

KIC 007543649

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})
007543649-01	OBS	1469.01	3.582072	133.427682	1527.8	4.302	125.1	125.4	0.99	6109	5.42	606.12
007543649-02	OBS	No	3.582149	131.624768	98.4	3.115	9.4	9.9	0.99	6109	1.16	606.11

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007543649-01	OBS	FP	0.00	0	1	1	0	MOD_SEC_DV—MOD_SEC_ALT—HAS_SEC_TCE—CENT_RESOLVED_OFFSET
007543649-02	OBS	FP	0.00	1	1	1	0	IS_SEC_TCE—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.

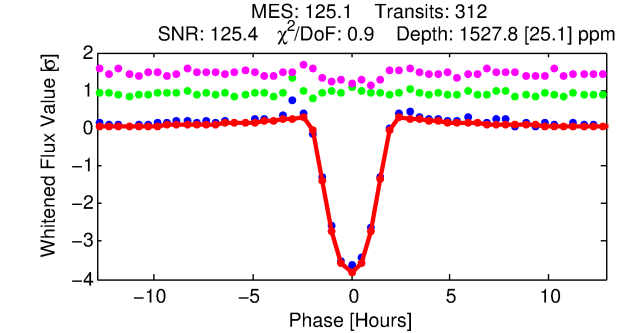
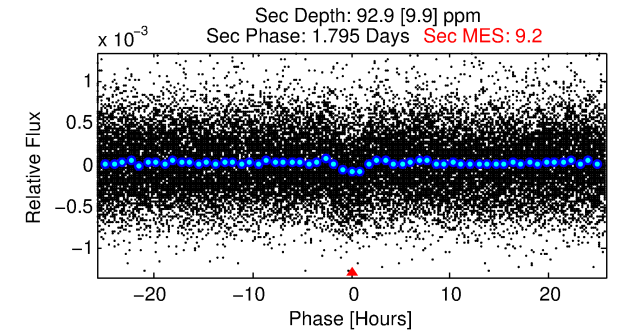
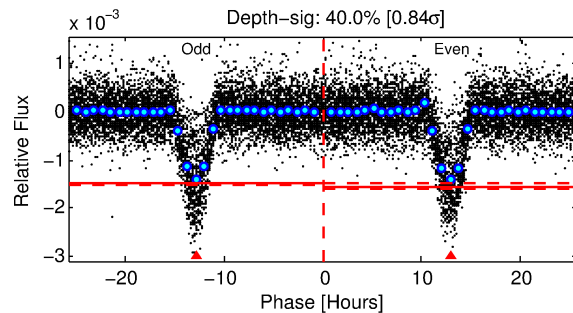
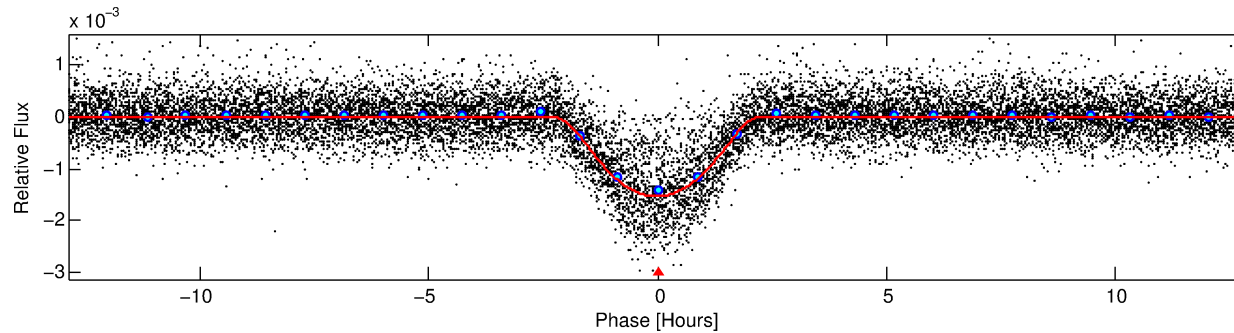
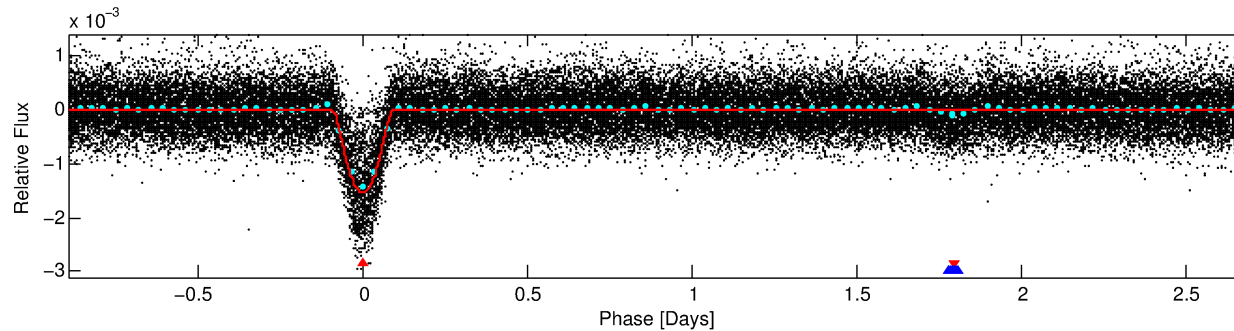
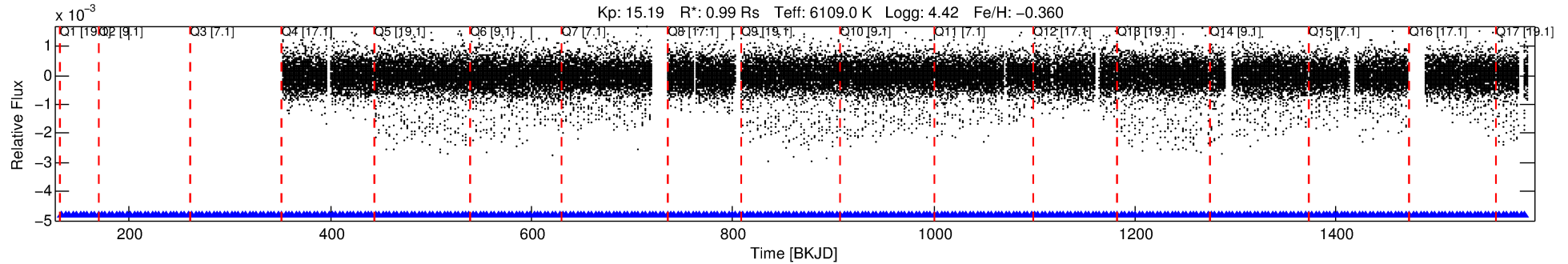
Ephemeris Match Information For 007543649-01

No Significant Match Found

DV One-Page Summary

KIC: 7543649 Candidate: 1 of 2 Period: 3.582 d
KOI: K01469.01 Corr: 0.990

Kp: 15.19 R*: 0.99 Rs Teff: 6109.0 K Logg: 4.42 Fe/H: -0.360



DV Fit Results:

Period = 3.58207 [0.00000] d
Epoch = 133.4277 [0.0009] BKJD
Rp/R* = 0.0500 [0.0038]
a/R* = 2.75 [0.09]
b = 0.97 [0.01]
Seff = 606.12 [234.26]
Teq = 1265 [122] K
Rp = 5.42 [1.60] Re
a = 0.0451 [0.0109] AU
Ag = 3.53 [1.41] [1.79σ]
Teffp = 2682 [161] K [7.01σ]

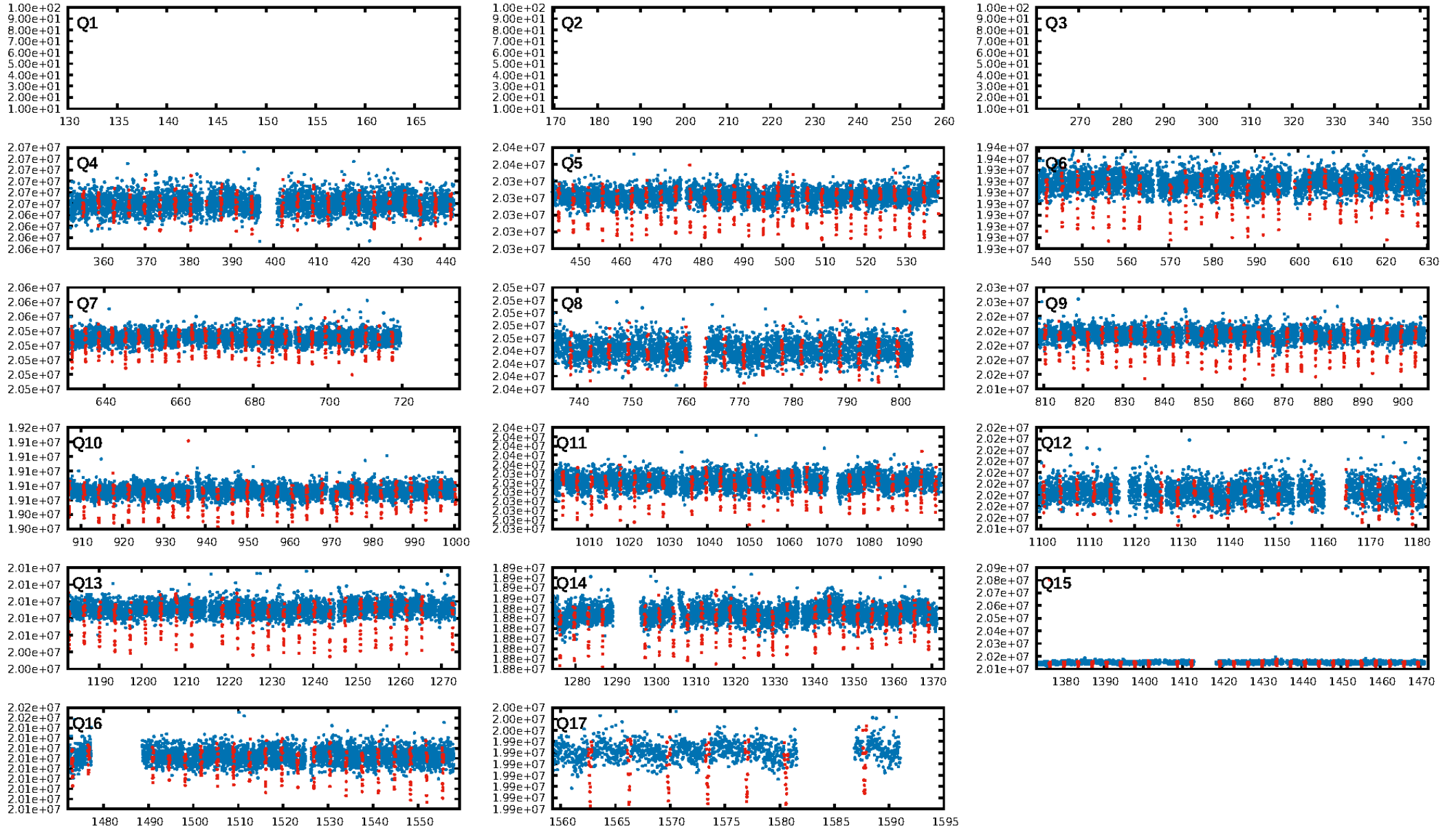
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [305/305]
GhostDiagnostic-chr: -1.329
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [14/14]

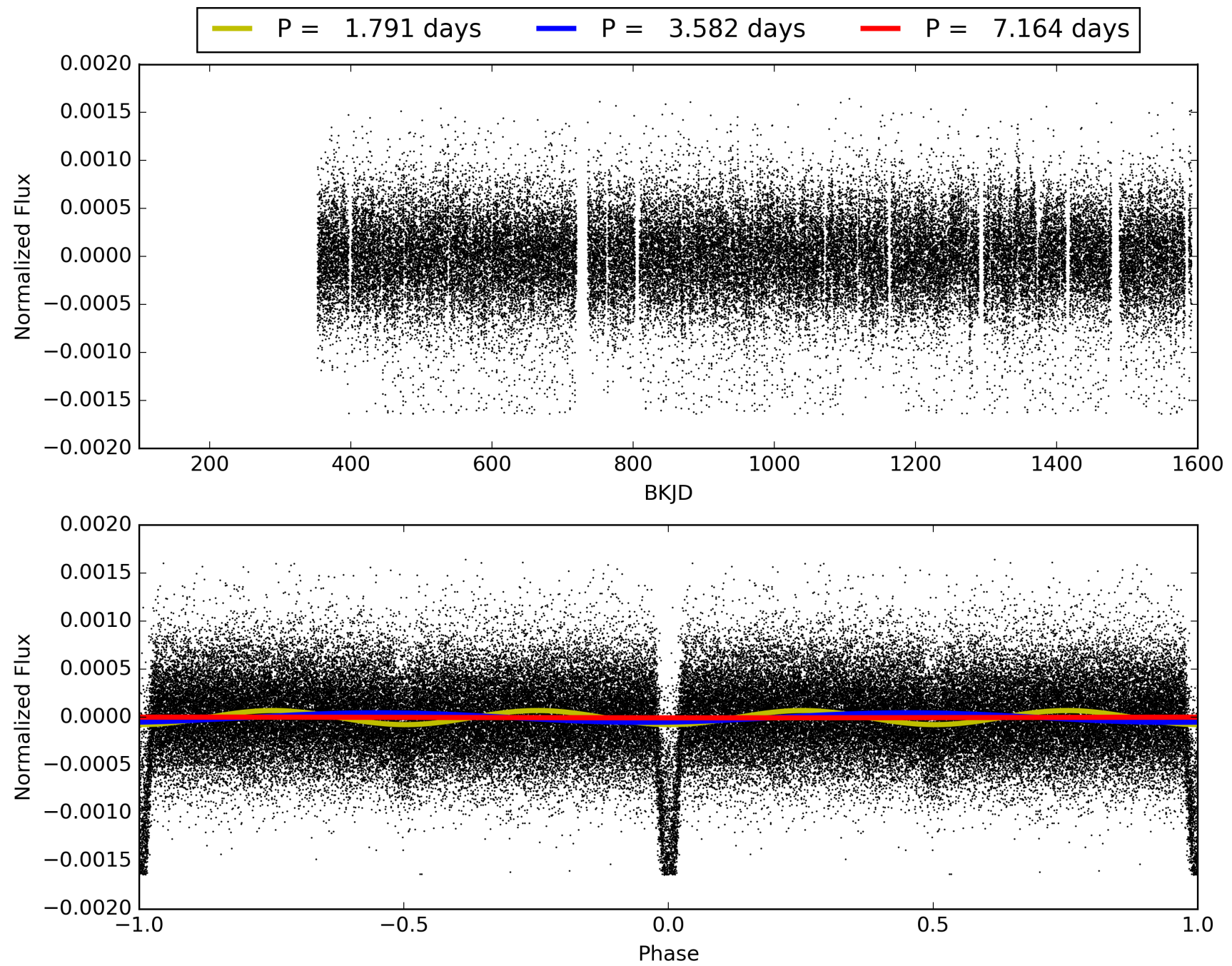
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 11:05:04 Z

