

KIC 004569150

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})
004569150-01	OBS	No	2.233777	132.738010	114.9	8.589	9.8	9.6	3.75	7693	5.42	24964.47
004569150-02	OBS	No	3.723979	133.414133	154.4	5.133	8.7	8.4	3.75	7693	5.18	12628.90
004569150-03	OBS	No	143.442467	173.816325	916.6	2.060	7.2	5.5	3.75	7693	13.53	97.08

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004569150-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004569150-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004569150-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

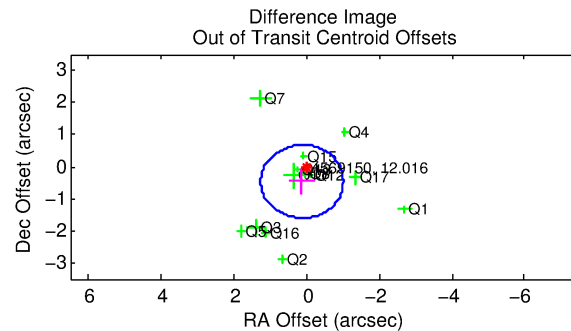
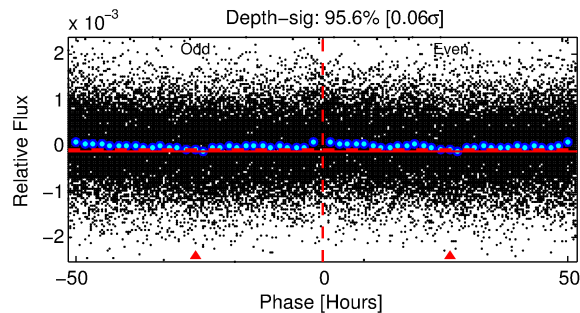
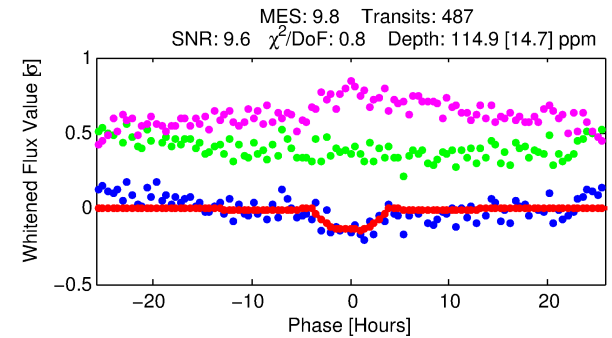
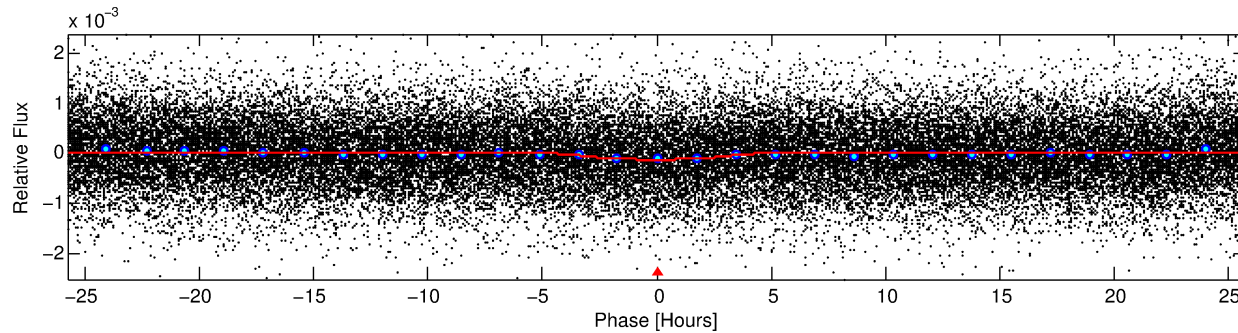
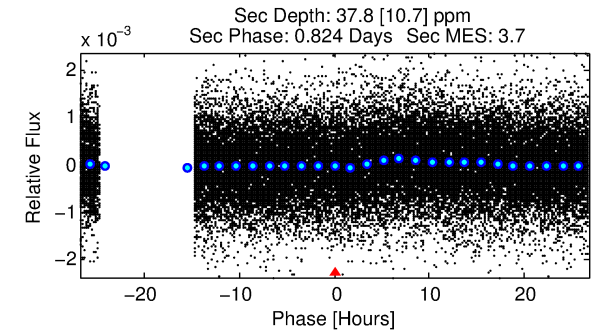
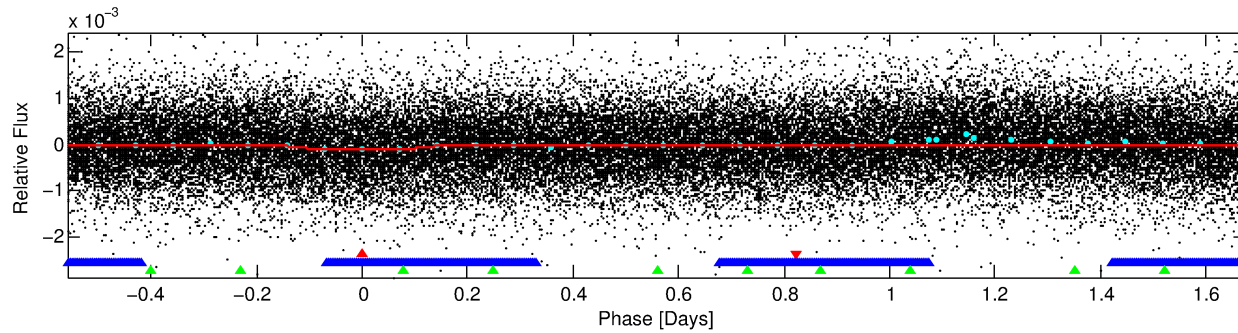
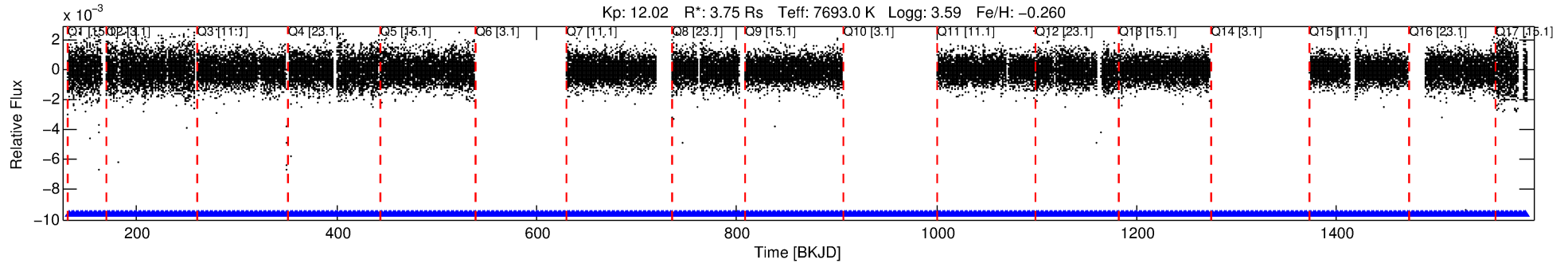
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004569150-01

No Significant Match Found

DV One-Page Summary

KIC: 4569150 Candidate: 1 of 3 Period: 2.234 d



DV Fit Results:

Period = 2.23378 [0.00005] d
Epoch = 132.7380 [0.0161] BKJD
 R_p/R^* = 0.0132 [0.0010]
 a/R^* = 1.10 [0.03]
 b = 0.98 [0.01]
 S_{eff} = 24964.47 [22488.57]
 T_{eq} = 3205 [722] K
 R_p = 5.42 [2.96] R_e
 a = 0.0421 [0.0228] AU
 A_g = 1.25 [1.18] [0.21σ]
 T_{eff} = 5241 [476] K [2.35σ]

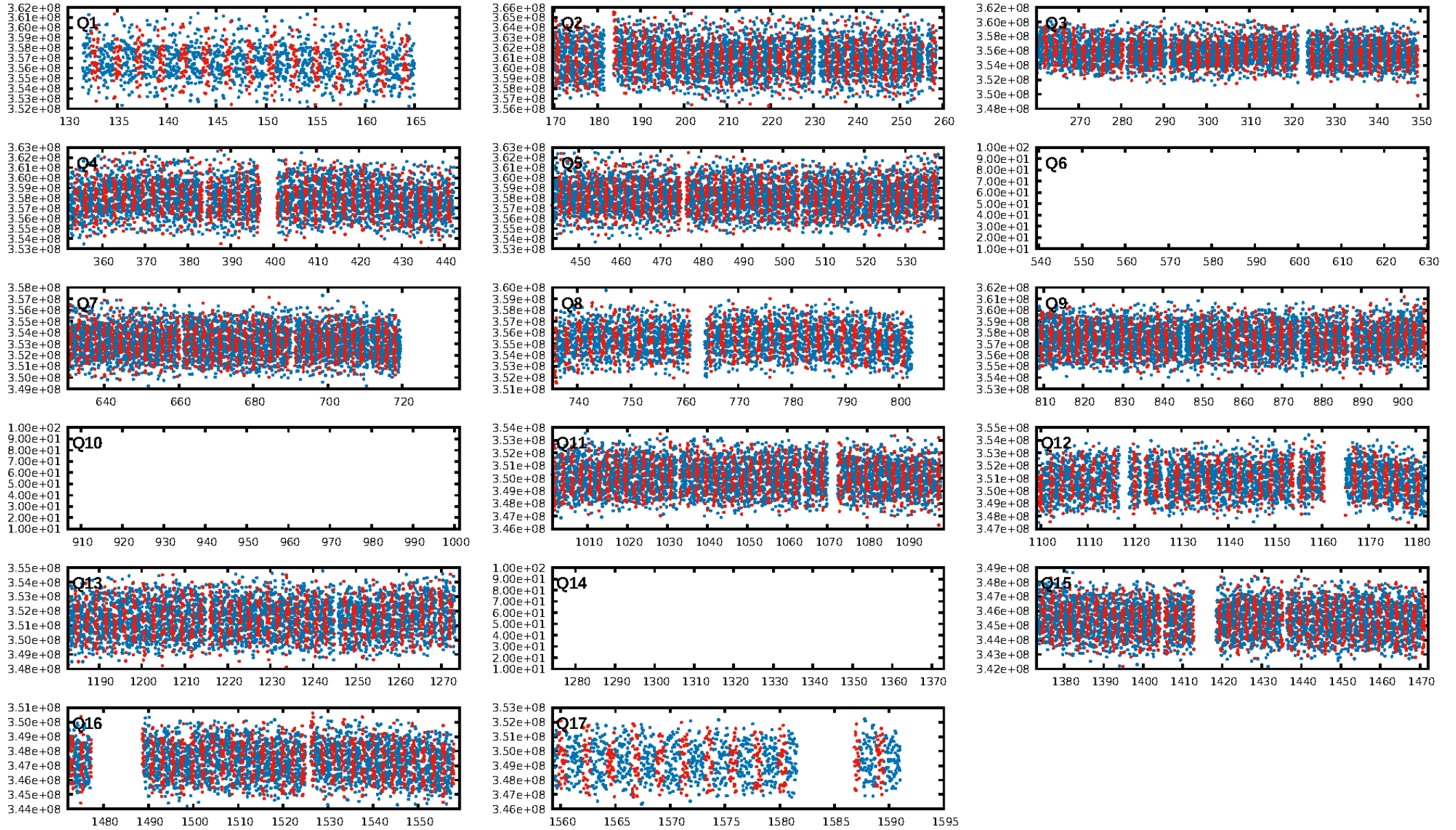
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [3.57σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.09e-21
RollingBand-fgt: 1.00 [460/460]
GhostDiagnostic-chr: 1.508
Centroid-sig: 83.5%
Centroid-so: 0.112 arcsec [0.85σ]
OotOffset-rm: 0.480 arcsec [1.27σ]
KicOffset-rm: 0.428 arcsec [1.17σ]
OotOffset-st: 1/4/4/4 [13]
KicOffset-st: 1/4/4/4 [13]
DiffImageQuality-fgm: 0.77 [10/13]
DiffImageOverlap-fno: 1.00 [14/14]

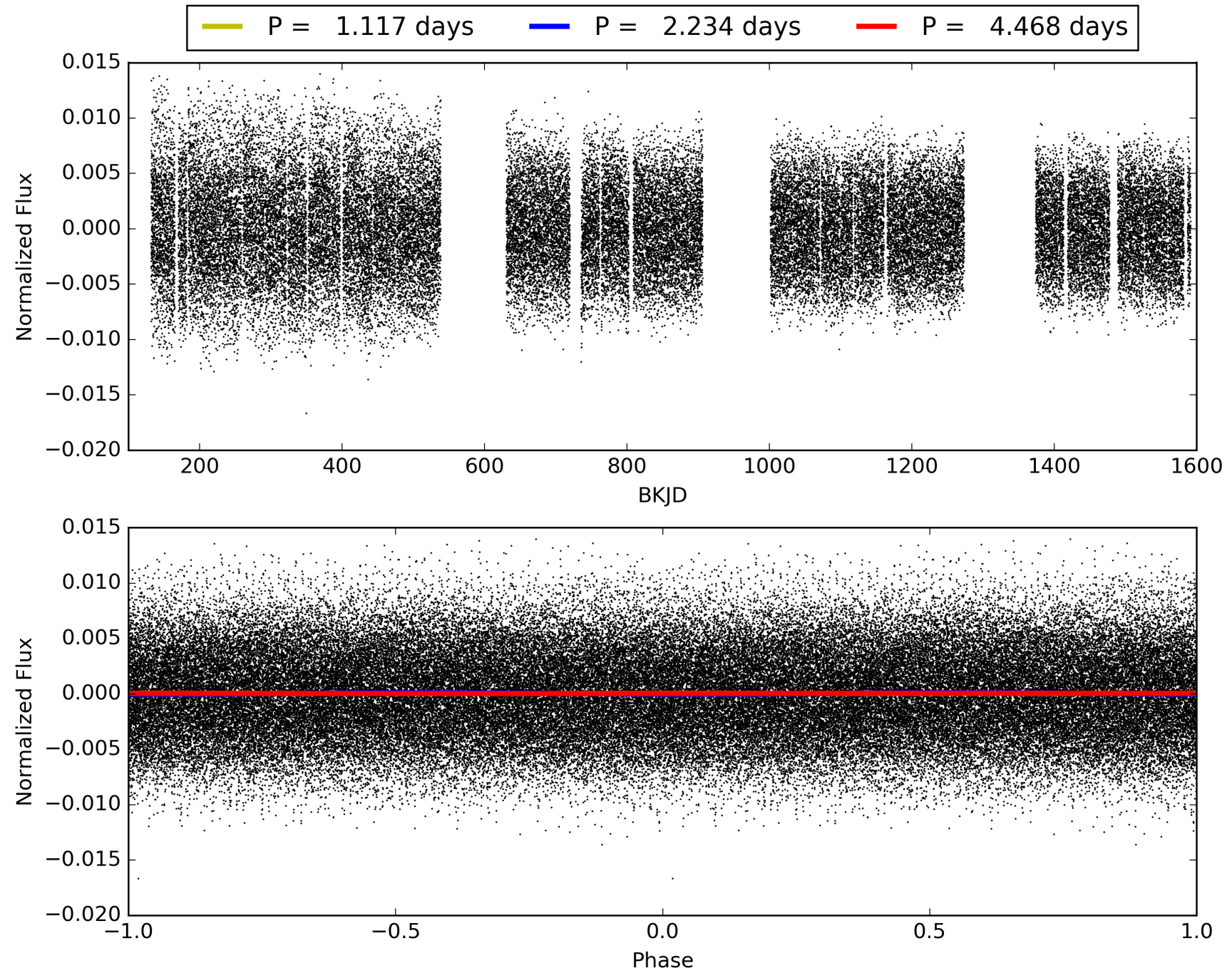
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:35:54 Z

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

TCE 004569150-01, PDC Light Curves

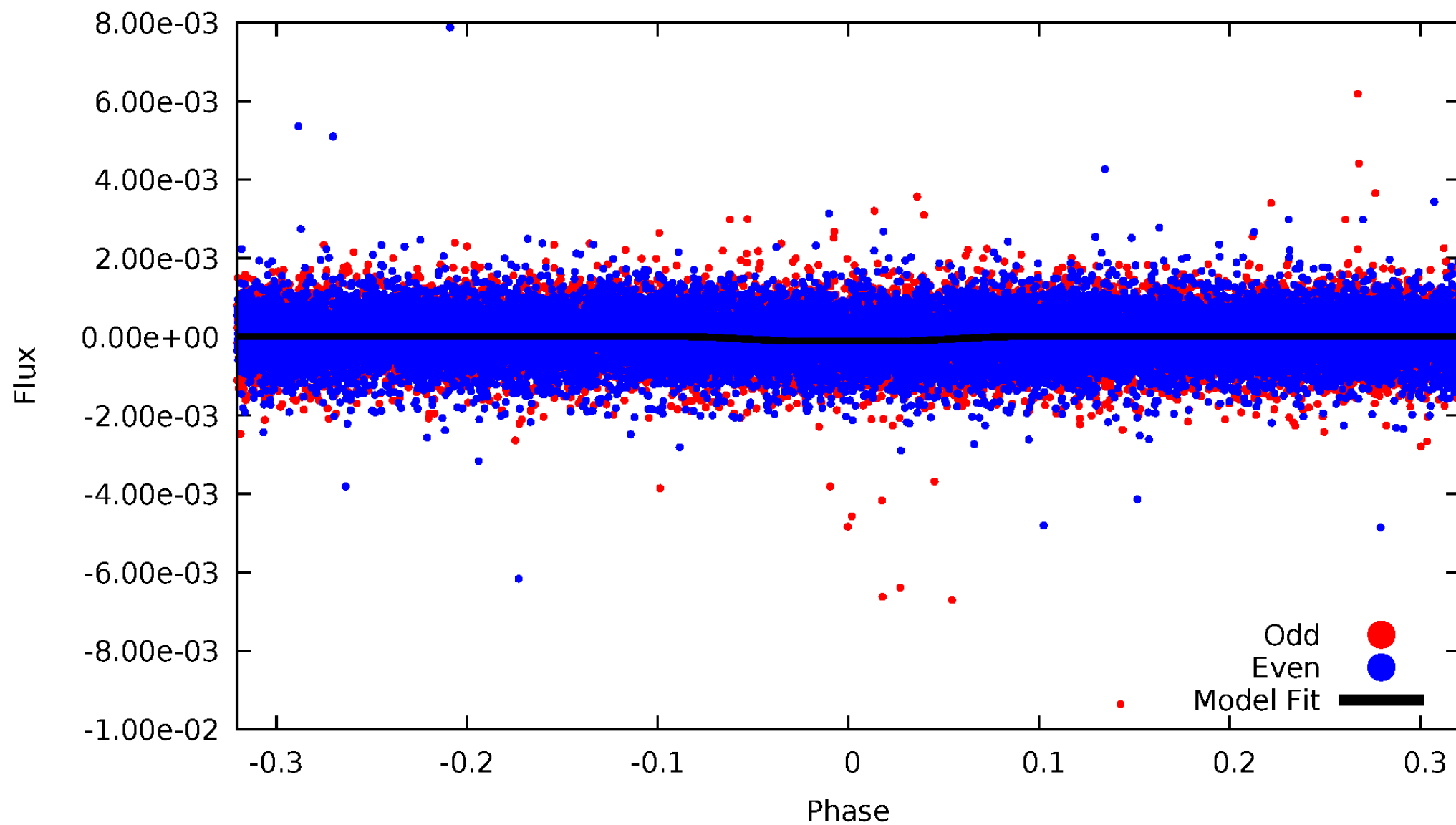


TCE 004569150-01



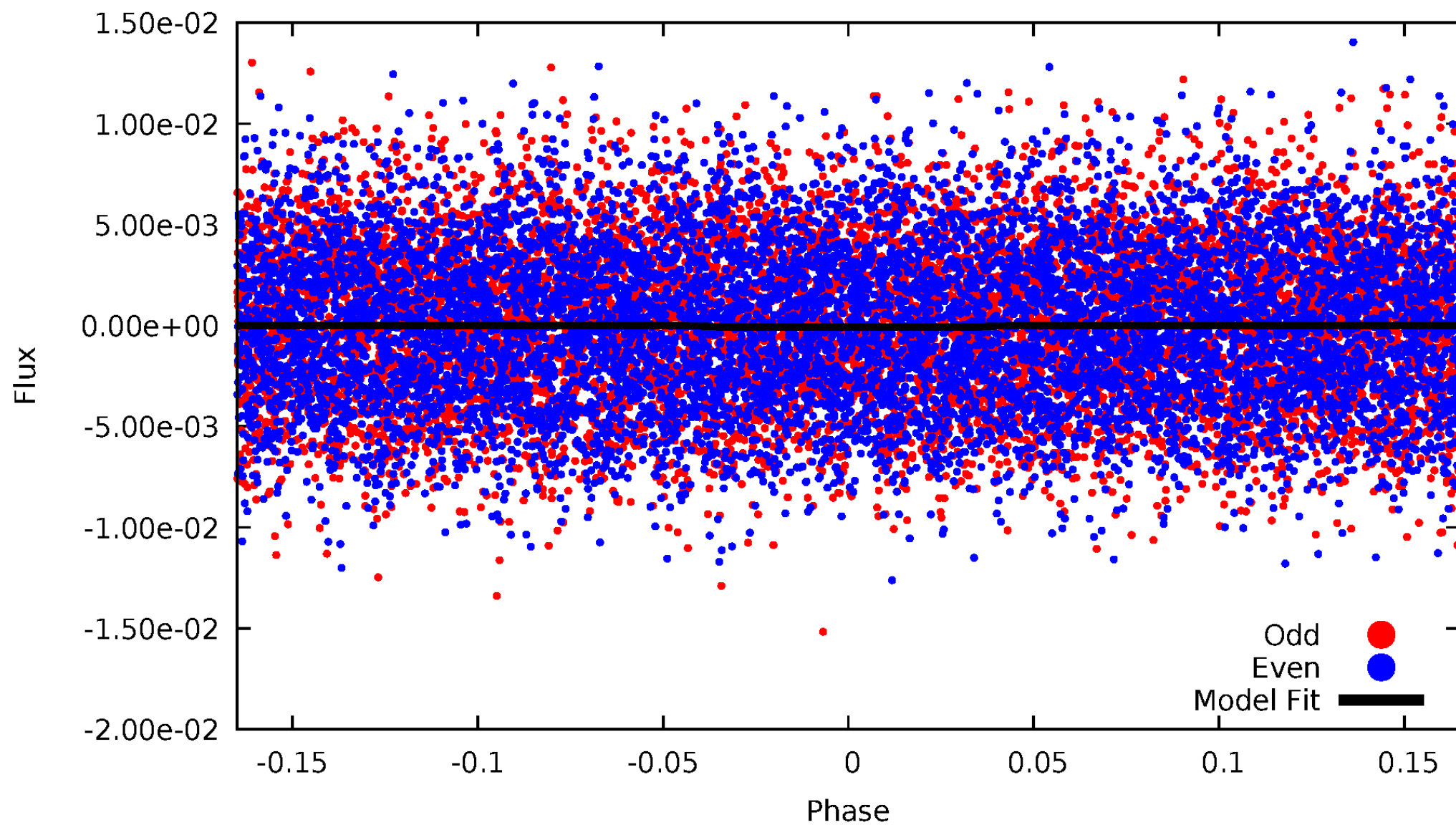
DV Odd/Even

TCE 004569150-01

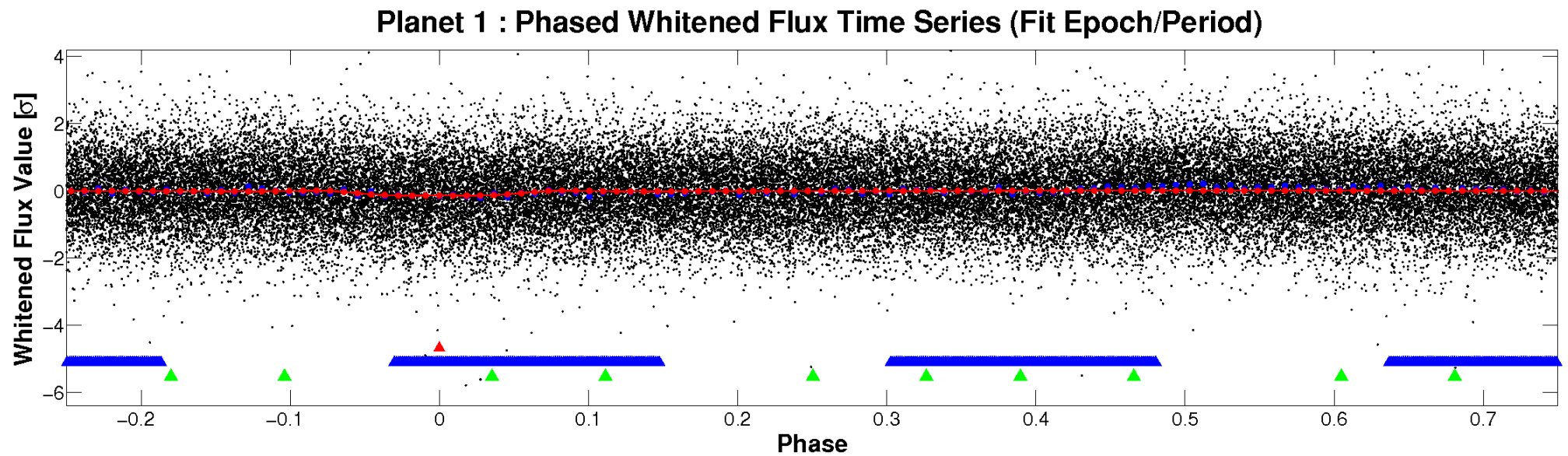
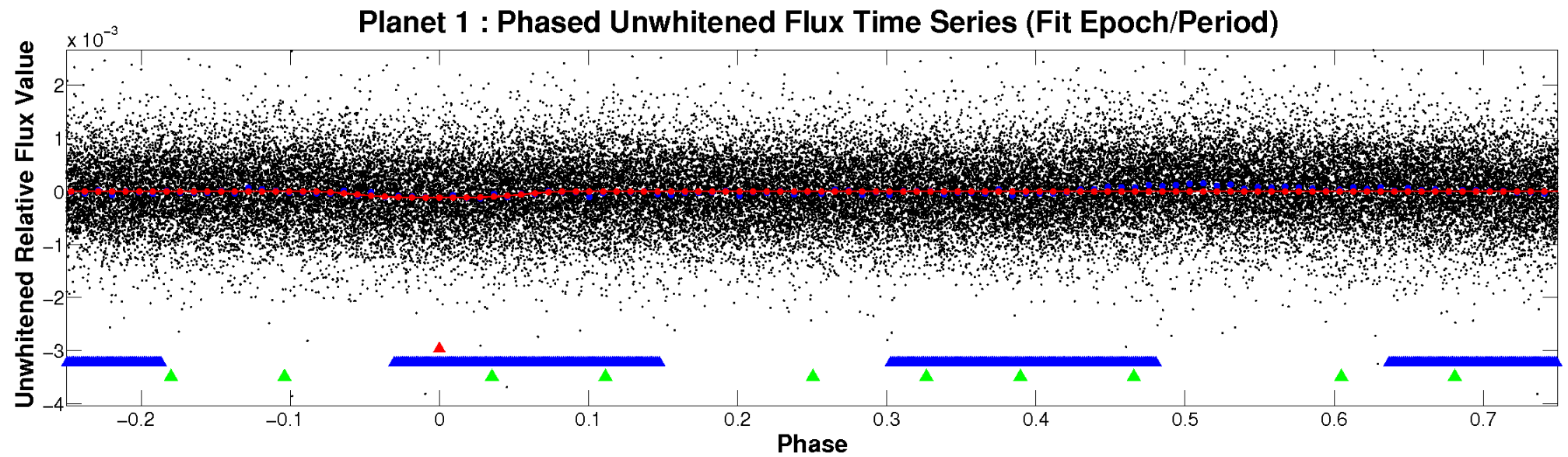


