

KIC 011572046

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})
011572046-01	OBS	No	0.642618	131.810580	15.9	4.174	9.3	8.9	3.08	7693	1.32	91439.60
011572046-02	OBS	No	101.668319	232.737823	396.0	1.721	9.0	9.7	3.08	7693	6.96	106.86
011572046-03	OBS	No	36.143464	149.228090	268.5	1.458	9.2	10.8	3.08	7693	5.93	424.32
011572046-04	OBS	No	50.100346	169.792696	107.4	1.105	8.7	2.6	3.08	7693	3.32	274.55
011572046-05	OBS	No	50.115129	169.578882	73.6	29.183	8.4	5.1	3.08	7693	3.04	274.44
011572046-06	OBS	No	26.470805	136.628006	203.5	1.448	8.4	8.9	3.08	7693	4.46	642.76
011572046-07	OBS	No	49.584264	155.994699	415.1	0.873	8.5	9.5	3.08	7693	6.66	278.36

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011572046-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—CENT_UNRESOLVED_OFFSET
011572046-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011572046-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_TER_DV
011572046-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
011572046-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_FEW_DIFFS
011572046-06	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011572046-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV

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

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

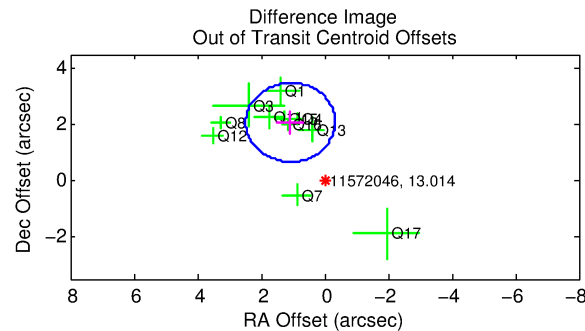
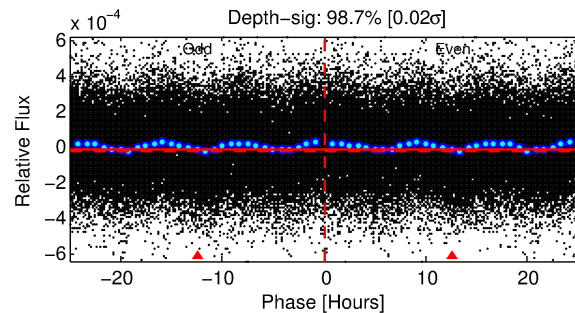
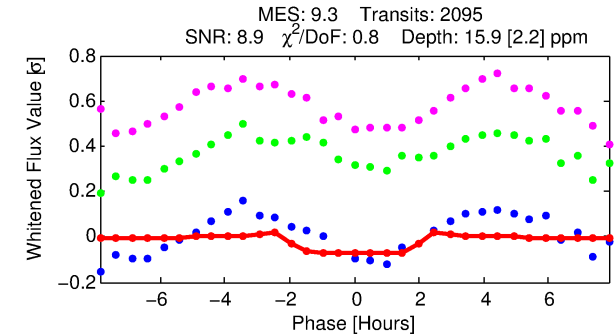
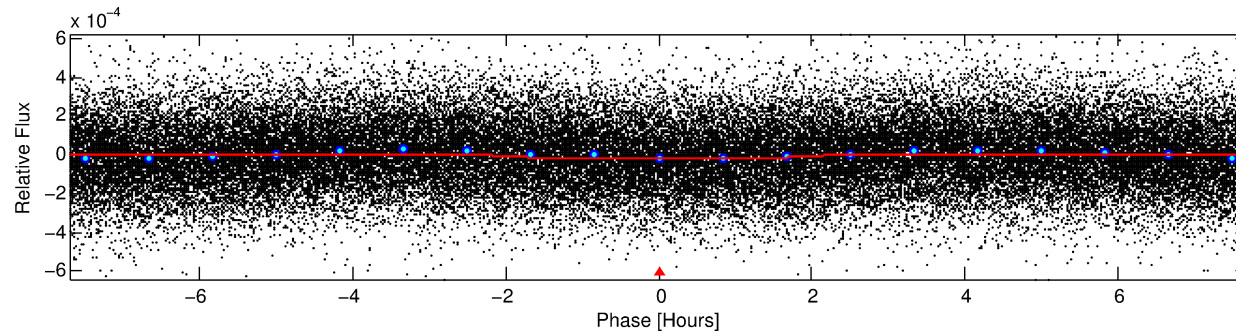
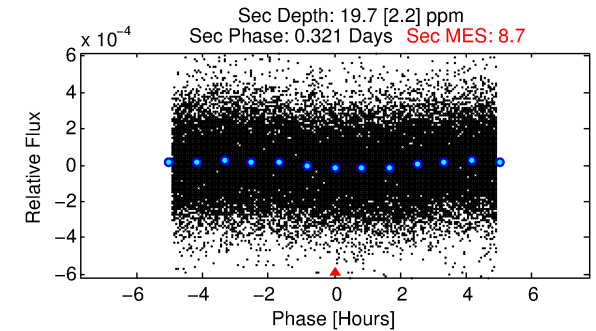
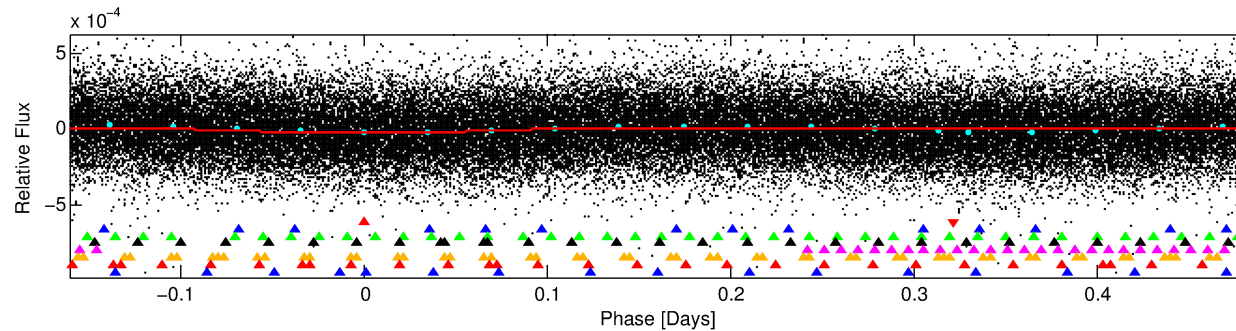
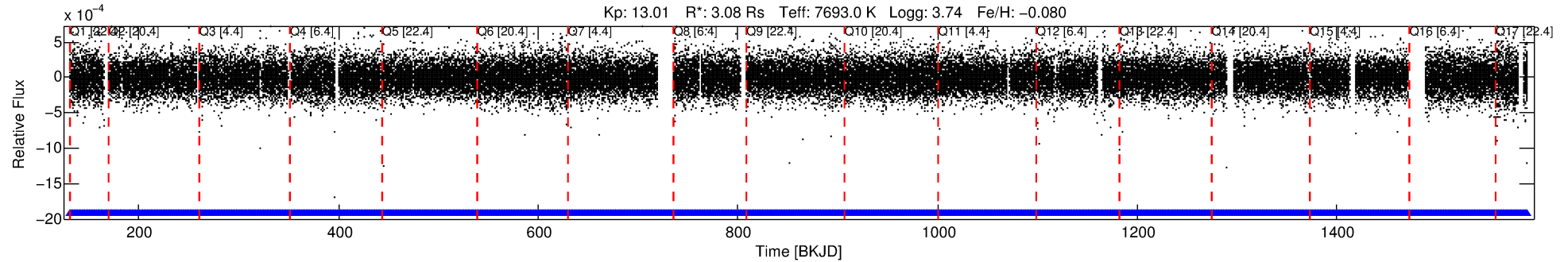
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011572046-01

No Significant Match Found

DV One-Page Summary

KIC: 11572046 Candidate: 1 of 8 Period: 0.643 d



DV Fit Results:

Period = 0.64262 [0.00001] d
Epoch = 131.8106 [0.0042] BKJD
Rp/R* = 0.0039 [0.0015]
a/R* = 1.18 [0.74]
b = 0.72 [1.54]
Seff = 91439.61 [63330.20]
Teq = 4434 [768] K
Rp = 1.32 [0.78] Re
a = 0.0180 [0.0077] AU
Ag = 2.01 [2.06] [0.49σ]
Teffp = 8161 [1610] K [2.09σ]

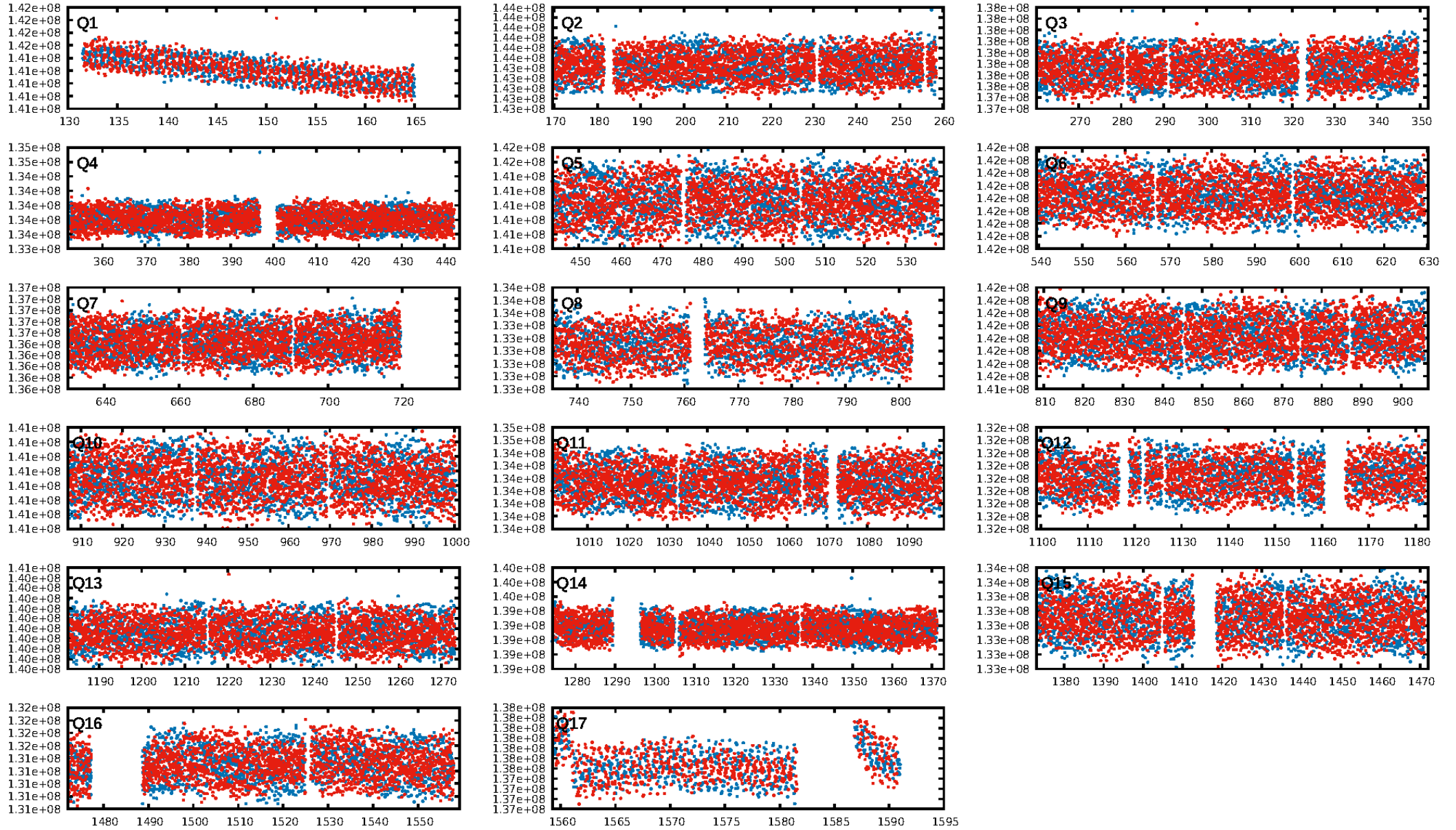
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [140.31σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.15e-12
RollingBand-fgt: 1.00 [2002/2002]
GhostDiagnostic-chr: 1.682
Centroid-sig: 4.9%
Centroid-so: 1.208 arcsec [1.19σ]
OotOffset-rm: 2.342 arcsec [5.00σ]
KicOffset-rm: 2.316 arcsec [3.92σ]
OotOffset-st: 0/4/4/3 [11]
KicOffset-st: 0/4/4/3 [11]
DiffImageQuality-fgm: 0.27 [3/11]
DiffImageOverlap-fno: 1.00 [17/17]

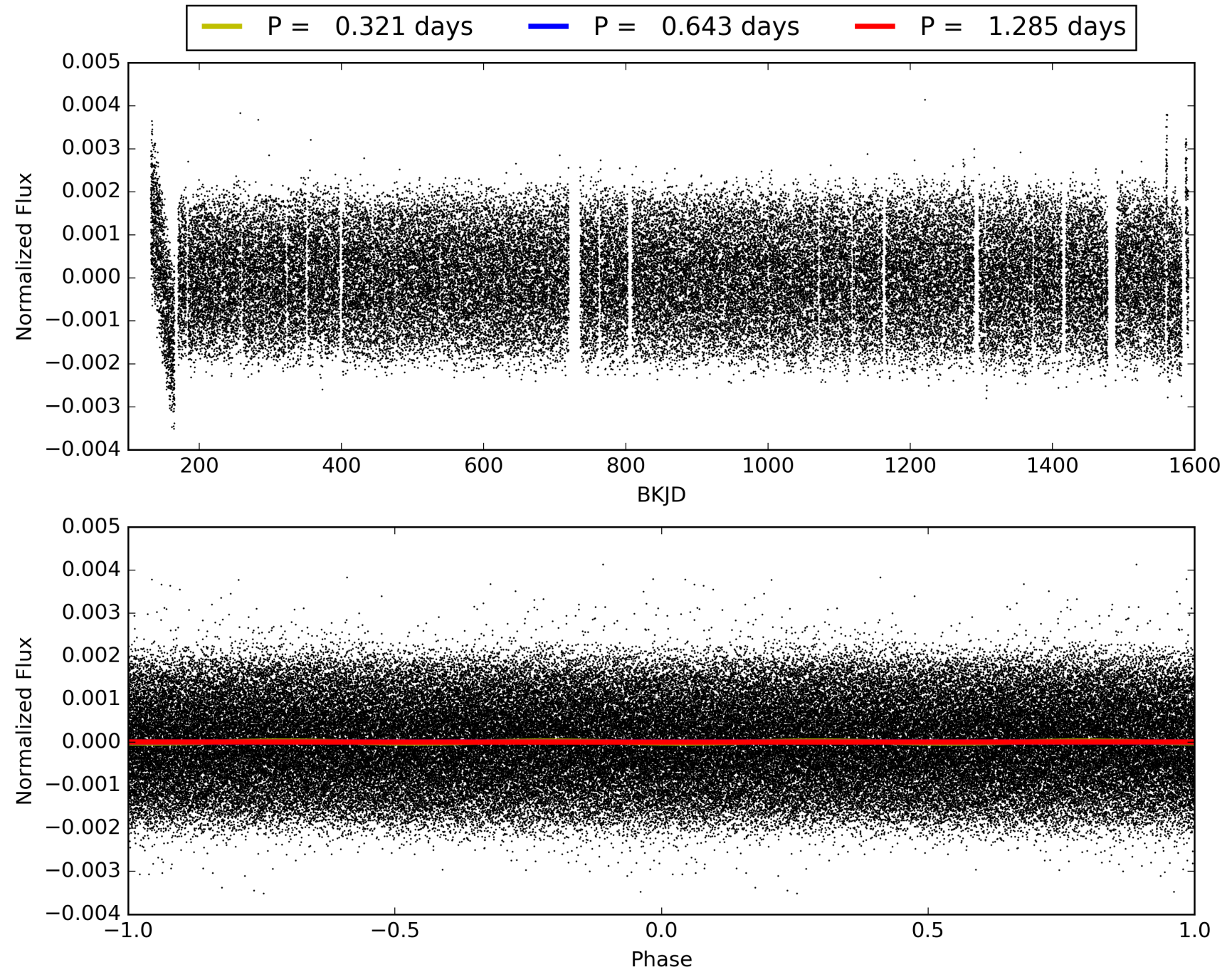
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 011572046-01, PDC Light Curves

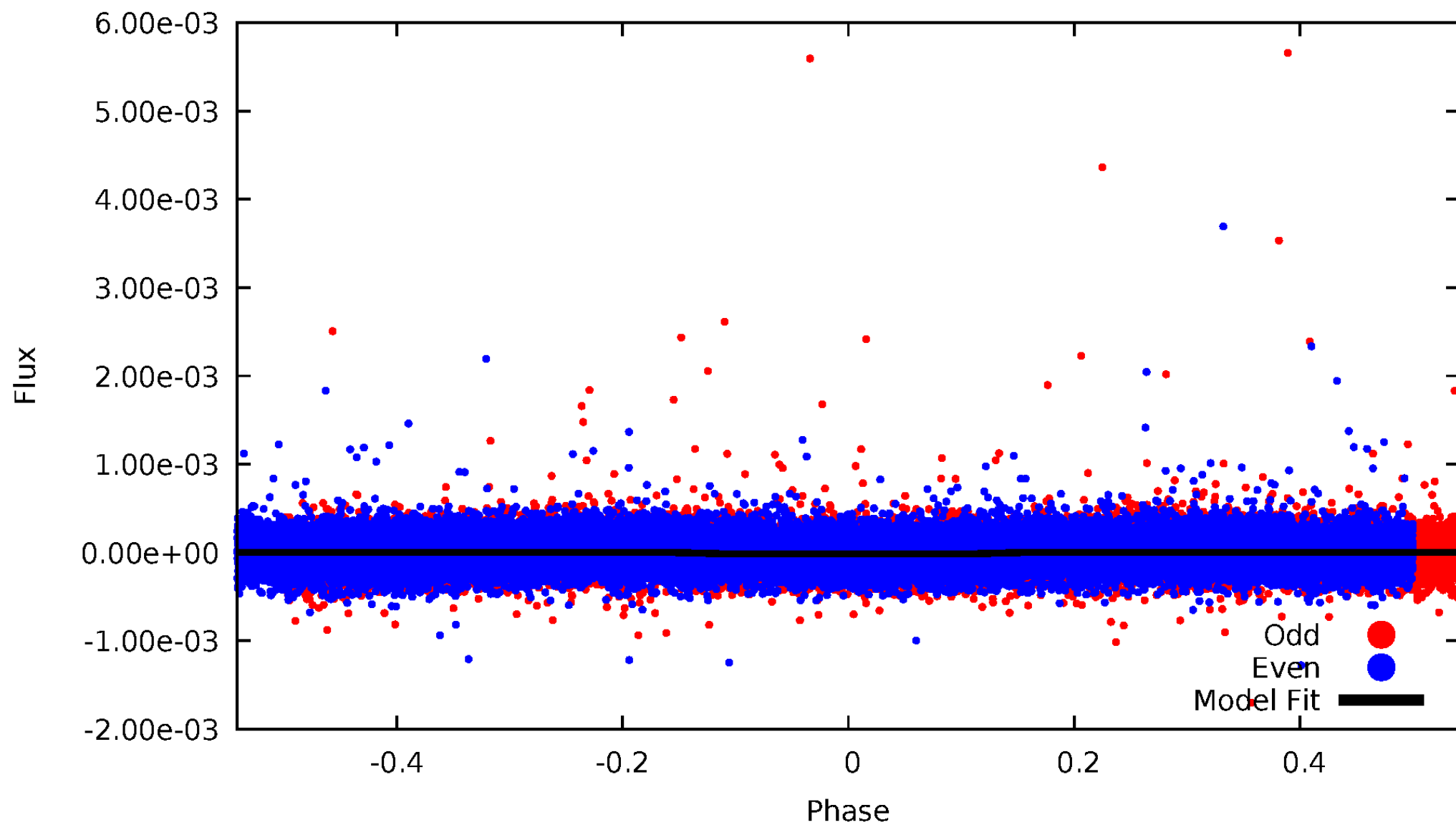


TCE 011572046-01



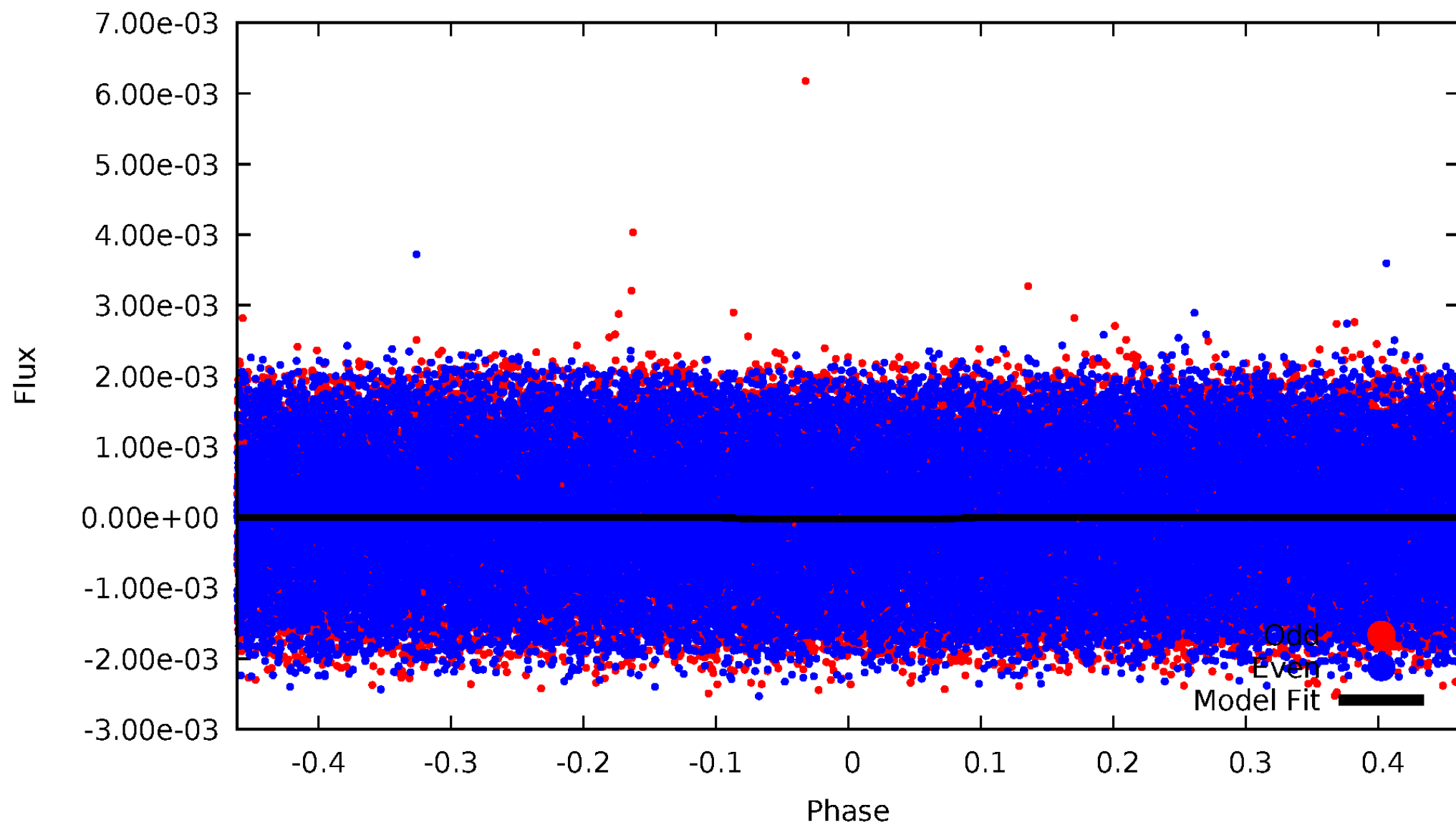
DV Odd/Even

TCE 011572046-01

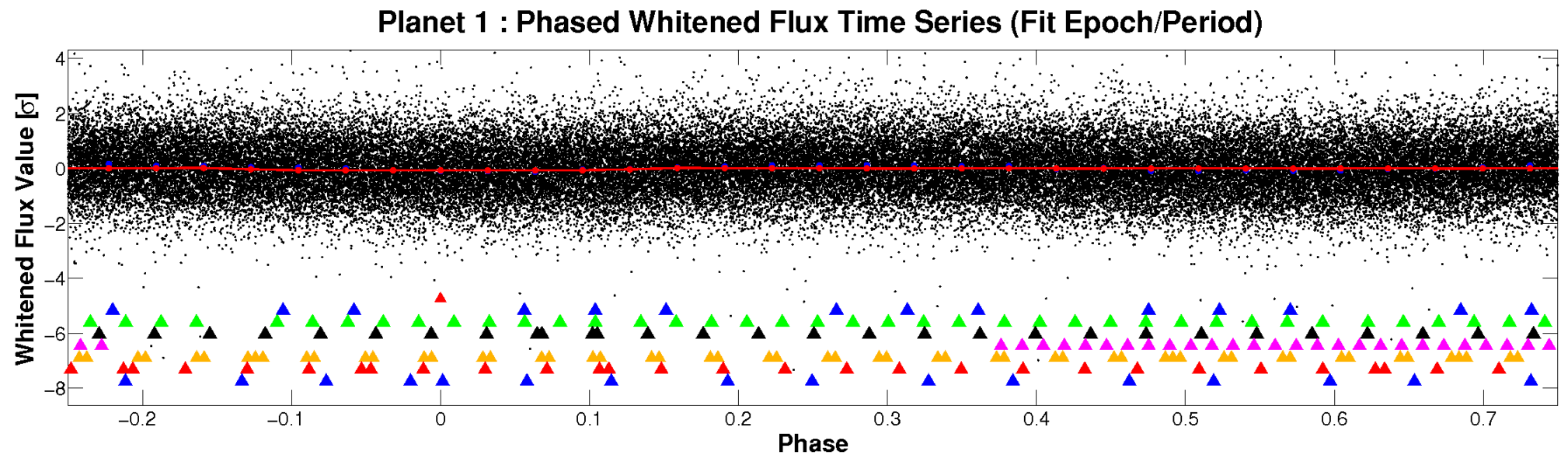
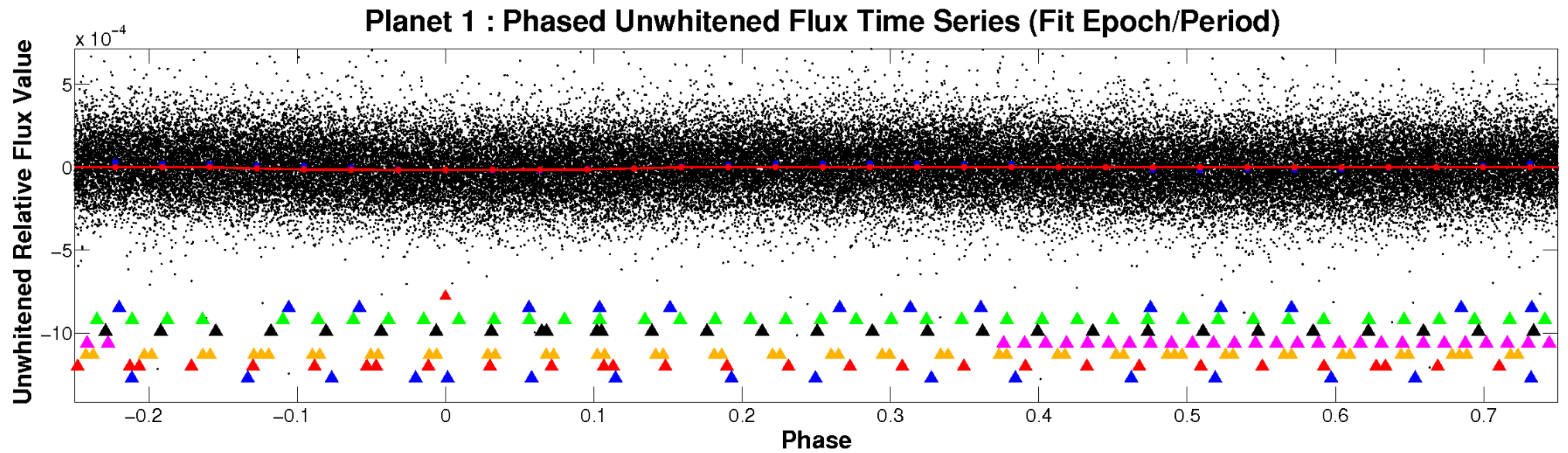


ALT Odd/Even

TCE 011572046-01

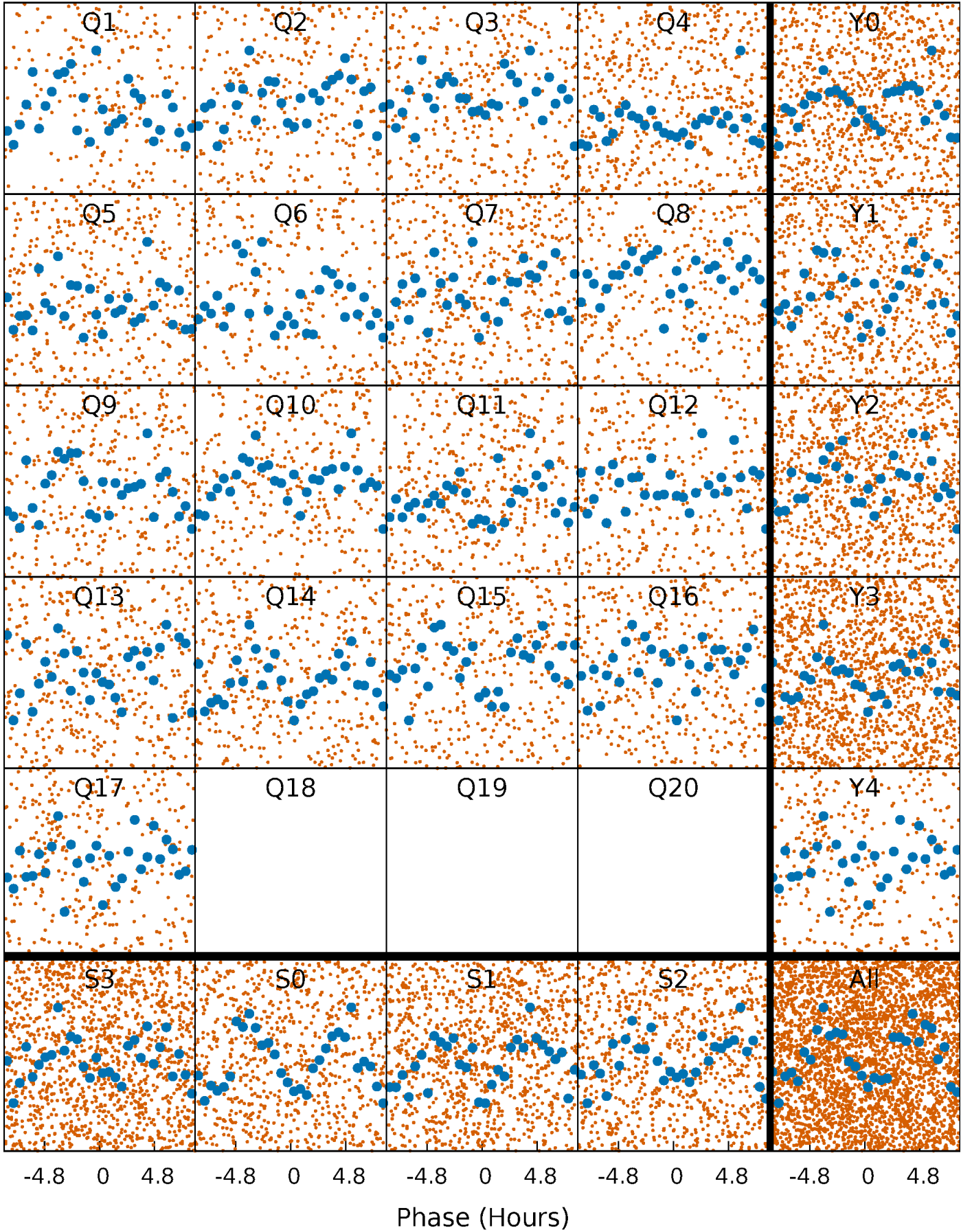


Non-Whitened Vs. Whitened Light Curve



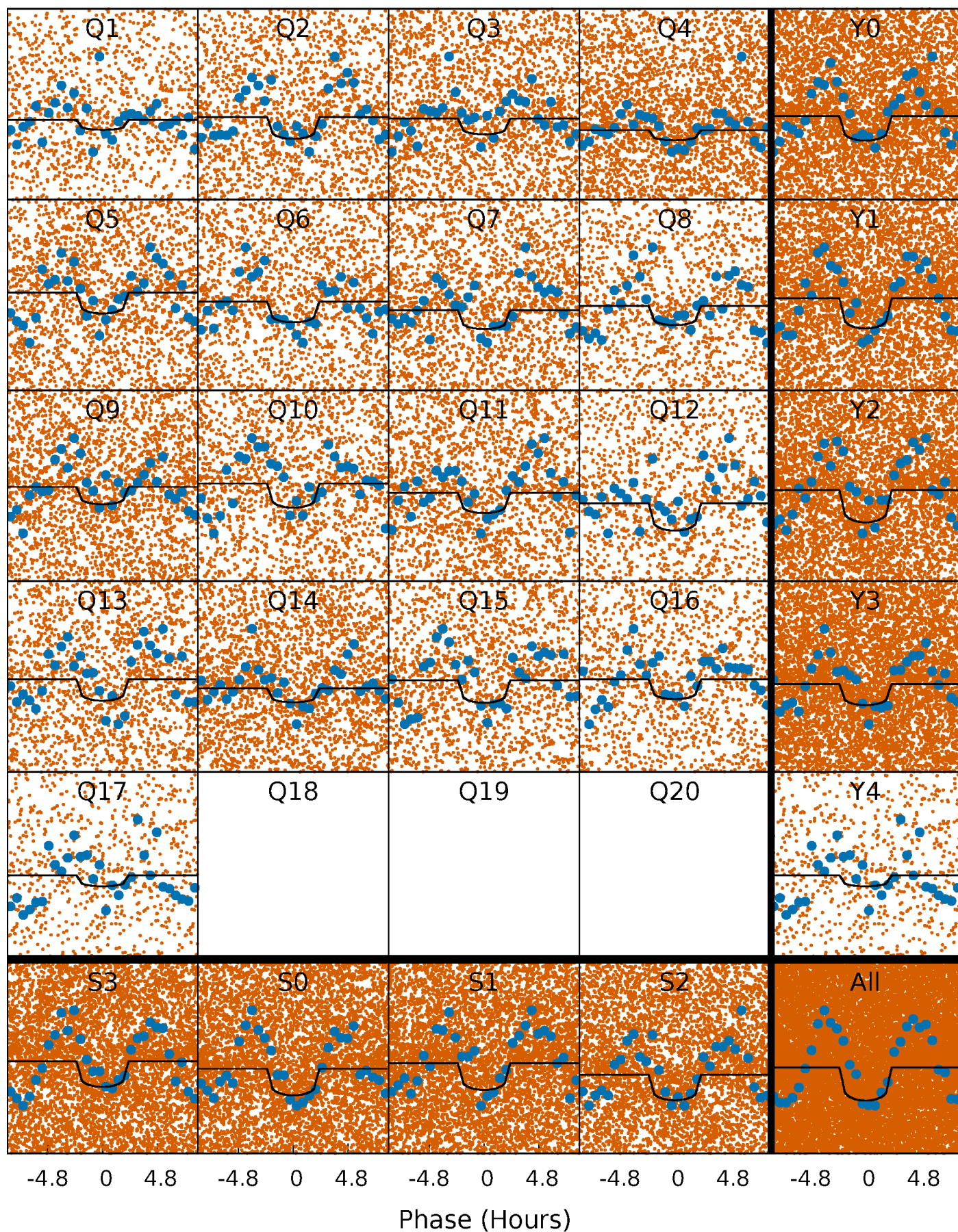
PDC Quarter-Phased Transit Curves

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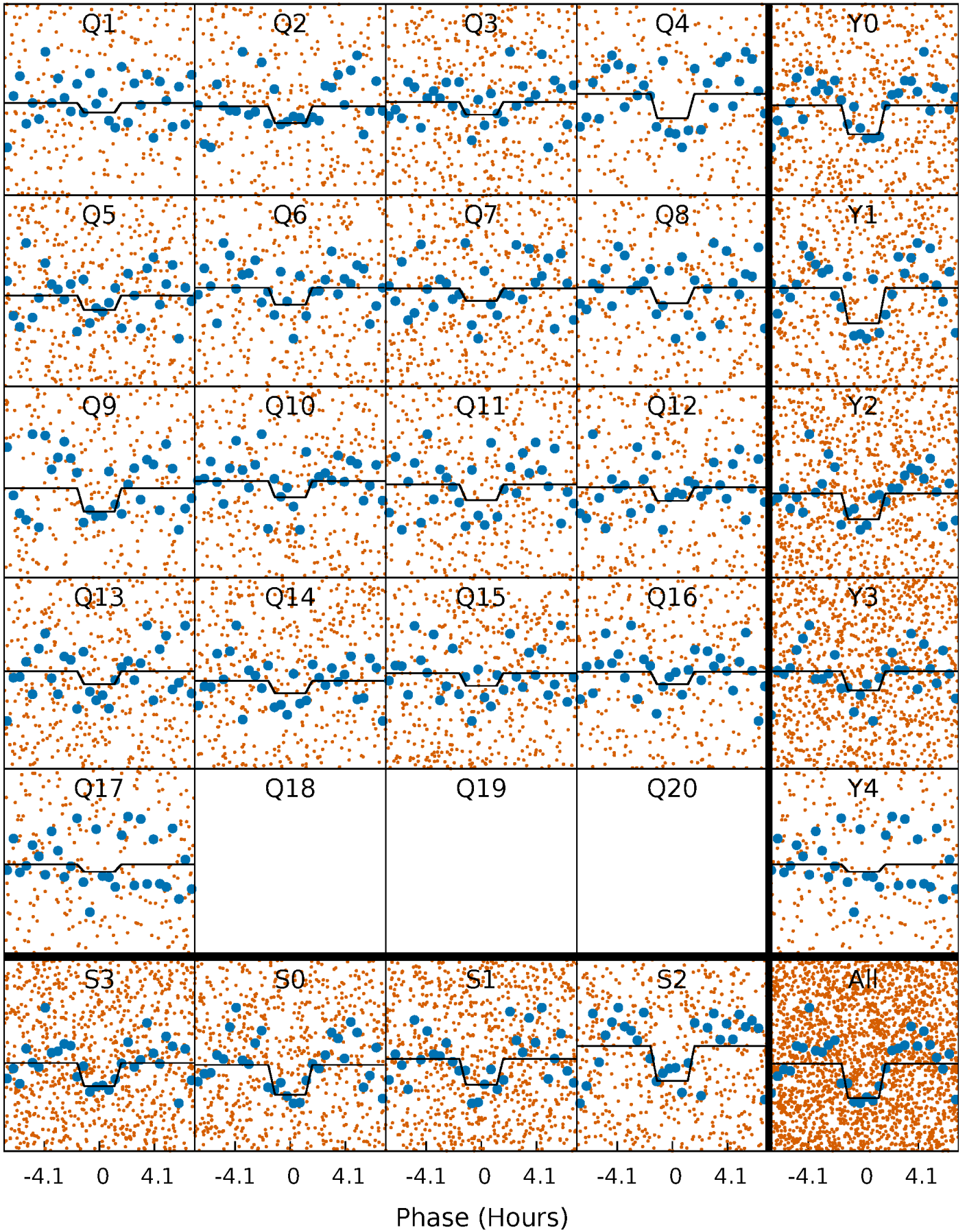
DV Quarter-Phased Transit Curves

TCE 011572046-01 P= 0.642618 Days $T_0=131.810580$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

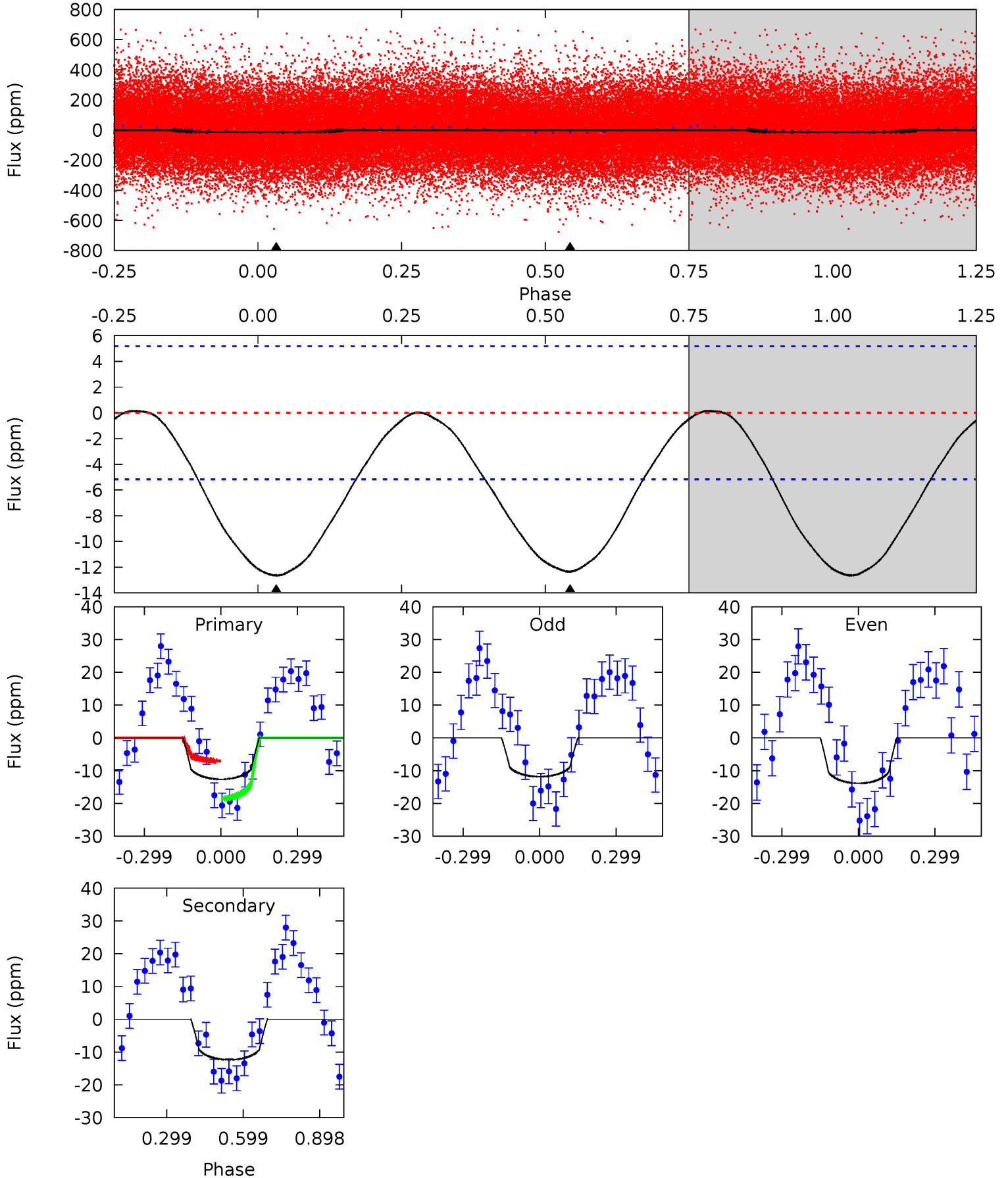
TCE 011572046-01 P= 0.642639 Days $T_0=131.808935$ (BKJD)



DV Model-Shift Uniqueness Test

011572046-01, P = 0.642618 Days, E = 131.167962 Days

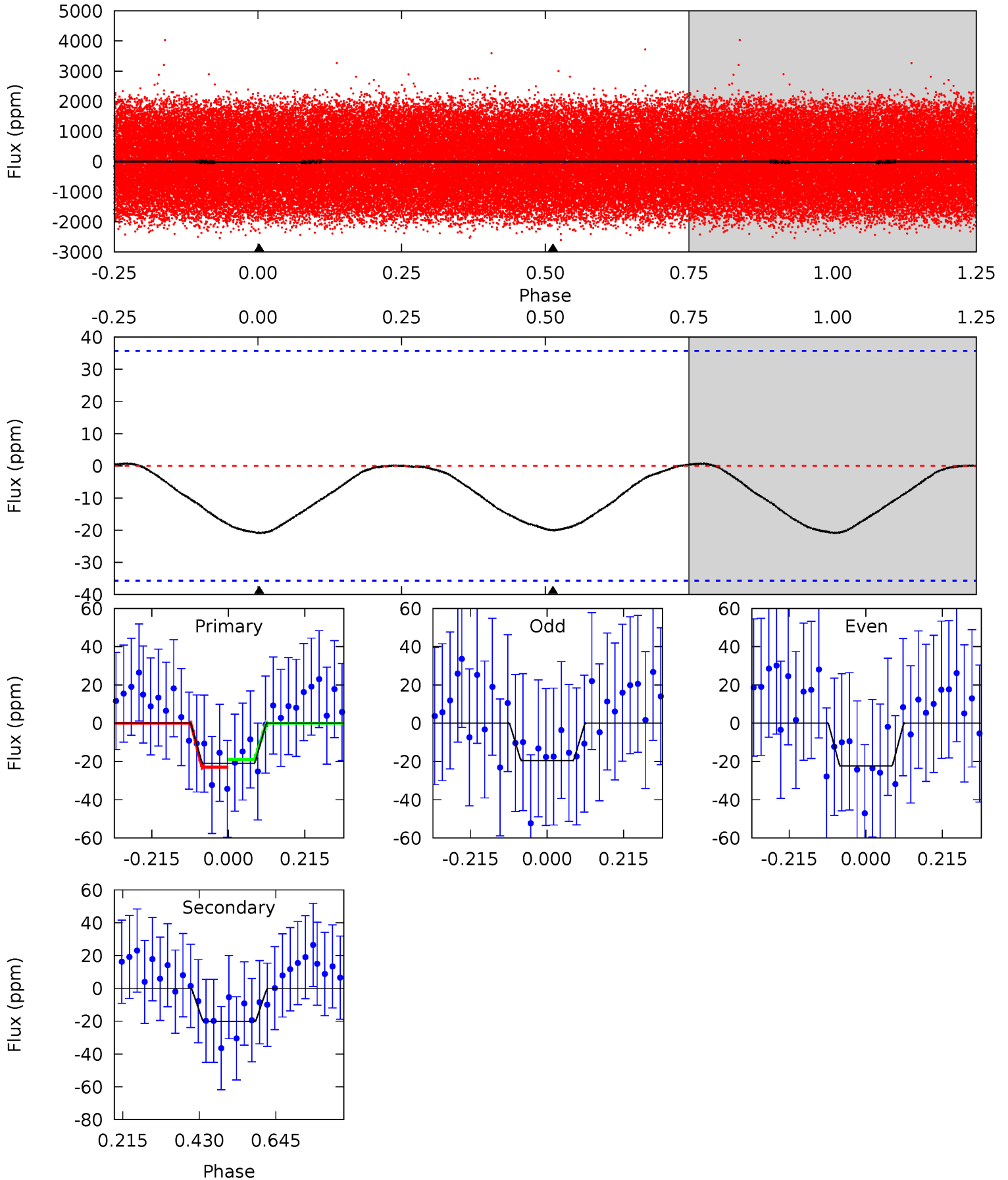
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.6	10.3	0	0	4.33	1.04	0.19	10.6	10.6	10.3	10.3	0.87	1.13	0.01	4.95



Alt Model-Shift Uniqueness Test

011572046-01, P = 0.642639 Days, E = 131.166296 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.58	2.48	0	0	4.40	1.24	0.04	2.58	2.58	2.48	2.48	0.17	1.93	0.04	0.25



Stellar Parameters For KIC 011572046

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7693^{+211}_{-316}	$3.739^{+0.392}_{-0.073}$	$-0.080^{+0.200}_{-0.350}$	$3.081^{+0.348}_{-1.391}$	$1.898^{+0.105}_{-0.420}$	$0.091^{+0.331}_{-0.021}$
	+3%/-4%	+10%/-2%	+250%/-438%	+11%/-45%	+6%/-22%	+362%/-23%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 011572046-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-12 ± 1	$1.22^{+0.51}_{-0.50}$	6004^{+373}_{-588}	6607^{+2757}_{-1300}	$1.484^{+2.737}_{-0.754}$
Alt.	-20 ± 8	$1.38^{+0.58}_{-0.53}$	6014^{+406}_{-652}	7096^{+2641}_{-1511}	$1.706^{+3.017}_{-0.885}$

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 $A_{obs} \gg 1.0$

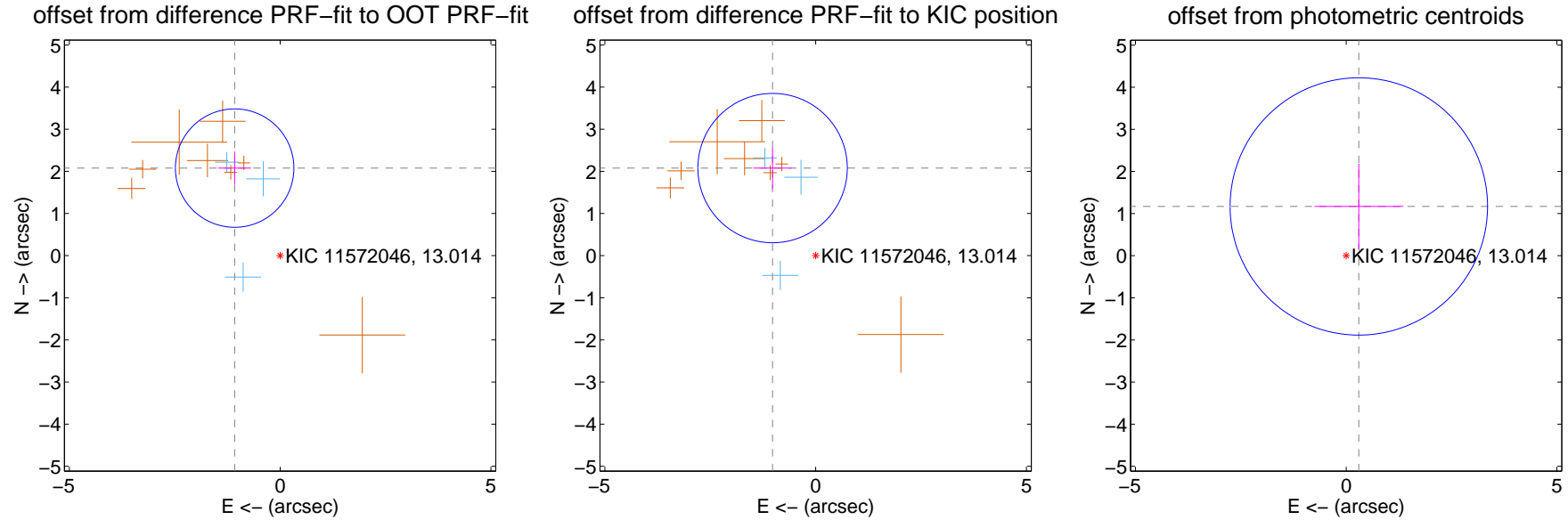
DV Centroid Data

Supplemental centroid analysis for 011572046-01. Kepler magnitude: 13.01. Transit SNR 8.88

There are 3 quarters with good PRF difference image offsets

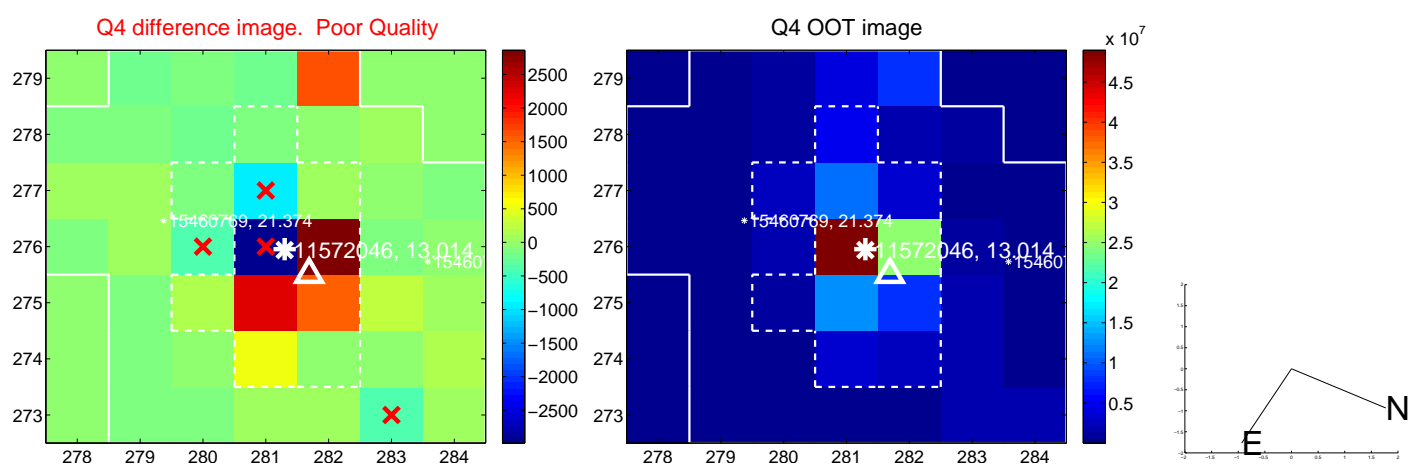
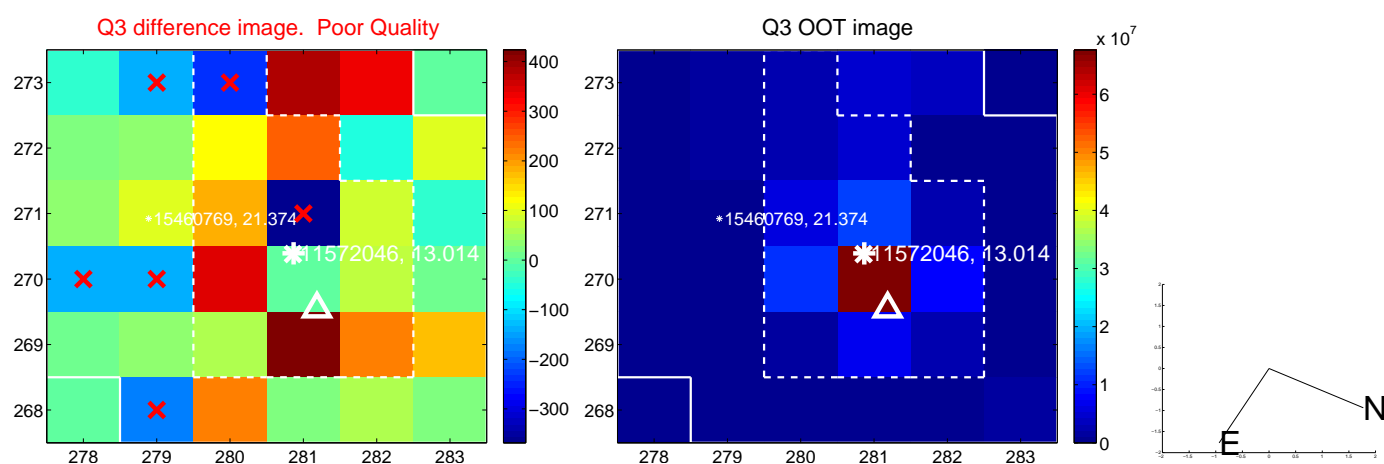
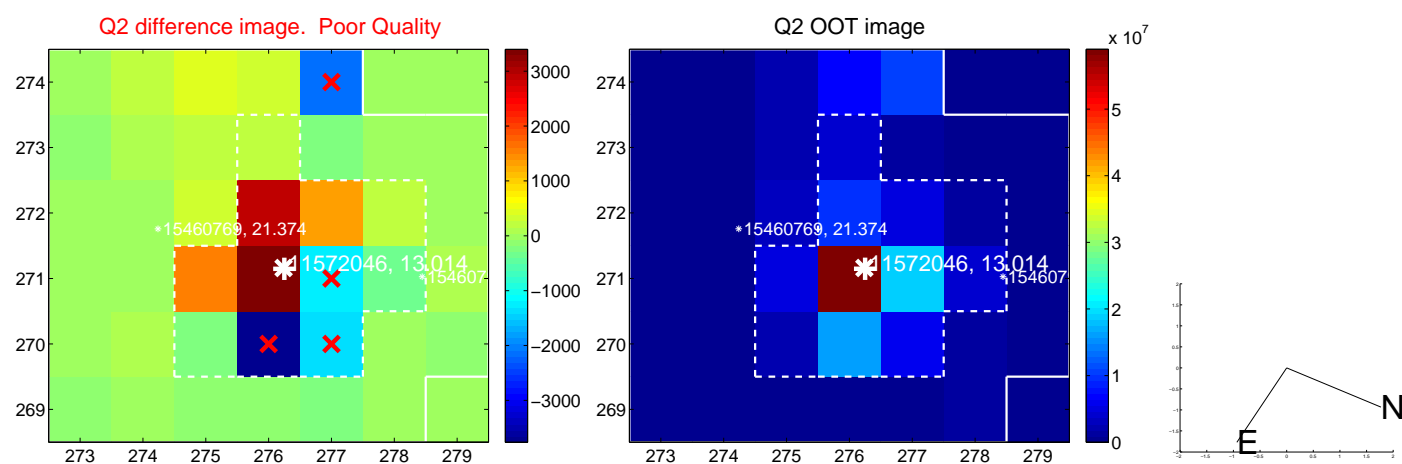
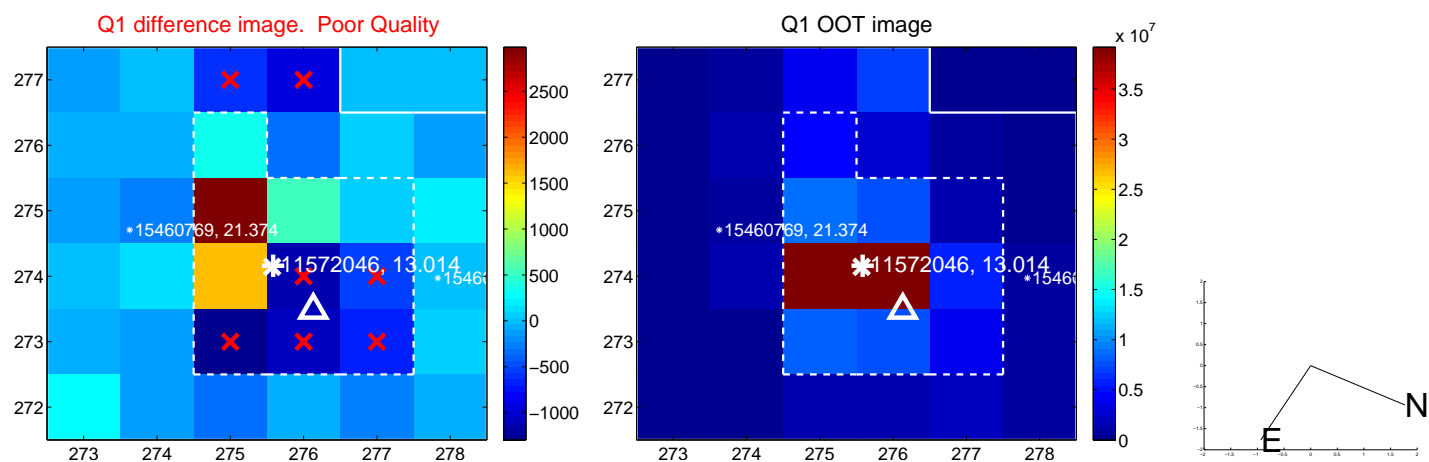
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.342 \pm 0.468	5.00	1.079 \pm 0.391	2.078 \pm 0.395
PRF-fit source offset from KIC position	2.316 \pm 0.591	3.92	1.022 \pm 0.453	2.079 \pm 0.488
photometric centroid source offset	1.21 \pm 1.02	1.19	-0.30 \pm 1.05	1.17 \pm 1.02