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

TCE 007543649-01, PDC Light Curves

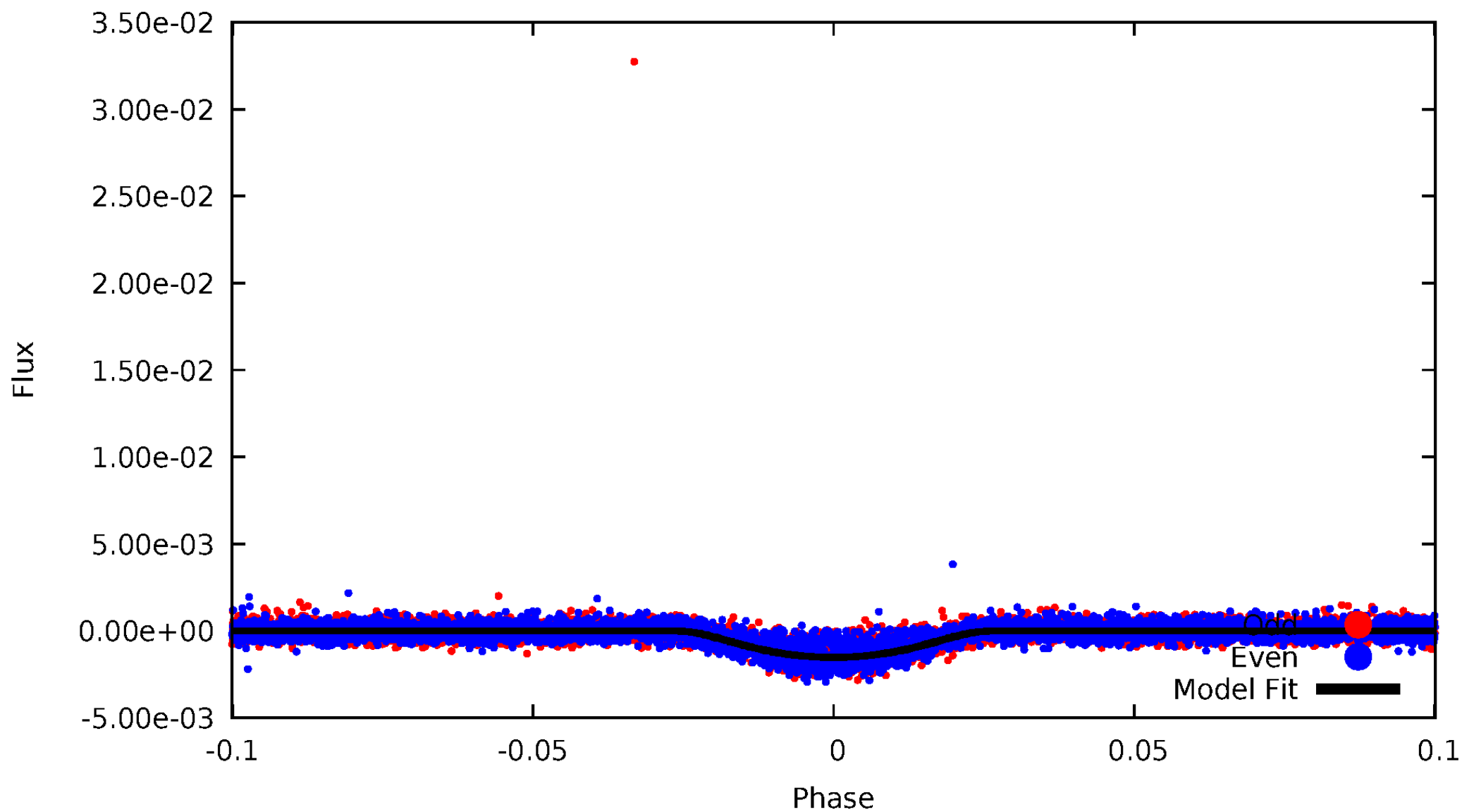


TCE 007543649-01



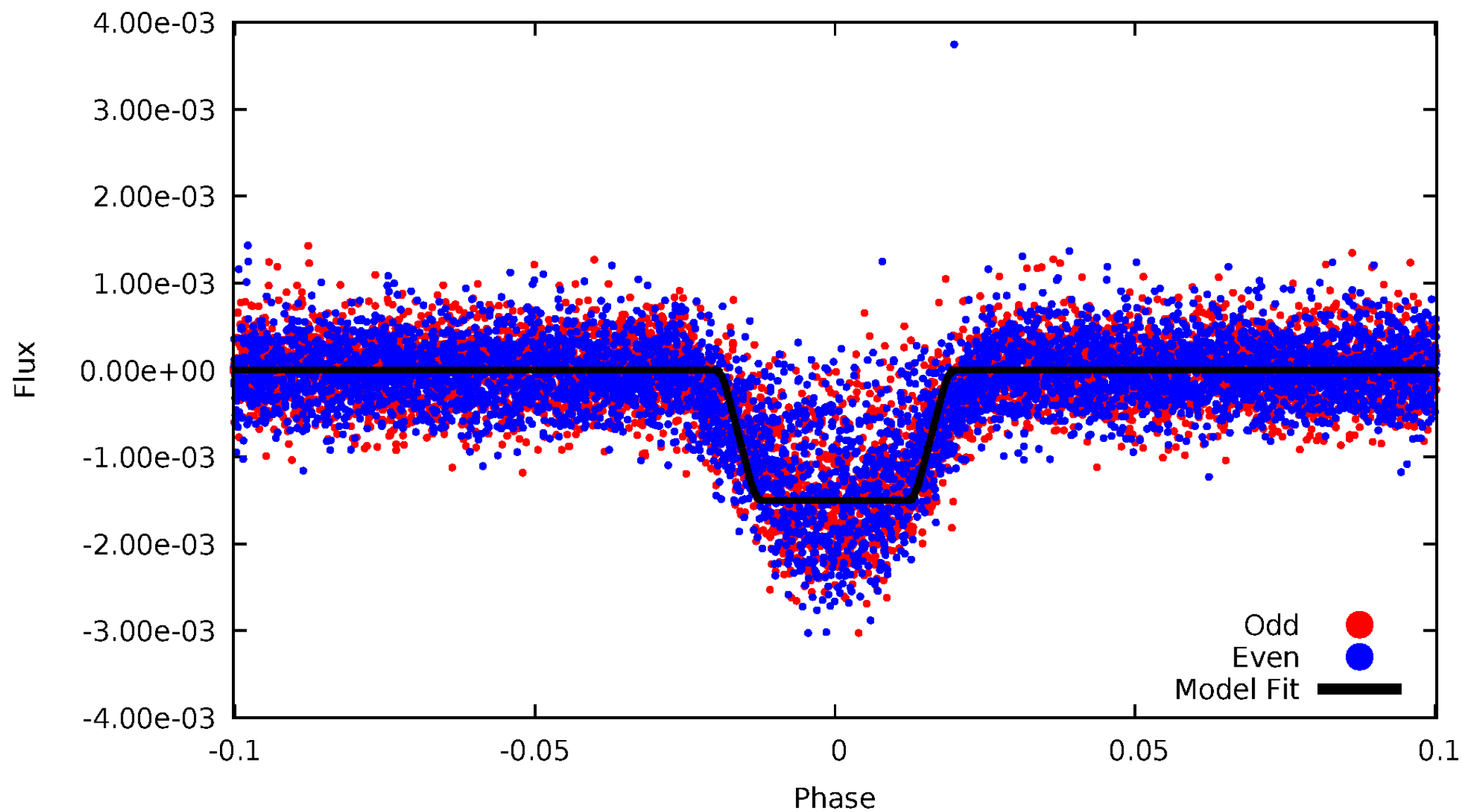
DV Odd/Even

TCE 007543649-01



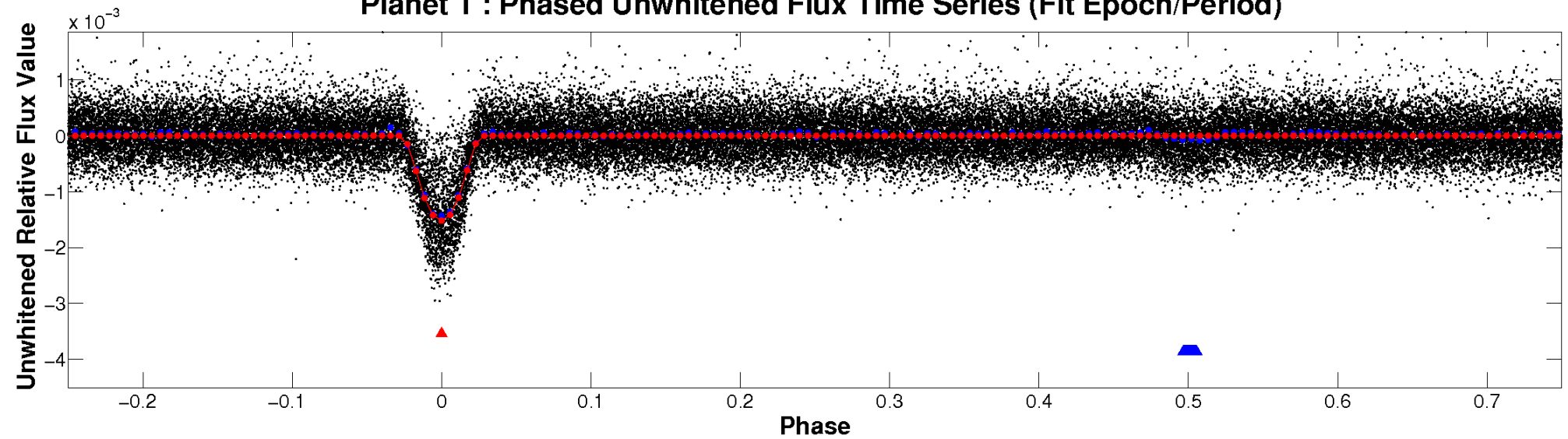
ALT Odd/Even

TCE 007543649-01

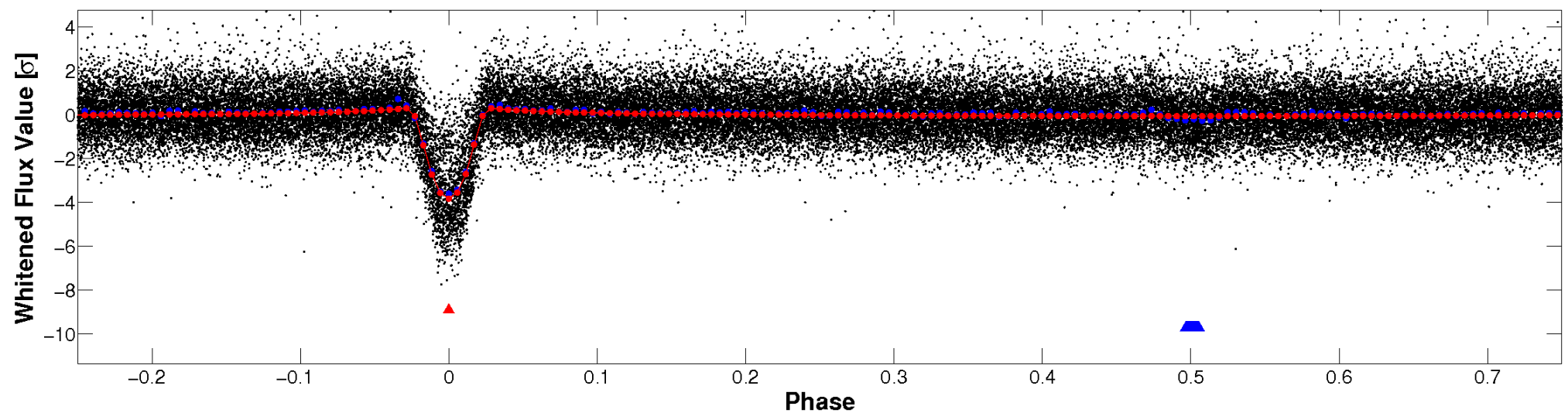


Non-Whitened Vs. Whitened Light Curve

Planet 1 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

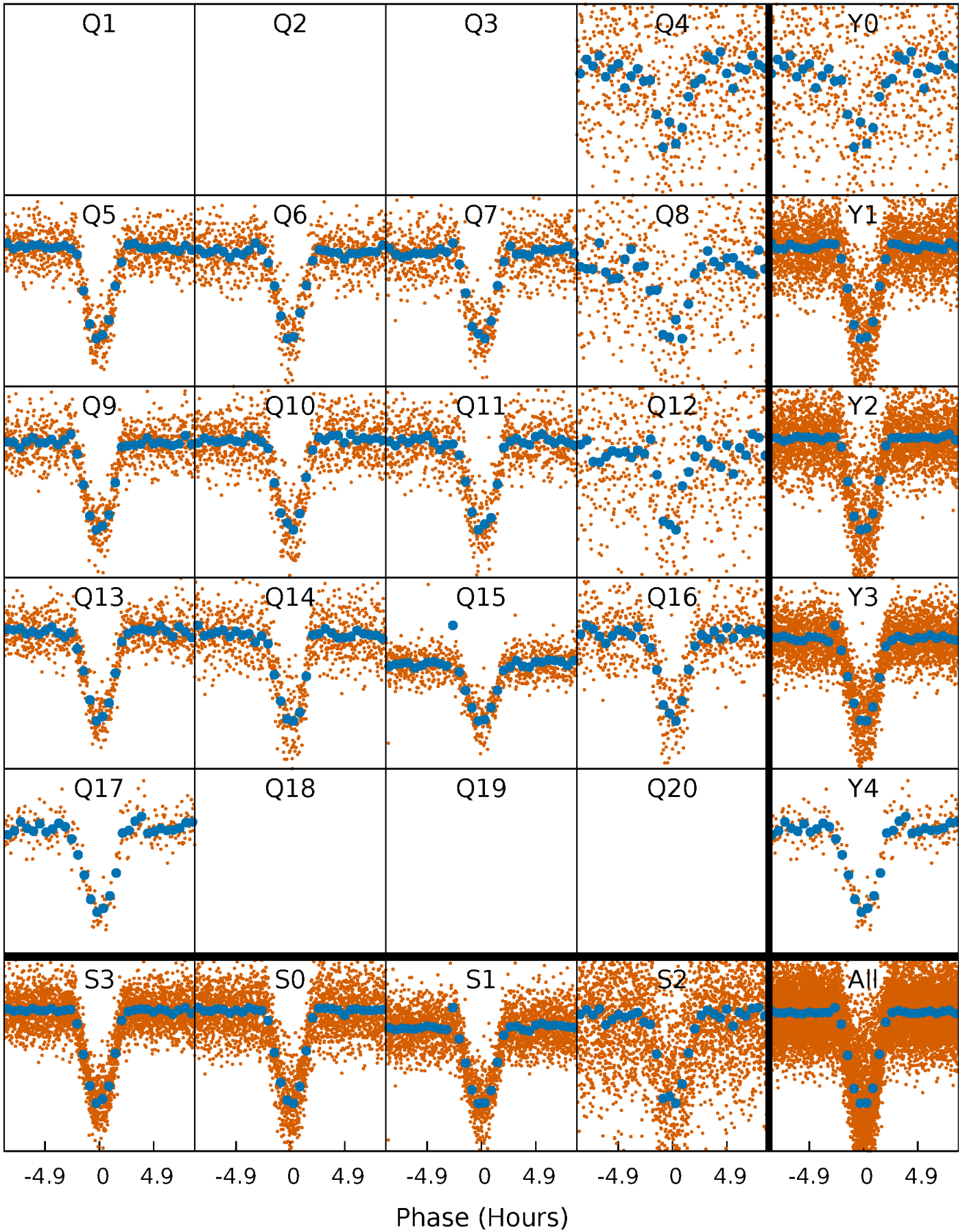


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



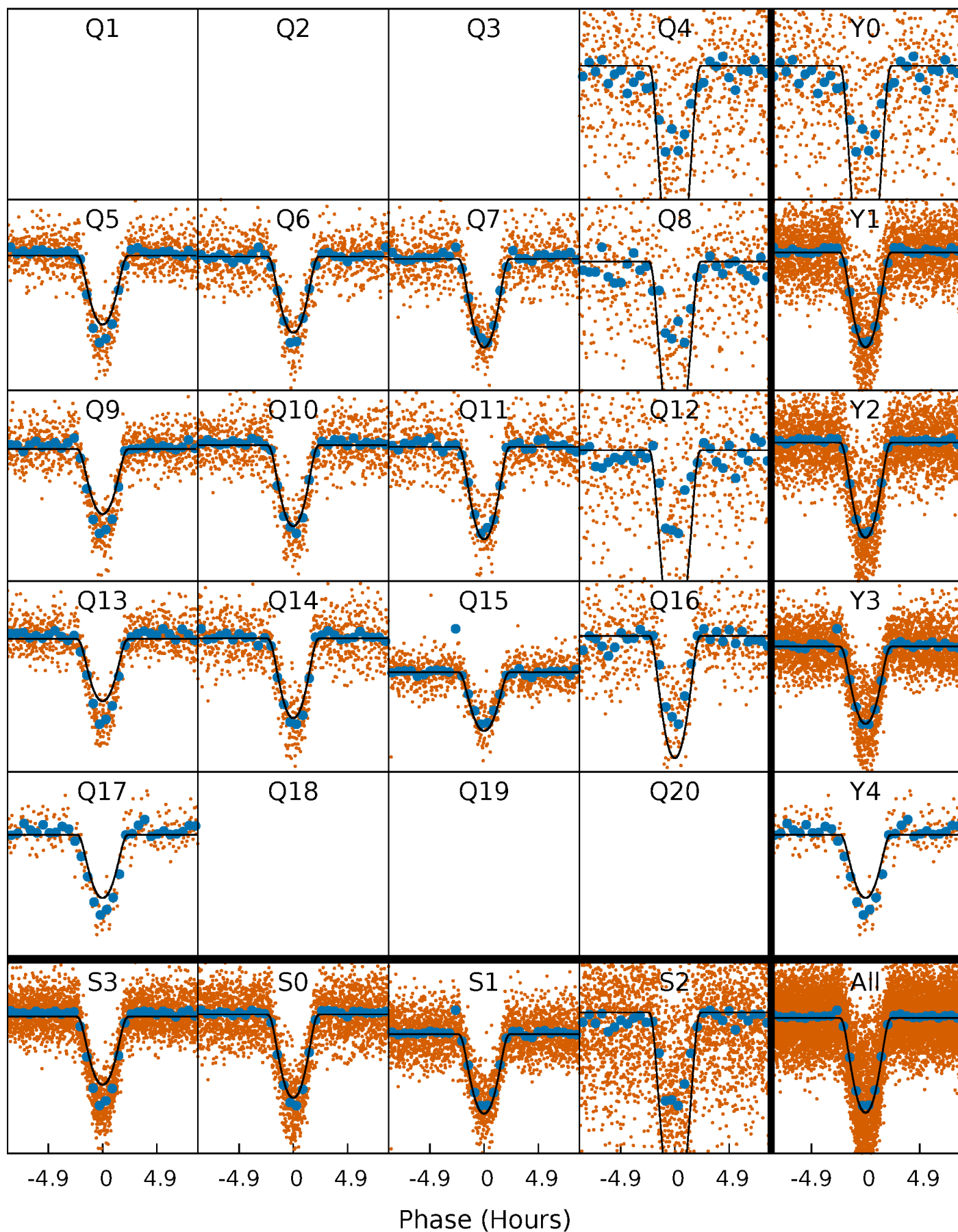
PDC Quarter-Phased Transit Curves

TCE 007543649-01 P= 3.582072 Days $T_0=133.427682$ (BKJD)



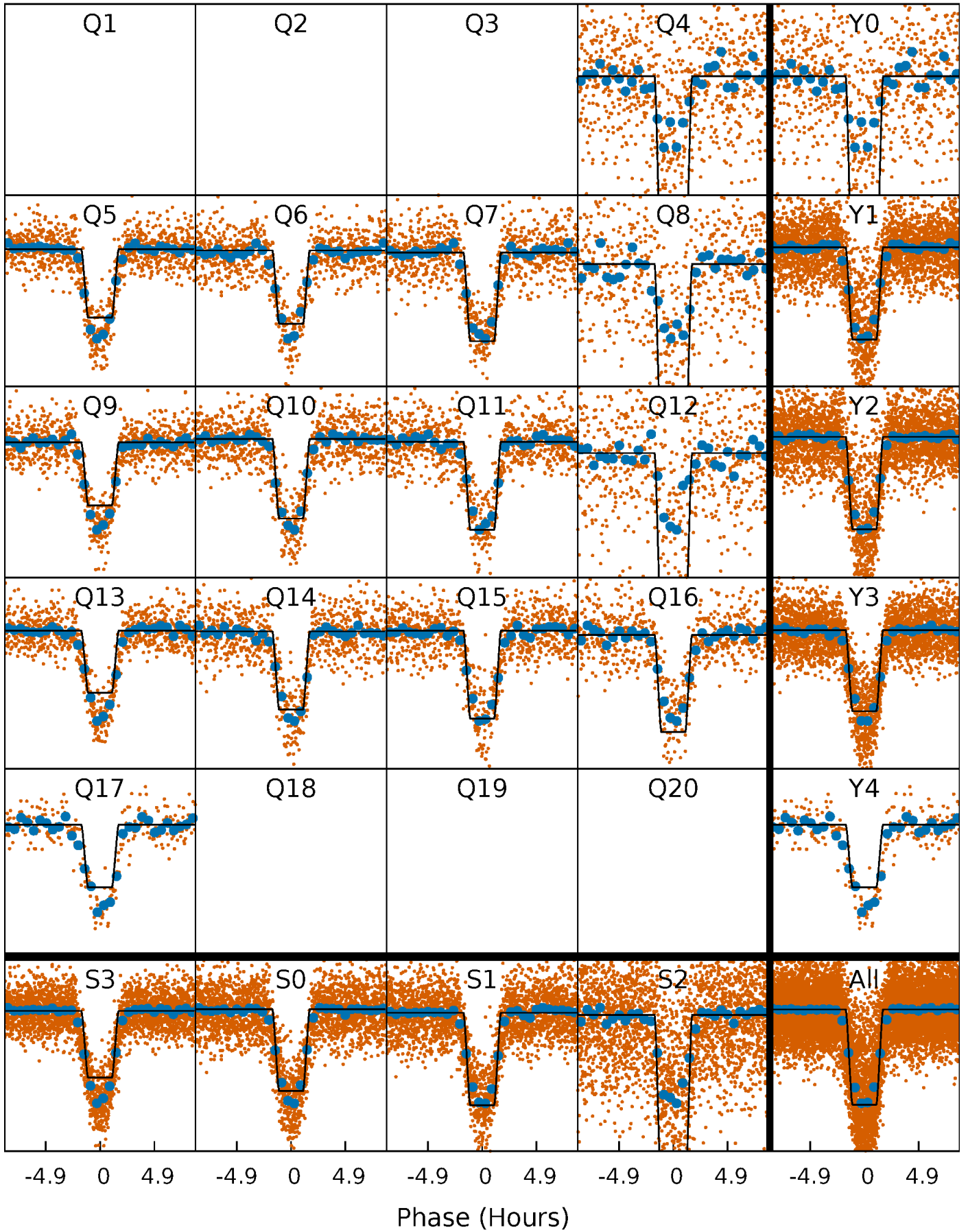
DV Quarter-Phased Transit Curves

TCE 007543649-01 P= 3.582072 Days $T_0=133.427682$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

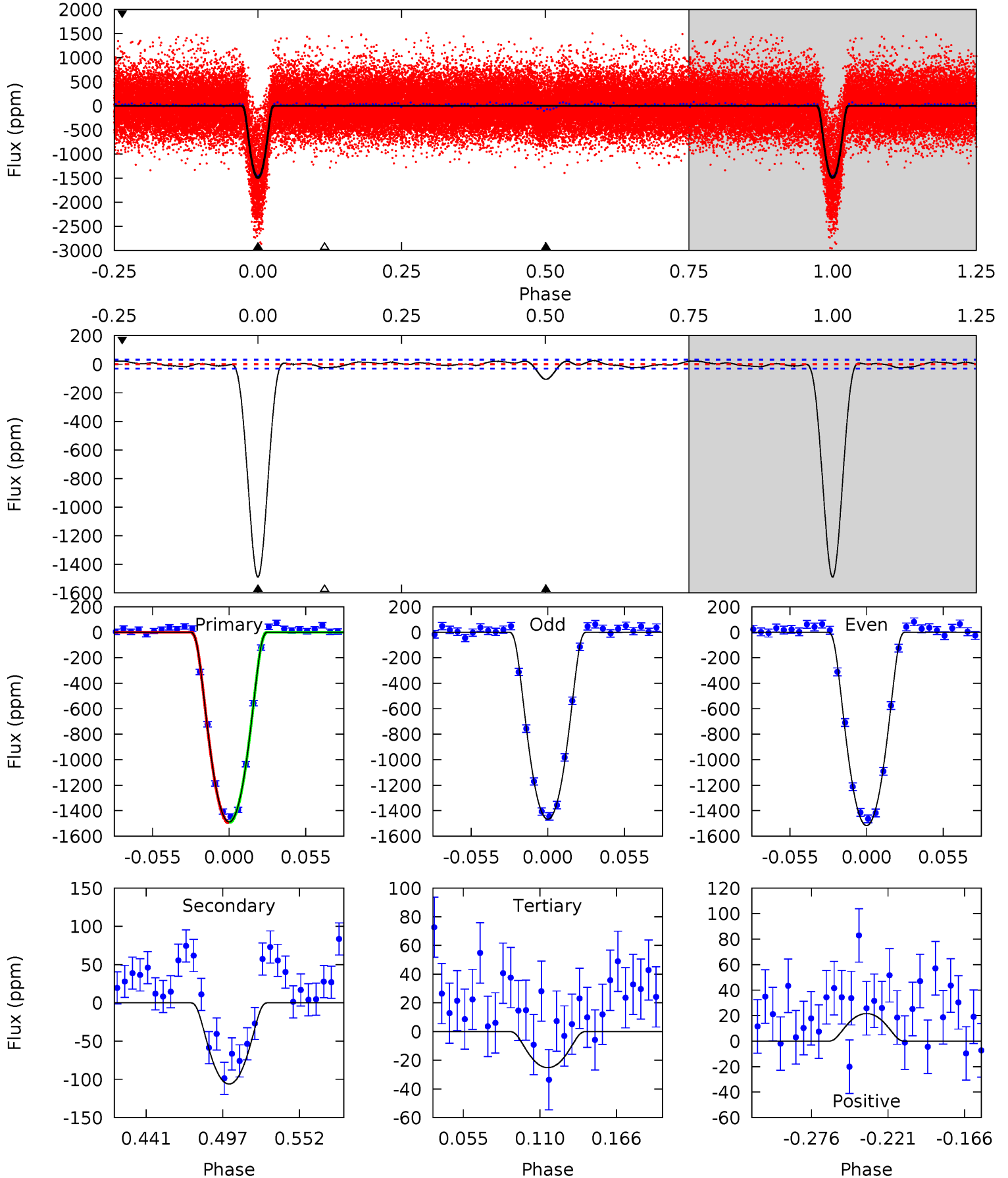
TCE 007543649-01 P= 3.582049 Days $T_0=133.432643$ (BKJD)



