

KIC 006631948

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})
006631948-01	OBS	No	0.641894	132.391949	0.0	4.412	7.4	0.0	0.78	5409	0.01	2445.05
006631948-02	OBS	No	48.855077	153.468091	1249.1	1.428	11.2	8.9	0.78	5409	2.99	7.58
006631948-03	OBS	No	25.505965	139.890262	1335.6	1.398	9.5	10.2	0.78	5409	2.88	18.03
006631948-04	OBS	No	39.227192	149.187864	1471.9	2.047	11.5	11.2	0.78	5409	3.12	10.16
006631948-05	OBS	No	43.239576	150.757152	1431.3	1.253	11.8	7.3	0.78	5409	3.33	8.92
006631948-06	OBS	No	18.643862	148.996893	846.7	1.590	9.5	9.8	0.78	5409	2.45	27.39
006631948-07	OBS	No	17.208289	147.594402	630.5	2.335	8.2	7.8	0.78	5409	2.18	30.47

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006631948-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—CENT_RESOLVED_OFFSET
006631948-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—CENT_RESOLVED_OFFSET
006631948-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_RESOLVED_OFFSET
006631948-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—CENT_RESOLVED_OFFSET
006631948-05	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_RESOLVED_OFFSET—HALO_GHOST
006631948-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET
006631948-07	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_RESOLVED_OFFSET

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

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

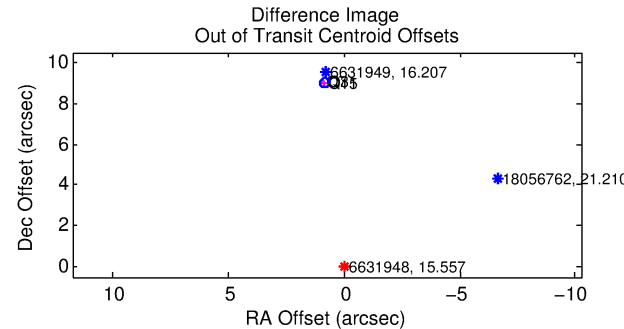
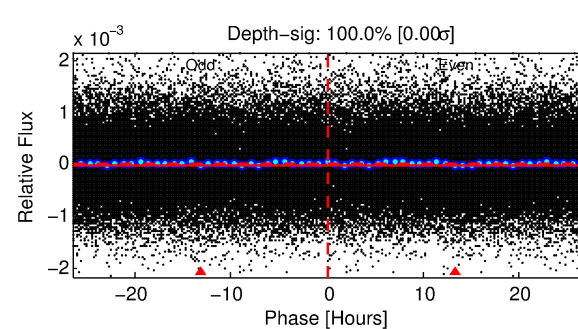
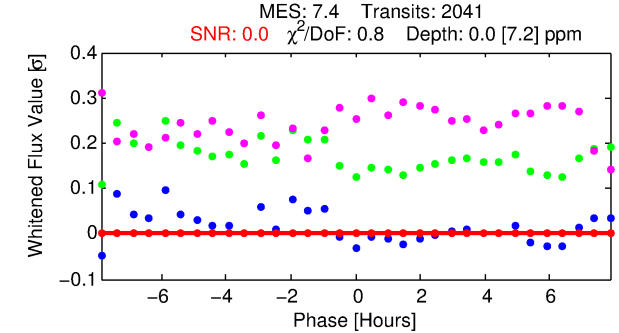
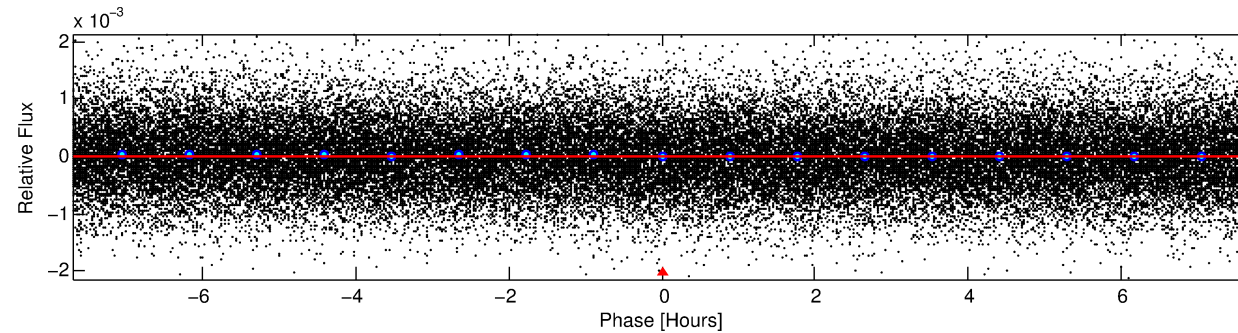
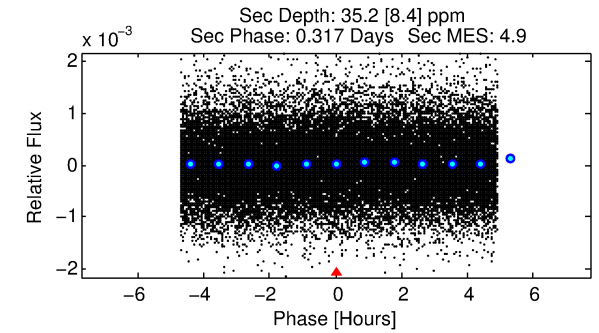
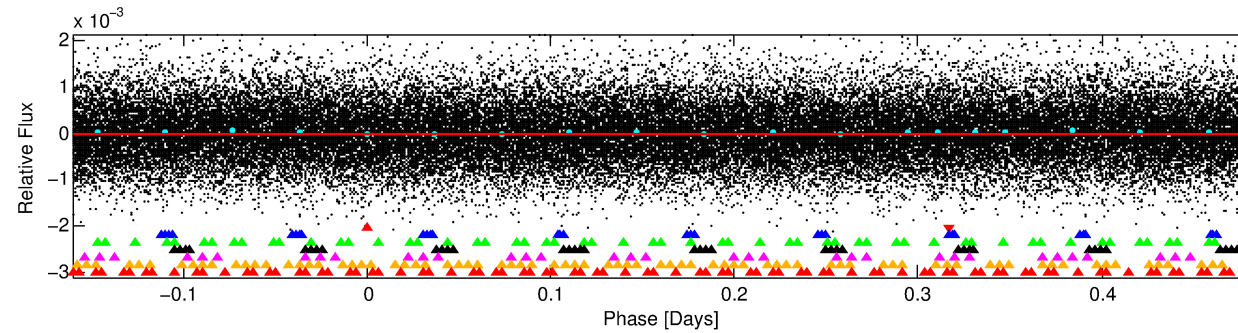
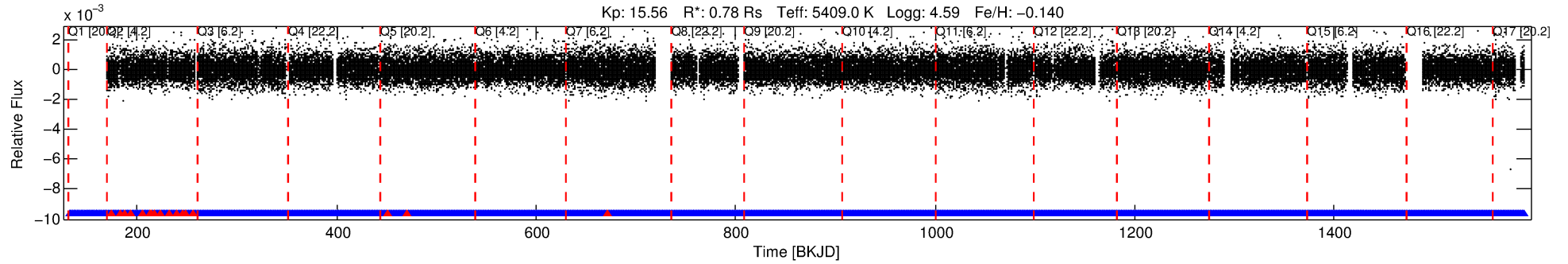
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006631948-01

No Significant Match Found

DV One-Page Summary

KIC: 6631948 Candidate: 1 of 7 Period: 0.642 d



DV Fit Results:

Period = 0.64189 [0.02655] d
Epoch = 132.3919 [11.9607] BKJD
Rp/R* = 0.0001 [0.0237]
a/R* = 1.22 [94.96]
b = 0.47 [402.74]
Seff = 2445.05 [654.54]
Teq = 1793 [120] K
Rp = 0.01 [2.03] Re
a = 0.0139 [0.0022] AU
Ag = 25860.09 [8733215.19] [0.00σ]
Teff = 35156 [2968392] K [0.01σ]

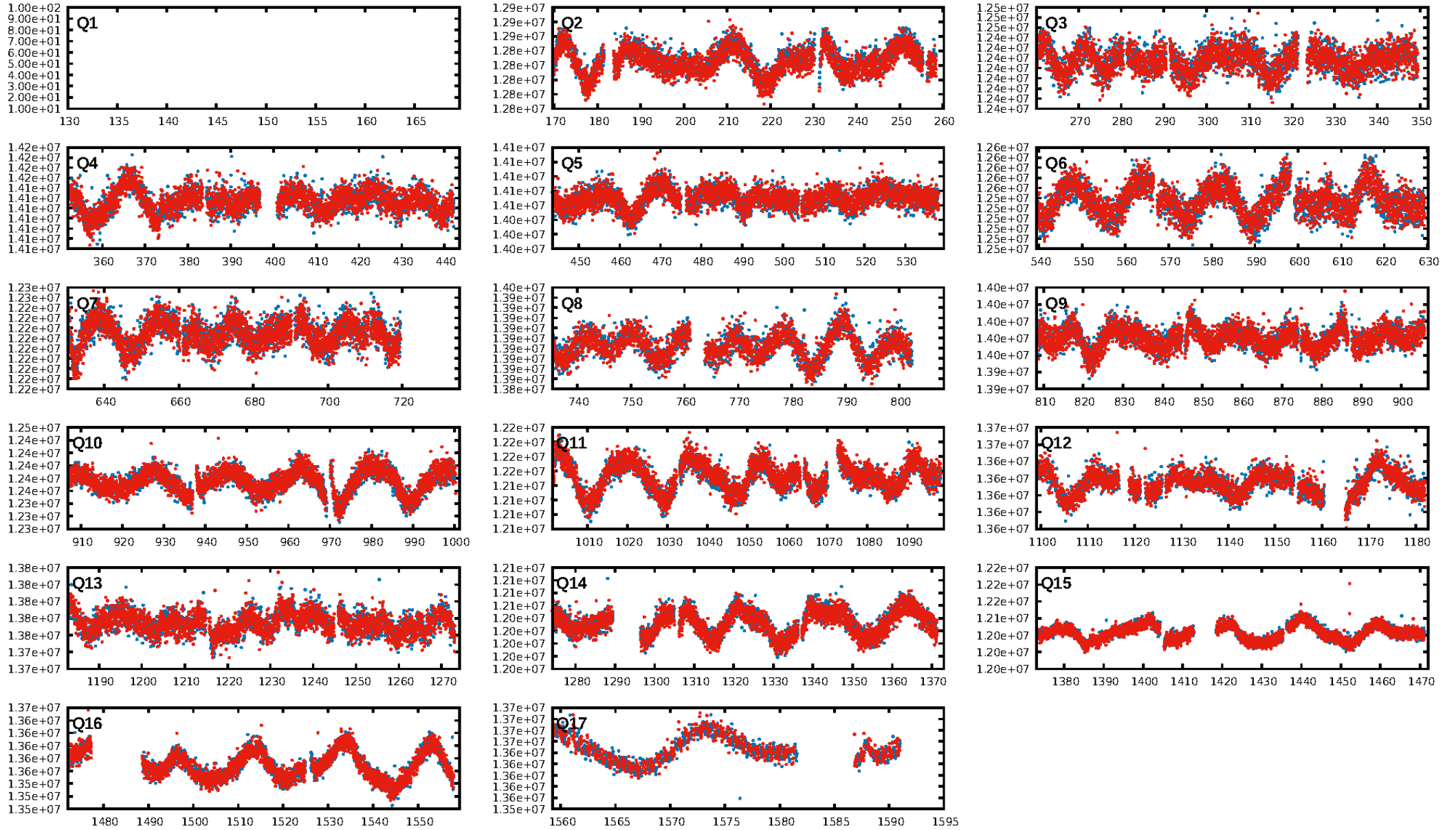
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [79.64σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 5.67e-13
RollingBand-fgt: 0.99 [1981/1999]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 9.053 arcsec [123.02σ]
KicOffset-rm: 9.348 arcsec [133.82σ]
OotOffset-st: 0/4/0/0 [4]
KicOffset-st: 0/4/0/0 [4]
DiffImageQuality-fgm: 0.25 [1/4]
DiffImageOverlap-fno: 1.00 [16/16]

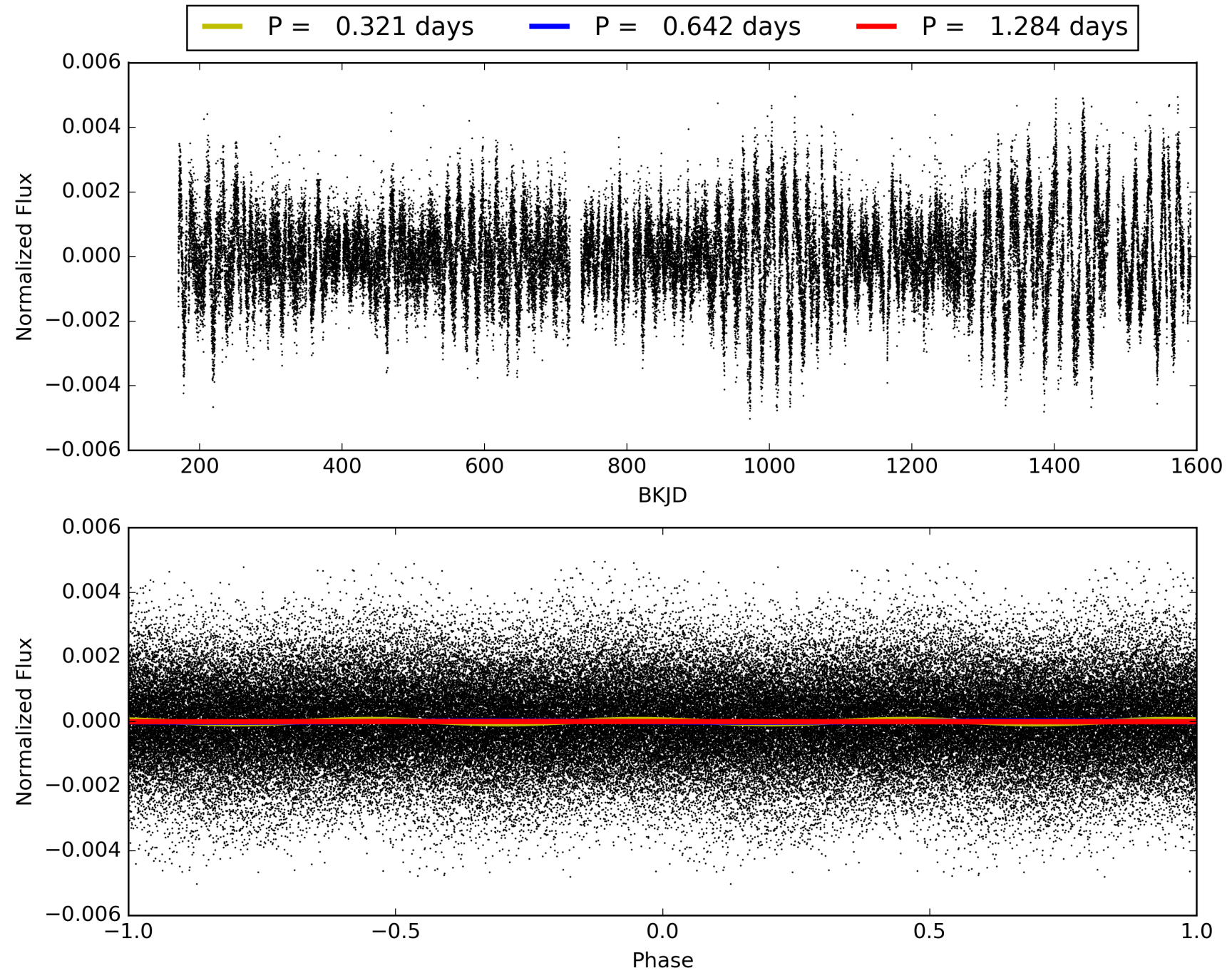
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:17:20 Z

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

TCE 006631948-01, PDC Light Curves

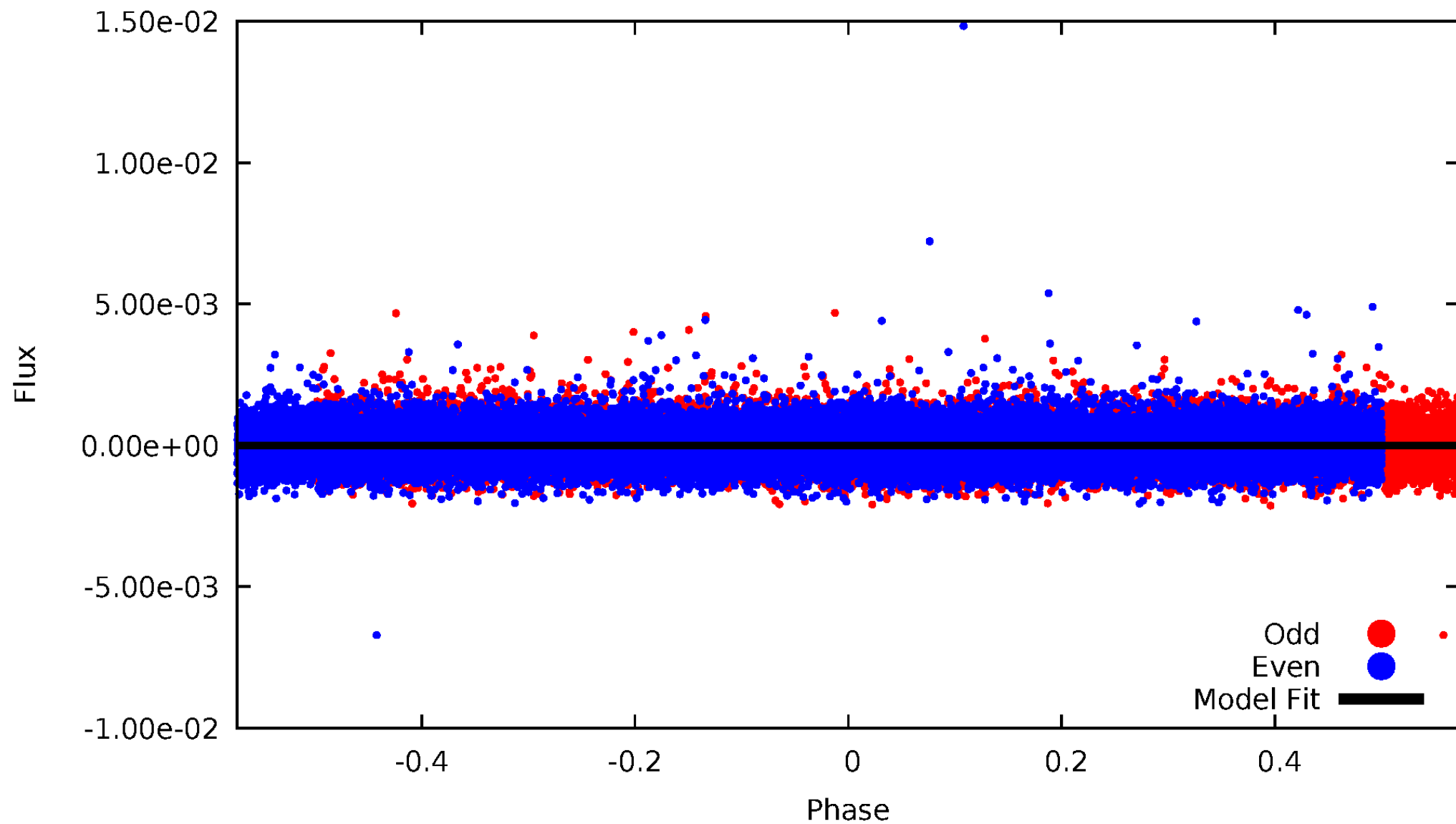


TCE 006631948-01



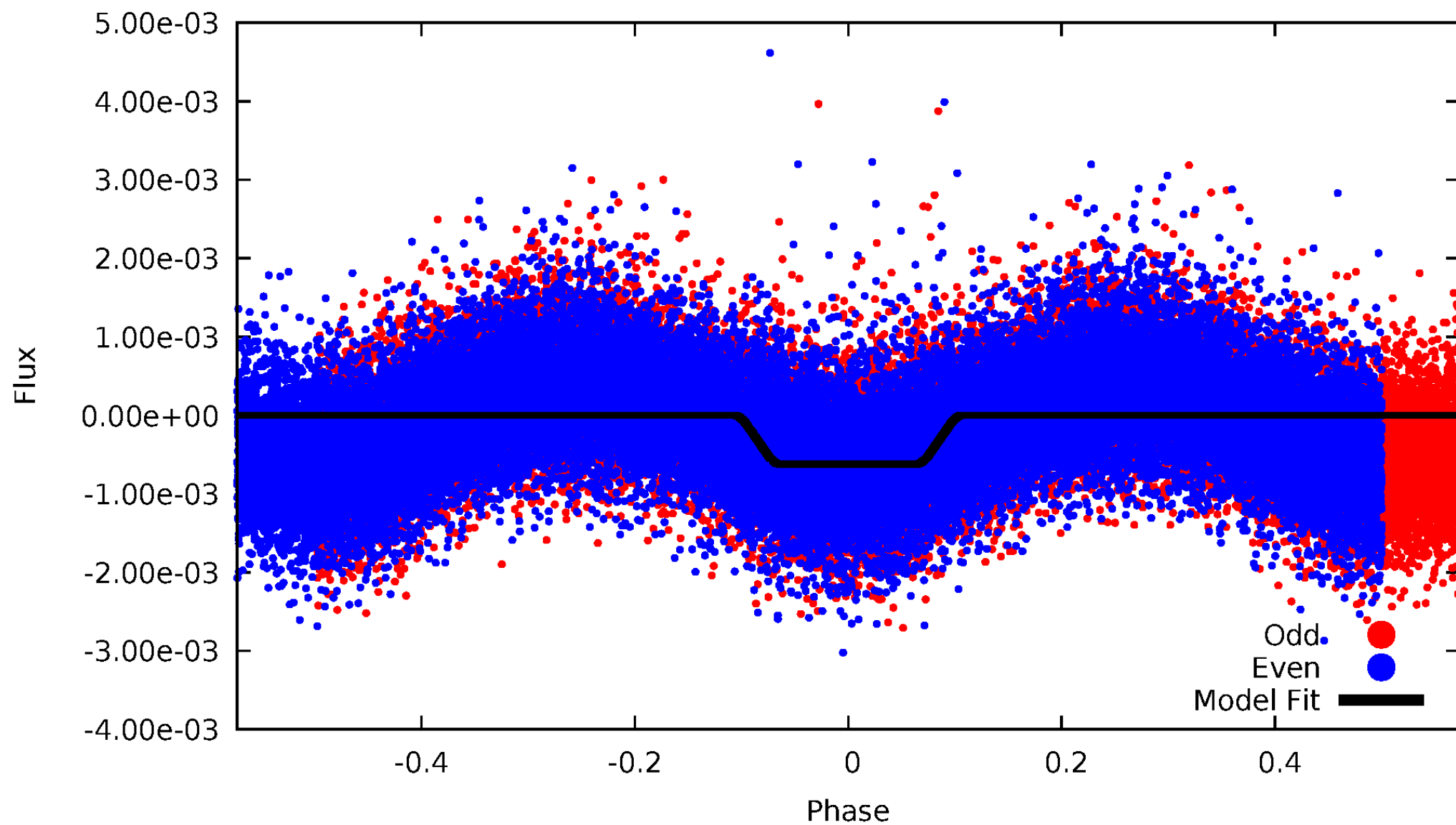
DV Odd/Even

TCE 006631948-01

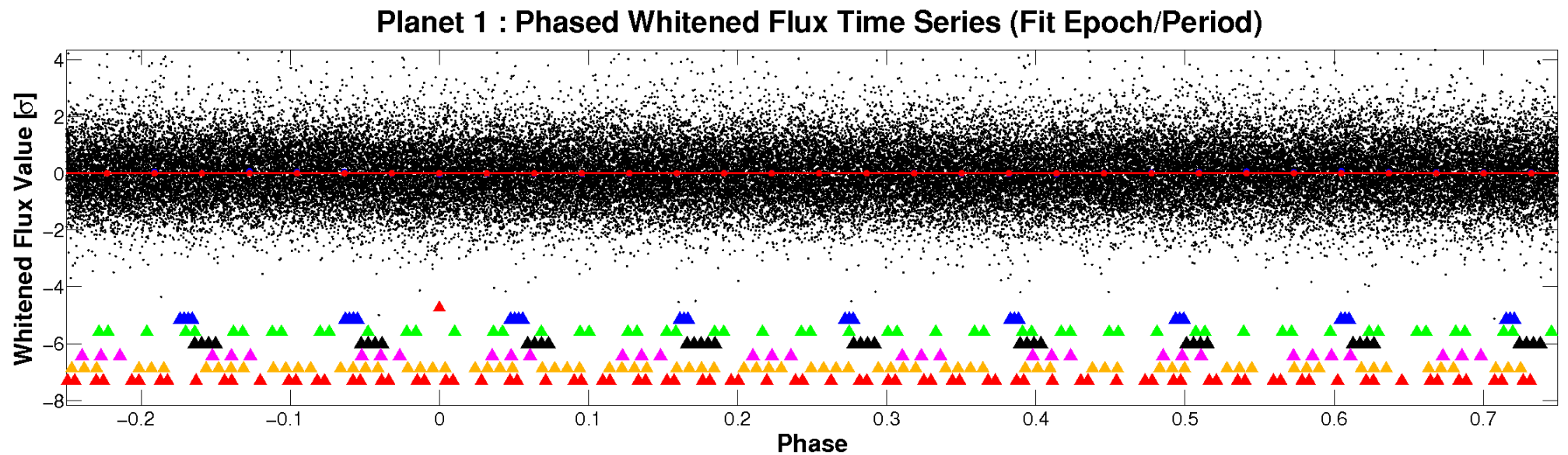
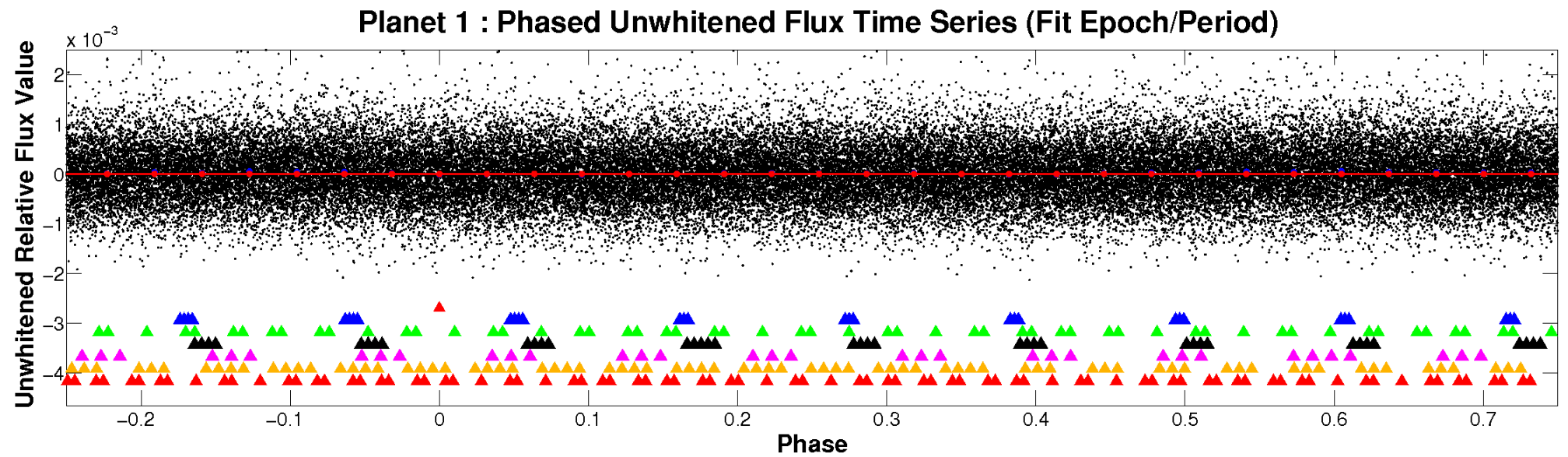


ALT Odd/Even

TCE 006631948-01

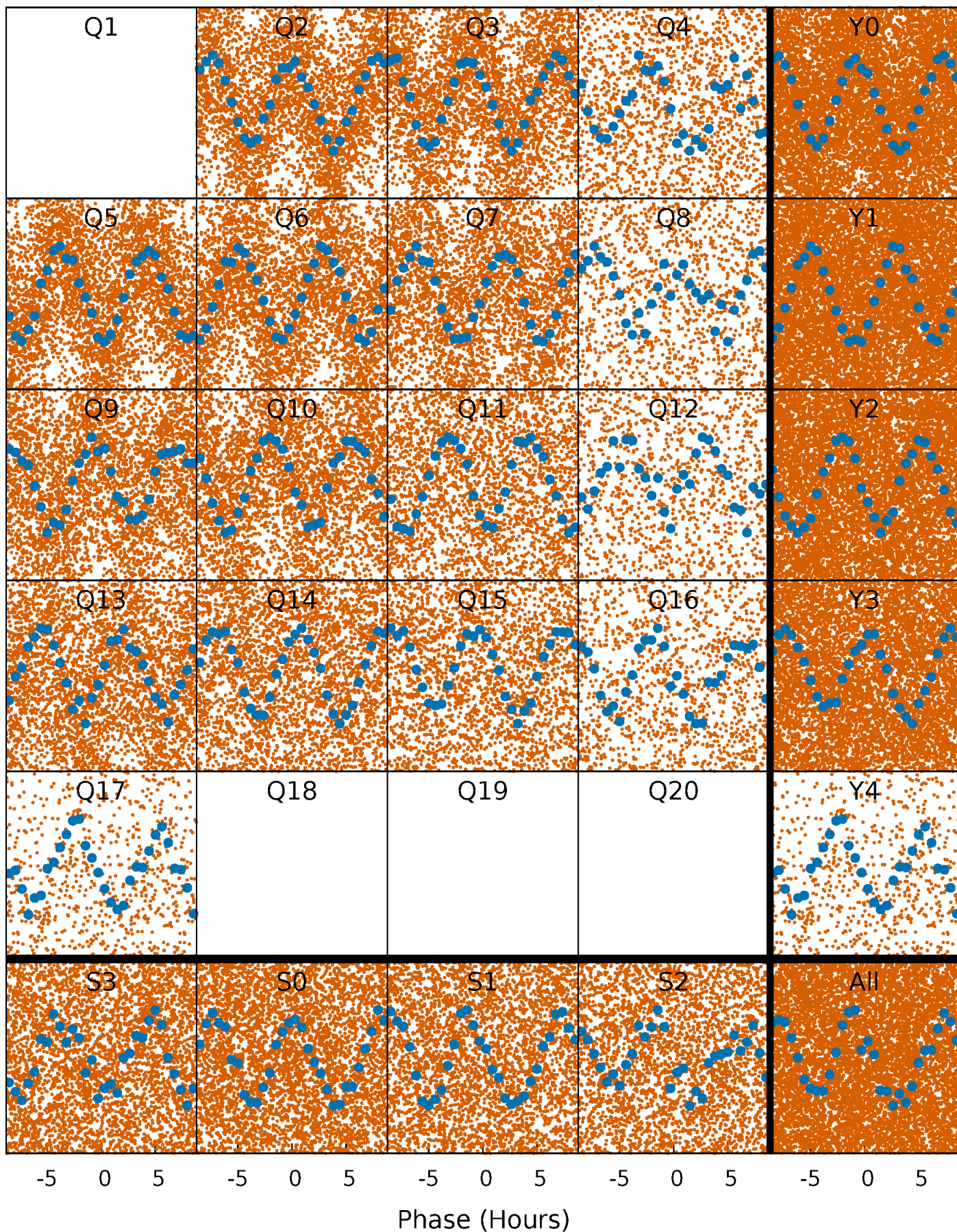


Non-Whitened Vs. Whitened Light Curve



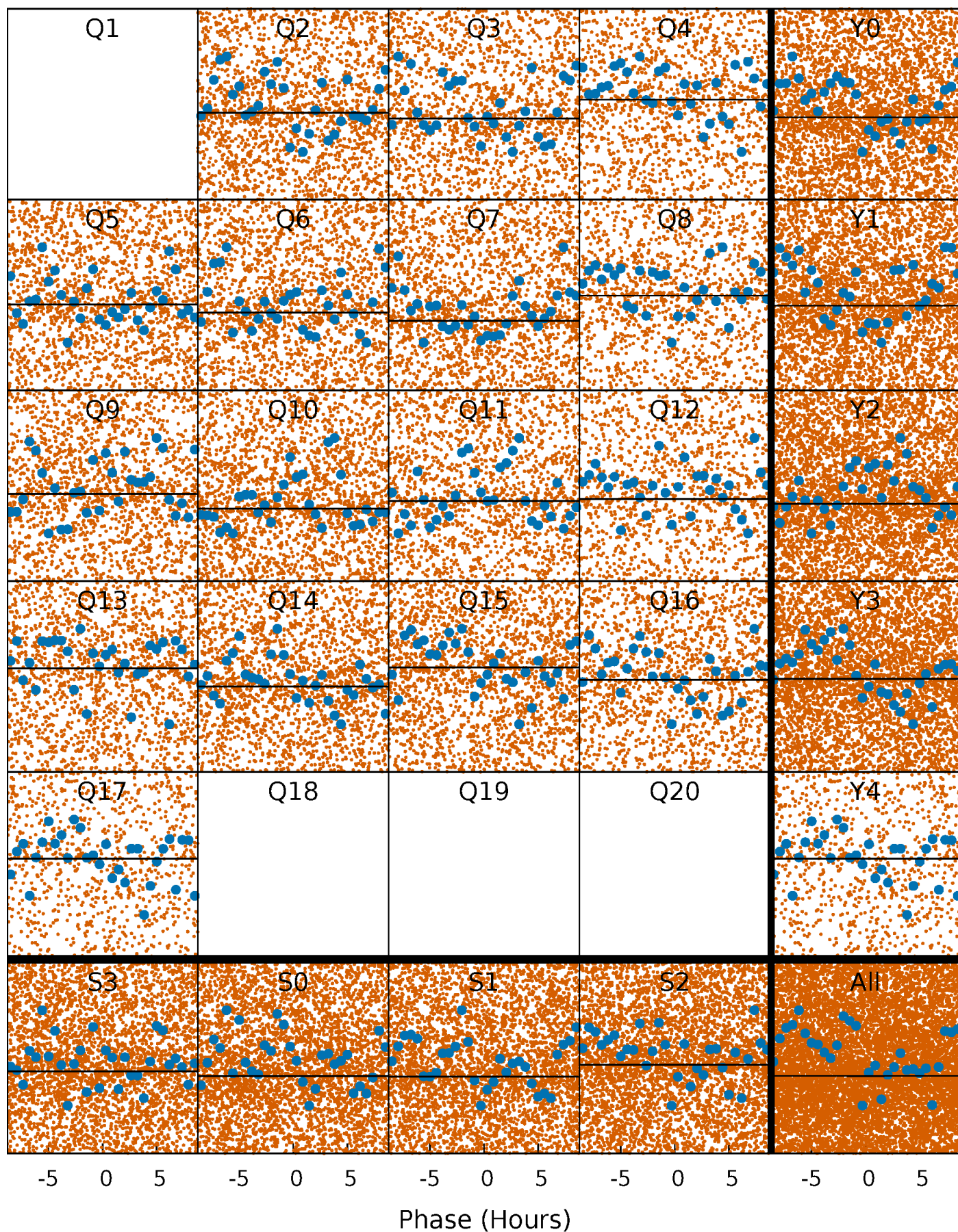
PDC Quarter-Phased Transit Curves

TCE 006631948-01 P= 0.641894 Days $T_0=132.391949$ (BKJD)



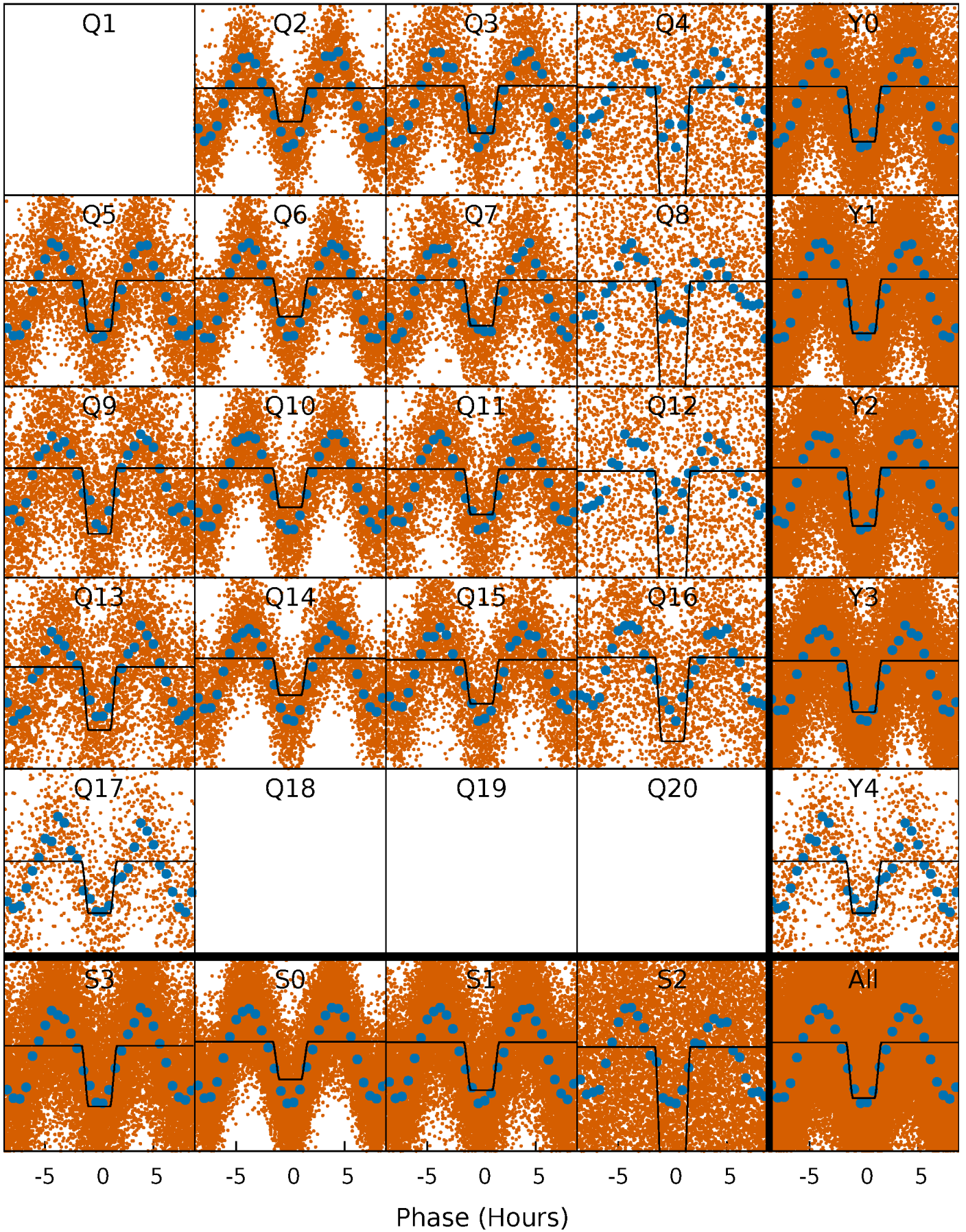
DV Quarter-Phased Transit Curves

TCE 006631948-01 P= 0.641894 Days $T_0=132.391949$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

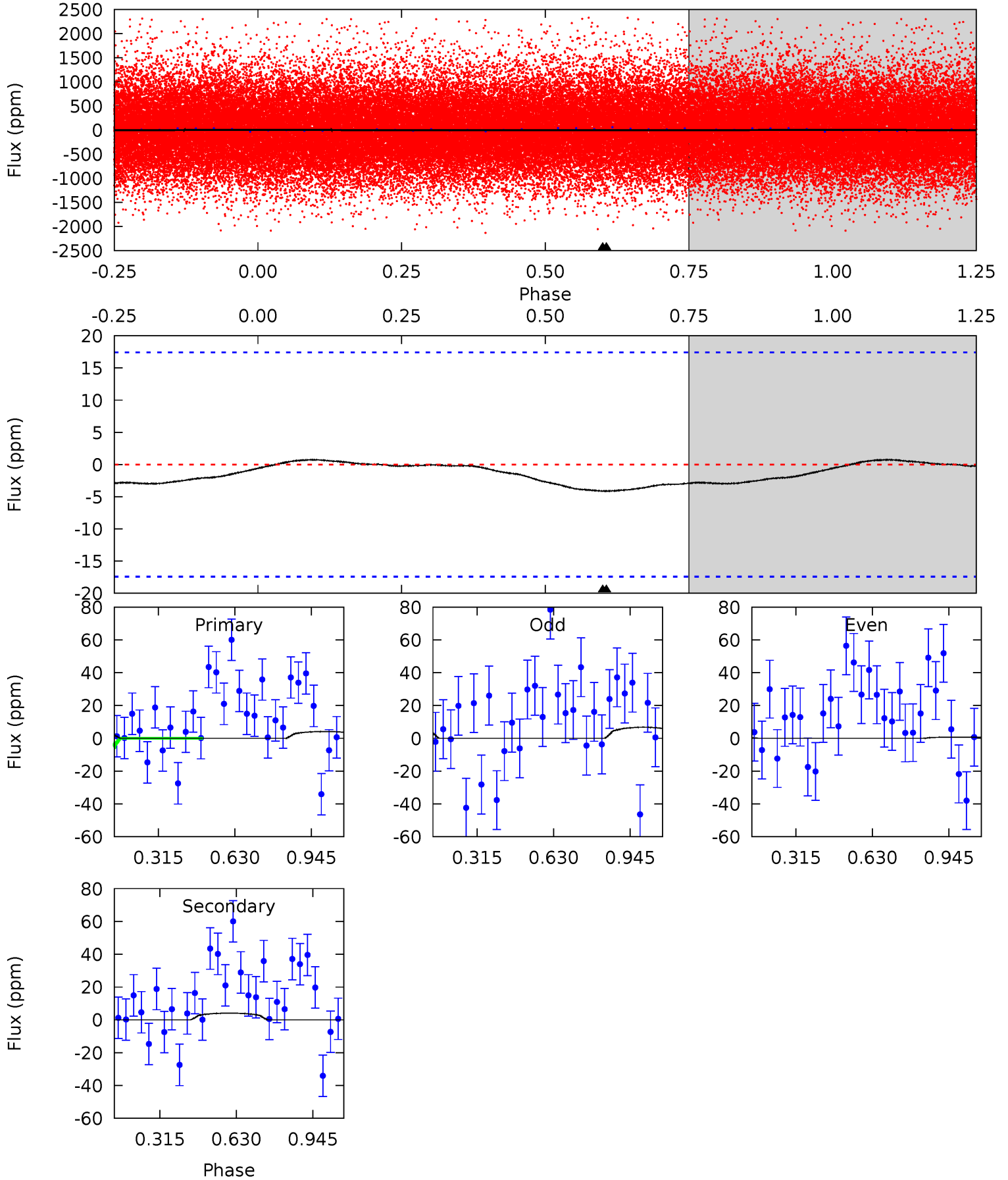
TCE 006631948-01 P= 0.641540 Days $T_0=131.958562$ (BKJD)



DV Model-Shift Uniqueness Test

006631948-01, P = 0.641894 Days, E = 132.391949 Days

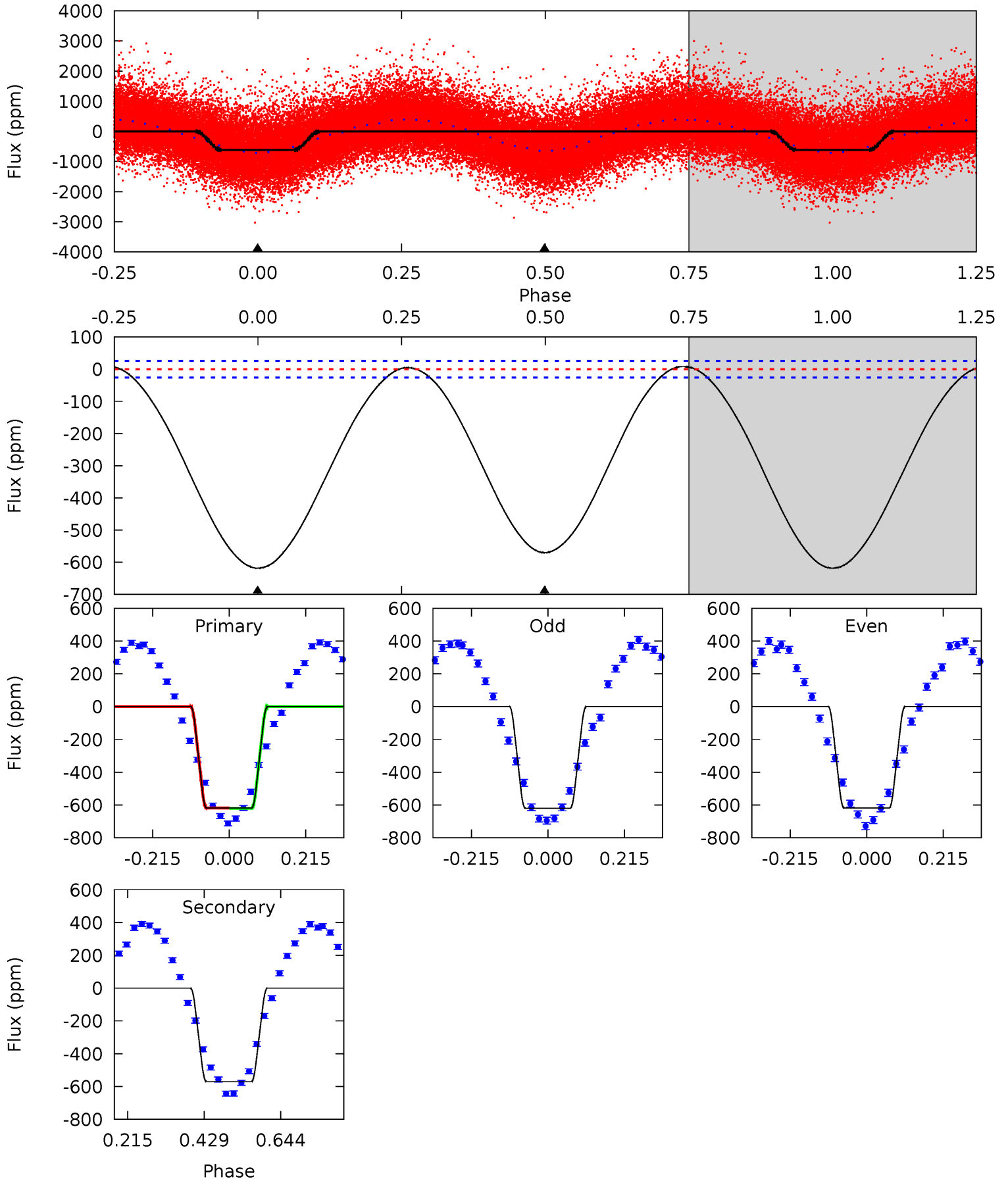
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.02	1.02	0	0	4.32	1.00	0.18	1.02	1.02	1.02	1.02	0.75	1.62	0.15	0.90



Alt Model-Shift Uniqueness Test

006631948-01, P = 0.641540 Days, E = 131.958562 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
104.2	96.1	0	0	4.40	1.24	2.04	104.2	104.2	96.1	96.1	0.02	0.98	0.01	0.18



Stellar Parameters For KIC 006631948

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5409^{+161}_{-161}	$4.587^{+0.032}_{-0.128}$	$-0.140^{+0.300}_{-0.300}$	$0.784^{+0.148}_{-0.063}$	$0.872^{+0.081}_{-0.098}$	$2.551^{+0.430}_{-0.953}$
	+3%/-3%	+1%/-3%	+214%/-214%	+19%/-8%	+9%/-11%	+17%/-37%
Source	PHO1	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 006631948-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-4 ± 4	$1.46^{+1.48}_{-1.01}$	2559^{+116}_{-119}	-2581^{+6070}_{-281}	$0.142^{+1.500}_{-0.149}$
Alt.	-570 ± 6	$2.59^{+1.76}_{-1.59}$	2552^{+129}_{-116}	4955^{+3084}_{-989}	$9.128^{+52.649}_{-6.011}$

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

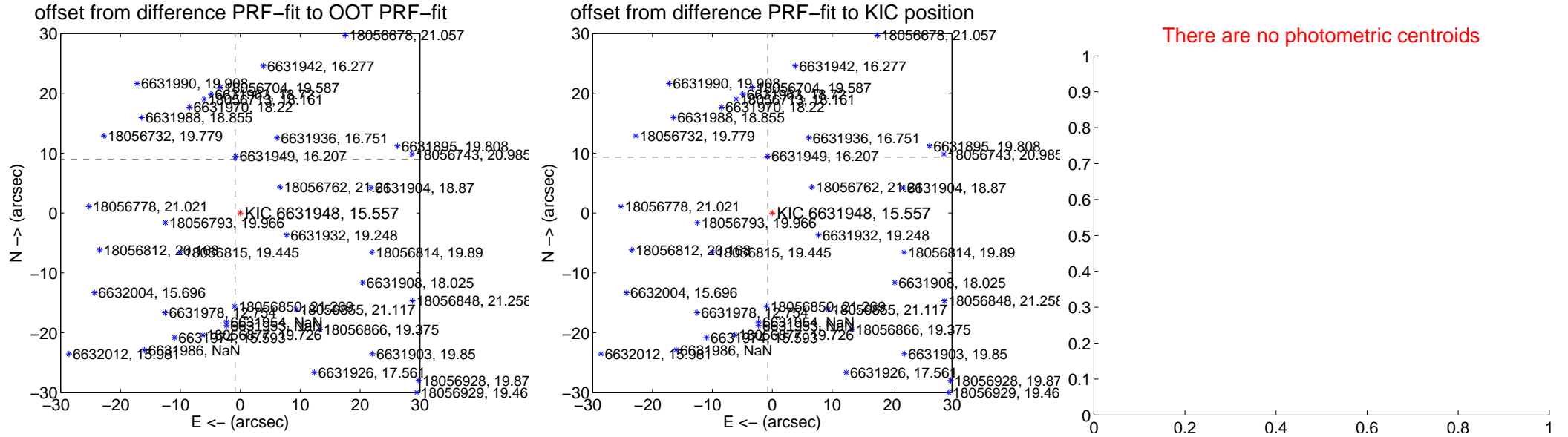
DV Centroid Data

Supplemental centroid analysis for 006631948-01. Kepler magnitude: 15.56. Transit SNR 0.00

There are 1 quarters with good PRF difference image offsets

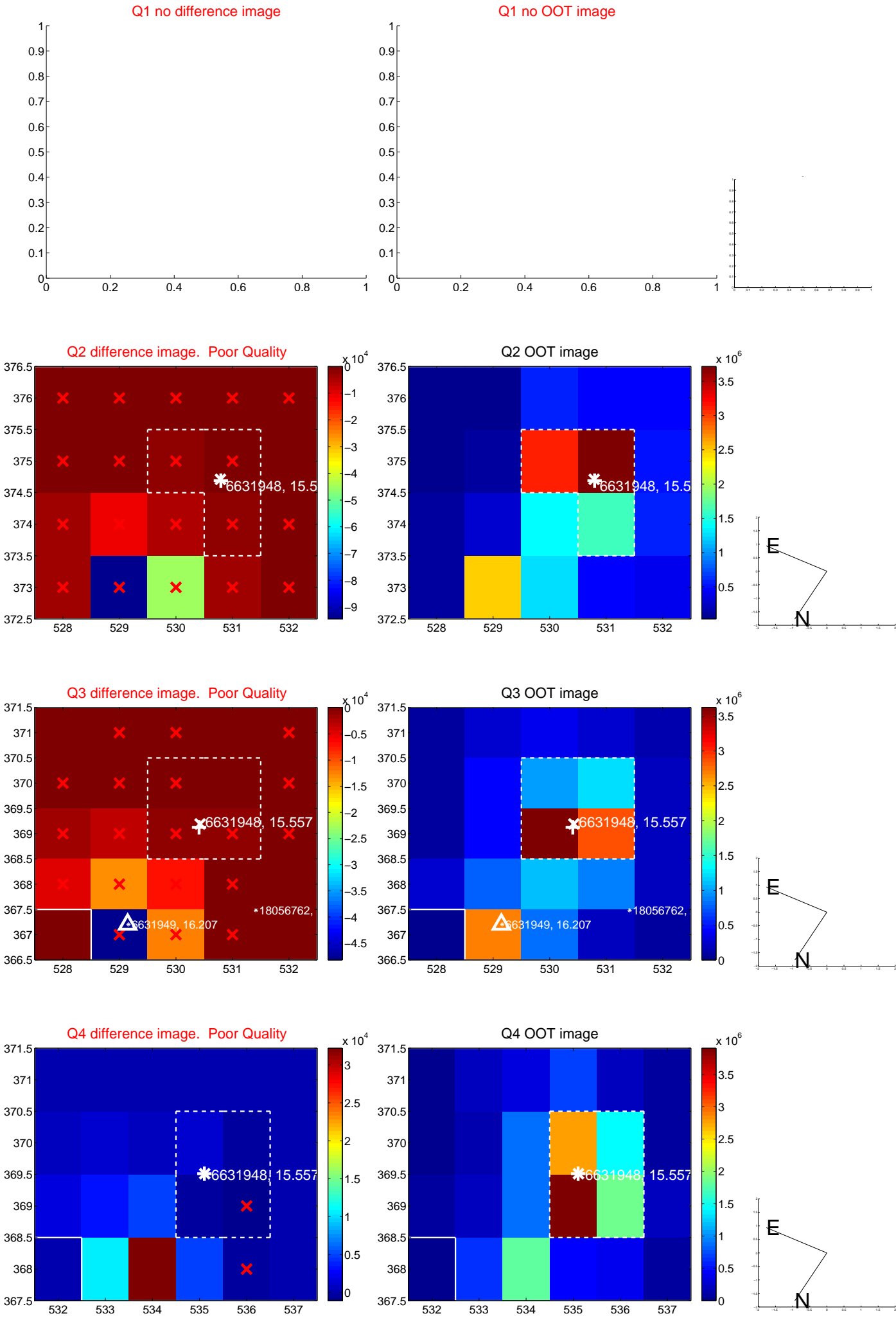
The direct PRF centroid is offset from the target star catalog position by about 0.31 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	9.053 \pm 0.074	123.02	0.847 \pm 0.069	9.014 \pm 0.073
PRF-fit source offset from KIC position	9.348 \pm 0.070	133.82	0.762 \pm 0.069	9.317 \pm 0.070
photometric centroid source offset	—	—	—	—

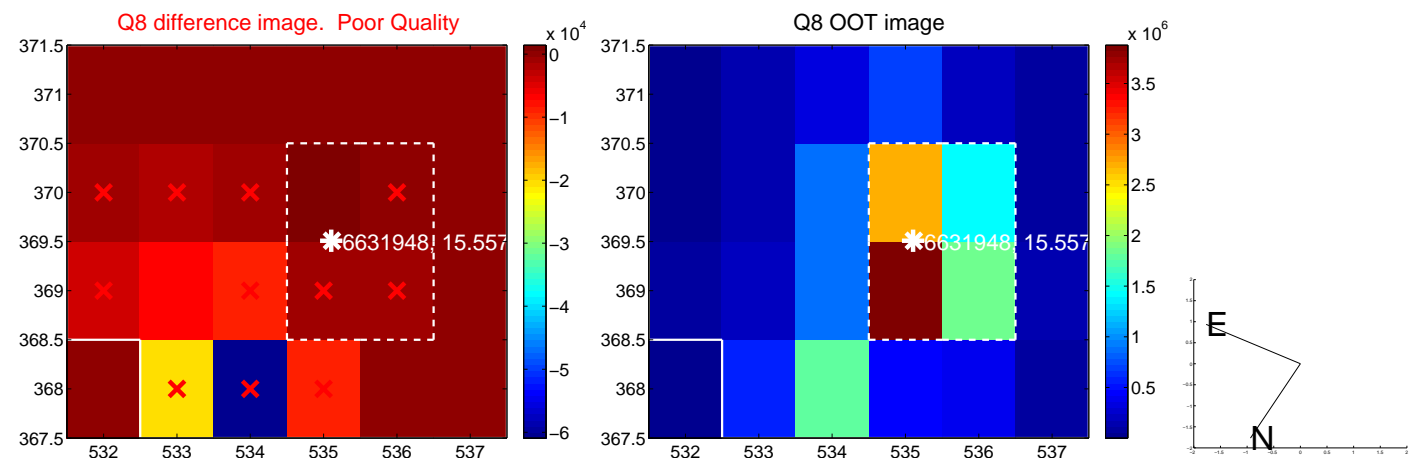
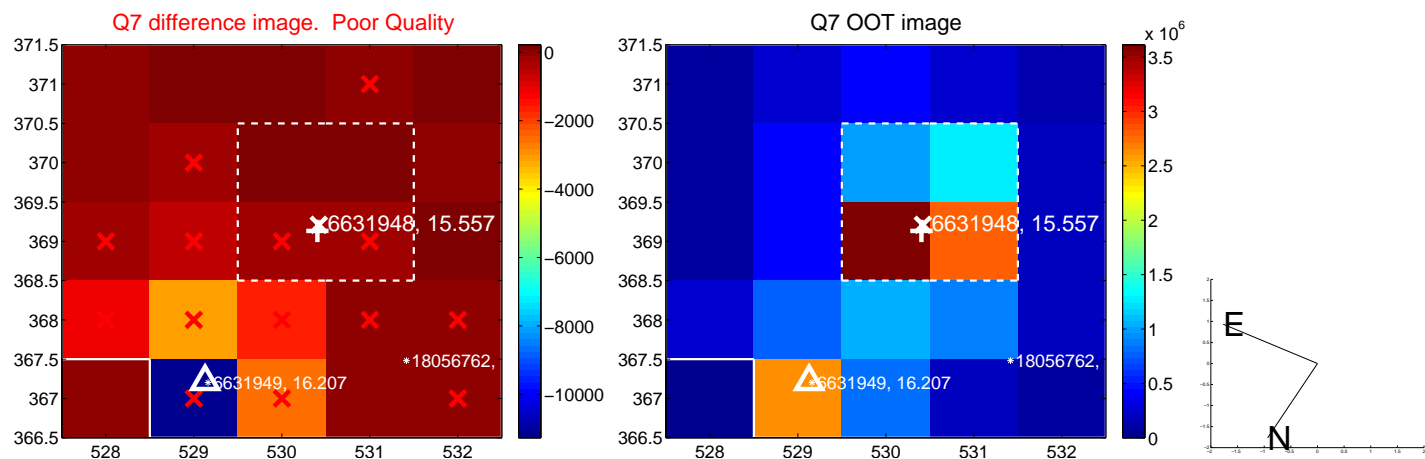
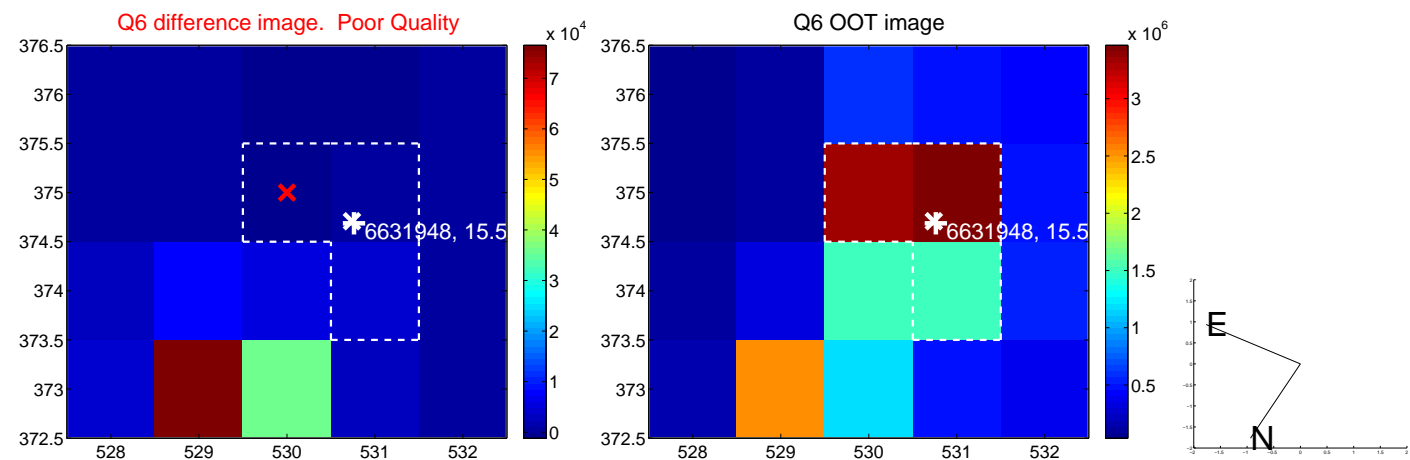
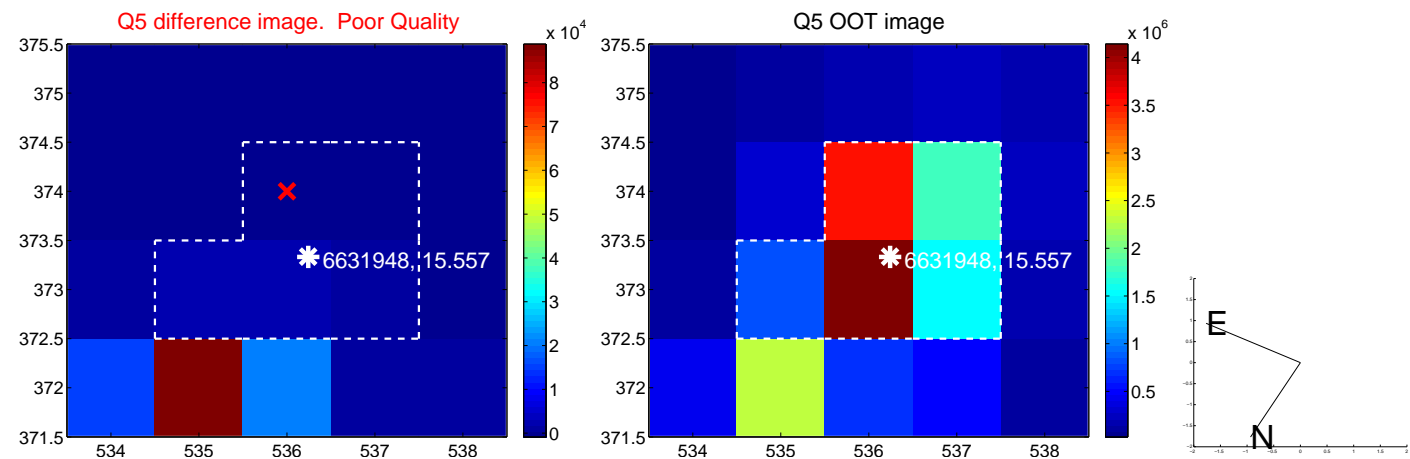


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

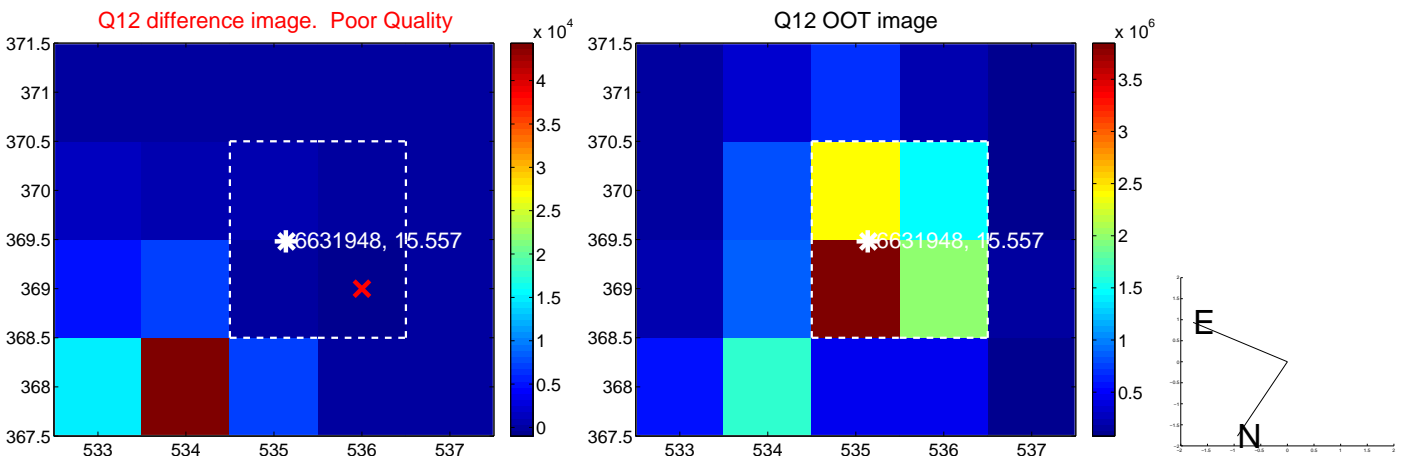
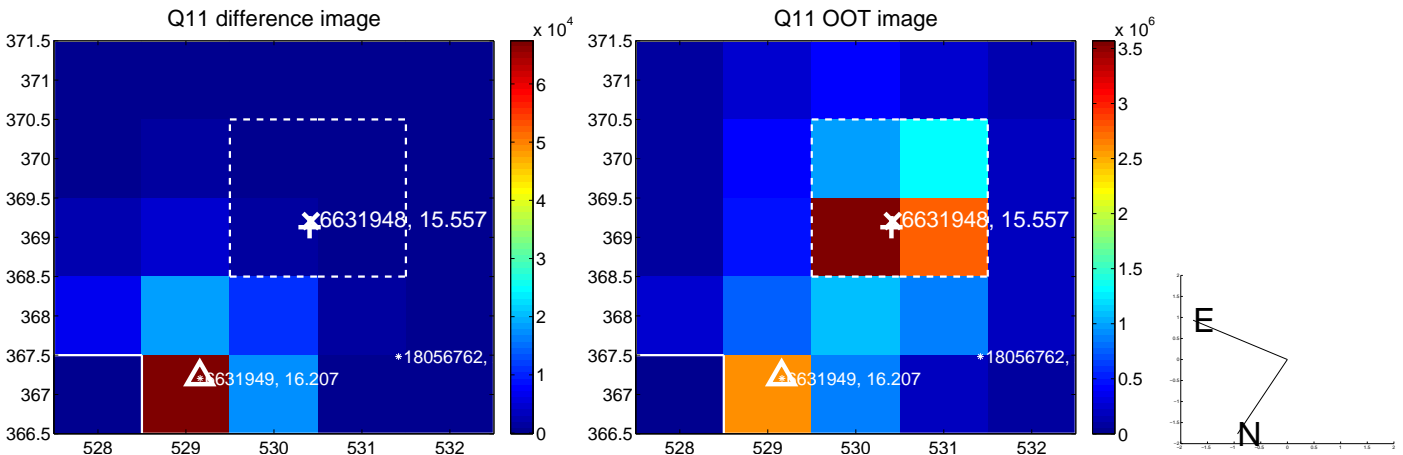
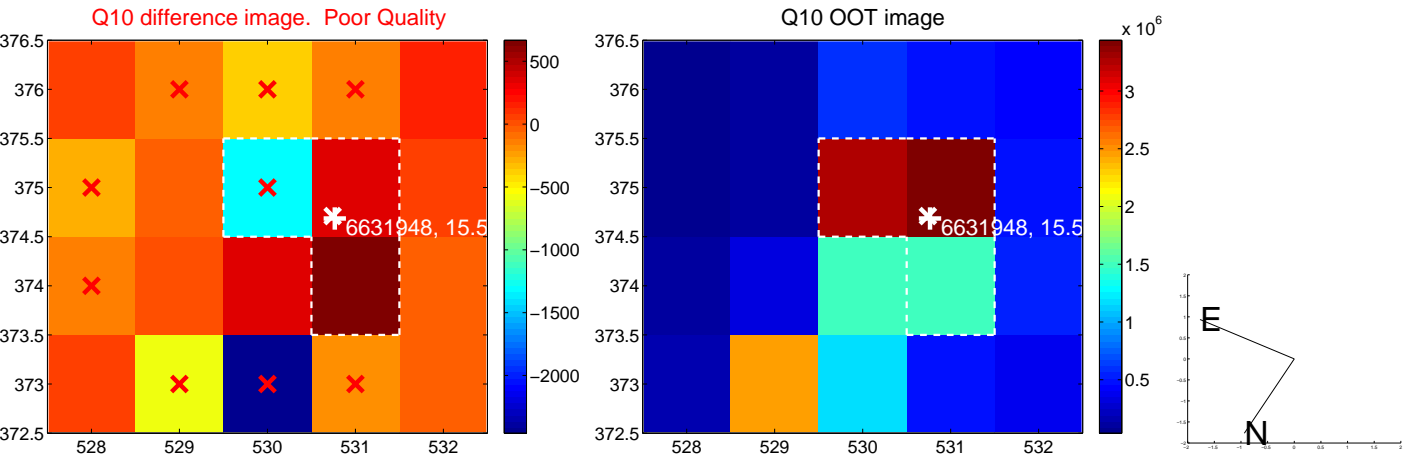
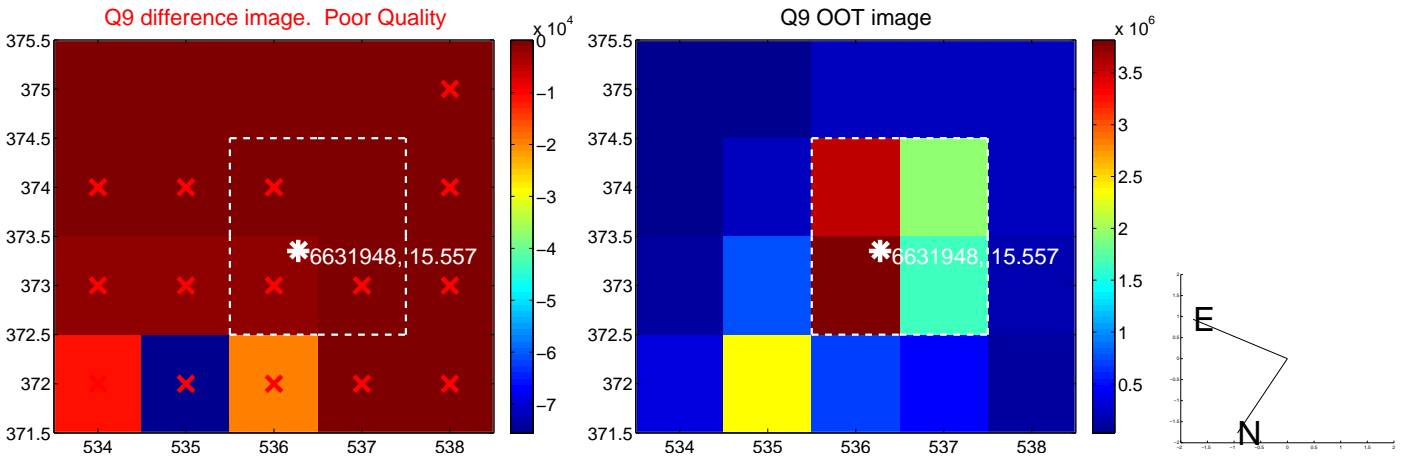
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



