

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})
007211759-01	OBS	No	48.541107	161.892782	786.7	0.928	134.9	4.7	3.16	8402	9.99	408.44
007211759-02	OBS	No	358.886546	161.664202	215.2	2.879	29.2	15.0	3.16	8402	5.34	28.36
007211759-03	OBS	No	64.575712	164.014592	178.7	9.683	22.3	21.9	3.16	8402	4.74	279.16
007211759-04	OBS	No	40.935358	162.840184	275.3	4.161	21.3	21.2	3.16	8402	6.05	512.64
007211759-05	OBS	No	34.650460	160.429464	15.4	0.524	15.5	0.4	3.16	8402	1.60	640.22
007211759-06	OBS	No	34.637188	160.678807	17.4	3.190	15.7	1.3	3.16	8402	1.53	640.55
007211759-07	OBS	No	27.387010	136.391221	18.2	3.254	9.9	2.3	3.16	8402	1.46	876.09
007211759-08	OBS	No	26.505878	136.615978	428.1	6.000	38.8	-1.0	3.16	8402	6.62	915.13
007211759-09	OBS	No	26.082524	137.048060	102.2	7.484	21.7	7.7	3.16	8402	3.69	934.99
007211759-10	OBS	No	26.321290	135.945076	208.1	15.000	35.7	-1.0	3.16	8402	4.61	923.70

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007211759-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
007211759-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
007211759-03	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED—HALO_GHOST
007211759-04	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
007211759-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED—HALO_GHOST
007211759-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA_TRACKER—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_SATURATED
007211759-07	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED—HALO_GHOST
007211759-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
007211759-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
007211759-10	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED

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

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

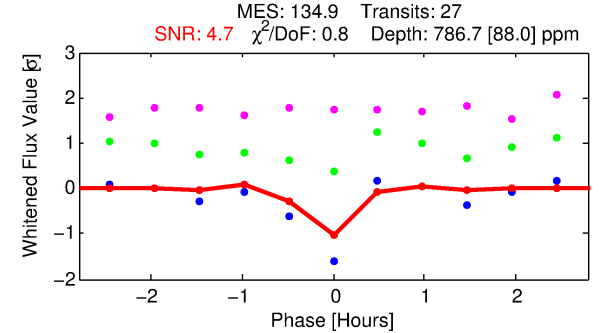
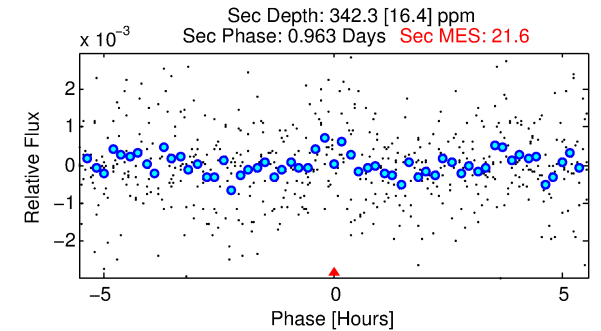
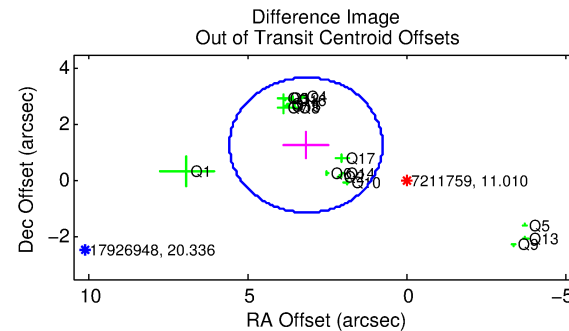
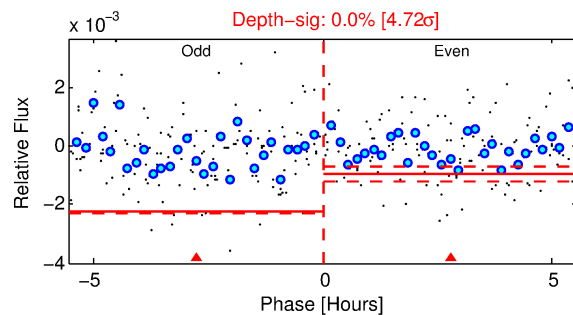
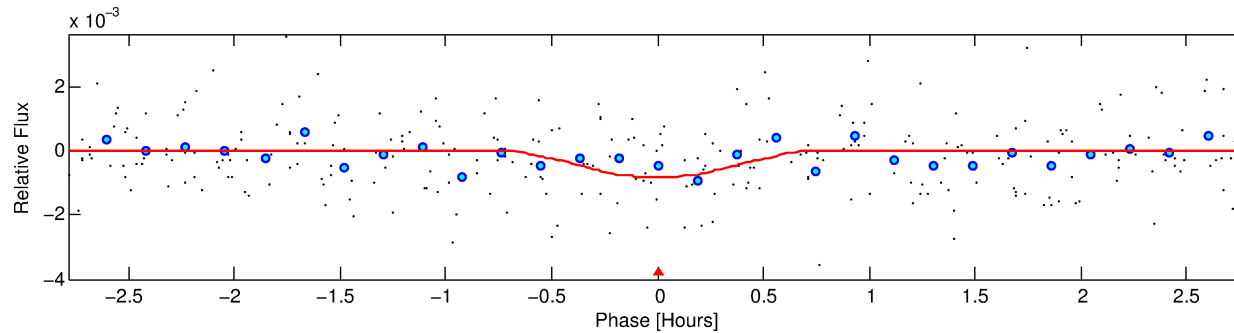
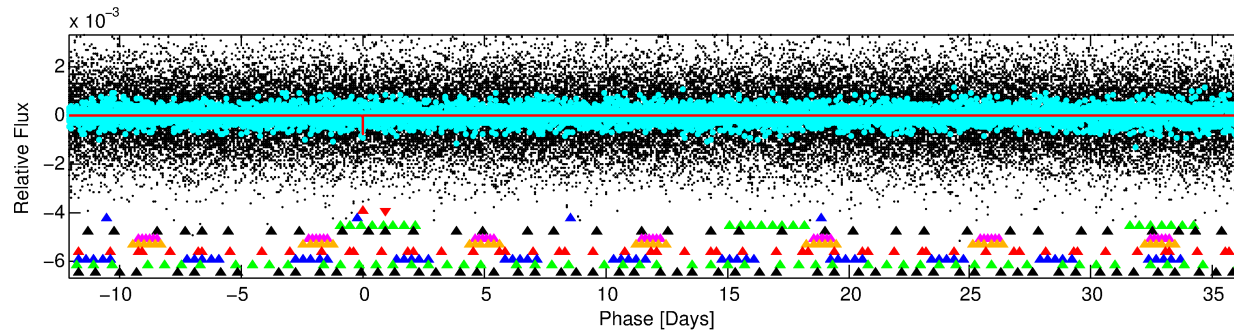
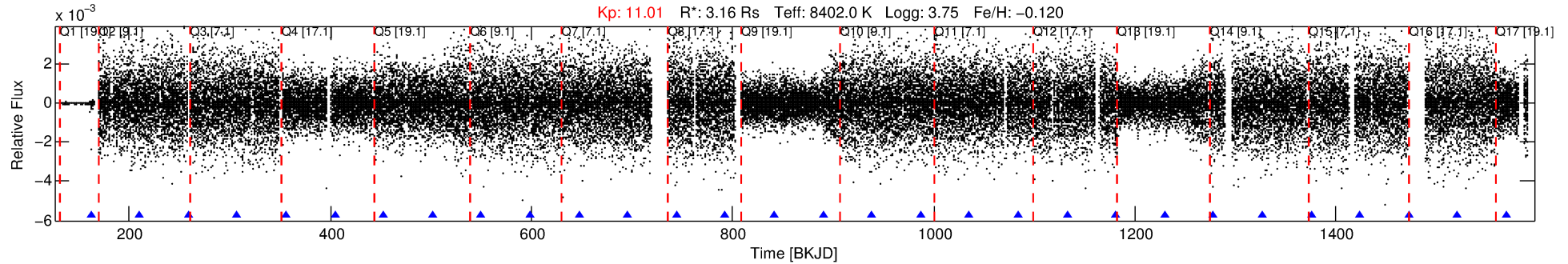
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007211759-01

No Significant Match Found

DV One-Page Summary

KIC: 7211759 Candidate: 1 of 10 Period: 48.541 d



DV Fit Results:

Period = 48.54111 [0.00021] d
Epoch = 161.8928 [0.0026] BKJD
 $R_p/R^* = 0.0290$ [0.0424]
 $a/R^* = 242.50$ [2195.01]
 $b = 0.83$ [3.41]
 $\text{Seff} = 408.44$ [287.29]
 $T_{\text{eq}} = 1146$ [202] K
 $R_p = 9.99$ [15.27] R_{\oplus}
 $a = 0.3301$ [0.1413] AU
 $A_g = 205.67$ [617.58] [0.33 σ]
 $T_{\text{eff}} = 6712$ [4916] K [1.13 σ]

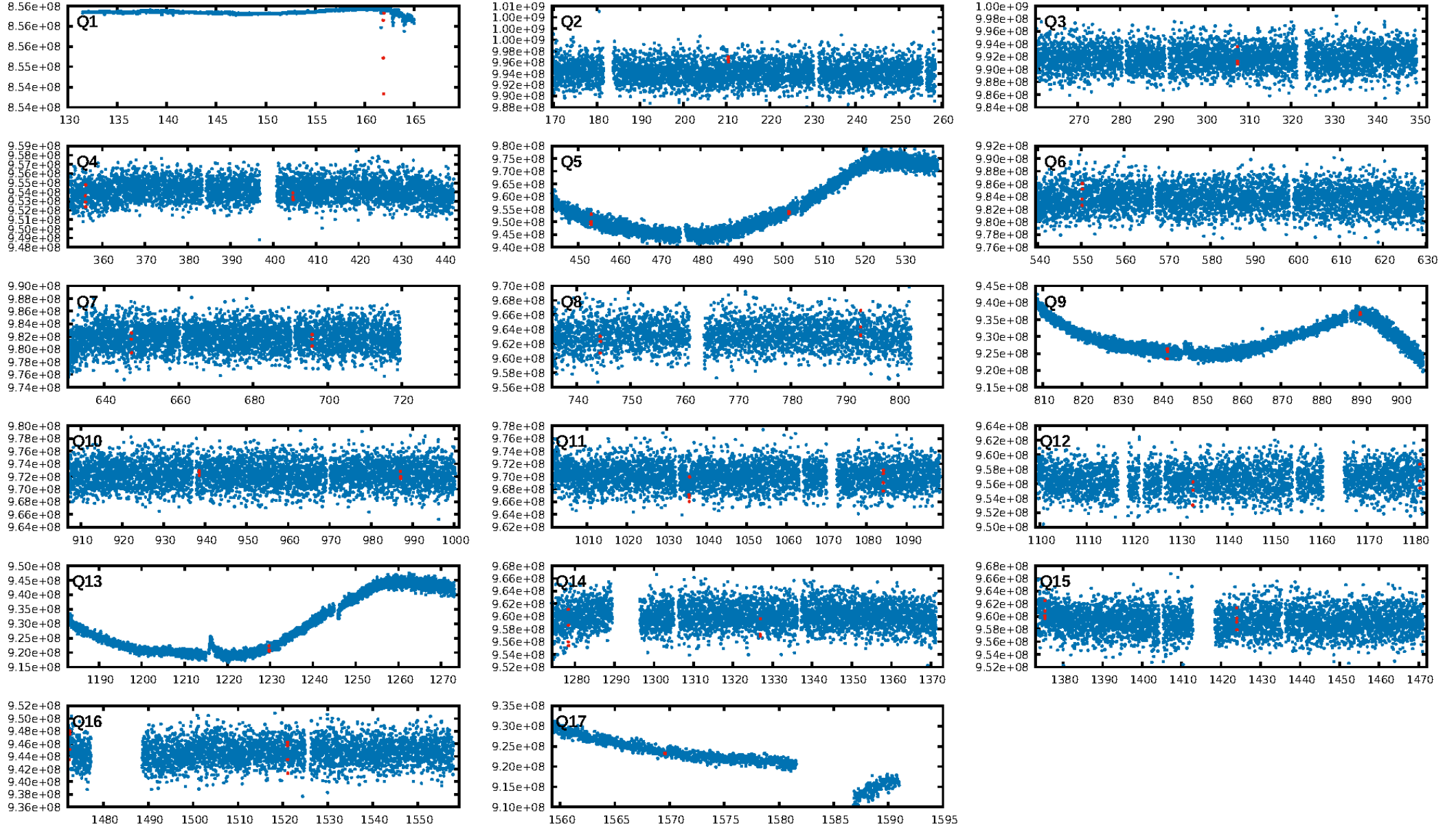
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [42.82 σ]
LongPeriod-sig: 100.0% [39.56 σ]
ModelChiSquare2-sig: 87.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [25/25]
GhostDiagnostic-chr: 6.338
Centroid-sig: 9.1%
Centroid-so: 0.737 arcsec [1.03 σ]
OotOffset-rm: 3.419 arcsec [4.26 σ]
KicOffset-rm: 3.488 arcsec [4.54 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.29 [5/17]
DiffImageOverlap-fno: 0.94 [16/17]

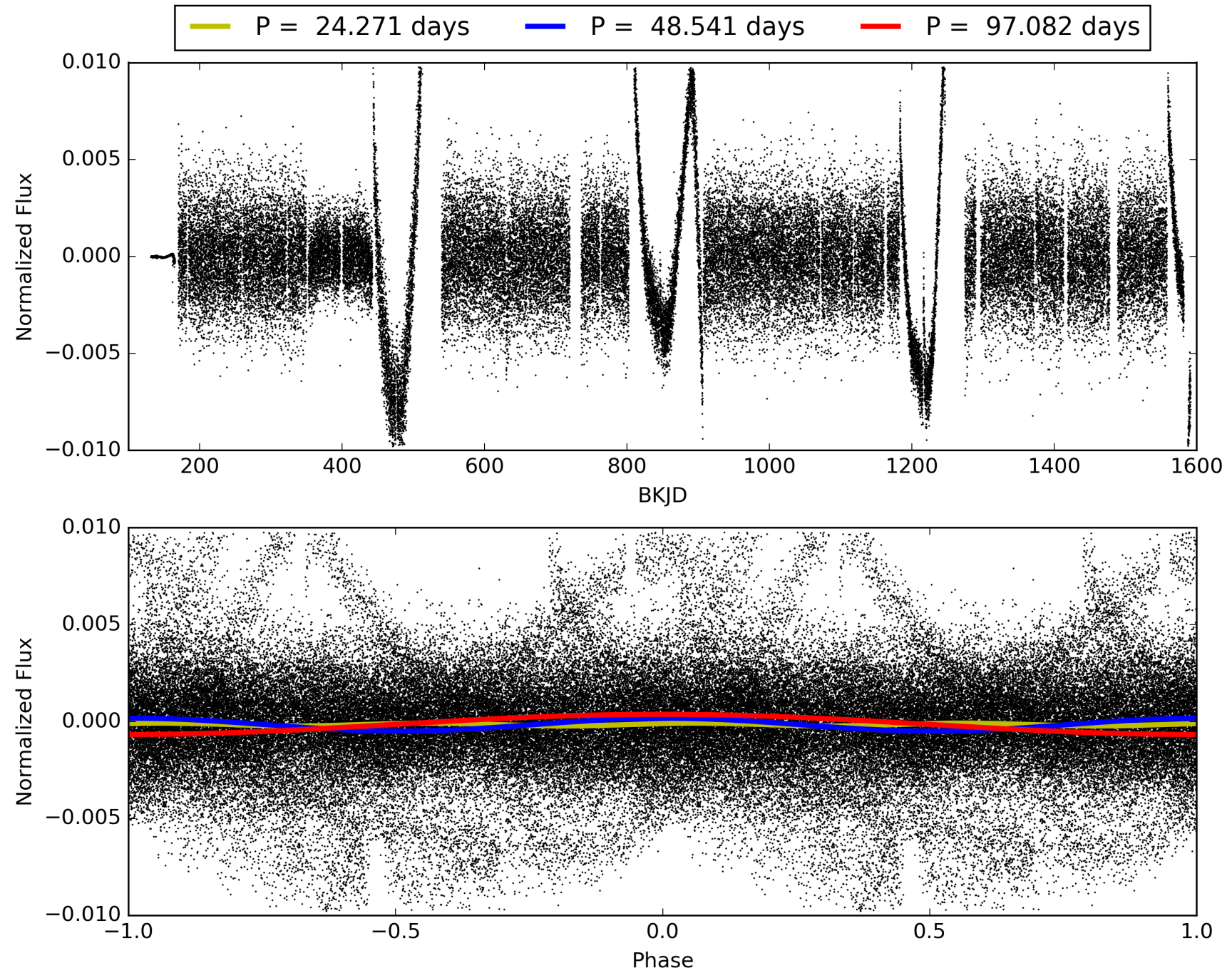
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 08:36:48 Z

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

TCE 007211759-01, PDC Light Curves

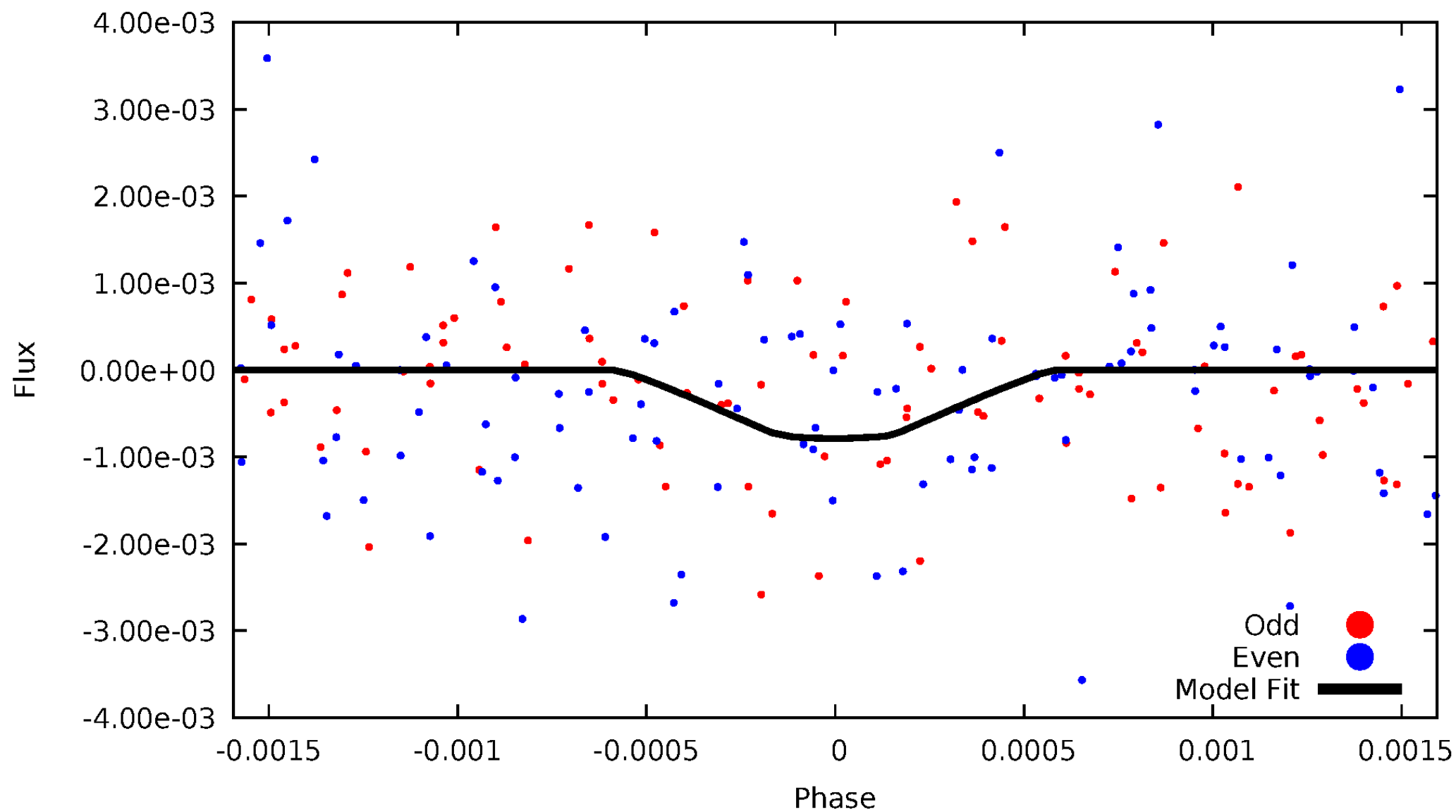


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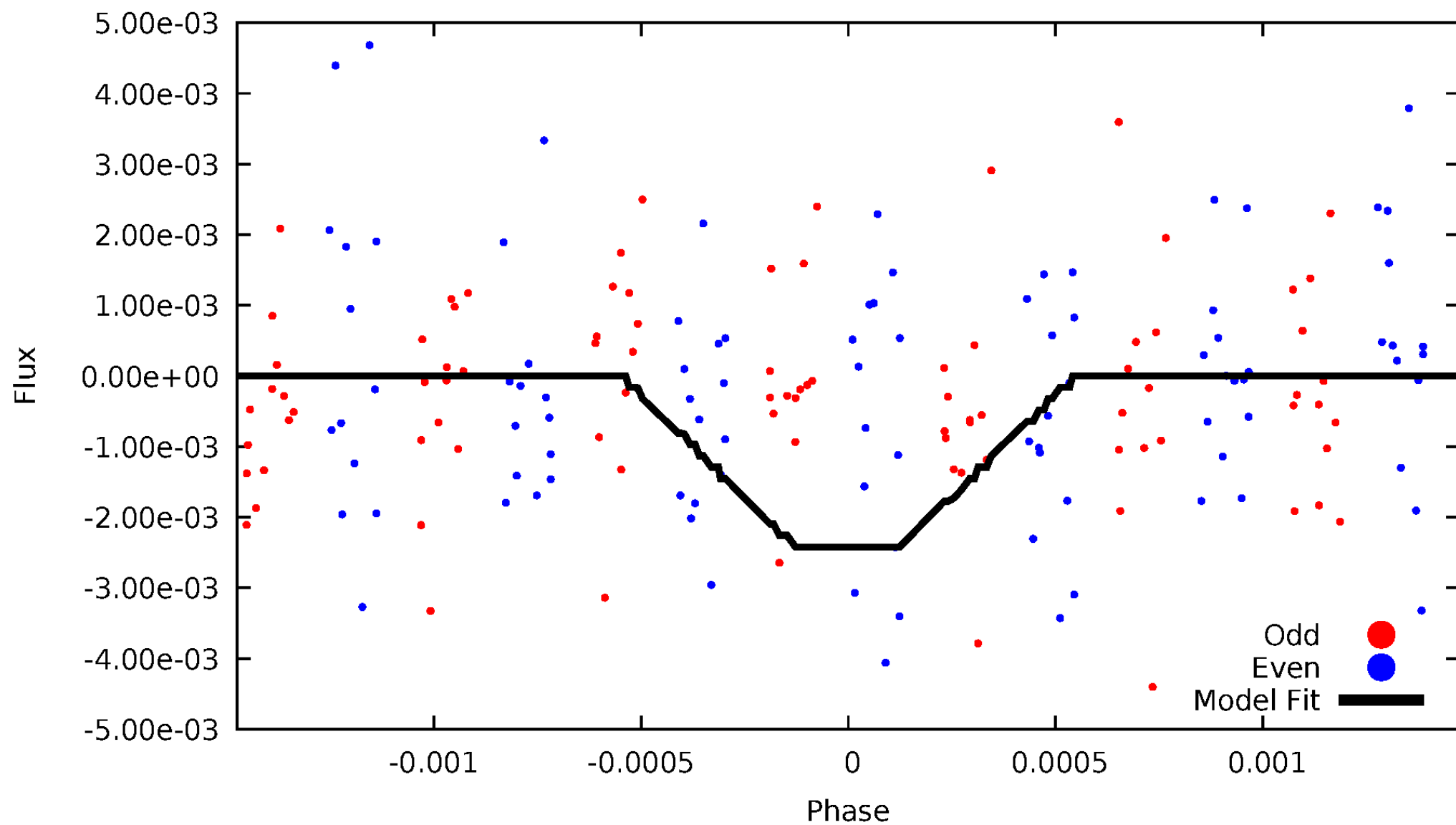
DV Odd/Even

TCE 007211759-01

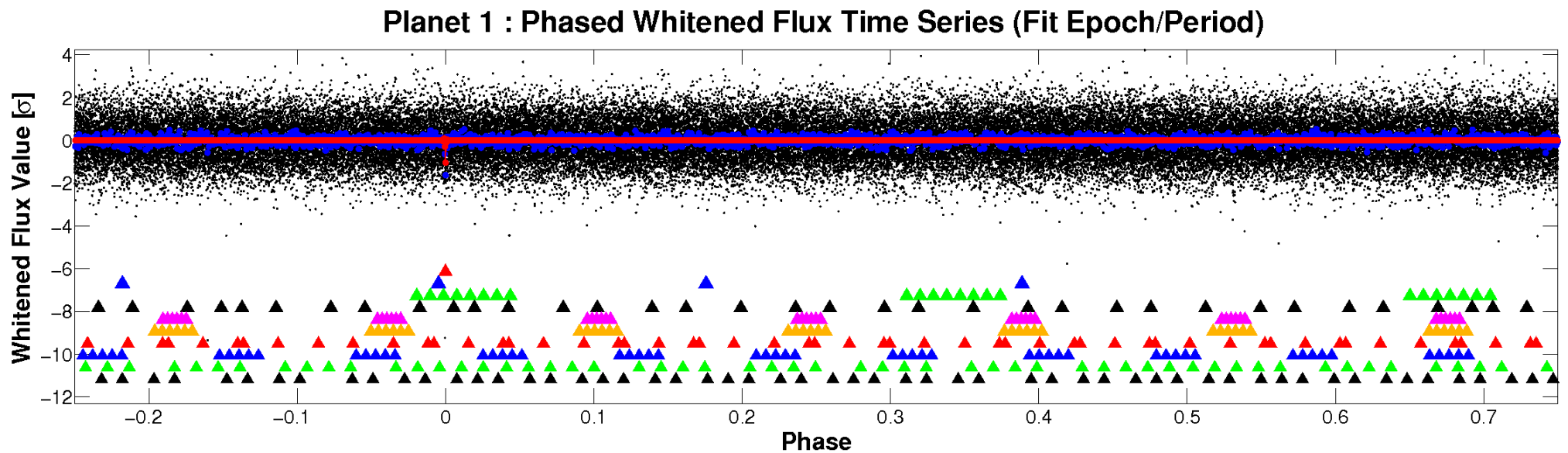
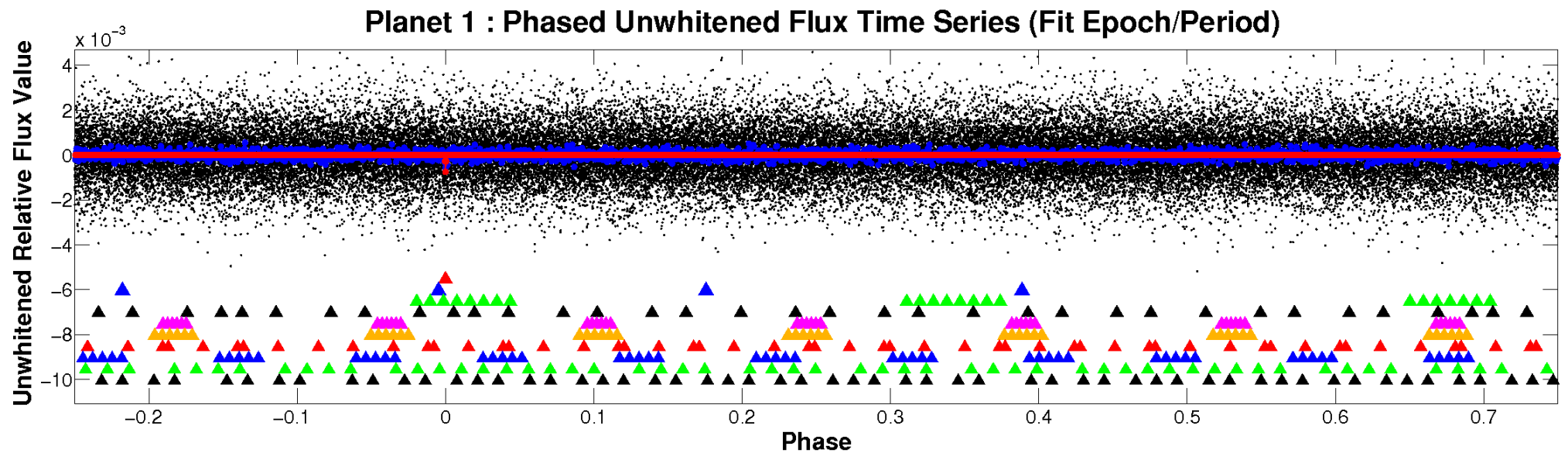


ALT Odd/Even

TCE 007211759-01

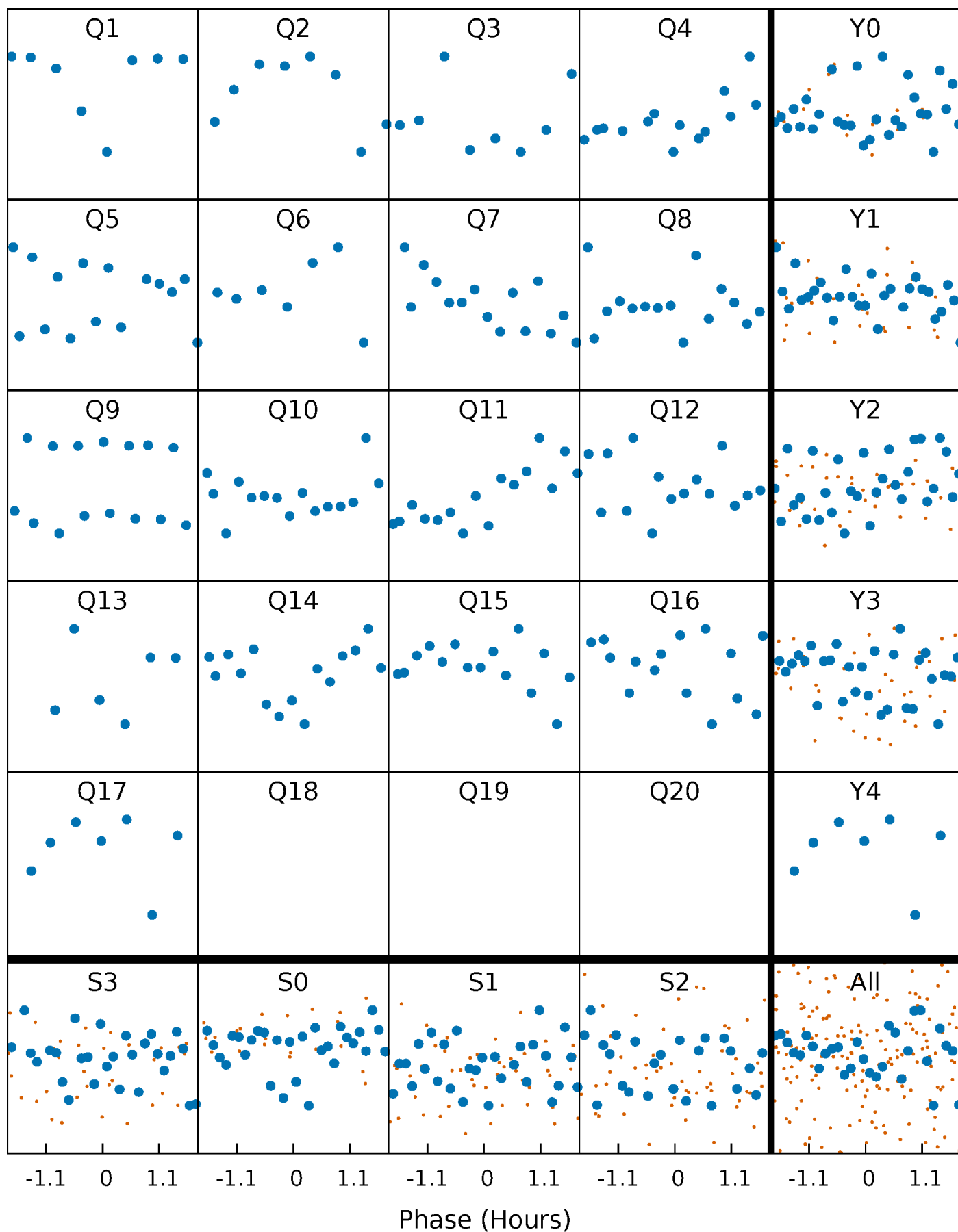


Non-Whitened Vs. Whitened Light Curve



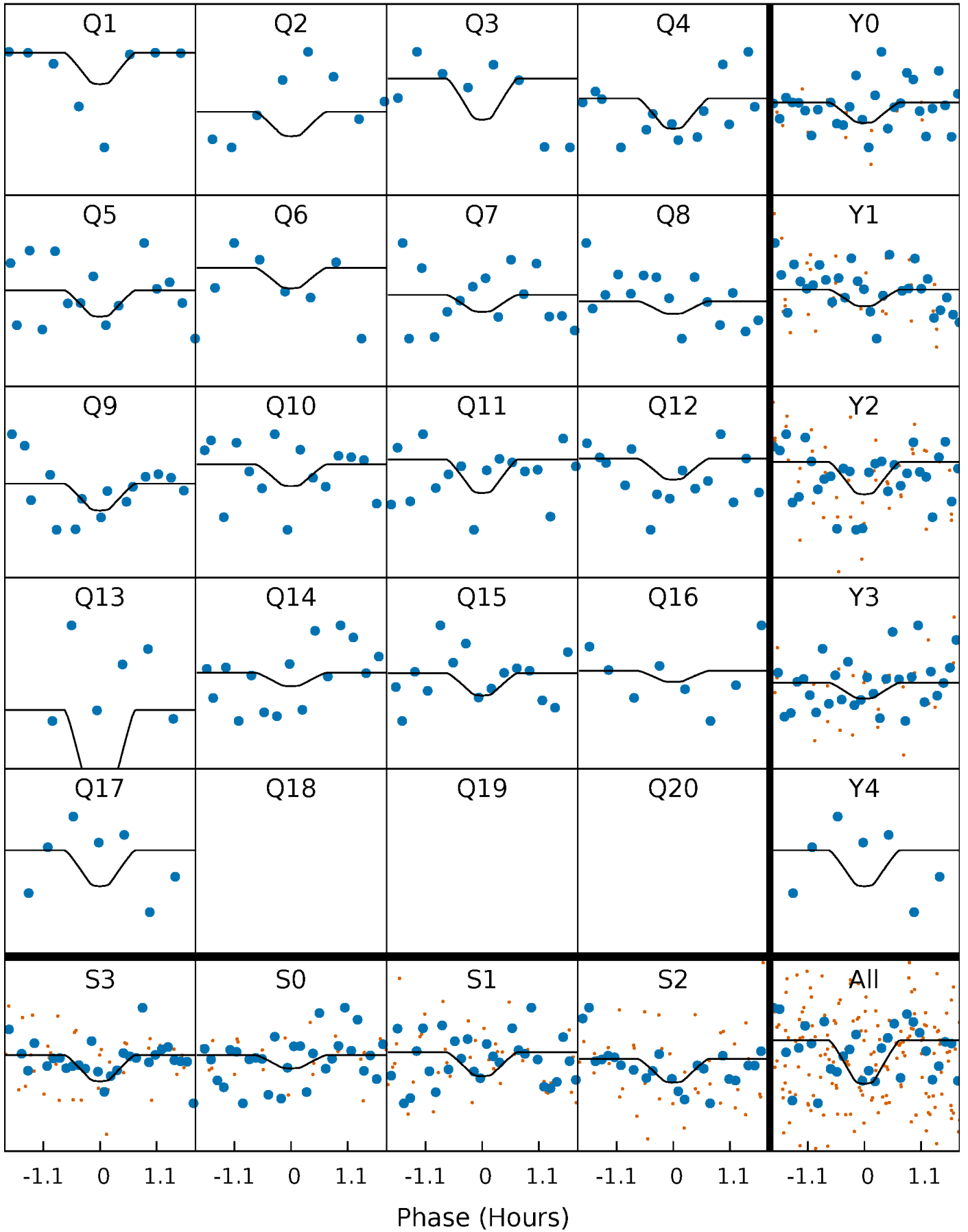
PDC Quarter-Phased Transit Curves

TCE 007211759-01 P= 48.541107 Days $T_0=161.892782$ (BKJD)



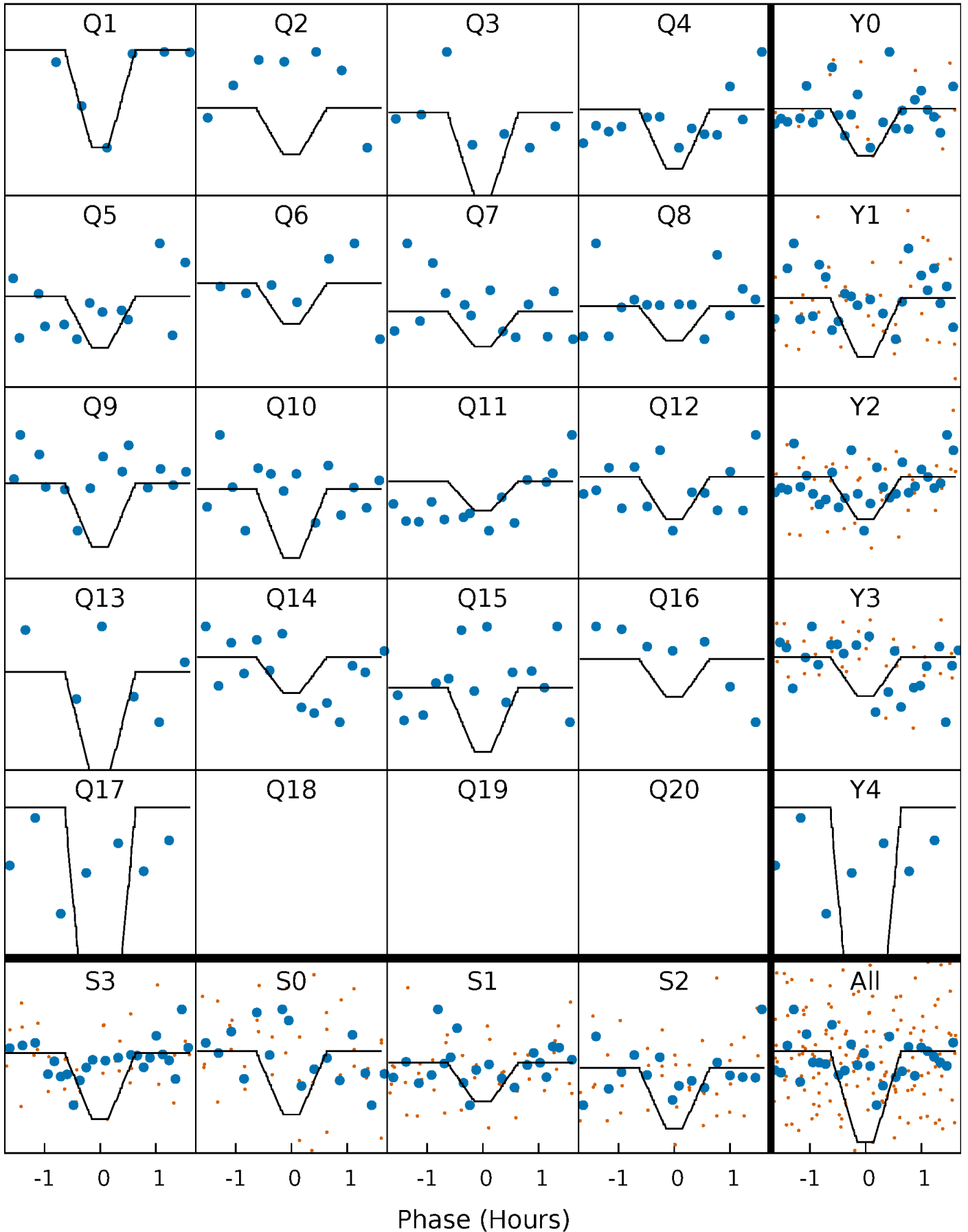
DV Quarter-Phased Transit Curves

TCE 007211759-01 P= 48.541107 Days $T_0=161.892782$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

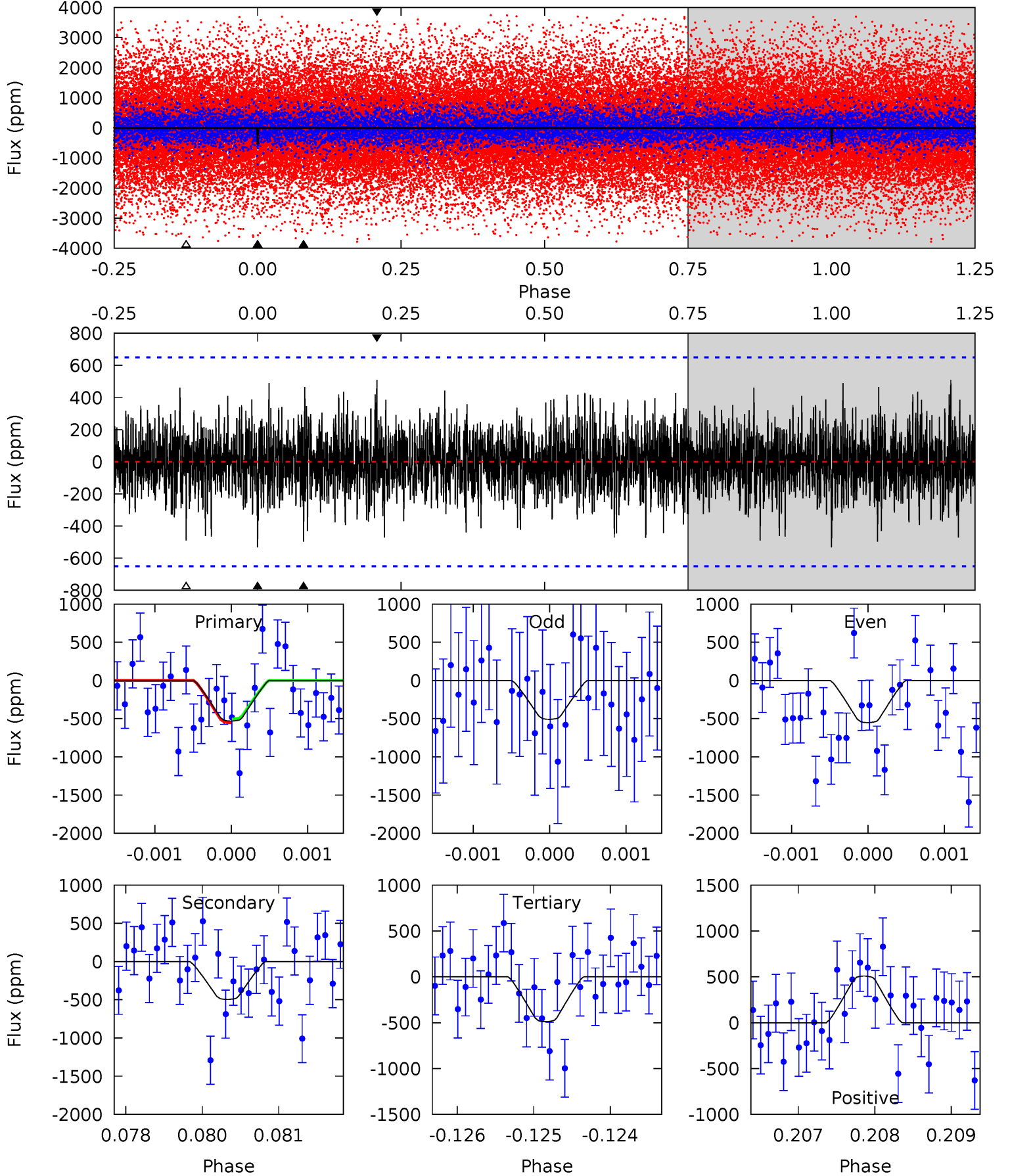
TCE 007211759-01 P= 48.540038 Days $T_0=161.892656$ (BKJD)



DV Model-Shift Uniqueness Test

007211759-01, $P = 48.541107$ Days, $E = 113.351675$ Days

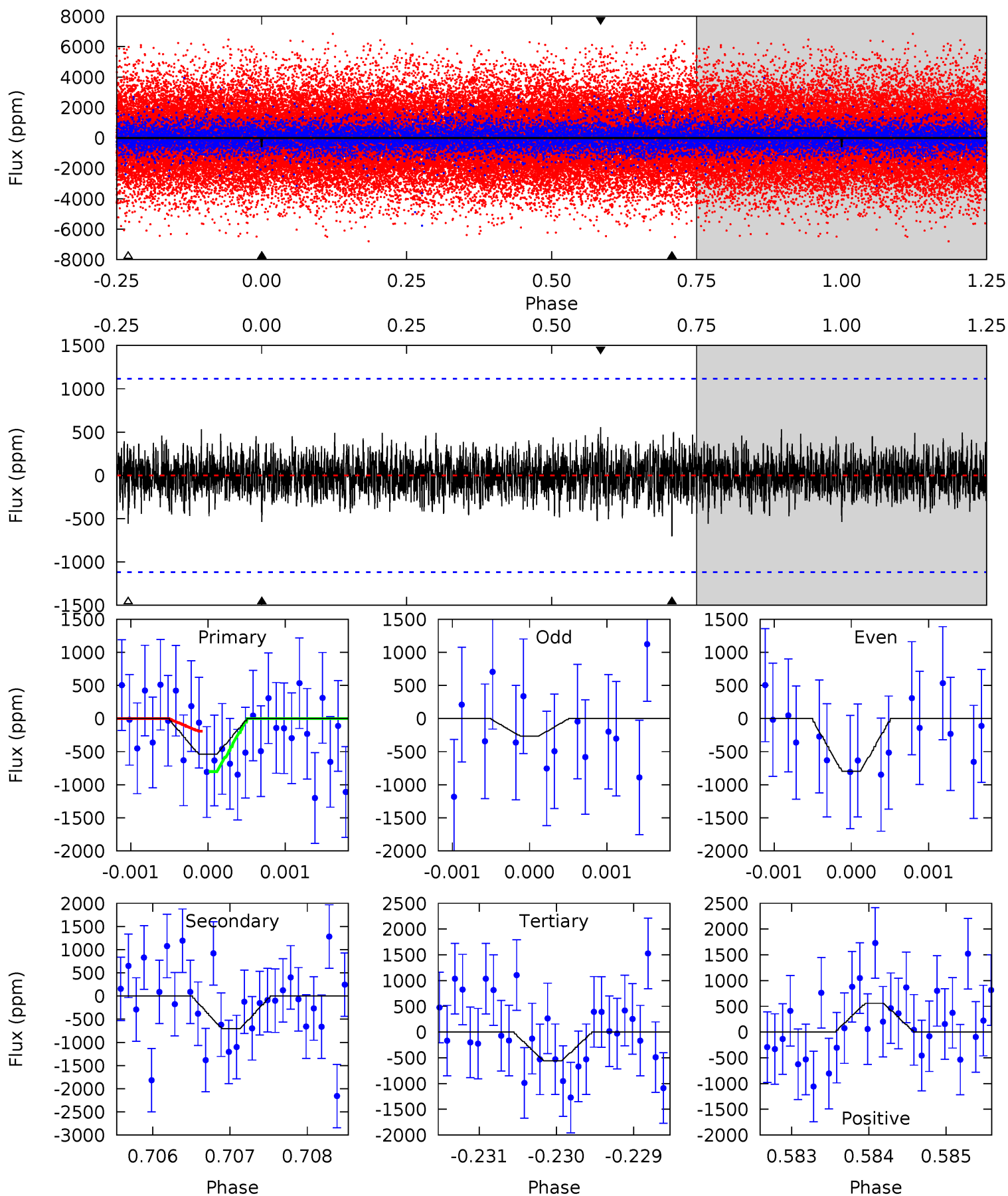
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.43	4.14	4.08	4.24	5.42	3.24	1.22	0.35	0.19	0.06	-0.10	0.18	1.02	0.49	0.20



Alt Model-Shift Uniqueness Test

007211759-01, P = 48.540038 Days, E = 113.352618 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.62	3.42	2.71	2.71	5.44	3.27	0.81	-0.09	-0.10	0.72	0.71	1.29	1.03	0.44	1.48



Stellar Parameters For KIC 007211759

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8402^{+232}_{-365}	$3.748^{+0.399}_{-0.142}$	$-0.120^{+0.350}_{-0.400}$	$3.157^{+0.944}_{-1.416}$	$2.039^{+0.384}_{-0.469}$	$0.091^{+0.335}_{-0.045}$
	+3%/-4%	+11%/-4%	+292%/-333%	+30%/-45%	+19%/-23%	+367%/-49%
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 007211759-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-497 ± 120	$13.06^{+13.20}_{-9.15}$	1550^{+133}_{-159}	5888^{+6889}_{-1522}	169^{+1562}_{-127}
Alt.	-703 ± 205	$17.33^{+14.35}_{-10.74}$	1551^{+130}_{-169}	5591^{+3612}_{-1195}	142^{+752}_{-102}

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

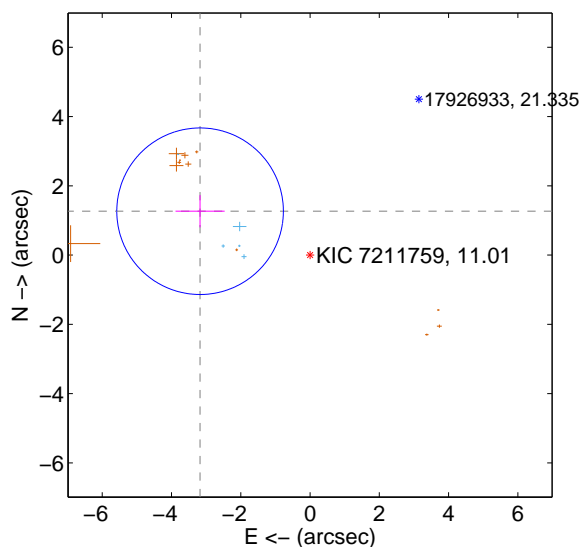
Supplemental centroid analysis for 007211759-01. **Kepler magnitude: 11.01.** Transit SNR 4.69

There are 5 quarters with good PRF difference image offsets

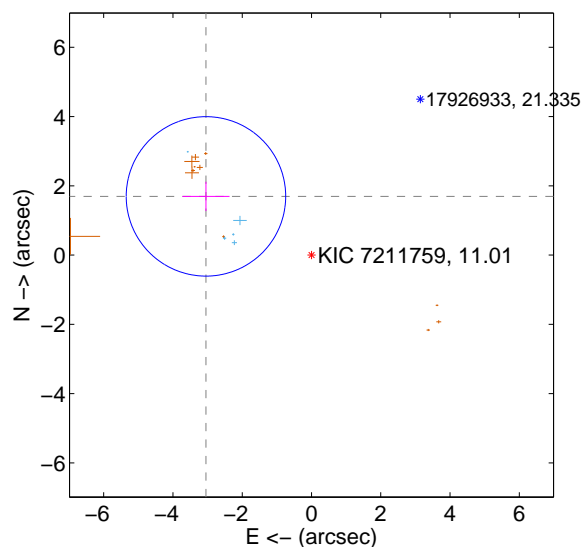
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.419 ± 0.802	4.26	3.175 ± 0.709	1.267 ± 0.463
PRF-fit source offset from KIC position	3.488 ± 0.767	4.54	3.048 ± 0.682	1.696 ± 0.424
photometric centroid source offset	0.74 ± 0.72	1.03	0.55 ± 0.84	0.49 ± 0.51

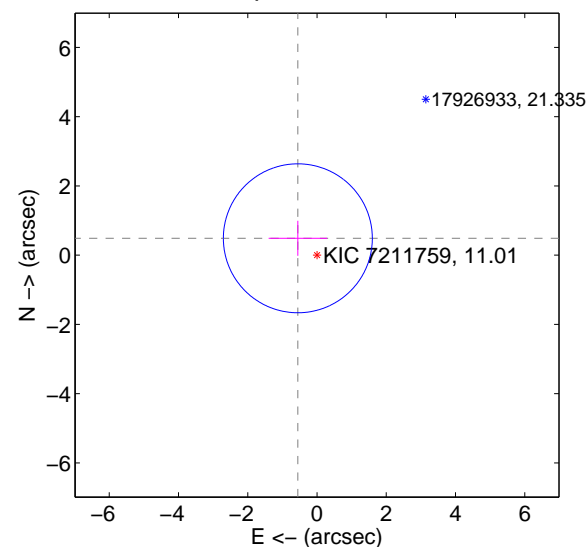
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

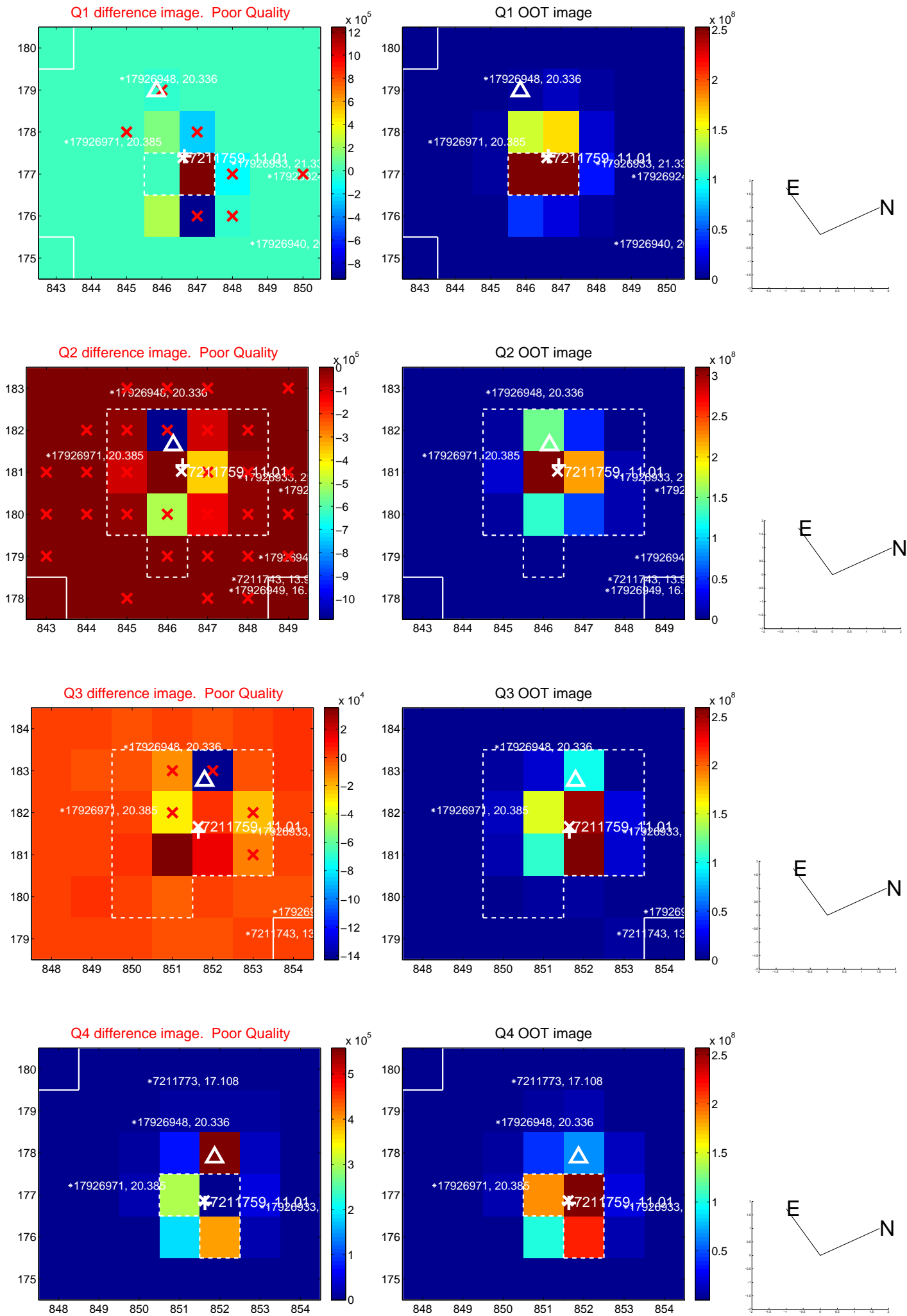


offset from photometric centroids

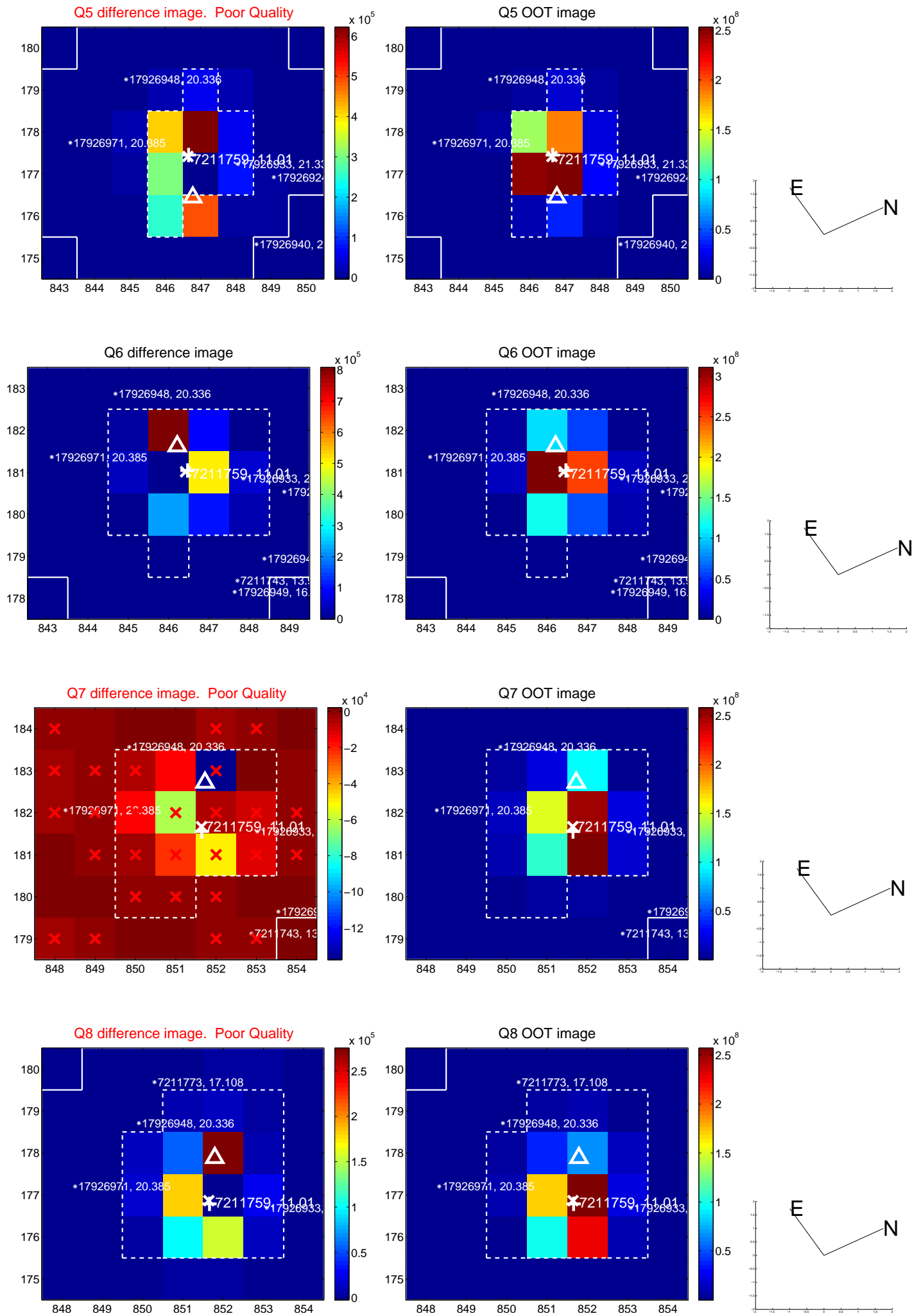


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

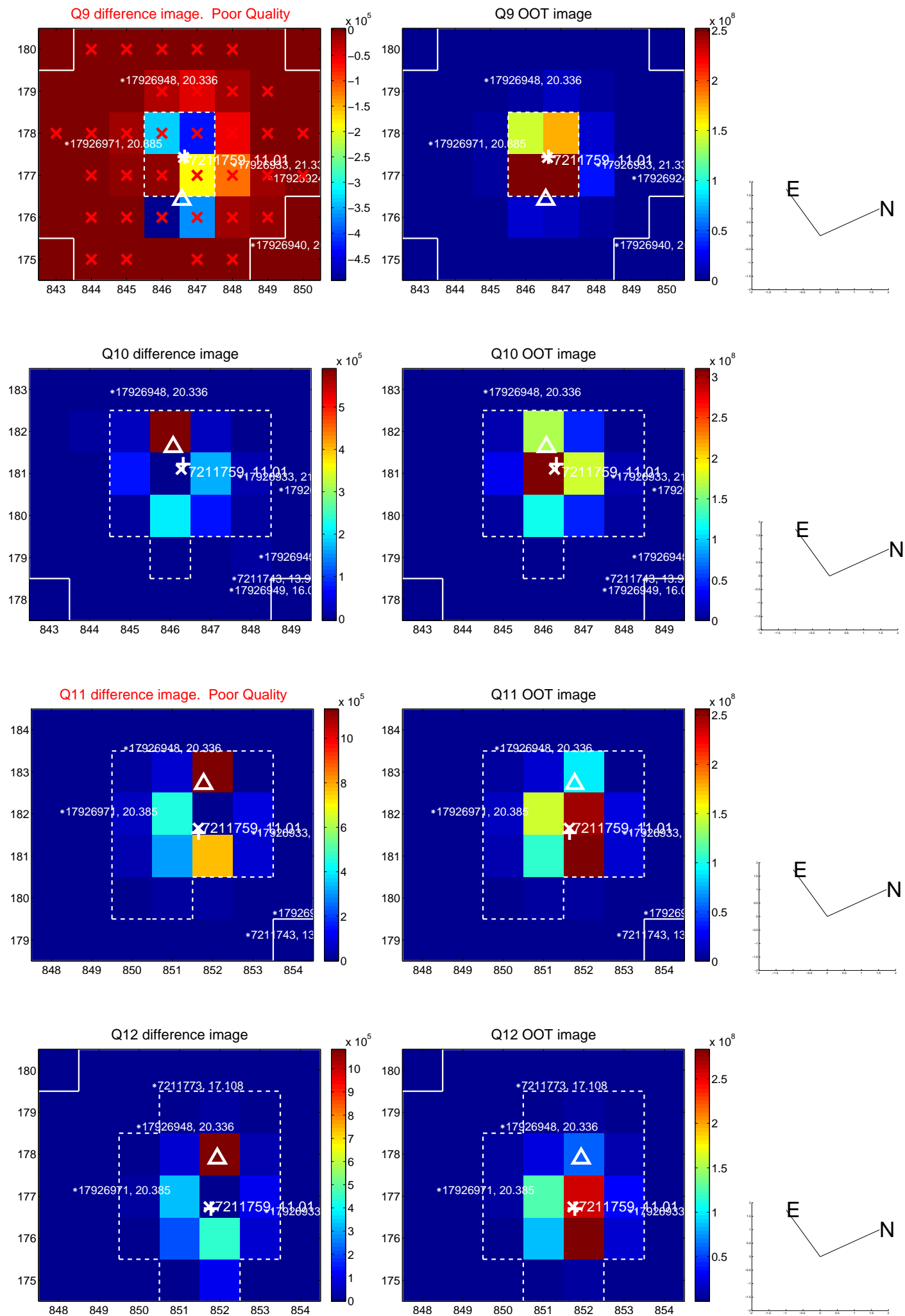
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



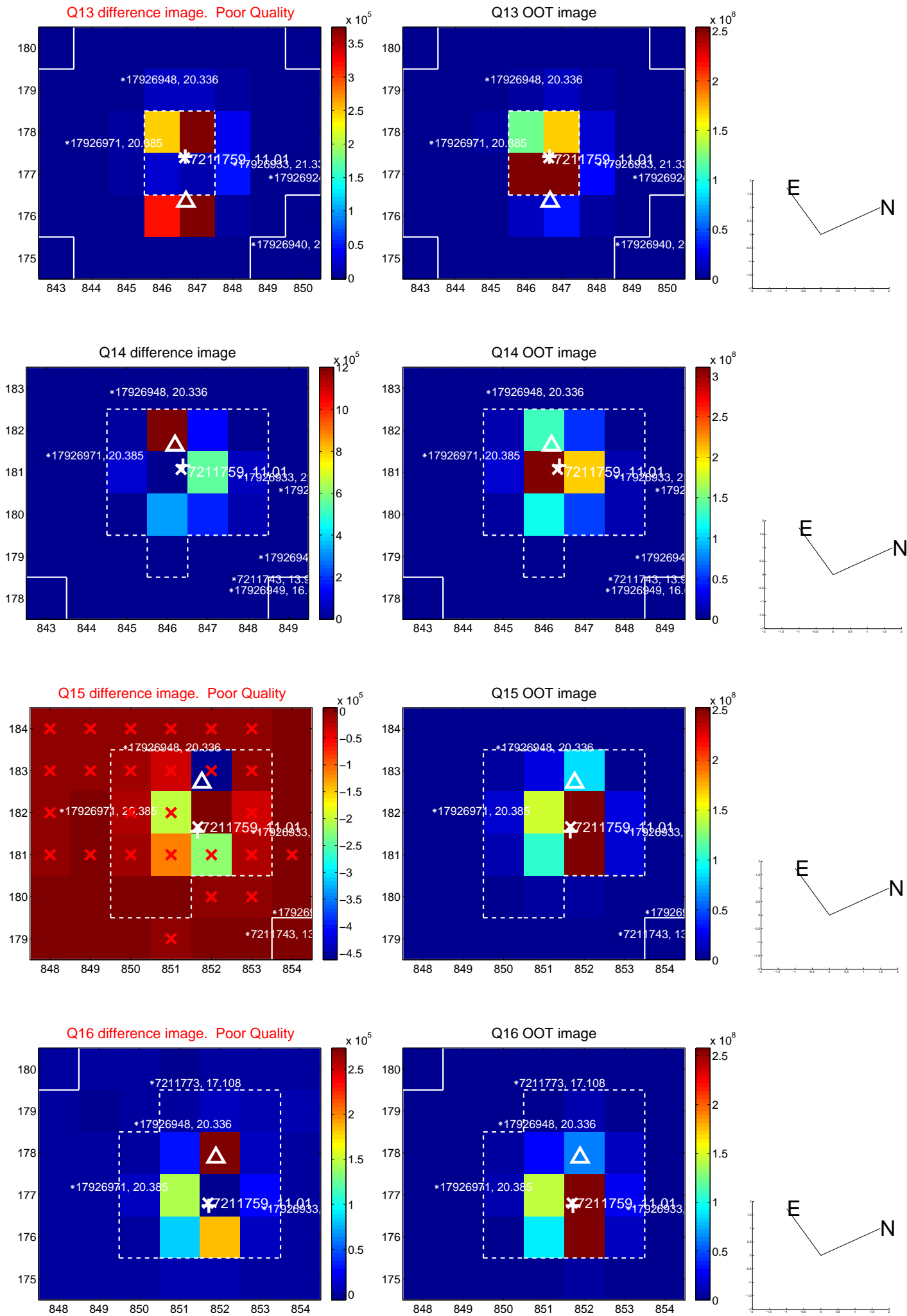
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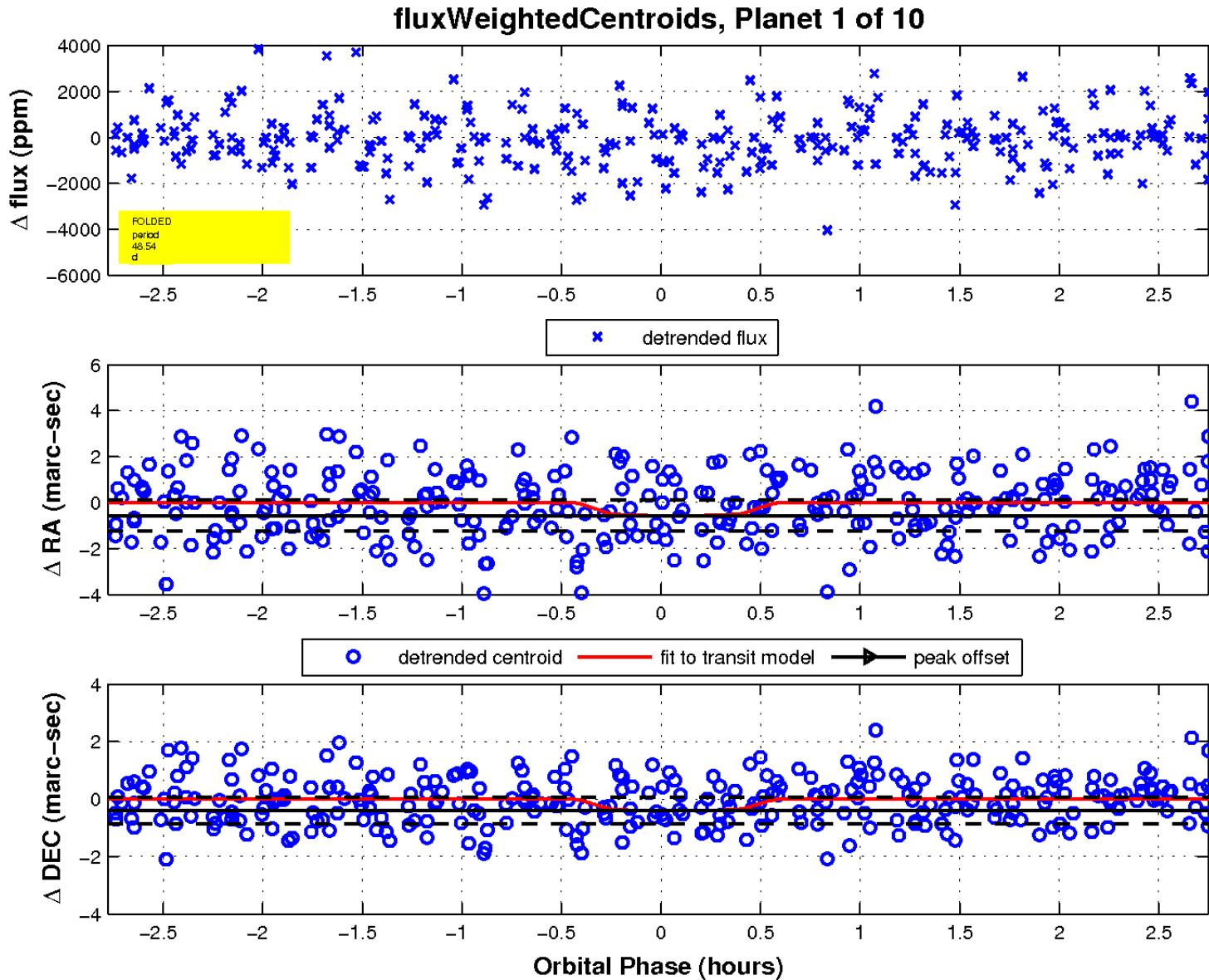
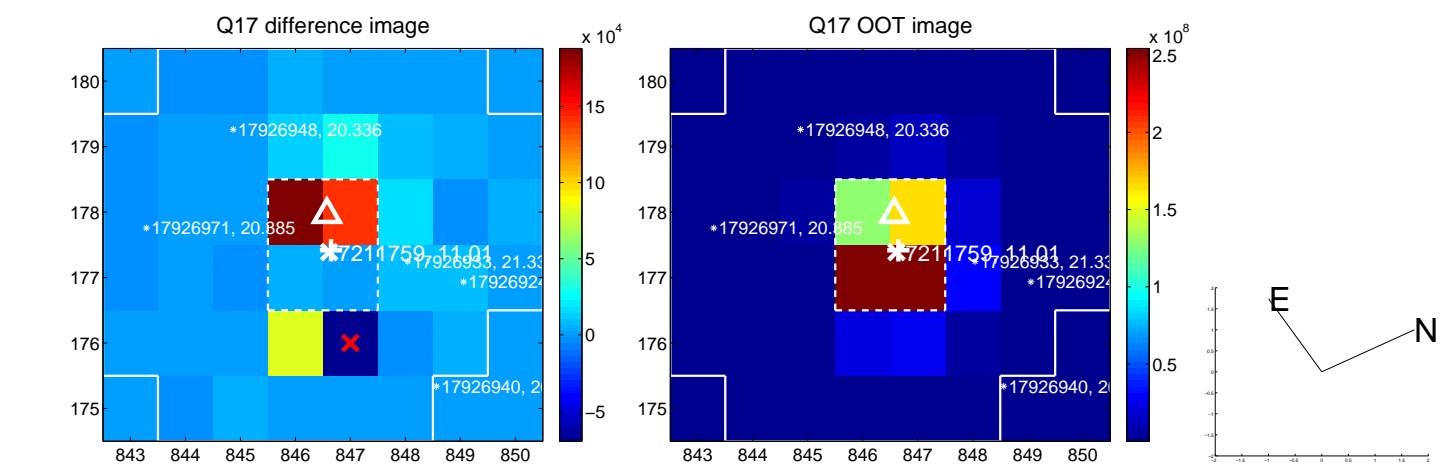
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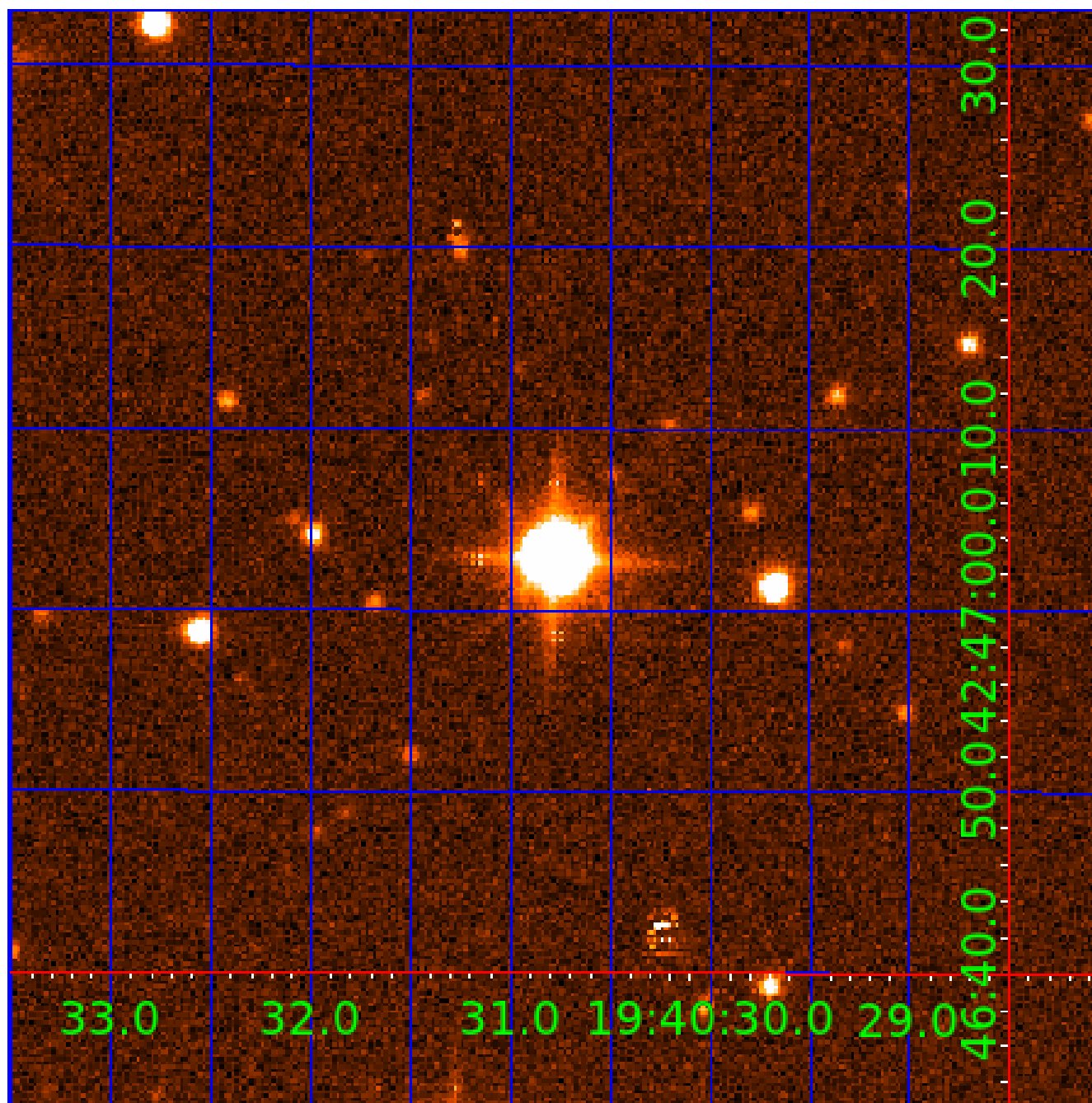


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UKIRT Image

Declination



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007211759-04	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
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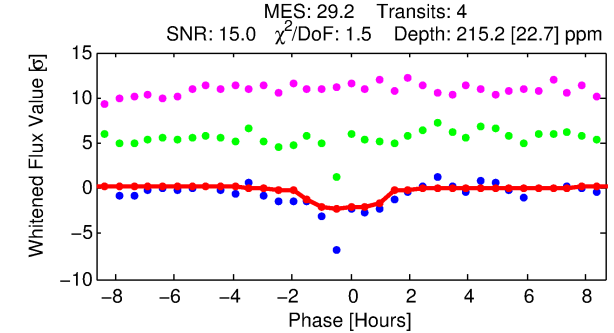
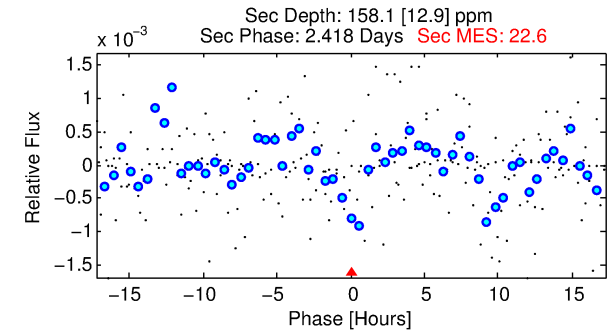
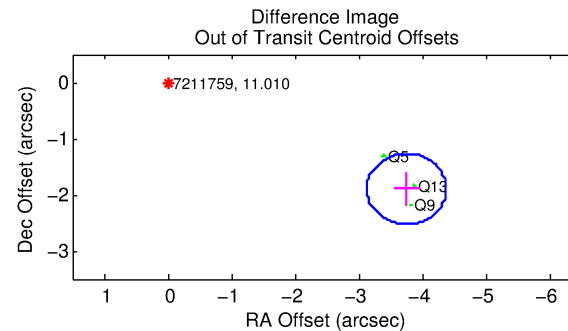
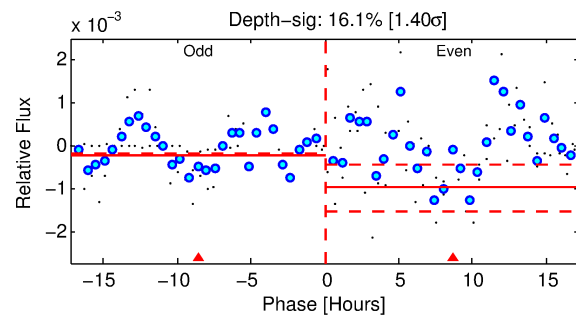
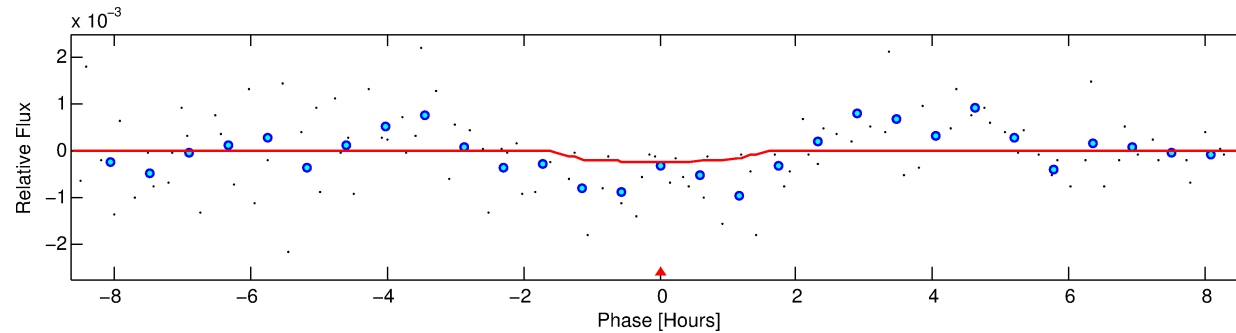
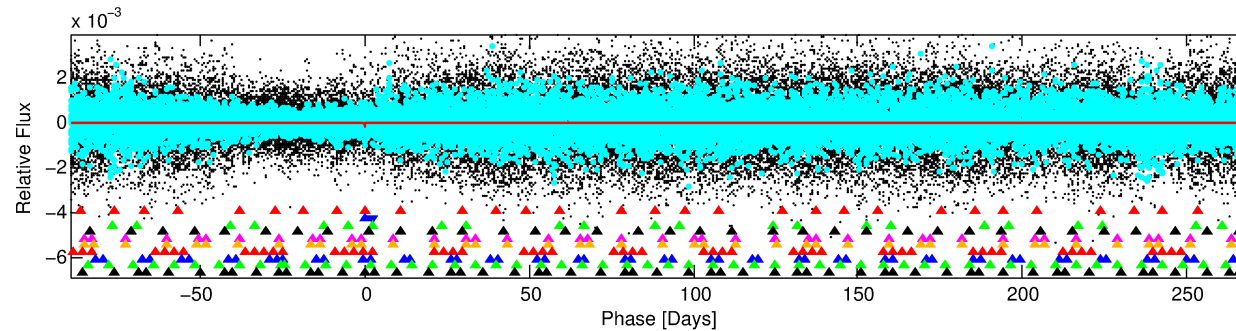
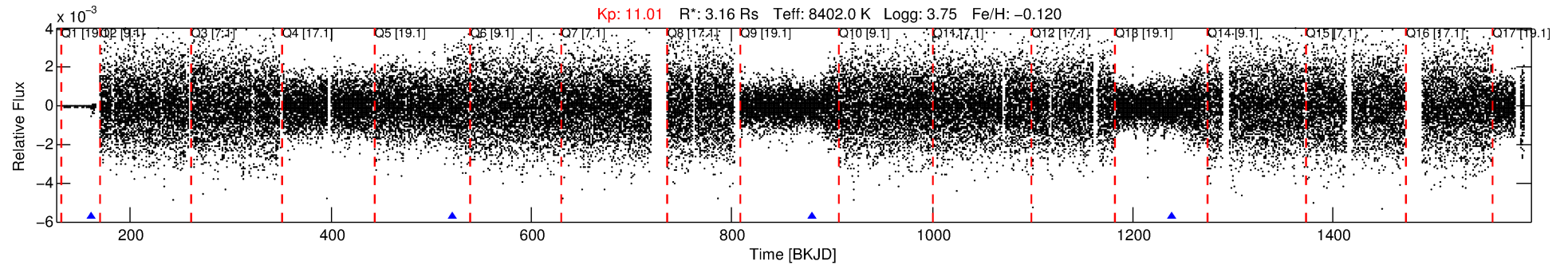
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007211759-02

No Significant Match Found

DV One-Page Summary

KIC: 7211759 Candidate: 2 of 10 Period: 358.887 d



DV Fit Results:

Period = 358.88655 [0.01685] d
Epoch = 161.6642 [0.0039] BKJD
Rp/R* = 0.0155 [0.0333]
a/R* = 469.18 [6559.77]
b = 0.89 [3.37]
Seff = 28.36 [19.95]
Teq = 588 [103] K
Rp = 5.34 [11.72] Re
a = 1.2527 [0.5362] AU
Ag = 4793.55 [20877.72] [0.23 σ]
Teff = 7570 [8148] K [0.86 σ]

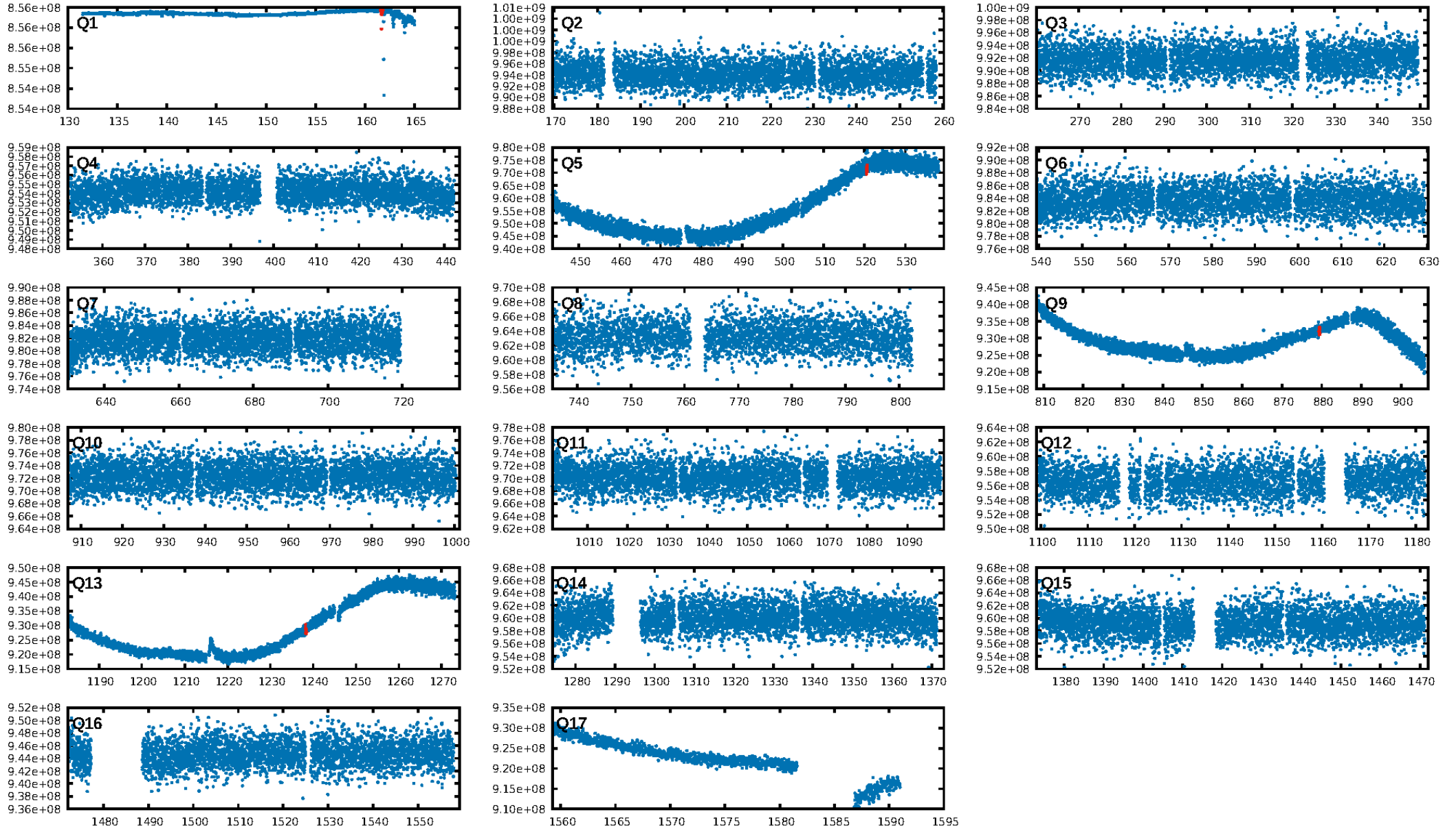
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [699.19 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.4%
ModelChiSquareGoF-sig: 78.8%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.938
Centroid-sig: 0.1%
Centroid-so: 9.974 arcsec [2.02 σ]
OotOffset-rm: 4.204 arcsec [20.12 σ]
KicOffset-rm: 4.113 arcsec [14.92 σ]
OotOffset-st: 0/0/0/3 [3]
KicOffset-st: 0/0/0/3 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 0.75 [3/4]

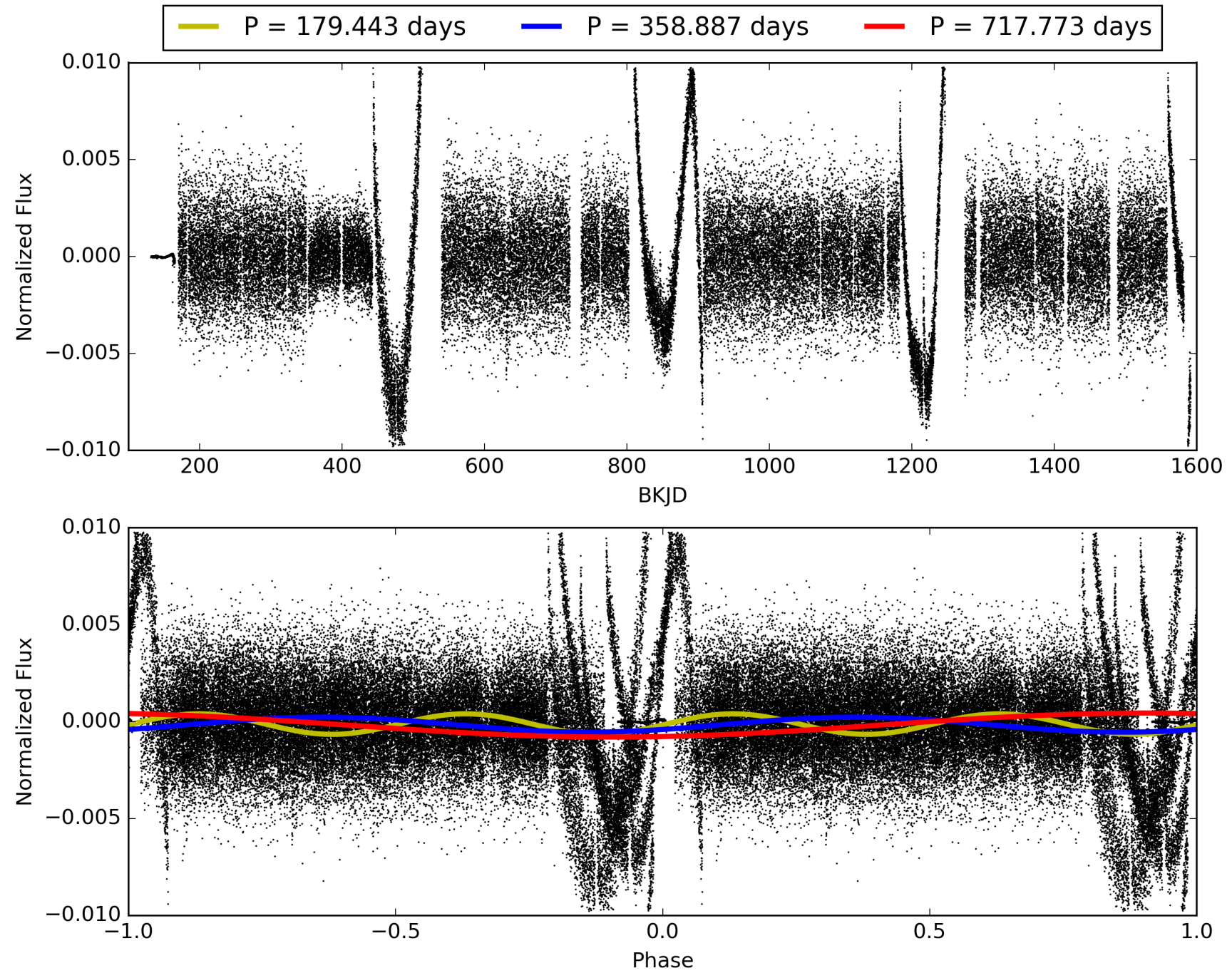
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 08:37:07 Z

