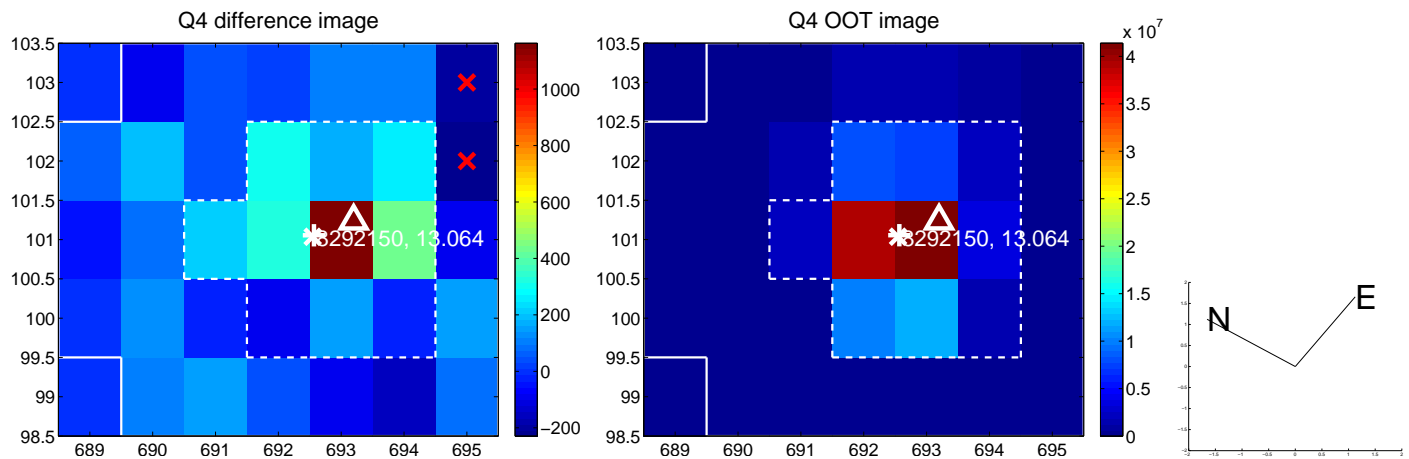
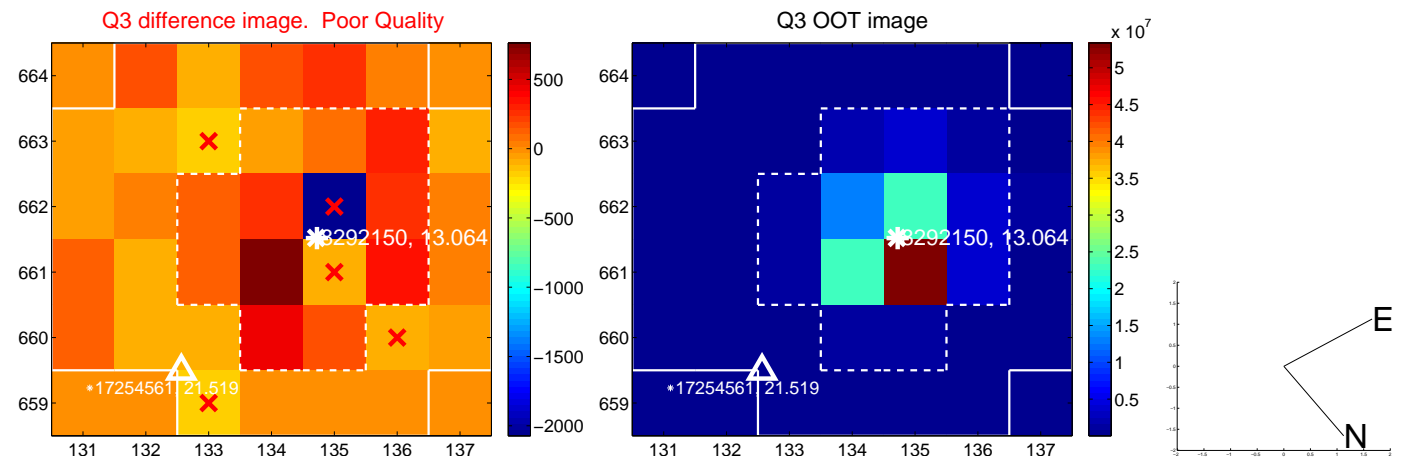
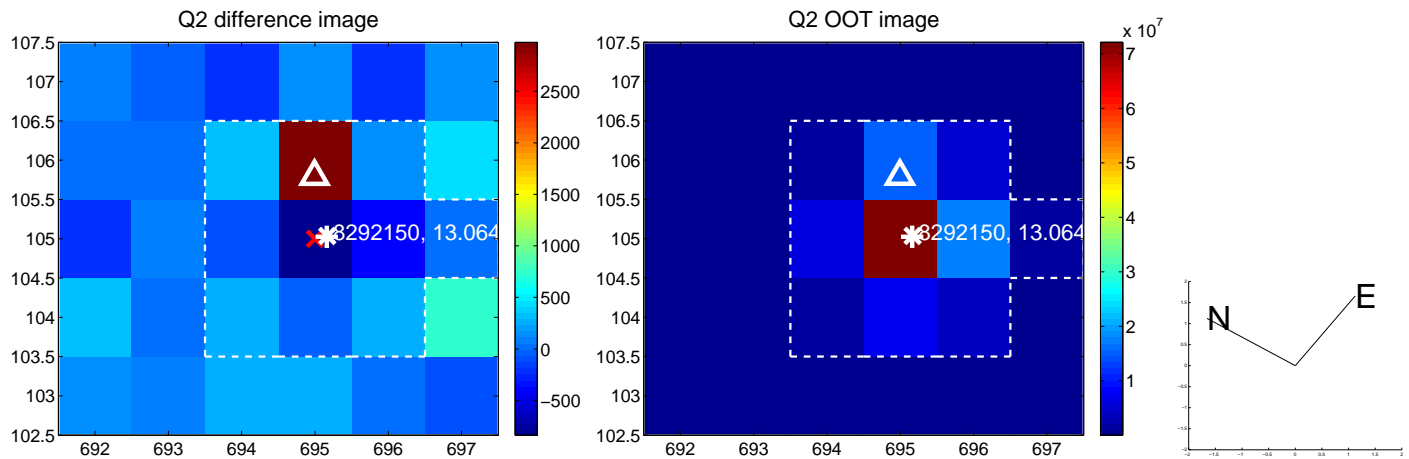
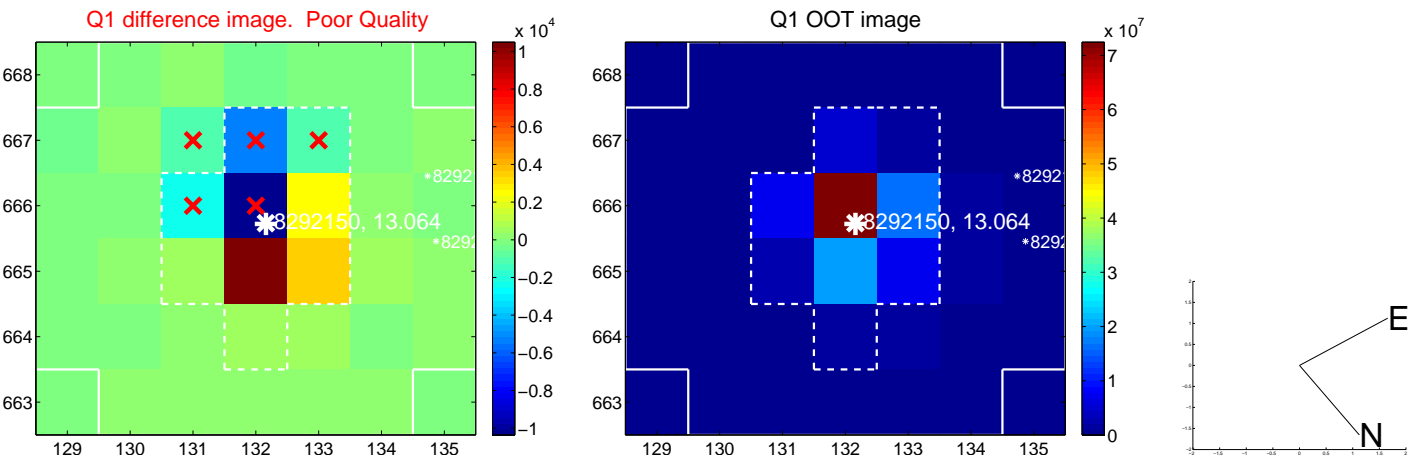


offset from photometric centroids

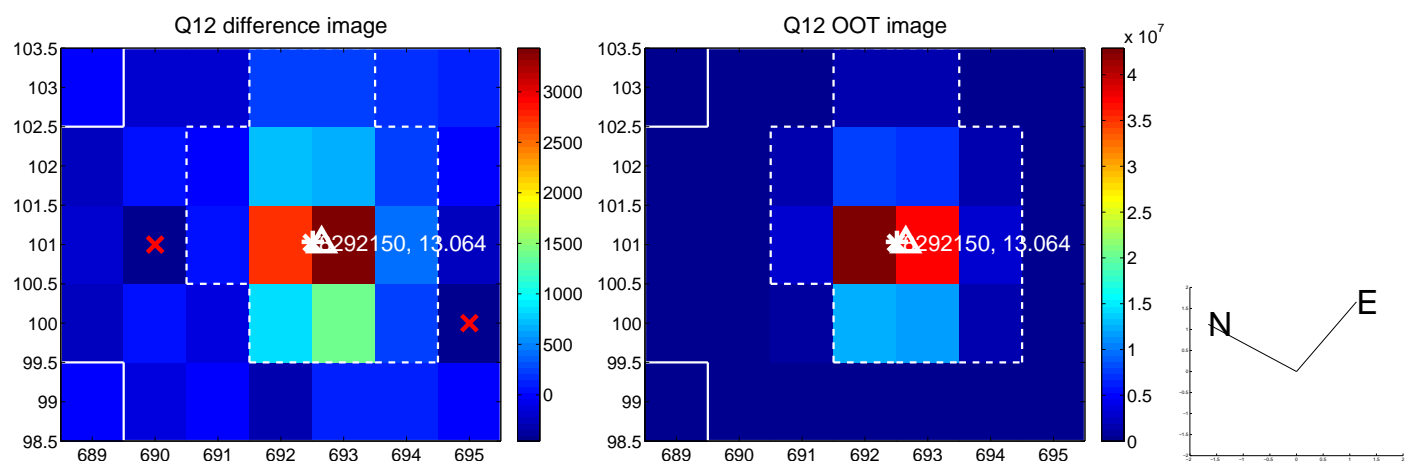
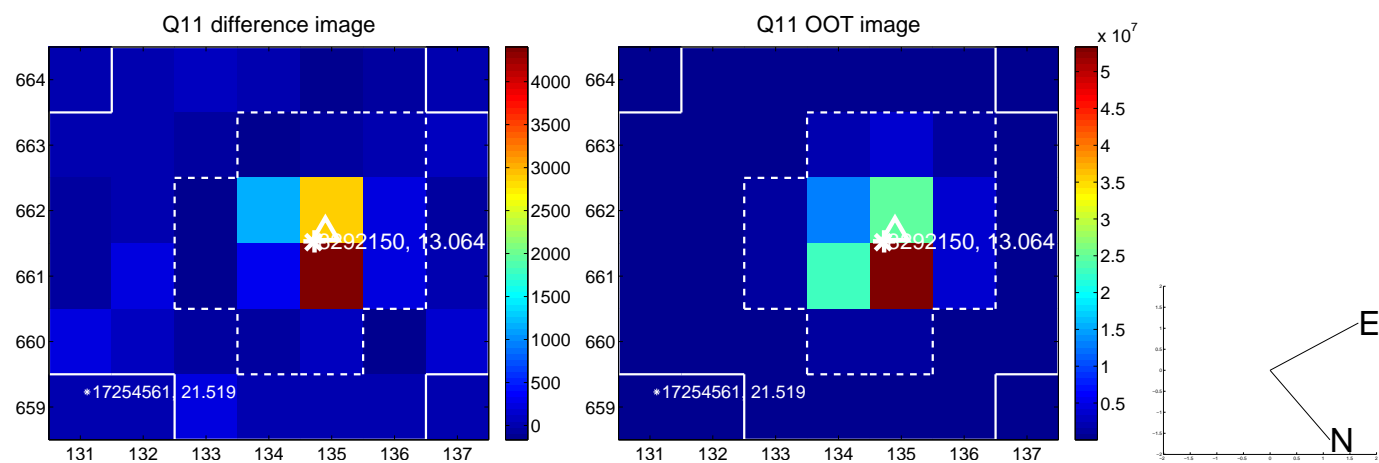
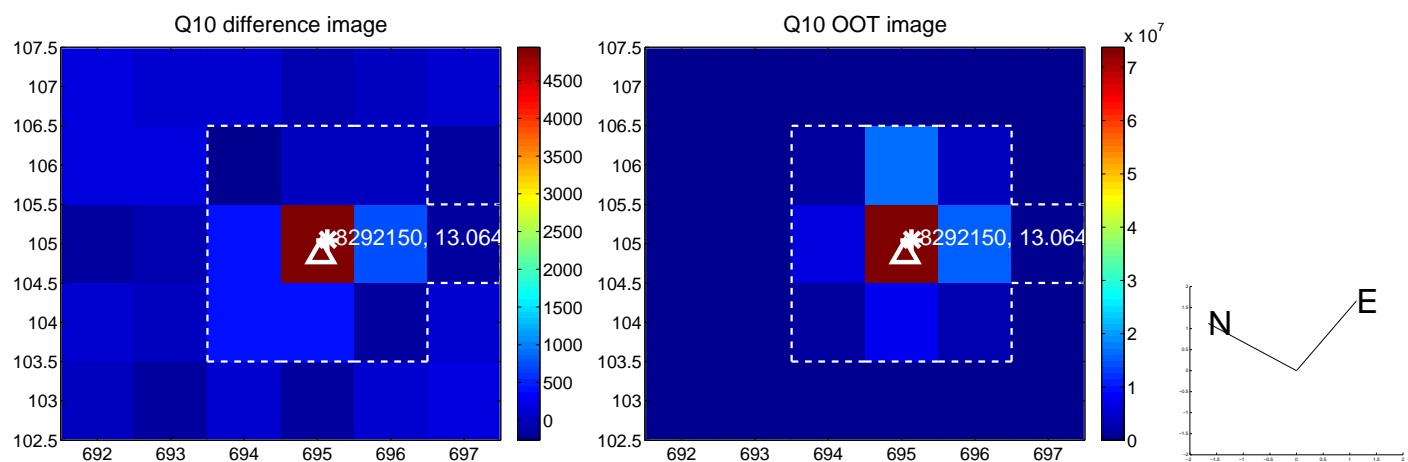
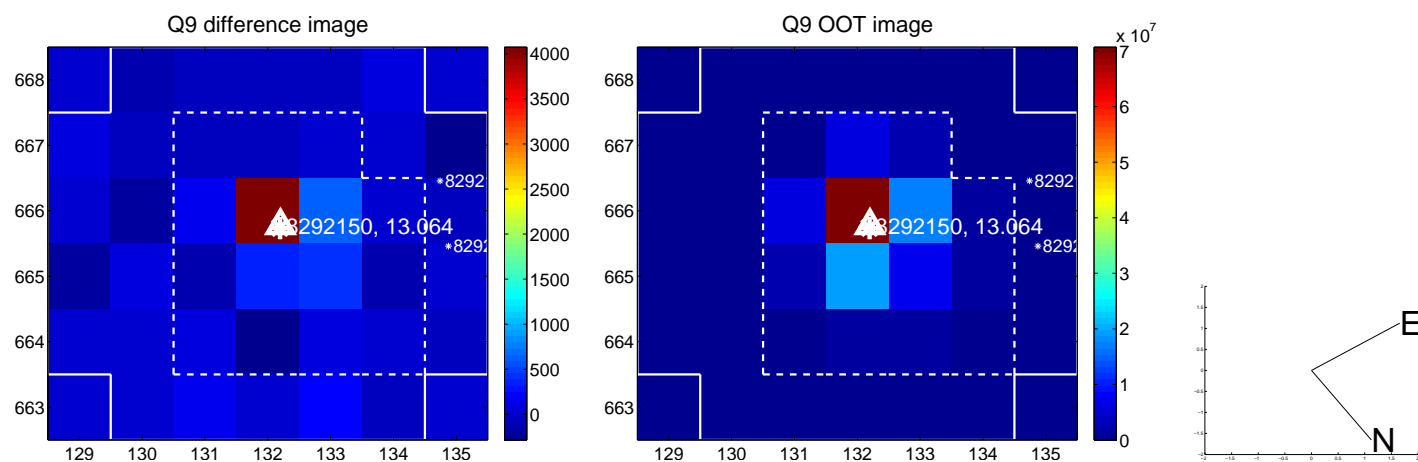