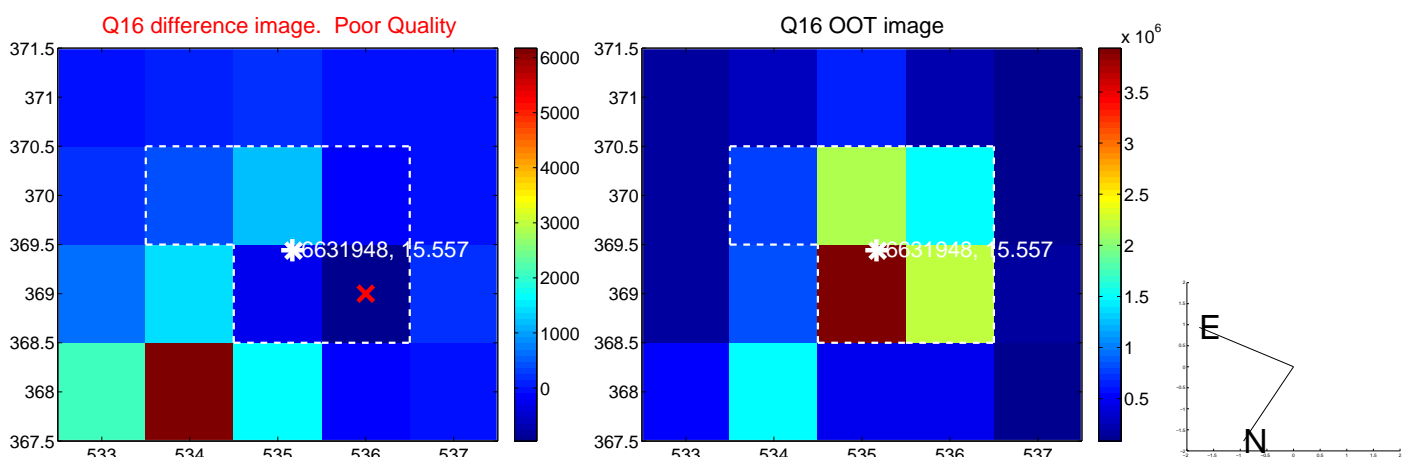
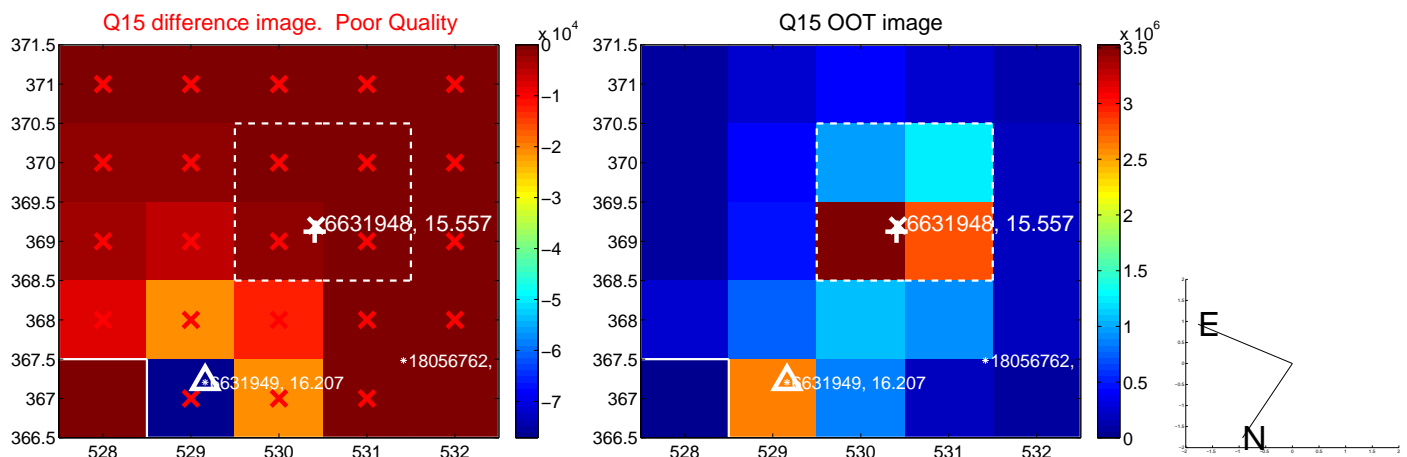
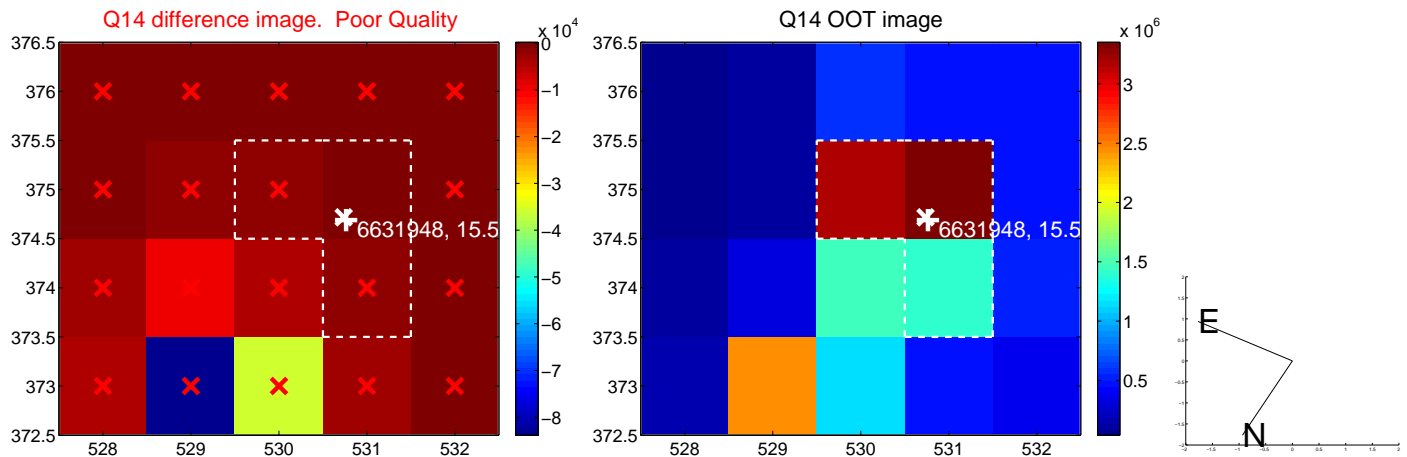
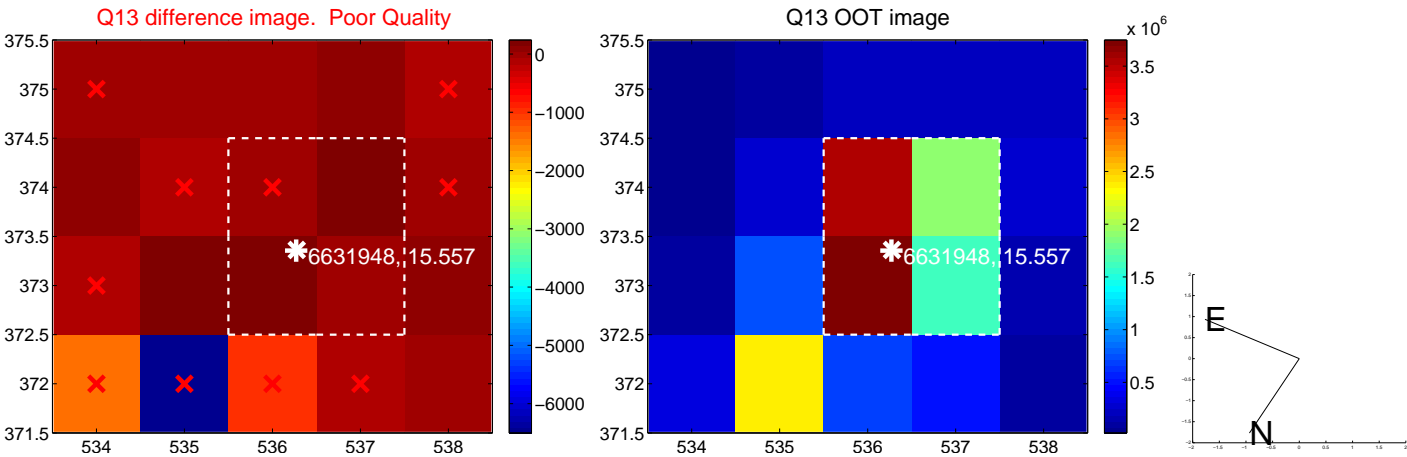
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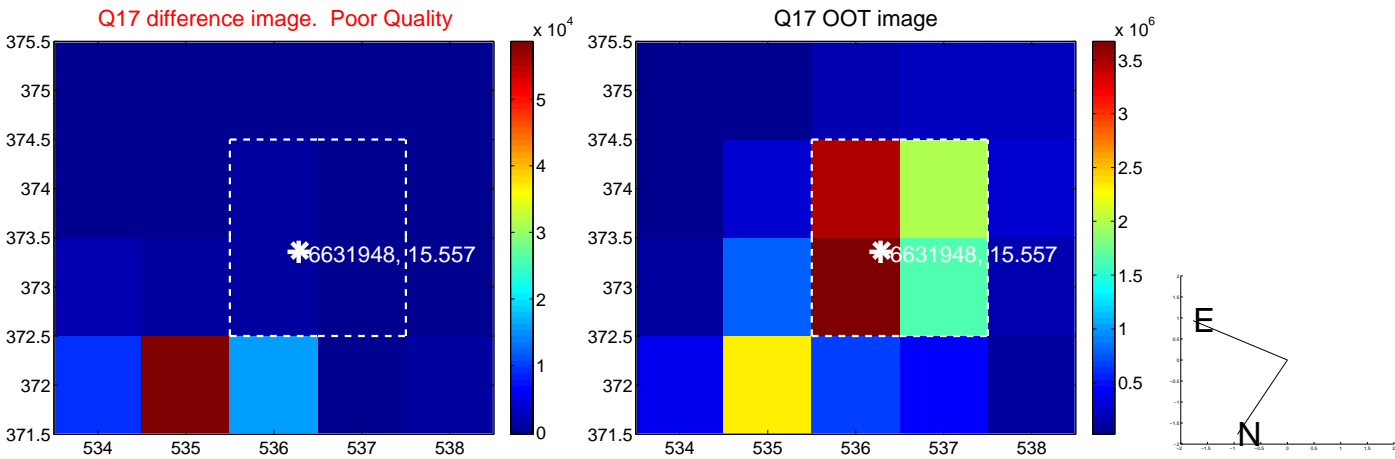
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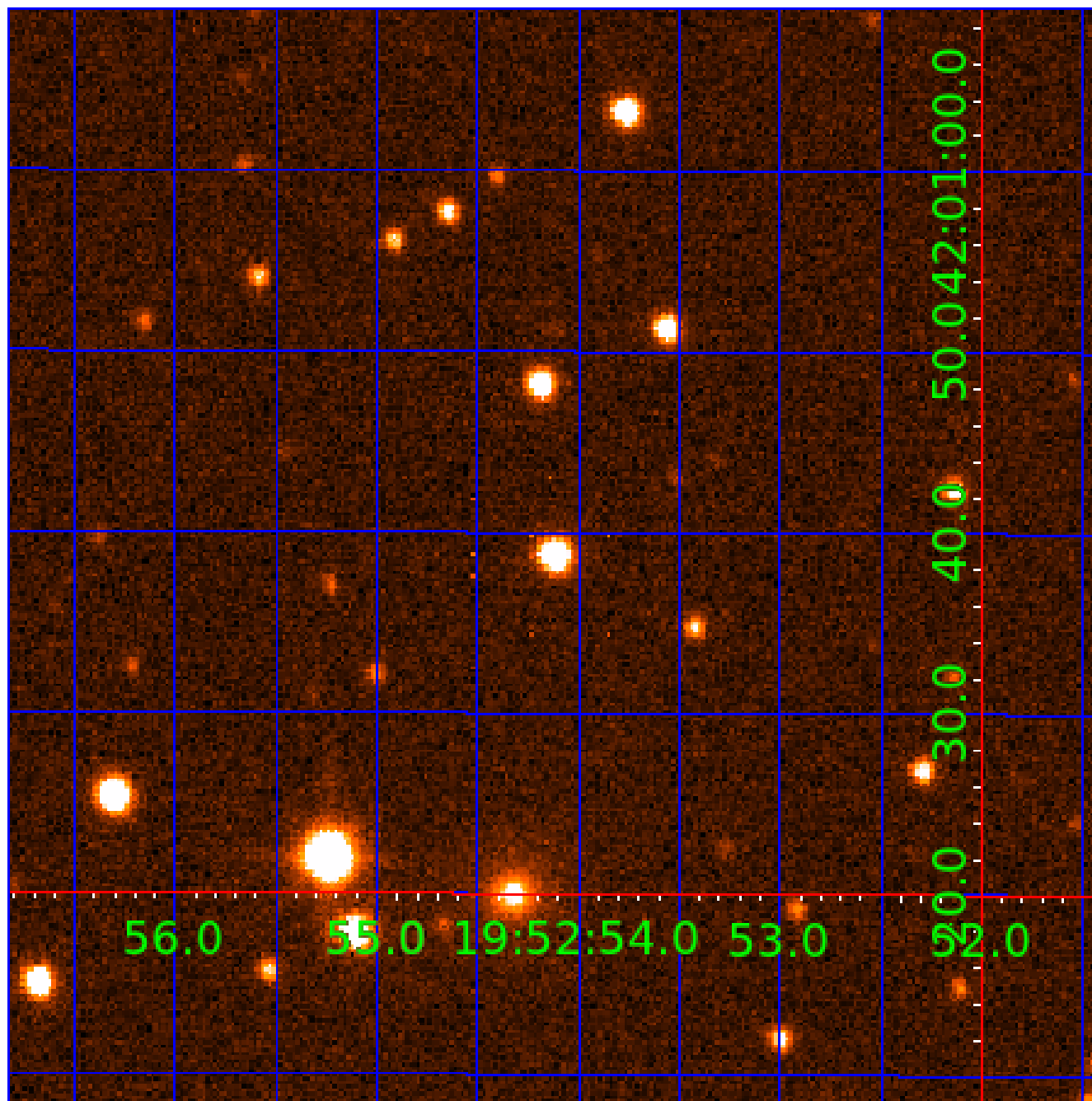
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 006631948

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})
006631948-01	OBS	No	0.641894	132.391949	0.0	4.412	7.4	0.0	0.78	5409	0.01	2445.05
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006631948-05	OBS	No	43.239576	150.757152	1431.3	1.253	11.8	7.3	0.78	5409	3.33	8.92
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006631948-07	OBS	No	17.208289	147.594402	630.5	2.335	8.2	7.8	0.78	5409	2.18	30.47

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006631948-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—CENT_RESOLVED_OFFSET
006631948-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—CENT_RESOLVED_OFFSET
006631948-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_RESOLVED_OFFSET
006631948-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—CENT_RESOLVED_OFFSET
006631948-05	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_RESOLVED_OFFSET—HALO_GHOST
006631948-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET
006631948-07	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_RESOLVED_OFFSET

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

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

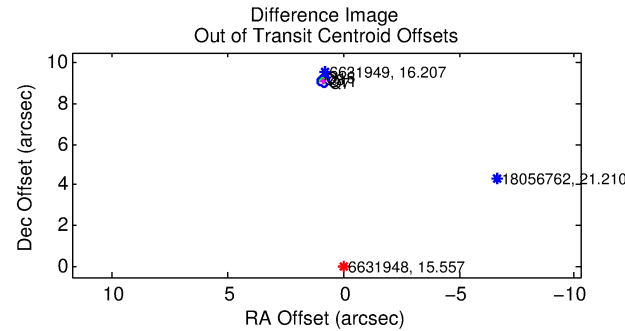
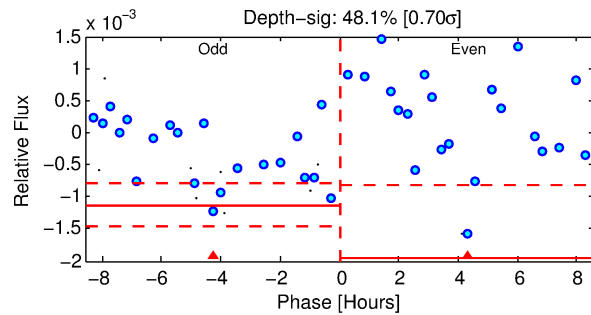
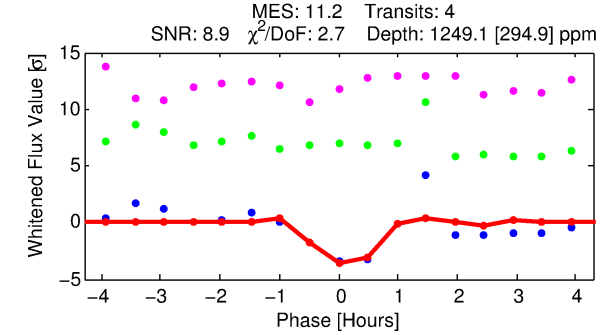
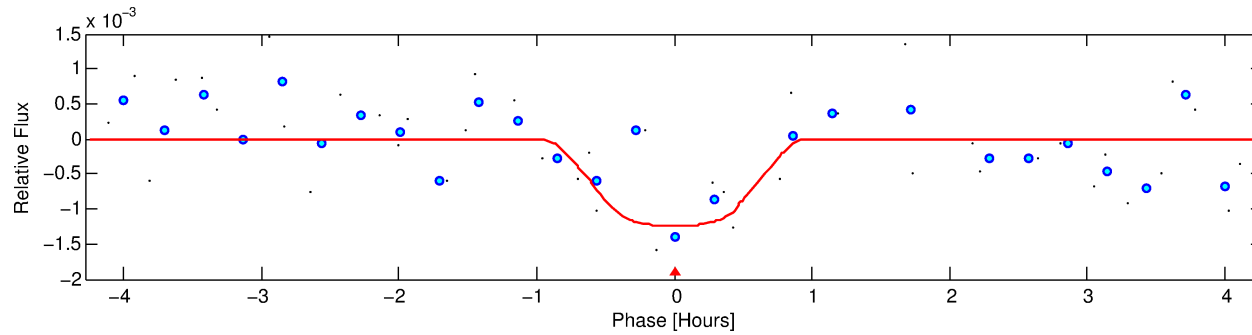
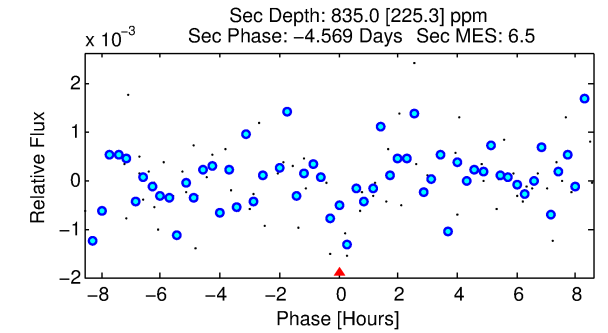
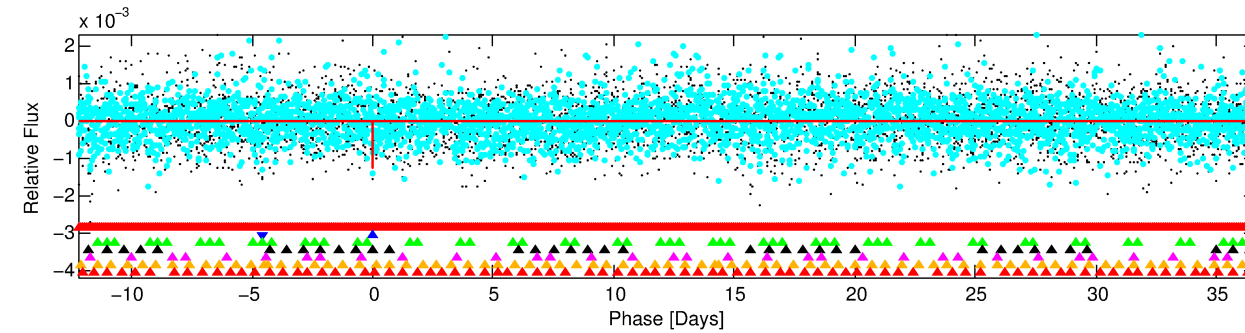
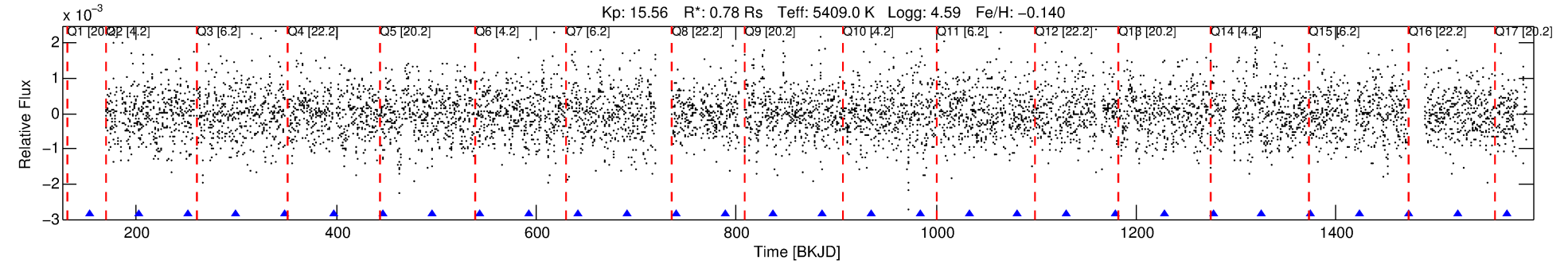
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006631948-02

No Significant Match Found

DV One-Page Summary

KIC: 6631948 Candidate: 2 of 7 Period: 48.855 d



DV Fit Results:

Period = 48.85508 [0.00092] d
Epoch = 153.4681 [0.0155] BKJD
Rp/R* = 0.0350 [0.1527]
a/R* = 194.84 [3395.15]
b = 0.72 [11.92]
Seff = 7.58 [1.99]
Teq = 423 [28] K
Rp = 2.99 [13.08] Re
a = 0.2494 [0.0398] AU
Ag = 3192.31 [27905.15] [0.11σ]
Teffp = 4917 [10743] K [0.42σ]

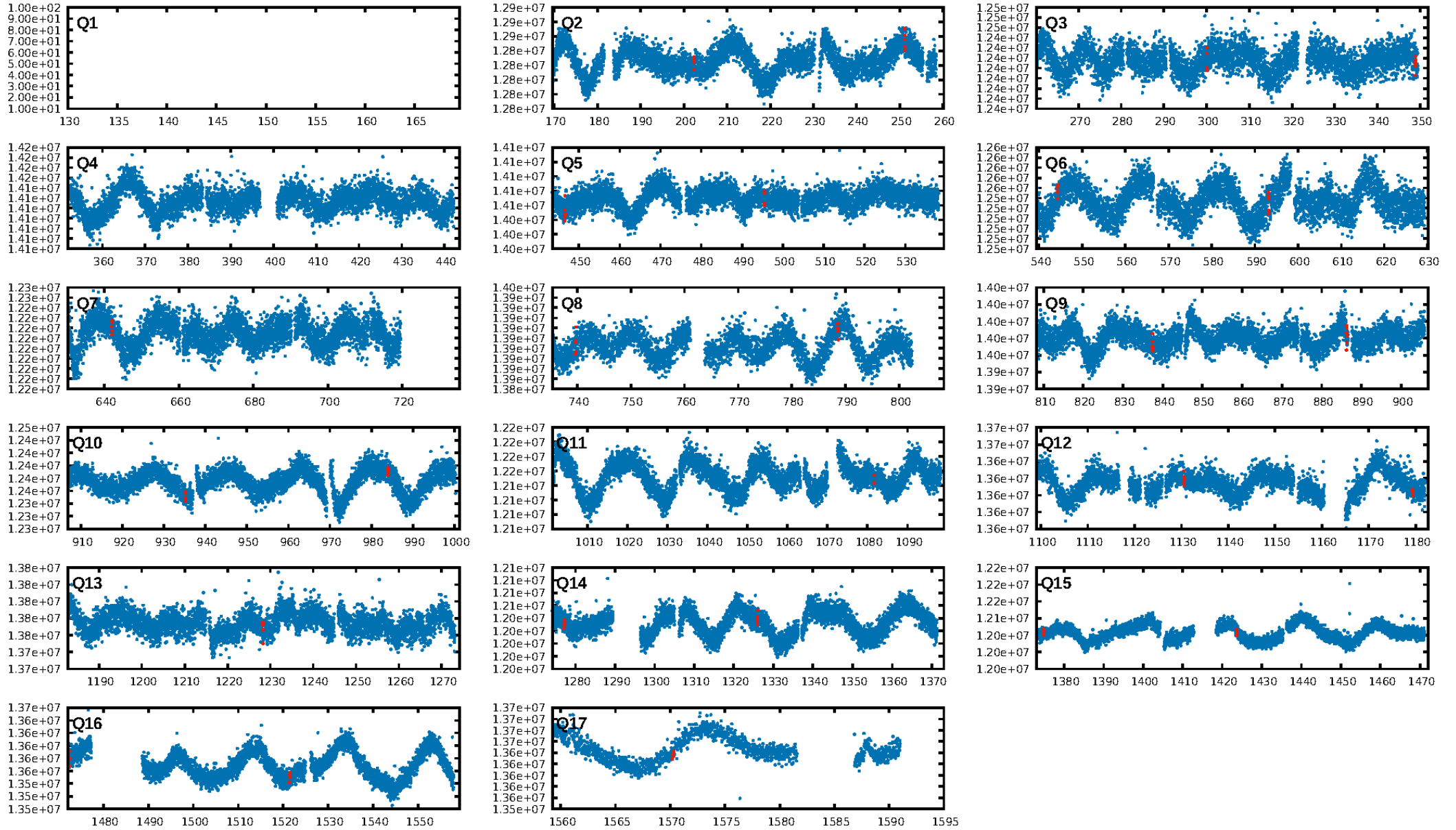
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [70.95σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.0%
ModelChiSquareGof-sig: 67.0%
Bootstrap-pfa: 7.03e-12
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 1.292
Centroid-sig: 37.7%
Centroid-so: 0.268 arcsec [0.22σ]
OotOffset-rm: 9.133 arcsec [106.94σ]
KicOffset-rm: 9.421 arcsec [113.56σ]
OotOffset-st: 0/4/0/0 [4]
KicOffset-st: 0/4/0/0 [4]
DiffImageQuality-fgm: 1.00 [4/4]
DiffImageOverlap-fno: 0.07 [1/15]

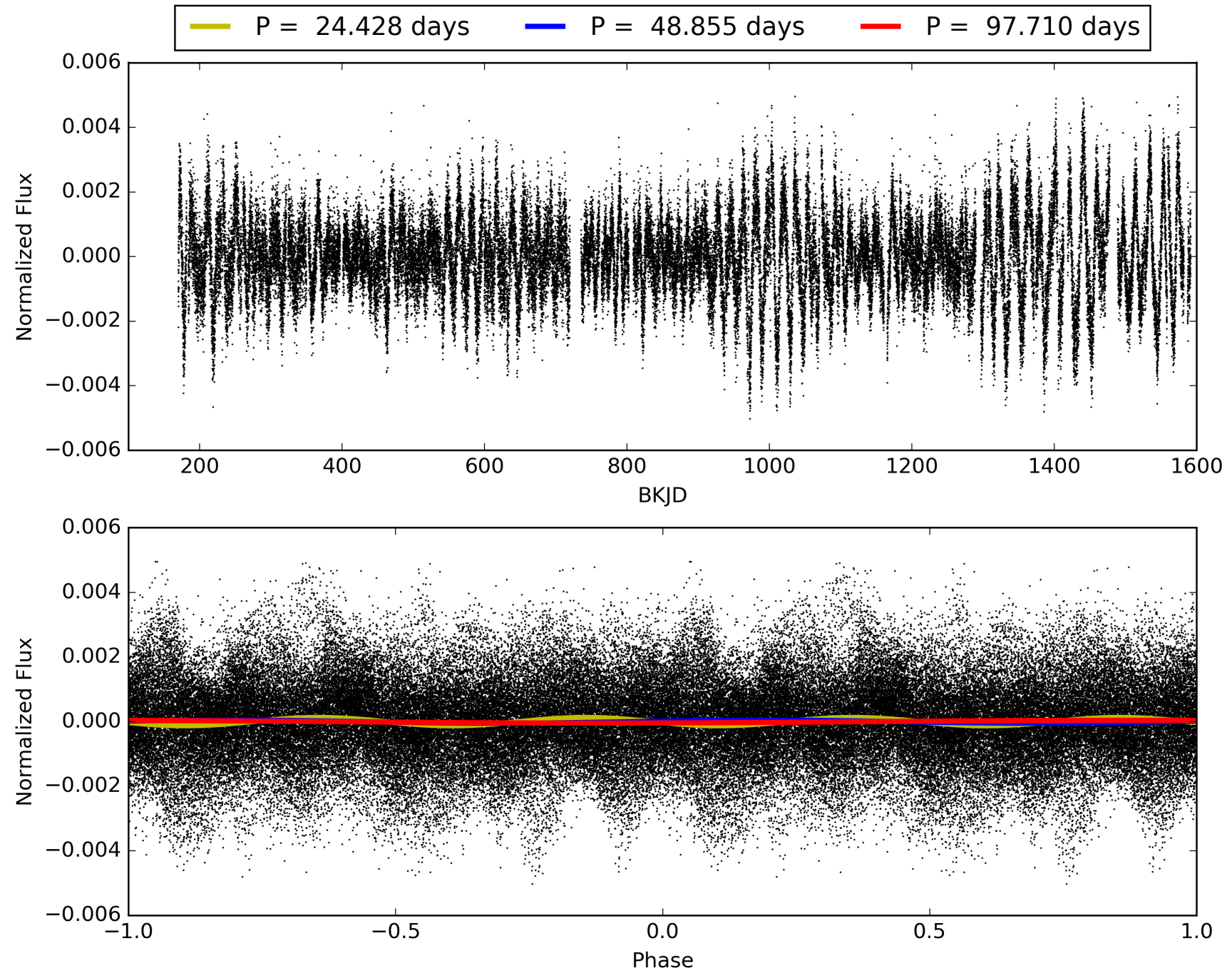
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:17:31 Z

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

TCE 006631948-02, PDC Light Curves

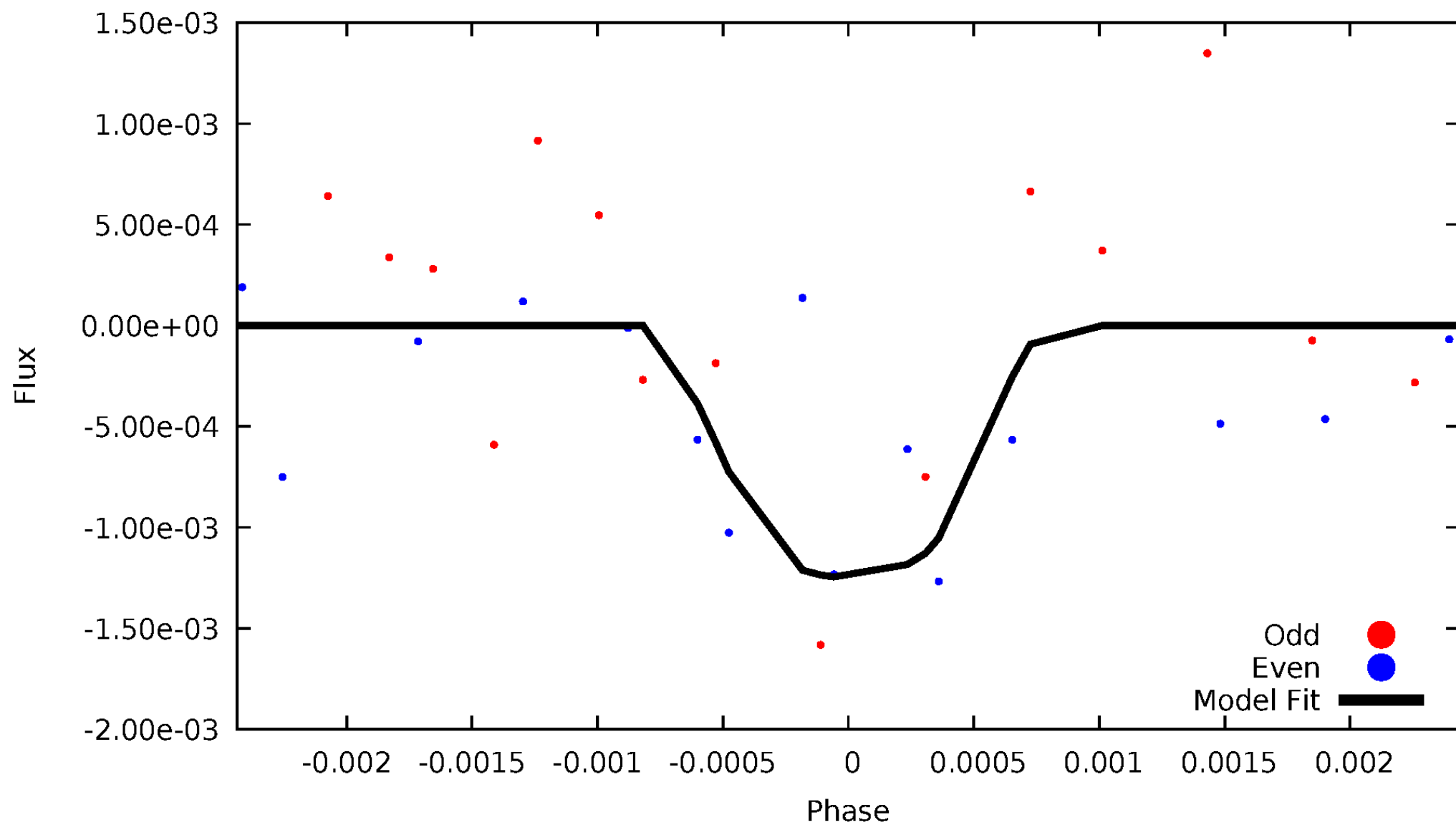


TCE 006631948-02



DV Odd/Even

TCE 006631948-02

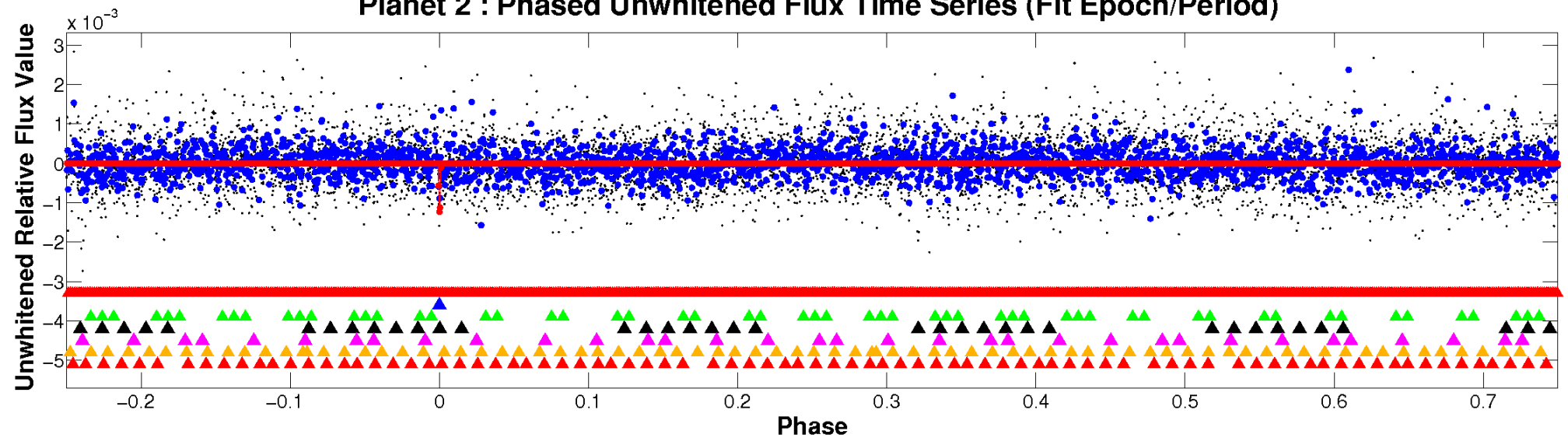


ALT Odd/Even

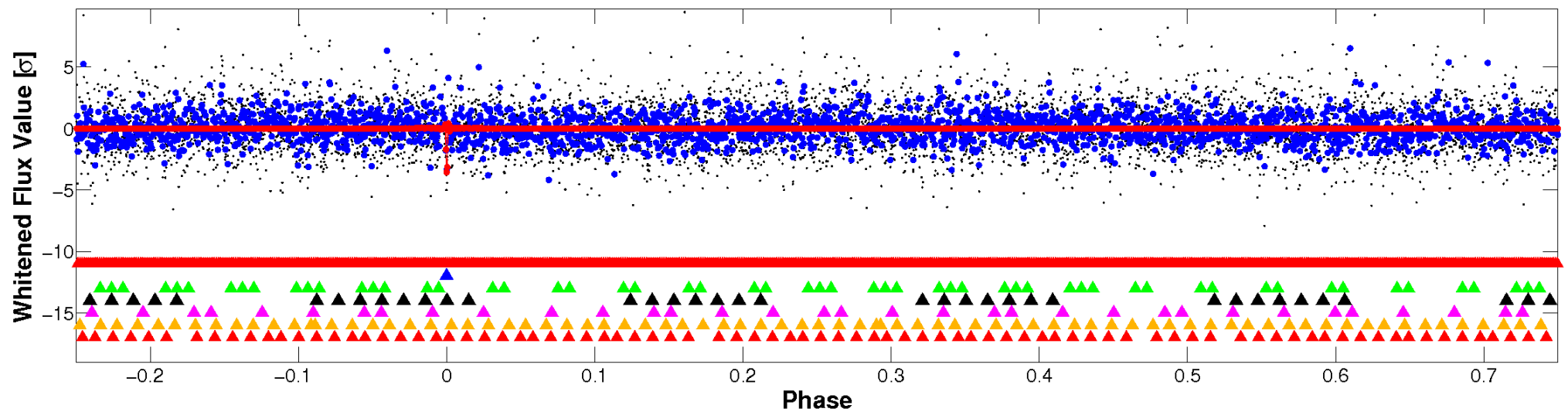
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

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

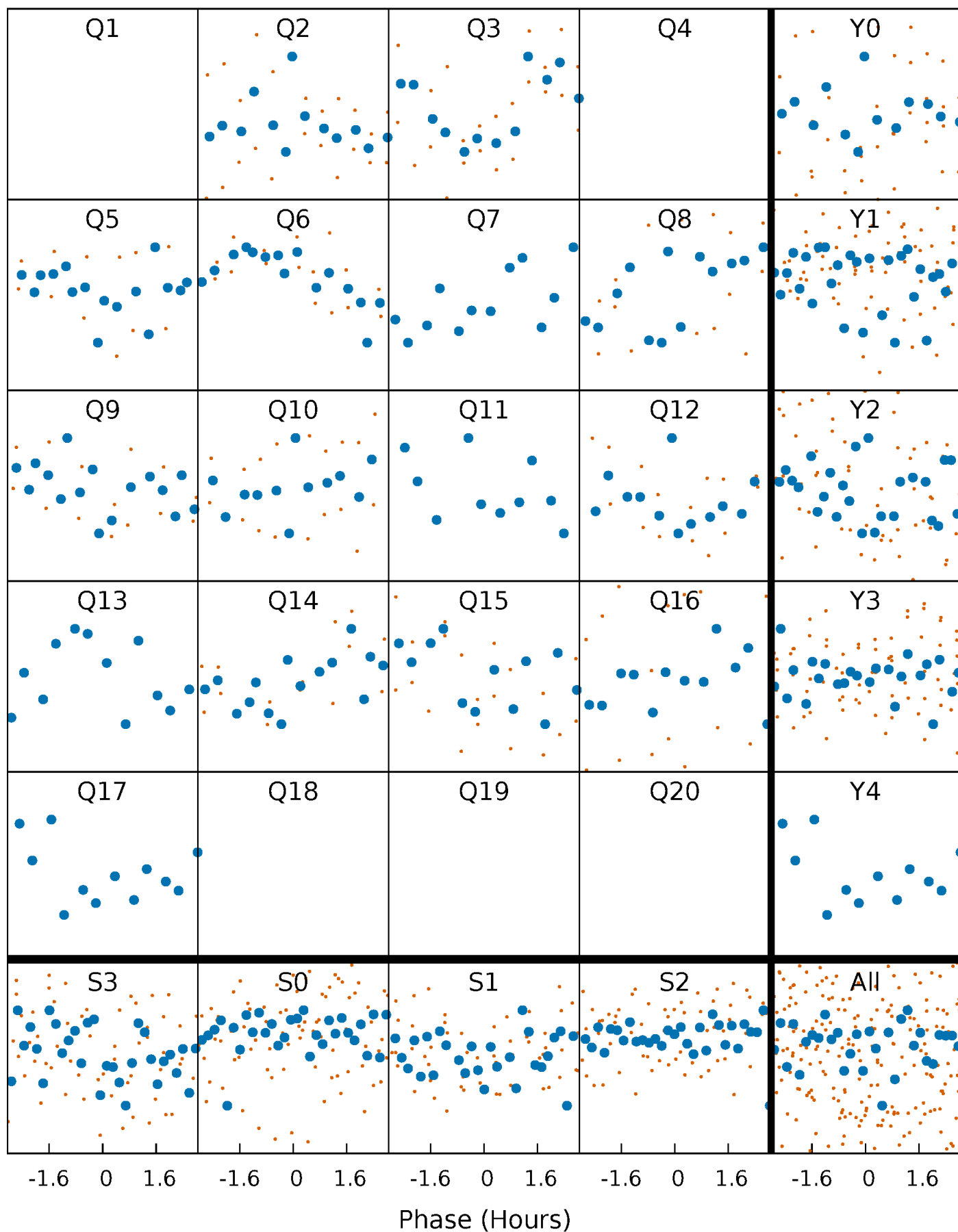


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



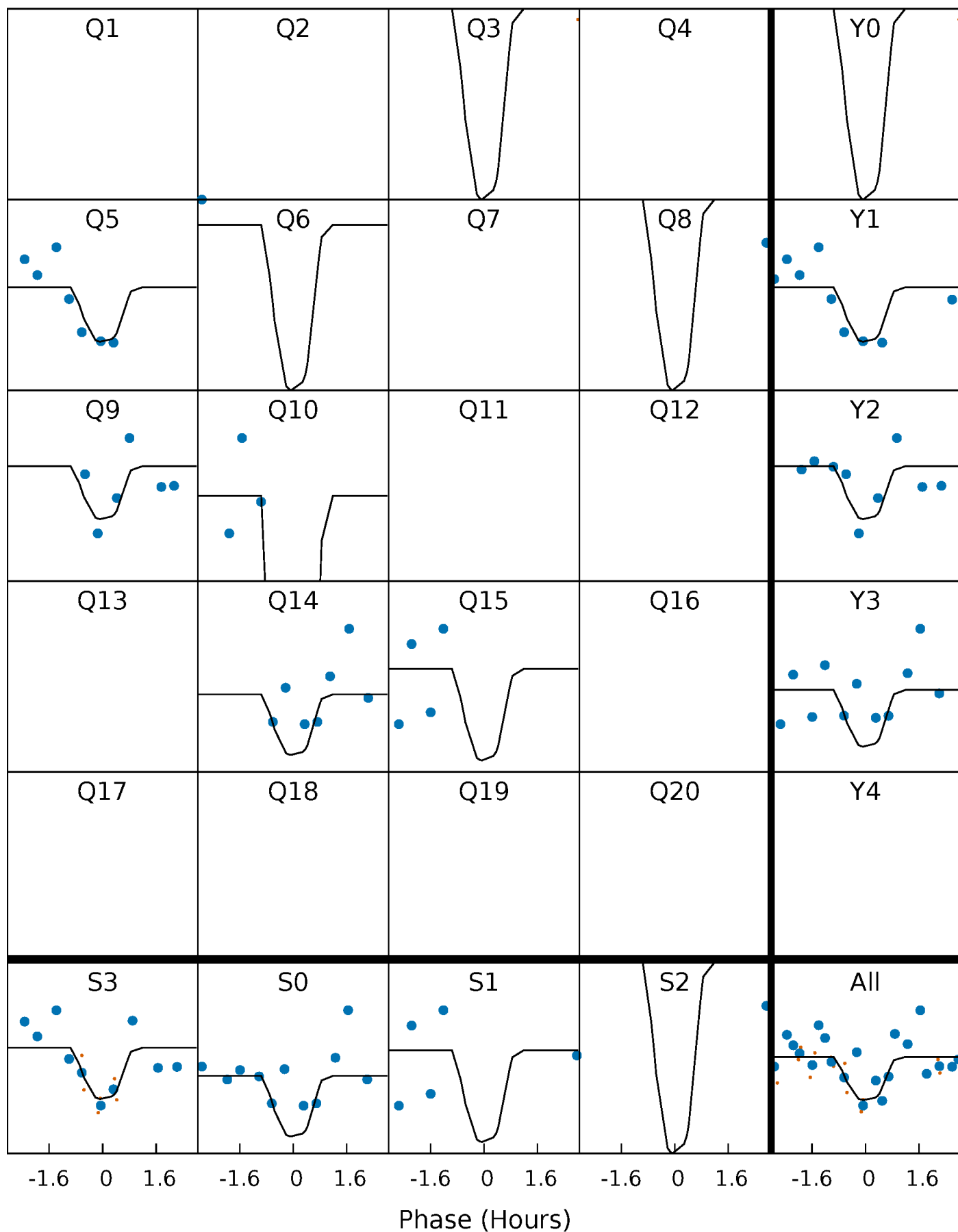
PDC Quarter-Phased Transit Curves

TCE 006631948-02 P= 48.855077 Days $T_0=153.468091$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 006631948-02 P= 48.855077 Days $T_0=153.468091$ (BKJD)

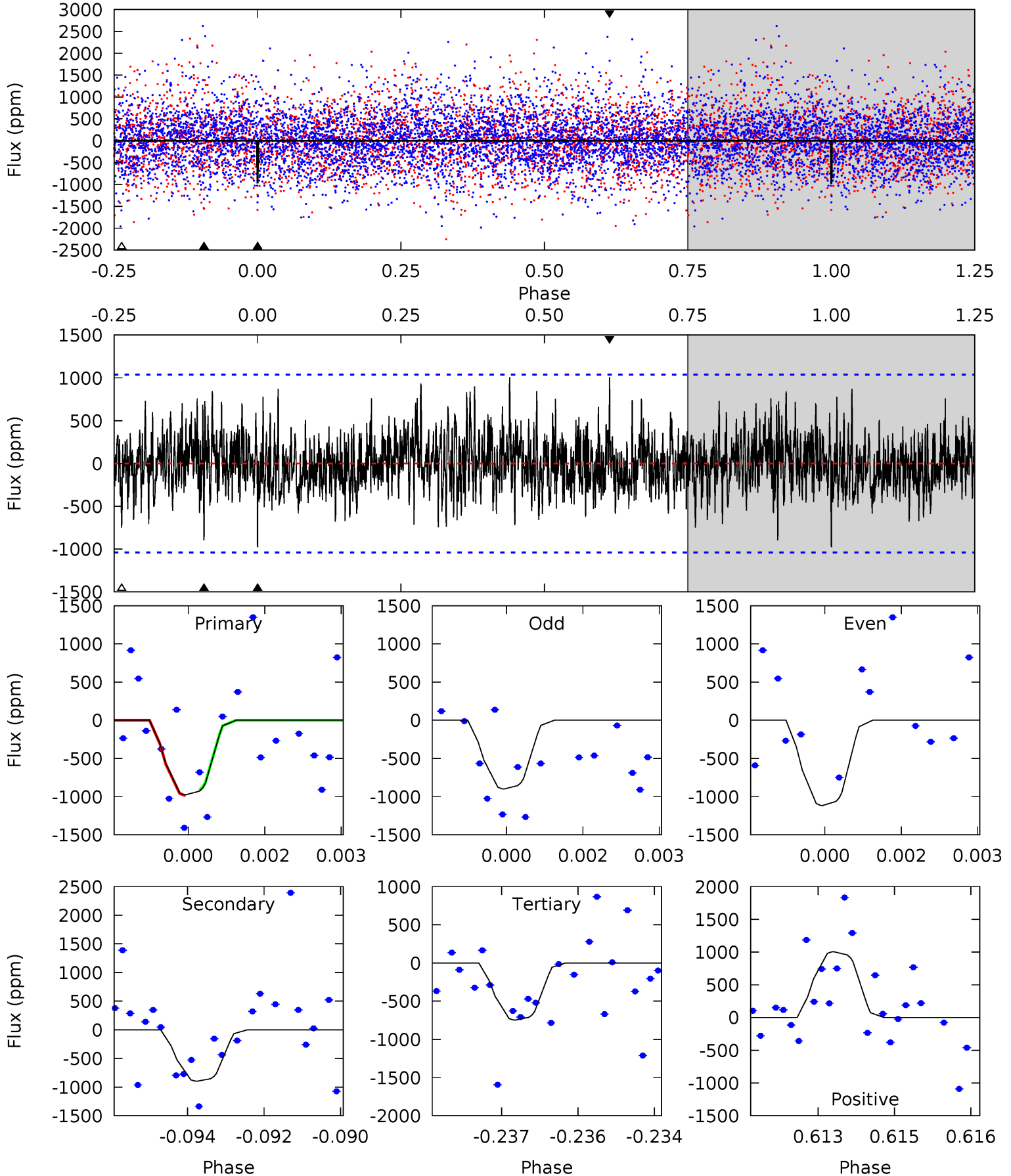


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

006631948-02, P = 48.855077 Days, E = 153.468091 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.05	4.64	3.87	5.20	5.37	3.15	1.35	1.18	-0.15	0.77	-0.57	0.59	0.86	0.51	0.18



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 006631948

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5409^{+161}_{-161}	$4.587^{+0.032}_{-0.128}$	$-0.140^{+0.300}_{-0.300}$	$0.784^{+0.148}_{-0.063}$	$0.872^{+0.081}_{-0.098}$	$2.551^{+0.430}_{-0.953}$
	+3%/-3%	+1%/-3%	+214%/-214%	+19%/-8%	+9%/-11%	+17%/-37%
Source	PHO1	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 006631948-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-898 ± 194	$10.54^{+10.70}_{-7.37}$	602^{+29}_{-23}	3268^{+1760}_{-568}	267^{+2767}_{-200}
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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

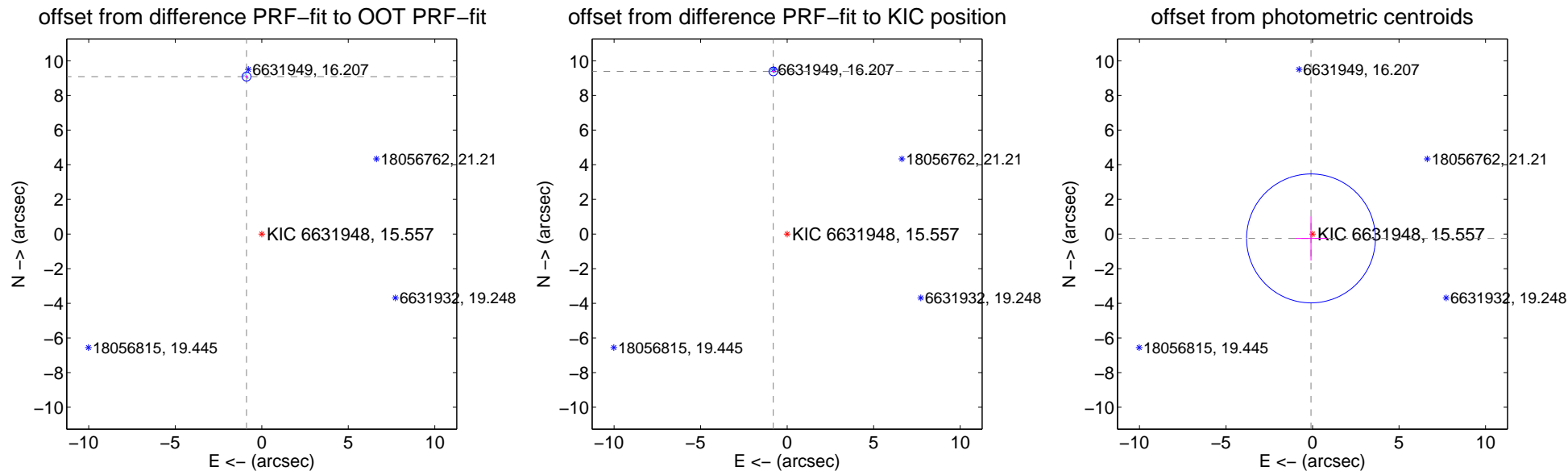
DV Centroid Data

Supplemental centroid analysis for 006631948-02. Kepler magnitude: 15.56. Transit SNR 8.91

There are 4 quarters with good PRF difference image offsets

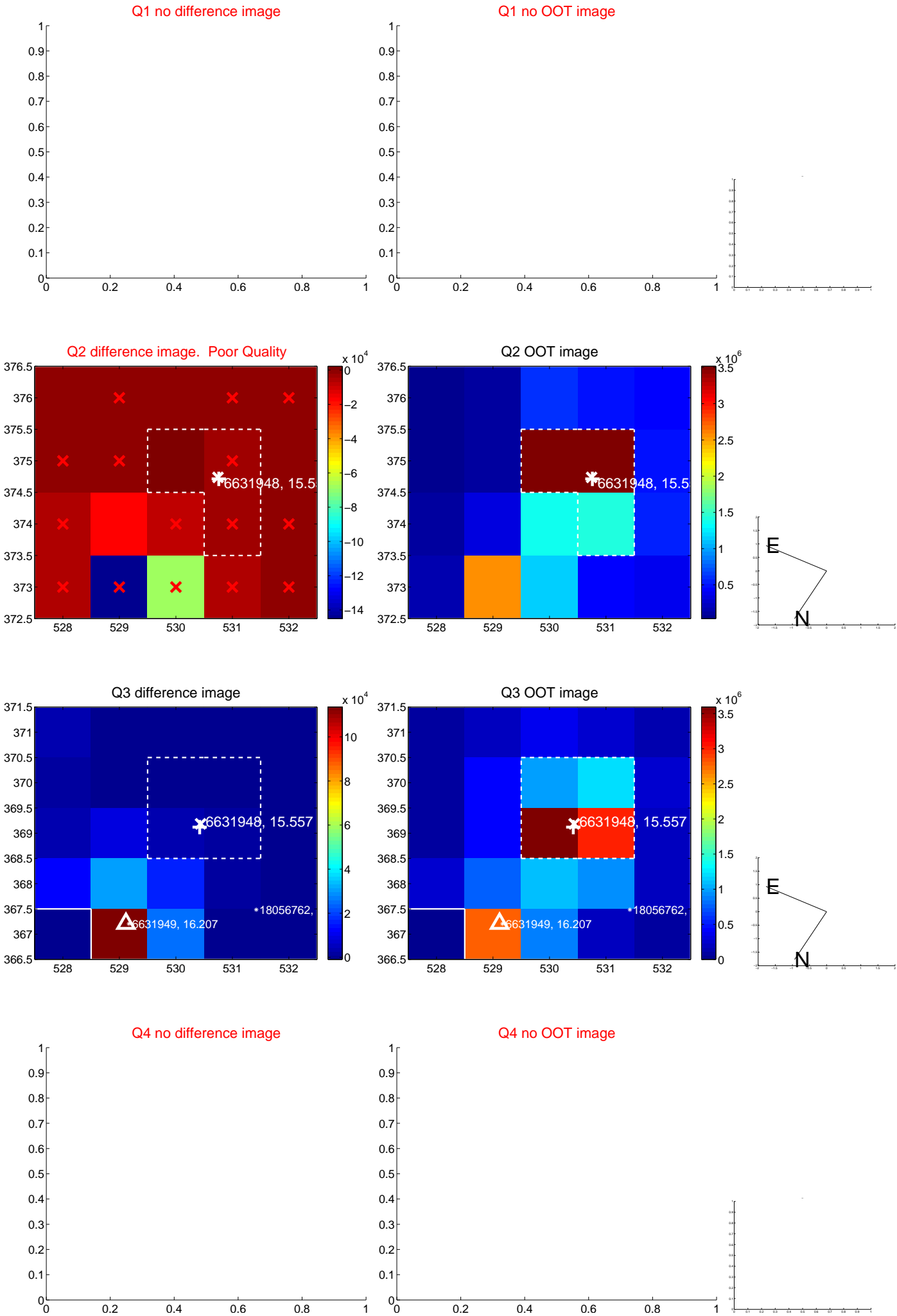
The direct PRF centroid is offset from the target star catalog position by about 0.32 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	9.133 \pm 0.085	106.94	0.882 \pm 0.091	9.091 \pm 0.085
PRF-fit source offset from KIC position	9.421 \pm 0.083	113.56	0.801 \pm 0.097	9.387 \pm 0.083
photometric centroid source offset	0.27 \pm 1.24	0.22	0.09 \pm 0.92	-0.25 \pm 1.27

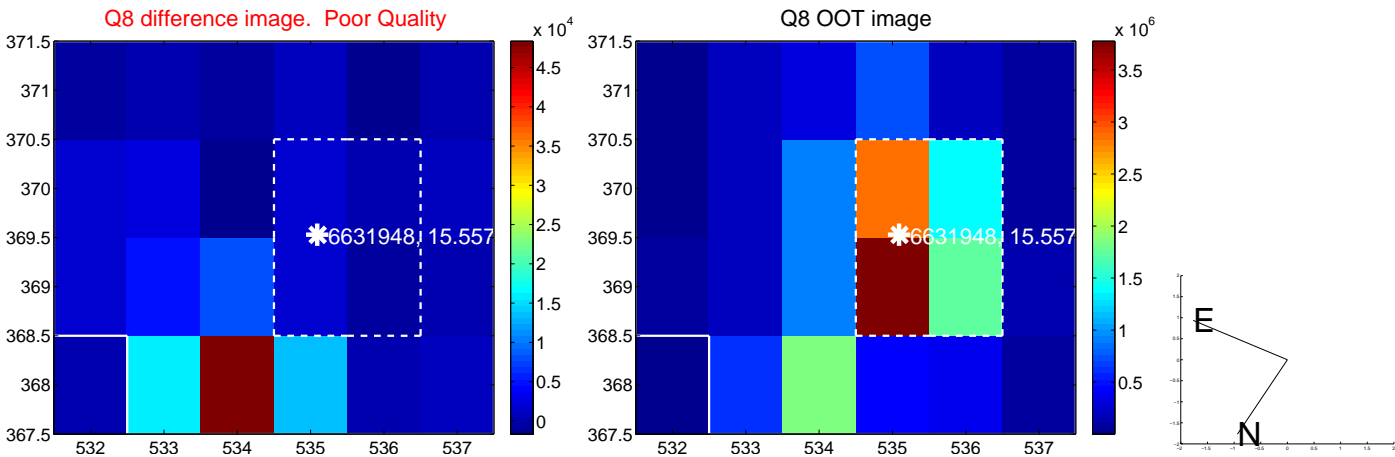
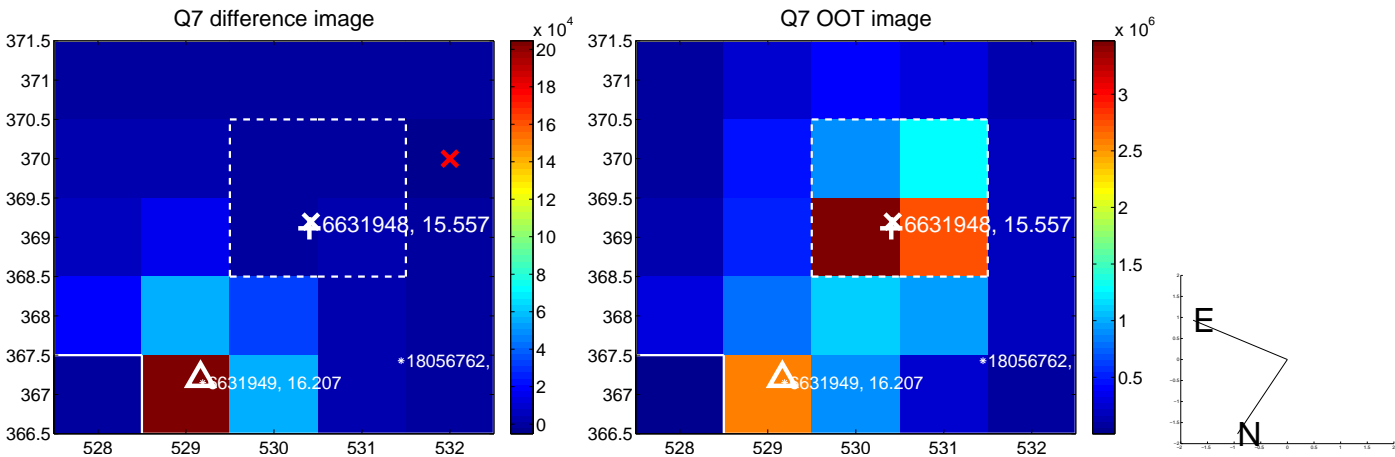
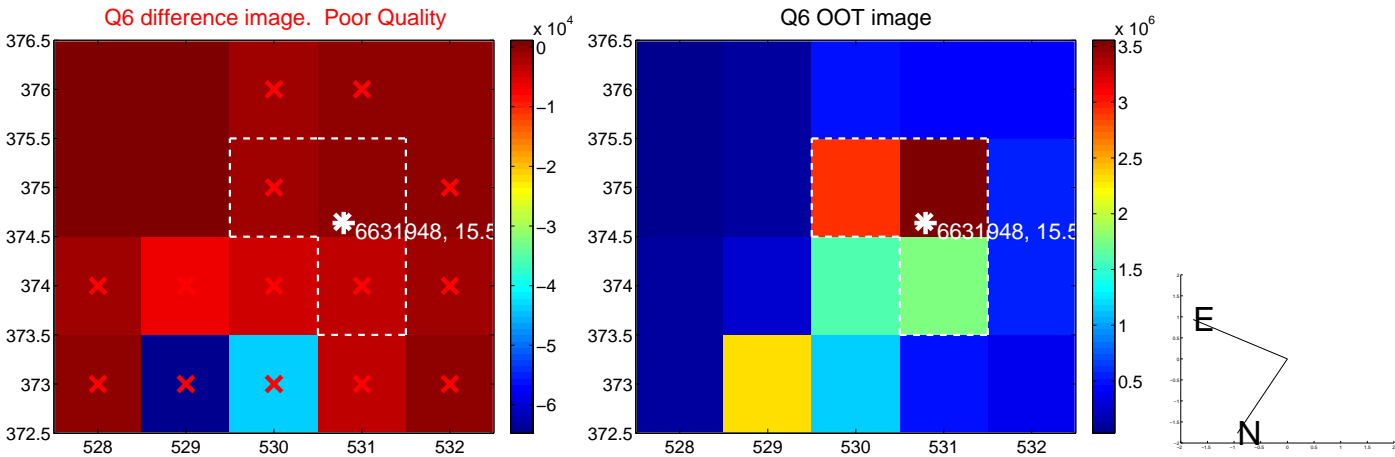
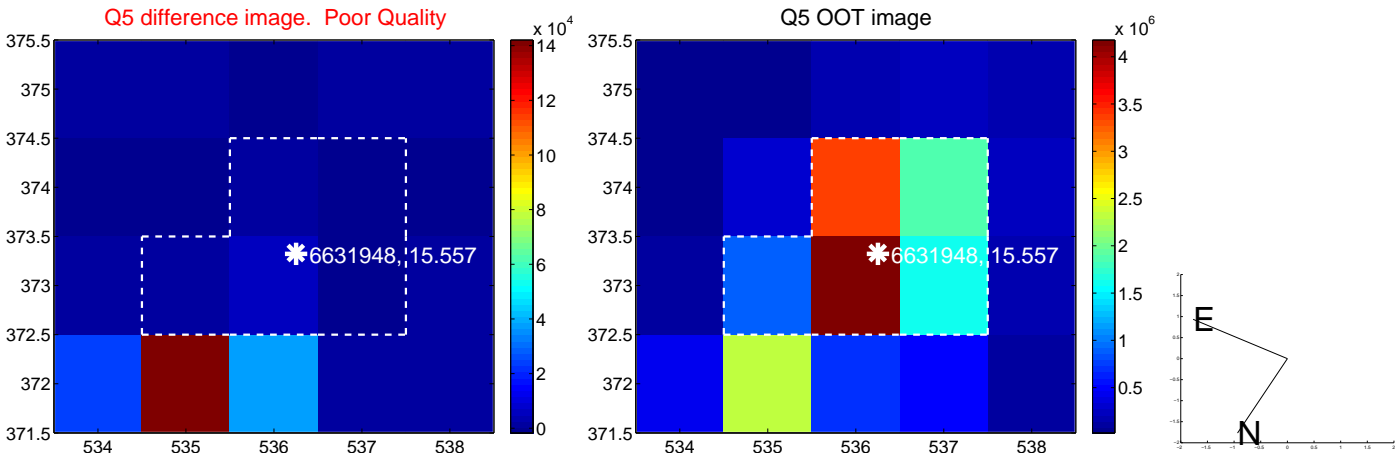


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

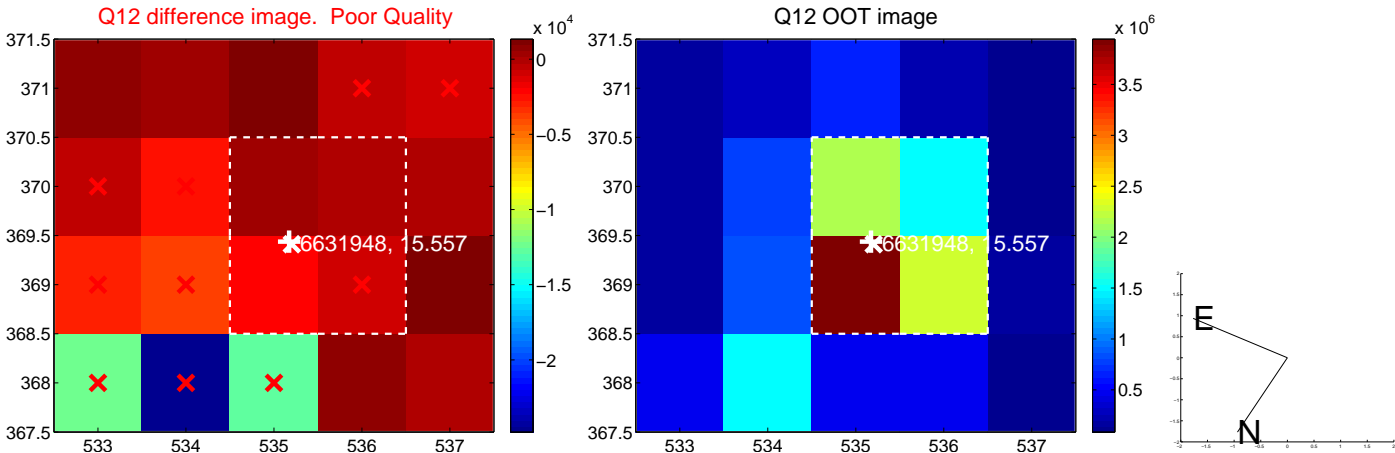
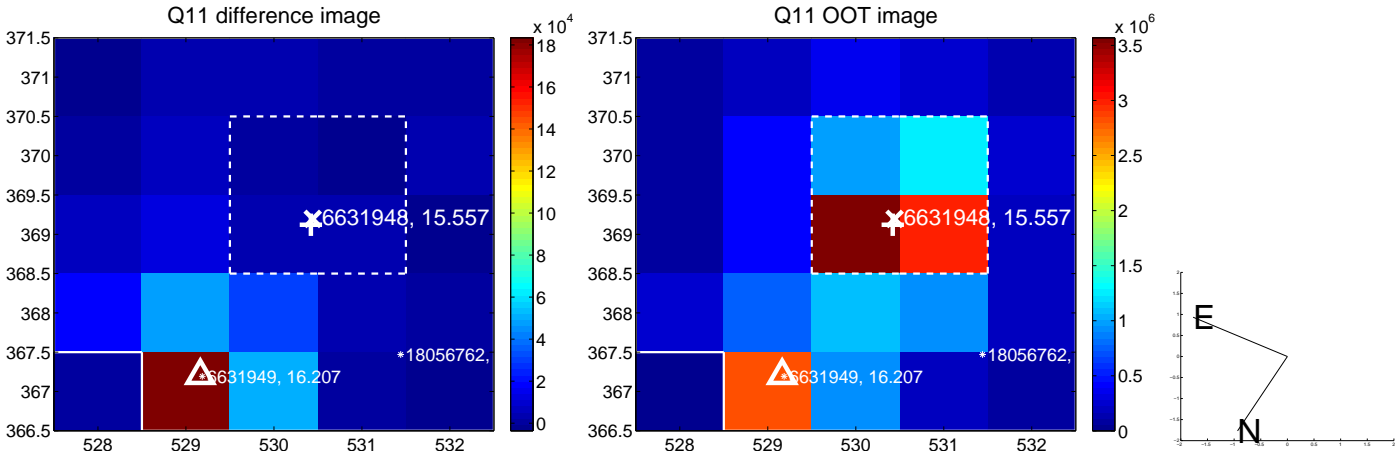
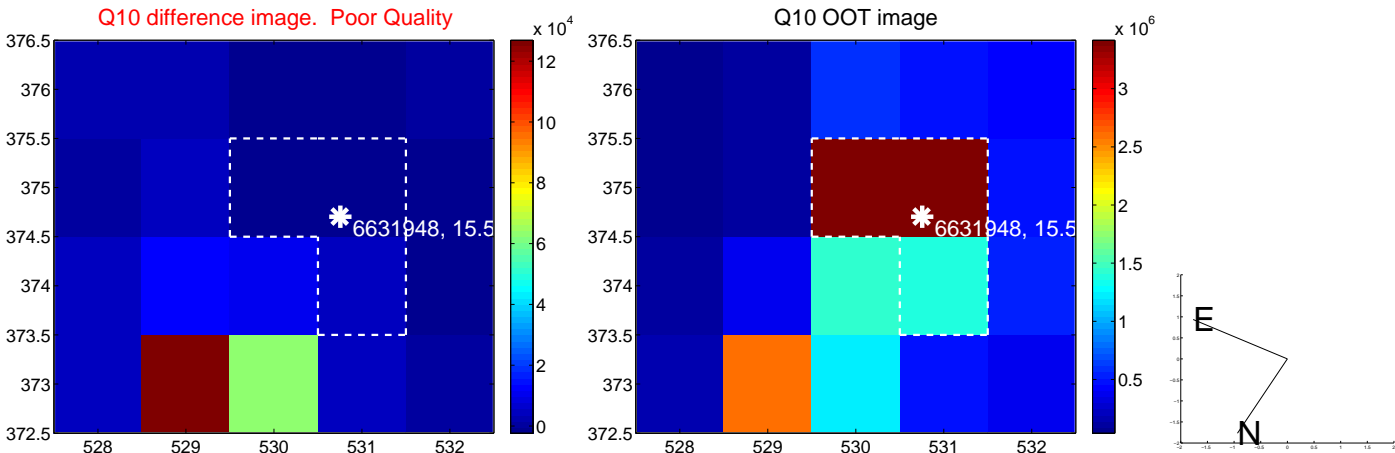
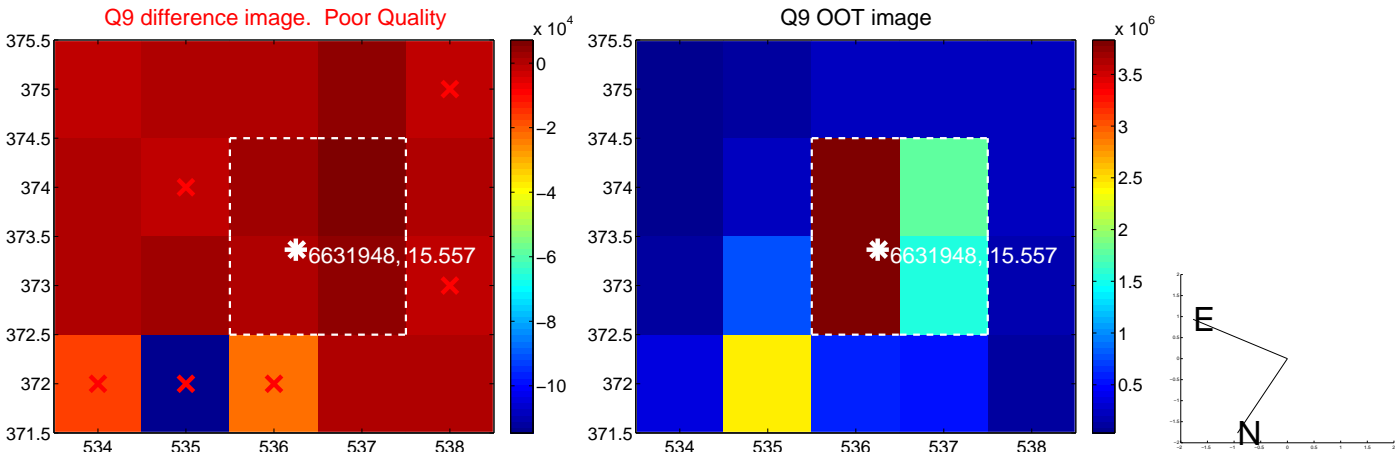
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