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

TCE 007211759-02, PDC Light Curves

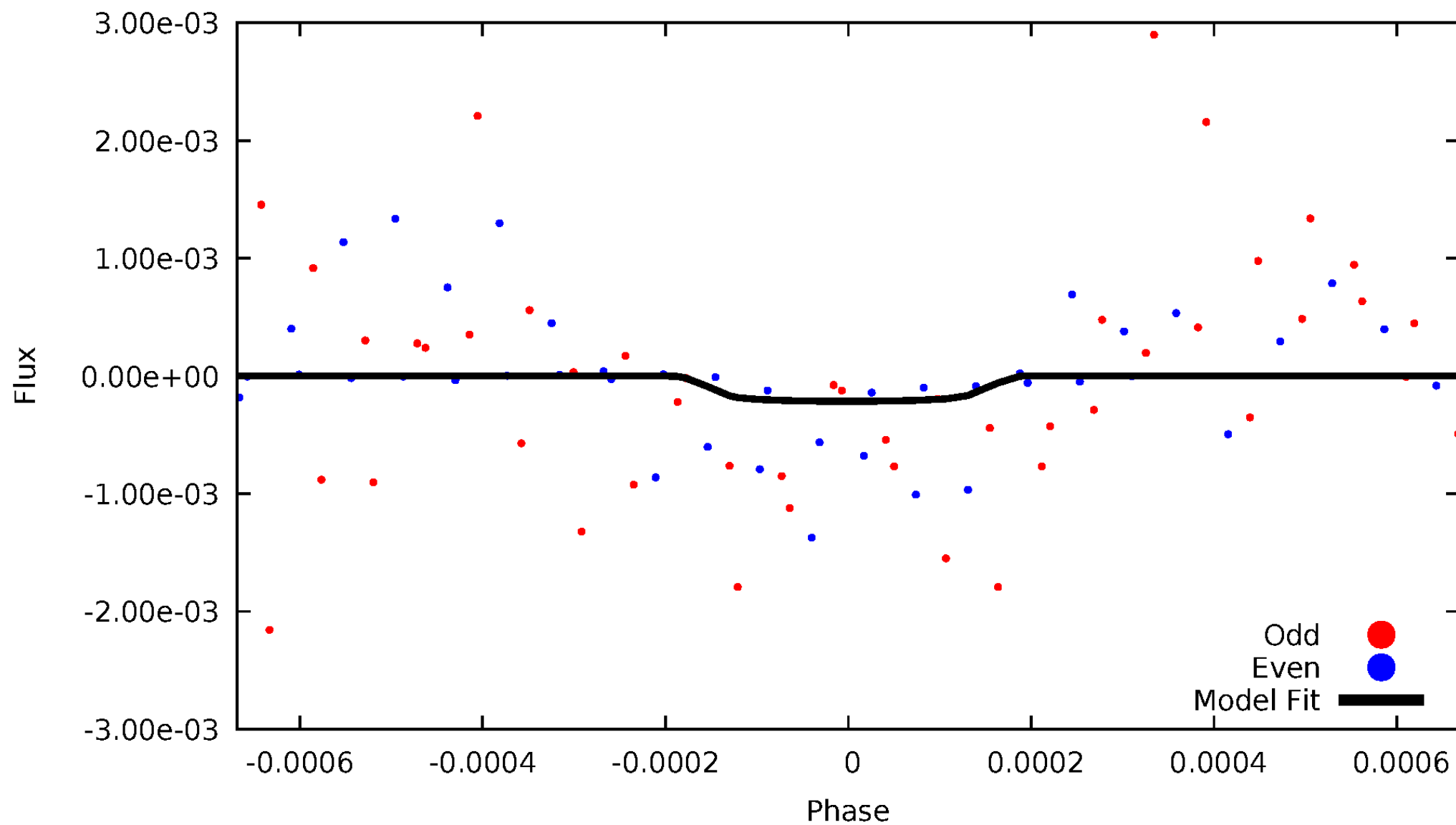


TCE 007211759-02



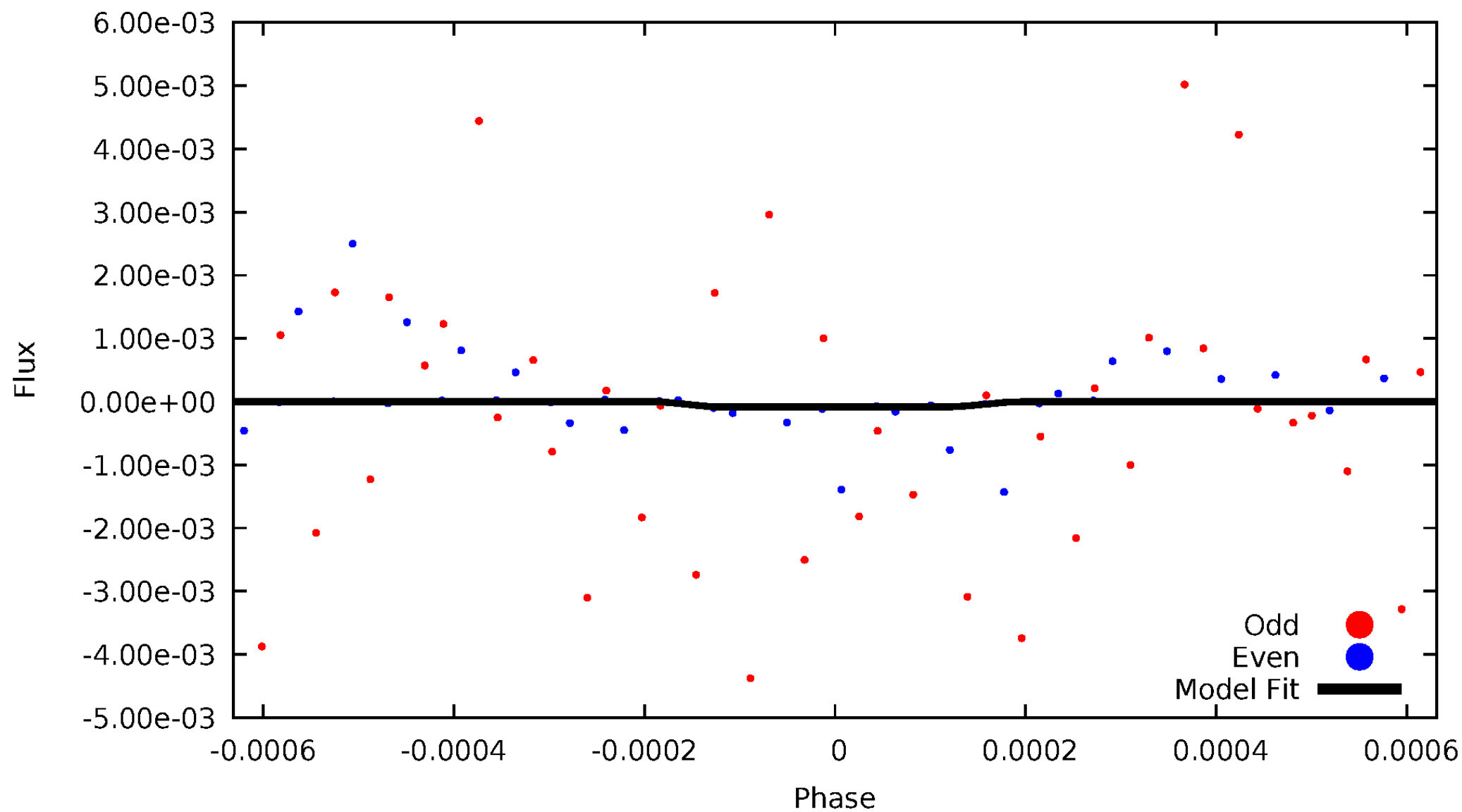
DV Odd/Even

TCE 007211759-02



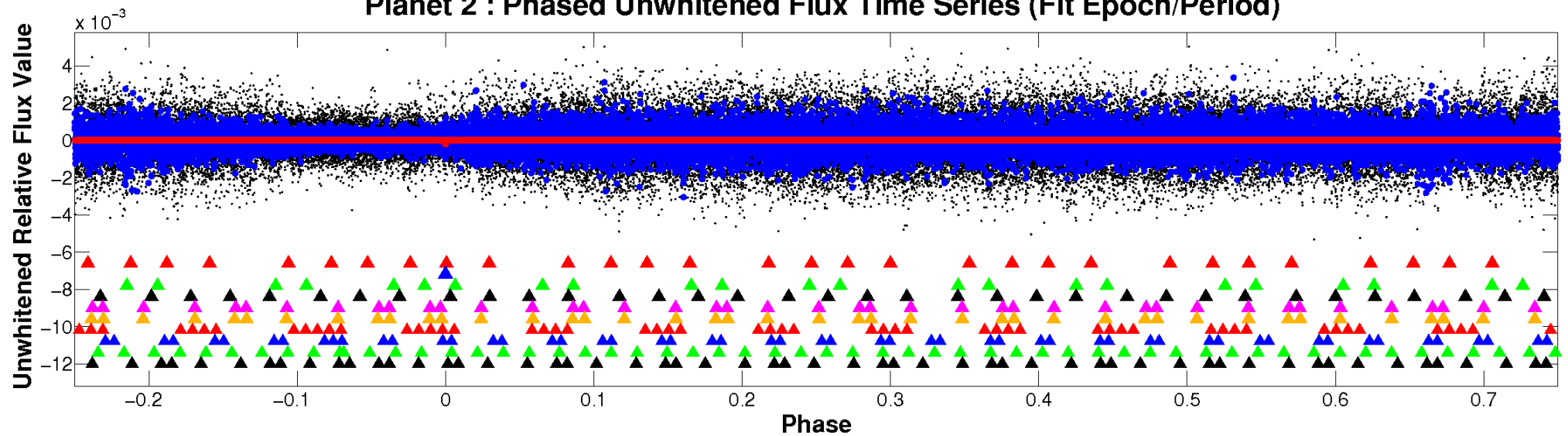
ALT Odd/Even

TCE 007211759-02

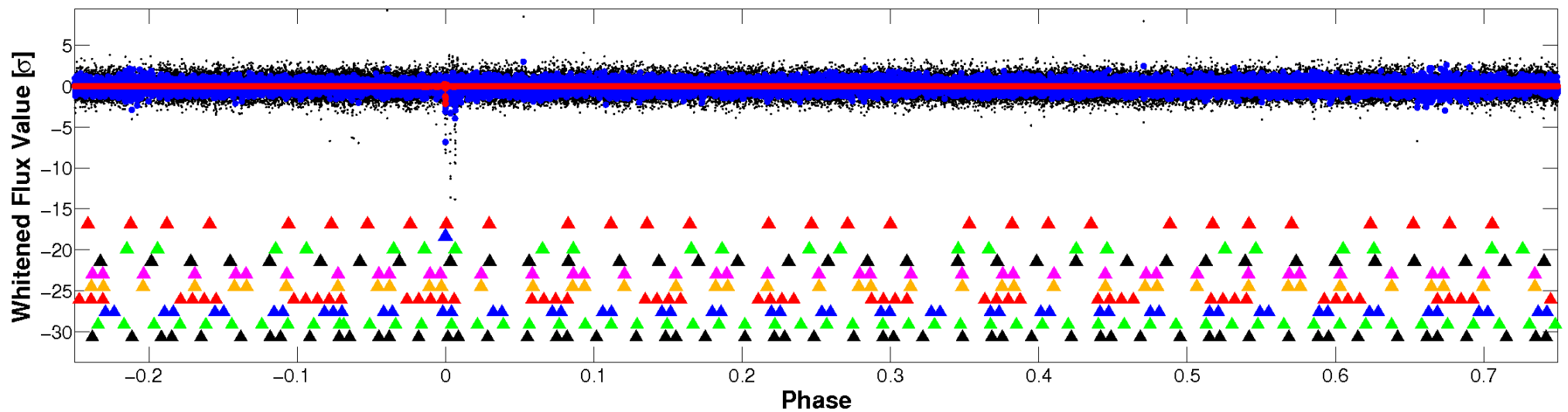


Non-Whitened Vs. Whitened Light Curve

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

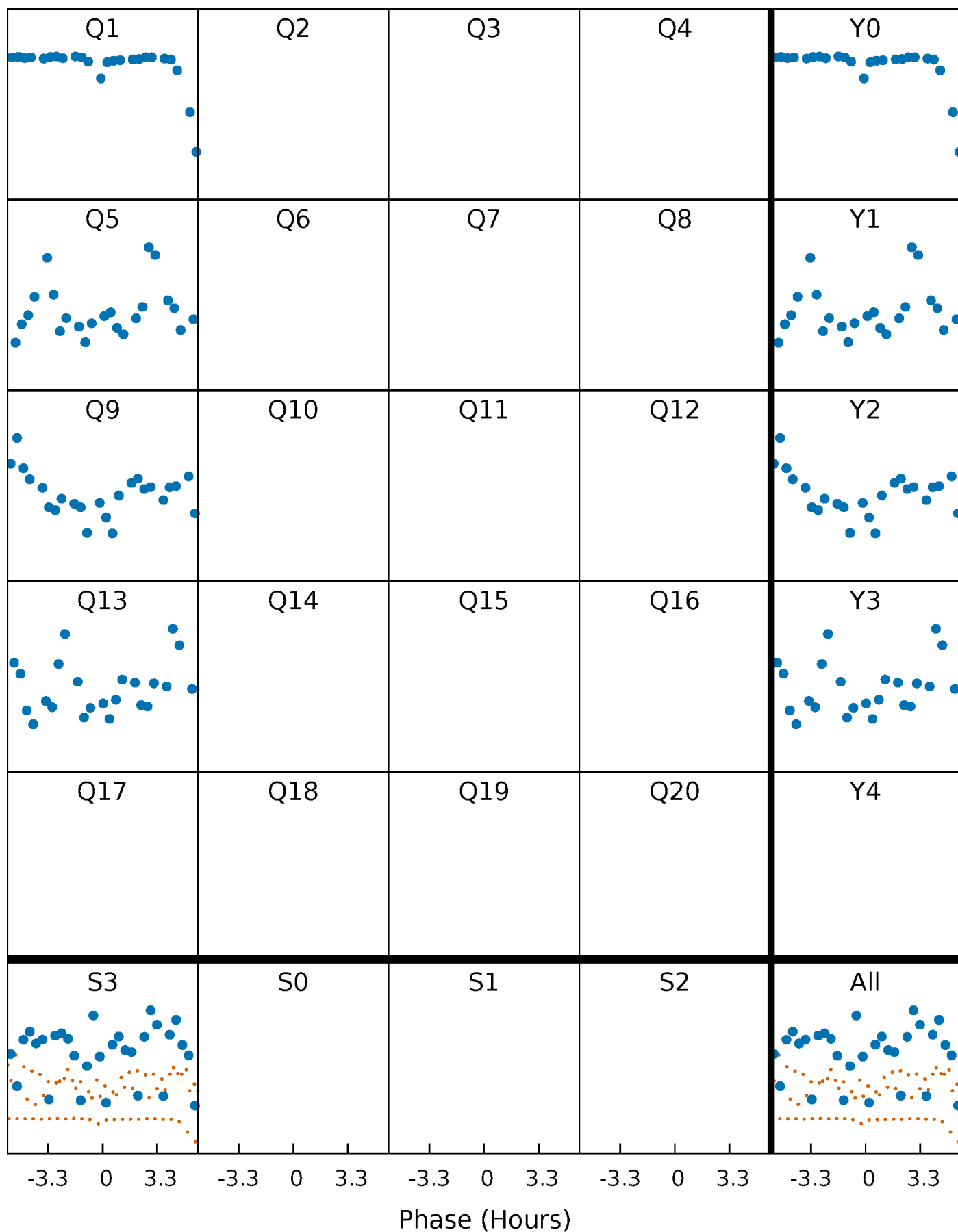


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



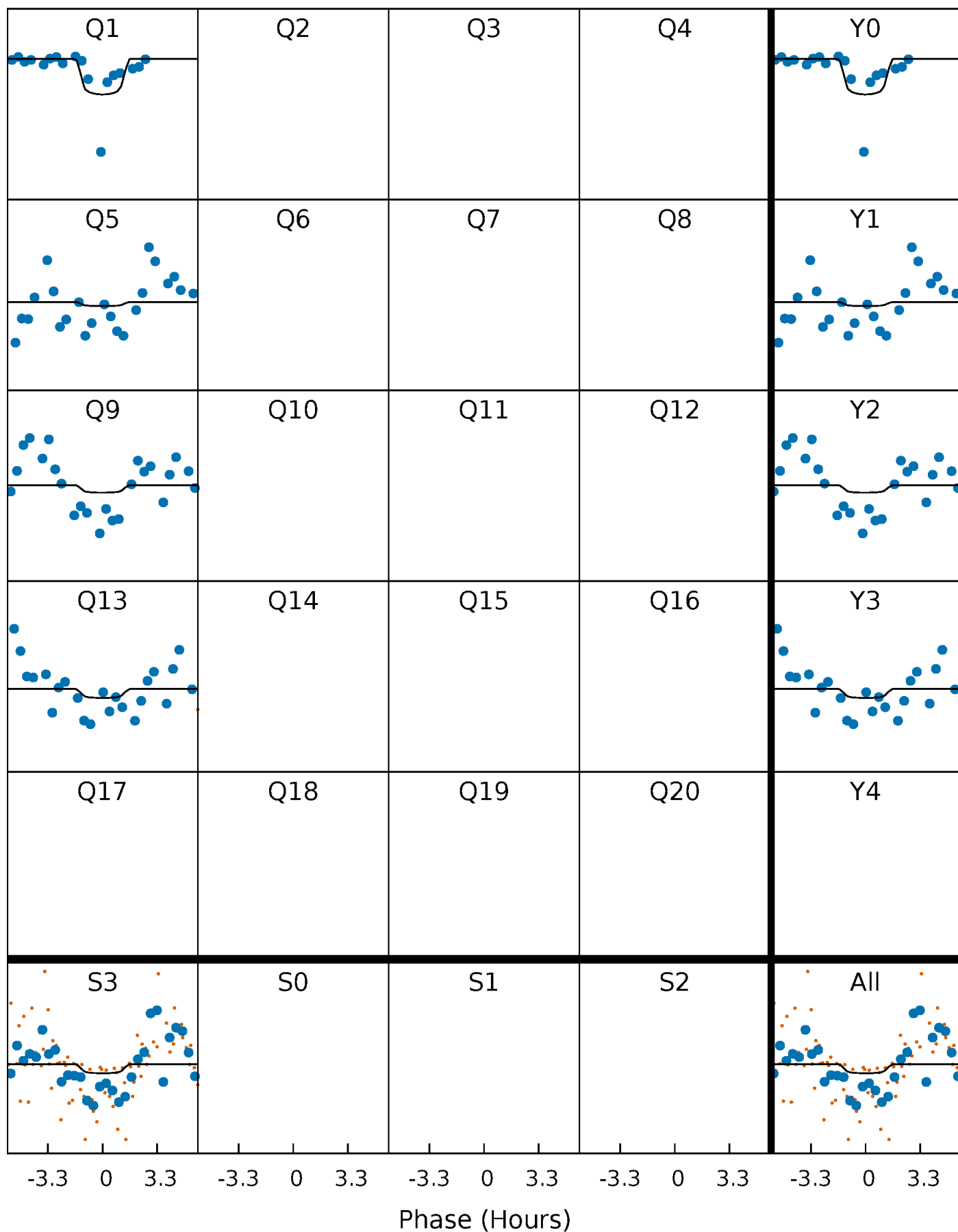
PDC Quarter-Phased Transit Curves

TCE 007211759-02 P=358.886546 Days $T_0=161.664202$ (BKJD)



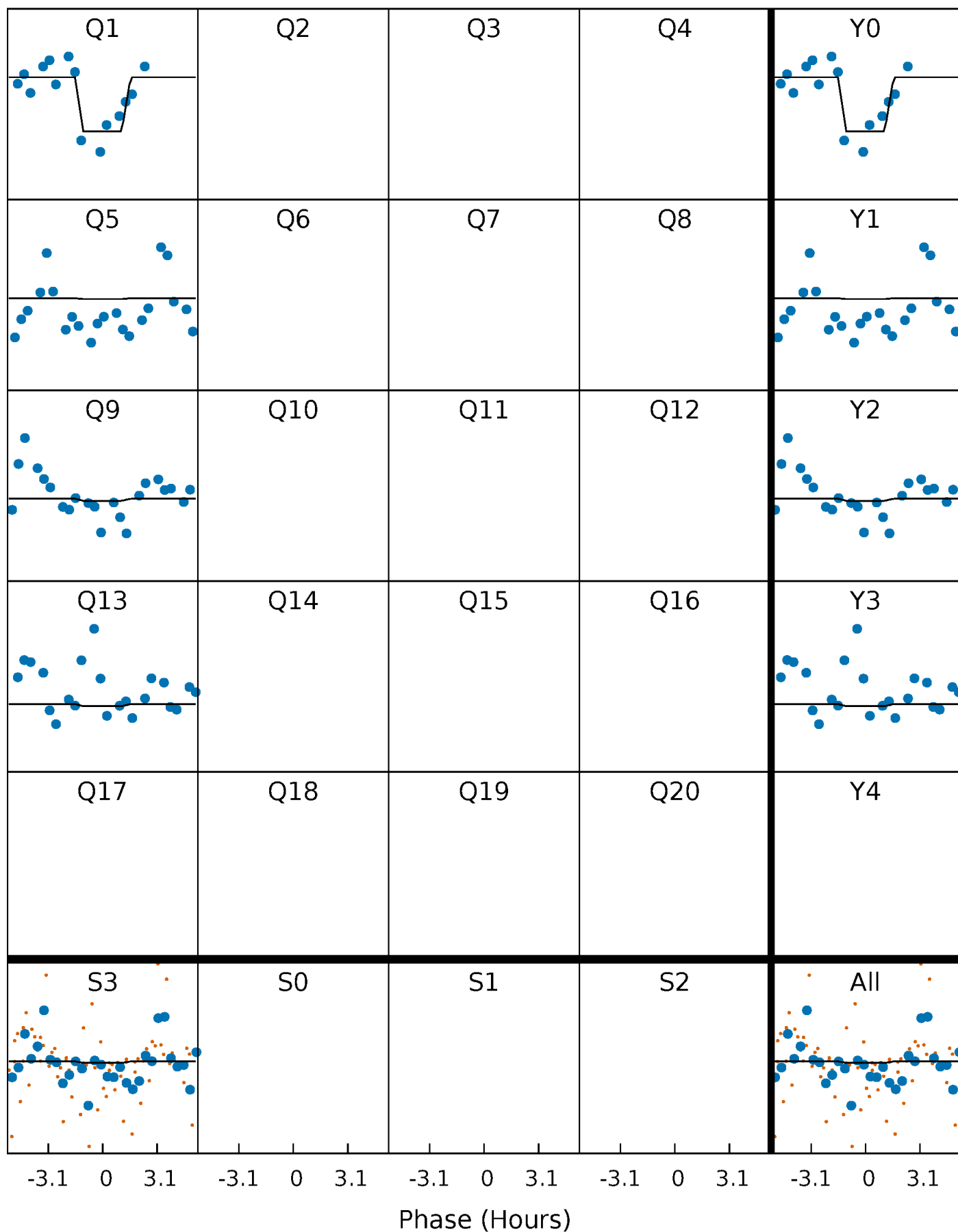
DV Quarter-Phased Transit Curves

TCE 007211759-02 $P=358.886546$ Days $T_0=161.664202$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

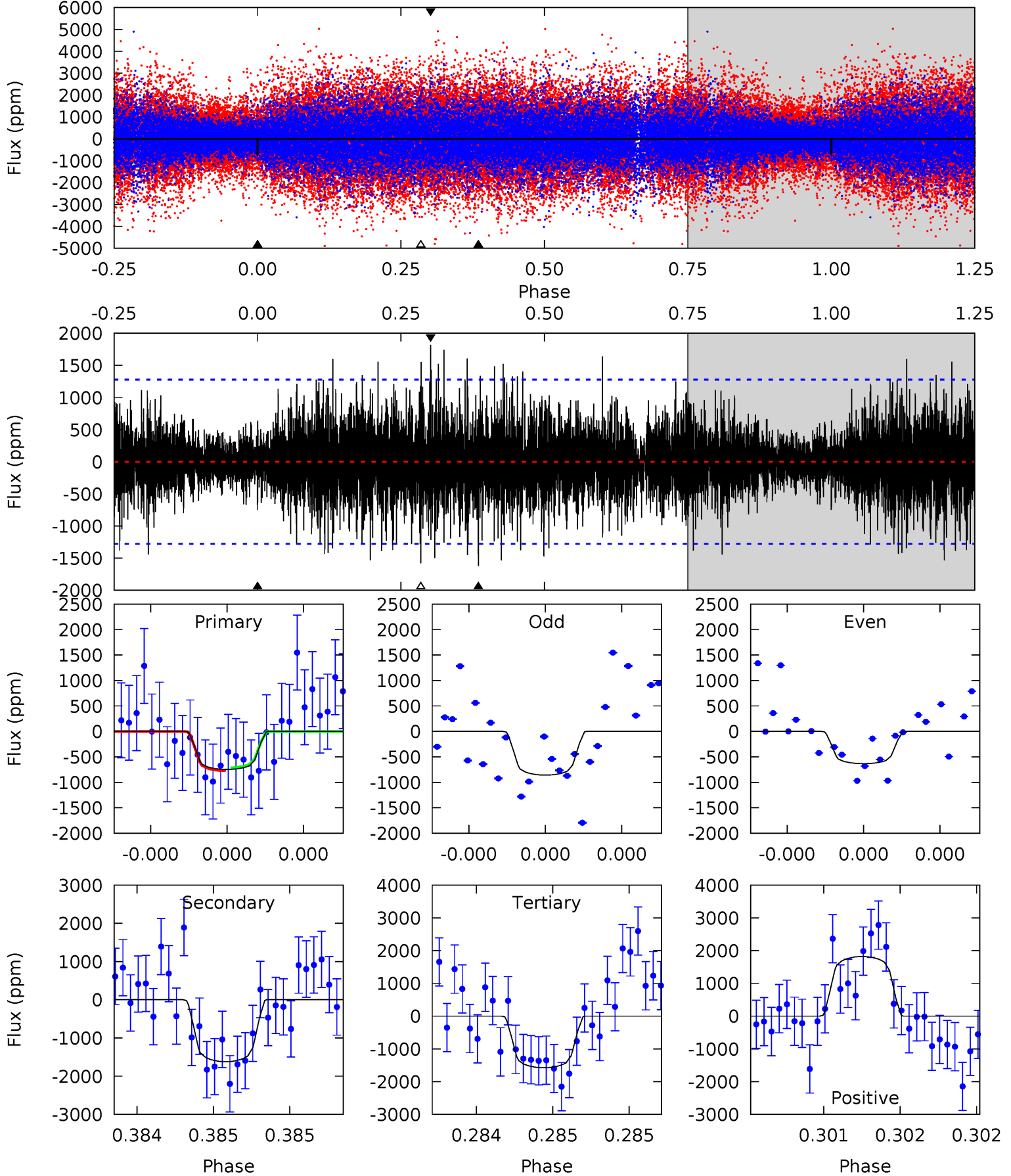
TCE 007211759-02 P=358.860992 Days $T_0=161.678190$ (BKJD)



DV Model-Shift Uniqueness Test

007211759-02, $P = 358.886546$ Days, $E = 161.664202$ Days

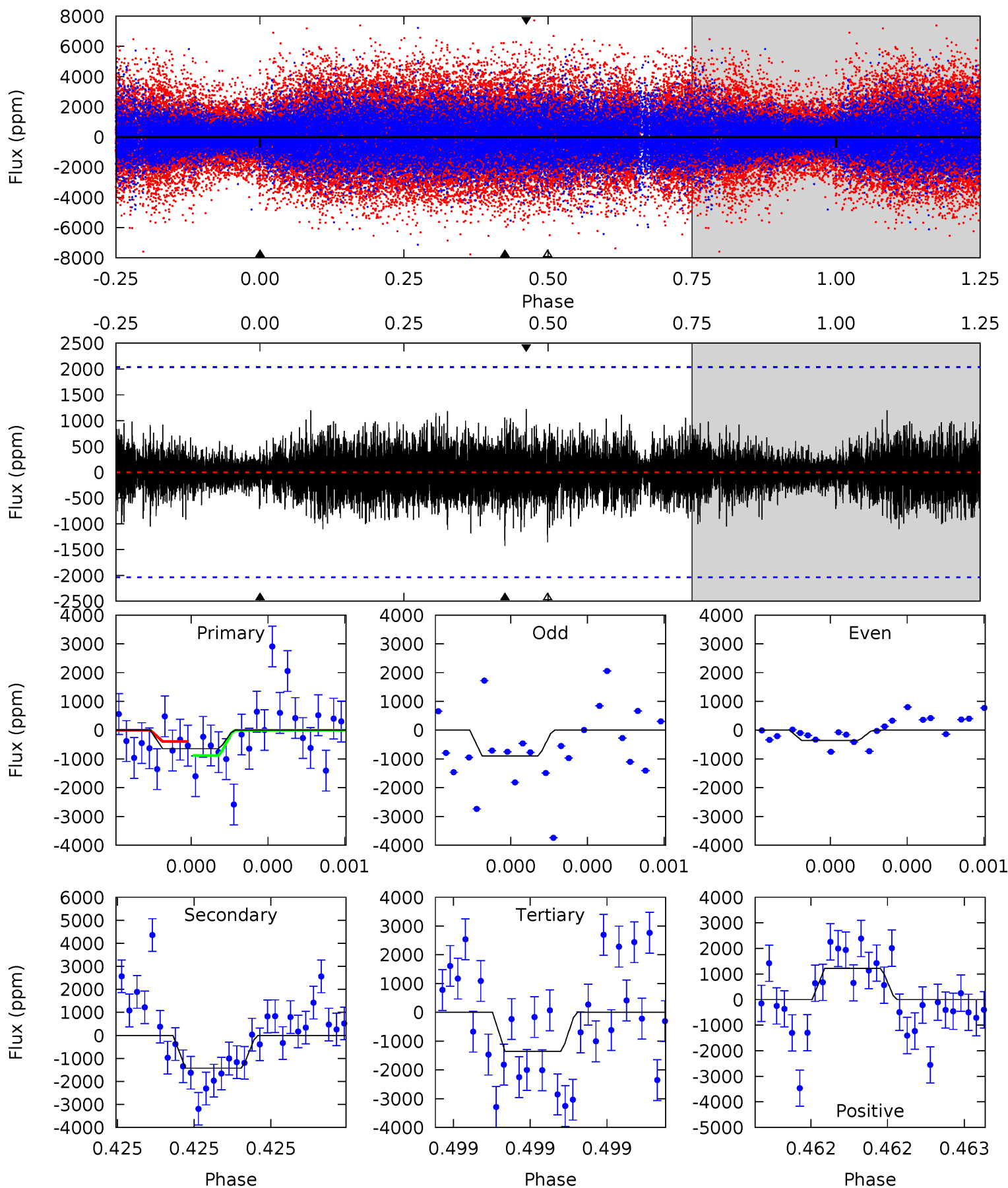
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.29	7.15	6.94	8.02	5.63	3.56	1.74	-3.65	-4.73	0.21	-0.87	0.51	0.95	0.53	0.13



Alt Model-Shift Uniqueness Test

007211759-02, P = 358.860992 Days, E = 161.678190 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.78	3.95	3.76	3.38	5.64	3.58	0.86	-1.98	-1.60	0.19	0.56	0.74	1.87	0.46	0.68



Stellar Parameters For KIC 007211759

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	ρ_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8402^{+232}_{-365}	$3.748^{+0.399}_{-0.142}$	$-0.120^{+0.350}_{-0.400}$	$3.157^{+0.944}_{-1.416}$	$2.039^{+0.384}_{-0.469}$	$0.091^{+0.335}_{-0.045}$
	+3%/-4%	+11%/-4%	+292%/-333%	+30%/-45%	+19%/-23%	+367%/-49%
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 007211759-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1622 ± 227	$8.97^{+9.91}_{-6.19}$	794^{+69}_{-88}	10248^{+25851}_{-3494}	$16795^{+163794}_{-12720}$
Alt.	-1425 ± 361	$8.76^{+9.40}_{-6.01}$	802^{+65}_{-87}	10338^{+21688}_{-3639}	$16058^{+137265}_{-12572}$

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

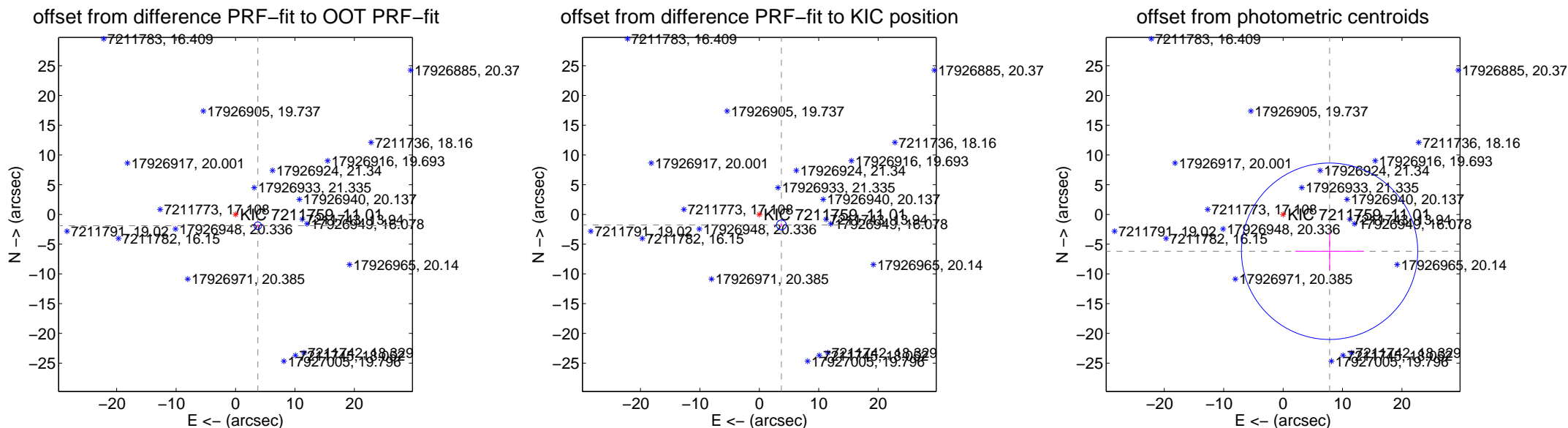
DV Centroid Data

Supplemental centroid analysis for 007211759-02. **Kepler magnitude: 11.01.** Transit SNR 15.04

There are 2 quarters with good PRF difference image offsets

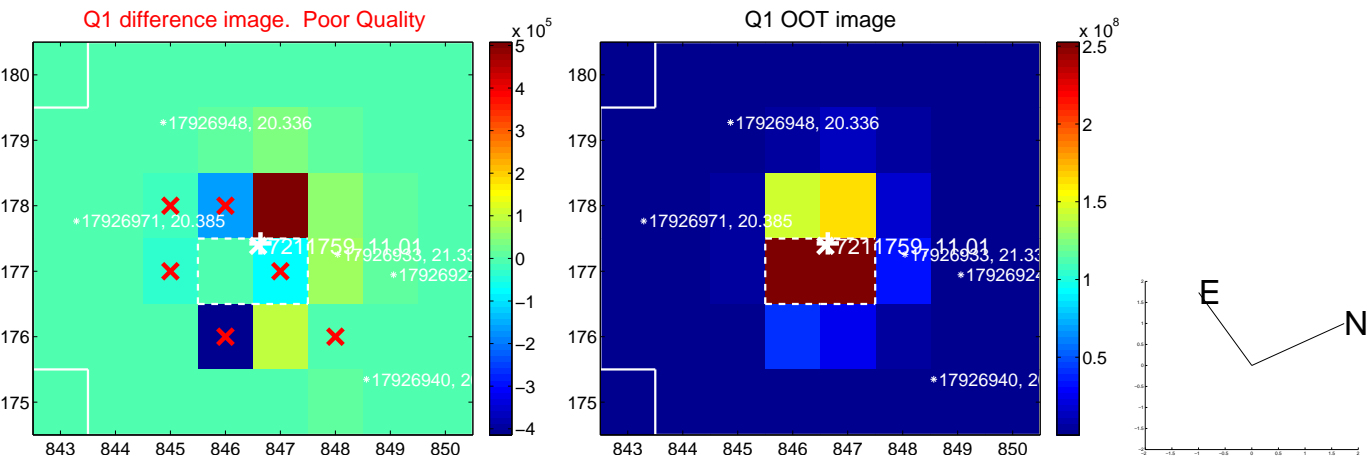
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.204 ± 0.209	20.12	-3.753 ± 0.189	-1.896 ± 0.273
PRF-fit source offset from KIC position	4.113 ± 0.276	14.92	-3.714 ± 0.169	-1.767 ± 0.308
photometric centroid source offset	9.97 ± 4.94	2.02	-7.82 ± 5.78	-6.19 ± 3.19

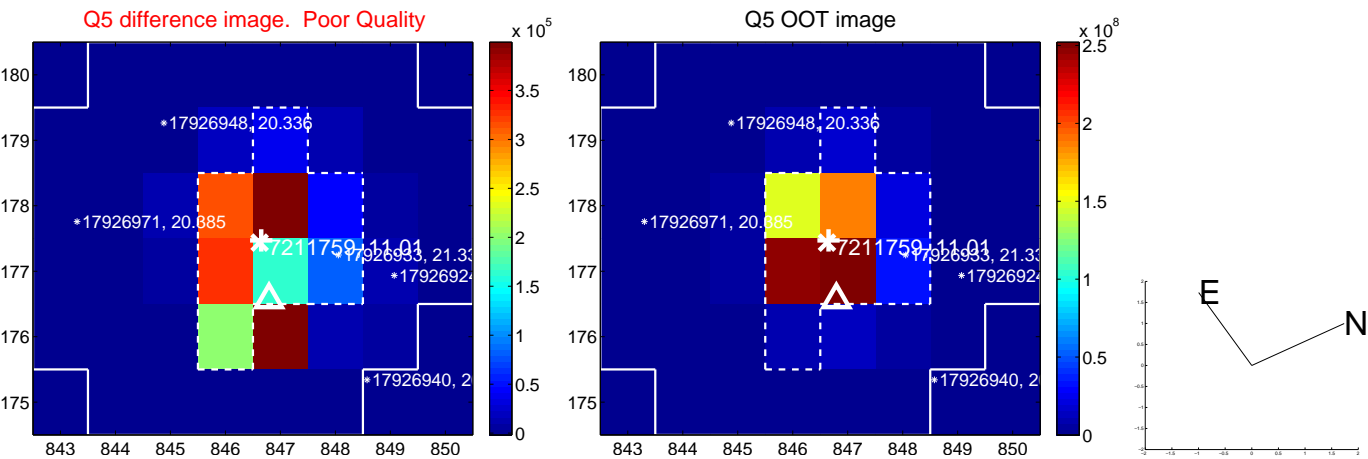


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

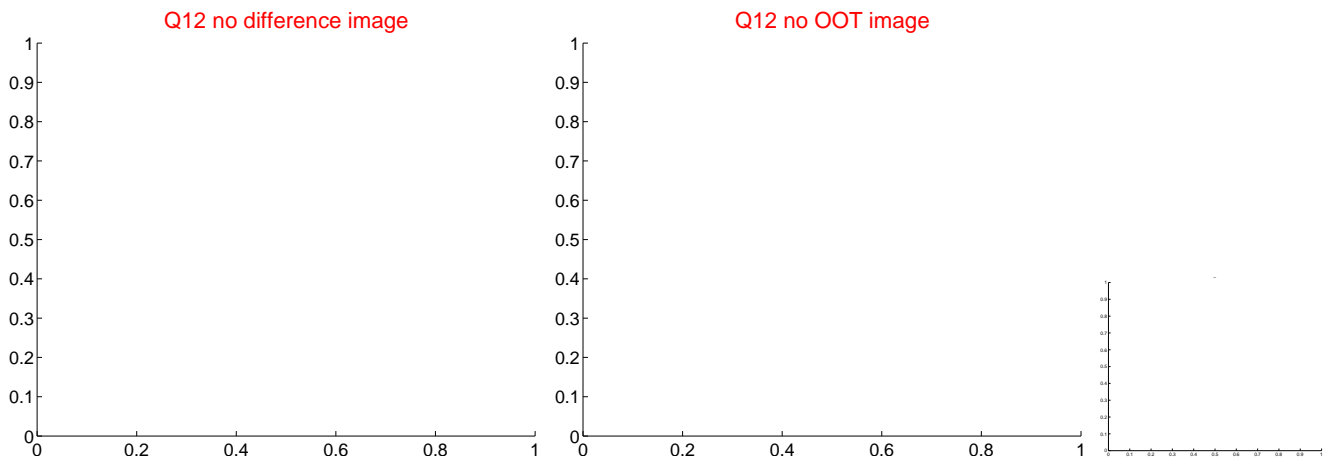
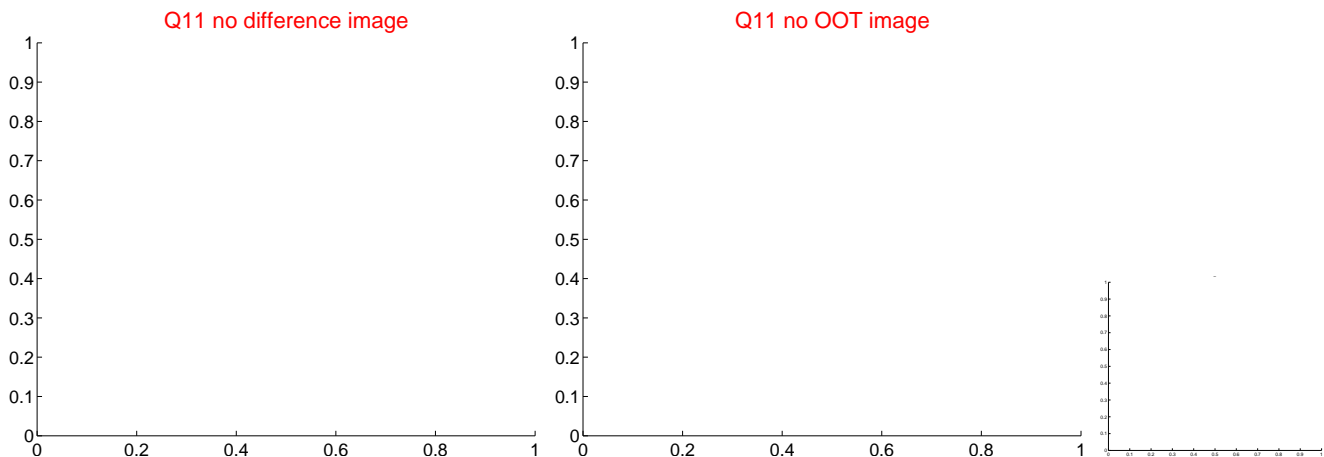
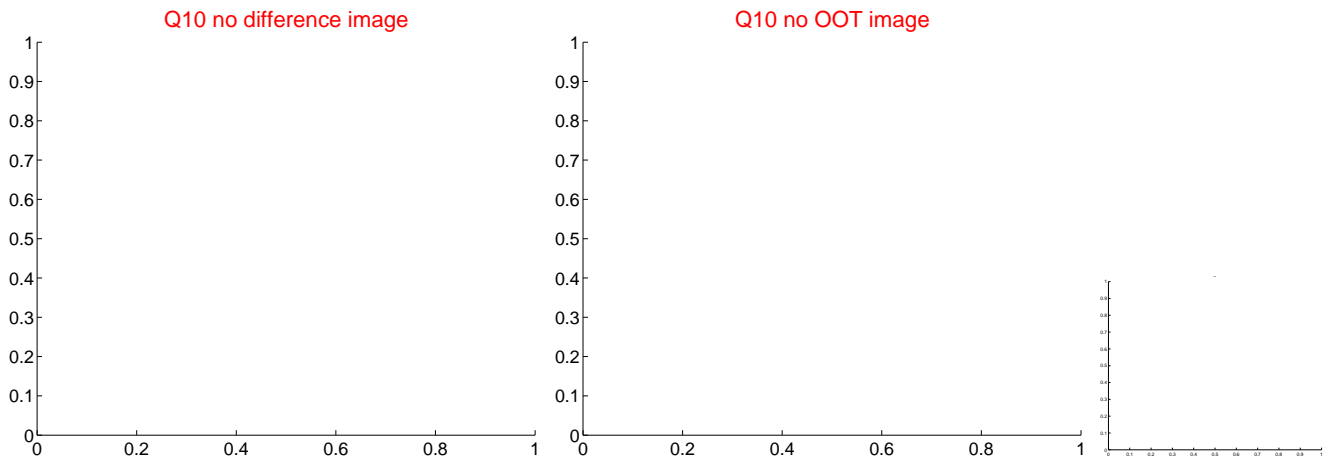
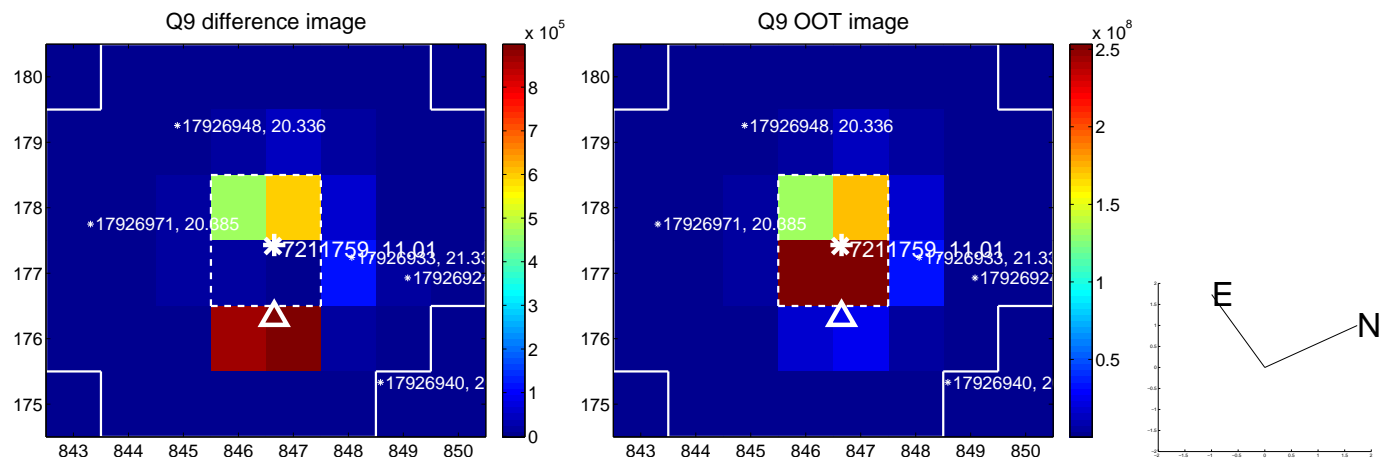
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



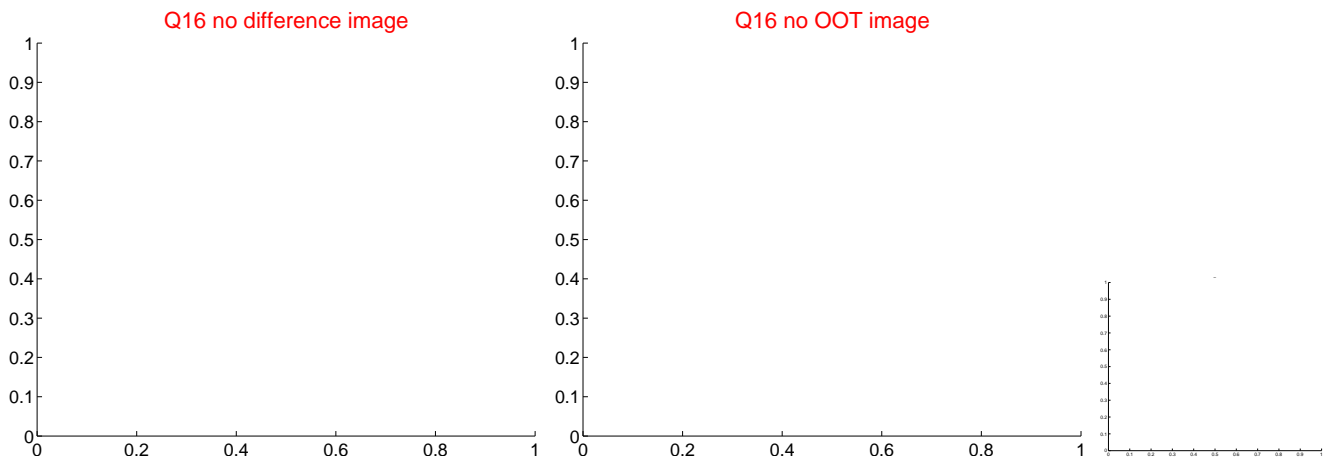
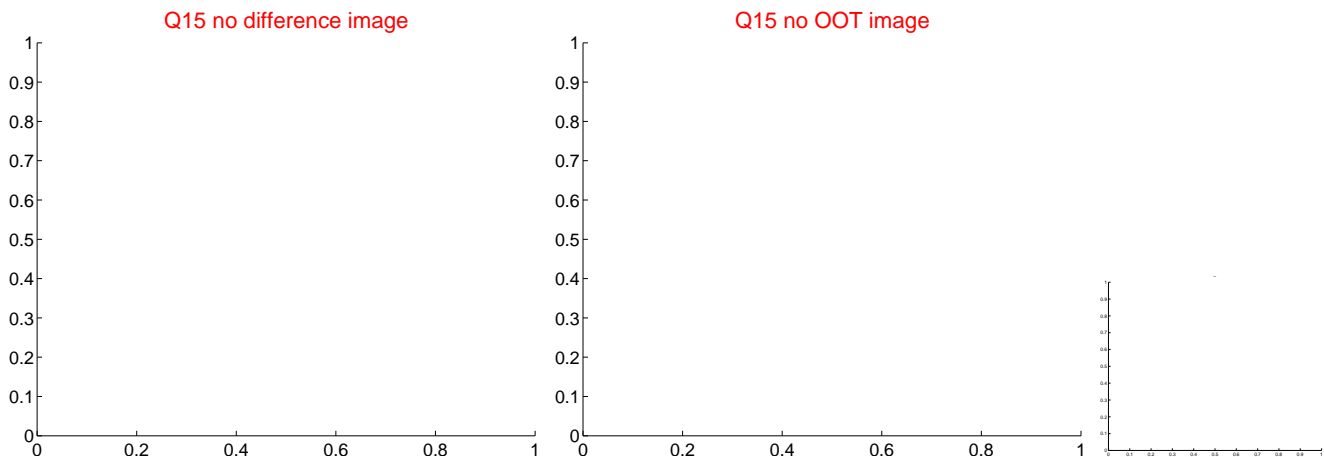
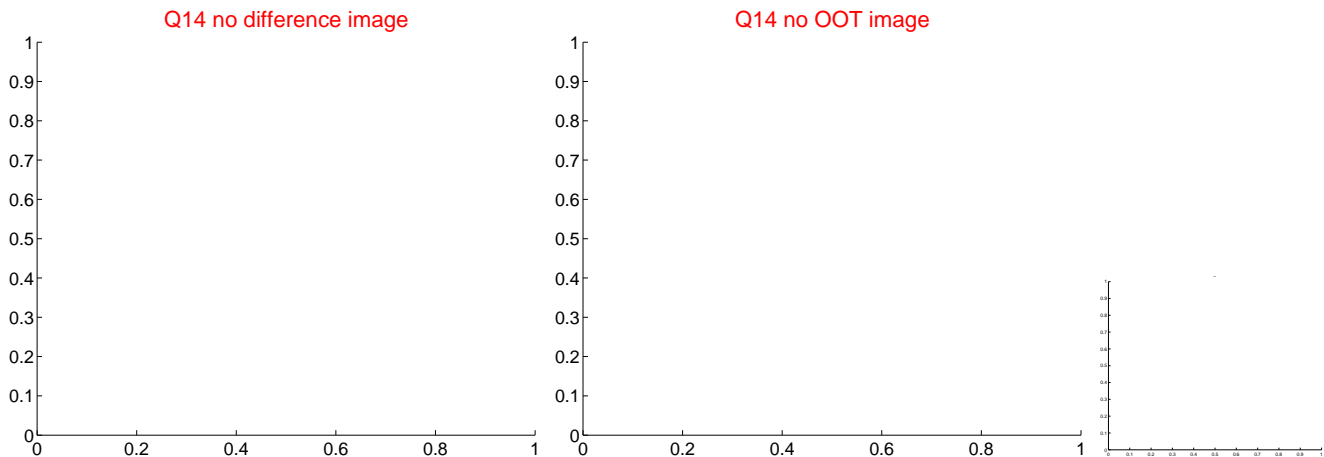
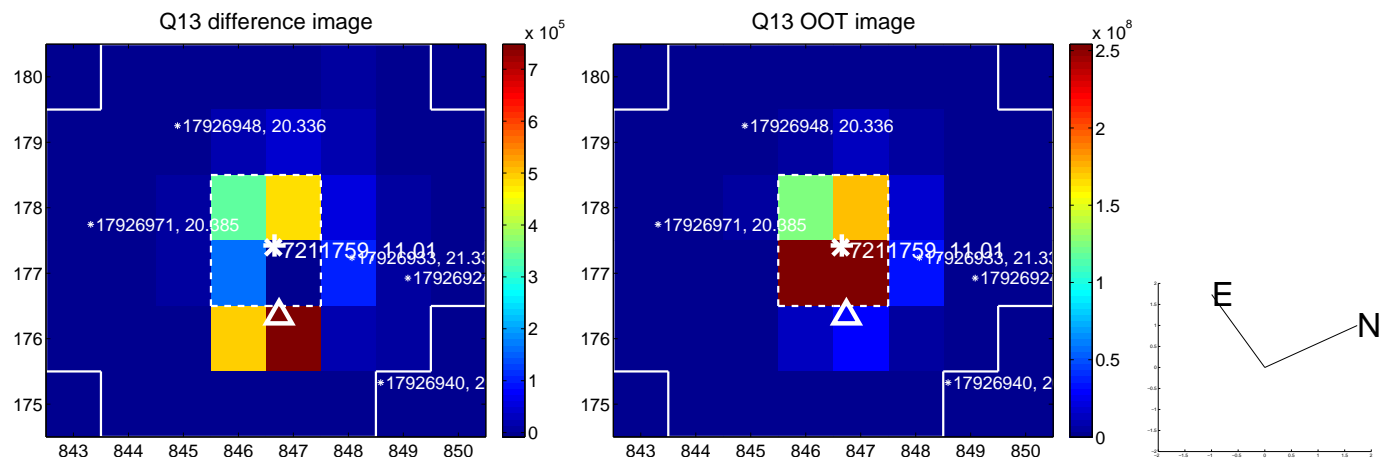
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



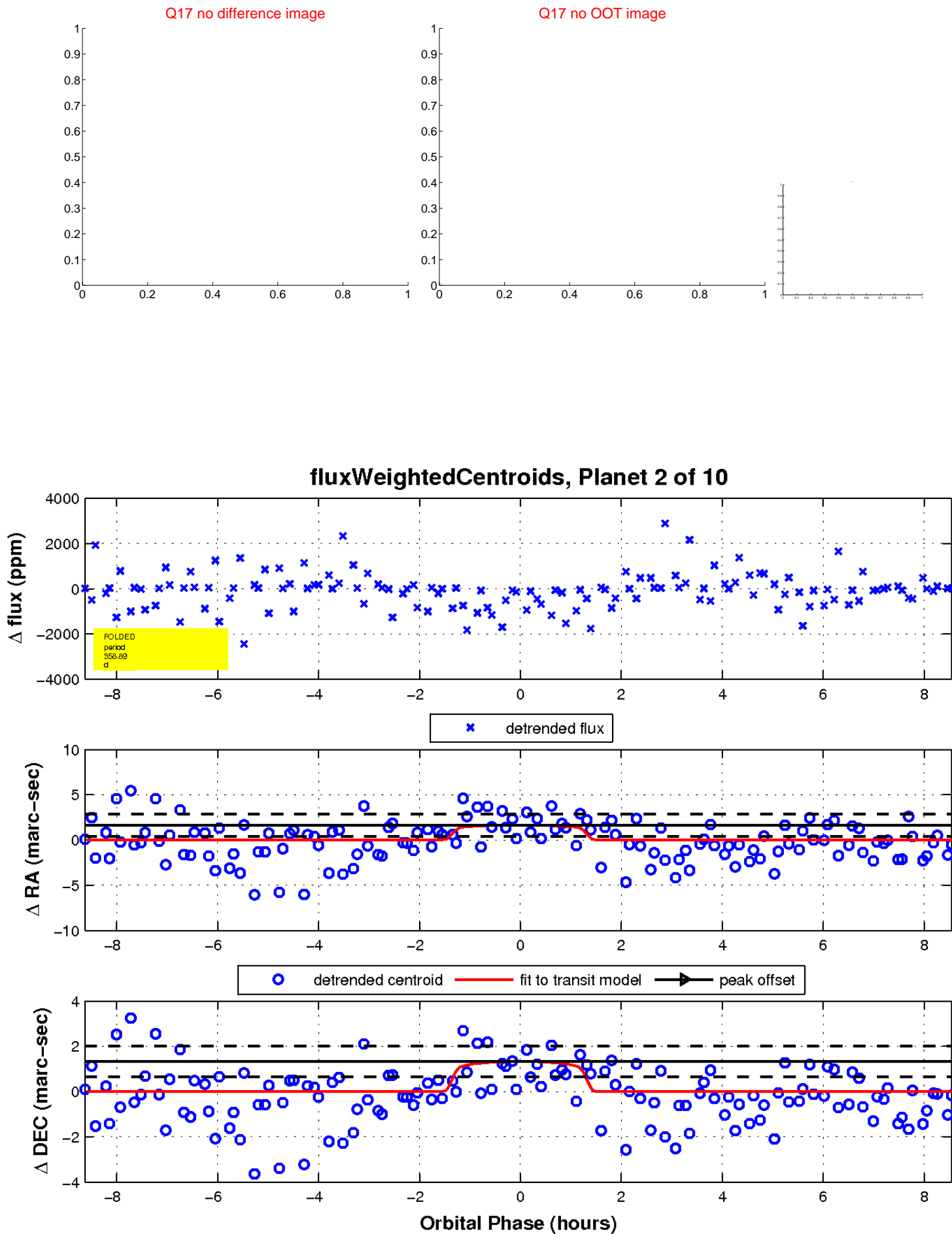
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

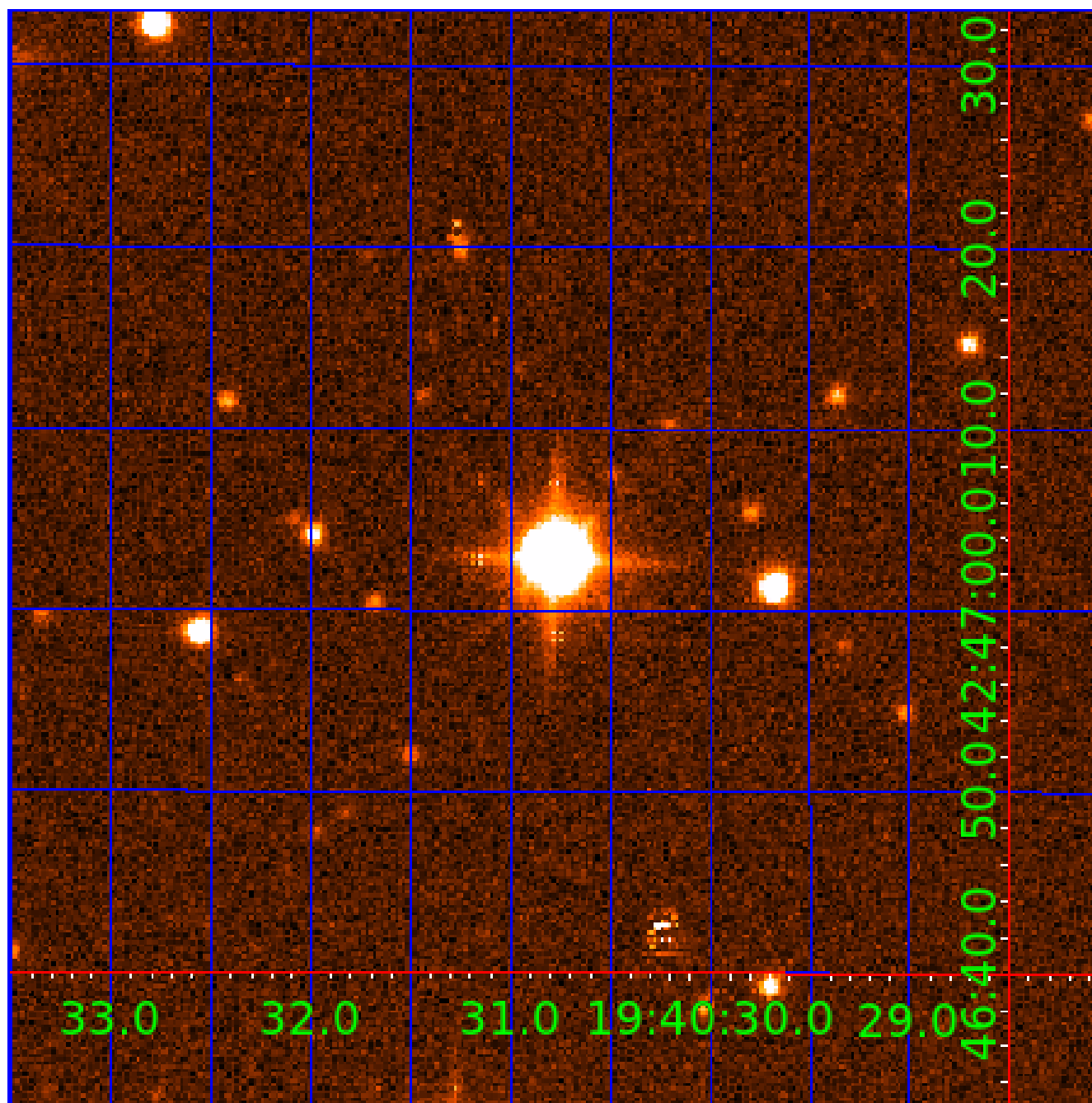


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



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})
007211759-01	OBS	No	48.541107	161.892782	786.7	0.928	134.9	4.7	3.16	8402	9.99	408.44
007211759-02	OBS	No	358.886546	161.664202	215.2	2.879	29.2	15.0	3.16	8402	5.34	28.36
007211759-03	OBS	No	64.575712	164.014592	178.7	9.683	22.3	21.9	3.16	8402	4.74	279.16
007211759-04	OBS	No	40.935358	162.840184	275.3	4.161	21.3	21.2	3.16	8402	6.05	512.64
007211759-05	OBS	No	34.650460	160.429464	15.4	0.524	15.5	0.4	3.16	8402	1.60	640.22
007211759-06	OBS	No	34.637188	160.678807	17.4	3.190	15.7	1.3	3.16	8402	1.53	640.55
007211759-07	OBS	No	27.387010	136.391221	18.2	3.254	9.9	2.3	3.16	8402	1.46	876.09
007211759-08	OBS	No	26.505878	136.615978	428.1	6.000	38.8	-1.0	3.16	8402	6.62	915.13
007211759-09	OBS	No	26.082524	137.048060	102.2	7.484	21.7	7.7	3.16	8402	3.69	934.99
007211759-10	OBS	No	26.321290	135.945076	208.1	15.000	35.7	-1.0	3.16	8402	4.61	923.70

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007211759-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
007211759-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
007211759-03	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED—HALO_GHOST
007211759-04	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
007211759-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED—HALO_GHOST
007211759-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA_TRACKER—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_SATURATED
007211759-07	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED—HALO_GHOST
007211759-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
007211759-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
007211759-10	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED

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

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

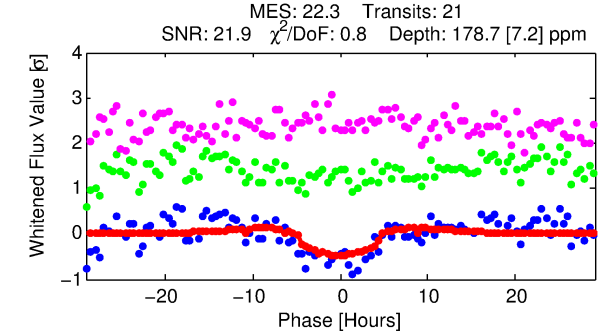
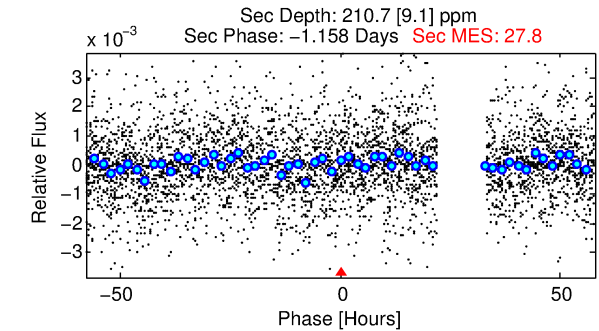
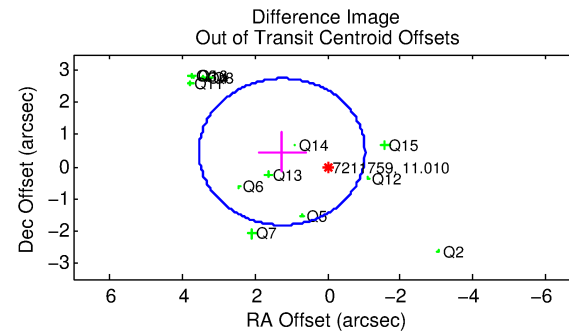
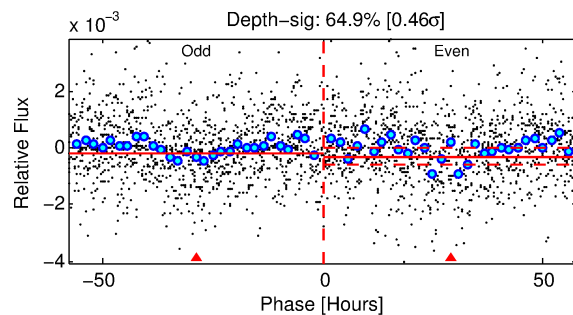
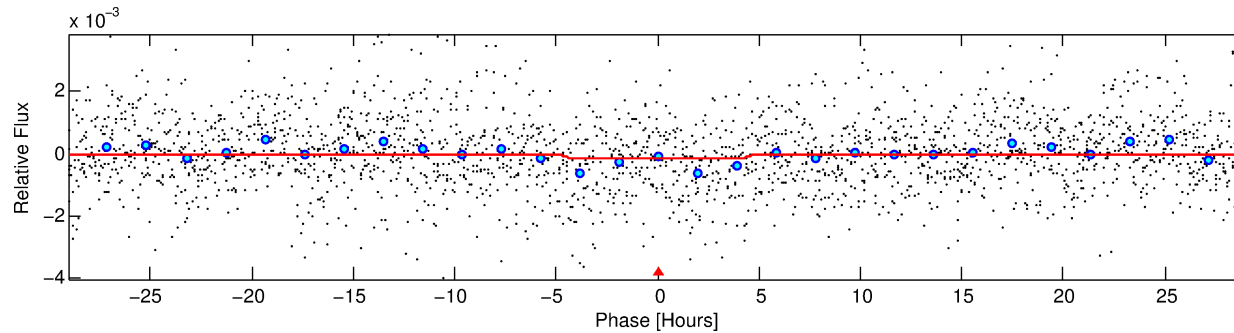
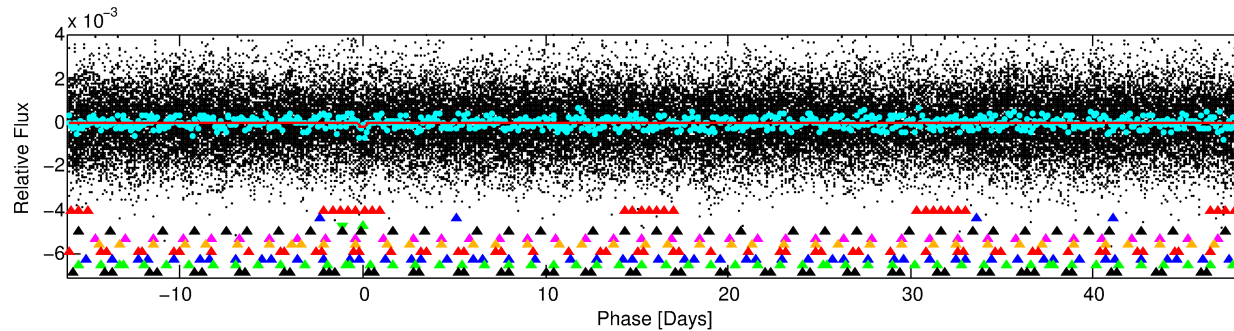
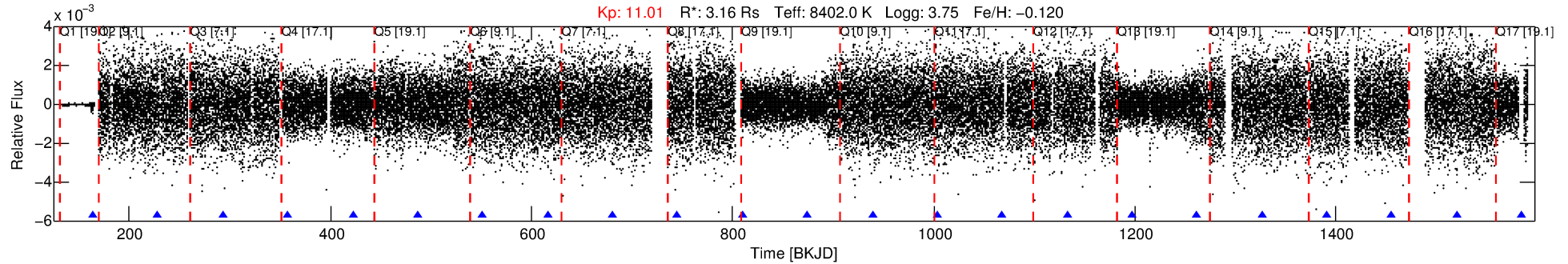
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007211759-03

No Significant Match Found

DV One-Page Summary

KIC: 7211759 Candidate: 3 of 10 Period: 64.576 d



DV Fit Results:

Period = 64.57571 [0.00220] d
Epoch = 164.0146 [0.0051] BKJD
Rp/R* = 0.0138 [0.0047]
a/R* = 28.75 [61.43]
b = 0.84 [0.75]
Seff = 279.16 [196.35]
Teq = 1042 [183] K
Rp = 4.74 [2.67] Re
a = 0.3993 [0.1709] AU
Ag = 823.23 [796.56] [1.03 σ]
Teffp = 8632 [1529] K [4.93 σ]

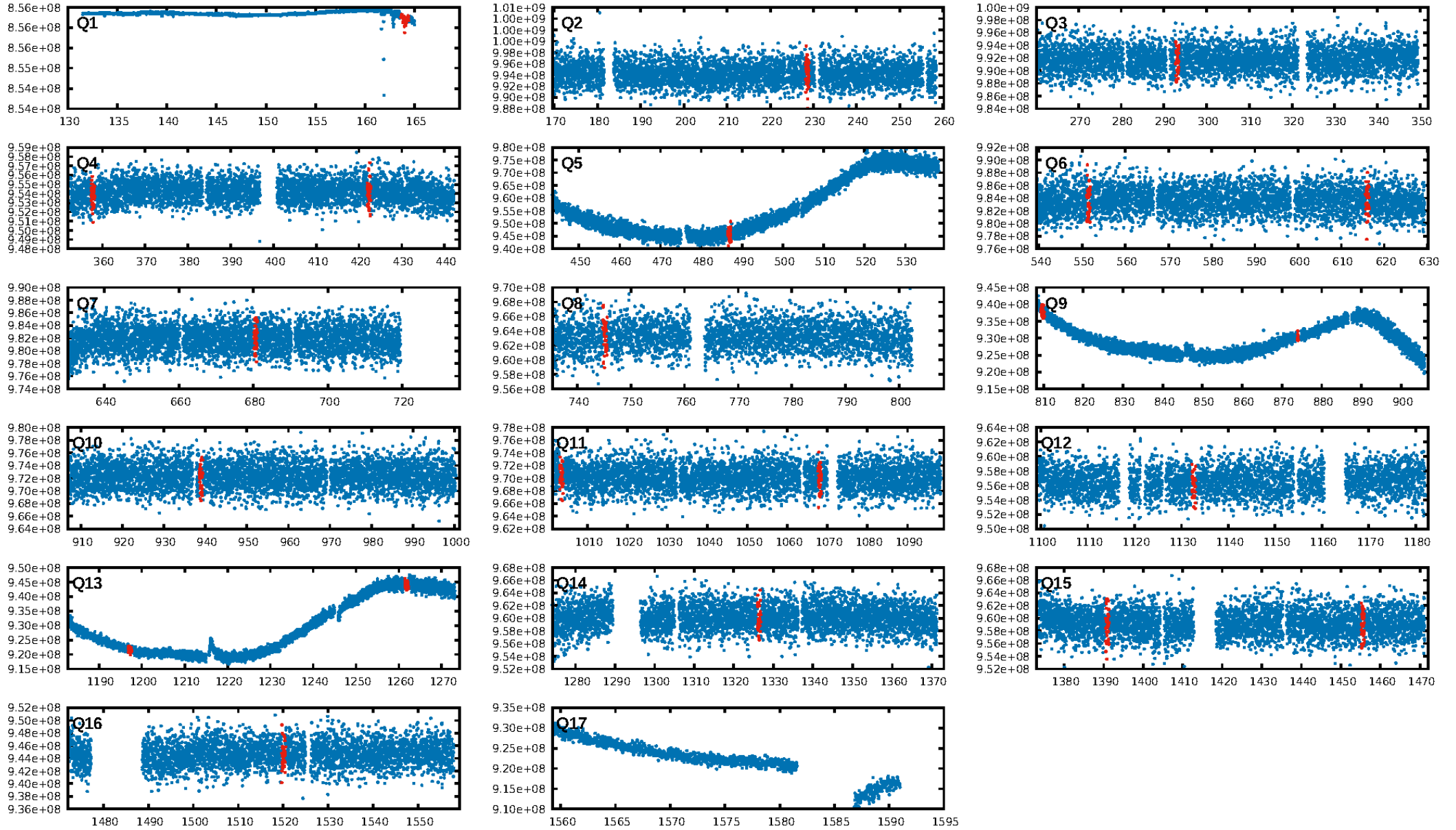
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [39.56 σ]
LongPeriod-sig: 100.0% [699.19 σ]
ModelChiSquare2-sig: 94.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [20/20]
GhostDiagnostic-chr: 0.1797
Centroid-sig: 7.0%
Centroid-so: 1.014 arcsec [1.13 σ]
OotOffset-rm: 1.333 arcsec [1.75 σ]
KicOffset-rm: 1.512 arcsec [2.23 σ]
OotOffset-st: 3/4/4/2 [13]
KicOffset-st: 3/4/4/2 [13]
DiffImageQuality-fgm: 0.77 [10/13]
DiffImageOverlap-fno: 0.50 [7/14]

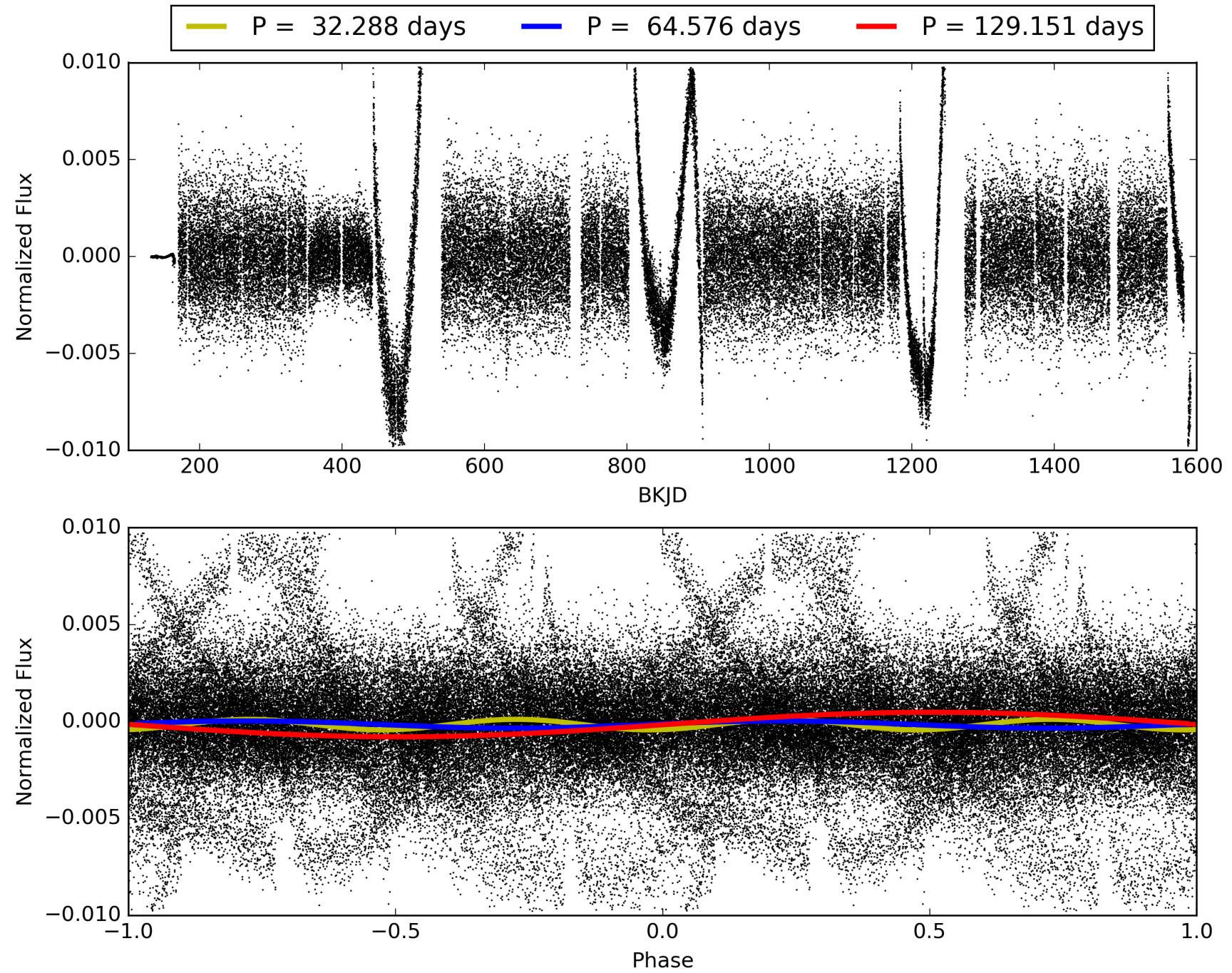
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 08:37:14 Z

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

TCE 007211759-03, PDC Light Curves

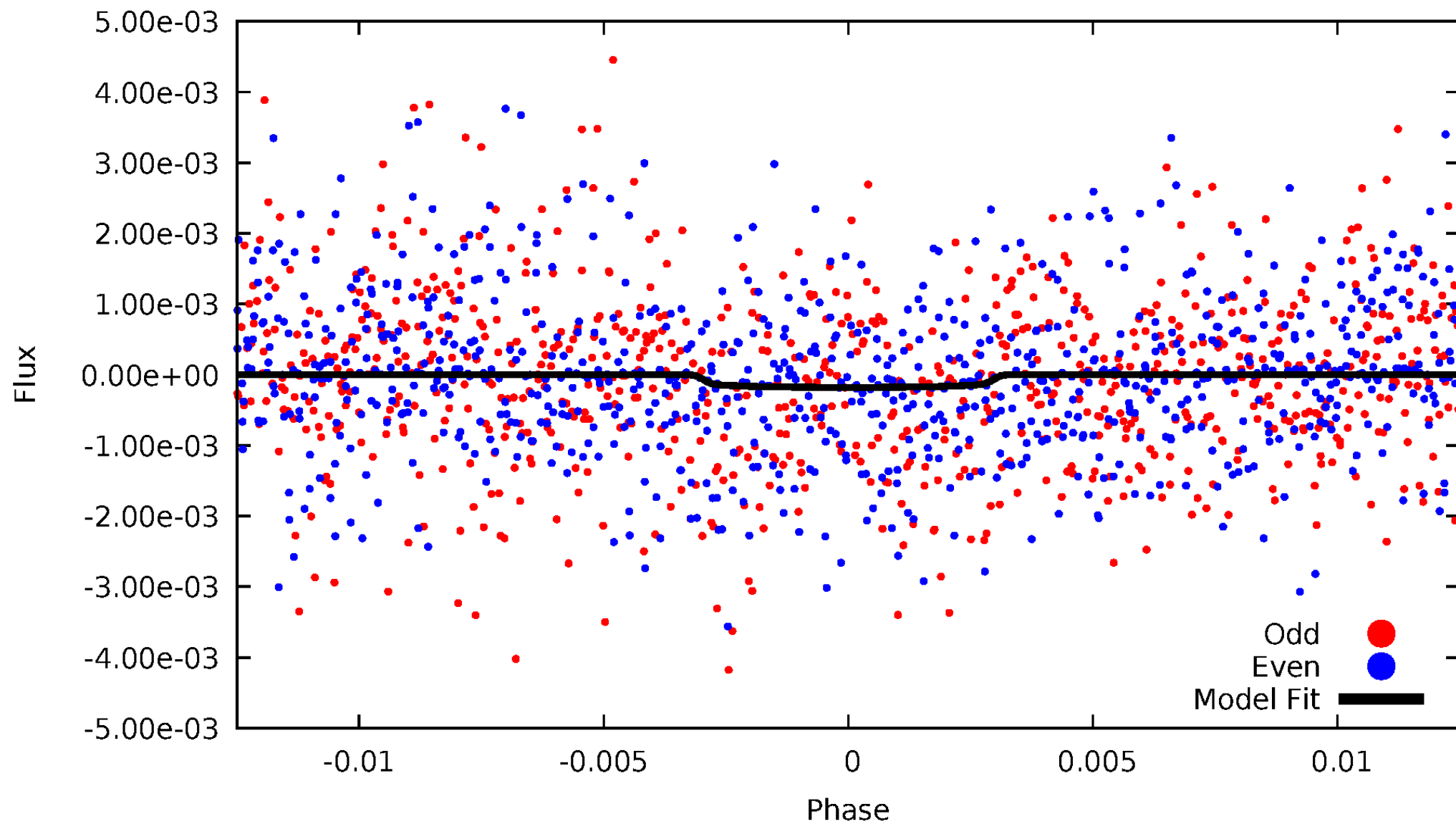


TCE 007211759-03



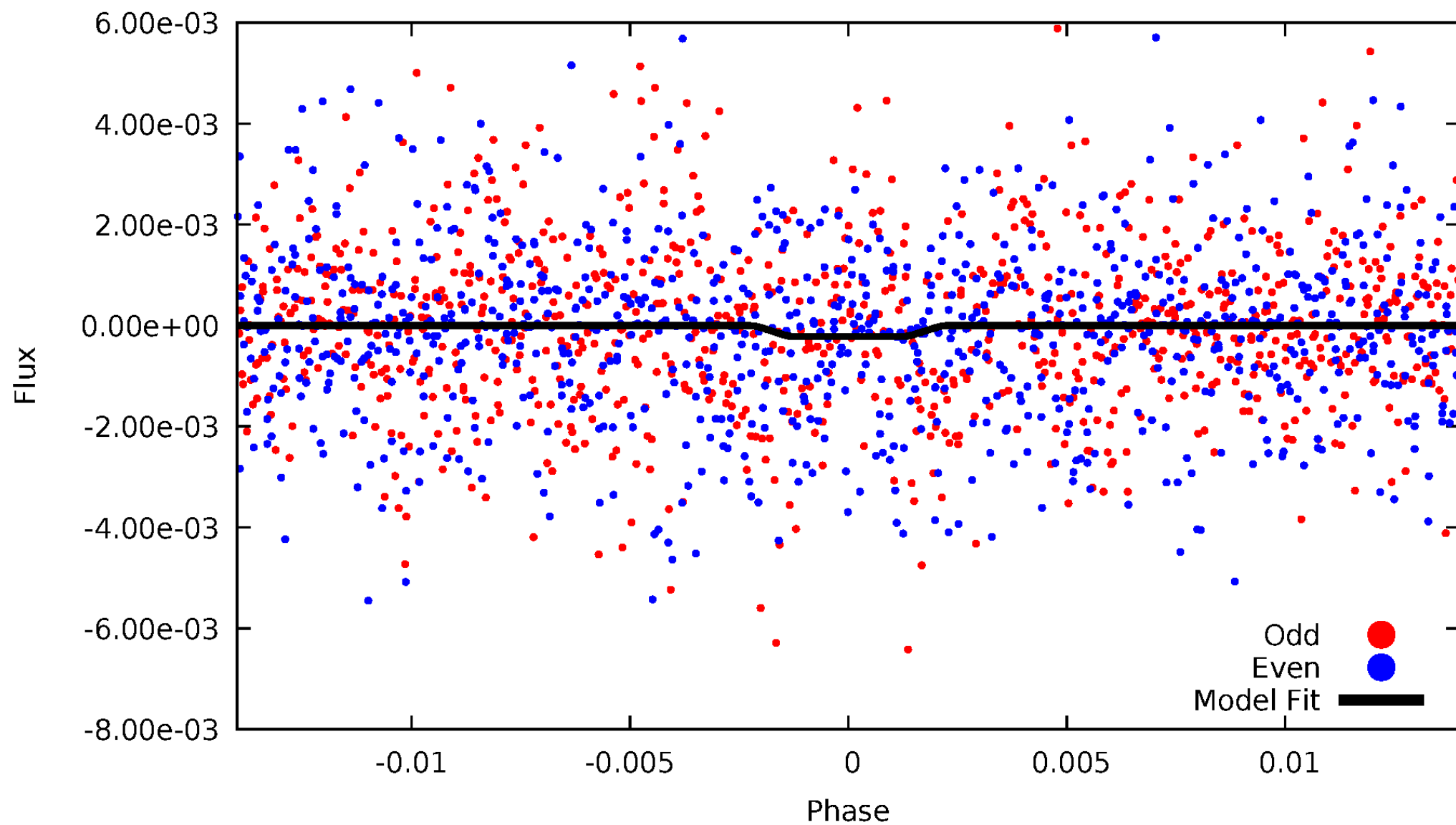
DV Odd/Even

TCE 007211759-03



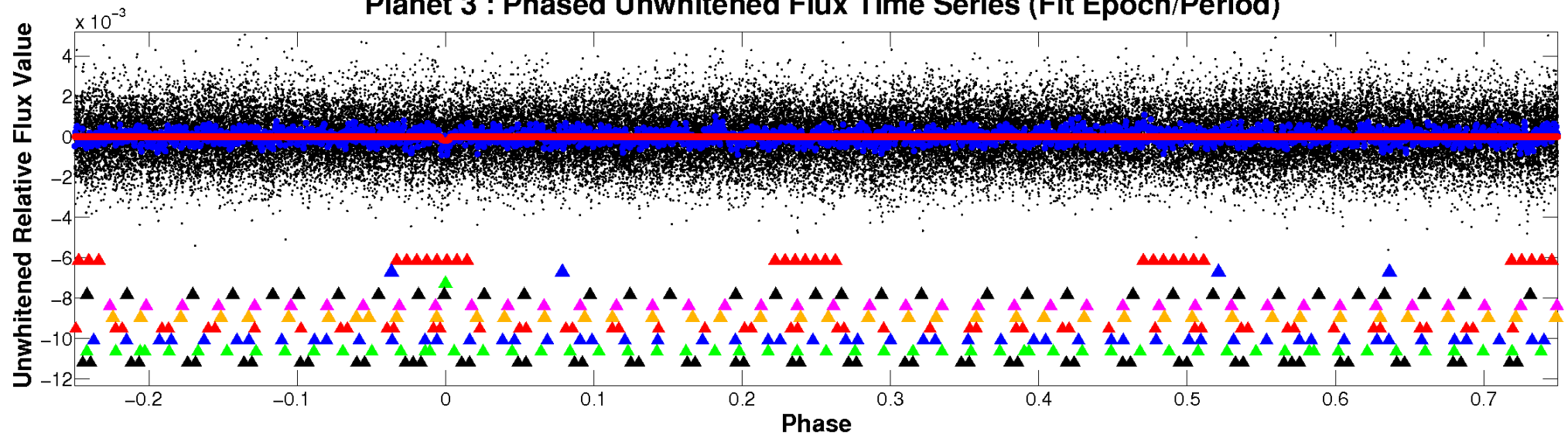
ALT Odd/Even

TCE 007211759-03

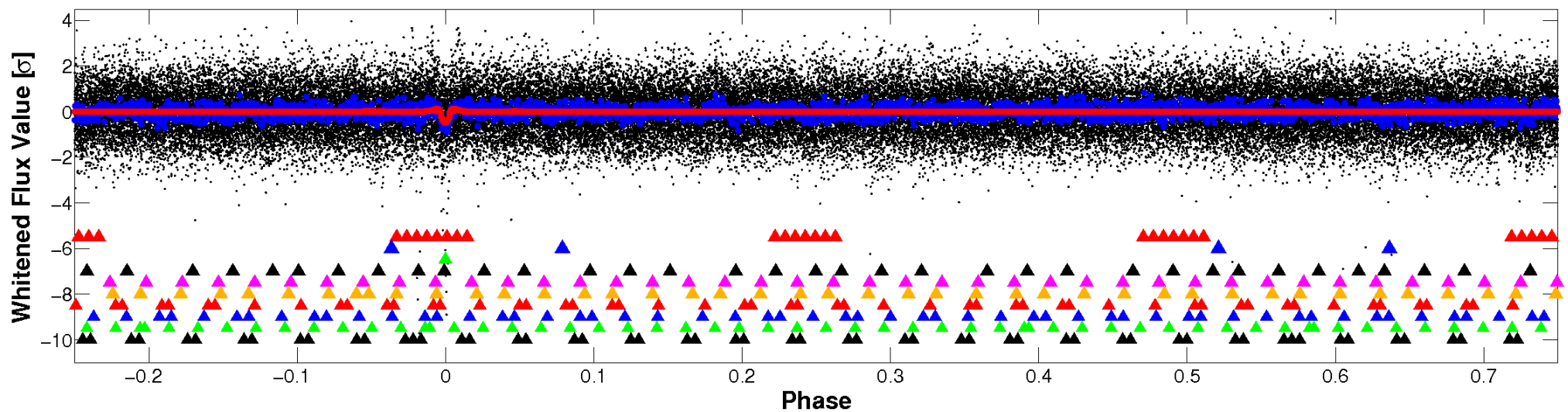


Non-Whitened Vs. Whitened Light Curve

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

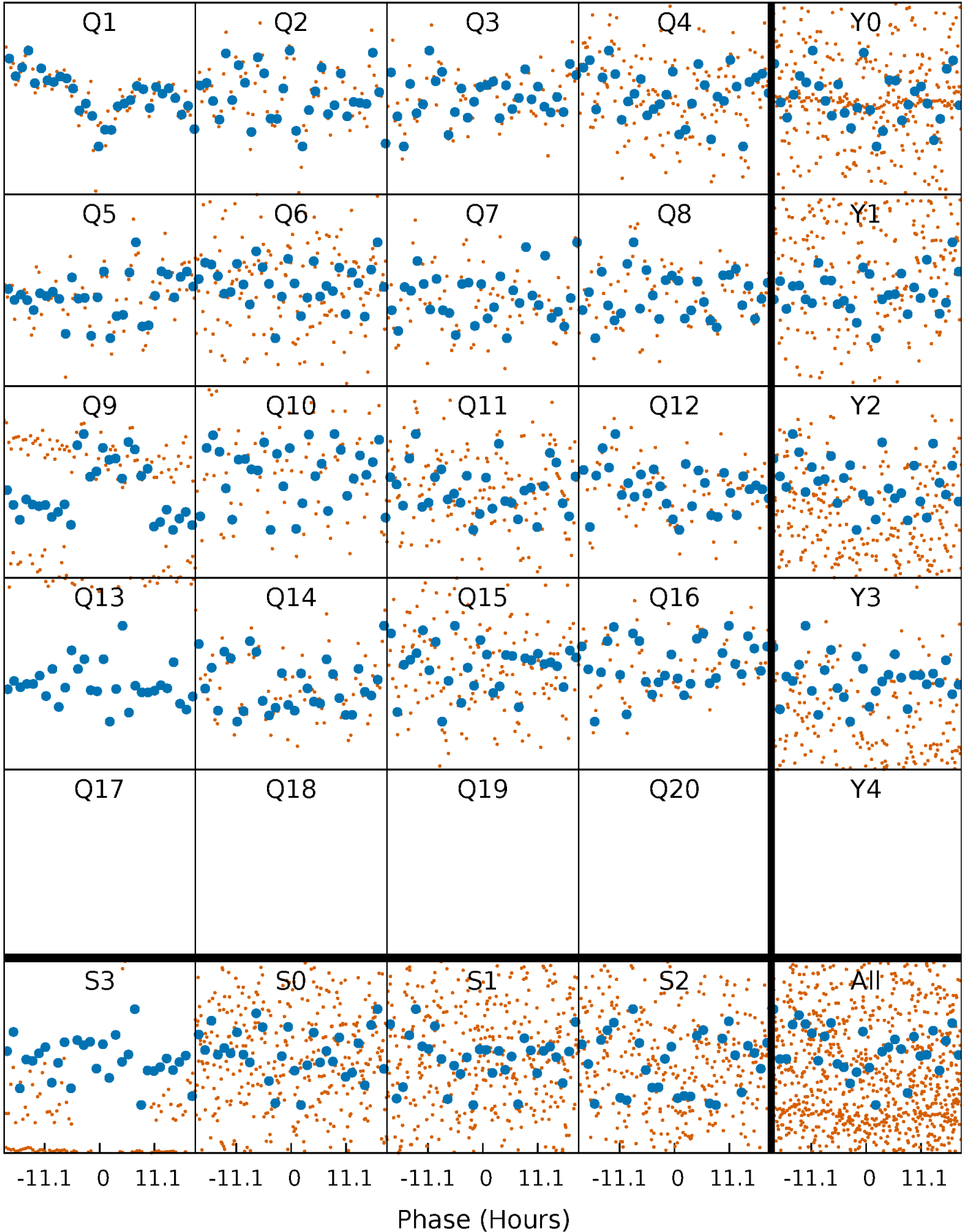


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



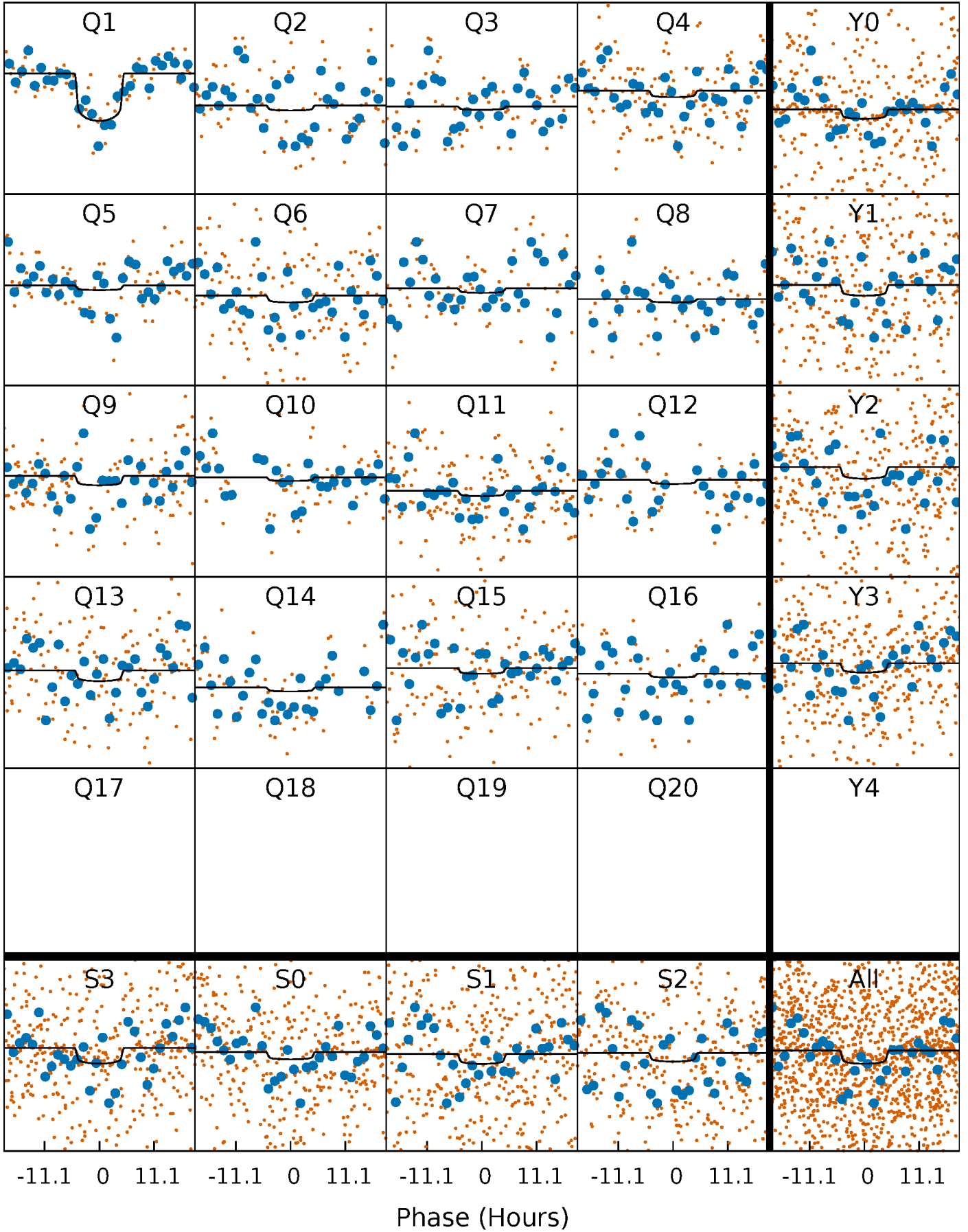
PDC Quarter-Phased Transit Curves

TCE 007211759-03 P= 64.575712 Days $T_0=164.014592$ (BKJD)



