

KIC 005876187

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})
005876187-01	OBS	No	1.713992	131.912139	6.2	11.737	10.7	2.3	1.84	6846	0.46	6617.64
005876187-02	OBS	No	57.276541	148.277502	248.9	8.067	12.6	8.4	1.84	6846	3.12	61.48
005876187-03	OBS	No	37.440682	154.129756	259.4	10.148	12.7	10.9	1.84	6846	3.26	108.37
005876187-04	OBS	No	15.895752	131.868485	139.1	3.611	11.7	6.9	1.84	6846	2.42	339.63
005876187-05	OBS	No	61.156781	167.602539	669.8	7.383	13.3	10.1	1.84	6846	9.01	56.34
005876187-06	OBS	No	74.472334	147.685145	406.0	4.447	11.3	8.0	1.84	6846	3.76	43.32
005876187-09	OBS	No	75.289242	162.348641	178.8	5.000	9.0	-1.0	1.84	6846	2.48	42.70

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005876187-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005876187-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—HALO_GHOST
005876187-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005876187-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005876187-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005876187-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005876187-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

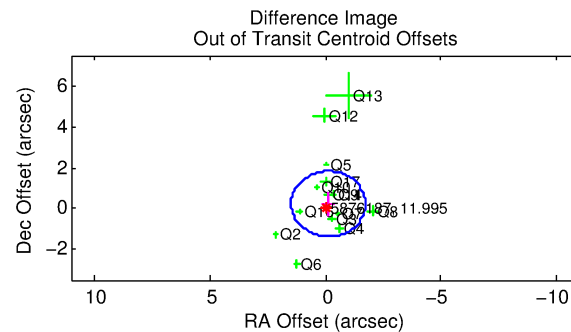
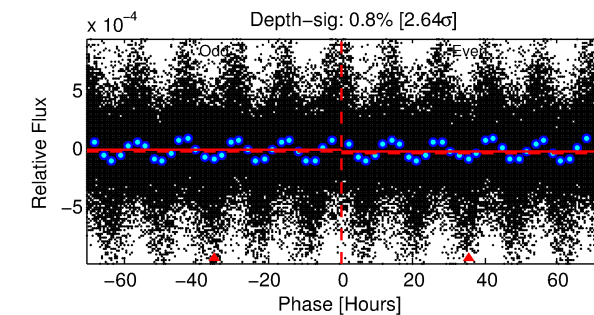
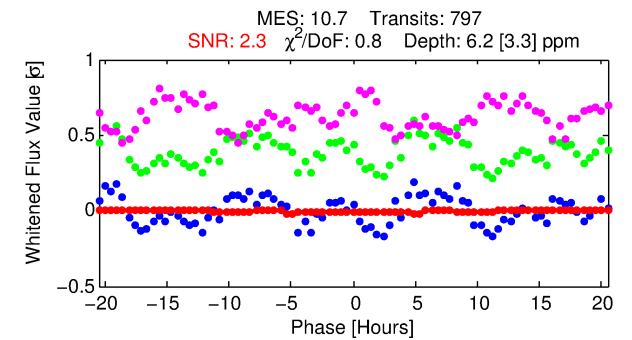
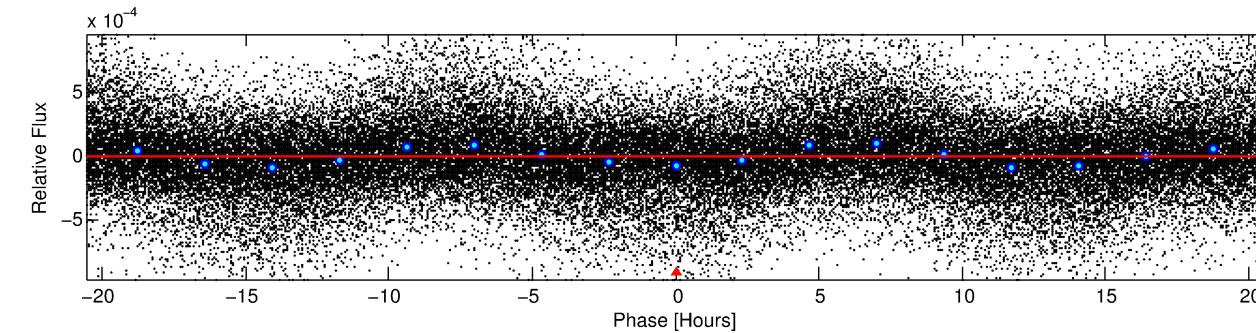
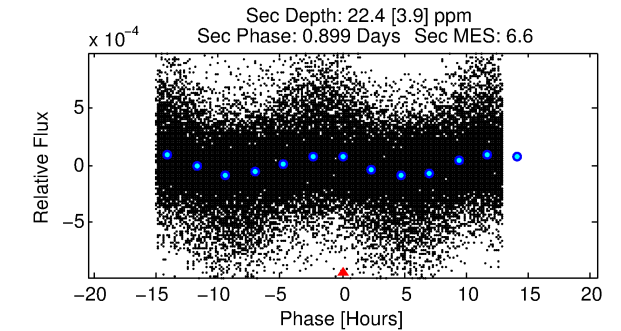
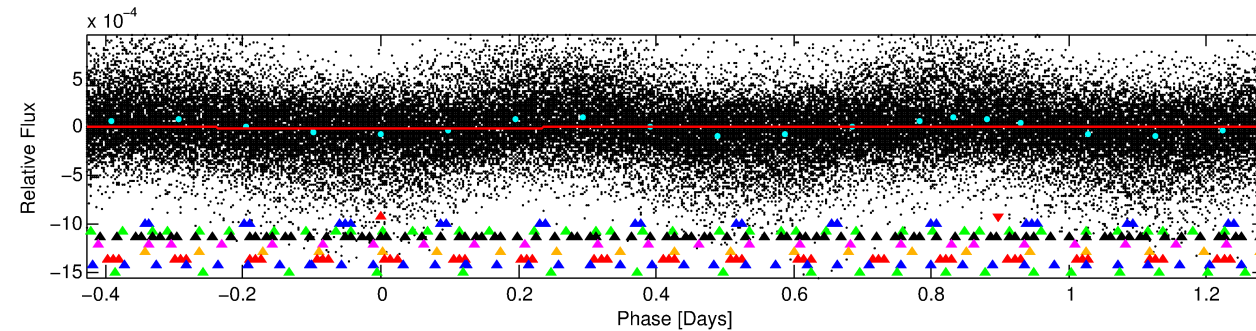
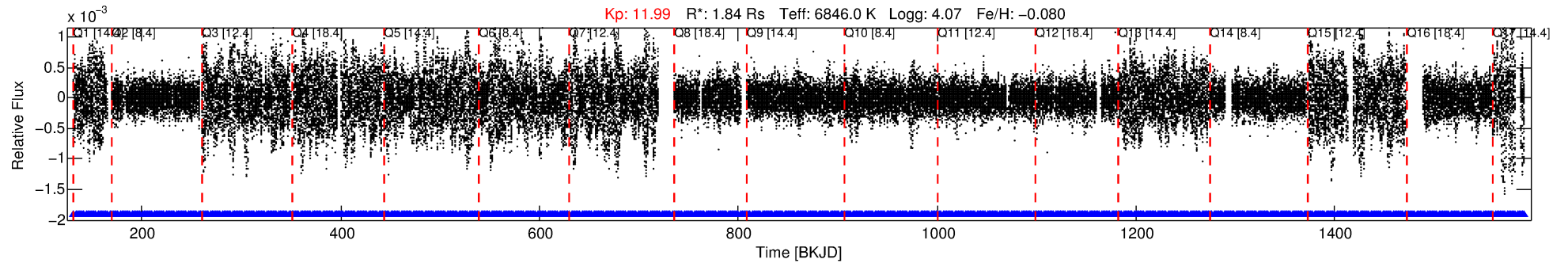
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005876187-01

No Significant Match Found

DV One-Page Summary

KIC: 5876187 Candidate: 1 of 9 Period: 1.714 d



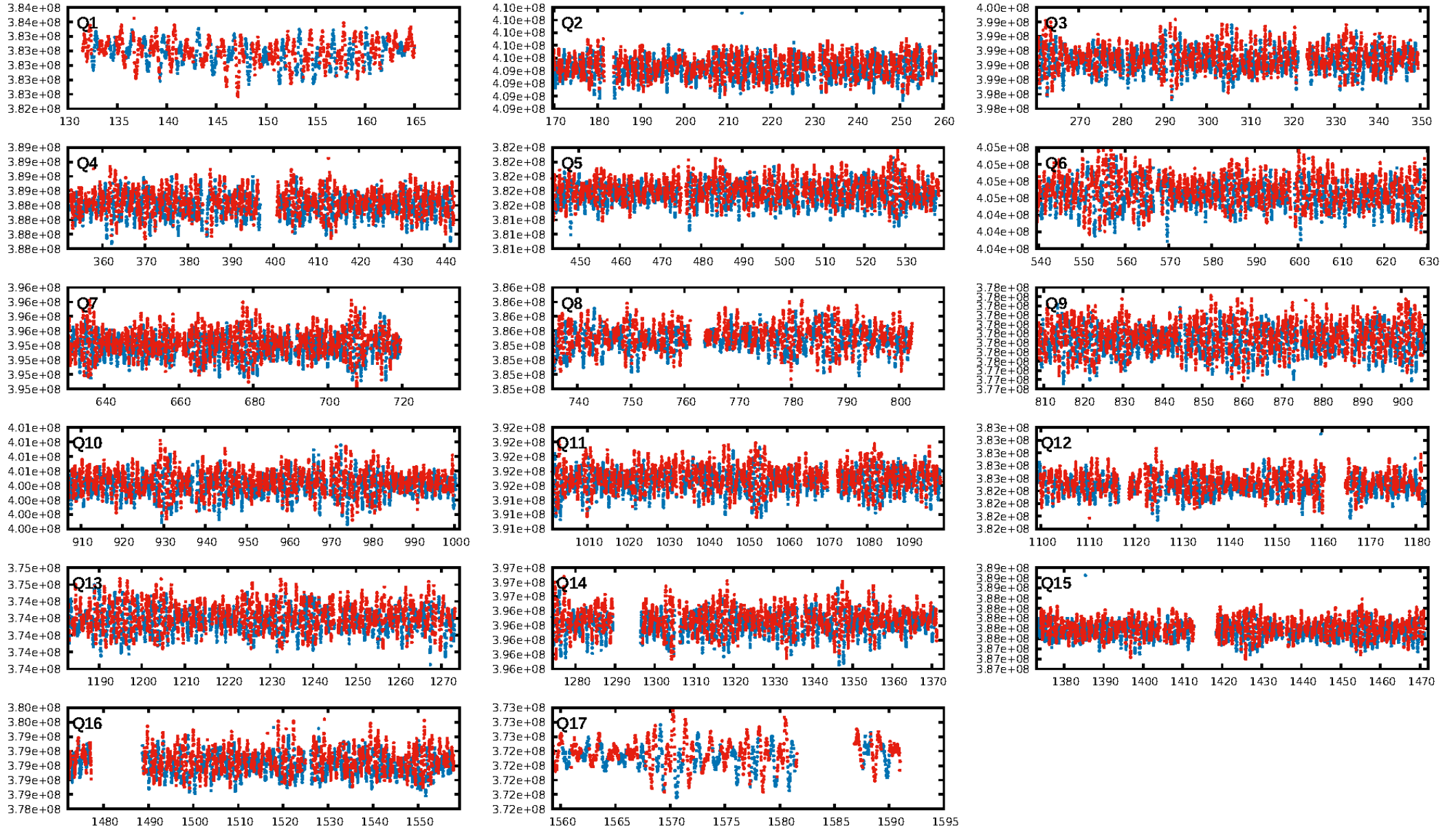
DV Fit Results:

Period = 1.71399 [0.00008] d
Epoch = 131.9121 [0.0160] BKJD
Rp/R* = 0.0023 [0.0061]
a/R* = 1.28 [7.35]
b = 0.17 [83.87]
Seff = 6617.64 [1679.27]
Teq = 2300 [146] K
Rp = 0.46 [1.22] Re
a = 0.0317 [0.0051] AU
Ag = 57.54 [302.84] [0.19σ]
Teffp = 9793 [12872] K [0.58σ]

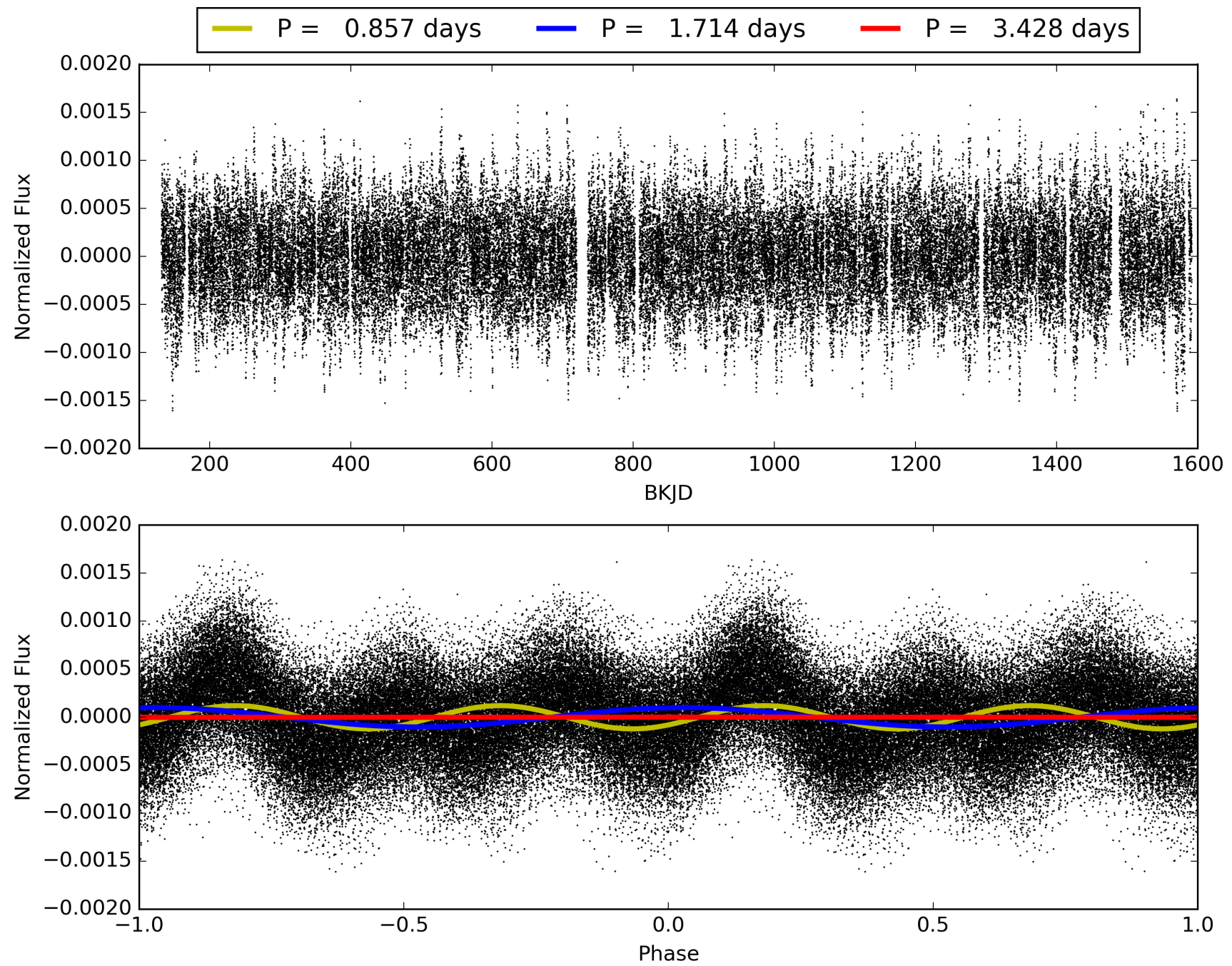
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [27.72σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [761/761]
GhostDiagnostic-chr: 2.288
Centroid-sig: 0.0%
Centroid-so: 2.765 arcsec [2.28σ]
OotOffset-rm: 0.255 arcsec [0.48σ]
KicOffset-rm: 0.271 arcsec [0.63σ]
OotOffset-st: 4/3/4/4 [15]
KicOffset-st: 4/3/4/4 [15]
DiffImageQuality-fgm: 0.20 [3/15]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 005876187-01, PDC Light Curves

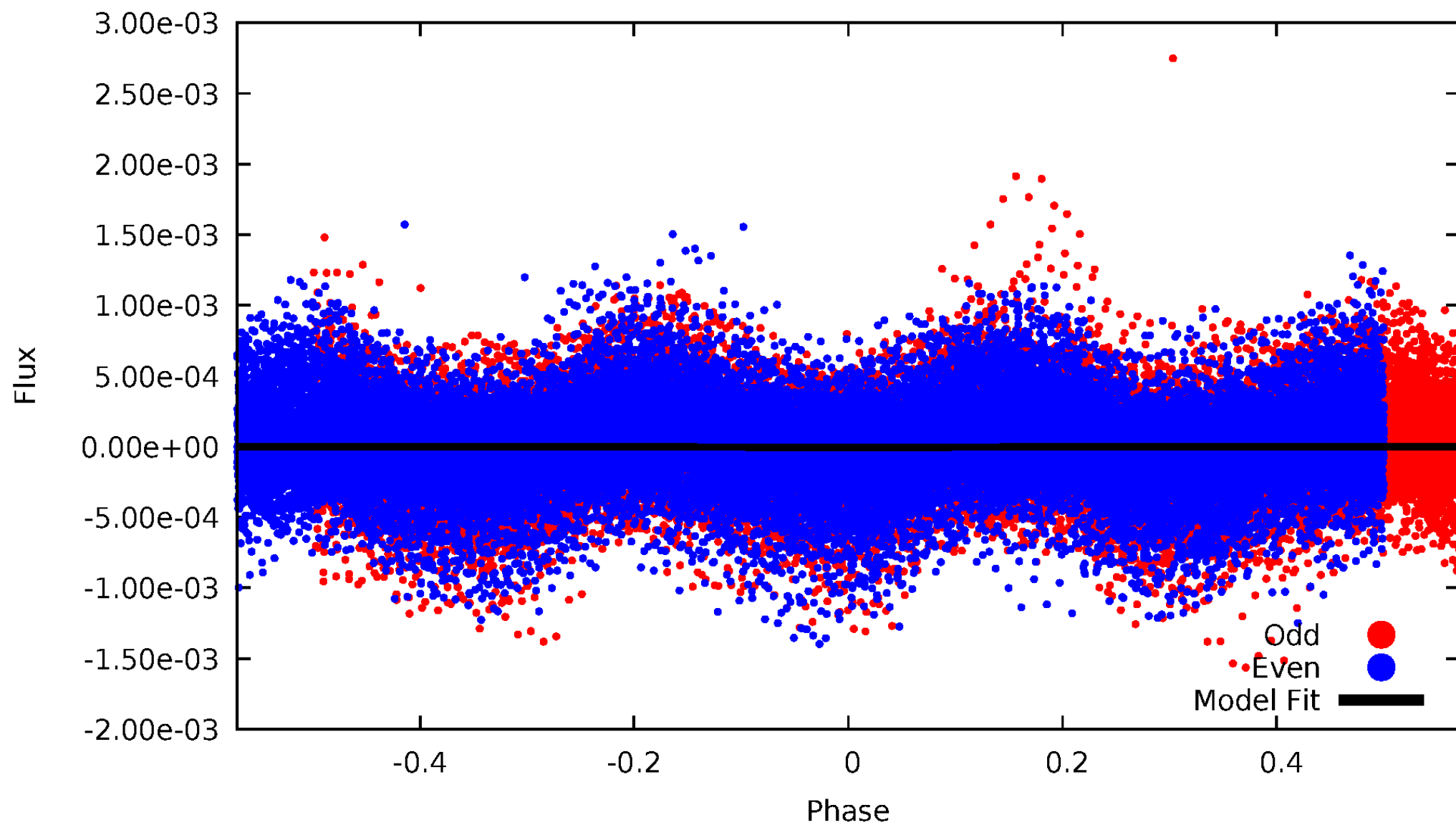


TCE 005876187-01



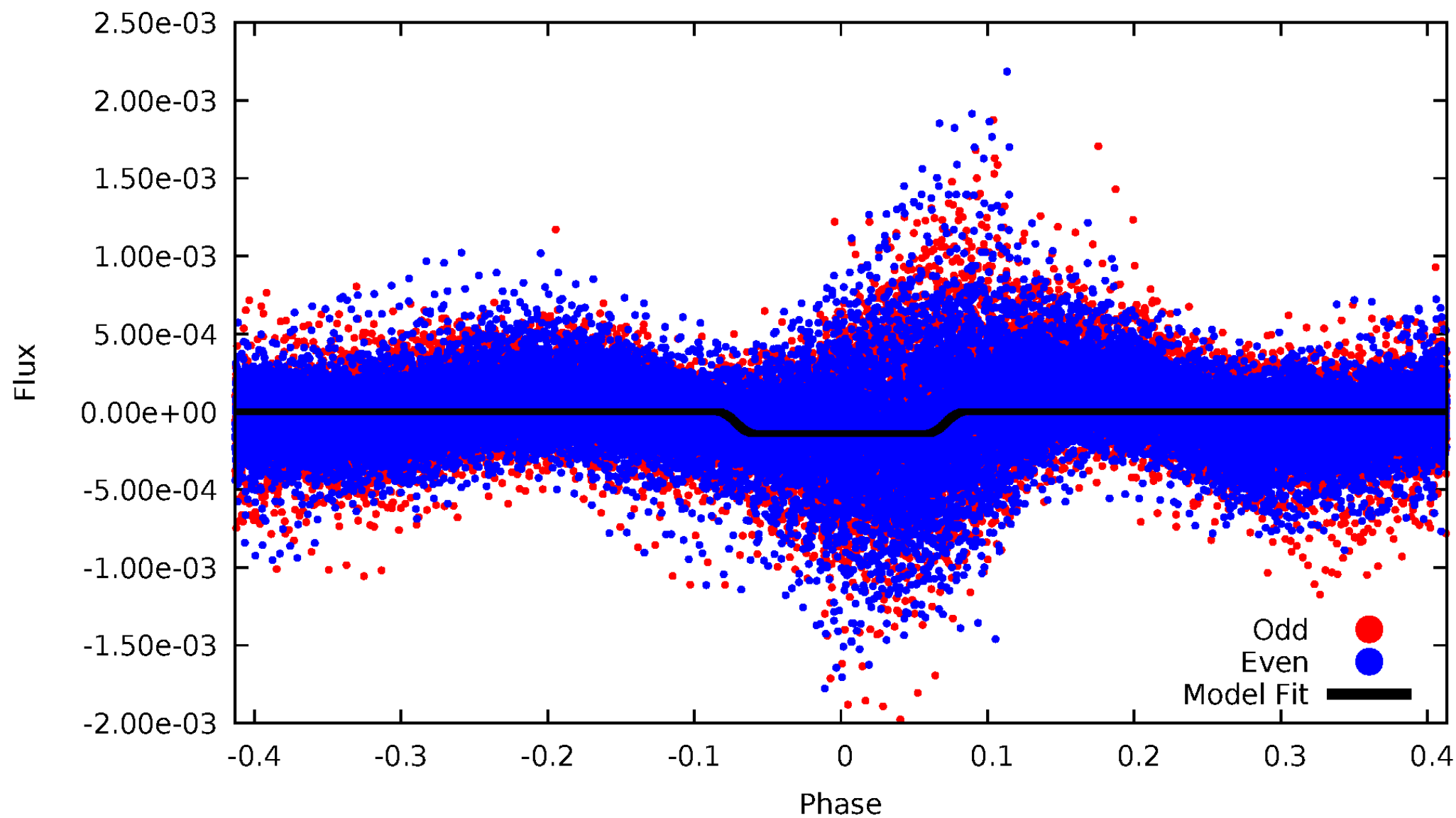
DV Odd/Even

TCE 005876187-01

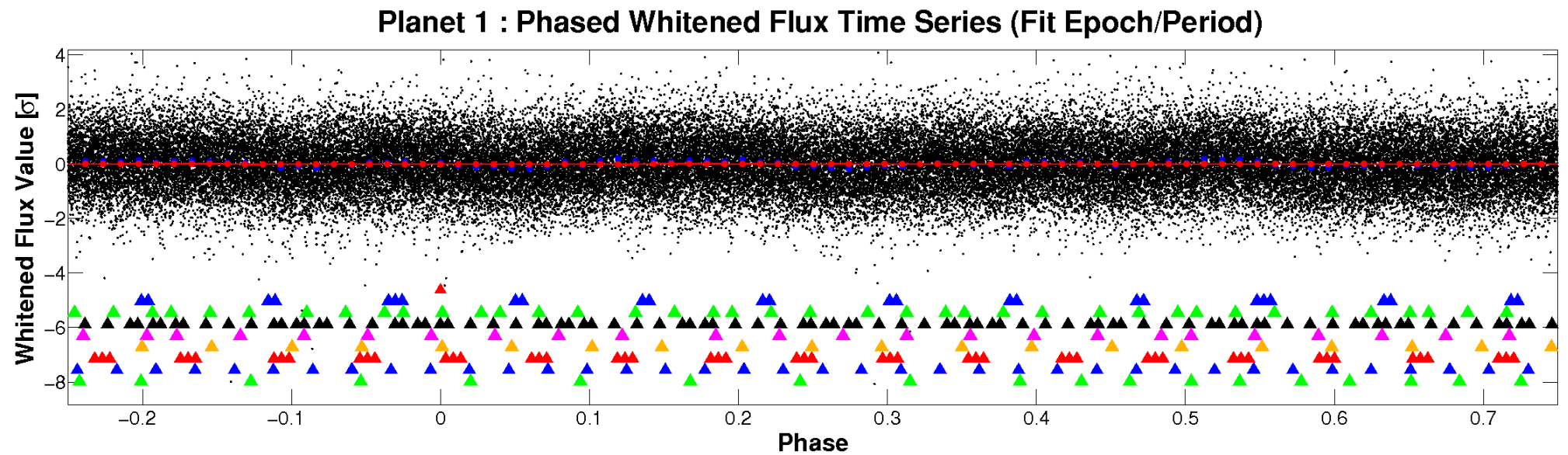
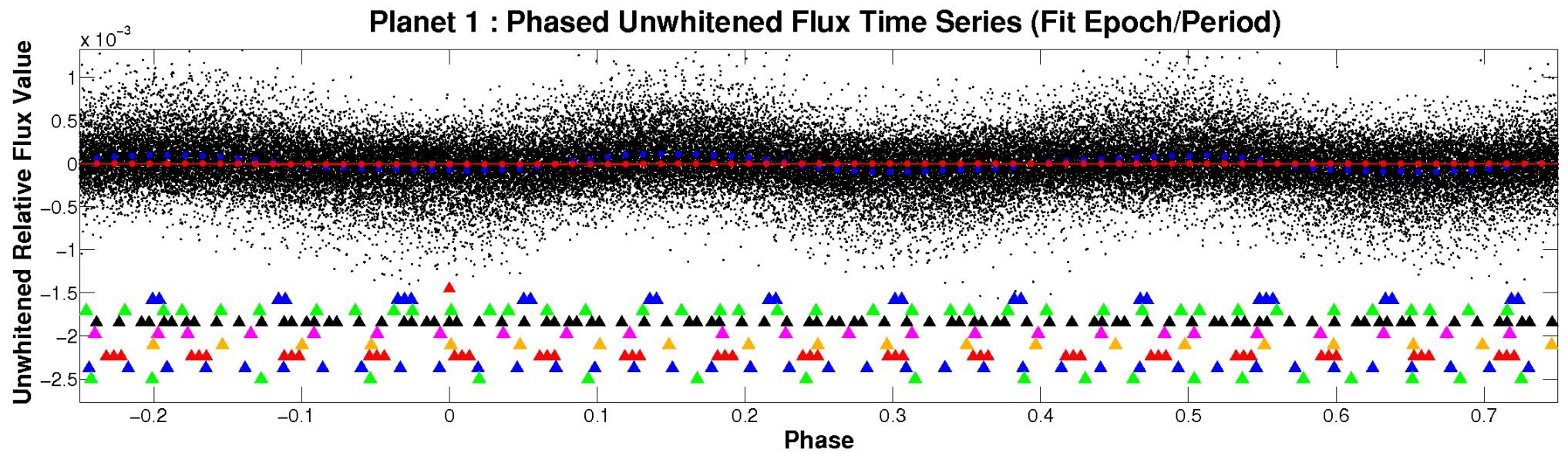