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

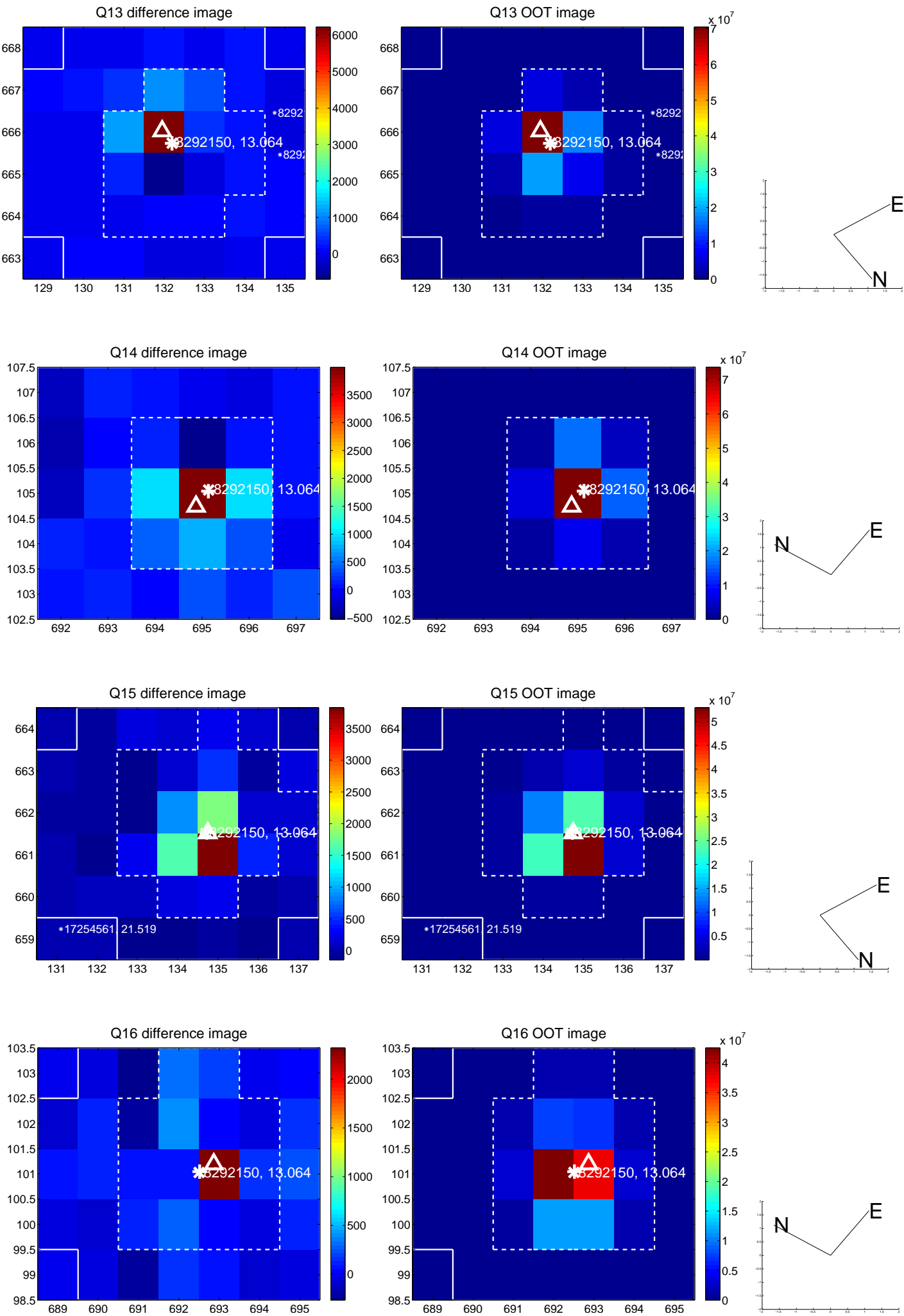
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



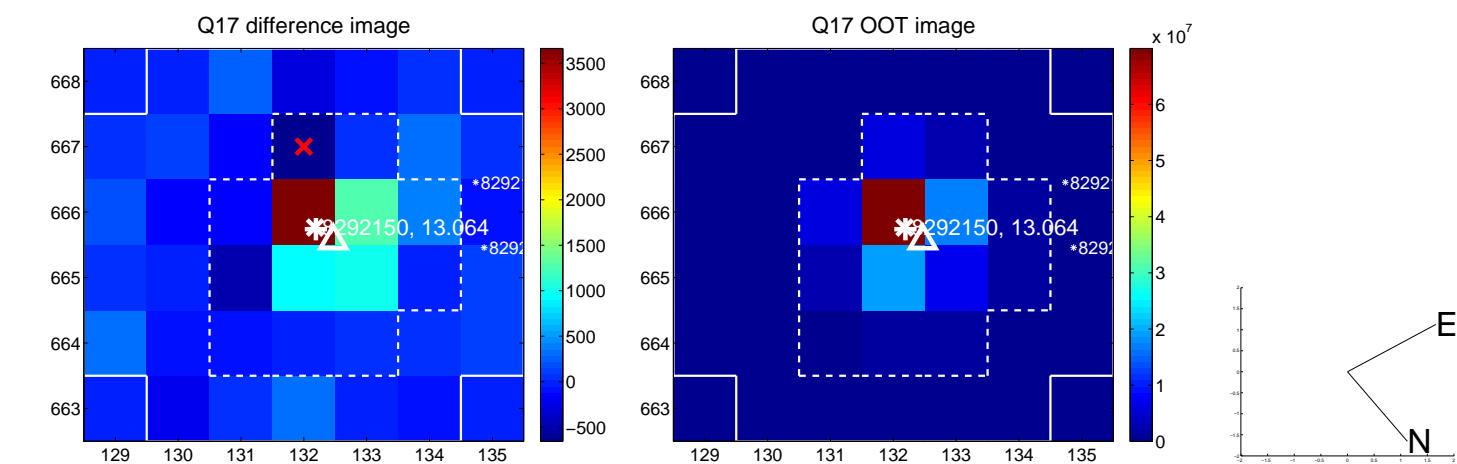
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



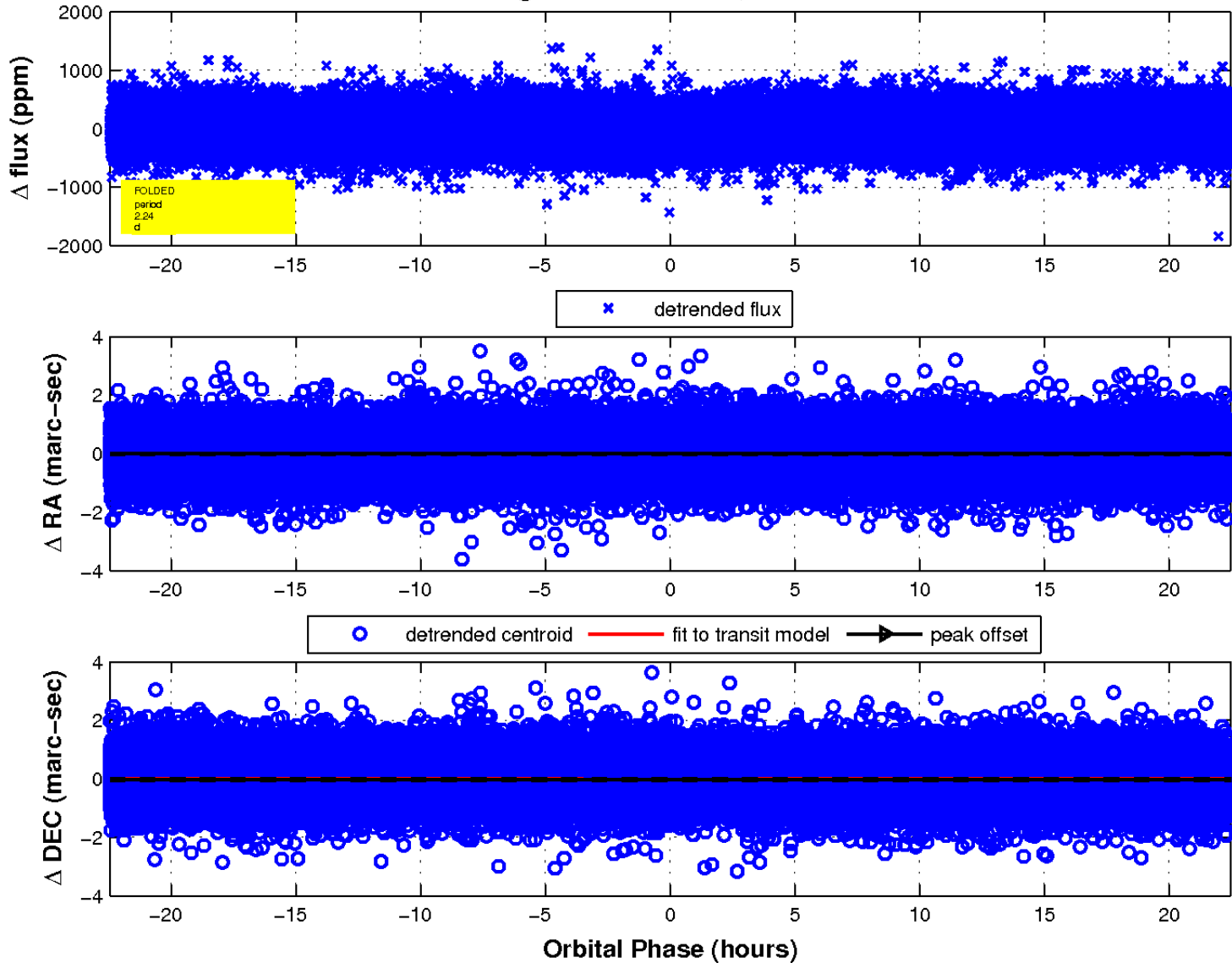
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

