

KIC 005739251

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})
005739251-01	OBS	No	0.868952	132.321739	97.9	4.928	12.8	11.5	0.61	3963	0.58	360.99
005739251-02	OBS	No	383.240200	146.574993	3136.4	7.899	12.6	8.4	0.61	3963	3.63	0.11
005739251-03	OBS	No	153.727393	191.466115	1636.0	5.316	10.7	6.8	0.61	3963	2.38	0.36
005739251-05	OBS	No	187.430989	136.366580	2283.0	4.361	8.9	7.1	0.61	3963	3.01	0.28
005739251-06	OBS	No	579.707049	332.511898	3640.5	7.902	10.5	9.4	0.61	3963	3.93	0.06
005739251-07	OBS	No	52.503293	176.046621	997.2	2.000	8.7	-1.0	0.61	3963	1.87	1.52
005739251-08	OBS	No	86.182052	146.239333	997.8	4.648	8.1	5.3	0.61	3963	2.03	0.79
005739251-09	OBS	No	178.650615	149.550422	369.1	9.000	8.8	-1.0	0.61	3963	1.13	0.30

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005739251-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_KIC_POS
005739251-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT— INCONSISTENT_TRANS—CENT_FEW_DIFFS
005739251-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_TER_ALT—INCONSISTENT_TRANS
005739251-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005739251-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT— INCONSISTENT_TRANS—CENT_FEW_DIFFS
005739251-07	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
005739251-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_TRACKER—TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT— MOD_POS_ALT—CENT_KIC_POS
005739251-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—ALL_TRANS_CHASES—CENT_NOFITS

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

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

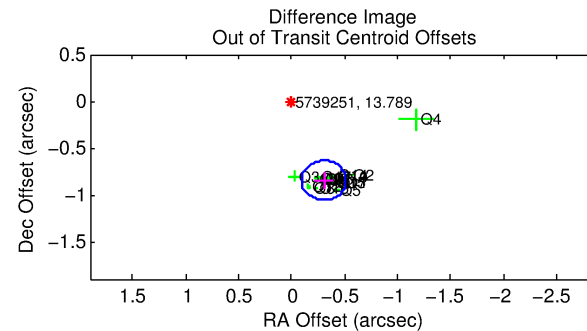
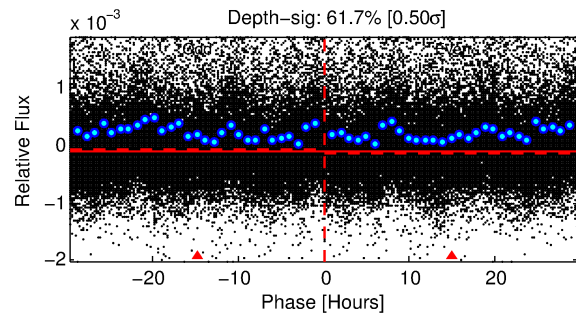
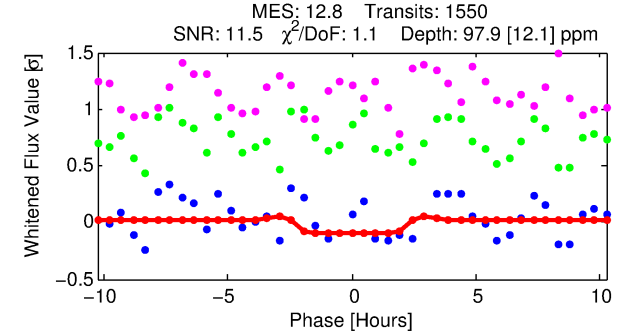
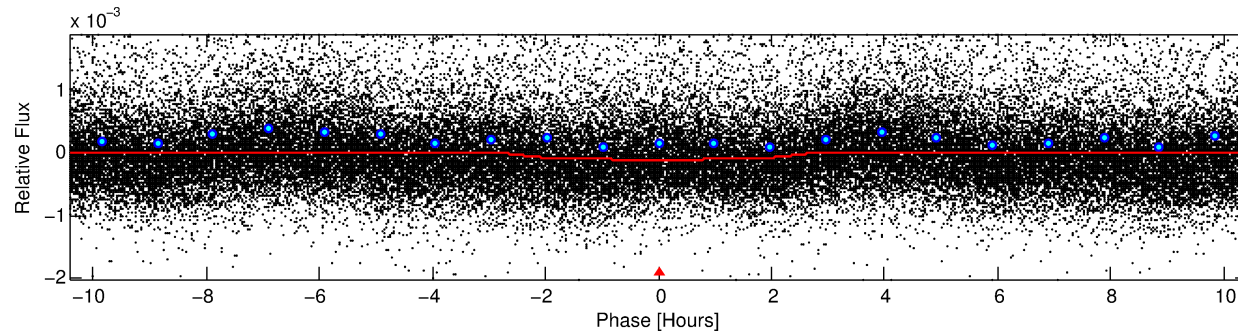
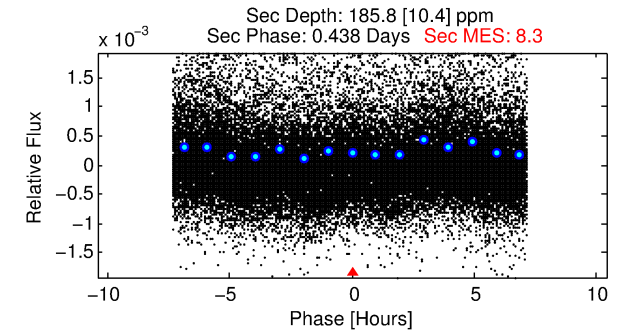
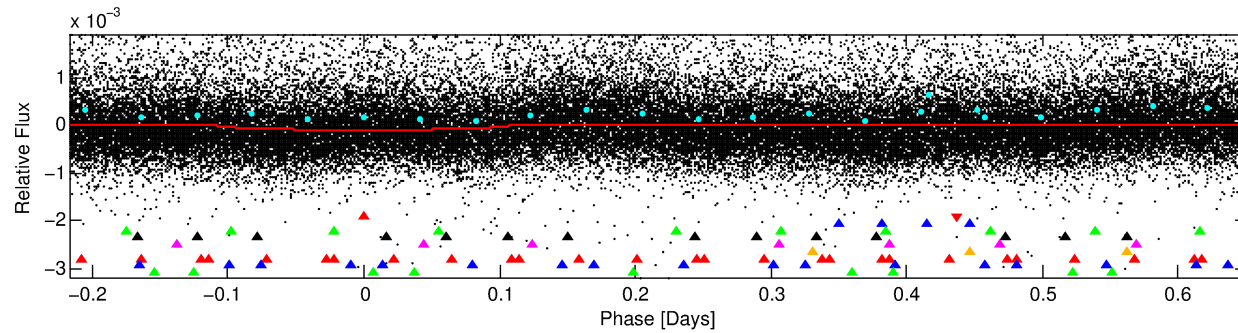
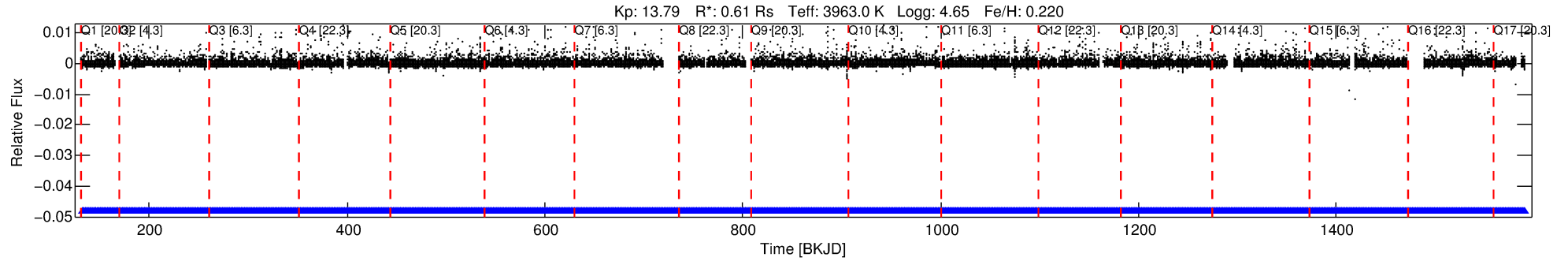
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005739251-01

No Significant Match Found

DV One-Page Summary

KIC: 5739251 Candidate: 1 of 9 Period: 0.869 d



DV Fit Results:

Period = 0.86895 [0.00001] d
Epoch = 132.3217 [0.0030] BKJD
Rp/R* = 0.0087 [0.0047]
a/R* = 1.49 [1.44]
b = 0.00 [620.04]
Seff = 360.99 [69.34]
Teff = 1111 [53] K
Rp = 0.58 [0.32] Re
a = 0.0151 [0.0013] AU
Ag = 68.95 [75.54] [0.90 σ]
Teffp = 4952 [1361] K [2.82 σ]

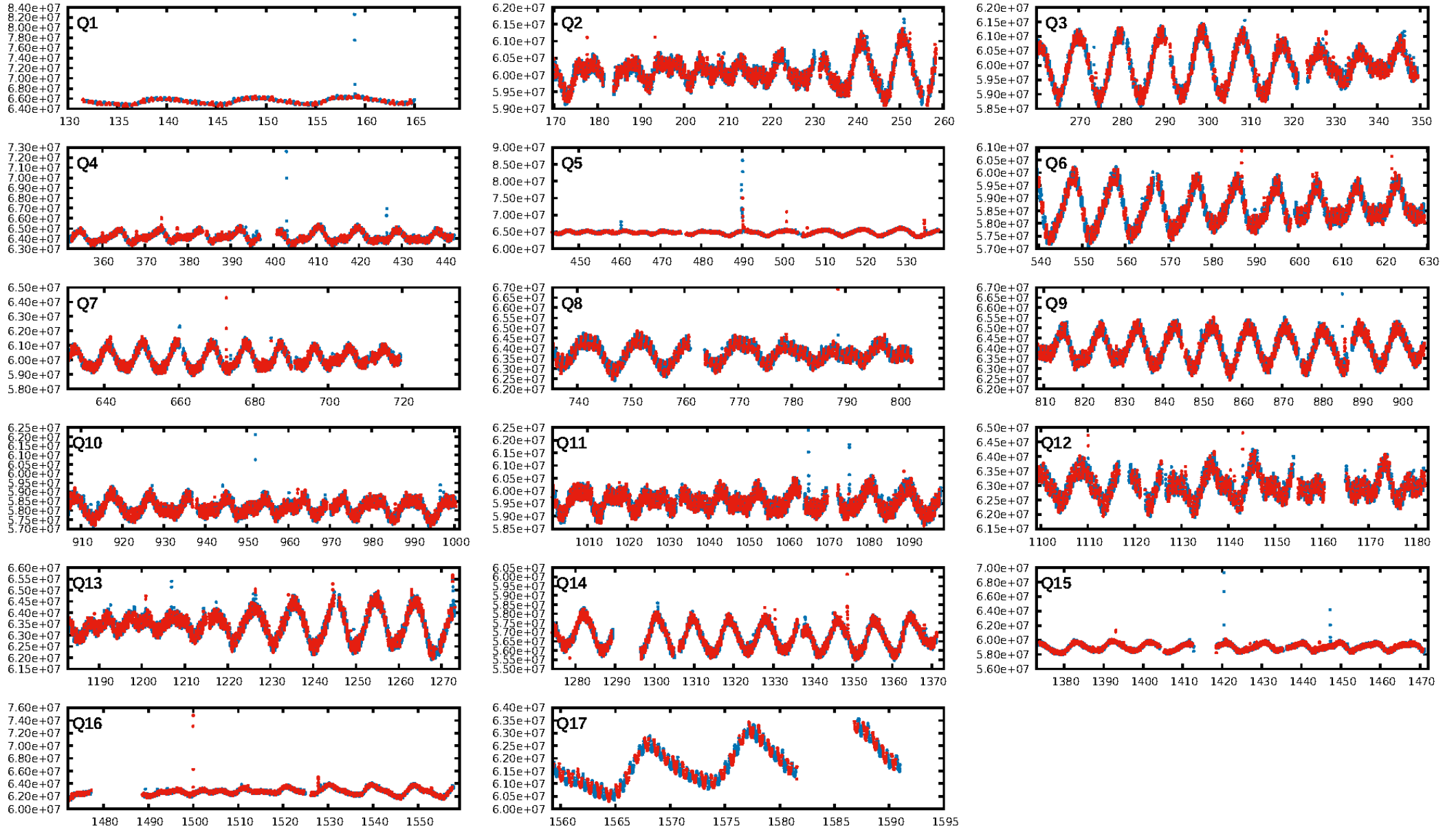
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [233.01 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1480/1480]
GhostDiagnostic-chr: 0.9521
Centroid-sig: 19.4%
Centroid-so: 0.687 arcsec [1.89 σ]
OotOffset-rm: 0.901 arcsec [12.79 σ]
KicOffset-rm: 0.620 arcsec [7.06 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.82 [14/17]
DiffImageOverlap-fno: 1.00 [17/17]

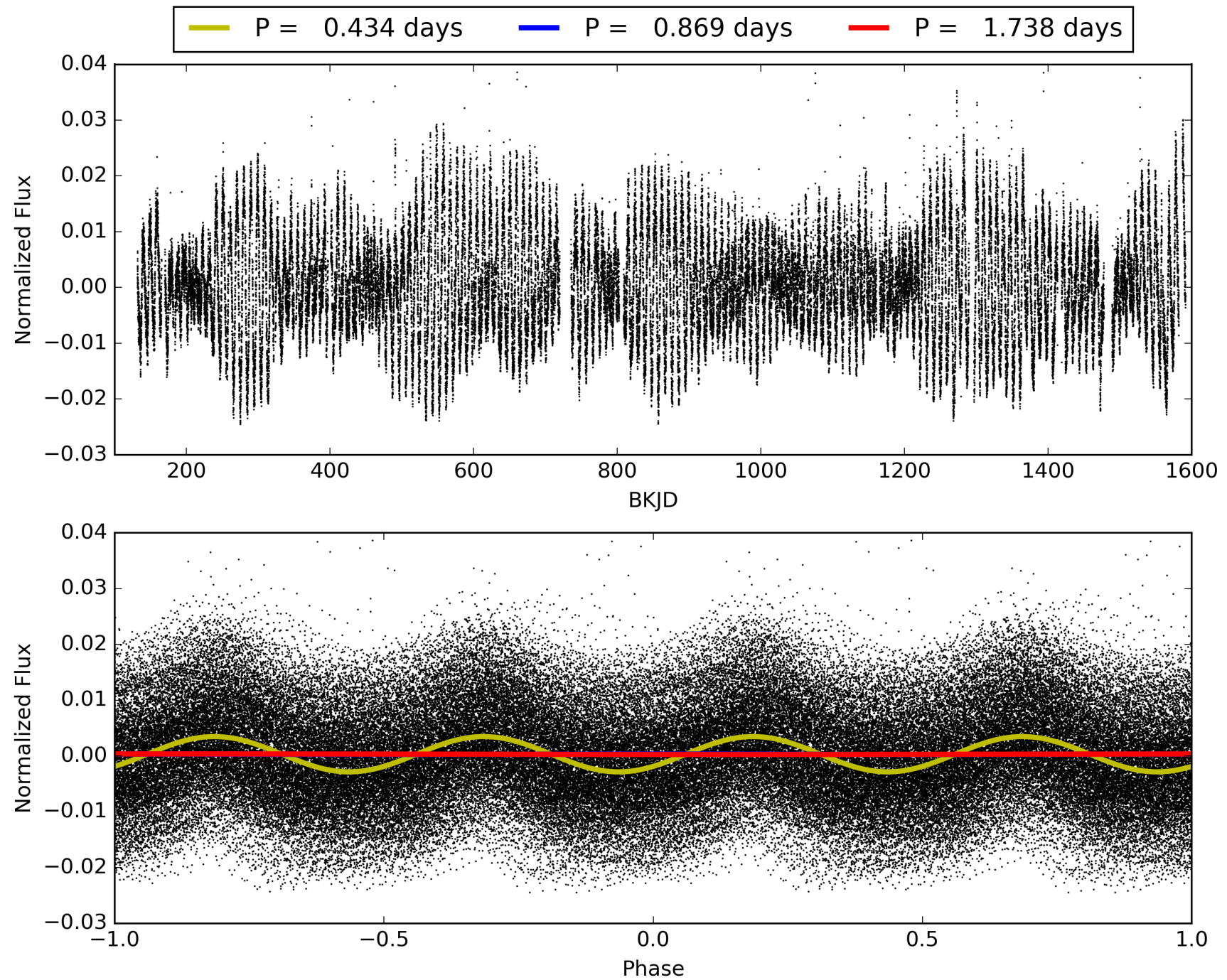
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 17:11:24 Z

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

TCE 005739251-01, PDC Light Curves

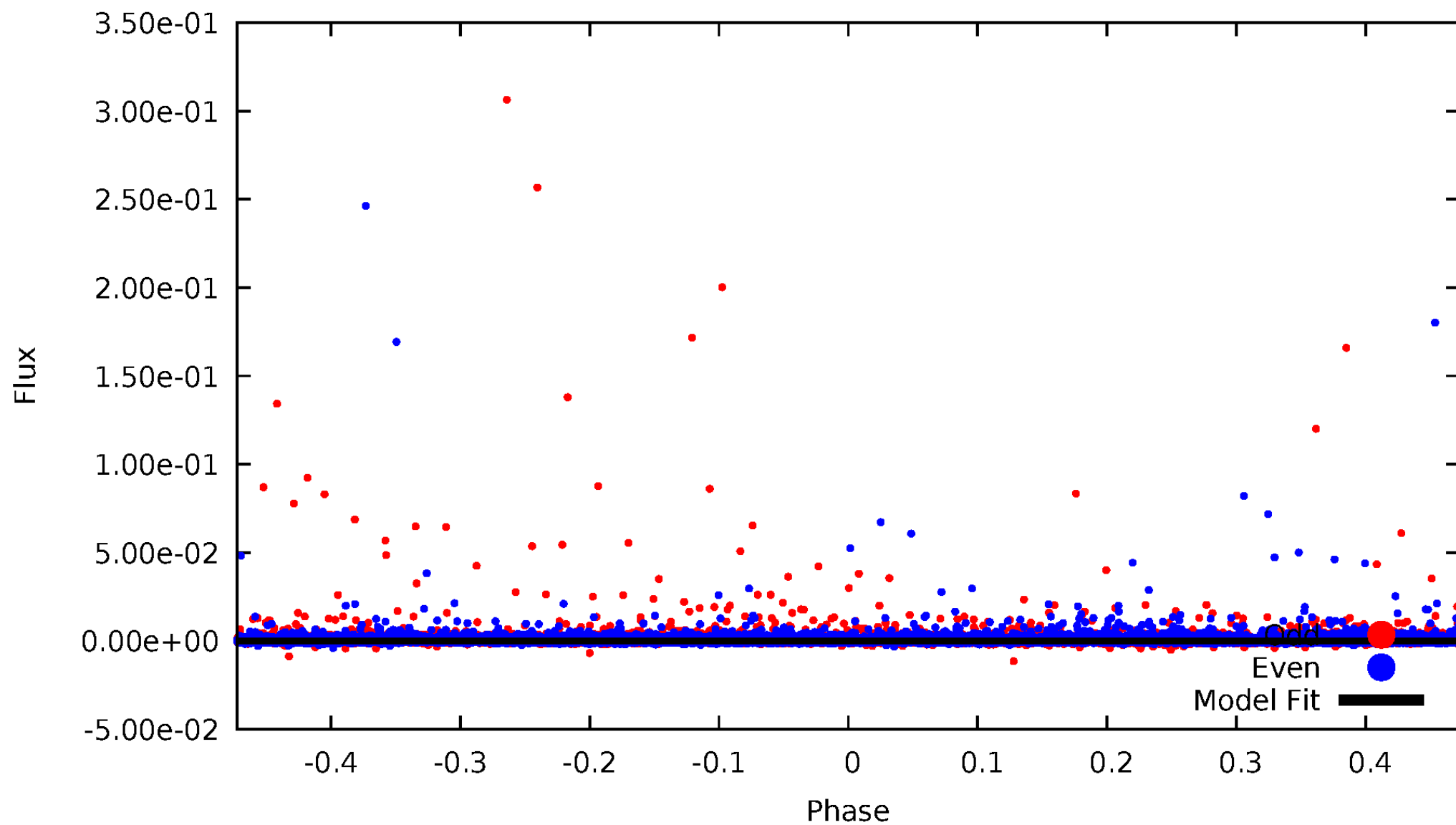


TCE 005739251-01



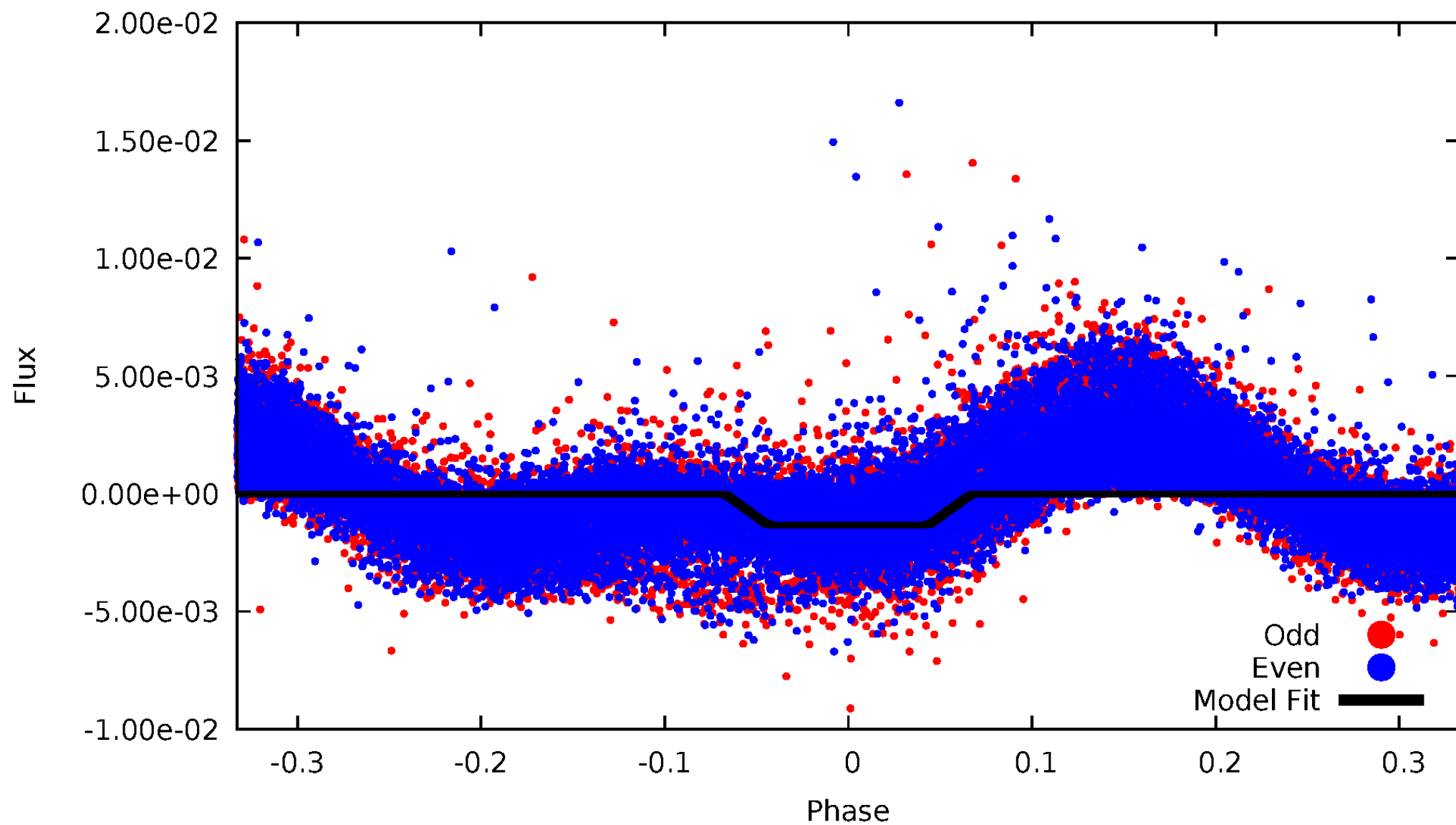
DV Odd/Even

TCE 005739251-01



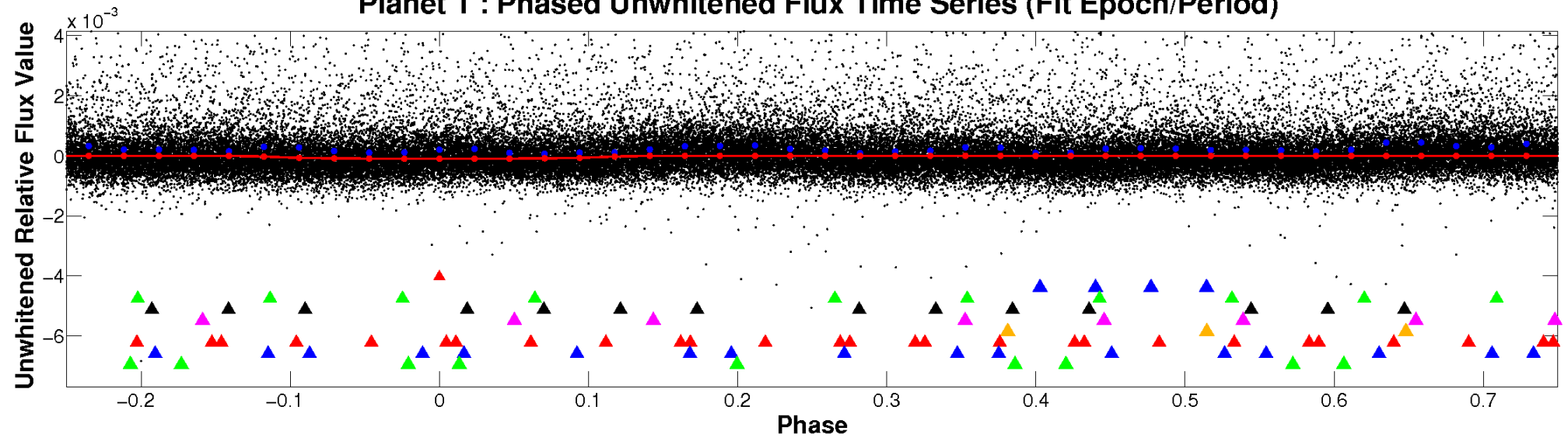
ALT Odd/Even

TCE 005739251-01

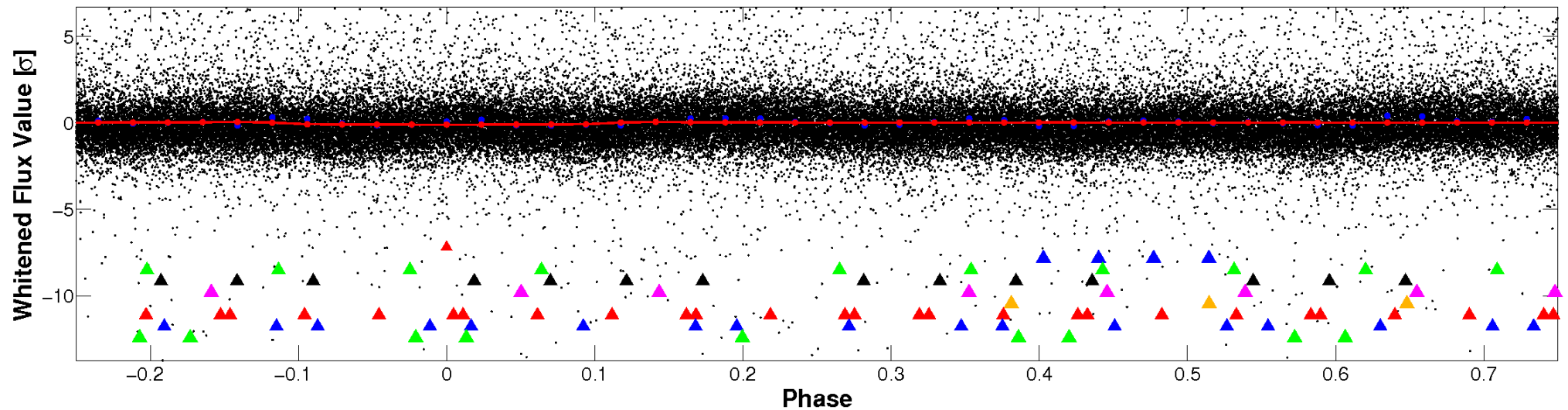


Non-Whitened Vs. Whitened Light Curve

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

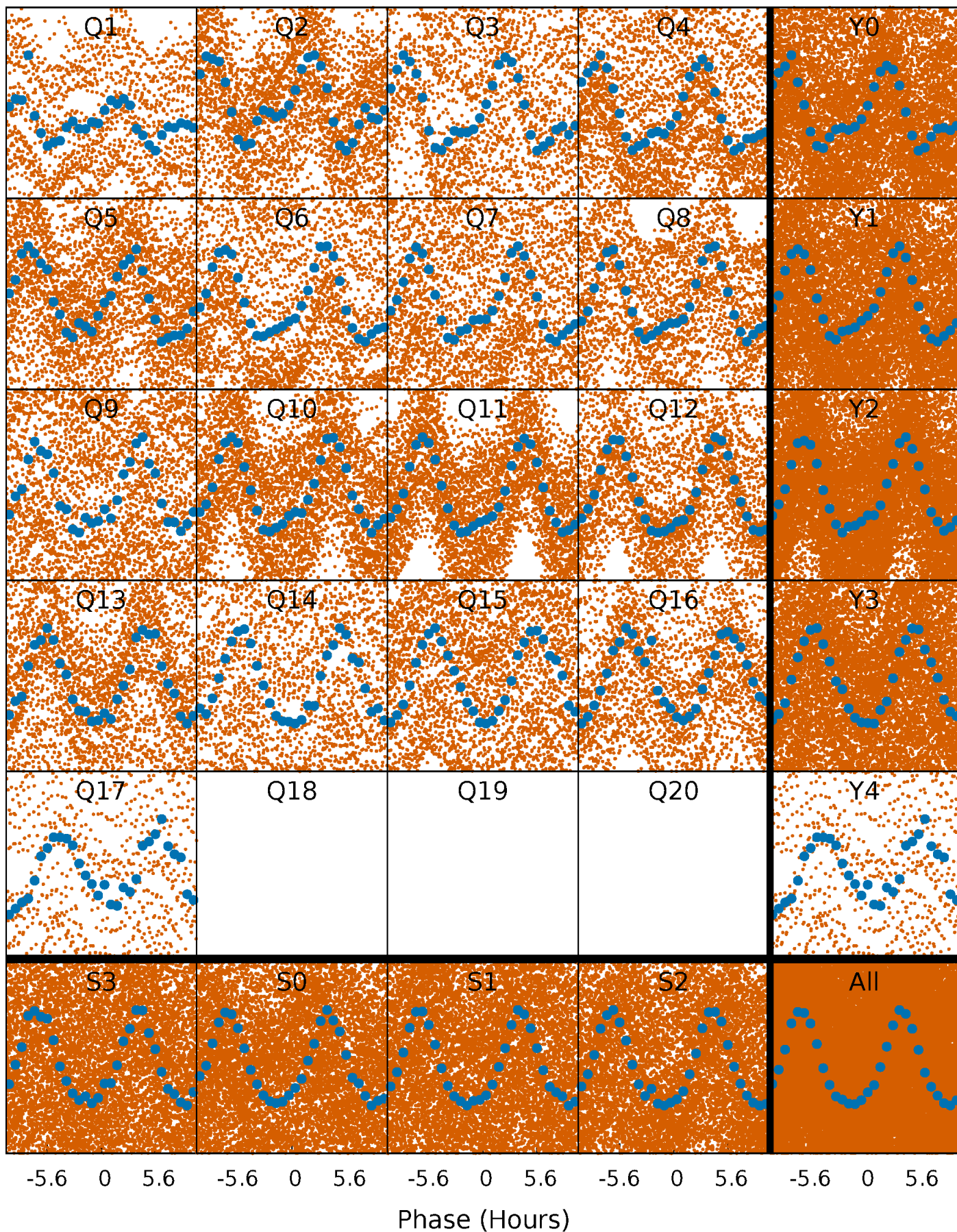


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



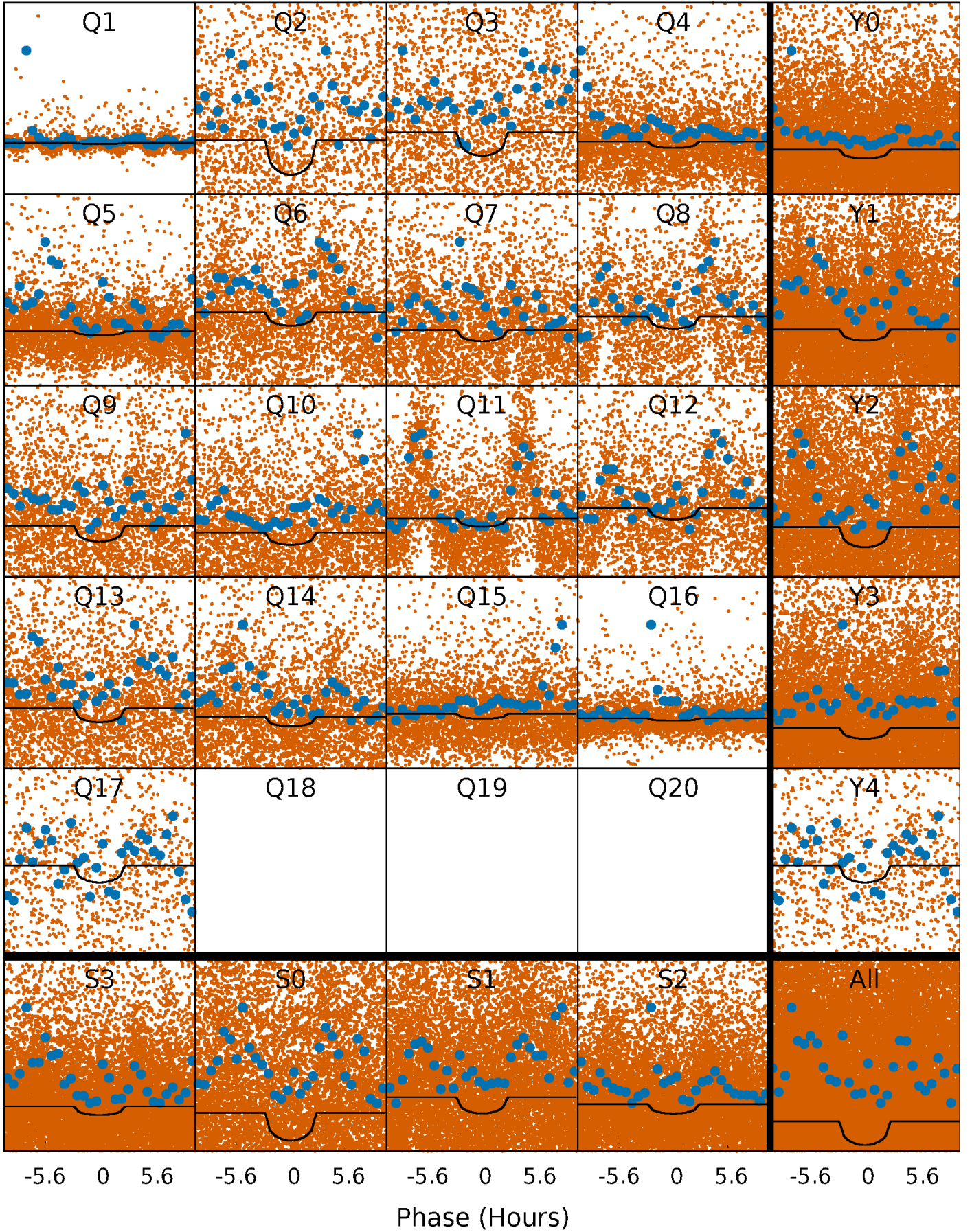
PDC Quarter-Phased Transit Curves

TCE 005739251-01 P= 0.868952 Days $T_0=132.321739$ (BKJD)



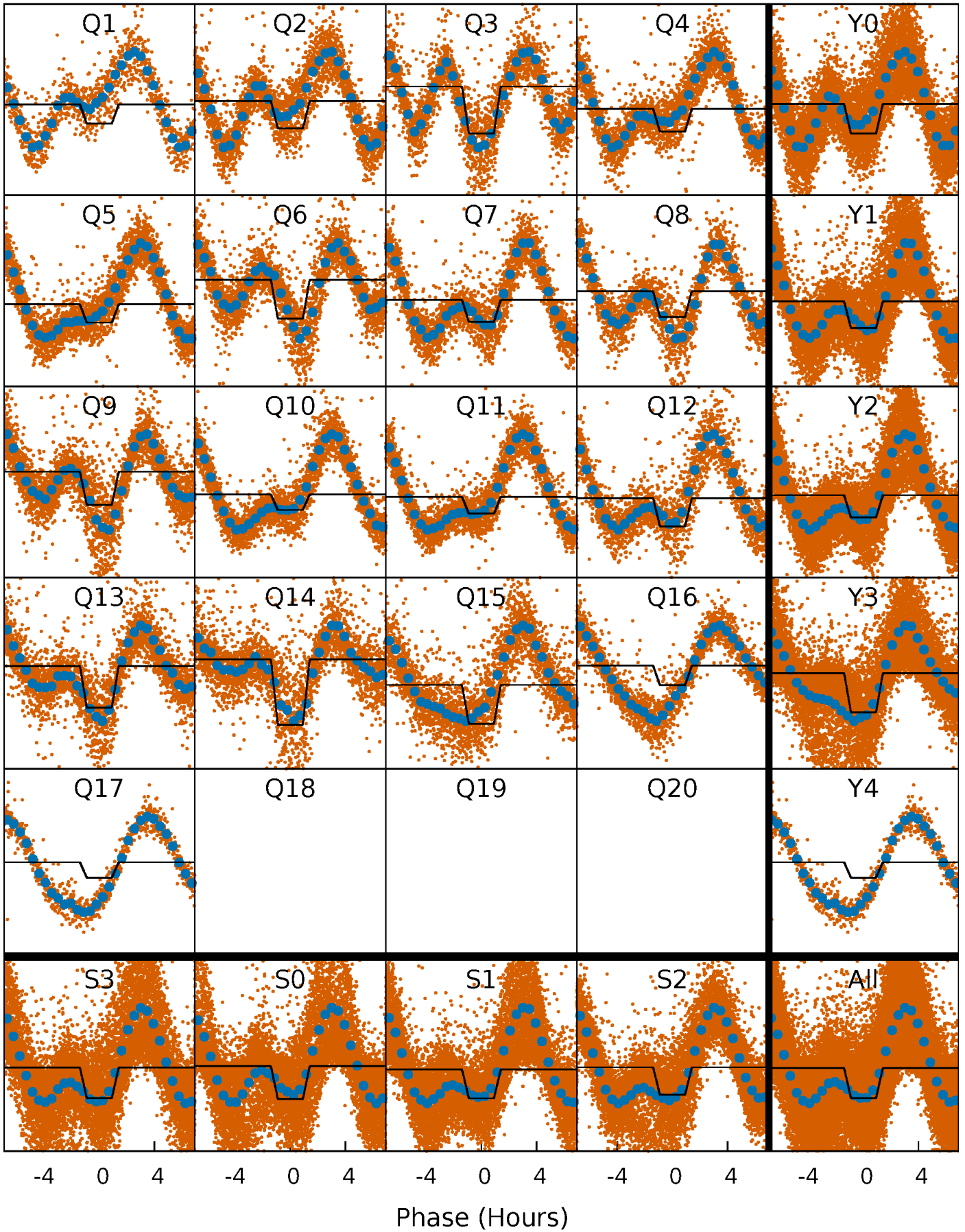
DV Quarter-Phased Transit Curves

TCE 005739251-01 P= 0.868952 Days $T_0=132.321739$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

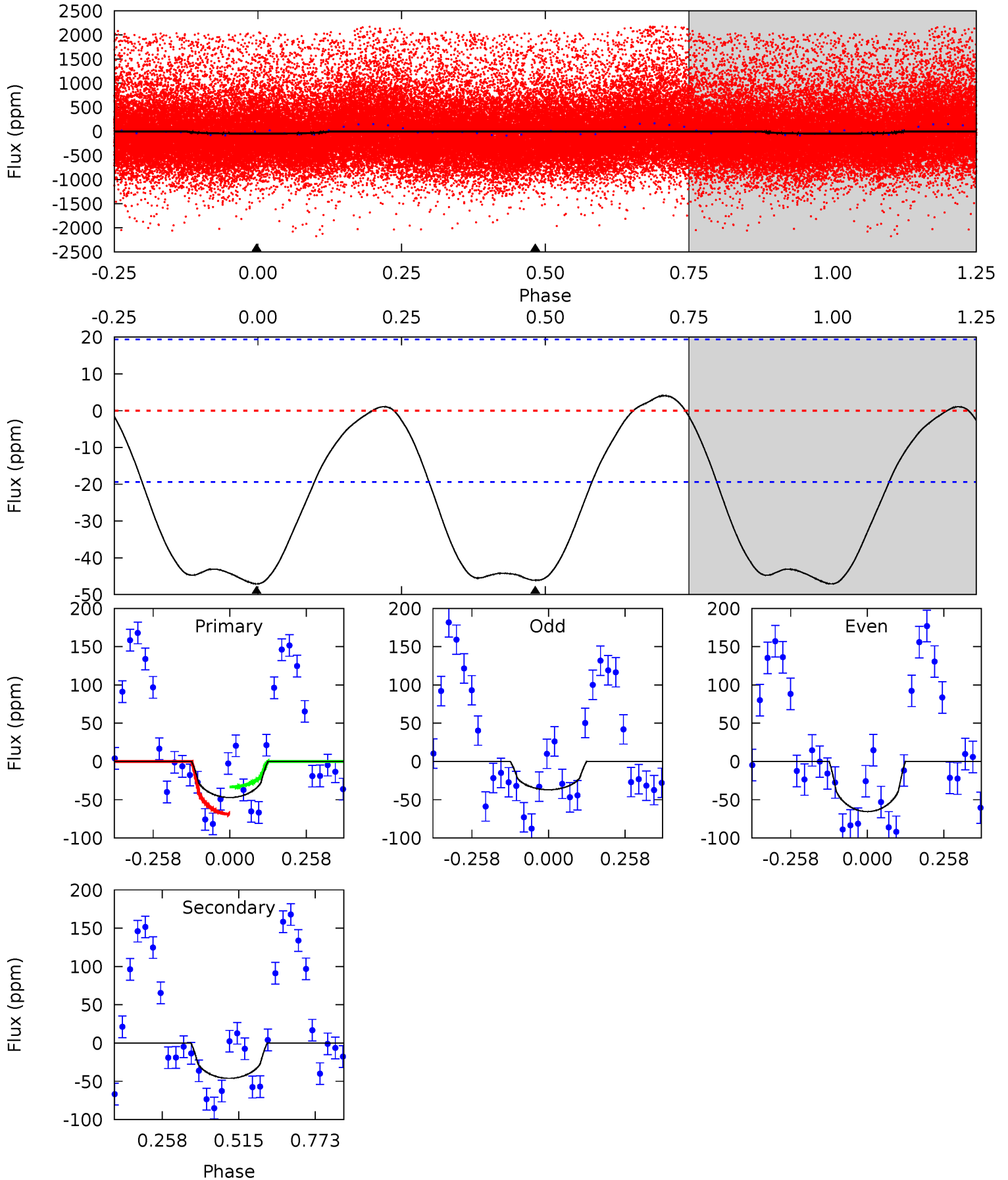
TCE 005739251-01 P= 0.869032 Days $T_0=132.293069$ (BKJD)



DV Model-Shift Uniqueness Test

005739251-01, P = 0.868952 Days, E = 131.452787 Days

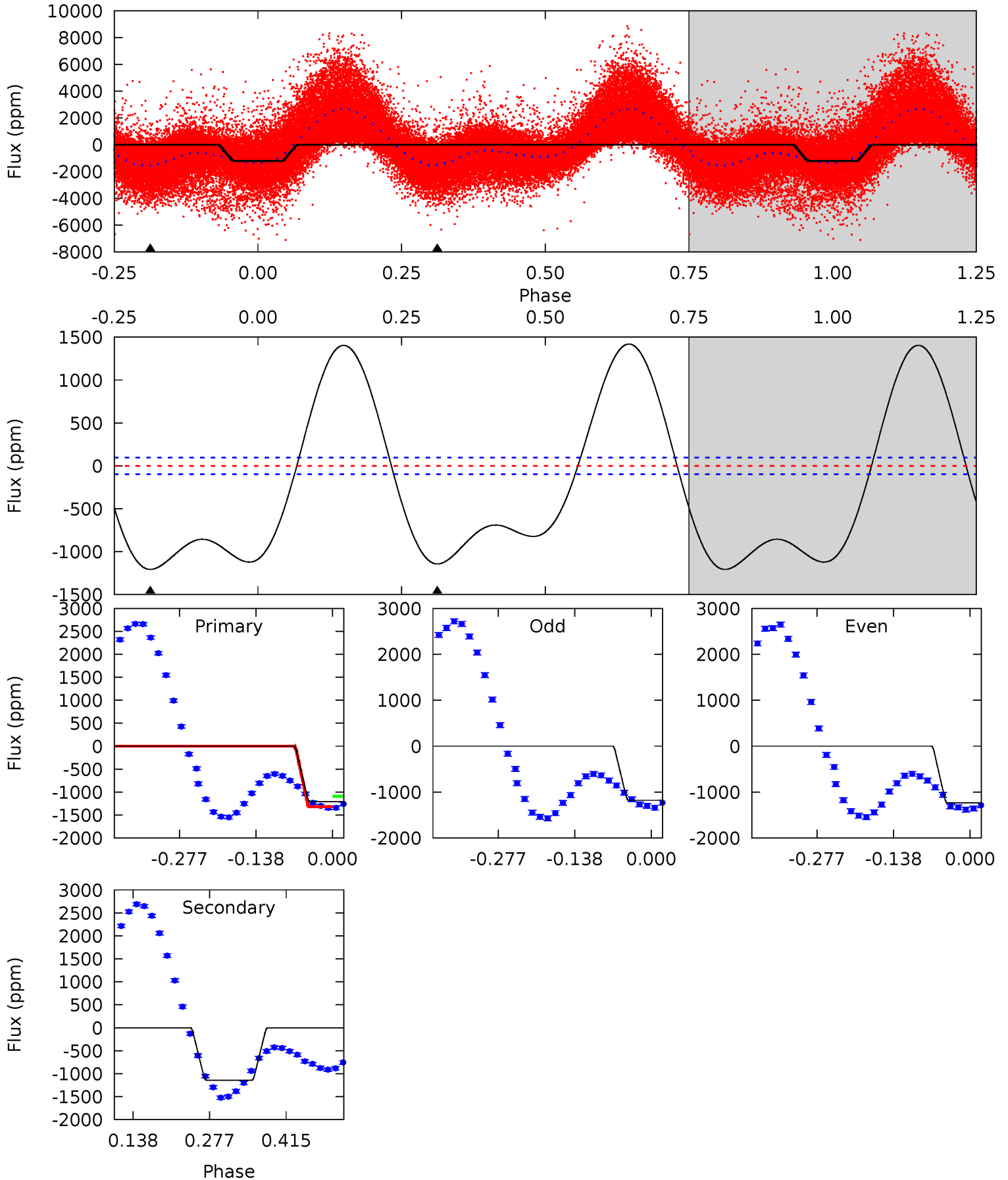
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.6	10.4	0	0	4.36	1.13	0.77	10.6	10.6	10.4	10.4	3.30	-8.44	0.08	4.20



Alt Model-Shift Uniqueness Test

005739251-01, P = 0.869032 Days, E = 131.424037 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
55.9	53.0	0	0	4.50	1.48	43.6	55.9	55.9	53.0	53.0	1.34	1.05	0.54	5.03



Stellar Parameters For KIC 005739251

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	3963^{+122}_{-150}	$4.652^{+0.060}_{-0.020}$	$0.220^{+0.200}_{-0.300}$	$0.612^{+0.029}_{-0.068}$	$0.613^{+0.041}_{-0.062}$	$3.761^{+1.109}_{-0.369}$
	+3%/-4%	+1%/-0%	+91%/-136%	+5%/-11%	+7%/-10%	+29%/-10%
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 005739251-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-46 ± 4	$0.59^{+0.30}_{-0.28}$	1540^{+62}_{-63}	3607^{+891}_{-475}	17^{+42}_{-10}
Alt.	-1143 ± 22	$2.41^{+0.33}_{-0.33}$	1543^{+52}_{-70}	3846^{+222}_{-213}	25^{+9}_{-6}

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

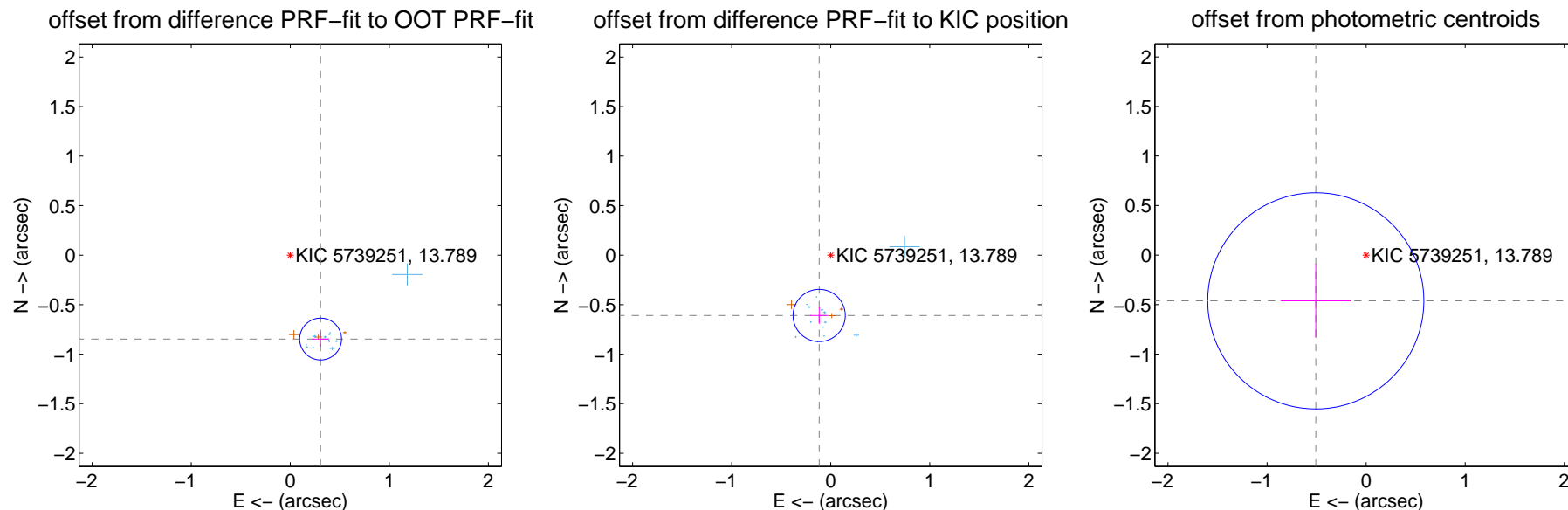
DV Centroid Data

Supplemental centroid analysis for 005739251-01. Kepler magnitude: 13.79. Transit SNR 11.51

There are 14 quarters with good PRF difference image offsets

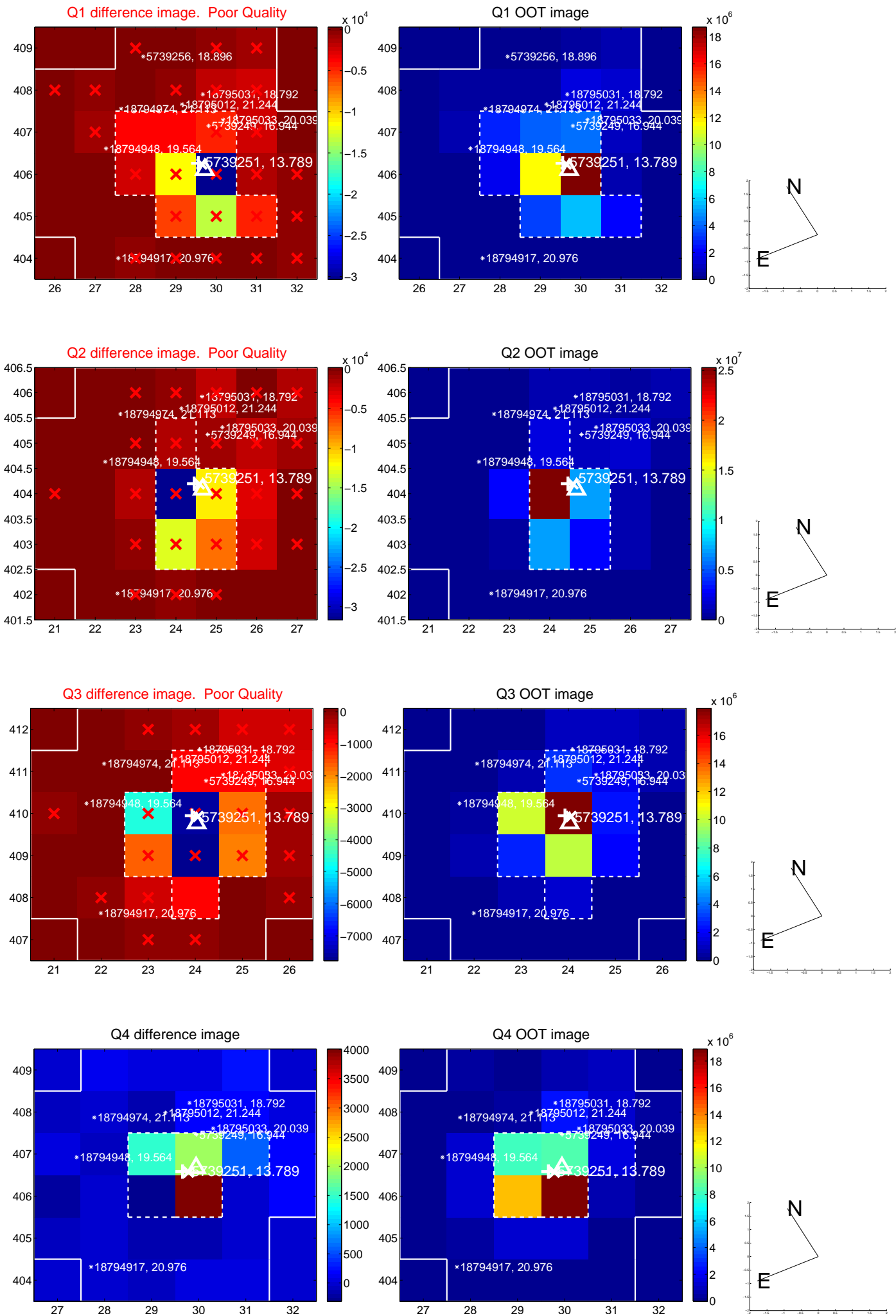
The direct PRF centroid is offset from the target star catalog position by about 0.39 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.901 ± 0.070	12.79	-0.306 ± 0.086	-0.847 ± 0.076
PRF-fit source offset from KIC position	0.620 ± 0.088	7.06	0.117 ± 0.091	-0.609 ± 0.084
photometric centroid source offset	0.69 ± 0.36	1.89	0.51 ± 0.36	-0.46 ± 0.37

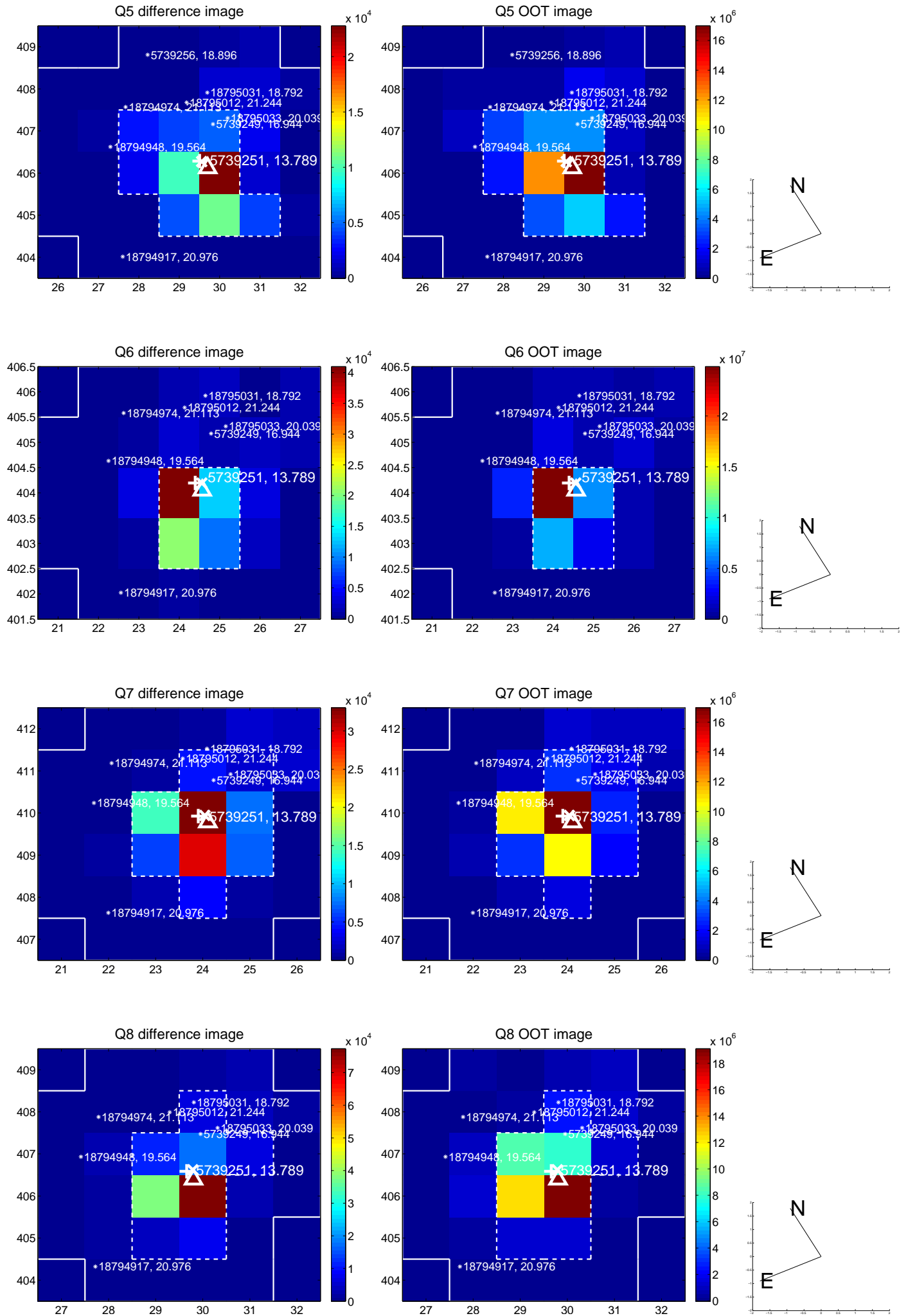


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

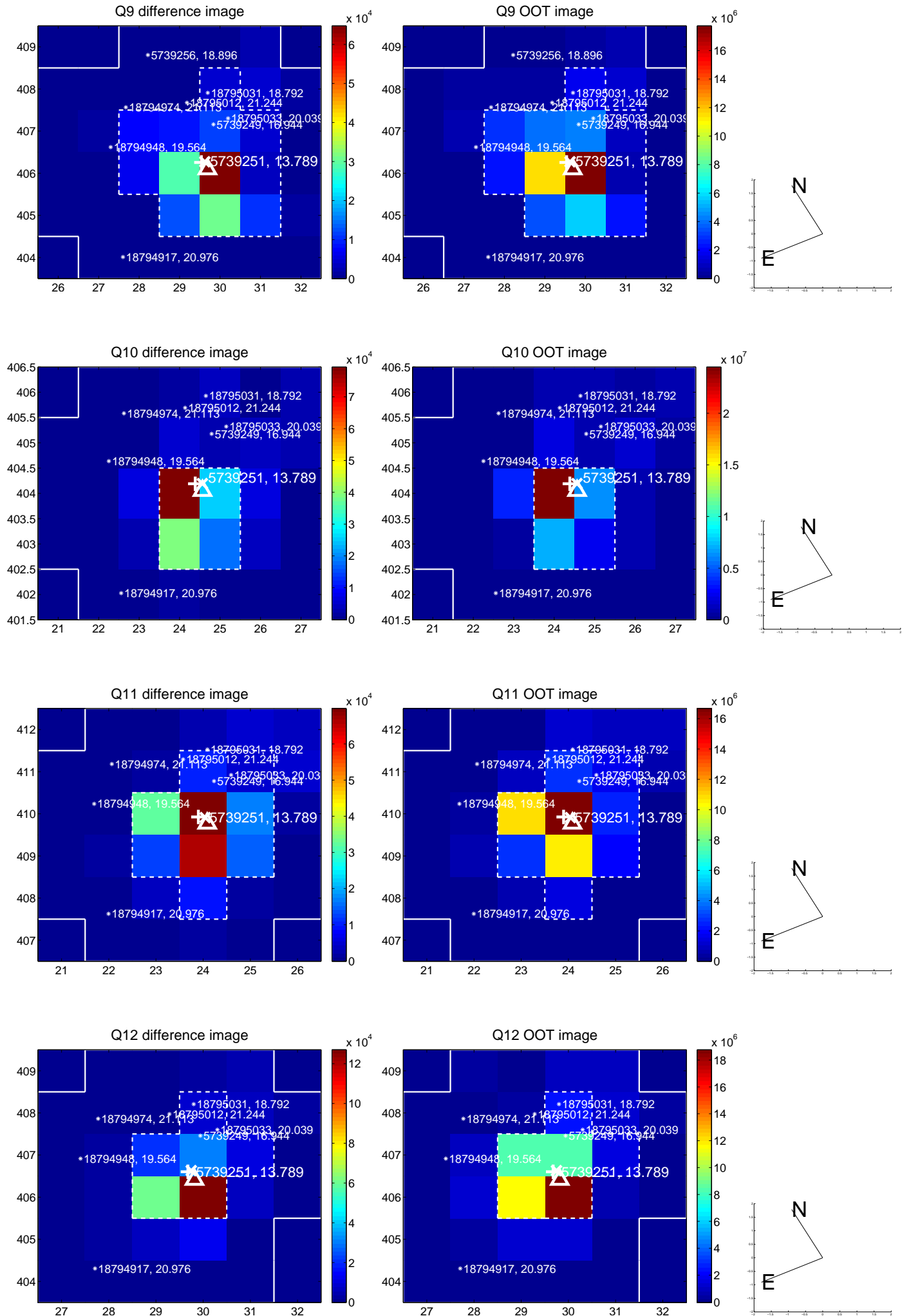
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



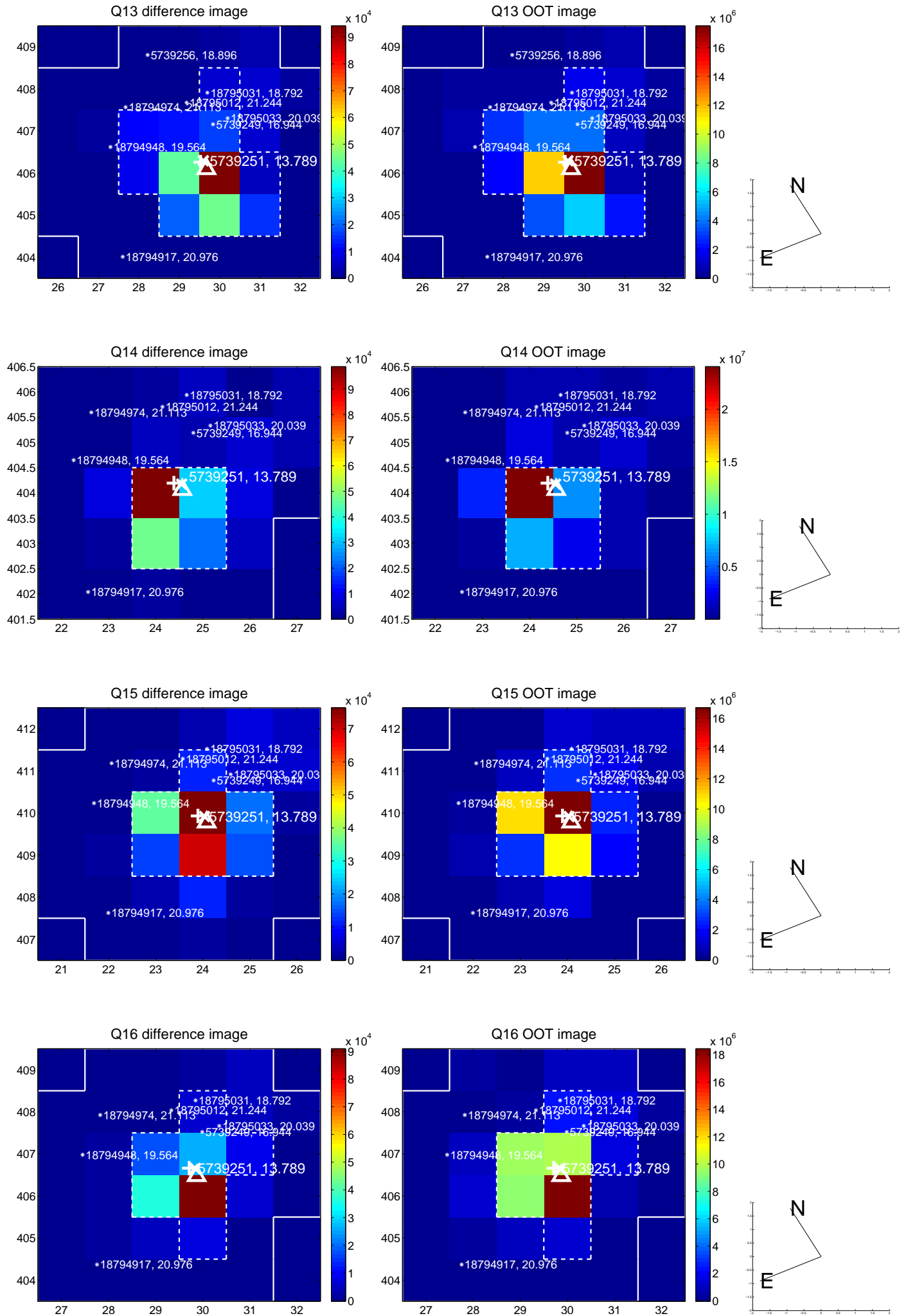
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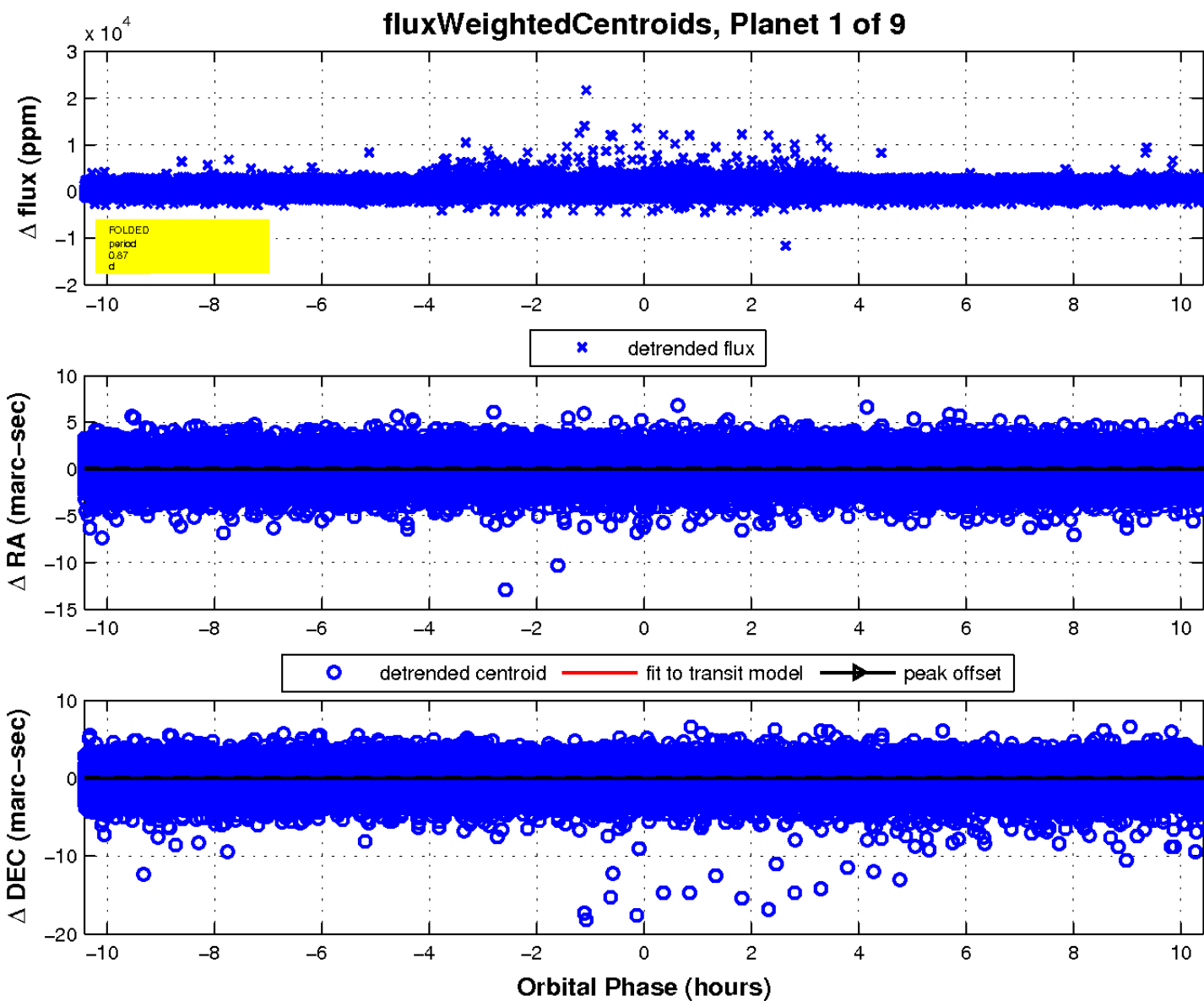
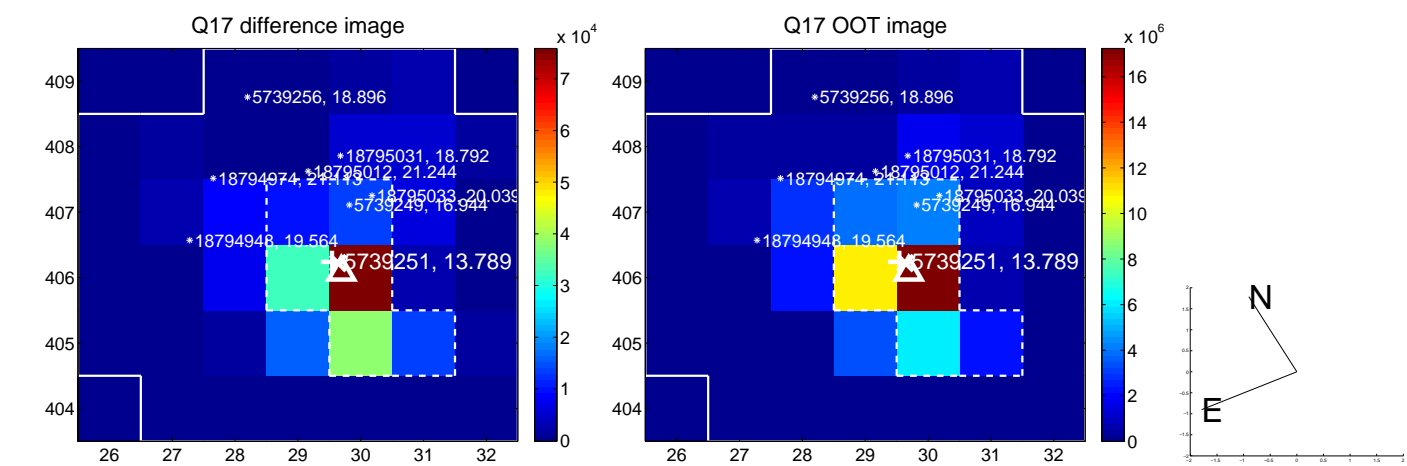
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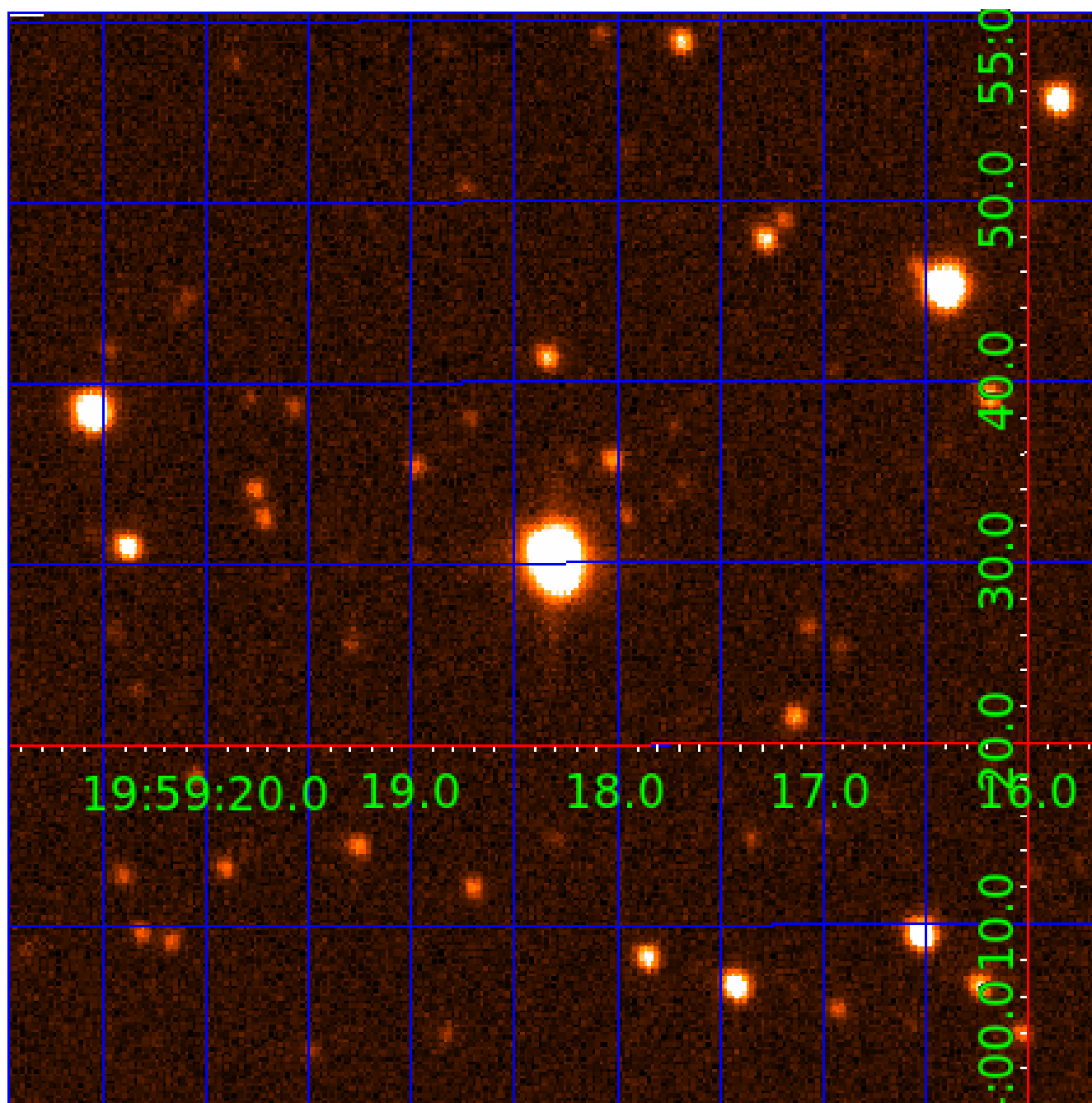


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005739251

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})
005739251-01	OBS	No	0.868952	132.321739	97.9	4.928	12.8	11.5	0.61	3963	0.58	360.99
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005739251-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_KIC_POS
005739251-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT— INCONSISTENT_TRANS—CENT_FEW_DIFFS
005739251-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_TER_ALT—INCONSISTENT_TRANS
005739251-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005739251-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT— INCONSISTENT_TRANS—CENT_FEW_DIFFS
005739251-07	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
005739251-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_TRACKER—TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT— MOD_POS_ALT—CENT_KIC_POS
005739251-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—ALL_TRANS_CHASES—CENT_NOFITS

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

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

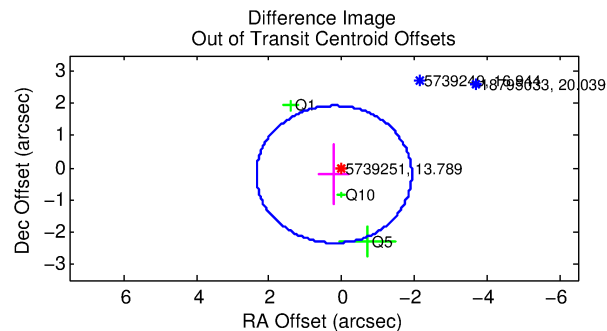
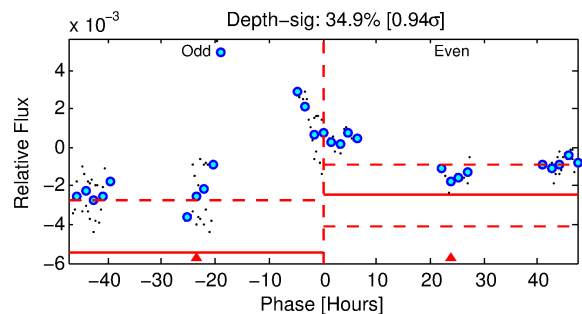
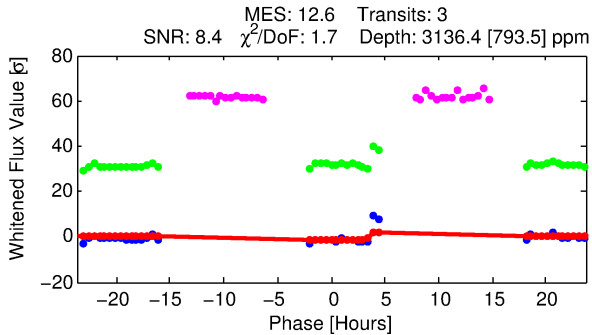
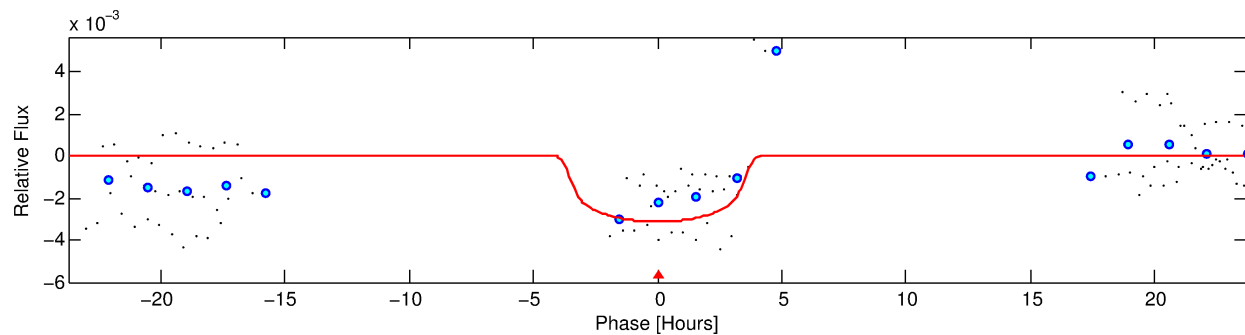
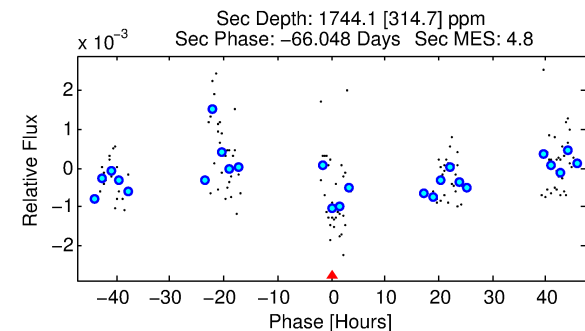
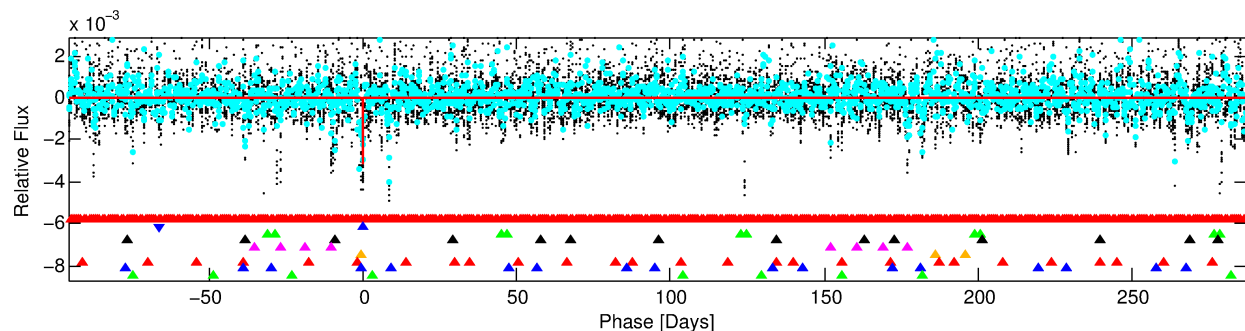
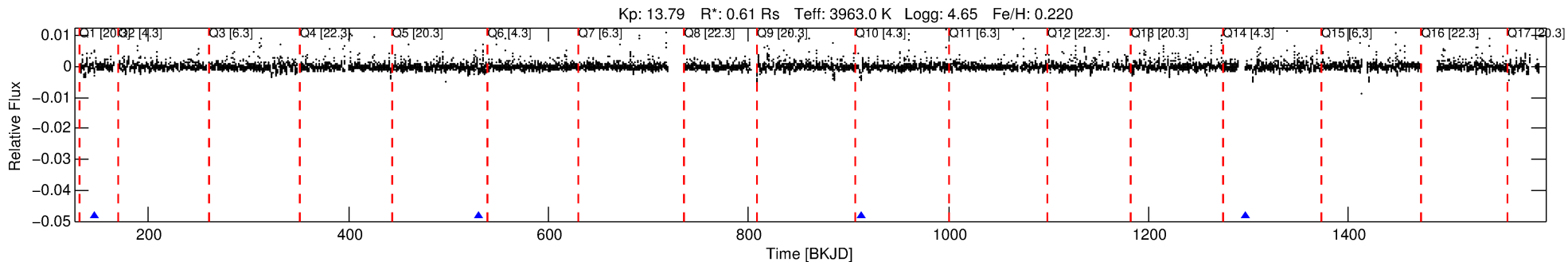
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005739251-02