ALT Odd/Even

TCE 004569150-01

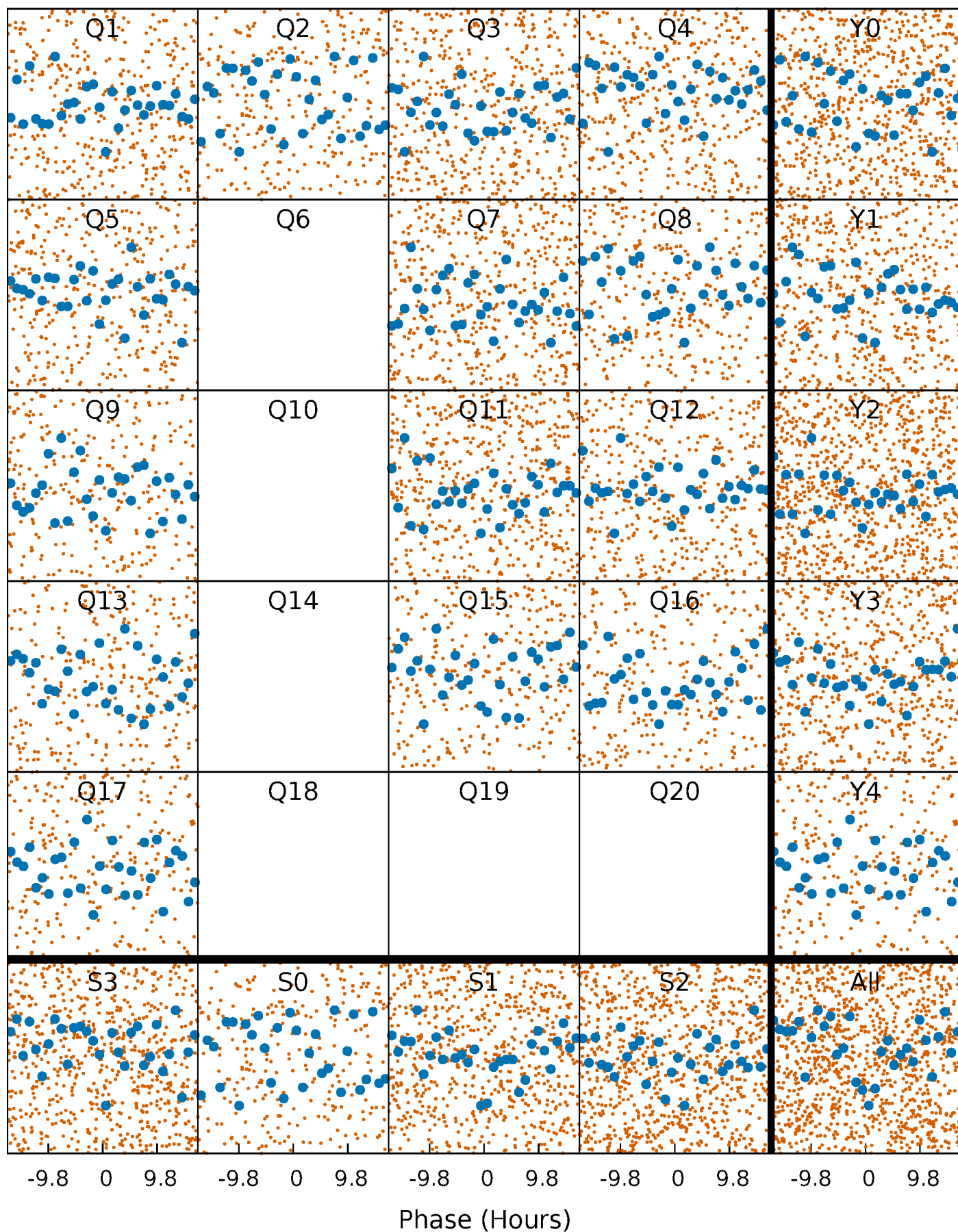


Non-Whitened Vs. Whitened Light Curve



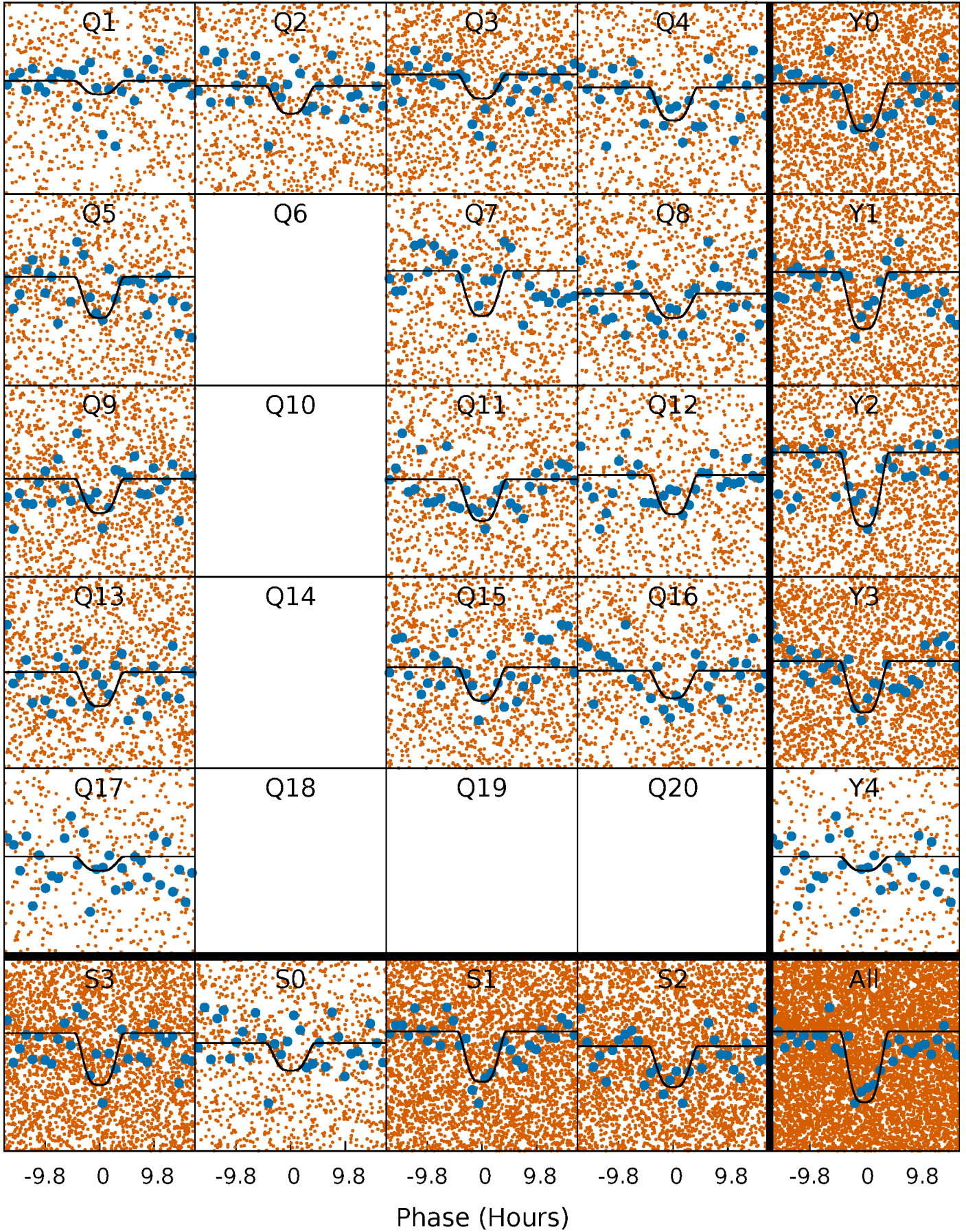
PDC Quarter-Phased Transit Curves

TCE 004569150-01 P= 2.233777 Days $T_0=132.738010$ (BKJD)



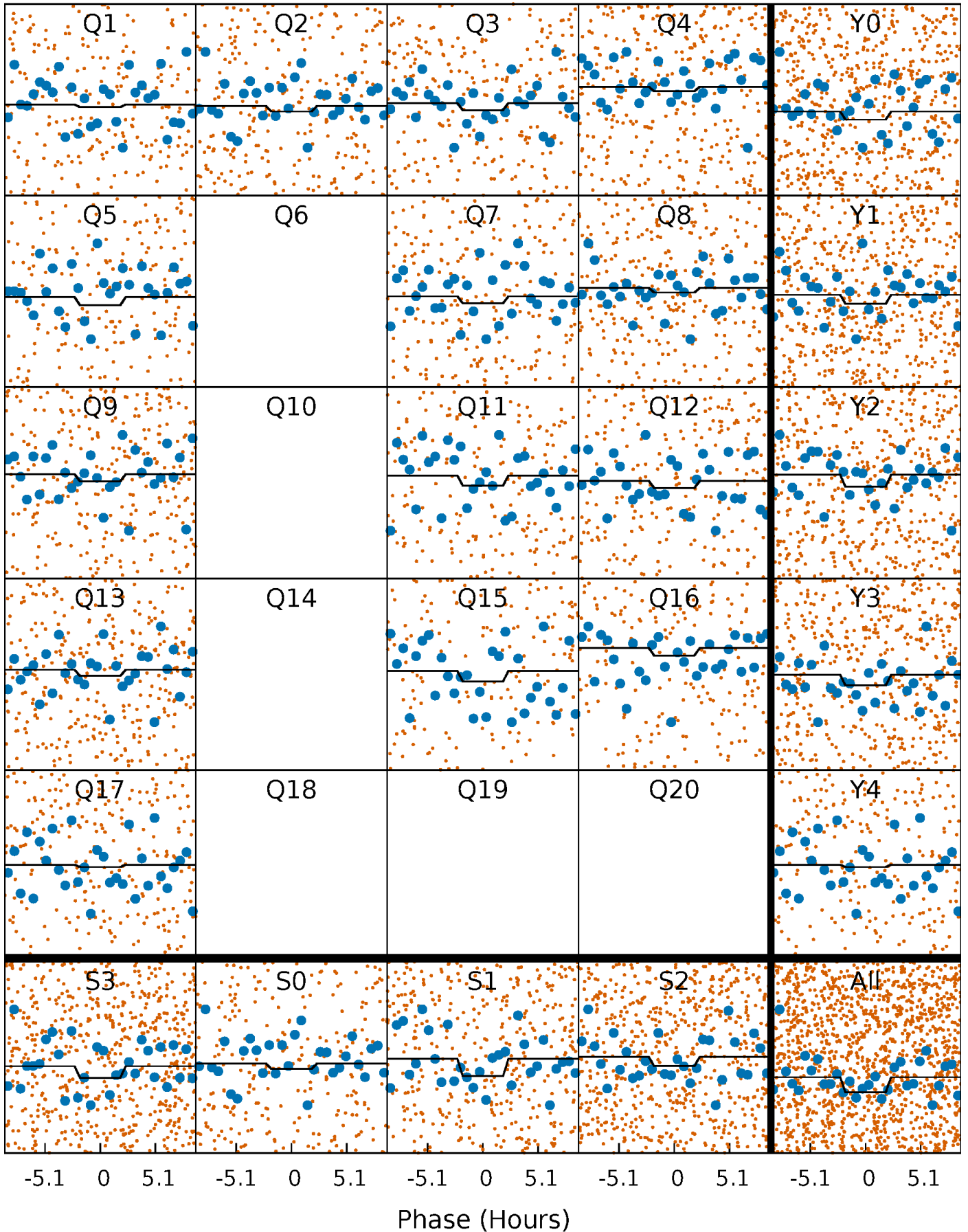
DV Quarter-Phased Transit Curves

TCE 004569150-01 P= 2.233777 Days $T_0=132.738010$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

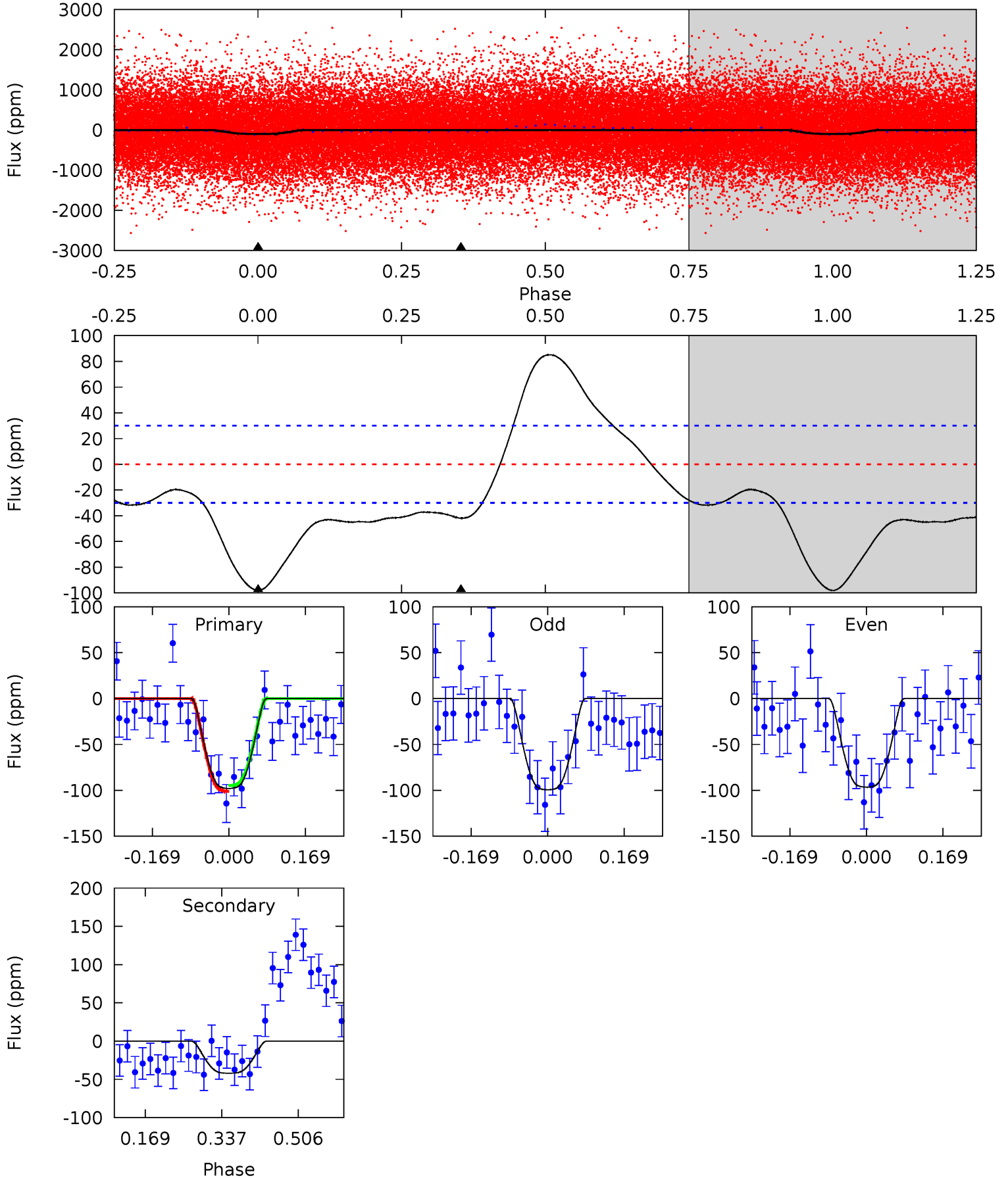
TCE 004569150-01 P= 2.233651 Days $T_0=132.805648$ (BKJD)



DV Model-Shift Uniqueness Test

004569150-01, P = 2.233777 Days, E = 130.504233 Days

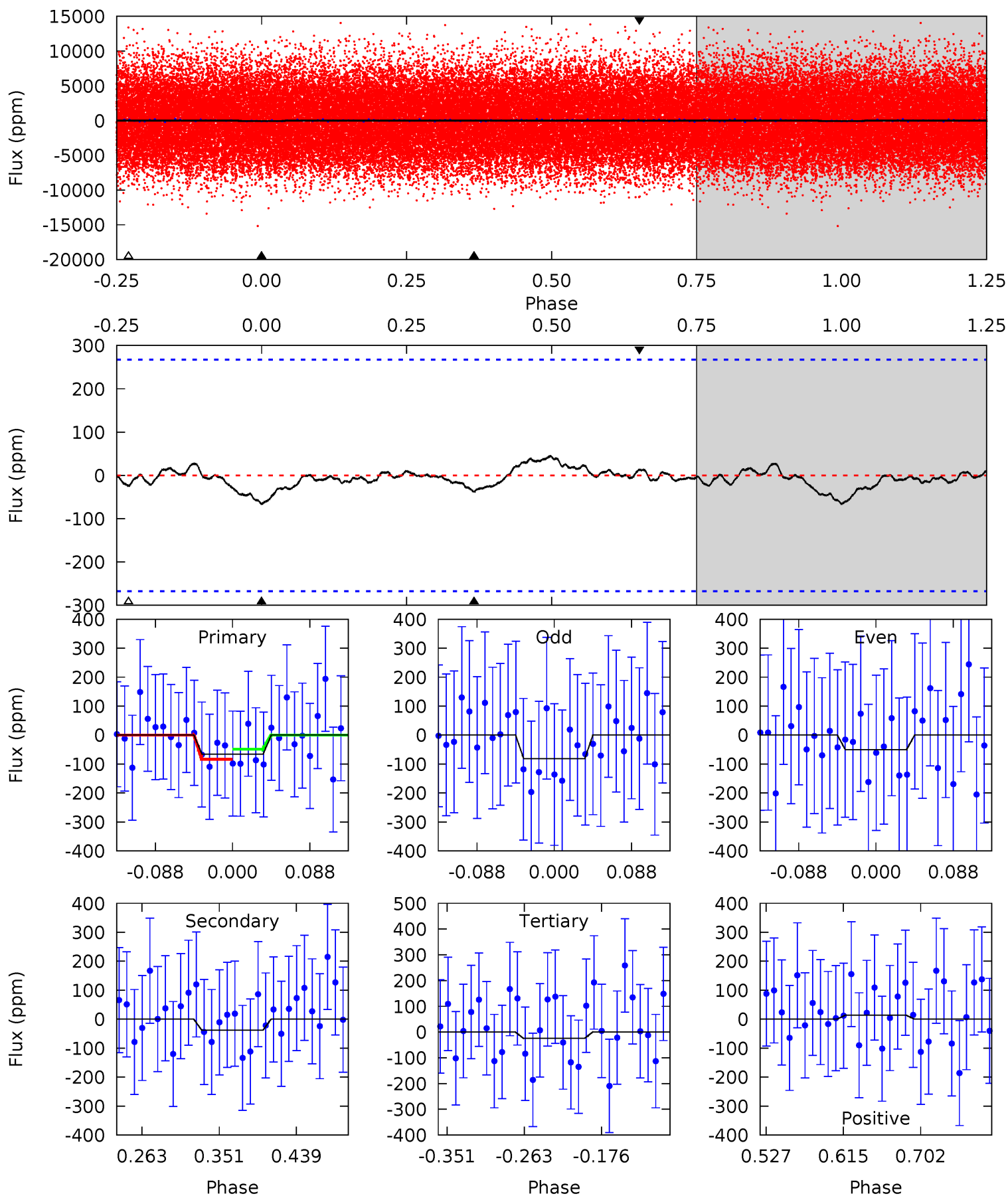
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.6	6.23	0	0	4.45	1.38	5.58	14.6	14.6	6.23	6.23	0.22	0.97	0.46	0.48



Alt Model-Shift Uniqueness Test

004569150-01, P = 2.233651 Days, E = 130.571997 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.13	0.65	0.42	0.23	4.59	1.71	0.26	0.71	0.90	0.23	0.42	0.27	0.90	0.40	0.30



Stellar Parameters For KIC 004569150

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7693^{+212}_{-319}	$3.588^{+0.527}_{-0.062}$	$-0.260^{+0.250}_{-0.300}$	$3.751^{+0.506}_{-2.025}$	$1.987^{+0.125}_{-0.561}$	$0.053^{+0.372}_{-0.011}$
	+3%/-4%	+15%/-2%	+96%/-115%	+13%/-54%	+6%/-28%	+701%/-20%
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 004569150-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-42 ± 7	$4.83^{+0.93}_{-1.31}$	4231^{+349}_{-543}	5103^{+318}_{-378}	$1.738^{+1.424}_{-0.557}$
Alt.	-38 ± 58	$3.05^{+0.66}_{-0.81}$	4259^{+310}_{-552}	6304^{+2313}_{-12027}	$3.925^{+8.496}_{-5.867}$

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

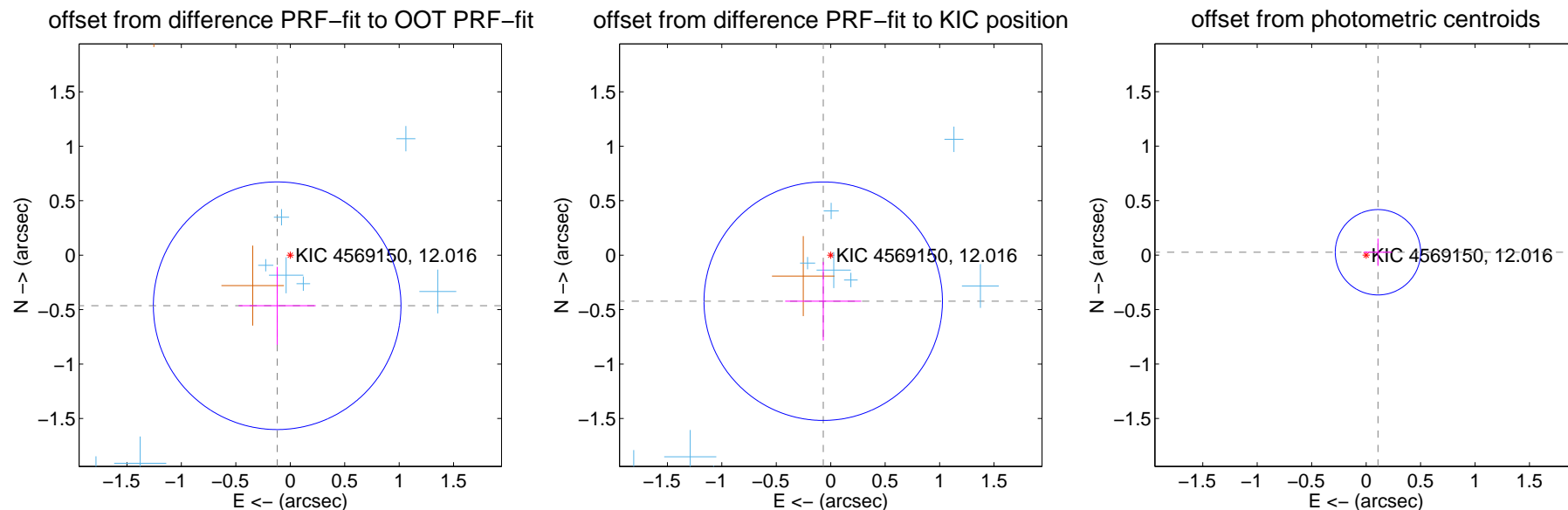
DV Centroid Data

Supplemental centroid analysis for 004569150-01. Kepler magnitude: 12.02. Transit SNR 9.61

There are 10 quarters with good PRF difference image offsets

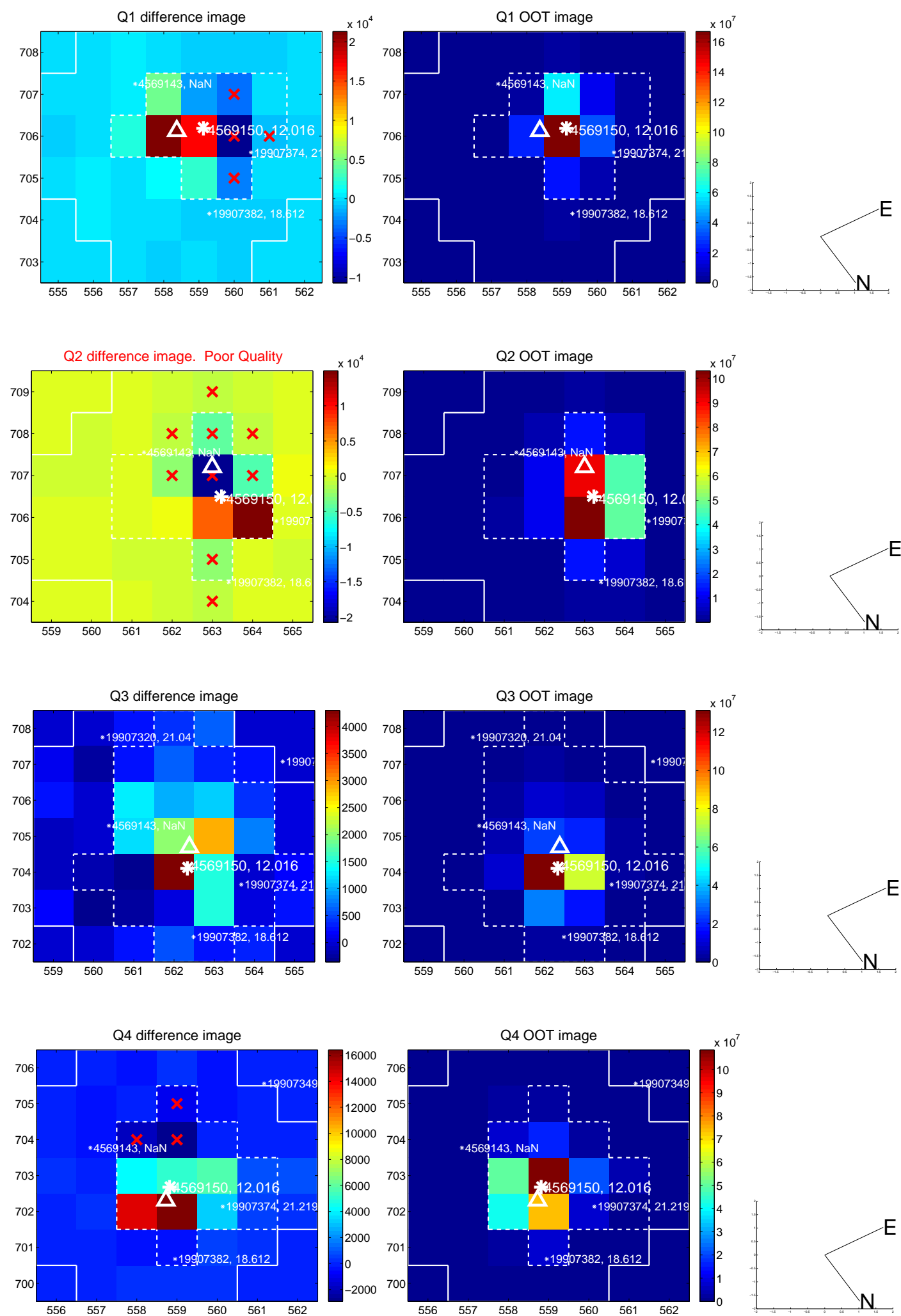
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.480 ± 0.379	1.27	0.120 ± 0.354	-0.464 ± 0.358
PRF-fit source offset from KIC position	0.428 ± 0.365	1.17	0.069 ± 0.350	-0.423 ± 0.360
photometric centroid source offset	0.11 ± 0.13	0.85	-0.11 ± 0.13	0.03 ± 0.13

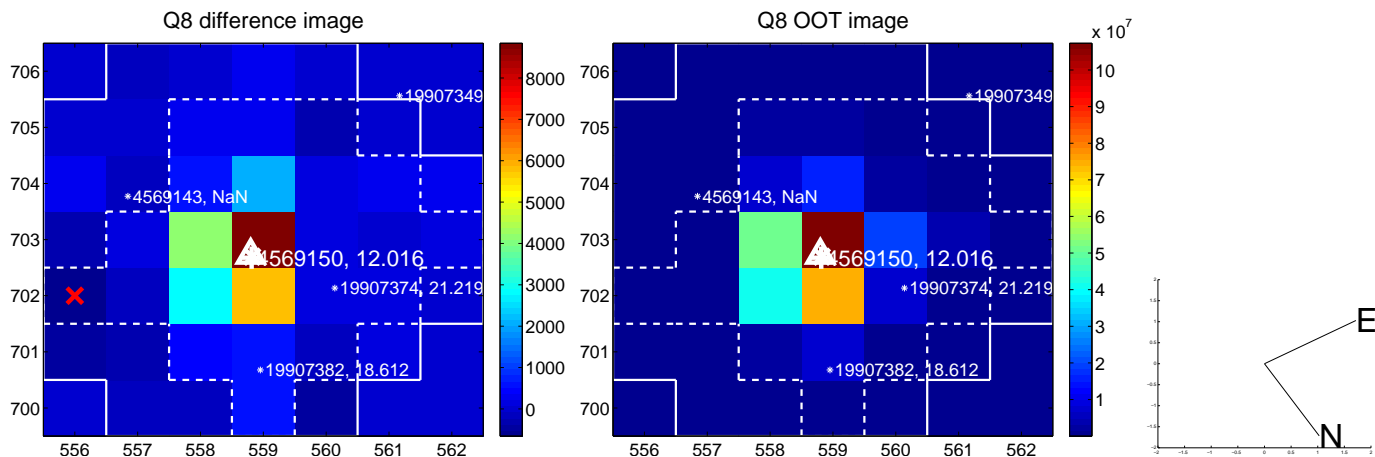
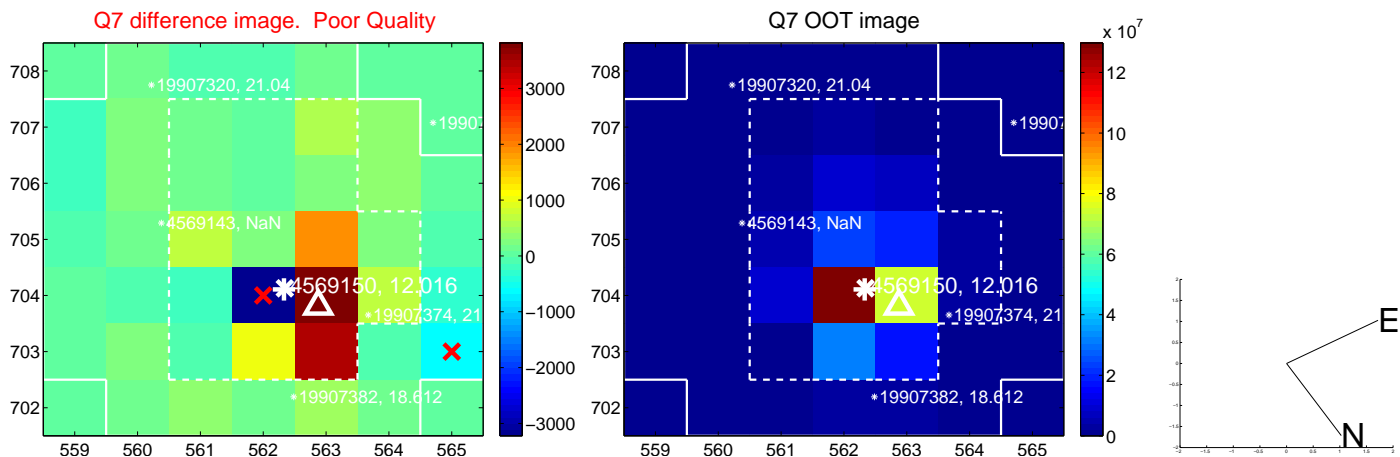
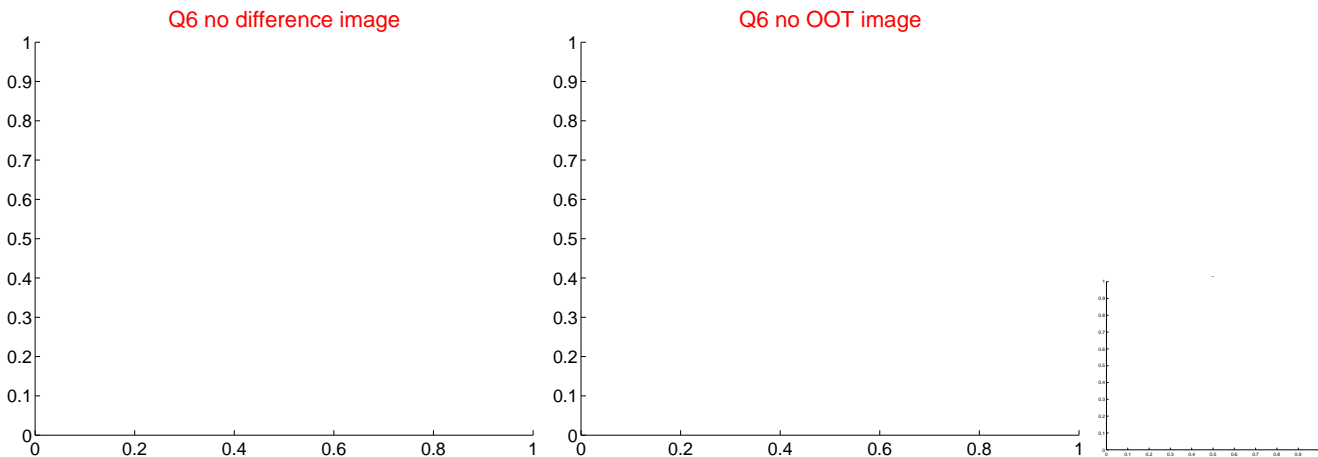
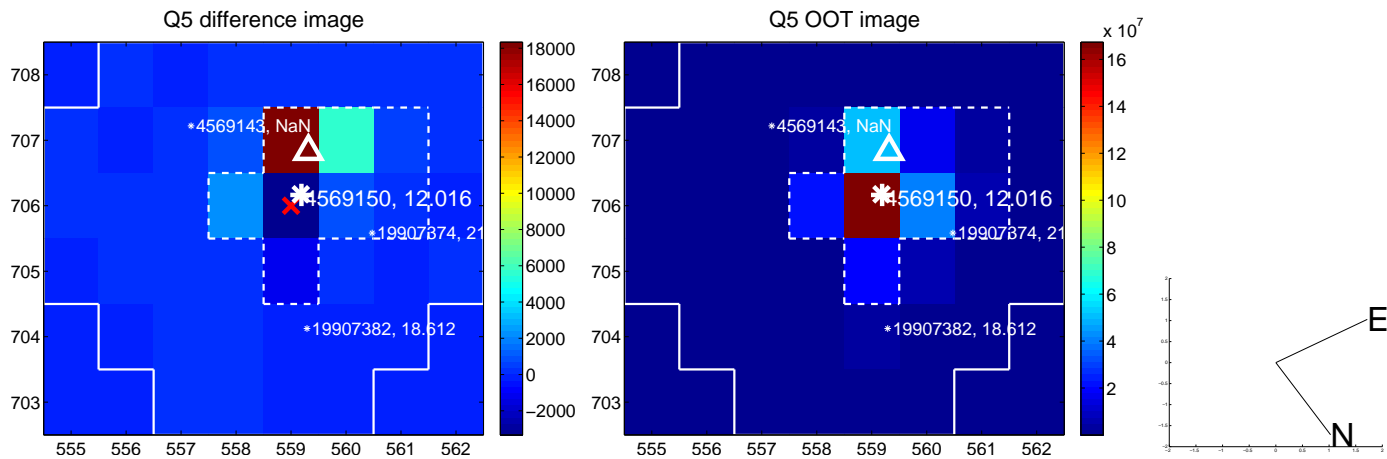