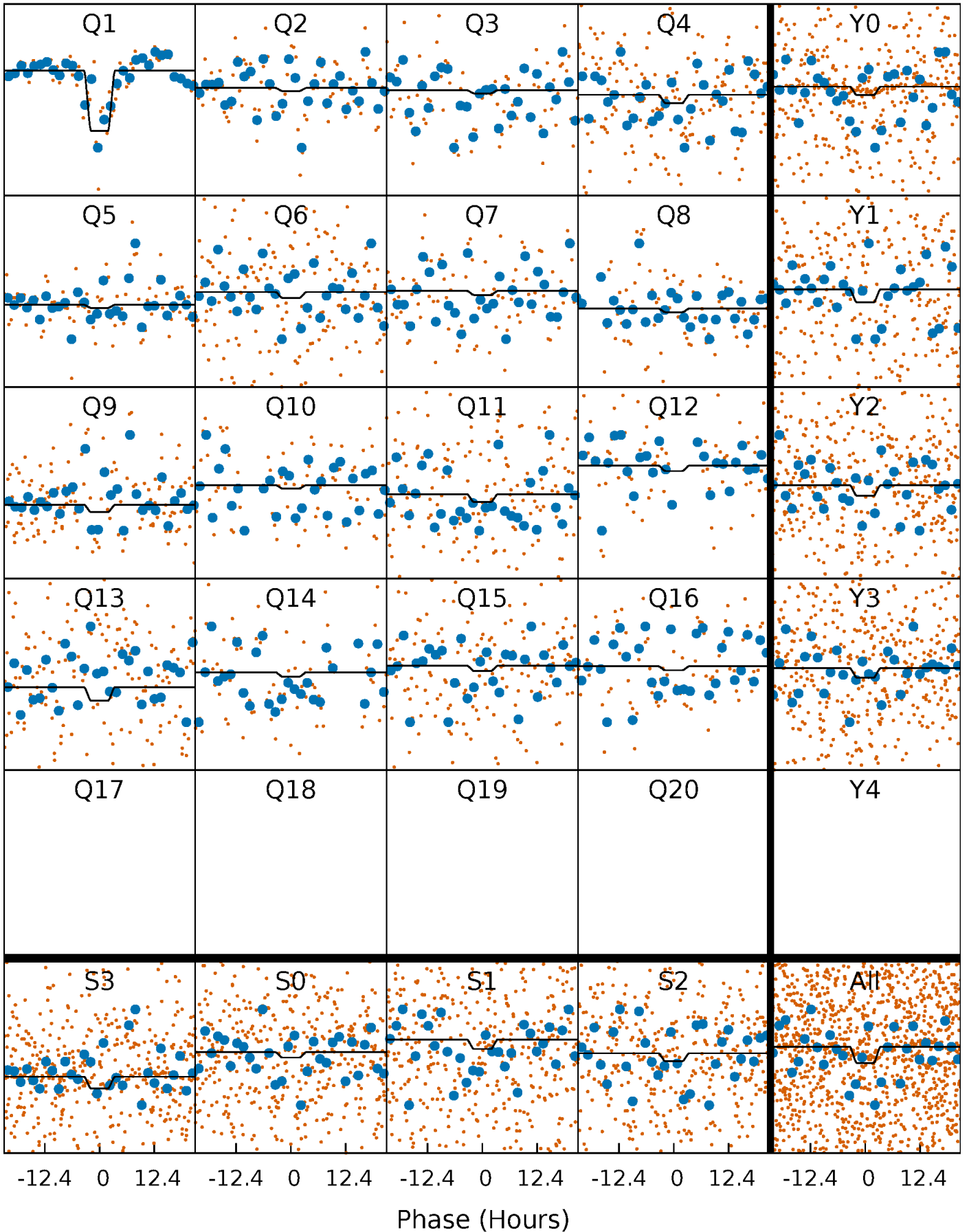
DV Quarter-Phased Transit Curves

TCE 007211759-03 P= 64.575712 Days $T_0=164.014592$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

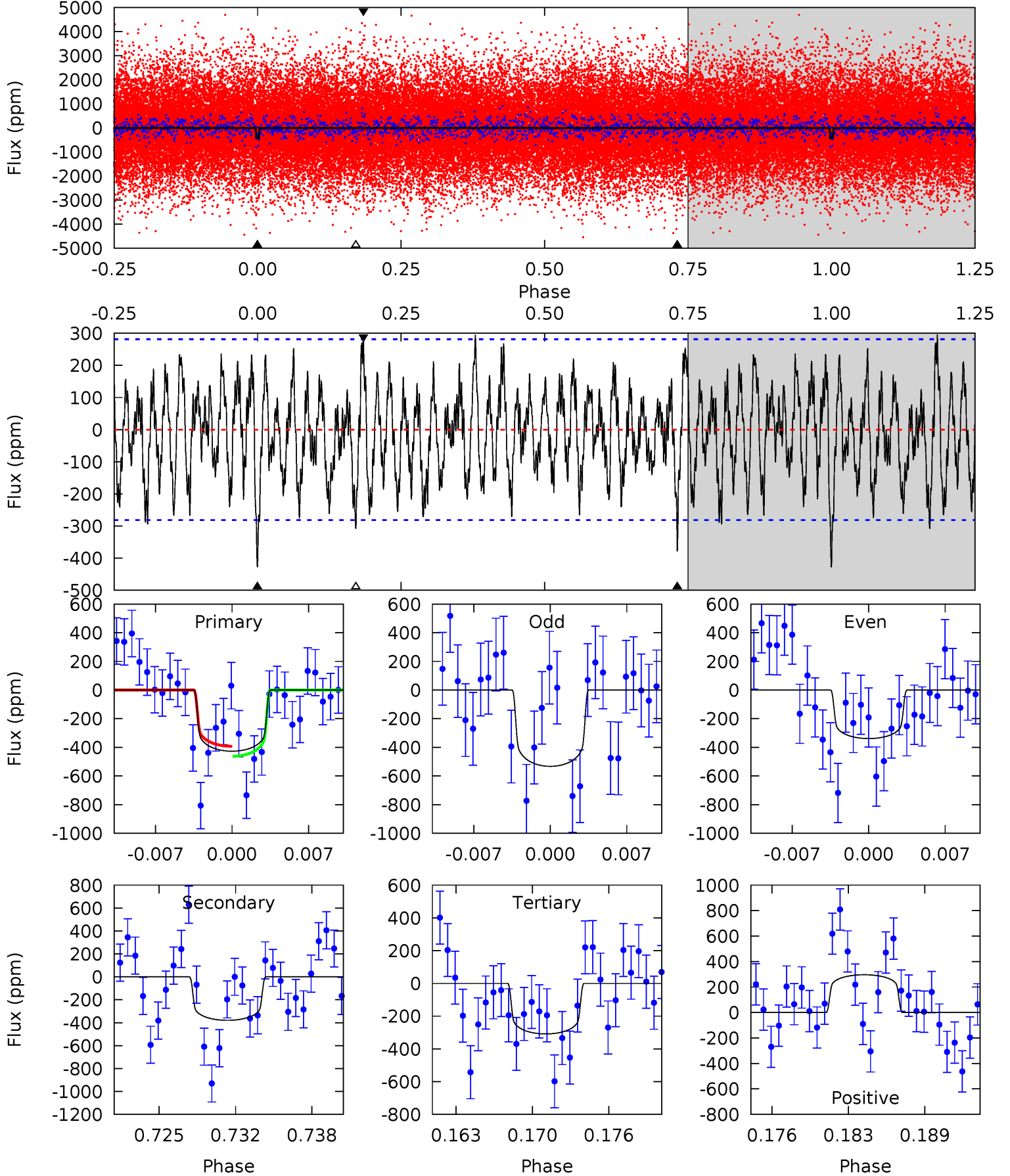
TCE 007211759-03 P= 64.575397 Days $T_0=163.992247$ (BKJD)



DV Model-Shift Uniqueness Test

007211759-03, P = 64.575712 Days, E = 99.438880 Days

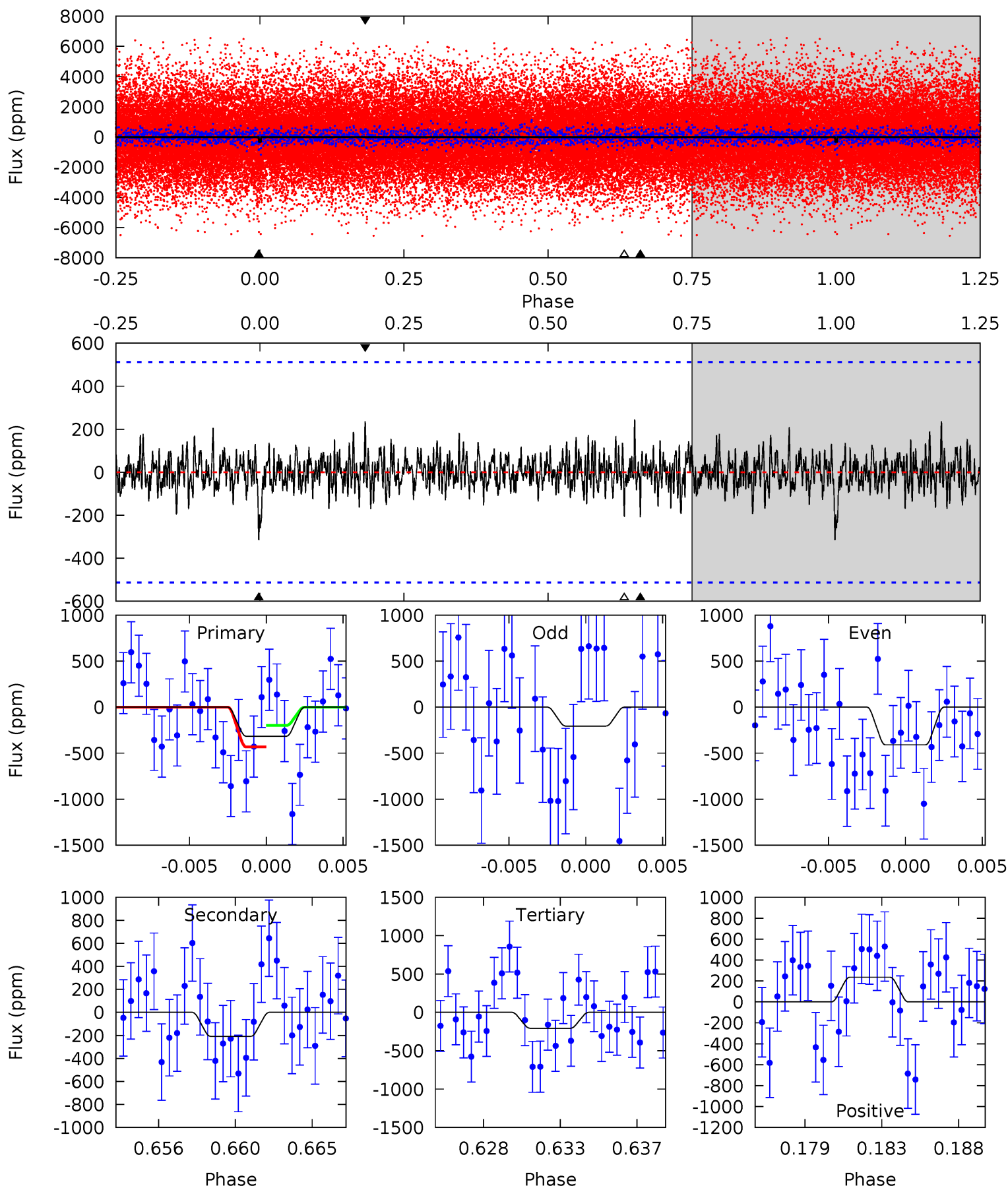
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.75	6.88	5.60	5.38	5.11	2.72	2.16	2.15	2.38	1.28	1.51	1.75	1.02	0.41	0.64



Alt Model-Shift Uniqueness Test

007211759-03, P = 64.575397 Days, E = 99.416850 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.19	2.10	2.09	2.38	5.17	2.83	0.65	1.10	0.81	0.01	-0.28	1.02	0.80	0.44	1.18



Stellar Parameters For KIC 007211759

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8402^{+232}_{-365}	$3.748^{+0.399}_{-0.142}$	$-0.120^{+0.350}_{-0.400}$	$3.157^{+0.944}_{-1.416}$	$2.039^{+0.384}_{-0.469}$	$0.091^{+0.335}_{-0.045}$
	+3%/-4%	+11%/-4%	+292%/-333%	+30%/-45%	+19%/-23%	+367%/-49%
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 007211759-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-379 ± 55	$4.38^{+1.97}_{-1.62}$	1420^{+118}_{-166}	10578^{+4185}_{-2048}	1701^{+2524}_{-885}
Alt.	-208 ± 99	$4.83^{+2.15}_{-1.75}$	1416^{+122}_{-159}	8027^{+2731}_{-1769}	747^{+1302}_{-462}

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

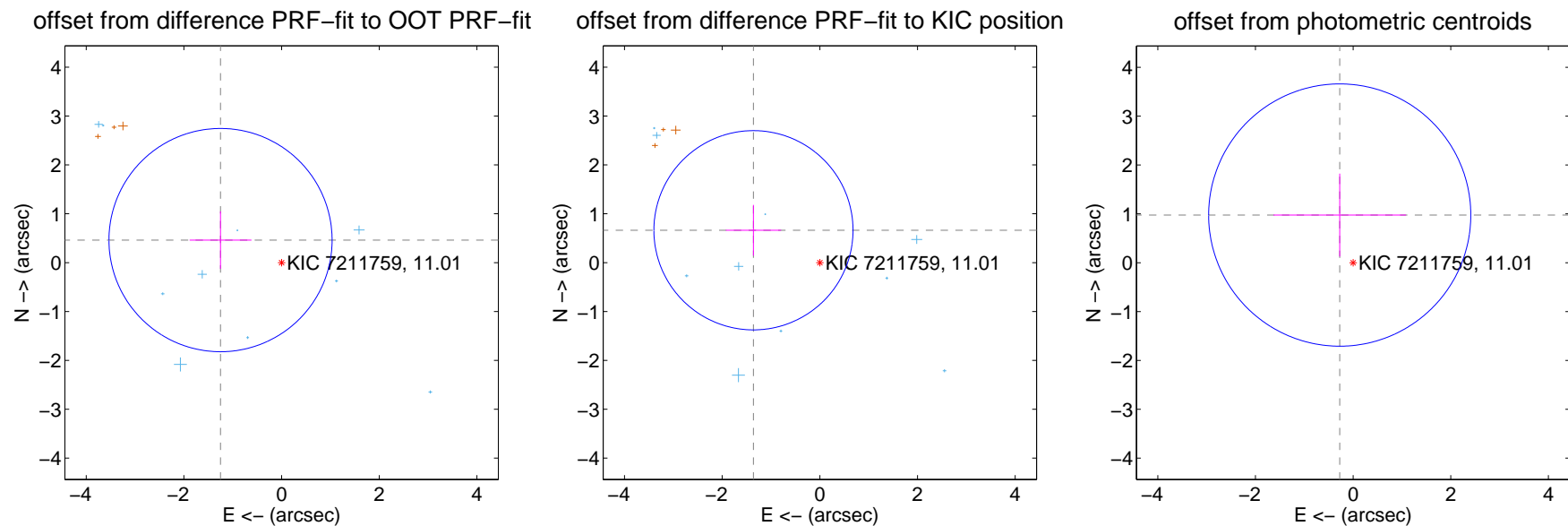
DV Centroid Data

Supplemental centroid analysis for 007211759-03. **Kepler magnitude: 11.01.** Transit SNR 21.90

There are 10 quarters with good PRF difference image offsets

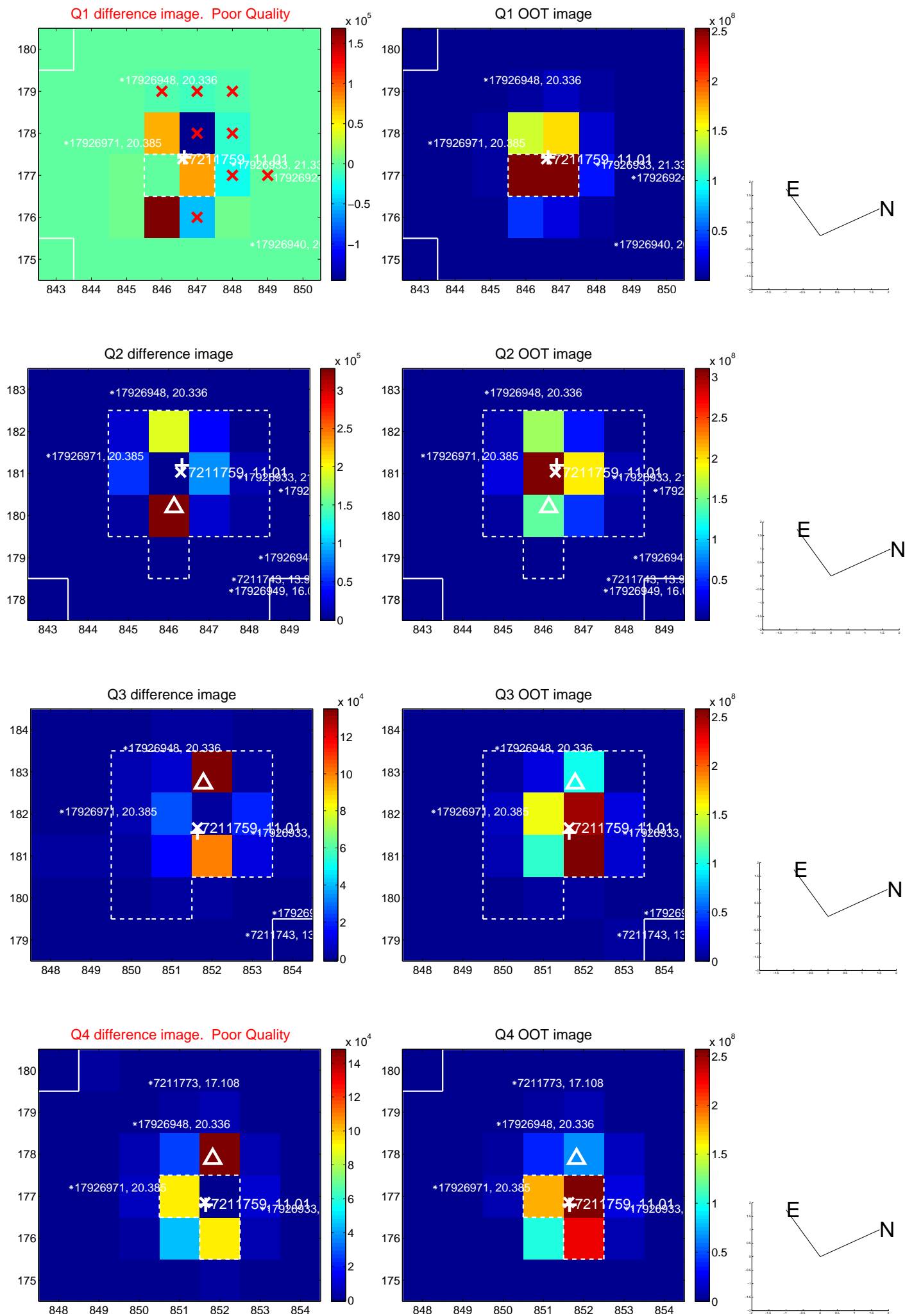
The direct PRF centroid is offset from the target star catalog position by about 0.27 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.333 ± 0.762	1.75	1.250 ± 0.633	0.461 ± 0.589
PRF-fit source offset from KIC position	1.512 ± 0.680	2.23	1.360 ± 0.566	0.663 ± 0.518
photometric centroid source offset	1.01 ± 0.89	1.13	0.27 ± 1.36	0.98 ± 0.85

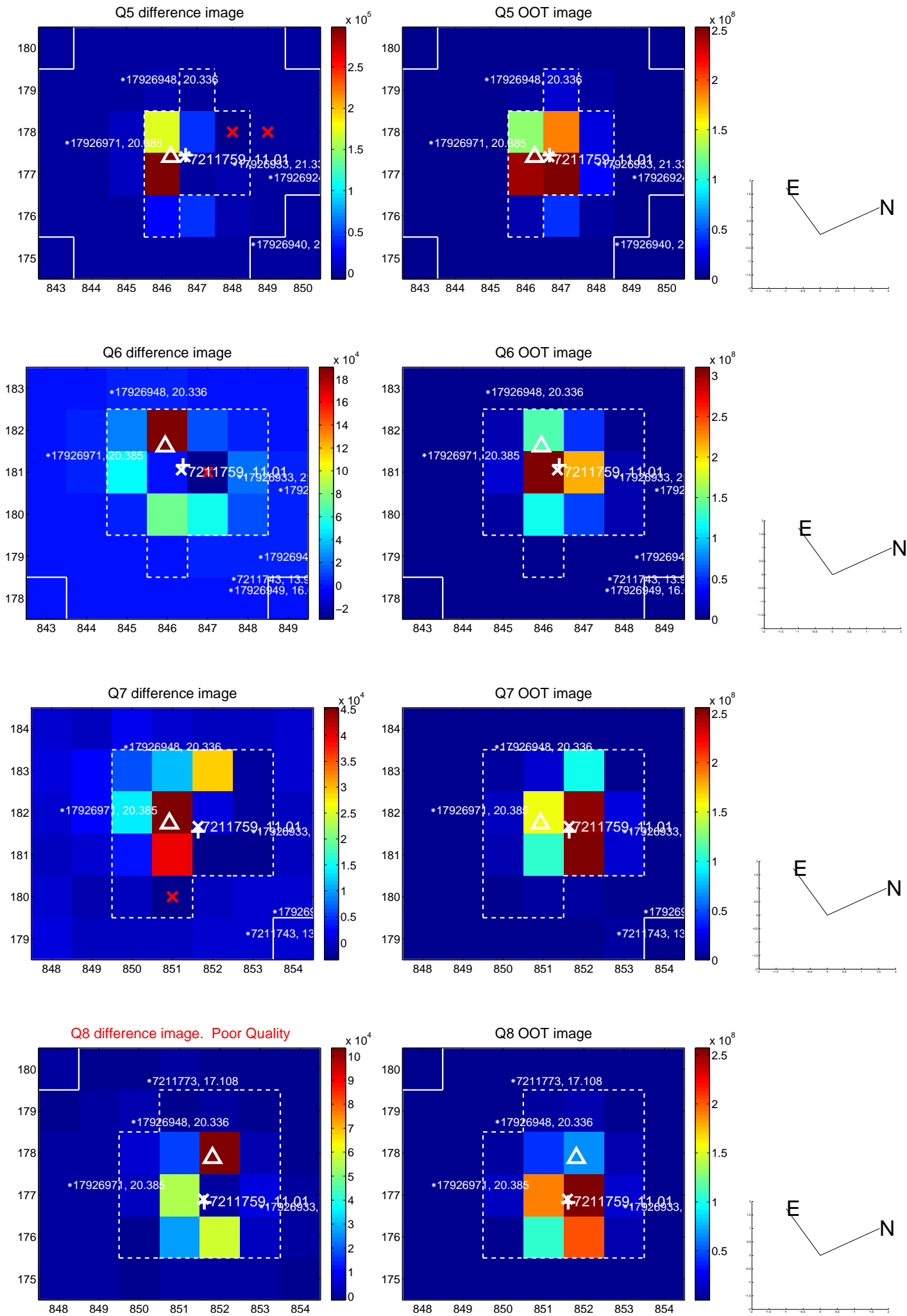


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

Q9 no difference image



Q9 no OOT image



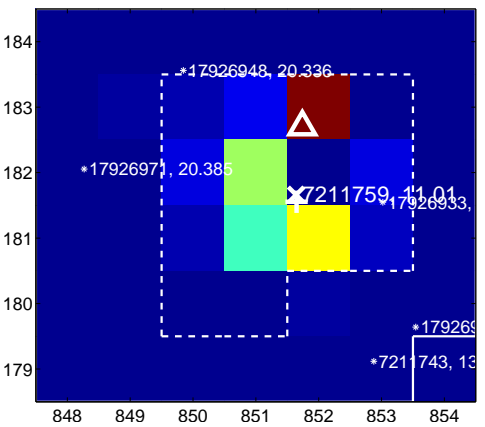
Q10 no difference image



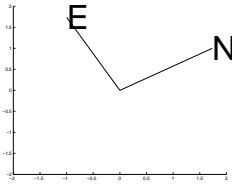
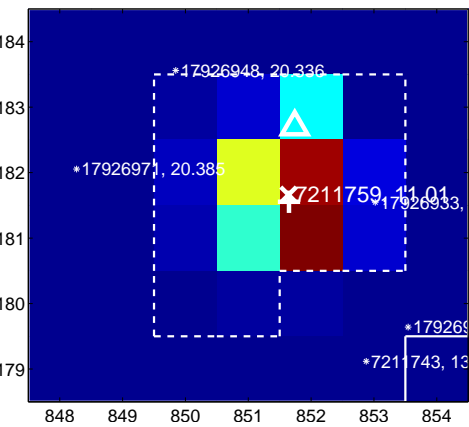
Q10 no OOT image



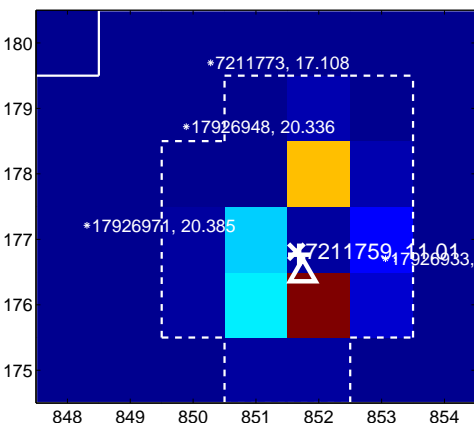
Q11 difference image. Poor Quality



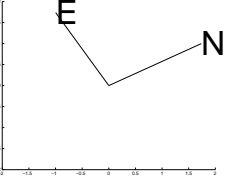
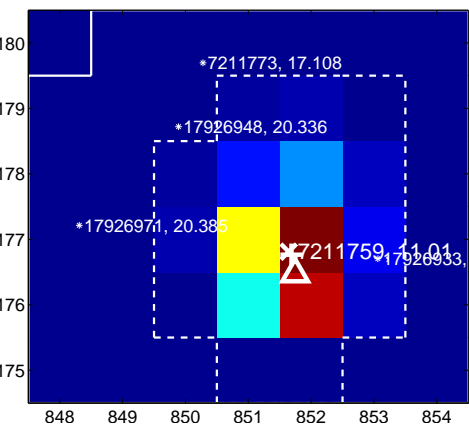
Q11 OOT image



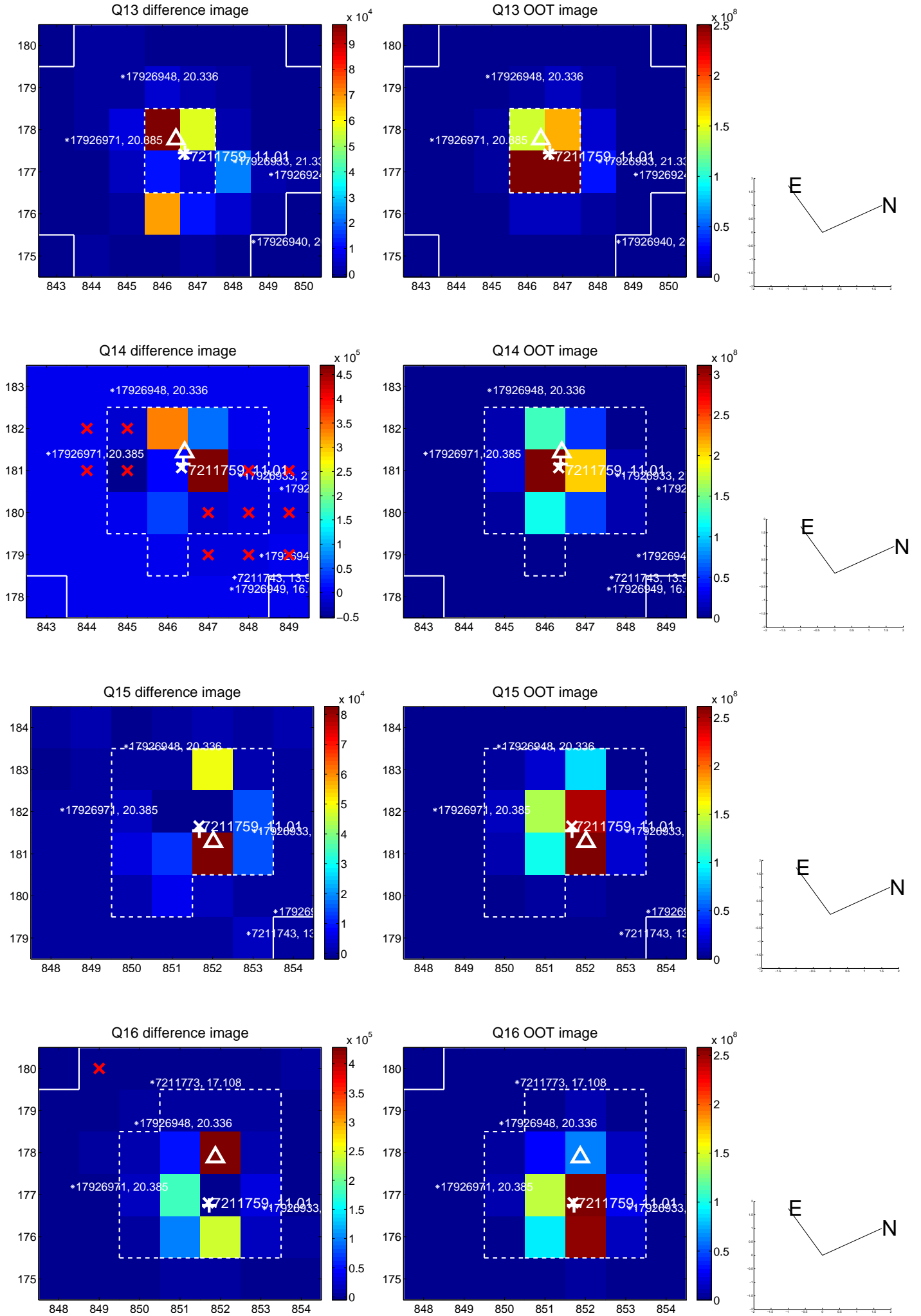
Q12 difference image



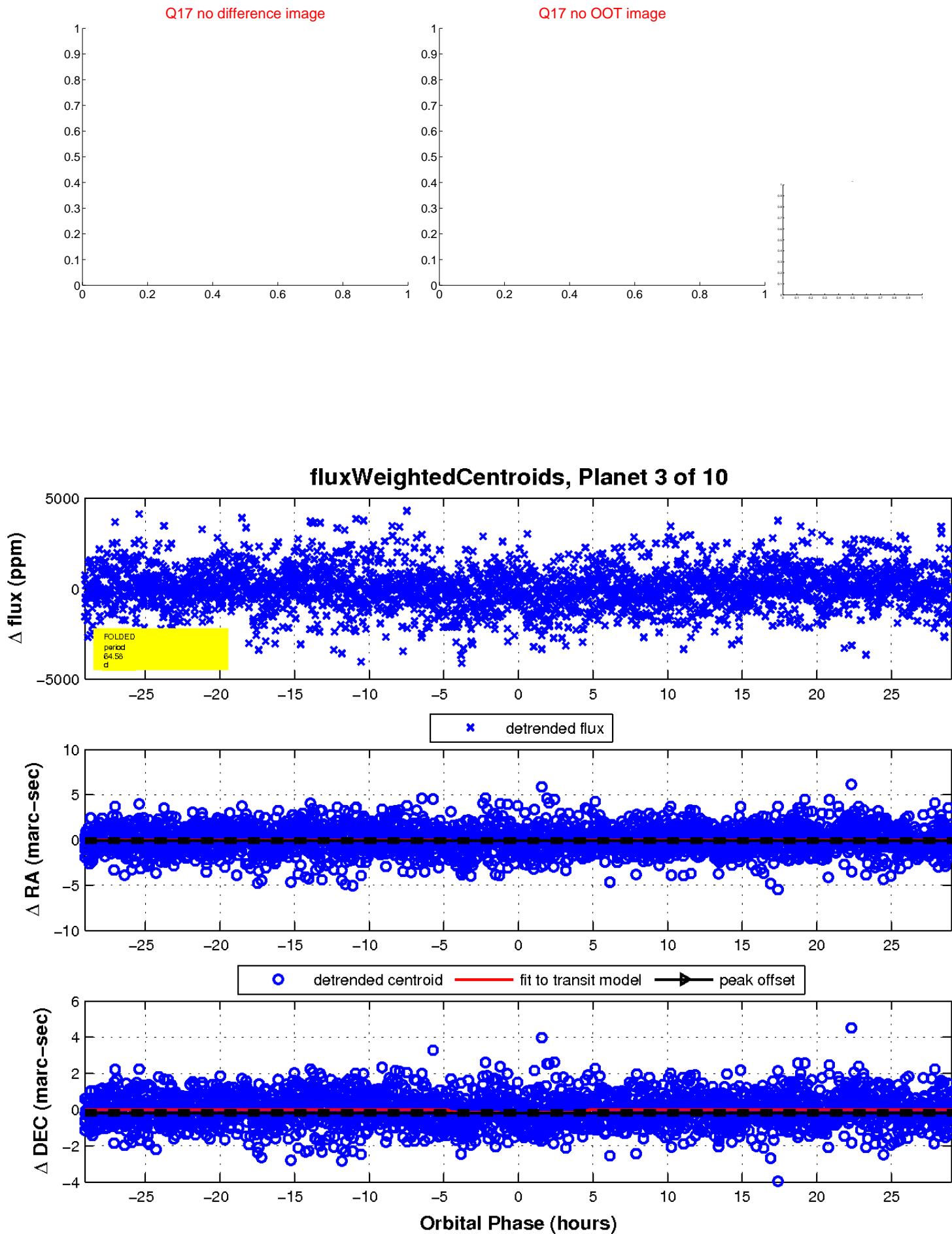
Q12 OOT image



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

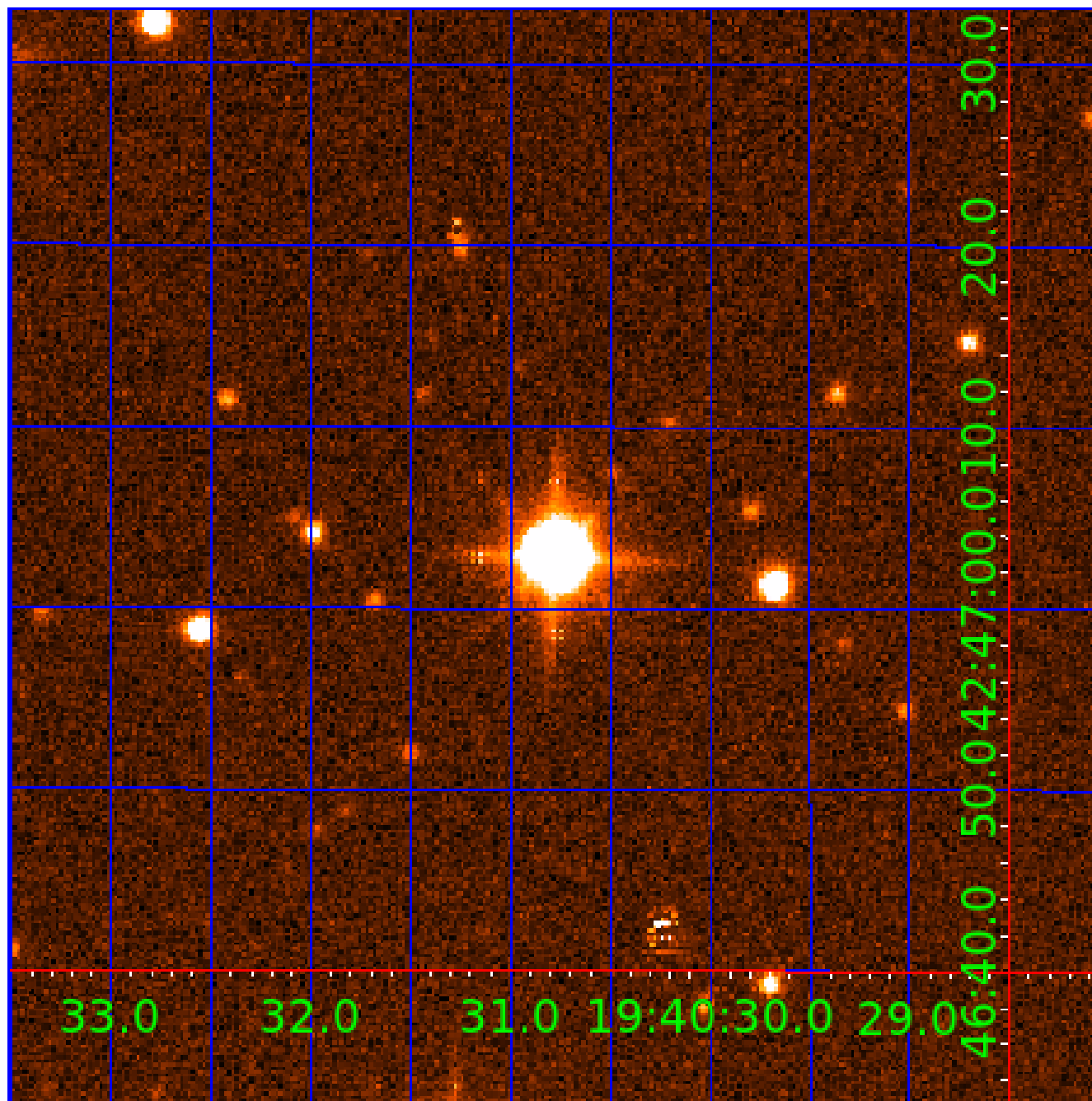


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



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})
007211759-01	OBS	No	48.541107	161.892782	786.7	0.928	134.9	4.7	3.16	8402	9.99	408.44
007211759-02	OBS	No	358.886546	161.664202	215.2	2.879	29.2	15.0	3.16	8402	5.34	28.36
007211759-03	OBS	No	64.575712	164.014592	178.7	9.683	22.3	21.9	3.16	8402	4.74	279.16
007211759-04	OBS	No	40.935358	162.840184	275.3	4.161	21.3	21.2	3.16	8402	6.05	512.64
007211759-05	OBS	No	34.650460	160.429464	15.4	0.524	15.5	0.4	3.16	8402	1.60	640.22
007211759-06	OBS	No	34.637188	160.678807	17.4	3.190	15.7	1.3	3.16	8402	1.53	640.55
007211759-07	OBS	No	27.387010	136.391221	18.2	3.254	9.9	2.3	3.16	8402	1.46	876.09
007211759-08	OBS	No	26.505878	136.615978	428.1	6.000	38.8	-1.0	3.16	8402	6.62	915.13
007211759-09	OBS	No	26.082524	137.048060	102.2	7.484	21.7	7.7	3.16	8402	3.69	934.99
007211759-10	OBS	No	26.321290	135.945076	208.1	15.000	35.7	-1.0	3.16	8402	4.61	923.70

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007211759-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
007211759-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
007211759-03	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED—HALO_GHOST
007211759-04	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
007211759-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED—HALO_GHOST
007211759-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA_TRACKER—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_SATURATED
007211759-07	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED—HALO_GHOST
007211759-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
007211759-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
007211759-10	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED

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

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

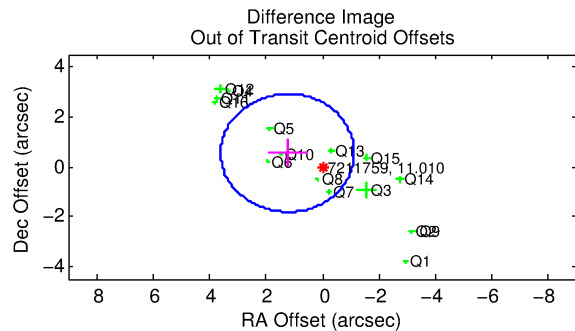
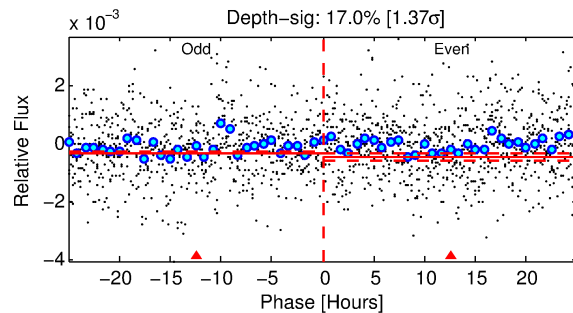
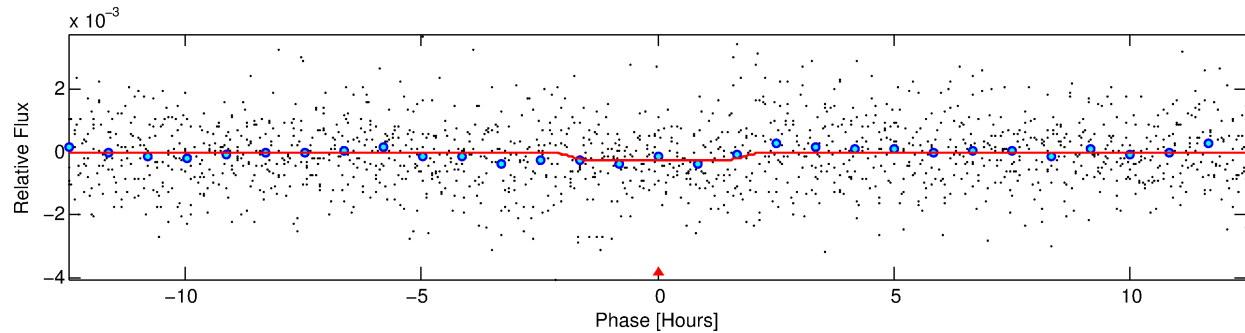
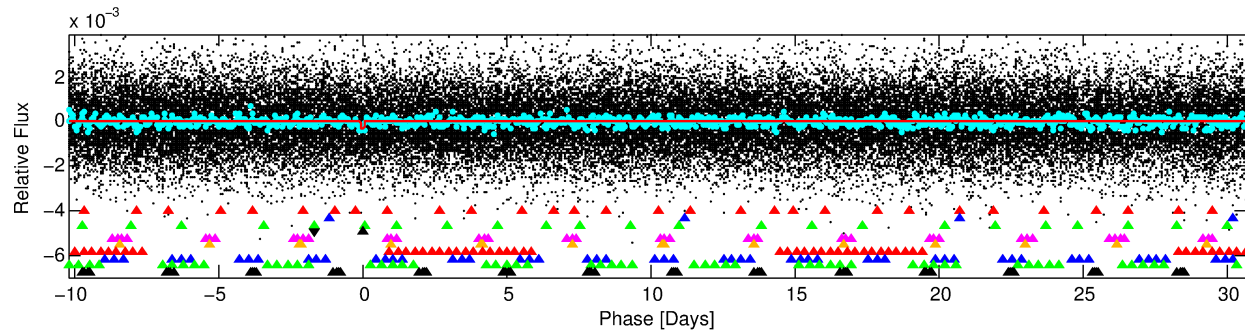
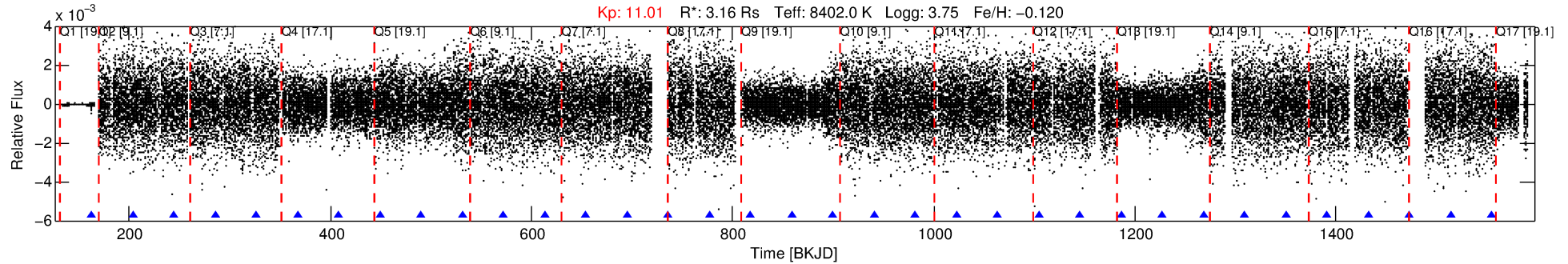
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007211759-04

No Significant Match Found

DV One-Page Summary

KIC: 7211759 Candidate: 4 of 10 Period: 40.935 d



DV Fit Results:

Period = 40.93536 [0.00061] d
Epoch = 162.8402 [0.0037] BKJD
 $R_p/R^* = 0.0176$ [0.0082]
 $a/R^* = 36.74$ [111.70]
 $b = 0.89$ [0.70]
 $S_{\text{eff}} = 512.64$ [360.58]
 $T_{\text{eq}} = 1213$ [213] K
 $R_p = 6.05$ [3.93] R_{e}
 $a = 0.2946$ [0.1261] AU
 $A_g = 78.58$ [91.83] [0.84 σ]
 $T_{\text{eff}} = 5585$ [1347] K [3.20 σ]

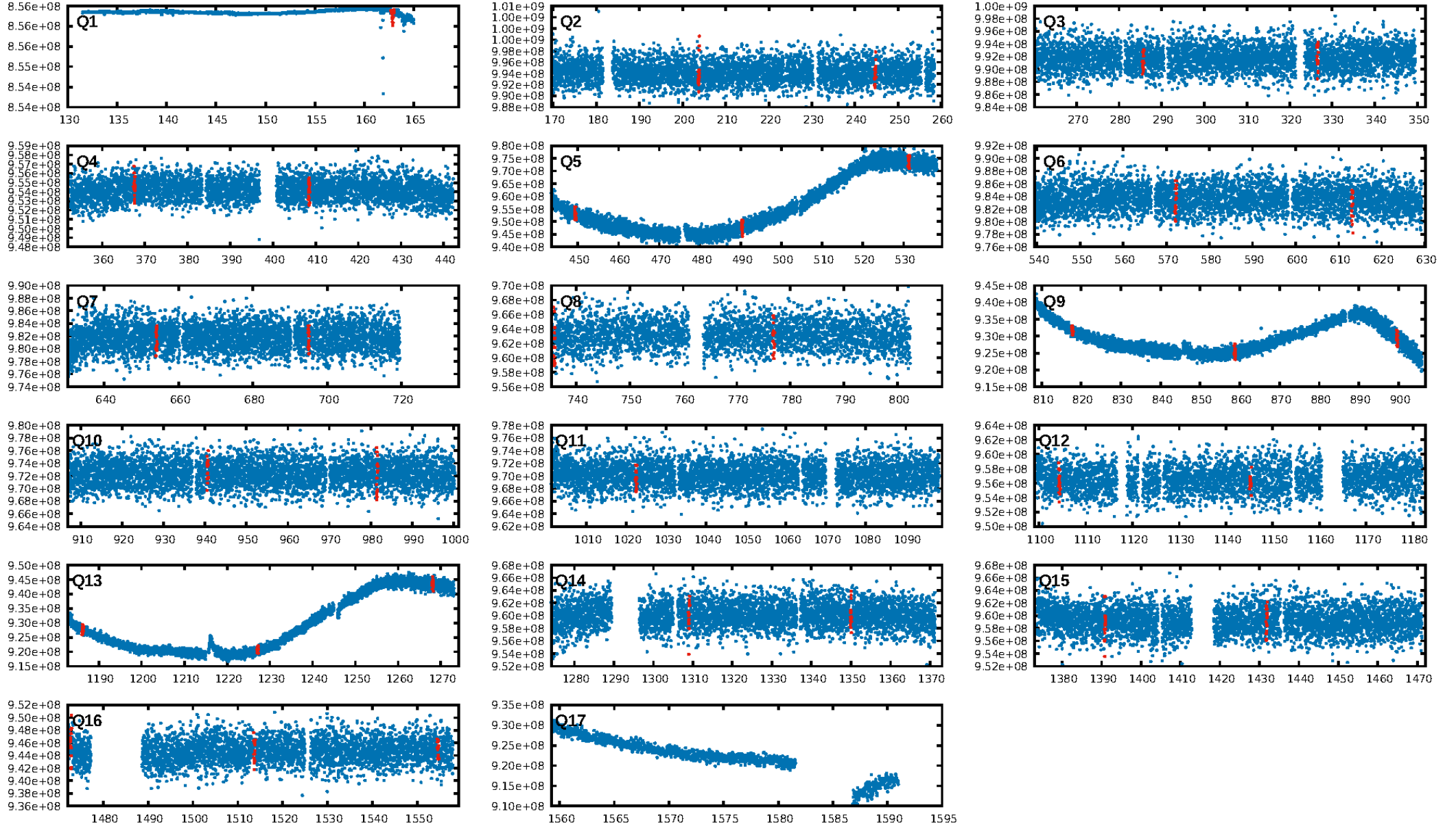
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [35.97 σ]
LongPeriod-sig: 100.0% [42.82 σ]
ModelChiSquare2-sig: 99.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [31/31]
GhostDiagnostic-chr: 1.269
Centroid-sig: 26.9%
Centroid-so: 1.108 arcsec [1.02 σ]
OotOffset-rm: 1.356 arcsec [1.72 σ]
KicOffset-rm: 1.440 arcsec [1.82 σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.50 [8/16]
DiffImageOverlap-fno: 0.94 [15/16]

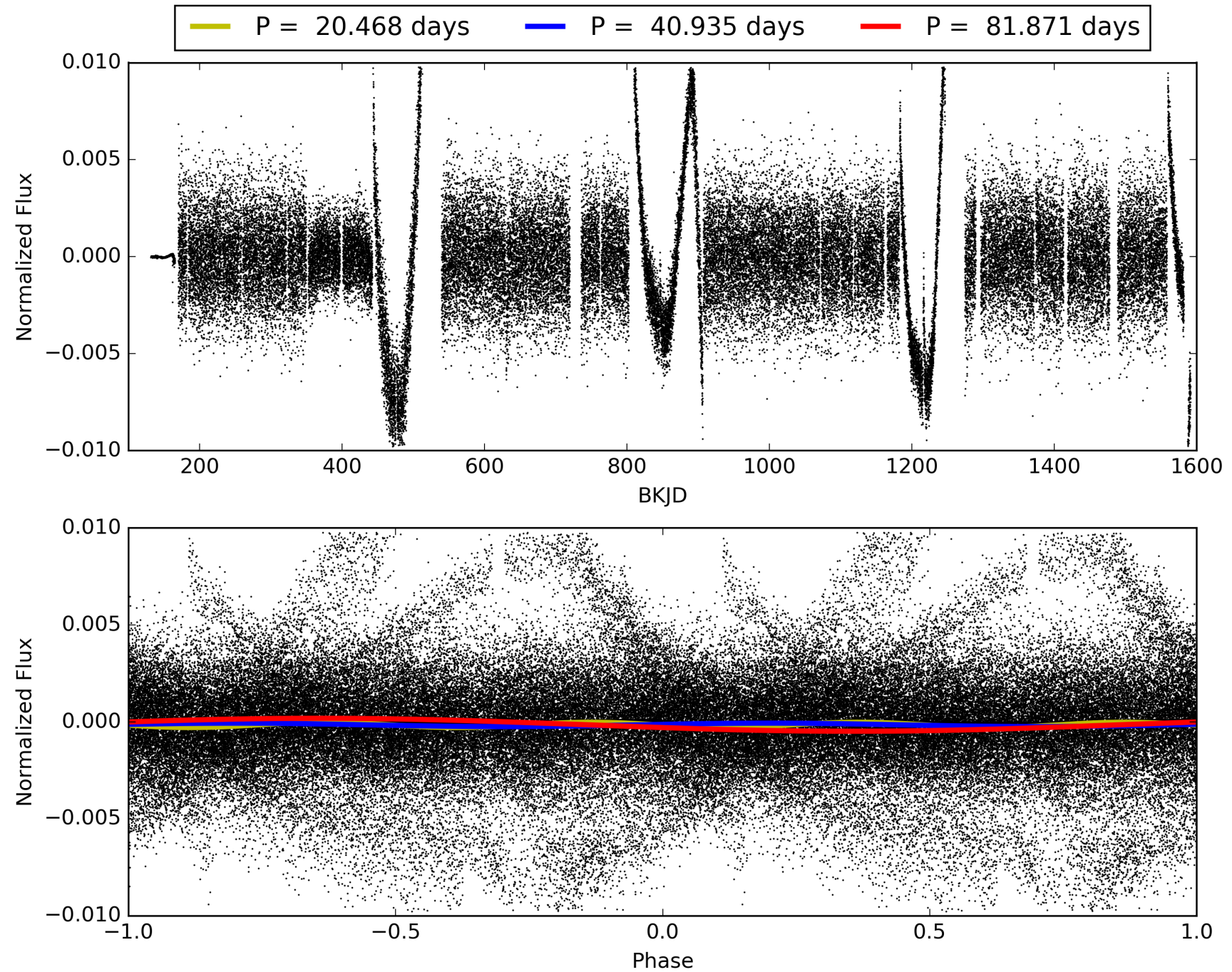
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 08:37:21 Z

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

TCE 007211759-04, PDC Light Curves

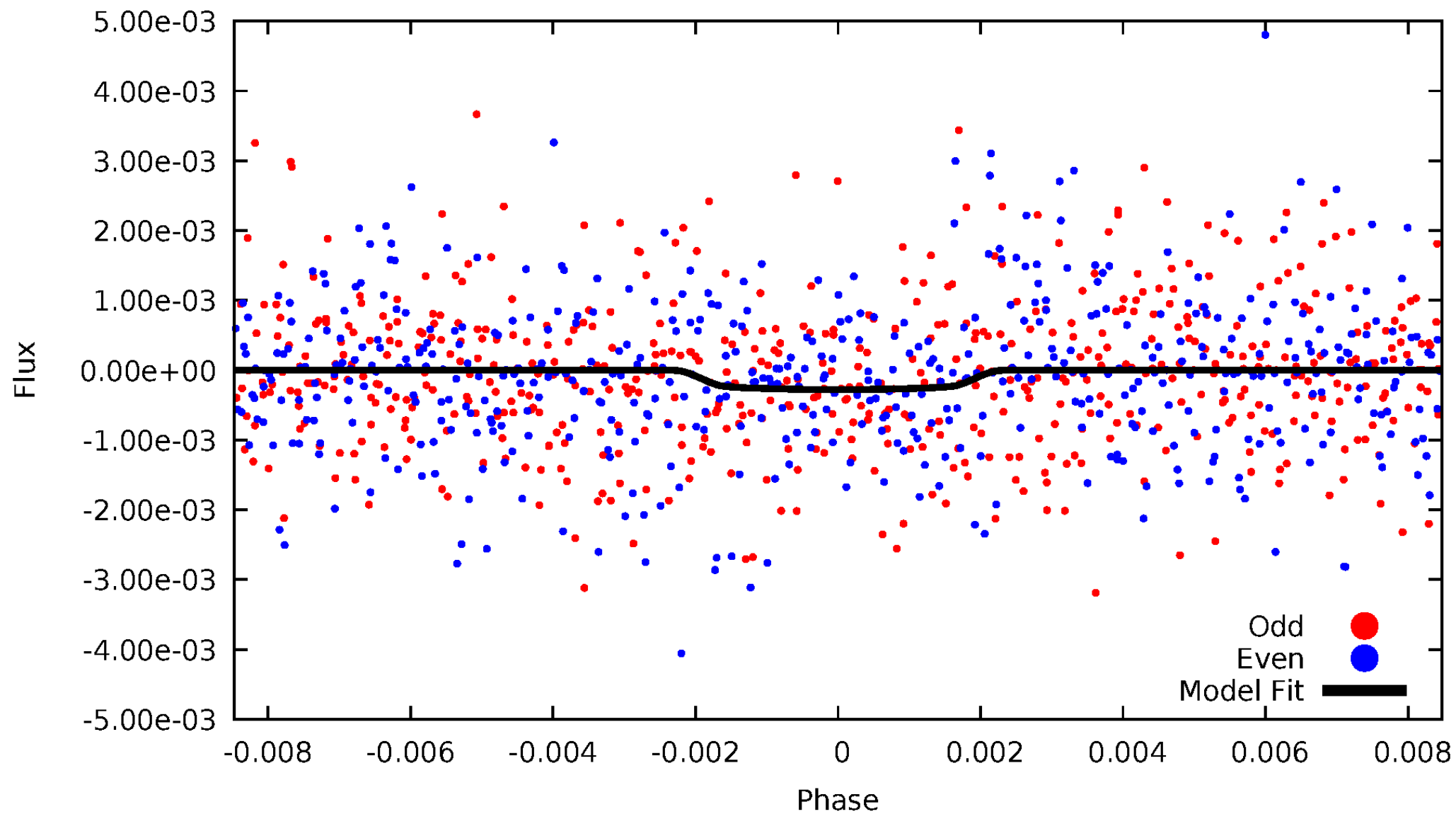


TCE 007211759-04



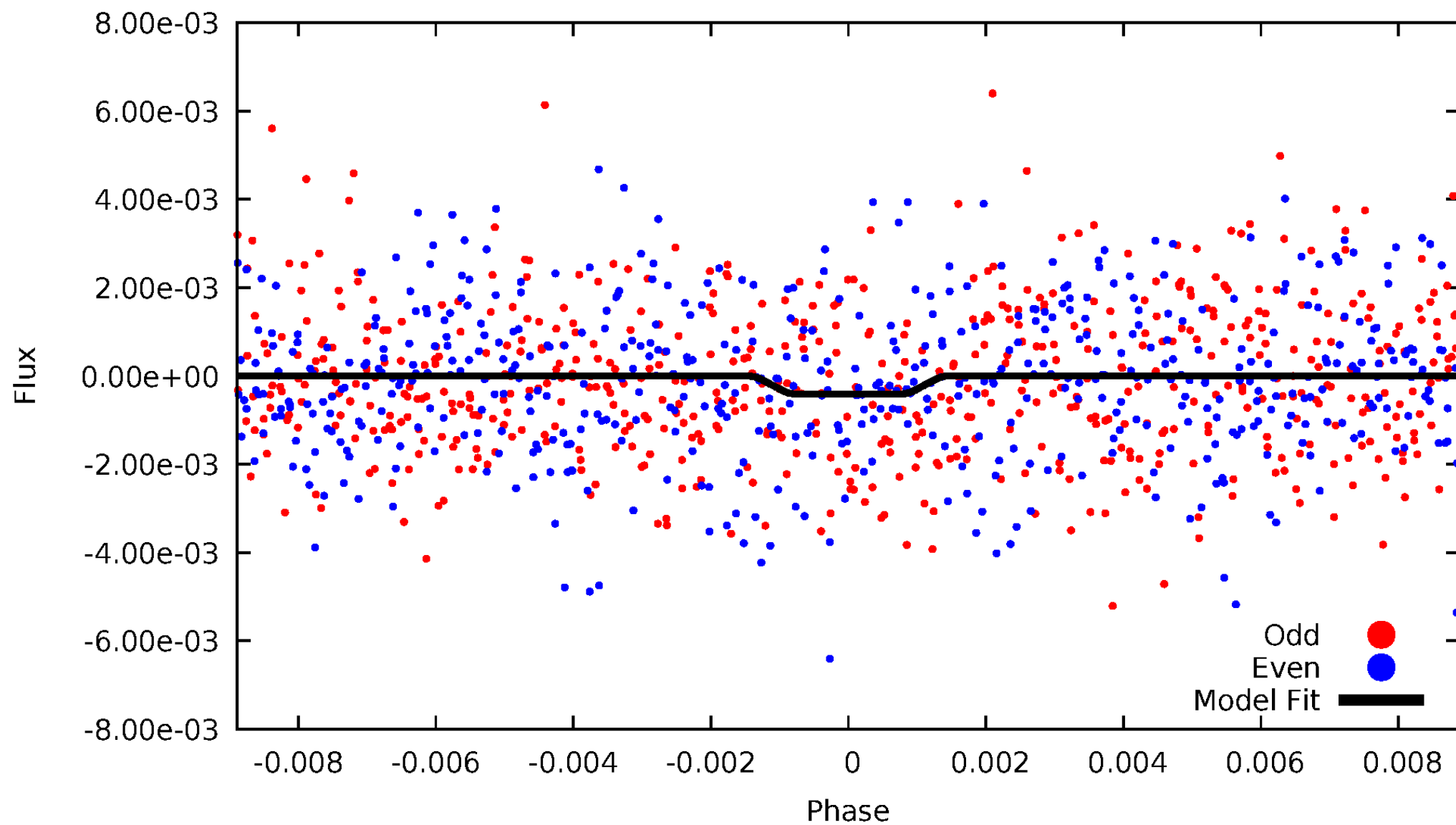
DV Odd/Even

TCE 007211759-04



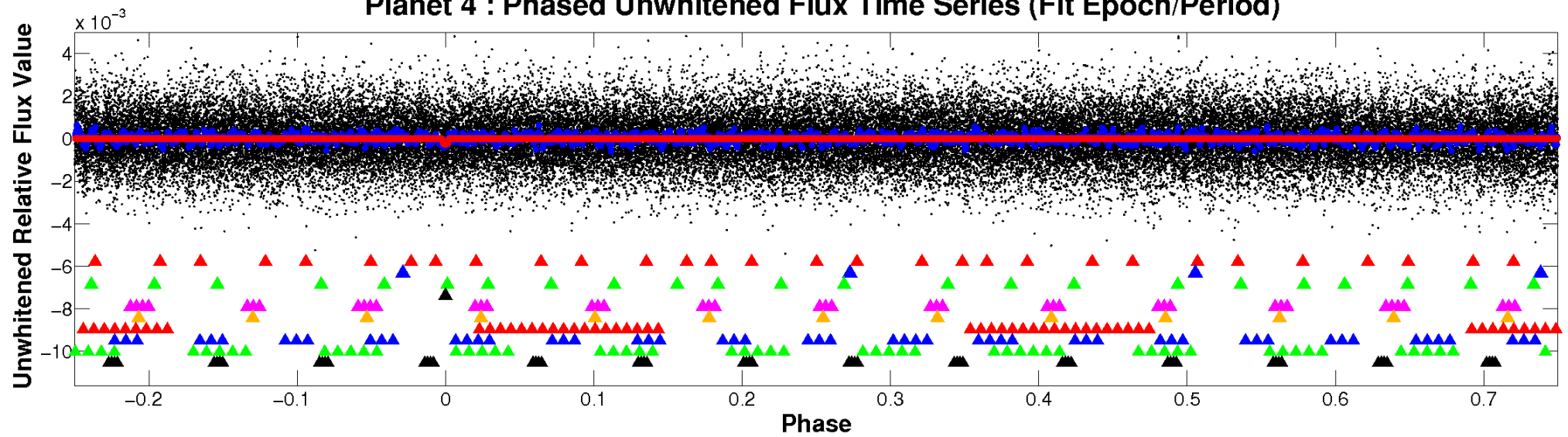
ALT Odd/Even

TCE 007211759-04

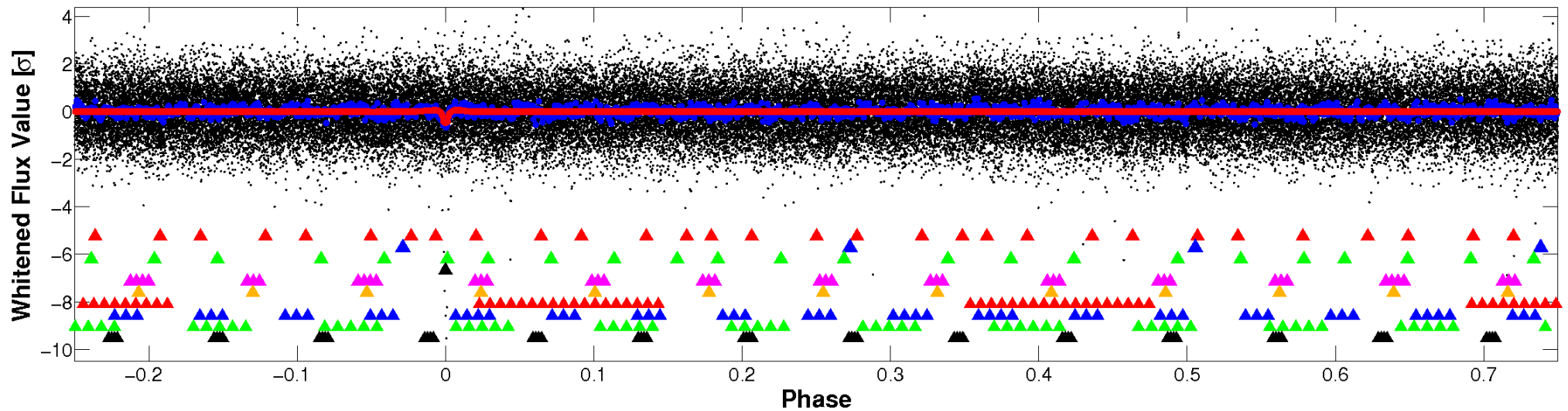


Non-Whitened Vs. Whitened Light Curve

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

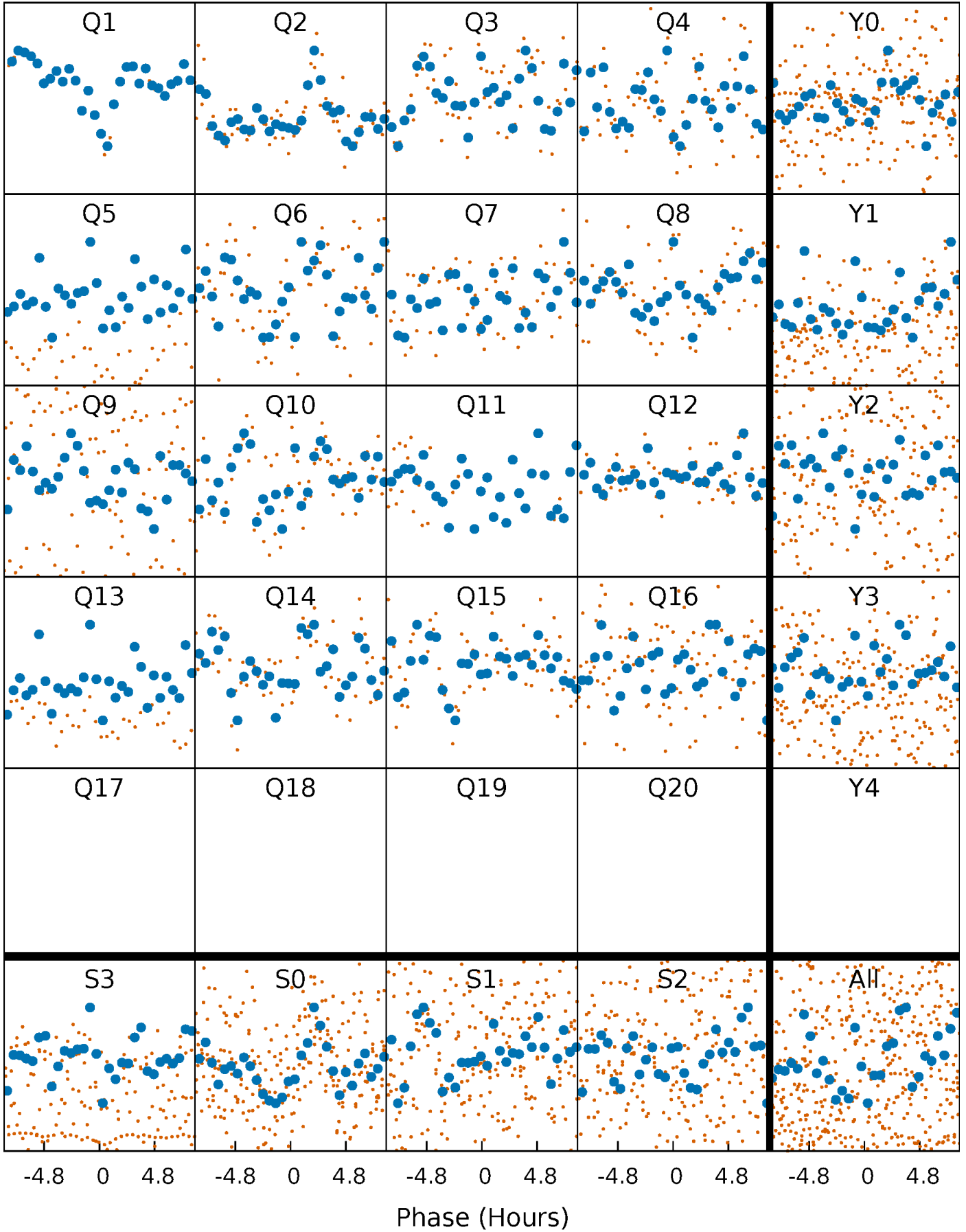


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



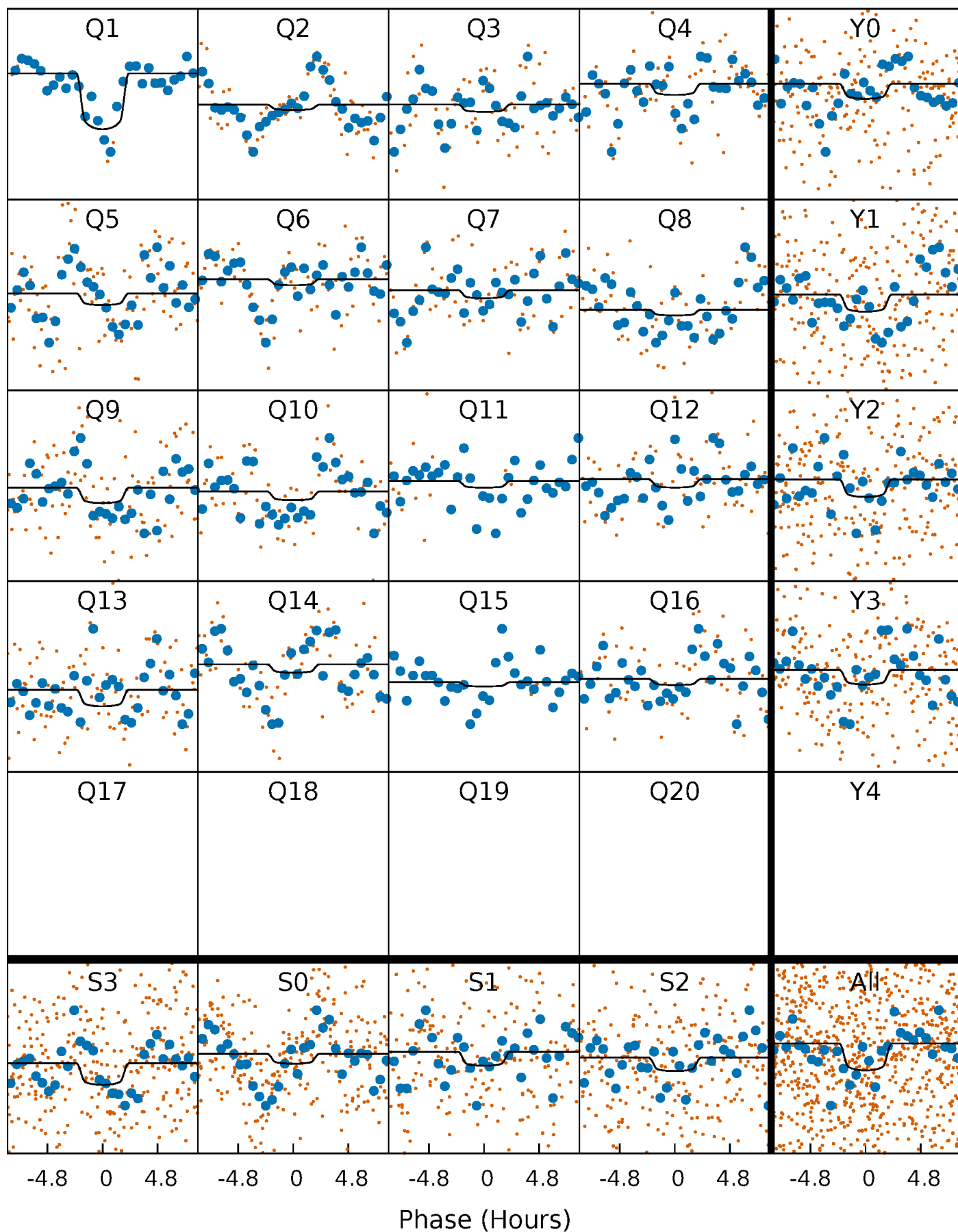
PDC Quarter-Phased Transit Curves

TCE 007211759-04 P= 40.935358 Days $T_0=162.840184$ (BKJD)



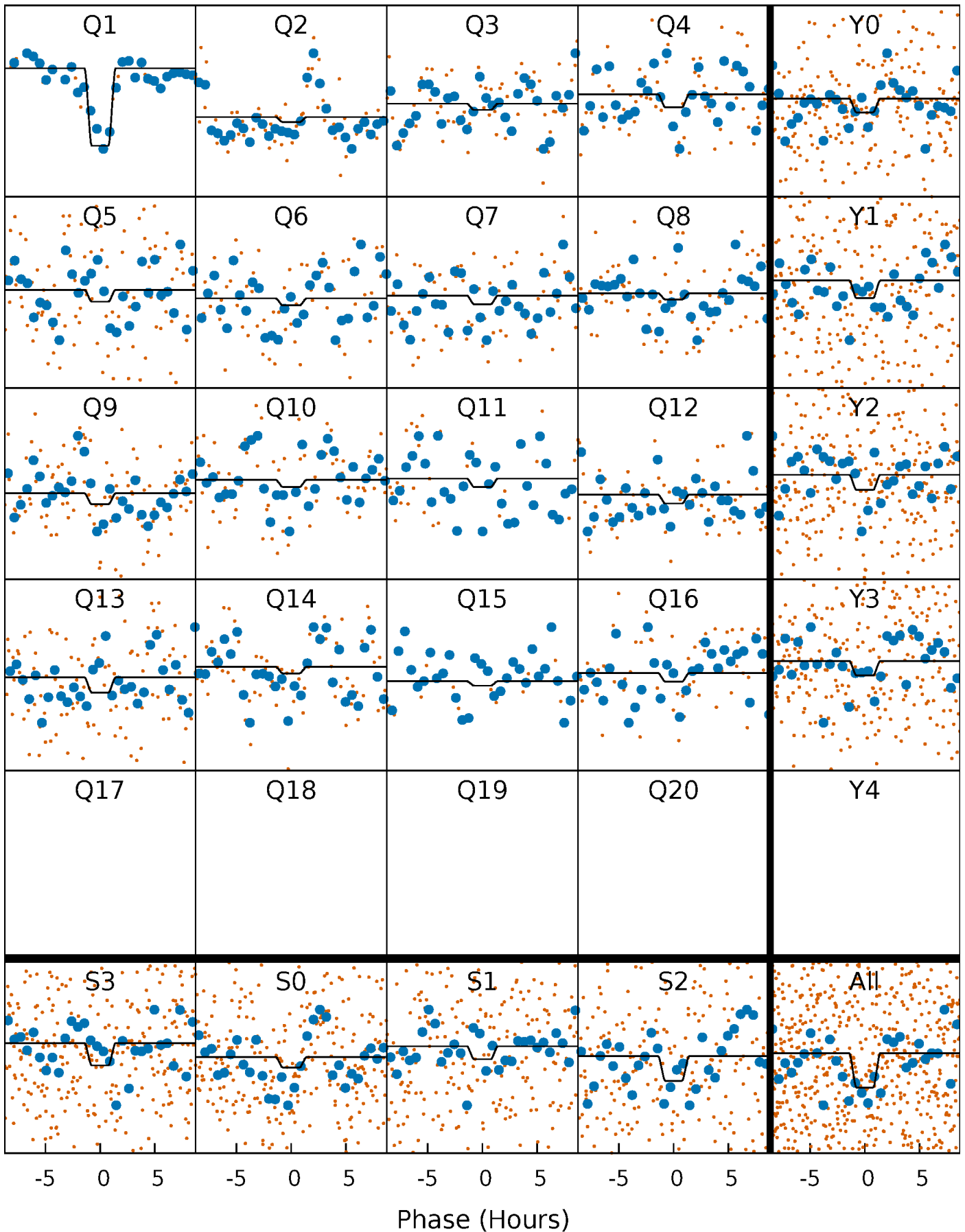
DV Quarter-Phased Transit Curves

TCE 007211759-04 P= 40.935358 Days $T_0=162.840184$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

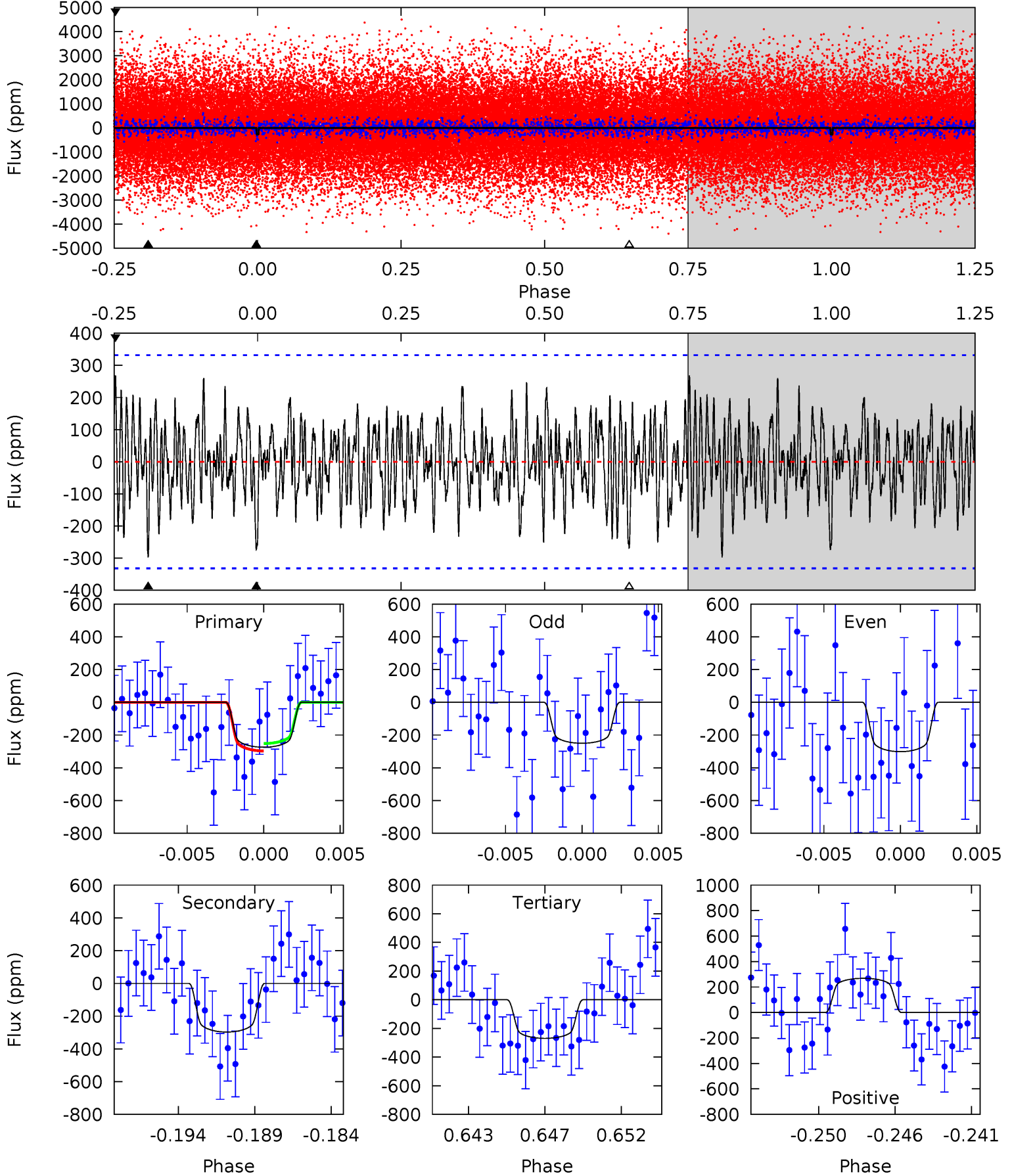
TCE 007211759-04 $P = 40.933595$ Days $T_0 = 162.850318$ (BKJD)



DV Model-Shift Uniqueness Test

007211759-04, P = 40.935358 Days, E = 121.904826 Days

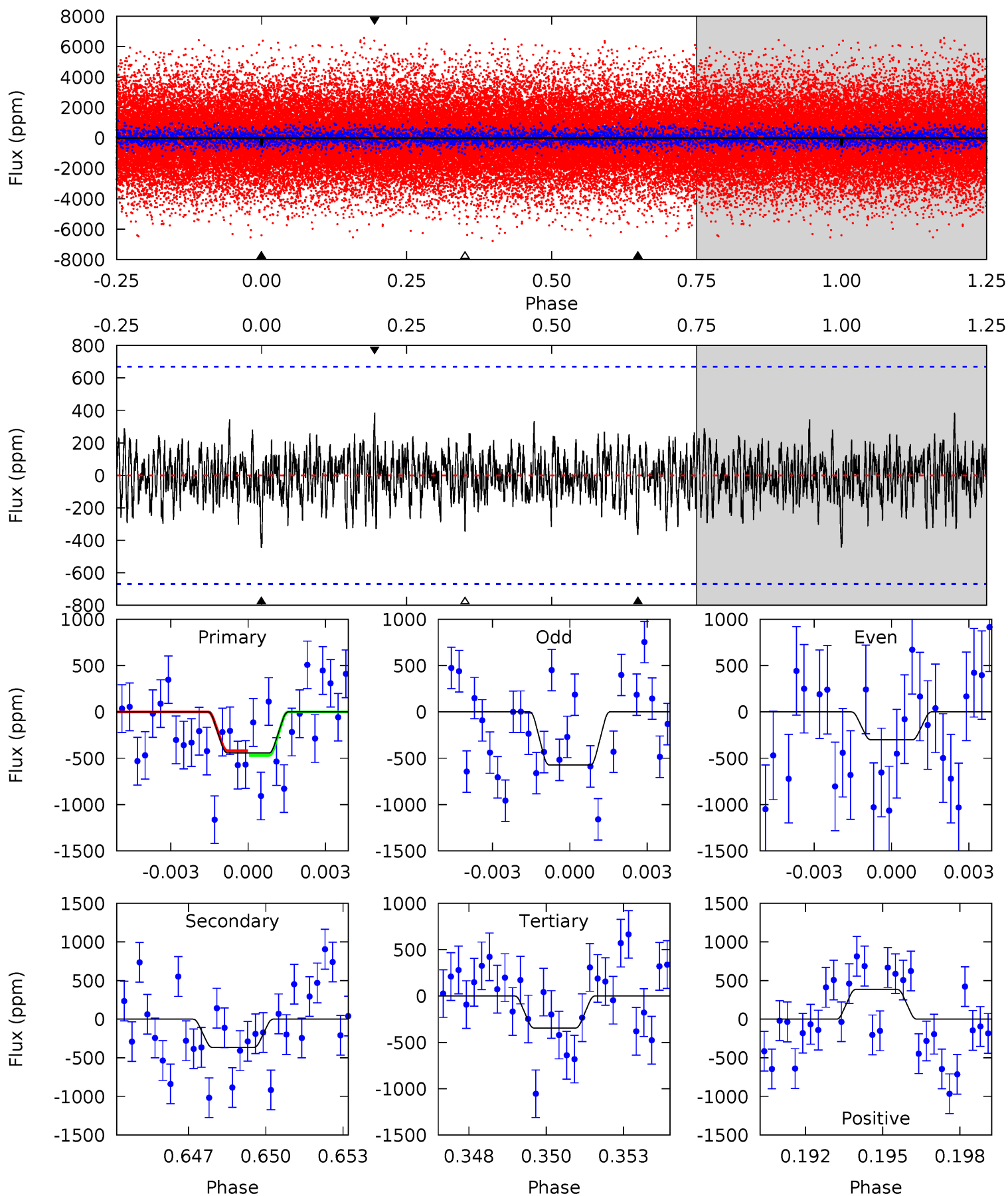
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.27	4.63	4.19	4.18	5.17	2.83	1.53	0.08	0.09	0.43	0.45	0.40	1.01	0.47	0.35



Alt Model-Shift Uniqueness Test

007211759-04, P = 40.933595 Days, E = 121.916723 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.49	2.88	2.72	3.03	5.26	2.99	0.91	0.77	0.46	0.16	-0.15	1.07	2.23	0.46	0.20



Stellar Parameters For KIC 007211759

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8402^{+232}_{-365}	$3.748^{+0.399}_{-0.142}$	$-0.120^{+0.350}_{-0.400}$	$3.157^{+0.944}_{-1.416}$	$2.039^{+0.384}_{-0.469}$	$0.091^{+0.335}_{-0.045}$
	+3%/-4%	+11%/-4%	+292%/-333%	+30%/-45%	+19%/-23%	+367%/-49%
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 007211759-04 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-297 ± 64	$5.54^{+3.17}_{-2.45}$	1648^{+137}_{-200}	8237^{+4415}_{-1747}	461^{+1133}_{-284}
Alt.	-366 ± 127	$6.44^{+3.24}_{-2.97}$	1656^{+142}_{-202}	8070^{+3912}_{-1677}	415^{+1055}_{-254}

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

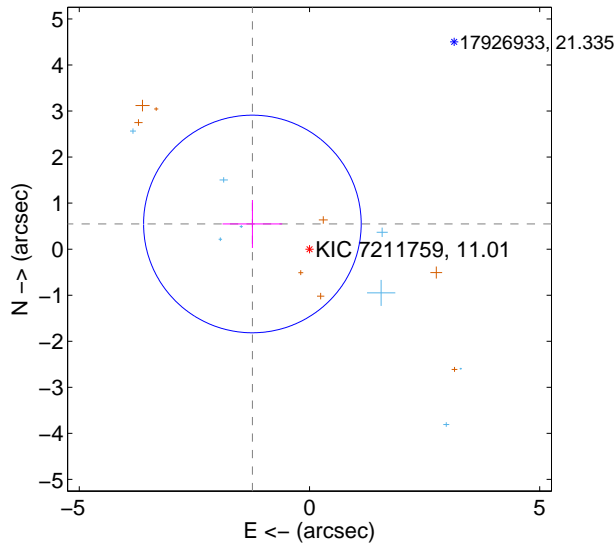
Supplemental centroid analysis for 007211759-04. **Kepler magnitude: 11.01.** Transit SNR 21.21

There are 8 quarters with good PRF difference image offsets

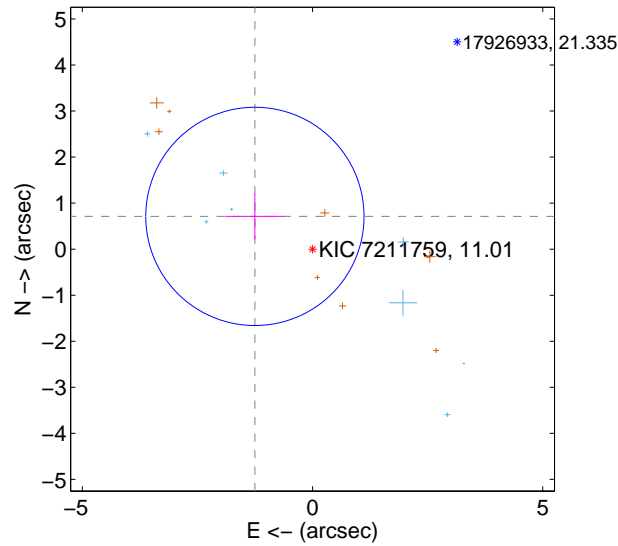
The direct PRF centroid is offset from the target star catalog position by about 0.25 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.356 ± 0.788	1.72	1.240 ± 0.648	0.547 ± 0.520
PRF-fit source offset from KIC position	1.440 ± 0.790	1.82	1.252 ± 0.643	0.712 ± 0.501
photometric centroid source offset	1.11 ± 1.09	1.02	-1.04 ± 1.14	0.39 ± 0.68

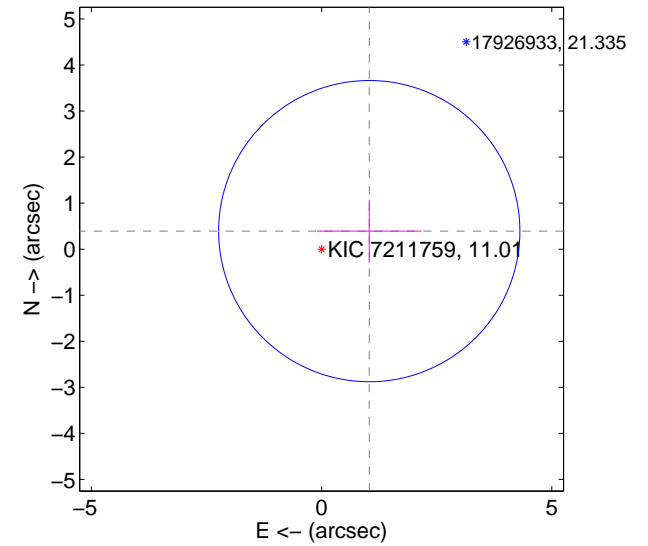
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

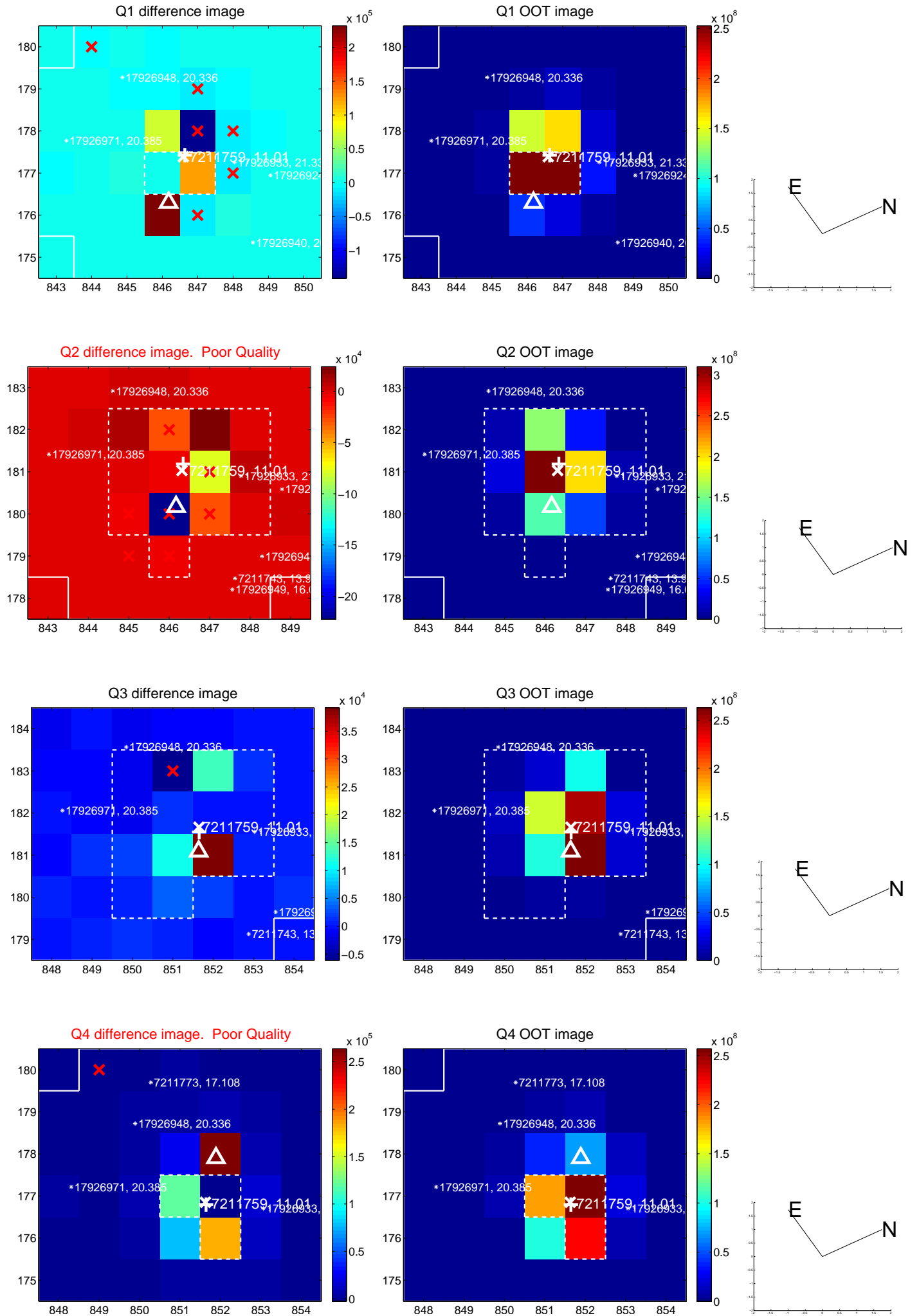


offset from photometric centroids

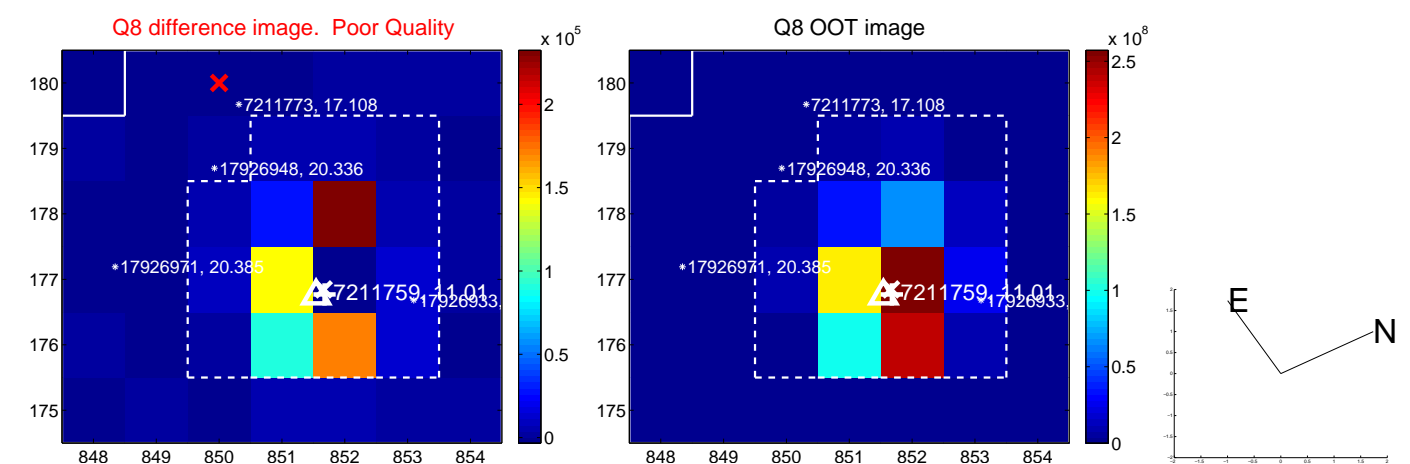
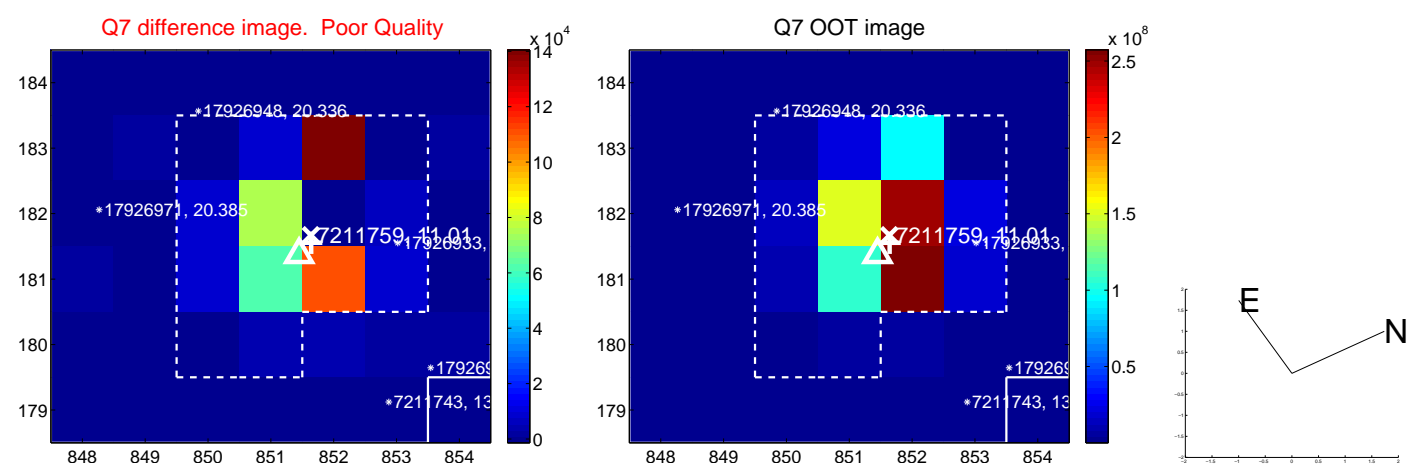
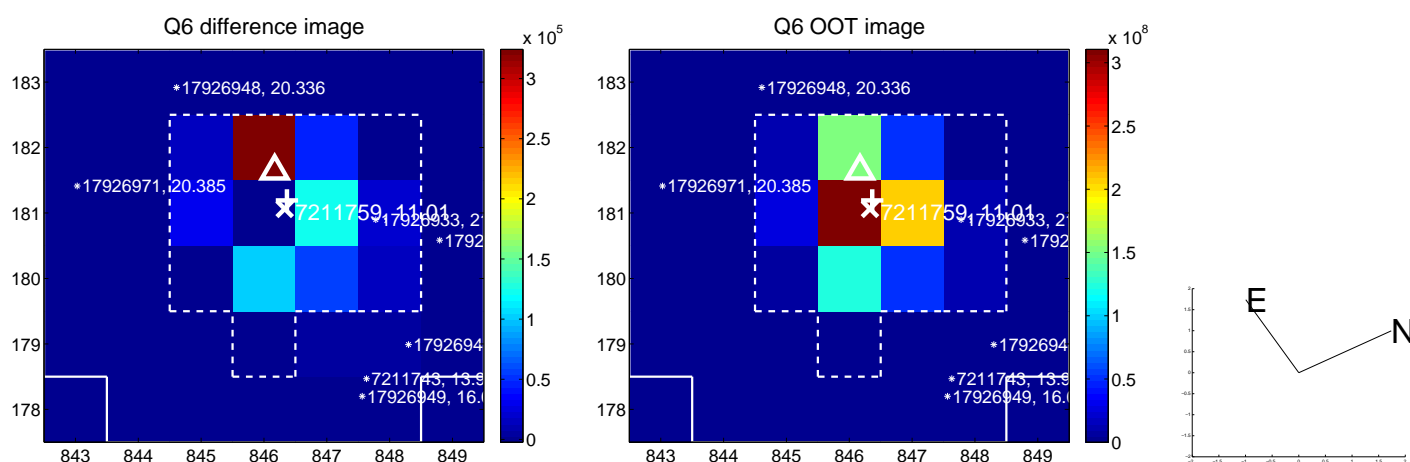
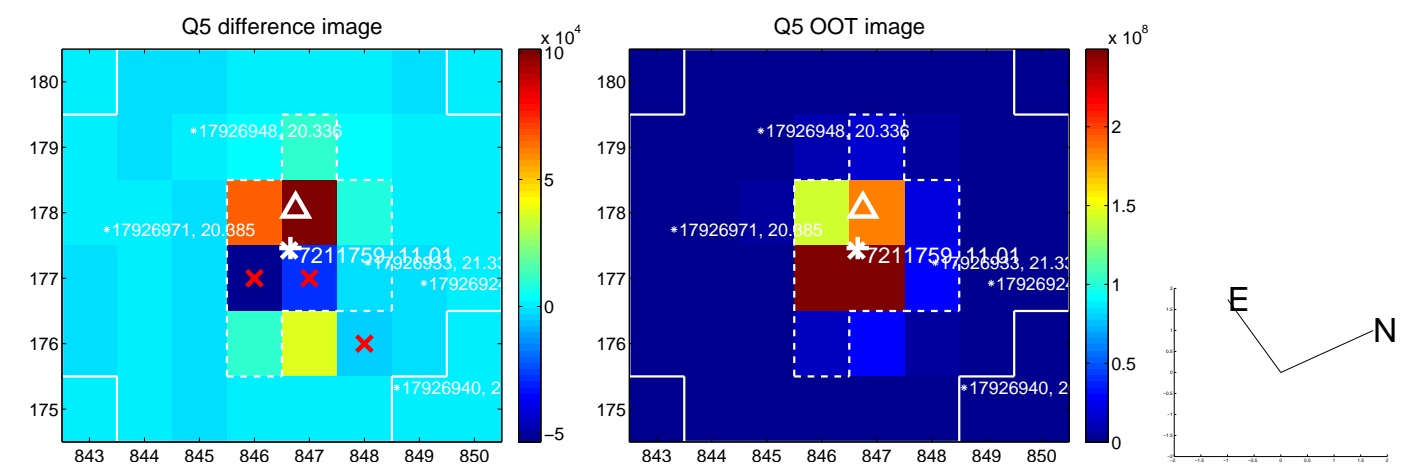