No Significant Match Found

DV One-Page Summary

KIC: 5739251 Candidate: 2 of 9 Period: 383.240 d



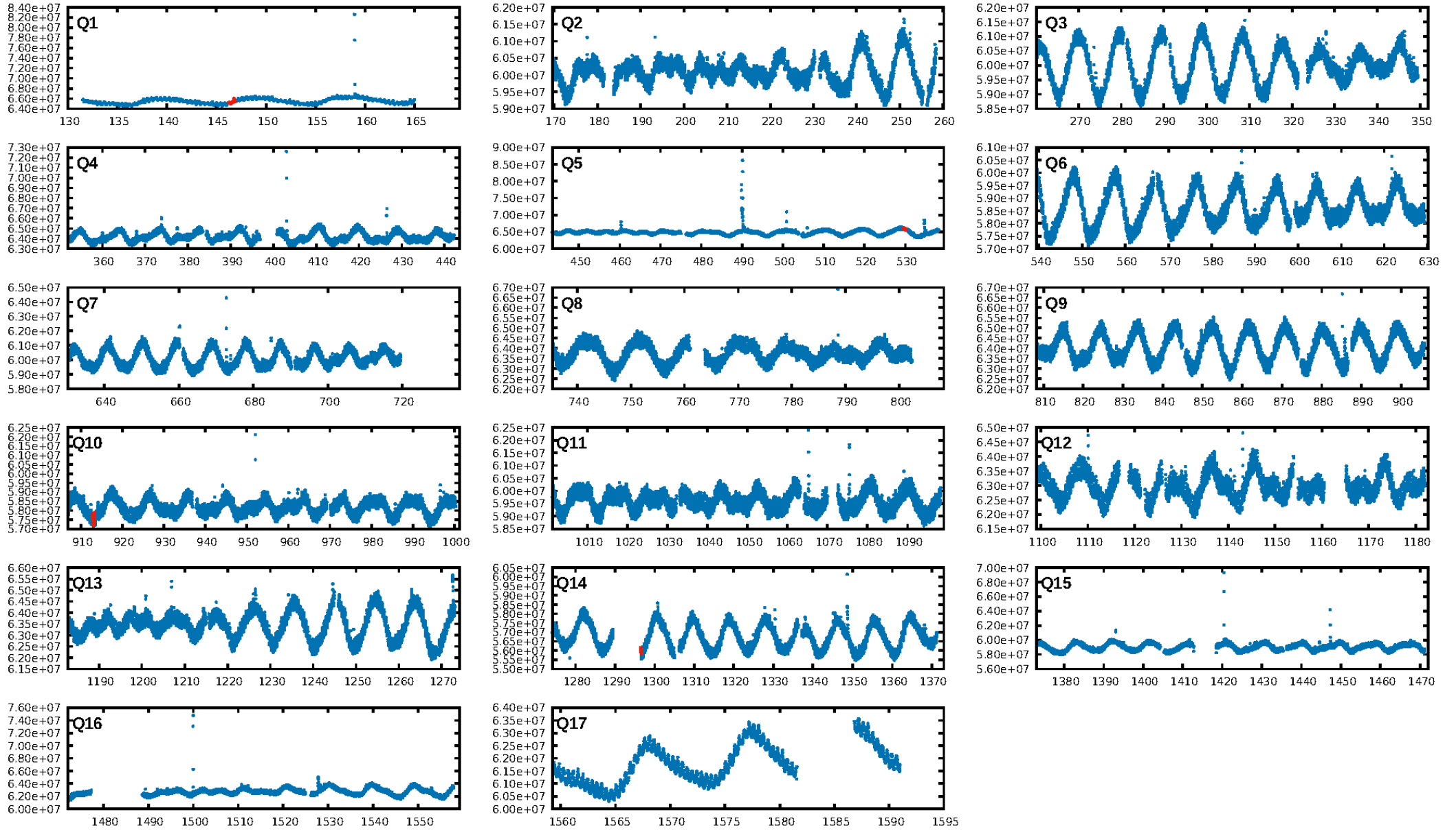
DV Fit Results:

Period = 383.24020 [0.02230] d
Epoch = 146.5750 [0.0646] BKJD
Rp/R* = 0.0544 [0.0210]
a/R* = 297.52 [392.66]
b = 0.68 [0.80]
Seff = 0.11 [0.02]
Teq = 146 [7] K
Rp = 3.63 [1.46] Re
a = 0.8774 [0.0765] AU
Ag = 55932.98 [44837.41] [1.25σ]
Teffp = 3472 [701] K [4.75σ]

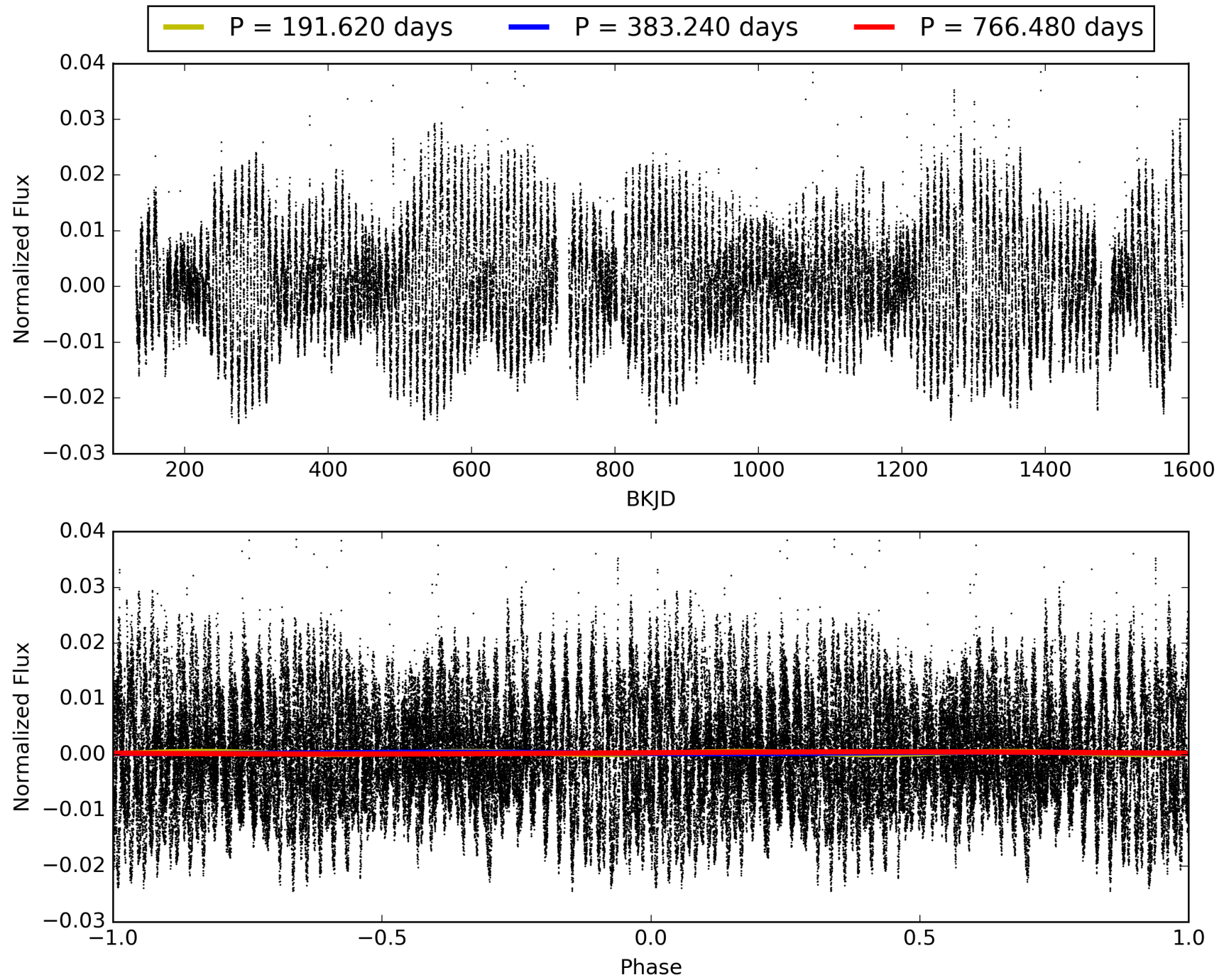
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [520.81σ]
LongPeriod-sig: 100.0% [422.01σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 99.2%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: 0.9629
Centroid-sig: 79.4%
Centroid-so: 0.813 arcsec [3.85σ]
OotOffset-rm: 0.301 arcsec [0.42σ]
KicOffset-rm: 0.698 arcsec [1.19σ]
OotOffset-st: 1/0/0/2 [3]
KicOffset-st: 1/0/0/2 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 0.00 [0/3]

TCE 005739251-02, PDC Light Curves

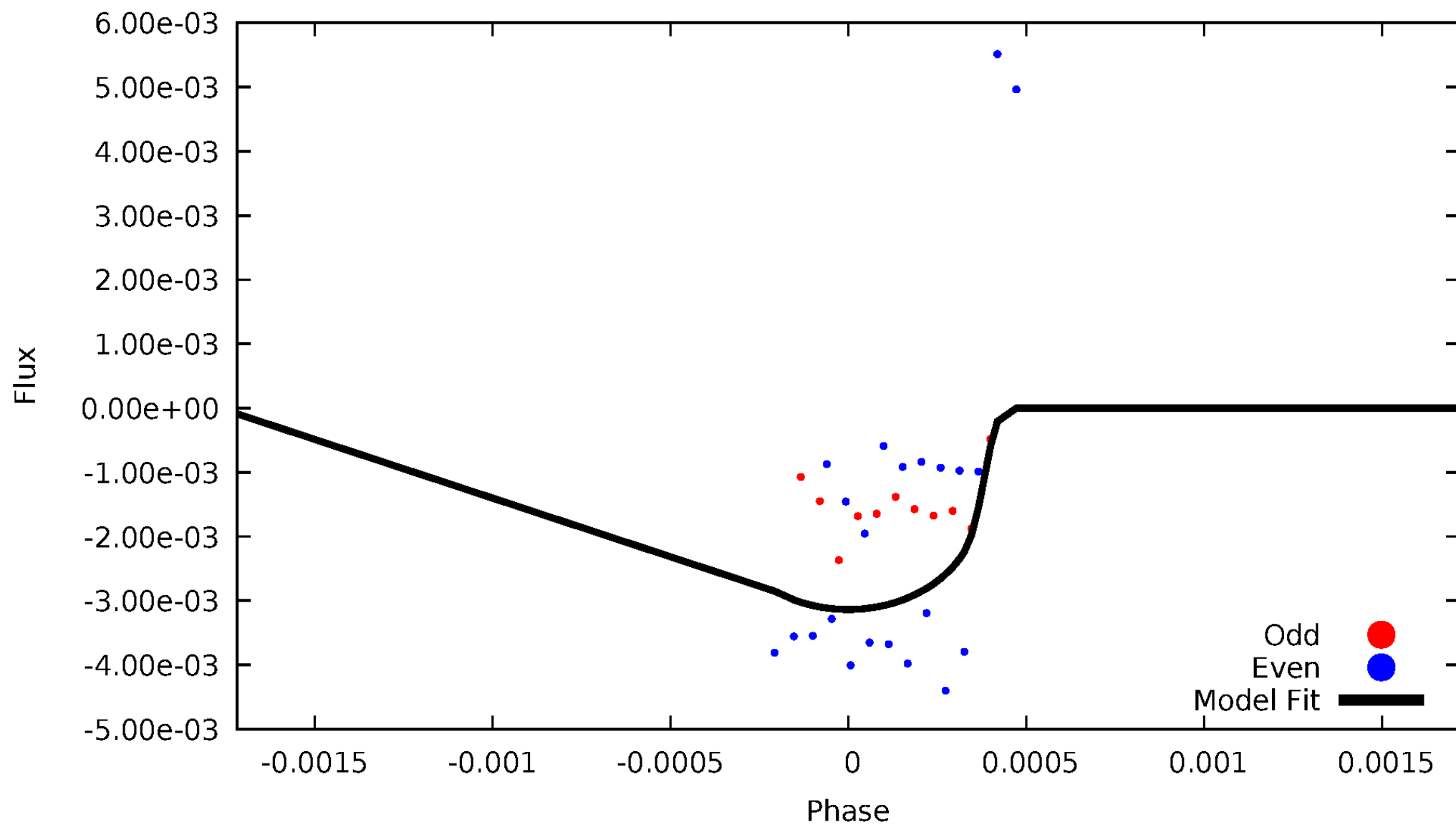


TCE 005739251-02



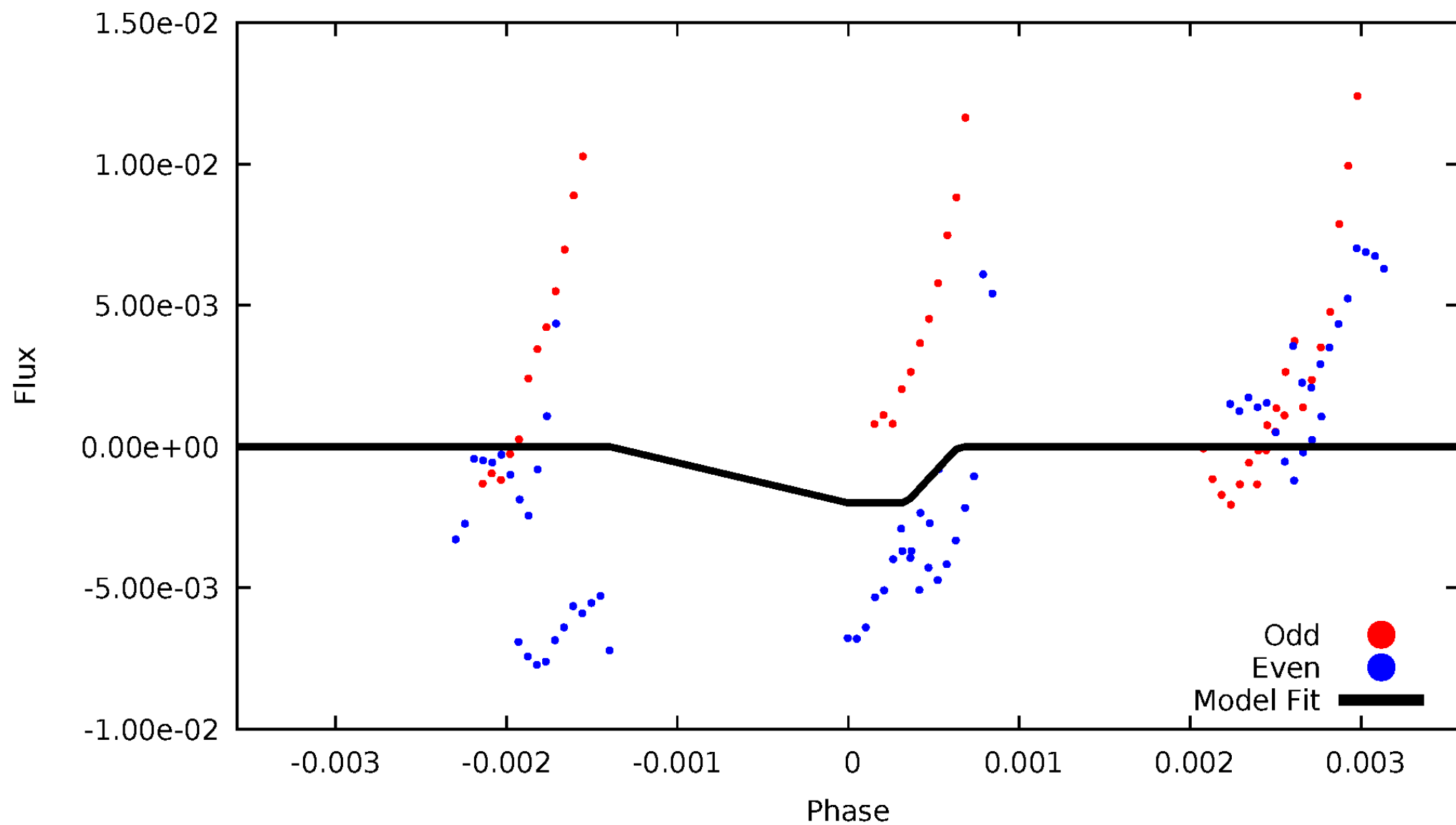
DV Odd/Even

TCE 005739251-02



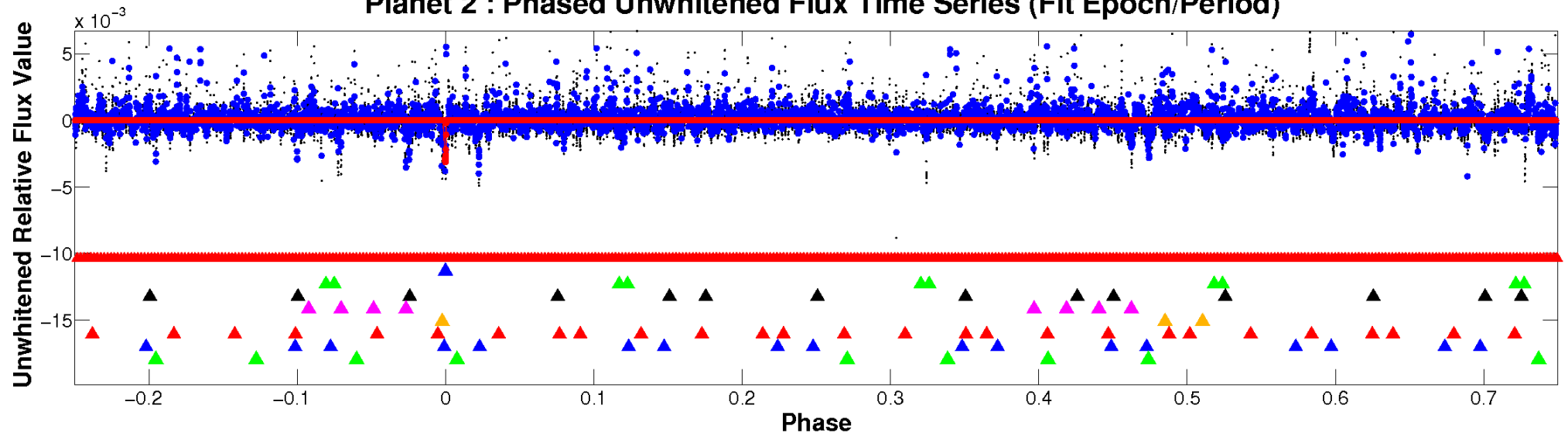
ALT Odd/Even

TCE 005739251-02

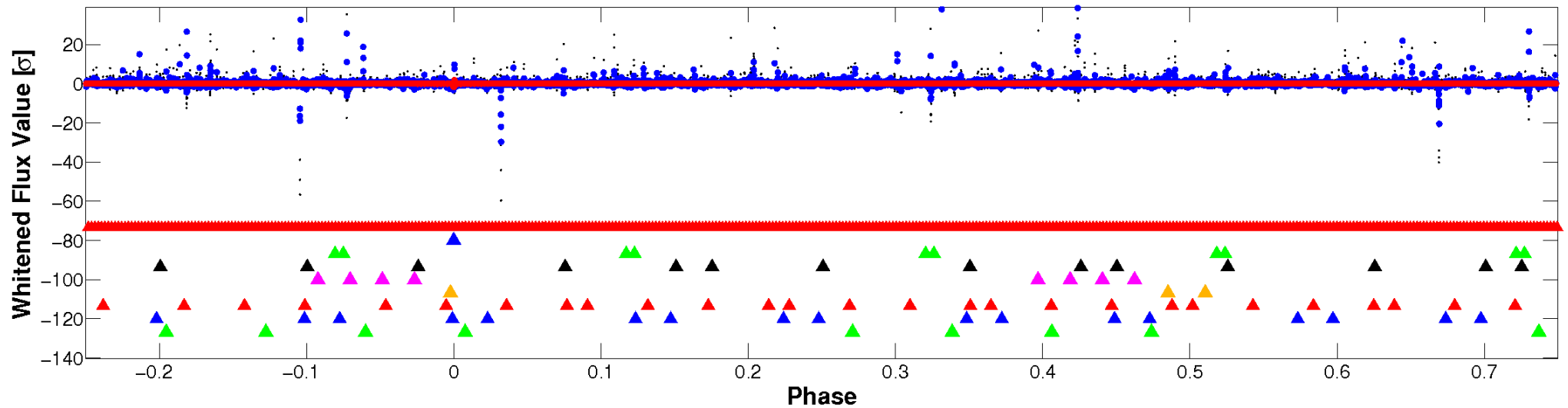


Non-Whitened Vs. Whitened Light Curve

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

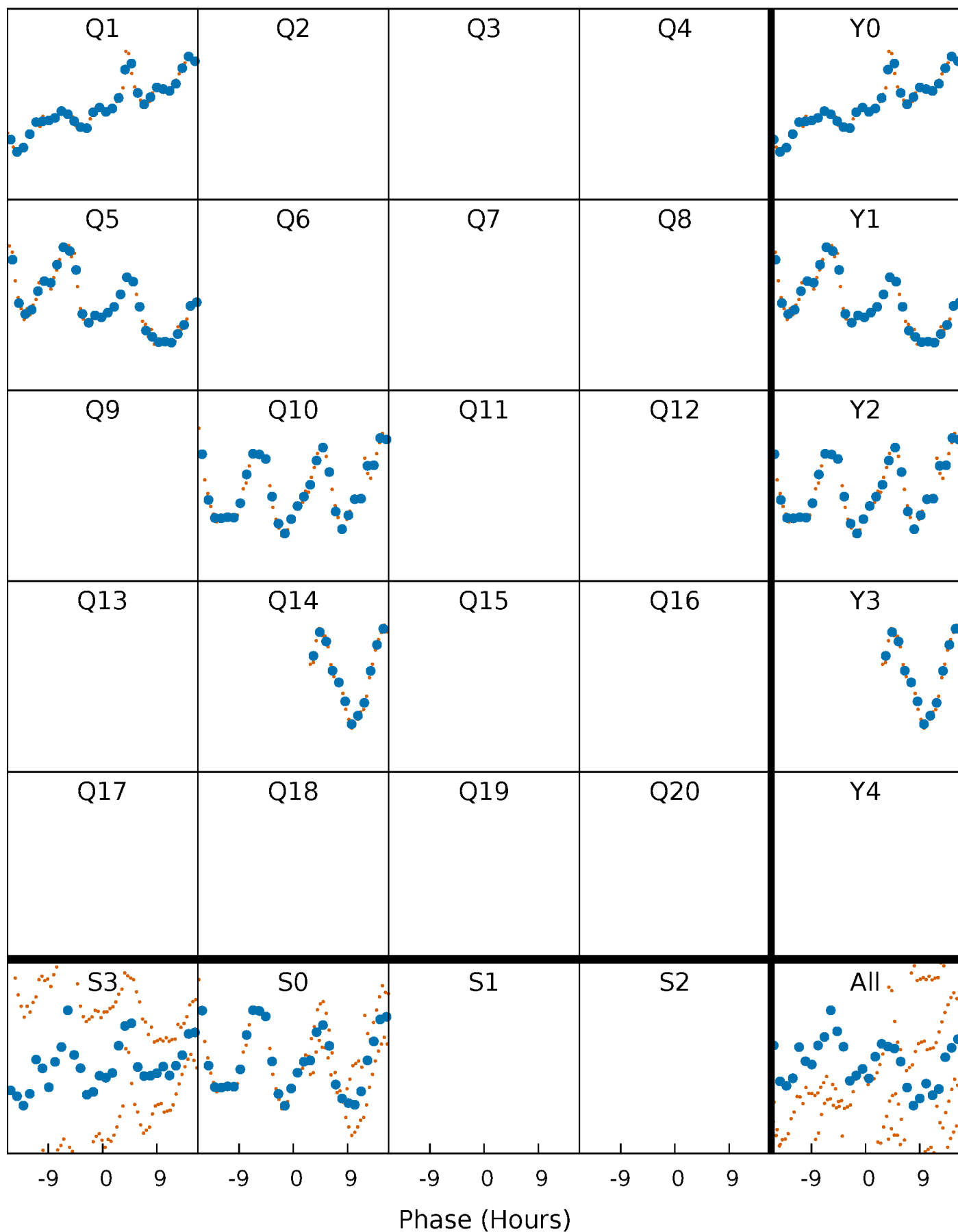


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



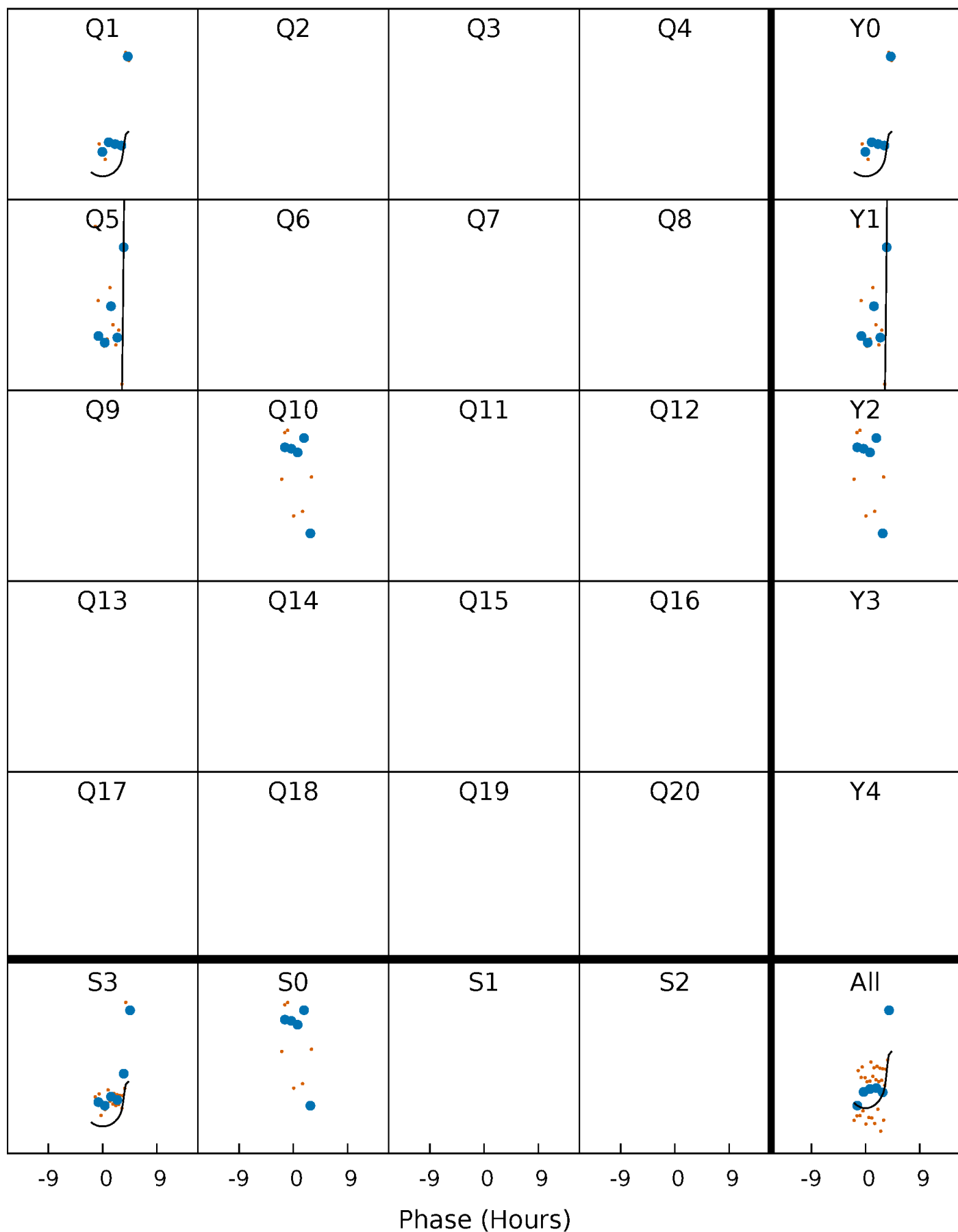
PDC Quarter-Phased Transit Curves

TCE 005739251-02 $P=383.240200$ Days $T_0=146.574993$ (BKJD)



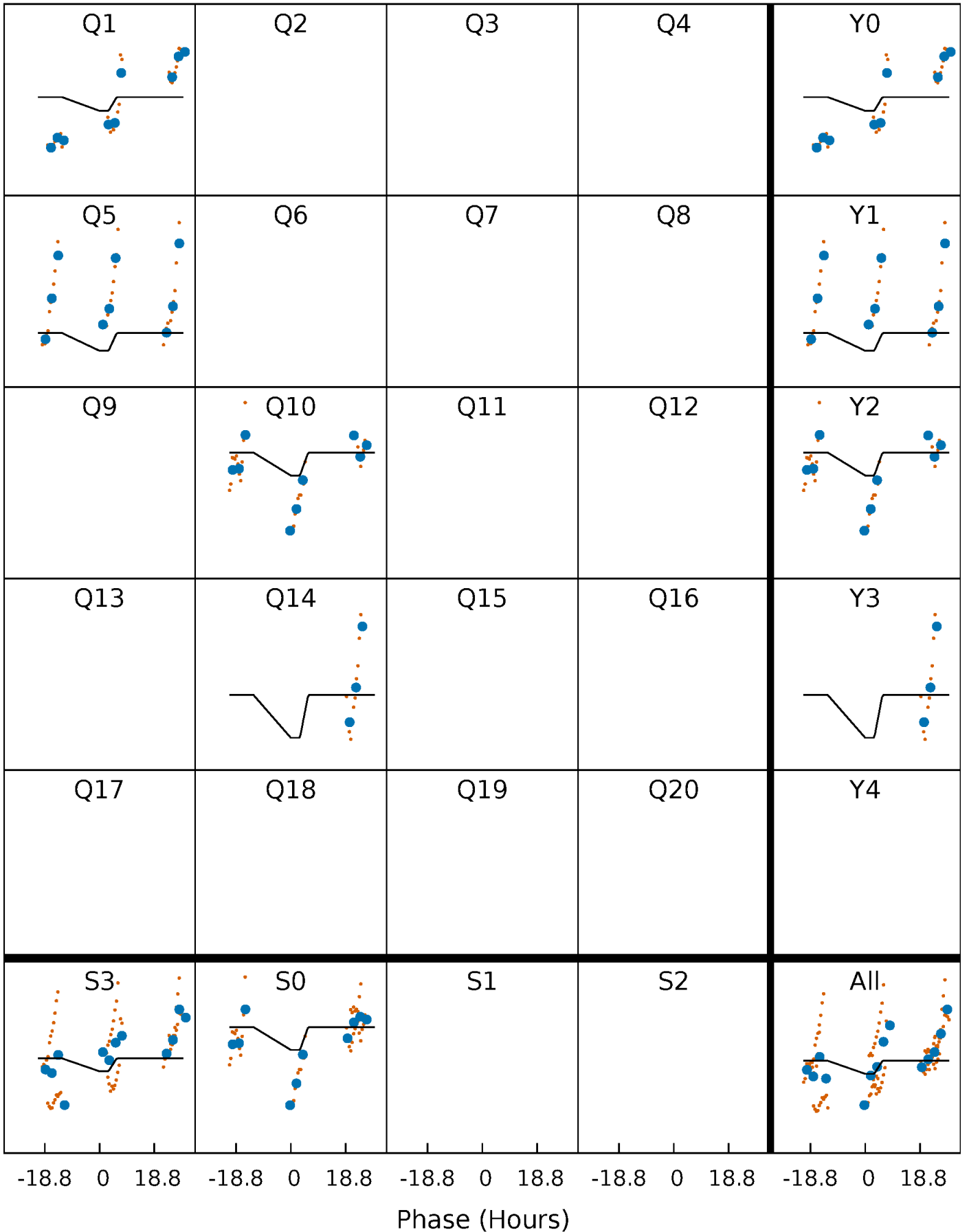
DV Quarter-Phased Transit Curves

TCE 005739251-02 $P=383.240200$ Days $T_0=146.574993$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

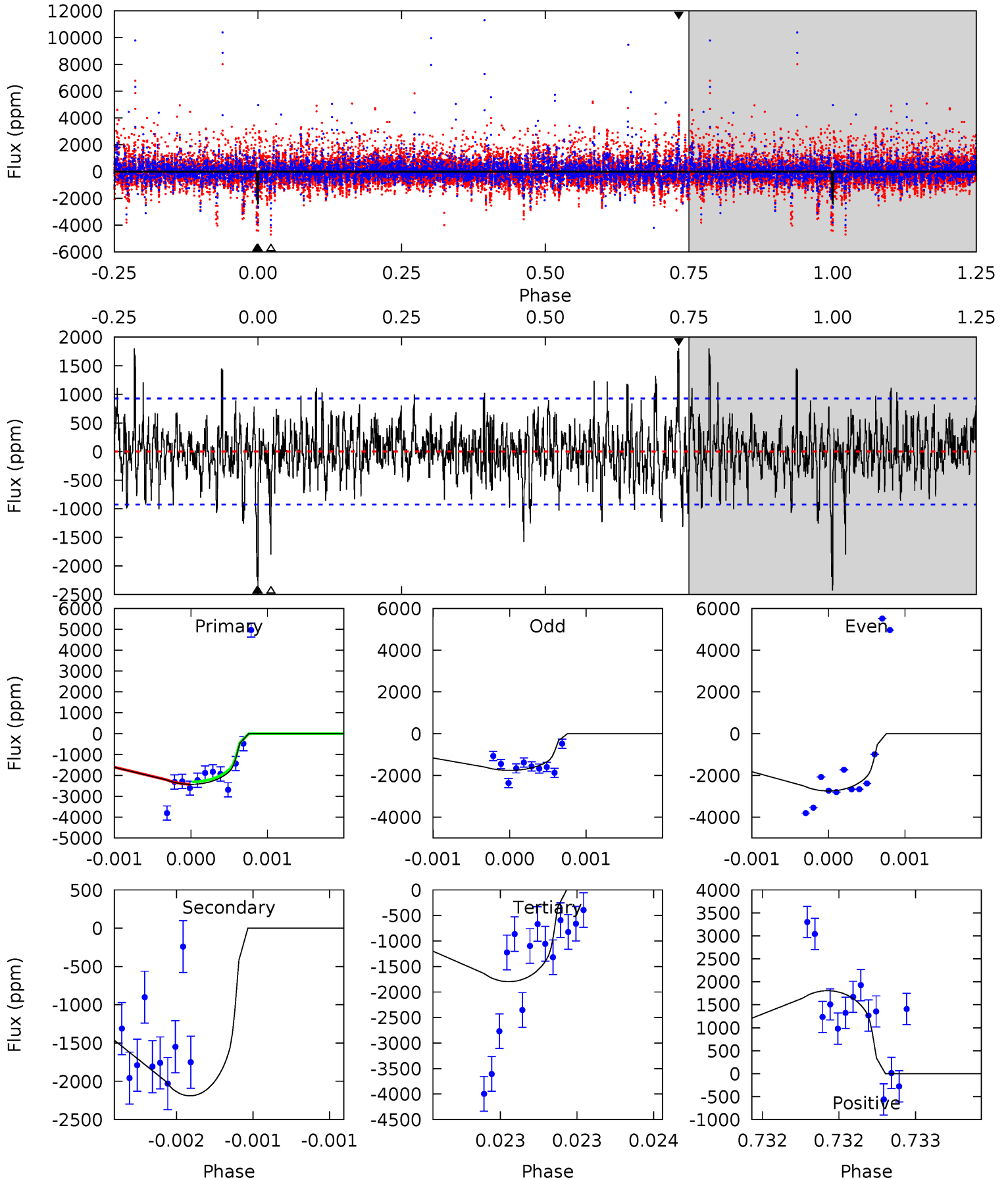
TCE 005739251-02 P=383.272285 Days $T_0=146.433217$ (BKJD)



DV Model-Shift Uniqueness Test

005739251-02, P = 383.240200 Days, E = 146.574993 Days

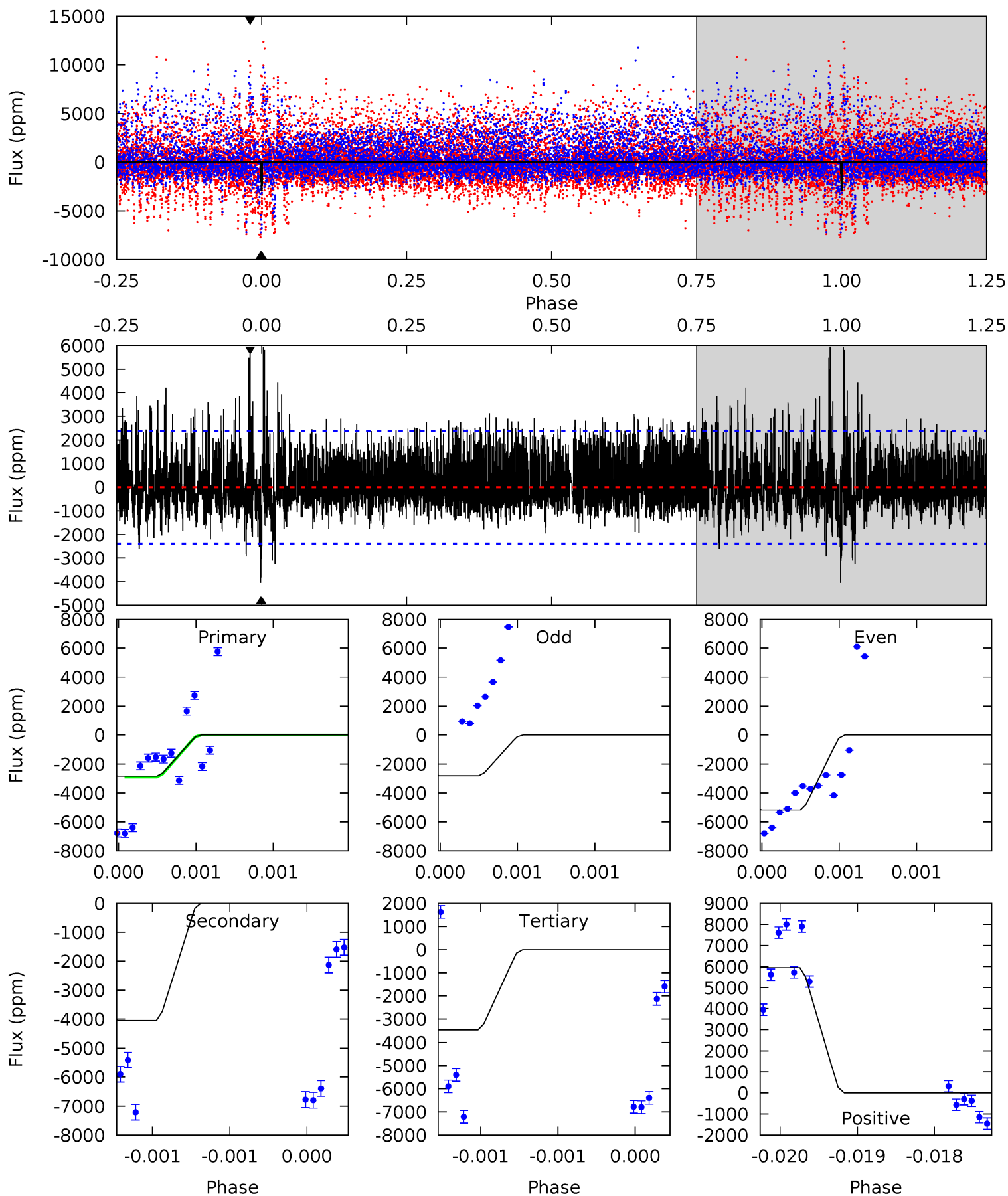
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.5	13.1	10.7	10.8	5.53	3.42	2.38	3.77	3.72	2.34	2.29	1.42	1.30	0.43	0.28



Alt Model-Shift Uniqueness Test

005739251-02, P = 383.272285 Days, E = 146.433217 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.61	9.41	8.04	13.8	5.53	3.42	2.50	-1.43	-7.22	1.37	-4.42	2.65	0.50	0.60	0.00



Stellar Parameters For KIC 005739251

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3963^{+122}_{-150}	$4.652^{+0.060}_{-0.020}$	$0.220^{+0.200}_{-0.300}$	$0.612^{+0.029}_{-0.068}$	$0.613^{+0.041}_{-0.062}$	$3.761^{+1.109}_{-0.369}$
	+3%/-4%	+1%/-0%	+91%/-136%	+5%/-11%	+7%/-10%	+29%/-10%
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 005739251-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-2189 ± 168	$3.53^{+1.39}_{-1.36}$	202^{+7}_{-8}	3786^{+739}_{-413}	$74703^{+126405}_{-36362}$
Alt.	-4047 ± 430	$2.96^{+1.37}_{-1.36}$	202^{+7}_{-8}	4511^{+1398}_{-627}	$198134^{+483741}_{-108175}$

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

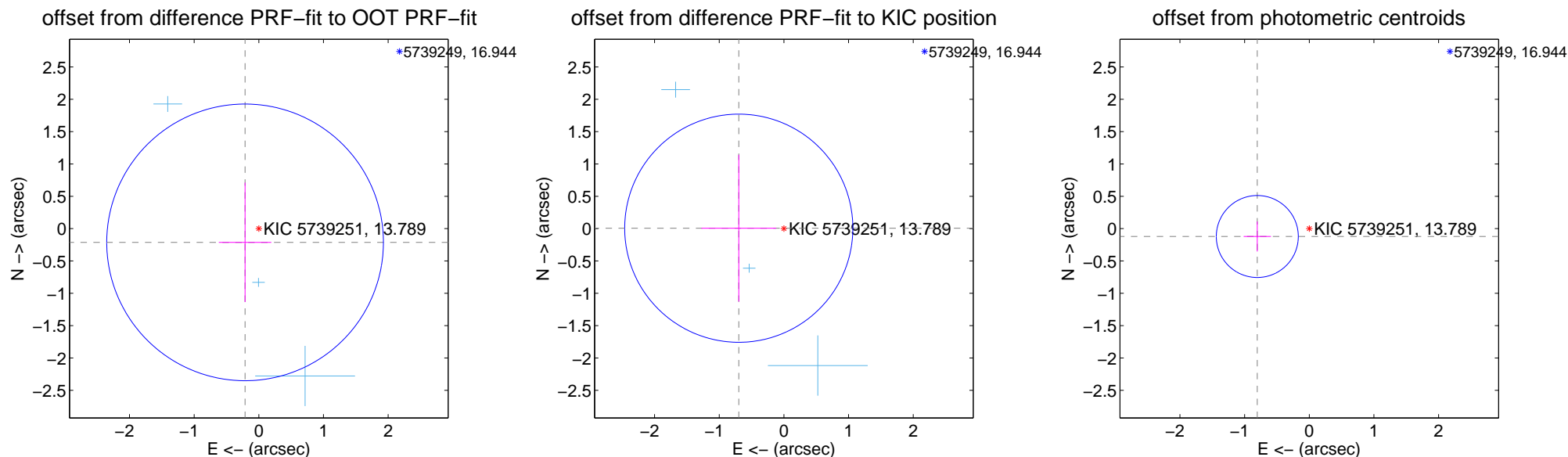
DV Centroid Data

Supplemental centroid analysis for 005739251-02. Kepler magnitude: 13.79. Transit SNR 8.35

There are 3 quarters with good PRF difference image offsets

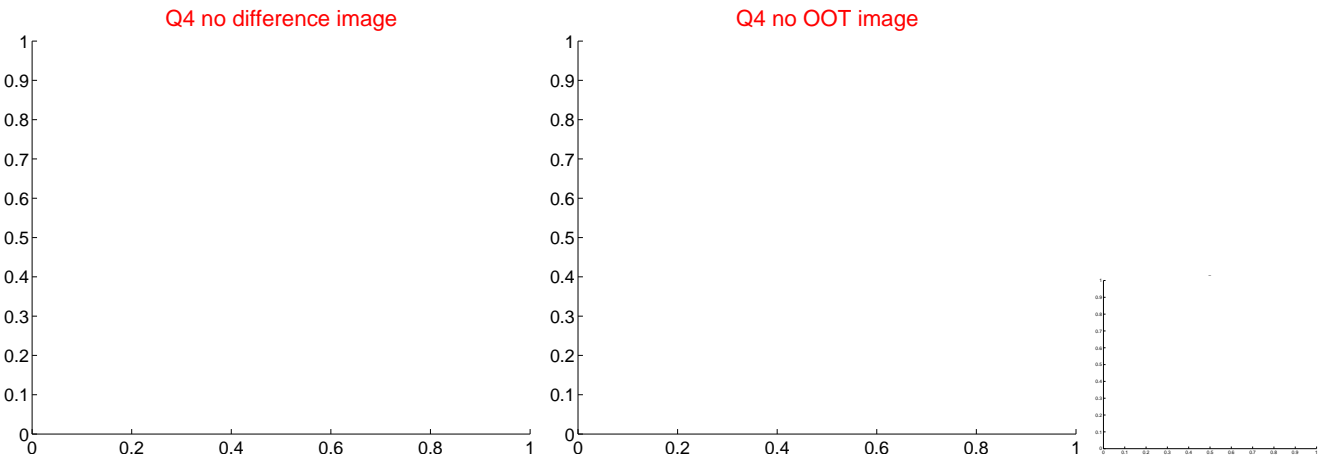
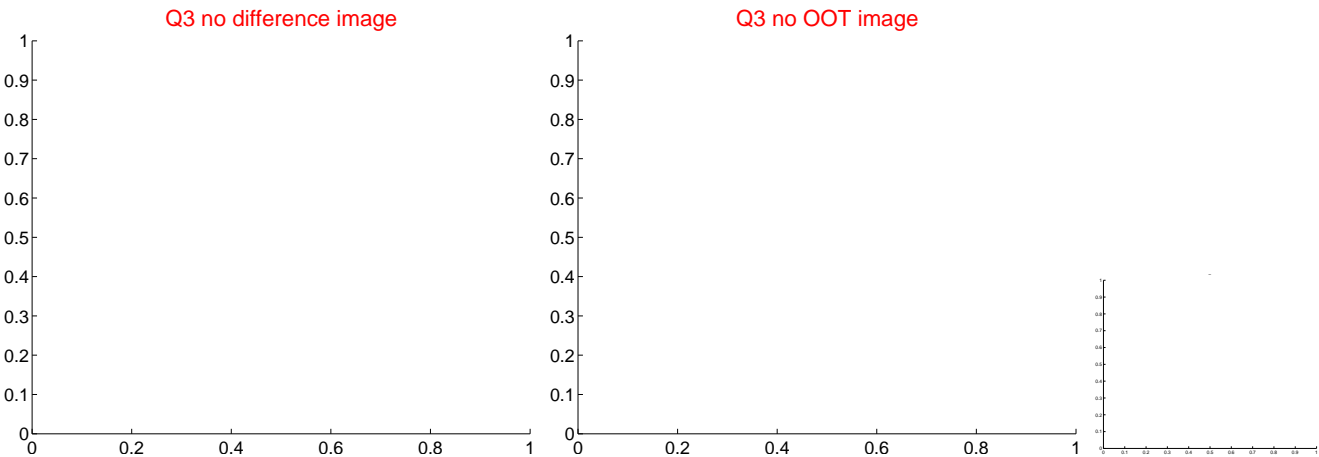
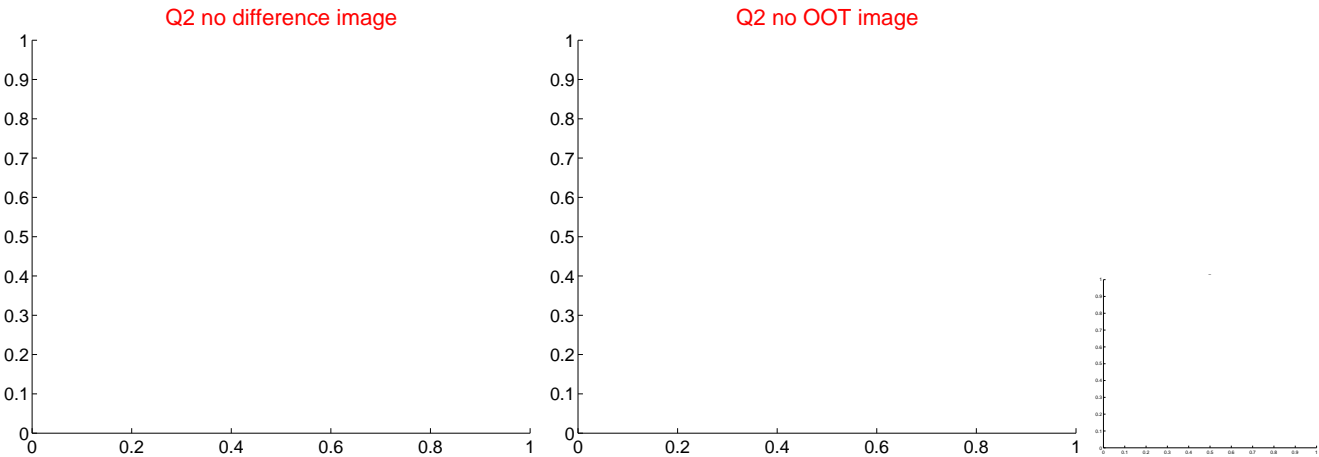
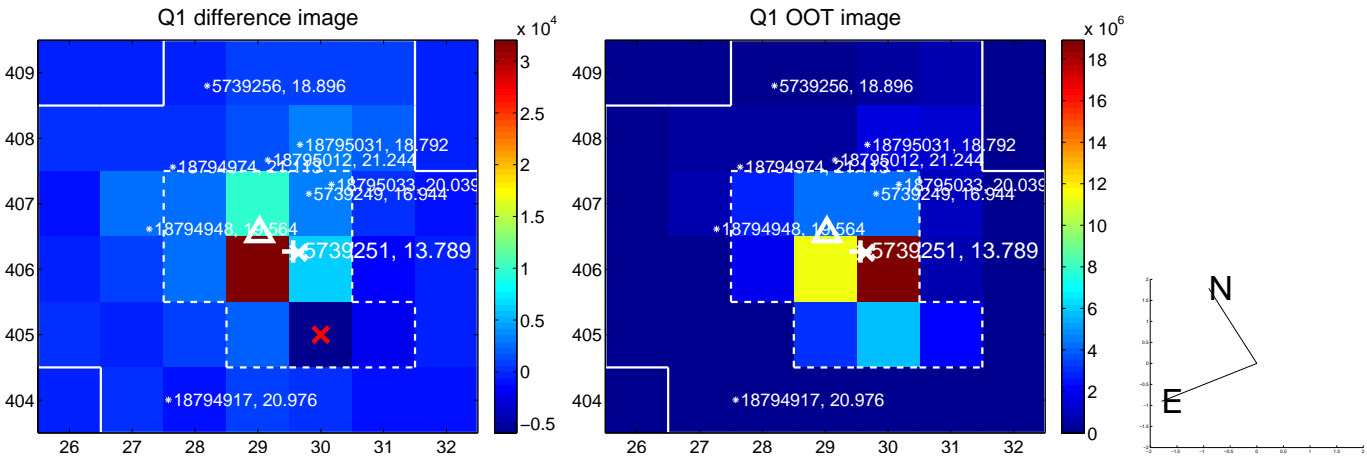
The direct PRF centroid is offset from the target star catalog position by about 0.58 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.301 ± 0.713	0.42	0.213 ± 0.406	-0.212 ± 0.923
PRF-fit source offset from KIC position	0.698 ± 0.588	1.19	0.698 ± 0.578	0.006 ± 1.135
photometric centroid source offset	0.81 ± 0.21	3.85	0.80 ± 0.21	-0.12 ± 0.23

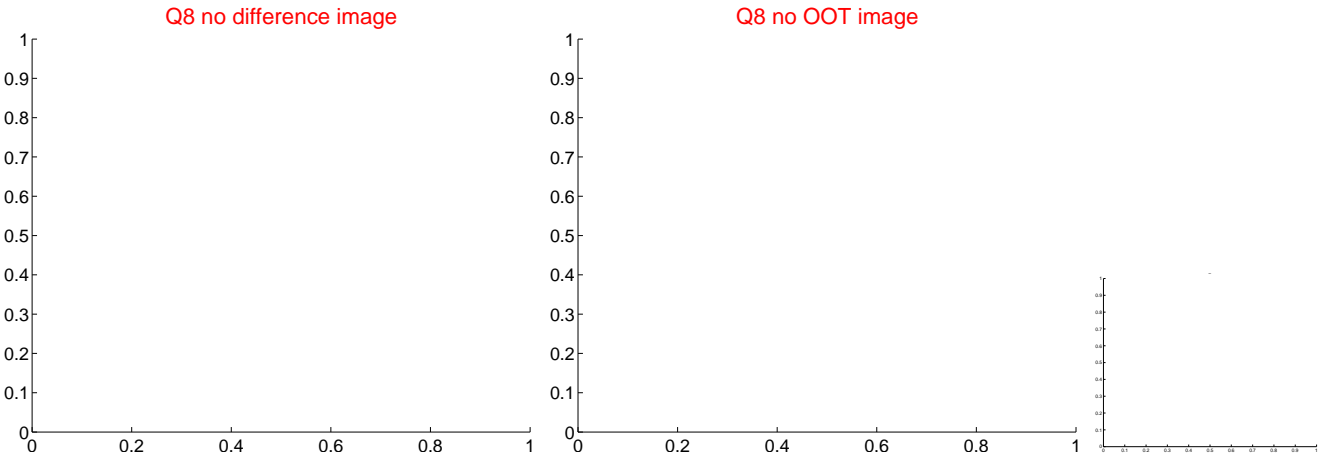
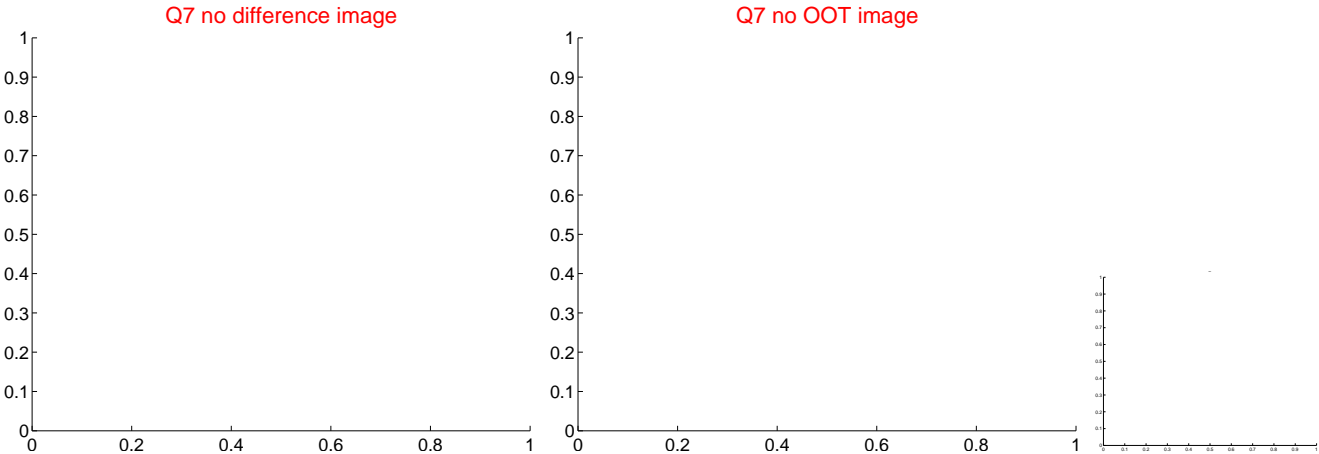
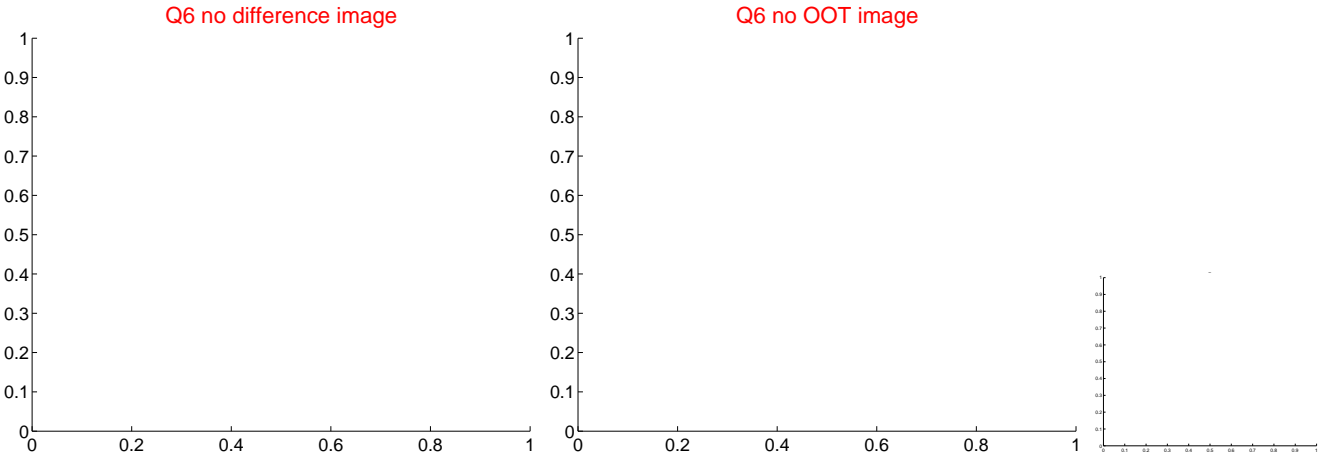
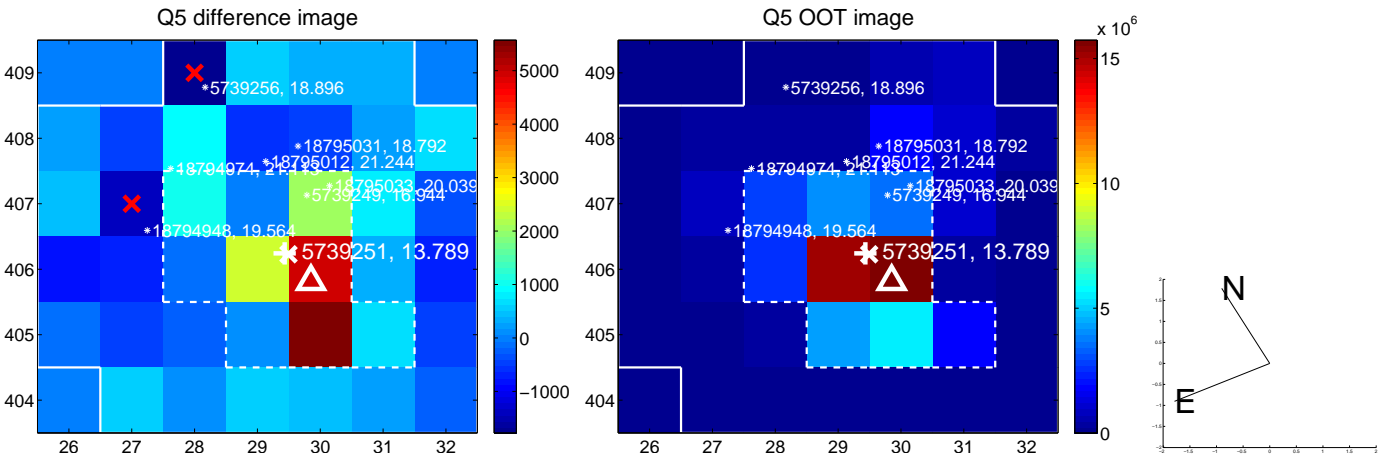


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

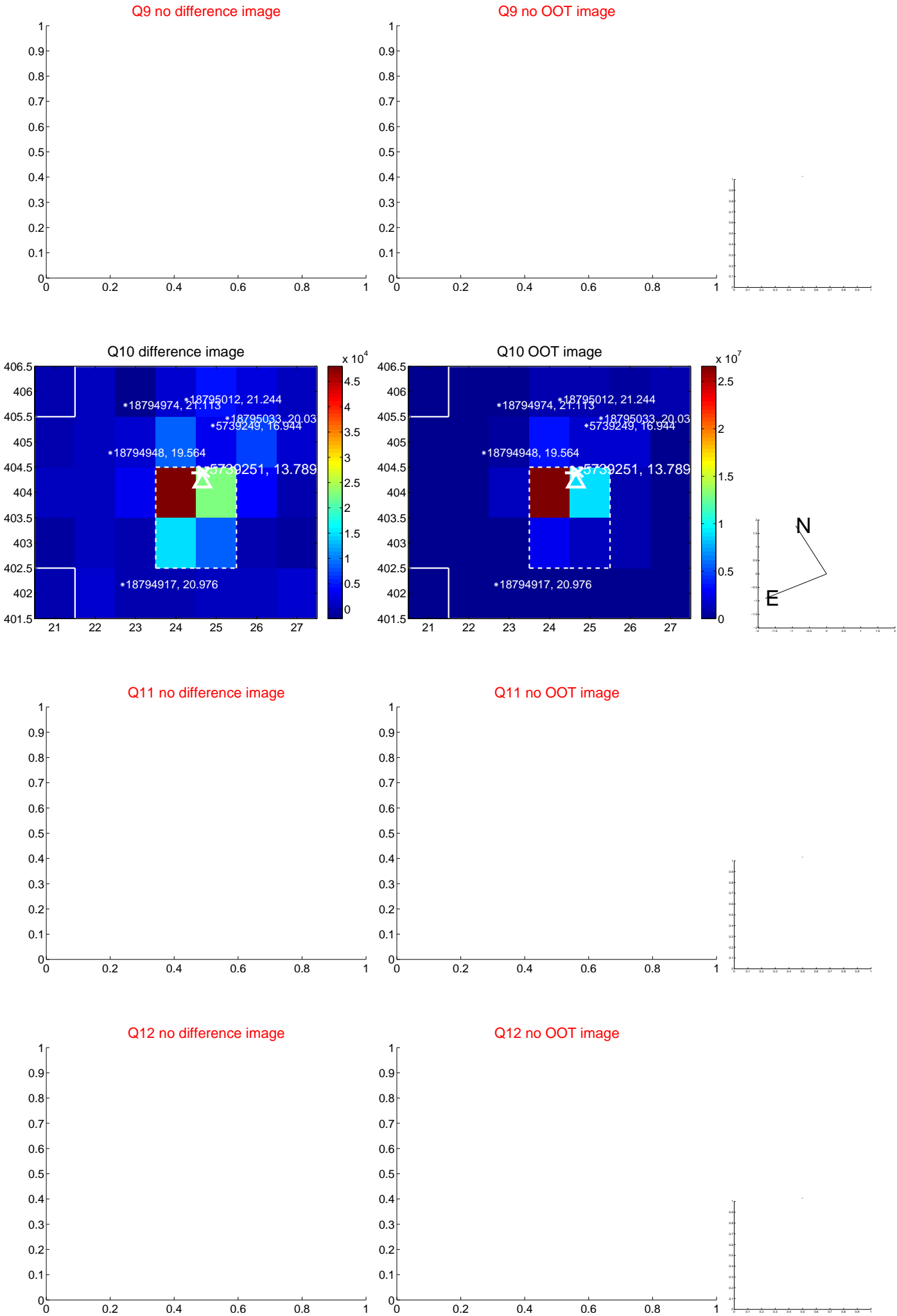
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



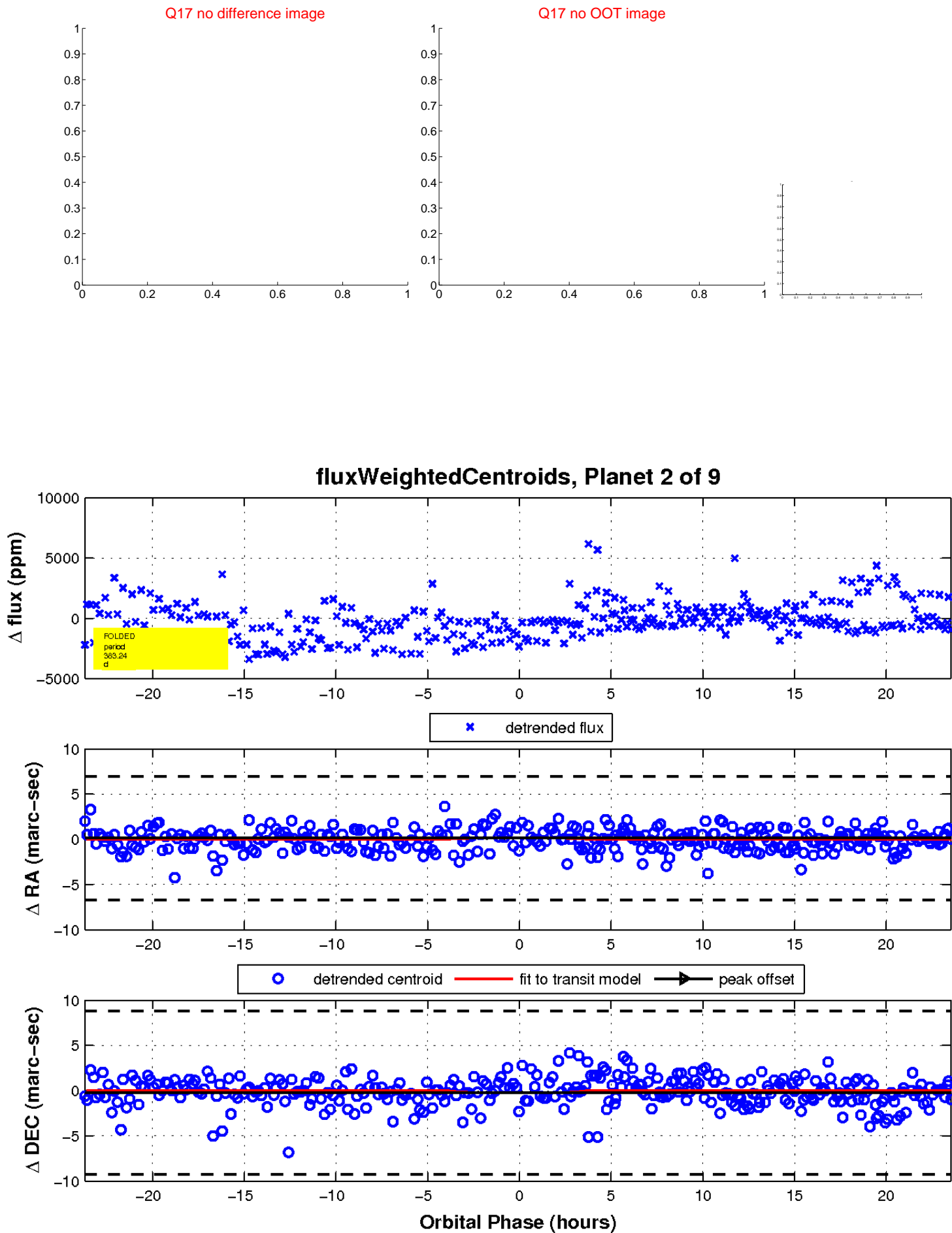
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

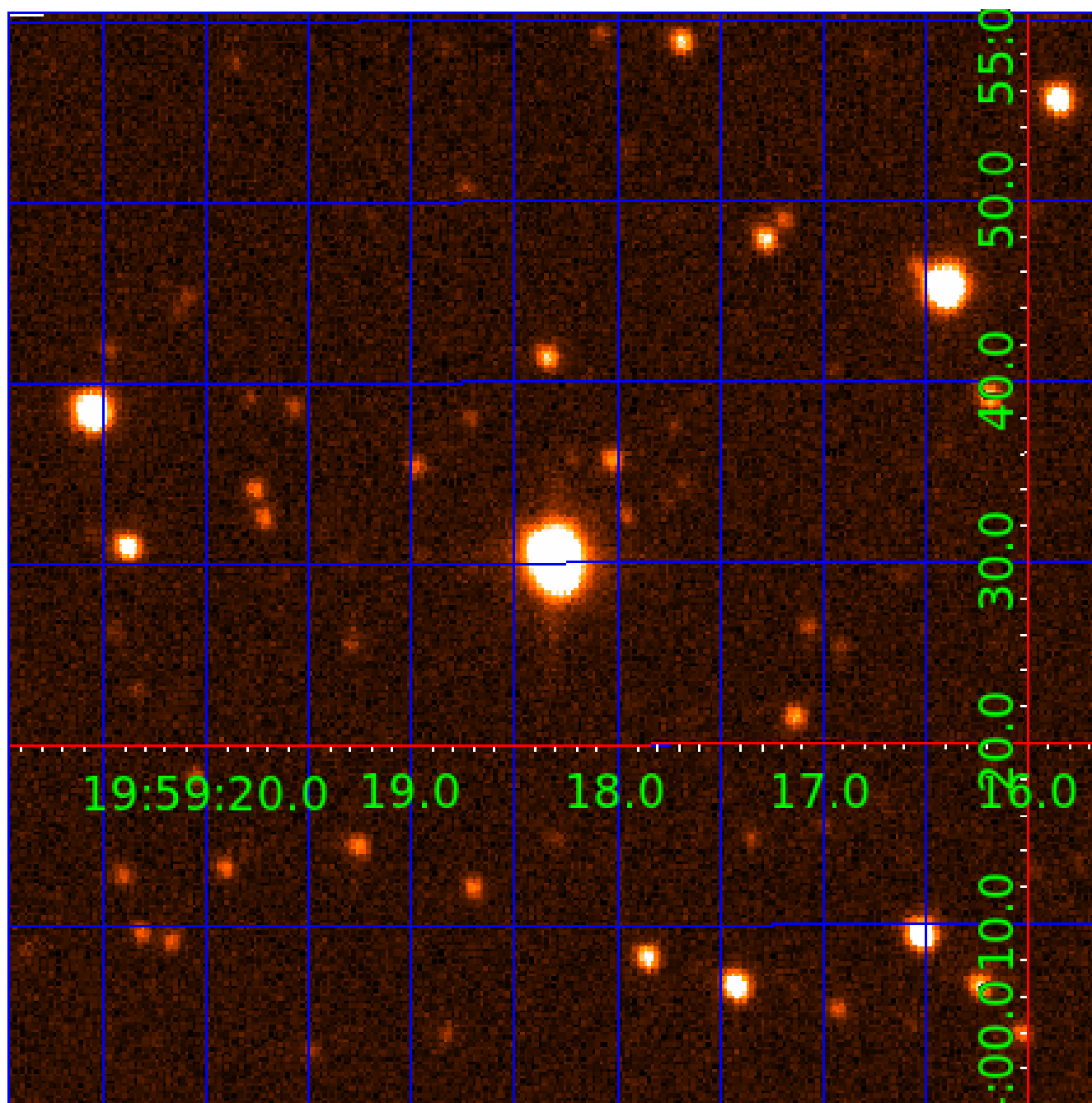


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005739251

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})
005739251-01	OBS	No	0.868952	132.321739	97.9	4.928	12.8	11.5	0.61	3963	0.58	360.99
005739251-02	OBS	No	383.240200	146.574993	3136.4	7.899	12.6	8.4	0.61	3963	3.63	0.11
005739251-03	OBS	No	153.727393	191.466115	1636.0	5.316	10.7	6.8	0.61	3963	2.38	0.36
005739251-05	OBS	No	187.430989	136.366580	2283.0	4.361	8.9	7.1	0.61	3963	3.01	0.28
005739251-06	OBS	No	579.707049	332.511898	3640.5	7.902	10.5	9.4	0.61	3963	3.93	0.06
005739251-07	OBS	No	52.503293	176.046621	997.2	2.000	8.7	-1.0	0.61	3963	1.87	1.52
005739251-08	OBS	No	86.182052	146.239333	997.8	4.648	8.1	5.3	0.61	3963	2.03	0.79
005739251-09	OBS	No	178.650615	149.550422	369.1	9.000	8.8	-1.0	0.61	3963	1.13	0.30

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005739251-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_KIC_POS
005739251-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005739251-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—INCONSISTENT_TRANS
005739251-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005739251-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005739251-07	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
005739251-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_TRACKER—TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_KIC_POS
005739251-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—ALL_TRANS_CHASES—CENT_NOFITS

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

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

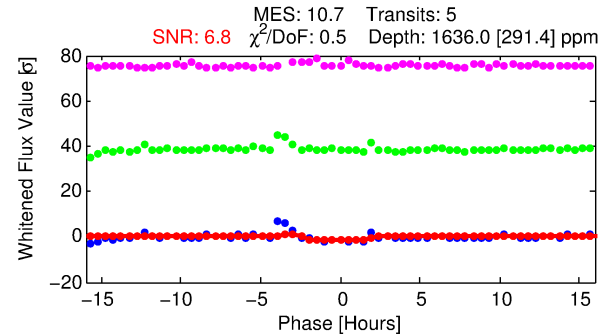
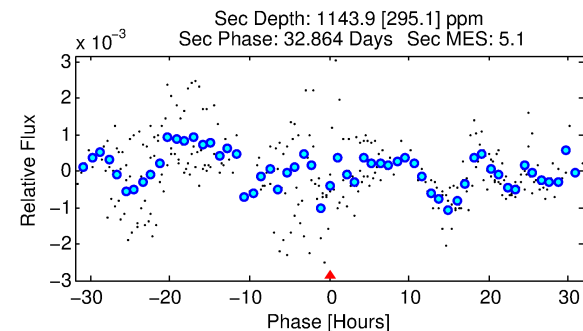
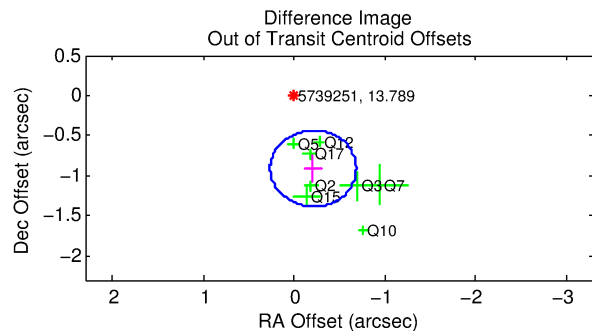
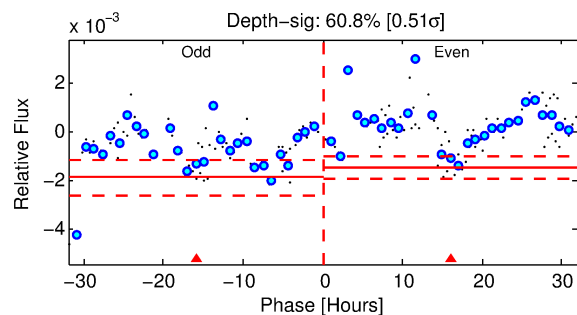
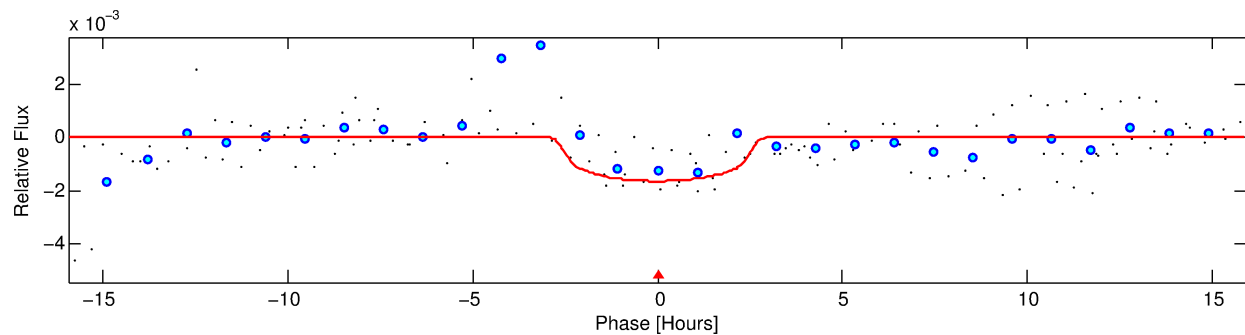
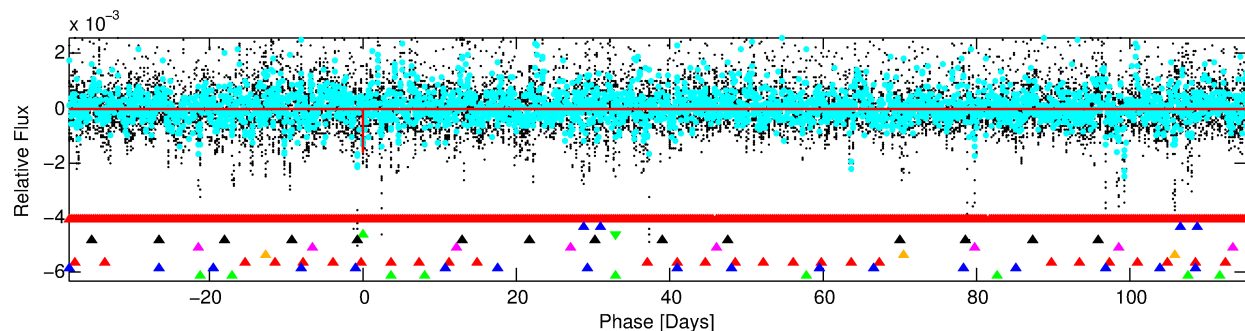
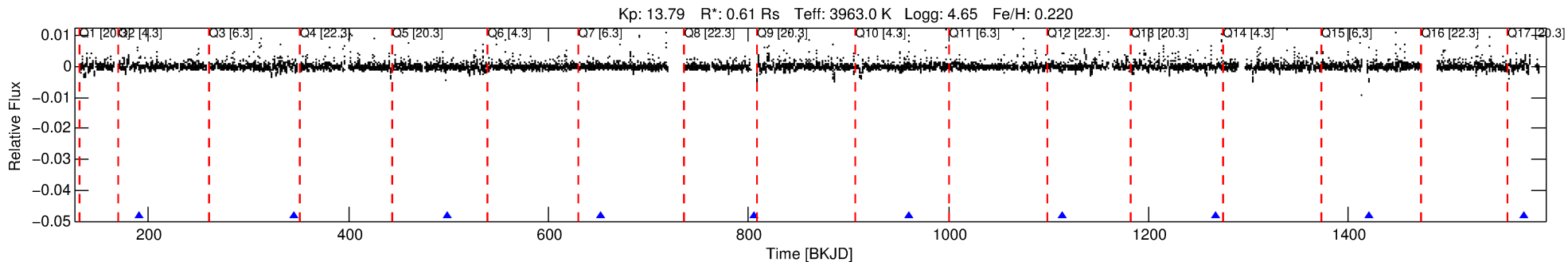
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005739251-03

No Significant Match Found

DV One-Page Summary

KIC: 5739251 Candidate: 3 of 9 Period: 153.727 d



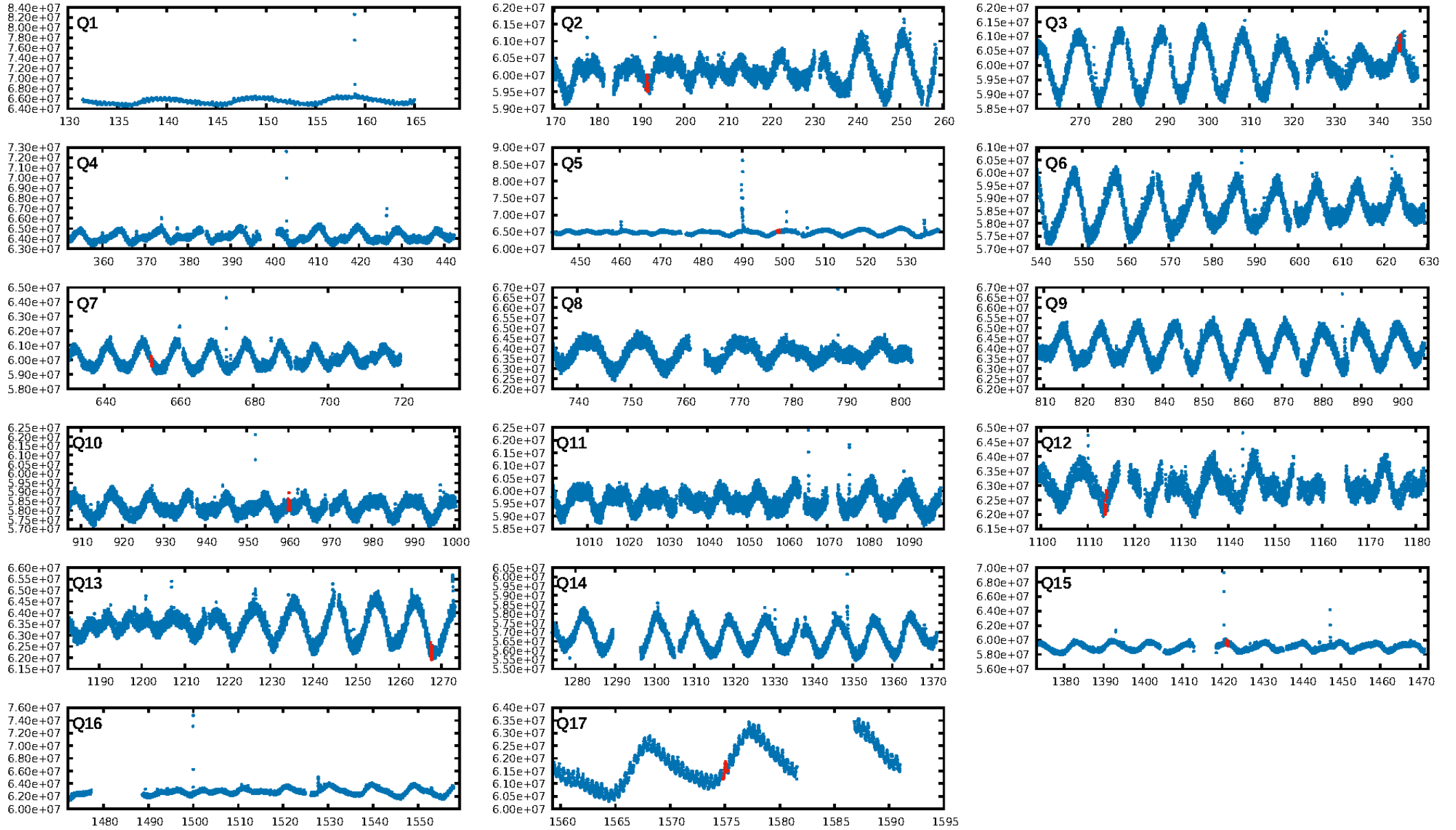
DV Fit Results:

Period = 153.72739 [0.00798] d
Epoch = 191.4661 [0.0511] BKJD
Rp/R* = 0.0357 [0.0555]
a/R* = 228.75 [1127.59]
b = 0.02 [224.35]
Seff = 0.36 [0.07]
Teq = 198 [10] K
Rp = 2.38 [3.72] Re
a = 0.4772 [0.0416] AU
Ag = 25233.75 [78803.35] [0.32σ]
Teffp = 3858 [3014] K [1.21σ]

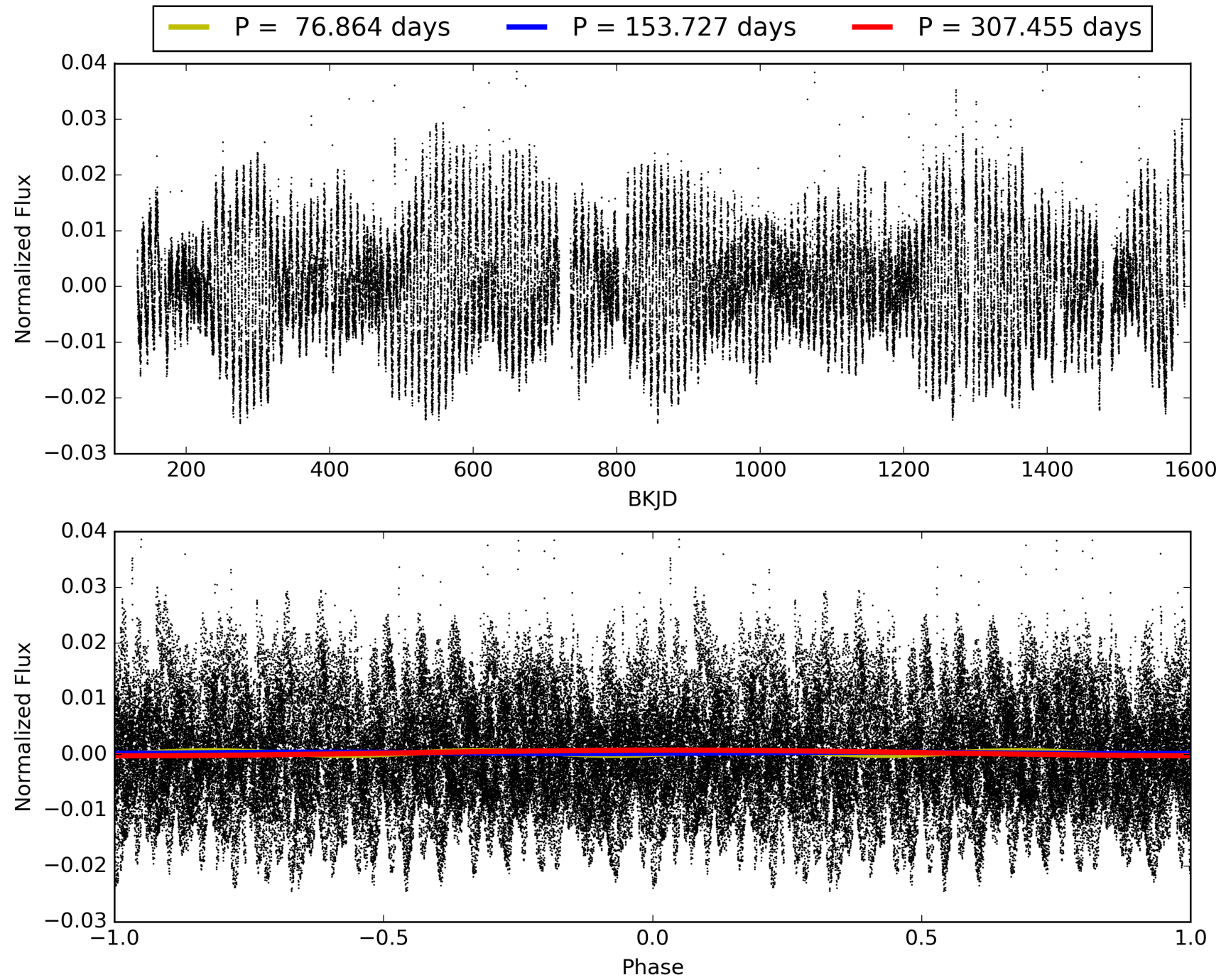
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [126.62σ]
LongPeriod-sig: 100.0% [57.23σ]
ModelChiSquare2-sig: 52.6%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 0.6027
Centroid-sig: 73.6%
Centroid-so: 0.729 arcsec [2.57σ]
OotOffset-rm: 0.934 arcsec [5.90σ]
KicOffset-rm: 0.708 arcsec [5.74σ]
OotOffset-st: 2/3/1/2 [8]
KicOffset-st: 2/3/1/2 [8]
DiffImageQuality-fgm: 0.50 [4/8]
DiffImageOverlap-fno: 0.00 [0/8]

TCE 005739251-03, PDC Light Curves

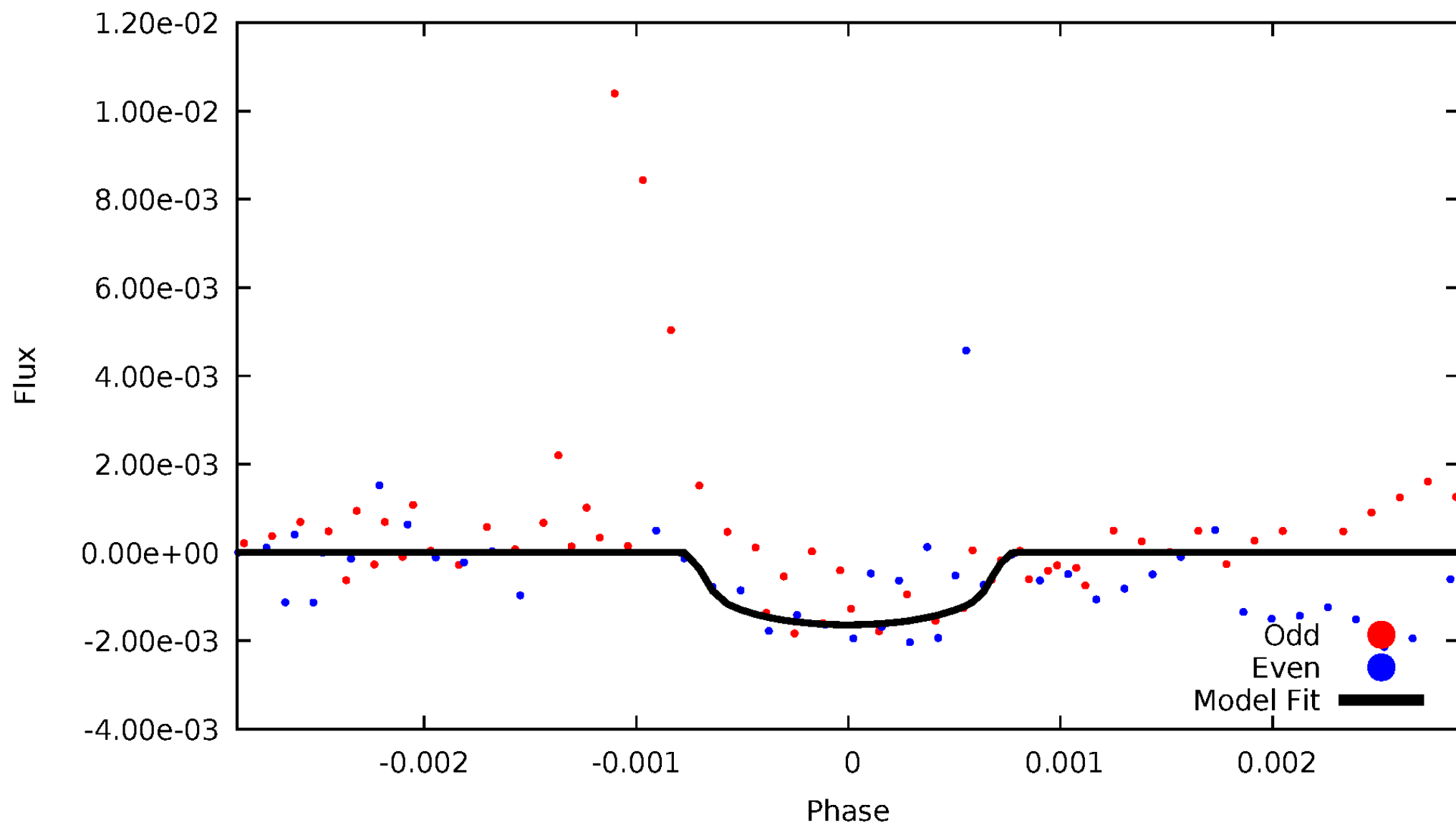


TCE 005739251-03



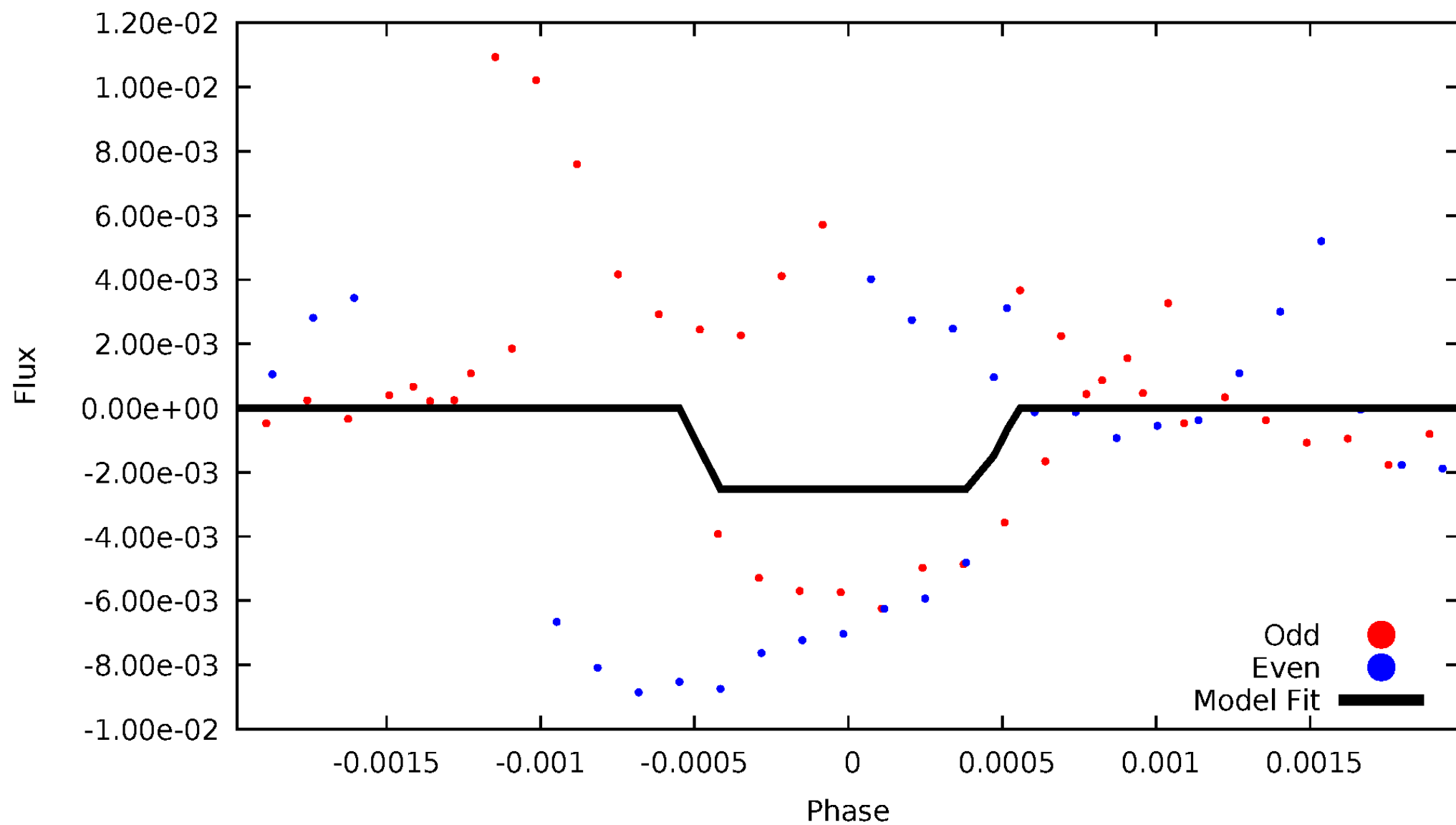
DV Odd/Even

TCE 005739251-03



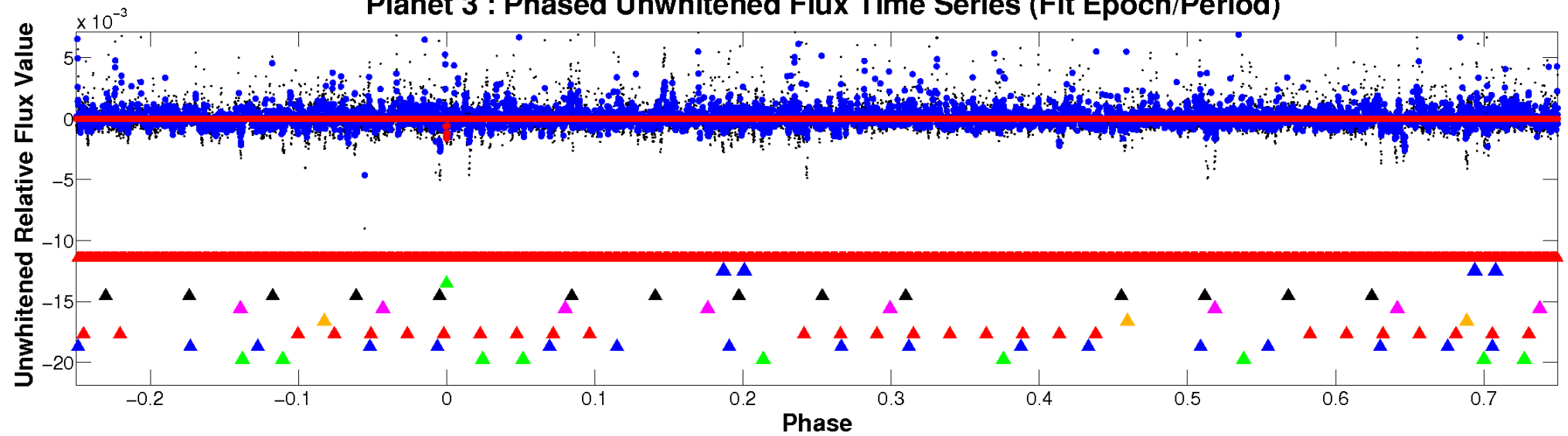
ALT Odd/Even

TCE 005739251-03

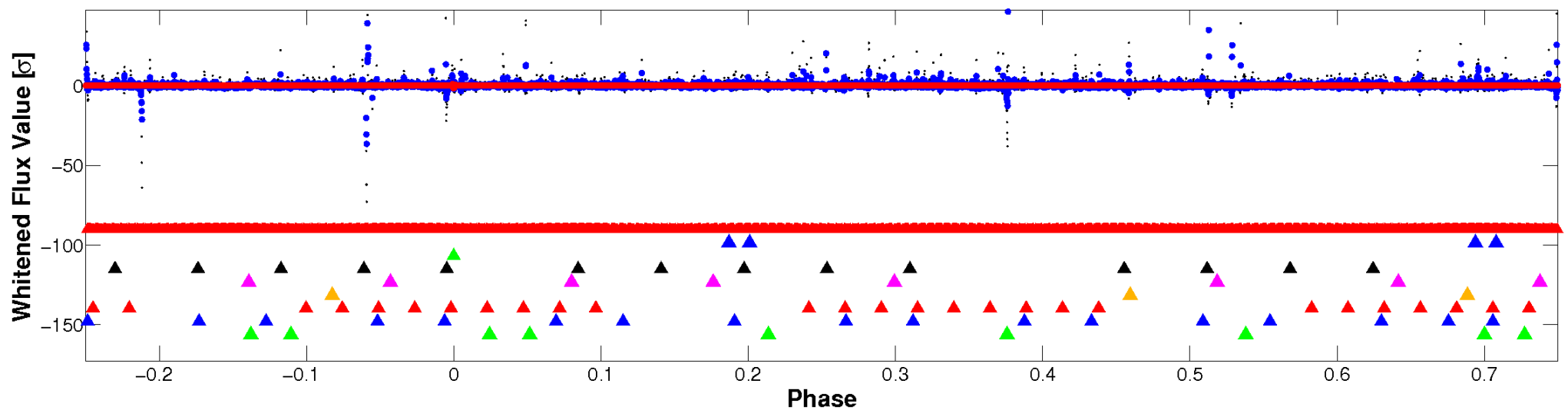


Non-Whitened Vs. Whitened Light Curve

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

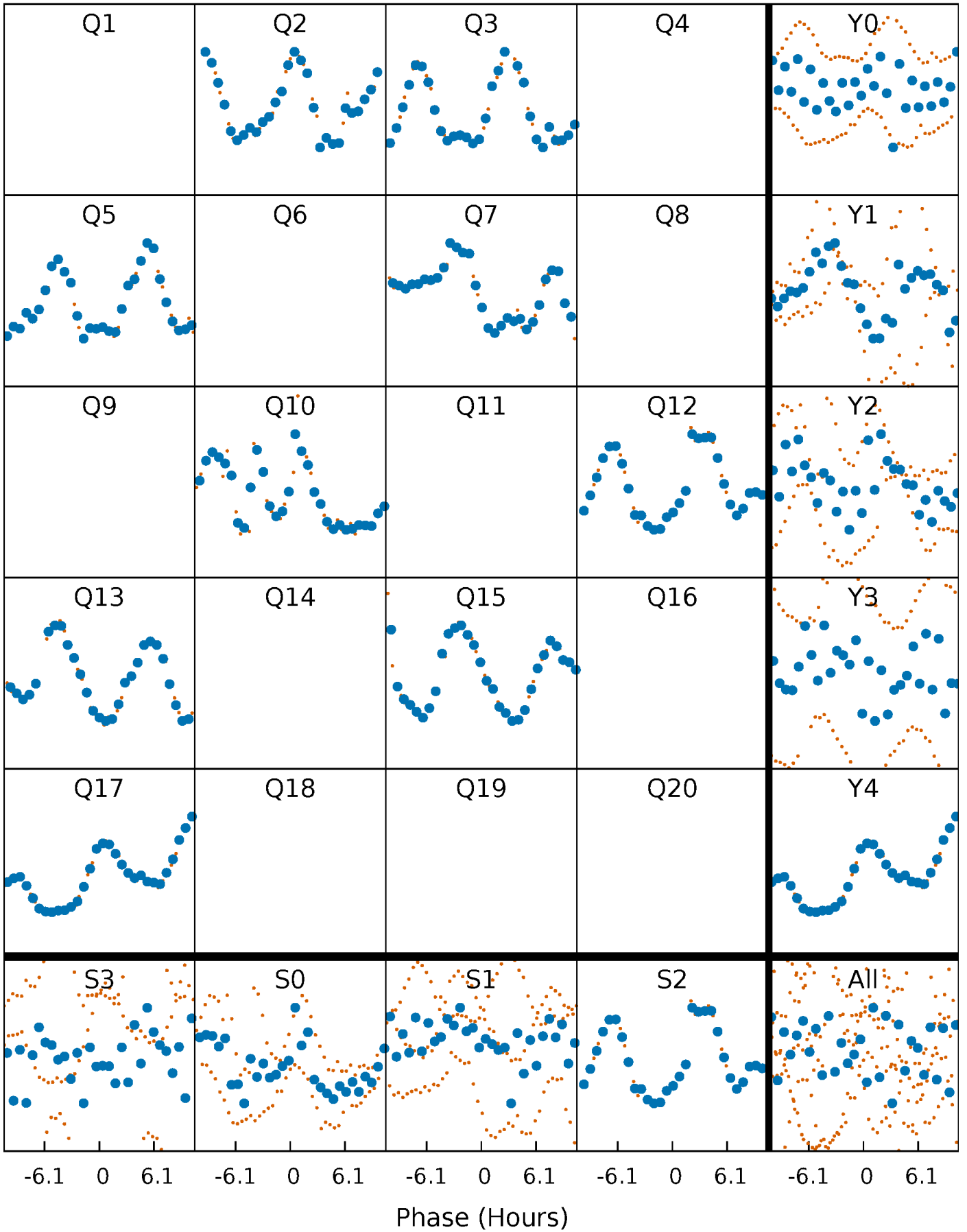


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



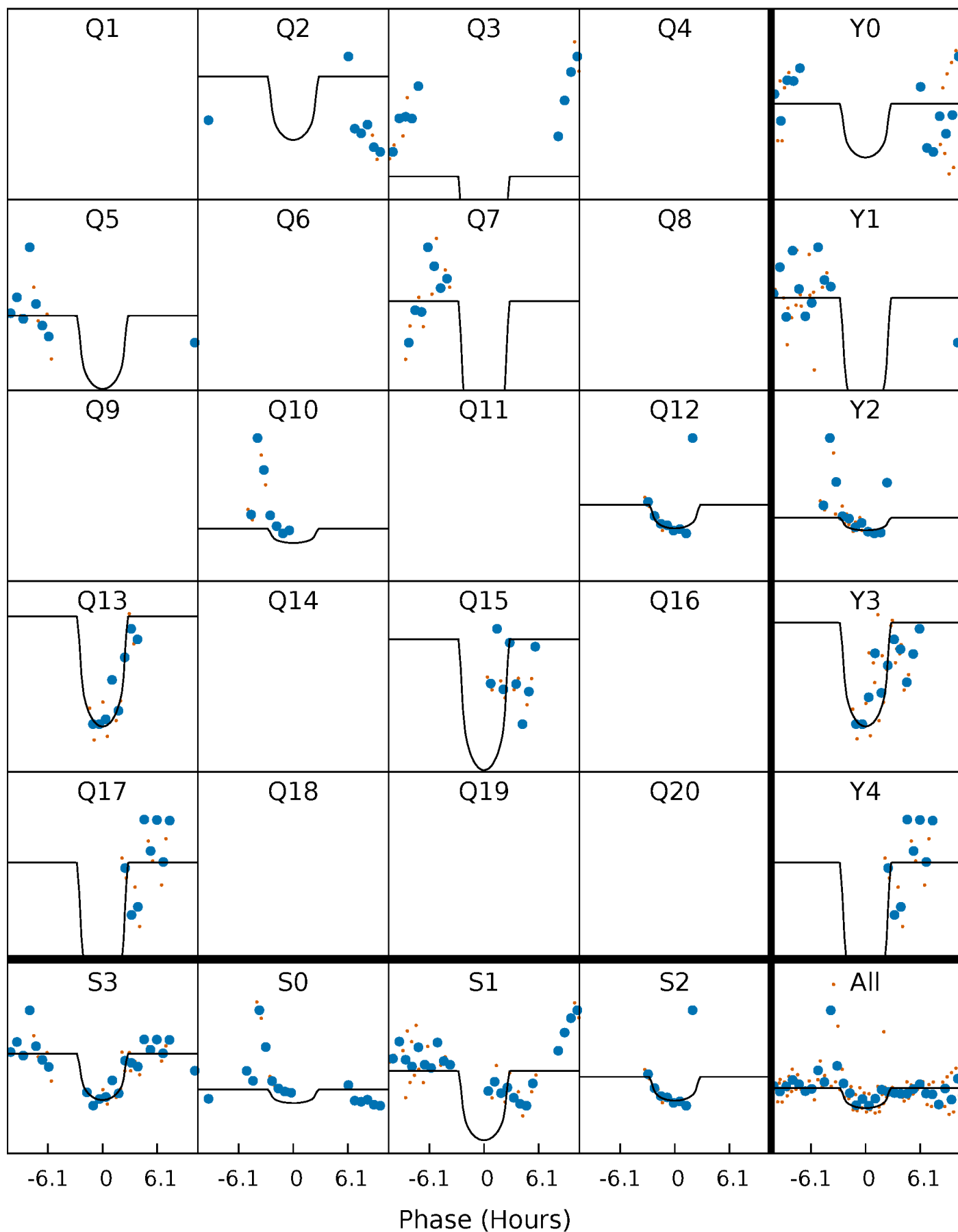
PDC Quarter-Phased Transit Curves

TCE 005739251-03 P=153.727394 Days $T_0=191.466115$ (BKJD)



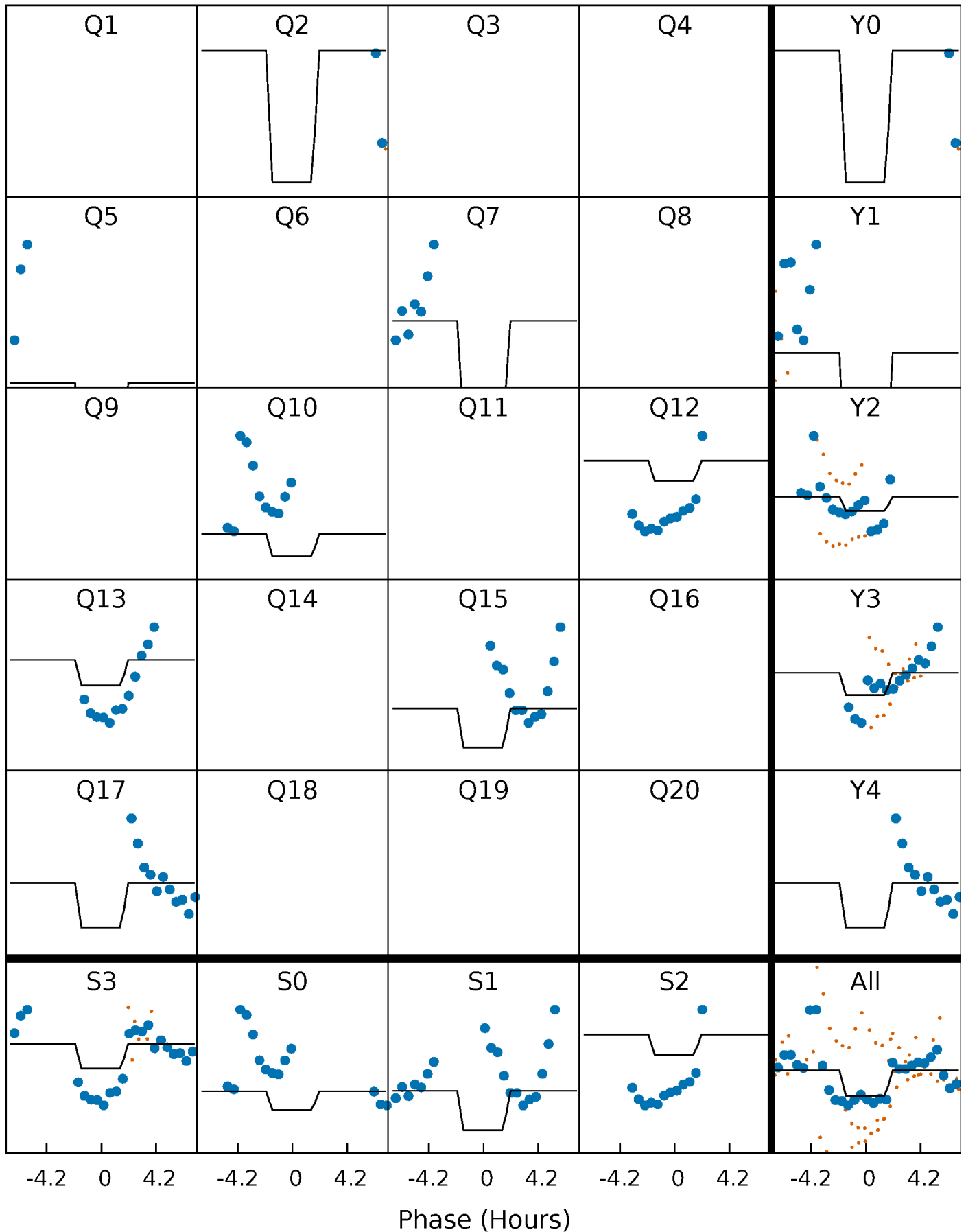
DV Quarter-Phased Transit Curves

TCE 005739251-03 P=153.727394 Days $T_0=191.466115$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

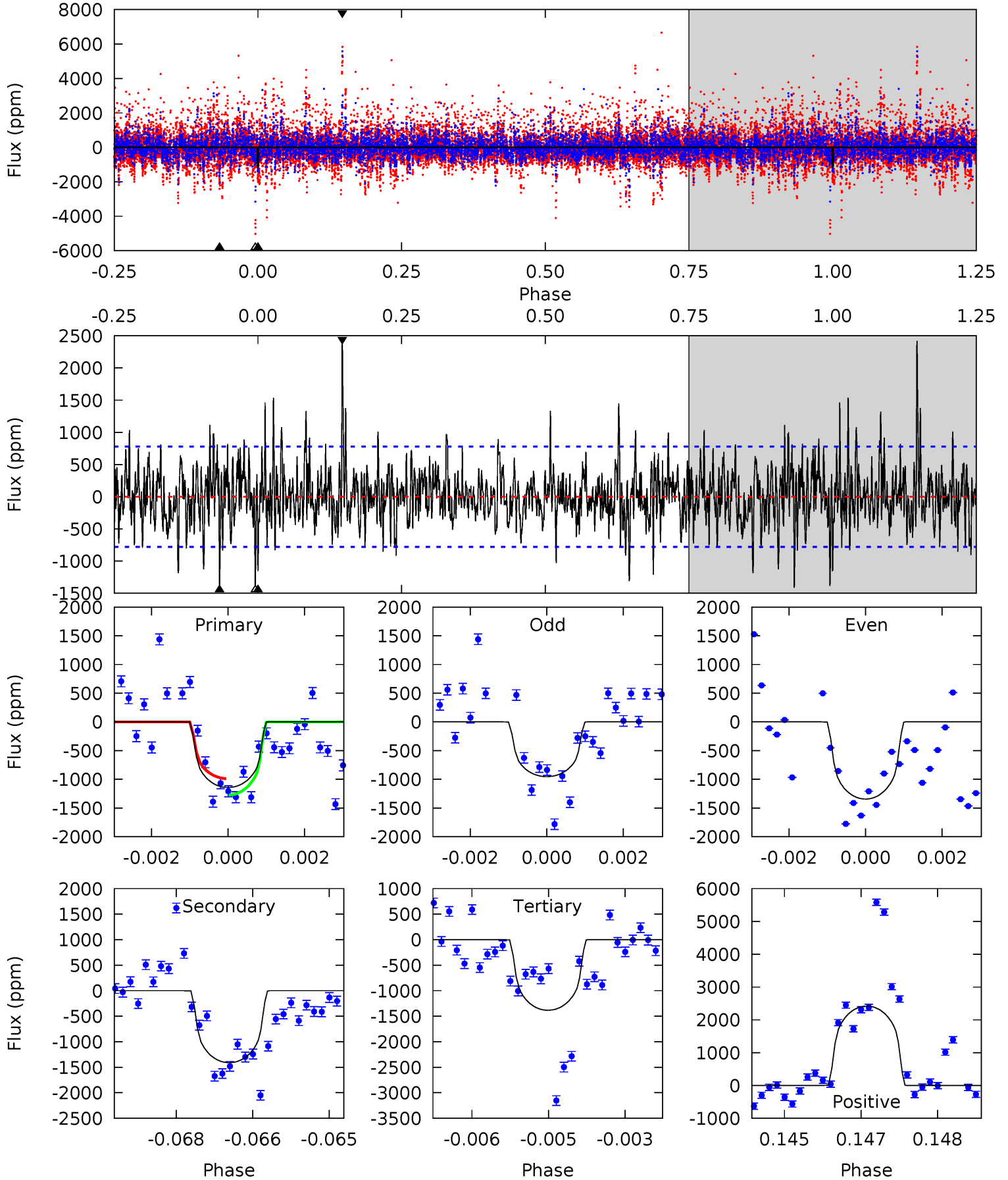
TCE 005739251-03 P=153.726744 Days $T_0=191.476275$ (BKJD)



DV Model-Shift Uniqueness Test

005739251-03, P = 153.727394 Days, E = 37.738721 Days

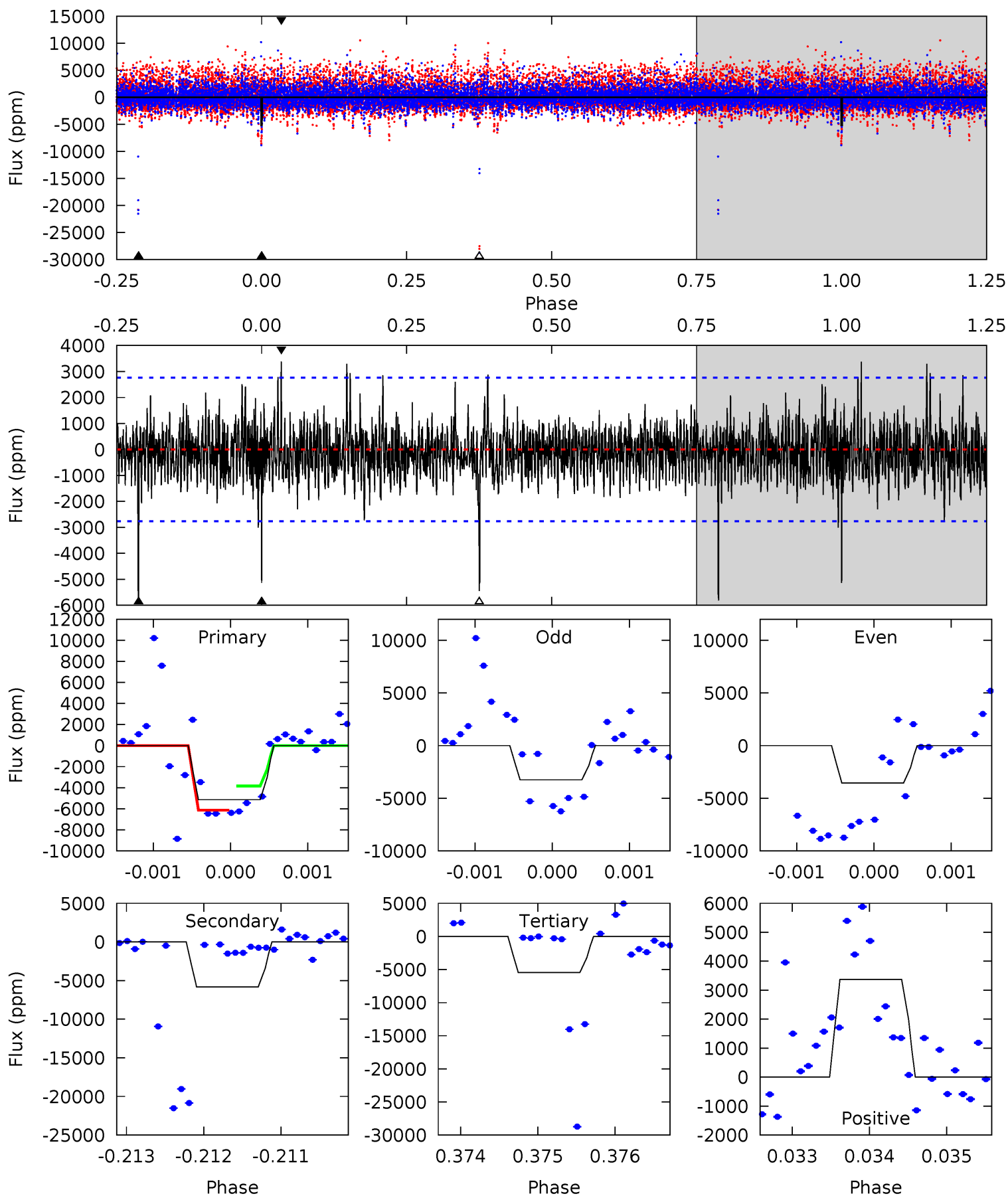
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.87	9.72	9.53	16.7	5.37	3.17	2.49	-1.66	-8.79	0.19	-6.95	0.45	1.35	0.63	0.99



Alt Model-Shift Uniqueness Test

005739251-03, P = 153.726744 Days, E = 37.749531 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.1	11.5	10.8	6.66	5.45	3.29	1.50	-0.62	3.48	0.71	4.81	0.32	1.01	0.37	2.31



Stellar Parameters For KIC 005739251

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3963^{+122}_{-150}	$4.652^{+0.060}_{-0.020}$	$0.220^{+0.200}_{-0.300}$	$0.612^{+0.029}_{-0.068}$	$0.613^{+0.041}_{-0.062}$	$3.761^{+1.109}_{-0.369}$
	+3%/-4%	+1%/-0%	+91%/-136%	+5%/-11%	+7%/-10%	+29%/-10%
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 005739251-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1411 ± 145	$3.50^{+2.93}_{-2.31}$	274^{+10}_{-11}	3526^{+1658}_{-601}	$14371^{+109764}_{-10111}$
Alt.	-5810 ± 507	$4.19^{+3.32}_{-2.65}$	275^{+10}_{-12}	4208^{+2129}_{-742}	$40910^{+253132}_{-27361}$

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 $A_{obs} \gg 1.0$

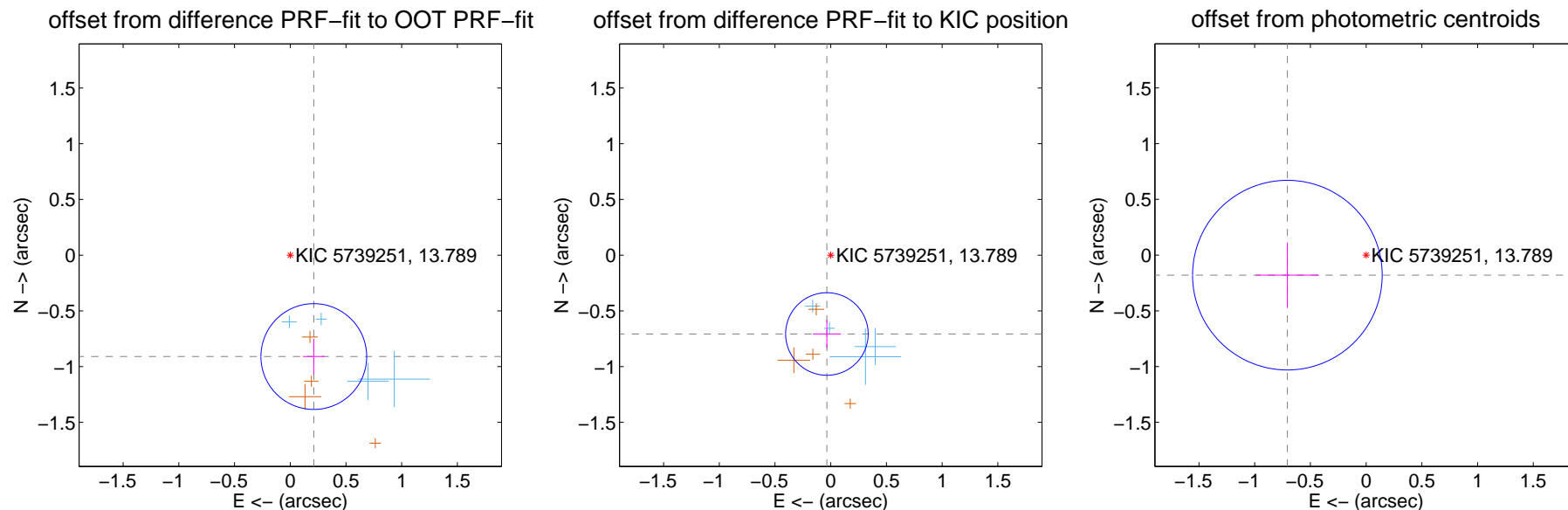
DV Centroid Data

Supplemental centroid analysis for 005739251-03. Kepler magnitude: 13.79. Transit SNR 6.79

There are 4 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.40 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.934 ± 0.158	5.90	-0.211 ± 0.098	-0.910 ± 0.161
PRF-fit source offset from KIC position	0.708 ± 0.124	5.74	0.034 ± 0.125	-0.708 ± 0.125
photometric centroid source offset	0.73 ± 0.28	2.57	0.71 ± 0.28	-0.18 ± 0.29



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.

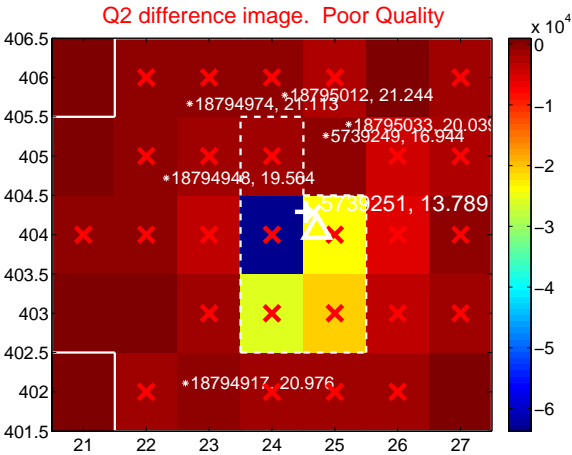
Q1 no difference image



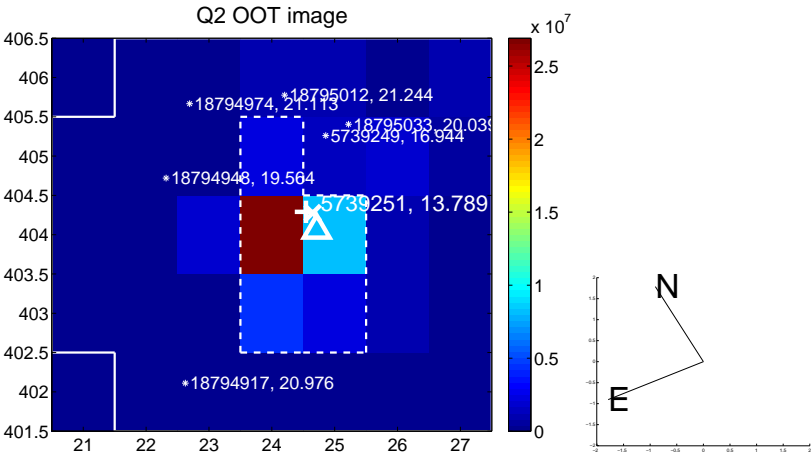
Q1 no OOT image



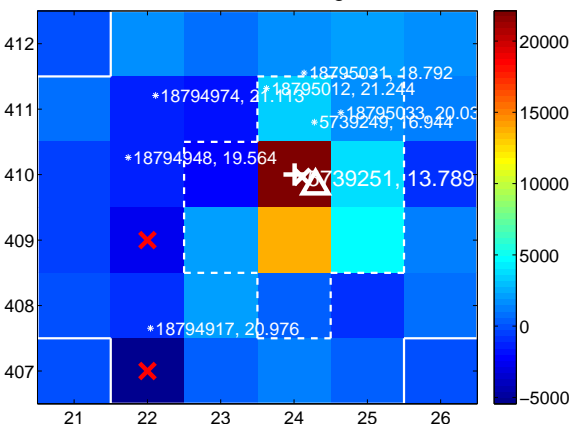
Q2 difference image. Poor Quality



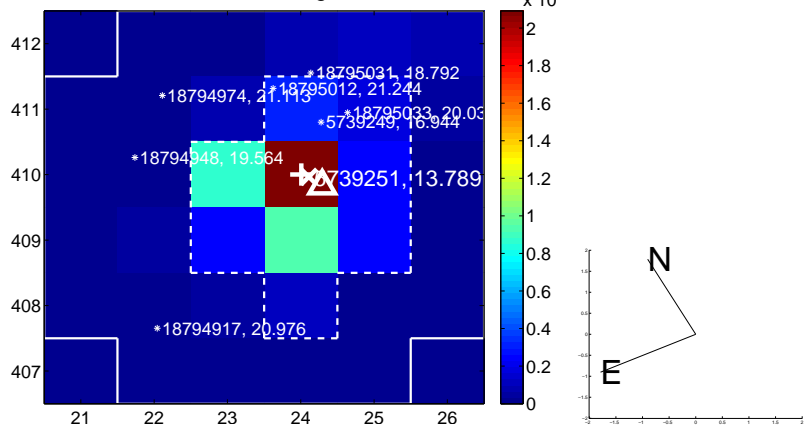
Q2 OOT image



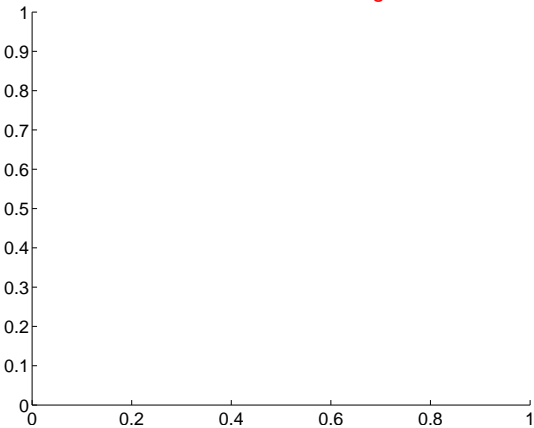
Q3 difference image



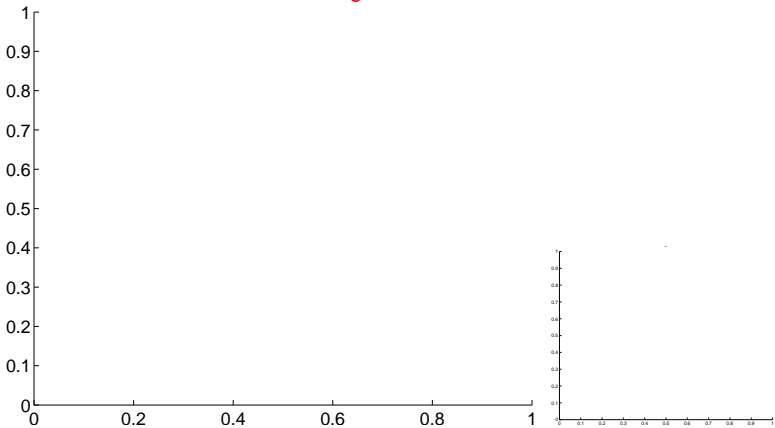
Q3 OOT image



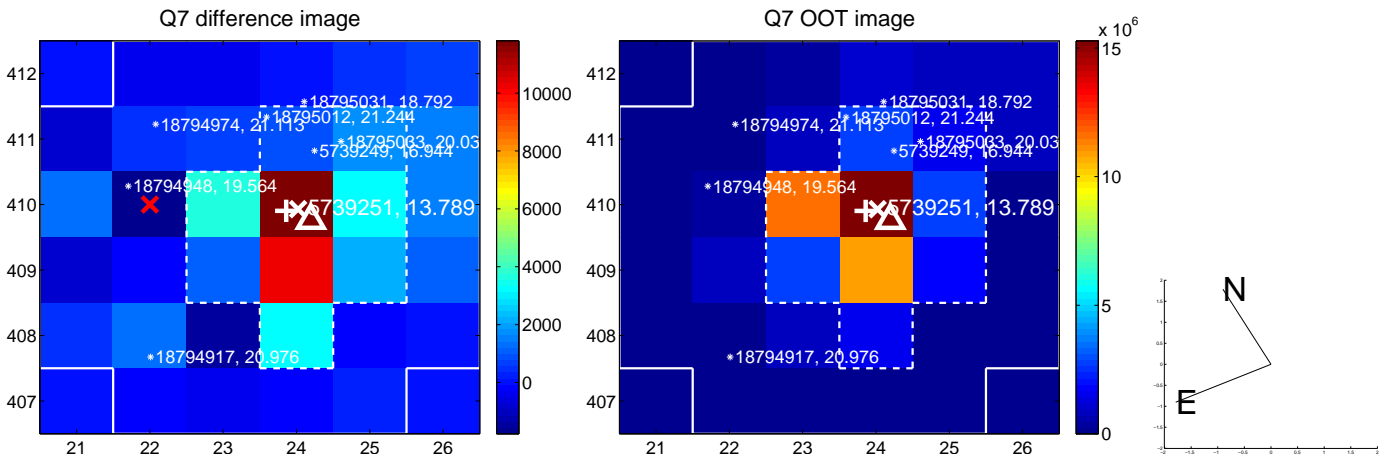
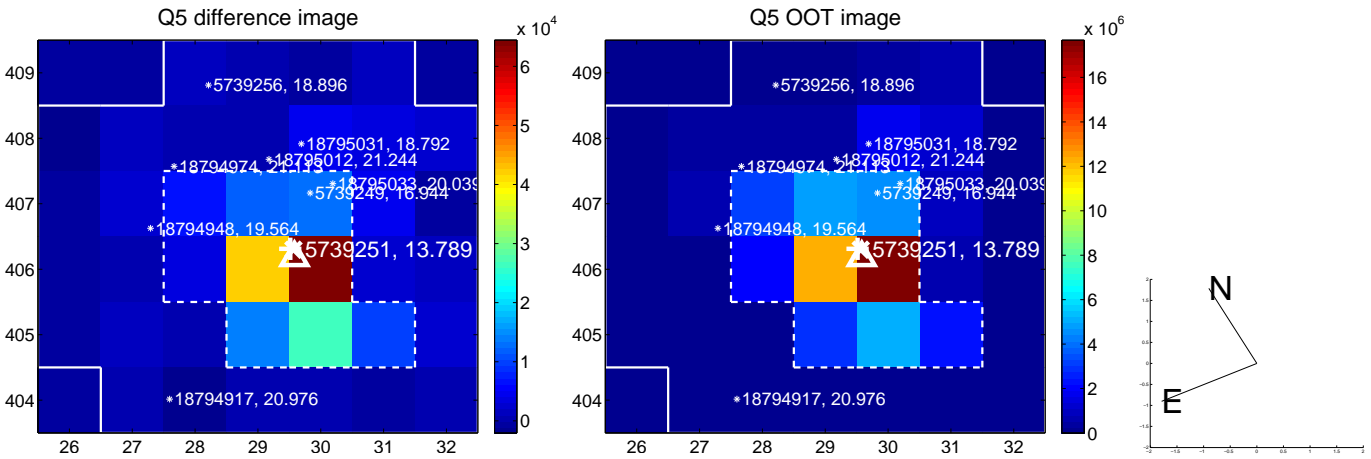
Q4 no difference image



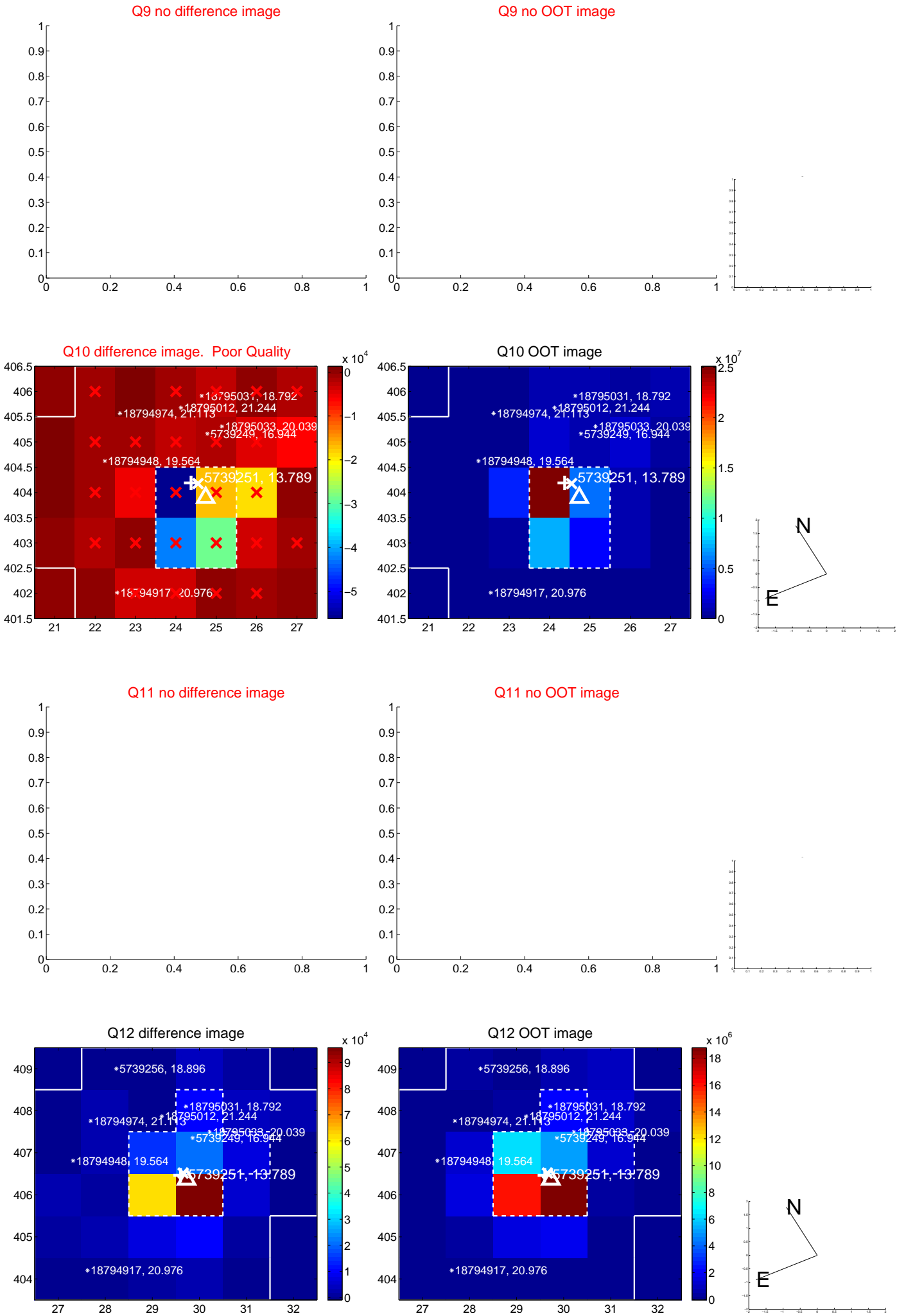
Q4 no OOT image



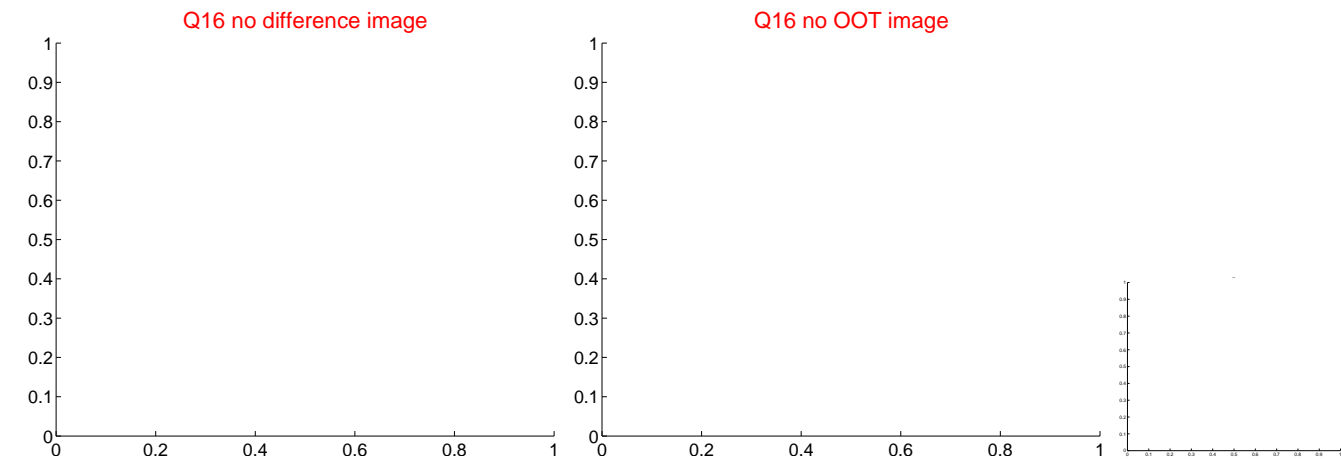
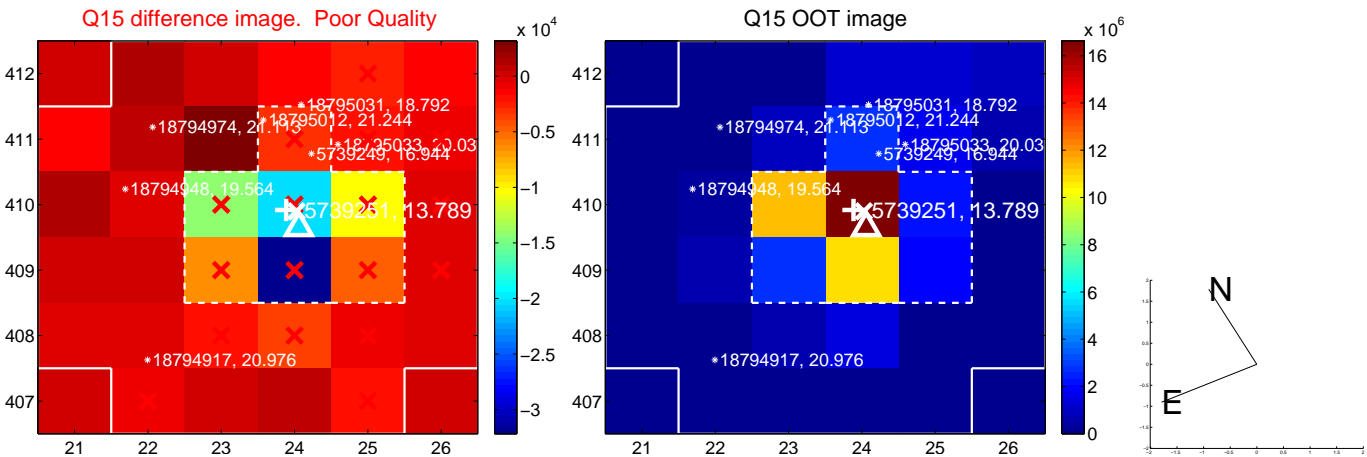
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



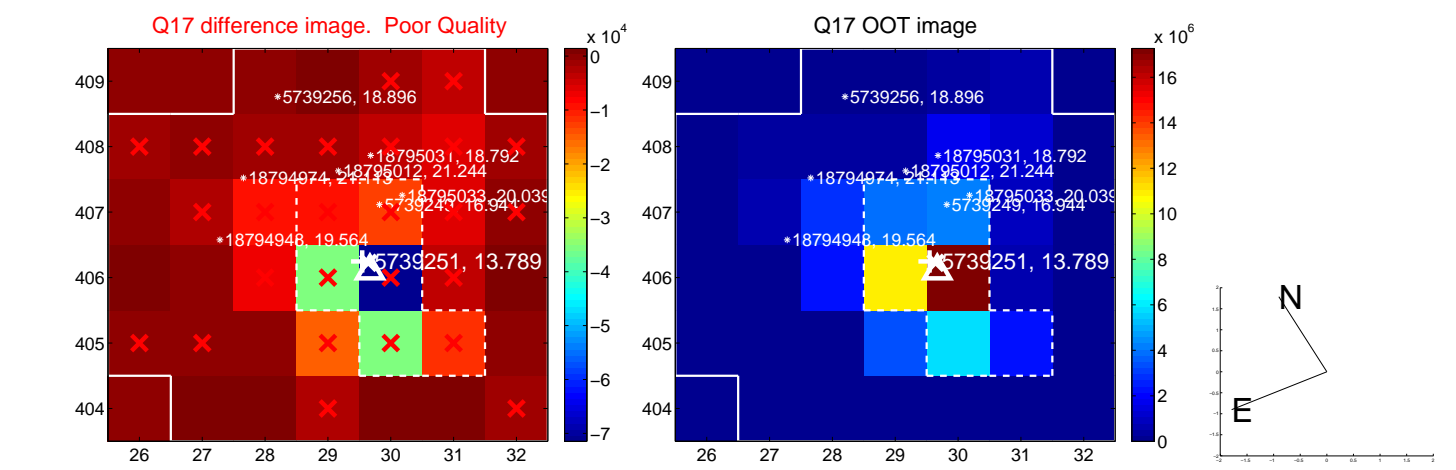
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



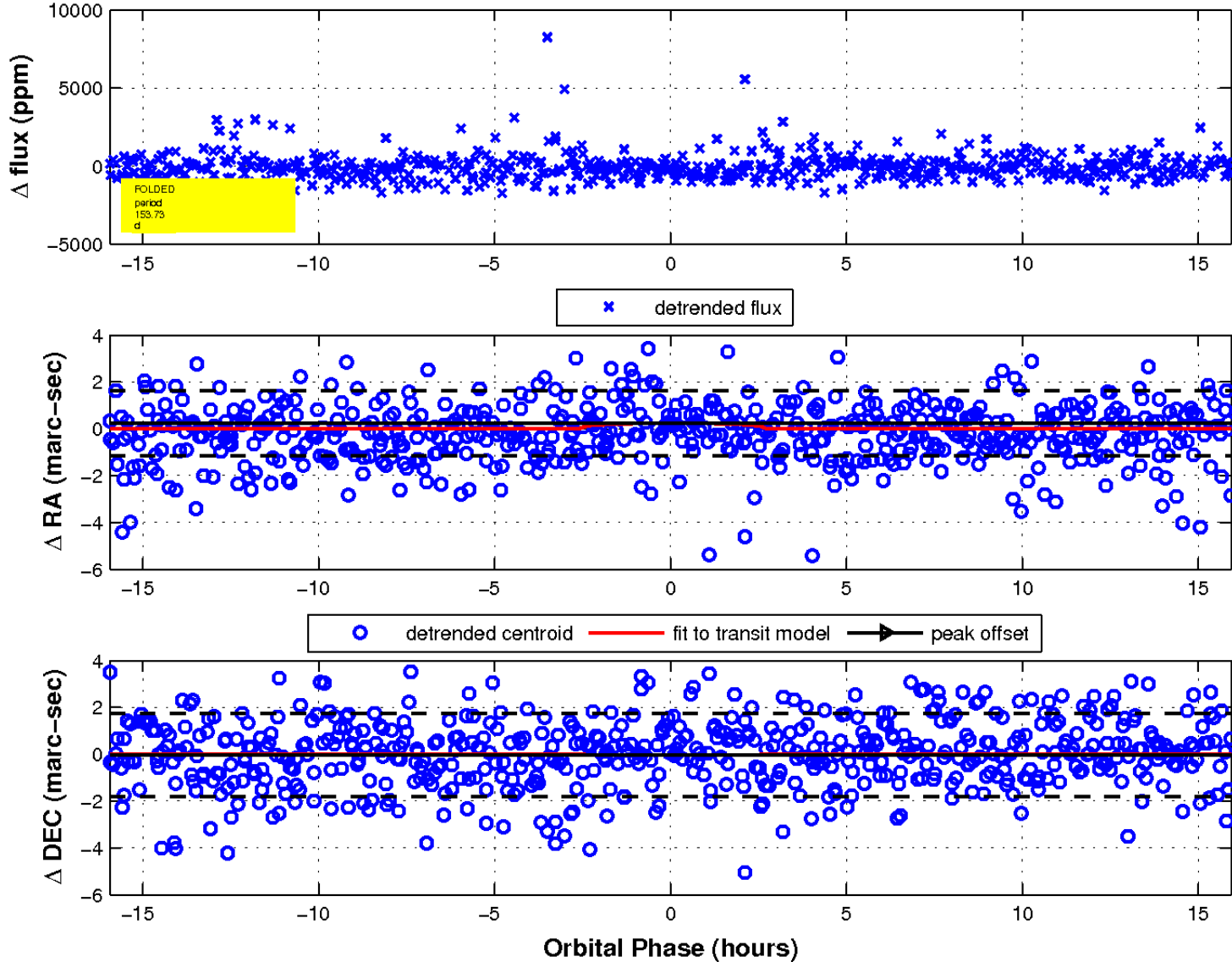
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

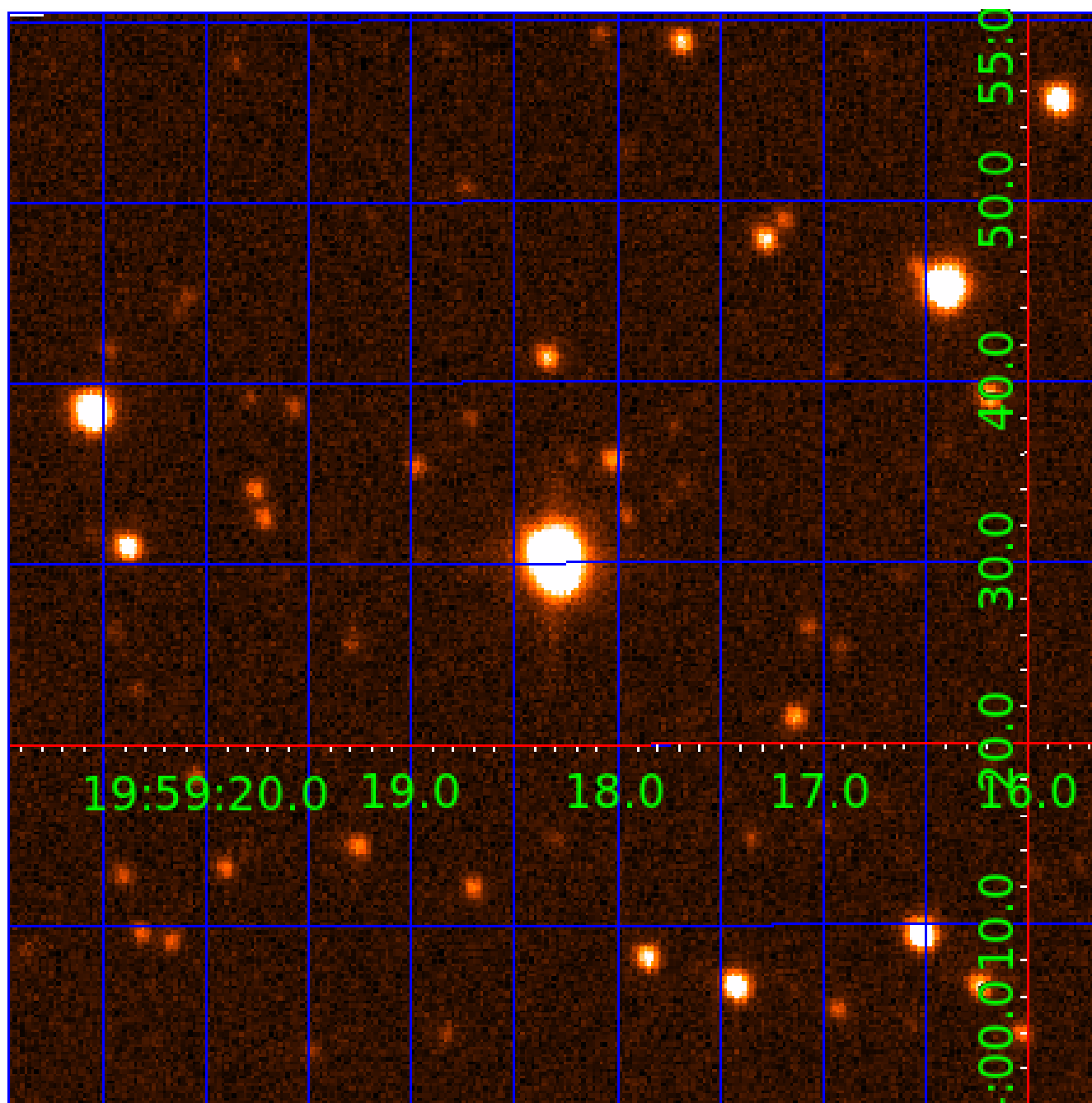


fluxWeightedCentroids, Planet 3 of 9



UKIRT Image

Declination



KIC 005739251

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})
005739251-01	OBS	No	0.868952	132.321739	97.9	4.928	12.8	11.5	0.61	3963	0.58	360.99
005739251-02	OBS	No	383.240200	146.574993	3136.4	7.899	12.6	8.4	0.61	3963	3.63	0.11
005739251-03	OBS	No	153.727393	191.466115	1636.0	5.316	10.7	6.8	0.61	3963	2.38	0.36
005739251-05	OBS	No	187.430989	136.366580	2283.0	4.361	8.9	7.1	0.61	3963	3.01	0.28
005739251-06	OBS	No	579.707049	332.511898	3640.5	7.902	10.5	9.4	0.61	3963	3.93	0.06
005739251-07	OBS	No	52.503293	176.046621	997.2	2.000	8.7	-1.0	0.61	3963	1.87	1.52
005739251-08	OBS	No	86.182052	146.239333	997.8	4.648	8.1	5.3	0.61	3963	2.03	0.79
005739251-09	OBS	No	178.650615	149.550422	369.1	9.000	8.8	-1.0	0.61	3963	1.13	0.30

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005739251-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_KIC_POS
005739251-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005739251-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—INCONSISTENT_TRANS
005739251-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005739251-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005739251-07	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
005739251-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_TRACKER—TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_KIC_POS
005739251-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—ALL_TRANS_CHASES—CENT_NOFITS

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

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

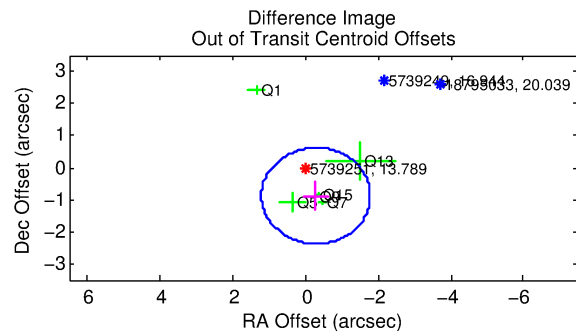
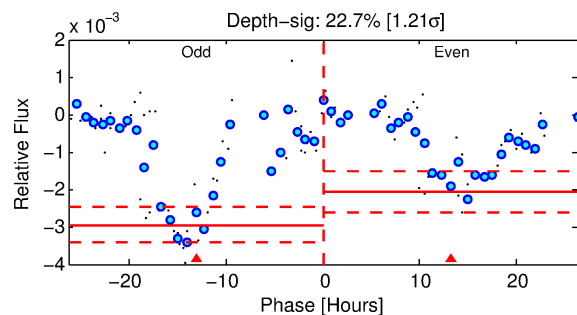
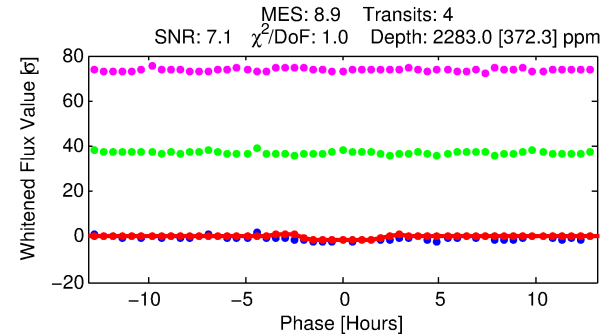
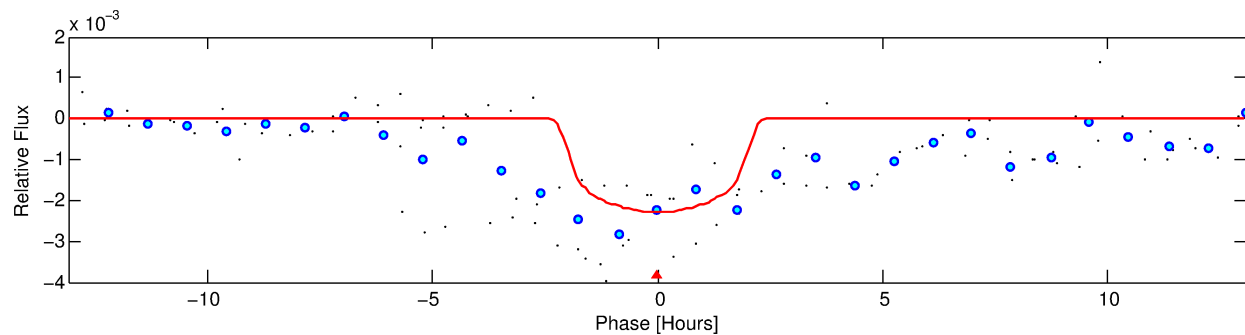
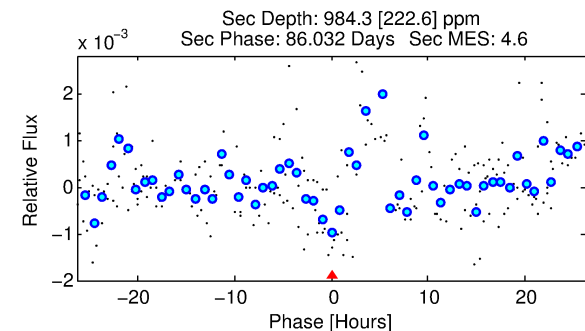
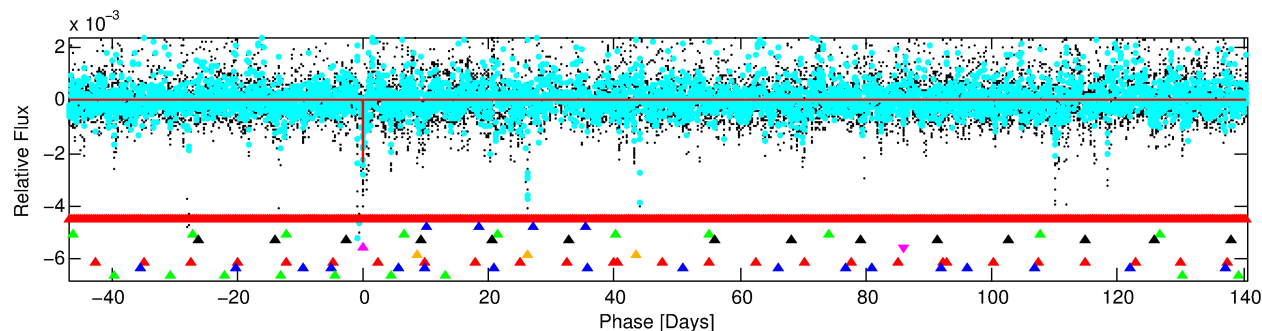
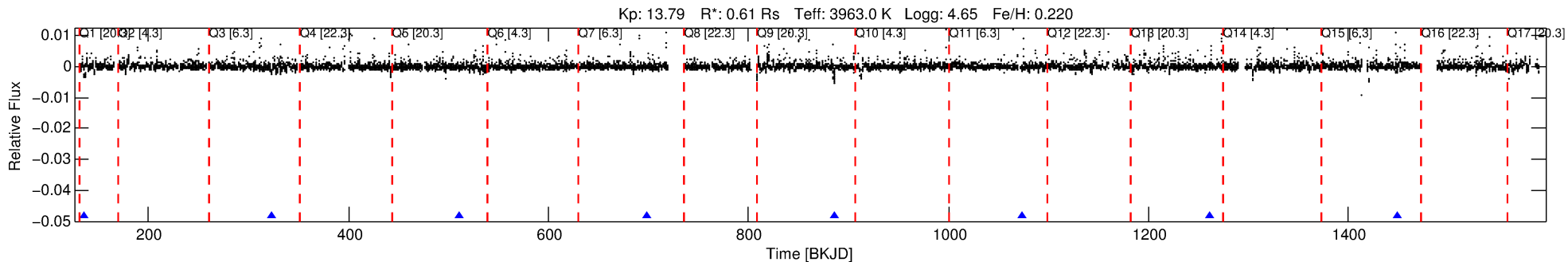
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005739251-05

No Significant Match Found

DV One-Page Summary

KIC: 5739251 Candidate: 5 of 9 Period: 187.431 d



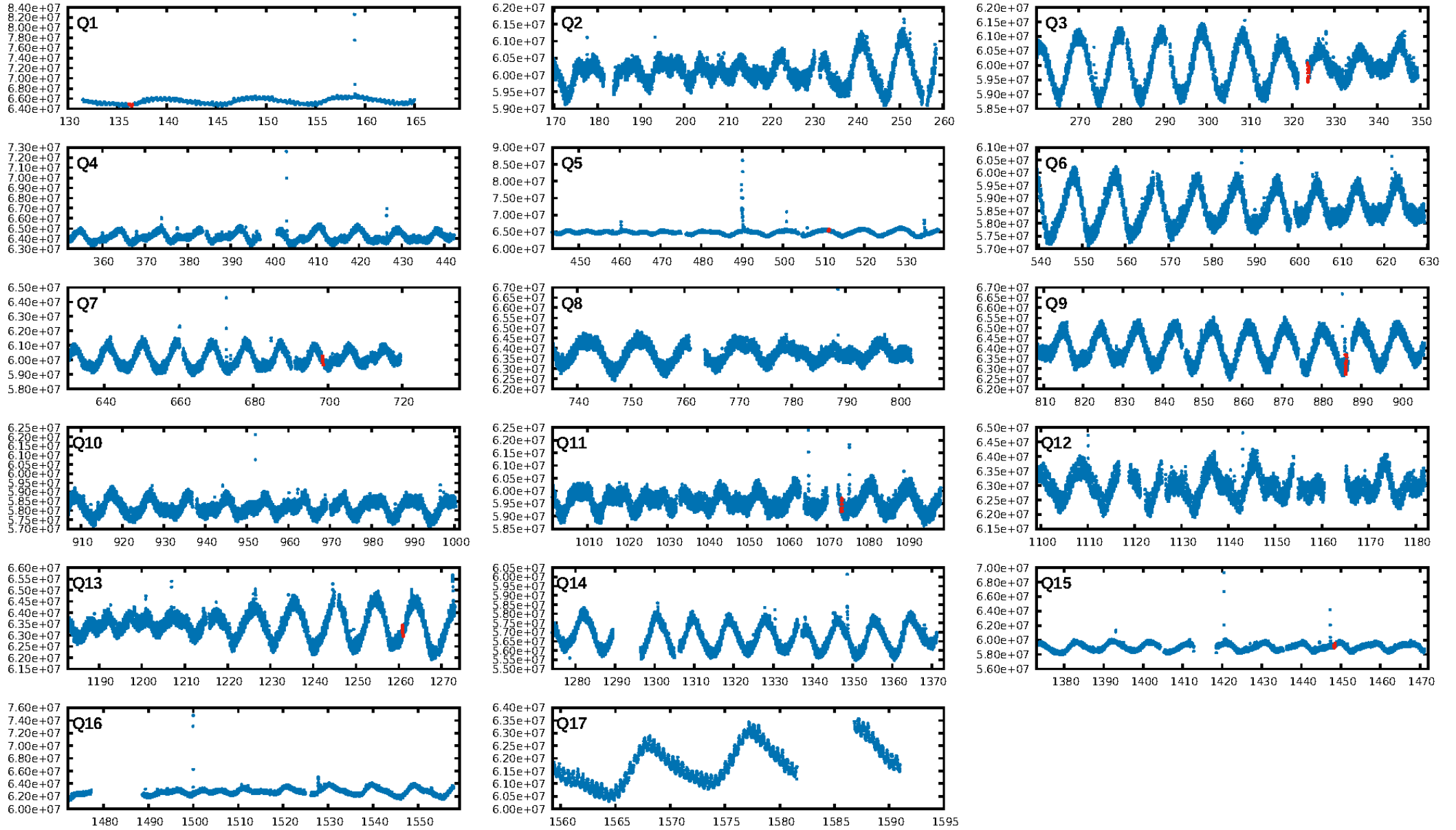
DV Fit Results:

Period = 187.43099 [0.00293] d
Epoch = 136.3666 [0.0096] BKJD
Rp/R* = 0.0450 [0.0394]
a/R* = 283.61 [805.05]
b = 0.59 [3.21]
Seff = 0.28 [0.05]
Teq = 185 [9] K
Rp = 3.01 [2.65] Re
a = 0.5446 [0.0475] AU
Ag = 17759.13 [31390.29] [0.57σ]
Teffp = 3308 [1464] K [2.13σ]