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

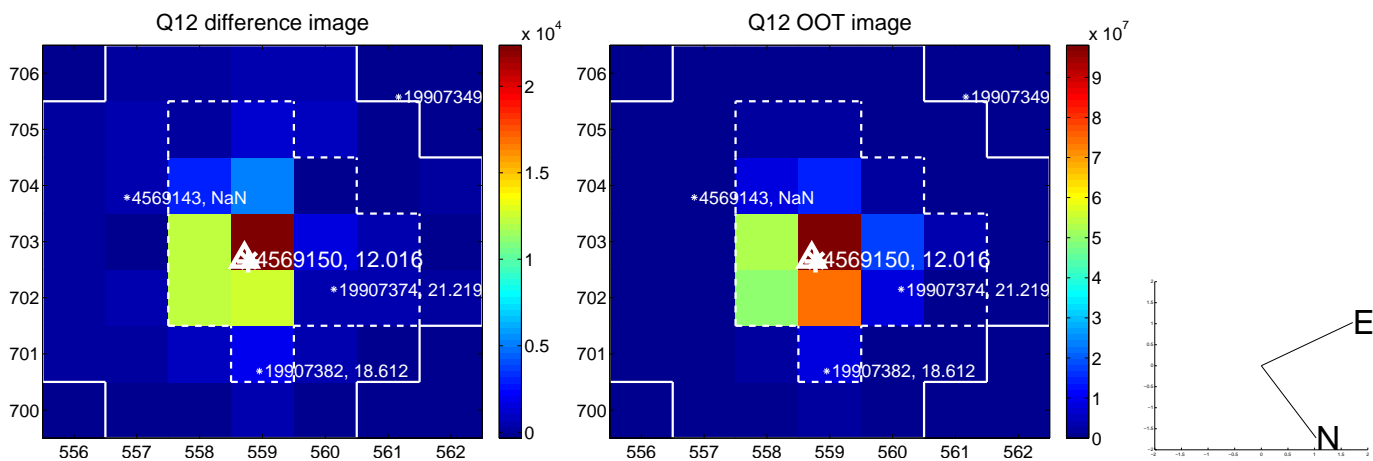
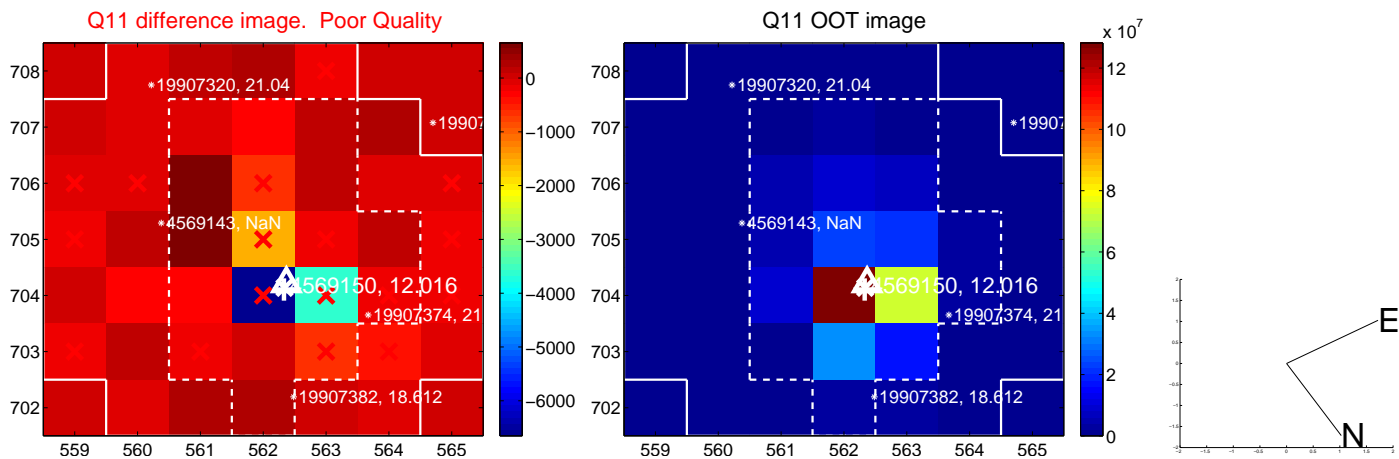
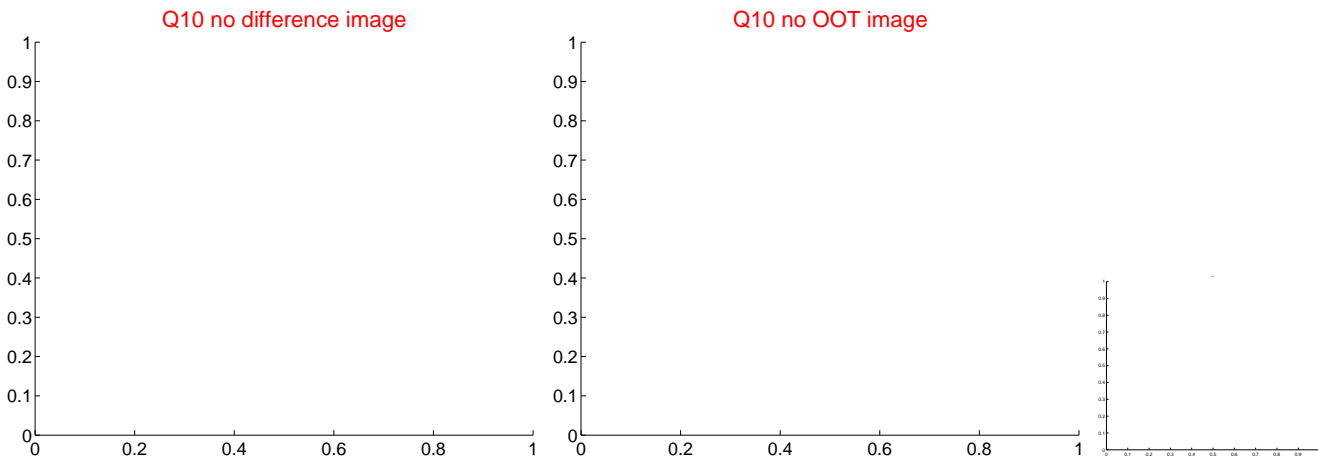
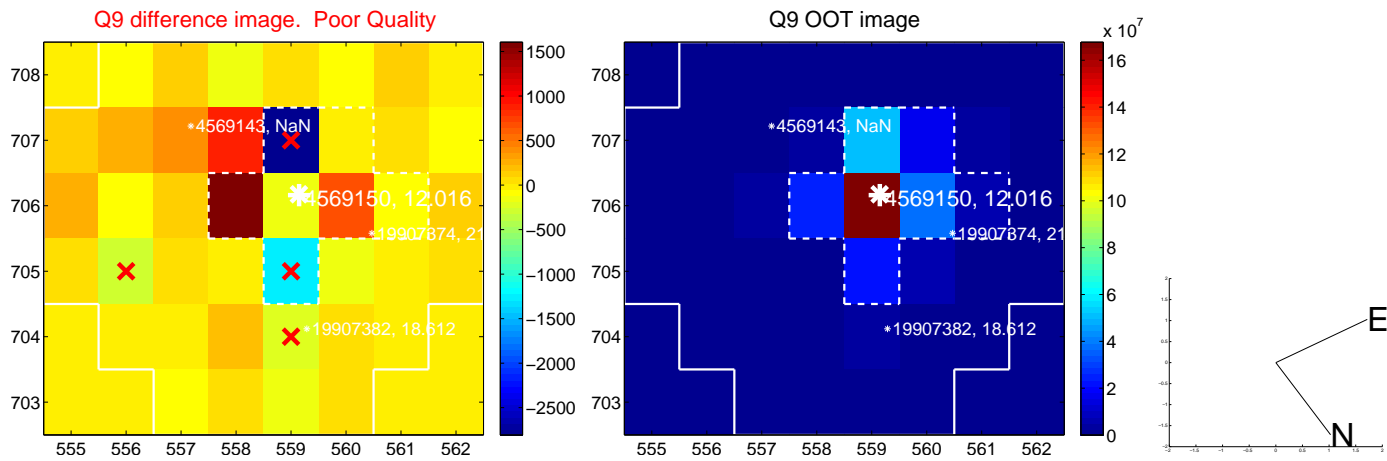
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



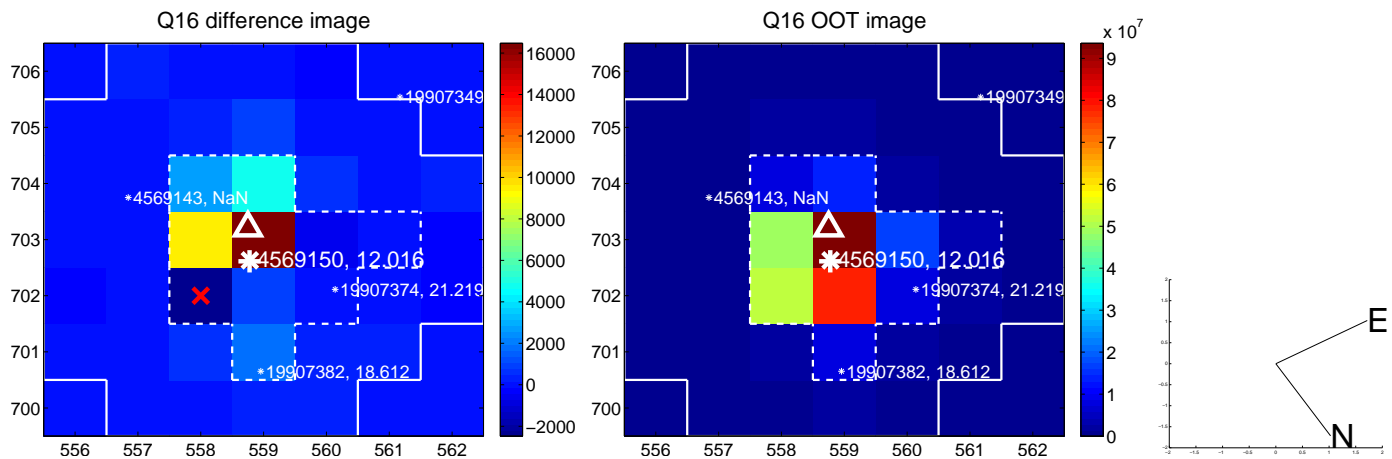
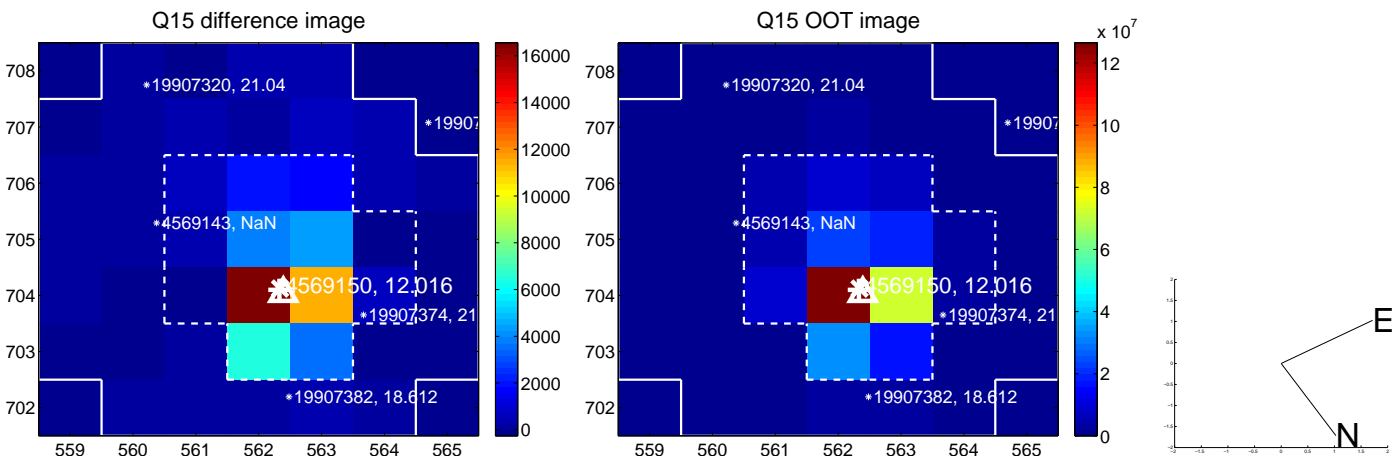
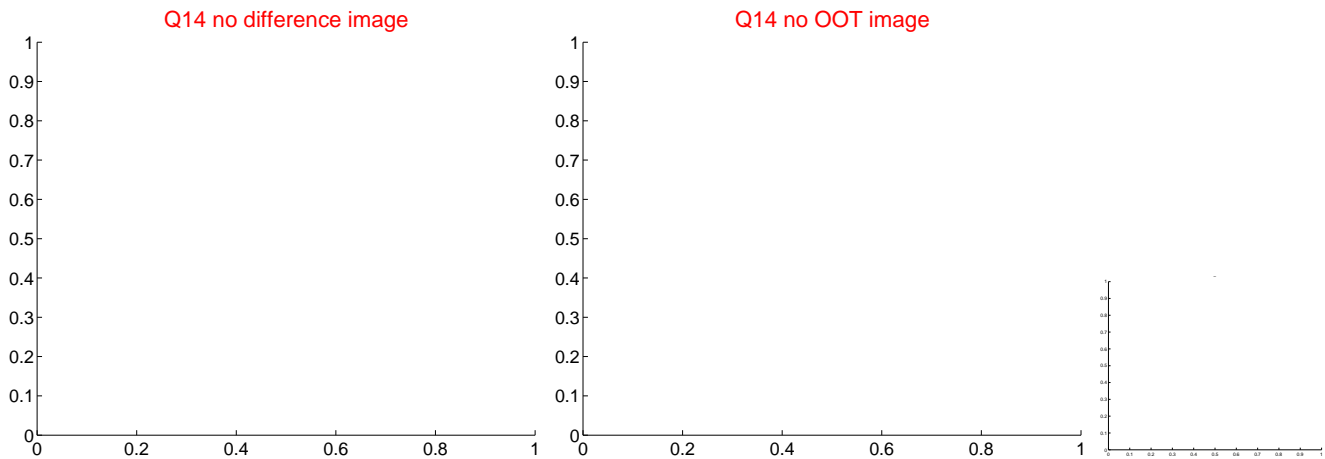
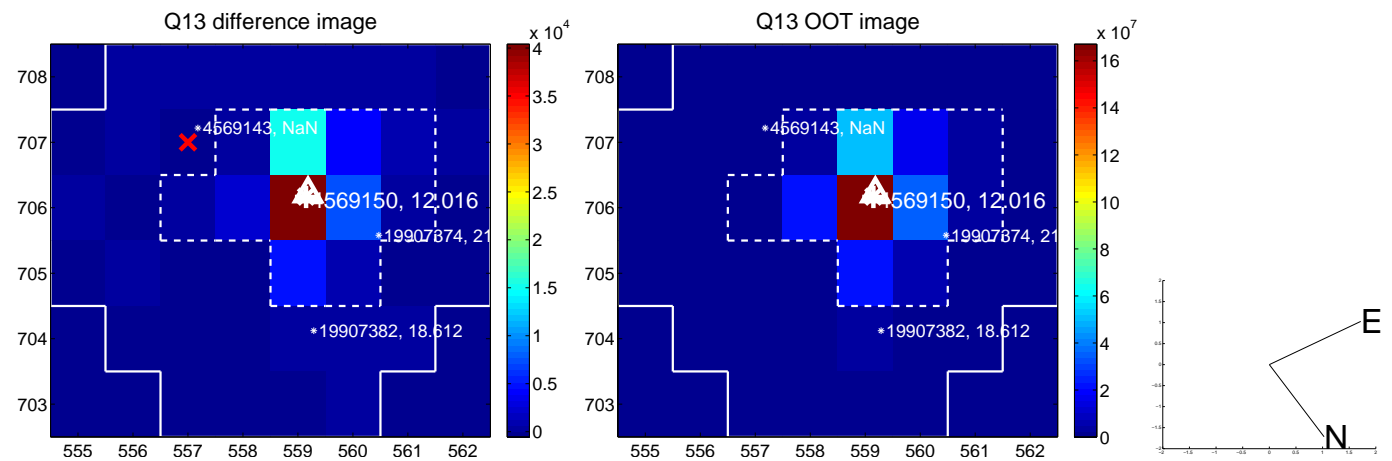
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



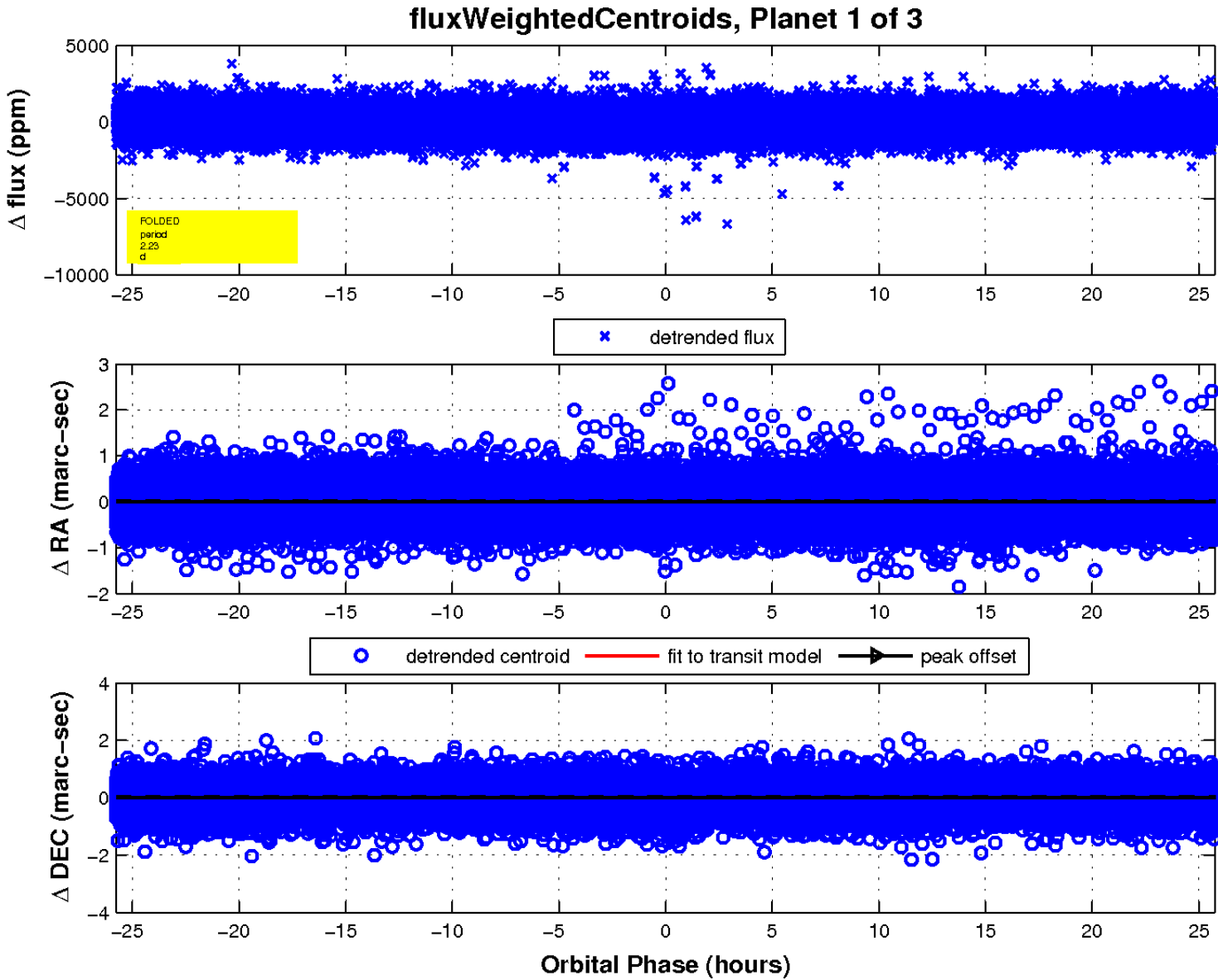
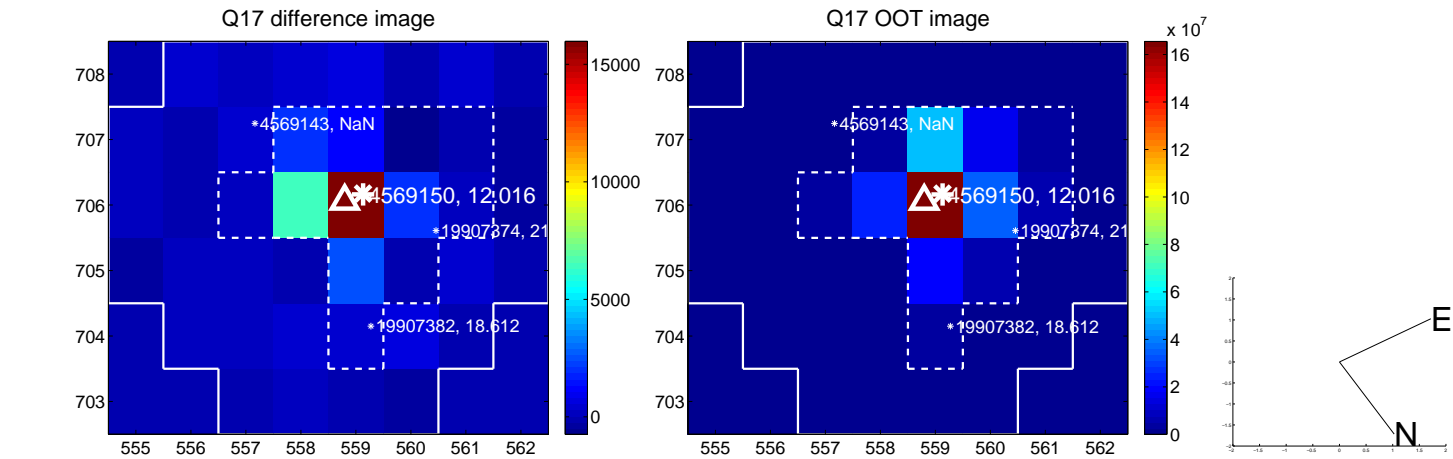
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

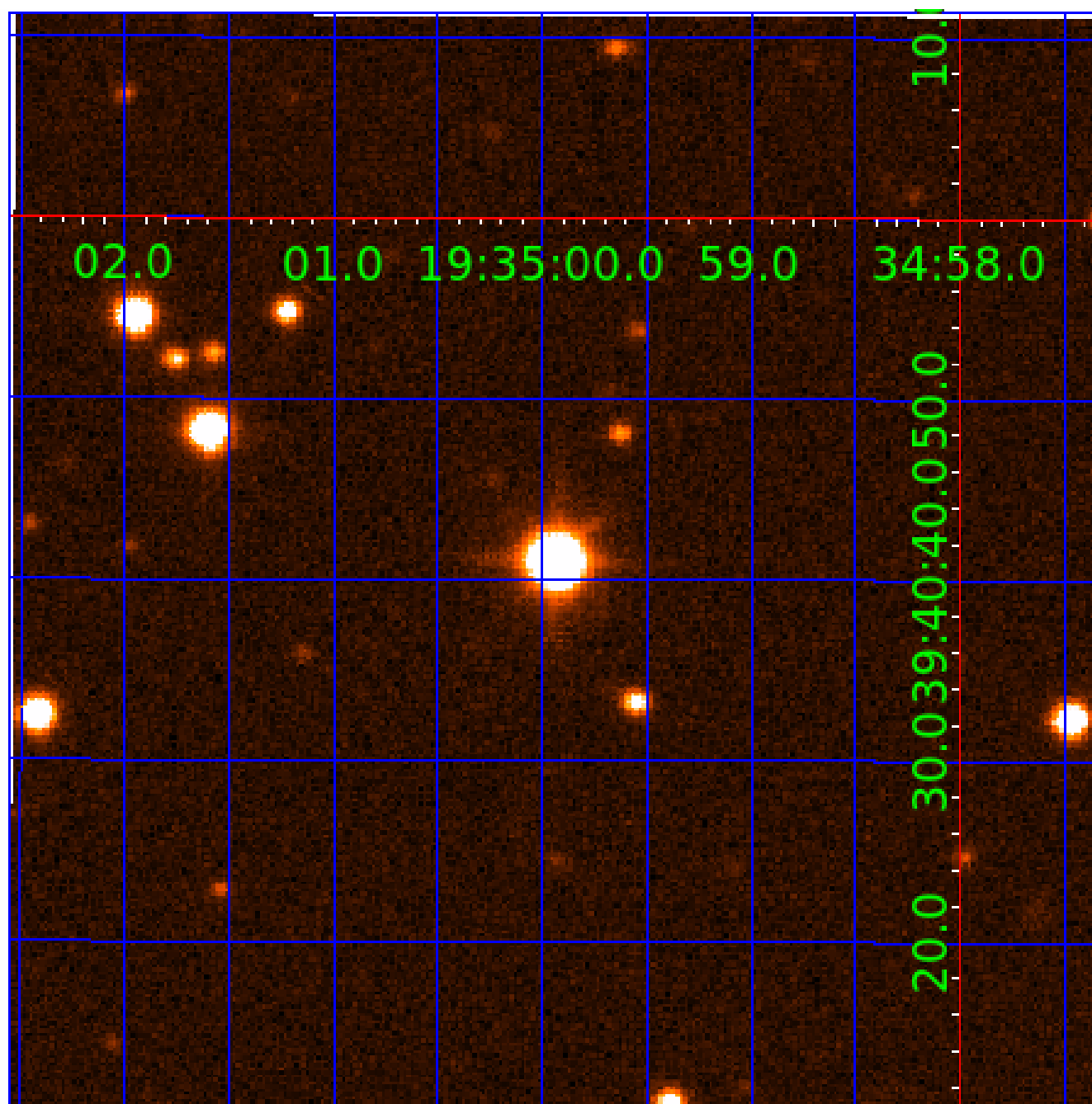


white \times : KIC target position; $+$: OOT centroid; Δ : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 004569150

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})
004569150-01	OBS	No	2.233777	132.738010	114.9	8.589	9.8	9.6	3.75	7693	5.42	24964.47
004569150-02	OBS	No	3.723979	133.414133	154.4	5.133	8.7	8.4	3.75	7693	5.18	12628.90
004569150-03	OBS	No	143.442467	173.816325	916.6	2.060	7.2	5.5	3.75	7693	13.53	97.08

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004569150-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004569150-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004569150-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