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

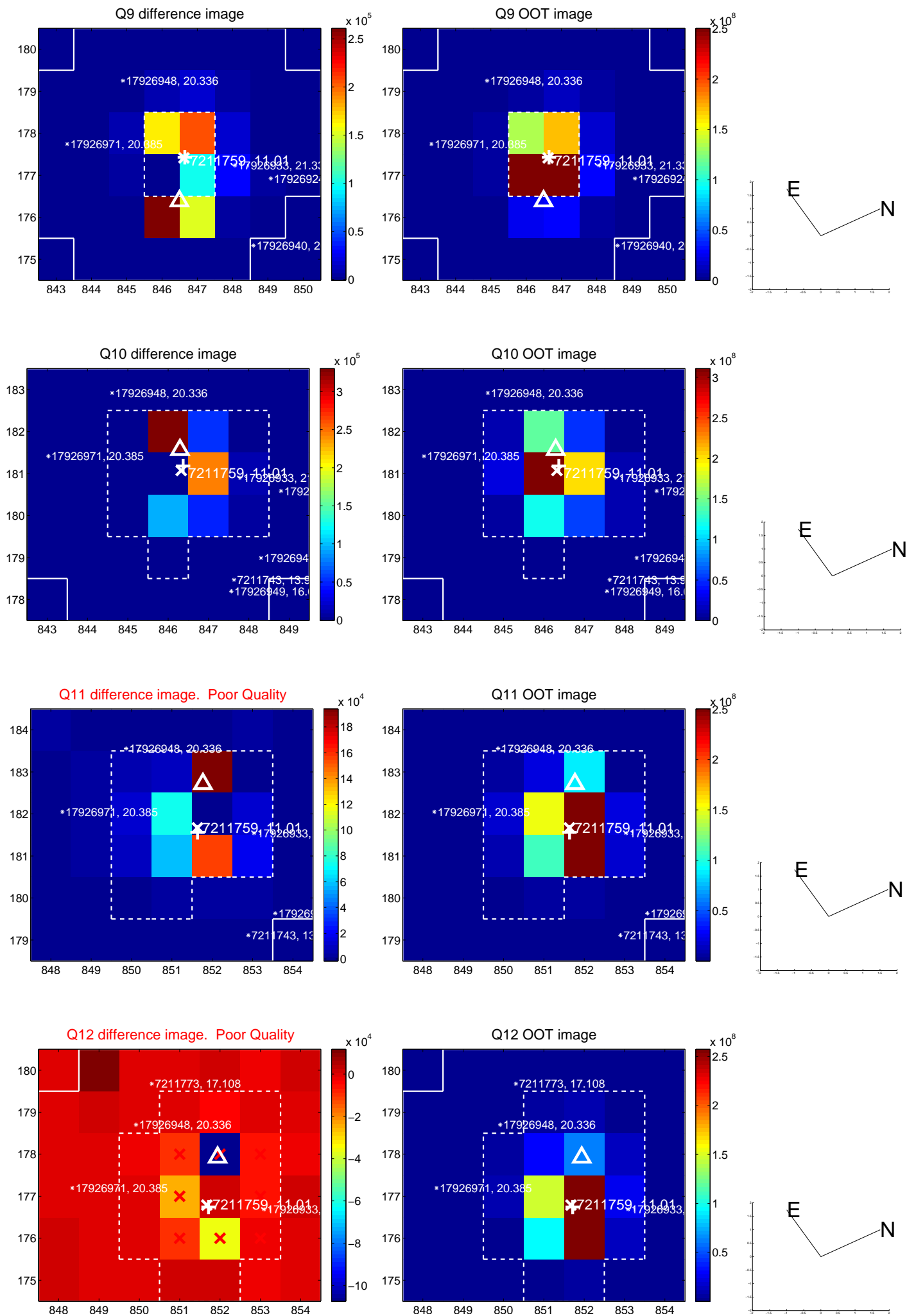
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



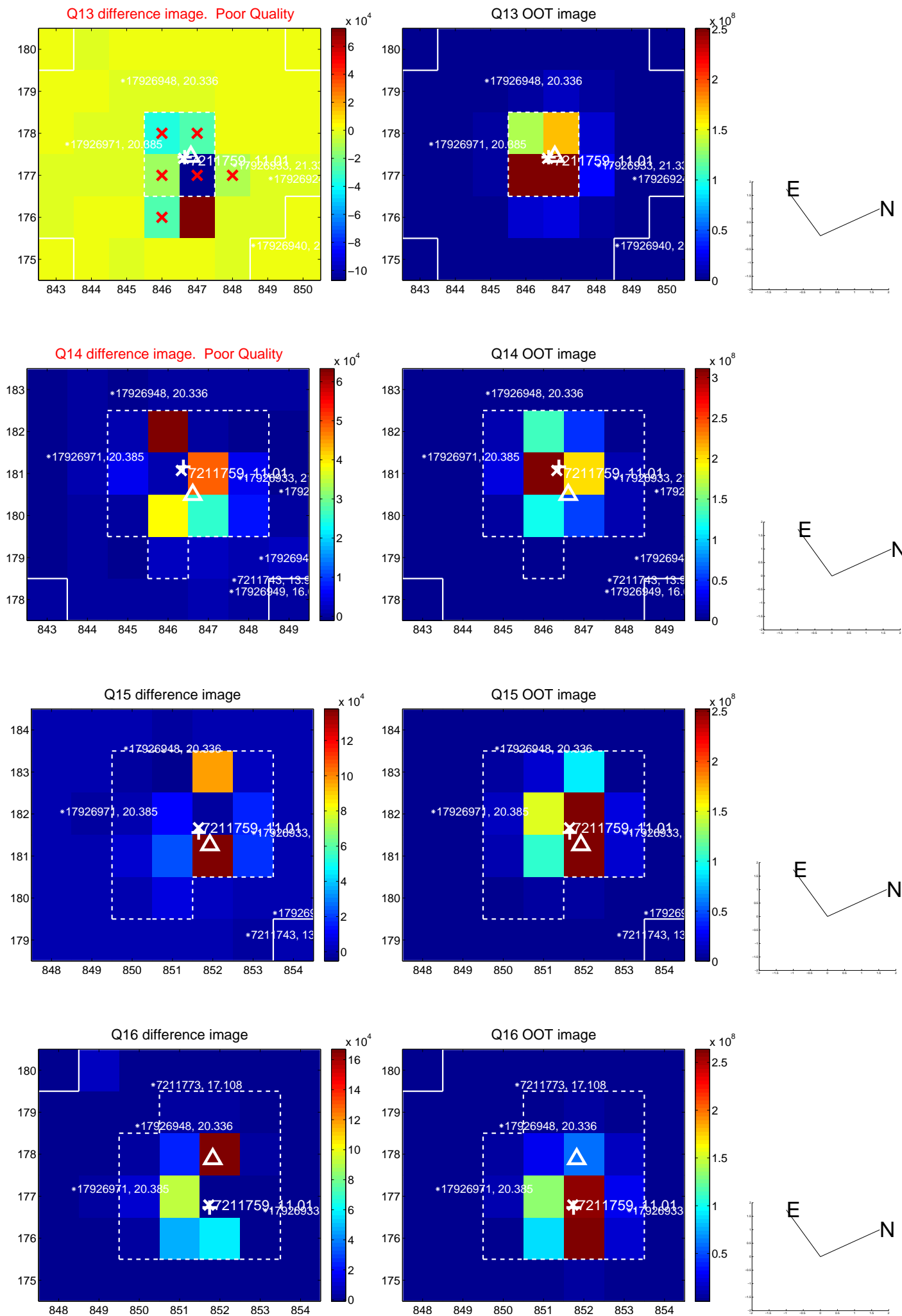
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



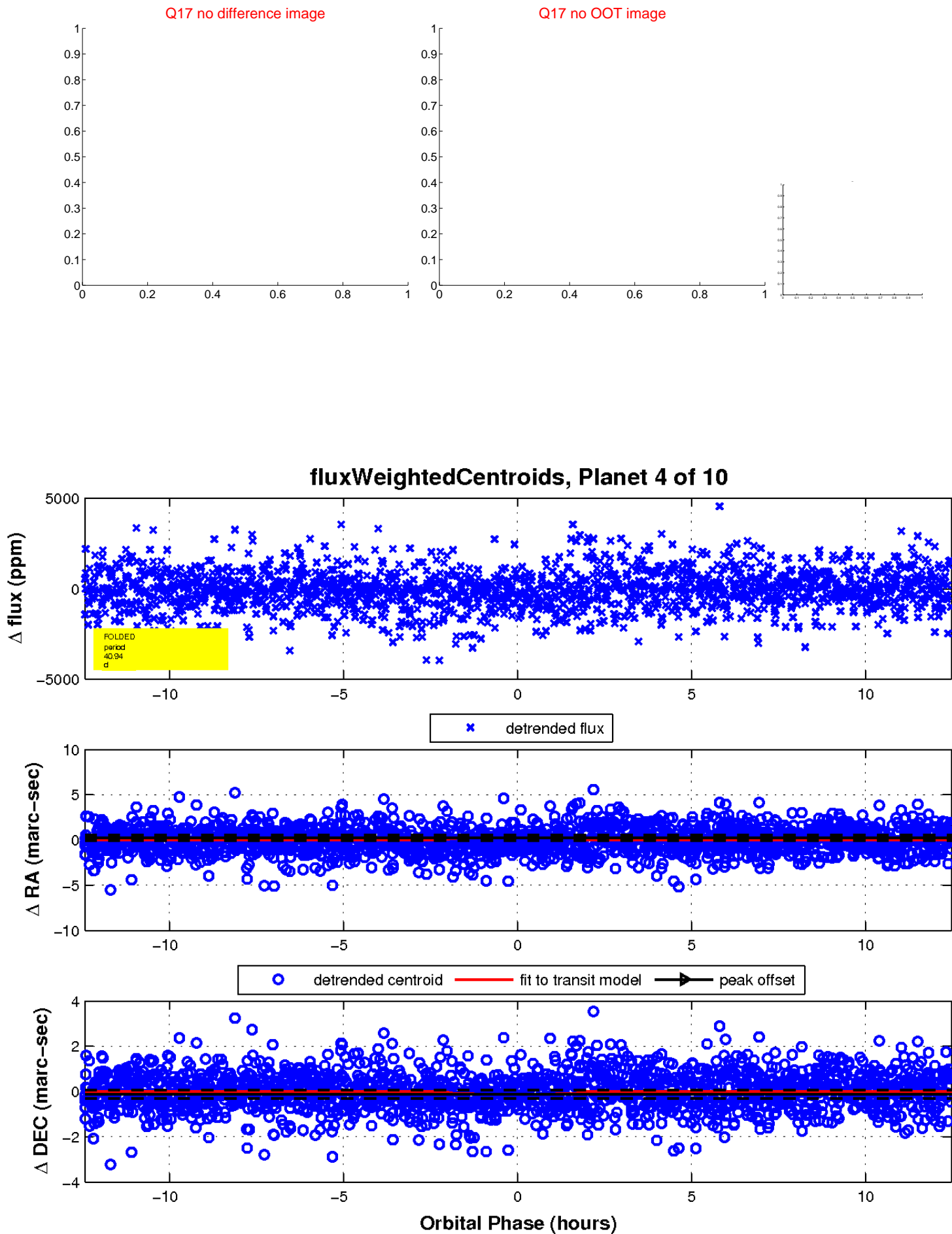
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

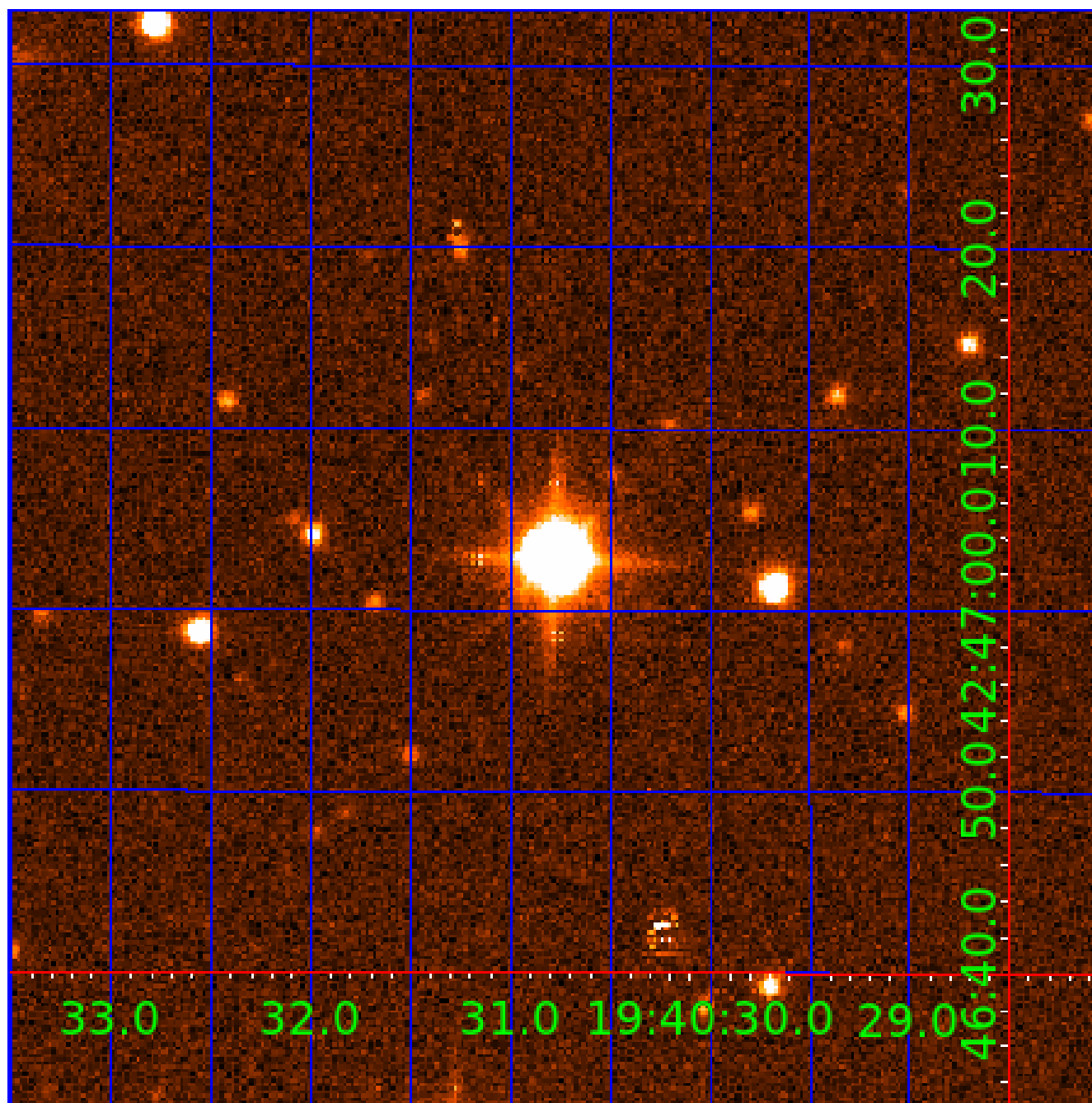


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



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})
007211759-01	OBS	No	48.541107	161.892782	786.7	0.928	134.9	4.7	3.16	8402	9.99	408.44
007211759-02	OBS	No	358.886546	161.664202	215.2	2.879	29.2	15.0	3.16	8402	5.34	28.36
007211759-03	OBS	No	64.575712	164.014592	178.7	9.683	22.3	21.9	3.16	8402	4.74	279.16
007211759-04	OBS	No	40.935358	162.840184	275.3	4.161	21.3	21.2	3.16	8402	6.05	512.64
007211759-05	OBS	No	34.650460	160.429464	15.4	0.524	15.5	0.4	3.16	8402	1.60	640.22
007211759-06	OBS	No	34.637188	160.678807	17.4	3.190	15.7	1.3	3.16	8402	1.53	640.55
007211759-07	OBS	No	27.387010	136.391221	18.2	3.254	9.9	2.3	3.16	8402	1.46	876.09
007211759-08	OBS	No	26.505878	136.615978	428.1	6.000	38.8	-1.0	3.16	8402	6.62	915.13
007211759-09	OBS	No	26.082524	137.048060	102.2	7.484	21.7	7.7	3.16	8402	3.69	934.99
007211759-10	OBS	No	26.321290	135.945076	208.1	15.000	35.7	-1.0	3.16	8402	4.61	923.70

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007211759-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
007211759-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
007211759-03	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED—HALO_GHOST
007211759-04	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
007211759-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED—HALO_GHOST
007211759-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA_TRACKER—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_SATURATED
007211759-07	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED—HALO_GHOST
007211759-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
007211759-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
007211759-10	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED

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

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

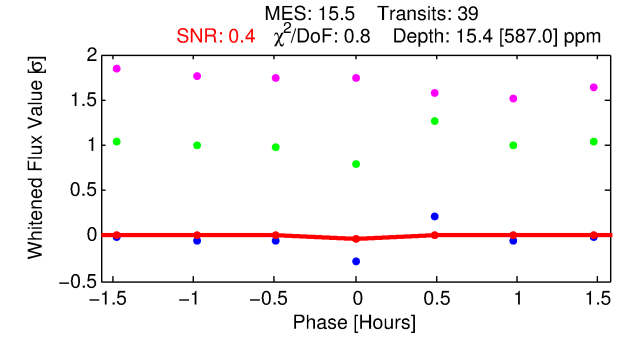
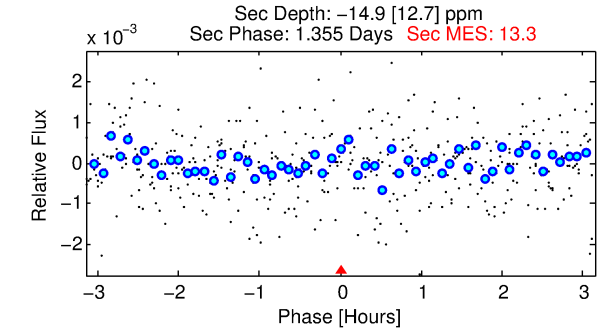
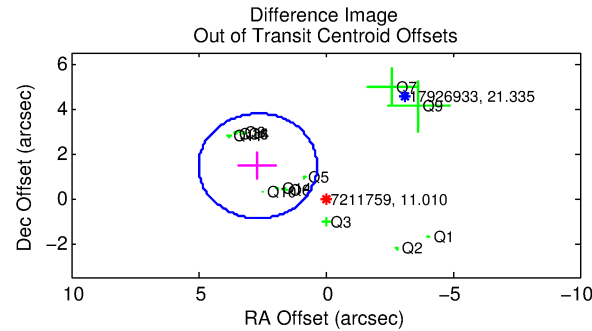
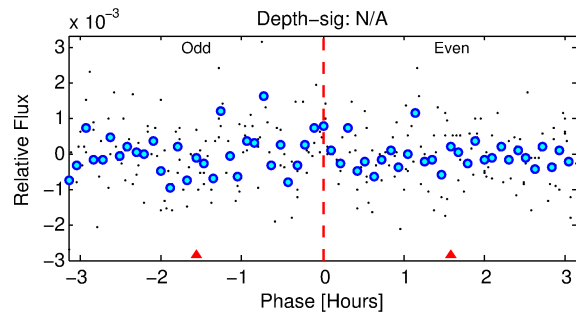
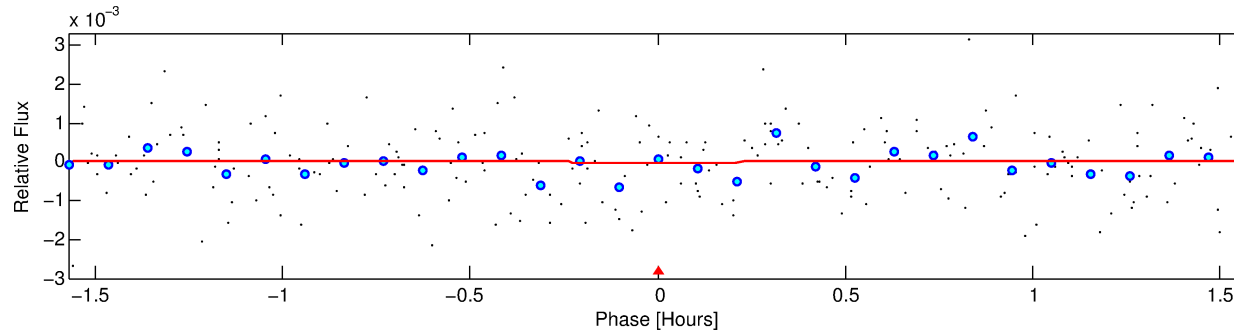
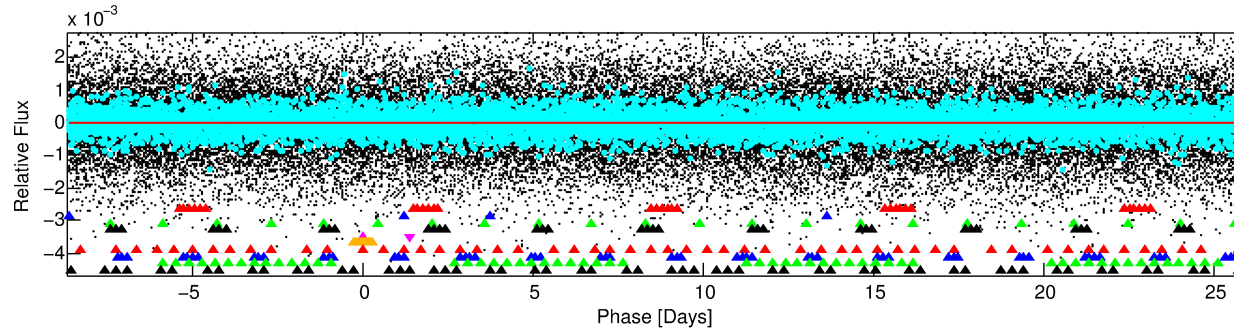
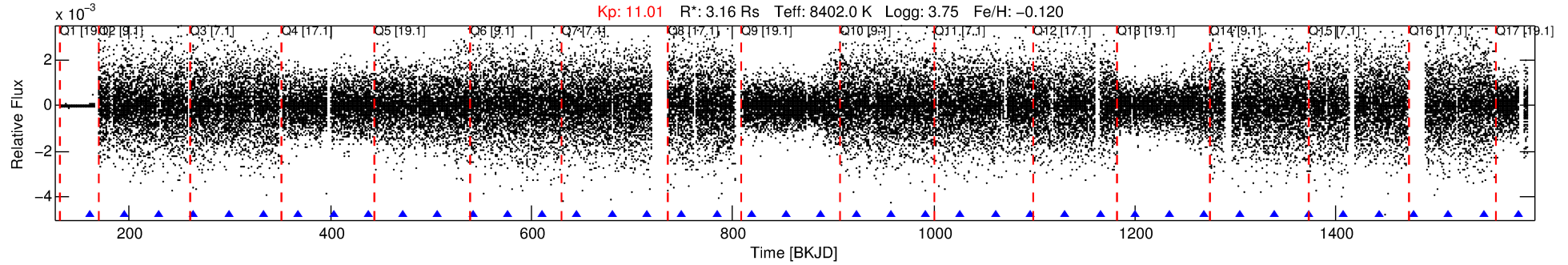
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007211759-05

No Significant Match Found

DV One-Page Summary

KIC: 7211759 Candidate: 5 of 10 Period: 34.650 d



DV Fit Results:

Period = 34.65046 [0.02794] d
Epoch = 160.4295 [0.3020] BKJD
Rp/R* = 0.0047 [0.1381]
a/R* = 136.91 [33389.91]
b = 0.97 [16.02]
Seff = 640.22 [450.32]
Teq = 1283 [226] K
Rp = 1.60 [47.57] Re
a = 0.2636 [0.1128] AU
Ag = N/A
Teffp = N/A

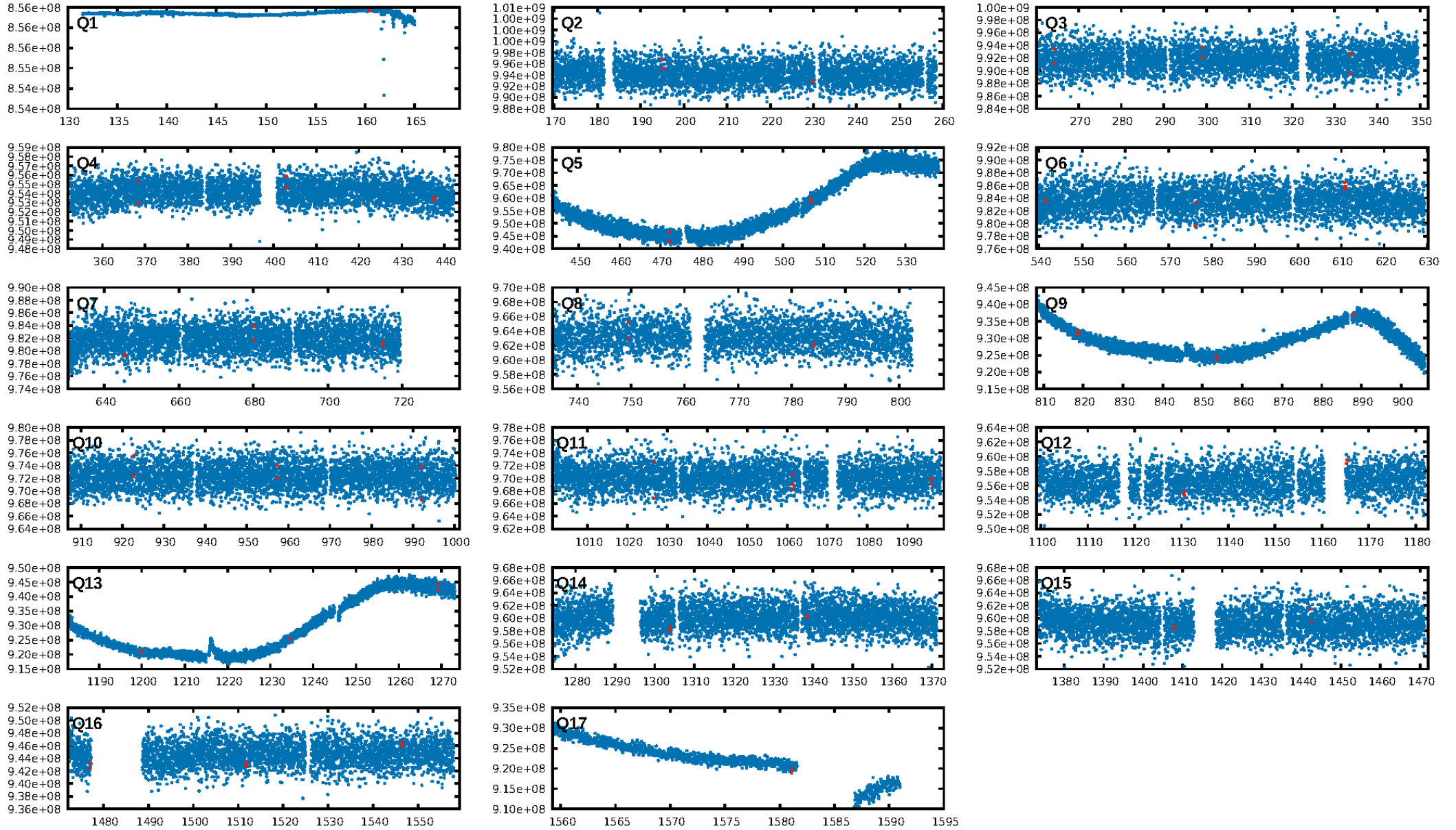
DV Diagnostic Results:

ShortPeriod-sig: 7.8% [0.10 σ]
LongPeriod-sig: 100.0% [35.97 σ]
ModelChiSquare2-sig: 96.4%
ModelChiSquareGof-sig: 99.5%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [37/37]
GhostDiagnostic-chr: -0.2152
Centroid-sig: 5.3%
Centroid-so: 59.408 arcsec [1.41 σ]
OotOffset-rm: 3.026 arcsec [3.89 σ]
KicOffset-rm: 3.066 arcsec [4.52 σ]
OotOffset-st: 4/3/3/3 [13]
KicOffset-st: 4/3/3/3 [13]
DiffImageQuality-fgm: 0.23 [3/13]
DiffImageOverlap-fno: 0.00 [0/13]

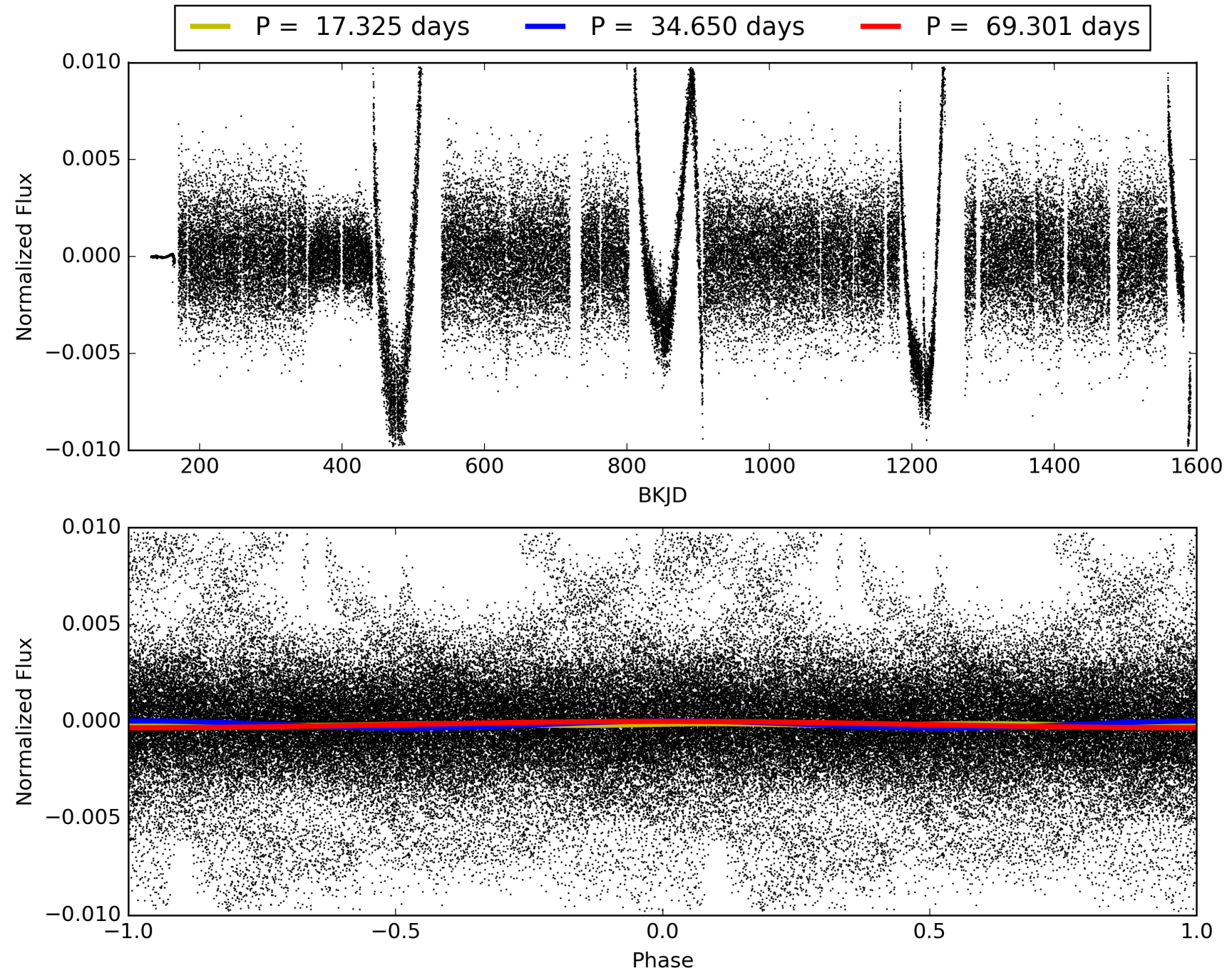
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 08:37:34 Z

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

TCE 007211759-05, PDC Light Curves

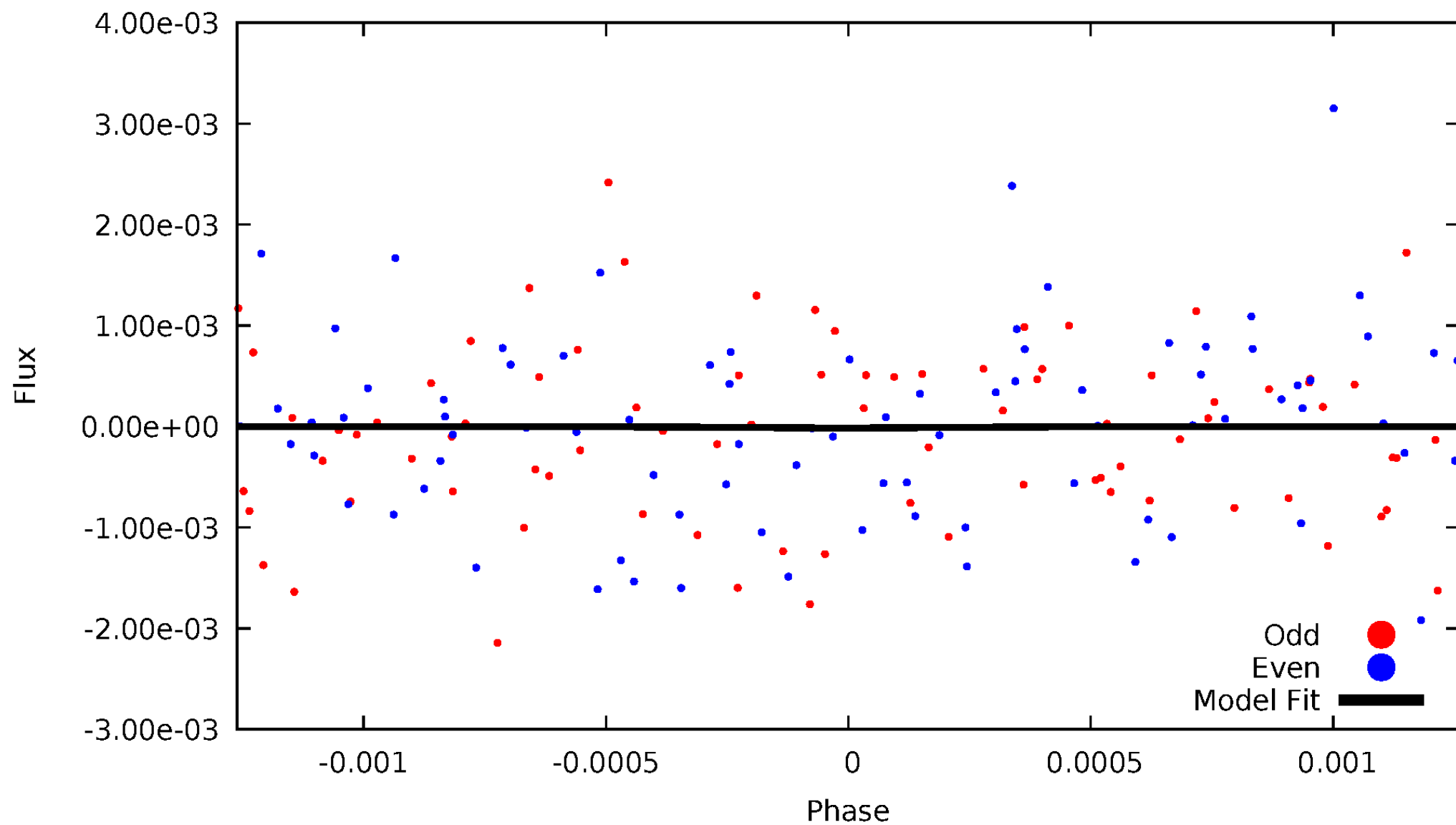


TCE 007211759-05



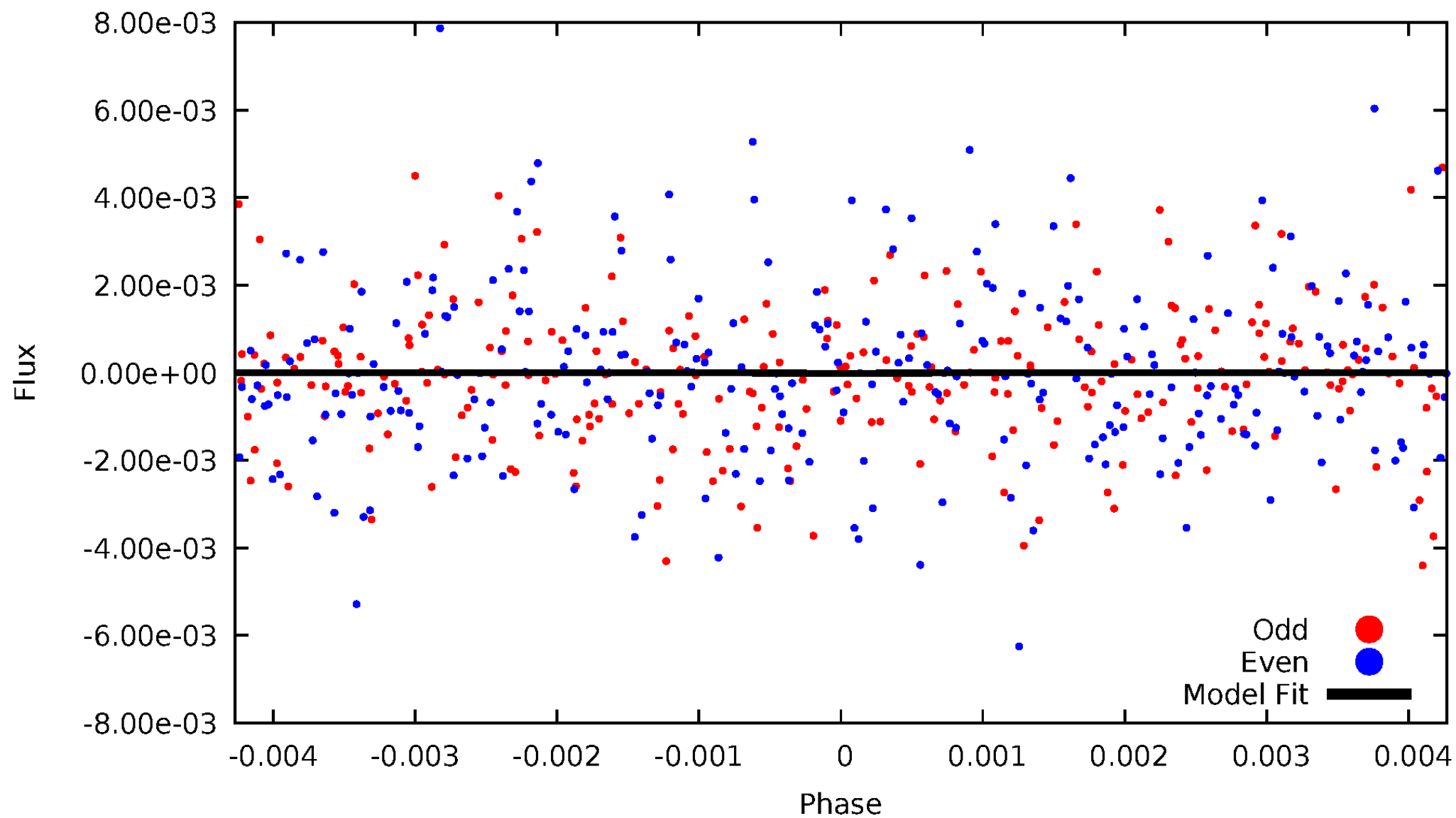
DV Odd/Even

TCE 007211759-05



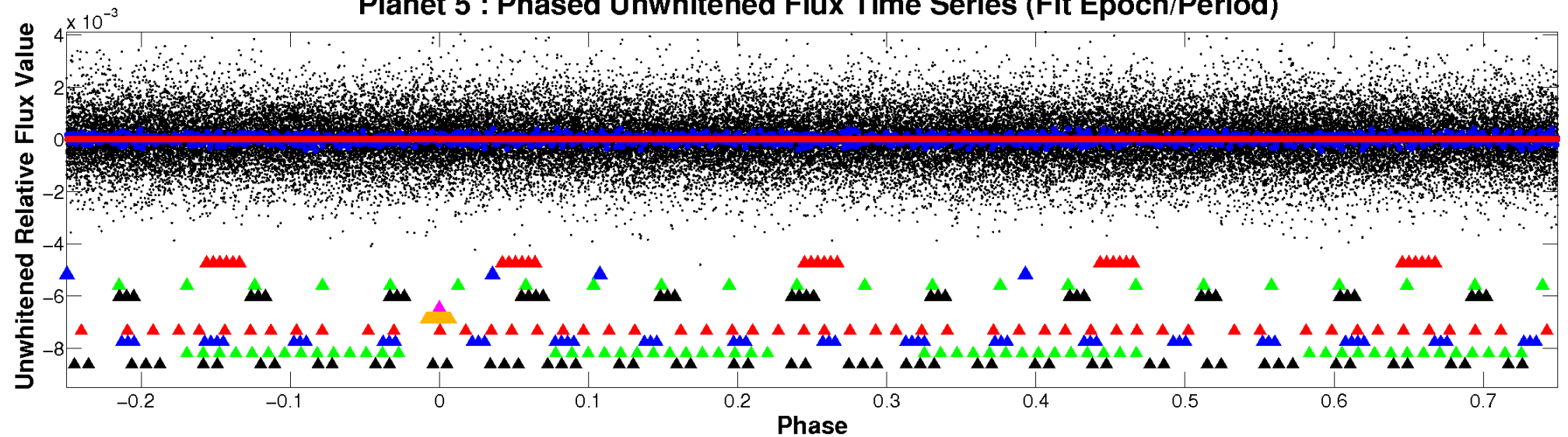
ALT Odd/Even

TCE 007211759-05

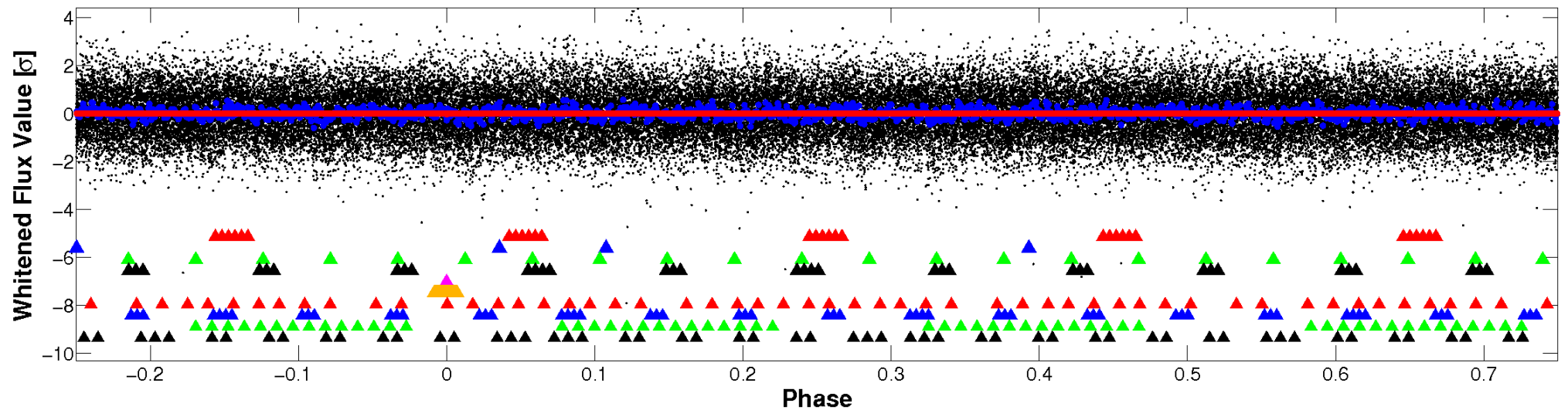


Non-Whitened Vs. Whitened Light Curve

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

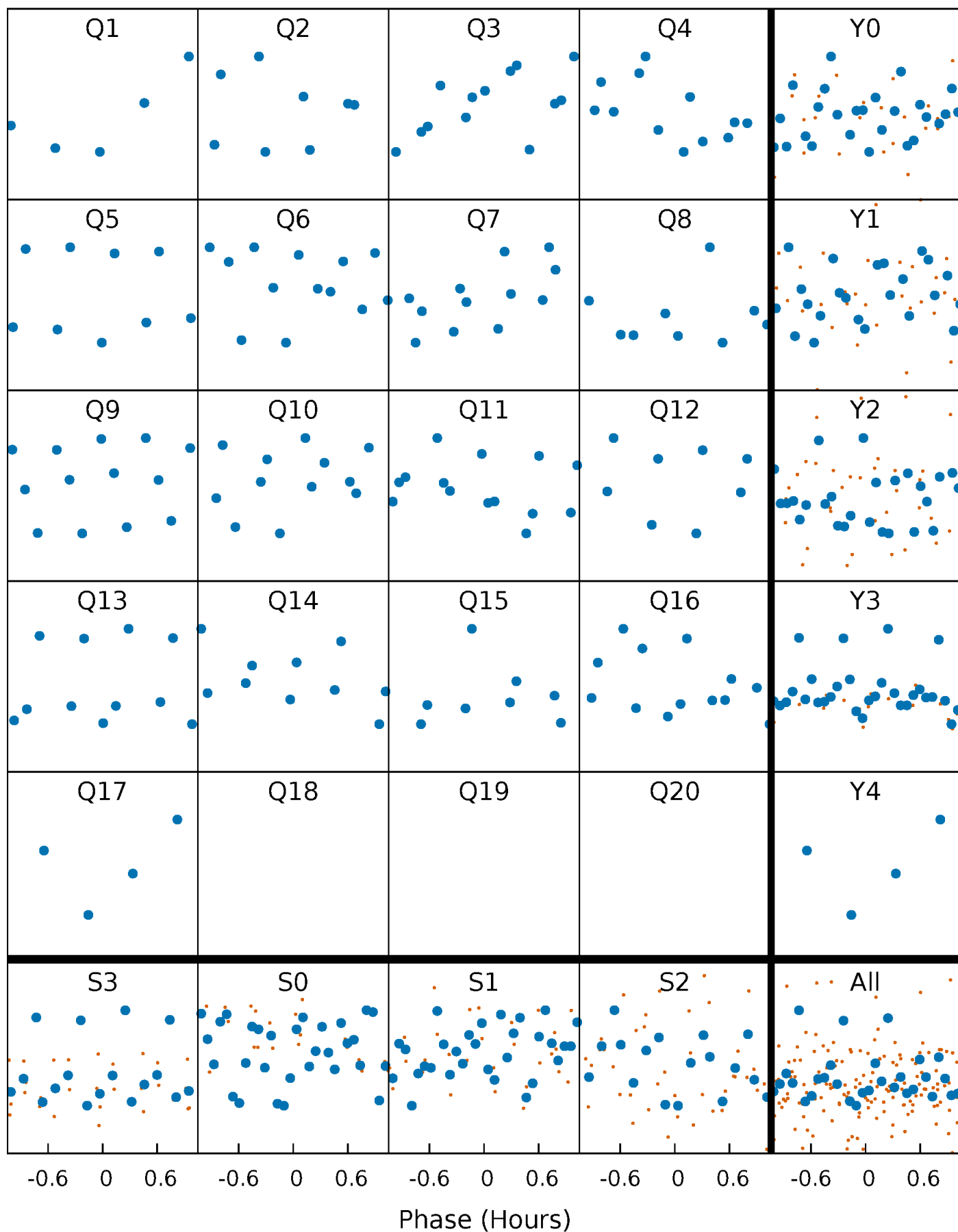


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



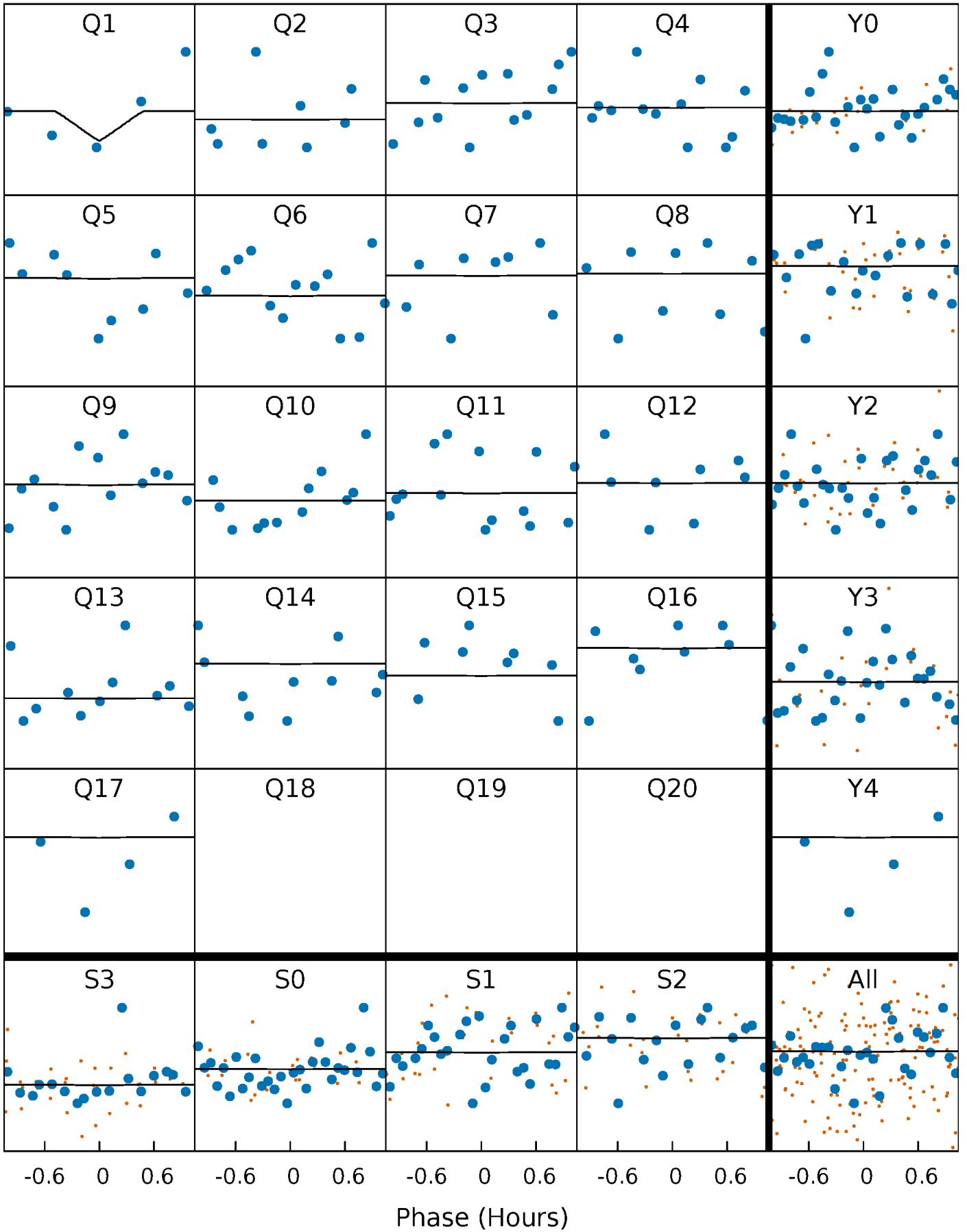
PDC Quarter-Phased Transit Curves

TCE 007211759-05 P= 34.650460 Days $T_0=160.429464$ (BKJD)



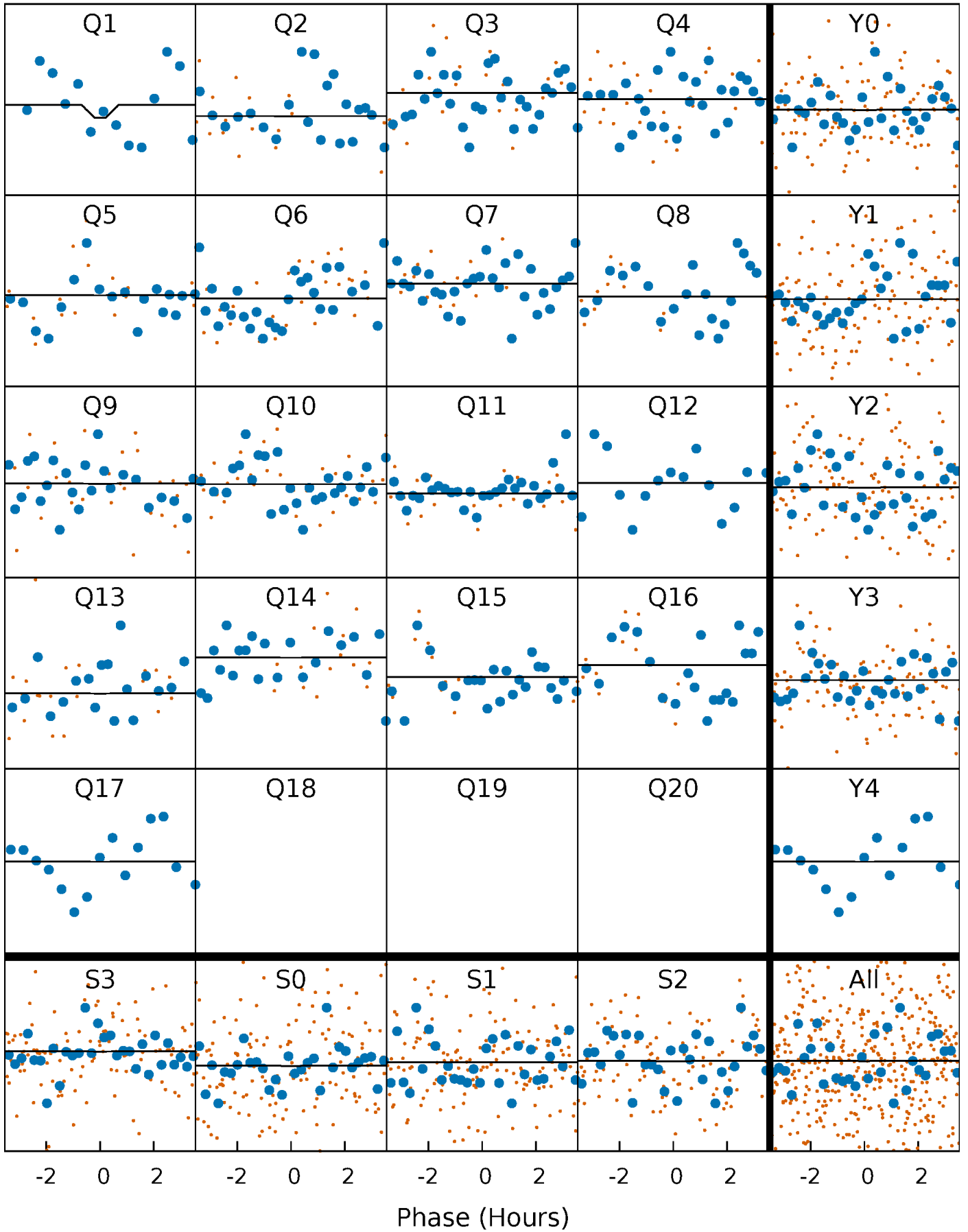
DV Quarter-Phased Transit Curves

TCE 007211759-05 $P = 34.650460$ Days $T_0 = 160.429464$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

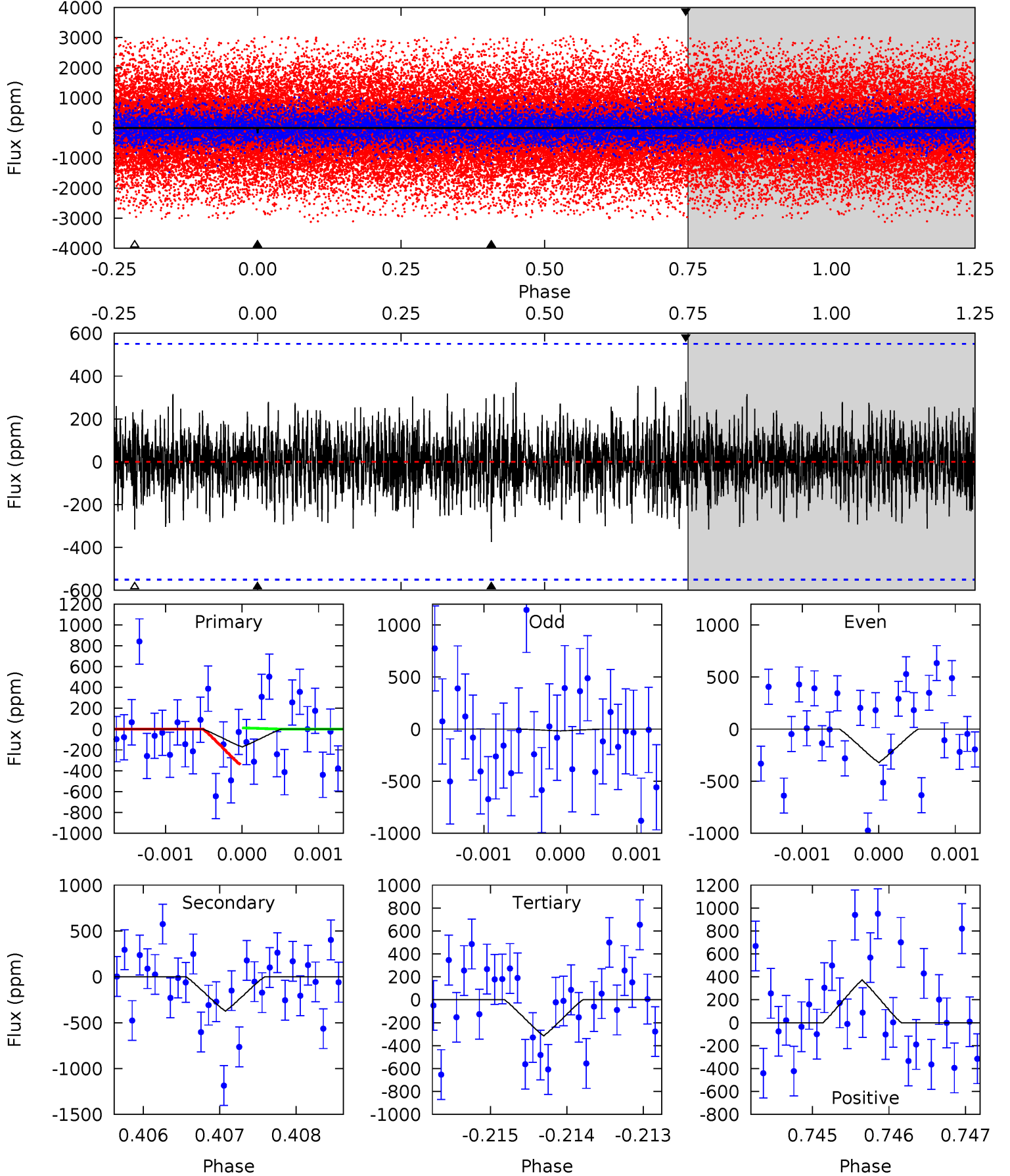
TCE 007211759-05 $P = 34.639485$ Days $T_0 = 160.360805$ (BKJD)



DV Model-Shift Uniqueness Test

007211759-05, P = 34.650460 Days, E = 125.779004 Days

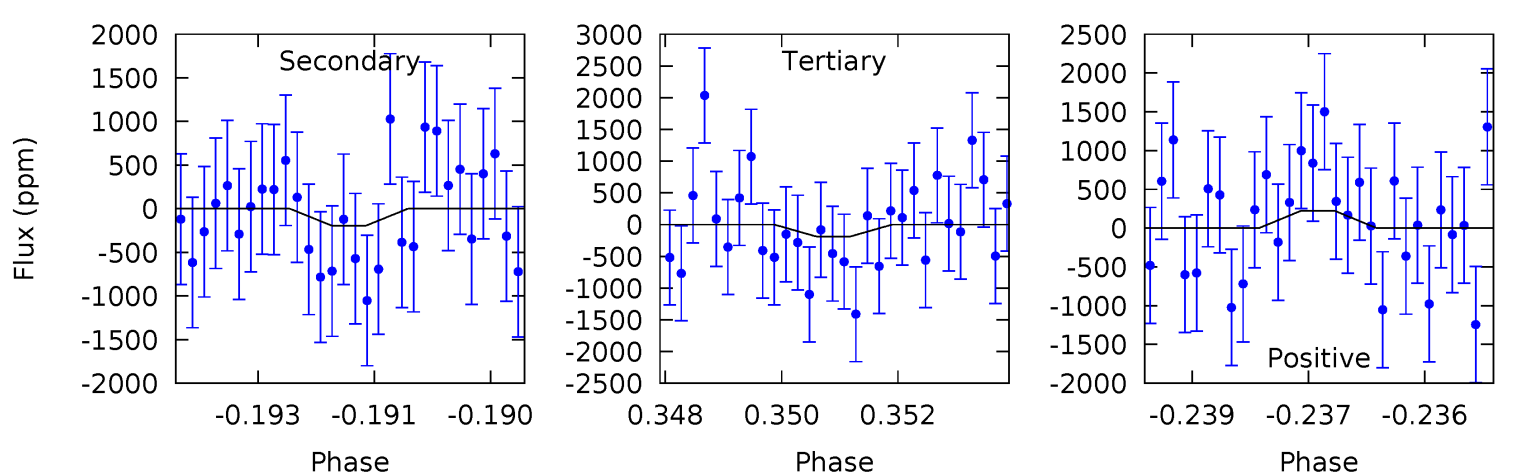
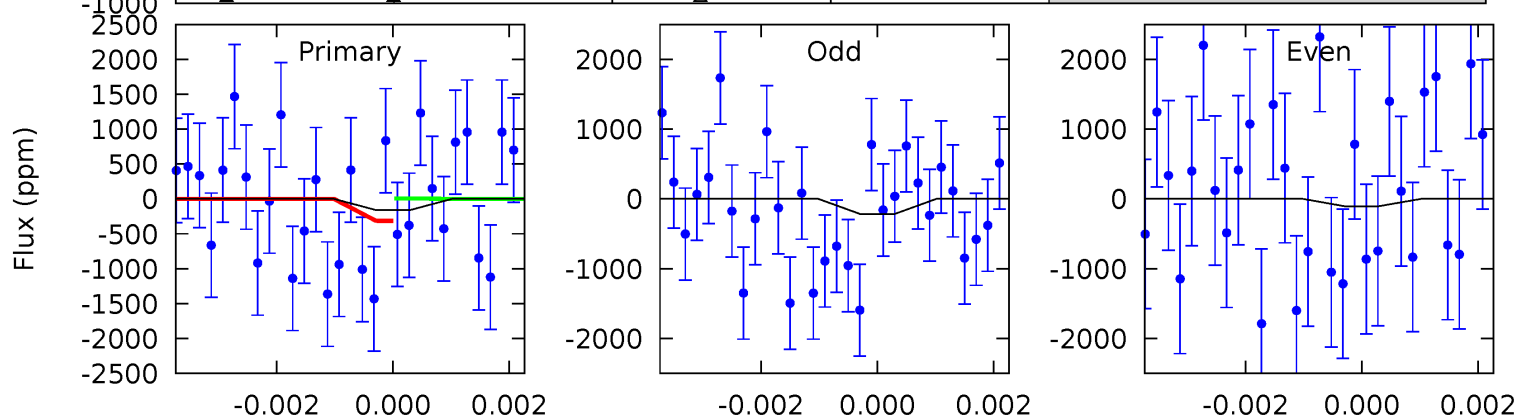
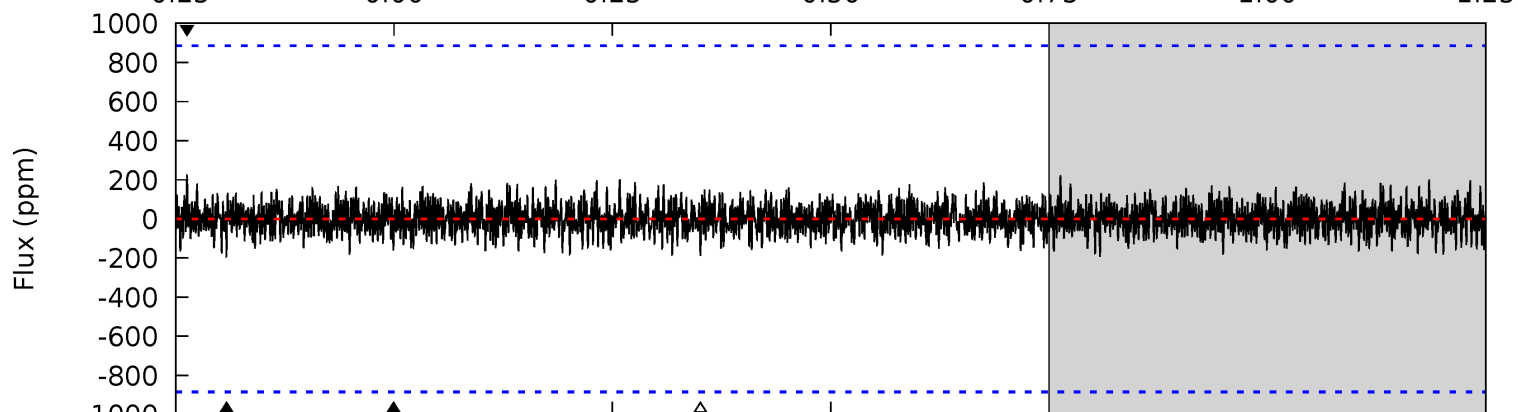
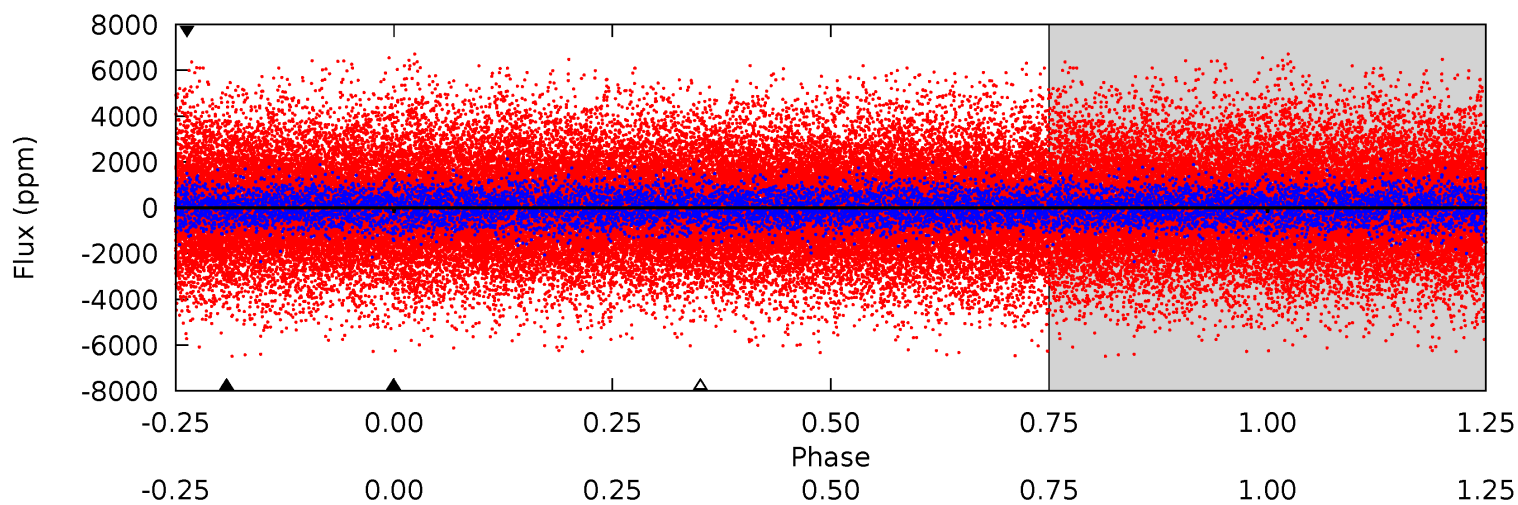
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.69	3.69	3.11	3.68	5.43	3.25	1.03	-1.42	-1.99	0.58	0.01	1.51	0.99	0.50	1.64



Alt Model-Shift Uniqueness Test

007211759-05, P = 34.639485 Days, E = 125.721320 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.97	1.18	1.14	1.35	5.36	3.15	0.42	-0.17	-0.38	0.04	-0.17	0.34	-6.57	0.53	0.93



Stellar Parameters For KIC 007211759

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	ρ_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8402^{+232}_{-365}	$3.748^{+0.399}_{-0.142}$	$-0.120^{+0.350}_{-0.400}$	$3.157^{+0.944}_{-1.416}$	$2.039^{+0.384}_{-0.469}$	$0.091^{+0.335}_{-0.045}$
	+3%/-4%	+11%/-4%	+292%/-333%	+30%/-45%	+19%/-23%	+367%/-49%
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 007211759-05 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-374 ± 101	$30.75^{+33.59}_{-20.92}$	1734^{+159}_{-215}	3882^{+2479}_{-835}	15^{+122}_{-12}
Alt.	-195 ± 165	$29.35^{+37.19}_{-20.34}$	1746^{+143}_{-200}	3438^{+1906}_{-1304}	$6.701^{+63.582}_{-6.272}$

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

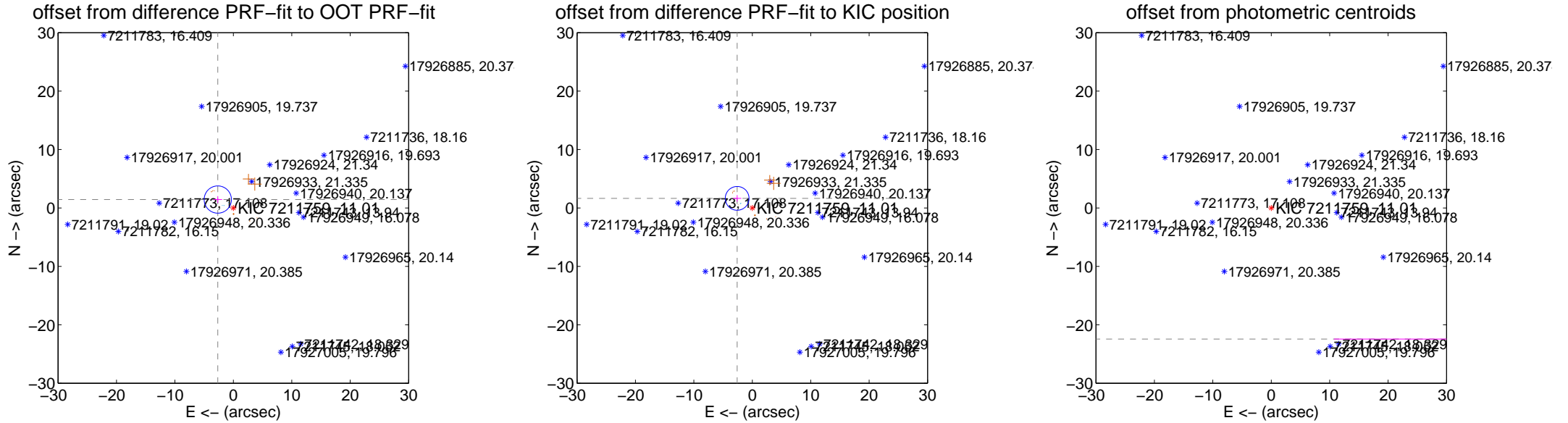
DV Centroid Data

Supplemental centroid analysis for 007211759-05. **Kepler magnitude: 11.01.** Transit SNR 0.42

There are 3 quarters with good PRF difference image offsets

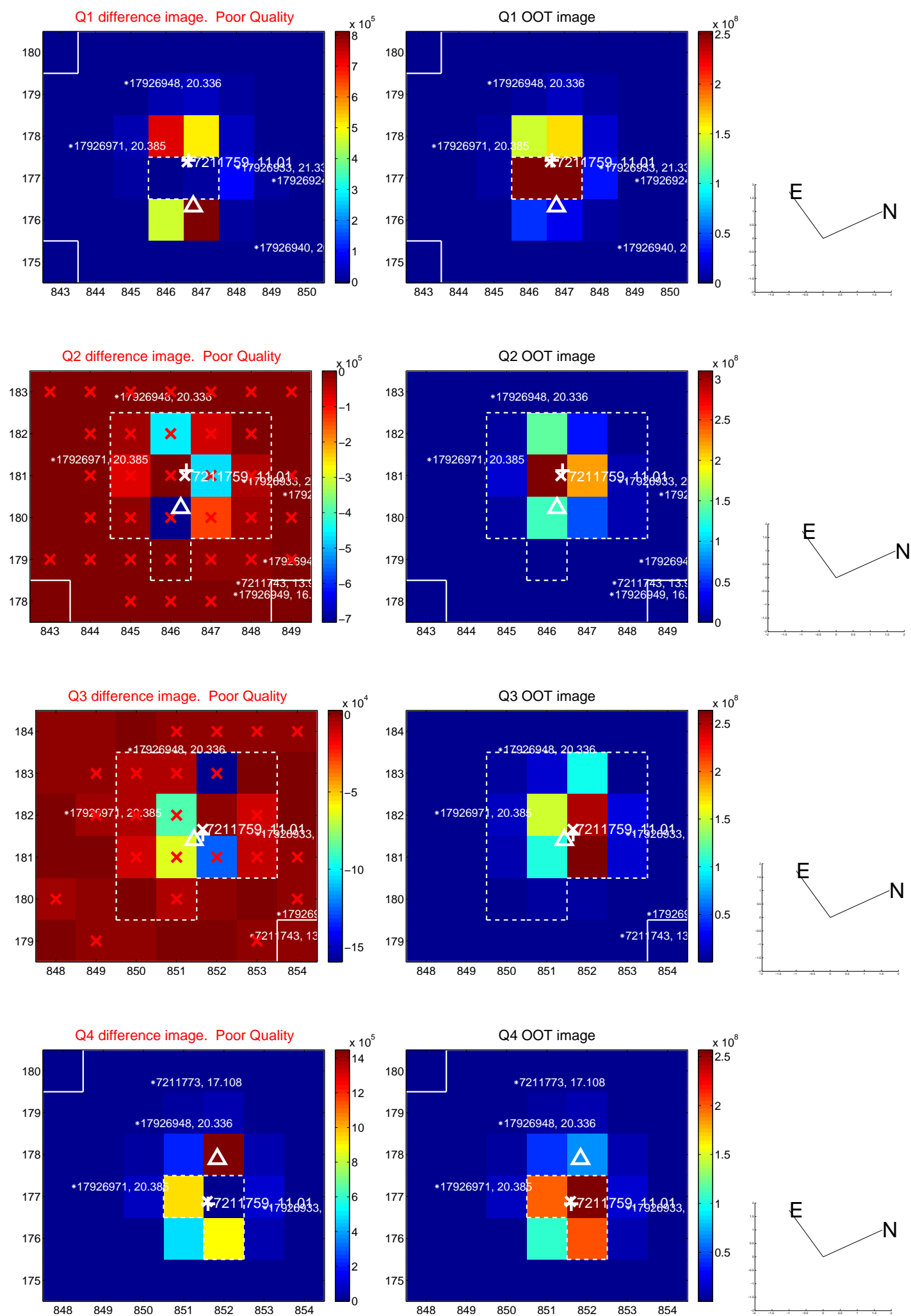
The direct PRF centroid is offset from the target star catalog position by about 0.27 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.026 ± 0.778	3.89	2.662 ± 0.737	1.439 ± 0.590
PRF-fit source offset from KIC position	3.066 ± 0.678	4.52	2.591 ± 0.706	1.640 ± 0.570
photometric centroid source offset	59.41 ± 42.15	1.41	-55.01 ± 44.28	-22.45 ± 25.90

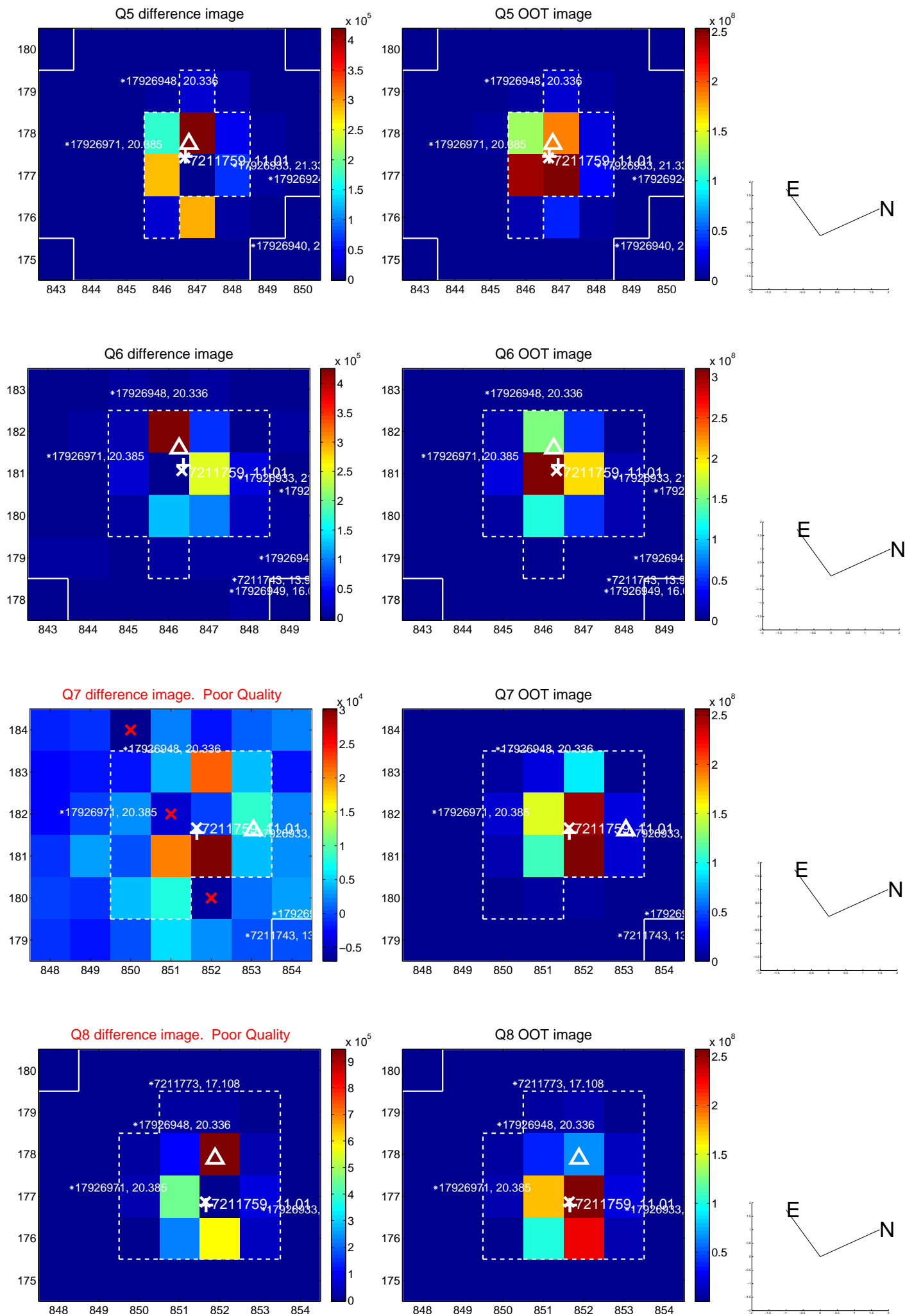


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

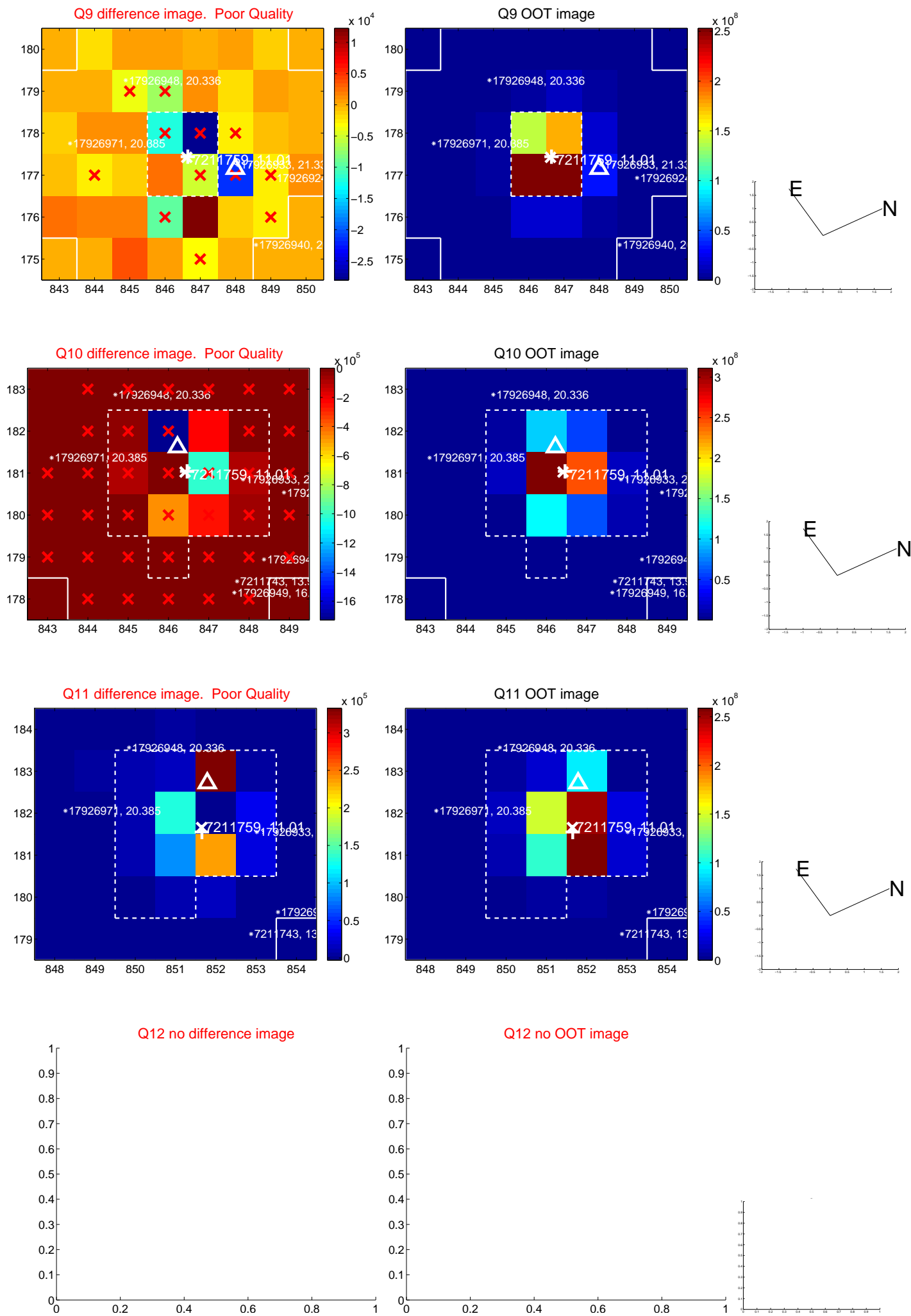
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



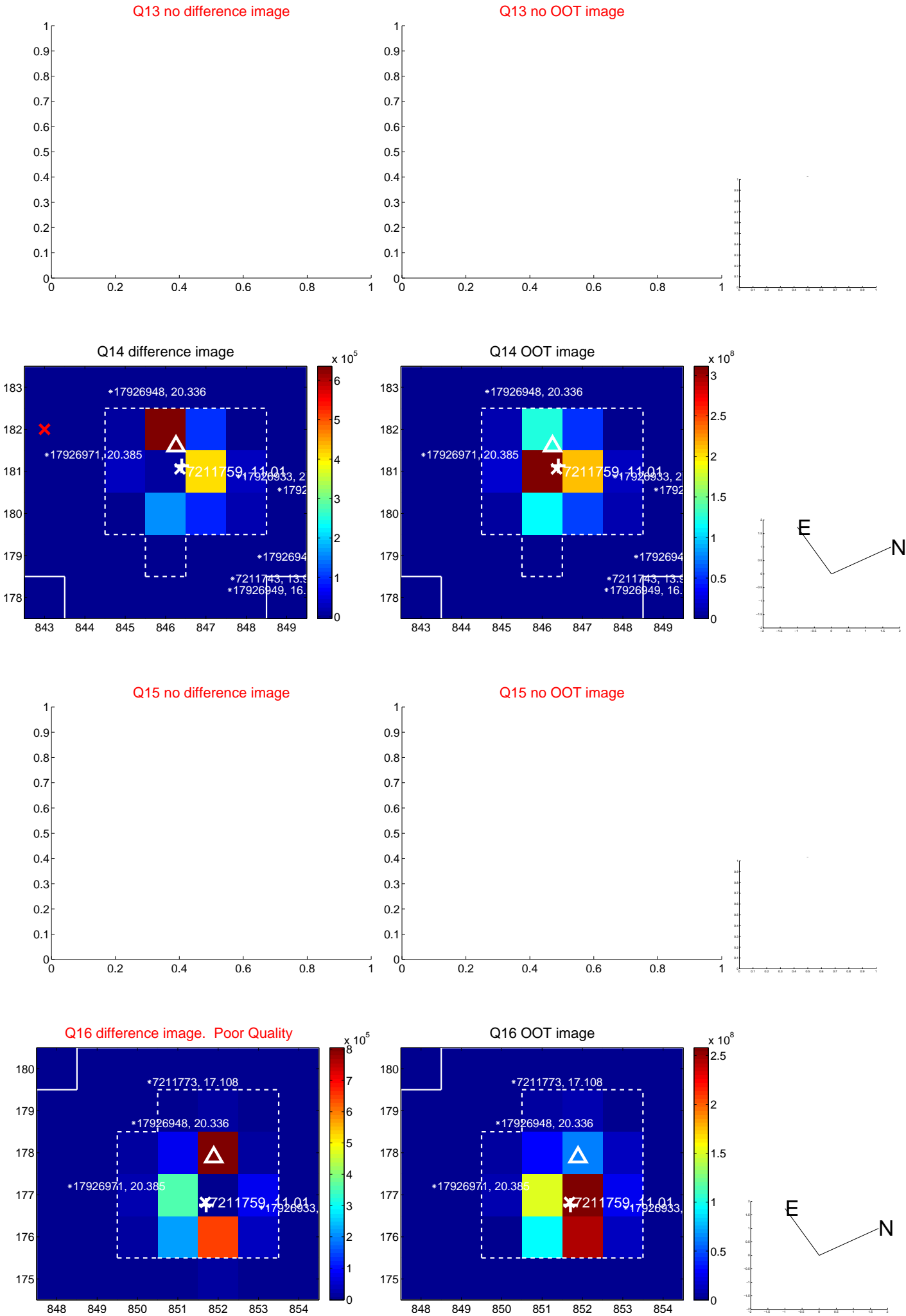
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



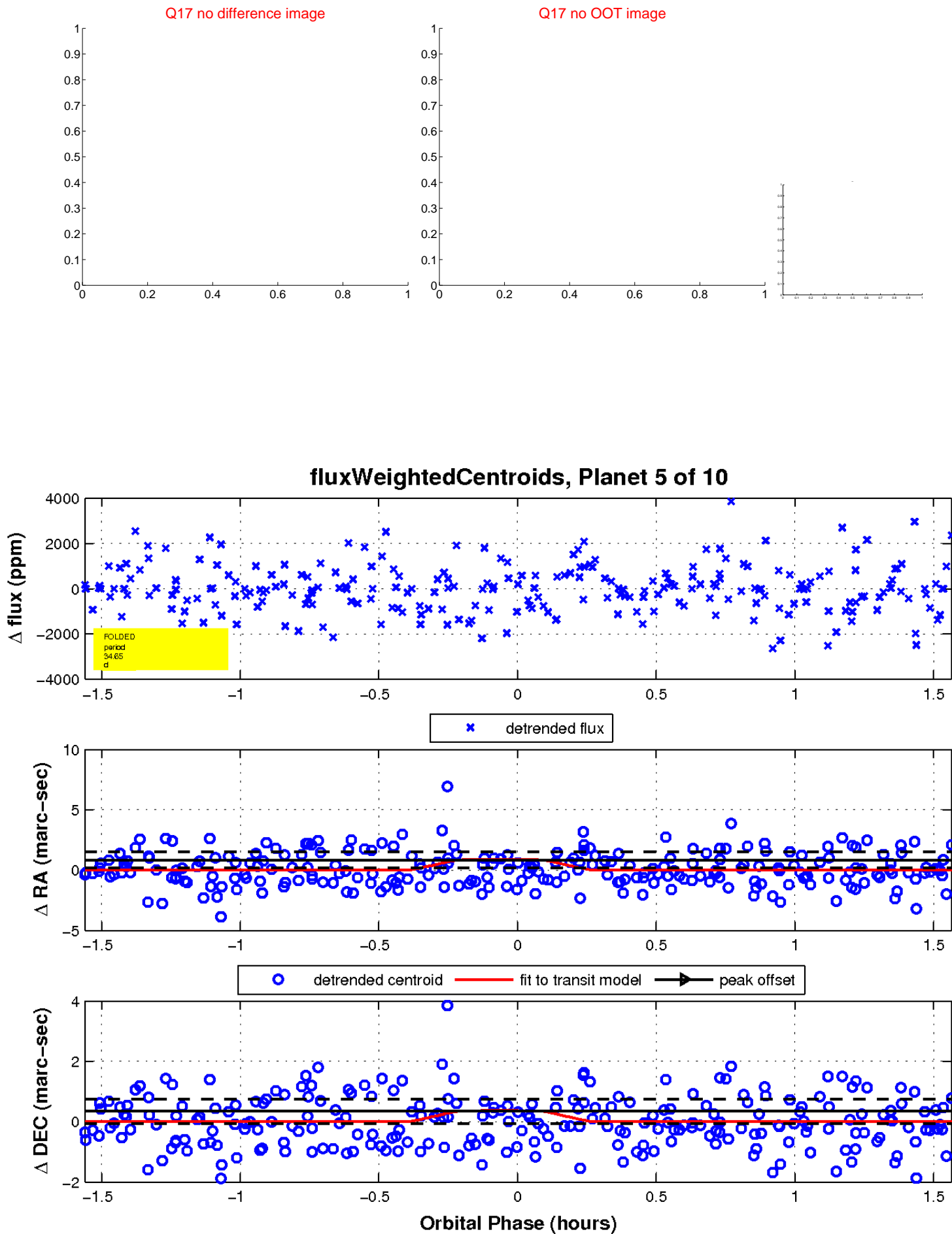
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

