

KIC 007630417

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})
007630417-01	OBS	No	1.130515	131.797403	83.2	4.581	8.5	8.8	2.92	10670	2.77	106074.13
007630417-02	OBS	No	1.130519	132.354532	156.8	6.453	11.9	14.4	2.92	10670	6.11	106073.58

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007630417-01	OBS	FP	0.00	1	0	0	0	LPP_DV
007630417-02	OBS	FP	0.00	1	0	0	0	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.

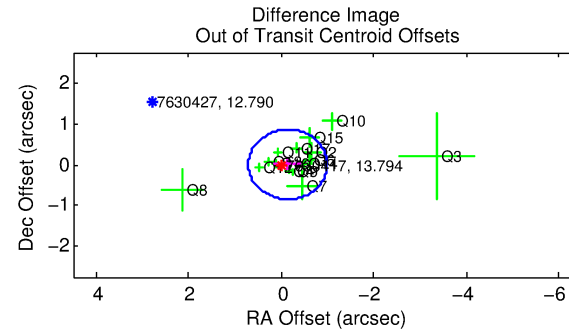
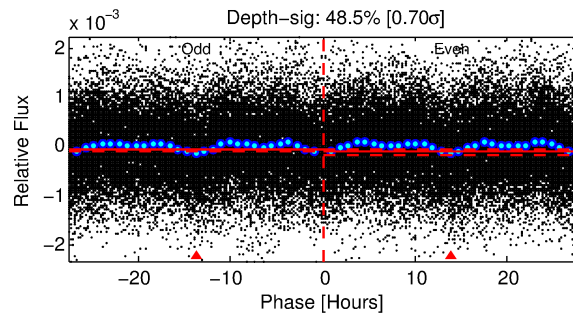
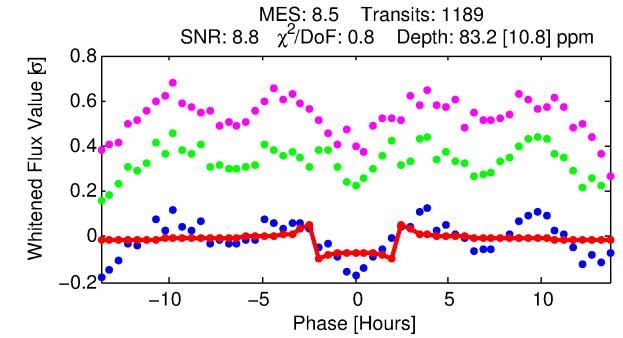
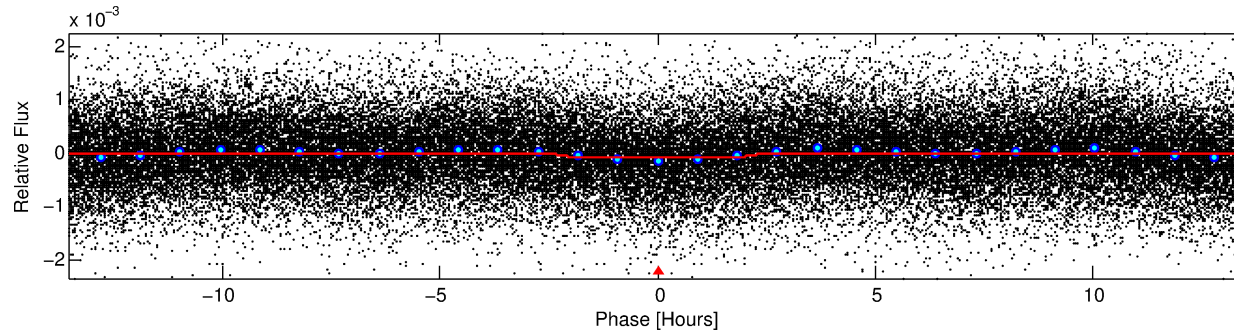
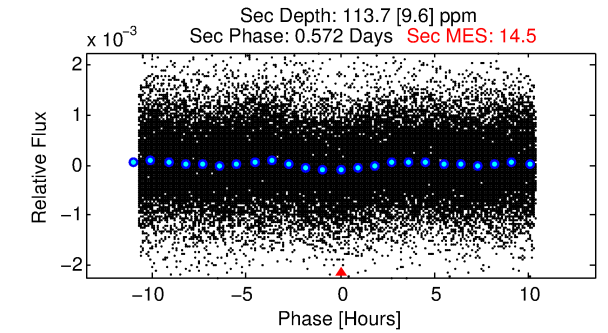
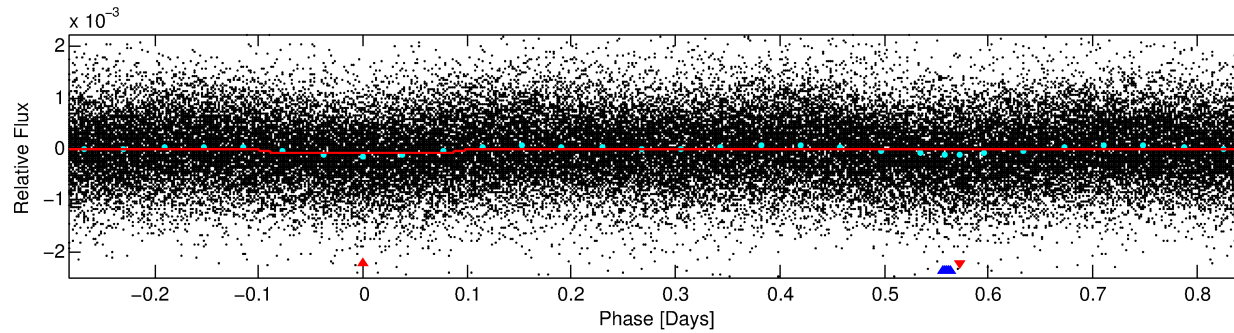
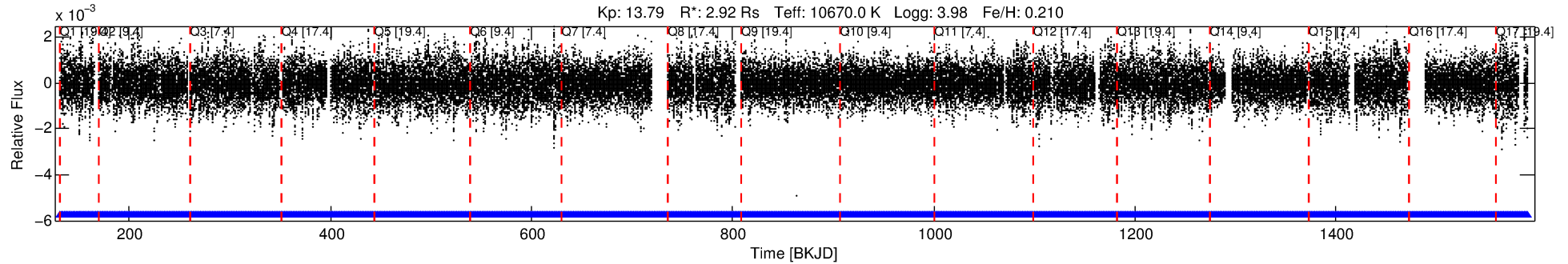
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007630417-01

No Significant Match Found

DV One-Page Summary

KIC: 7630417 Candidate: 1 of 2 Period: 1.131 d



DV Fit Results:

Period = 1.13051 [0.00001] d
Epoch = 131.7974 [0.0019] BKJD
Rp/R* = 0.0087 [0.0022]
a/R* = 1.87 [2.51]
b = 0.41 [3.88]
Seff = 106074.13 [70955.35]
Teq = 4602 [770] K
Rp = 2.77 [1.14] Re
a = 0.0305 [0.0082] AU
Ag = 7.60 [4.88] [1.35σ]
Teff = 11812 [2209] K [3.08σ]

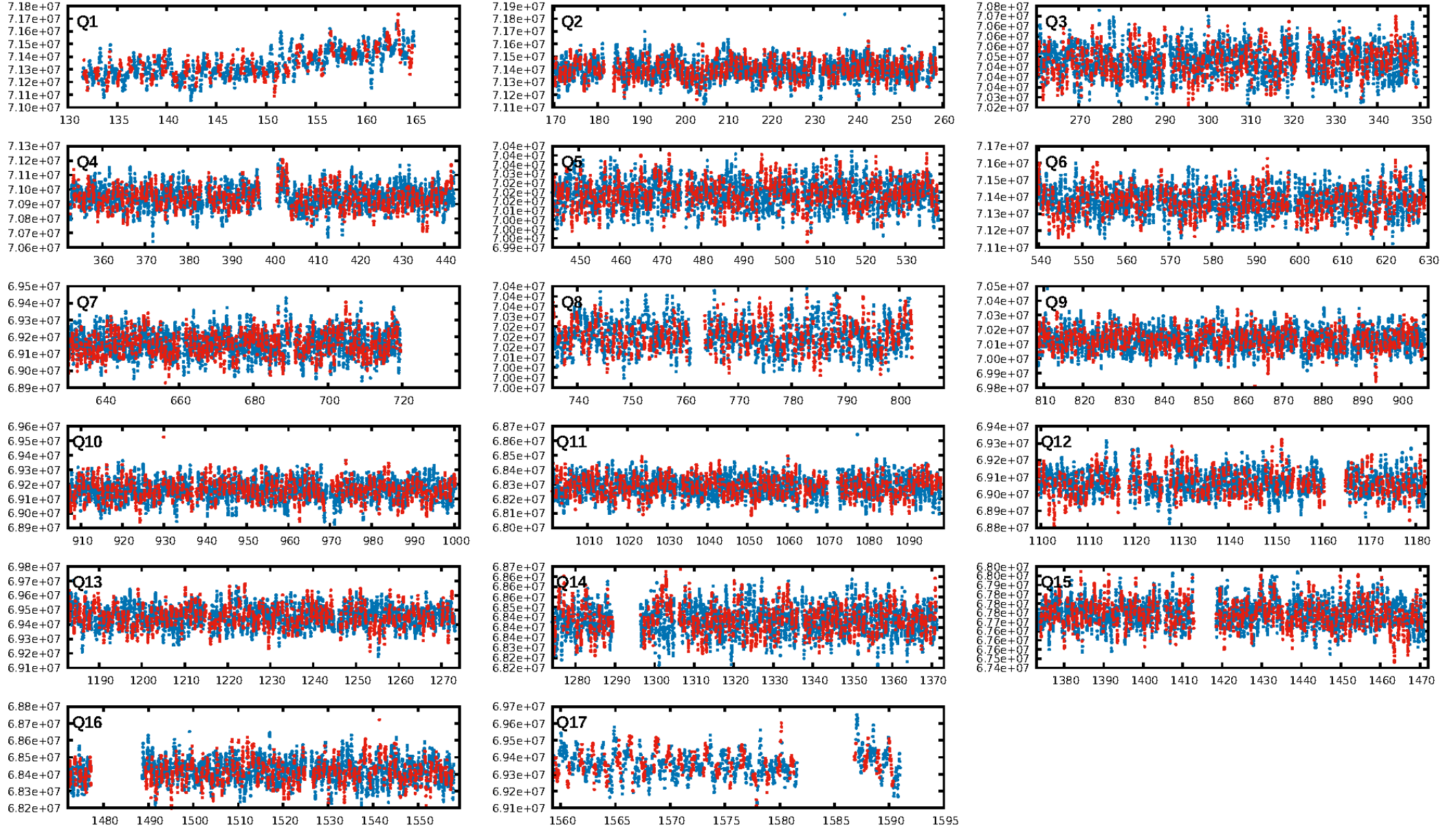
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1135/1135]
GhostDiagnostic-chr: 0.5079
Centroid-sig: 0.0%
Centroid-so: 0.468 arcsec [1.43σ]
OotOffset-rm: 0.135 arcsec [0.48σ]
OotOffset-st: 4/4/4/3 [15]
KicOffset-rm: 0.143 arcsec [0.48σ]
KicOffset-st: 4/4/4/3 [15]
DiffImageQuality-fgm: 0.87 [13/15]
DiffImageOverlap-fno: 1.00 [17/17]

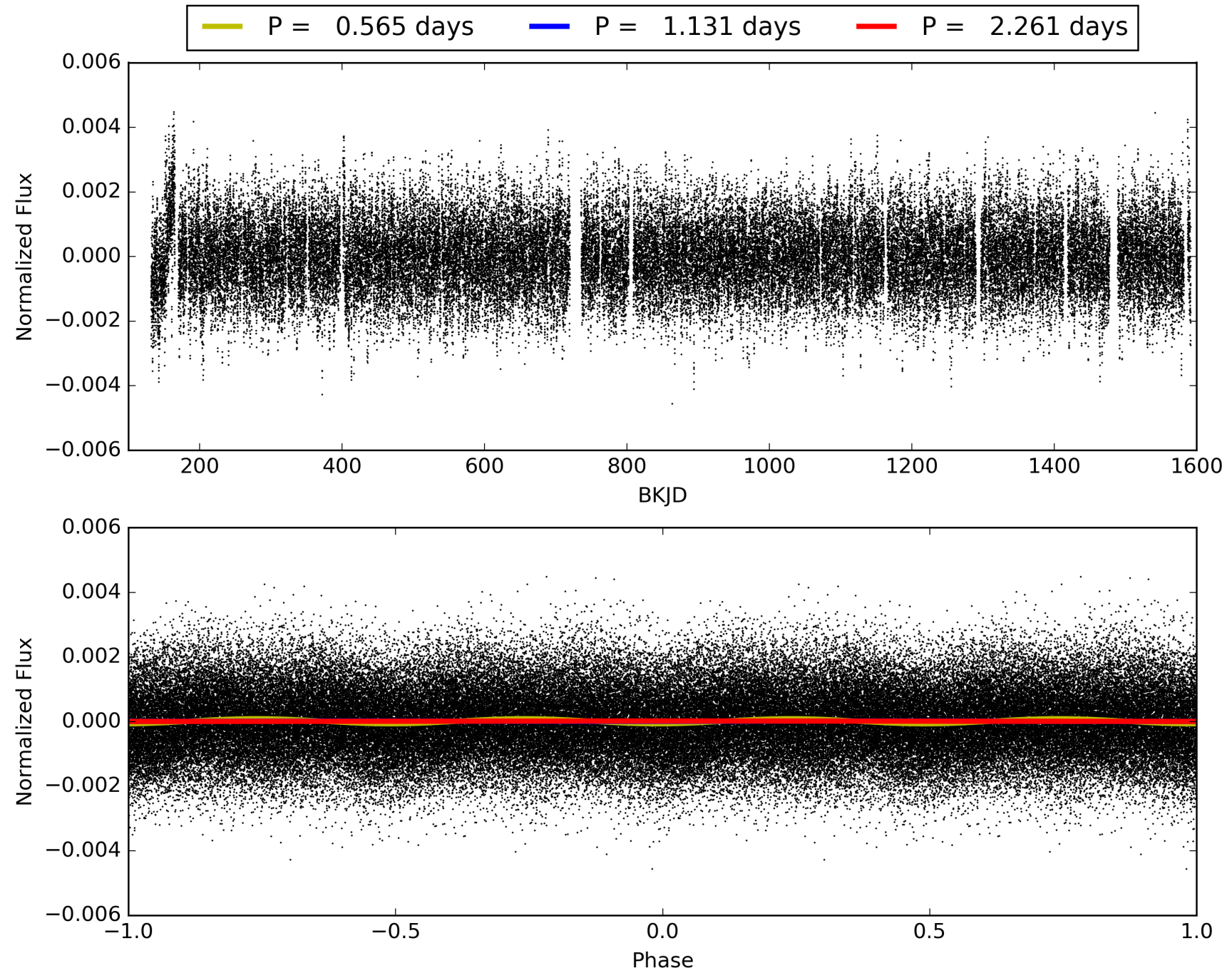
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 007630417-01, PDC Light Curves