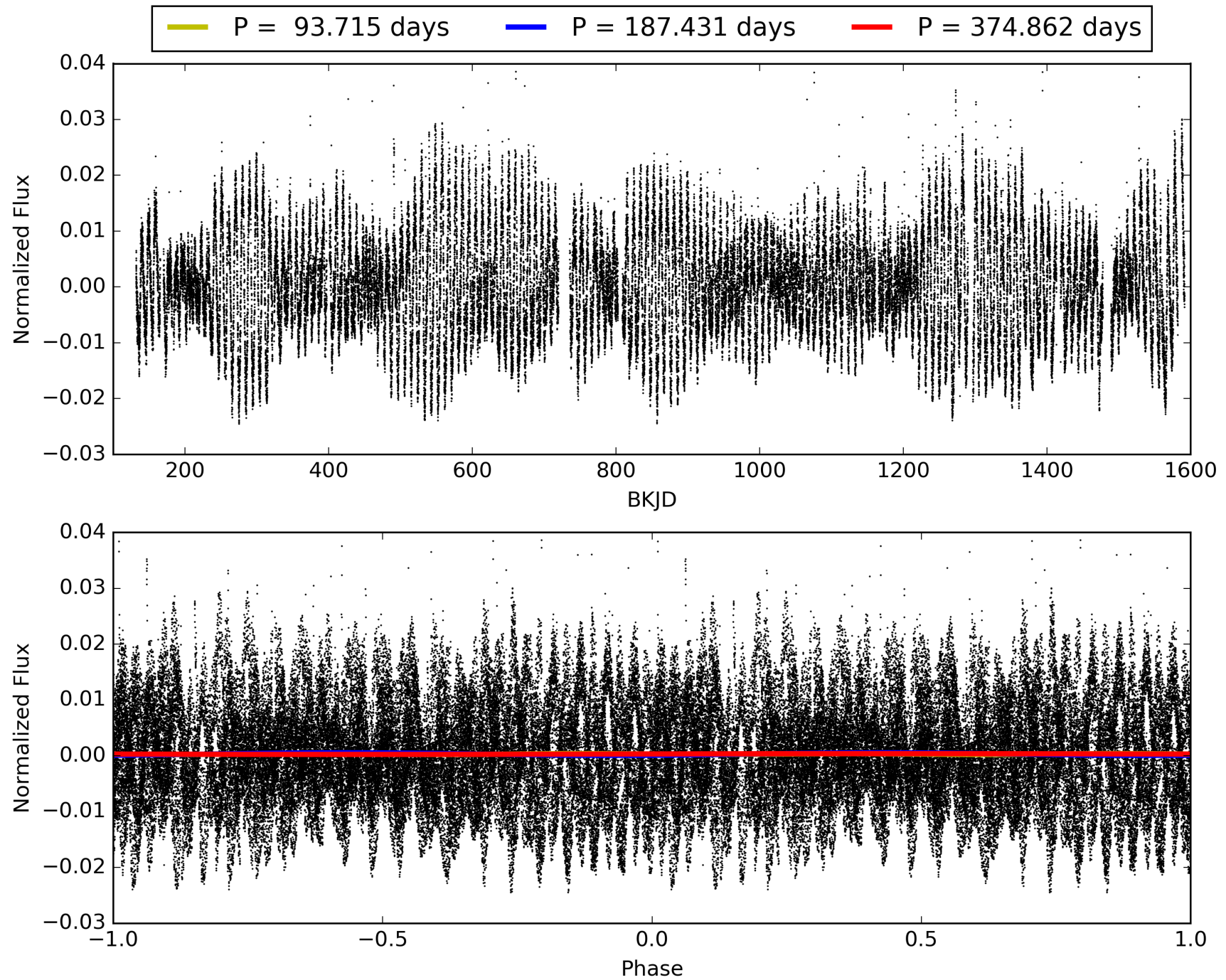
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [21.07σ]
LongPeriod-sig: 100.0% [520.81σ]
ModelChiSquare2-sig: 65.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.3335
Centroid-sig: 40.1%
Centroid-so: 1.100 arcsec [4.37σ]
OotOffset-rm: 0.925 arcsec [1.85σ]
KicOffset-rm: 0.692 arcsec [1.23σ]
OotOffset-st: 0/2/0/4 [6]
KicOffset-st: 0/2/0/4 [6]
DiffImageQuality-fgm: 0.50 [3/6]
DiffImageOverlap-fno: 0.00 [0/6]

TCE 005739251-05, PDC Light Curves

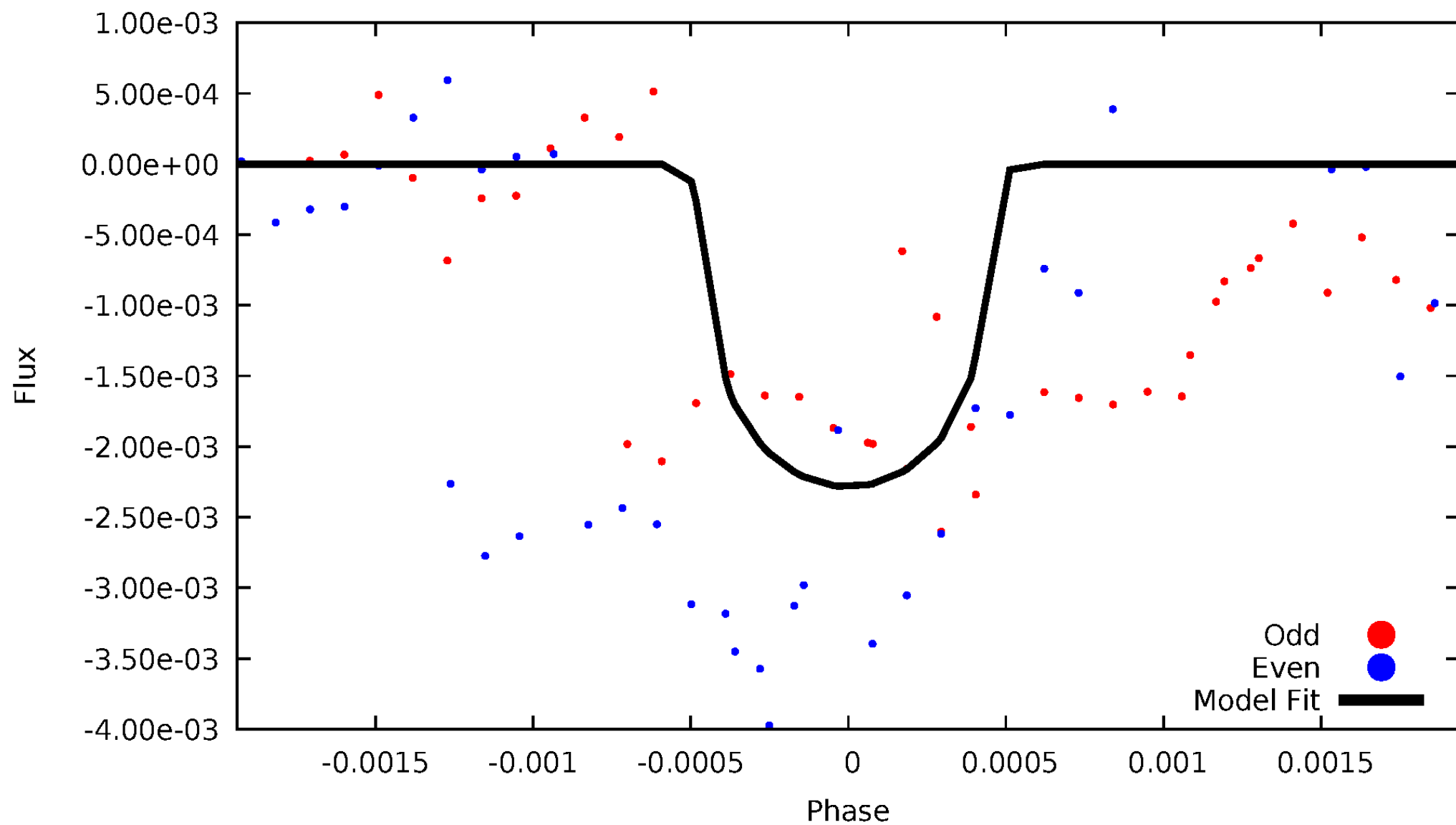


TCE 005739251-05



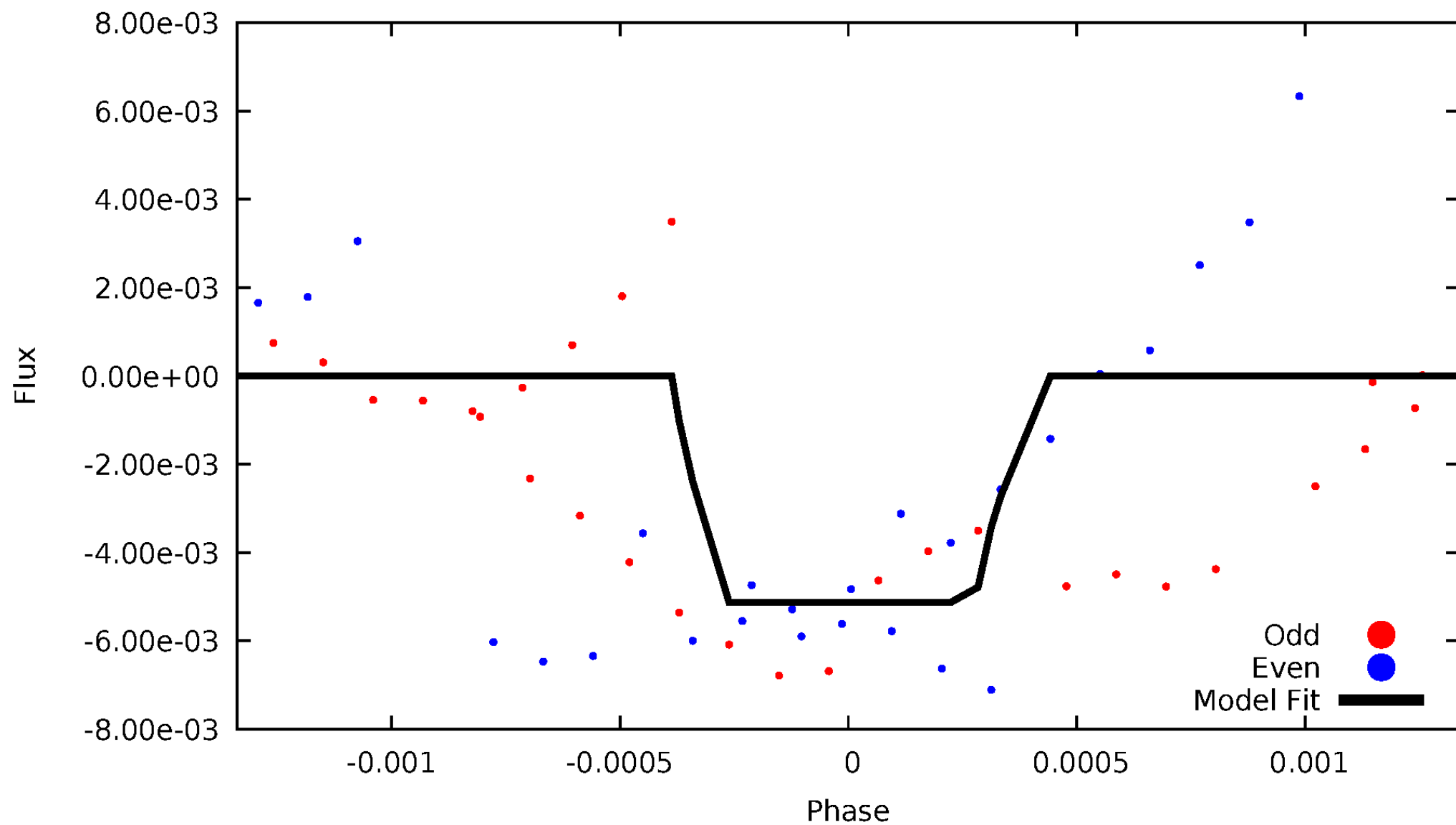
DV Odd/Even

TCE 005739251-05



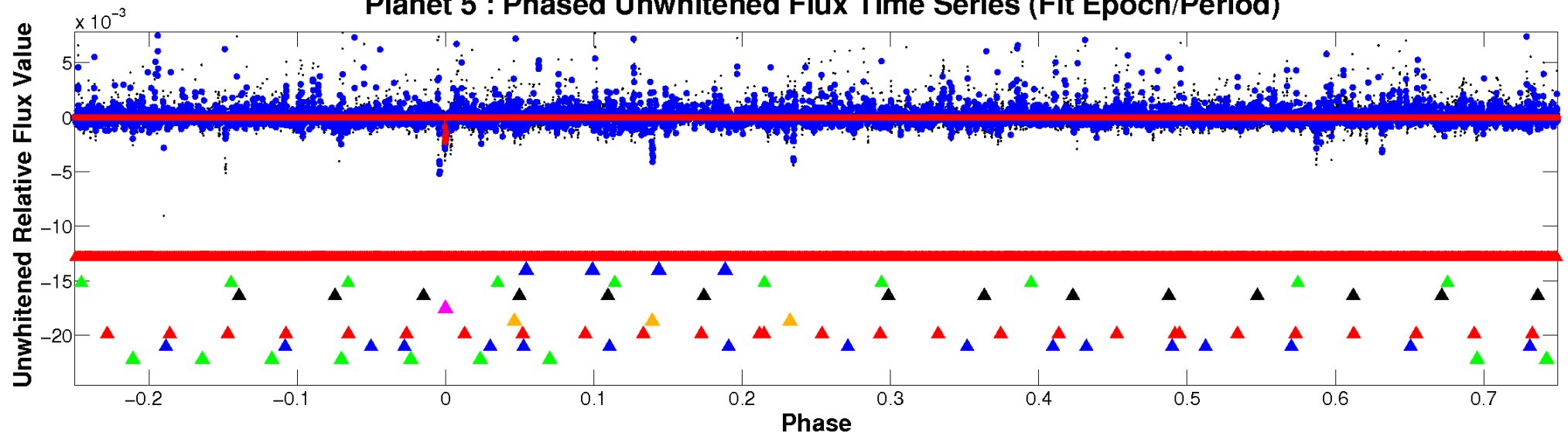
ALT Odd/Even

TCE 005739251-05

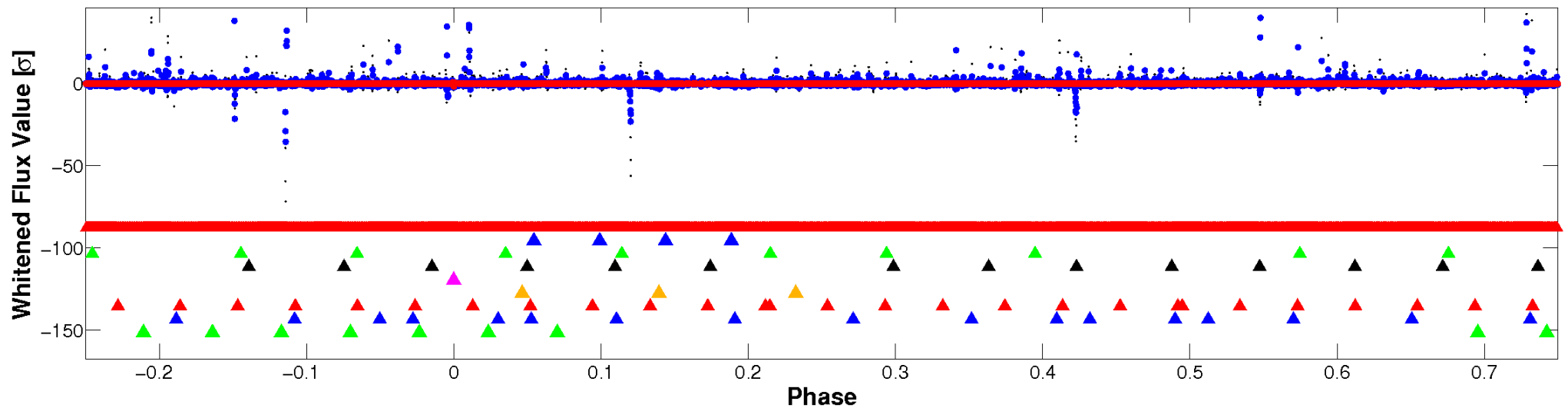


Non-Whitened Vs. Whitened Light Curve

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

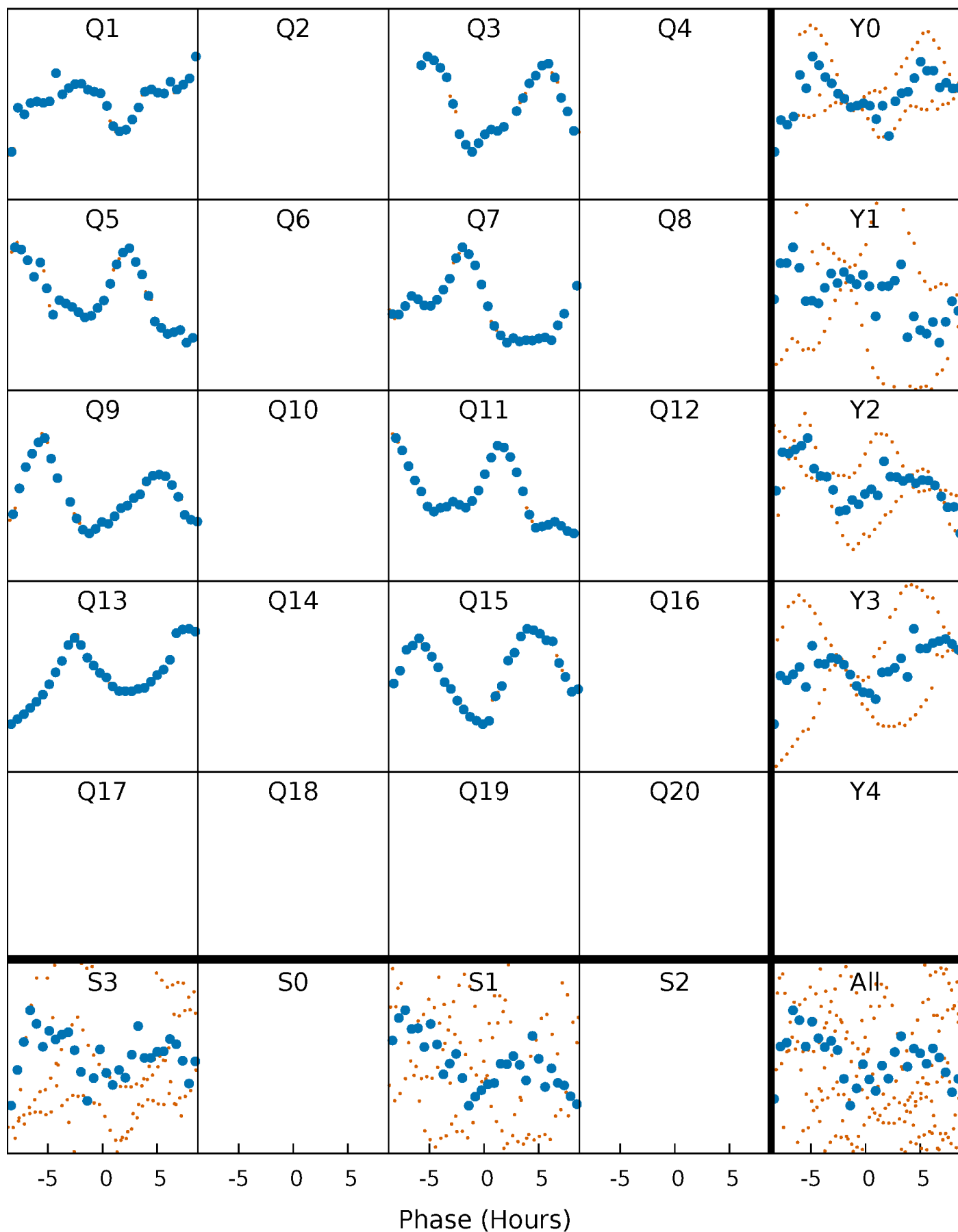


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



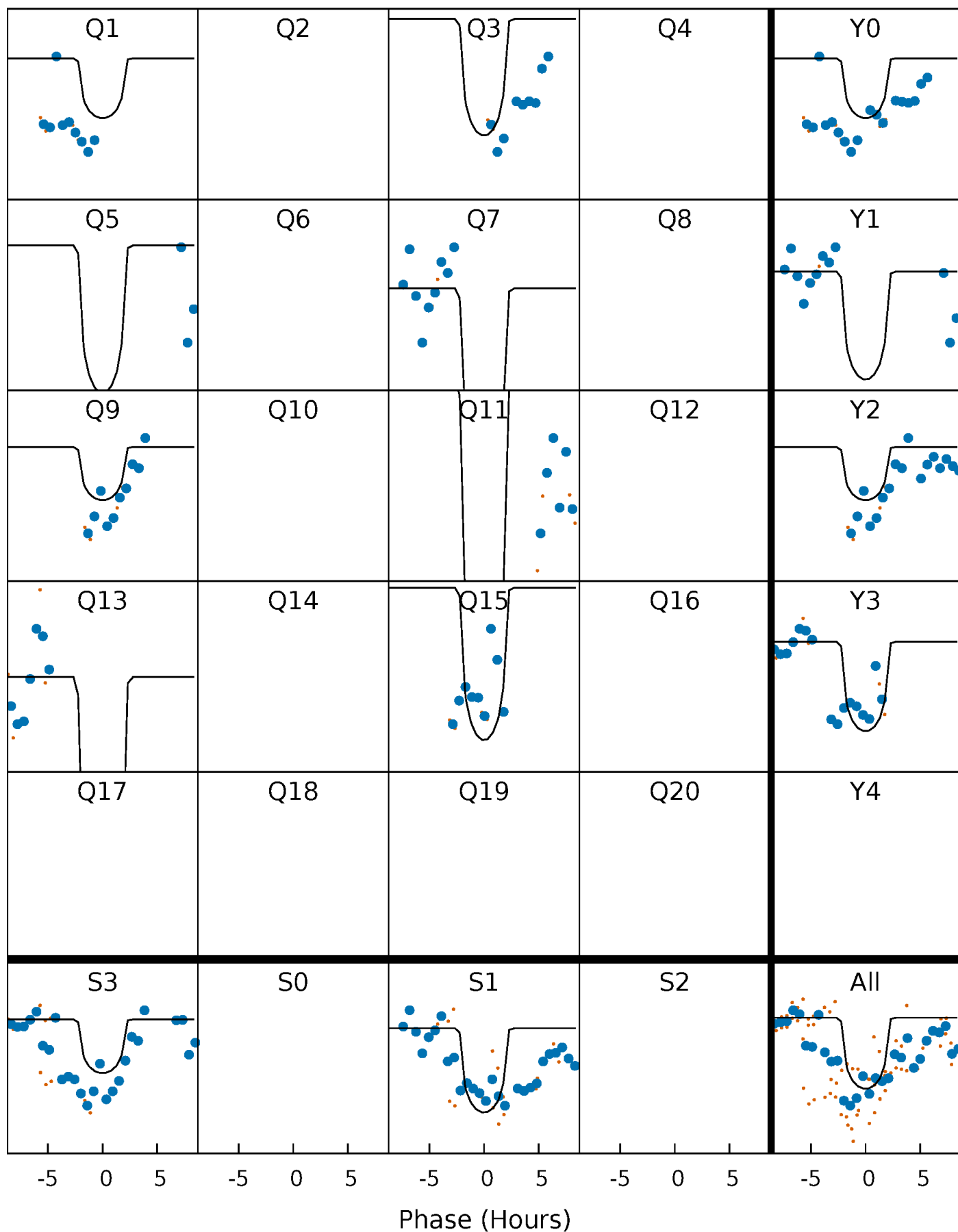
PDC Quarter-Phased Transit Curves

TCE 005739251-05 $P=187.430989$ Days $T_0=136.366580$ (BKJD)



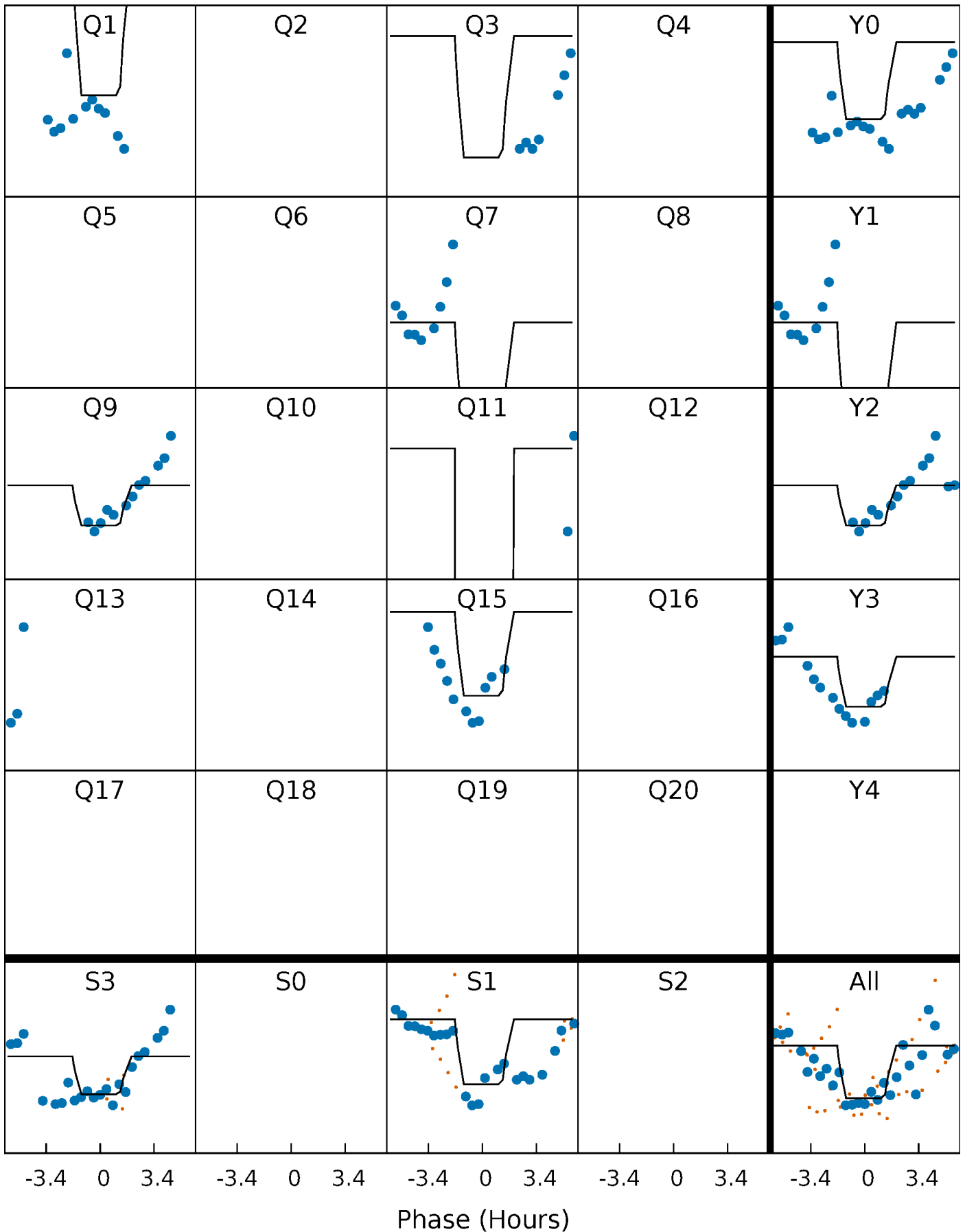
DV Quarter-Phased Transit Curves

TCE 005739251-05 $P=187.430989$ Days $T_0=136.366580$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

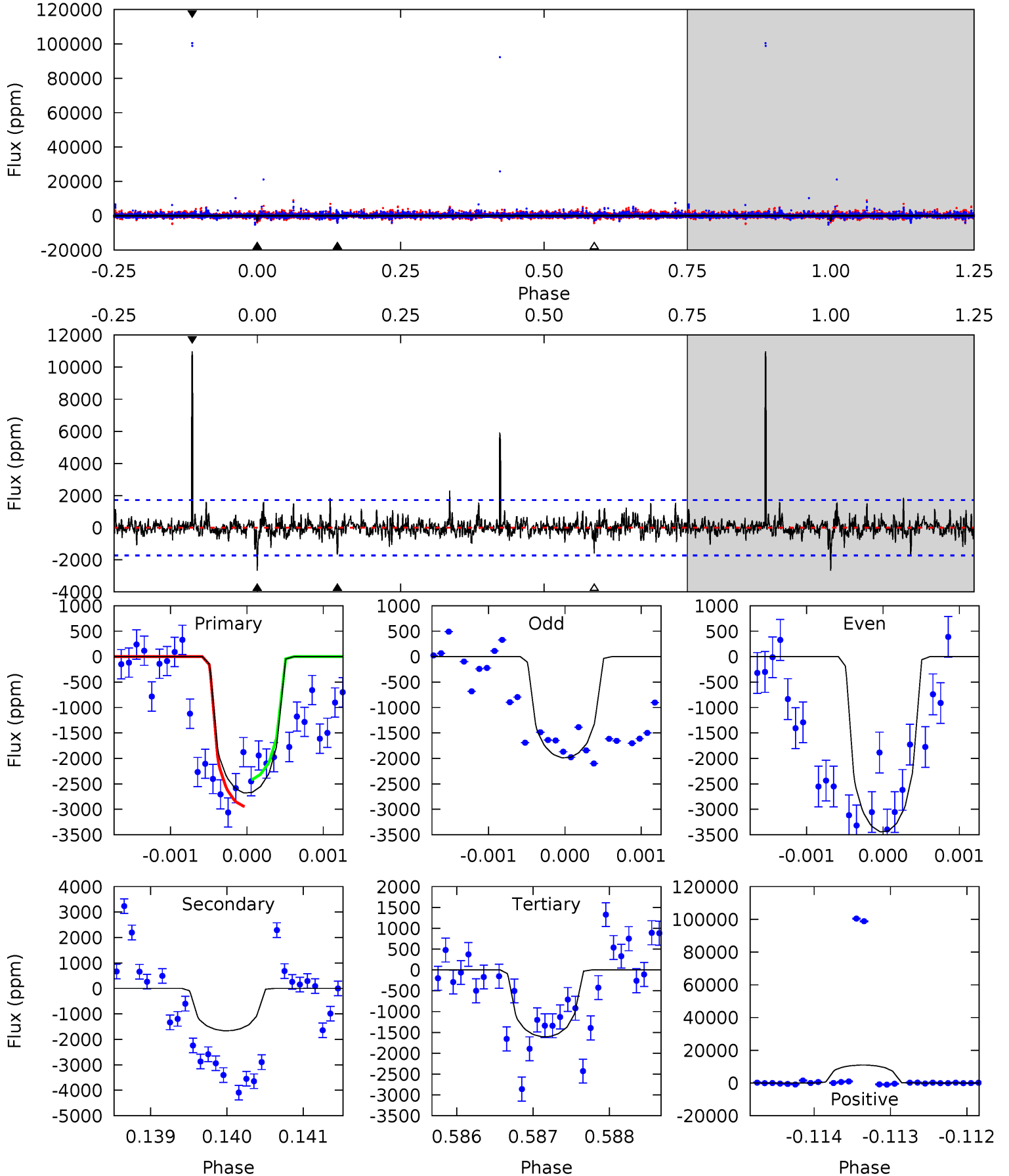
TCE 005739251-05 $P=187.446775$ Days $T_0=136.275753$ (BKJD)



DV Model-Shift Uniqueness Test

005739251-05, P = 187.430989 Days, E = 136.366580 Days

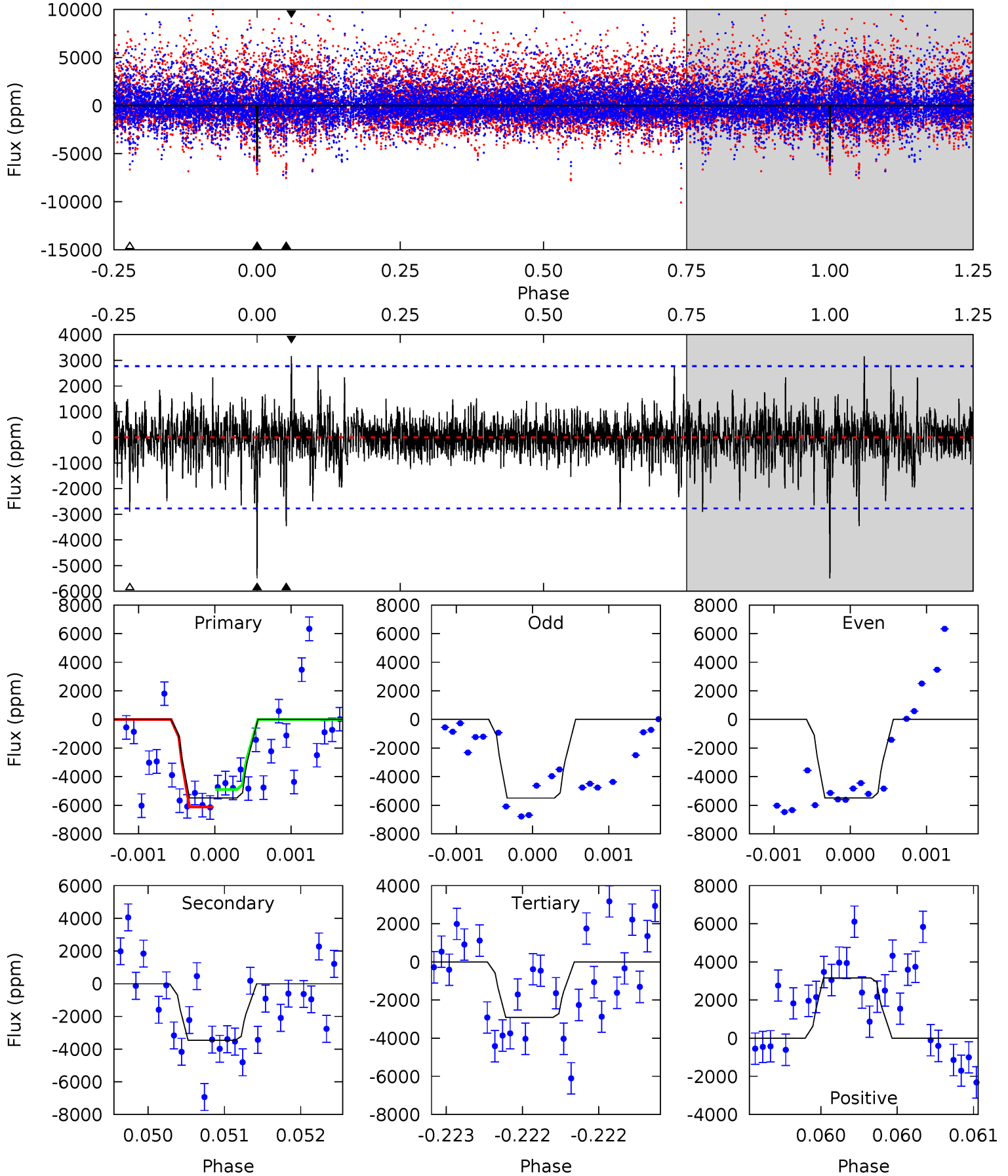
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.47	5.25	5.07	34.7	5.45	3.29	1.71	3.40	-26.2	0.18	-29.5	1.38	0.99	0.80	0.83



Alt Model-Shift Uniqueness Test

005739251-05, P = 187.446775 Days, E = 136.275753 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.9	6.85	5.77	6.26	5.49	3.36	1.19	5.13	4.64	1.08	0.58	0.00	1.00	0.36	1.20



Stellar Parameters For KIC 005739251

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3963^{+122}_{-150}	$4.652^{+0.060}_{-0.020}$	$0.220^{+0.200}_{-0.300}$	$0.612^{+0.029}_{-0.068}$	$0.613^{+0.041}_{-0.062}$	$3.761^{+1.109}_{-0.369}$
	+3%/-4%	+1%/-0%	+91%/-136%	+5%/-11%	+7%/-10%	+29%/-10%
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 005739251-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1662 ± 316	$3.45^{+2.47}_{-2.10}$	257^{+10}_{-10}	3598^{+1644}_{-524}	$22624^{+120781}_{-15120}$
Alt.	-3452 ± 504	$4.74^{+2.70}_{-2.33}$	257^{+9}_{-11}	3678^{+1044}_{-485}	24462^{+73660}_{-14524}

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 $A_{obs} \gg 1.0$

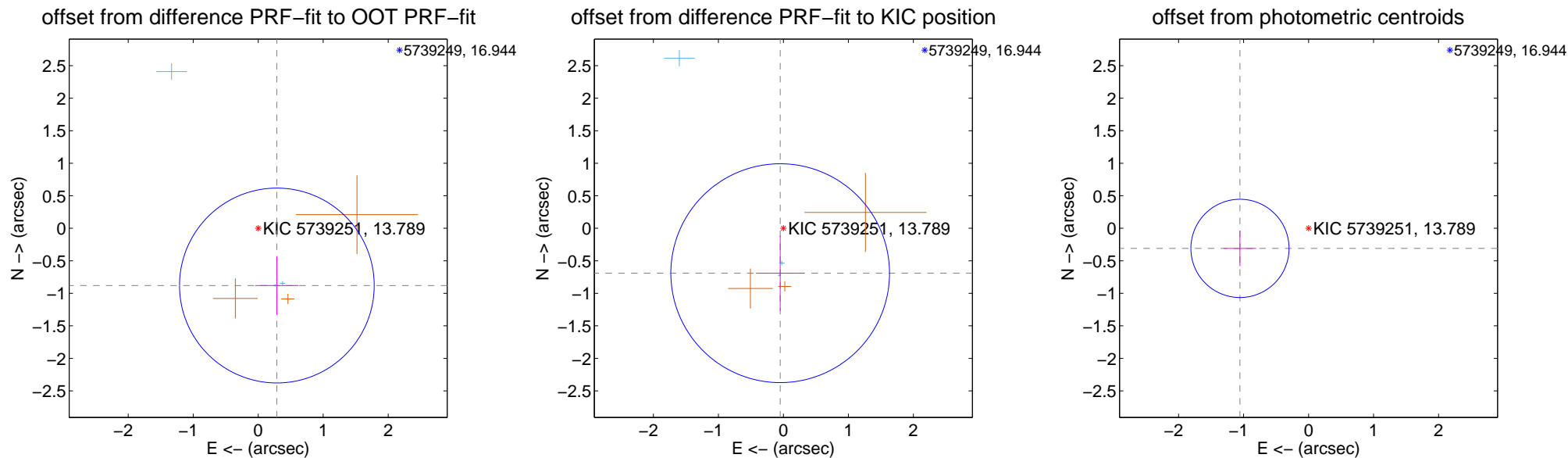
DV Centroid Data

Supplemental centroid analysis for 005739251-05. Kepler magnitude: 13.79. Transit SNR 7.11

There are 3 quarters with good PRF difference image offsets

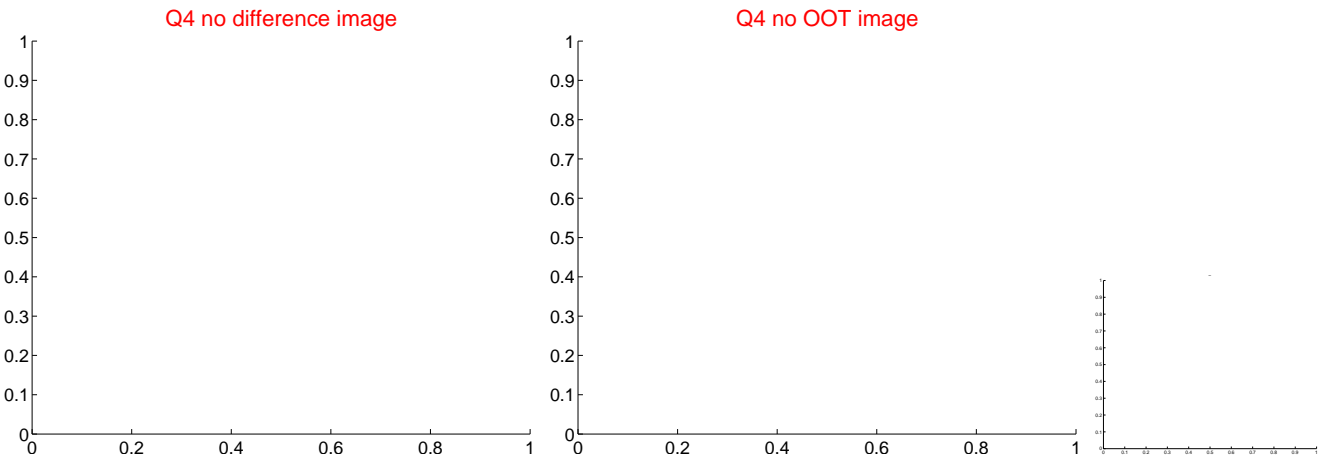
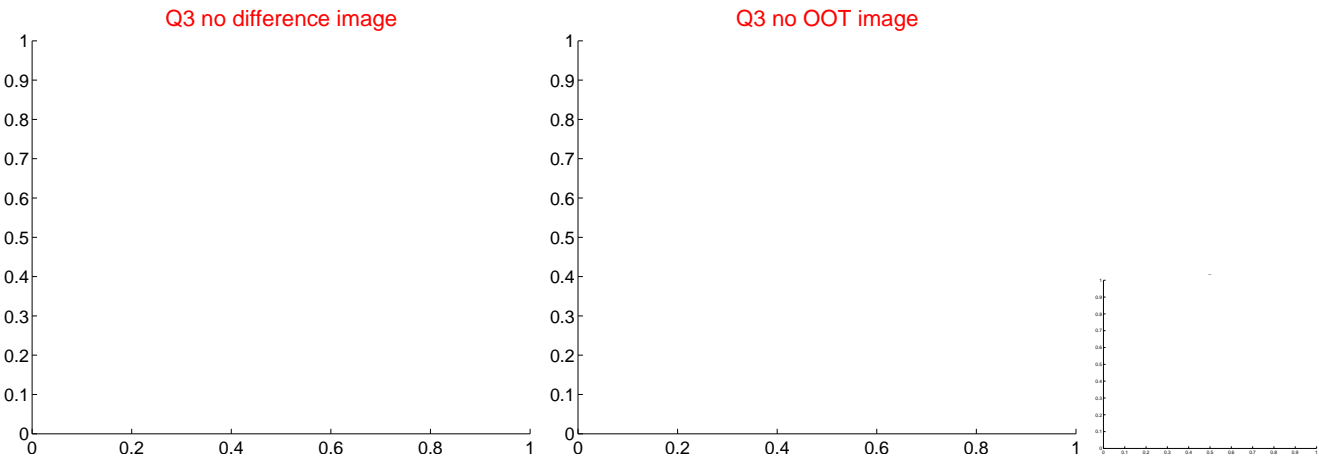
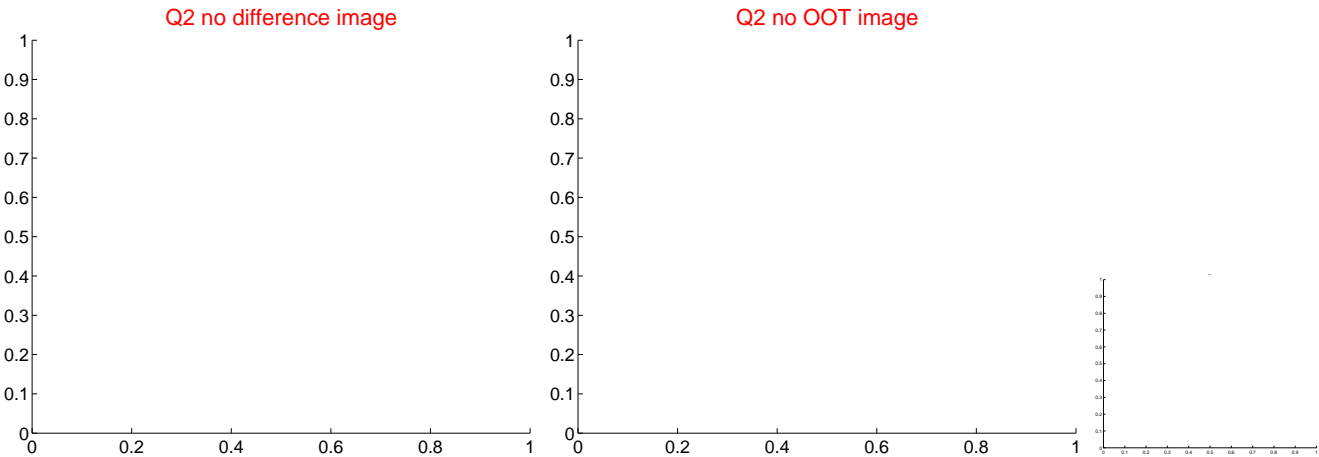
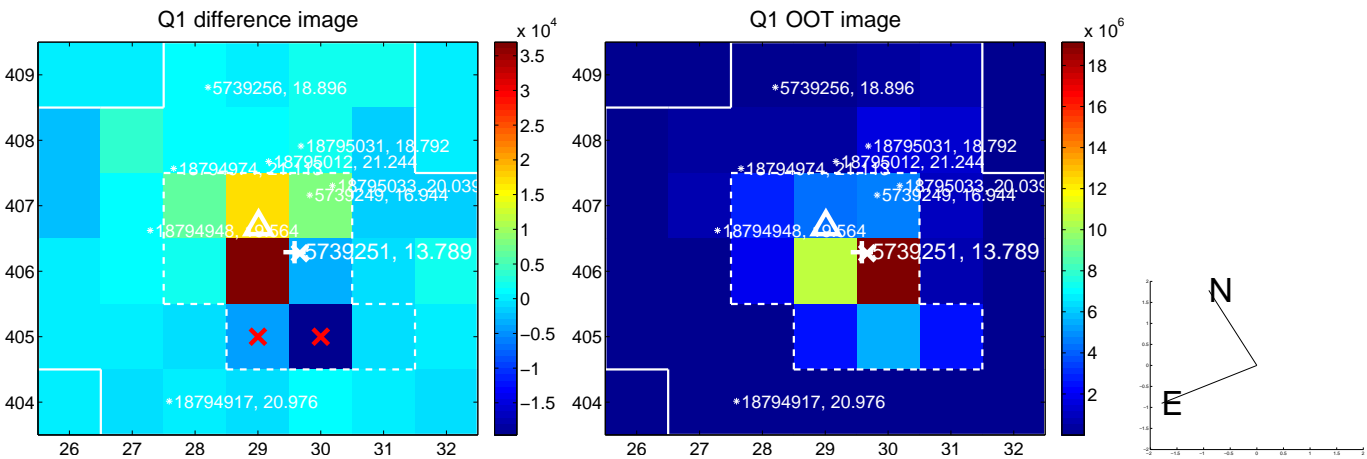
The direct PRF centroid is offset from the target star catalog position by about 0.51 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.925 ± 0.499	1.85	-0.287 ± 0.333	-0.880 ± 0.452
PRF-fit source offset from KIC position	0.692 ± 0.561	1.23	0.049 ± 0.372	-0.690 ± 0.579
photometric centroid source offset	1.10 ± 0.25	4.37	1.06 ± 0.25	-0.31 ± 0.27

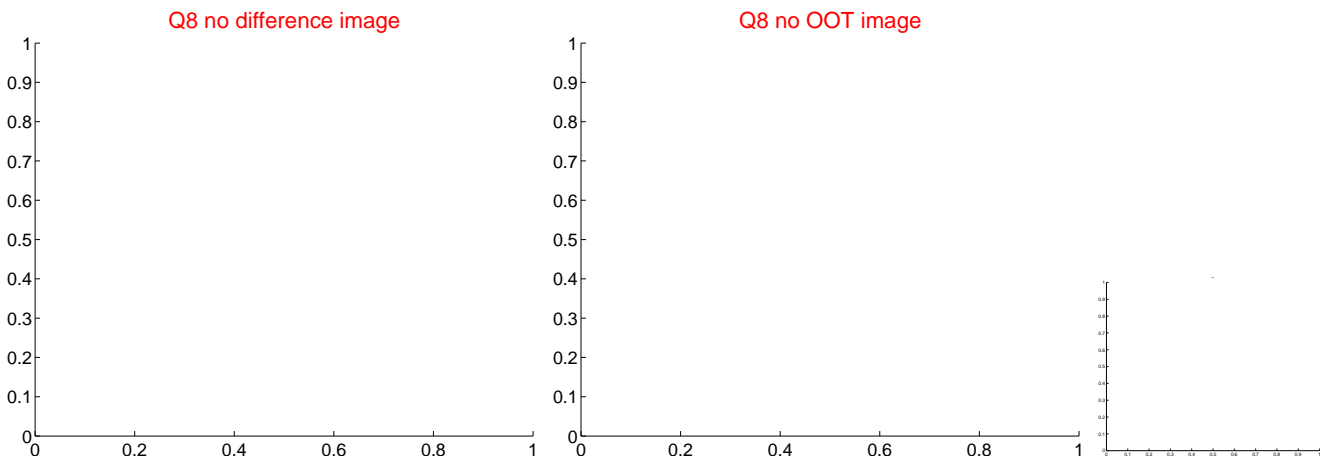
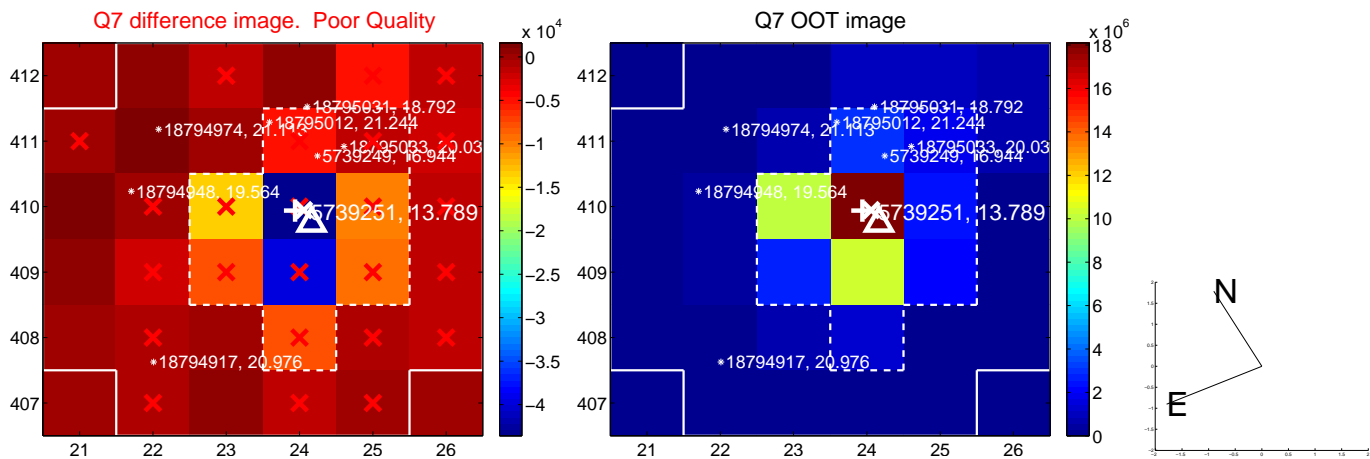
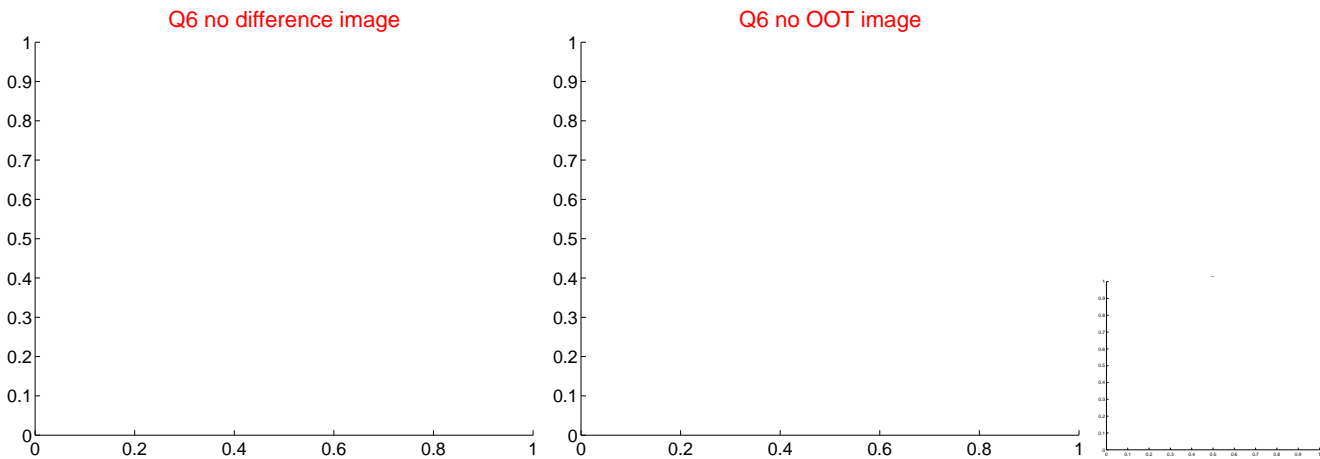
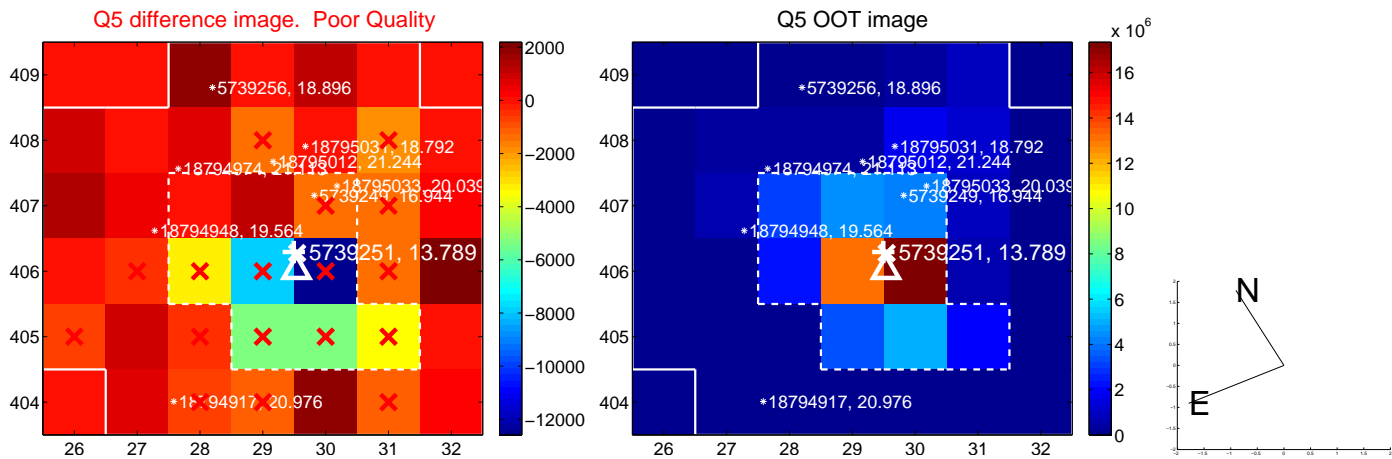


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

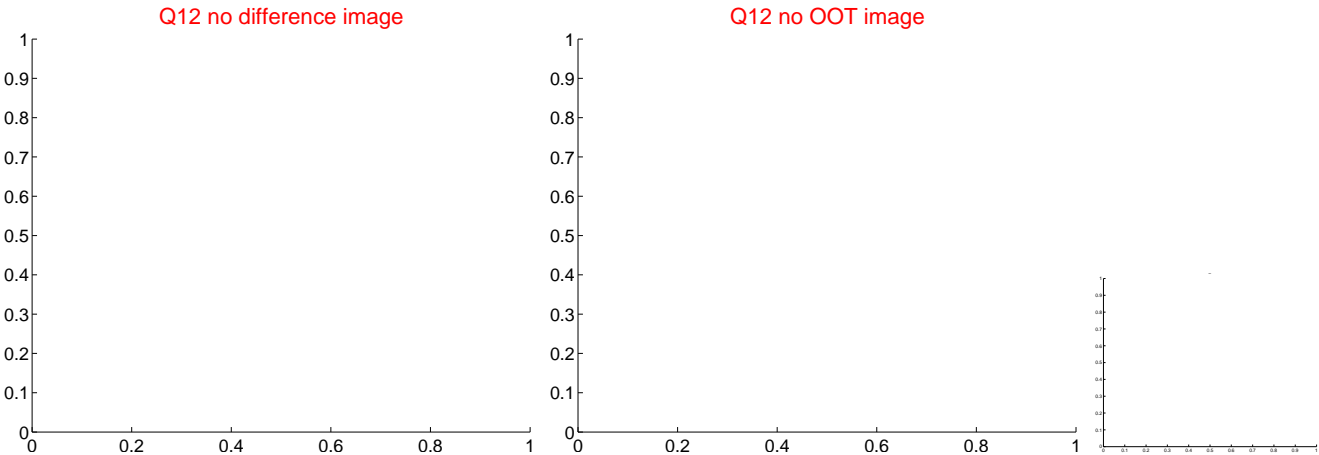
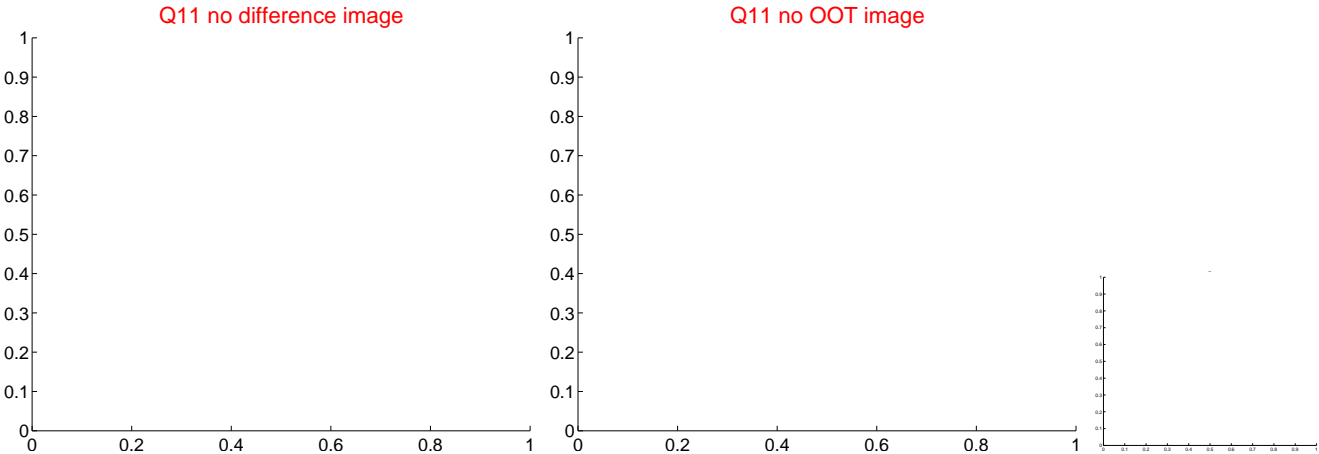
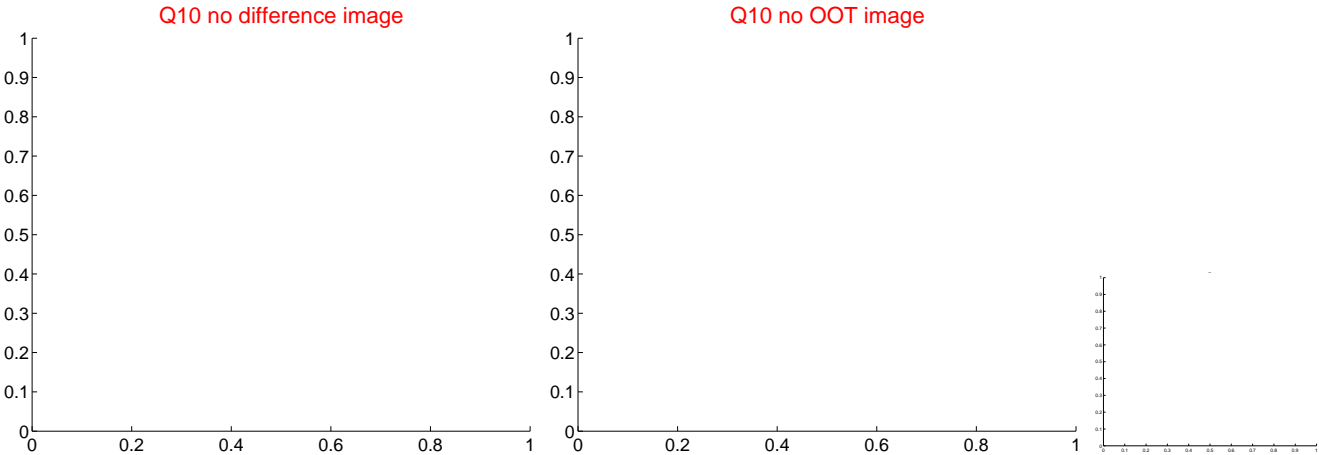
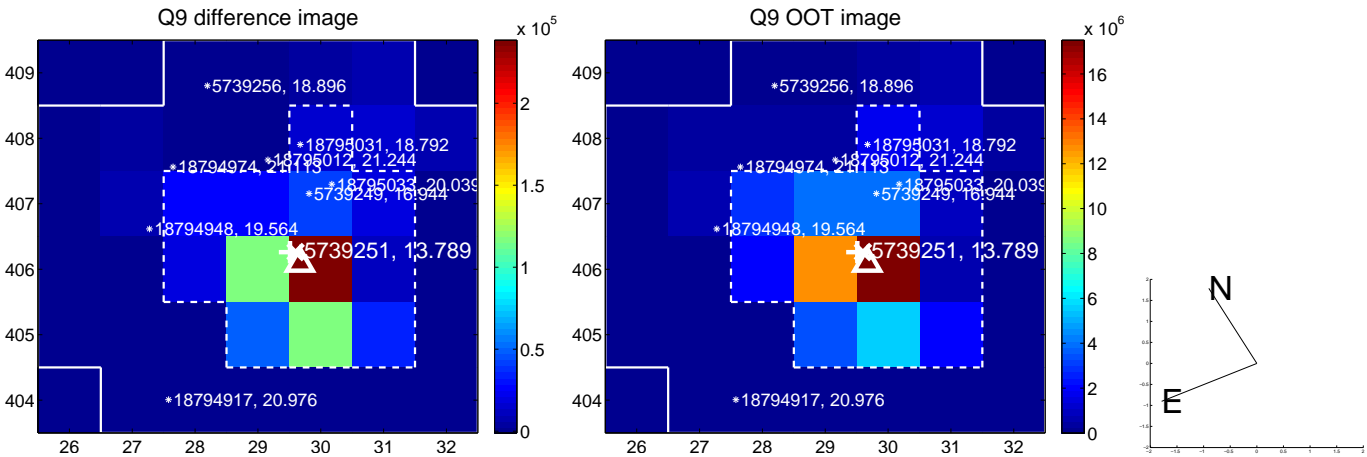
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



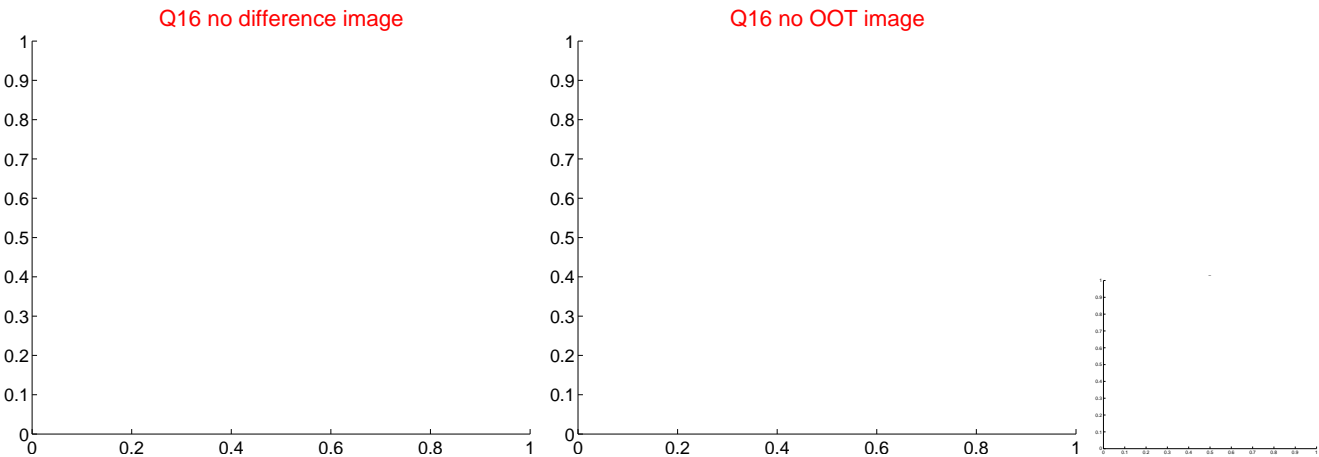
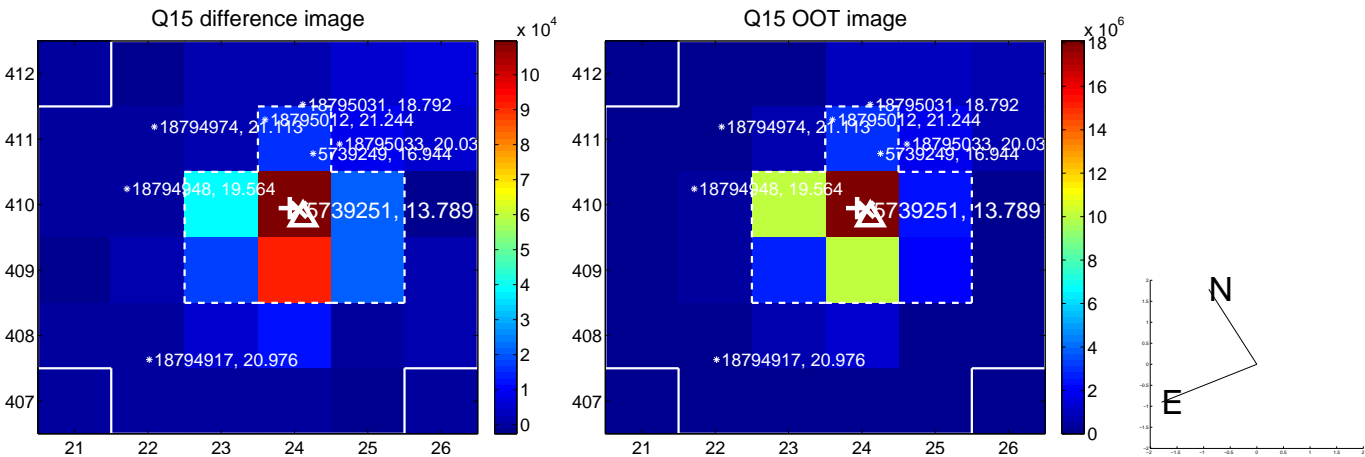
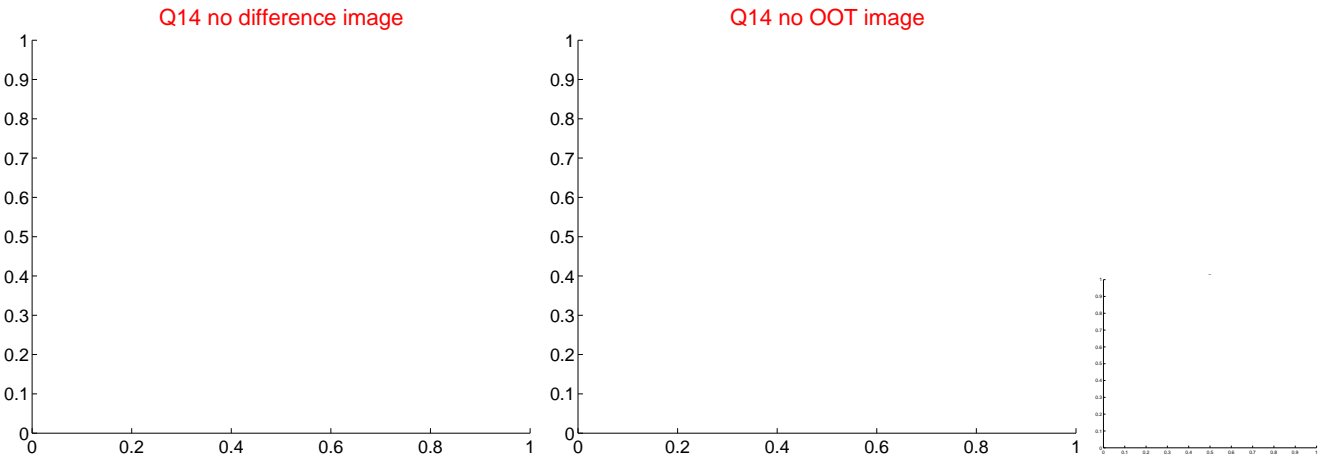
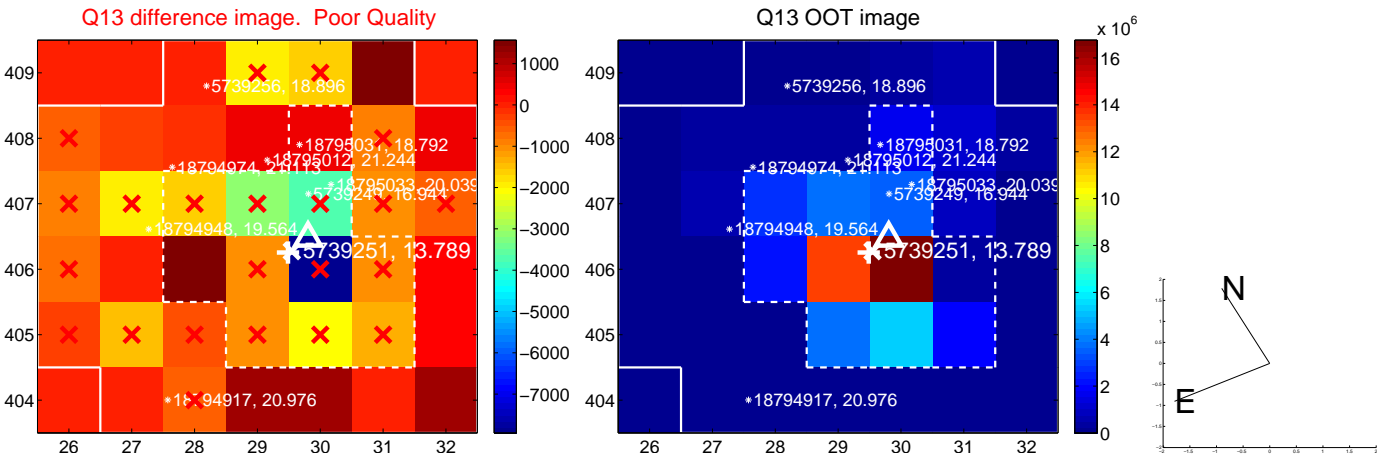
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



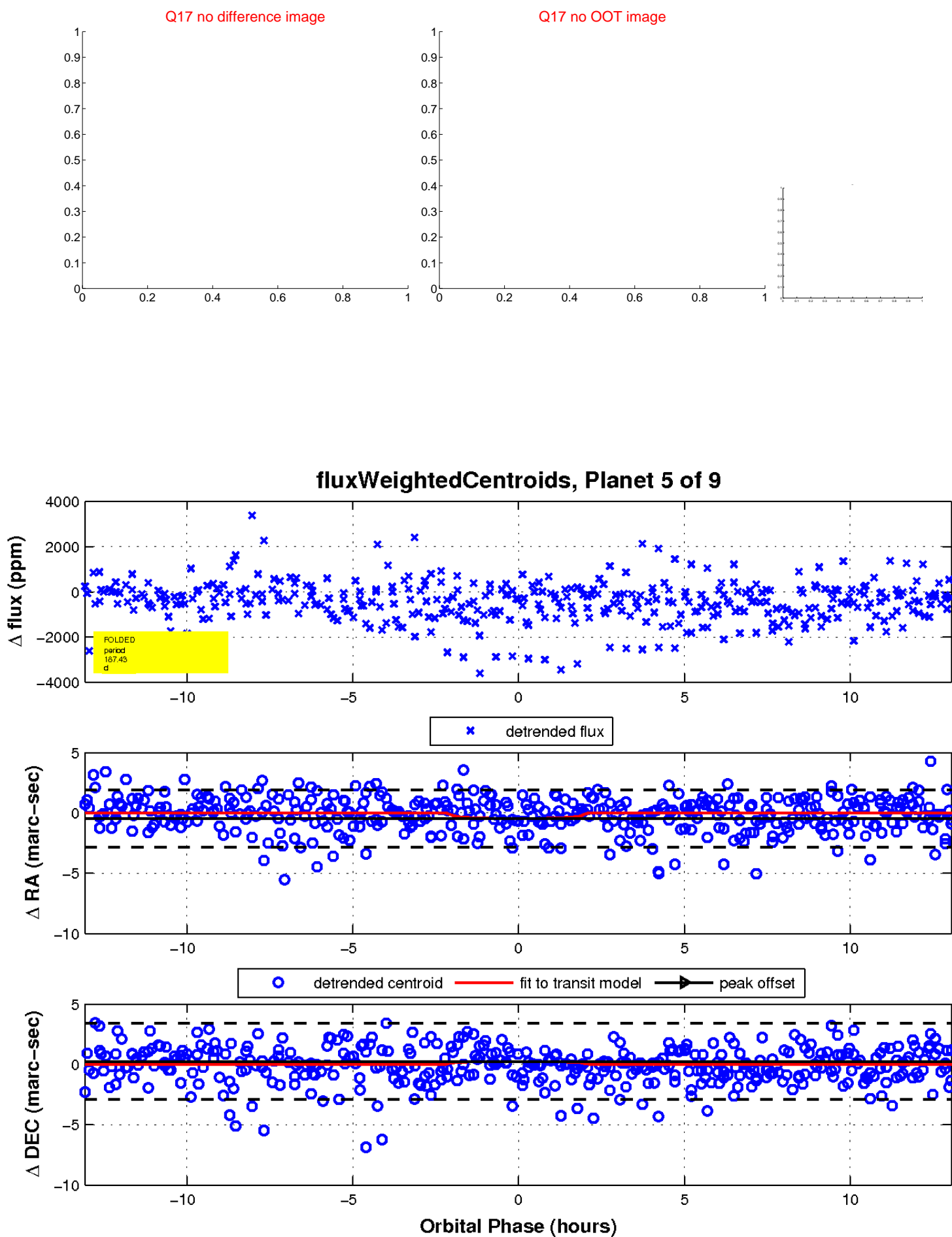
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

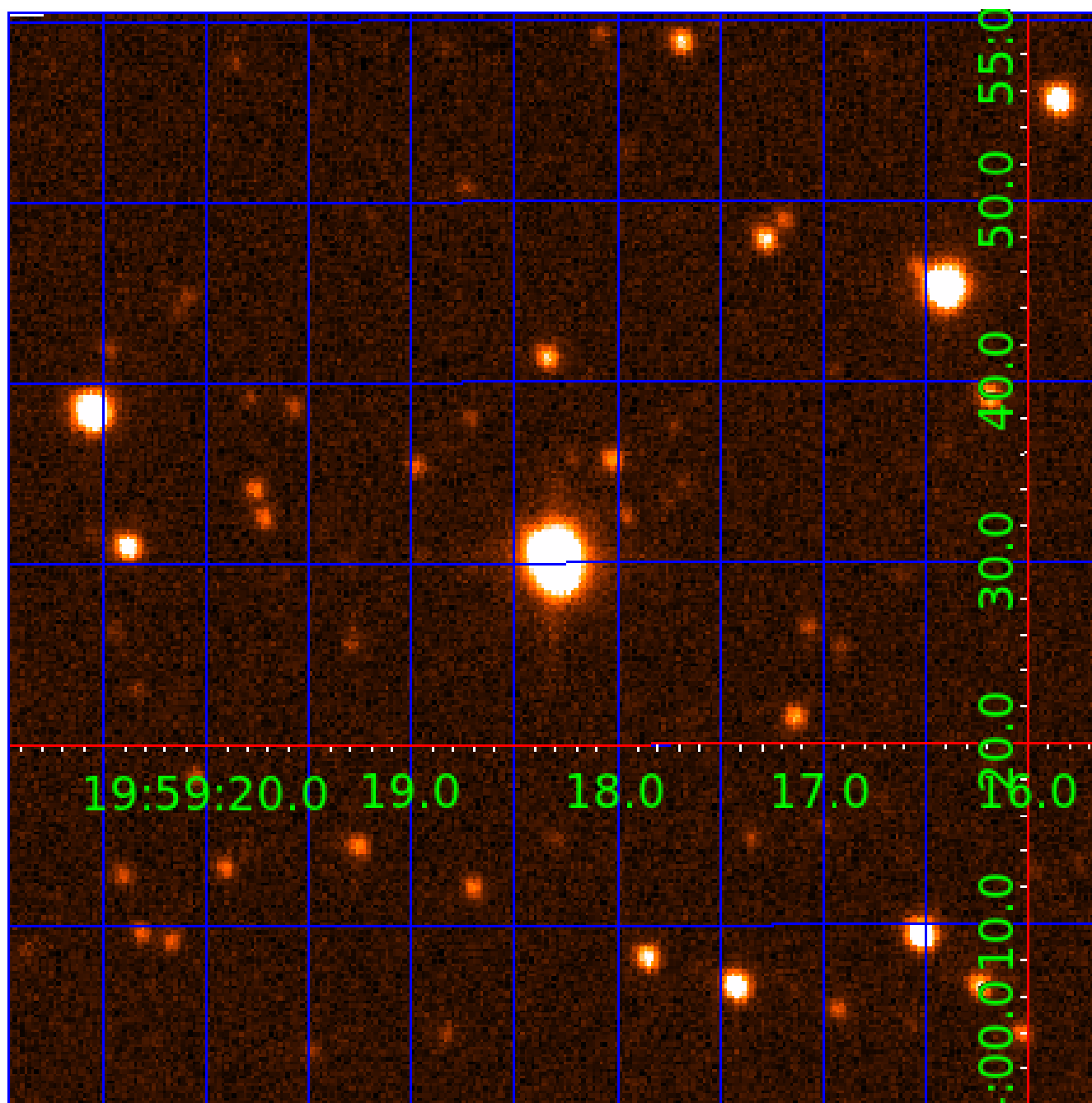


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005739251

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})
005739251-01	OBS	No	0.868952	132.321739	97.9	4.928	12.8	11.5	0.61	3963	0.58	360.99
005739251-02	OBS	No	383.240200	146.574993	3136.4	7.899	12.6	8.4	0.61	3963	3.63	0.11
005739251-03	OBS	No	153.727393	191.466115	1636.0	5.316	10.7	6.8	0.61	3963	2.38	0.36
005739251-05	OBS	No	187.430989	136.366580	2283.0	4.361	8.9	7.1	0.61	3963	3.01	0.28
005739251-06	OBS	No	579.707049	332.511898	3640.5	7.902	10.5	9.4	0.61	3963	3.93	0.06
005739251-07	OBS	No	52.503293	176.046621	997.2	2.000	8.7	-1.0	0.61	3963	1.87	1.52
005739251-08	OBS	No	86.182052	146.239333	997.8	4.648	8.1	5.3	0.61	3963	2.03	0.79
005739251-09	OBS	No	178.650615	149.550422	369.1	9.000	8.8	-1.0	0.61	3963	1.13	0.30

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005739251-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_KIC_POS
005739251-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005739251-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—INCONSISTENT_TRANS
005739251-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005739251-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005739251-07	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
005739251-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_TRACKER—TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_KIC_POS
005739251-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—ALL_TRANS_CHASES—CENT_NOFITS

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

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

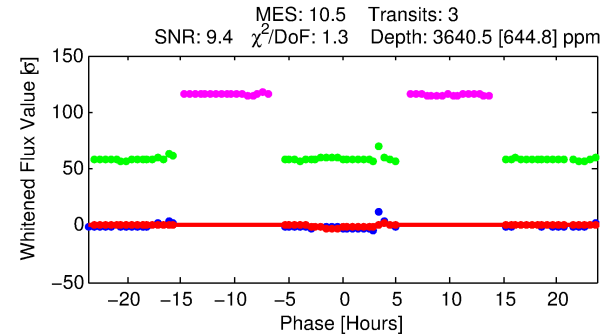
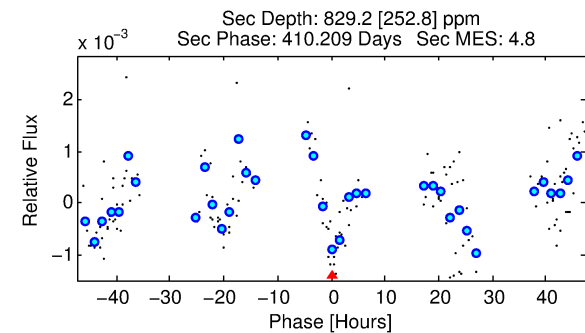
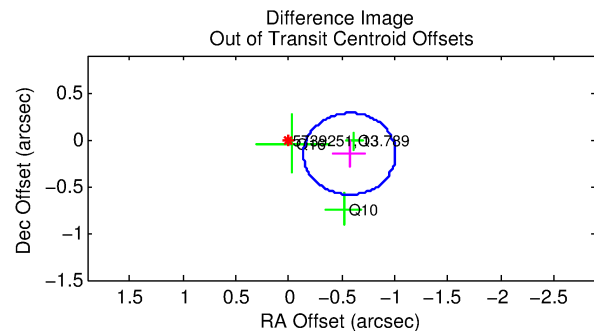
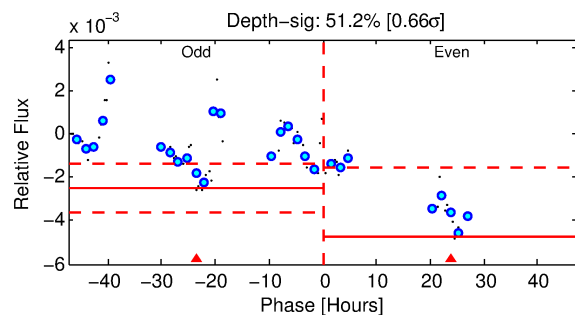
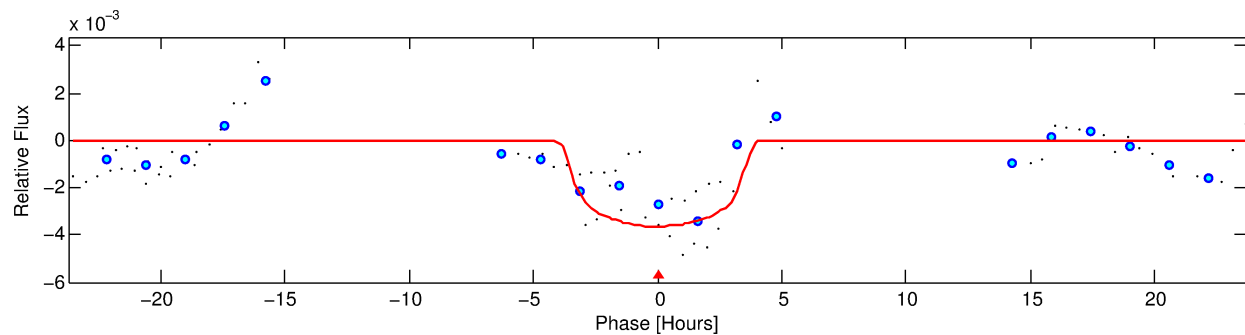
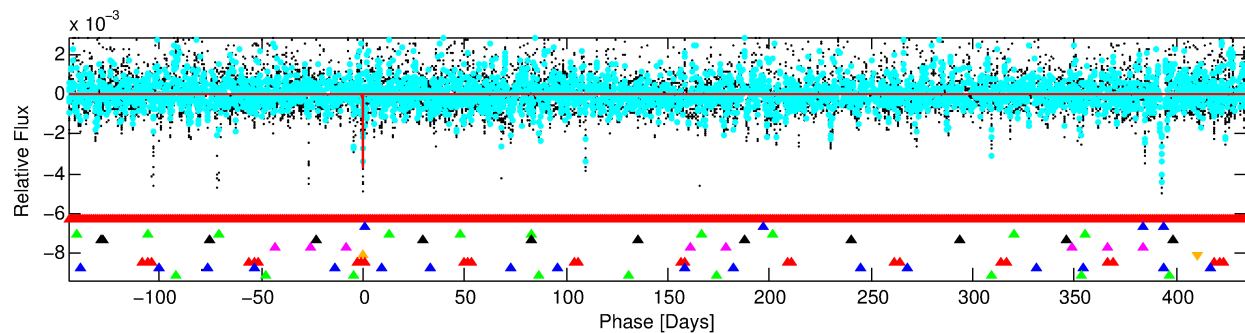
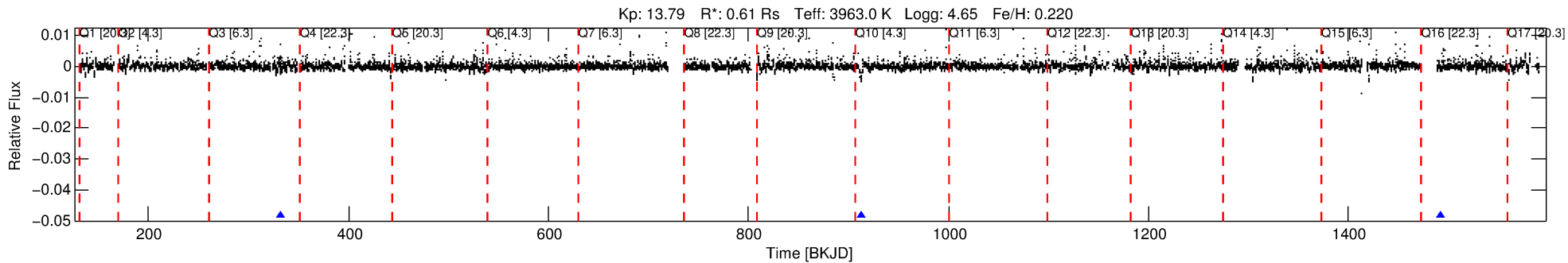
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005739251-06