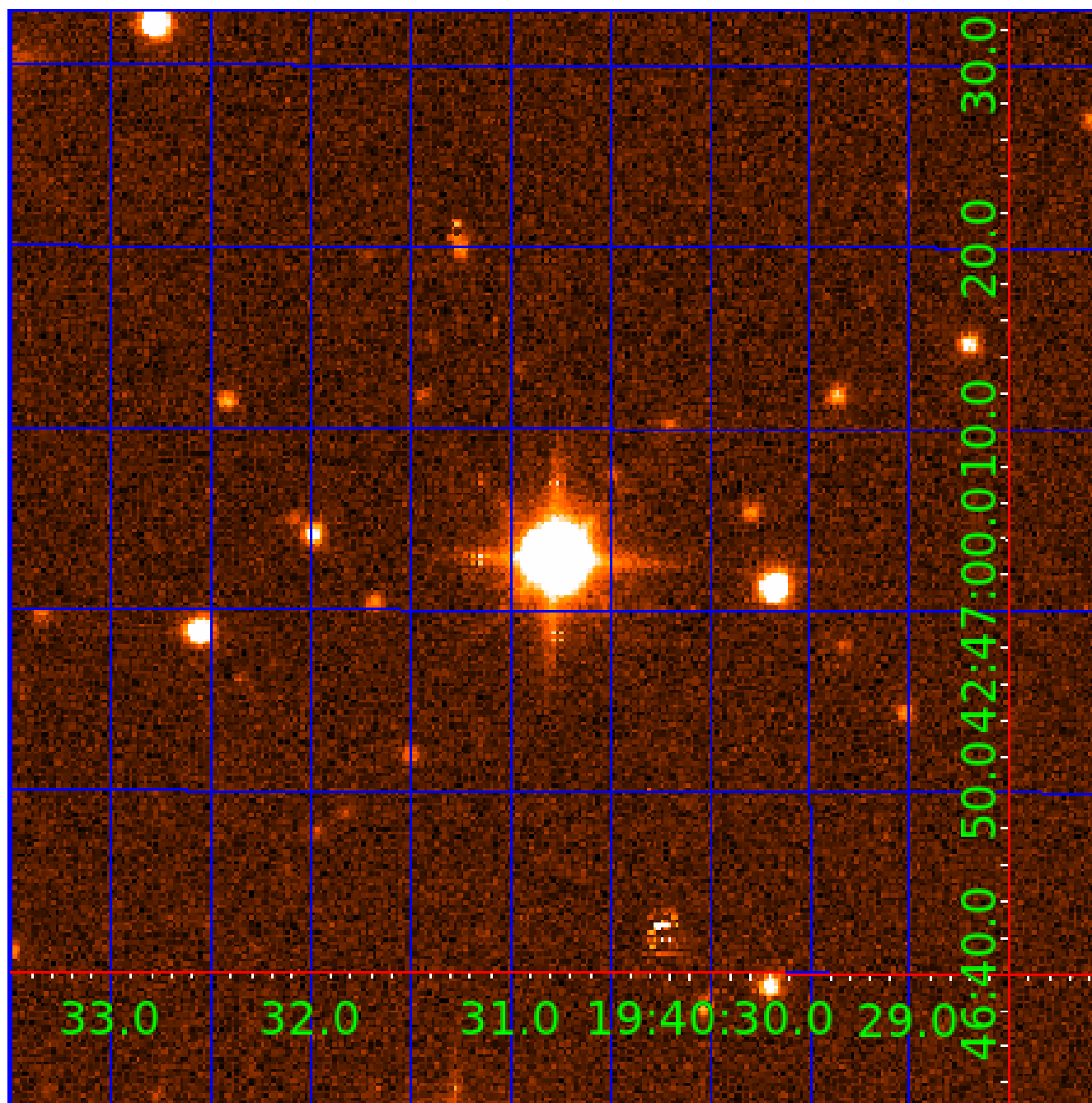


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



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})
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007211759-02	OBS	No	358.886546	161.664202	215.2	2.879	29.2	15.0	3.16	8402	5.34	28.36
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007211759-06	OBS	No	34.637188	160.678807	17.4	3.190	15.7	1.3	3.16	8402	1.53	640.55
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007211759-09	OBS	No	26.082524	137.048060	102.2	7.484	21.7	7.7	3.16	8402	3.69	934.99
007211759-10	OBS	No	26.321290	135.945076	208.1	15.000	35.7	-1.0	3.16	8402	4.61	923.70

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007211759-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
007211759-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
007211759-03	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED—HALO_GHOST
007211759-04	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
007211759-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED—HALO_GHOST
007211759-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA_TRACKER—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_SATURATED
007211759-07	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED—HALO_GHOST
007211759-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
007211759-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
007211759-10	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED

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

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

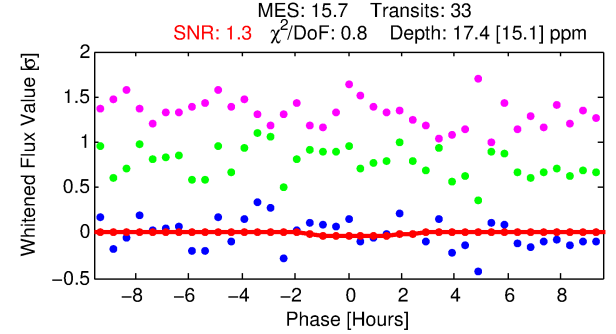
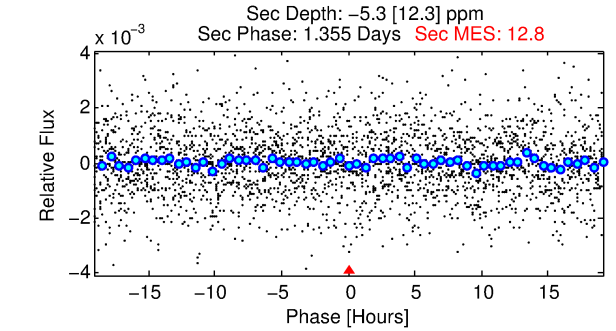
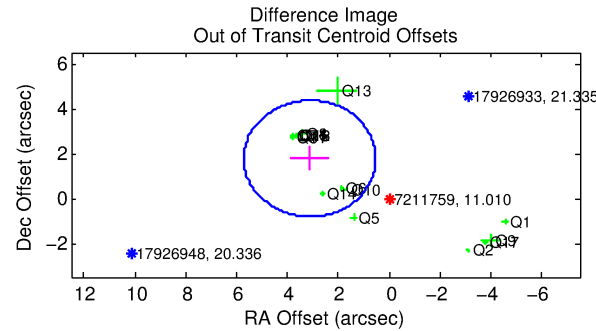
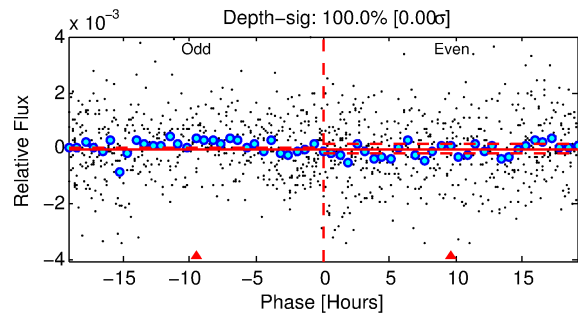
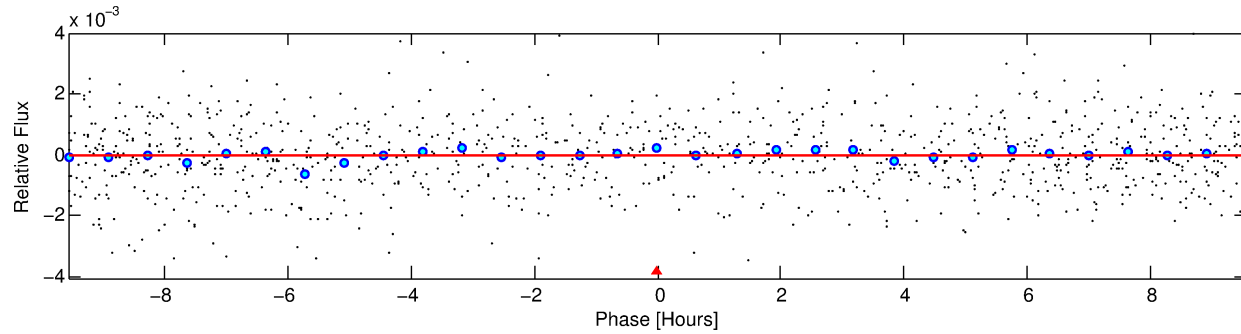
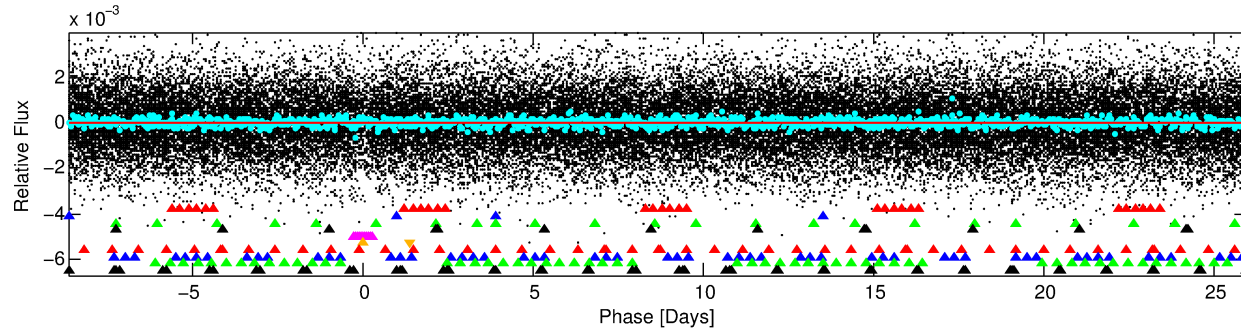
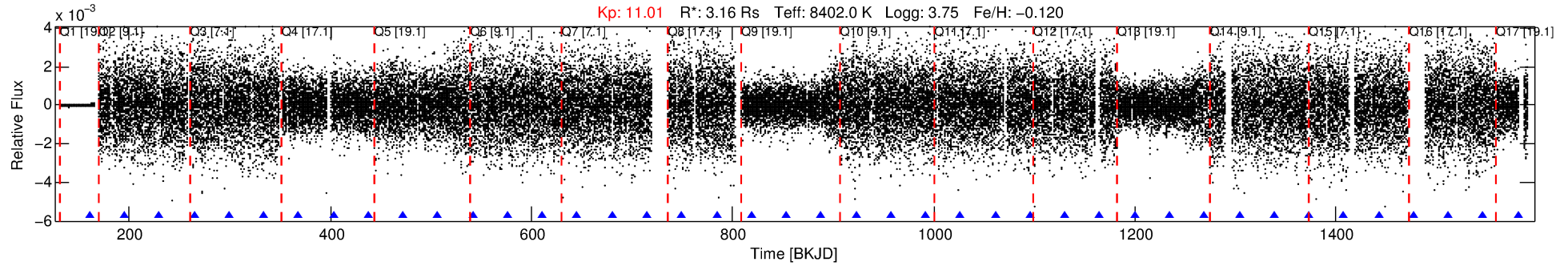
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007211759-06

No Significant Match Found

DV One-Page Summary

KIC: 7211759 Candidate: 6 of 10 Period: 34.637 d



DV Fit Results:

Period = 34.63719 [0.00811] d
Epoch = 160.6788 [0.0396] BKJD
Rp/R* = 0.0044 [0.0101]
a/R* = 36.90 [513.47]
b = 0.90 [3.01]
Seff = 640.55 [450.55]
Teq = 1283 [226] K
Rp = 1.53 [3.55] Re
a = 0.2636 [0.1128] AU
Ag = N/A
Teffp = N/A

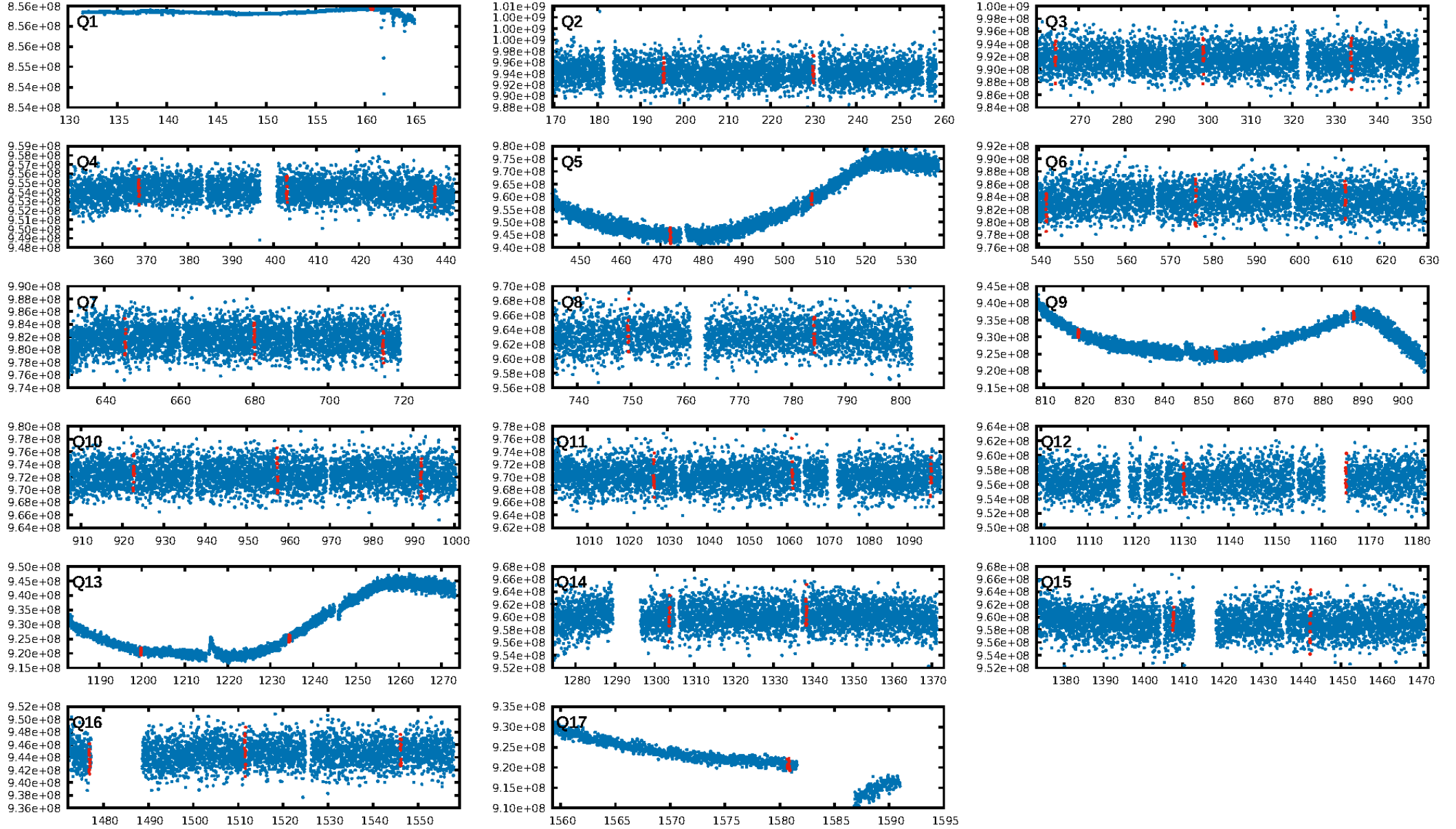
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [38.19sigma]
LongPeriod-sig: 7.8% [0.10sigma]
ModelChiSquare2-sig: 92.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [31/31]
GhostDiagnostic-chr: 1.134
Centroid-sig: 35.3%
Centroid-so: 17.002 arcsec [0.92sigma]
OotOffset-rm: 3.587 arcsec [4.15sigma]
KicOffset-rm: 3.546 arcsec [4.73sigma]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.18 [3/17]
DiffImageOverlap-fno: 0.00 [0/17]

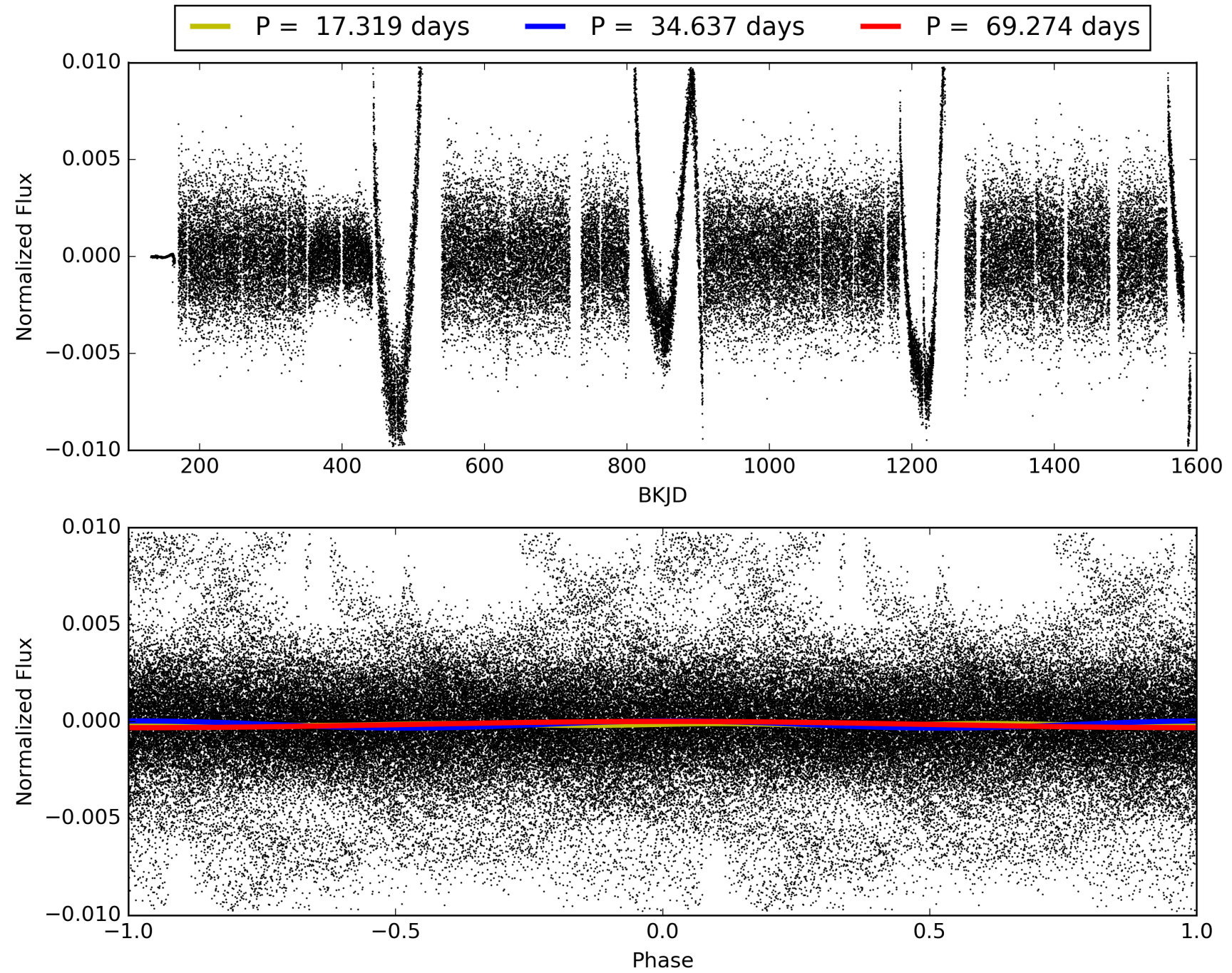
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 08:37:41 Z

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

TCE 007211759-06, PDC Light Curves

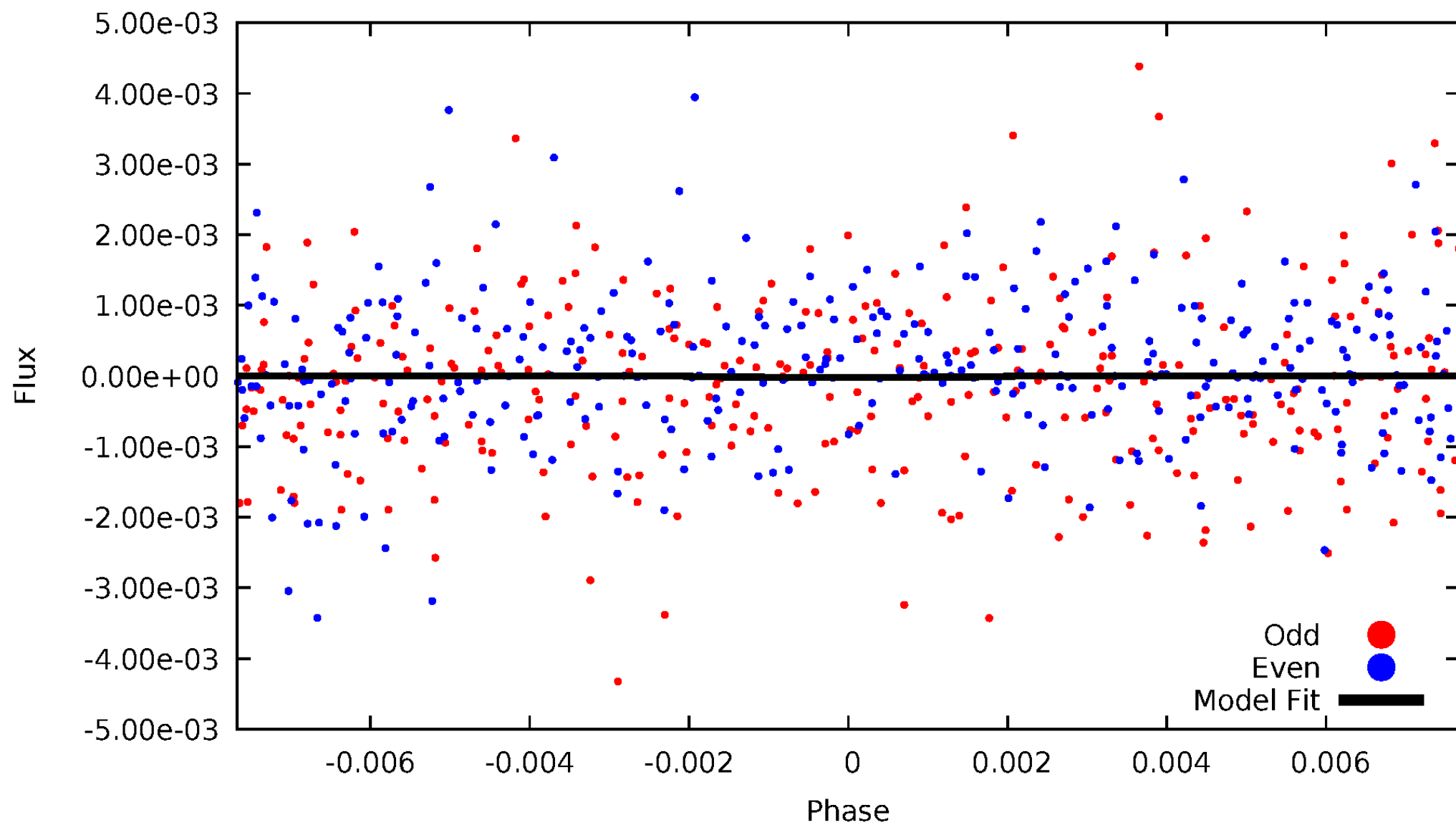


TCE 007211759-06



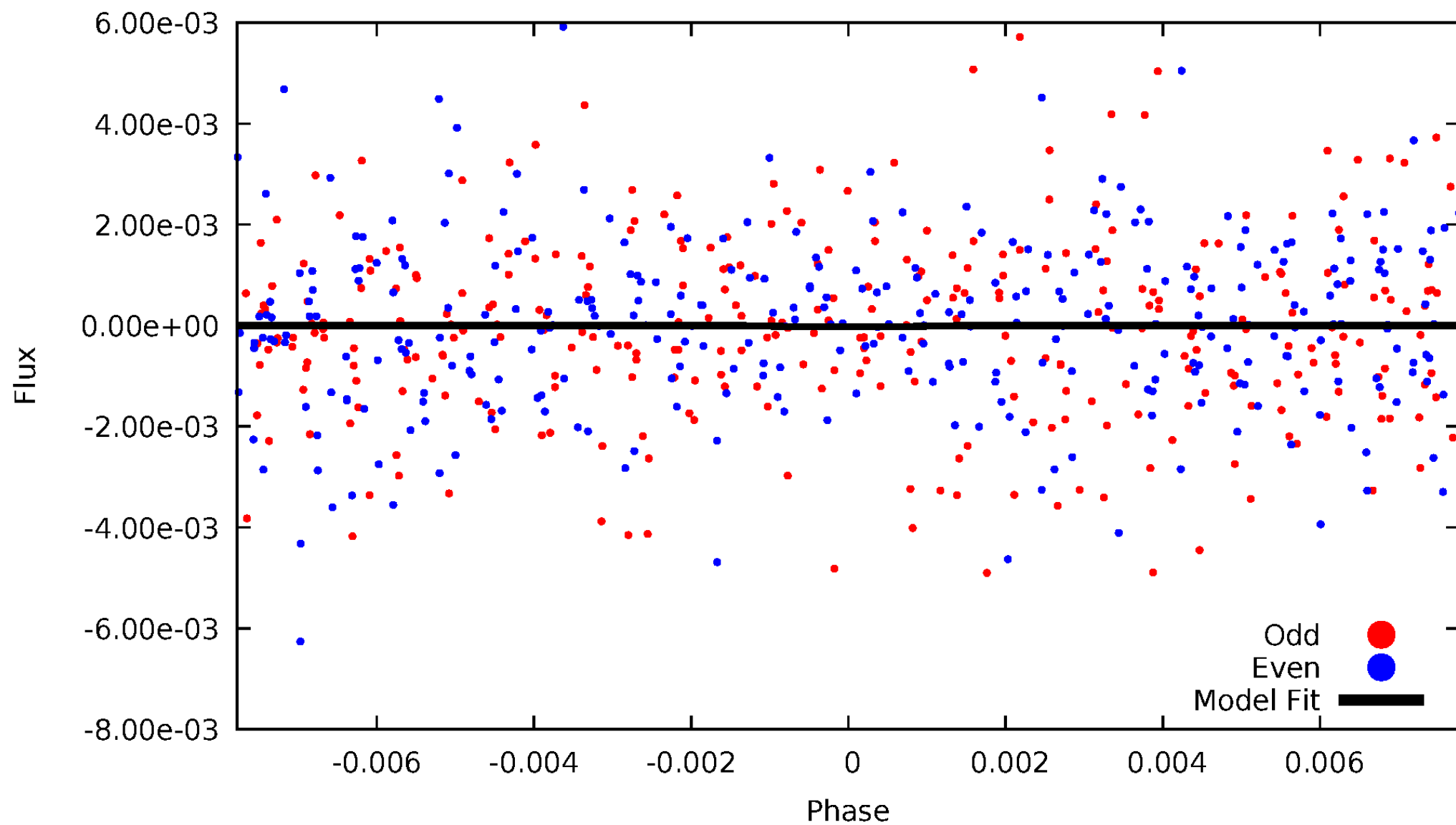
DV Odd/Even

TCE 007211759-06



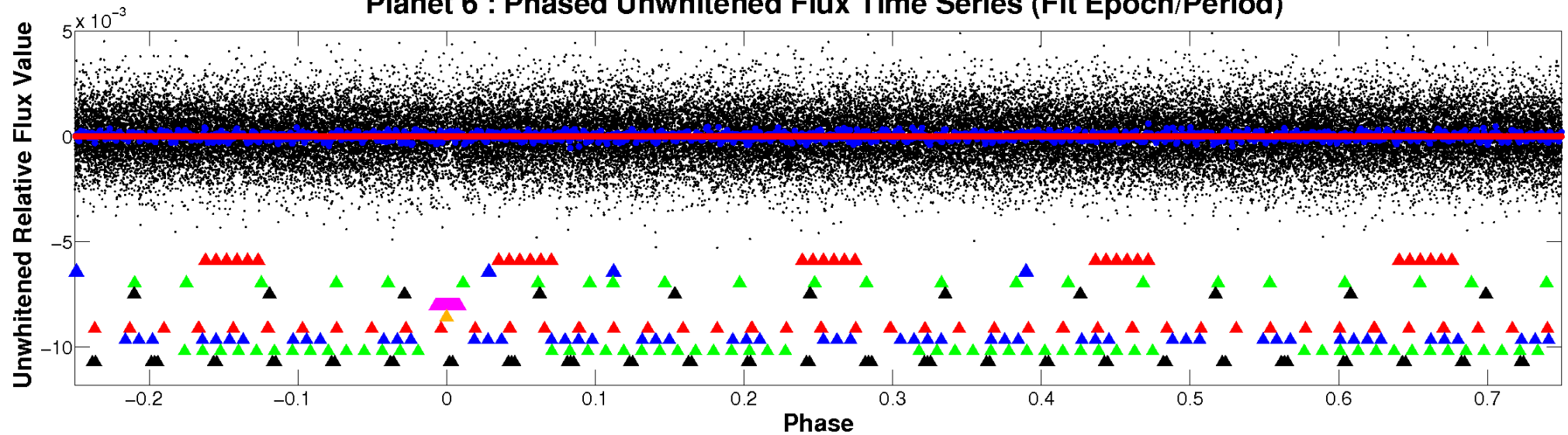
ALT Odd/Even

TCE 007211759-06

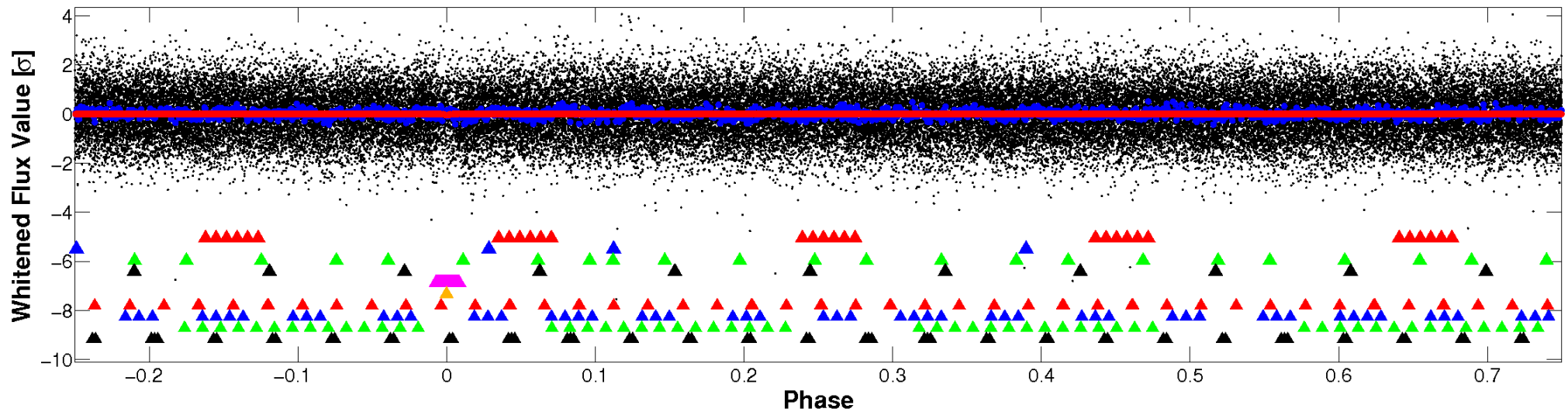


Non-Whitened Vs. Whitened Light Curve

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

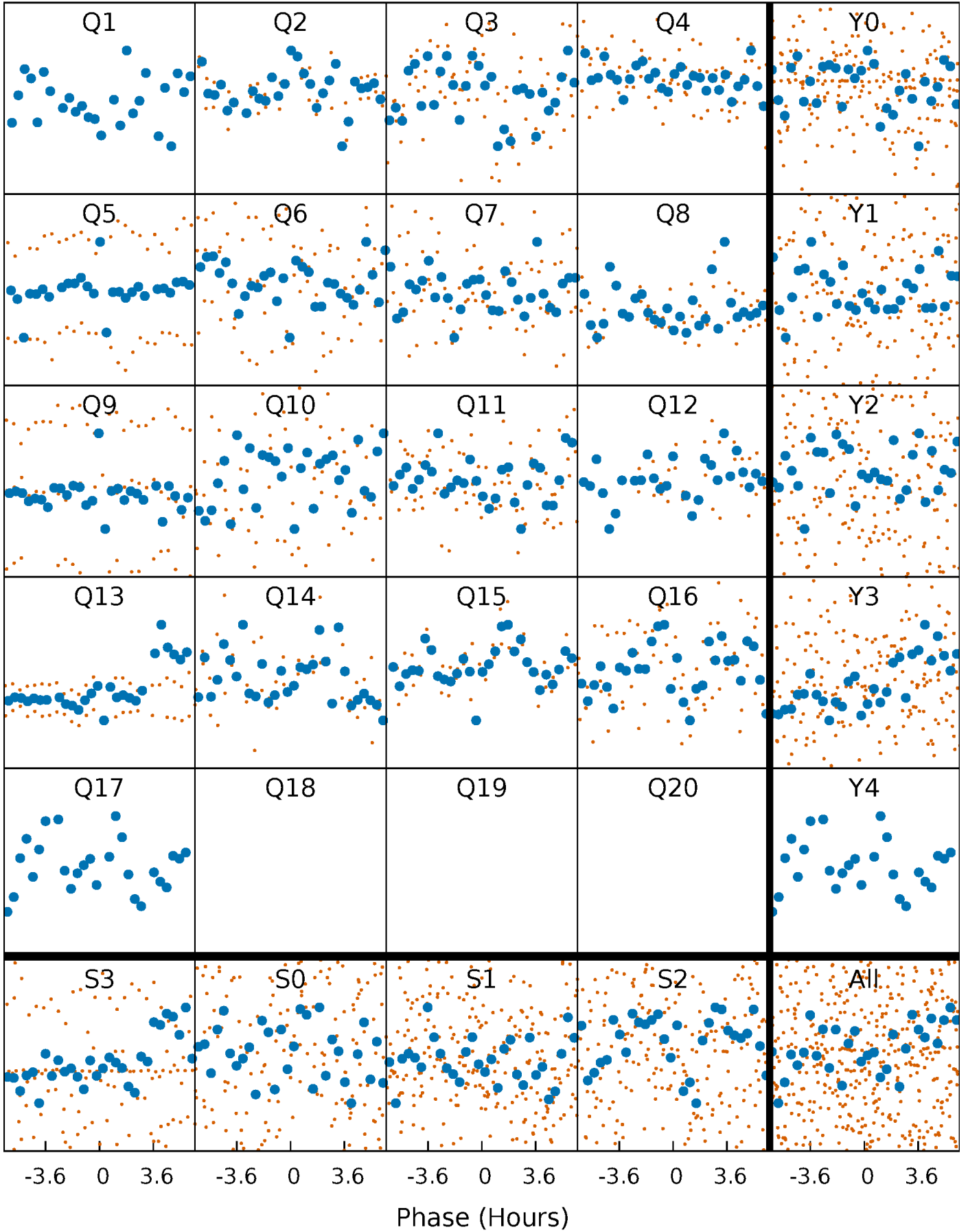


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



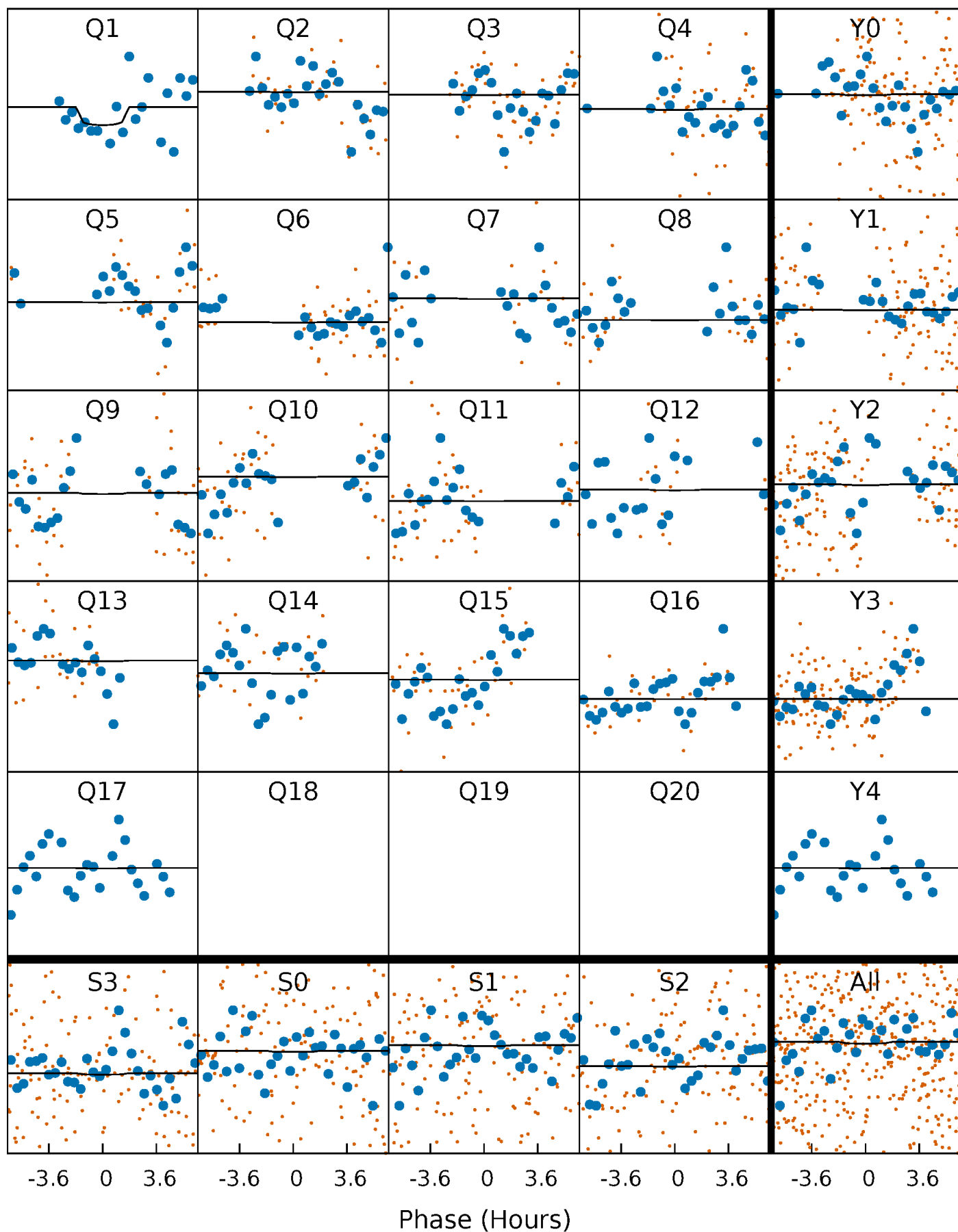
PDC Quarter-Phased Transit Curves

TCE 007211759-06 P= 34.637188 Days $T_0=160.678808$ (BKJD)



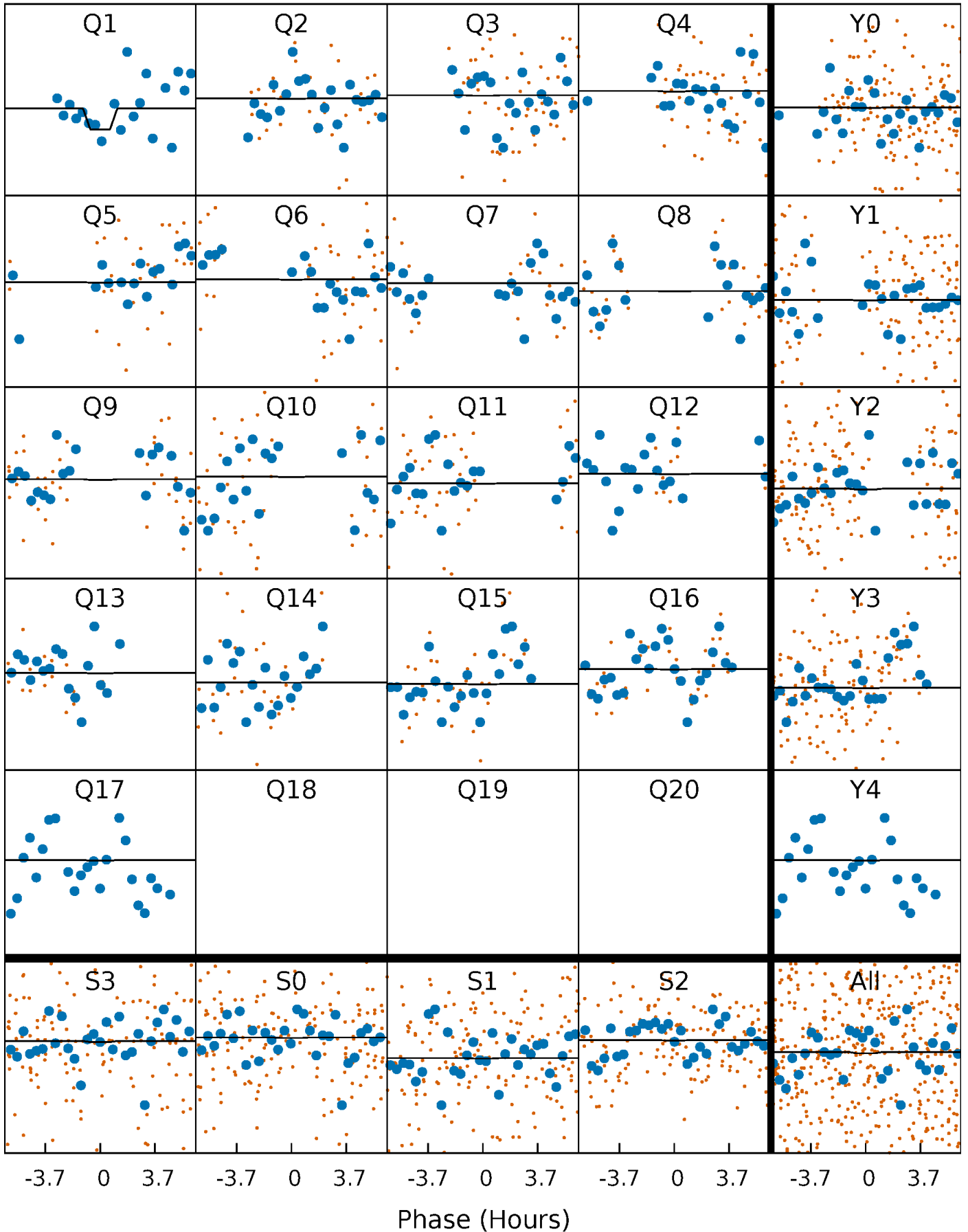
DV Quarter-Phased Transit Curves

TCE 007211759-06 P= 34.637188 Days $T_0=160.678808$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

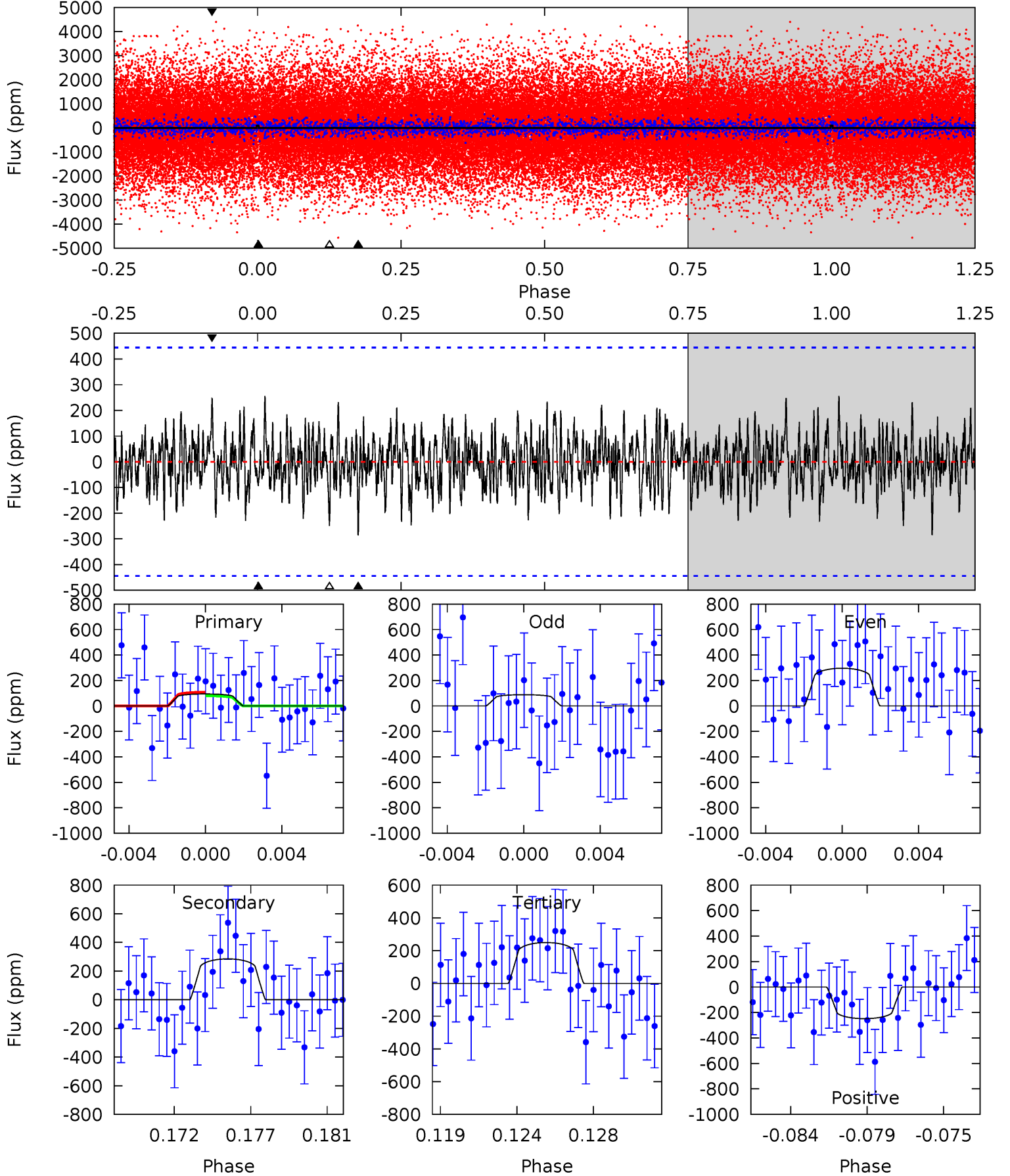
TCE 007211759-06 P= 34.637062 Days $T_0=160.679647$ (BKJD)



DV Model-Shift Uniqueness Test

007211759-06, $P = 34.637188$ Days, $E = 126.041620$ Days

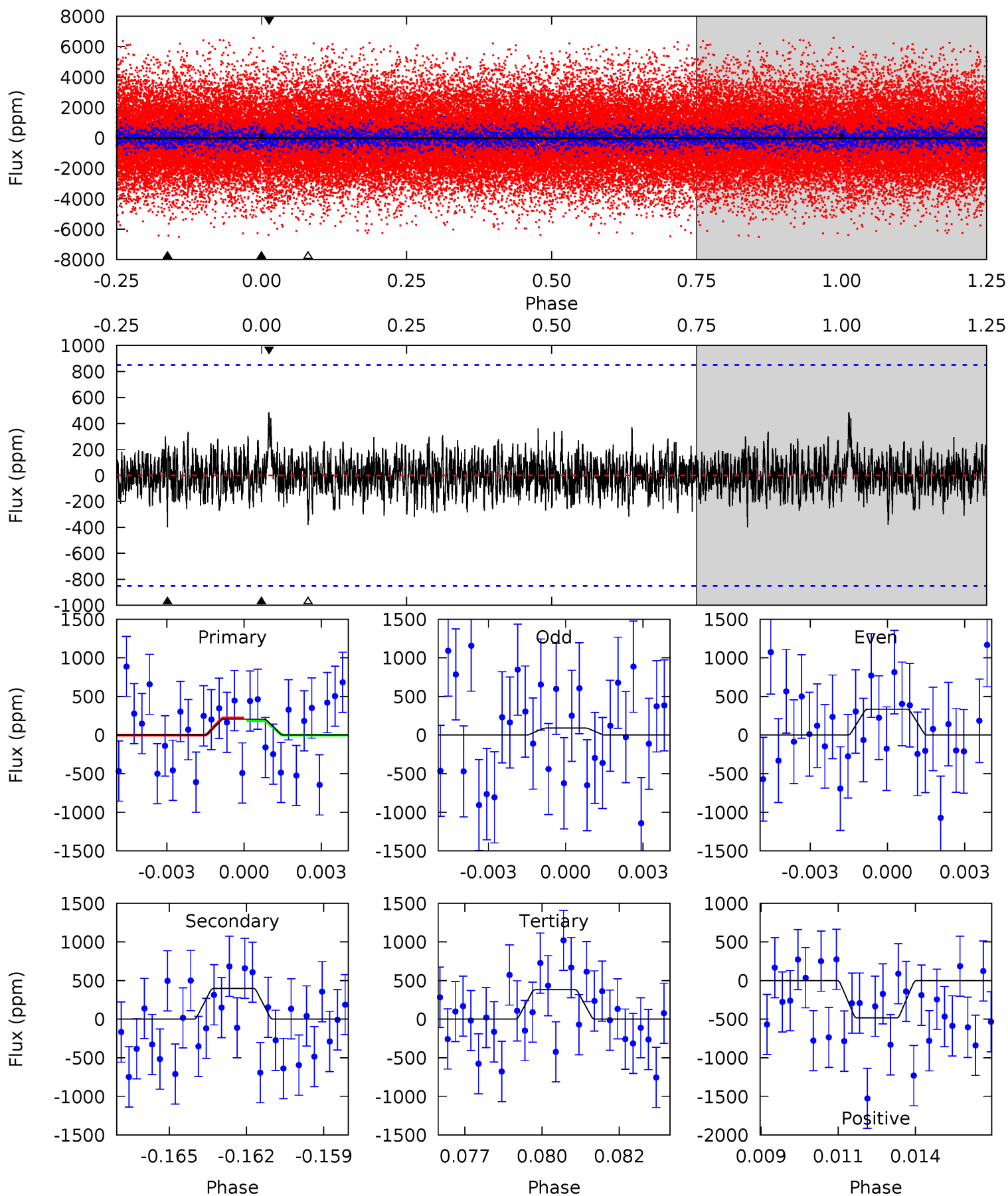
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.10	3.33	2.91	2.90	5.18	2.85	1.00	-1.81	-1.80	0.42	0.43	1.21	0.35	0.47	0.16



Alt Model-Shift Uniqueness Test

007211759-06, P = 34.637062 Days, E = 126.042585 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.27	2.46	2.36	2.99	5.26	2.98	0.69	-1.09	-1.72	0.10	-0.53	0.76	1.35	0.55	0.11



Stellar Parameters For KIC 007211759

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	ρ_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8402^{+232}_{-365}	$3.748^{+0.399}_{-0.142}$	$-0.120^{+0.350}_{-0.400}$	$3.157^{+0.944}_{-1.416}$	$2.039^{+0.384}_{-0.469}$	$0.091^{+0.335}_{-0.045}$
	+3%/-4%	+11%/-4%	+292%/-333%	+30%/-45%	+19%/-23%	+367%/-49%
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 007211759-06 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-285 ± 86	$2.81^{+2.98}_{-1.84}$	1747^{+157}_{-191}	13532^{+40020}_{-5428}	1327^{+11085}_{-1015}
Alt.	-399 ± 162	$2.79^{+2.97}_{-1.92}$	1741^{+156}_{-205}	15745^{+55092}_{-7233}	1819^{+18050}_{-1443}

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

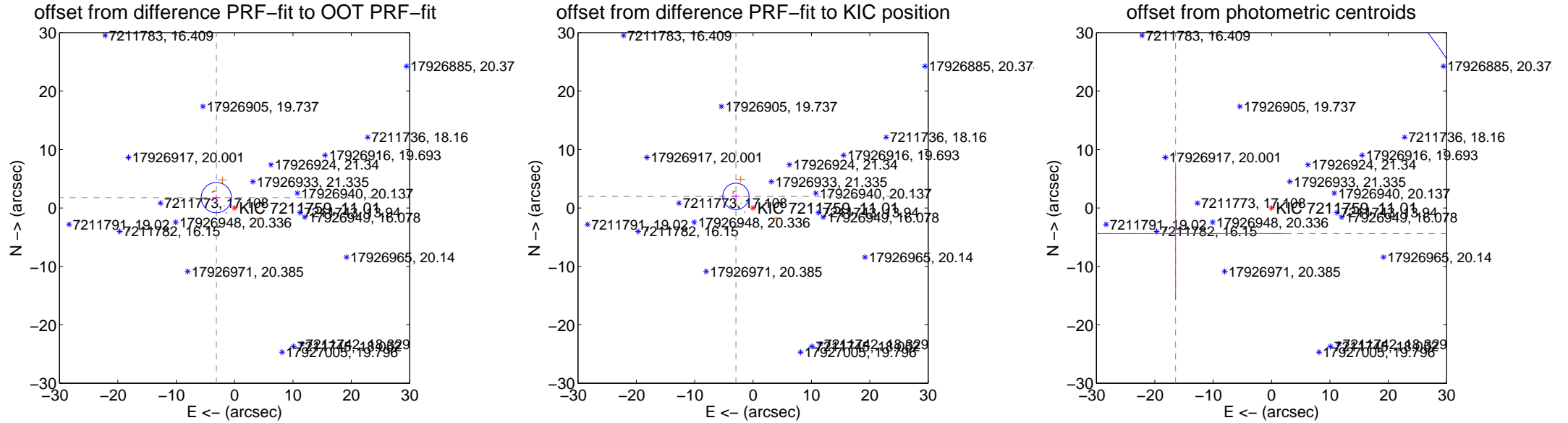
DV Centroid Data

Supplemental centroid analysis for 007211759-06. **Kepler magnitude: 11.01.** Transit SNR 1.34

There are 3 quarters with good PRF difference image offsets

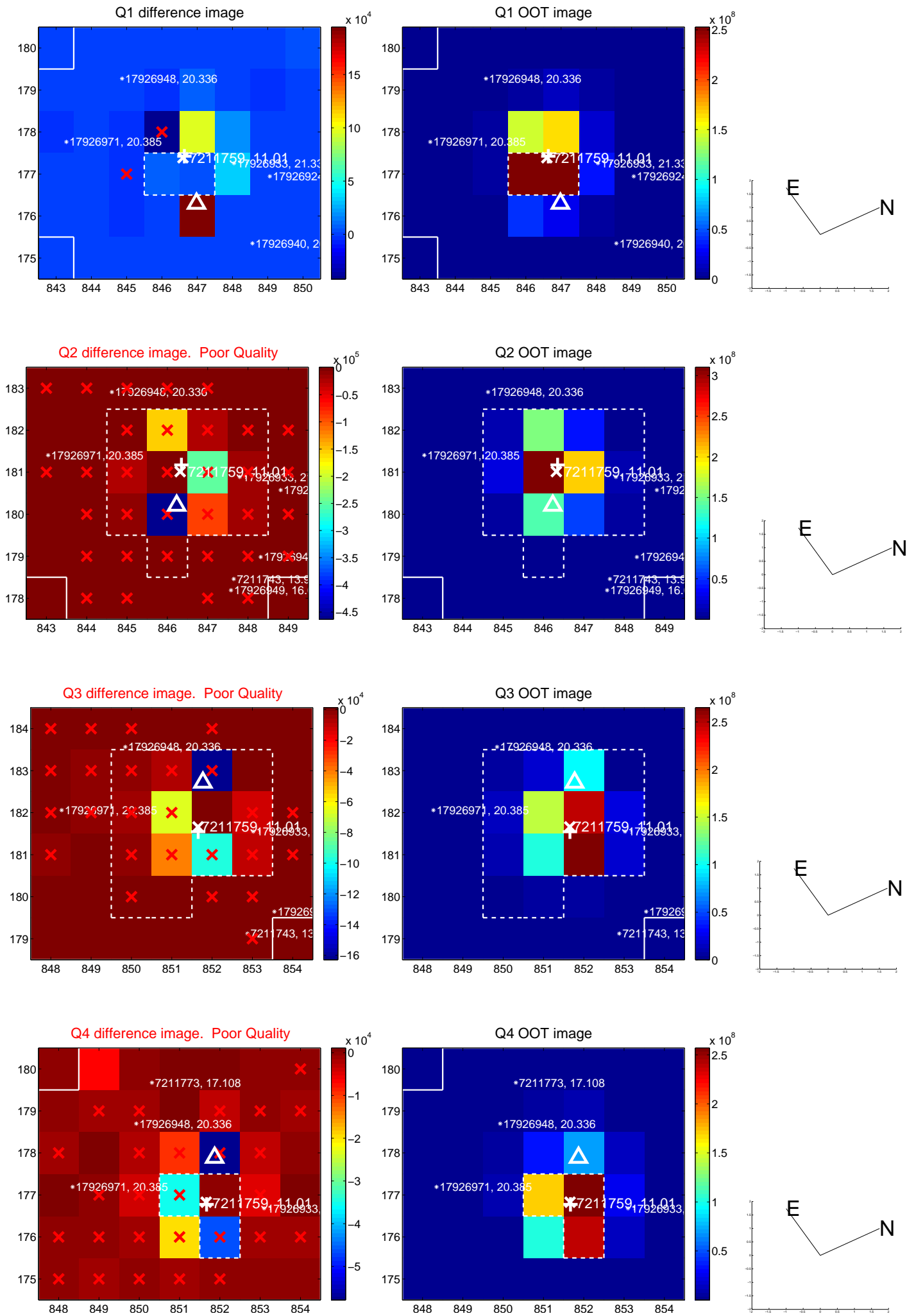
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.587 ± 0.865	4.15	3.120 ± 0.738	1.769 ± 0.517
PRF-fit source offset from KIC position	3.546 ± 0.750	4.73	2.938 ± 0.640	1.986 ± 0.459
photometric centroid source offset	17.00 ± 18.40	0.92	16.43 ± 18.80	-4.38 ± 11.39

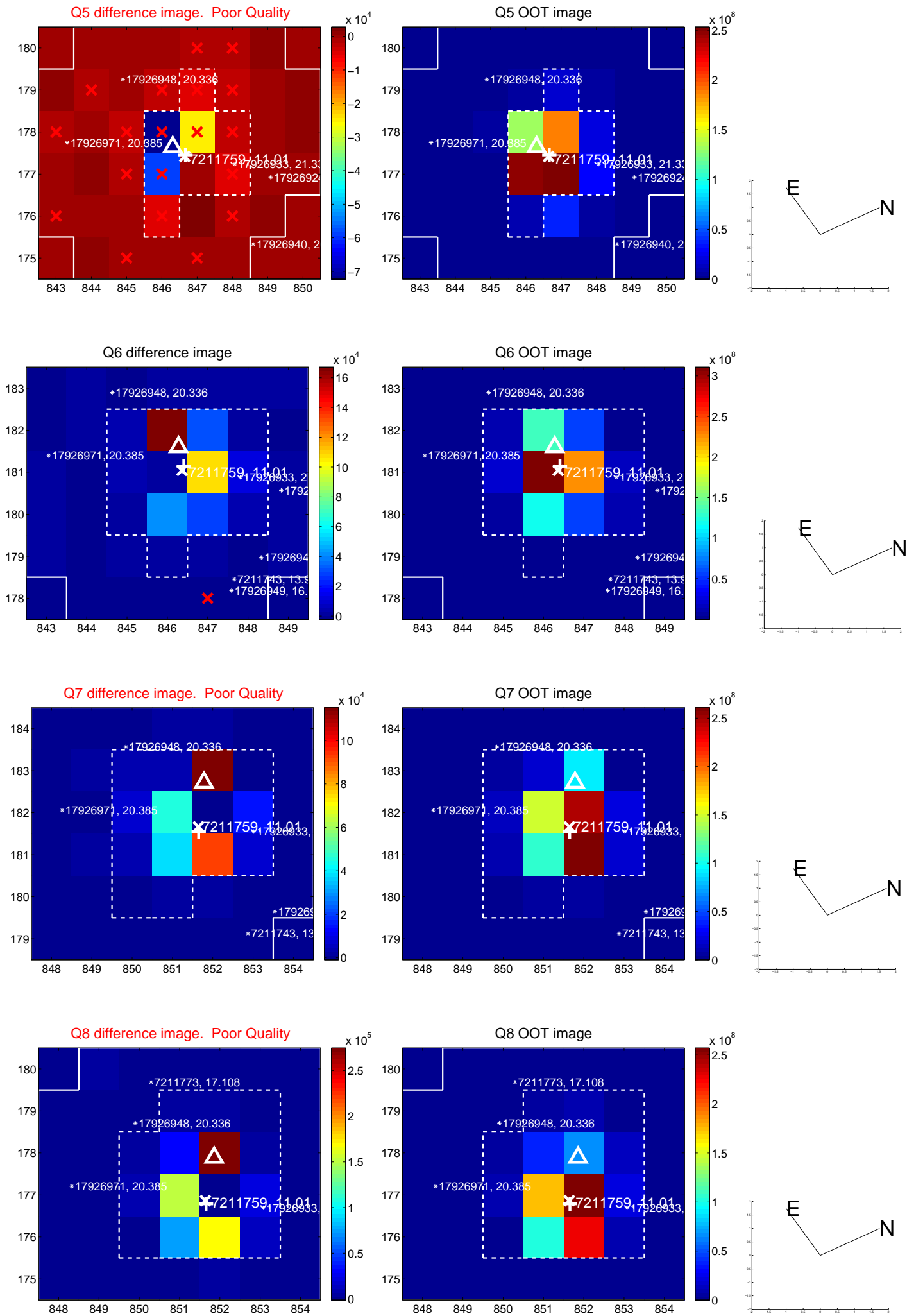


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

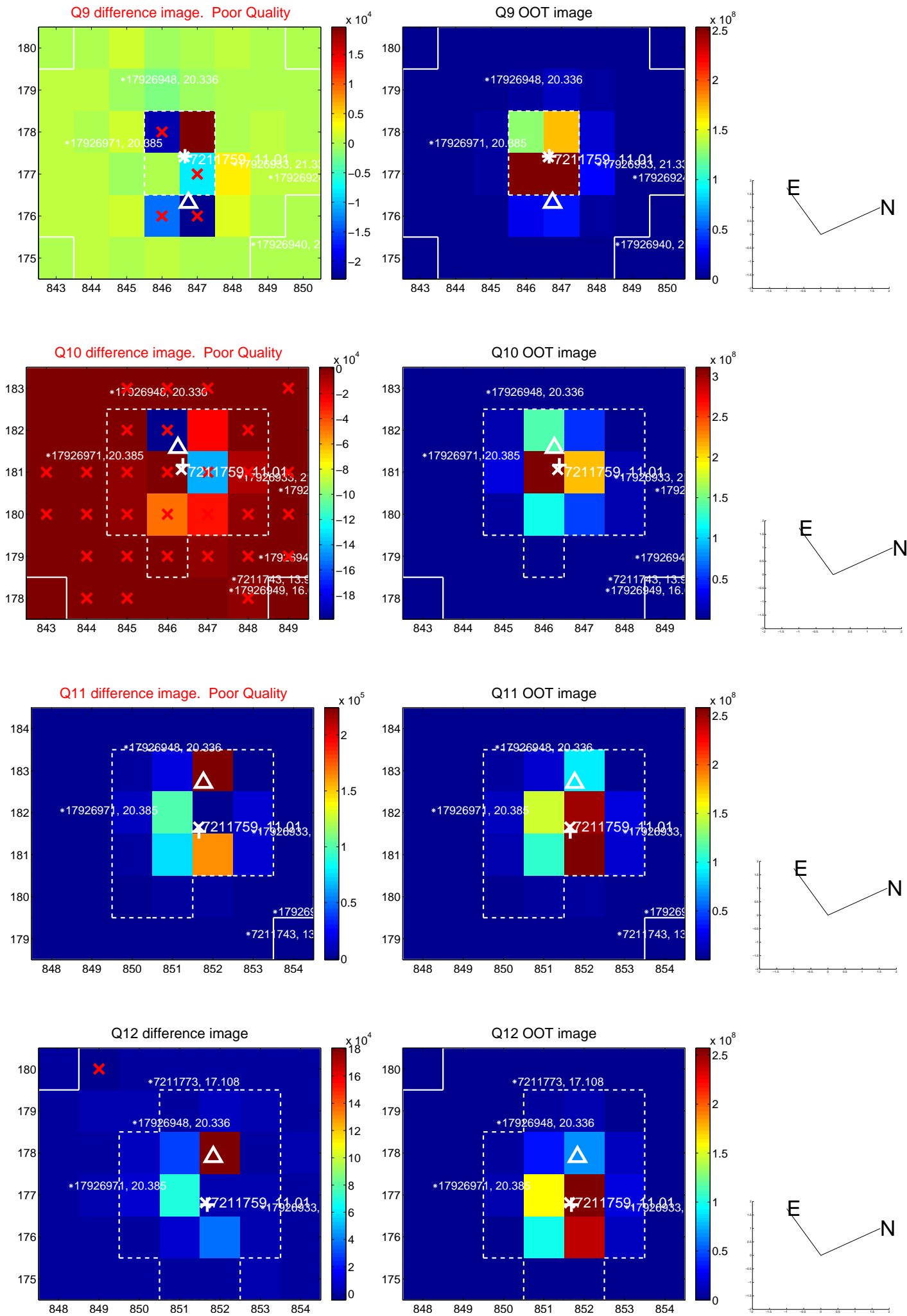
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



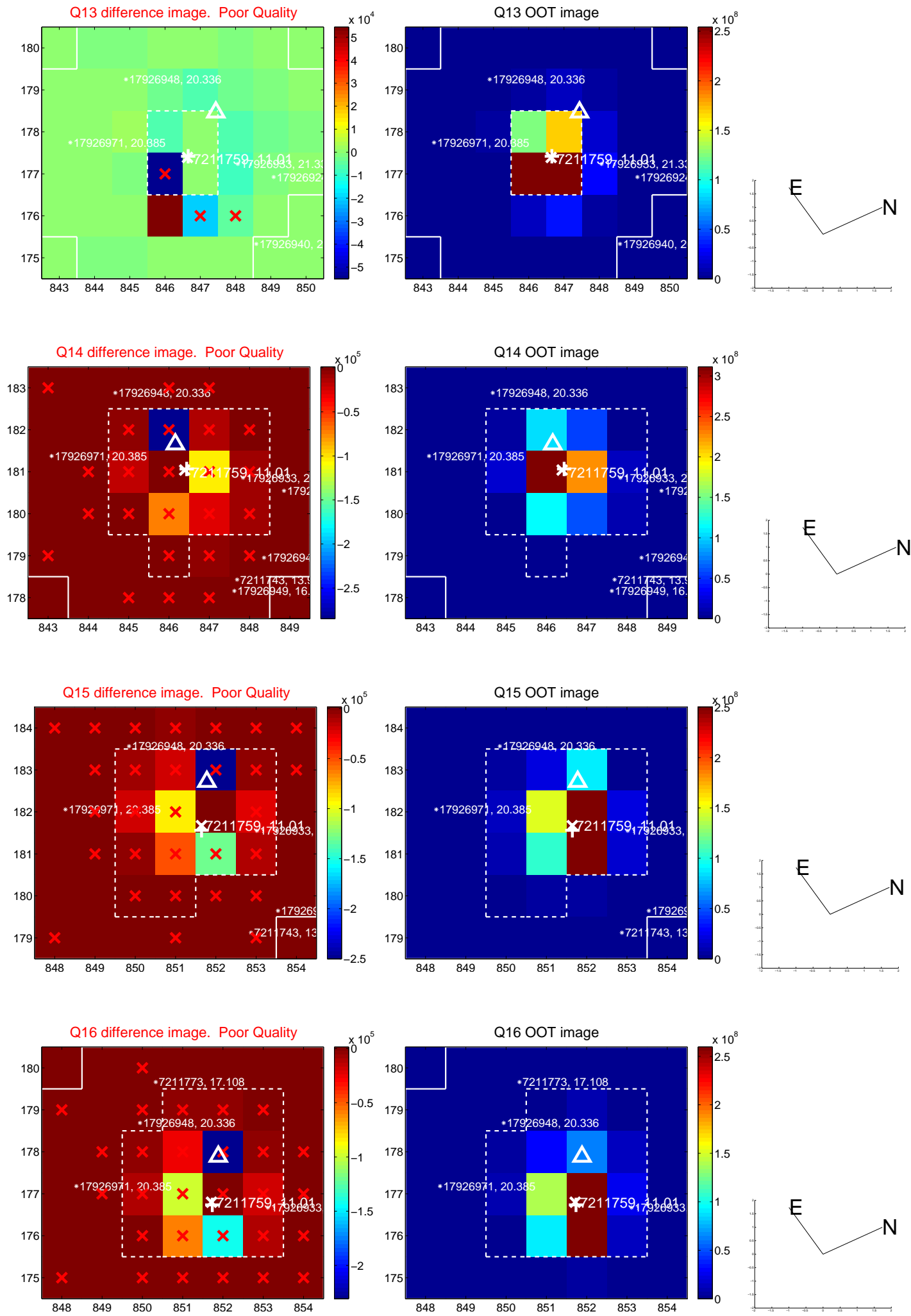
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



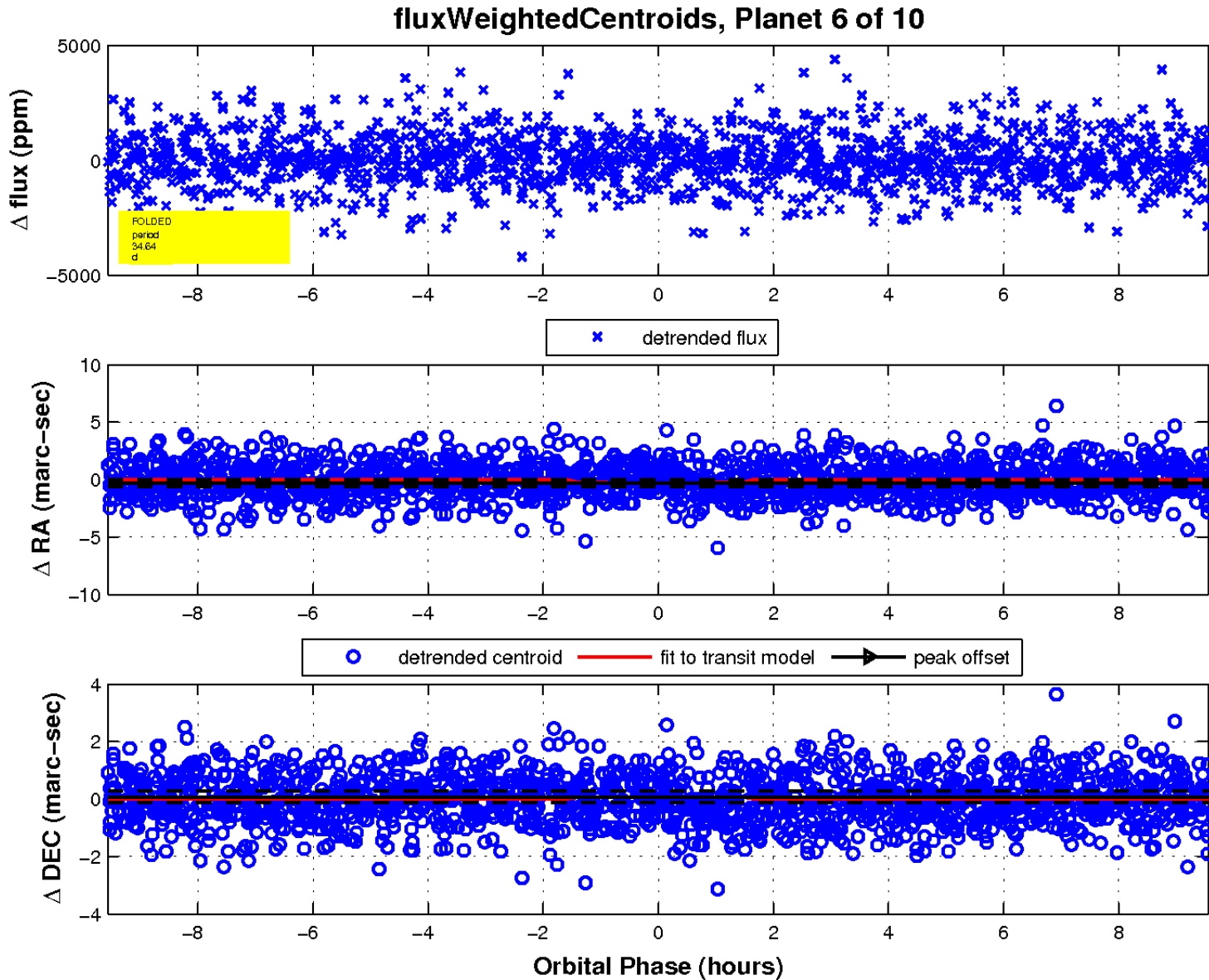
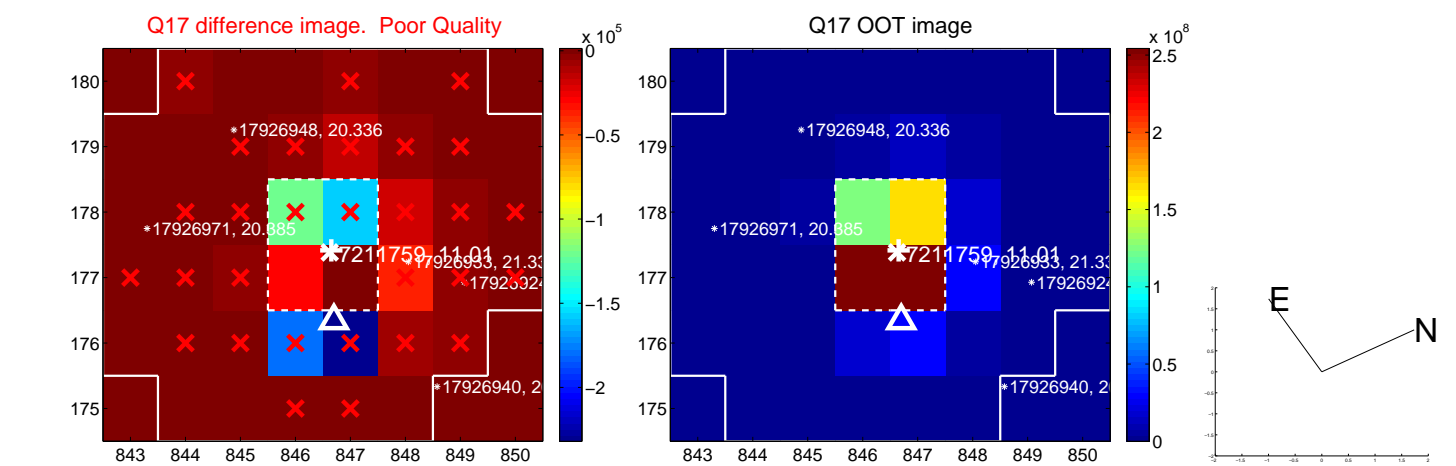
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

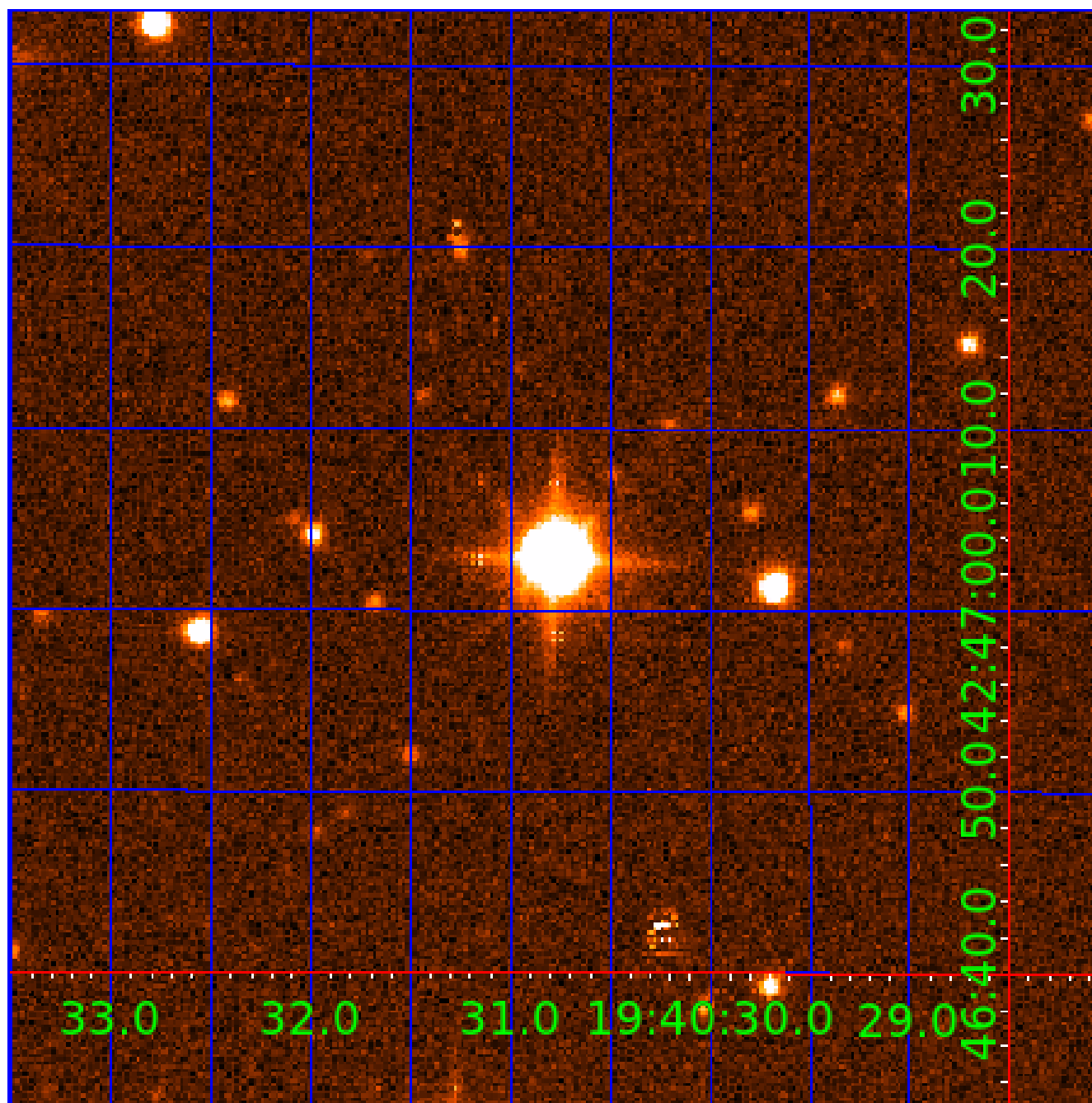


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



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})
007211759-01	OBS	No	48.541107	161.892782	786.7	0.928	134.9	4.7	3.16	8402	9.99	408.44
007211759-02	OBS	No	358.886546	161.664202	215.2	2.879	29.2	15.0	3.16	8402	5.34	28.36
007211759-03	OBS	No	64.575712	164.014592	178.7	9.683	22.3	21.9	3.16	8402	4.74	279.16
007211759-04	OBS	No	40.935358	162.840184	275.3	4.161	21.3	21.2	3.16	8402	6.05	512.64
007211759-05	OBS	No	34.650460	160.429464	15.4	0.524	15.5	0.4	3.16	8402	1.60	640.22
007211759-06	OBS	No	34.637188	160.678807	17.4	3.190	15.7	1.3	3.16	8402	1.53	640.55
007211759-07	OBS	No	27.387010	136.391221	18.2	3.254	9.9	2.3	3.16	8402	1.46	876.09
007211759-08	OBS	No	26.505878	136.615978	428.1	6.000	38.8	-1.0	3.16	8402	6.62	915.13
007211759-09	OBS	No	26.082524	137.048060	102.2	7.484	21.7	7.7	3.16	8402	3.69	934.99
007211759-10	OBS	No	26.321290	135.945076	208.1	15.000	35.7	-1.0	3.16	8402	4.61	923.70

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007211759-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
007211759-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
007211759-03	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED—HALO_GHOST
007211759-04	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
007211759-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED—HALO_GHOST
007211759-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA_TRACKER—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_SATURATED
007211759-07	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED—HALO_GHOST
007211759-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
007211759-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
007211759-10	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED

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

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

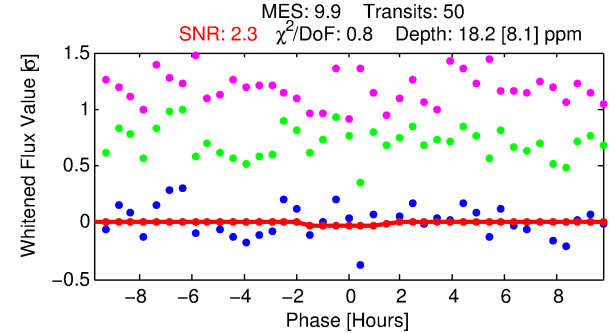
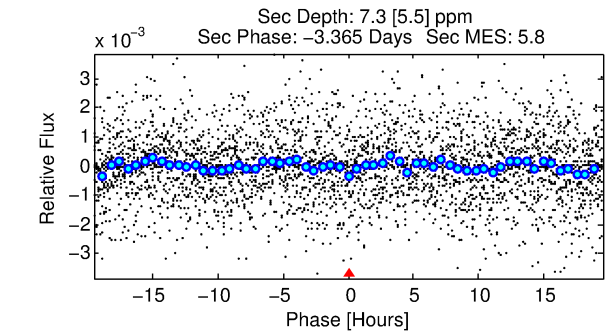
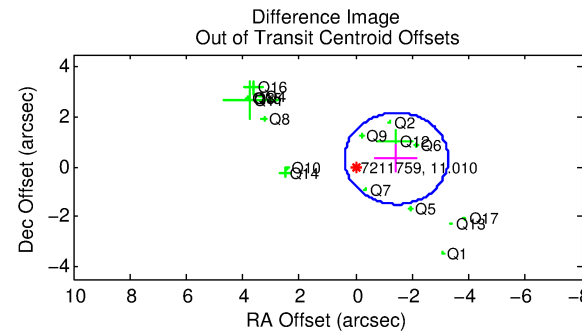
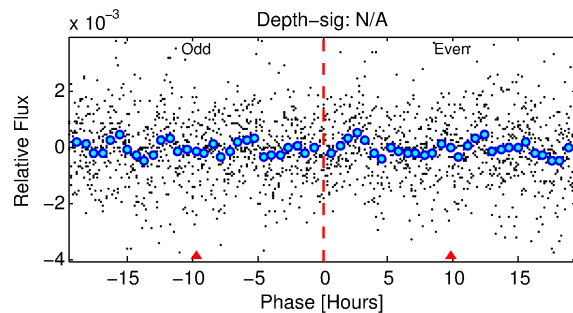
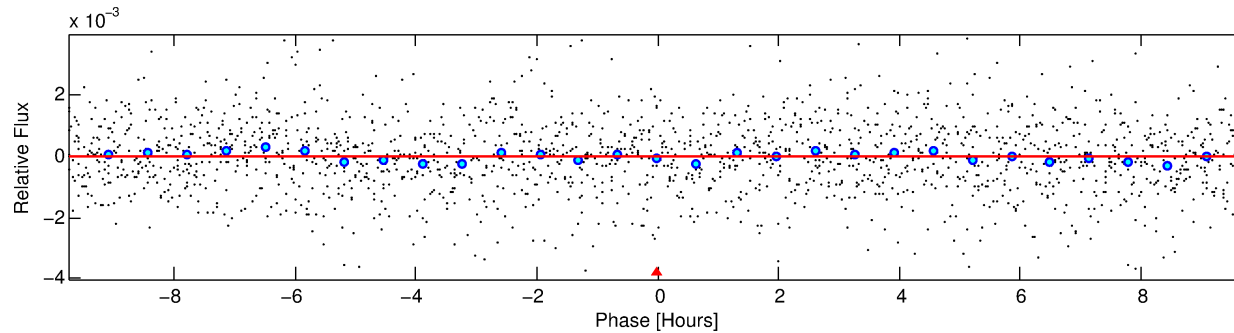
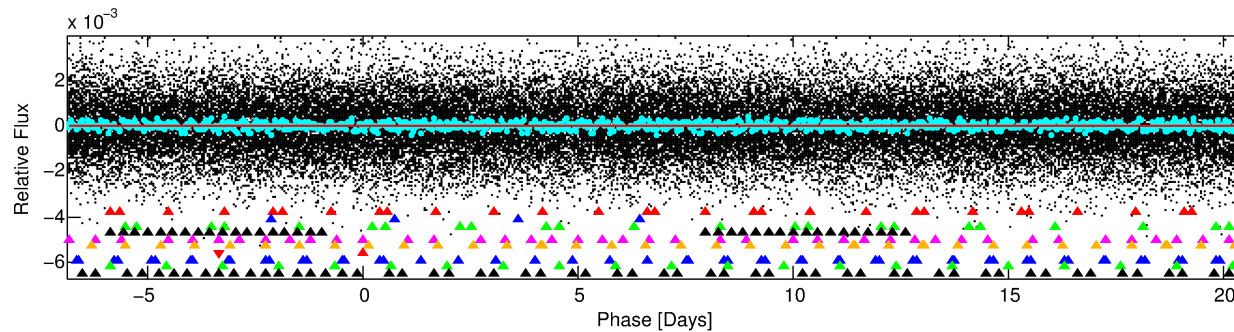
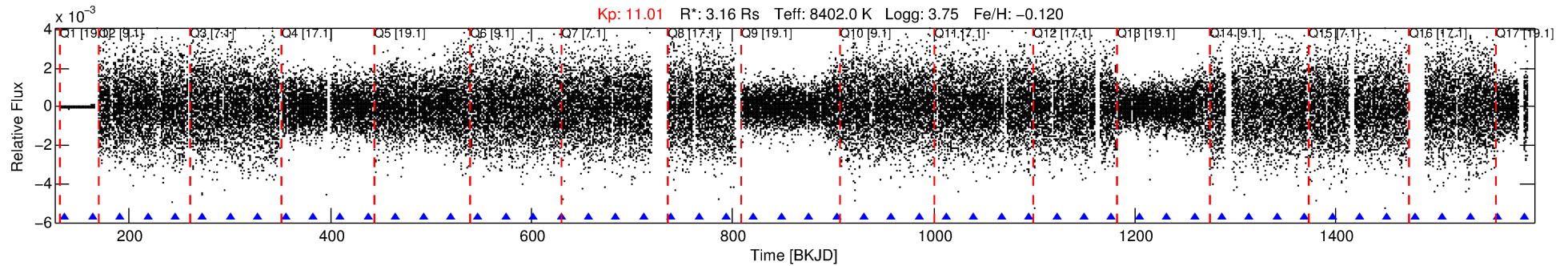
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007211759-07

No Significant Match Found

DV One-Page Summary

KIC: 7211759 Candidate: 7 of 10 Period: 27.387 d



DV Fit Results:

Period = 27.38701 [0.05849] d
Epoch = 136.3912 [0.0147] BKJD
Rp/R* = 0.0042 [0.0036]
a/R* = 43.31 [162.34]
b = 0.74 [2.64]
Seff = 876.09 [616.23]
Teq = 1387 [244] K
Rp = 1.46 [1.39] Re
a = 0.2254 [0.0965] AU
Ag = 96.08 [188.66] [0.50σ]
Teffp = 6715 [3105] K [1.71σ]

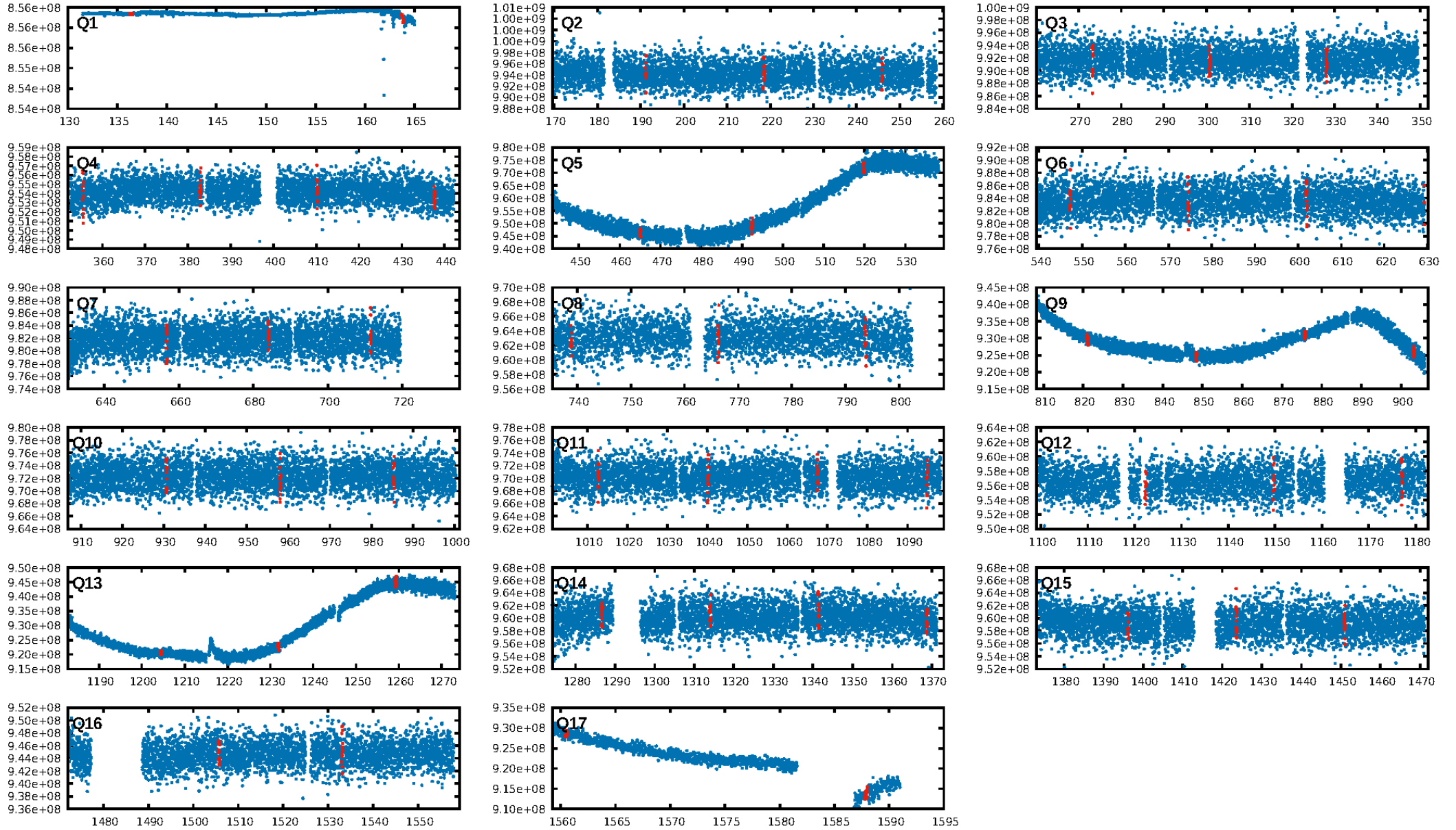
DV Diagnostic Results:

ShortPeriod-sig: 99.8% [3.10σ]
LongPeriod-sig: 100.0% [38.19σ]
ModelChiSquare2-sig: 54.8%
ModelChiSquareGof-sig: 99.1%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [47/47]
GhostDiagnostic-chr: -0.06435
Centroid-sig: 3.4%
Centroid-so: 22.659 arcsec [1.57σ]
OotOffset-rm: 1.470 arcsec [2.40σ]
KicOffset-rm: 1.323 arcsec [2.29σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.24 [4/17]
DiffImageOverlap-fno: 0.94 [16/17]

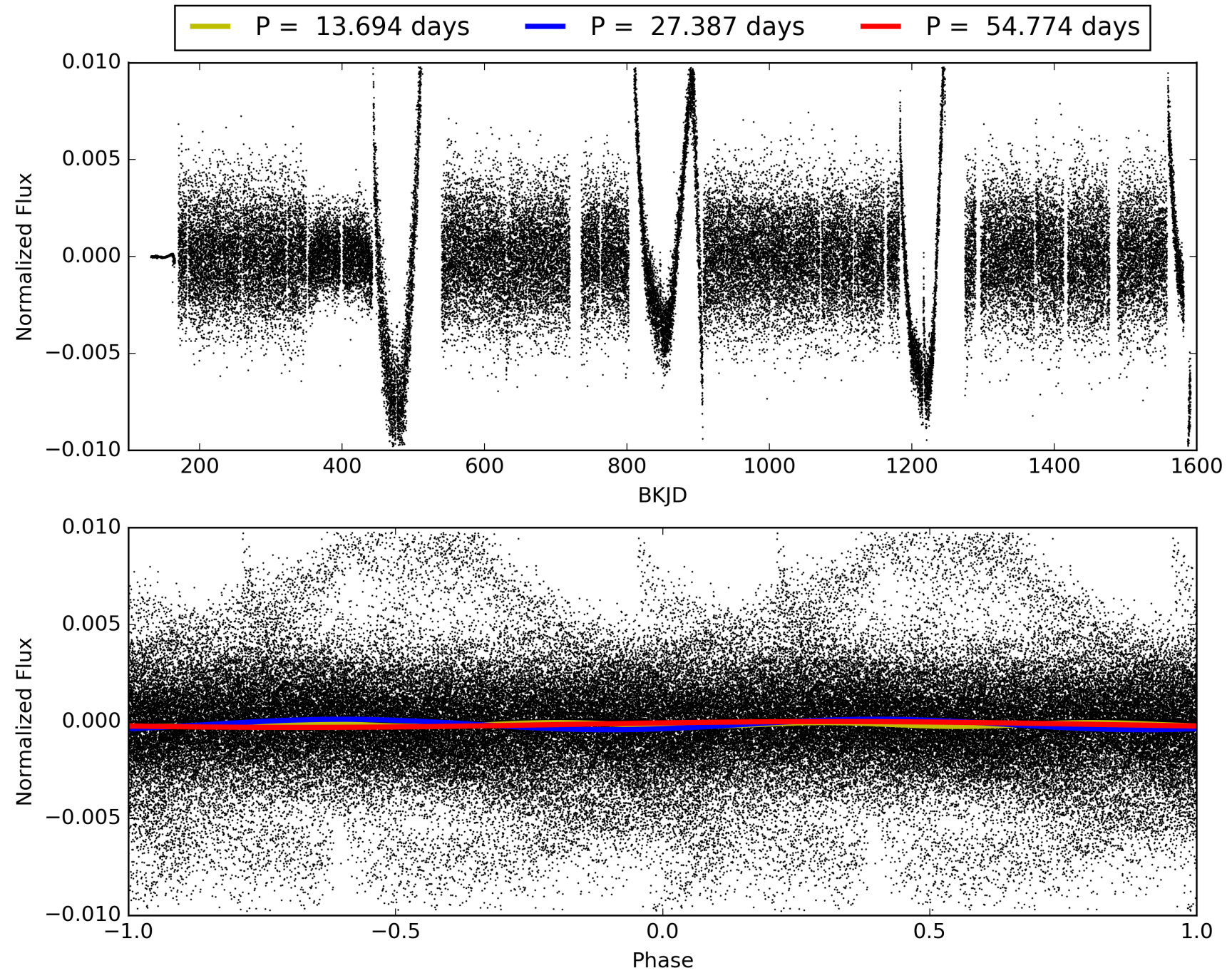
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 08:37:48 Z