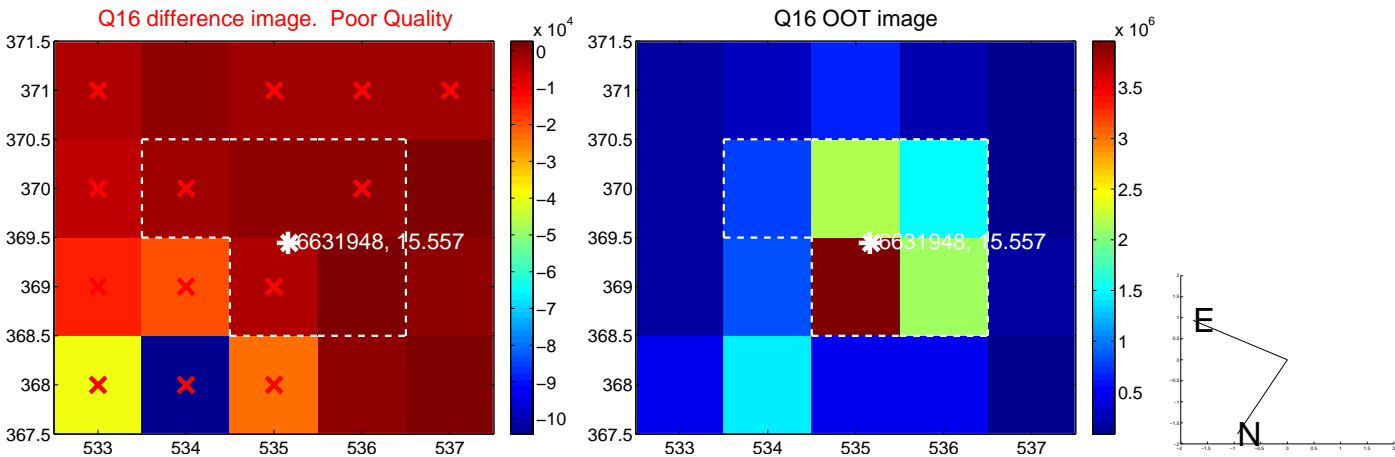
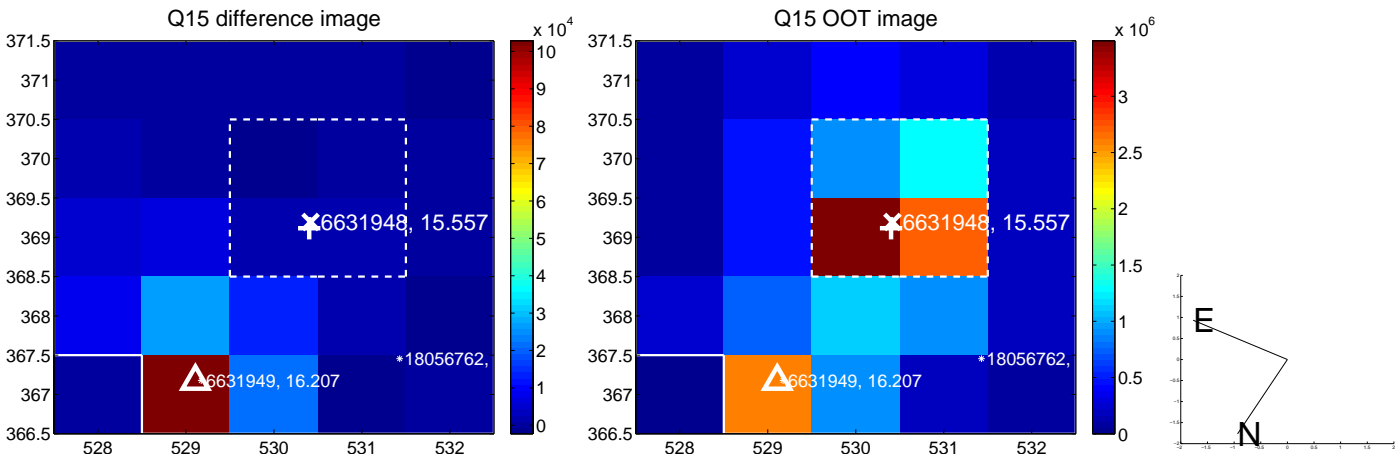
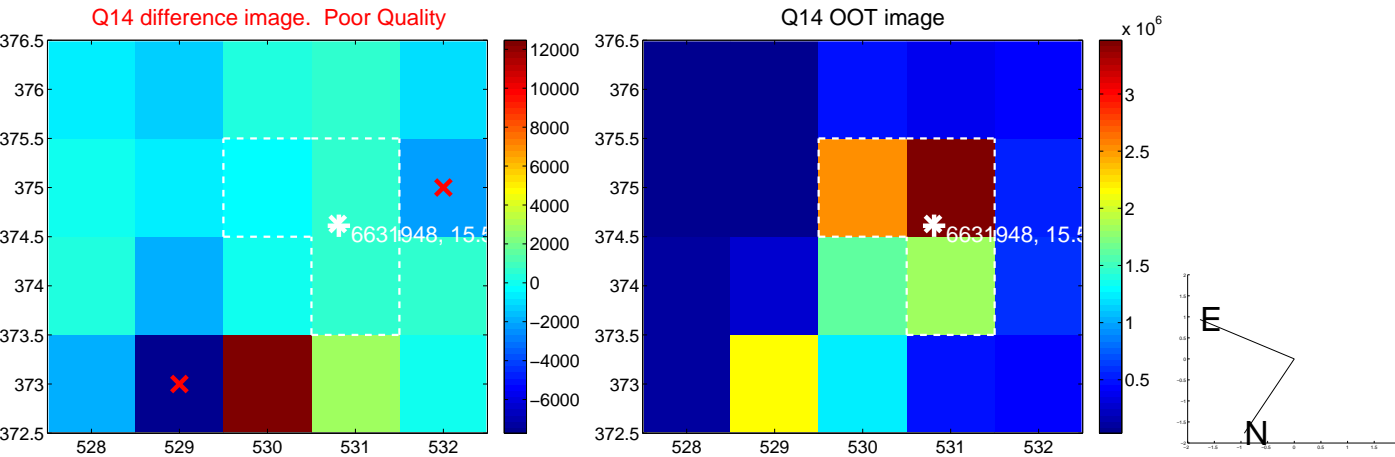
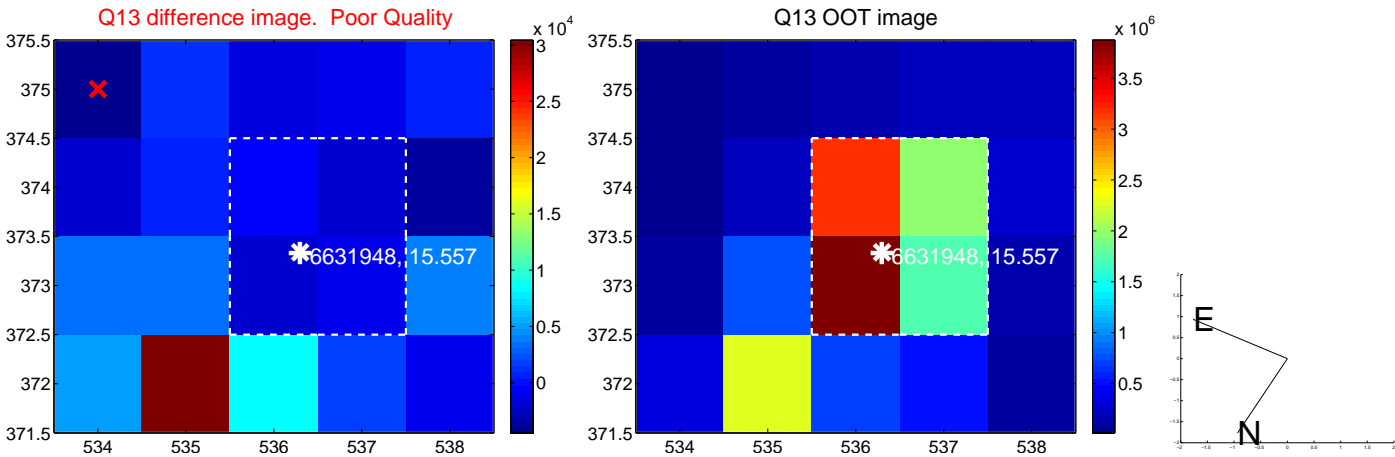
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



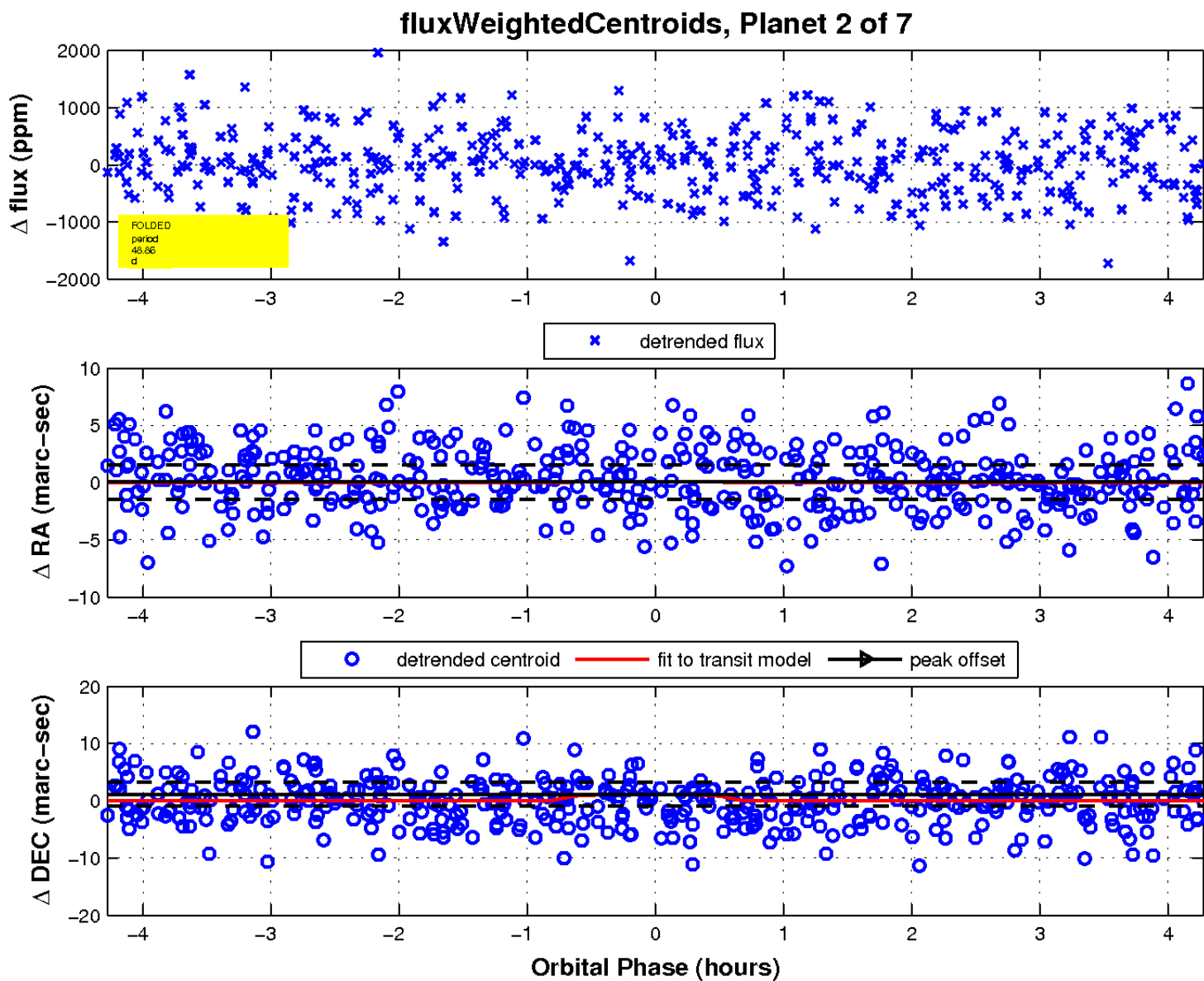
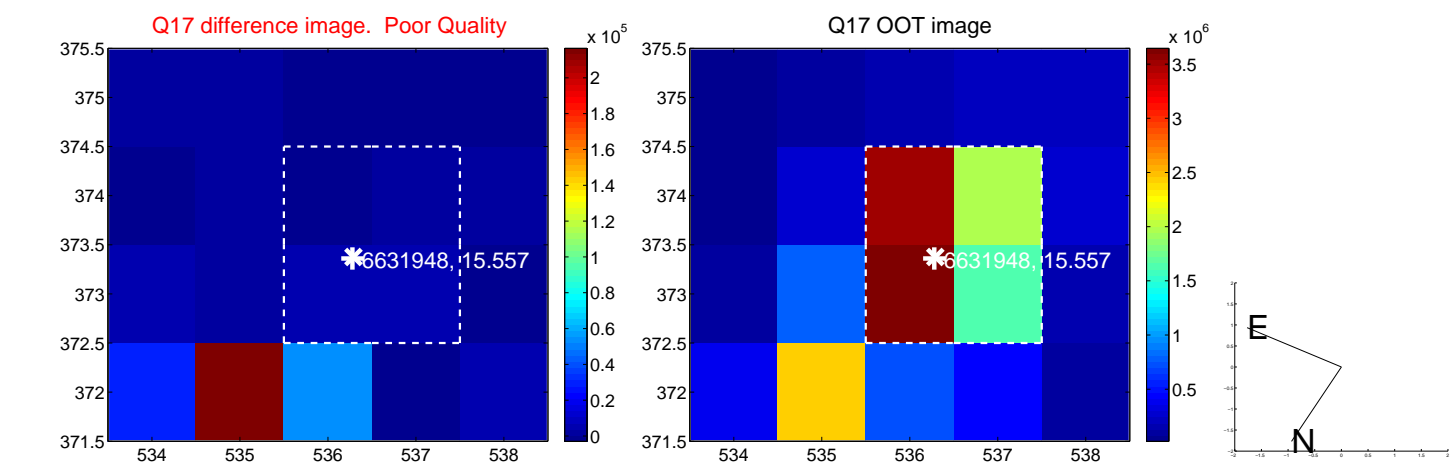
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

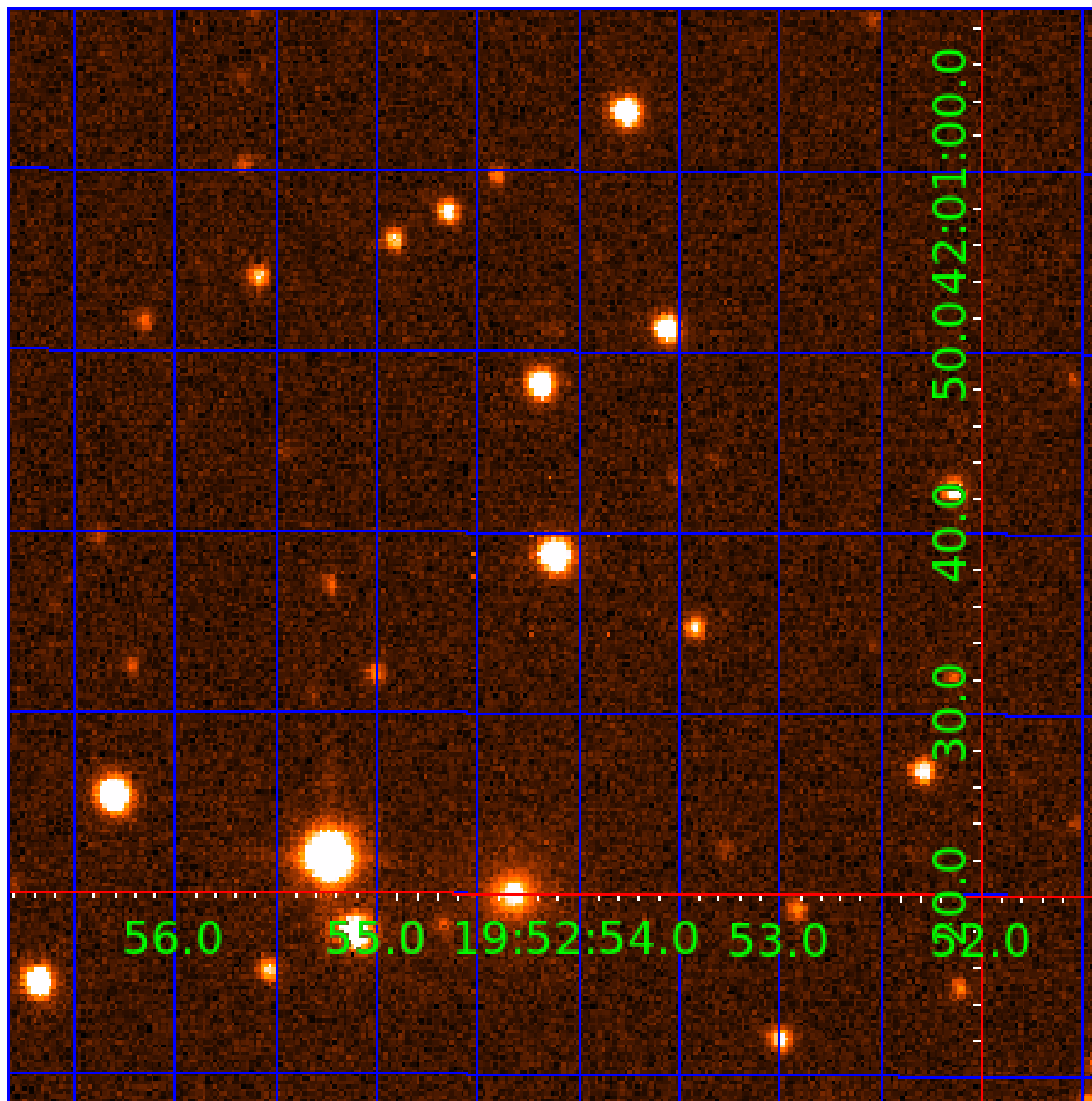


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006631948

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})
006631948-01	OBS	No	0.641894	132.391949	0.0	4.412	7.4	0.0	0.78	5409	0.01	2445.05
006631948-02	OBS	No	48.855077	153.468091	1249.1	1.428	11.2	8.9	0.78	5409	2.99	7.58
006631948-03	OBS	No	25.505965	139.890262	1335.6	1.398	9.5	10.2	0.78	5409	2.88	18.03
006631948-04	OBS	No	39.227192	149.187864	1471.9	2.047	11.5	11.2	0.78	5409	3.12	10.16
006631948-05	OBS	No	43.239576	150.757152	1431.3	1.253	11.8	7.3	0.78	5409	3.33	8.92
006631948-06	OBS	No	18.643862	148.996893	846.7	1.590	9.5	9.8	0.78	5409	2.45	27.39
006631948-07	OBS	No	17.208289	147.594402	630.5	2.335	8.2	7.8	0.78	5409	2.18	30.47

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006631948-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—CENT_RESOLVED_OFFSET
006631948-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—CENT_RESOLVED_OFFSET
006631948-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_RESOLVED_OFFSET
006631948-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—CENT_RESOLVED_OFFSET
006631948-05	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_RESOLVED_OFFSET—HALO_GHOST
006631948-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET
006631948-07	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_RESOLVED_OFFSET

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

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

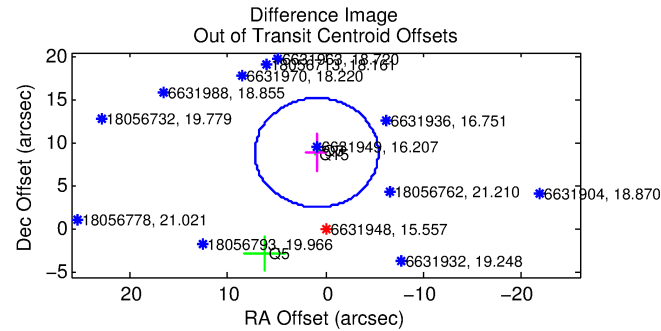
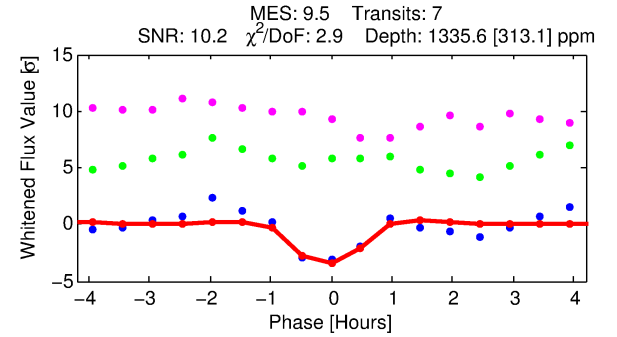
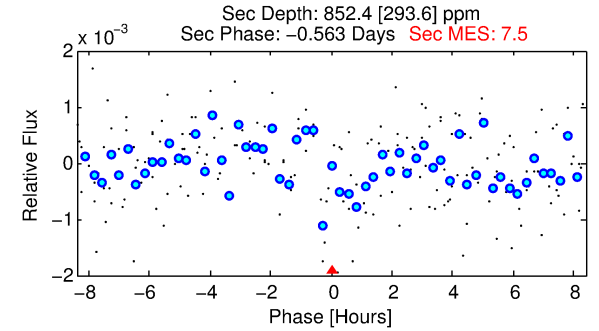
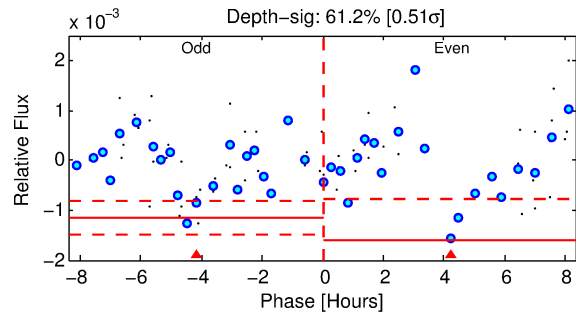
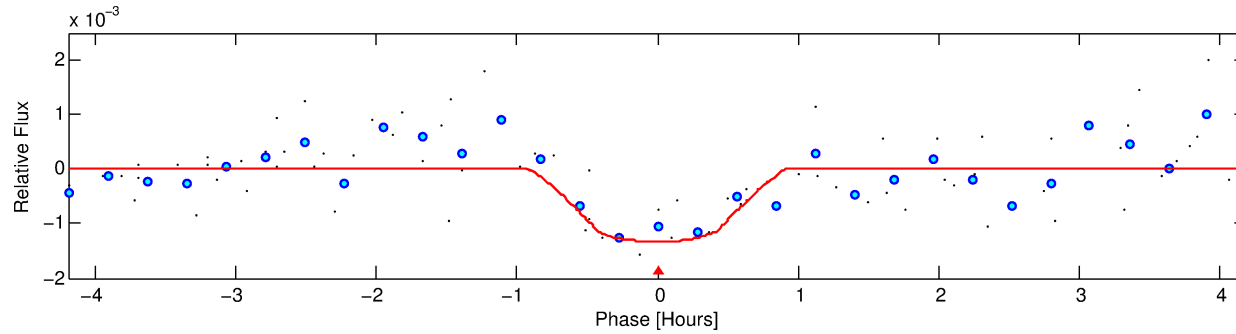
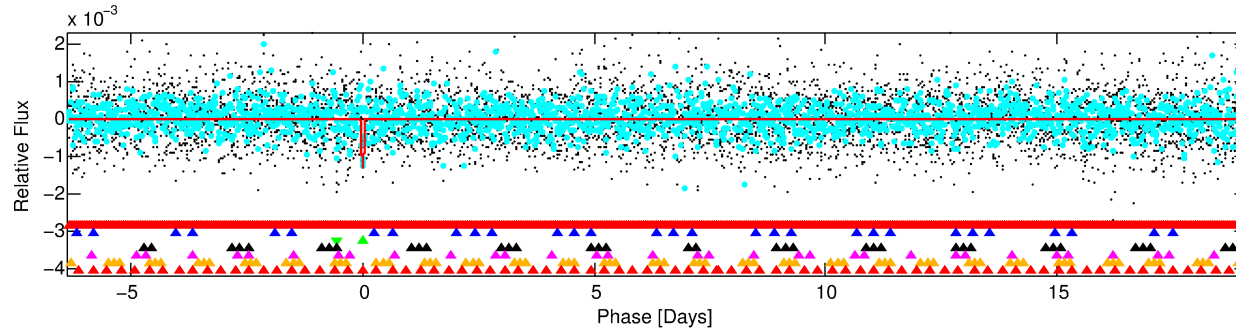
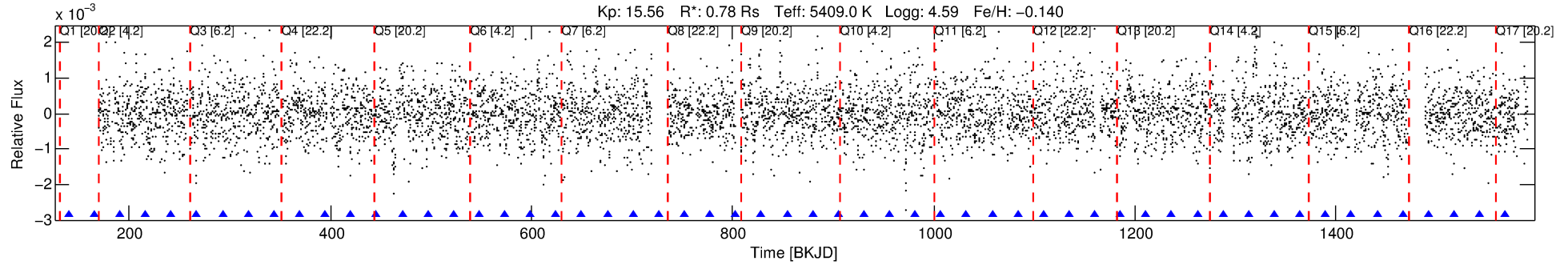
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006631948-03

No Significant Match Found

DV One-Page Summary

KIC: 6631948 Candidate: 3 of 7 Period: 25.506 d



DV Fit Results:

Period = 25.50596 [0.00028] d
Epoch = 139.8903 [0.0096] BKJD
Rp/R* = 0.0337 [0.1074]
a/R* = 133.59 [1683.83]
b = 0.39 [28.15]
Seff = 18.03 [4.72]
Teq = 525 [34] K
Rp = 2.88 [9.21] Re
a = 0.1617 [0.0258] AU
Ag = 1474.85 [9423.61] [0.16 σ]
Teffp = 5035 [8038] K [0.56 σ]

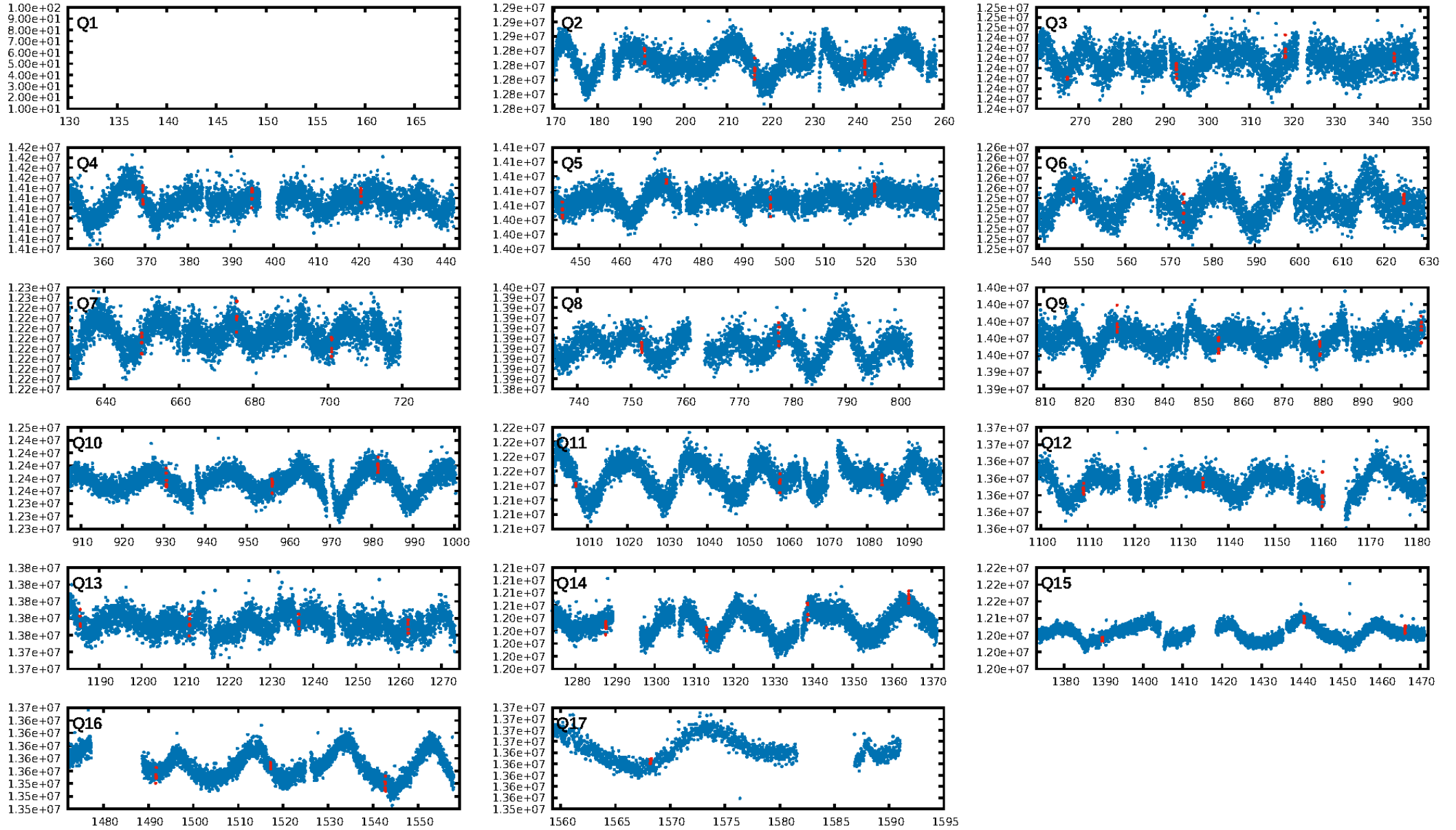
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [77.78 σ]
LongPeriod-sig: 100.0% [132.85 σ]
ModelChiSquare2-sig: 39.6%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 2.87e-09
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: -9.153
Centroid-sig: 19.4%
Centroid-so: 1.463 arcsec [1.79 σ]
OotOffset-rm: 8.933 arcsec [4.25 σ]
KicOffset-rm: 9.222 arcsec [3.72 σ]
OotOffset-st: 0/3/0/1 [4]
KicOffset-st: 0/3/0/1 [4]
DiffImageQuality-fgm: 0.75 [3/4]
DiffImageOverlap-fno: 0.06 [1/16]

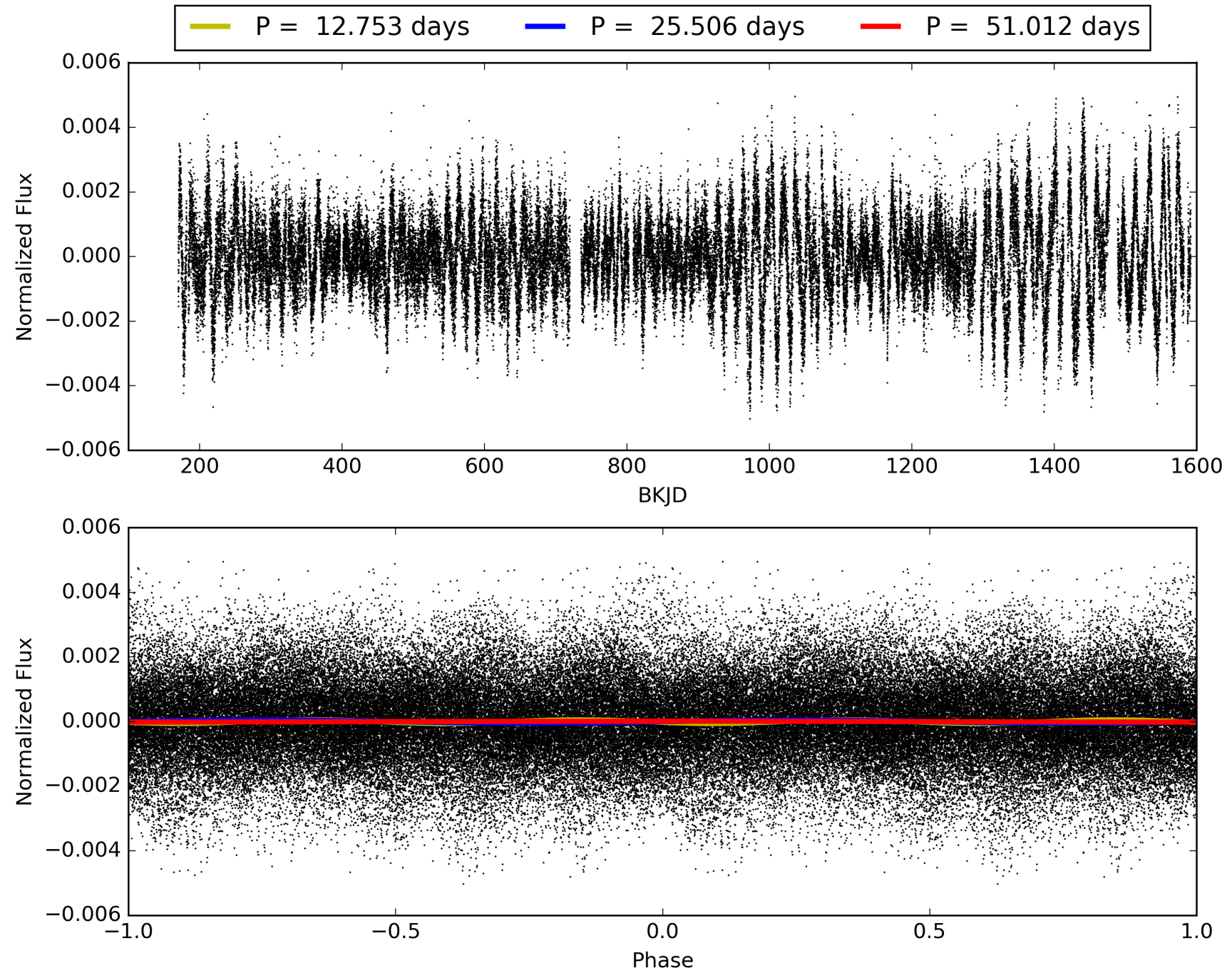
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:17:35 Z

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

TCE 006631948-03, PDC Light Curves

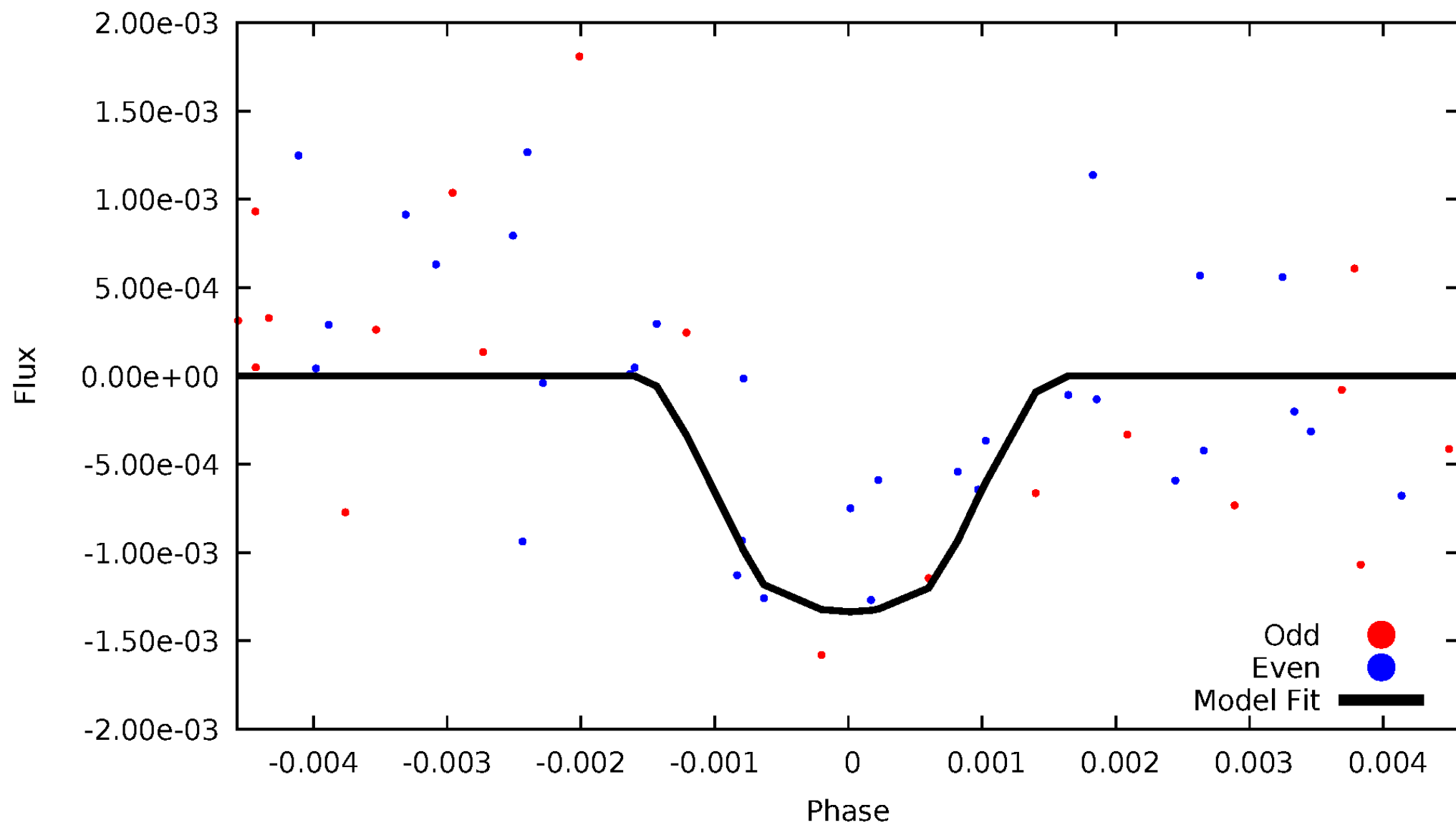


TCE 006631948-03



DV Odd/Even

TCE 006631948-03

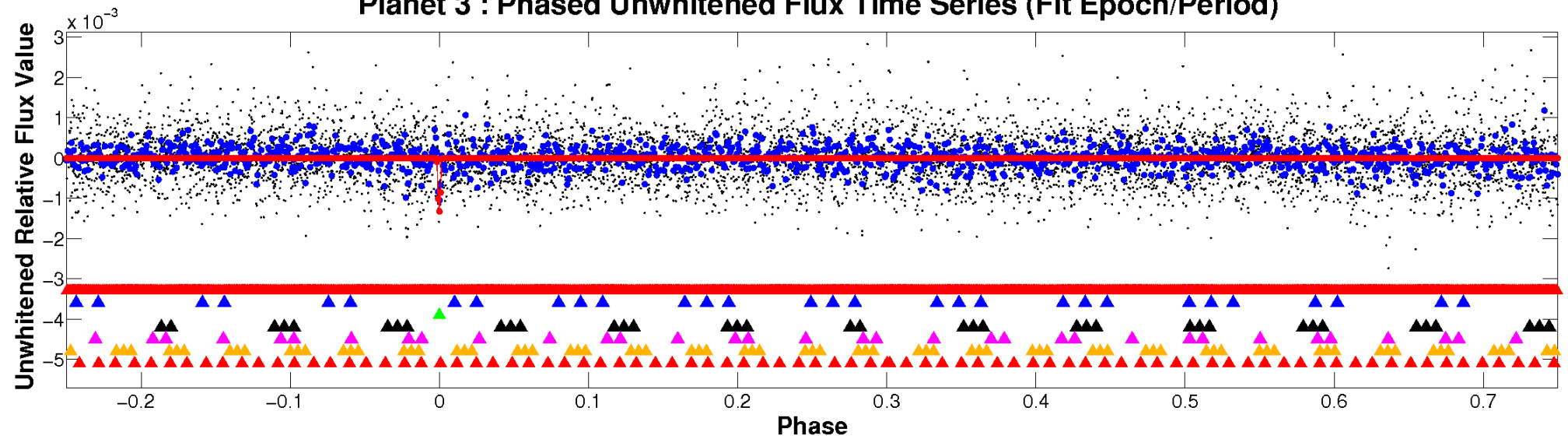


ALT Odd/Even

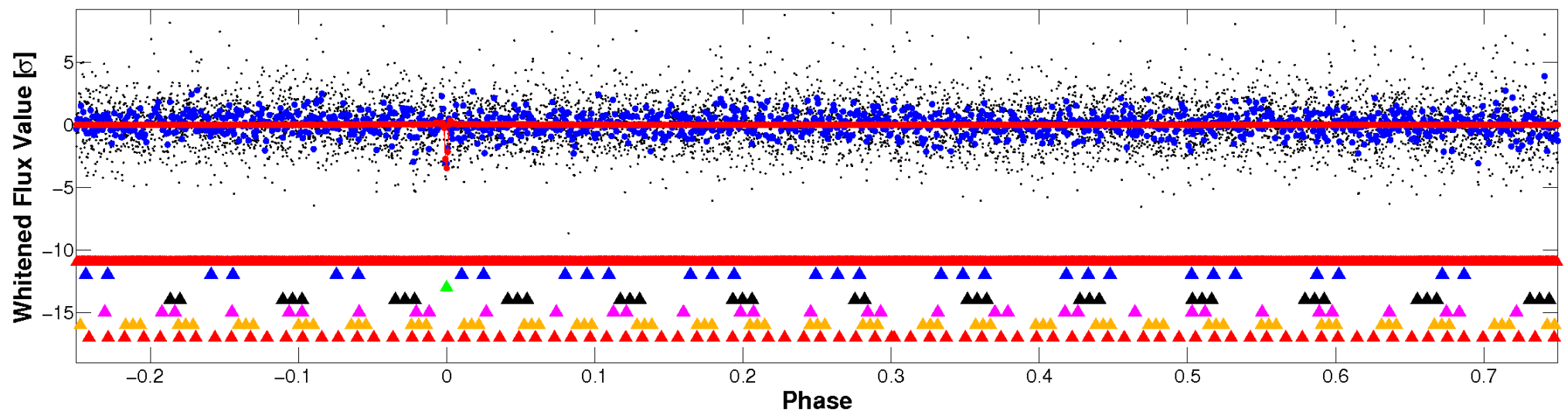
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

Planet 3 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

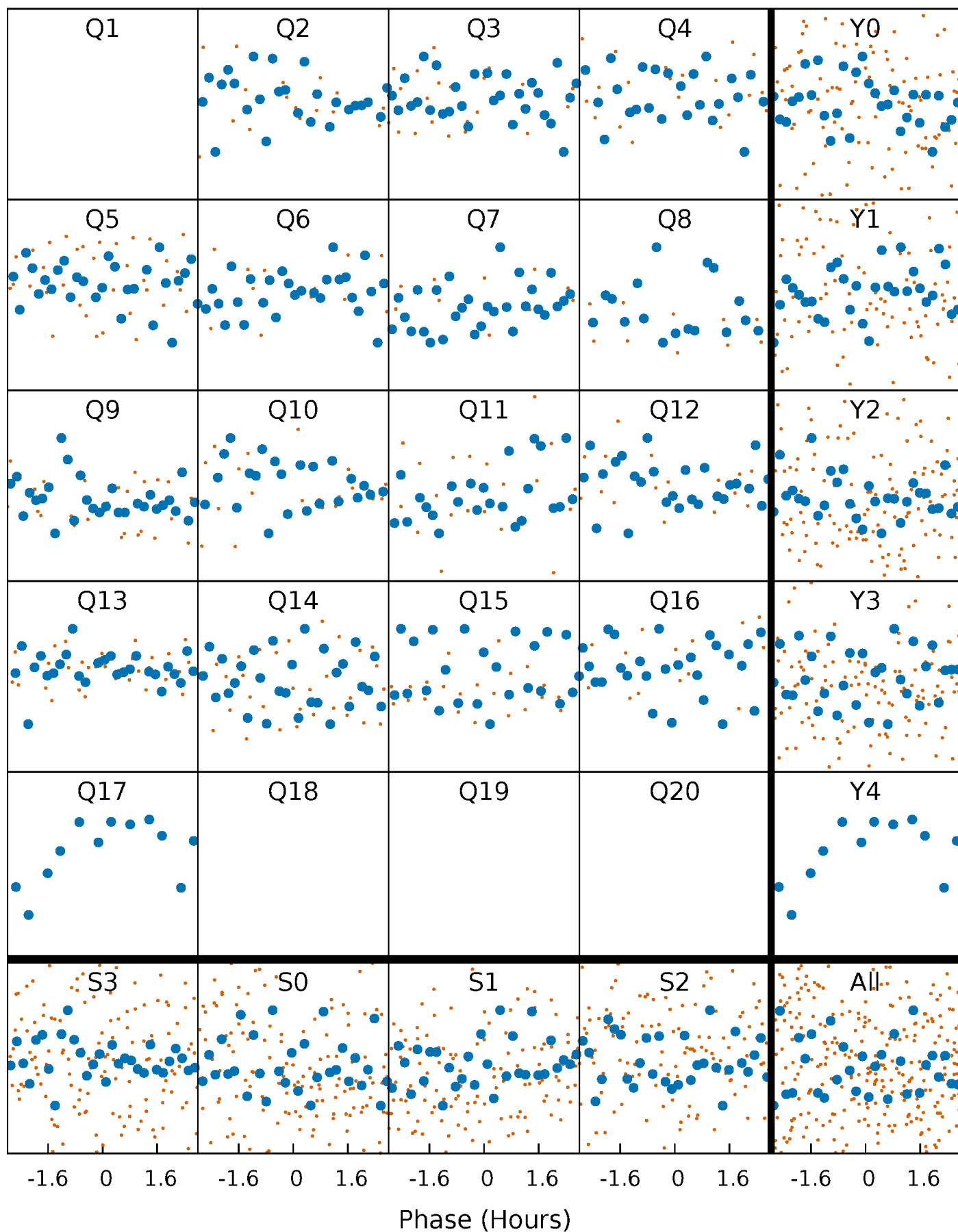


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



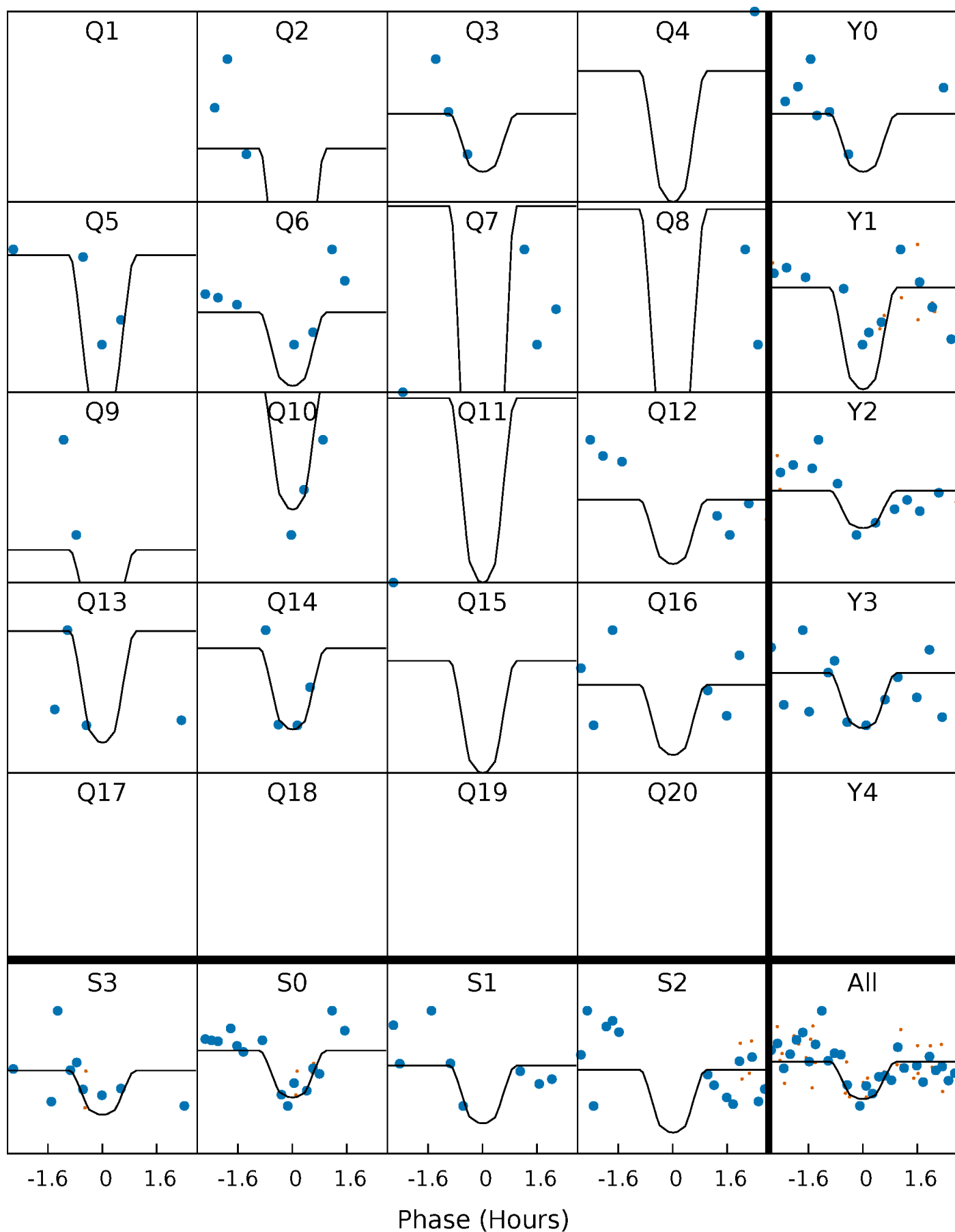
PDC Quarter-Phased Transit Curves

TCE 006631948-03 P= 25.505965 Days $T_0=139.890262$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 006631948-03 P= 25.505965 Days $T_0=139.890262$ (BKJD)

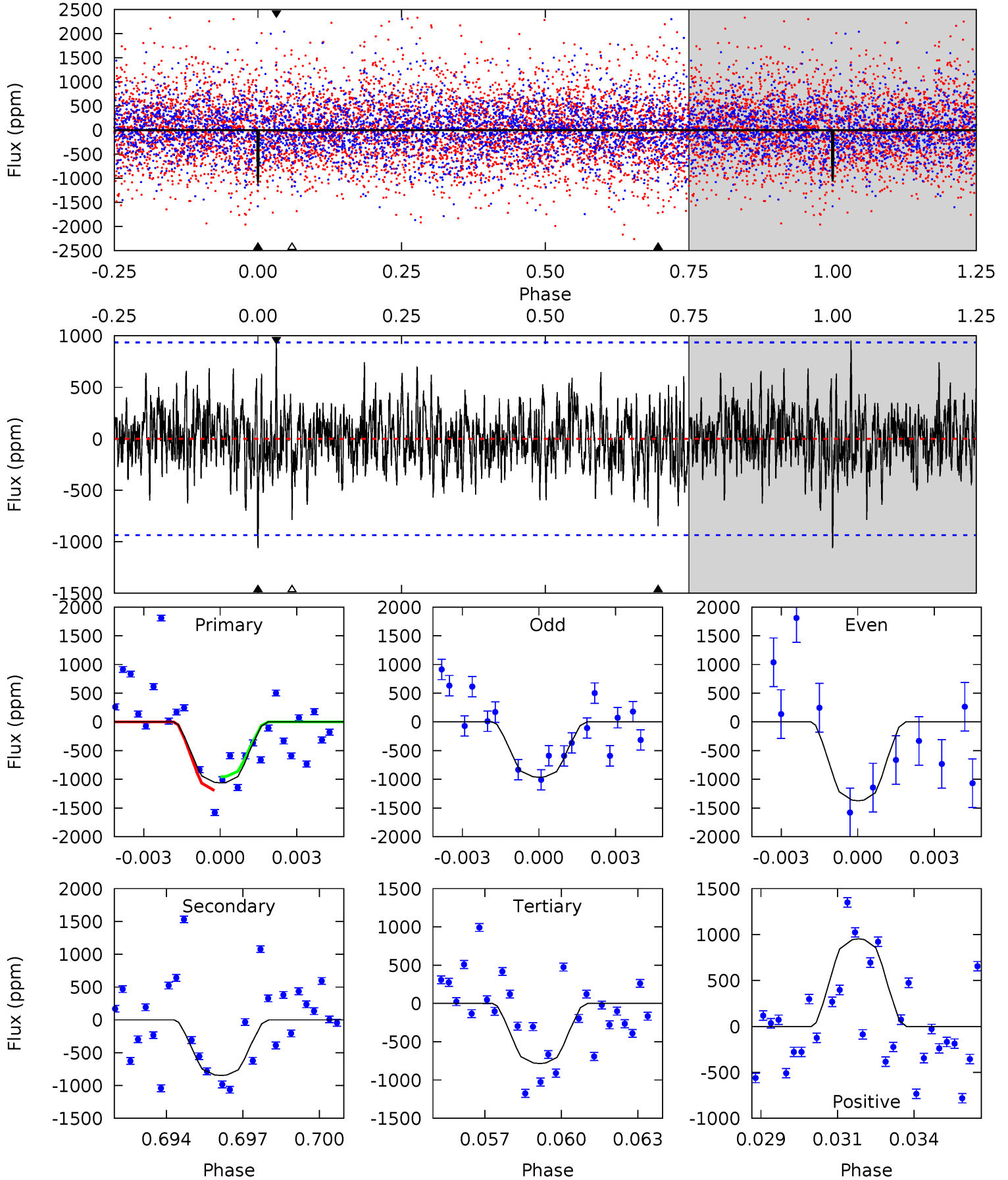


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

006631948-03, P = 25.505965 Days, E = 139.890262 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.99	4.78	4.43	5.38	5.28	3.01	1.30	1.56	0.61	0.35	-0.60	0.85	1.02	0.47	0.66



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 006631948

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5409^{+161}_{-161}	$4.587^{+0.032}_{-0.128}$	$-0.140^{+0.300}_{-0.300}$	$0.784^{+0.148}_{-0.063}$	$0.872^{+0.081}_{-0.098}$	$2.551^{+0.430}_{-0.953}$
	+3%/-3%	+1%/-3%	+214%/-214%	+19%/-8%	+9%/-11%	+17%/-37%
Source	PHO1	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 006631948-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-848 ± 177	$7.89^{+7.72}_{-5.46}$	749^{+35}_{-29}	3552^{+2012}_{-679}	191^{+1885}_{-146}
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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

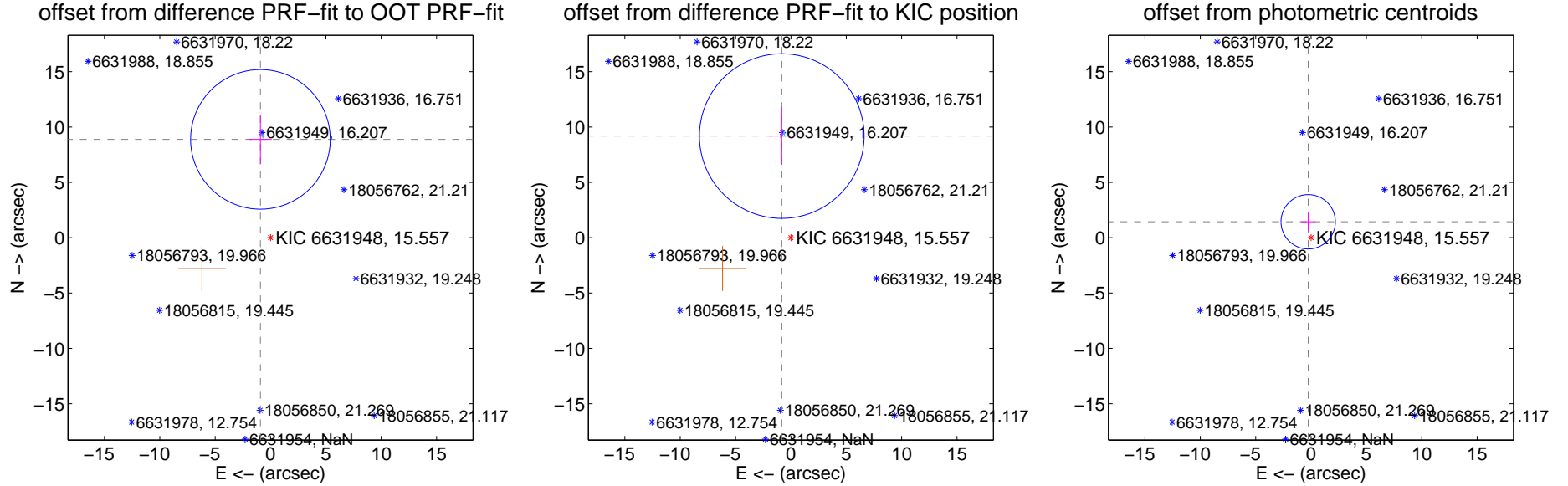
DV Centroid Data

Supplemental centroid analysis for 006631948-03. Kepler magnitude: 15.56. Transit SNR 10.21

There are 3 quarters with good PRF difference image offsets

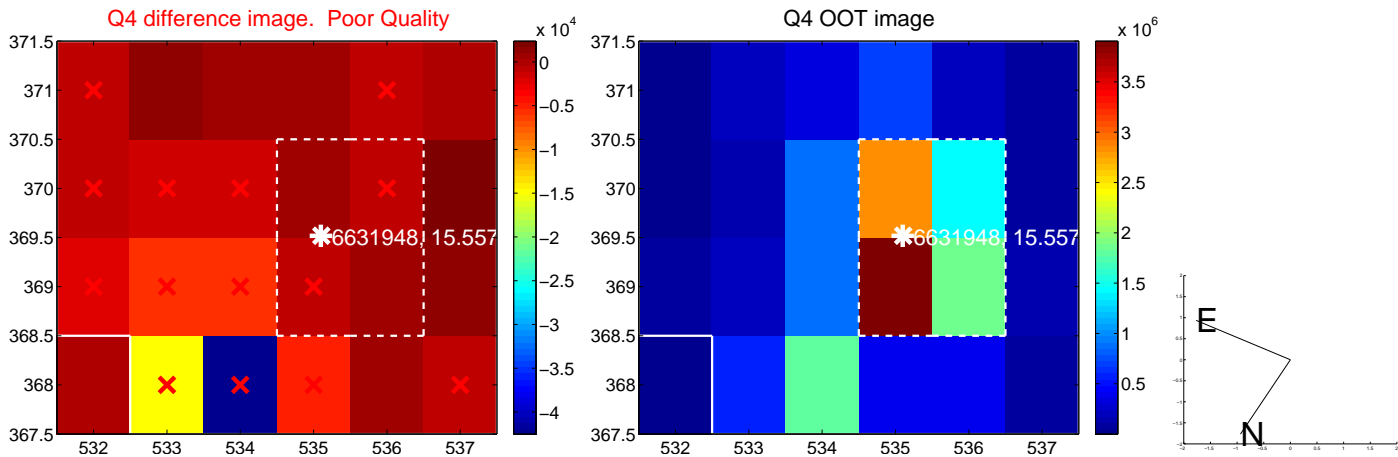
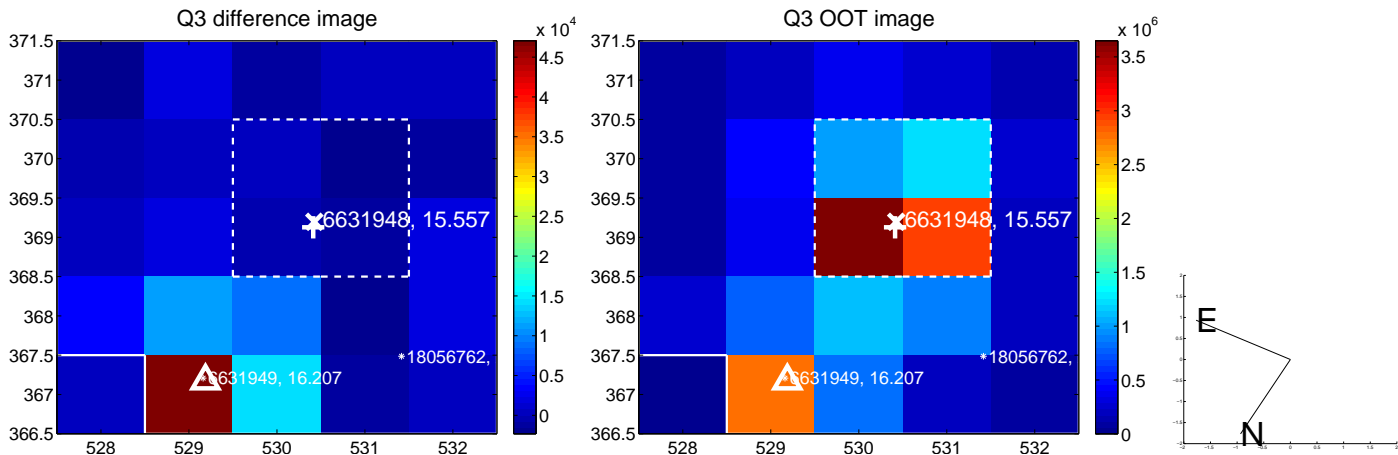
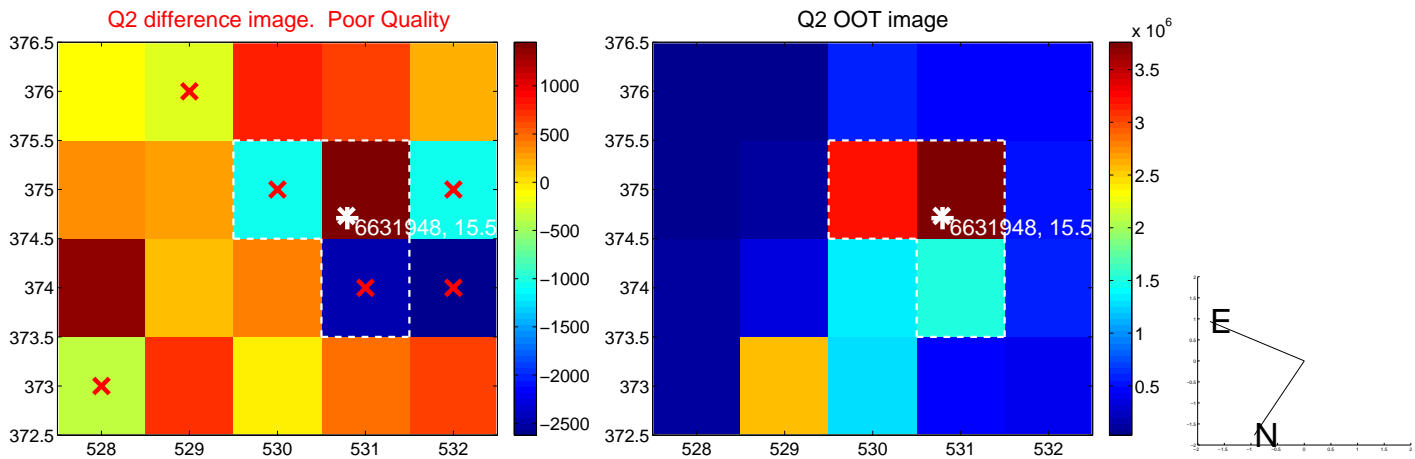
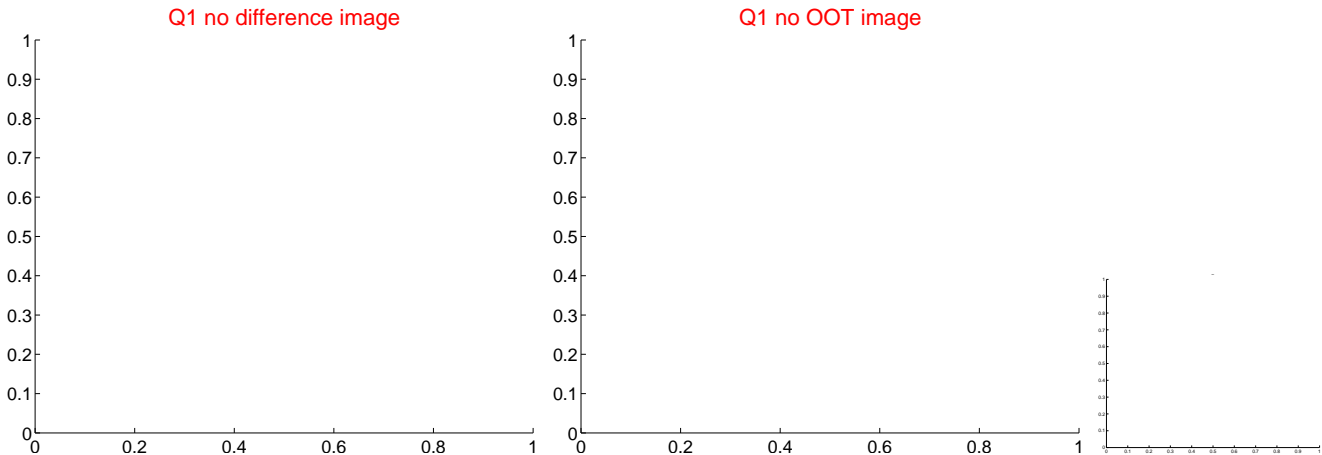
The direct PRF centroid is offset from the target star catalog position by about 0.31 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	8.933 \pm 2.102	4.25	0.912 \pm 1.009	8.886 \pm 2.217
PRF-fit source offset from KIC position	9.222 \pm 2.479	3.72	0.827 \pm 1.170	9.185 \pm 2.594
photometric centroid source offset	1.46 \pm 0.82	1.79	0.26 \pm 0.62	1.44 \pm 0.82

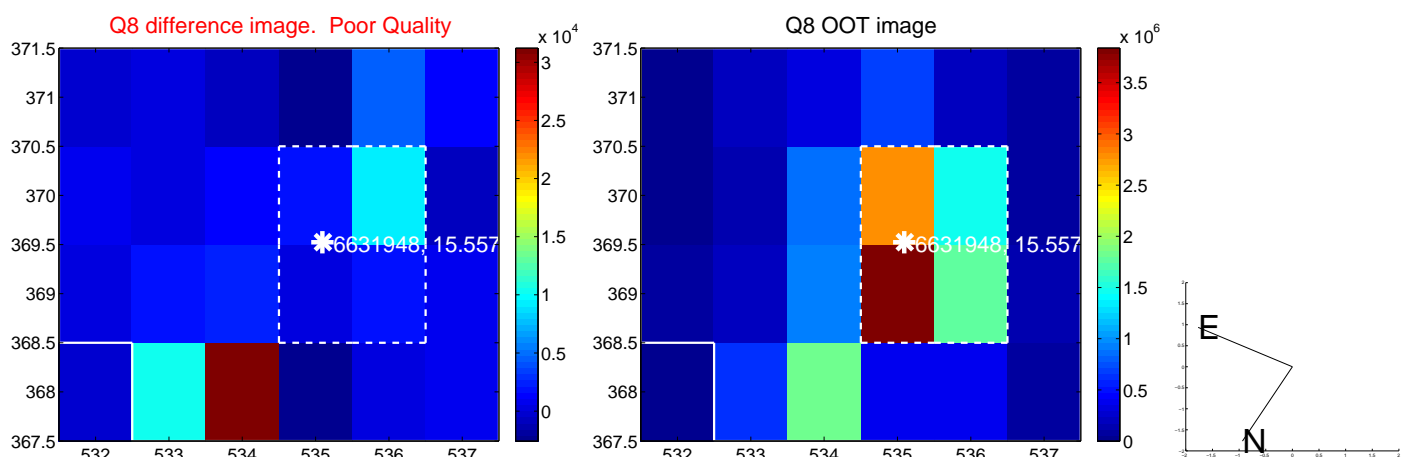
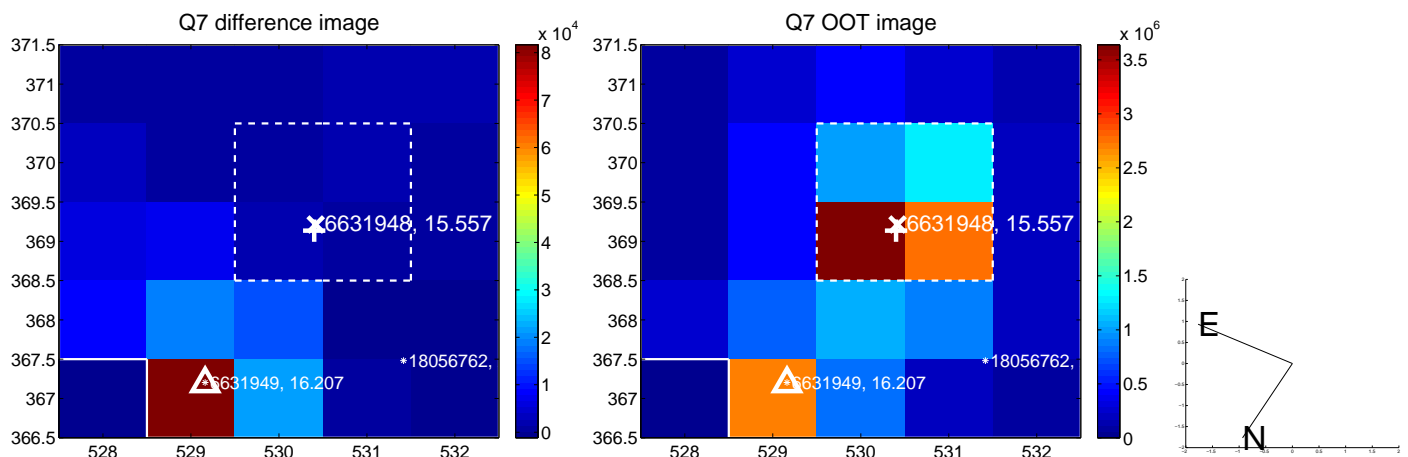
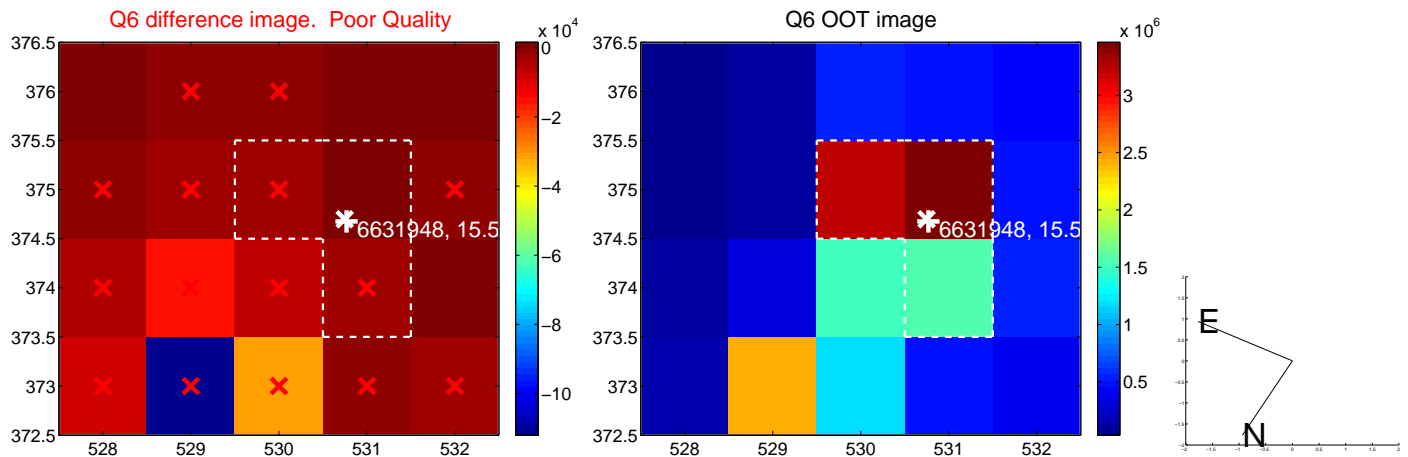
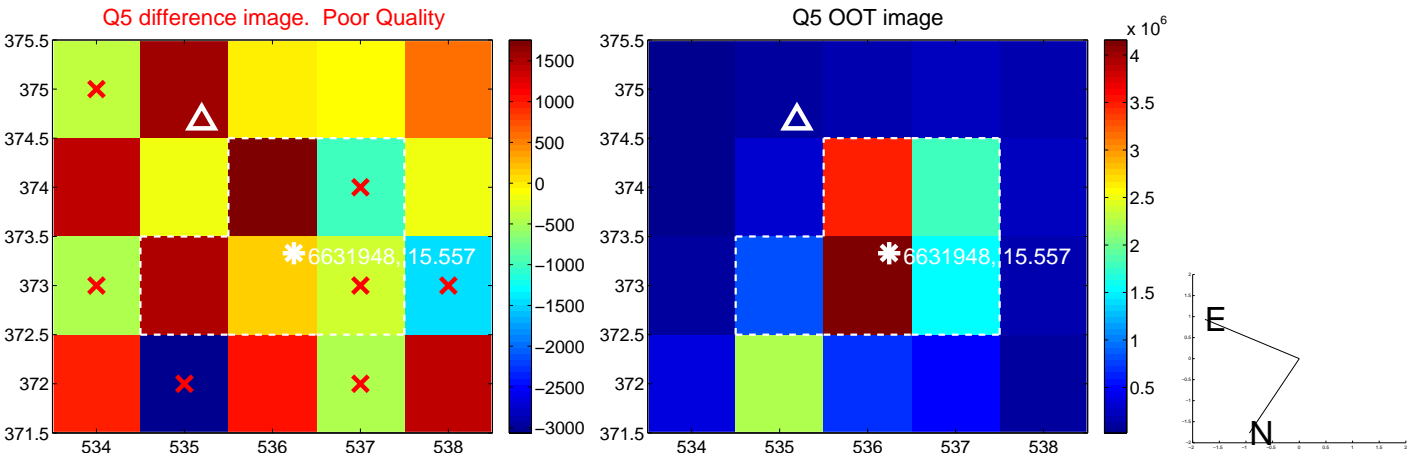