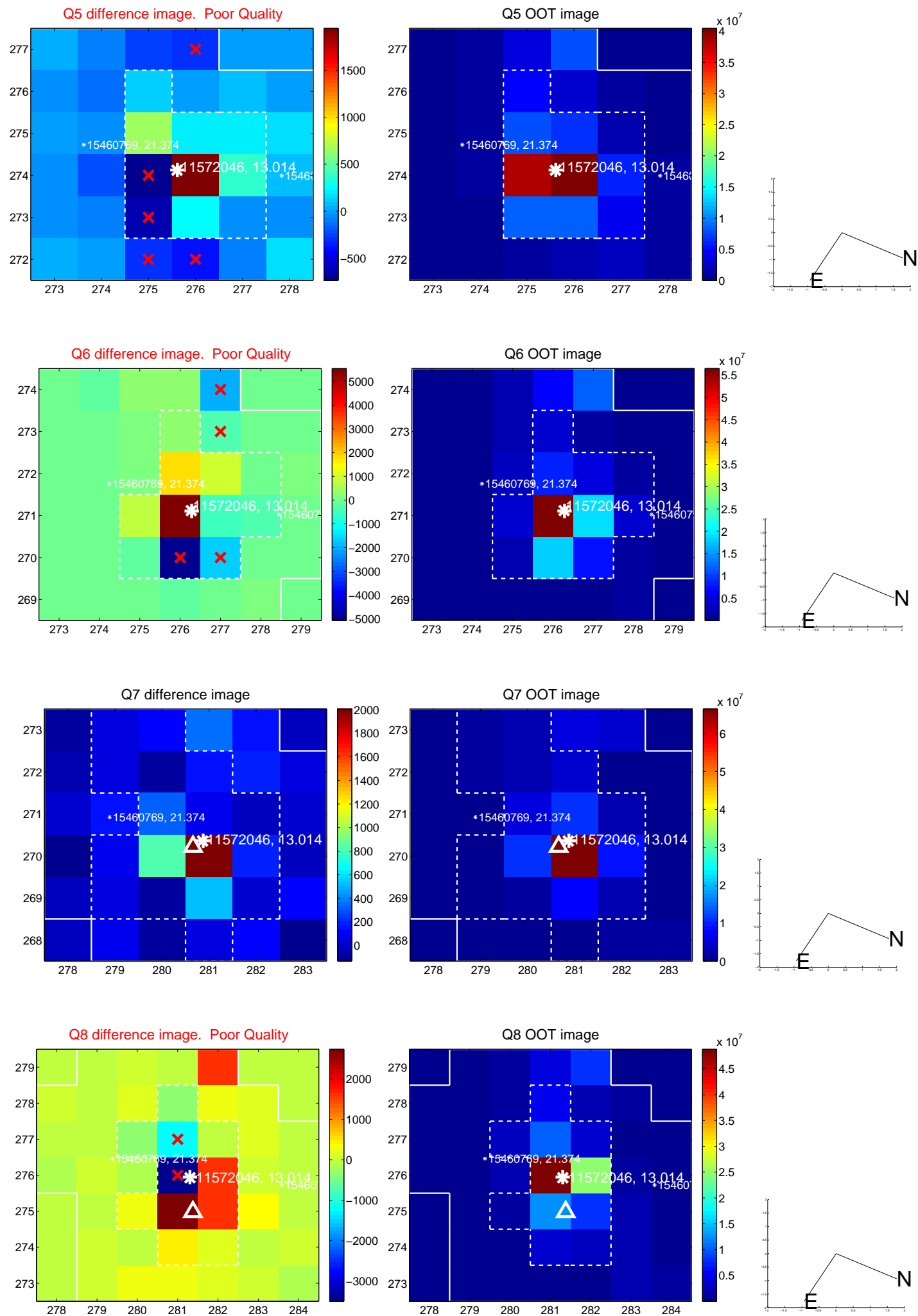


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

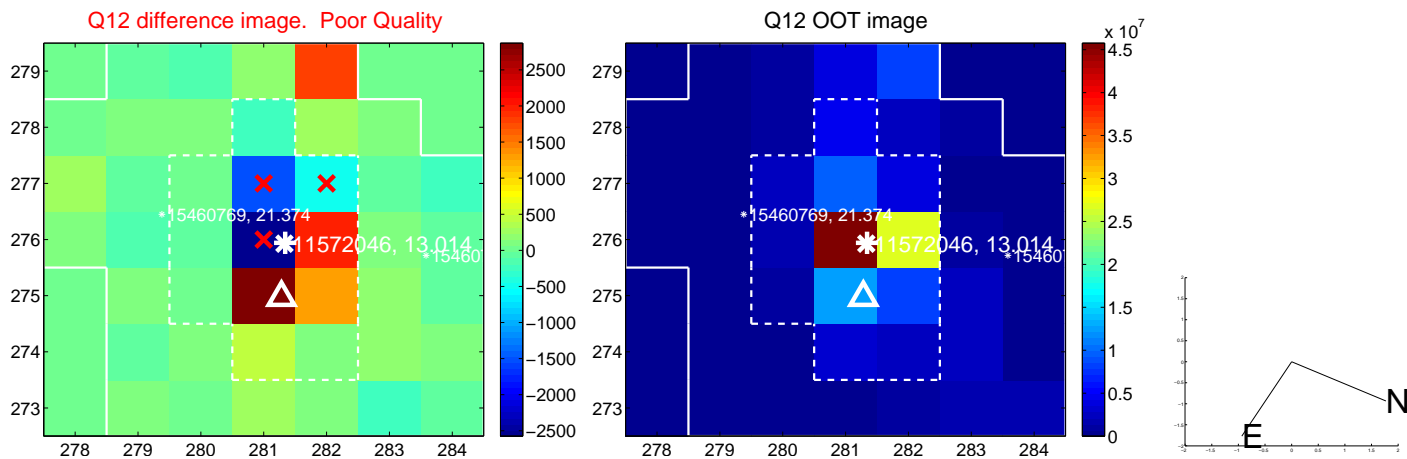
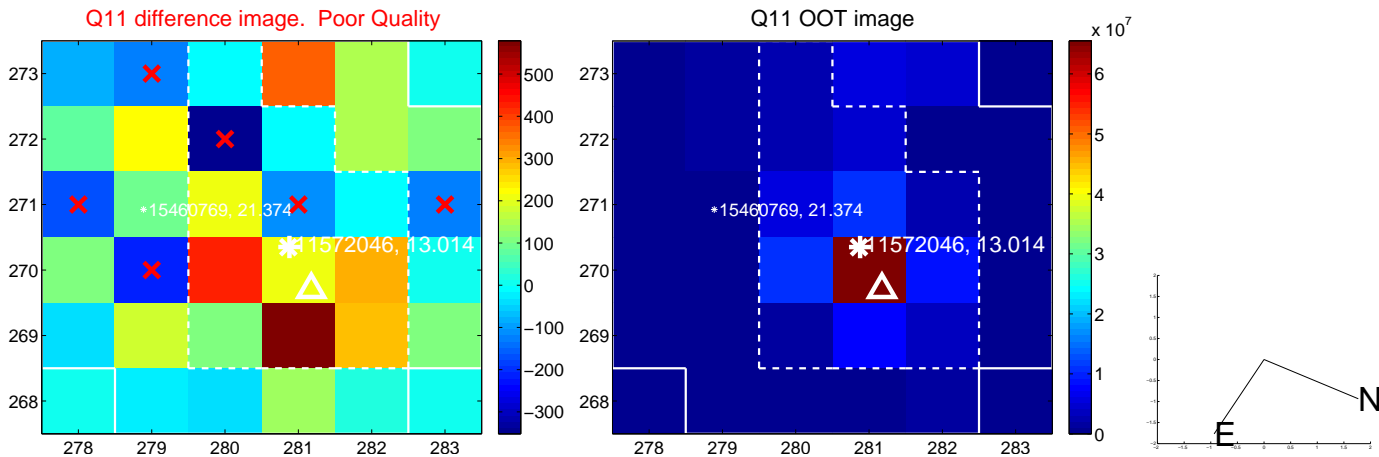
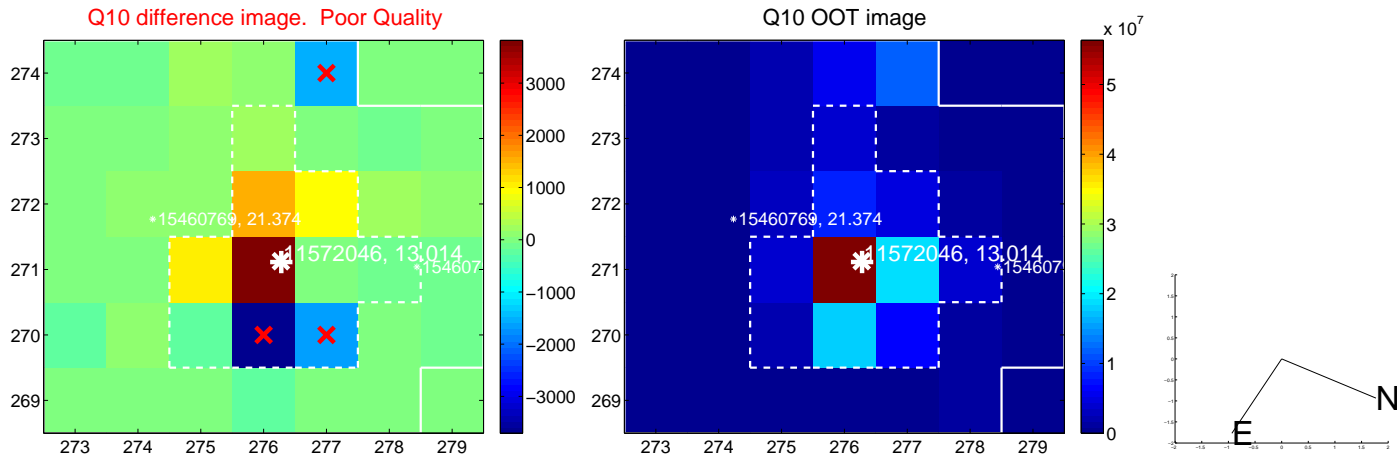
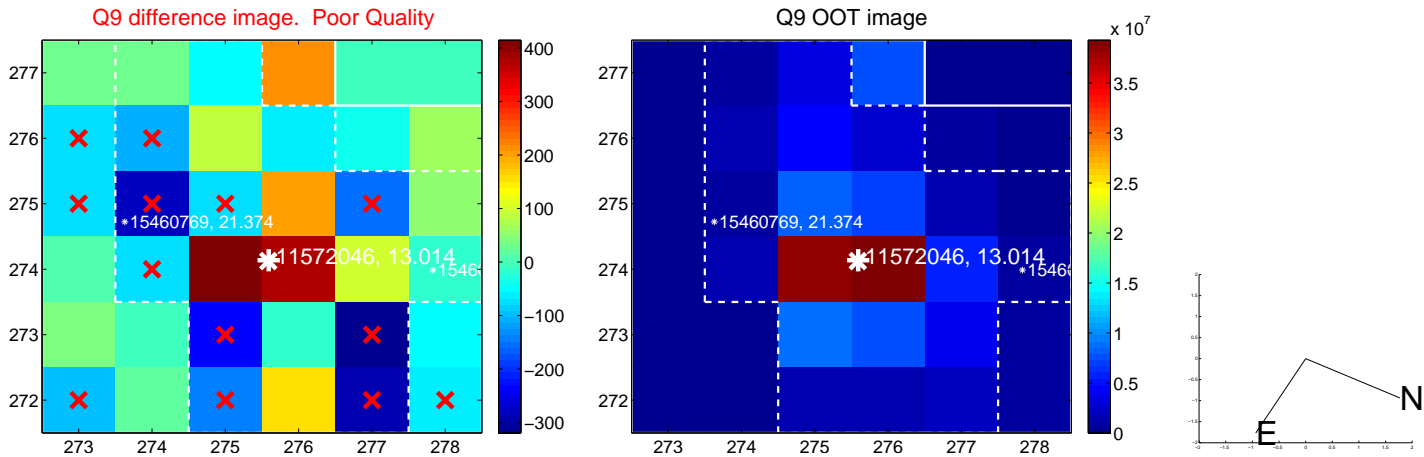
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



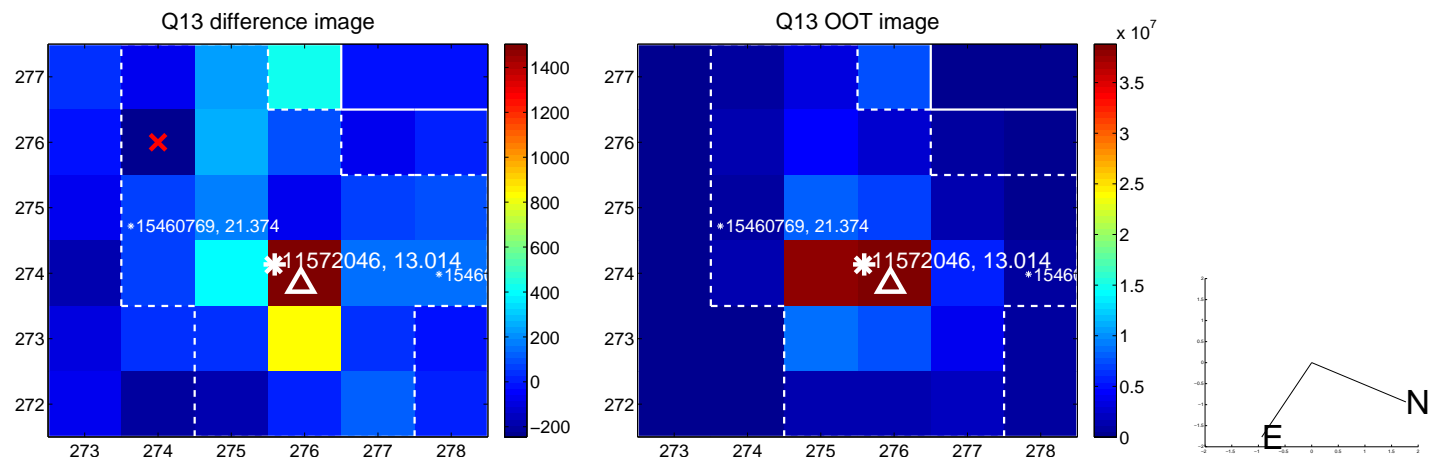
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



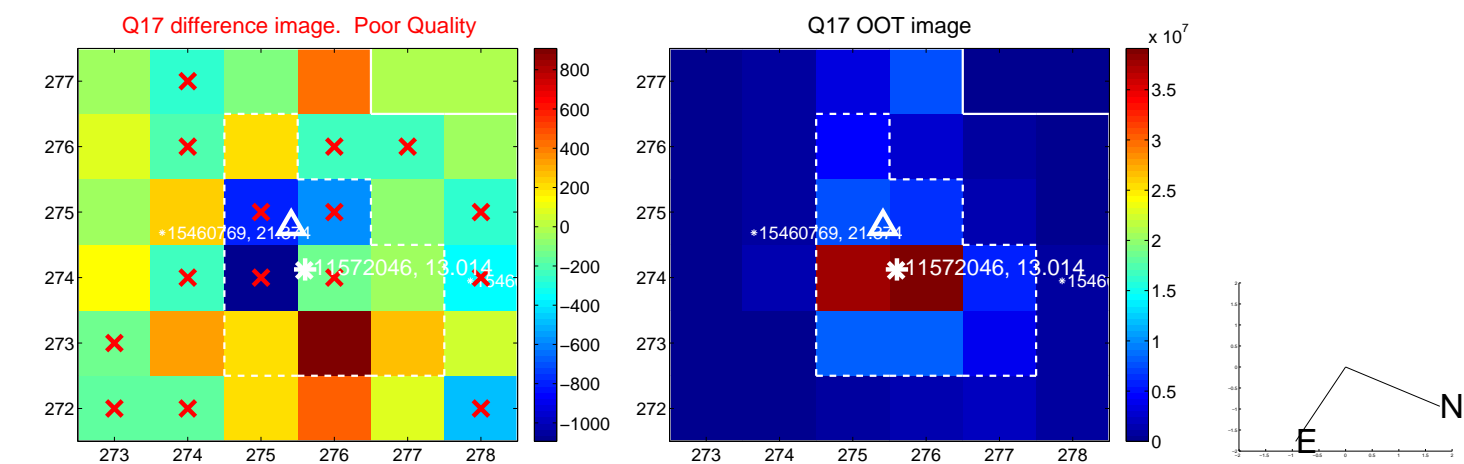
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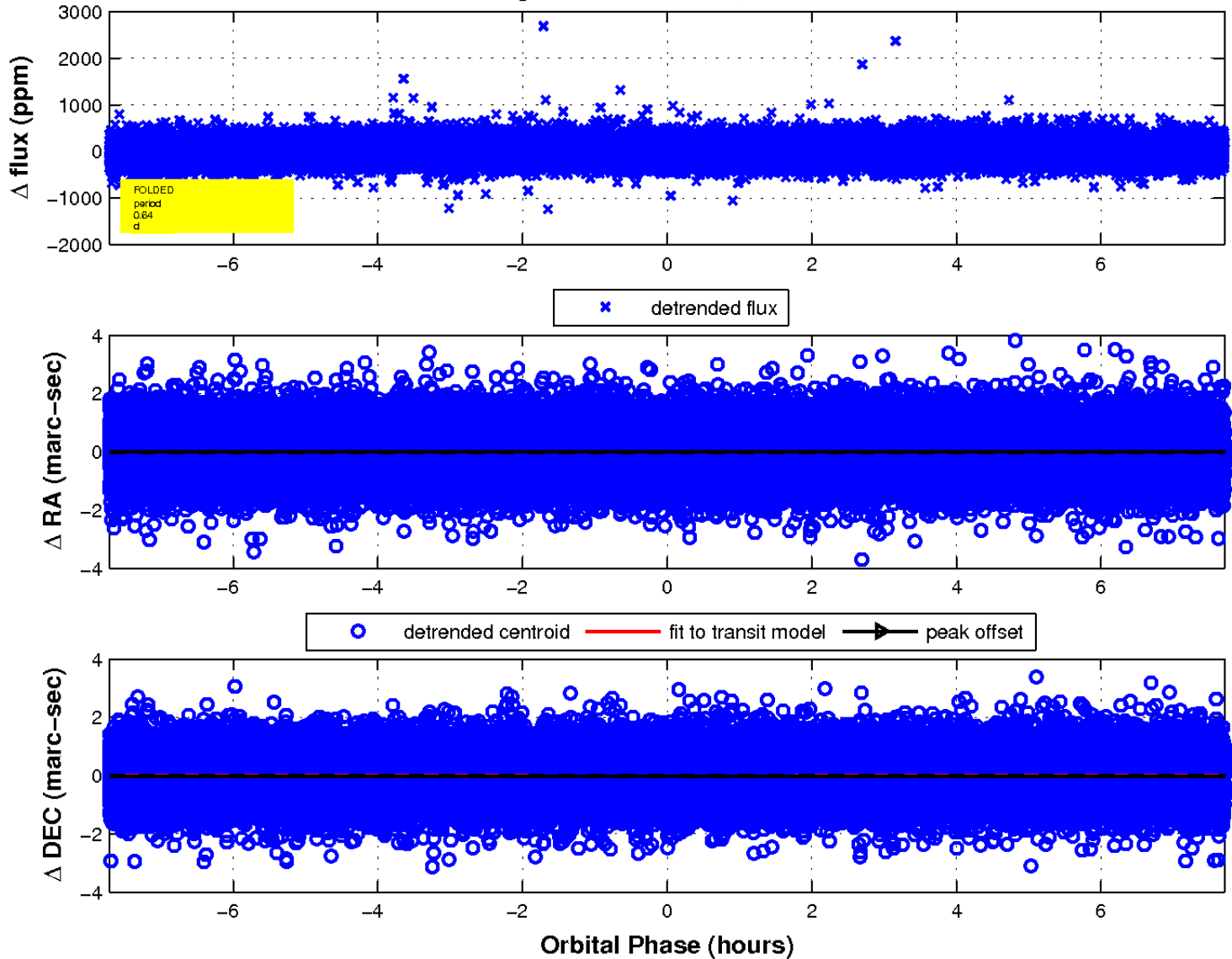
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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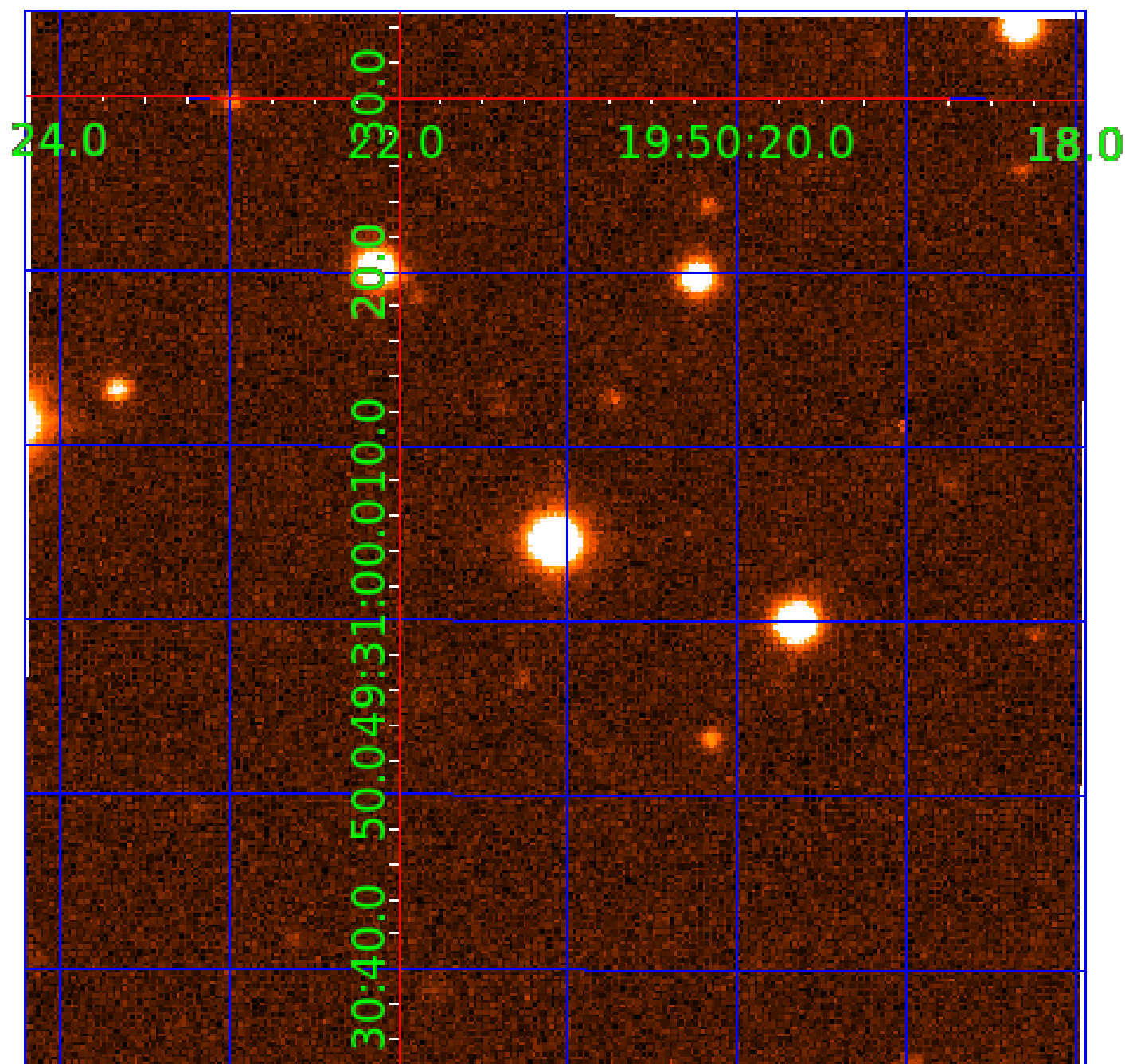


fluxWeightedCentroids, Planet 1 of 8



UKIRT Image

Declination



KIC 011572046

Q1-17 DR25 TCE Parameters

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011572046-01	OBS	No	0.642618	131.810580	15.9	4.174	9.3	8.9	3.08	7693	1.32	91439.60
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Robovetter Results

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011572046-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011572046-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_TER_DV
011572046-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
011572046-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_FEW_DIFFS
011572046-06	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011572046-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV

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

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

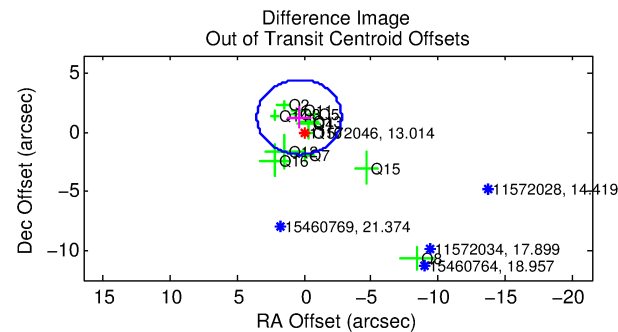
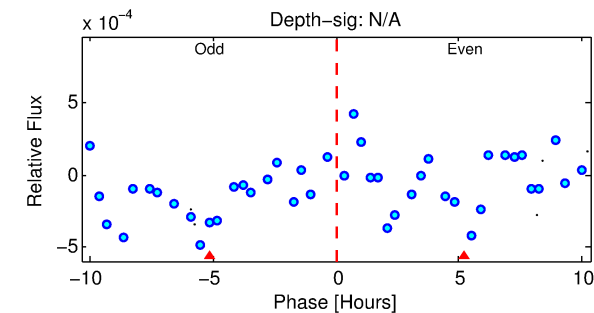
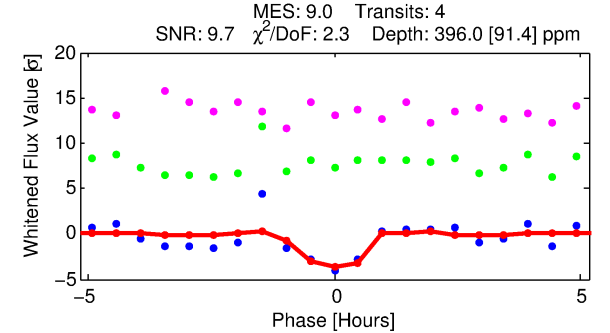
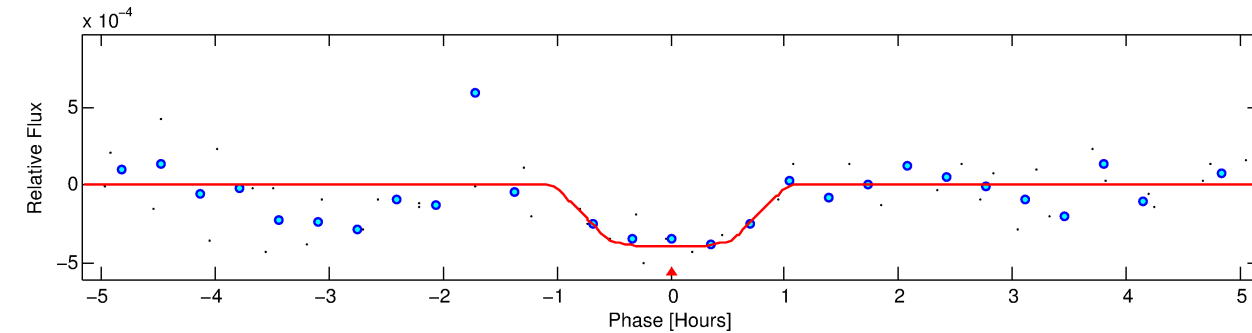
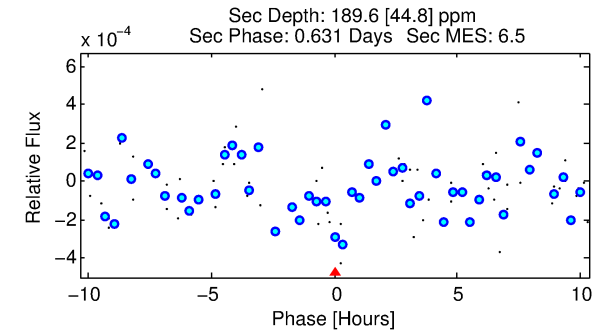
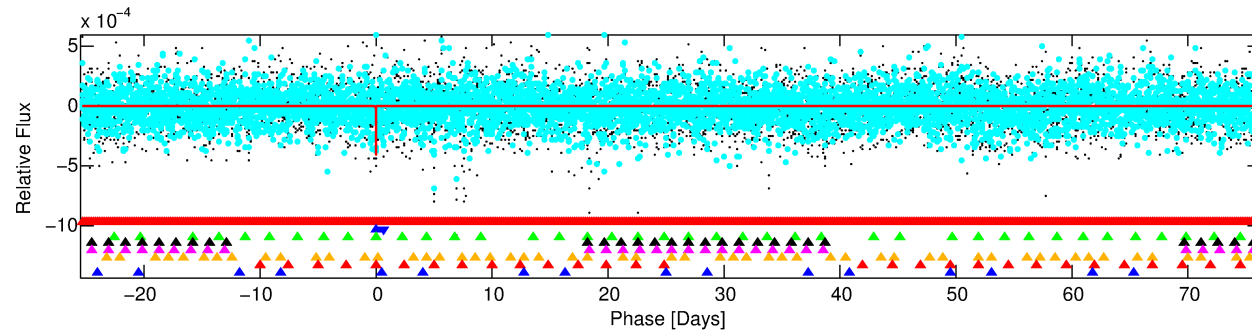
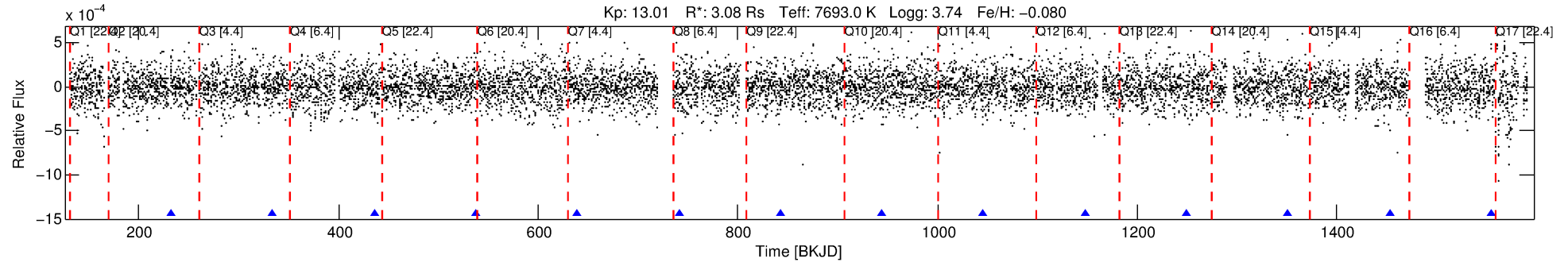
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011572046-02

No Significant Match Found

DV One-Page Summary

KIC: 11572046 Candidate: 2 of 8 Period: 101.668 d



DV Fit Results:

Period = 101.66832 [0.00160] d
Epoch = 232.7378 [0.0130] BKJD
Rp/R* = 0.0207 [0.0352]
a/R* = 248.92 [2618.59]
b = 0.86 [3.24]
Seff = 106.86 [74.01]
Teq = 820 [142] K
Rp = 6.96 [12.24] Re
a = 0.5280 [0.2247] AU
Ag = 600.76 [2087.49] [0.29 σ]
Teffp = 6275 [5355] K [1.02 σ]

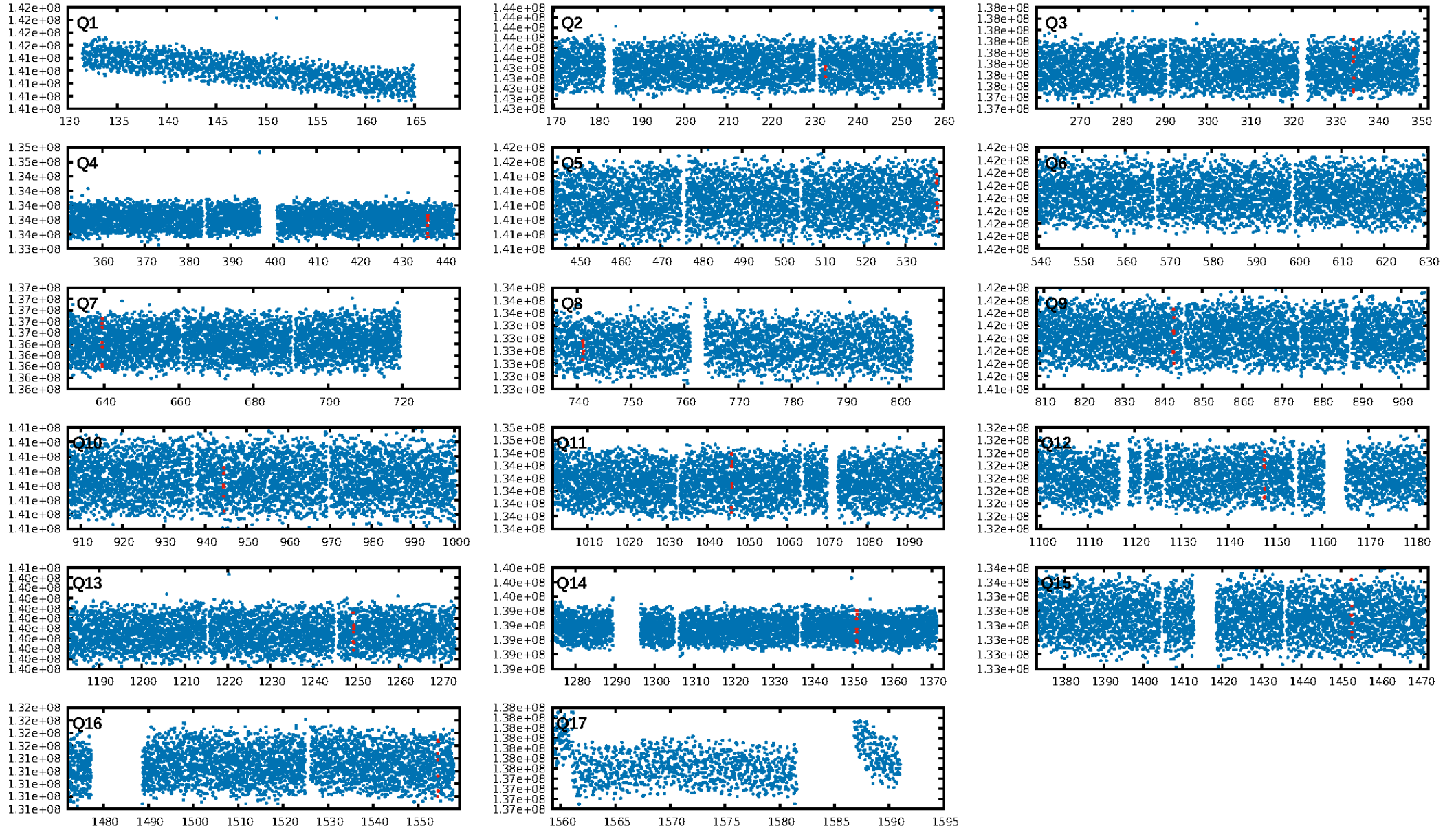
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [28.45 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 26.5%
ModelChiSquareGof-sig: 98.1%
Bootstrap-pfa: 3.02e-09
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 0.477
Centroid-sig: 3.5%
Centroid-so: 1.035 arcsec [1.29 σ]
OotOffset-rm: 1.321 arcsec [1.25 σ]
OotOffset-st: 3/4/4/2 [13]
KicOffset-rm: 1.321 arcsec [1.30 σ]
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DiffImageOverlap-fno: 0.00 [0/14]

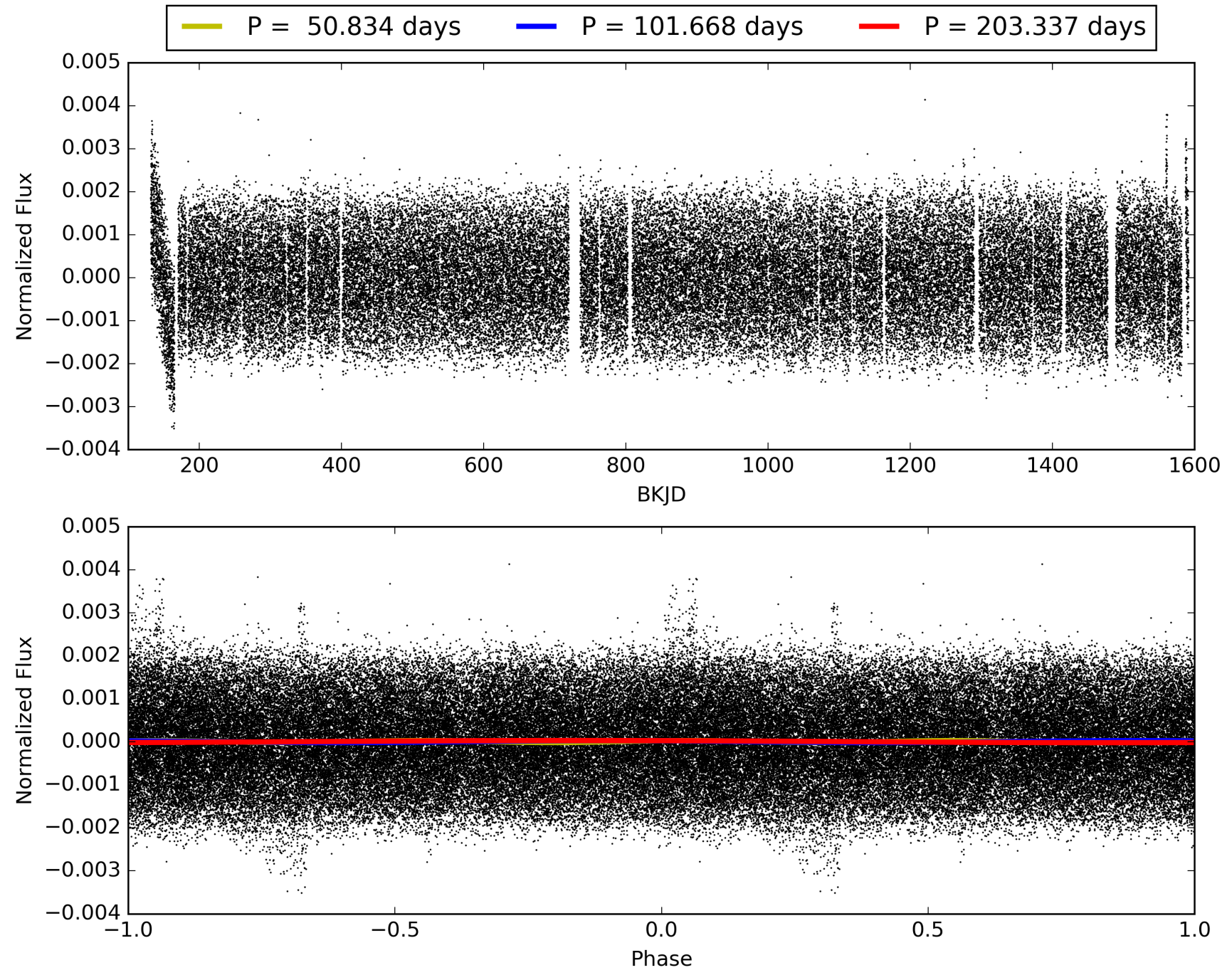
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 011572046-02, PDC Light Curves

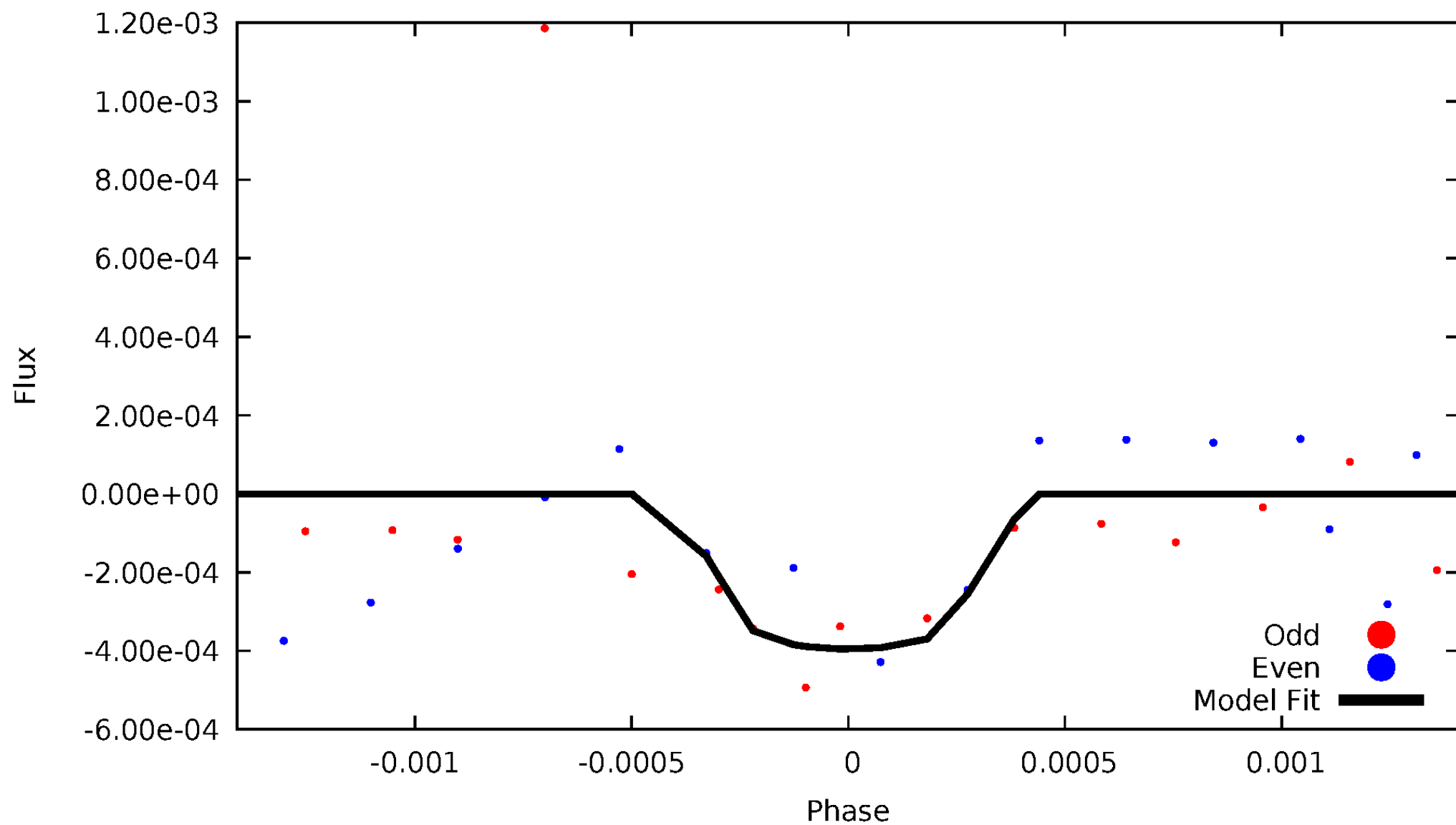


TCE 011572046-02



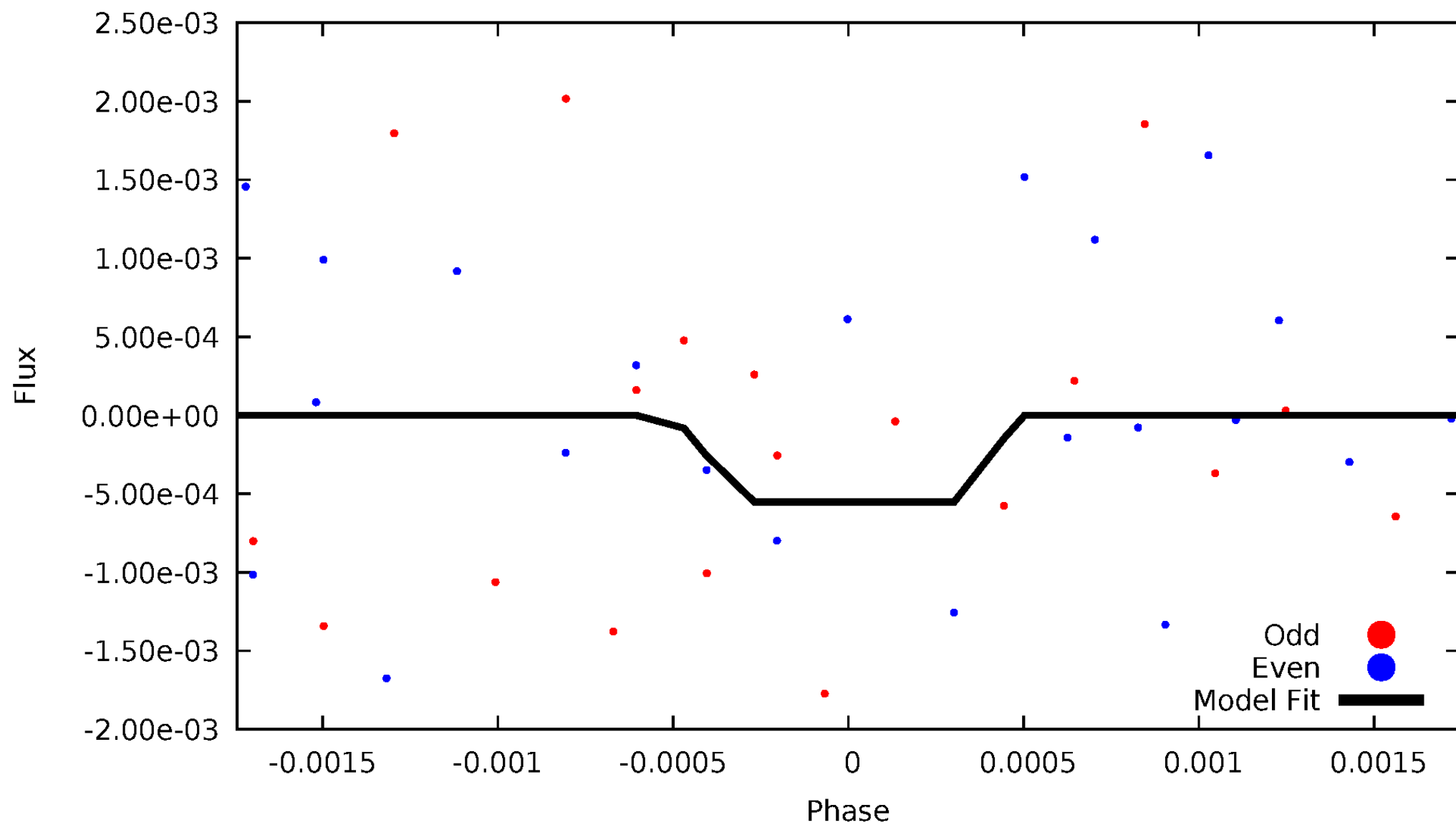
DV Odd/Even

TCE 011572046-02



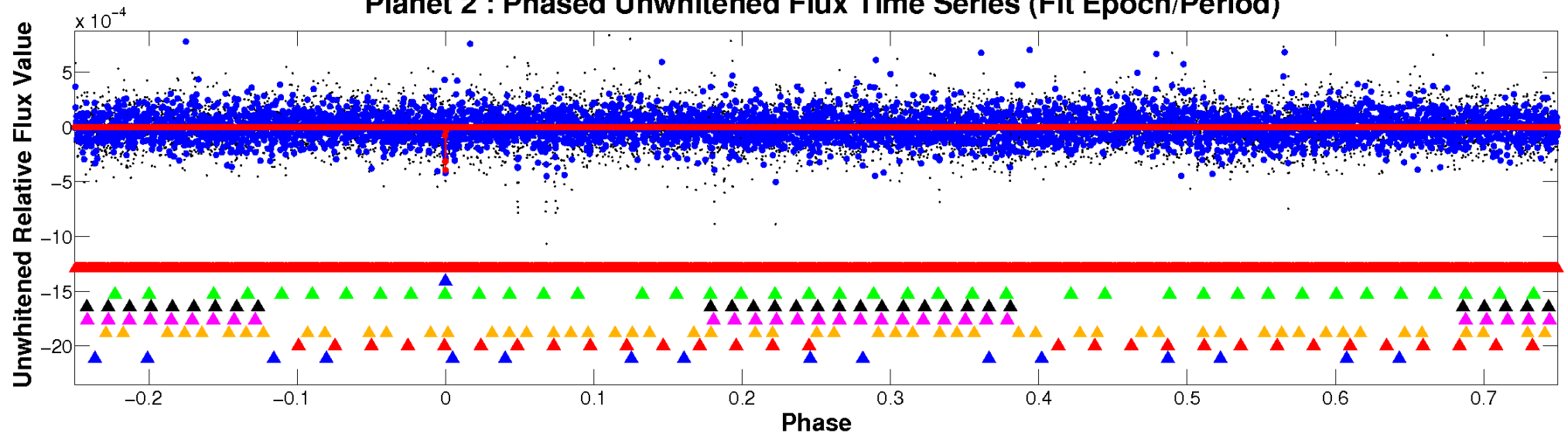
ALT Odd/Even

TCE 011572046-02

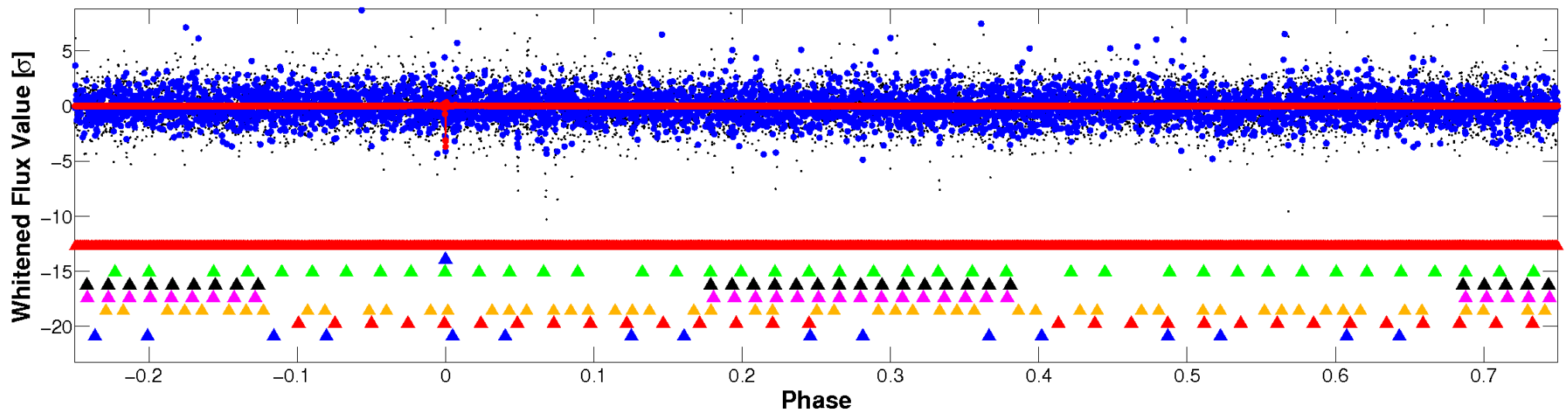


Non-Whitened Vs. Whitened Light Curve

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

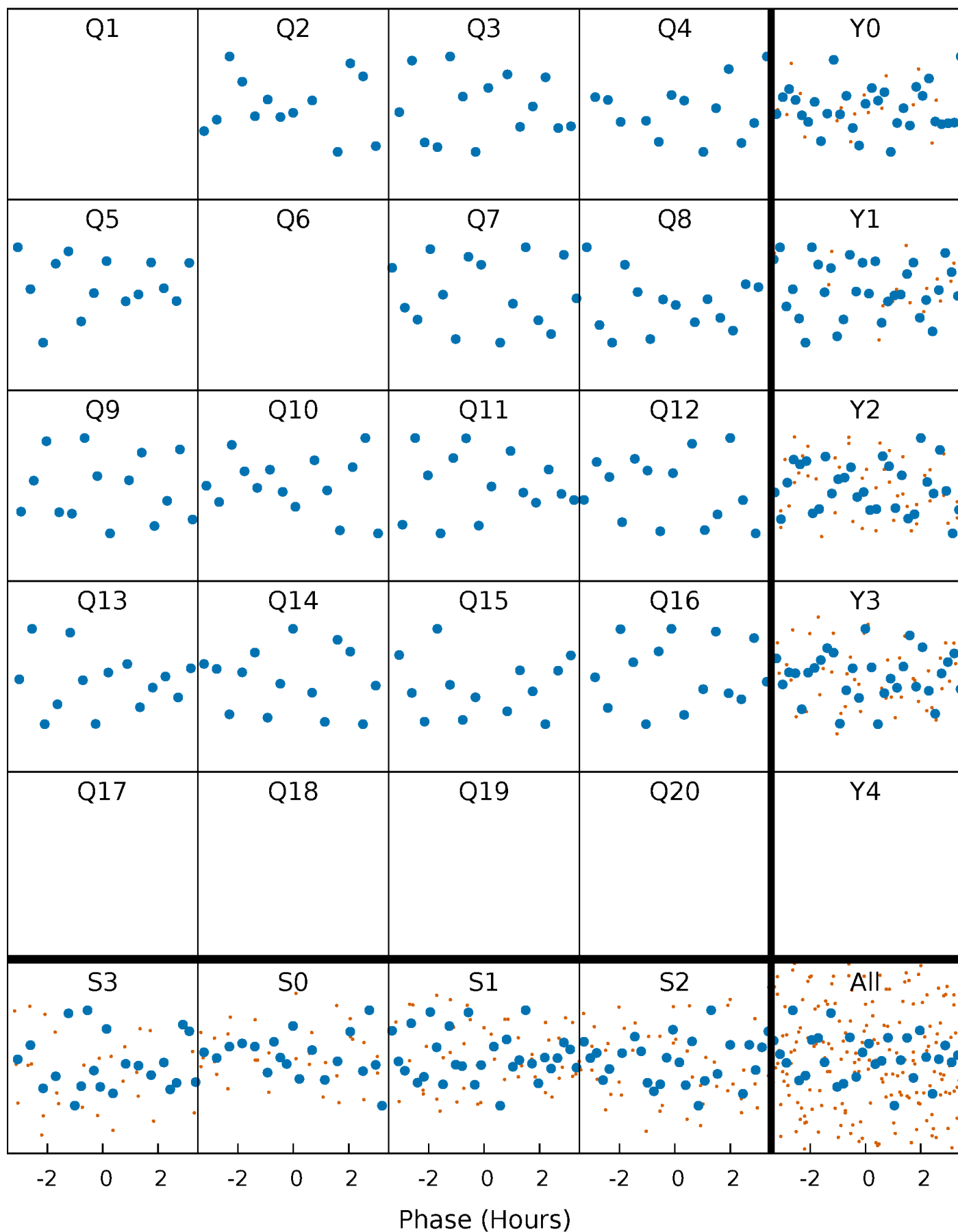


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



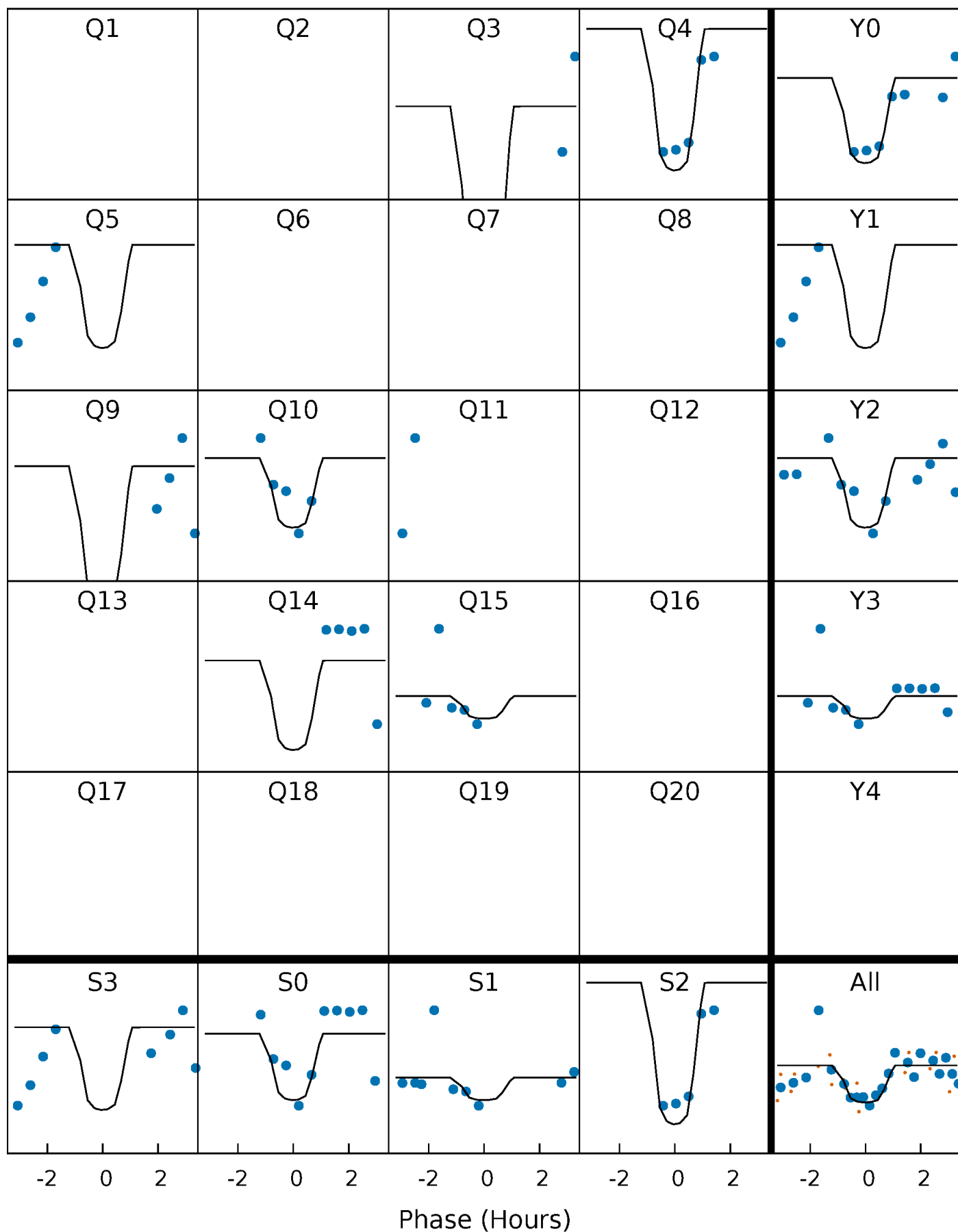
PDC Quarter-Phased Transit Curves

TCE 011572046-02 P=101.668319 Days $T_0=232.737823$ (BKJD)



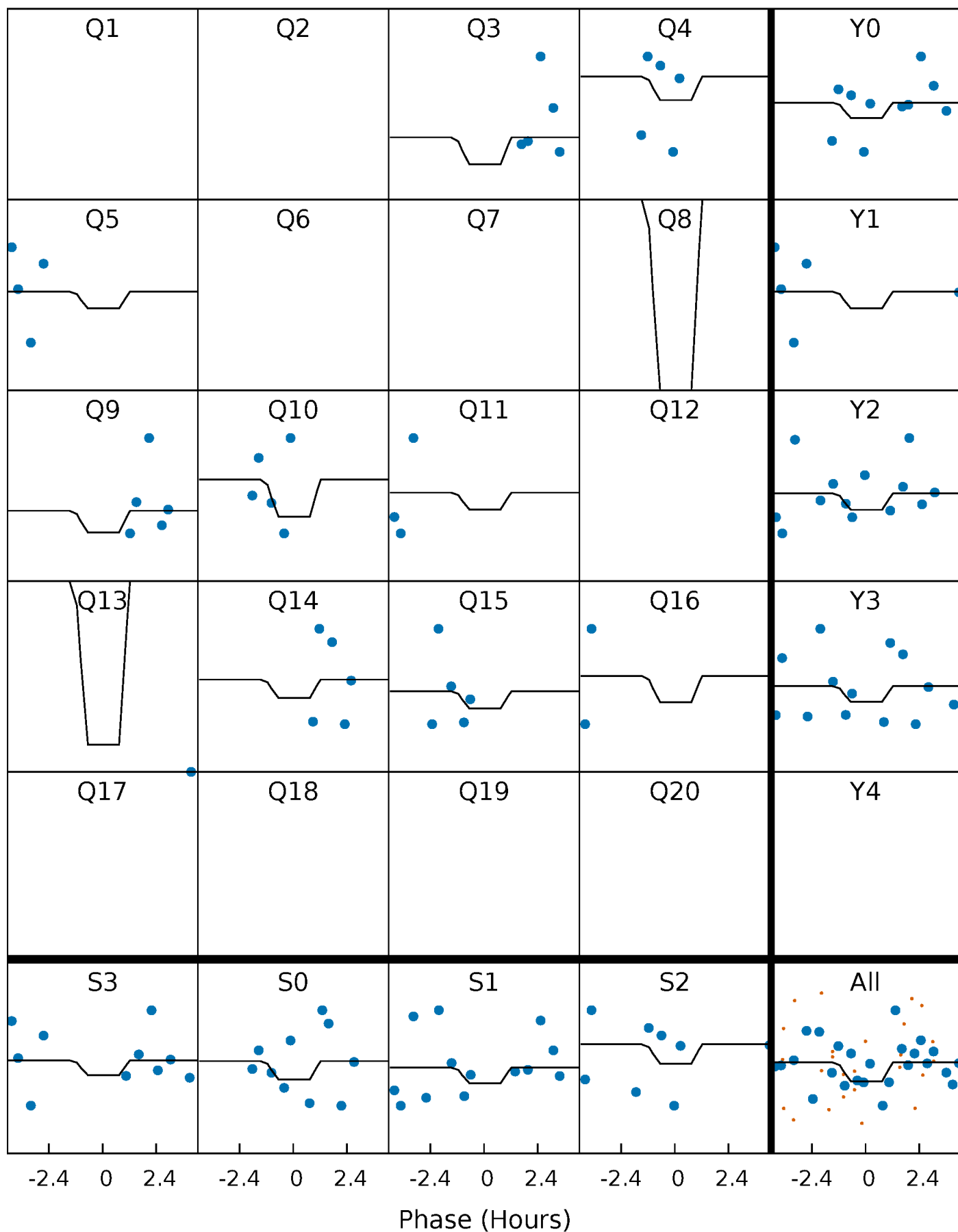
DV Quarter-Phased Transit Curves

TCE 011572046-02 P=101.668319 Days $T_0=232.737823$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

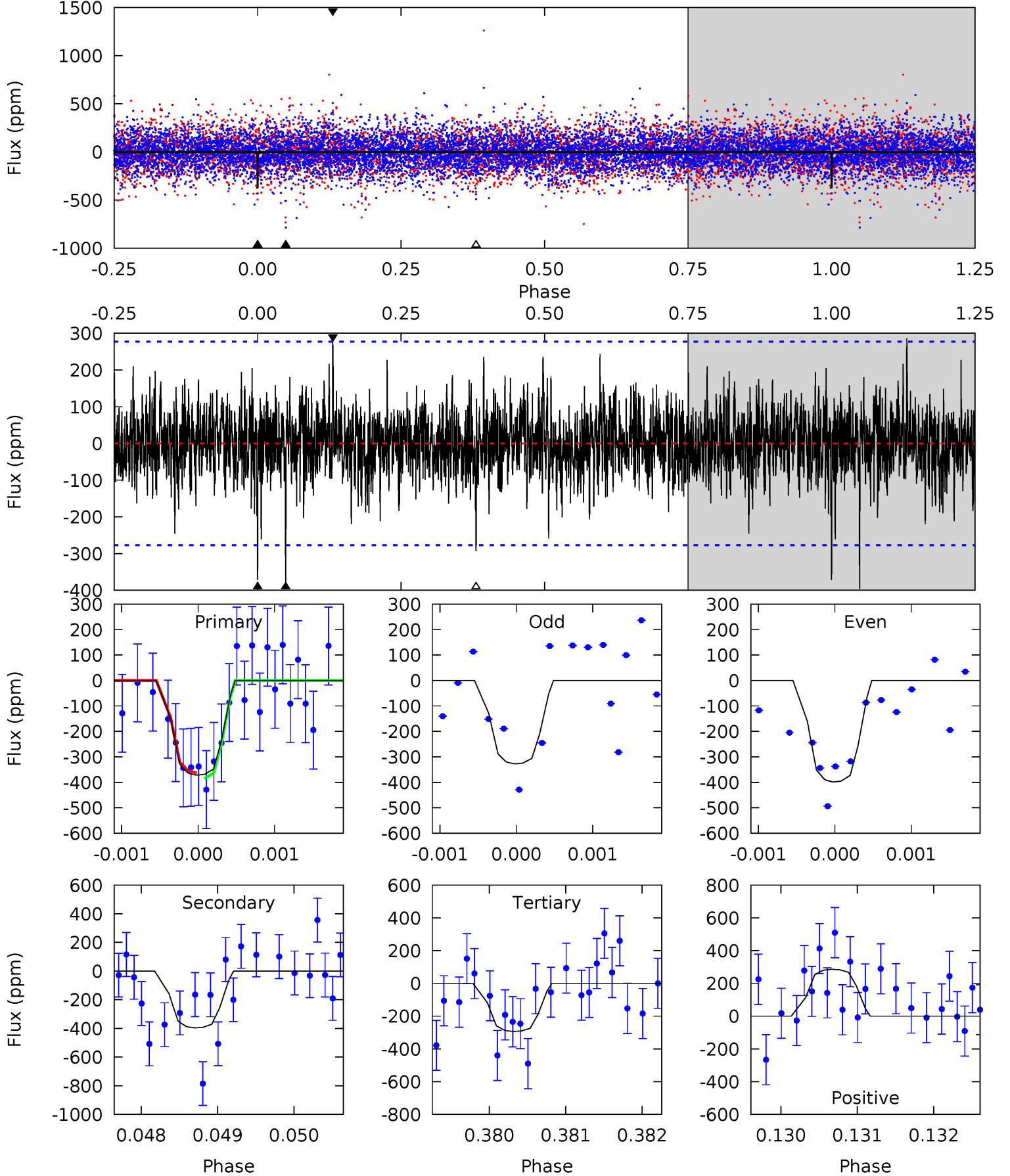
TCE 011572046-02 P=101.664804 Days $T_0=232.790628$ (BKJD)



DV Model-Shift Uniqueness Test

011572046-02, P = 101.668319 Days, E = 131.069504 Days

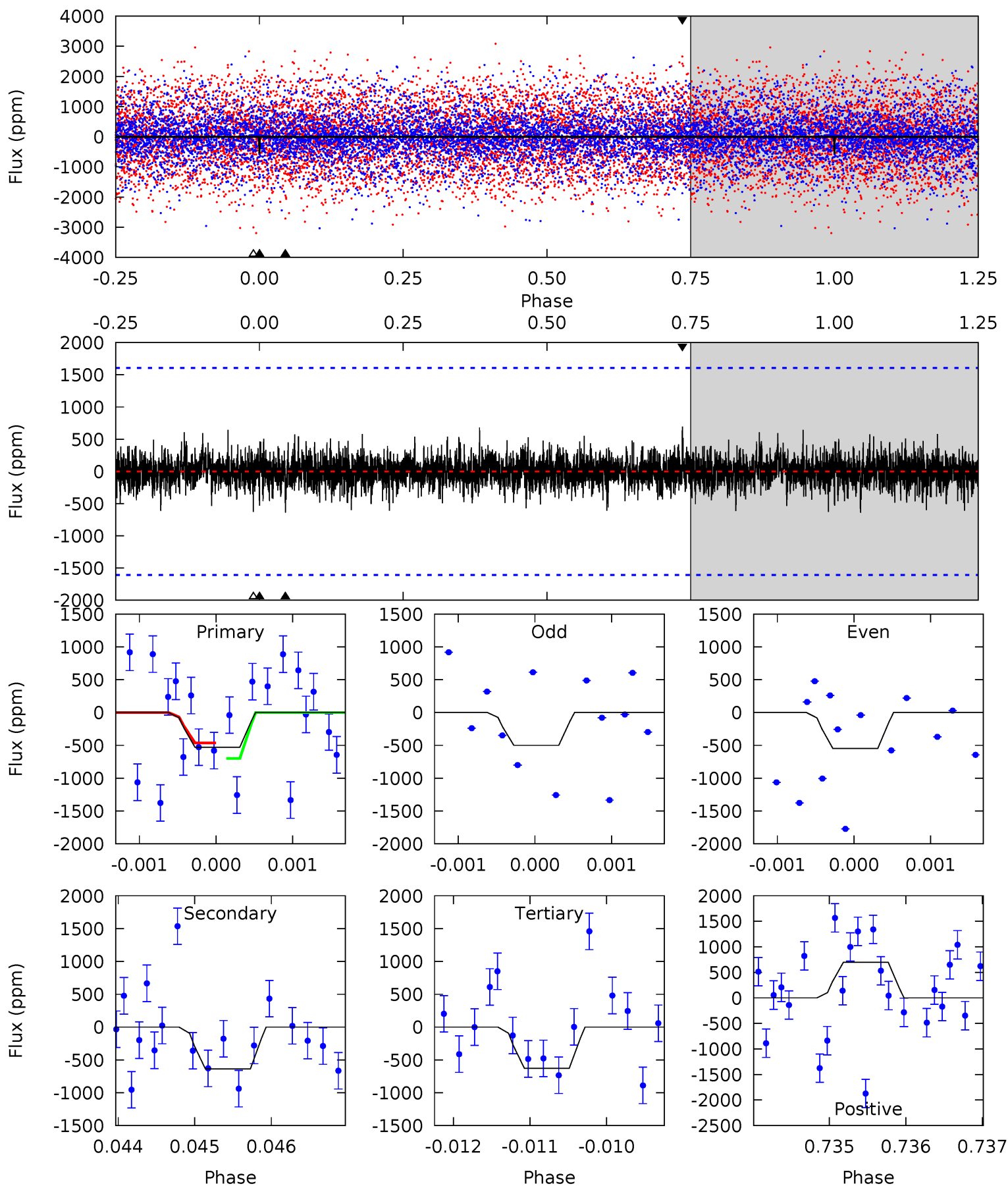
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.34	7.82	5.79	5.65	5.47	3.32	1.37	1.55	1.69	2.03	2.17	0.68	1.10	0.42	0.22



Alt Model-Shift Uniqueness Test

011572046-02, P = 101.664804 Days, E = 131.125824 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.79	2.17	2.13	2.36	5.46	3.30	0.58	-0.34	-0.57	0.04	-0.20	0.08	0.85	0.52	0.37