ALT Odd/Even

TCE 005876187-01

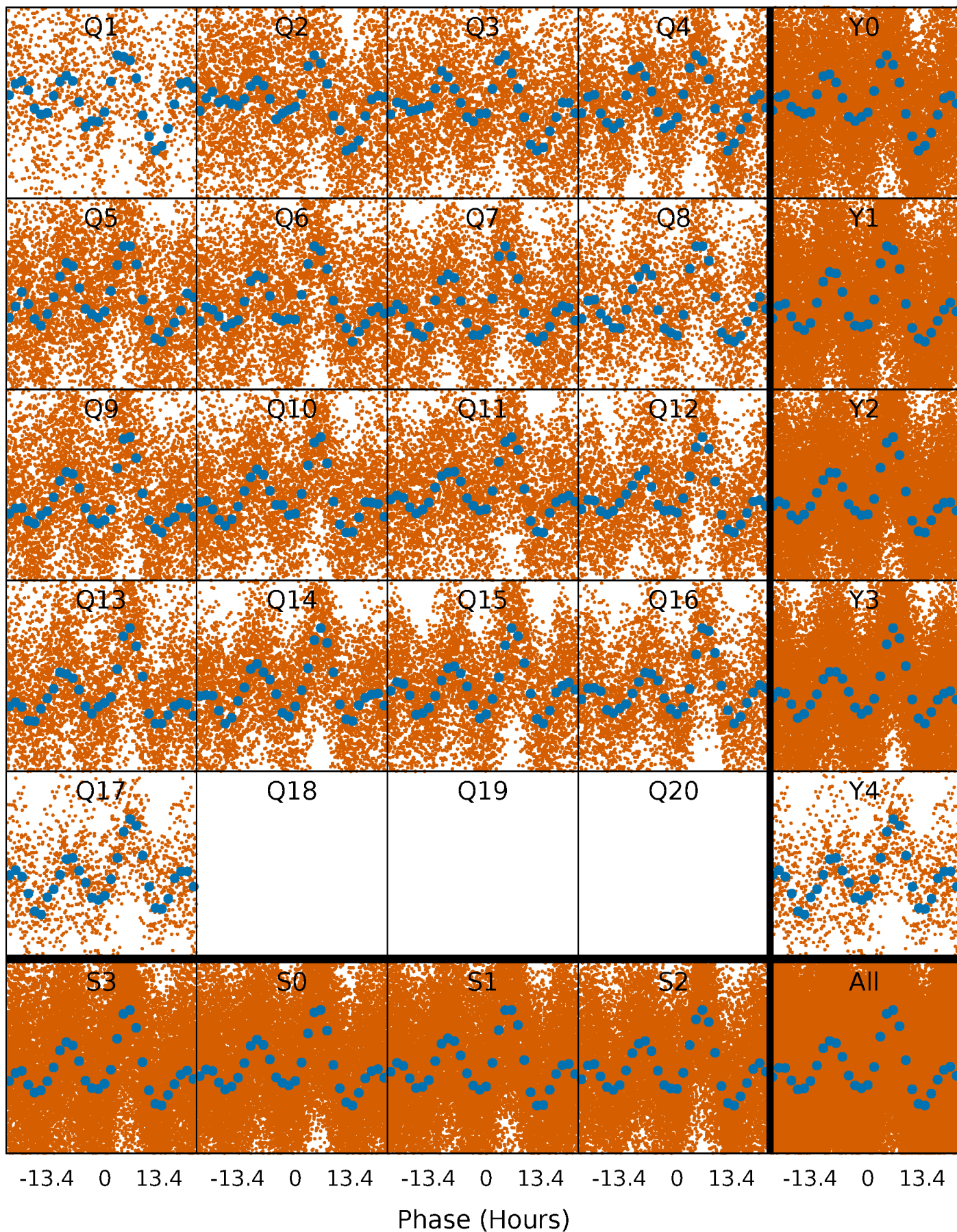


Non-Whitened Vs. Whitened Light Curve



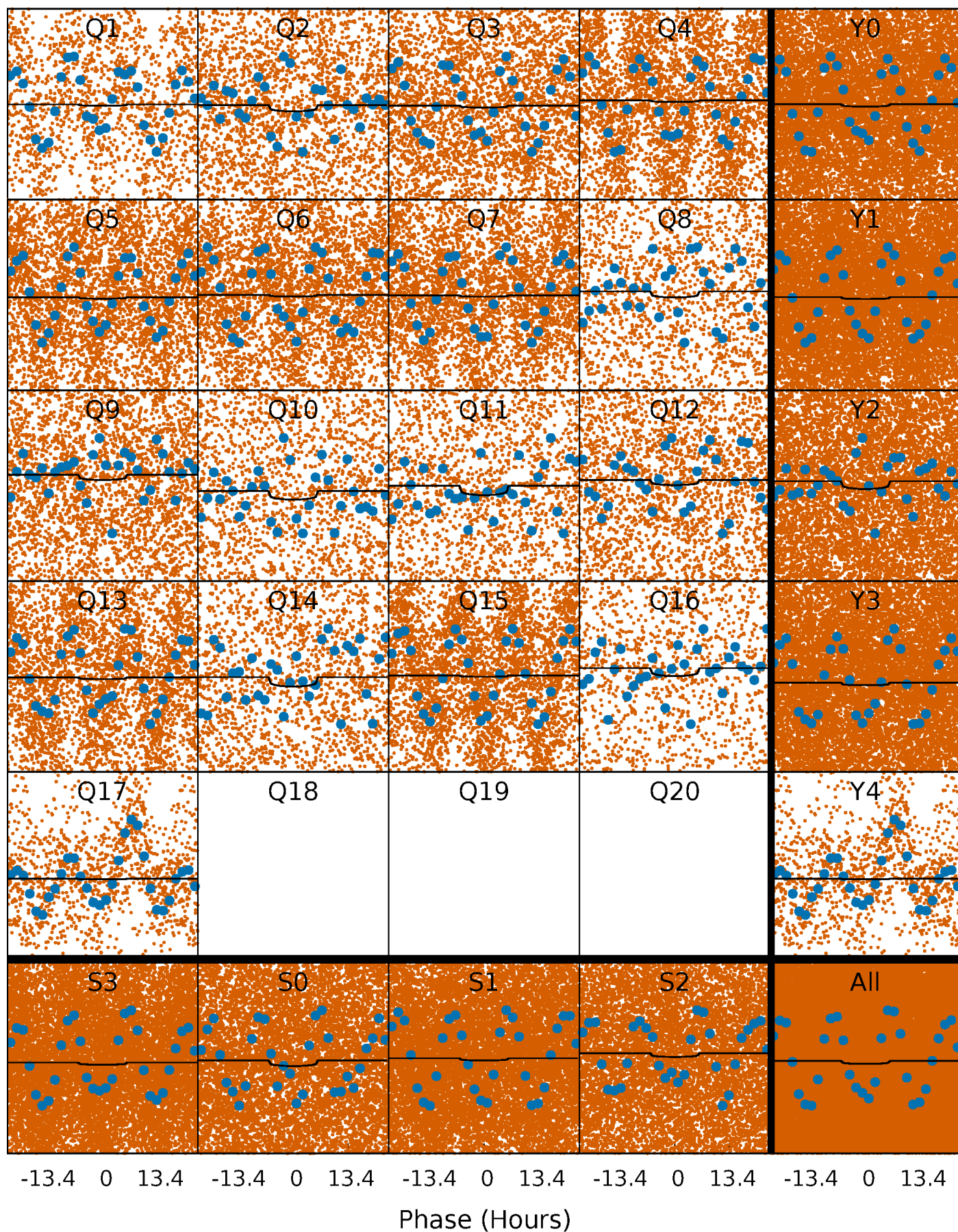
PDC Quarter-Phased Transit Curves

TCE 005876187-01 P= 1.713992 Days $T_0=131.912139$ (BKJD)



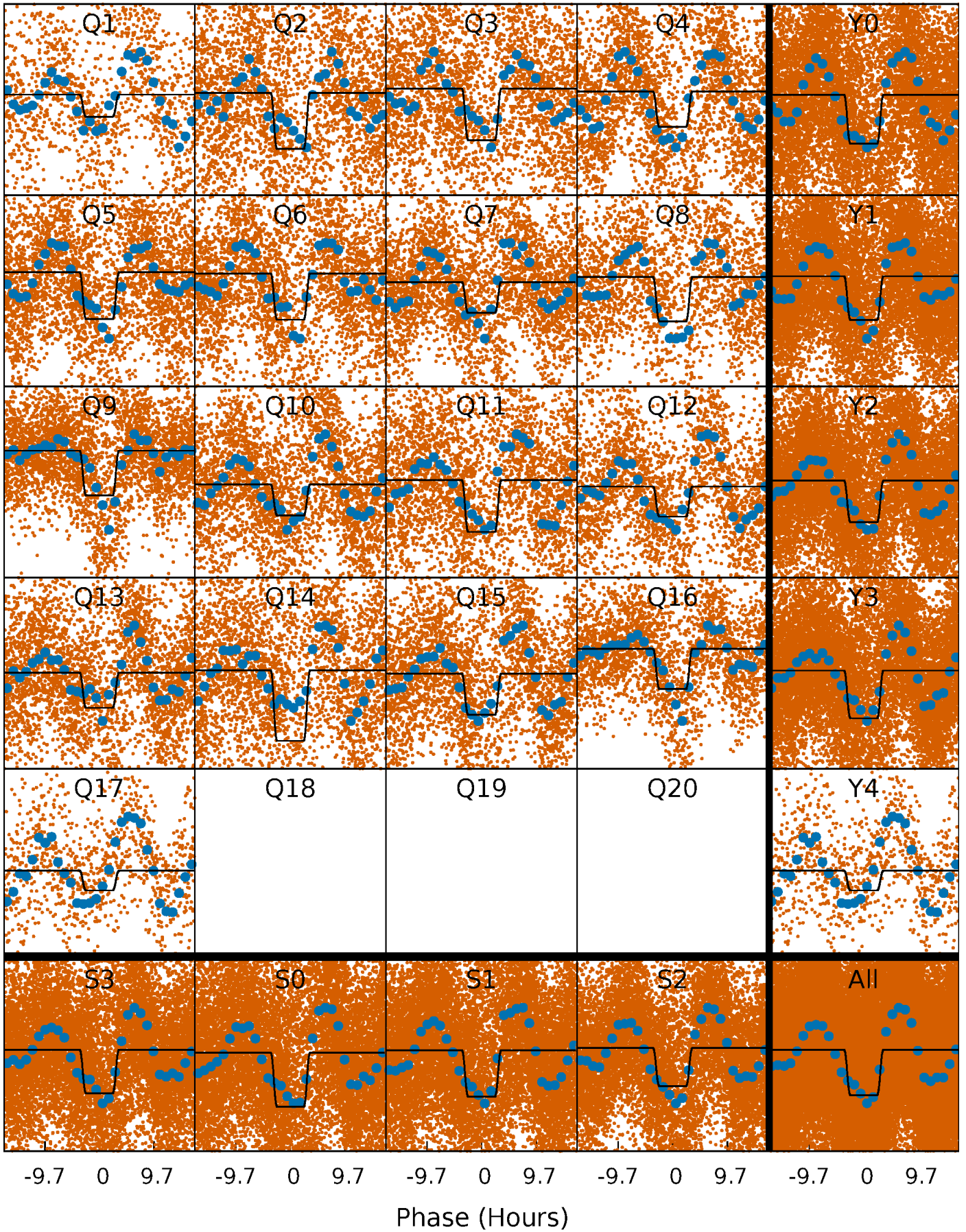
DV Quarter-Phased Transit Curves

TCE 005876187-01 P= 1.713992 Days $T_0=131.912139$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

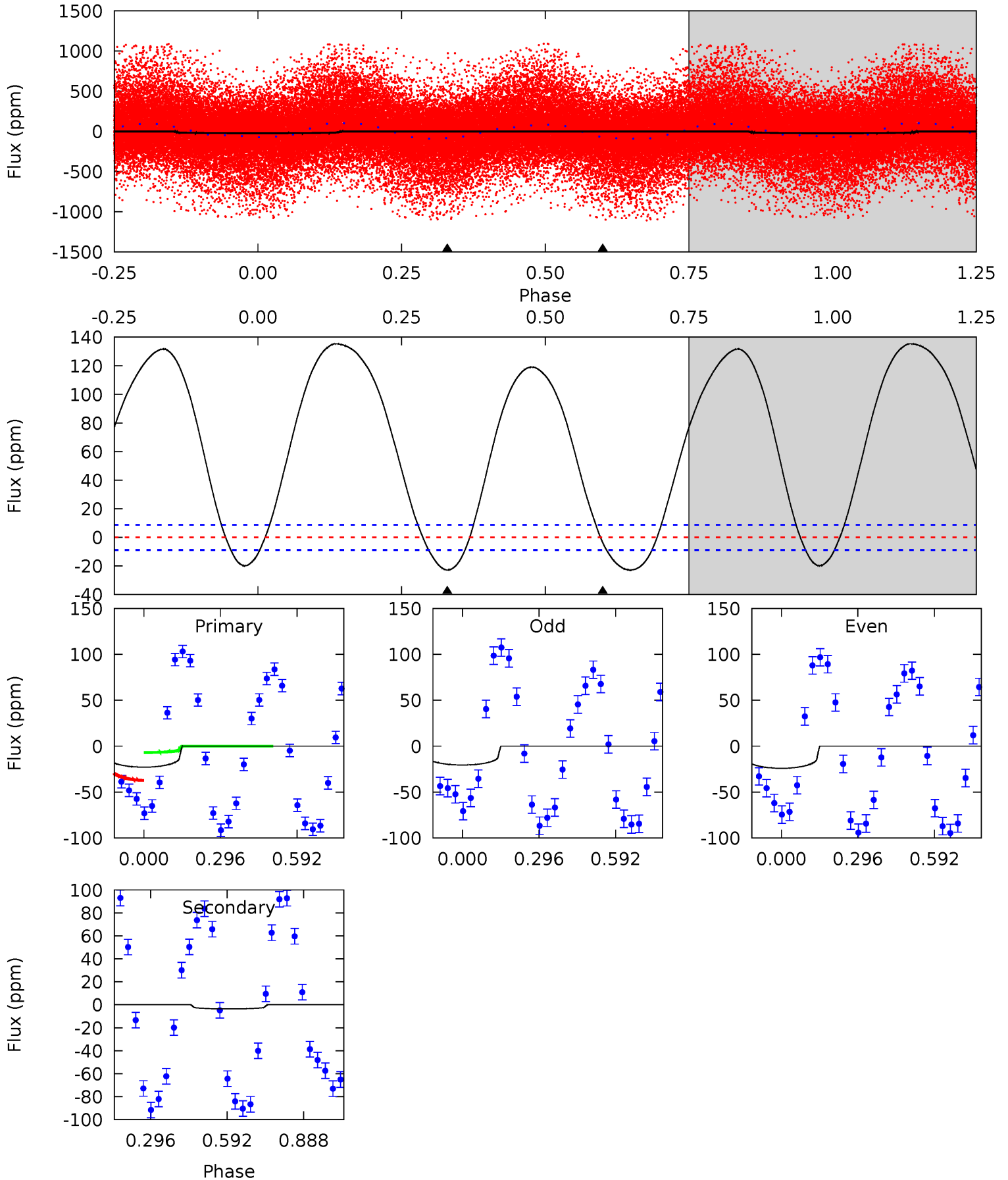
TCE 005876187-01 P= 1.714121 Days $T_0=131.873382$ (BKJD)



DV Model-Shift Uniqueness Test

005876187-01, P = 1.713992 Days, E = 130.198147 Days

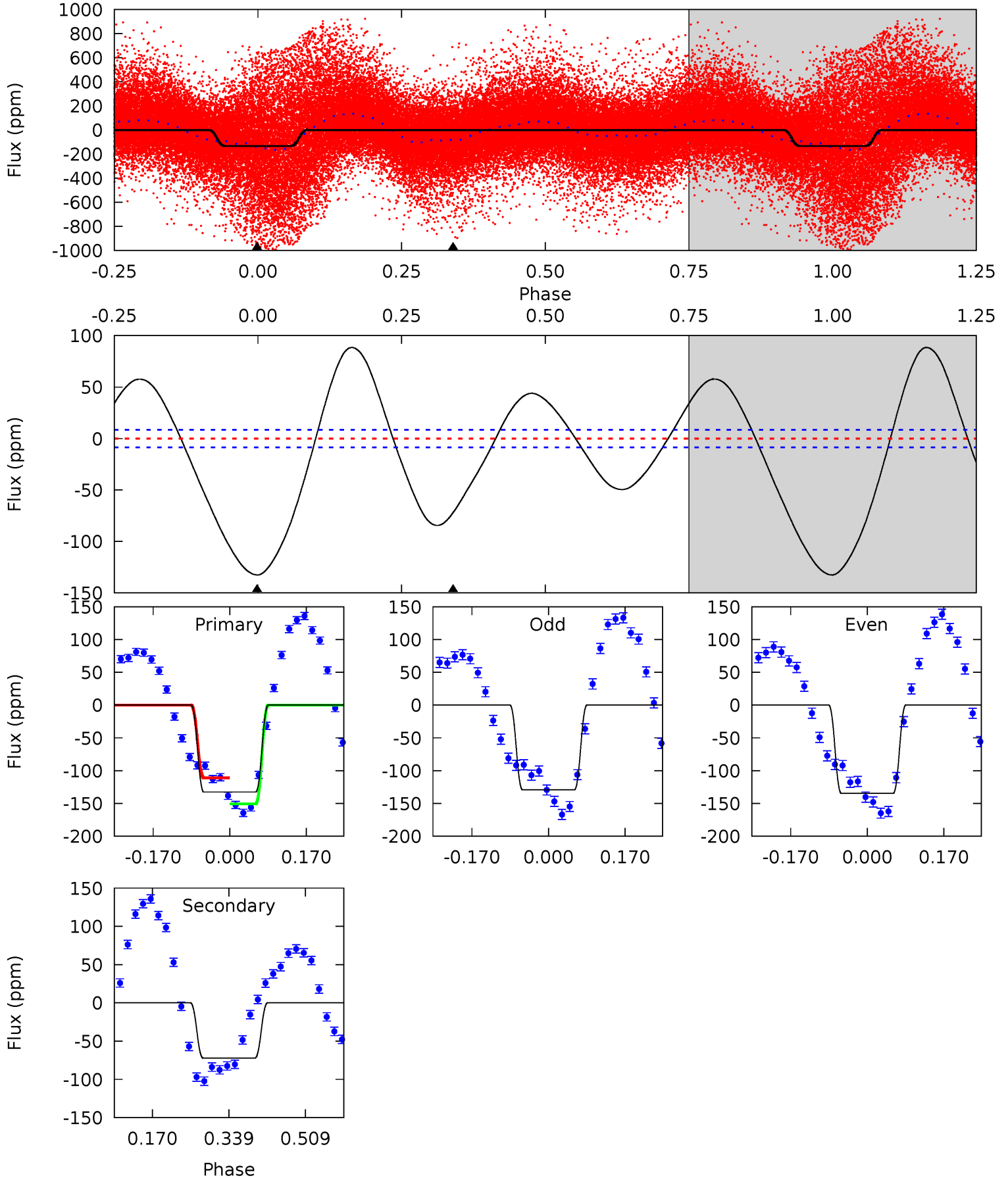
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.3	1.80	0	0	4.33	1.04	13.0	11.3	11.3	1.80	1.80	0.88	1.50	0.86	7.42



Alt Model-Shift Uniqueness Test

005876187-01, P = 1.714121 Days, E = 130.159261 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
69.4	37.7	0	0	4.45	1.37	19.3	69.4	69.4	37.7	37.7	1.42	1.19	0.40	10.1



Stellar Parameters For KIC 005876187

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6846^{+82}_{-82}	$4.069^{+0.143}_{-0.117}$	$-0.080^{+0.200}_{-0.150}$	$1.837^{+0.325}_{-0.325}$	$1.444^{+0.115}_{-0.115}$	$0.328^{+0.233}_{-0.117}$
	+1%/-1%	+4%/-3%	+250%/-188%	+18%/-18%	+8%/-8%	+71%/-36%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 005876187-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-4 ± 2	$1.08^{+1.05}_{-0.74}$	3213^{+152}_{-164}	4040^{+2961}_{-1698}	$1.580^{+12.991}_{-1.254}$
Alt.	-72 ± 2	$2.35^{+1.17}_{-1.09}$	3213^{+153}_{-152}	5744^{+2407}_{-977}	$7.145^{+17.898}_{-3.933}$

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

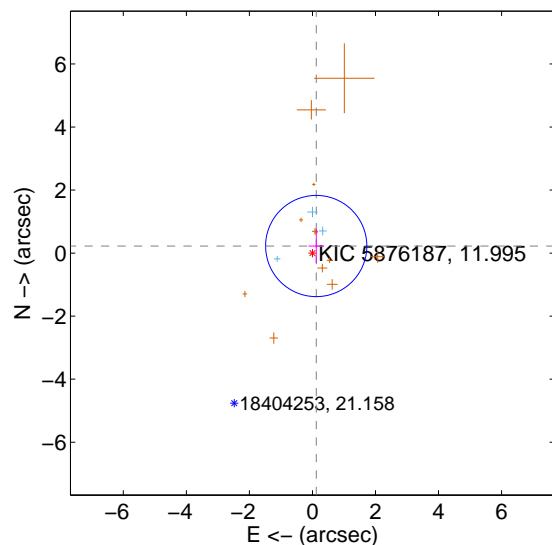
Supplemental centroid analysis for 005876187-01. **Kepler magnitude: 11.99.** Transit SNR 2.27

There are 3 quarters with good PRF difference image offsets

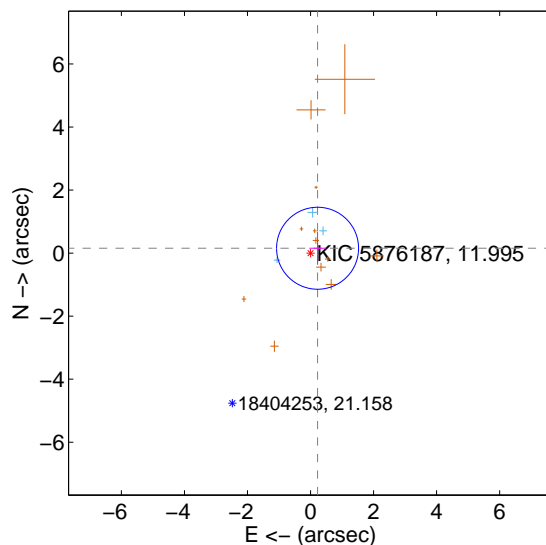
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.255 ± 0.535	0.48	-0.120 ± 0.248	0.225 ± 0.540
PRF-fit source offset from KIC position	0.271 ± 0.433	0.63	-0.224 ± 0.264	0.154 ± 0.523
photometric centroid source offset	2.77 ± 1.21	2.28	0.62 ± 1.19	2.69 ± 1.21

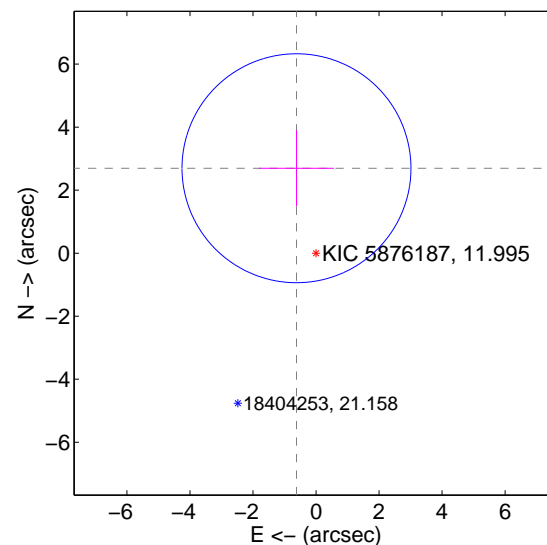
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

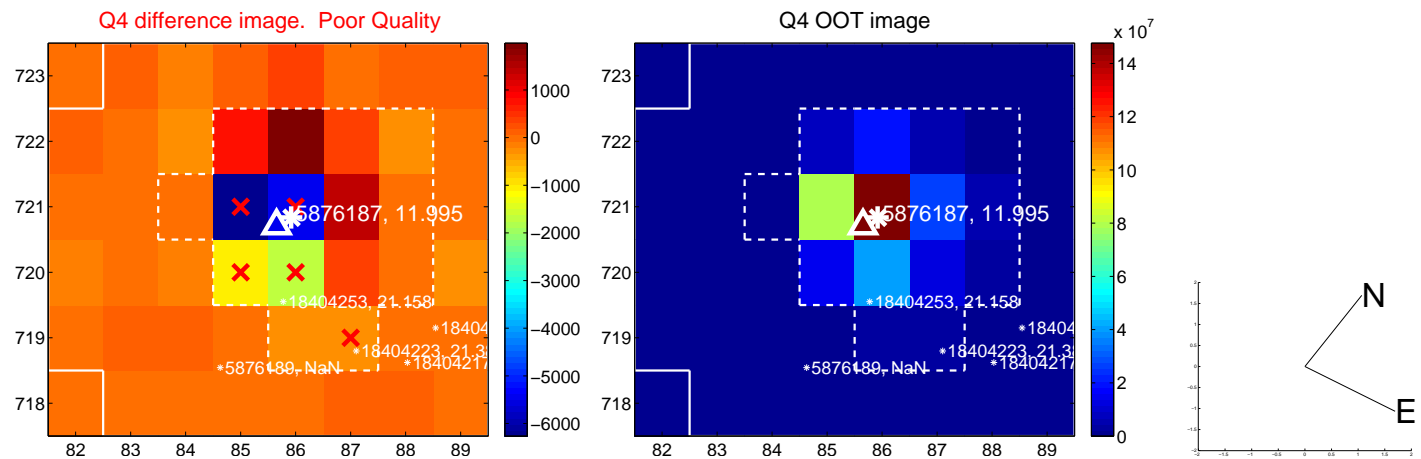
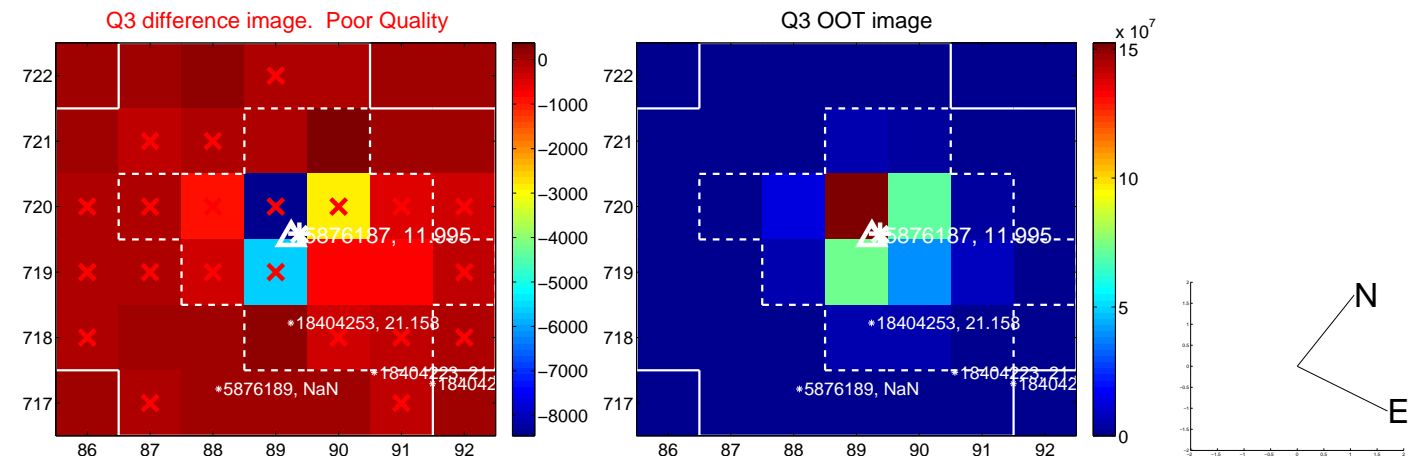
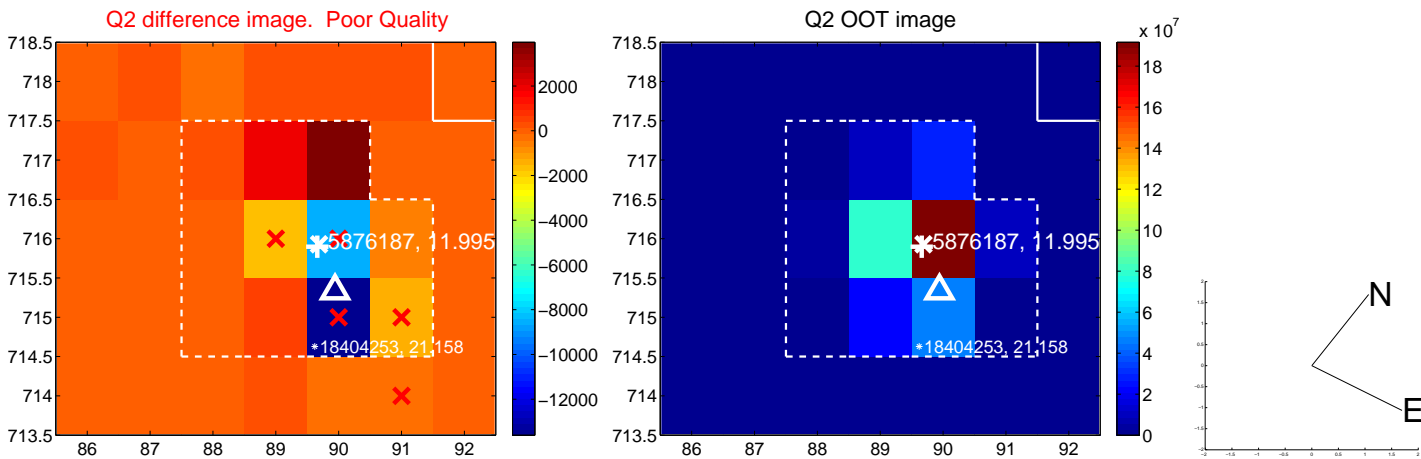
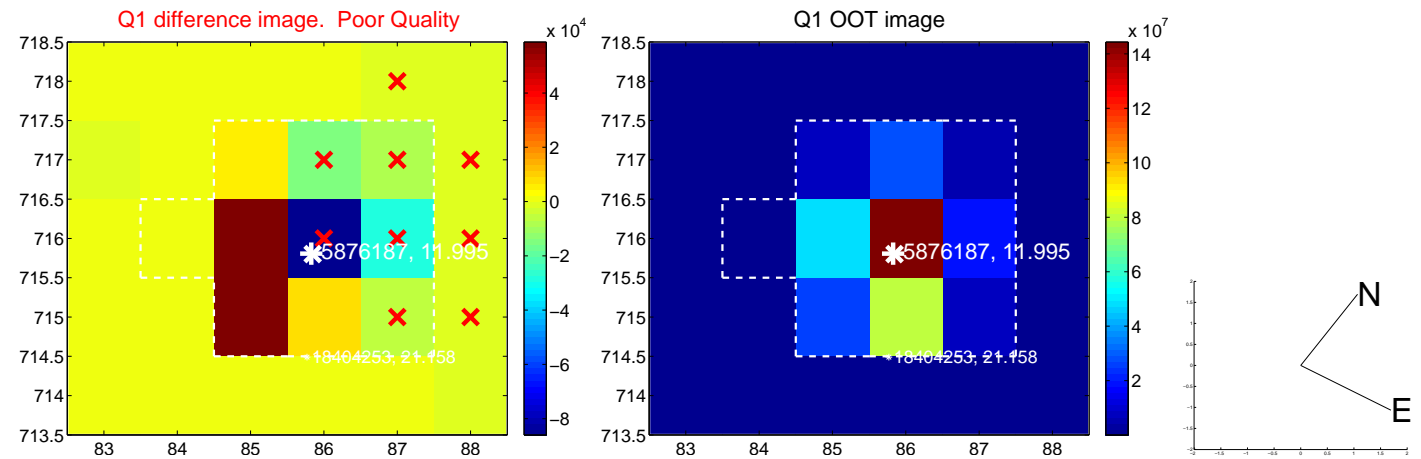