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

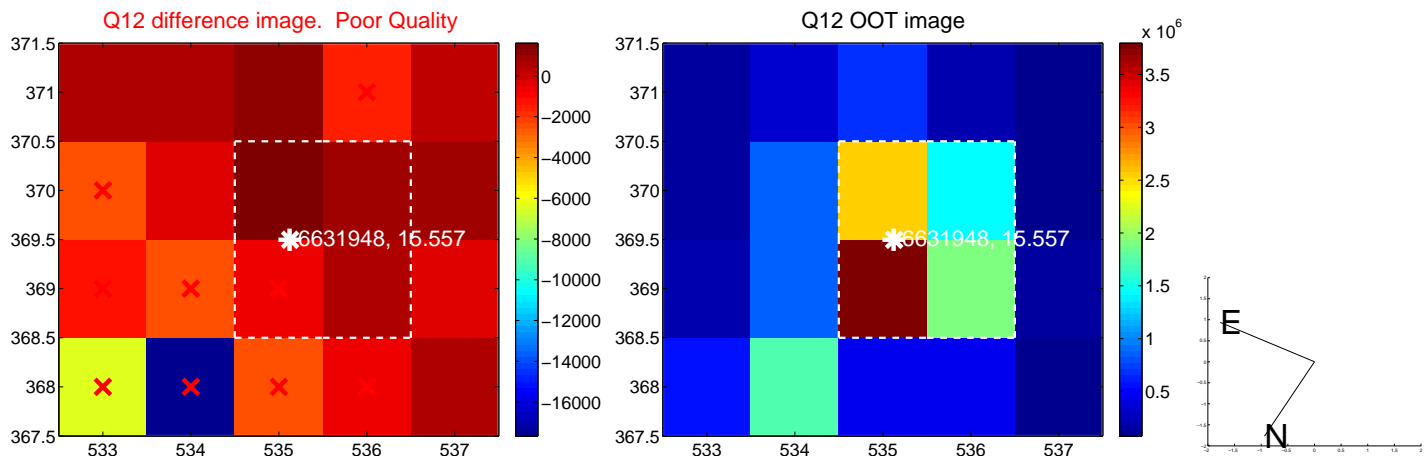
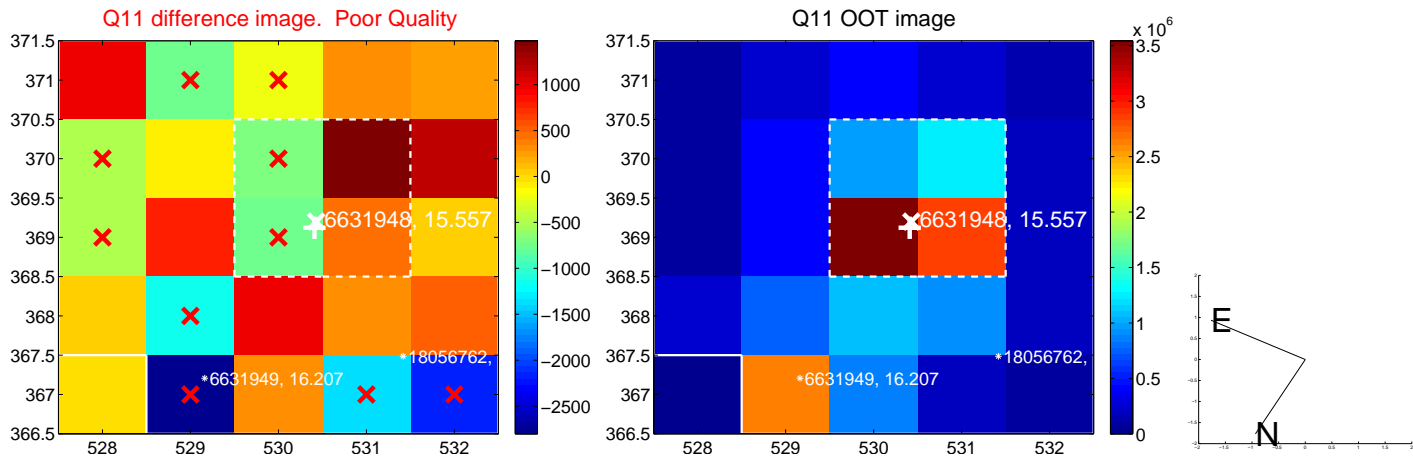
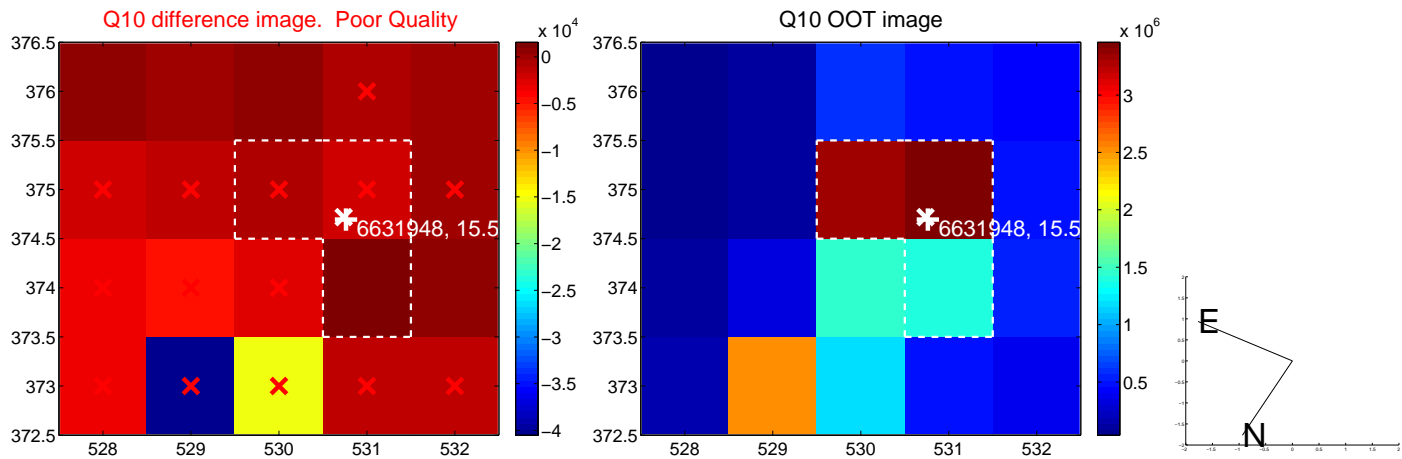
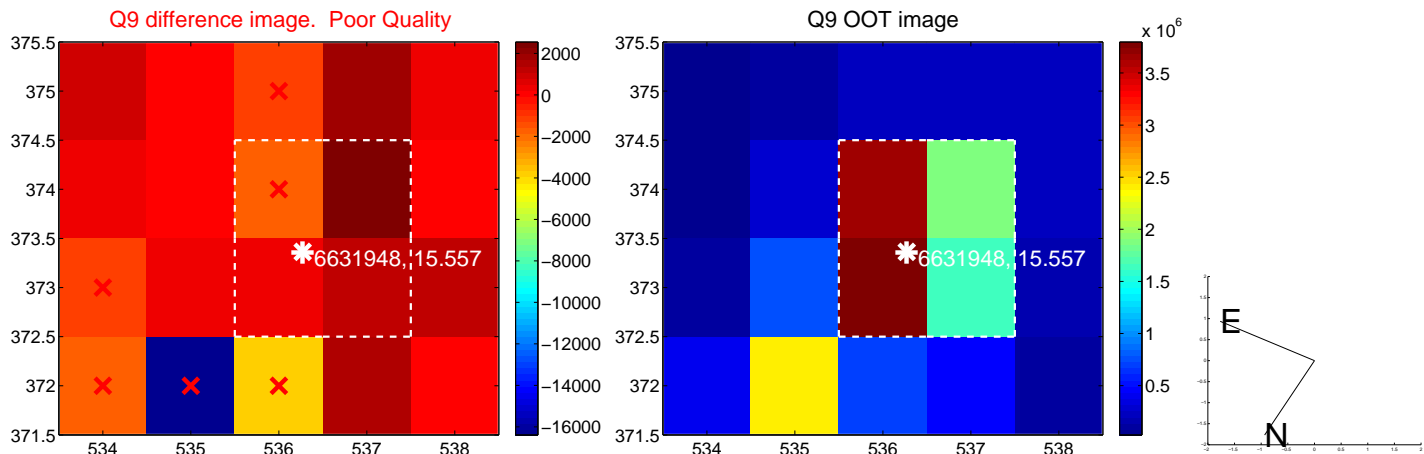
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



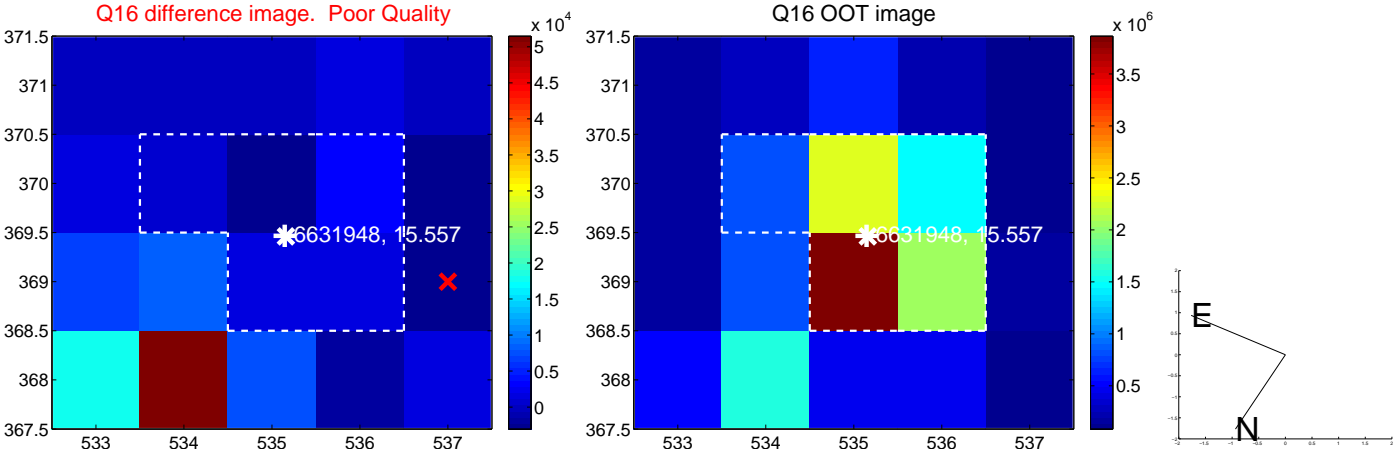
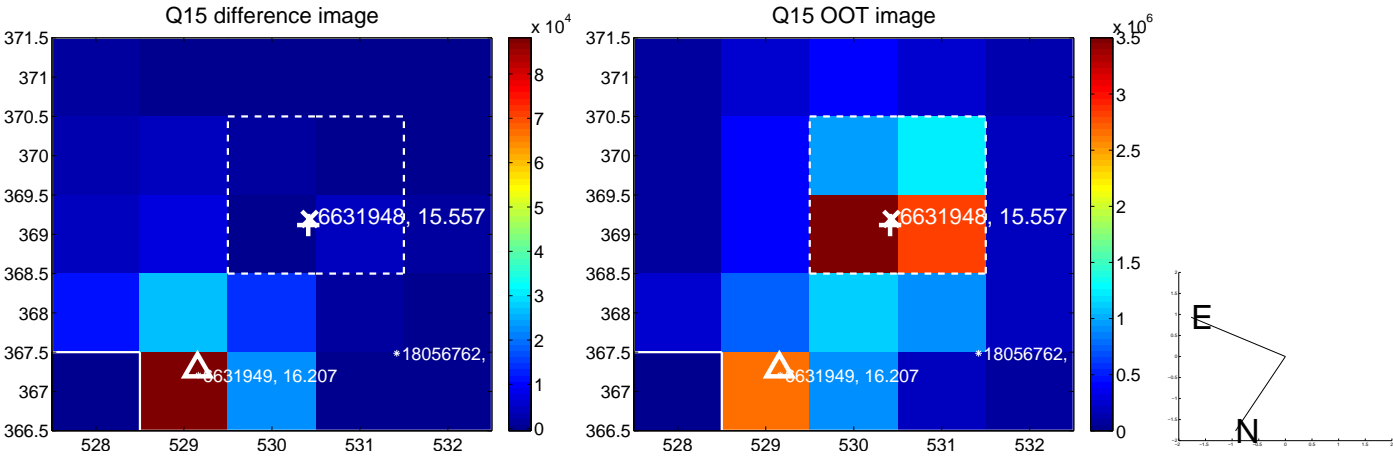
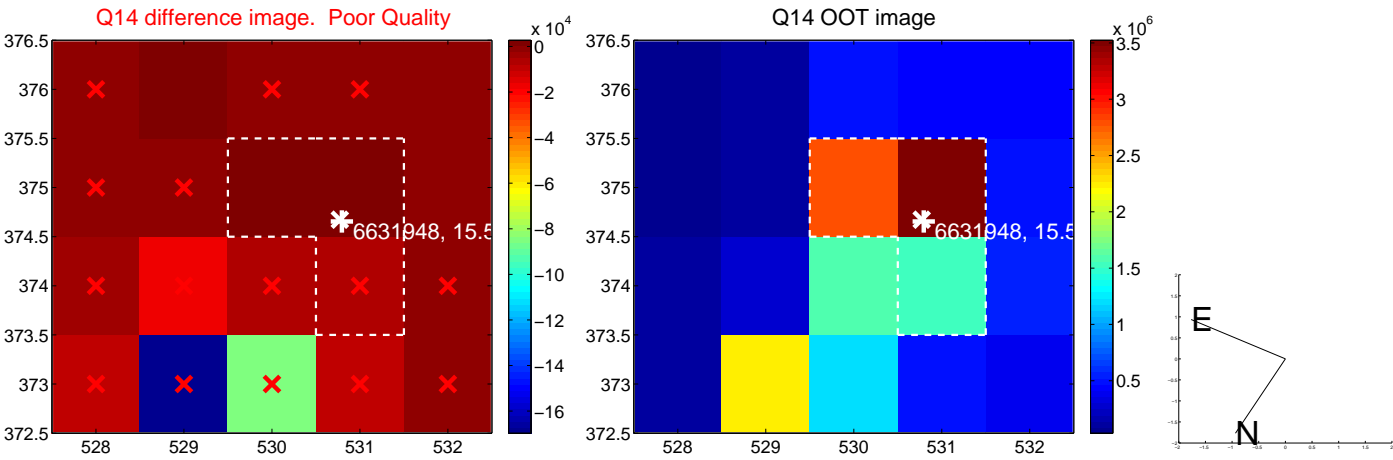
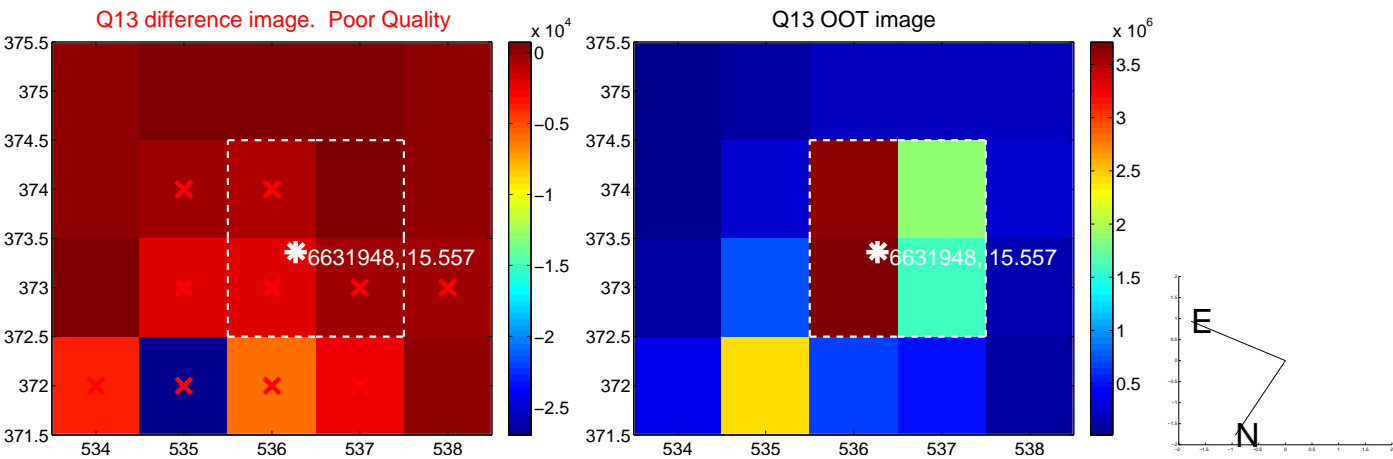
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



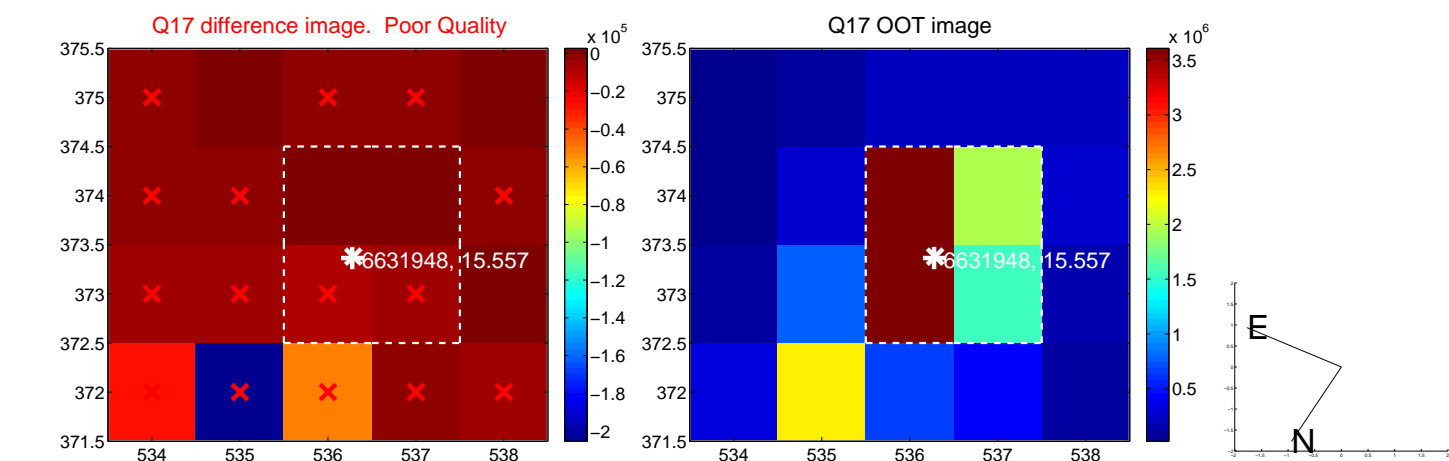
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



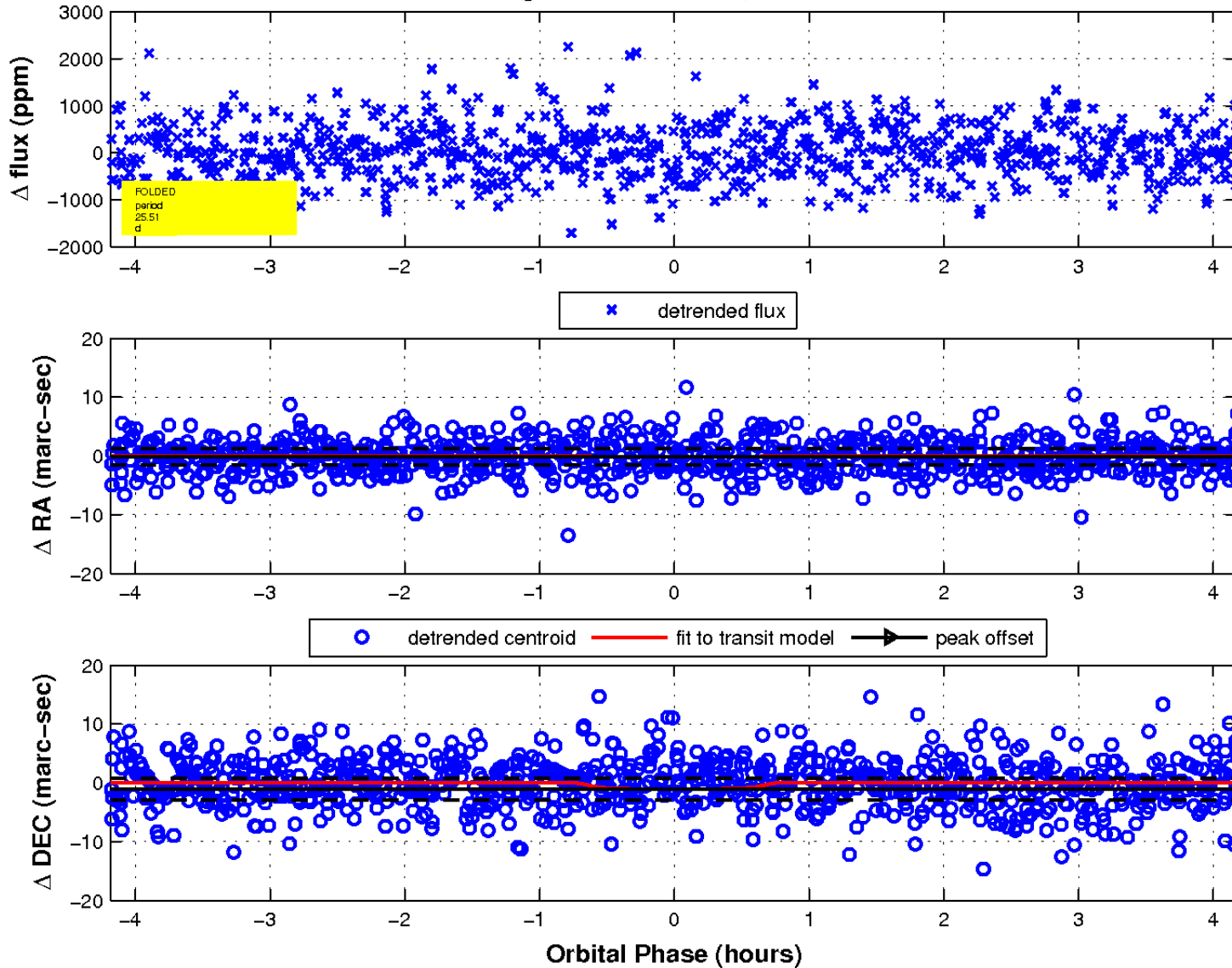
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

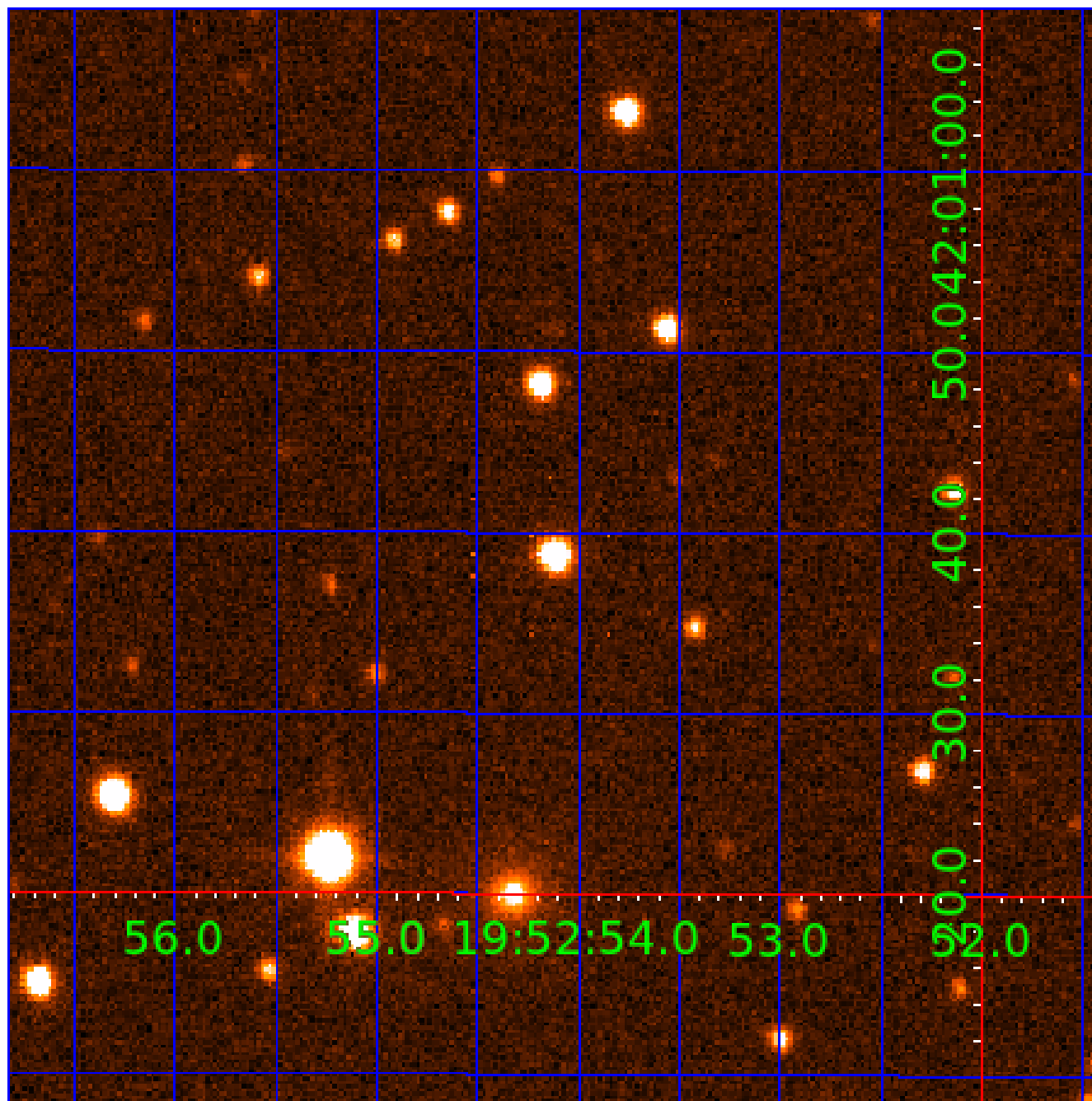


fluxWeightedCentroids, Planet 3 of 7



UKIRT Image

Declination



KIC 006631948

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})
006631948-01	OBS	No	0.641894	132.391949	0.0	4.412	7.4	0.0	0.78	5409	0.01	2445.05
006631948-02	OBS	No	48.855077	153.468091	1249.1	1.428	11.2	8.9	0.78	5409	2.99	7.58
006631948-03	OBS	No	25.505965	139.890262	1335.6	1.398	9.5	10.2	0.78	5409	2.88	18.03
006631948-04	OBS	No	39.227192	149.187864	1471.9	2.047	11.5	11.2	0.78	5409	3.12	10.16
006631948-05	OBS	No	43.239576	150.757152	1431.3	1.253	11.8	7.3	0.78	5409	3.33	8.92
006631948-06	OBS	No	18.643862	148.996893	846.7	1.590	9.5	9.8	0.78	5409	2.45	27.39
006631948-07	OBS	No	17.208289	147.594402	630.5	2.335	8.2	7.8	0.78	5409	2.18	30.47

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006631948-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—CENT_RESOLVED_OFFSET
006631948-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—CENT_RESOLVED_OFFSET
006631948-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_RESOLVED_OFFSET
006631948-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—CENT_RESOLVED_OFFSET
006631948-05	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_RESOLVED_OFFSET—HALO_GHOST
006631948-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET
006631948-07	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_RESOLVED_OFFSET

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

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

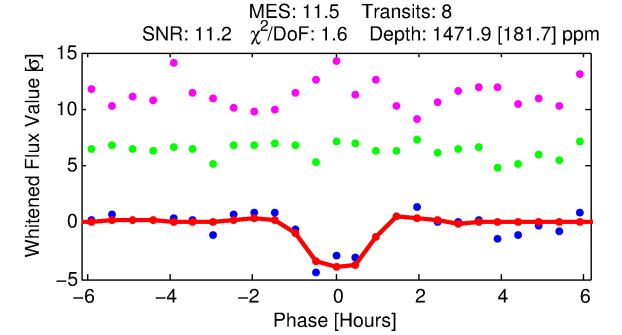
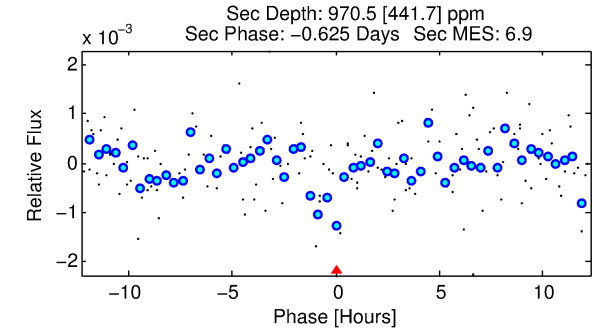
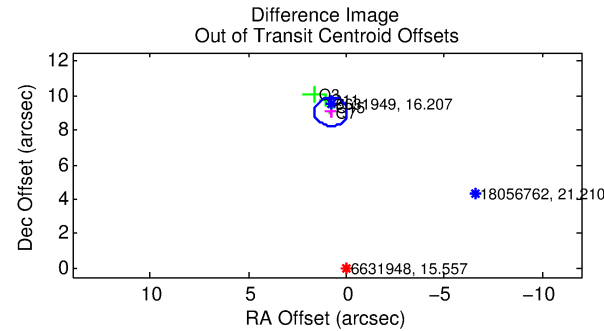
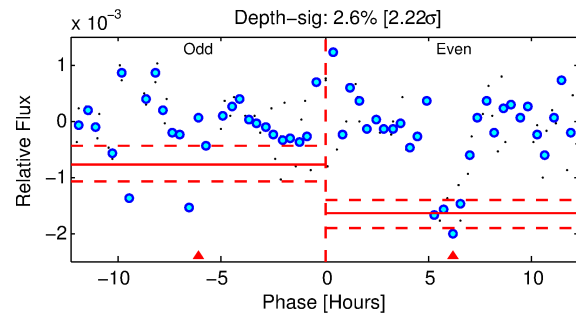
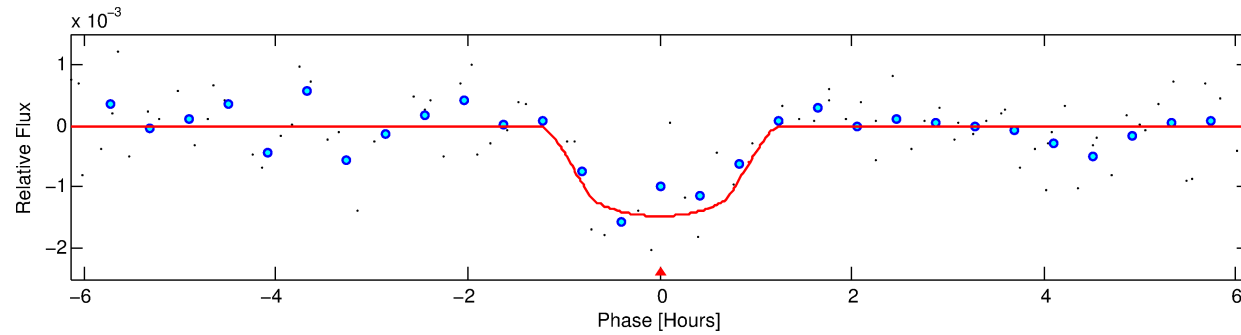
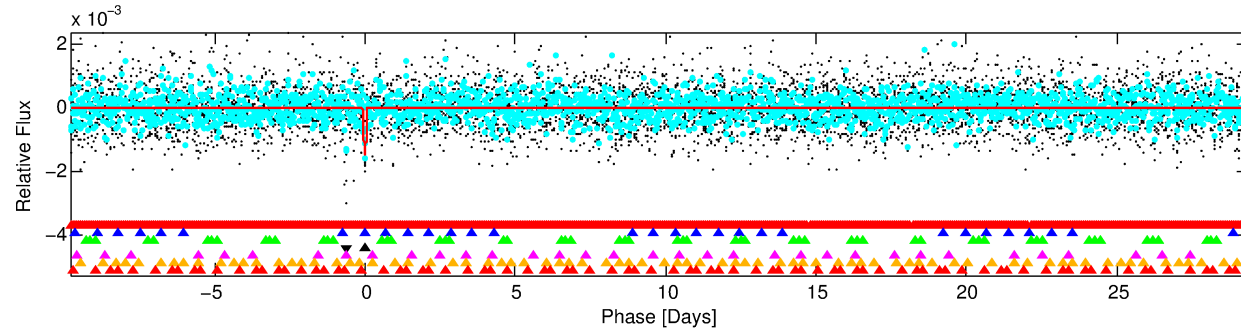
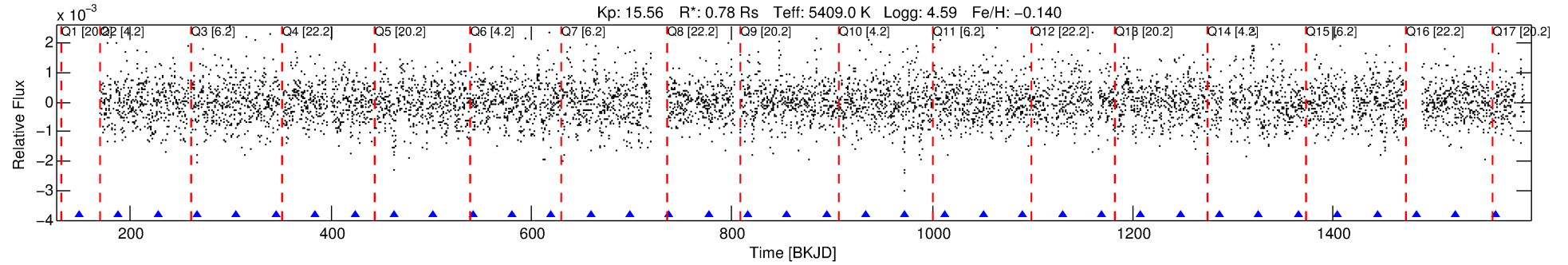
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006631948-04

No Significant Match Found

DV One-Page Summary

KIC: 6631948 Candidate: 4 of 7 Period: 39.227 d



DV Fit Results:

Period = 39.22719 [0.00041] d
Epoch = 149.1879 [0.0073] BKJD
Rp/R* = 0.0365 [0.0761]
a/R* = 124.31 [1016.71]
b = 0.59 [9.07]
Seff = 10.16 [2.66]
Teq = 455 [30] K
Rp = 3.12 [6.54] Re
a = 0.2154 [0.0344] AU
Ag = 2540.83 [10674.51] [0.24σ]
Teff = 4997 [5242] K [0.87σ]

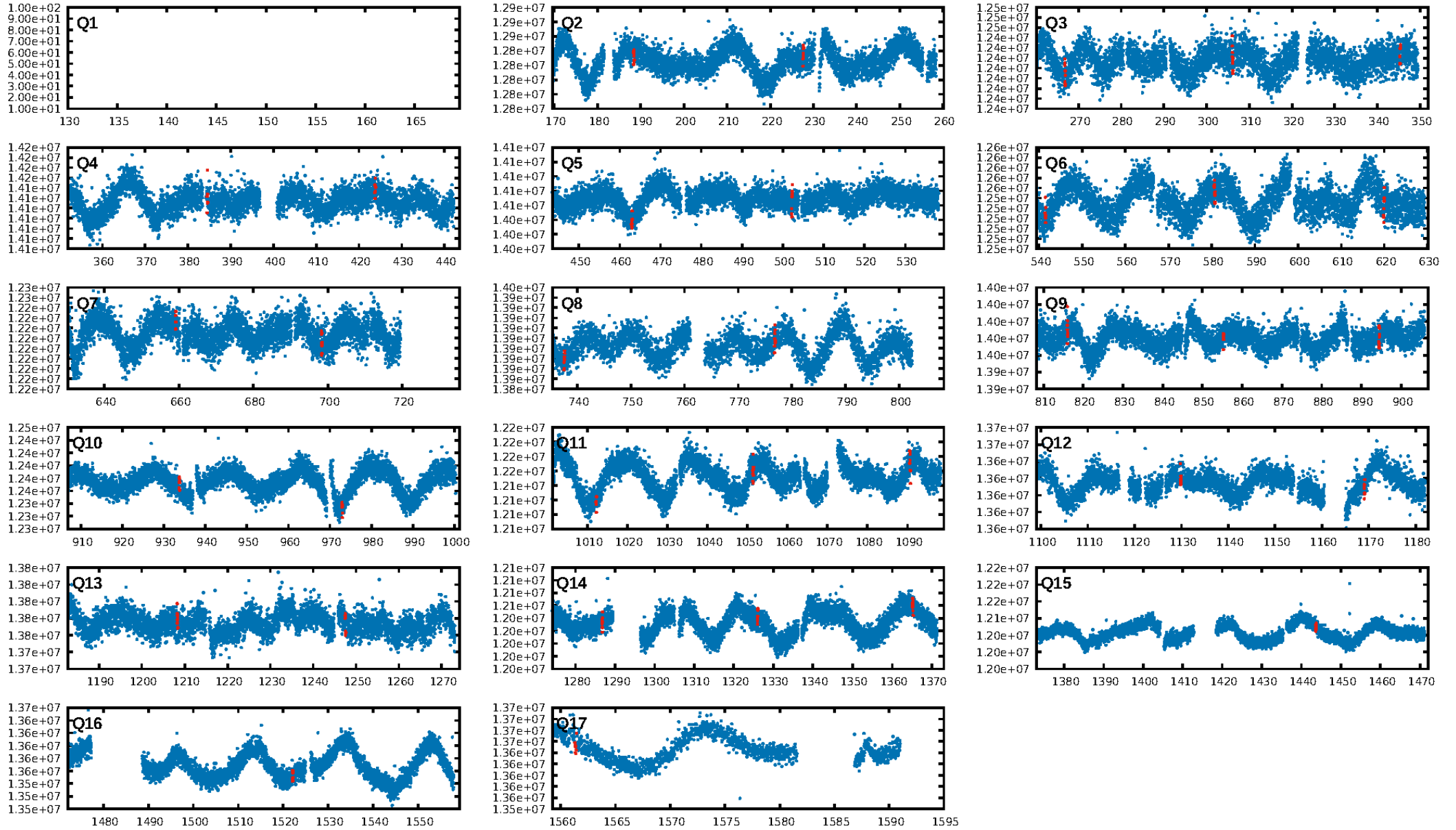
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [132.85σ]
LongPeriod-sig: 100.0% [40.13σ]
ModelChiSquare2-sig: 18.8%
ModelChiSquareGoF-sig: 100.0%
Bootstrap-pfa: 1.91e-12
RollingBand-fgt: 1.00 [8/8]
GhostDiagnostic-chr: -1.977
Centroid-sig: 26.1%
Centroid-so: 0.702 arcsec [1.04σ]
OotOffset-rm: 9.102 arcsec [32.67σ]
KicOffset-rm: 9.388 arcsec [44.47σ]
OotOffset-st: 0/4/0/0 [4]
KicOffset-st: 0/4/0/0 [4]
DiffImageQuality-fgm: 0.25 [1/4]
DiffImageOverlap-fno: 0.00 [0/16]

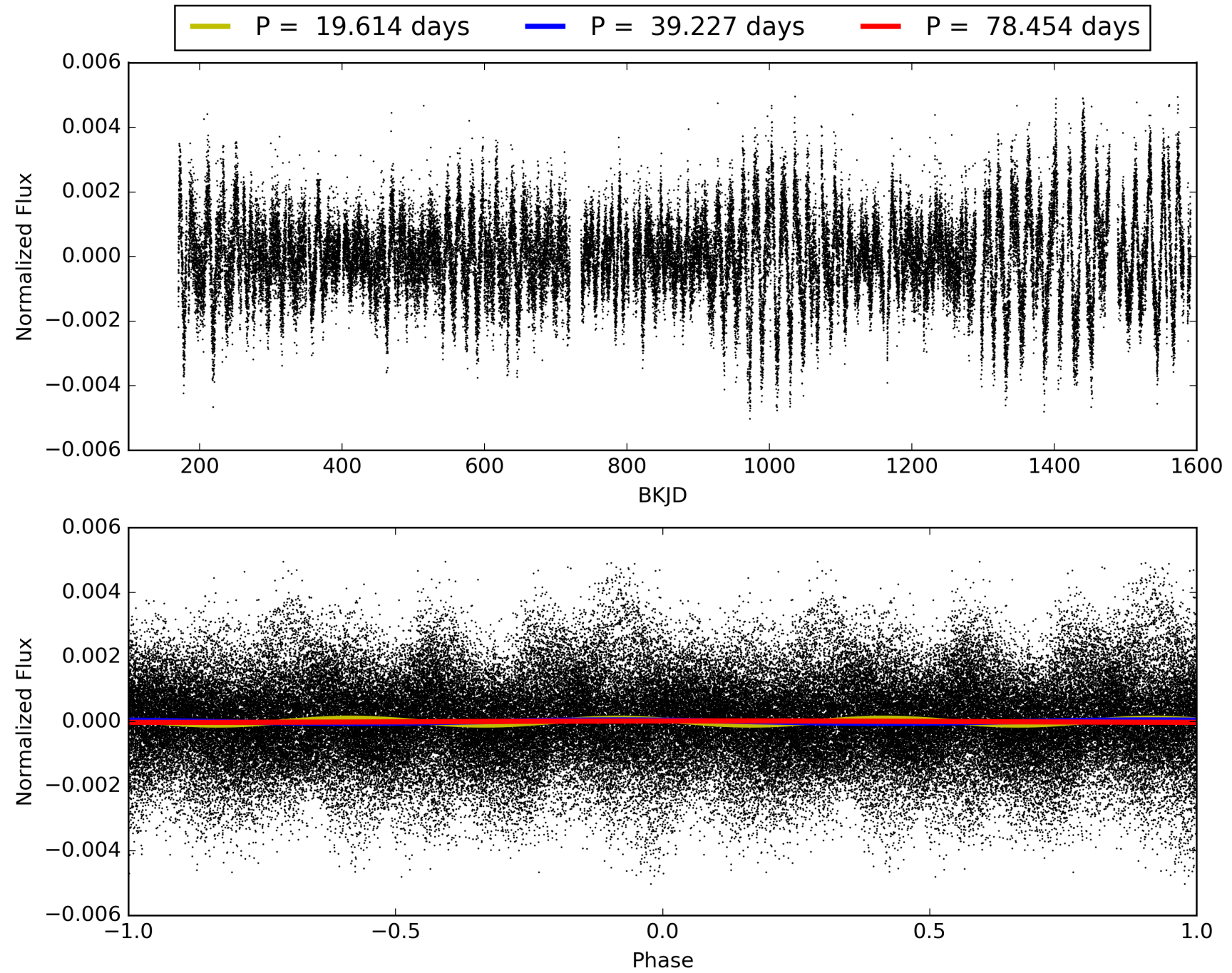
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:17:38 Z

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

TCE 006631948-04, PDC Light Curves

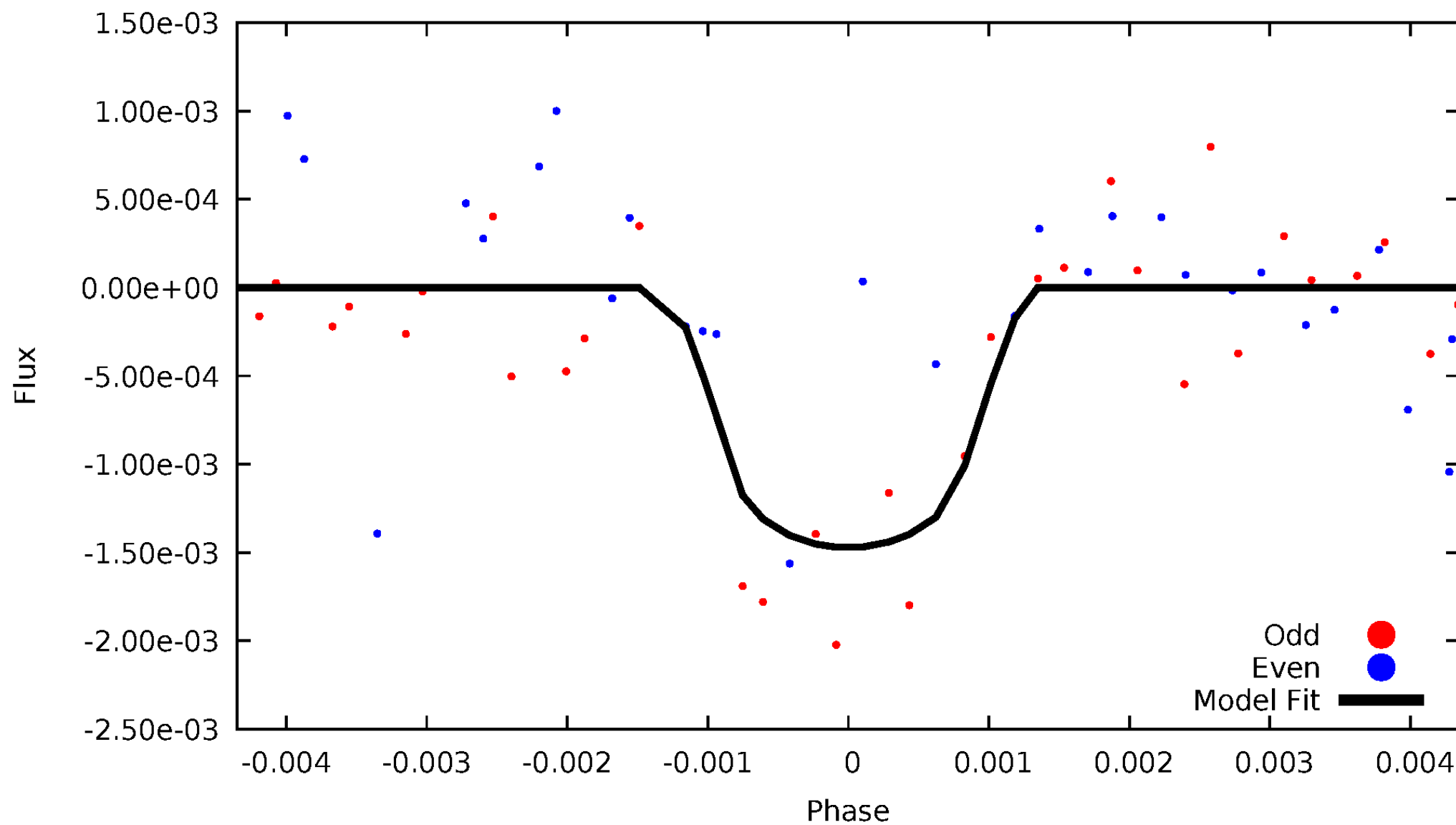


TCE 006631948-04



DV Odd/Even

TCE 006631948-04

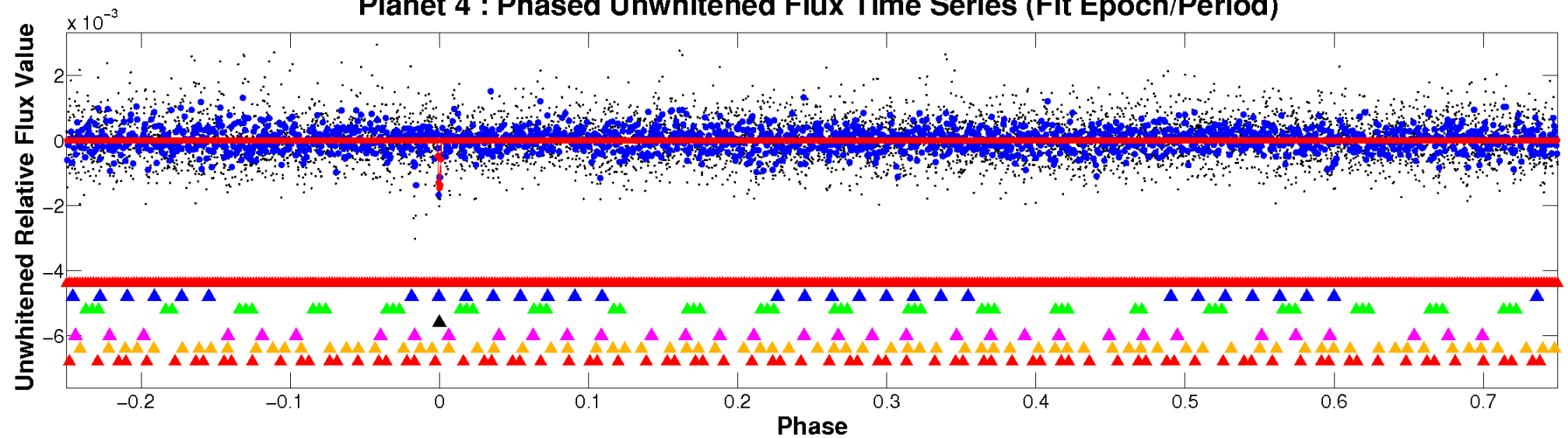


ALT Odd/Even

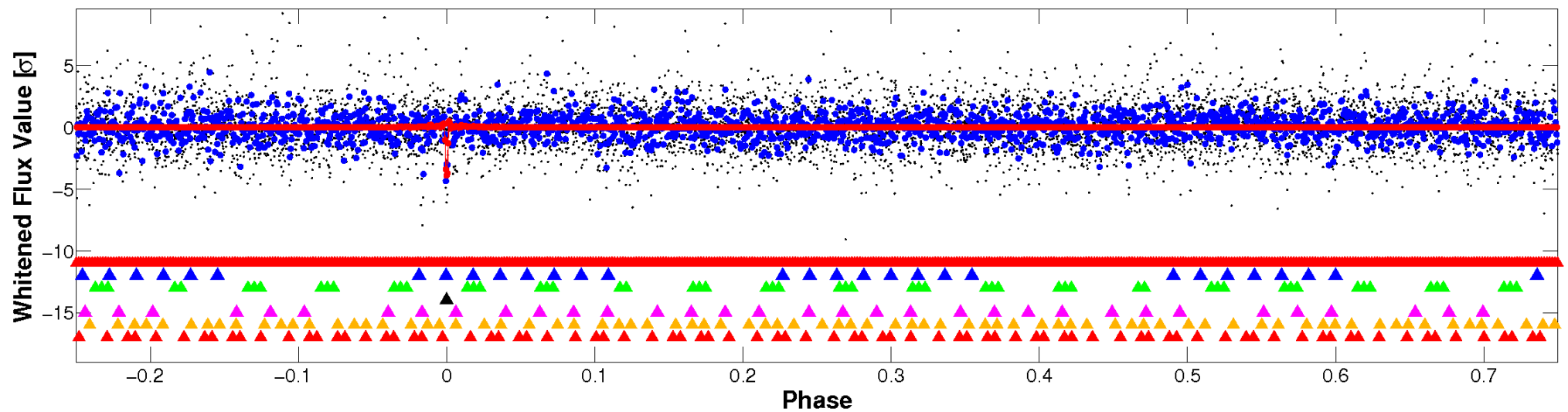
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

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

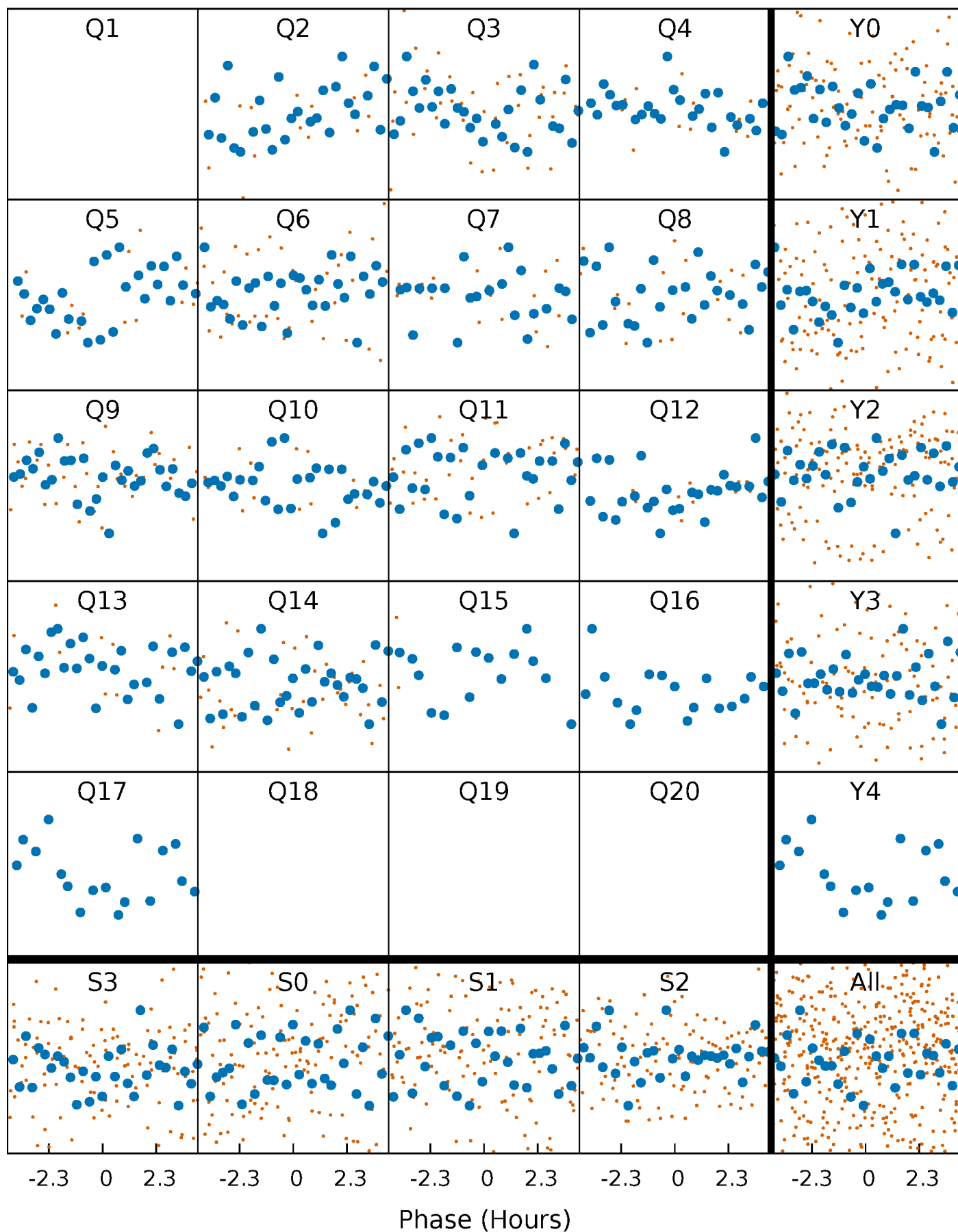


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



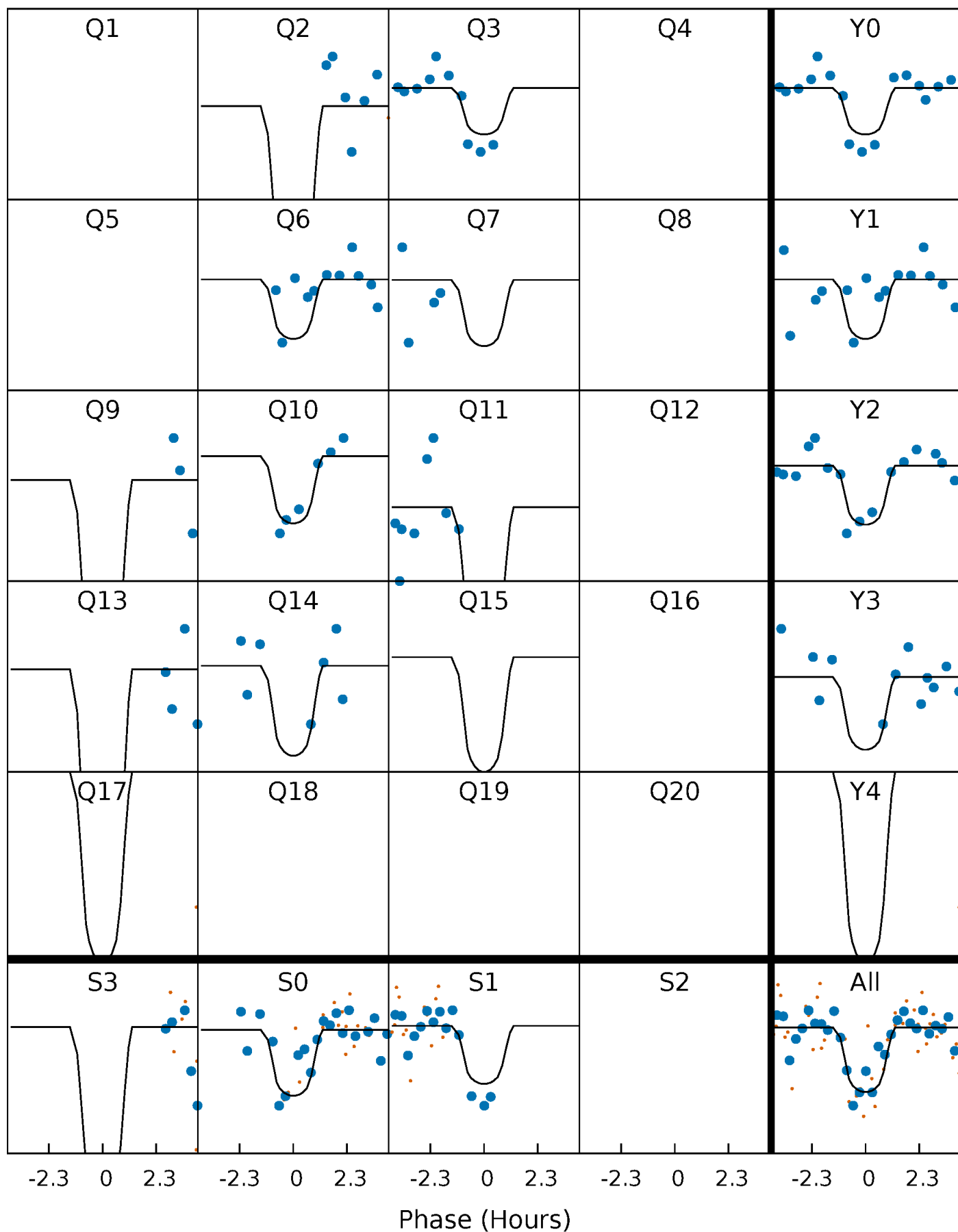
PDC Quarter-Phased Transit Curves

TCE 006631948-04 P= 39.227192 Days $T_0=149.187864$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 006631948-04 P= 39.227192 Days $T_0=149.187864$ (BKJD)

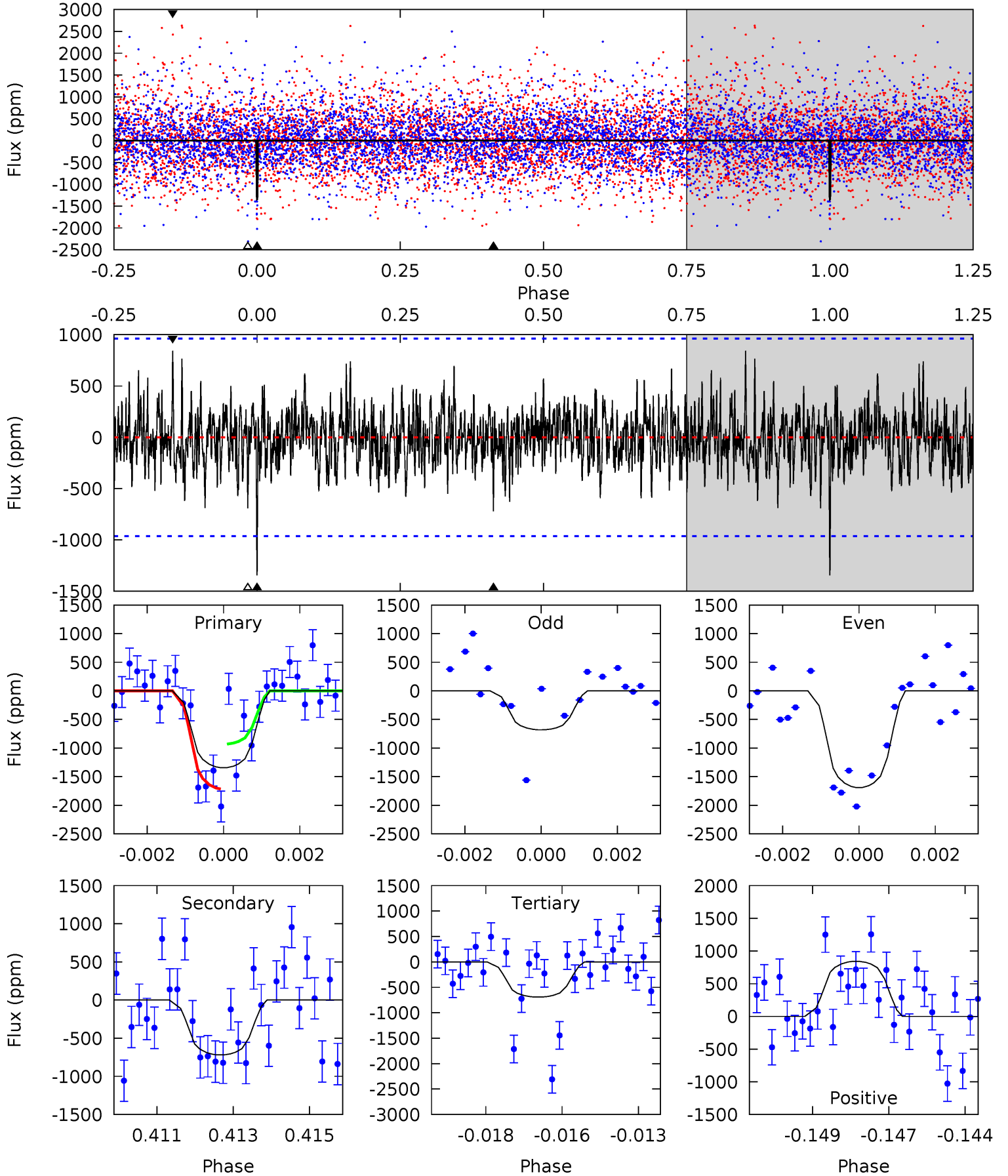


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

006631948-04, P = 39.227192 Days, E = 149.187864 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.41	3.97	3.81	4.64	5.31	3.06	1.23	3.59	2.76	0.15	-0.68	2.62	0.92	0.39	2.18



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 006631948

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5409^{+161}_{-161}	$4.587^{+0.032}_{-0.128}$	$-0.140^{+0.300}_{-0.300}$	$0.784^{+0.148}_{-0.063}$	$0.872^{+0.081}_{-0.098}$	$2.551^{+0.430}_{-0.953}$
	+3%/-3%	+1%/-3%	+214%/-214%	+19%/-8%	+9%/-11%	+17%/-37%
Source	PHO1	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 006631948-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-719 ± 181	$5.84^{+5.73}_{-3.99}$	649^{+31}_{-25}	3814^{+2246}_{-735}	526^{+4585}_{-392}
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 $A_{obs} \gg 1.0$

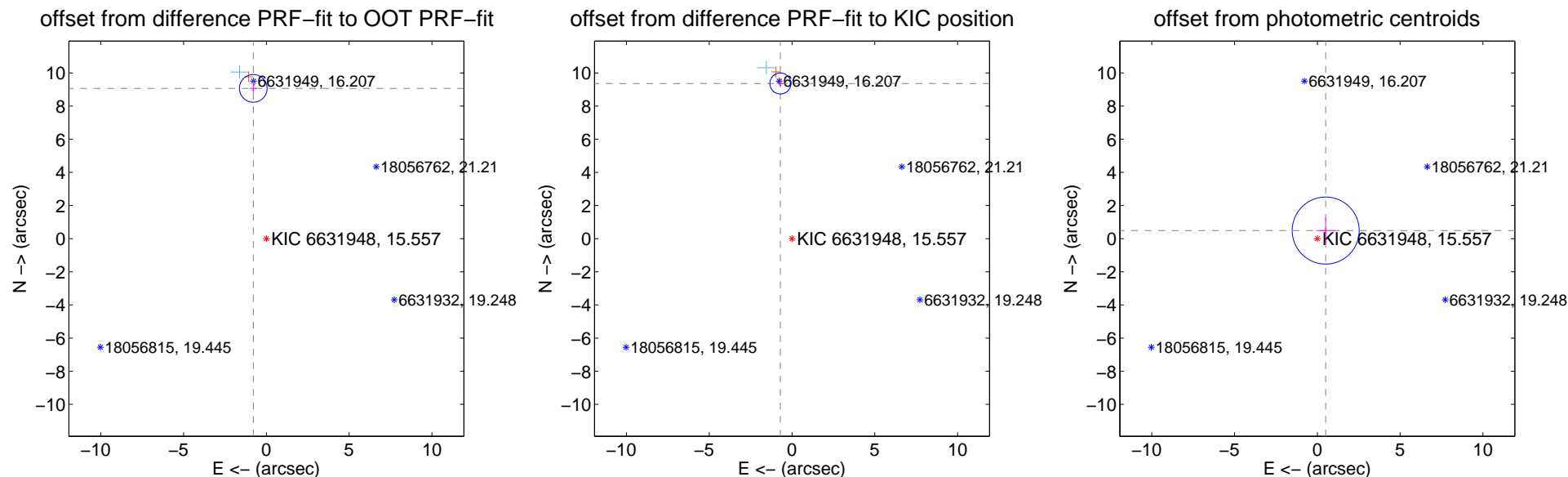
DV Centroid Data

Supplemental centroid analysis for 006631948-04. Kepler magnitude: 15.56. Transit SNR 11.17

There are 1 quarters with good PRF difference image offsets

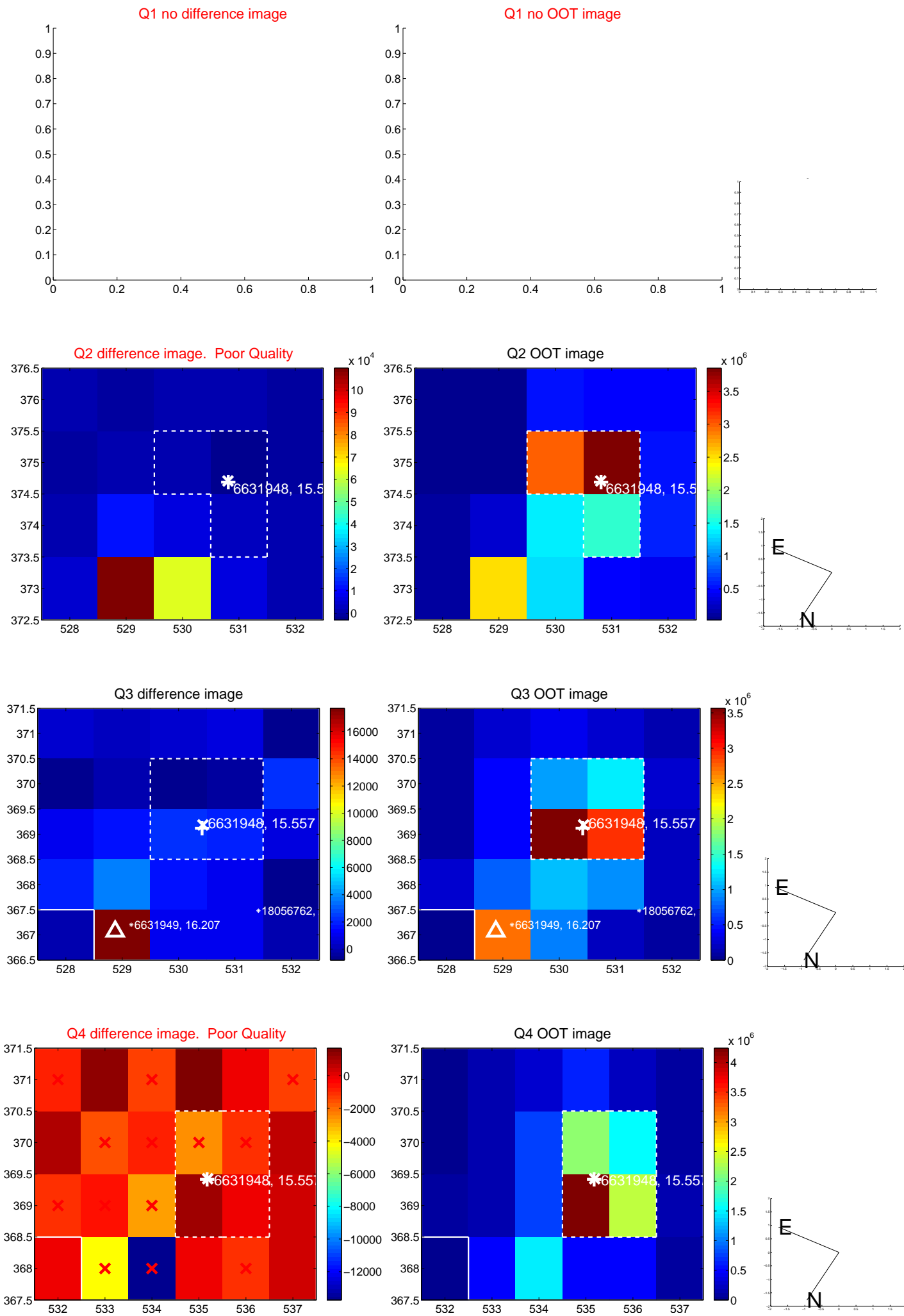
The direct PRF centroid is offset from the target star catalog position by about 0.29 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	9.102 \pm 0.279	32.67	0.790 \pm 0.214	9.067 \pm 0.264
PRF-fit source offset from KIC position	9.388 \pm 0.211	44.47	0.702 \pm 0.147	9.362 \pm 0.204
photometric centroid source offset	0.70 \pm 0.67	1.04	-0.51 \pm 0.55	0.49 \pm 0.78

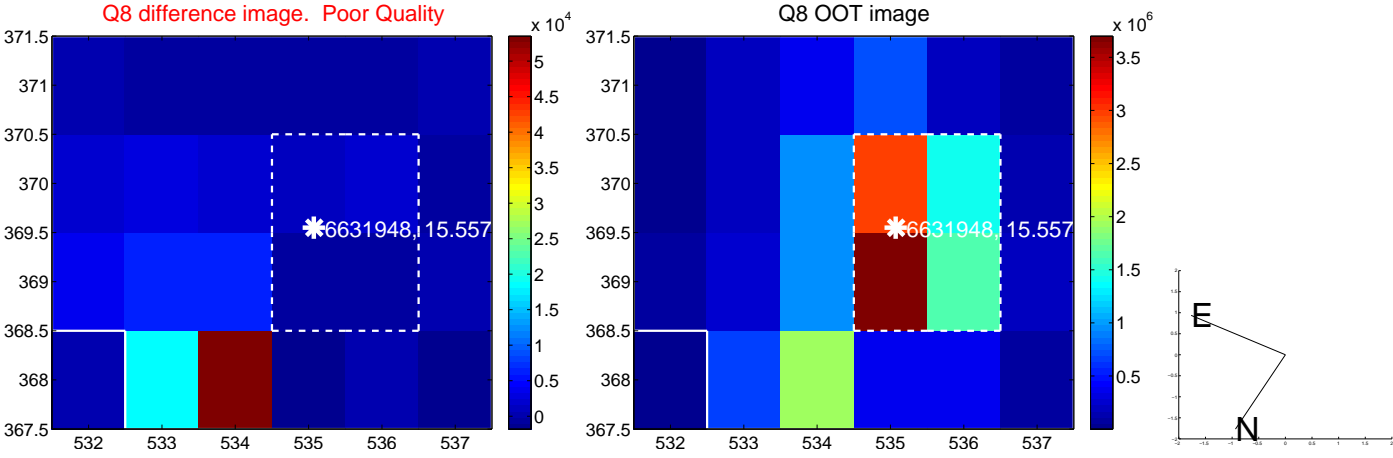
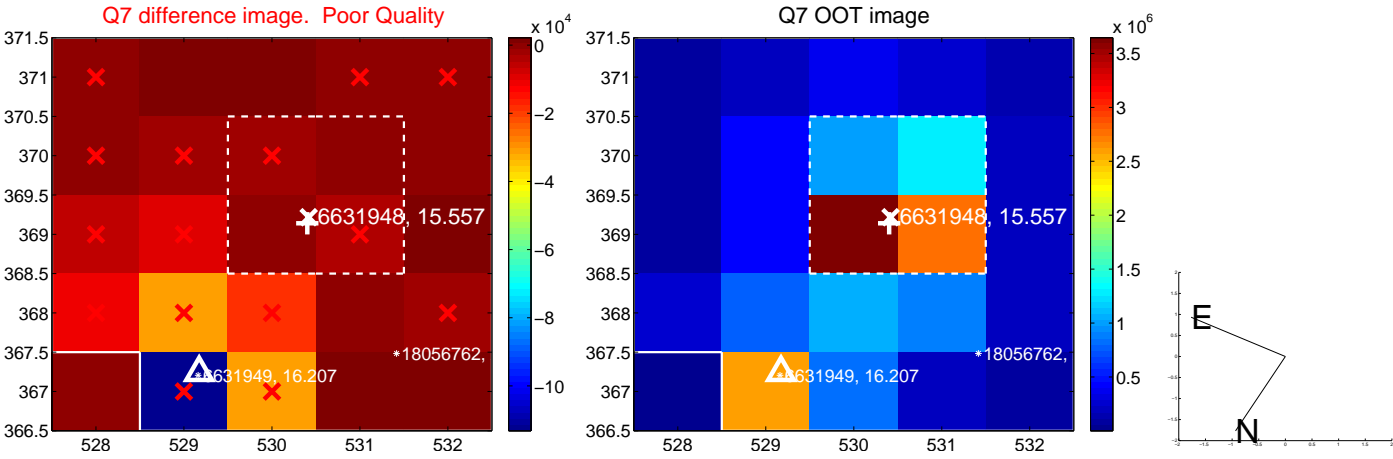
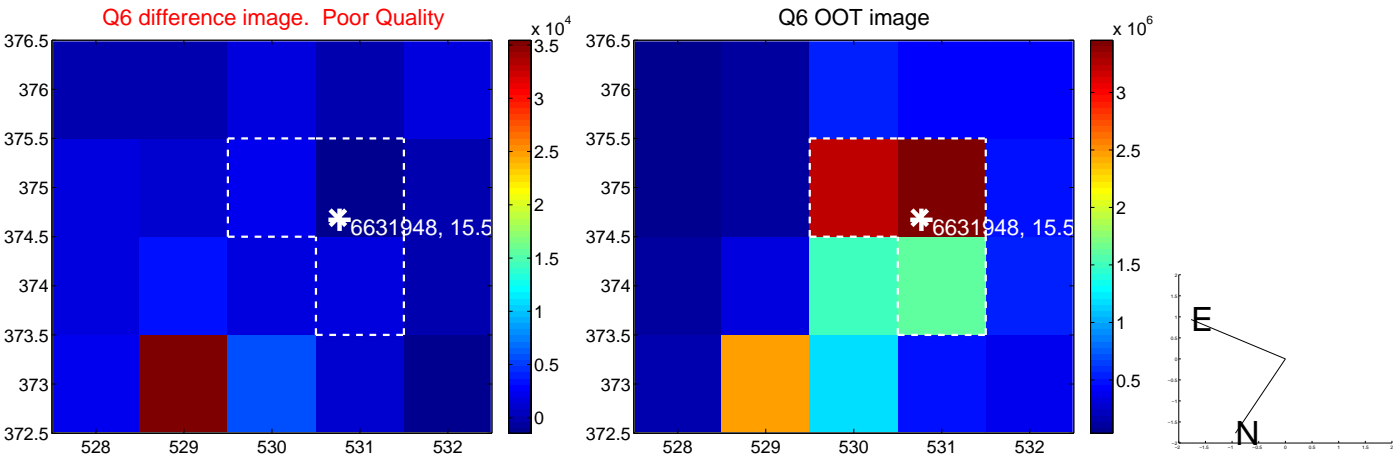
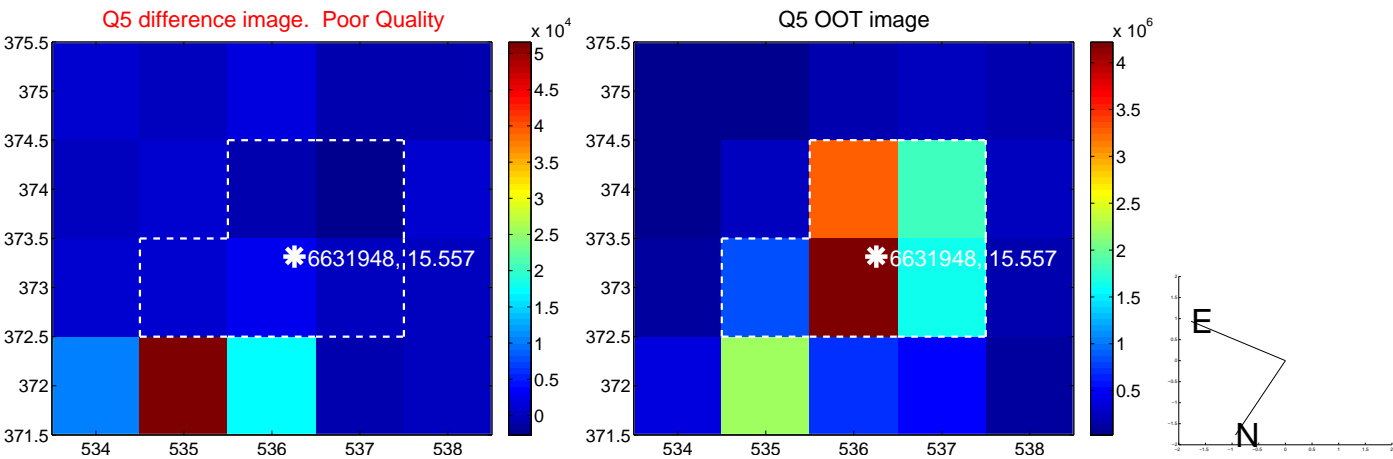