No Significant Match Found

DV One-Page Summary

KIC: 5739251 Candidate: 6 of 9 Period: 579.707 d



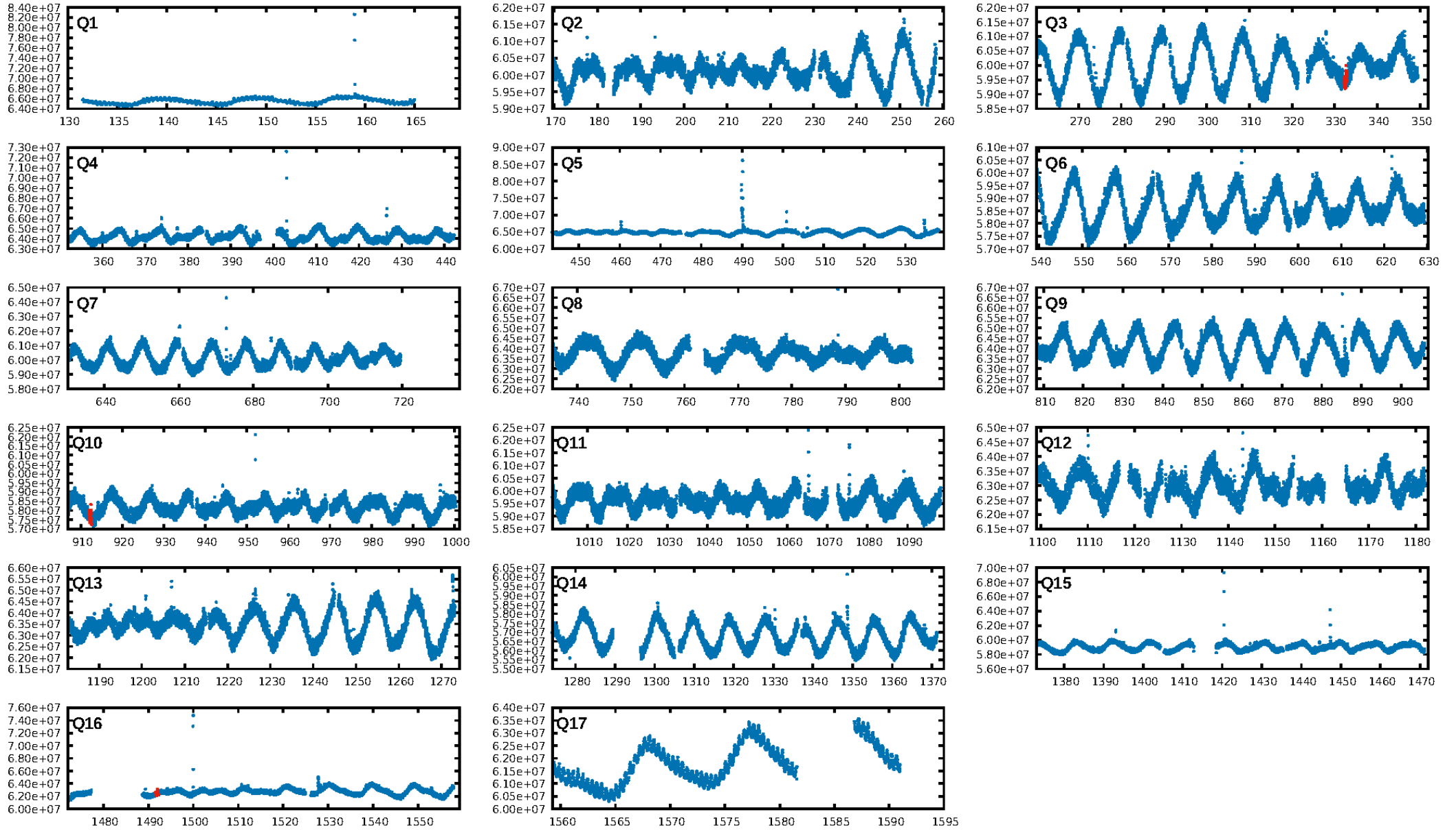
DV Fit Results:

Period = 579.70705 [0.04882] d
Epoch = 332.5119 [0.0502] BKJD
Rp/R* = 0.0588 [0.0239]
a/R* = 449.82 [618.36]
b = 0.69 [0.96]
Seff = 0.06 [0.01]
Teq = 127 [6] K
Rp = 3.93 [1.65] Re
a = 1.1561 [0.1008] AU
Ag = 39563.82 [34652.80] [1.14σ]
Teffp = 2774 [611] K [4.33σ]

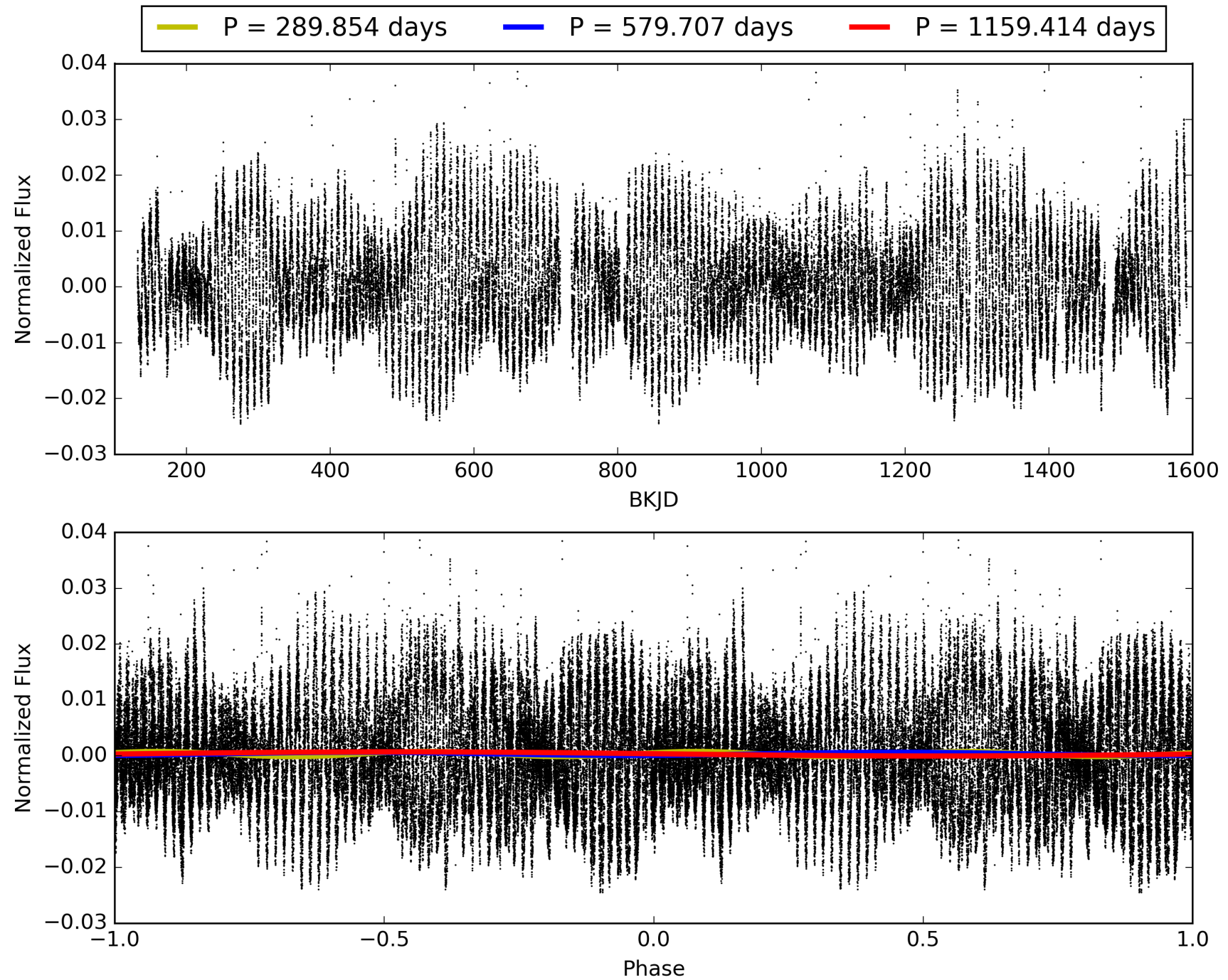
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [422.01σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.2
Centroid-sig: 3.7%
Centroid-so: 0.719 arcsec [3.70σ]
OotOffset-rm: 0.594 arcsec [4.09σ]
KicOffset-rm: 0.242 arcsec [1.28σ]
OotOffset-st: 1/1/1/0 [3]
KicOffset-st: 1/1/1/0 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 0.00 [0/3]

TCE 005739251-06, PDC Light Curves

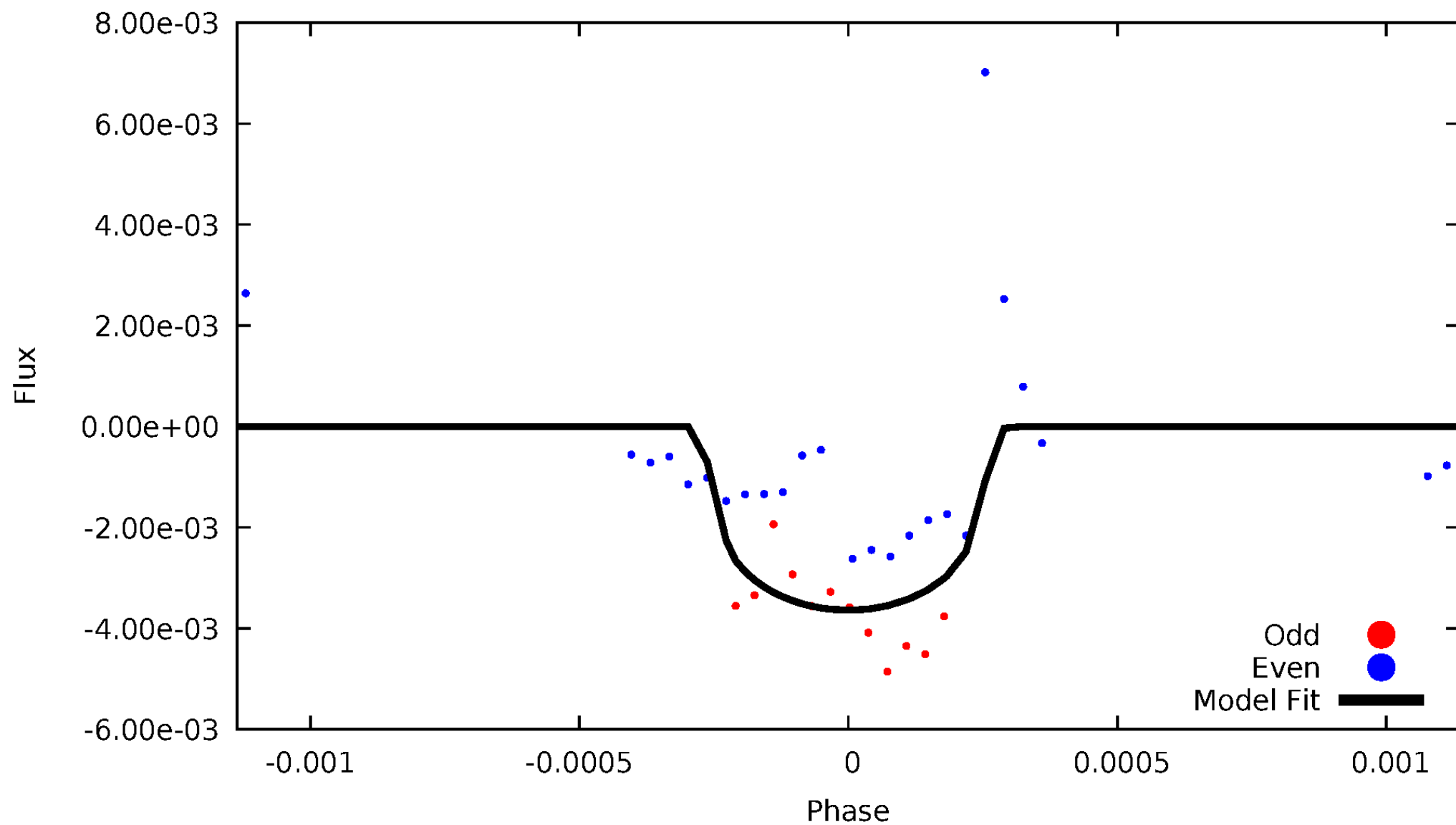


TCE 005739251-06



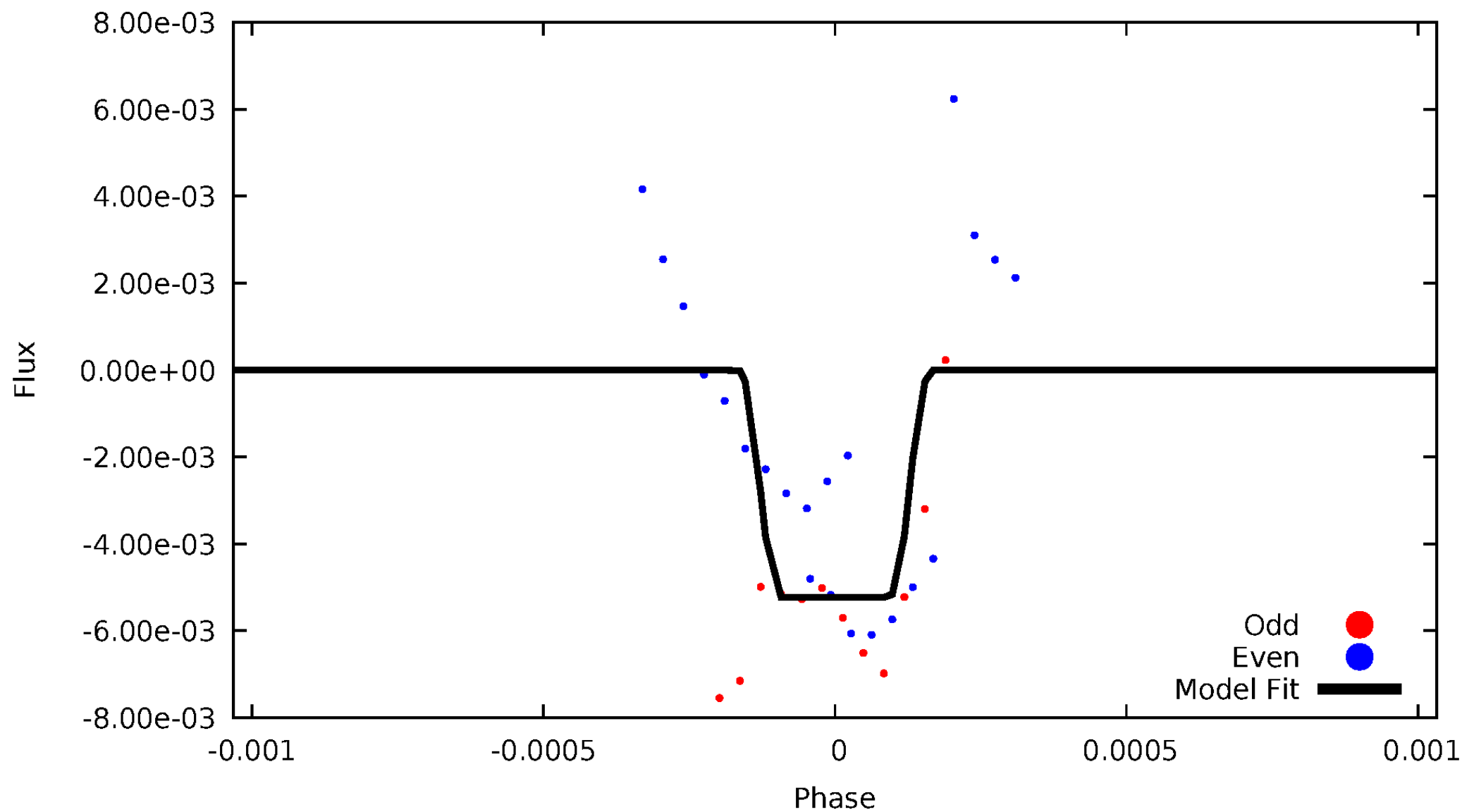
DV Odd/Even

TCE 005739251-06



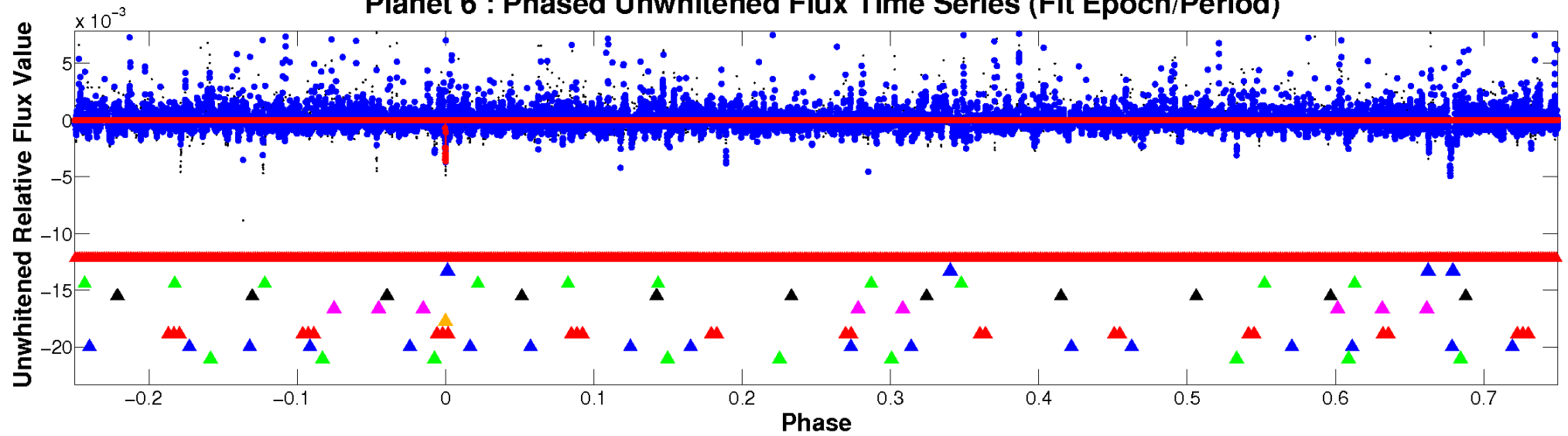
ALT Odd/Even

TCE 005739251-06

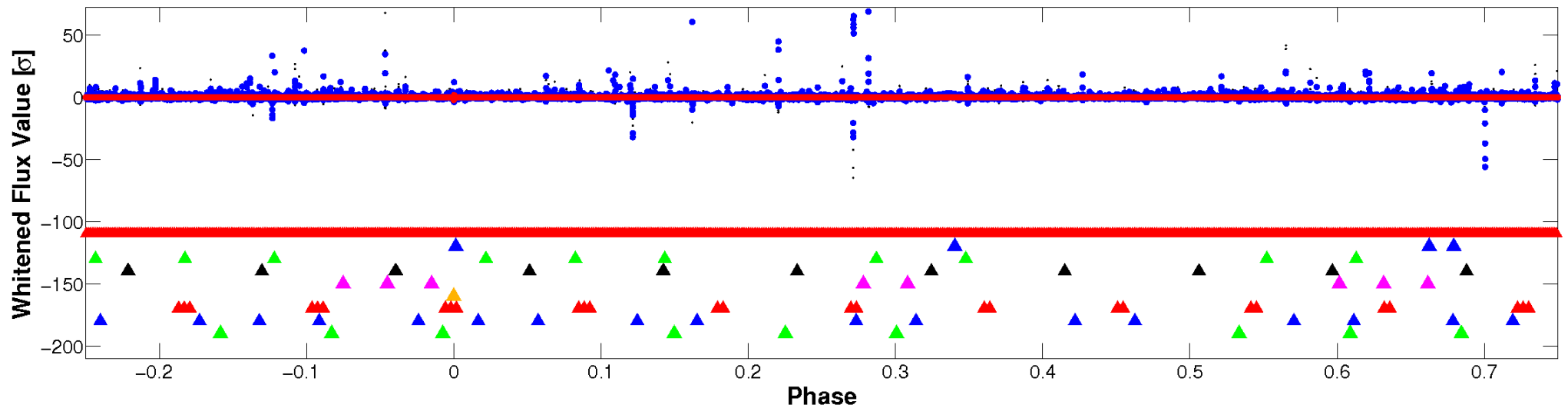


Non-Whitened Vs. Whitened Light Curve

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

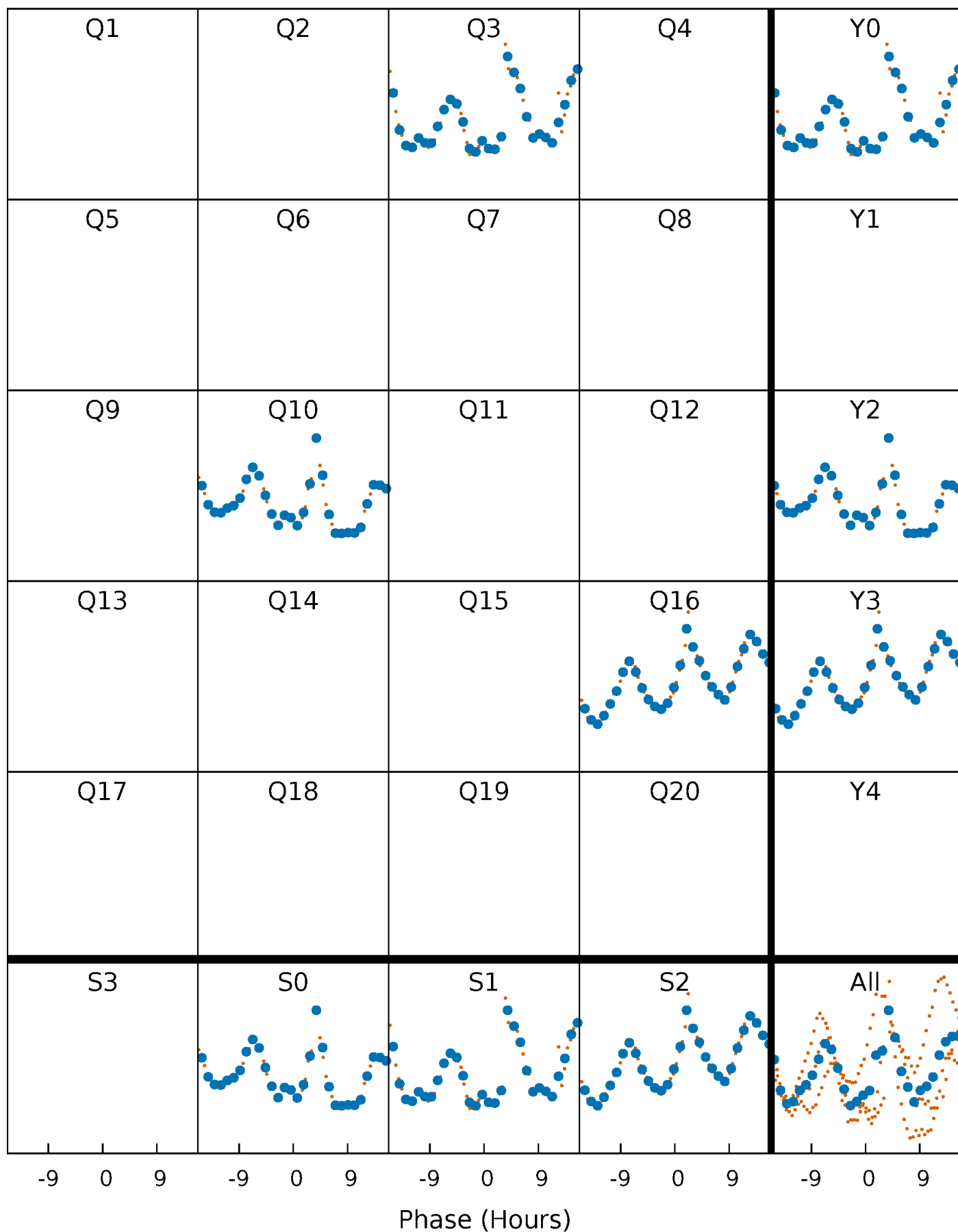


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



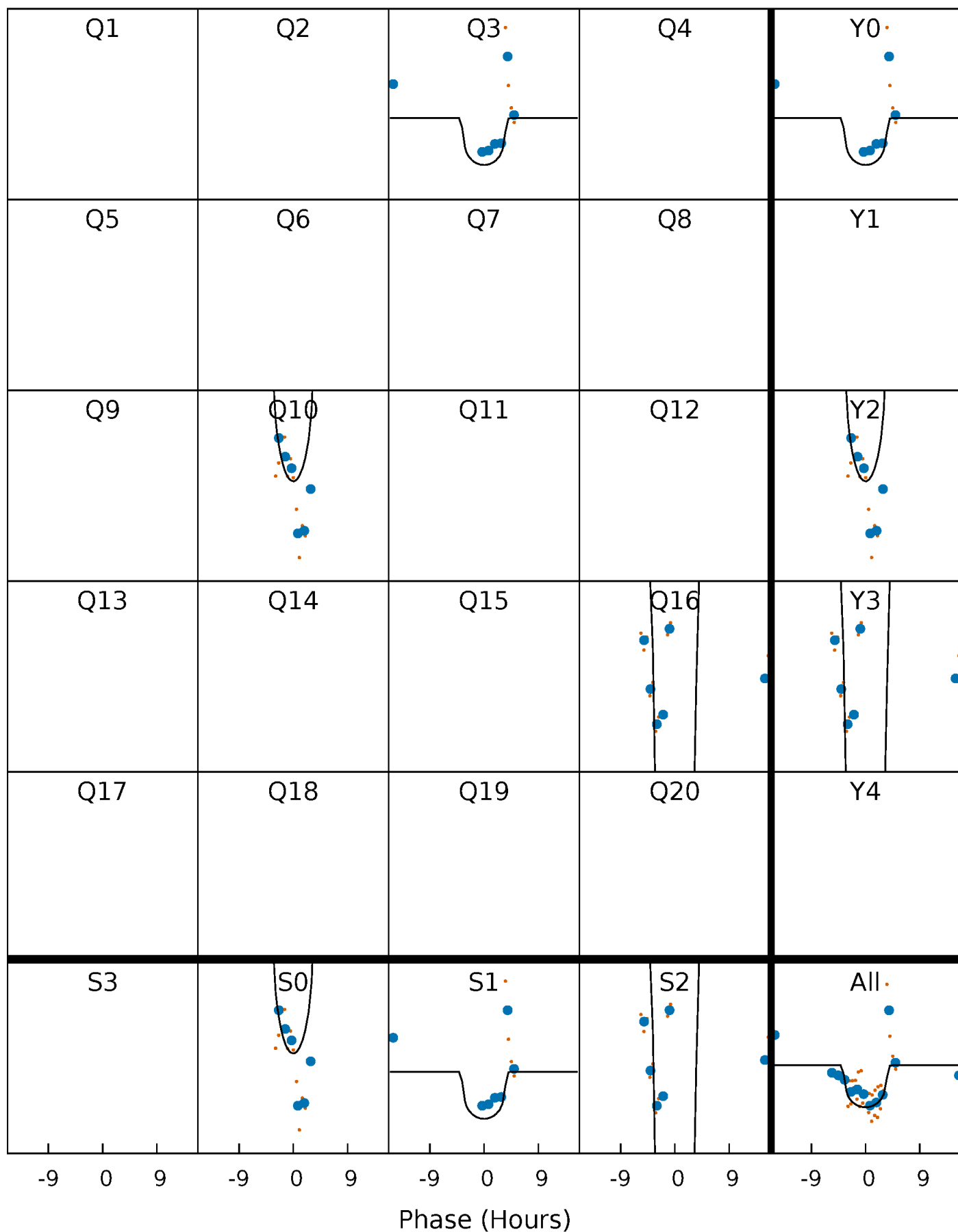
PDC Quarter-Phased Transit Curves

TCE 005739251-06 P=579.707049 Days $T_0=332.511898$ (BKJD)



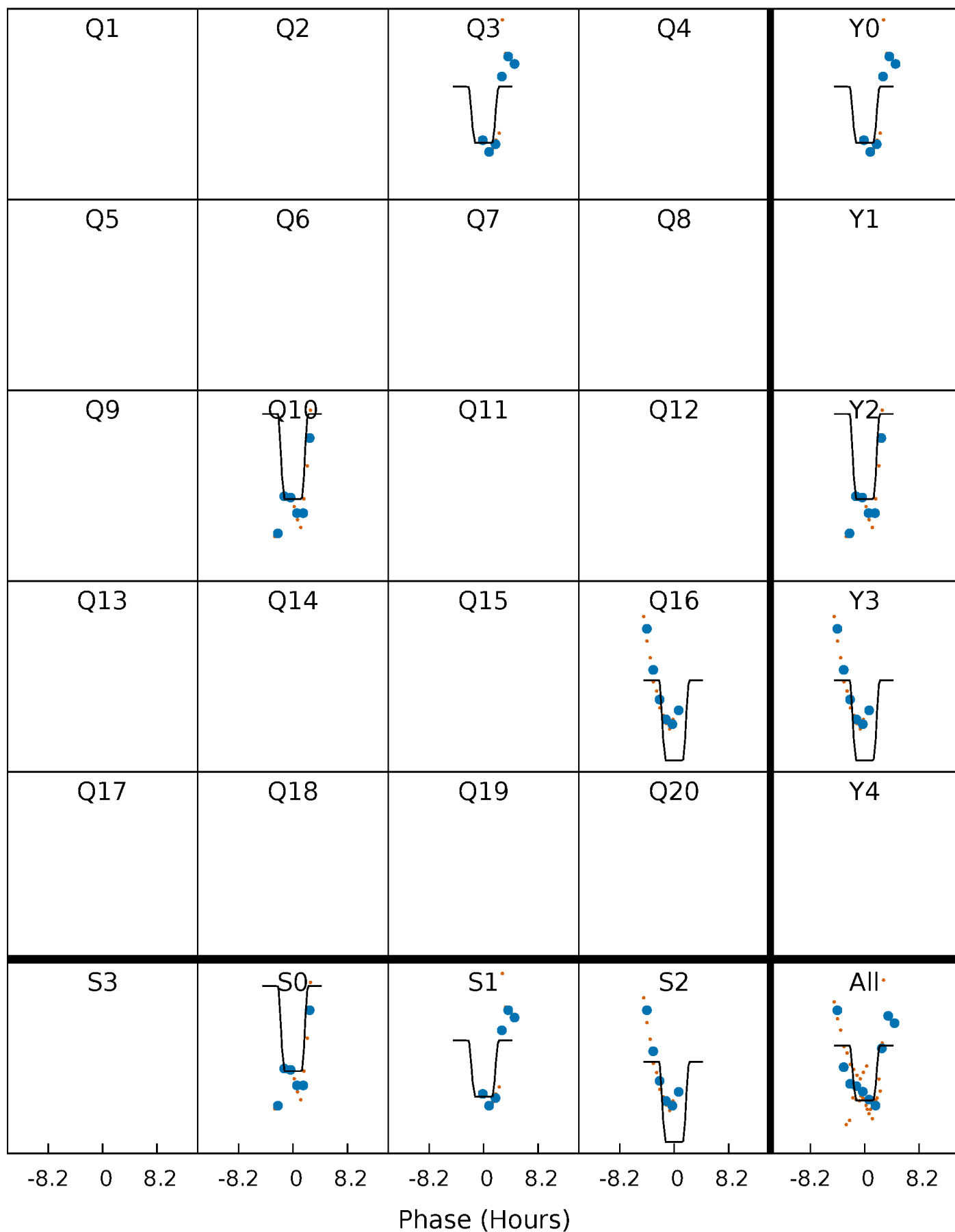
DV Quarter-Phased Transit Curves

TCE 005739251-06 P=579.707049 Days $T_0=332.511898$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

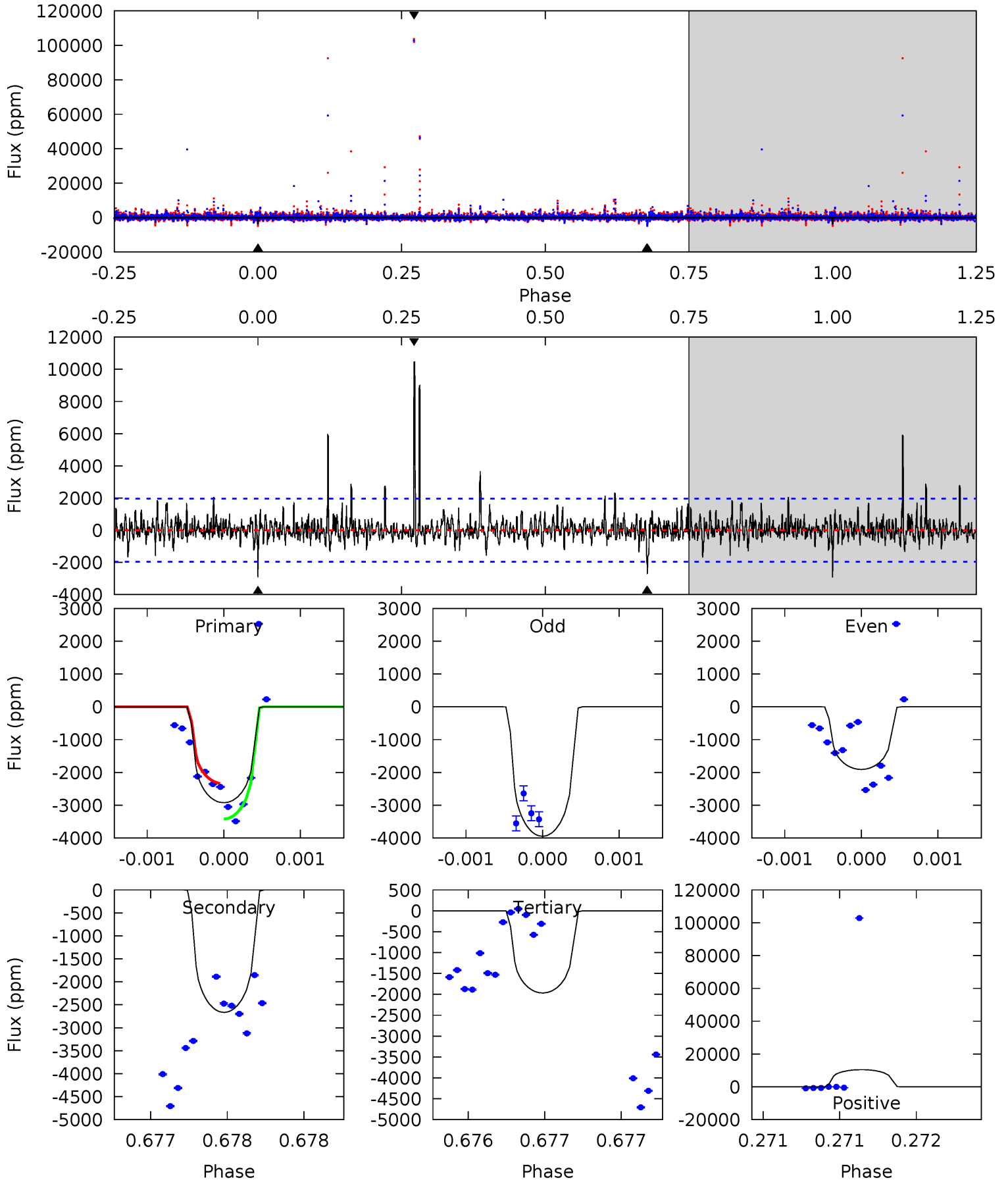
TCE 005739251-06 P=579.671281 Days $T_0=332.541087$ (BKJD)



DV Model-Shift Uniqueness Test

005739251-06, P = 579.707049 Days, E = 332.511898 Days

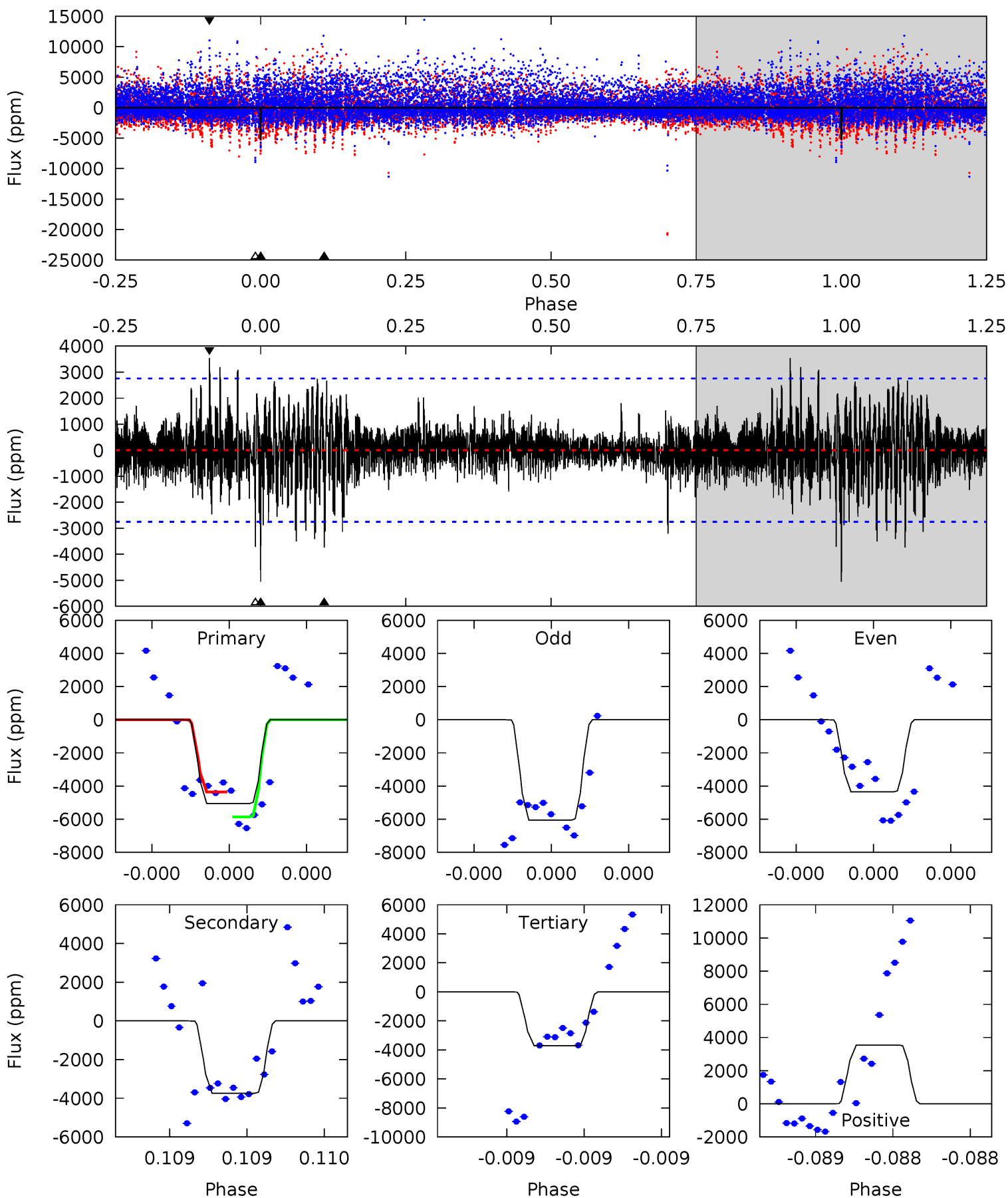
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.26	7.53	5.56	29.5	5.54	3.42	2.07	2.70	-21.3	1.97	-22.0	2.18	1.16	0.78	1.53



Alt Model-Shift Uniqueness Test

005739251-06, P = 579.671281 Days, E = 332.541087 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.4	7.67	7.61	7.26	5.65	3.60	1.61	2.75	3.10	0.06	0.40	1.74	0.84	0.41	1.52



Stellar Parameters For KIC 005739251

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	3963^{+122}_{-150}	$4.652^{+0.060}_{-0.020}$	$0.220^{+0.200}_{-0.300}$	$0.612^{+0.029}_{-0.068}$	$0.613^{+0.041}_{-0.062}$	$3.761^{+1.109}_{-0.369}$
	+3%/-4%	+1%/-0%	+91%/-136%	+5%/-11%	+7%/-10%	+29%/-10%
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 005739251-06 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-2667 ± 354	$3.75^{+1.57}_{-1.41}$	176^{+7}_{-7}	3812^{+742}_{-448}	$139271^{+208887}_{-71023}$
Alt.	-3738 ± 488	$4.81^{+1.61}_{-1.54}$	176^{+7}_{-7}	3726^{+550}_{-355}	$122579^{+142824}_{-56192}$

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

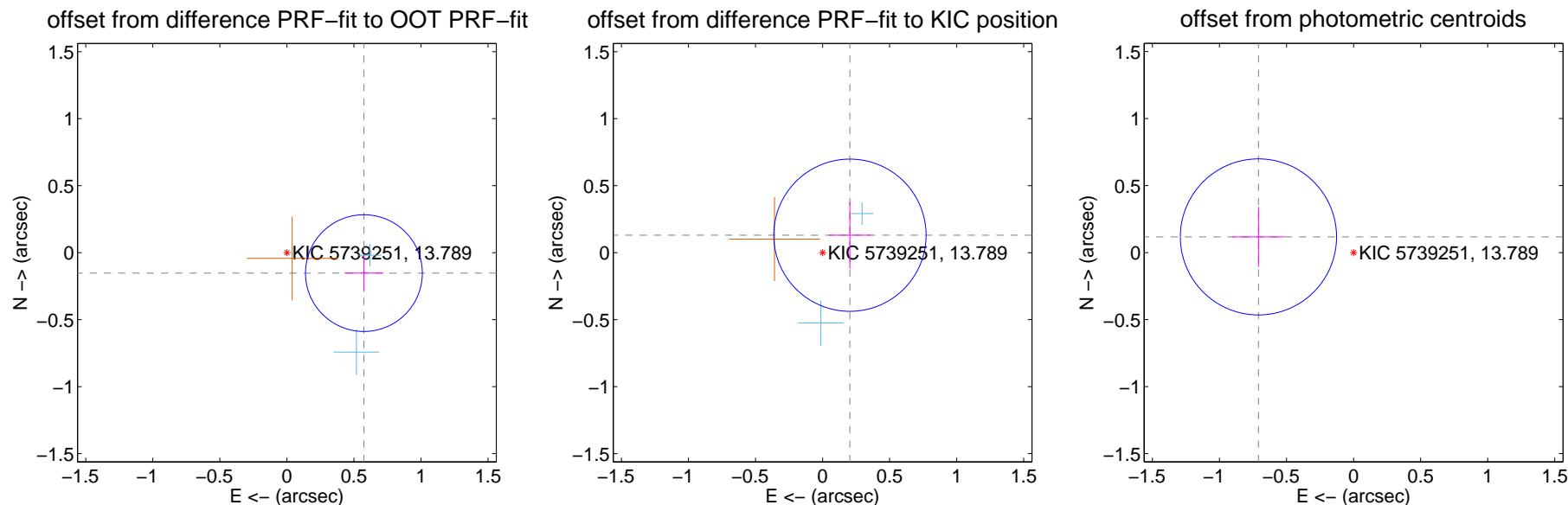
DV Centroid Data

Supplemental centroid analysis for 005739251-06. Kepler magnitude: 13.79. Transit SNR 9.40

There are 2 quarters with good PRF difference image offsets

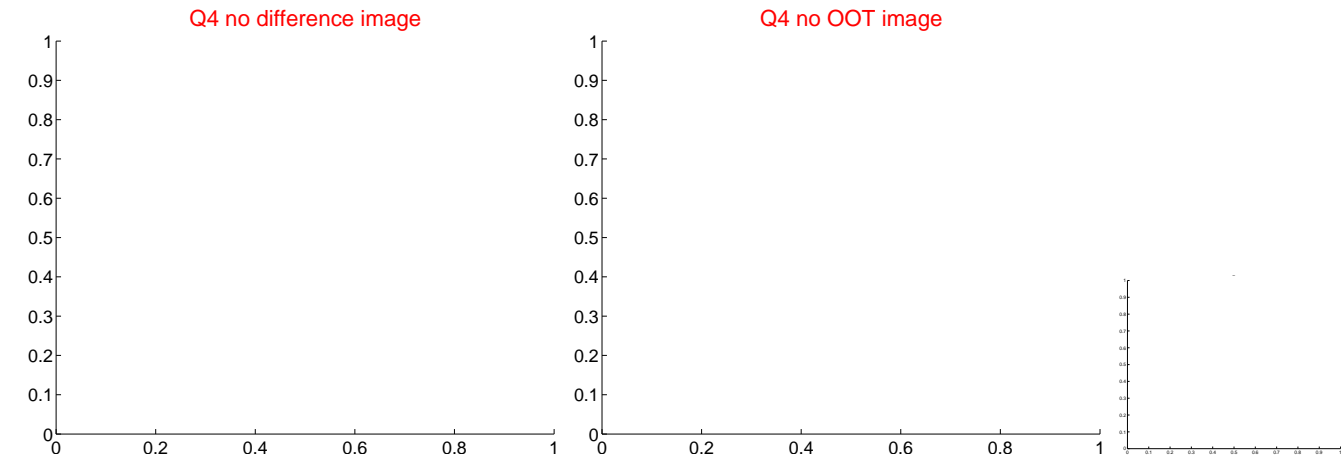
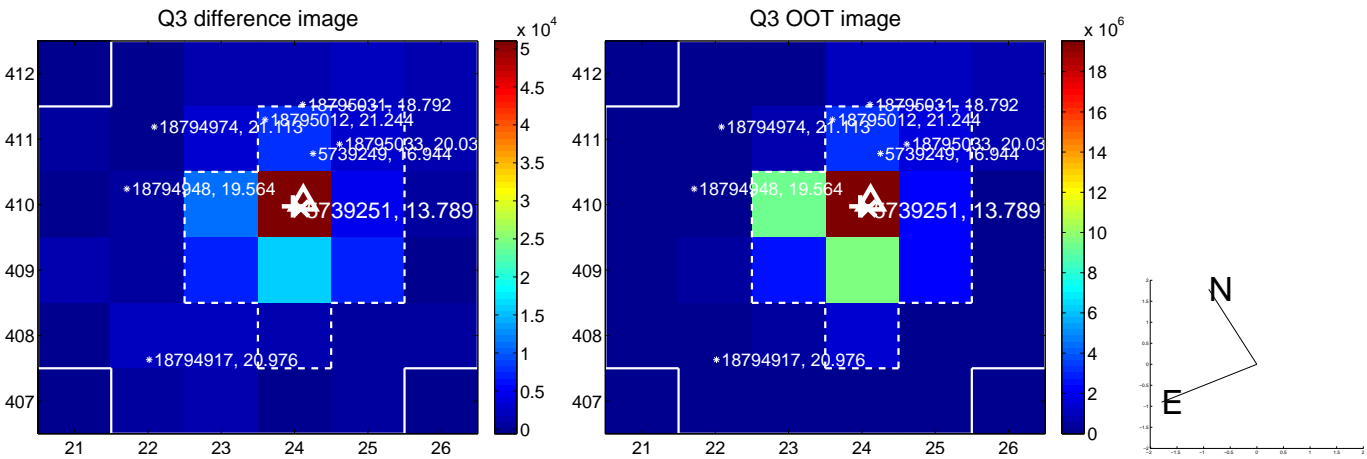
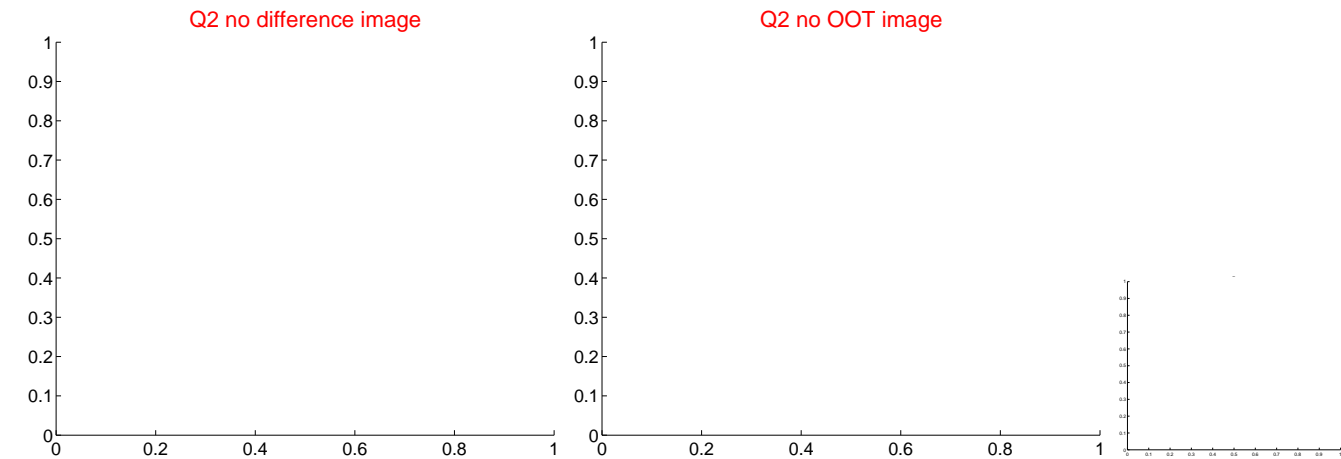
The direct PRF centroid is offset from the target star catalog position by about 0.42 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.594 ± 0.145	4.09	-0.574 ± 0.146	-0.153 ± 0.139
PRF-fit source offset from KIC position	0.242 ± 0.189	1.28	-0.204 ± 0.158	0.130 ± 0.250
photometric centroid source offset	0.72 ± 0.19	3.70	0.71 ± 0.19	0.12 ± 0.22

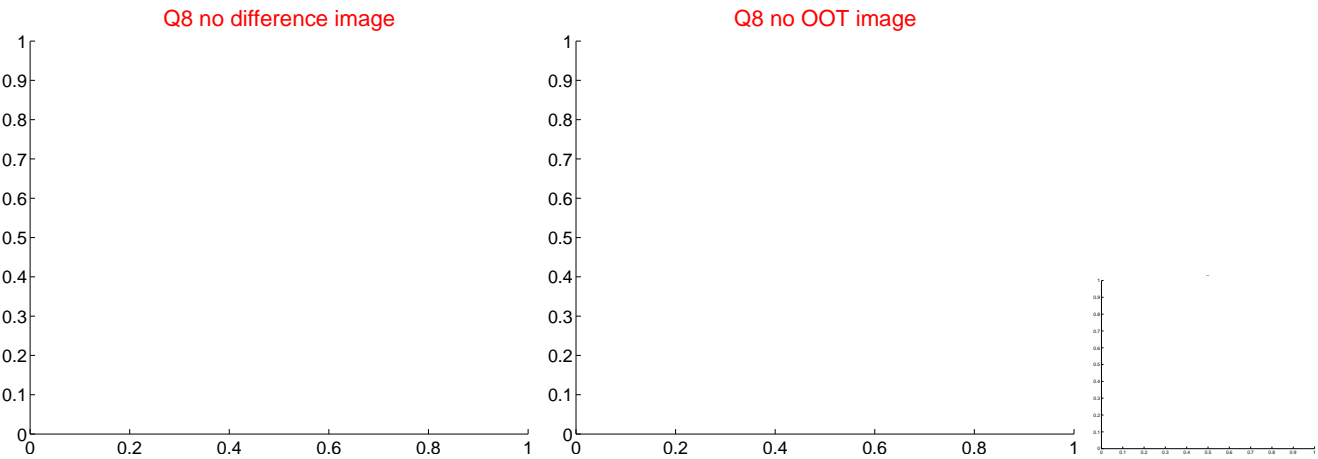
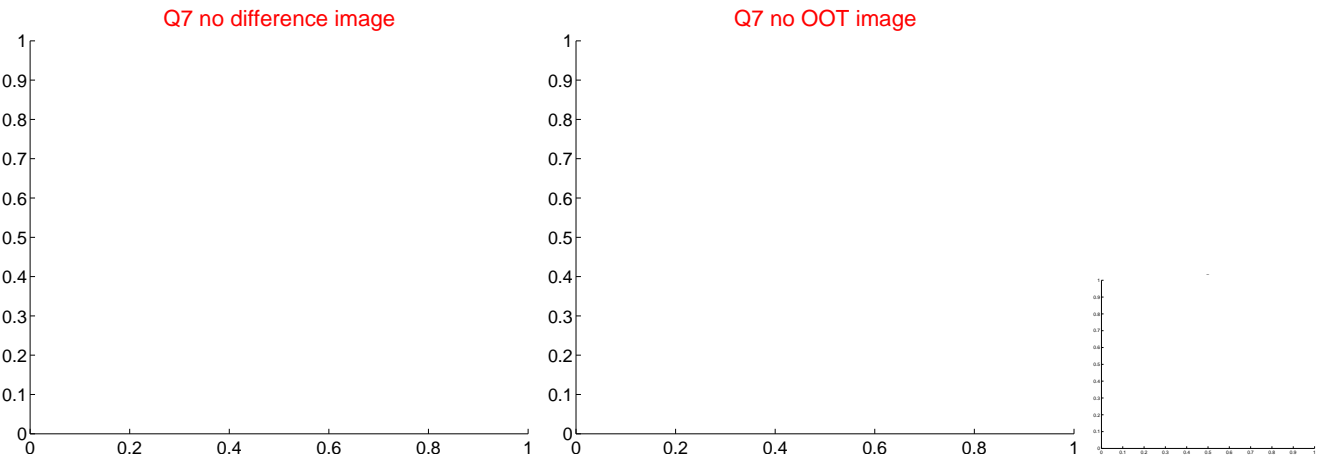
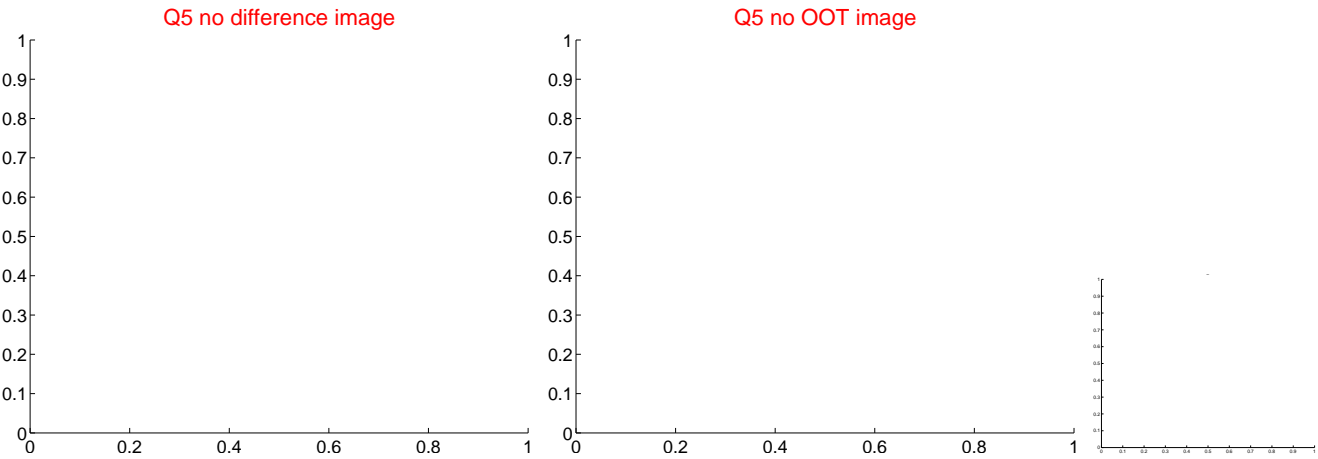


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

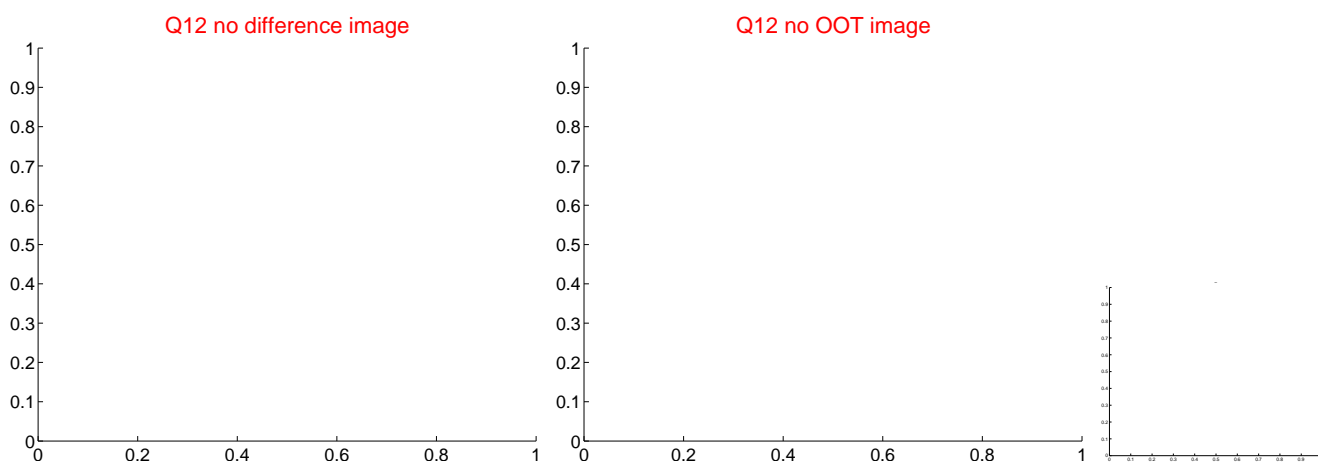
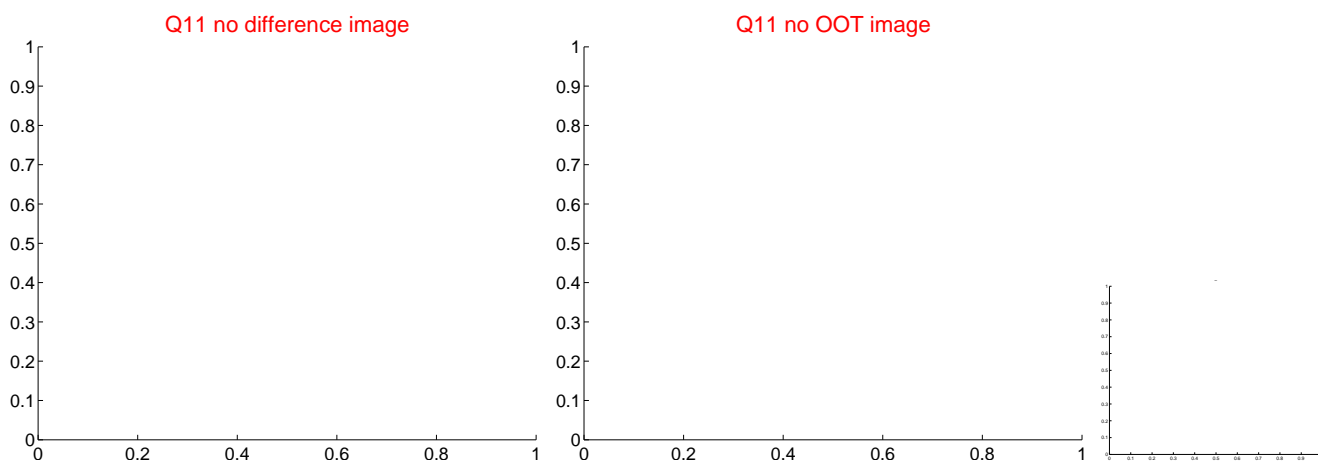
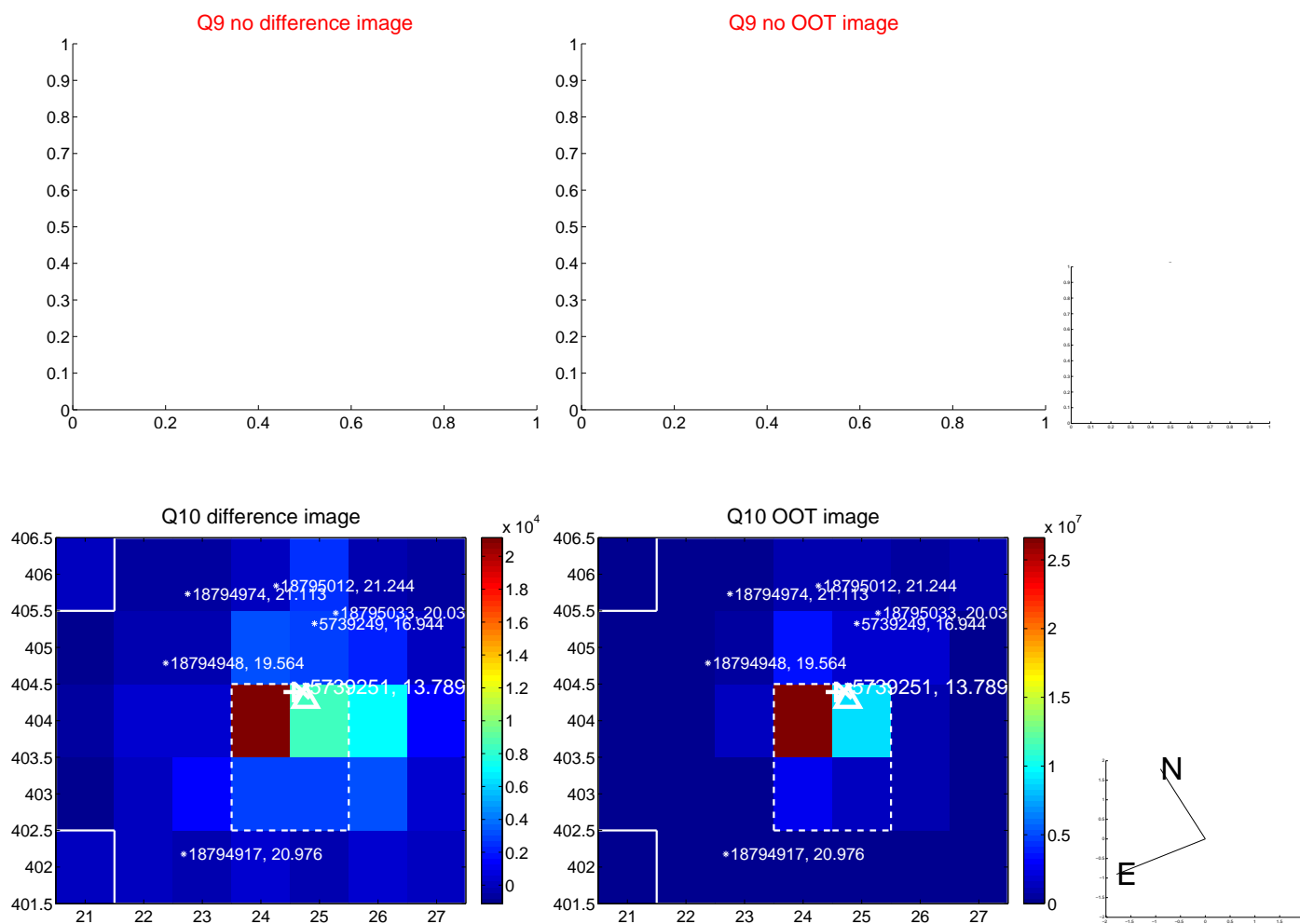
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



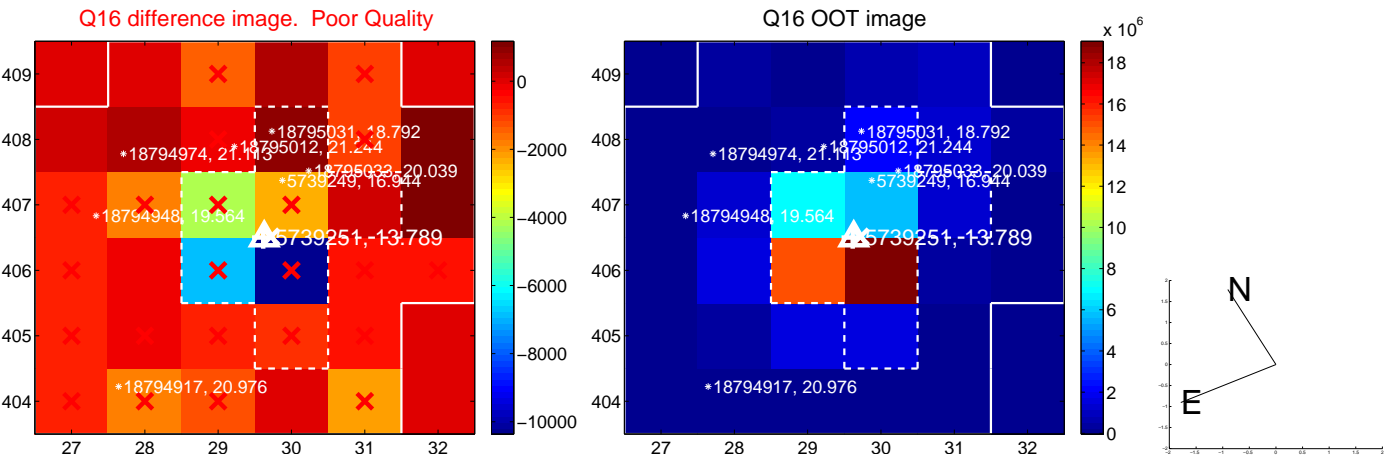
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



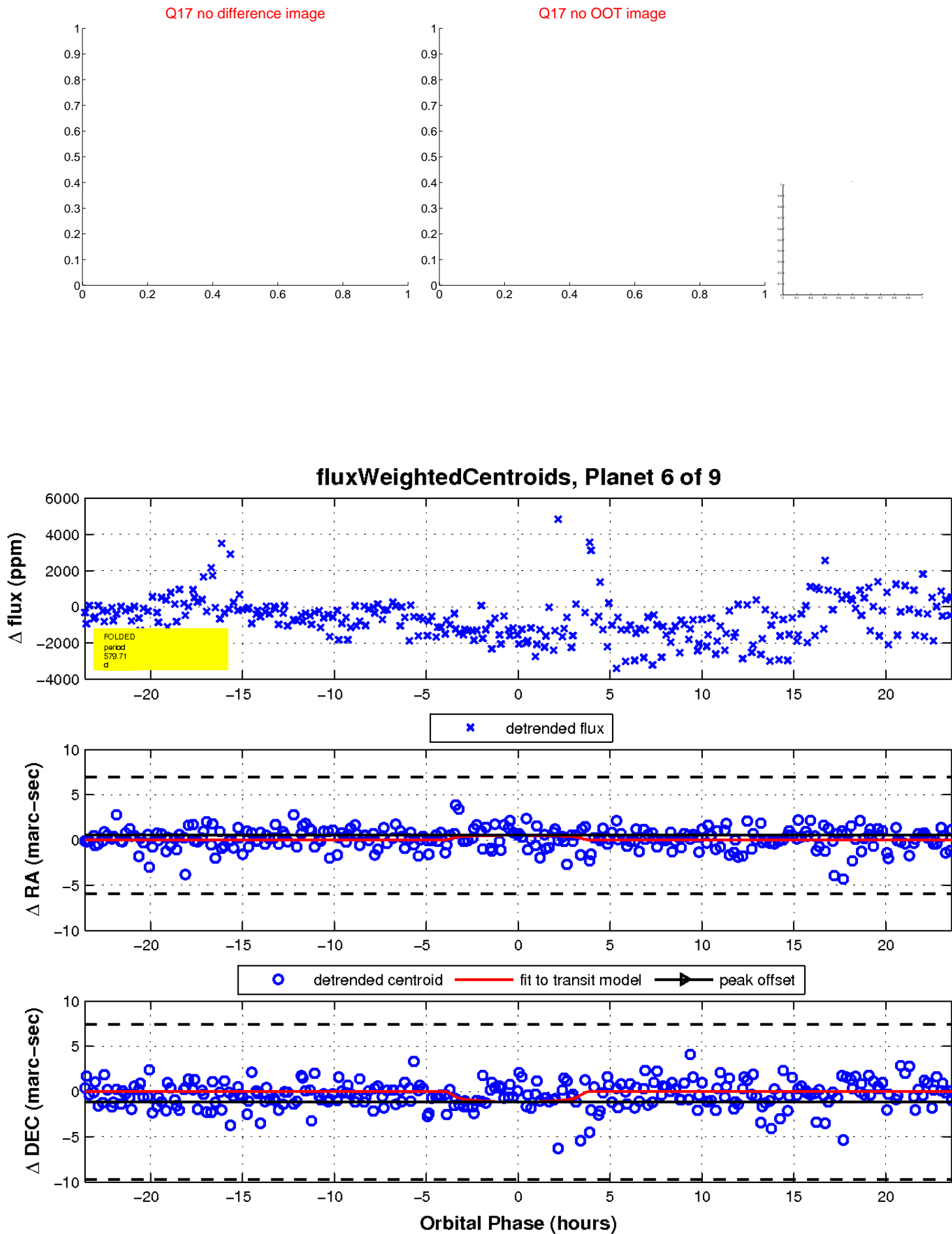
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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

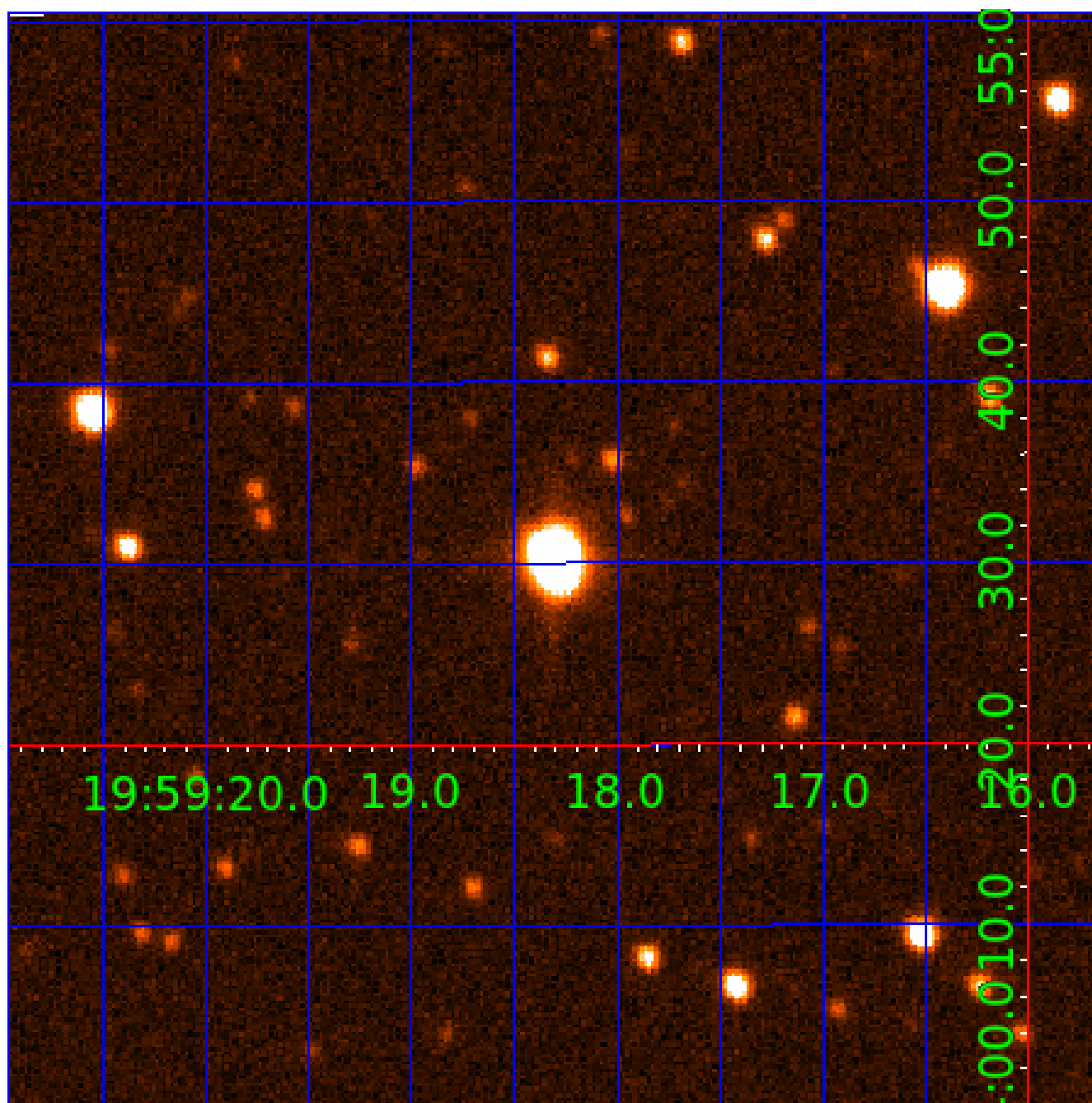


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005739251

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})
005739251-01	OBS	No	0.868952	132.321739	97.9	4.928	12.8	11.5	0.61	3963	0.58	360.99
005739251-02	OBS	No	383.240200	146.574993	3136.4	7.899	12.6	8.4	0.61	3963	3.63	0.11
005739251-03	OBS	No	153.727393	191.466115	1636.0	5.316	10.7	6.8	0.61	3963	2.38	0.36
005739251-05	OBS	No	187.430989	136.366580	2283.0	4.361	8.9	7.1	0.61	3963	3.01	0.28
005739251-06	OBS	No	579.707049	332.511898	3640.5	7.902	10.5	9.4	0.61	3963	3.93	0.06
005739251-07	OBS	No	52.503293	176.046621	997.2	2.000	8.7	-1.0	0.61	3963	1.87	1.52
005739251-08	OBS	No	86.182052	146.239333	997.8	4.648	8.1	5.3	0.61	3963	2.03	0.79
005739251-09	OBS	No	178.650615	149.550422	369.1	9.000	8.8	-1.0	0.61	3963	1.13	0.30

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005739251-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_KIC_POS
005739251-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005739251-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—INCONSISTENT_TRANS
005739251-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005739251-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005739251-07	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
005739251-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_TRACKER—TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_KIC_POS
005739251-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—ALL_TRANS_CHASES—CENT_NOFITS

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

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

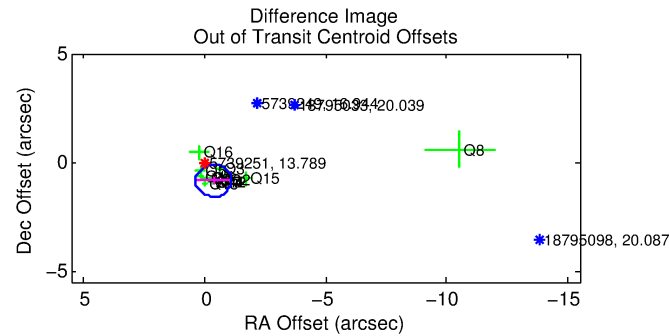
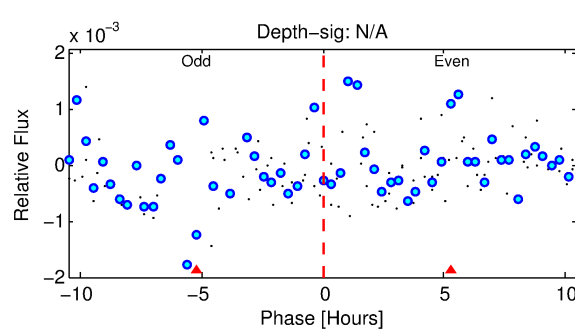
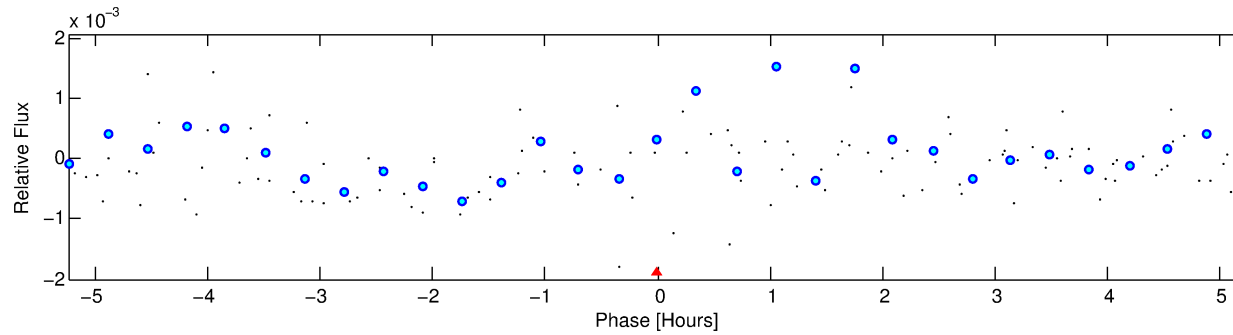
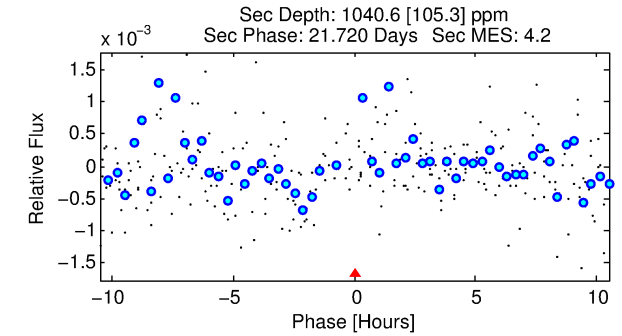
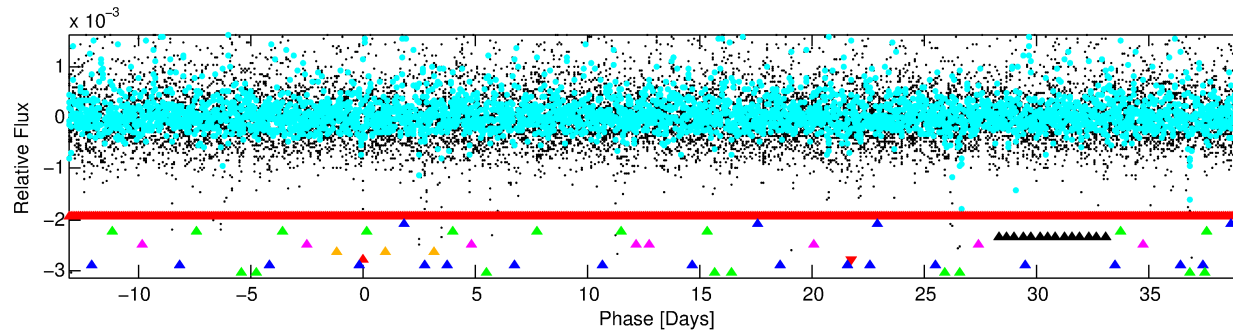
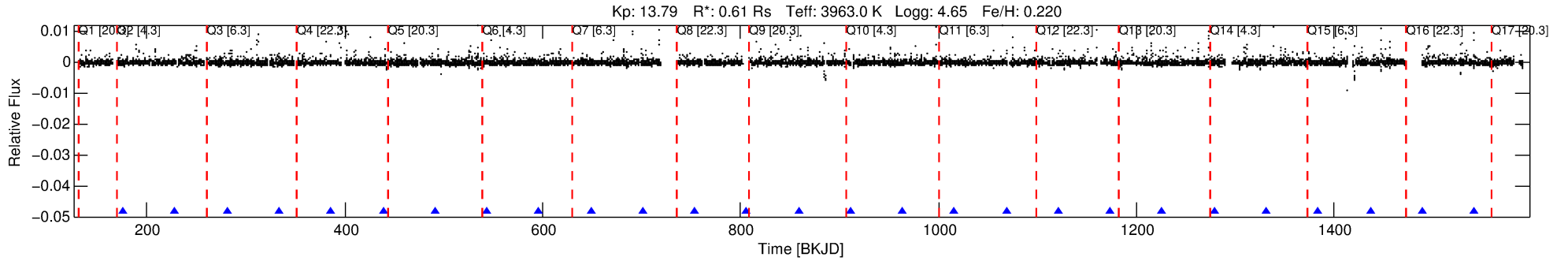
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005739251-07

No Significant Match Found

DV One-Page Summary

KIC: 5739251 Candidate: 7 of 9 Period: 52.503 d



TPS TCE Results:

Period = 52.50329 d
Epoch = 176.0466 BKJD

DV fit results are unavailable

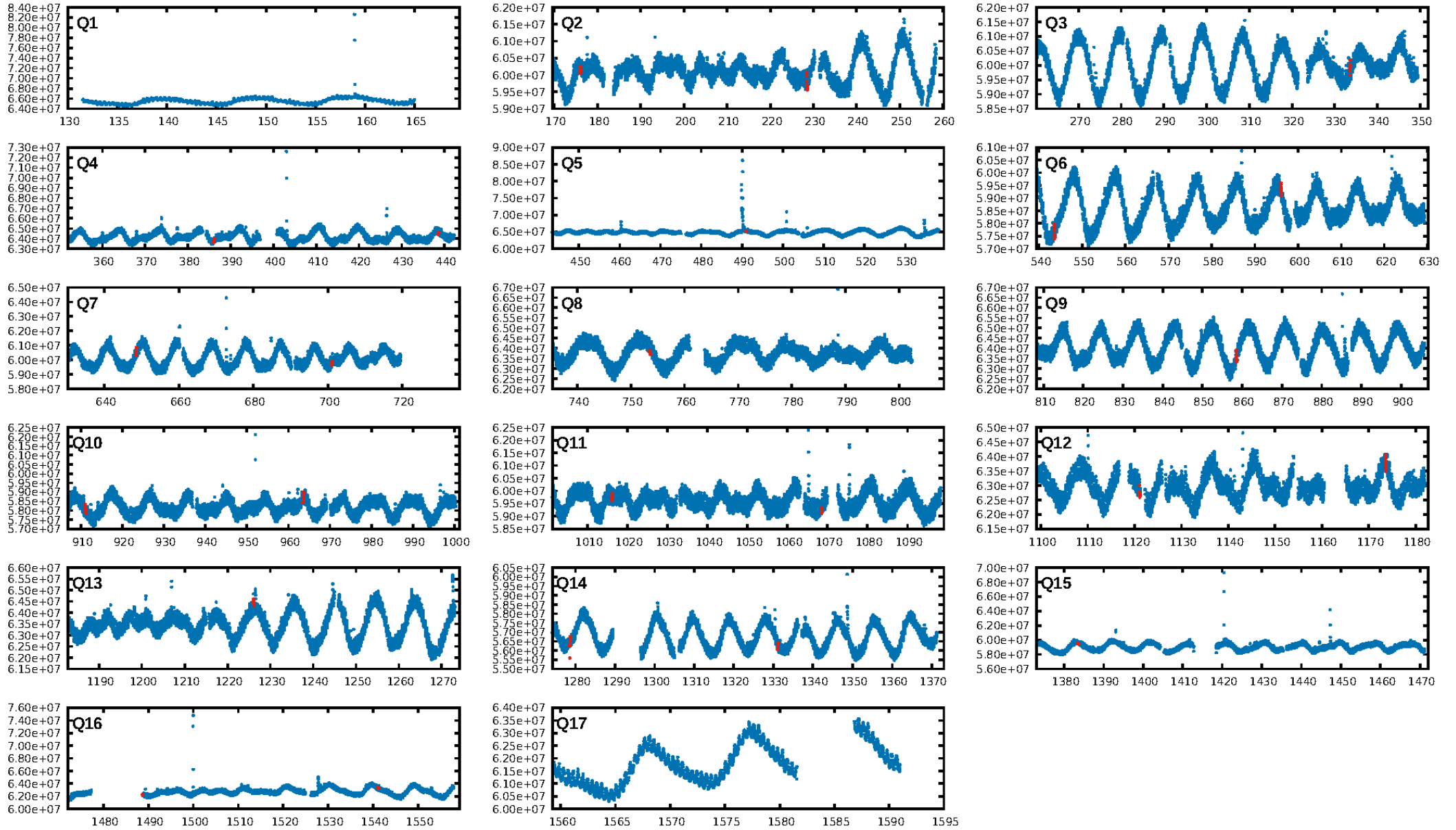
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [233.01 σ]
LongPeriod-sig: 100.0% [159.74 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [9/9]
GhostDiagnostic-chr: -0.5773
Centroid-sig: 27.5%
Centroid-so: 0.719 arcsec [0.68 σ]
OotOffset-rm: 0.927 arcsec [3.79 σ]
KicOffset-rm: 0.647 arcsec [2.74 σ]
OotOffset-st: 3/4/4/3 [14]
KicOffset-st: 3/4/4/3 [14]
DiffImageQuality-fgm: 0.57 [8/14]
DiffImageOverlap-fno: 0.20 [3/15]

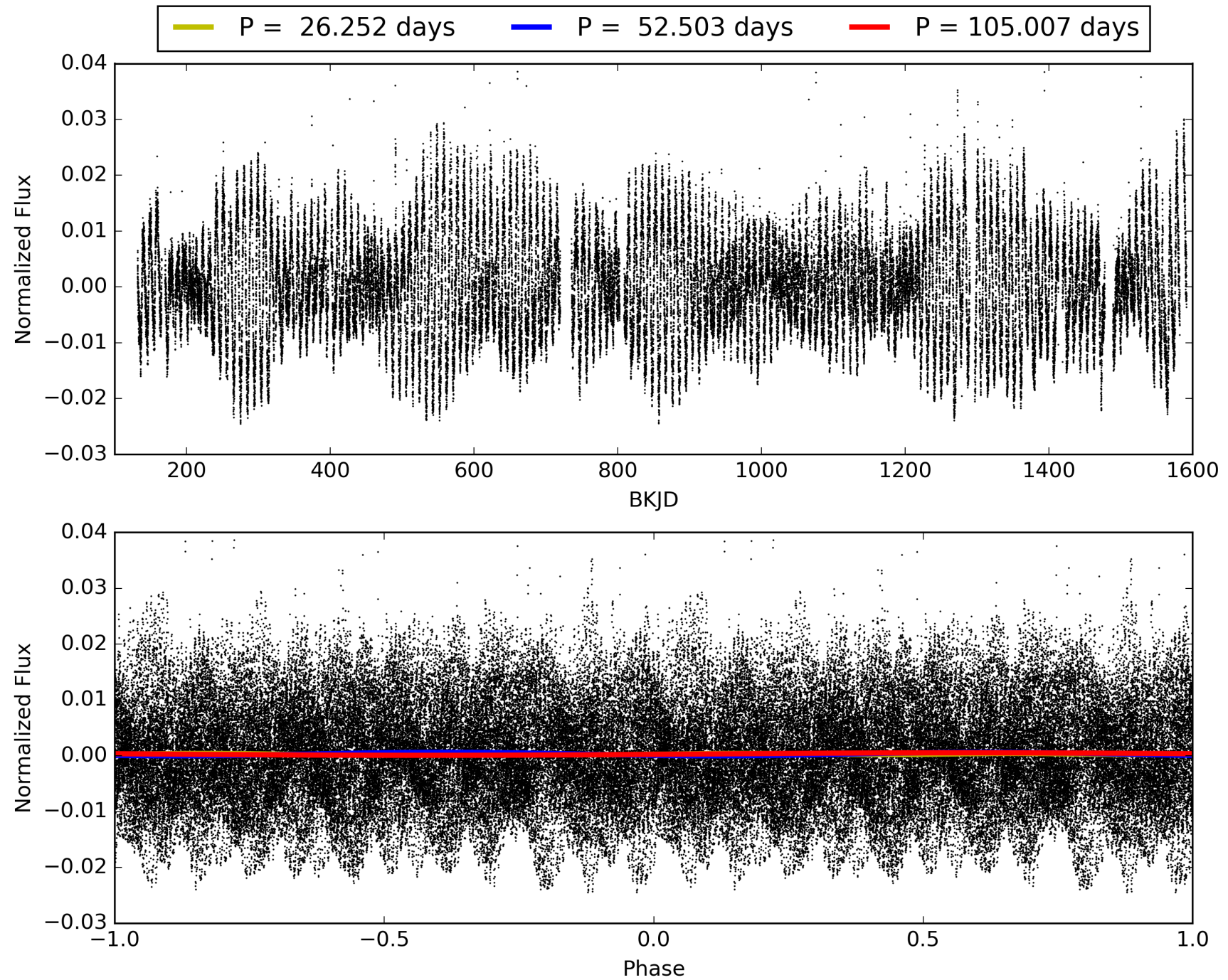
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 005739251-07, PDC Light Curves

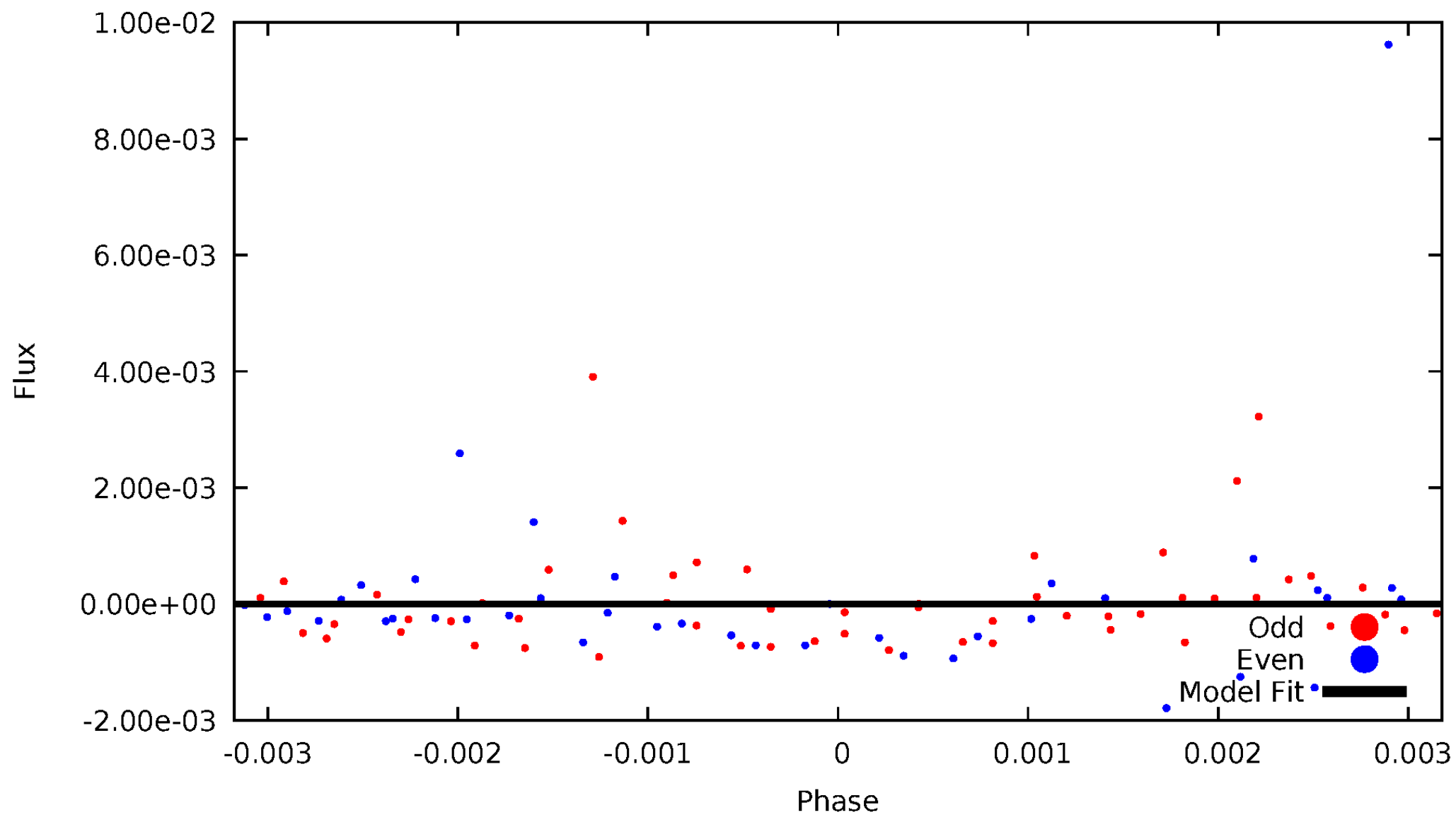


TCE 005739251-07



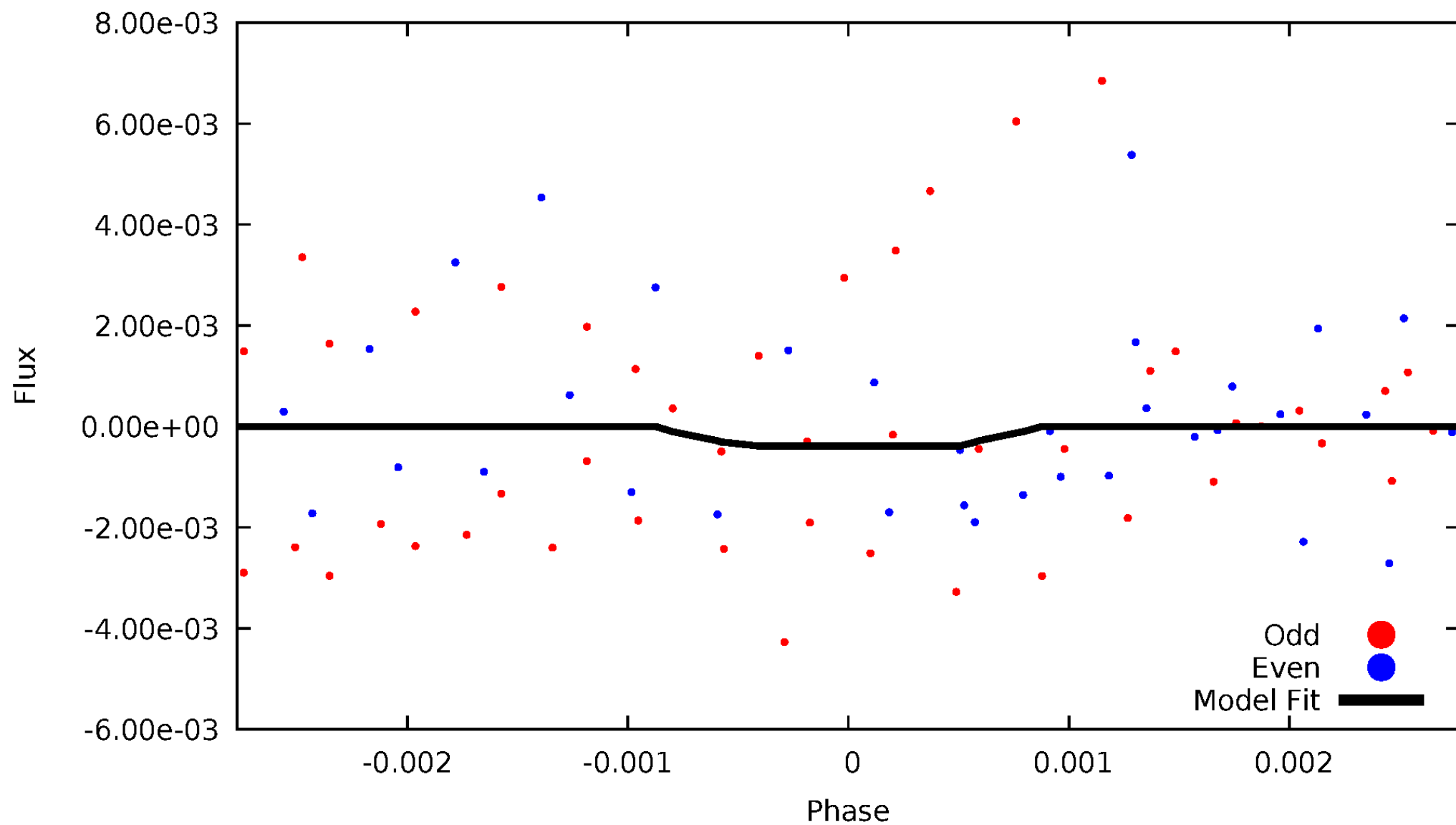
DV Odd/Even

TCE 005739251-07



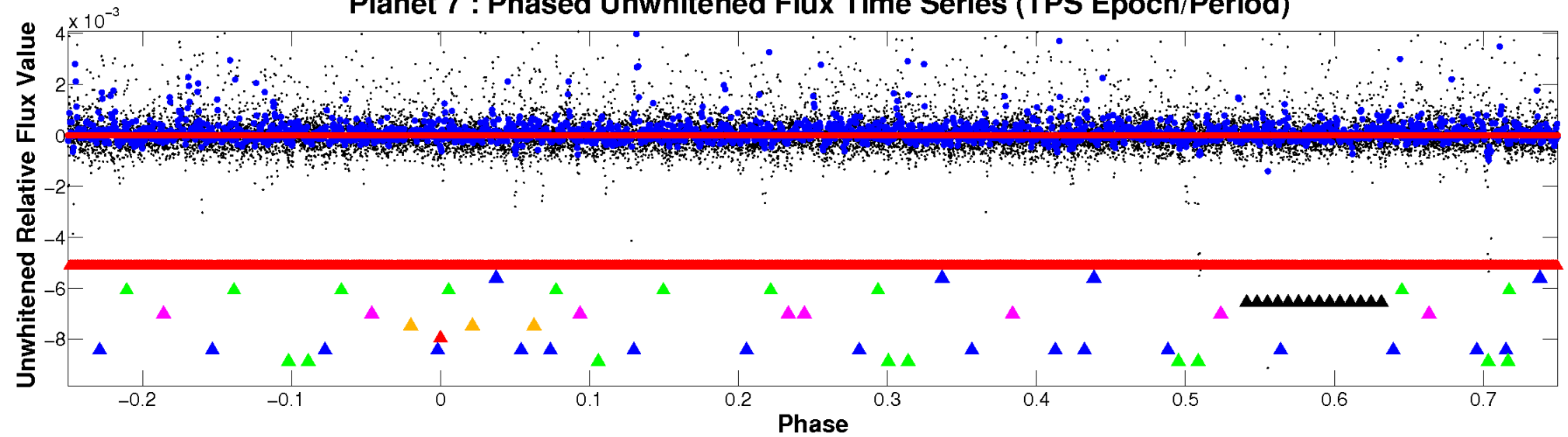
ALT Odd/Even

TCE 005739251-07

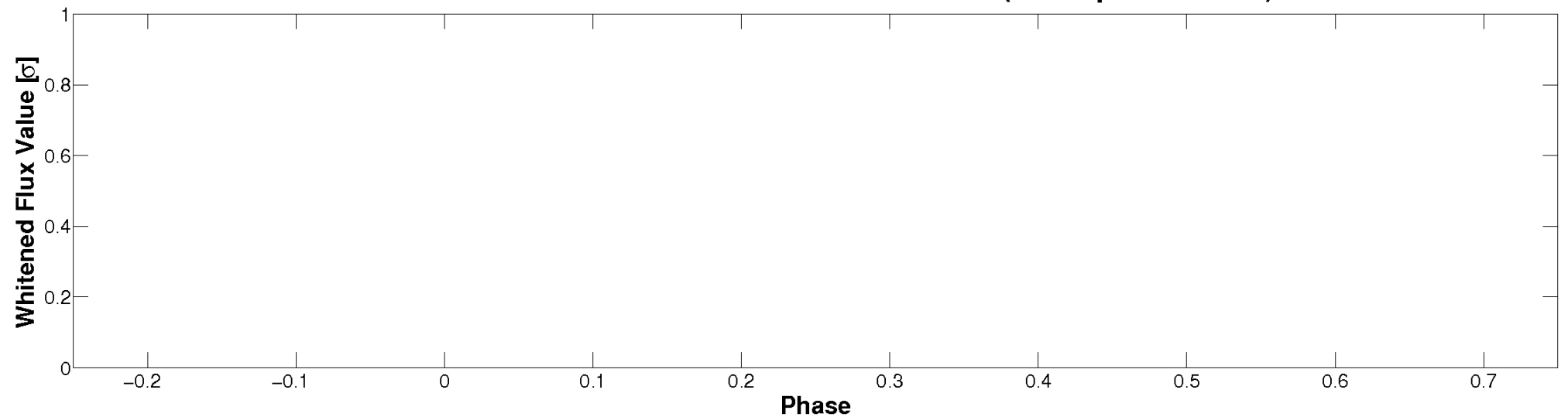


Non-Whitened Vs. Whitened Light Curve

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

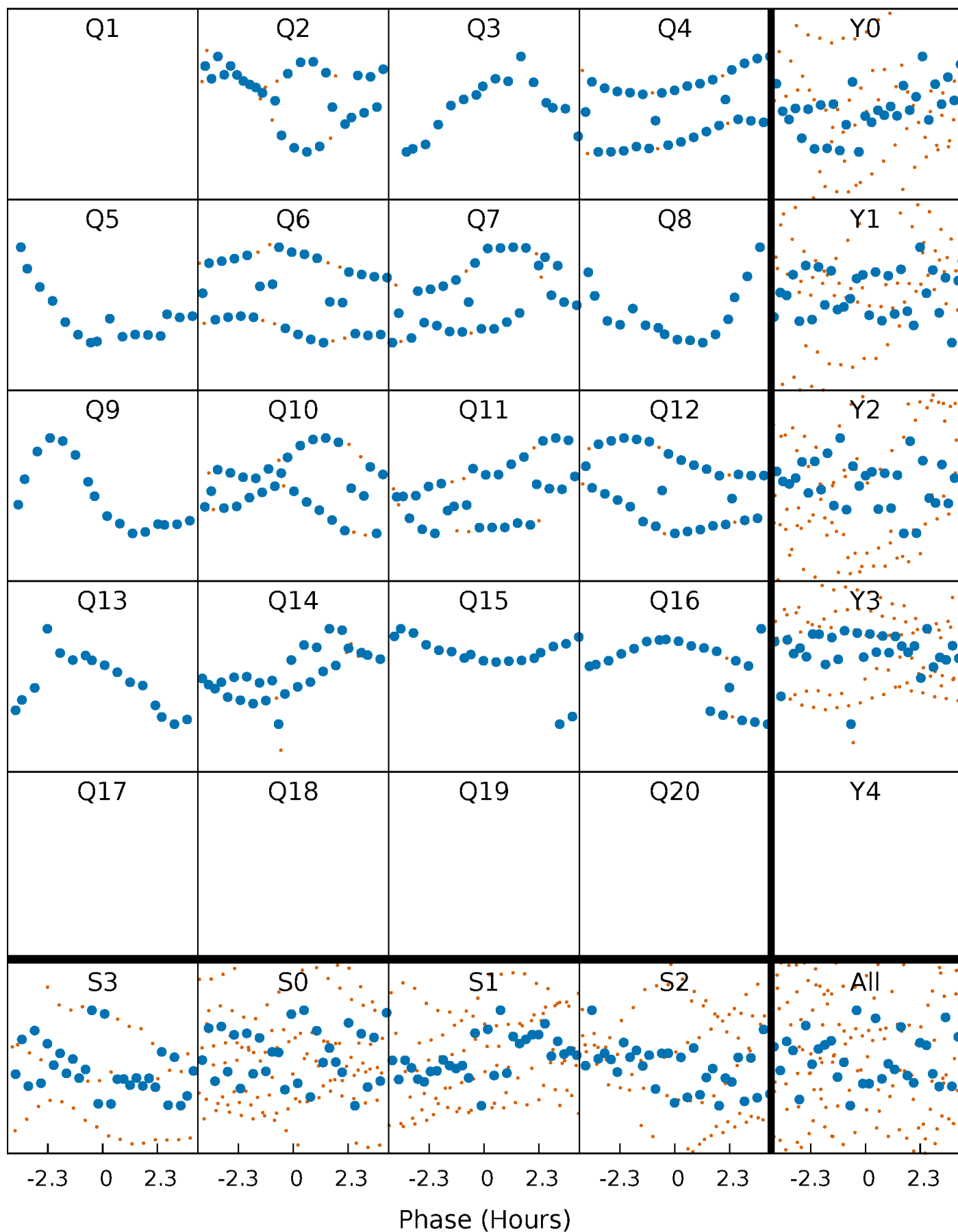


Planet 7 : Phased Whitened Flux Time Series (TPS Epoch/Period)



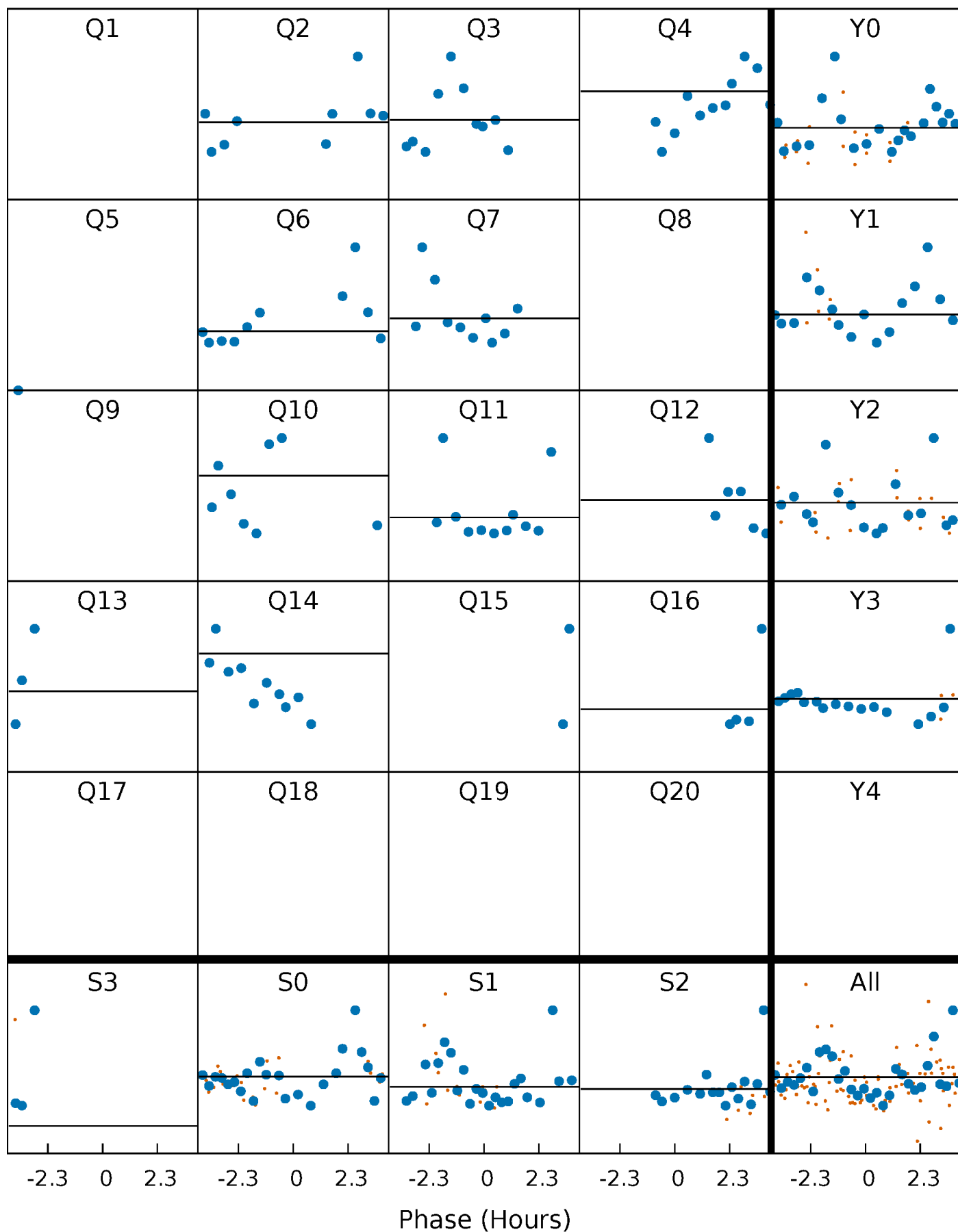
PDC Quarter-Phased Transit Curves

TCE 005739251-07 P= 52.503293 Days $T_0=176.046621$ (BKJD)



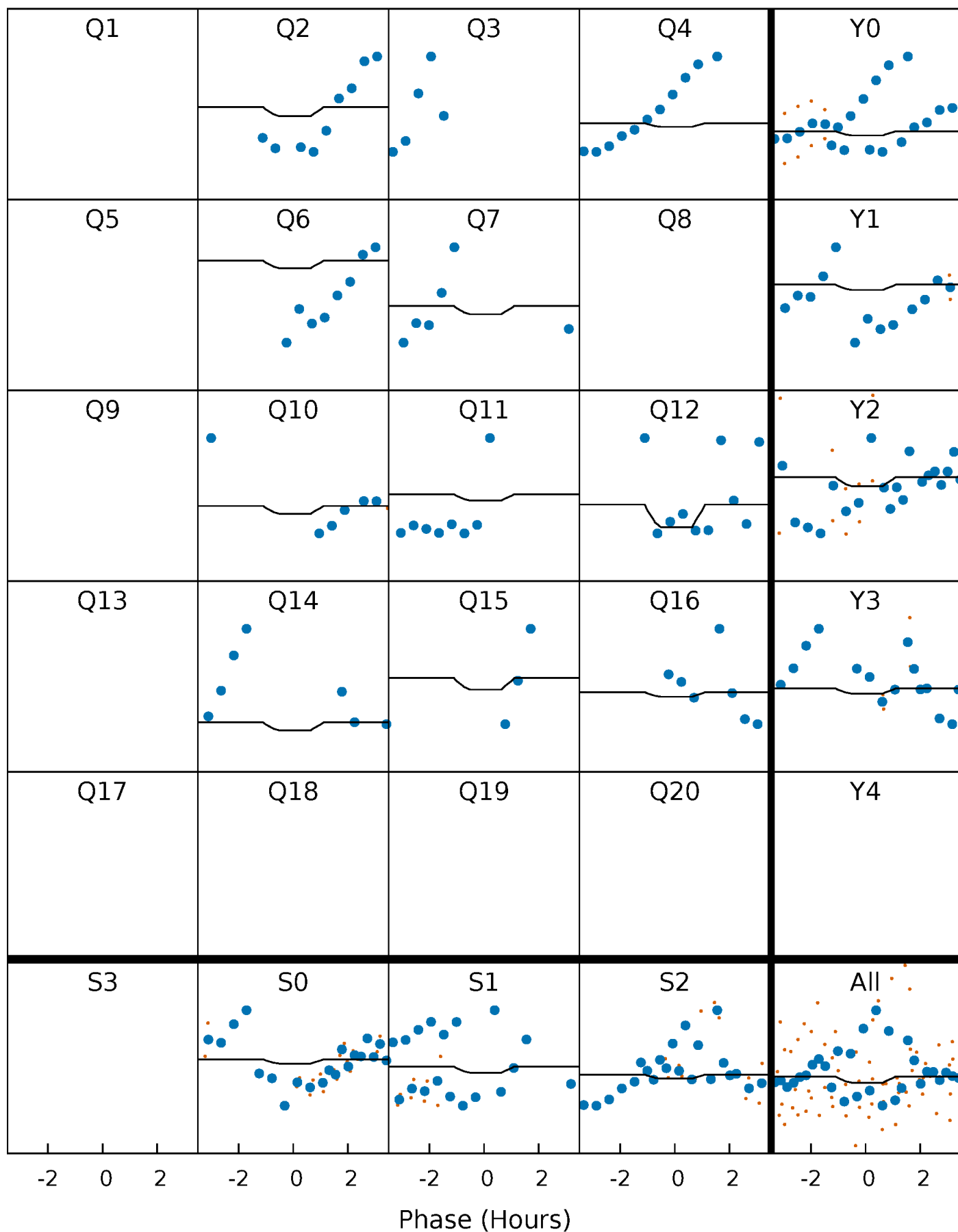
DV Quarter-Phased Transit Curves

TCE 005739251-07 P= 52.503293 Days $T_0=176.046621$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

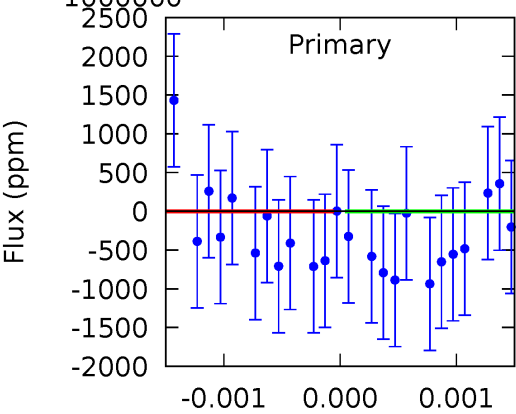
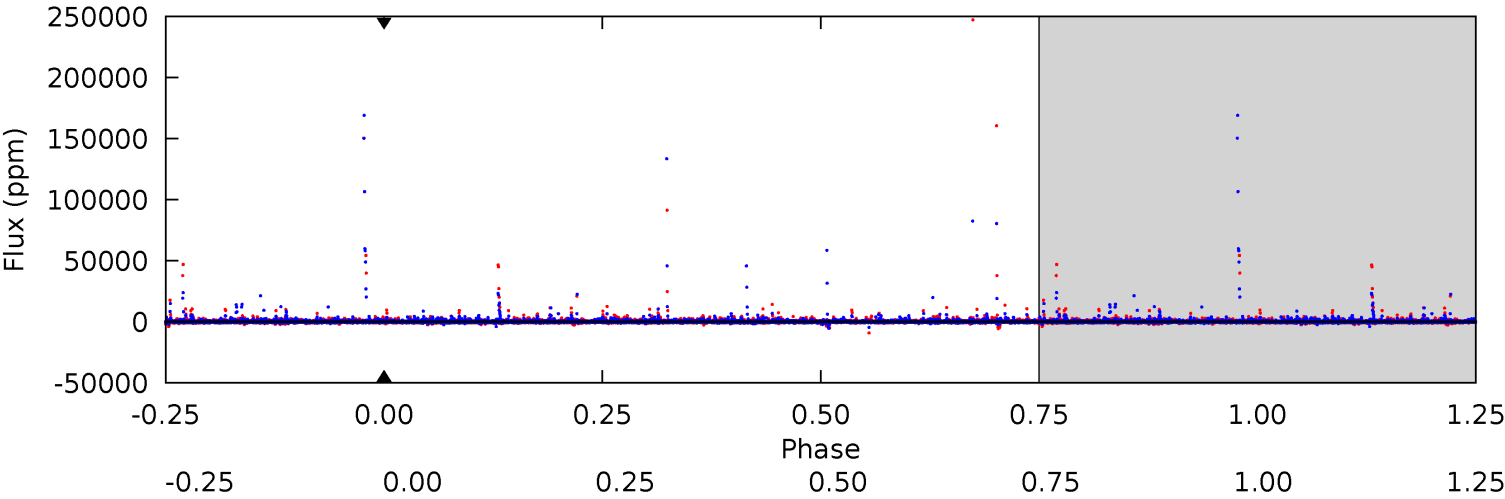
TCE 005739251-07 P= 52.503293 Days $T_0=176.151560$ (BKJD)



DV Model-Shift Uniqueness Test

005739251-07, P = 52.503293 Days, E = 123.543328 Days

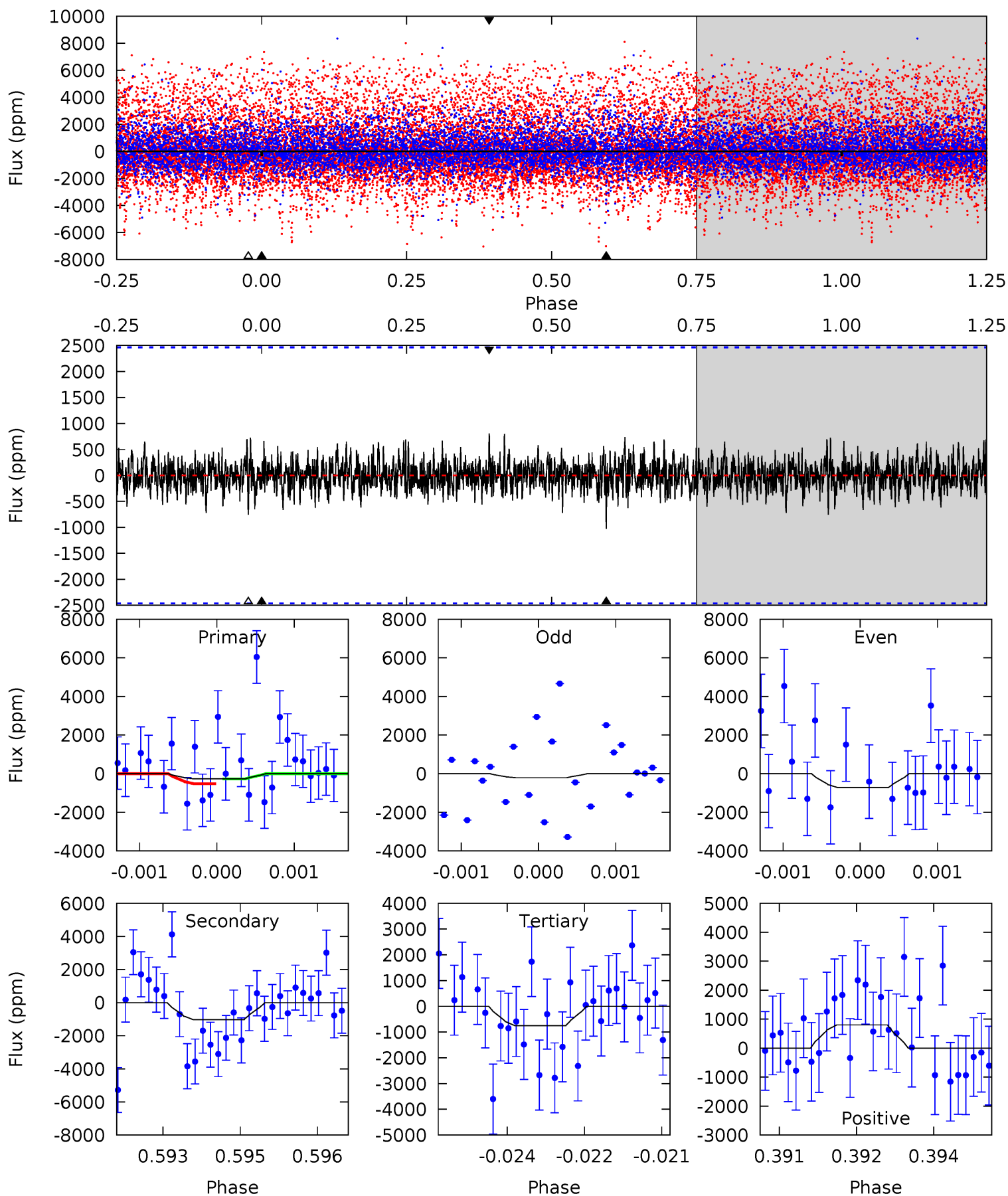
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

005739251-07, P = 52.503293 Days, E = 123.648267 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.59	2.25	1.65	1.76	5.39	3.20	0.49	-1.06	-1.16	0.60	0.49	0.51	1.18	0.44	0.27



Stellar Parameters For KIC 005739251

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	3963^{+122}_{-150}	$4.652^{+0.060}_{-0.020}$	$0.220^{+0.200}_{-0.300}$	$0.612^{+0.029}_{-0.068}$	$0.613^{+0.041}_{-0.062}$	$3.761^{+1.109}_{-0.369}$
	+3%/-4%	+1%/-0%	+91%/-136%	+5%/-11%	+7%/-10%	+29%/-10%
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 005739251-07 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$5.24^{+5.46}_{-3.61}$	391^{+14}_{-15}	2877^{+5902}_{-11434}	$1011^{+200687}_{-183705}$
Alt.	-1028 ± 457	$5.23^{+5.18}_{-3.70}$	392^{+15}_{-17}	2972^{+1431}_{-521}	1134^{+12046}_{-886}

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

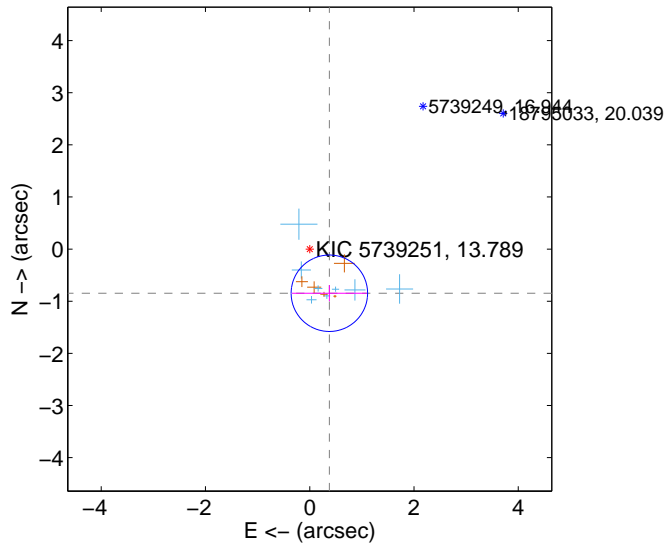
Supplemental centroid analysis for 005739251-07. Kepler magnitude: 13.79. Transit SNR -1.00

There are 8 quarters with good PRF difference image offsets

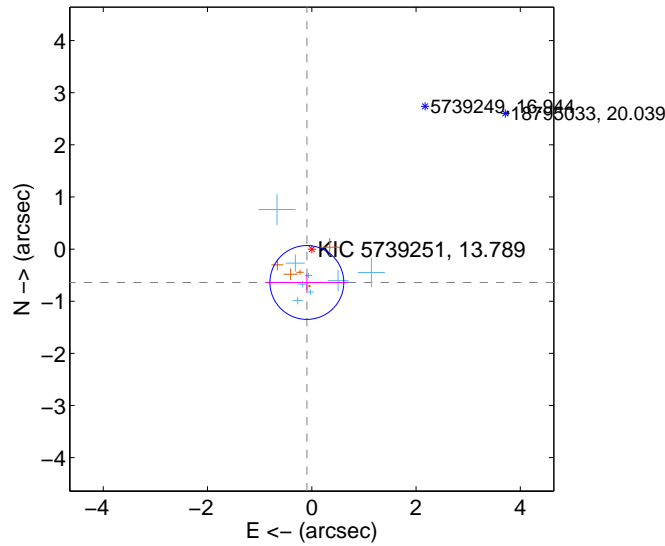
The direct PRF centroid is offset from the target star catalog position by about 0.54 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.927 ± 0.244	3.79	-0.377 ± 0.718	-0.847 ± 0.154
PRF-fit source offset from KIC position	0.647 ± 0.236	2.74	0.094 ± 0.789	-0.640 ± 0.153
photometric centroid source offset	0.72 ± 1.05	0.68	-0.16 ± 1.05	-0.70 ± 1.05

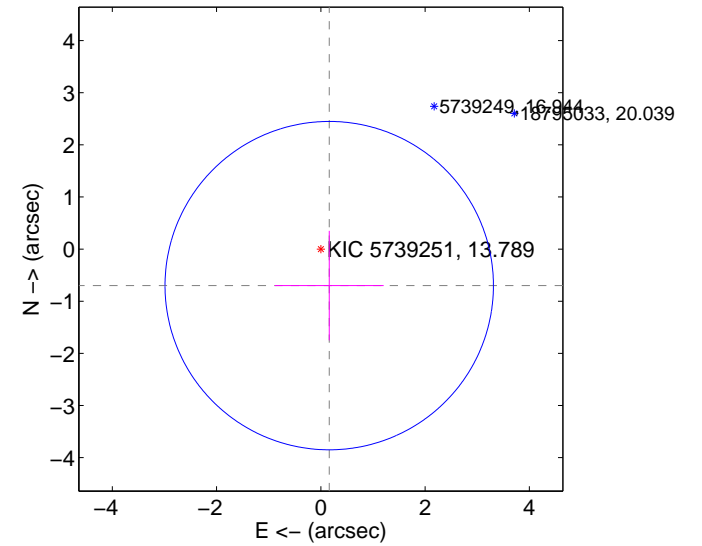
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

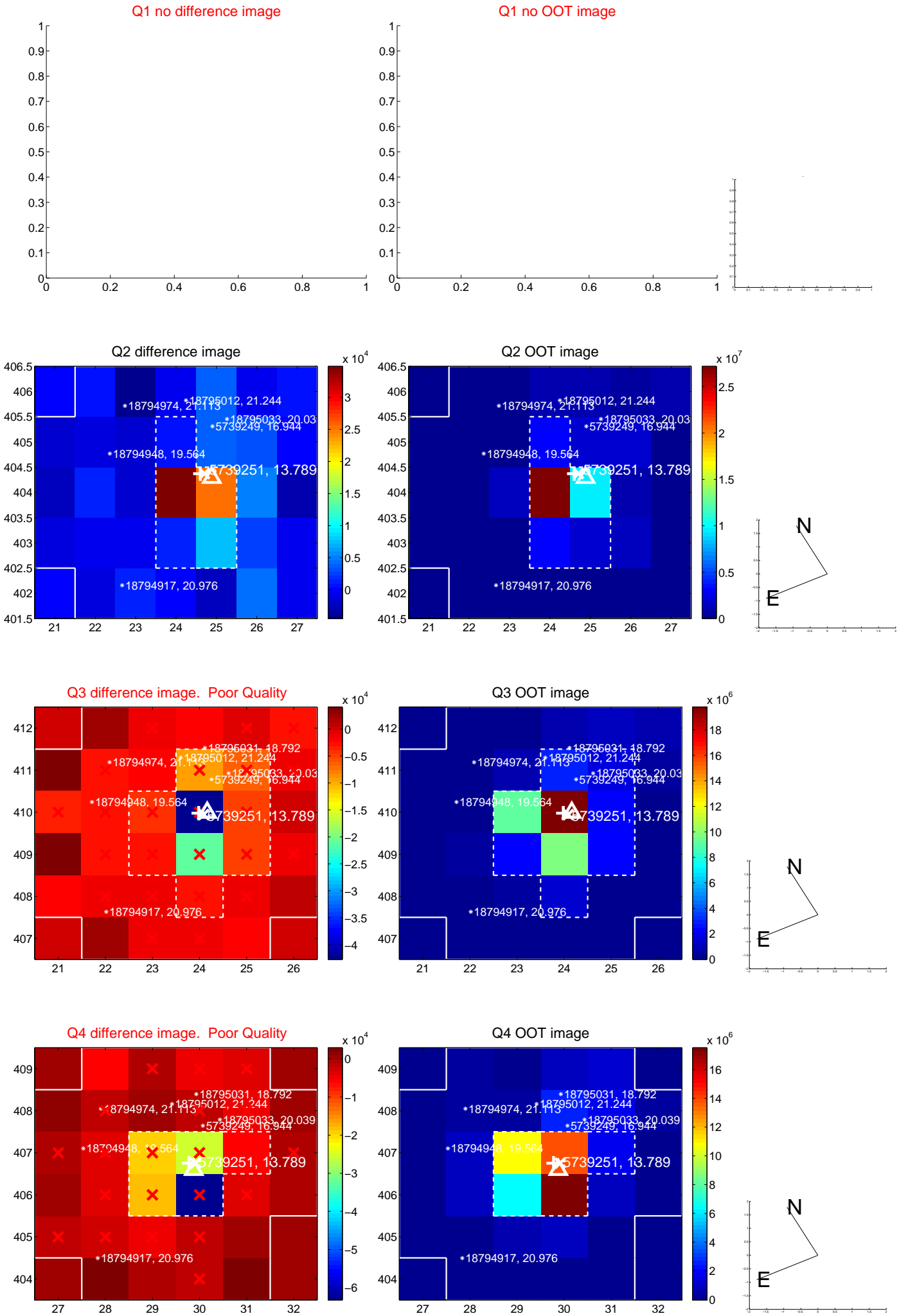


offset from photometric centroids

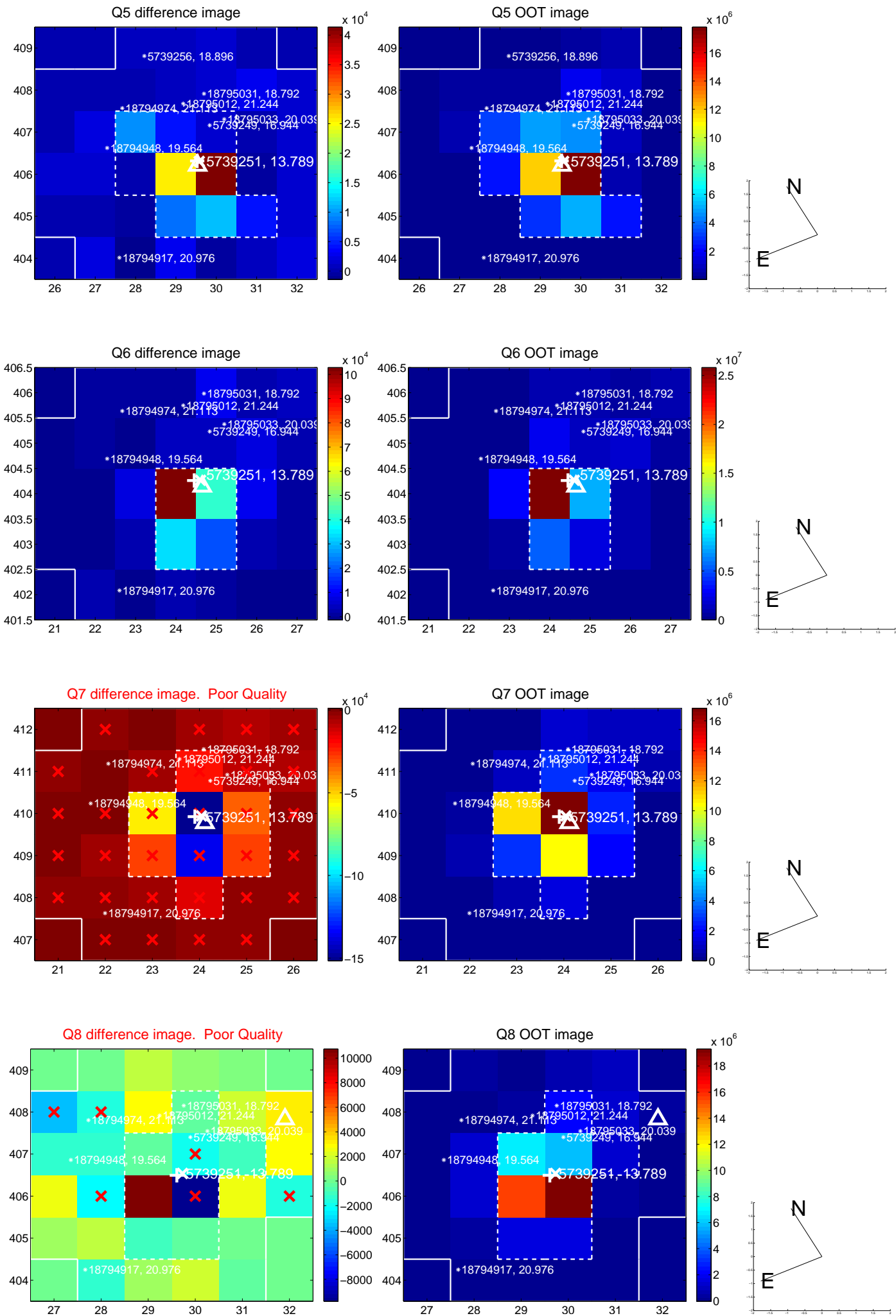


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

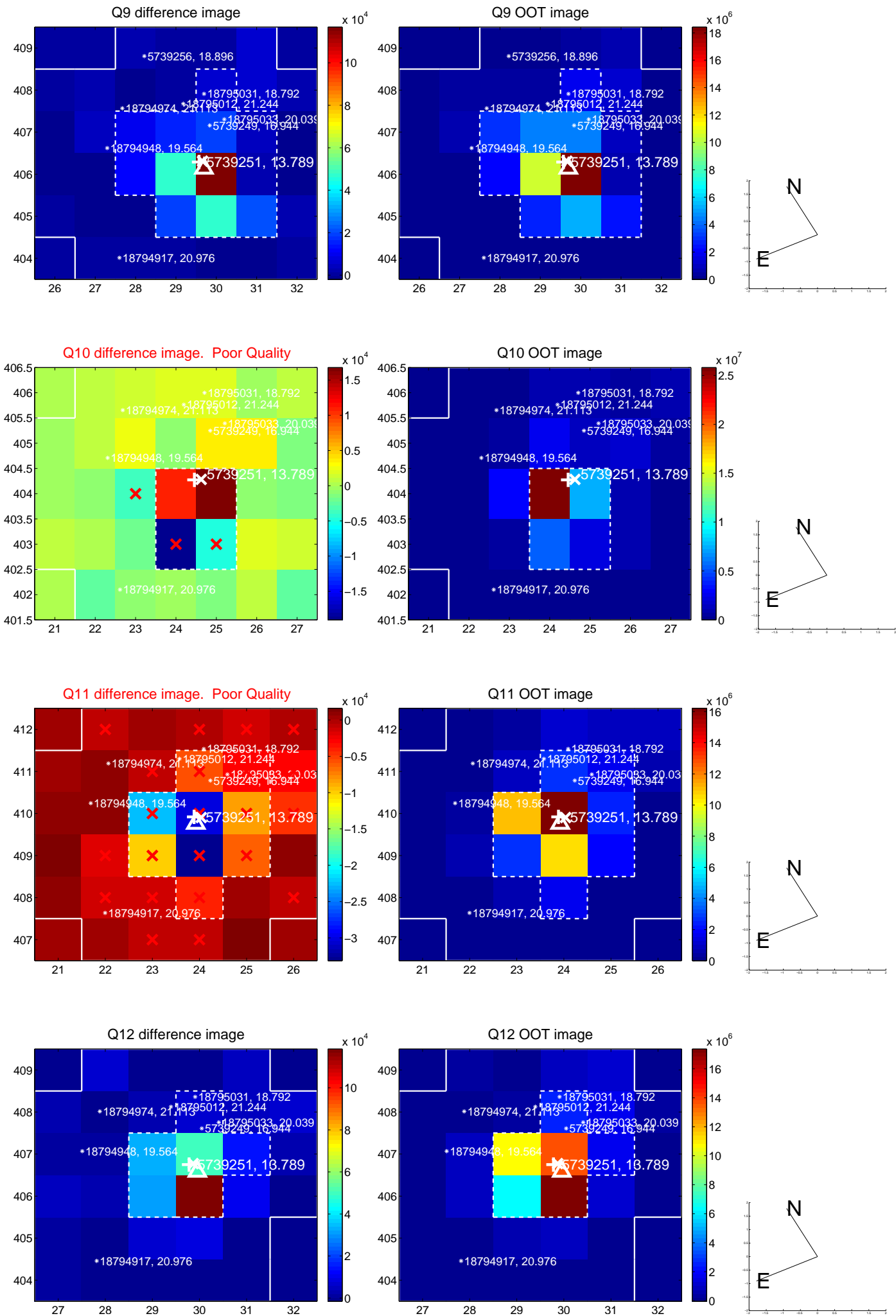
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



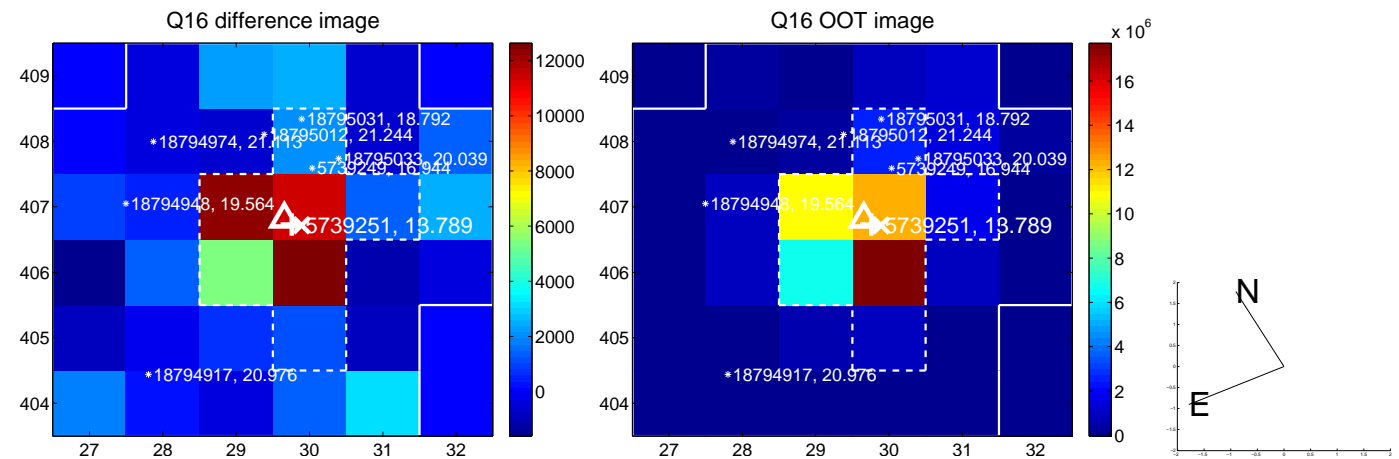
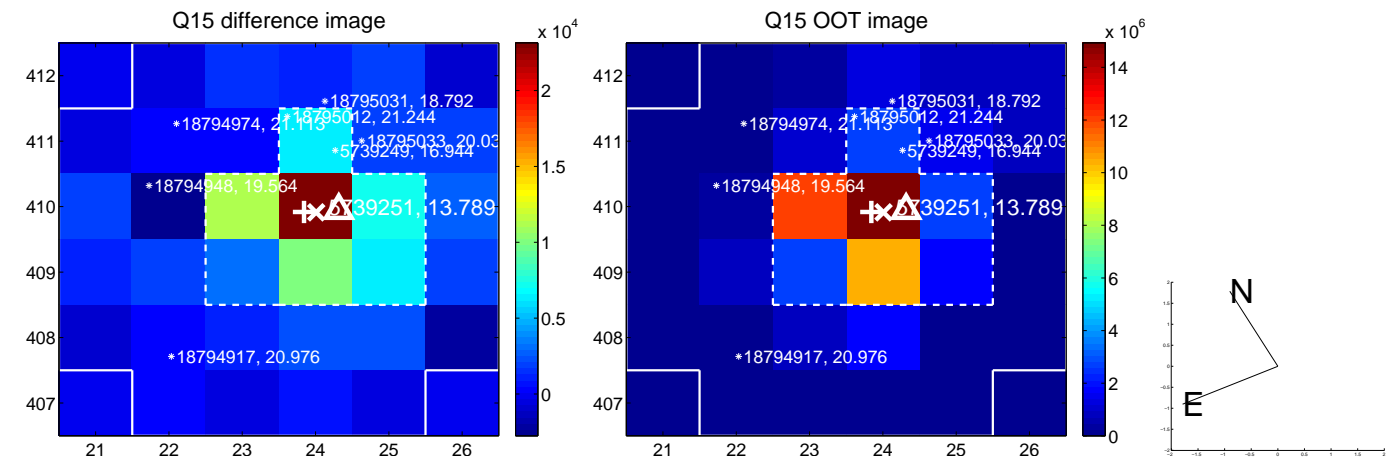
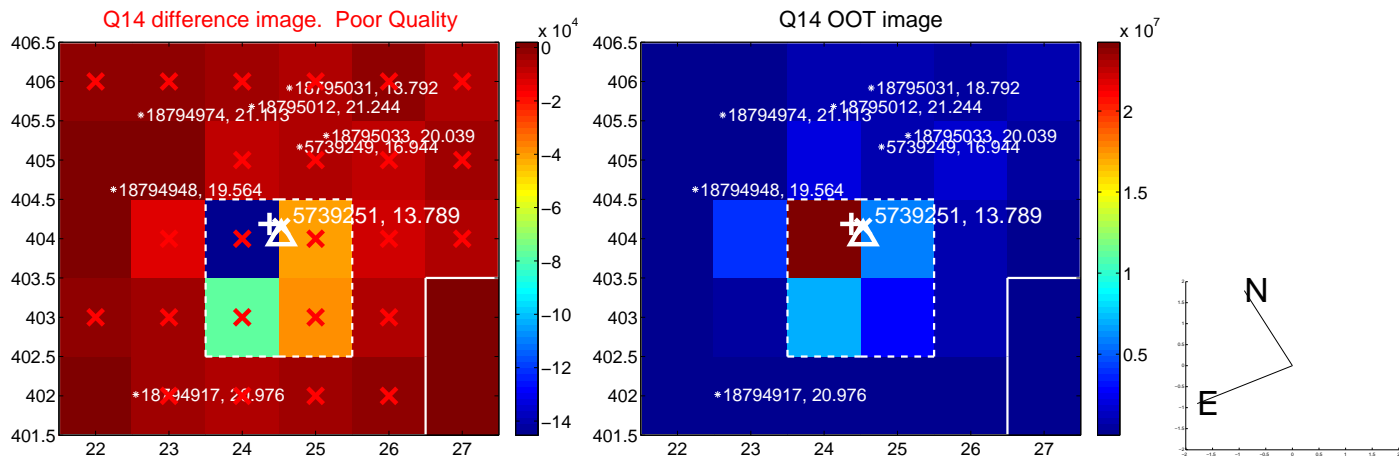
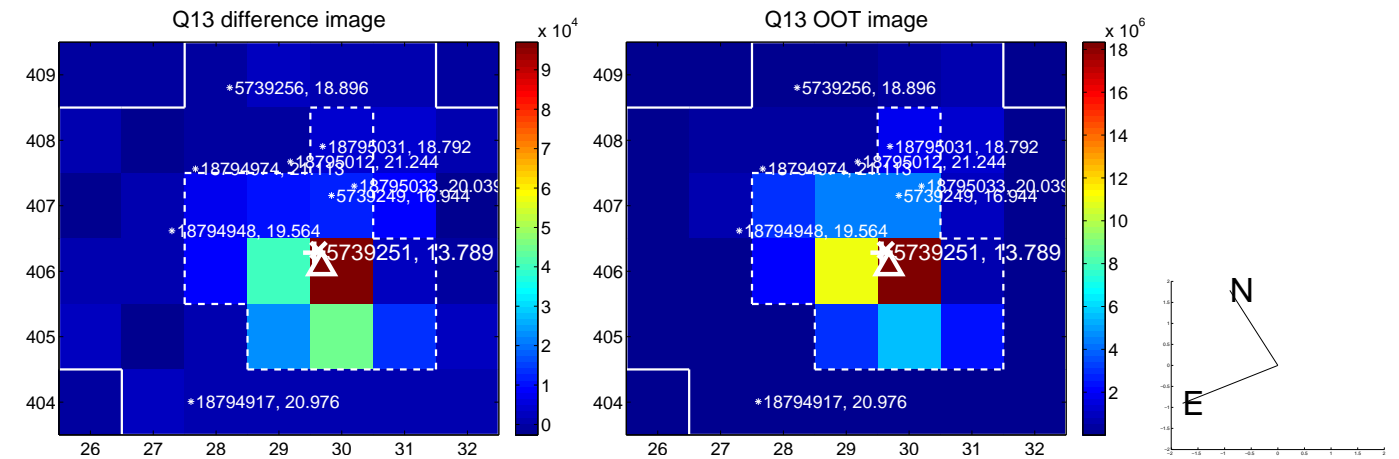
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



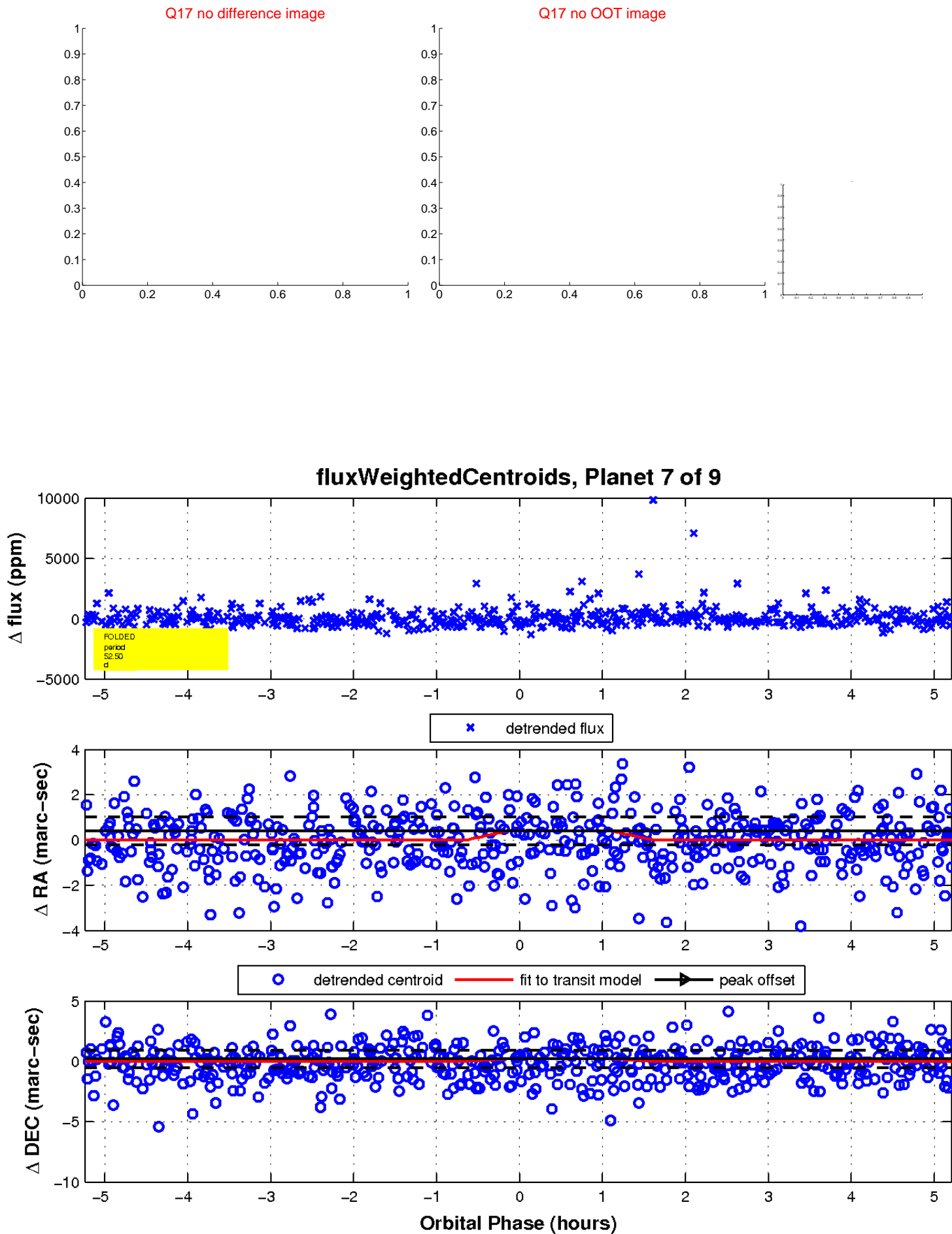
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

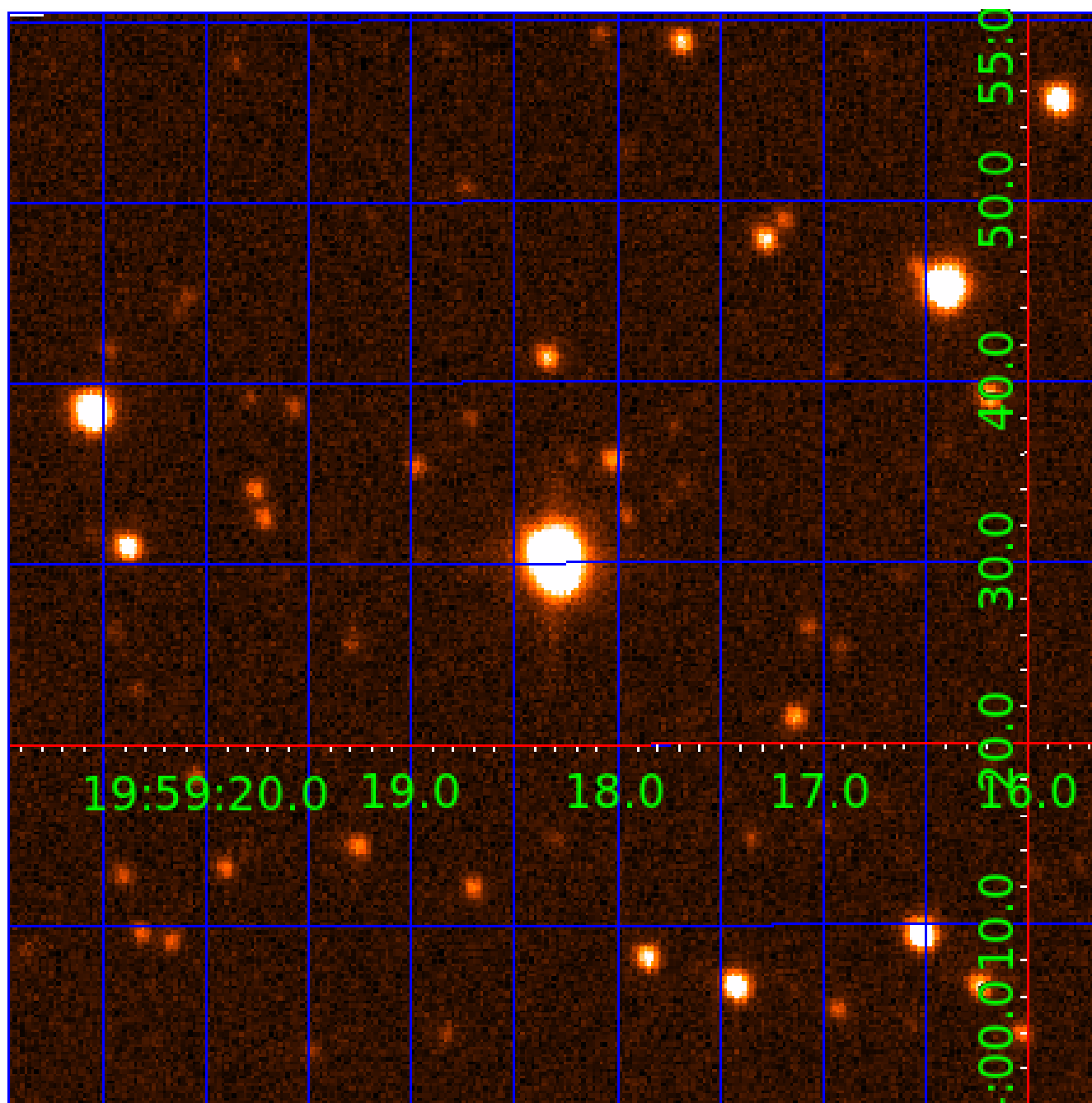


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005739251

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})
005739251-01	OBS	No	0.868952	132.321739	97.9	4.928	12.8	11.5	0.61	3963	0.58	360.99
005739251-02	OBS	No	383.240200	146.574993	3136.4	7.899	12.6	8.4	0.61	3963	3.63	0.11
005739251-03	OBS	No	153.727393	191.466115	1636.0	5.316	10.7	6.8	0.61	3963	2.38	0.36
005739251-05	OBS	No	187.430989	136.366580	2283.0	4.361	8.9	7.1	0.61	3963	3.01	0.28
005739251-06	OBS	No	579.707049	332.511898	3640.5	7.902	10.5	9.4	0.61	3963	3.93	0.06
005739251-07	OBS	No	52.503293	176.046621	997.2	2.000	8.7	-1.0	0.61	3963	1.87	1.52
005739251-08	OBS	No	86.182052	146.239333	997.8	4.648	8.1	5.3	0.61	3963	2.03	0.79
005739251-09	OBS	No	178.650615	149.550422	369.1	9.000	8.8	-1.0	0.61	3963	1.13	0.30

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005739251-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_KIC_POS
005739251-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005739251-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—INCONSISTENT_TRANS
005739251-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005739251-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005739251-07	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
005739251-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_TRACKER—TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_KIC_POS
005739251-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—ALL_TRANS_CHASES—CENT_NOFITS

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

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

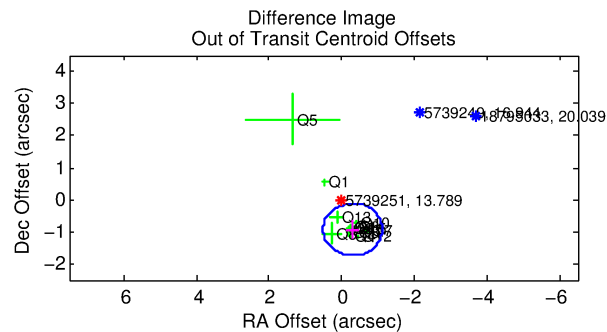
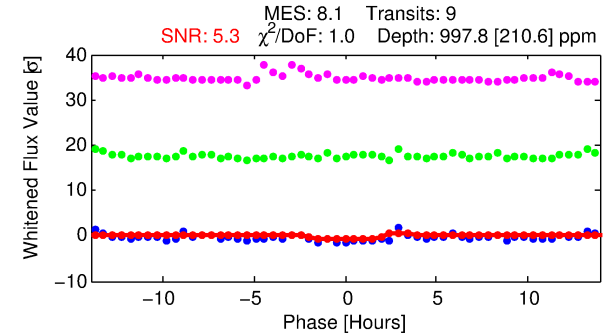
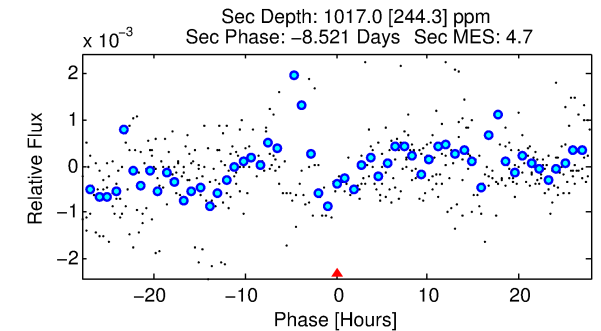
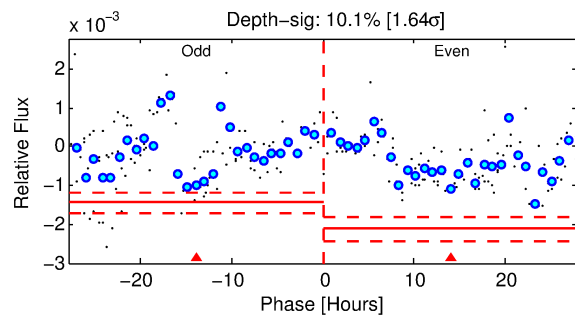
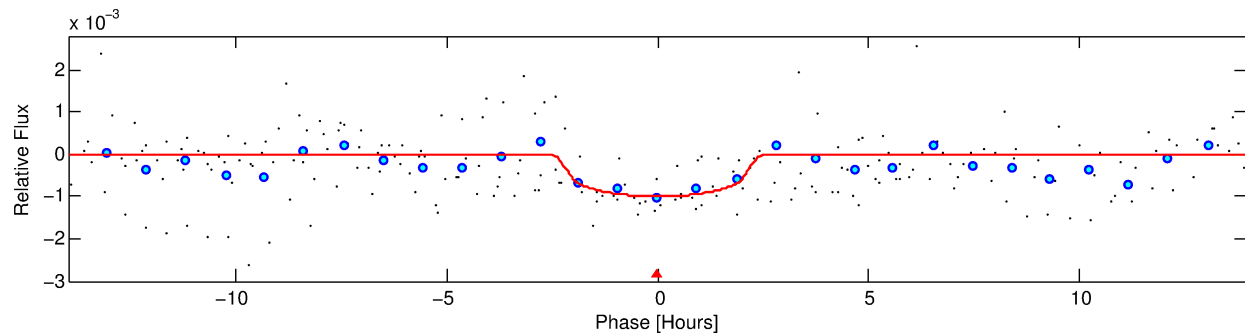
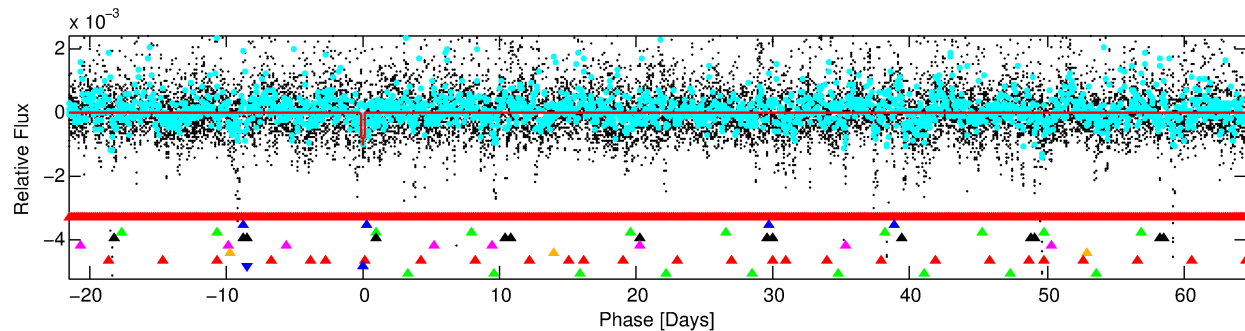
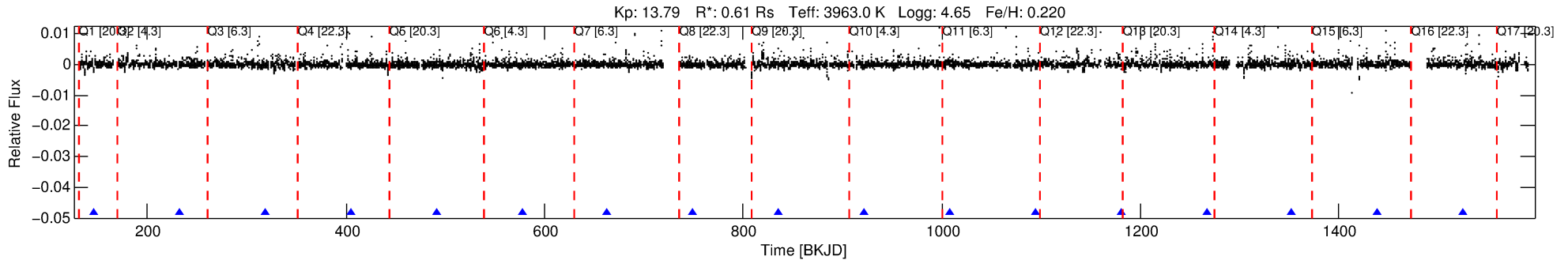
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005739251-08

No Significant Match Found

DV One-Page Summary

KIC: 5739251 Candidate: 8 of 9 Period: 86.182 d



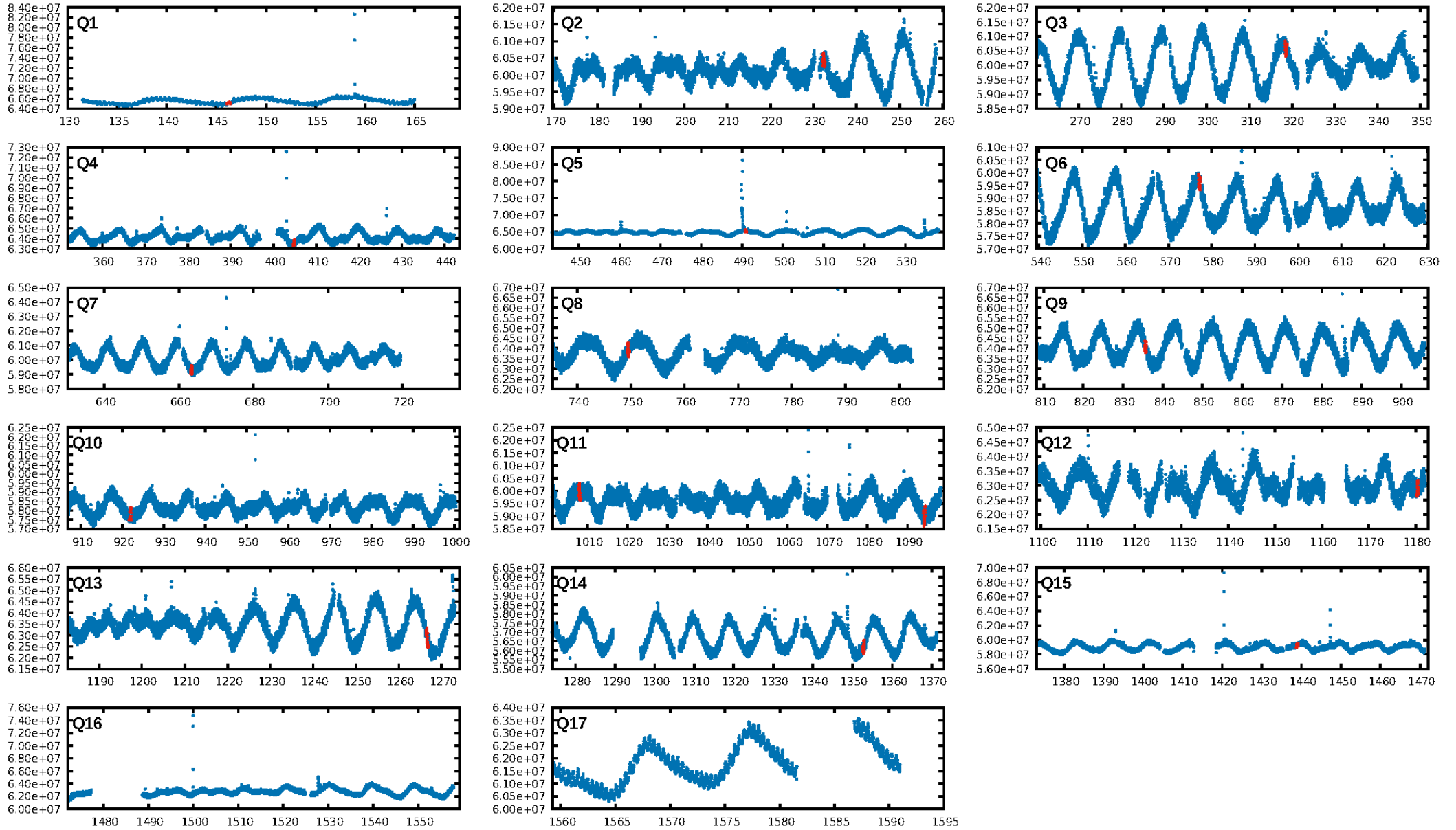
DV Fit Results:

Period = 86.18205 [0.00160] d
Epoch = 146.2393 [0.0156] BKJD
Rp/R* = 0.0304 [0.0379]
a/R* = 112.20 [465.08]
b = 0.66 [3.63]
Seff = 0.79 [0.15]
Teq = 240 [12] K
Rp = 2.03 [2.54] Re
a = 0.3244 [0.0283] AU
Ag = 14271.73 [35727.25] [0.40 σ]
Teffp = 4058 [2541] K [1.50 σ]