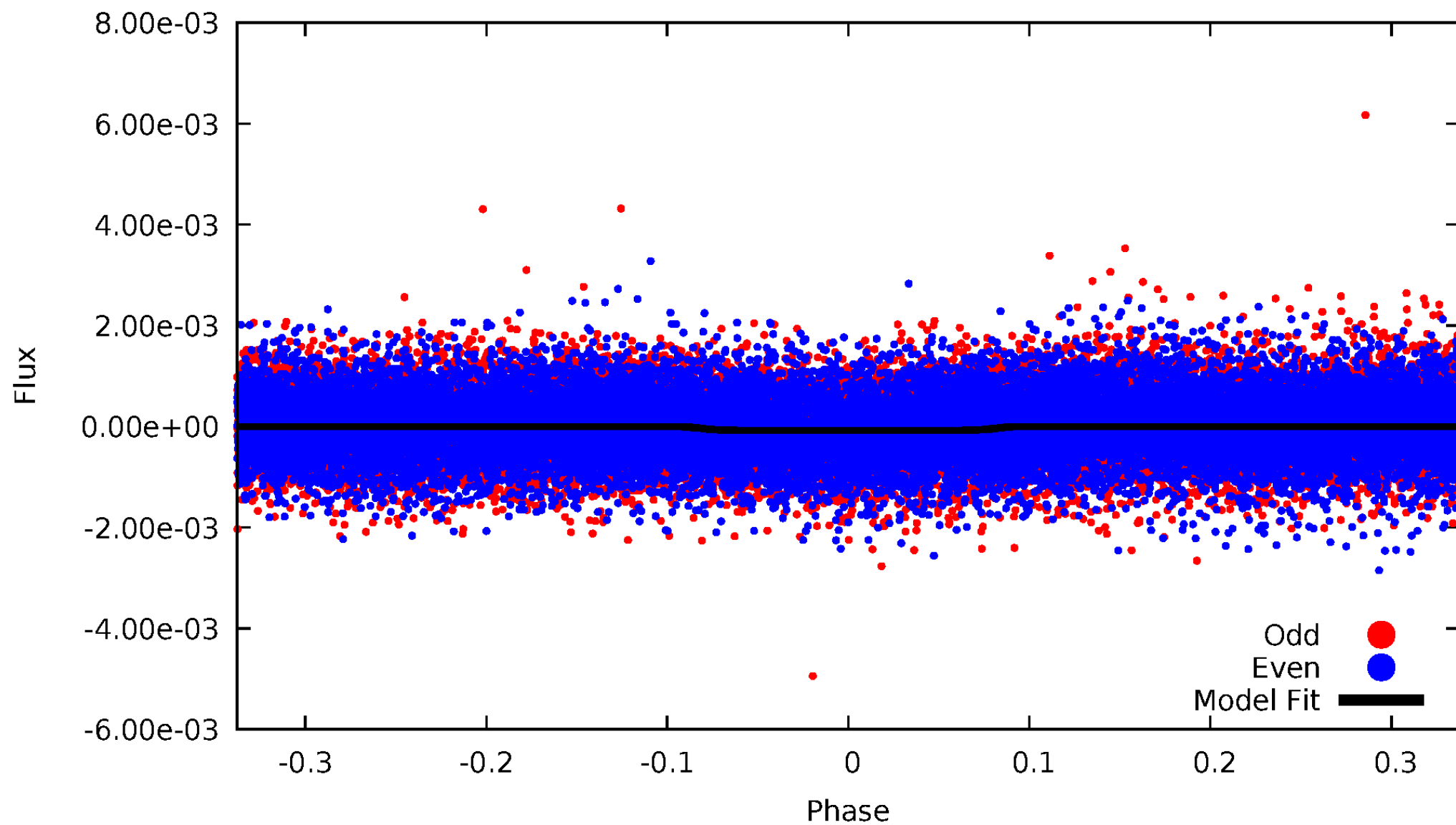


TCE 007630417-01



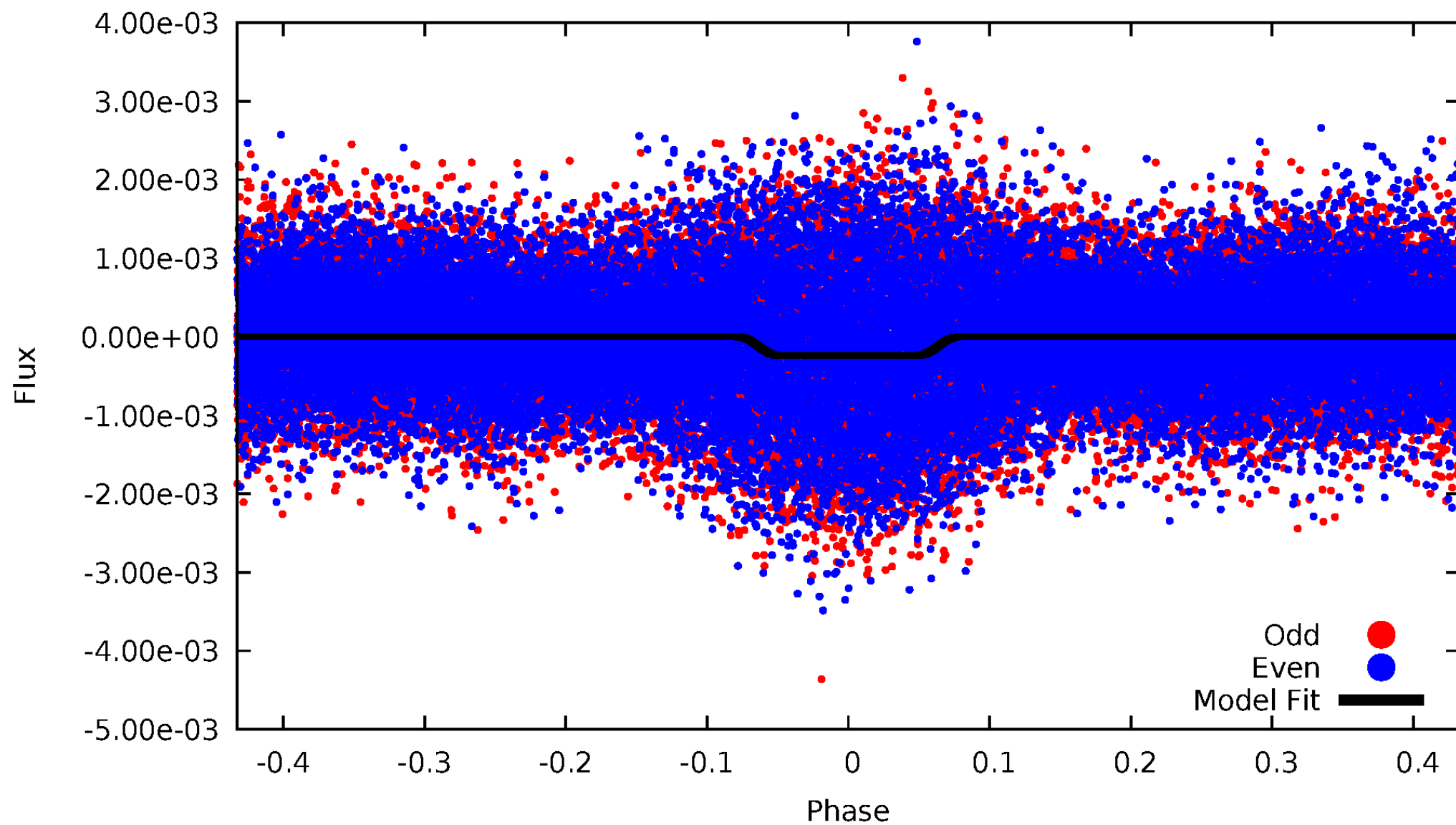
DV Odd/Even

TCE 007630417-01

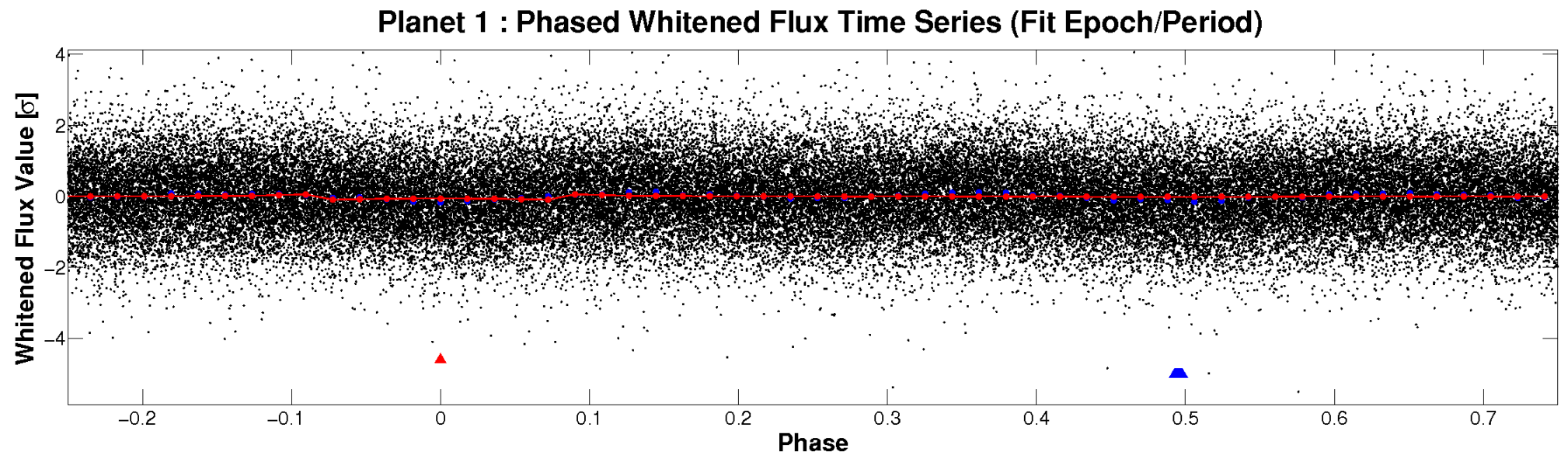
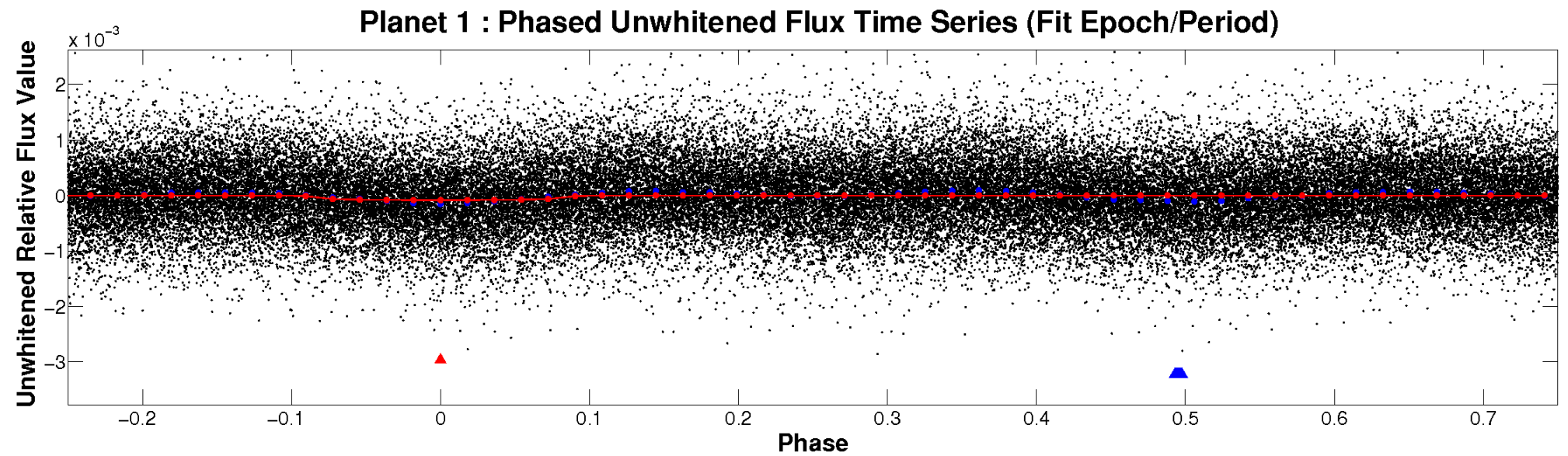


ALT Odd/Even

TCE 007630417-01

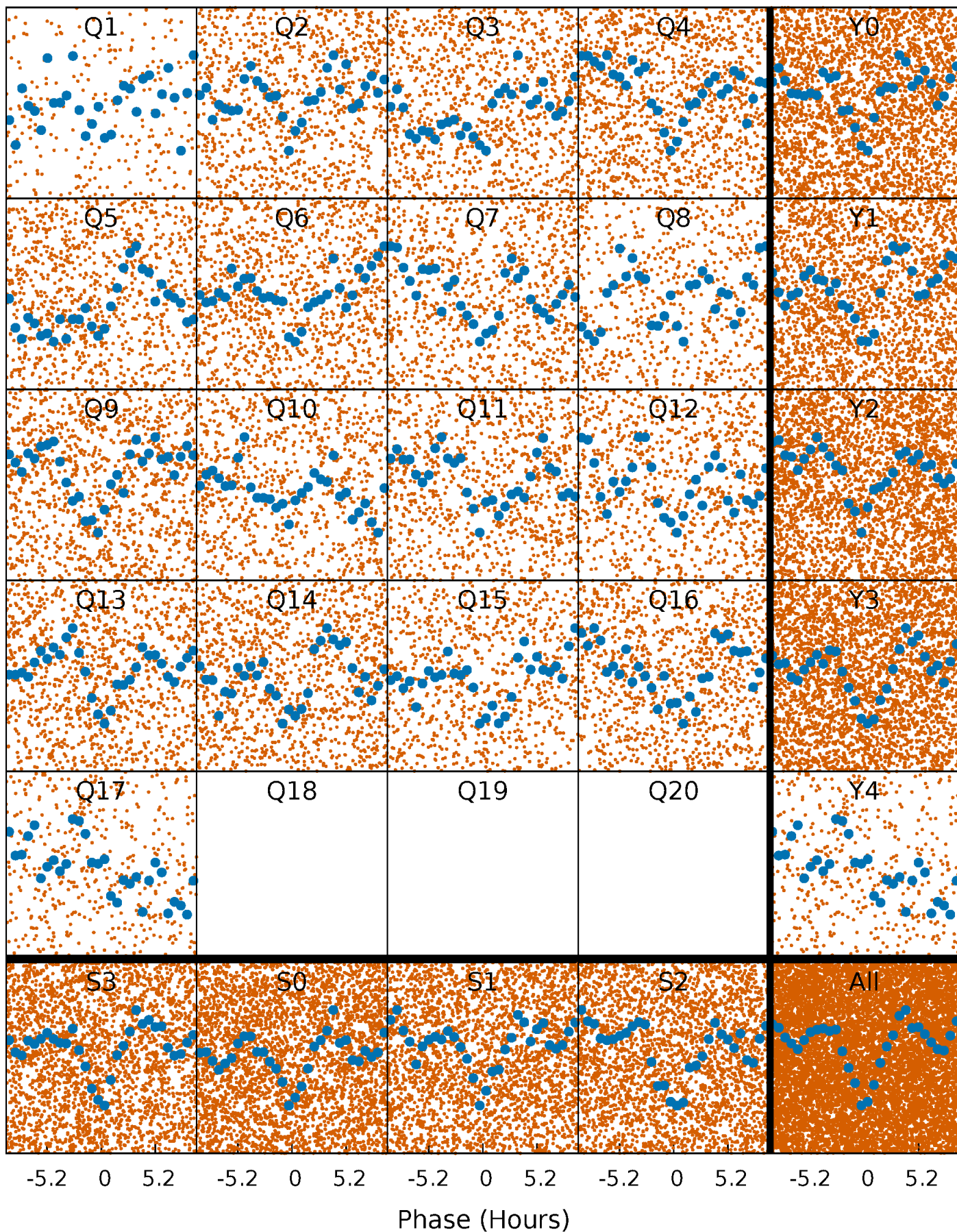


Non-Whitened Vs. Whitened Light Curve



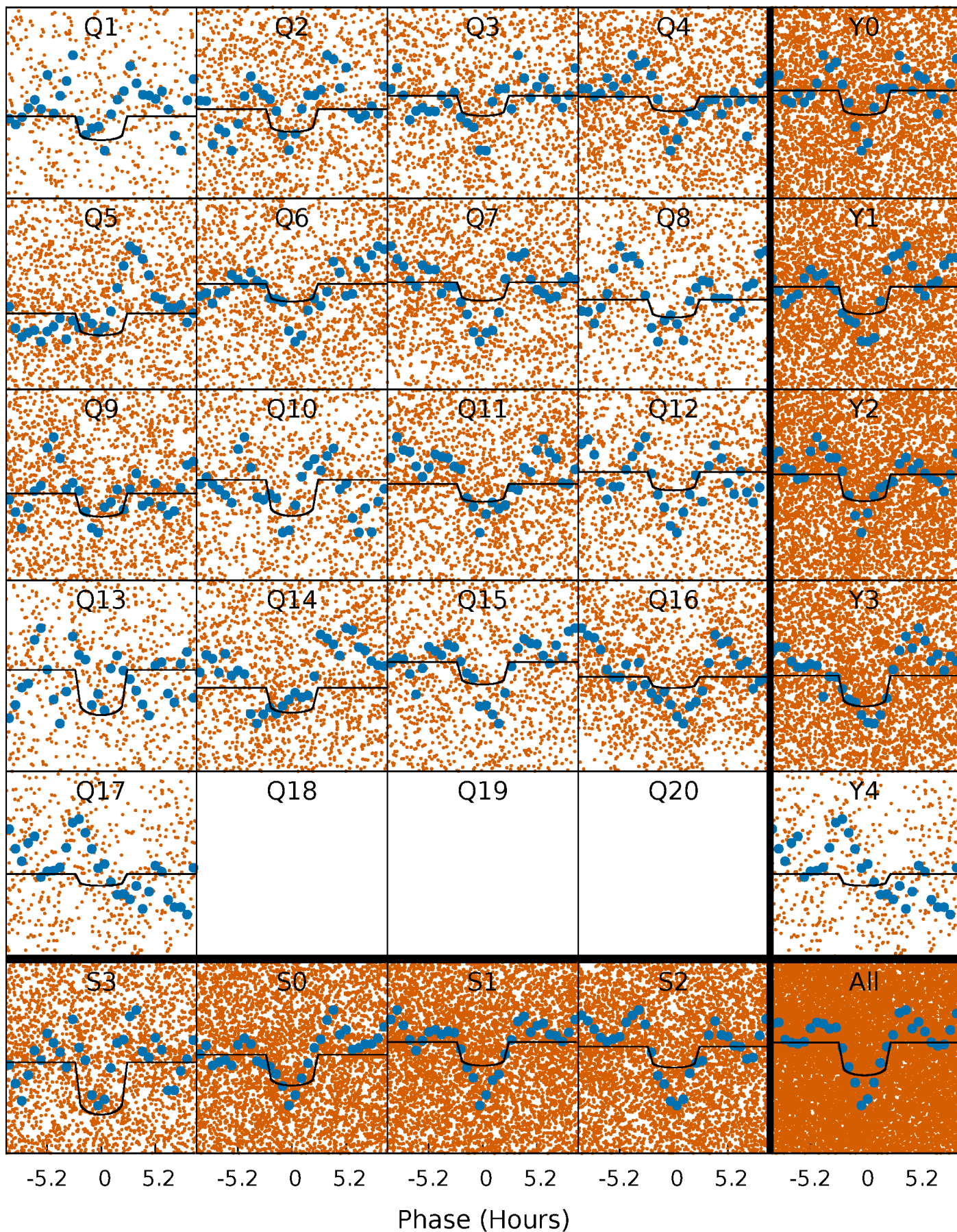
PDC Quarter-Phased Transit Curves

TCE 007630417-01 P= 1.130515 Days $T_0=131.797403$ (BKJD)



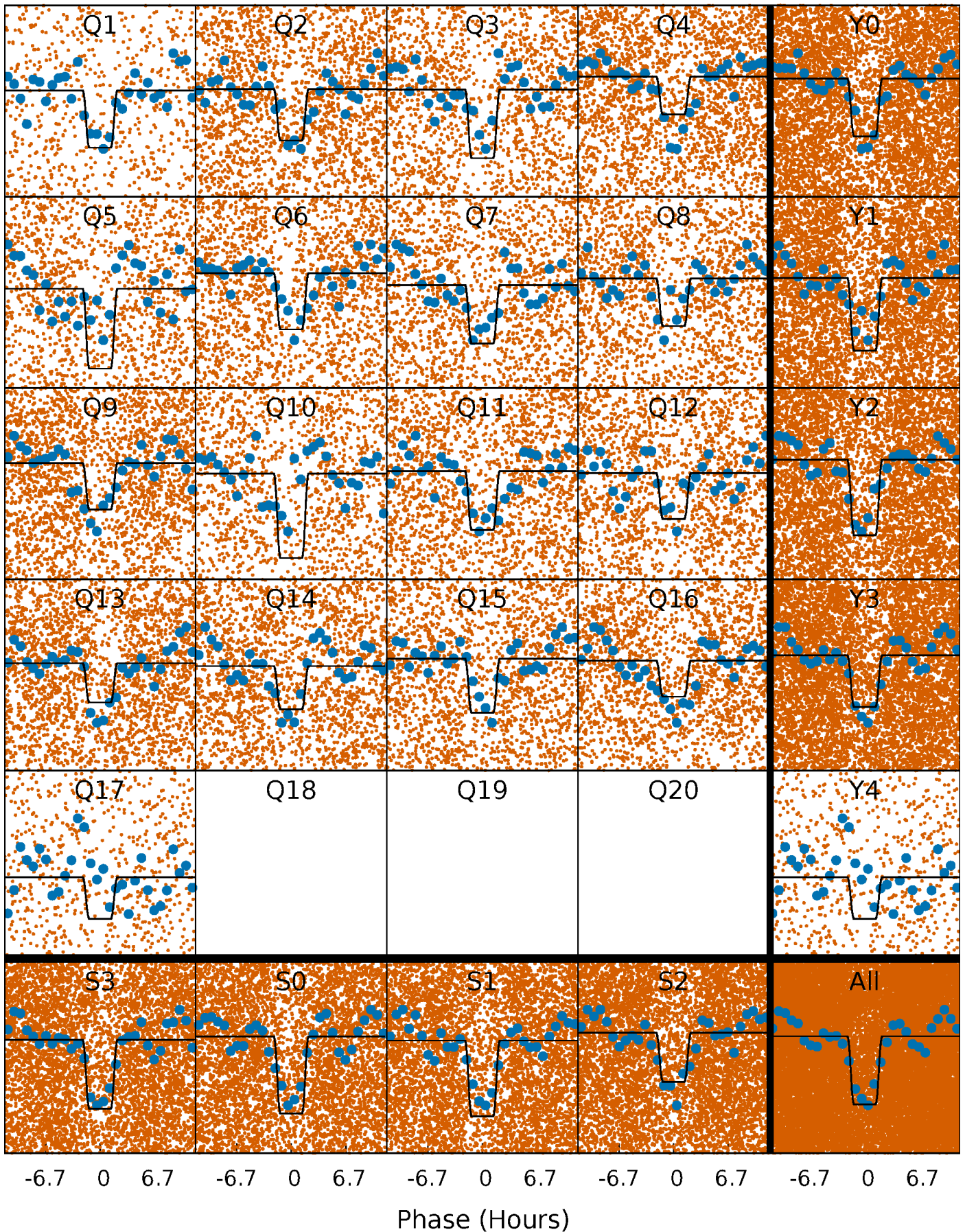
DV Quarter-Phased Transit Curves

TCE 007630417-01 P= 1.130515 Days $T_0=131.797403$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

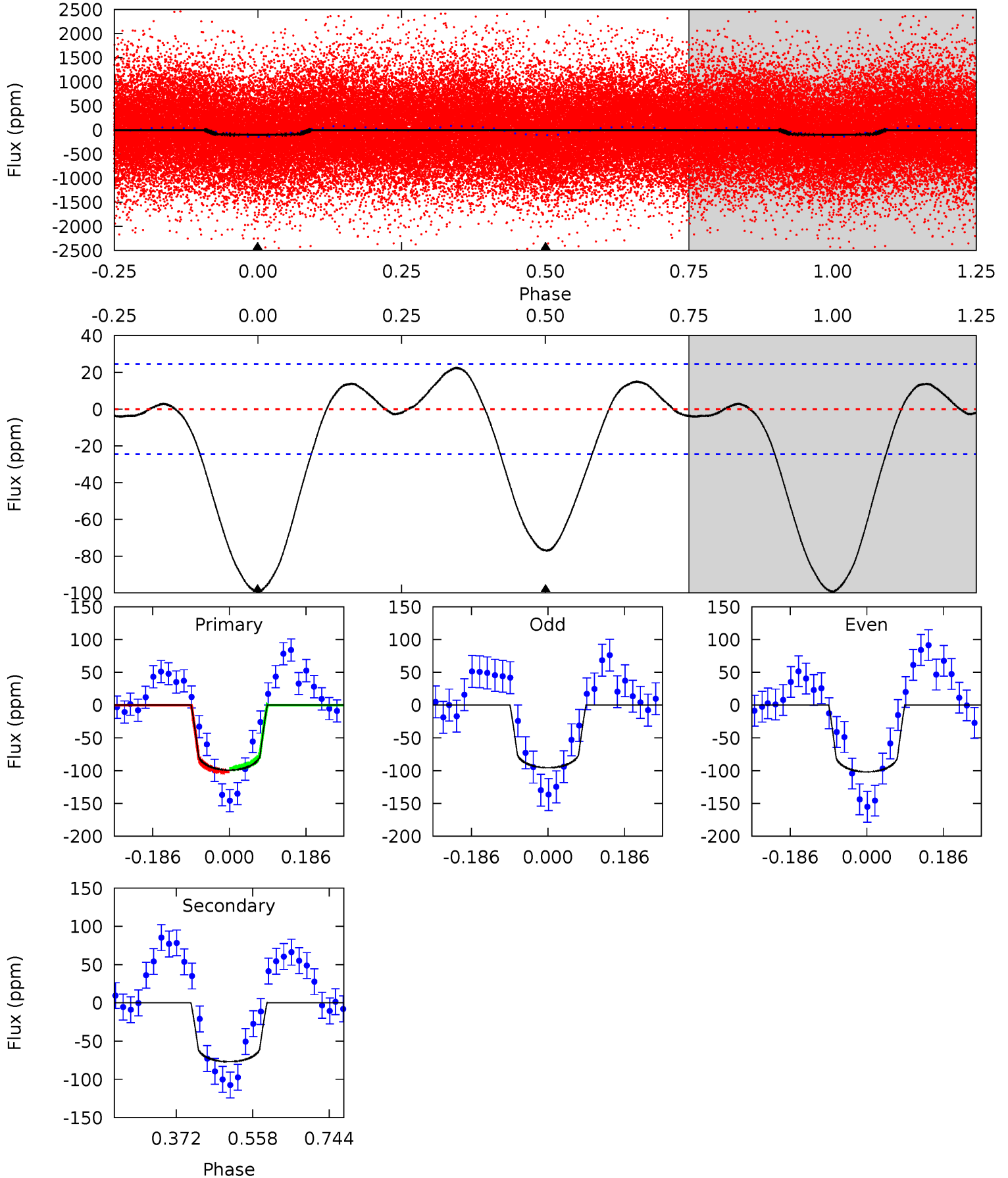
TCE 007630417-01 P= 1.130545 Days $T_0=131.777150$ (BKJD)



DV Model-Shift Uniqueness Test

007630417-01, P = 1.130515 Days, E = 130.666888 Days

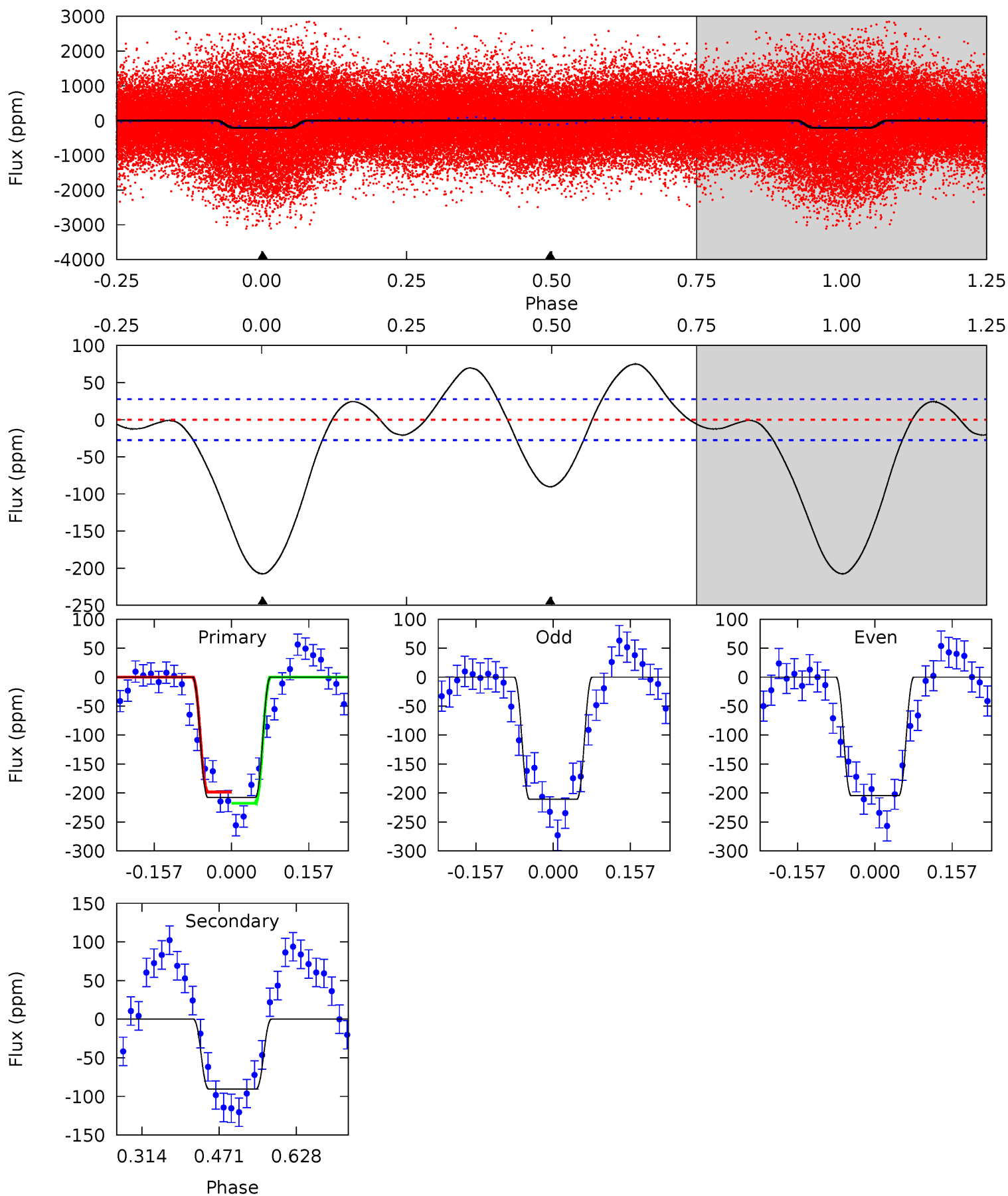
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.9	13.9	0	0	4.43	1.32	0.92	17.9	17.9	13.9	13.9	0.57	1.10	0.18	0.49