DV Model-Shift Uniqueness Test

007543649-01, P = 3.582072 Days, E = 133.427682 Days

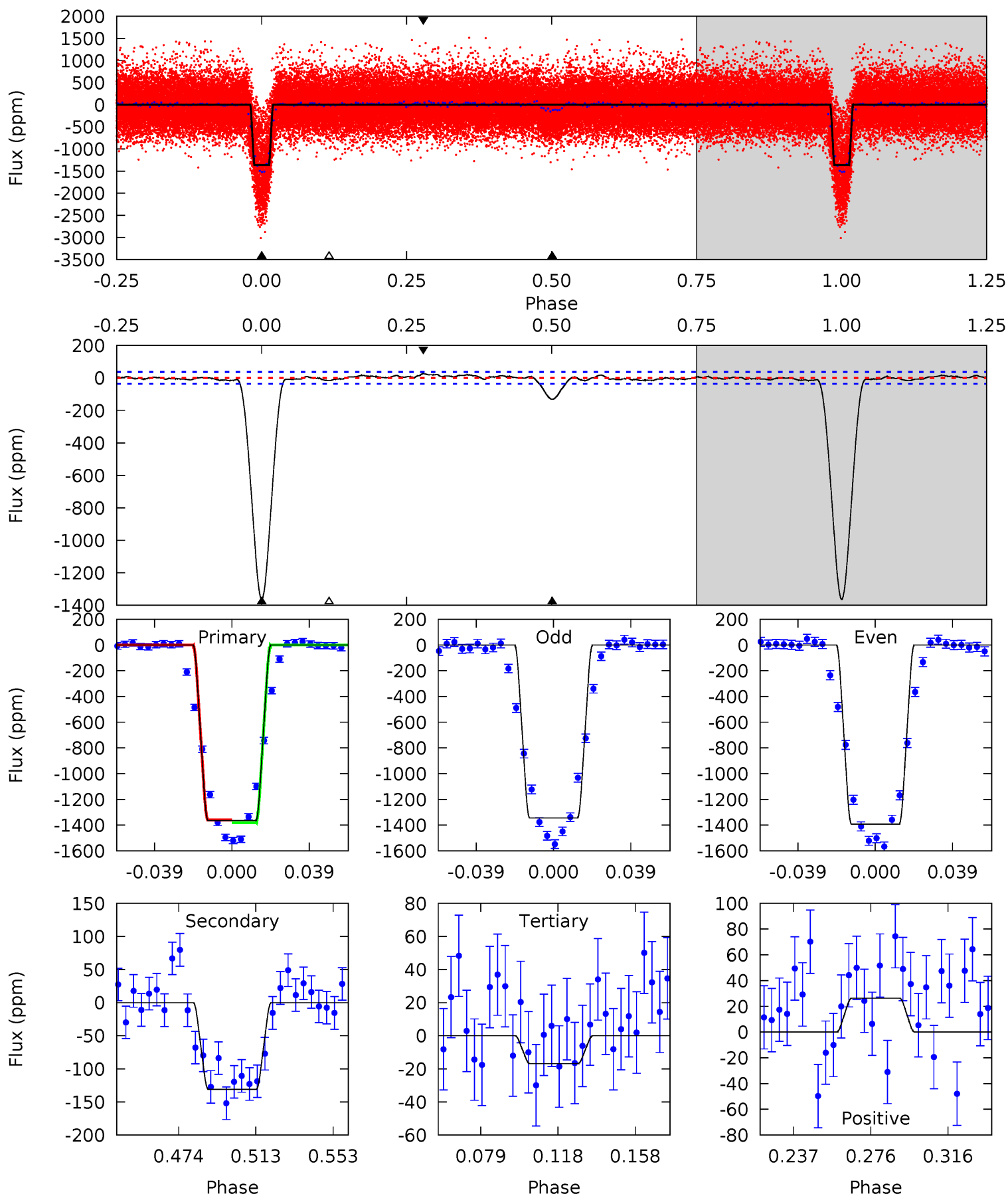
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
228.9	16.3	3.87	3.32	4.69	1.92	1.83	225.1	225.6	12.4	13.0	3.78	0.94	0.02	0.18



Alt Model-Shift Uniqueness Test

007543649-01, P = 3.582049 Days, E = 133.432643 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
178.0	17.1	2.20	3.44	4.76	2.06	1.27	175.8	174.5	14.9	13.7	3.07	0.93	0.02	1.41



Stellar Parameters For KIC 007543649

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6109^{+192}_{-235}	$4.422^{+0.090}_{-0.195}$	$-0.360^{+0.300}_{-0.300}$	$0.993^{+0.283}_{-0.131}$	$0.950^{+0.140}_{-0.115}$	$1.366^{+0.624}_{-0.692}$
	+3%/-4%	+2%/-4%	+83%/-83%	+28%/-13%	+15%/-12%	+46%/-51%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 007543649-01 / KOI 1469.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-106 ± 7	$5.57^{+0.93}_{-0.70}$	1792^{+138}_{-99}	3276^{+116}_{-108}	$3.758^{+1.150}_{-0.924}$
Alt.	-131 ± 8	$4.31^{+0.69}_{-0.58}$	1791^{+120}_{-104}	3703^{+161}_{-151}	$7.876^{+2.478}_{-2.009}$

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

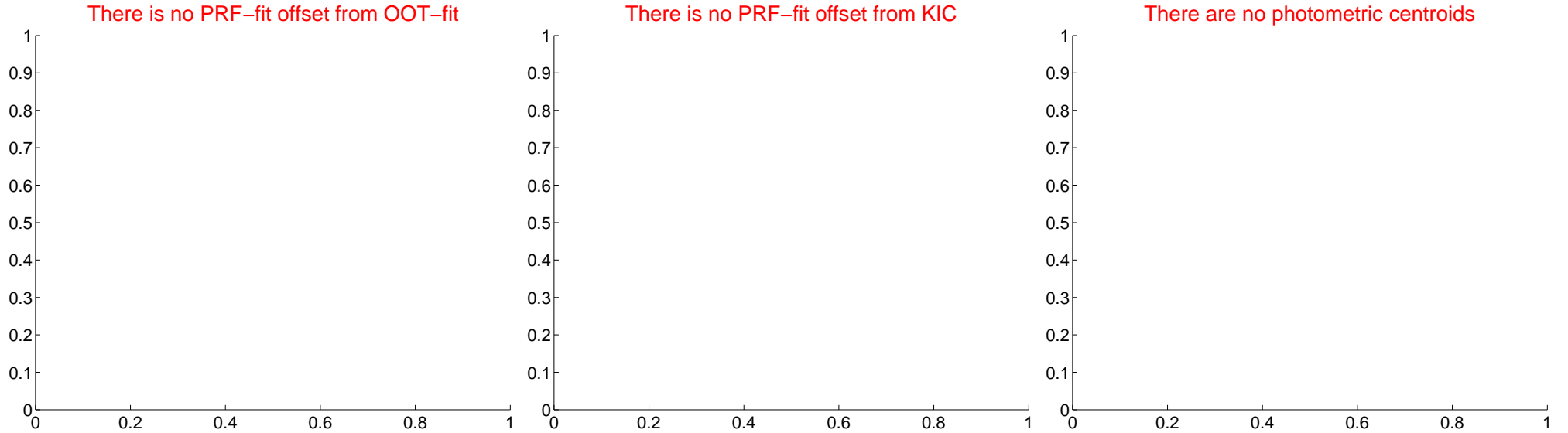
DV Centroid Data

Supplemental centroid analysis for 007543649-01. Kepler magnitude: 15.19. Transit SNR 125.43

There are 0 quarters with good PRF difference image offsets

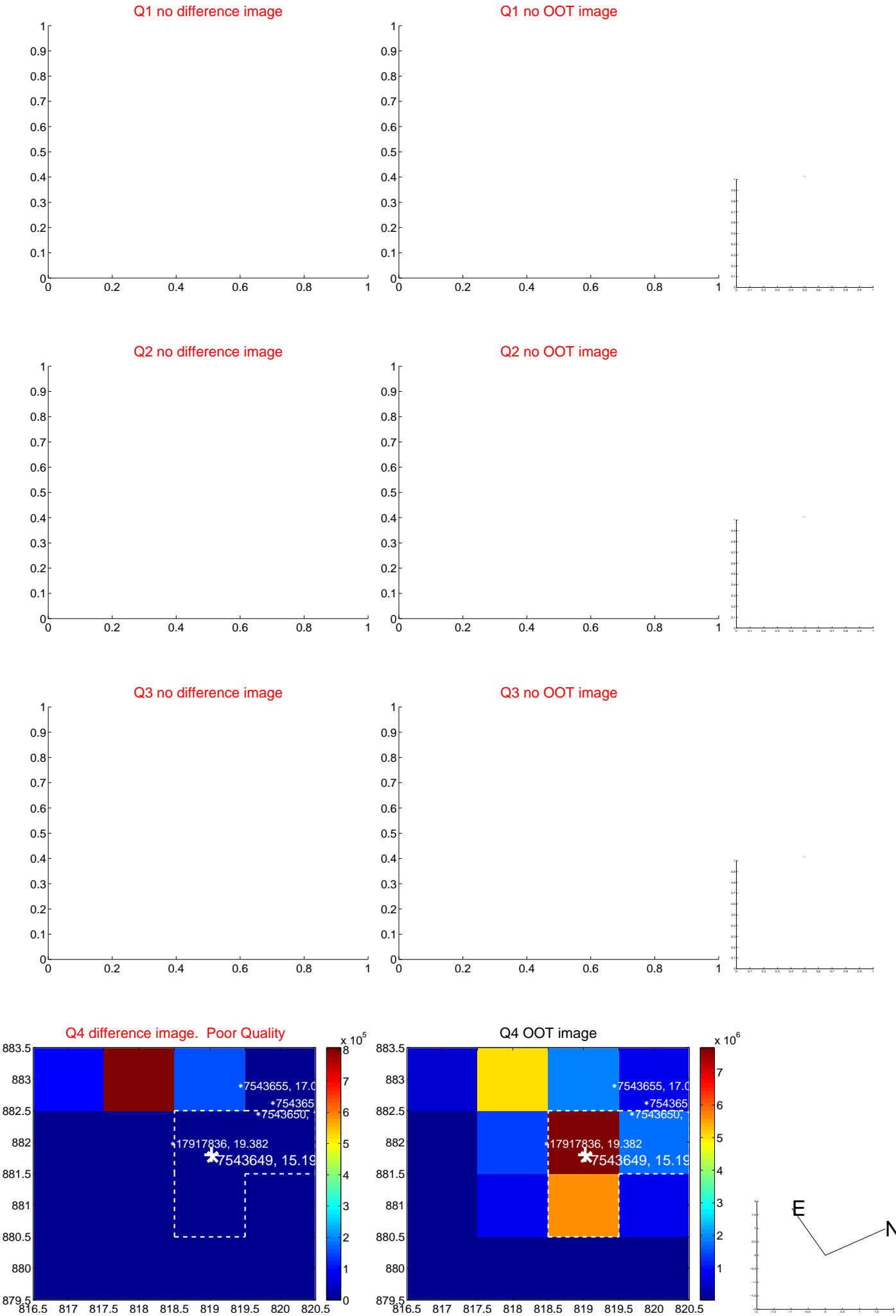
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	—	—	—	—

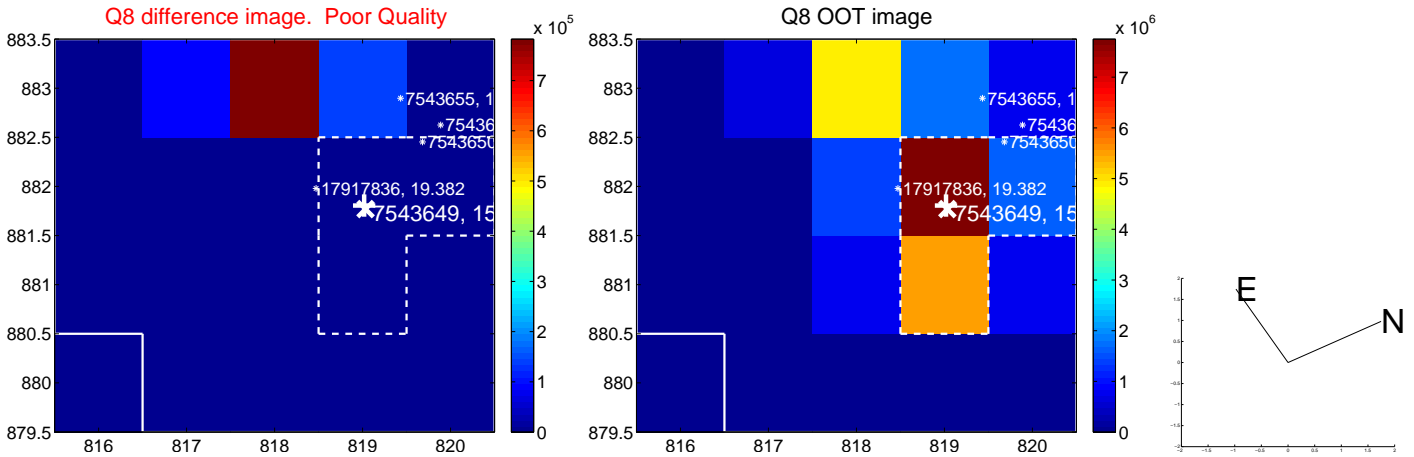
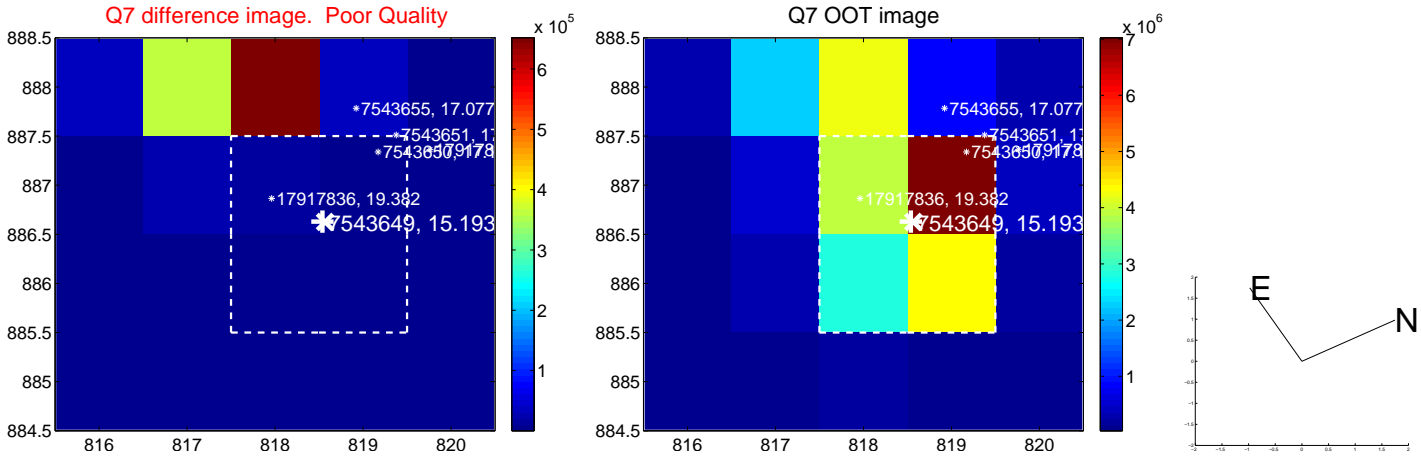
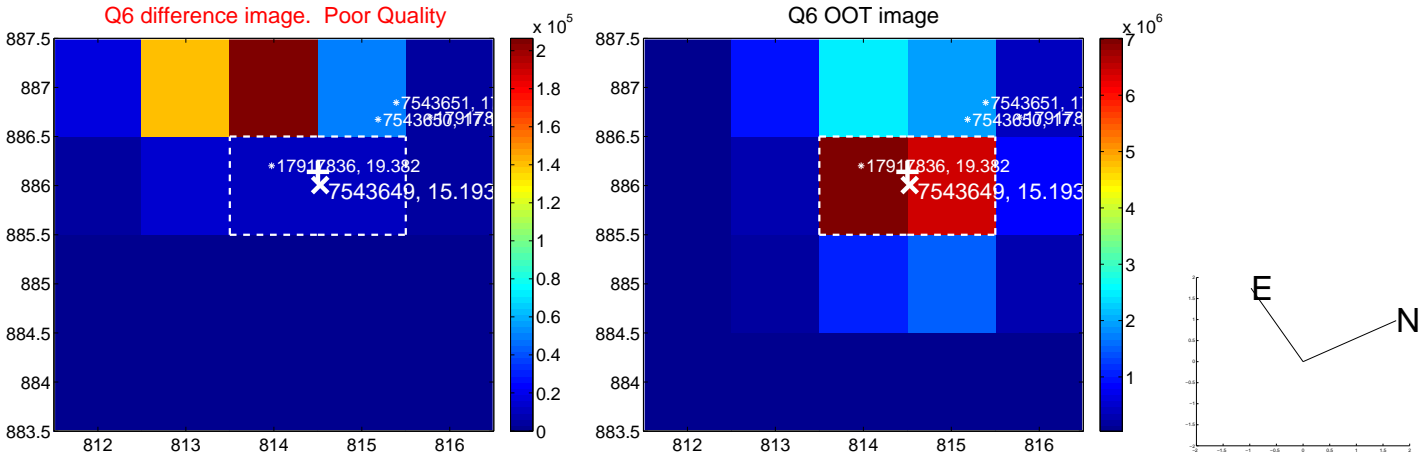
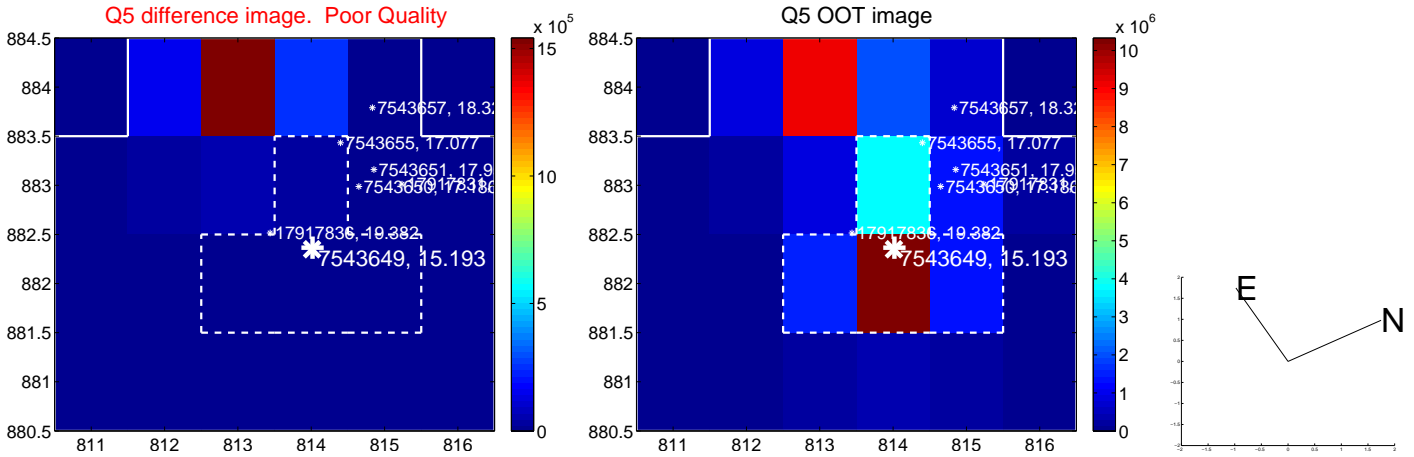