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

TCE 007211759-07, PDC Light Curves

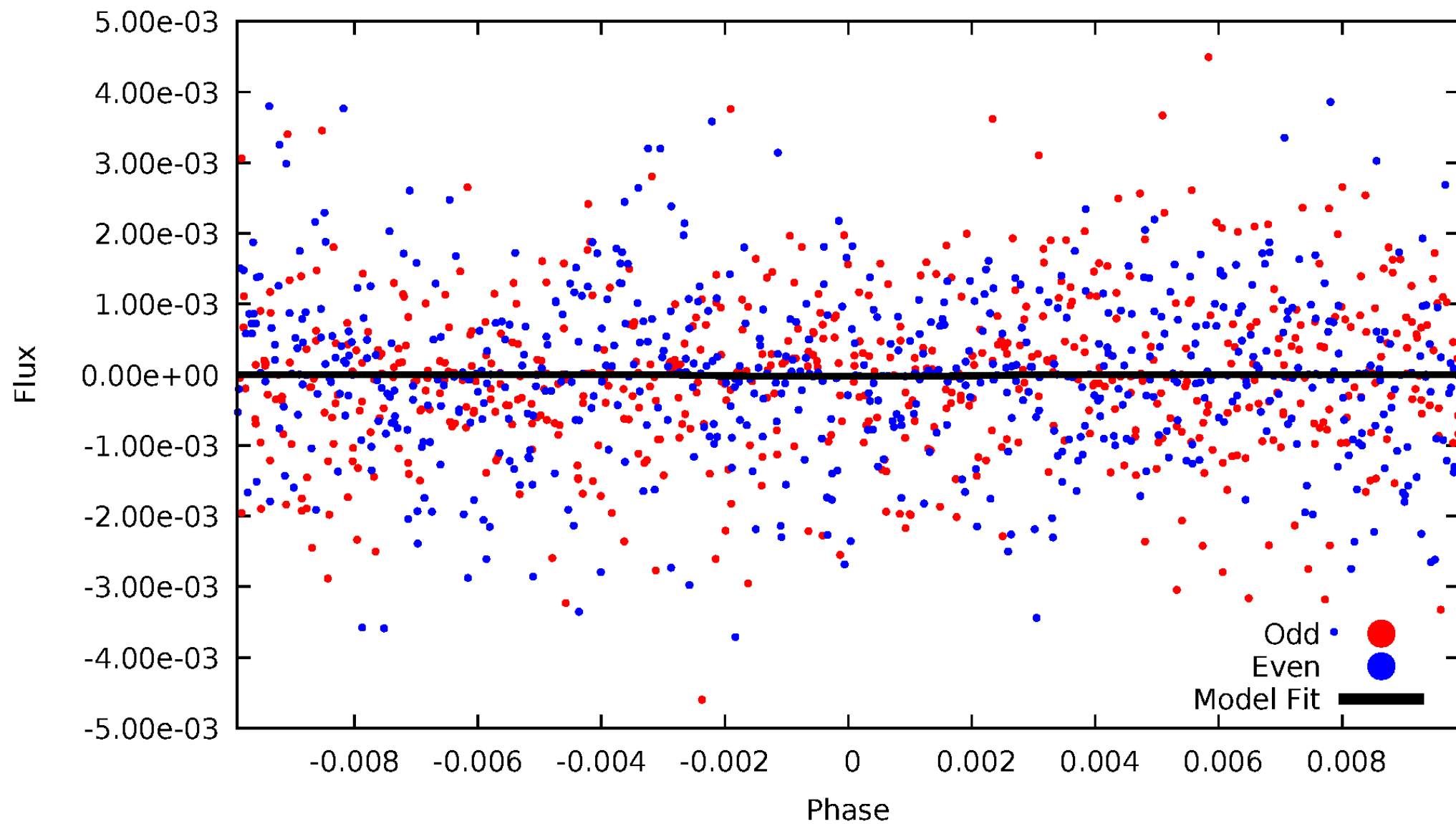


TCE 007211759-07



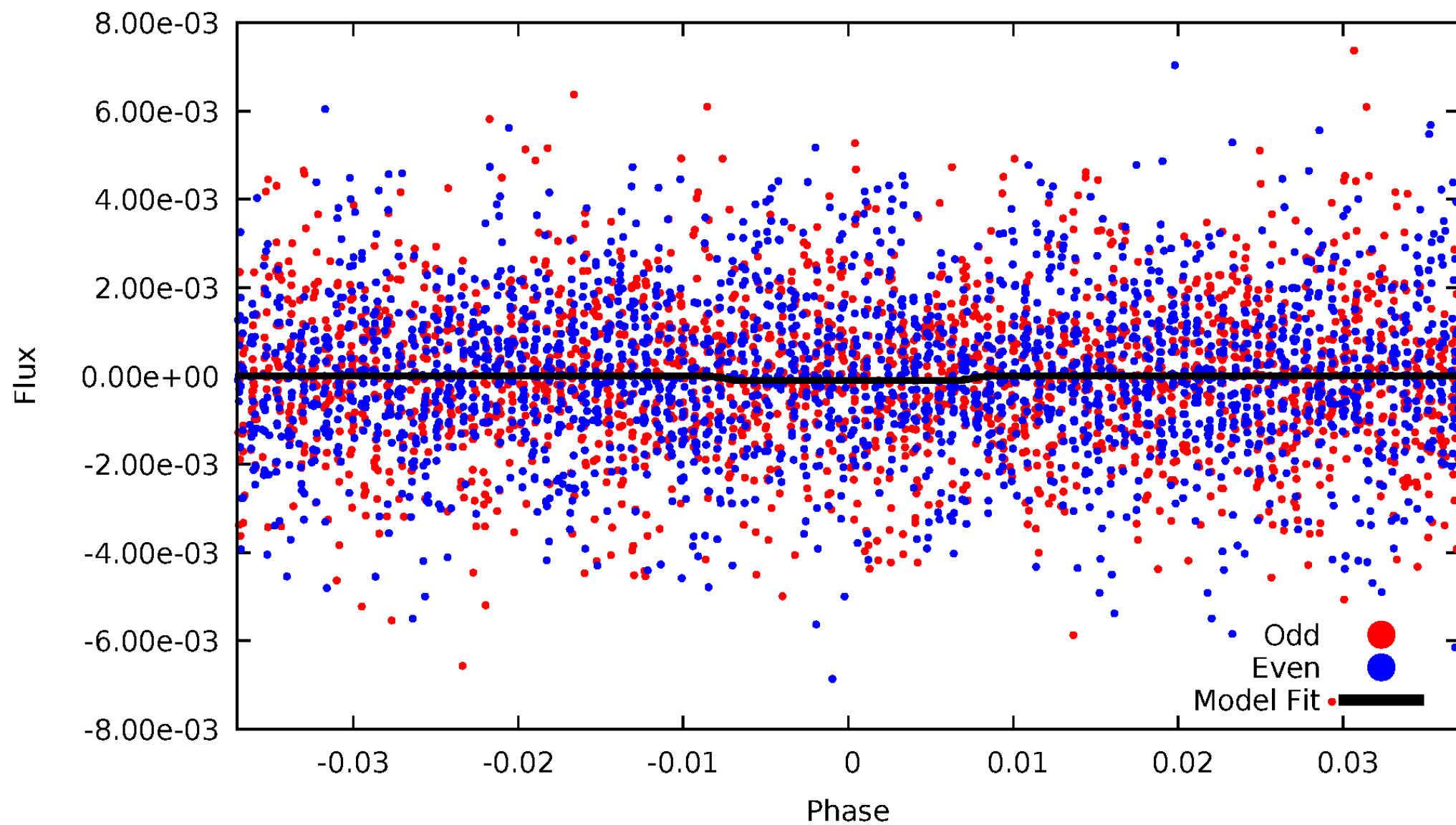
DV Odd/Even

TCE 007211759-07



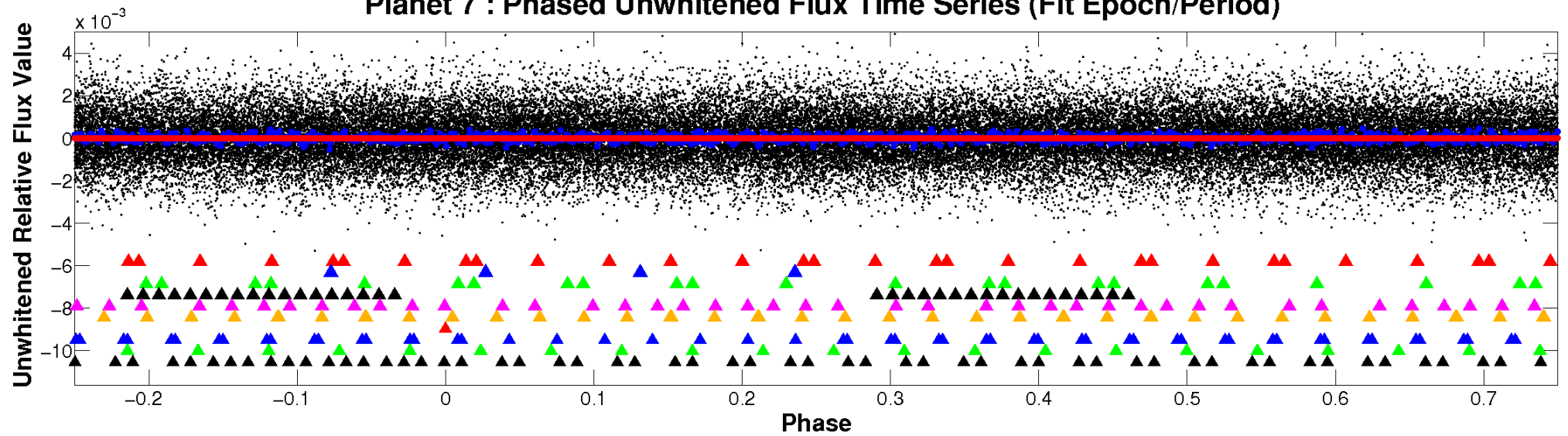
ALT Odd/Even

TCE 007211759-07

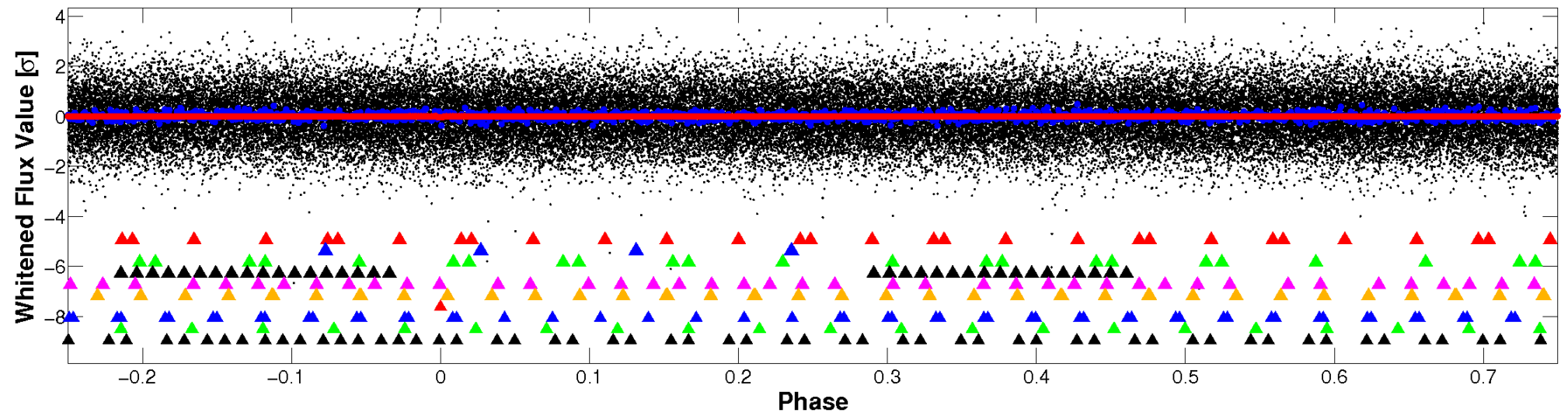


Non-Whitened Vs. Whitened Light Curve

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

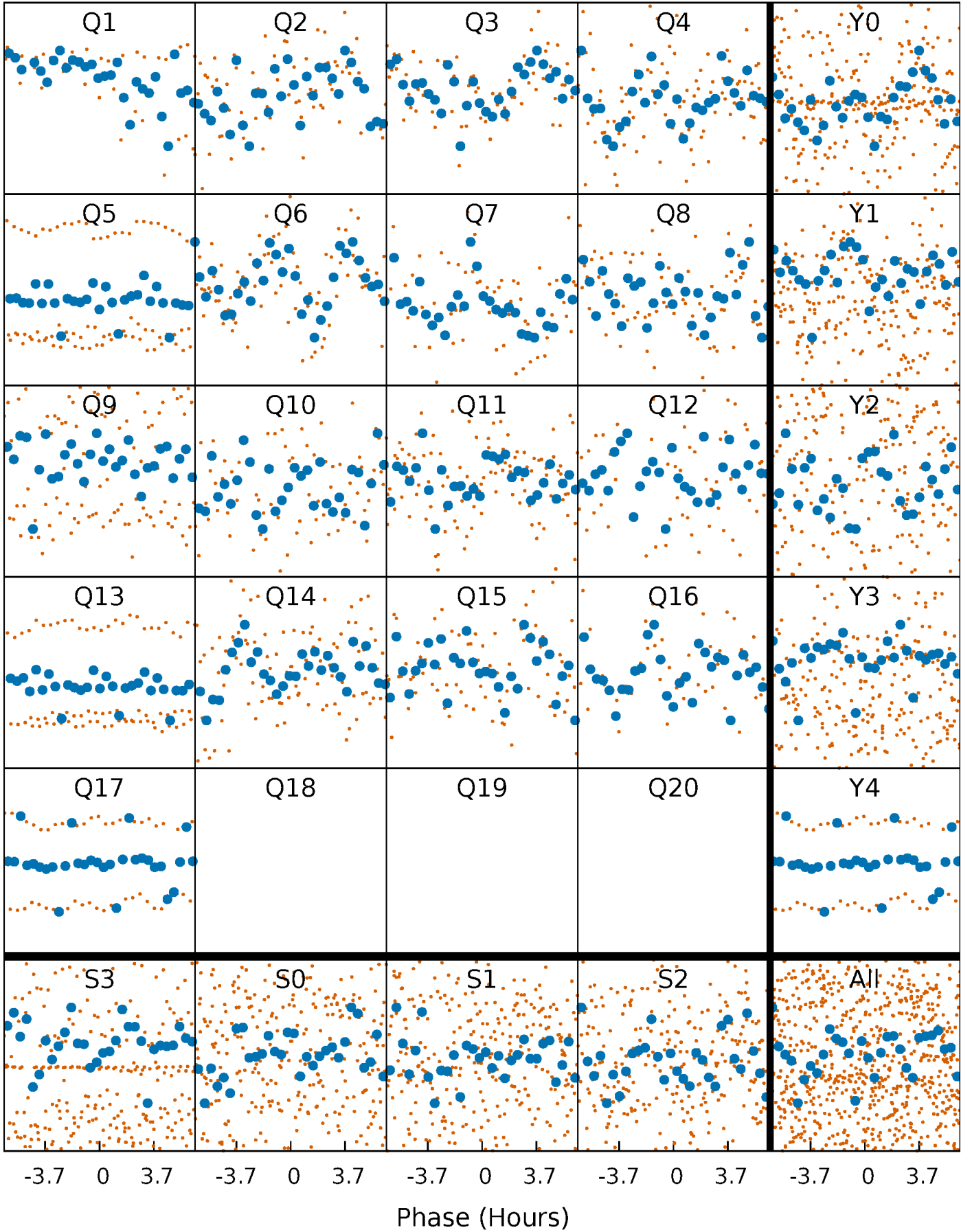


Planet 7 : Phased Whitened Flux Time Series (Fit Epoch/Period)



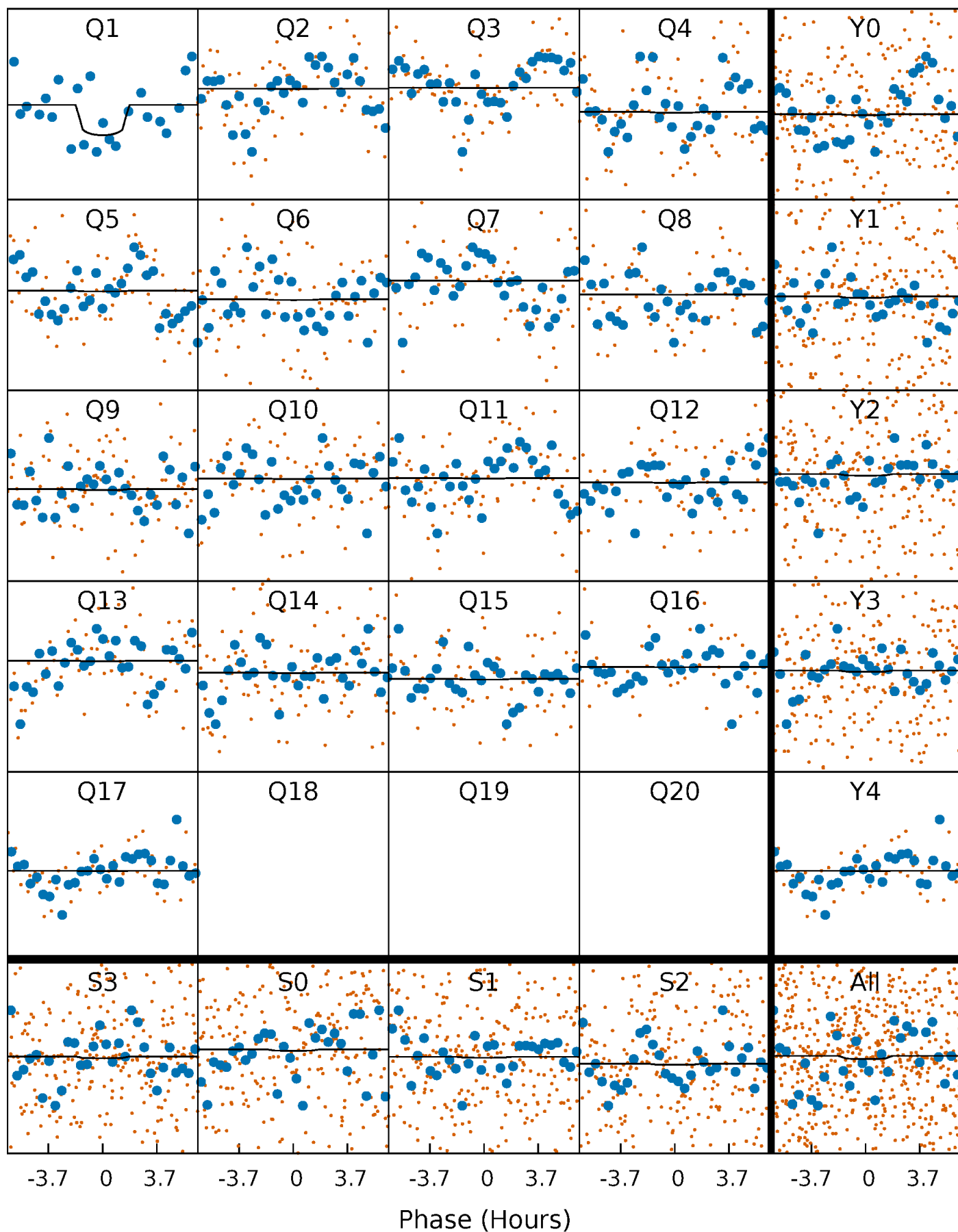
PDC Quarter-Phased Transit Curves

TCE 007211759-07 $P = 27.387010$ Days $T_0 = 136.391221$ (BKJD)



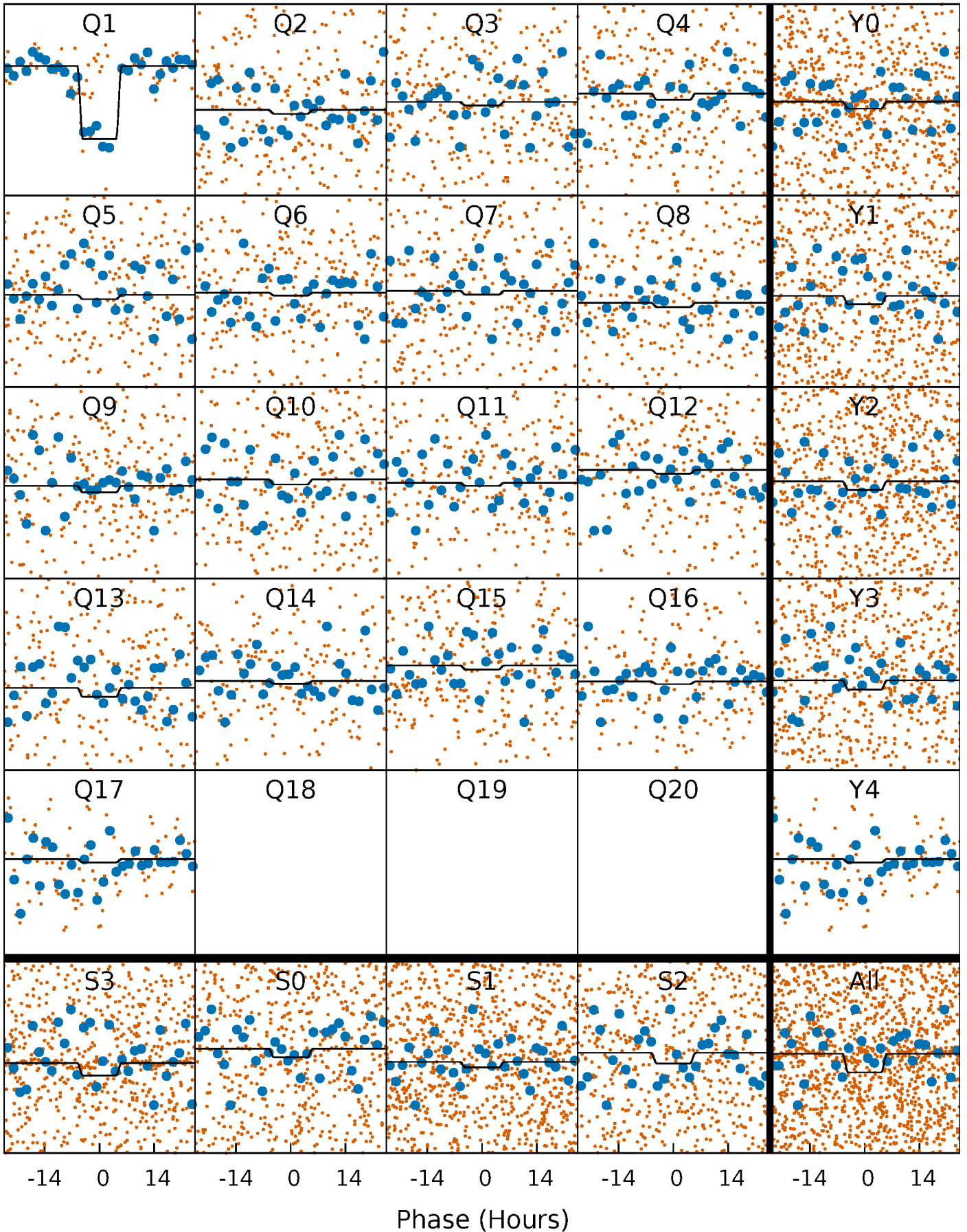
DV Quarter-Phased Transit Curves

TCE 007211759-07 P= 27.387010 Days $T_0=136.391221$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

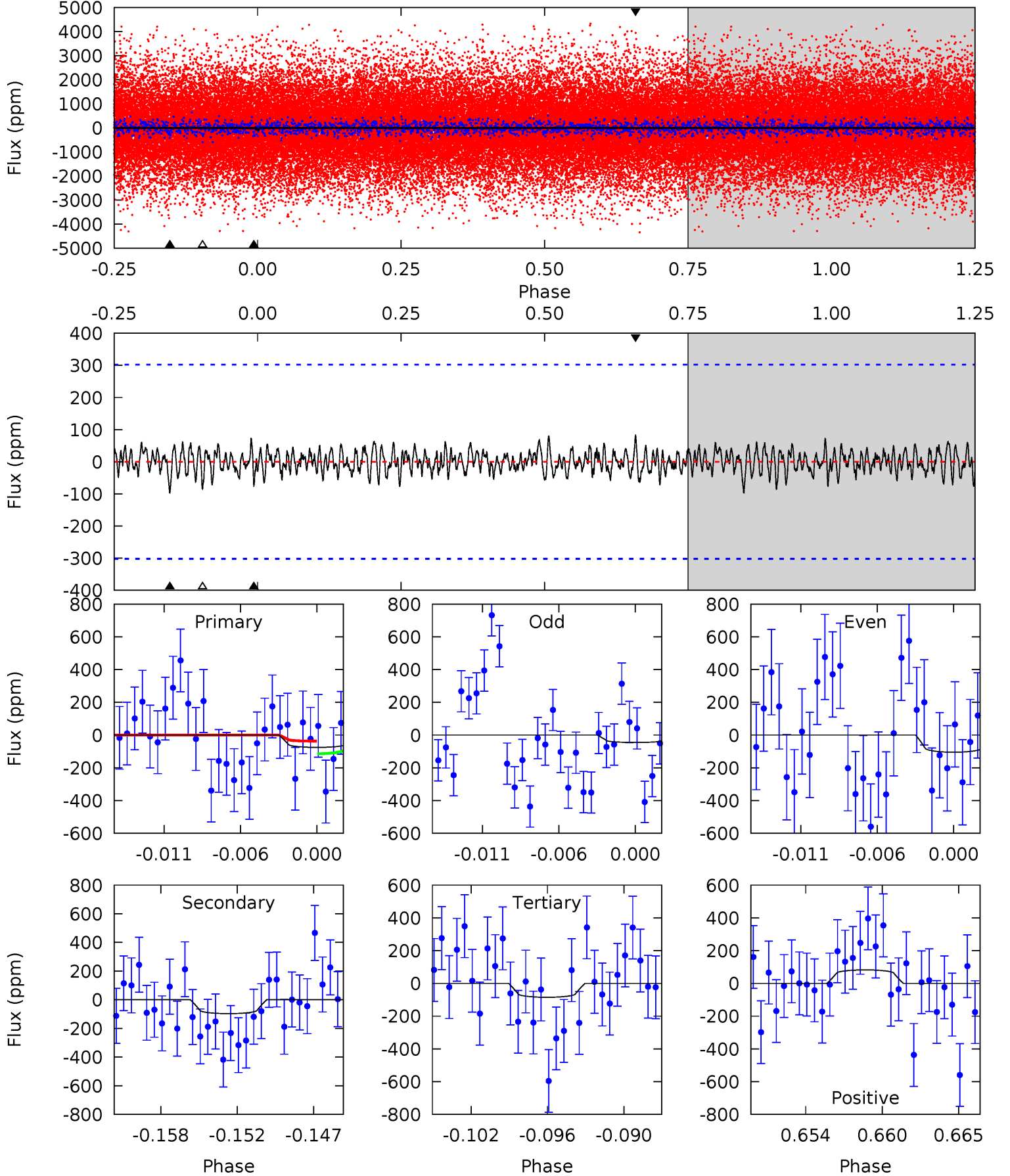
TCE 007211759-07 $P = 27.503448$ Days $T_0 = 137.330374$ (BKJD)



DV Model-Shift Uniqueness Test

007211759-07, P = 27.387010 Days, E = 109.004211 Days

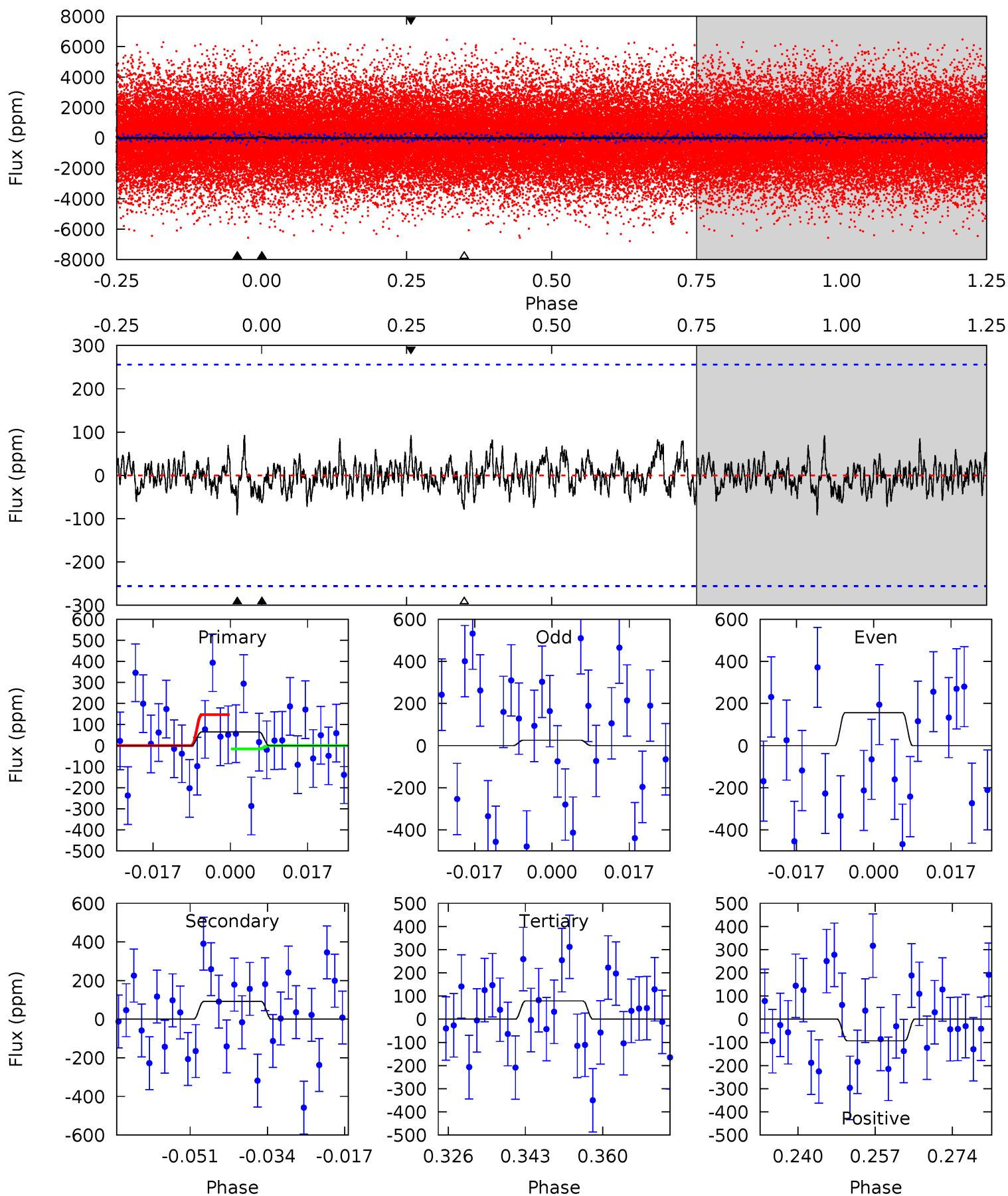
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.28	1.65	1.44	1.40	5.14	2.77	0.49	-0.16	-0.11	0.20	0.25	0.51	5.91	0.46	0.65



Alt Model-Shift Uniqueness Test

007211759-07, P = 27.503448 Days, E = 109.826926 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.24	1.77	1.52	1.80	4.92	2.38	0.53	-0.27	-0.56	0.25	-0.03	1.26	0.79	0.50	1.26



Stellar Parameters For KIC 007211759

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8402^{+232}_{-365}	$3.748^{+0.399}_{-0.142}$	$-0.120^{+0.350}_{-0.400}$	$3.157^{+0.944}_{-1.416}$	$2.039^{+0.384}_{-0.469}$	$0.091^{+0.335}_{-0.045}$
	+3%/-4%	+11%/-4%	+292%/-333%	+30%/-45%	+19%/-23%	+367%/-49%
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 007211759-07 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-97 ± 59	$1.51^{+1.18}_{-0.91}$	1876^{+169}_{-194}	13672^{+26472}_{-5778}	983^{+5858}_{-778}
Alt.	-92 ± 52	$3.27^{+1.56}_{-1.26}$	1891^{+154}_{-212}	7872^{+3255}_{-1888}	221^{+480}_{-146}

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 $A_{obs} \gg 1.0$

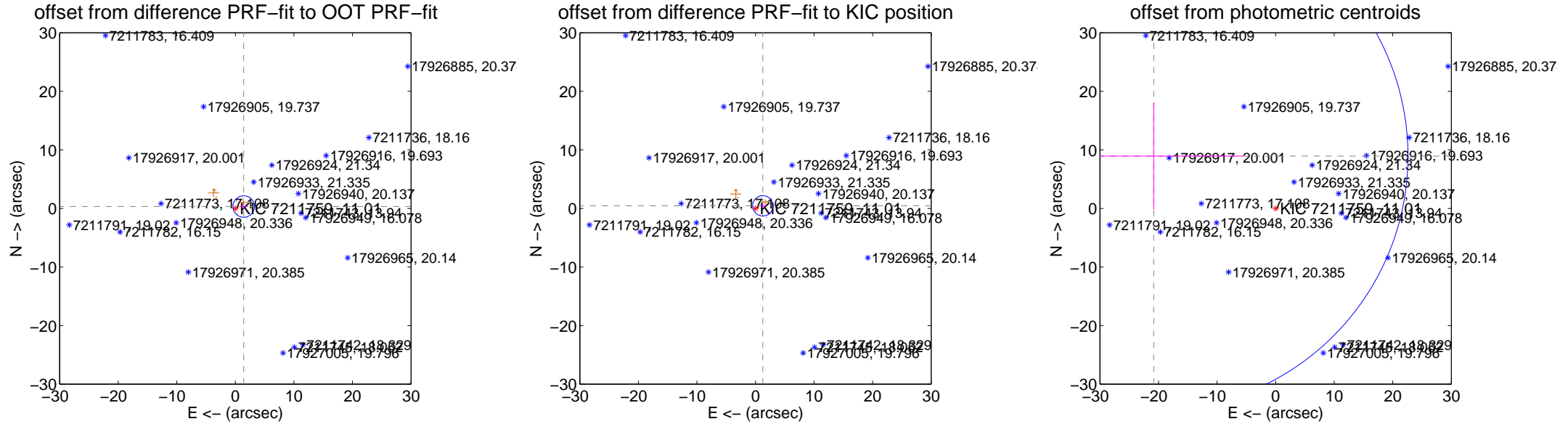
DV Centroid Data

Supplemental centroid analysis for 007211759-07. **Kepler magnitude: 11.01.** Transit SNR 2.31

There are 4 quarters with good PRF difference image offsets

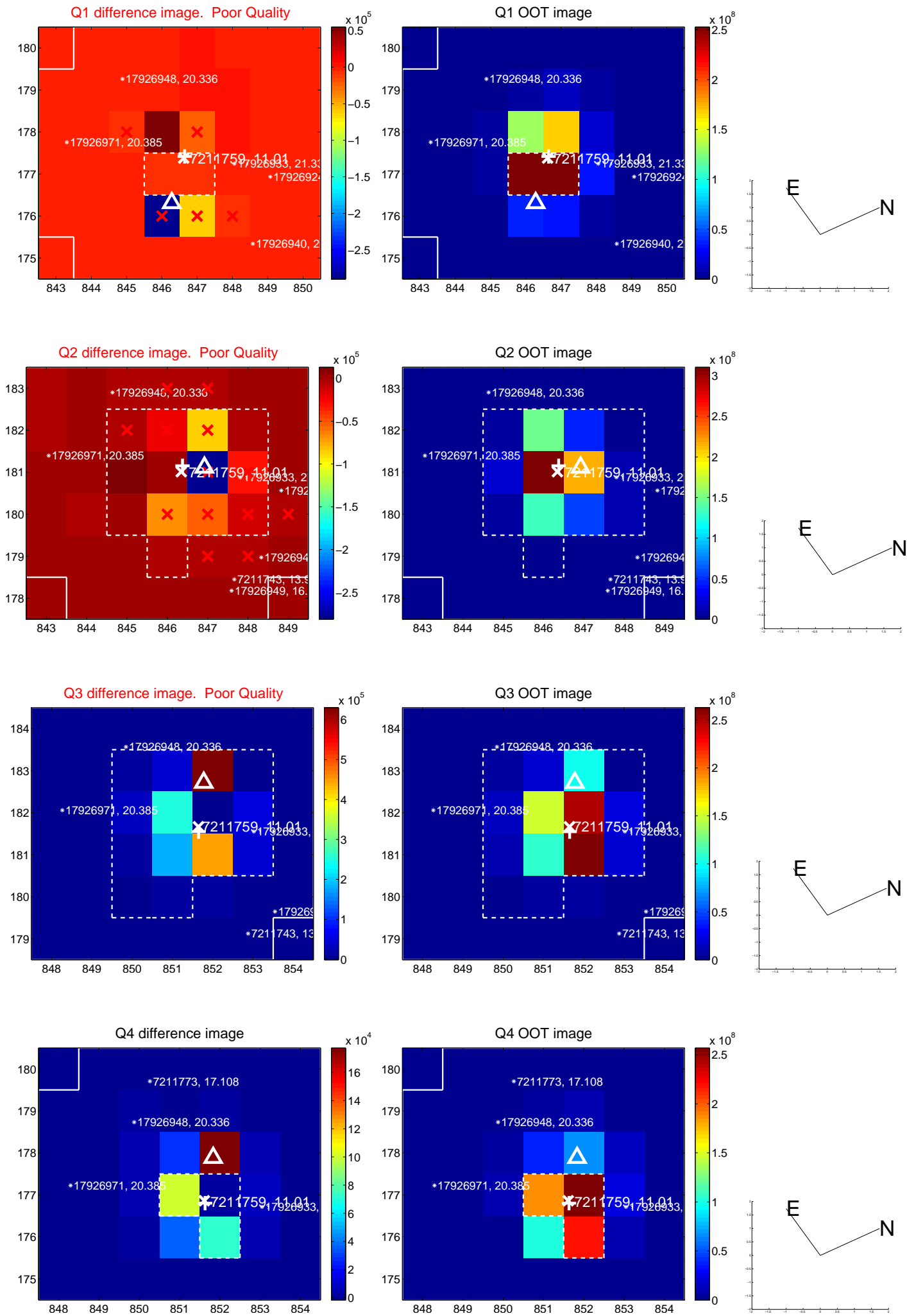
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.470 ± 0.611	2.40	-1.433 ± 0.720	0.327 ± 0.518
PRF-fit source offset from KIC position	1.323 ± 0.578	2.29	-1.246 ± 0.598	0.444 ± 0.398
photometric centroid source offset	22.66 ± 14.47	1.57	20.82 ± 15.25	8.94 ± 9.17

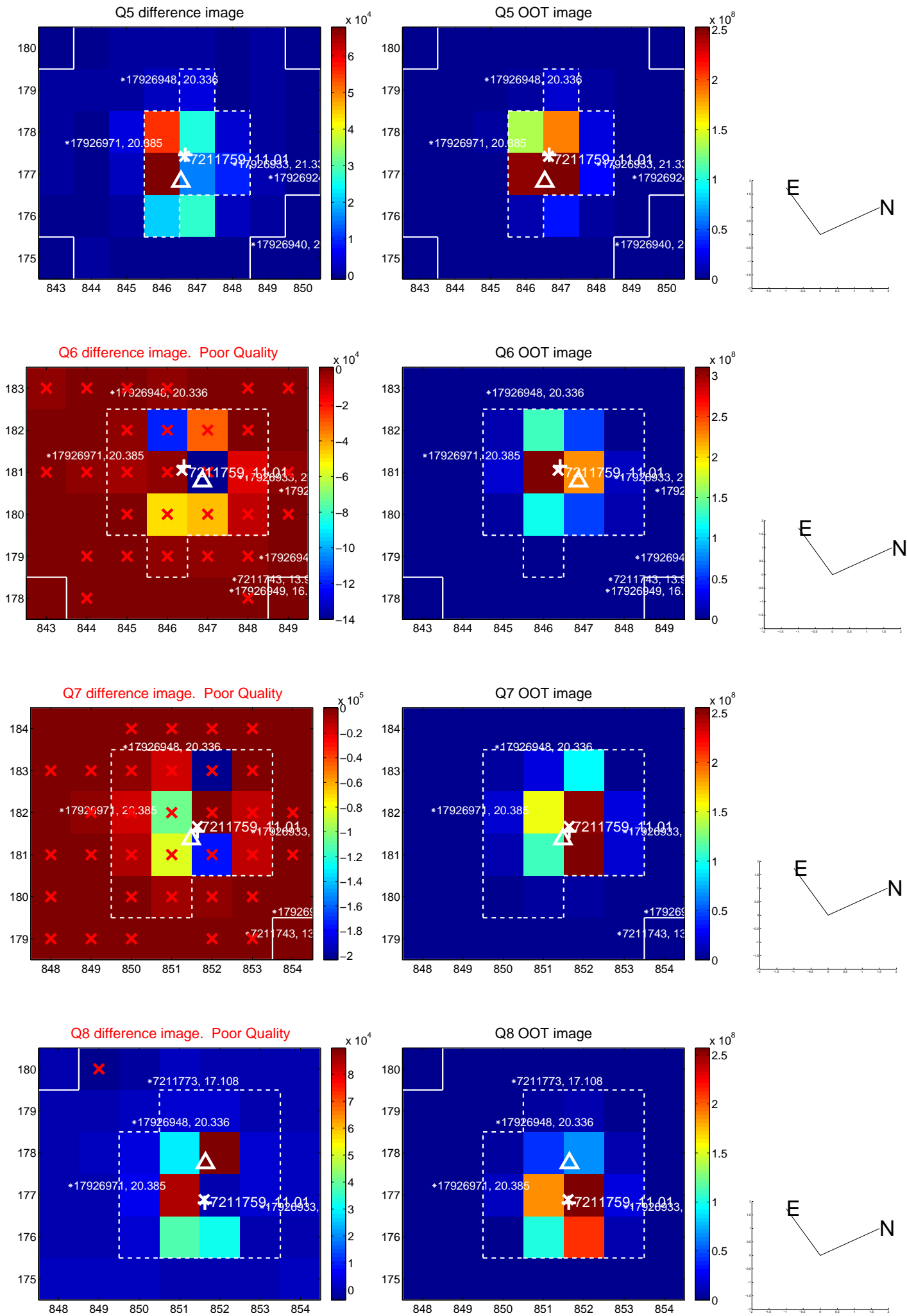


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

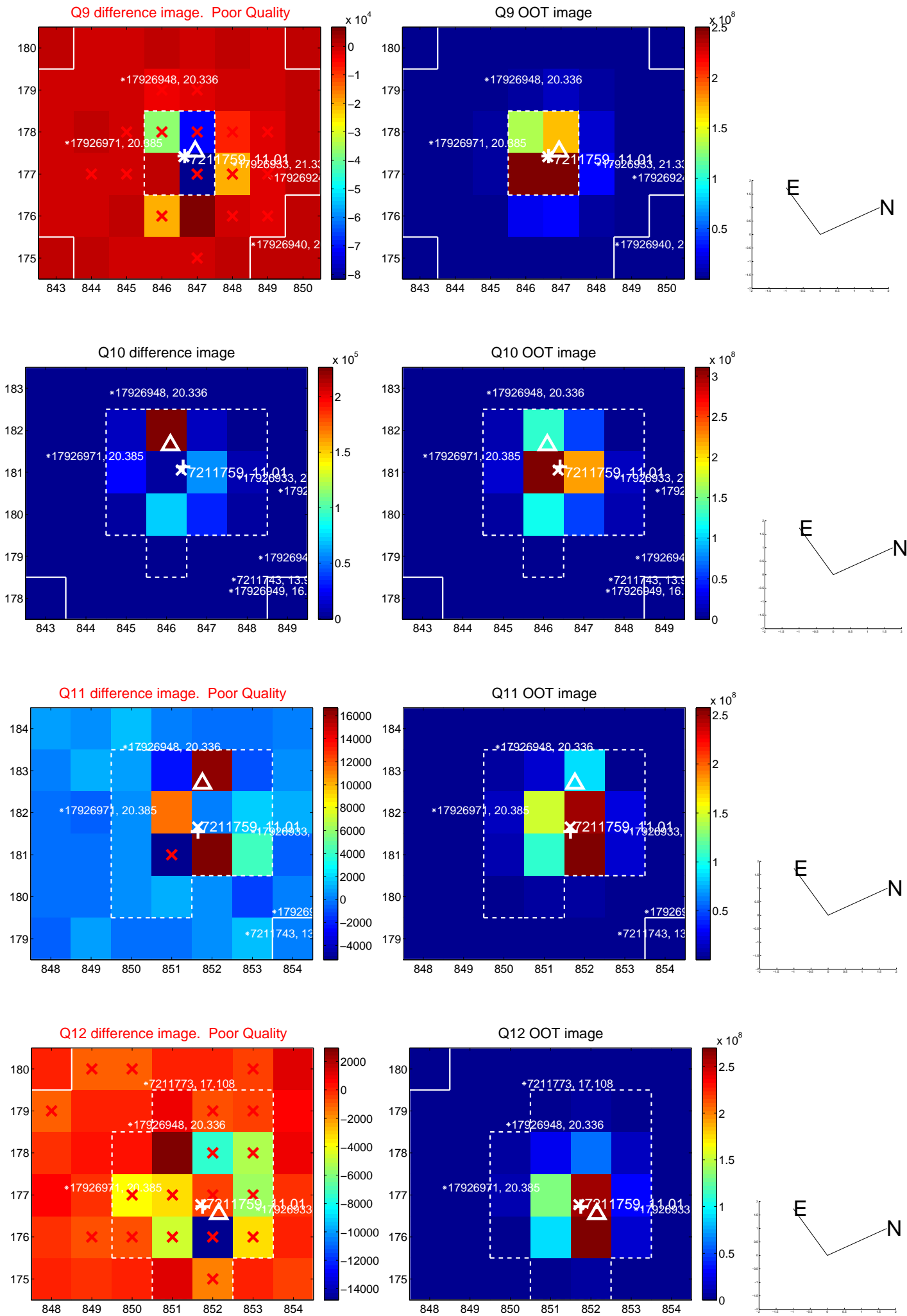
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



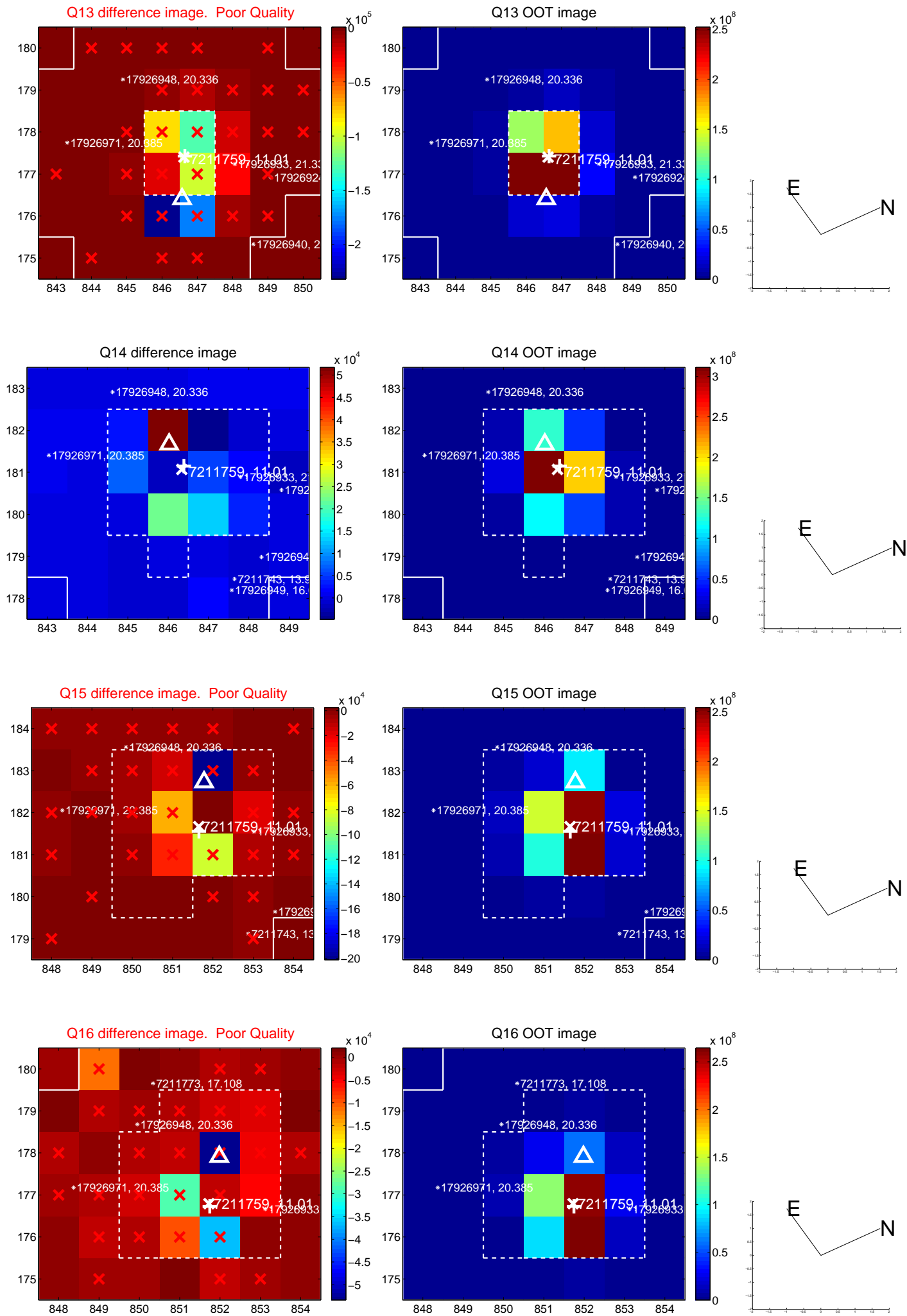
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



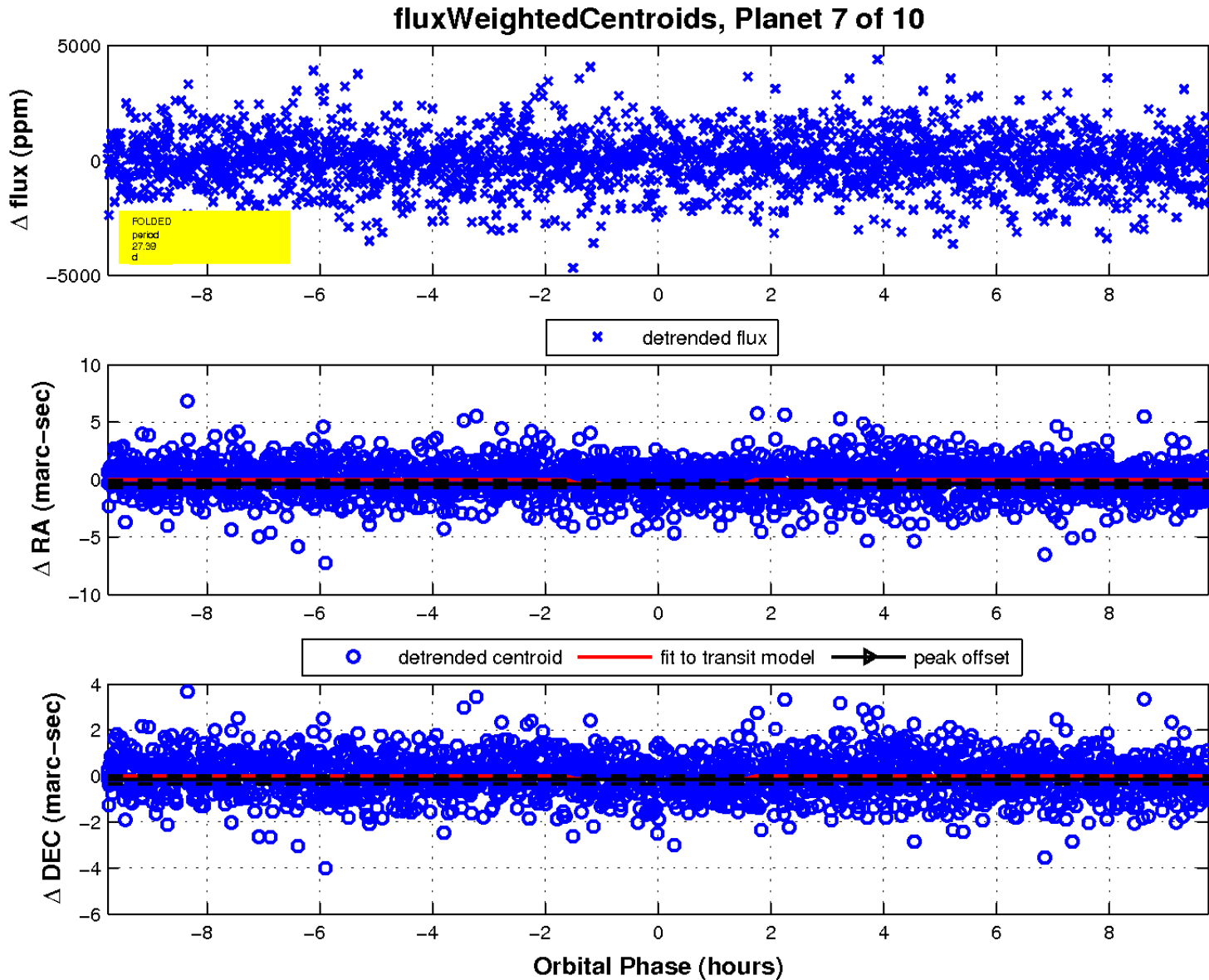
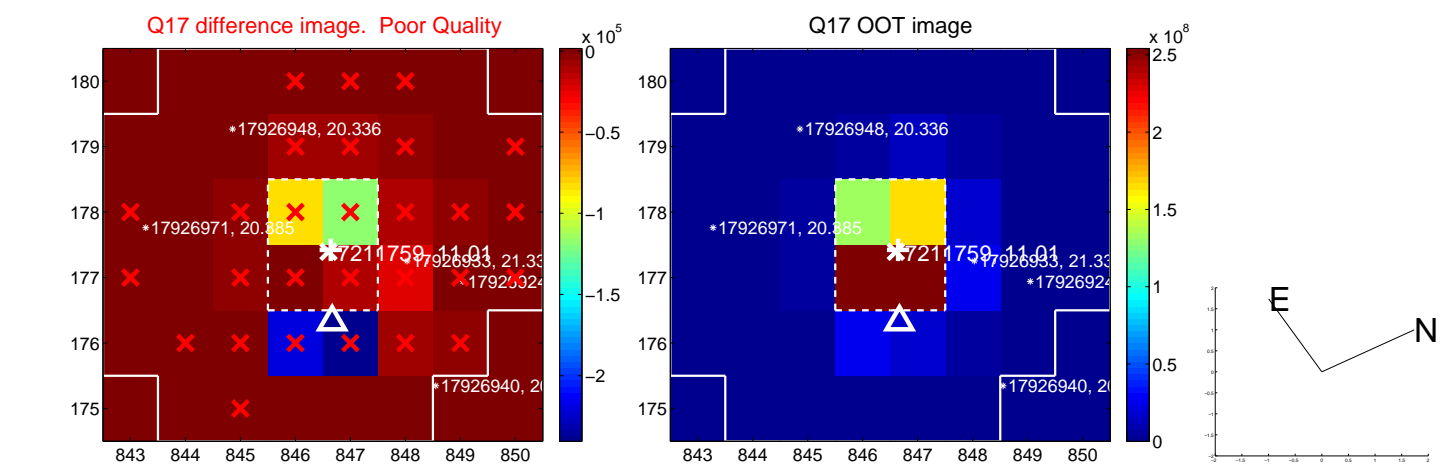
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

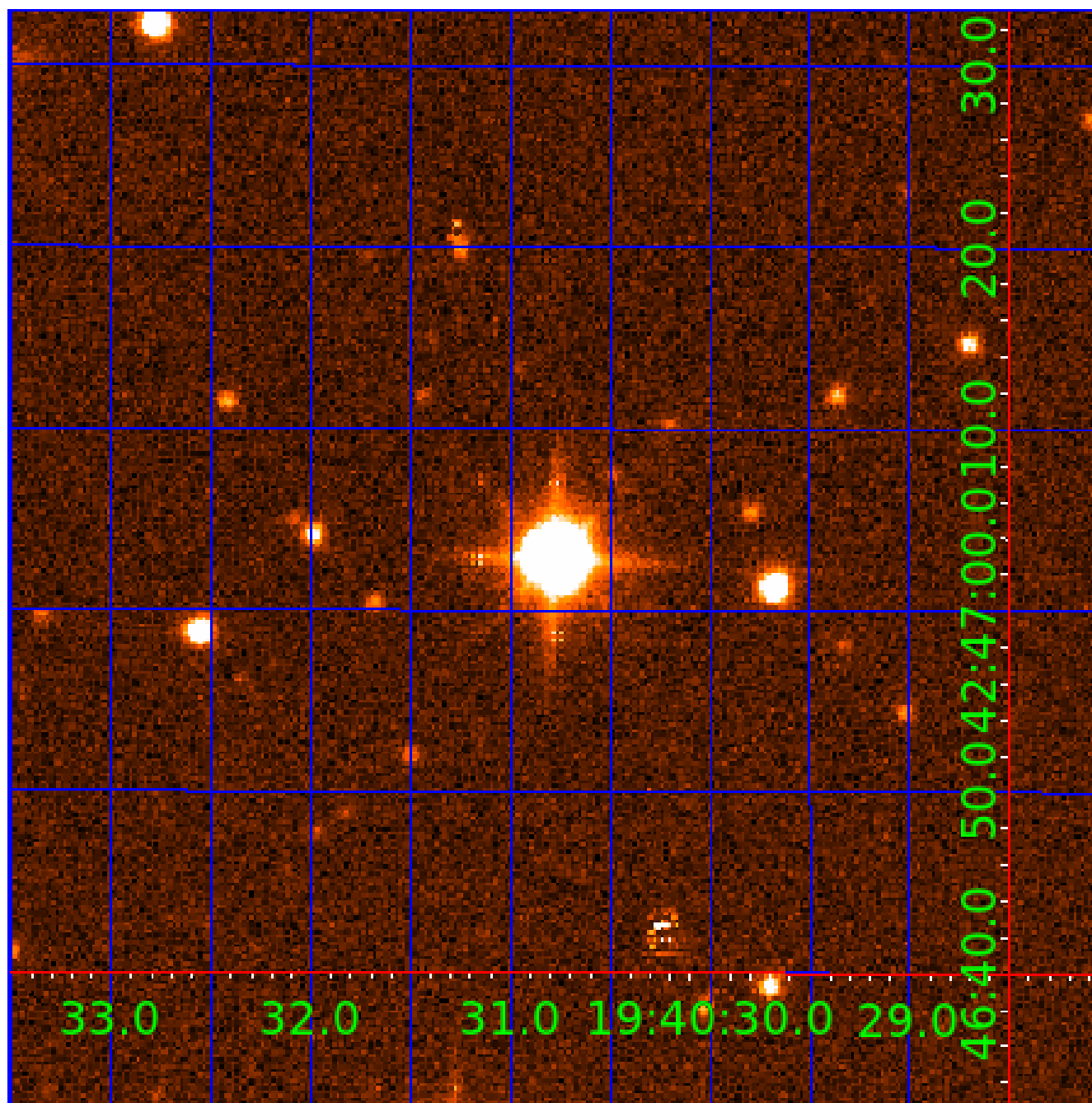


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



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})
007211759-01	OBS	No	48.541107	161.892782	786.7	0.928	134.9	4.7	3.16	8402	9.99	408.44
007211759-02	OBS	No	358.886546	161.664202	215.2	2.879	29.2	15.0	3.16	8402	5.34	28.36
007211759-03	OBS	No	64.575712	164.014592	178.7	9.683	22.3	21.9	3.16	8402	4.74	279.16
007211759-04	OBS	No	40.935358	162.840184	275.3	4.161	21.3	21.2	3.16	8402	6.05	512.64
007211759-05	OBS	No	34.650460	160.429464	15.4	0.524	15.5	0.4	3.16	8402	1.60	640.22
007211759-06	OBS	No	34.637188	160.678807	17.4	3.190	15.7	1.3	3.16	8402	1.53	640.55
007211759-07	OBS	No	27.387010	136.391221	18.2	3.254	9.9	2.3	3.16	8402	1.46	876.09
007211759-08	OBS	No	26.505878	136.615978	428.1	6.000	38.8	-1.0	3.16	8402	6.62	915.13
007211759-09	OBS	No	26.082524	137.048060	102.2	7.484	21.7	7.7	3.16	8402	3.69	934.99
007211759-10	OBS	No	26.321290	135.945076	208.1	15.000	35.7	-1.0	3.16	8402	4.61	923.70

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007211759-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
007211759-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
007211759-03	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED—HALO_GHOST
007211759-04	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
007211759-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED—HALO_GHOST
007211759-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA_TRACKER—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_SATURATED
007211759-07	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED—HALO_GHOST
007211759-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
007211759-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
007211759-10	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED

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

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

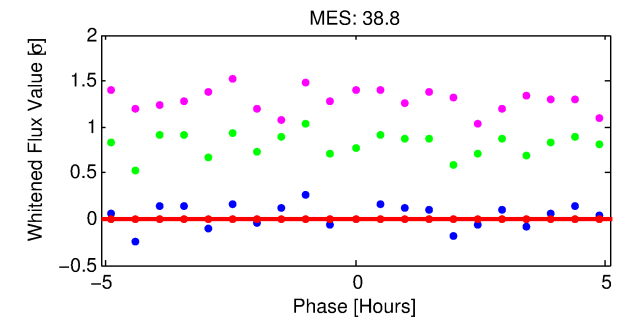
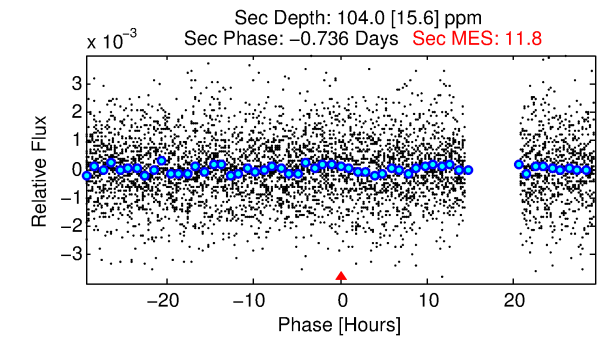
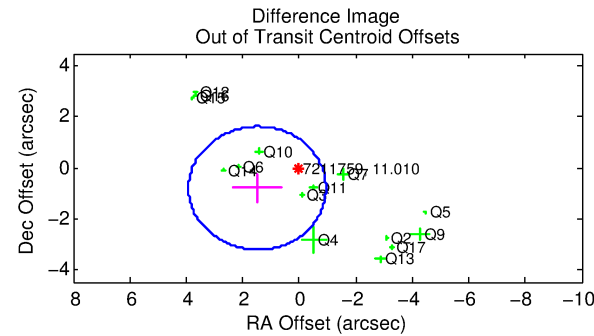
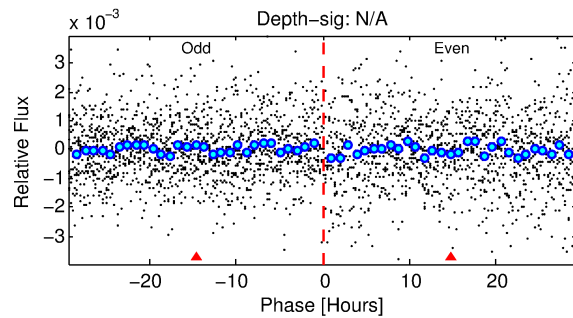
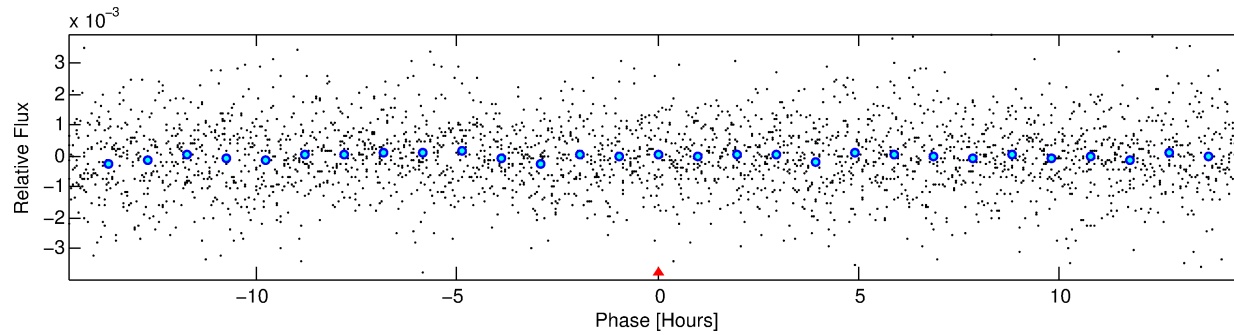
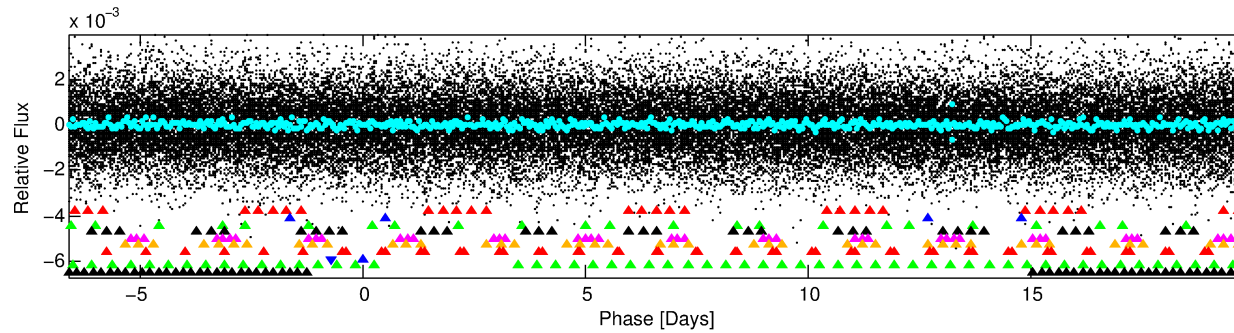
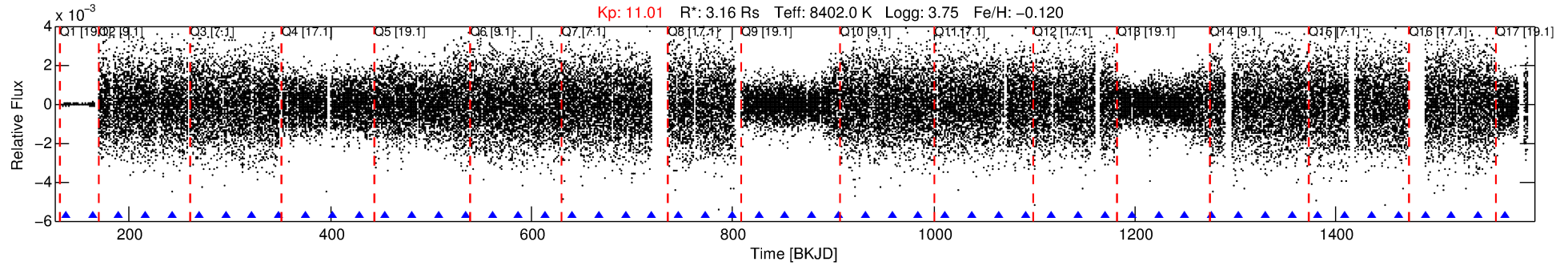
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007211759-08

No Significant Match Found

DV One-Page Summary

KIC: 7211759 Candidate: 8 of 10 Period: 26.506 d



TPS TCE Results:

Period = 26.50588 d
Epoch = 136.6160 BKJD

DV fit results are unavailable

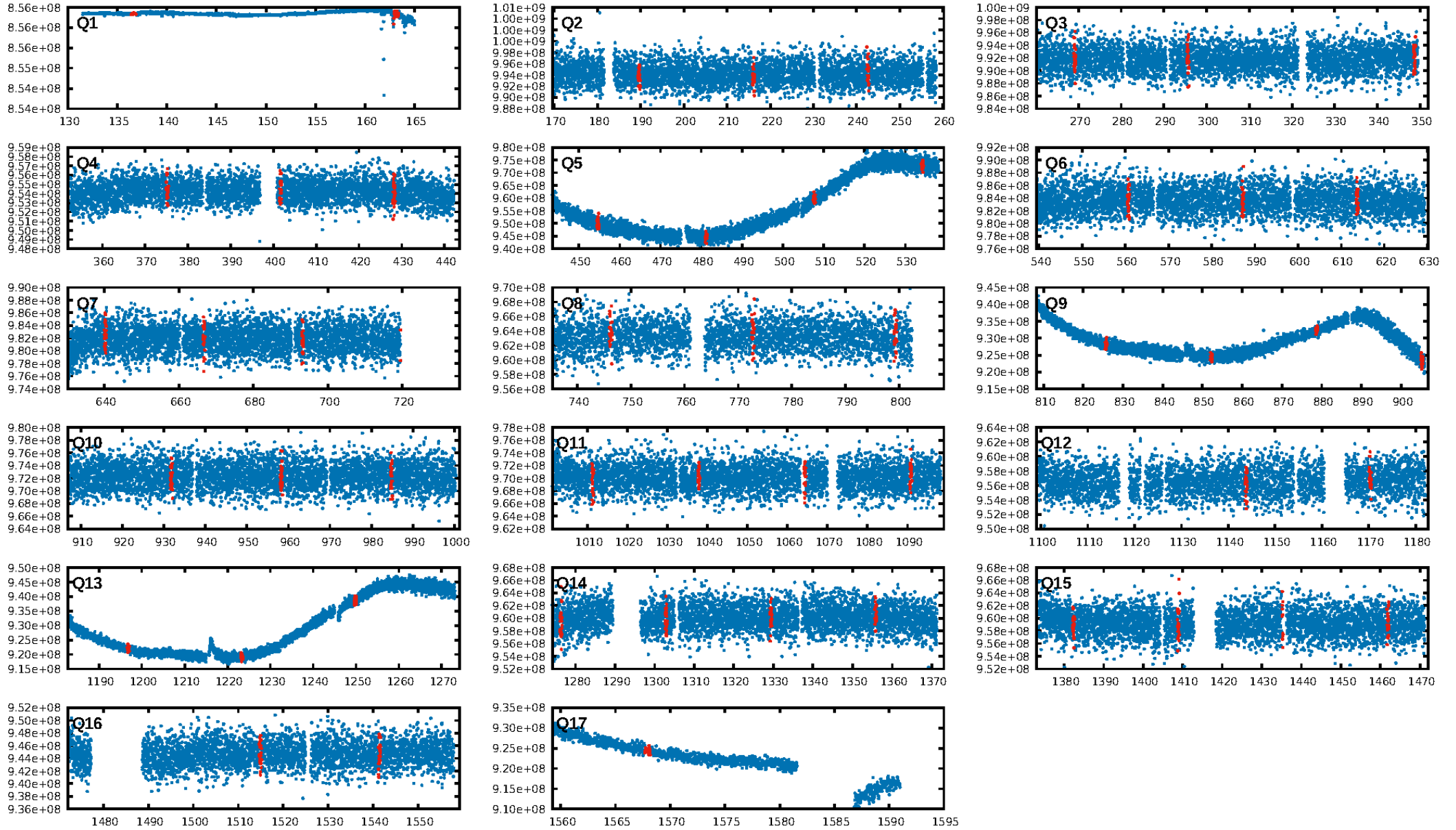
DV Diagnostic Results:

ShortPeriod-sig: 21.6% [0.27σ]
LongPeriod-sig: 99.8% [3.10σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [47/47]
GhostDiagnostic-chr: -1.16
Centroid-sig: 0.4%
Centroid-so: 37.573 arcsec [1.97σ]
OotOffset-rm: 1.688 arcsec [2.08σ]
KicOffset-rm: 1.335 arcsec [1.66σ]
OotOffset-st: 4/4/3/4 [15]
KicOffset-st: 4/4/3/4 [15]
DiffImageQuality-fgm: 0.47 [7/15]
DiffImageOverlap-fno: 0.94 [16/17]

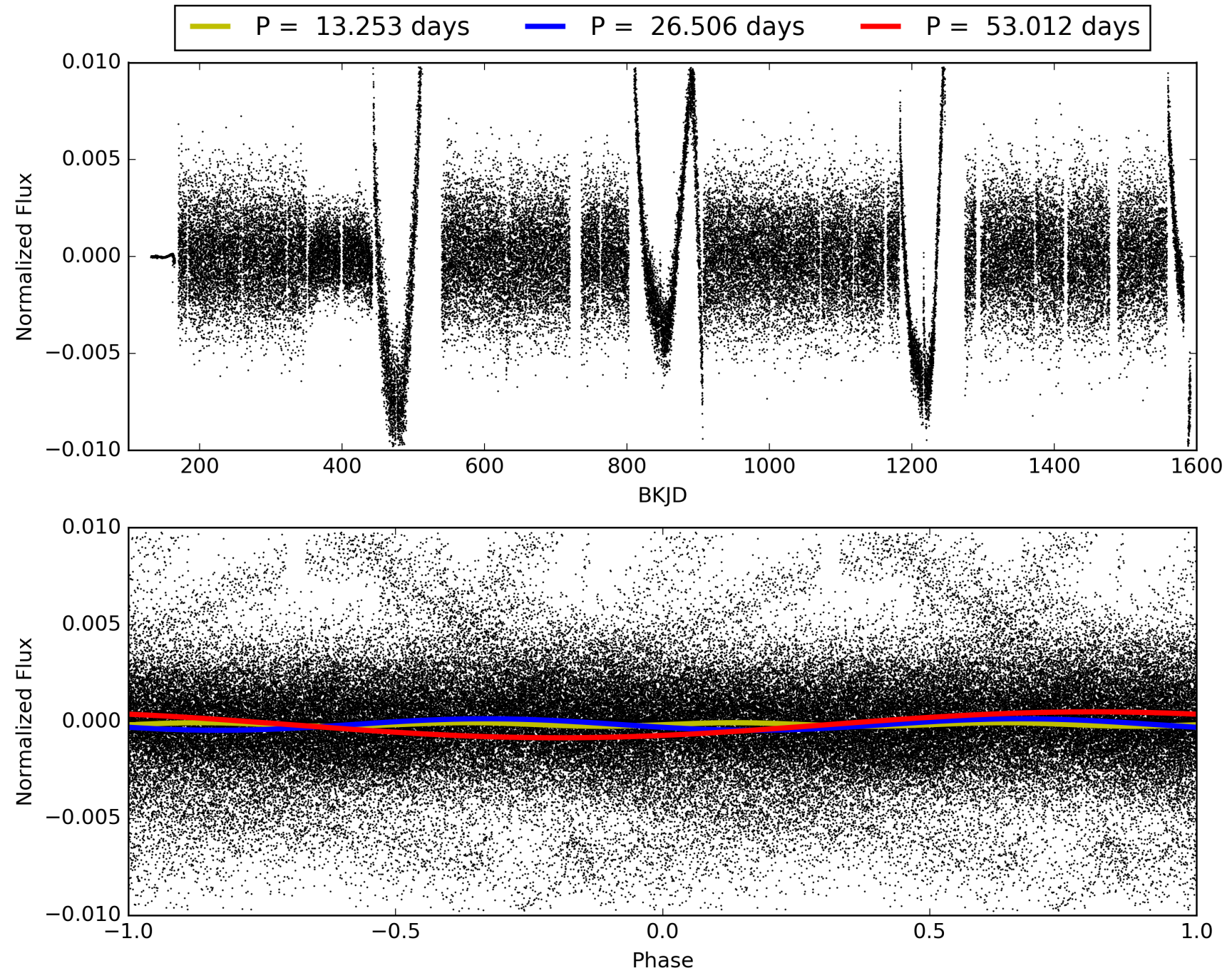
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 08:37:54 Z

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

TCE 007211759-08, PDC Light Curves

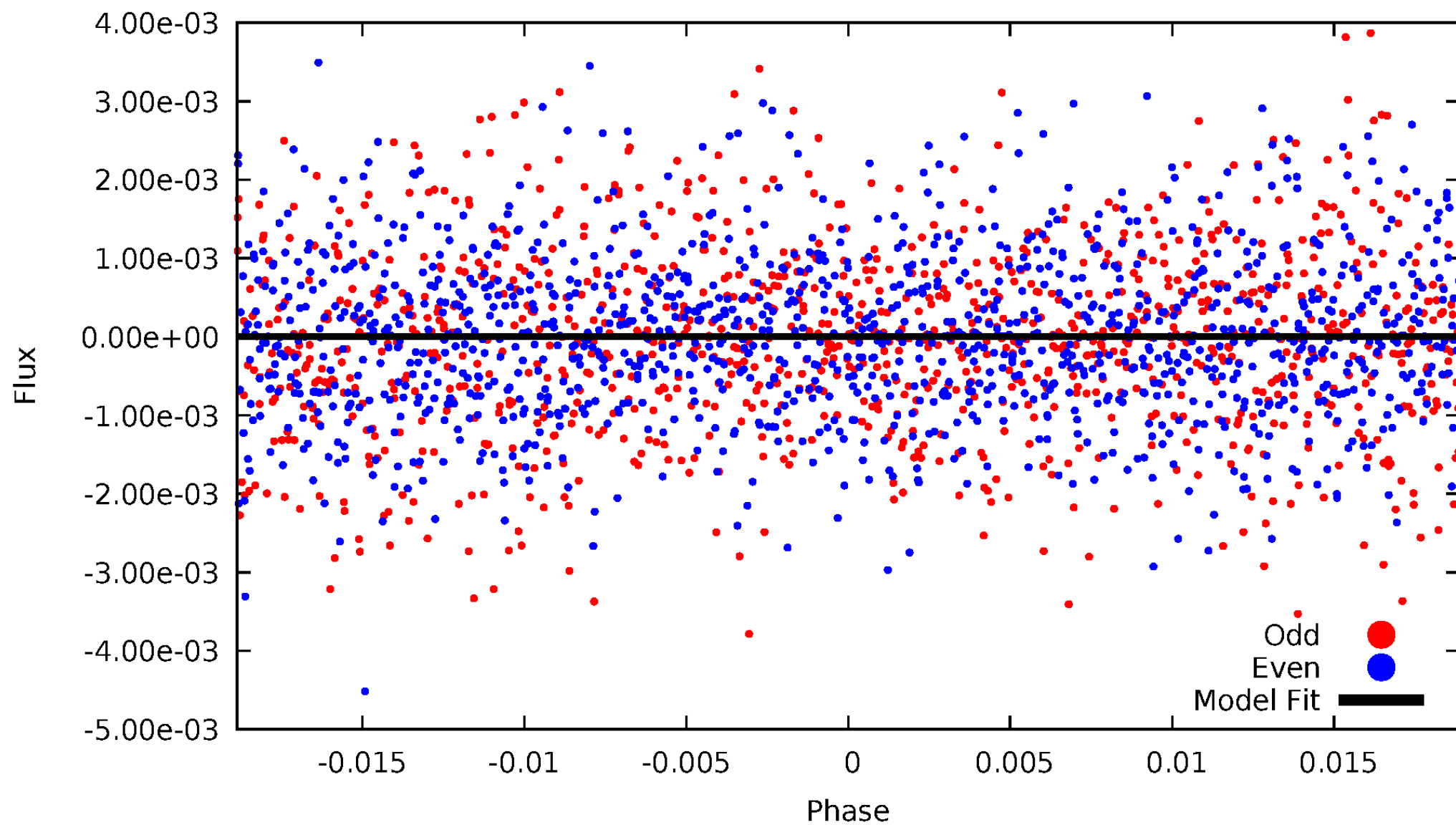


TCE 007211759-08



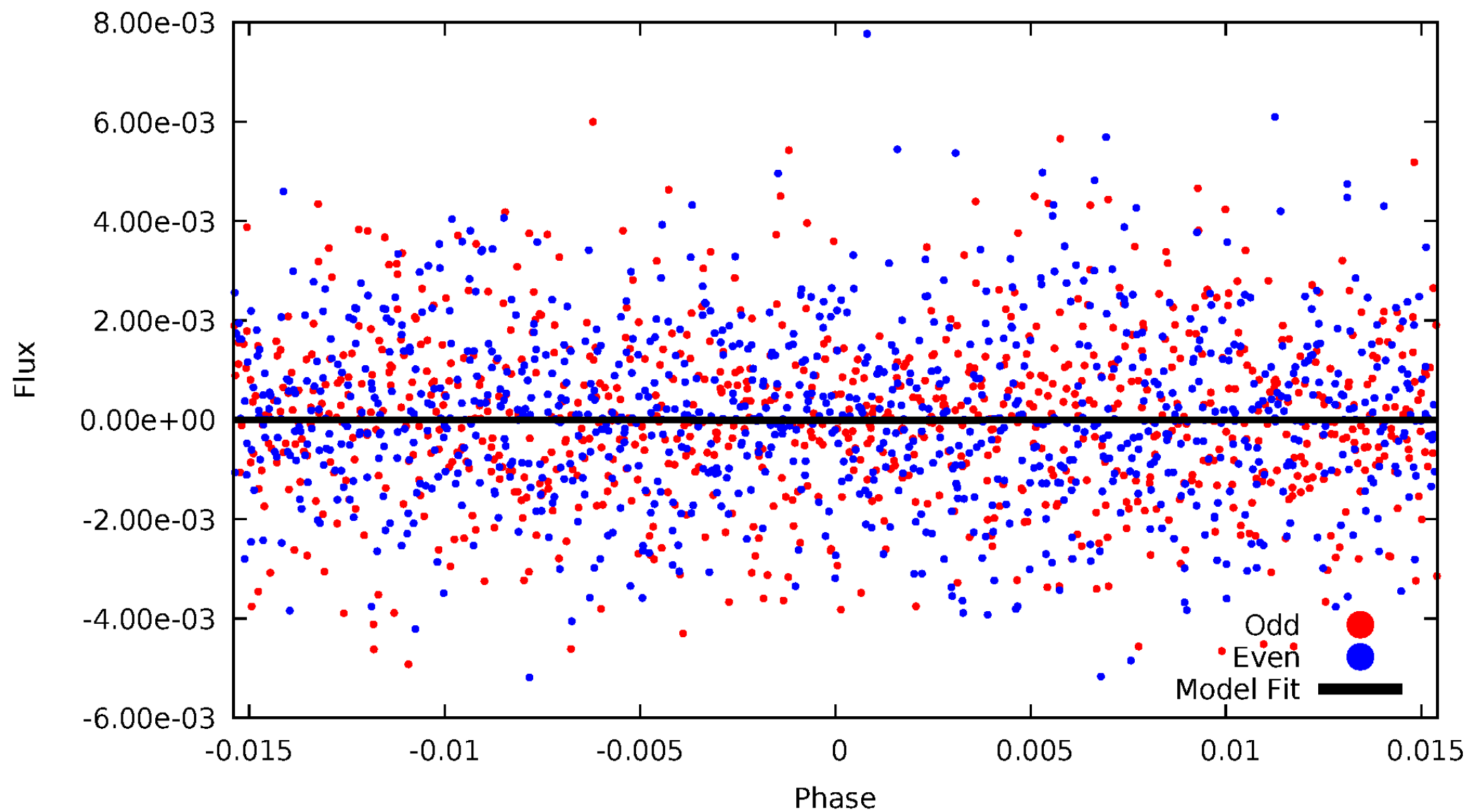
DV Odd/Even

TCE 007211759-08



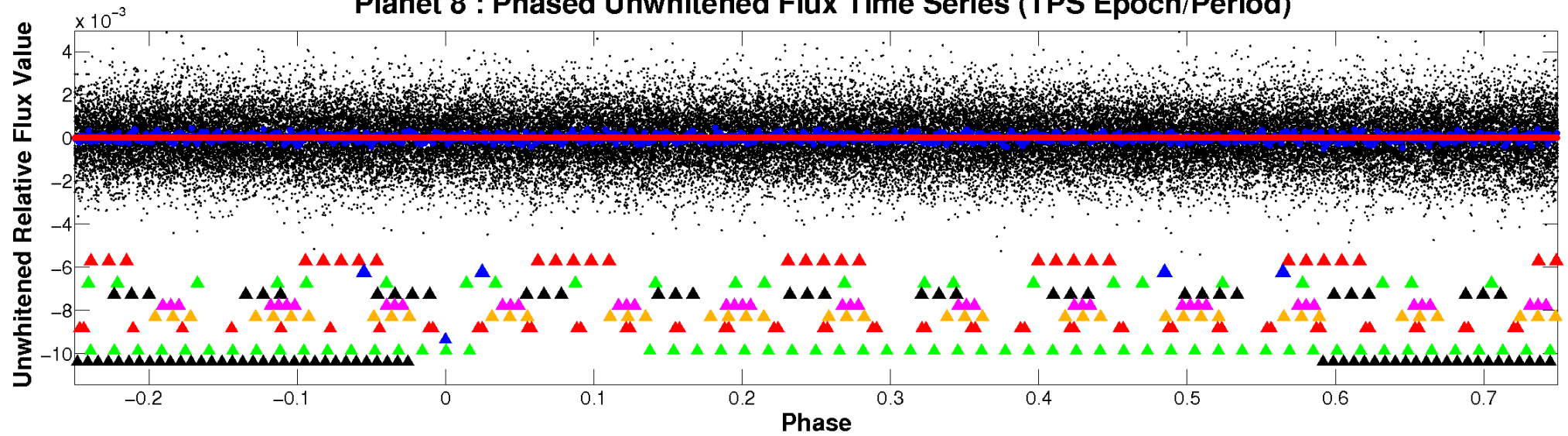
ALT Odd/Even

TCE 007211759-08

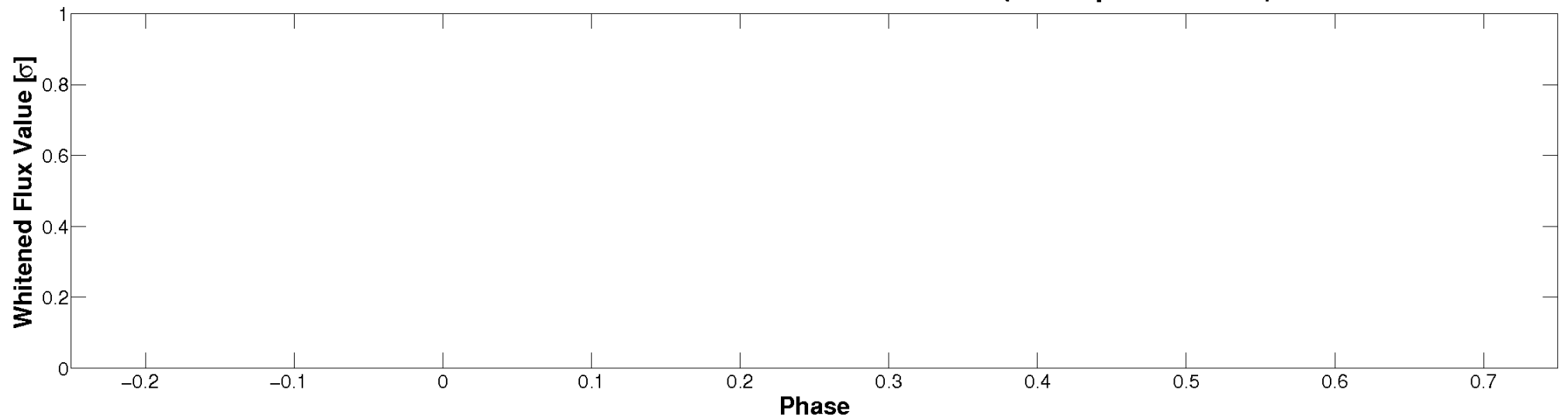


Non-Whitened Vs. Whitened Light Curve

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

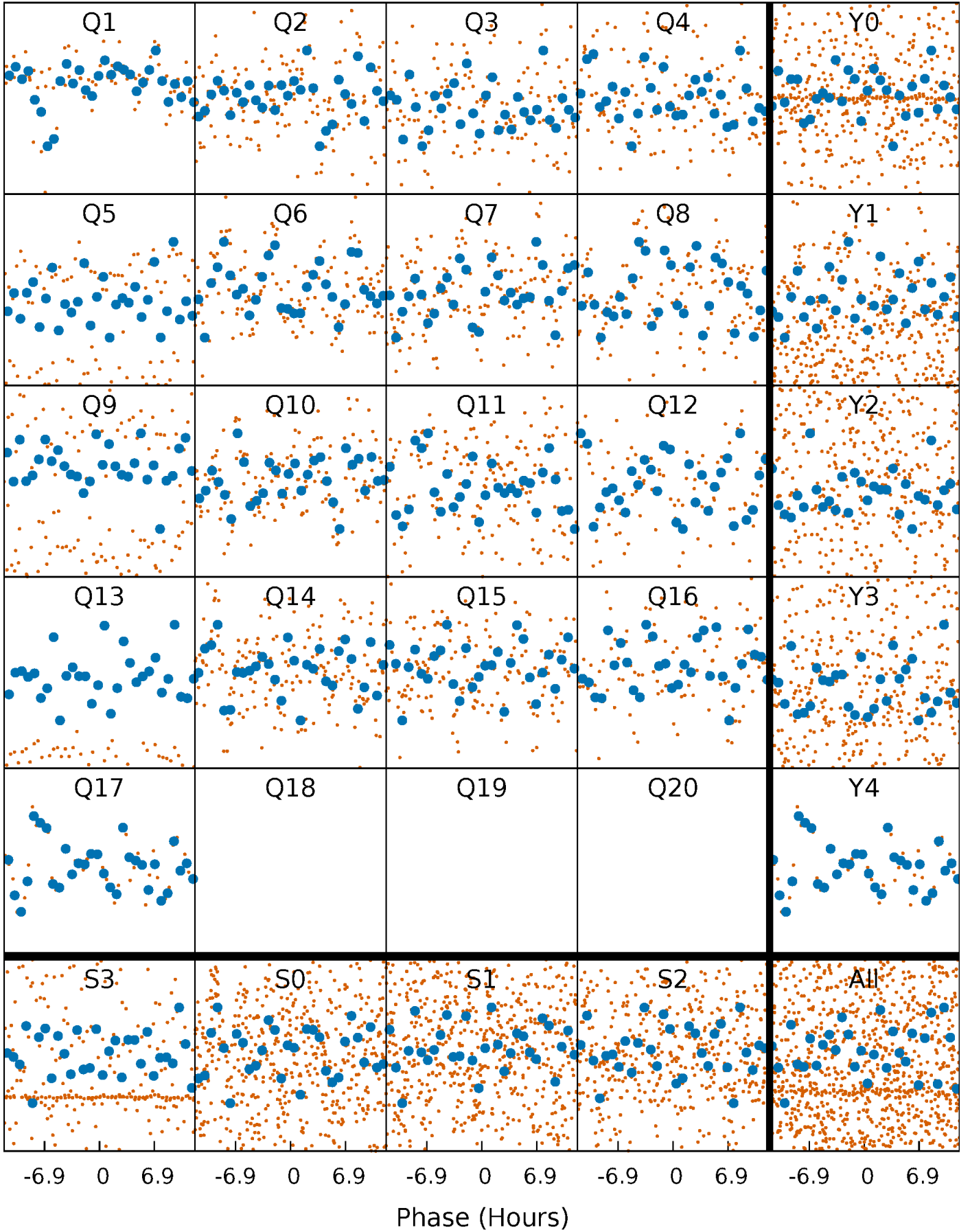


Planet 8 : Phased Whitened Flux Time Series (TPS Epoch/Period)



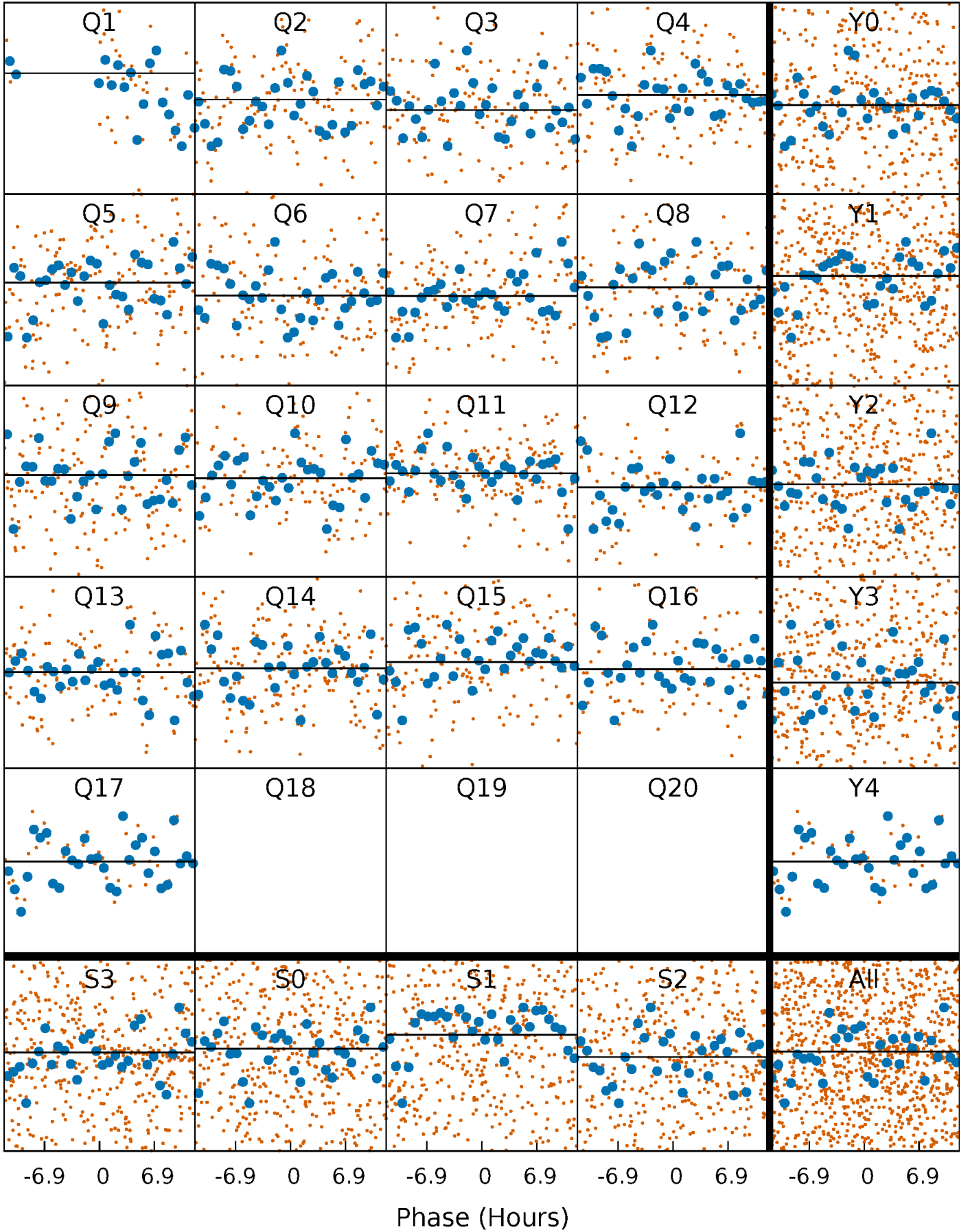
PDC Quarter-Phased Transit Curves

TCE 007211759-08 P= 26.505878 Days $T_0=136.615978$ (BKJD)