Alt Model-Shift Uniqueness Test

007630417-01, P = 1.130545 Days, E = 130.646605 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
33.6	14.6	0	0	4.47	1.42	3.98	33.6	33.6	14.6	14.6	0.50	0.96	0.27	1.57



Stellar Parameters For KIC 007630417

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	10670^{+388}_{-1455}	$3.980^{+0.171}_{-0.209}$	$0.210^{+0.150}_{-0.200}$	$2.915^{+0.948}_{-0.776}$	$2.955^{+0.228}_{-0.683}$	$0.168^{+0.183}_{-0.088}$
	+4%/-14%	+4%/-5%	+71%/-95%	+33%/-27%	+8%/-23%	+109%/-52%
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 007630417-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-77 ± 6	$2.65^{+0.89}_{-0.77}$	6298^{+688}_{-817}	10303^{+3300}_{-1905}	$5.277^{+5.291}_{-2.244}$
Alt.	-90 ± 6	$4.94^{+1.13}_{-0.97}$	6279^{+689}_{-736}	7009^{+924}_{-780}	$1.824^{+0.921}_{-0.595}$

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

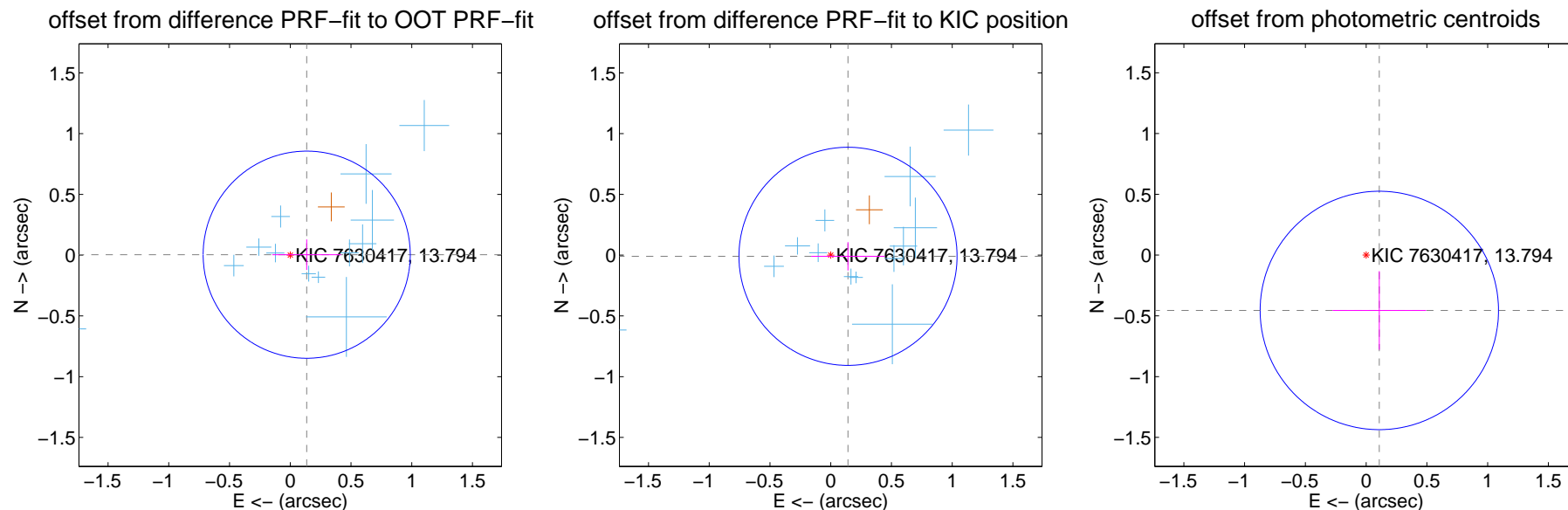
DV Centroid Data

Supplemental centroid analysis for 007630417-01. Kepler magnitude: 13.79. Transit SNR 8.77

There are 13 quarters with good PRF difference image offsets

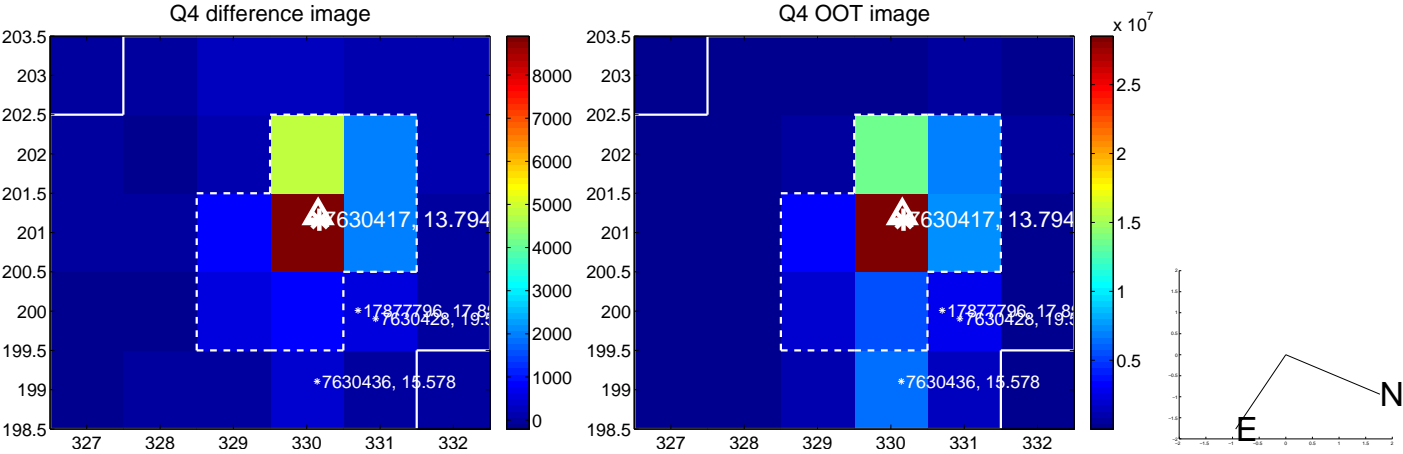
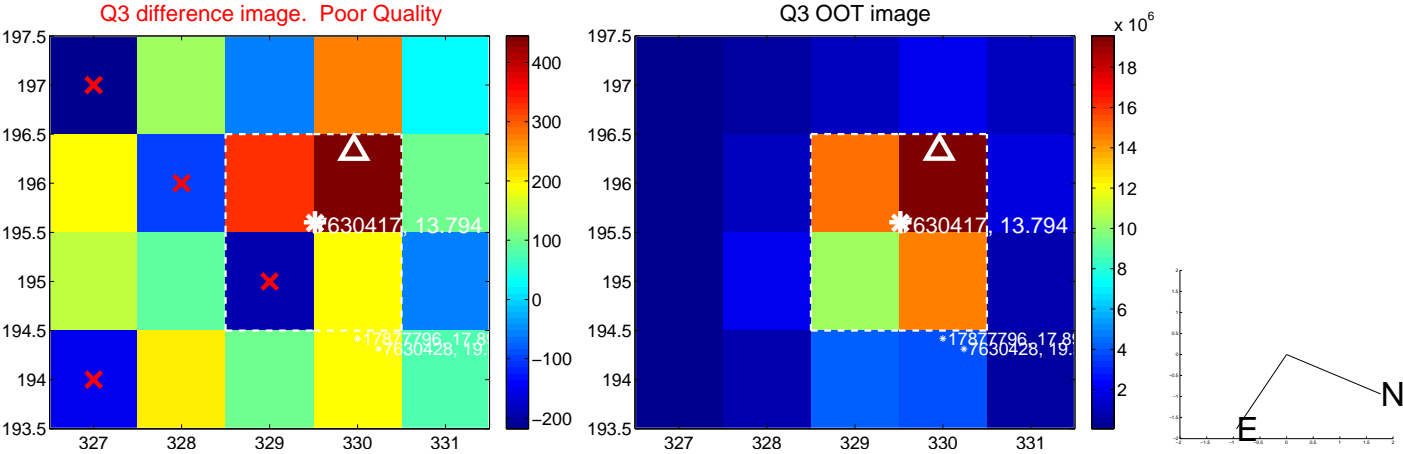
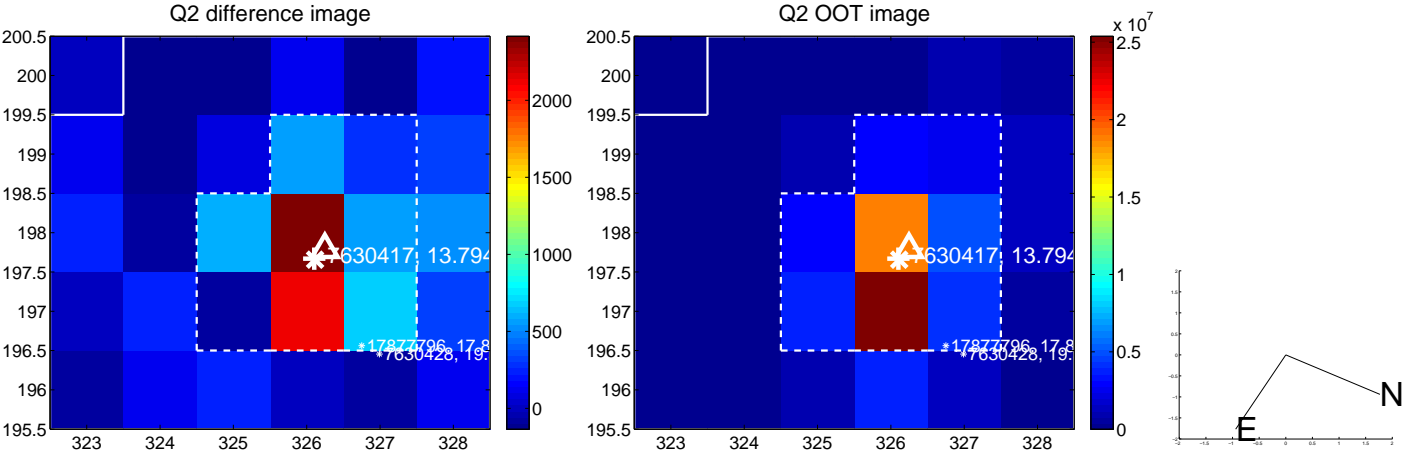
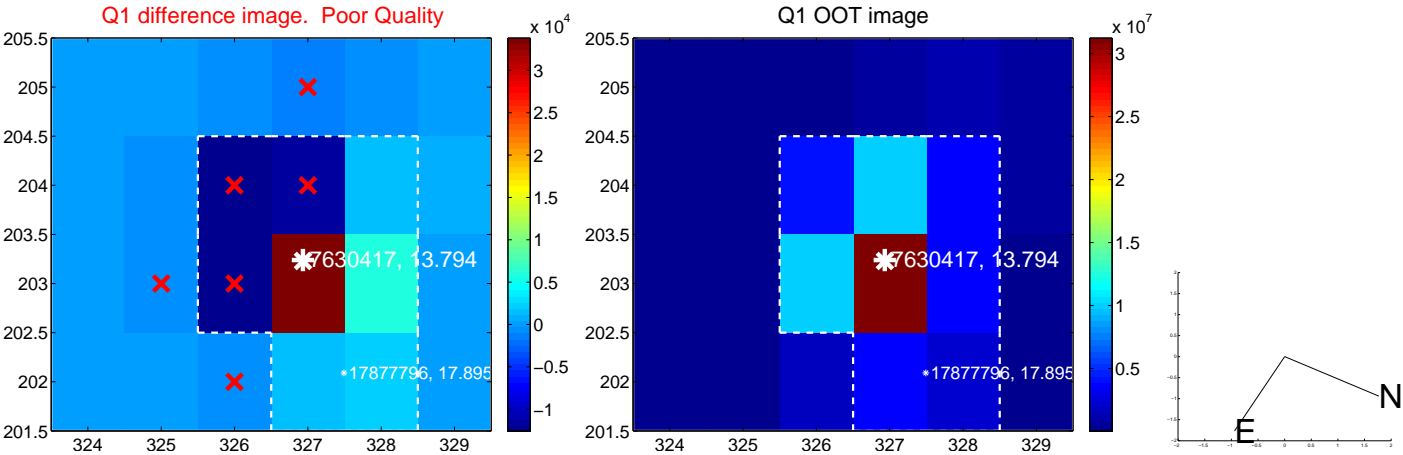
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.135 ± 0.284	0.48	-0.135 ± 0.283	0.004 ± 0.126
PRF-fit source offset from KIC position	0.143 ± 0.299	0.48	-0.142 ± 0.303	-0.010 ± 0.117
photometric centroid source offset	0.47 ± 0.33	1.43	-0.11 ± 0.38	-0.46 ± 0.32

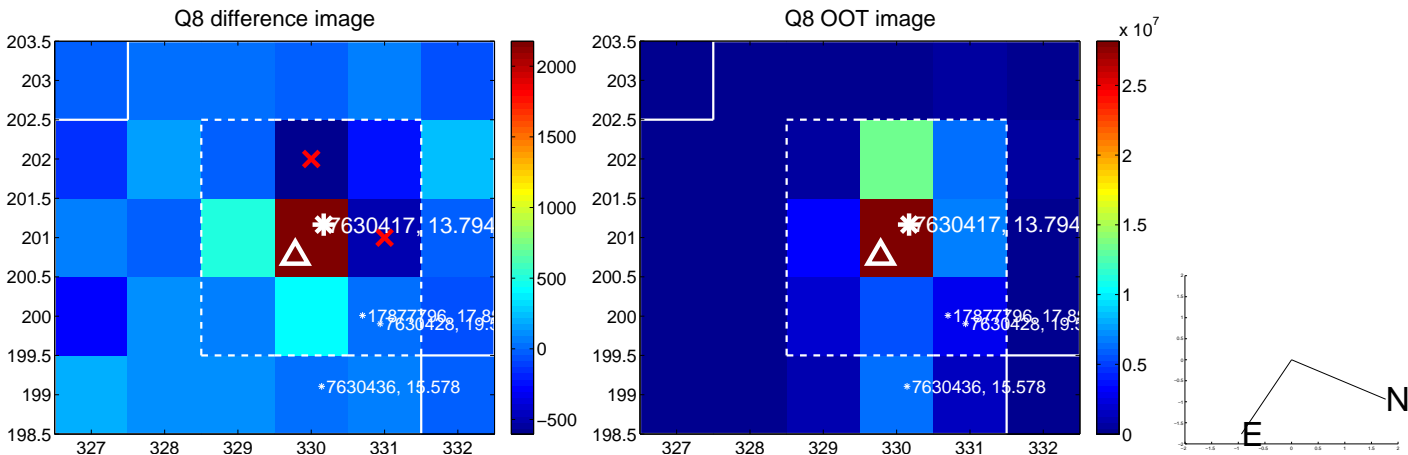
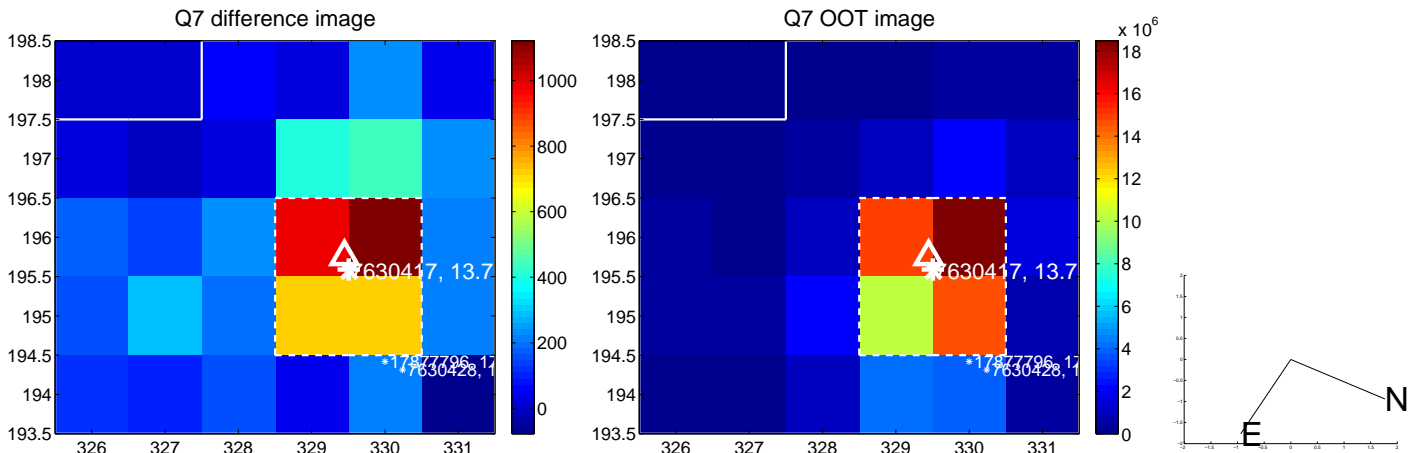
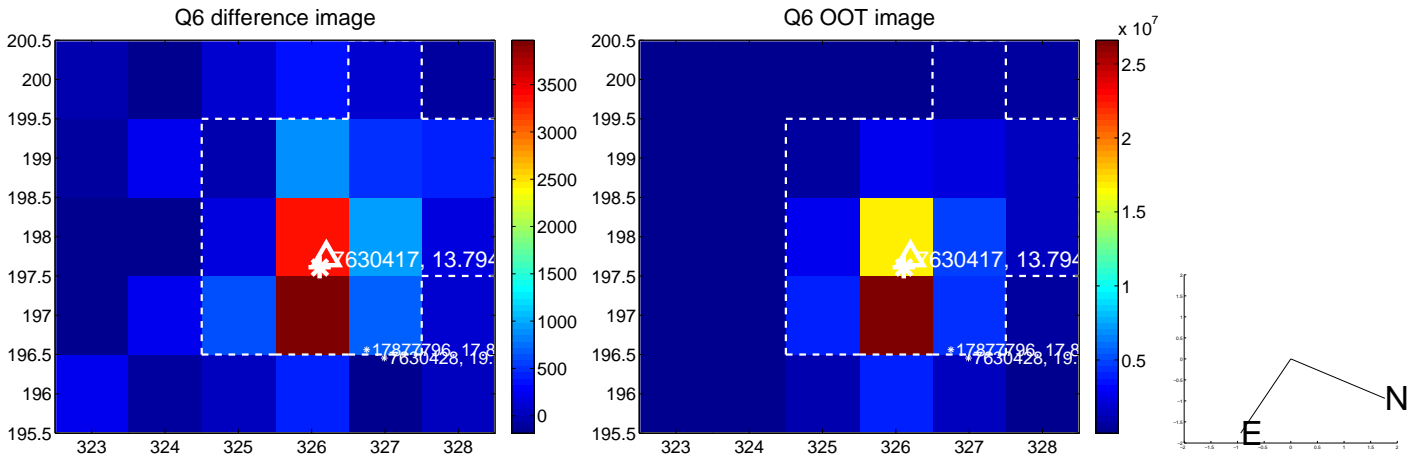
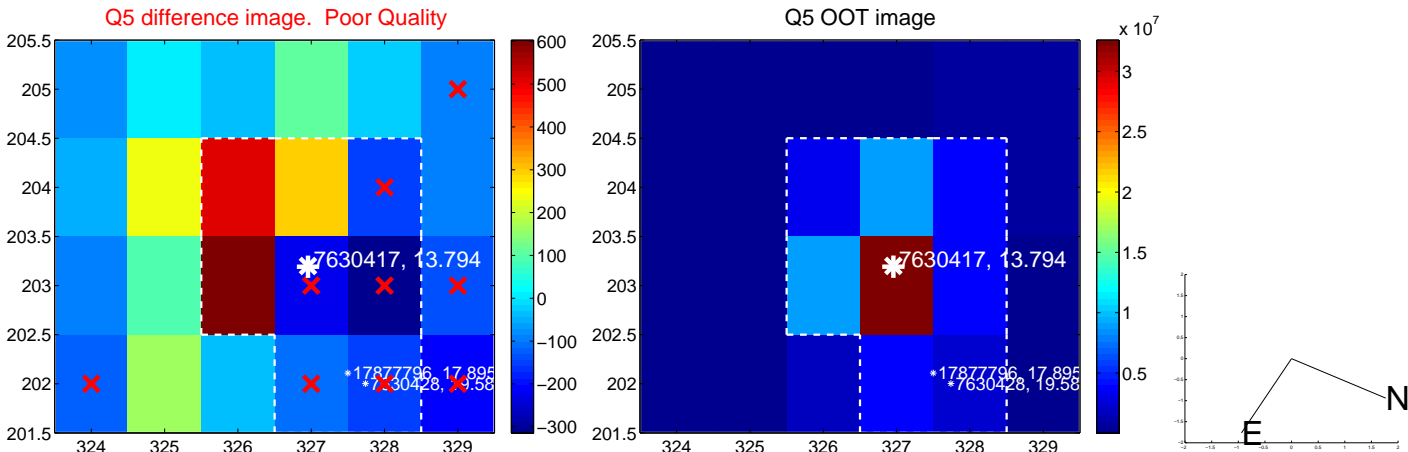