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

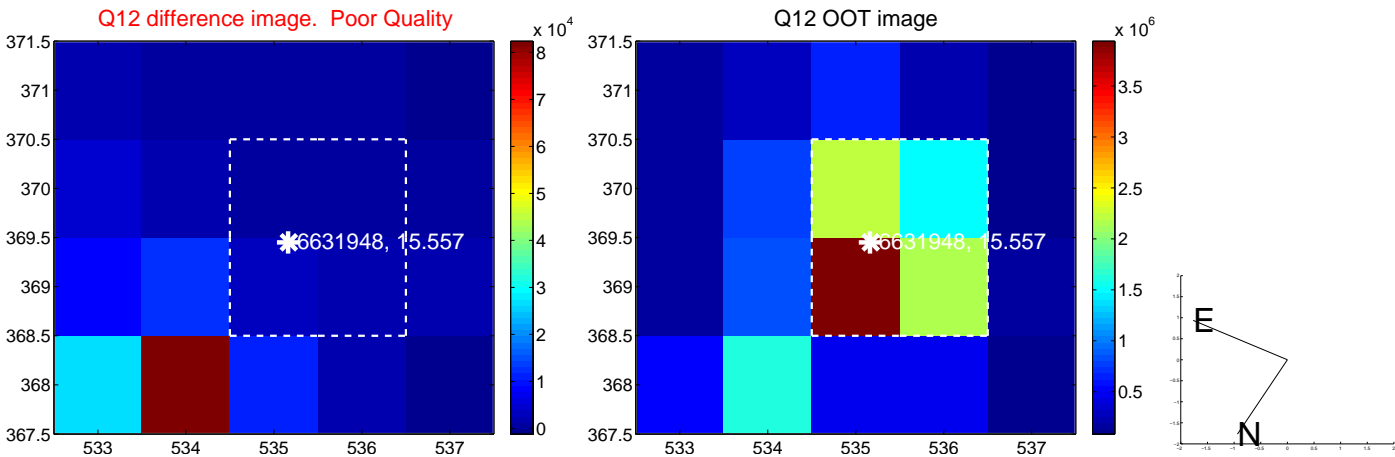
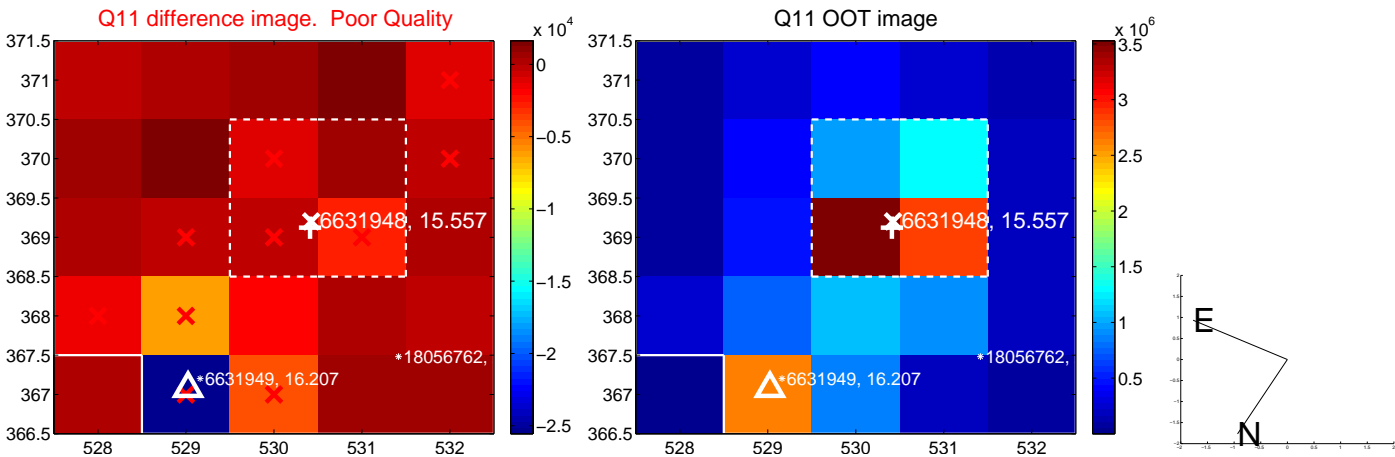
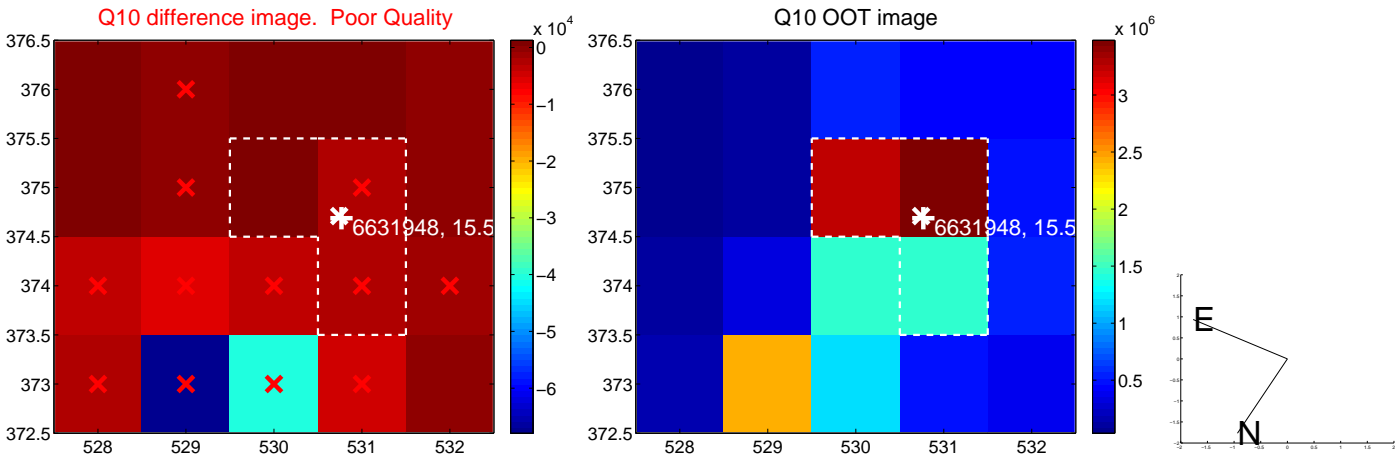
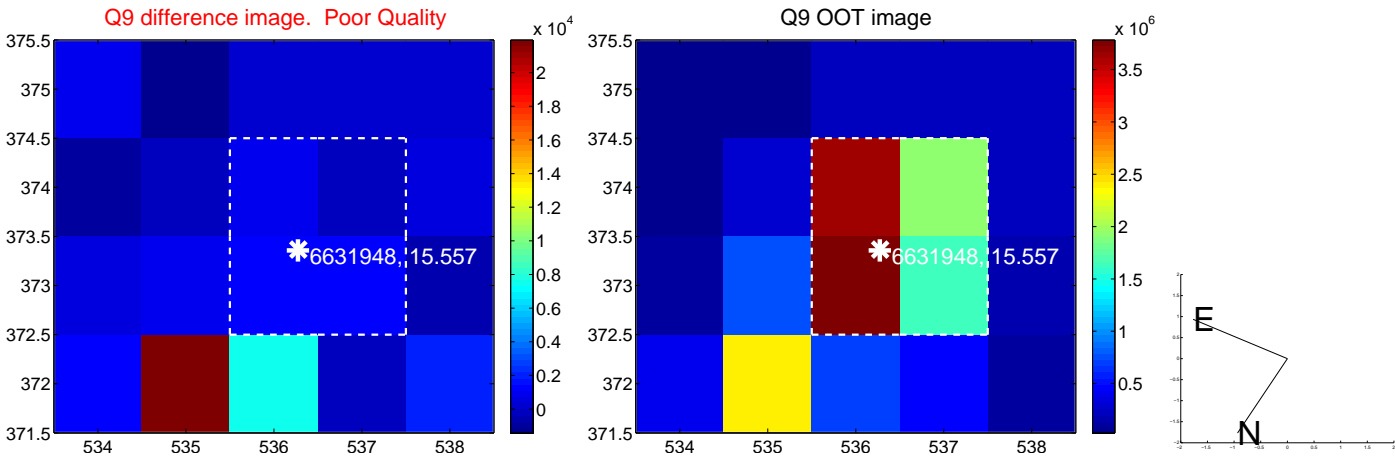
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



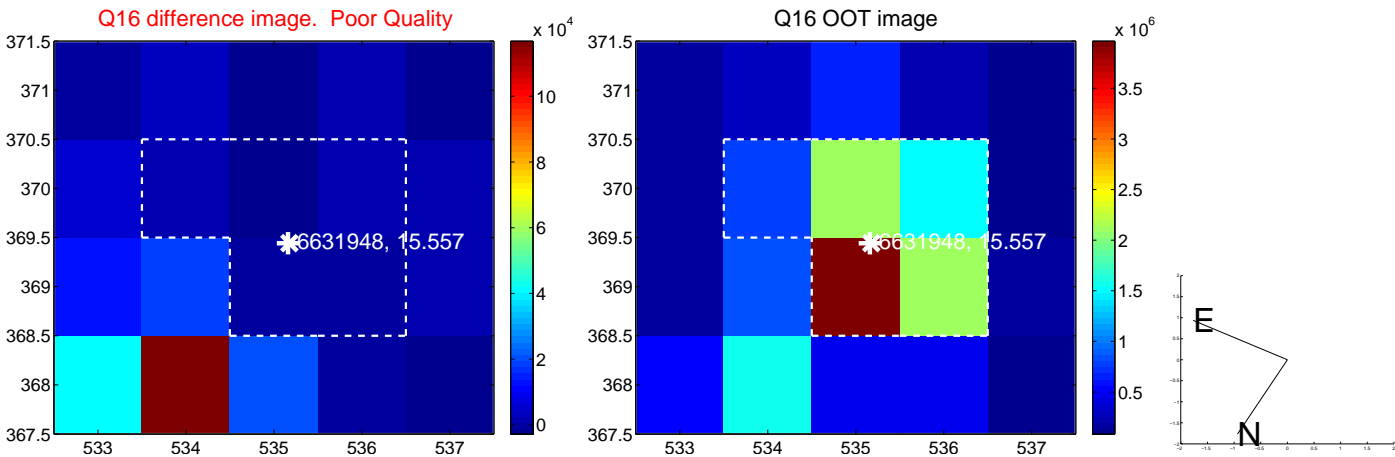
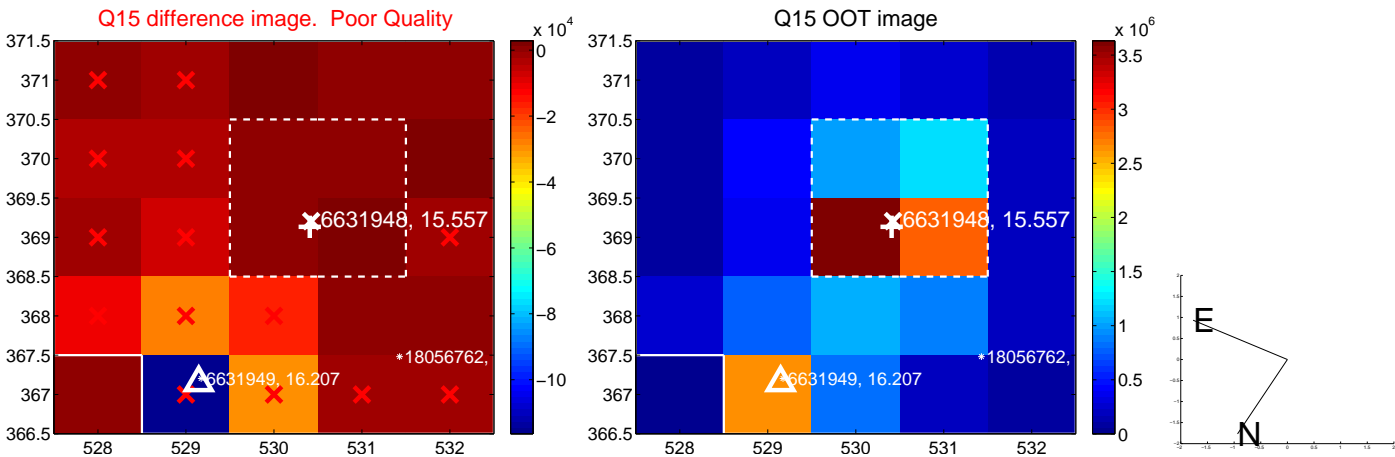
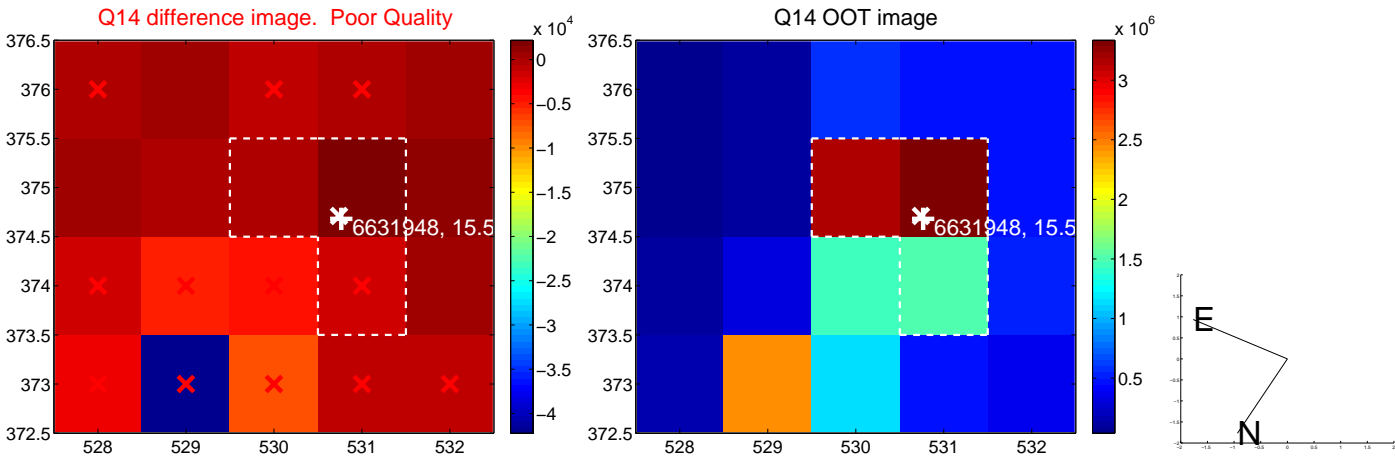
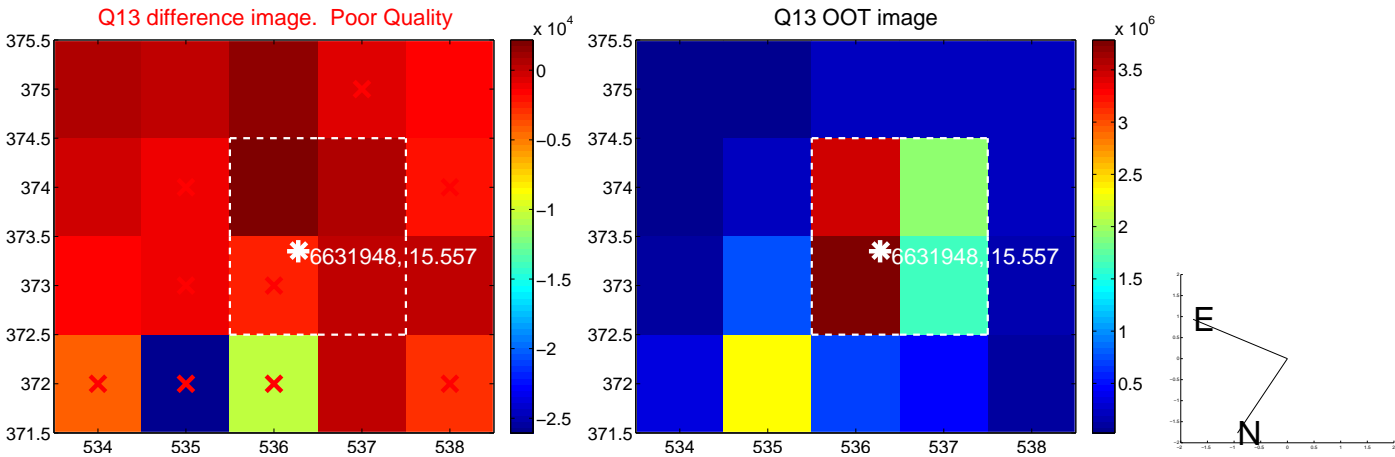
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



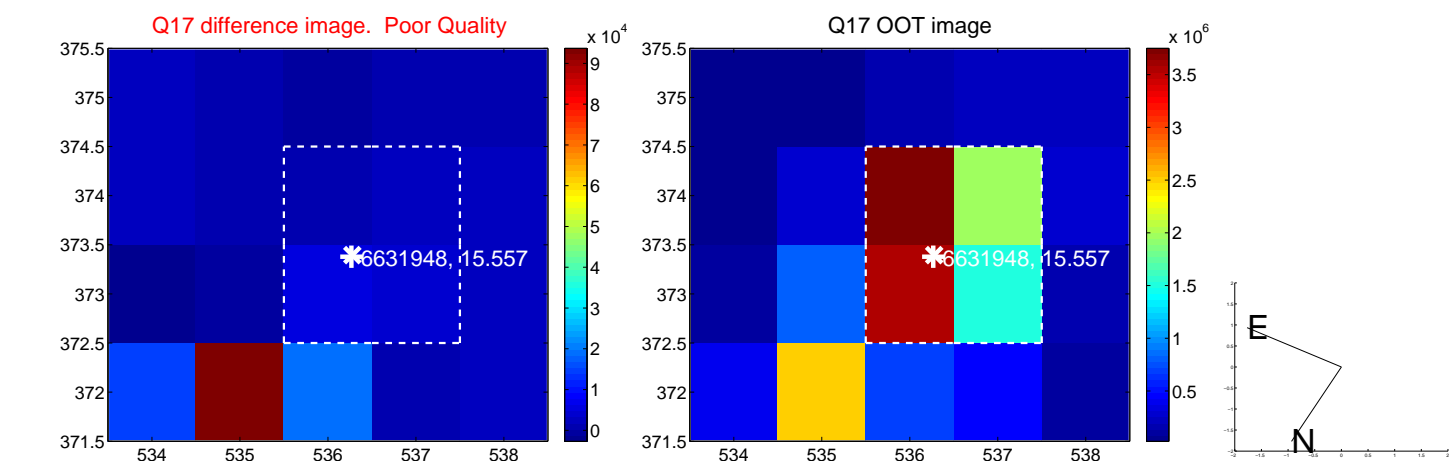
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



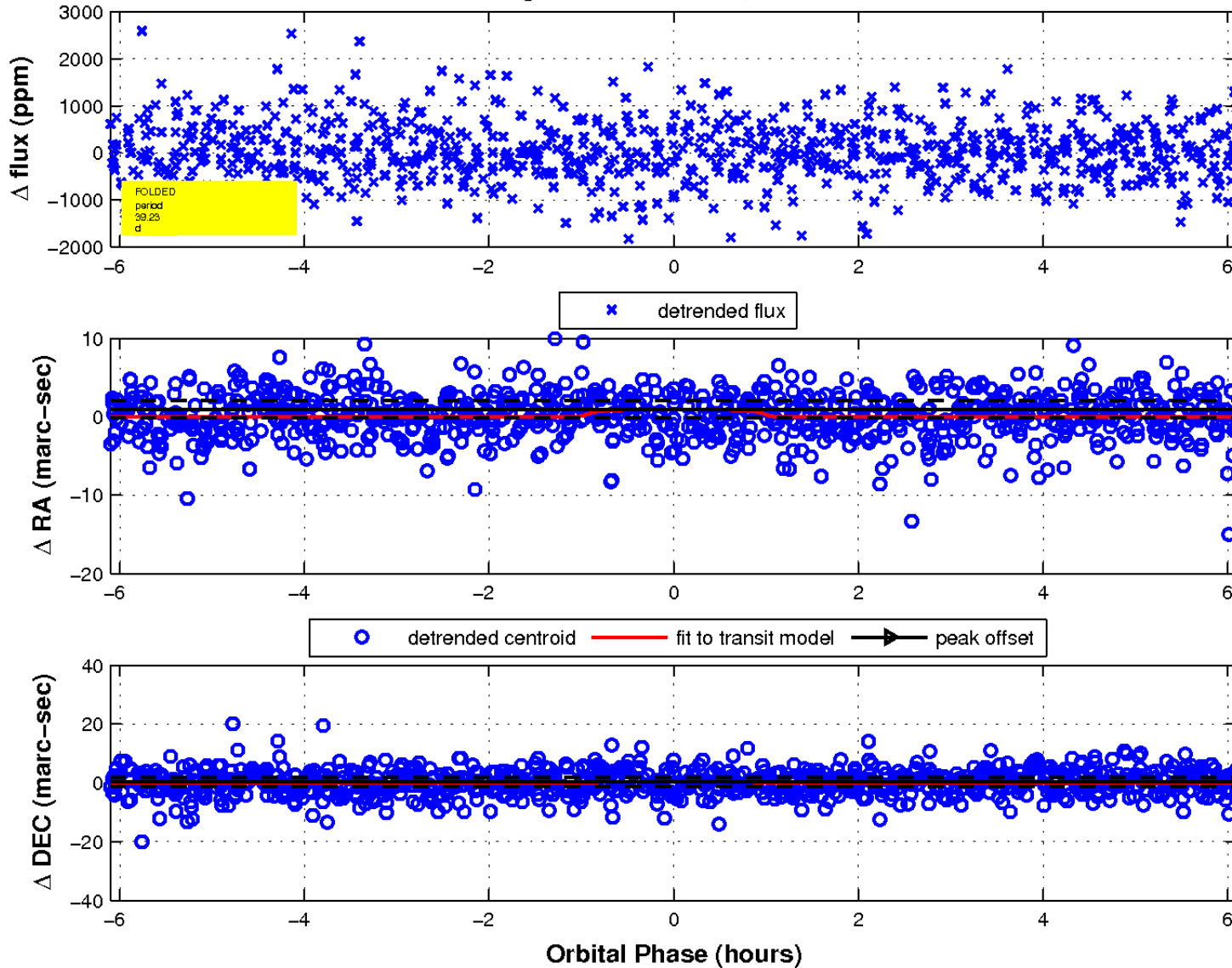
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

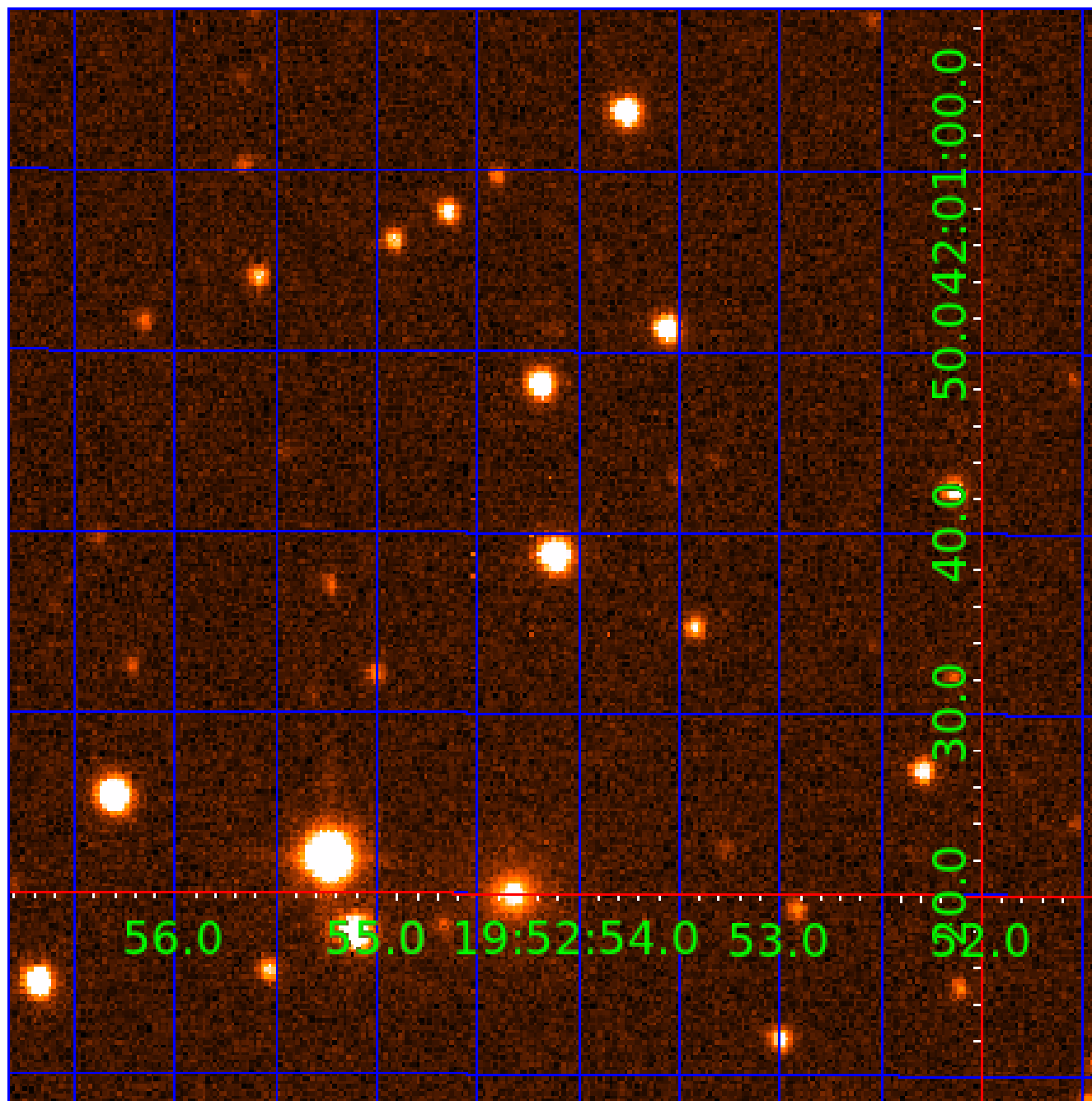


fluxWeightedCentroids, Planet 4 of 7



UKIRT Image

Declination



KIC 006631948

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})
006631948-01	OBS	No	0.641894	132.391949	0.0	4.412	7.4	0.0	0.78	5409	0.01	2445.05
006631948-02	OBS	No	48.855077	153.468091	1249.1	1.428	11.2	8.9	0.78	5409	2.99	7.58
006631948-03	OBS	No	25.505965	139.890262	1335.6	1.398	9.5	10.2	0.78	5409	2.88	18.03
006631948-04	OBS	No	39.227192	149.187864	1471.9	2.047	11.5	11.2	0.78	5409	3.12	10.16
006631948-05	OBS	No	43.239576	150.757152	1431.3	1.253	11.8	7.3	0.78	5409	3.33	8.92
006631948-06	OBS	No	18.643862	148.996893	846.7	1.590	9.5	9.8	0.78	5409	2.45	27.39
006631948-07	OBS	No	17.208289	147.594402	630.5	2.335	8.2	7.8	0.78	5409	2.18	30.47

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006631948-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—CENT_RESOLVED_OFFSET
006631948-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—CENT_RESOLVED_OFFSET
006631948-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_RESOLVED_OFFSET
006631948-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—CENT_RESOLVED_OFFSET
006631948-05	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_RESOLVED_OFFSET—HALO_GHOST
006631948-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET
006631948-07	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_RESOLVED_OFFSET

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

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

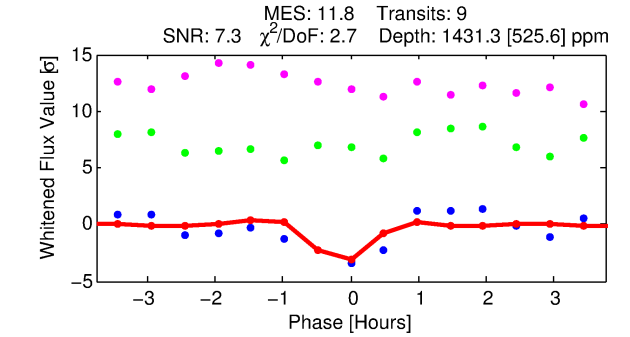
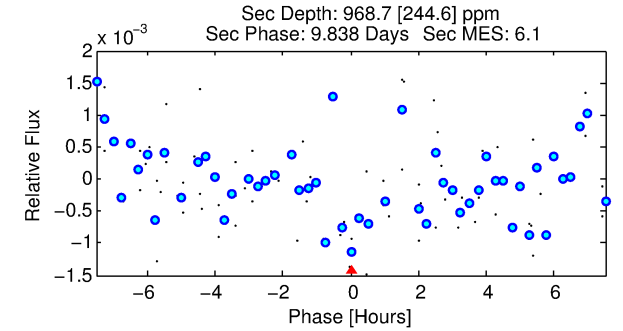
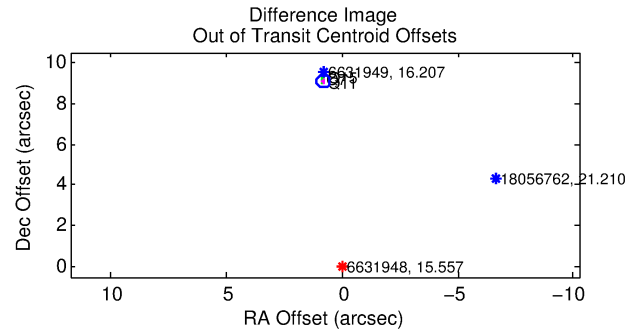
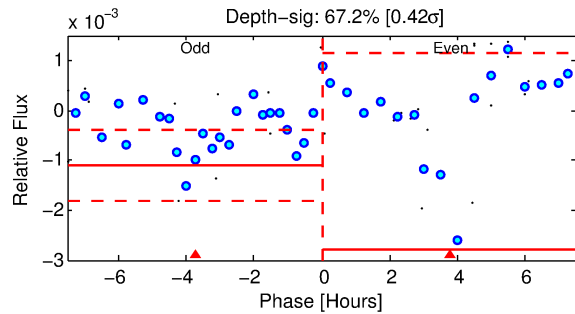
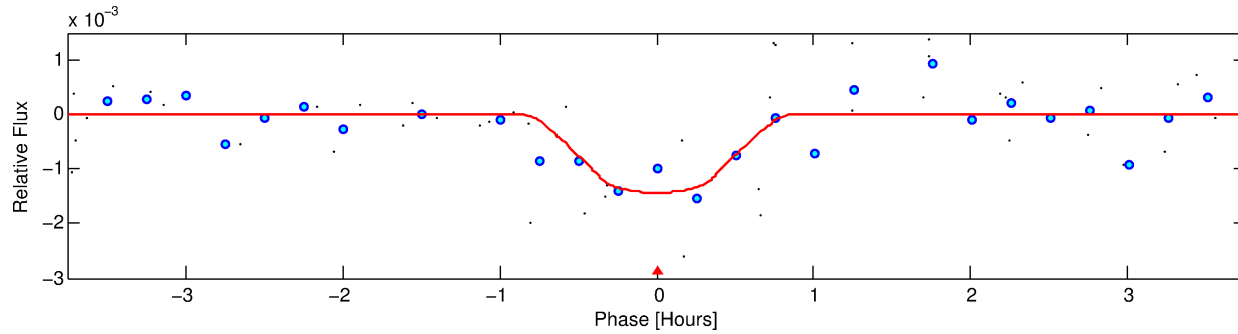
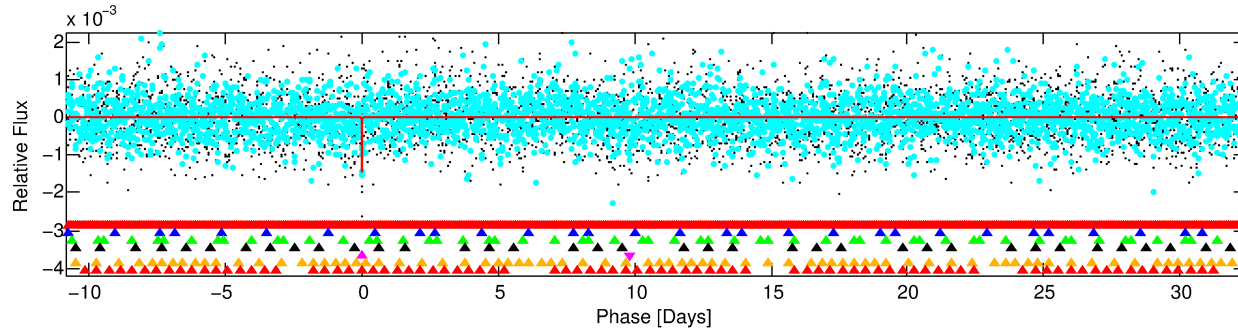
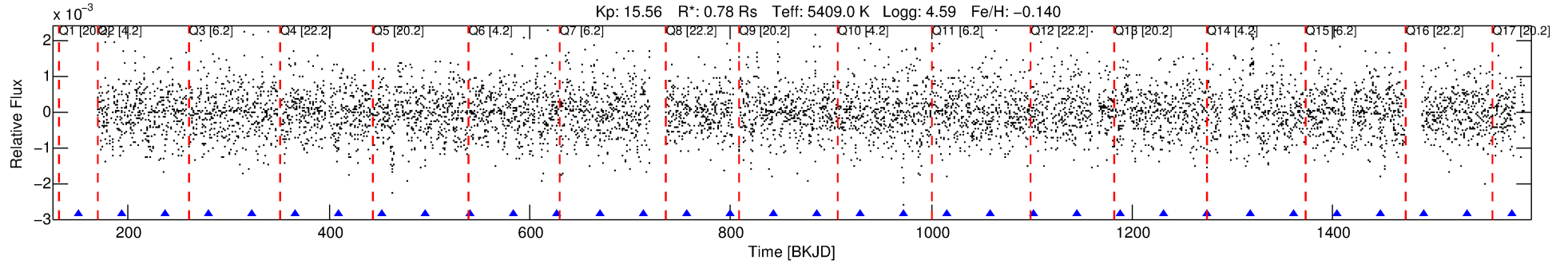
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006631948-05

No Significant Match Found

DV One-Page Summary

KIC: 6631948 Candidate: 5 of 7 Period: 43.240 d



DV Fit Results:

Period = 43.23958 [0.00046] d
Epoch = 150.7572 [0.0116] BKJD
Rp/R* = 0.0389 [0.1127]
a/R* = 175.15 [2002.32]
b = 0.80 [5.33]
Seff = 8.92 [2.34]
Teq = 441 [29] K
Rp = 3.33 [9.66] Re
a = 0.2299 [0.0367] AU
Ag = 2544.84 [14779.23] [0.17 σ]
Teff = 4839 [7022] K [0.63 σ]

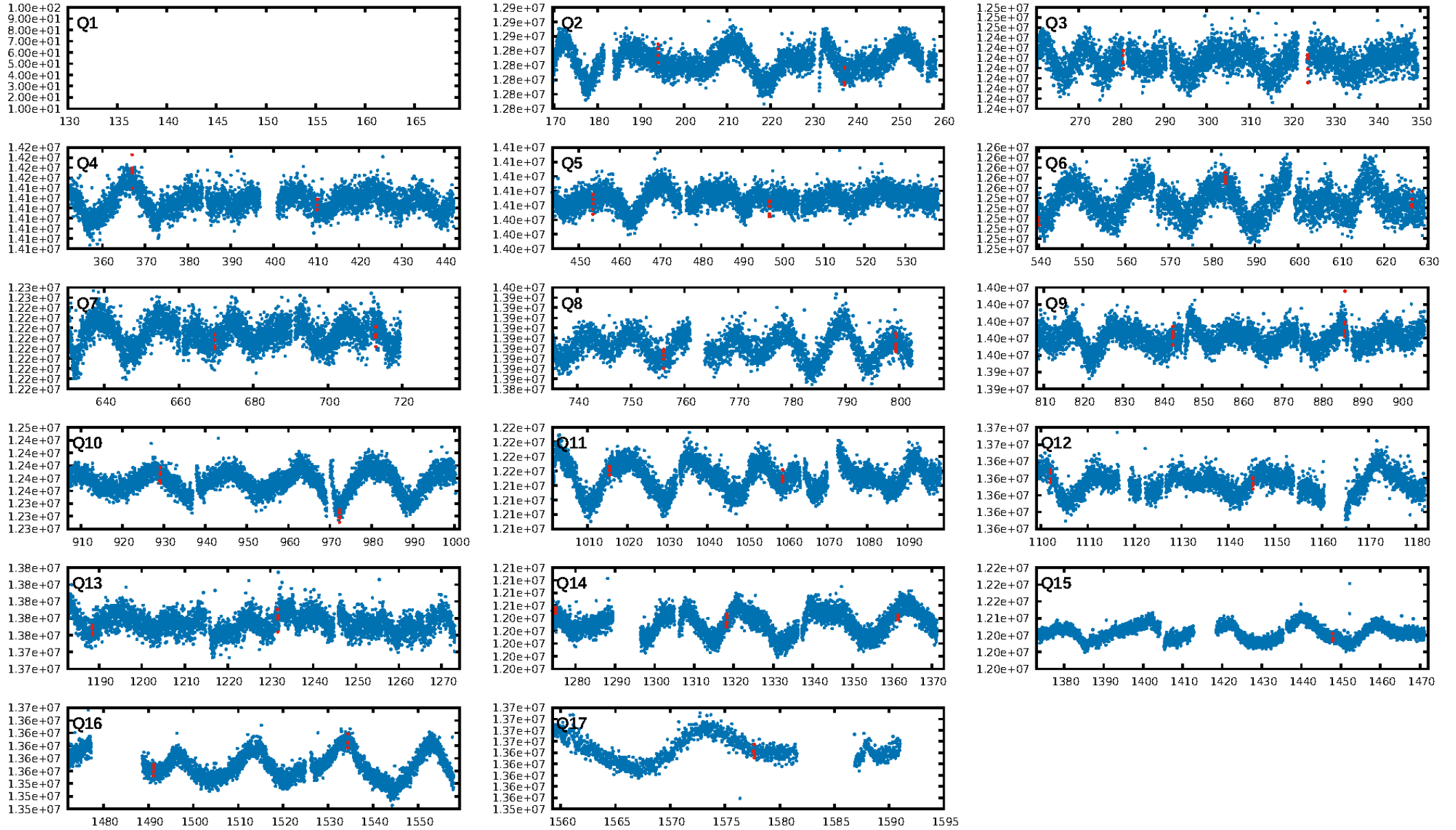
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [40.13 σ]
LongPeriod-sig: 100.0% [70.95 σ]
ModelChiSquare2-sig: 0.4%
ModelChiSquareGoF-sig: 64.4%
Bootstrap-pfa: 5.12e-13
RollingBand-fgt: 1.00 [8/8]
GhostDiagnostic-chr: 0.1796
Centroid-sig: 5.5%
Centroid-so: 1.852 arcsec [1.83 σ]
OotOffset-rm: 9.136 arcsec [88.98 σ]
KicOffset-rm: 9.420 arcsec [92.06 σ]
OotOffset-st: 0/3/0/0 [3]
KicOffset-st: 0/3/0/0 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 0.13 [2/15]

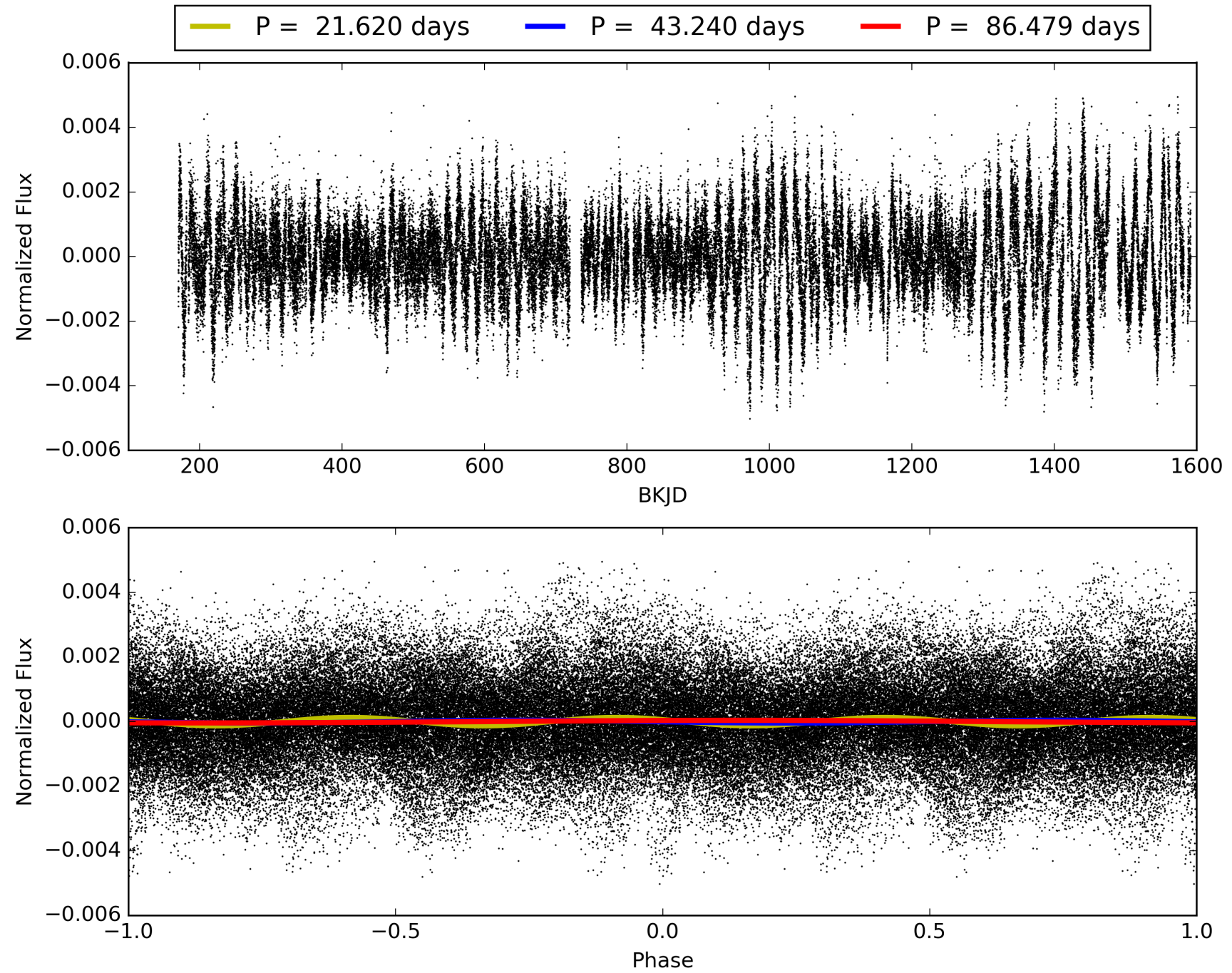
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:17:41 Z

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

TCE 006631948-05, PDC Light Curves

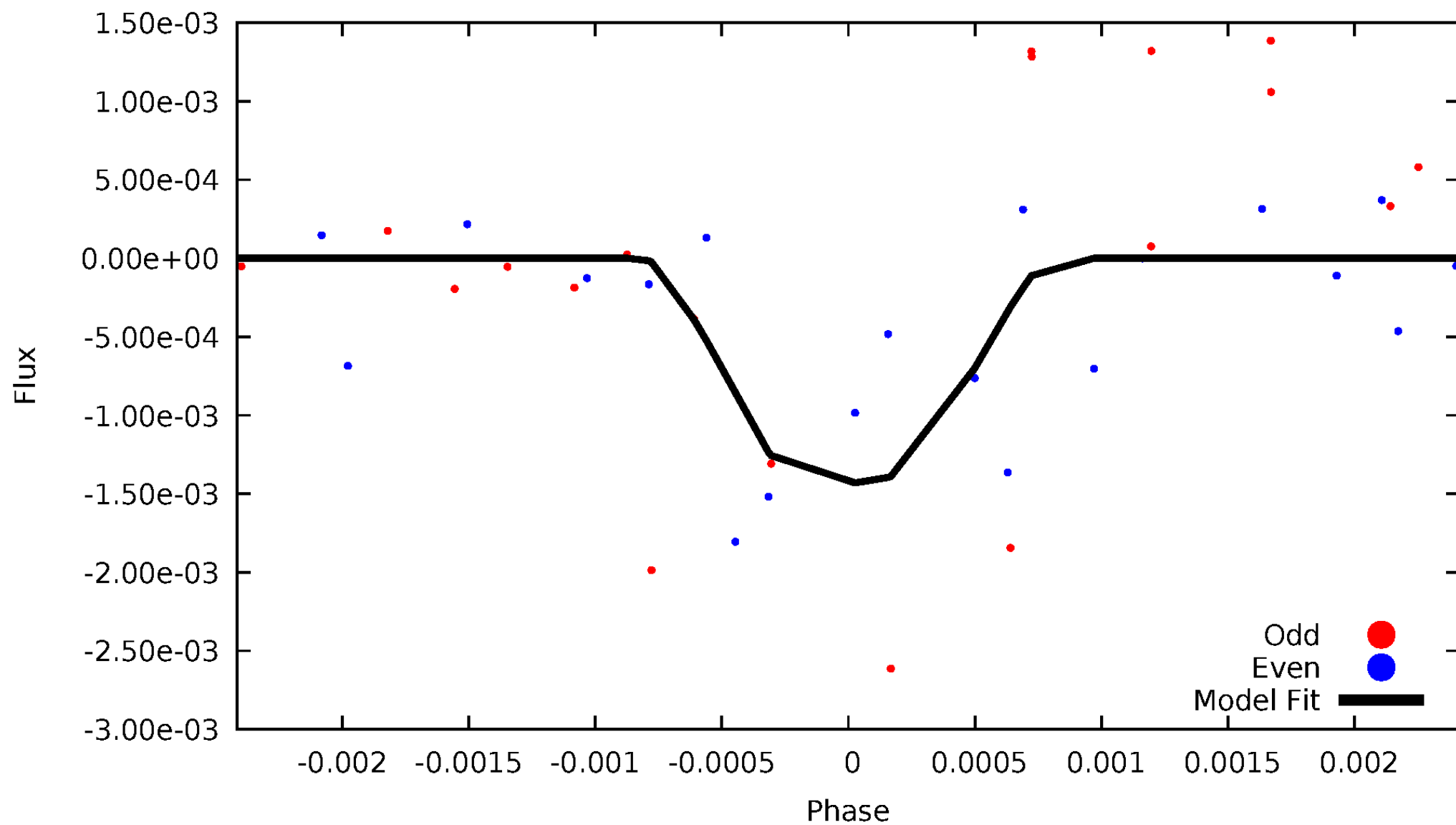


TCE 006631948-05



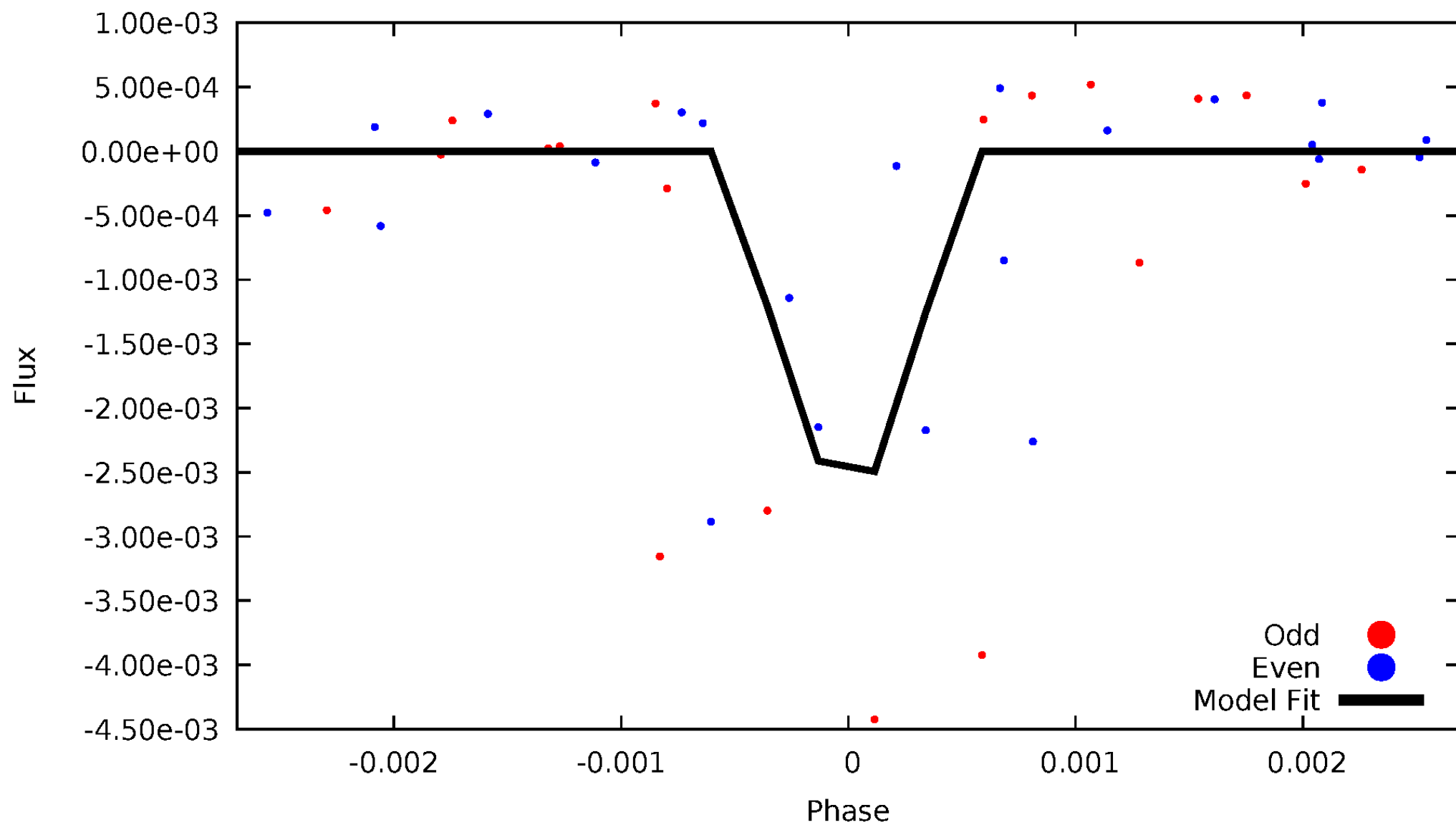
DV Odd/Even

TCE 006631948-05



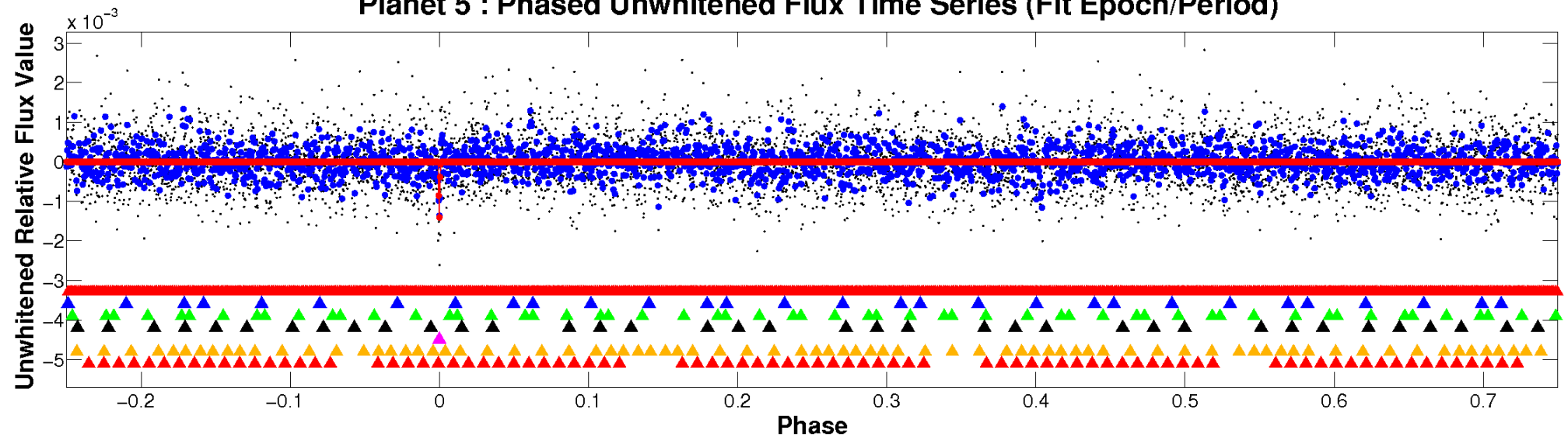
ALT Odd/Even

TCE 006631948-05

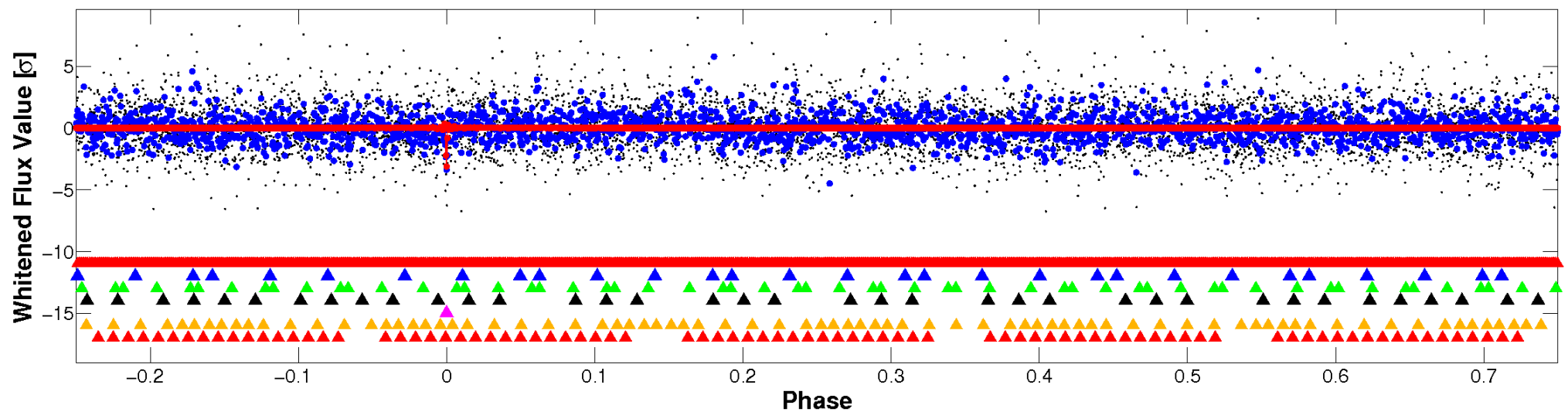


Non-Whitened Vs. Whitened Light Curve

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

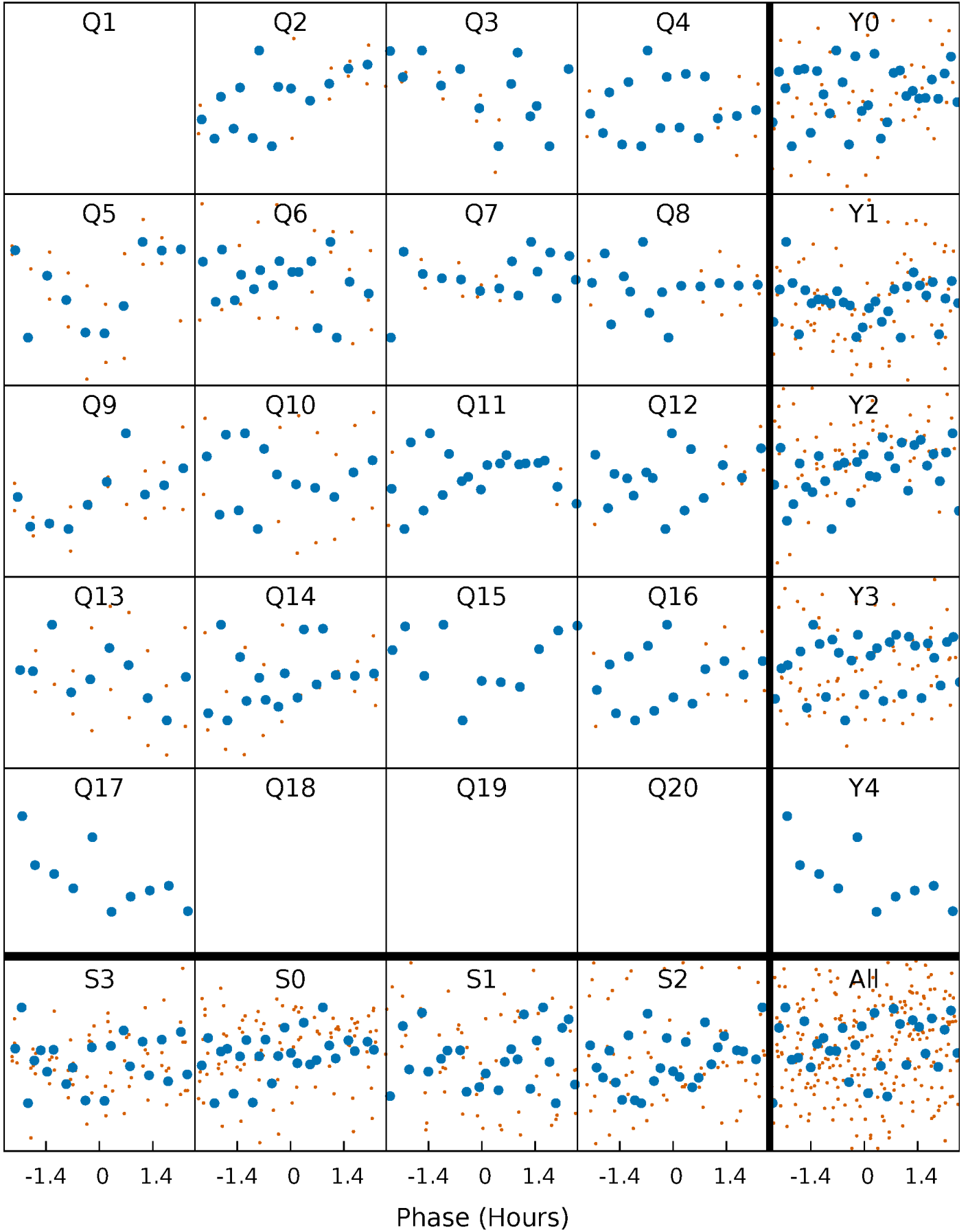


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



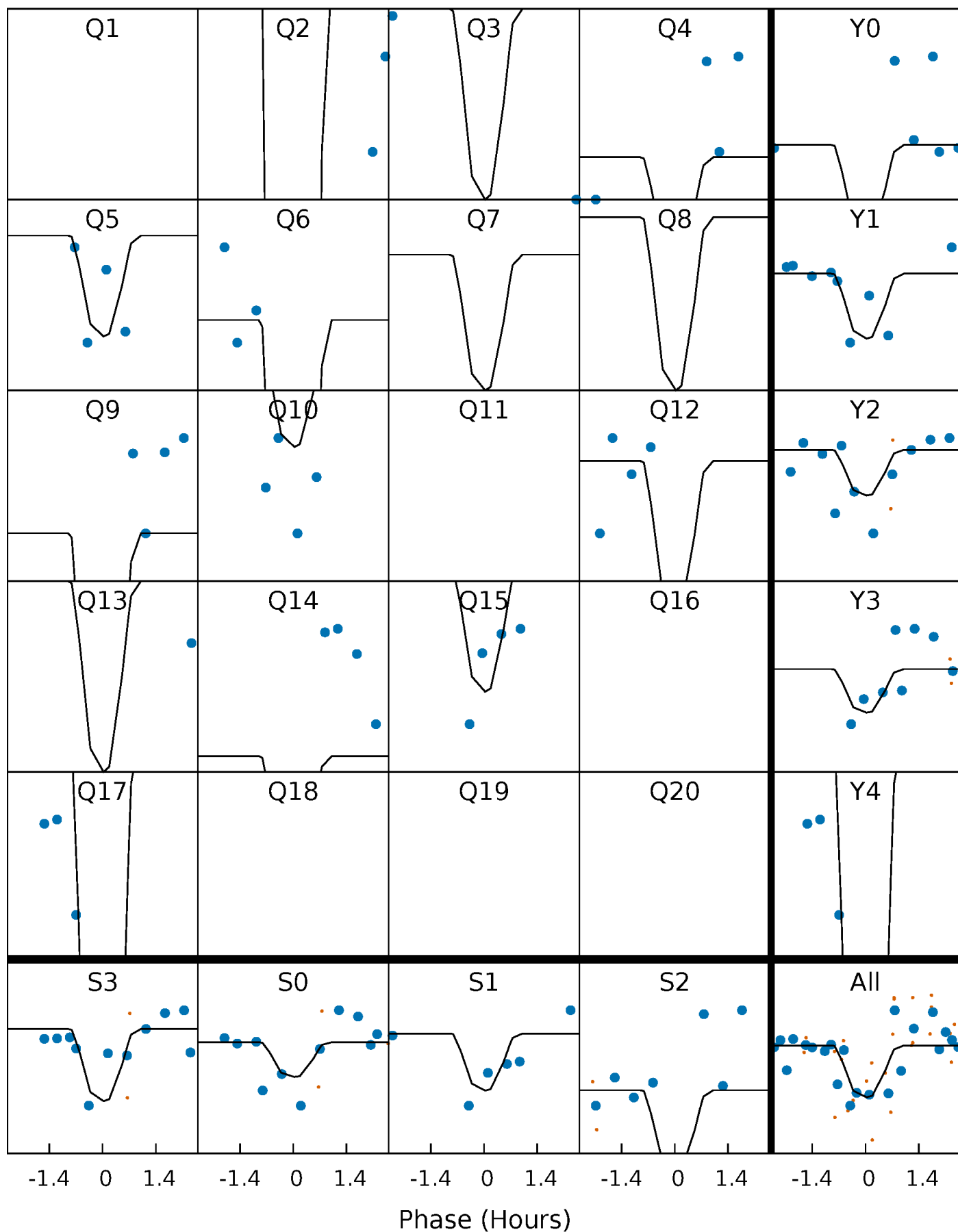
PDC Quarter-Phased Transit Curves

TCE 006631948-05 $P = 43.239576$ Days $T_0 = 150.757152$ (BKJD)



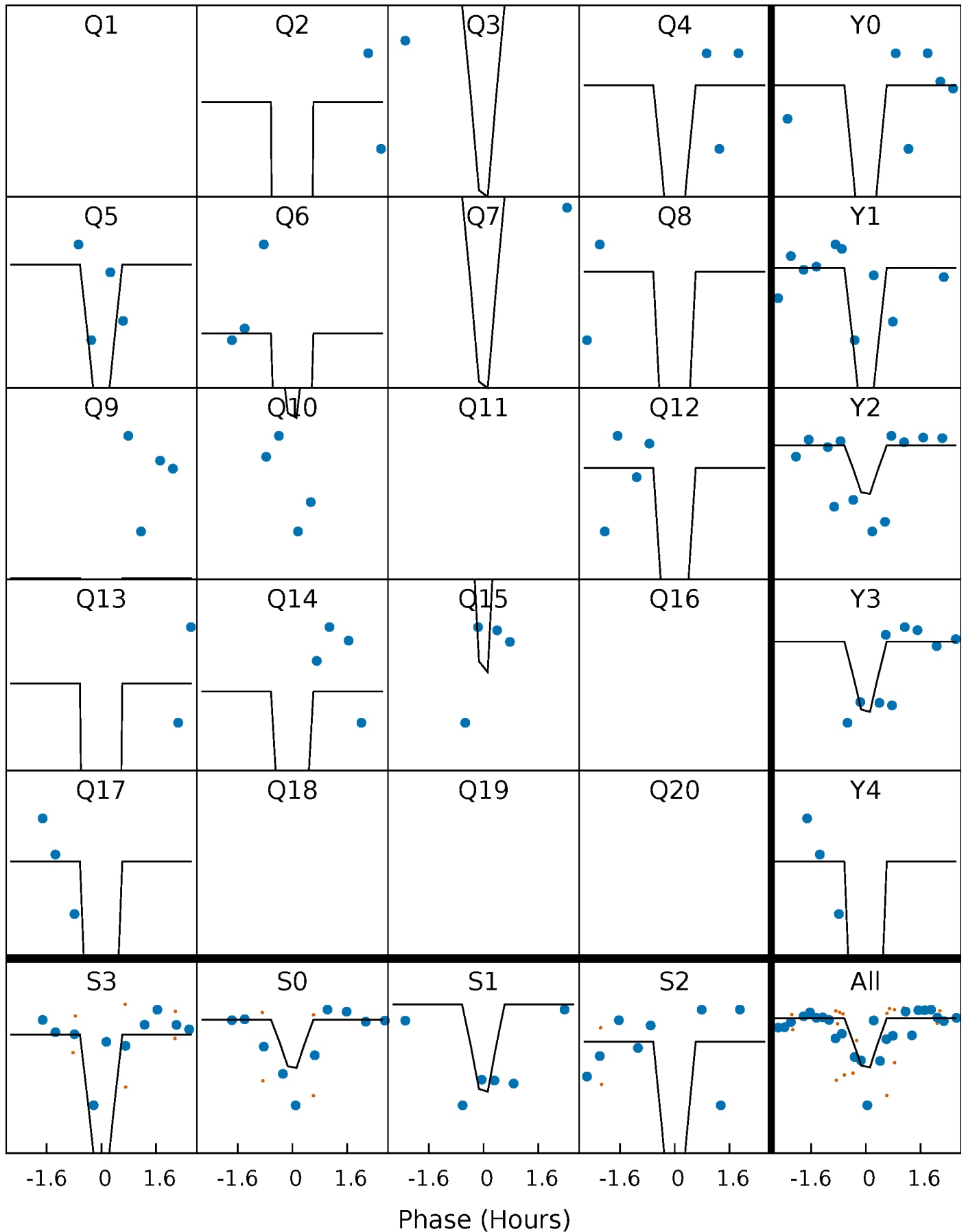
DV Quarter-Phased Transit Curves

TCE 006631948-05 P= 43.239576 Days $T_0=150.757152$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

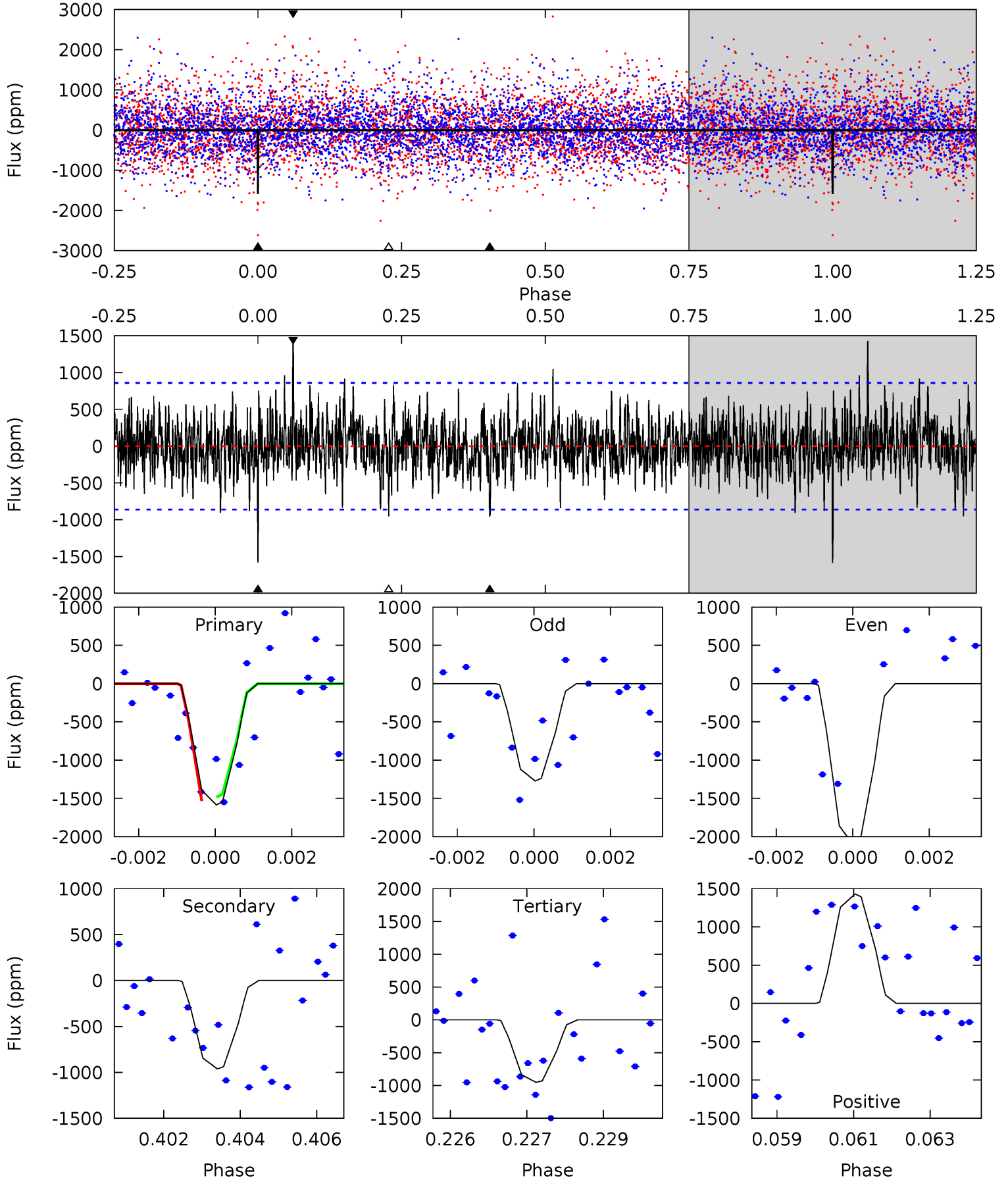
TCE 006631948-05 P= 43.239995 Days $T_0=150.751417$ (BKJD)



DV Model-Shift Uniqueness Test

006631948-05, P = 43.239576 Days, E = 150.757152 Days

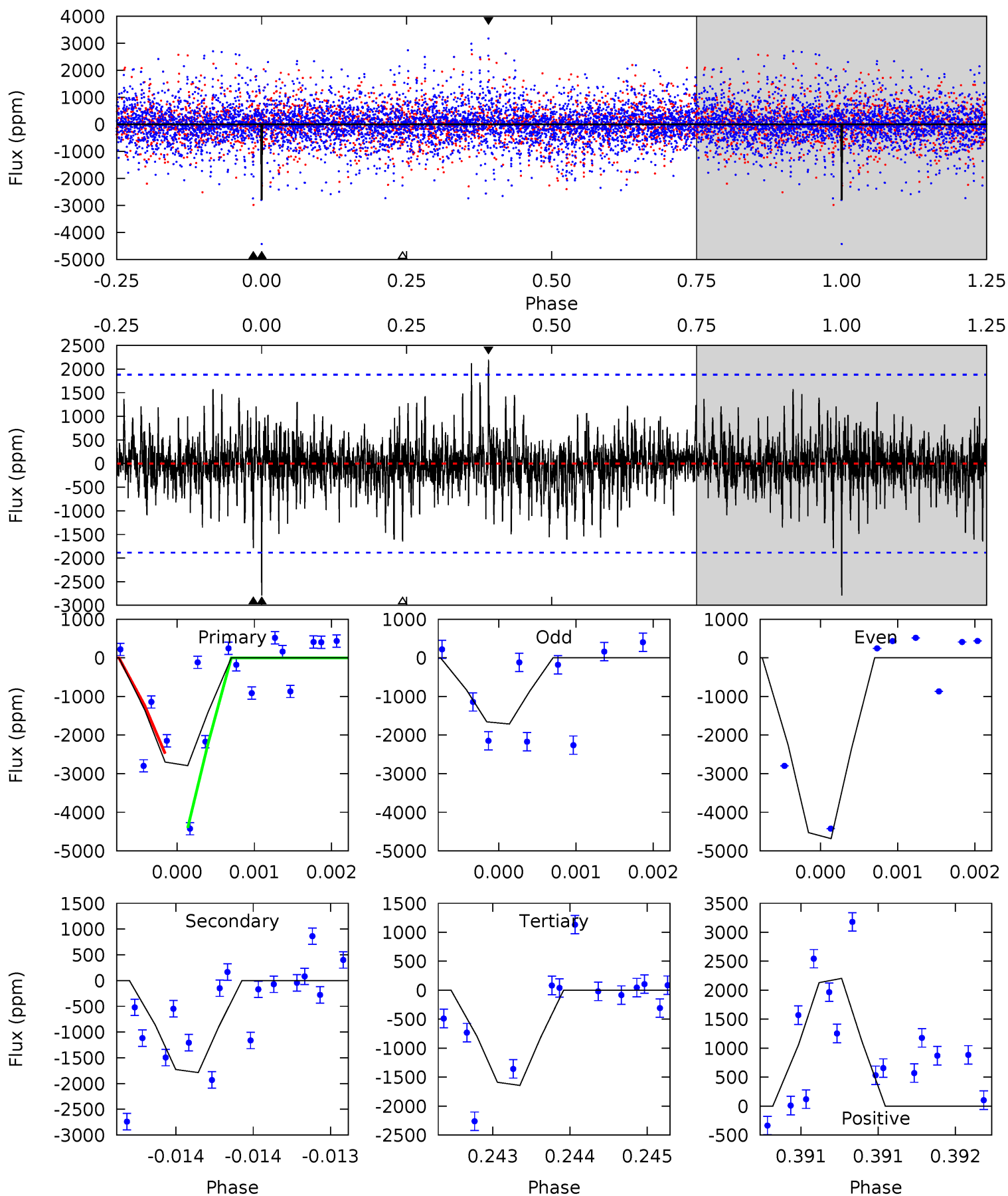
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.85	5.98	5.92	8.89	5.35	3.13	1.74	3.92	0.96	0.06	-2.91	2.57	1.11	0.47	0.14