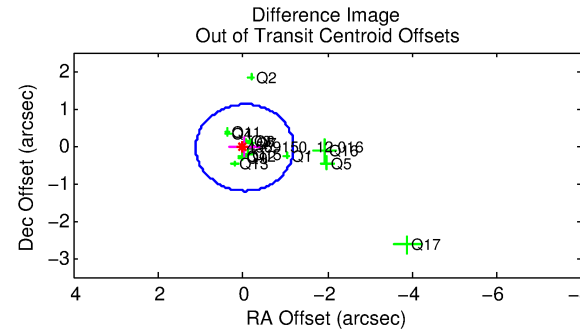
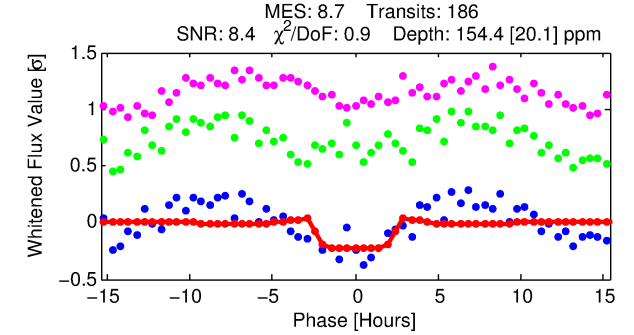
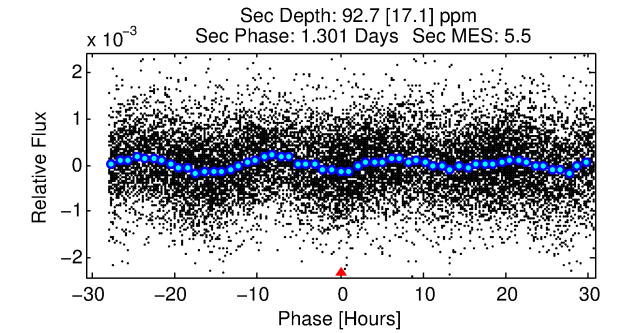
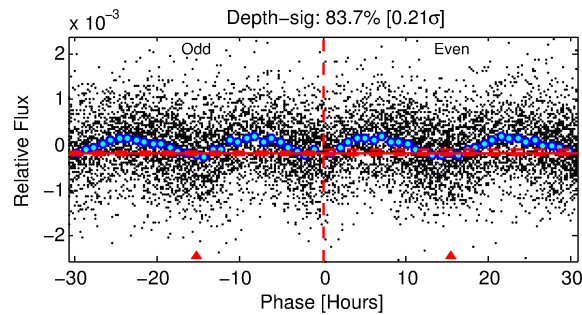
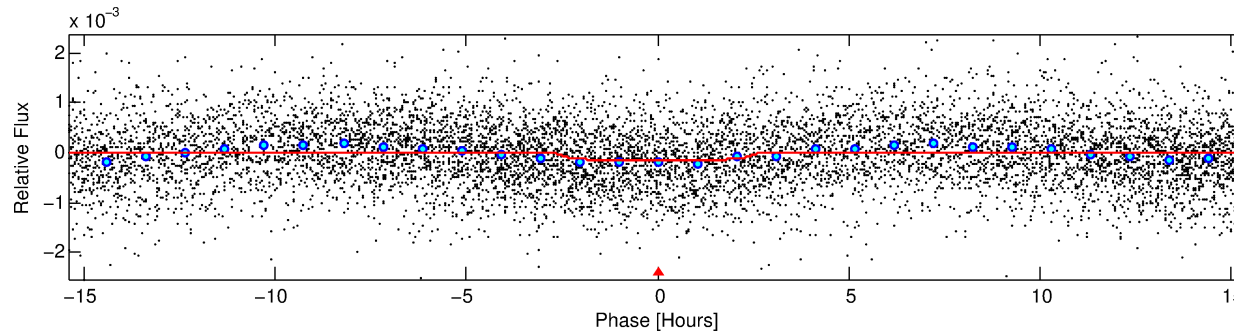
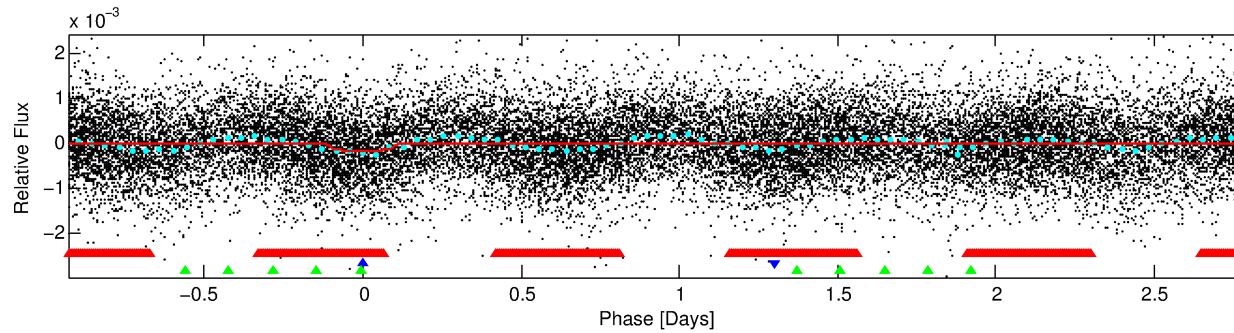
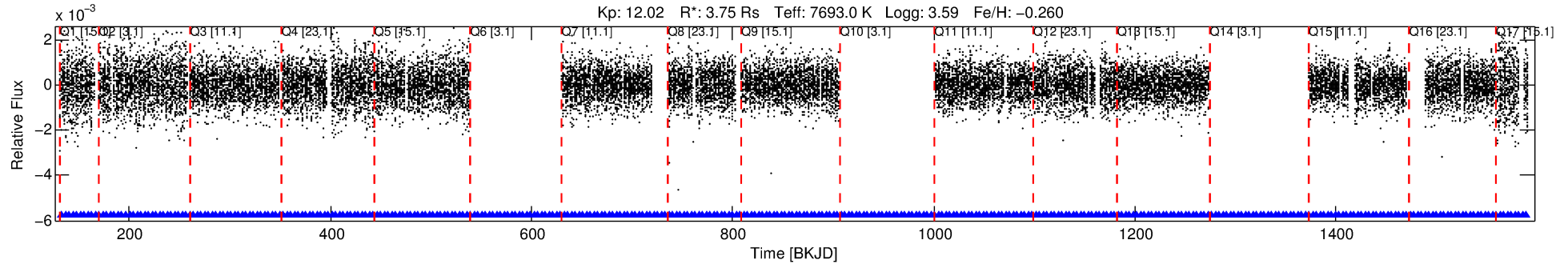
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004569150-02

No Significant Match Found

DV One-Page Summary

KIC: 4569150 Candidate: 2 of 3 Period: 3.724 d



DV Fit Results:

Period = 3.72398 [0.00005] d
Epoch = 133.4141 [0.0083] BKJD
Rp/R* = 0.0127 [0.0085]
a/R* = 3.48 [11.35]
b = 0.81 [1.53]
Seff = 12628.90 [11376.41]
Teq = 2703 [609] K
Rp = 5.18 [4.45] Re
a = 0.0591 [0.0320] AU
Ag = 6.65 [10.74] [0.53 σ]
Teffp = 6711 [2284] K [1.70 σ]

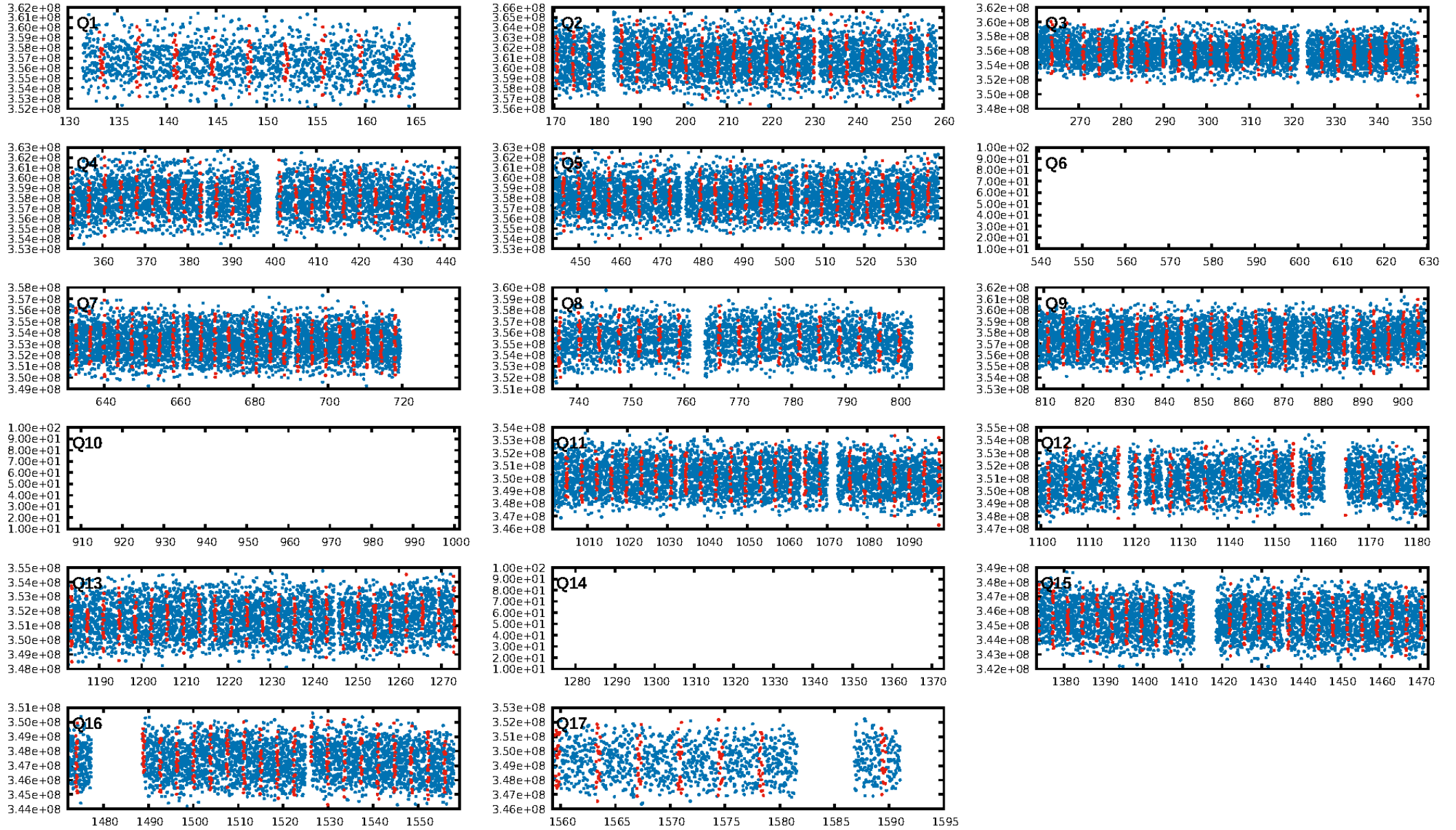
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [3.57 σ]
LongPeriod-sig: 100.0% [606.24 σ]
ModelChiSquare2-sig: 97.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.18e-16
RollingBand-fgt: 1.00 [178/178]
GhostDiagnostic-chr: 1.002
Centroid-sig: 8.8%
Centroid-so: 0.228 arcsec [1.70 σ]
OotOffset-rm: 0.064 arcsec [0.17 σ]
KicOffset-rm: 0.094 arcsec [0.30 σ]
OotOffset-st: 1/4/4/5 [14]
KicOffset-st: 1/4/4/5 [14]
DiffImageQuality-fgm: 0.86 [12/14]
DiffImageOverlap-fno: 1.00 [14/14]

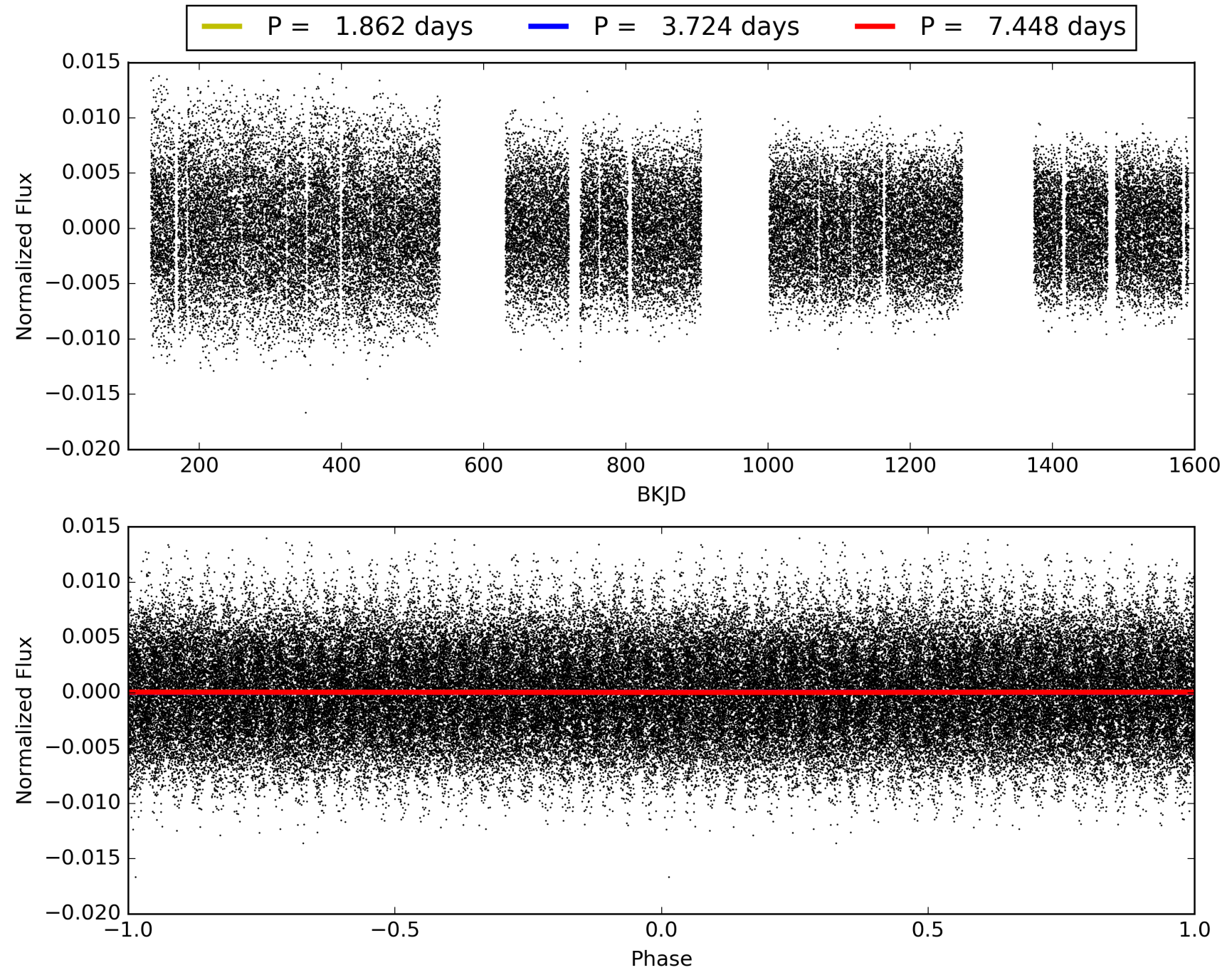
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:36:04 Z

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

TCE 004569150-02, PDC Light Curves

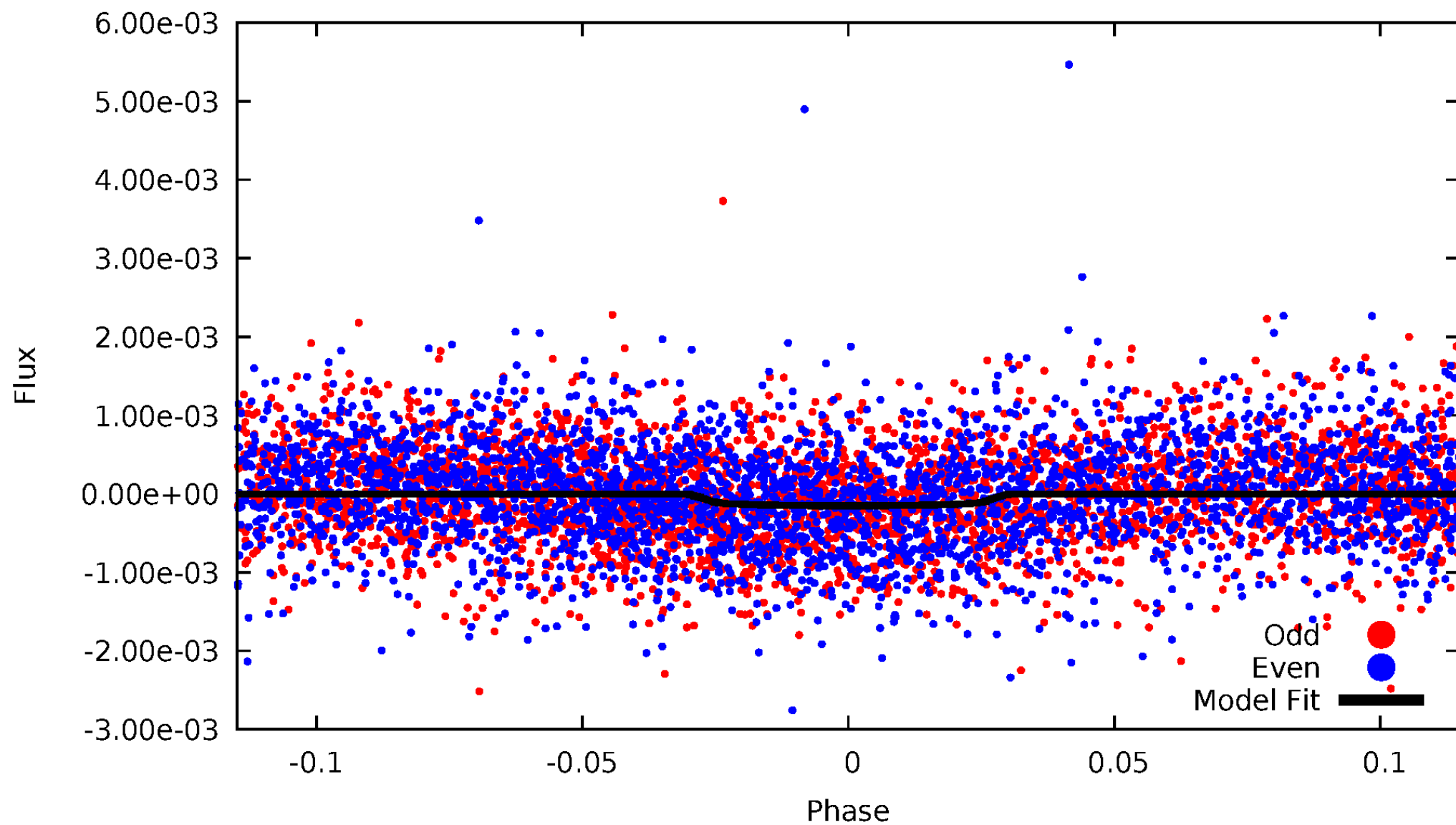


TCE 004569150-02



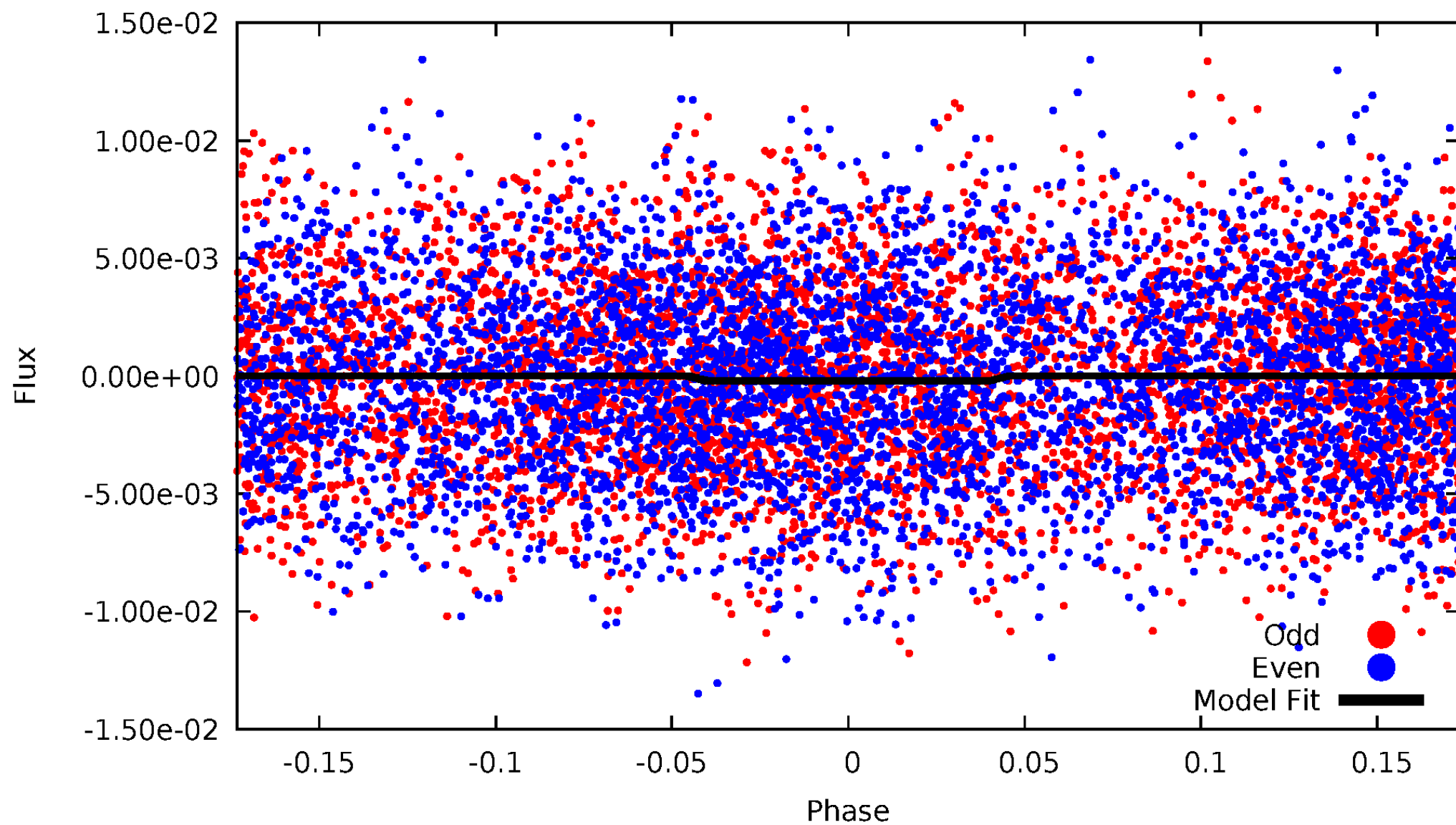
DV Odd/Even

TCE 004569150-02



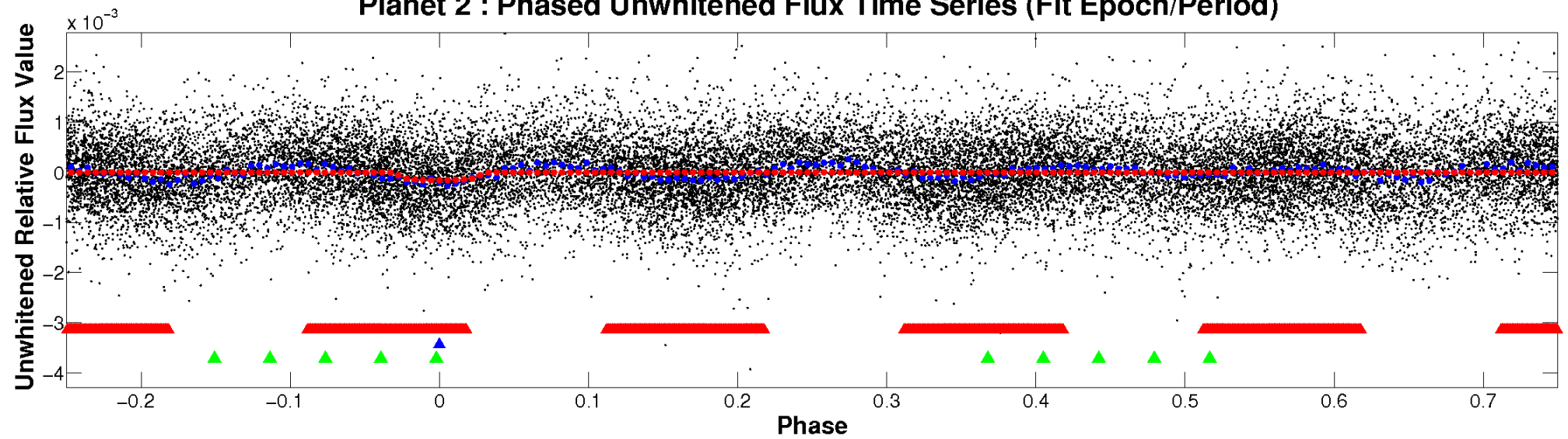
ALT Odd/Even

TCE 004569150-02

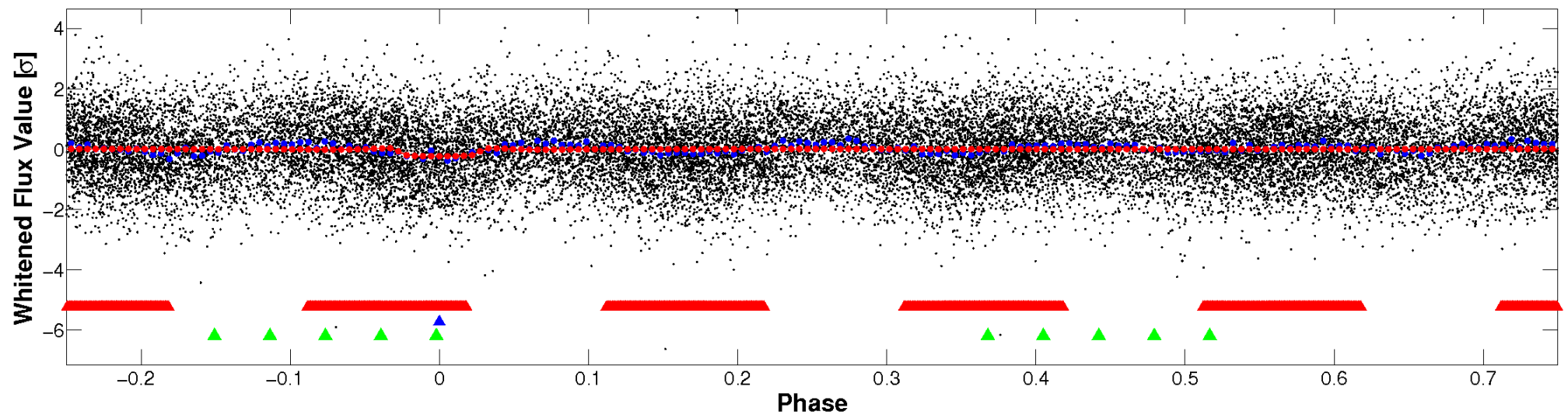


Non-Whitened Vs. Whitened Light Curve

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

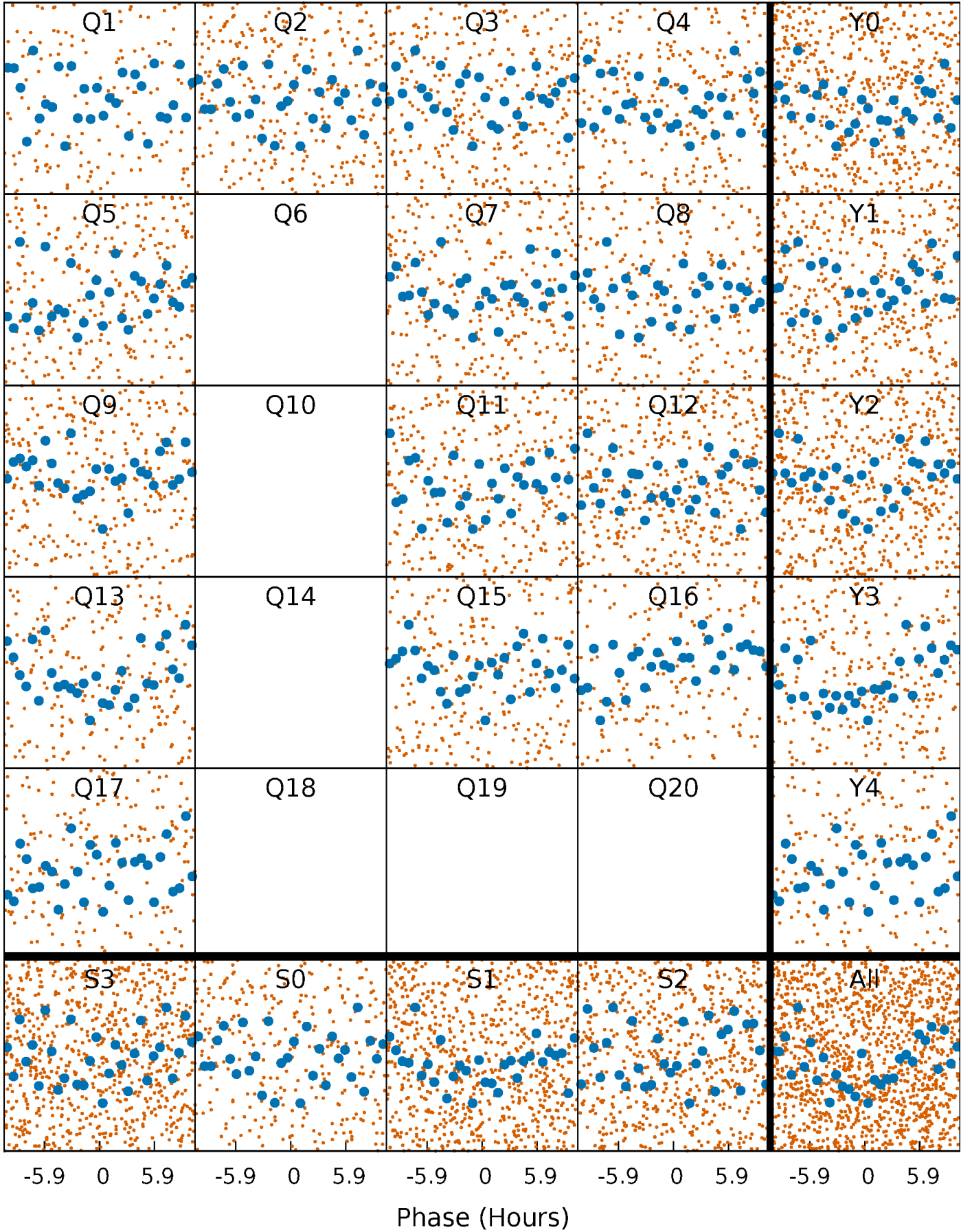


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



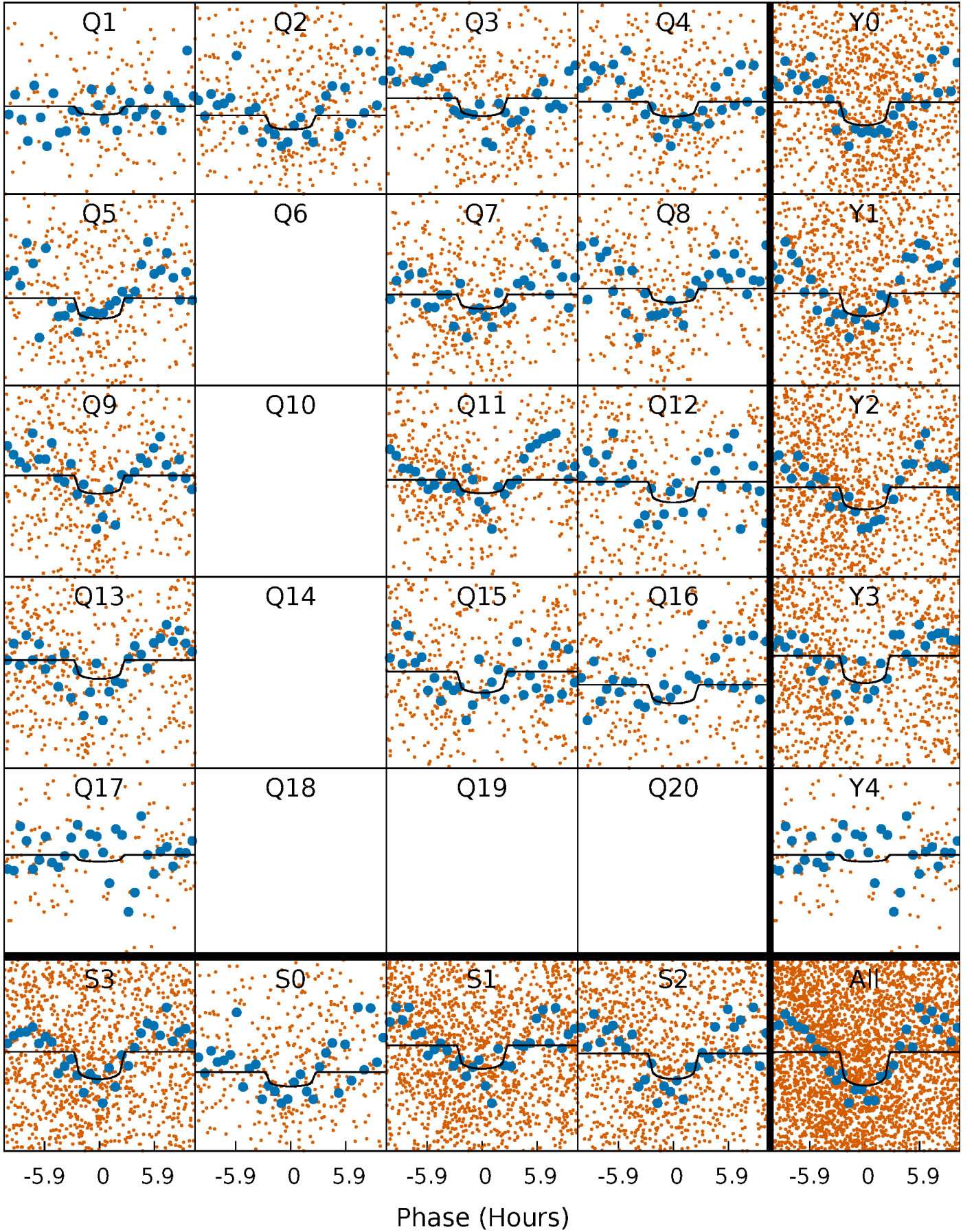
PDC Quarter-Phased Transit Curves

TCE 004569150-02 P= 3.723979 Days $T_0=133.414133$ (BKJD)