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

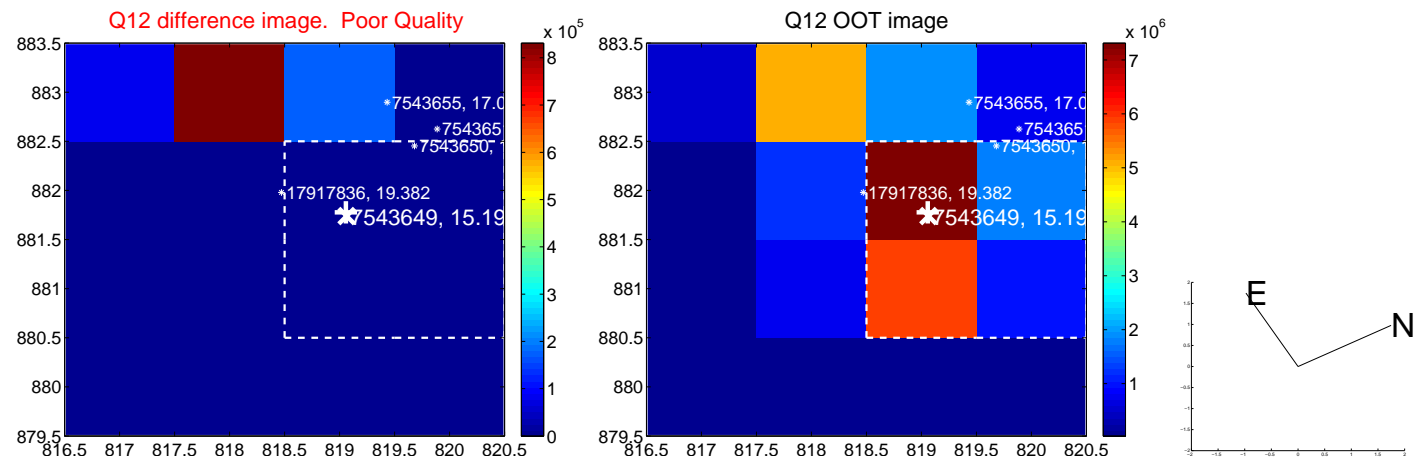
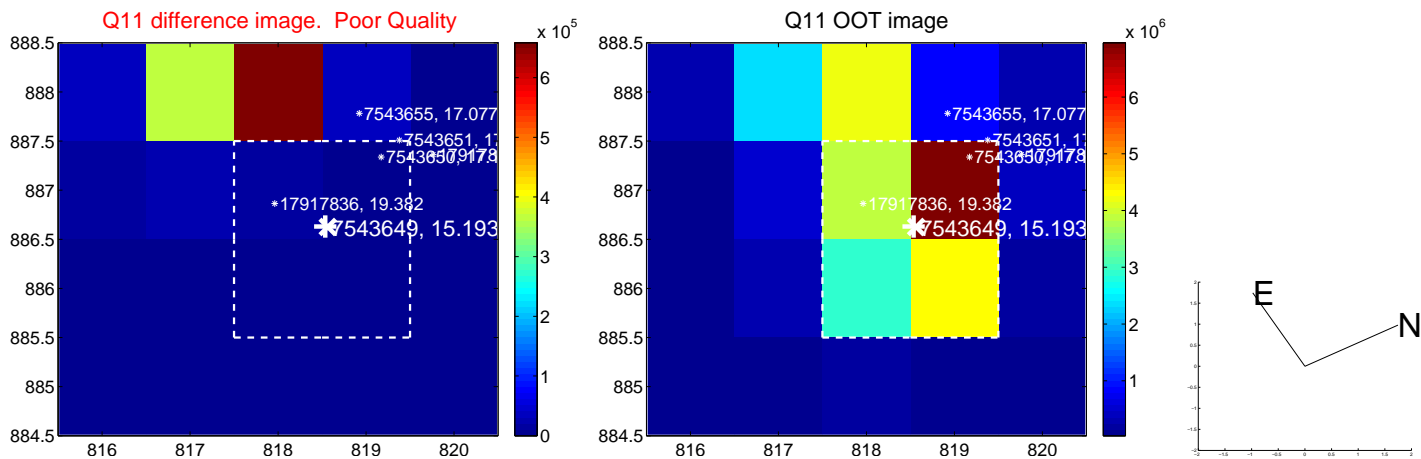
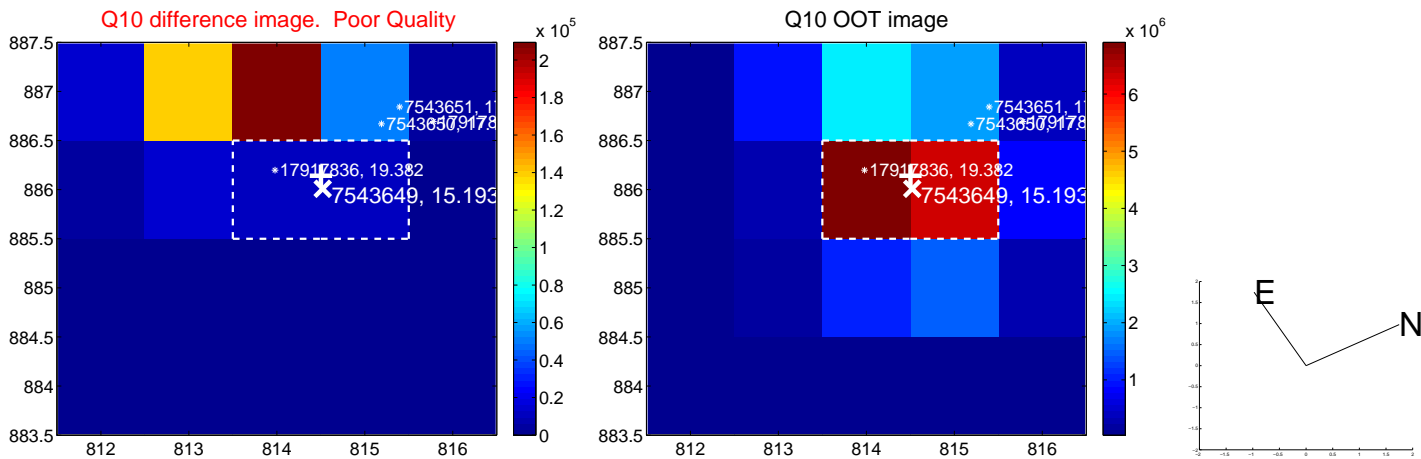
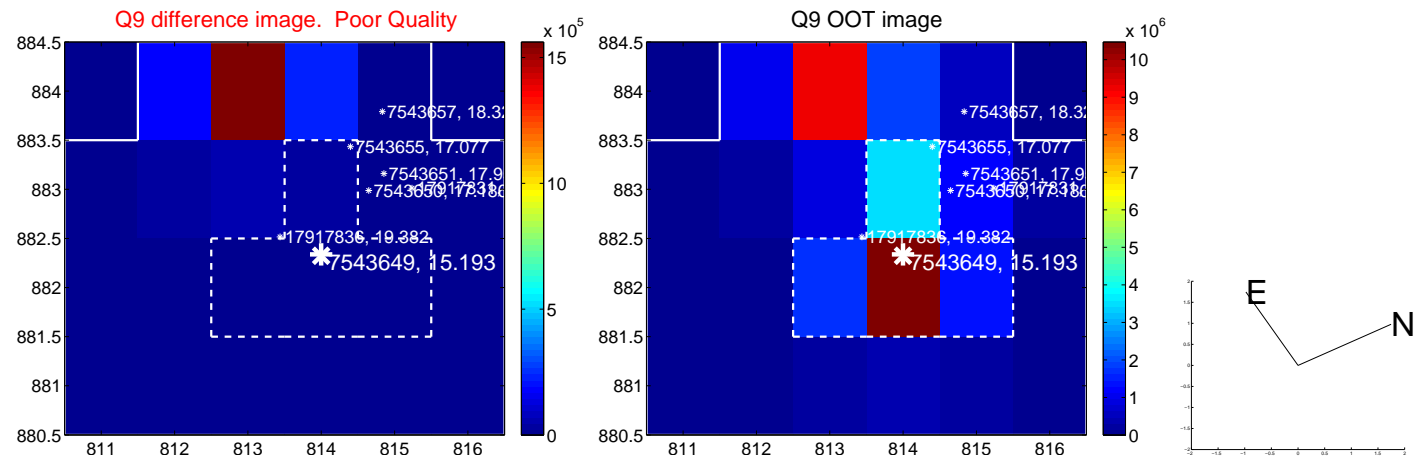
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



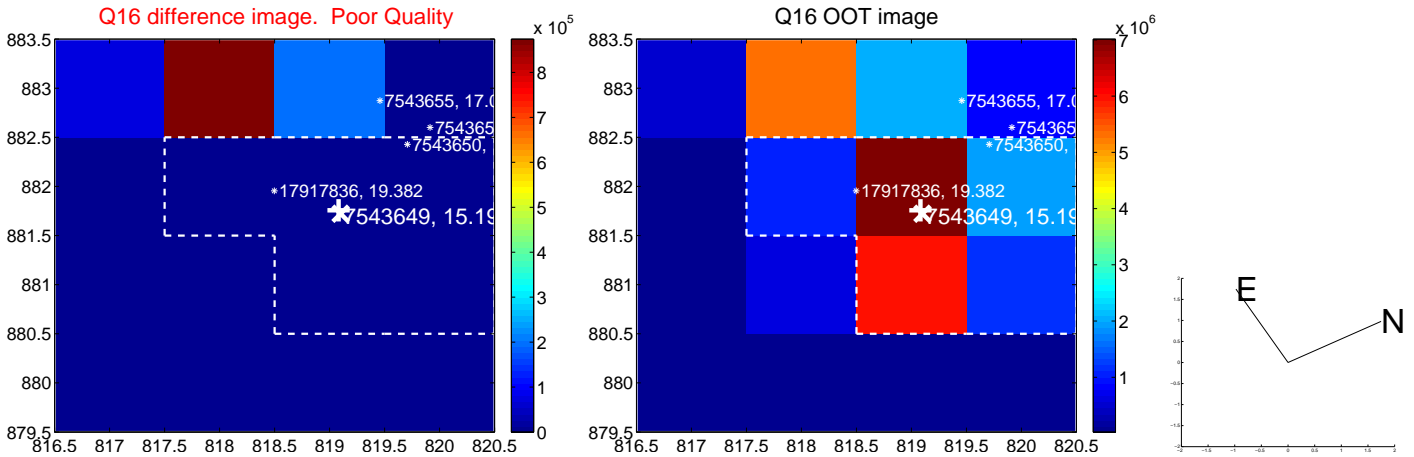
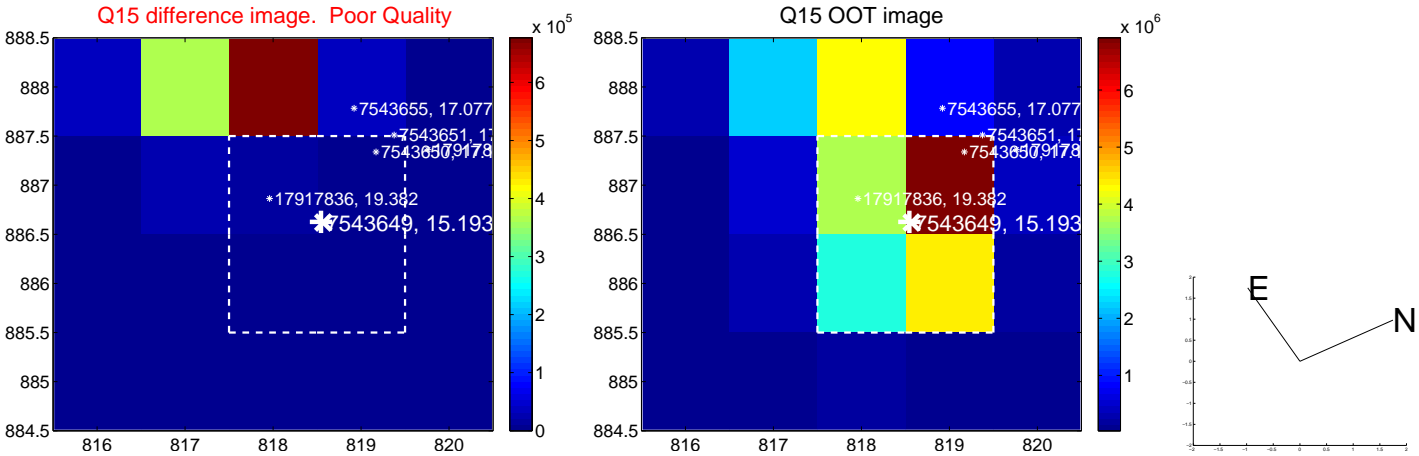
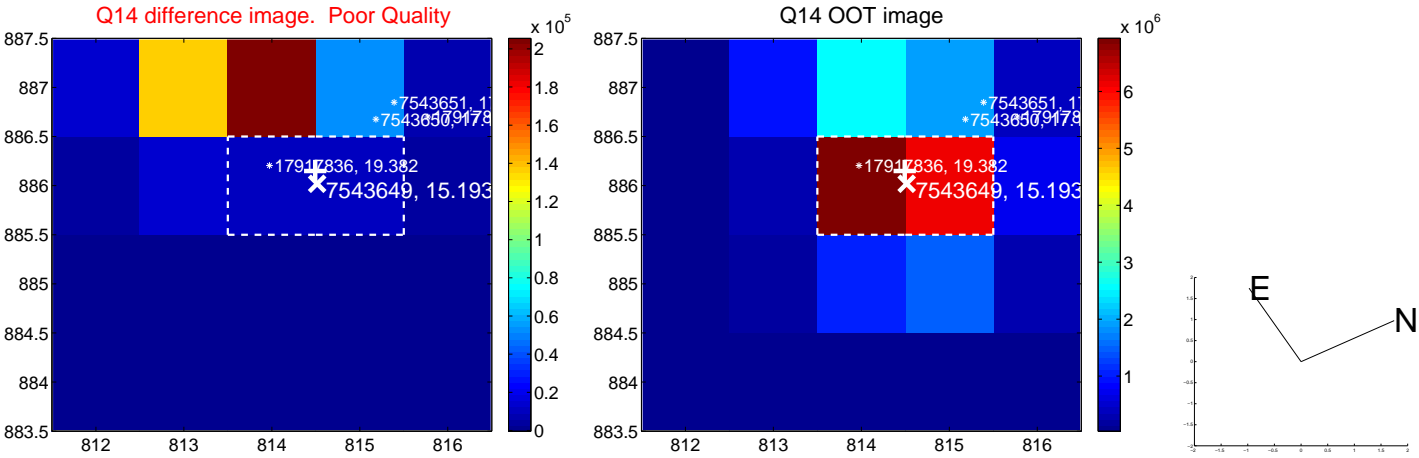
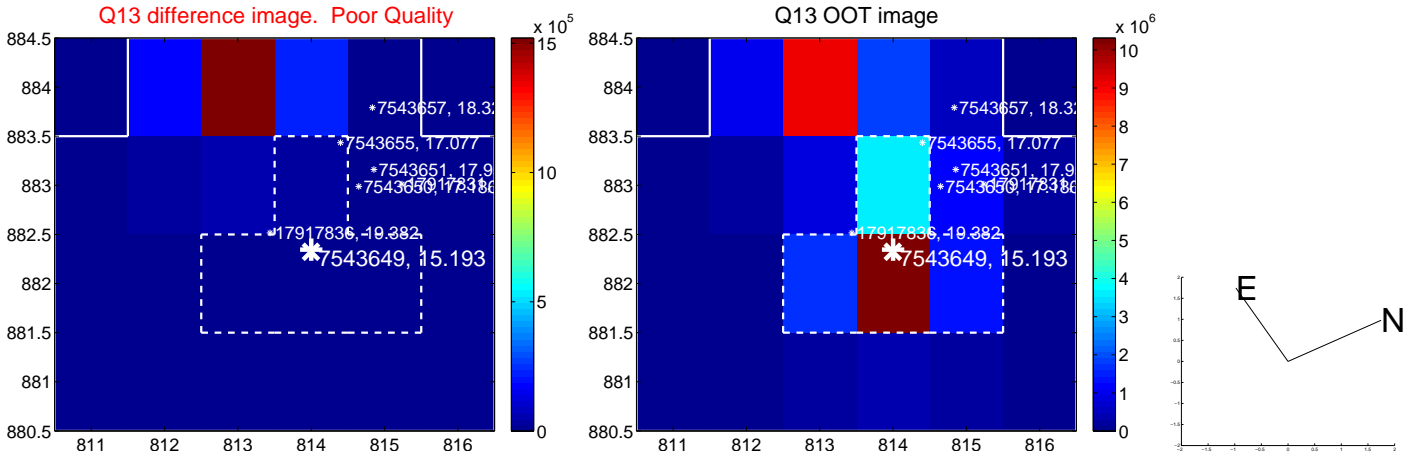
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



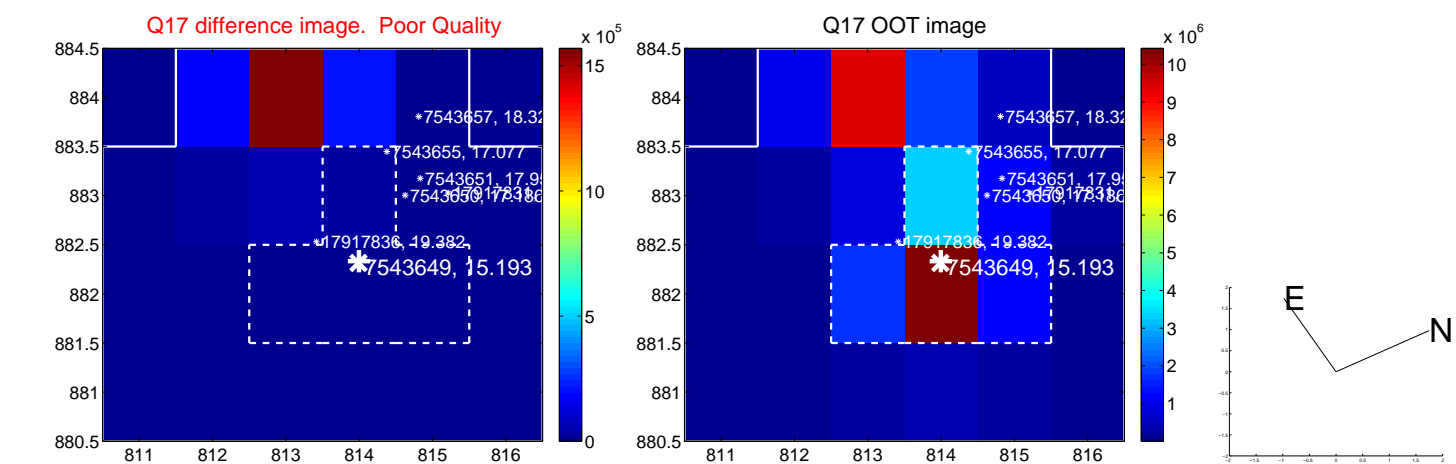
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



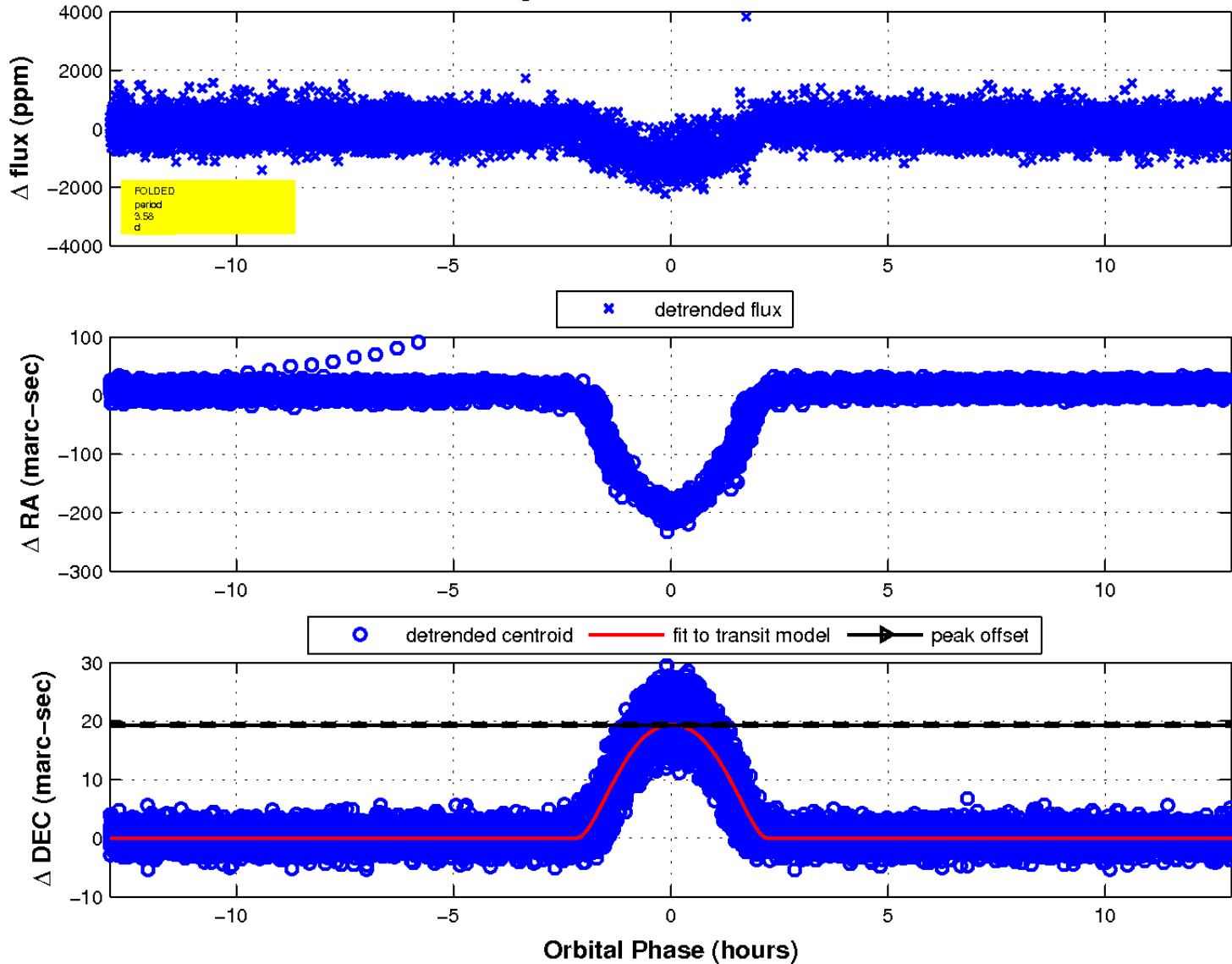
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

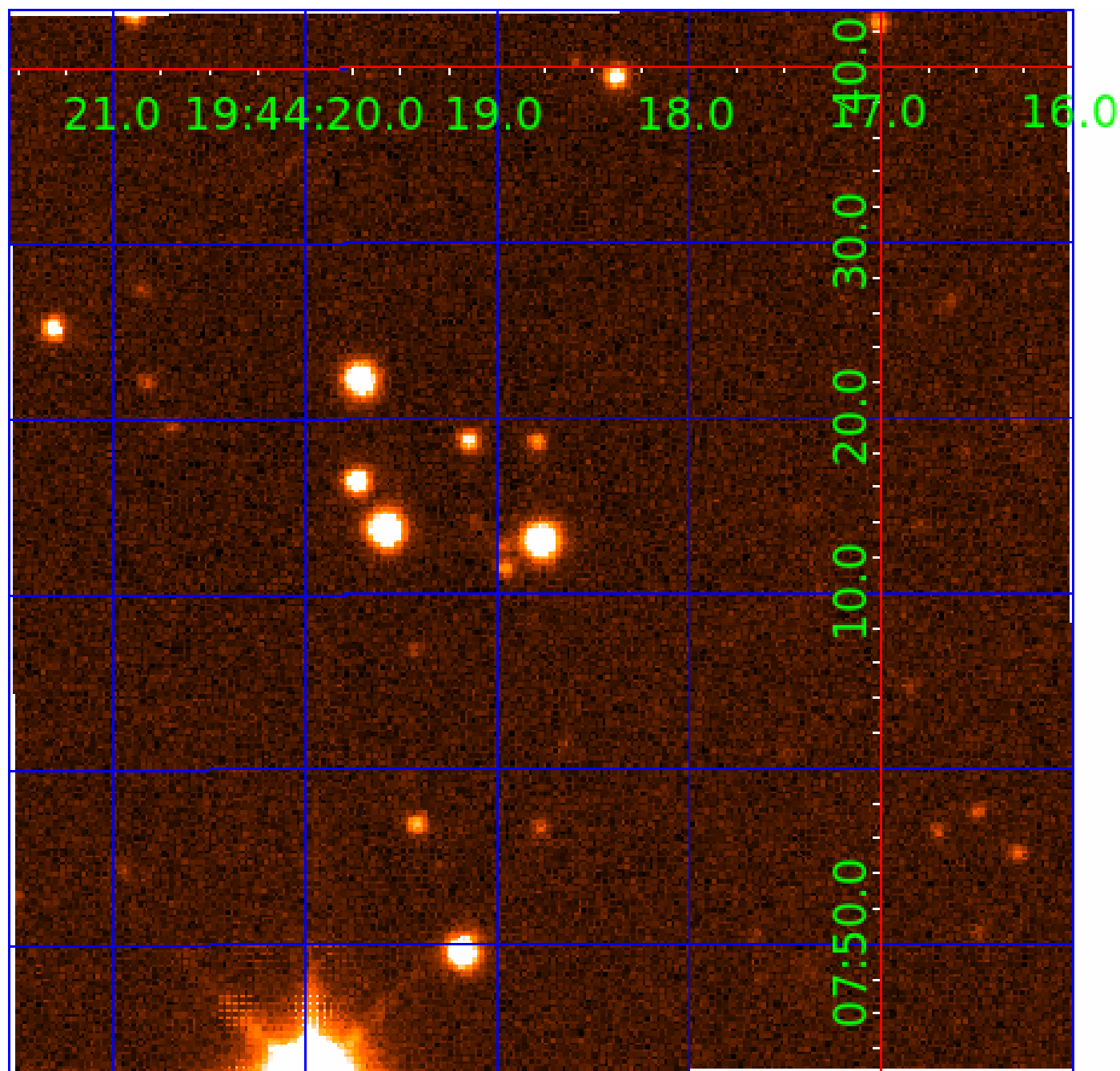


fluxWeightedCentroids, Planet 1 of 2



UKIRT Image

Declination



KIC 007543649

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})
007543649-01	OBS	1469.01	3.582072	133.427682	1527.8	4.302	125.1	125.4	0.99	6109	5.42	606.12
007543649-02	OBS	No	3.582149	131.624768	98.4	3.115	9.4	9.9	0.99	6109	1.16	606.11