Stellar Parameters For KIC 011572046

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7693^{+211}_{-316}	$3.739^{+0.392}_{-0.073}$	$-0.080^{+0.200}_{-0.350}$	$3.081^{+0.348}_{-1.391}$	$1.898^{+0.105}_{-0.420}$	$0.091^{+0.331}_{-0.021}$
	+3%/-4%	+10%/-2%	+250%/-438%	+11%/-45%	+6%/-22%	+362%/-23%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 011572046-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-396 ± 51	$9.45^{+9.51}_{-6.58}$	1109^{+78}_{-118}	5910^{+6737}_{-1452}	653^{+6397}_{-484}
Alt.	-638 ± 295	$10.75^{+10.04}_{-7.05}$	1110^{+69}_{-116}	6159^{+6186}_{-1642}	756^{+6275}_{-586}

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 $A_{obs} \gg 1.0$

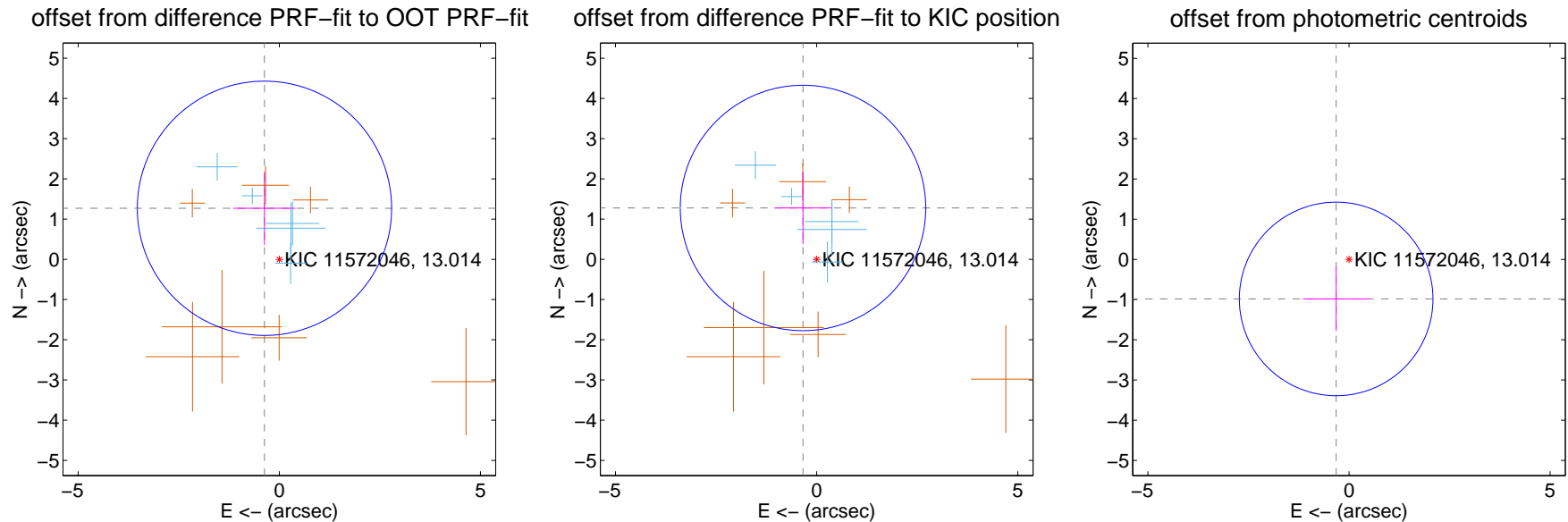
DV Centroid Data

Supplemental centroid analysis for 011572046-02. Kepler magnitude: 13.01. Transit SNR 9.72

There are 5 quarters with good PRF difference image offsets

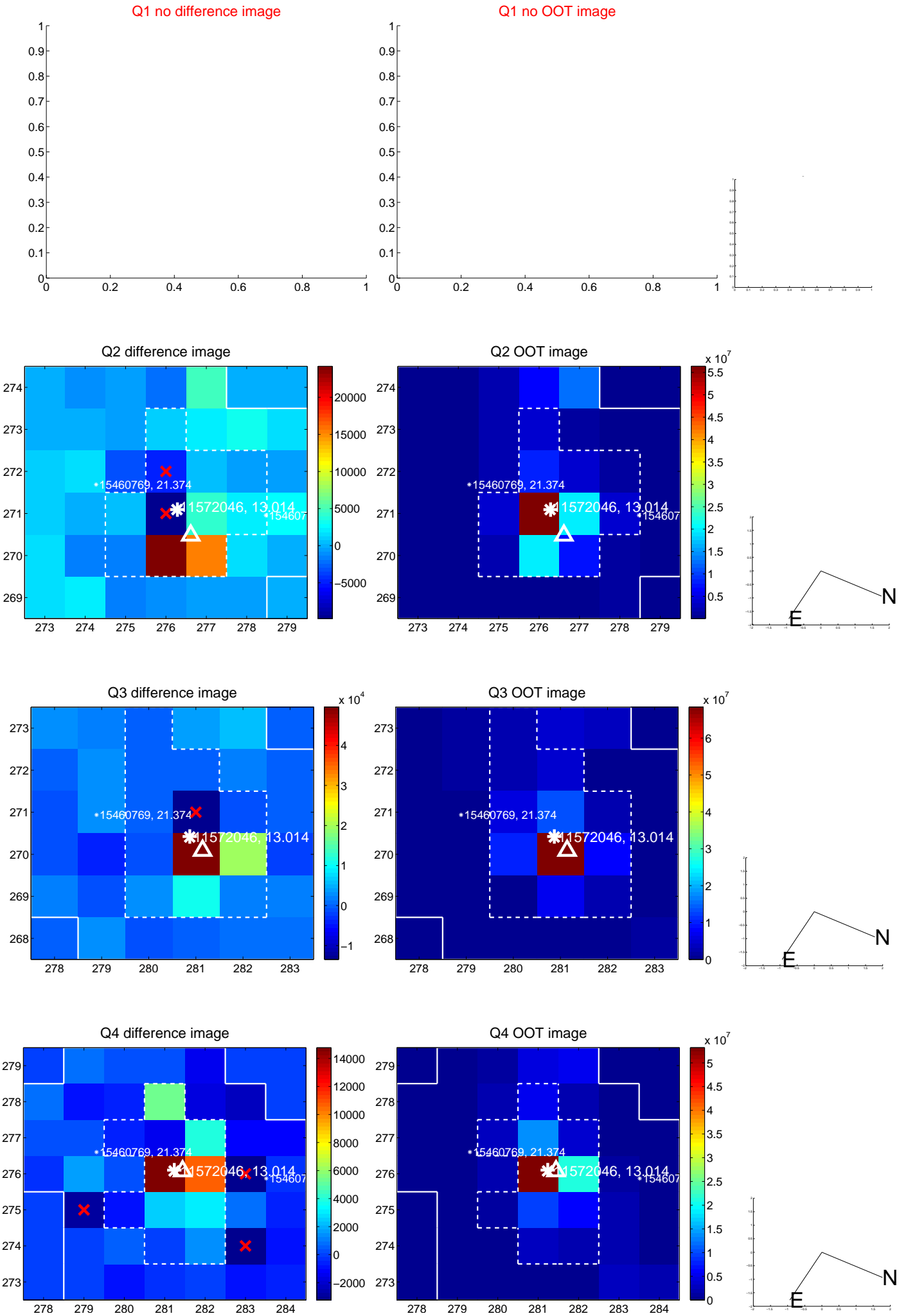
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.321 ± 1.054	1.25	0.369 ± 0.776	1.268 ± 0.913
PRF-fit source offset from KIC position	1.321 ± 1.017	1.30	0.340 ± 0.710	1.277 ± 0.899
photometric centroid source offset	1.03 ± 0.80	1.29	0.32 ± 0.83	-0.98 ± 0.80

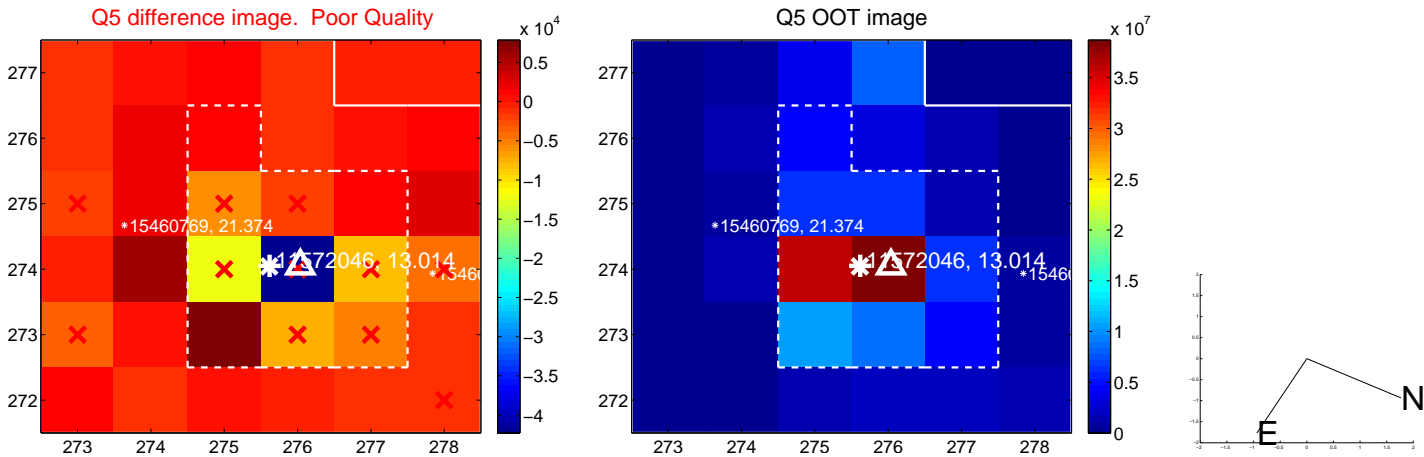


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

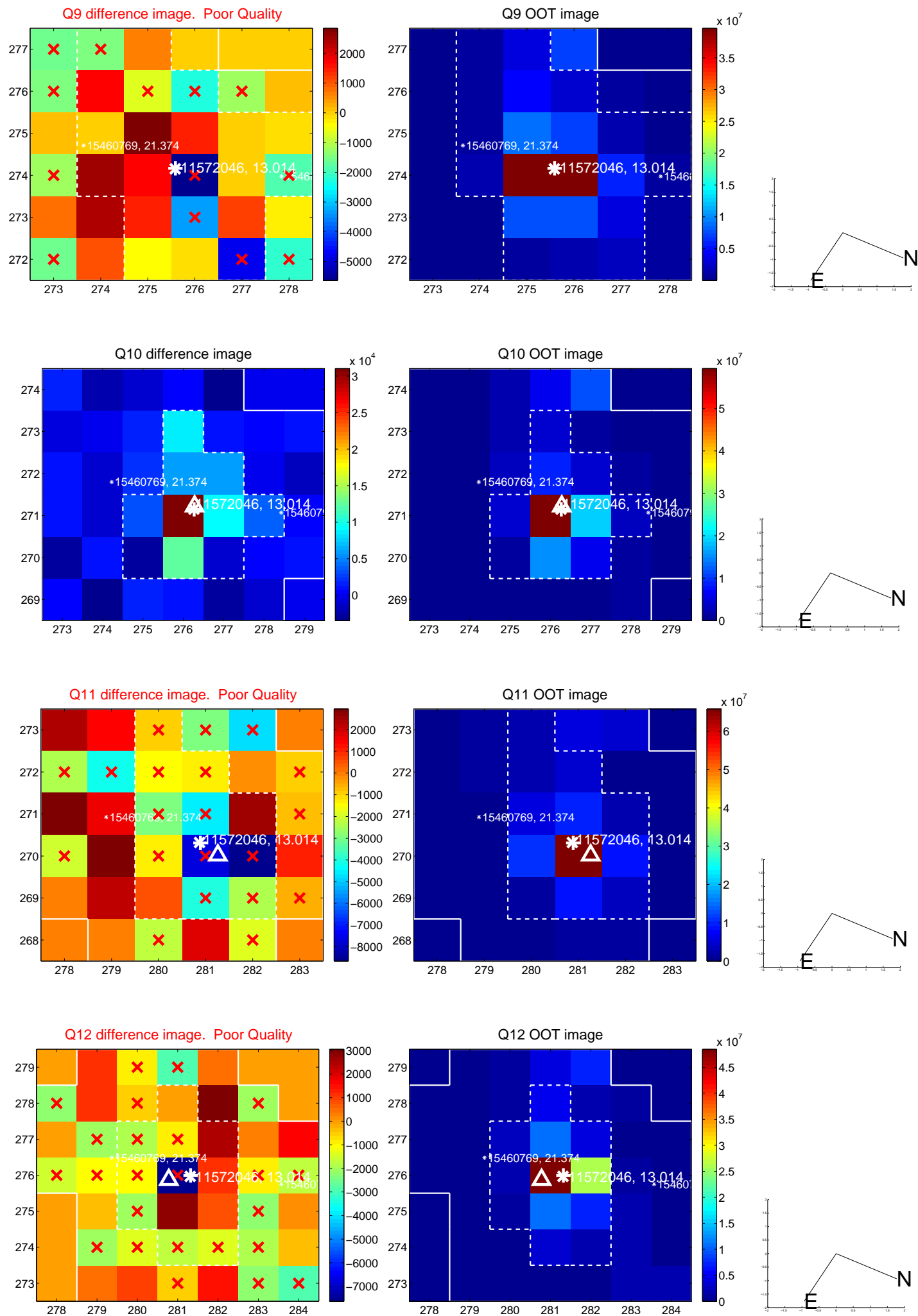
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



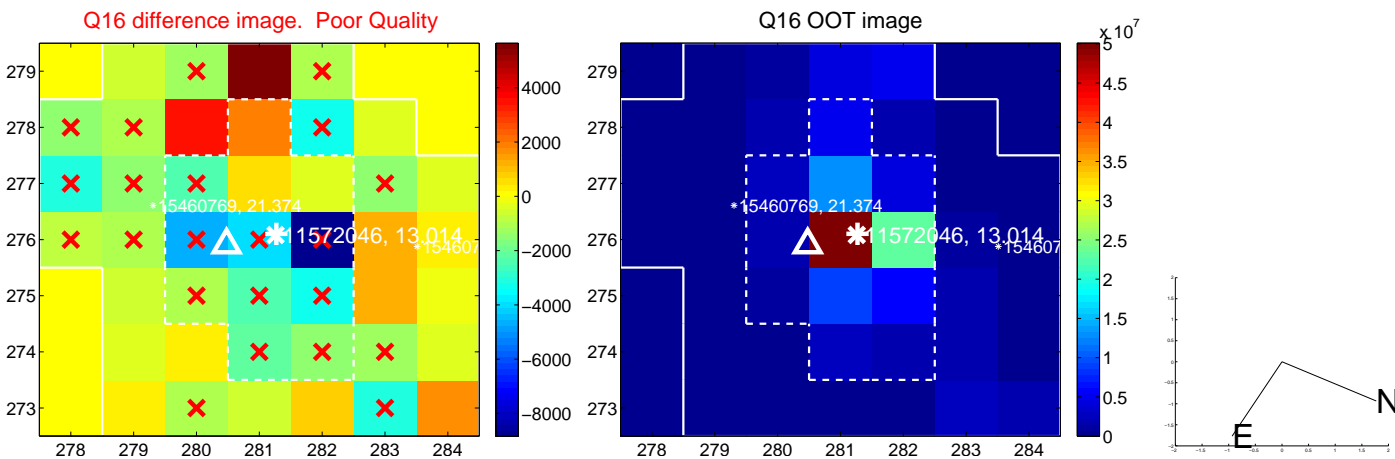
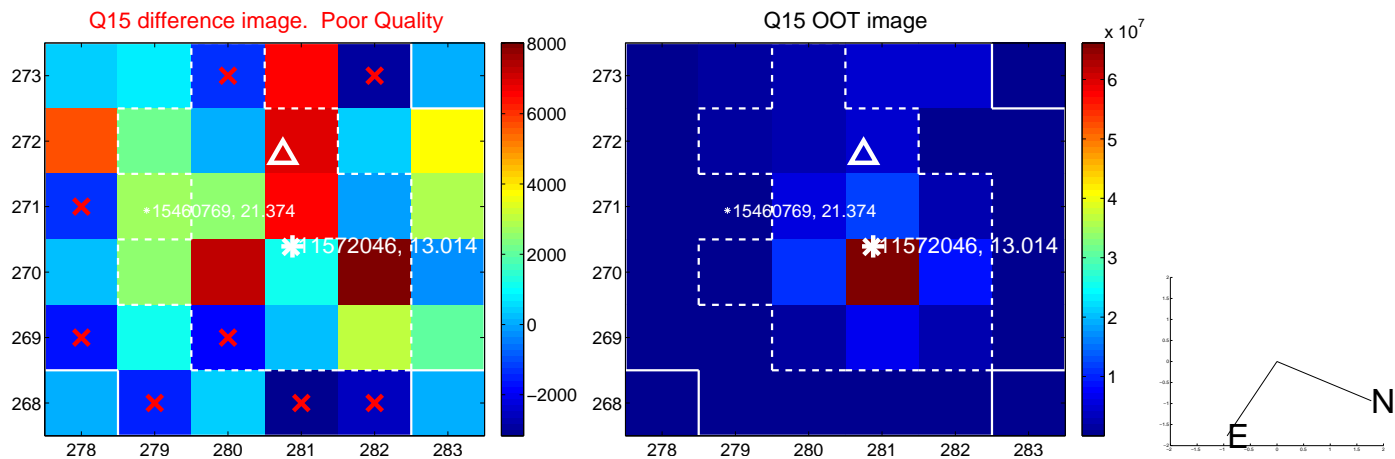
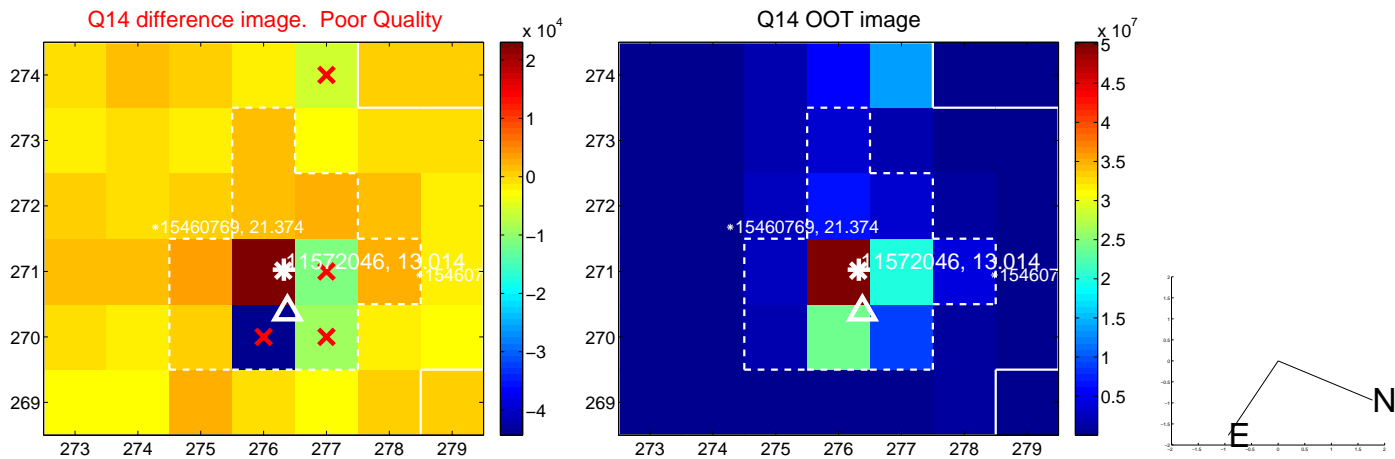
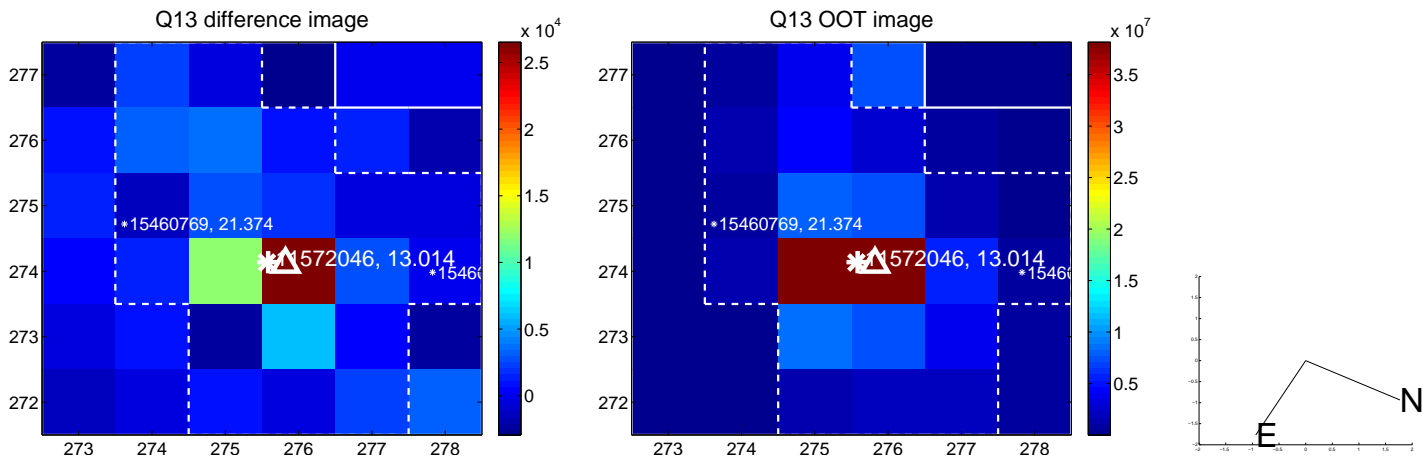
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



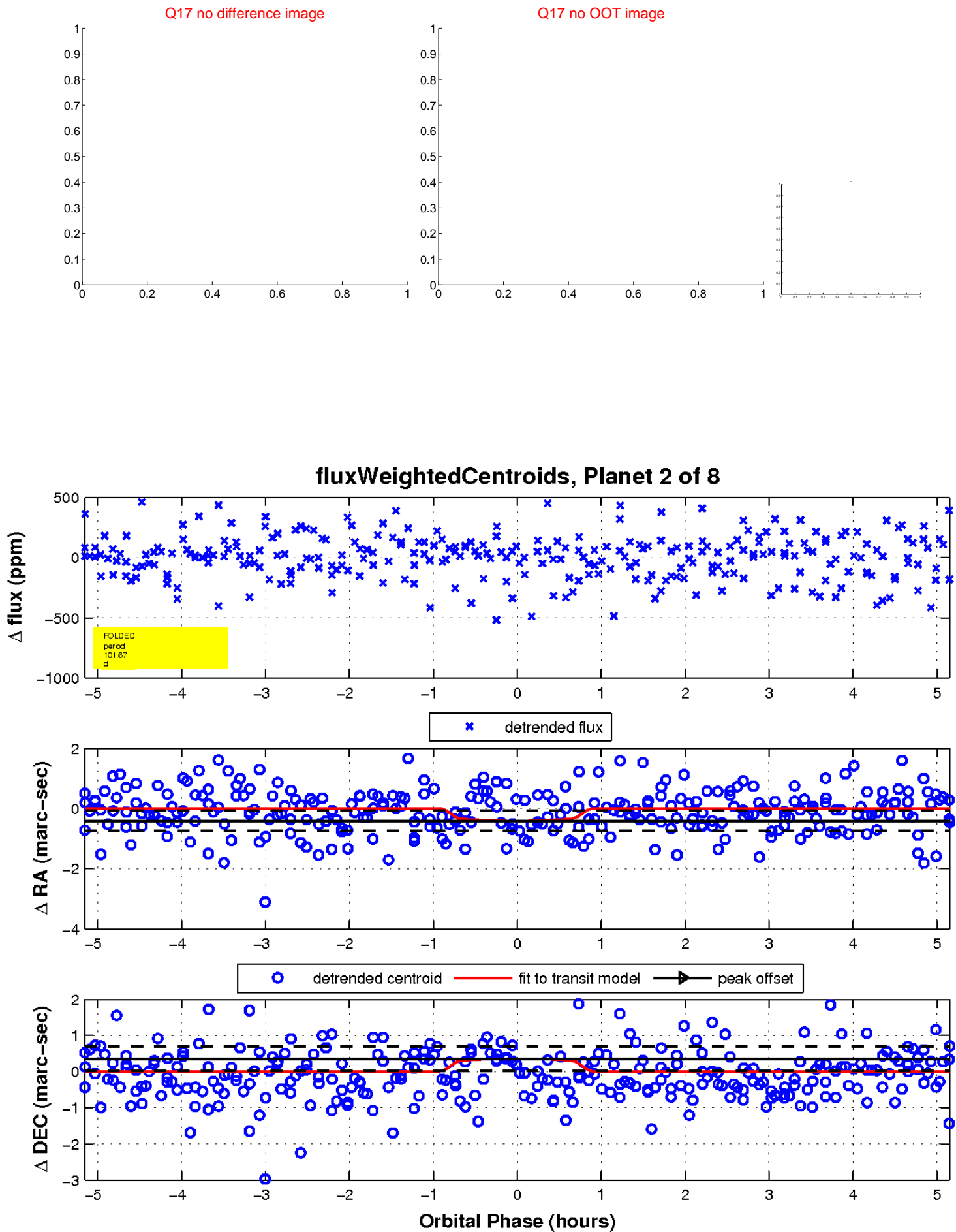
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

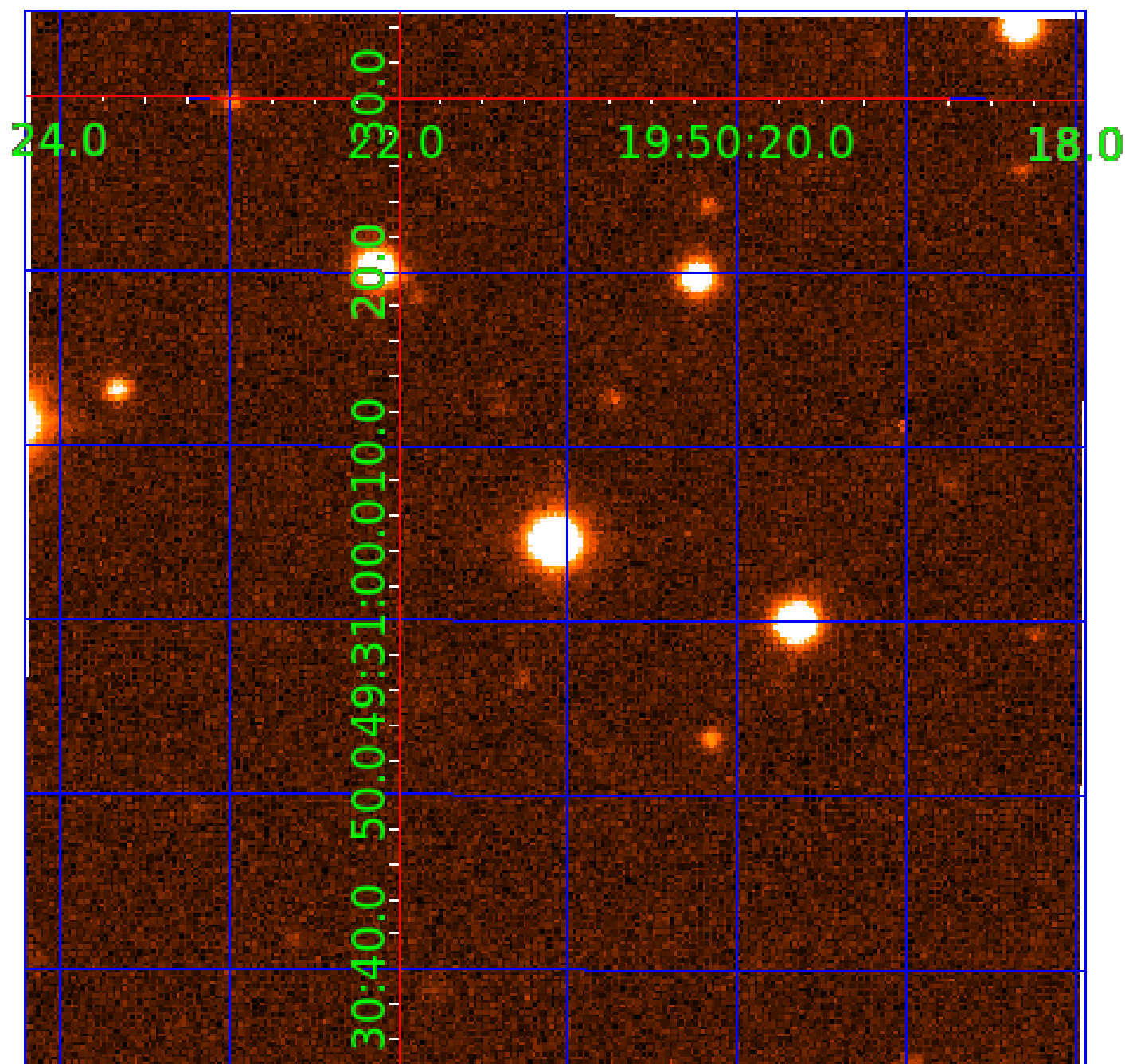


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011572046

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})
011572046-01	OBS	No	0.642618	131.810580	15.9	4.174	9.3	8.9	3.08	7693	1.32	91439.60
011572046-02	OBS	No	101.668319	232.737823	396.0	1.721	9.0	9.7	3.08	7693	6.96	106.86
011572046-03	OBS	No	36.143464	149.228090	268.5	1.458	9.2	10.8	3.08	7693	5.93	424.32
011572046-04	OBS	No	50.100346	169.792696	107.4	1.105	8.7	2.6	3.08	7693	3.32	274.55
011572046-05	OBS	No	50.115129	169.578882	73.6	29.183	8.4	5.1	3.08	7693	3.04	274.44
011572046-06	OBS	No	26.470805	136.628006	203.5	1.448	8.4	8.9	3.08	7693	4.46	642.76
011572046-07	OBS	No	49.584264	155.994699	415.1	0.873	8.5	9.5	3.08	7693	6.66	278.36

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011572046-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—CENT_UNRESOLVED_OFFSET
011572046-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011572046-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_TER_DV
011572046-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
011572046-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_FEW_DIFFS
011572046-06	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011572046-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV

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

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

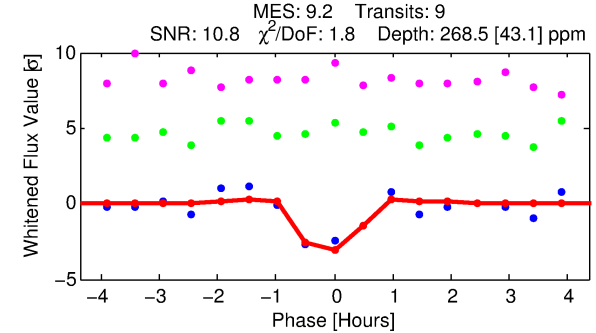
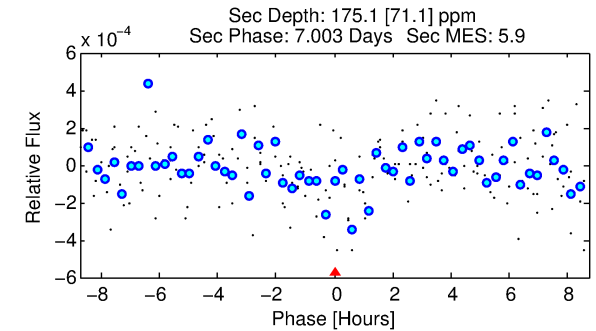
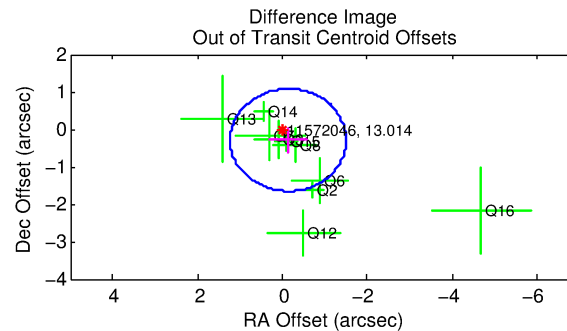
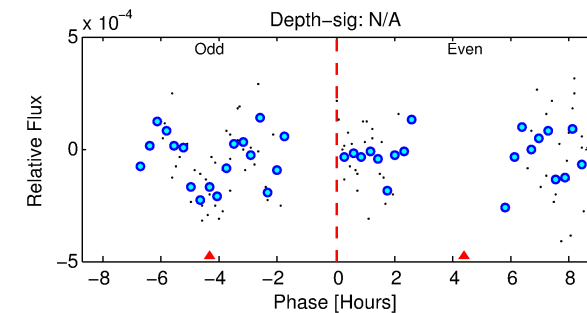
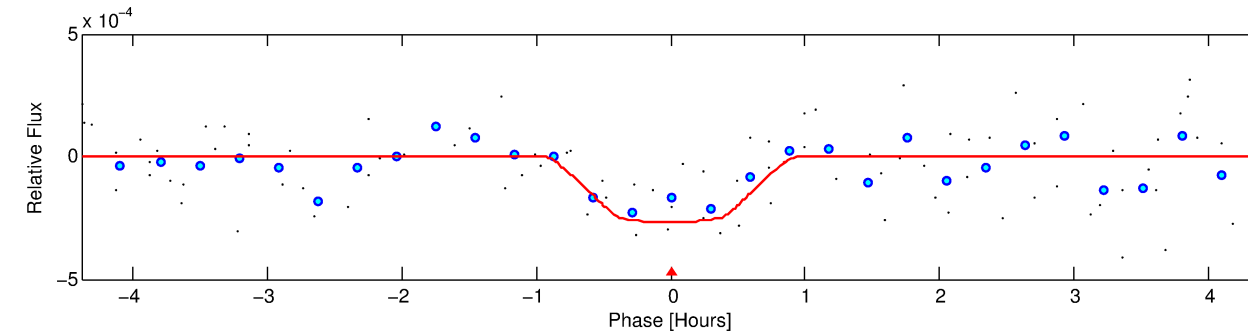
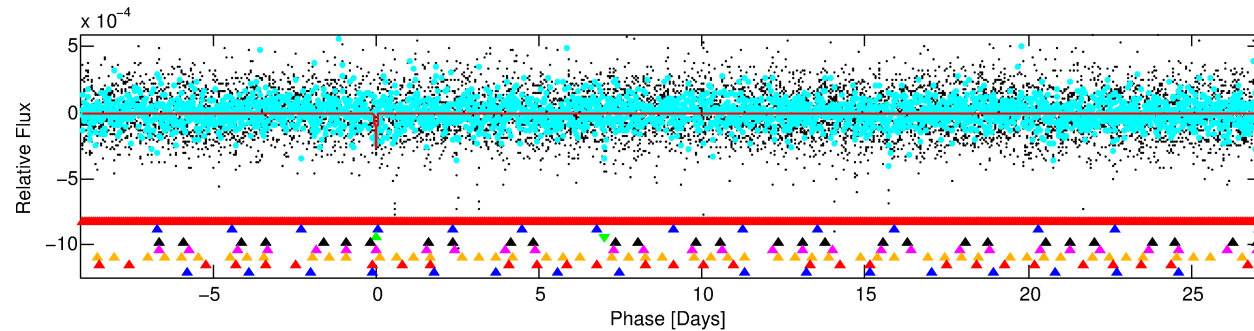
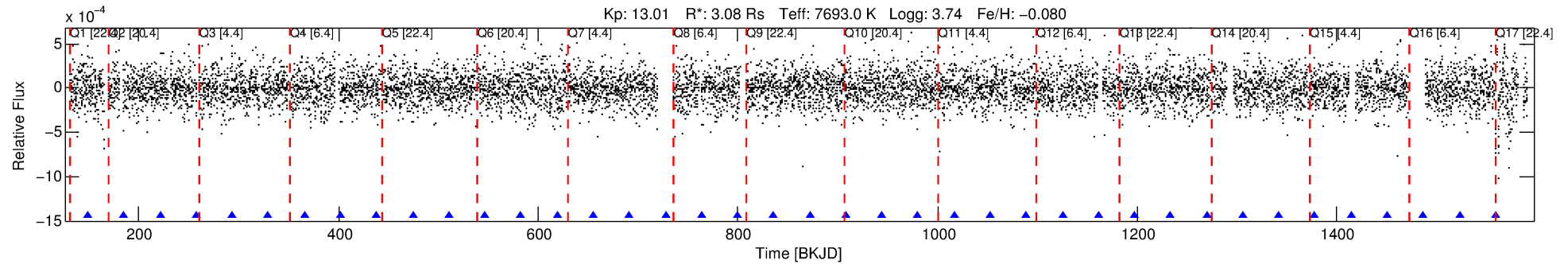
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011572046-03

No Significant Match Found

DV One-Page Summary

KIC: 11572046 Candidate: 3 of 8 Period: 36.143 d



DV Fit Results:

Period = 36.14346 [0.00044] d
Epoch = 149.2281 [0.0085] BKJD
Rp/R* = 0.0176 [0.0221]
a/R* = 86.30 [694.75]
b = 0.91 [1.54]
Seff = 424.33 [293.88]
Teq = 1157 [200] K
Rp = 5.93 [7.91] Re
a = 0.2650 [0.1128] AU
Ag = 192.38 [505.89] [0.38 σ]
Teffp = 6664 [4244] K [1.30 σ]

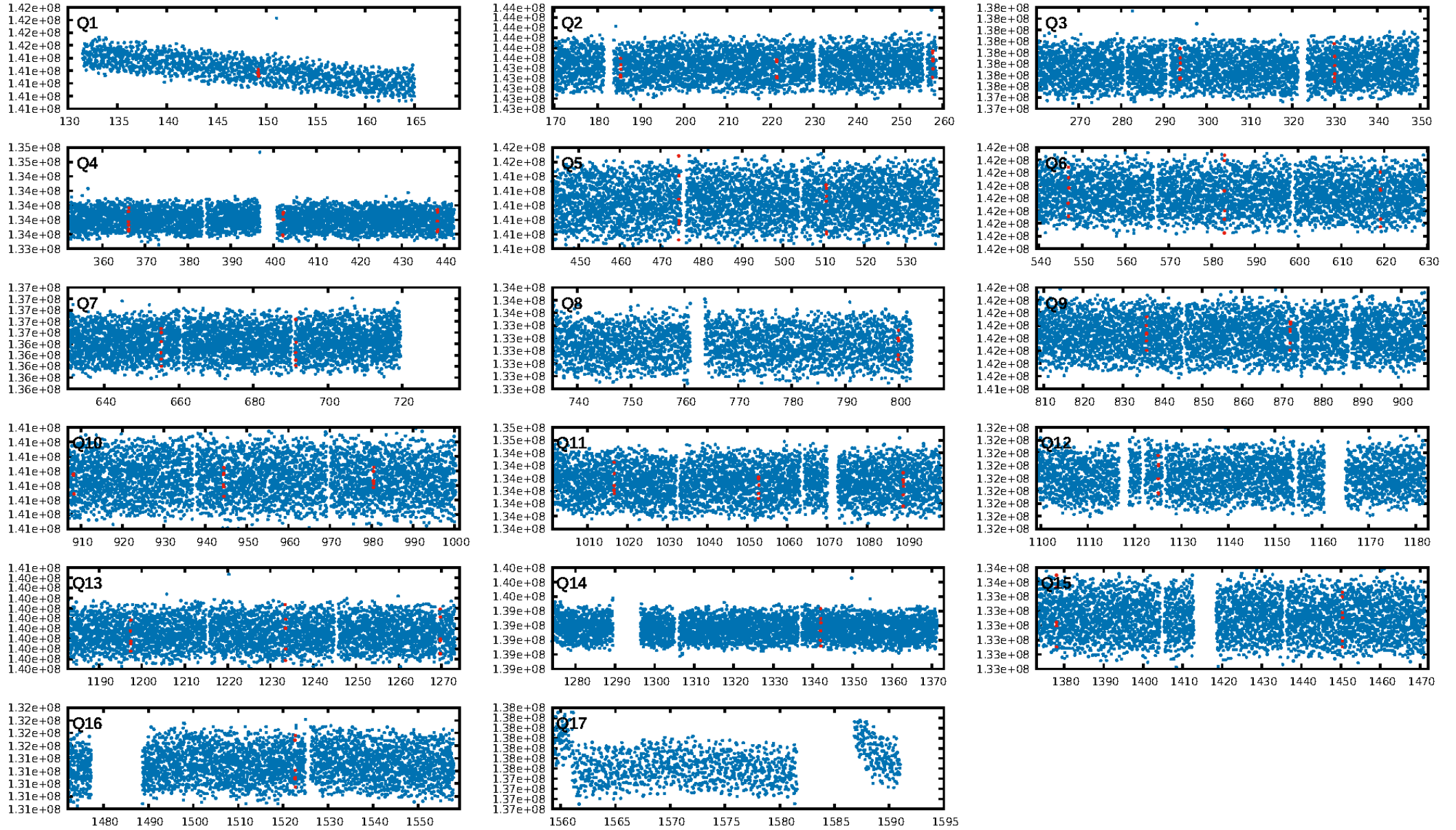
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [112.97 σ]
LongPeriod-sig: 100.0% [189.79 σ]
ModelChiSquare2-sig: 15.6%
ModelChiSquareGof-sig: 91.9%
Bootstrap-pfa: 1.75e-09
RollingBand-fgt: 1.00 [9/9]
GhostDiagnostic-chr: -0.5484
Centroid-sig: 15.7%
Centroid-so: 1.278 arcsec [1.49 σ]
OotOffset-rm: 0.319 arcsec [0.70 σ]
KicOffset-rm: 0.274 arcsec [0.46 σ]
OotOffset-st: 3/3/3/1 [10]
KicOffset-st: 3/3/3/1 [10]
DiffImageQuality-fgm: 0.20 [2/10]
DiffImageOverlap-fno: 0.00 [0/16]

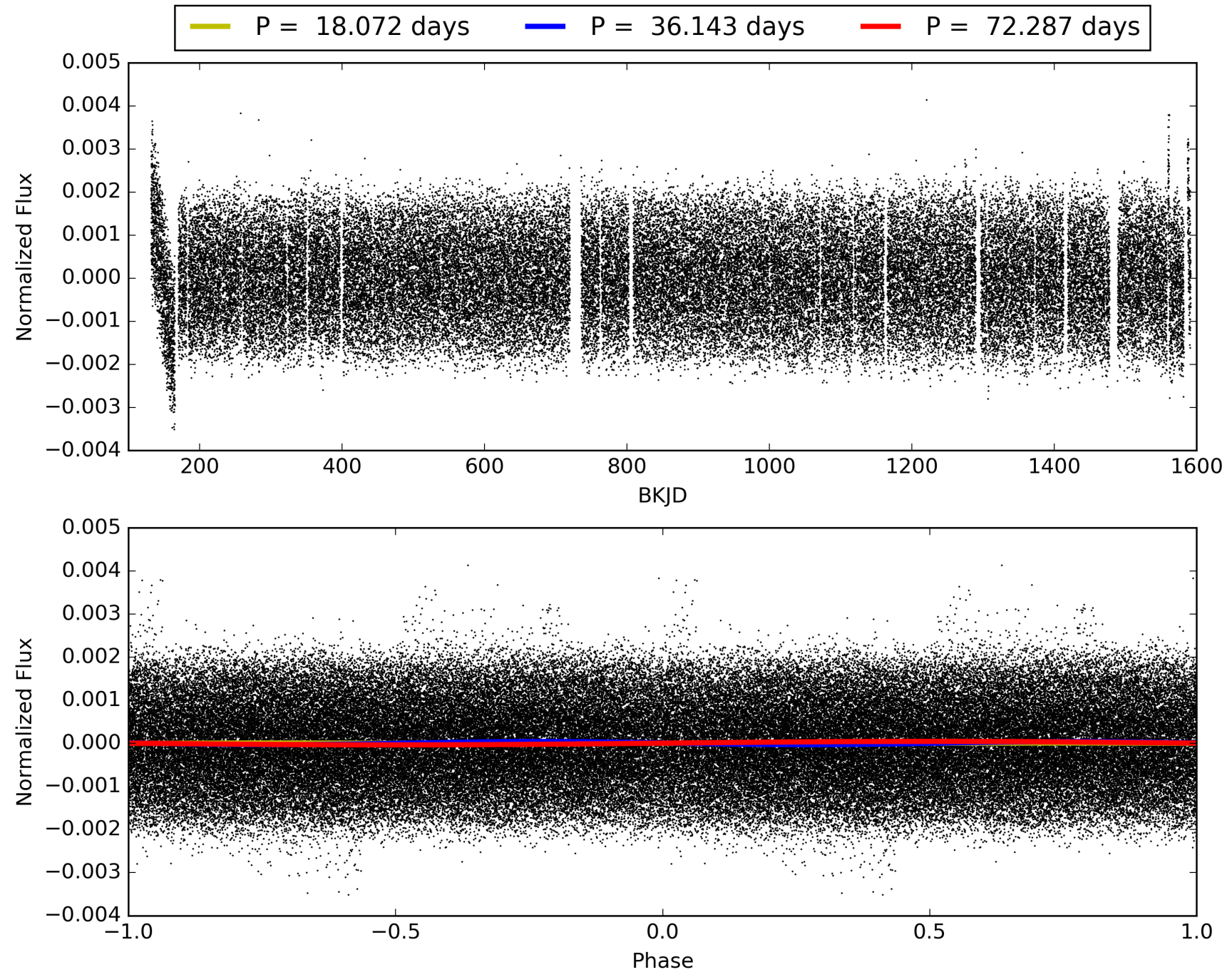
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 18:17:08 Z

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

TCE 011572046-03, PDC Light Curves

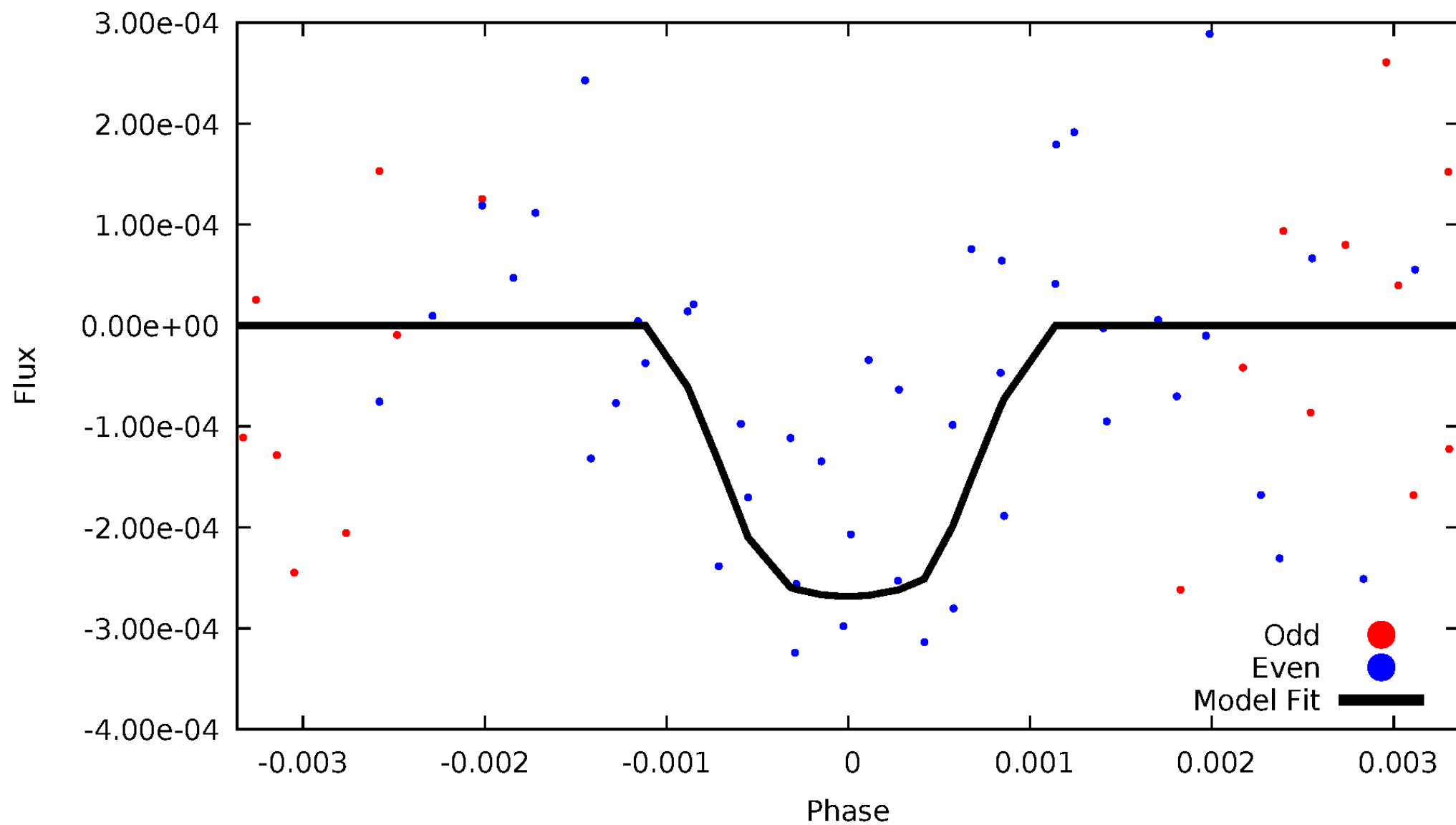


TCE 011572046-03



DV Odd/Even

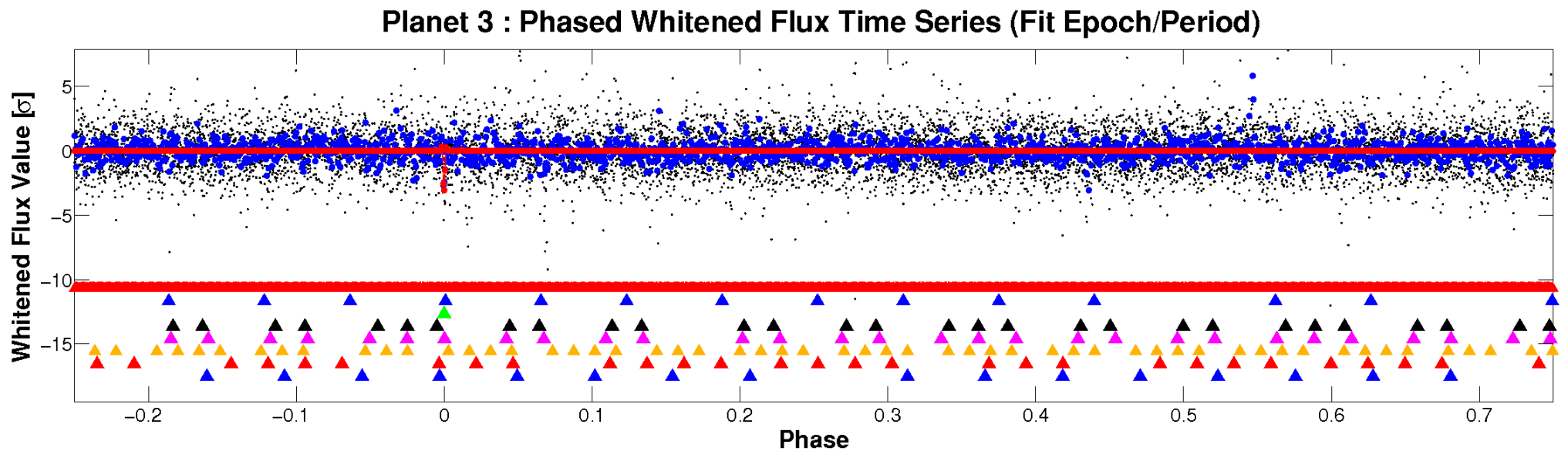
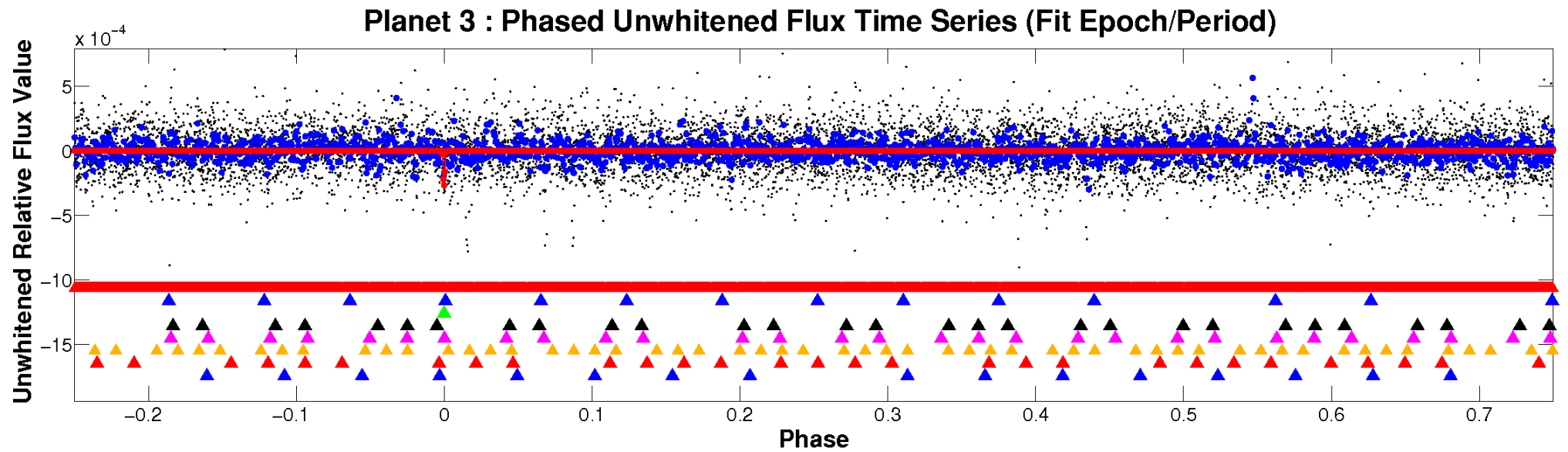
TCE 011572046-03



ALT Odd/Even

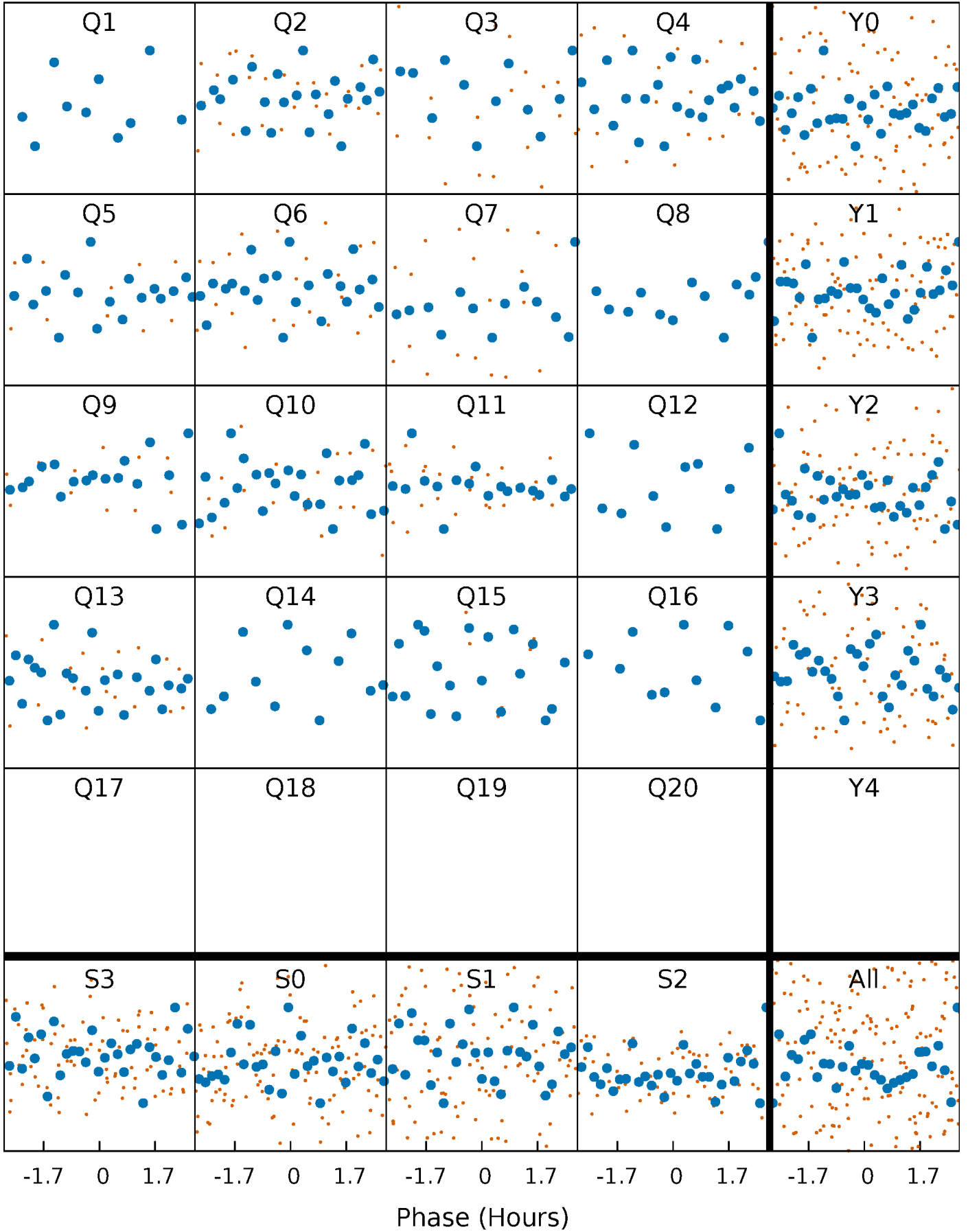
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve



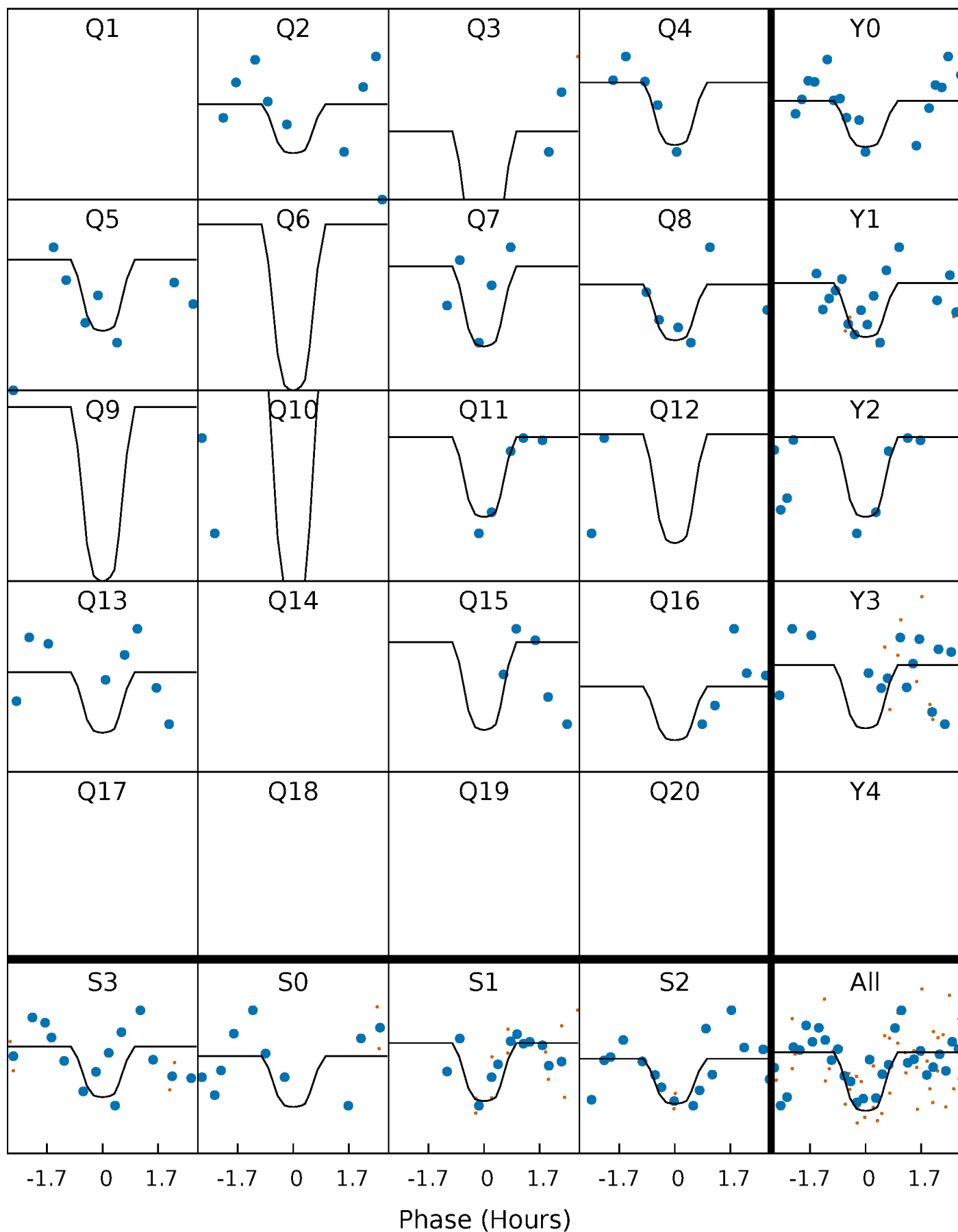
PDC Quarter-Phased Transit Curves

TCE 011572046-03 P= 36.143464 Days $T_0=149.228090$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 011572046-03 P= 36.143464 Days $T_0=149.228090$ (BKJD)

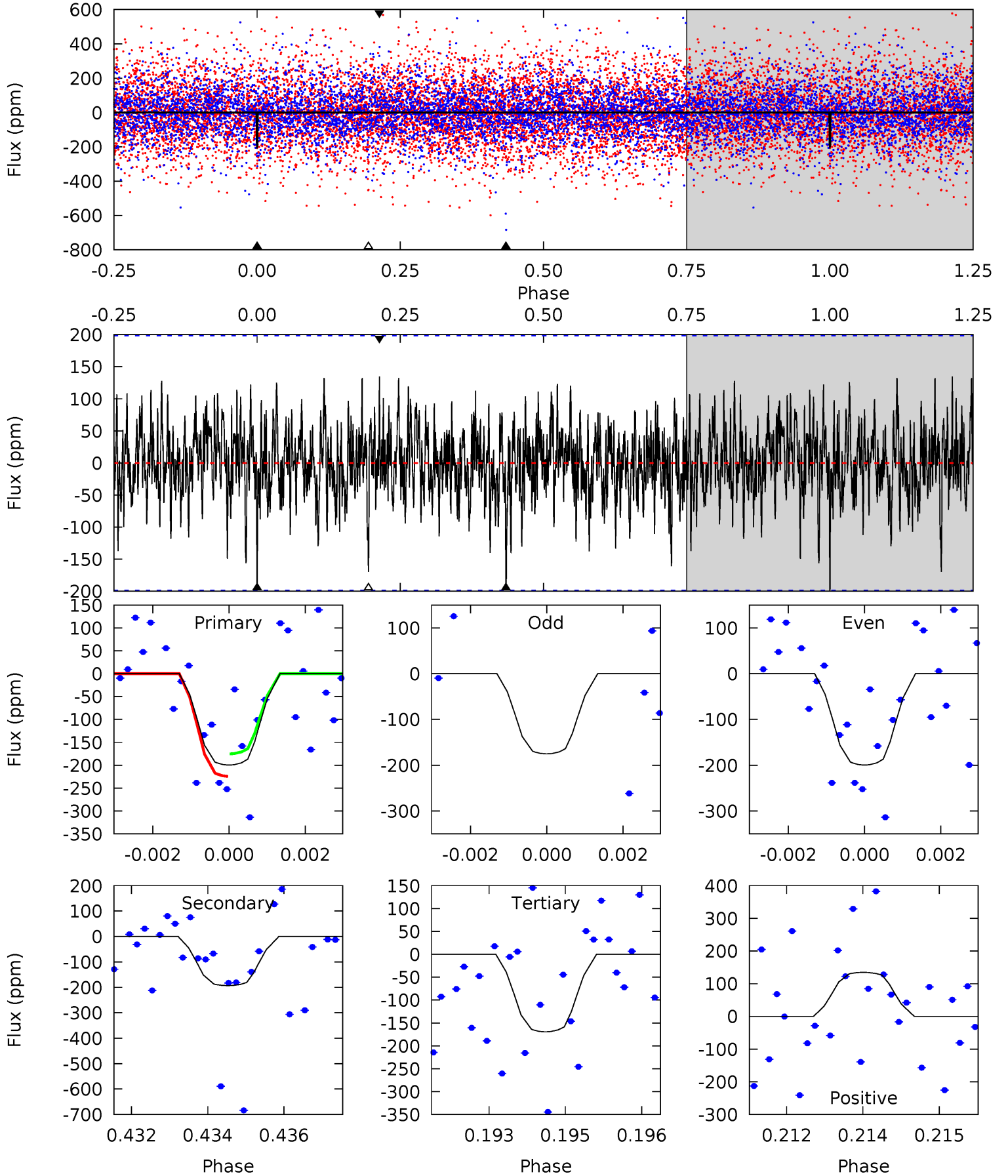


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

011572046-03, $P = 36.143464$ Days, $E = 113.084626$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.37	5.21	4.56	3.63	5.36	3.14	1.27	0.81	1.75	0.65	1.58	0.39	0.75	0.40	0.66