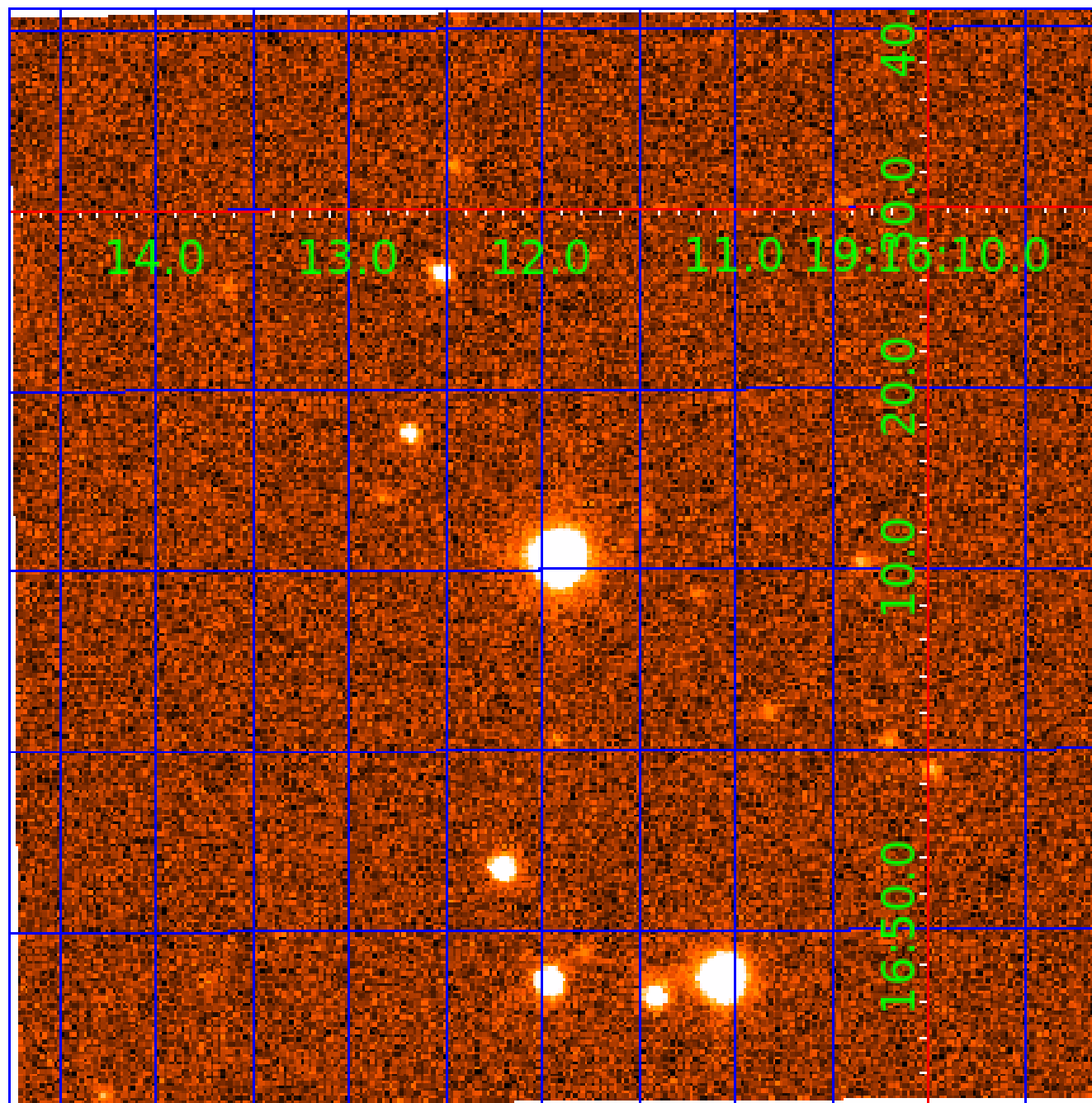


fluxWeightedCentroids, Planet 1 of 2



UKIRT Image

Declination



KIC 008292150

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})
008292150-01	OBS	No	2.237871	133.567053	29.6	7.488	12.4	12.2	2.89	7447	1.88	12531.53
008292150-02	OBS	No	2.237959	132.393047	35.6	6.546	12.4	13.9	2.89	7447	2.06	12530.88

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008292150-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
008292150-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_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.

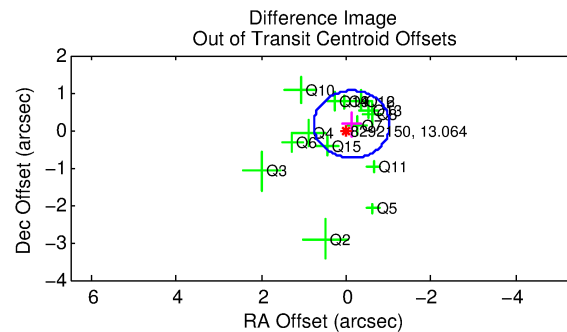
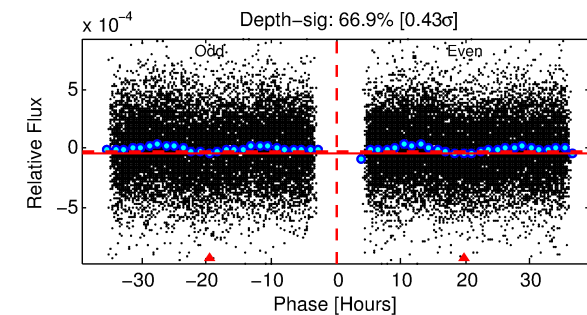
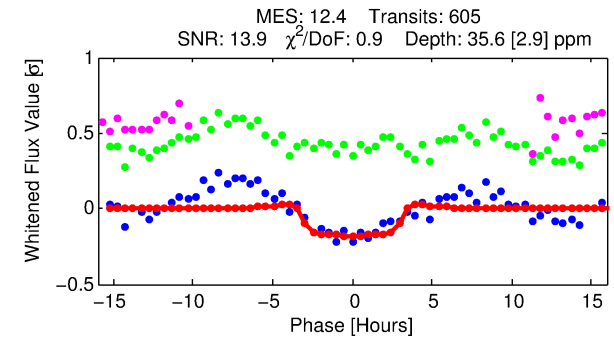
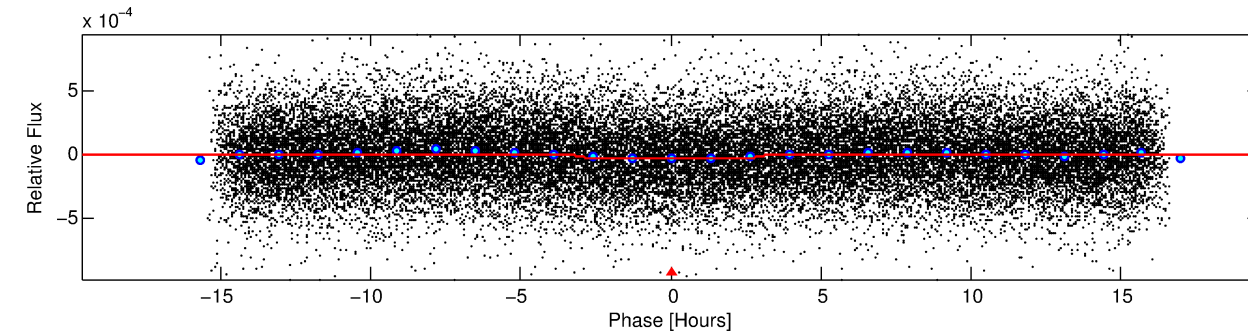
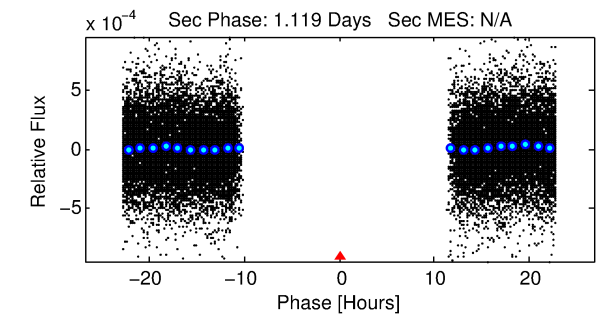
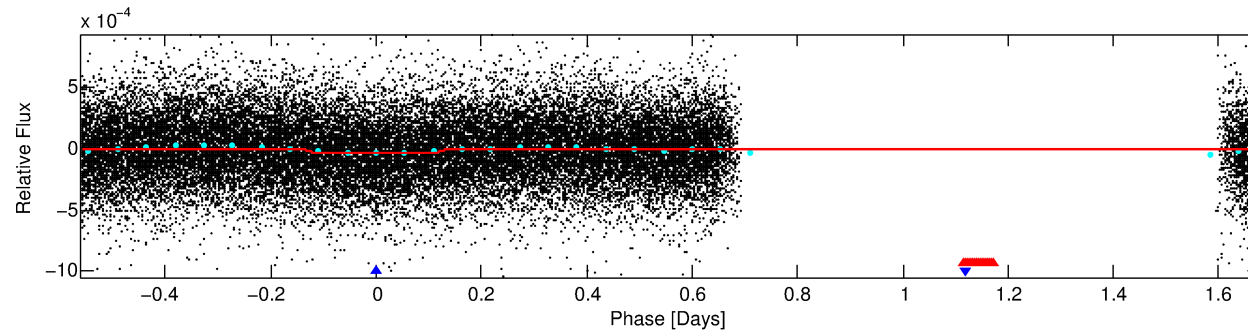
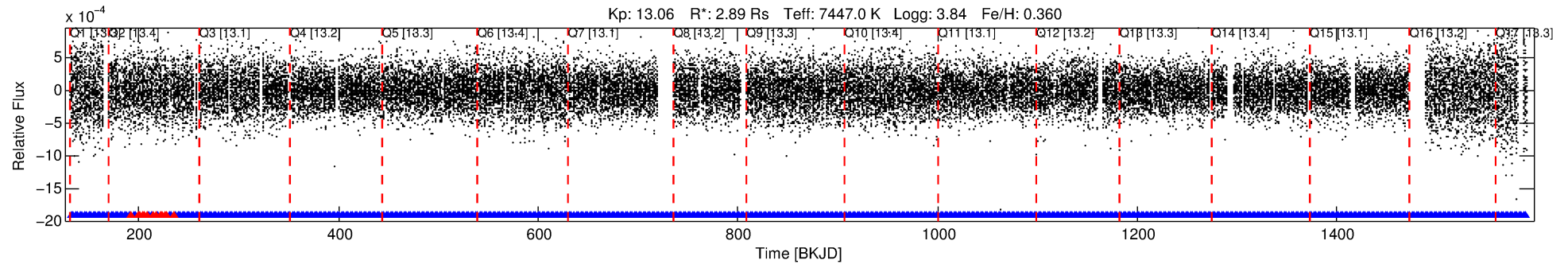
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008292150-02

No Significant Match Found

DV One-Page Summary

KIC: 8292150 Candidate: 2 of 2 Period: 2.238 d



DV Fit Results:

Period = 2.23796 [0.00002] d
Epoch = 132.3930 [0.0059] BKJD
Rp/R* = 0.0066 [0.0014]
a/R* = 1.36 [0.86]
b = 0.94 [0.18]
Seff = 12530.88 [3780.25]
Teq = 2698 [203] K
Rp = 2.06 [0.64] Re
a = 0.0428 [0.0084] AU

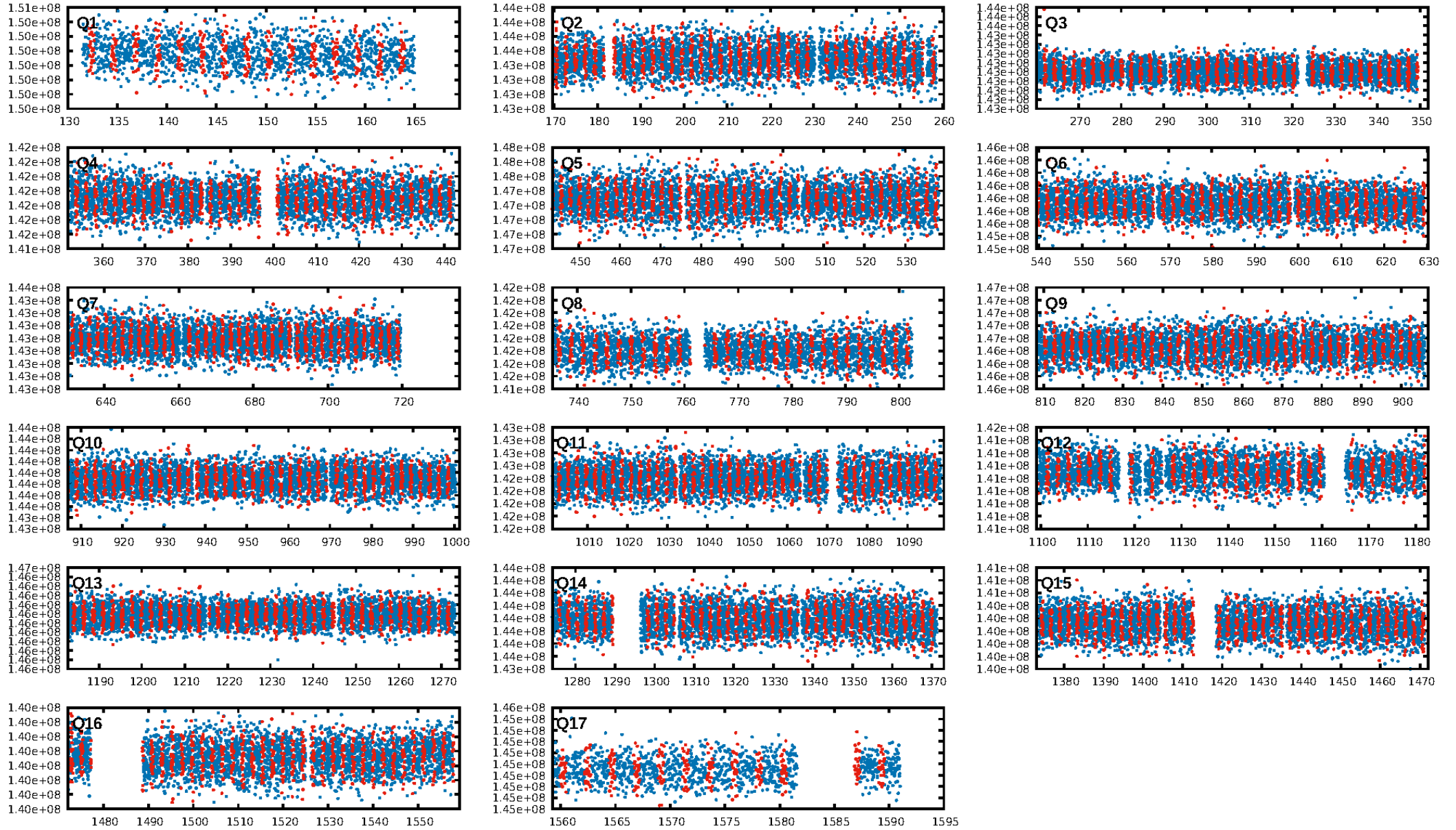
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.76e-38
RollingBand-fgt: 0.98 [565/578]
GhostDiagnostic-chr: 2.776
Centroid-sig: 0.0%
Centroid-so: 2.108 arcsec [3.12σ]
OotOffset-rm: 0.207 arcsec [0.69σ]
KicOffset-rm: 0.190 arcsec [0.70σ]
OotOffset-st: 4/4/4/3 [15]
KicOffset-st: 4/4/4/3 [15]
DiffImageQuality-fgm: 0.93 [14/15]
DiffImageOverlap-fno: 1.00 [17/17]