offset from photometric centroids

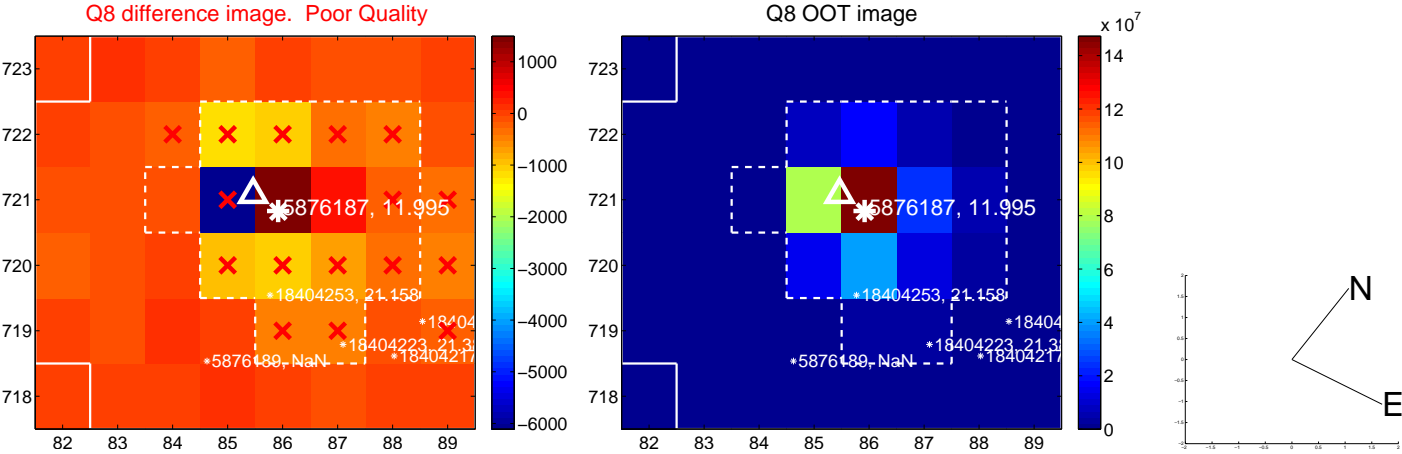
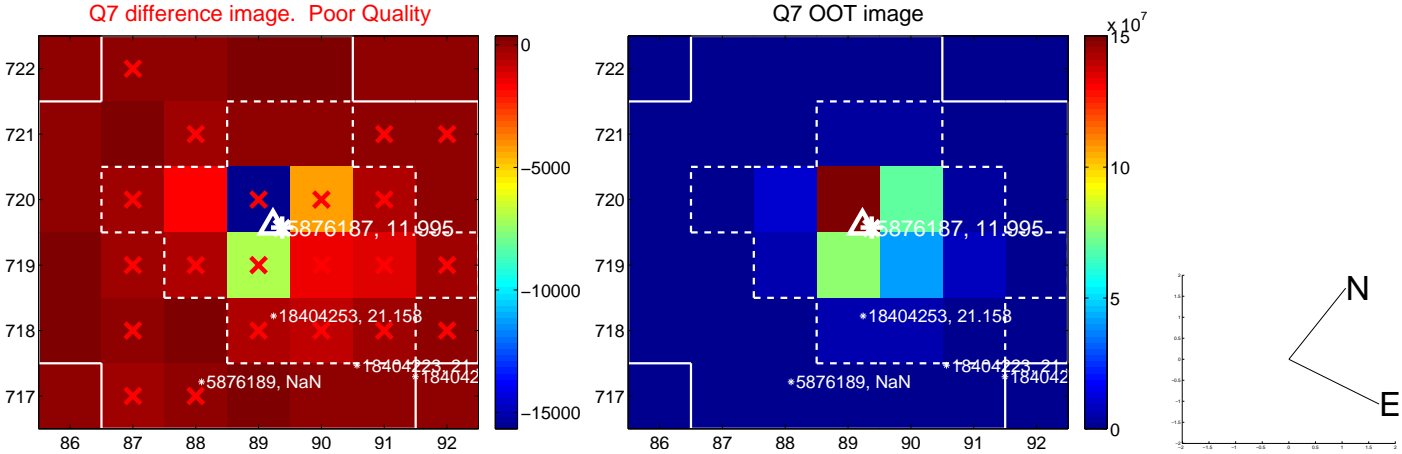
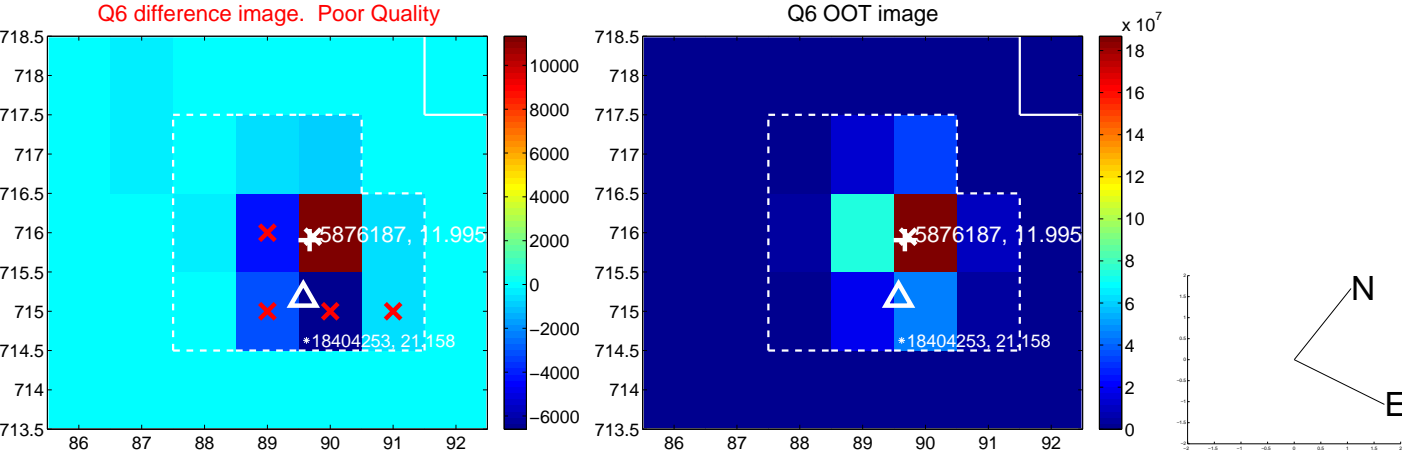
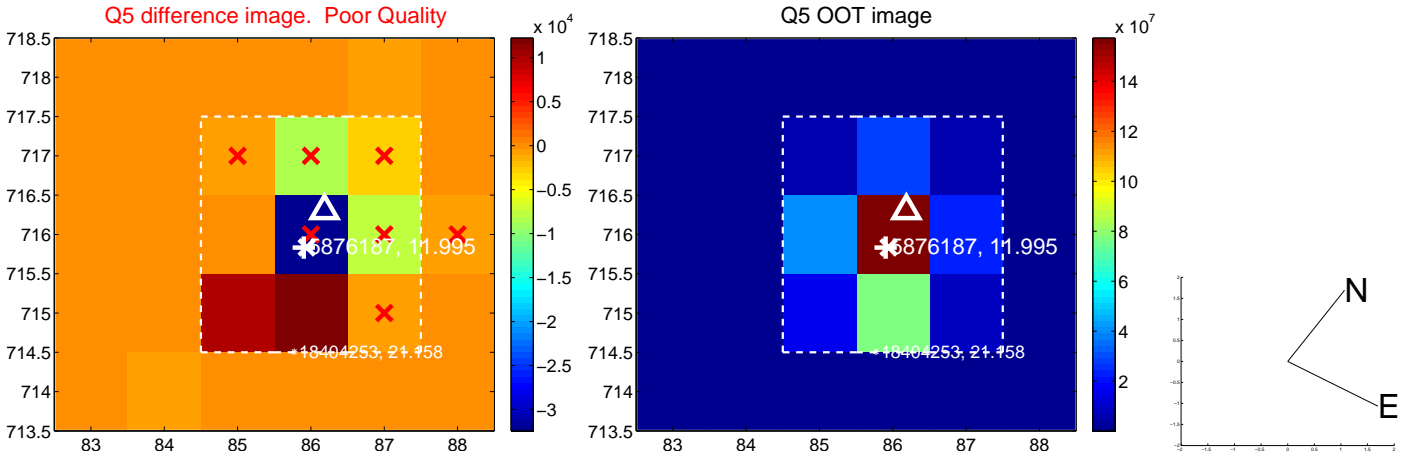


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

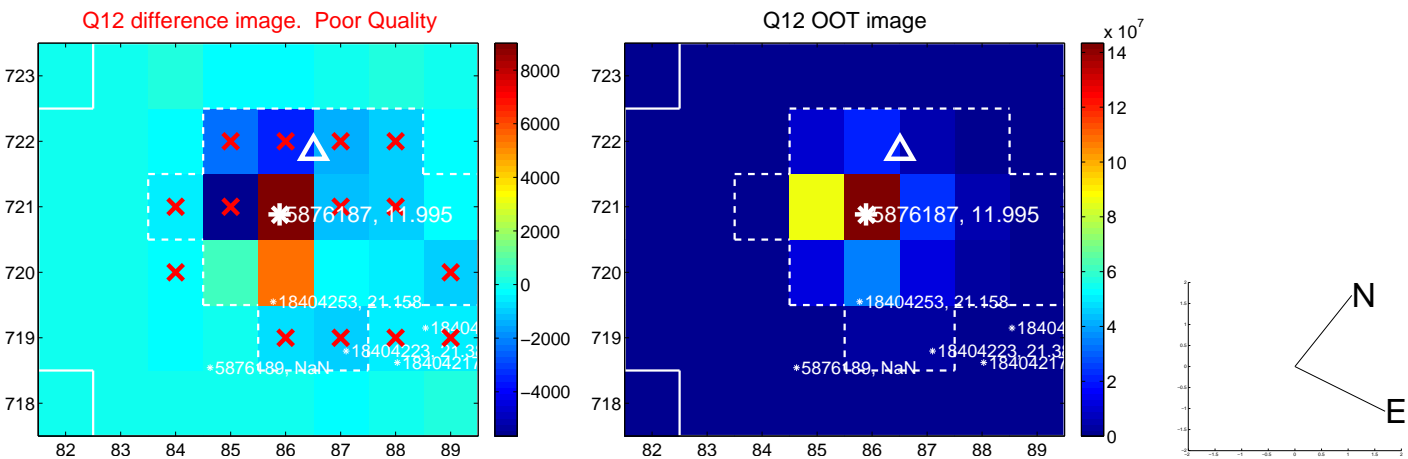
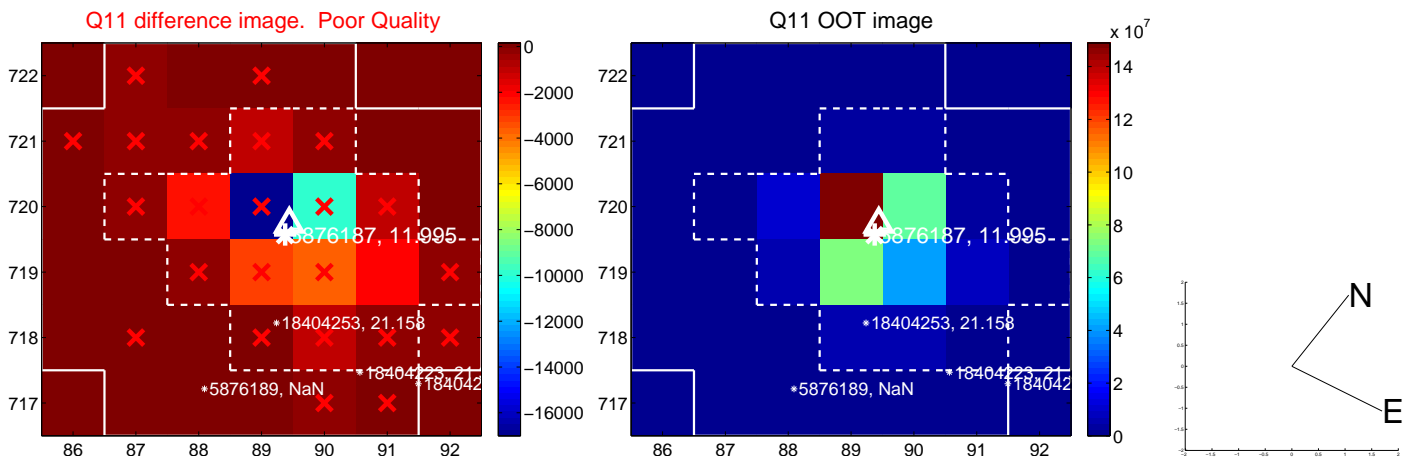
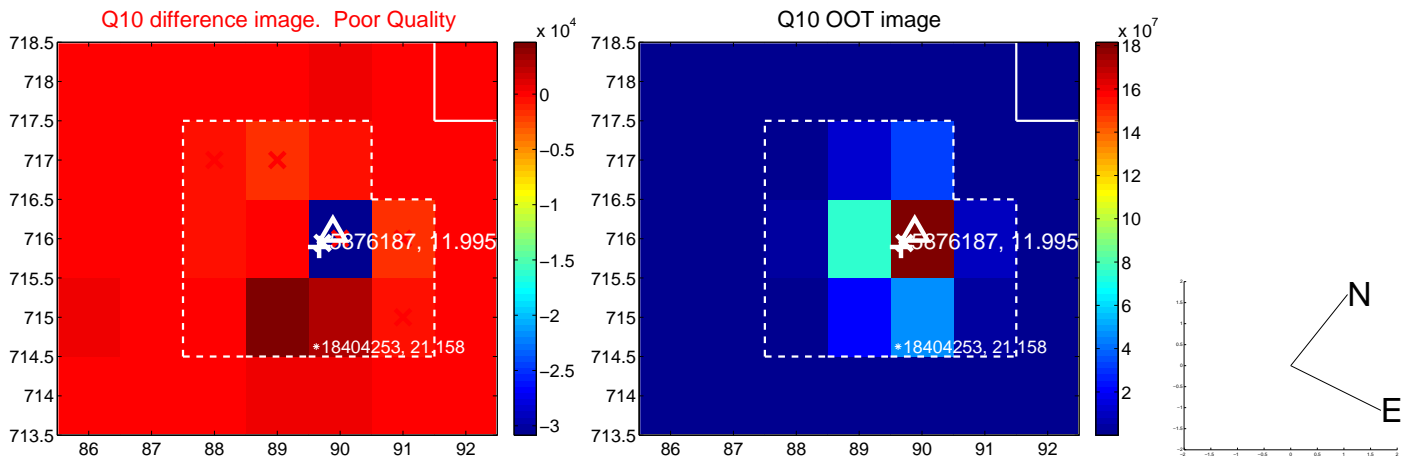
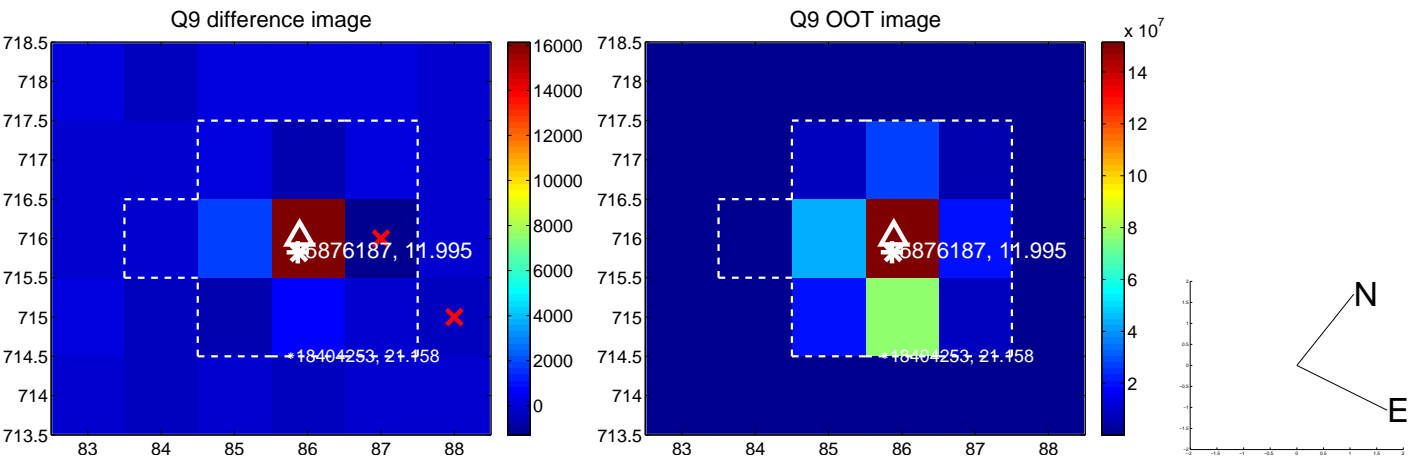
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



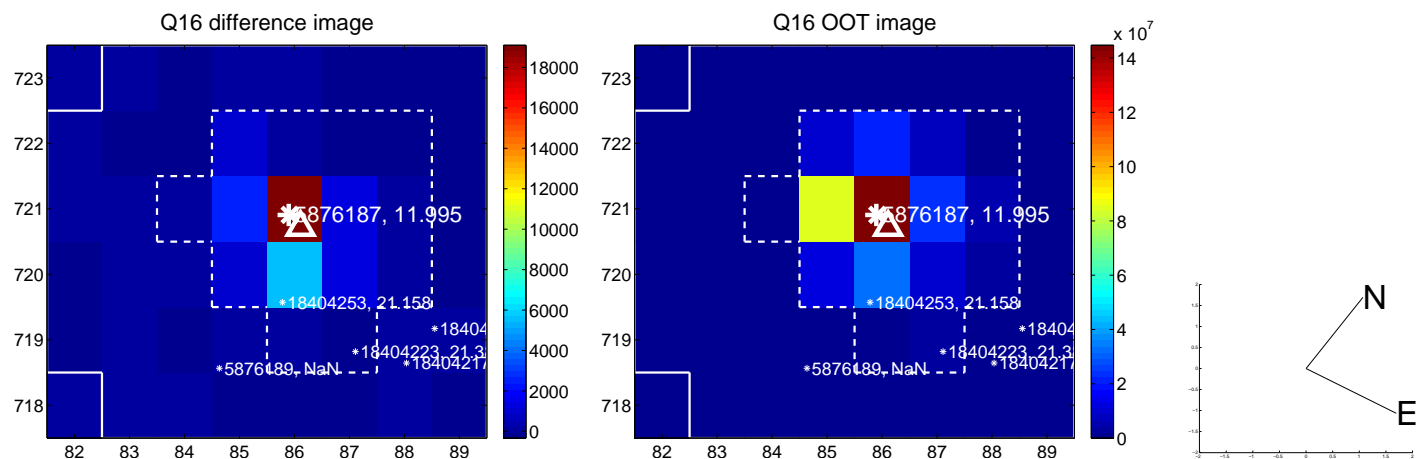
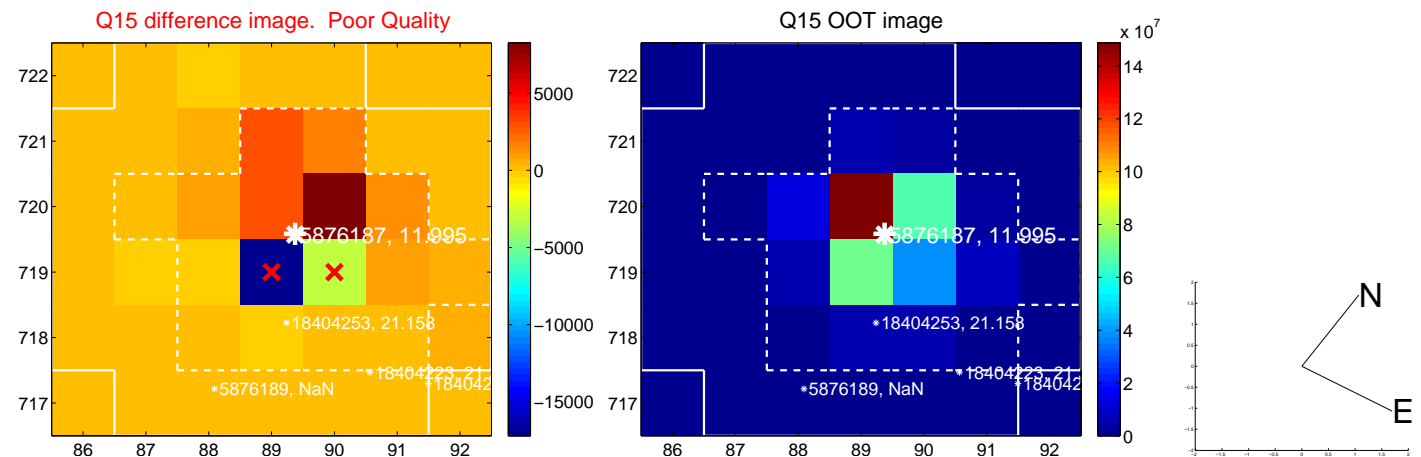
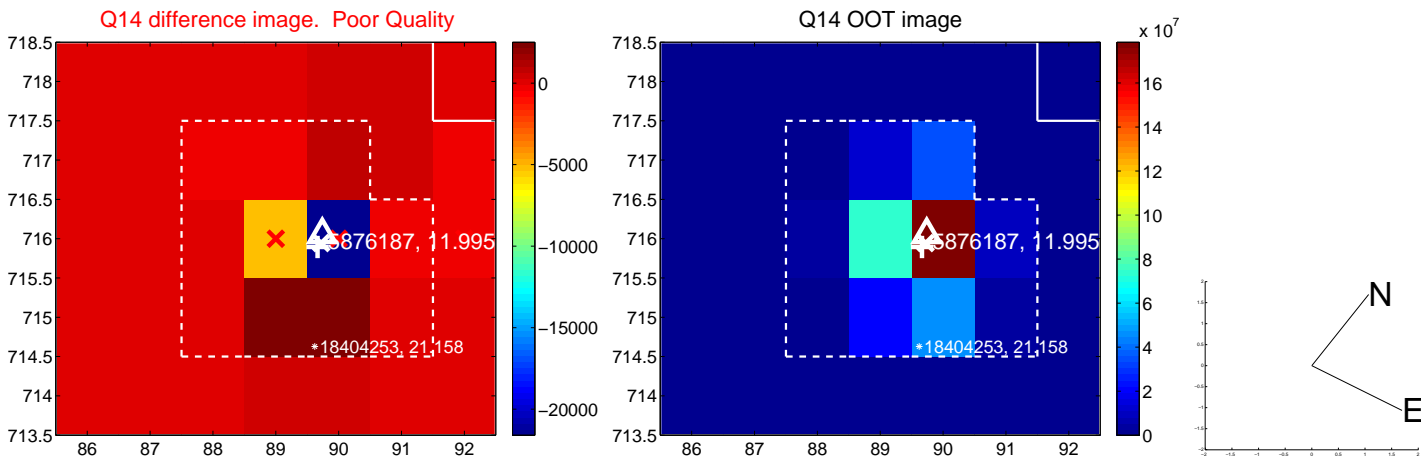
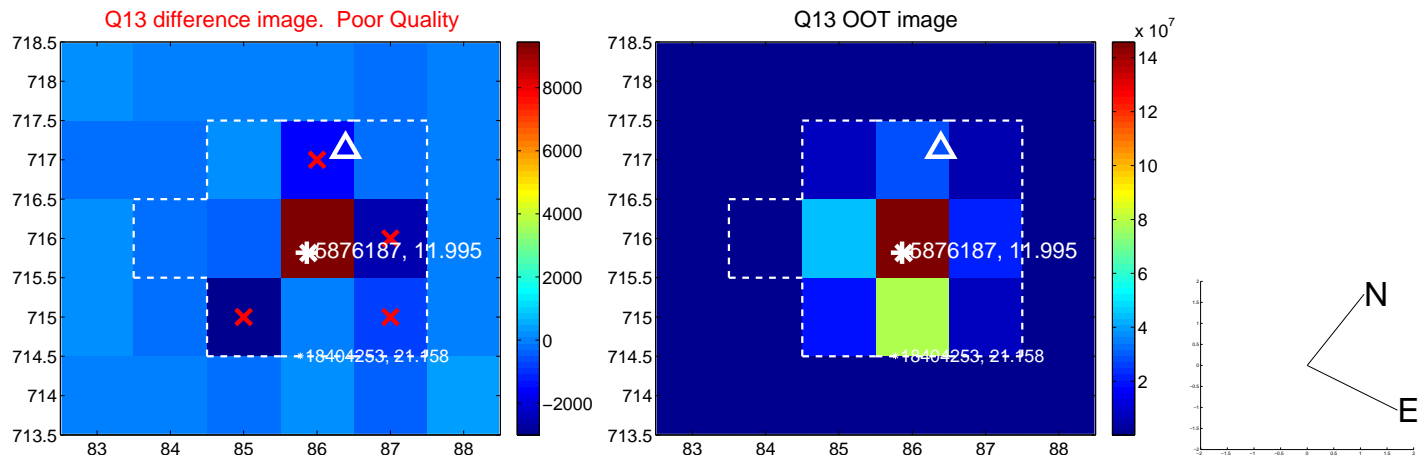
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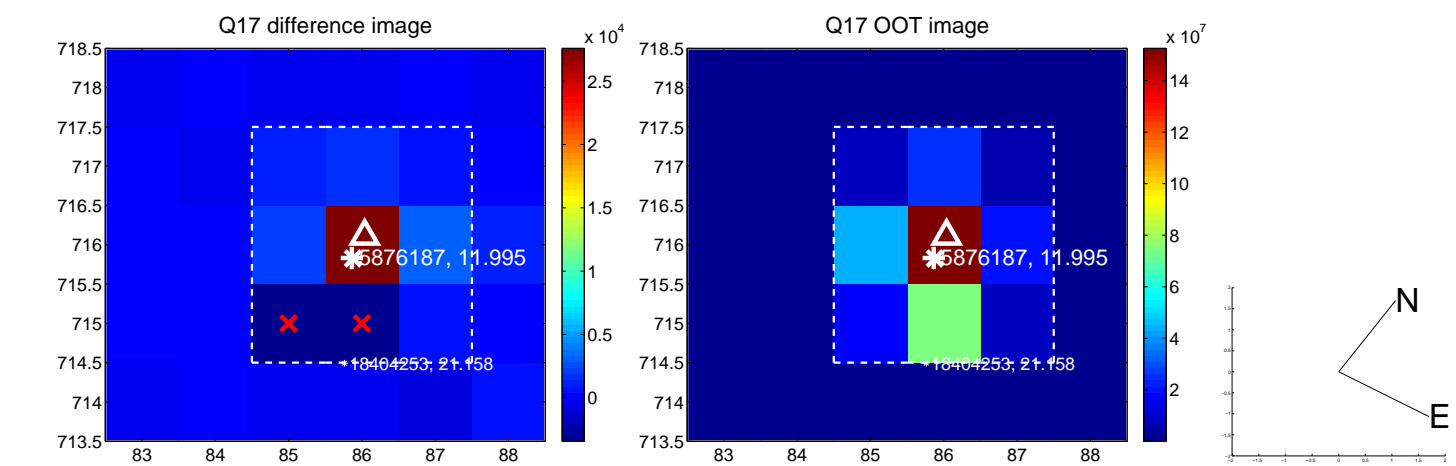
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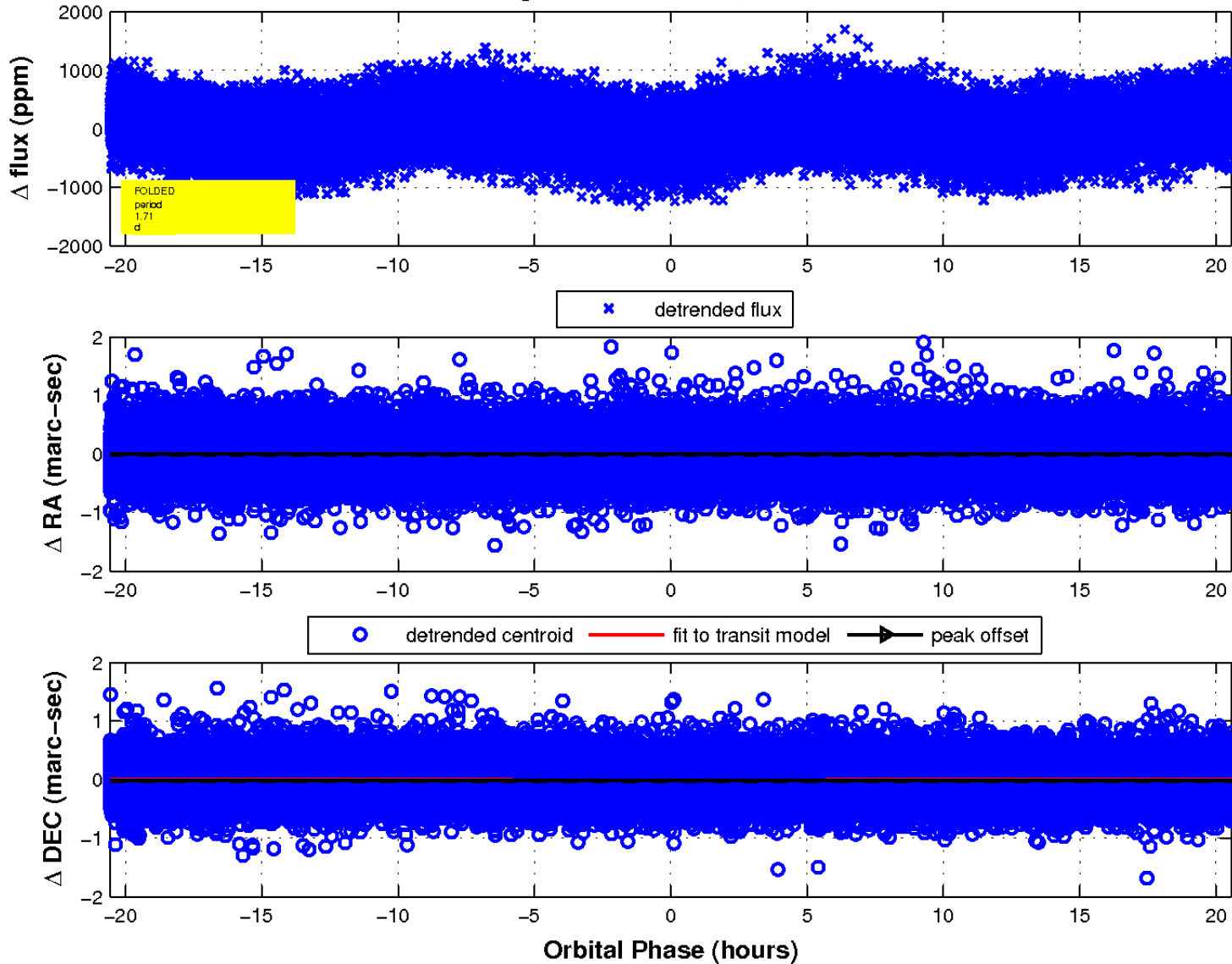
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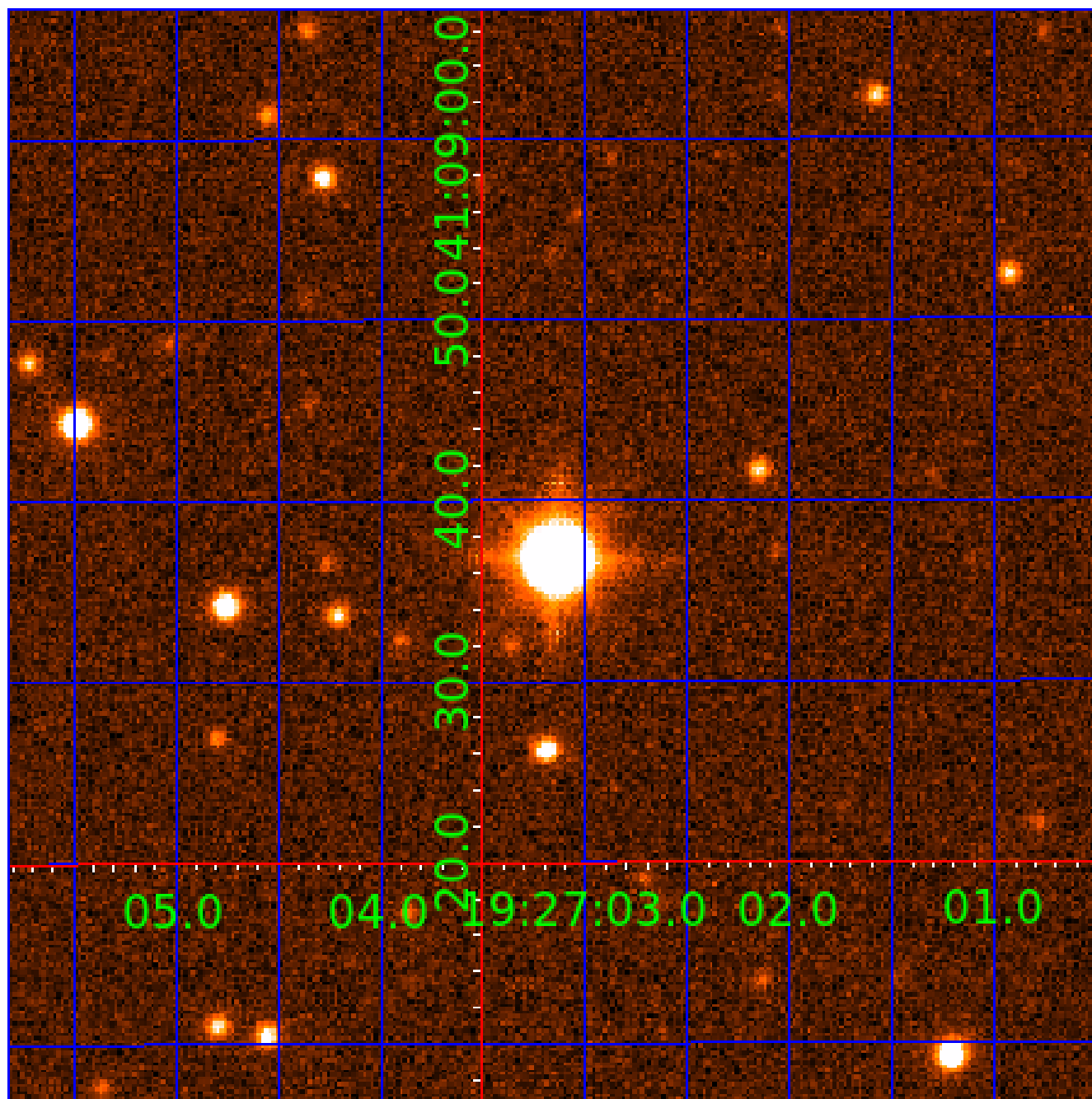


fluxWeightedCentroids, Planet 1 of 9



UKIRT Image

Declination



KIC 005876187

Q1-17 DR25 TCE Parameters

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005876187-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005876187-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005876187-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005876187-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005876187-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