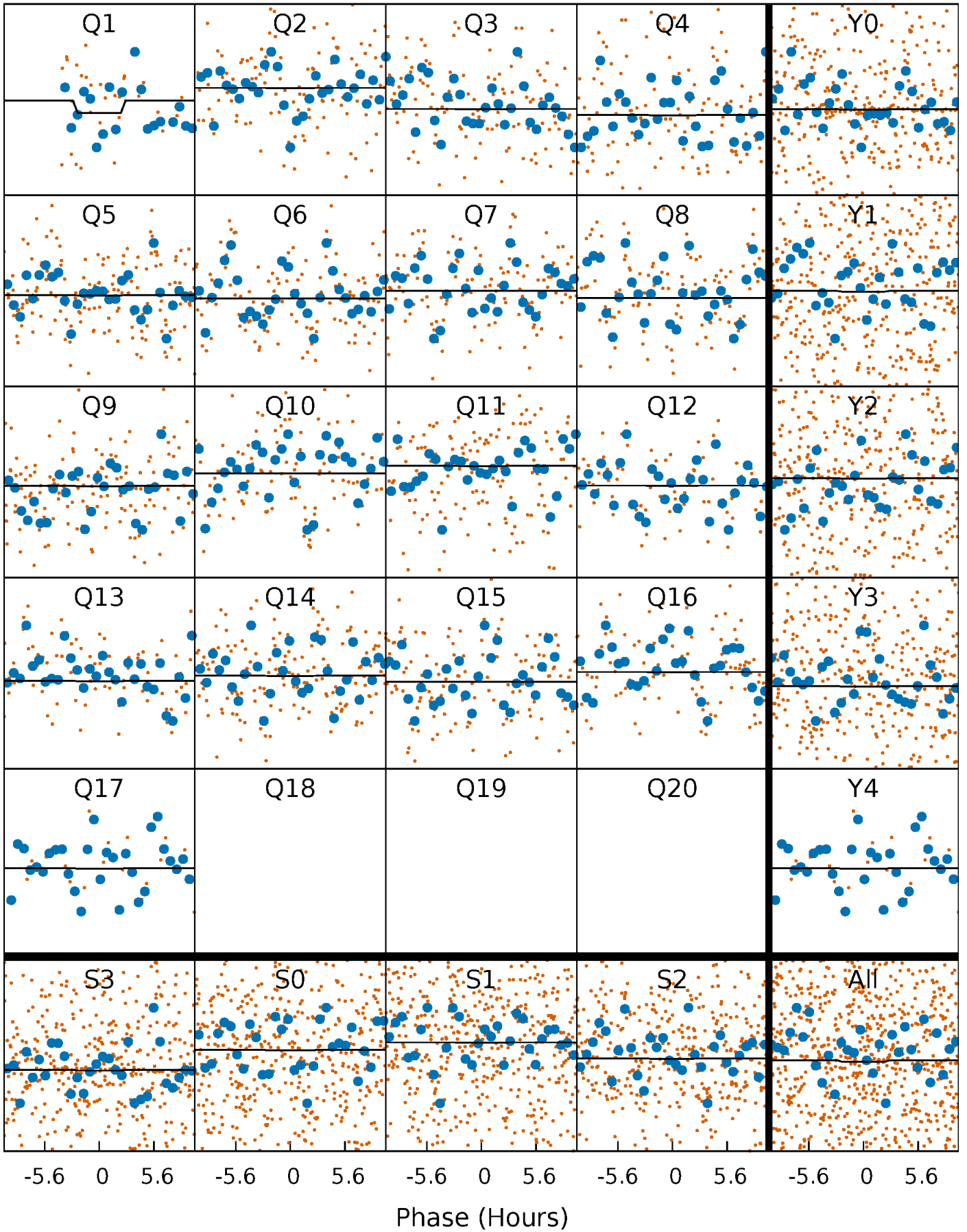
DV Quarter-Phased Transit Curves

TCE 007211759-08 P= 26.505878 Days $T_0=136.615978$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

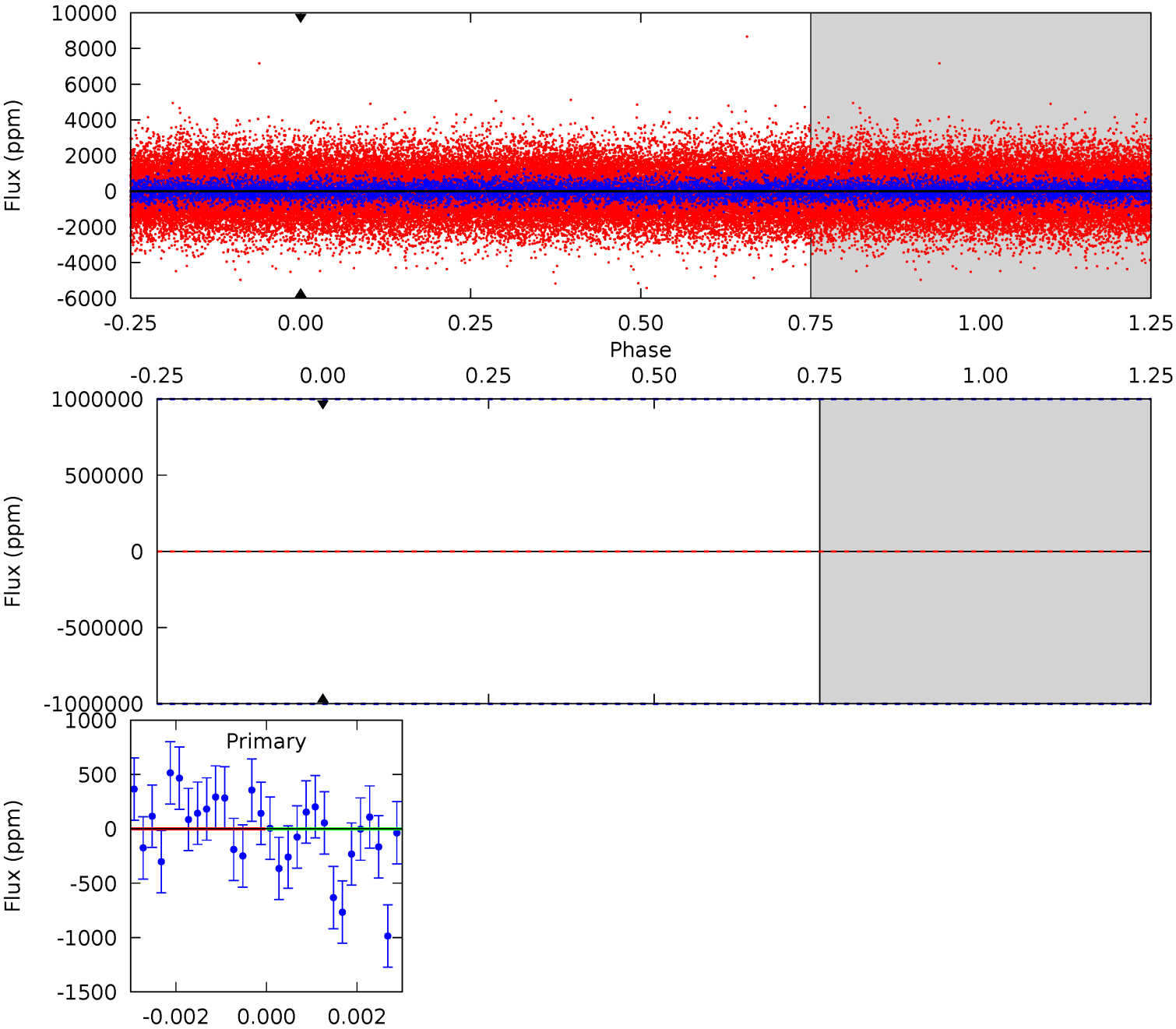
TCE 007211759-08 P= 26.505878 Days $T_0=136.778866$ (BKJD)



DV Model-Shift Uniqueness Test

007211759-08, P = 26.505878 Days, E = 110.110100 Days

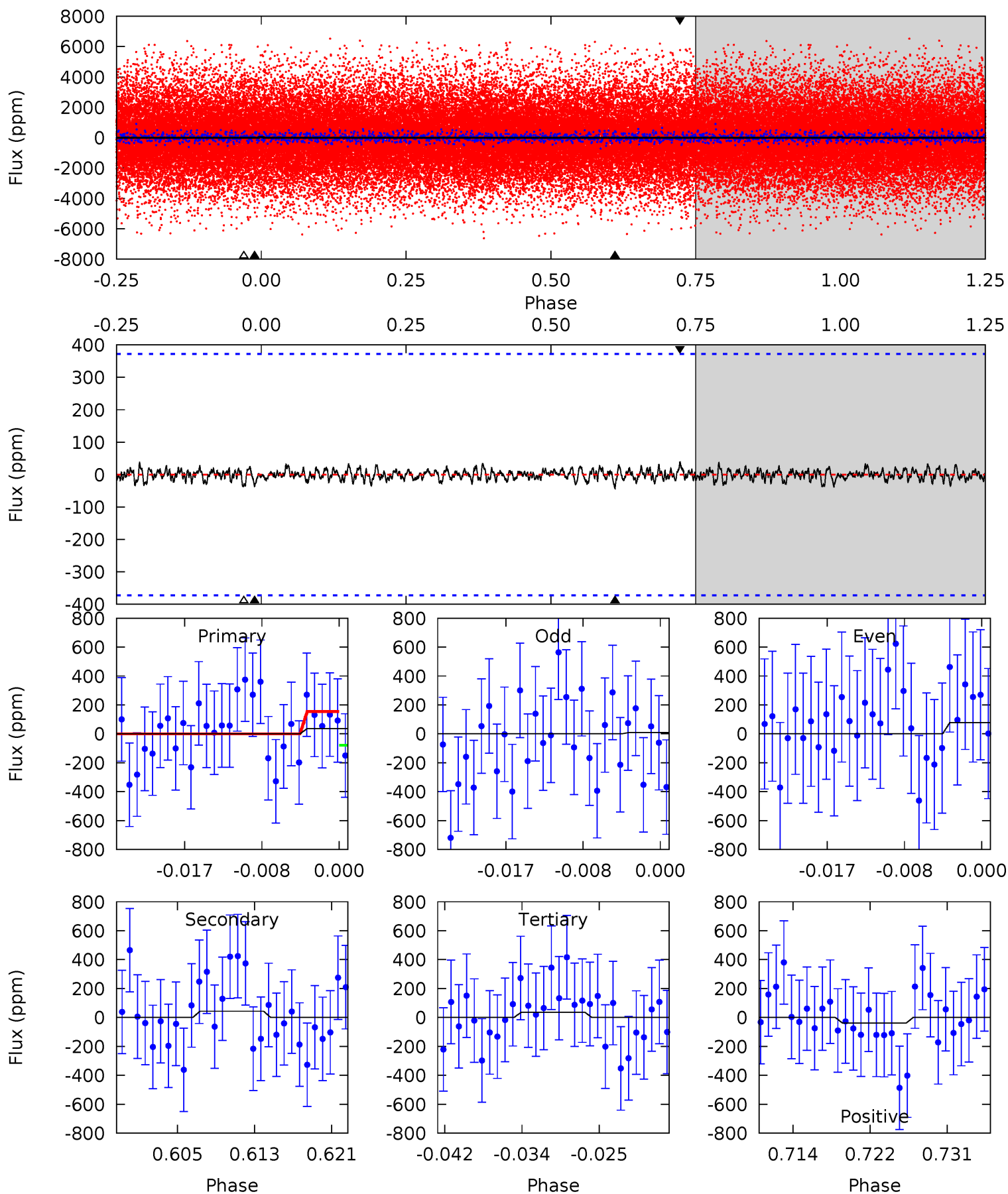
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

007211759-08, P = 26.505878 Days, E = 110.272988 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.50	0.59	0.49	0.53	5.06	2.64	0.18	0.01	-0.03	0.10	0.06	0.47	-1.73	0.47	0.51



Stellar Parameters For KIC 007211759

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8402^{+232}_{-365}	$3.748^{+0.399}_{-0.142}$	$-0.120^{+0.350}_{-0.400}$	$3.157^{+0.944}_{-1.416}$	$2.039^{+0.384}_{-0.469}$	$0.091^{+0.335}_{-0.045}$
	+3%/-4%	+11%/-4%	+292%/-333%	+30%/-45%	+19%/-23%	+367%/-49%
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 007211759-08 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$23.86^{+27.29}_{-16.89}$	1907^{+173}_{-224}	-6131^{+61103}_{-38961}	$-88.064^{+9603.038}_{-7334.606}$
Alt.	-43 ± 74	$20.70^{+25.91}_{-14.31}$	1900^{+159}_{-202}	2786^{+1766}_{-5668}	$1.370^{+25.222}_{-2.624}$

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

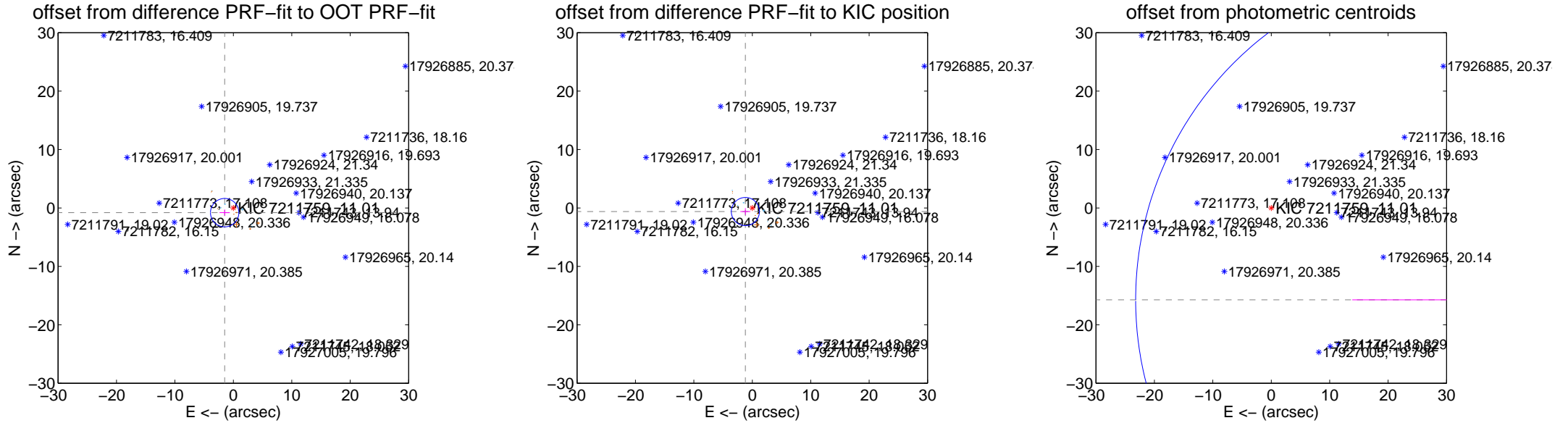
DV Centroid Data

Supplemental centroid analysis for 007211759-08. **Kepler magnitude: 11.01.** Transit SNR -1.00

There are 7 quarters with good PRF difference image offsets

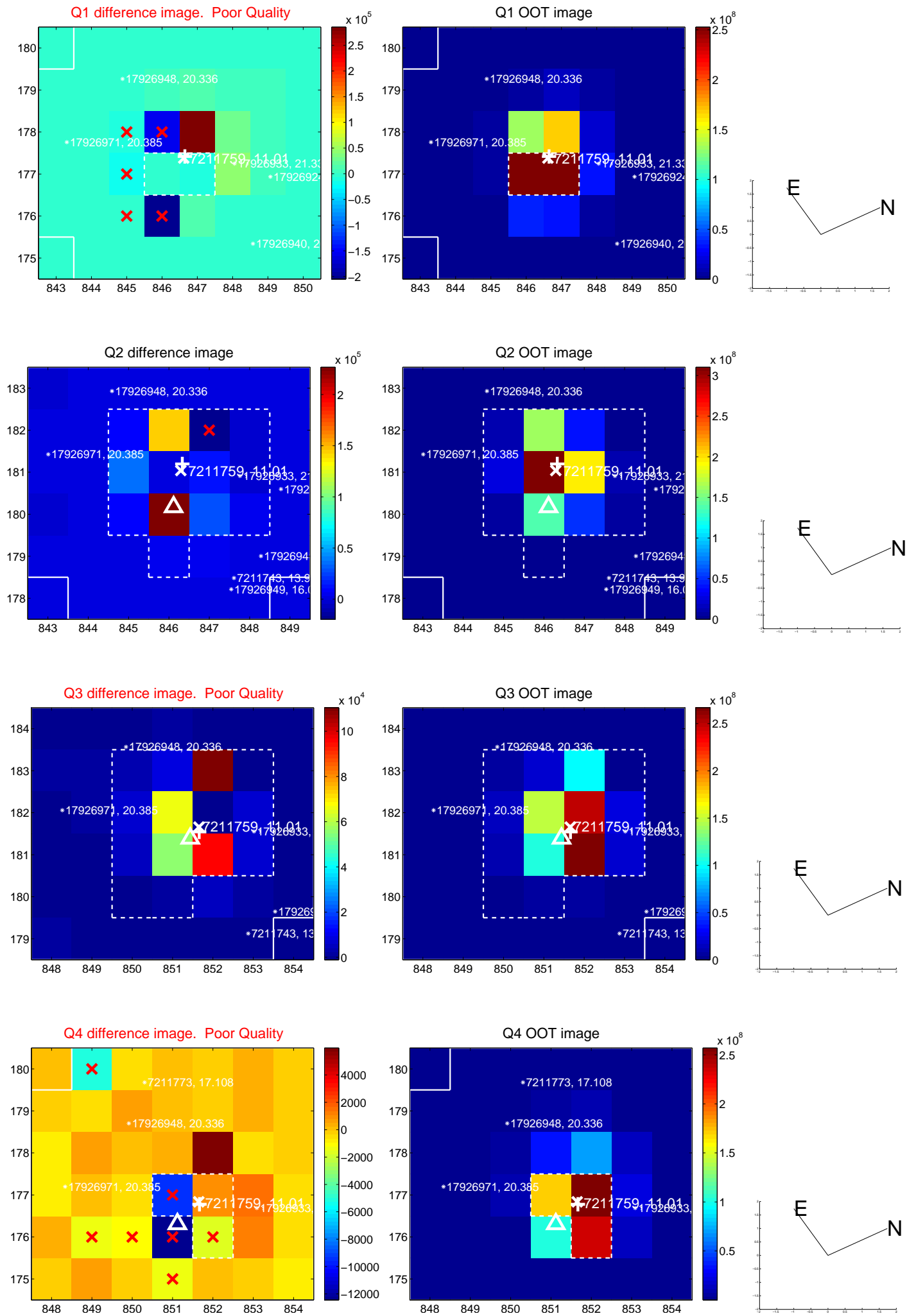
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.688 ± 0.810	2.08	1.484 ± 0.874	-0.805 ± 0.541
PRF-fit source offset from KIC position	1.335 ± 0.803	1.66	1.186 ± 0.853	-0.614 ± 0.577
photometric centroid source offset	37.58 ± 19.11	1.97	-34.13 ± 20.26	-15.72 ± 12.33

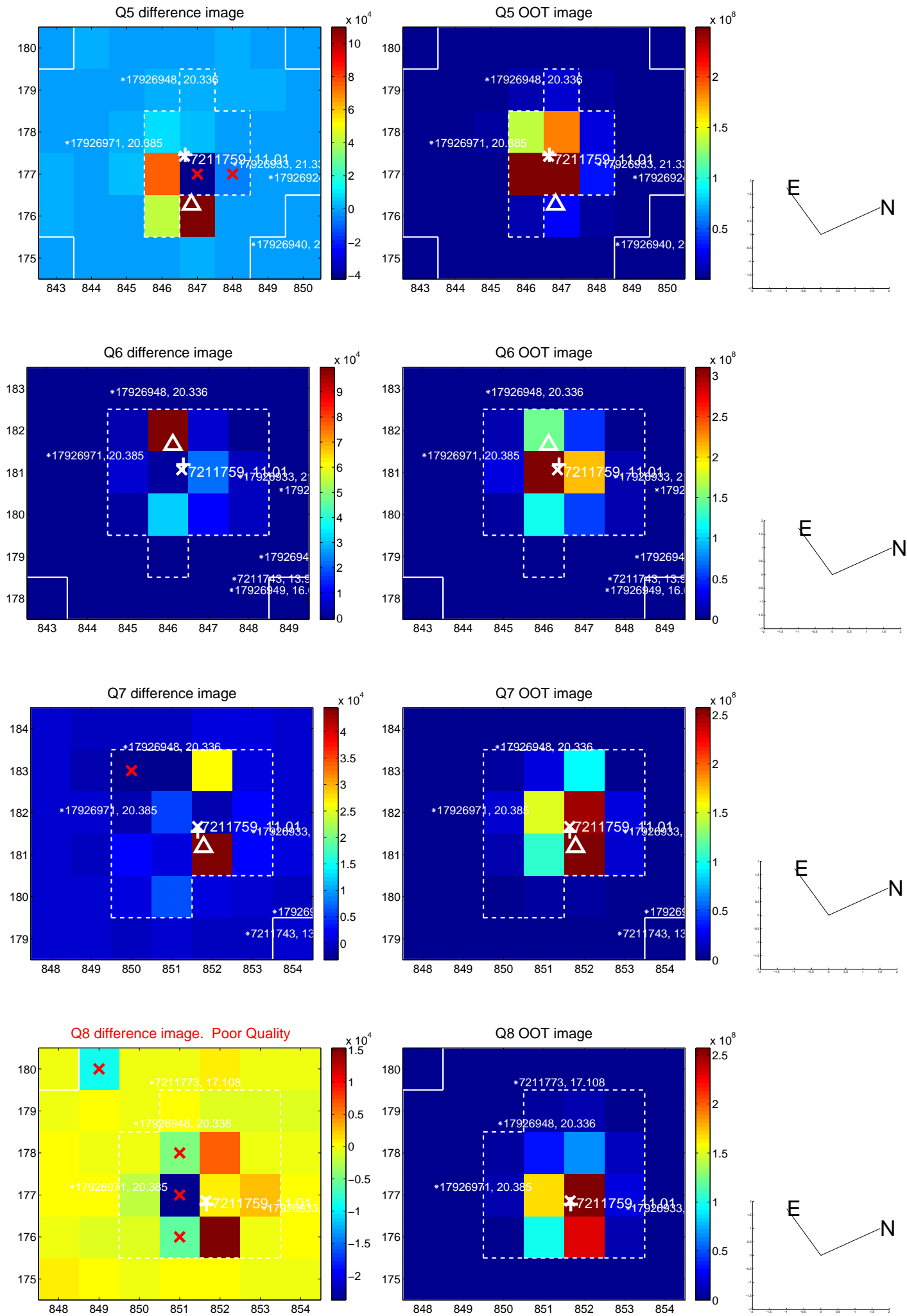


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

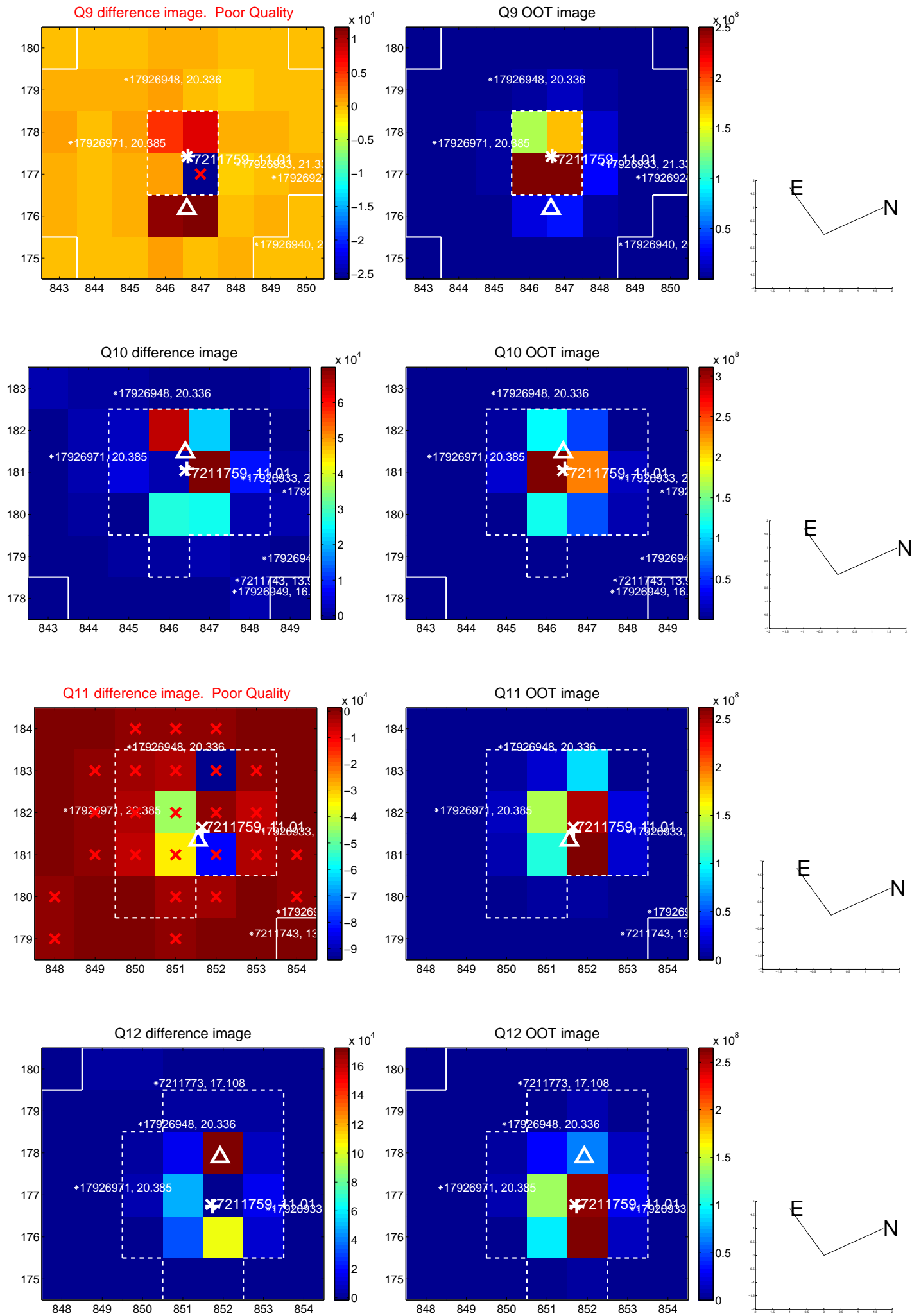
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



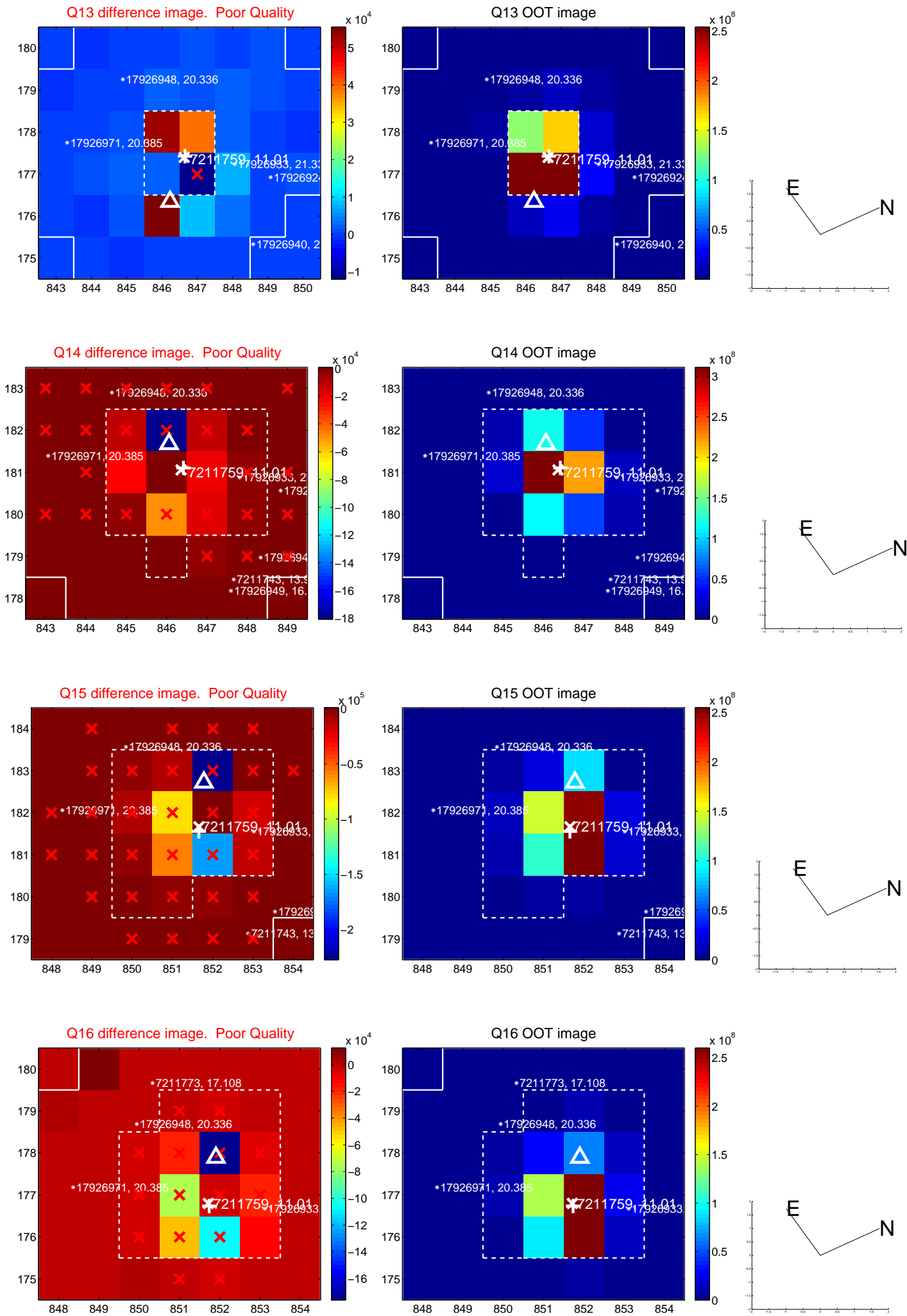
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



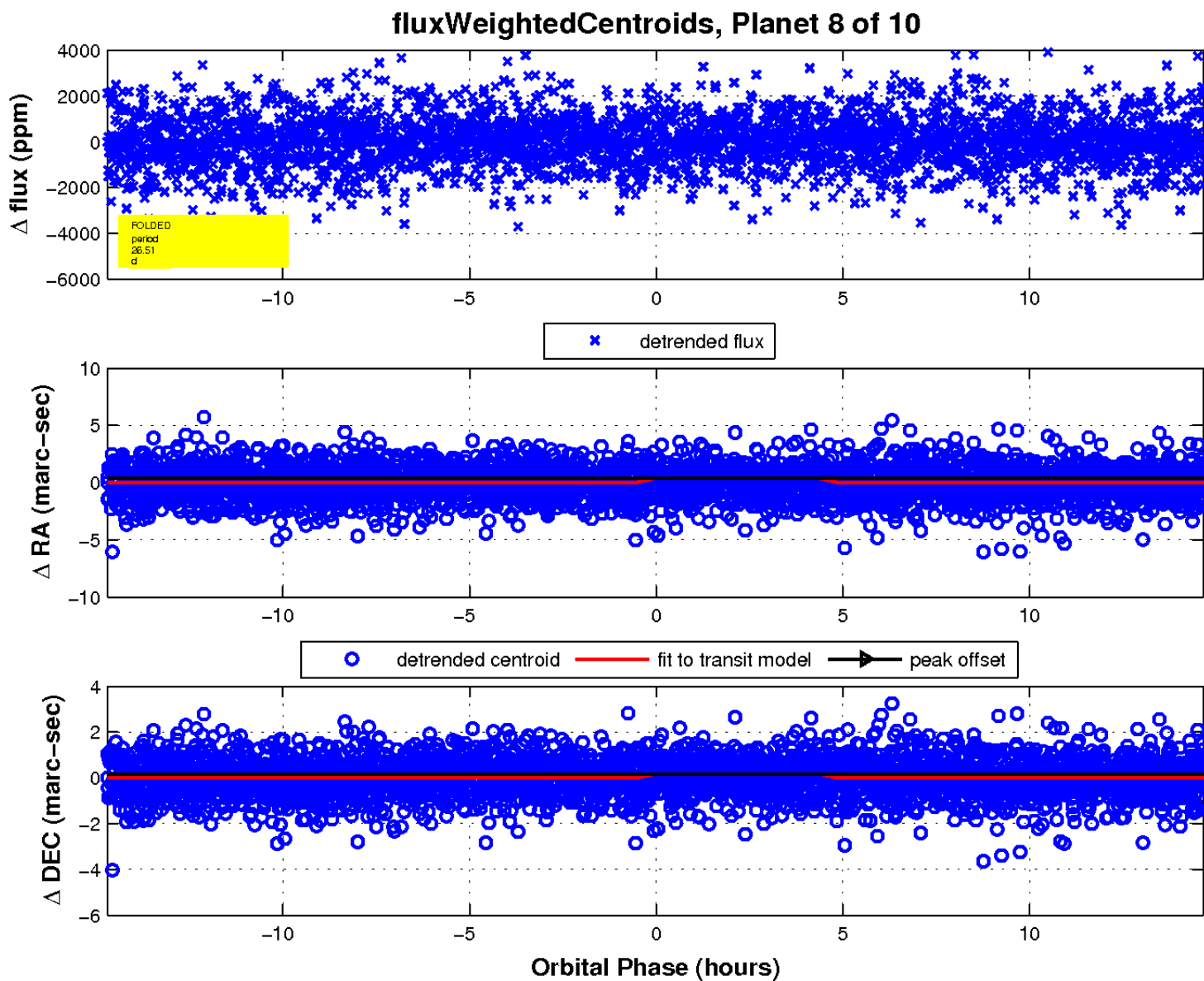
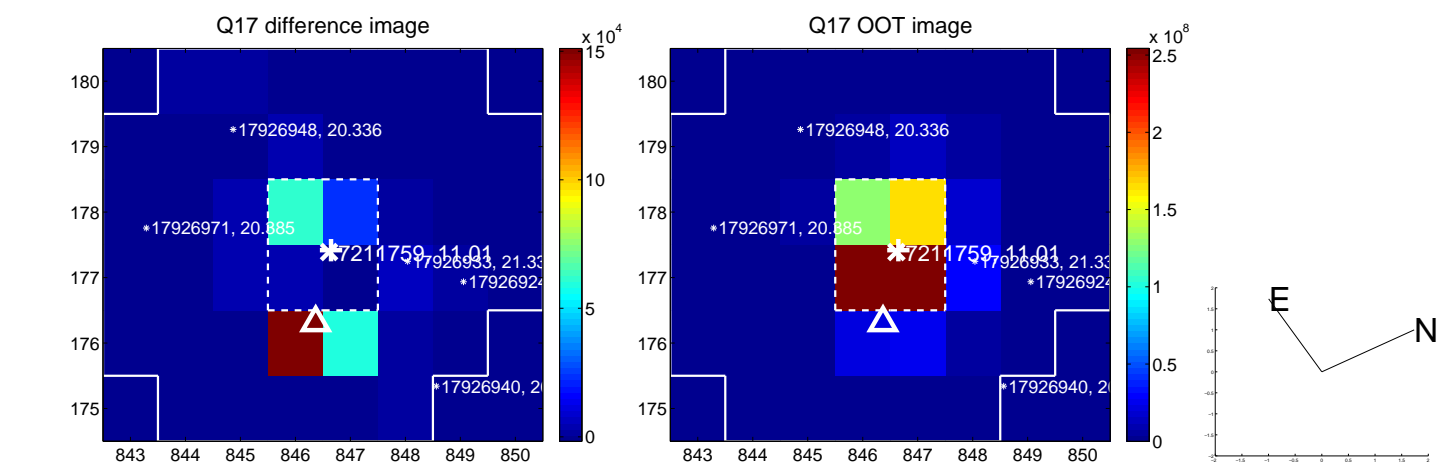
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

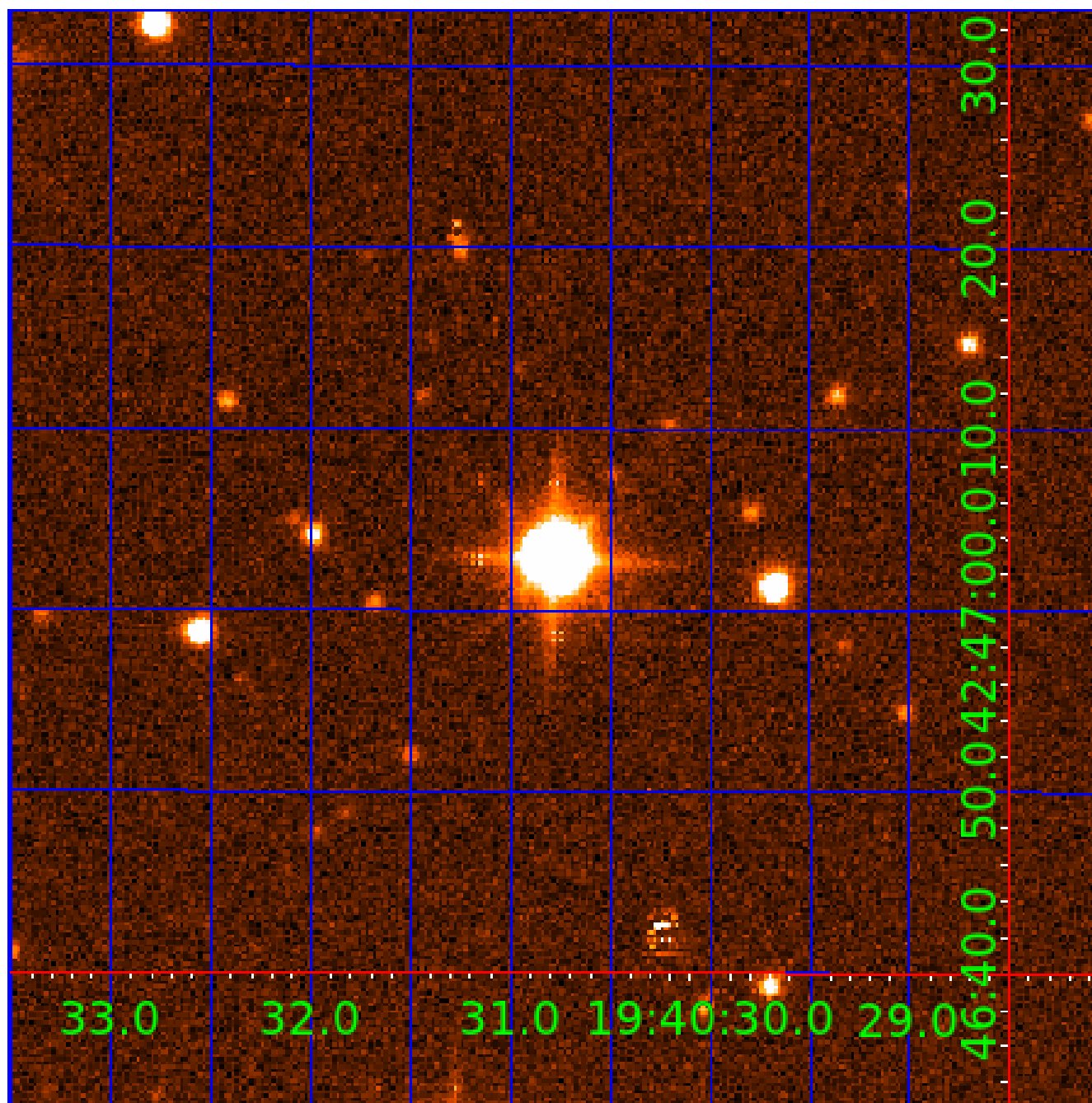


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



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})
007211759-01	OBS	No	48.541107	161.892782	786.7	0.928	134.9	4.7	3.16	8402	9.99	408.44
007211759-02	OBS	No	358.886546	161.664202	215.2	2.879	29.2	15.0	3.16	8402	5.34	28.36
007211759-03	OBS	No	64.575712	164.014592	178.7	9.683	22.3	21.9	3.16	8402	4.74	279.16
007211759-04	OBS	No	40.935358	162.840184	275.3	4.161	21.3	21.2	3.16	8402	6.05	512.64
007211759-05	OBS	No	34.650460	160.429464	15.4	0.524	15.5	0.4	3.16	8402	1.60	640.22
007211759-06	OBS	No	34.637188	160.678807	17.4	3.190	15.7	1.3	3.16	8402	1.53	640.55
007211759-07	OBS	No	27.387010	136.391221	18.2	3.254	9.9	2.3	3.16	8402	1.46	876.09
007211759-08	OBS	No	26.505878	136.615978	428.1	6.000	38.8	-1.0	3.16	8402	6.62	915.13
007211759-09	OBS	No	26.082524	137.048060	102.2	7.484	21.7	7.7	3.16	8402	3.69	934.99
007211759-10	OBS	No	26.321290	135.945076	208.1	15.000	35.7	-1.0	3.16	8402	4.61	923.70

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007211759-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
007211759-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
007211759-03	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED—HALO_GHOST
007211759-04	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
007211759-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED—HALO_GHOST
007211759-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA_TRACKER—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_SATURATED
007211759-07	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED—HALO_GHOST
007211759-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
007211759-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
007211759-10	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED

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

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

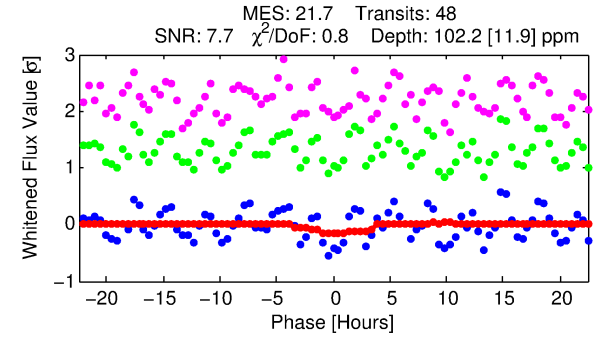
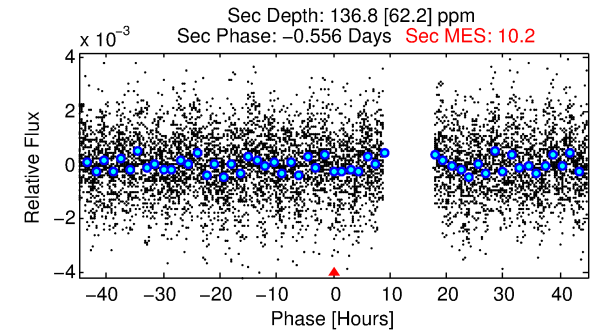
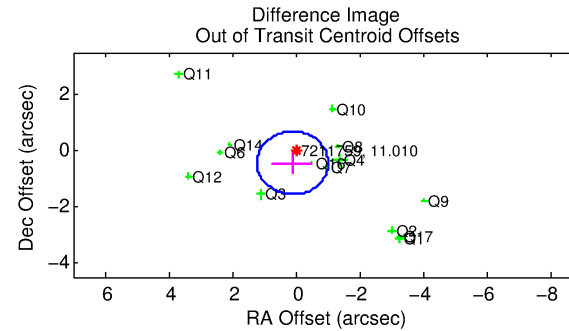
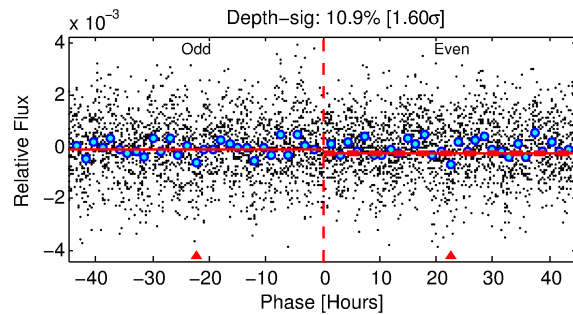
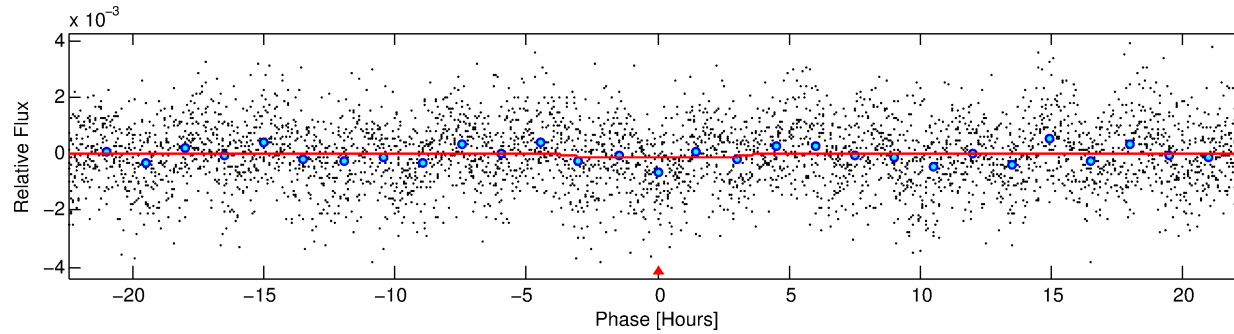
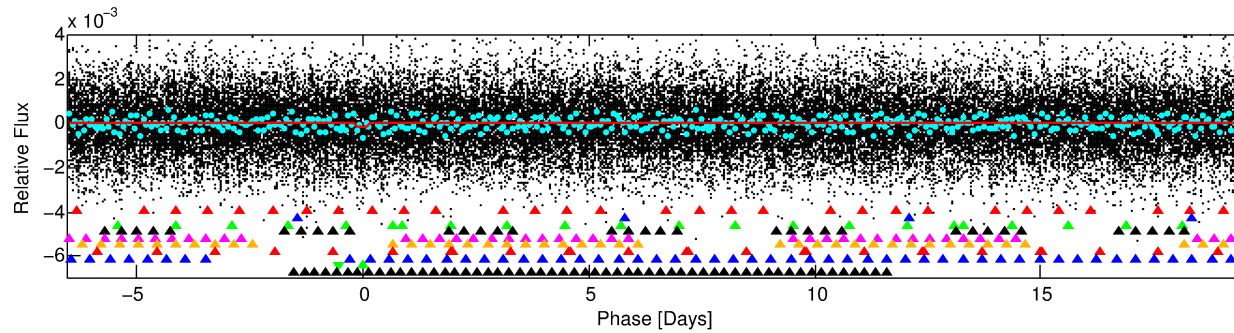
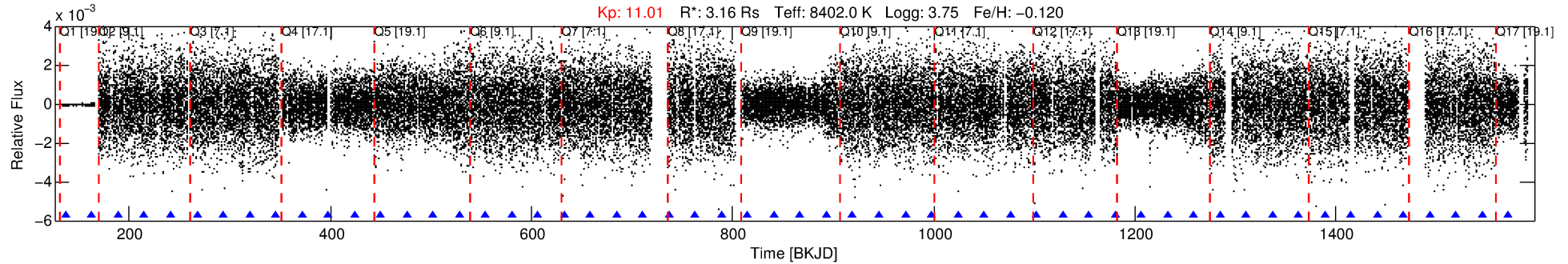
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007211759-09

No Significant Match Found

DV One-Page Summary

KIC: 7211759 Candidate: 9 of 10 Period: 26.083 d



DV Fit Results:

Period = 26.08252 [0.00097] d
Epoch = 137.0481 [0.0215] BKJD
Rp/R* = 0.0107 [0.0075]
a/R* = 12.65 [58.06]
b = 0.89 [1.05]
Seff = 934.99 [657.66]
Teq = 1410 [248] K
Rp = 3.69 [3.06] Re
a = 0.2182 [0.0934] AU
Ag = 263.69 [427.06] [0.62 σ]
Teffp = 8785 [3249] K [2.26 σ]

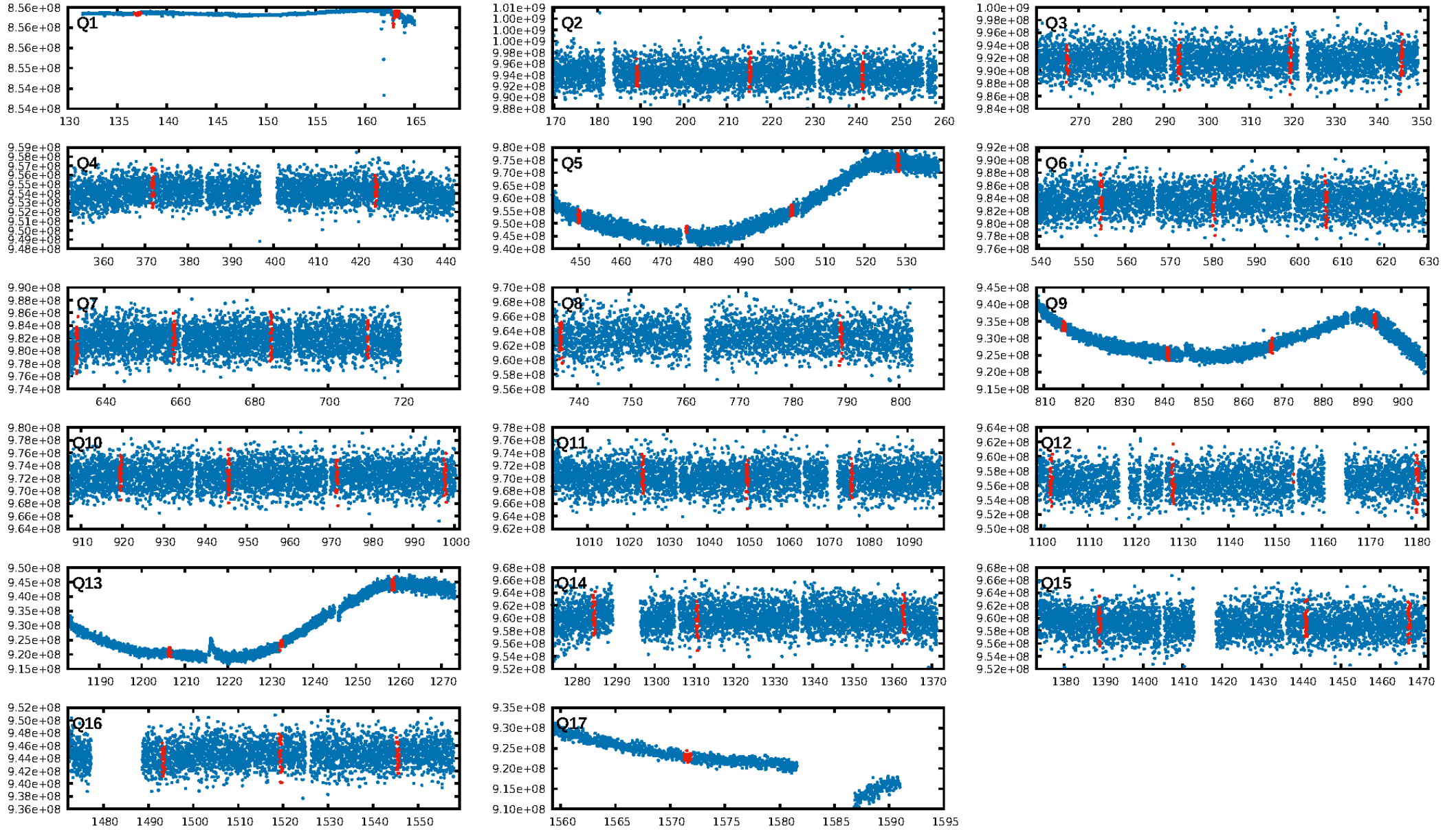
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 26.8% [0.34 σ]
ModelChiSquare2-sig: 88.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [46/46]
GhostDiagnostic-chr: 0.5724
Centroid-sig: 75.1%
Centroid-so: 0.571 arcsec [0.35 σ]
OotOffset-rm: 0.450 arcsec [1.20 σ]
KicOffset-rm: 0.362 arcsec [0.74 σ]
OotOffset-st: 4/3/4/3 [14]
KicOffset-st: 4/3/4/3 [14]
DiffImageQuality-fgm: 0.29 [4/14]
DiffImageOverlap-fno: 0.82 [14/17]

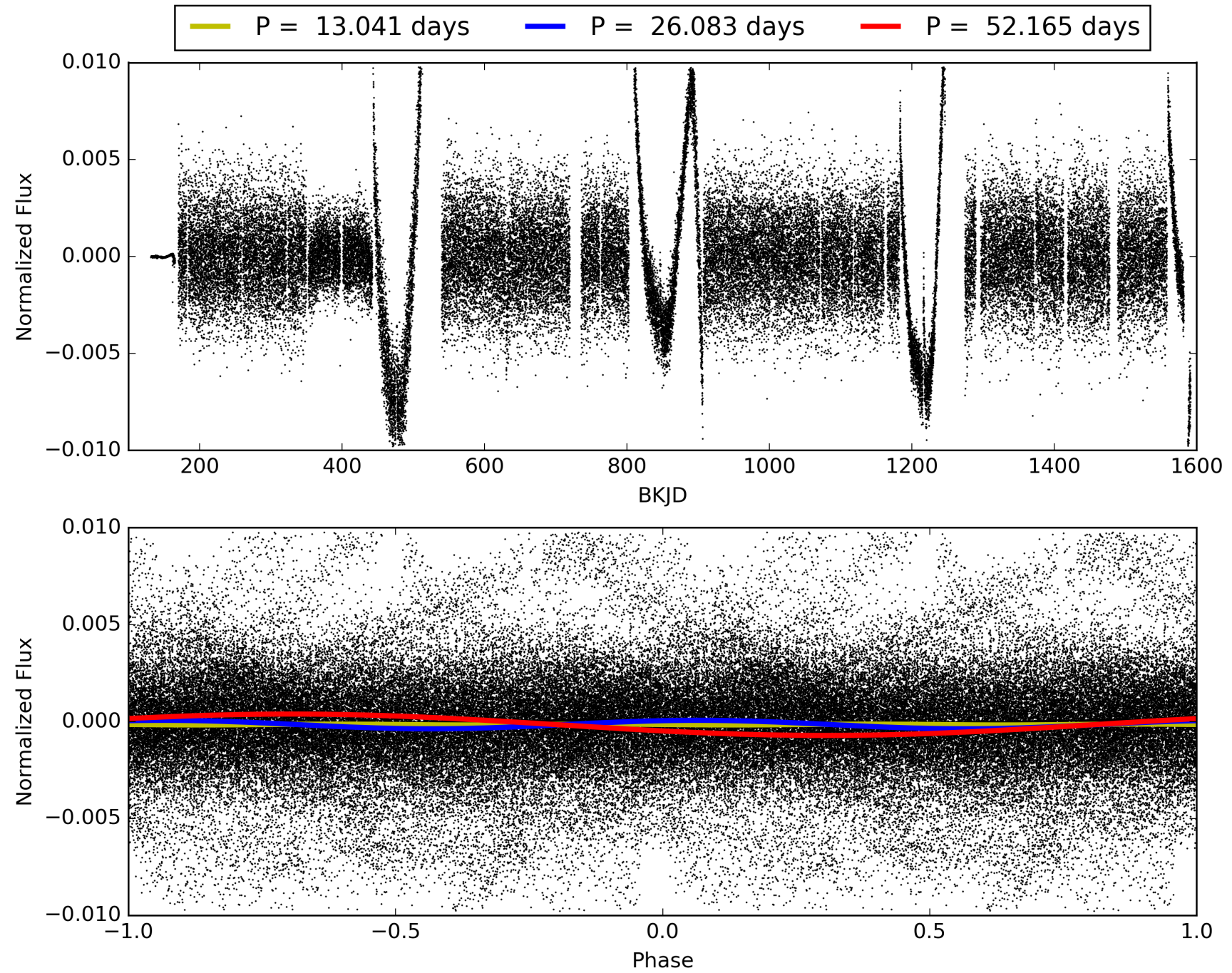
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 08:38:01 Z

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

TCE 007211759-09, PDC Light Curves

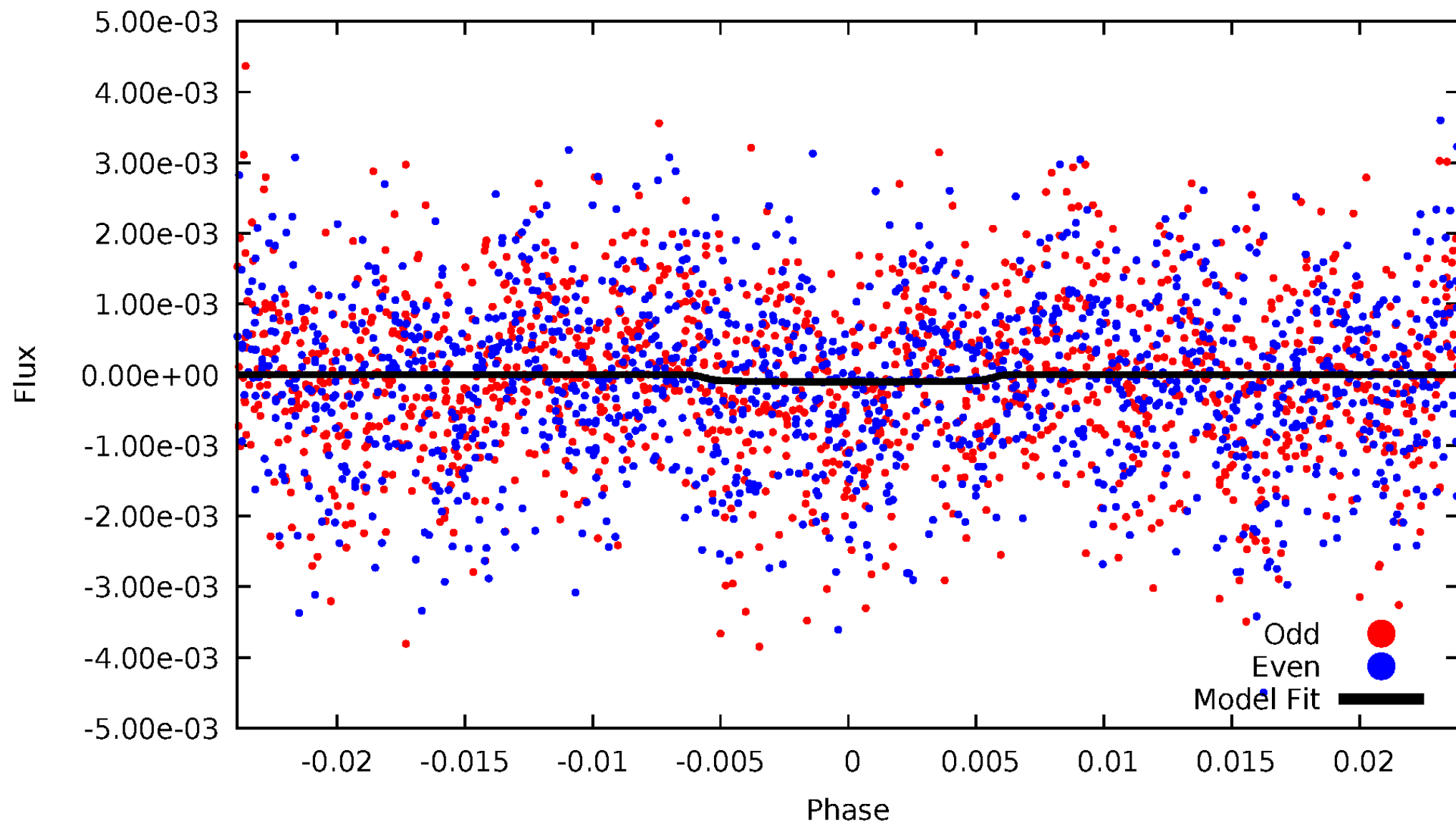


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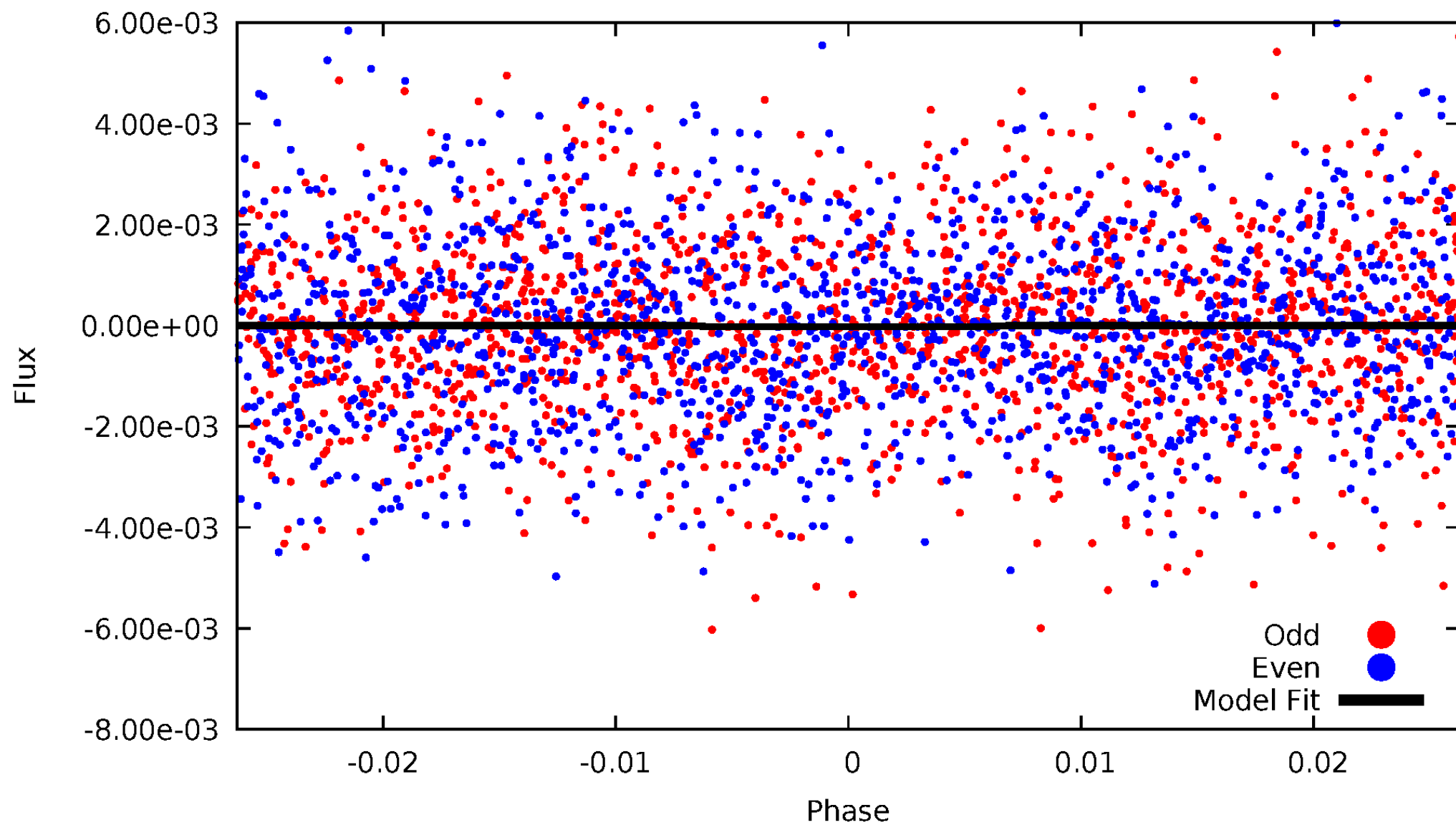
DV Odd/Even

TCE 007211759-09



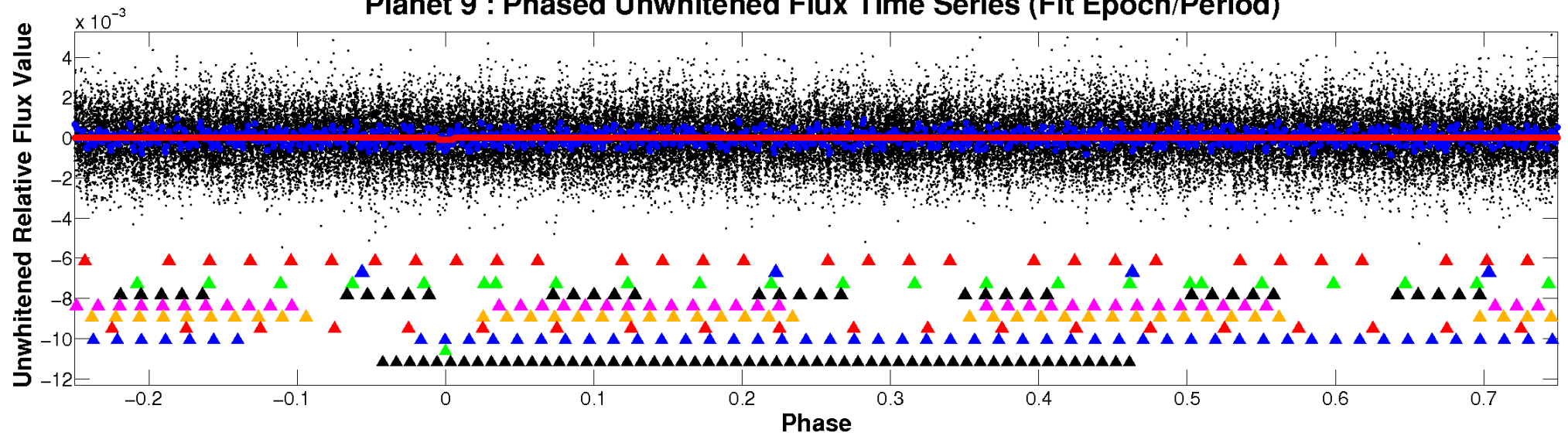
ALT Odd/Even

TCE 007211759-09

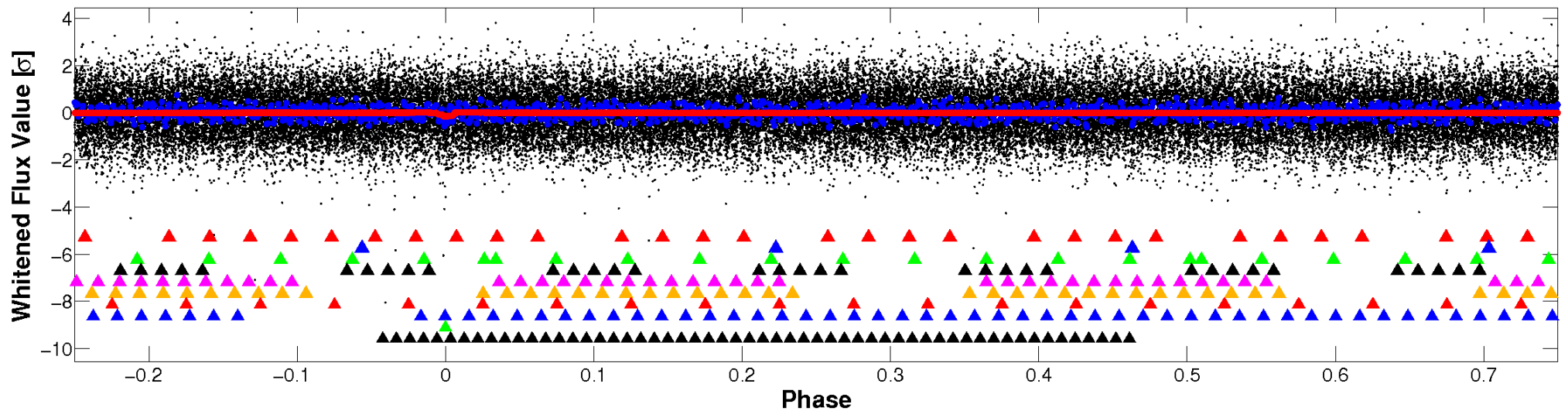


Non-Whitened Vs. Whitened Light Curve

Planet 9 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

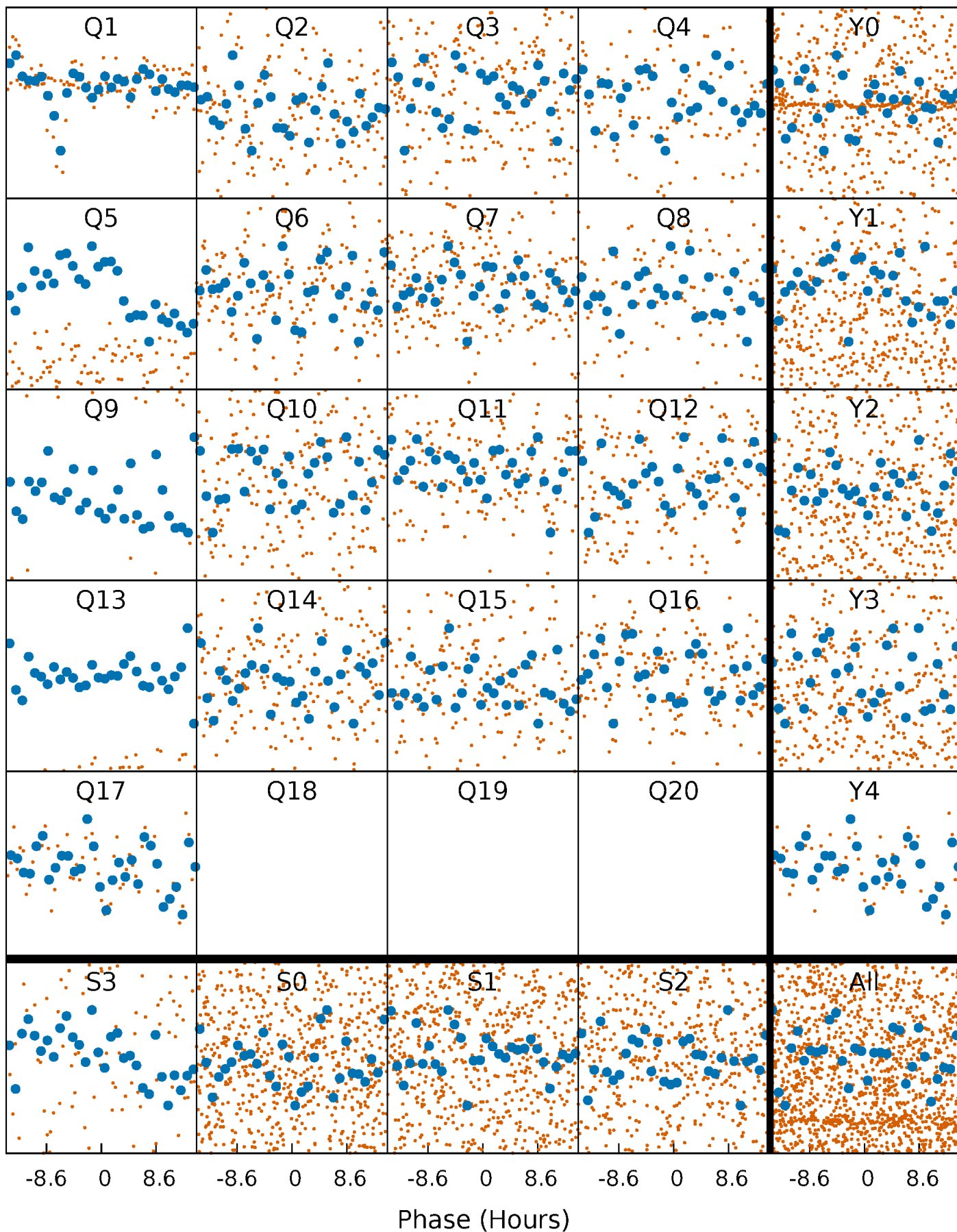


Planet 9 : Phased Whitened Flux Time Series (Fit Epoch/Period)



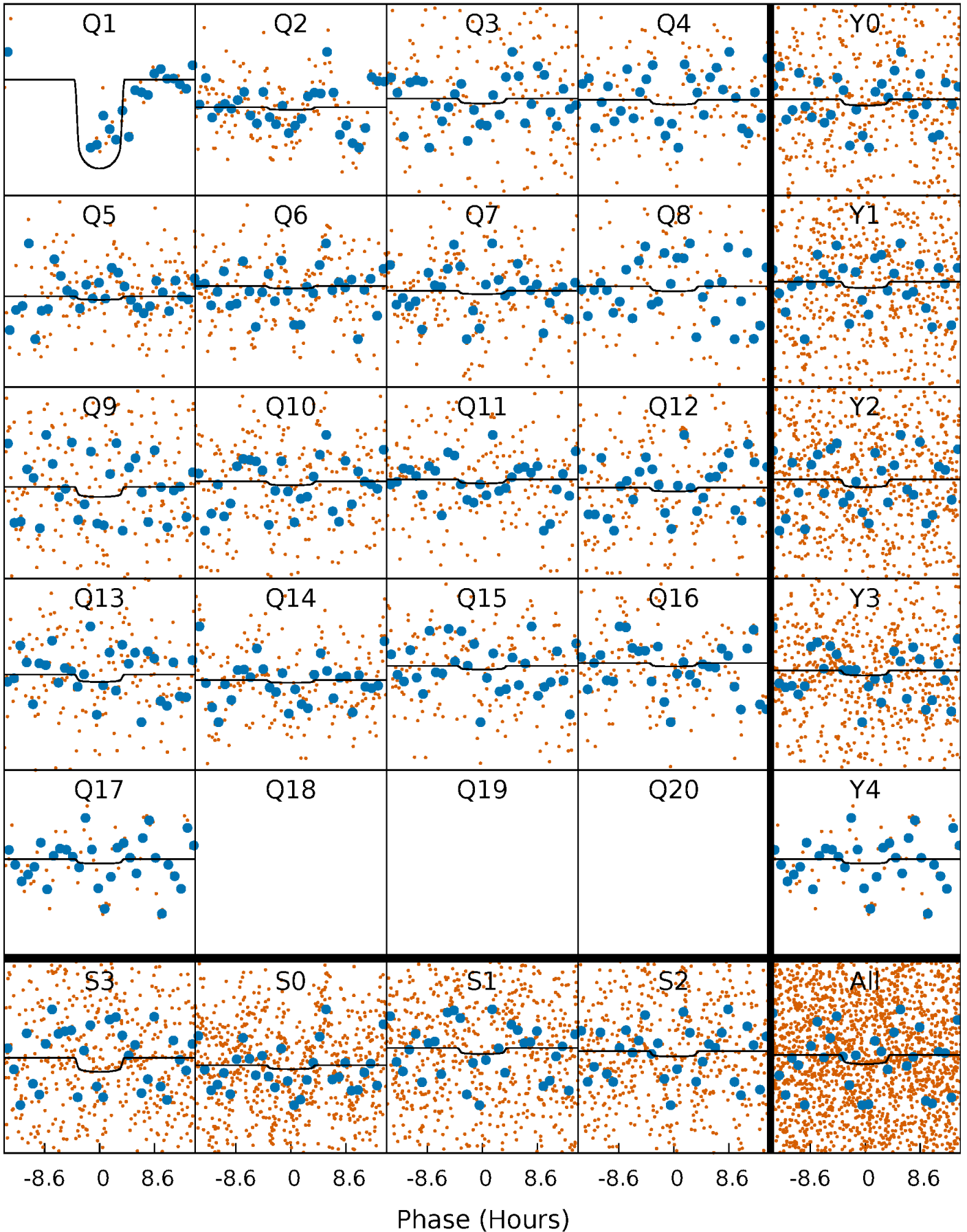
PDC Quarter-Phased Transit Curves

TCE 007211759-09 P= 26.082524 Days $T_0=137.048060$ (BKJD)



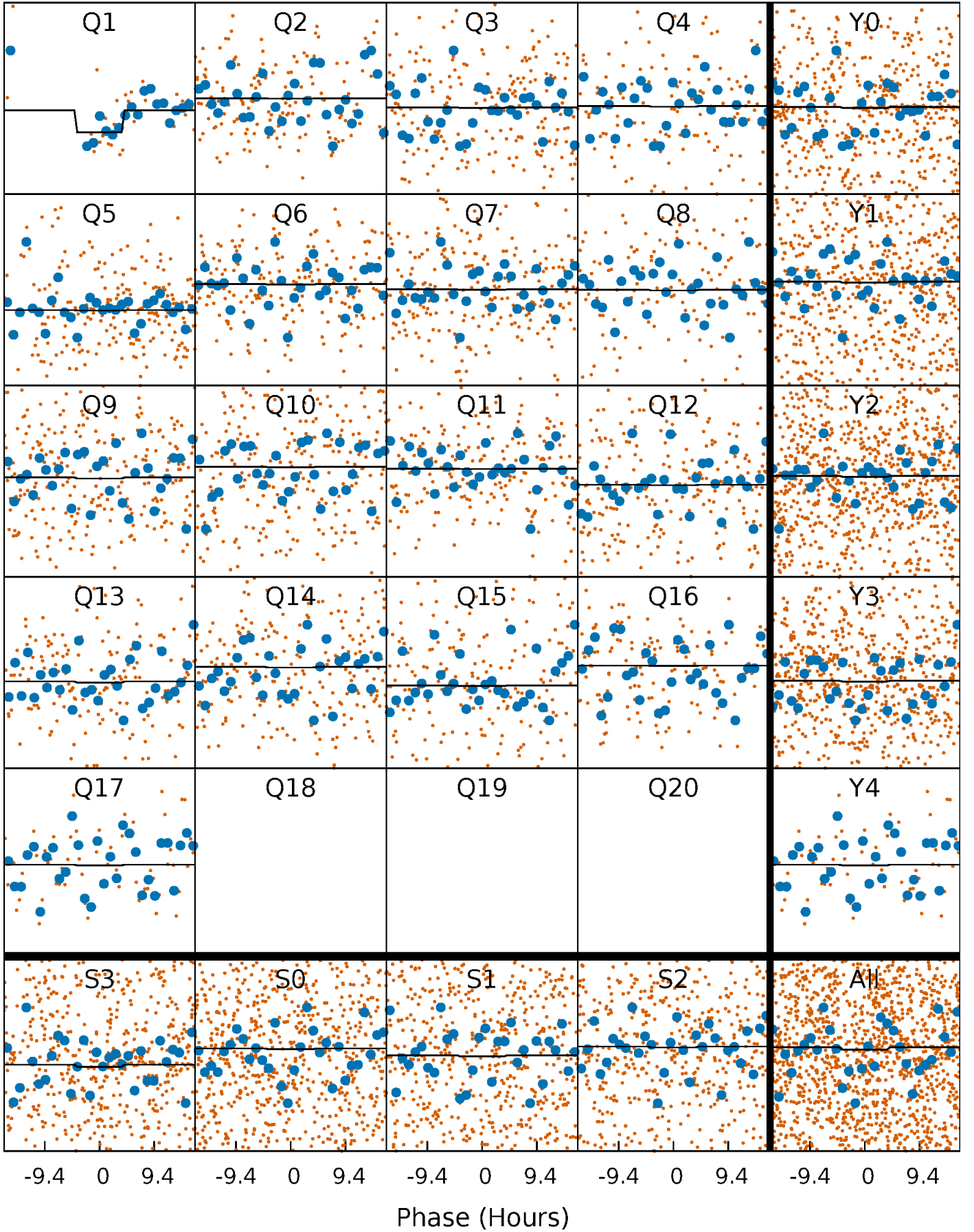
DV Quarter-Phased Transit Curves

TCE 007211759-09 P= 26.082524 Days $T_0=137.048060$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

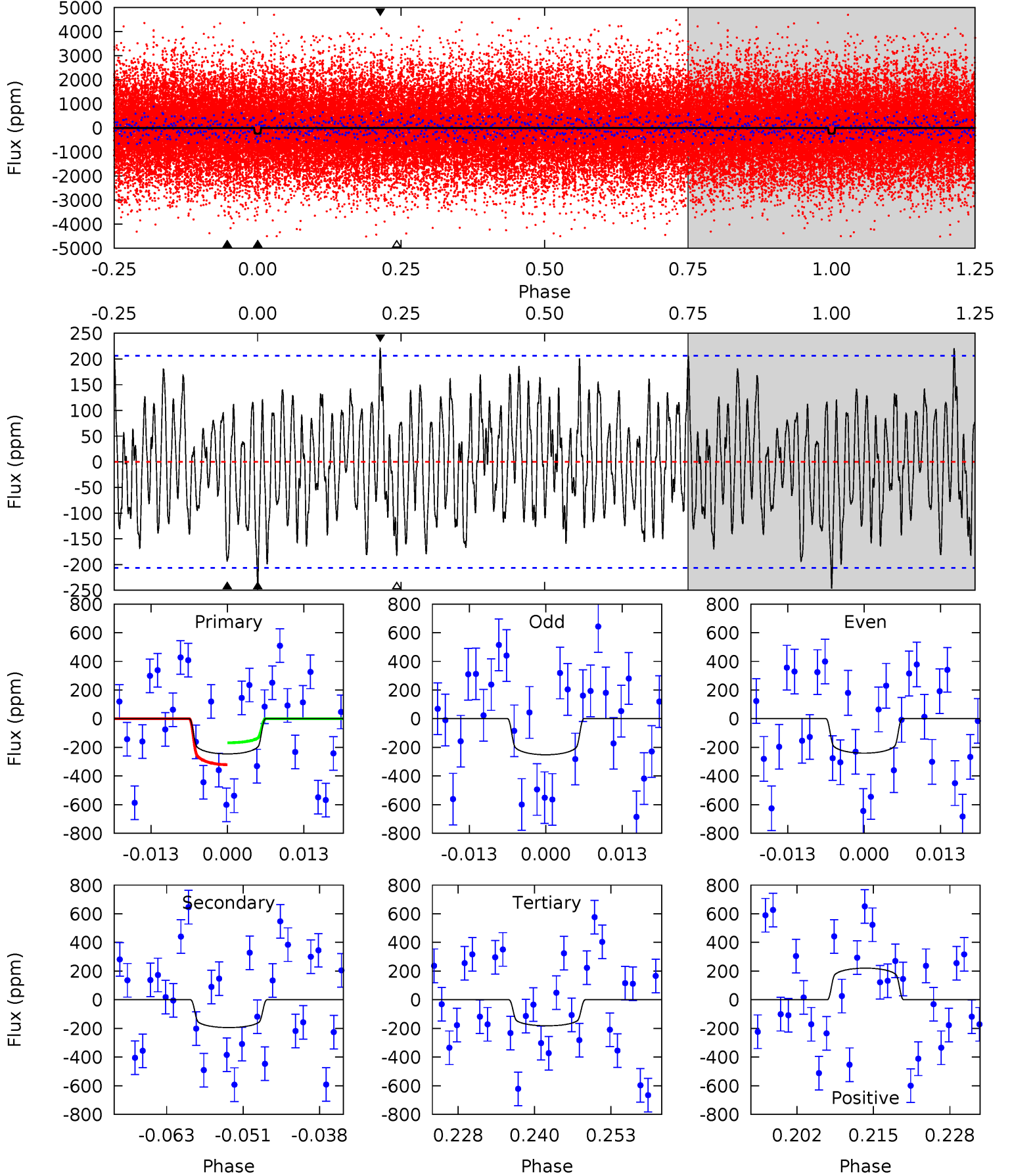
TCE 007211759-09 P= 26.083714 Days $T_0=137.087751$ (BKJD)



DV Model-Shift Uniqueness Test

007211759-09, P = 26.082524 Days, E = 110.965536 Days

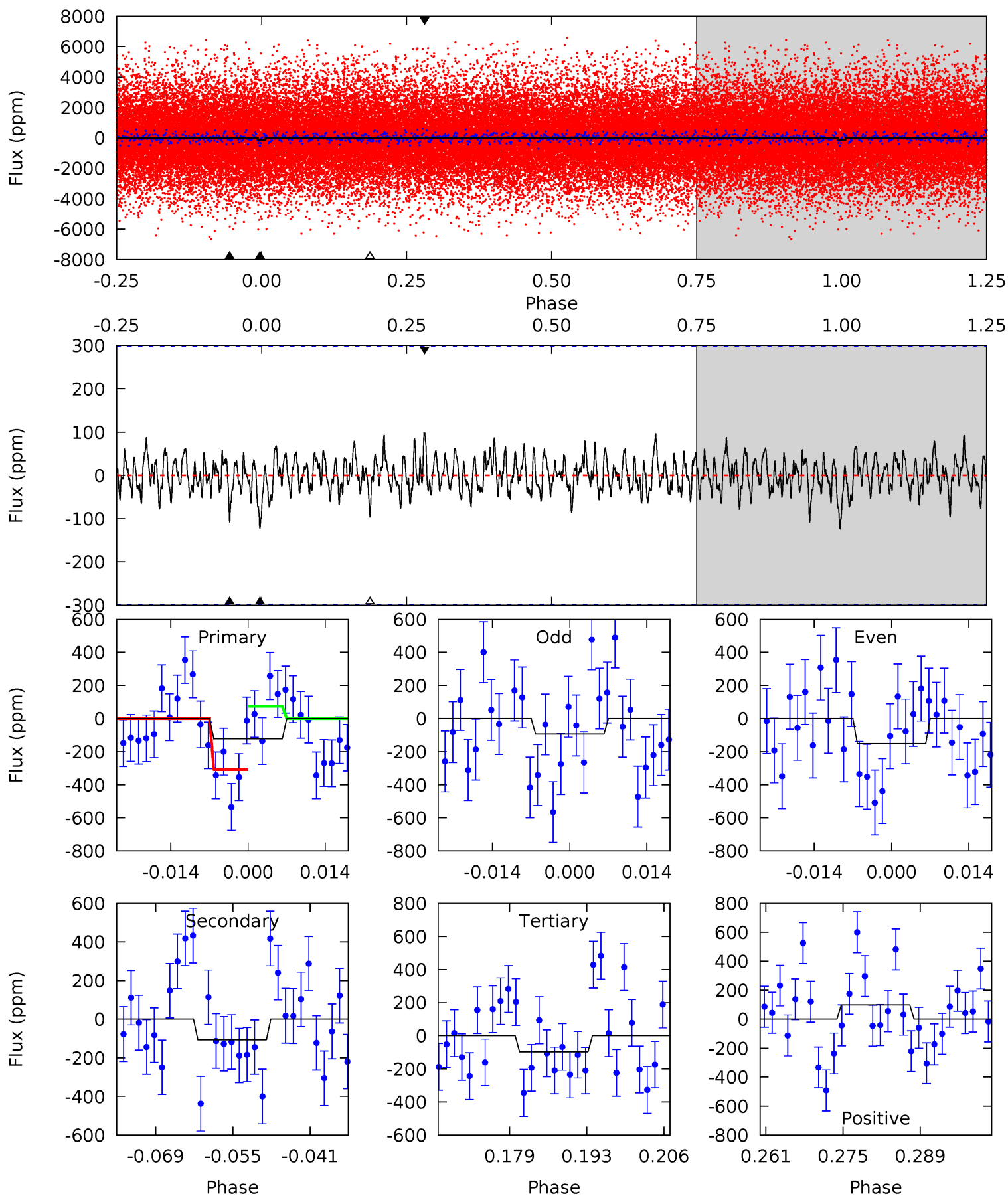
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.95	4.69	4.39	5.33	4.98	2.49	2.04	1.56	0.62	0.30	-0.64	0.14	1.21	0.47	1.84



Alt Model-Shift Uniqueness Test

007211759-09, P = 26.083714 Days, E = 111.004037 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.04	1.78	1.60	1.63	4.96	2.46	0.57	0.44	0.41	0.18	0.15	0.48	1.28	0.44	1.94



Stellar Parameters For KIC 007211759

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8402^{+232}_{-365}	$3.748^{+0.399}_{-0.142}$	$-0.120^{+0.350}_{-0.400}$	$3.157^{+0.944}_{-1.416}$	$2.039^{+0.384}_{-0.469}$	$0.091^{+0.335}_{-0.045}$
	+3%/-4%	+11%/-4%	+292%/-333%	+30%/-45%	+19%/-23%	+367%/-49%
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 007211759-09 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-194 ± 41	$3.47^{+2.50}_{-1.92}$	1918^{+166}_{-198}	9805^{+10923}_{-2714}	409^{+1712}_{-271}
Alt.	-107 ± 60	$2.14^{+2.07}_{-1.39}$	1905^{+172}_{-241}	10743^{+23166}_{-4310}	556^{+4309}_{-457}

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

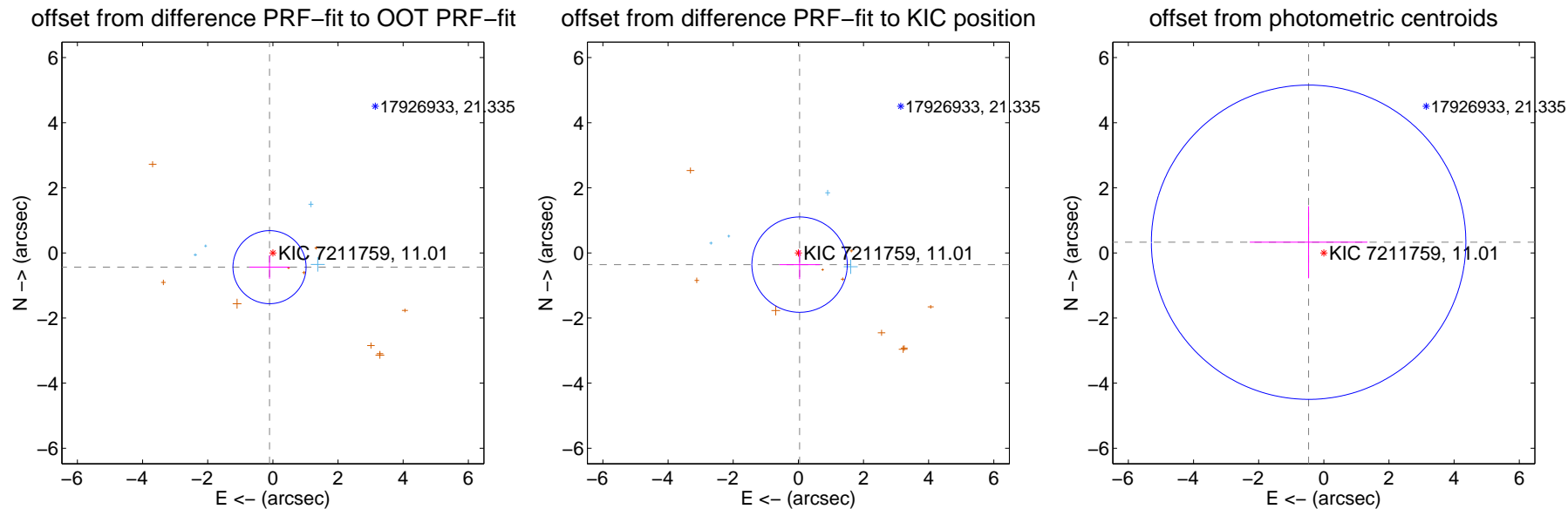
DV Centroid Data

Supplemental centroid analysis for 007211759-09. **Kepler magnitude: 11.01**. Transit SNR 7.67

There are 4 quarters with good PRF difference image offsets

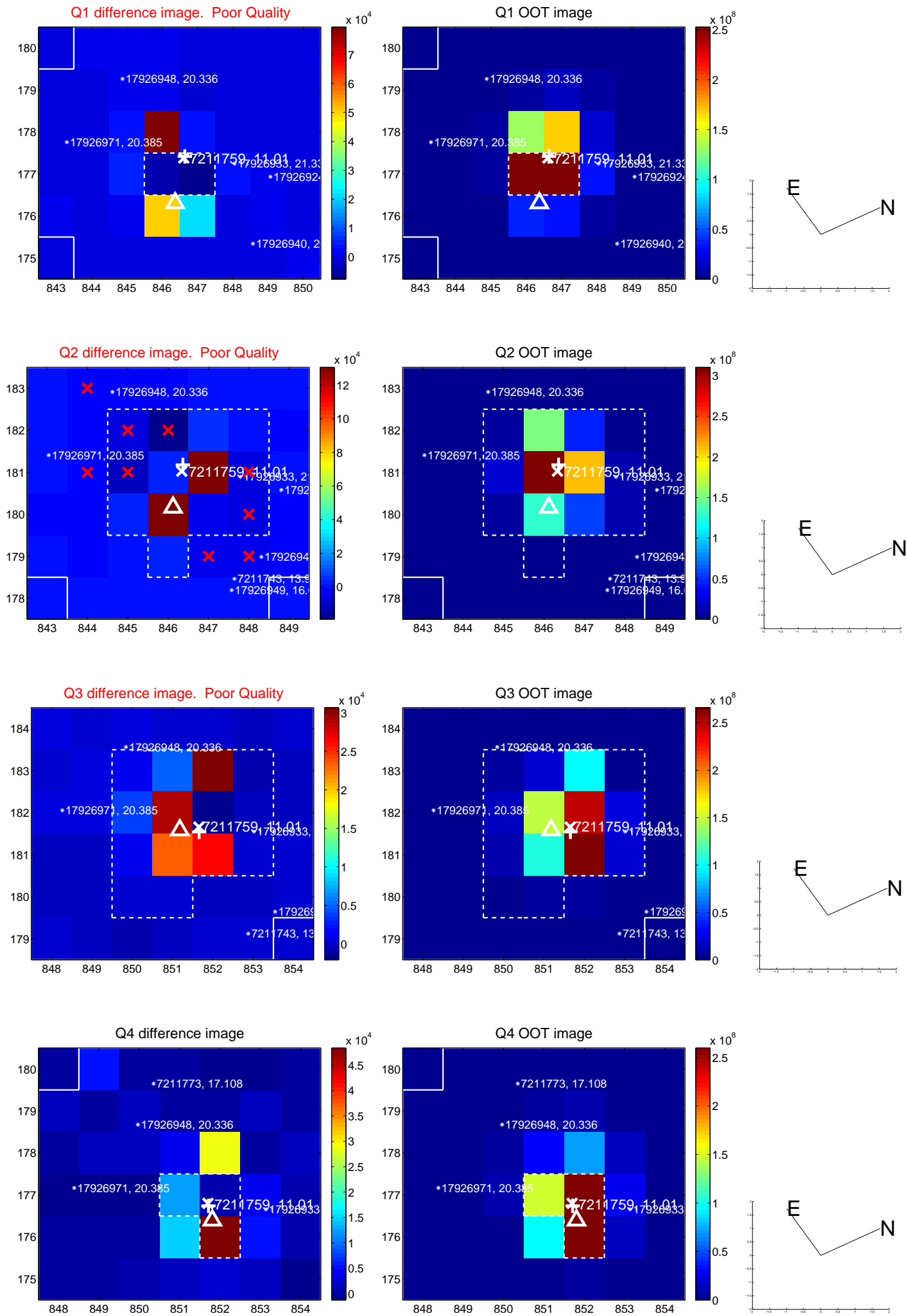
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.450 ± 0.374	1.20	0.103 ± 0.621	-0.438 ± 0.356
PRF-fit source offset from KIC position	0.362 ± 0.488	0.74	-0.038 ± 0.623	-0.360 ± 0.445
photometric centroid source offset	0.57 ± 1.61	0.35	0.47 ± 1.81	0.33 ± 1.11