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 011572046

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7693^{+211}_{-316}	$3.739^{+0.392}_{-0.073}$	$-0.080^{+0.200}_{-0.350}$	$3.081^{+0.348}_{-1.391}$	$1.898^{+0.105}_{-0.420}$	$0.091^{+0.331}_{-0.021}$
	+3%/-4%	+10%/-2%	+250%/-438%	+11%/-45%	+6%/-22%	+362%/-23%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 011572046-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-193 ± 37	$6.82^{+6.23}_{-4.39}$	1564^{+106}_{-173}	5838^{+5587}_{-1372}	158^{+1083}_{-116}
Alt.	N/A	N/A	N/A	N/A	N/A

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 $A_{obs} \gg 1.0$

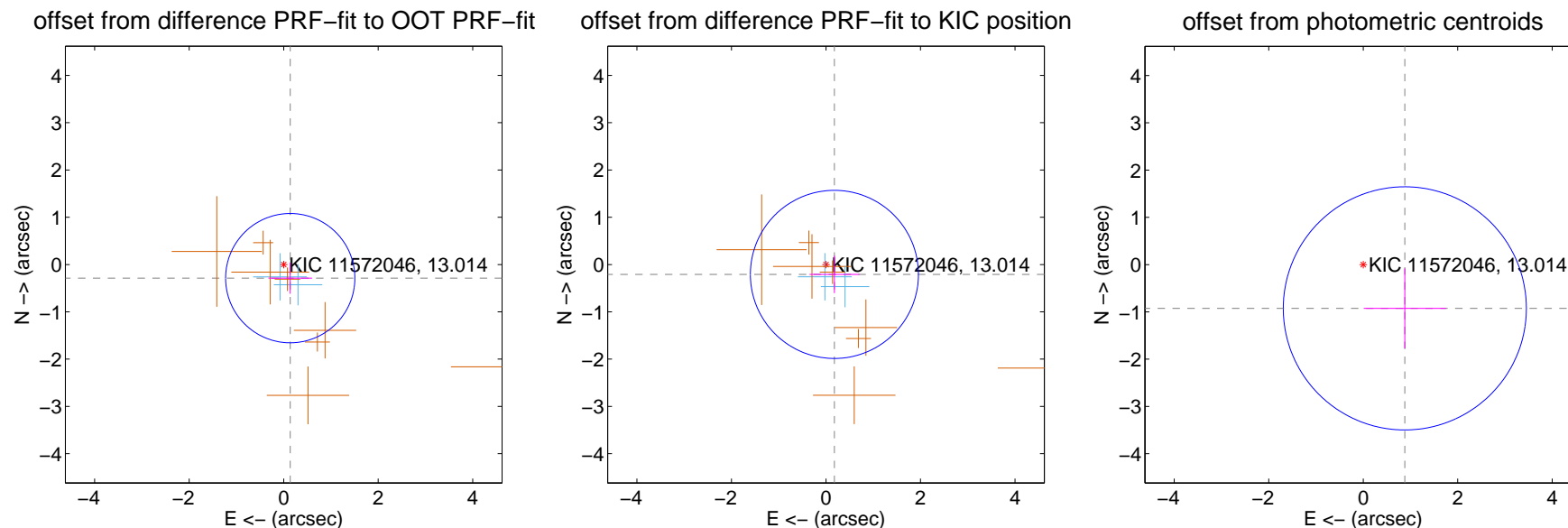
DV Centroid Data

Supplemental centroid analysis for 011572046-03. Kepler magnitude: 13.01. Transit SNR 10.80

There are 2 quarters with good PRF difference image offsets

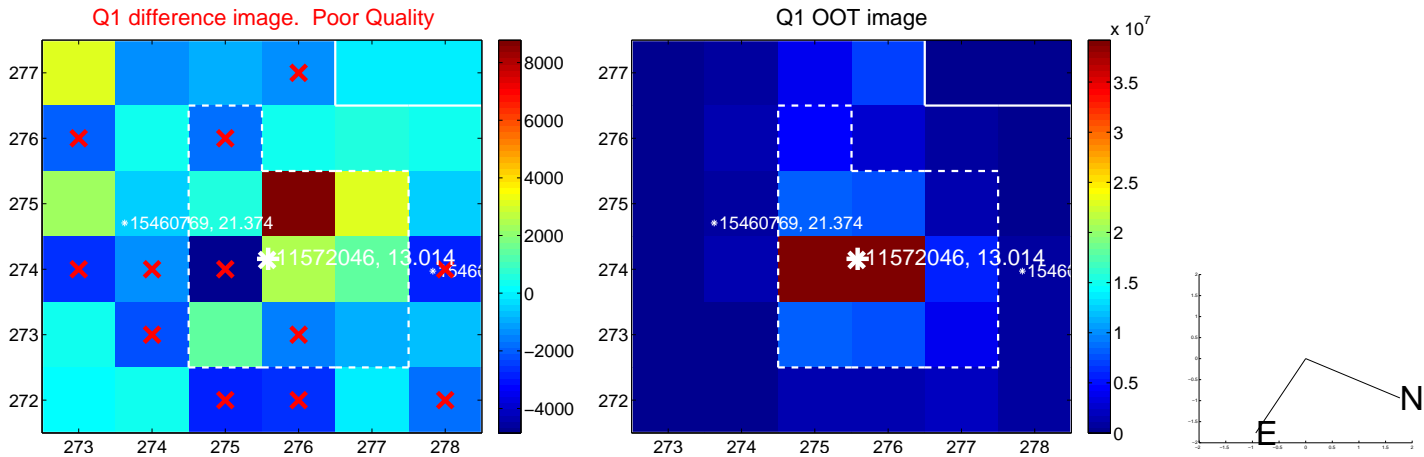
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.319 ± 0.456	0.70	-0.139 ± 0.461	-0.288 ± 0.331
PRF-fit source offset from KIC position	0.274 ± 0.593	0.46	-0.179 ± 0.528	-0.208 ± 0.395
photometric centroid source offset	1.28 ± 0.86	1.49	-0.88 ± 0.87	-0.93 ± 0.85

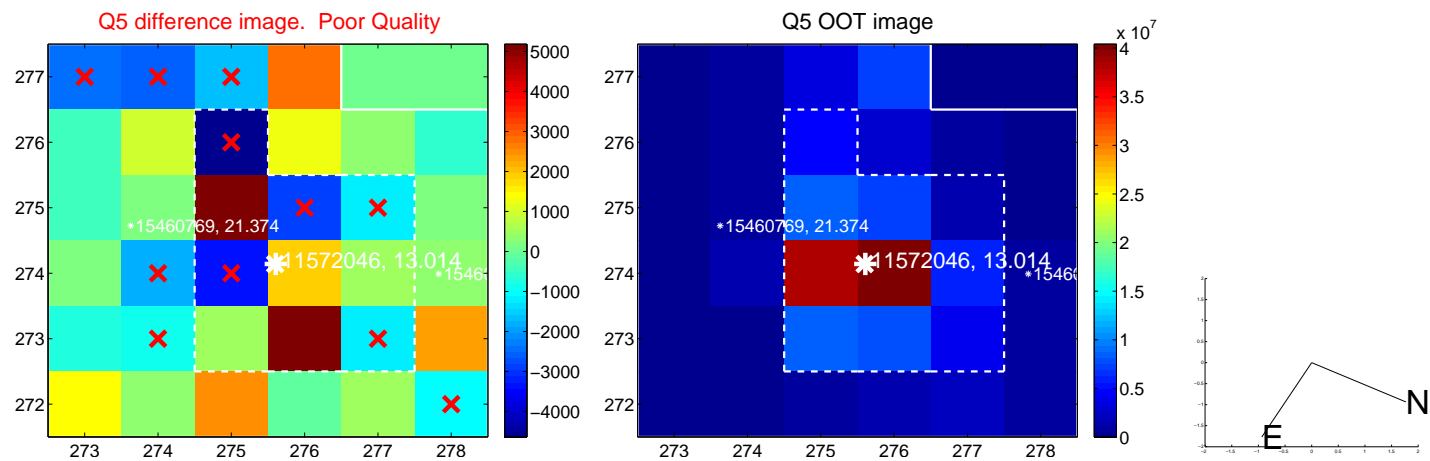


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

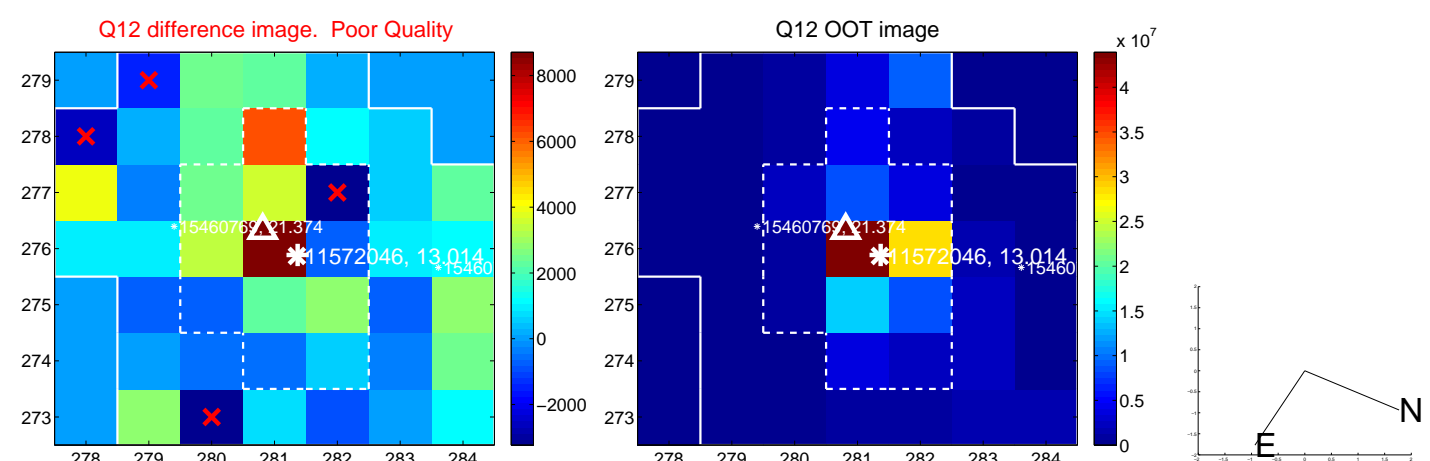
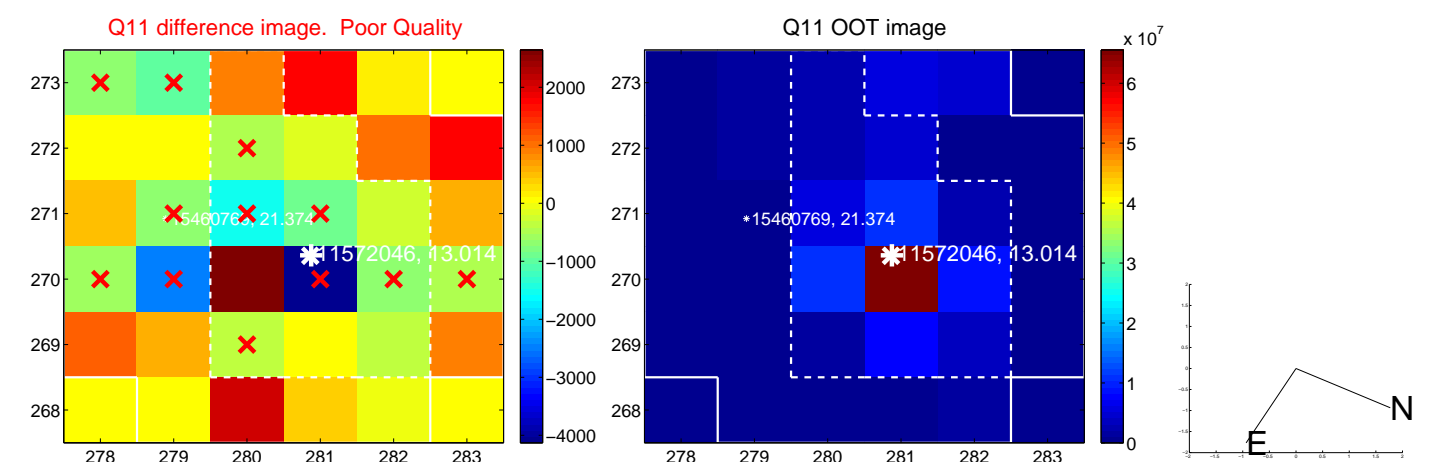
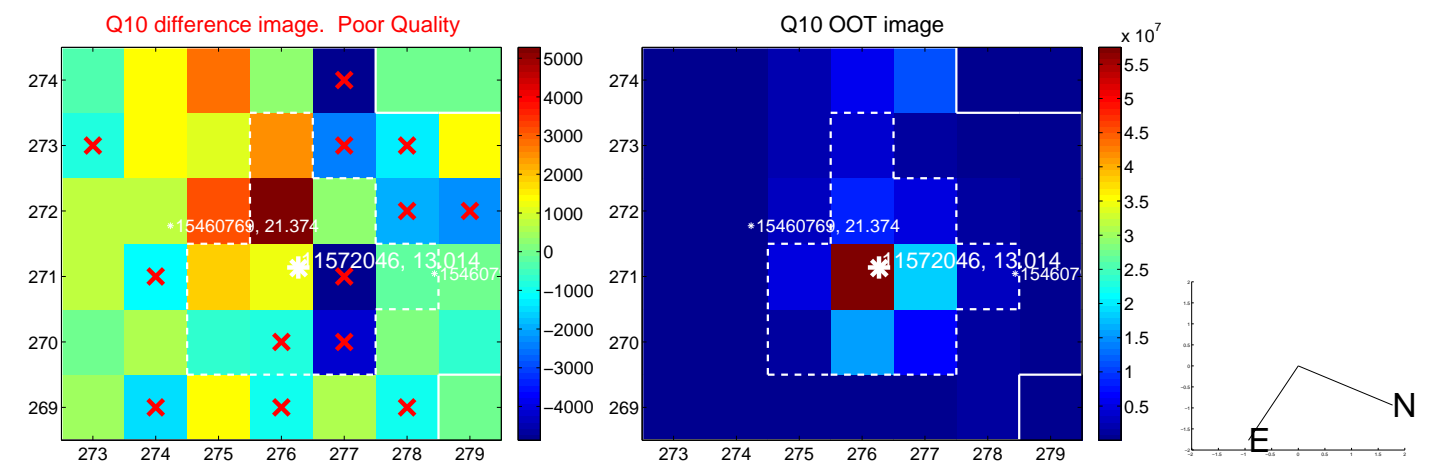
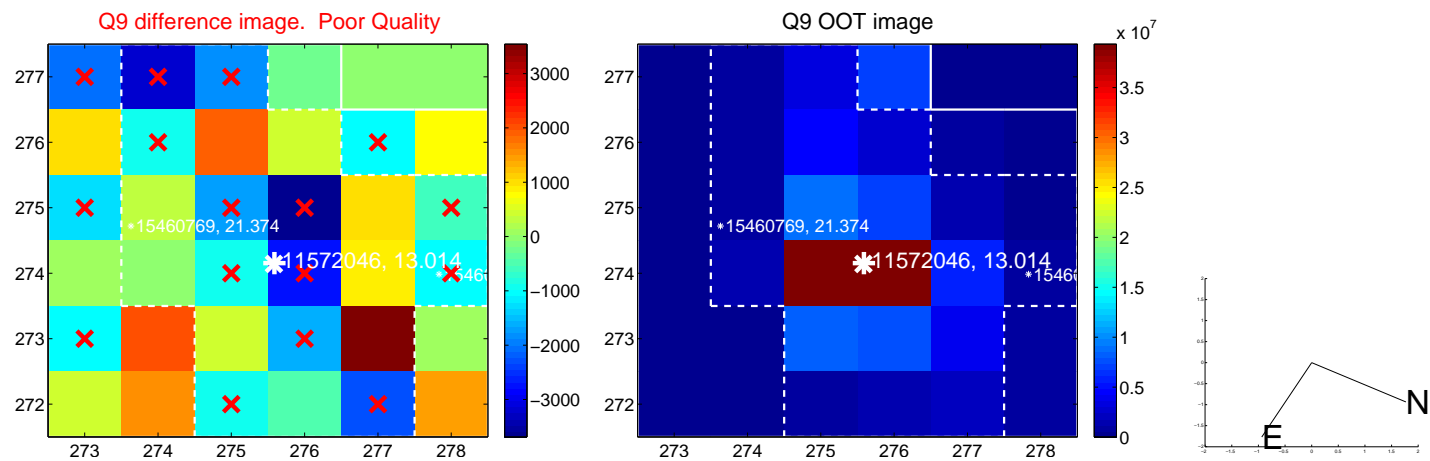
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



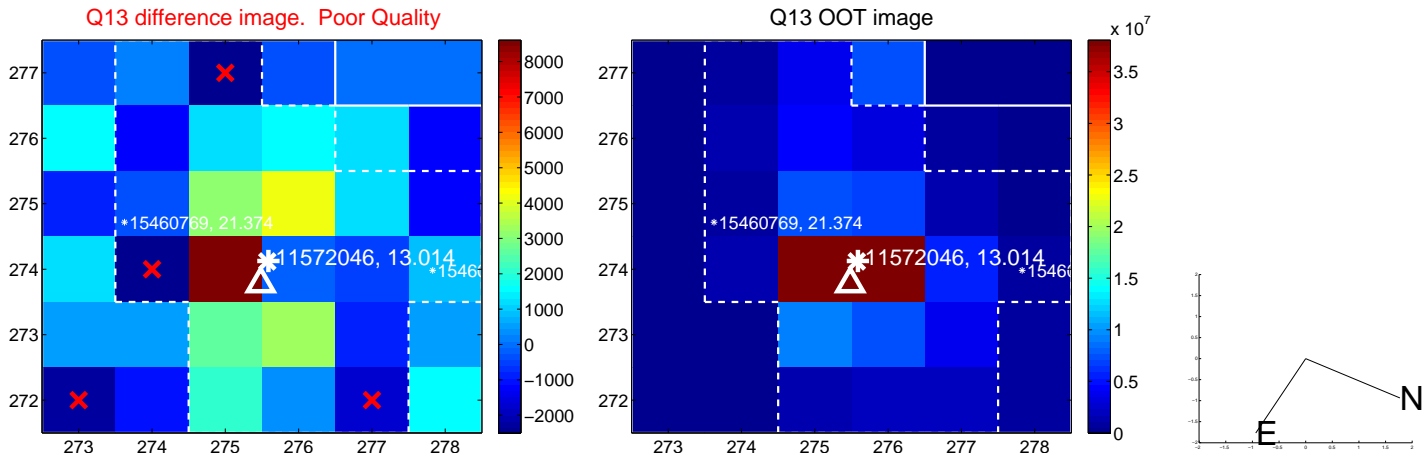
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



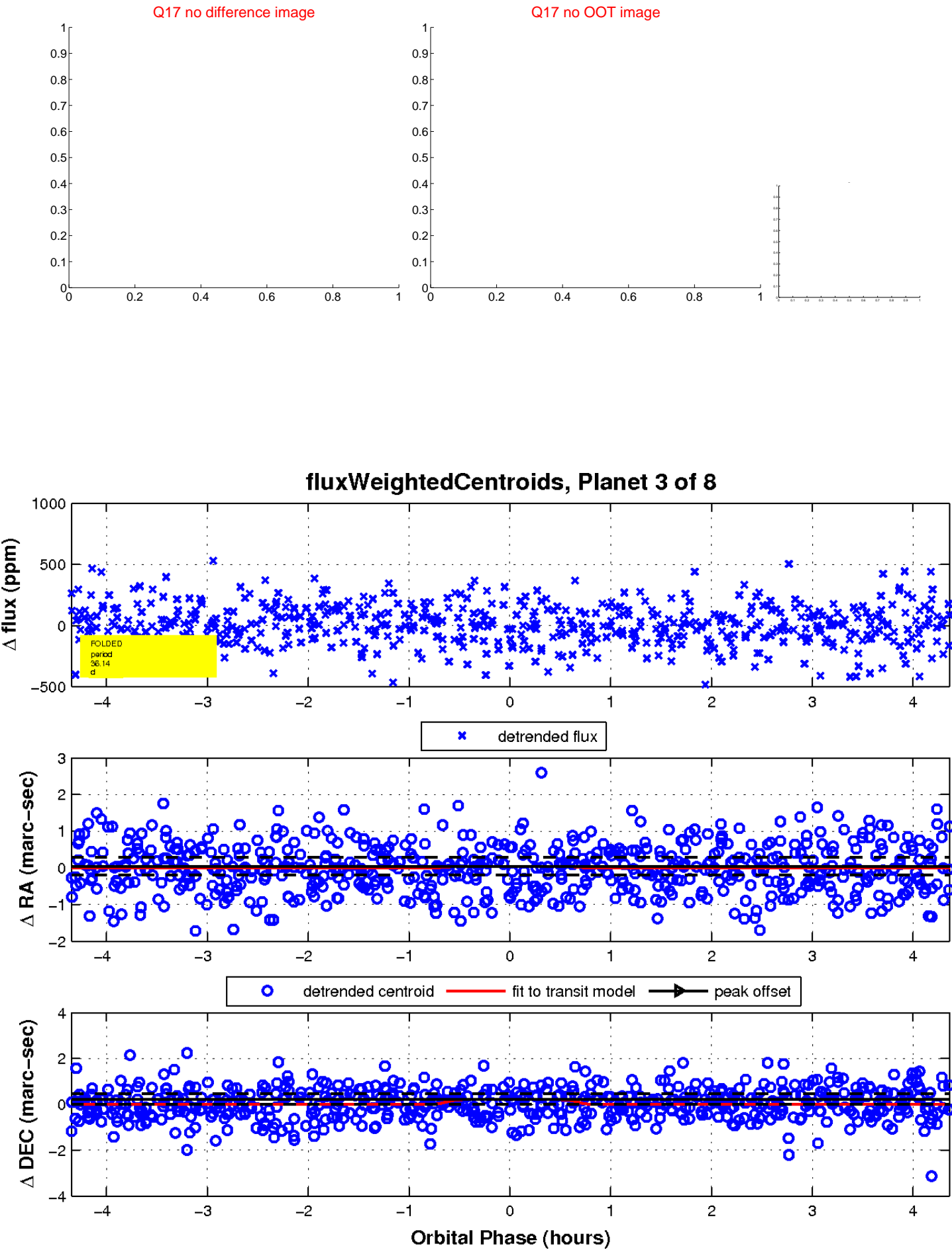
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

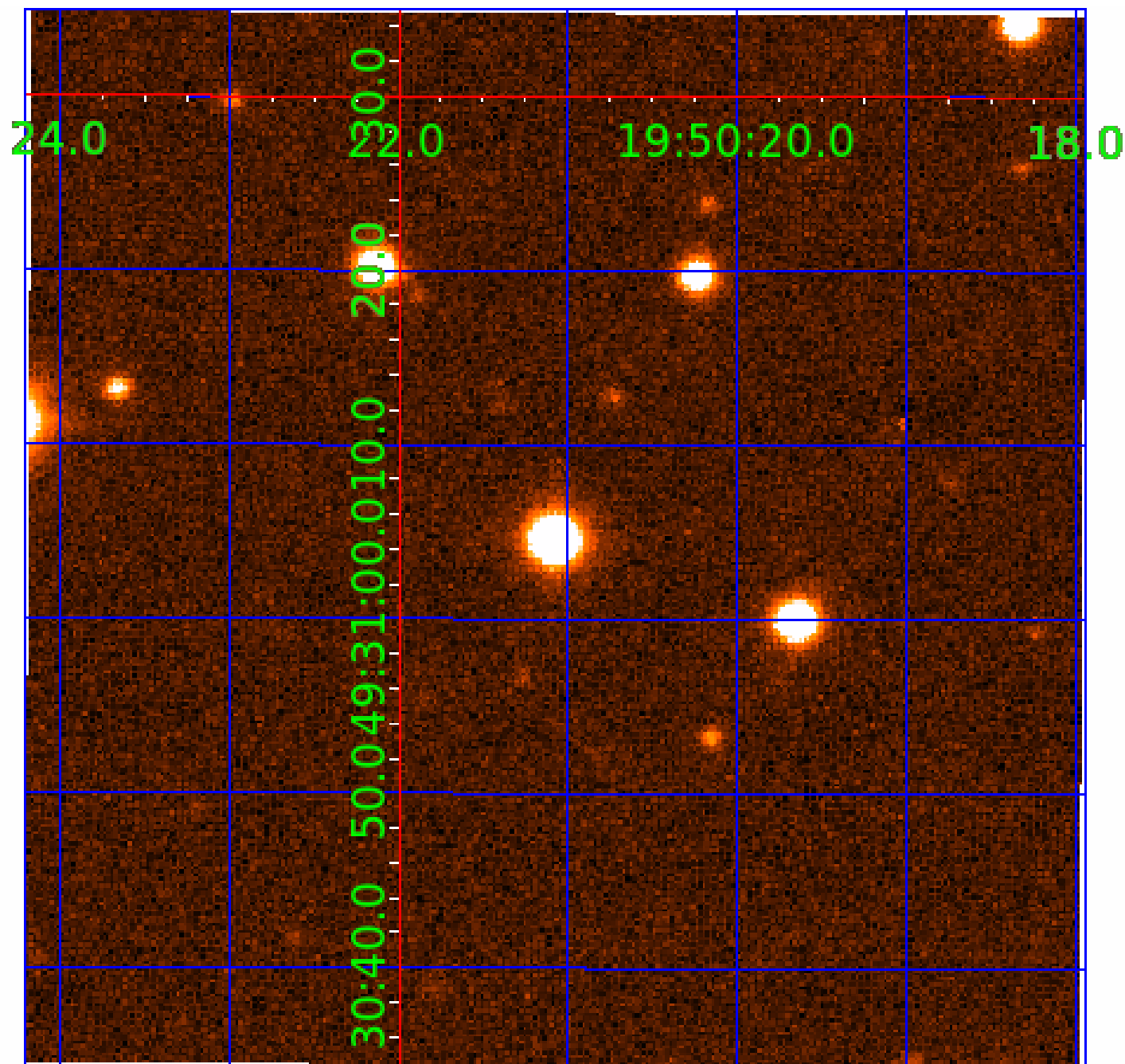


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011572046

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})
011572046-01	OBS	No	0.642618	131.810580	15.9	4.174	9.3	8.9	3.08	7693	1.32	91439.60
011572046-02	OBS	No	101.668319	232.737823	396.0	1.721	9.0	9.7	3.08	7693	6.96	106.86
011572046-03	OBS	No	36.143464	149.228090	268.5	1.458	9.2	10.8	3.08	7693	5.93	424.32
011572046-04	OBS	No	50.100346	169.792696	107.4	1.105	8.7	2.6	3.08	7693	3.32	274.55
011572046-05	OBS	No	50.115129	169.578882	73.6	29.183	8.4	5.1	3.08	7693	3.04	274.44
011572046-06	OBS	No	26.470805	136.628006	203.5	1.448	8.4	8.9	3.08	7693	4.46	642.76
011572046-07	OBS	No	49.584264	155.994699	415.1	0.873	8.5	9.5	3.08	7693	6.66	278.36

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011572046-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—CENT_UNRESOLVED_OFFSET
011572046-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011572046-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_TER_DV
011572046-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
011572046-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_FEW_DIFFS
011572046-06	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011572046-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV

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

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

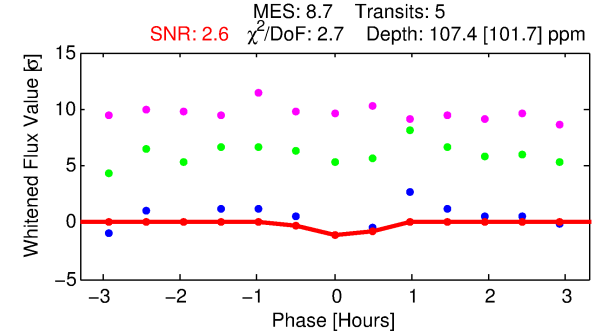
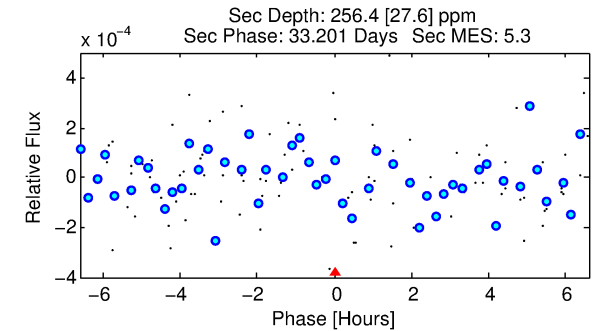
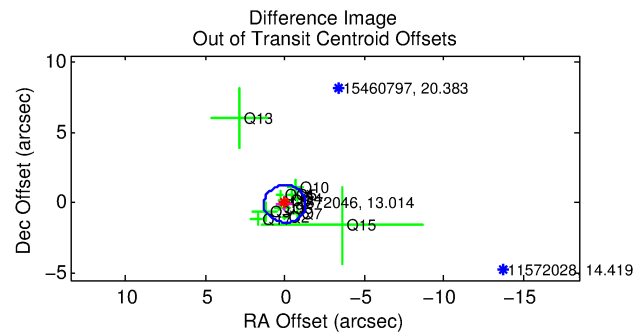
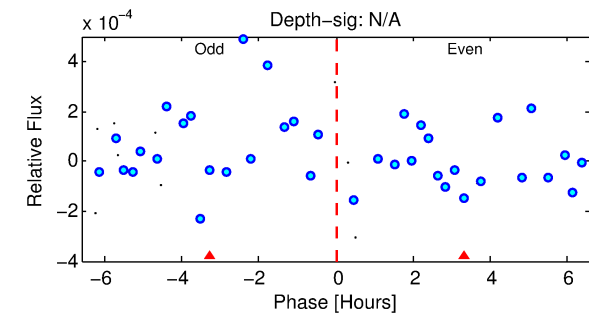
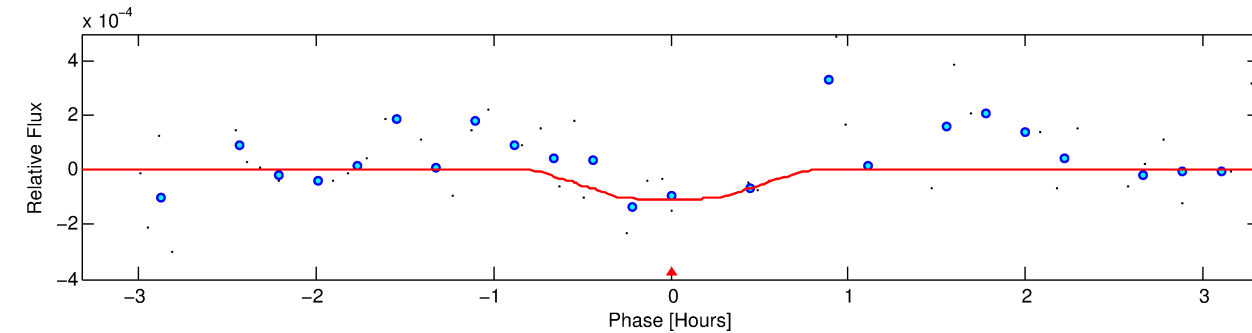
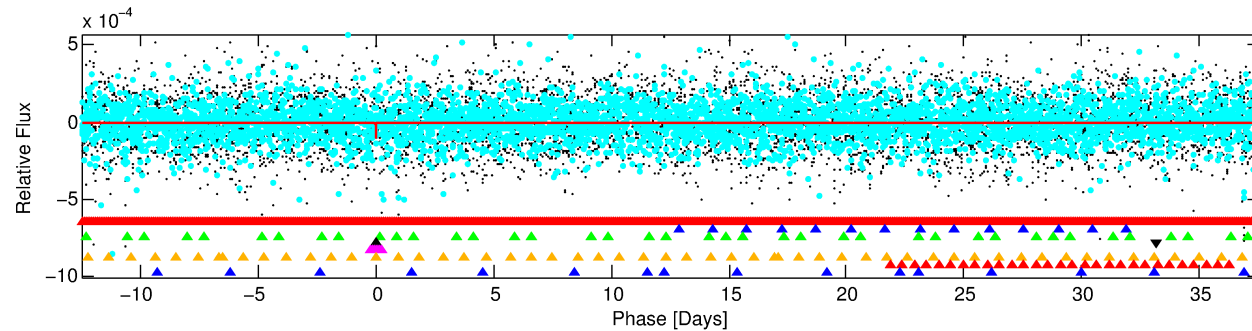
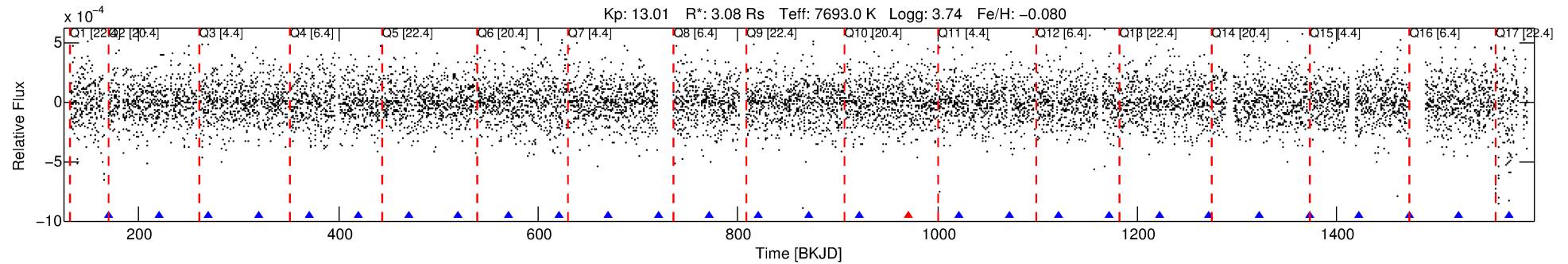
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011572046-04

No Significant Match Found

DV One-Page Summary

KIC: 11572046 Candidate: 4 of 8 Period: 50.100 d



DV Fit Results:

Period = 50.10035 [0.00482] d
Epoch = 169.7927 [0.0823] BKJD
Rp/R* = 0.0099 [0.0528]
a/R* = 309.46 [10072.10]
b = 0.47 [52.80]
Seff = 274.55 [190.15]
Teq = 1038 [180] K
Rp = 3.32 [17.82] Re
a = 0.3294 [0.1402] AU
Ag = 1389.44 [14901.75] [0.09] σ
Teffp = 9798 [26222] K [0.33] σ

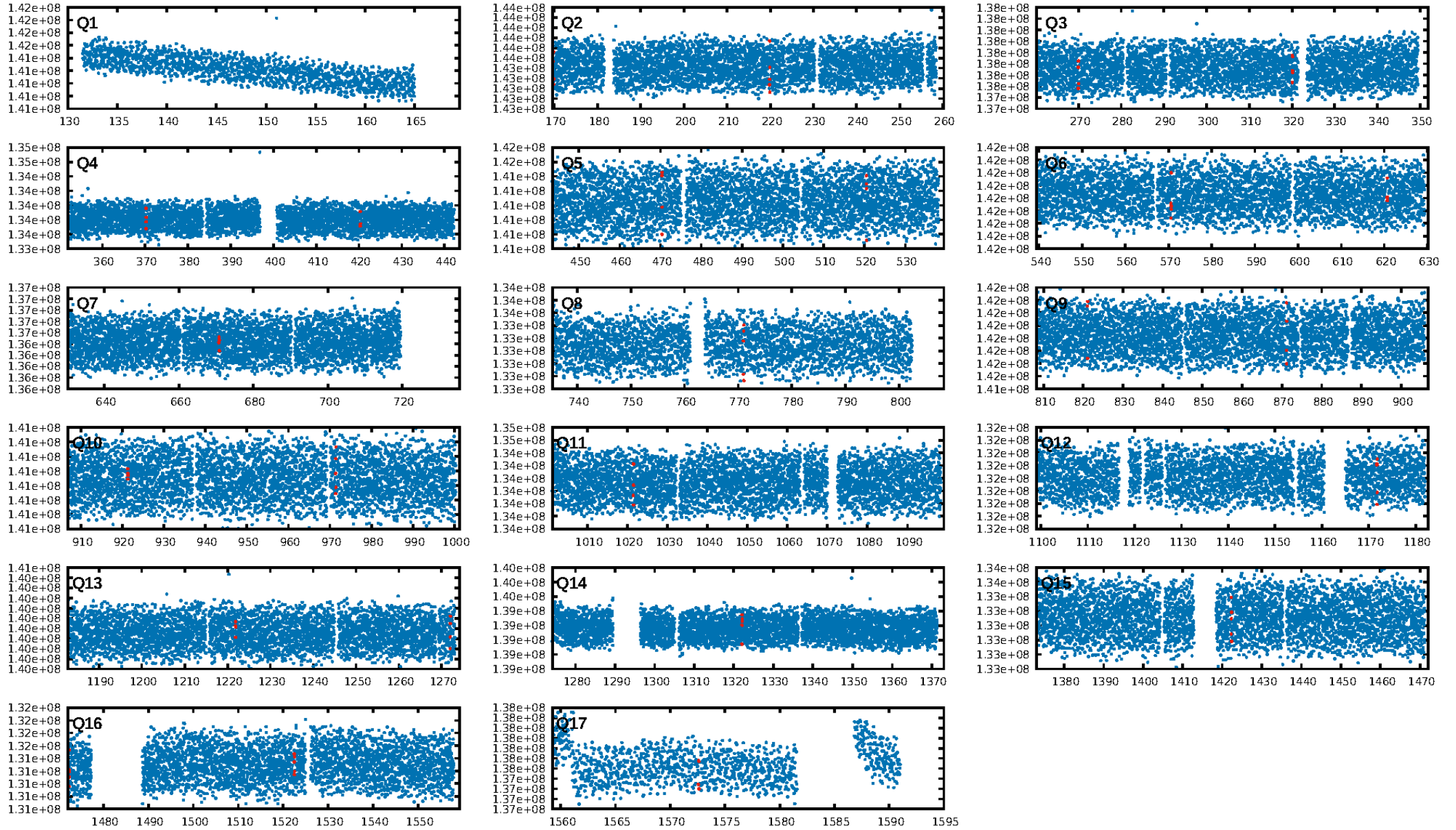
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [8.79] σ
LongPeriod-sig: 1.0% [0.01] σ
ModelChiSquare2-sig: 9.8%
ModelChiSquareGof-sig: 73.3%
Bootstrap-pfa: 2.15e-11
RollingBand-fgt: 0.80 [4/5]
GhostDiagnostic-chr: -0.04245
Centroid-sig: 45.8%
Centroid-so: 1.978 arcsec [0.70] σ
OotOffset-rm: 0.078 arcsec [0.18] σ
KicOffset-rm: 0.075 arcsec [0.15] σ
OotOffset-st: 4/3/2/4 [13]
KicOffset-st: 4/3/2/4 [13]
DiffImageQuality-fgm: 0.38 [5/13]
DiffImageOverlap-fno: 0.00 [0/14]

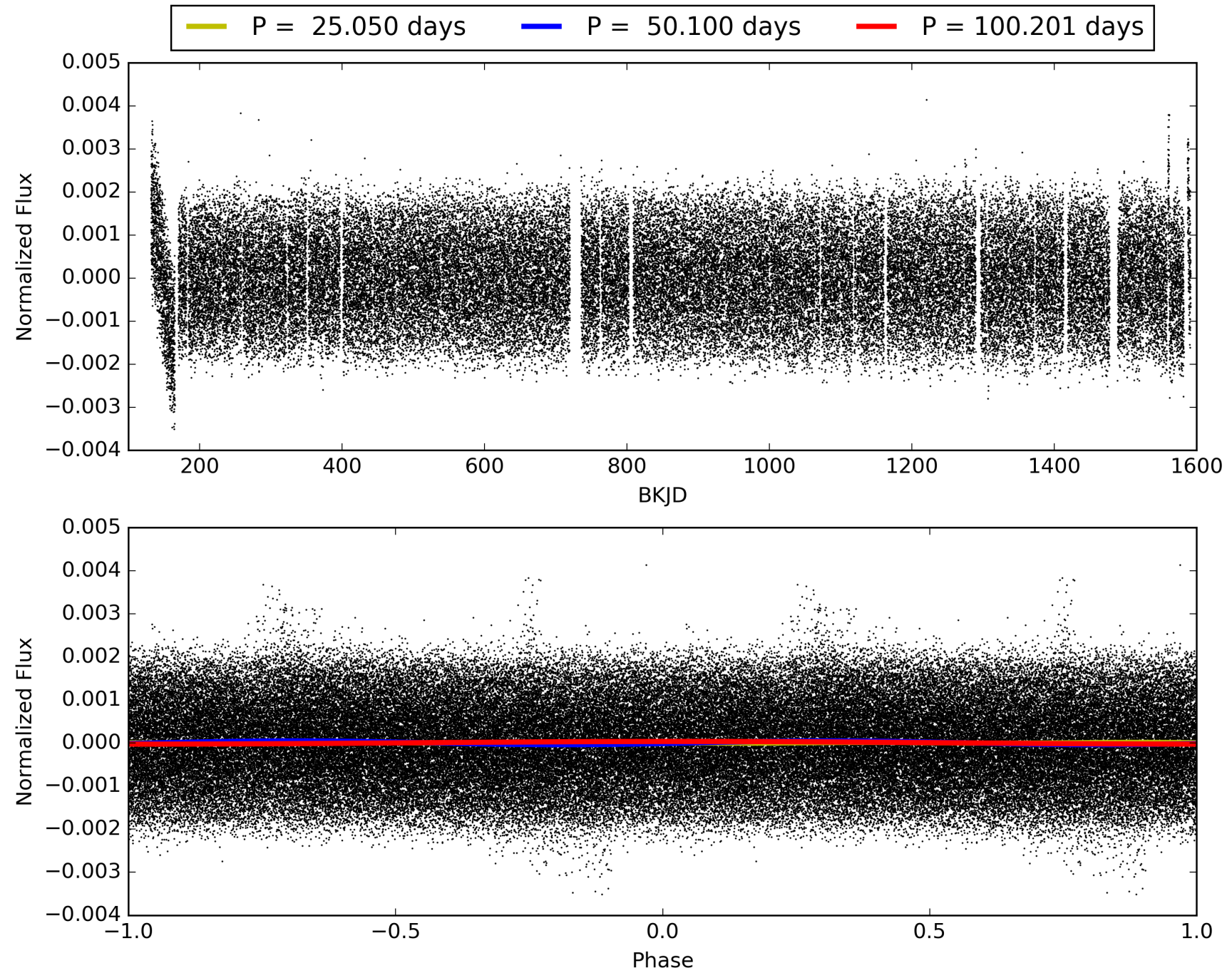
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 011572046-04, PDC Light Curves

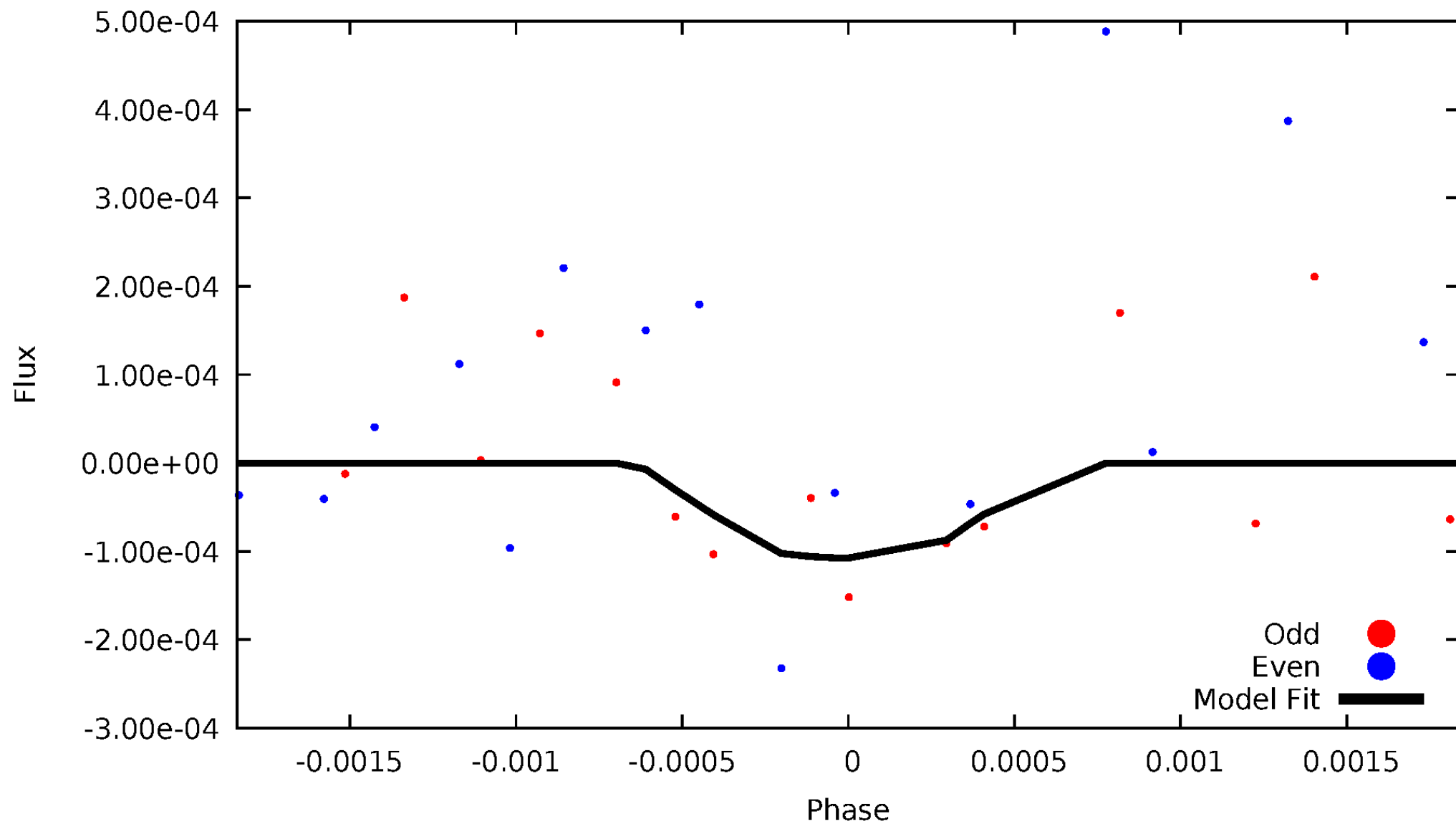


TCE 011572046-04



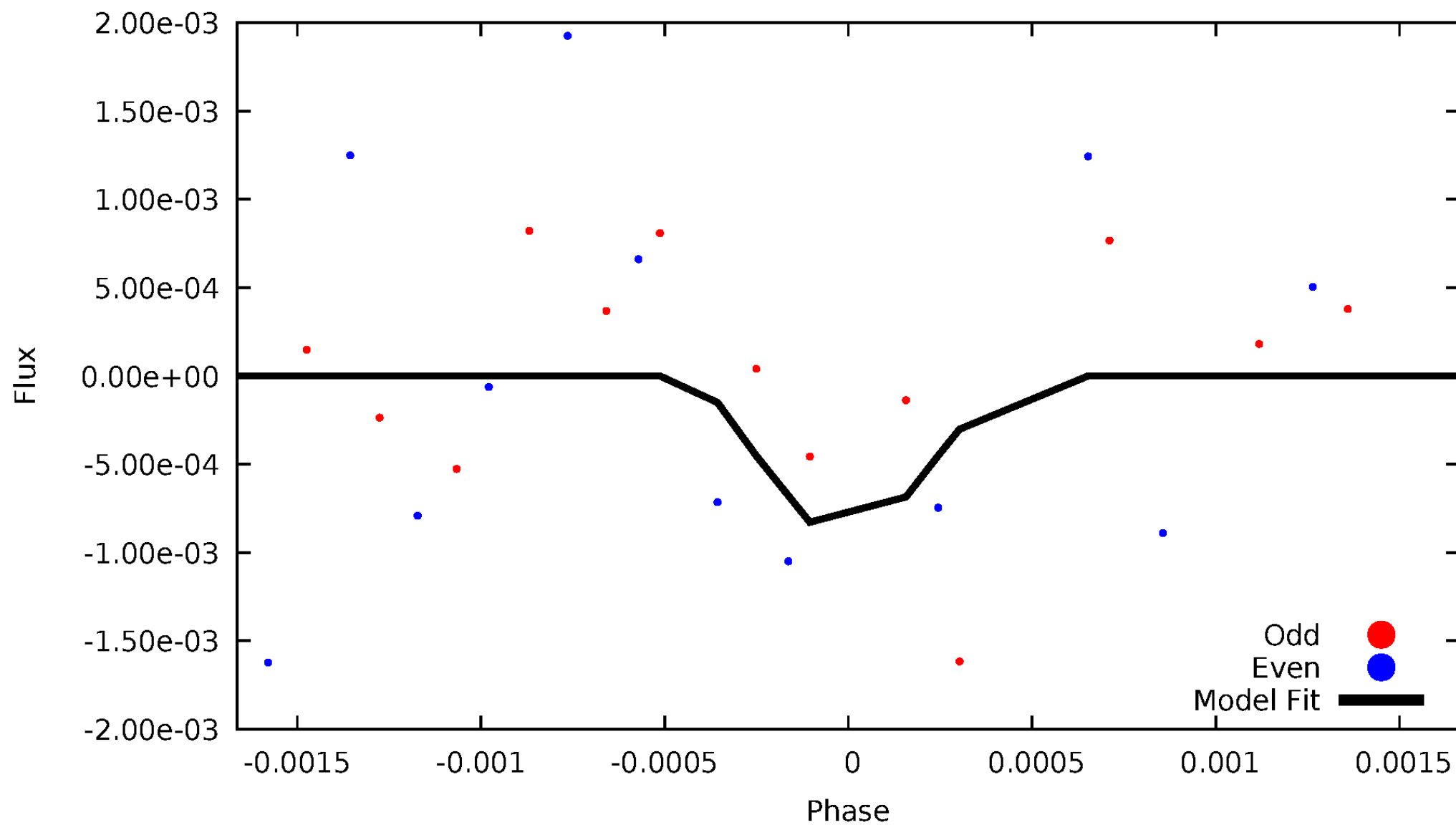
DV Odd/Even

TCE 011572046-04



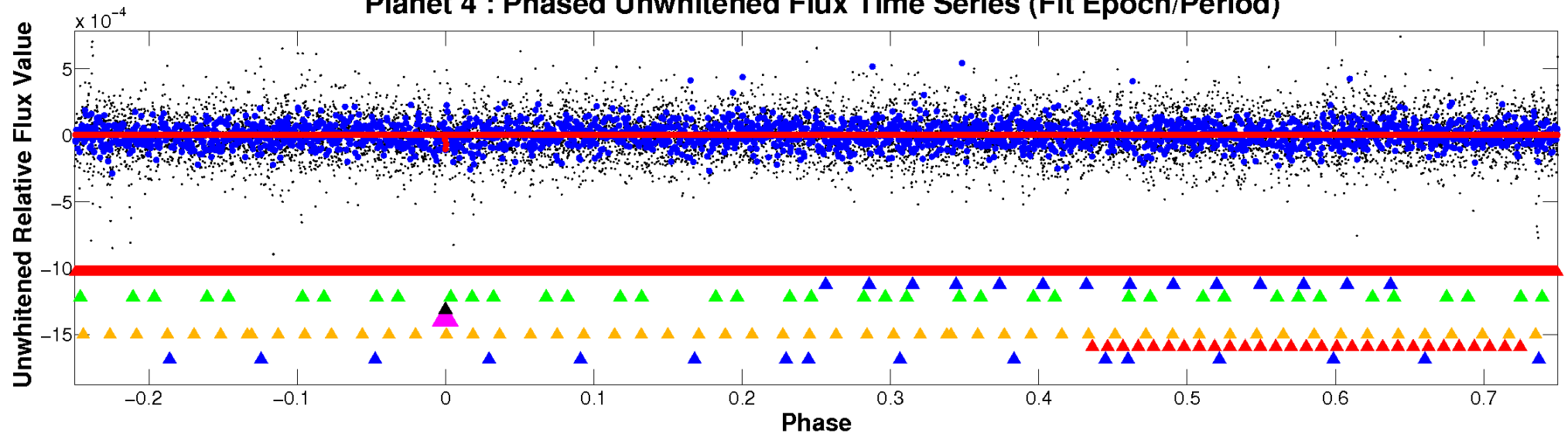
ALT Odd/Even

TCE 011572046-04

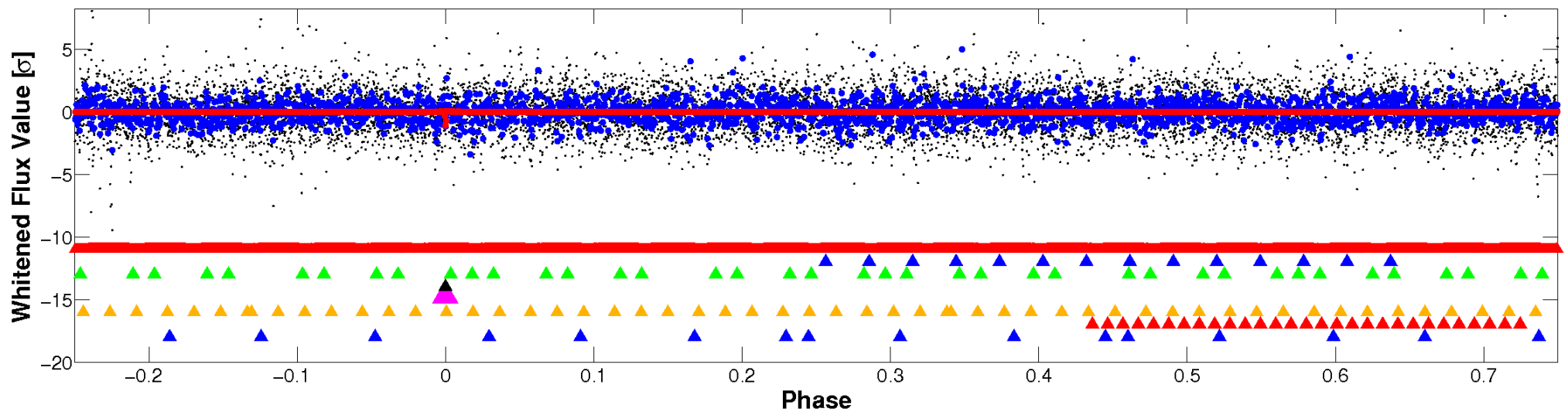


Non-Whitened Vs. Whitened Light Curve

Planet 4 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

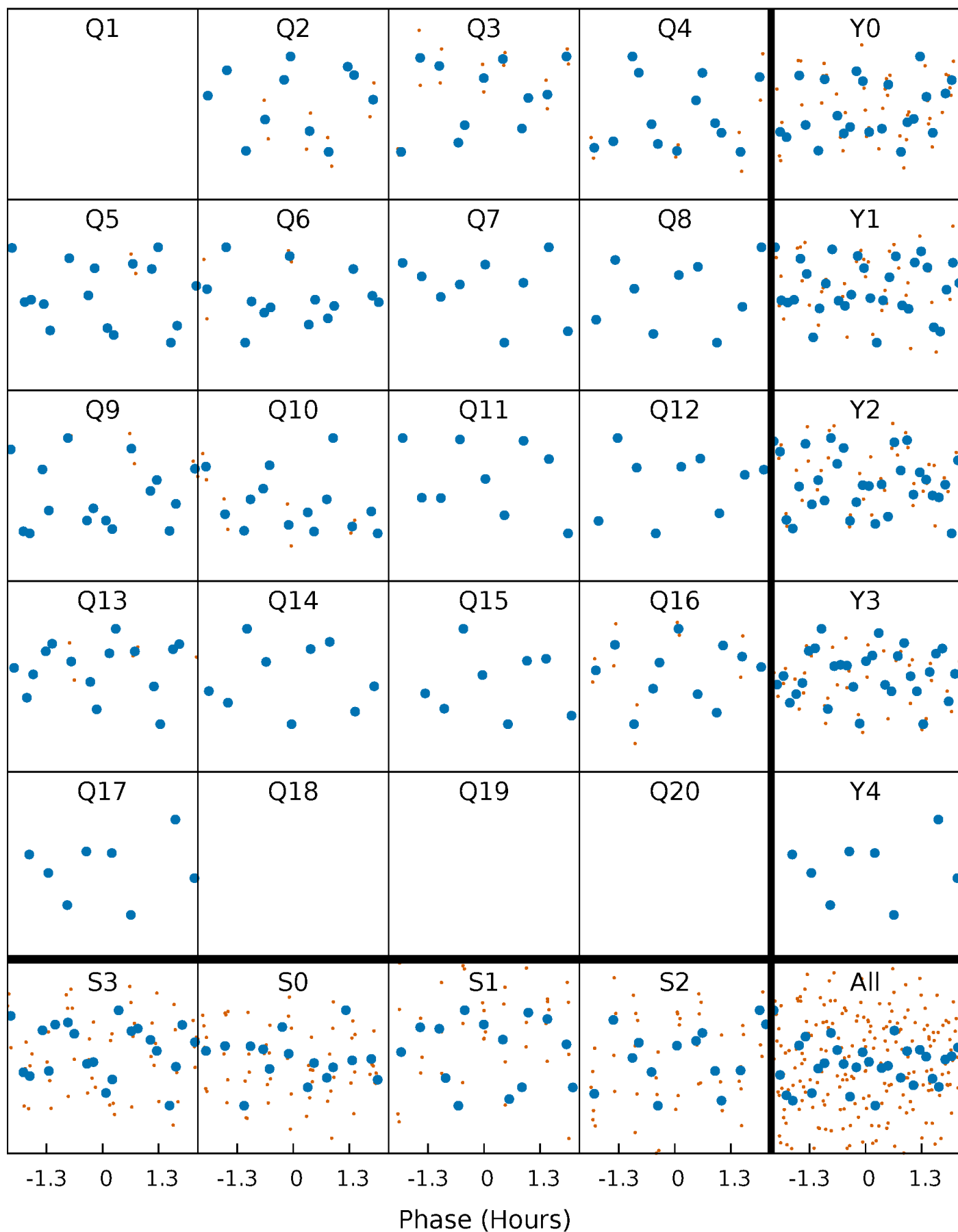


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



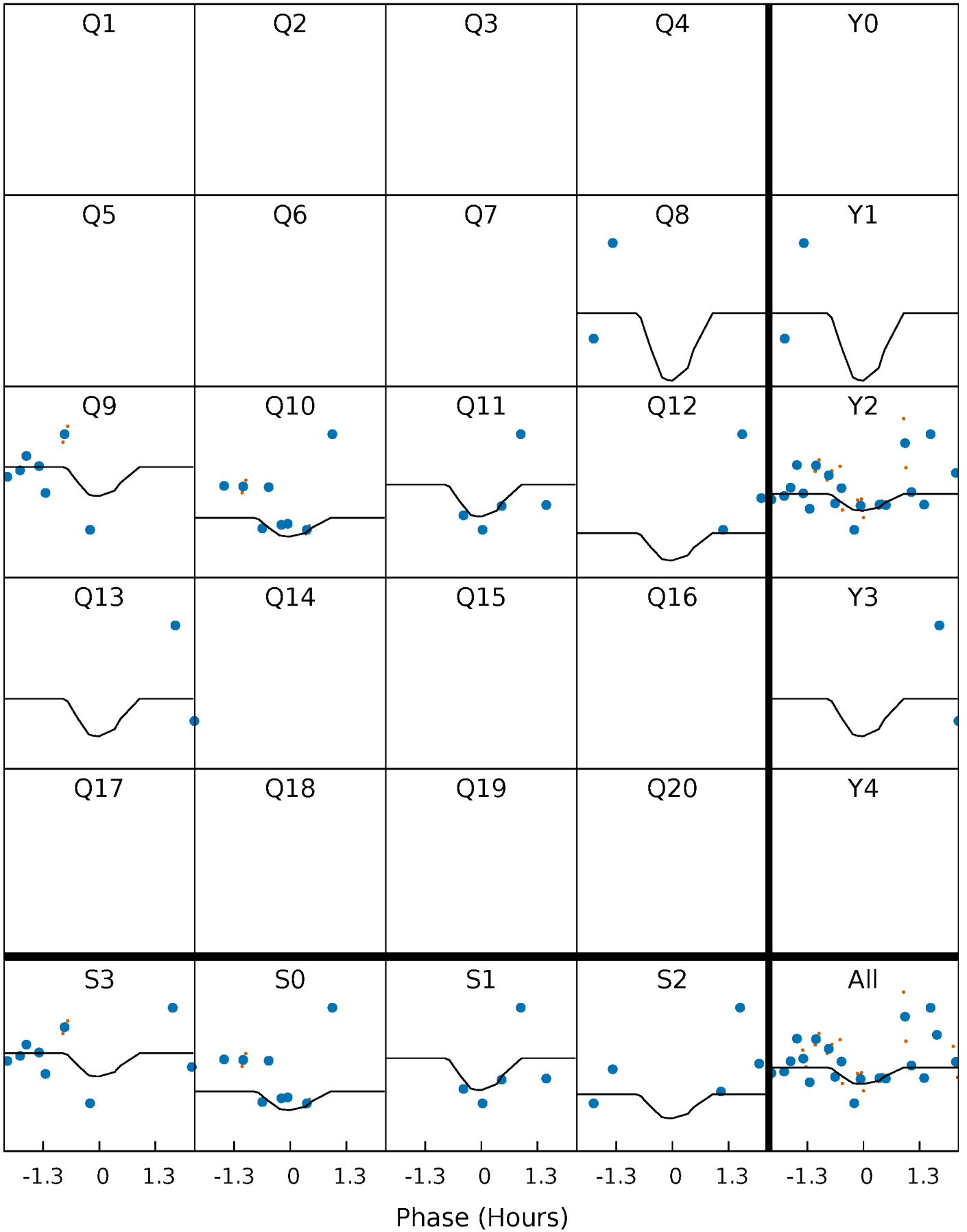
PDC Quarter-Phased Transit Curves

TCE 011572046-04 P= 50.100346 Days $T_0=169.792696$ (BKJD)



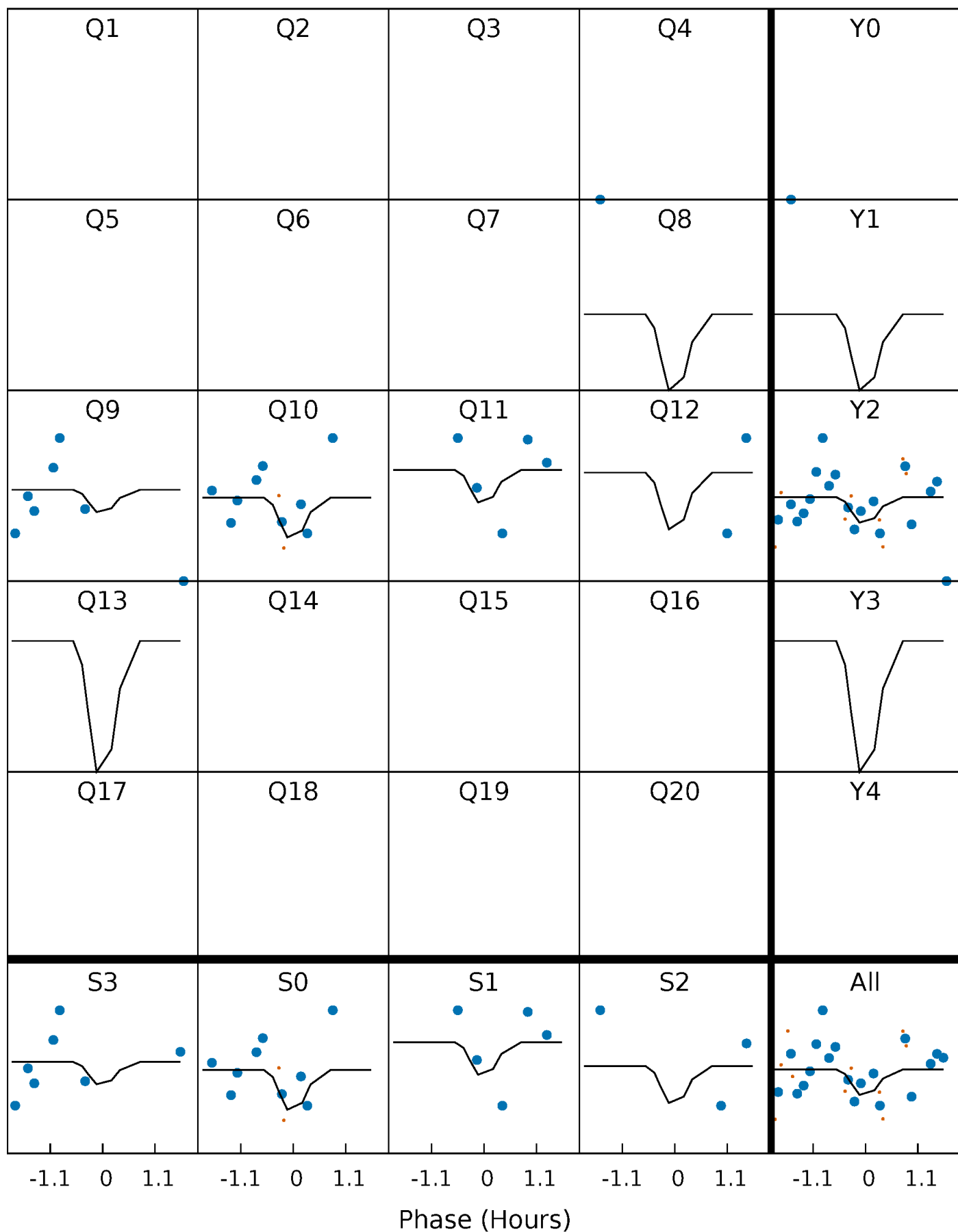
DV Quarter-Phased Transit Curves

TCE 011572046-04 P= 50.100346 Days $T_0=169.792696$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