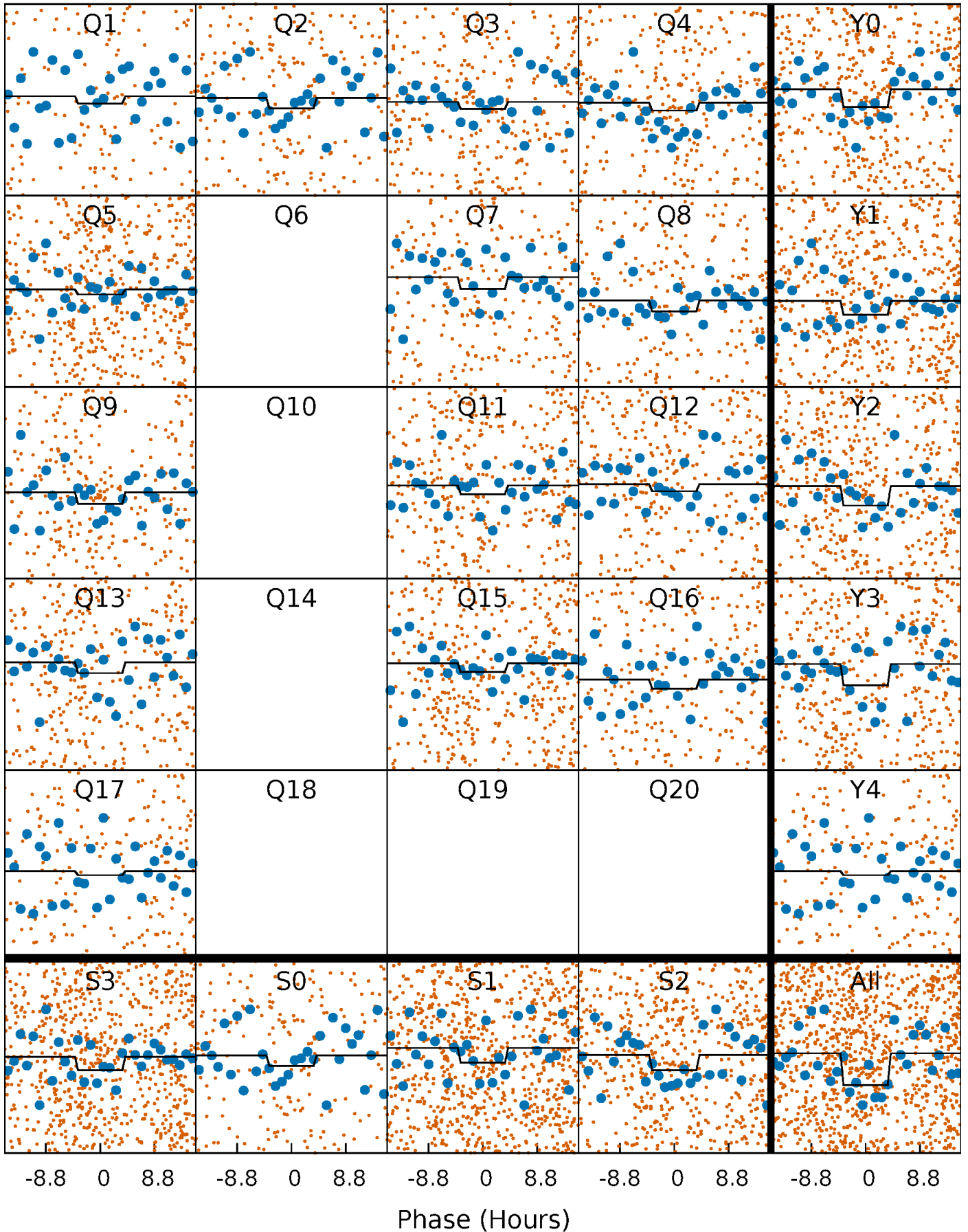
DV Quarter-Phased Transit Curves

TCE 004569150-02 P= 3.723979 Days $T_0=133.414133$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

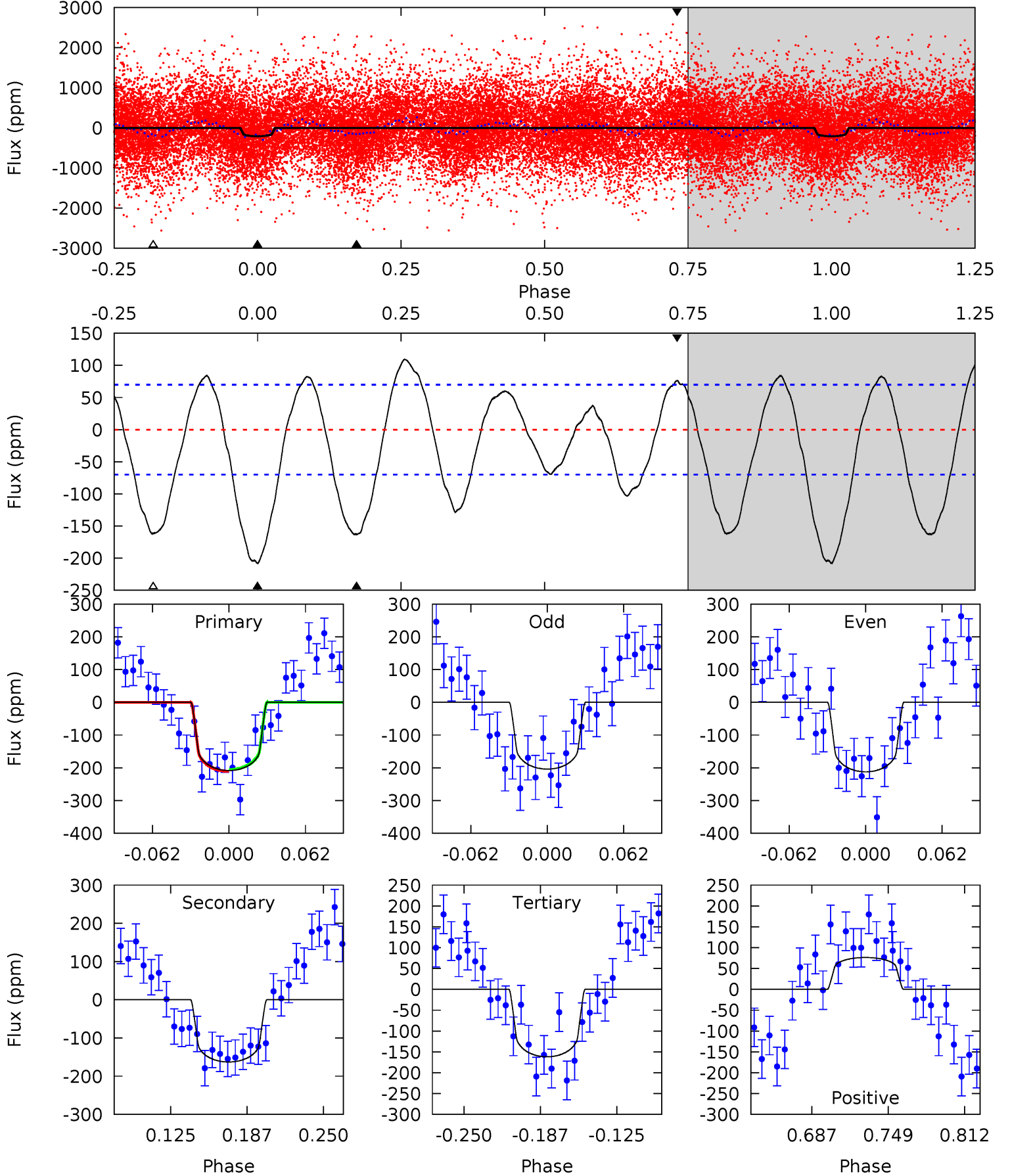
TCE 004569150-02 P= 3.723740 Days $T_0=133.445254$ (BKJD)



DV Model-Shift Uniqueness Test

004569150-02, P = 3.723979 Days, E = 129.690154 Days

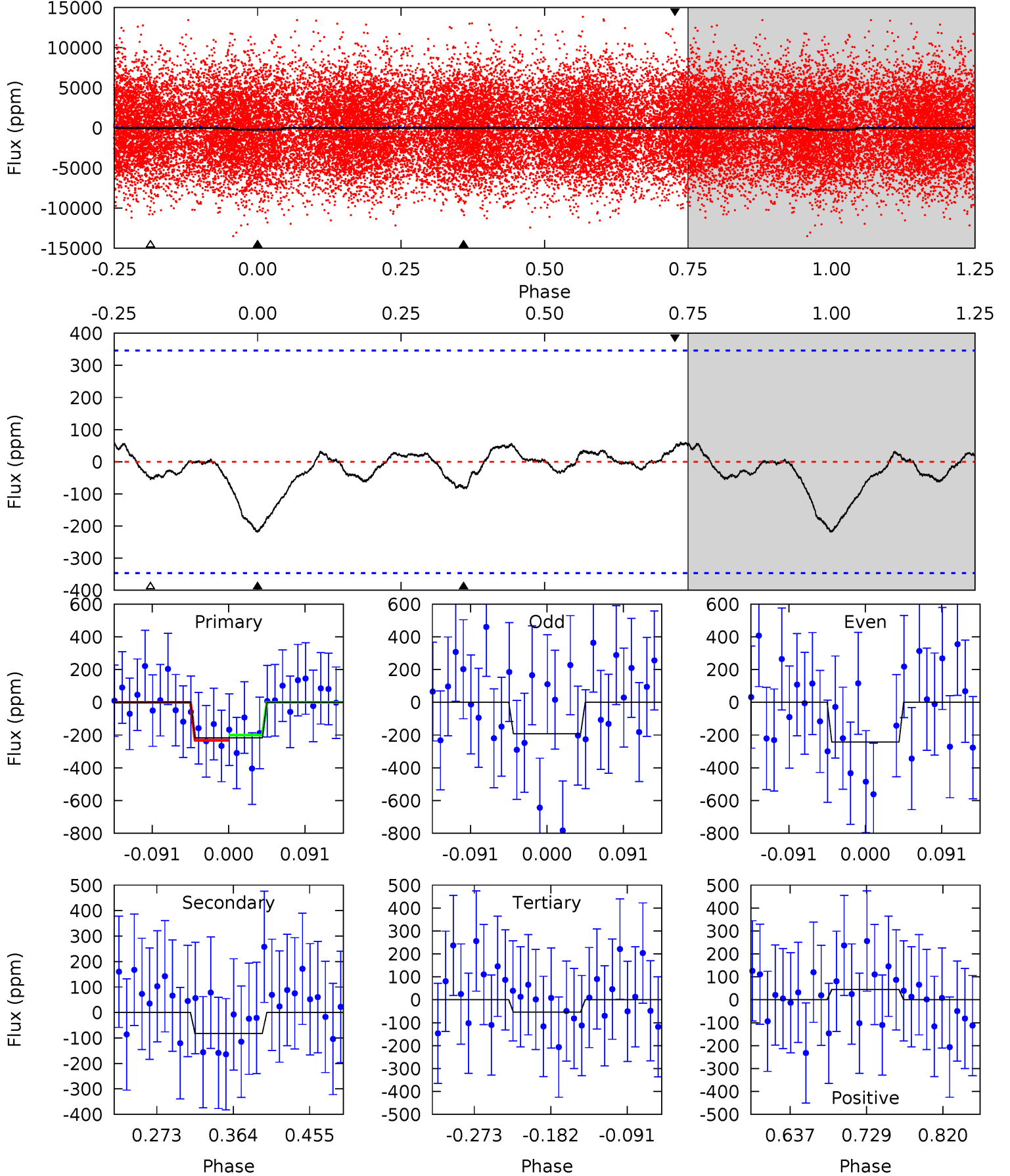
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.9	10.9	10.8	5.09	4.66	1.86	4.73	3.10	8.79	0.07	5.77	0.28	0.93	0.34	0.17



Alt Model-Shift Uniqueness Test

004569150-02, P = 3.723740 Days, E = 129.721514 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.88	1.09	0.72	0.59	4.58	1.69	0.39	2.16	2.29	0.38	0.50	0.34	1.00	0.21	0.21



Stellar Parameters For KIC 004569150

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7693^{+212}_{-319}	$3.588^{+0.527}_{-0.062}$	$-0.260^{+0.250}_{-0.300}$	$3.751^{+0.506}_{-2.025}$	$1.987^{+0.125}_{-0.561}$	$0.053^{+0.372}_{-0.011}$
	+3%/-4%	+15%/-2%	+96%/-115%	+13%/-54%	+6%/-28%	+701%/-20%
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 004569150-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-163 ± 15	$4.66^{+3.41}_{-2.72}$	3622^{+265}_{-492}	7433^{+6005}_{-1803}	14^{+68}_{-9}
Alt.	-82 ± 76	$5.06^{+3.67}_{-2.77}$	3615^{+268}_{-483}	5540^{+3131}_{-7720}	$4.617^{+20.073}_{-4.326}$

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 $A_{obs} \gg 1.0$

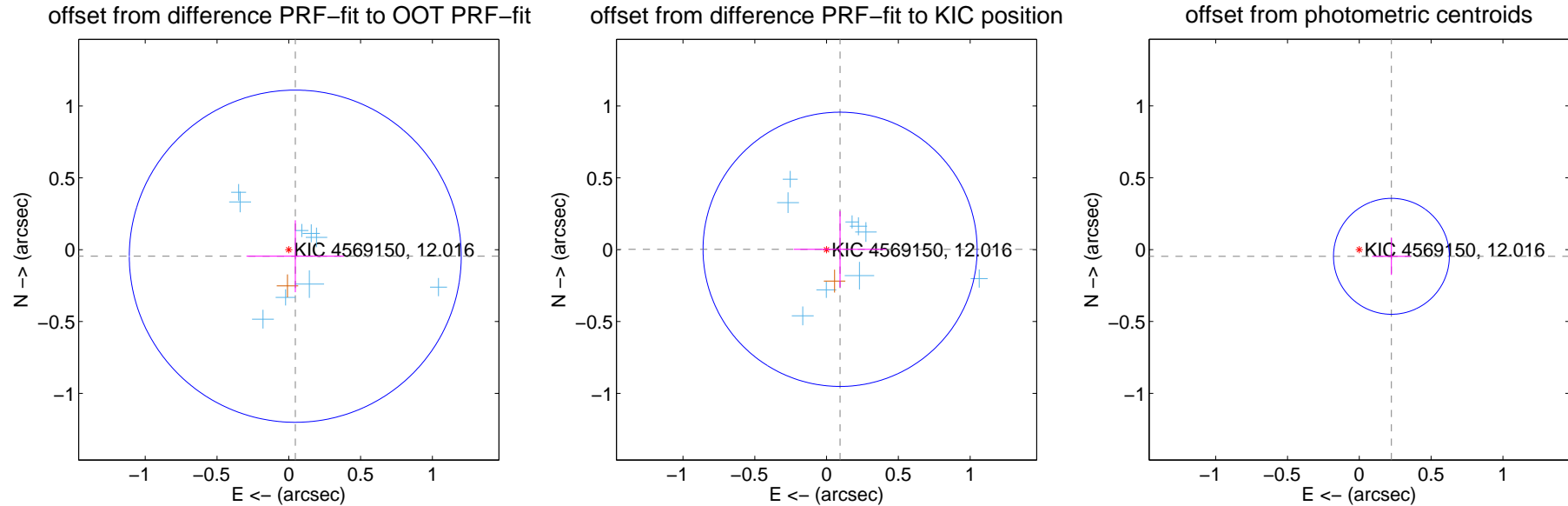
DV Centroid Data

Supplemental centroid analysis for 004569150-02. Kepler magnitude: 12.02. Transit SNR 8.36

There are 12 quarters with good PRF difference image offsets

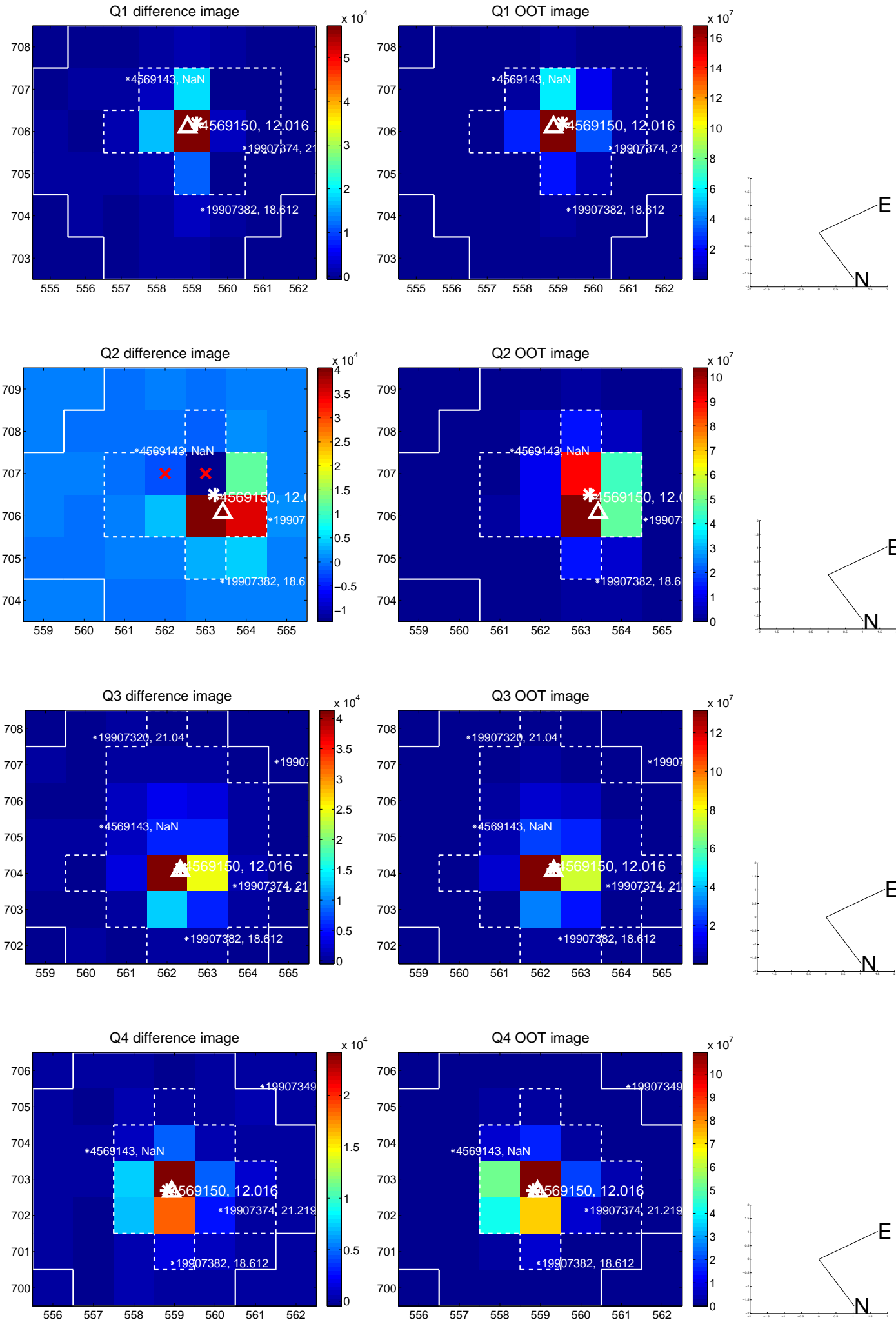
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.064 ± 0.385	0.17	-0.045 ± 0.339	-0.045 ± 0.250
PRF-fit source offset from KIC position	0.094 ± 0.318	0.30	-0.094 ± 0.323	0.002 ± 0.265
photometric centroid source offset	0.23 ± 0.13	1.70	-0.22 ± 0.13	-0.05 ± 0.13

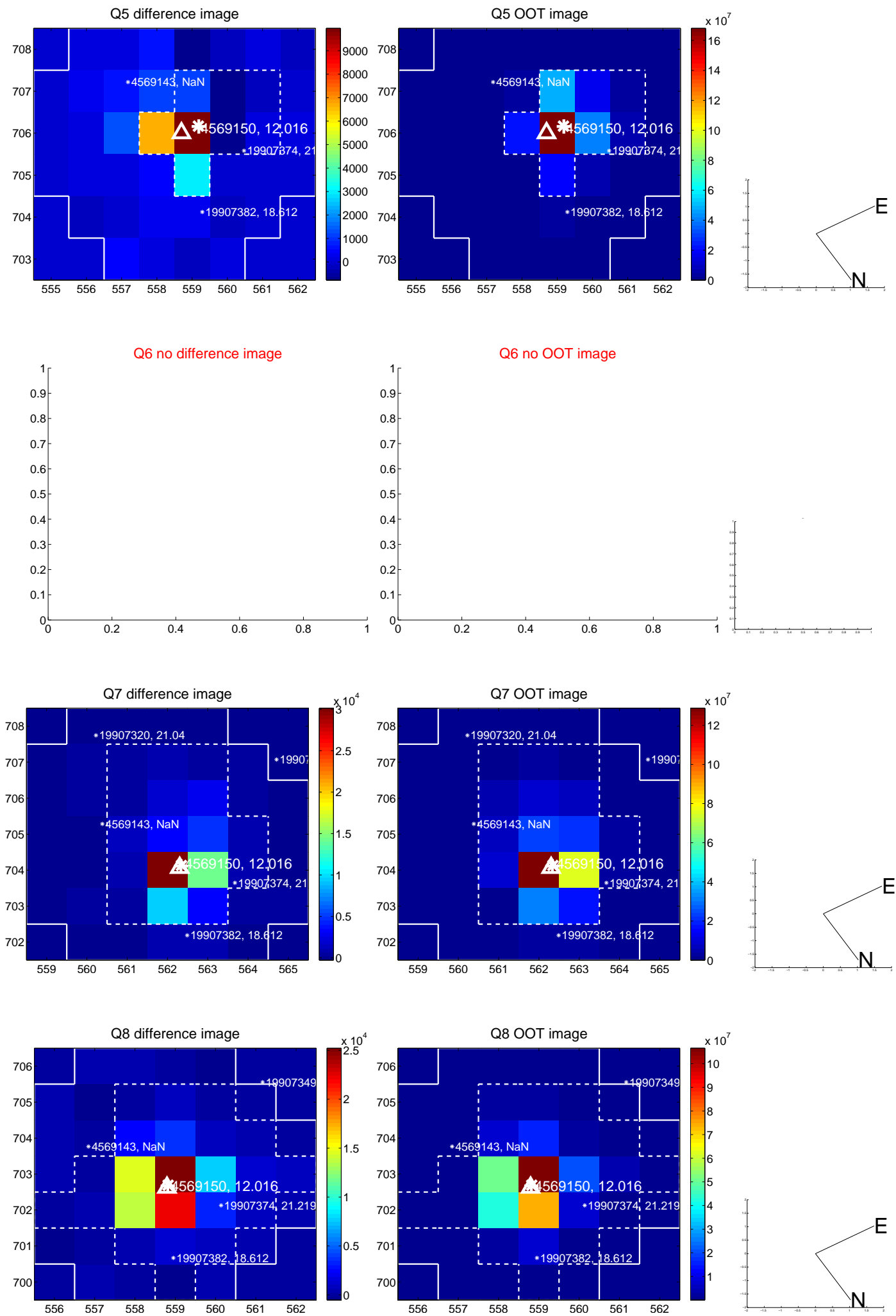


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

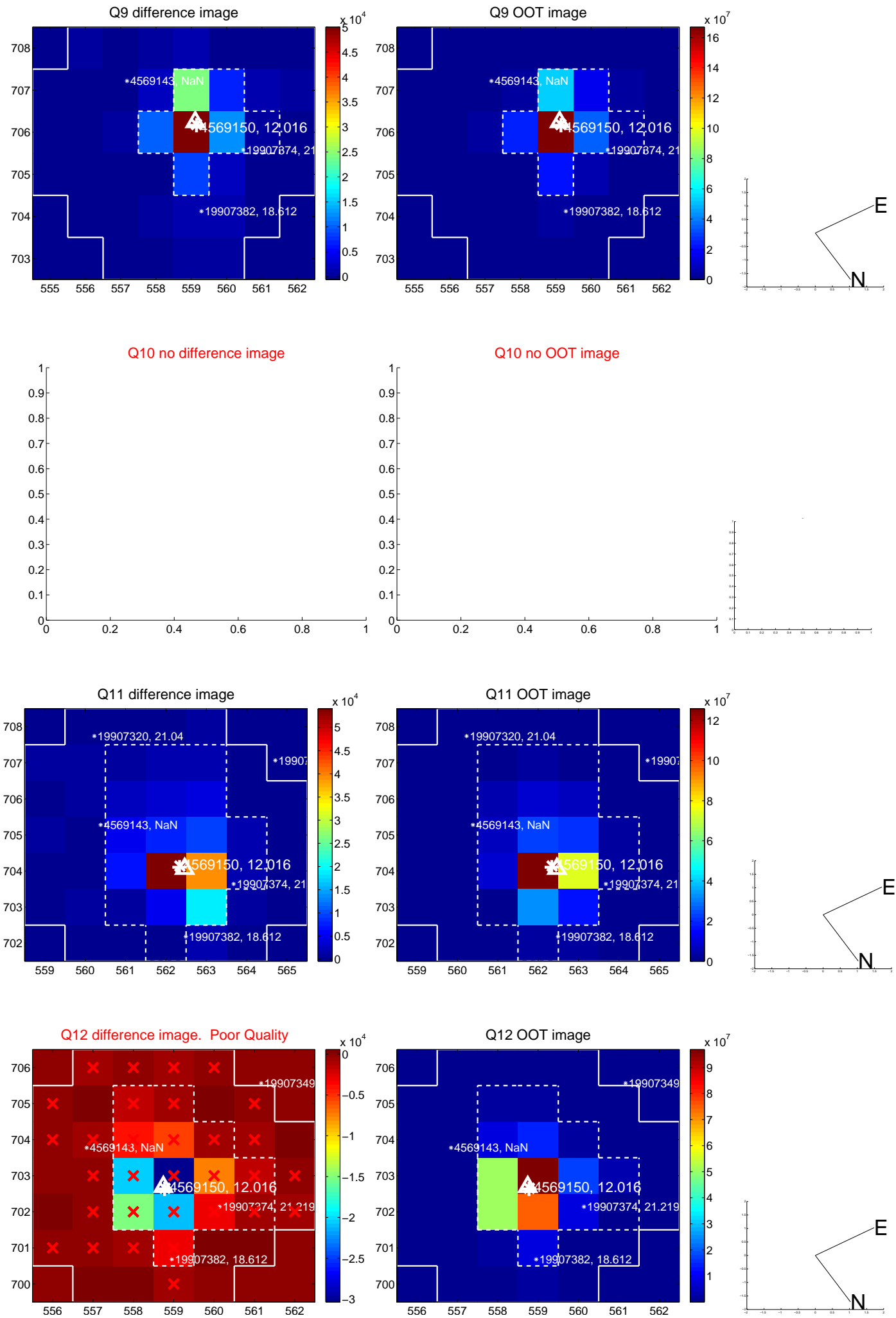
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