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007543649-01	OBS	FP	0.00	0	1	1	0	MOD_SEC_DV—MOD_SEC_ALT—HAS_SEC_TCE—CENT_RESOLVED_OFFSET
007543649-02	OBS	FP	0.00	1	1	1	0	IS_SEC_TCE—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 007543649-02

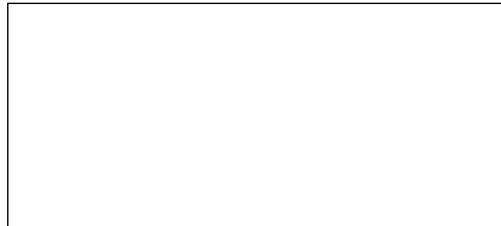
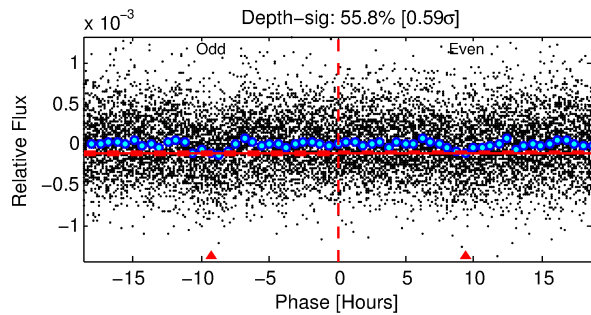
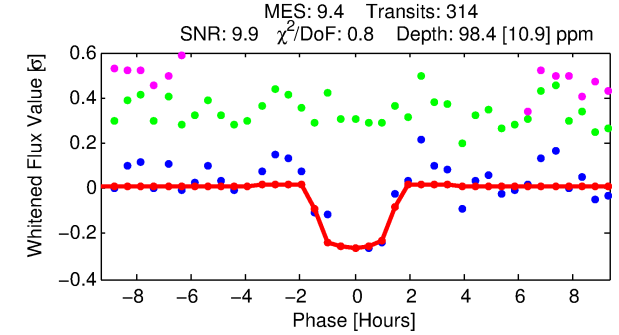
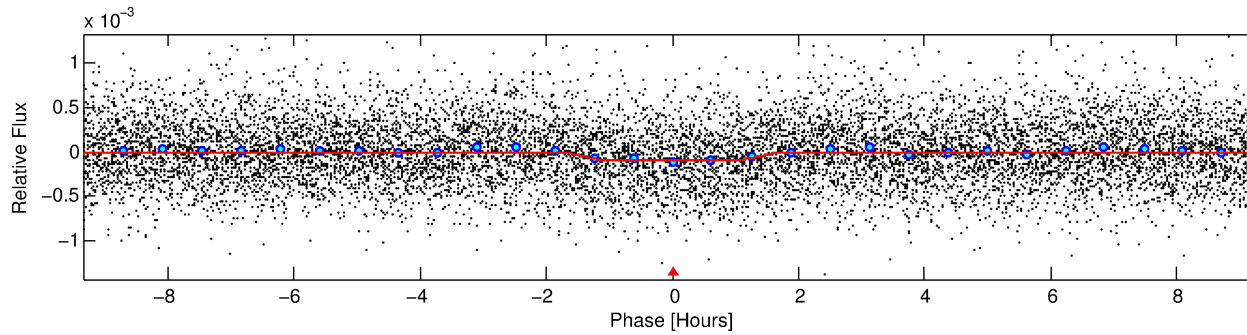
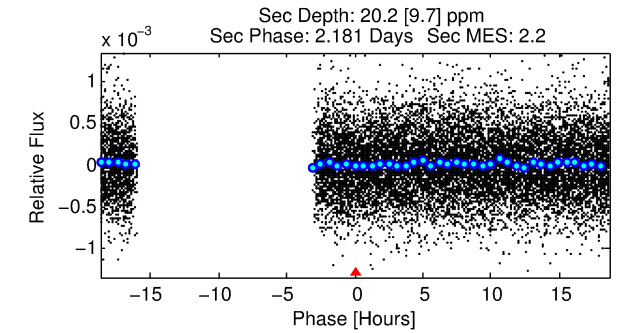
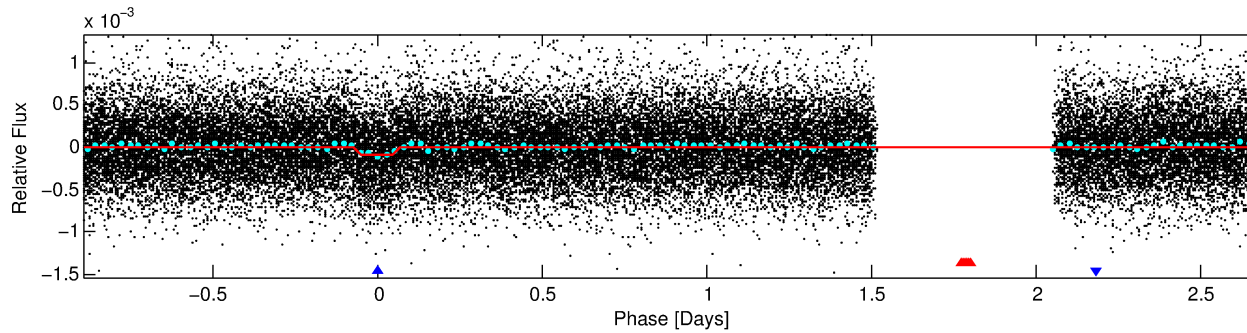
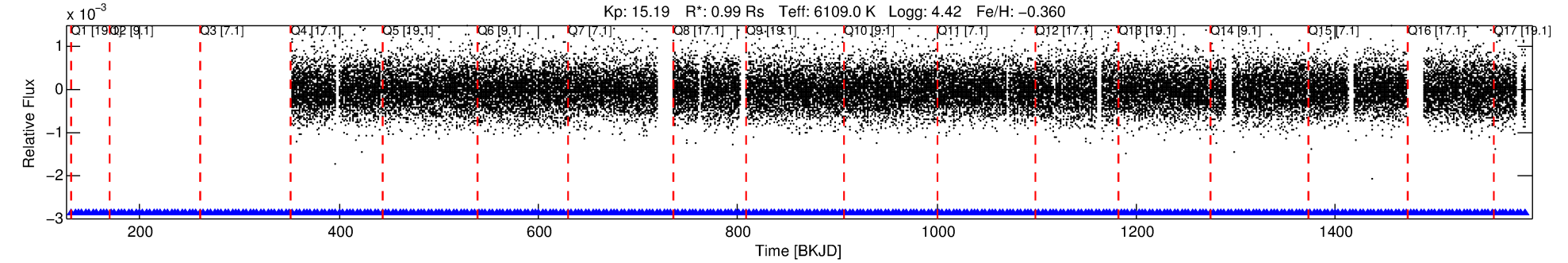
No Significant Match Found

DV One-Page Summary

KIC: 7543649 Candidate: 2 of 2 Period: 3.582 d

KOI: K01469 Corr: No Ephemeris Match

Kp: 15.19 R*: 0.99 Rs Teff: 6109.0 K Logg: 4.42 Fe/H: -0.360



DV Fit Results:

Period = 3.58215 [0.00003] d
Epoch = 131.6248 [0.0051] BKJD
Rp/R* = 0.0107 [0.0054]
a/R* = 4.07 [10.49]
b = 0.90 [0.56]
Seff = 606.11 [234.26]
Teq = 1265 [122] K
Rp = 1.16 [0.67] Re
a = 0.0451 [0.0109] AU
Ag = 16.72 [19.54] [0.80σ]
Teffp = 3956 [1112] K [2.41σ]

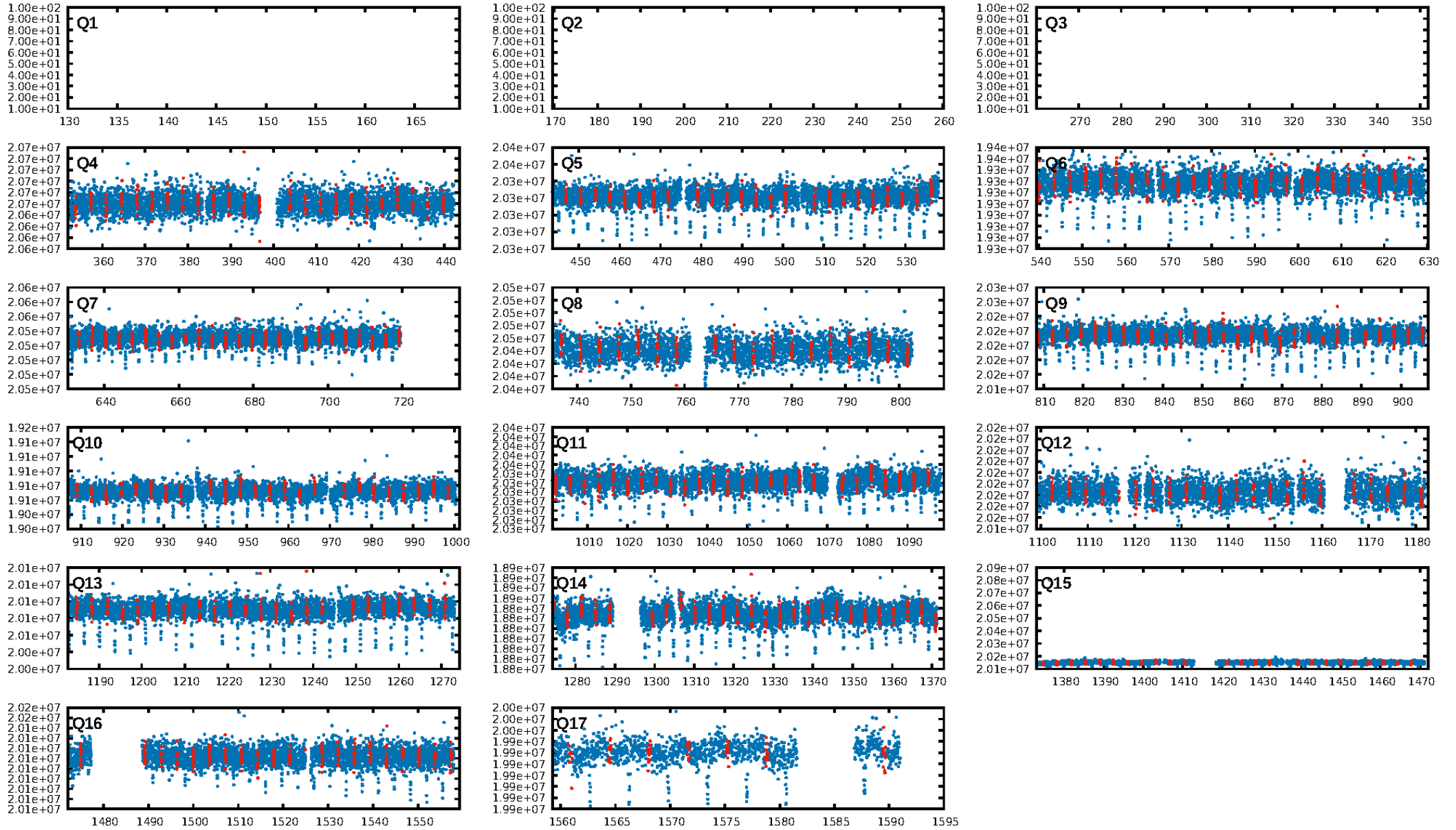
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 6.39e-21
RollingBand-fgt: 1.00 [307/307]
GhostDiagnostic-chr: -0.5272
Centroid-sig: N/A
Centroid-so: 31.570 arcsec [17.42σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [14/14]

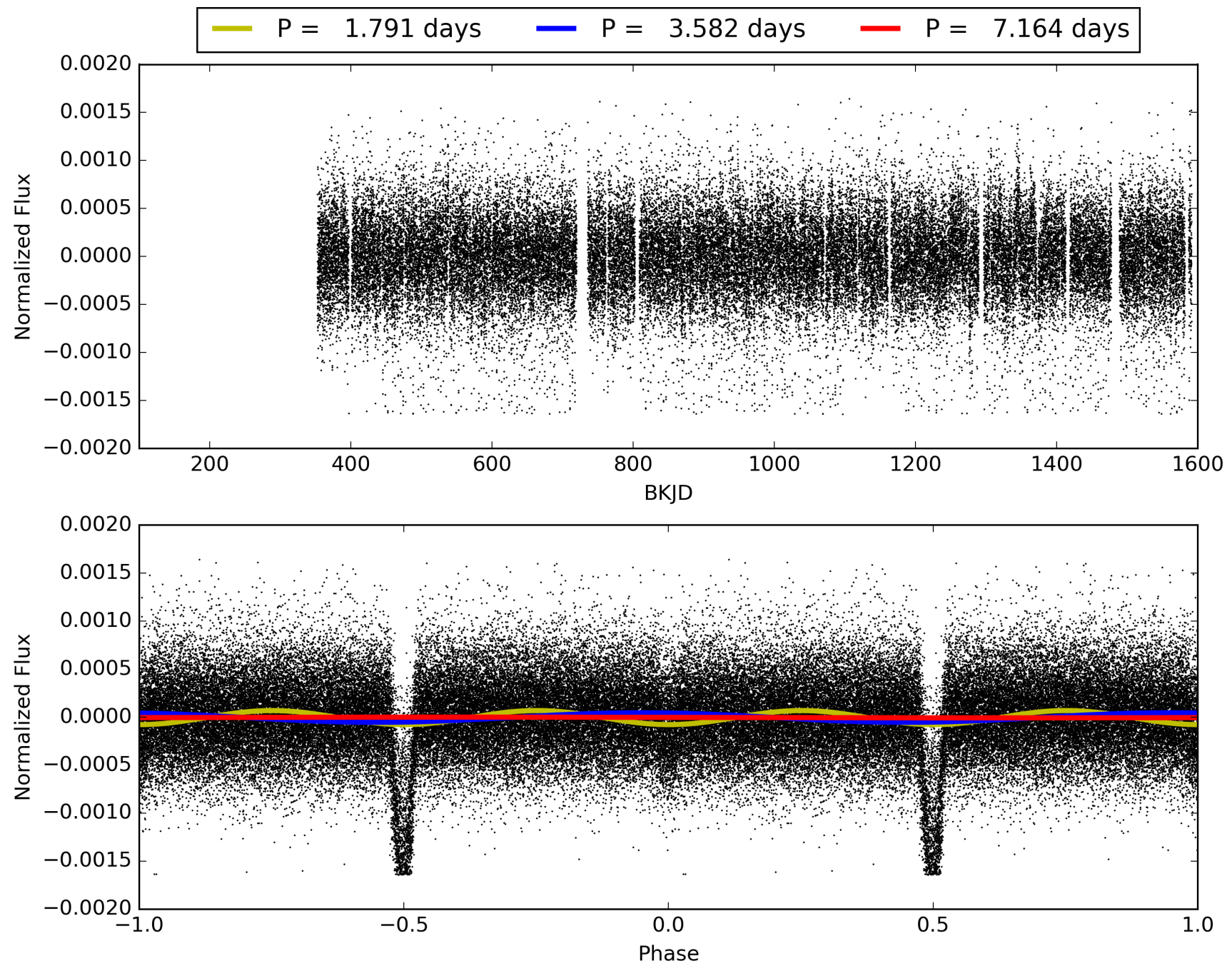
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 11:05:11 Z