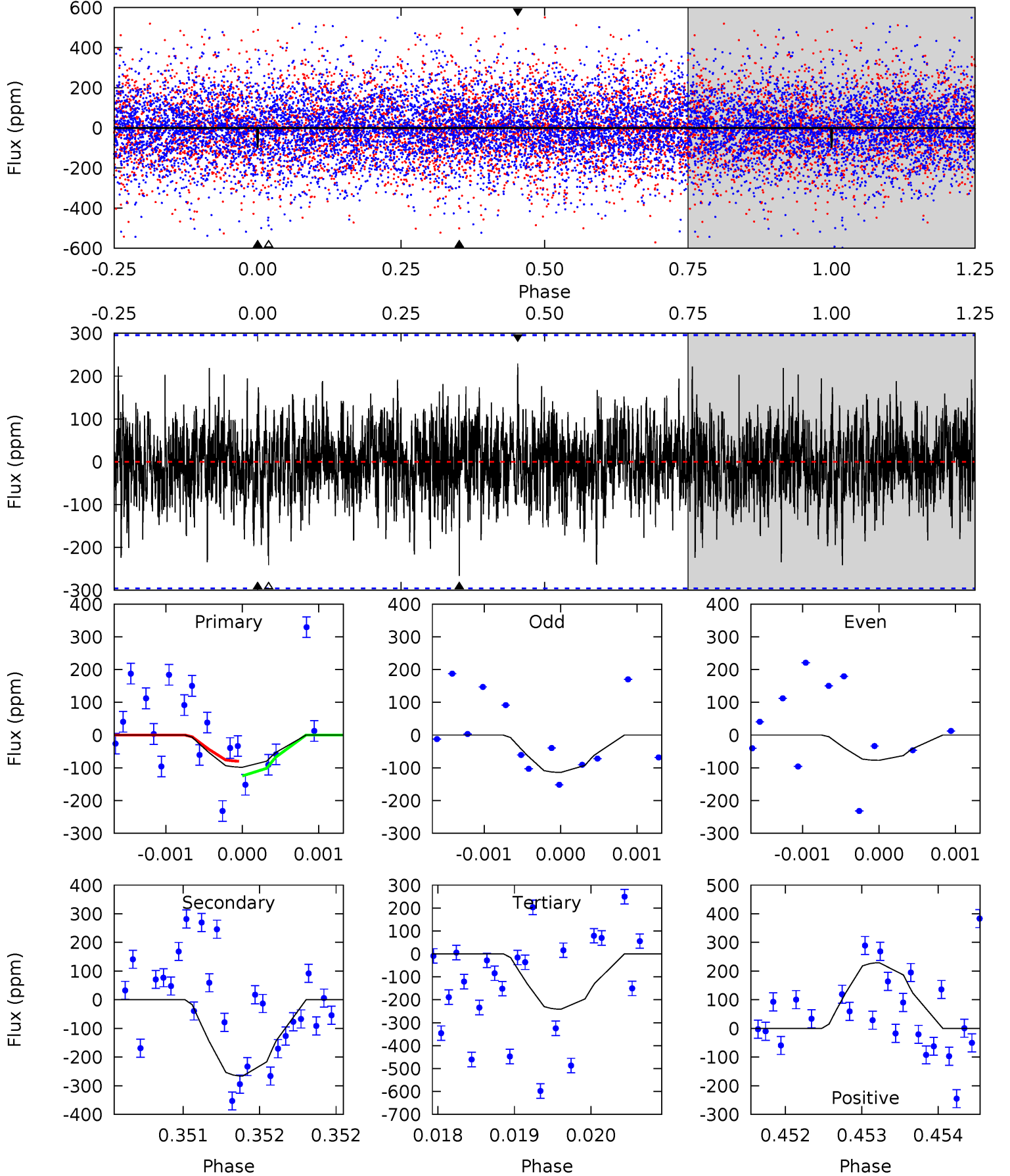
TCE 011572046-04 P= 50.099553 Days $T_0=169.811514$ (BKJD)



DV Model-Shift Uniqueness Test

011572046-04, P = 50.100346 Days, E = 119.692350 Days

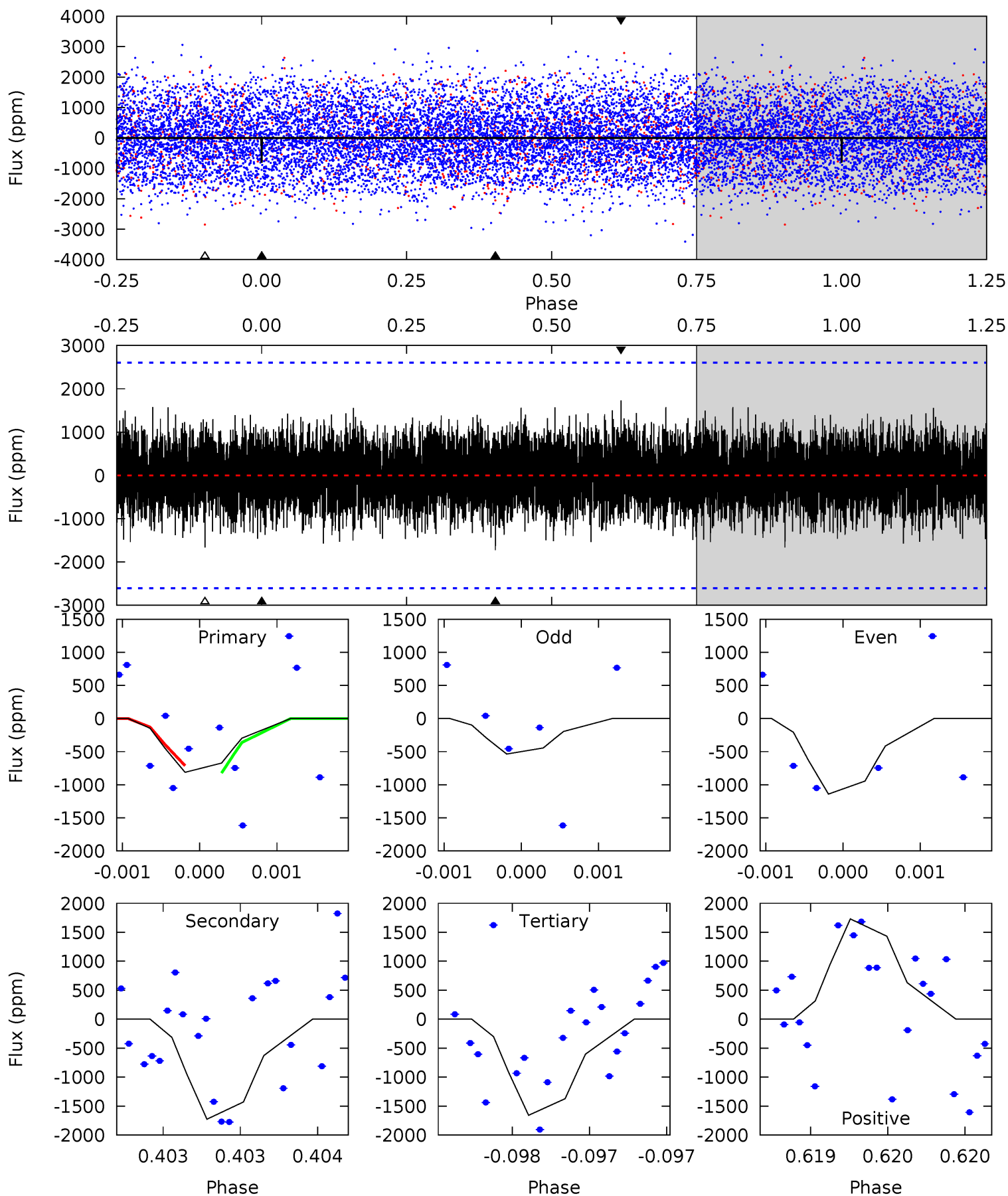
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.82	4.92	4.46	4.24	5.46	3.31	1.21	-2.65	-2.42	0.46	0.68	0.34	0.98	0.46	0.40



Alt Model-Shift Uniqueness Test

011572046-04, P = 50.099553 Days, E = 119.711961 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.73	3.68	3.54	3.69	5.56	3.45	1.25	-1.80	-1.96	0.15	-0.01	0.65	0.84	0.50	0.12



Stellar Parameters For KIC 011572046

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7693^{+211}_{-316}	$3.739^{+0.392}_{-0.073}$	$-0.080^{+0.200}_{-0.350}$	$3.081^{+0.348}_{-1.391}$	$1.898^{+0.105}_{-0.420}$	$0.091^{+0.331}_{-0.021}$
	+3%/-4%	+10%/-2%	+250%/-438%	+11%/-45%	+6%/-22%	+362%/-23%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 011572046-04 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-266 ± 54	$11.00^{+13.73}_{-7.80}$	1413^{+88}_{-148}	5117^{+5062}_{-1400}	133^{+1473}_{-108}
Alt.	-1727 ± 469	$16.23^{+15.53}_{-11.28}$	1404^{+96}_{-149}	6588^{+8137}_{-1737}	375^{+3480}_{-280}

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

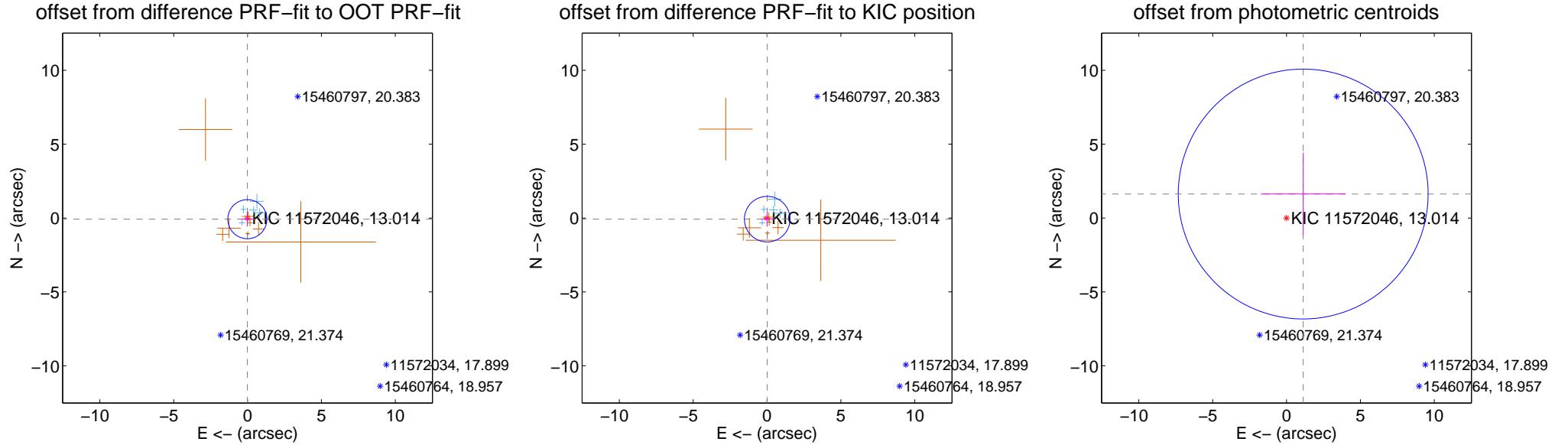
DV Centroid Data

Supplemental centroid analysis for 011572046-04. Kepler magnitude: 13.01. Transit SNR 2.56

There are 5 quarters with good PRF difference image offsets

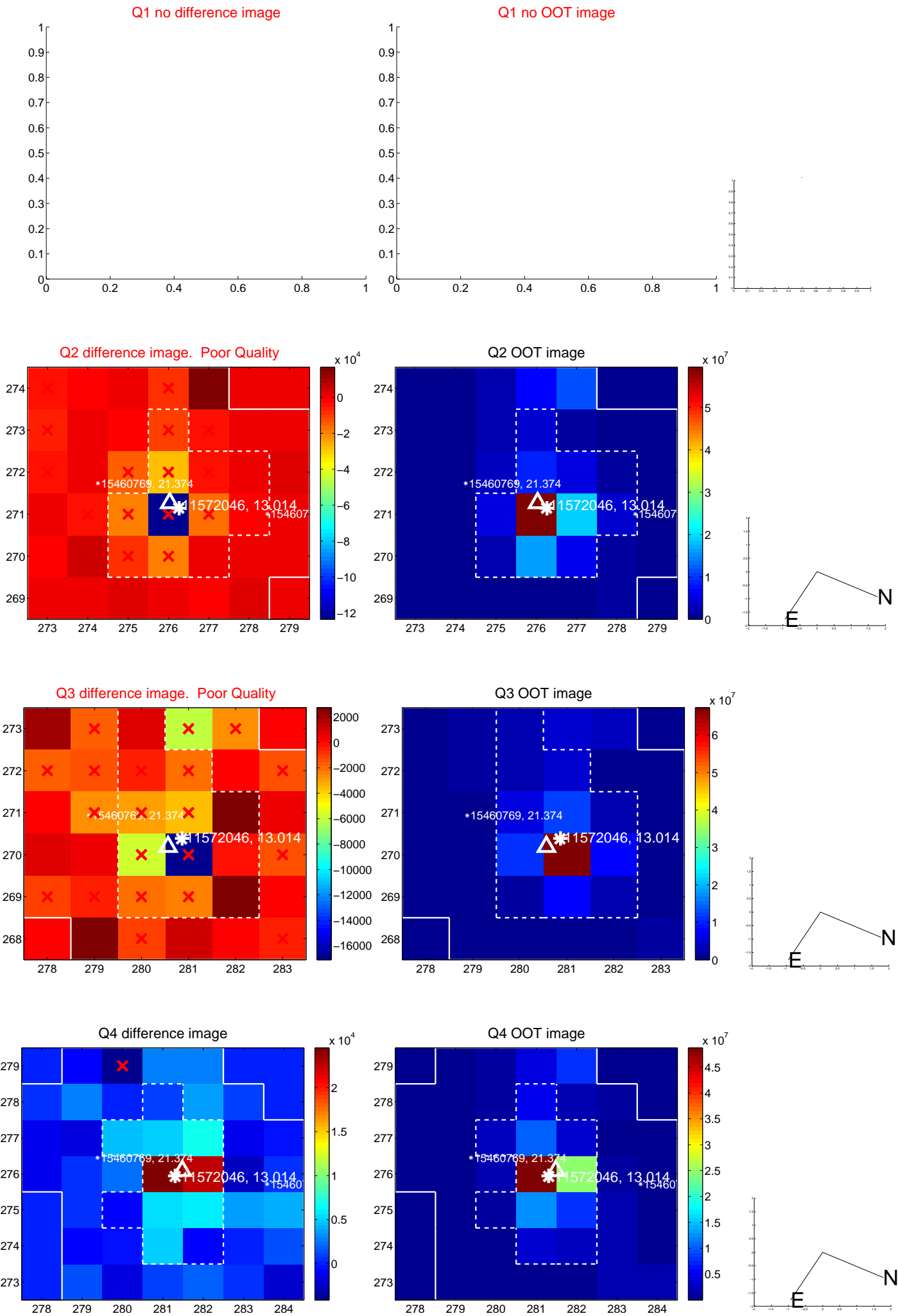
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.078 ± 0.441	0.18	0.014 ± 0.444	-0.077 ± 0.485
PRF-fit source offset from KIC position	0.075 ± 0.514	0.15	-0.010 ± 0.421	-0.075 ± 0.487
photometric centroid source offset	1.98 ± 2.82	0.70	-1.13 ± 2.87	1.63 ± 2.79

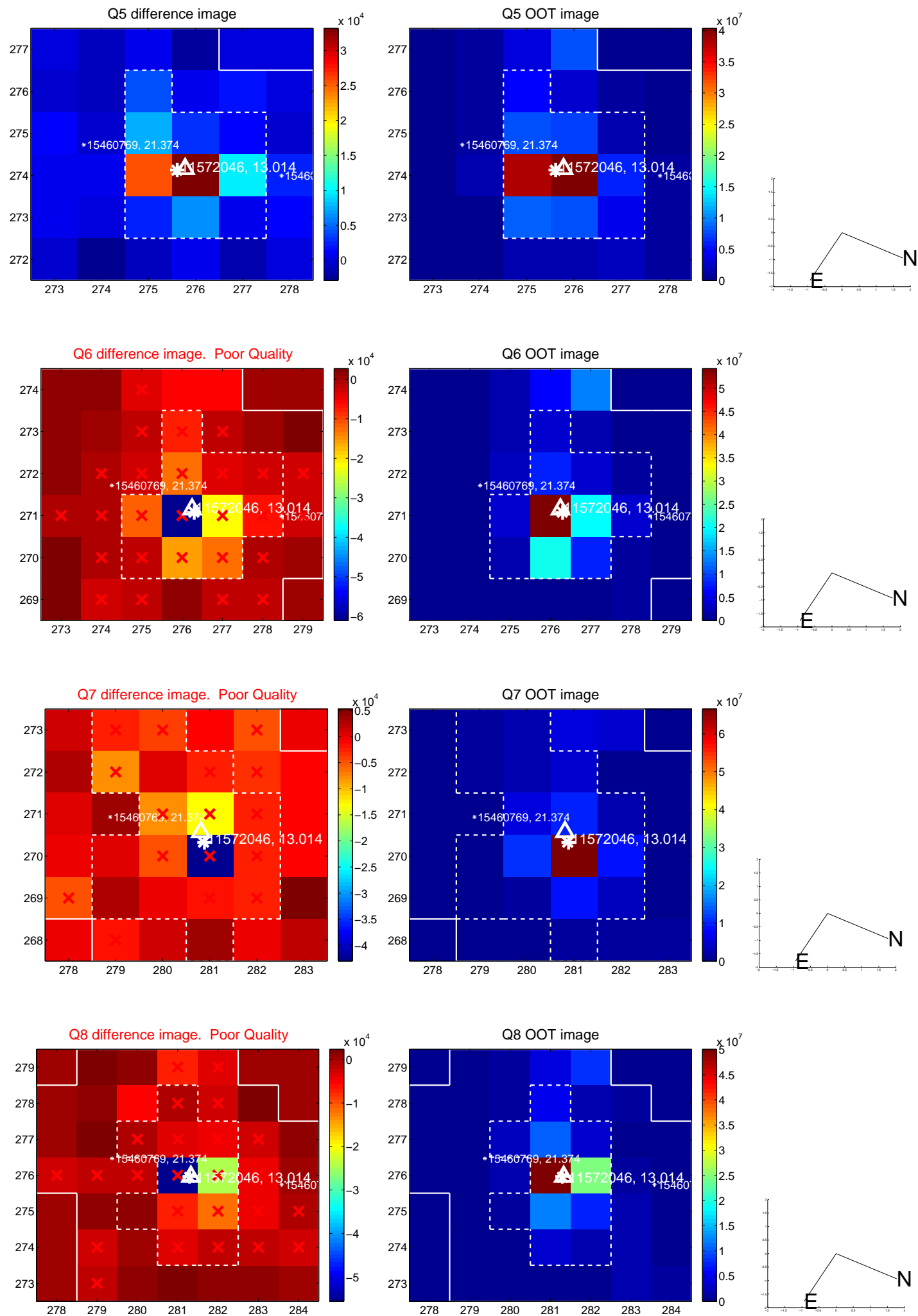


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

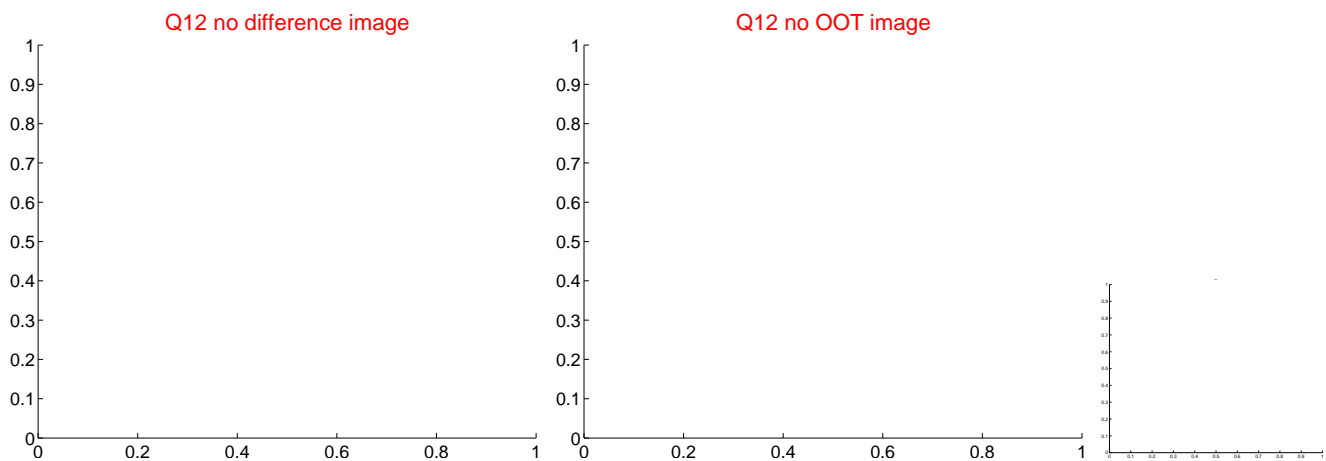
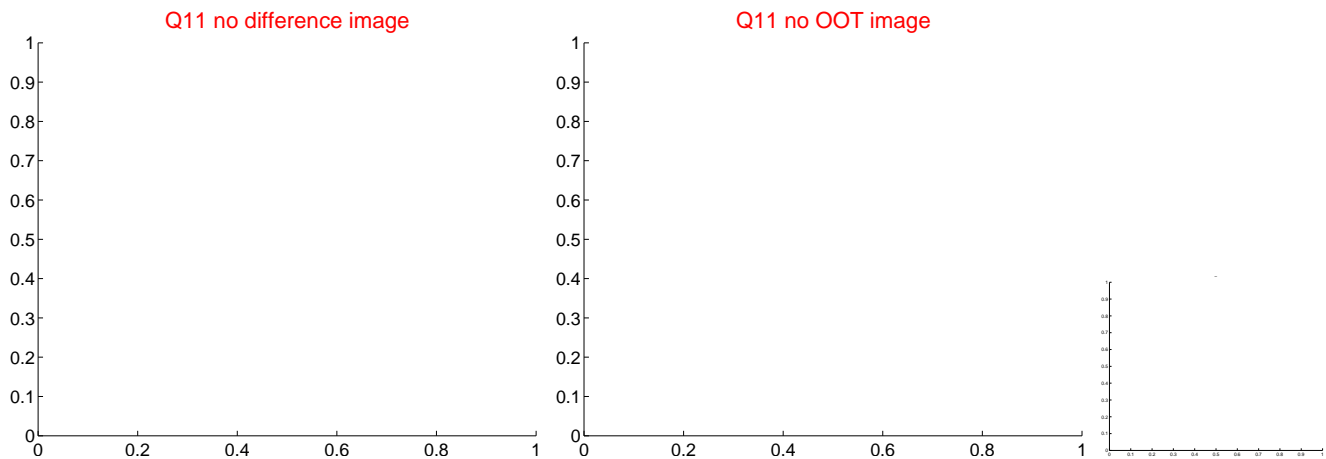
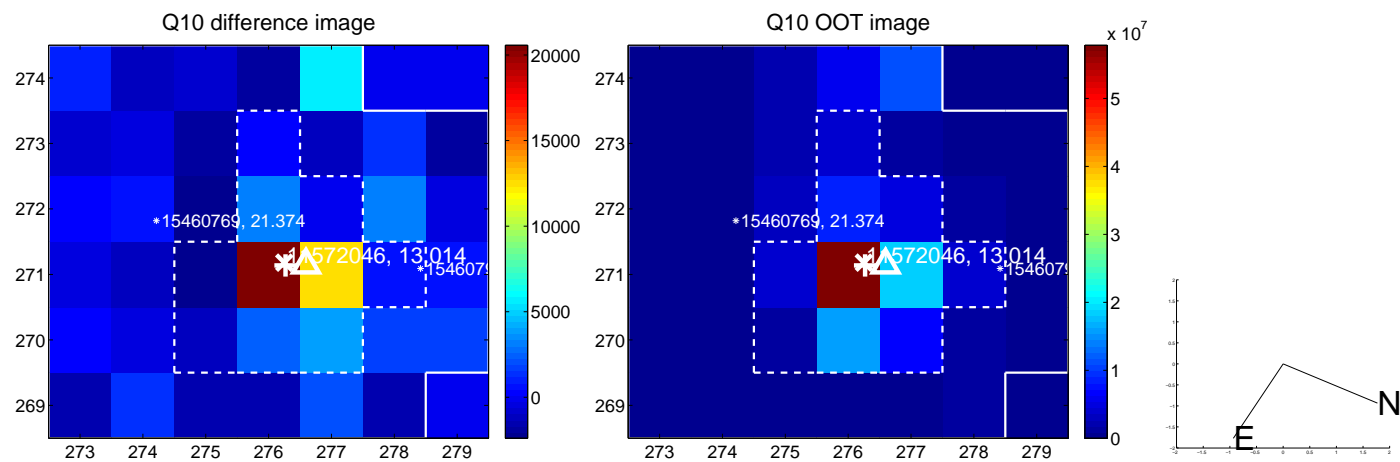
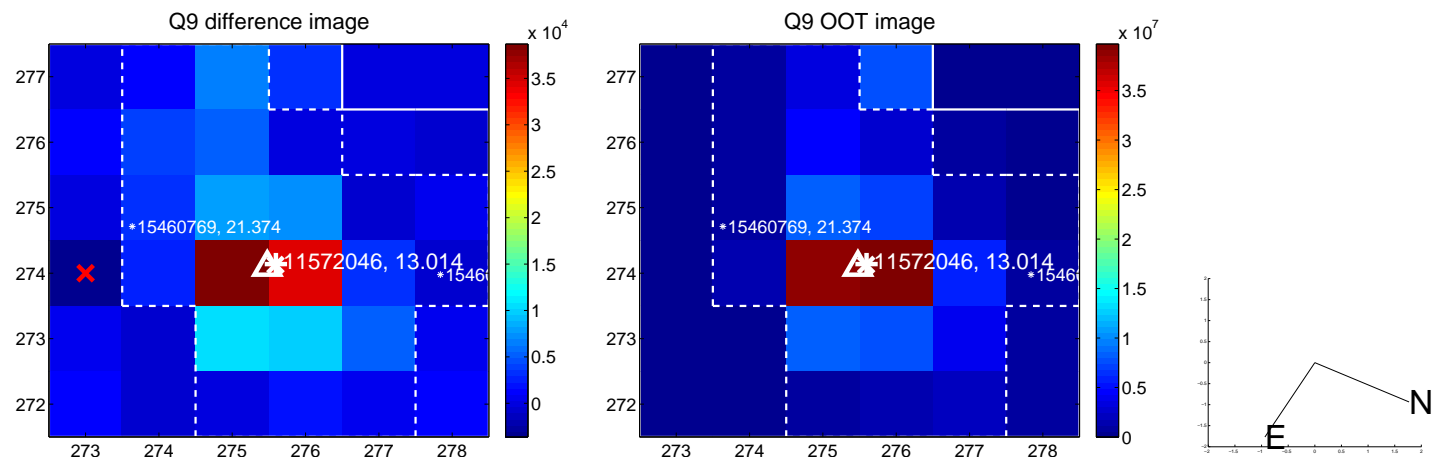
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



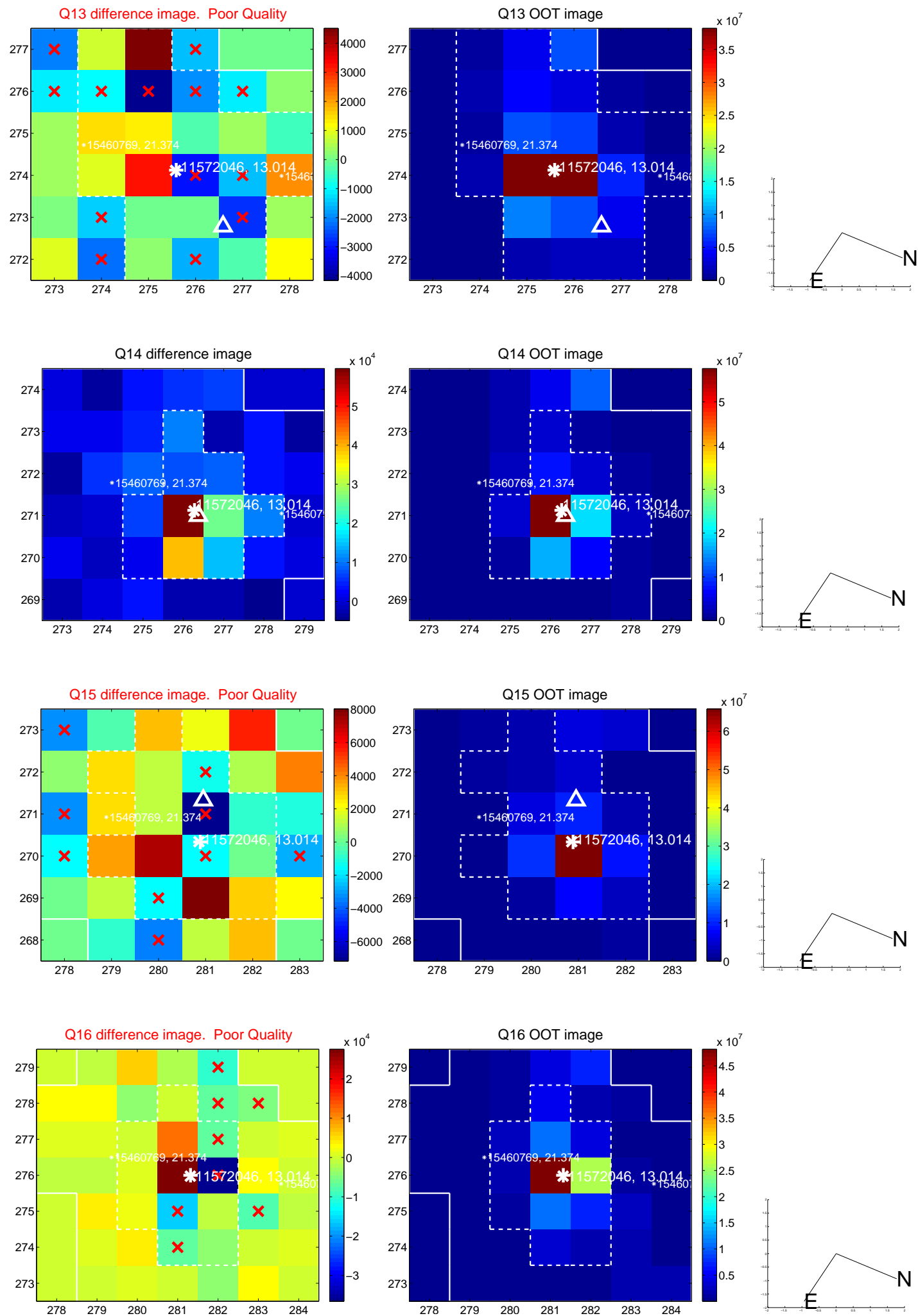
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



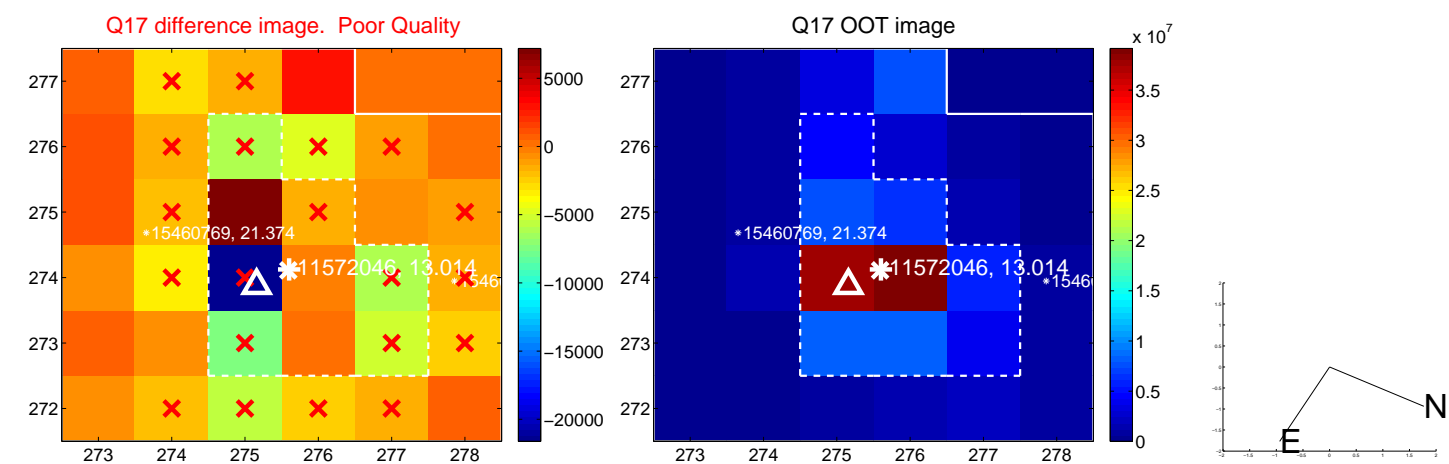
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



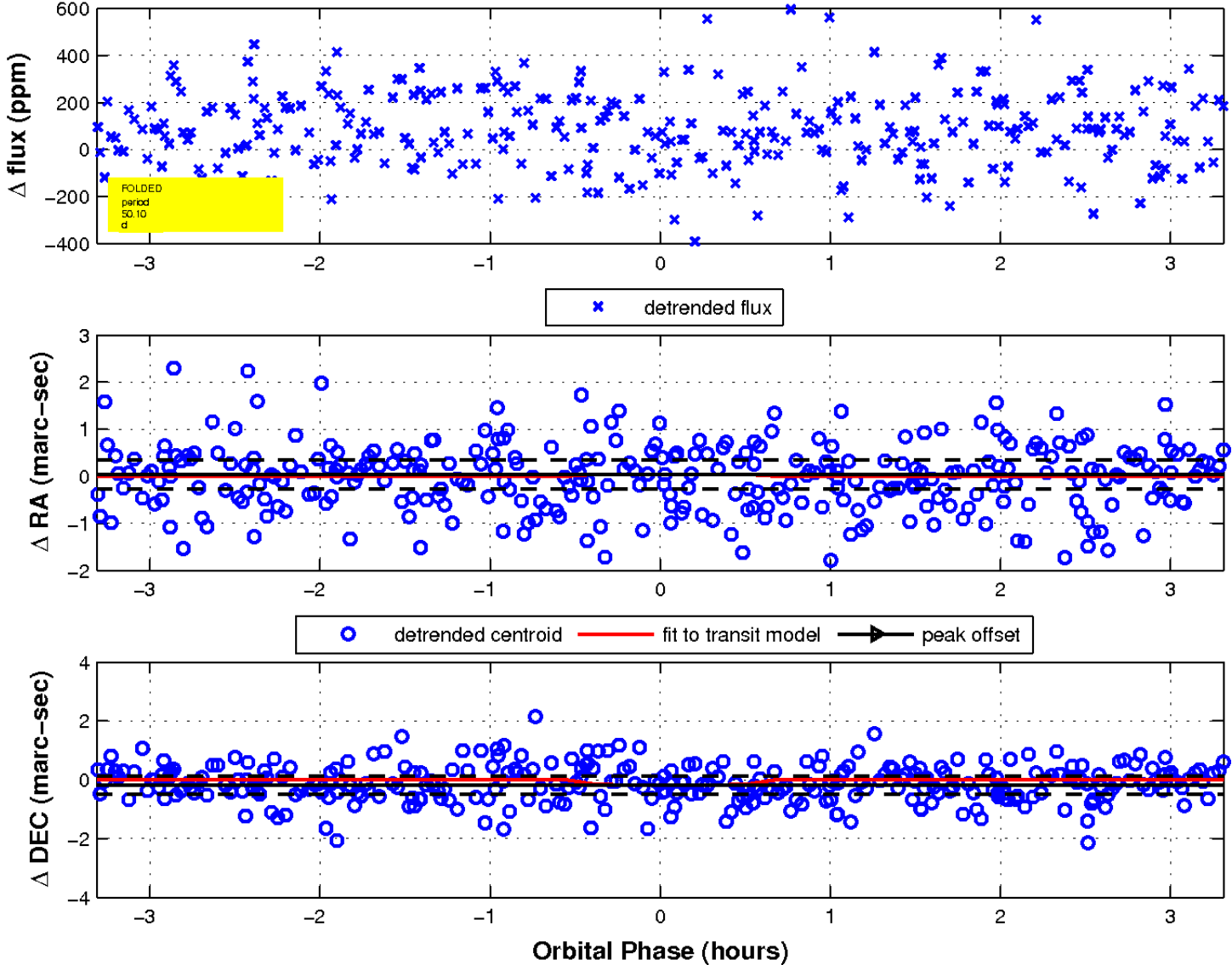
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

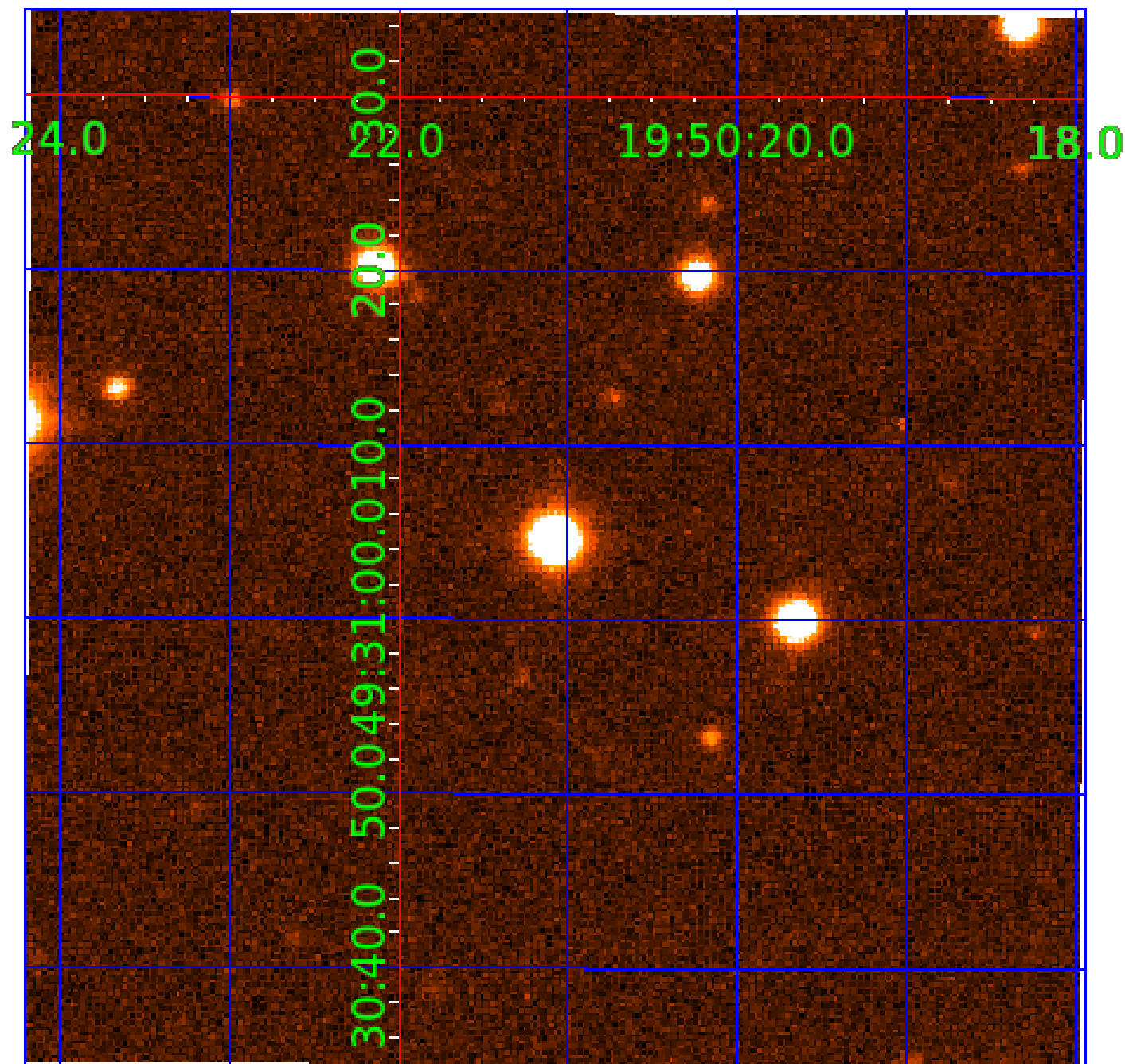


fluxWeightedCentroids, Planet 4 of 8



UKIRT Image

Declination



KIC 011572046

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})
011572046-01	OBS	No	0.642618	131.810580	15.9	4.174	9.3	8.9	3.08	7693	1.32	91439.60
011572046-02	OBS	No	101.668319	232.737823	396.0	1.721	9.0	9.7	3.08	7693	6.96	106.86
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011572046-04	OBS	No	50.100346	169.792696	107.4	1.105	8.7	2.6	3.08	7693	3.32	274.55
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011572046-06	OBS	No	26.470805	136.628006	203.5	1.448	8.4	8.9	3.08	7693	4.46	642.76
011572046-07	OBS	No	49.584264	155.994699	415.1	0.873	8.5	9.5	3.08	7693	6.66	278.36

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011572046-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—CENT_UNRESOLVED_OFFSET
011572046-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011572046-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_TER_DV
011572046-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
011572046-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_FEW_DIFFS
011572046-06	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011572046-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV

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

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

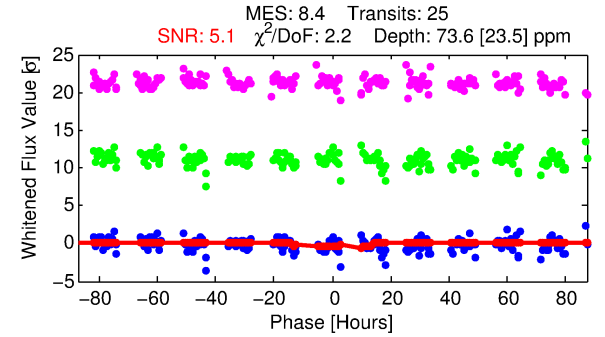
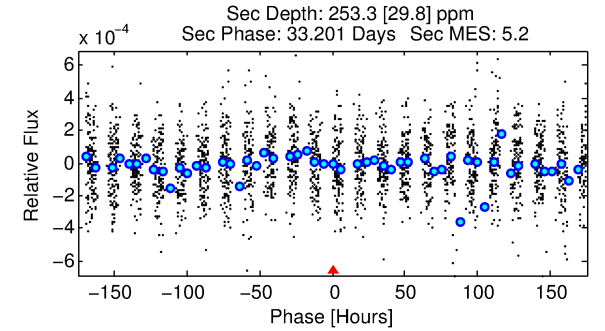
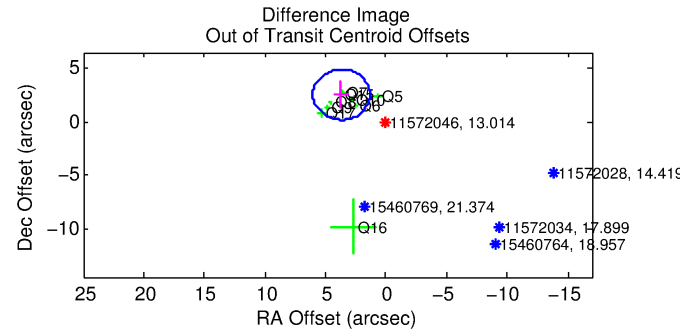
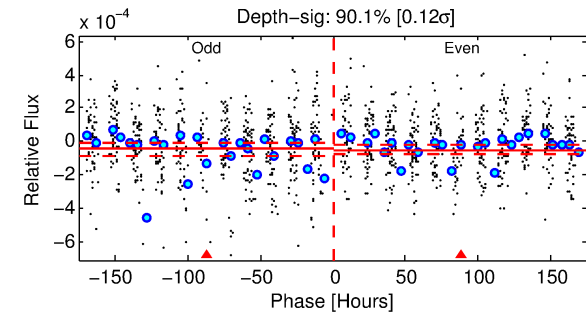
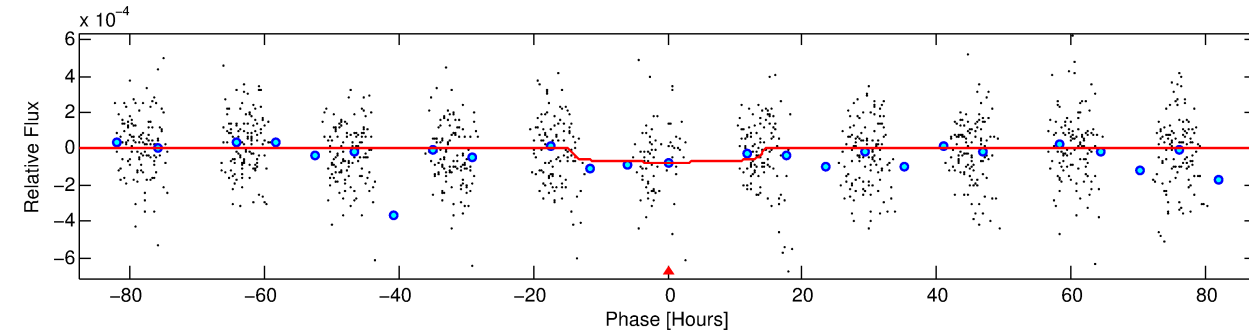
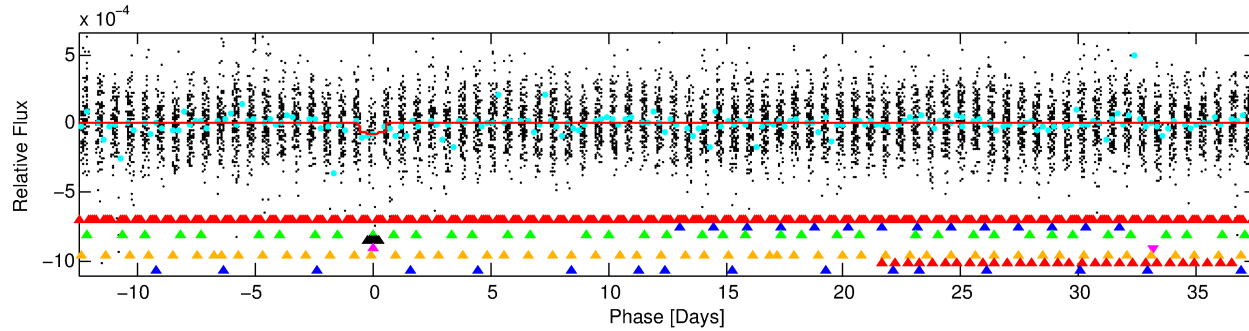
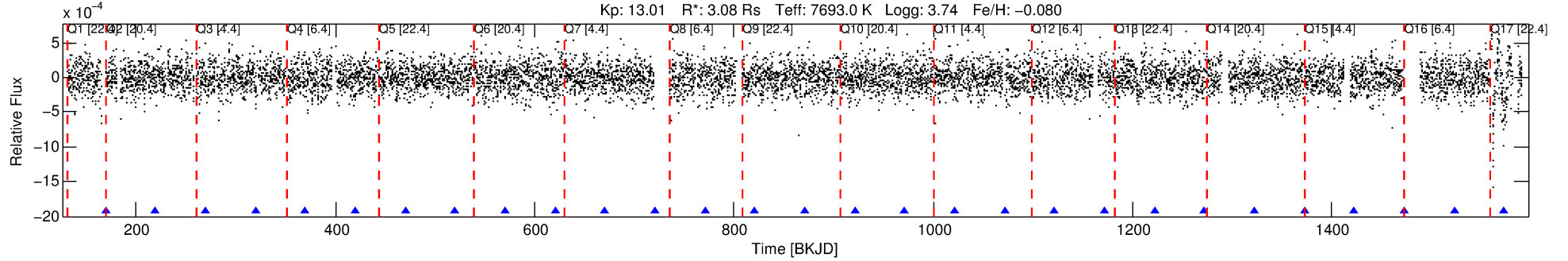
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011572046-05

No Significant Match Found

DV One-Page Summary

KIC: 11572046 Candidate: 5 of 8 Period: 50.115 d



DV Fit Results:

Period = 50.11513 [0.00851] d
Epoch = 169.5789 [0.1545] BKJD
Rp/R* = 0.0090 [0.0020]
a/R* = 6.44 [5.28]
b = 0.88 [0.21]
Seff = 274.44 [190.07]
Teq = 1038 [180] K
Rp = 3.04 [1.53] Re
a = 0.3295 [0.1402] AU
Ag = 1641.13 [1334.74] [1.23σ]
Teffp = 10213 [1240] K [7.3σ]

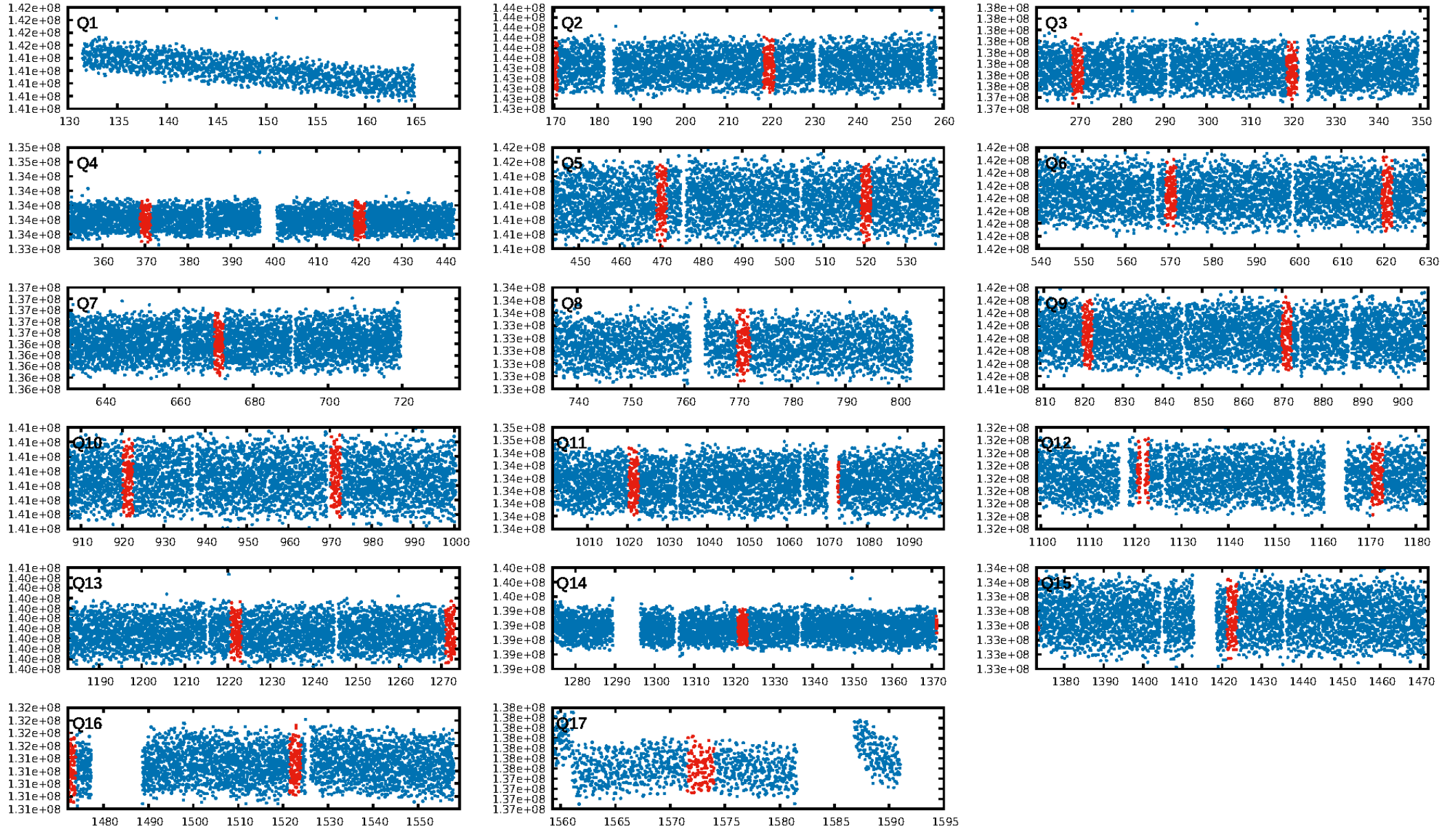
DV Diagnostic Results:

ShortPeriod-sig: 1.0% [0.01σ]
LongPeriod-sig: 100.0% [30.51σ]
ModelChiSquare2-sig: 0.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 8.10e-11
RollingBand-fgt: 1.00 [24/24]
GhostDiagnostic-chr: -0.6971
Centroid-sig: 9.3%
Centroid-so: 1.454 arcsec [1.33σ]
OotOffset-rm: 4.490 arcsec [5.71σ]
KicOffset-rm: 4.508 arcsec [5.57σ]
OotOffset-st: 2/2/2/3 [9]
KicOffset-st: 2/2/2/3 [9]
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DiffImageOverlap-fno: 0.00 [0/12]

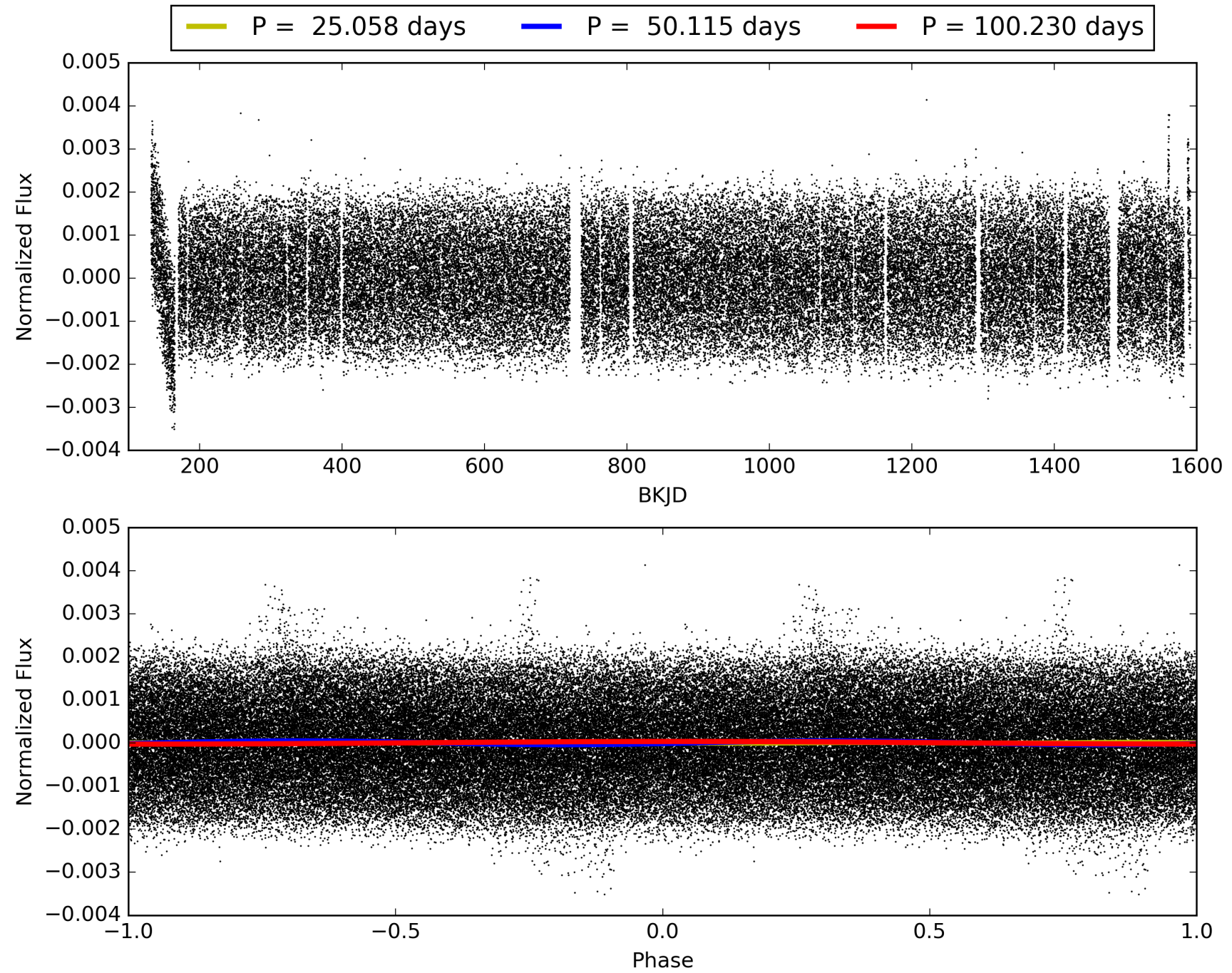
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 18:17:17 Z