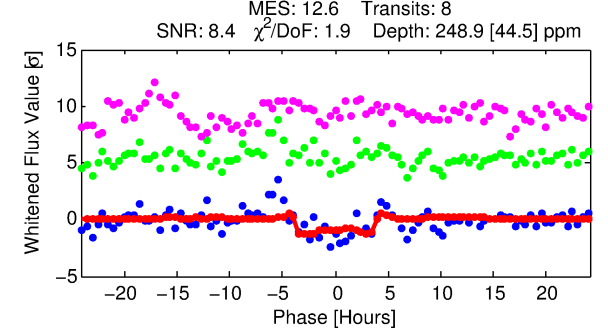
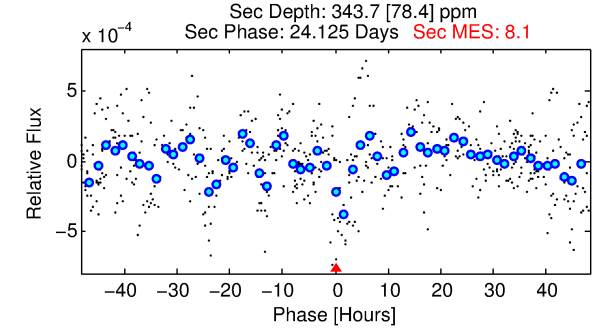
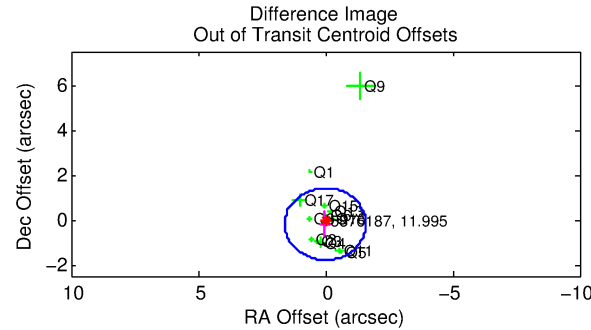
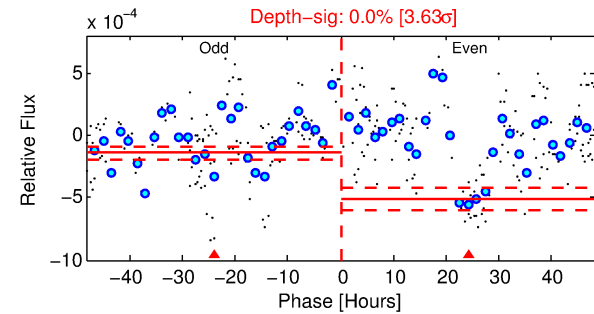
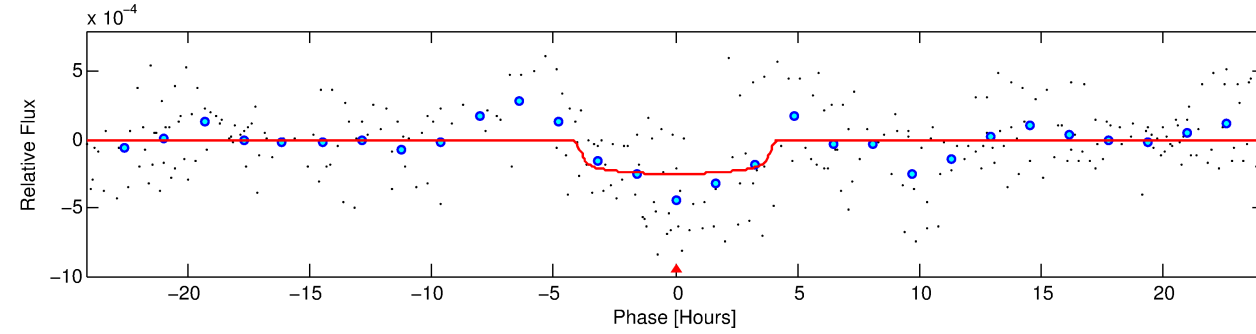
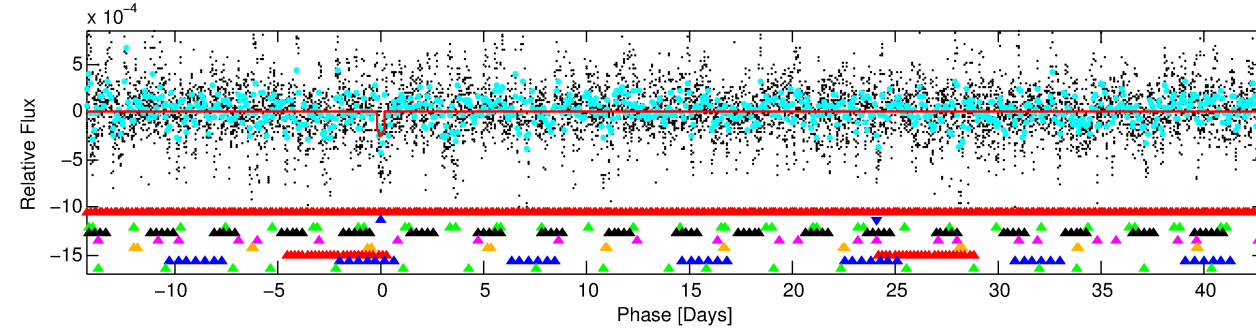
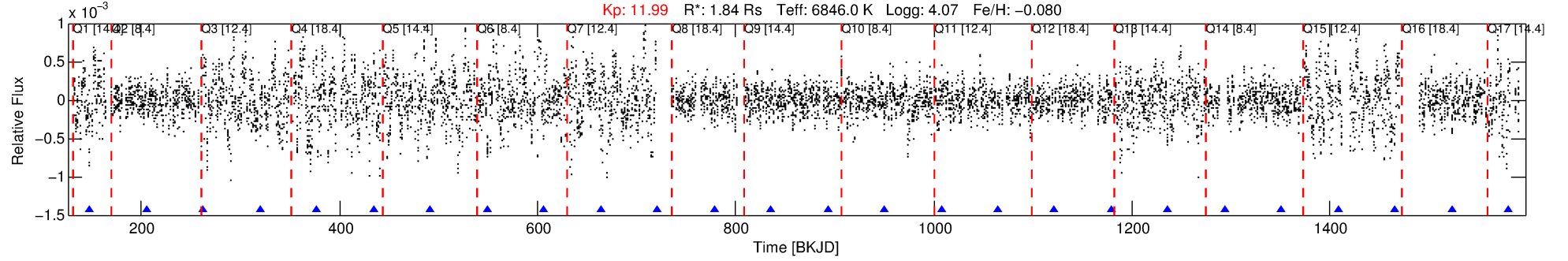
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005876187-02

No Significant Match Found

DV One-Page Summary

KIC: 5876187 Candidate: 2 of 9 Period: 57.277 d



DV Fit Results:

Period = 57.27654 [0.00099] d
Epoch = 148.2775 [0.0141] BKJD
Rp/R* = 0.0156 [0.0065]
a/R* = 38.54 [90.00]
b = 0.73 [1.53]
Seff = 61.48 [15.60]
Teq = 714 [45] K
Rp = 3.12 [1.42] Re
a = 0.3287 [0.0530] AU
Ag = 2094.07 [1896.08] [1.10σ]
Teffp = 7468 [1628] K [4.15σ]

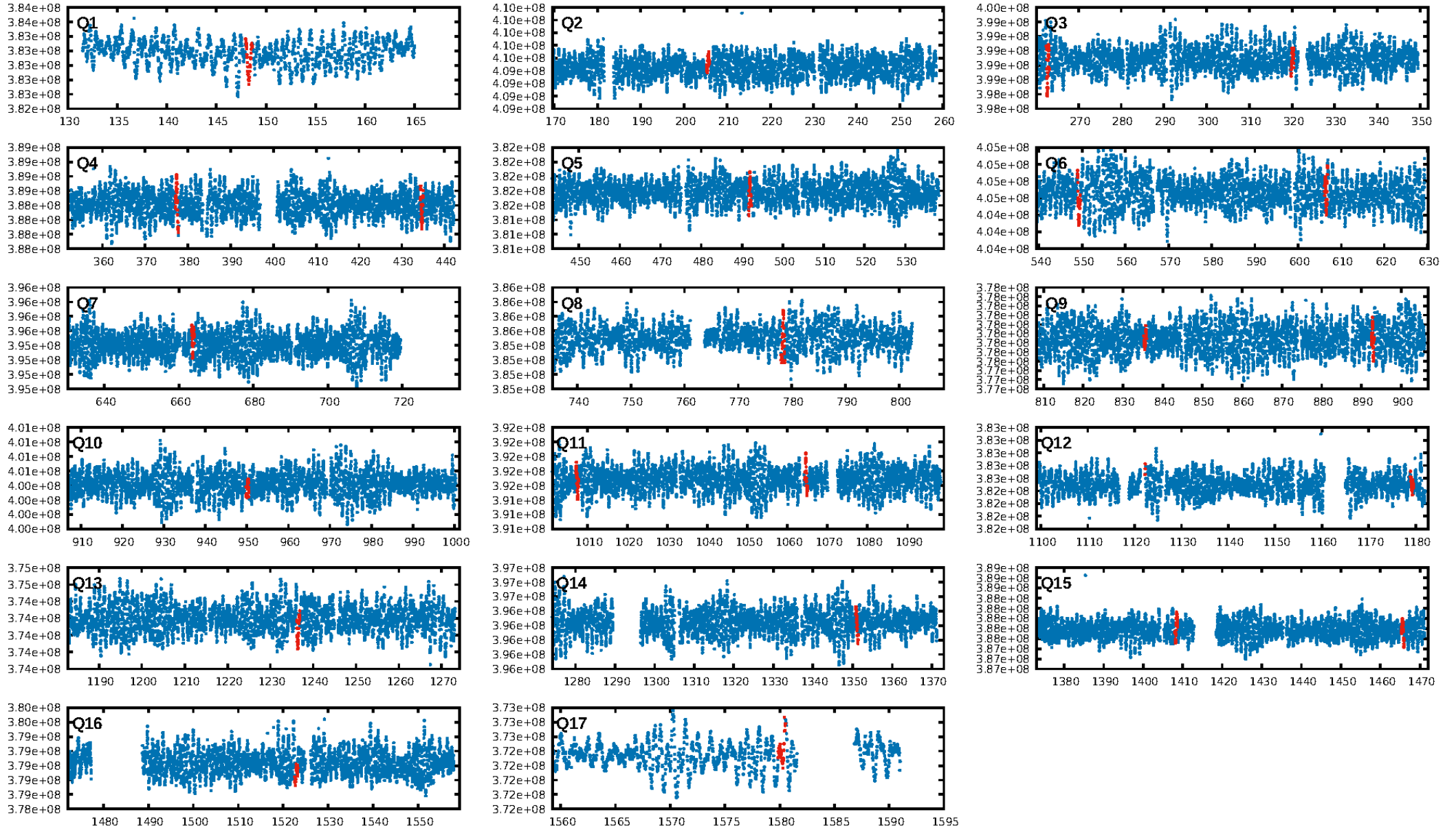
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [36.72σ]
LongPeriod-sig: 100.0% [8.52σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 99.6%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: 0.08743
Centroid-sig: 29.3%
Centroid-so: 0.177 arcsec [0.83σ]
OotOffset-rm: 0.197 arcsec [0.37σ]
OotOffset-st: 2/3/3/5 [13]
KicOffset-rm: 0.260 arcsec [0.49σ]
KicOffset-st: 2/3/3/5 [13]
DiffImageQuality-fgm: 0.54 [7/13]
DiffImageOverlap-fno: 0.00 [0/16]

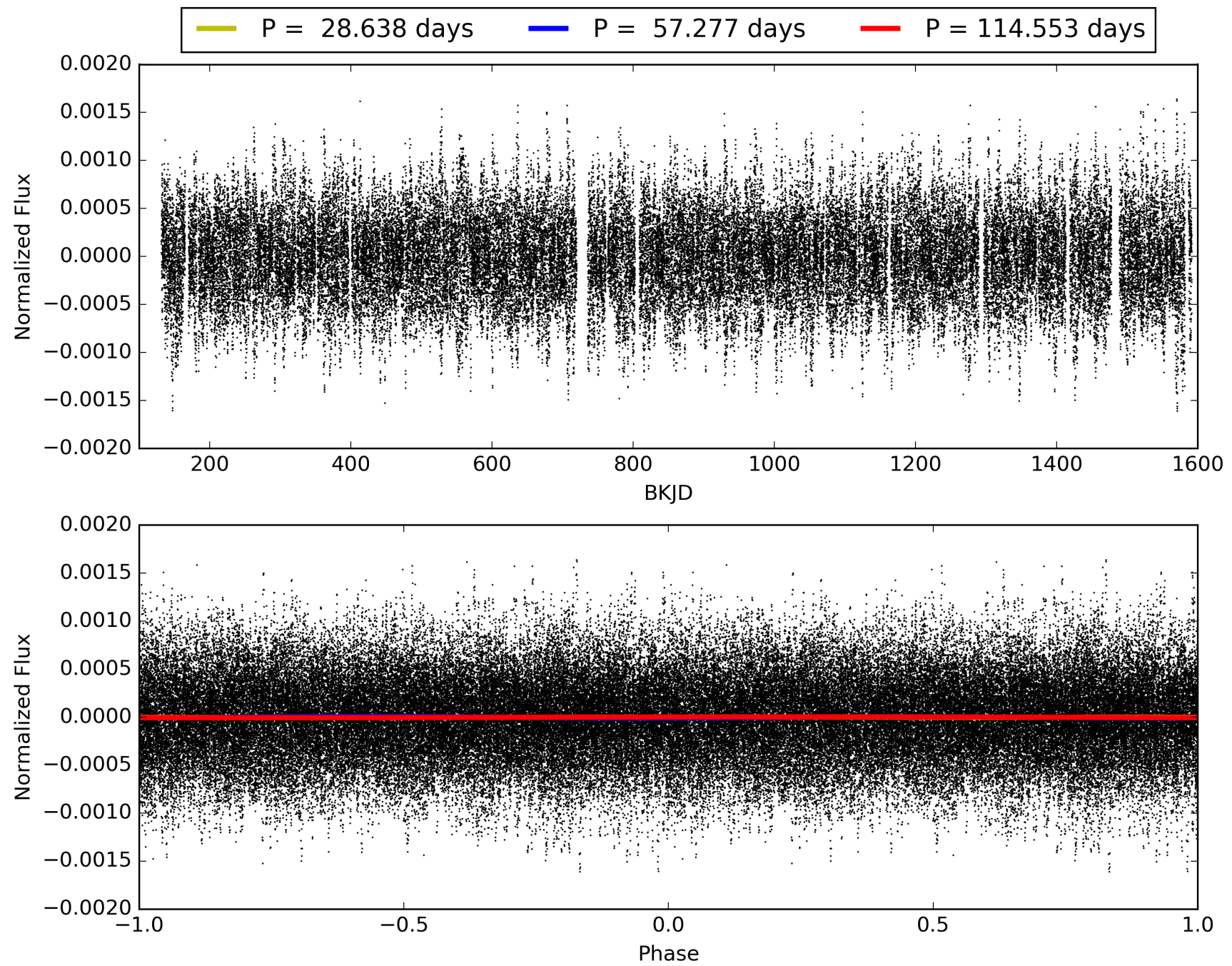
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 09:12:43 Z