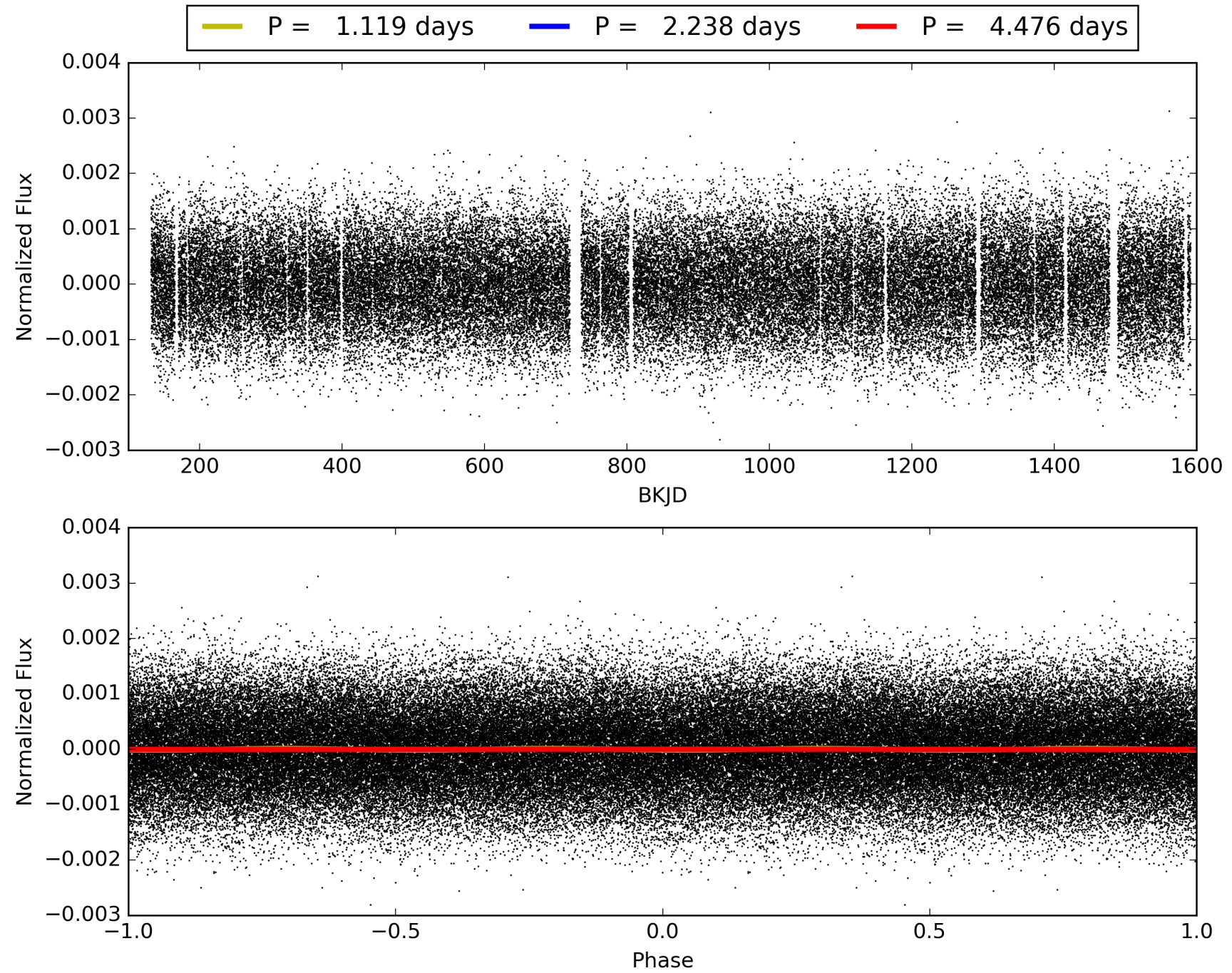
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 23:24:49 Z