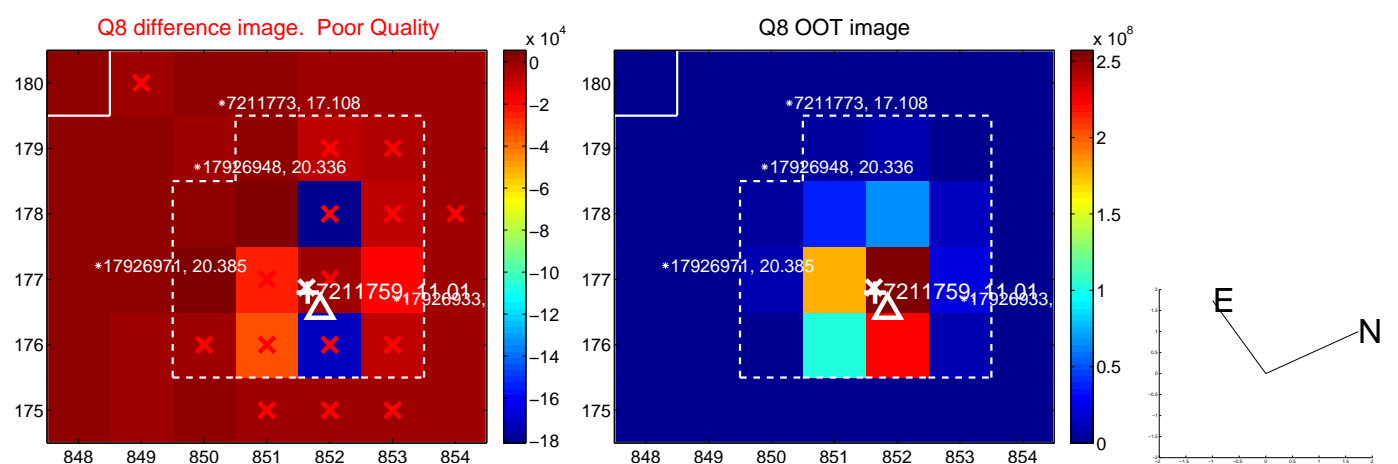
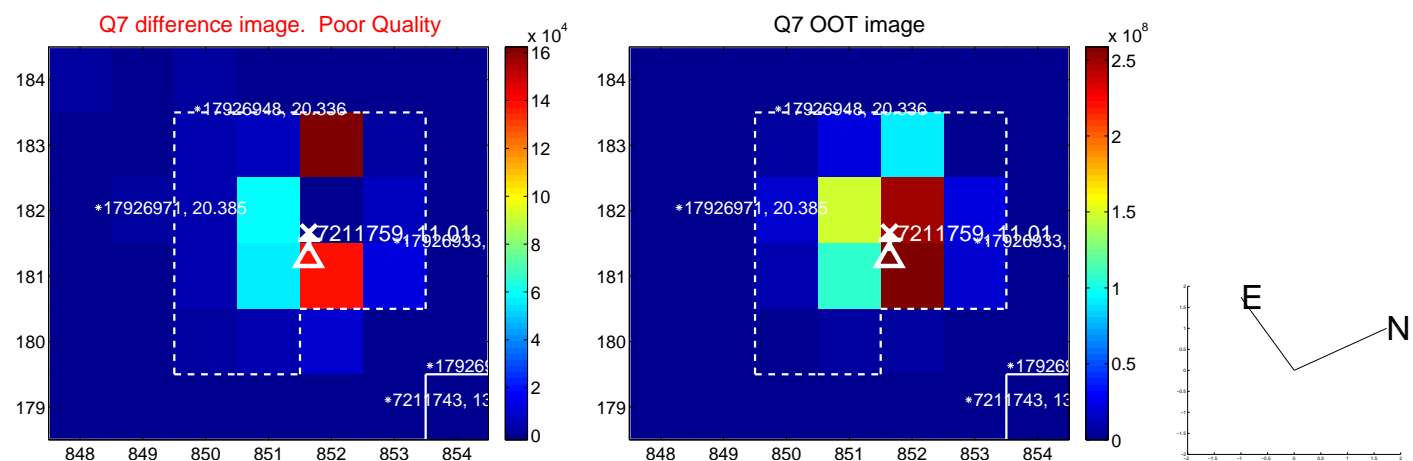
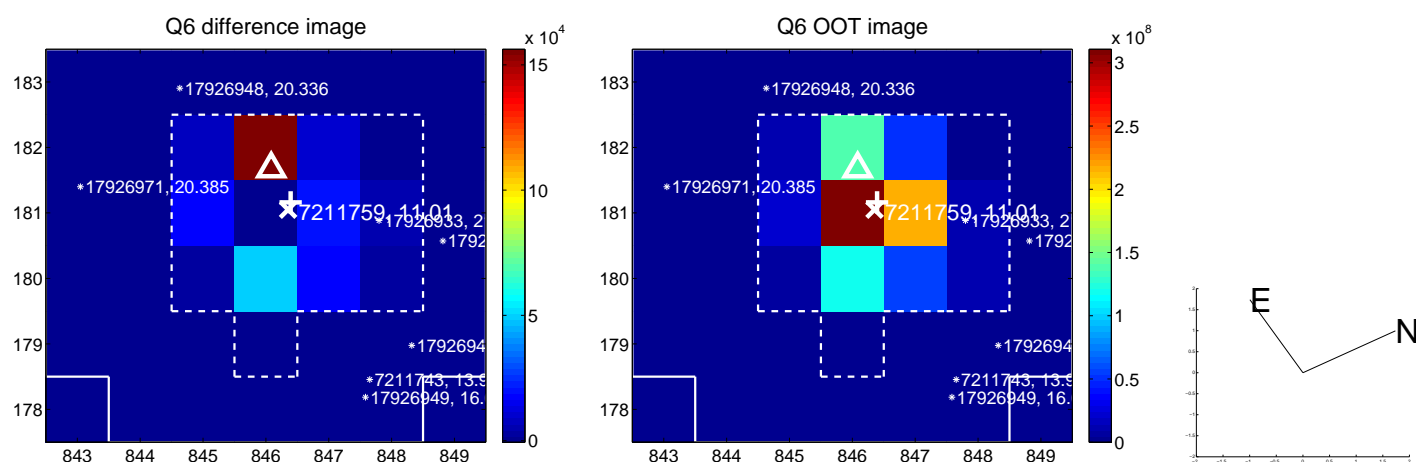
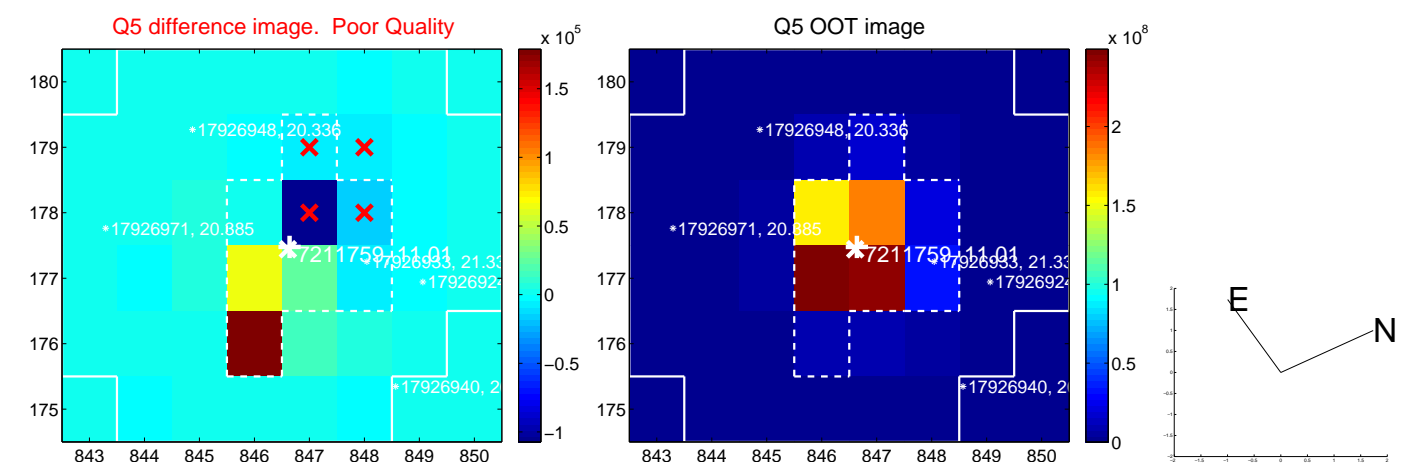


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

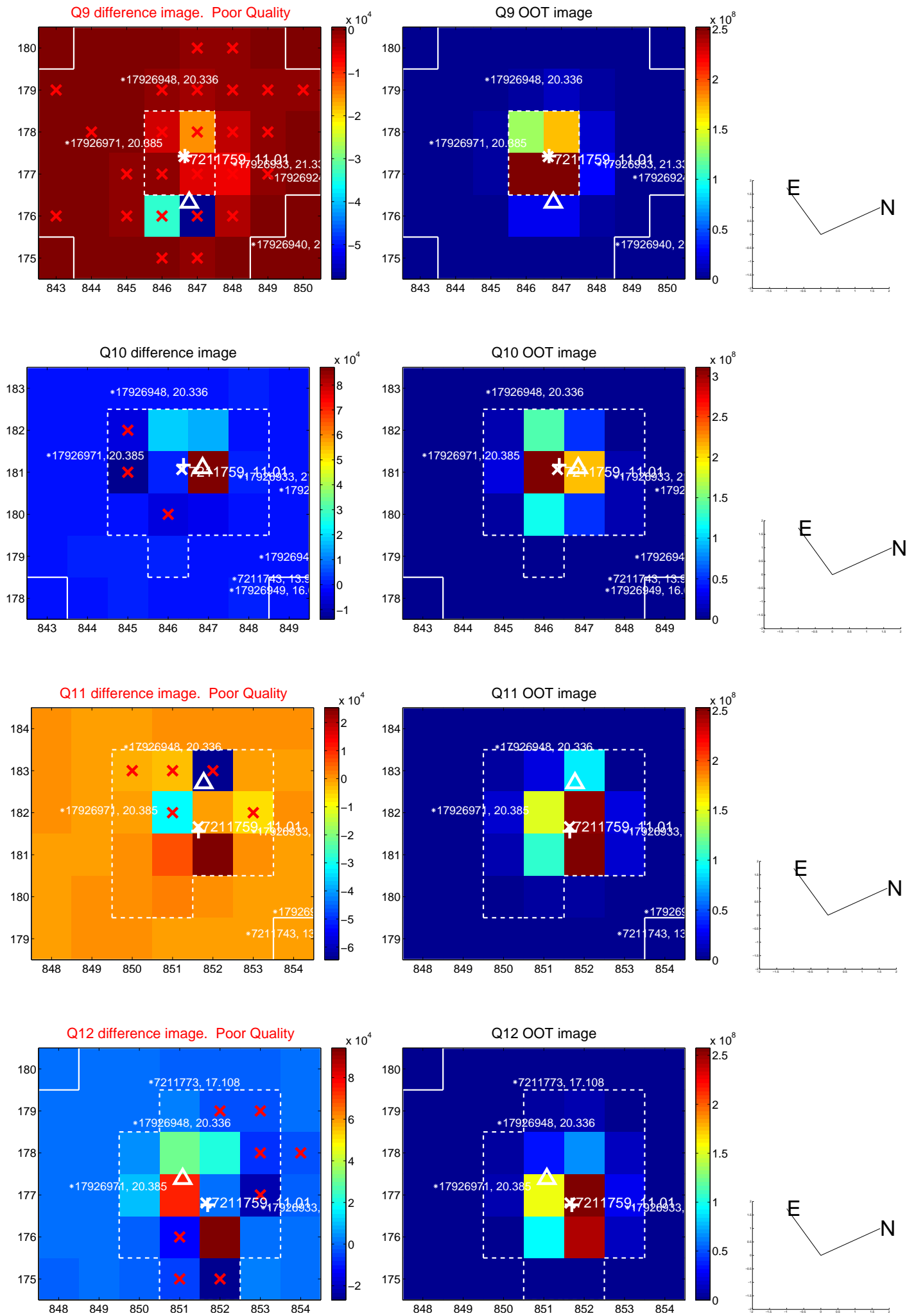
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



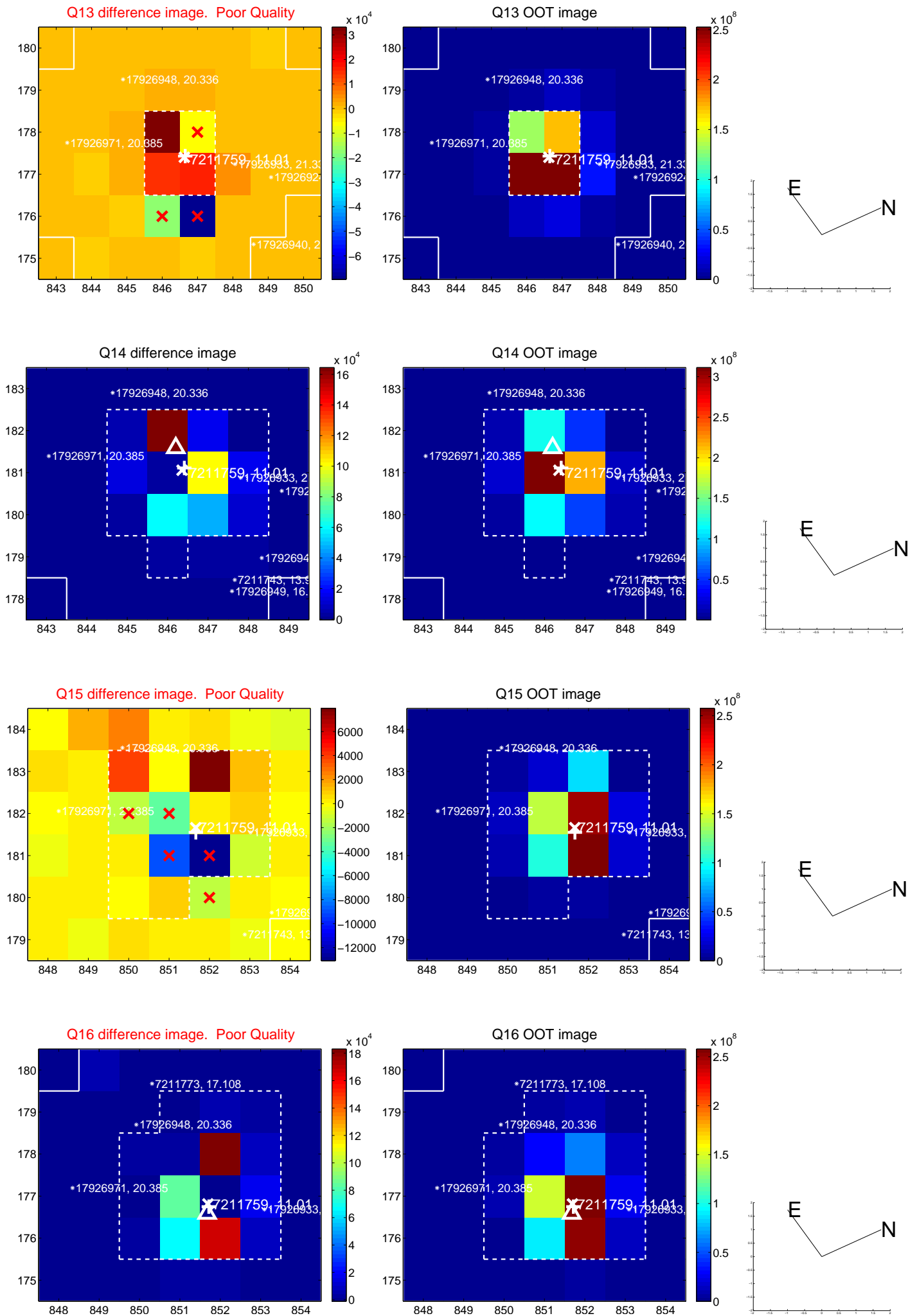
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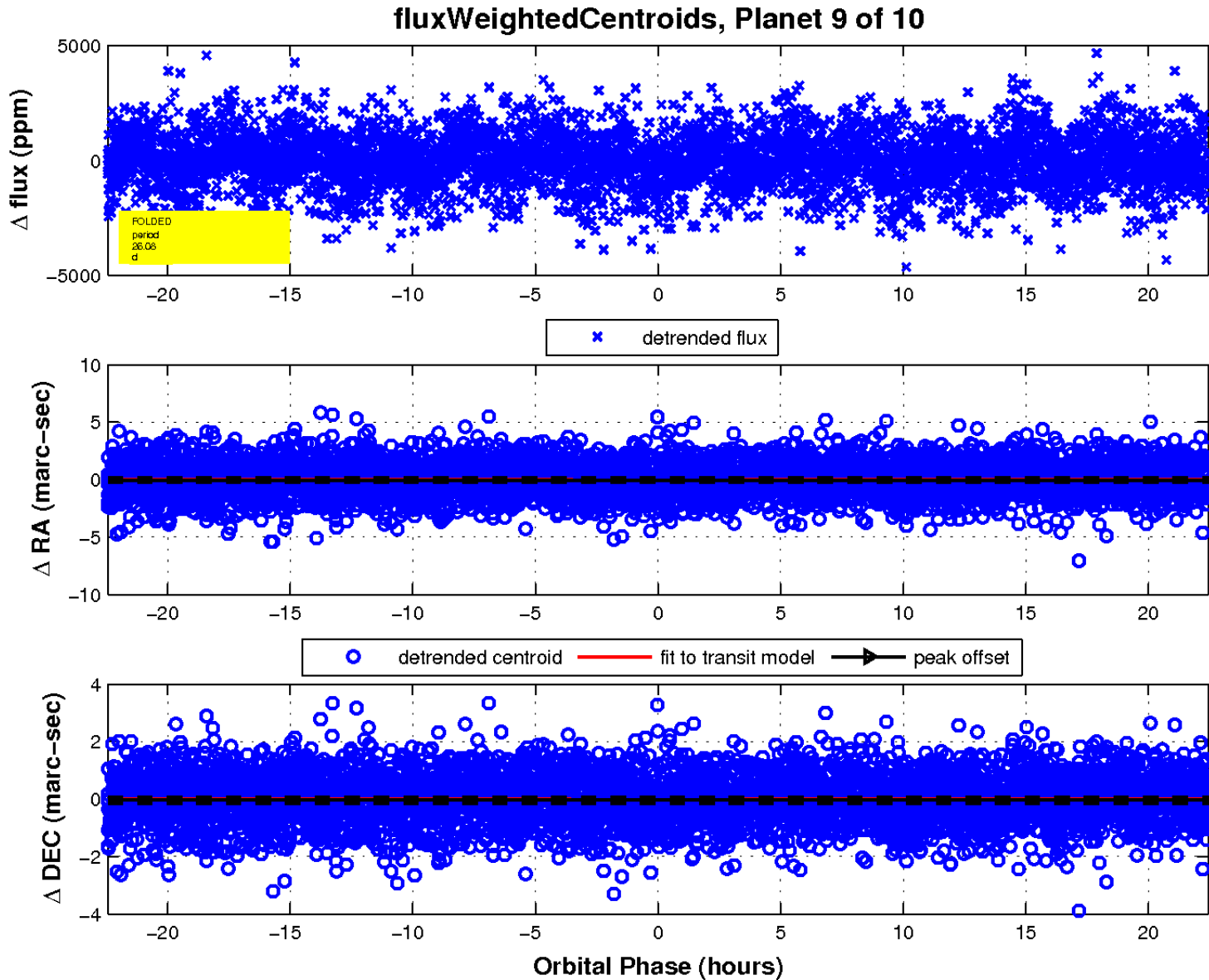
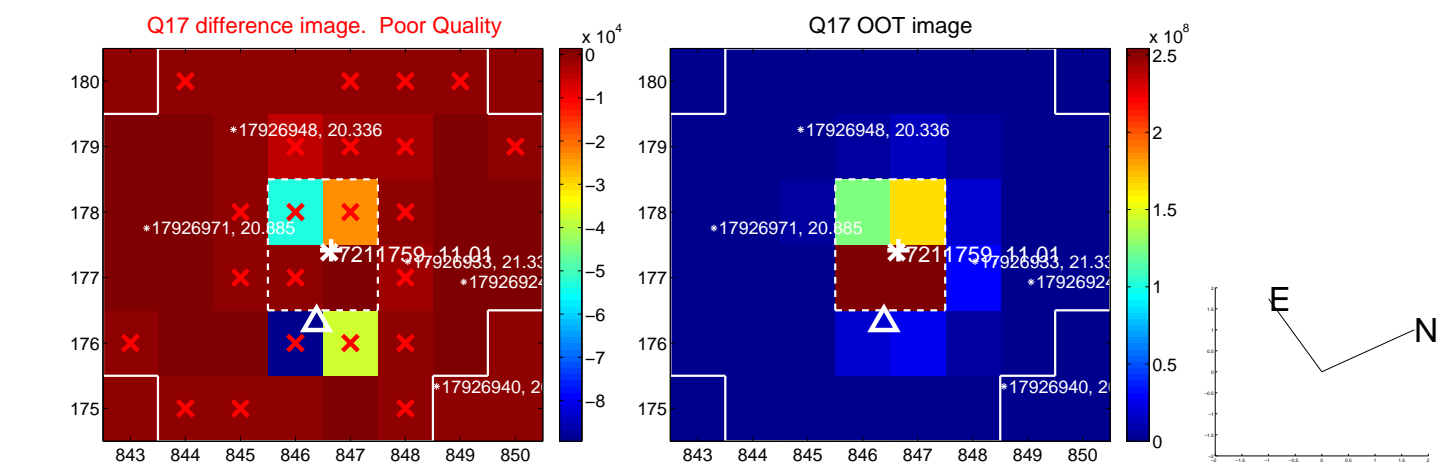
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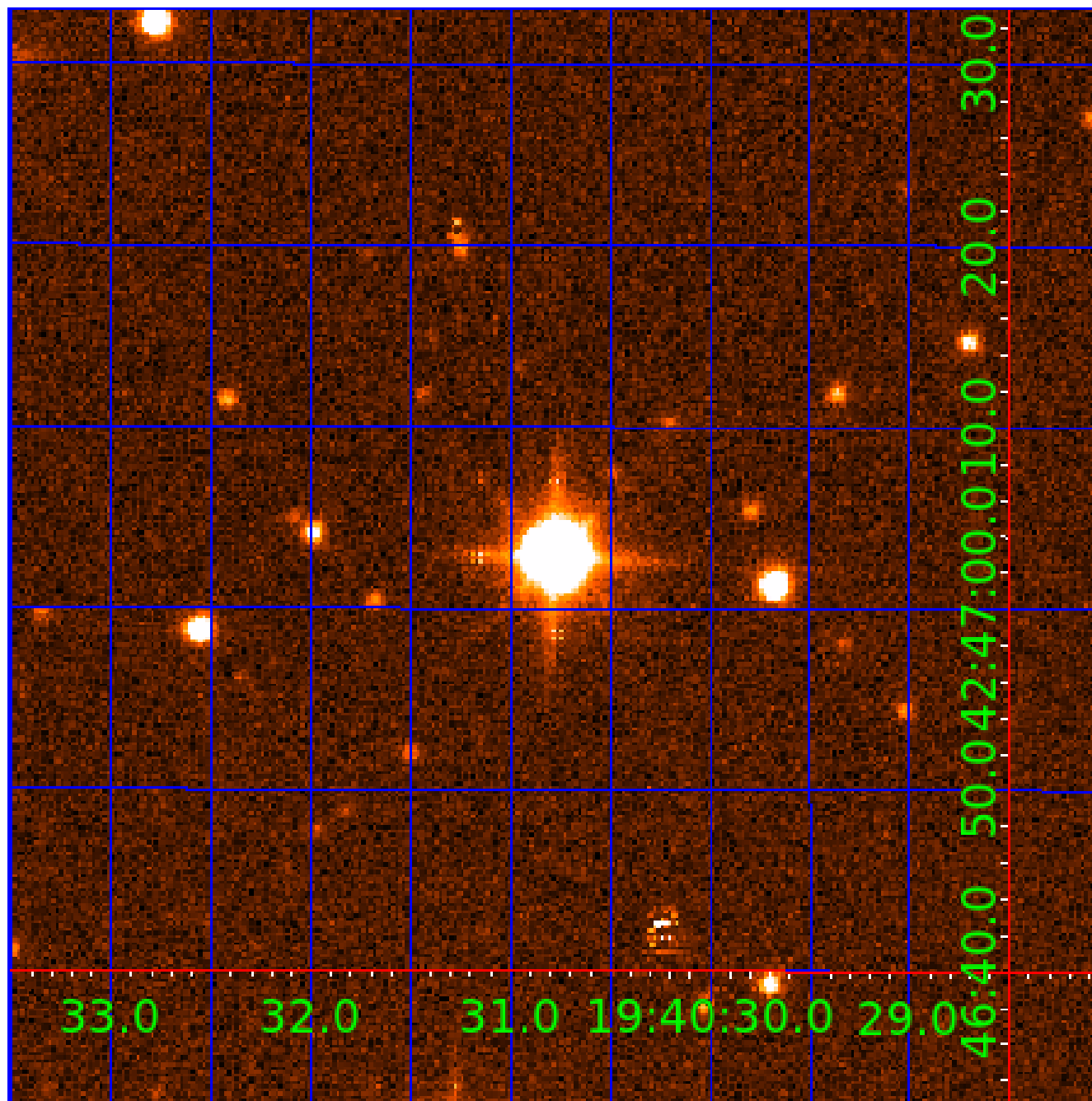


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UKIRT Image

Declination



Q1-17 DR25 TCE Parameters

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Robovetter Results

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007211759-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
007211759-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
007211759-03	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED—HALO_GHOST
007211759-04	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
007211759-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED—HALO_GHOST
007211759-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA_TRACKER—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_SATURATED
007211759-07	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED—HALO_GHOST
007211759-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
007211759-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
007211759-10	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED

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

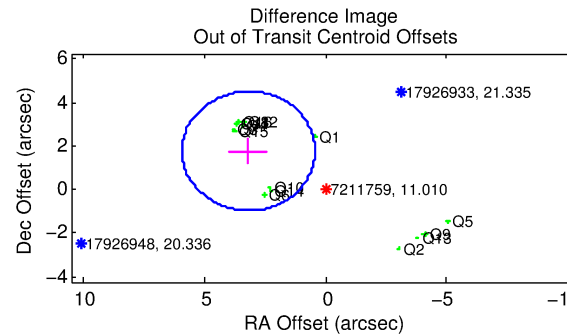
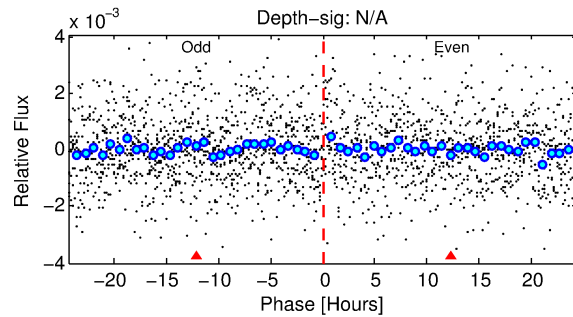
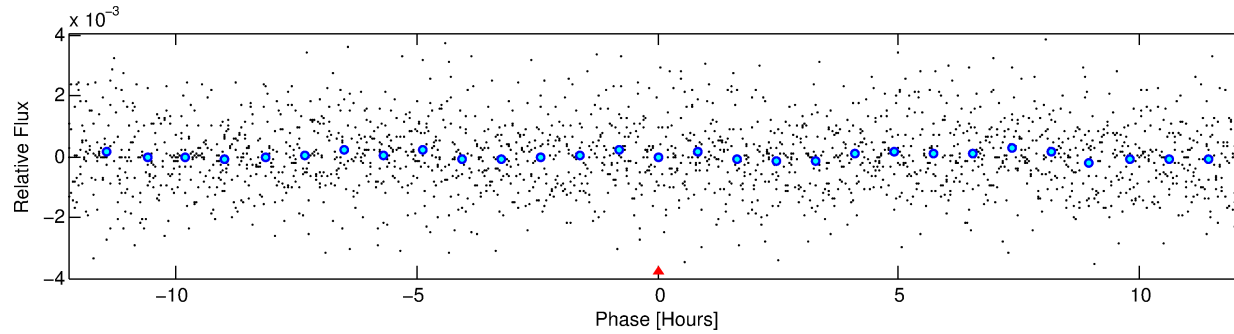
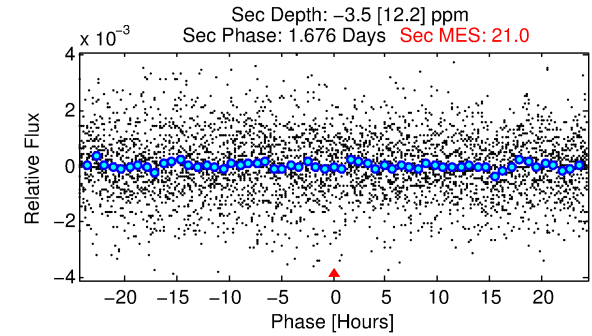
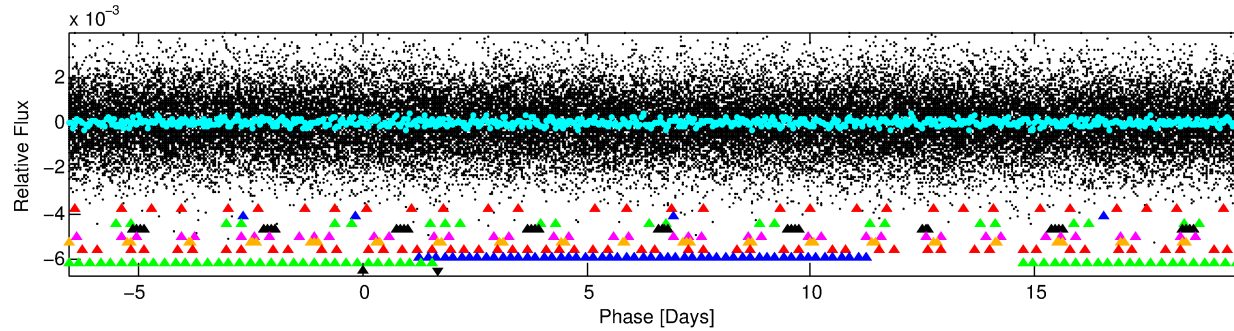
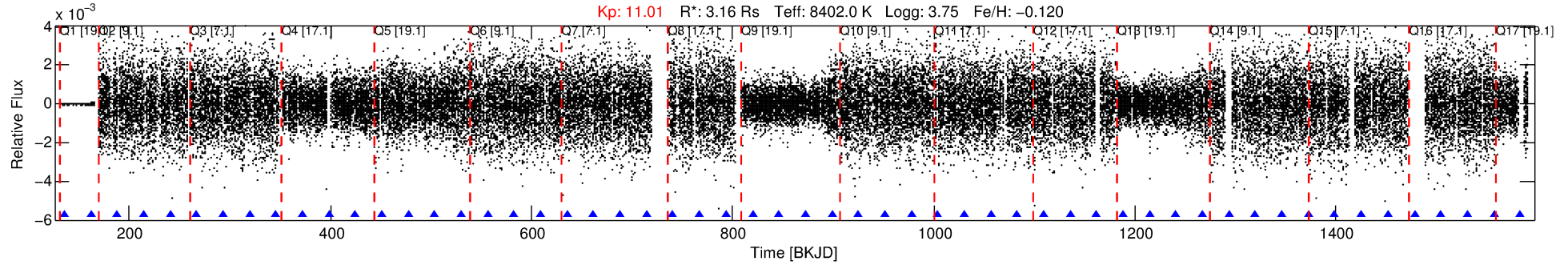
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007211759-10

No Significant Match Found

DV One-Page Summary

KIC: 7211759 Candidate: 10 of 10 Period: 26.321 d



TPS TCE Results:

Period = 26.32129 d
Epoch = 135.9451 BKJD

DV fit results are unavailable

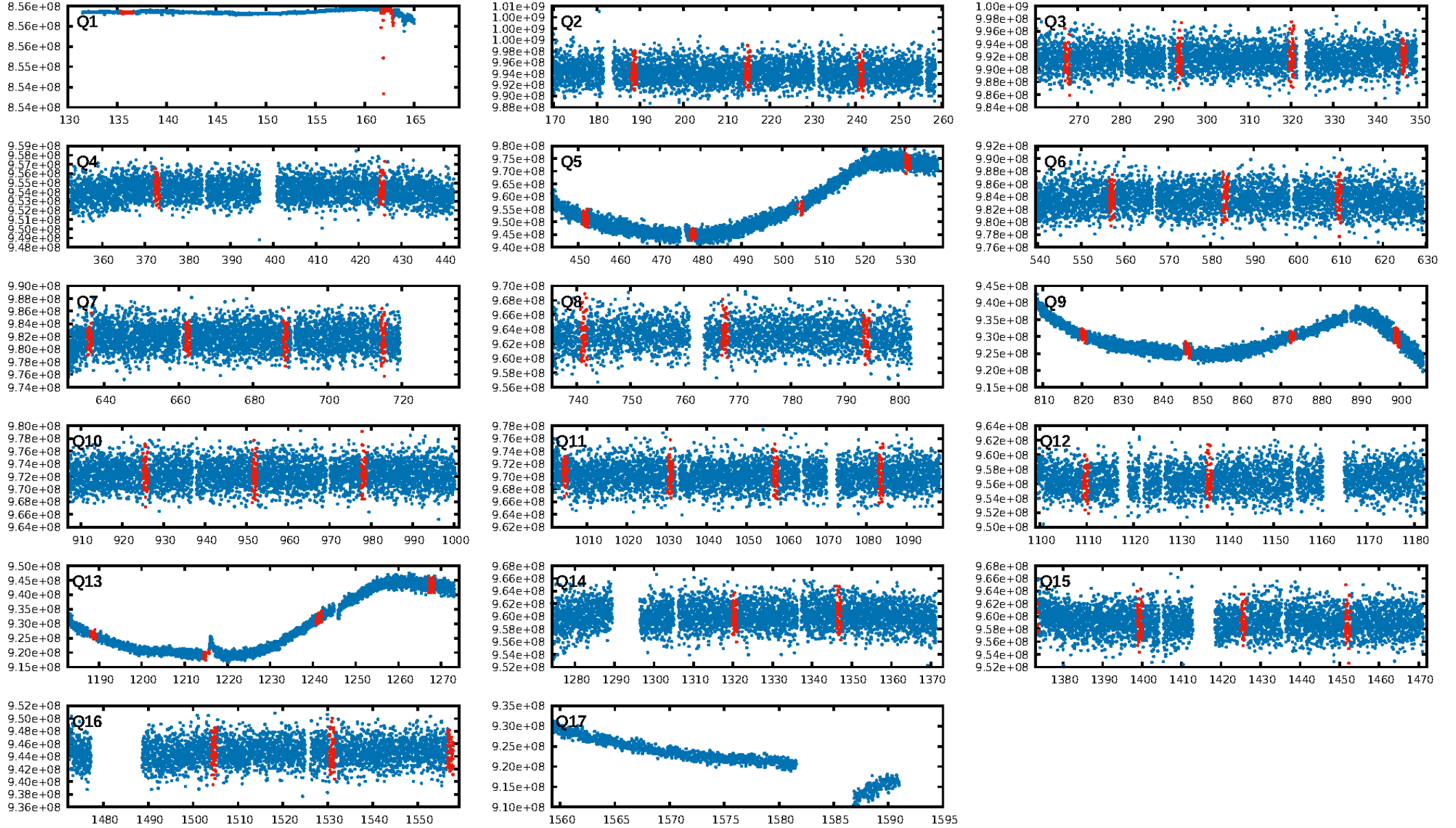
DV Diagnostic Results:

ShortPeriod-sig: 26.8% [0.34 σ]
LongPeriod-sig: 21.6% [0.27 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [43/43]
GhostDiagnostic-chr: -1.038
Centroid-sig: 2.3%
Centroid-so: 9.713 arcsec [1.47 σ]
OotOffset-rm: 3.637 arcsec [3.98 σ]
KicOffset-rm: 3.724 arcsec [4.46 σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.31 [5/16]
DiffImageOverlap-fno: 0.94 [15/16]

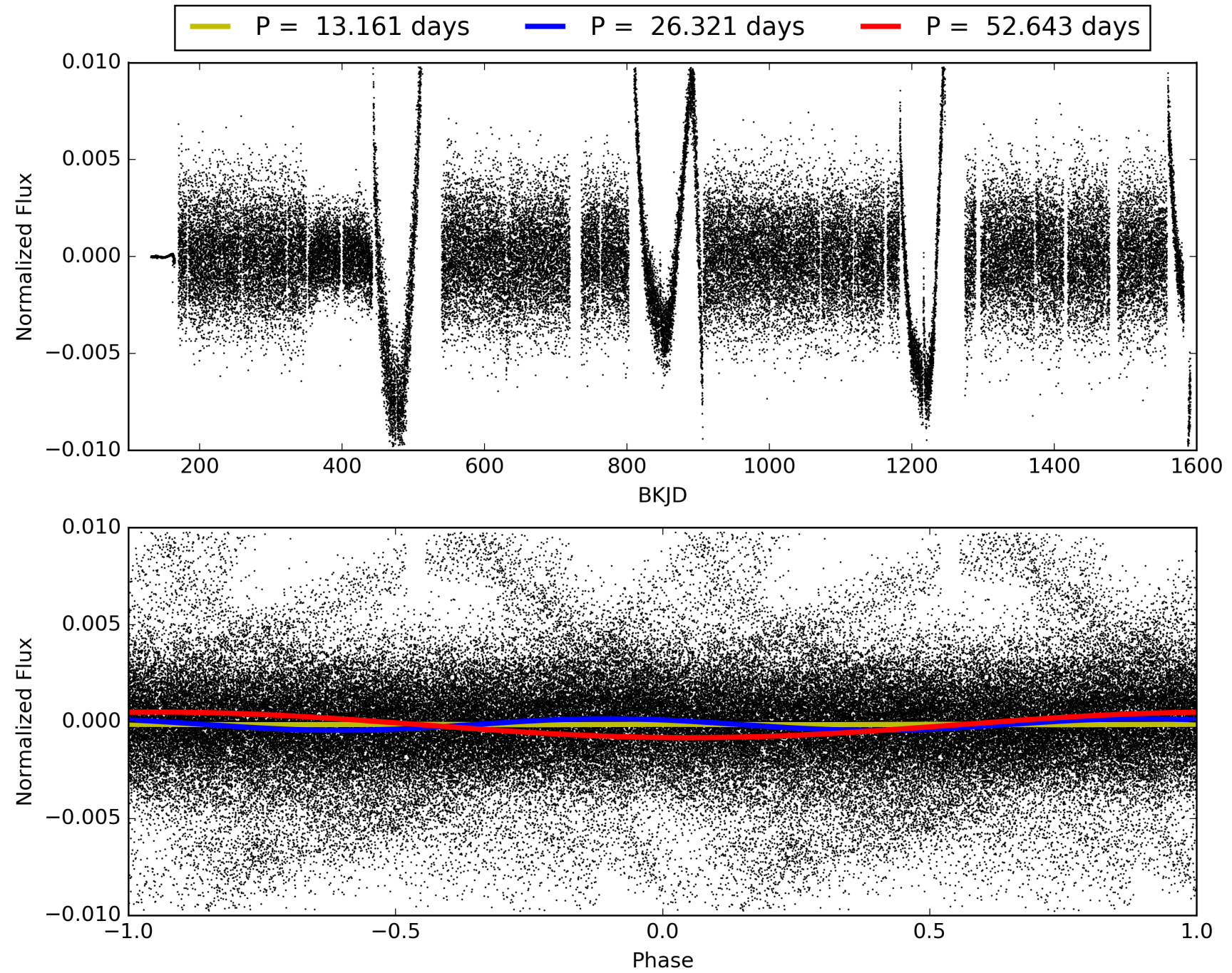
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 08:38:07 Z

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

TCE 007211759-10, PDC Light Curves

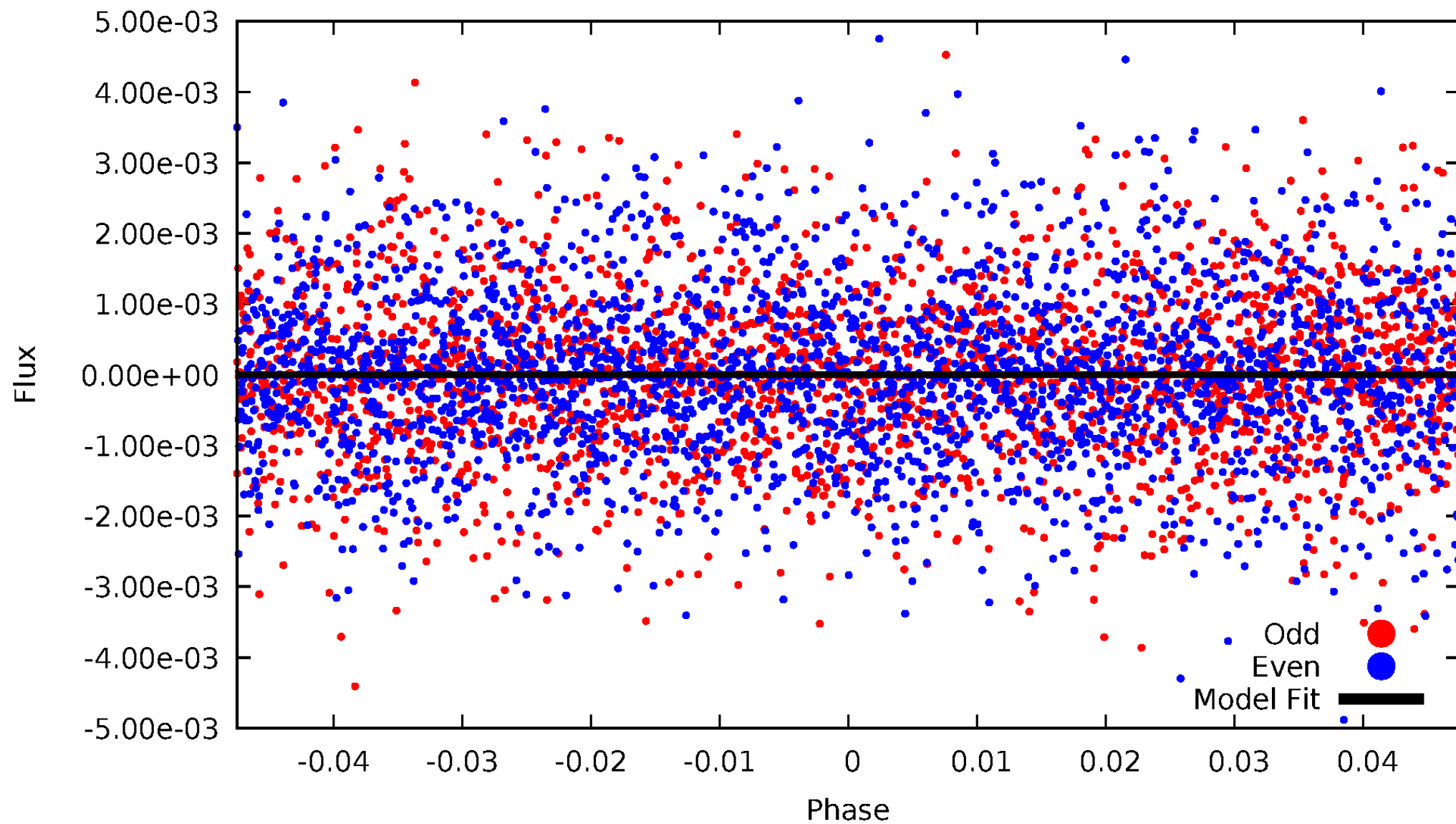


TCE 007211759-10



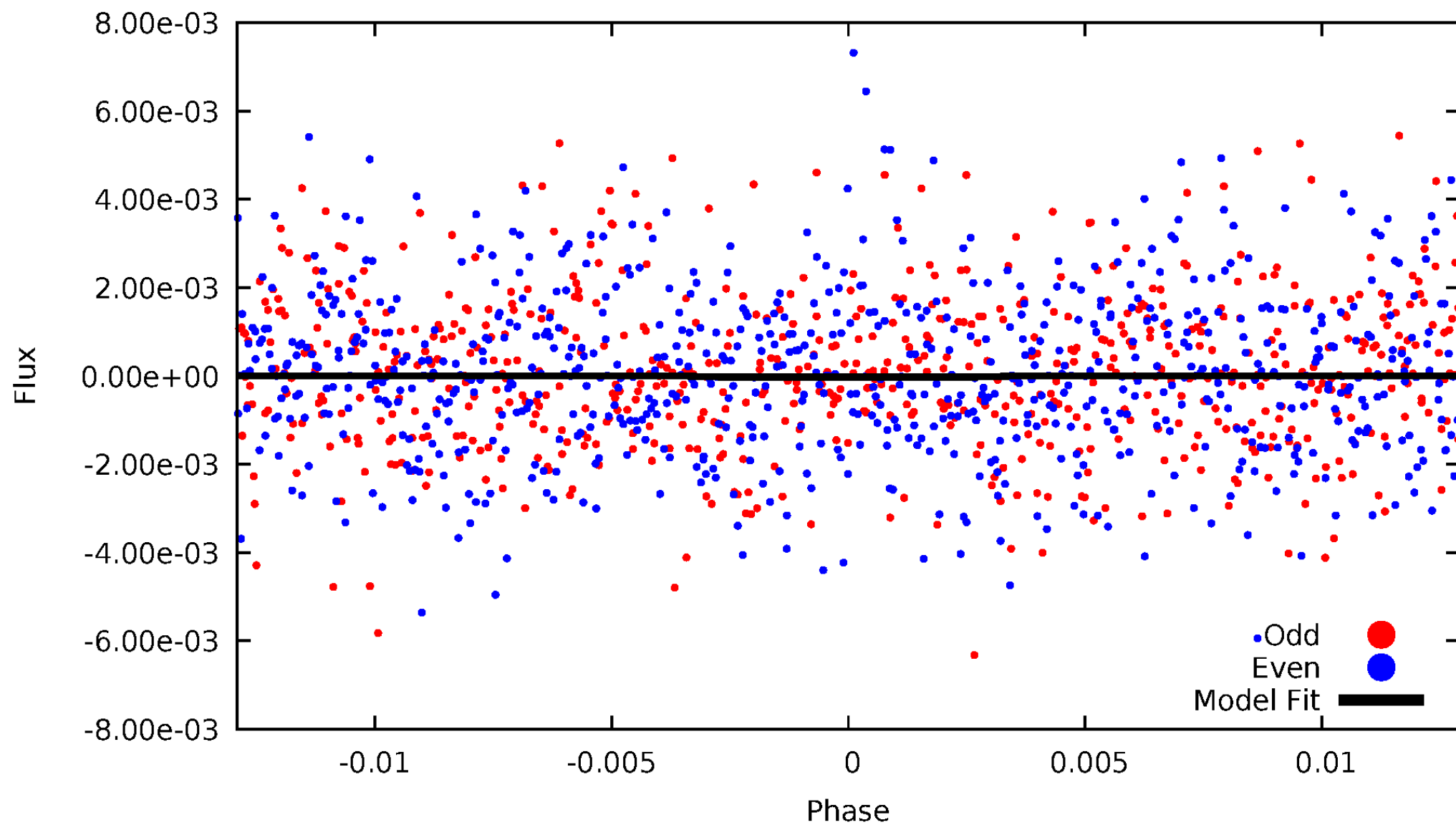
DV Odd/Even

TCE 007211759-10



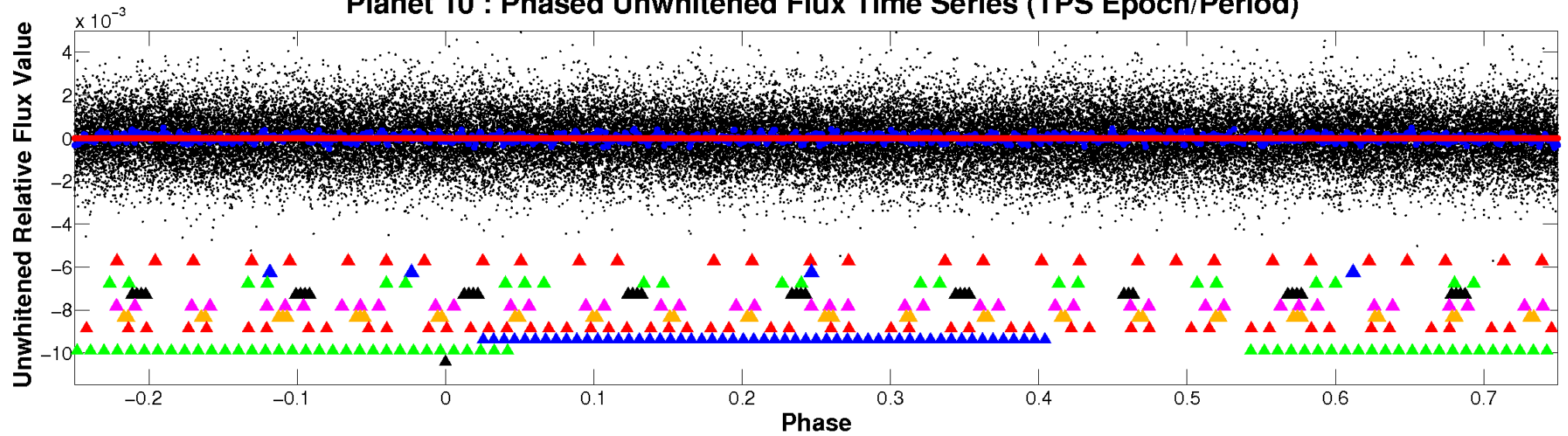
ALT Odd/Even

TCE 007211759-10

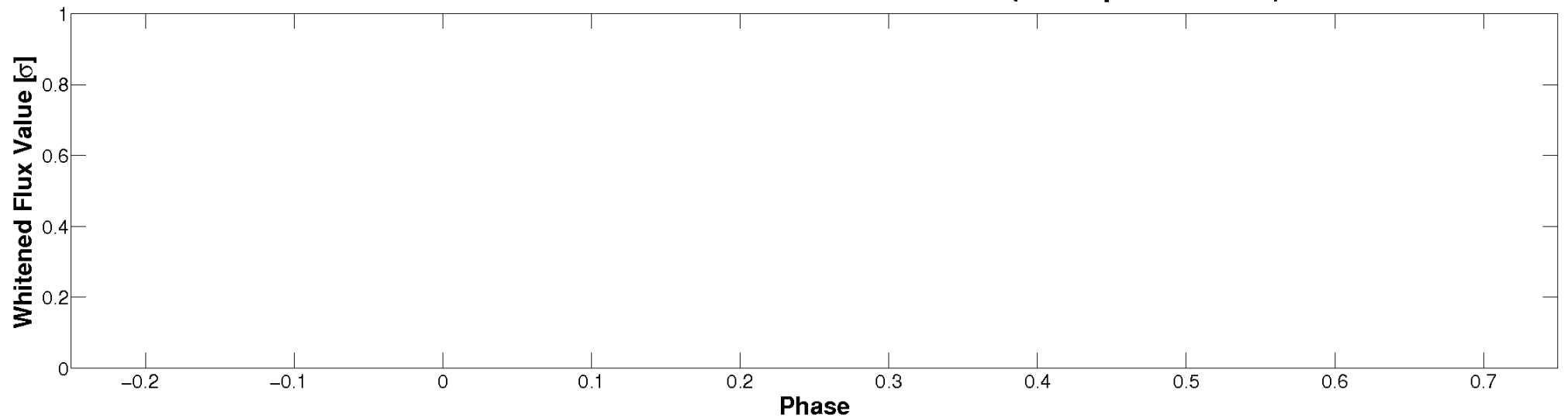


Non-Whitened Vs. Whitened Light Curve

Planet 10 : Phased Unwhitened Flux Time Series (TPS Epoch/Period)

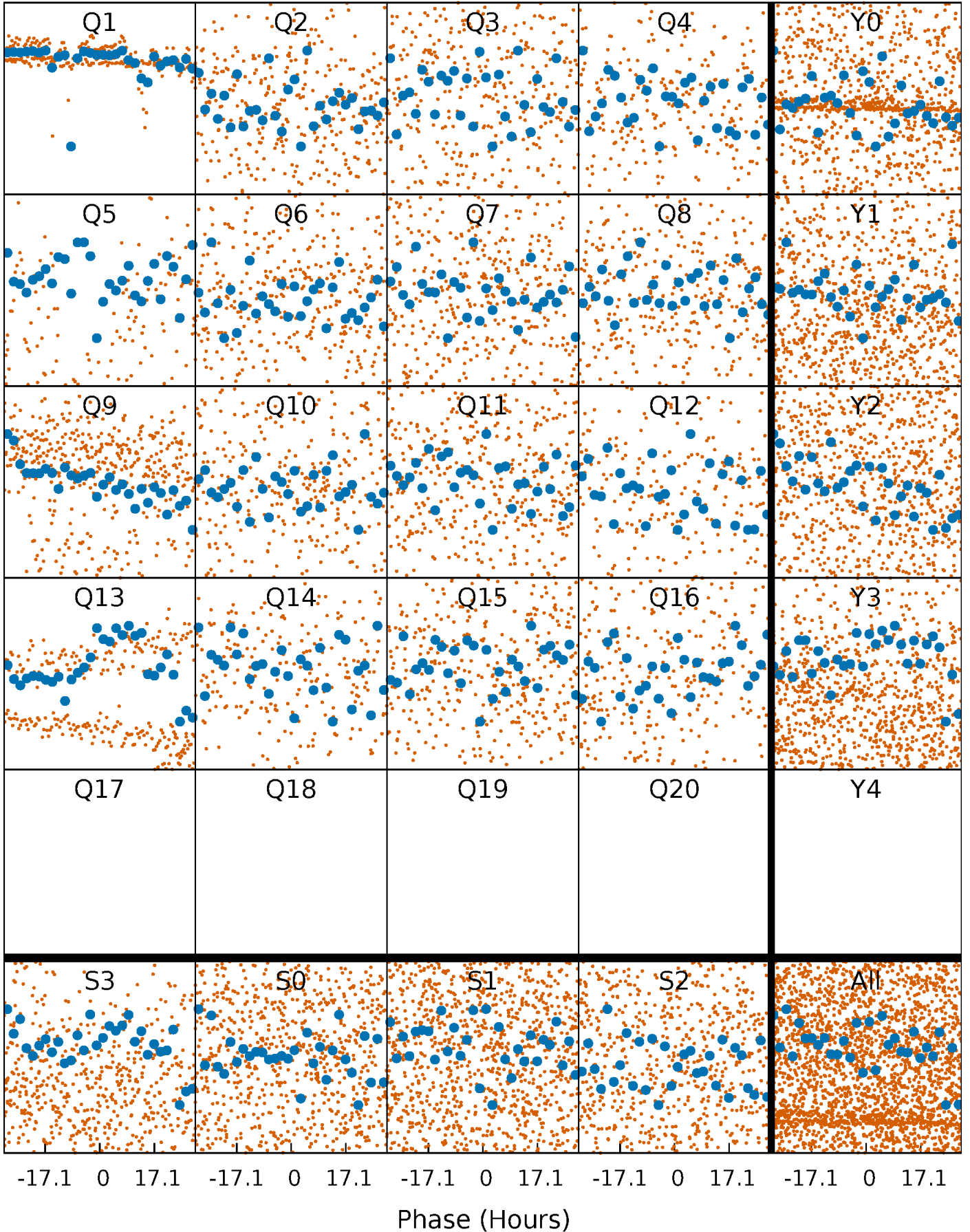


Planet 10 : Phased Whitened Flux Time Series (TPS Epoch/Period)



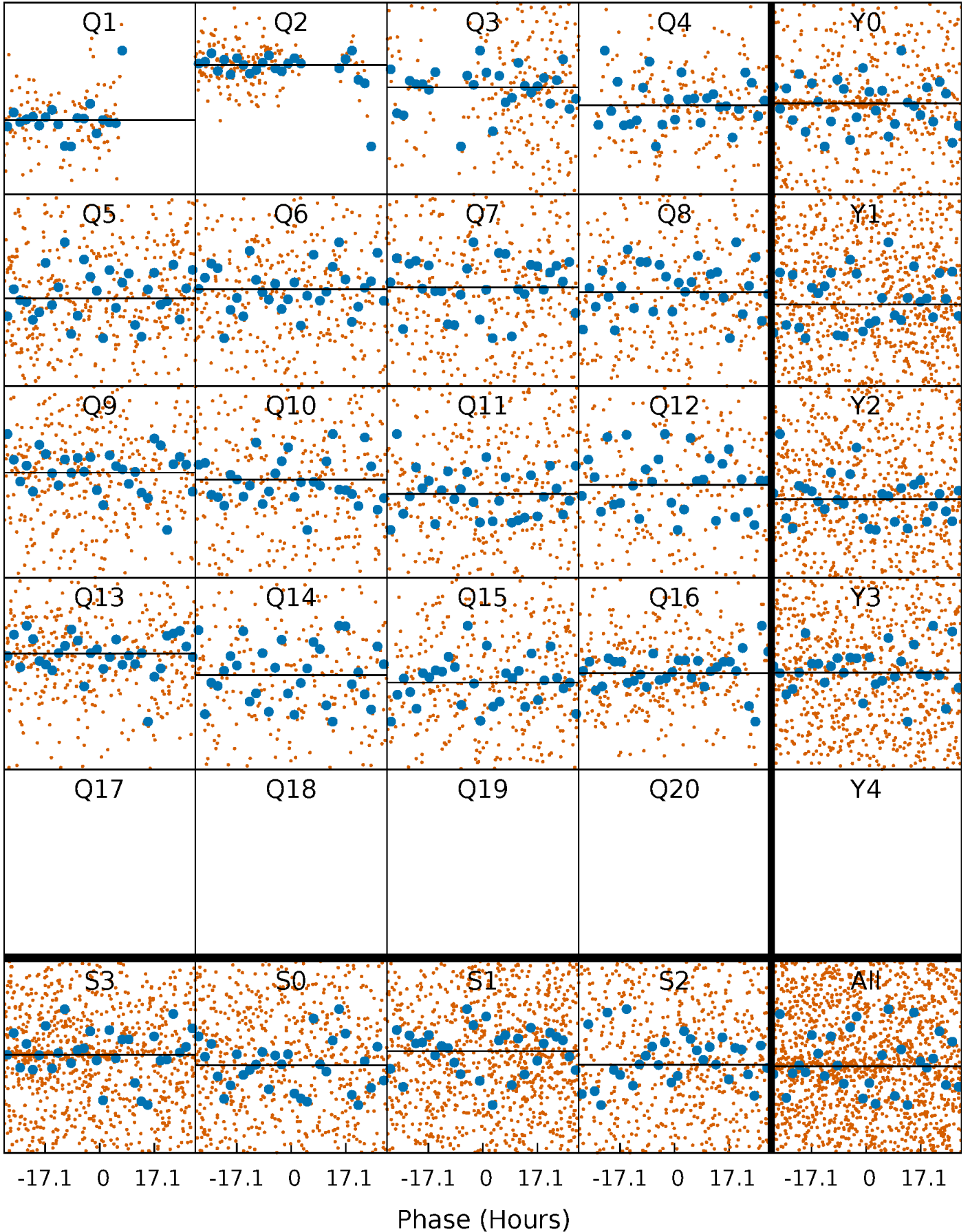
PDC Quarter-Phased Transit Curves

TCE 007211759-10 P= 26.321290 Days $T_0=135.945076$ (BKJD)



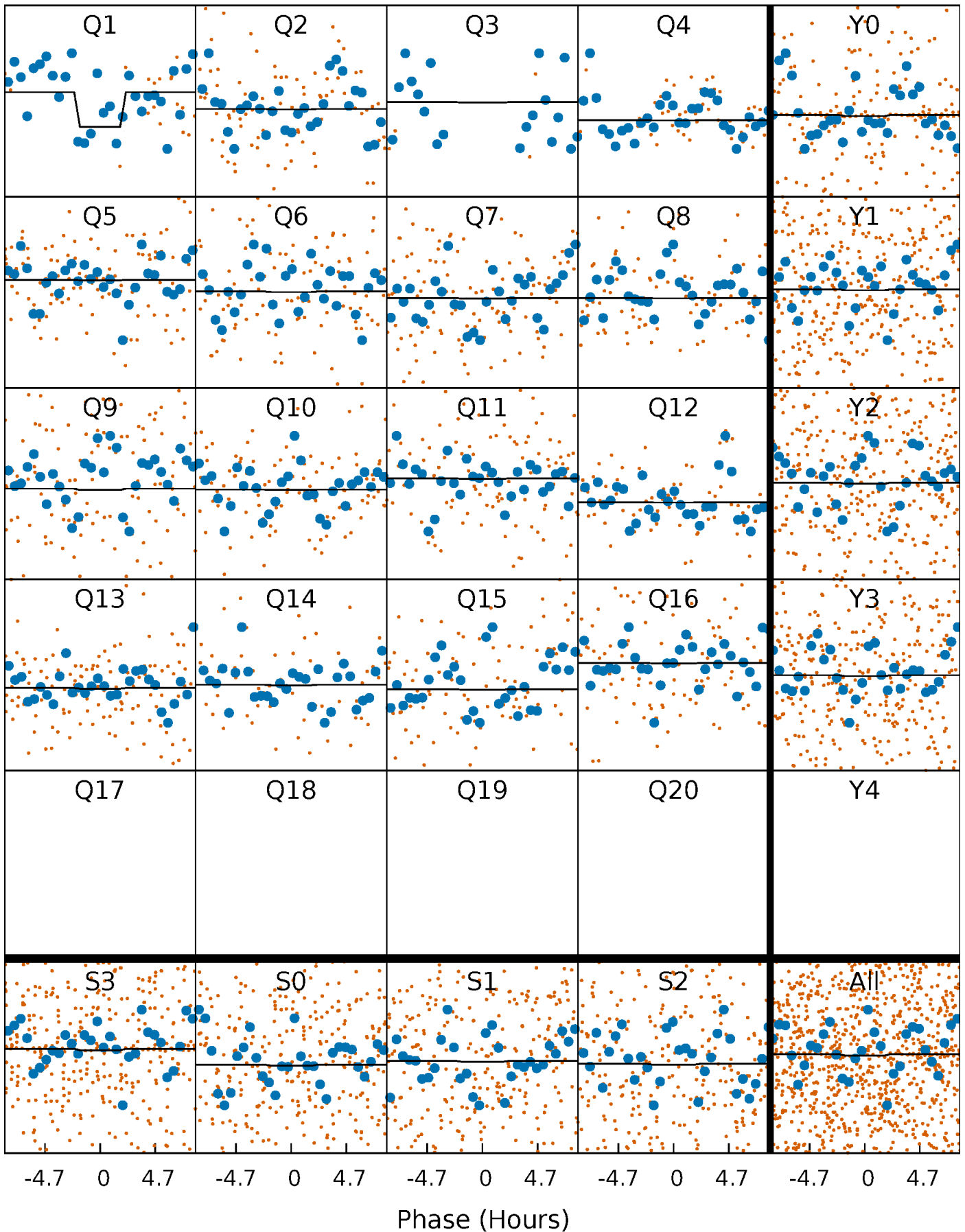
DV Quarter-Phased Transit Curves

TCE 007211759-10 P= 26.321290 Days $T_0=135.945076$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

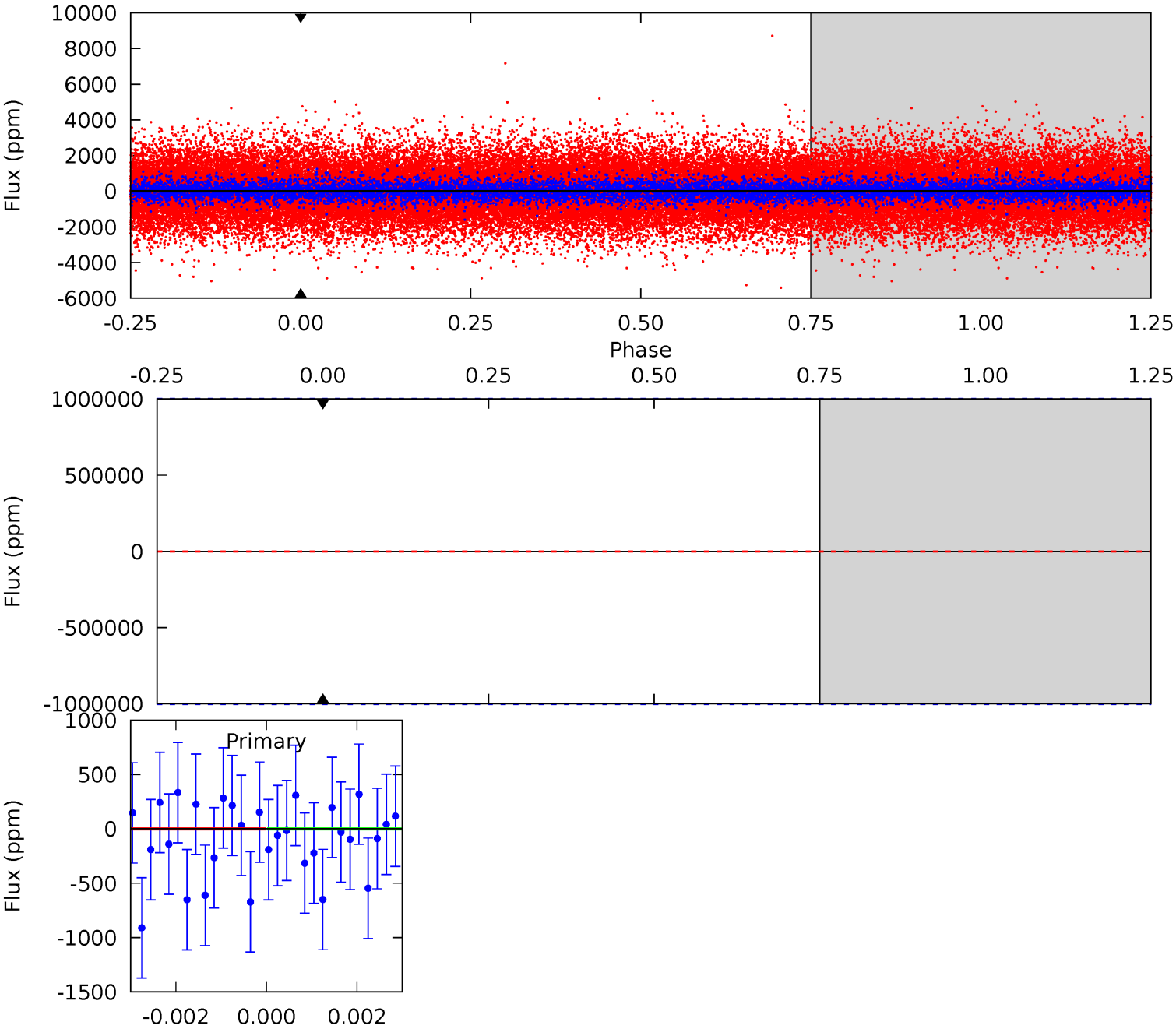
TCE 007211759-10 P= 26.321290 Days $T_0=135.508203$ (BKJD)



DV Model-Shift Uniqueness Test

007211759-10, P = 26.321290 Days, E = 109.623786 Days

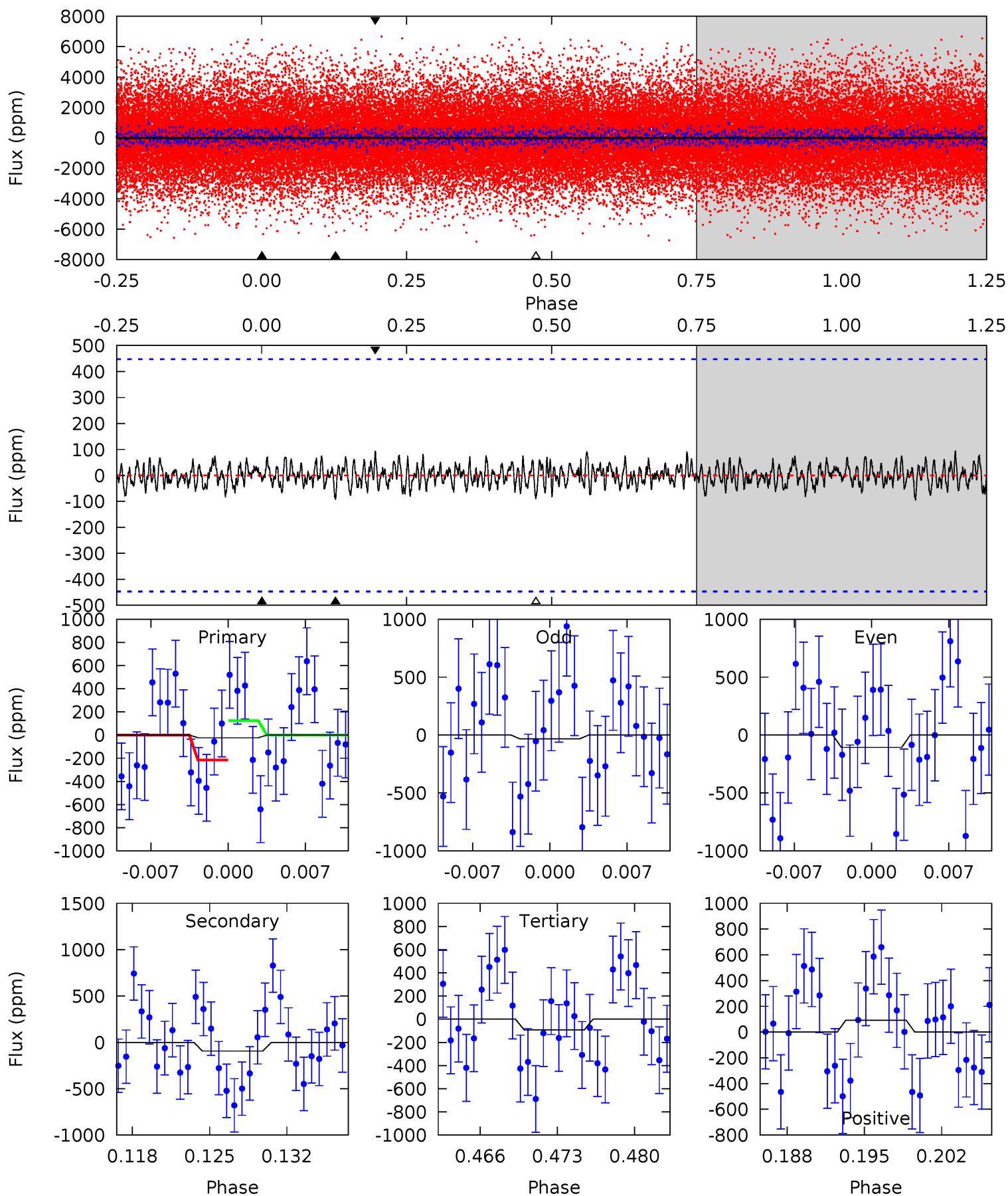
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

007211759-10, P = 26.321290 Days, E = 109.186913 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.27	1.07	1.04	1.05	5.10	2.70	0.38	-0.77	-0.78	0.02	0.01	0.42	0.20	0.50	0.52



Stellar Parameters For KIC 007211759

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8402^{+232}_{-365}	$3.748^{+0.399}_{-0.142}$	$-0.120^{+0.350}_{-0.400}$	$3.157^{+0.944}_{-1.416}$	$2.039^{+0.384}_{-0.469}$	$0.091^{+0.335}_{-0.045}$
	+3%/-4%	+11%/-4%	+292%/-333%	+30%/-45%	+19%/-23%	+367%/-49%
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 007211759-10 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$23.54^{+24.08}_{-16.48}$	1904^{+167}_{-206}	6208^{+52272}_{-57201}	91^{+10221}_{-7423}
Alt.	-94 ± 88	$22.79^{+26.19}_{-16.69}$	1910^{+166}_{-211}	3244^{+2268}_{-5580}	$3.374^{+57.547}_{-3.272}$

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

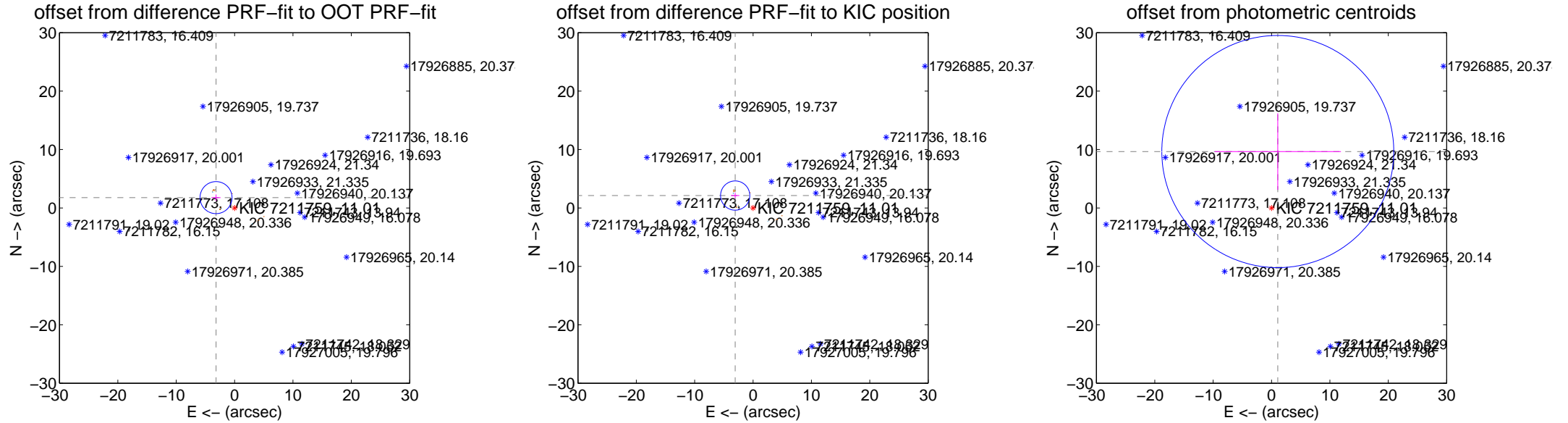
DV Centroid Data

Supplemental centroid analysis for 007211759-10. **Kepler magnitude: 11.01.** Transit SNR -1.00

There are 5 quarters with good PRF difference image offsets

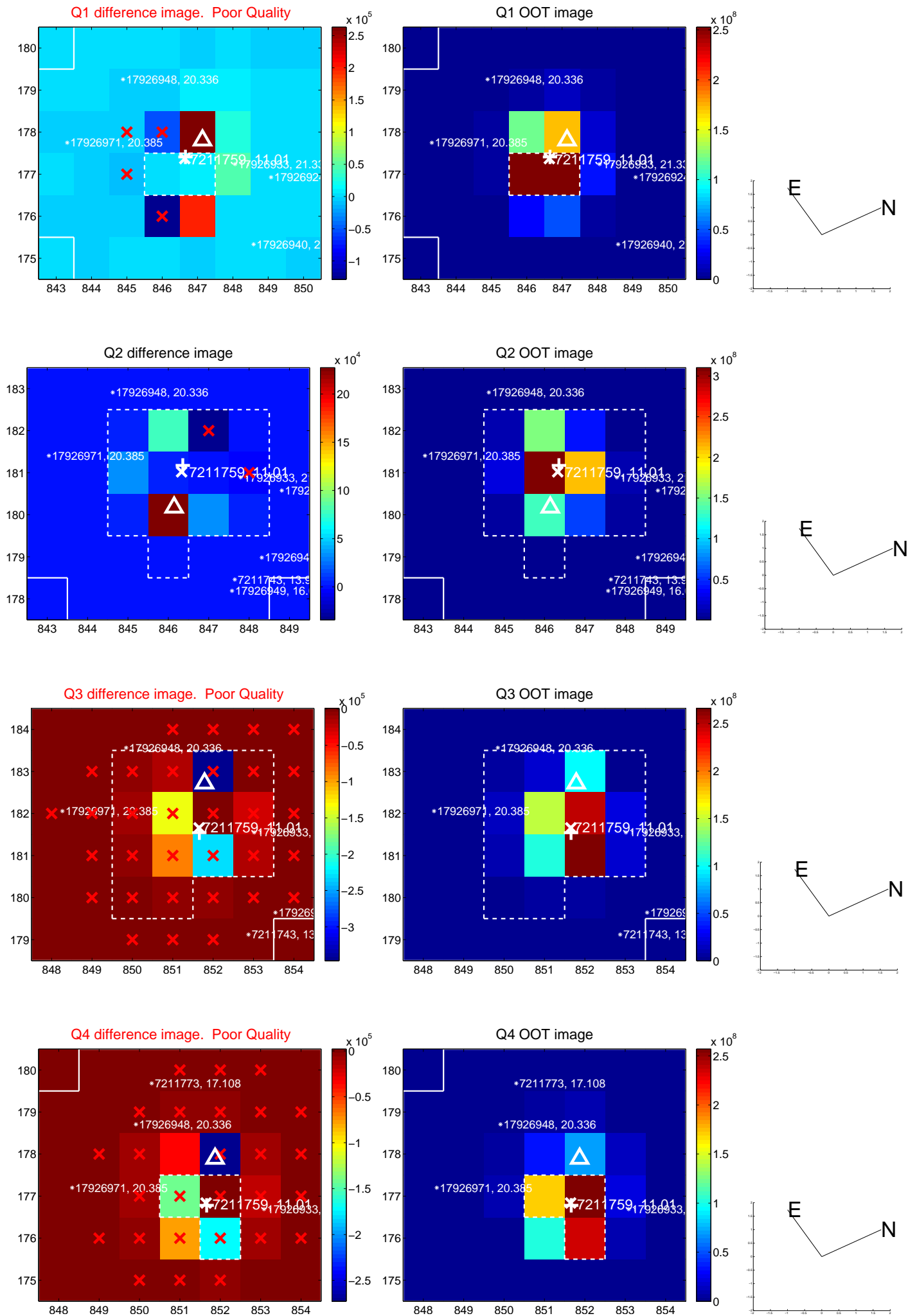
The direct PRF centroid is offset from the target star catalog position by about 0.27 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.637 ± 0.914	3.98	3.178 ± 0.776	1.768 ± 0.542
PRF-fit source offset from KIC position	3.724 ± 0.835	4.46	3.061 ± 0.721	2.121 ± 0.477
photometric centroid source offset	9.71 ± 6.62	1.47	-1.07 ± 10.81	9.65 ± 6.55

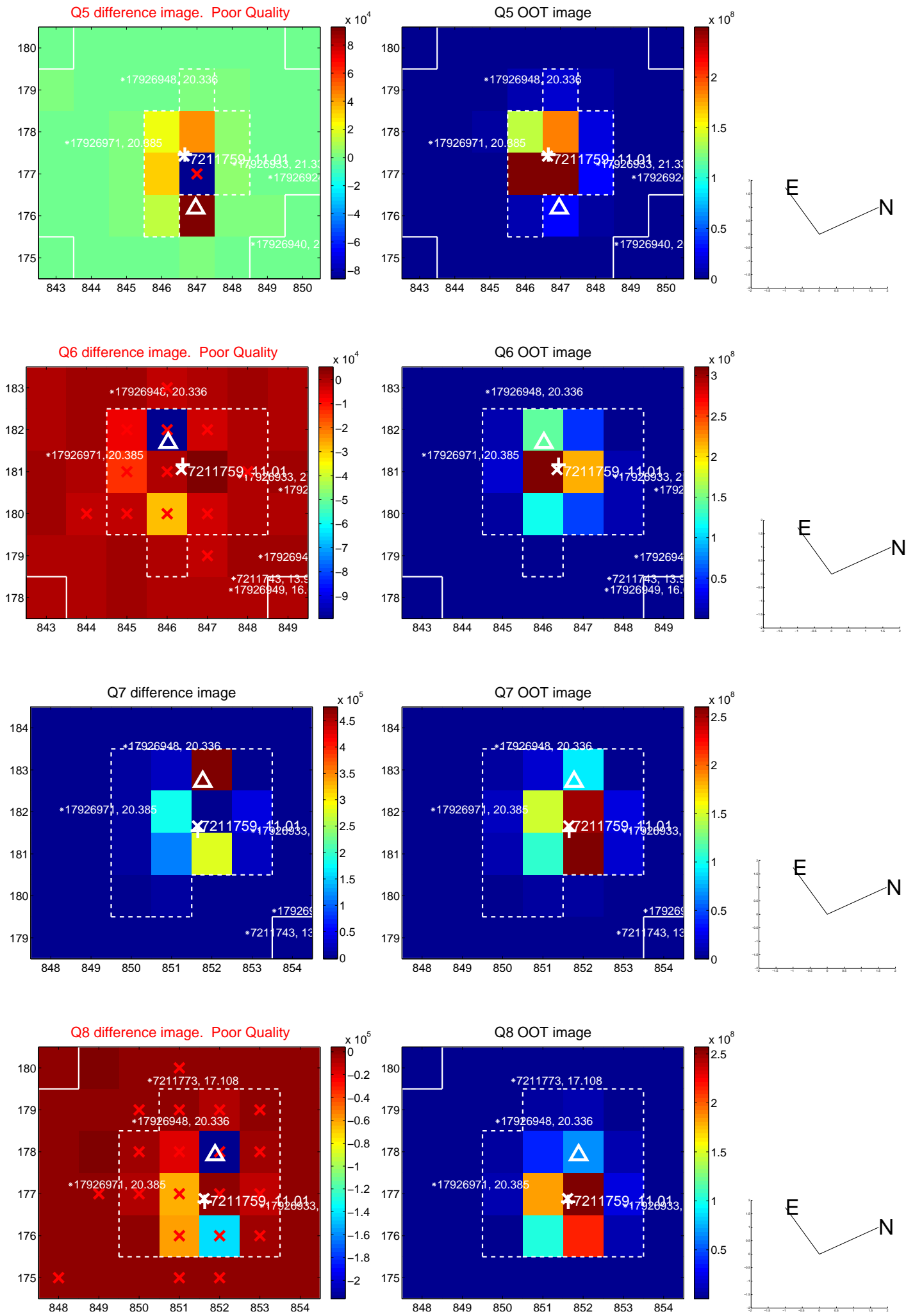


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

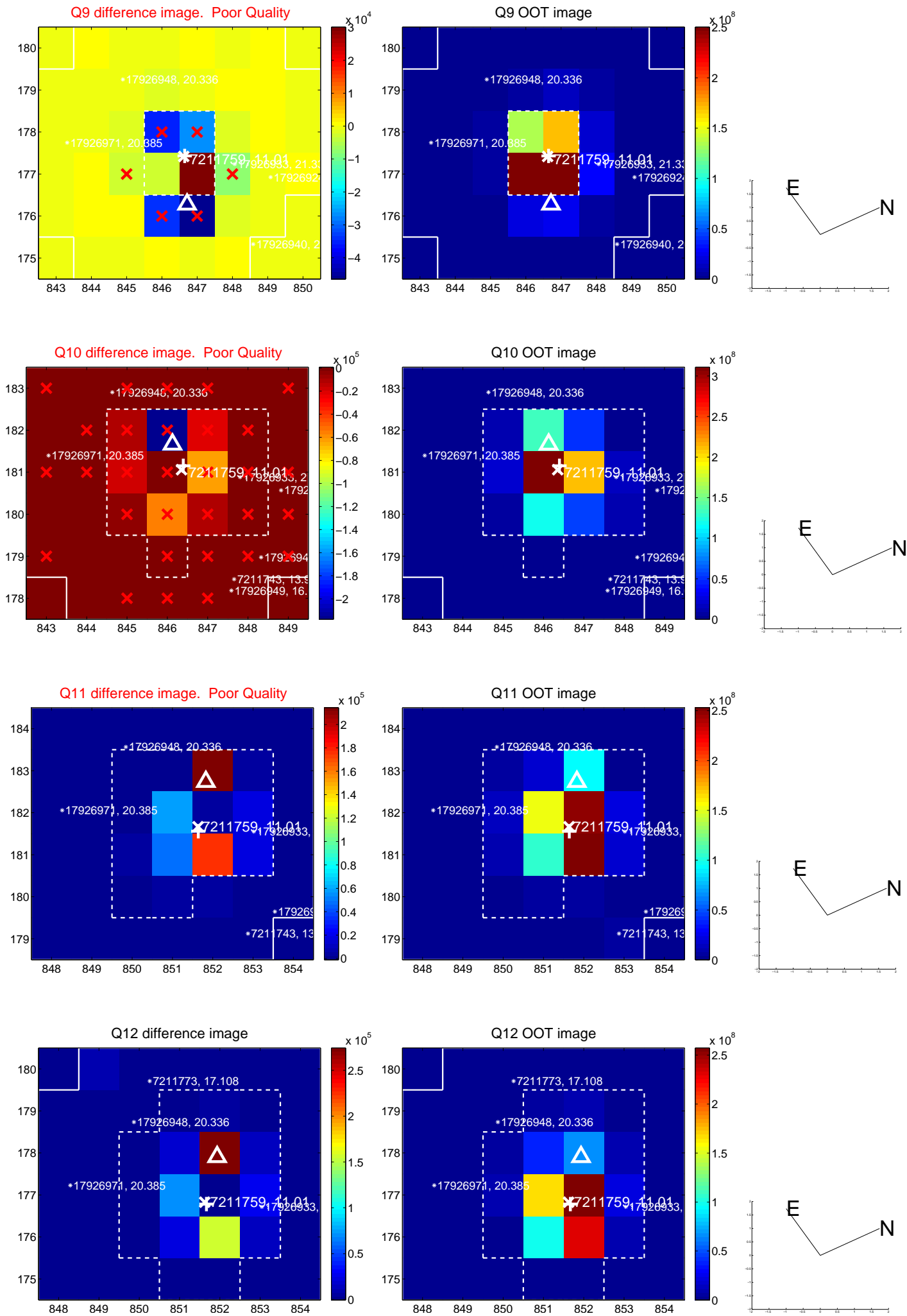
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



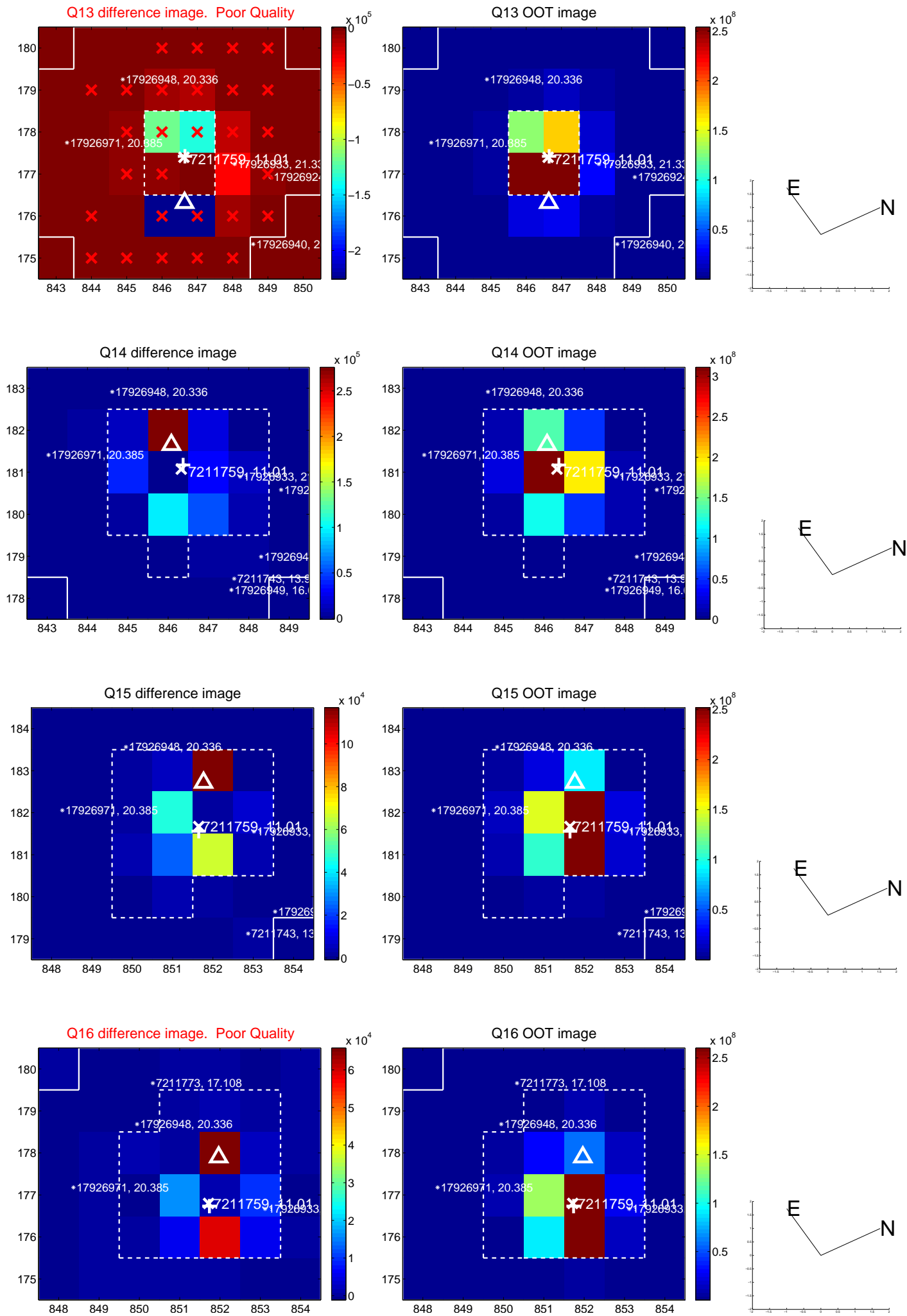
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



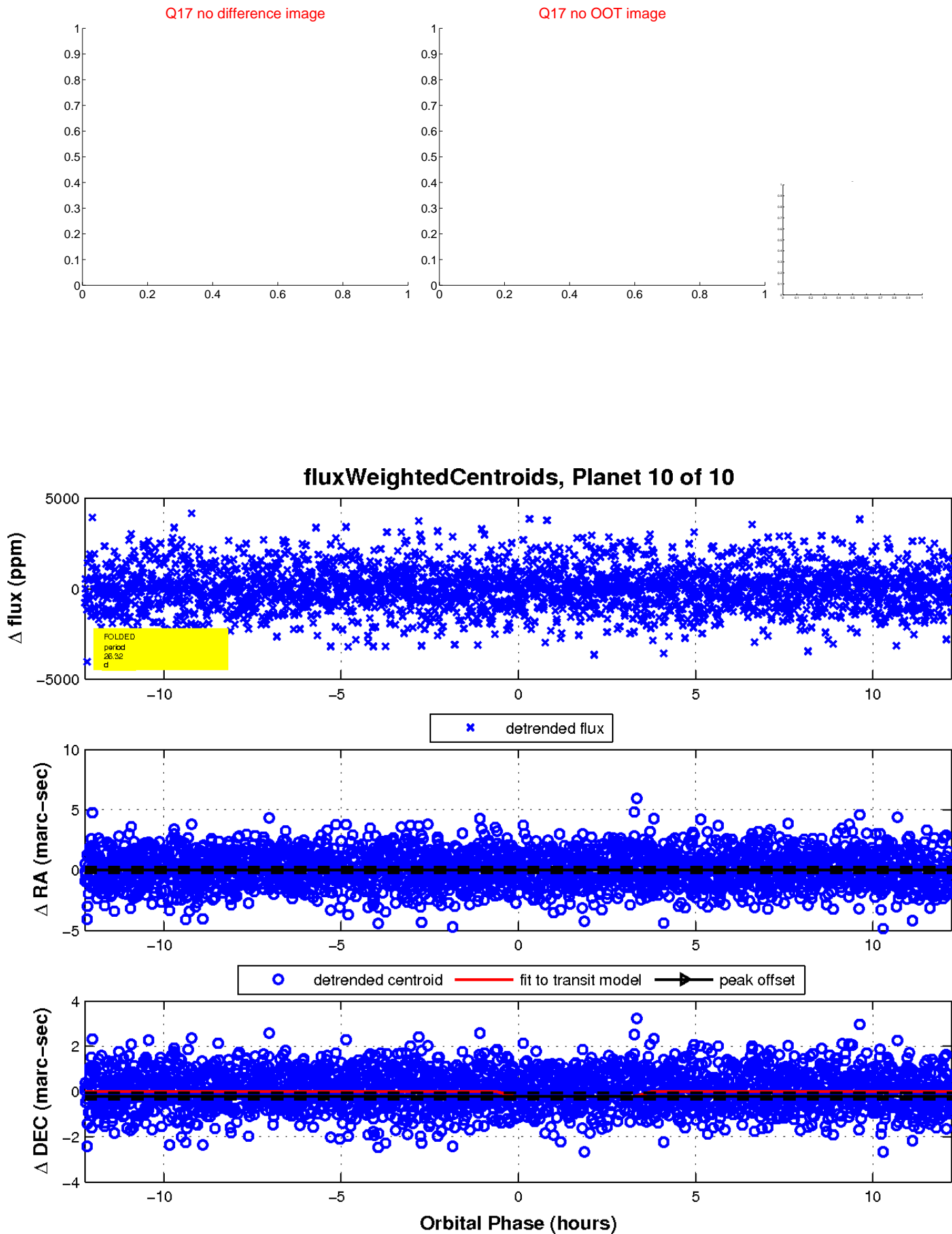
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