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

TCE 005876187-02, PDC Light Curves

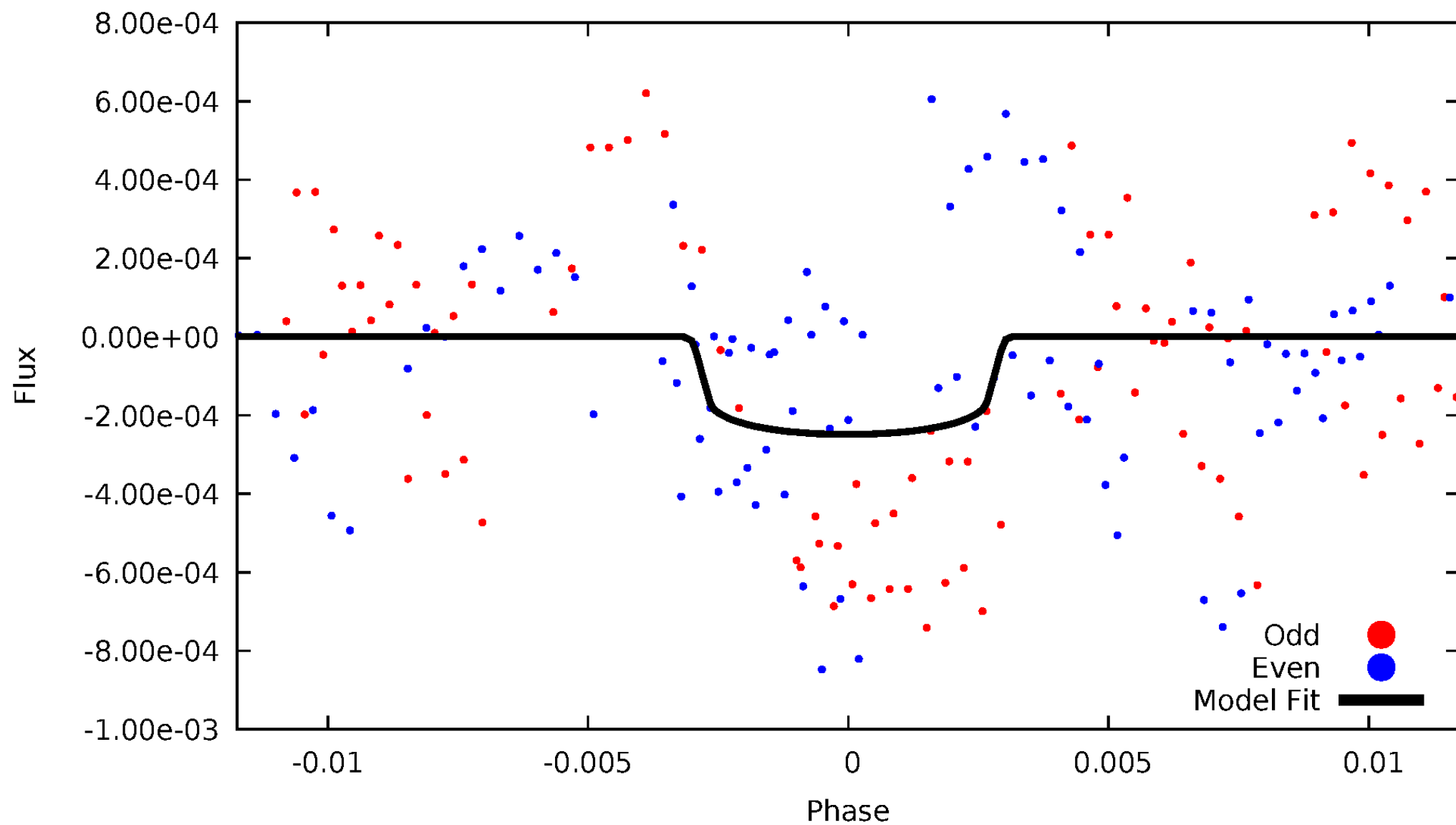


TCE 005876187-02



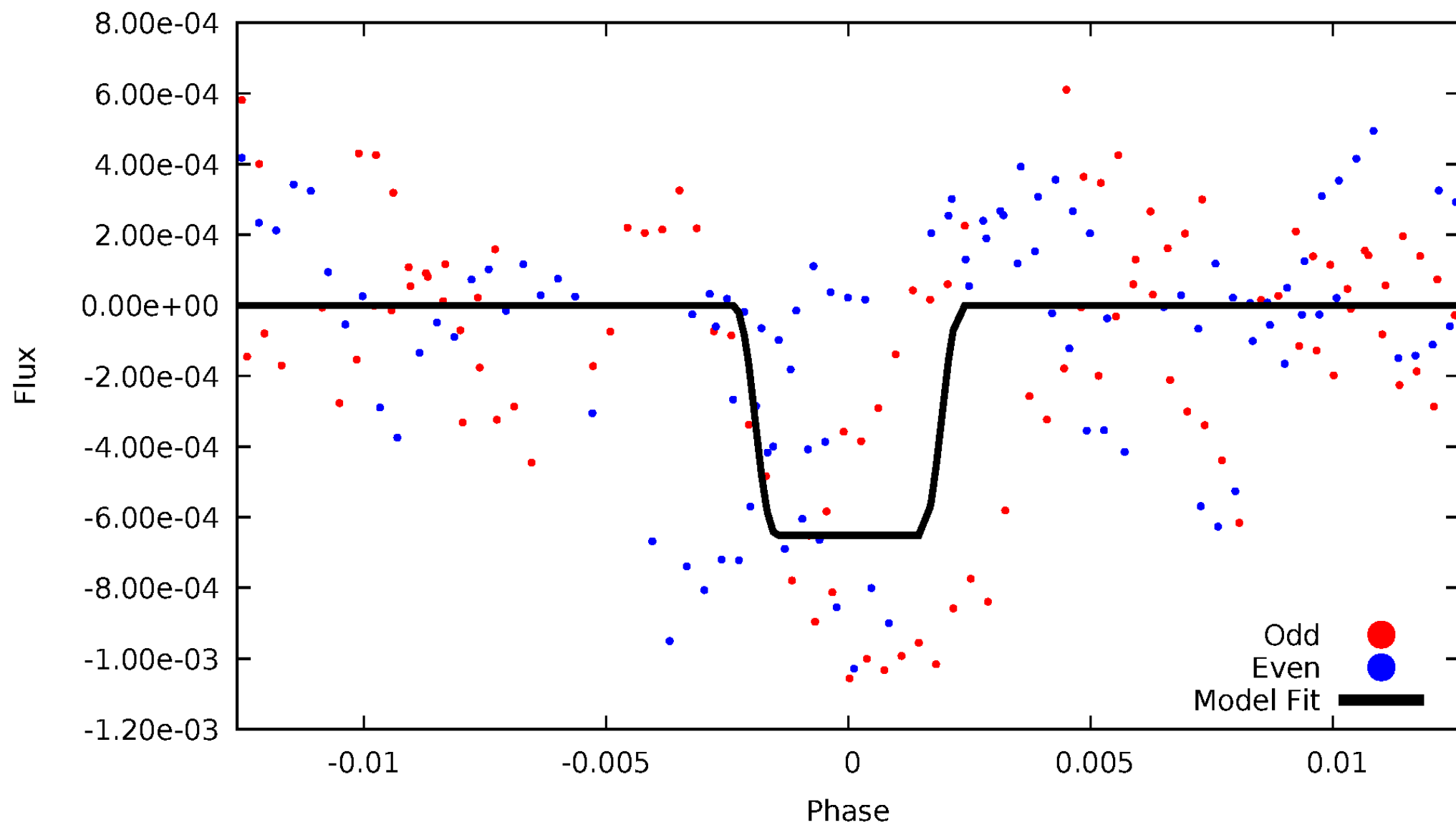
DV Odd/Even

TCE 005876187-02



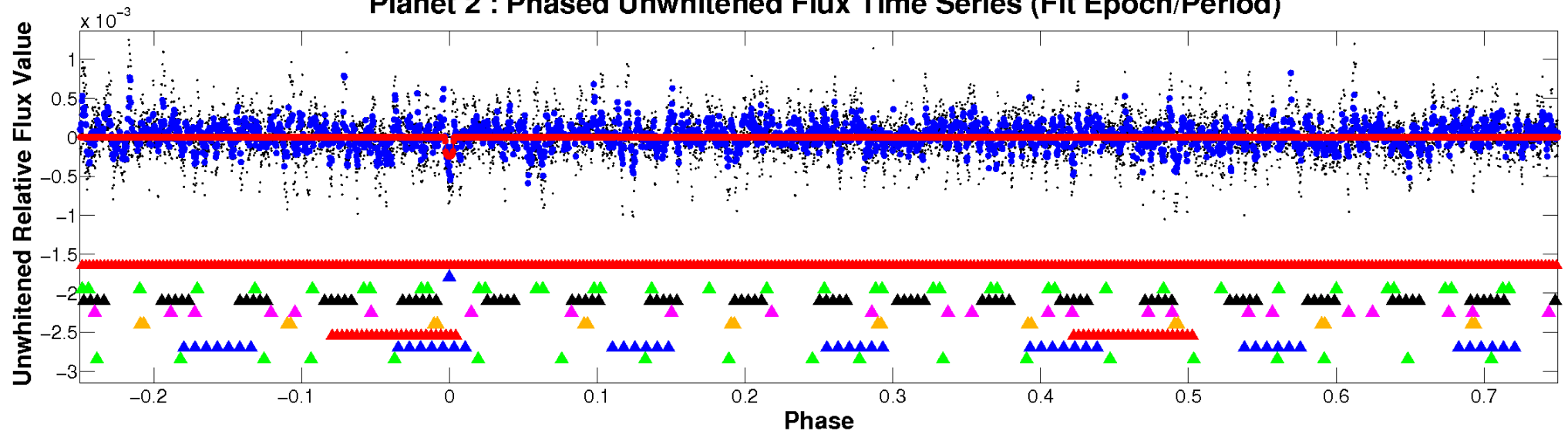
ALT Odd/Even

TCE 005876187-02

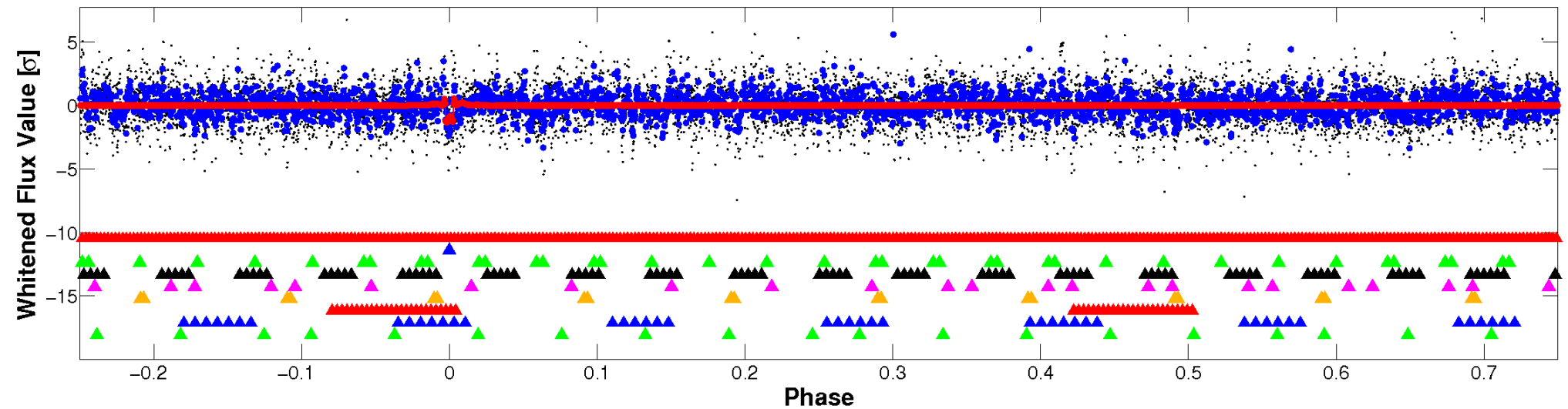


Non-Whitened Vs. Whitened Light Curve

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

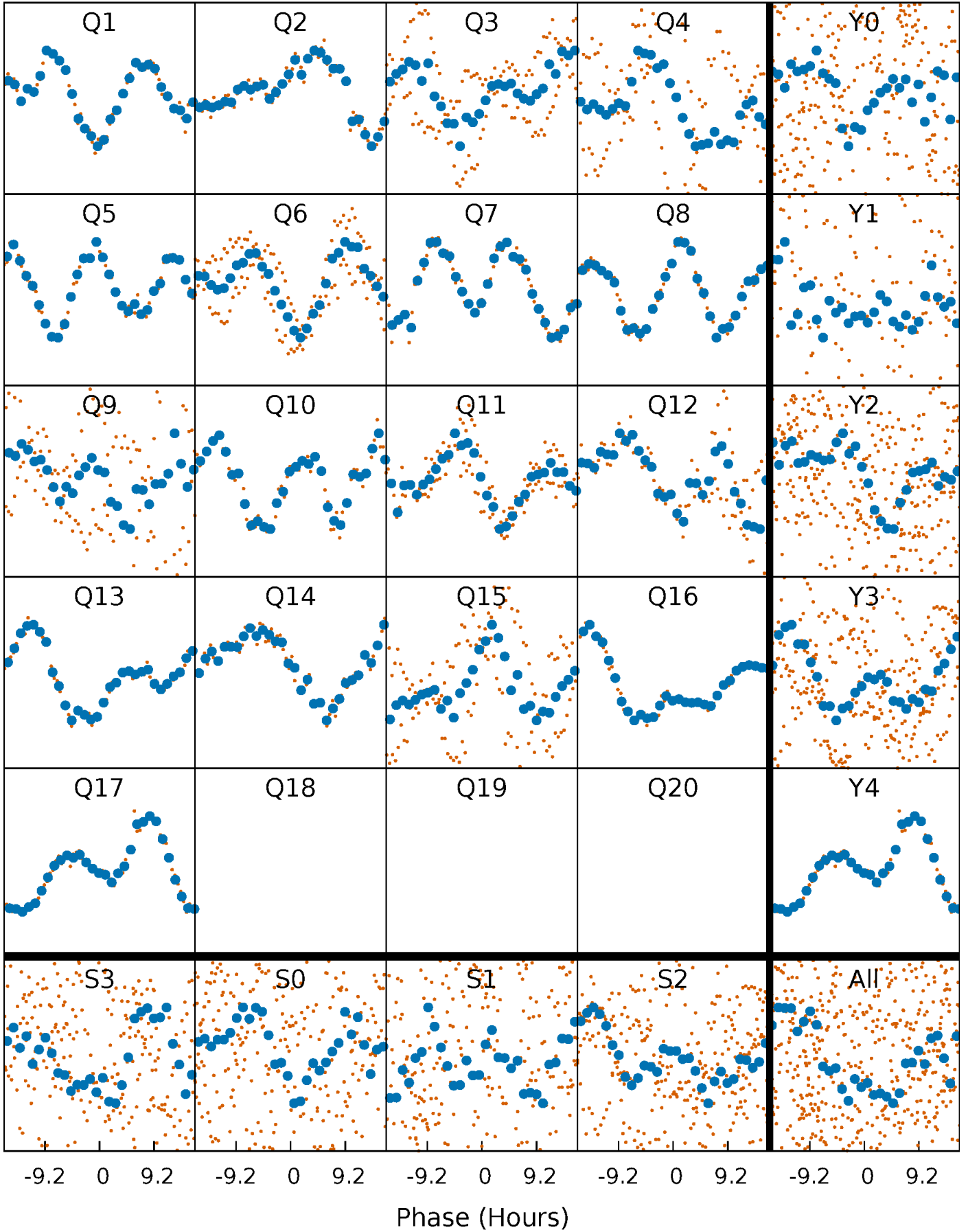


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



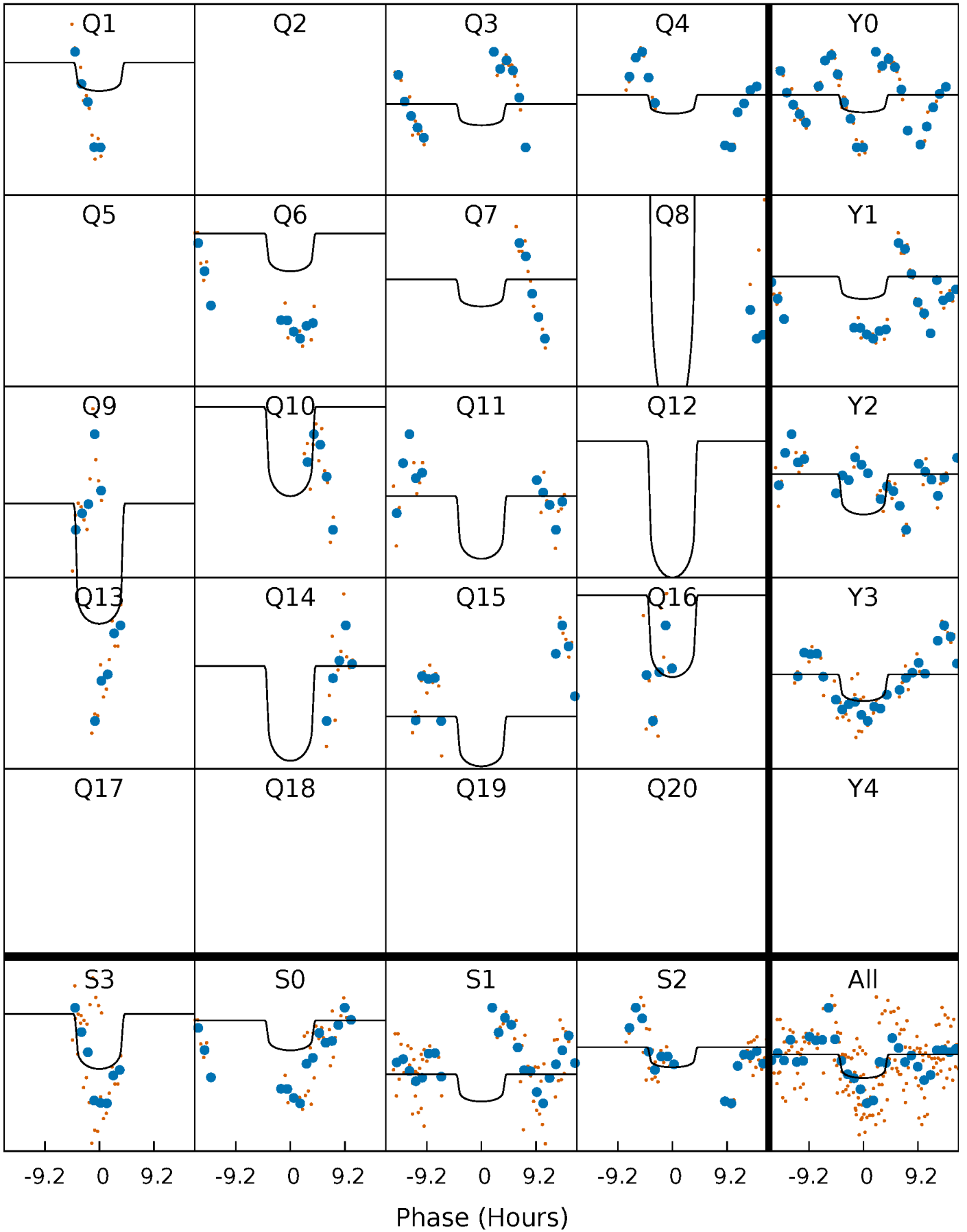
PDC Quarter-Phased Transit Curves

TCE 005876187-02 P= 57.276541 Days $T_0=148.277502$ (BKJD)



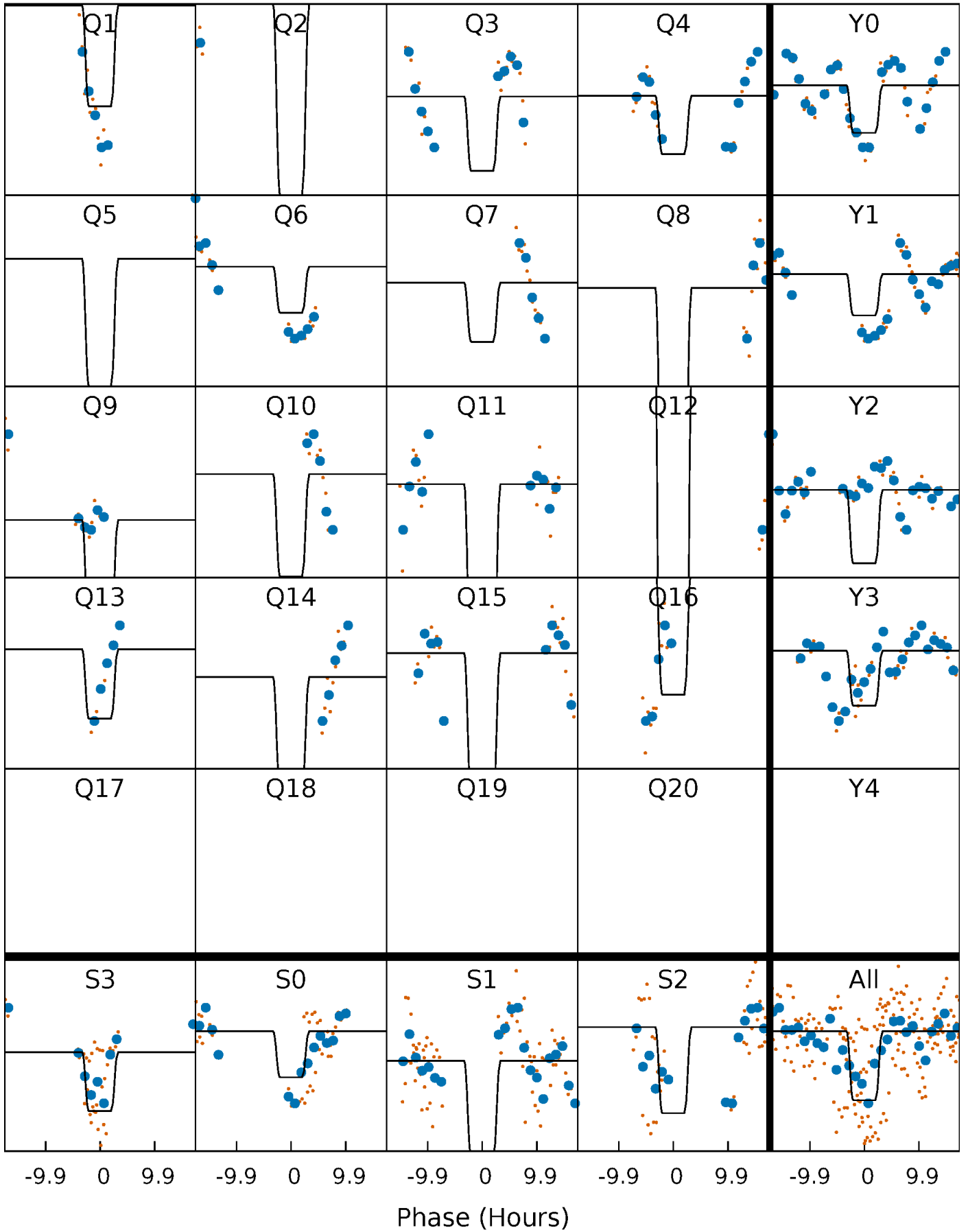
DV Quarter-Phased Transit Curves

TCE 005876187-02 P= 57.276541 Days $T_0=148.277502$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

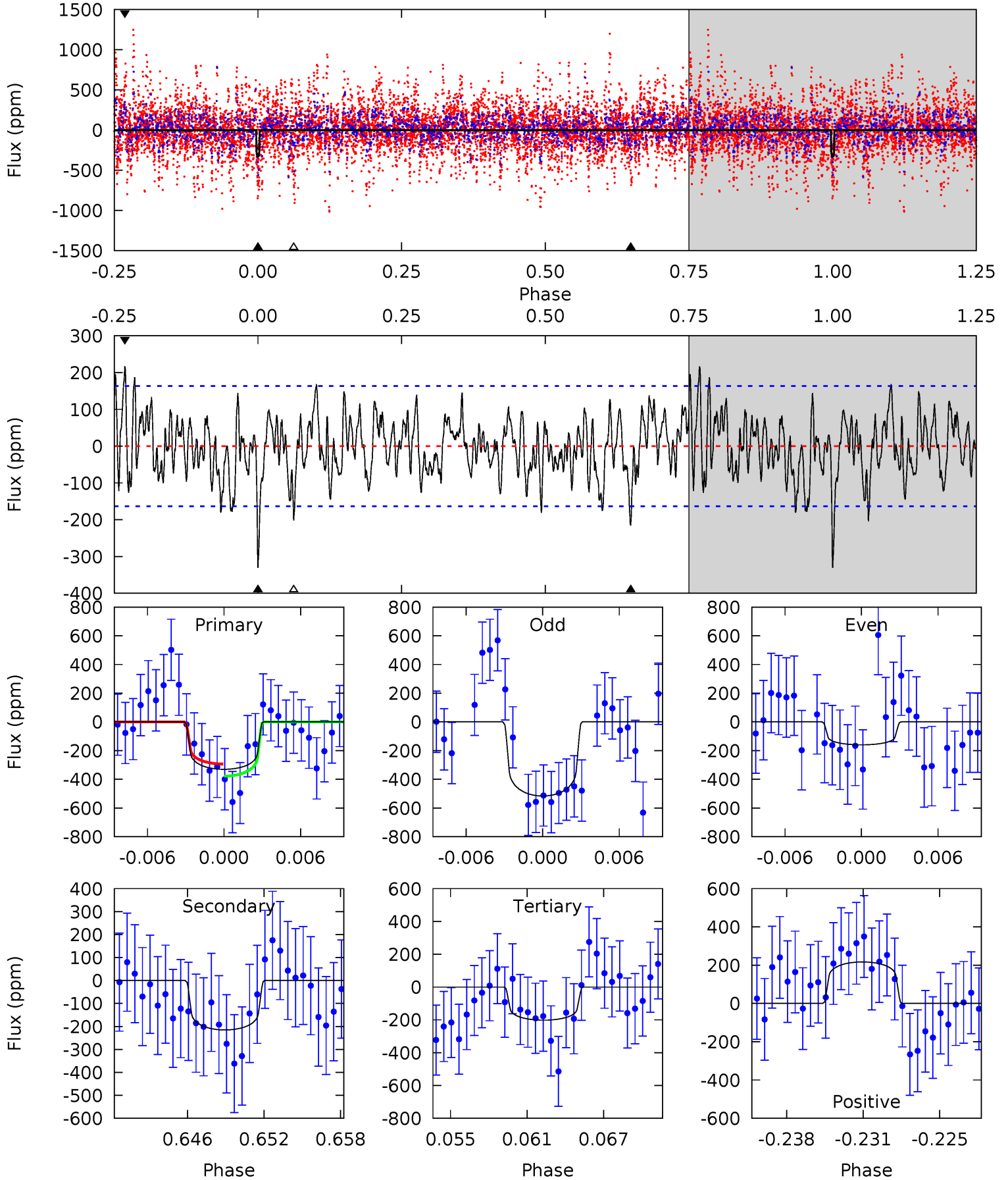
TCE 005876187-02 P= 57.279182 Days $T_0=148.241505$ (BKJD)



DV Model-Shift Uniqueness Test

005876187-02, P = 57.276541 Days, E = 91.000961 Days

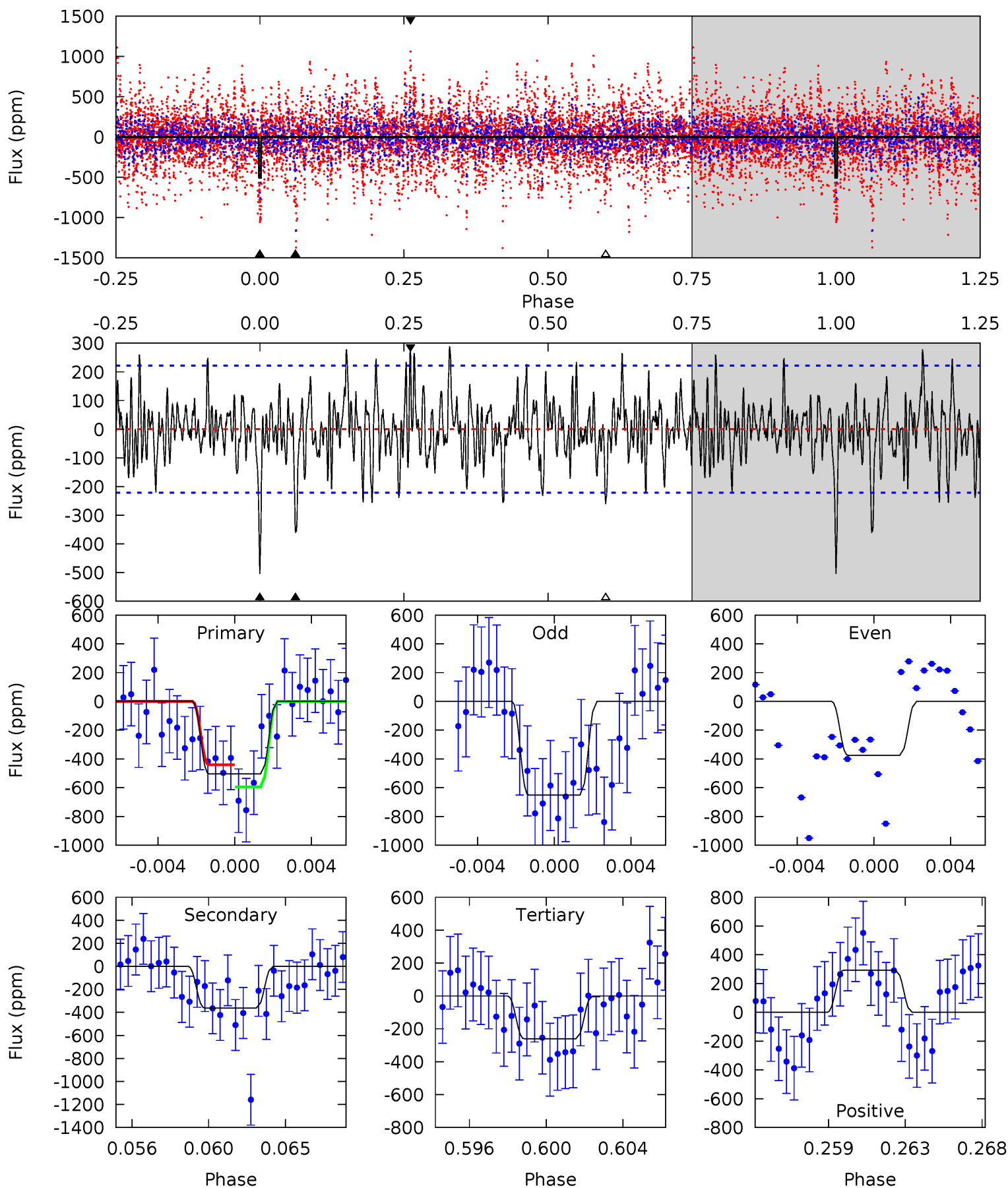
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.4	6.74	6.32	6.79	5.12	2.74	2.17	4.03	3.56	0.42	-0.05	5.53	0.90	0.40	1.34



Alt Model-Shift Uniqueness Test

005876187-02, P = 57.279182 Days, E = 90.962323 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.8	8.46	6.10	6.86	5.19	2.85	2.10	5.70	4.93	2.36	1.59	3.17	1.11	0.37	1.77



Stellar Parameters For KIC 005876187

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6846^{+82}_{-82}	$4.069^{+0.143}_{-0.117}$	$-0.080^{+0.200}_{-0.150}$	$1.837^{+0.325}_{-0.325}$	$1.444^{+0.115}_{-0.115}$	$0.328^{+0.233}_{-0.117}$
	+1%/-1%	+4%/-3%	+250%/-188%	+18%/-18%	+8%/-8%	+71%/-36%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 005876187-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-215 ± 32	$3.10^{+1.37}_{-1.33}$	998^{+47}_{-47}	6635^{+2462}_{-1126}	1324^{+2563}_{-713}
Alt.	-362 ± 43	$5.05^{+1.52}_{-1.32}$	1000^{+48}_{-49}	5899^{+974}_{-642}	837^{+702}_{-345}

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 $A_{obs} \gg 1.0$

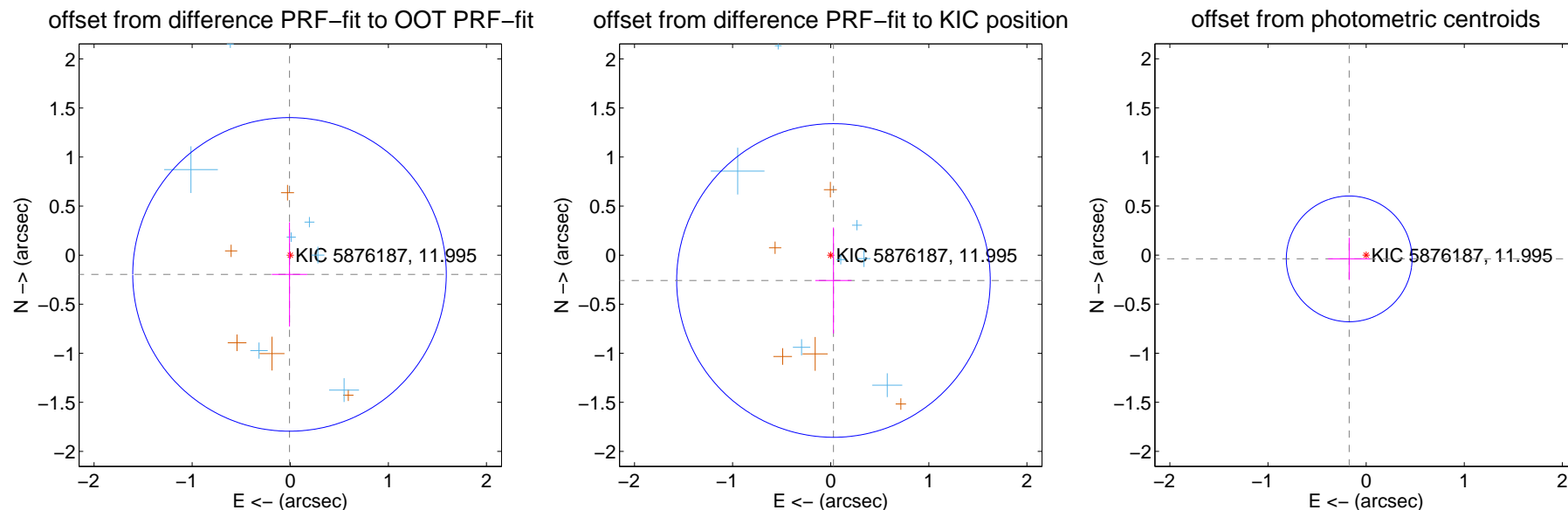
DV Centroid Data

Supplemental centroid analysis for 005876187-02. **Kepler magnitude: 11.99.** Transit SNR 8.37

There are 7 quarters with good PRF difference image offsets

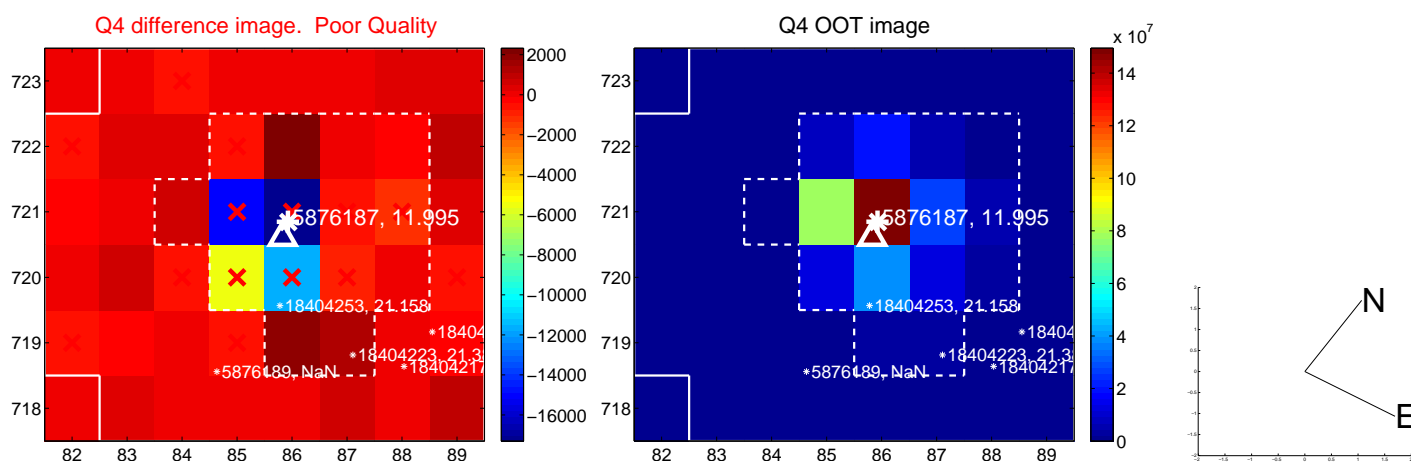
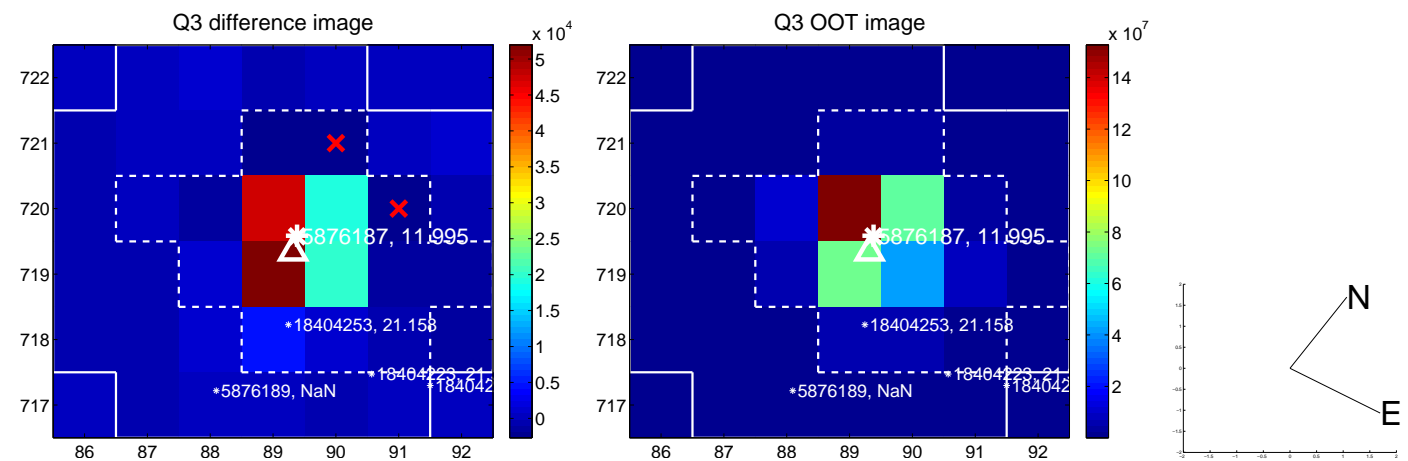
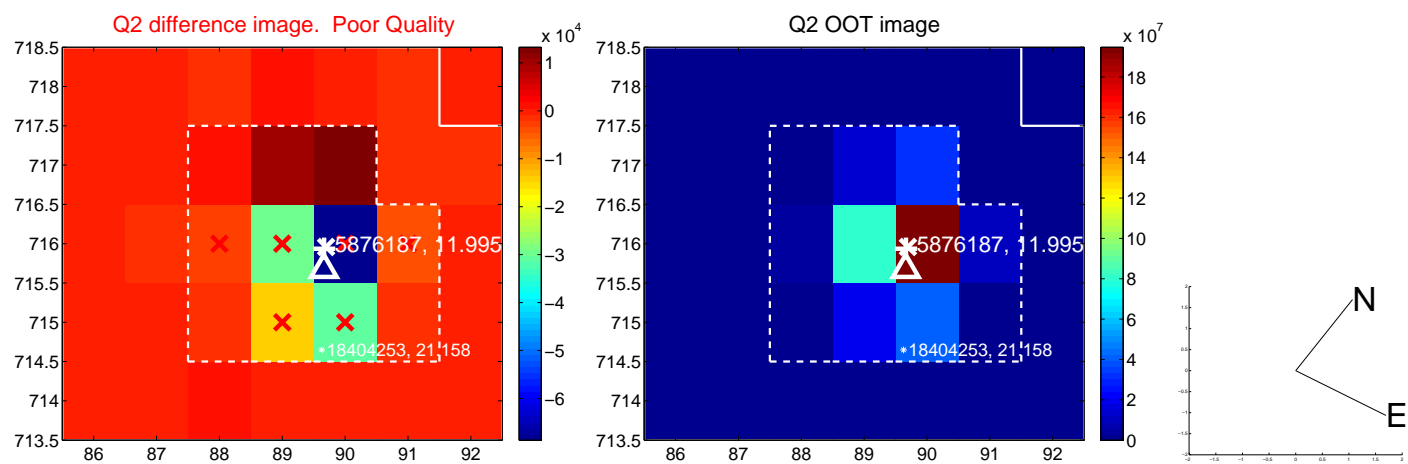
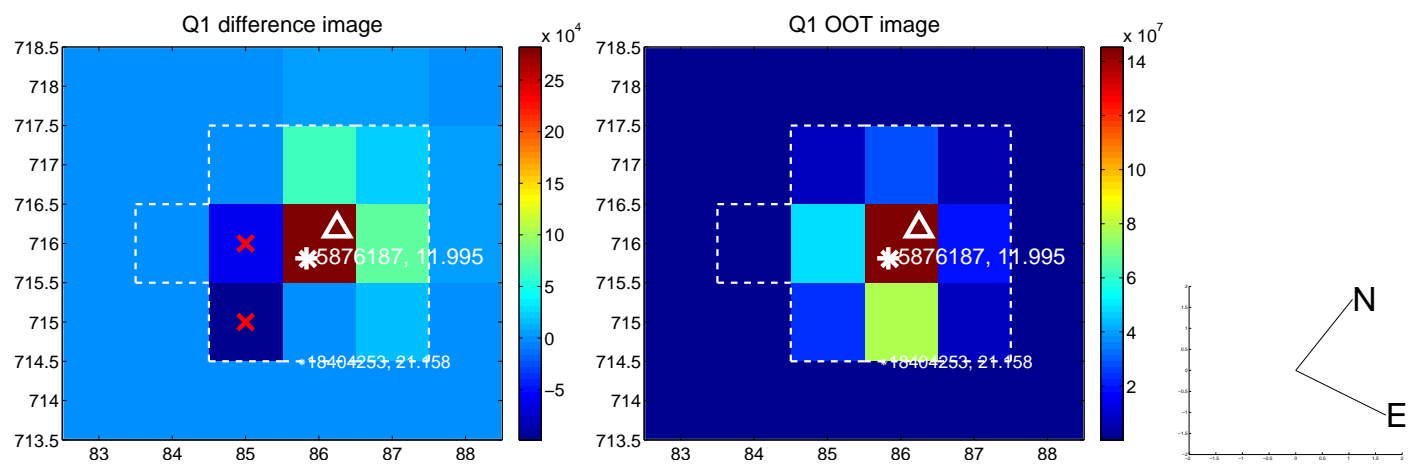
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.197 ± 0.533	0.37	0.008 ± 0.181	-0.196 ± 0.531
PRF-fit source offset from KIC position	0.260 ± 0.533	0.49	-0.028 ± 0.185	-0.258 ± 0.540
photometric centroid source offset	0.18 ± 0.21	0.83	0.17 ± 0.21	-0.04 ± 0.22