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

TCE 008292150-02, PDC Light Curves

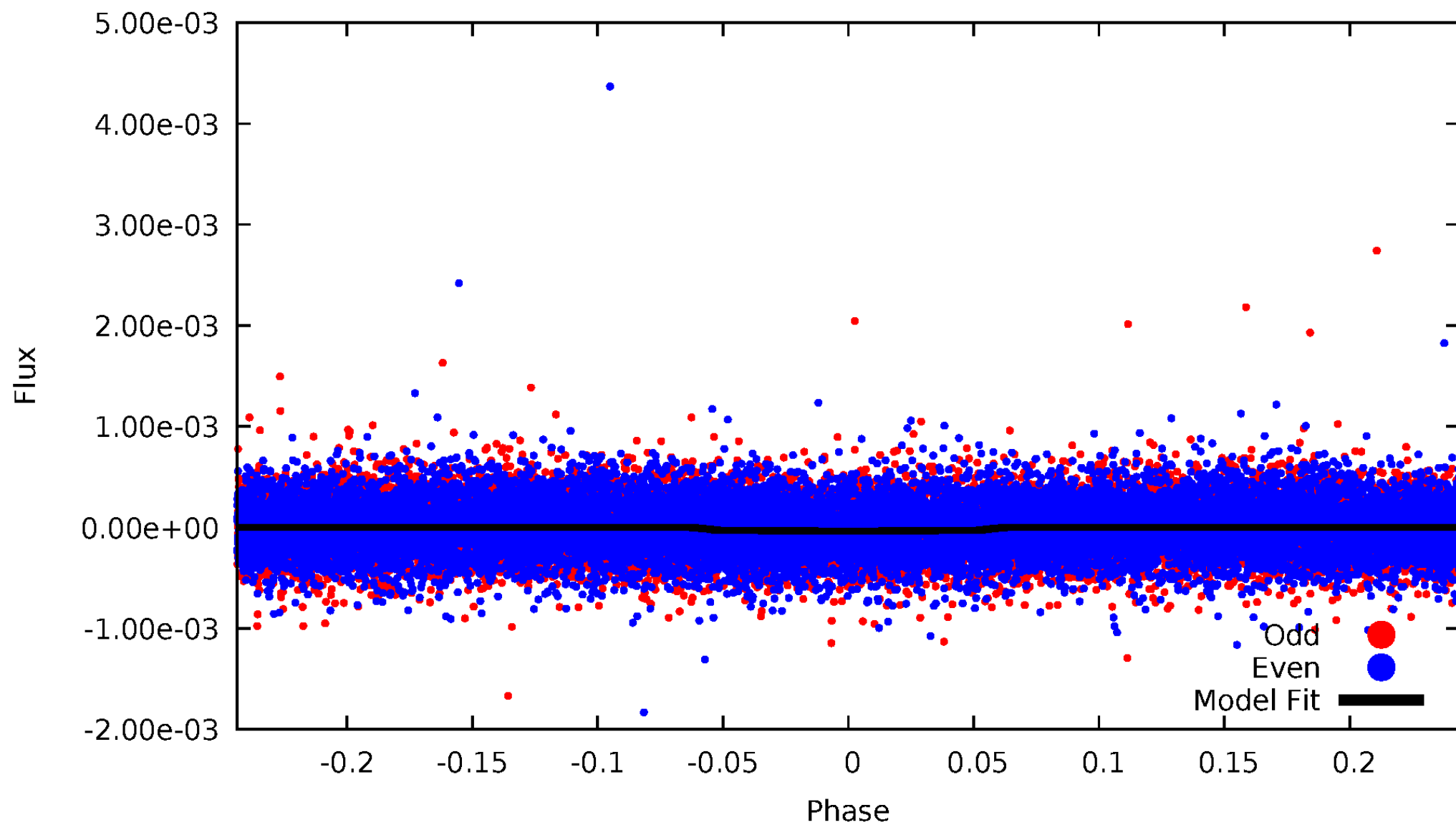


TCE 008292150-02



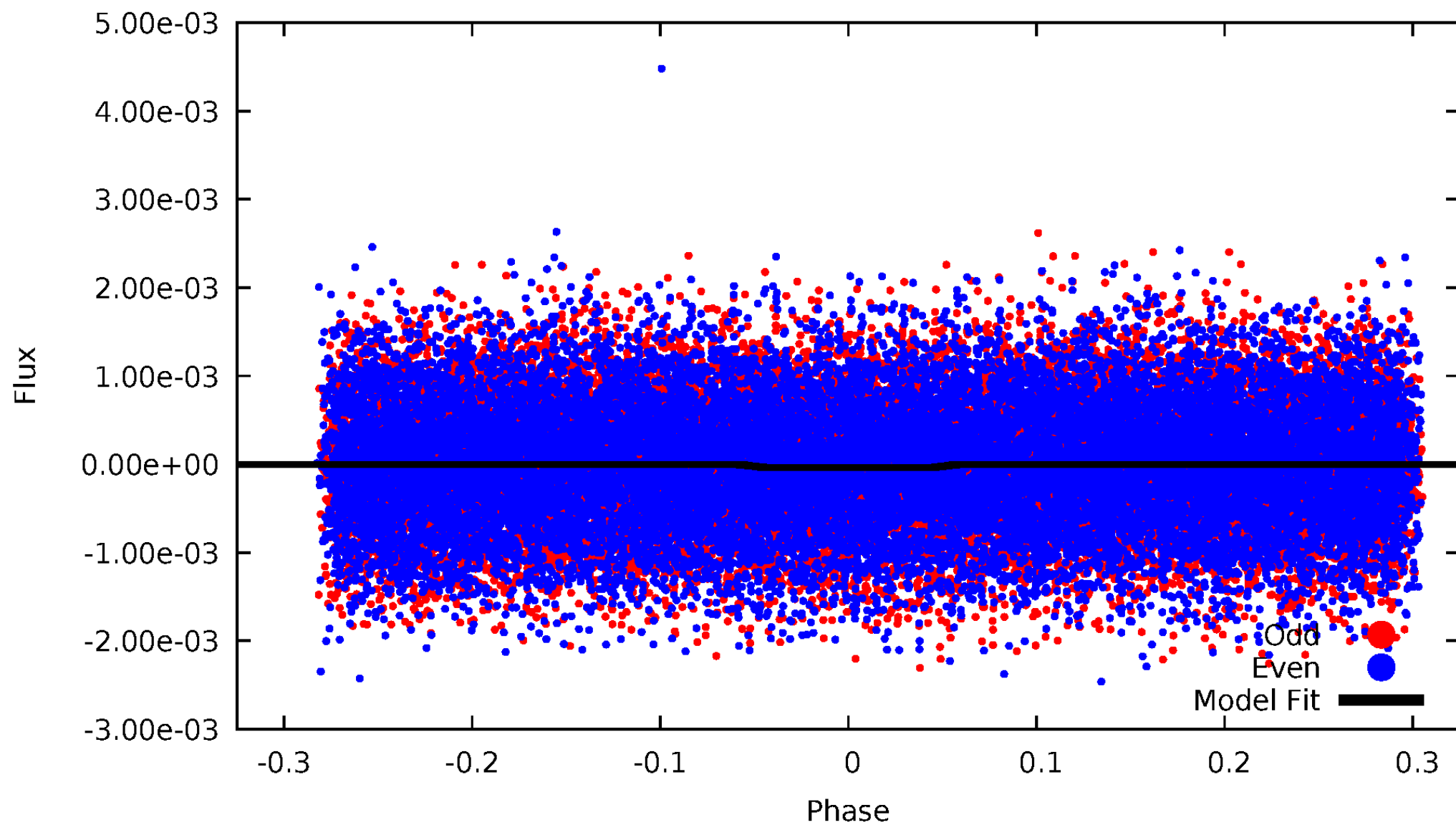
DV Odd/Even

TCE 008292150-02



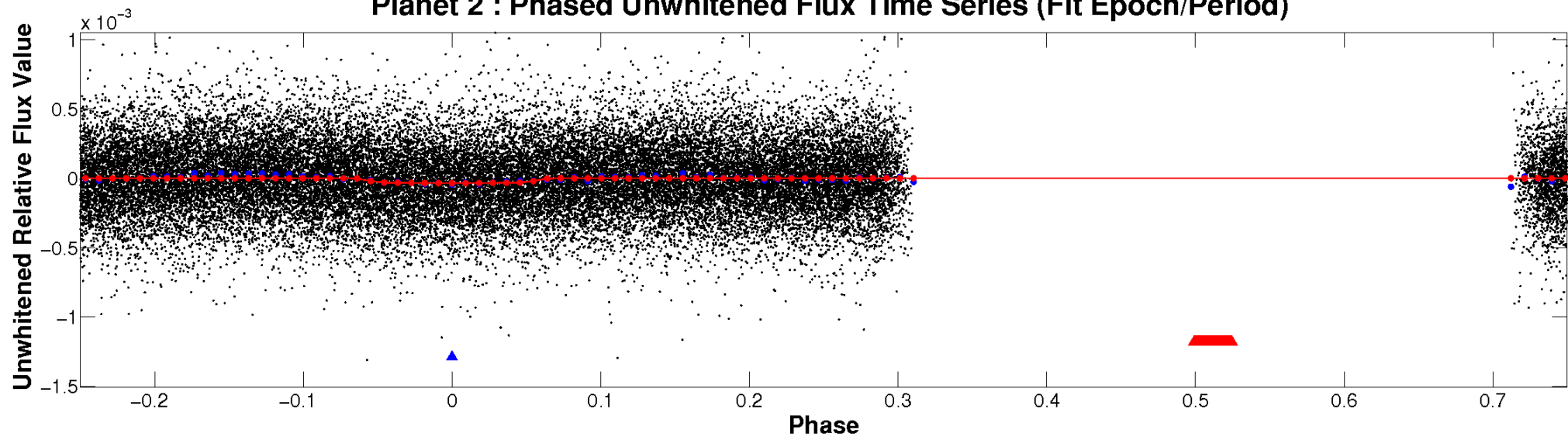
ALT Odd/Even

TCE 008292150-02

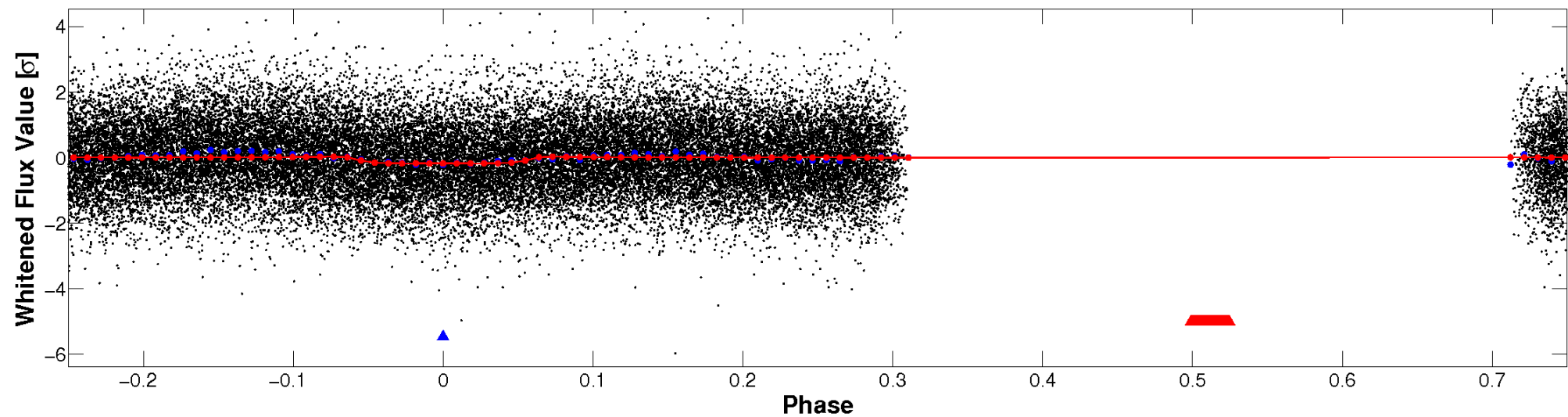


Non-Whitened Vs. Whitened Light Curve

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

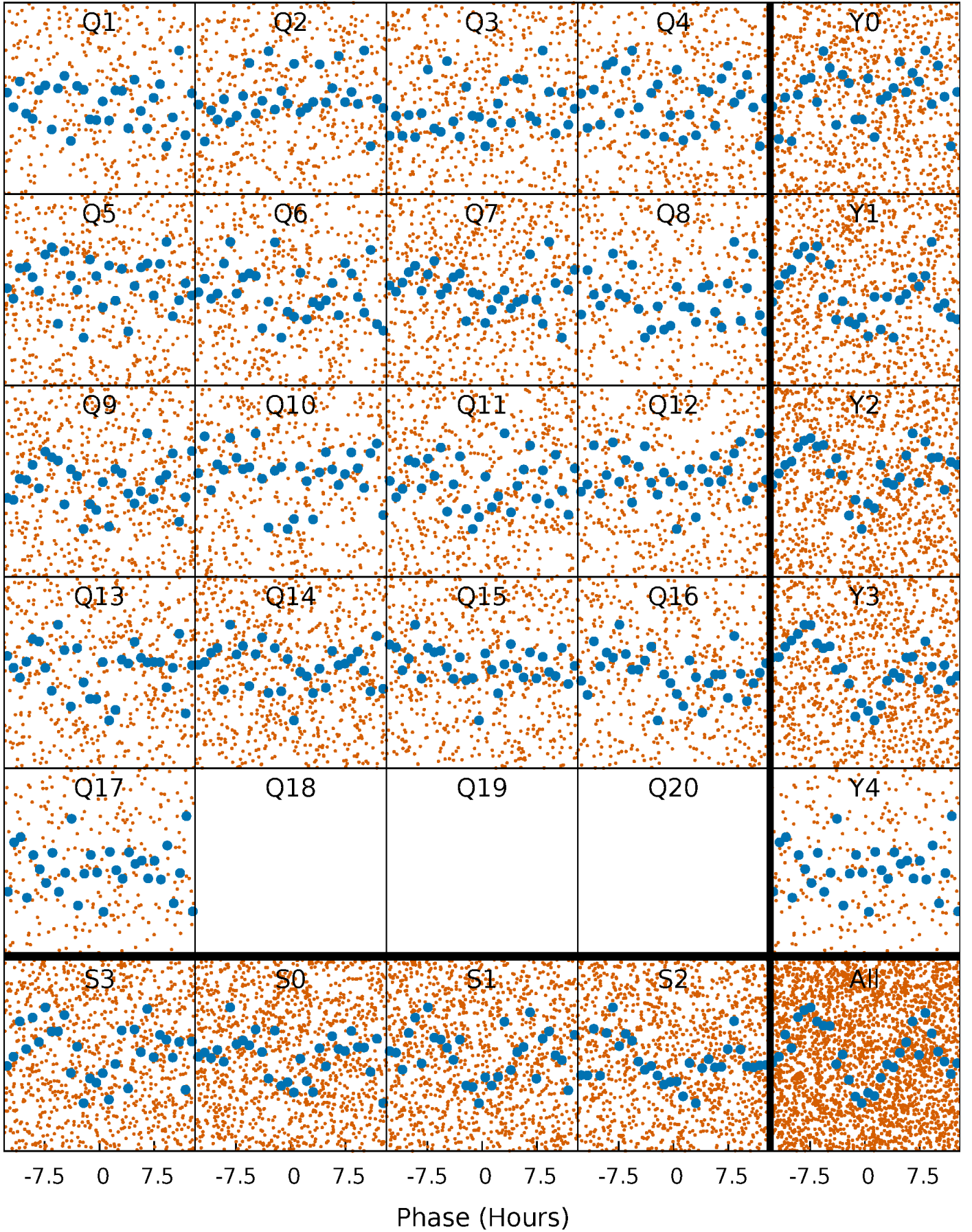


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



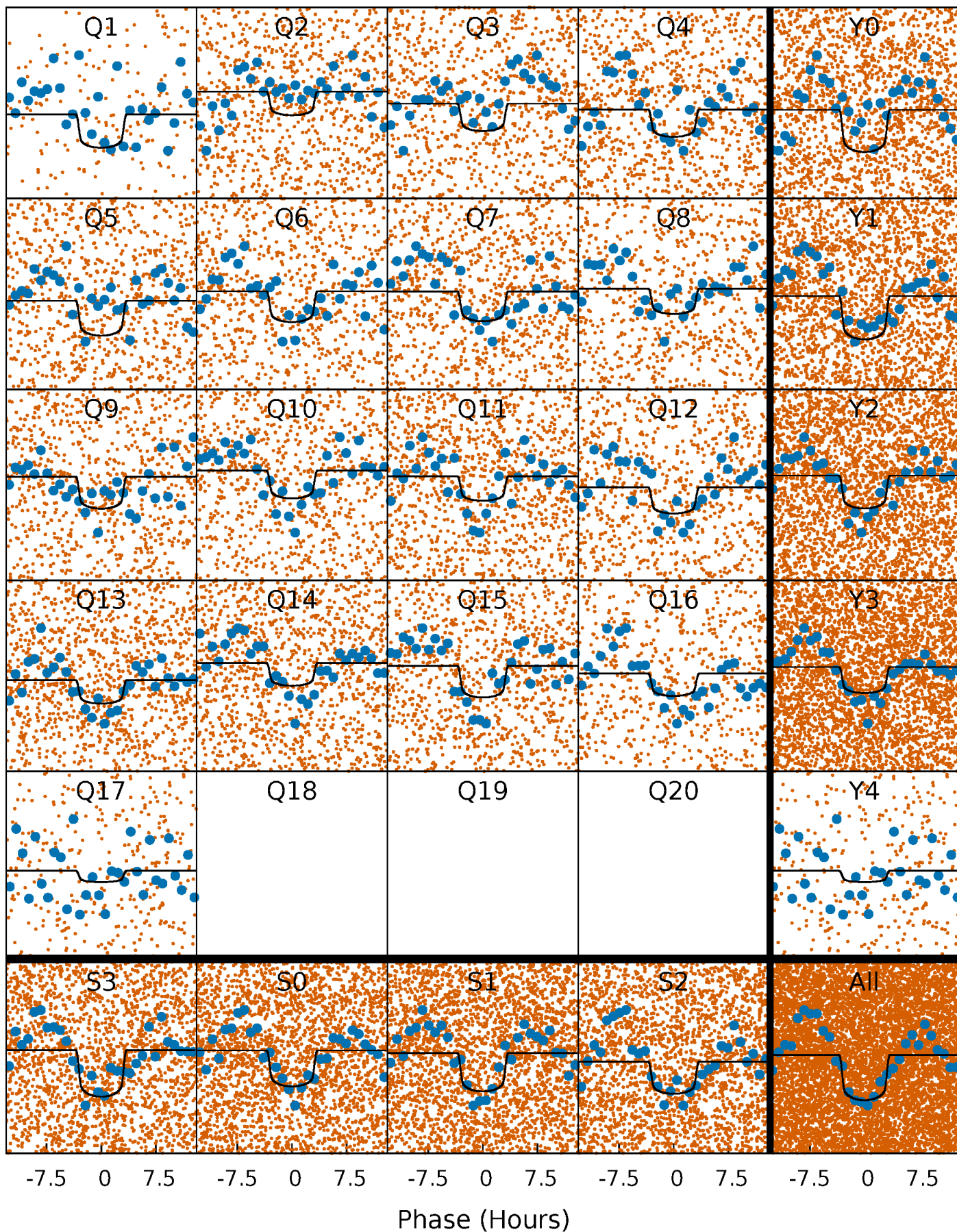
PDC Quarter-Phased Transit Curves

TCE 008292150-02 P= 2.237959 Days $T_0=132.393047$ (BKJD)



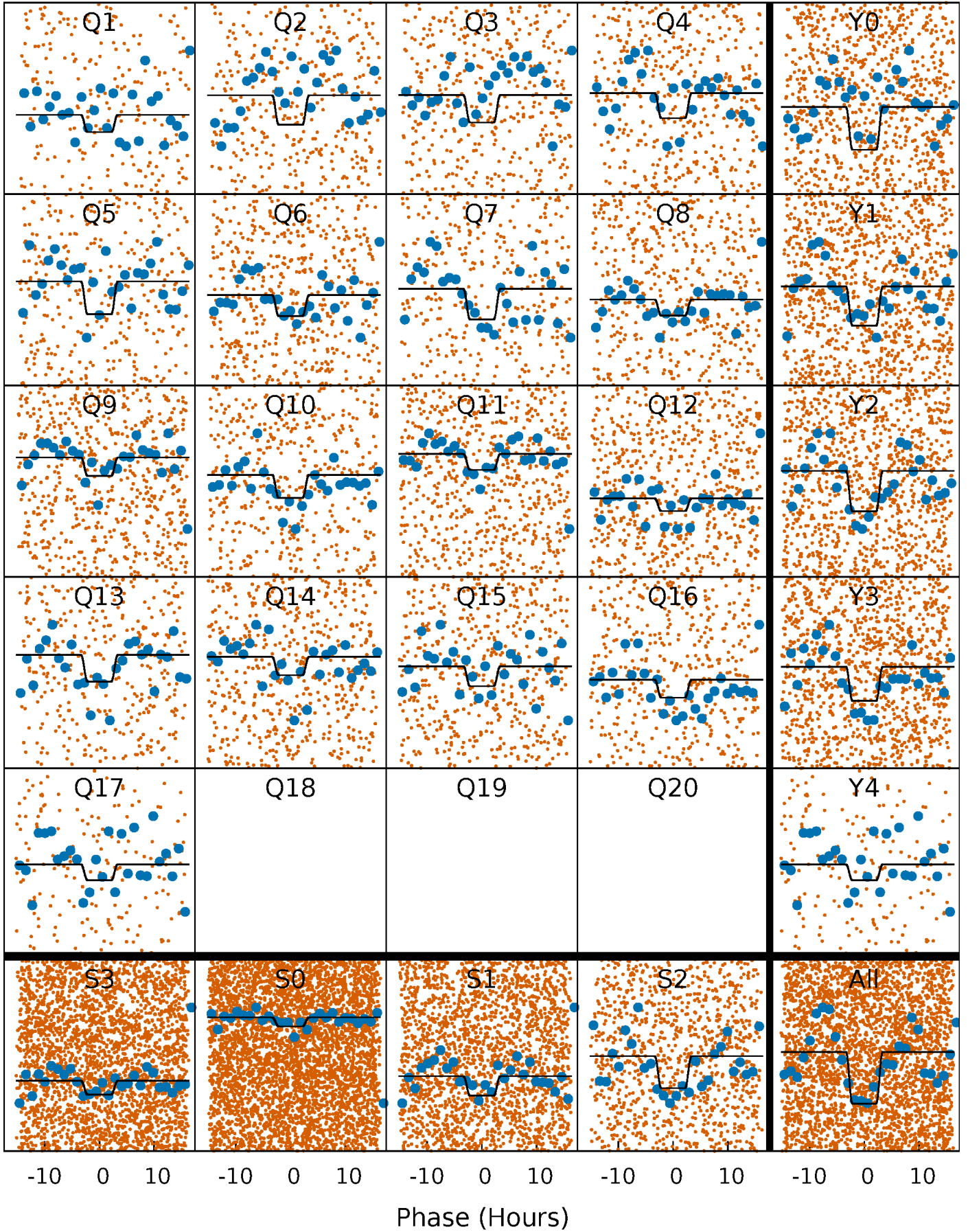
DV Quarter-Phased Transit Curves

TCE 008292150-02 P= 2.237959 Days $T_0=132.393047$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