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

TCE 007543649-02, PDC Light Curves

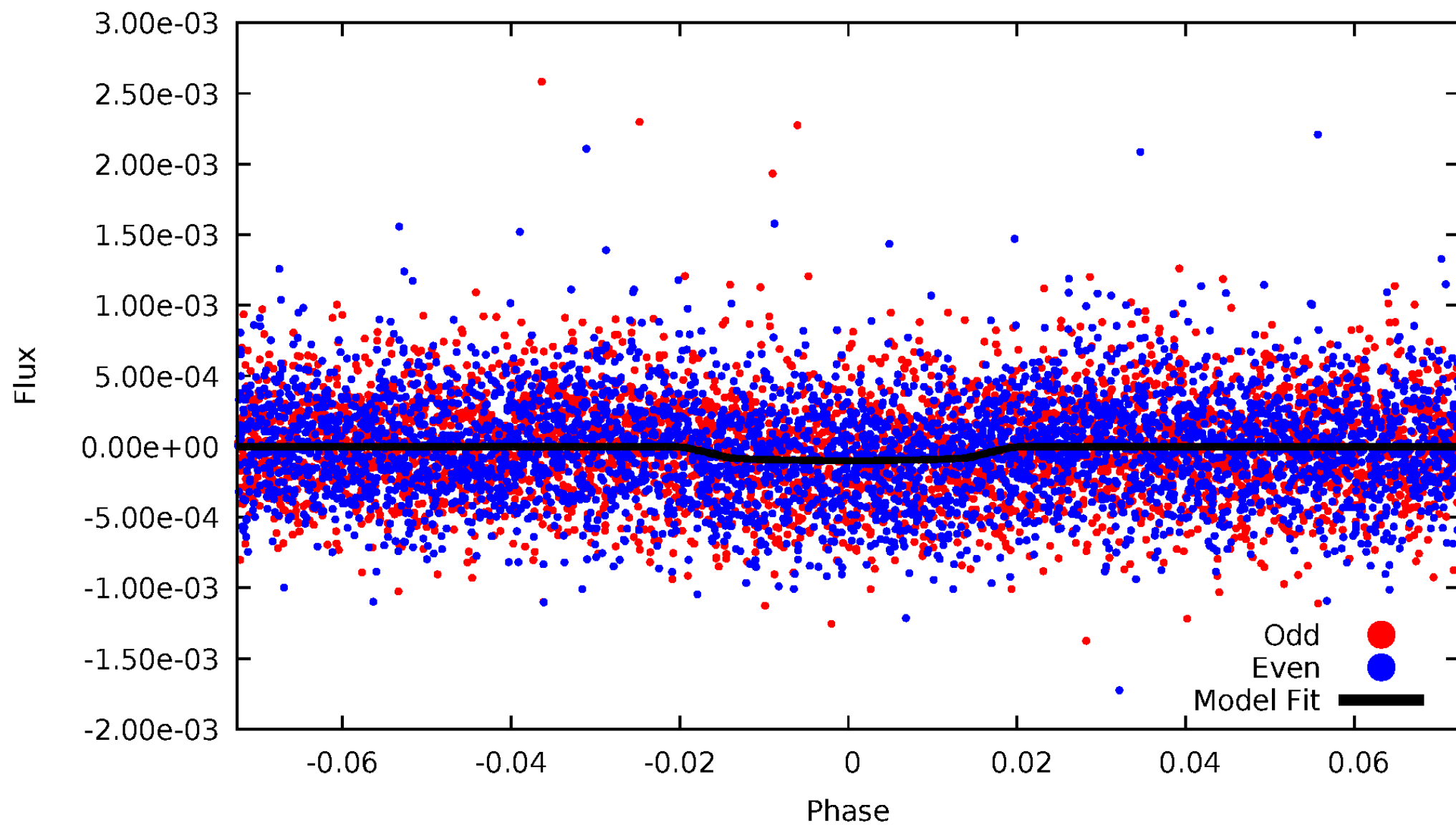


TCE 007543649-02



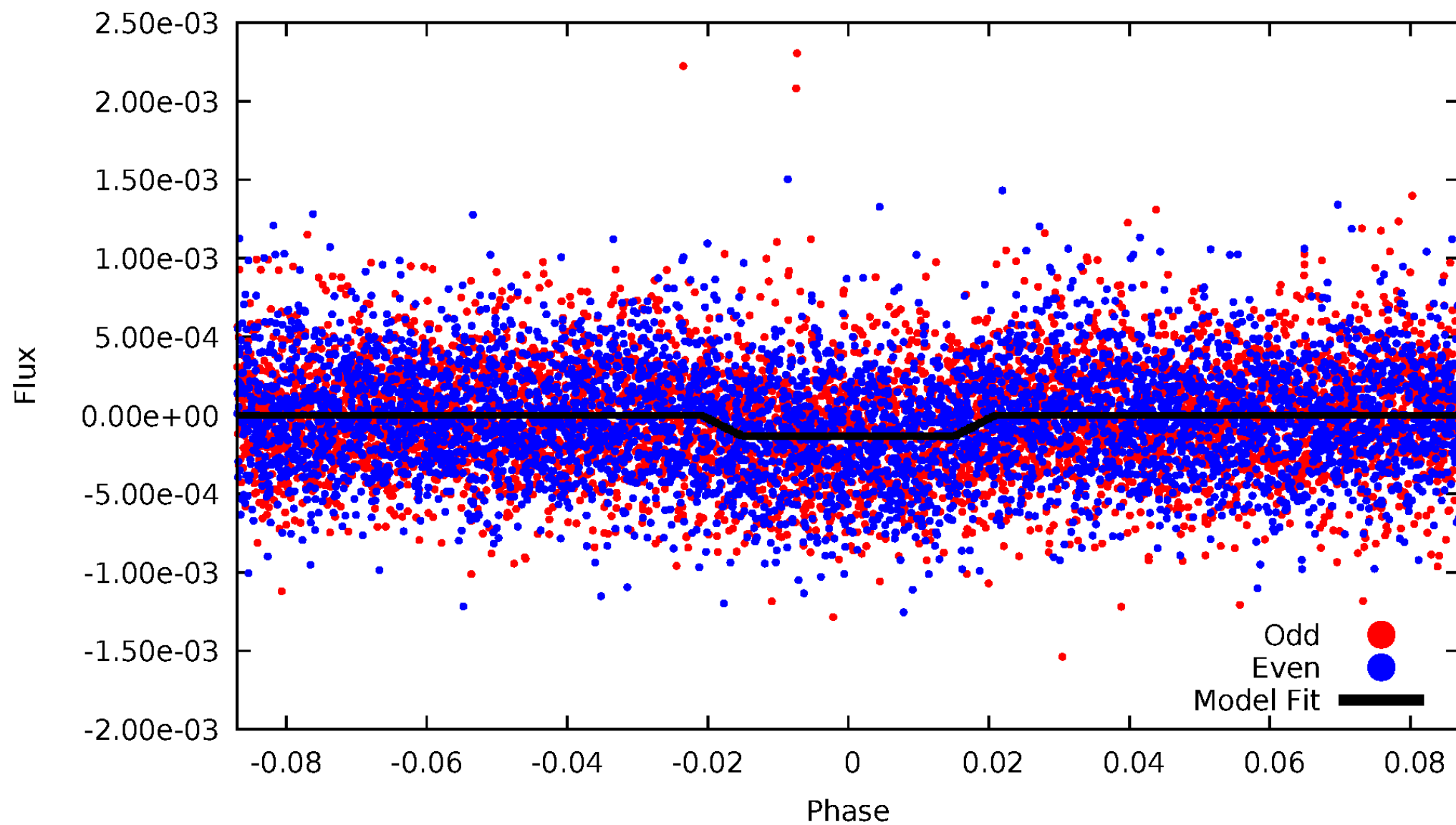
DV Odd/Even

TCE 007543649-02



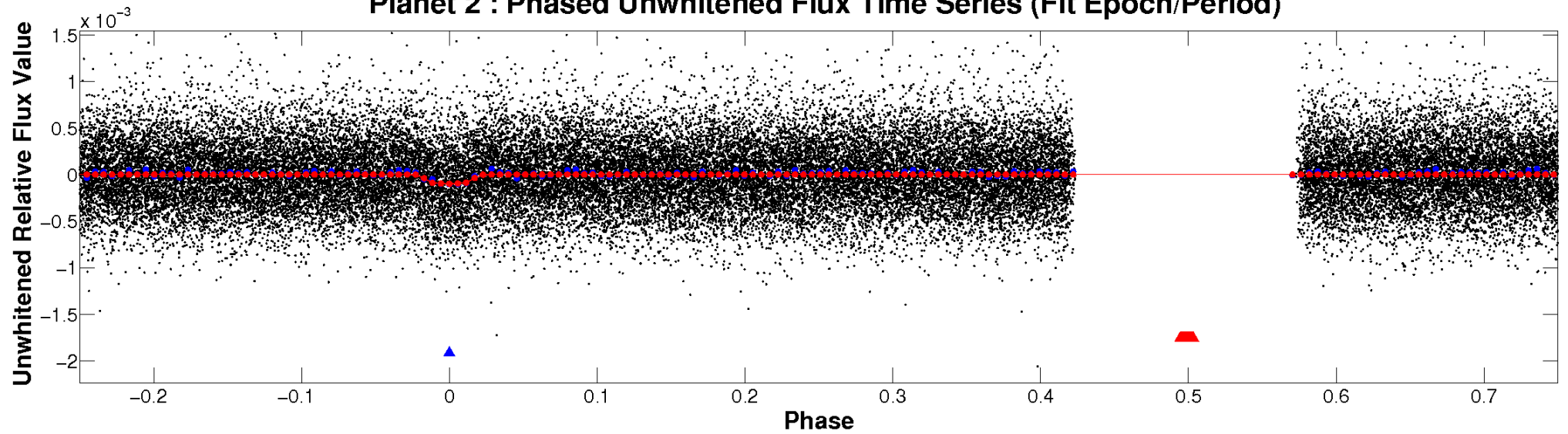
ALT Odd/Even

TCE 007543649-02

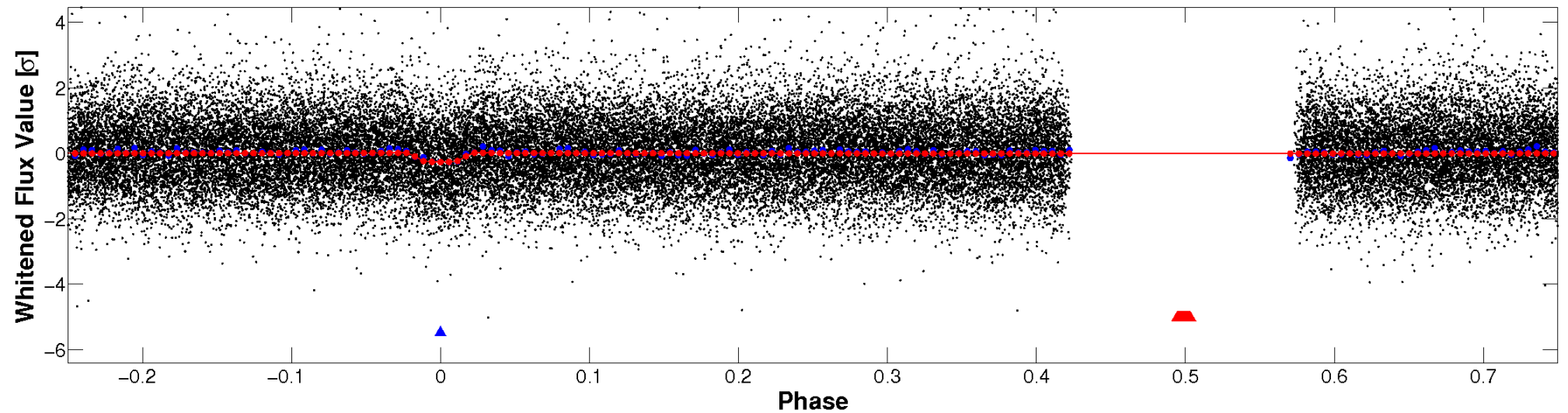


Non-Whitened Vs. Whitened Light Curve

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

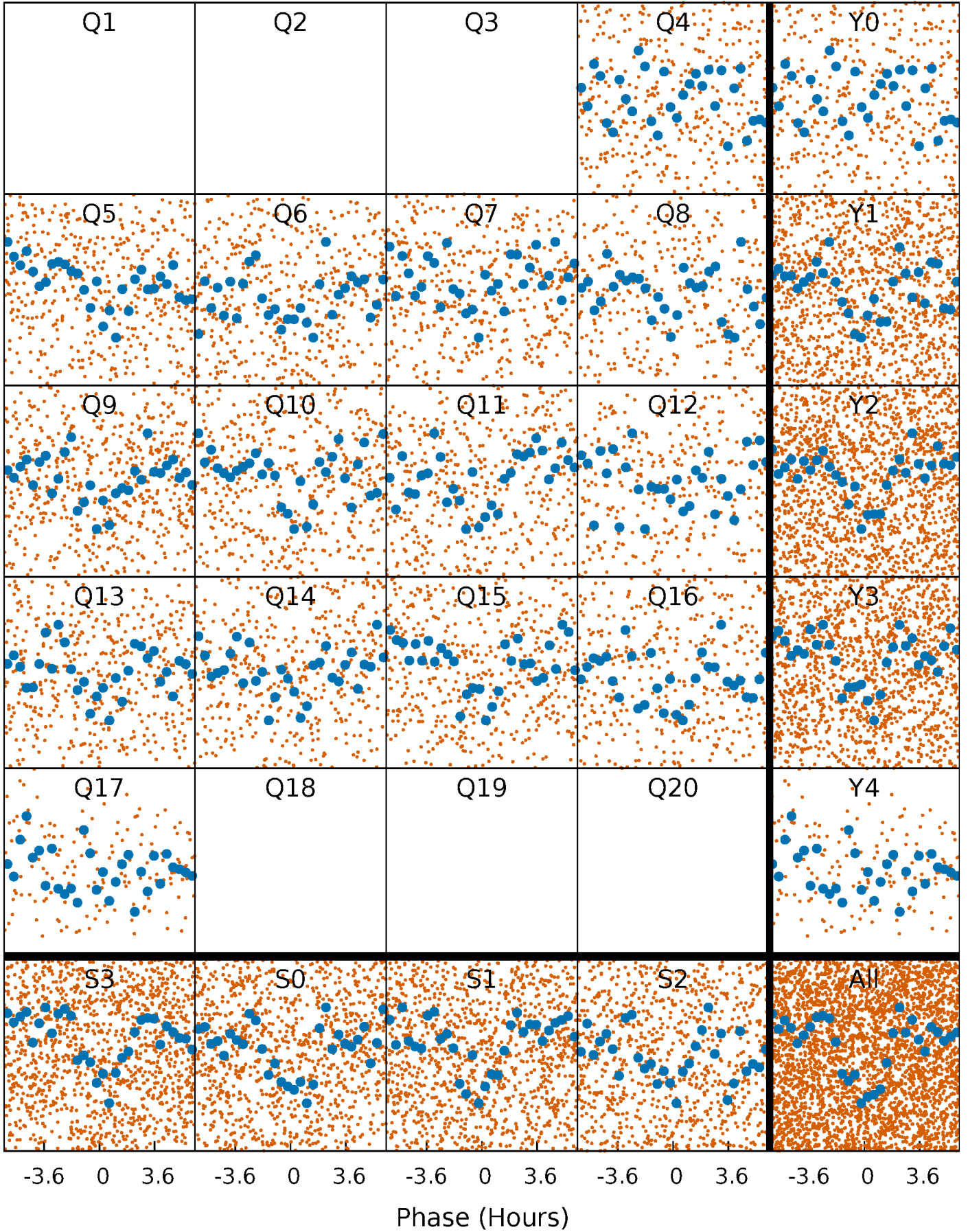


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



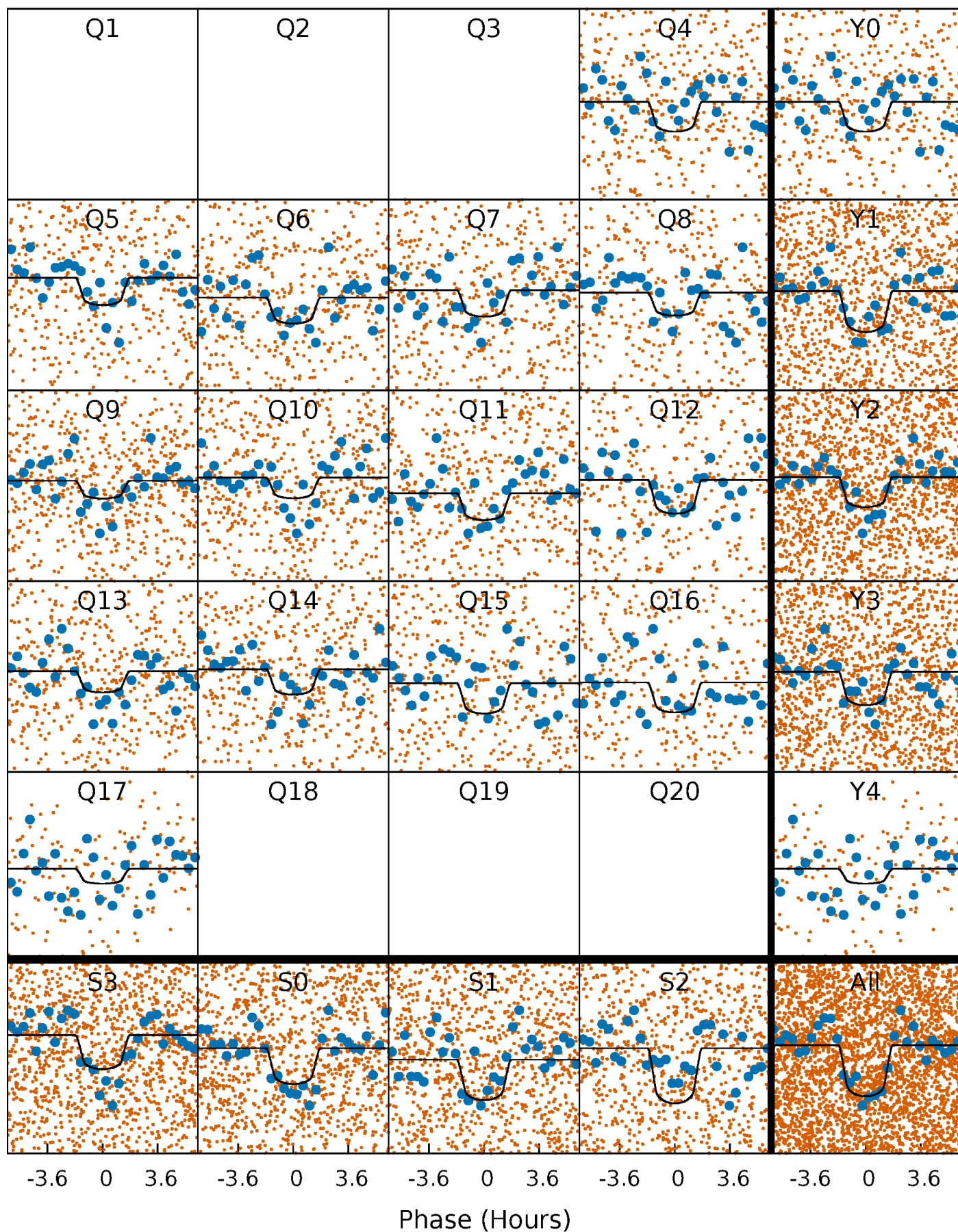
PDC Quarter-Phased Transit Curves

TCE 007543649-02 P= 3.582149 Days $T_0=131.624768$ (BKJD)



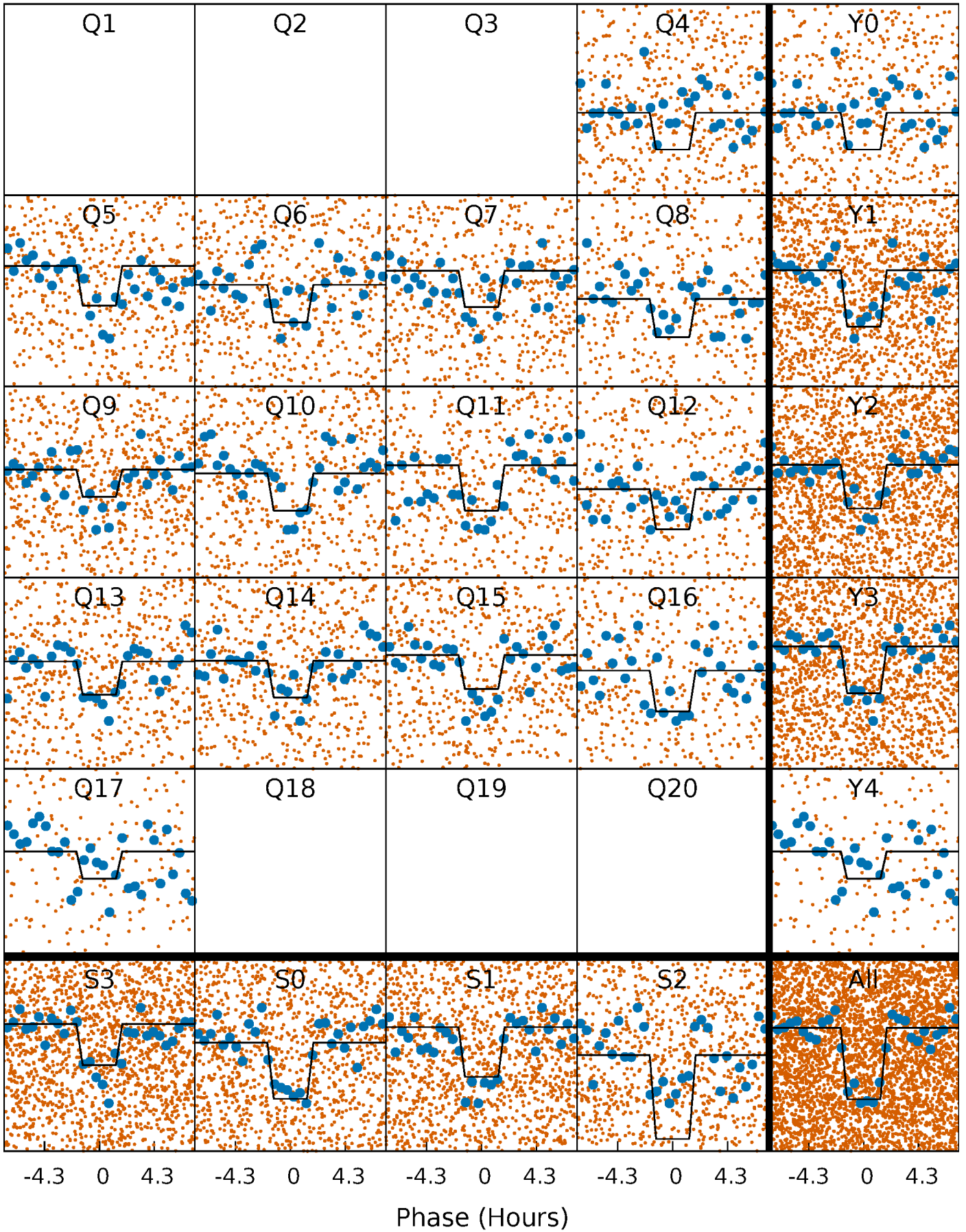
DV Quarter-Phased Transit Curves

TCE 007543649-02 P= 3.582149 Days $T_0=131.624768$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

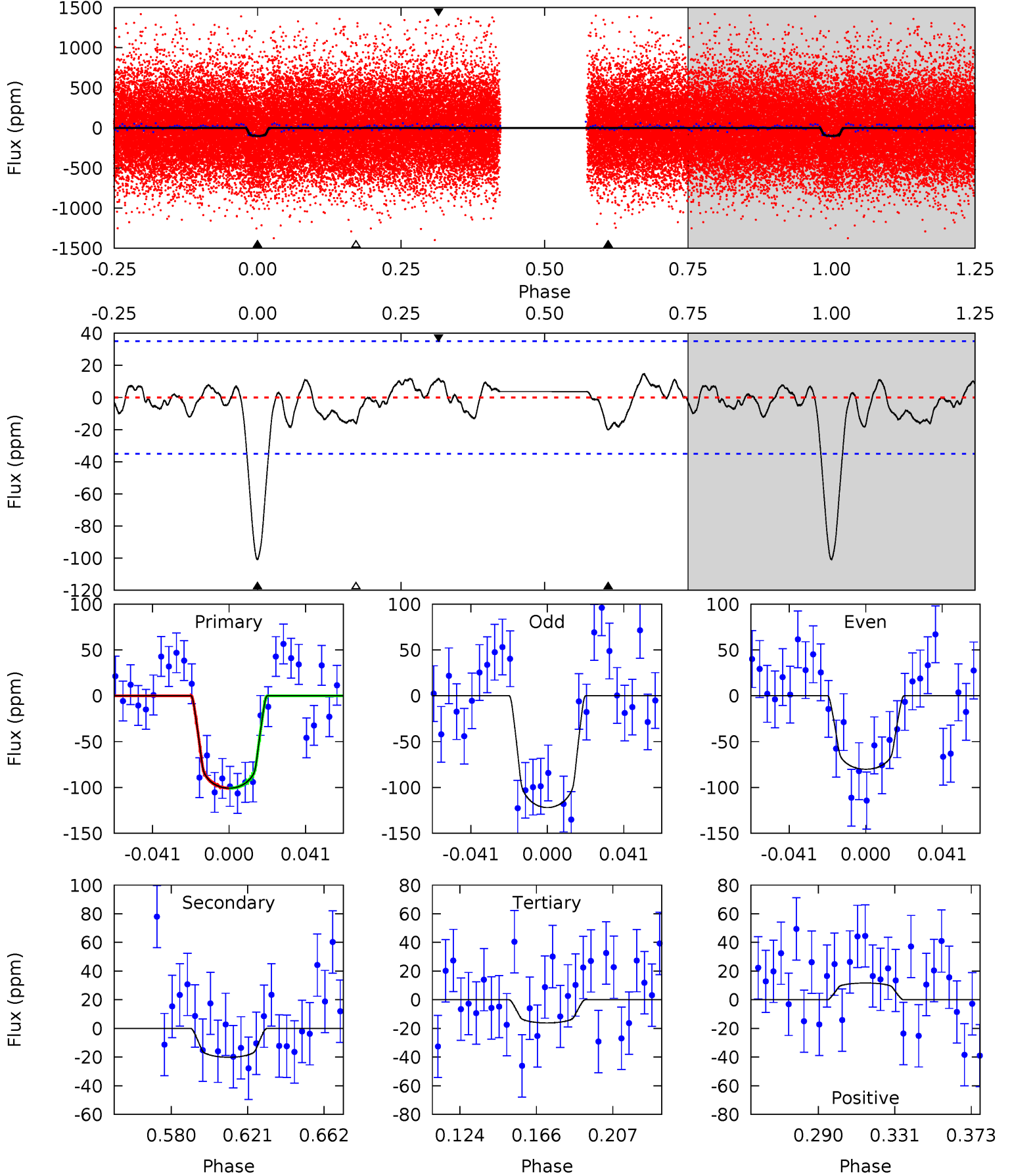
TCE 007543649-02 P= 3.582111 Days $T_0=131.632107$ (BKJD)