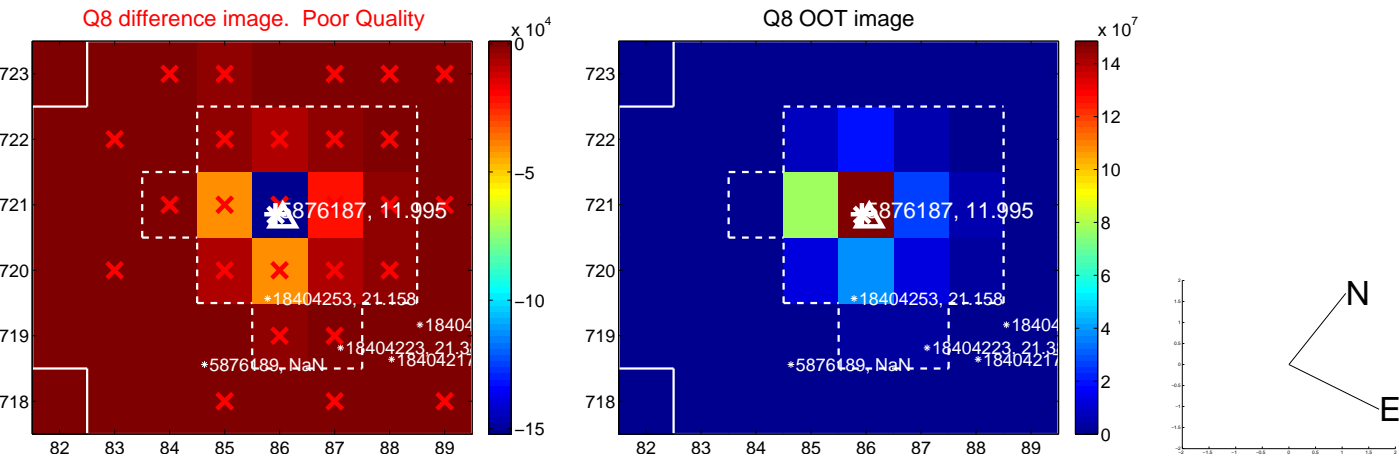
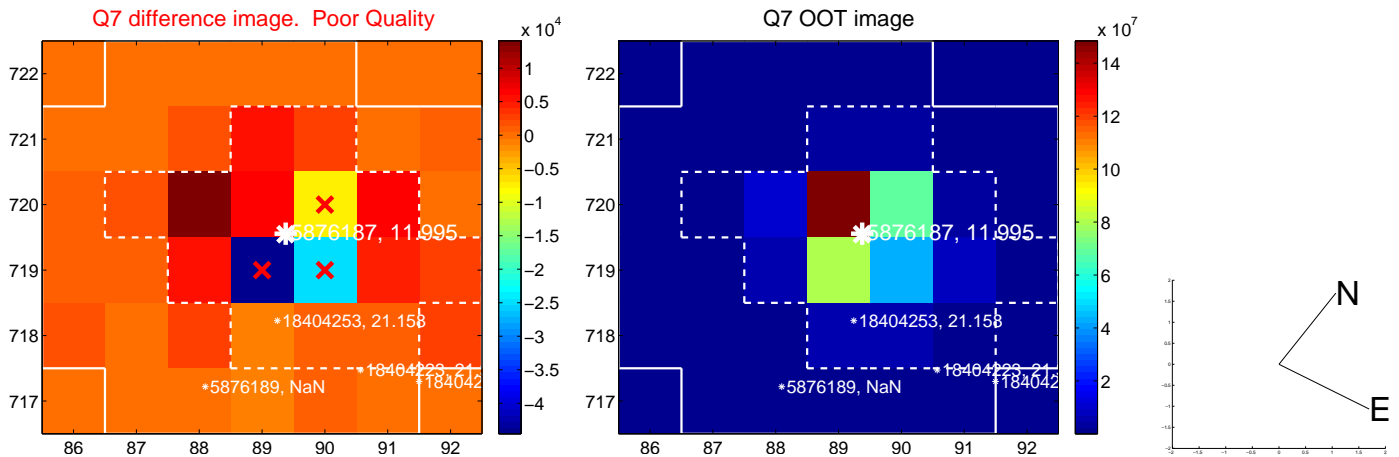
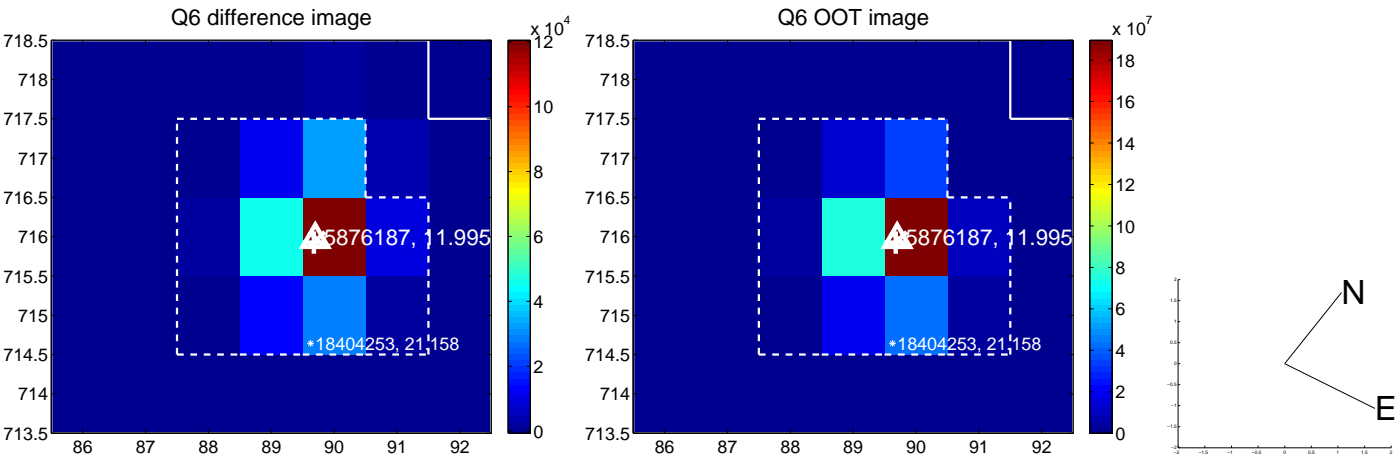
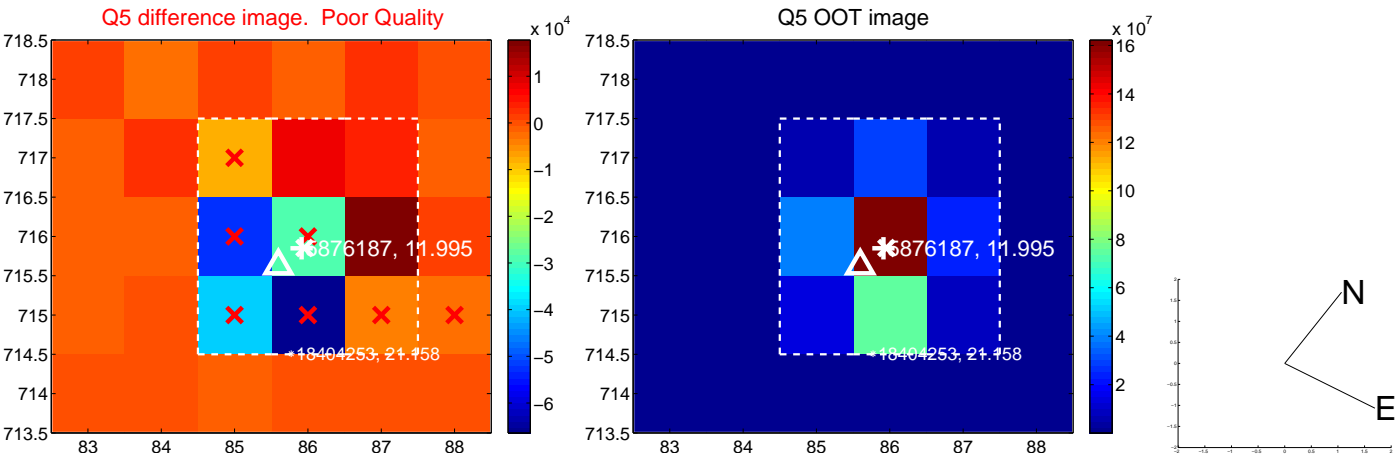


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

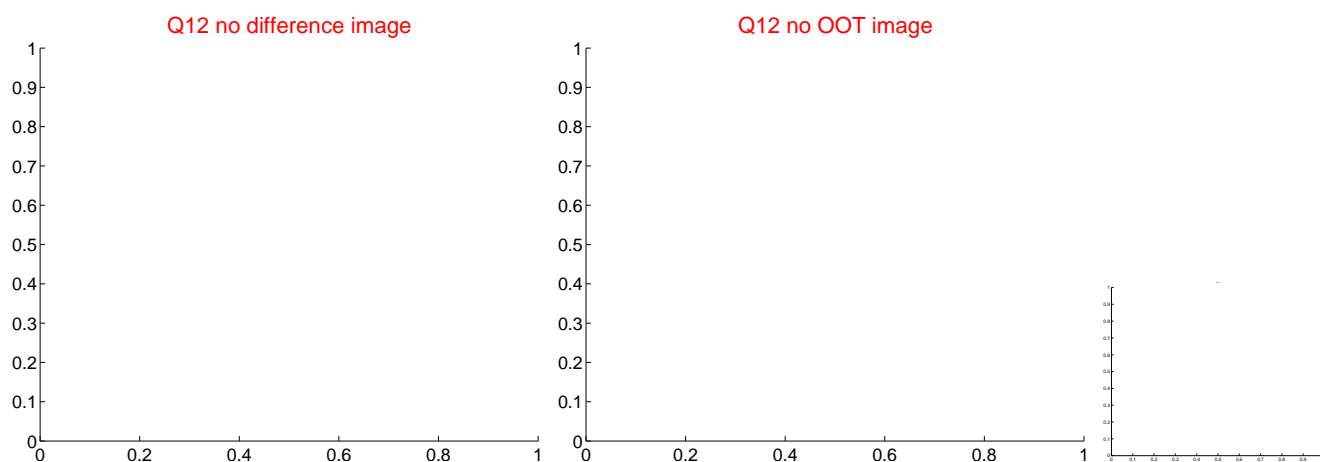
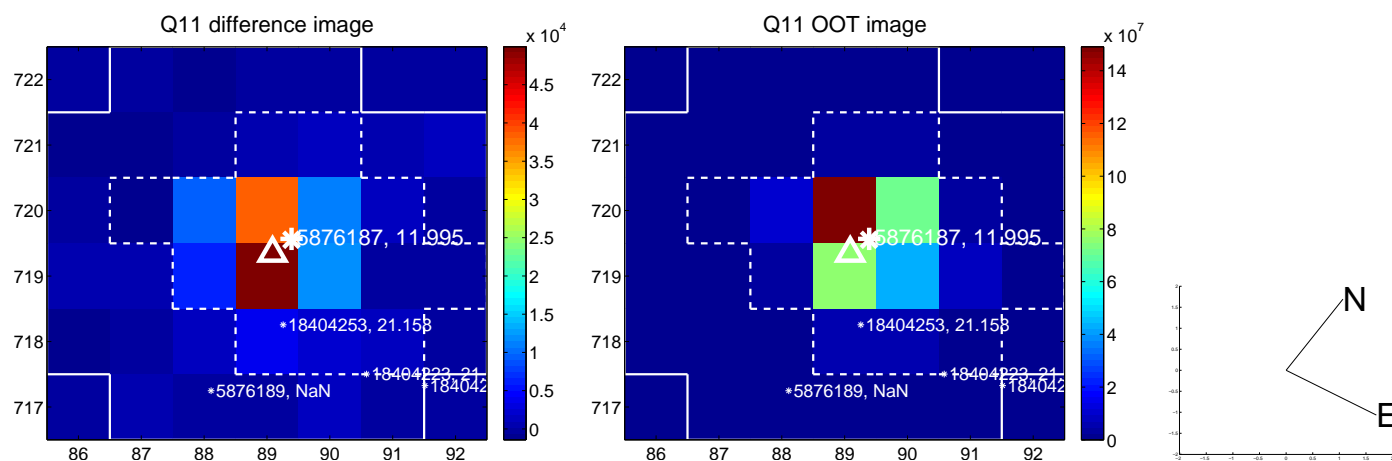
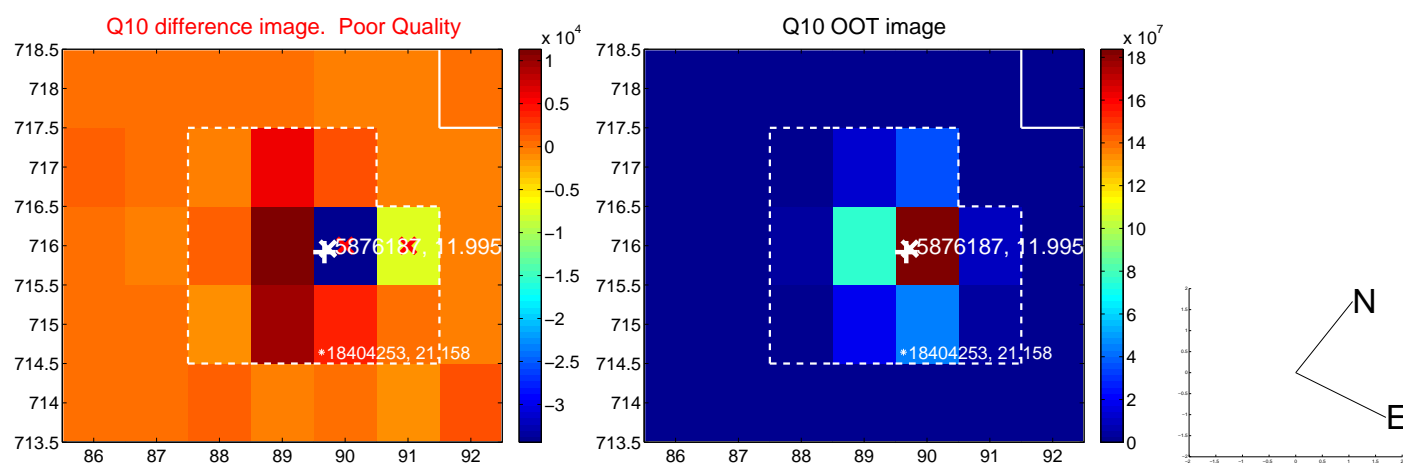
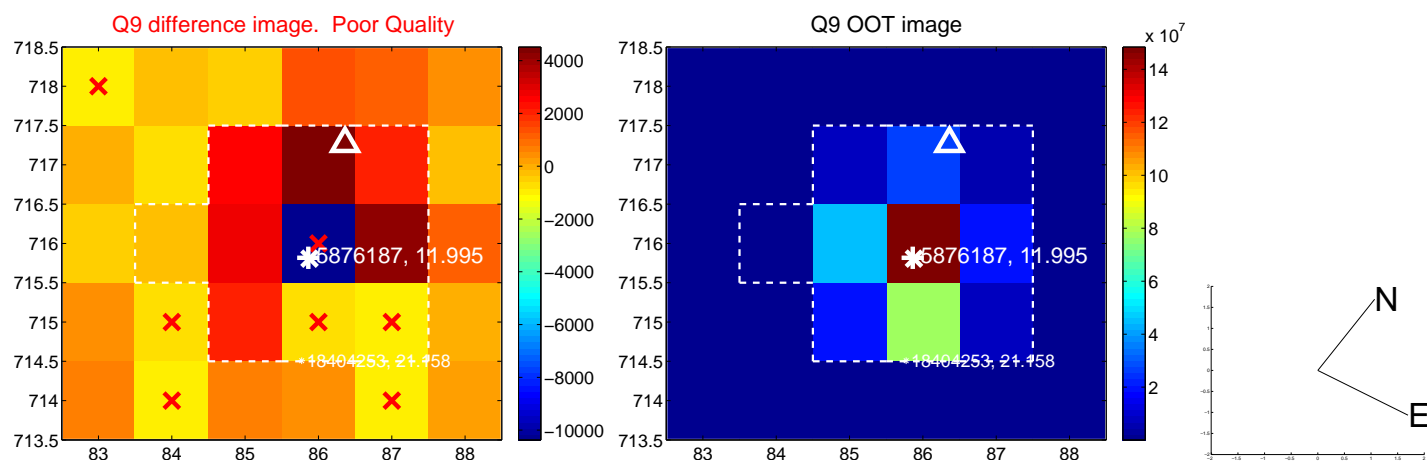
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



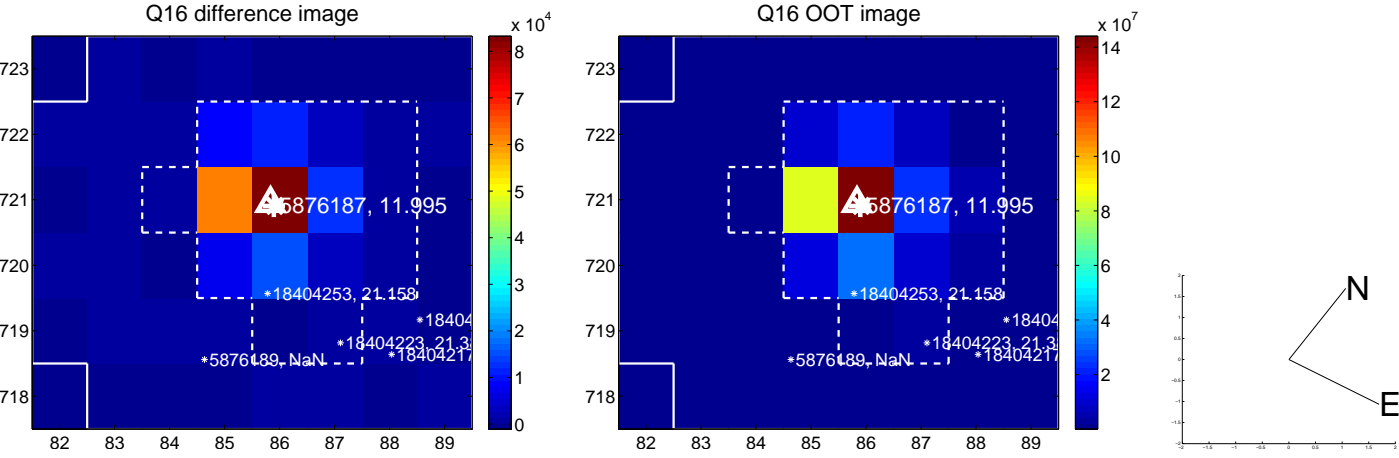
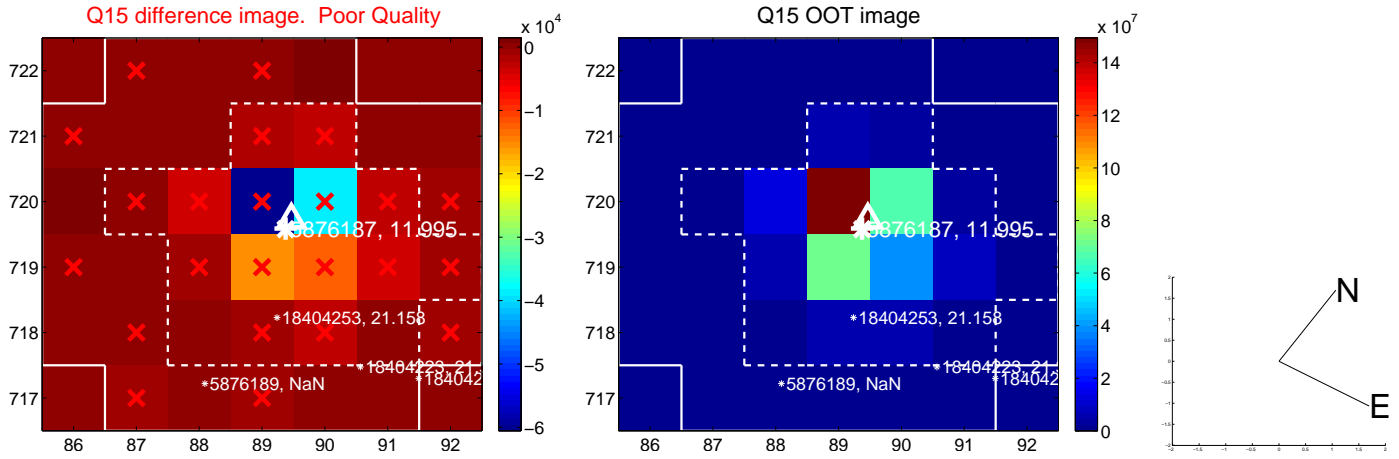
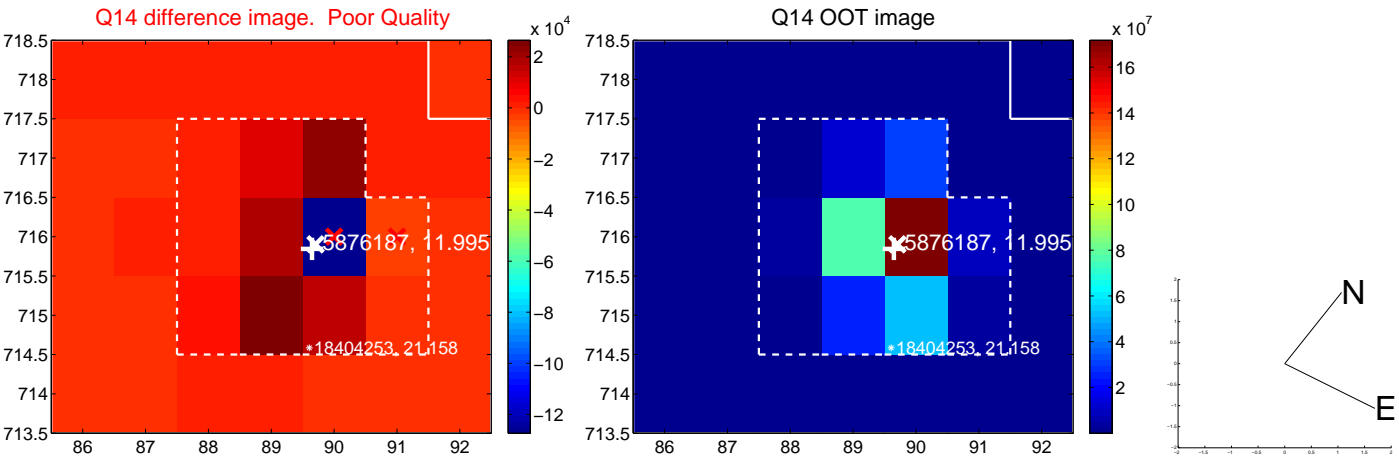
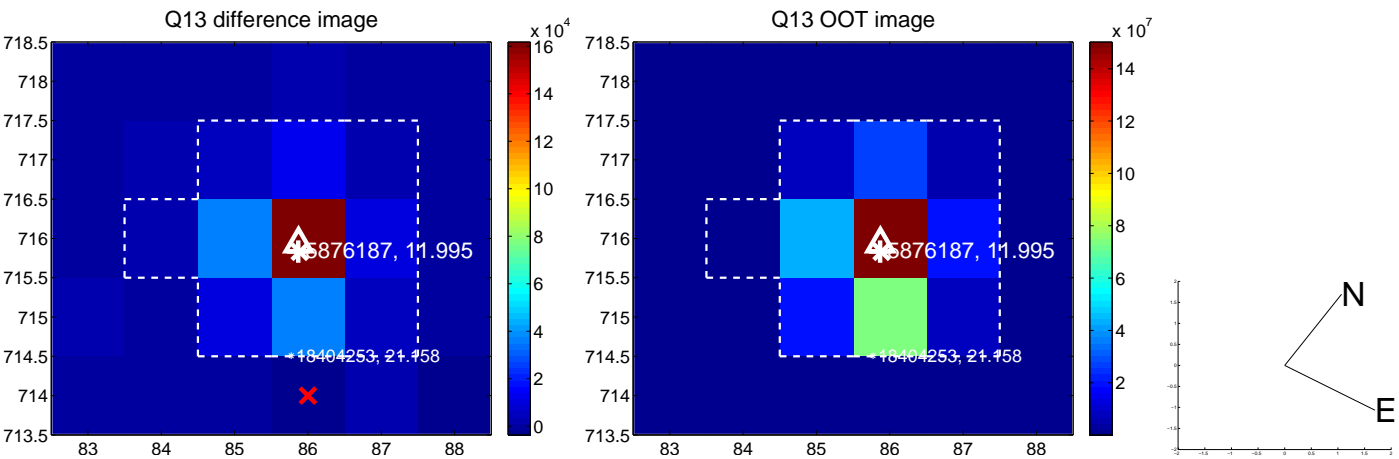
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



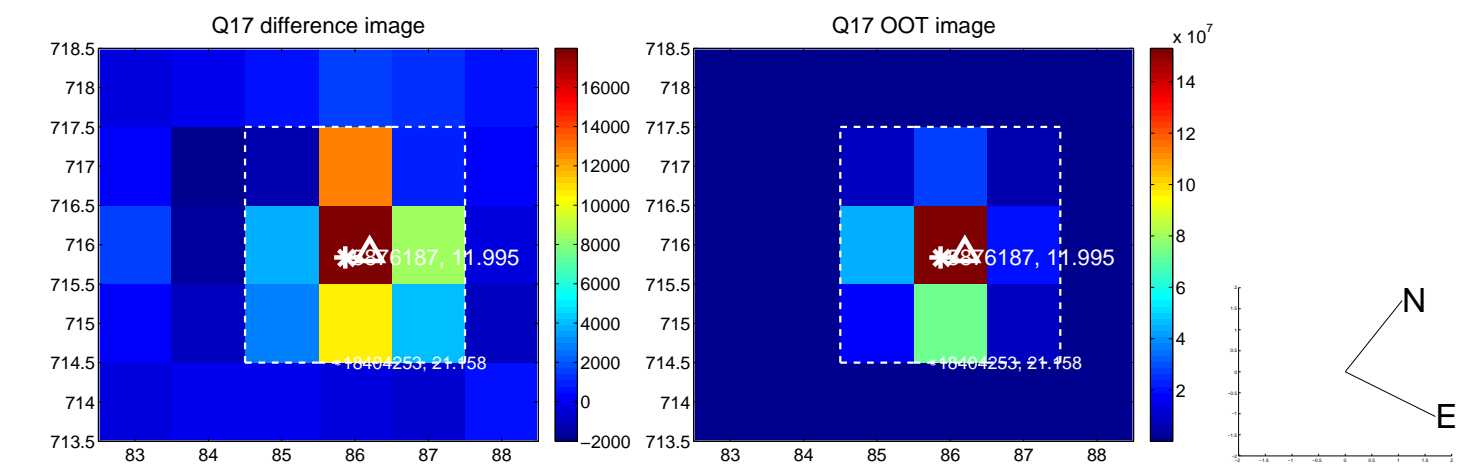
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



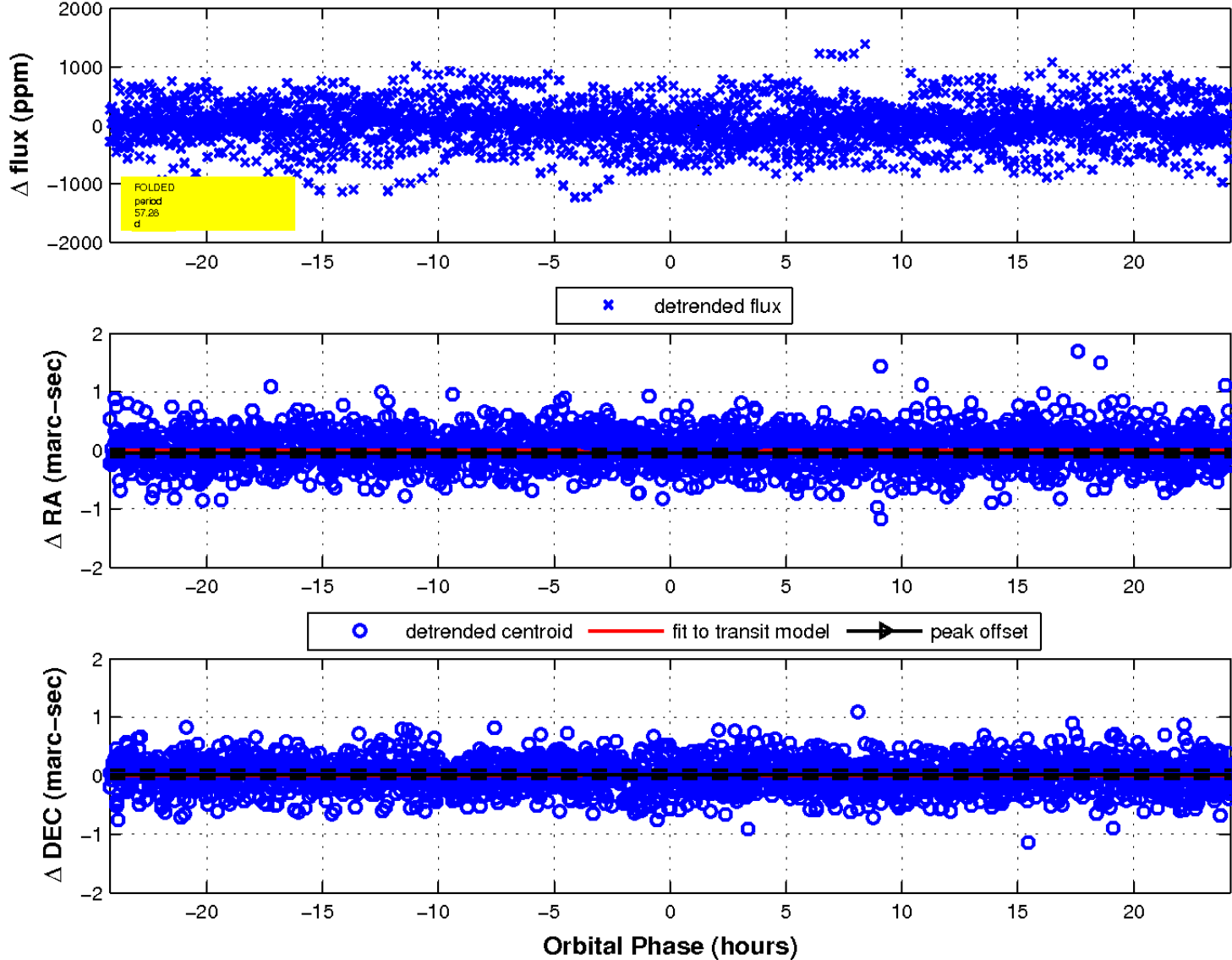
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