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

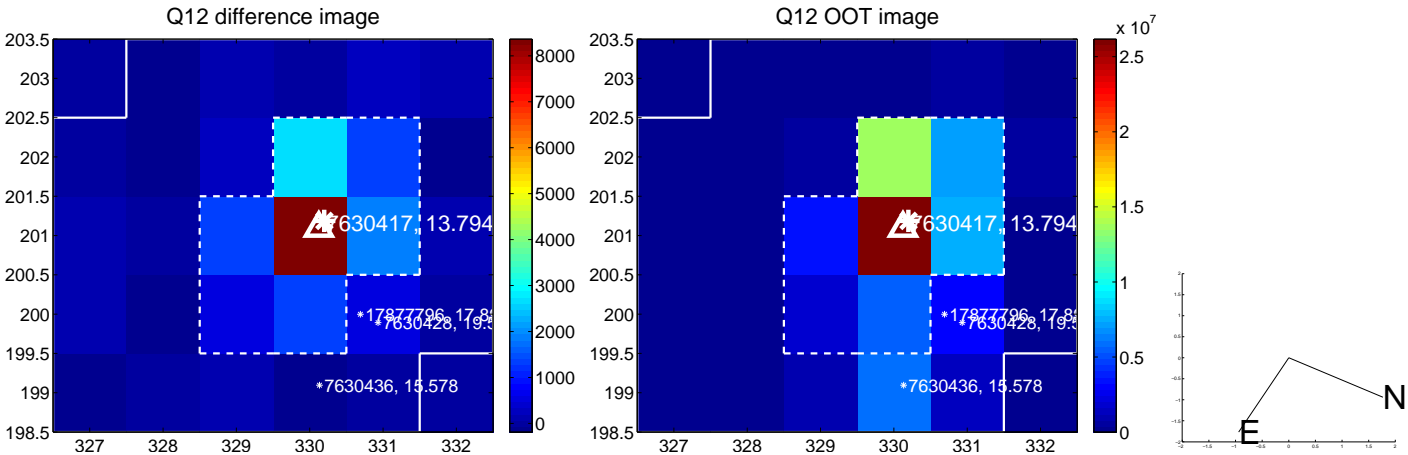
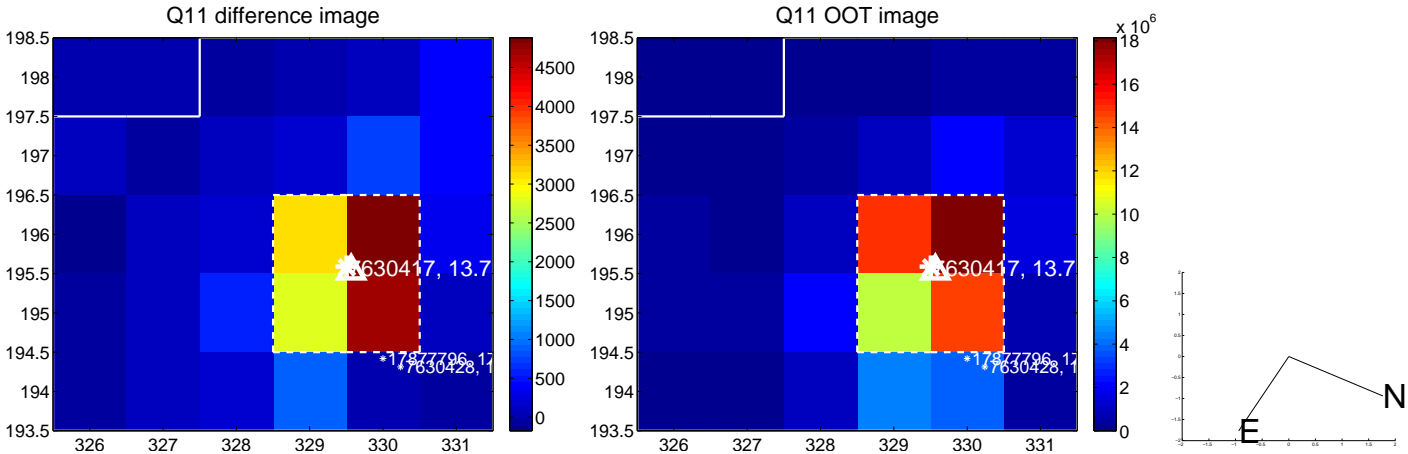
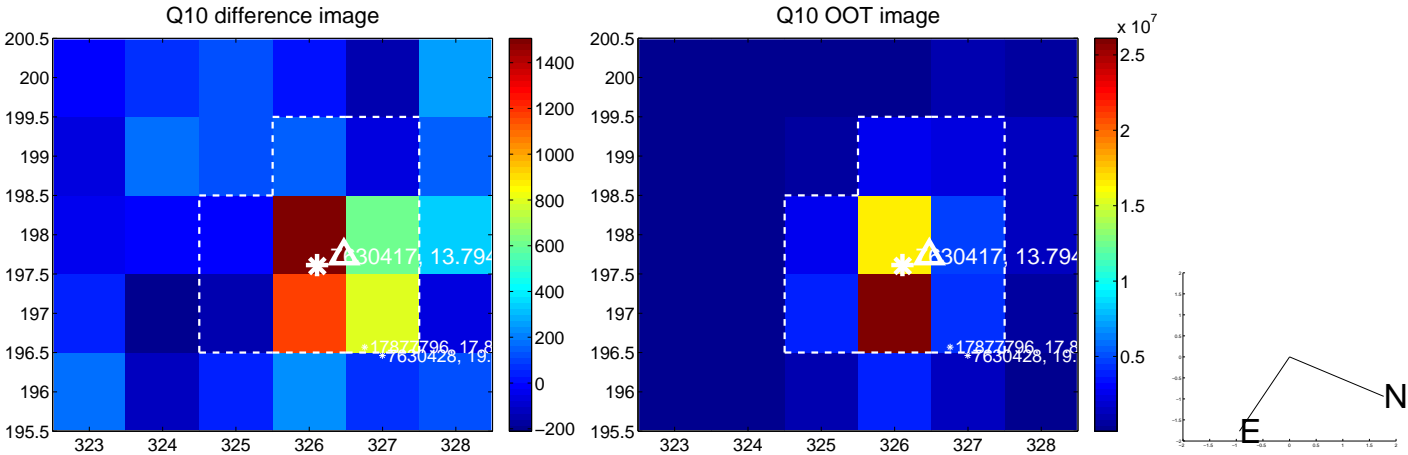
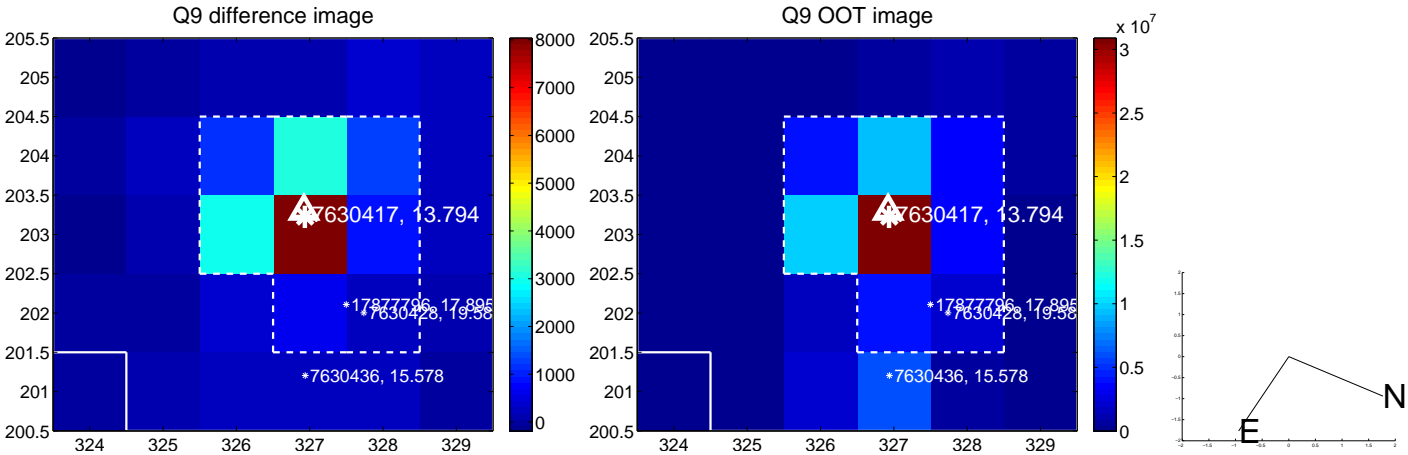
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



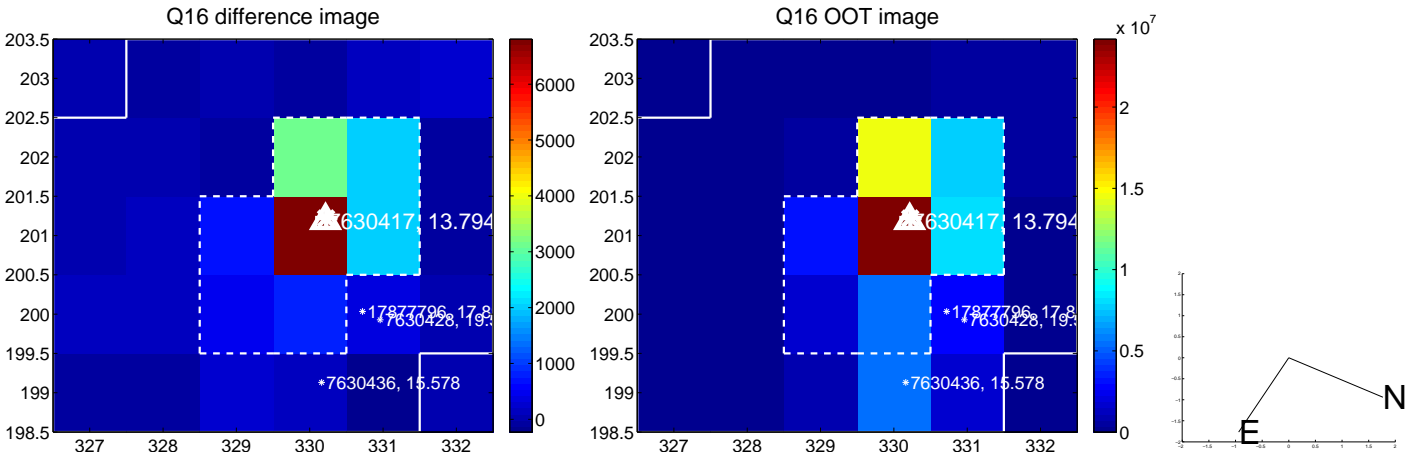
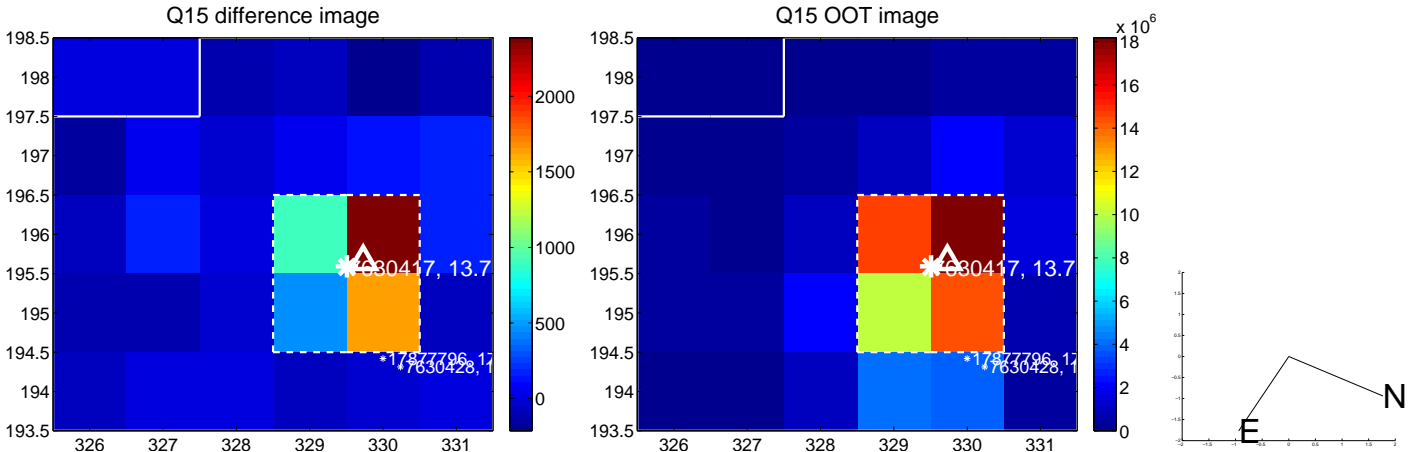
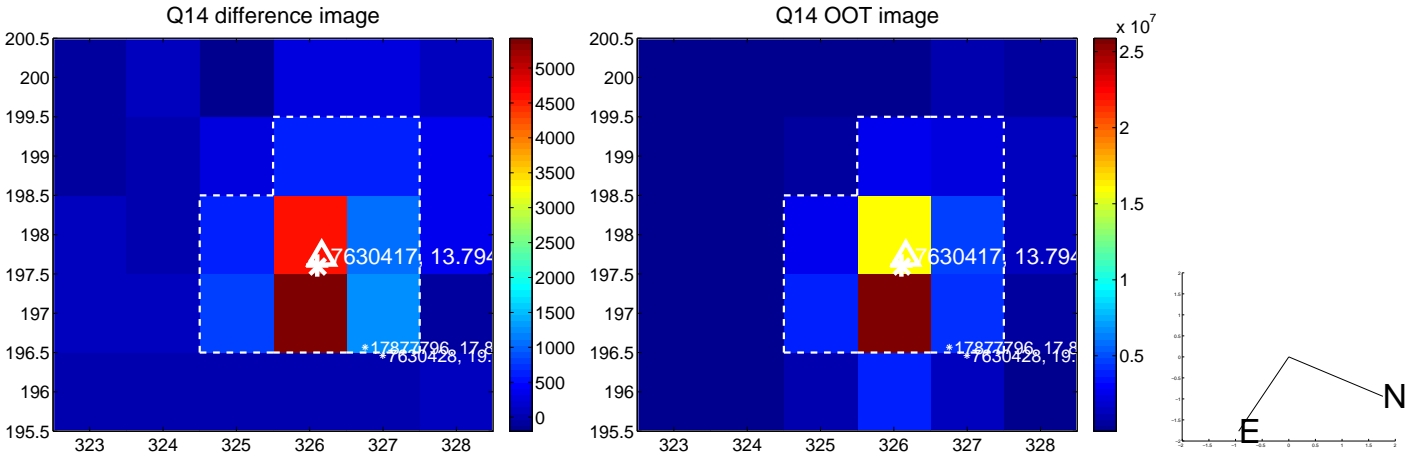
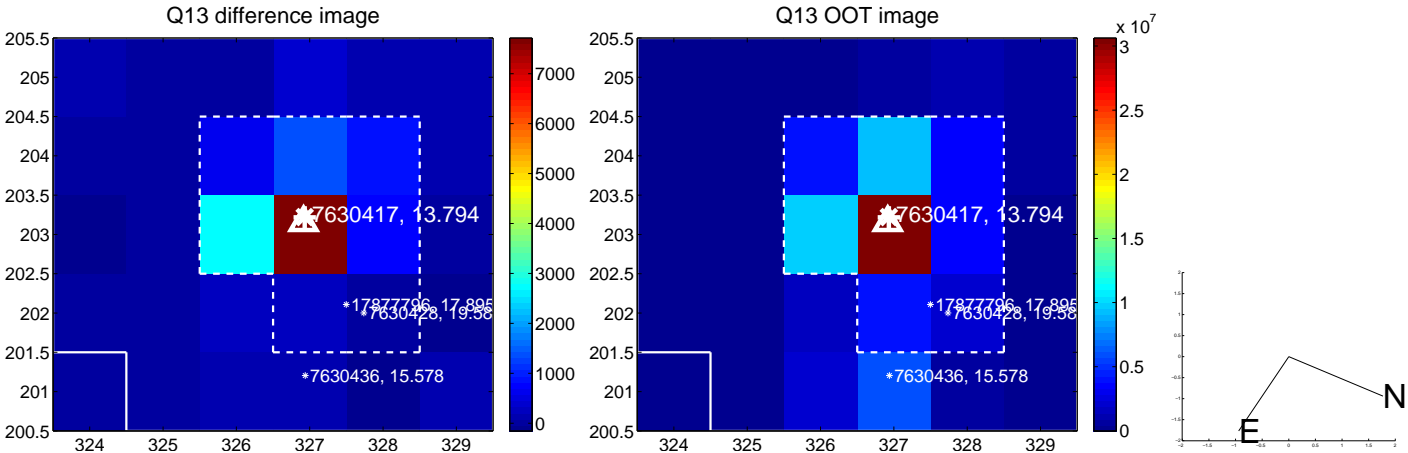
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



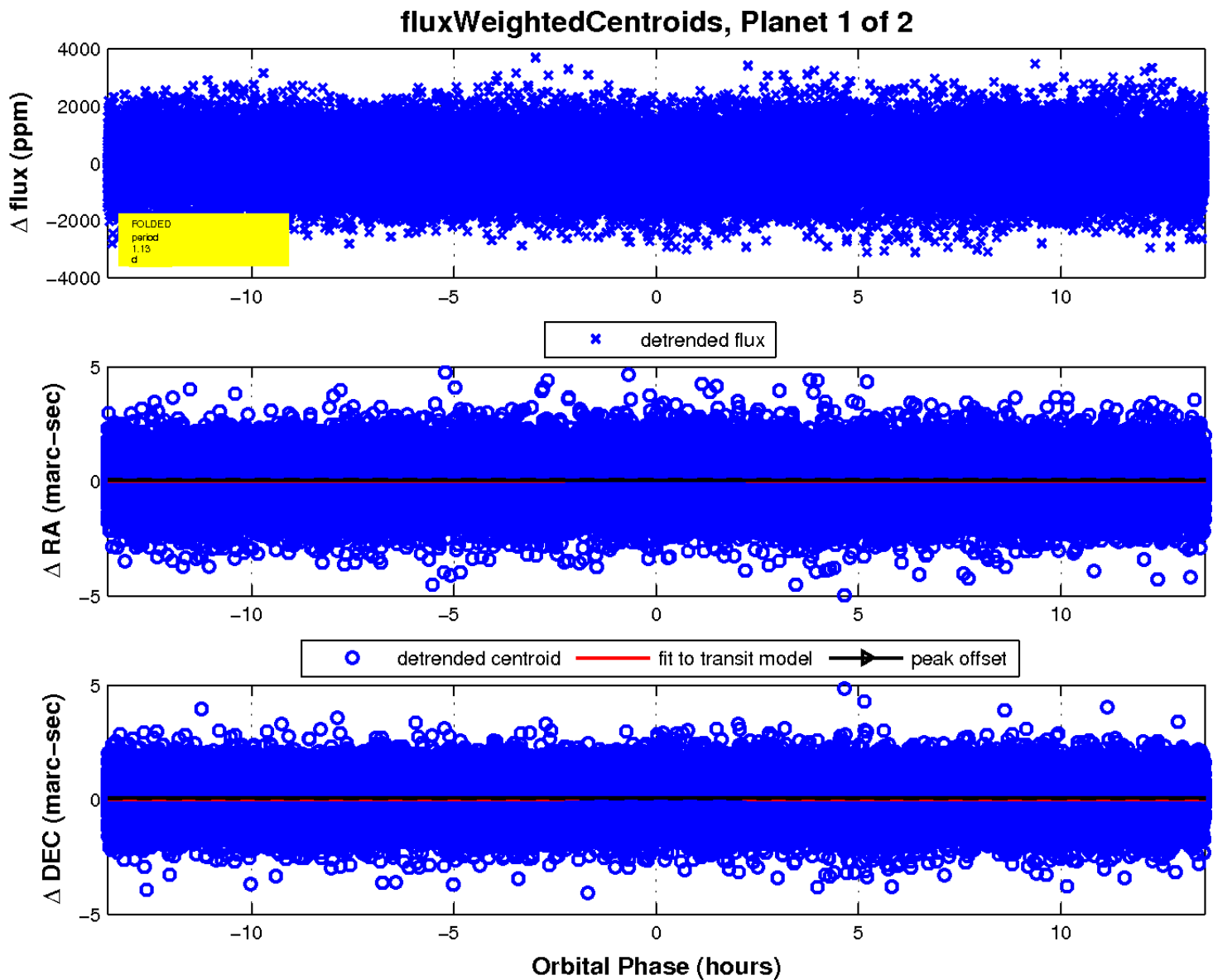
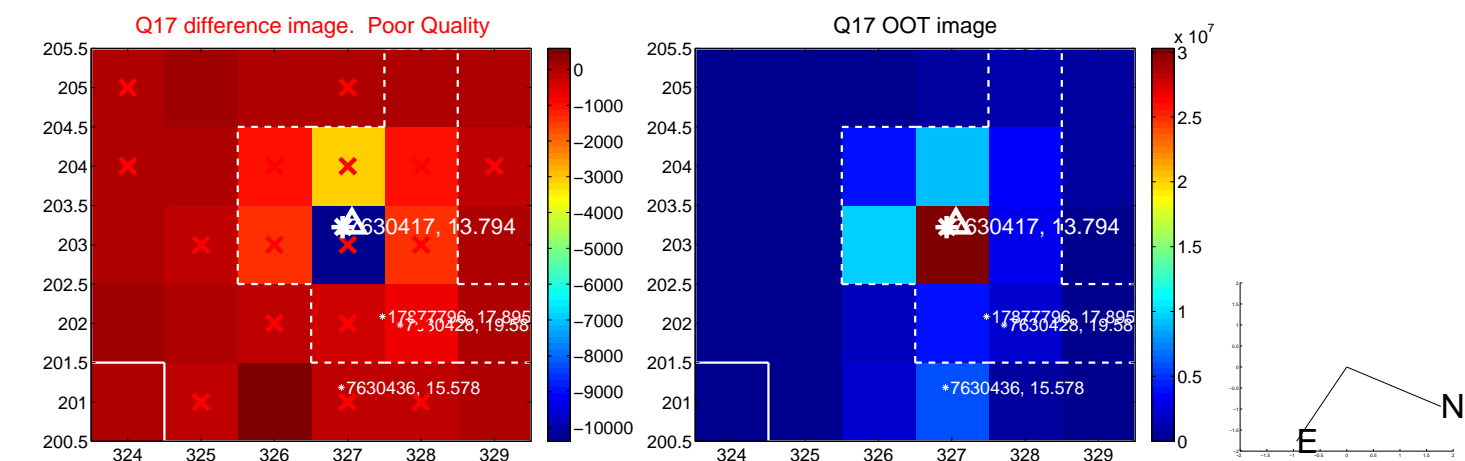
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

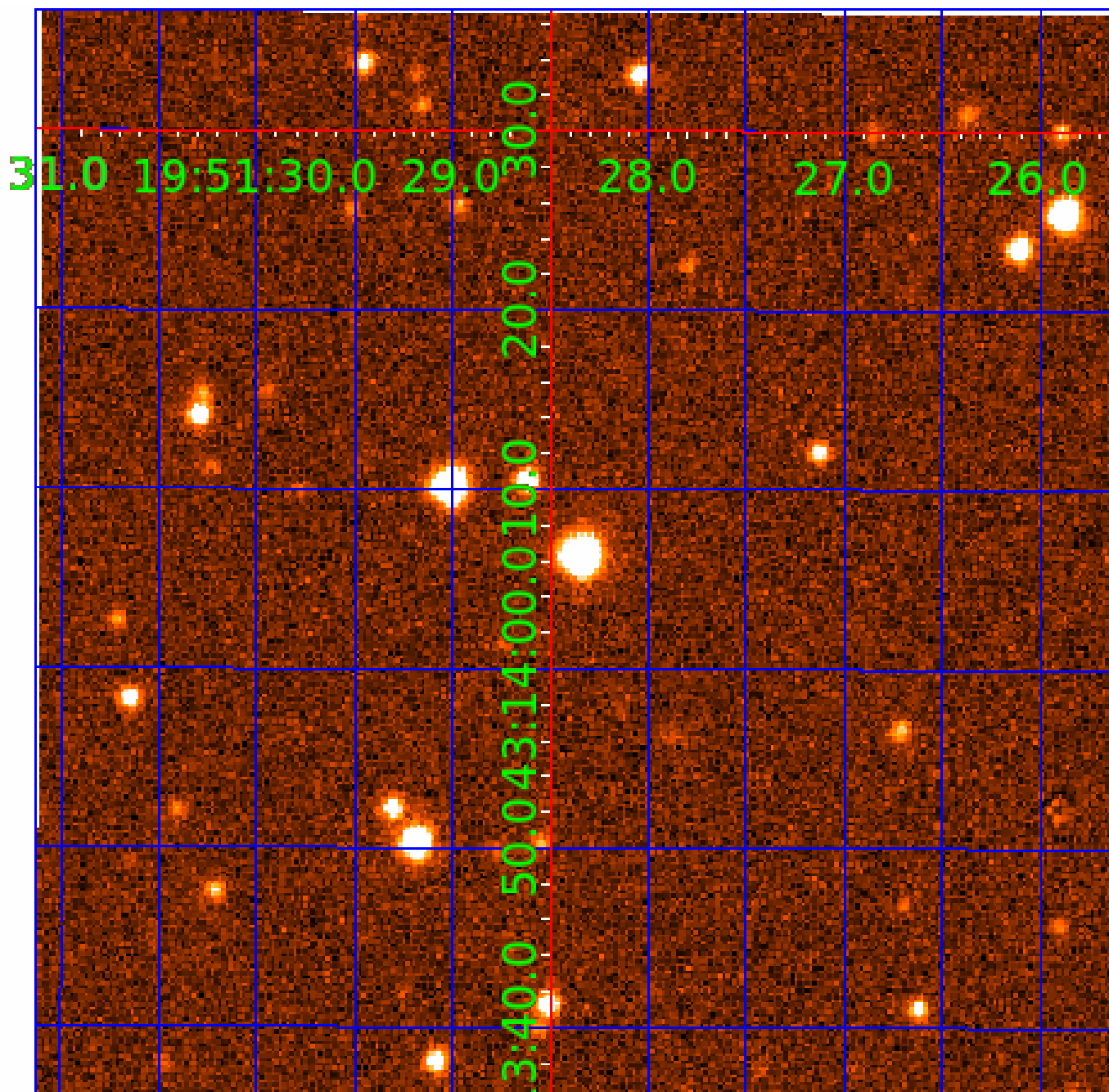


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007630417

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})
007630417-01	OBS	No	1.130515	131.797403	83.2	4.581	8.5	8.8	2.92	10670	2.77	106074.13
007630417-02	OBS	No	1.130519	132.354532	156.8	6.453	11.9	14.4	2.92	10670	6.11	106073.58

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007630417-01	OBS	FP	0.00	1	0	0	0	LPP_DV
007630417-02	OBS	FP	0.00	1	0	0	0	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.