Alt Model-Shift Uniqueness Test

006631948-05, P = 43.239995 Days, E = 150.751417 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.13	5.20	4.78	6.41	5.48	3.34	1.28	3.34	1.71	0.42	-1.21	3.45	1.02	0.44	2.34



Stellar Parameters For KIC 006631948

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5409^{+161}_{-161}	$4.587^{+0.032}_{-0.128}$	$-0.140^{+0.300}_{-0.300}$	$0.784^{+0.148}_{-0.063}$	$0.872^{+0.081}_{-0.098}$	$2.551^{+0.430}_{-0.953}$
	+3%/-3%	+1%/-3%	+214%/-214%	+19%/-8%	+9%/-11%	+17%/-37%
Source	PHO1	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 006631948-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-963 ± 161	$8.35^{+8.64}_{-5.85}$	628^{+31}_{-28}	3520^{+2077}_{-637}	383^{+3854}_{-289}
Alt.	-1787 ± 344	$8.92^{+8.60}_{-5.72}$	626^{+31}_{-24}	3822^{+1985}_{-705}	602^{+4457}_{-438}

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

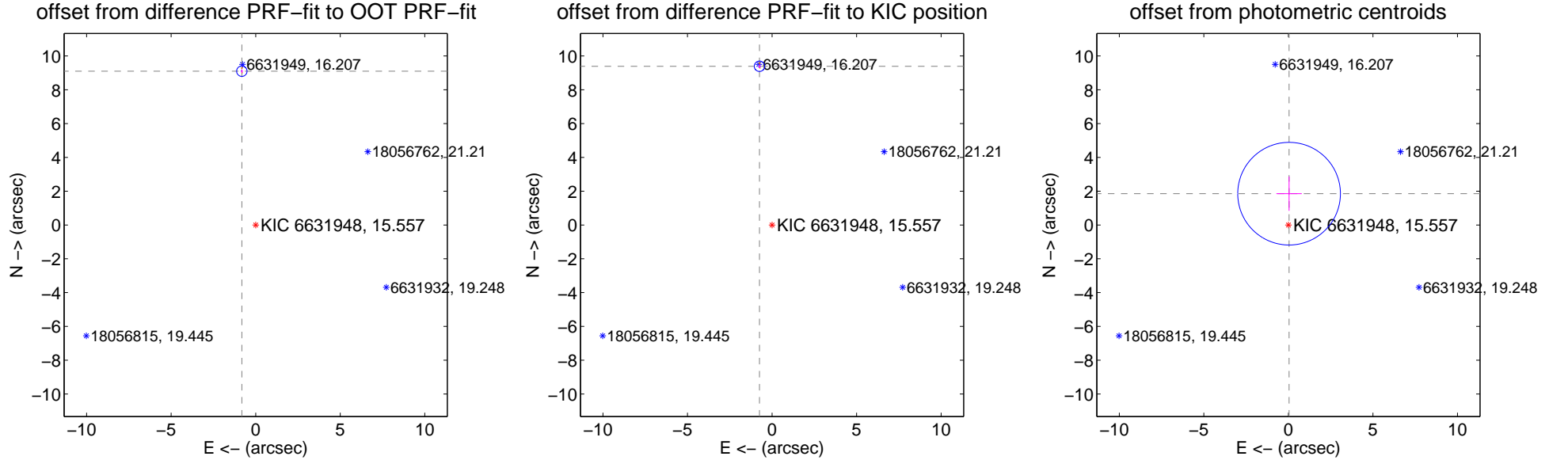
DV Centroid Data

Supplemental centroid analysis for 006631948-05. Kepler magnitude: 15.56. Transit SNR 7.25

There are 1 quarters with good PRF difference image offsets

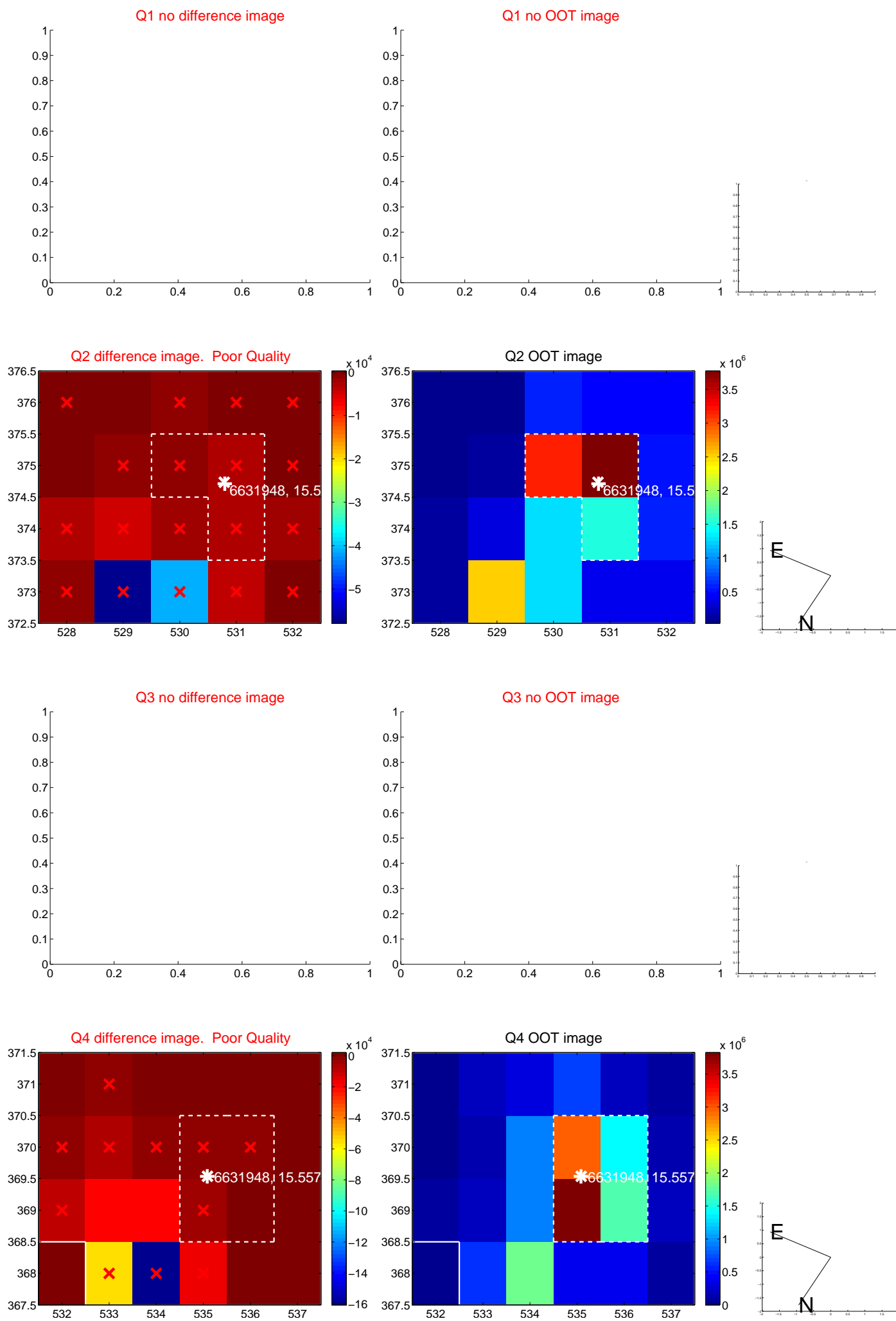
The direct PRF centroid is offset from the target star catalog position by about 0.29 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	9.136 \pm 0.103	88.98	0.820 ± 0.067	9.099 ± 0.103
PRF-fit source offset from KIC position	9.420 \pm 0.102	92.06	0.744 ± 0.070	9.391 ± 0.102
photometric centroid source offset	1.85 ± 1.01	1.83	-0.04 ± 0.75	1.85 ± 1.01

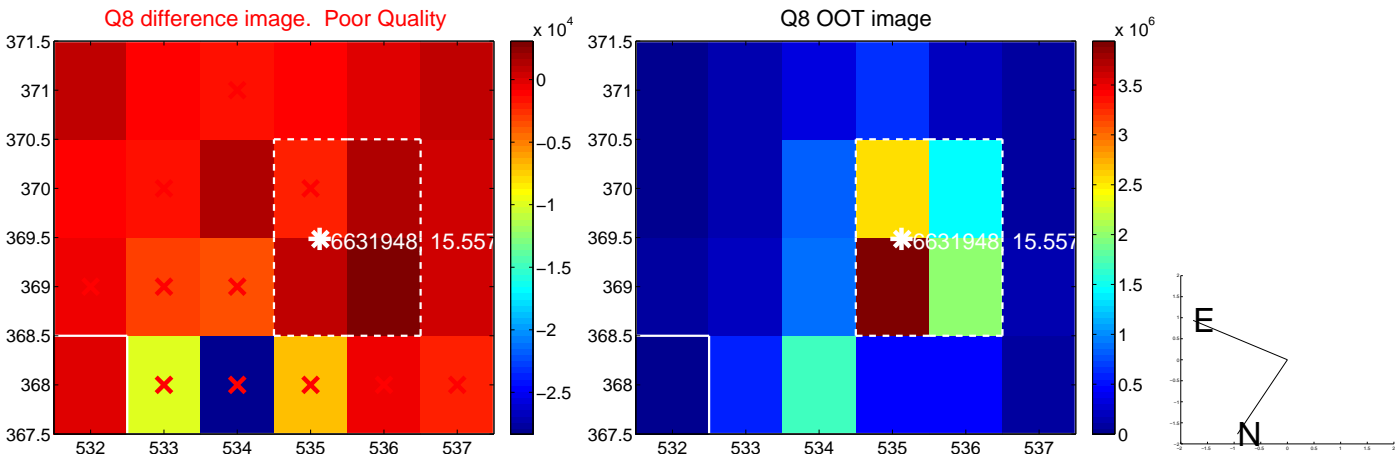
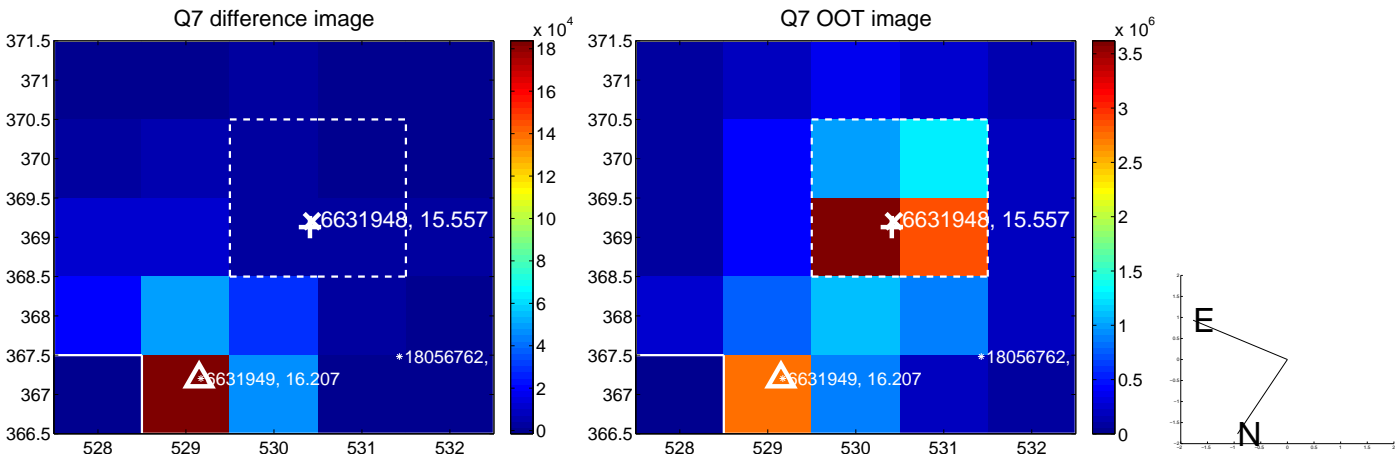
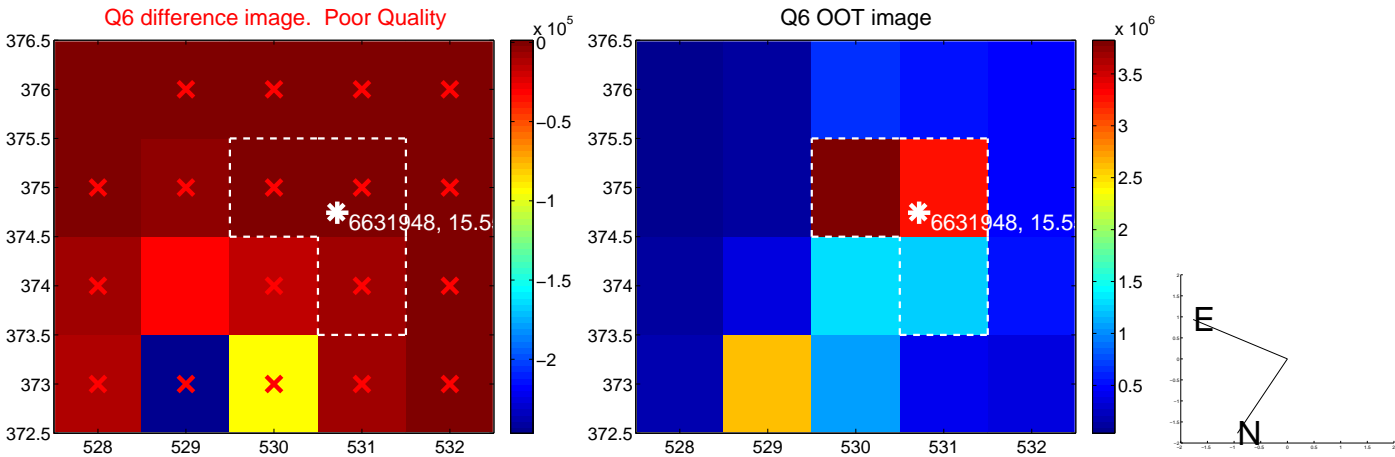
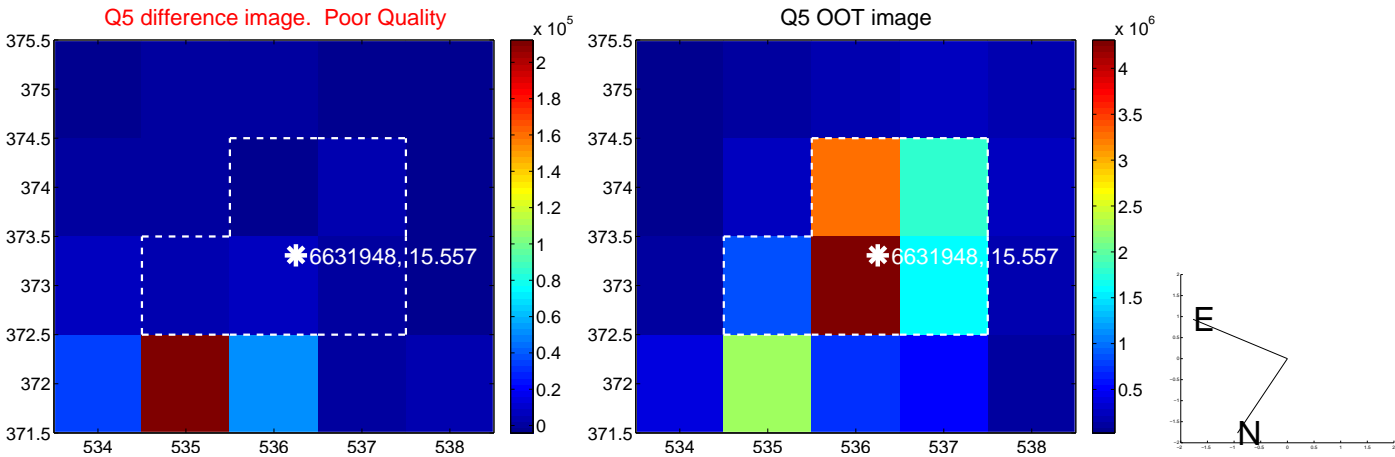


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

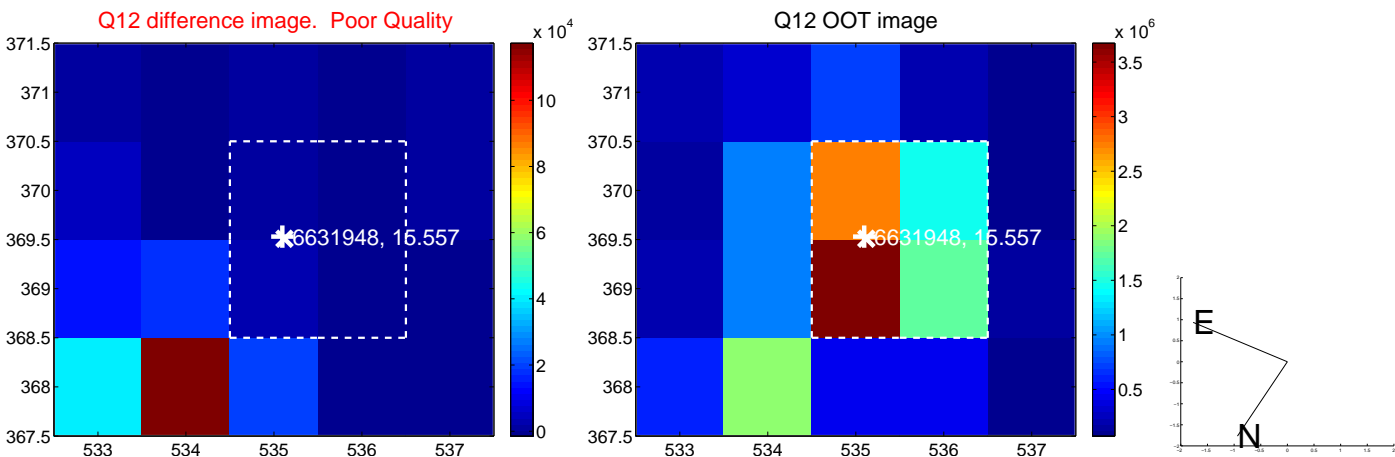
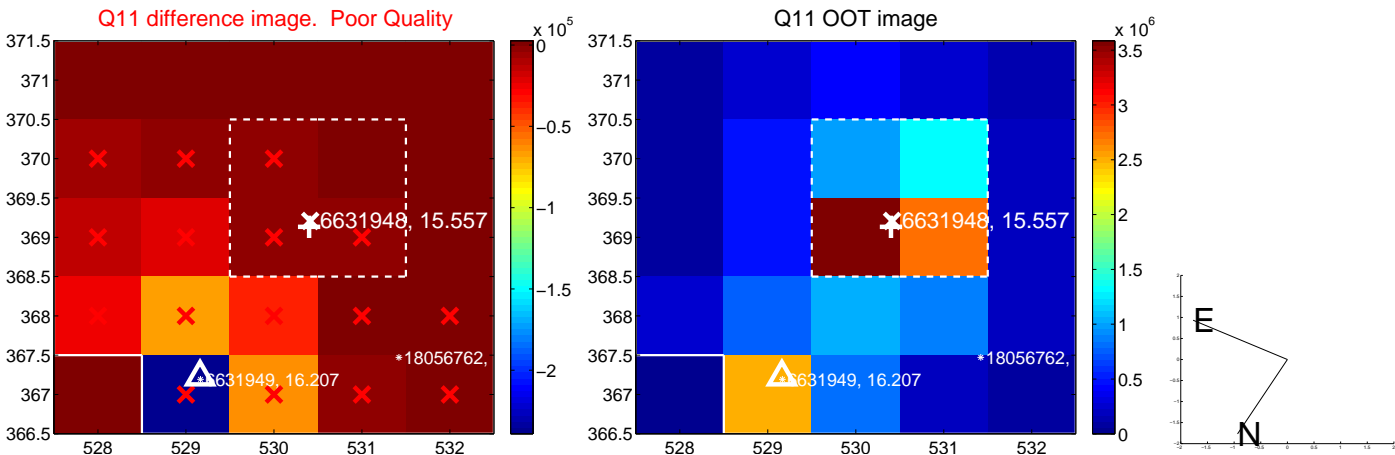
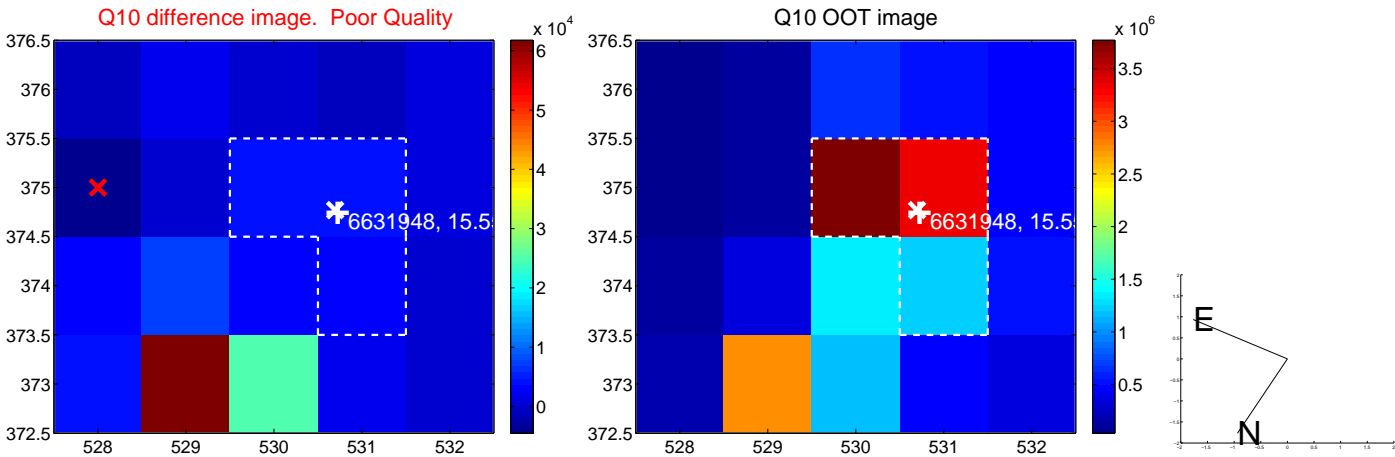
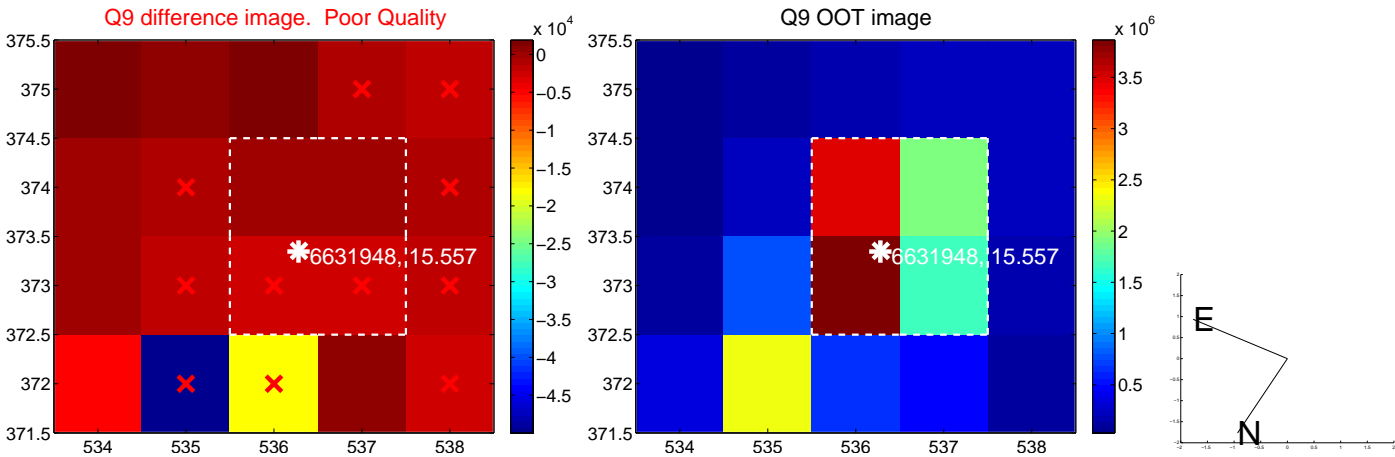
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



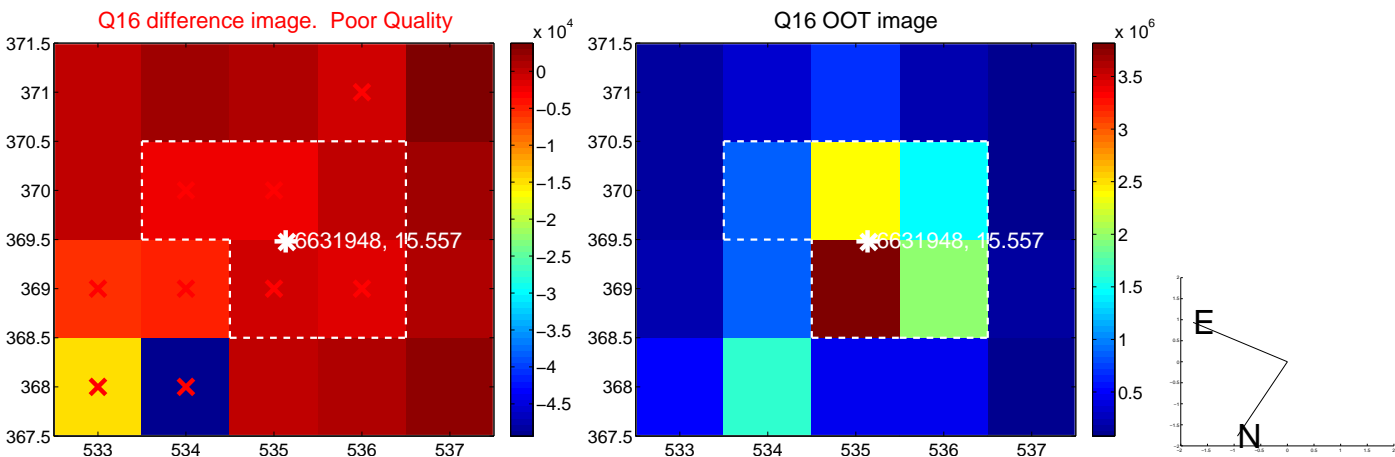
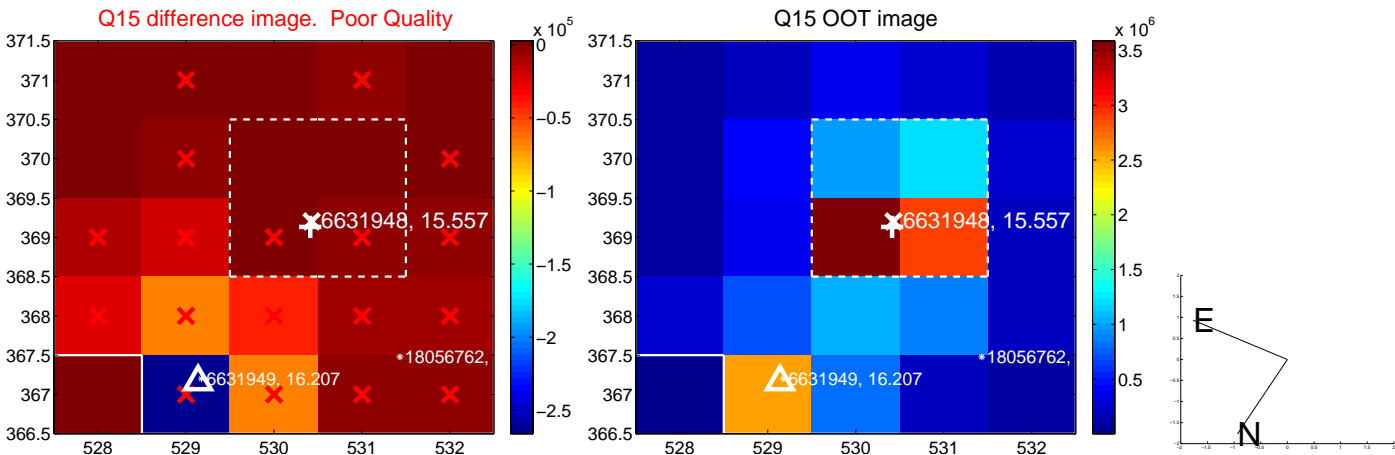
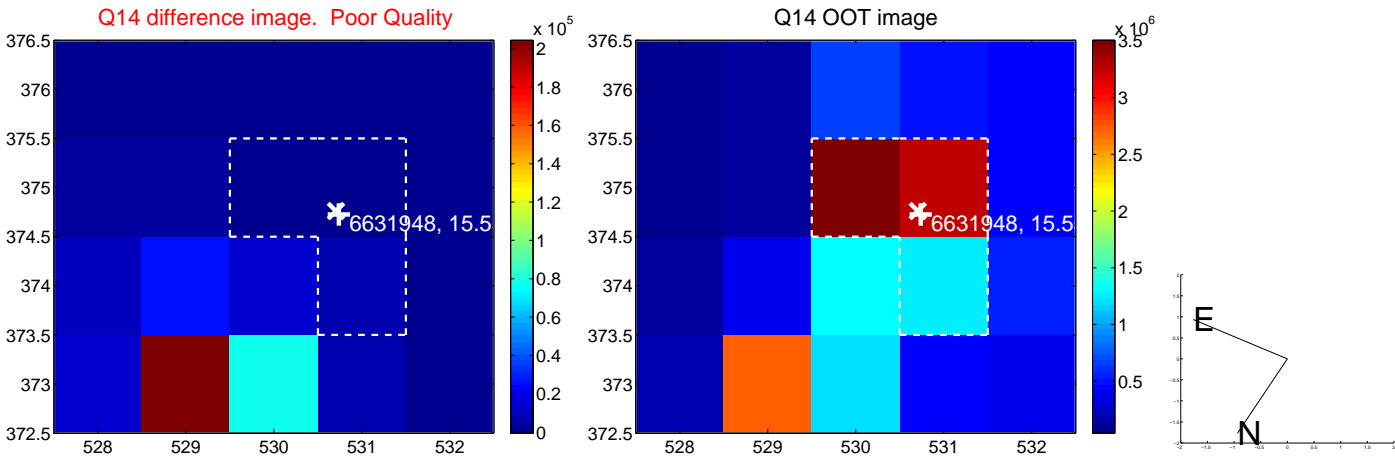
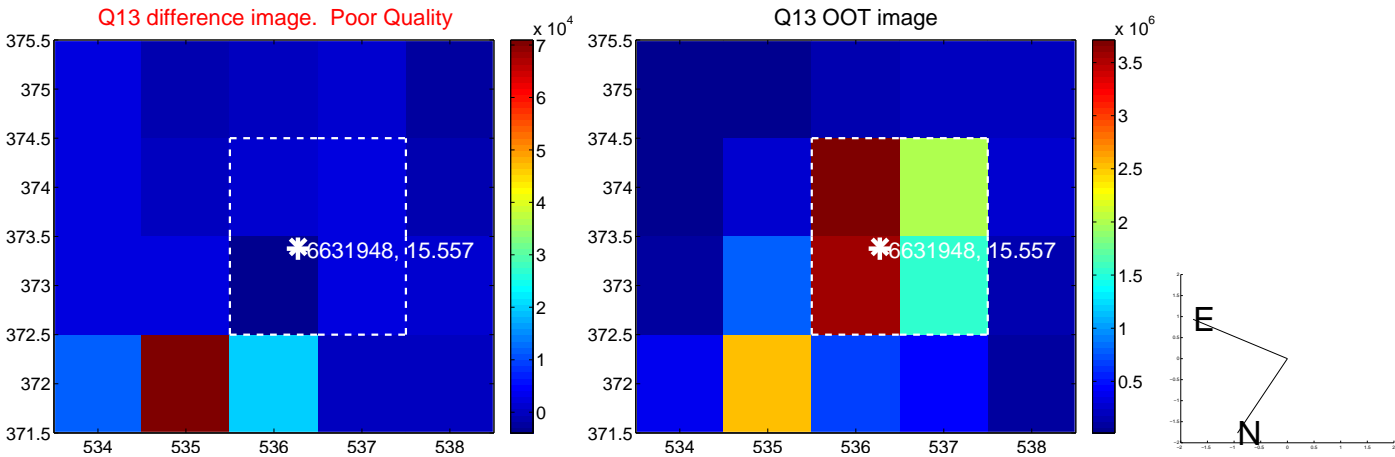
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



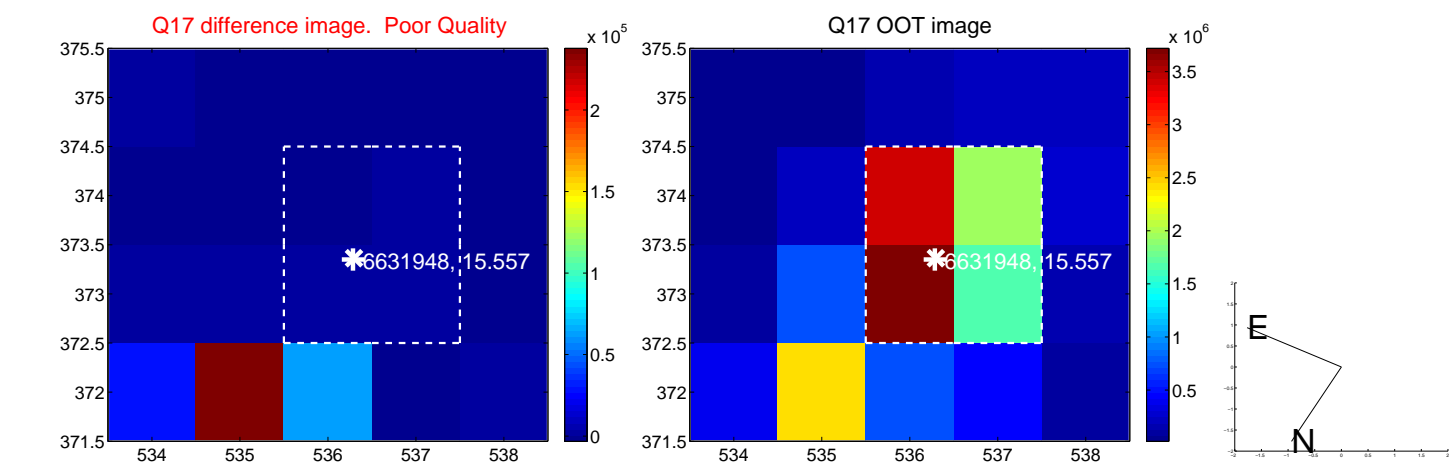
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



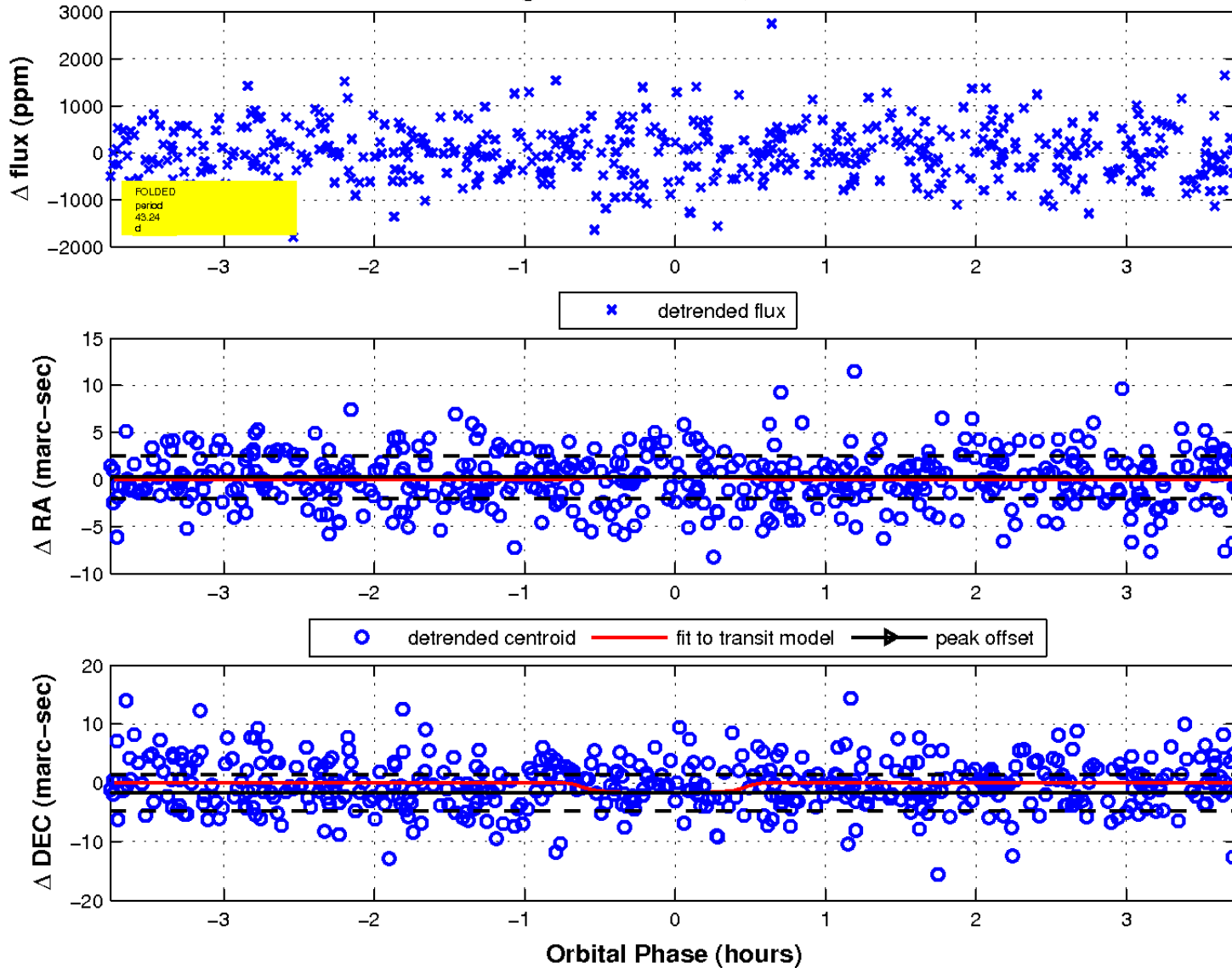
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

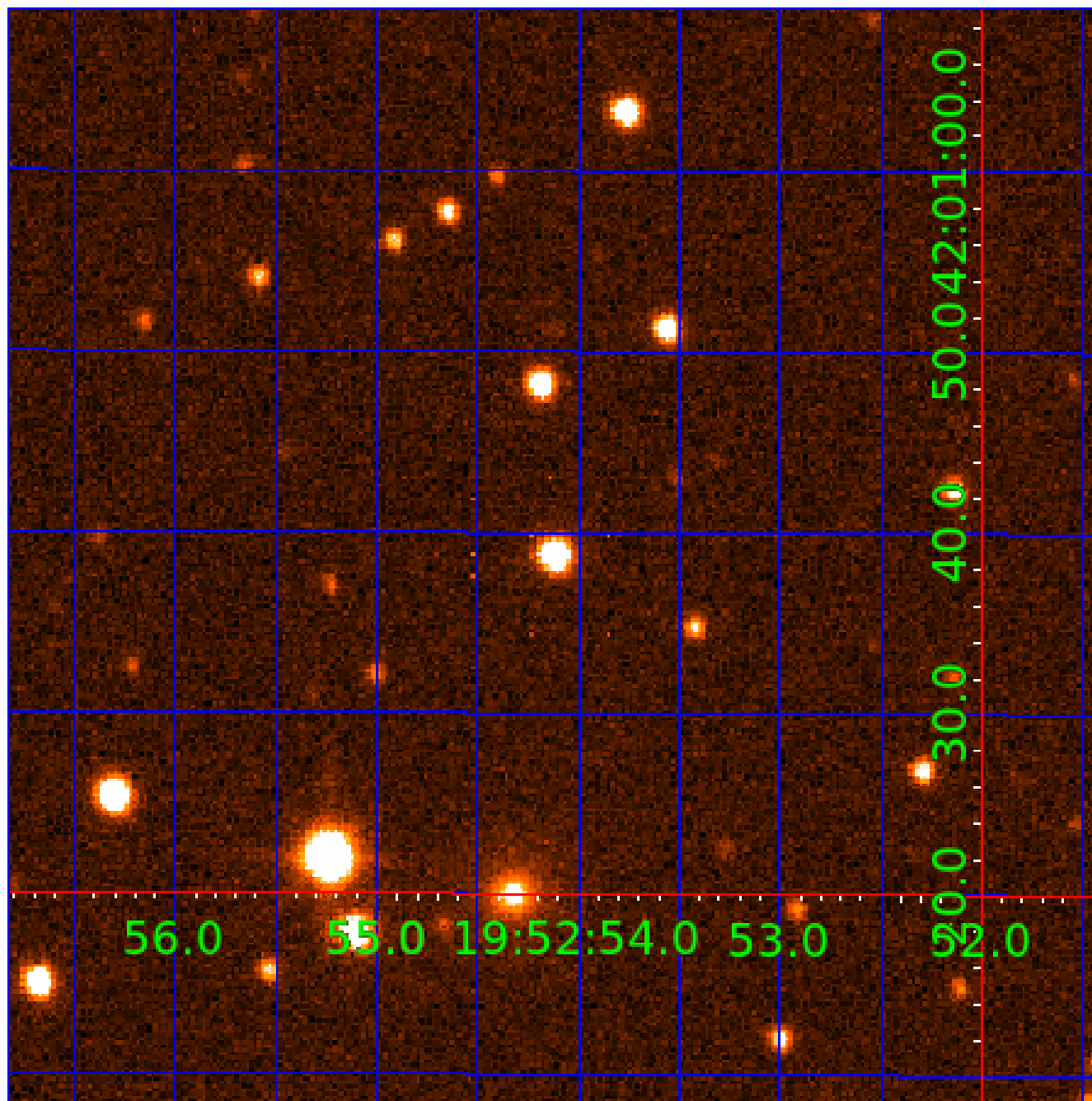


fluxWeightedCentroids, Planet 5 of 7



UKIRT Image

Declination



KIC 006631948

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})
006631948-01	OBS	No	0.641894	132.391949	0.0	4.412	7.4	0.0	0.78	5409	0.01	2445.05
006631948-02	OBS	No	48.855077	153.468091	1249.1	1.428	11.2	8.9	0.78	5409	2.99	7.58
006631948-03	OBS	No	25.505965	139.890262	1335.6	1.398	9.5	10.2	0.78	5409	2.88	18.03
006631948-04	OBS	No	39.227192	149.187864	1471.9	2.047	11.5	11.2	0.78	5409	3.12	10.16
006631948-05	OBS	No	43.239576	150.757152	1431.3	1.253	11.8	7.3	0.78	5409	3.33	8.92
006631948-06	OBS	No	18.643862	148.996893	846.7	1.590	9.5	9.8	0.78	5409	2.45	27.39
006631948-07	OBS	No	17.208289	147.594402	630.5	2.335	8.2	7.8	0.78	5409	2.18	30.47

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006631948-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—CENT_RESOLVED_OFFSET
006631948-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—CENT_RESOLVED_OFFSET
006631948-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_RESOLVED_OFFSET
006631948-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—CENT_RESOLVED_OFFSET
006631948-05	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_RESOLVED_OFFSET—HALO_GHOST
006631948-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET
006631948-07	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_RESOLVED_OFFSET

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

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

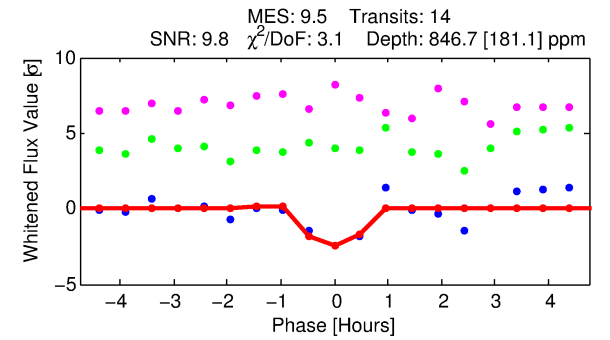
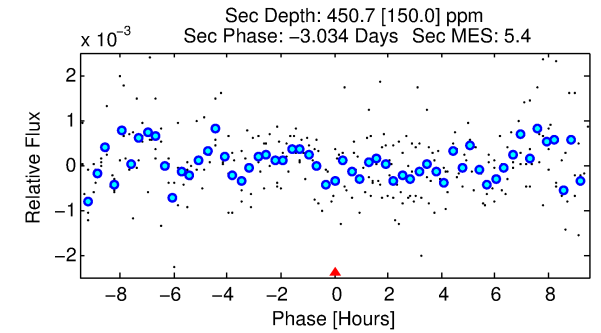
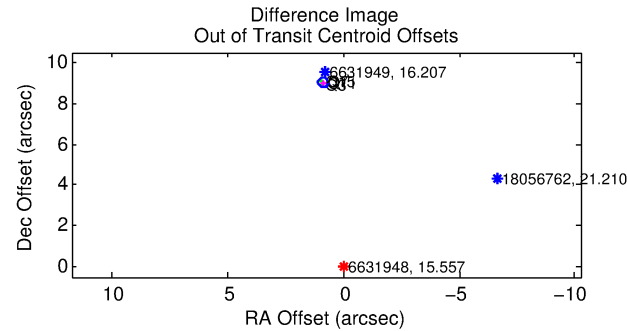
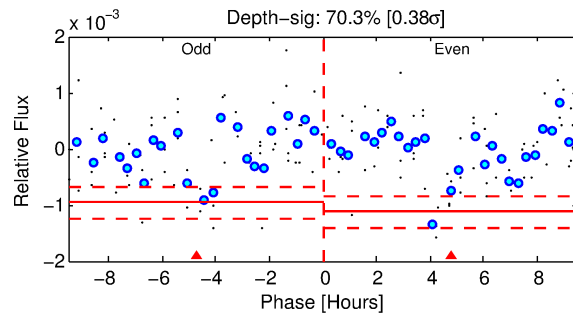
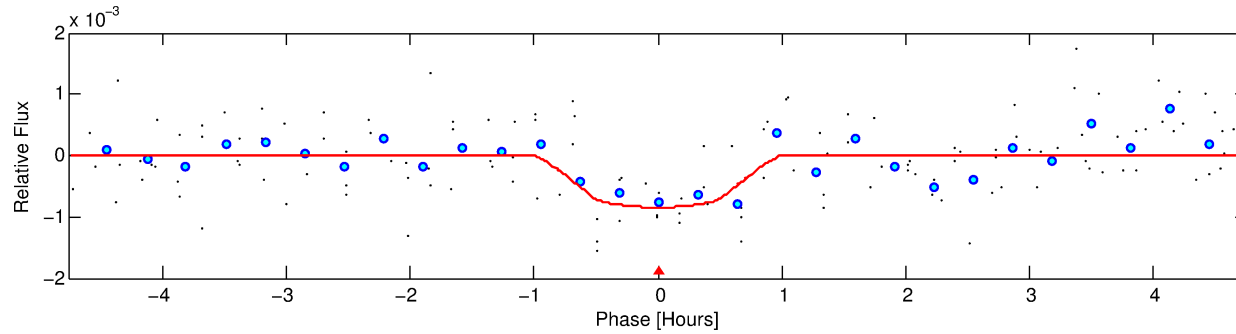
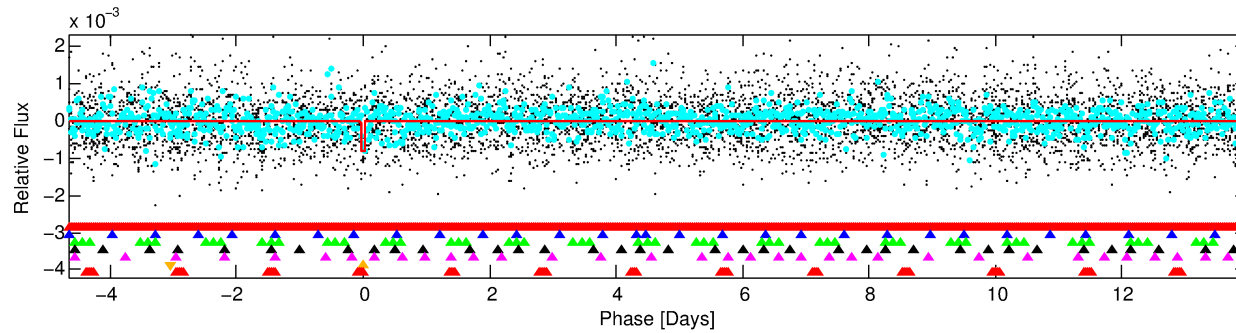
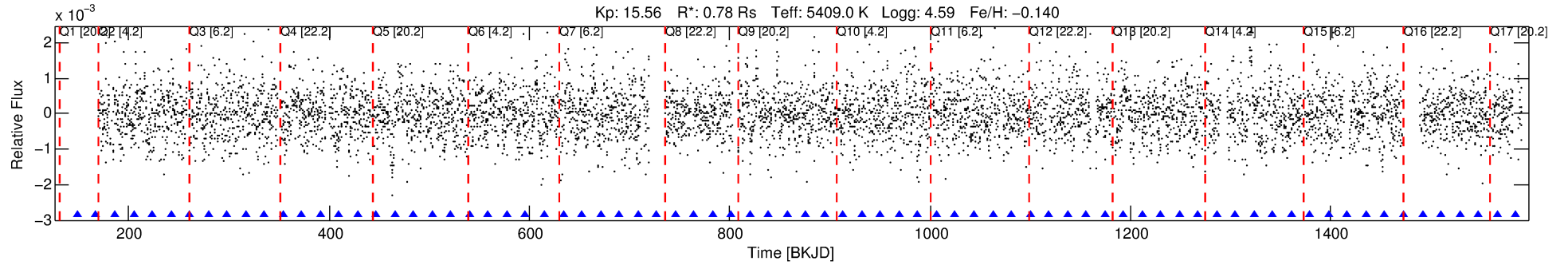
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006631948-06

No Significant Match Found

DV One-Page Summary

KIC: 6631948 Candidate: 6 of 7 Period: 18.644 d



DV Fit Results:

Period = 18.64386 [0.00023] d
Epoch = 148.9969 [0.0086] BKJD
Rp/R* = 0.0286 [0.0726]
a/R* = 66.99 [669.08]
b = 0.71 [7.22]
Seff = 27.39 [7.17]
Teq = 583 [38] K
Rp = 2.45 [6.22] Re
a = 0.1312 [0.0209] AU
Ag = 711.40 [3617.44] [0.20 σ]
Teff = 4658 [5917] K [0.69 σ]

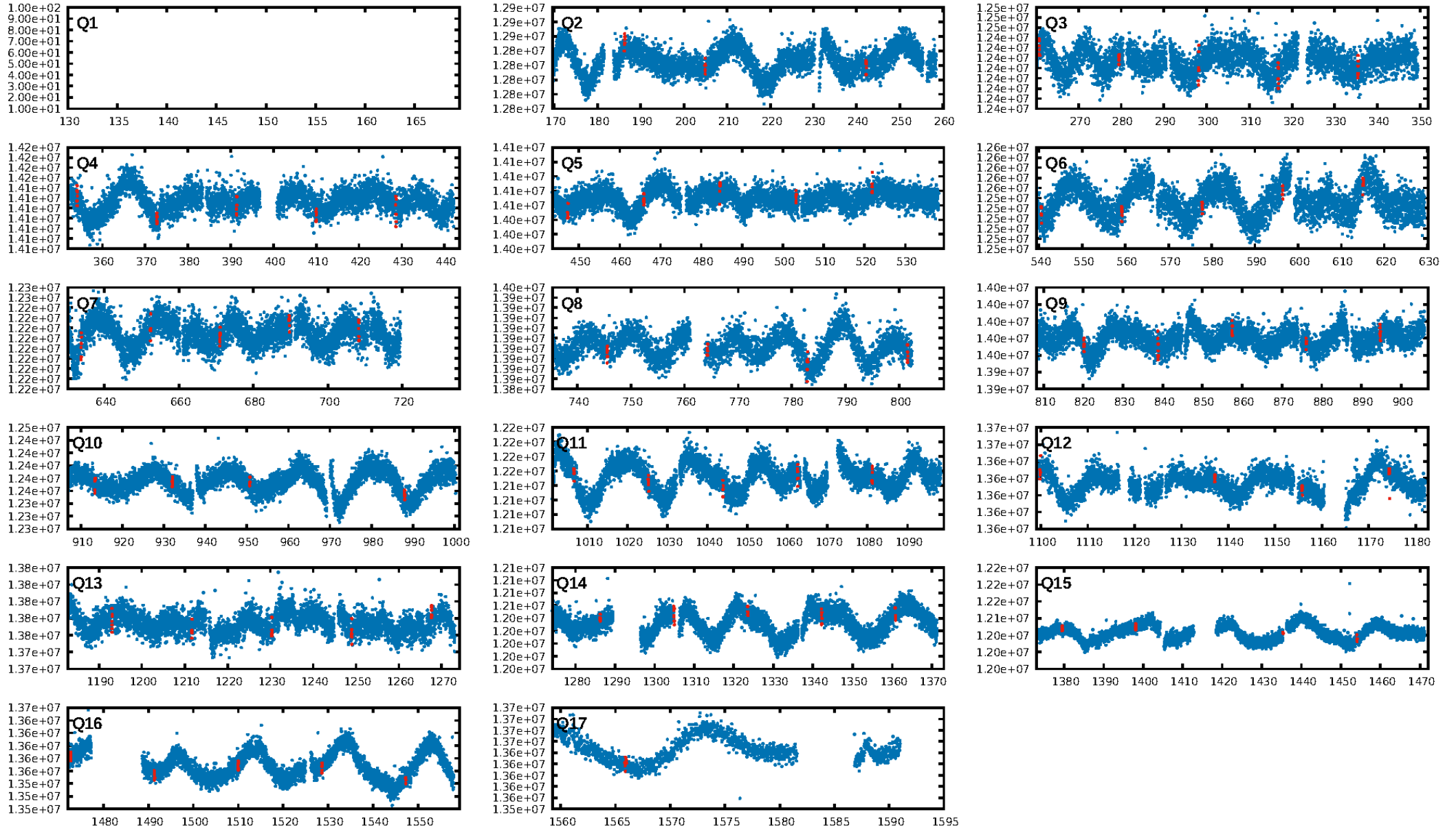
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [12.20 σ]
LongPeriod-sig: 100.0% [77.78 σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 11.7%
Bootstrap-pfa: 2.30e-09
RollingBand-fgt: 1.00 [14/14]
GhostDiagnostic-chr: 0.9584
Centroid-sig: 0.0%
Centroid-so: 3.248 arcsec [3.09 σ]
OotOffset-rm: 9.053 arcsec [115.55 σ]
KicOffset-rm: 9.370 arcsec [119.04 σ]
OotOffset-st: 0/4/0/0 [4]
KicOffset-st: 0/4/0/0 [4]
DiffImageQuality-fgm: 0.50 [2/4]
DiffImageOverlap-fno: 0.00 [0/16]

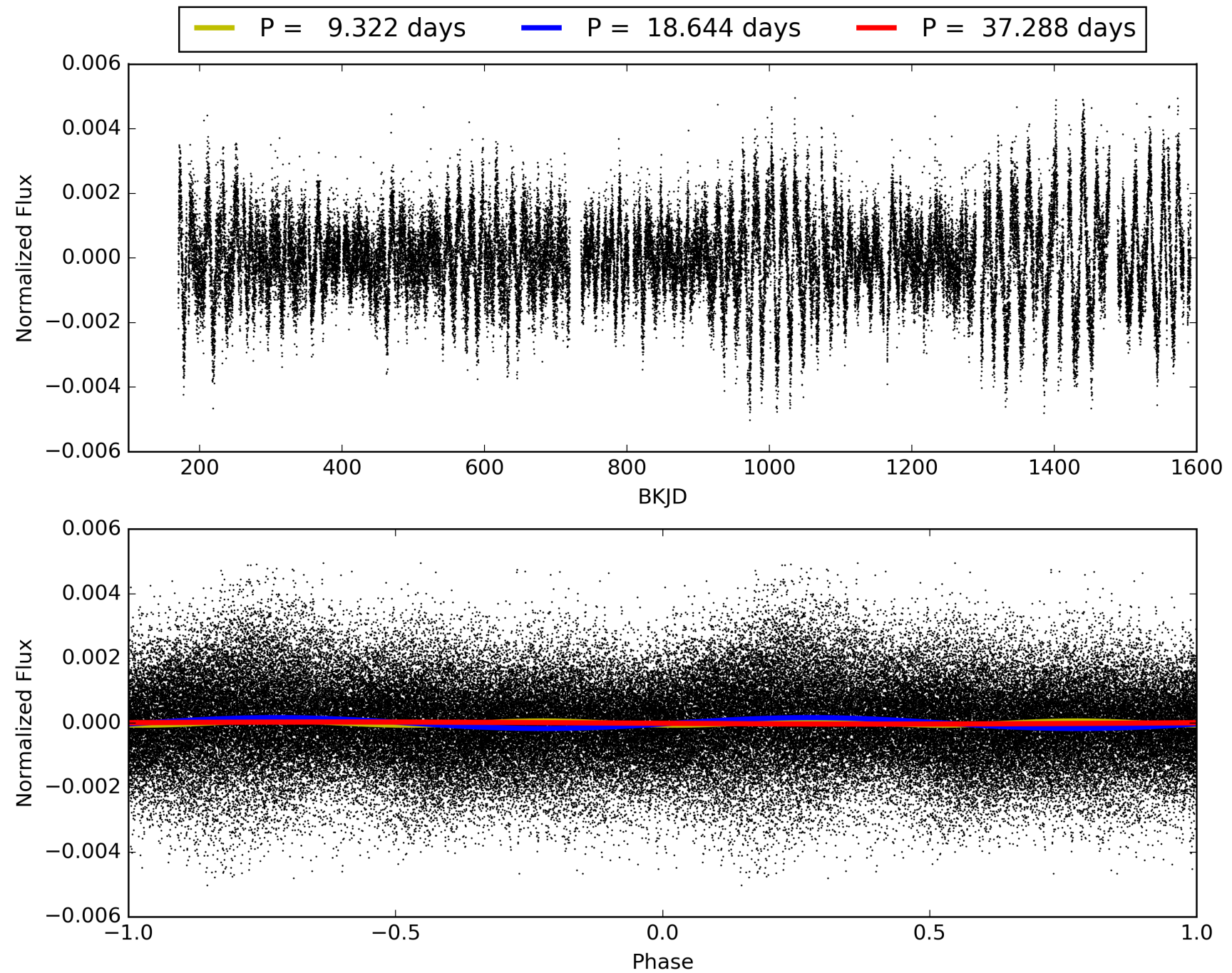
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:17:45 Z

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

TCE 006631948-06, PDC Light Curves

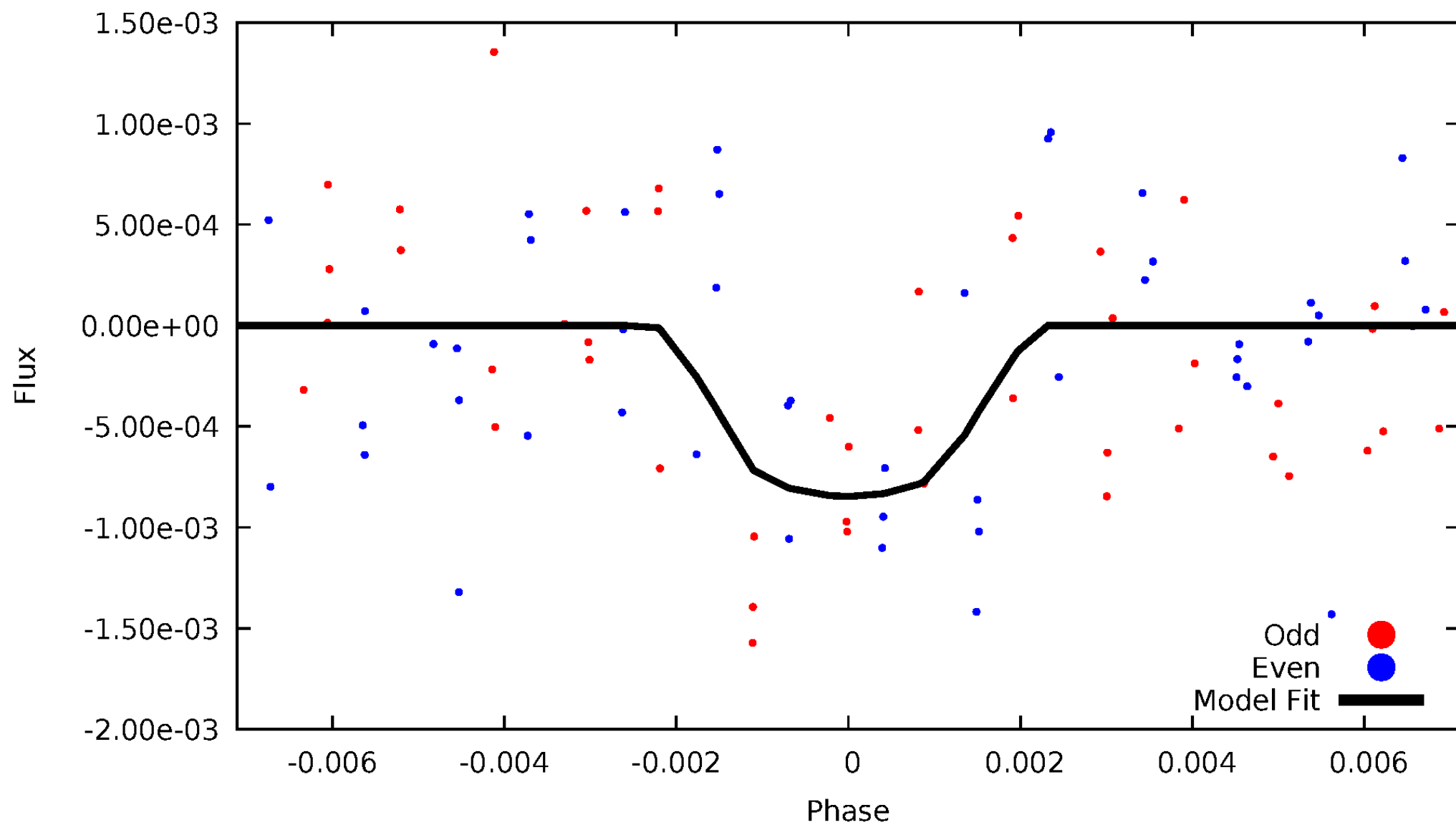


TCE 006631948-06



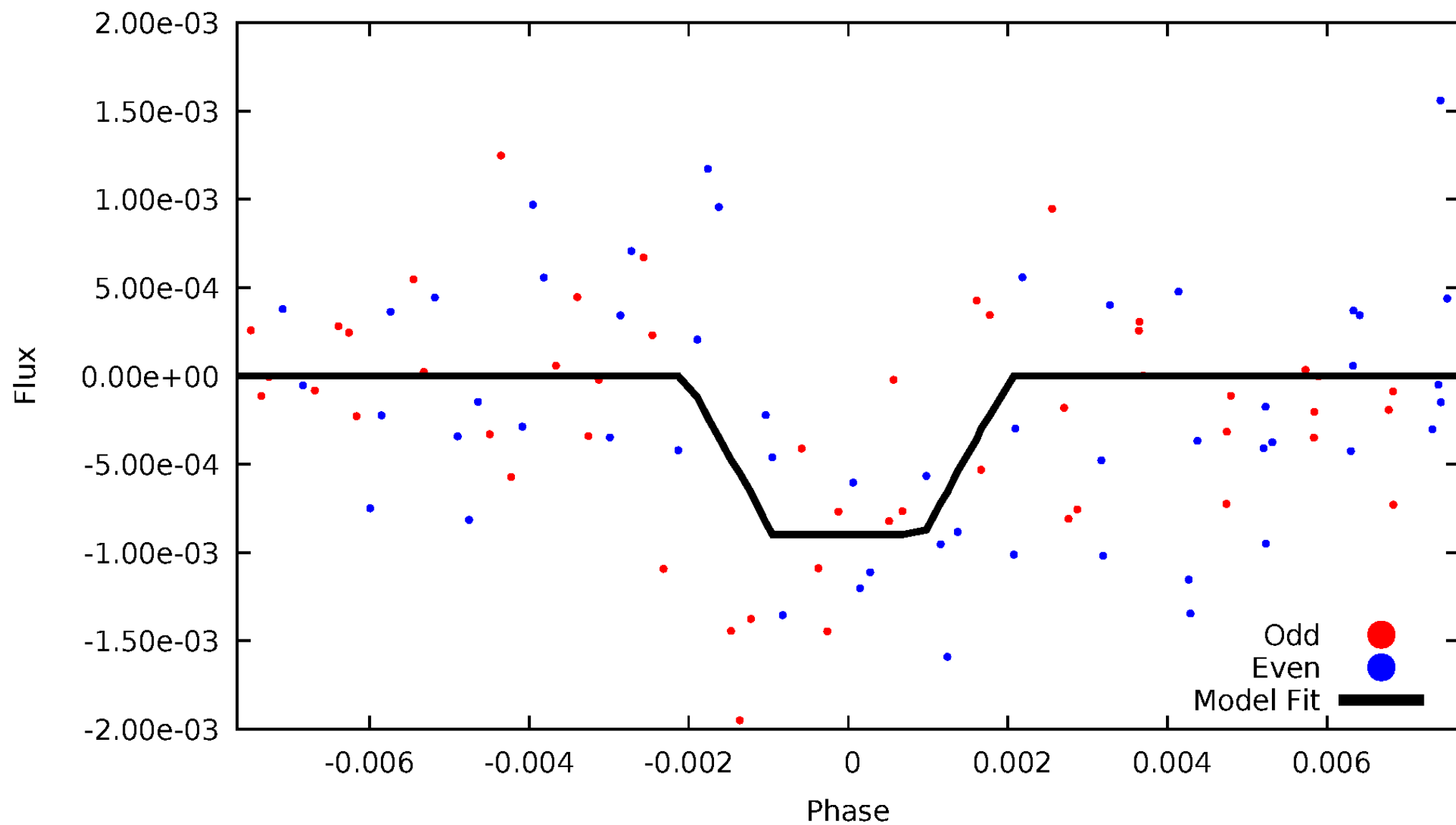
DV Odd/Even

TCE 006631948-06



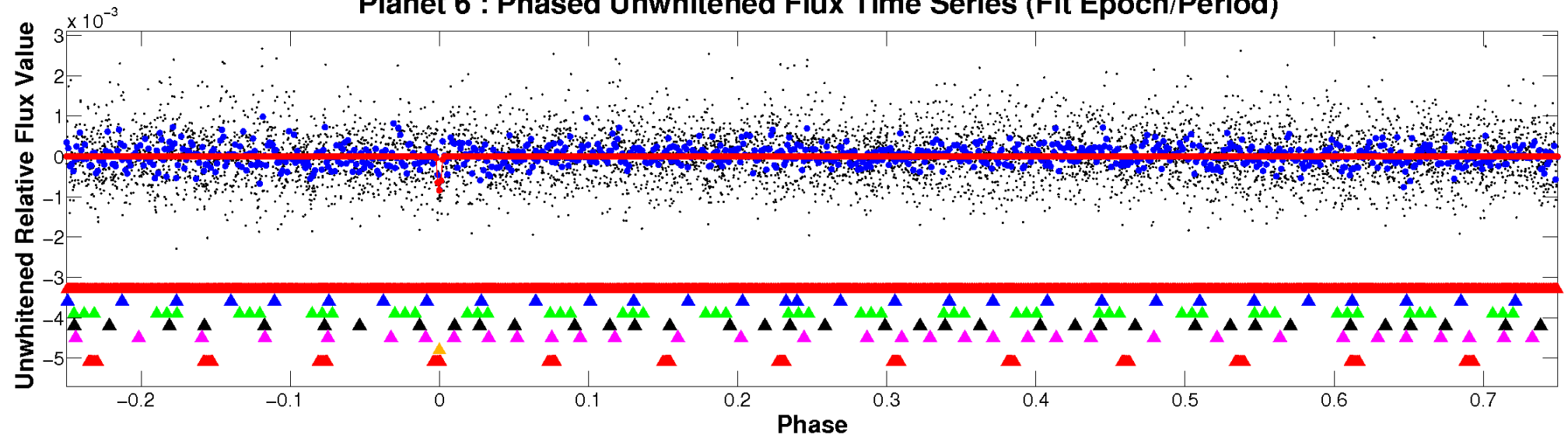
ALT Odd/Even

TCE 006631948-06

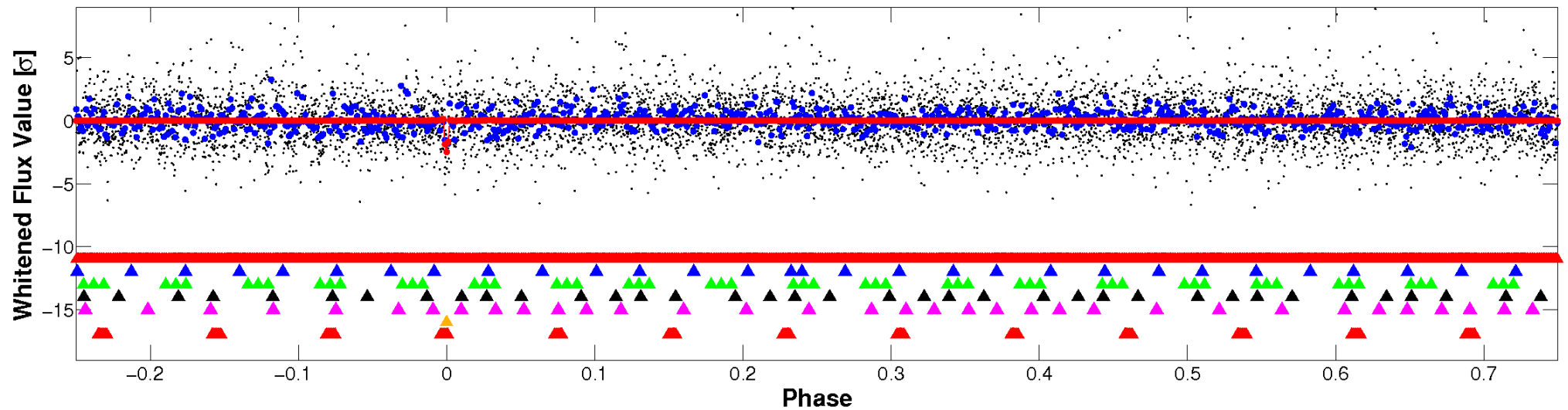


Non-Whitened Vs. Whitened Light Curve

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

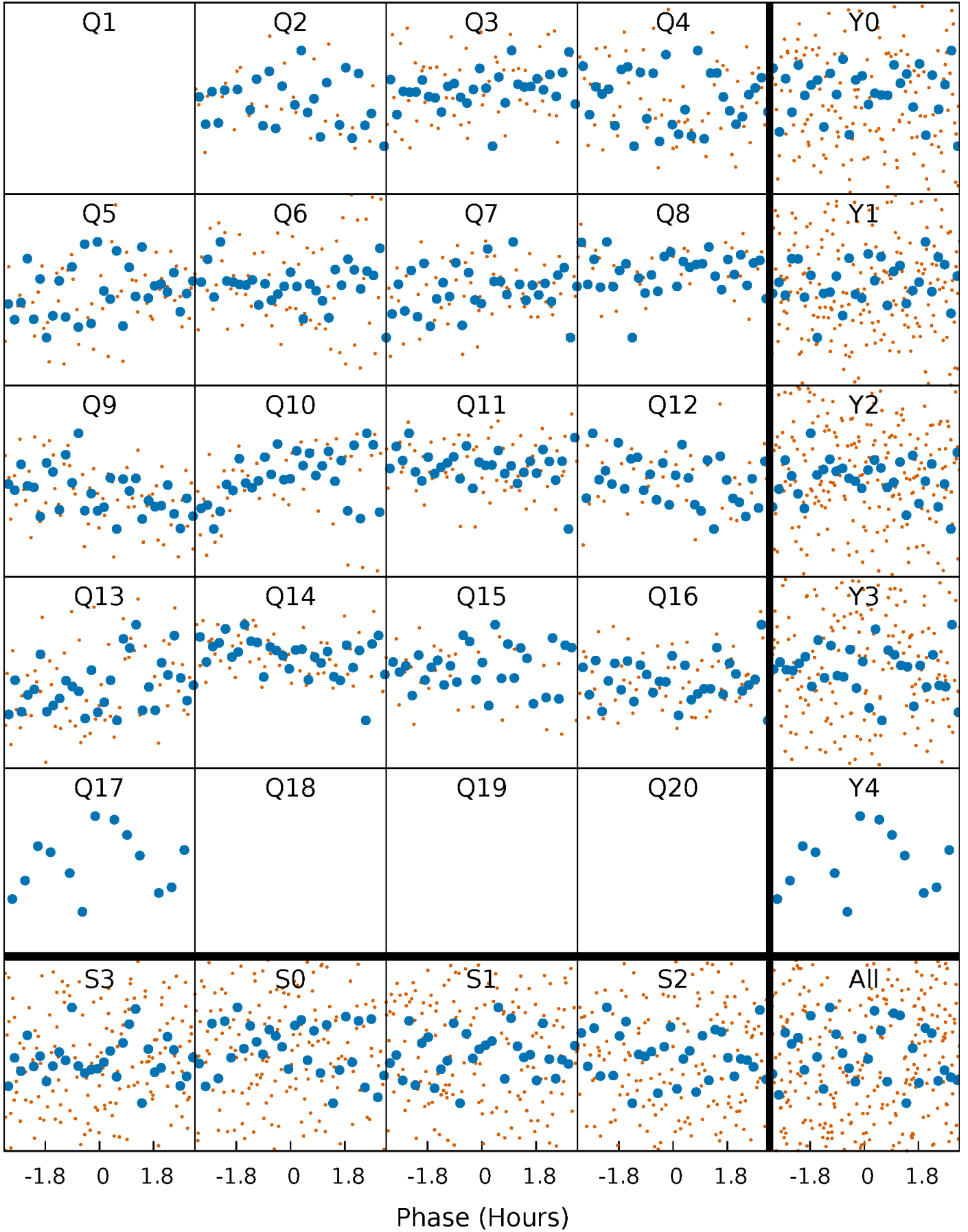


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



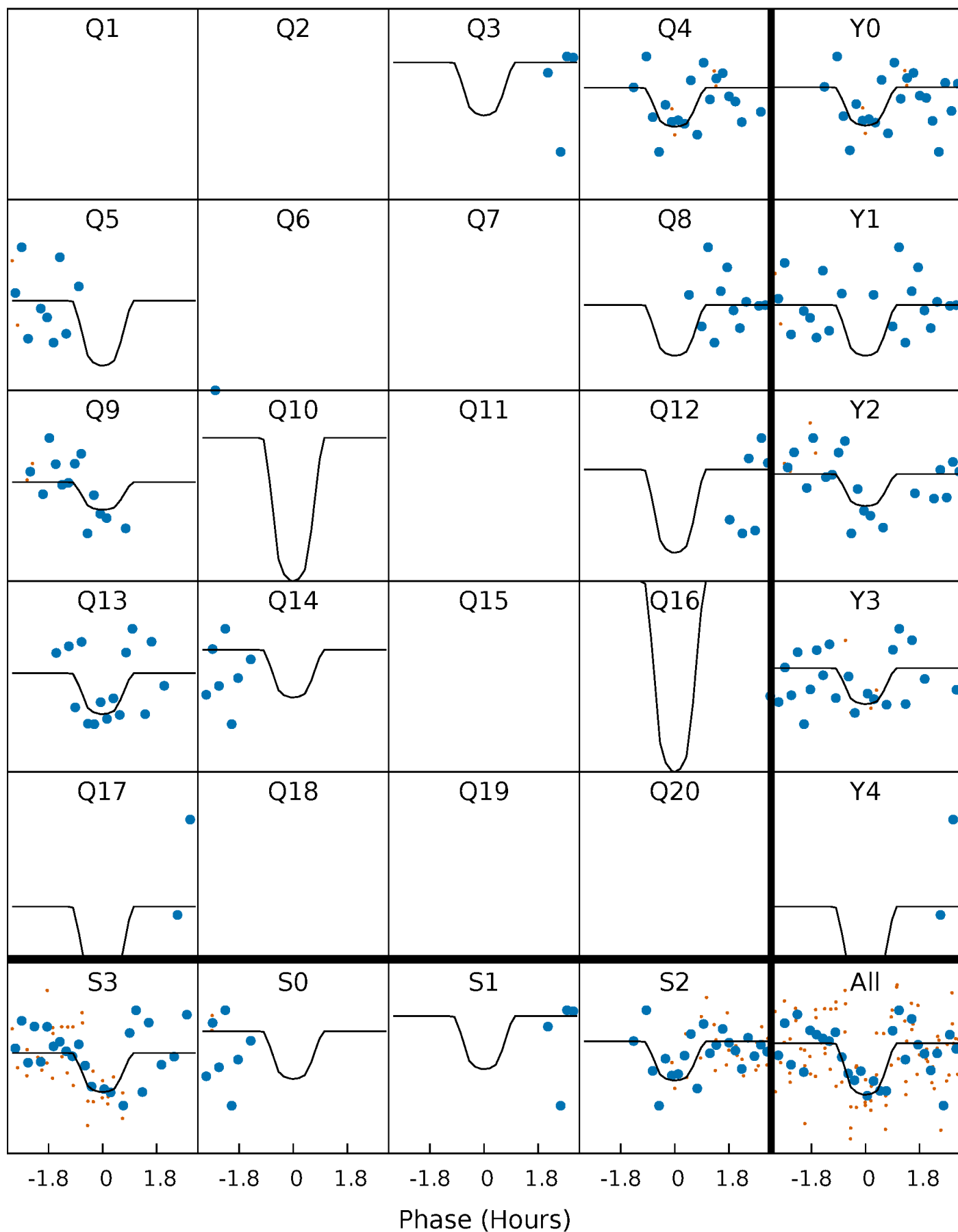
PDC Quarter-Phased Transit Curves

TCE 006631948-06 P= 18.643862 Days $T_0=148.996893$ (BKJD)