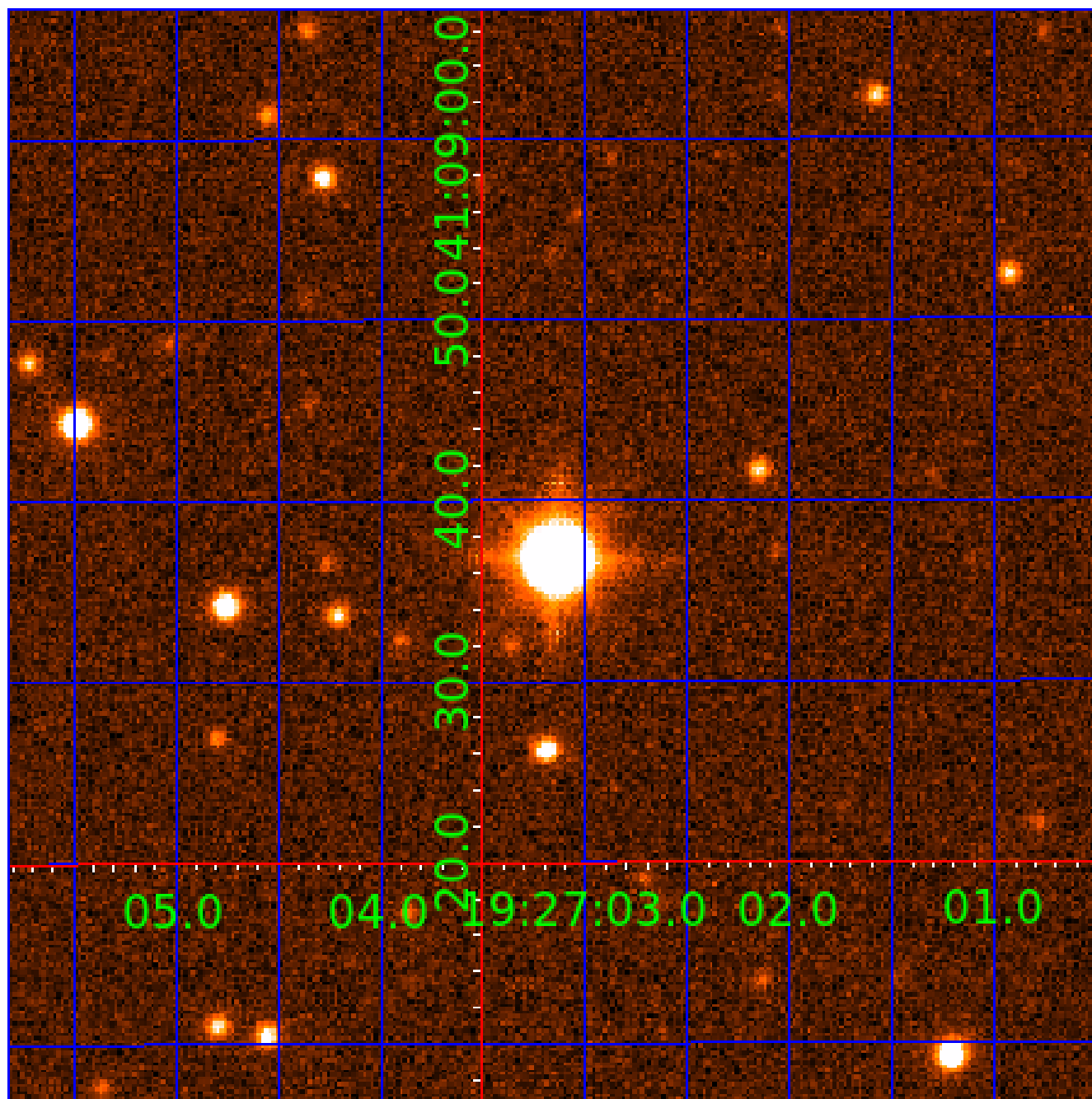


fluxWeightedCentroids, Planet 2 of 9



UKIRT Image

Declination



KIC 005876187

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})
005876187-01	OBS	No	1.713992	131.912139	6.2	11.737	10.7	2.3	1.84	6846	0.46	6617.64
005876187-02	OBS	No	57.276541	148.277502	248.9	8.067	12.6	8.4	1.84	6846	3.12	61.48
005876187-03	OBS	No	37.440682	154.129756	259.4	10.148	12.7	10.9	1.84	6846	3.26	108.37
005876187-04	OBS	No	15.895752	131.868485	139.1	3.611	11.7	6.9	1.84	6846	2.42	339.63
005876187-05	OBS	No	61.156781	167.602539	669.8	7.383	13.3	10.1	1.84	6846	9.01	56.34
005876187-06	OBS	No	74.472334	147.685145	406.0	4.447	11.3	8.0	1.84	6846	3.76	43.32
005876187-09	OBS	No	75.289242	162.348641	178.8	5.000	9.0	-1.0	1.84	6846	2.48	42.70

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005876187-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005876187-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—HALO_GHOST
005876187-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005876187-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005876187-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005876187-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005876187-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

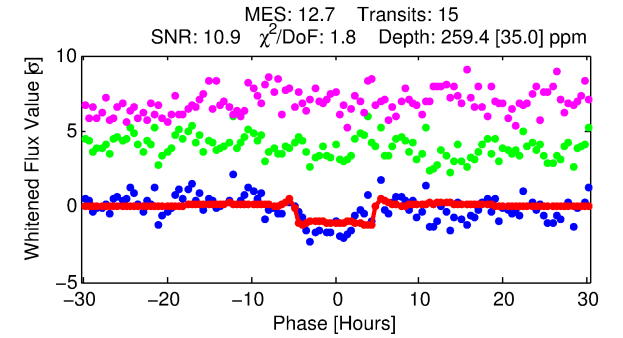
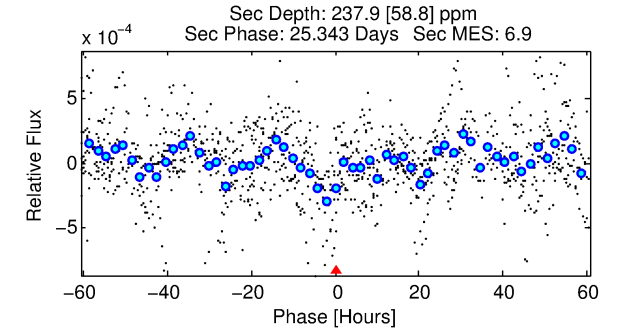
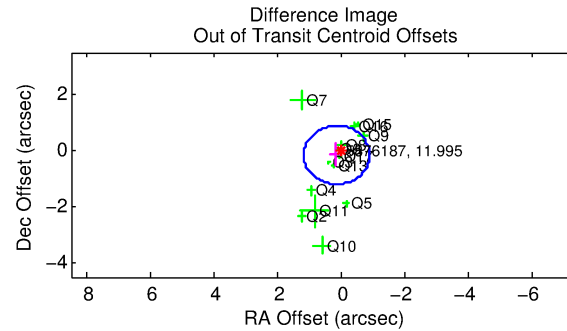
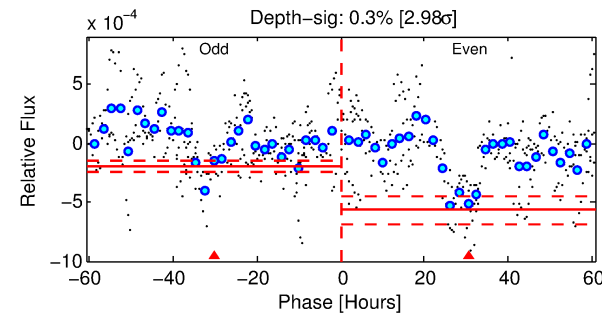
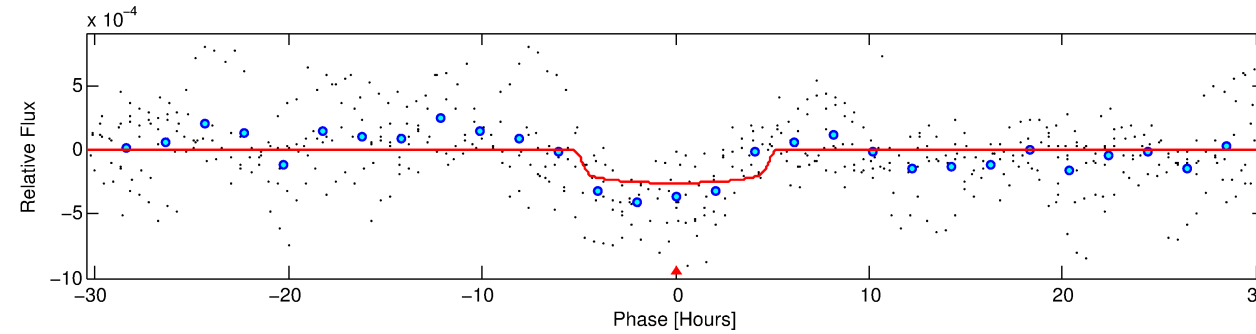
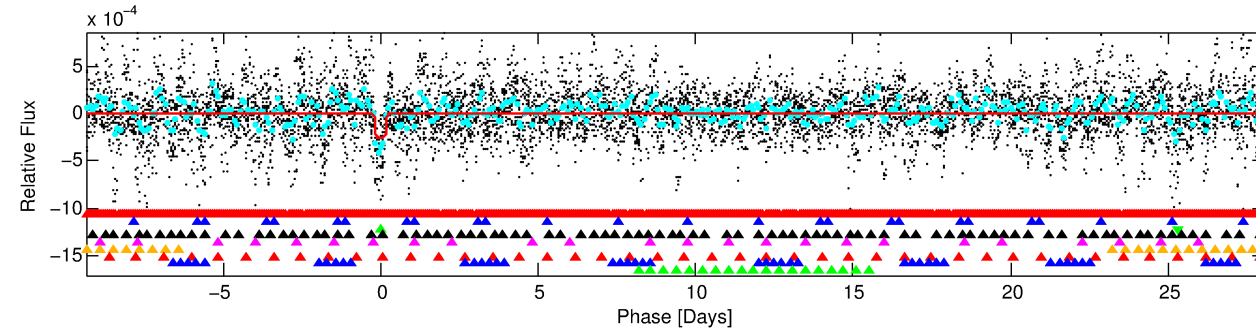
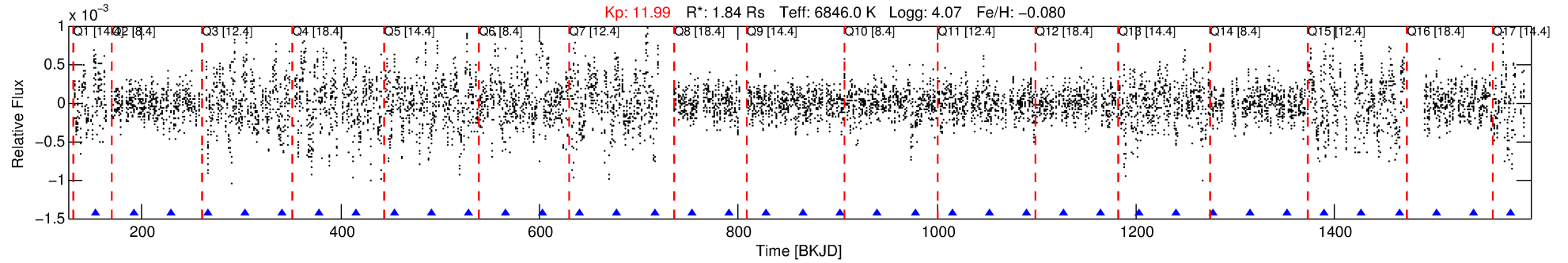
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005876187-03

No Significant Match Found

DV One-Page Summary

KIC: 5876187 Candidate: 3 of 9 Period: 37.441 d



DV Fit Results:

Period = 37.44068 [0.00051] d
Epoch = 154.1298 [0.0117] BKJD
Rp/R* = 0.0163 [0.0039]
a/R* = 17.76 [22.99]
b = 0.80 [0.59]
Seff = 108.37 [27.50]
Teff = 823 [52] K
Rp = 3.26 [0.97] Re
a = 0.2476 [0.0399] AU
Ag = 753.91 [445.35] [1.69 σ]
Teffp = 6665 [896] K [6.51 σ]

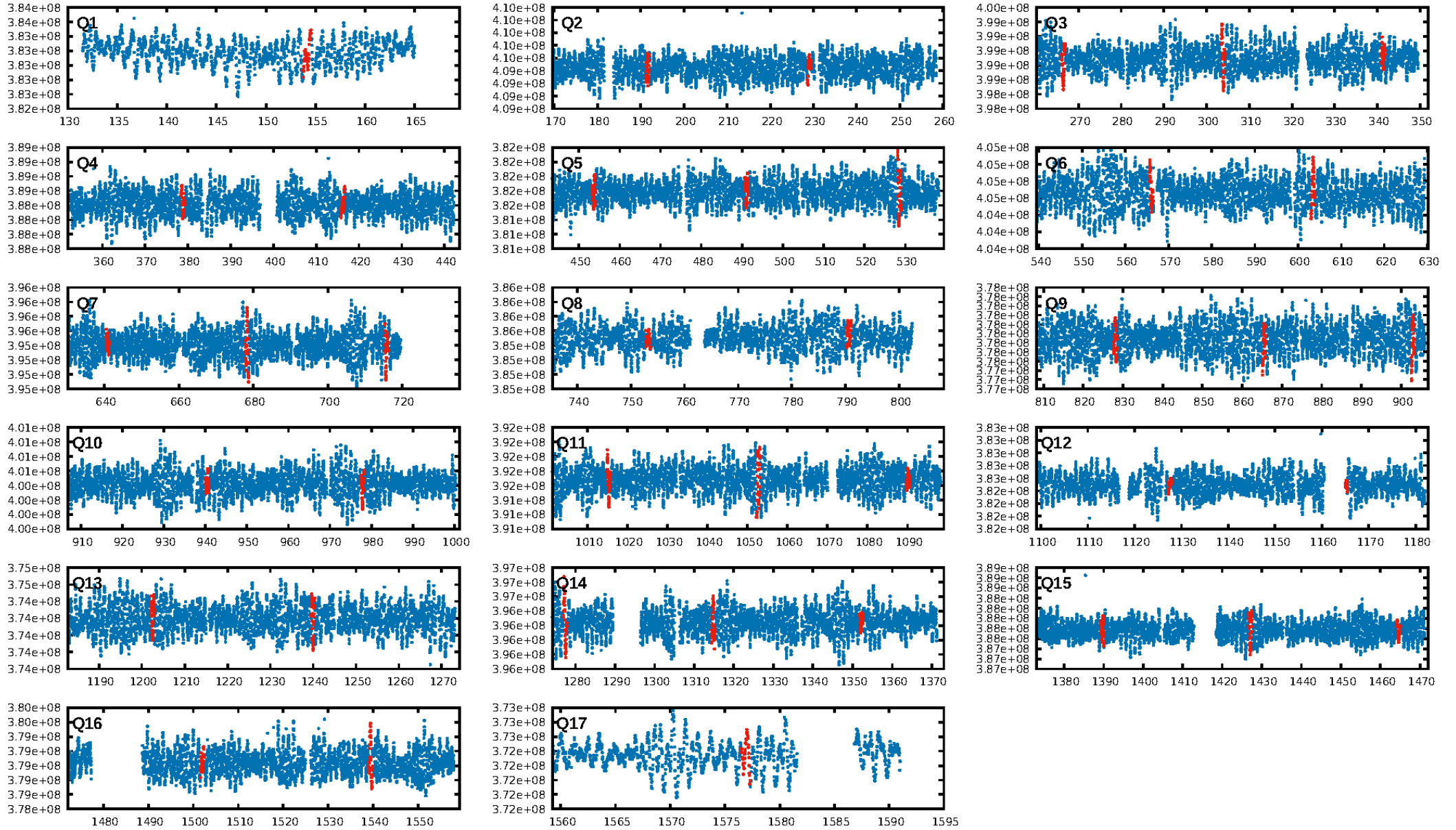
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [9.53 σ]
LongPeriod-sig: 100.0% [36.72 σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [15/15]
GhostDiagnostic-chr: 1.682
Centroid-sig: 82.5%
Centroid-so: 0.088 arcsec [0.58 σ]
OotOffset-rm: 0.216 arcsec [0.62 σ]
KicOffset-rm: 0.259 arcsec [0.65 σ]
OotOffset-st: 3/4/3/4 [14]
KicOffset-st: 3/4/3/4 [14]
DiffImageQuality-fgm: 0.57 [8/14]
DiffImageOverlap-fno: 0.00 [0/16]

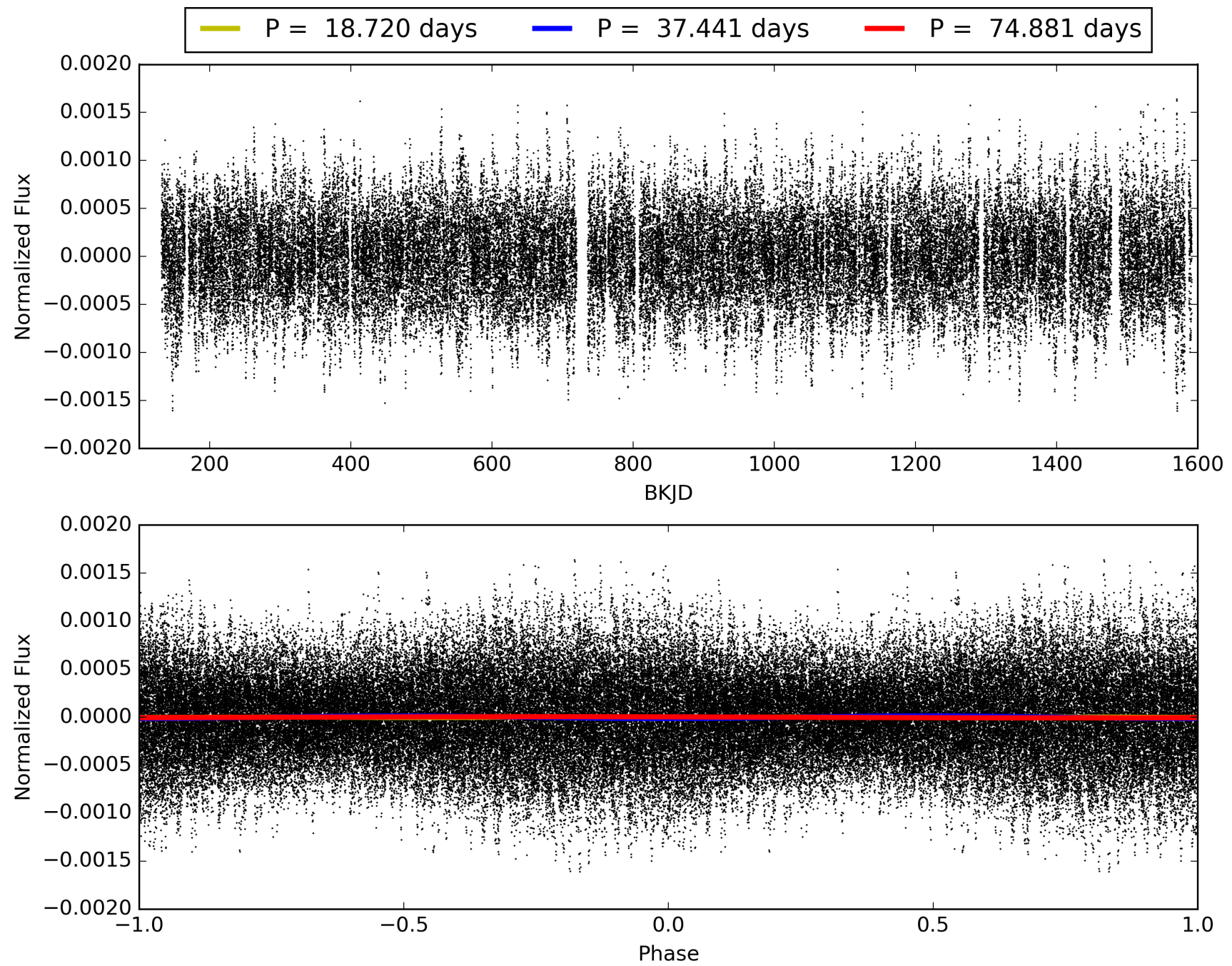
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 09:12:47 Z