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

TCE 011572046-05, PDC Light Curves

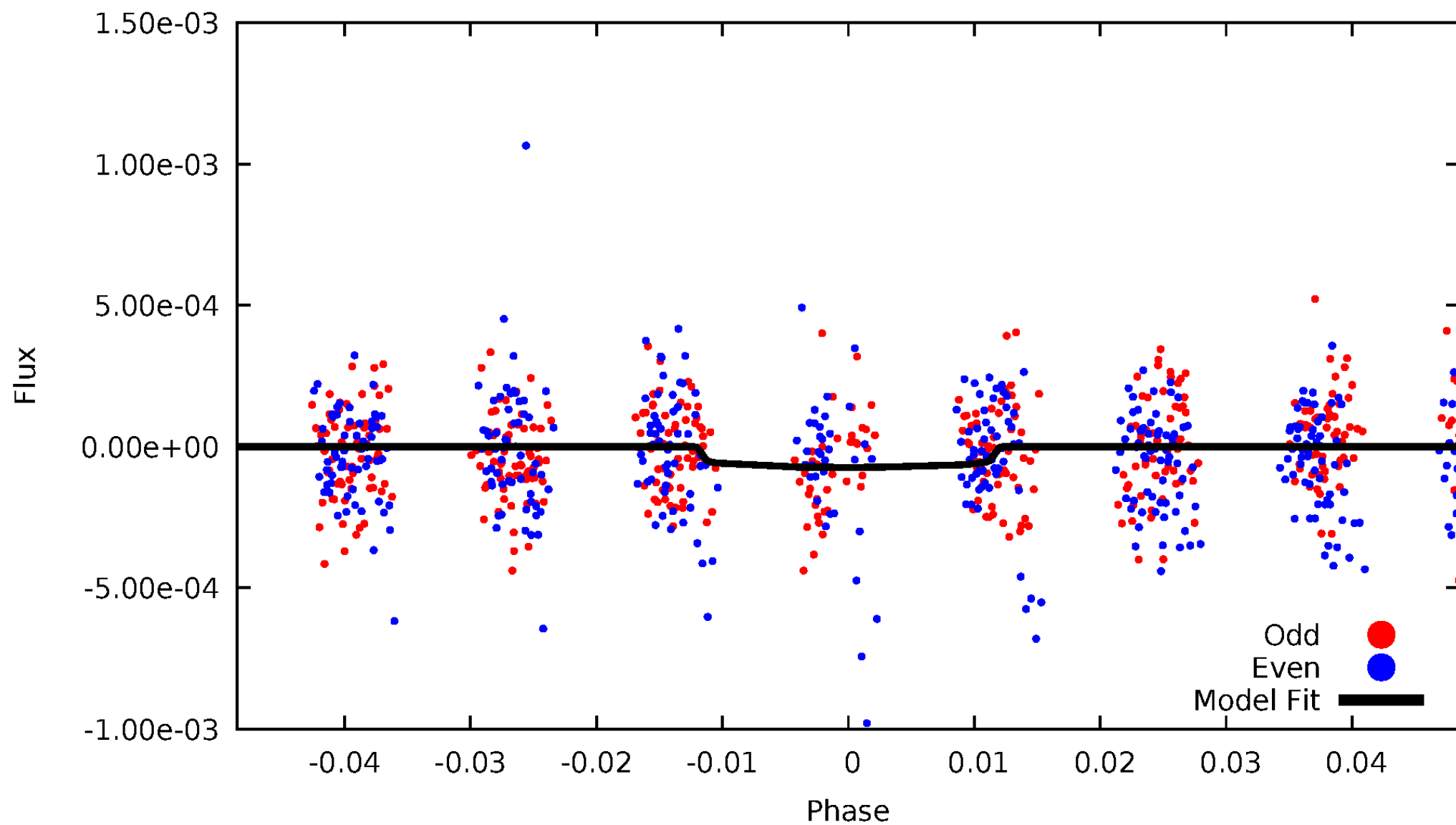


TCE 011572046-05



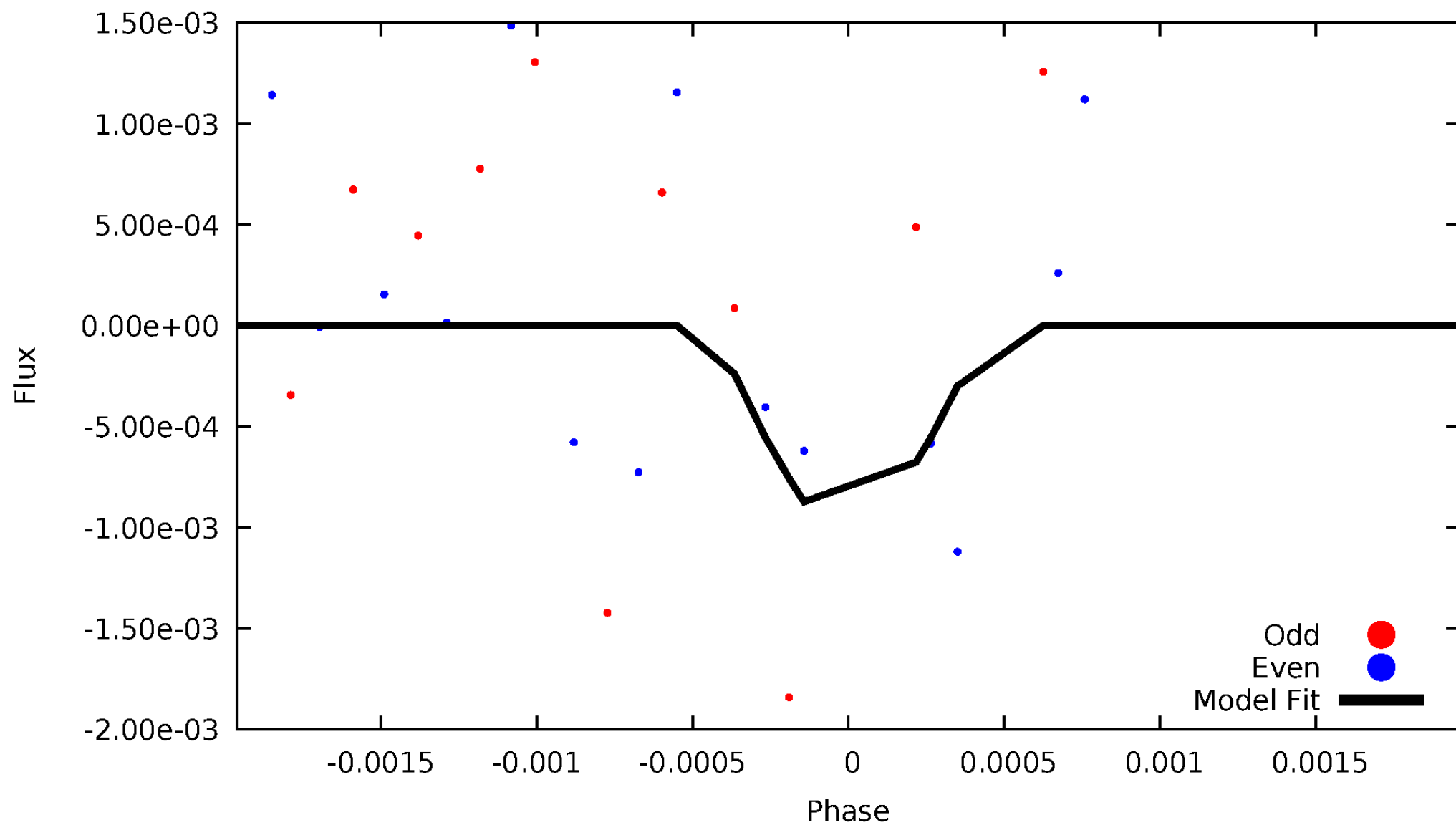
DV Odd/Even

TCE 011572046-05



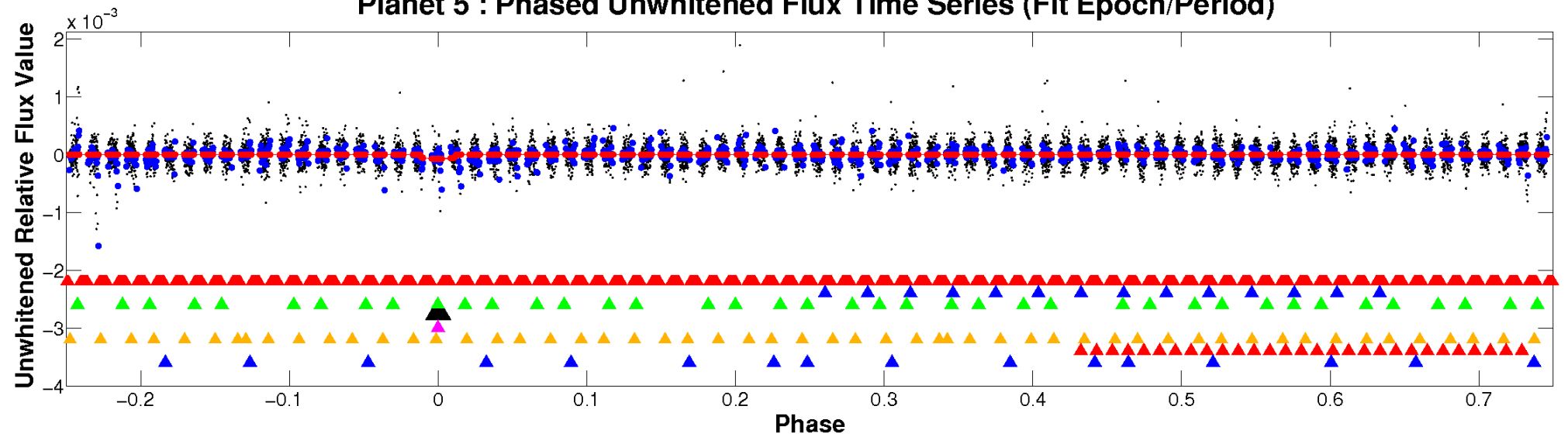
ALT Odd/Even

TCE 011572046-05

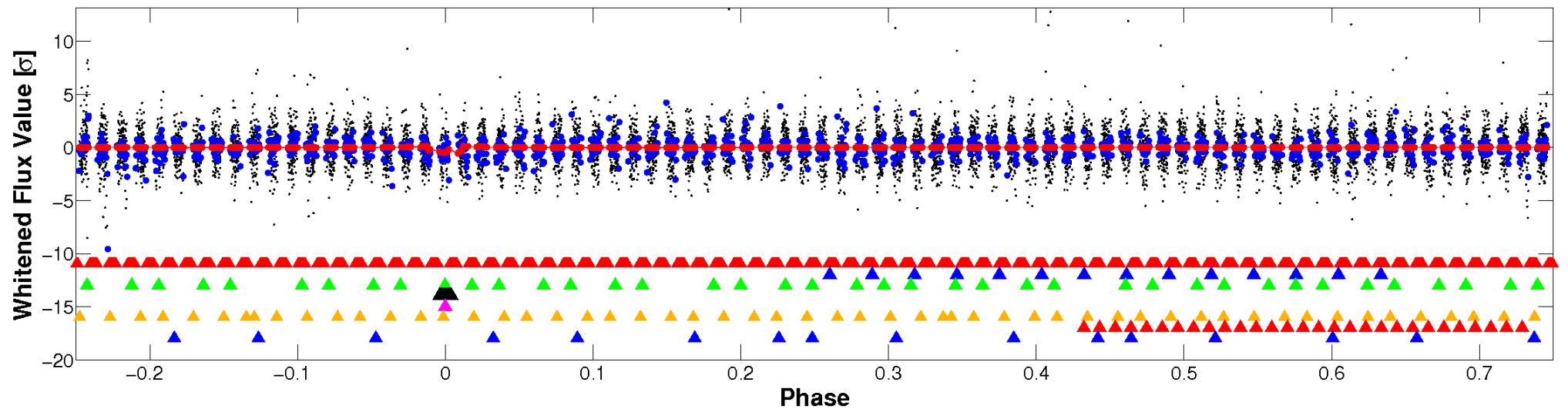


Non-Whitened Vs. Whitened Light Curve

Planet 5 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

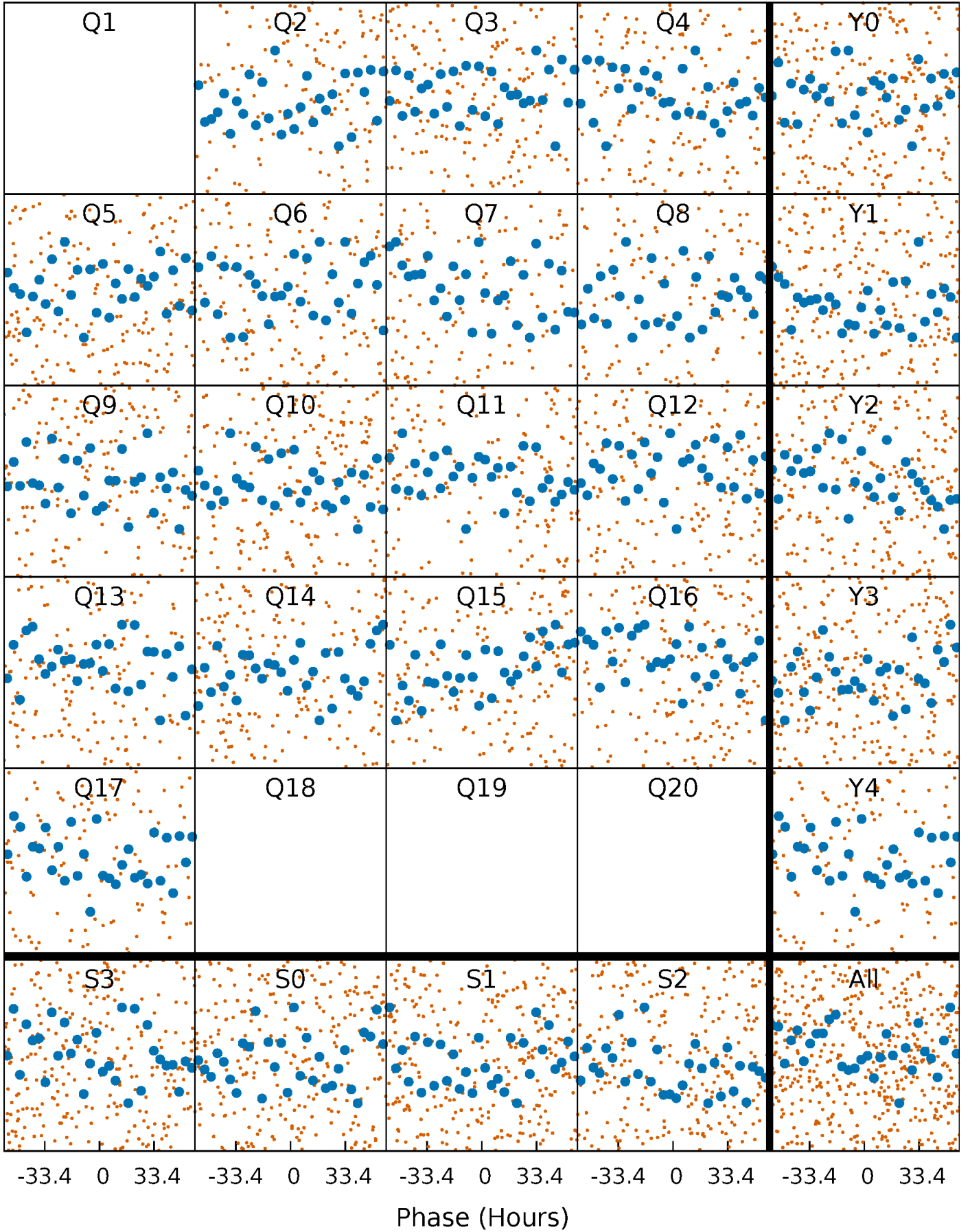


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



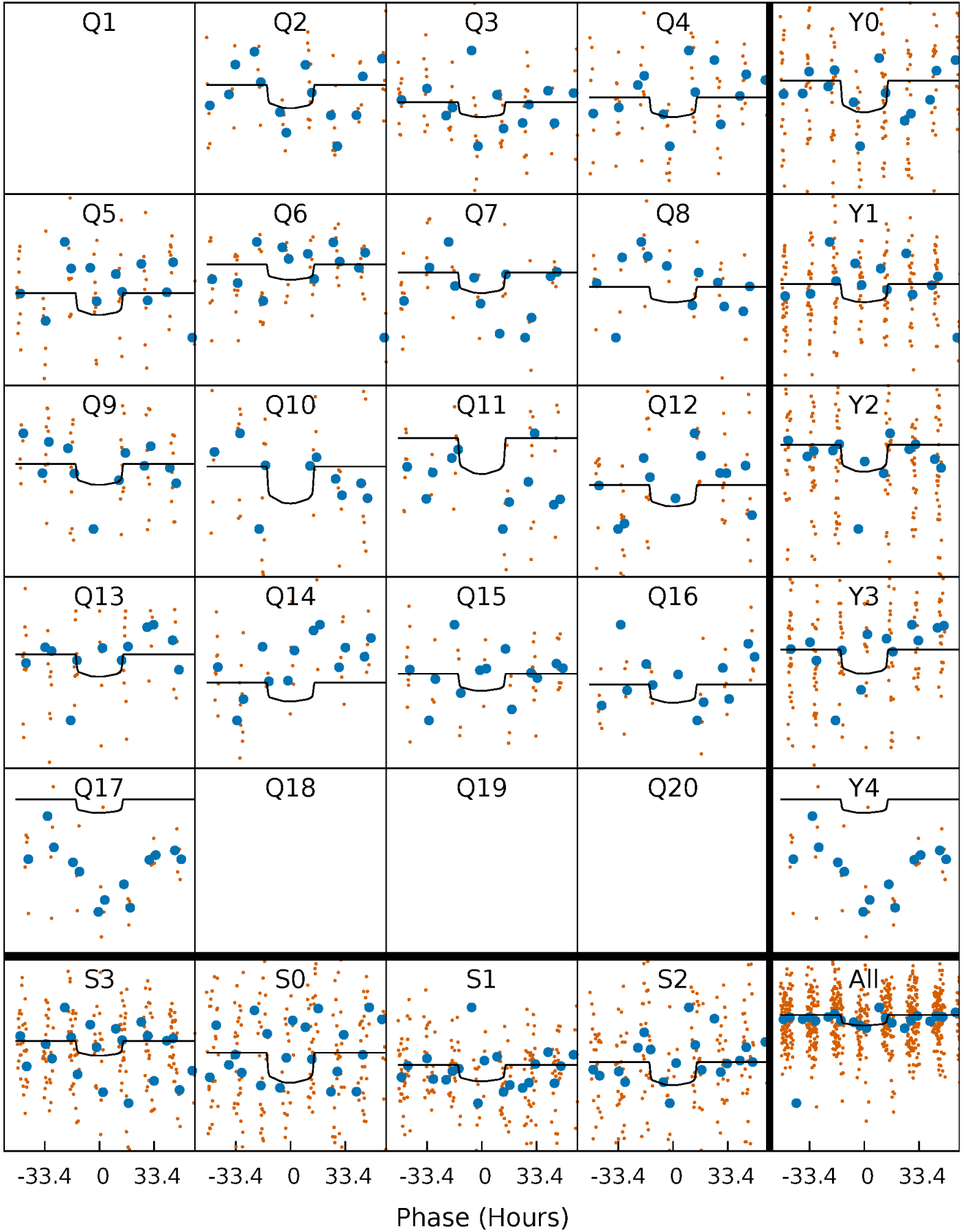
PDC Quarter-Phased Transit Curves

TCE 011572046-05 $P = 50.115129$ Days $T_0 = 169.578882$ (BKJD)



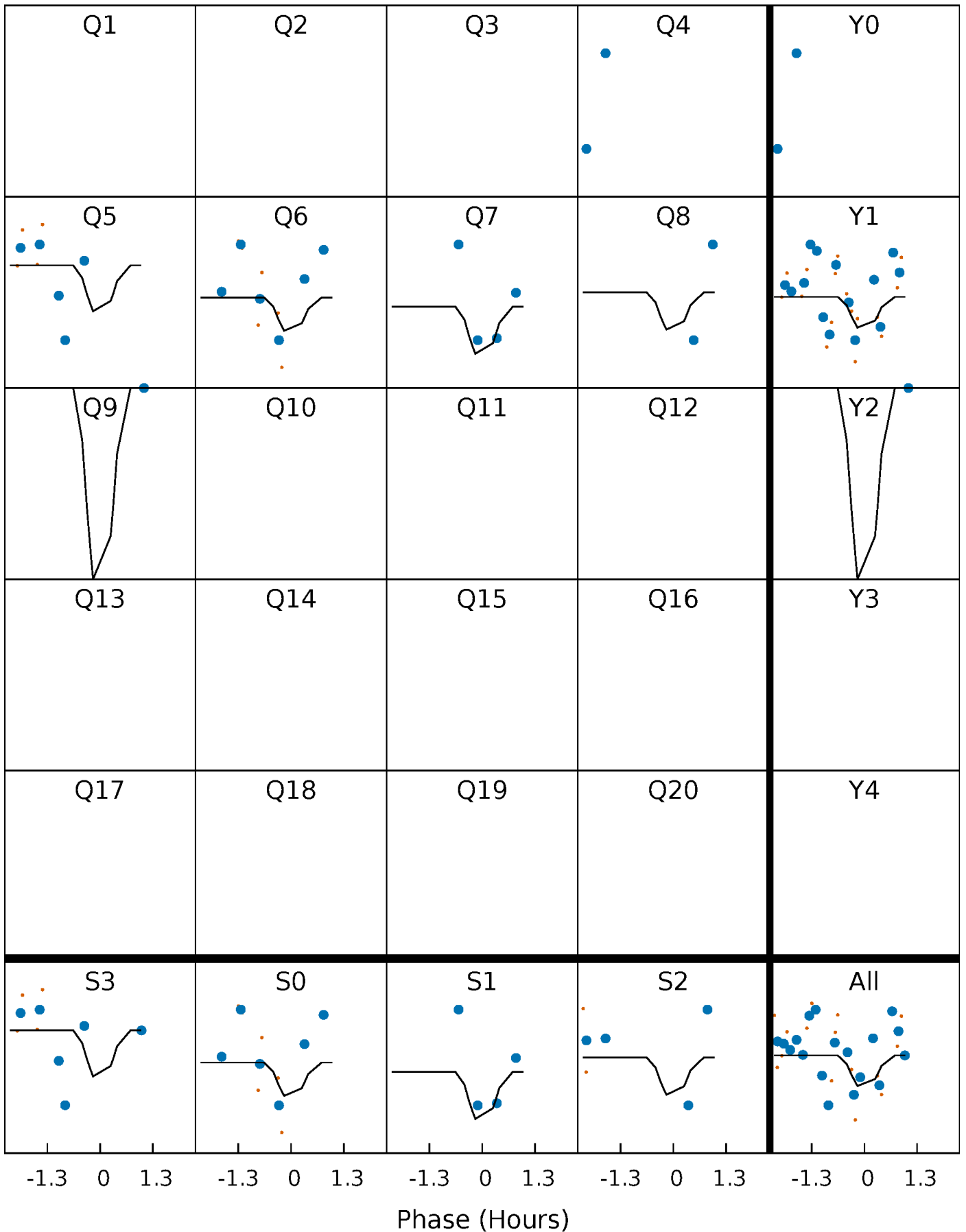
DV Quarter-Phased Transit Curves

TCE 011572046-05 P= 50.115129 Days $T_0=169.578882$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

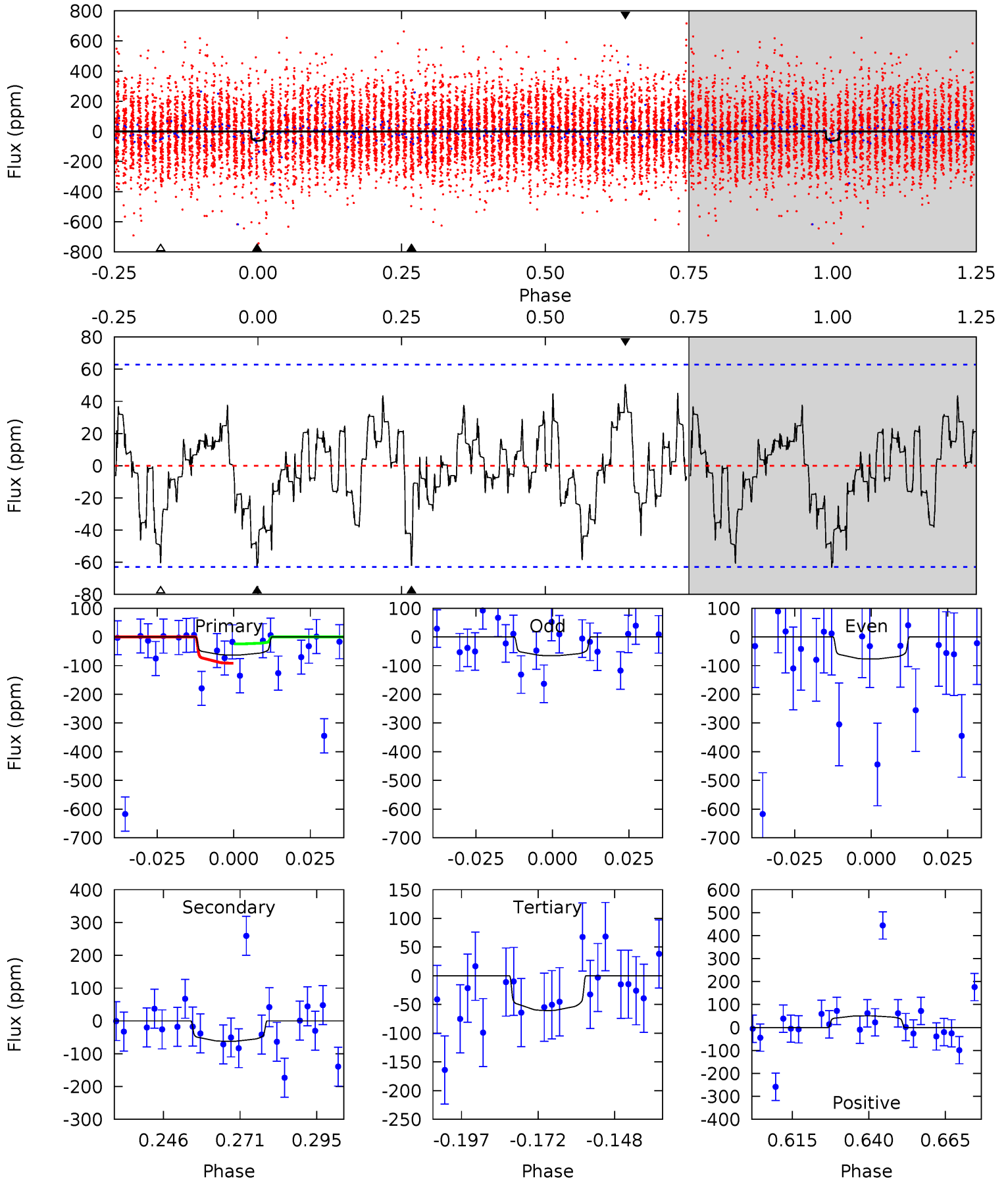
TCE 011572046-05 $P = 50.099553$ Days $T_0 = 169.644275$ (BKJD)



DV Model-Shift Uniqueness Test

011572046-05, P = 50.115129 Days, E = 119.463753 Days

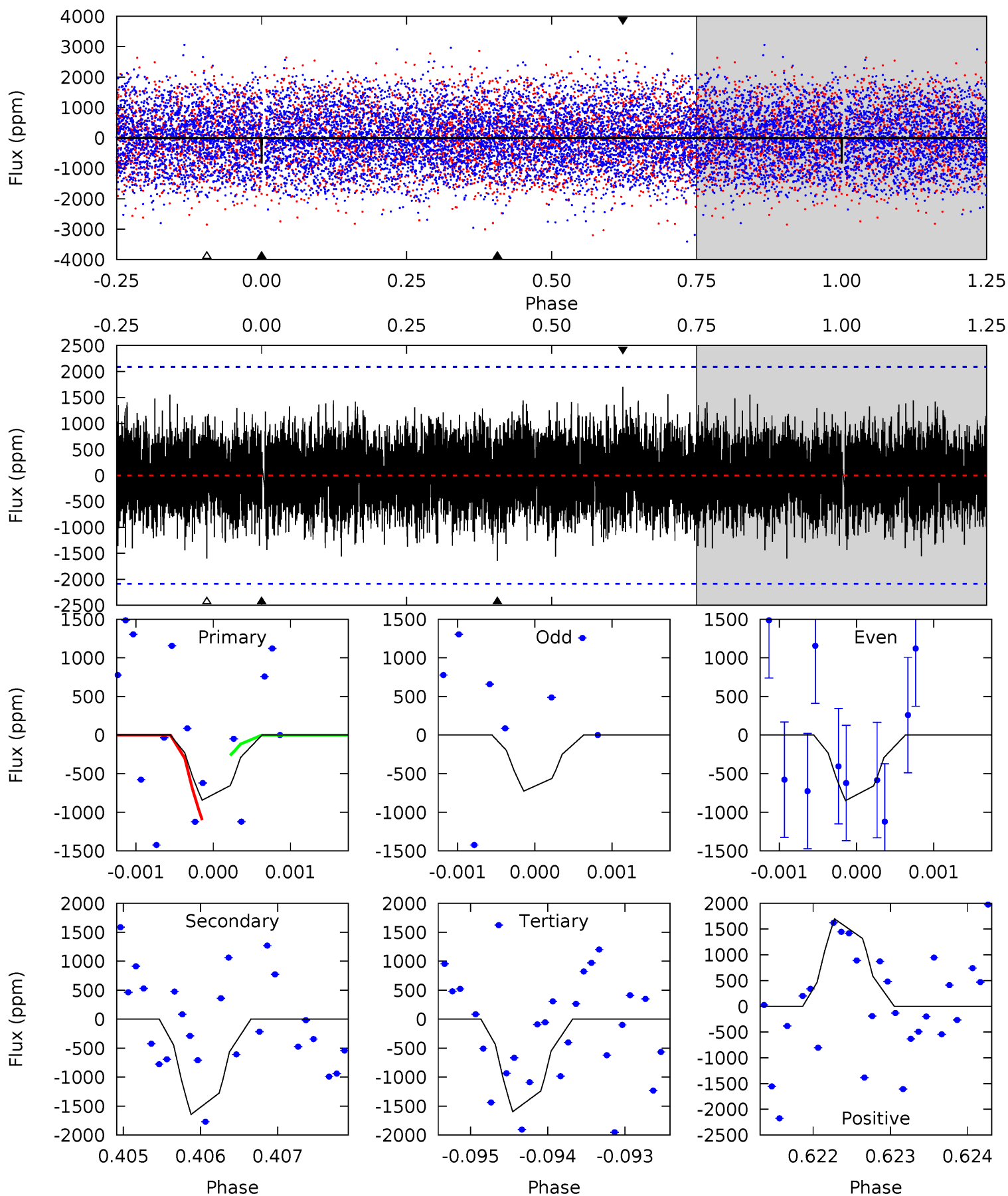
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.88	4.79	4.67	3.91	4.85	2.25	1.56	0.21	0.97	0.13	0.89	0.44	4.01	0.44	2.56



Alt Model-Shift Uniqueness Test

011572046-05, P = 50.099553 Days, E = 119.544722 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.20	4.29	4.17	4.44	5.45	3.29	1.51	-1.97	-2.23	0.12	-0.14	0.15	1.00	0.51	1.10



Stellar Parameters For KIC 011572046

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7693^{+211}_{-316}	$3.739^{+0.392}_{-0.073}$	$-0.080^{+0.200}_{-0.350}$	$3.081^{+0.348}_{-1.391}$	$1.898^{+0.105}_{-0.420}$	$0.091^{+0.331}_{-0.021}$
	+3%/-4%	+10%/-2%	+250%/-438%	+11%/-45%	+6%/-22%	+362%/-23%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 011572046-05 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-62 ± 13	$2.75^{+0.86}_{-0.83}$	1398^{+96}_{-149}	7051^{+1219}_{-872}	482^{+488}_{-214}
Alt.	-1644 ± 383	$10.94^{+1.51}_{-2.46}$	1403^{+91}_{-155}	8513^{+809}_{-862}	822^{+531}_{-244}

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

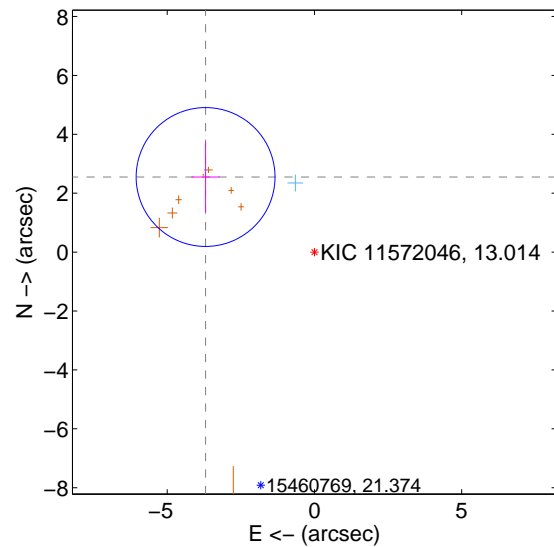
Supplemental centroid analysis for 011572046-05. Kepler magnitude: 13.01. Transit SNR 5.08

There are 1 quarters with good PRF difference image offsets

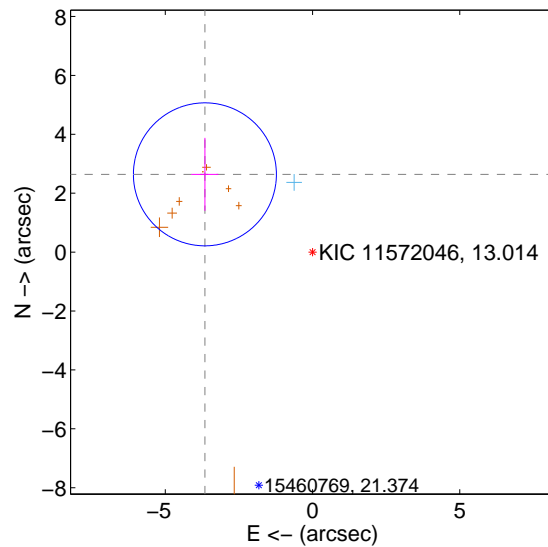
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.490 ± 0.786	5.71	3.696 ± 0.479	2.550 ± 1.190
PRF-fit source offset from KIC position	4.508 ± 0.809	5.57	3.654 ± 0.457	2.640 ± 1.238
photometric centroid source offset	1.45 ± 1.09	1.33	-0.73 ± 1.12	-1.25 ± 1.08

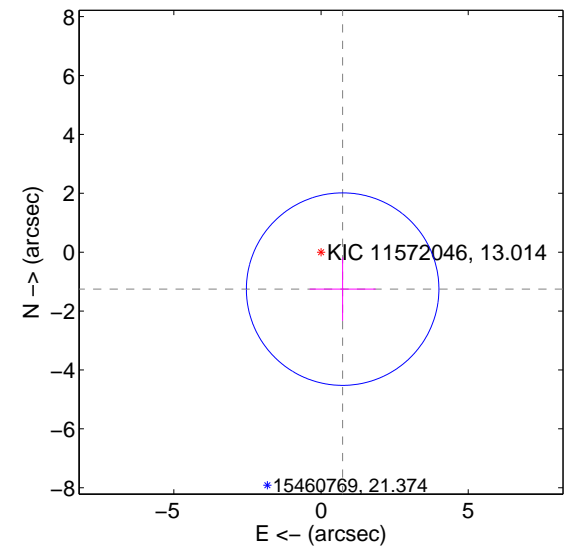
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

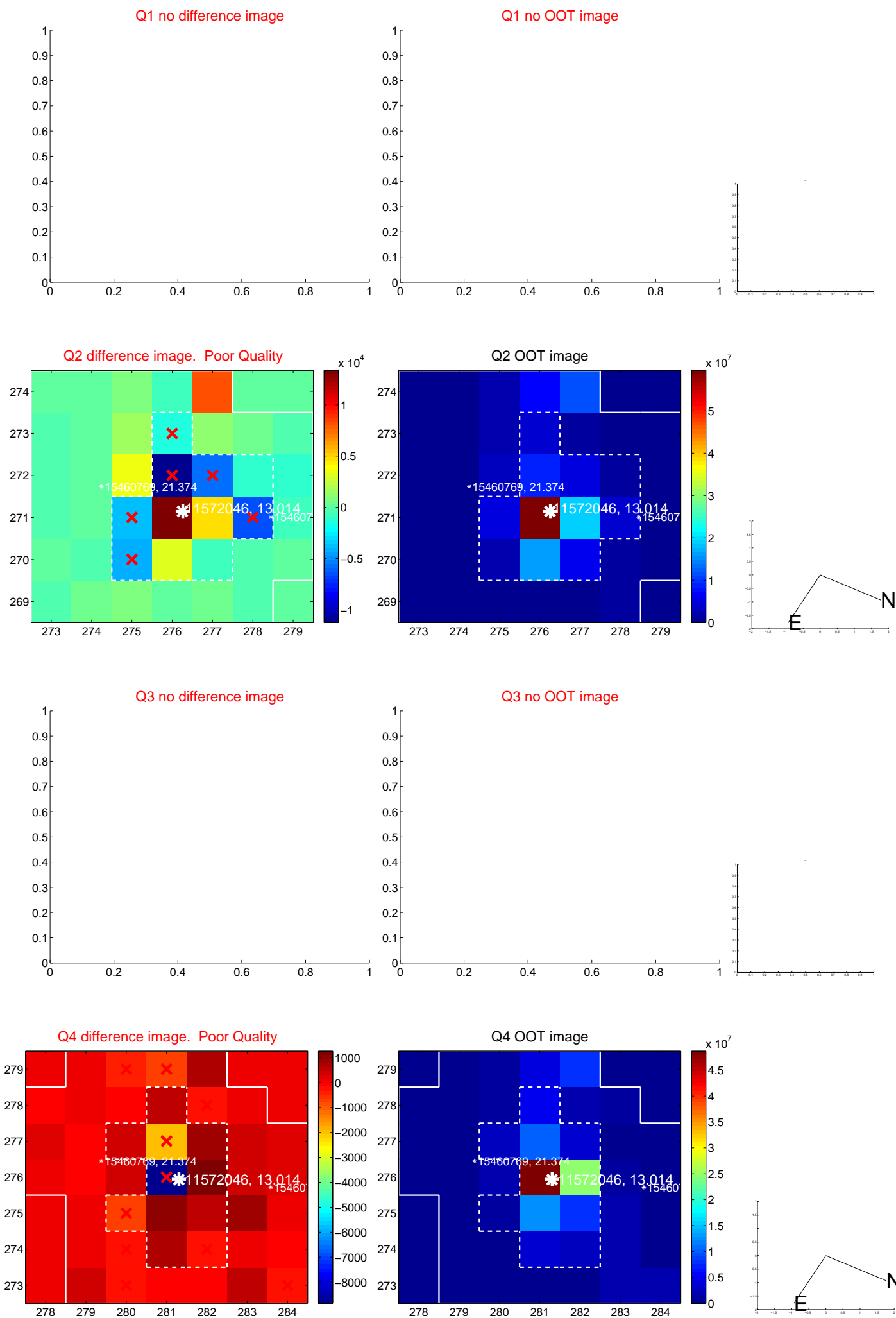


offset from photometric centroids

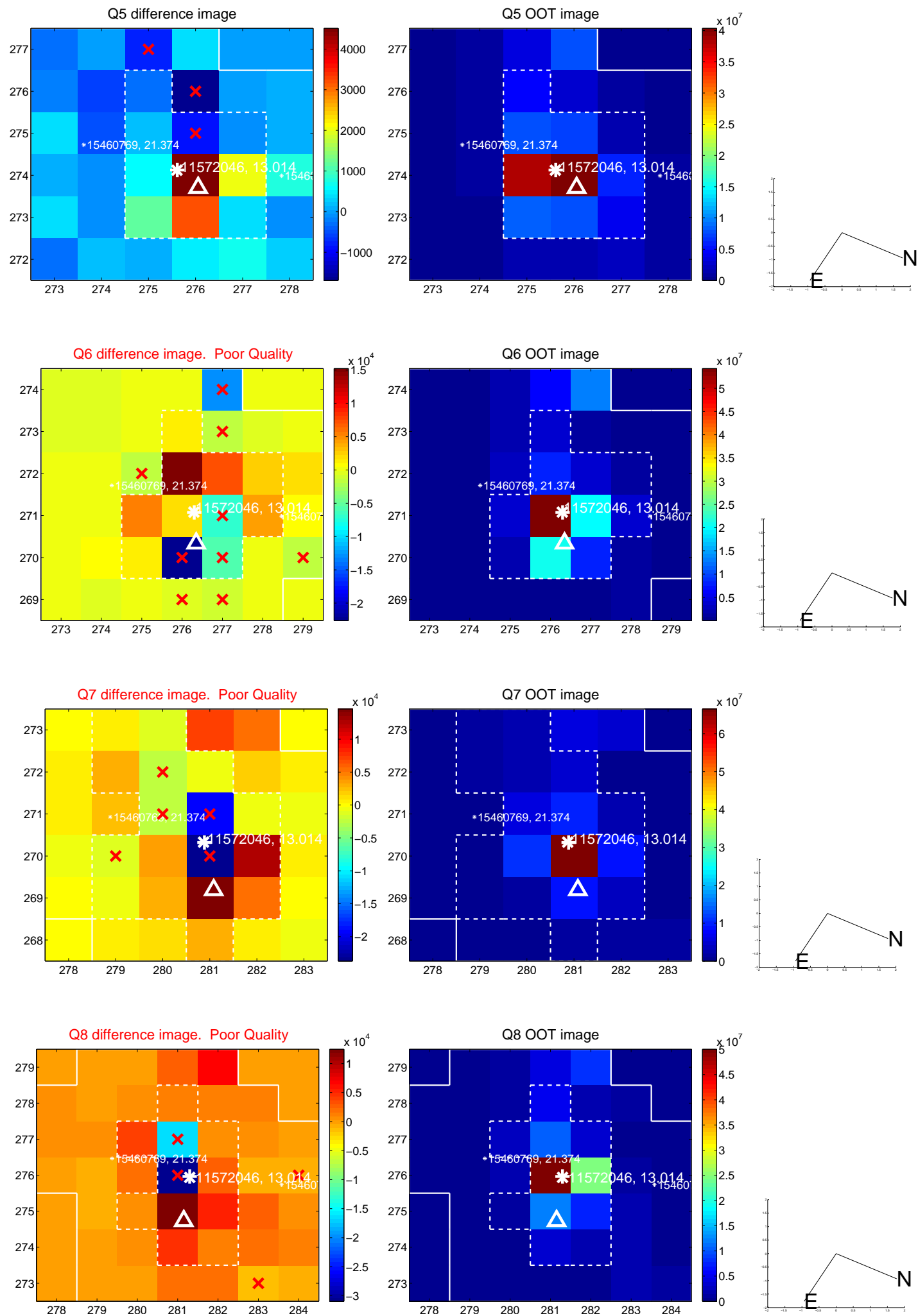


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

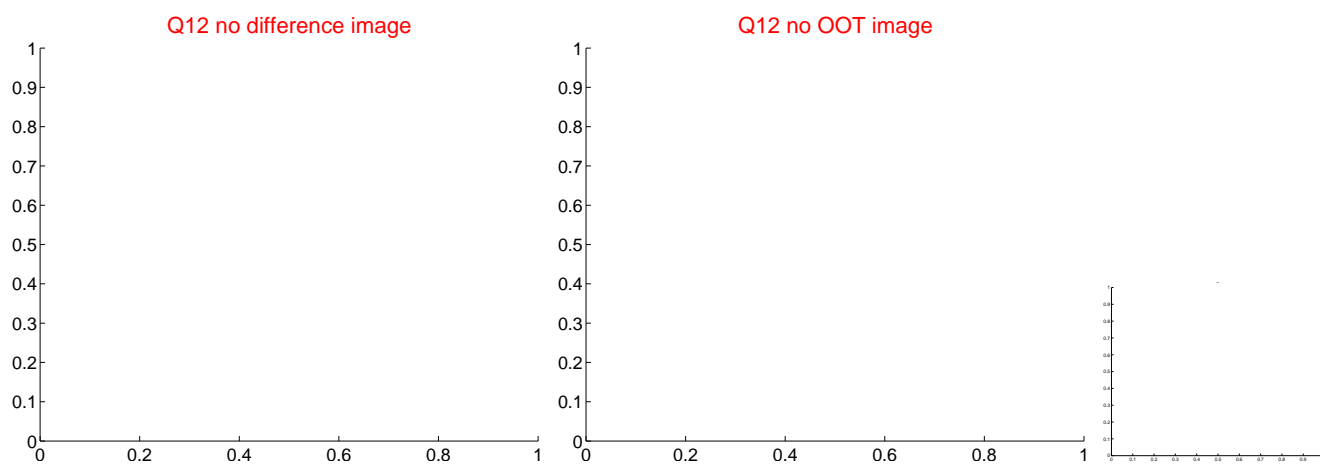
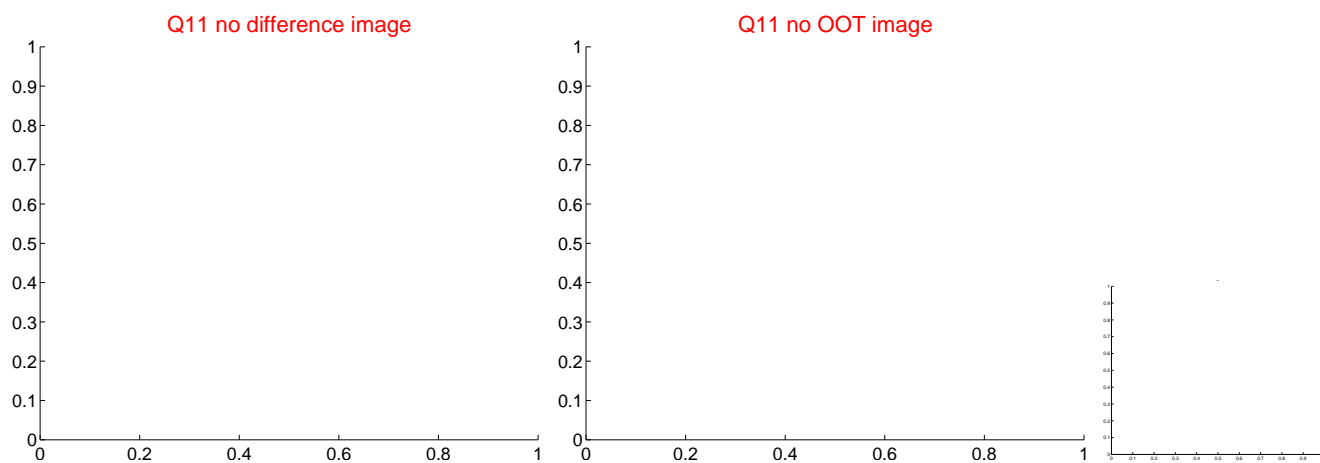
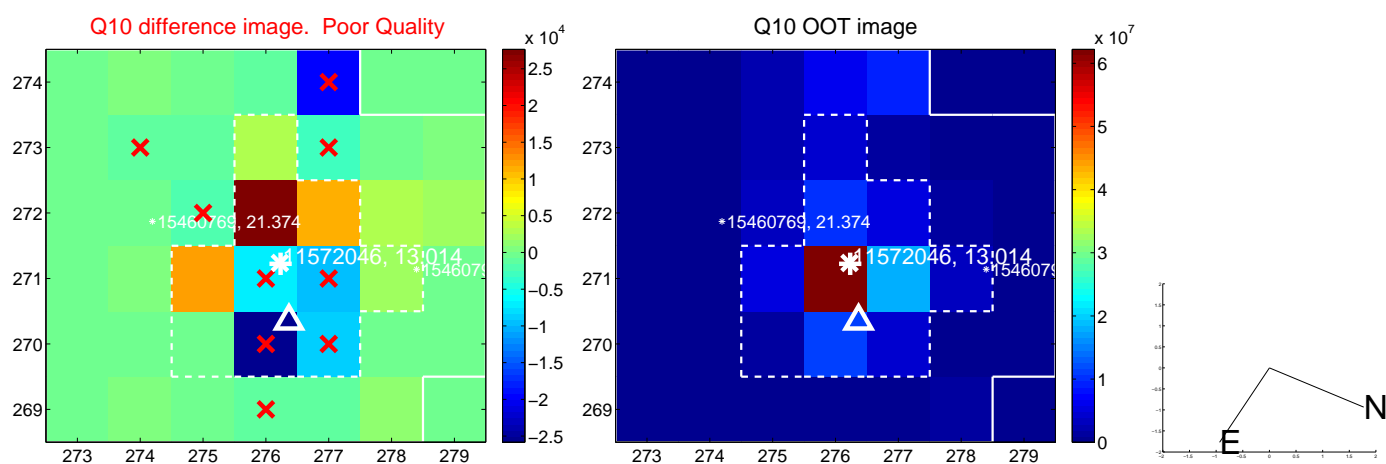
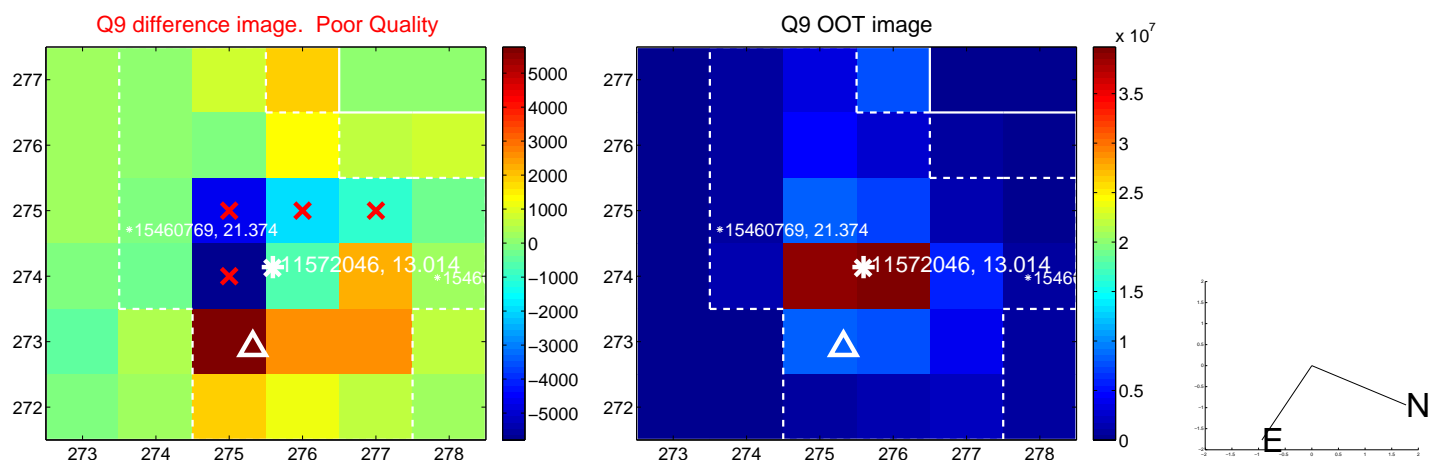
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



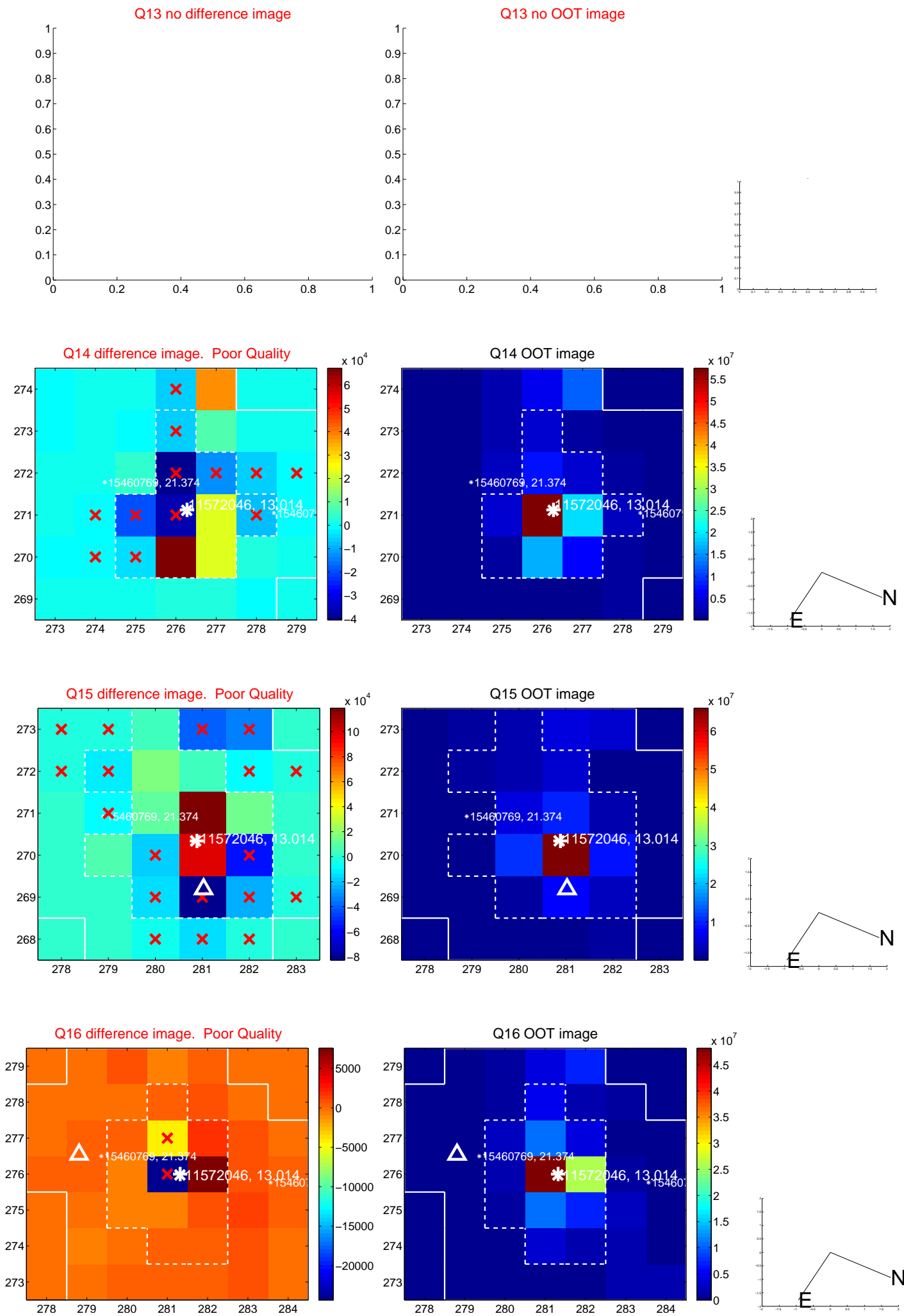
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



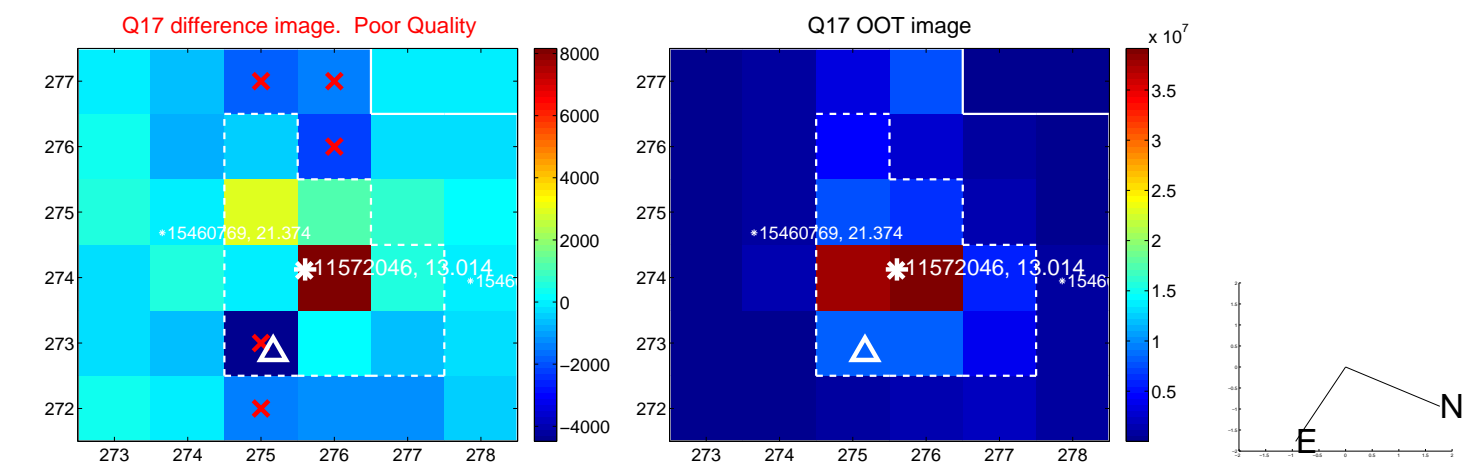
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



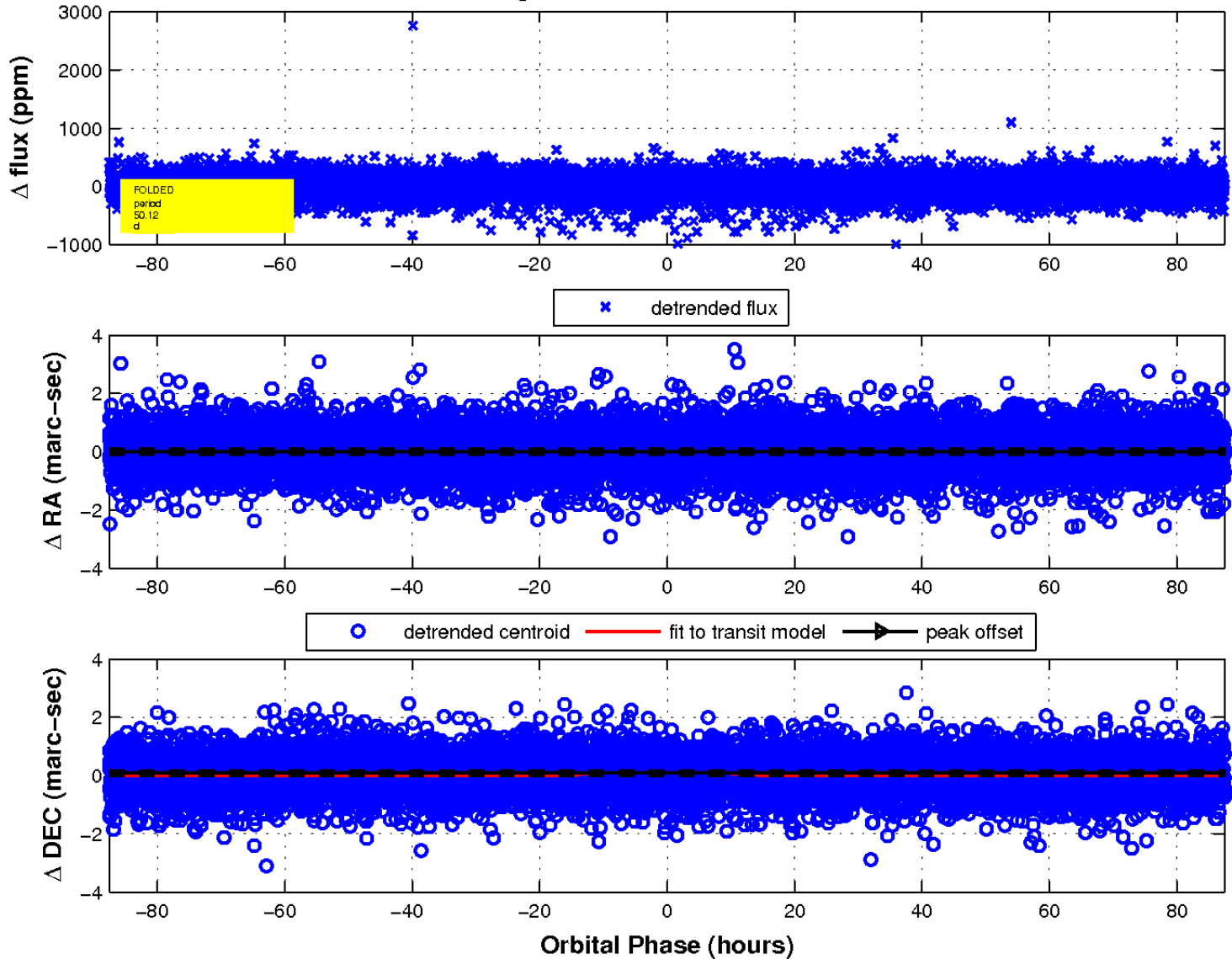
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

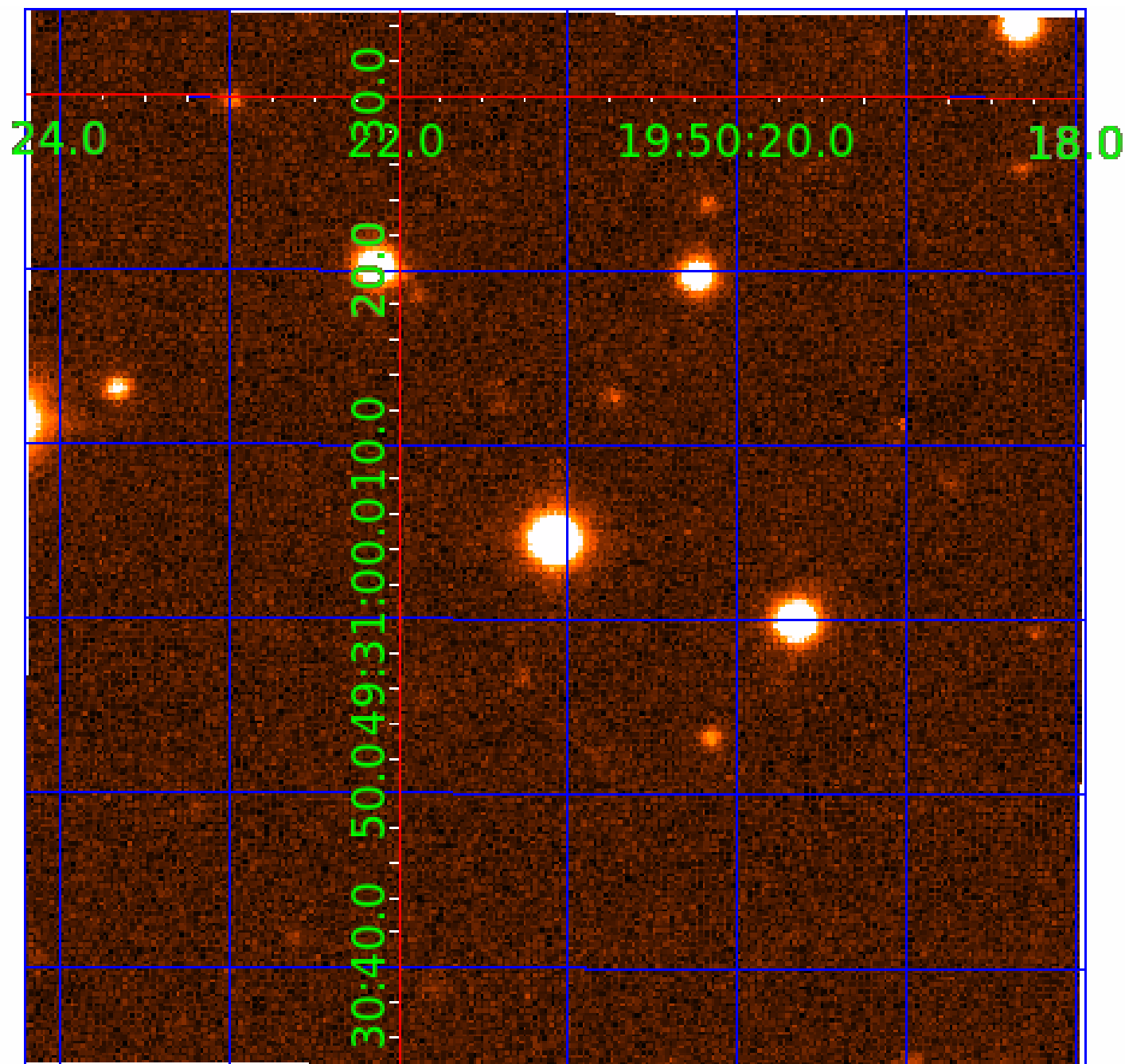


fluxWeightedCentroids, Planet 5 of 8



UKIRT Image

Declination



KIC 011572046

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})
011572046-01	OBS	No	0.642618	131.810580	15.9	4.174	9.3	8.9	3.08	7693	1.32	91439.60
011572046-02	OBS	No	101.668319	232.737823	396.0	1.721	9.0	9.7	3.08	7693	6.96	106.86
011572046-03	OBS	No	36.143464	149.228090	268.5	1.458	9.2	10.8	3.08	7693	5.93	424.32
011572046-04	OBS	No	50.100346	169.792696	107.4	1.105	8.7	2.6	3.08	7693	3.32	274.55
011572046-05	OBS	No	50.115129	169.578882	73.6	29.183	8.4	5.1	3.08	7693	3.04	274.44
011572046-06	OBS	No	26.470805	136.628006	203.5	1.448	8.4	8.9	3.08	7693	4.46	642.76
011572046-07	OBS	No	49.584264	155.994699	415.1	0.873	8.5	9.5	3.08	7693	6.66	278.36

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011572046-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—CENT_UNRESOLVED_OFFSET
011572046-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011572046-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_TER_DV
011572046-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
011572046-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_FEW_DIFFS
011572046-06	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011572046-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV

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

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

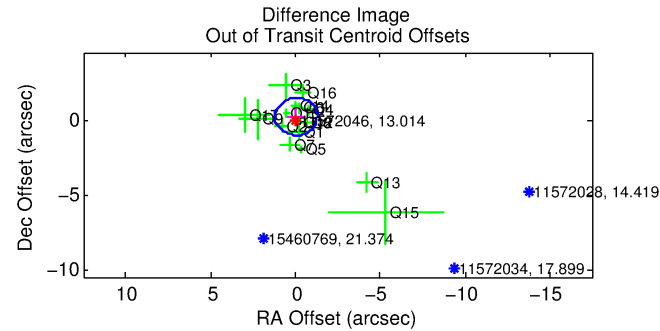
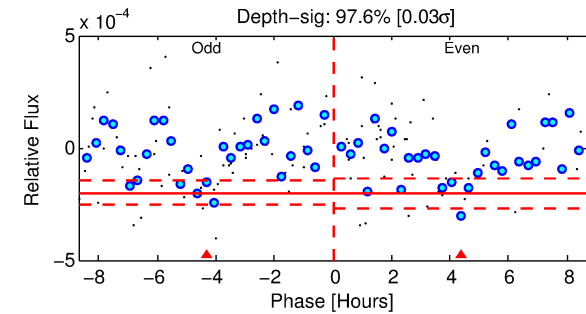
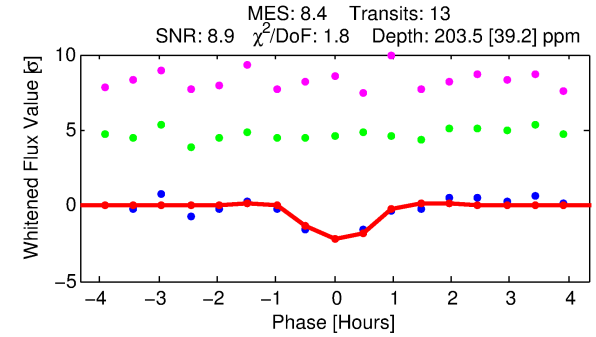
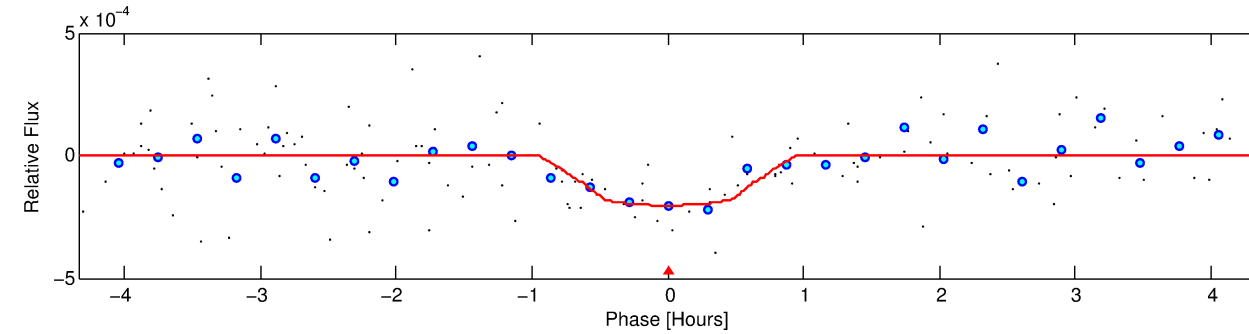
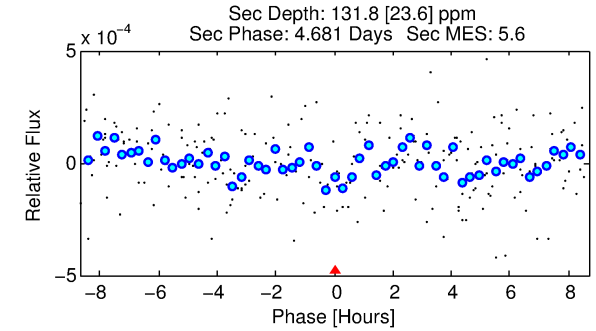
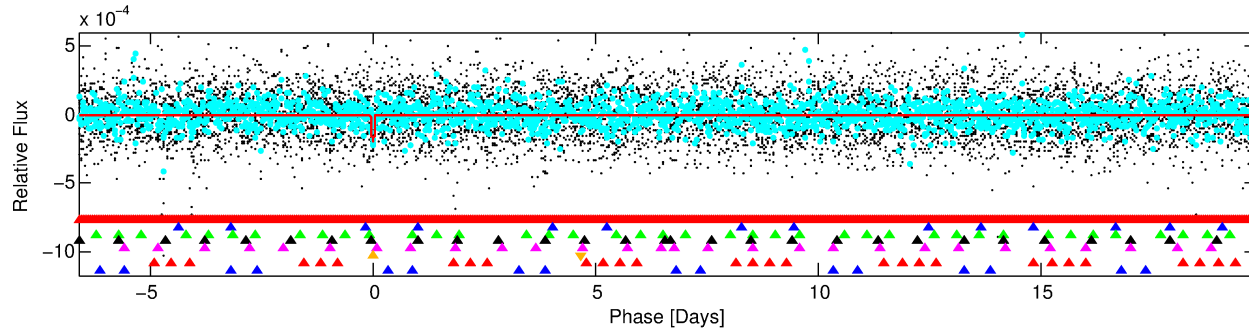
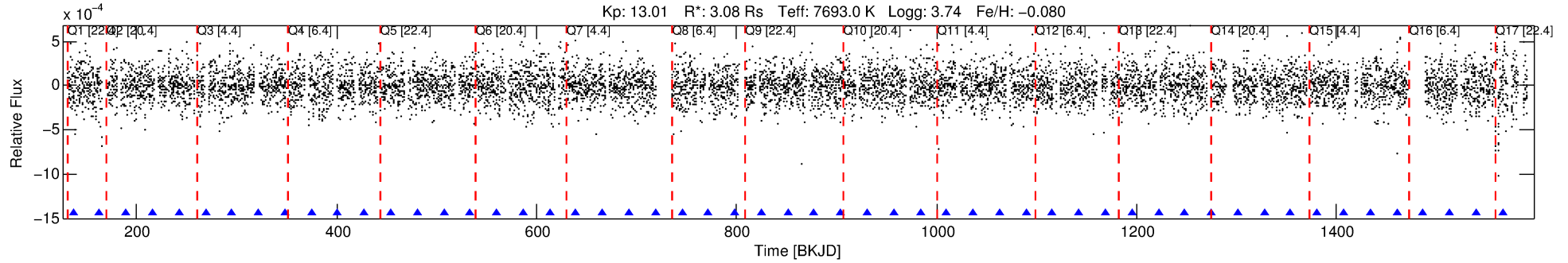
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011572046-06

No Significant Match Found

DV One-Page Summary

KIC: 11572046 Candidate: 6 of 8 Period: 26.471 d



DV Fit Results:

Period = 26.47080 [0.00025] d
Epoch = 136.6280 [0.0091] BKJD
Rp/R* = 0.0133 [0.0345]
a/R* = 141.48 [2084.95]
b = 0.03 [447.16]
Seff = 642.76 [445.17]
Teq = 1284 [222] K
Rp = 4.46 [11.79] Re
a = 0.2153 [0.0916] AU
Ag = 169.07 [888.56] [0.19σ]
Teffp = 7158 [9332] K [0.63σ]