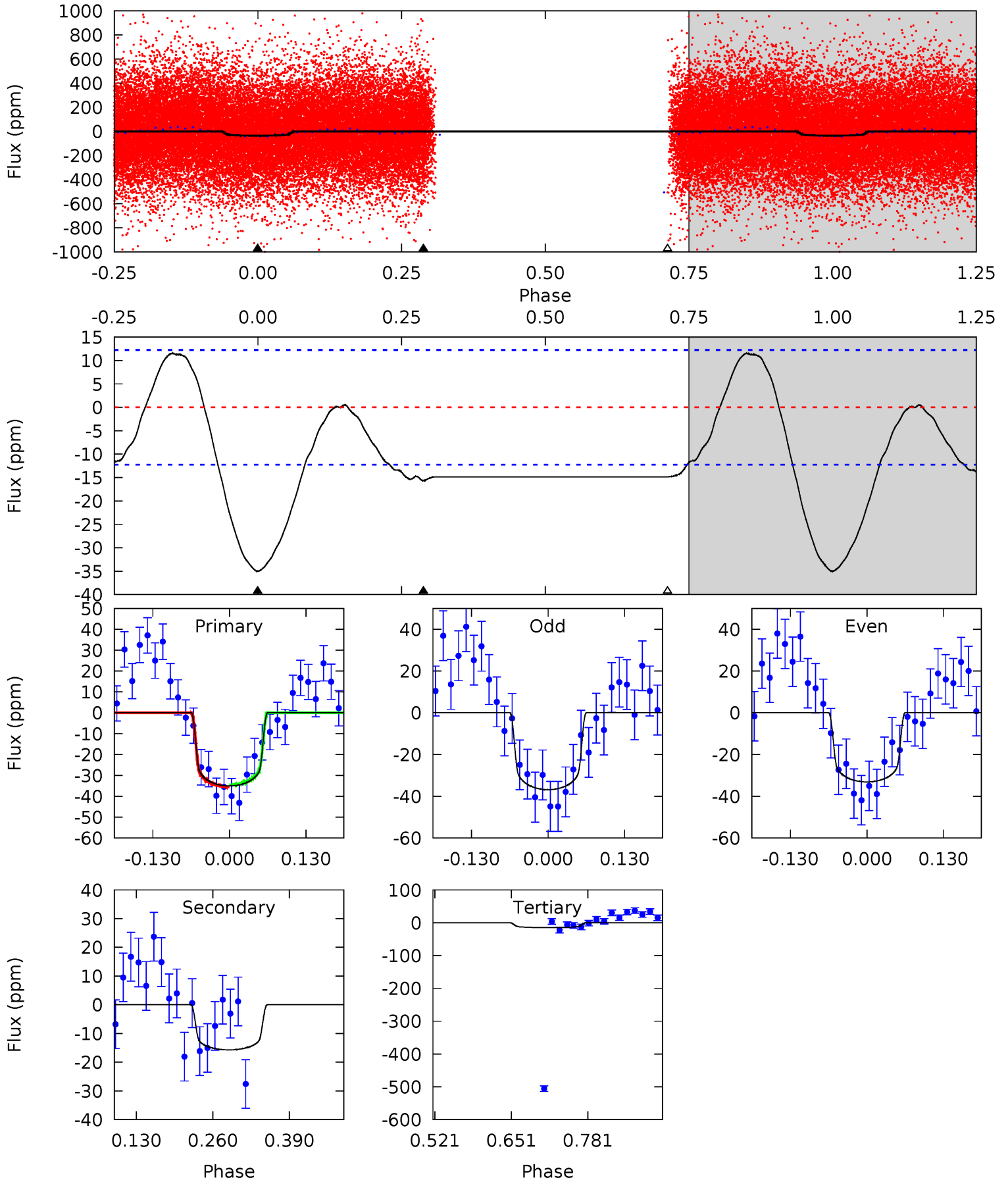
TCE 008292150-02 P= 2.237925 Days $T_0=132.404418$ (BKJD)



DV Model-Shift Uniqueness Test

008292150-02, P = 2.237959 Days, E = 130.155088 Days

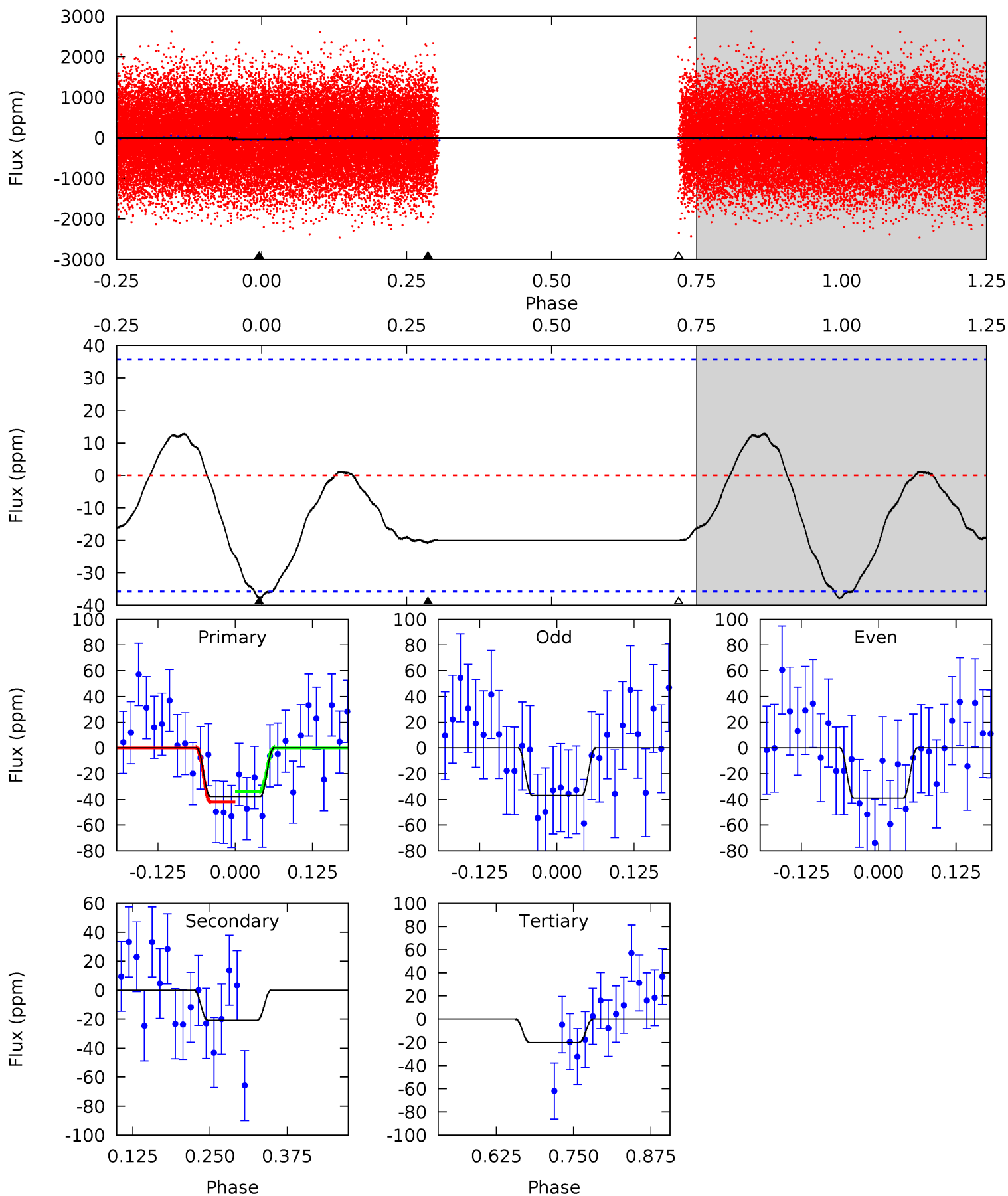
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.9	5.78	5.46	0	4.51	1.51	3.23	7.43	12.9	0.32	5.78	0.68	0.96	0.25	0.18



Alt Model-Shift Uniqueness Test

008292150-02, P = 2.237925 Days, E = 130.166493 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.78	2.62	2.52	0	4.52	1.53	1.35	2.25	4.78	0.09	2.62	0.13	0.93	0.25	0.51



Stellar Parameters For KIC 008292150

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7447^{+74}_{-96}	$3.837^{+0.168}_{-0.112}$	$0.360^{+0.050}_{-0.150}$	$2.887^{+0.524}_{-0.640}$	$2.085^{+0.174}_{-0.213}$	$0.122^{+0.103}_{-0.041}$
	+1%/-1%	+4%/-3%	+14%/-42%	+18%/-22%	+8%/-10%	+84%/-33%
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 008292150-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-16 ± 3	$2.02^{+0.55}_{-0.47}$	3749^{+190}_{-208}	5575^{+812}_{-549}	$3.792^{+2.928}_{-1.487}$
Alt.	-21 ± 8	$1.92^{+0.52}_{-0.44}$	3764^{+176}_{-221}	6160^{+1132}_{-949}	$5.429^{+4.900}_{-2.652}$

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

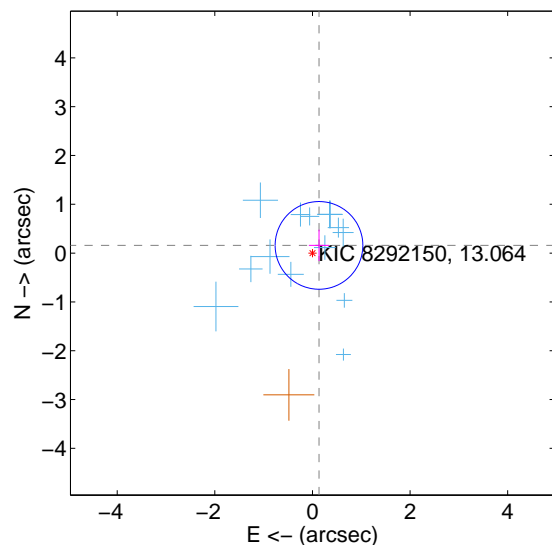
Supplemental centroid analysis for 008292150-02. Kepler magnitude: 13.06. Transit SNR 13.86

There are 14 quarters with good PRF difference image offsets

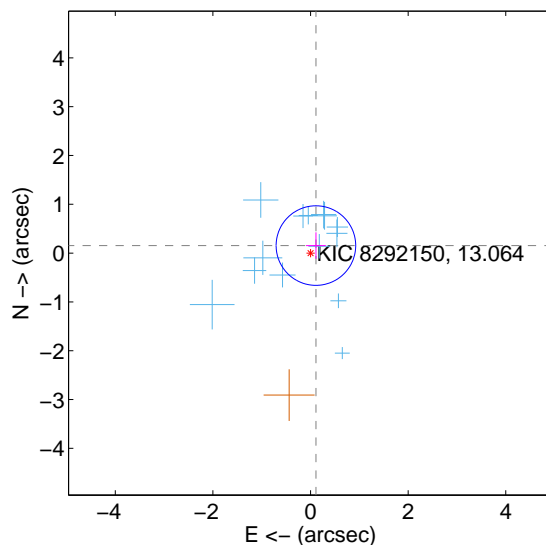
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.207 ± 0.300	0.69	-0.134 ± 0.209	0.158 ± 0.322
PRF-fit source offset from KIC position	0.190 ± 0.272	0.70	-0.110 ± 0.202	0.154 ± 0.272
photometric centroid source offset	2.11 ± 0.68	3.12	0.41 ± 0.61	-2.07 ± 0.68

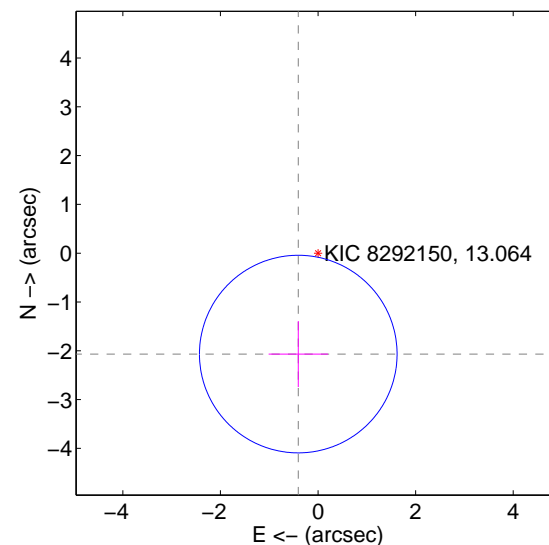
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