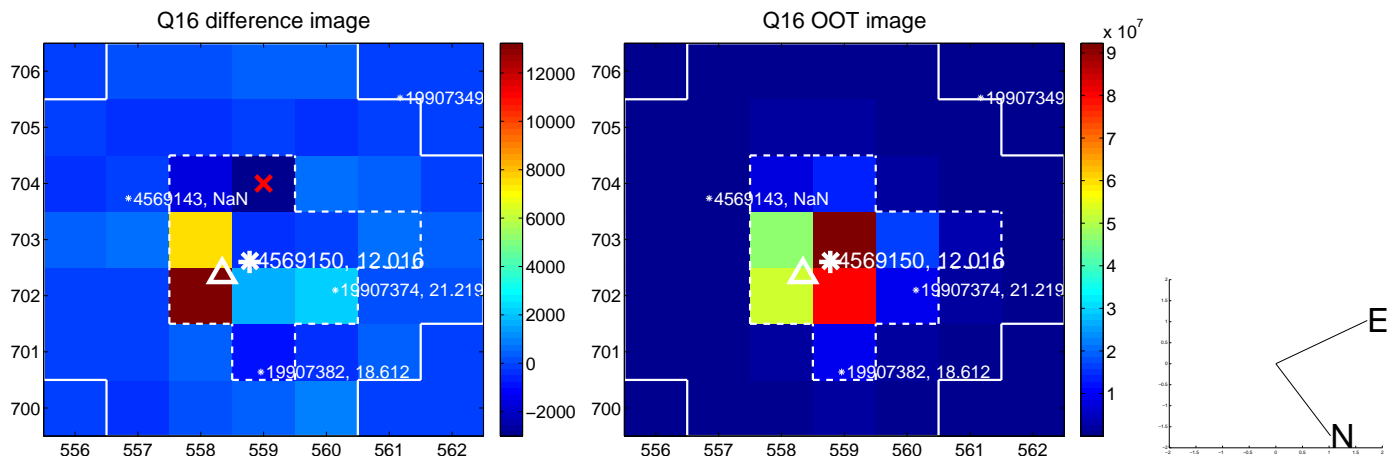
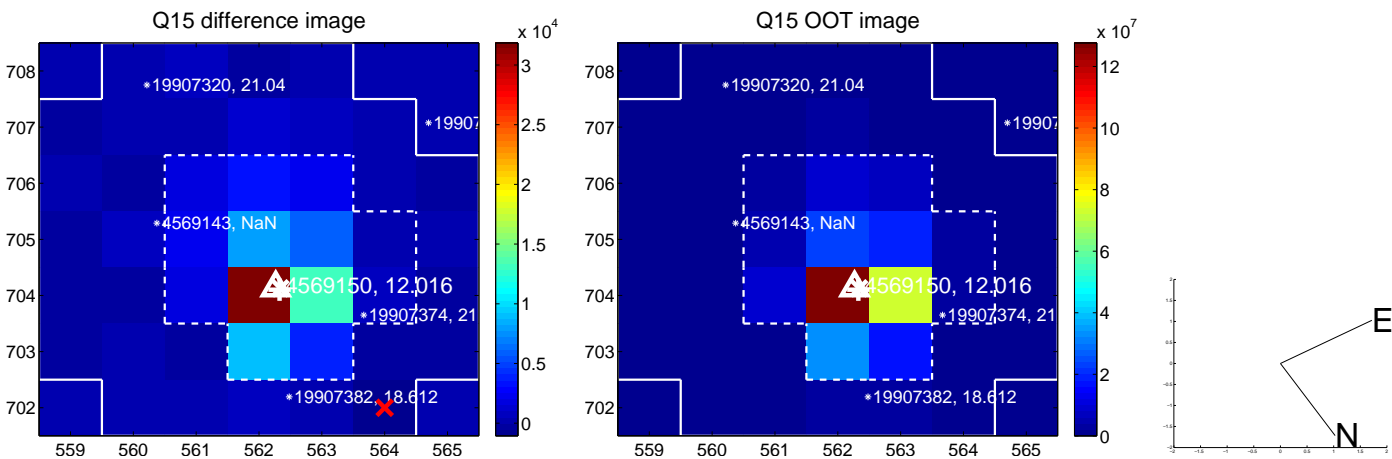
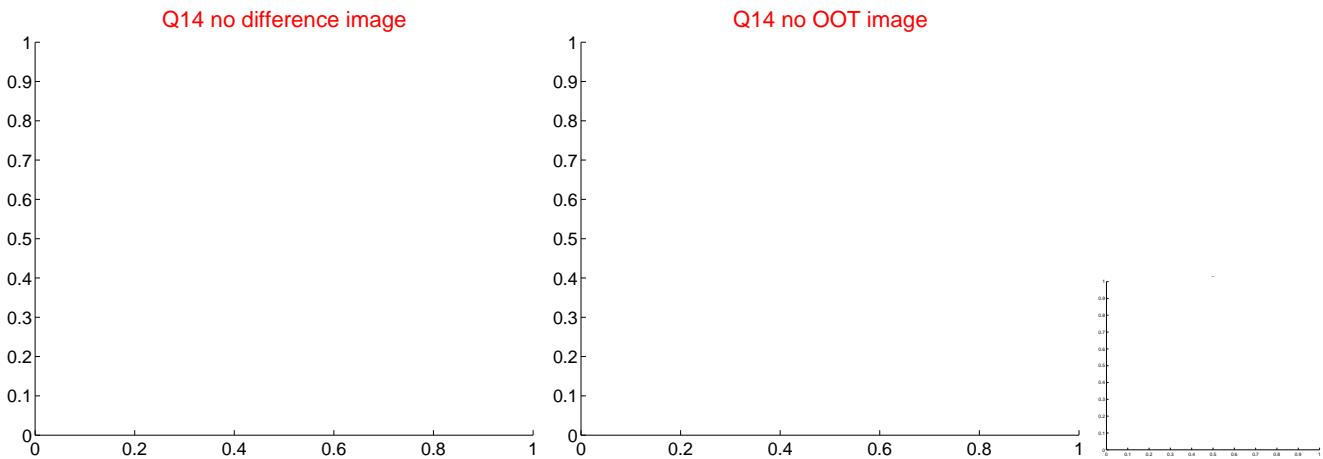
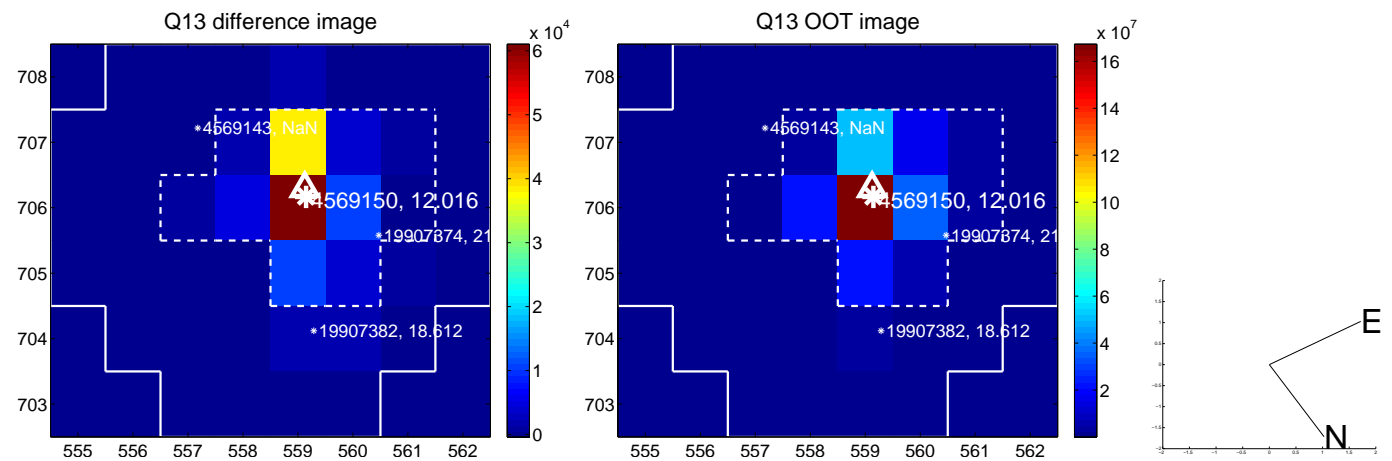
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



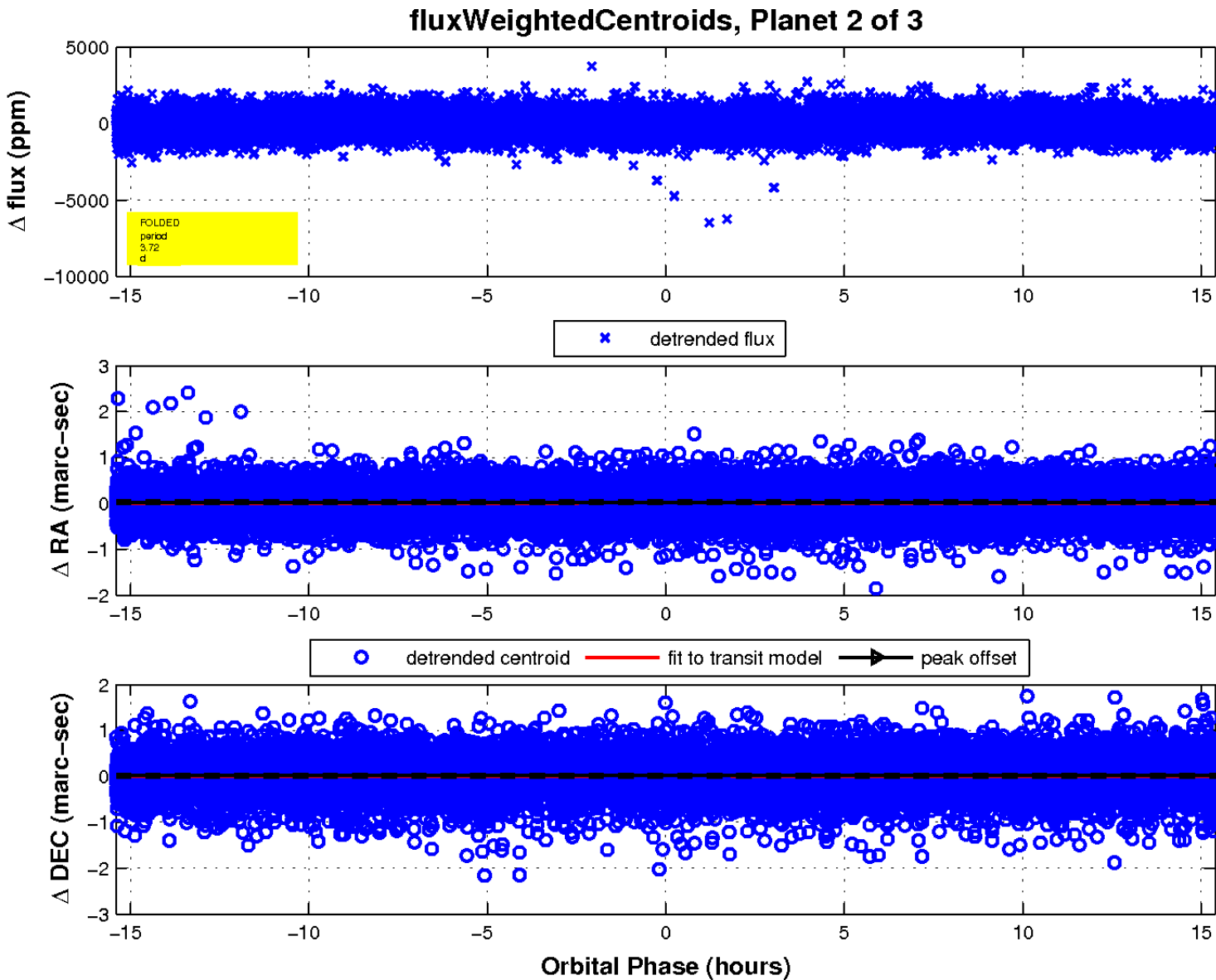
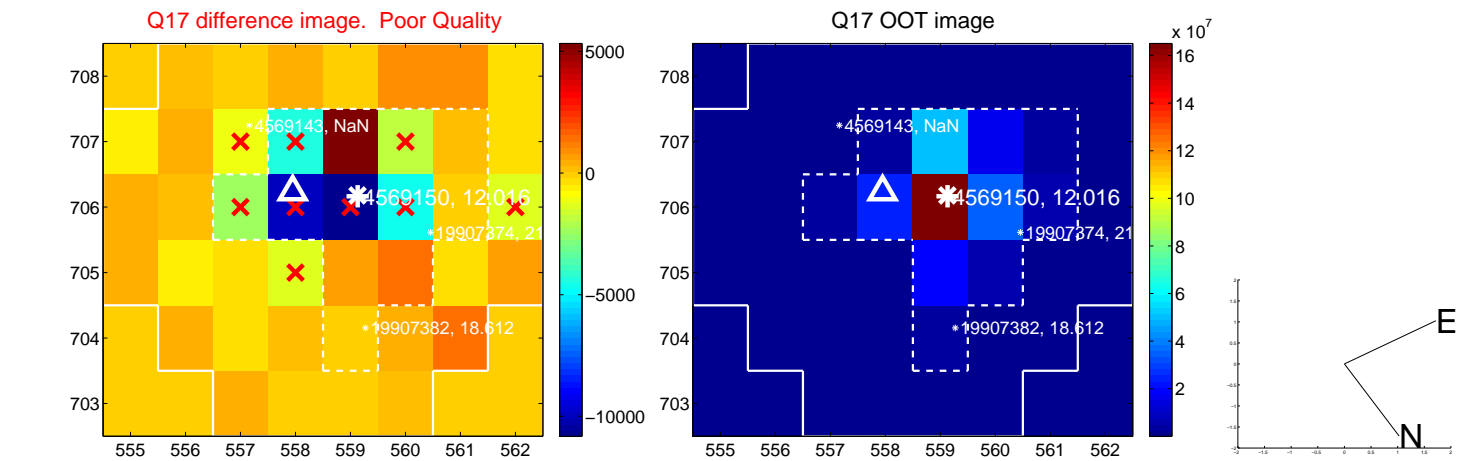
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

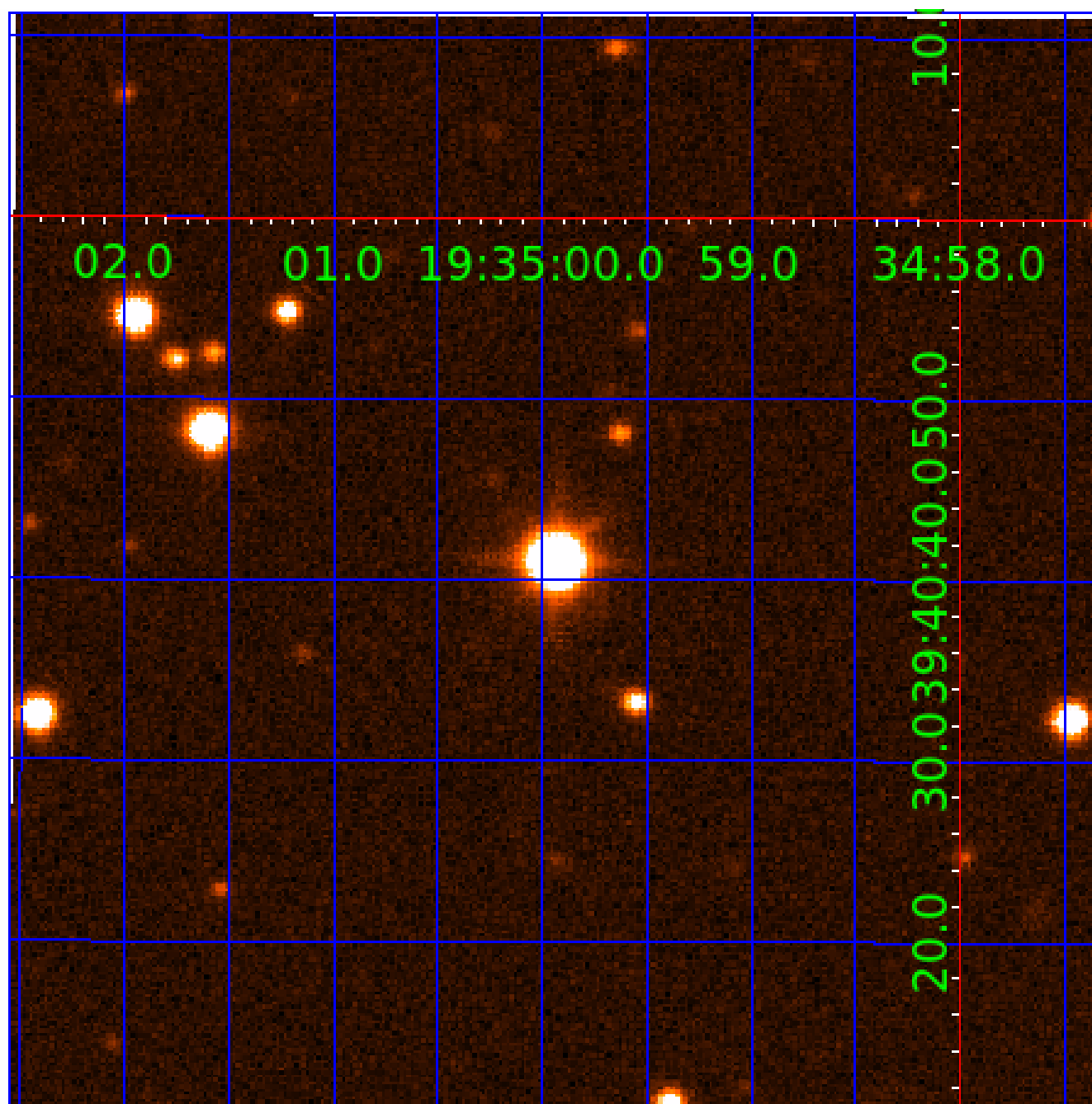


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 004569150

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})
004569150-01	OBS	No	2.233777	132.738010	114.9	8.589	9.8	9.6	3.75	7693	5.42	24964.47
004569150-02	OBS	No	3.723979	133.414133	154.4	5.133	8.7	8.4	3.75	7693	5.18	12628.90
004569150-03	OBS	No	143.442467	173.816325	916.6	2.060	7.2	5.5	3.75	7693	13.53	97.08

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004569150-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004569150-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004569150-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

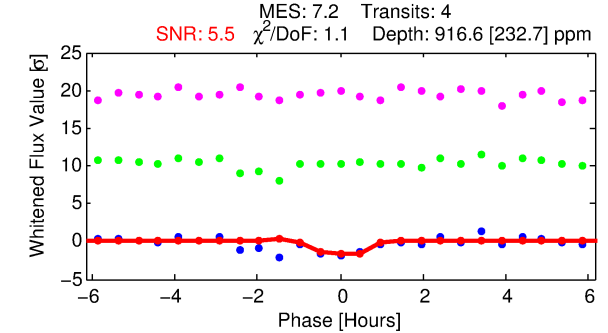
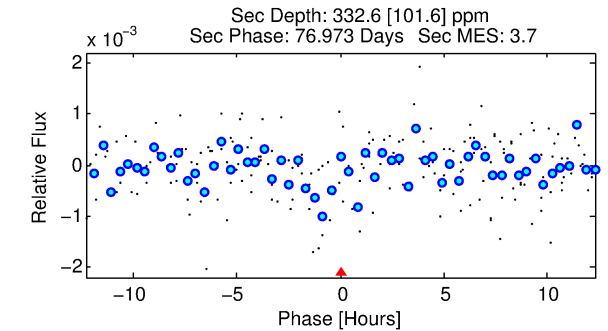
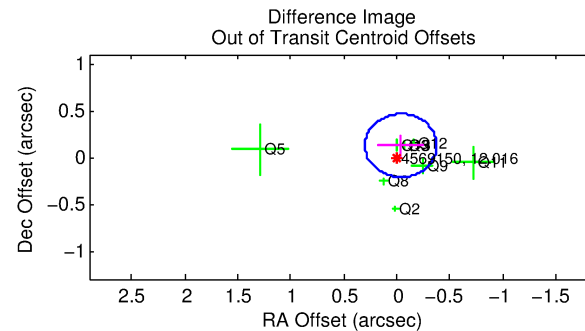
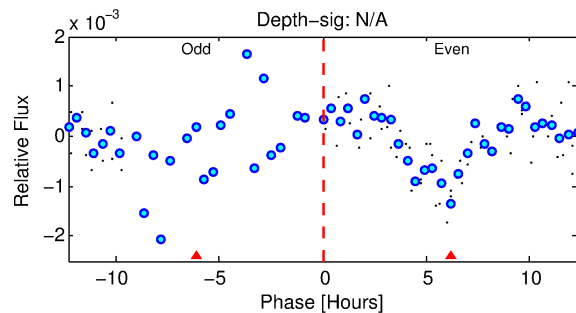
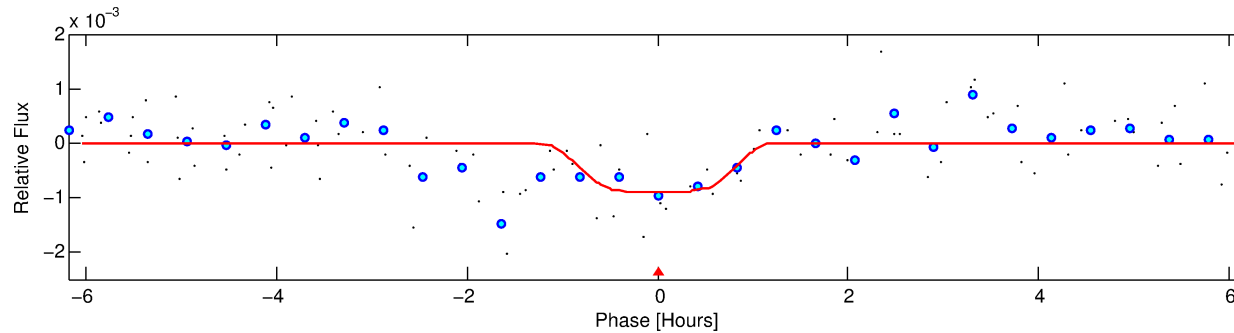
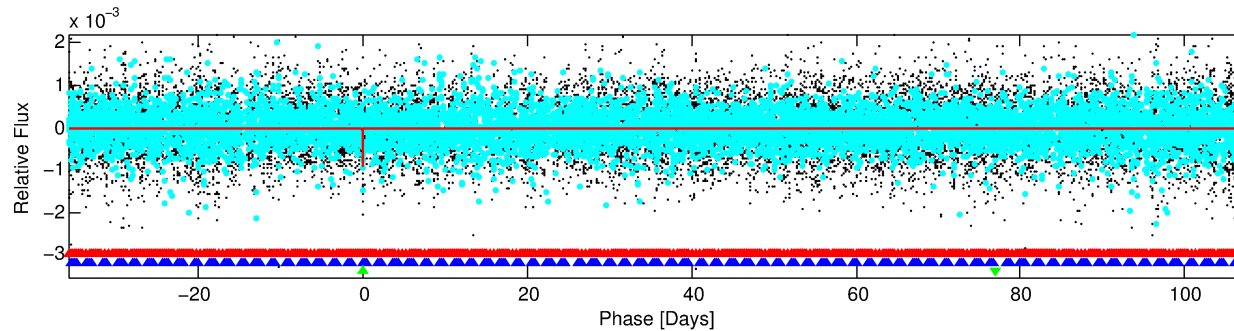
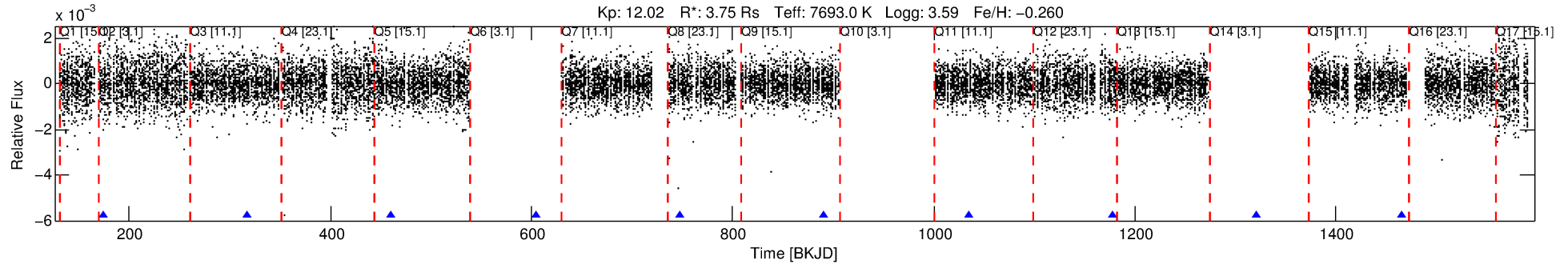
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004569150-03

No Significant Match Found

DV One-Page Summary

KIC: 4569150 Candidate: 3 of 3 Period: 143.442 d



DV Fit Results:

Period = 143.44247 [0.00163] d
Epoch = 173.8163 [0.0096] BKJD
Rp/R* = 0.0331 [0.0155]
a/R* = 255.53 [566.01]
b = 0.91 [0.41]
Seff = 97.08 [87.45]
Teq = 800 [180] K
Rp = 13.53 [9.67] Re
a = 0.6744 [0.3651] AU
Ag = 454.36 [601.52] [0.75σ]
Teffp = 5713 [1426] K [3.42σ]

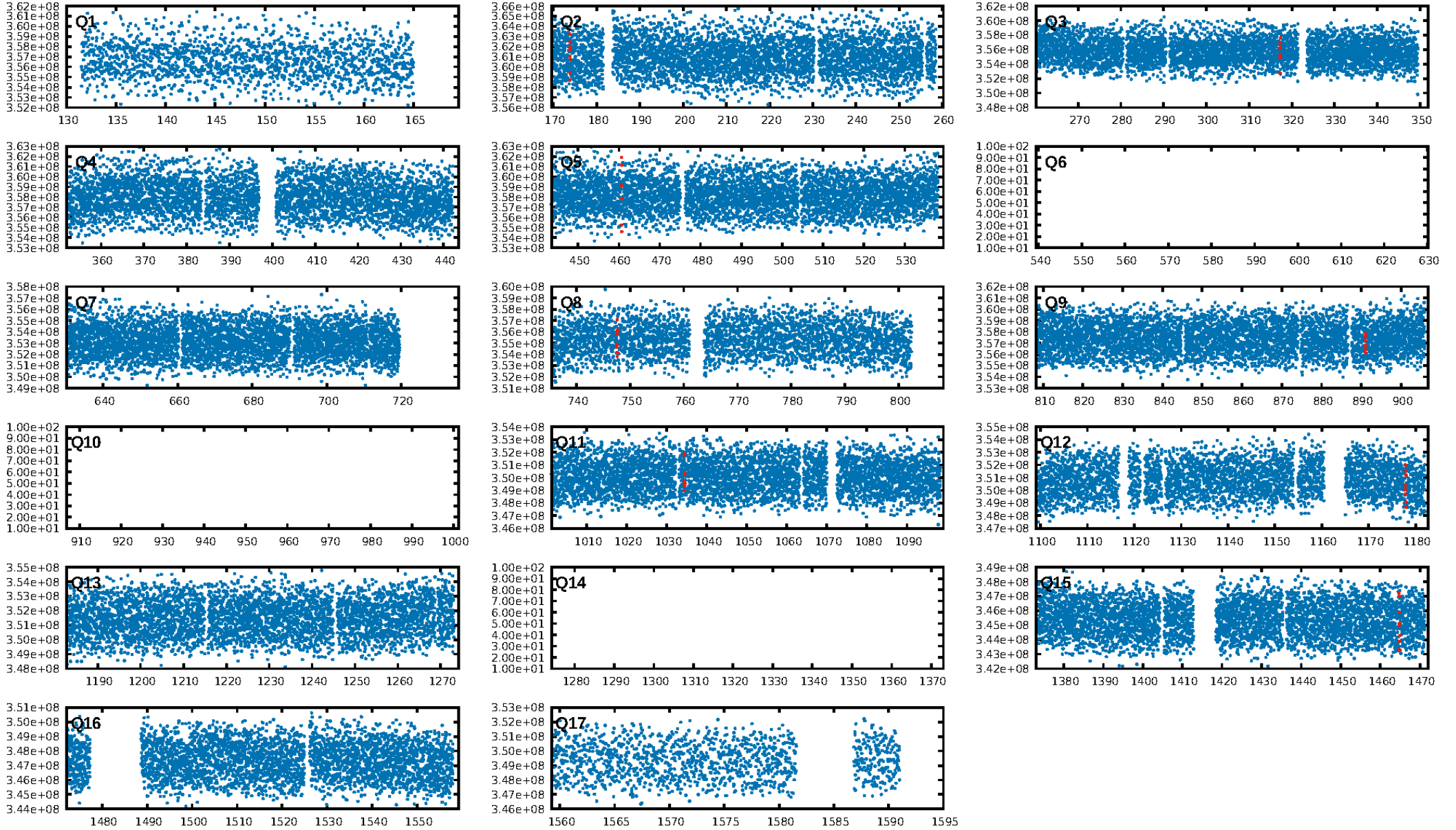
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [606.24σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 23.6%
ModelChiSquareGof-sig: 93.1%
Bootstrap-pfa: 2.05e-09
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -6.627
Centroid-sig: 23.9%
Centroid-so: 0.203 arcsec [0.94σ]
OotOffset-rm: 0.131 arcsec [1.17σ]
OotOffset-st: 1/3/2/2 [8]
KicOffset-rm: 0.200 arcsec [1.63σ]
KicOffset-st: 1/3/2/2 [8]
DiffImageQuality-fgm: 0.38 [3/8]
DiffImageOverlap-fno: 0.50 [4/8]