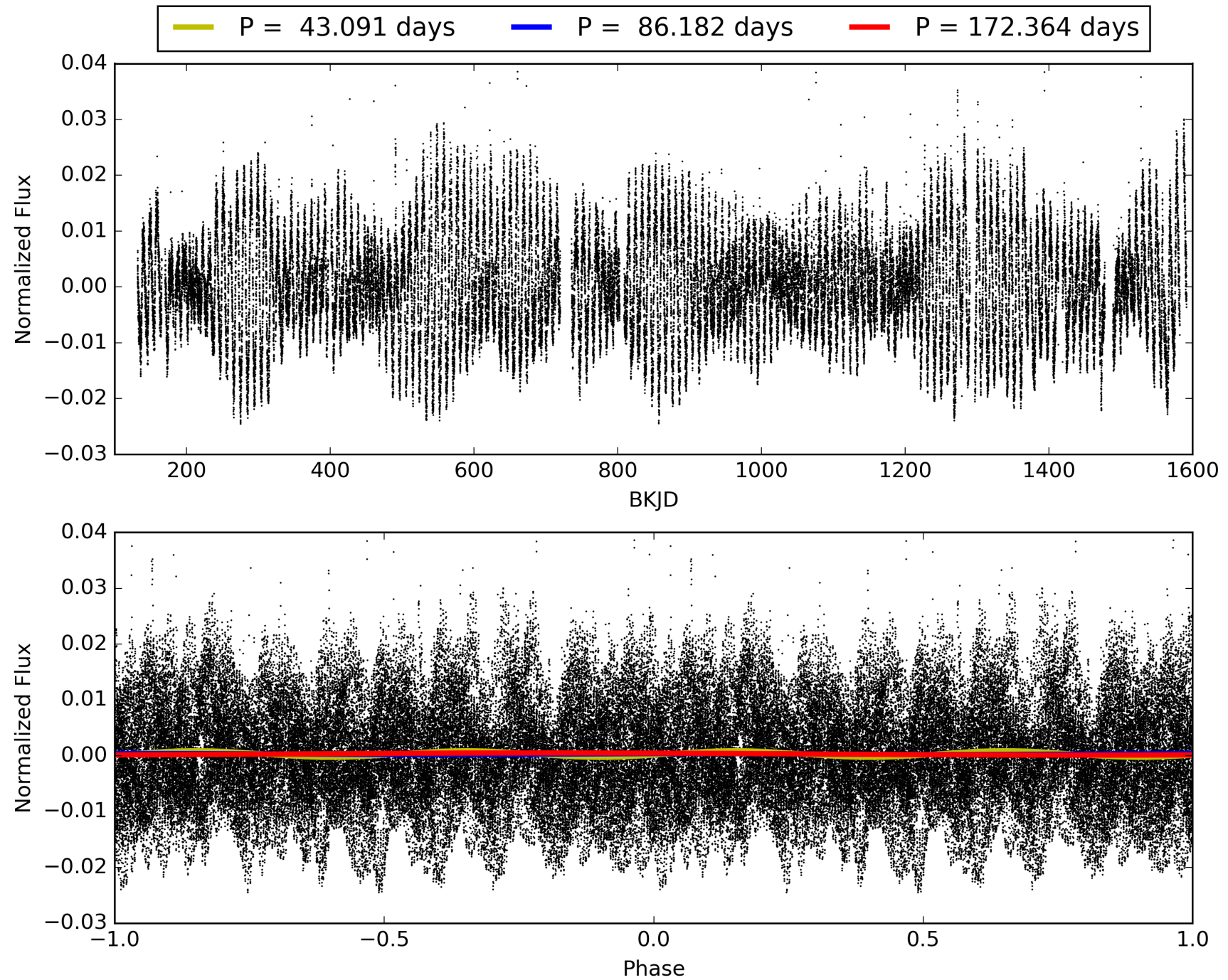
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [159.74 σ]
LongPeriod-sig: 100.0% [52.36 σ]
ModelChiSquare2-sig: 76.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [9/9]
GhostDiagnostic-chr: -0.3629
Centroid-sig: 58.3%
Centroid-so: 0.847 arcsec [2.21 σ]
OotOffset-rm: 0.976 arcsec [3.61 σ]
KicOffset-rm: 0.665 arcsec [2.79 σ]
OotOffset-st: 3/4/3/4 [14]
KicOffset-st: 3/4/3/4 [14]
DiffImageQuality-fgm: 0.36 [5/14]
DiffImageOverlap-fno: 0.00 [0/14]

TCE 005739251-08, PDC Light Curves

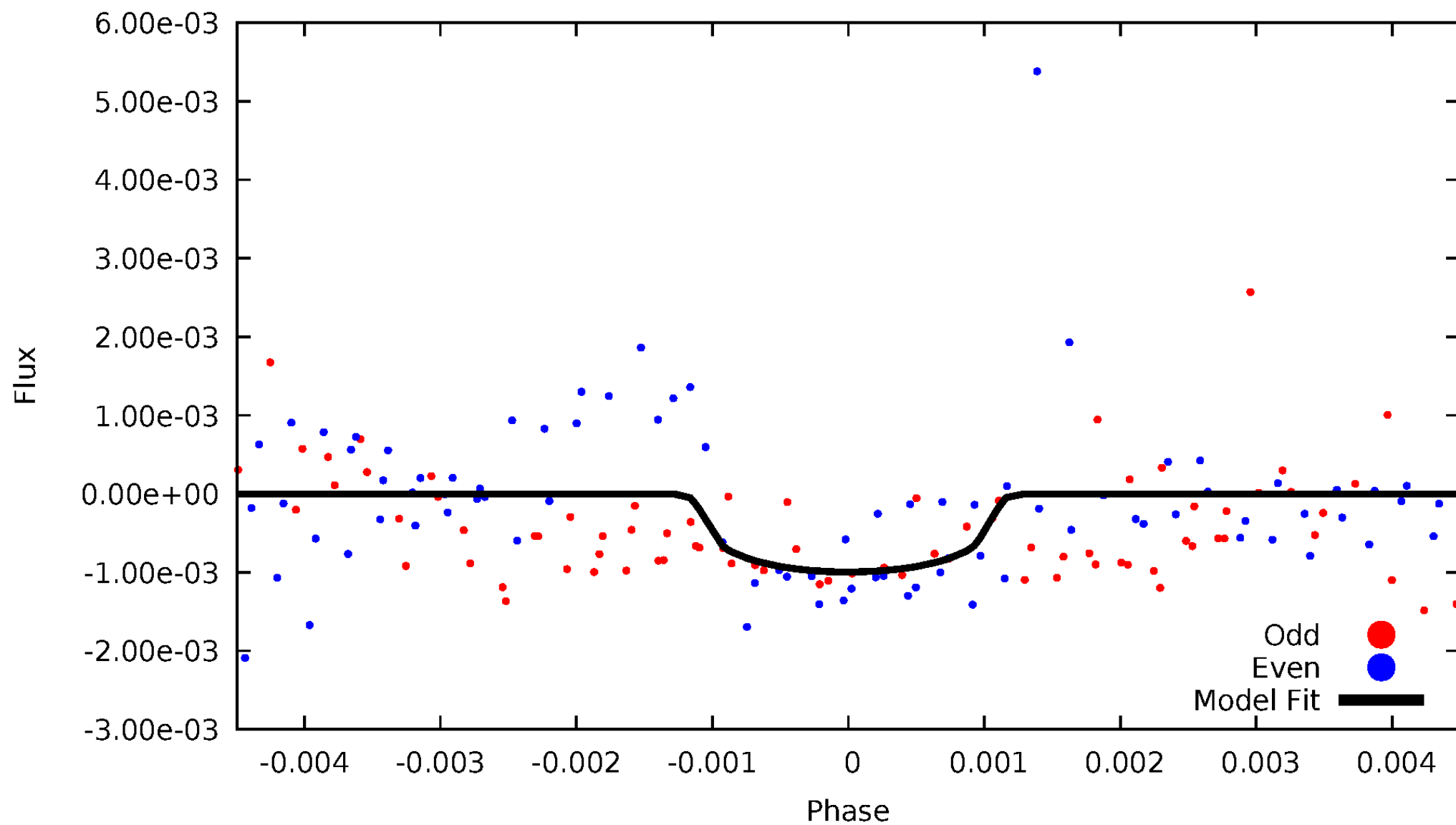


TCE 005739251-08



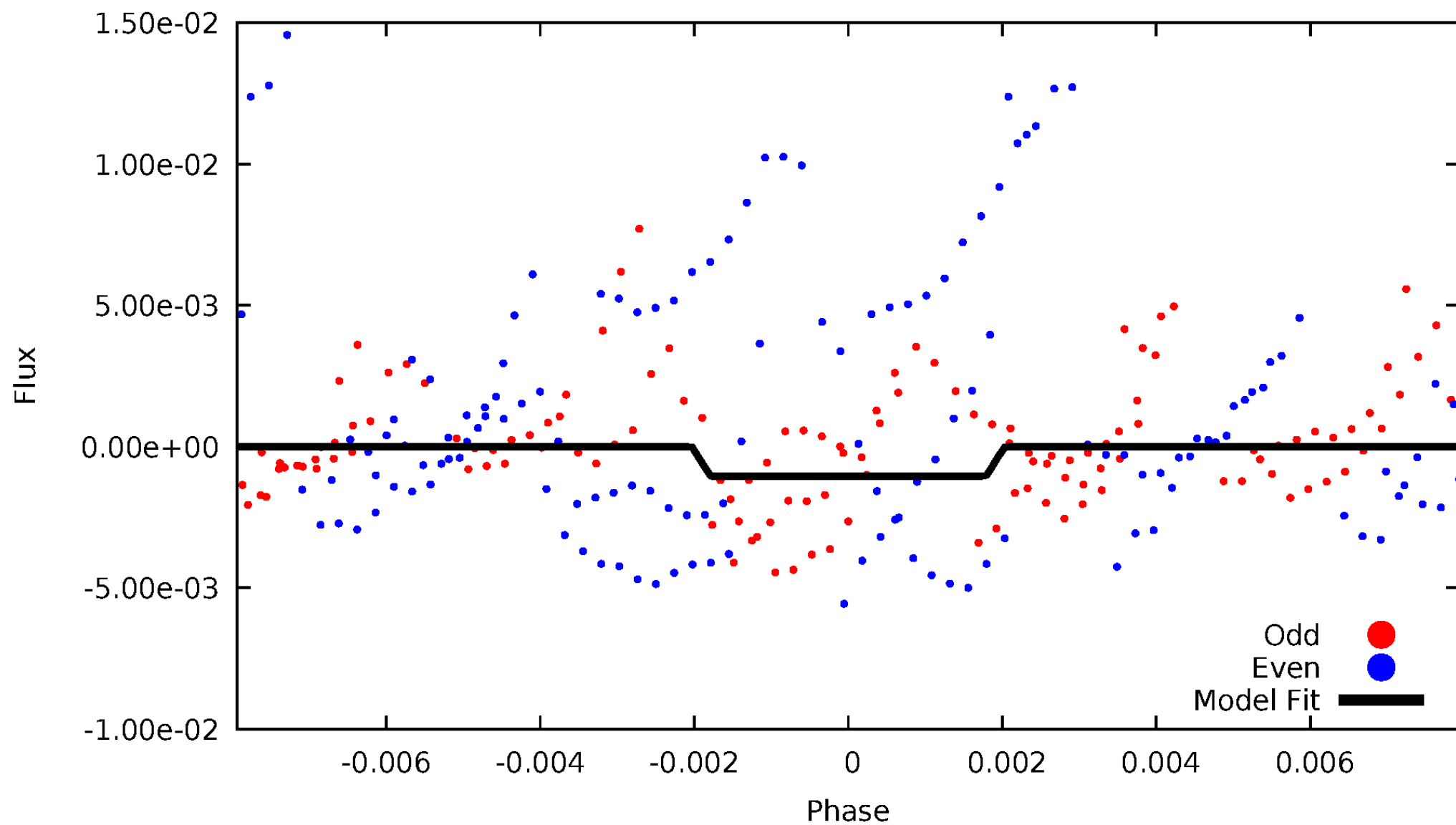
DV Odd/Even

TCE 005739251-08



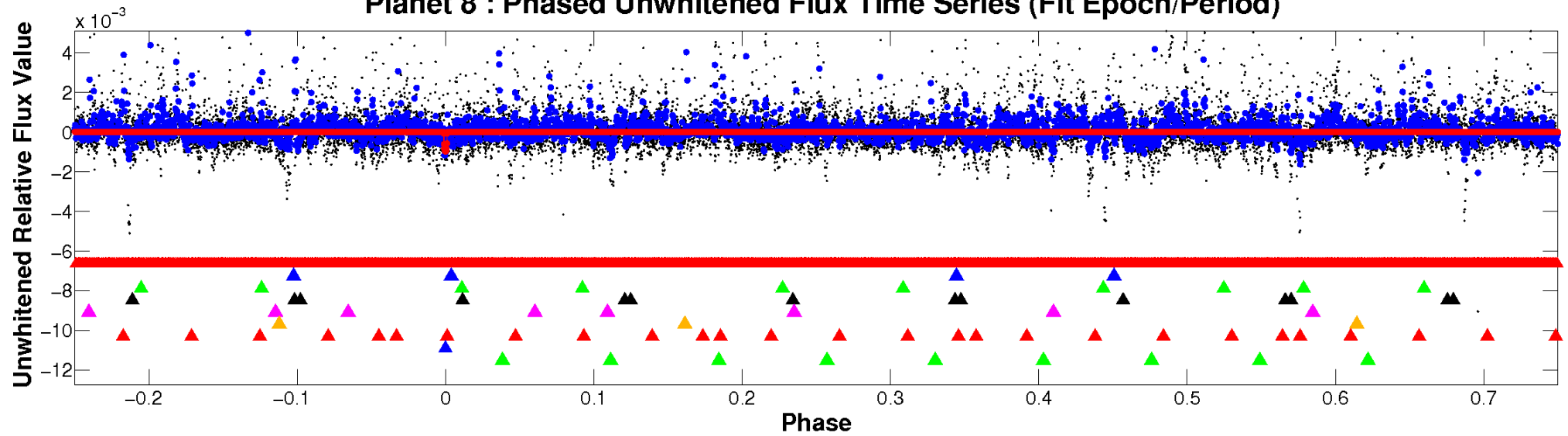
ALT Odd/Even

TCE 005739251-08

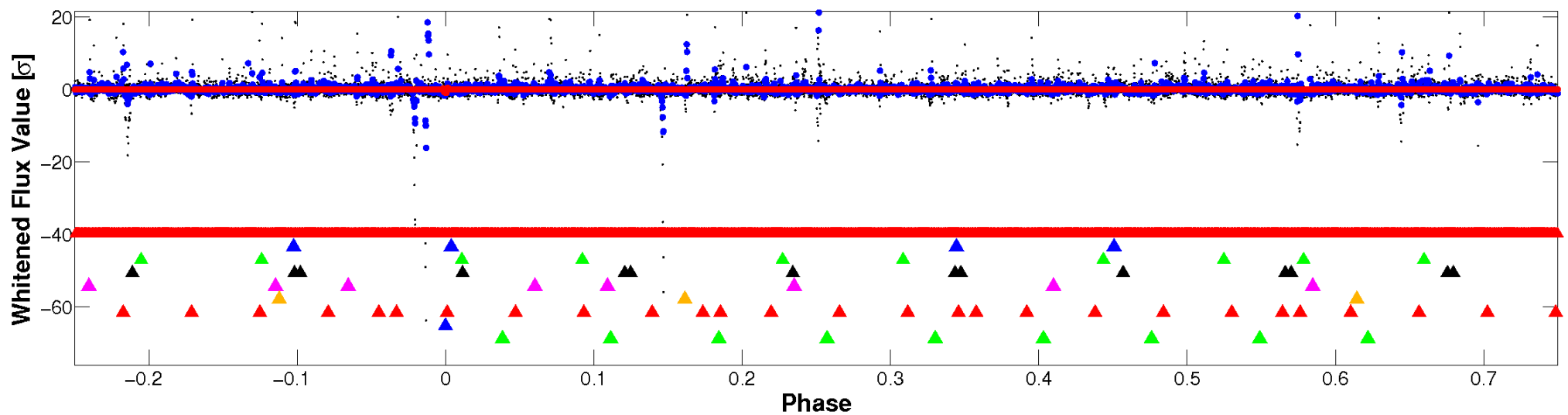


Non-Whitened Vs. Whitened Light Curve

Planet 8 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

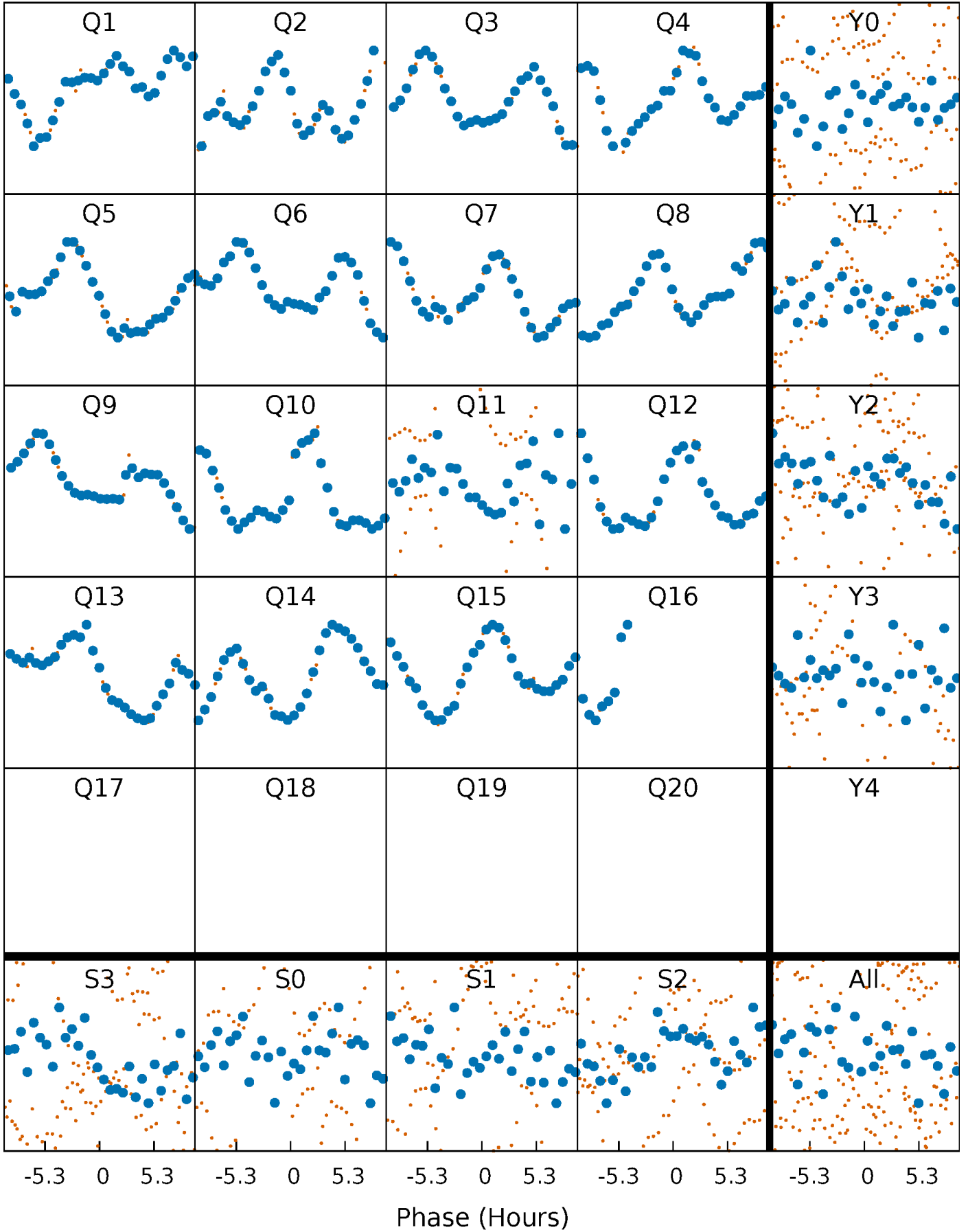


Planet 8 : Phased Whitened Flux Time Series (Fit Epoch/Period)



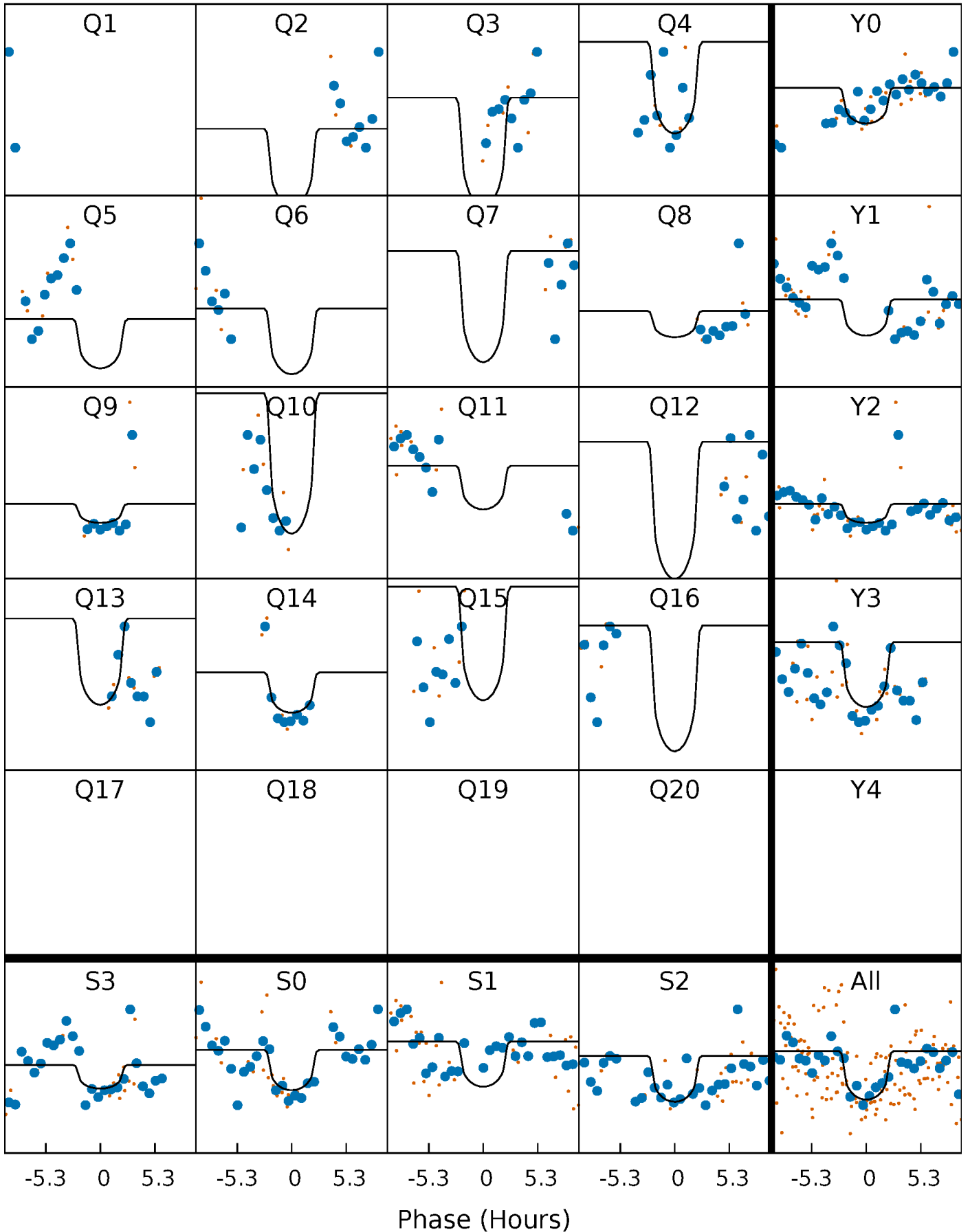
PDC Quarter-Phased Transit Curves

TCE 005739251-08 P= 86.182052 Days $T_0=146.239333$ (BKJD)



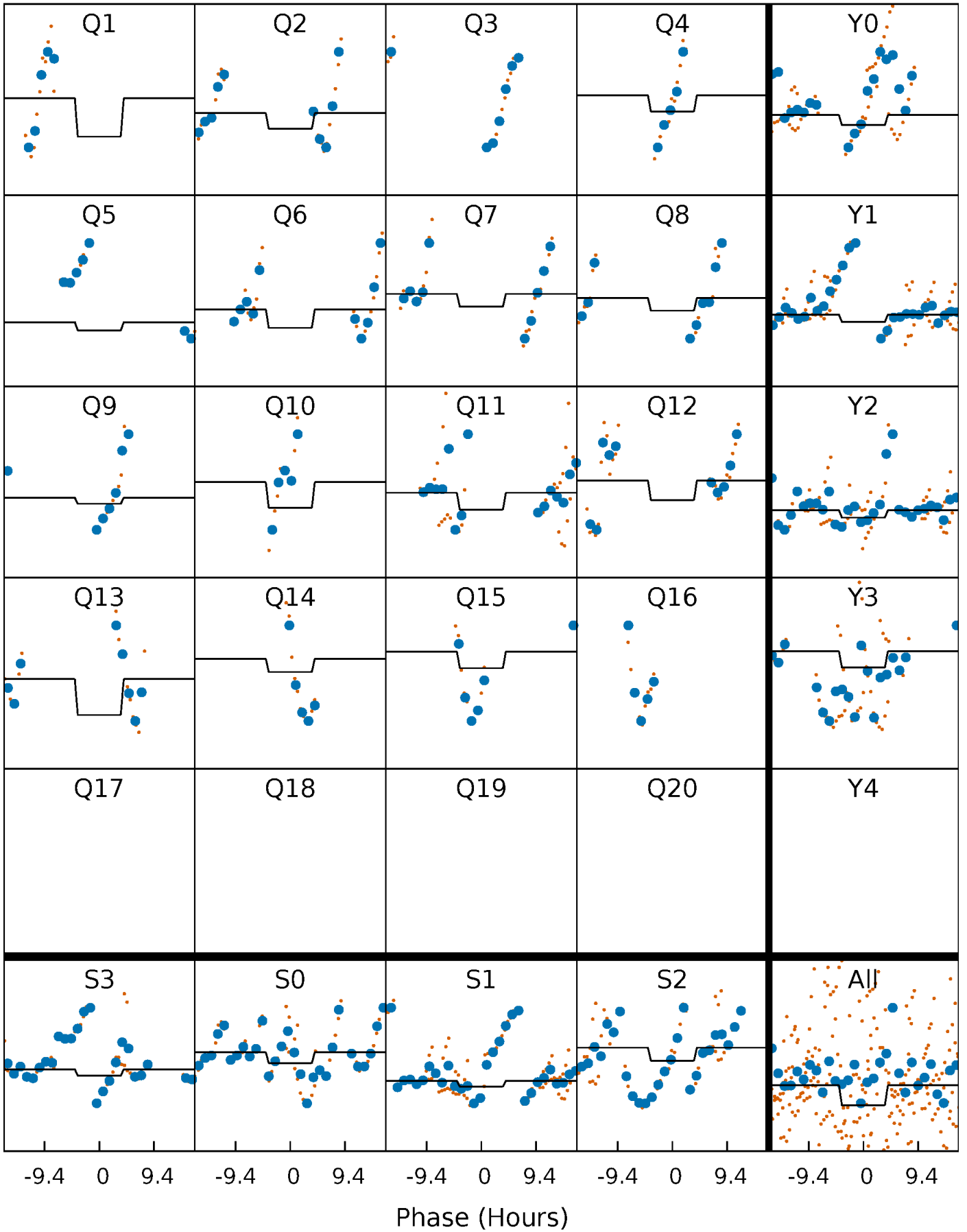
DV Quarter-Phased Transit Curves

TCE 005739251-08 P= 86.182052 Days $T_0=146.239333$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

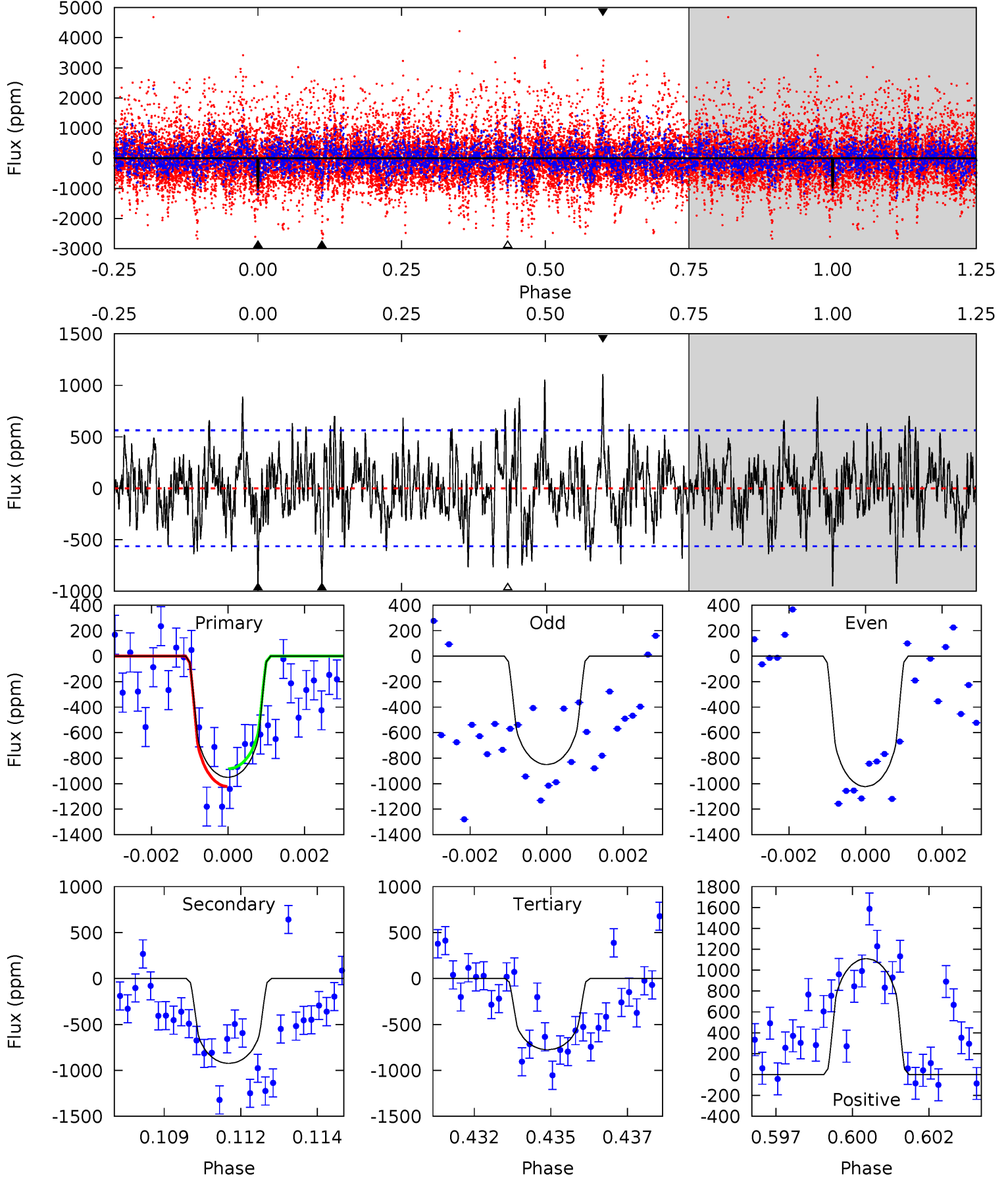
TCE 005739251-08 P= 86.176751 Days $T_0=146.222286$ (BKJD)



DV Model-Shift Uniqueness Test

005739251-08, P = 86.182052 Days, E = 60.057281 Days

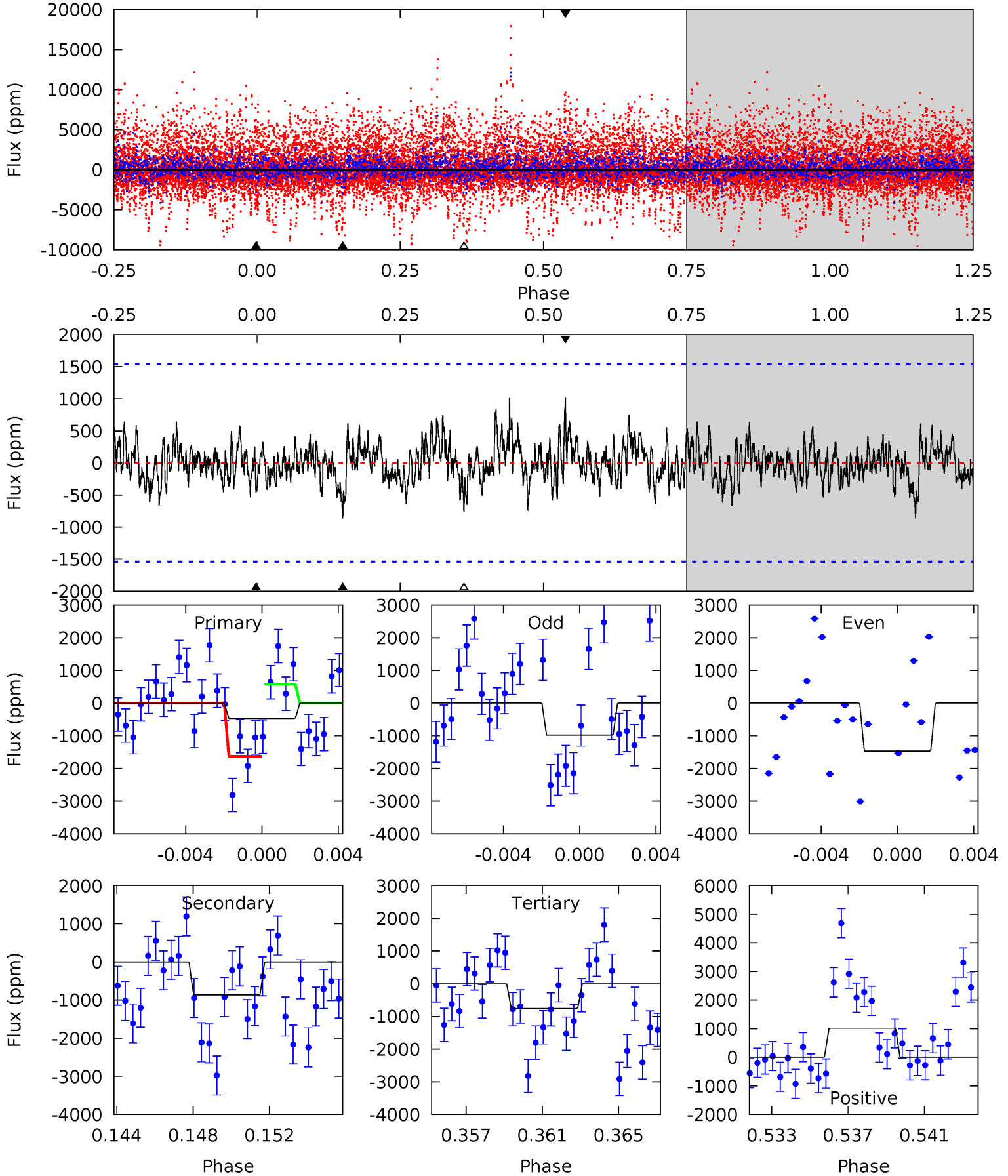
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.95	8.70	7.30	10.5	5.30	3.05	2.52	1.65	-1.50	1.40	-1.75	0.46	0.93	0.54	0.66



Alt Model-Shift Uniqueness Test

005739251-08, P = 86.176751 Days, E = 60.045535 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.58	2.92	2.55	3.43	5.19	2.87	0.90	-0.98	-1.86	0.37	-0.51	0.74	-0.31	0.54	1.79



Stellar Parameters For KIC 005739251

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	3963^{+122}_{-150}	$4.652^{+0.060}_{-0.020}$	$0.220^{+0.200}_{-0.300}$	$0.612^{+0.029}_{-0.068}$	$0.613^{+0.041}_{-0.062}$	$3.761^{+1.109}_{-0.369}$
	+3%/-4%	+1%/-0%	+91%/-136%	+5%/-11%	+7%/-10%	+29%/-10%
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 005739251-08 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-924 ± 106	$2.62^{+2.37}_{-1.72}$	332^{+13}_{-13}	3609^{+1906}_{-631}	7780^{+65152}_{-5675}
Alt.	-865 ± 296	$2.84^{+1.96}_{-1.70}$	333^{+12}_{-14}	3471^{+1339}_{-558}	6031^{+32893}_{-4152}

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 $A_{obs} \gg 1.0$

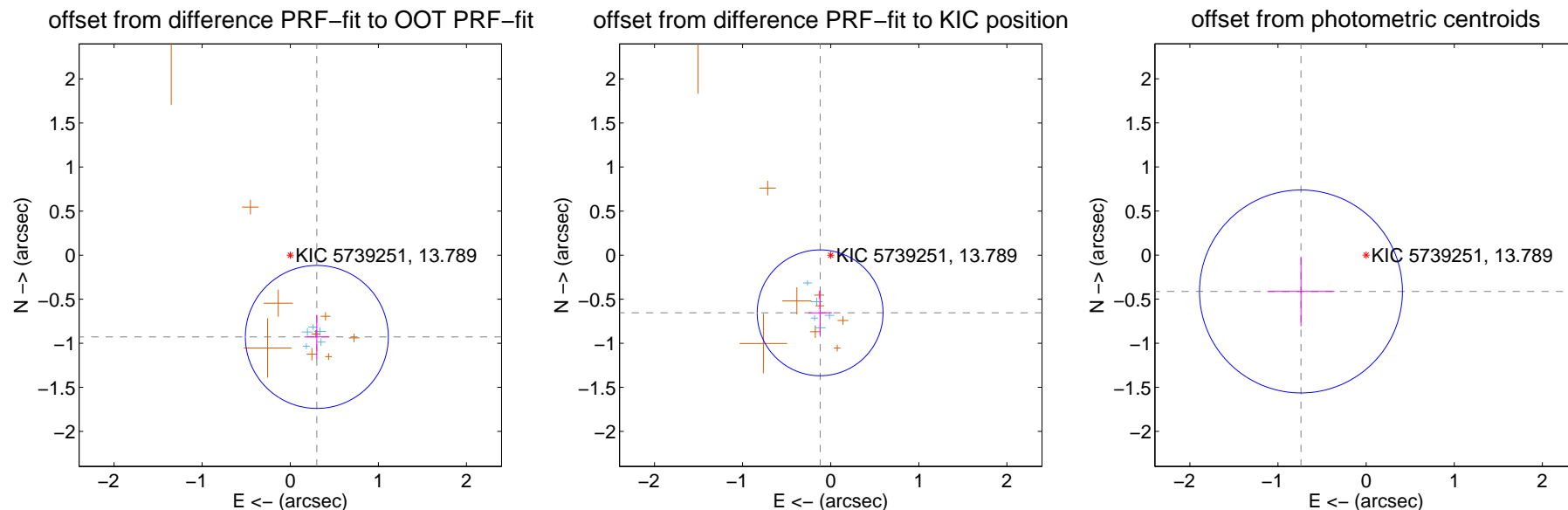
DV Centroid Data

Supplemental centroid analysis for 005739251-08. Kepler magnitude: 13.79. Transit SNR 5.26

There are 5 quarters with good PRF difference image offsets

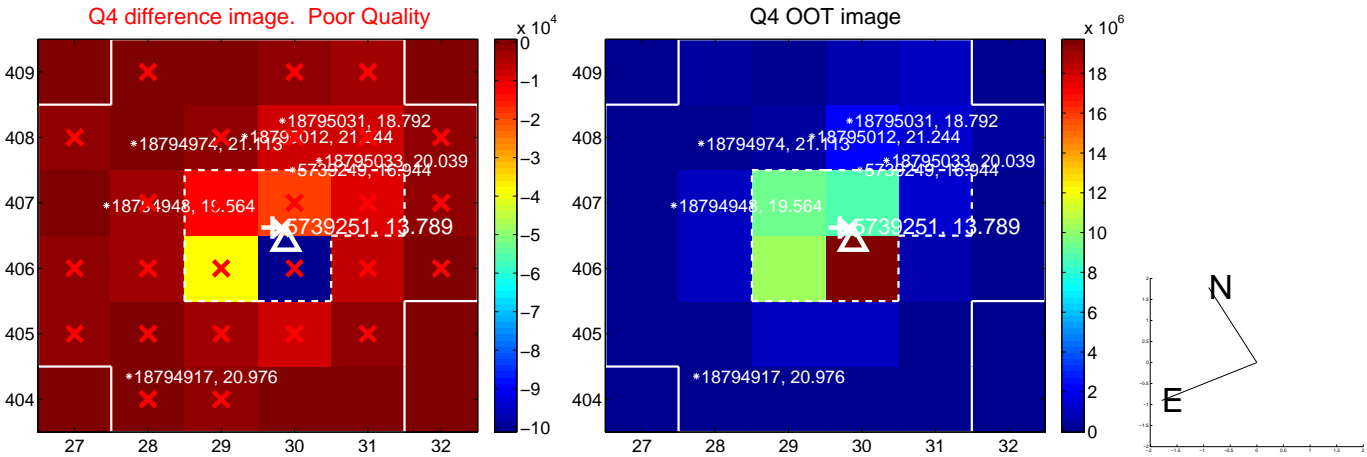
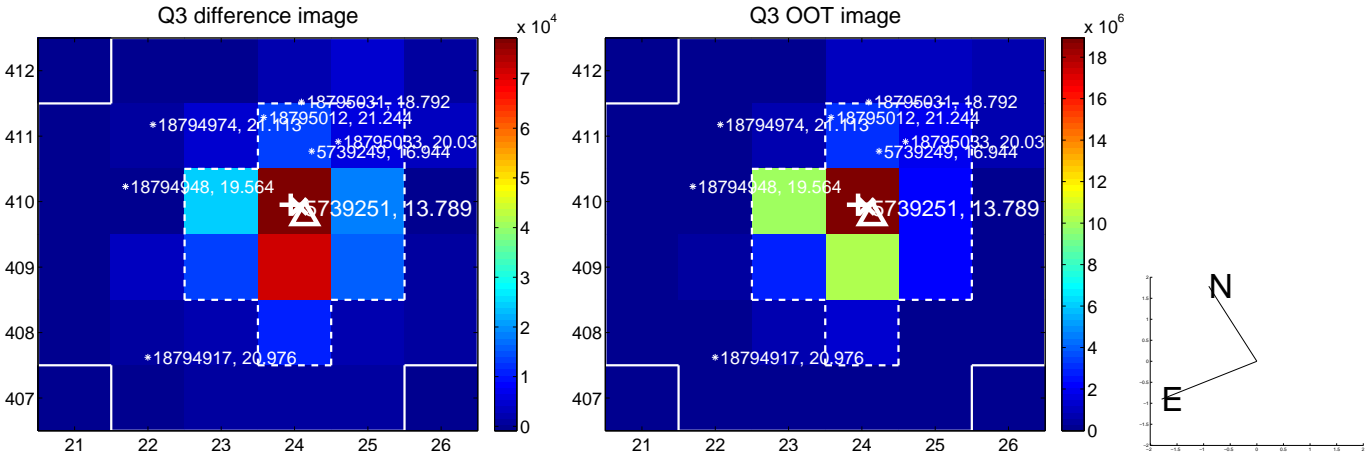
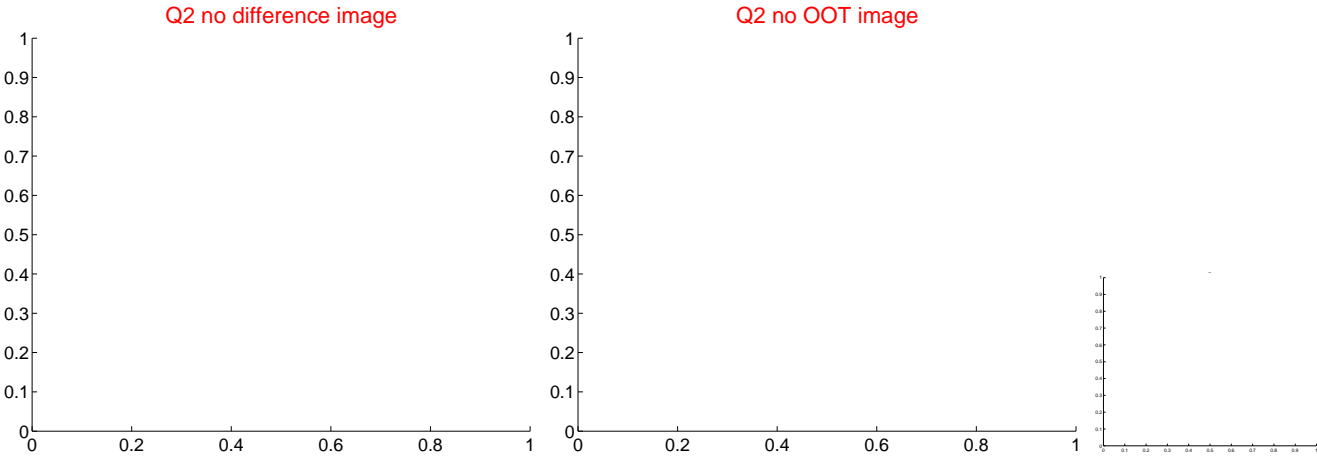
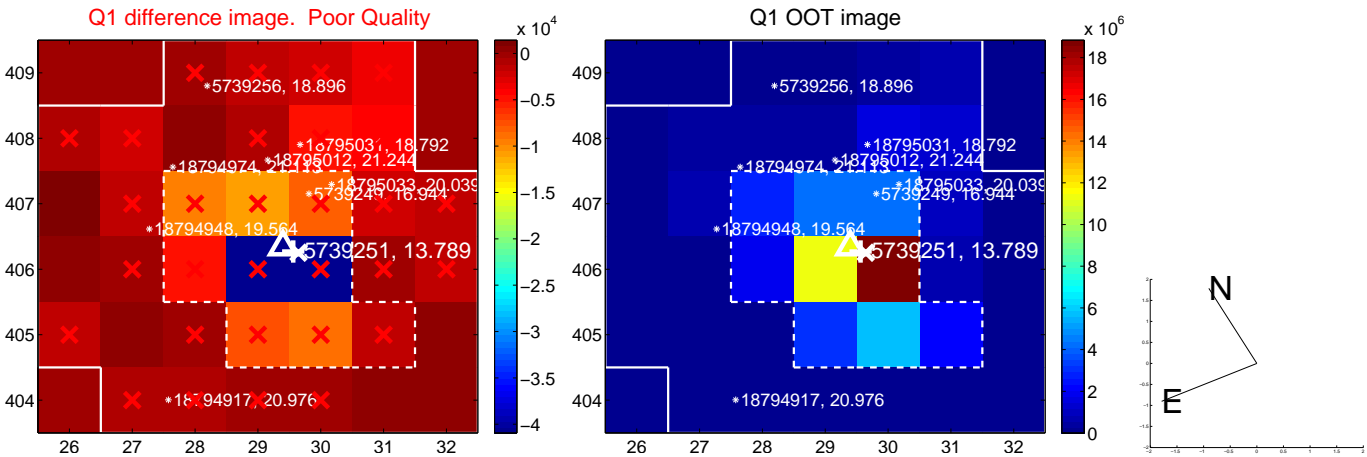
The direct PRF centroid is offset from the target star catalog position by about 0.52 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.976 ± 0.270	3.61	-0.302 ± 0.142	-0.928 ± 0.249
PRF-fit source offset from KIC position	0.665 ± 0.238	2.79	0.120 ± 0.133	-0.654 ± 0.258
photometric centroid source offset	0.85 ± 0.38	2.21	0.74 ± 0.38	-0.41 ± 0.39

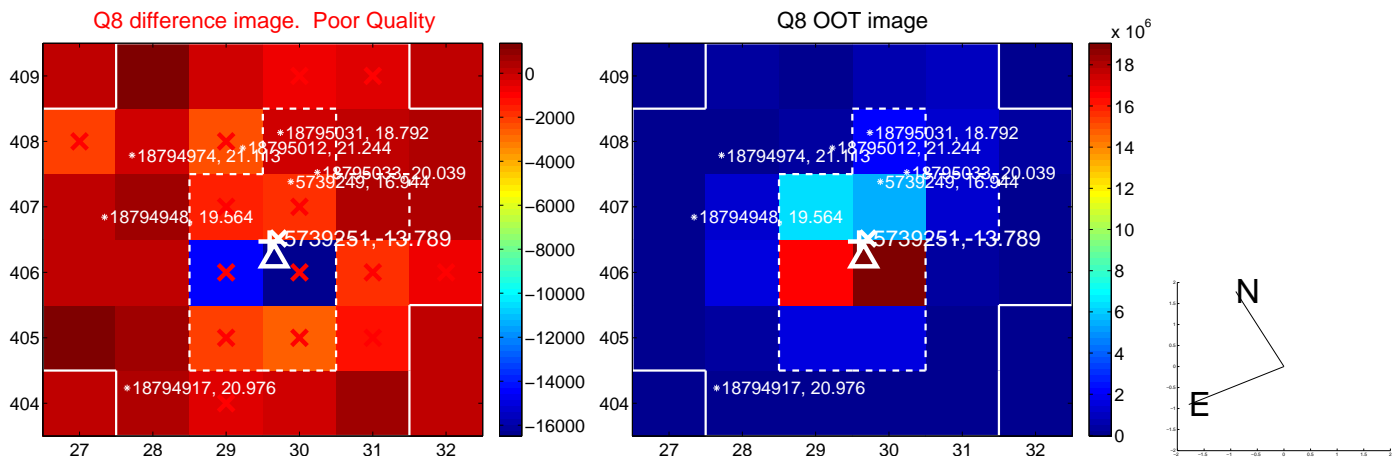
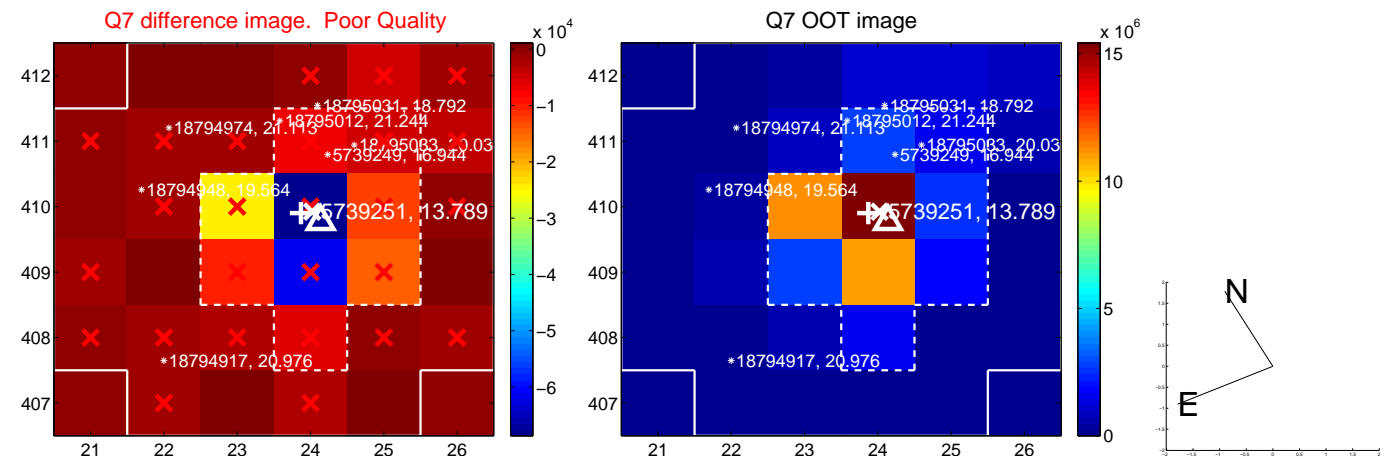
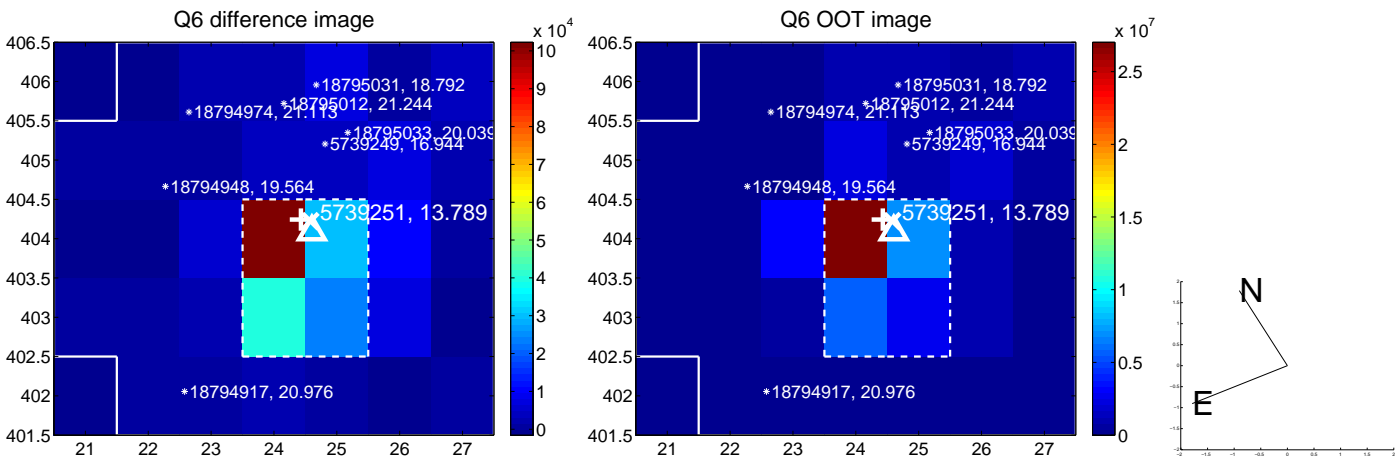
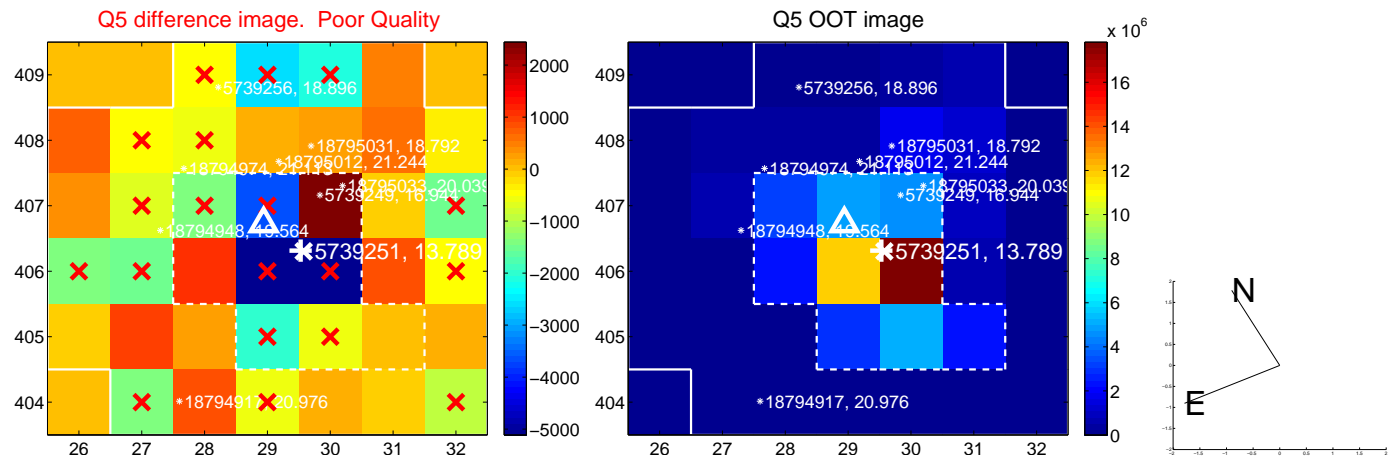


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

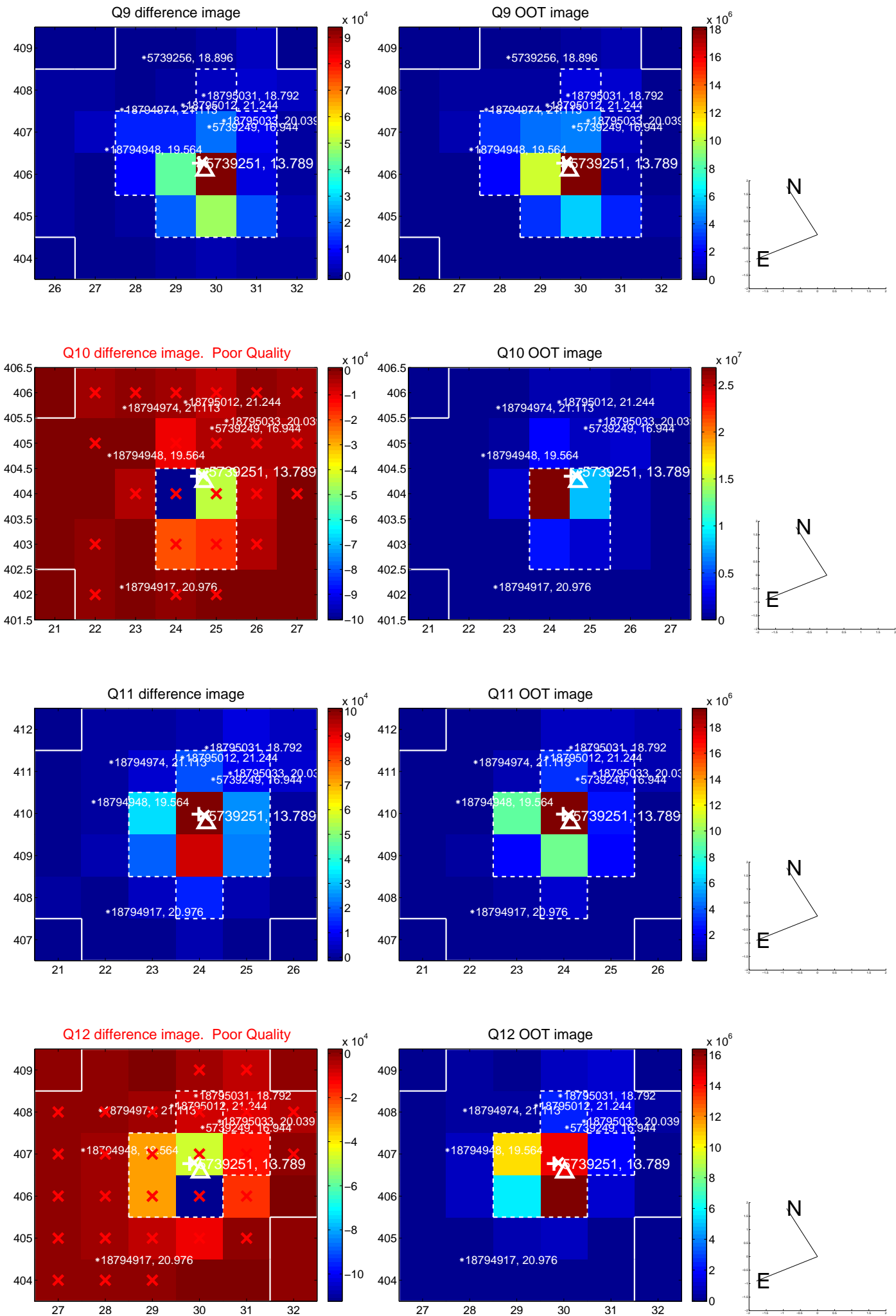
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



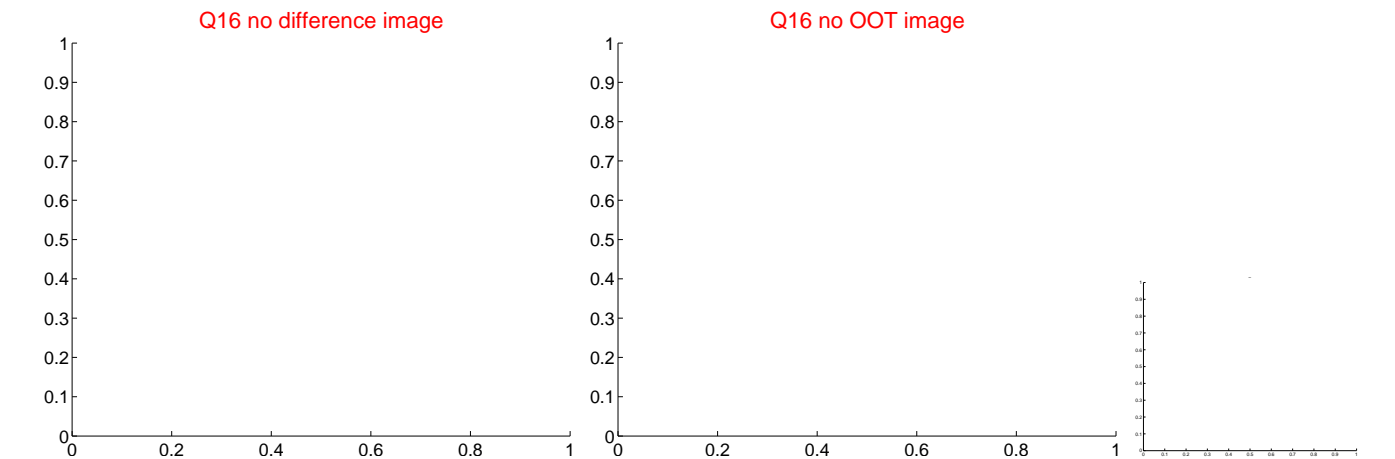
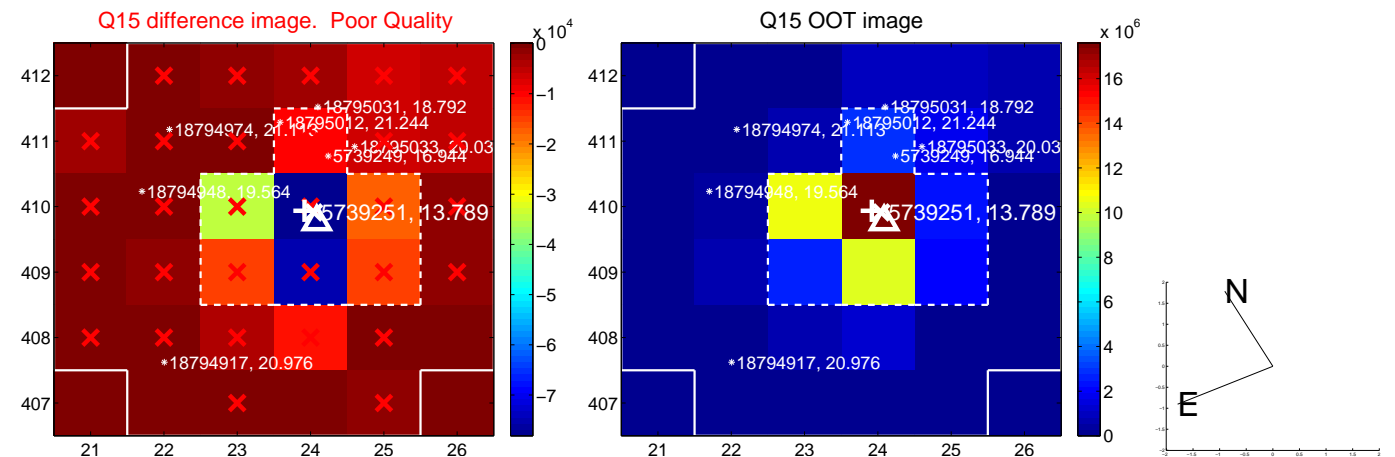
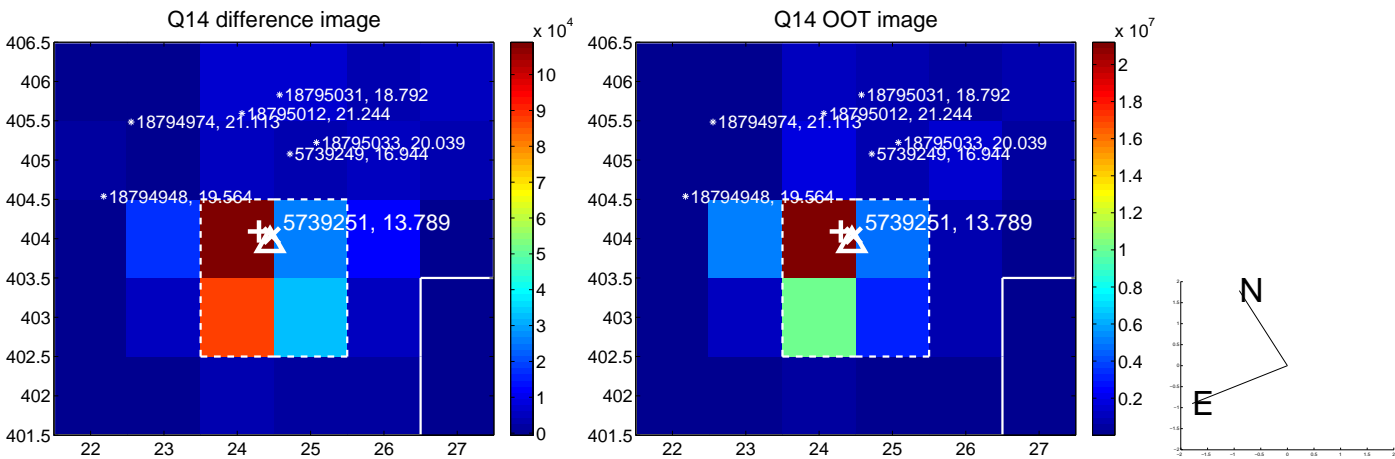
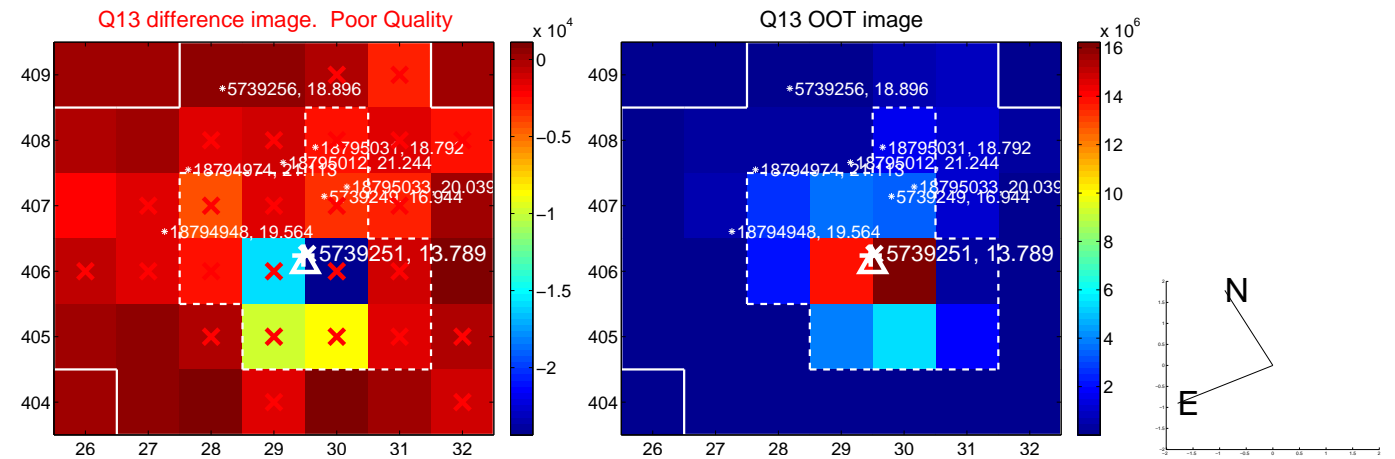
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



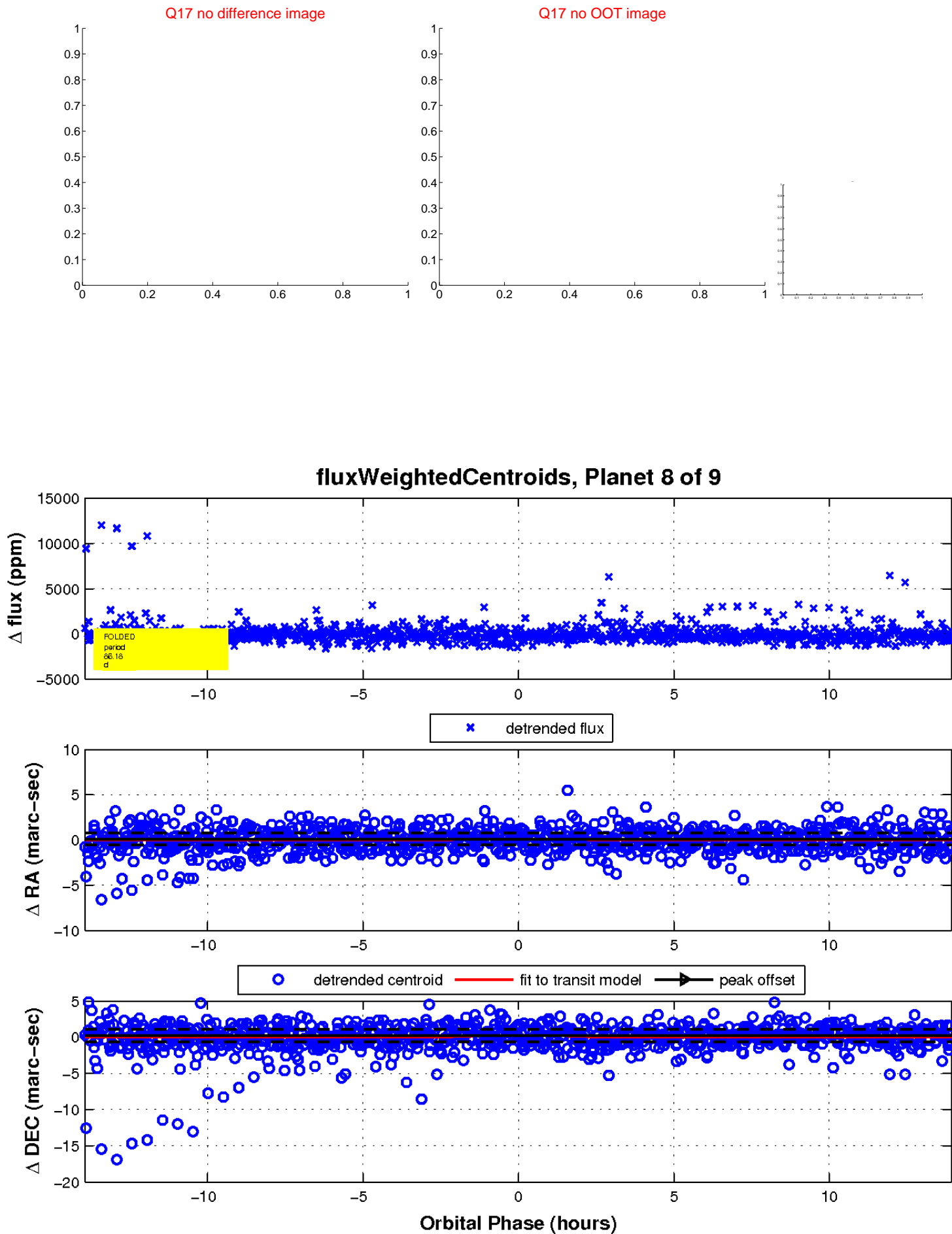
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

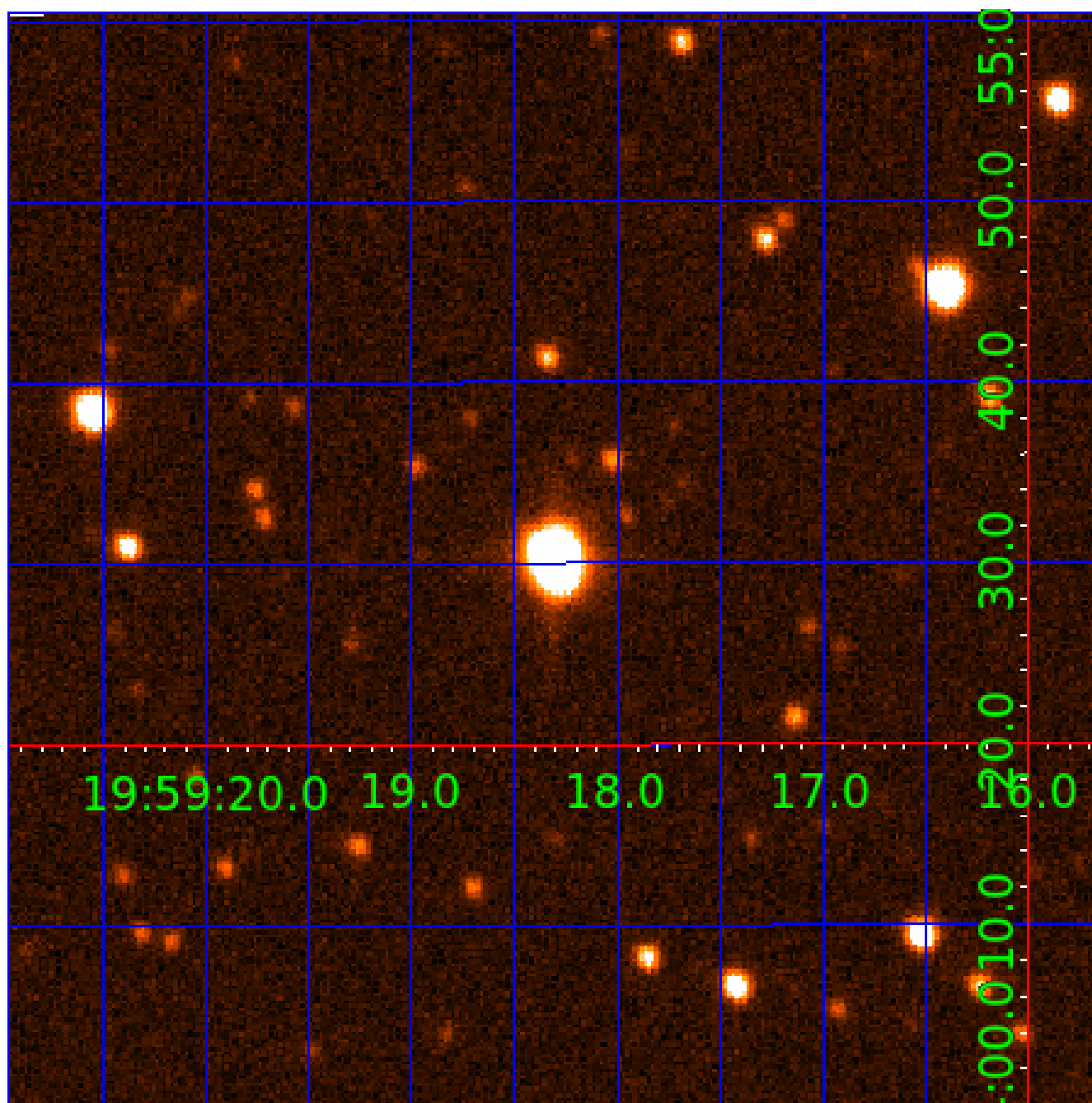


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005739251

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})
005739251-01	OBS	No	0.868952	132.321739	97.9	4.928	12.8	11.5	0.61	3963	0.58	360.99
005739251-02	OBS	No	383.240200	146.574993	3136.4	7.899	12.6	8.4	0.61	3963	3.63	0.11
005739251-03	OBS	No	153.727393	191.466115	1636.0	5.316	10.7	6.8	0.61	3963	2.38	0.36
005739251-05	OBS	No	187.430989	136.366580	2283.0	4.361	8.9	7.1	0.61	3963	3.01	0.28
005739251-06	OBS	No	579.707049	332.511898	3640.5	7.902	10.5	9.4	0.61	3963	3.93	0.06
005739251-07	OBS	No	52.503293	176.046621	997.2	2.000	8.7	-1.0	0.61	3963	1.87	1.52
005739251-08	OBS	No	86.182052	146.239333	997.8	4.648	8.1	5.3	0.61	3963	2.03	0.79
005739251-09	OBS	No	178.650615	149.550422	369.1	9.000	8.8	-1.0	0.61	3963	1.13	0.30

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005739251-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_KIC_POS
005739251-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005739251-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—INCONSISTENT_TRANS
005739251-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005739251-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005739251-07	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
005739251-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_TRACKER—TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_KIC_POS
005739251-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—ALL_TRANS_CHASES—CENT_NOFITS

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

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

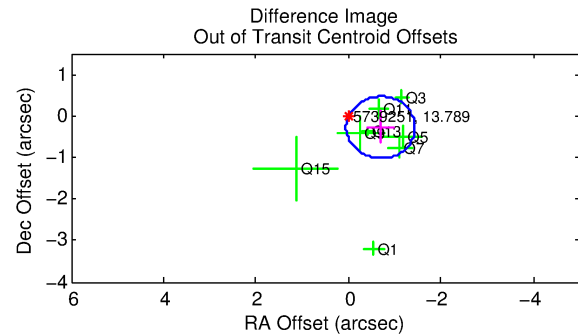
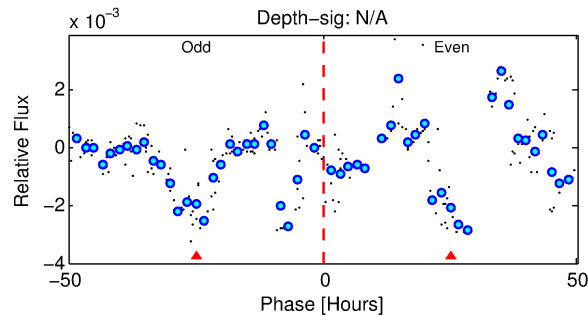
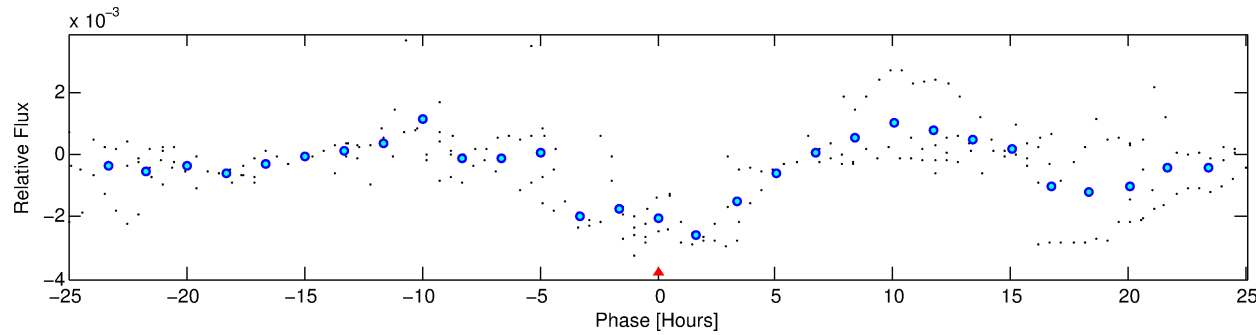
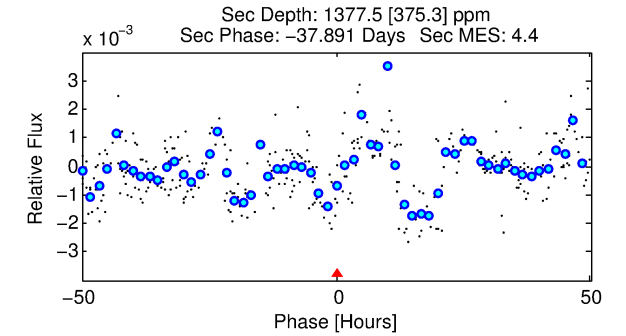
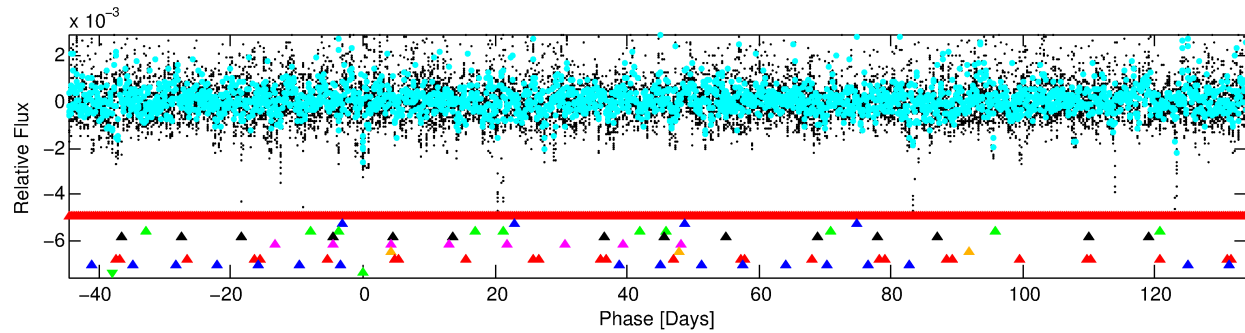
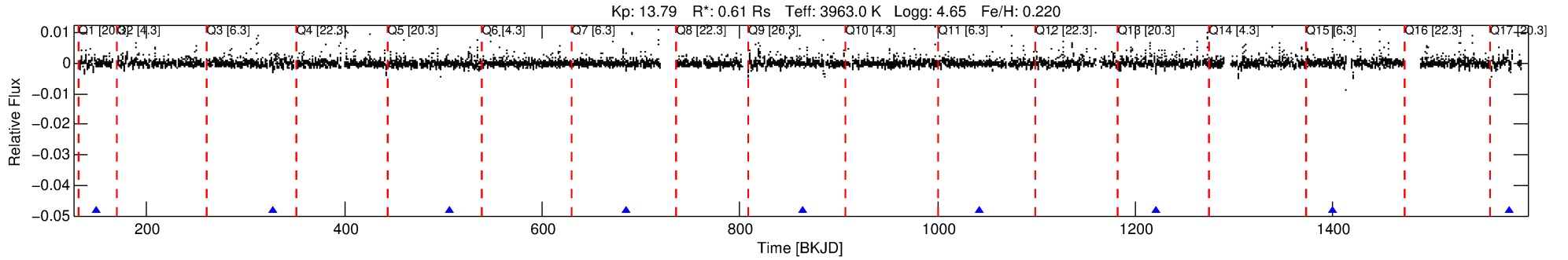
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005739251-09

No Significant Match Found

DV One-Page Summary

KIC: 5739251 Candidate: 9 of 9 Period: 178.651 d



TPS TCE Results:

Period = 178.65062 d
Epoch = 149.5504 BKJD

DV fit results are unavailable

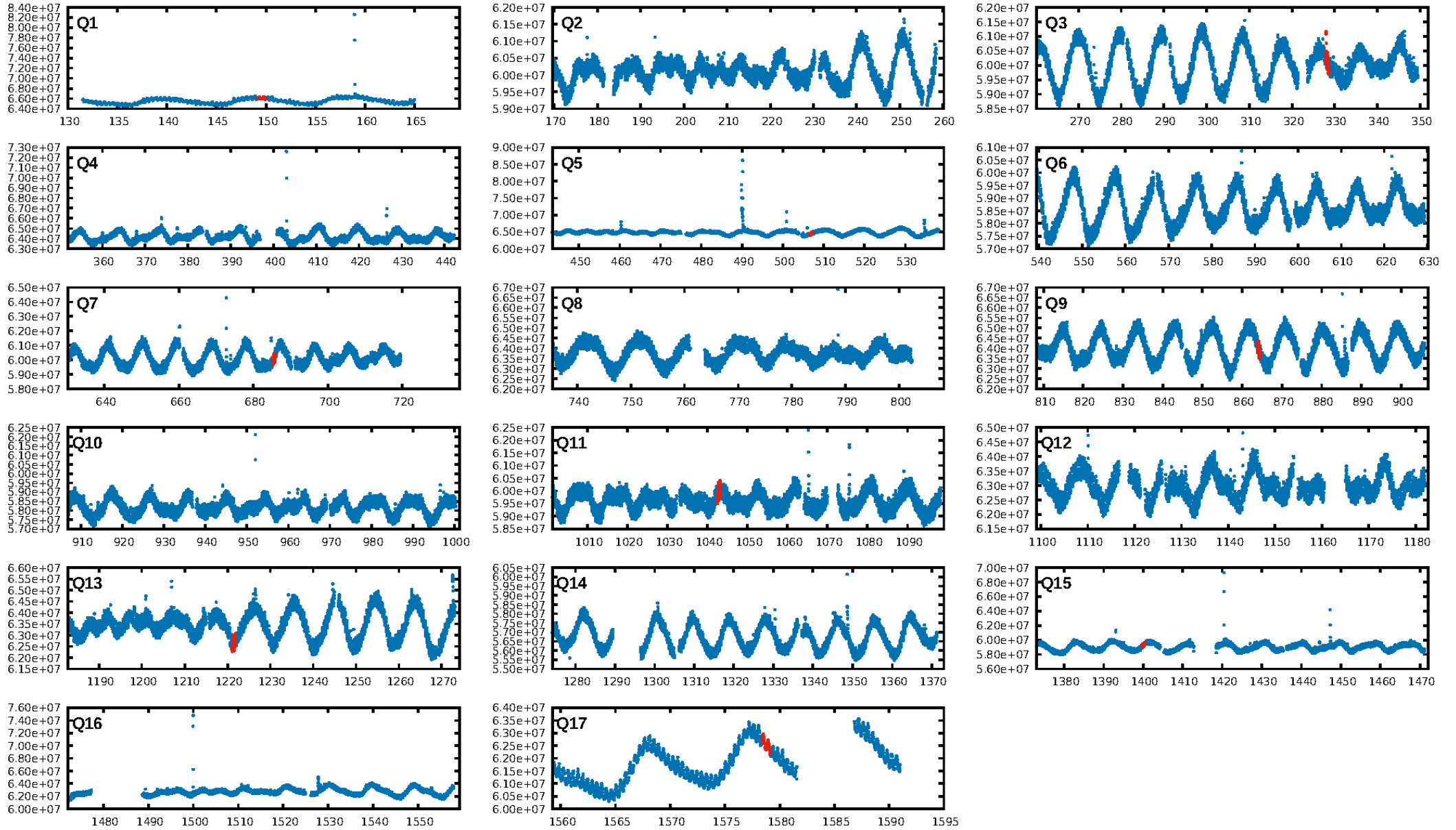
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [57.23 σ]
LongPeriod-sig: 100.0% [21.07 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 0.4782
Centroid-sig: 0.2%
Centroid-so: 0.941 arcsec [6.07 σ]
OotOffset-rm: 0.741 arcsec [2.99 σ]
KicOffset-rm: 0.526 arcsec [1.61 σ]
OotOffset-st: 0/4/0/4 [8]
KicOffset-st: 0/4/0/4 [8]
DiffImageQuality-fgm: 0.25 [2/8]
DiffImageOverlap-fno: 0.00 [0/9]

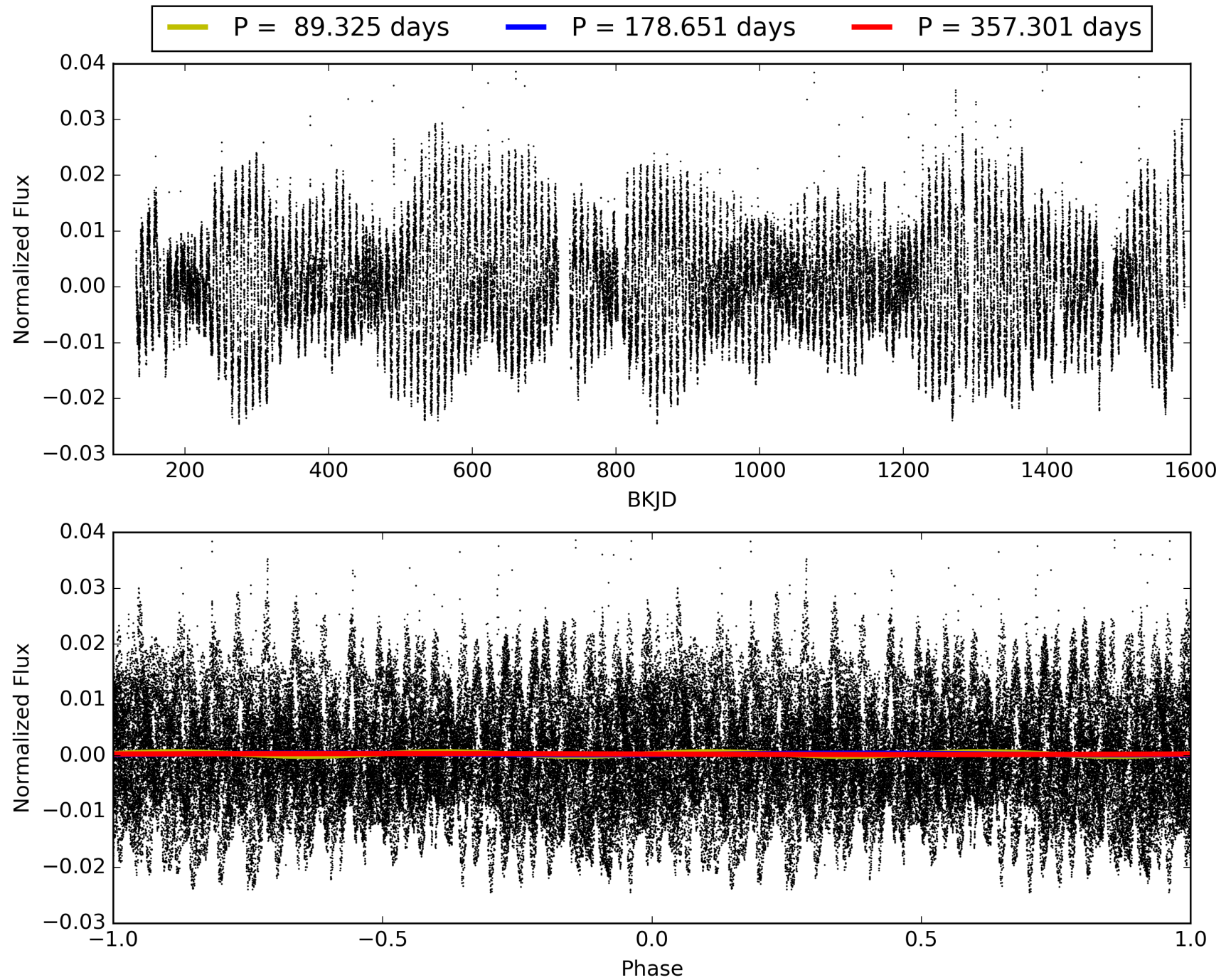
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 17:12:07 Z

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

TCE 005739251-09, PDC Light Curves

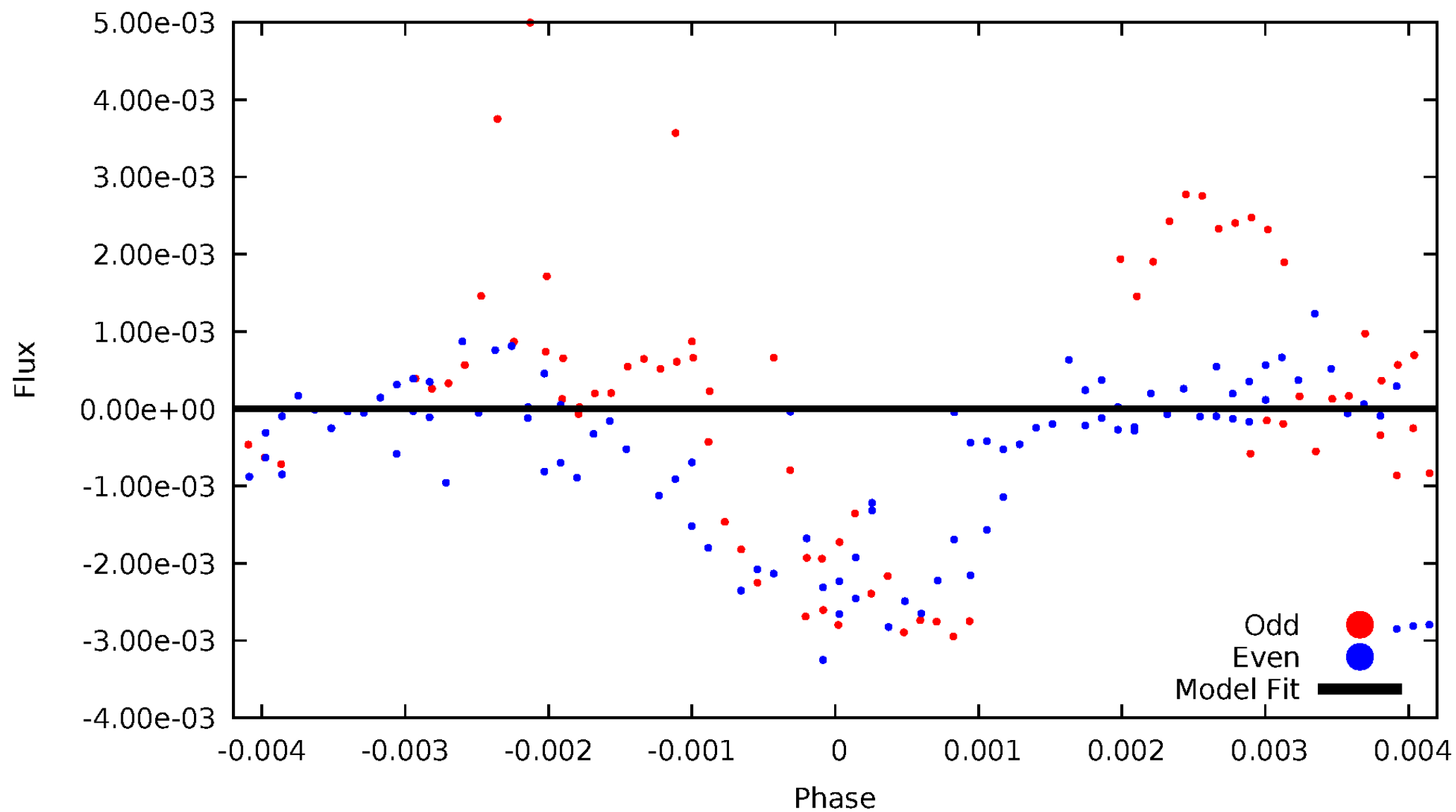


TCE 005739251-09



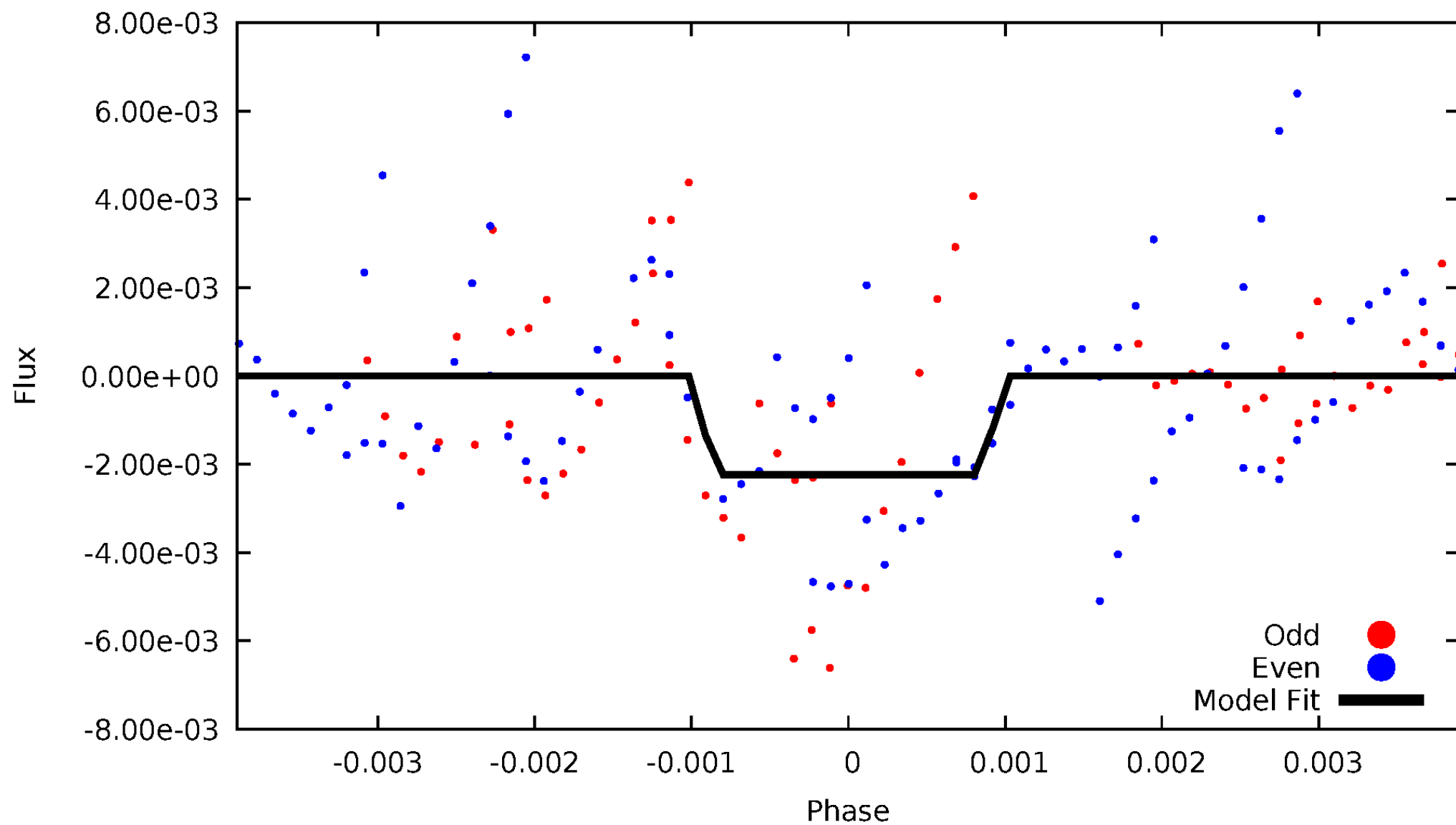
DV Odd/Even

TCE 005739251-09

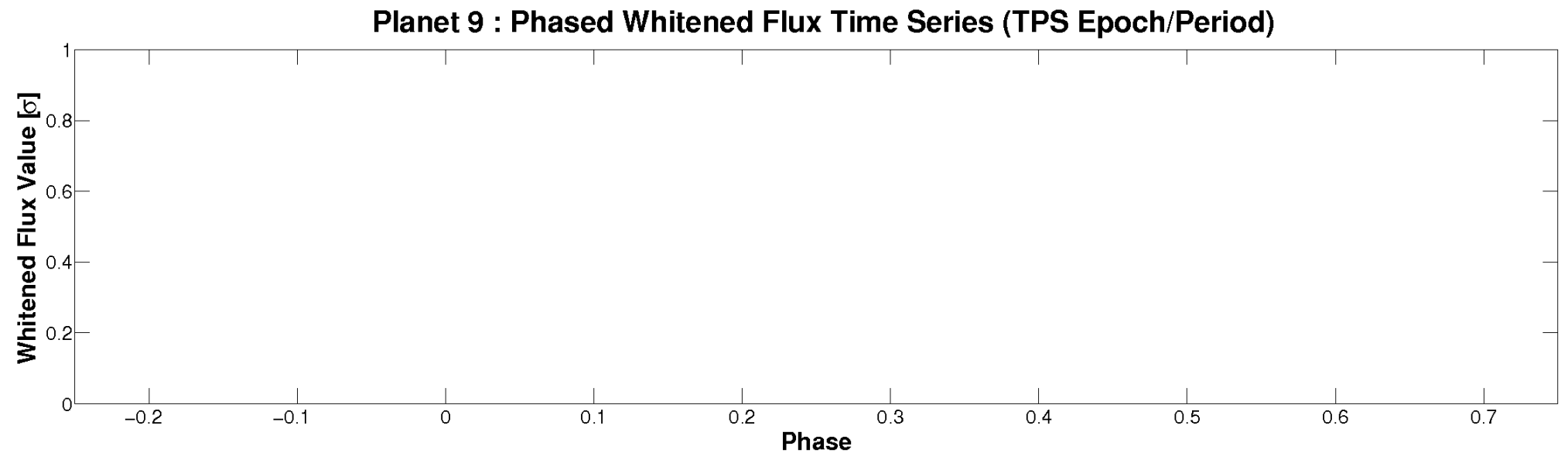
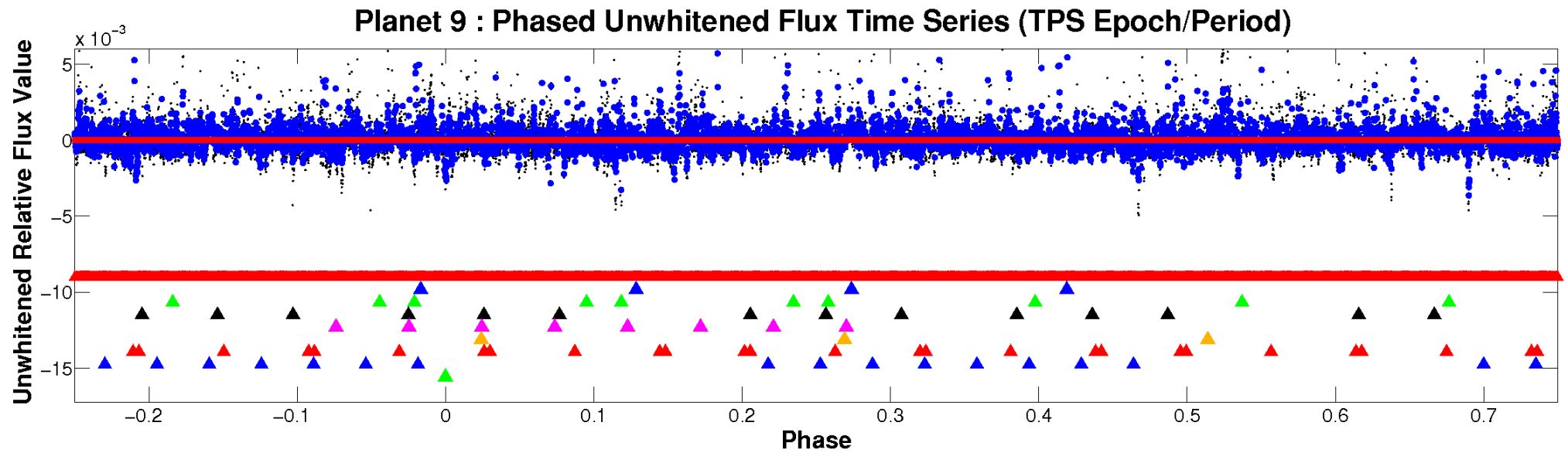


ALT Odd/Even

TCE 005739251-09

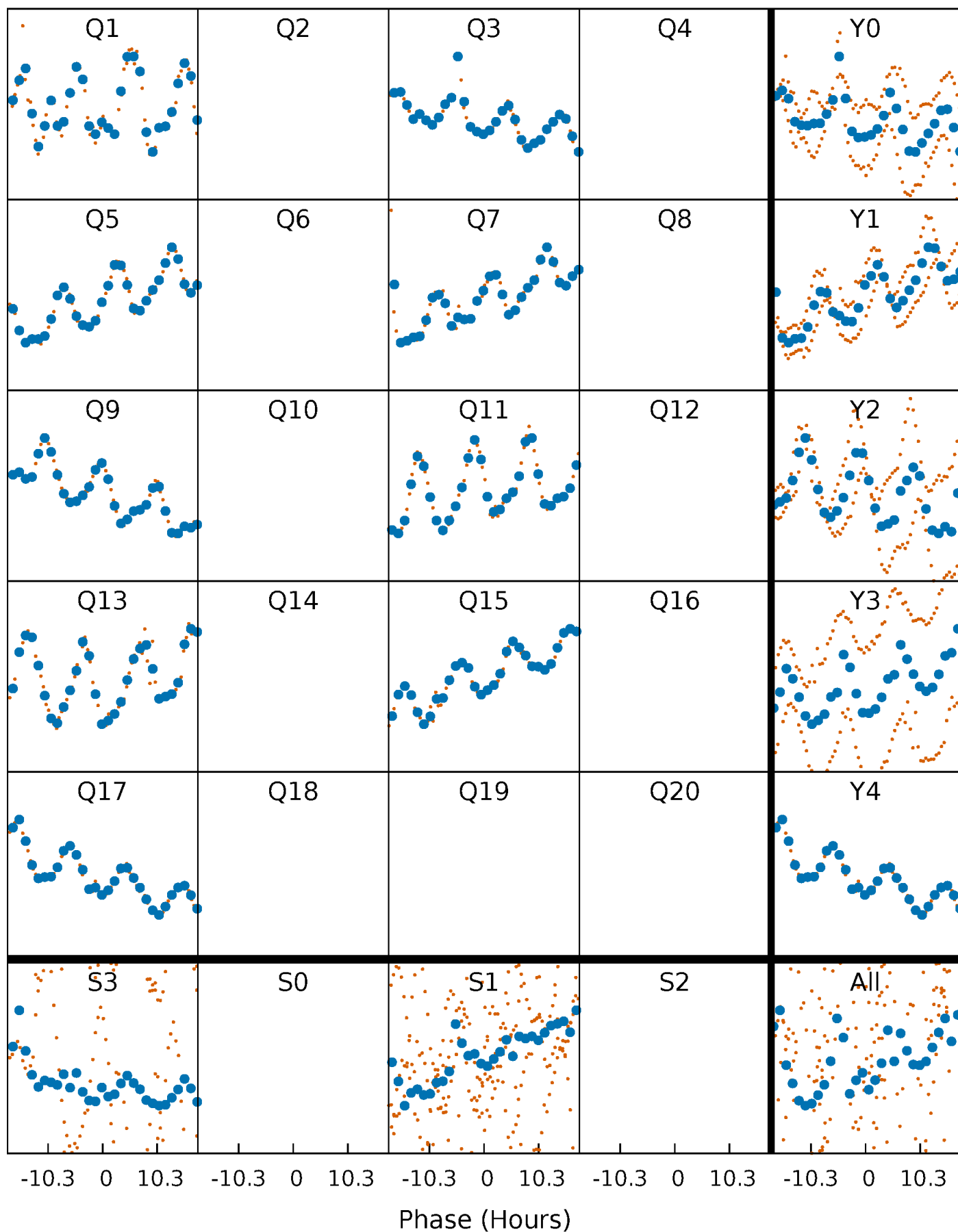


Non-Whitened Vs. Whitened Light Curve



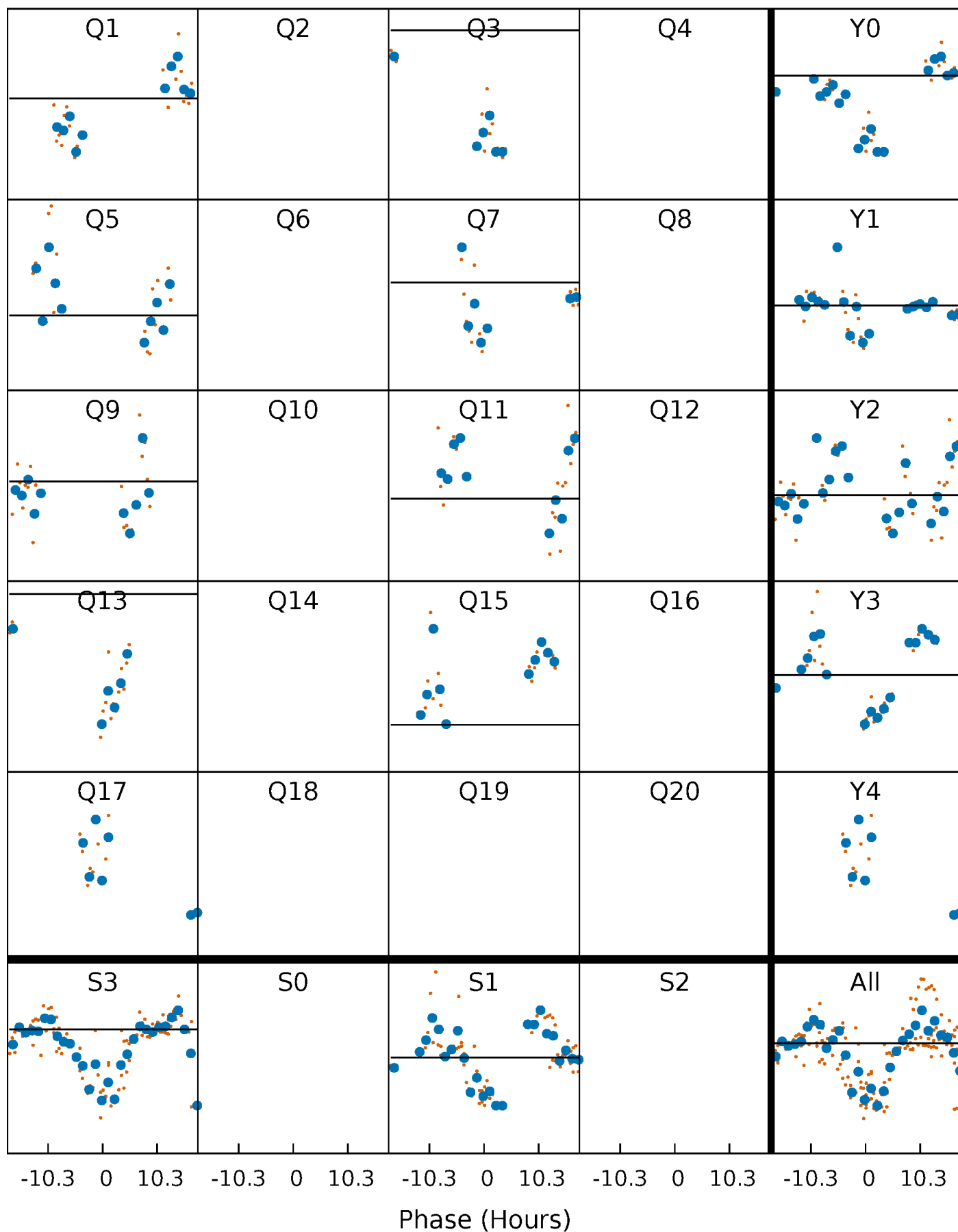
PDC Quarter-Phased Transit Curves

TCE 005739251-09 $P=178.650615$ Days $T_0=149.550422$ (BKJD)



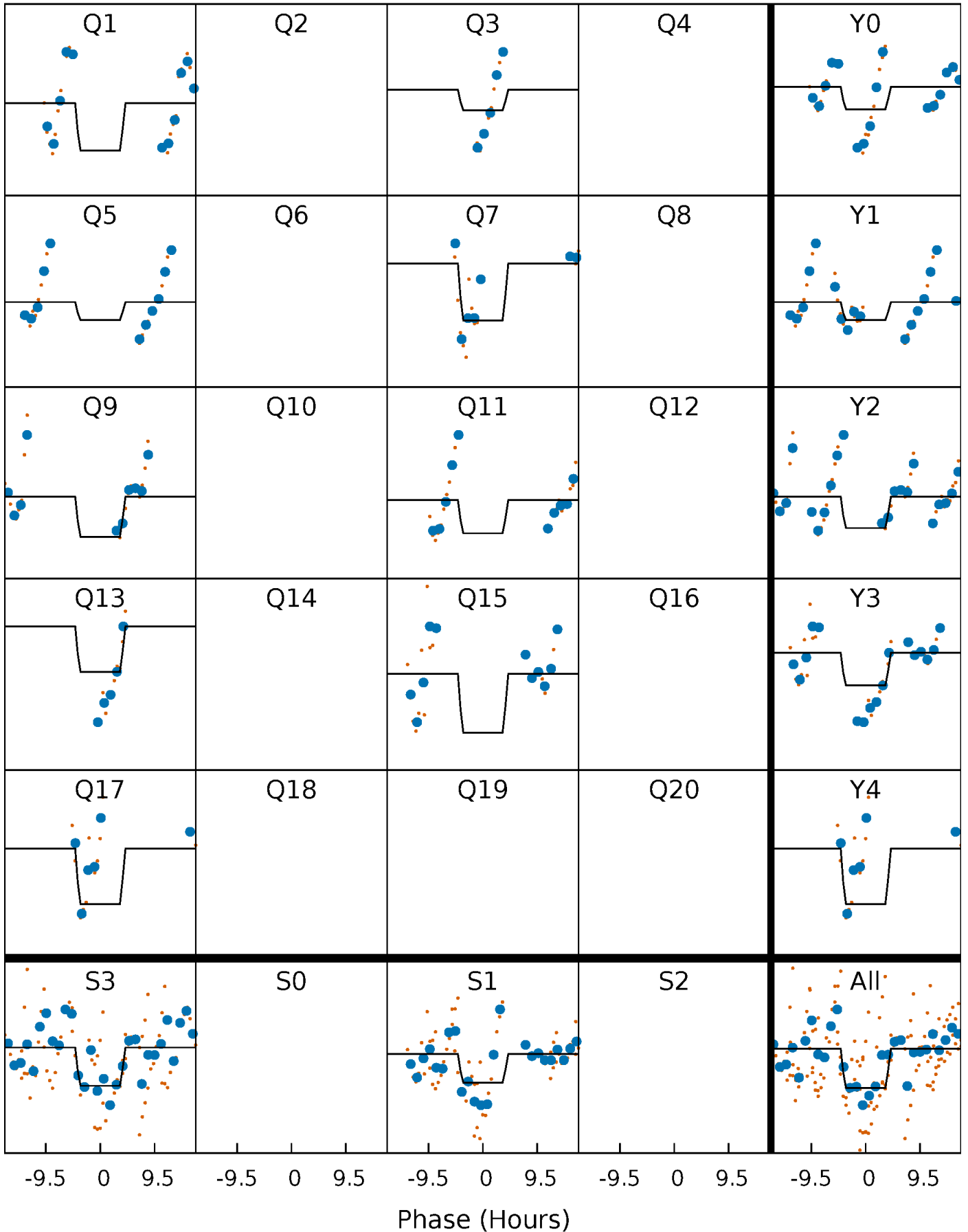
DV Quarter-Phased Transit Curves

TCE 005739251-09 P=178.650615 Days $T_0=149.550422$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

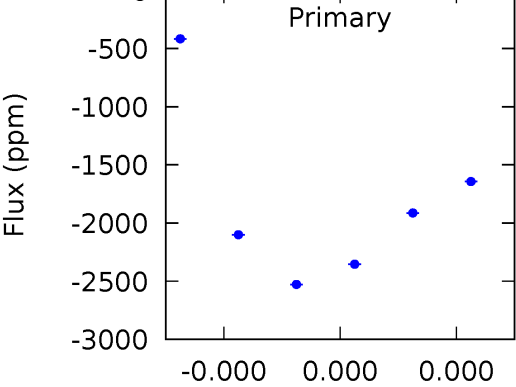
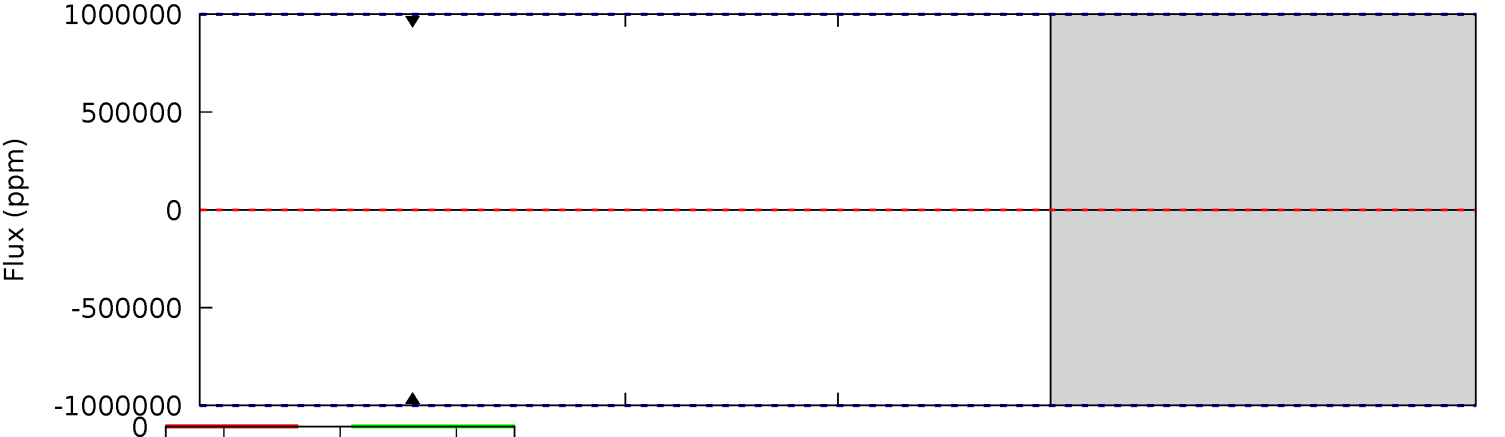
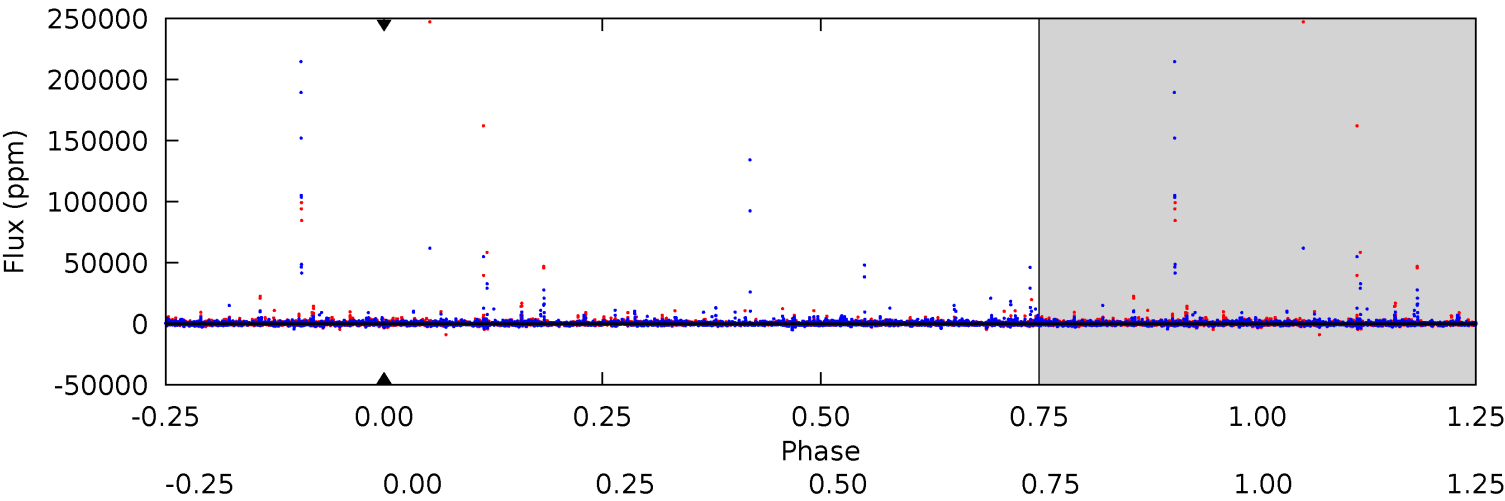
TCE 005739251-09 $P=178.650615$ Days $T_0=149.575538$ (BKJD)



DV Model-Shift Uniqueness Test

005739251-09, P = 178.650615 Days, E = 149.550422 Days

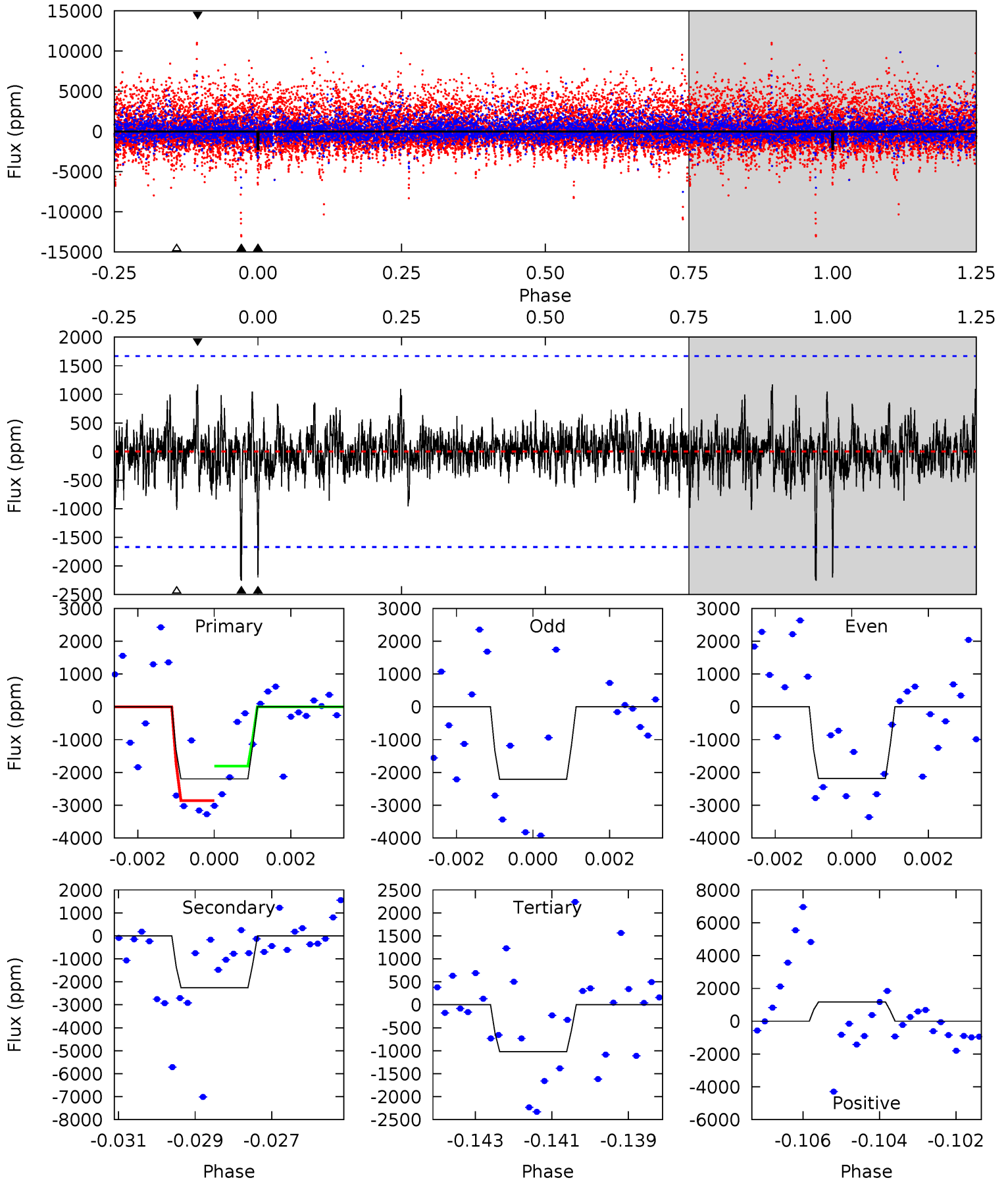
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

005739251-09, P = 178.650615 Days, E = 149.575538 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.04	7.22	3.27	3.75	5.34	3.12	0.90	3.78	3.29	3.95	3.47	0.04	0.98	0.34	1.67



Stellar Parameters For KIC 005739251

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	3963^{+122}_{-150}	$4.652^{+0.060}_{-0.020}$	$0.220^{+0.200}_{-0.300}$	$0.612^{+0.029}_{-0.068}$	$0.613^{+0.041}_{-0.062}$	$3.761^{+1.109}_{-0.369}$
	+3%/-4%	+1%/-0%	+91%/-136%	+5%/-11%	+7%/-10%	+29%/-10%
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 005739251-09 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$5.05^{+4.89}_{-3.69}$	261^{+9}_{-11}	3080^{+6973}_{-11404}	$7037^{+1536892}_{-877066}$
Alt.	-2254 ± 312	$5.87^{+5.61}_{-3.87}$	261^{+10}_{-11}	3244^{+1364}_{-579}	10568^{+77958}_{-7899}

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 $A_{obs} \gg 1.0$

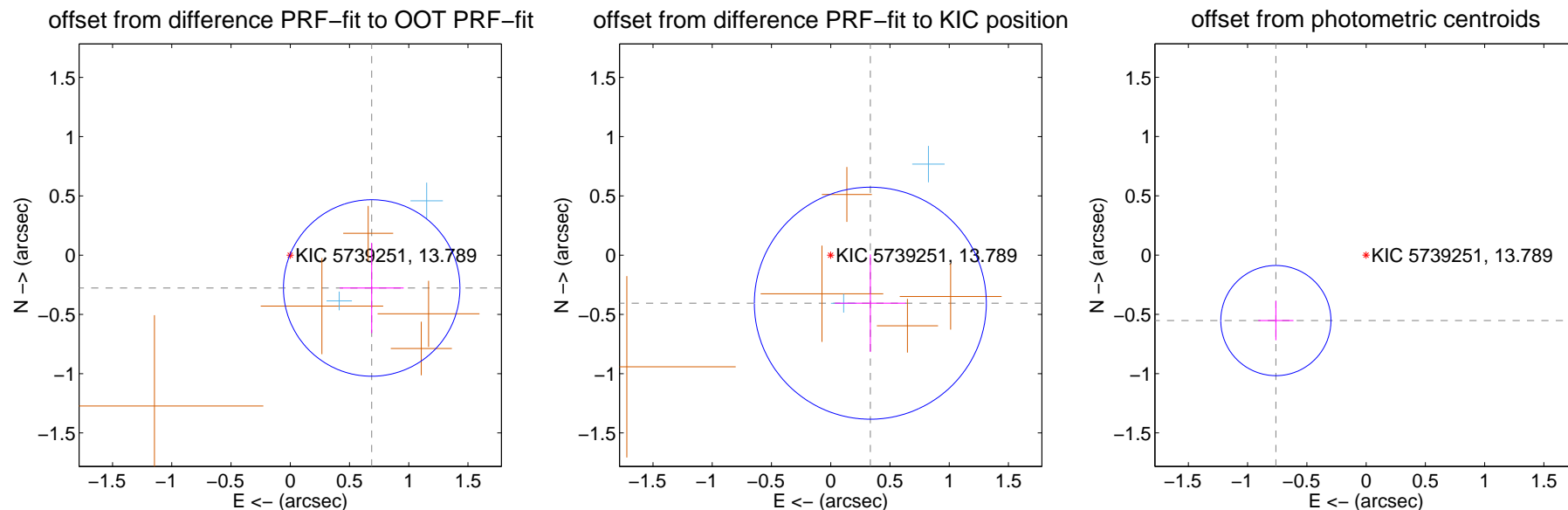
DV Centroid Data

Supplemental centroid analysis for 005739251-09. Kepler magnitude: 13.79. Transit SNR -1.00

There are 2 quarters with good PRF difference image offsets

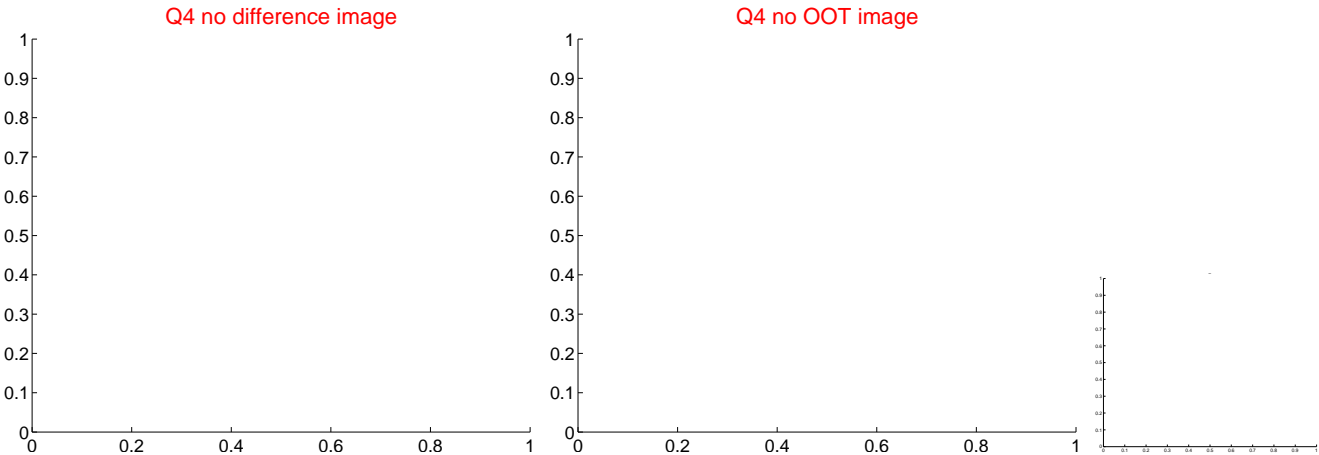
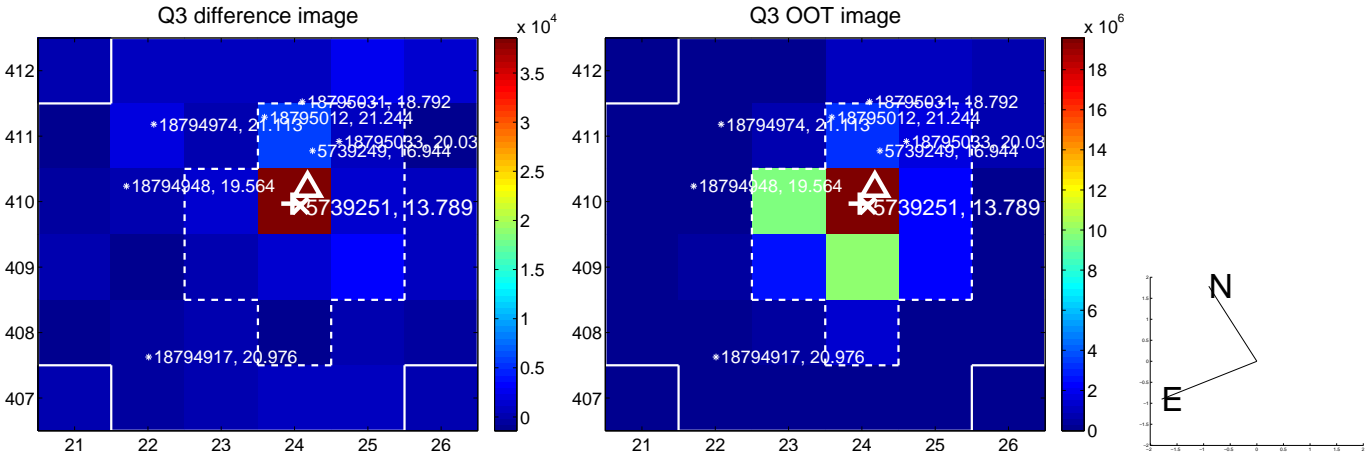
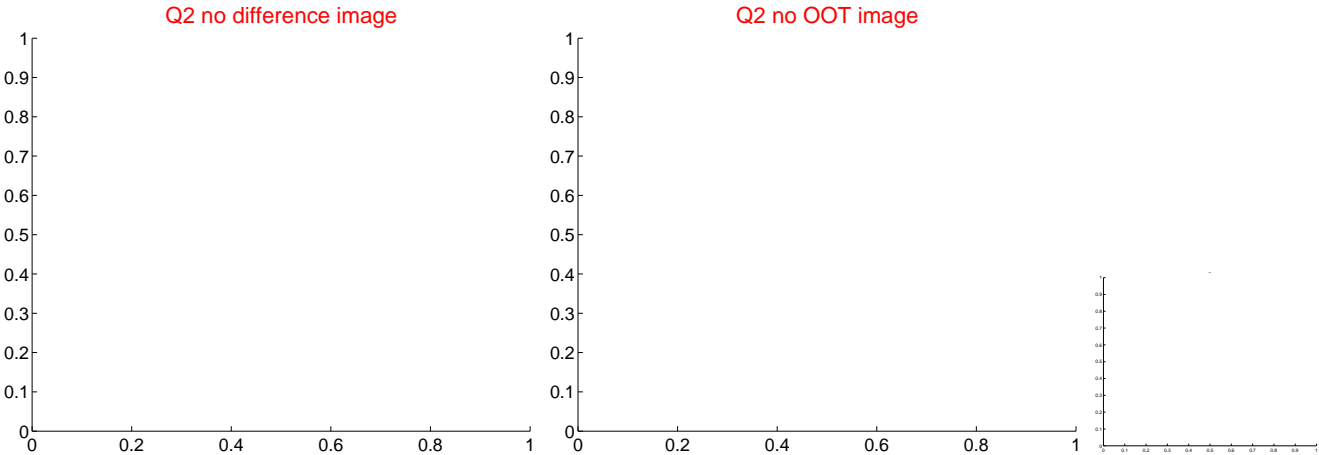
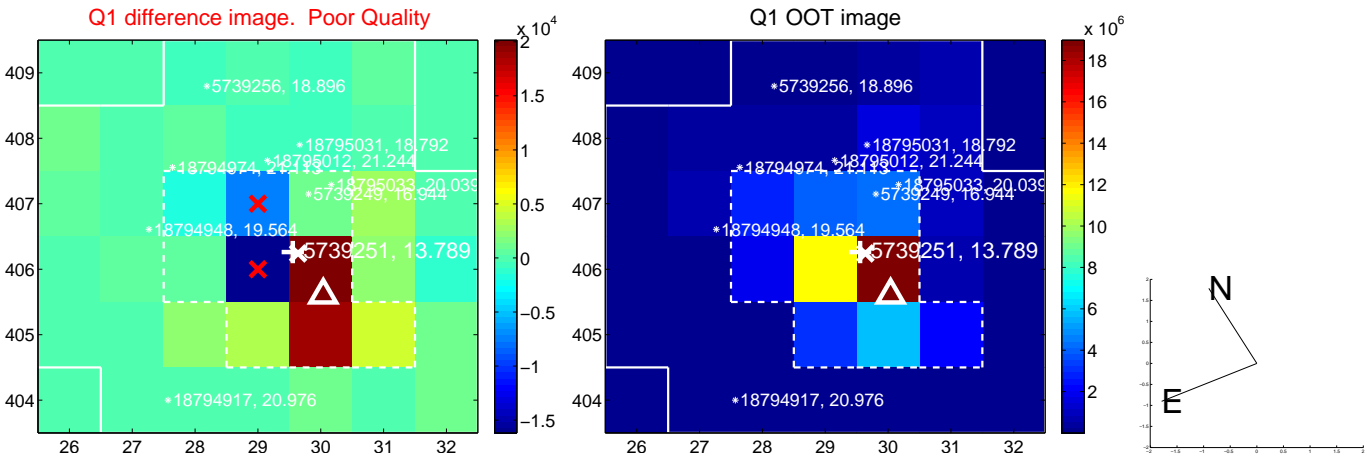
The direct PRF centroid is offset from the target star catalog position by about 0.66 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.741 ± 0.248	2.99	-0.687 ± 0.270	-0.277 ± 0.381
PRF-fit source offset from KIC position	0.526 ± 0.326	1.61	-0.334 ± 0.300	-0.405 ± 0.412
photometric centroid source offset	0.94 ± 0.15	6.07	0.76 ± 0.15	-0.55 ± 0.17

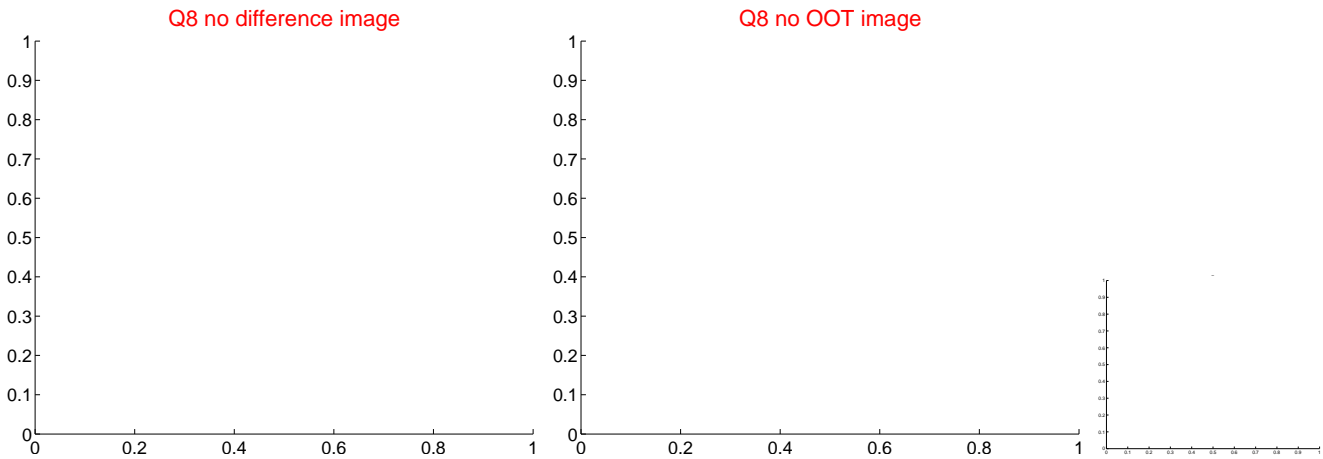
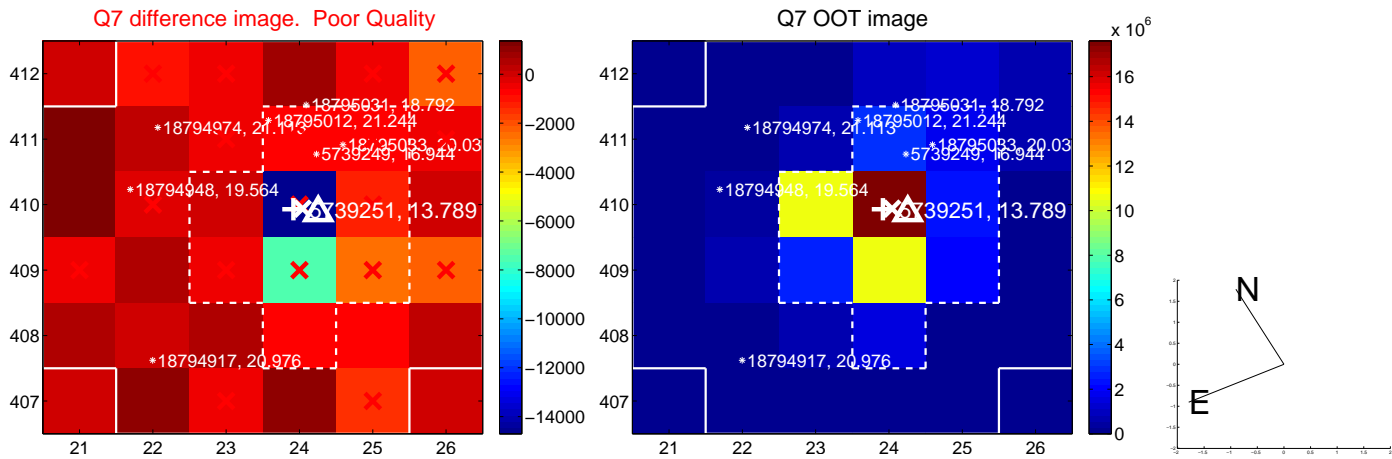
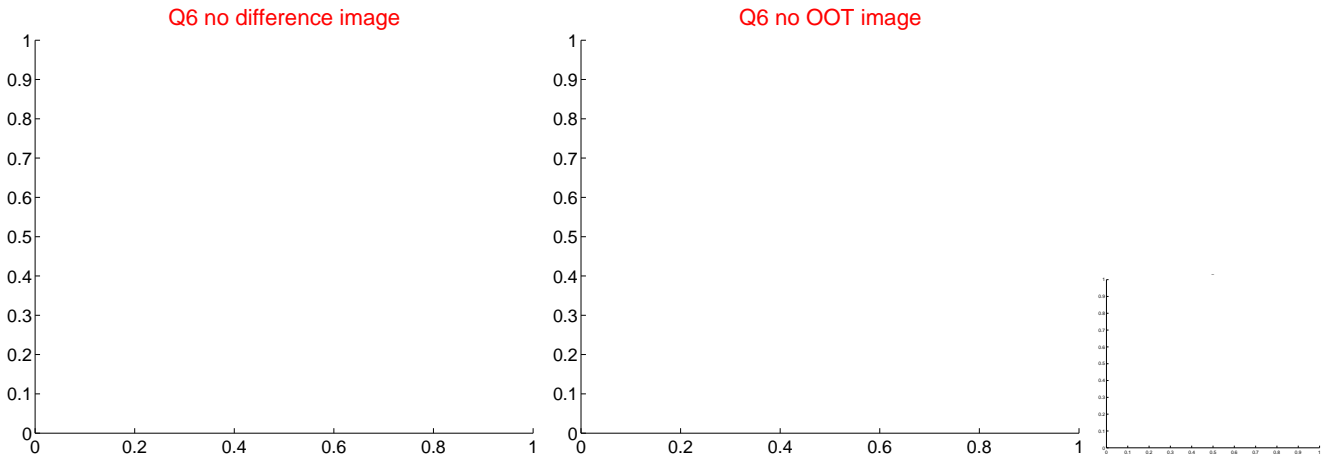
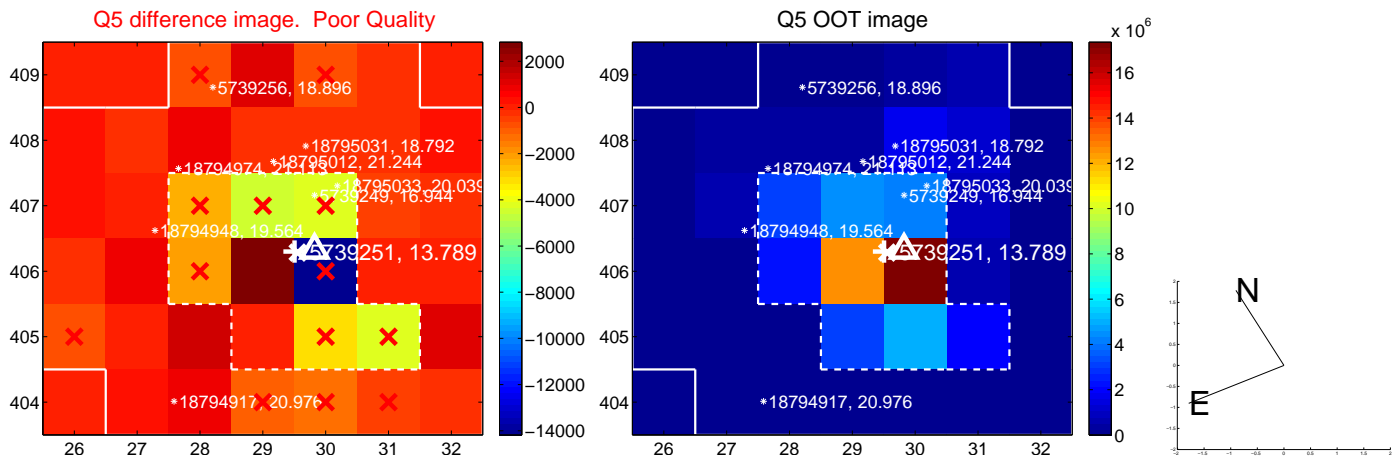


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

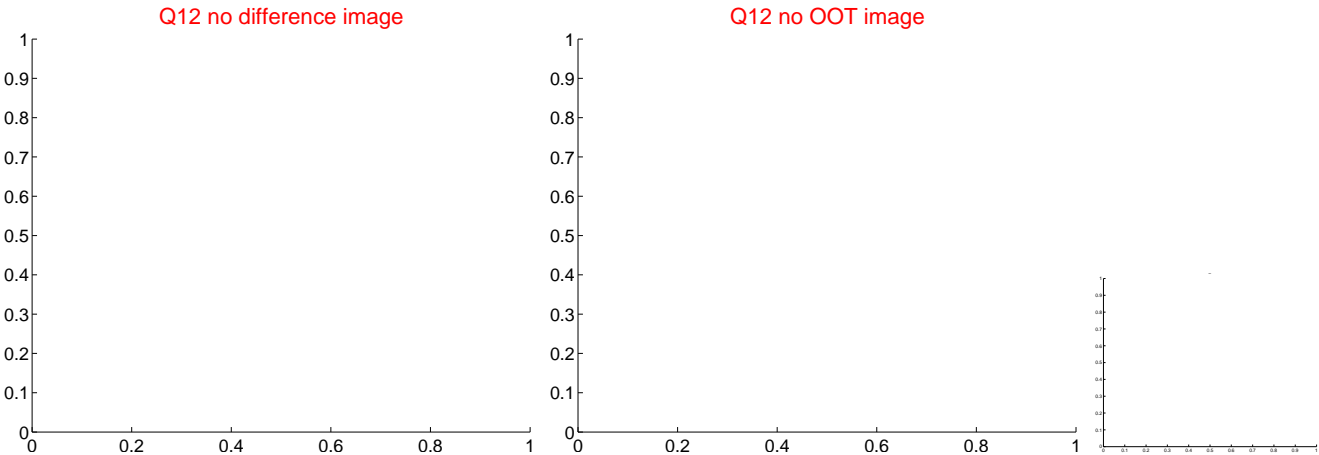
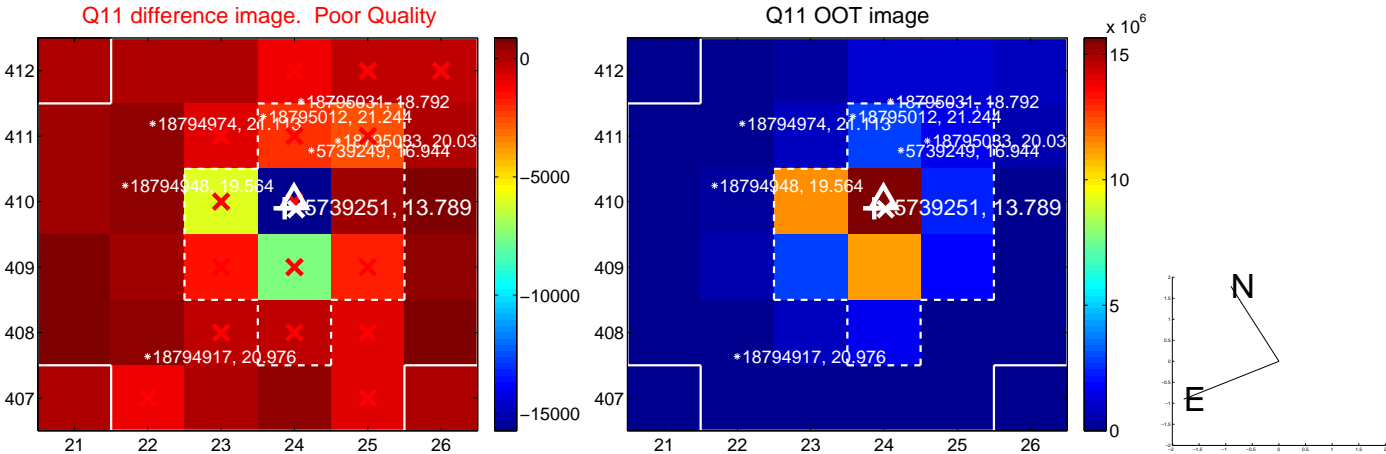
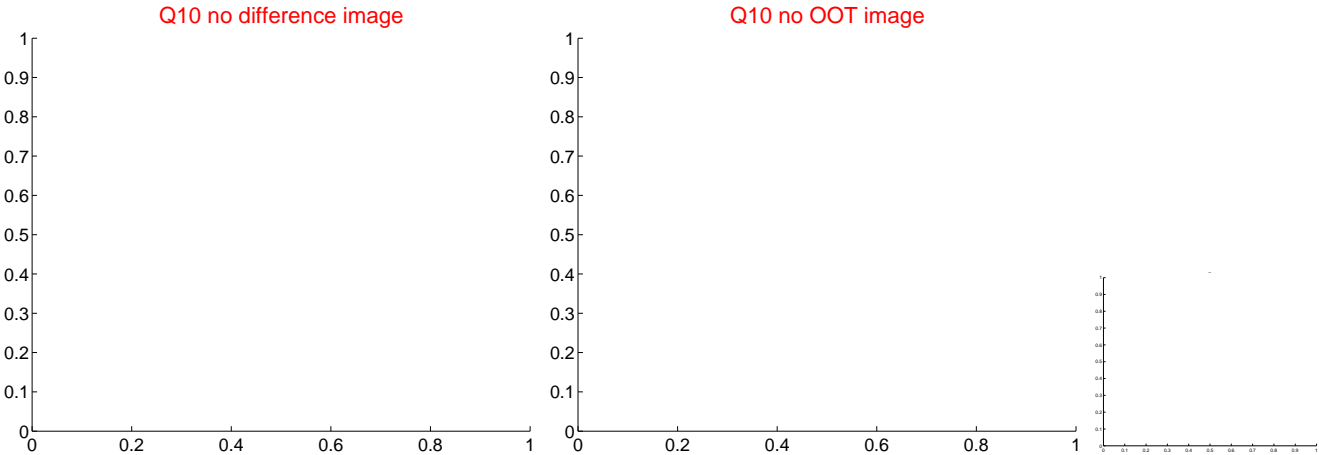
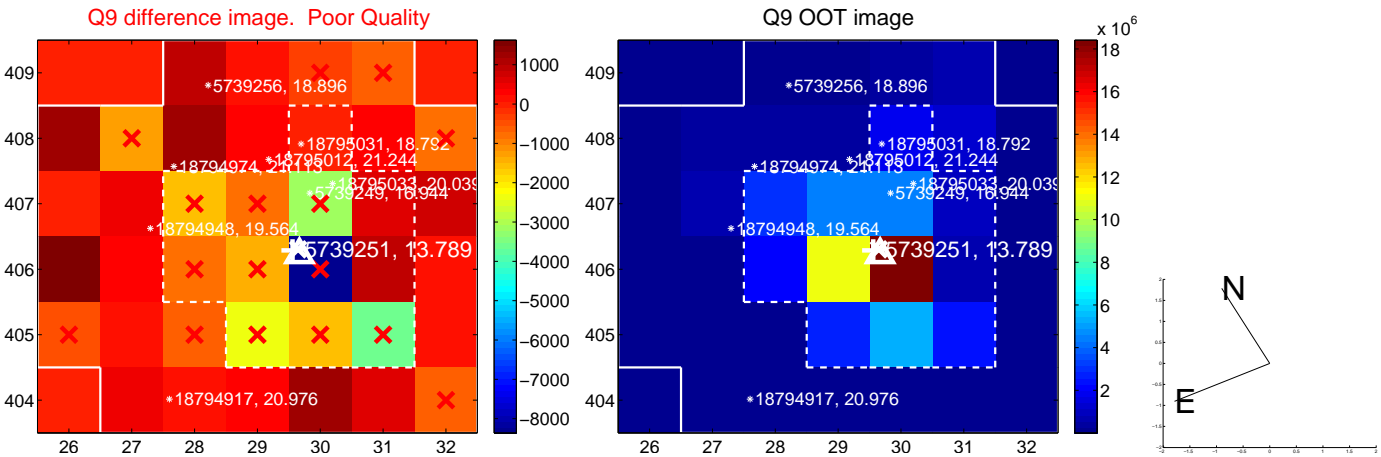
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



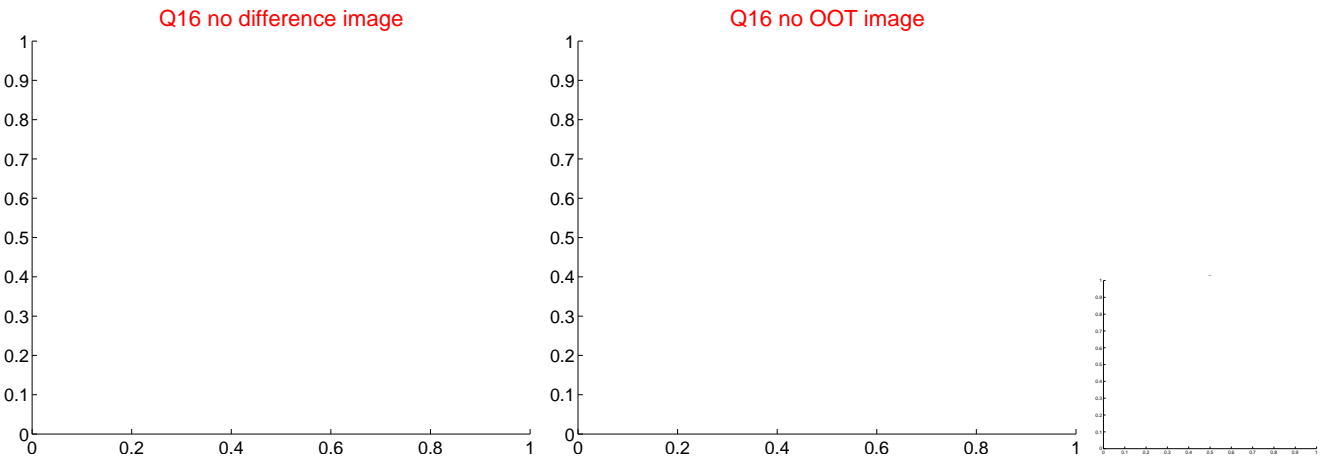
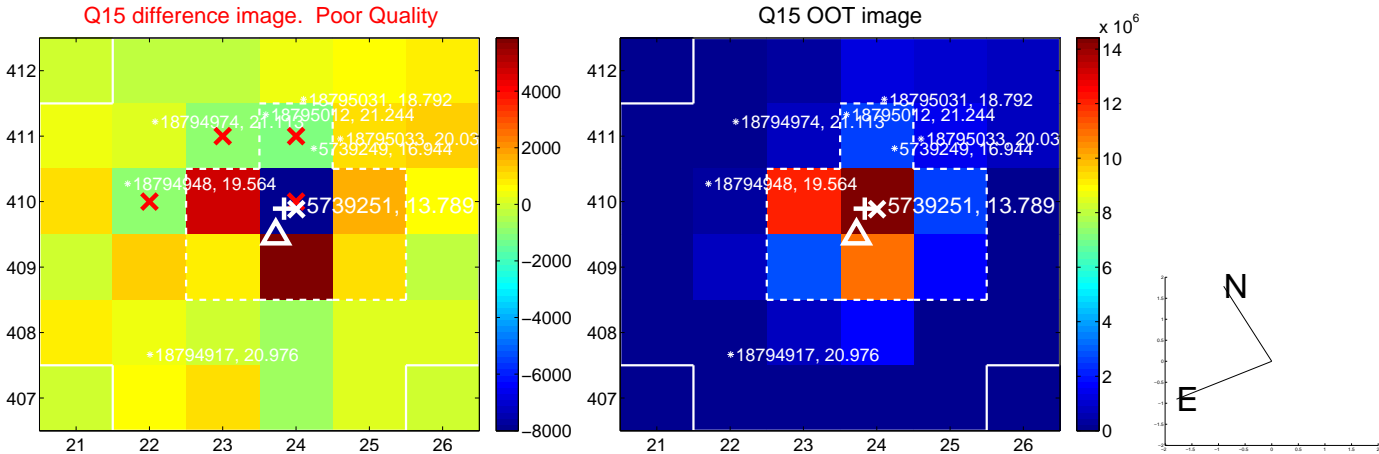
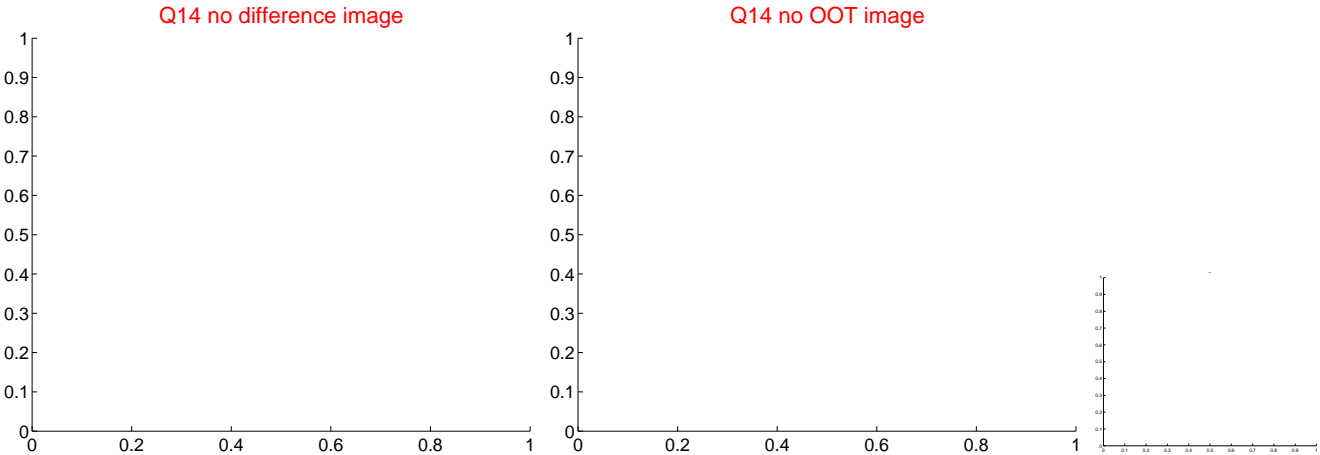
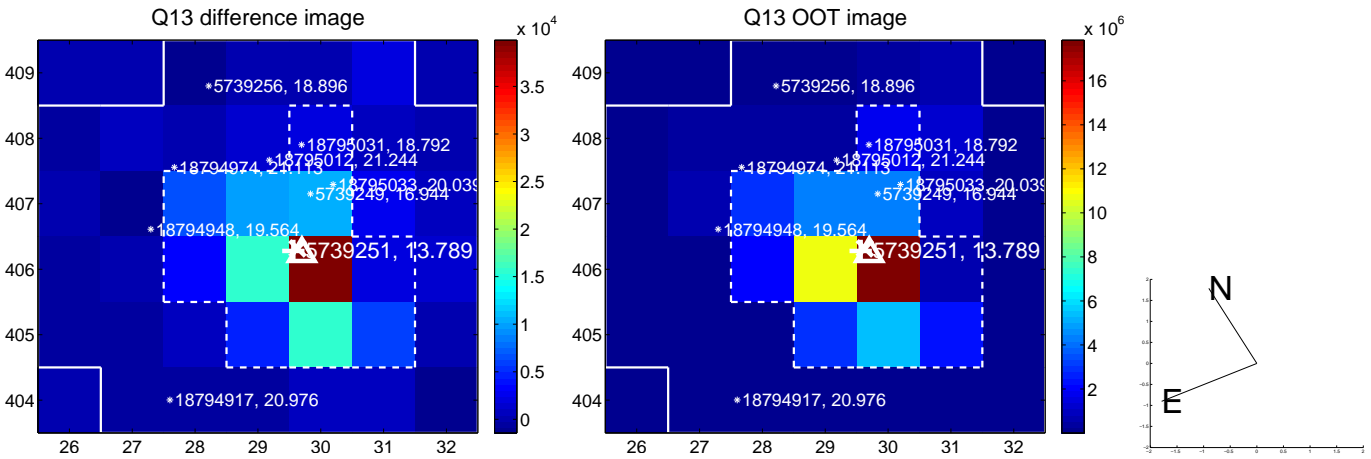
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



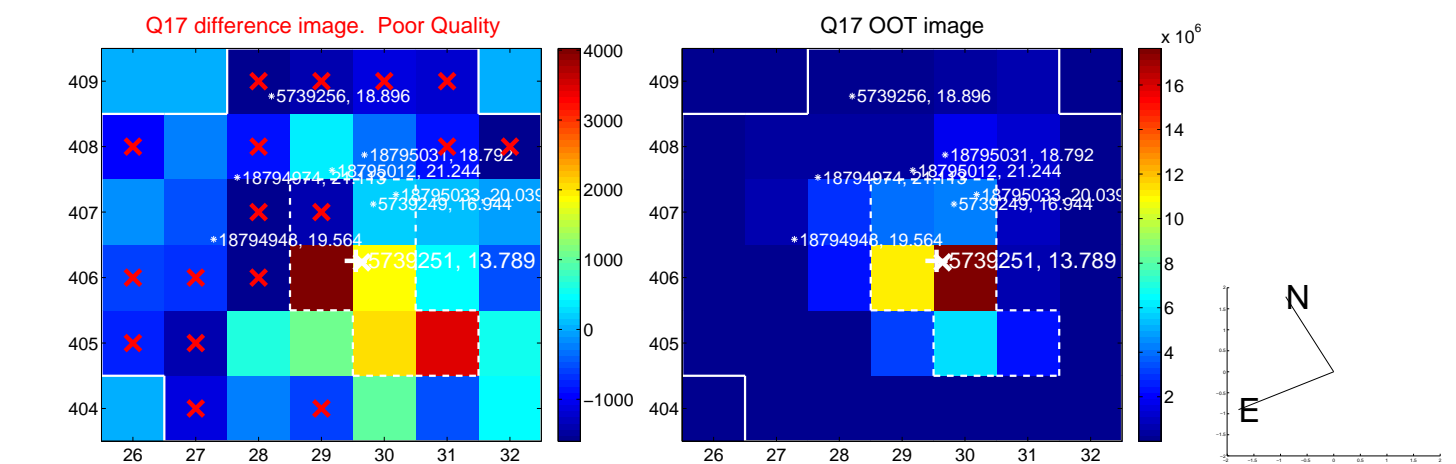
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



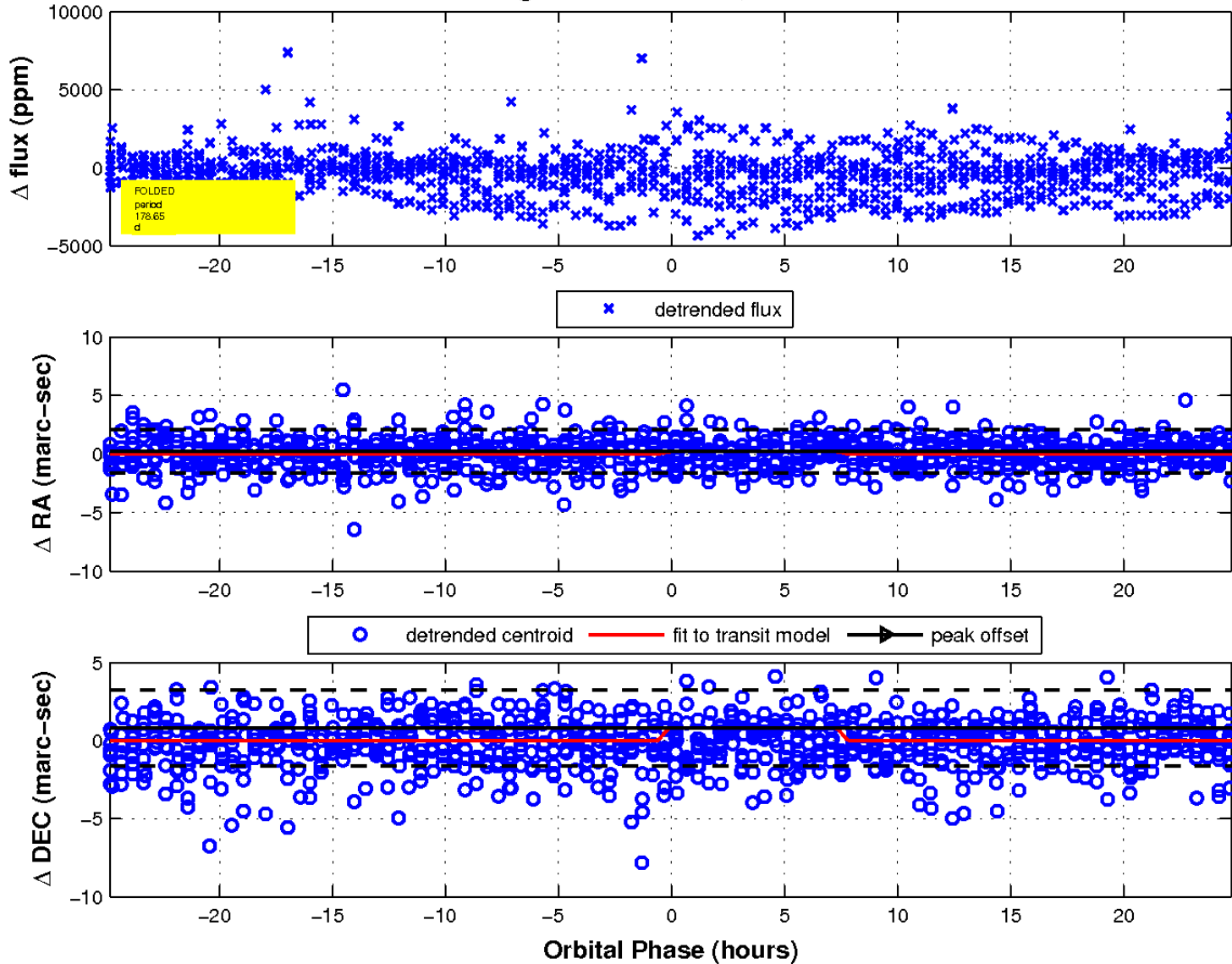
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 9 of 9



UKIRT Image

Declination