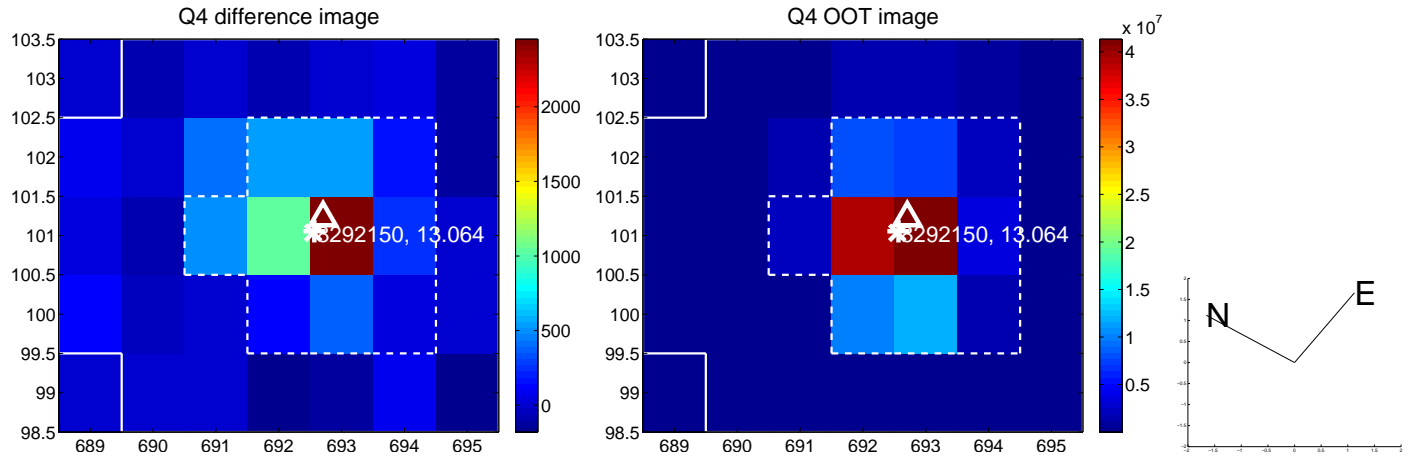
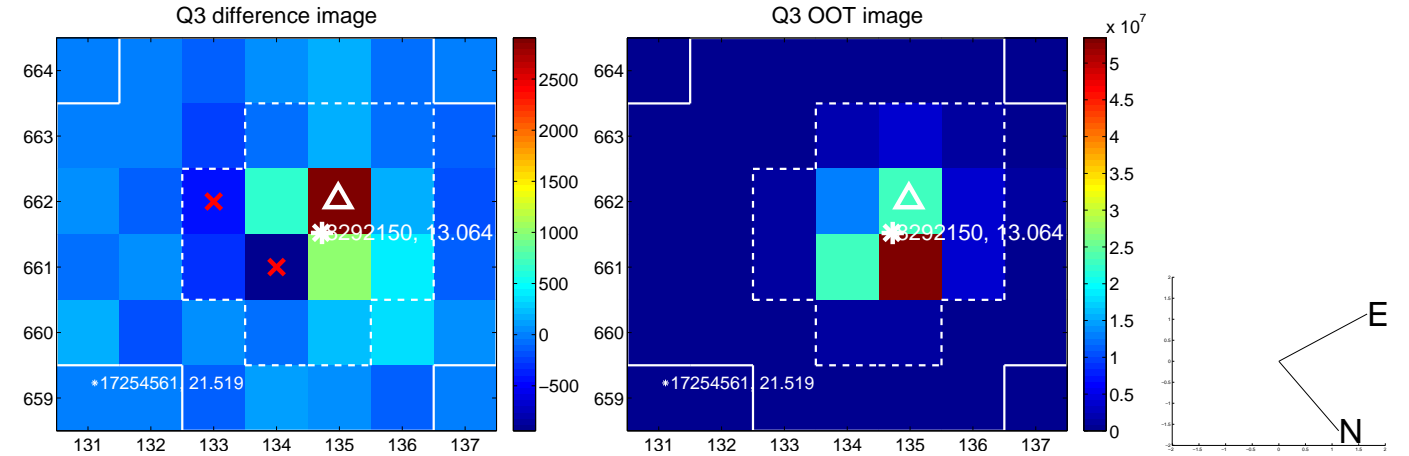
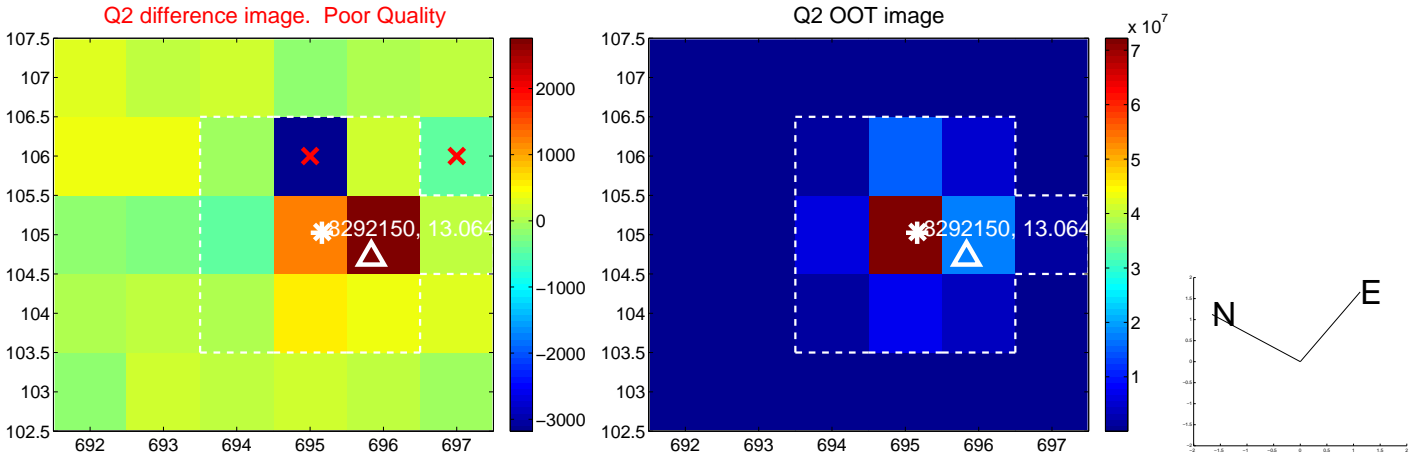
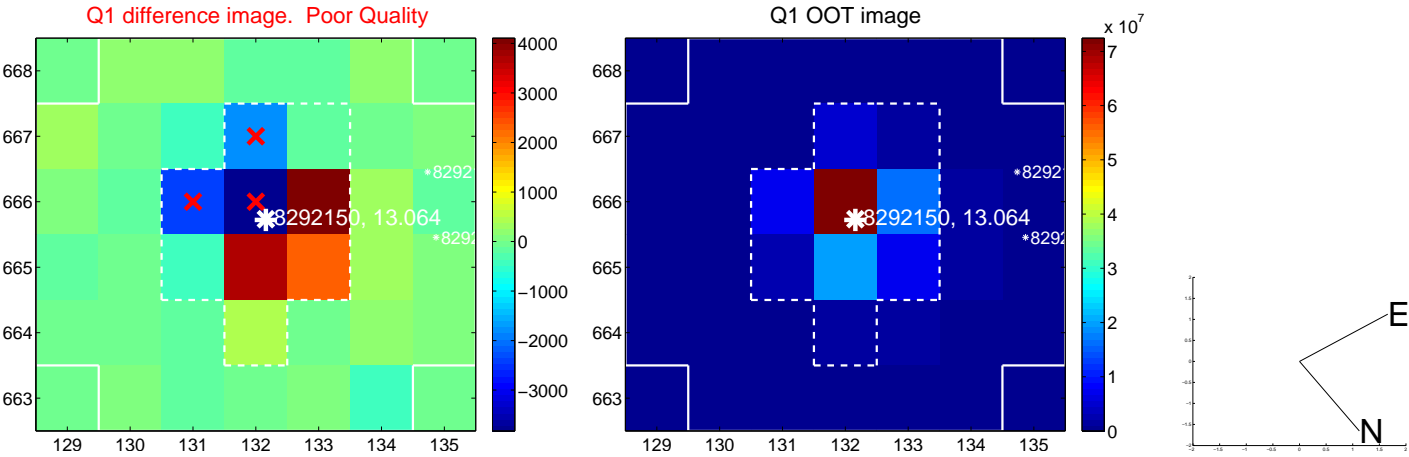


offset from photometric centroids

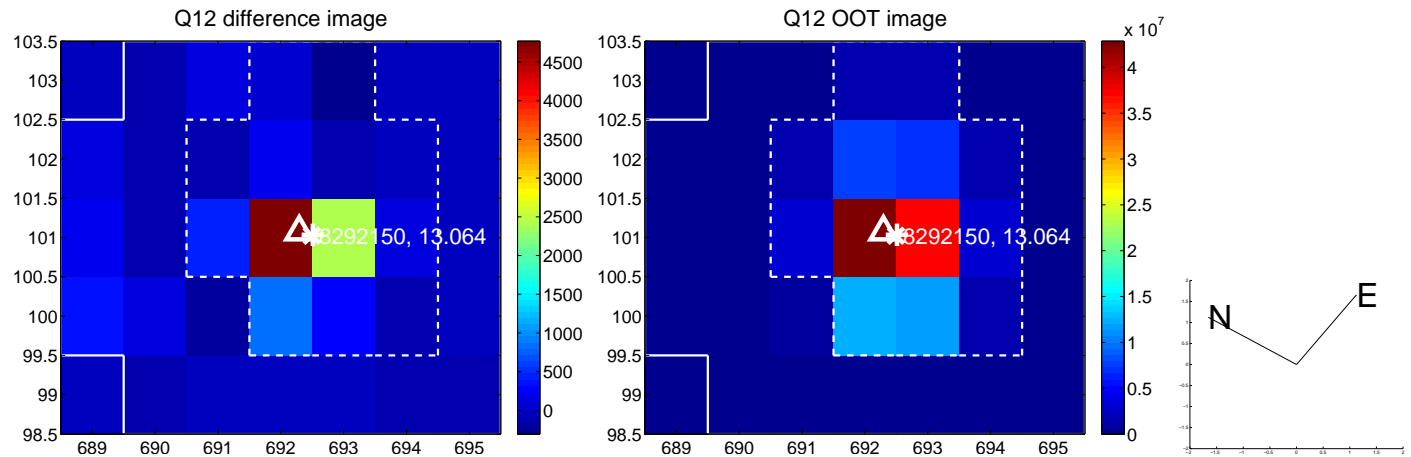
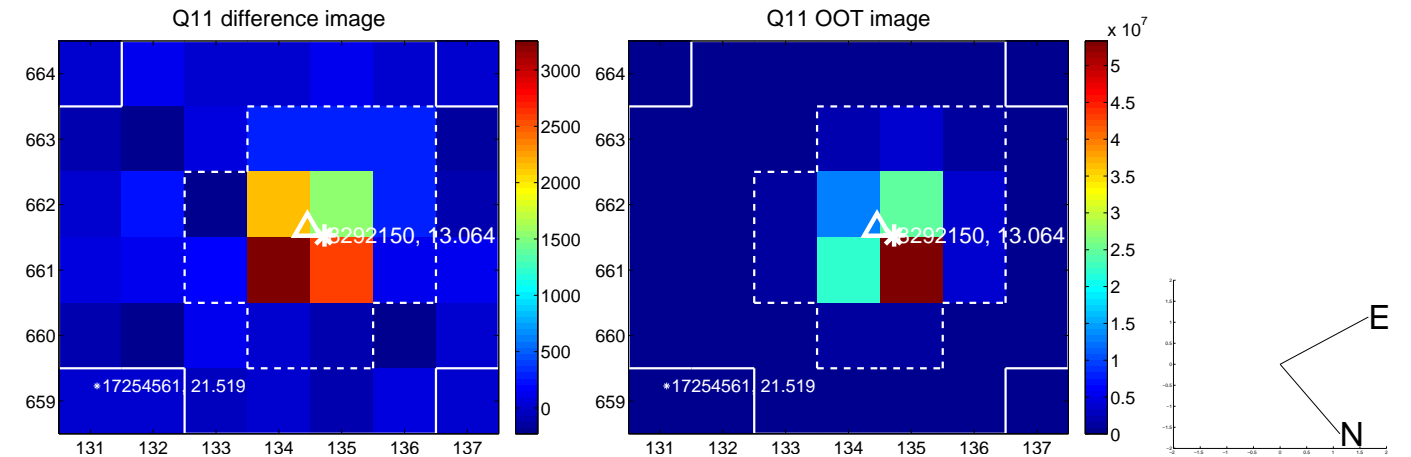
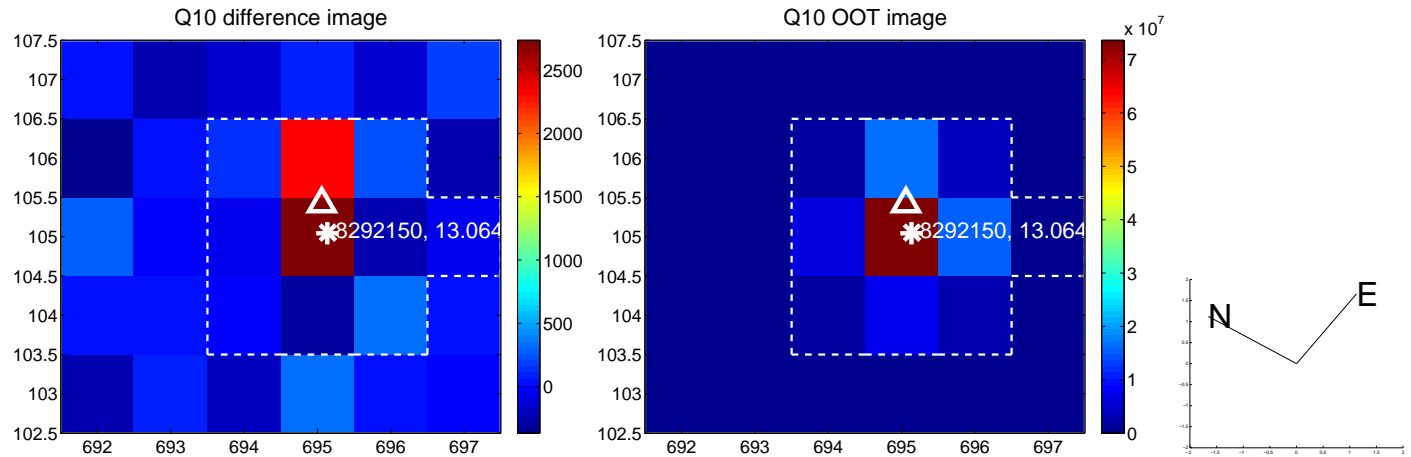
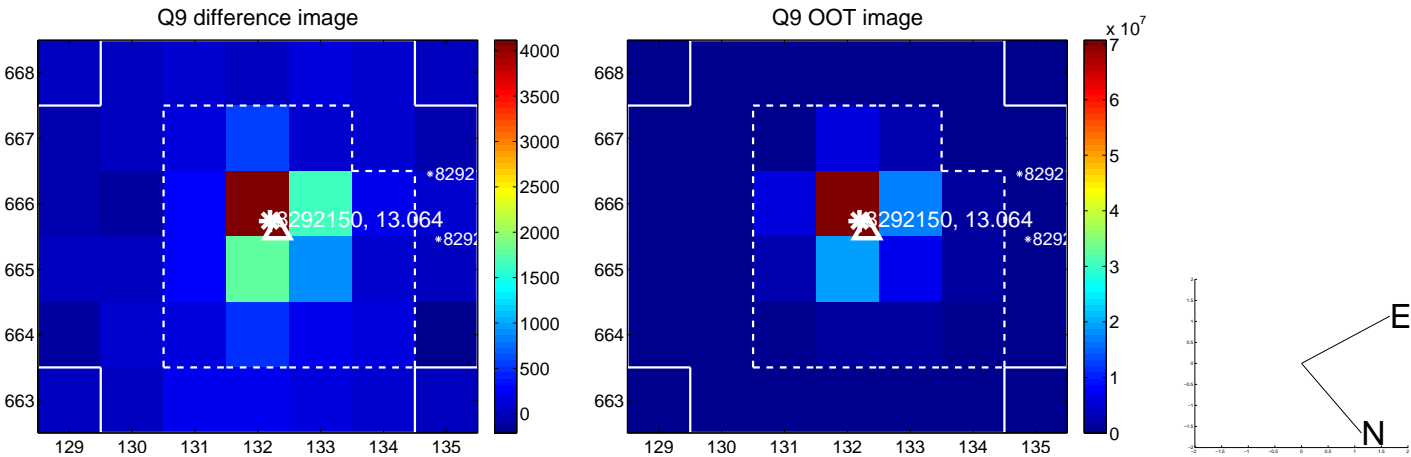