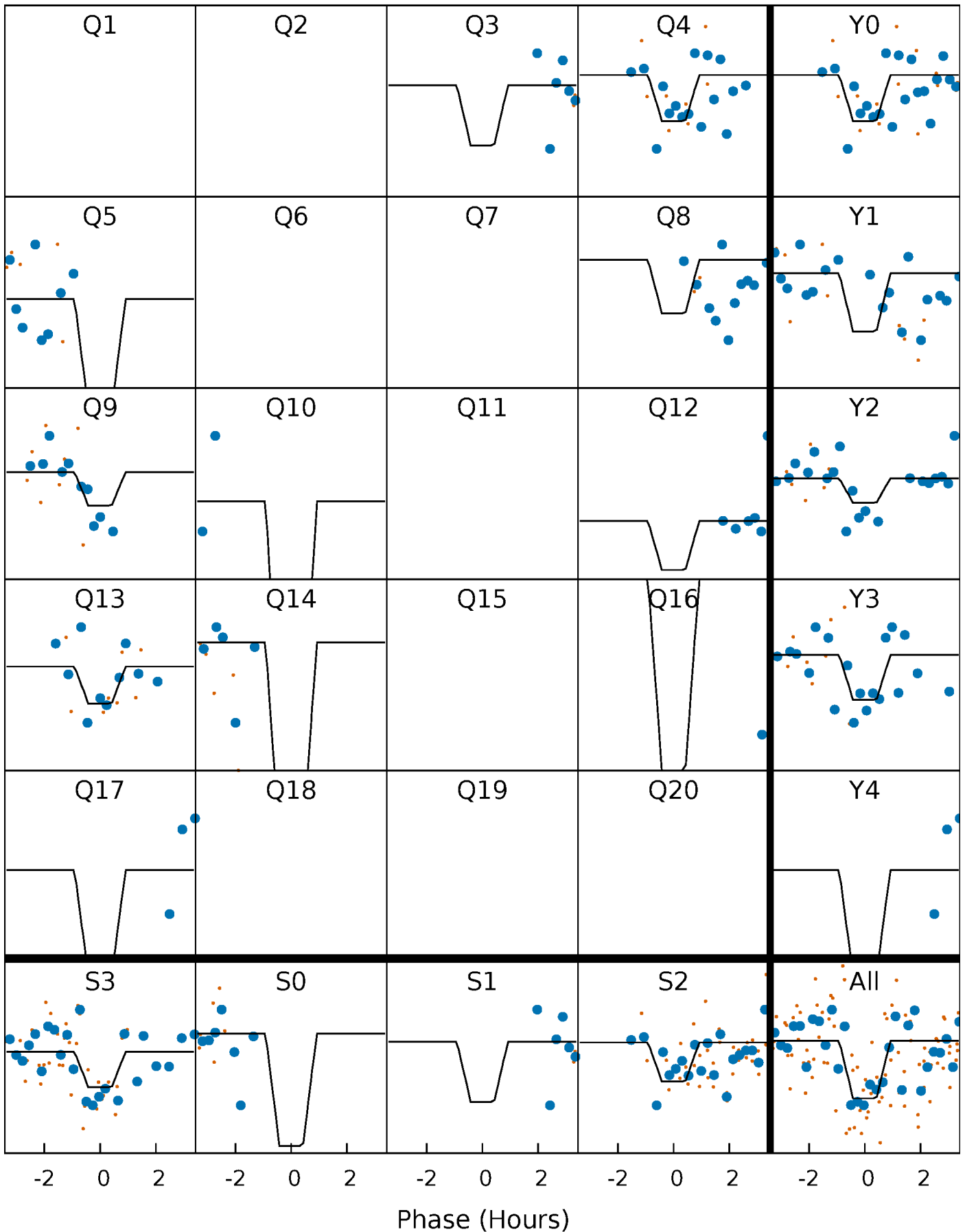
DV Quarter-Phased Transit Curves

TCE 006631948-06 P= 18.643862 Days $T_0=148.996893$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

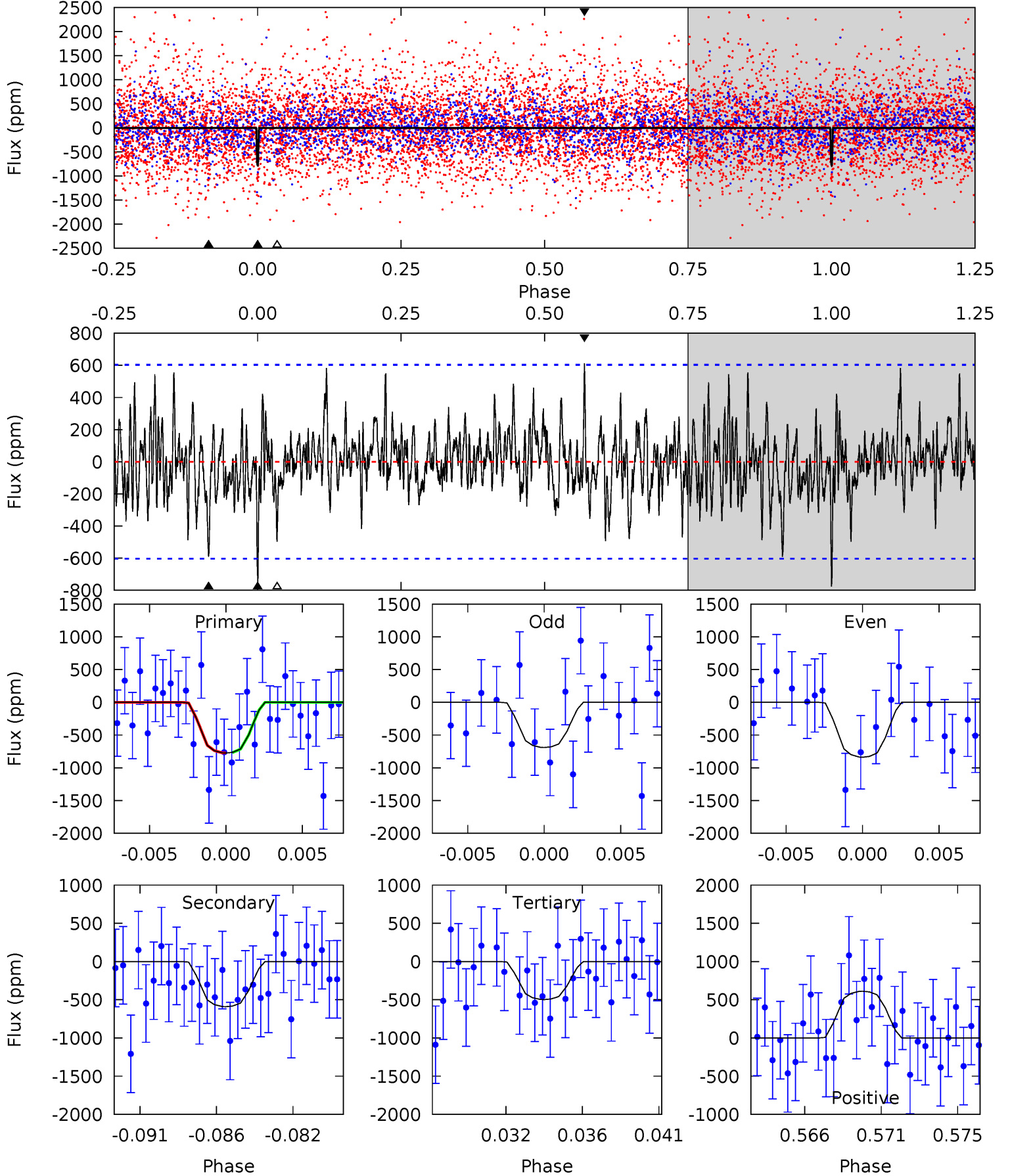
TCE 006631948-06 $P = 18.643762$ Days $T_0 = 149.005086$ (BKJD)



DV Model-Shift Uniqueness Test

006631948-06, P = 18.643862 Days, E = 148.996893 Days

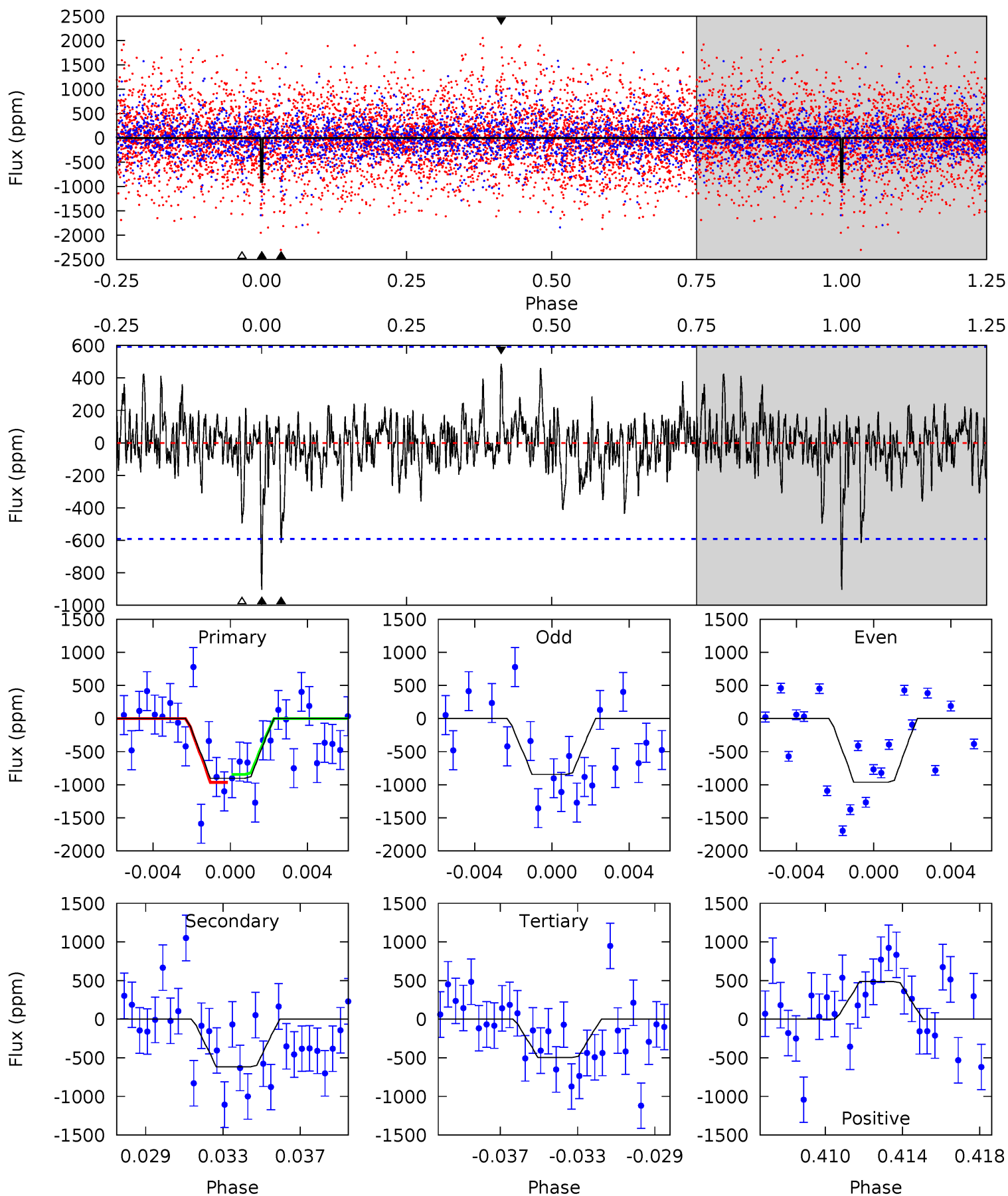
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.65	5.07	4.27	5.25	5.18	2.84	1.44	2.38	1.40	0.80	-0.18	0.65	0.94	0.44	0.04



Alt Model-Shift Uniqueness Test

006631948-06, $P = 18.643762$ Days, $E = 149.005086$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.96	5.43	4.37	4.28	5.22	2.91	1.17	3.59	3.68	1.06	1.15	0.53	0.88	0.35	0.53



Stellar Parameters For KIC 006631948

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5409^{+161}_{-161}	$4.587^{+0.032}_{-0.128}$	$-0.140^{+0.300}_{-0.300}$	$0.784^{+0.148}_{-0.063}$	$0.872^{+0.081}_{-0.098}$	$2.551^{+0.430}_{-0.953}$
	+3%/-3%	+1%/-3%	+214%/-214%	+19%/-8%	+9%/-11%	+17%/-37%
Source	PHO1	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 006631948-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-591 ± 117	$5.47^{+5.15}_{-3.56}$	827^{+40}_{-30}	3767^{+1963}_{-725}	180^{+1347}_{-133}
Alt.	-616 ± 113	$5.76^{+4.86}_{-4.05}$	830^{+38}_{-31}	3735^{+2255}_{-669}	184^{+1644}_{-135}

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

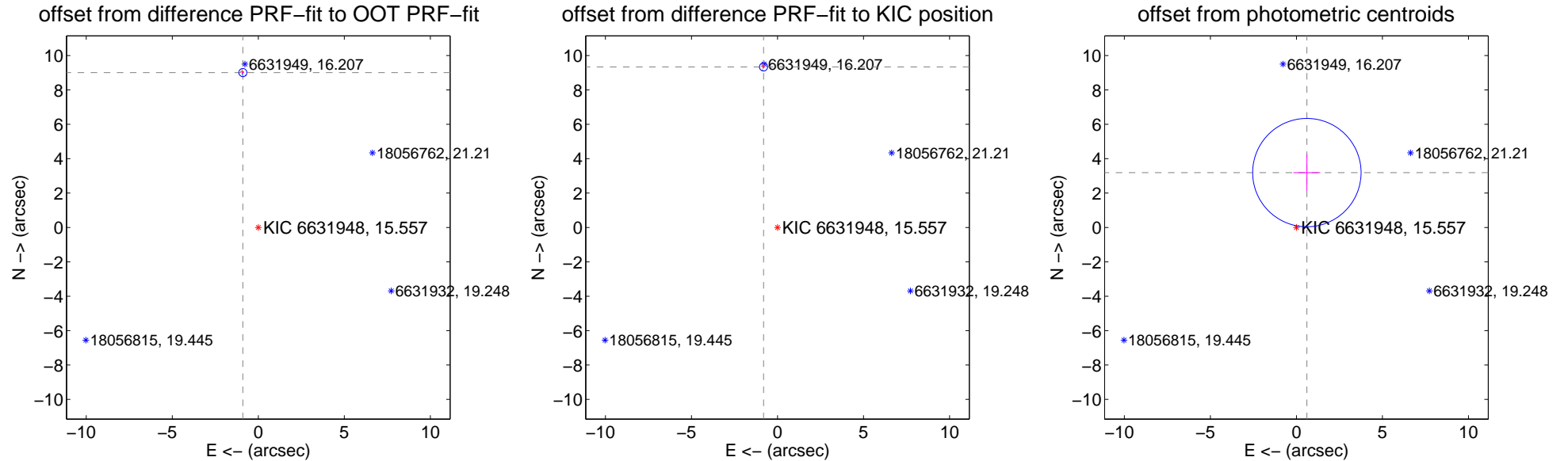
DV Centroid Data

Supplemental centroid analysis for 006631948-06. Kepler magnitude: 15.56. Transit SNR 9.77

There are 2 quarters with good PRF difference image offsets

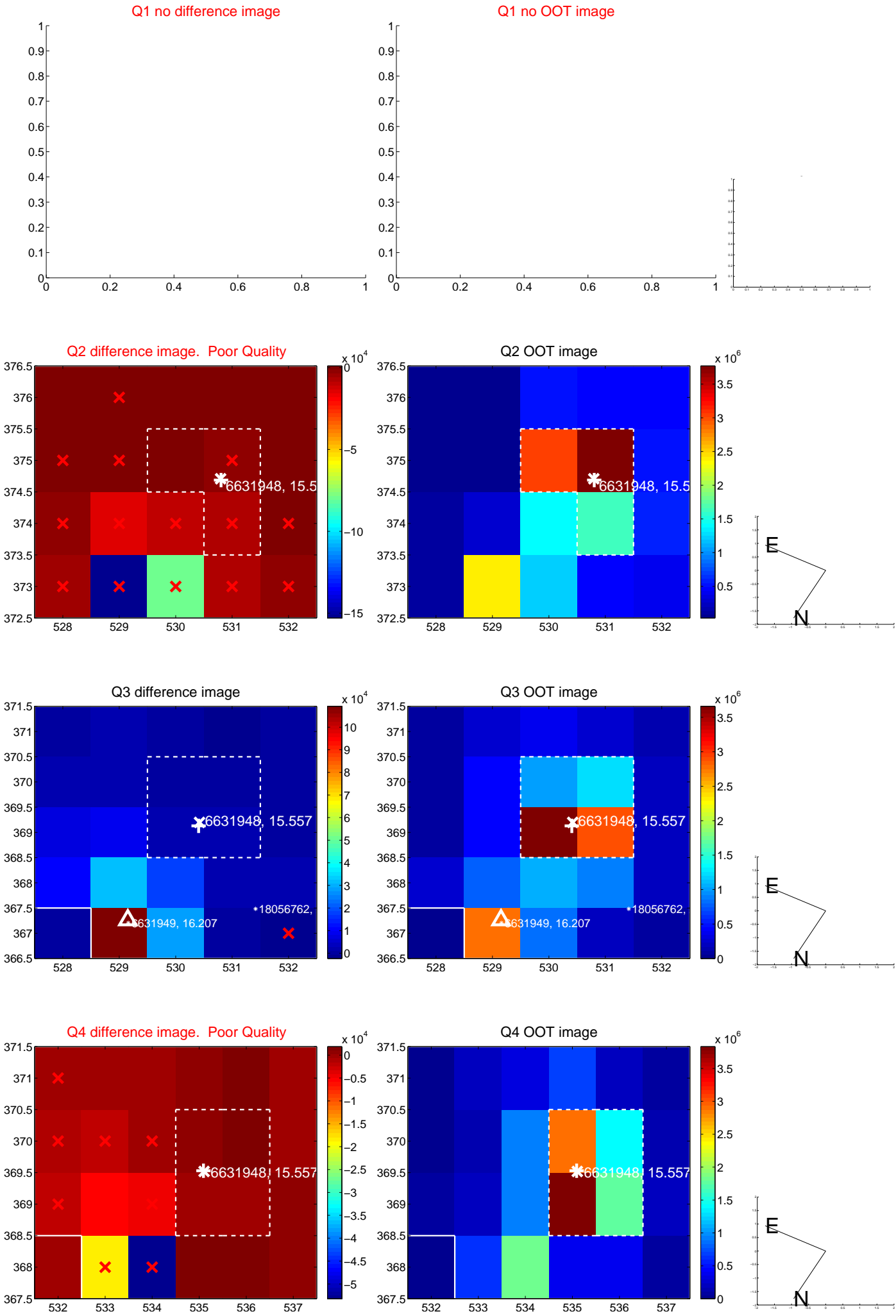
The direct PRF centroid is offset from the target star catalog position by about 0.32 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	9.053 \pm 0.078	115.55	0.897 \pm 0.068	9.008 \pm 0.078
PRF-fit source offset from KIC position	9.370 \pm 0.079	119.04	0.812 \pm 0.068	9.335 \pm 0.079
photometric centroid source offset	3.25 \pm 1.05	3.09	-0.61 \pm 0.78	3.19 \pm 1.06

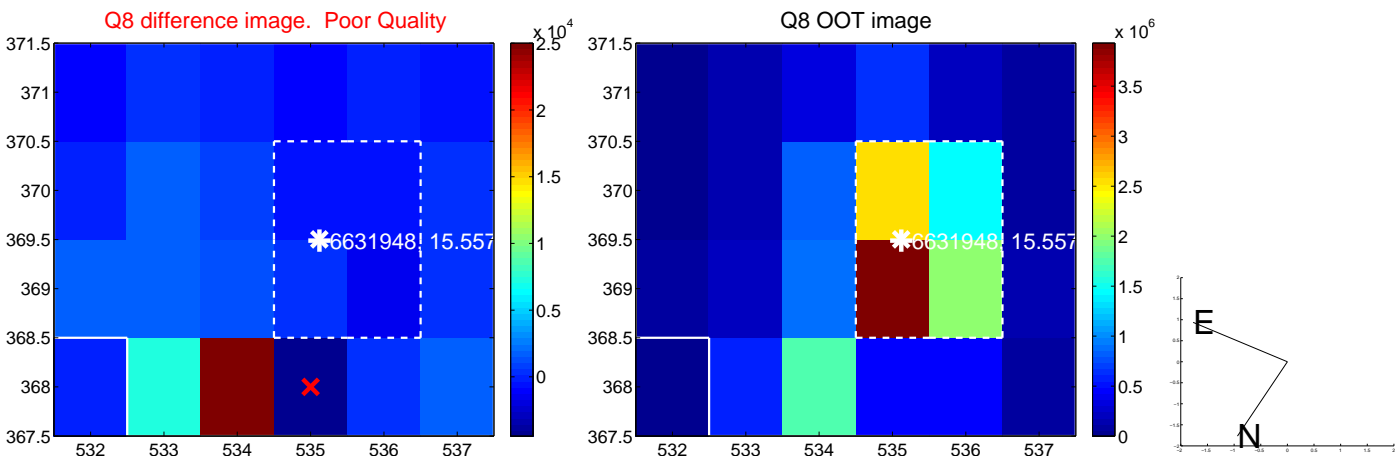
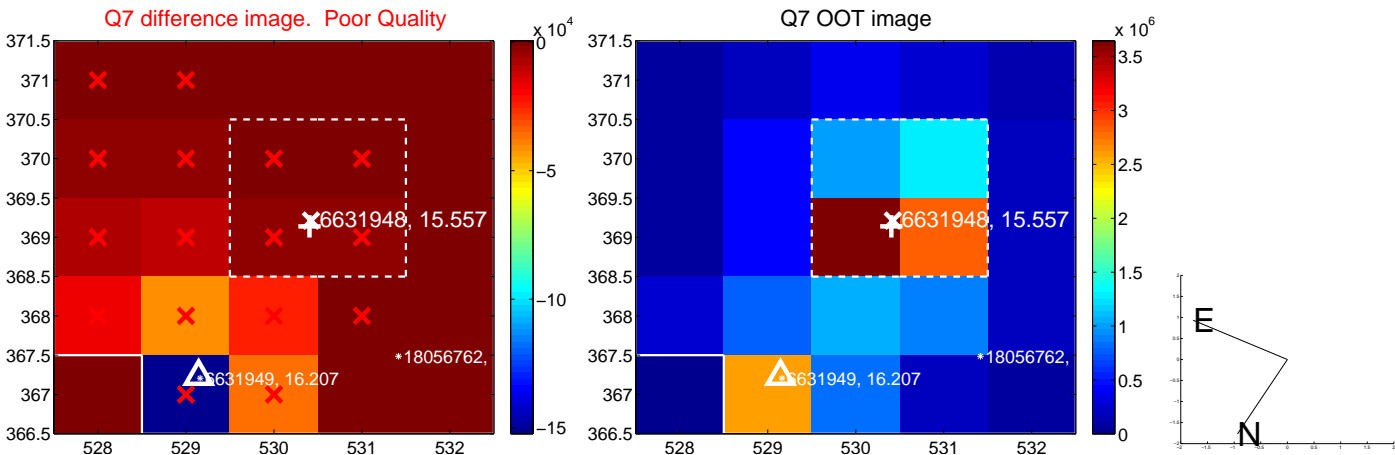
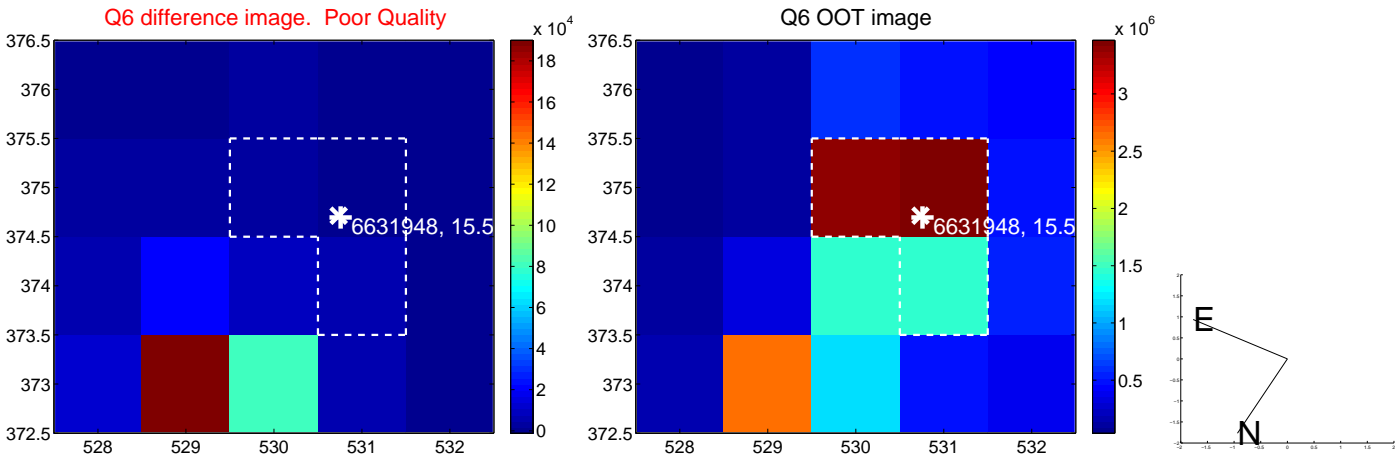
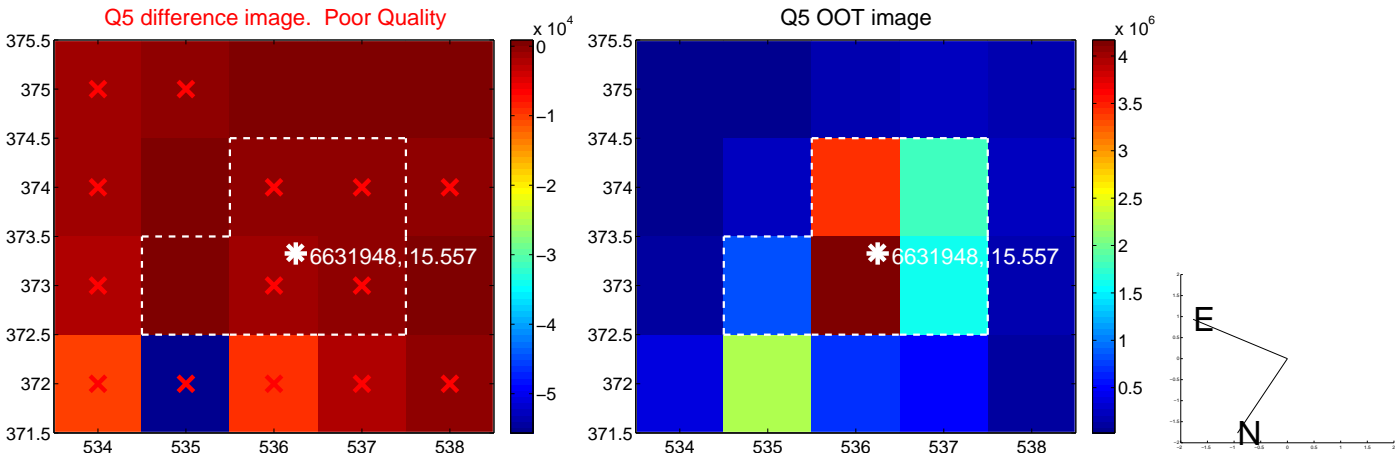


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

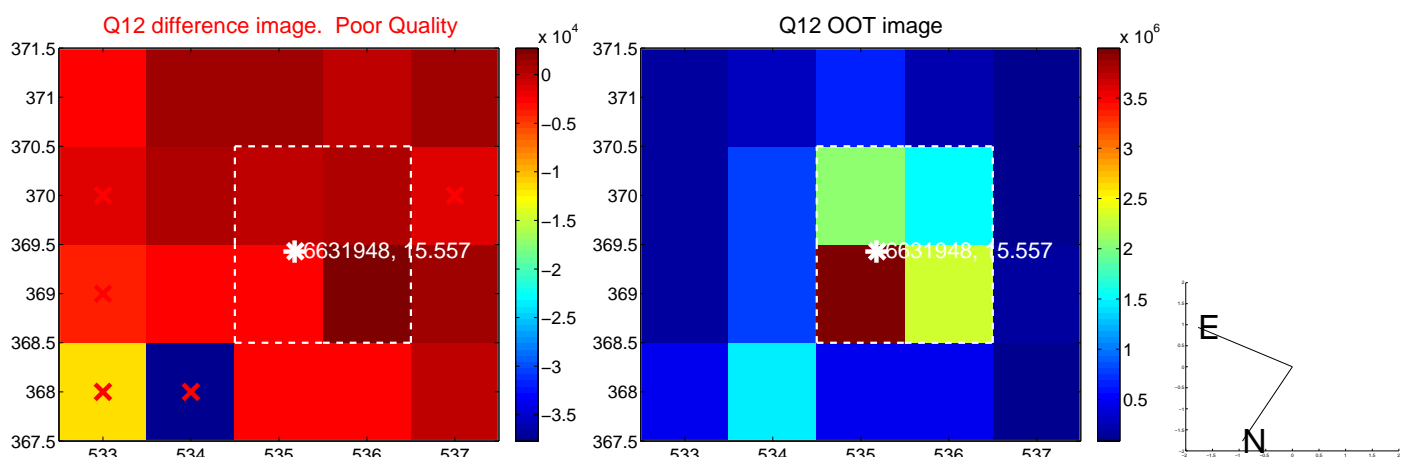
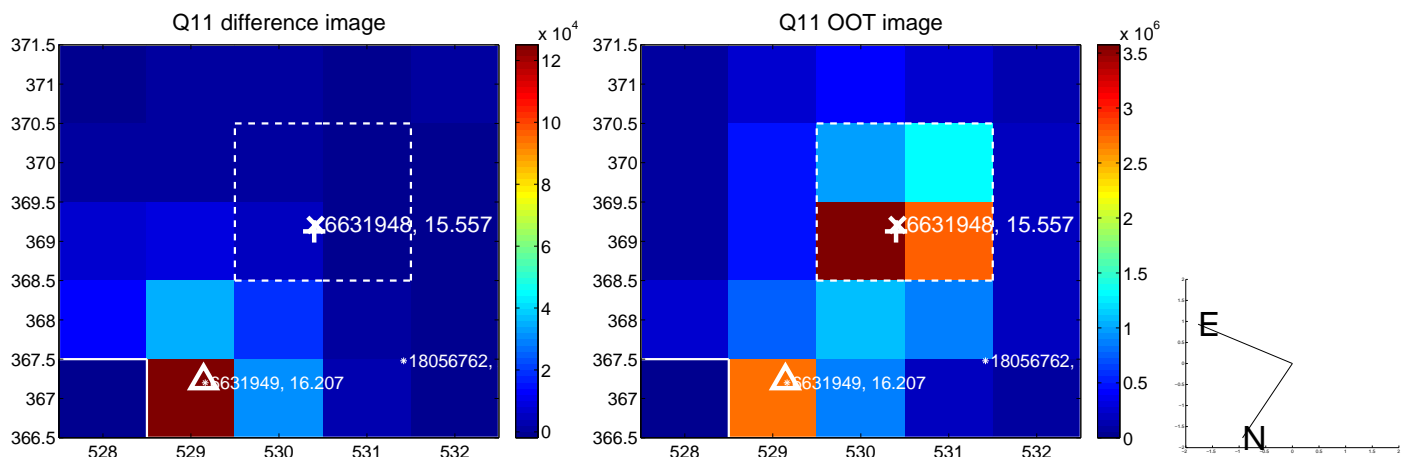
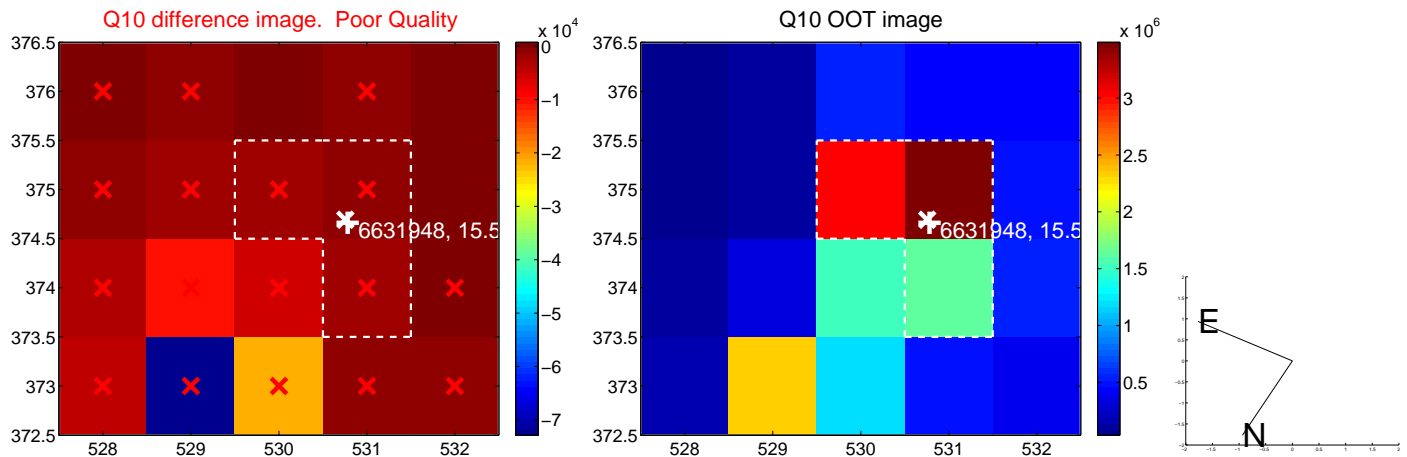
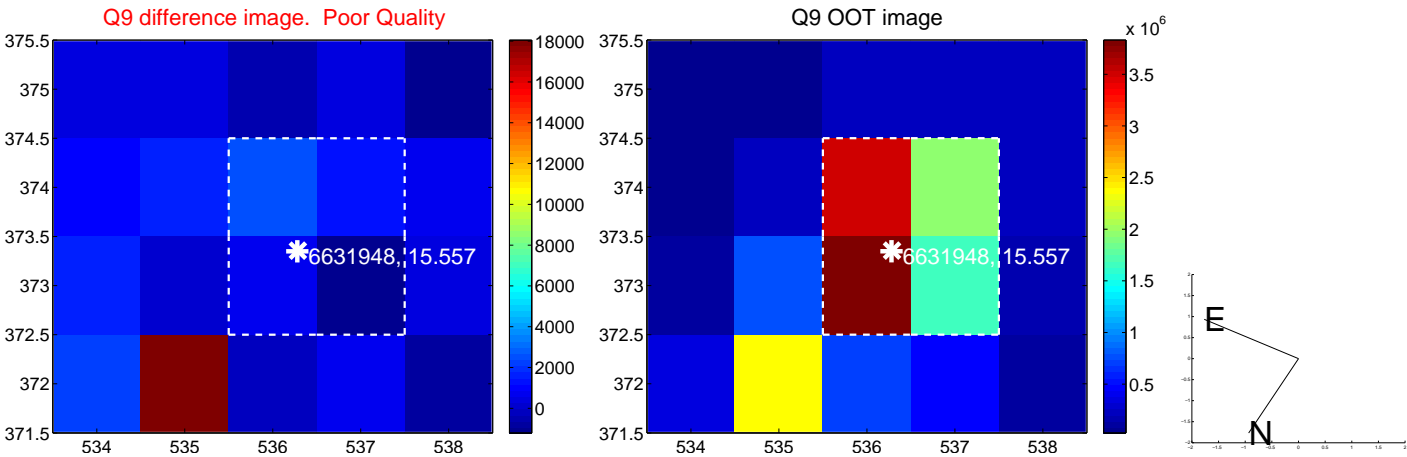
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



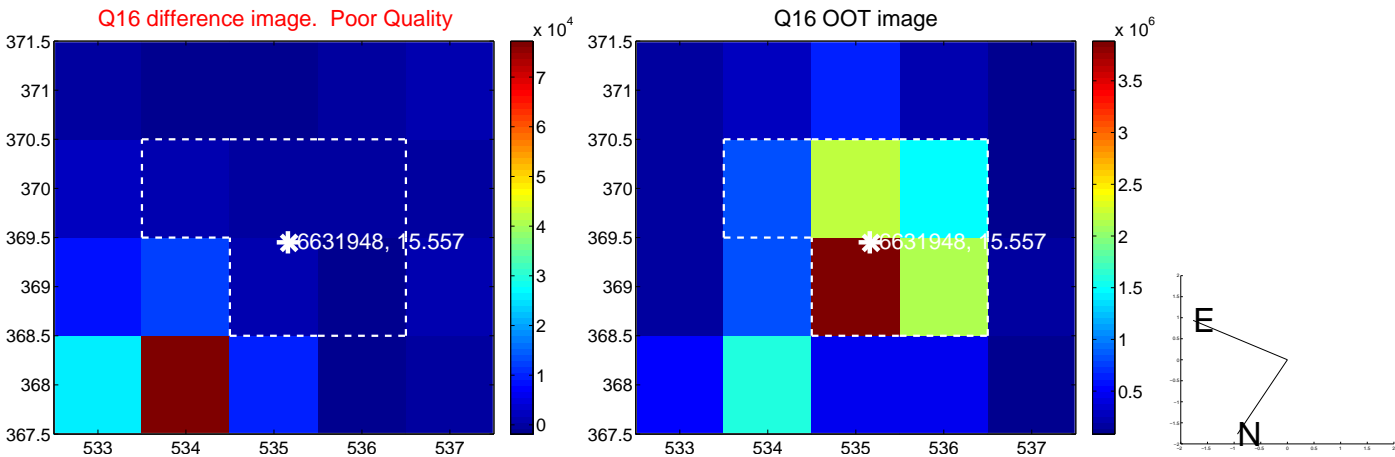
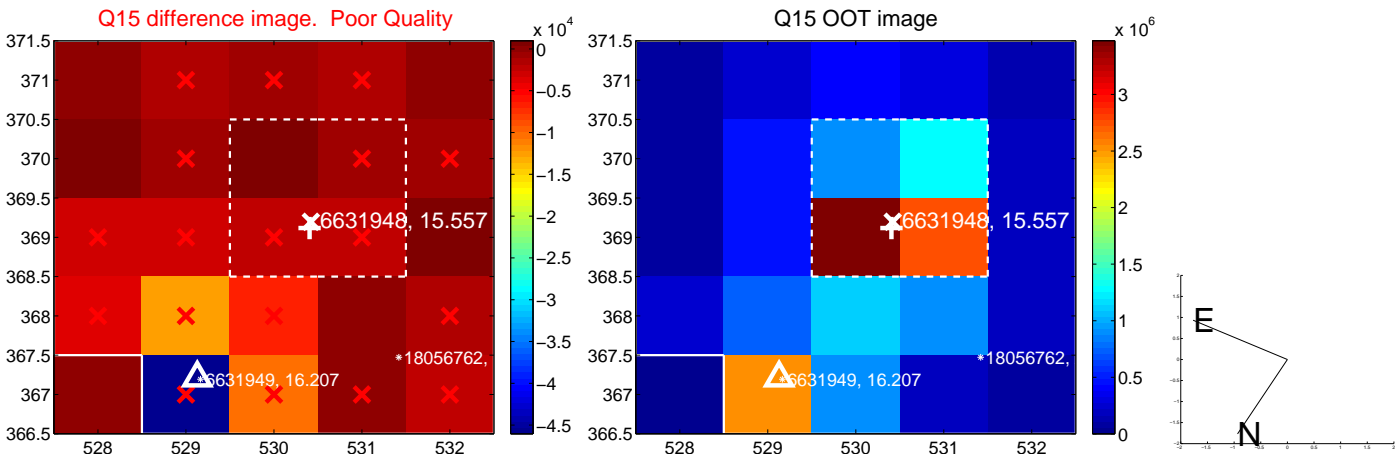
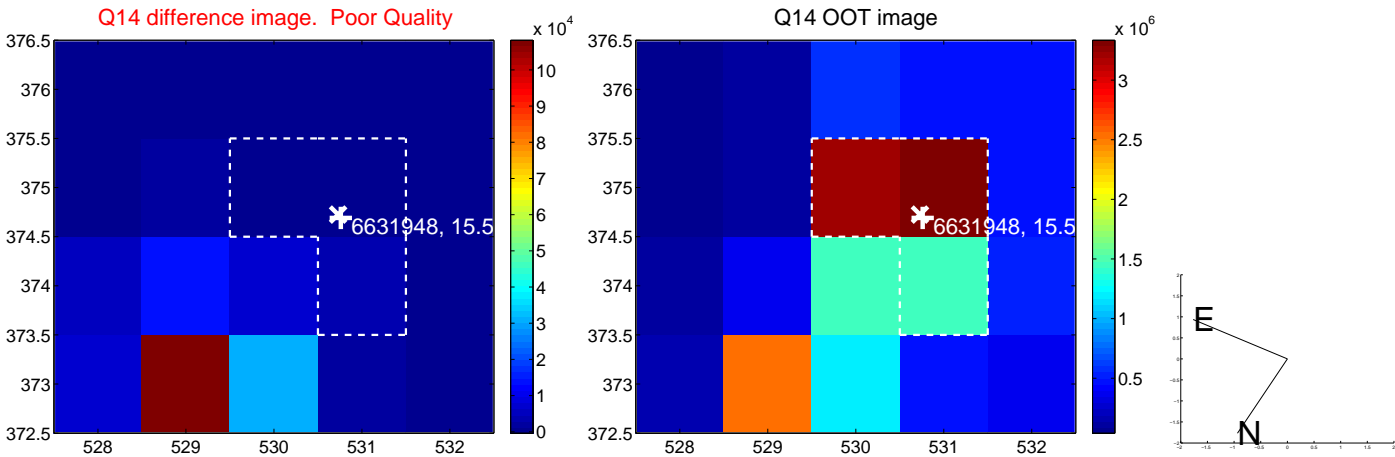
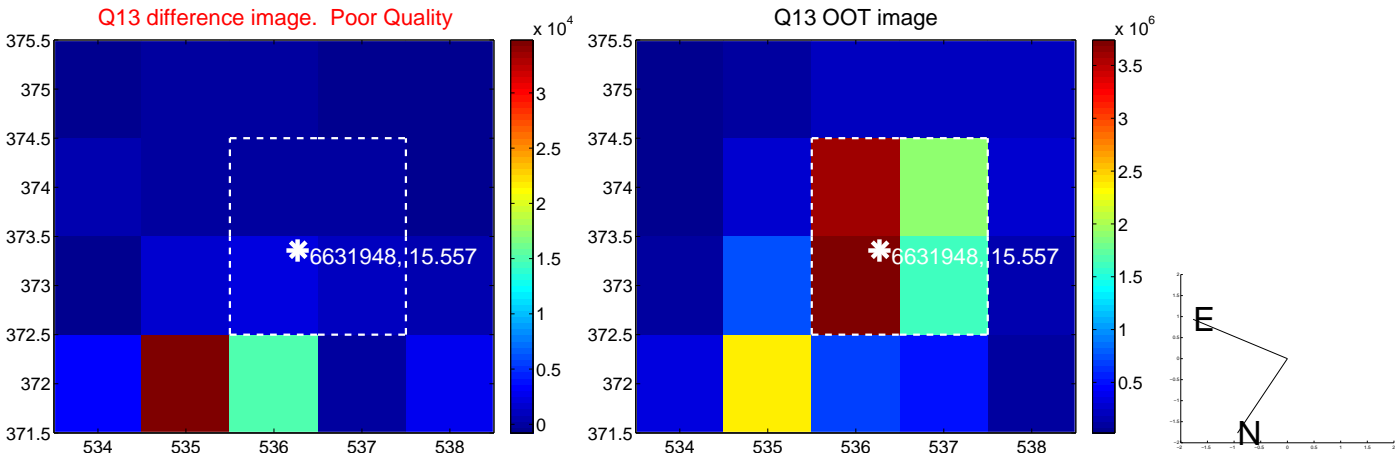
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



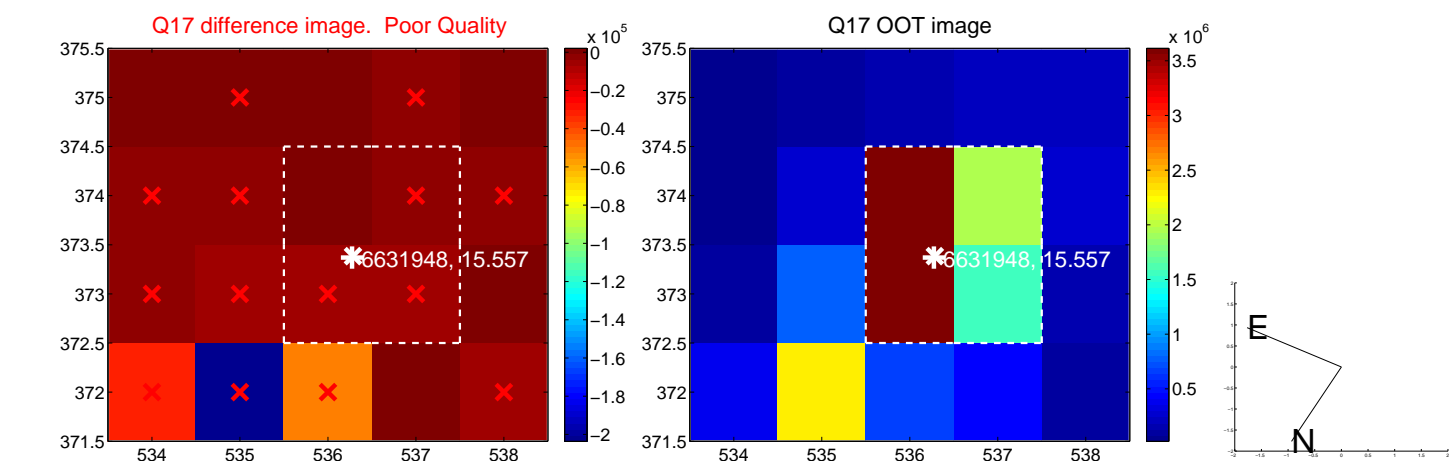
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



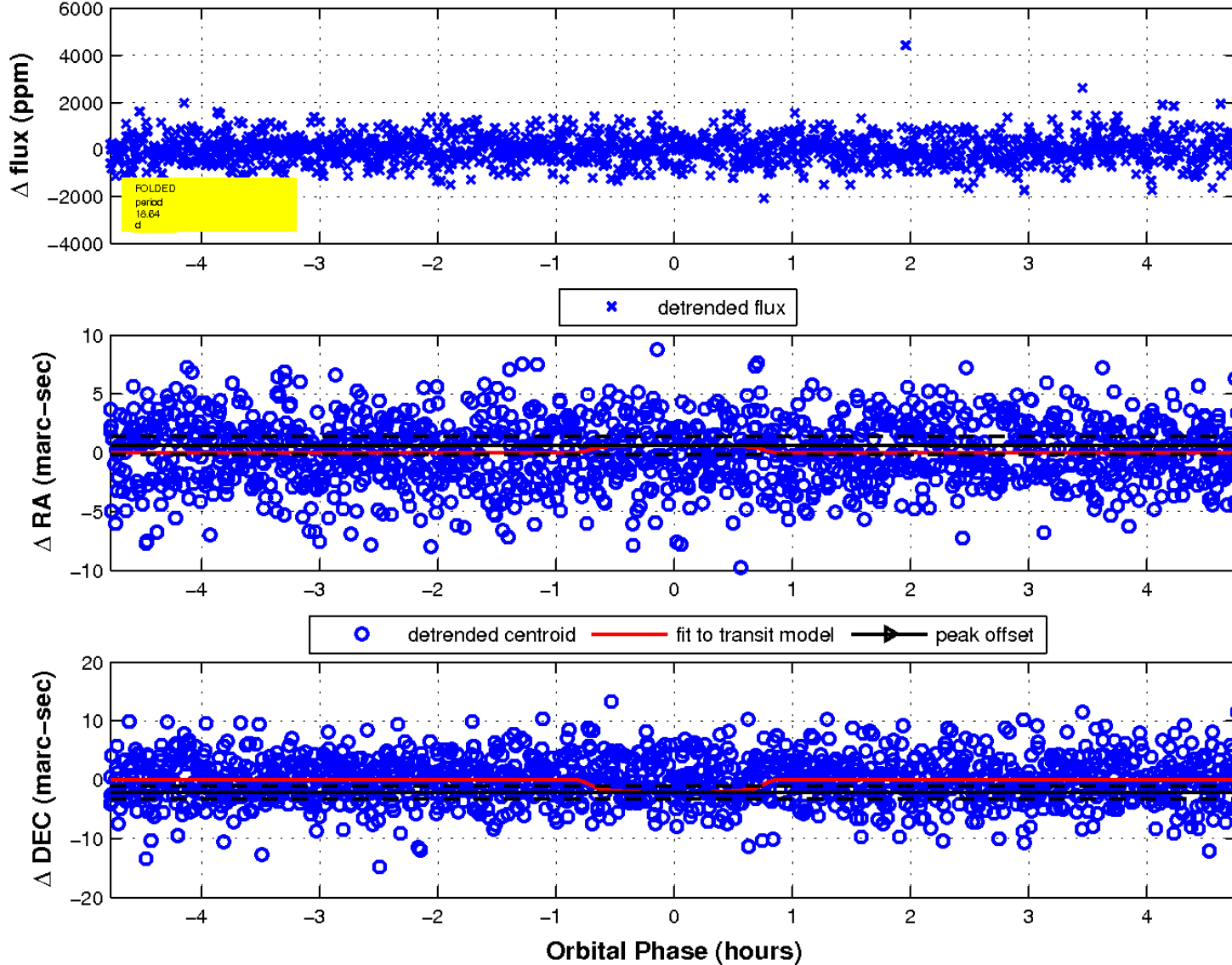
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

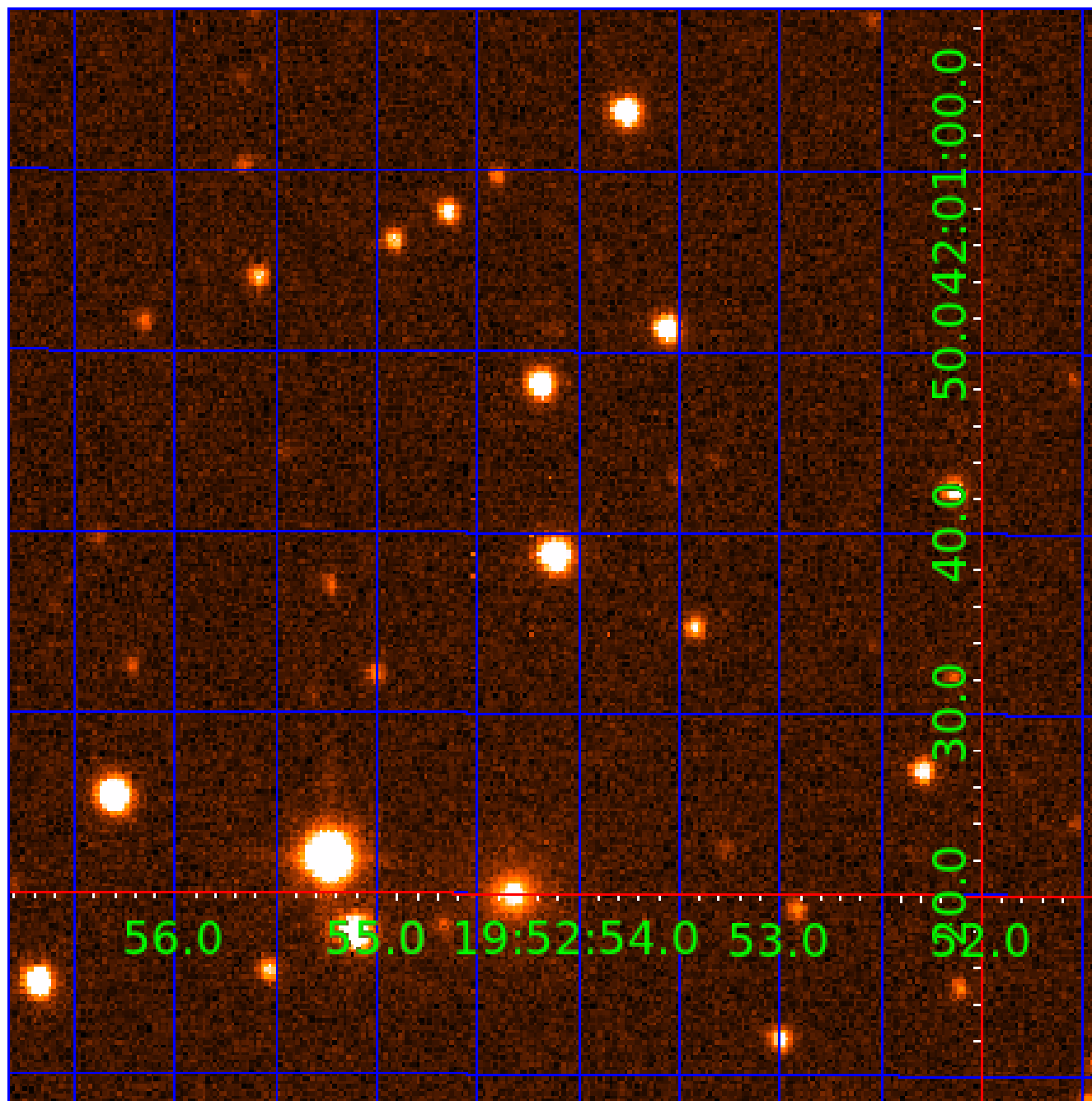


fluxWeightedCentroids, Planet 6 of 7



UKIRT Image

Declination



KIC 006631948

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})
006631948-01	OBS	No	0.641894	132.391949	0.0	4.412	7.4	0.0	0.78	5409	0.01	2445.05
006631948-02	OBS	No	48.855077	153.468091	1249.1	1.428	11.2	8.9	0.78	5409	2.99	7.58
006631948-03	OBS	No	25.505965	139.890262	1335.6	1.398	9.5	10.2	0.78	5409	2.88	18.03
006631948-04	OBS	No	39.227192	149.187864	1471.9	2.047	11.5	11.2	0.78	5409	3.12	10.16
006631948-05	OBS	No	43.239576	150.757152	1431.3	1.253	11.8	7.3	0.78	5409	3.33	8.92
006631948-06	OBS	No	18.643862	148.996893	846.7	1.590	9.5	9.8	0.78	5409	2.45	27.39
006631948-07	OBS	No	17.208289	147.594402	630.5	2.335	8.2	7.8	0.78	5409	2.18	30.47

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006631948-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—CENT_RESOLVED_OFFSET
006631948-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—CENT_RESOLVED_OFFSET
006631948-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_RESOLVED_OFFSET
006631948-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—CENT_RESOLVED_OFFSET
006631948-05	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_RESOLVED_OFFSET—HALO_GHOST
006631948-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET
006631948-07	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_RESOLVED_OFFSET

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

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

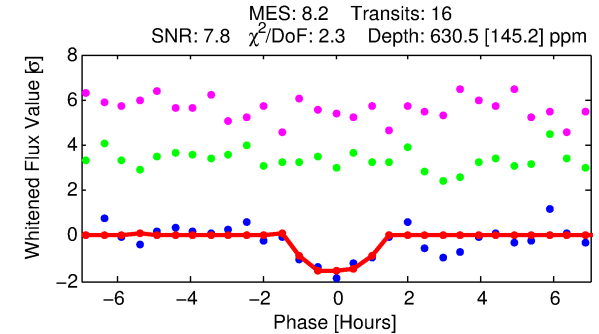
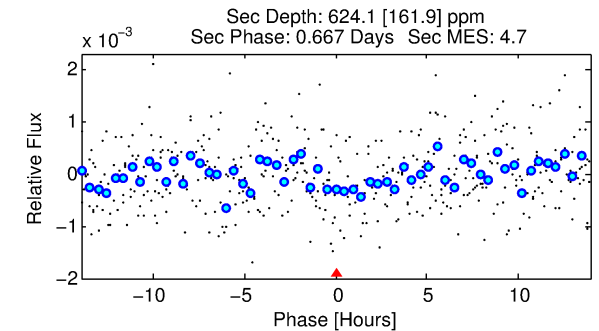
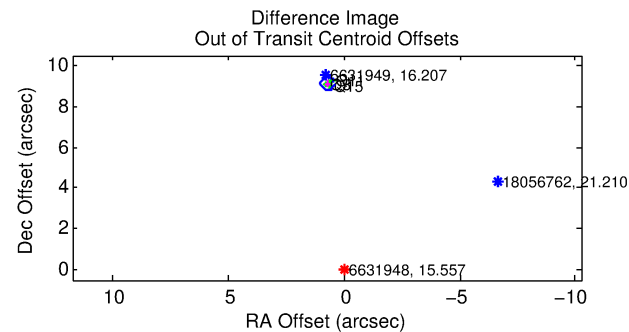
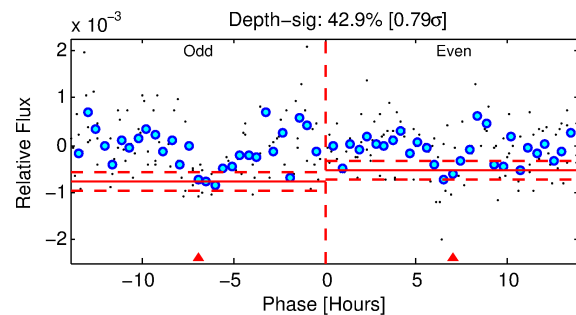
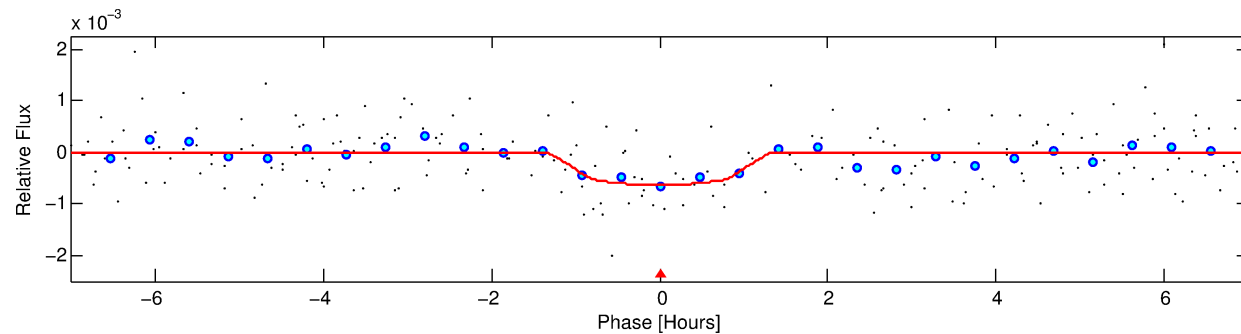
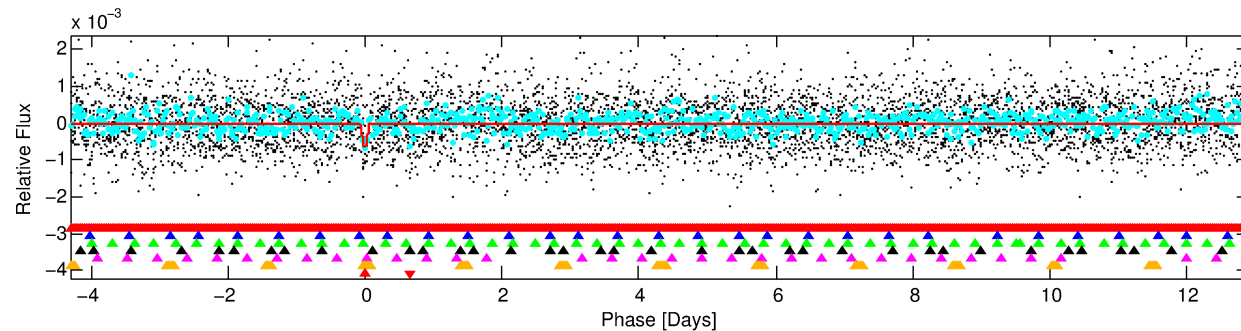
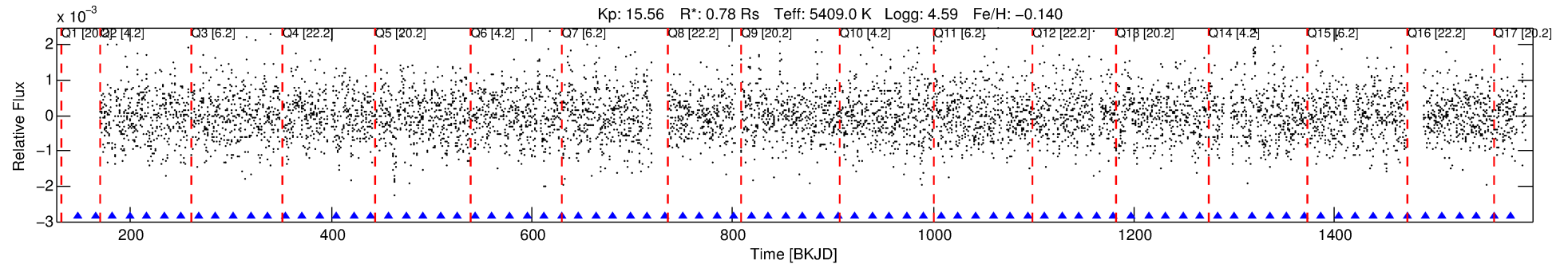
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006631948-07

No Significant Match Found

DV One-Page Summary

KIC: 6631948 Candidate: 7 of 7 Period: 17.208 d



DV Fit Results:

Period = 17.20829 [0.00027] d
Epoch = 147.5944 [0.0116] BKJD
Rp/R* = 0.0255 [0.0730]
a/R* = 37.11 [431.09]
b = 0.79 [5.81]
Seff = 30.47 [7.98]
Teq = 599 [39] K
Rp = 2.18 [6.26] Re
a = 0.1244 [0.0199] AU
Ag = 1118.04 [6420.81] [0.17 σ]
Teff = 5356 [7685] K [0.62 σ]

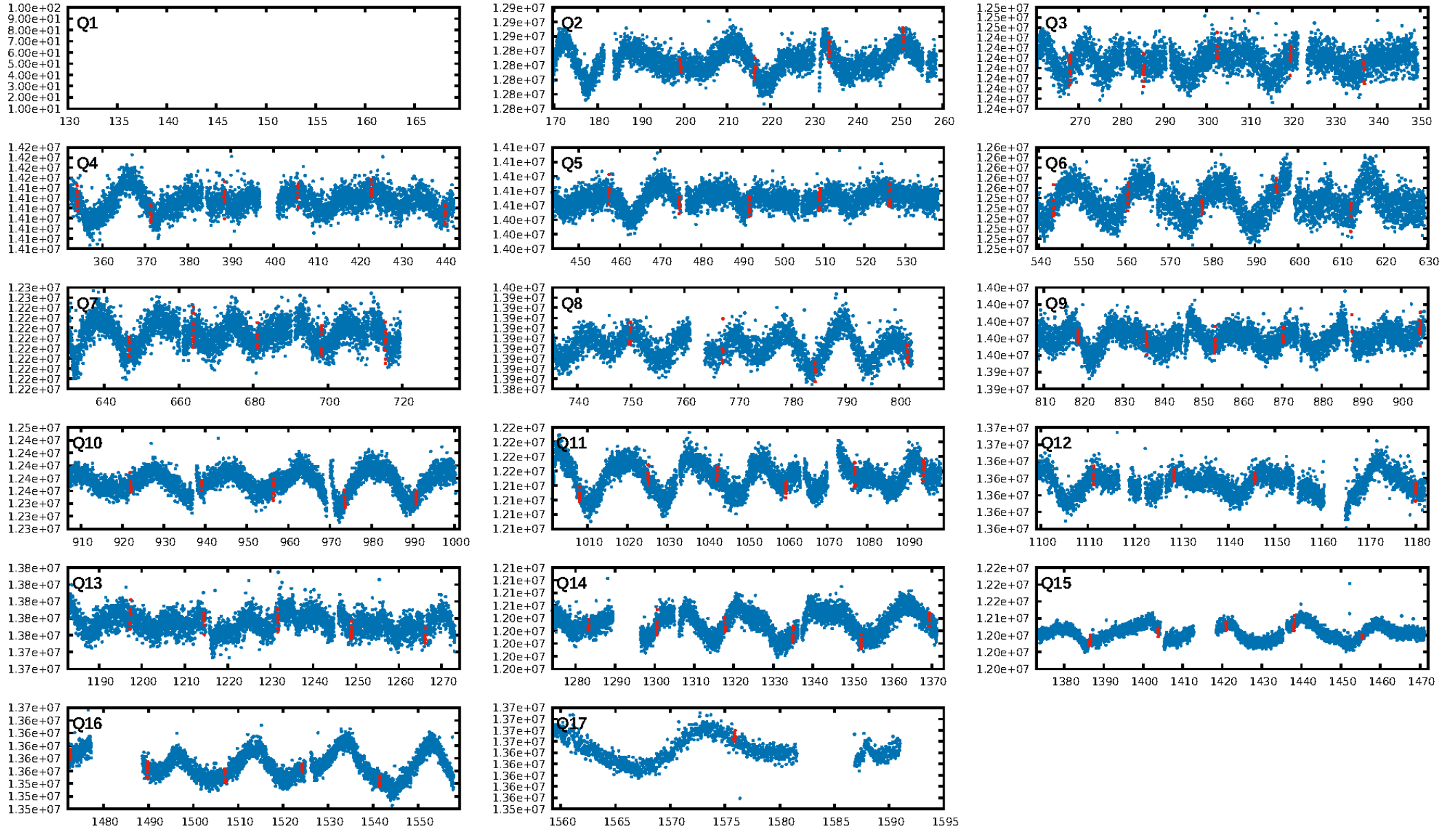
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [79.64 σ]
LongPeriod-sig: 100.0% [12.20 σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGoF-sig: 98.1%
Bootstrap-pfa: 1.26e-11
RollingBand-fgt: 1.00 [16/16]
GhostDiagnostic-chr: 0.3504
Centroid-sig: 0.9%
Centroid-so: 2.263 arcsec [2.15 σ]
OotOffset-rm: 9.146 arcsec [90.38 σ]
KicOffset-rm: 9.422 arcsec [83.69 σ]
OotOffset-st: 0/3/0/0 [3]
KicOffset-st: 0/3/0/0 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 0.00 [0/16]

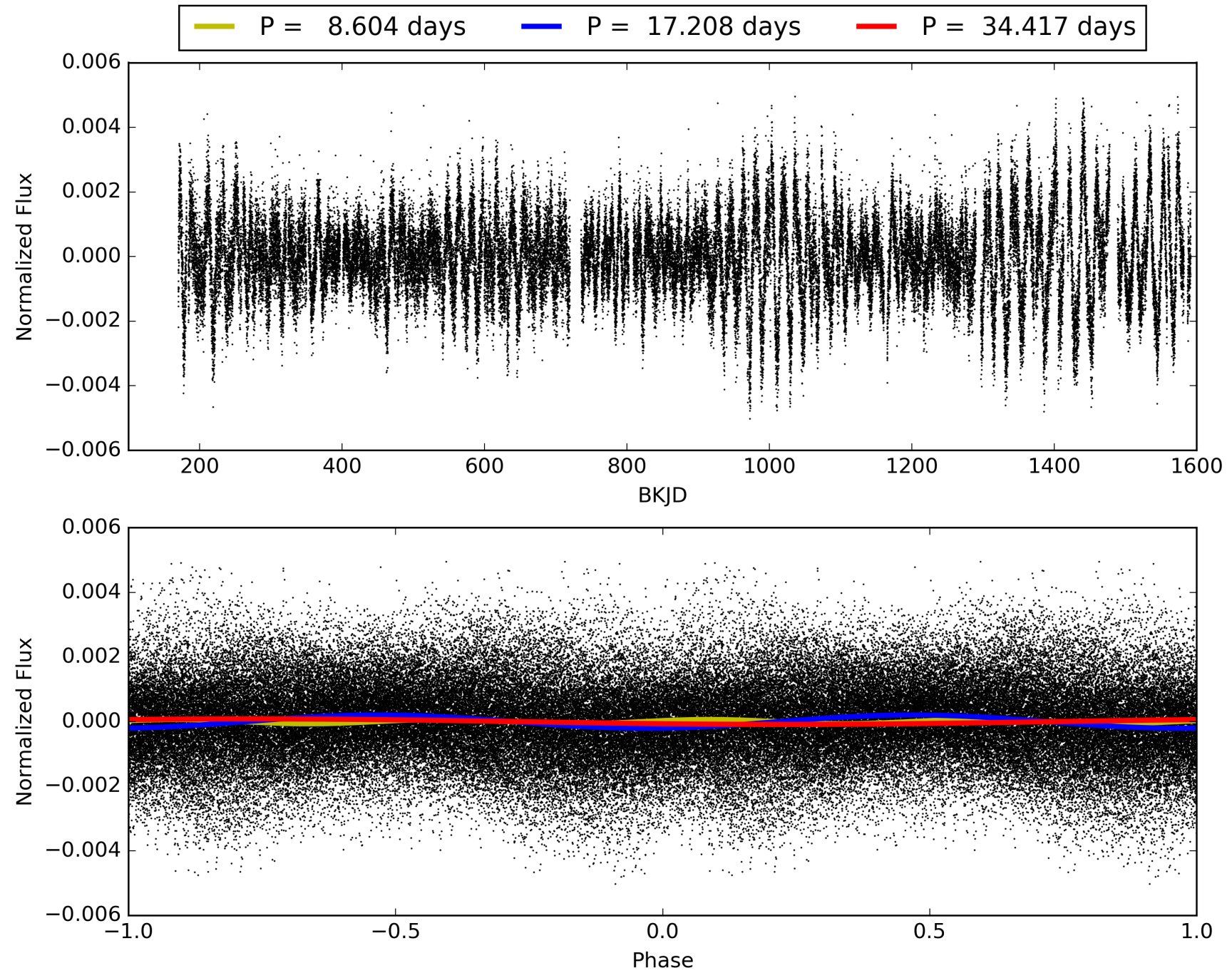
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:17:48 Z