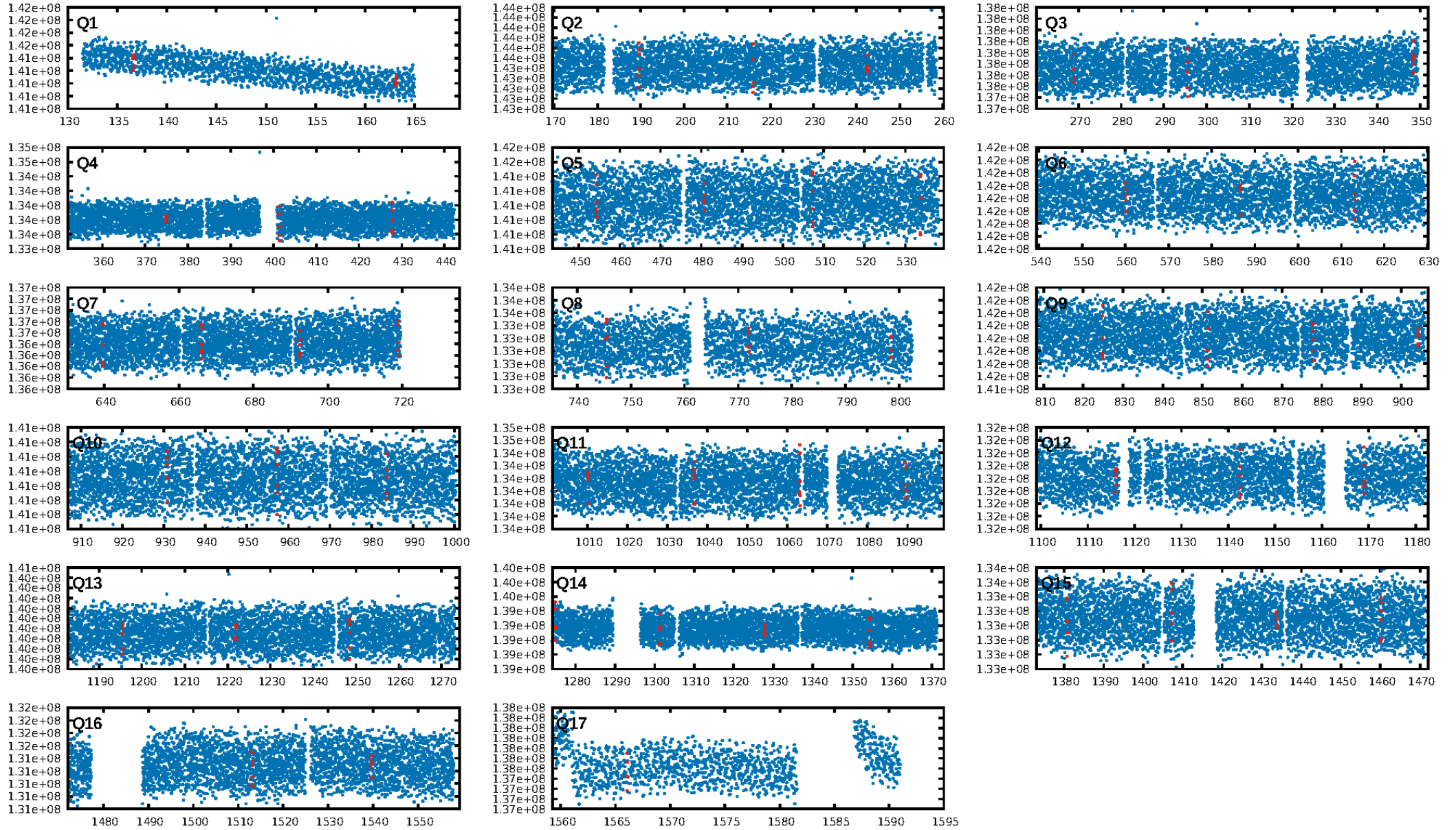
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [140.31σ]
LongPeriod-sig: 100.0% [112.97σ]
ModelChiSquare2-sig: 33.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.29e-08
RollingBand-fgt: 1.00 [12/12]
GhostDiagnostic-chr: 0.443
Centroid-sig: 80.8%
Centroid-so: 0.376 arcsec [0.43σ]
OotOffset-rm: 0.221 arcsec [0.53σ]
KicOffset-rm: 0.233 arcsec [0.64σ]
OotOffset-st: 4/3/4/5 [16]
KicOffset-st: 4/3/4/5 [16]
DiffImageQuality-fgm: 0.38 [6/16]
DiffImageOverlap-fno: 0.18 [3/17]

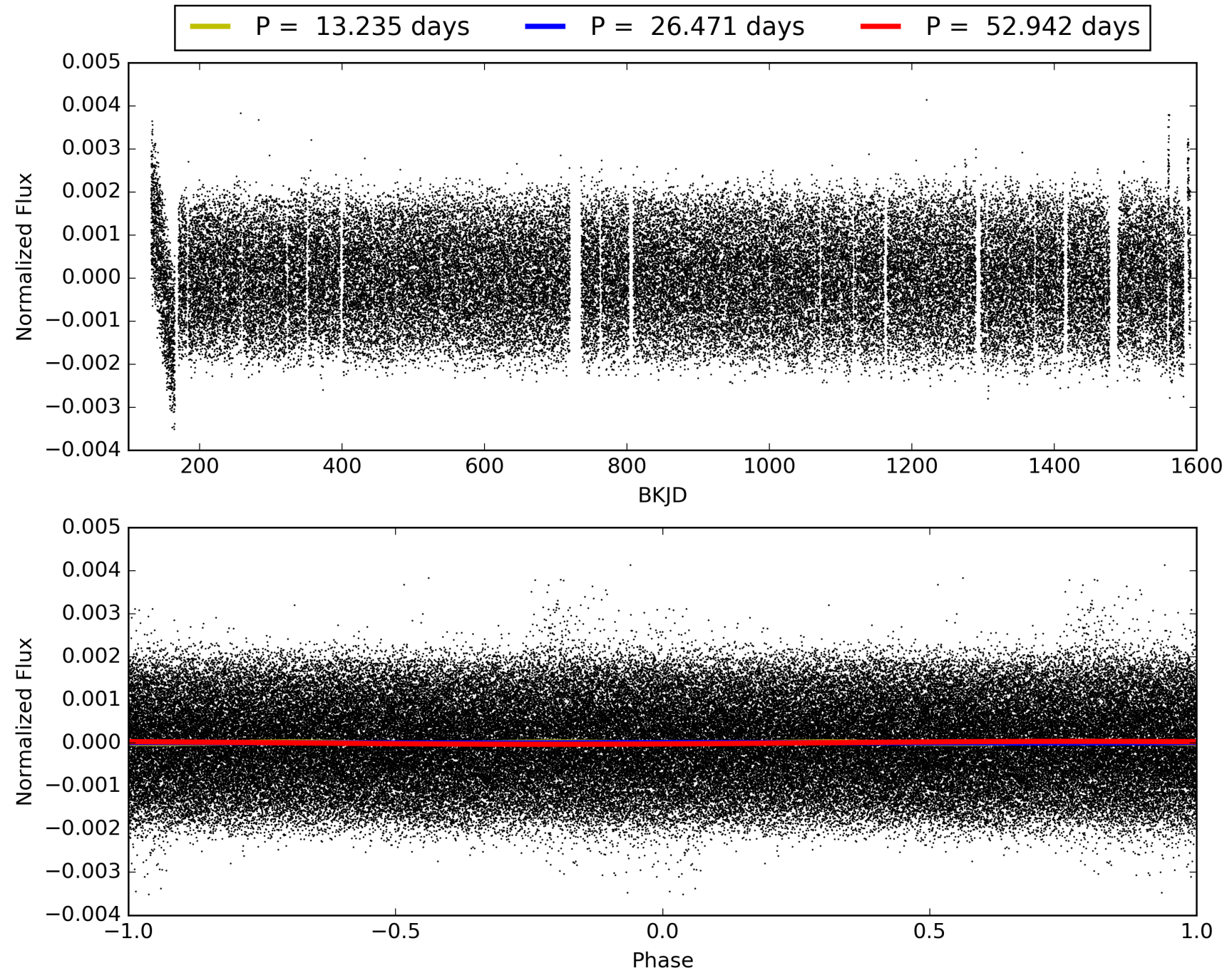
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 18:17:21 Z

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

TCE 011572046-06, PDC Light Curves

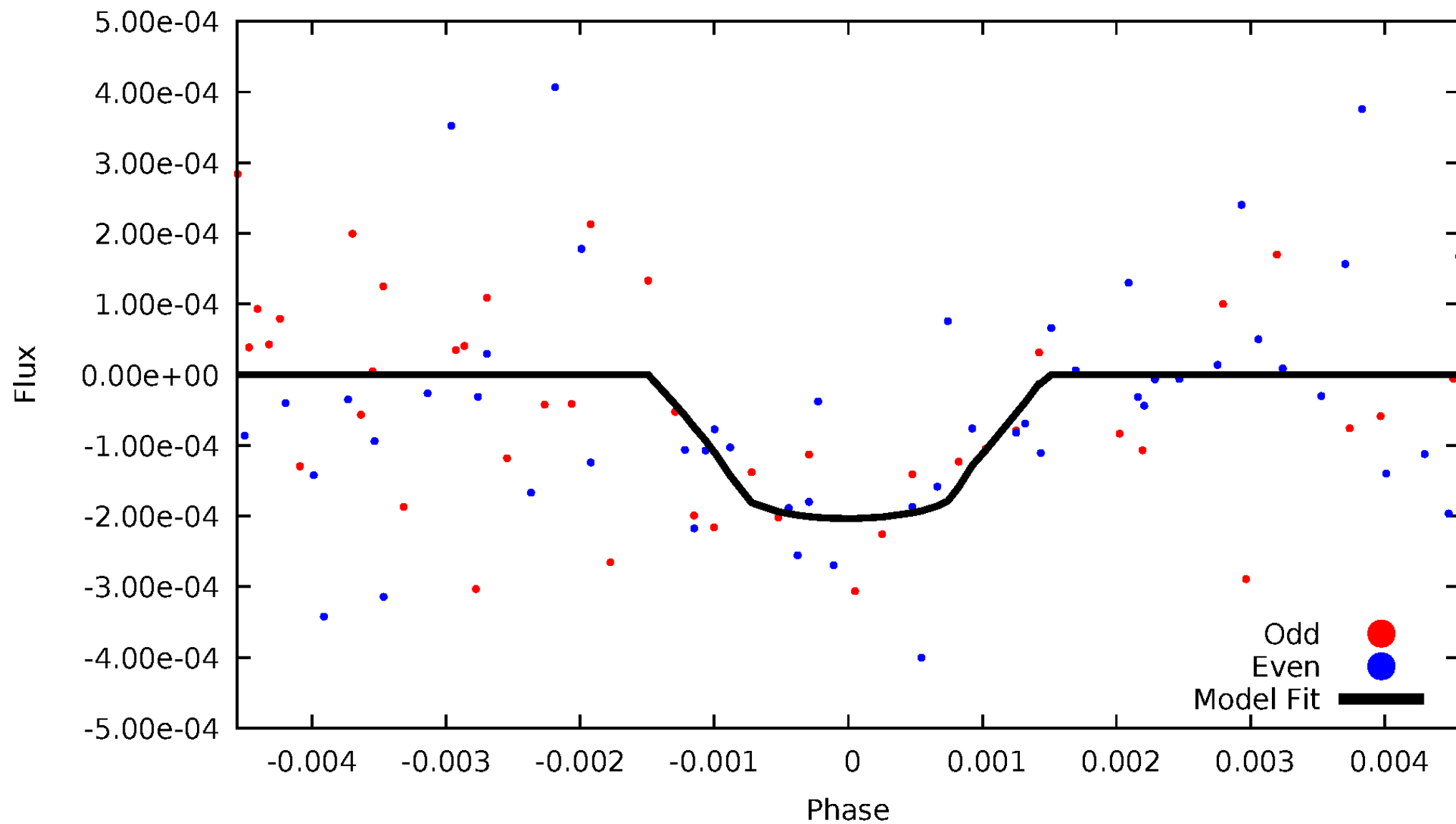


TCE 011572046-06



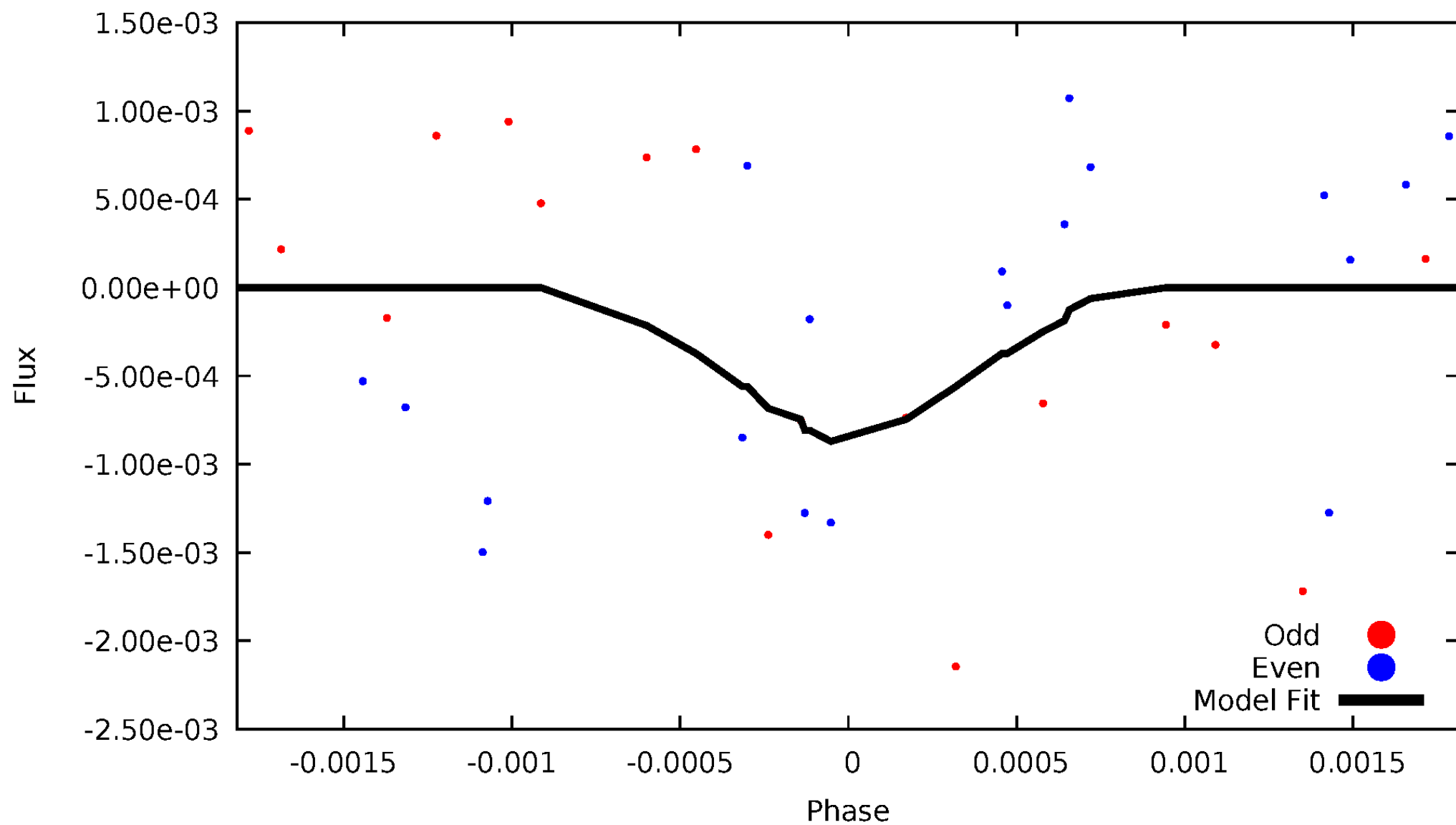
DV Odd/Even

TCE 011572046-06



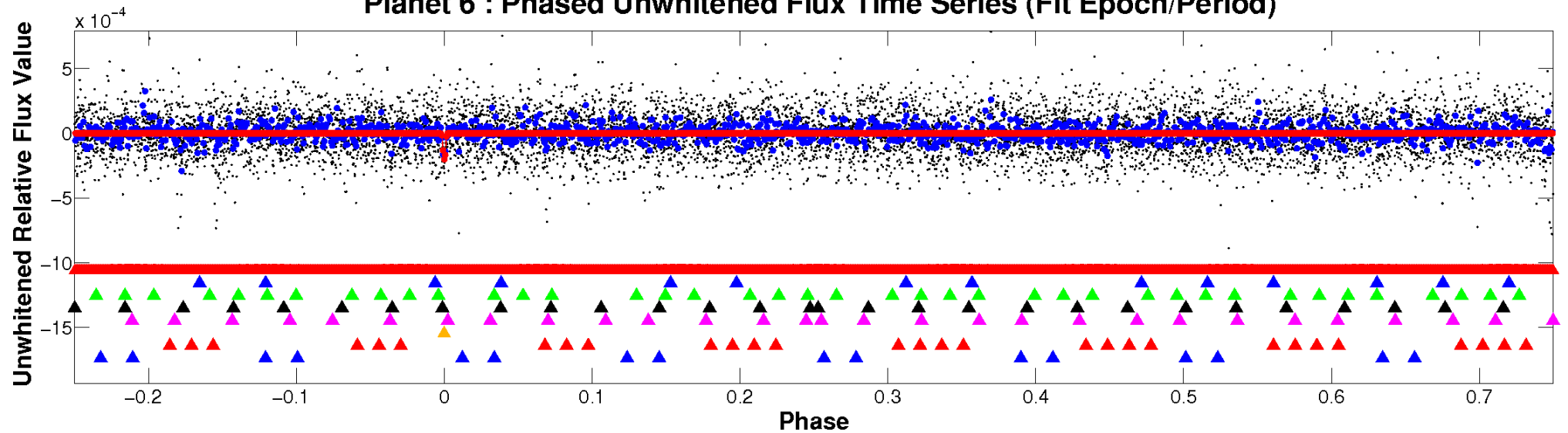
ALT Odd/Even

TCE 011572046-06

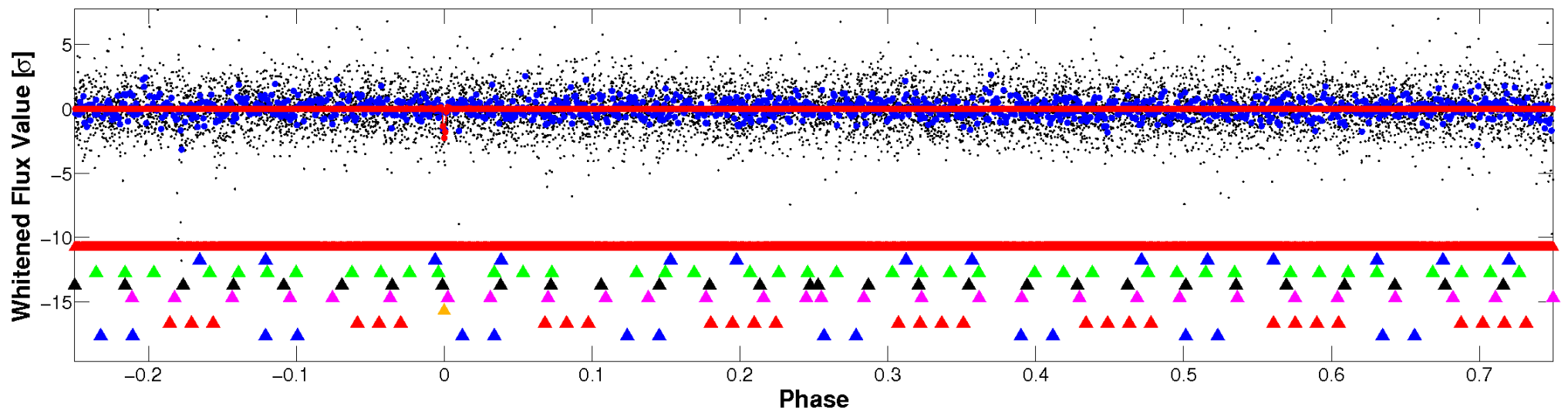


Non-Whitened Vs. Whitened Light Curve

Planet 6 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

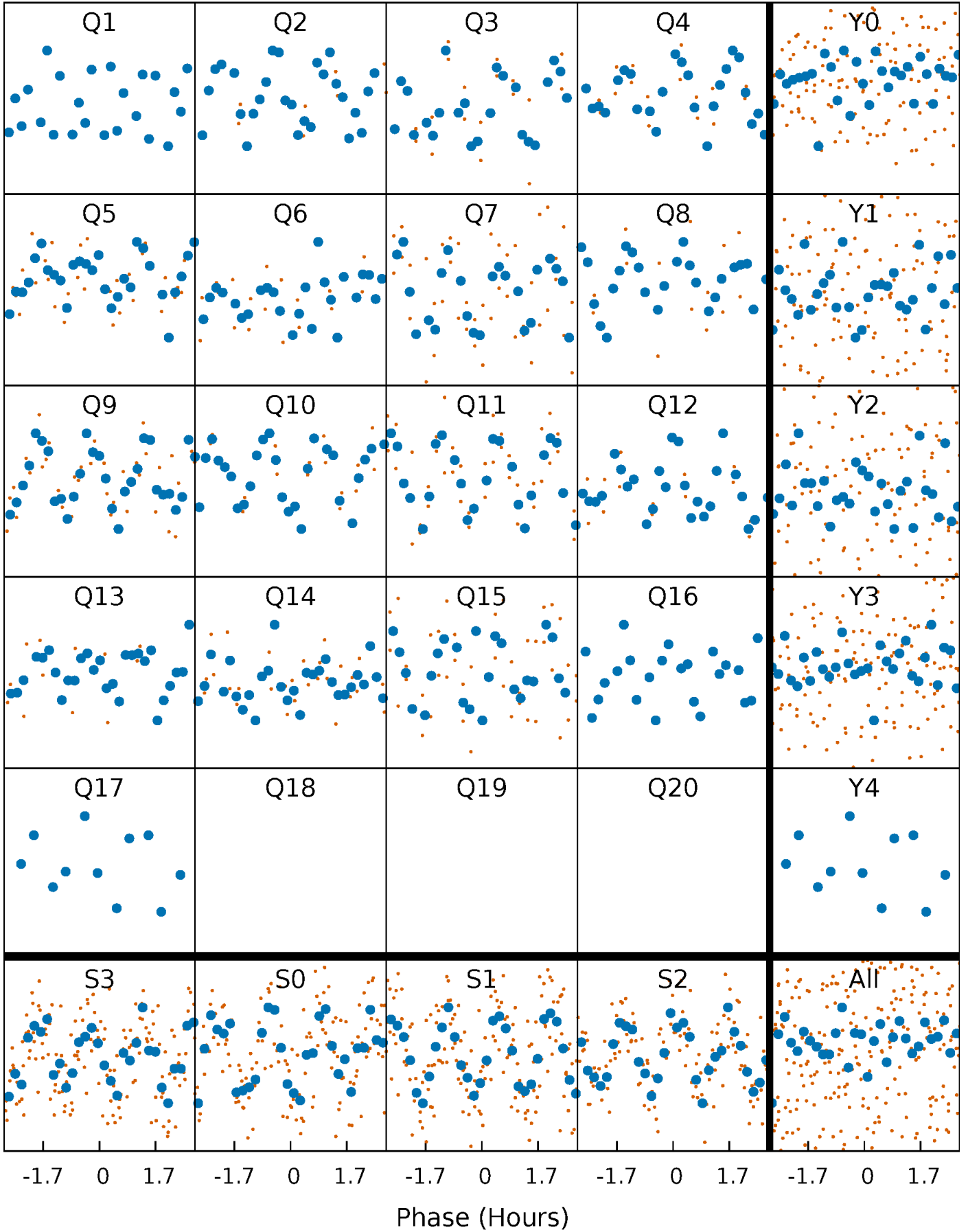


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



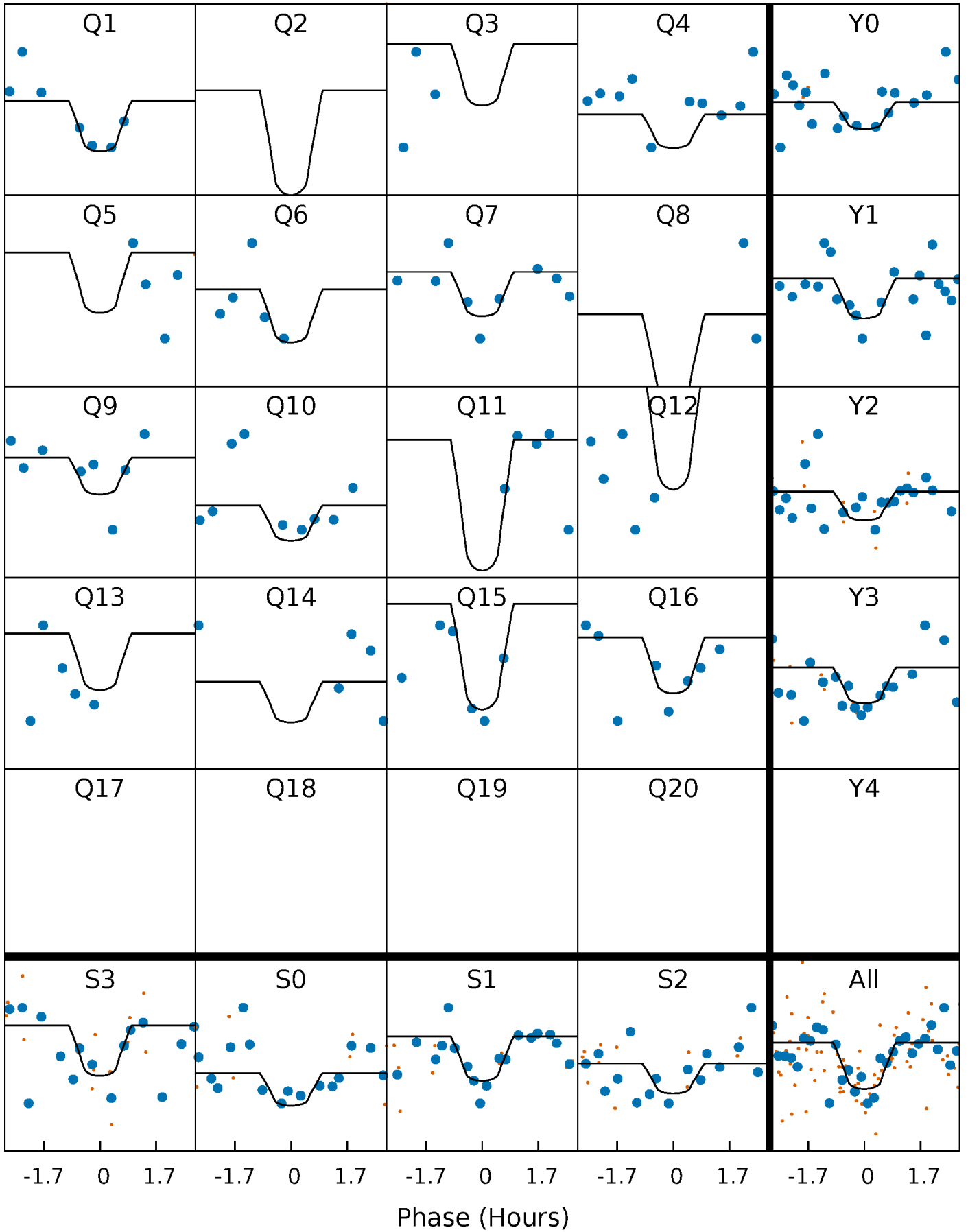
PDC Quarter-Phased Transit Curves

TCE 011572046-06 P= 26.470805 Days $T_0=136.628006$ (BKJD)



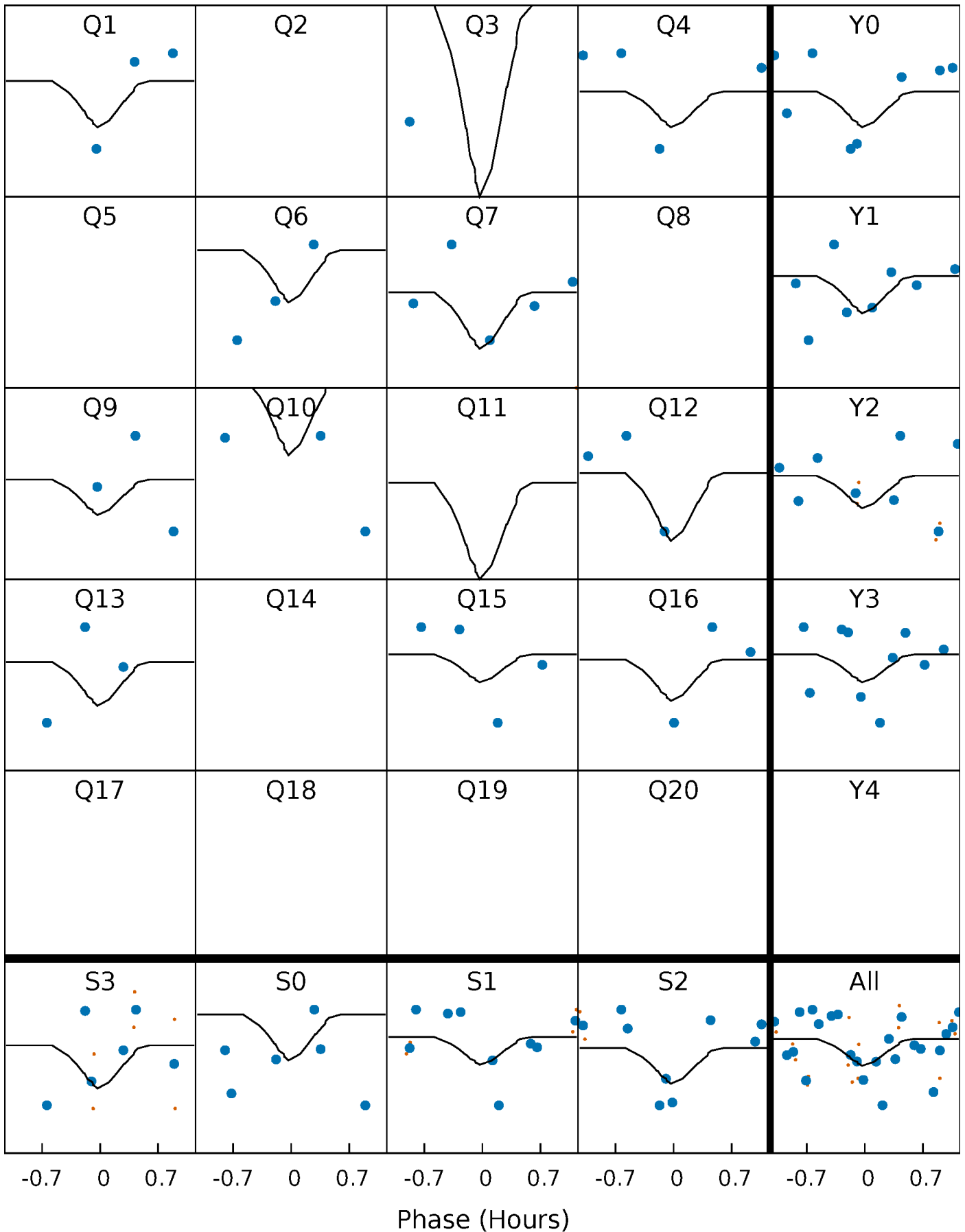
DV Quarter-Phased Transit Curves

TCE 011572046-06 P= 26.470805 Days $T_0=136.628006$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

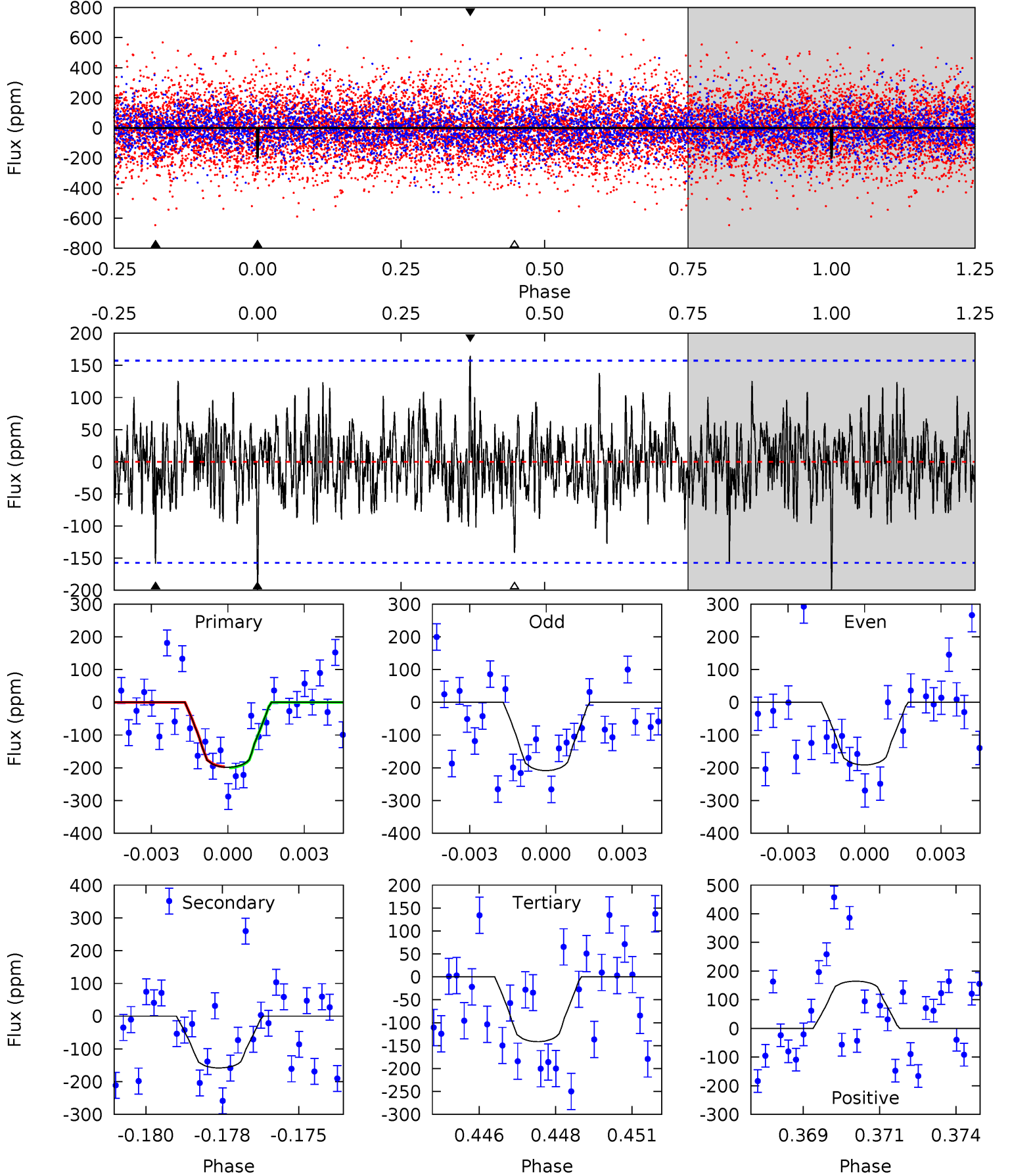
TCE 011572046-06 $P = 26.470859$ Days $T_0 = 136.603242$ (BKJD)



DV Model-Shift Uniqueness Test

011572046-06, P = 26.470805 Days, E = 110.157201 Days

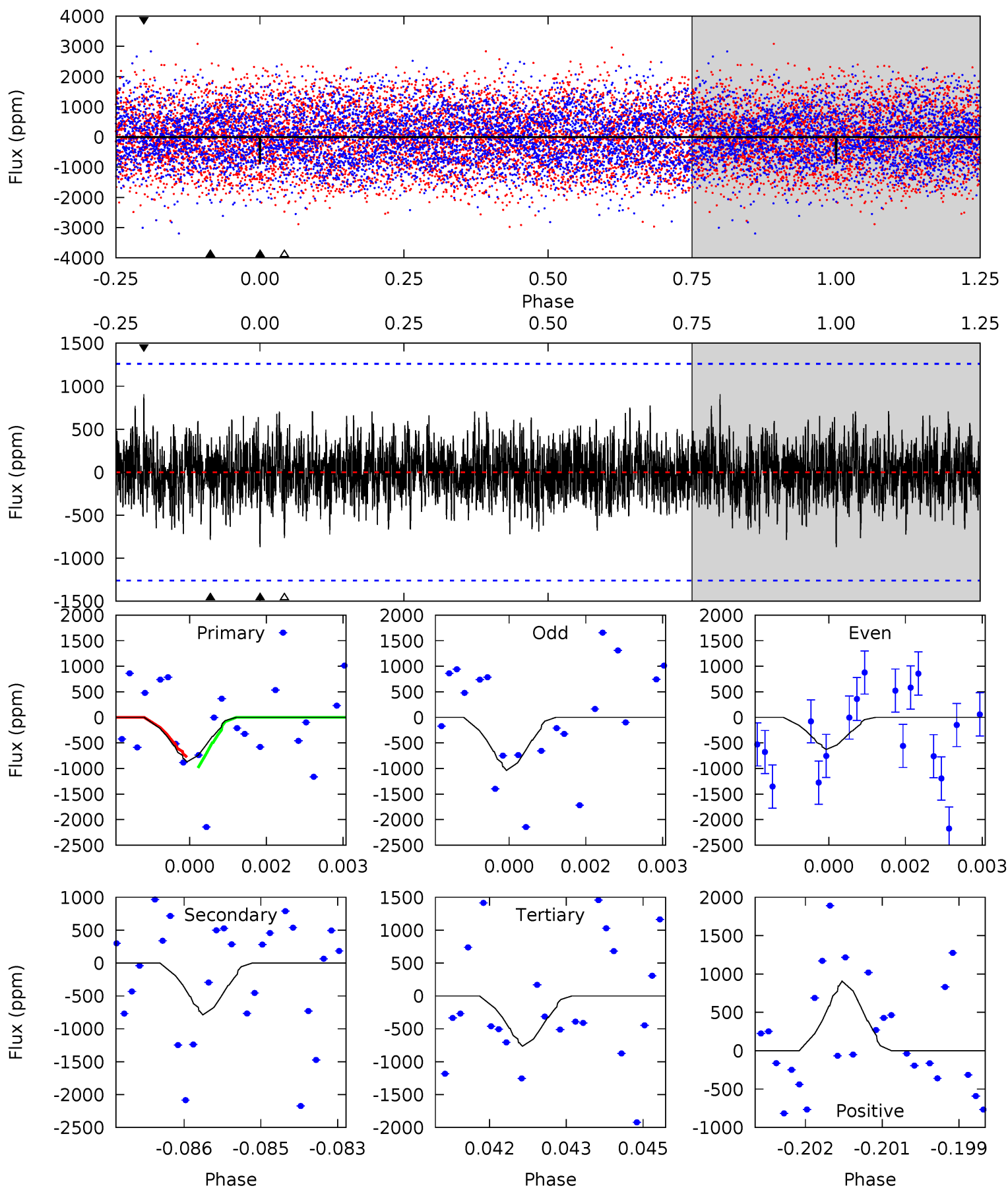
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.66	5.30	4.74	5.53	5.28	3.01	1.40	1.92	1.13	0.56	-0.22	0.29	1.00	0.45	0.05



Alt Model-Shift Uniqueness Test

011572046-06, $P = 26.470859$ Days, $E = 110.132383$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.71	3.36	3.26	3.87	5.37	3.17	1.06	0.44	-0.16	0.09	-0.51	0.84	0.84	0.51	0.45



Stellar Parameters For KIC 011572046

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7693^{+211}_{-316}	$3.739^{+0.392}_{-0.073}$	$-0.080^{+0.200}_{-0.350}$	$3.081^{+0.348}_{-1.391}$	$1.898^{+0.105}_{-0.420}$	$0.091^{+0.331}_{-0.021}$
	+3%/-4%	+10%/-2%	+250%/-438%	+11%/-45%	+6%/-22%	+362%/-23%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 011572046-06 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-158 ± 30	$8.89^{+8.76}_{-6.19}$	1747^{+109}_{-193}	4901^{+4480}_{-1086}	48^{+468}_{-36}
Alt.	-787 ± 235	$12.07^{+8.88}_{-7.63}$	1742^{+118}_{-181}	6301^{+5896}_{-1460}	135^{+853}_{-95}

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

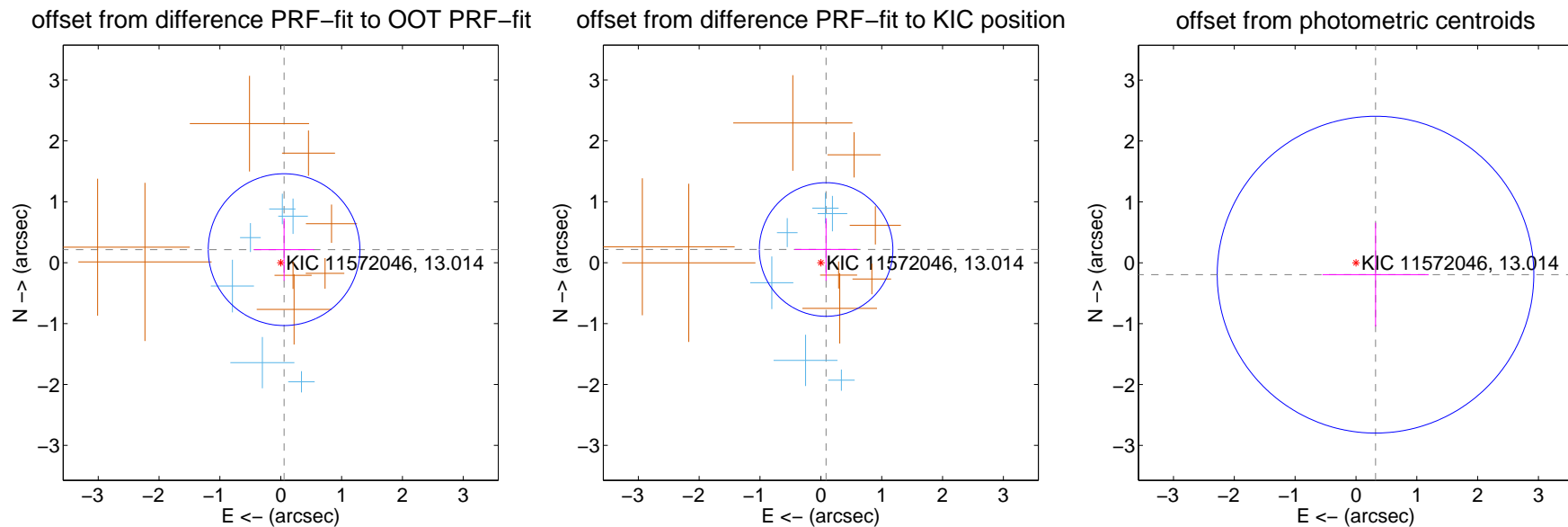
DV Centroid Data

Supplemental centroid analysis for 011572046-06. Kepler magnitude: 13.01. Transit SNR 8.94

There are 6 quarters with good PRF difference image offsets

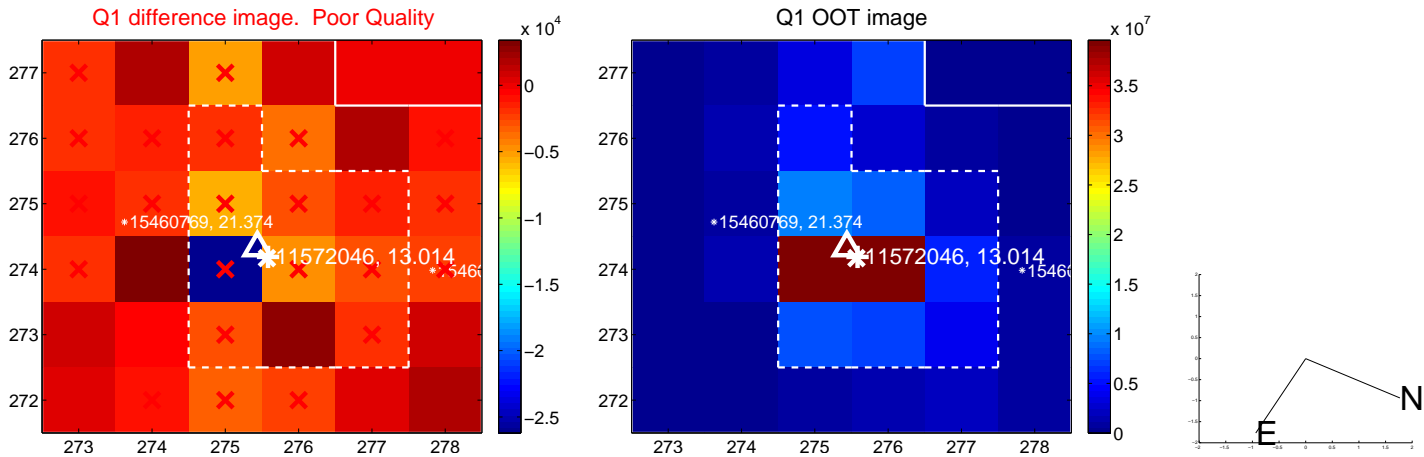
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.221 ± 0.416	0.53	-0.055 ± 0.496	0.214 ± 0.512
PRF-fit source offset from KIC position	0.233 ± 0.366	0.64	-0.086 ± 0.514	0.217 ± 0.514
photometric centroid source offset	0.38 ± 0.87	0.43	-0.32 ± 0.87	-0.20 ± 0.85

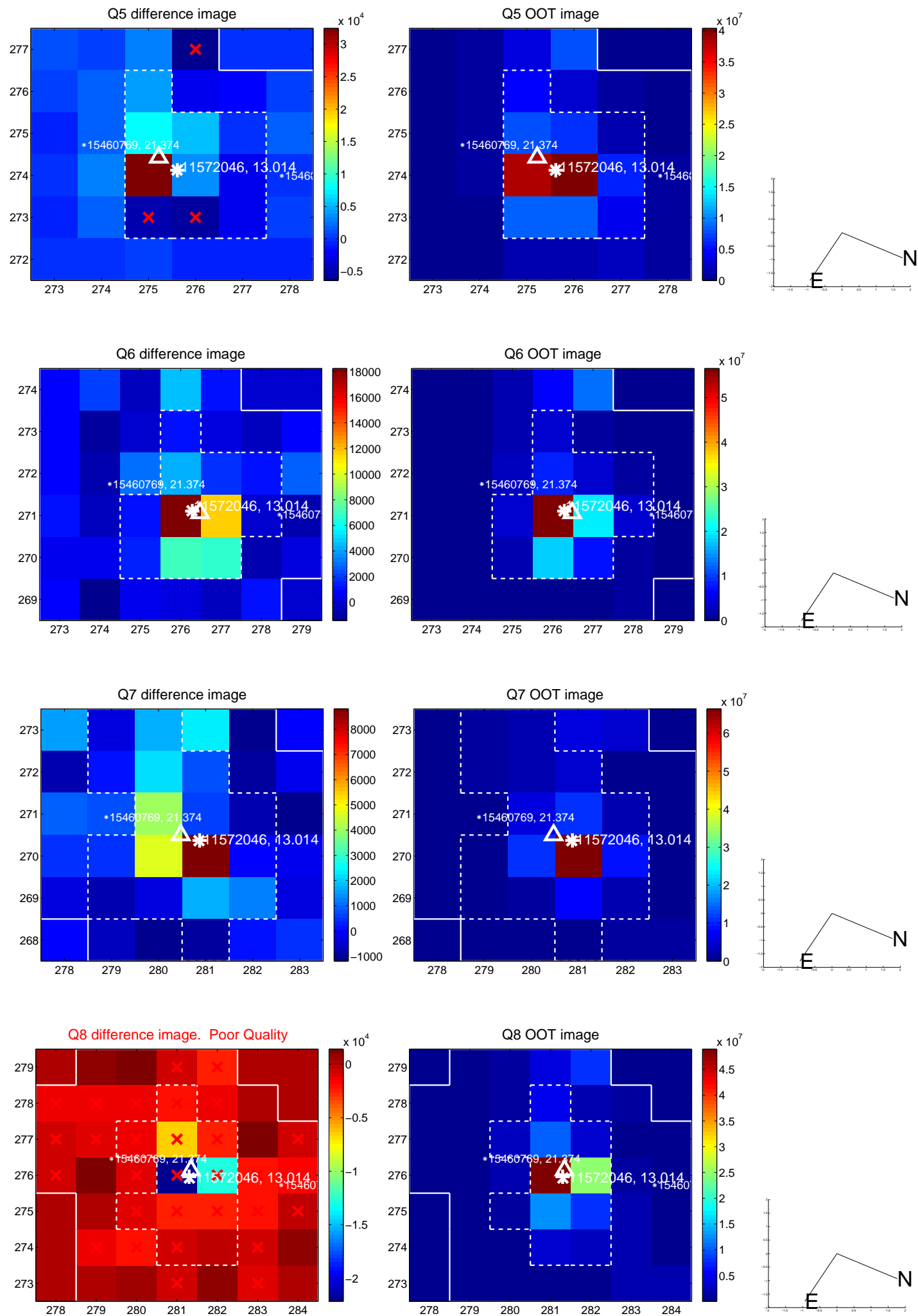


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

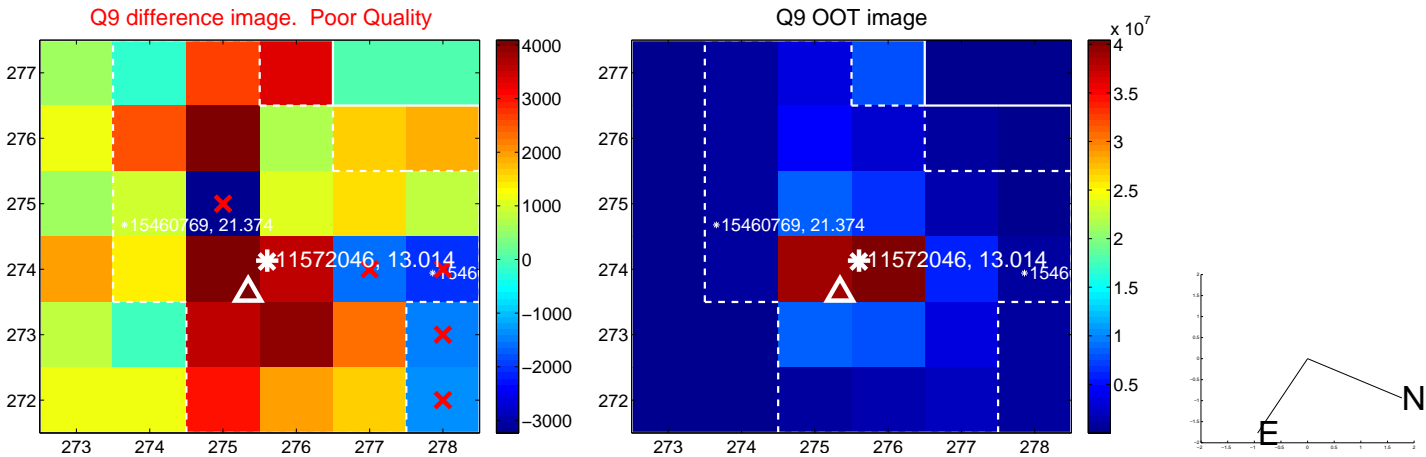
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



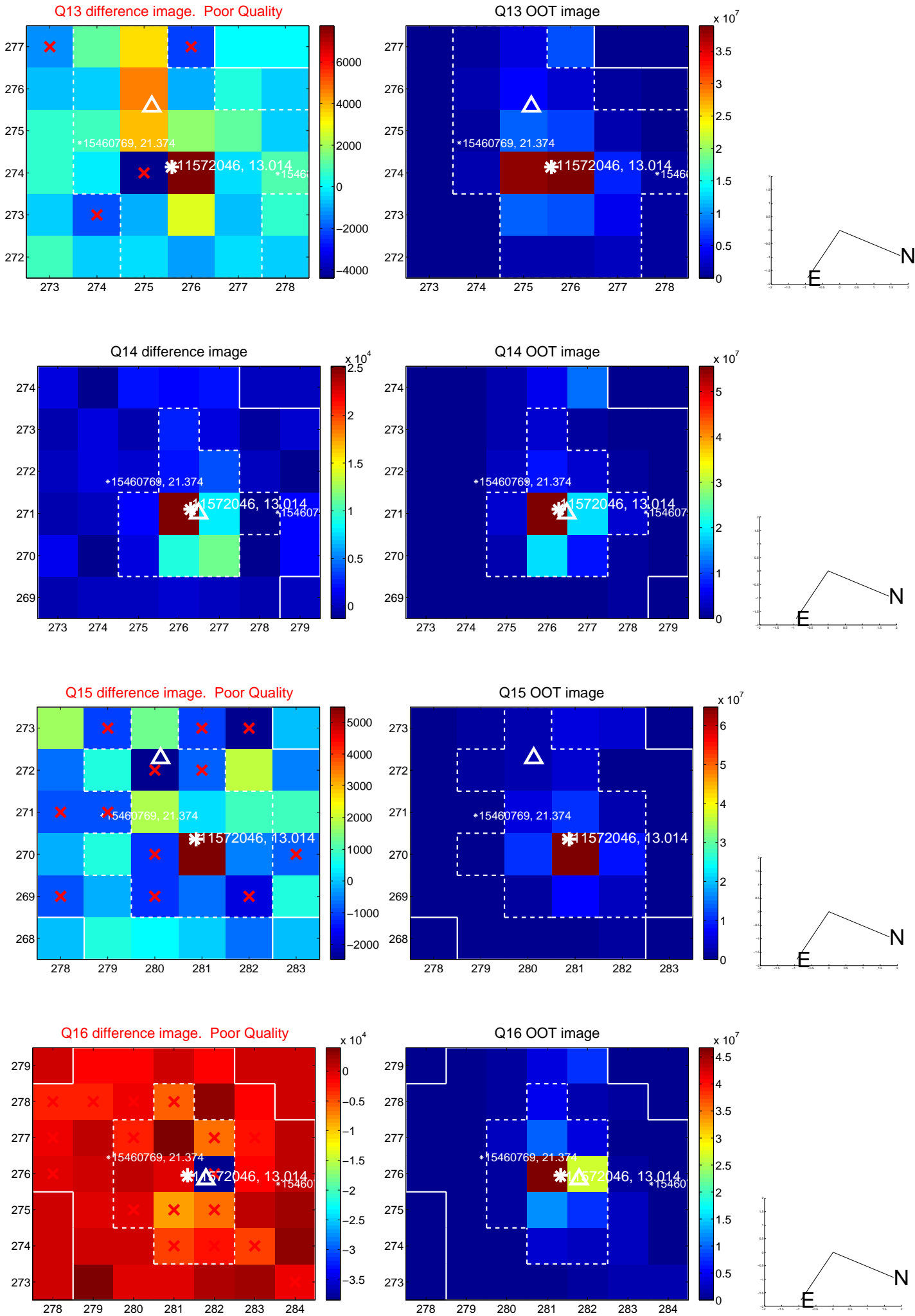
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



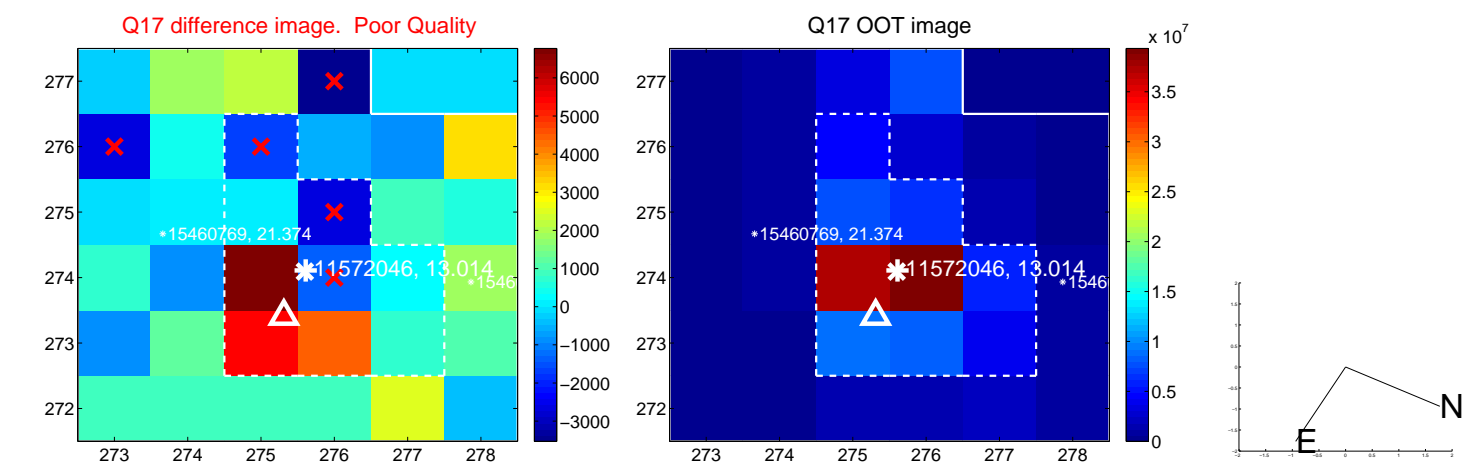
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



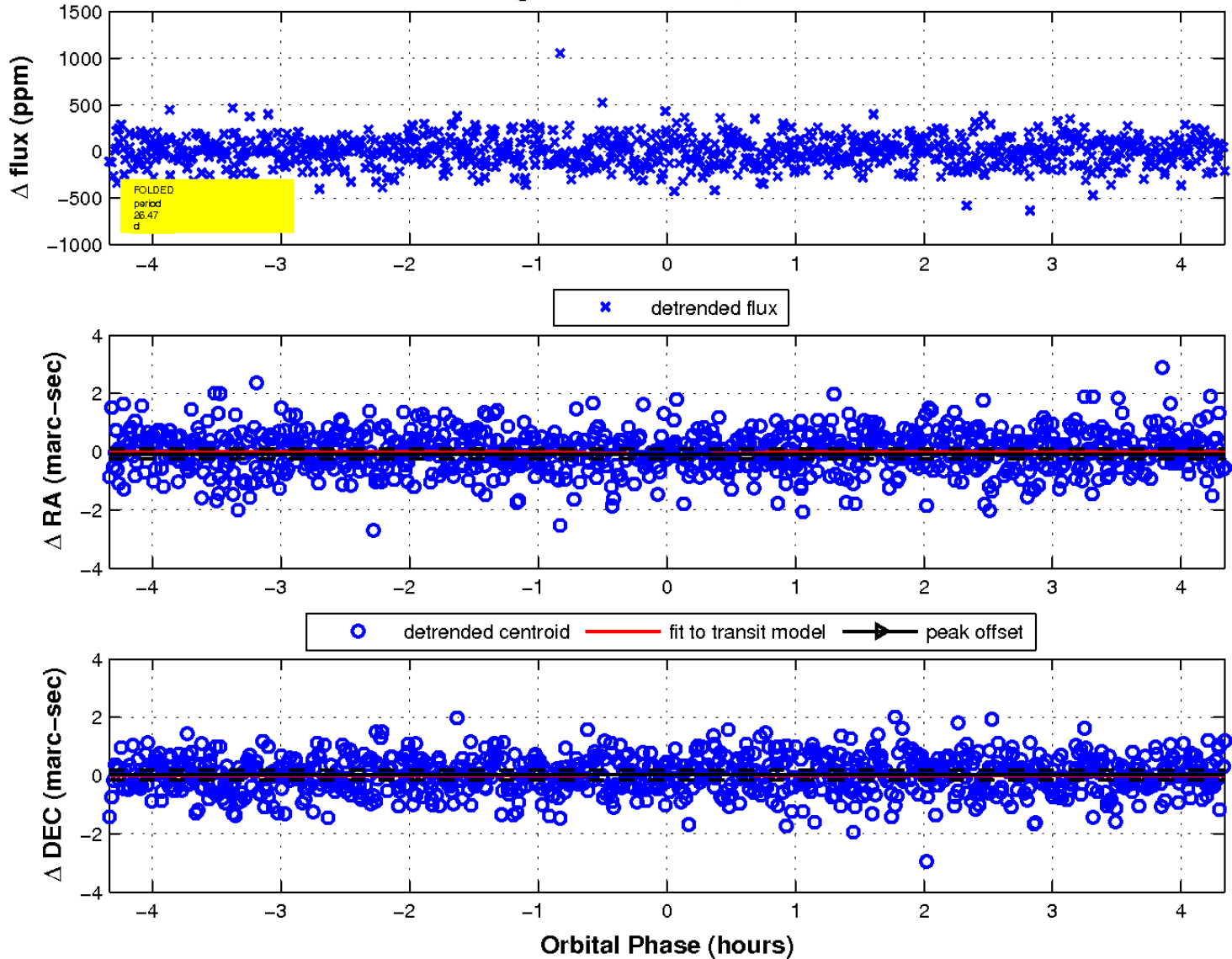
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

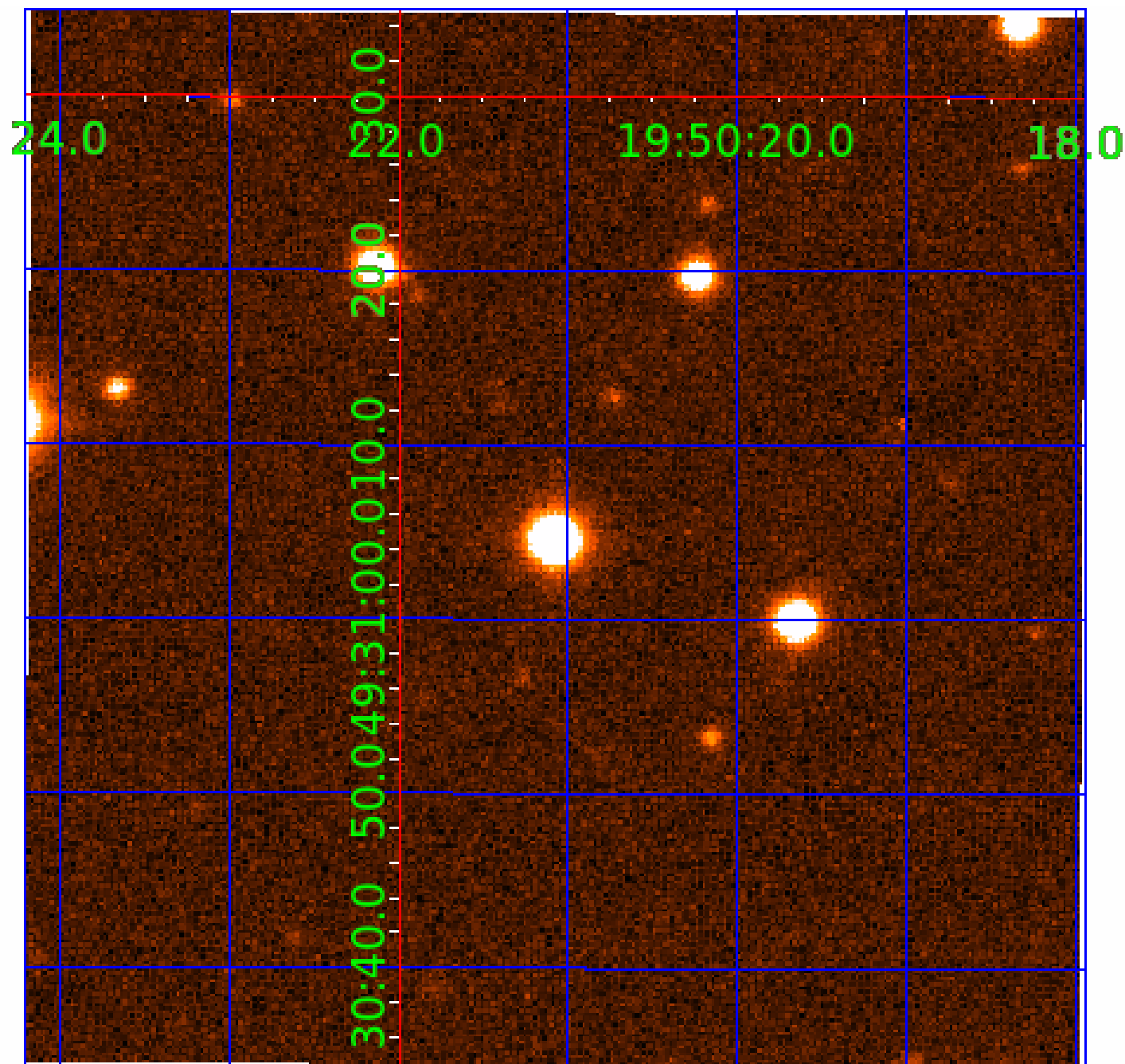


fluxWeightedCentroids, Planet 6 of 8



UKIRT Image

Declination



KIC 011572046

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})
011572046-01	OBS	No	0.642618	131.810580	15.9	4.174	9.3	8.9	3.08	7693	1.32	91439.60
011572046-02	OBS	No	101.668319	232.737823	396.0	1.721	9.0	9.7	3.08	7693	6.96	106.86
011572046-03	OBS	No	36.143464	149.228090	268.5	1.458	9.2	10.8	3.08	7693	5.93	424.32
011572046-04	OBS	No	50.100346	169.792696	107.4	1.105	8.7	2.6	3.08	7693	3.32	274.55
011572046-05	OBS	No	50.115129	169.578882	73.6	29.183	8.4	5.1	3.08	7693	3.04	274.44
011572046-06	OBS	No	26.470805	136.628006	203.5	1.448	8.4	8.9	3.08	7693	4.46	642.76
011572046-07	OBS	No	49.584264	155.994699	415.1	0.873	8.5	9.5	3.08	7693	6.66	278.36

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011572046-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—CENT_UNRESOLVED_OFFSET
011572046-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011572046-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_TER_DV
011572046-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
011572046-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_FEW_DIFFS
011572046-06	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011572046-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV