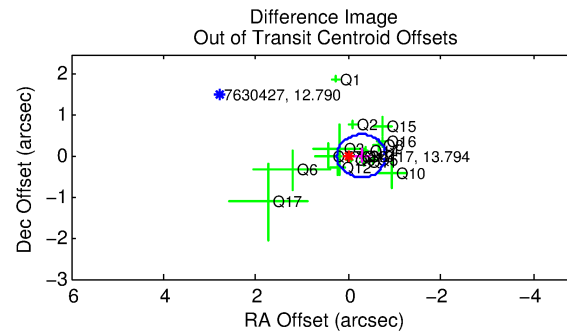
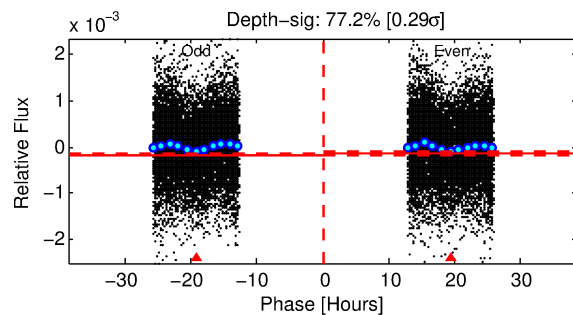
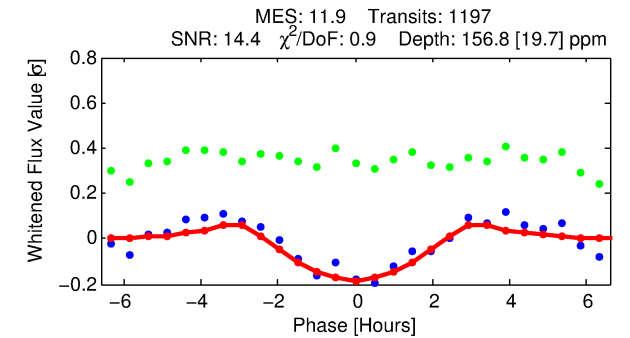
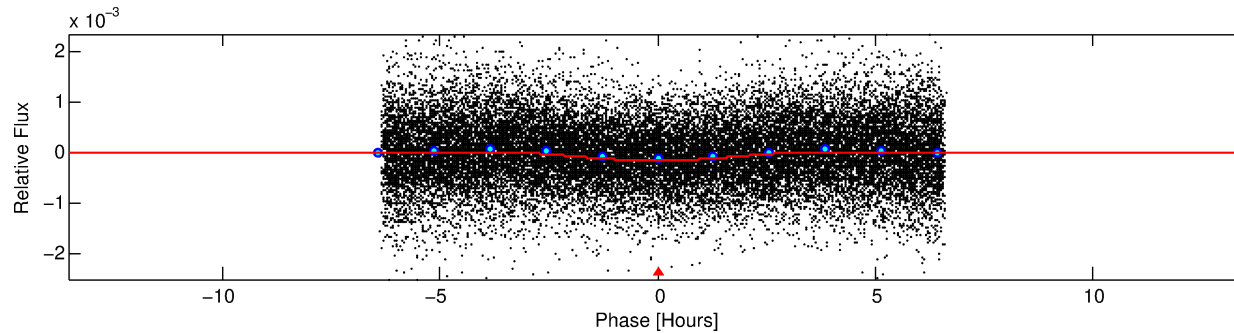
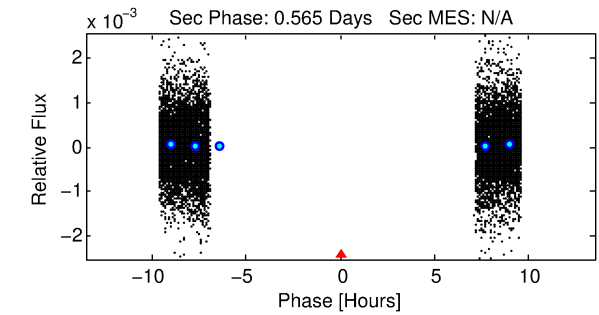
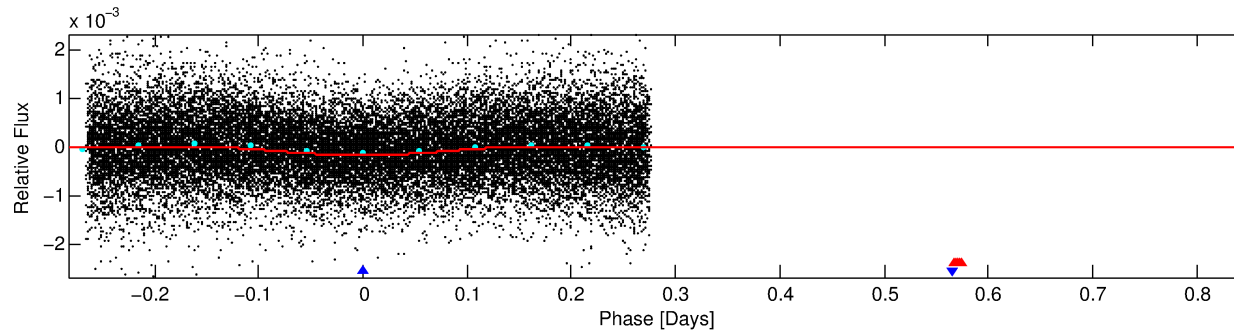
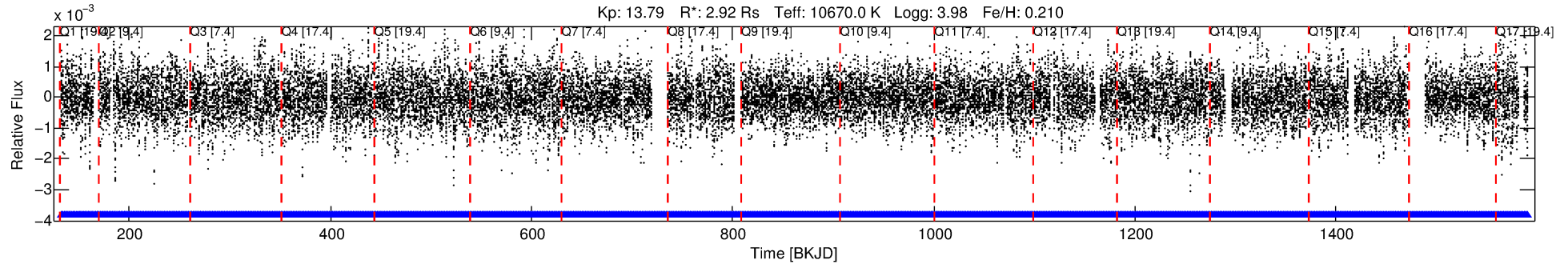
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007630417-02

No Significant Match Found

DV One-Page Summary

KIC: 7630417 Candidate: 2 of 2 Period: 1.131 d



DV Fit Results:

Period = 1.13052 [0.00001] d
Epoch = 132.3545 [0.0050] BKJD
Rp/R* = 0.0192 [0.0139]
a/R* = 1.04 [0.00]
b = 1.00 [0.02]
Seff = 106073.58 [70954.97]
Teq = 4602 [770] K
Rp = 6.11 [4.84] Re
a = 0.0305 [0.0082] AU

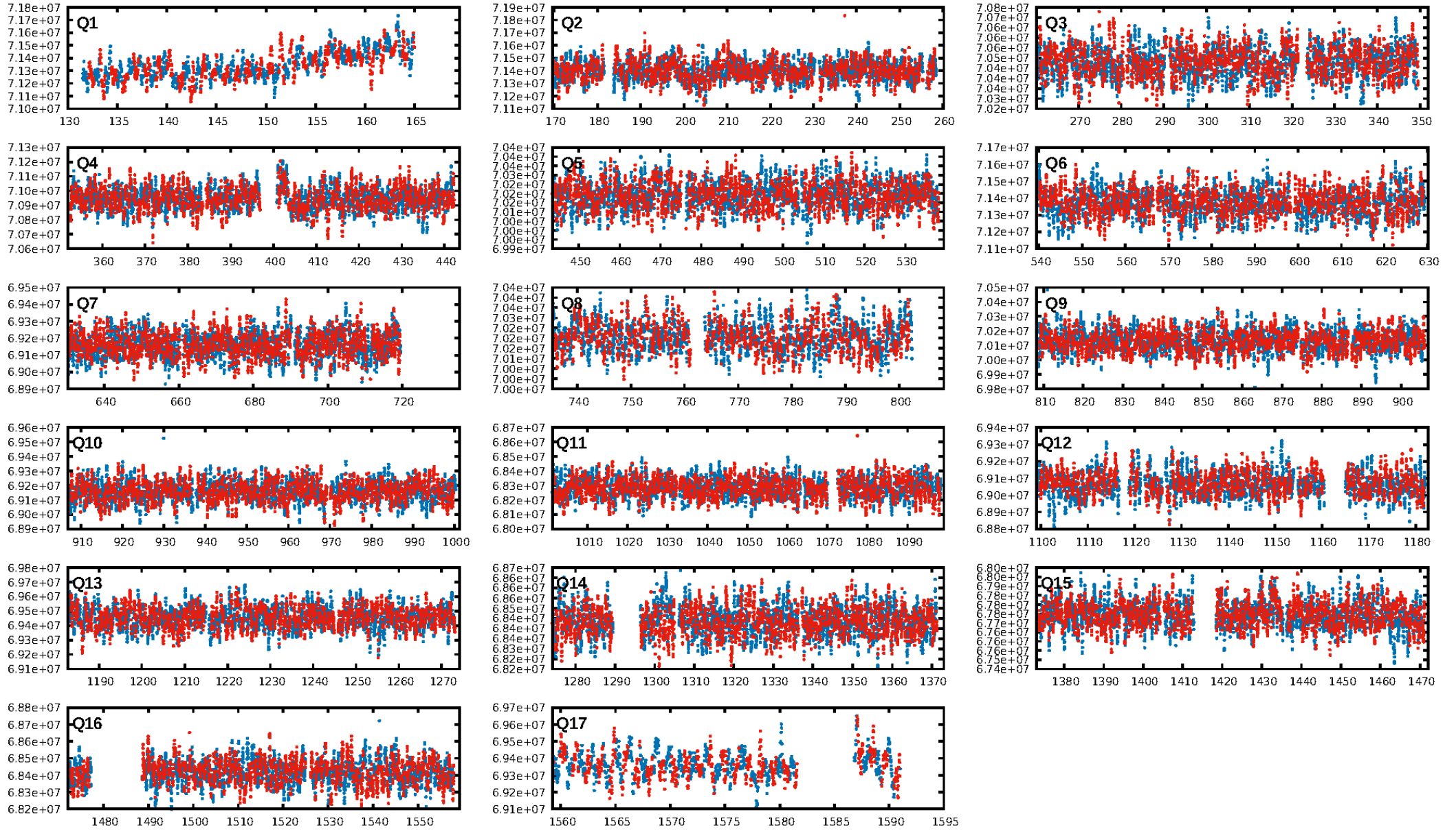
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1144/1144]
GhostDiagnostic-chr: 2.136
Centroid-sig: 0.0%
Centroid-so: 0.475 arcsec [1.99σ]
OotOffset-rm: 0.270 arcsec [1.54σ]
KicOffset-rm: 0.277 arcsec [1.58σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.88 [15/17]
DiffImageOverlap-fno: 0.00 [0/17]

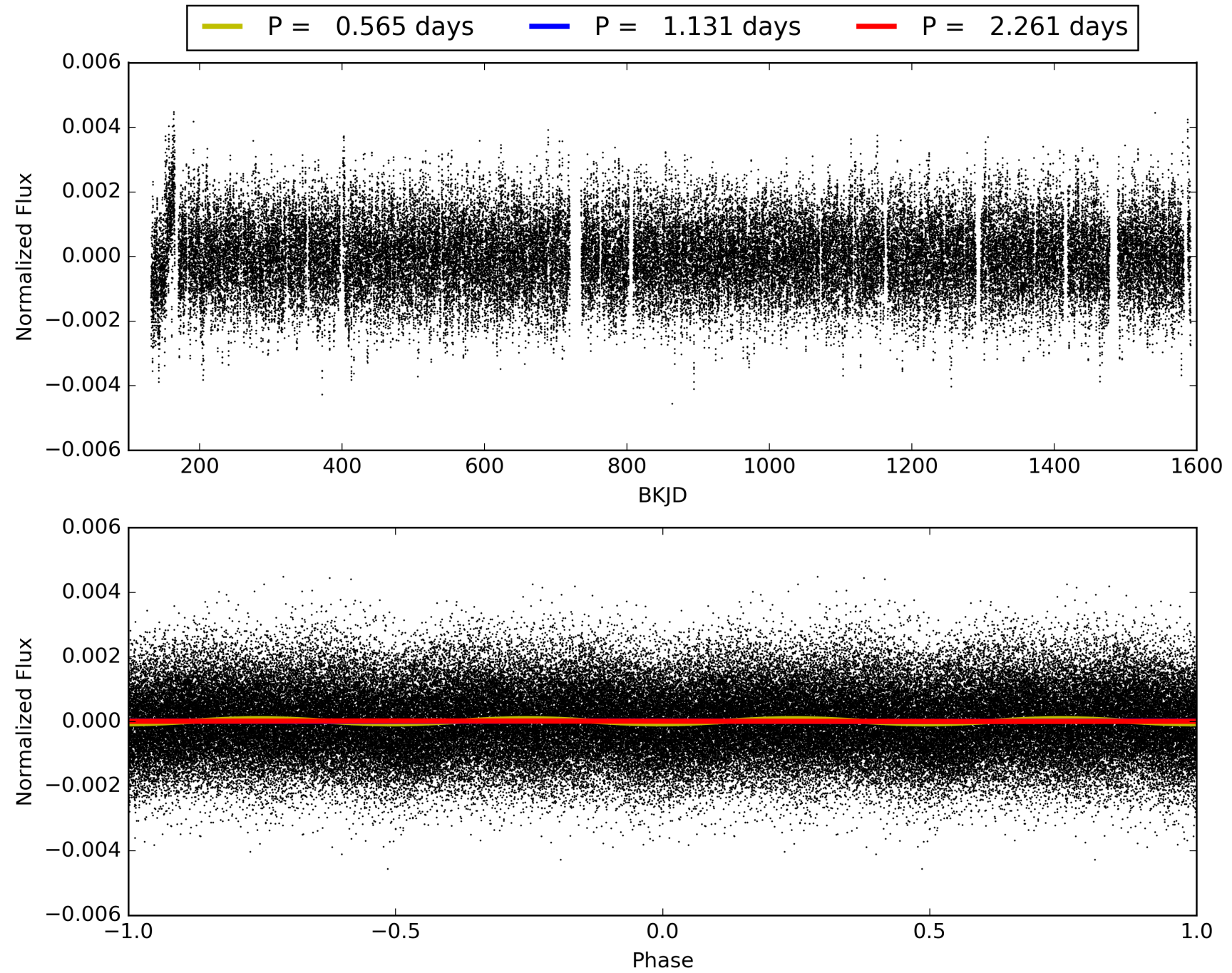
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 007630417-02, PDC Light Curves