DV Model-Shift Uniqueness Test

007543649-02, P = 3.582149 Days, E = 131.624768 Days

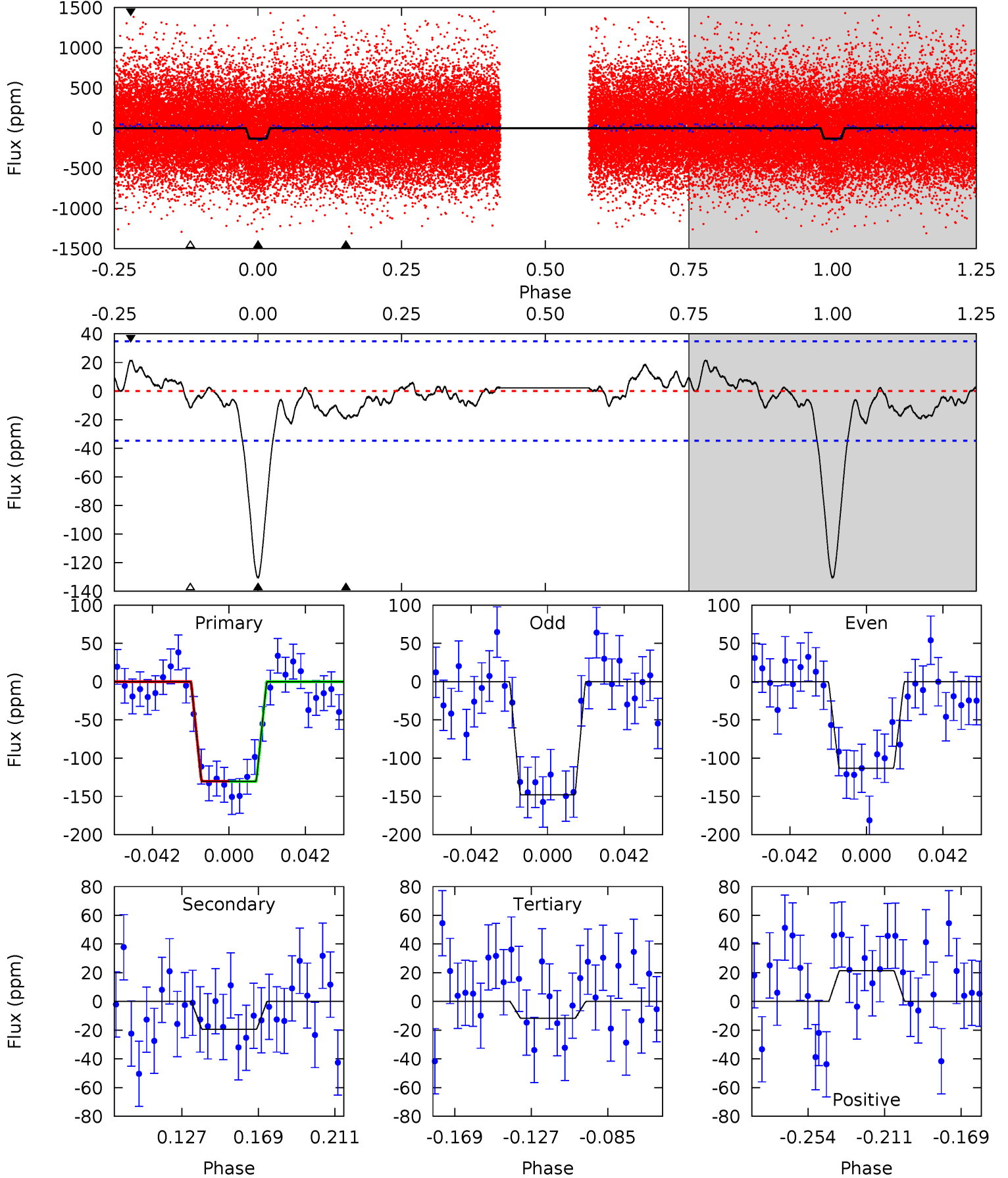
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.7	2.72	2.19	1.58	4.75	2.04	1.04	11.5	12.1	0.54	1.15	2.84	1.04	0.13	0.01



Alt Model-Shift Uniqueness Test

007543649-02, P = 3.582111 Days, E = 131.632107 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.8	2.64	1.59	2.93	4.74	2.03	1.10	16.2	14.8	1.05	-0.29	2.37	1.01	0.14	0.04



Stellar Parameters For KIC 007543649

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6109^{+192}_{-235}	$4.422^{+0.090}_{-0.195}$	$-0.360^{+0.300}_{-0.300}$	$0.993^{+0.283}_{-0.131}$	$0.950^{+0.140}_{-0.115}$	$1.366^{+0.624}_{-0.692}$
	+3%/-4%	+2%/-4%	+83%/-83%	+28%/-13%	+15%/-12%	+46%/-51%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 007543649-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-20 ± 7	$1.26^{+0.61}_{-0.61}$	1794^{+123}_{-108}	4077^{+1161}_{-550}	13^{+36}_{-8}
Alt.	-19 ± 7	$1.34^{+0.58}_{-0.63}$	1788^{+131}_{-103}	3982^{+1152}_{-545}	11^{+33}_{-7}

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

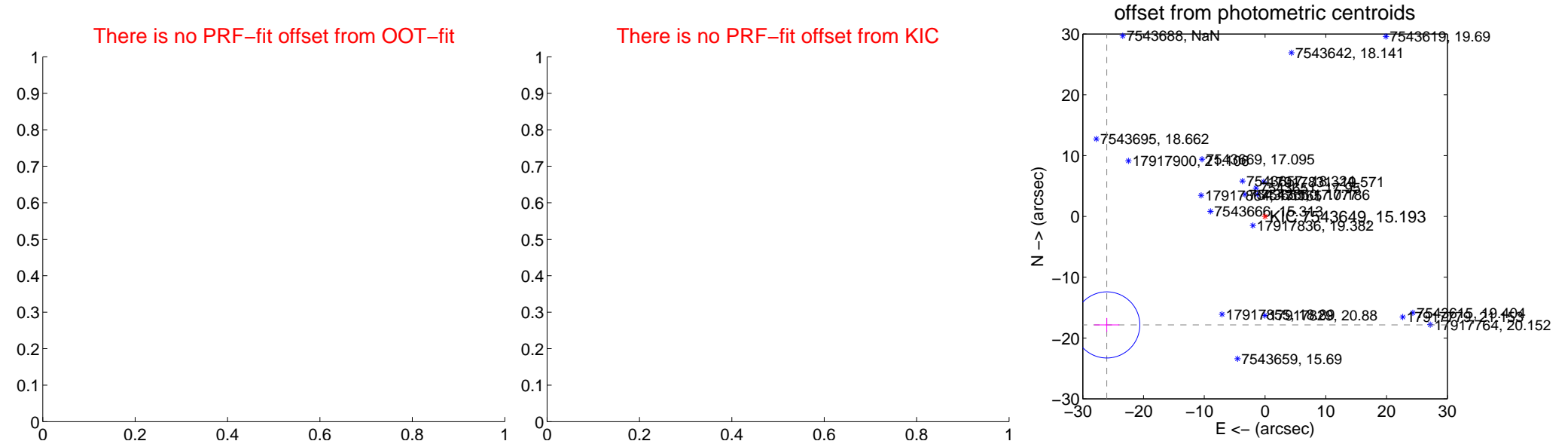
DV Centroid Data

Supplemental centroid analysis for 007543649-02. Kepler magnitude: 15.19. Transit SNR 9.87

There are 0 quarters with good PRF difference image offsets

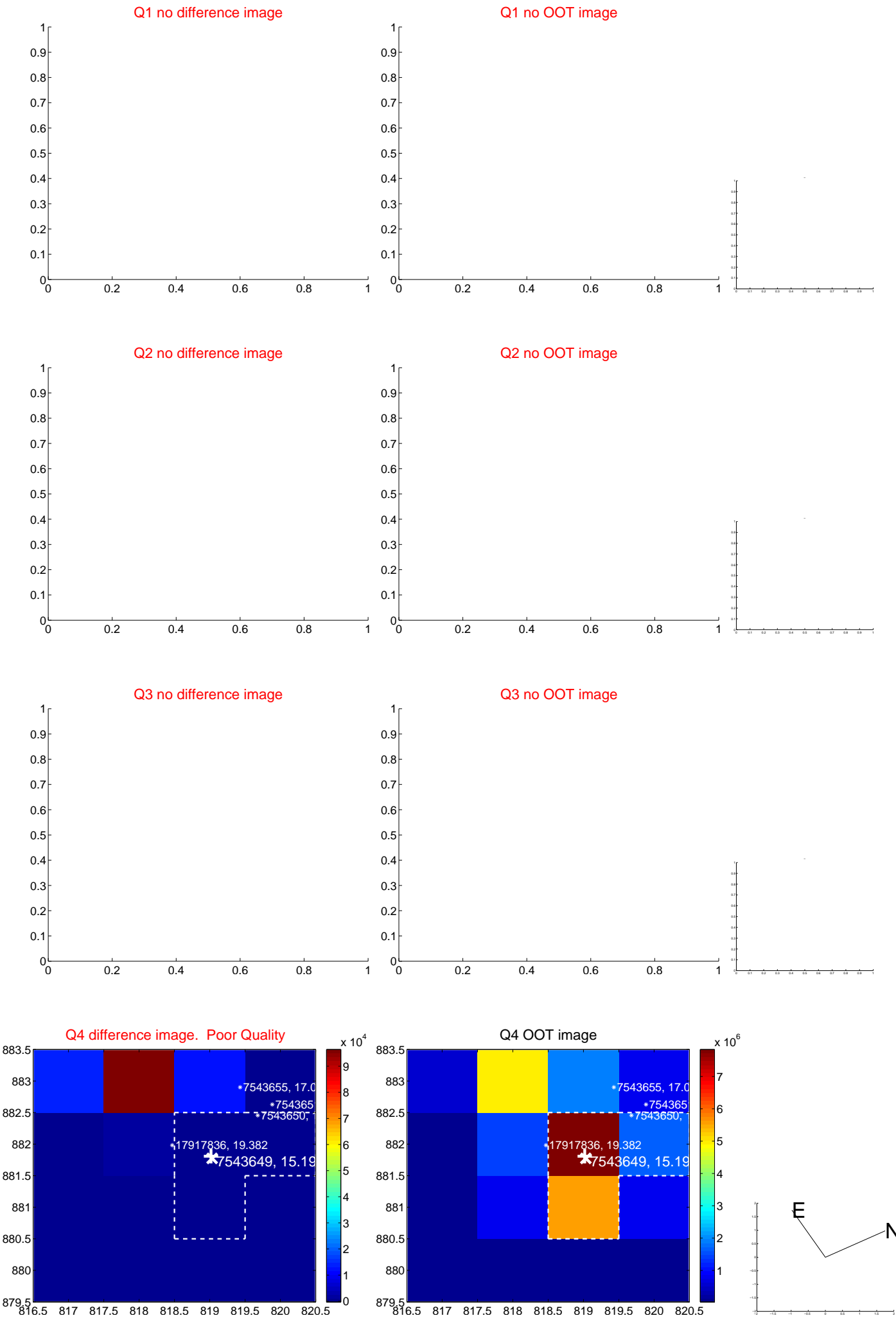
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	31.57 ± 1.81	17.42	26.05 ± 2.05	-17.84 ± 1.14

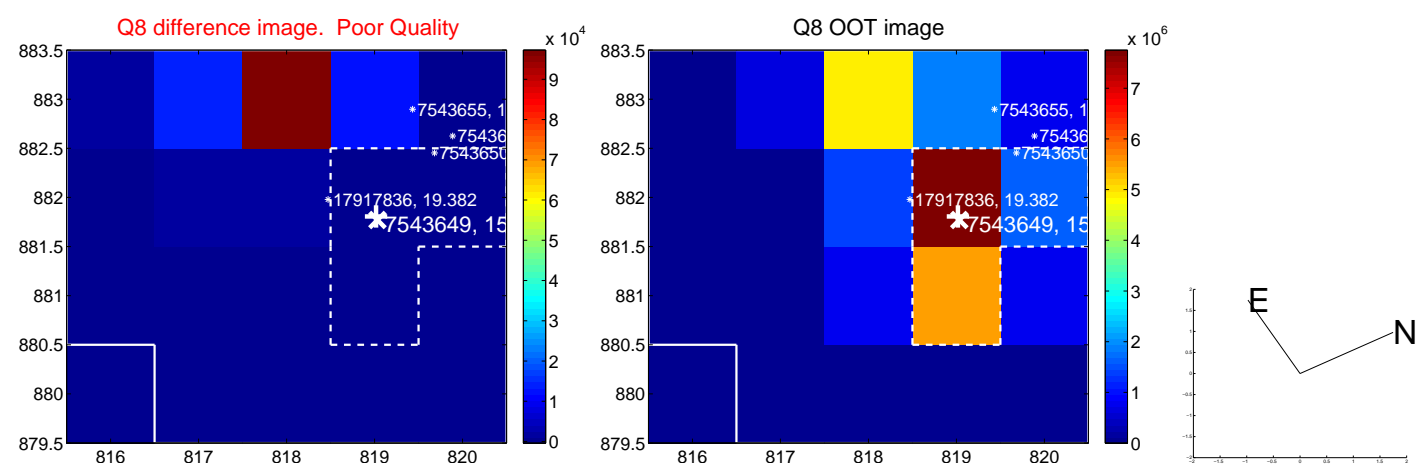
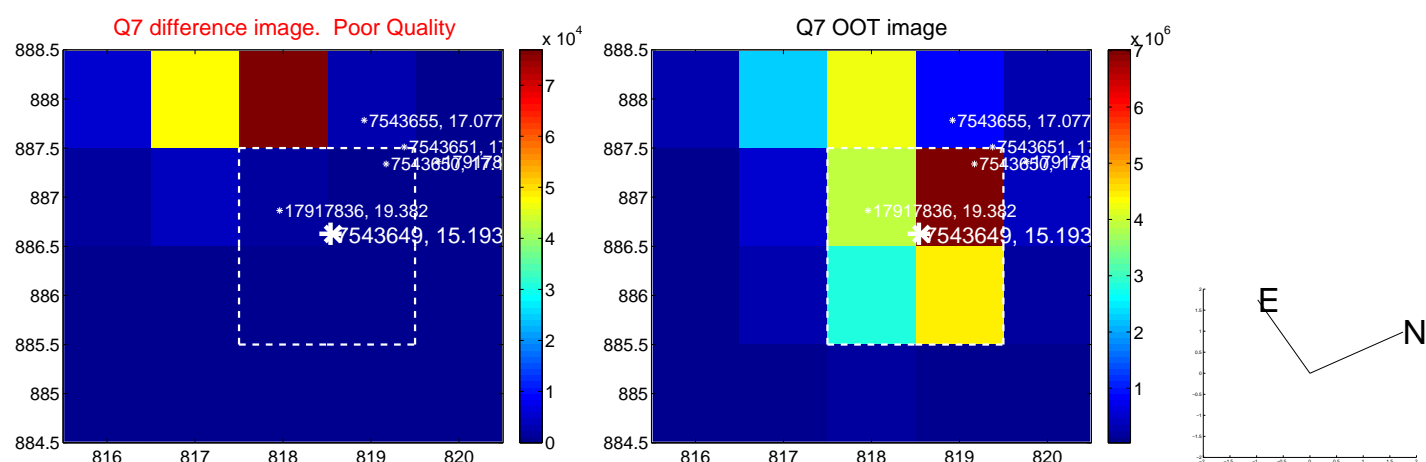
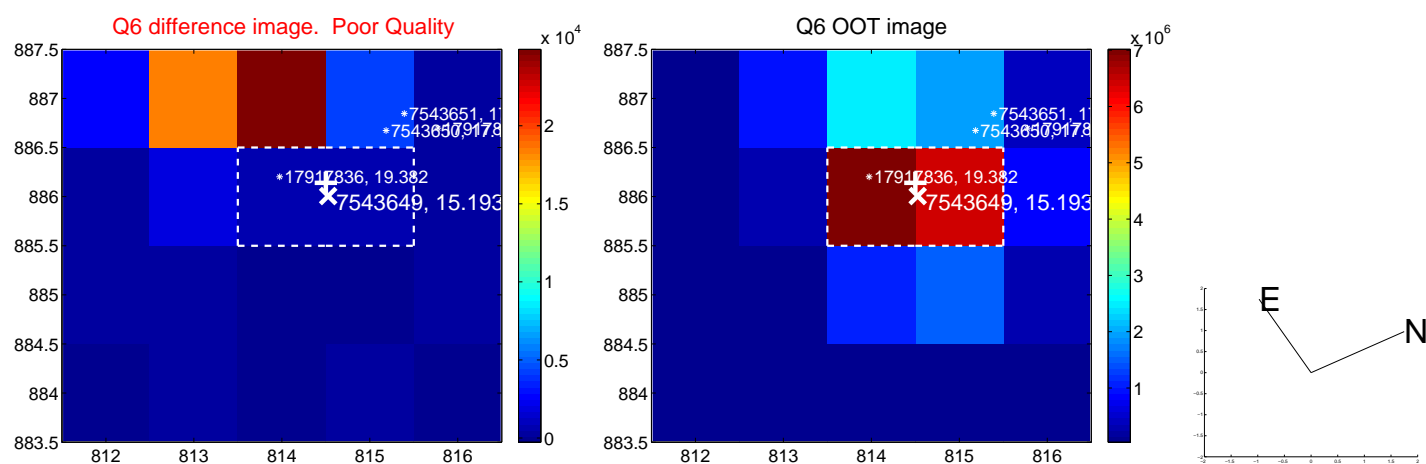
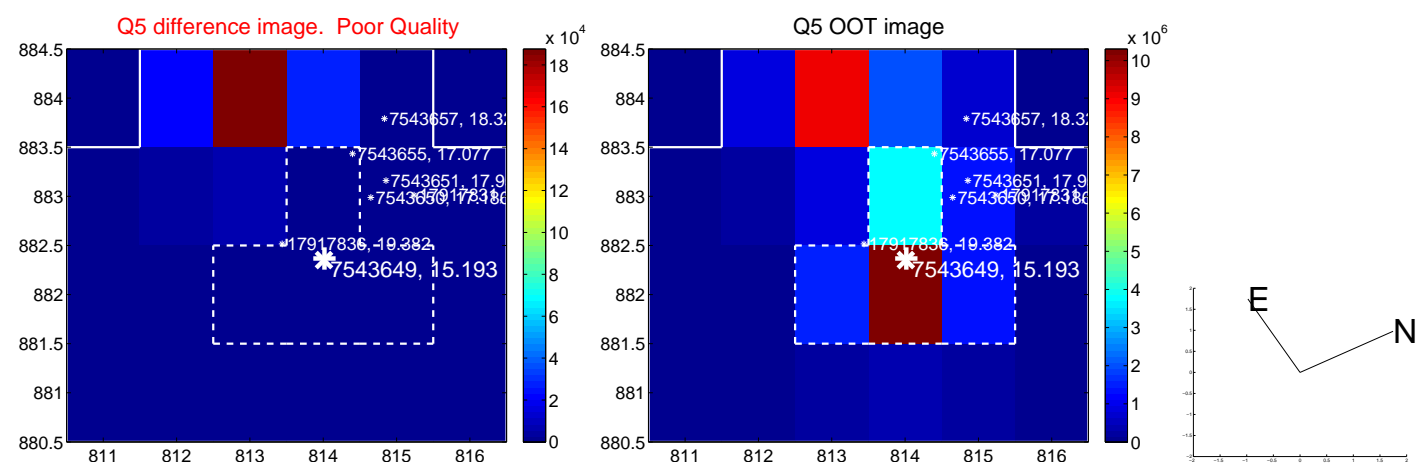