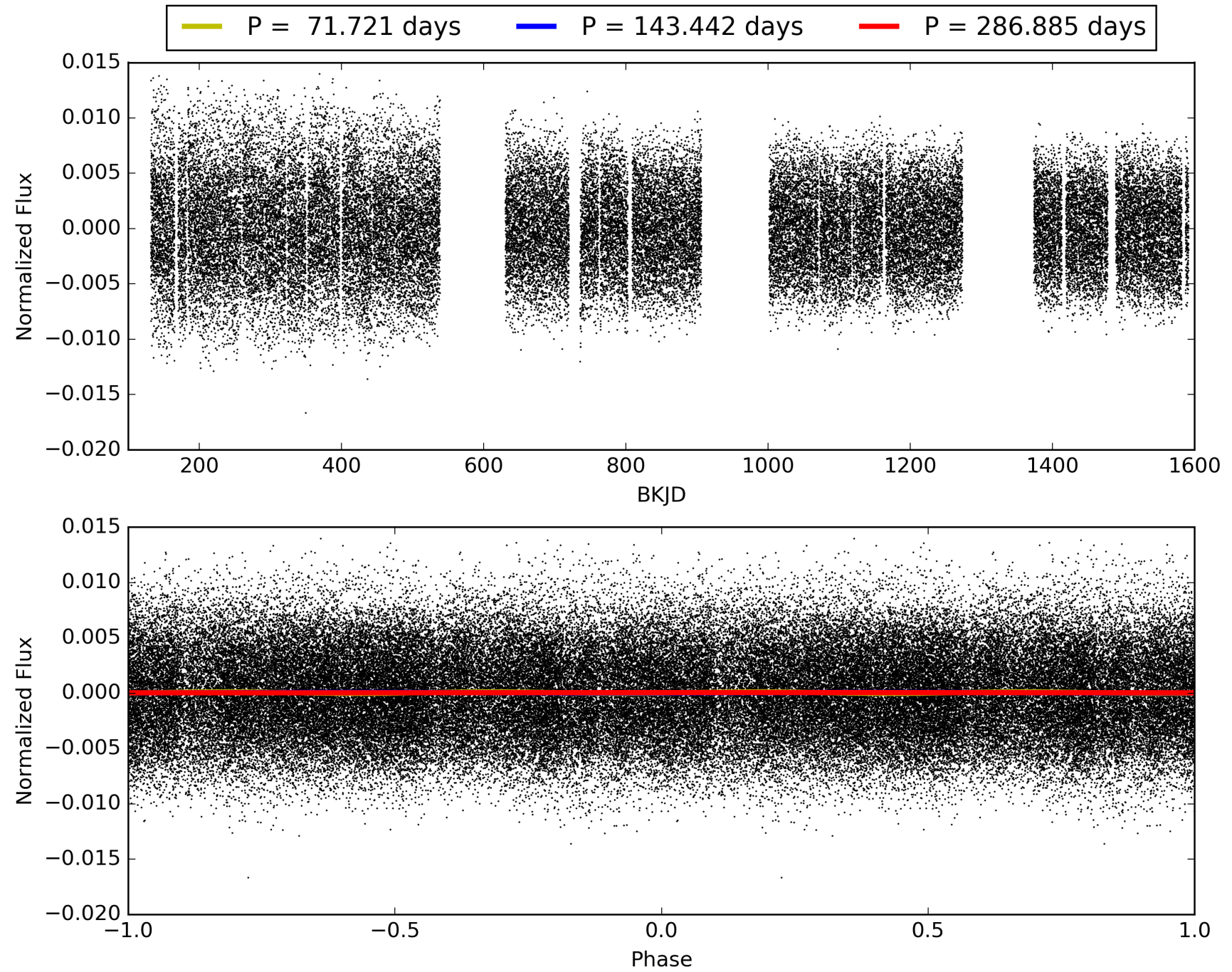
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:36:11 Z

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

TCE 004569150-03, PDC Light Curves

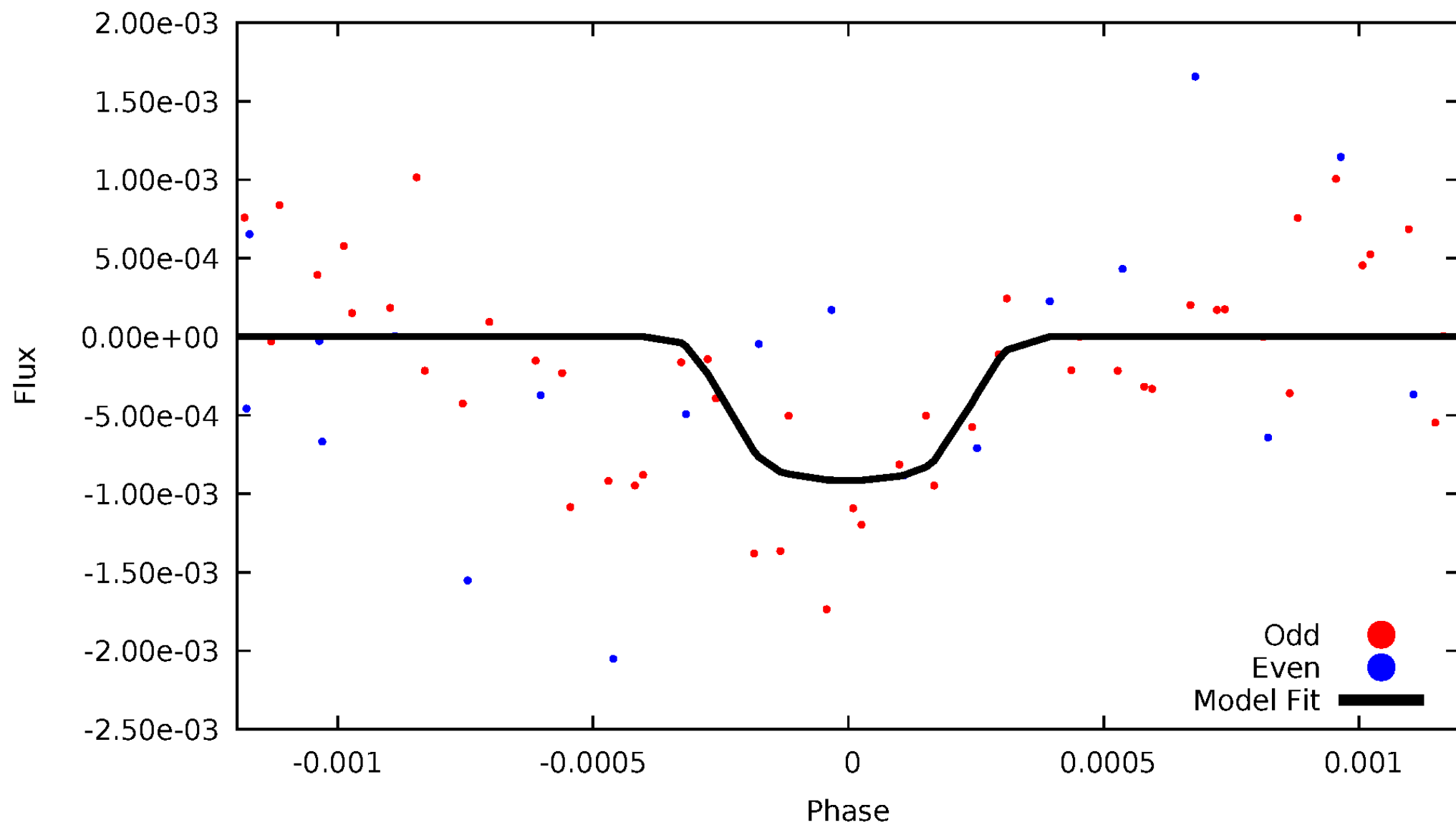


TCE 004569150-03



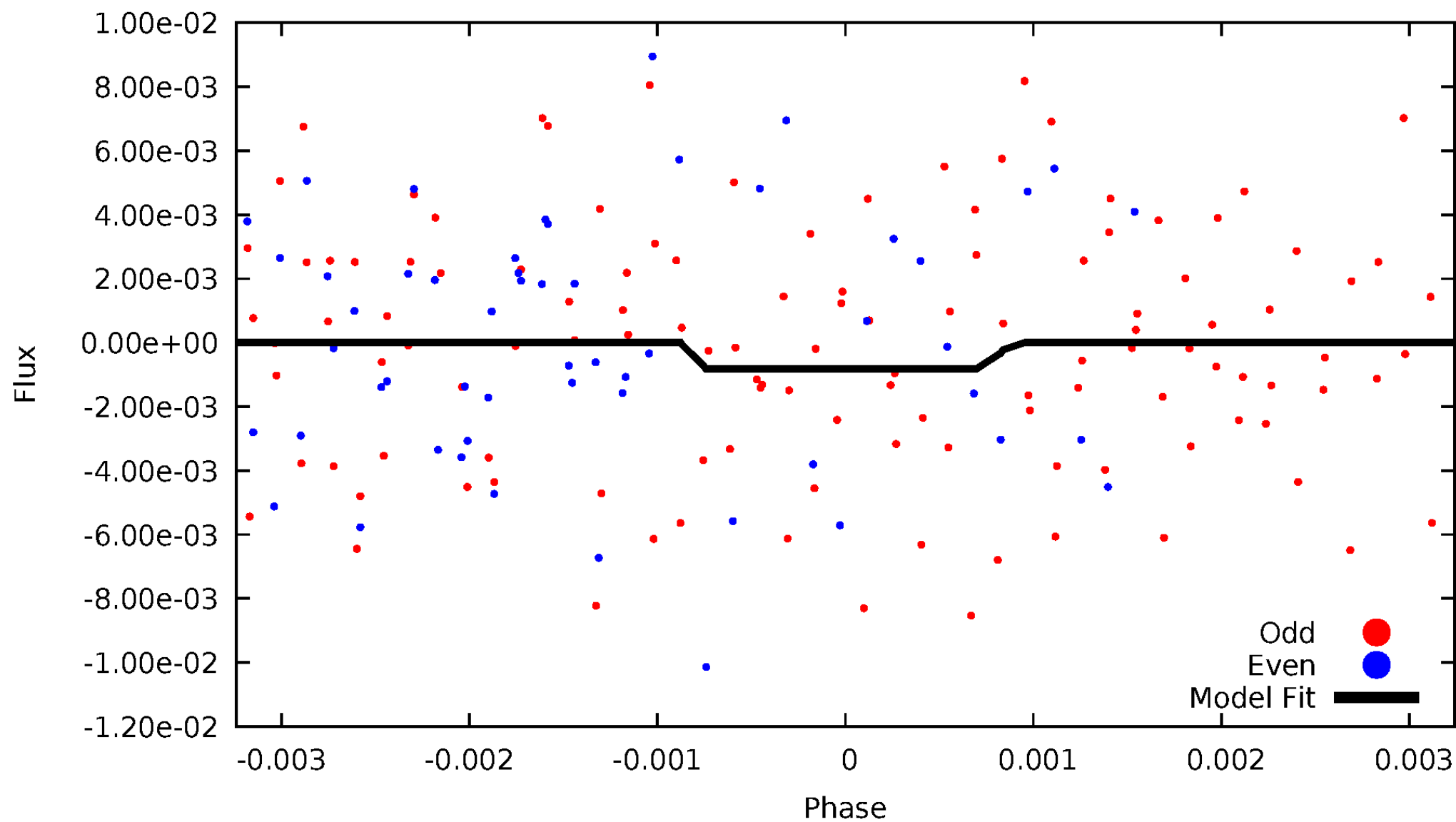
DV Odd/Even

TCE 004569150-03



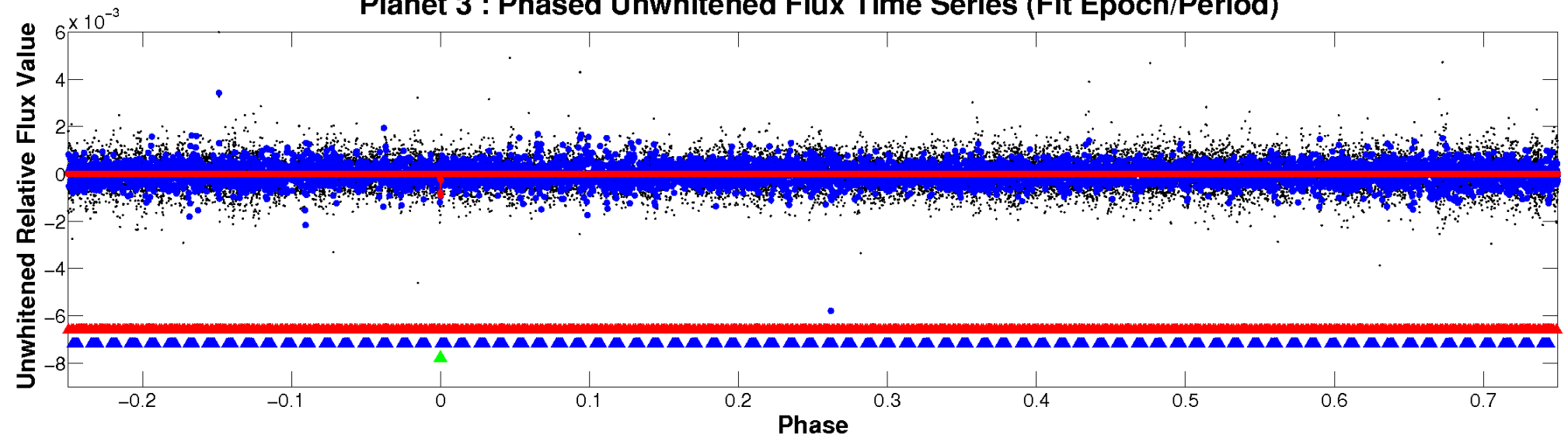
ALT Odd/Even

TCE 004569150-03

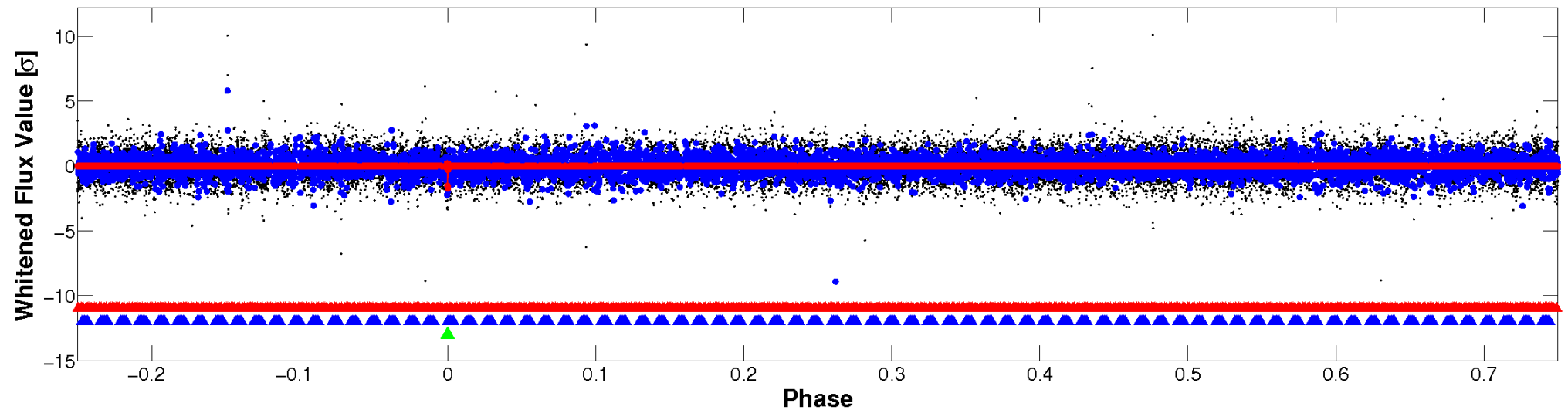


Non-Whitened Vs. Whitened Light Curve

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

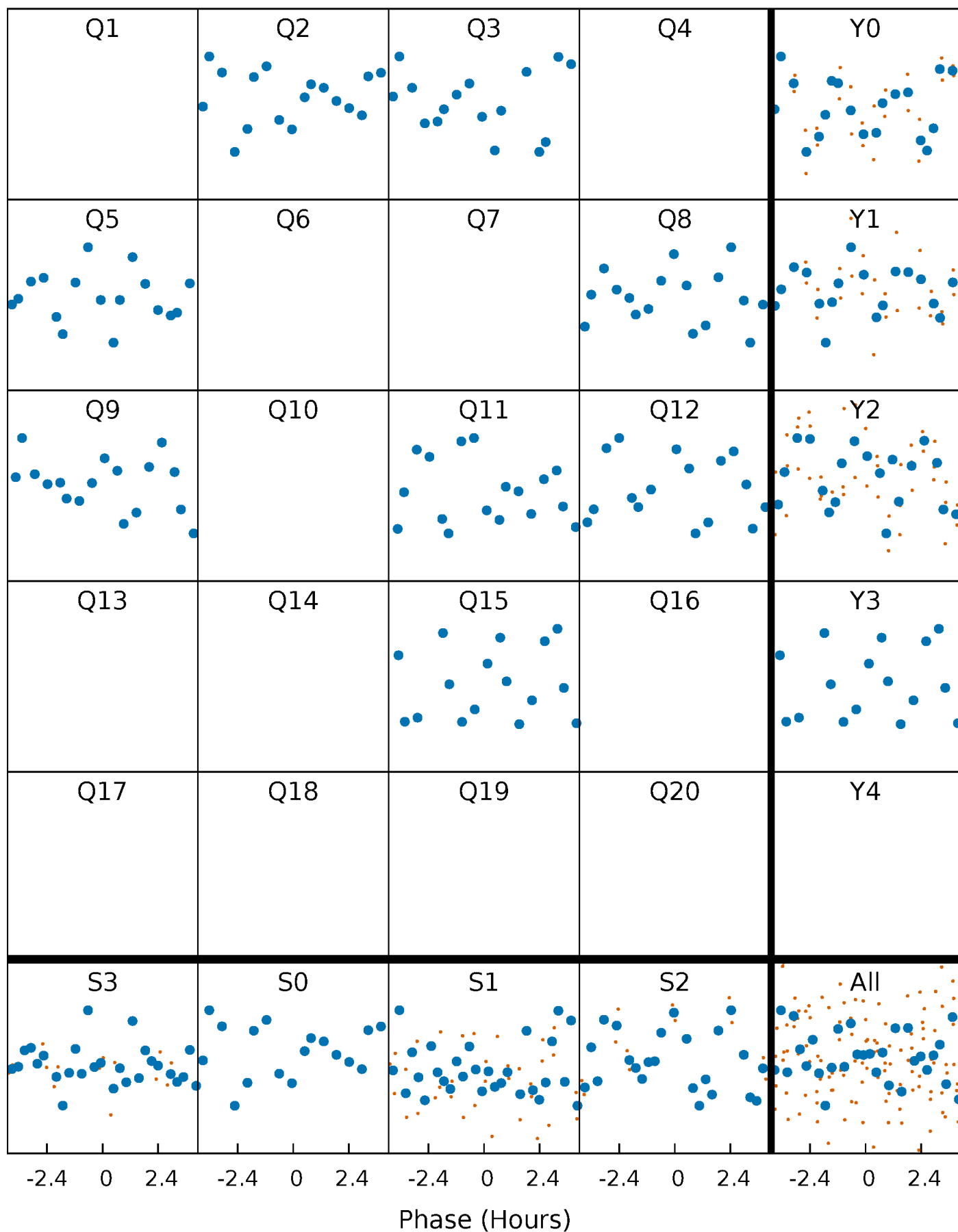


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



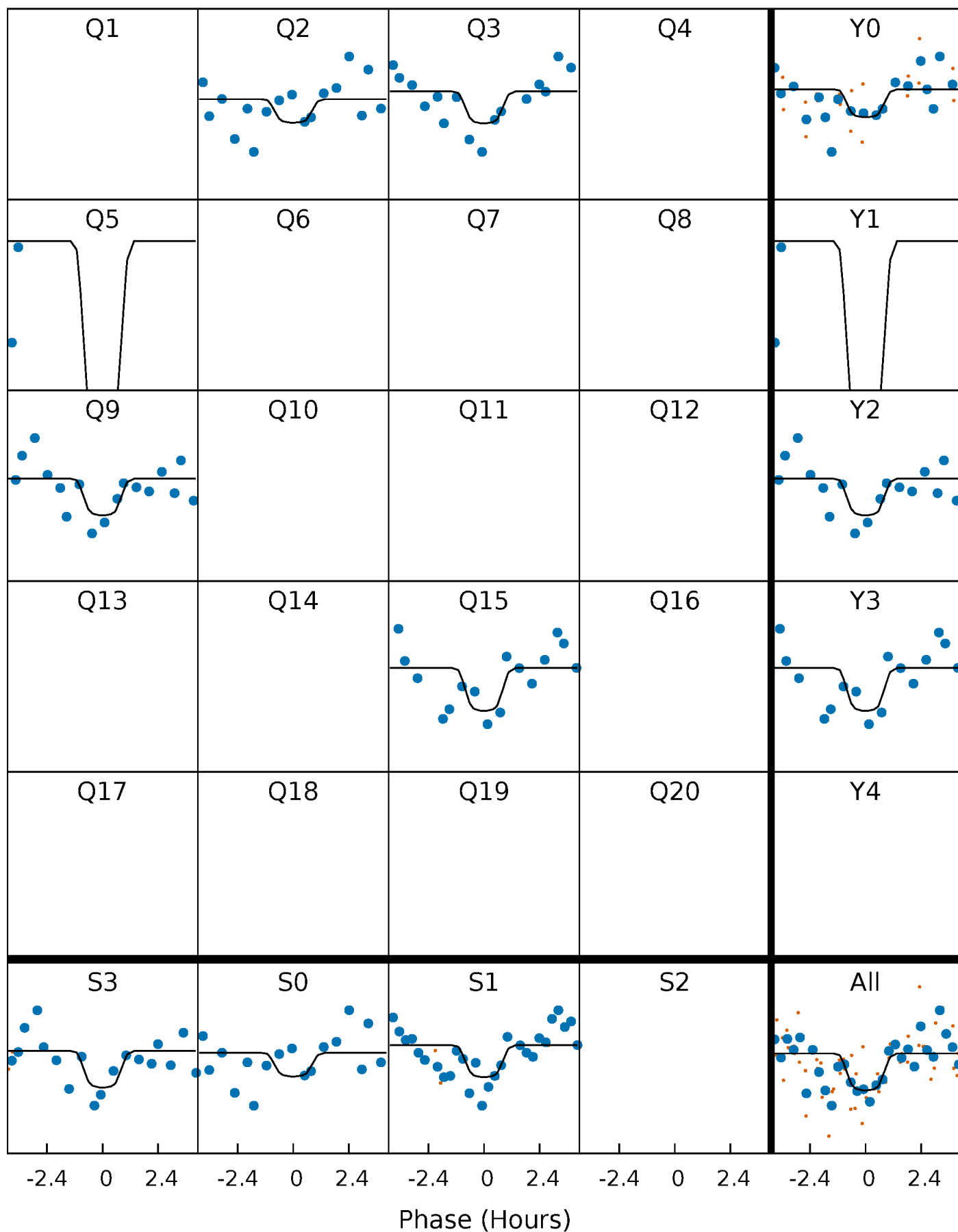
PDC Quarter-Phased Transit Curves

TCE 004569150-03 P=143.442467 Days $T_0=173.816325$ (BKJD)



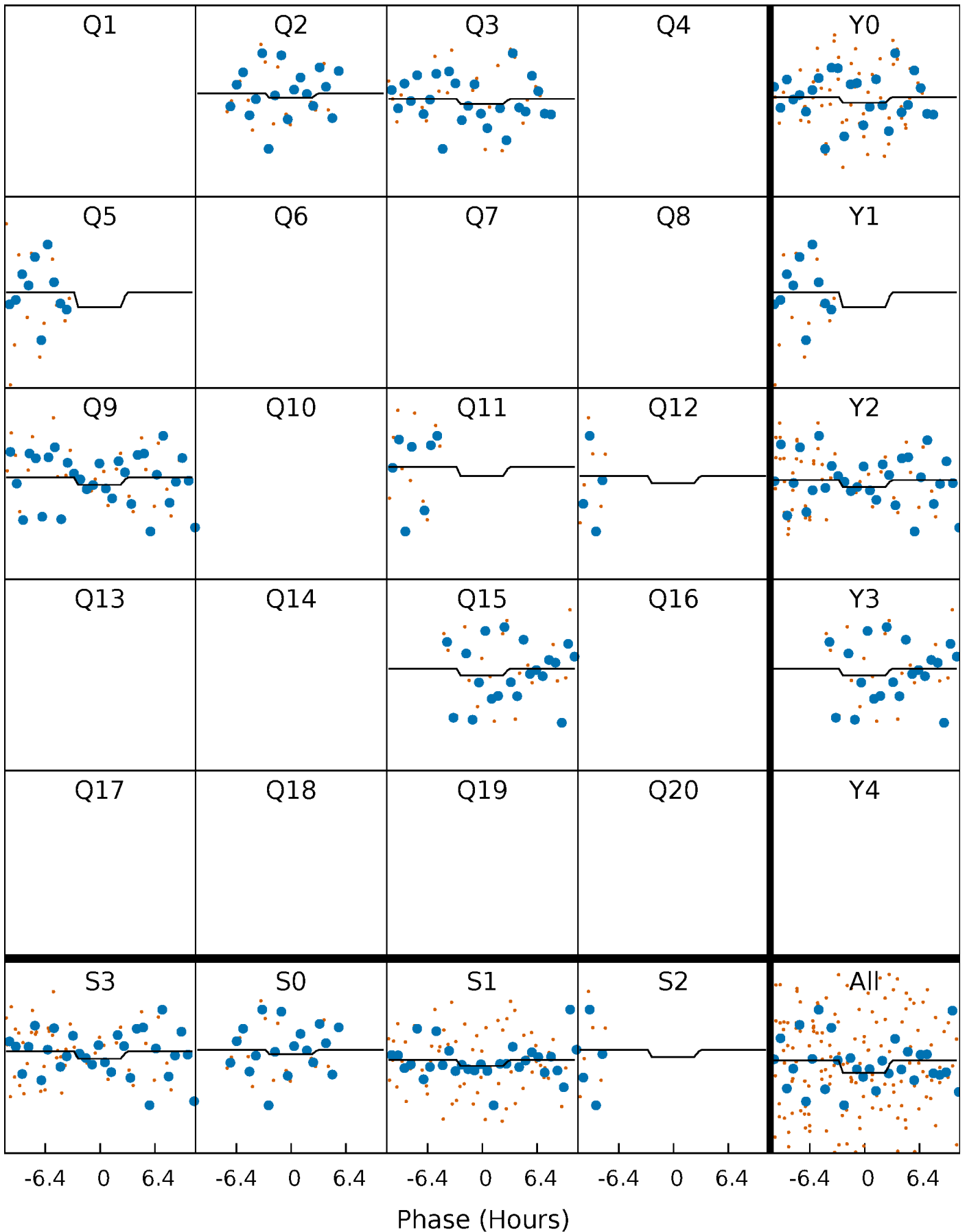
DV Quarter-Phased Transit Curves

TCE 004569150-03 P=143.442467 Days $T_0=173.816325$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

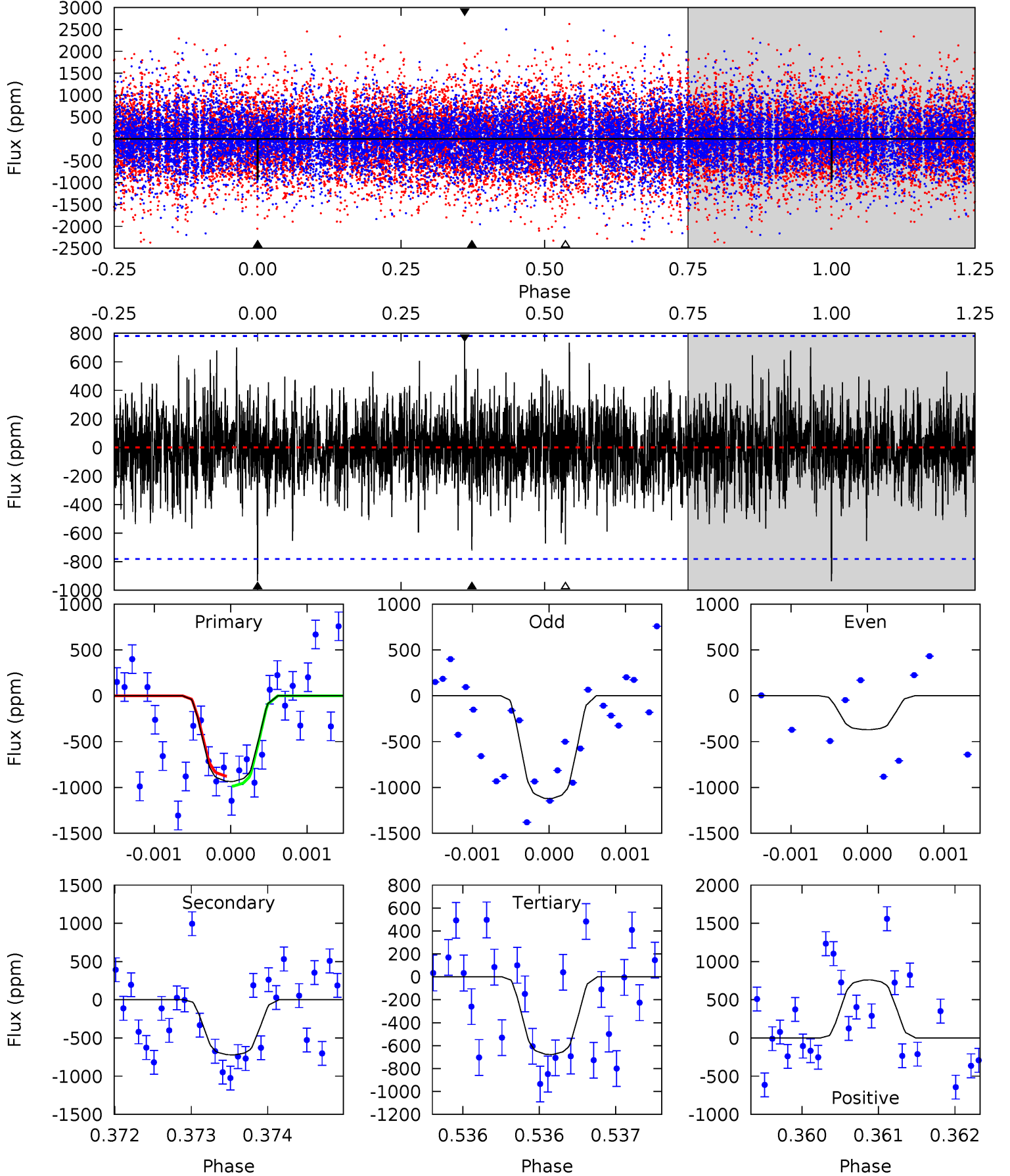
TCE 004569150-03 P=143.443298 Days $T_0=173.815749$ (BKJD)