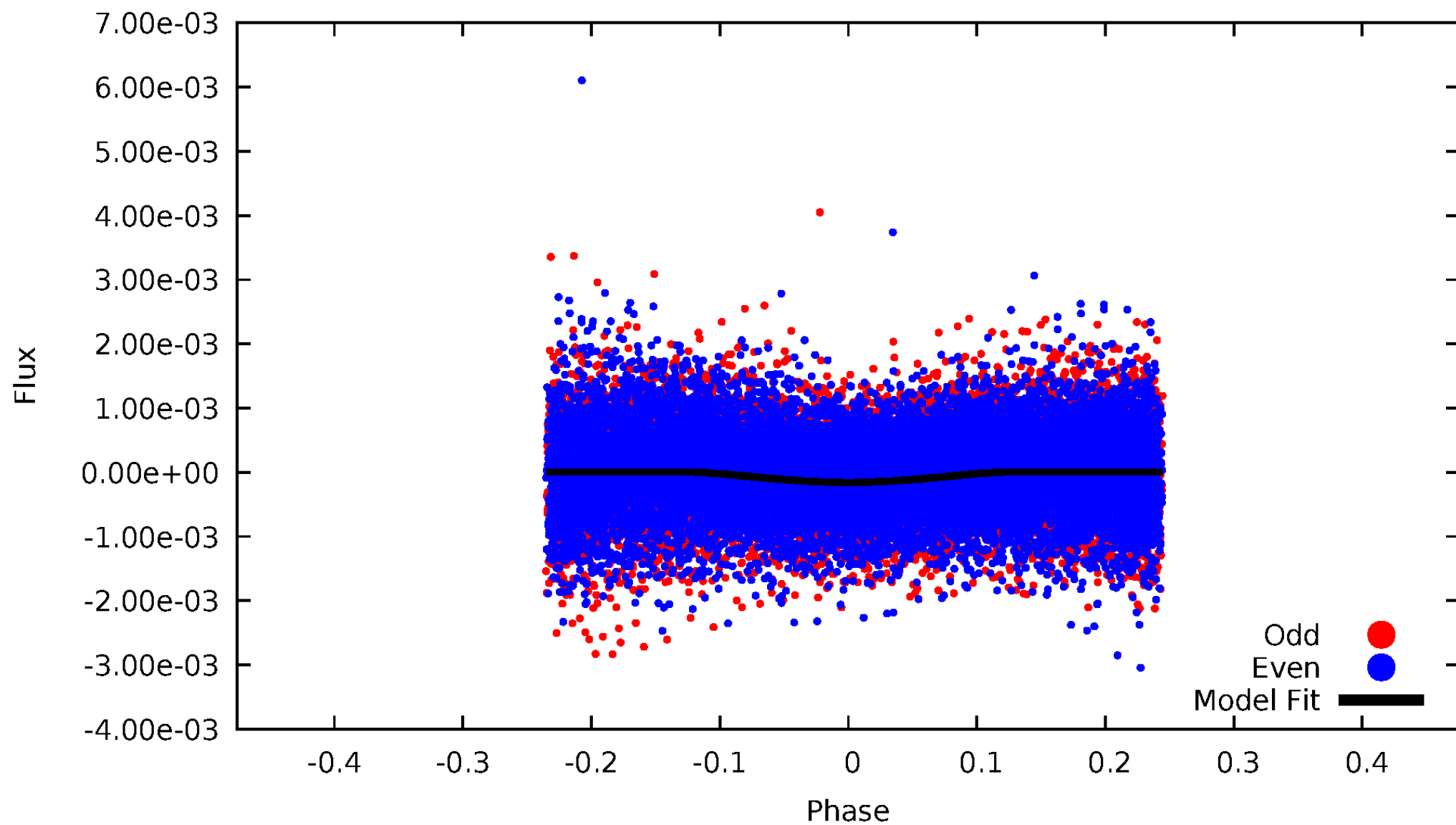


TCE 007630417-02



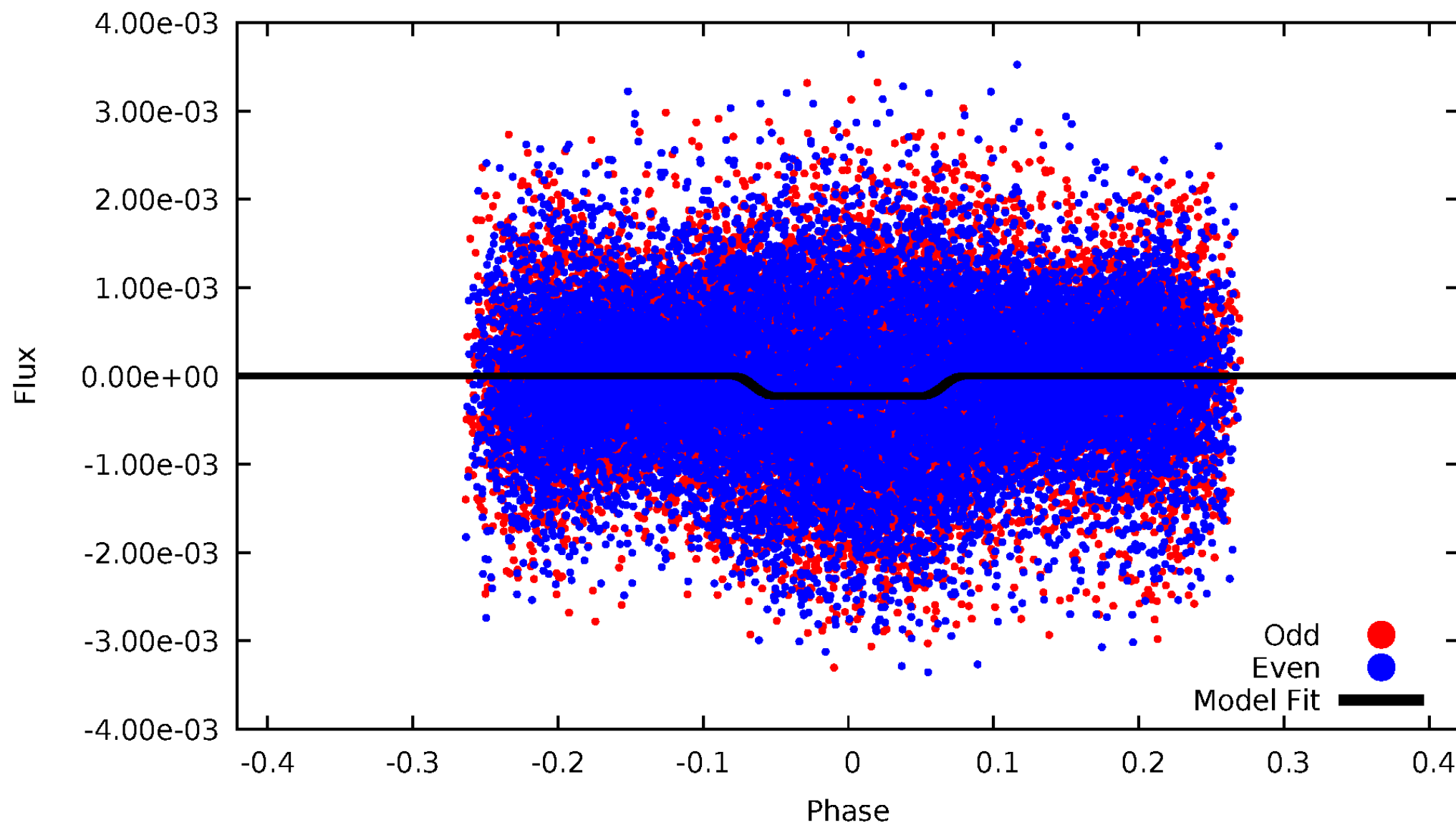
DV Odd/Even

TCE 007630417-02



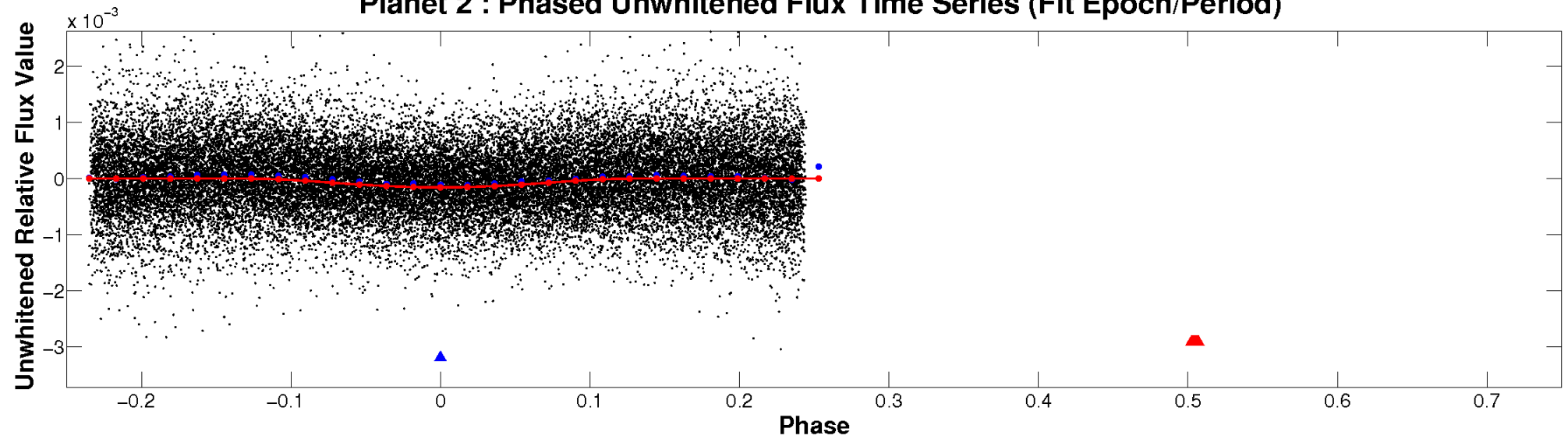
ALT Odd/Even

TCE 007630417-02

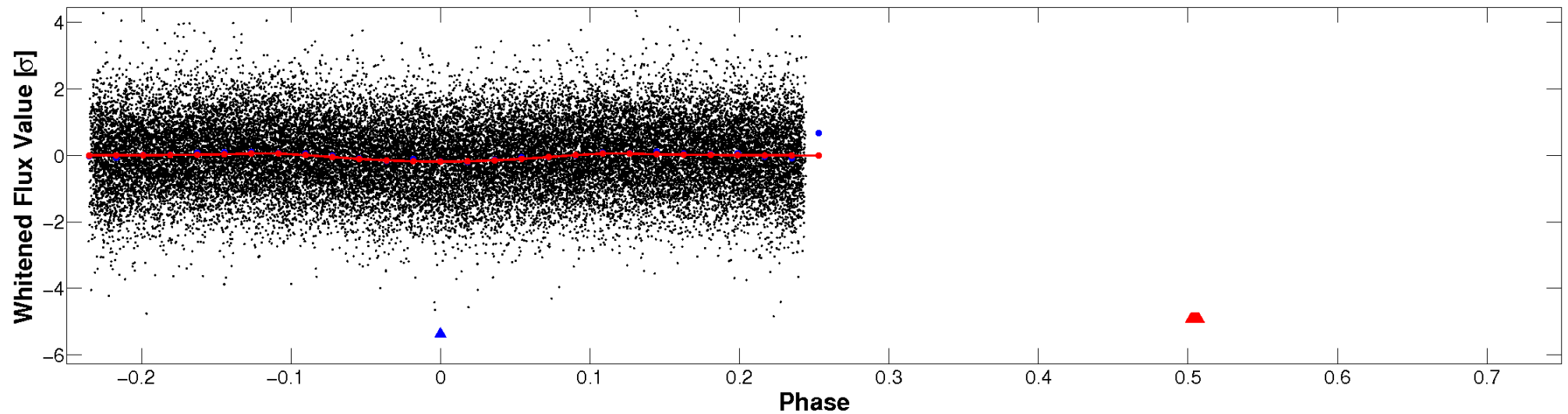


Non-Whitened Vs. Whitened Light Curve

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

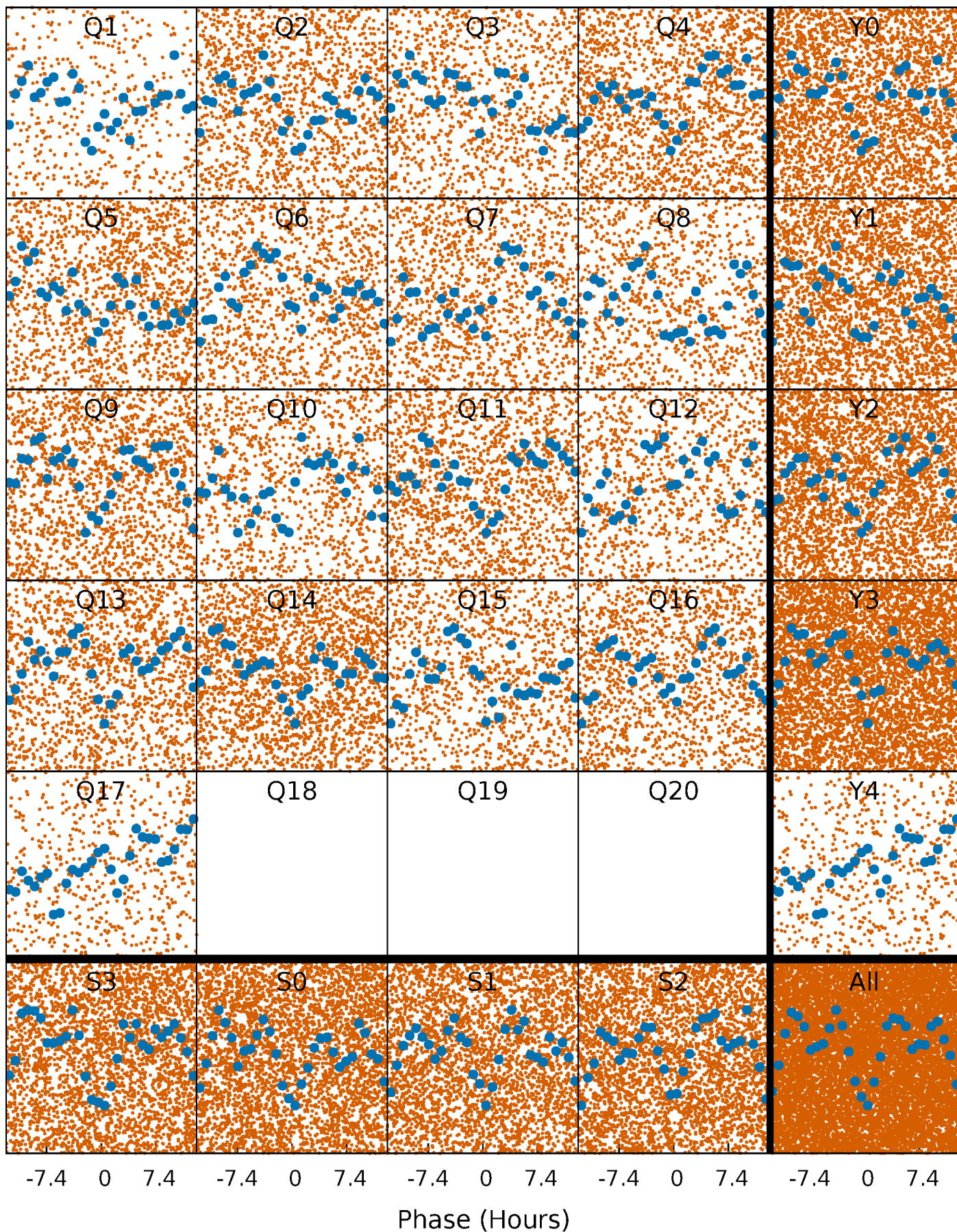


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



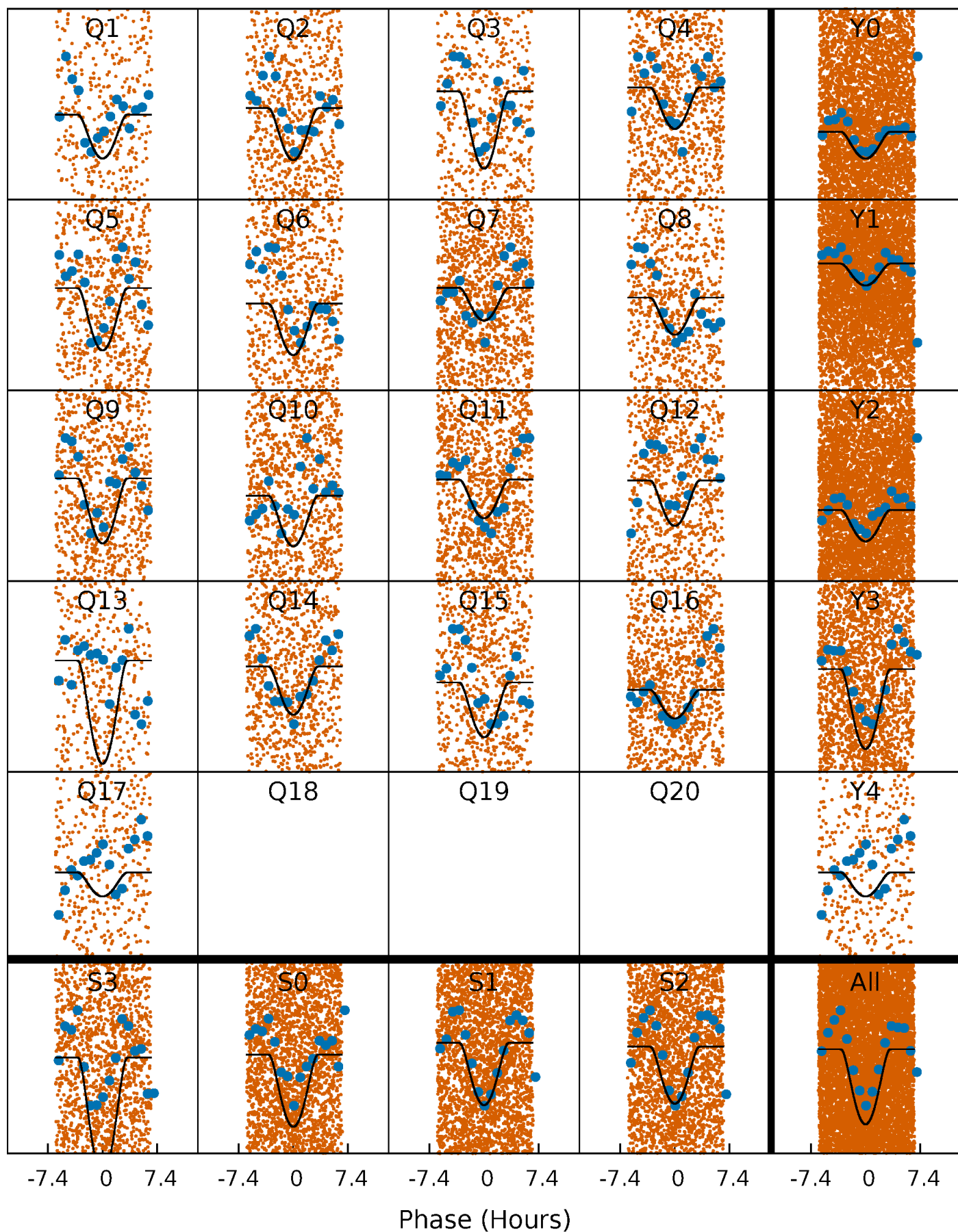
PDC Quarter-Phased Transit Curves

TCE 007630417-02 P= 1.130519 Days $T_0=132.354532$ (BKJD)



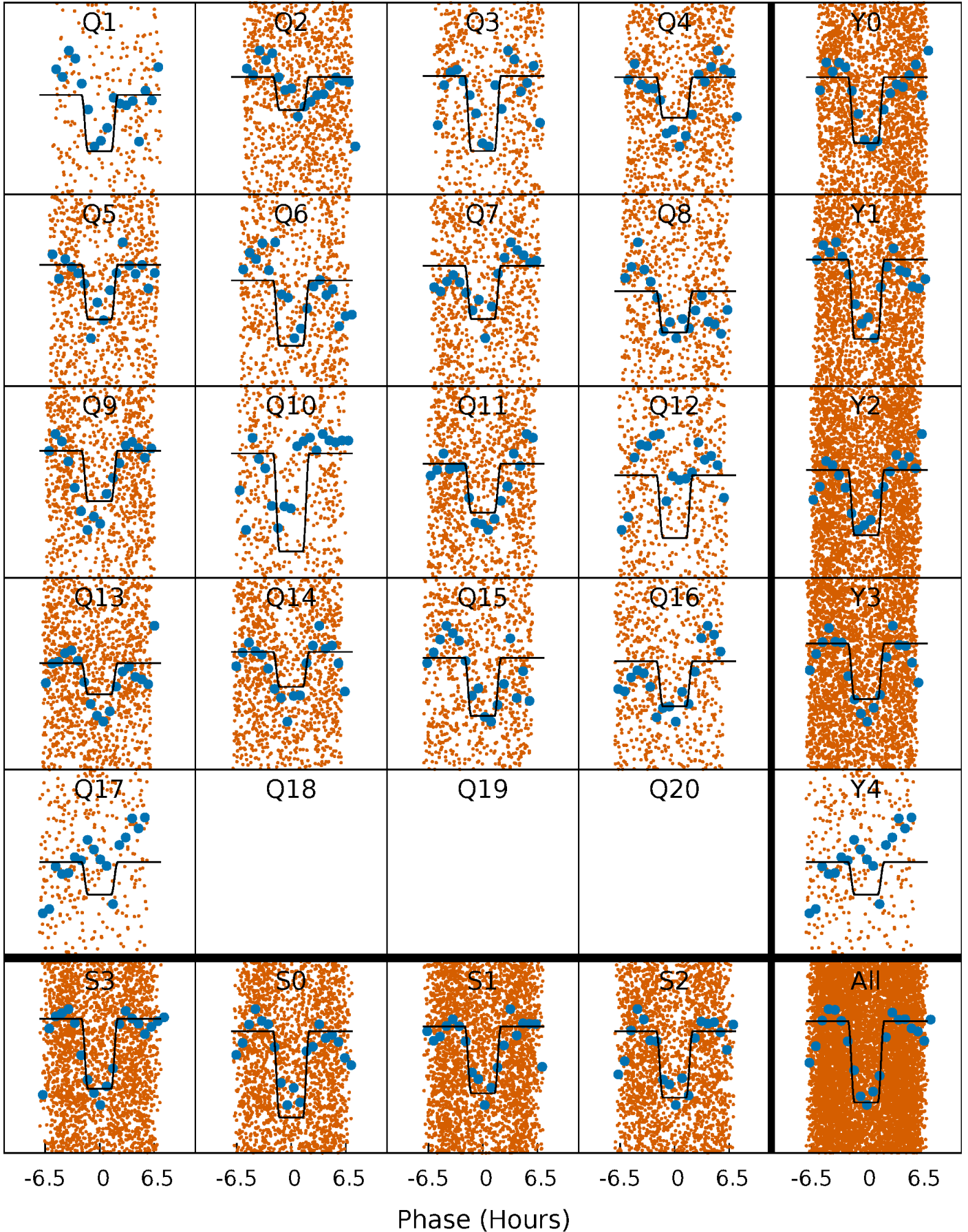
DV Quarter-Phased Transit Curves

TCE 007630417-02 P= 1.130519 Days $T_0=132.354532$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

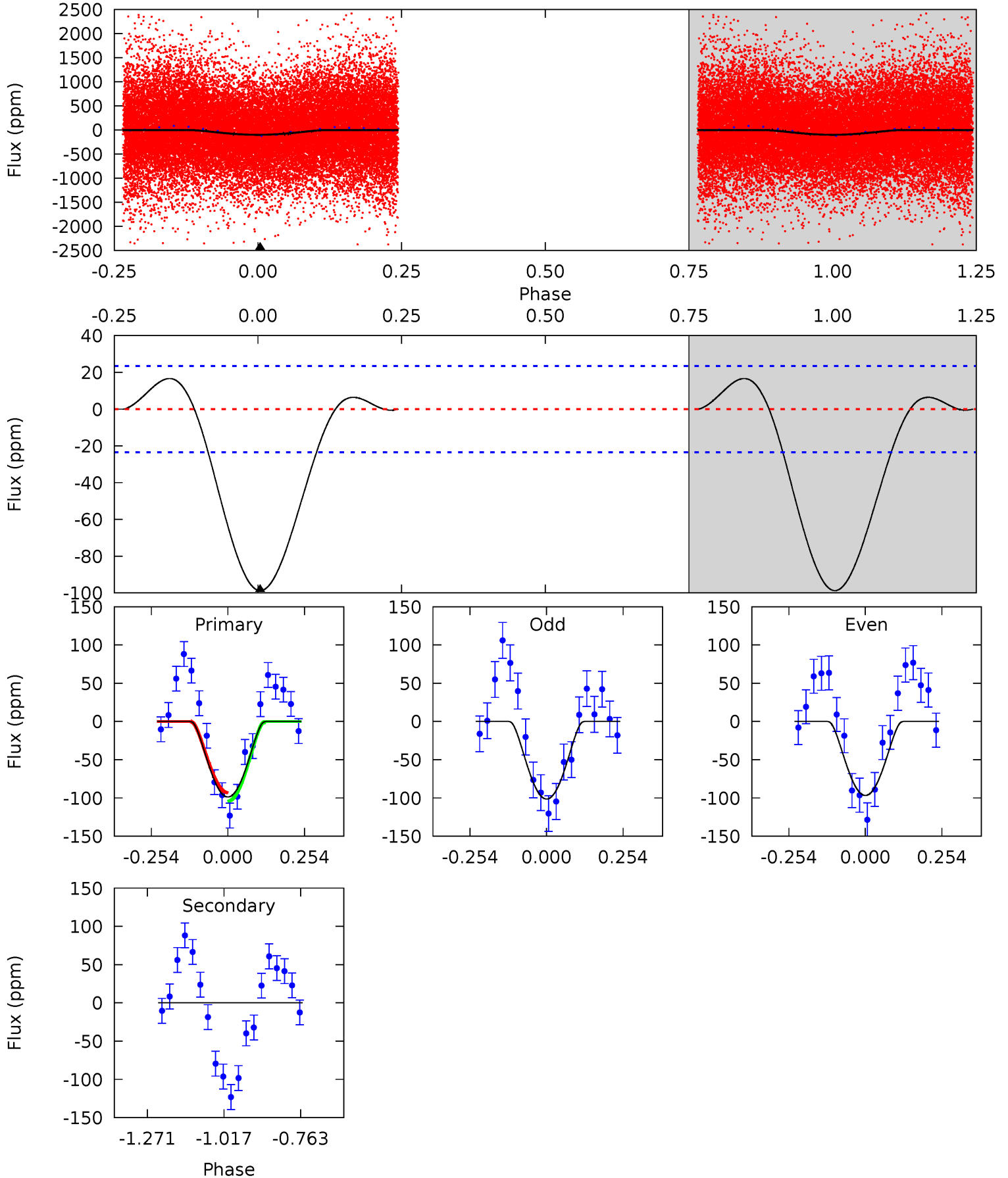
TCE 007630417-02 P= 1.130568 Days $T_0=132.325186$ (BKJD)