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

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

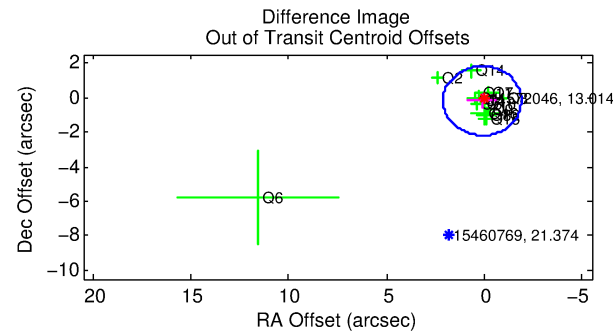
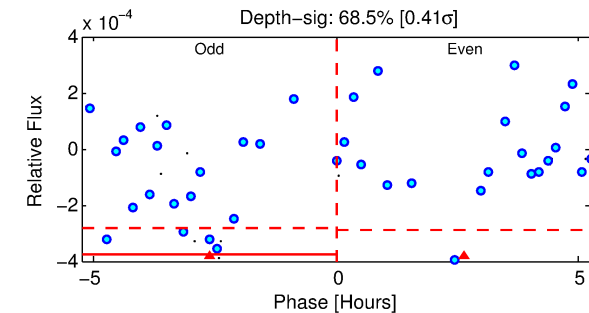
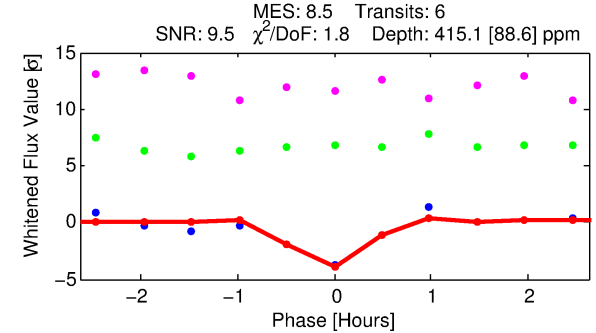
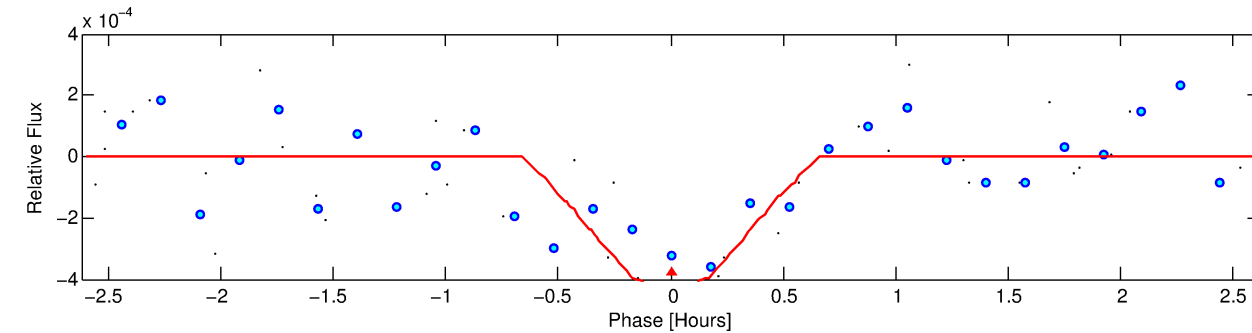
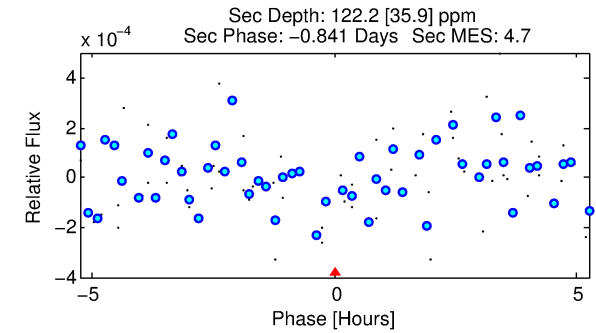
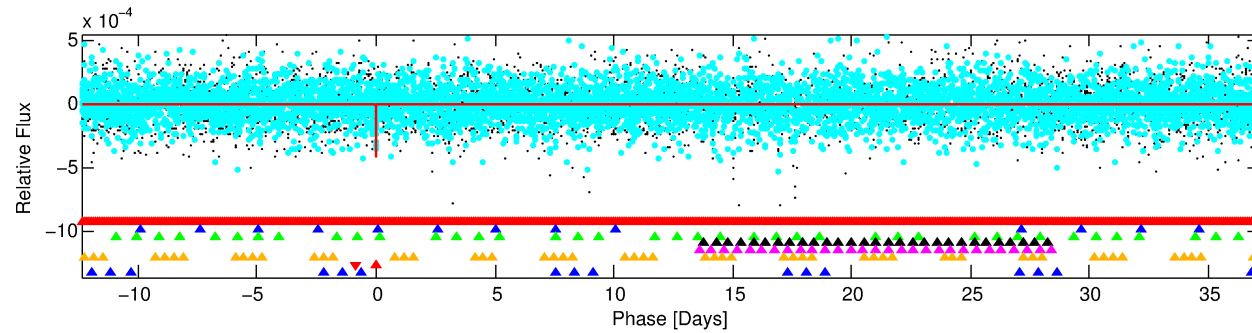
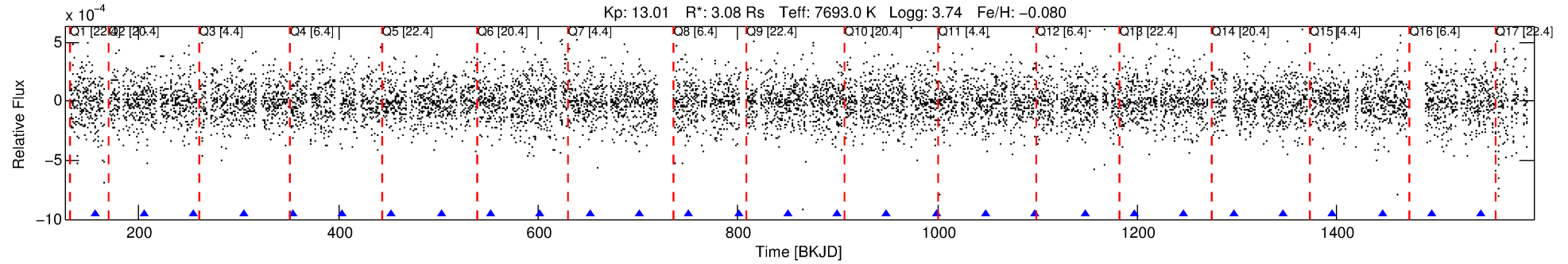
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011572046-07

No Significant Match Found

DV One-Page Summary

KIC: 11572046 Candidate: 7 of 8 Period: 49.584 d



DV Fit Results:

Period = 49.58426 [0.00040] d
Epoch = 155.9947 [0.0043] BKJD
Rp/R* = 0.0198 [0.0171]
a/R* = 360.89 [1701.38]
b = 0.59 [5.37]
Seff = 278.36 [192.79]
Teq = 1042 [180] K
Rp = 6.66 [6.50] Re
a = 0.3271 [0.1392] AU
Ag = 162.44 [305.41] [0.53σ]
Teffp = 5749 [2534] K [1.85σ]

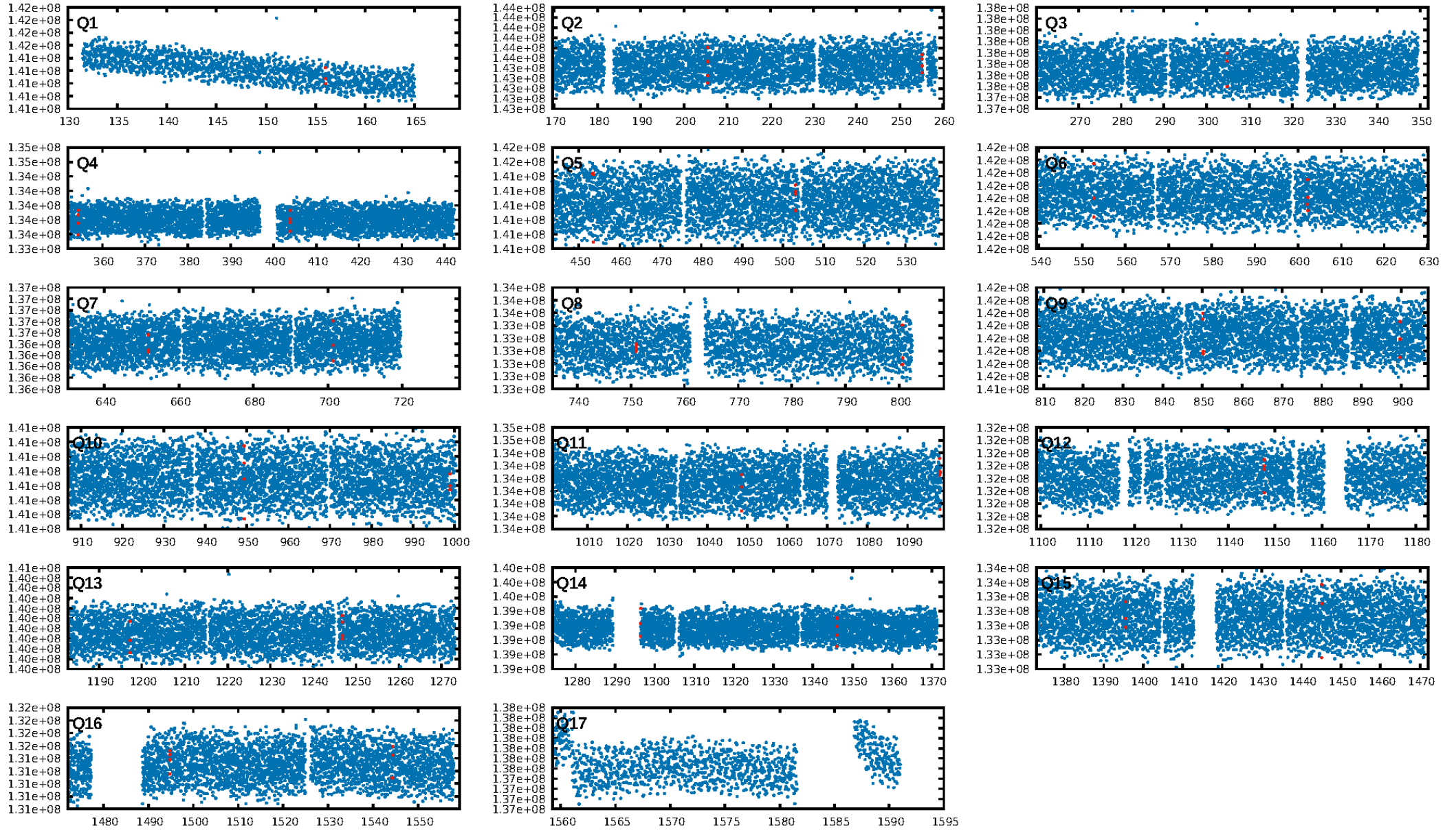
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [189.79σ]
LongPeriod-sig: 100.0% [8.79σ]
ModelChiSquare2-sig: 75.1%
ModelChiSquareGof-sig: 91.3%
Bootstrap-pfa: 2.69e-08
RollingBand-fgt: 1.00 [6/6]
GhostDiagnostic-chr: -9.196
Centroid-sig: 95.9%
Centroid-so: 0.557 arcsec [0.73σ]
OotOffset-rm: 0.225 arcsec [0.34σ]
OotOffset-st: 4/4/4/3 [15]
KicOffset-rm: 0.195 arcsec [0.33σ]
KicOffset-st: 4/4/4/3 [15]
DiffImageQuality-fgm: 0.47 [7/15]
DiffImageOverlap-fno: 0.00 [0/15]

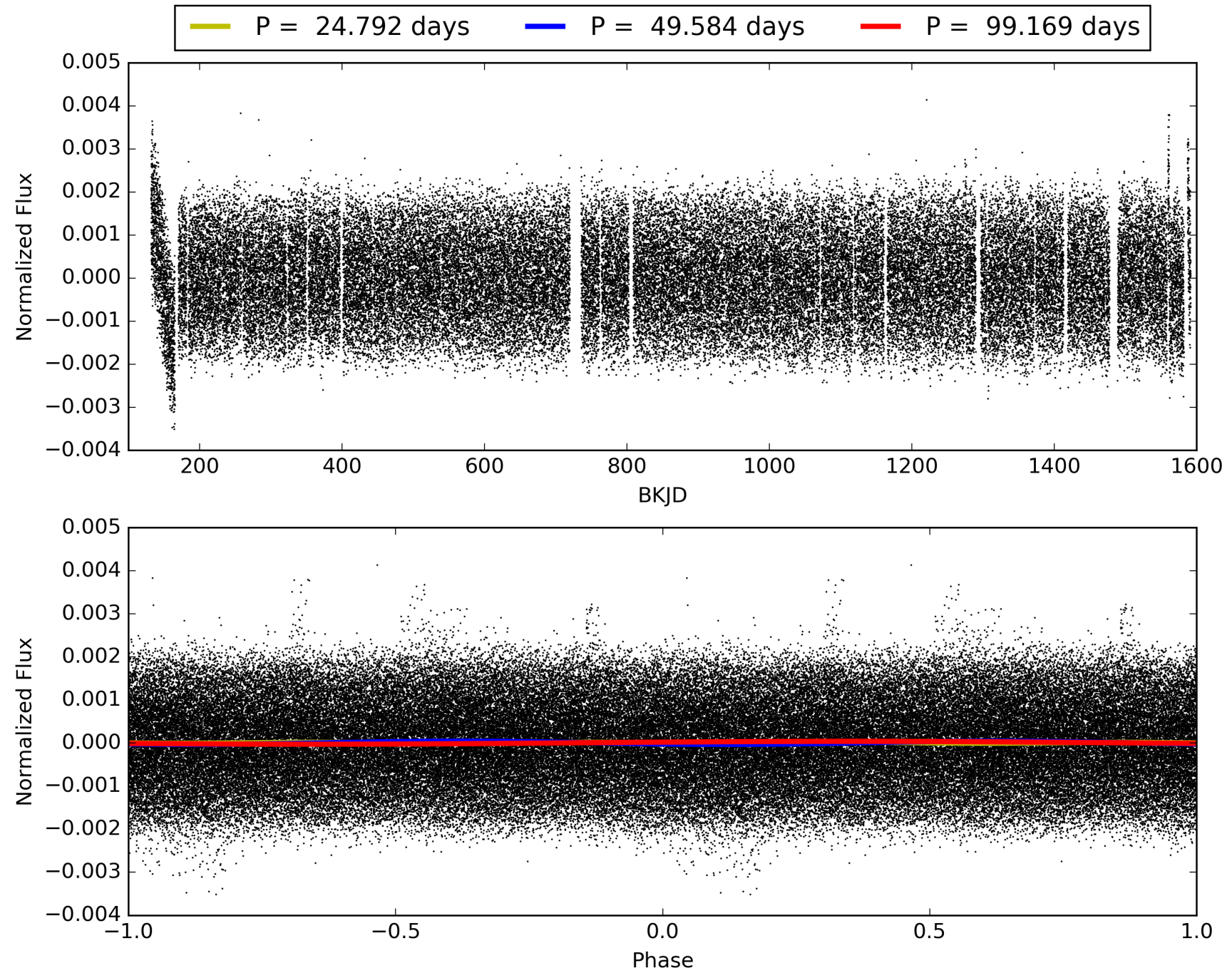
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 18:17:25 Z

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

TCE 011572046-07, PDC Light Curves

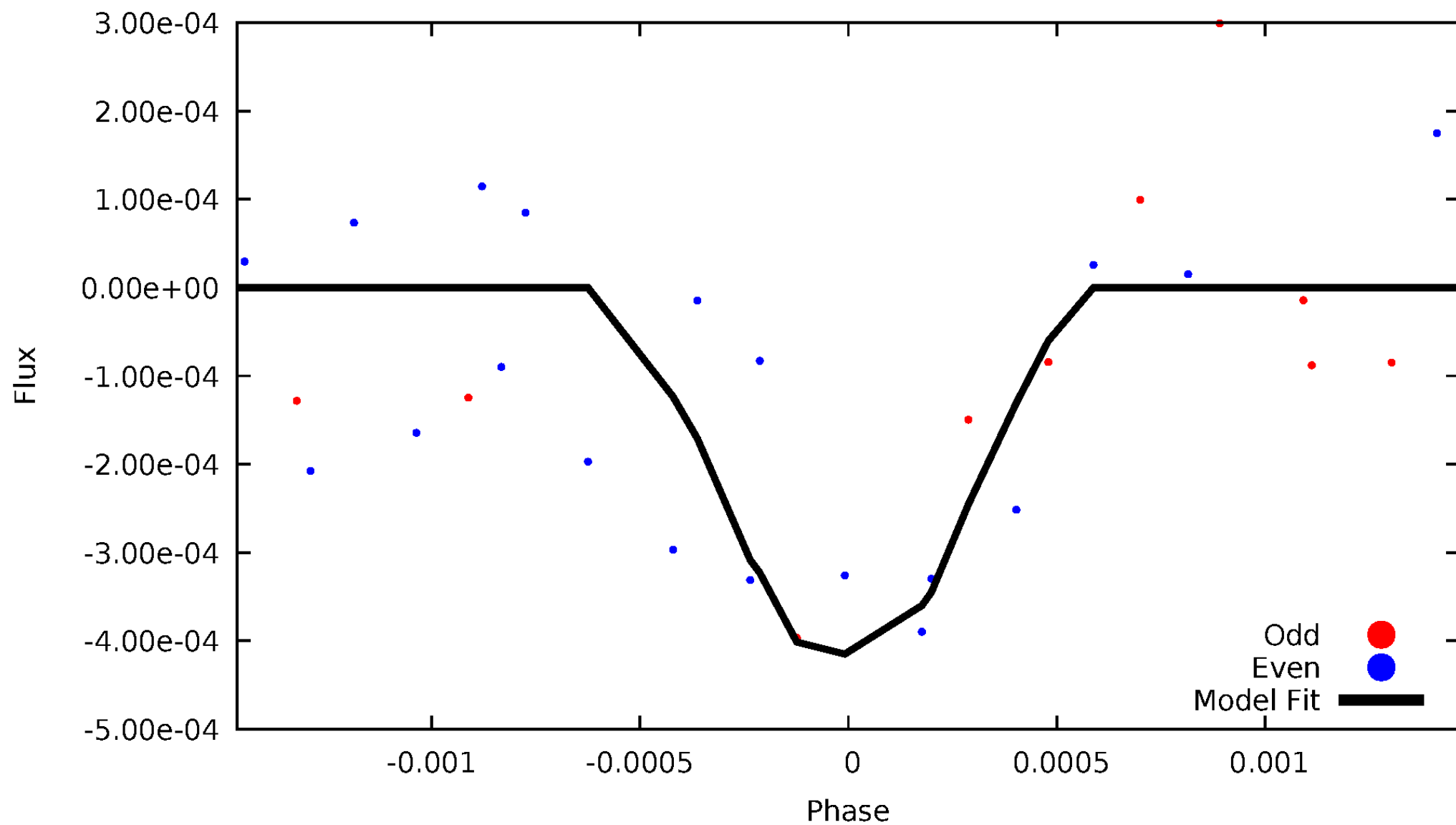


TCE 011572046-07



DV Odd/Even

TCE 011572046-07

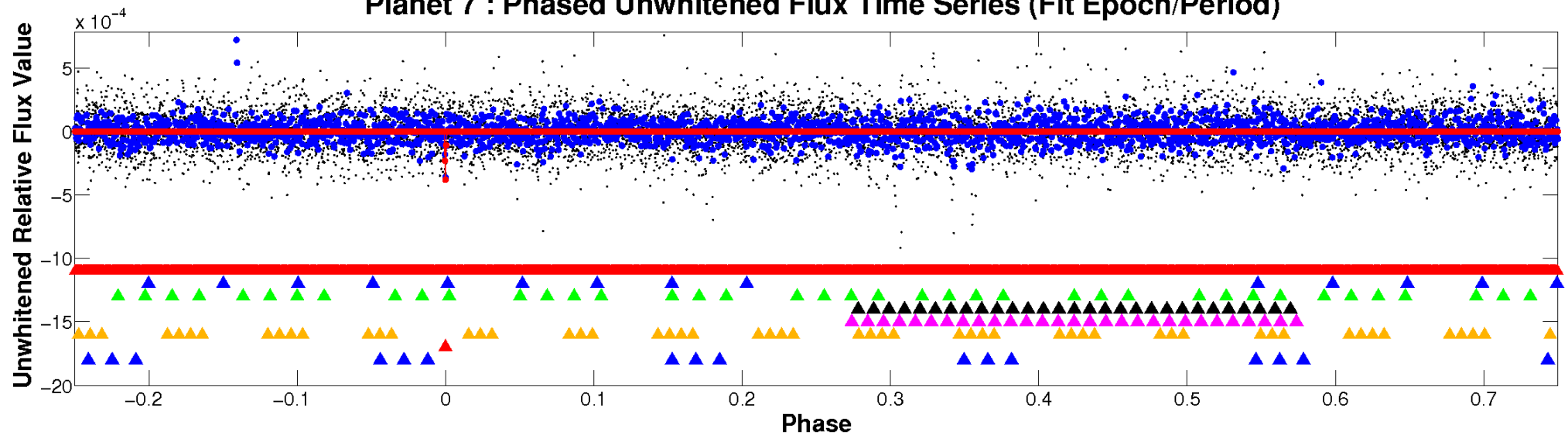


ALT Odd/Even

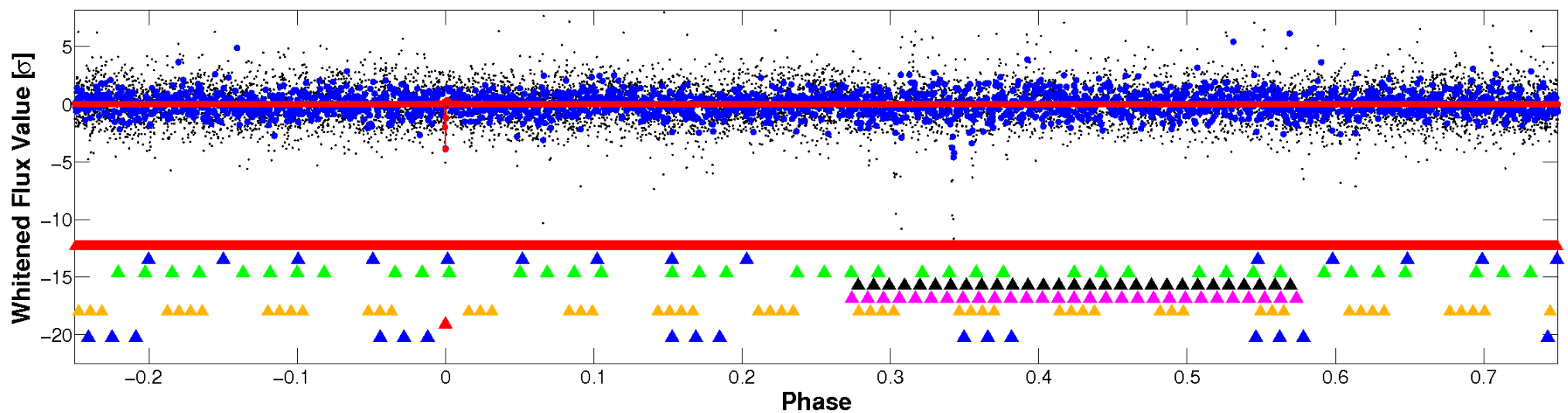
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

Planet 7 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

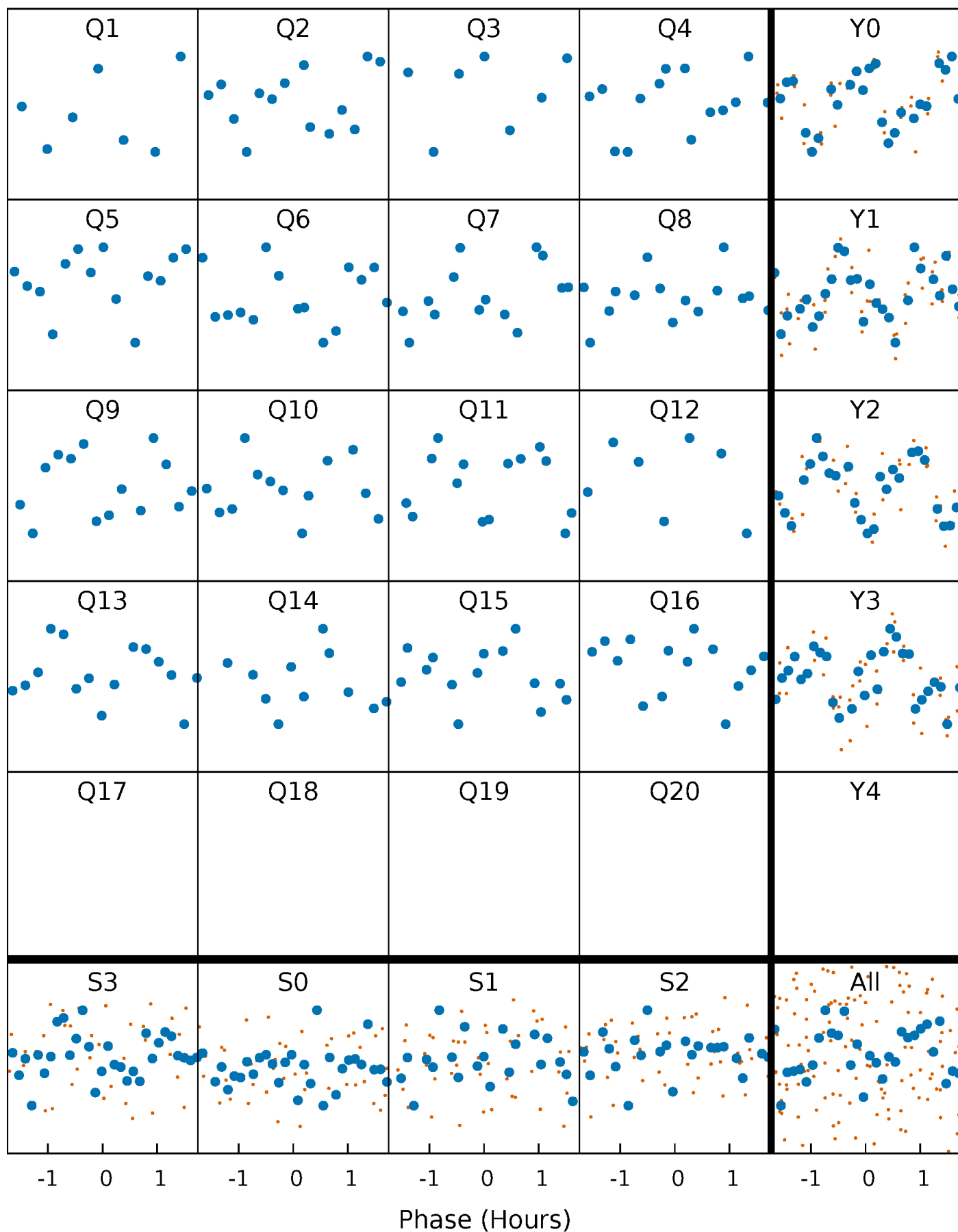


Planet 7 : Phased Whitened Flux Time Series (Fit Epoch/Period)



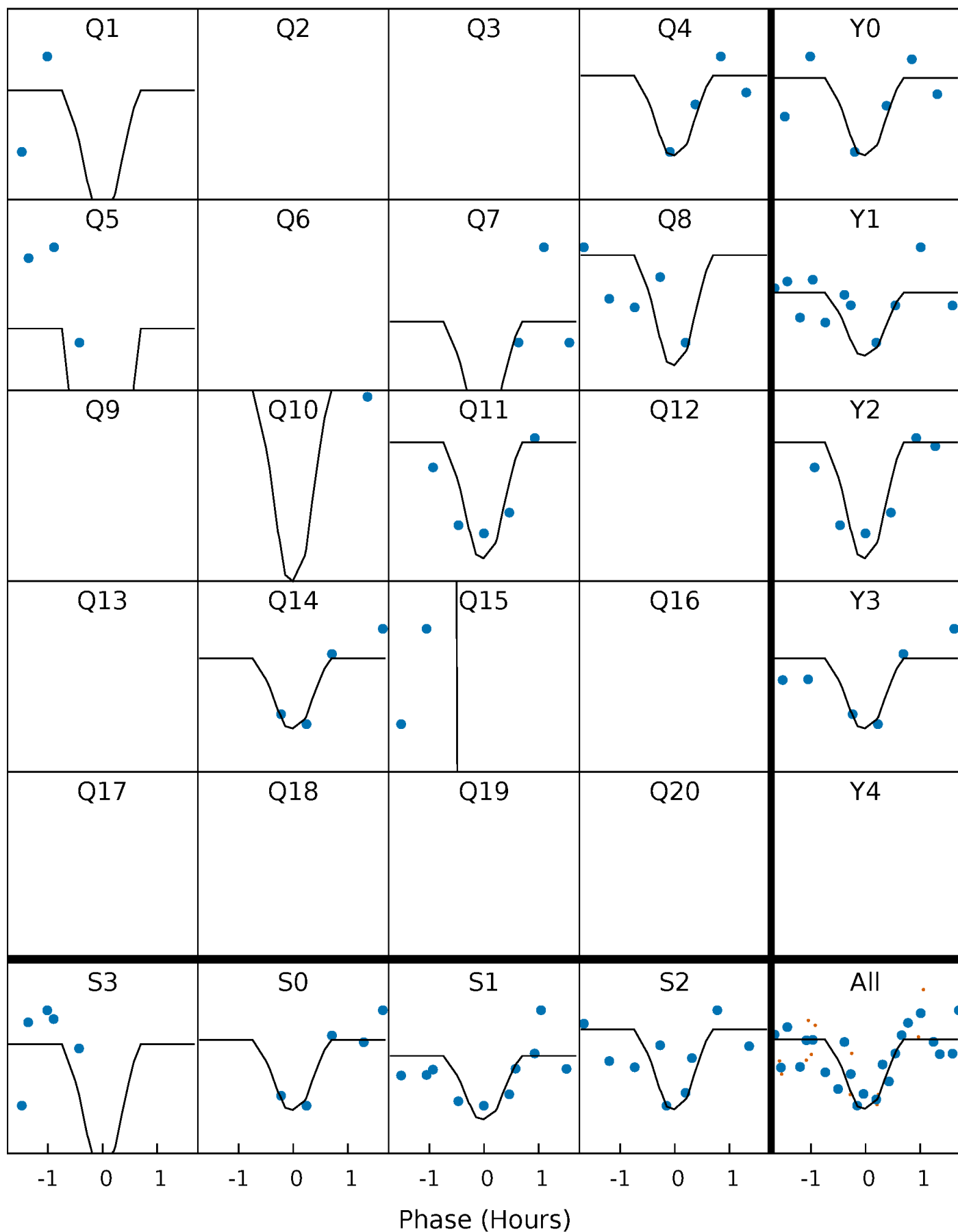
PDC Quarter-Phased Transit Curves

TCE 011572046-07 P= 49.584264 Days $T_0=155.994699$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 011572046-07 P= 49.584264 Days $T_0=155.994699$ (BKJD)

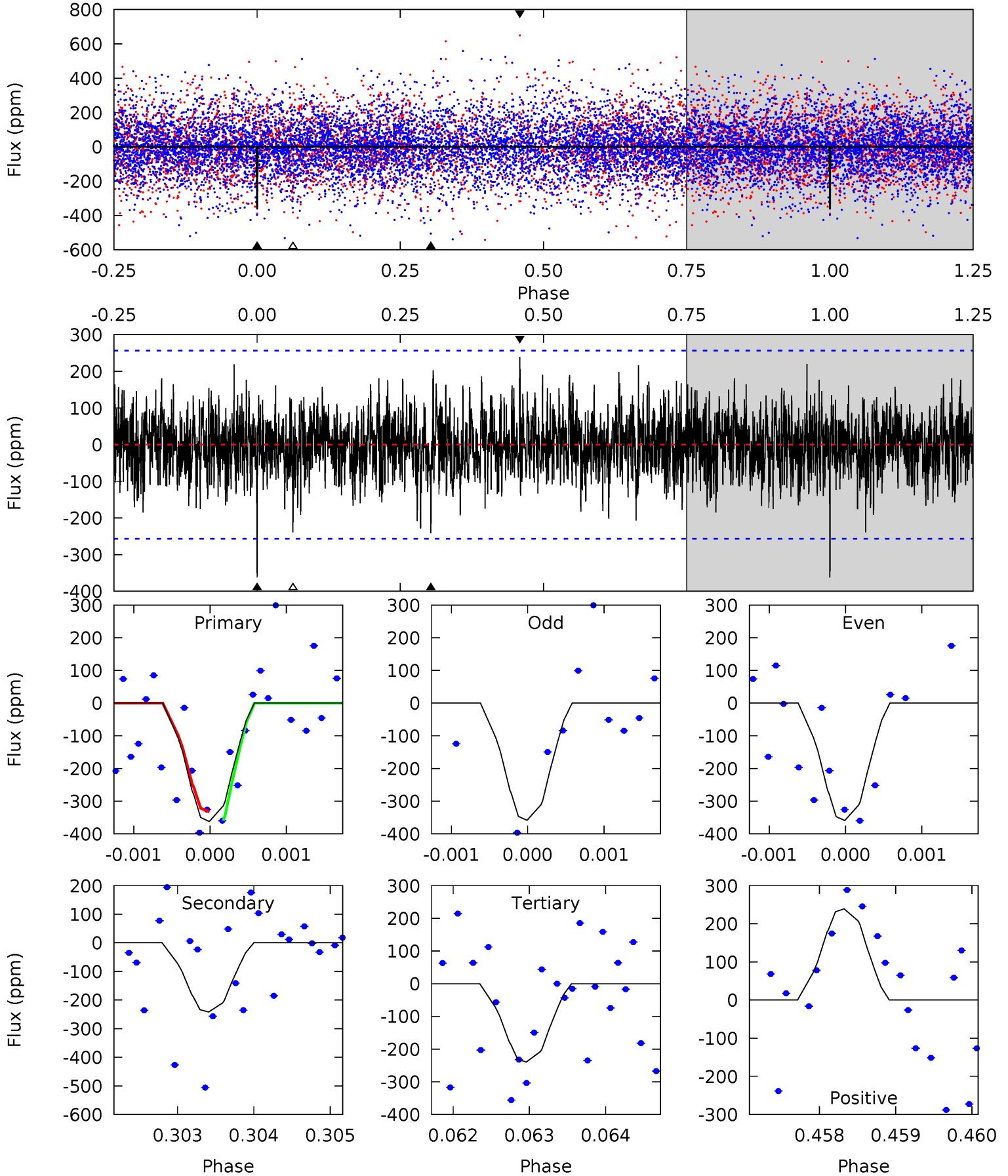


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

011572046-07, P = 49.584264 Days, E = 106.410435 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.69	5.14	5.09	5.08	5.45	3.29	1.40	2.61	2.61	0.05	0.06	0.01	0.95	0.40	0.28



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 011572046

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7693^{+211}_{-316}	$3.739^{+0.392}_{-0.073}$	$-0.080^{+0.200}_{-0.350}$	$3.081^{+0.348}_{-1.391}$	$1.898^{+0.105}_{-0.420}$	$0.091^{+0.331}_{-0.021}$
	+3%/-4%	+10%/-2%	+250%/-438%	+11%/-45%	+6%/-22%	+362%/-23%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 011572046-07 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-242 ± 47	$6.84^{+5.78}_{-3.99}$	1413^{+88}_{-157}	6240^{+4109}_{-1497}	290^{+1349}_{-205}
Alt.	N/A	N/A	N/A	N/A	N/A

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 $A_{obs} \gg 1.0$

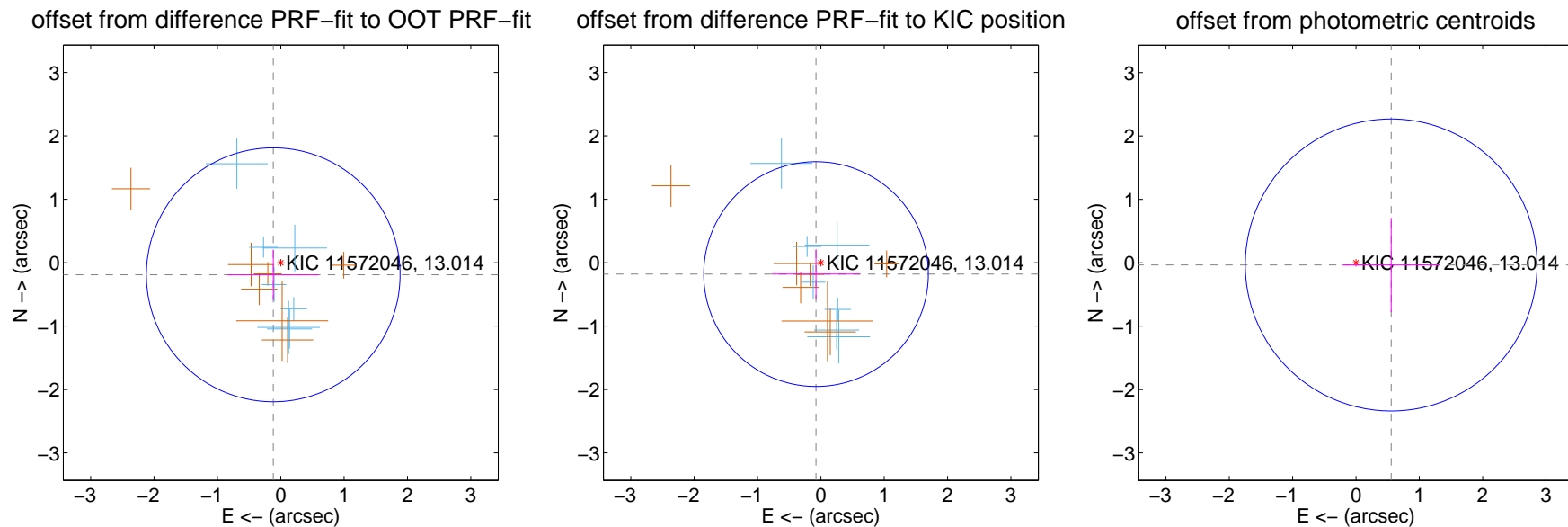
DV Centroid Data

Supplemental centroid analysis for 011572046-07. Kepler magnitude: 13.01. Transit SNR 9.52

There are 7 quarters with good PRF difference image offsets

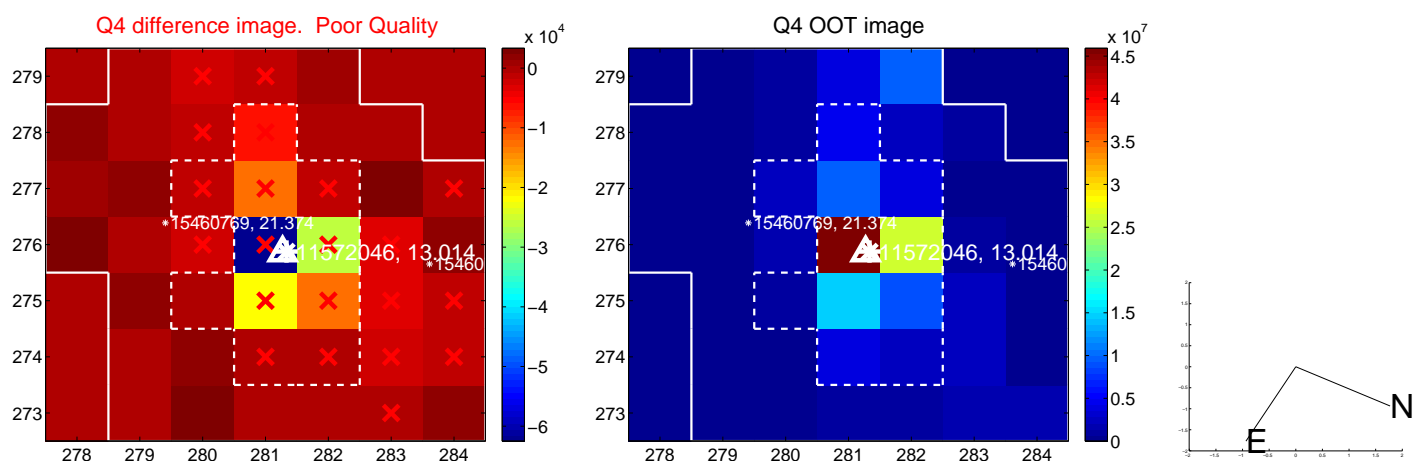
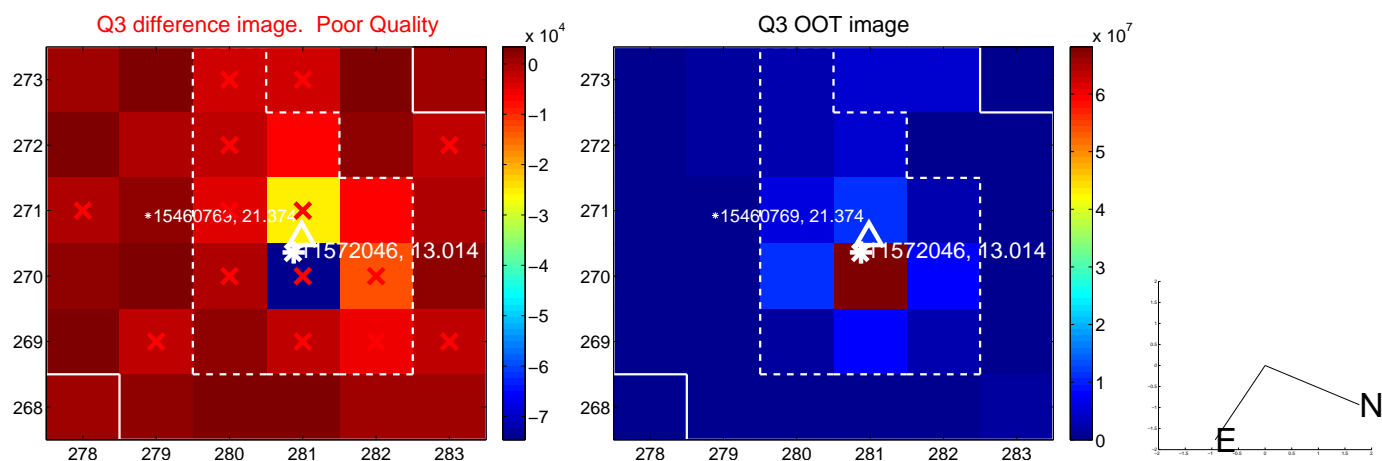
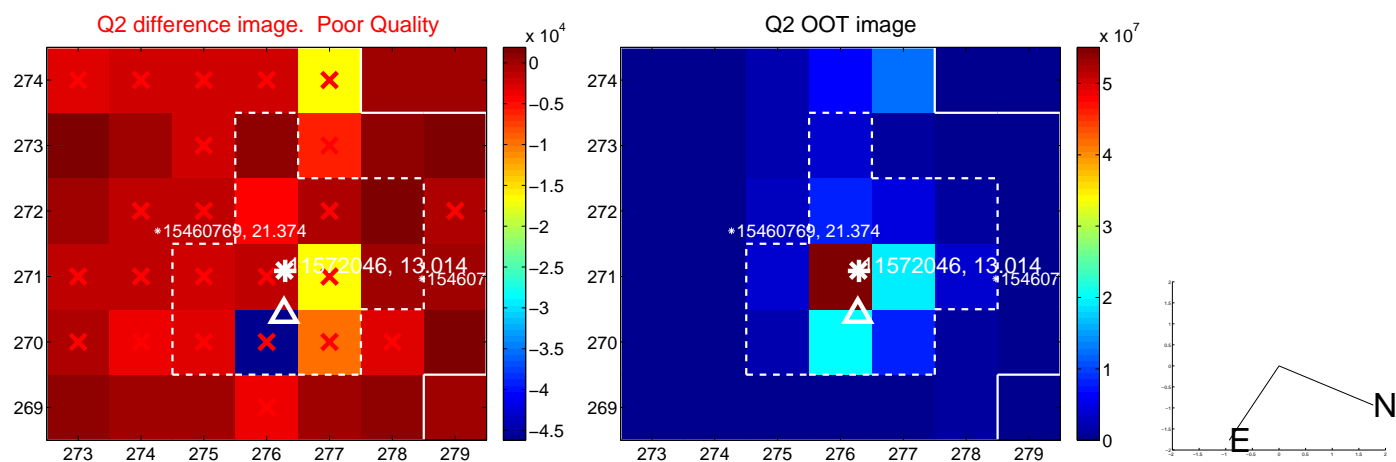
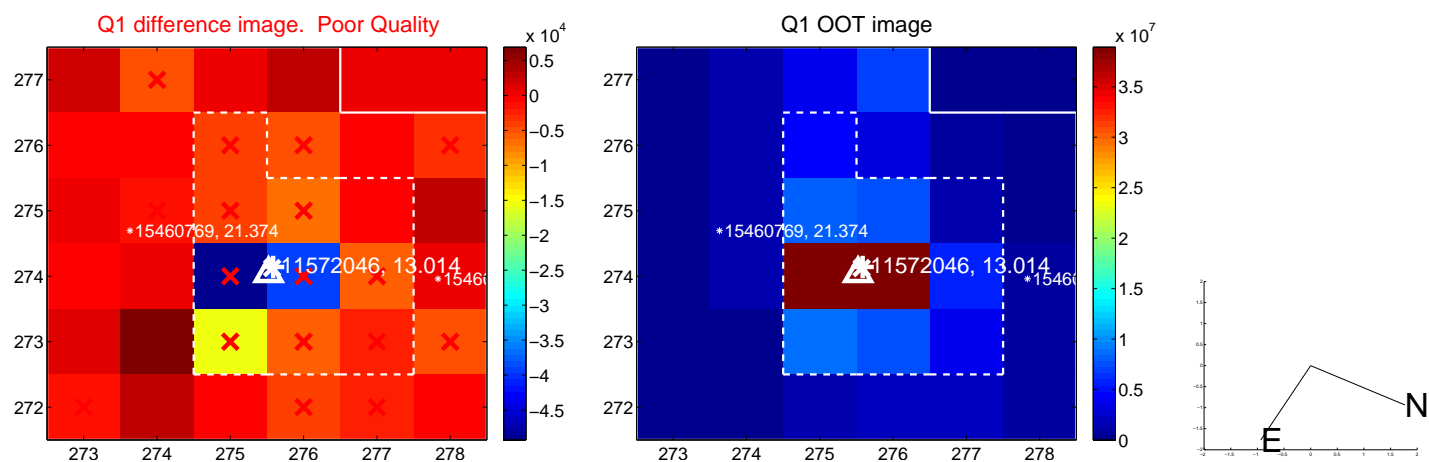
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.225 ± 0.668	0.34	0.118 ± 0.718	-0.191 ± 0.396
PRF-fit source offset from KIC position	0.195 ± 0.591	0.33	0.077 ± 0.697	-0.180 ± 0.392
photometric centroid source offset	0.56 ± 0.77	0.73	-0.56 ± 0.77	-0.03 ± 0.74

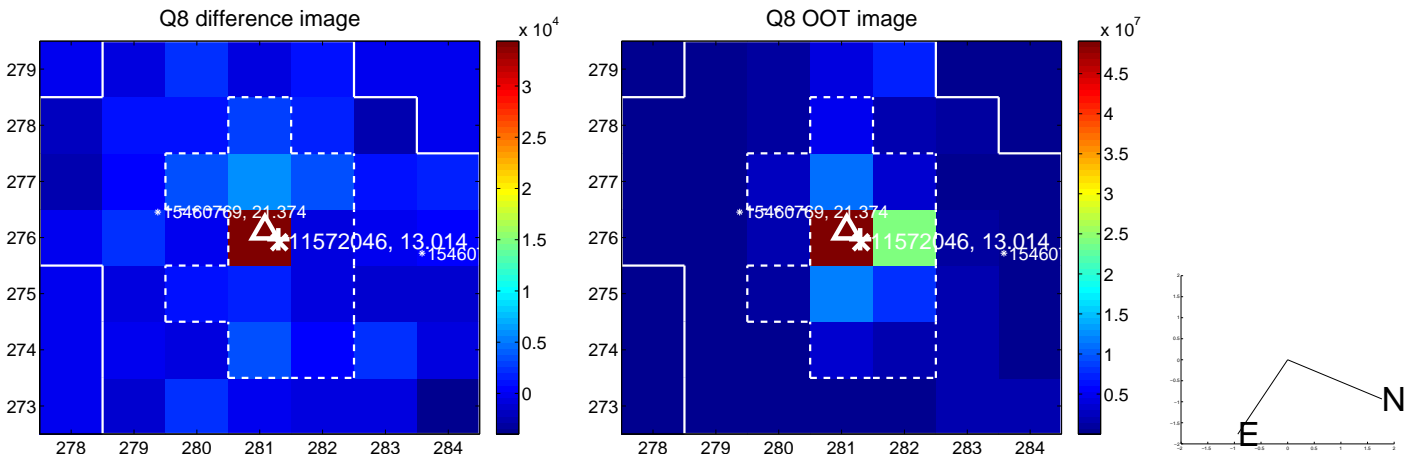
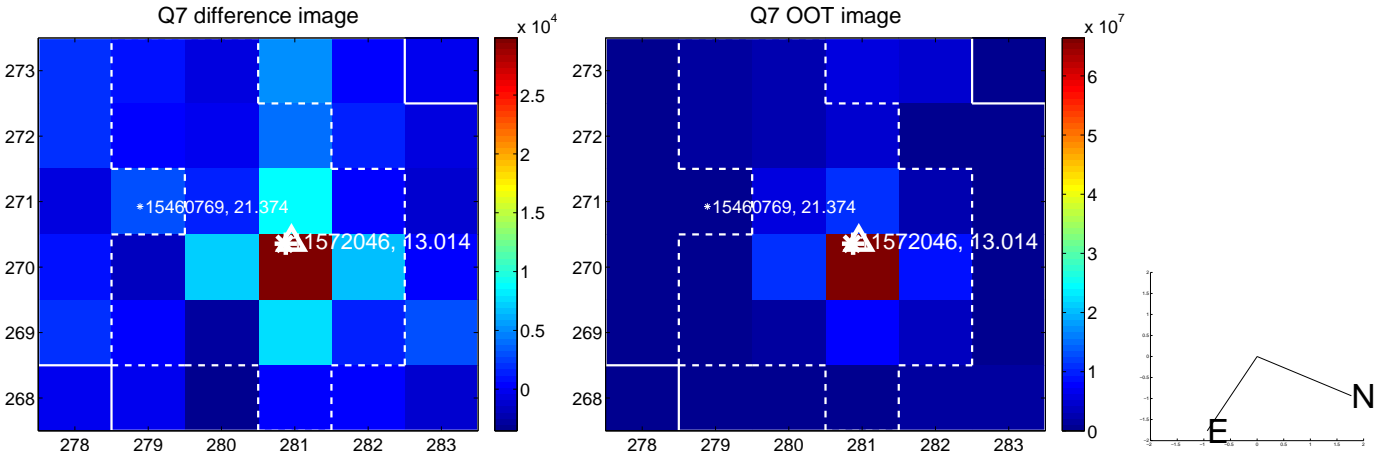
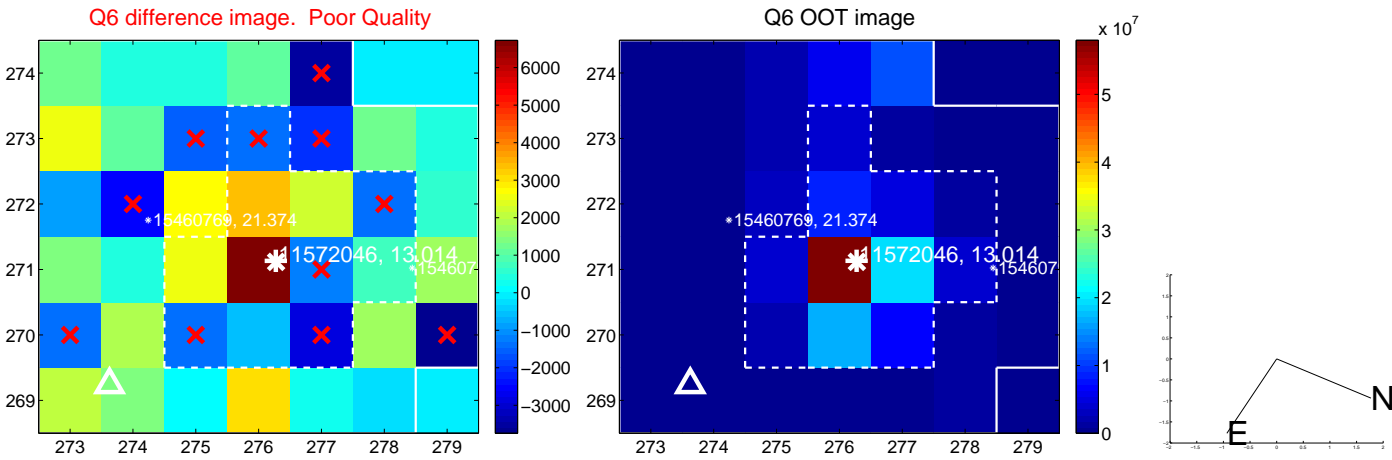
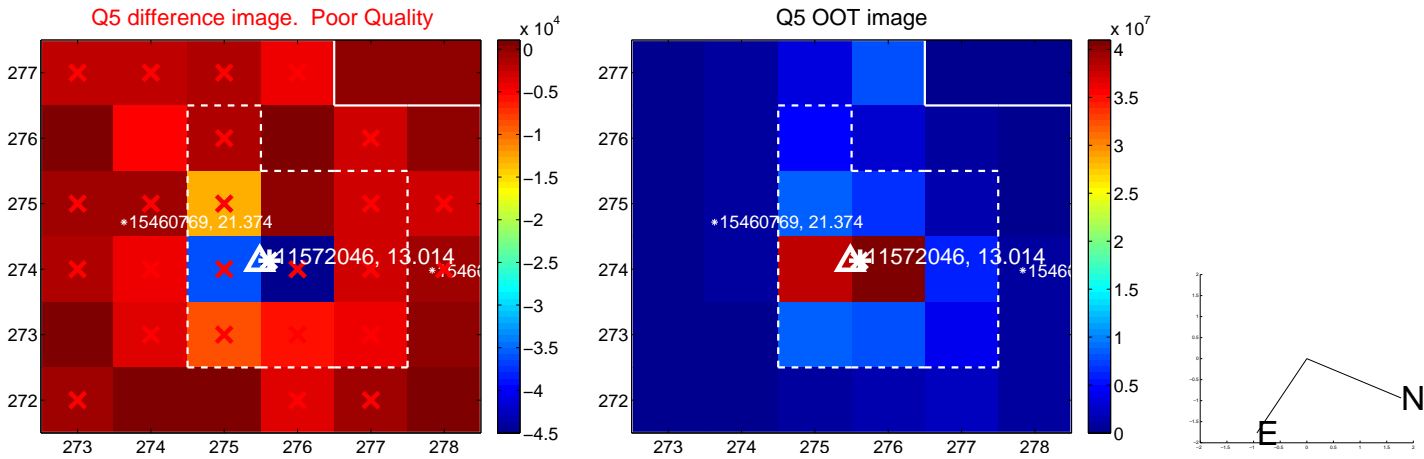


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

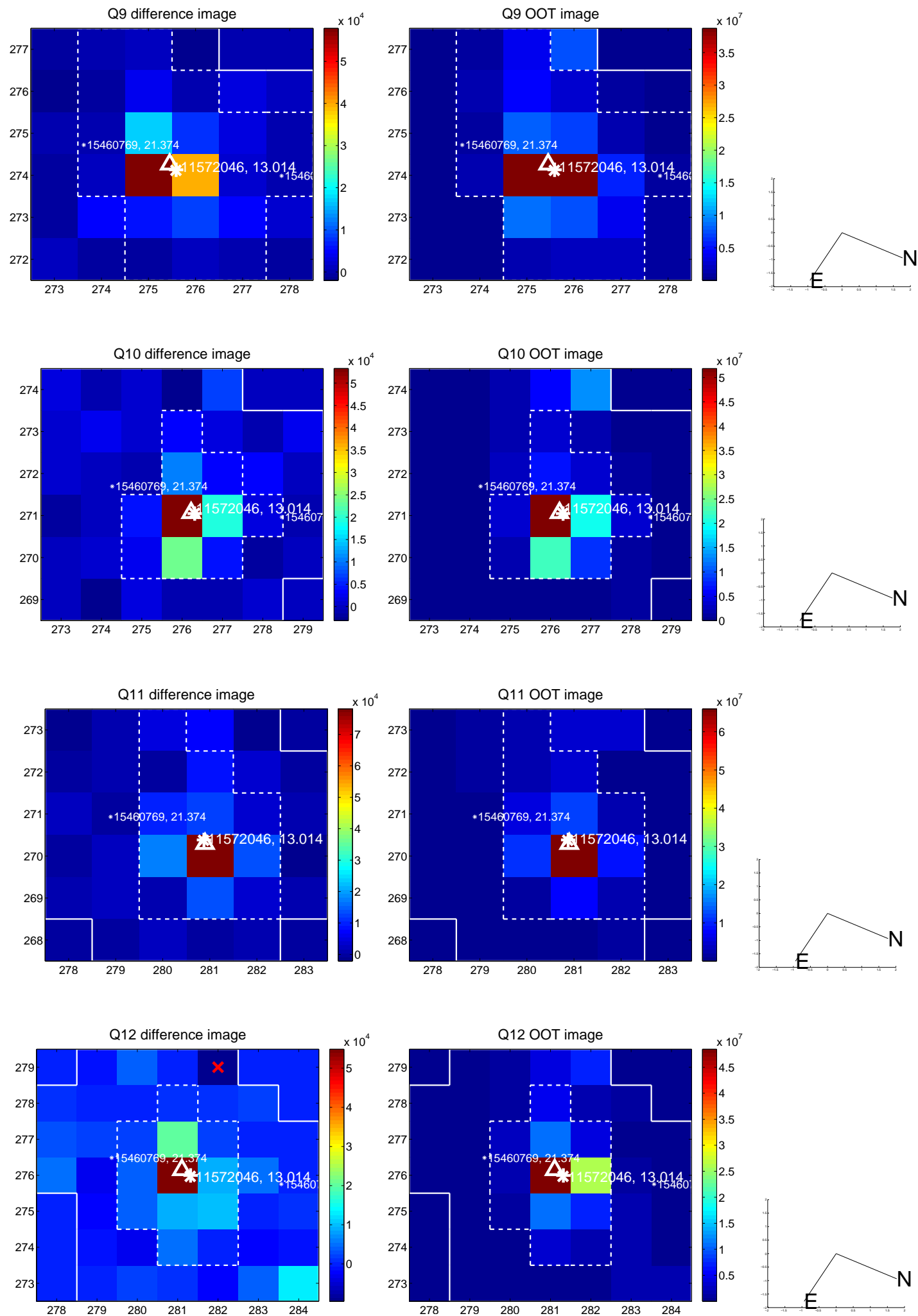
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



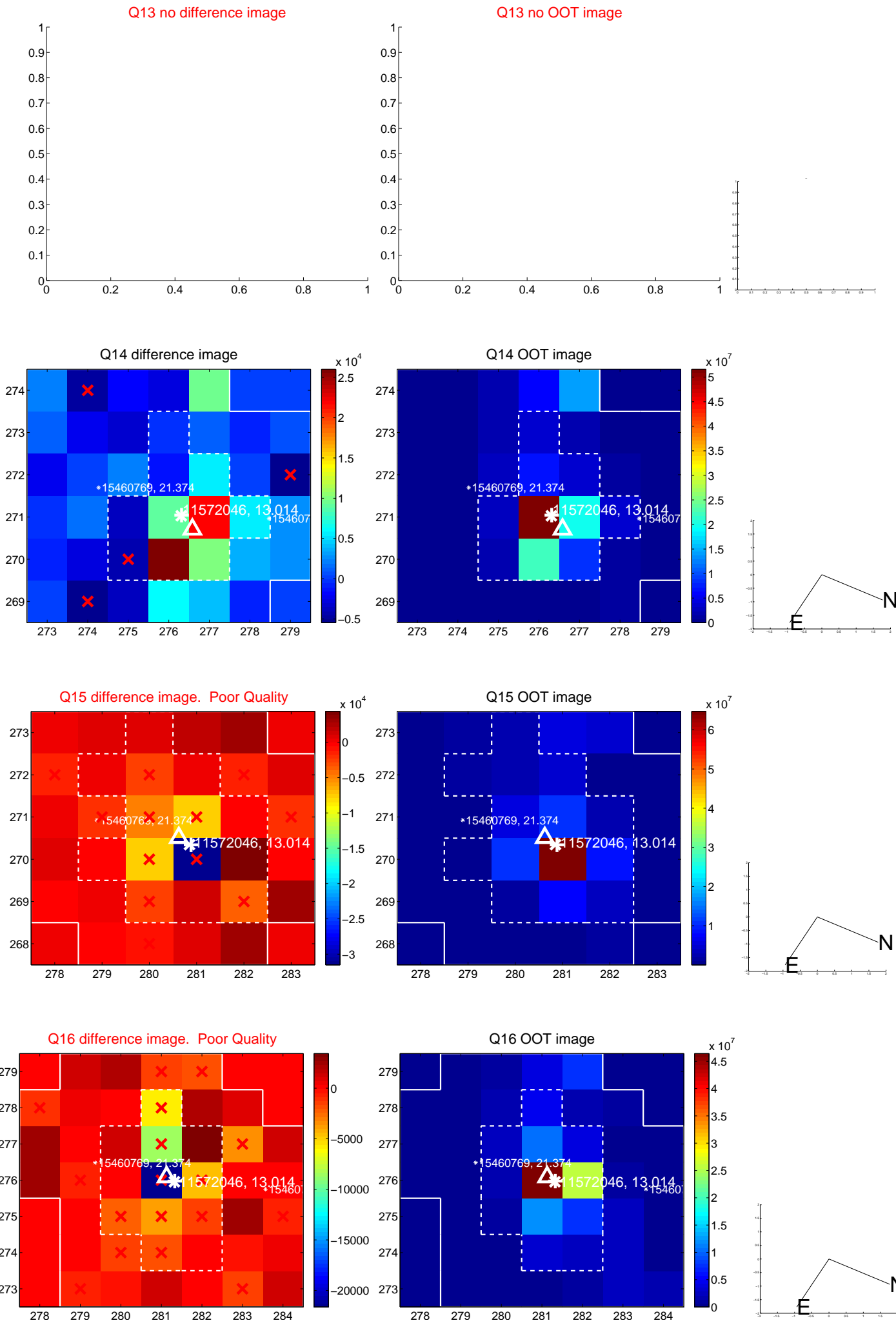
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



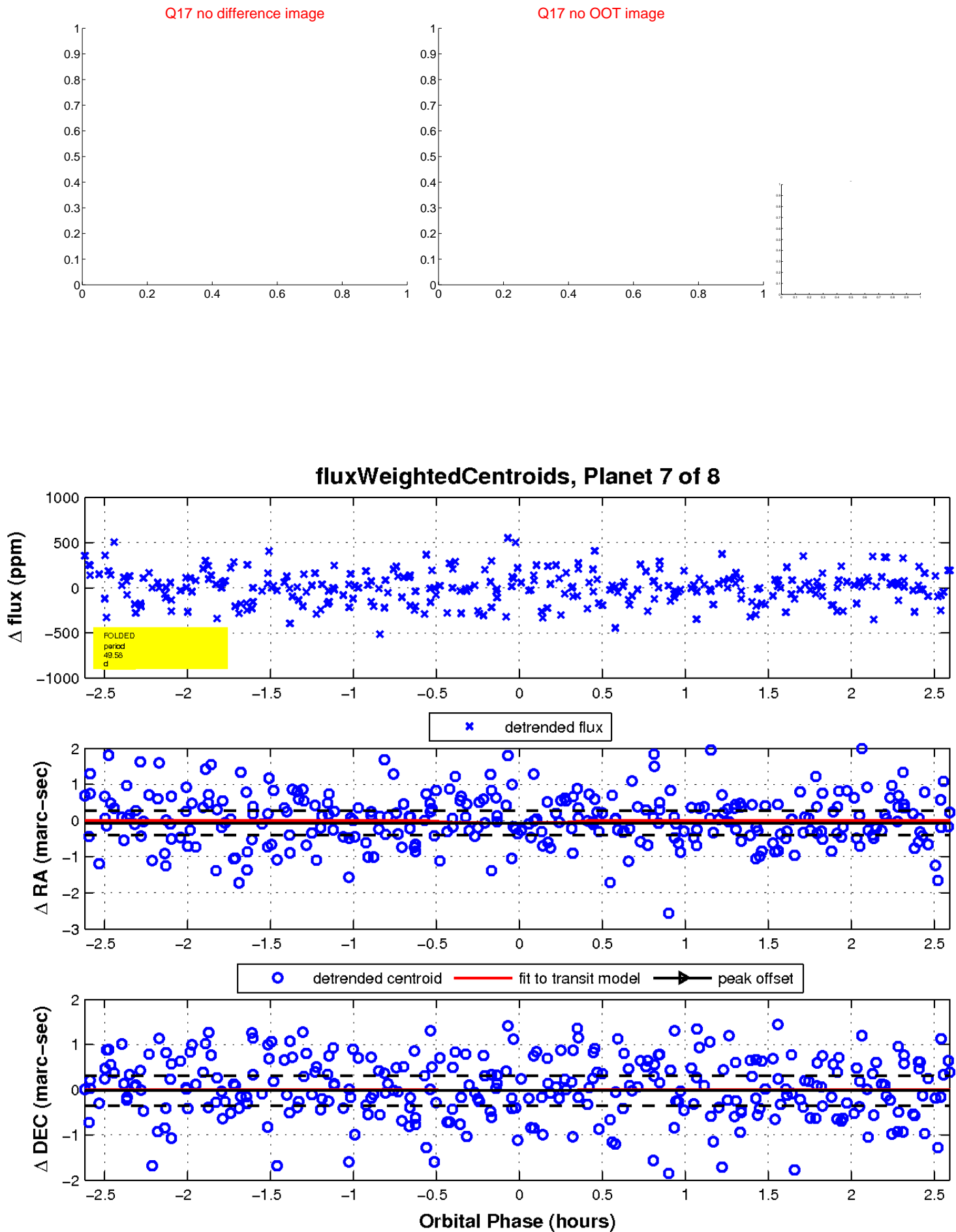
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