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

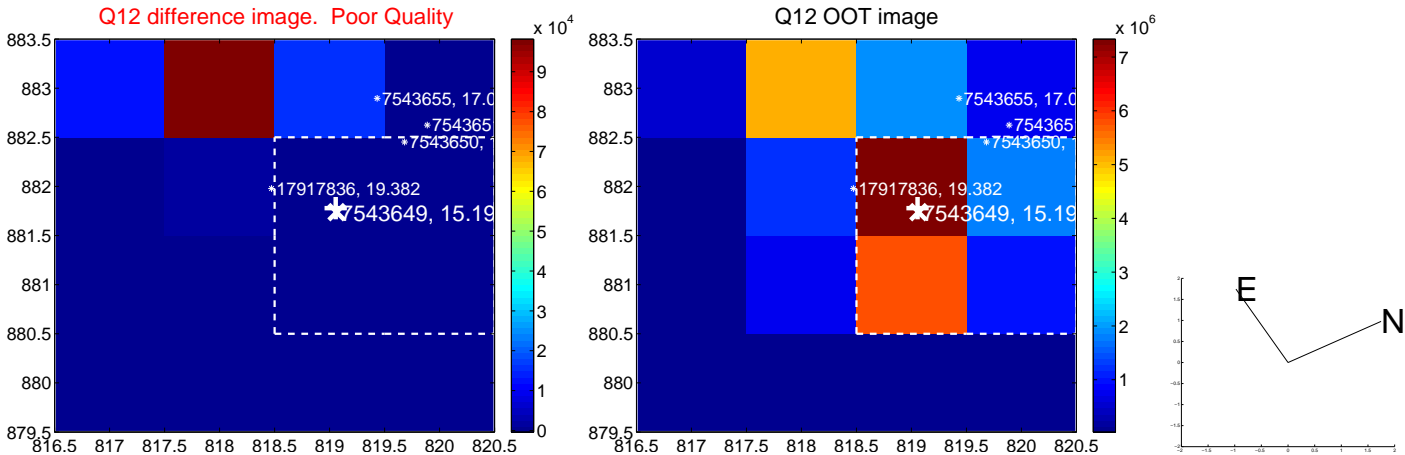
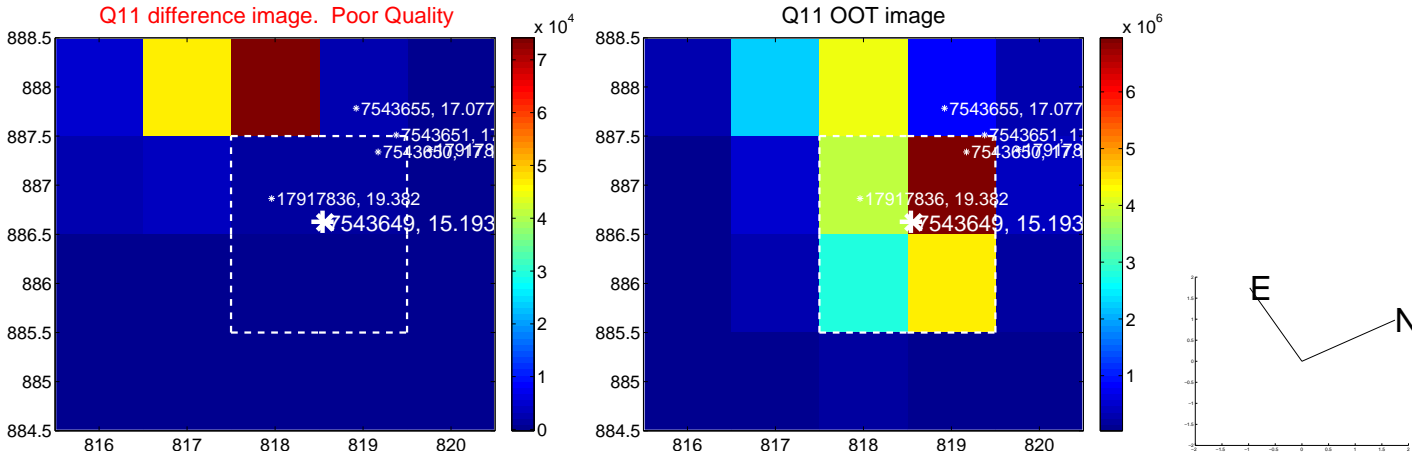
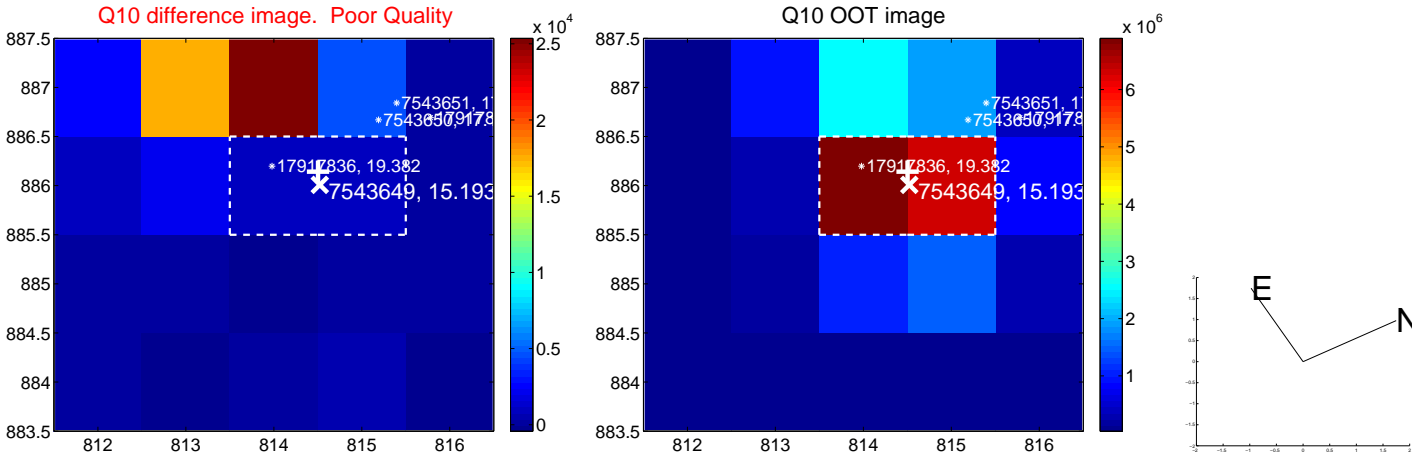
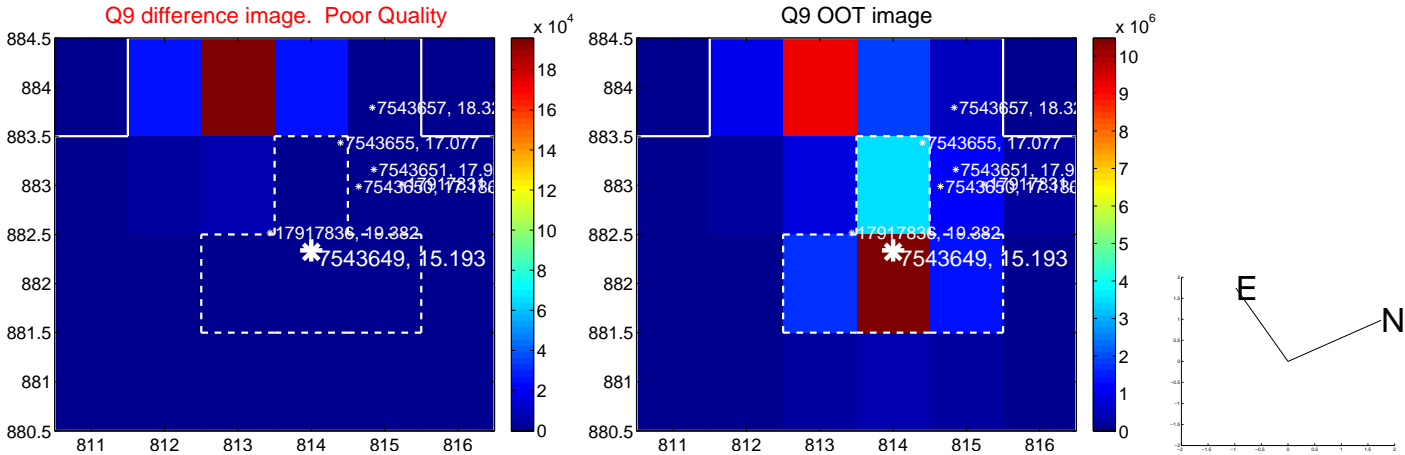
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



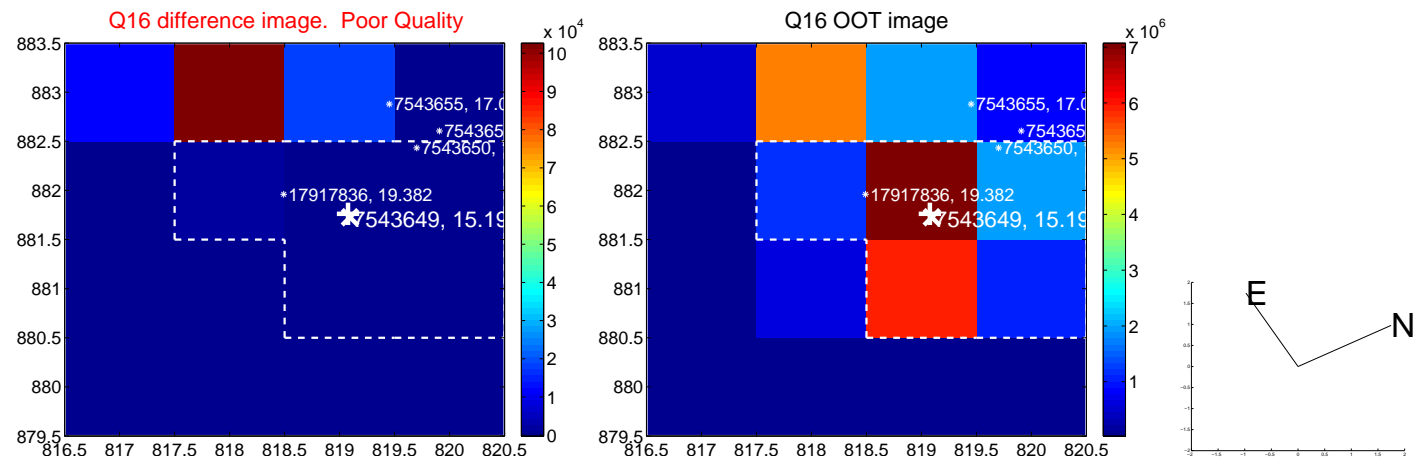
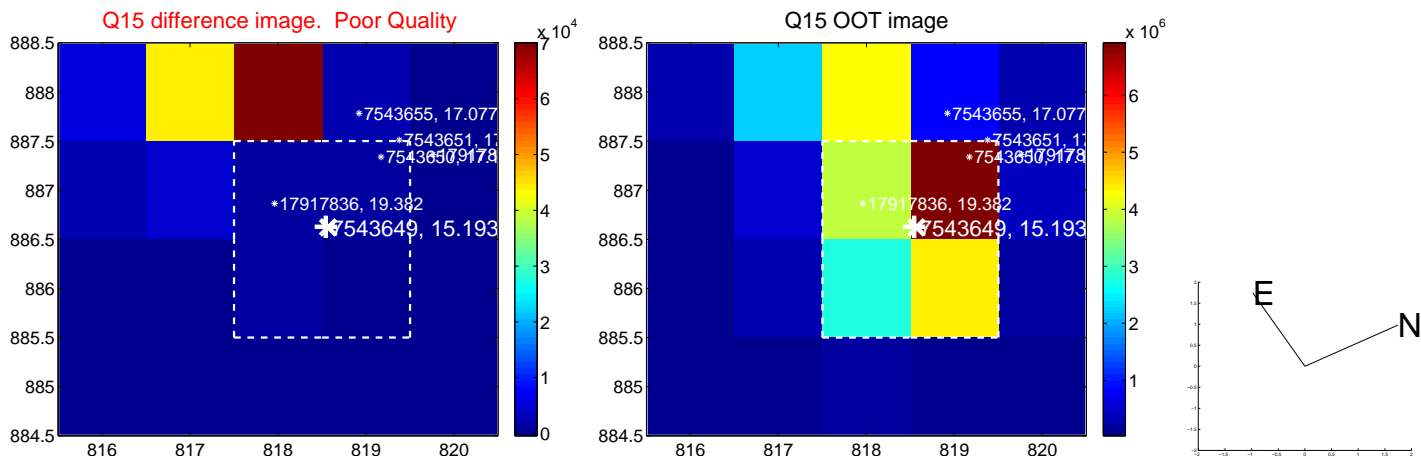
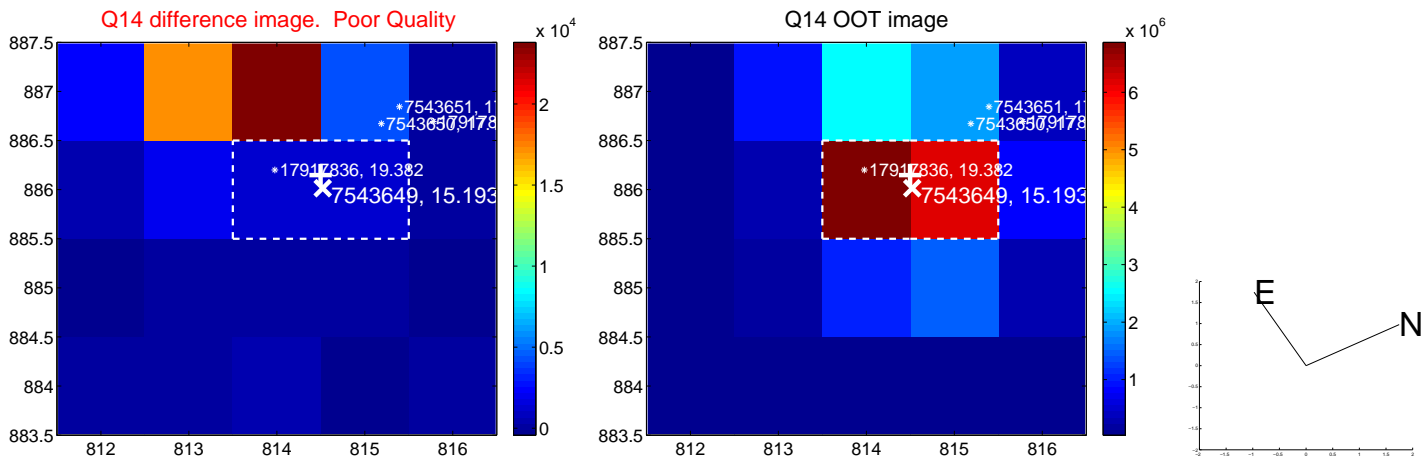
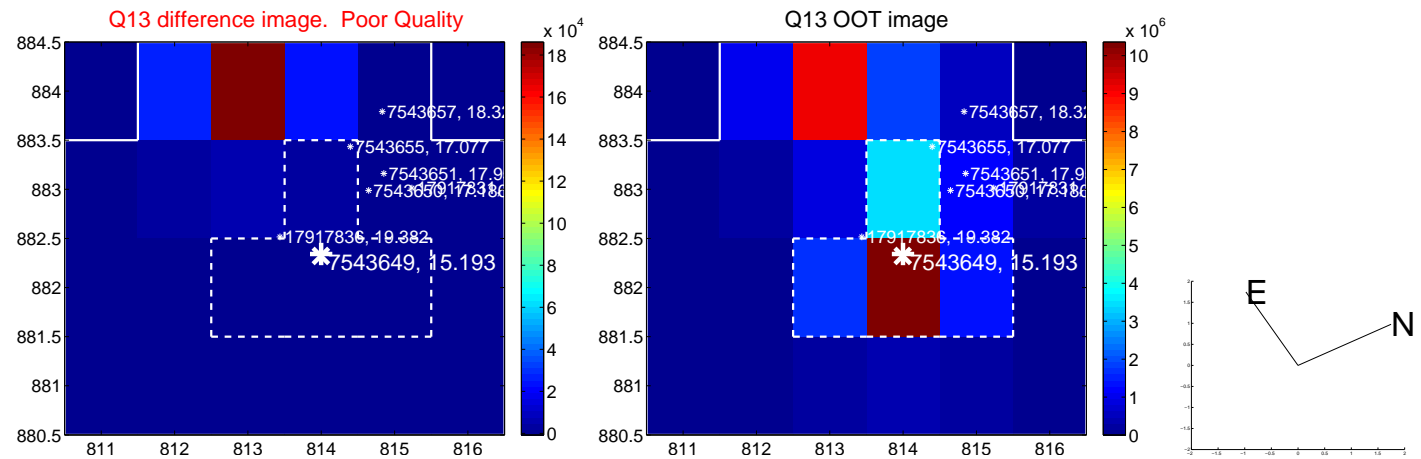
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



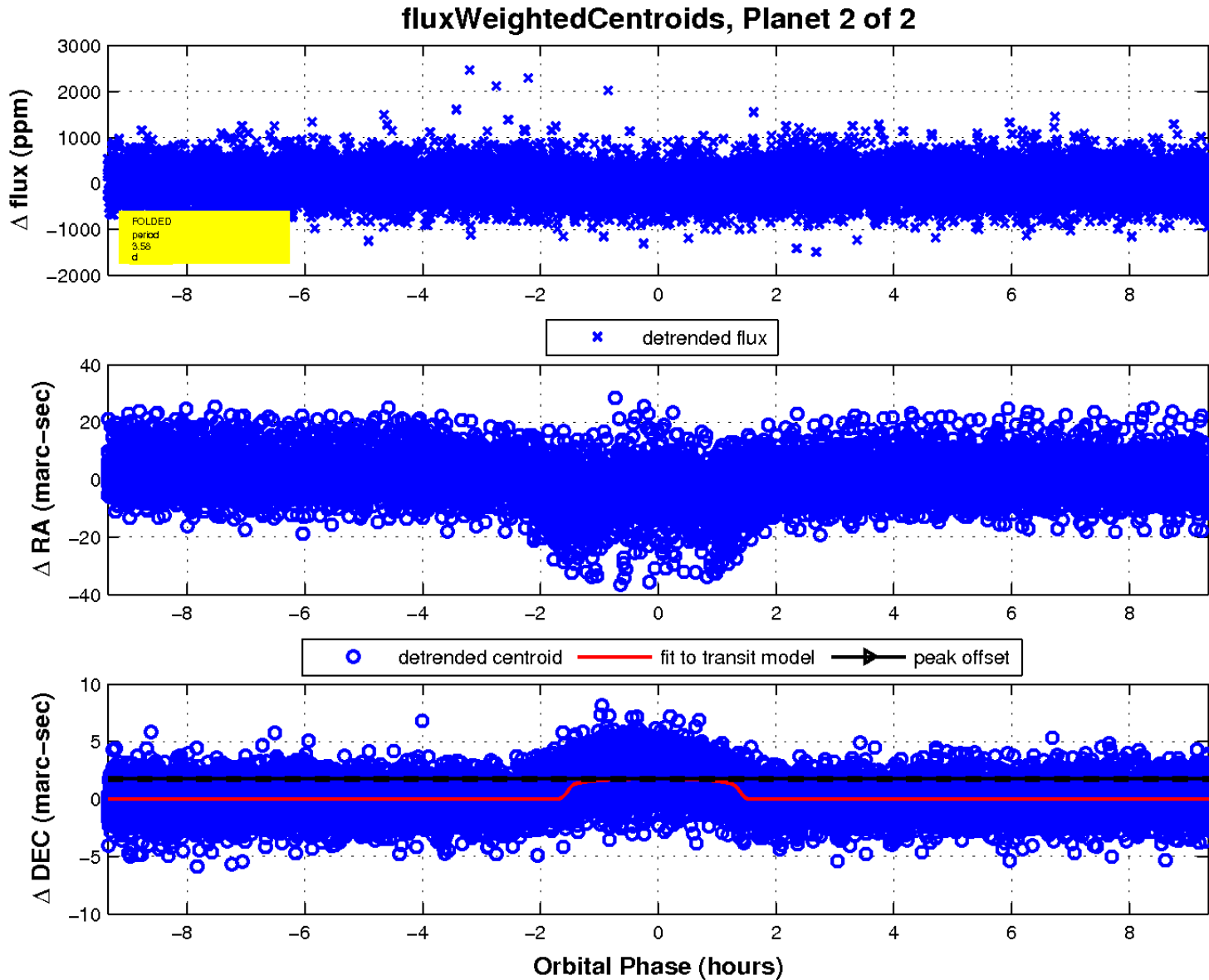
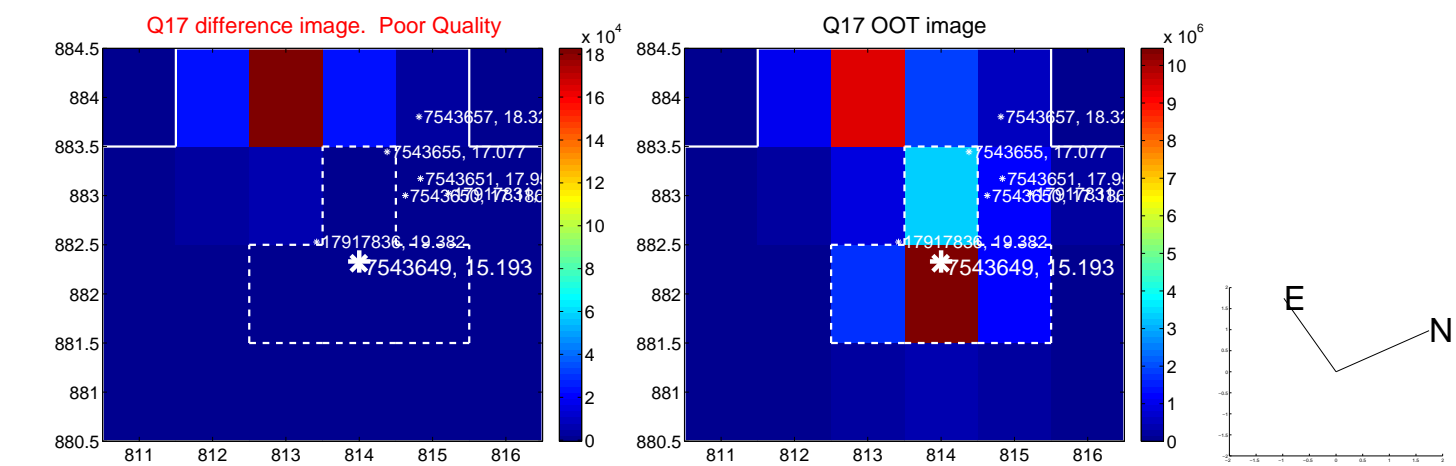
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