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

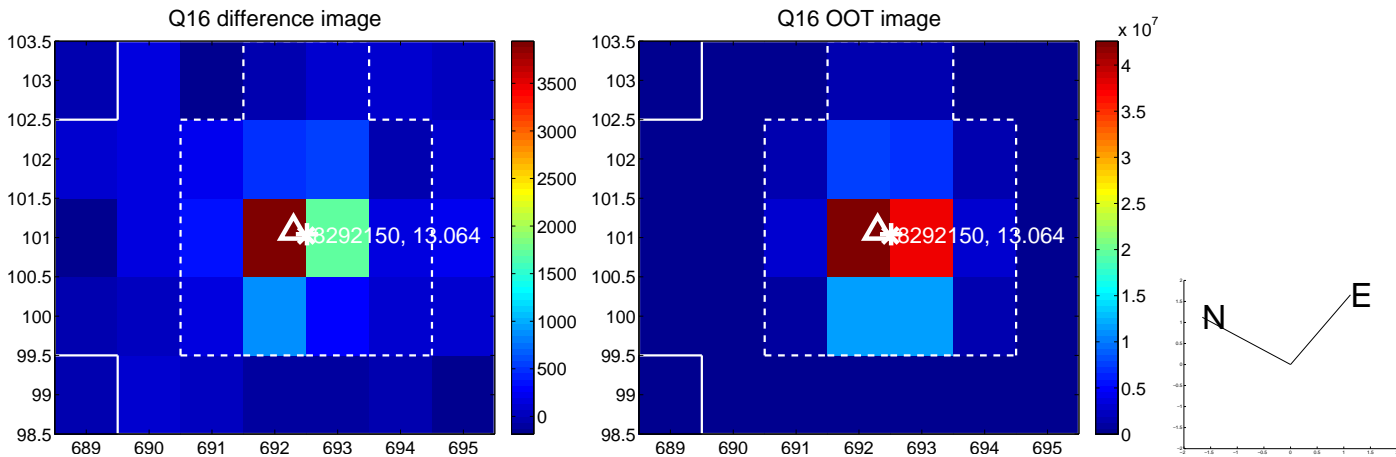
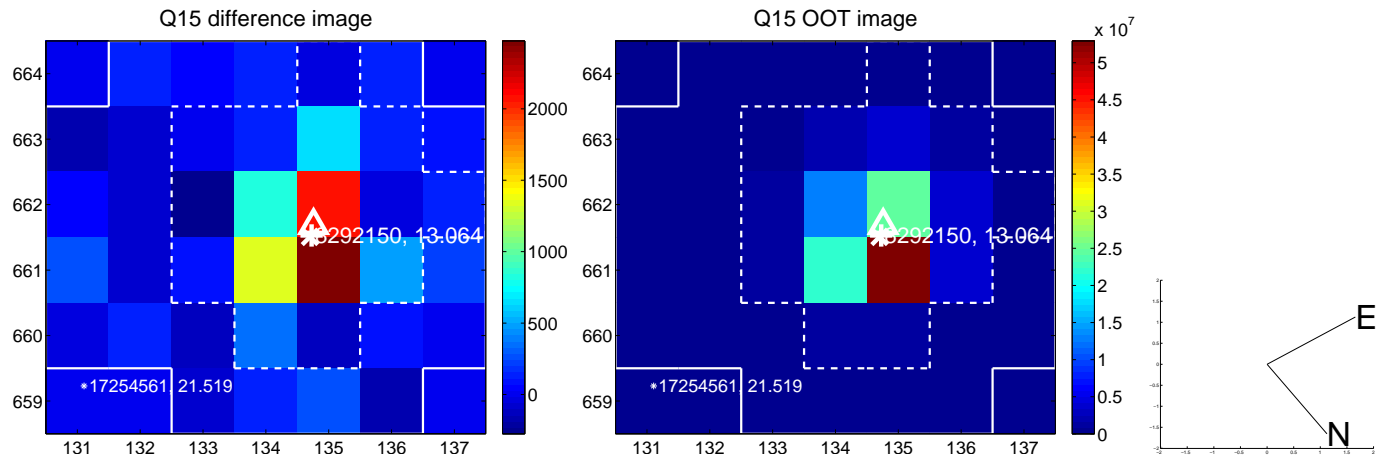
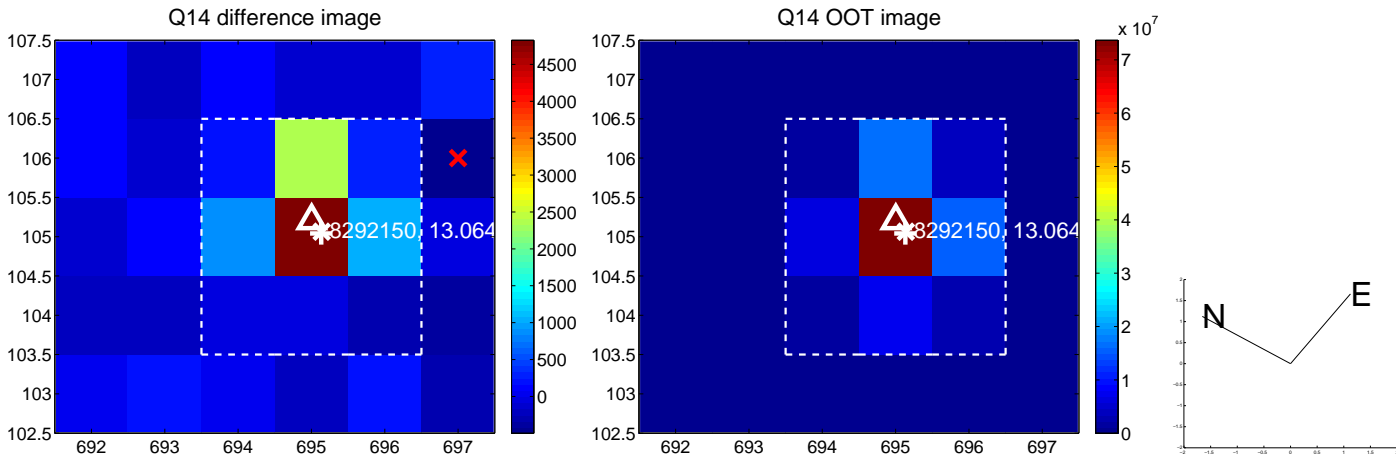
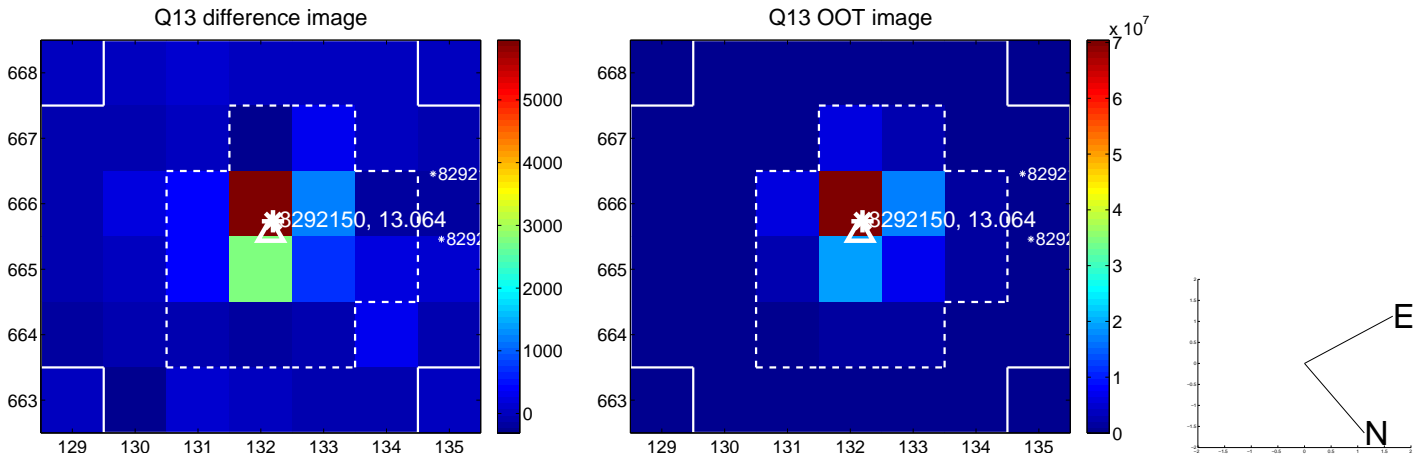
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



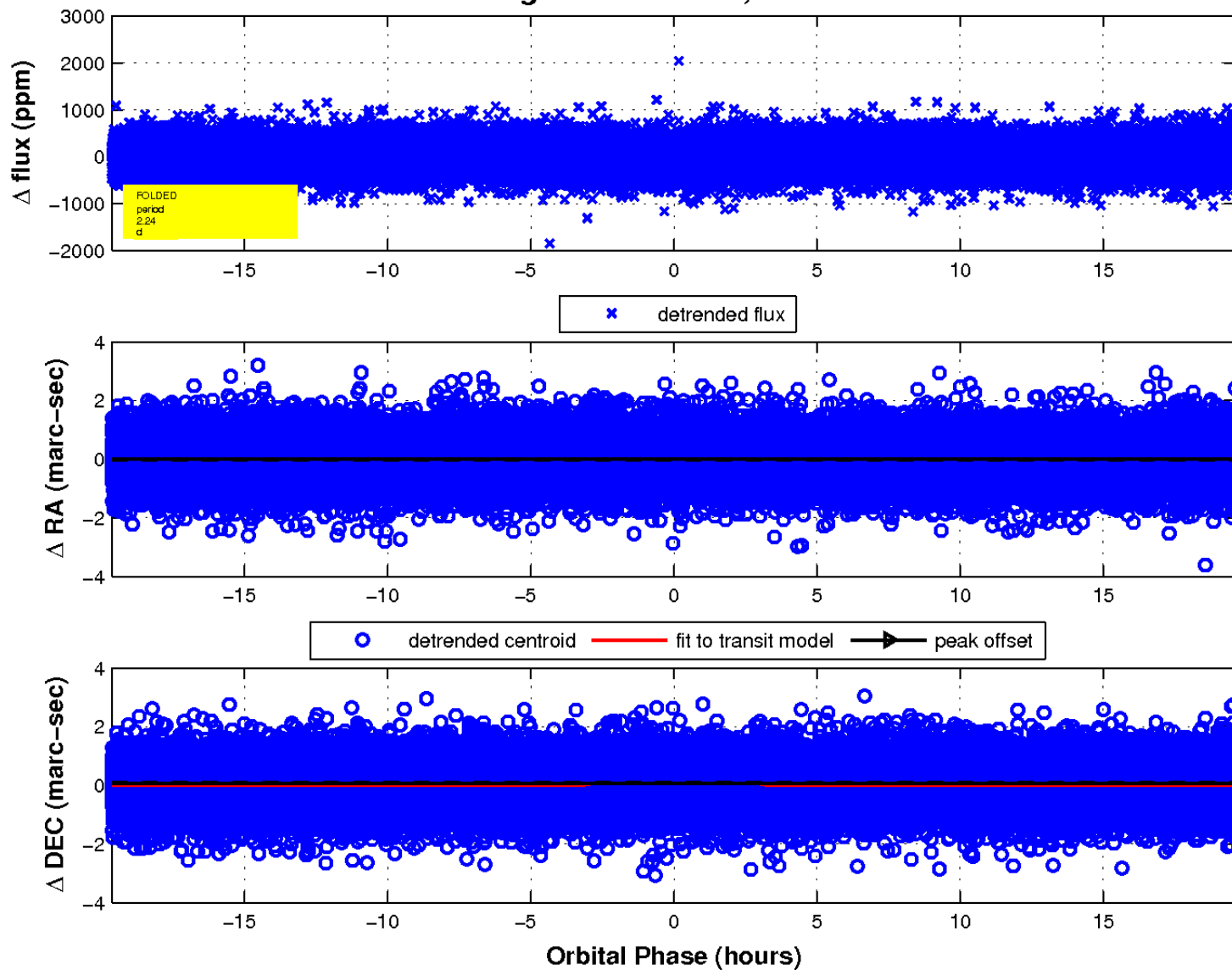
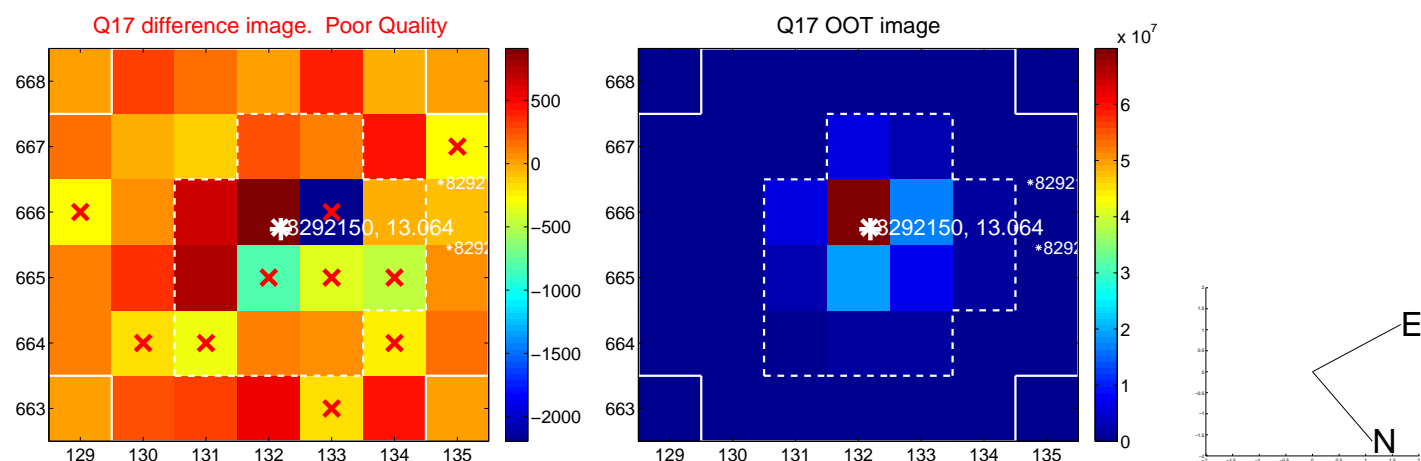
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