DV Model-Shift Uniqueness Test

004569150-03, $P = 143.442467$ Days, $E = 30.373858$ Days

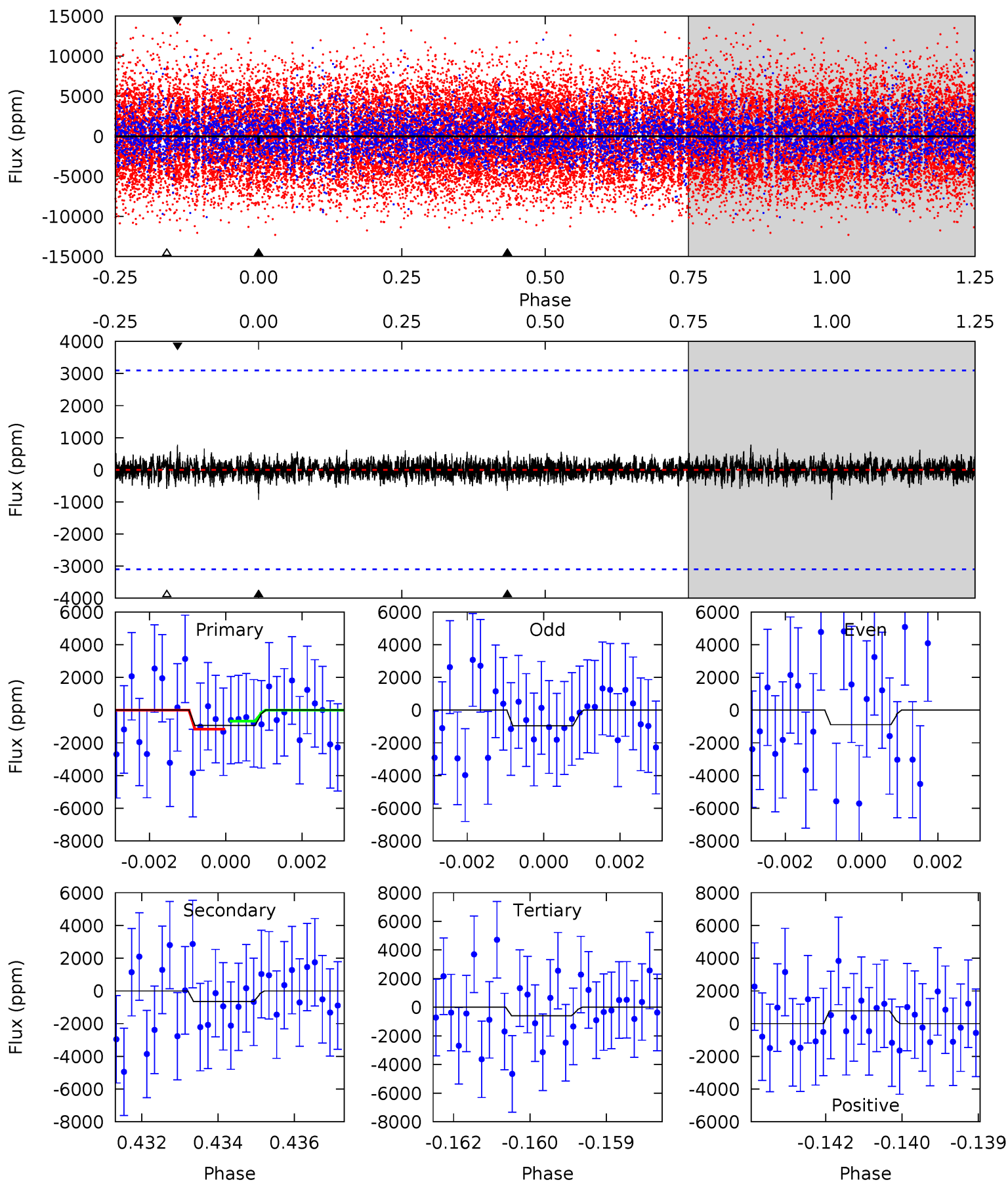
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.63	5.11	4.80	5.39	5.53	3.42	1.28	1.83	1.24	0.31	-0.28	2.34	0.95	0.45	0.38



Alt Model-Shift Uniqueness Test

004569150-03, P = 143.443298 Days, E = 30.372451 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.61	1.12	1.01	1.34	5.34	3.12	0.29	0.60	0.27	0.11	-0.22	0.05	1.30	0.45	0.42



Stellar Parameters For KIC 004569150

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7693^{+212}_{-319}	$3.588^{+0.527}_{-0.062}$	$-0.260^{+0.250}_{-0.300}$	$3.751^{+0.506}_{-2.025}$	$1.987^{+0.125}_{-0.561}$	$0.053^{+0.372}_{-0.011}$
	+3%/-4%	+15%/-2%	+96%/-115%	+13%/-54%	+6%/-28%	+701%/-20%
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 004569150-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-722 ± 141	$11.30^{+7.17}_{-5.49}$	1062^{+82}_{-143}	6806^{+3022}_{-1326}	1307^{+3743}_{-791}
Alt.	-652 ± 580	$10.28^{+6.43}_{-5.20}$	1070^{+79}_{-155}	6715^{+3883}_{-2956}	1230^{+4951}_{-1156}

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

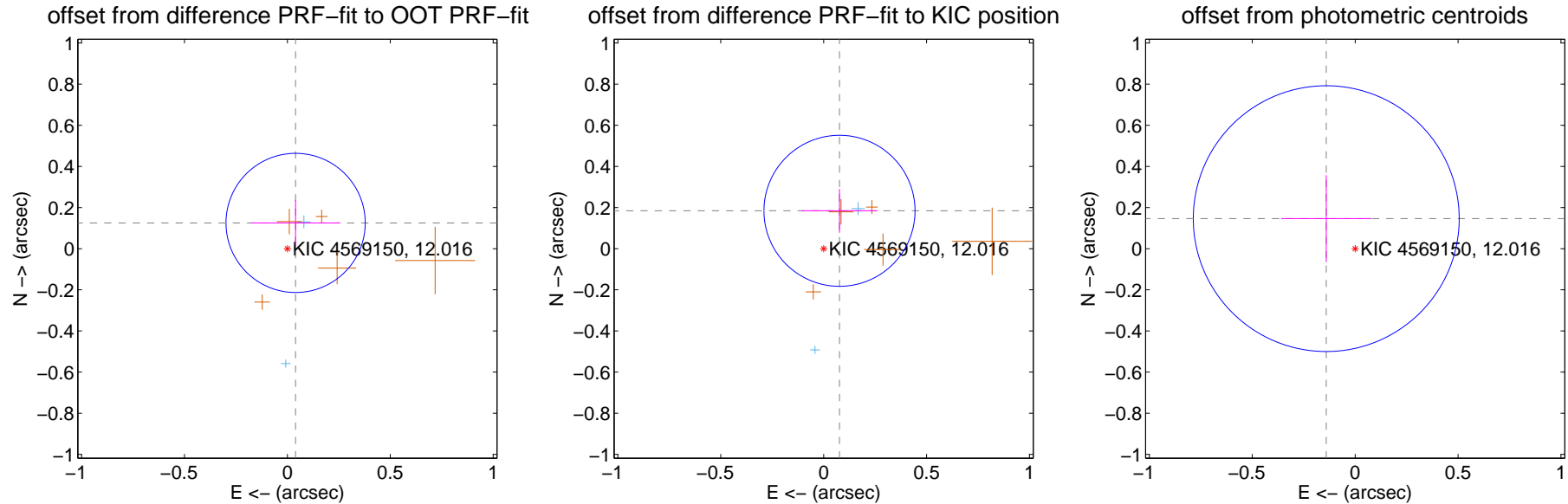
DV Centroid Data

Supplemental centroid analysis for 004569150-03. Kepler magnitude: 12.02. Transit SNR 5.54

There are 3 quarters with good PRF difference image offsets

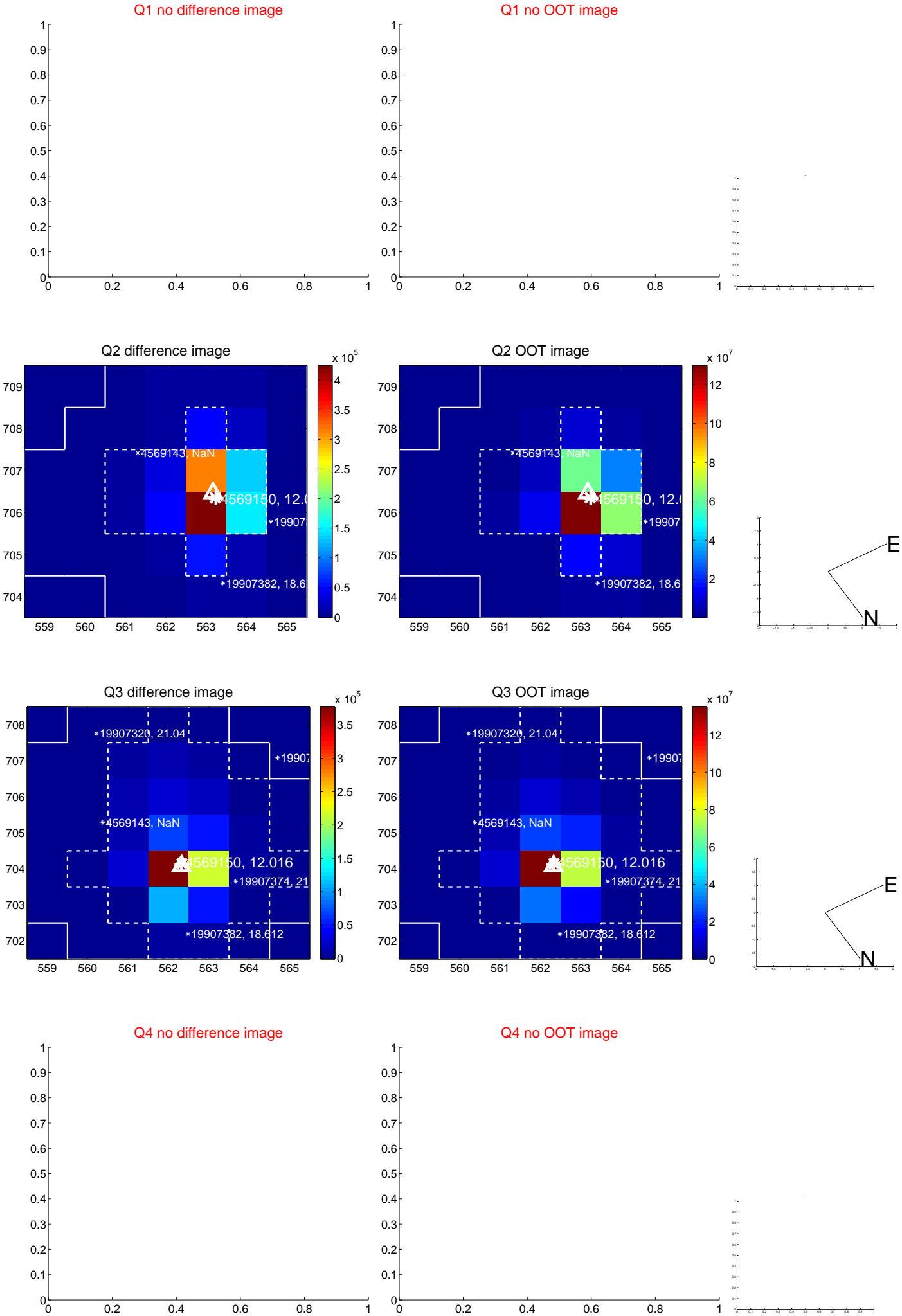
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.131 ± 0.113	1.17	-0.040 ± 0.217	0.125 ± 0.112
PRF-fit source offset from KIC position	0.200 ± 0.122	1.63	-0.077 ± 0.185	0.184 ± 0.107
photometric centroid source offset	0.20 ± 0.22	0.94	0.14 ± 0.22	0.15 ± 0.21

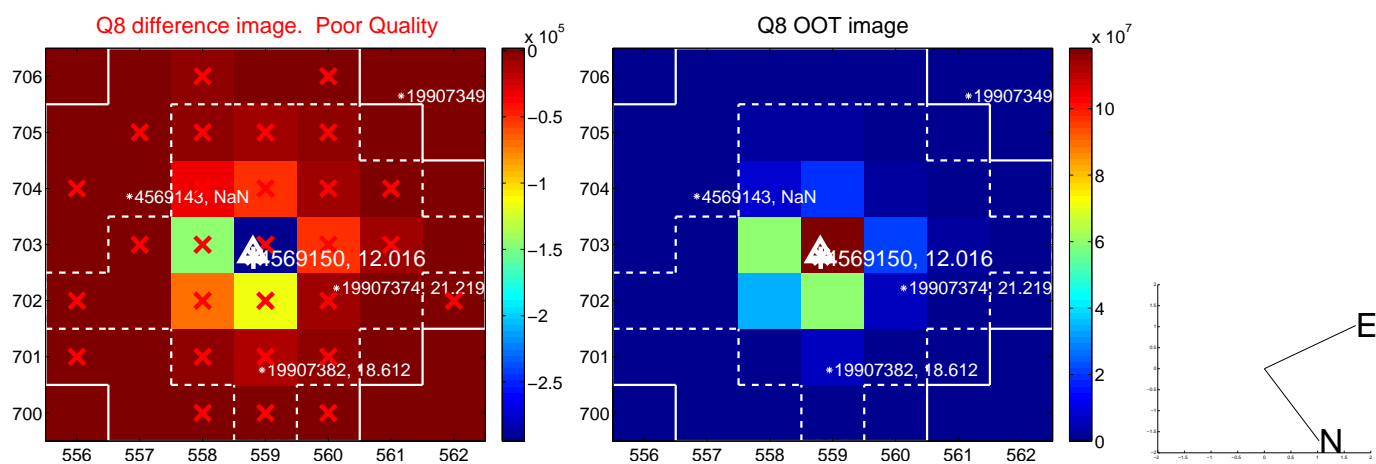
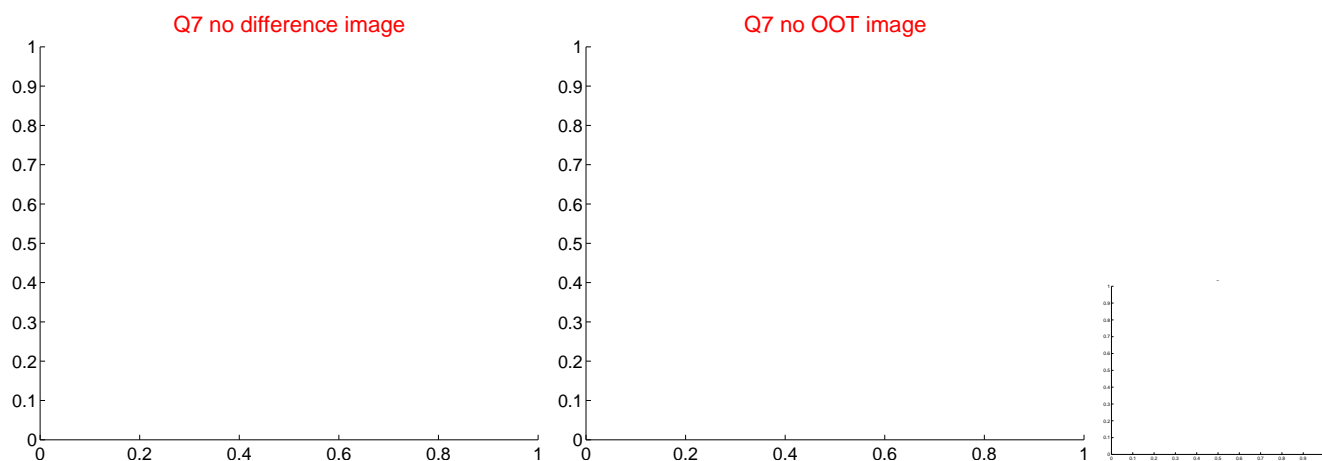
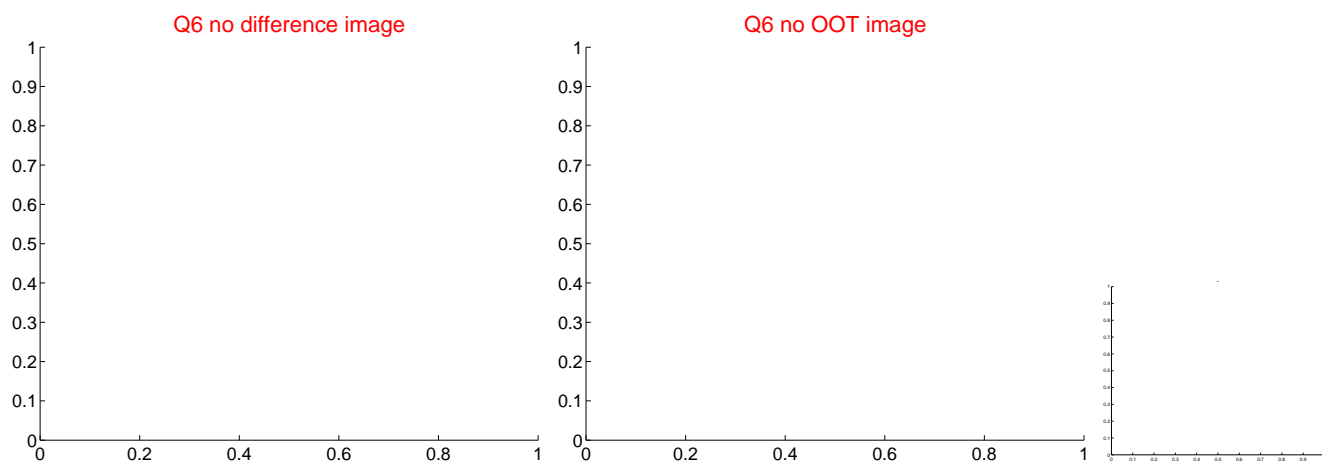
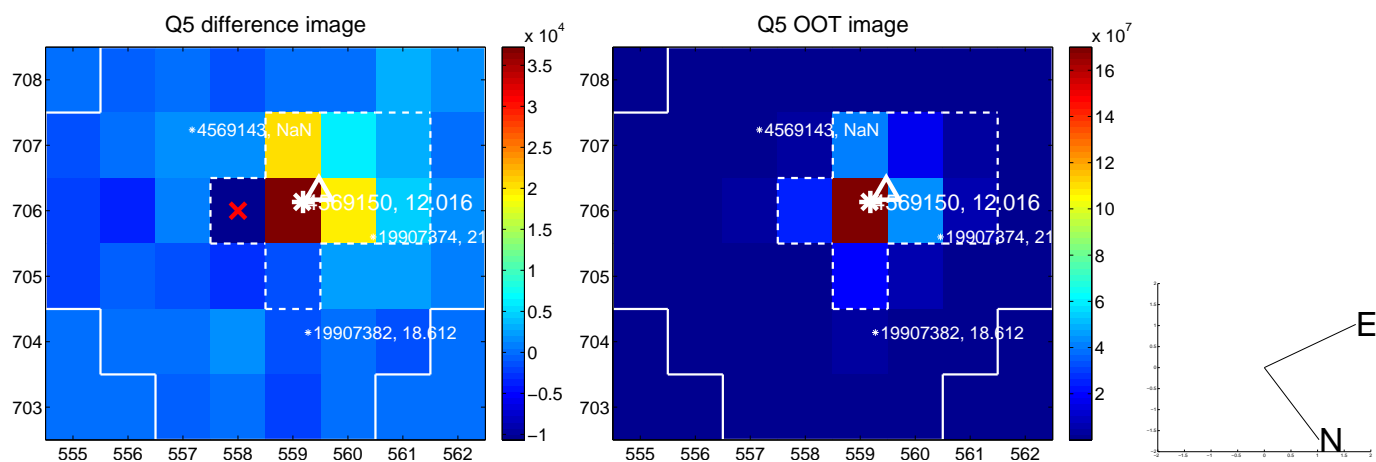


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

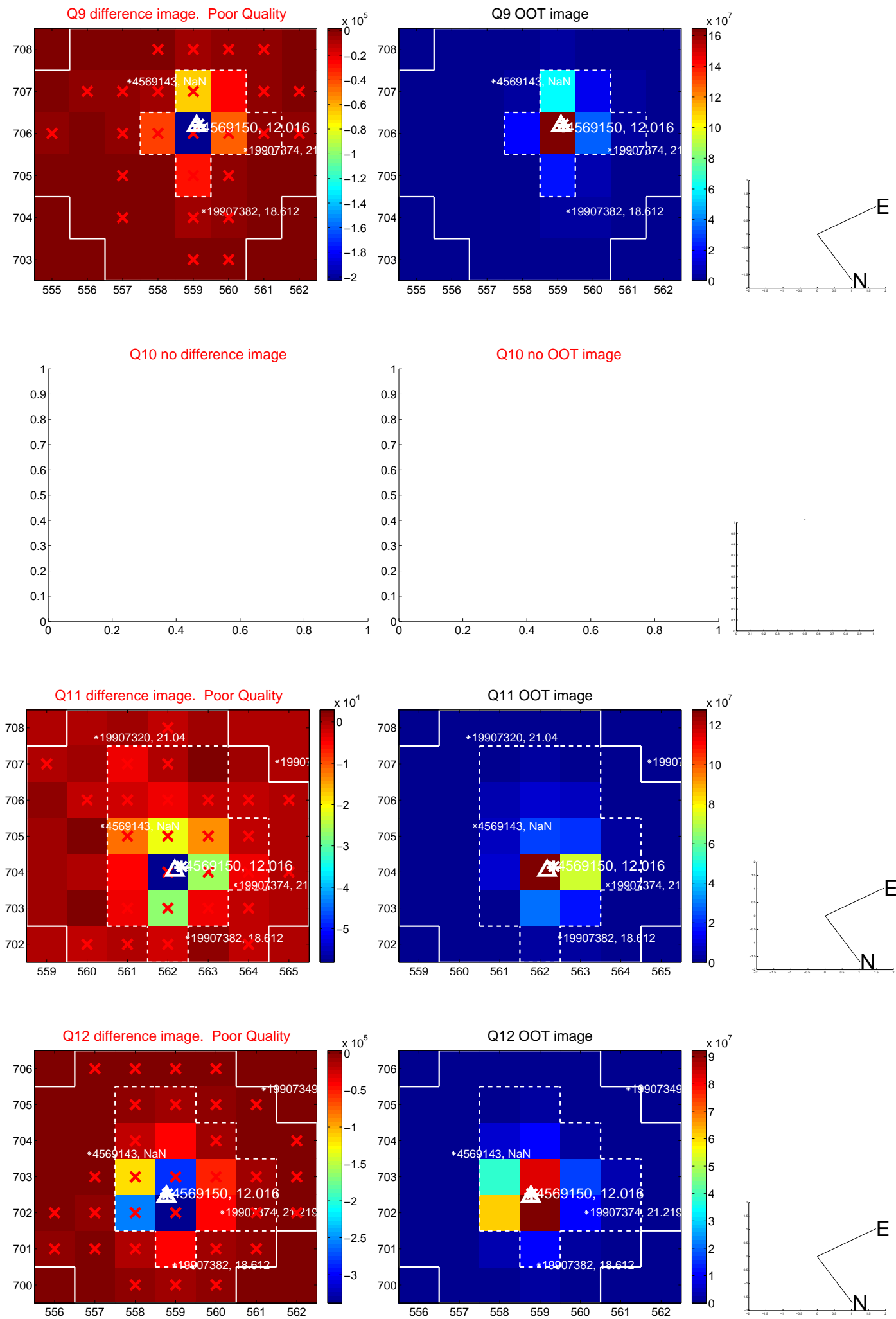
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



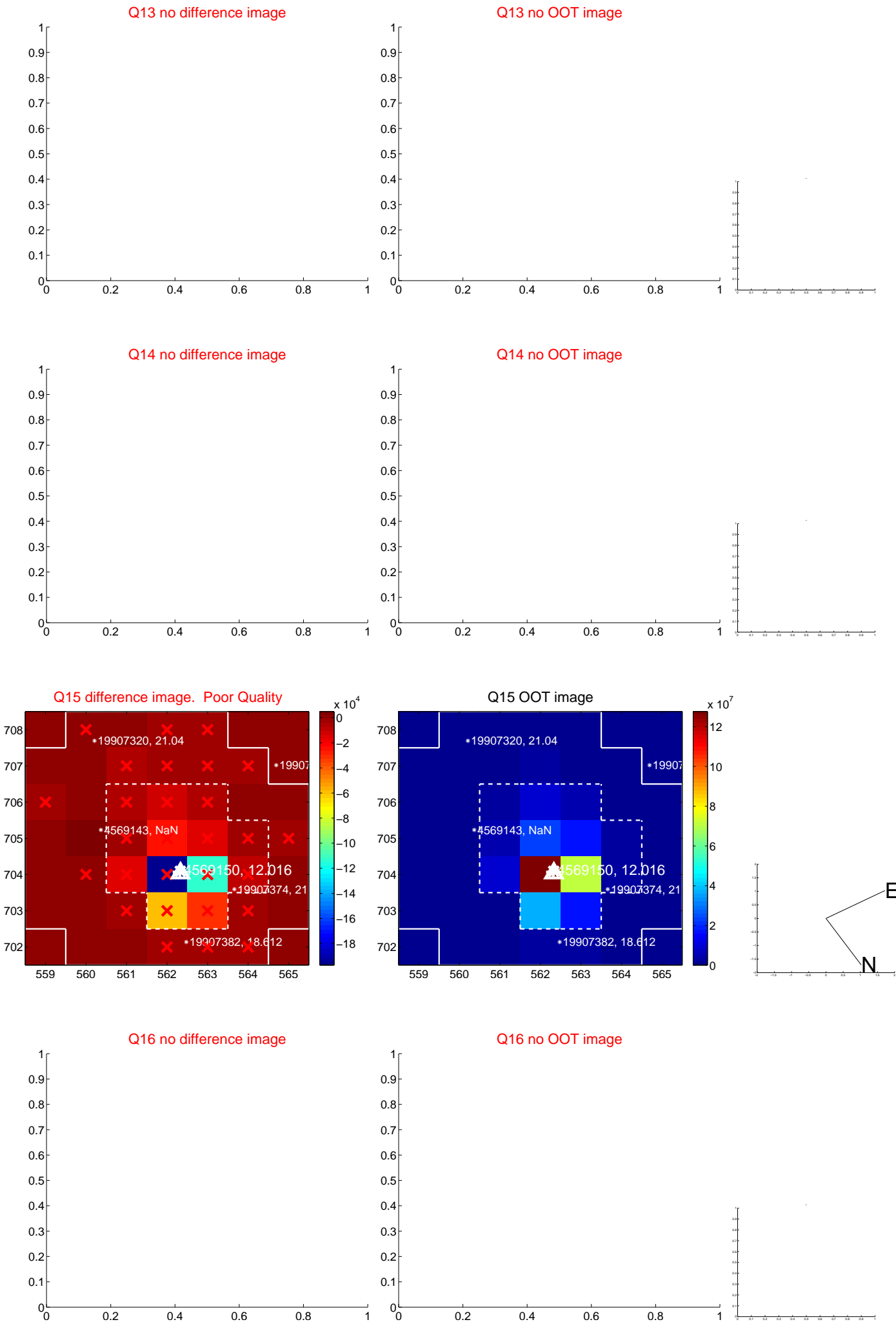
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



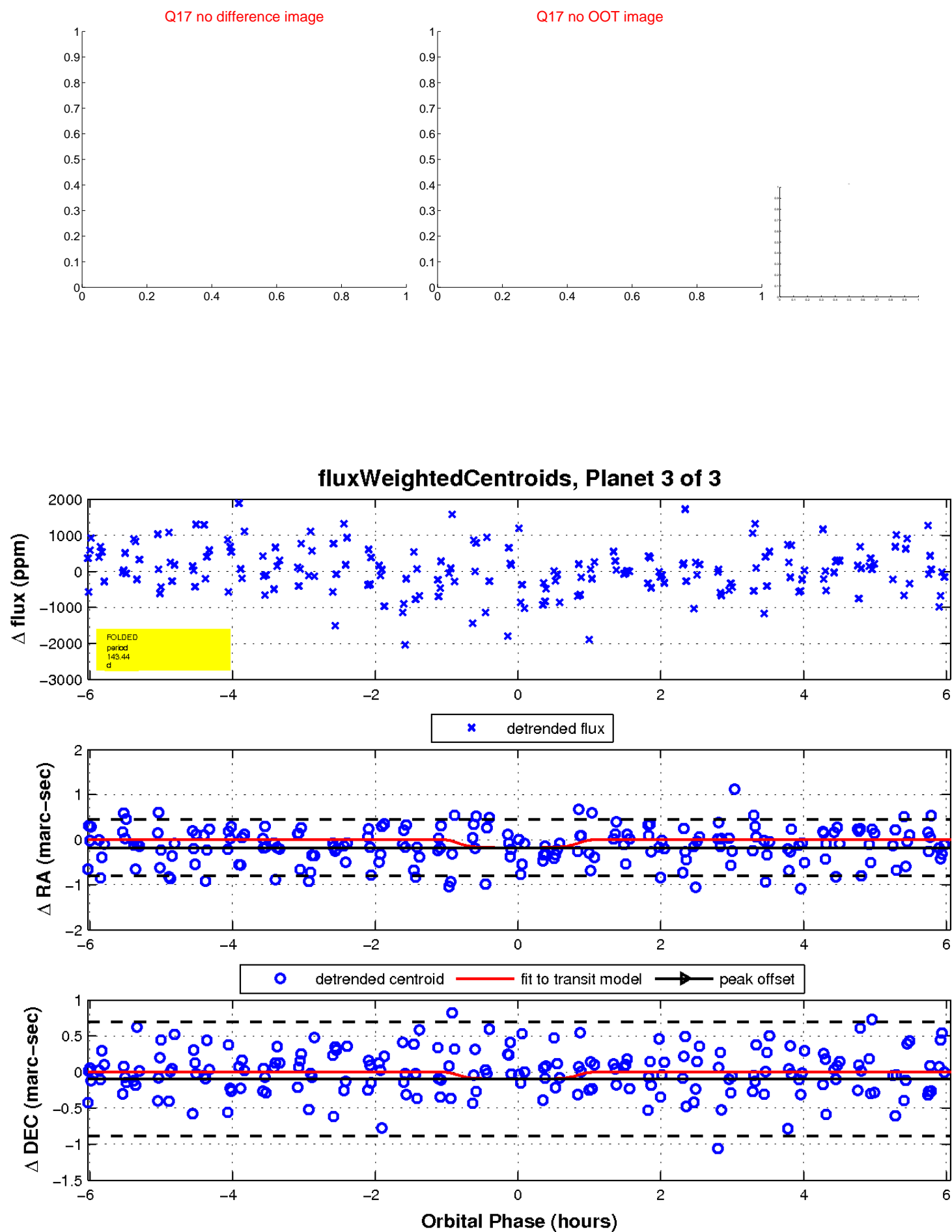
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