DV Model-Shift Uniqueness Test

007630417-02, P = 1.130519 Days, E = 131.224013 Days

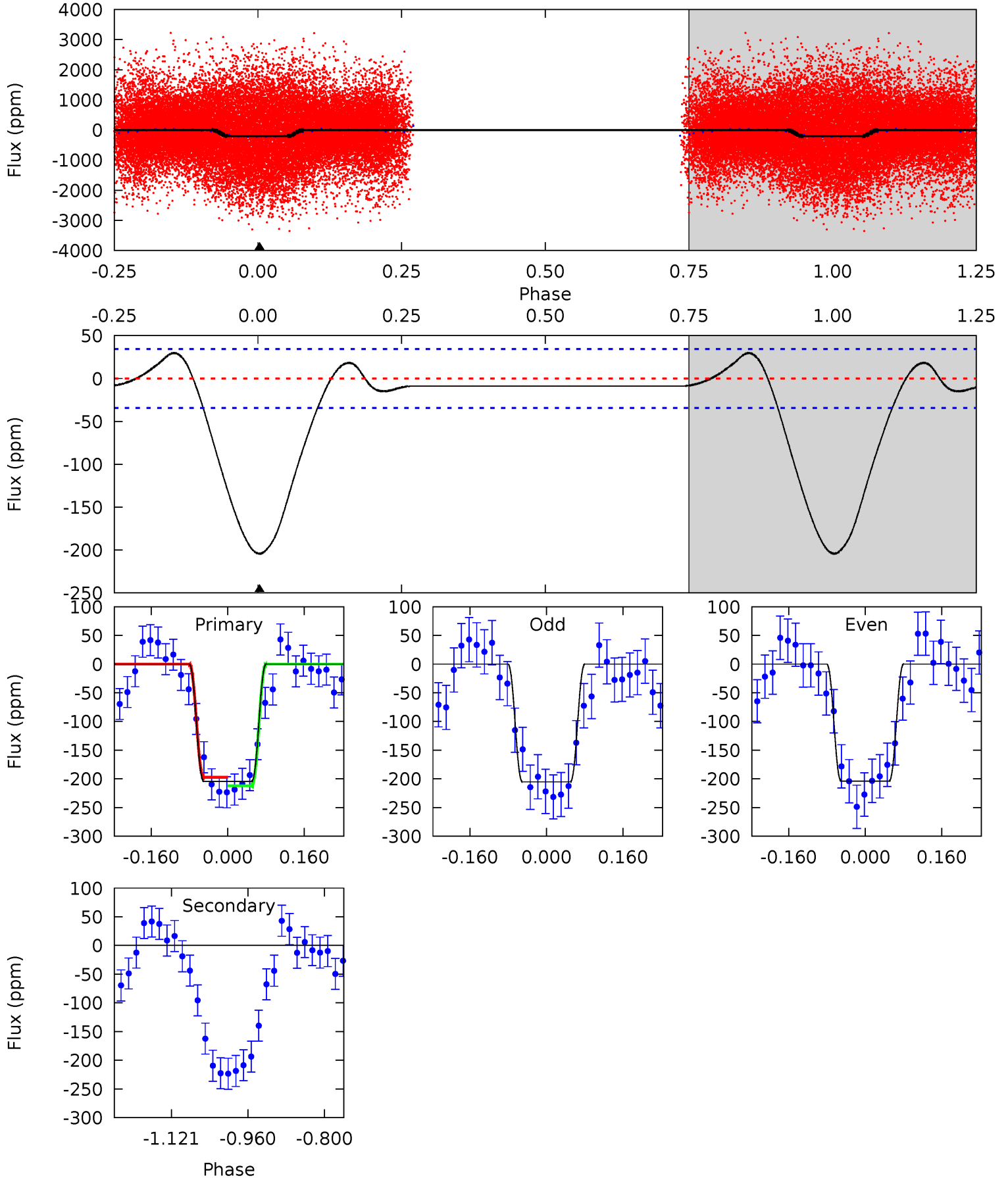
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.4	0	0	0	4.37	1.14	0.26	18.4	18.4	0	0	0.44	0.92	0.14	1.16



Alt Model-Shift Uniqueness Test

007630417-02, P = 1.130568 Days, E = 131.194618 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.6	0	0	0	4.47	1.40	1.57	26.6	26.6	0	0	0.09	0.99	0.13	0.77



Stellar Parameters For KIC 007630417

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	10670^{+388}_{-1455}	$3.980^{+0.171}_{-0.209}$	$0.210^{+0.150}_{-0.200}$	$2.915^{+0.948}_{-0.776}$	$2.955^{+0.228}_{-0.683}$	$0.168^{+0.183}_{-0.088}$
	+4%/-14%	+4%/-5%	+71%/-95%	+33%/-27%	+8%/-23%	+109%/-52%
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 007630417-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 5	$6.30^{+4.62}_{-3.48}$	6336^{+655}_{-804}	-4820^{+627}_{-619}	$-0.002^{+0.081}_{-0.099}$
Alt.	0 ± 8	$5.72^{+4.28}_{-3.54}$	6345^{+607}_{-783}	-4806^{+1171}_{-730}	$-0.001^{+0.215}_{-0.162}$

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 $A_{obs} \gg 1.0$

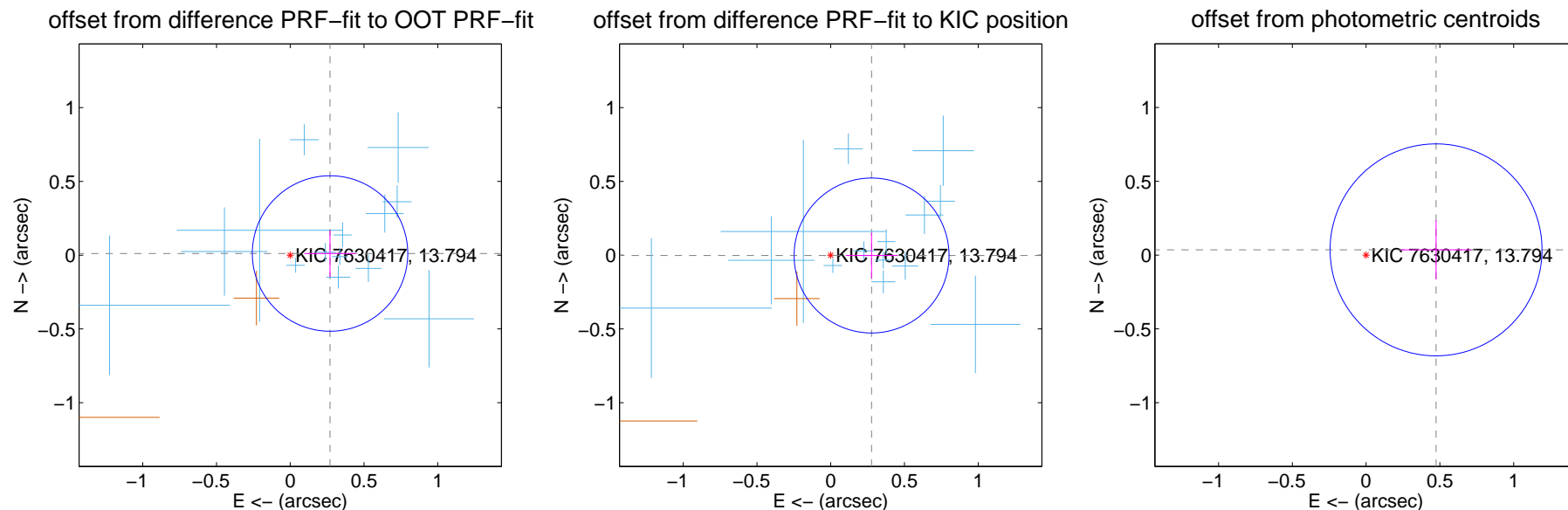
DV Centroid Data

Supplemental centroid analysis for 007630417-02. Kepler magnitude: 13.79. Transit SNR 14.41

There are 15 quarters with good PRF difference image offsets

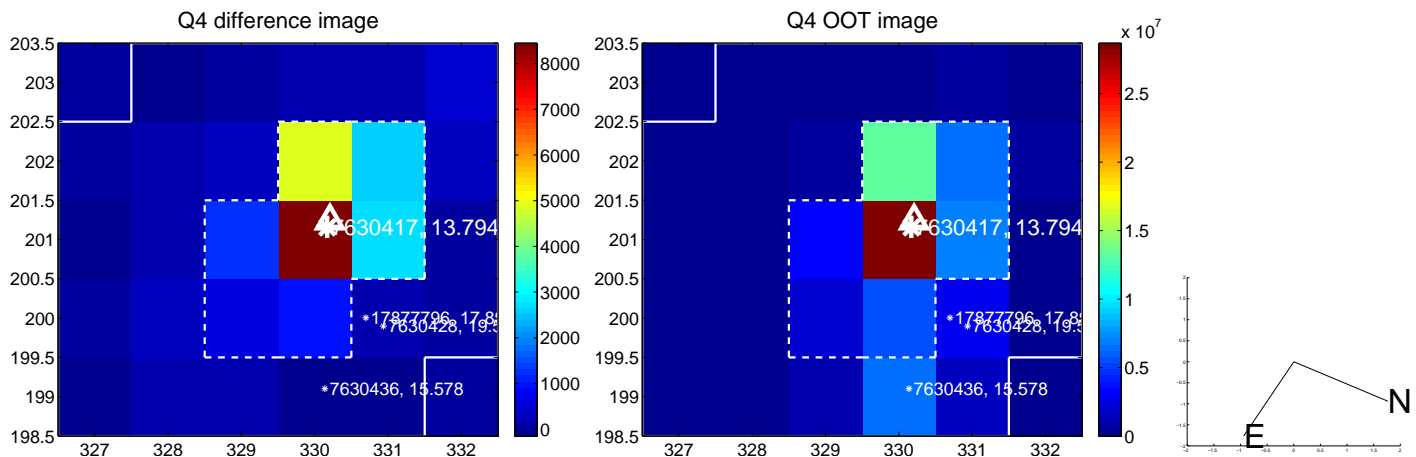
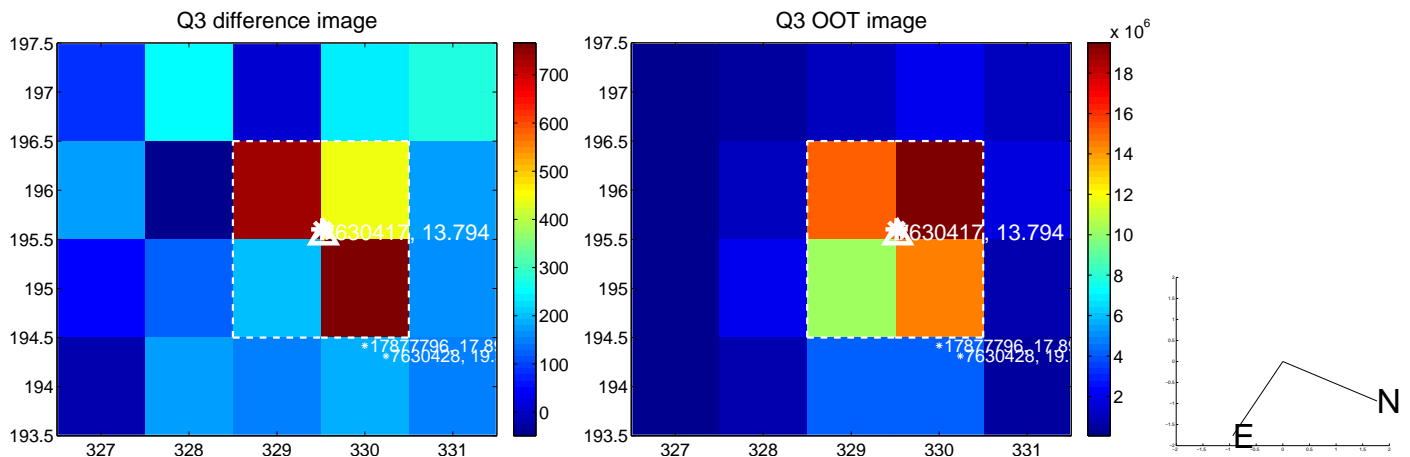
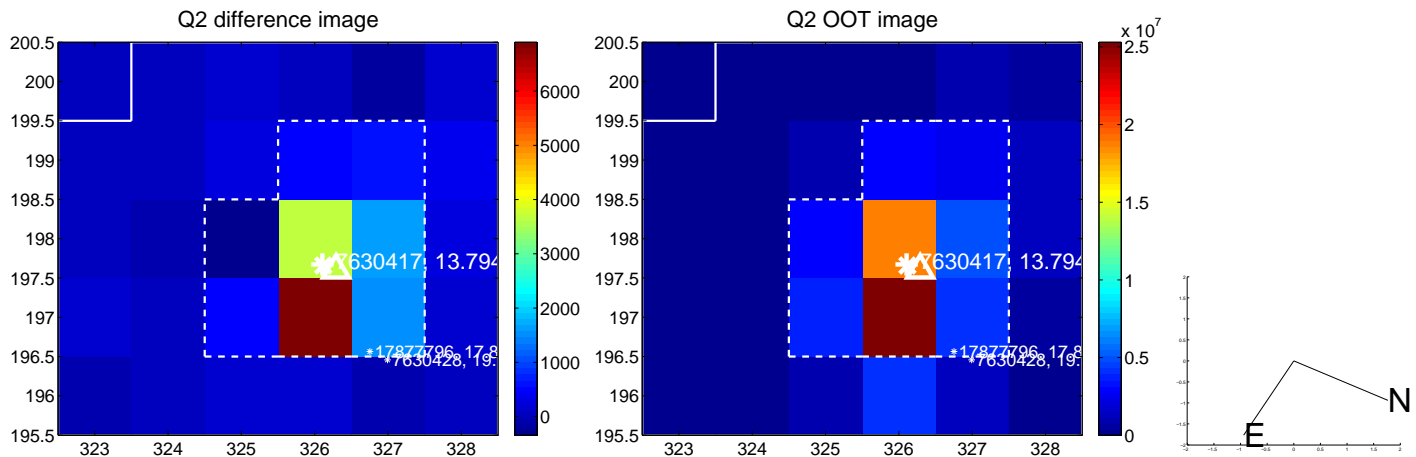
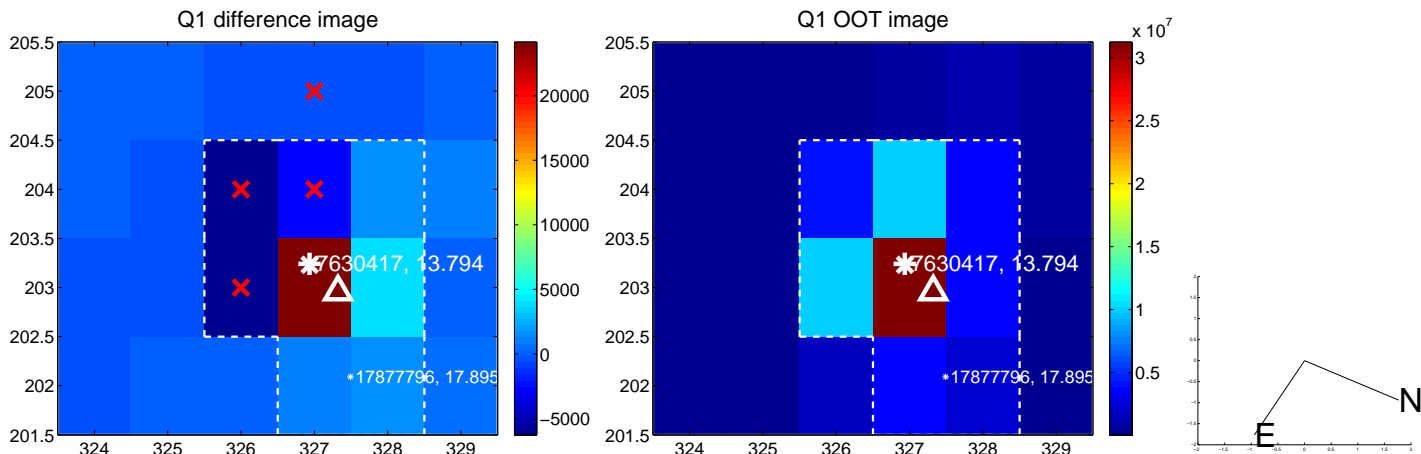
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.270 ± 0.176	1.54	-0.270 ± 0.174	0.011 ± 0.159
PRF-fit source offset from KIC position	0.277 ± 0.175	1.58	-0.277 ± 0.175	-0.002 ± 0.155
photometric centroid source offset	0.48 ± 0.24	1.99	-0.47 ± 0.24	0.04 ± 0.20

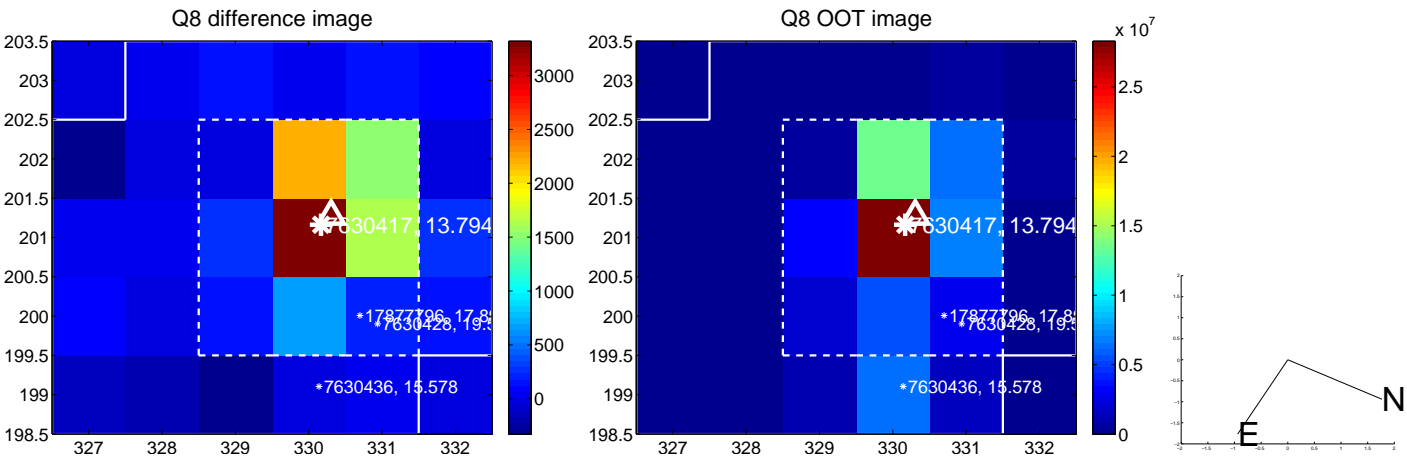
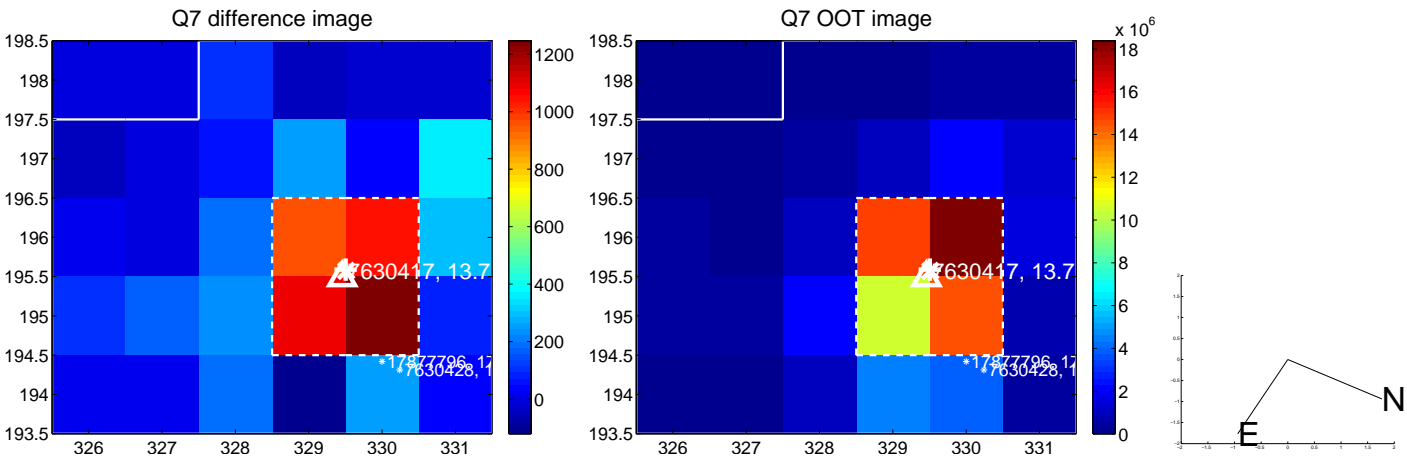
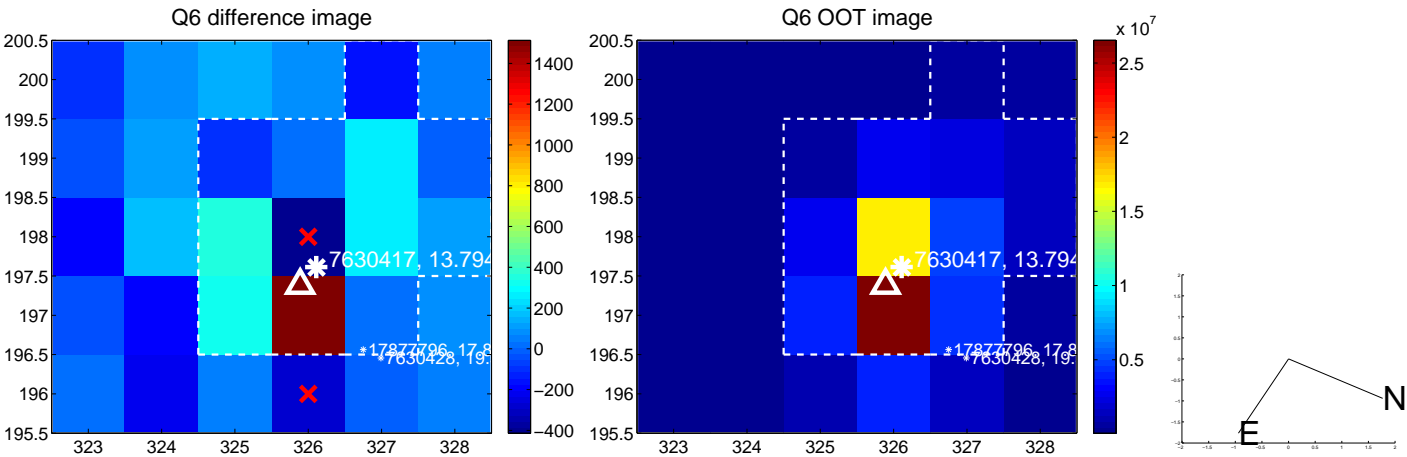
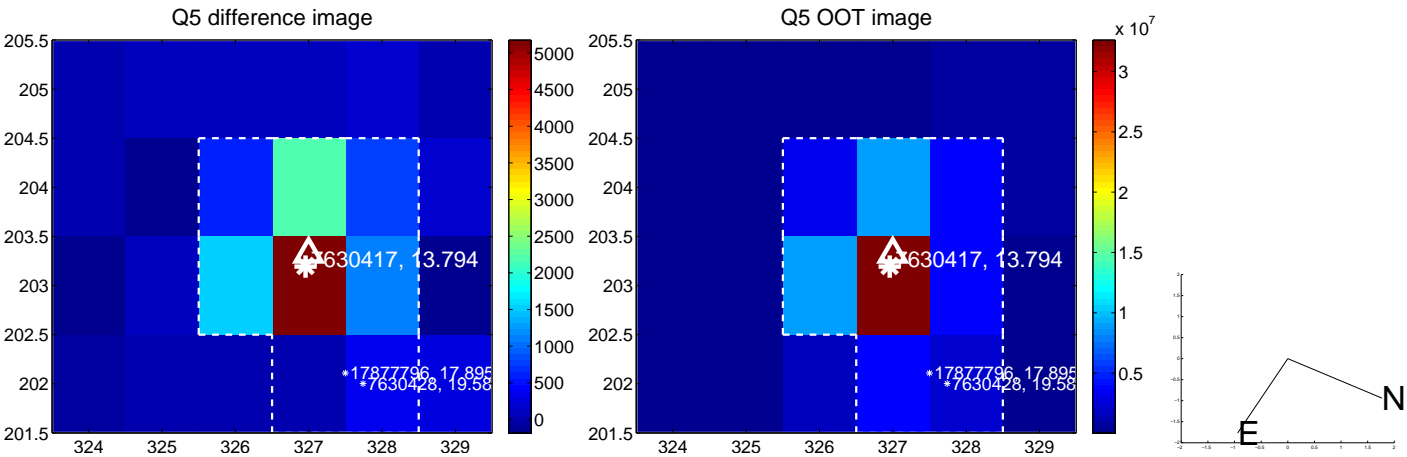