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

TCE 006631948-07, PDC Light Curves

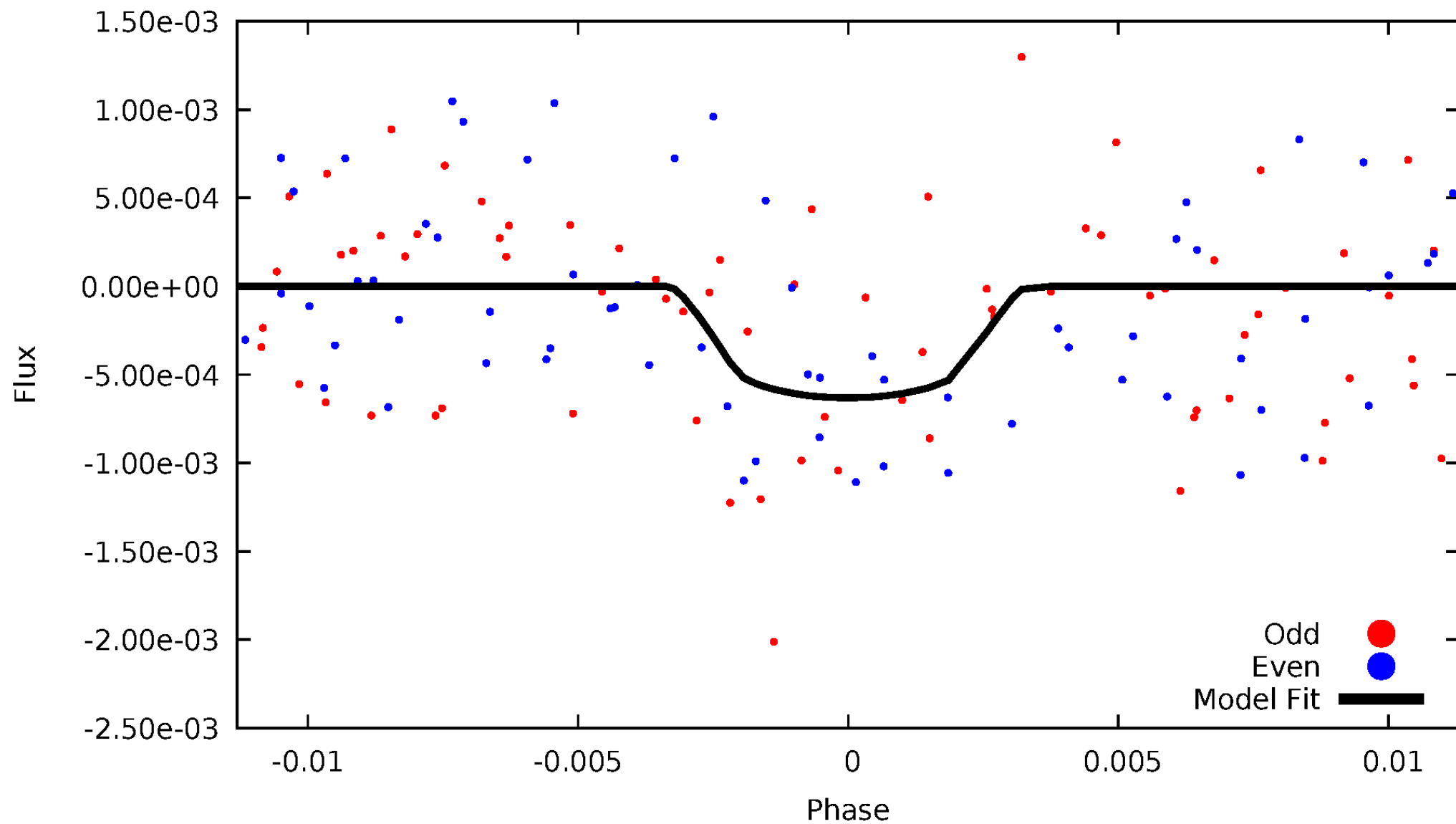


TCE 006631948-07



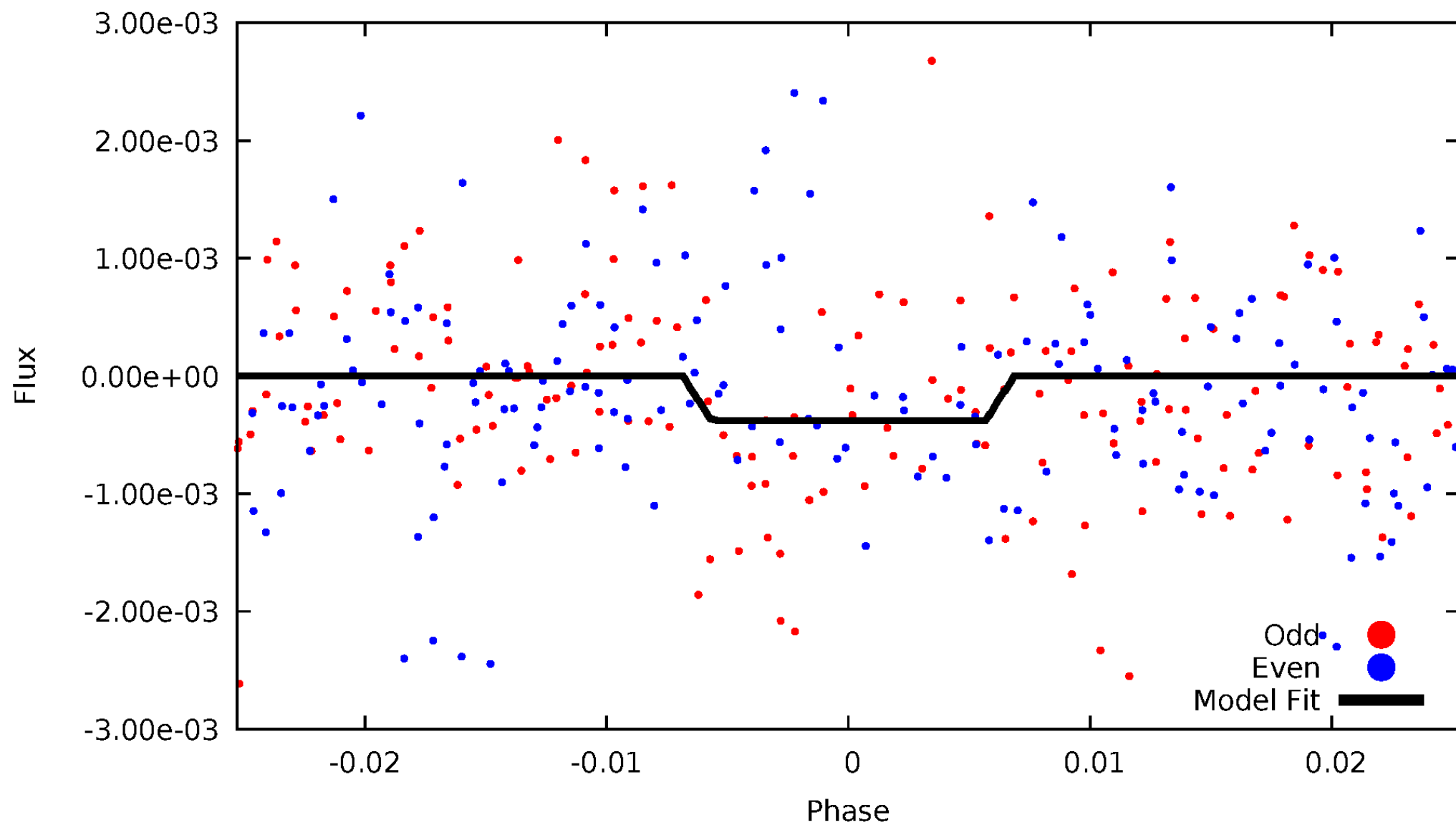
DV Odd/Even

TCE 006631948-07



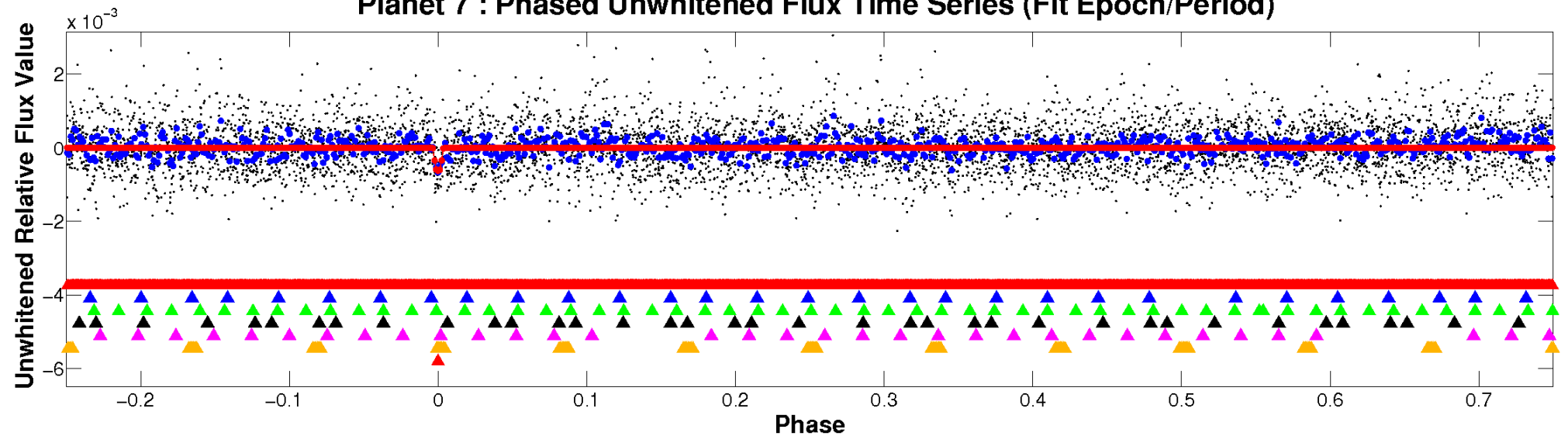
ALT Odd/Even

TCE 006631948-07

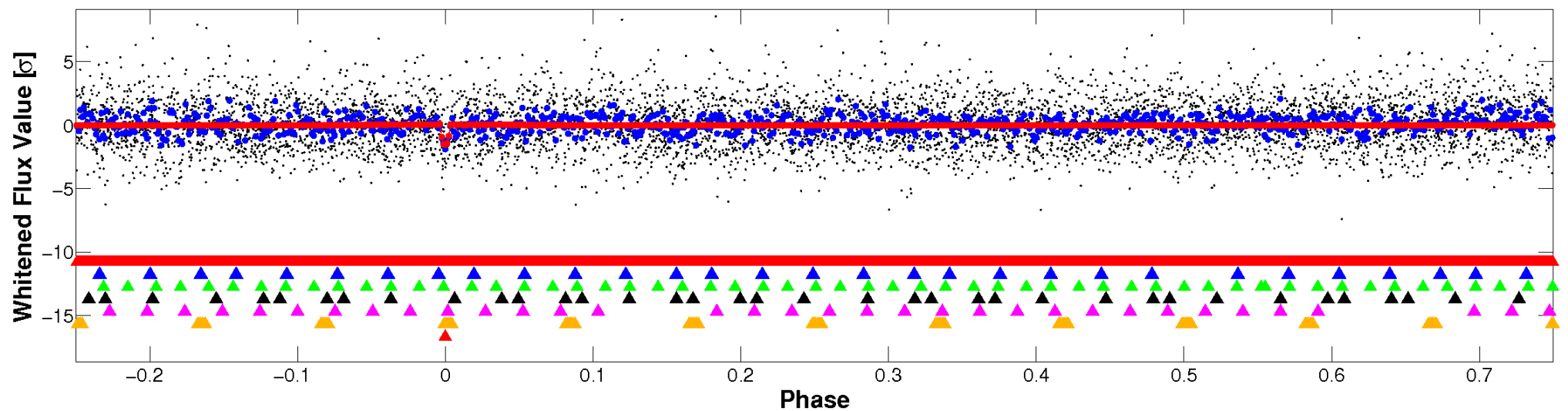


Non-Whitened Vs. Whitened Light Curve

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

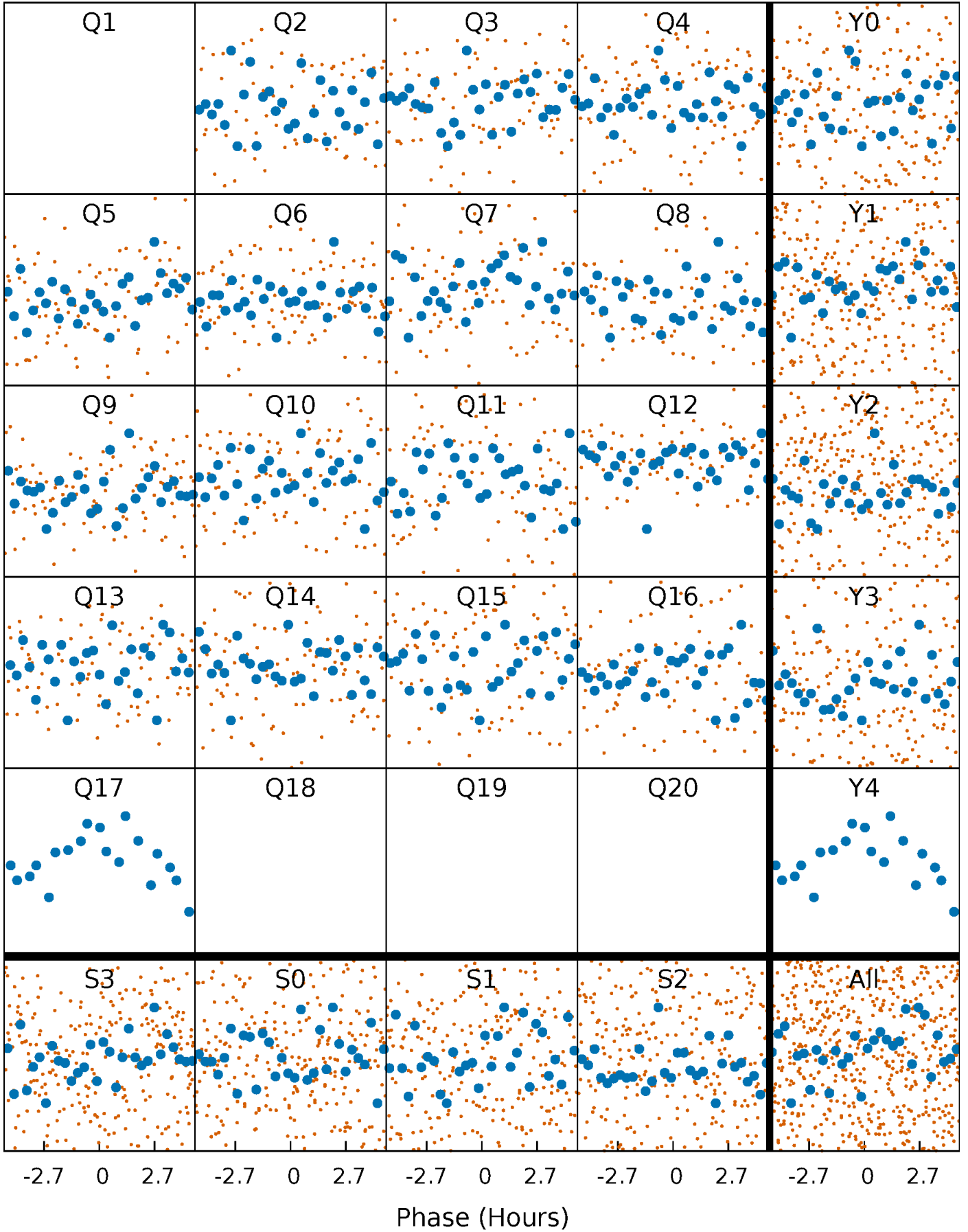


Planet 7 : Phased Whitened Flux Time Series (Fit Epoch/Period)



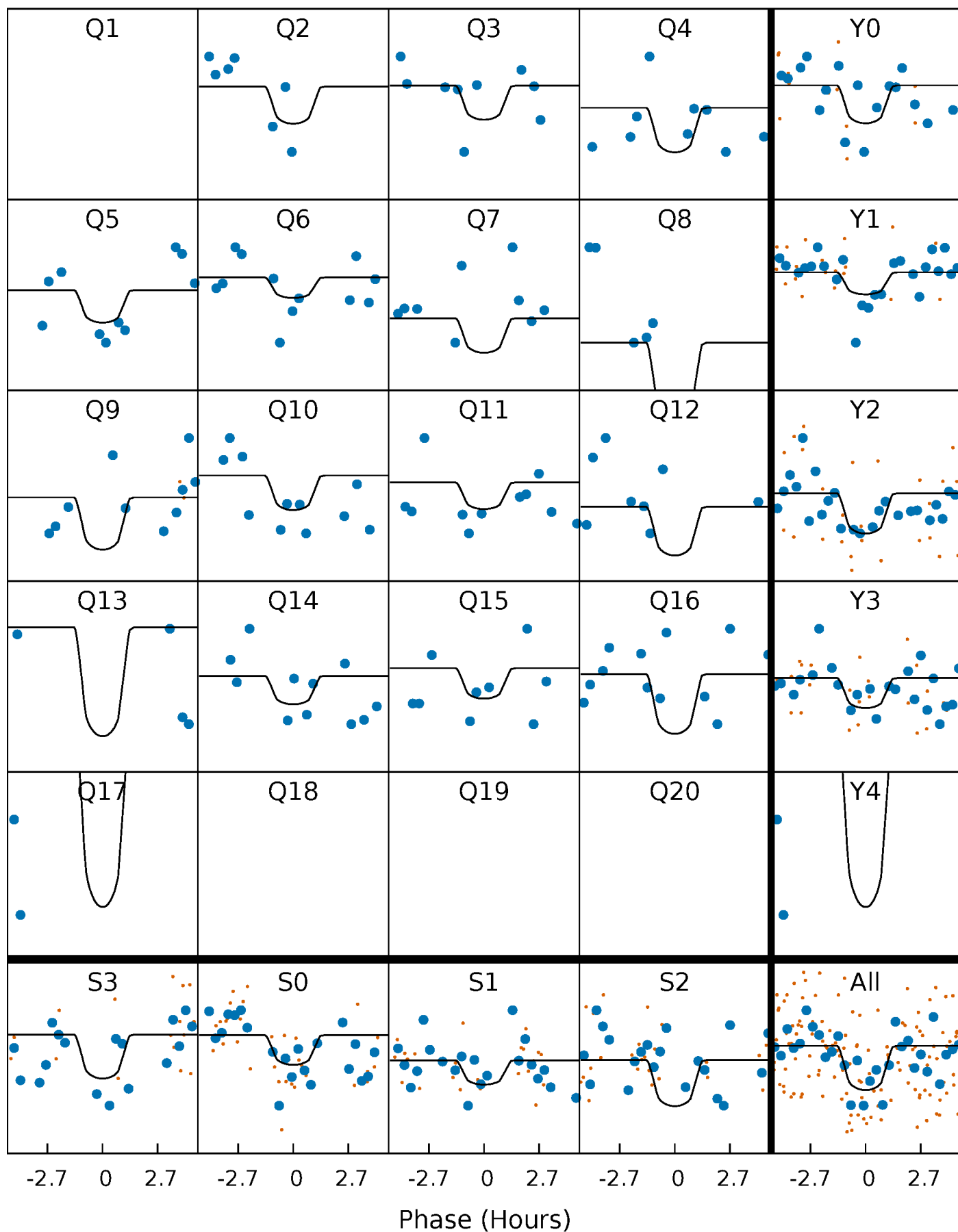
PDC Quarter-Phased Transit Curves

TCE 006631948-07 P= 17.208289 Days $T_0=147.594402$ (BKJD)



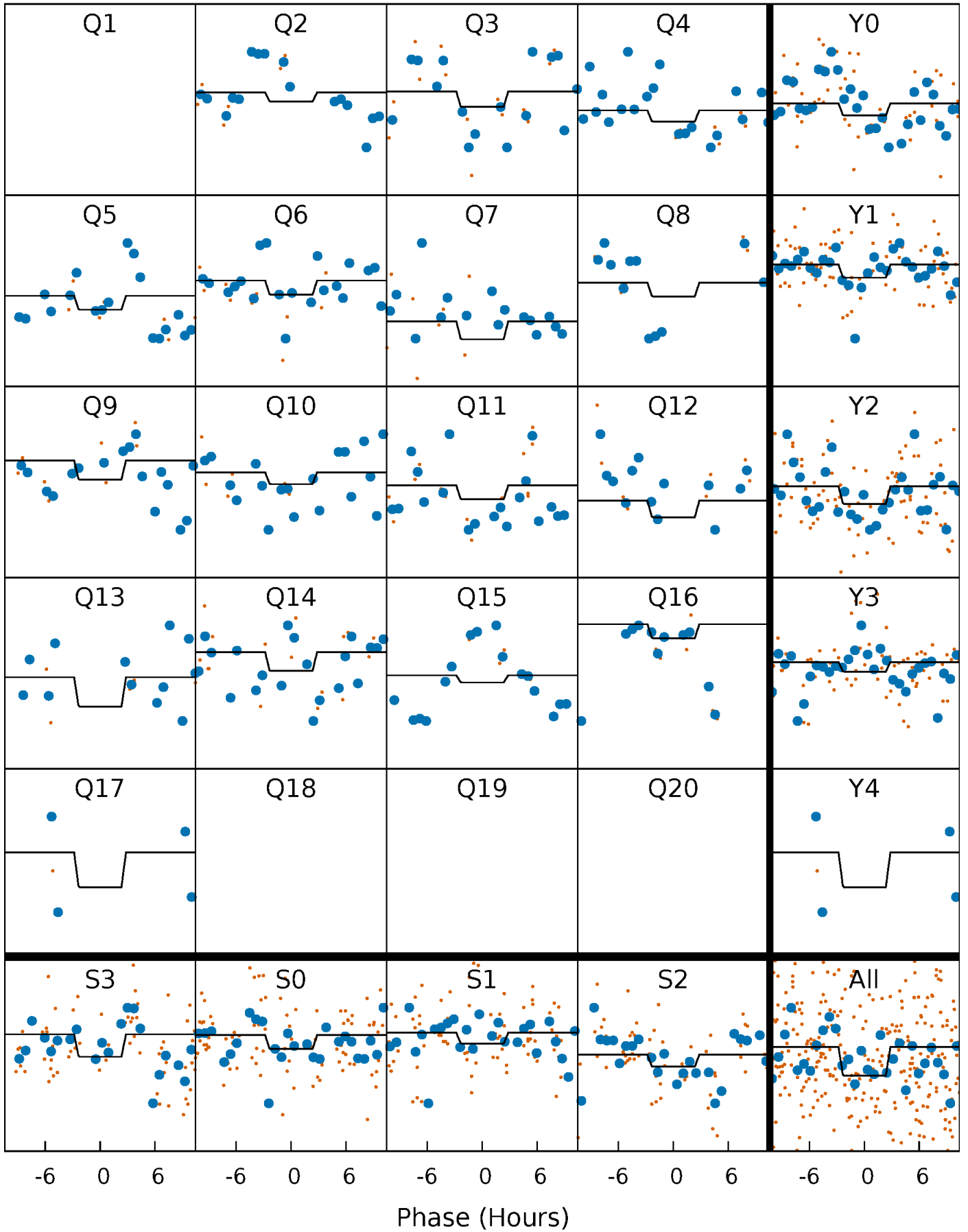
DV Quarter-Phased Transit Curves

TCE 006631948-07 P= 17.208289 Days $T_0=147.594402$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

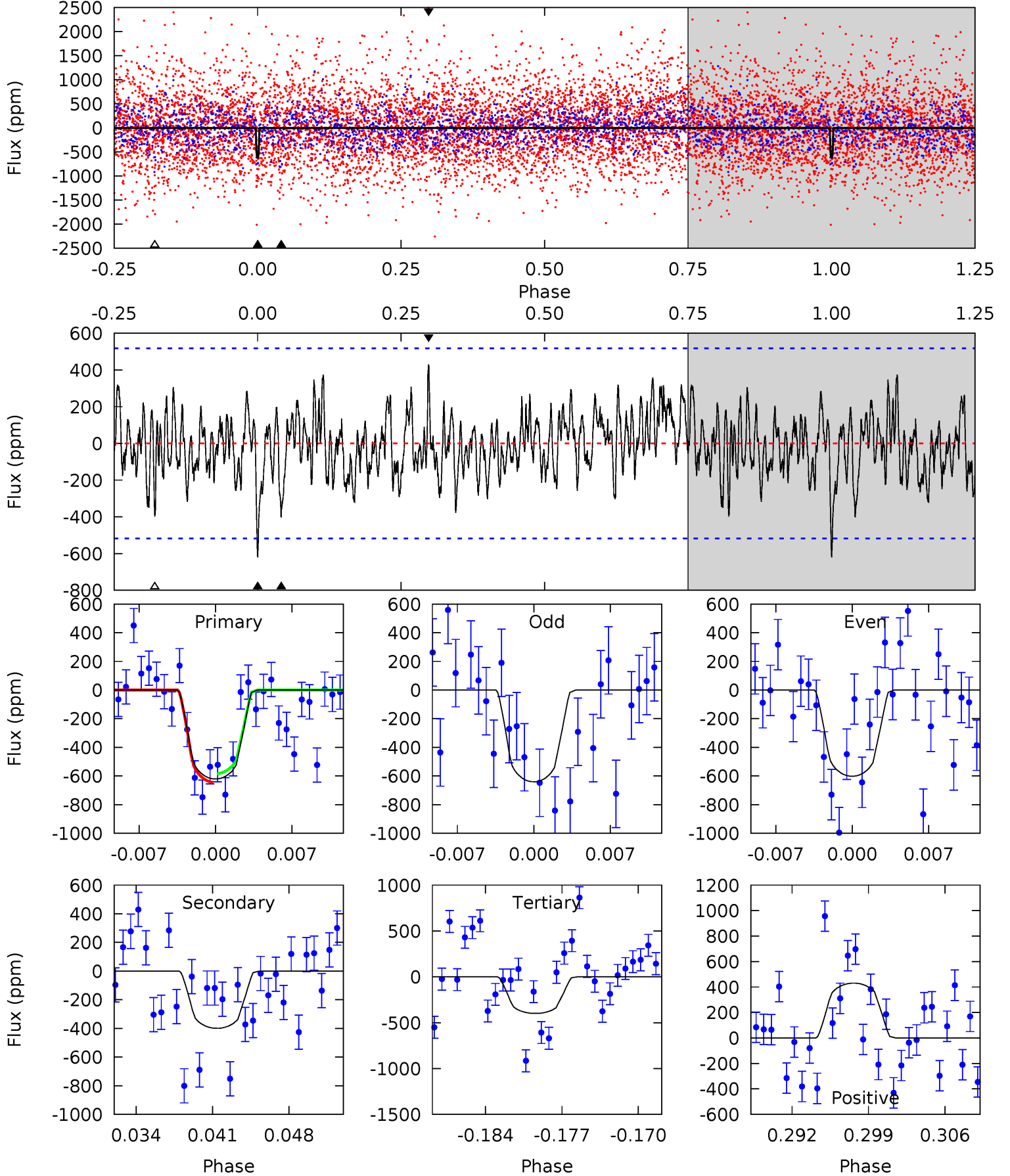
TCE 006631948-07 $P = 17.208529$ Days $T_0 = 147.602240$ (BKJD)



DV Model-Shift Uniqueness Test

006631948-07, P = 17.208289 Days, E = 147.594402 Days

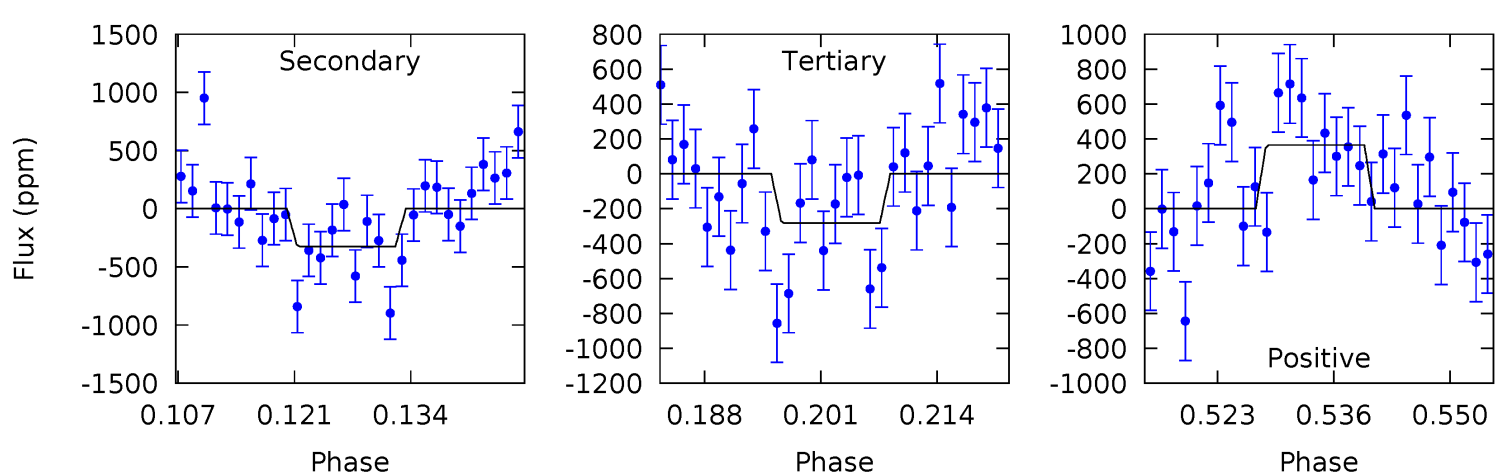
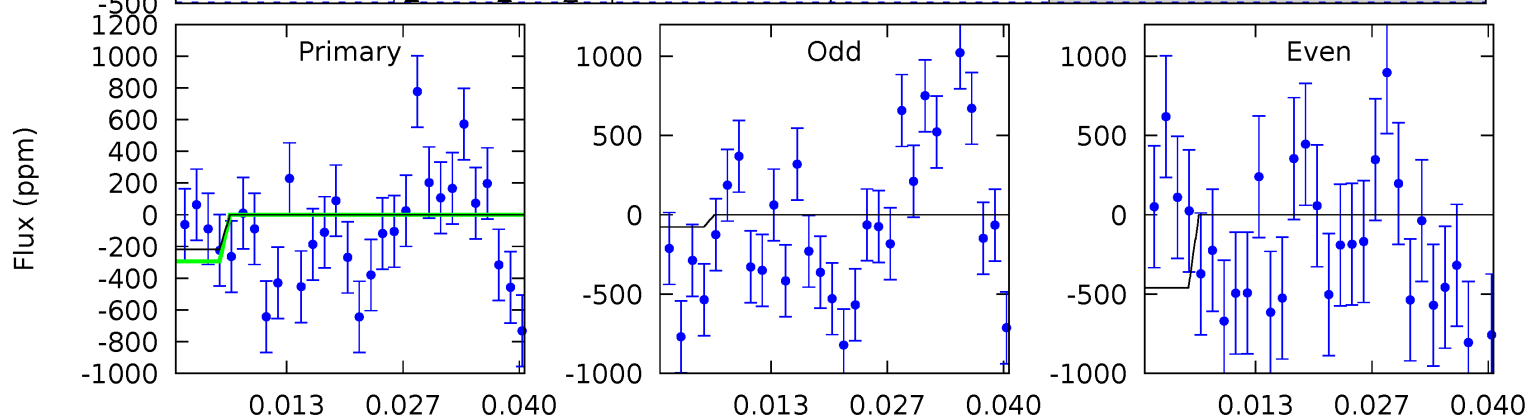
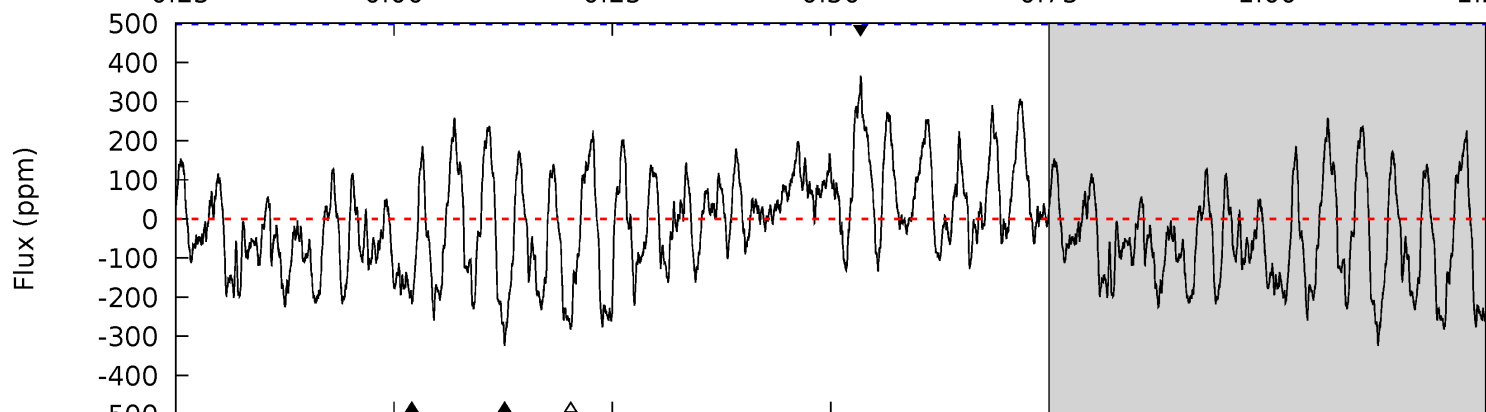
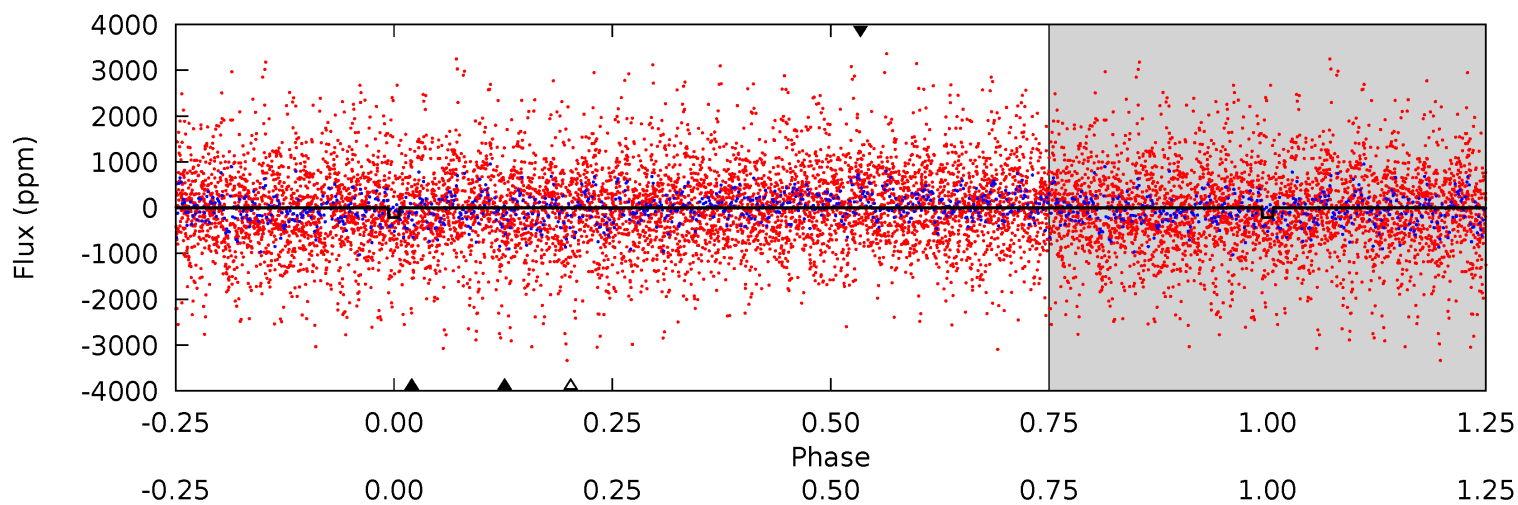
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.11	3.93	3.93	4.24	5.10	2.71	1.39	2.18	1.88	0.00	-0.31	0.19	0.76	0.41	0.30



Alt Model-Shift Uniqueness Test

006631948-07, $P = 17.208529$ Days, $E = 147.602240$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.16	3.23	2.82	3.64	4.97	2.47	1.21	-0.66	-1.48	0.41	-0.40	1.89	0.54	0.53	0.31



Stellar Parameters For KIC 006631948

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5409^{+161}_{-161}	$4.587^{+0.032}_{-0.128}$	$-0.140^{+0.300}_{-0.300}$	$0.784^{+0.148}_{-0.063}$	$0.872^{+0.081}_{-0.098}$	$2.551^{+0.430}_{-0.953}$
	+3%/-3%	+1%/-3%	+214%/-214%	+19%/-8%	+9%/-11%	+17%/-37%
Source	PHO1	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 006631948-07 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-399 ± 102	$5.32^{+5.20}_{-3.67}$	853^{+41}_{-37}	3574^{+2099}_{-663}	119^{+1153}_{-90}
Alt.	-324 ± 100	$5.16^{+4.50}_{-3.54}$	853^{+42}_{-32}	3489^{+1823}_{-652}	105^{+887}_{-81}

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

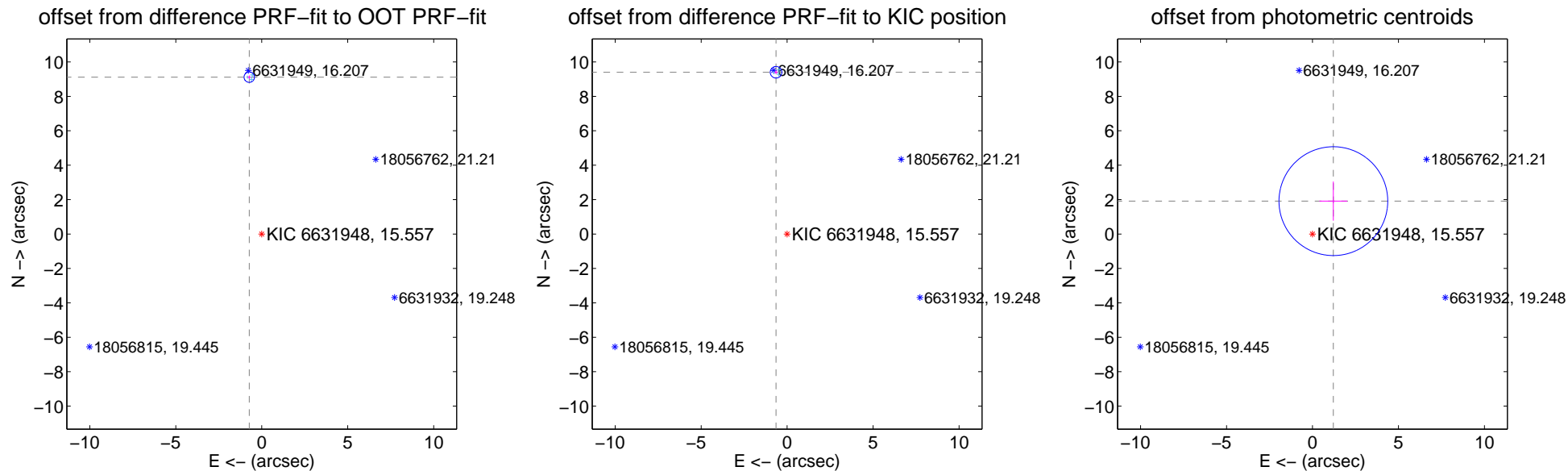
DV Centroid Data

Supplemental centroid analysis for 006631948-07. Kepler magnitude: 15.56. Transit SNR 7.76

There are 3 quarters with good PRF difference image offsets

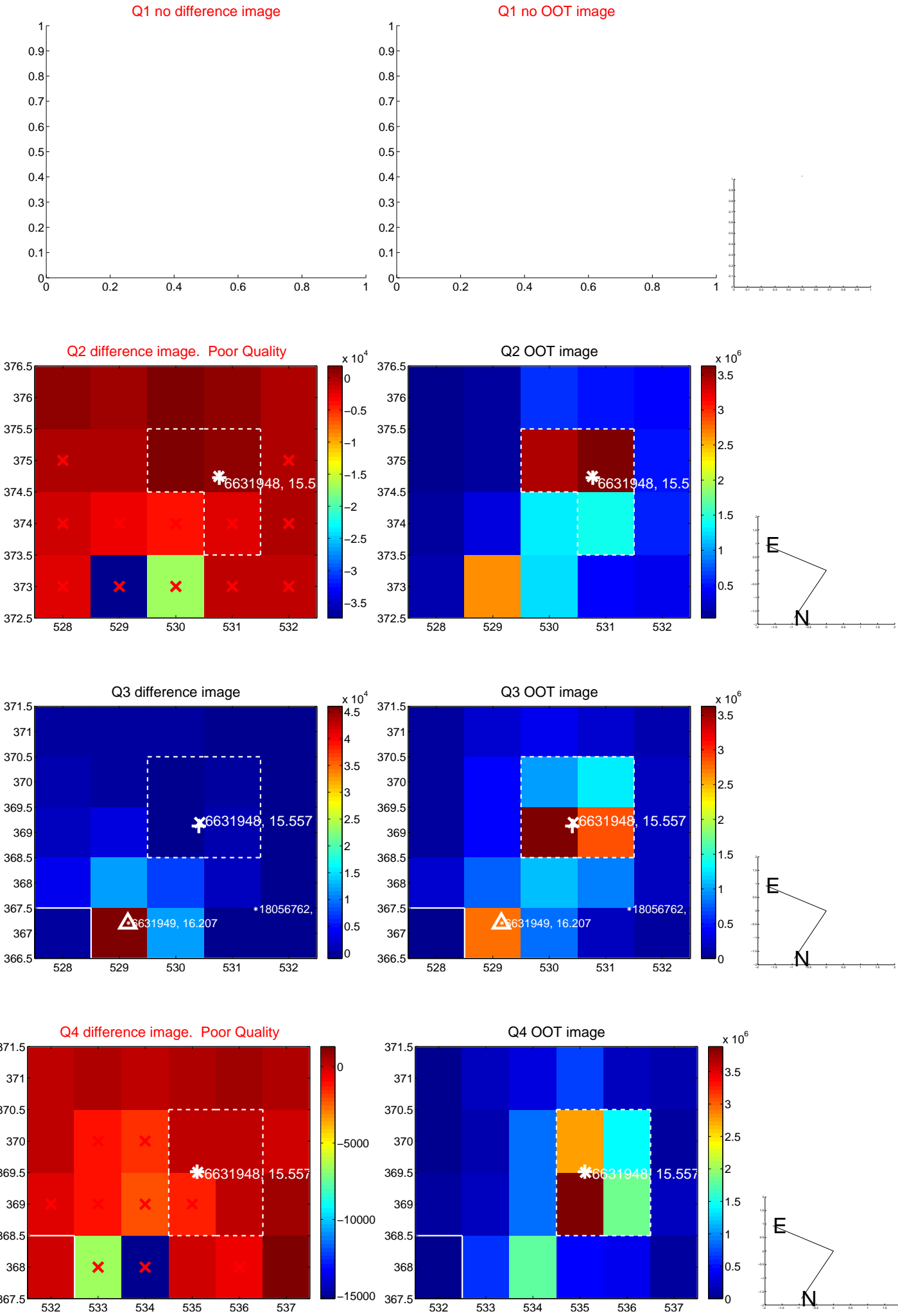
The direct PRF centroid is offset from the target star catalog position by about 0.32 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	9.146 \pm 0.101	90.38	0.727 \pm 0.090	9.117 \pm 0.101
PRF-fit source offset from KIC position	9.422 \pm 0.113	83.69	0.645 \pm 0.101	9.400 \pm 0.113
photometric centroid source offset	2.26 \pm 1.05	2.15	-1.21 \pm 0.81	1.91 \pm 1.14

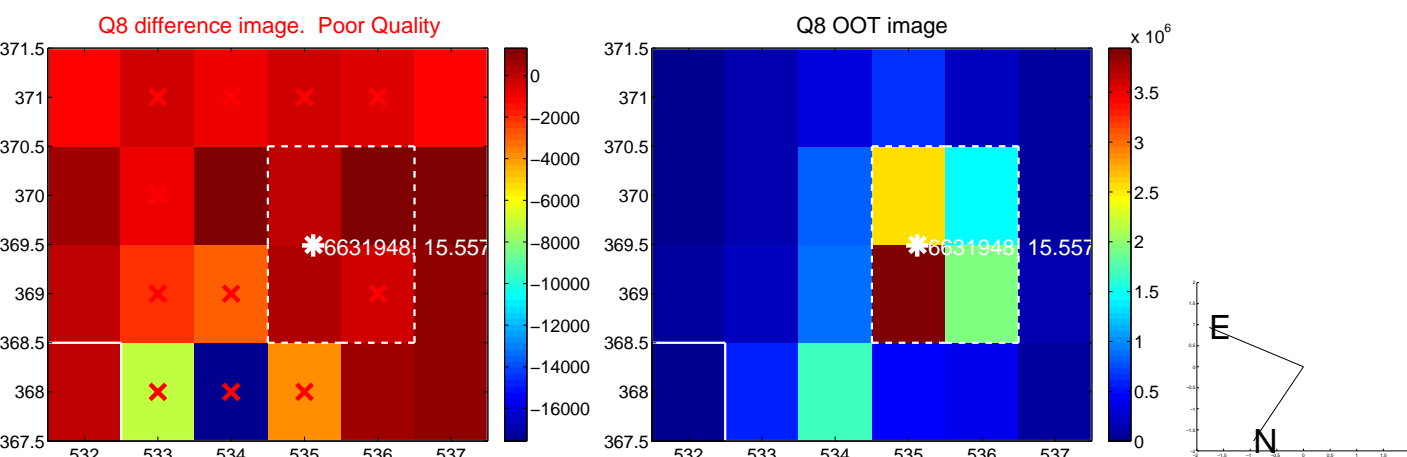
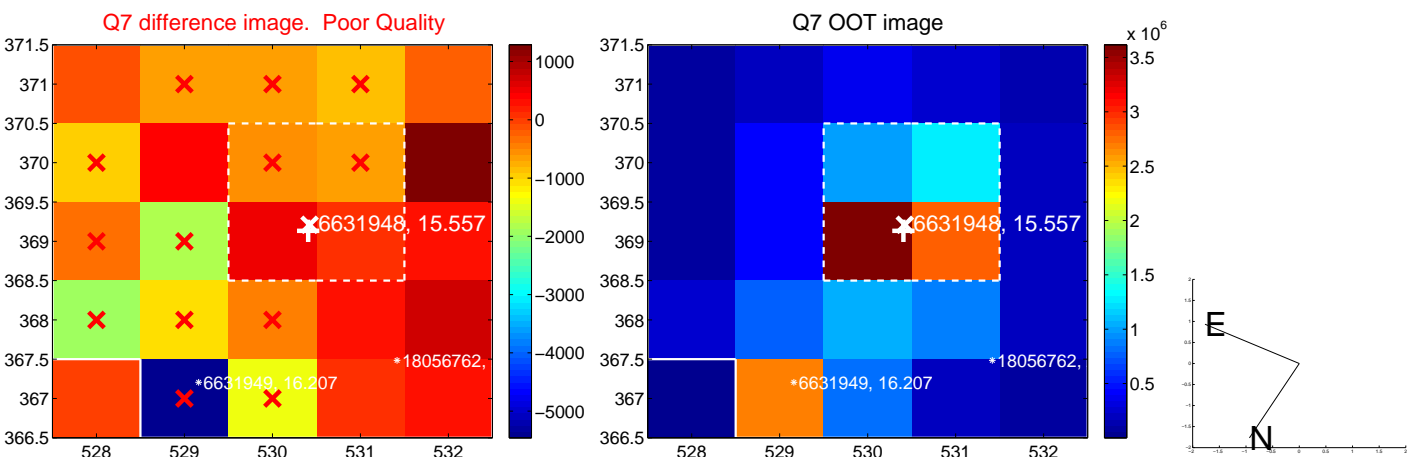
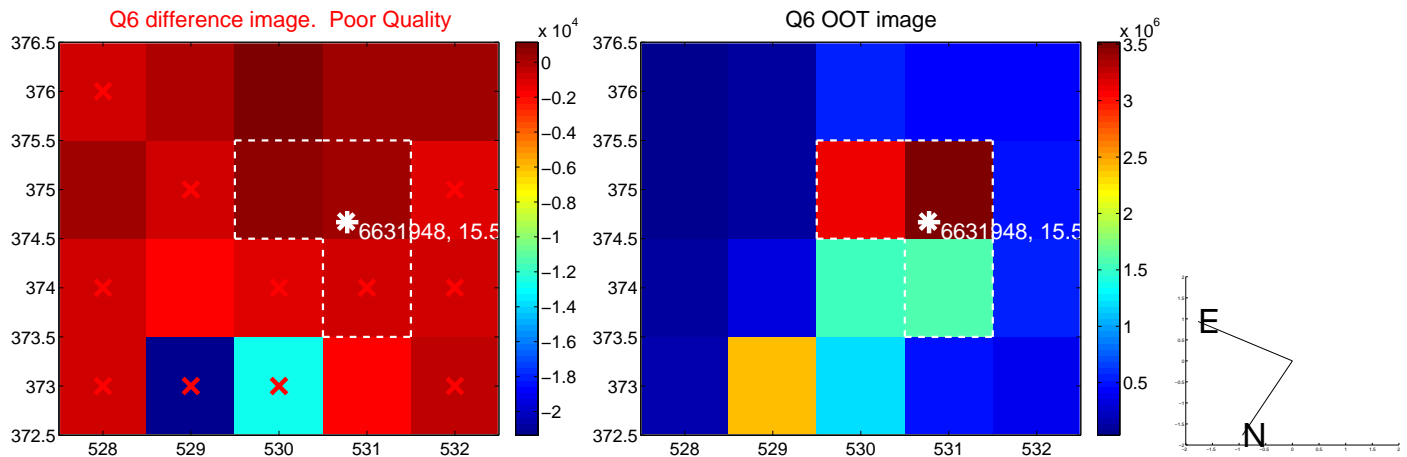
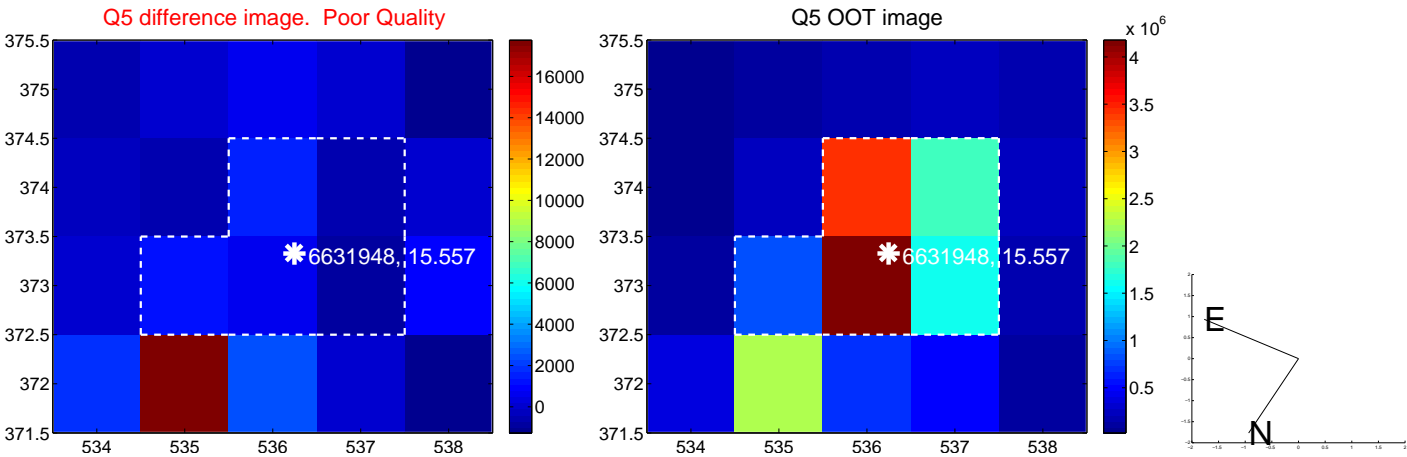


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

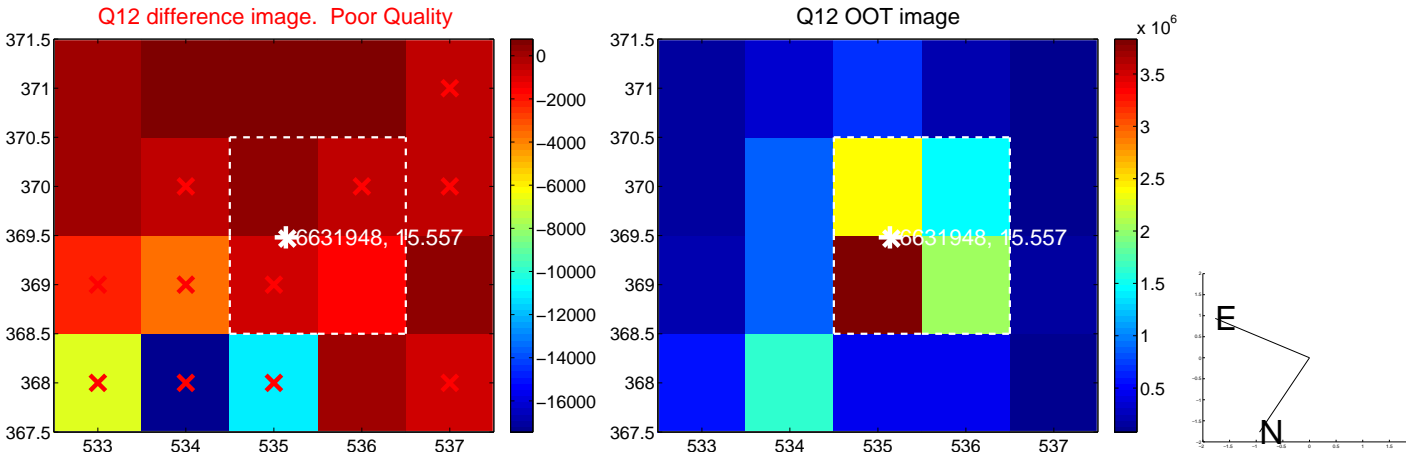
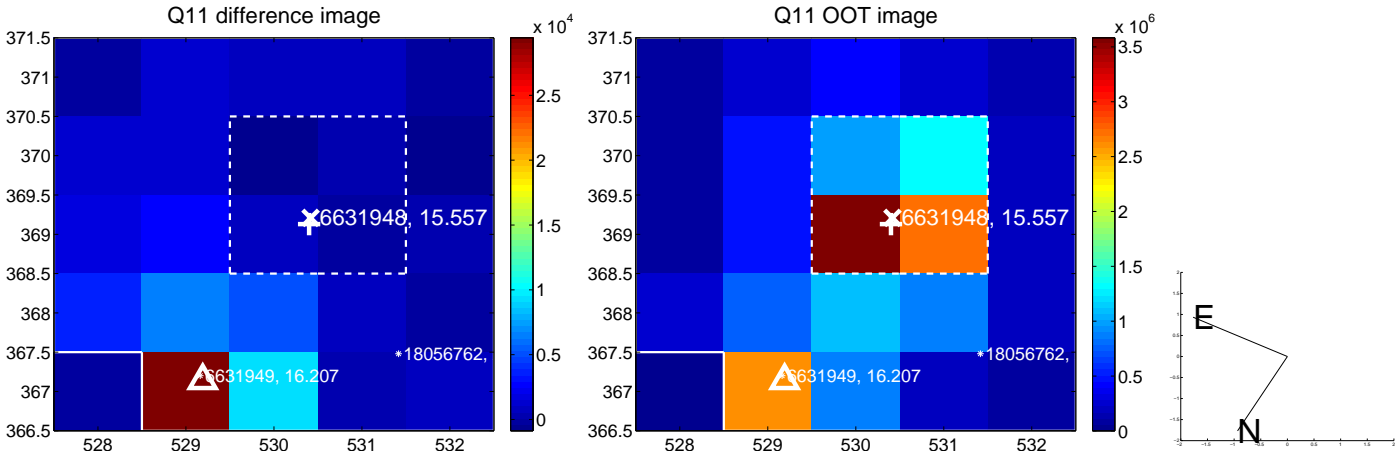
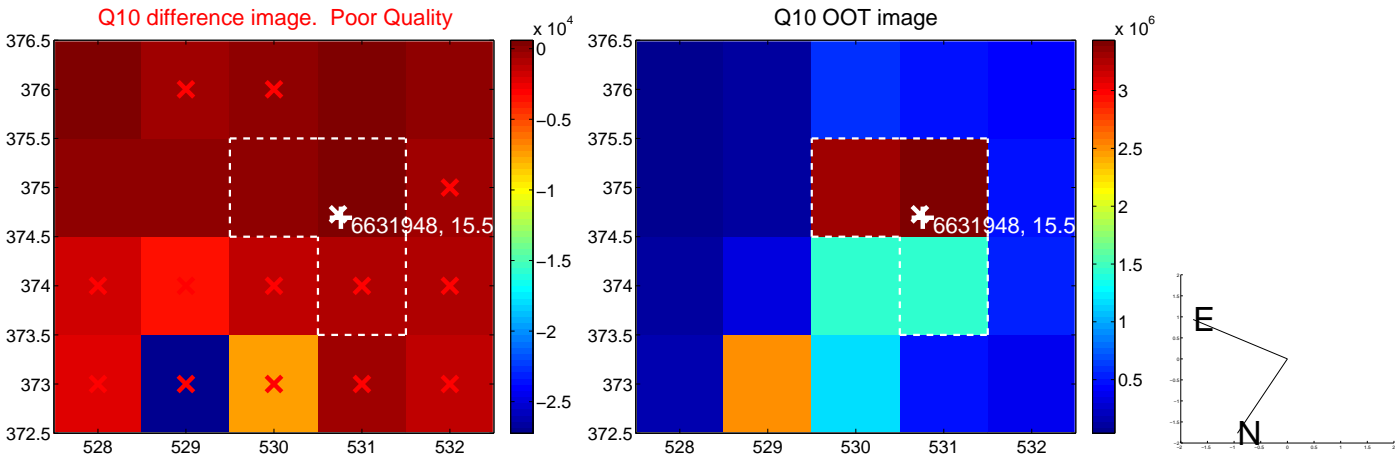
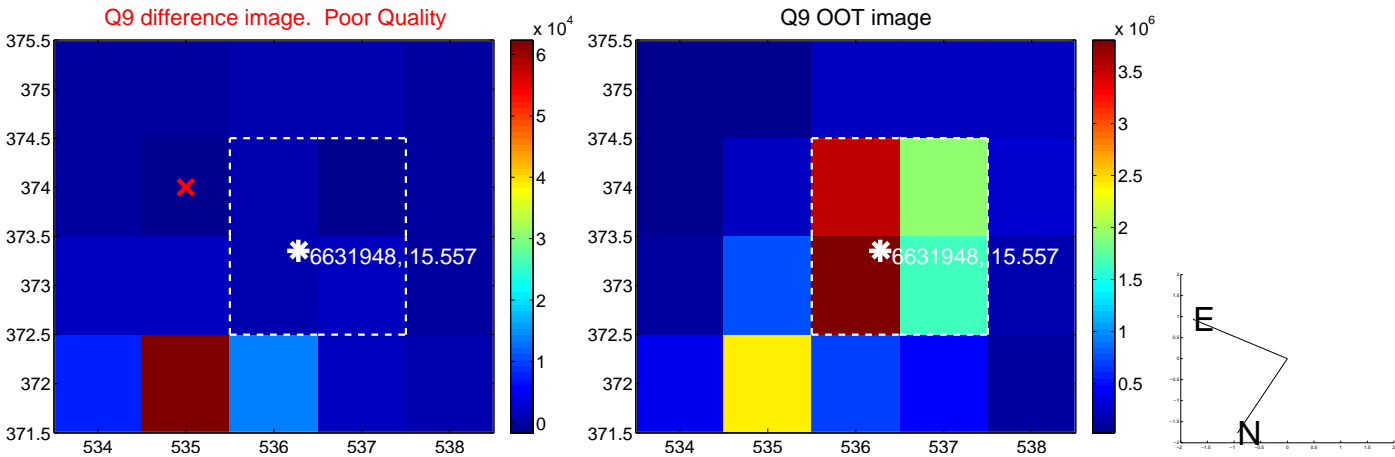
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



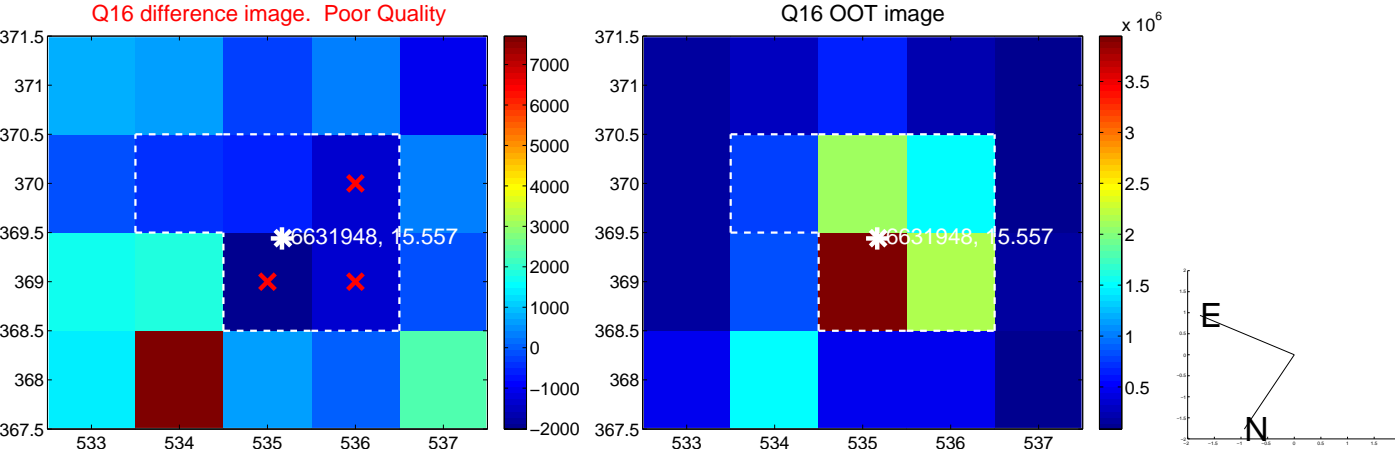
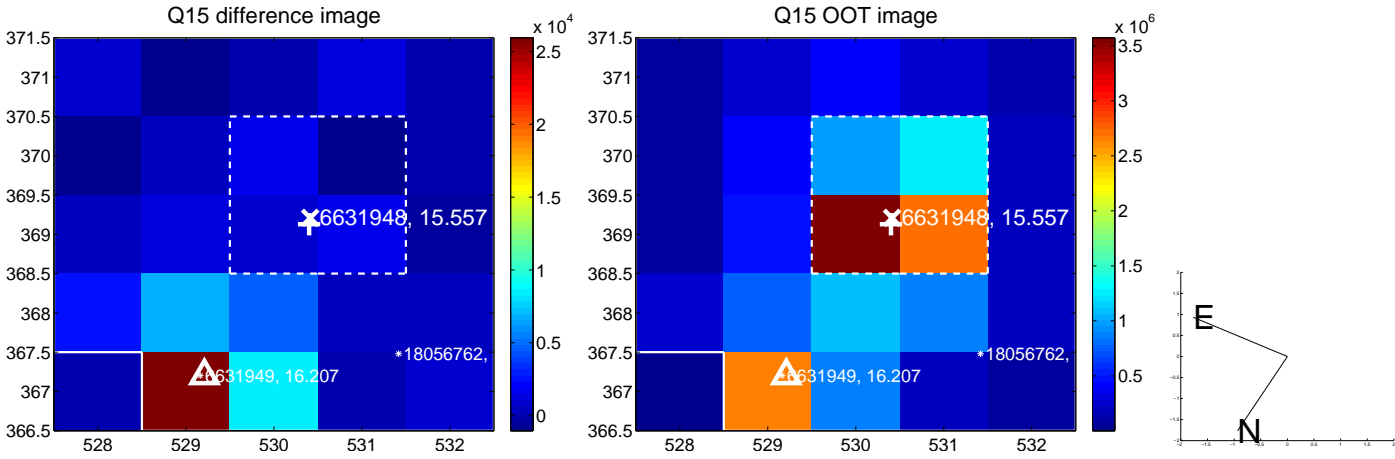
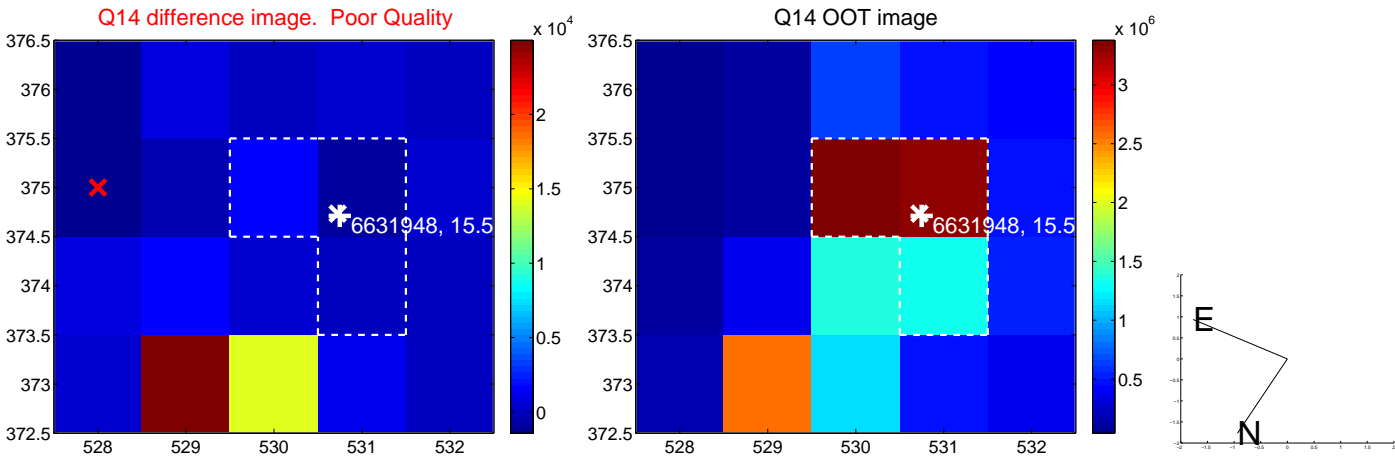
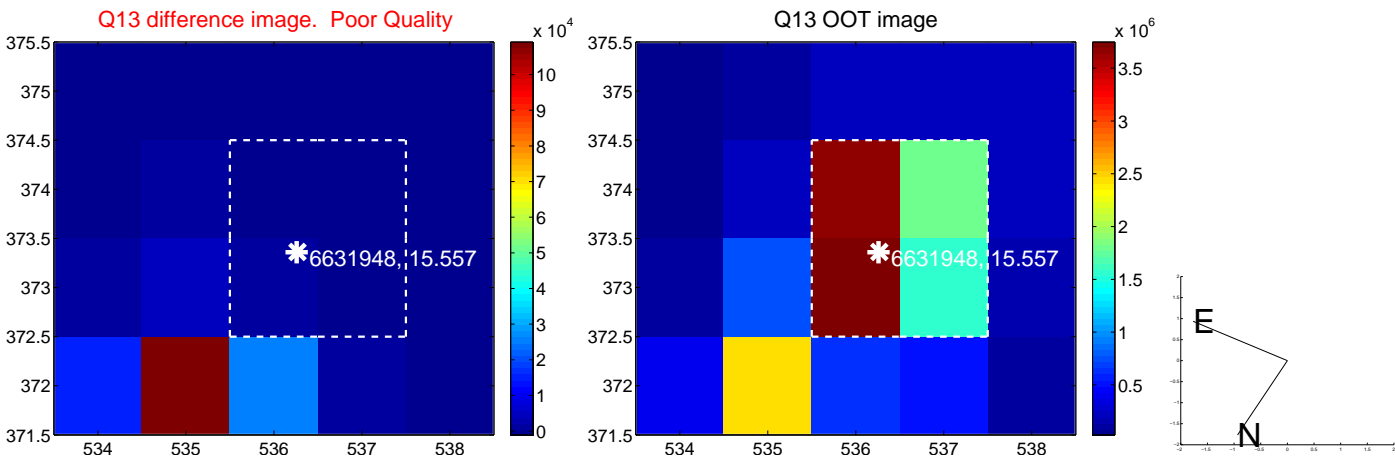
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



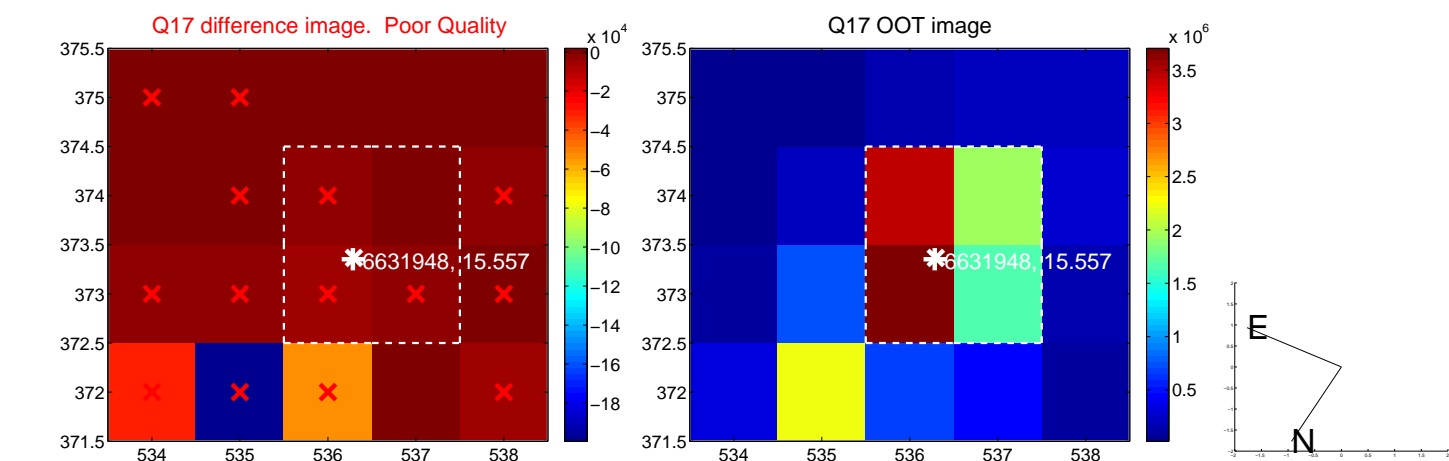
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



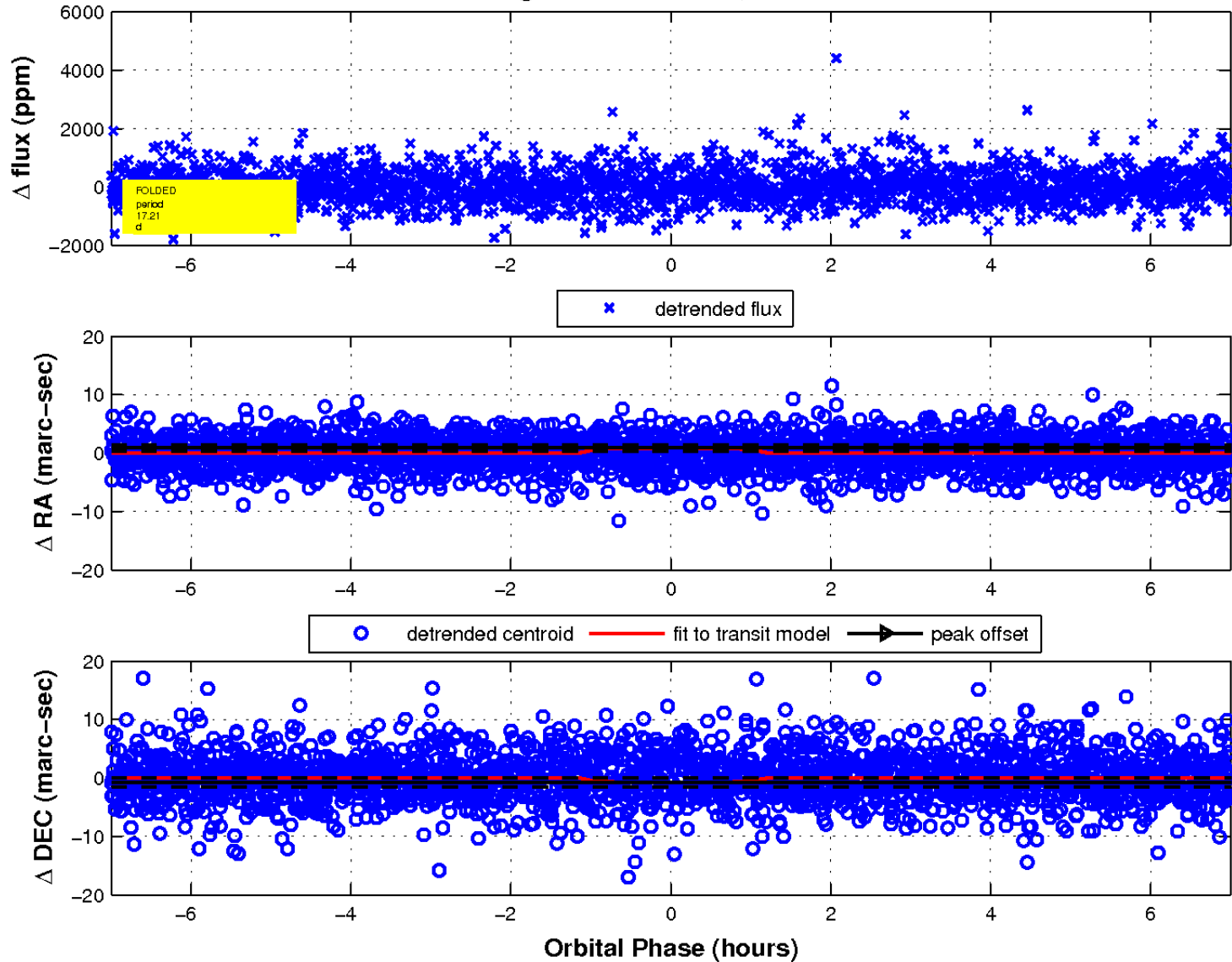
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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



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UKIRT Image

Declination