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

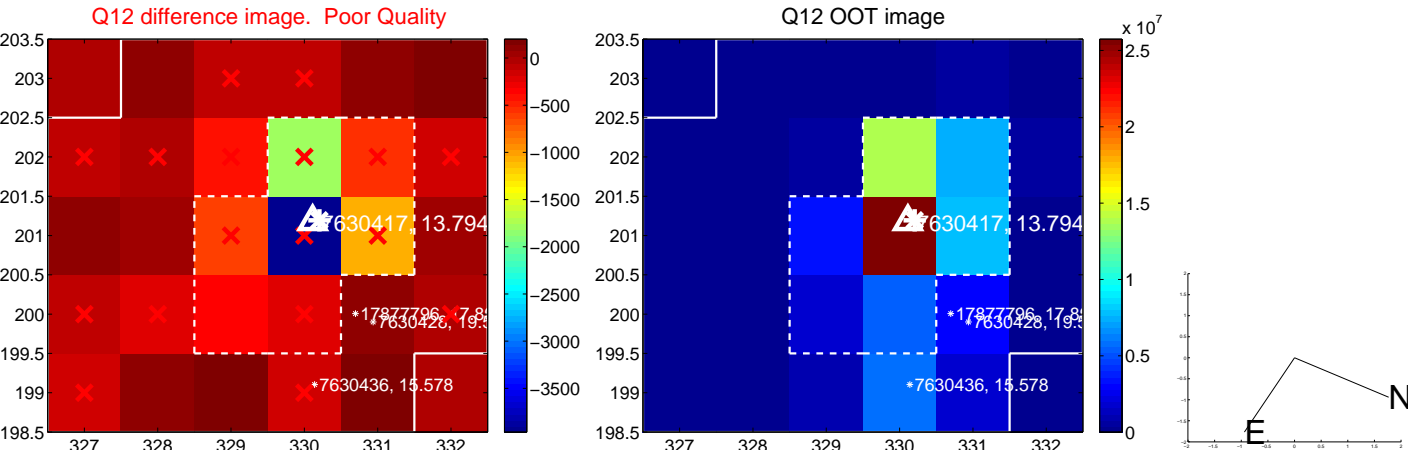
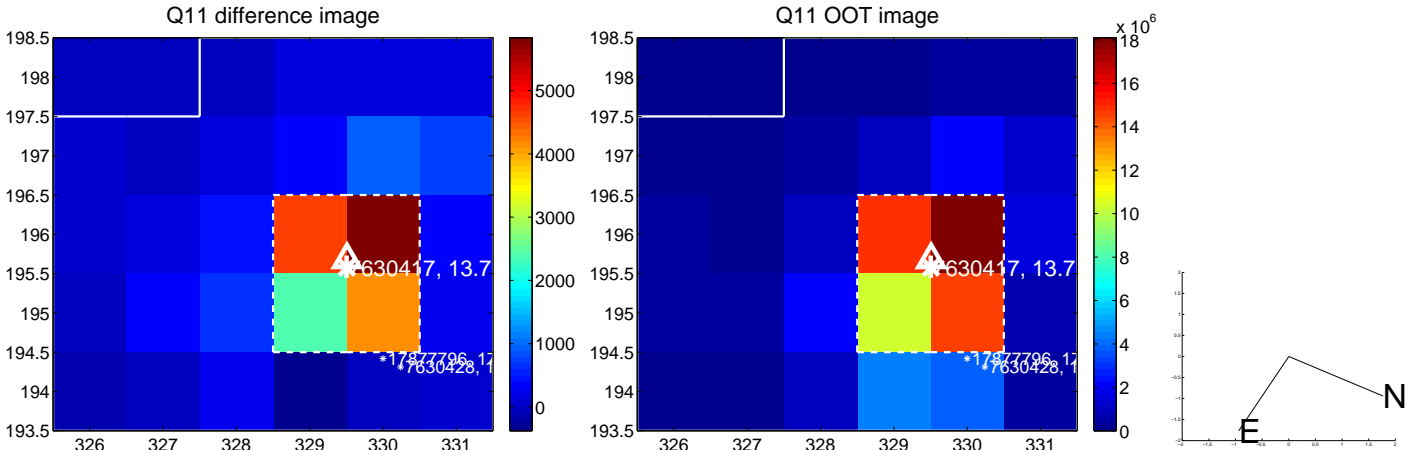
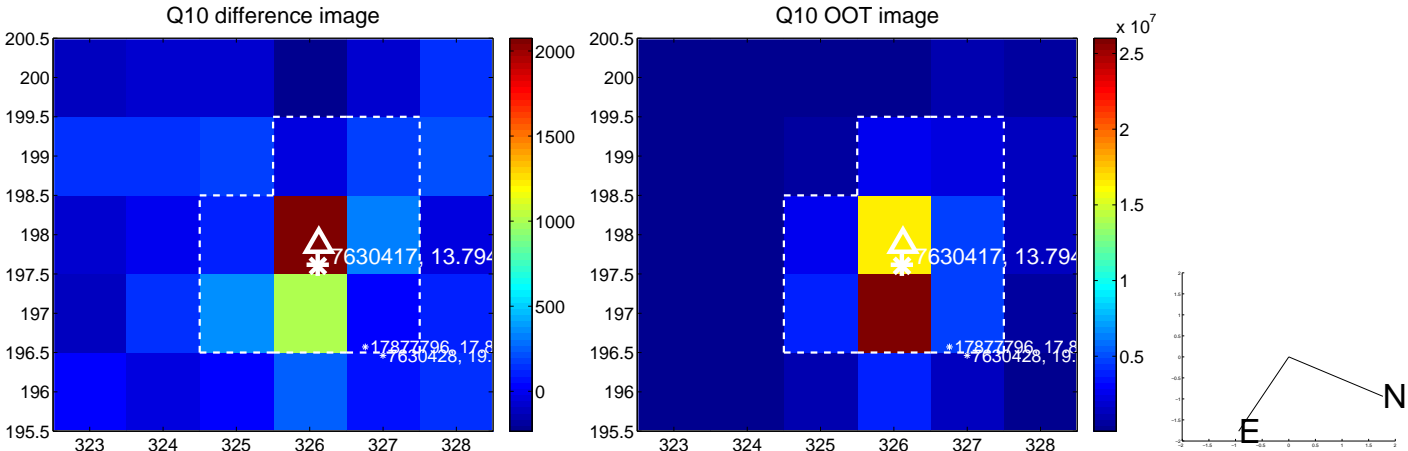
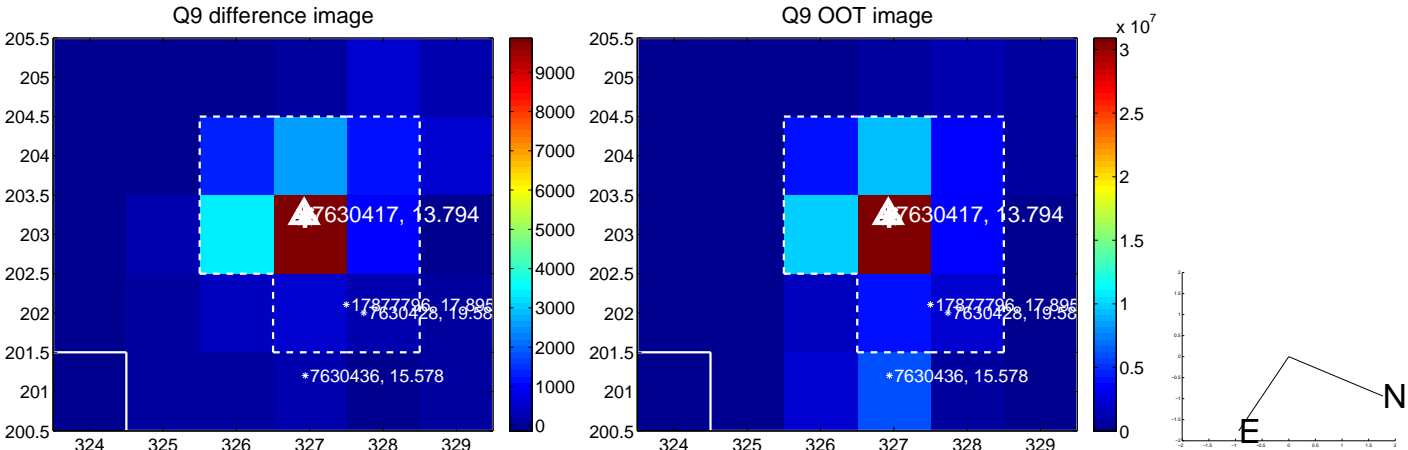
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



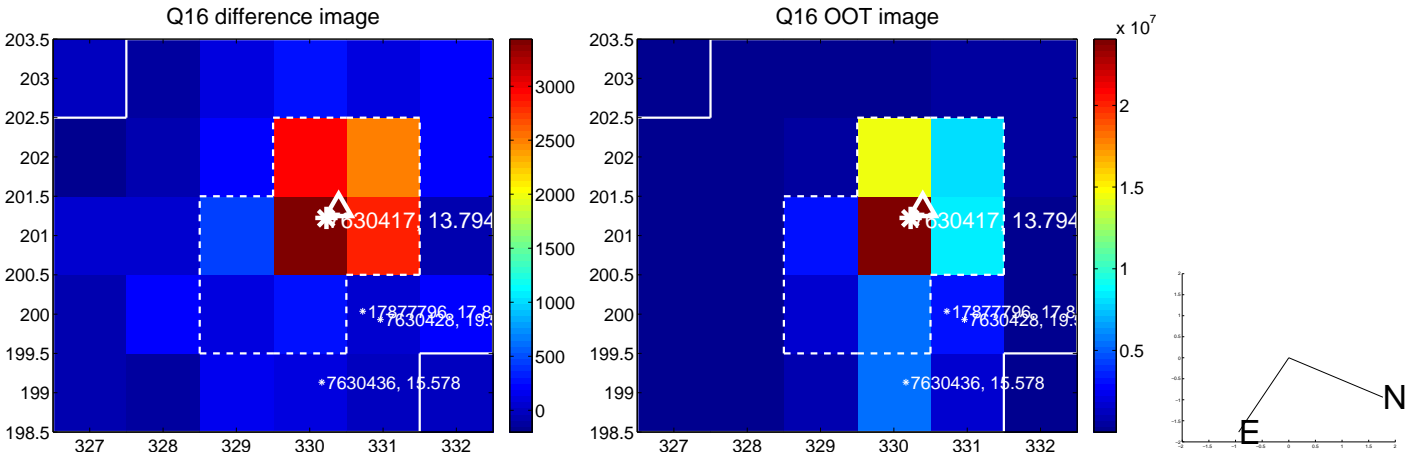
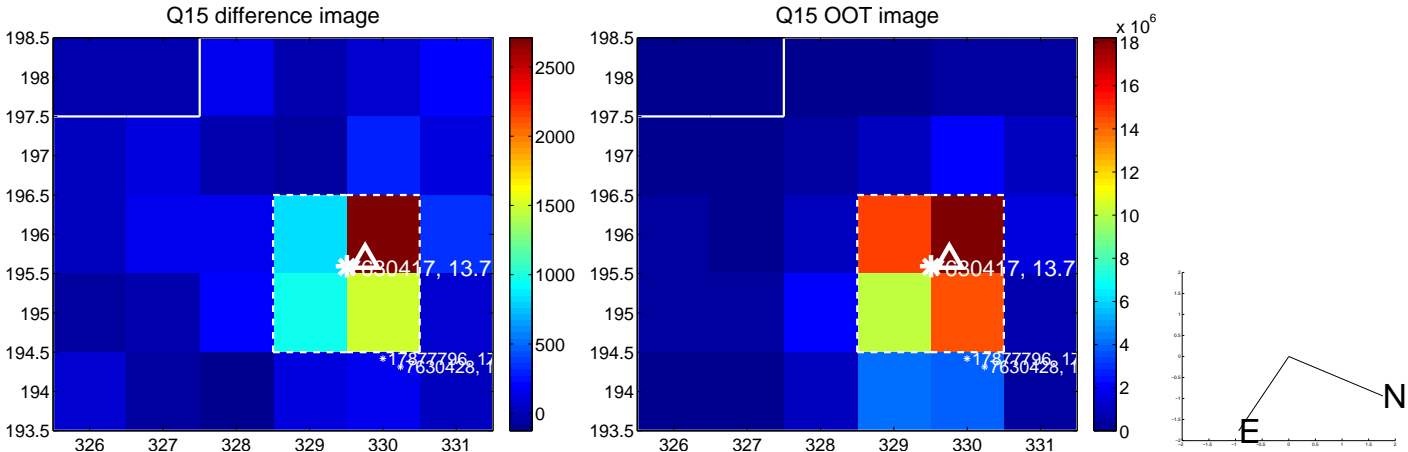
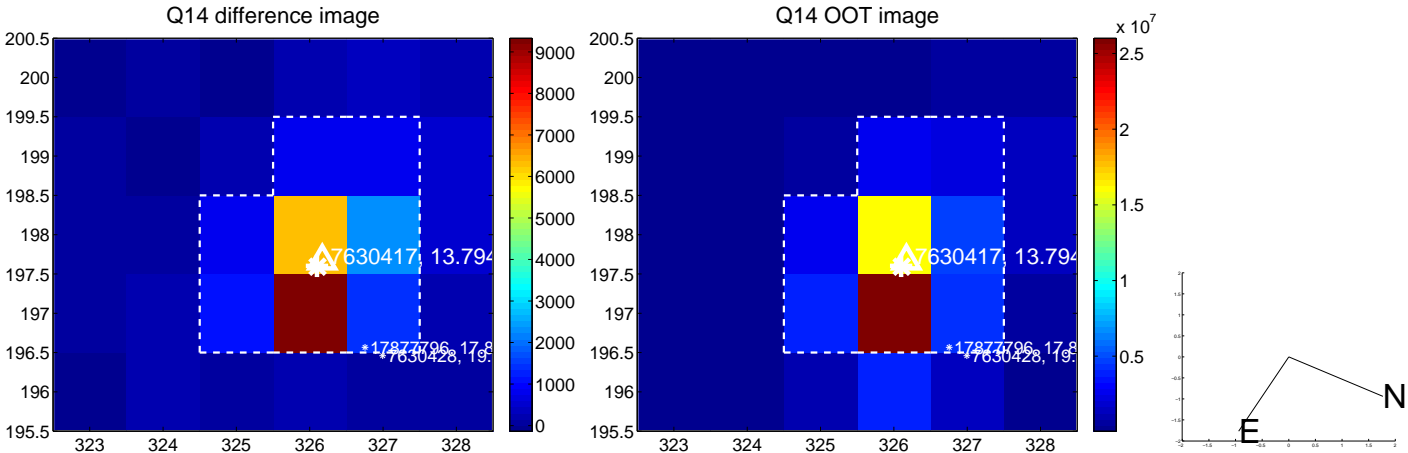
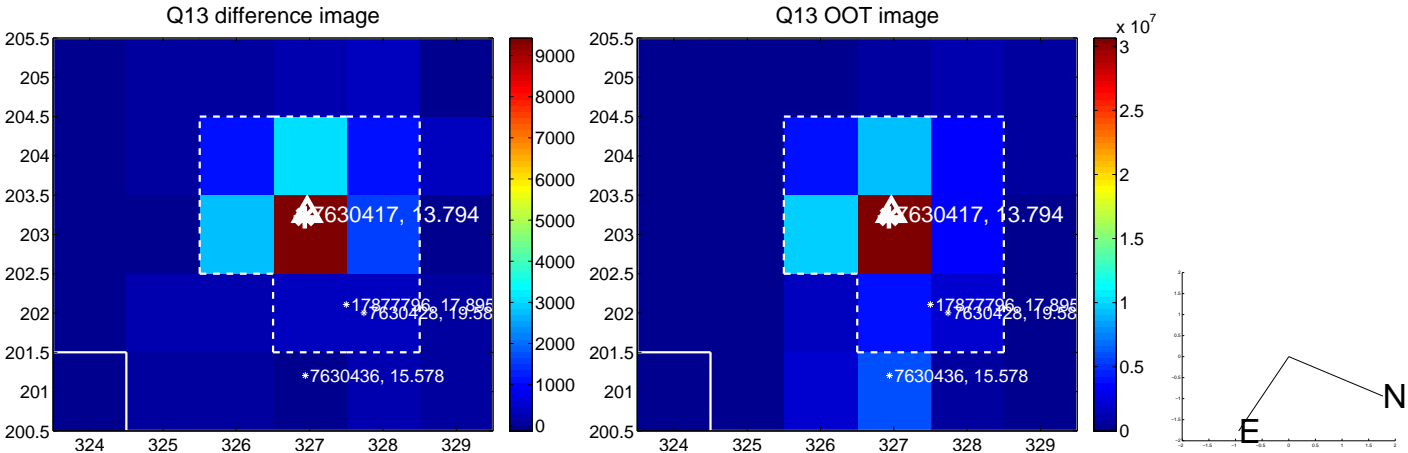
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



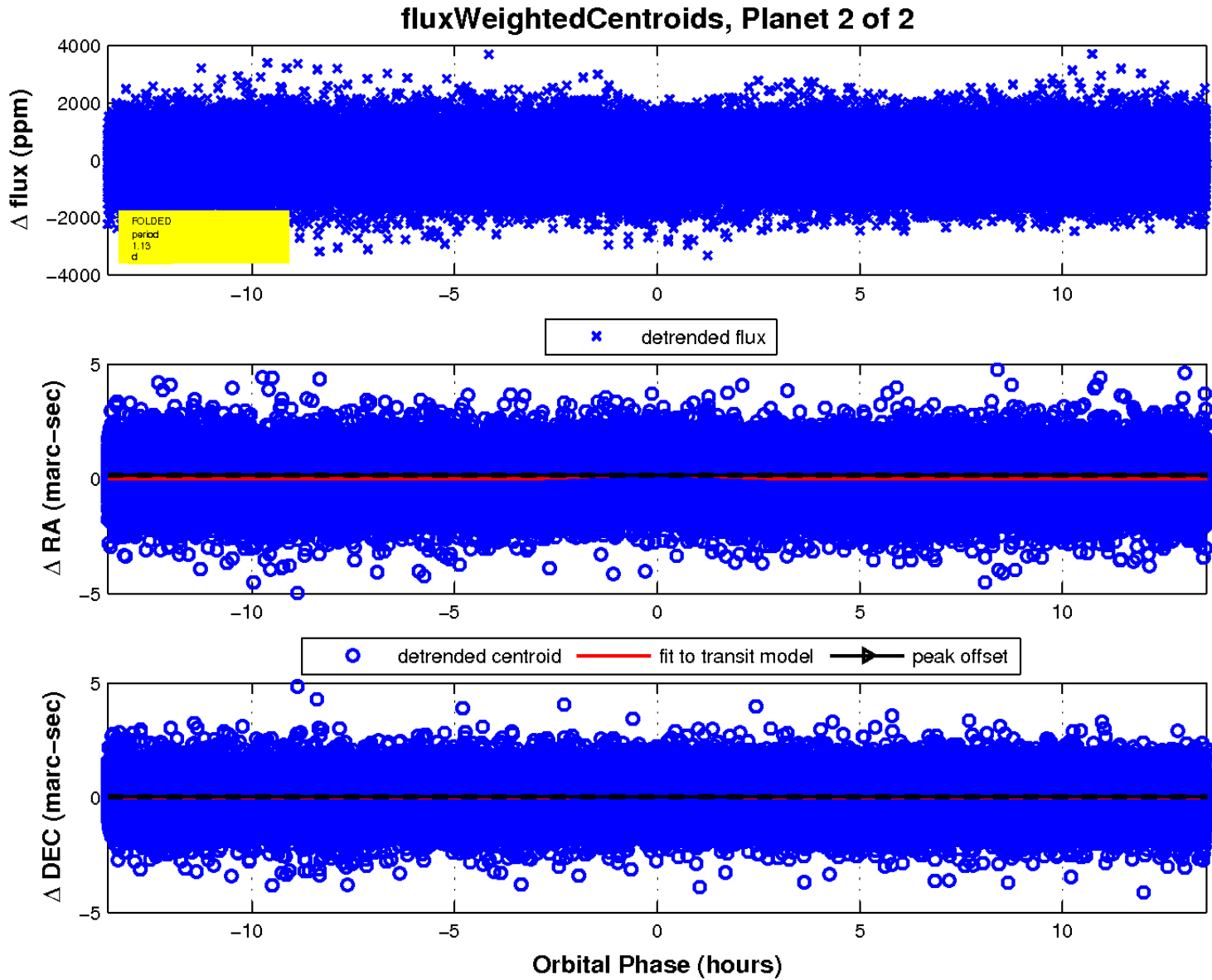
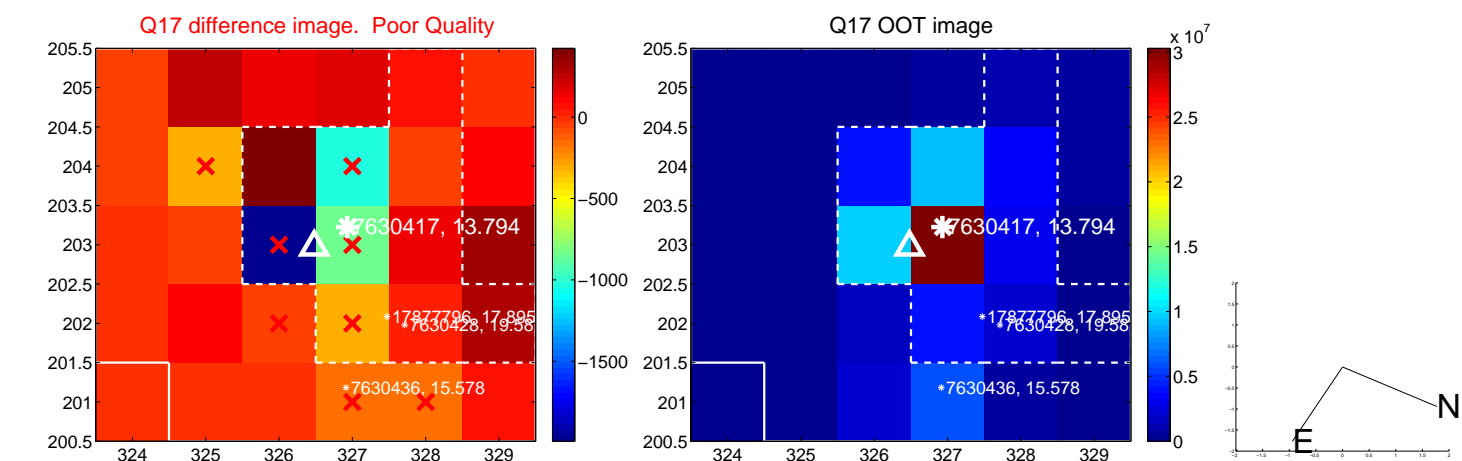
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