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

TCE 005876187-03, PDC Light Curves

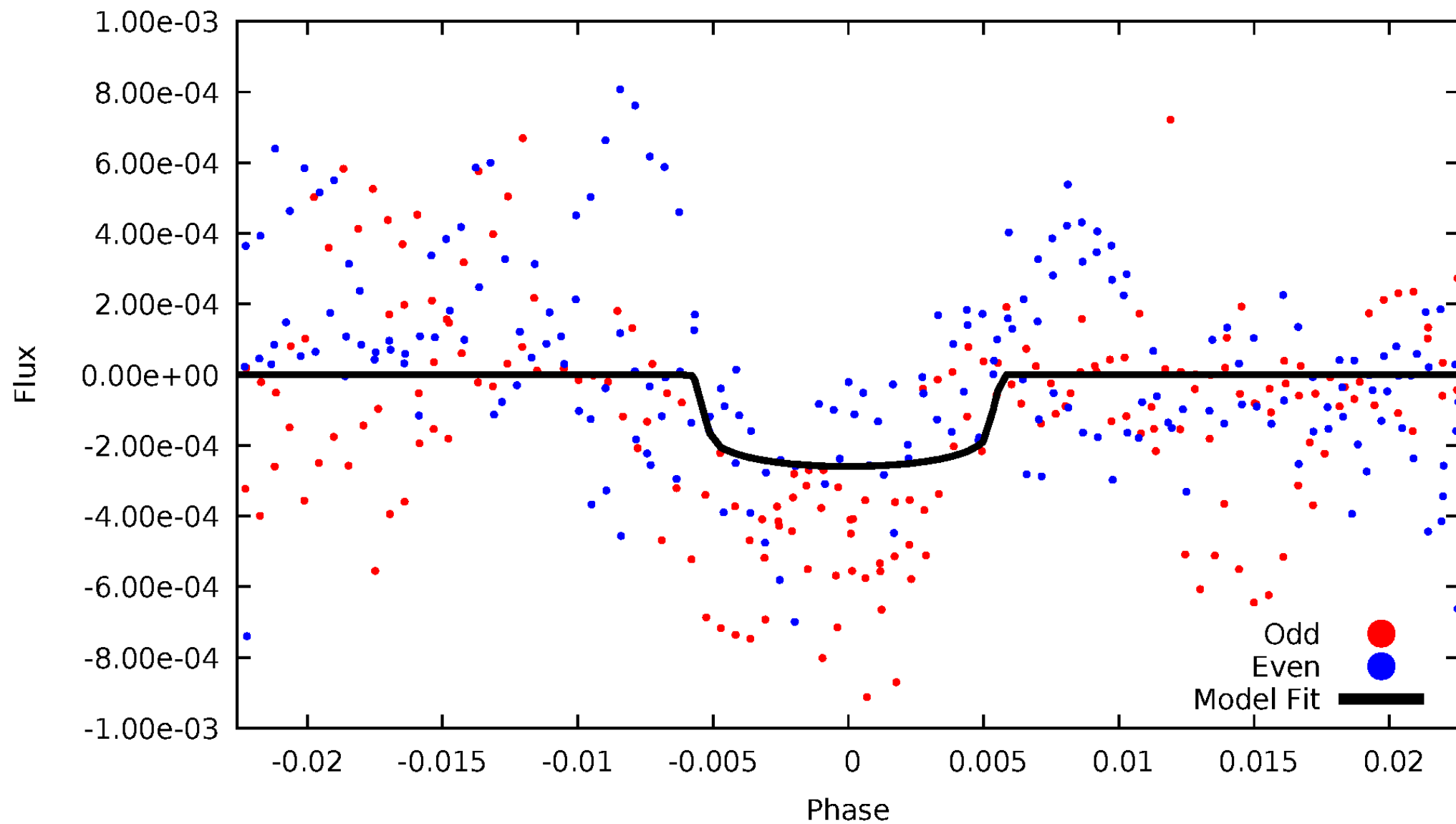


TCE 005876187-03



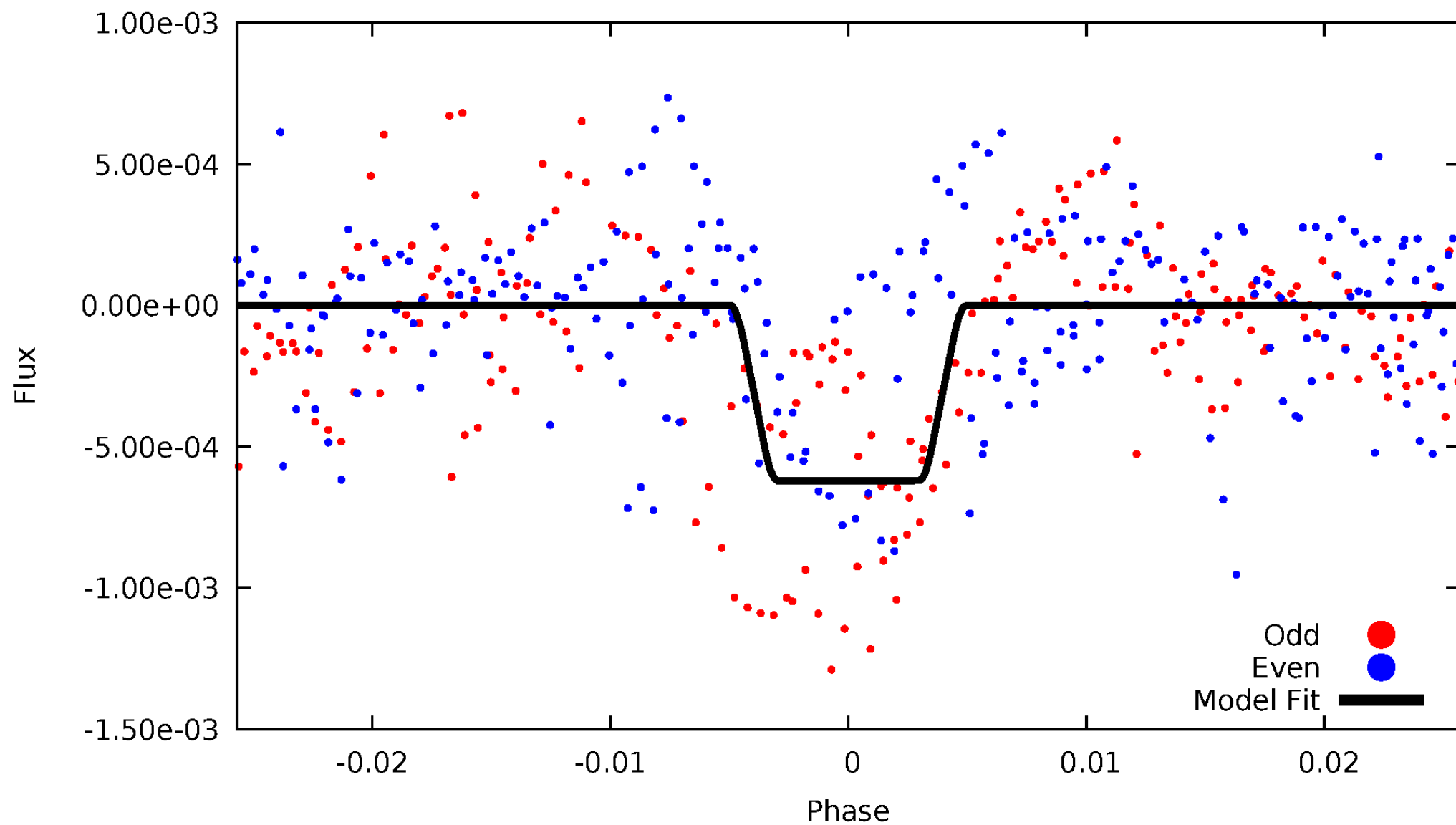
DV Odd/Even

TCE 005876187-03



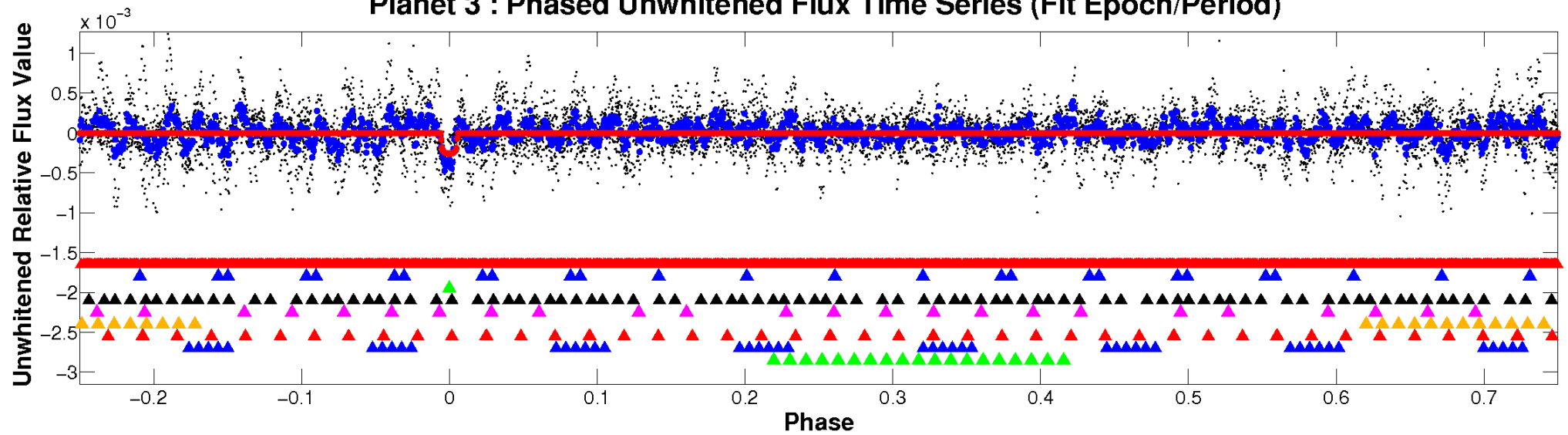
ALT Odd/Even

TCE 005876187-03

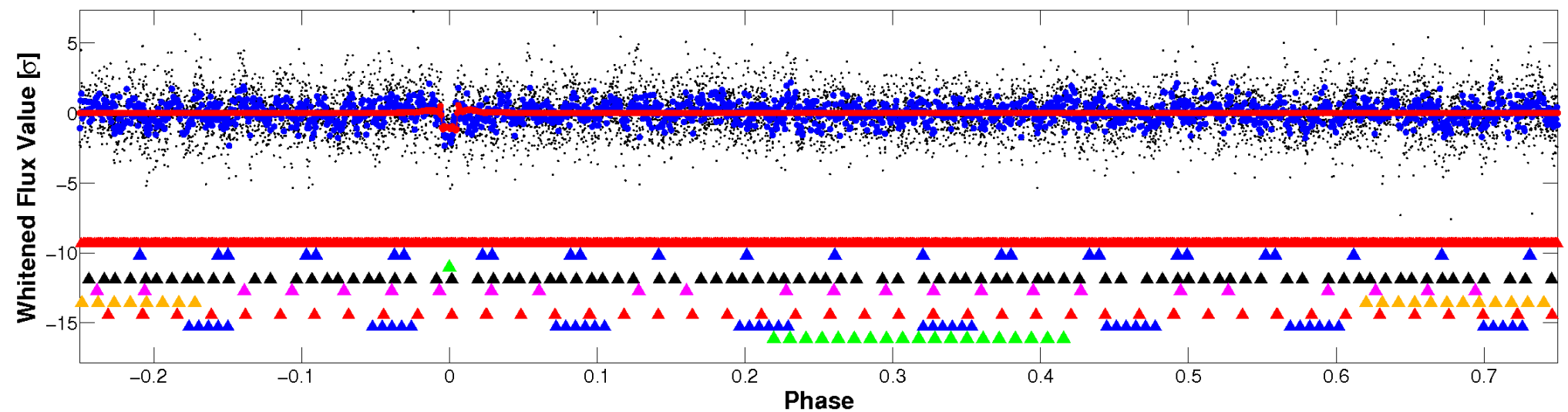


Non-Whitened Vs. Whitened Light Curve

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

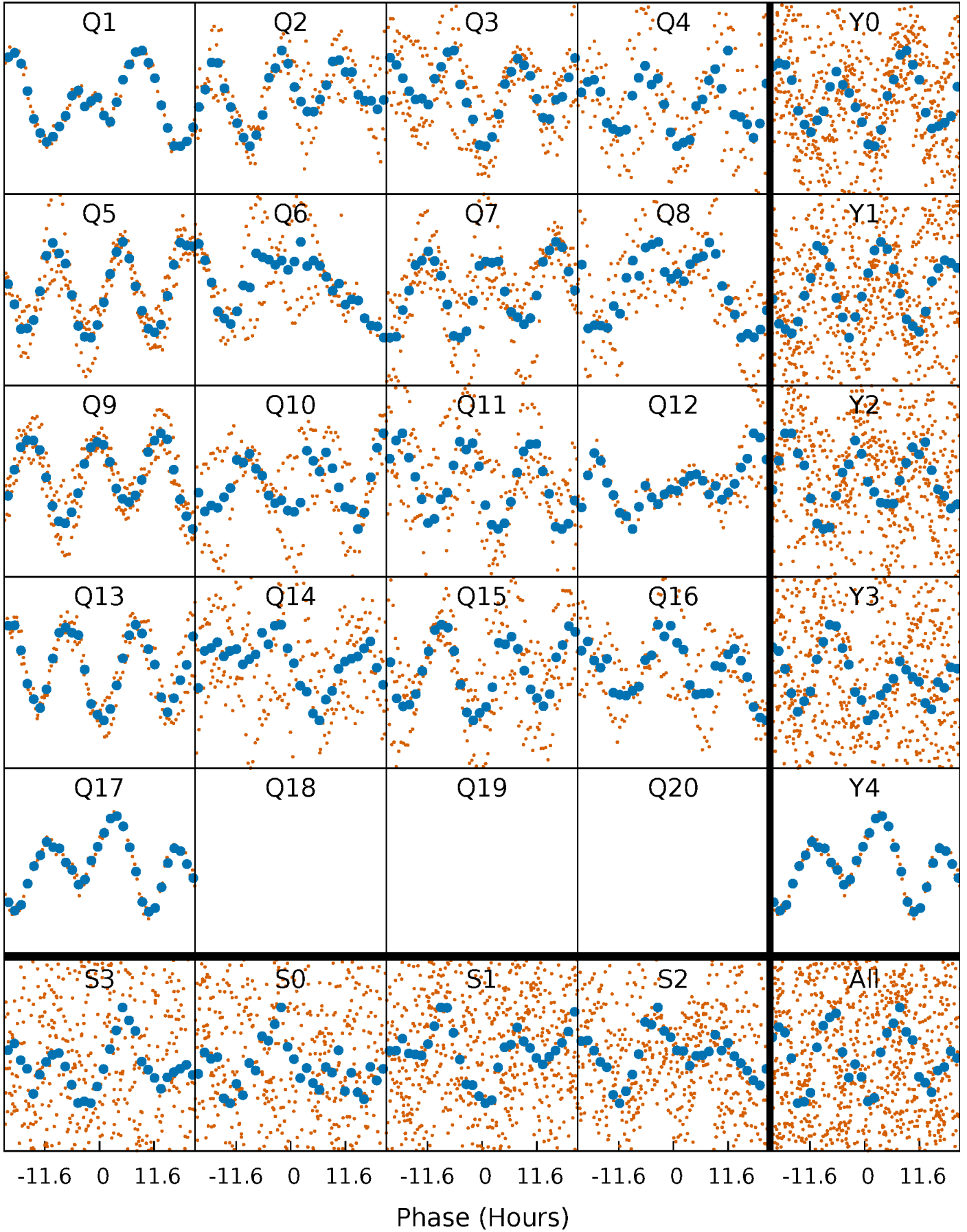


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



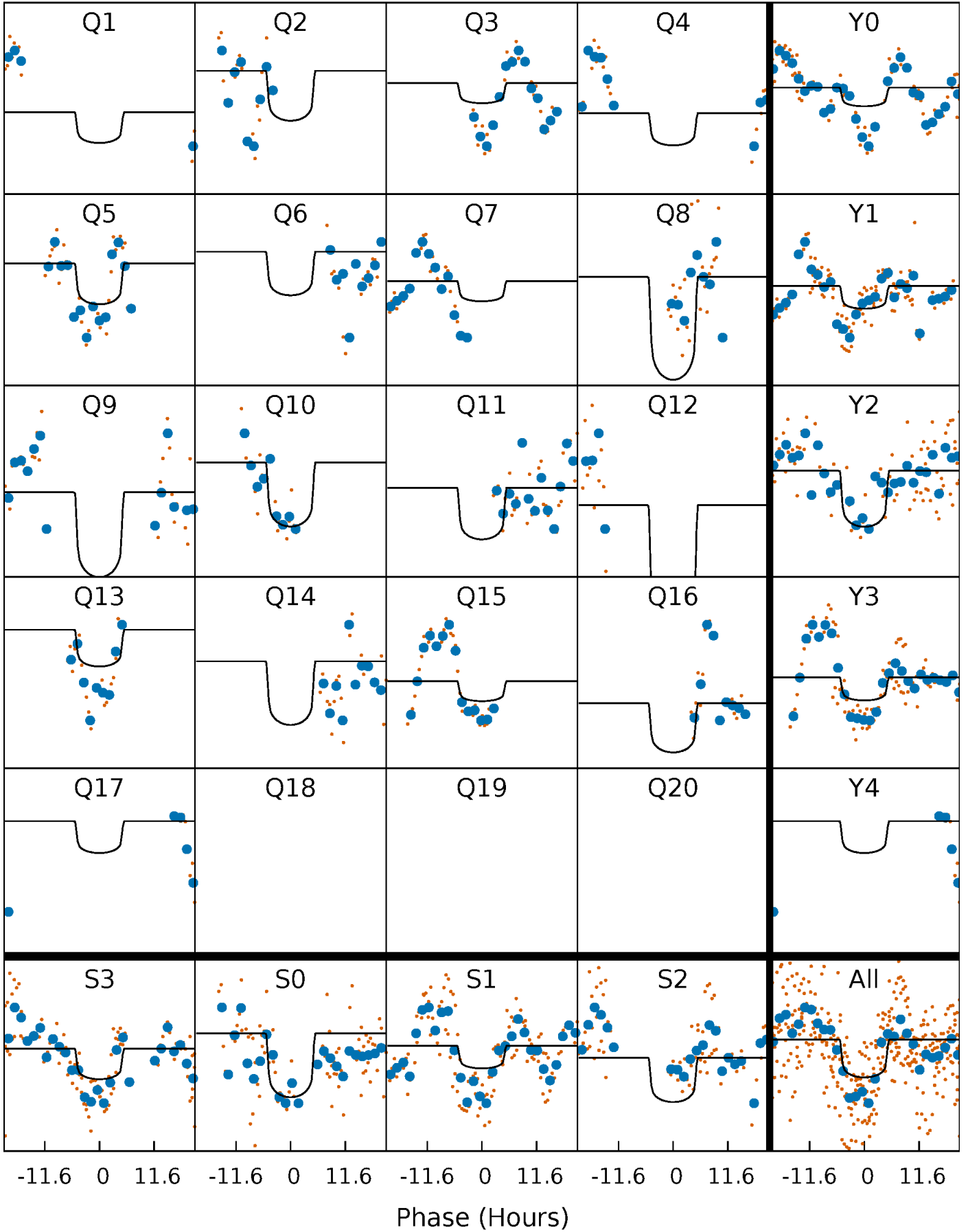
PDC Quarter-Phased Transit Curves

TCE 005876187-03 P= 37.440682 Days $T_0=154.129756$ (BKJD)



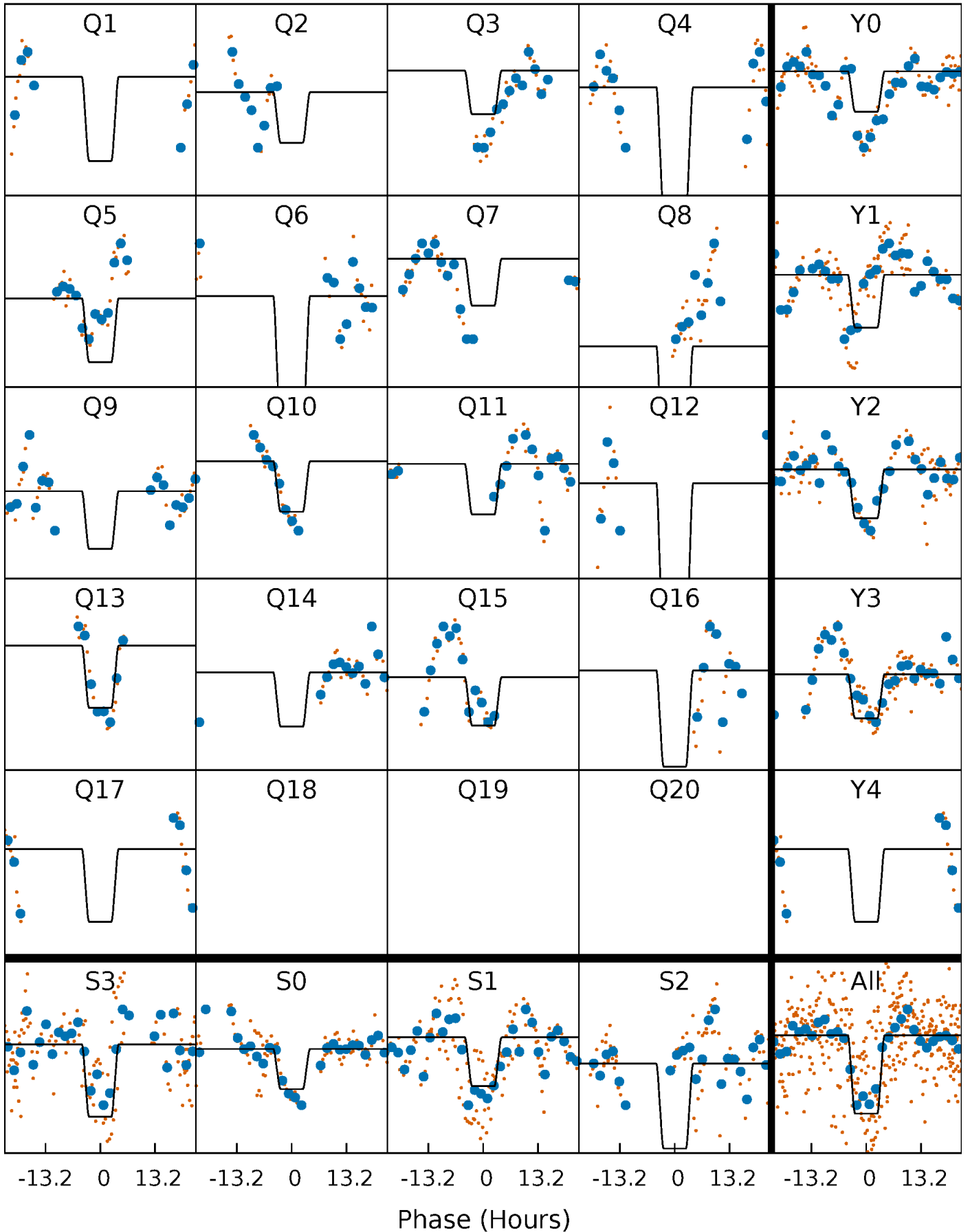
DV Quarter-Phased Transit Curves

TCE 005876187-03 P= 37.440682 Days $T_0=154.129756$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

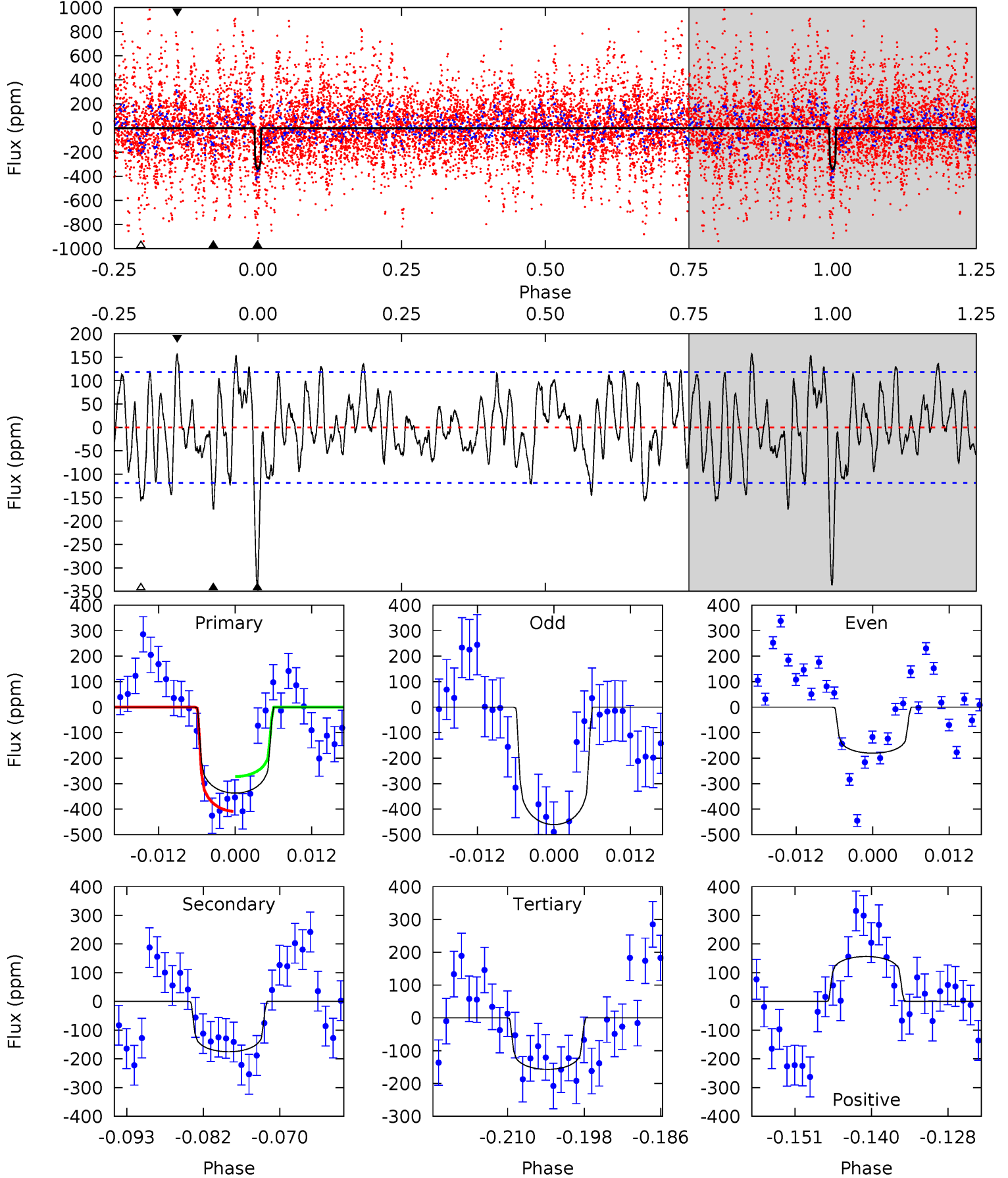
TCE 005876187-03 P= 37.439944 Days $T_0=154.122821$ (BKJD)



DV Model-Shift Uniqueness Test

005876187-03, P = 37.440682 Days, E = 116.689074 Days

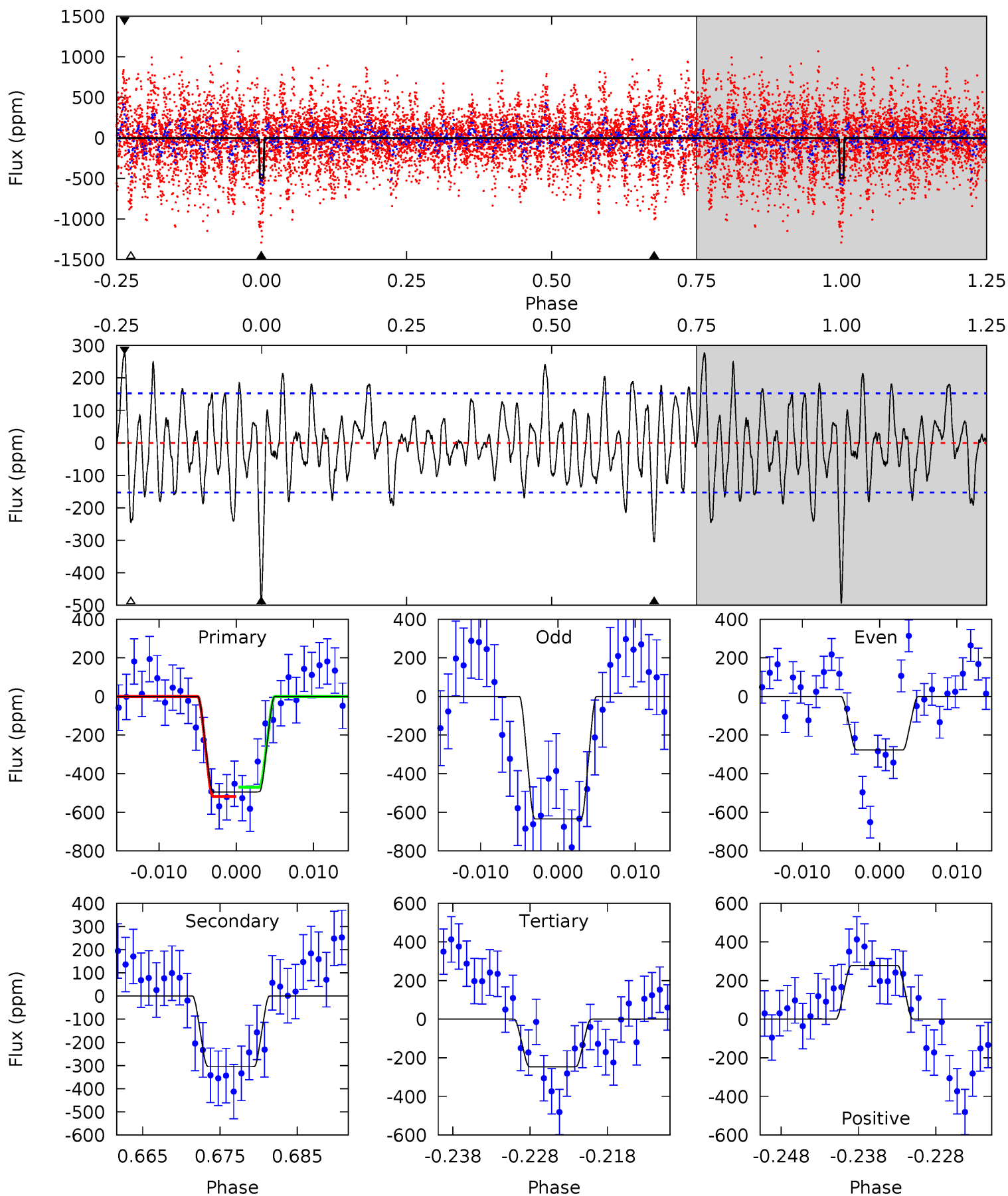
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.2	7.41	6.64	6.61	5.00	2.52	2.69	7.60	7.63	0.77	0.79	5.83	1.09	0.32	2.85



Alt Model-Shift Uniqueness Test

005876187-03, P = 37.439944 Days, E = 116.682877 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.3	10.0	8.10	9.13	5.03	2.58	3.10	8.17	7.13	1.93	0.89	5.76	1.07	0.36	0.78



Stellar Parameters For KIC 005876187

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6846^{+82}_{-82}	$4.069^{+0.143}_{-0.117}$	$-0.080^{+0.200}_{-0.150}$	$1.837^{+0.325}_{-0.325}$	$1.444^{+0.115}_{-0.115}$	$0.328^{+0.233}_{-0.117}$
	+1%/-1%	+4%/-3%	+250%/-188%	+18%/-18%	+8%/-8%	+71%/-36%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 005876187-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-175 ± 24	$3.20^{+0.82}_{-0.76}$	1149^{+52}_{-52}	6153^{+937}_{-592}	582^{+421}_{-227}
Alt.	-305 ± 30	$4.95^{+1.03}_{-0.83}$	1150^{+53}_{-59}	5705^{+526}_{-370}	422^{+185}_{-133}

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 $A_{obs} \gg 1.0$

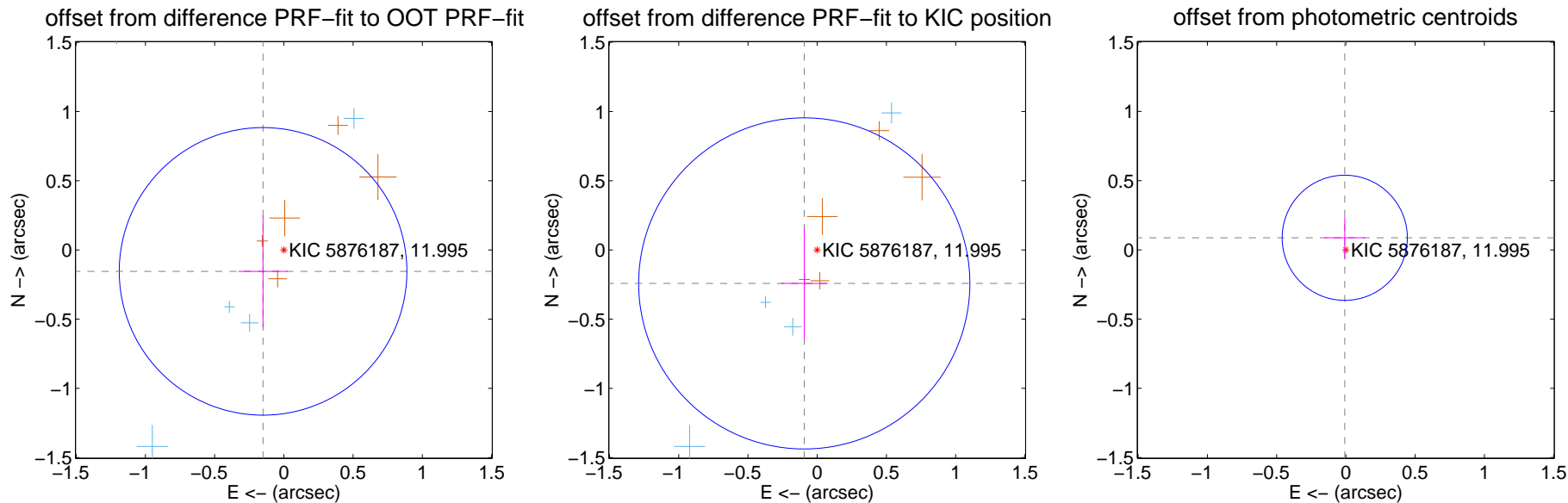
DV Centroid Data

Supplemental centroid analysis for 005876187-03. **Kepler magnitude: 11.99.** Transit SNR 10.87

There are 8 quarters with good PRF difference image offsets

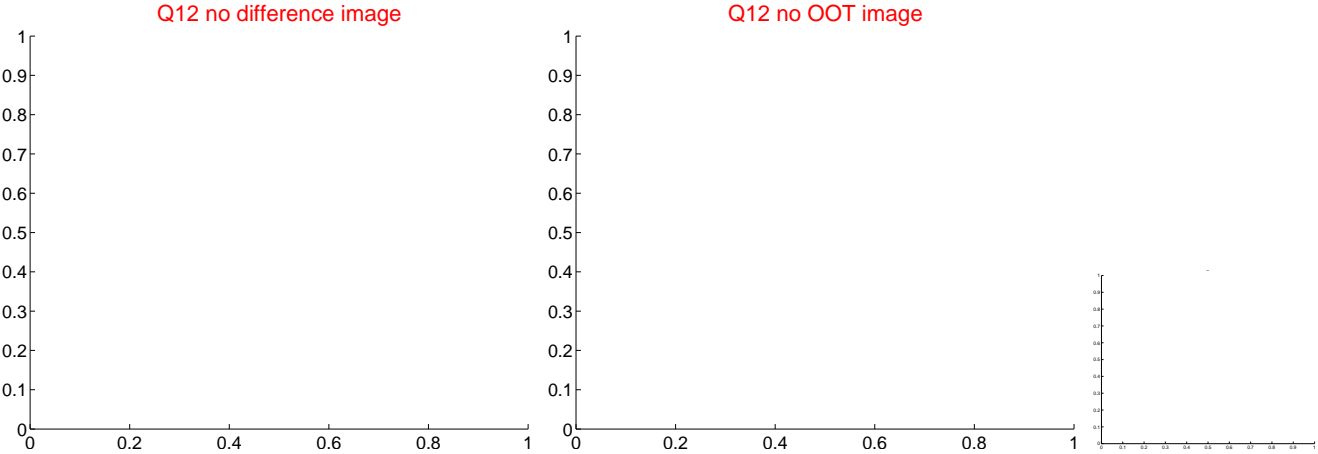
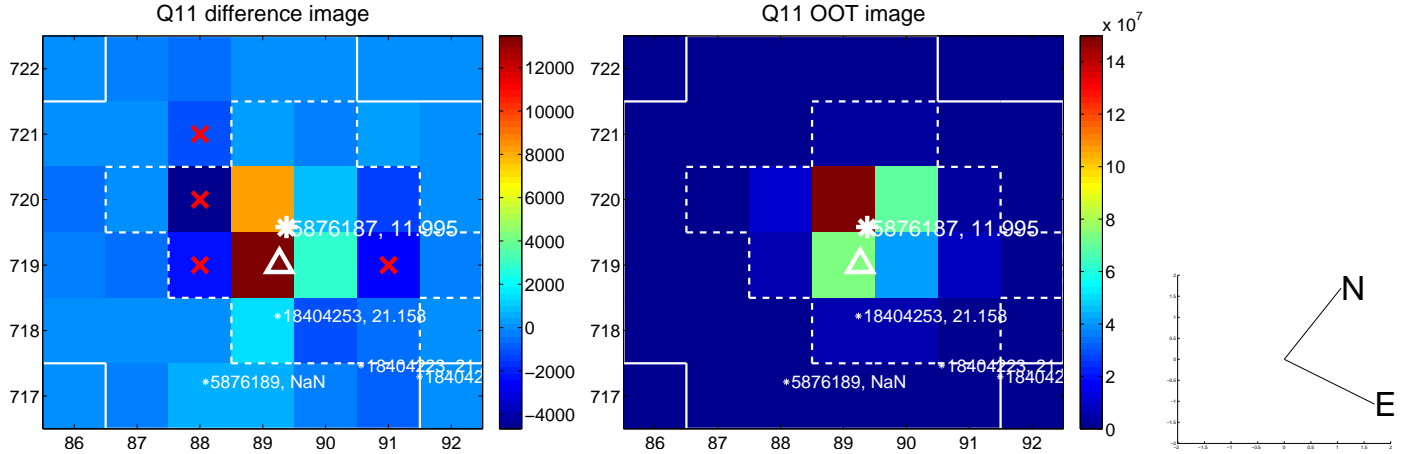
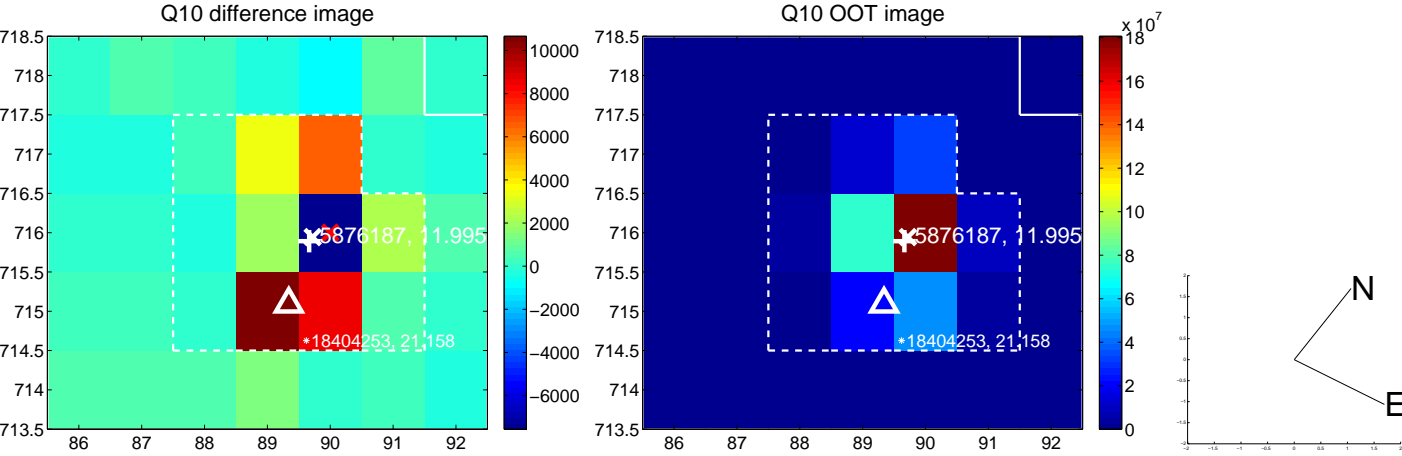
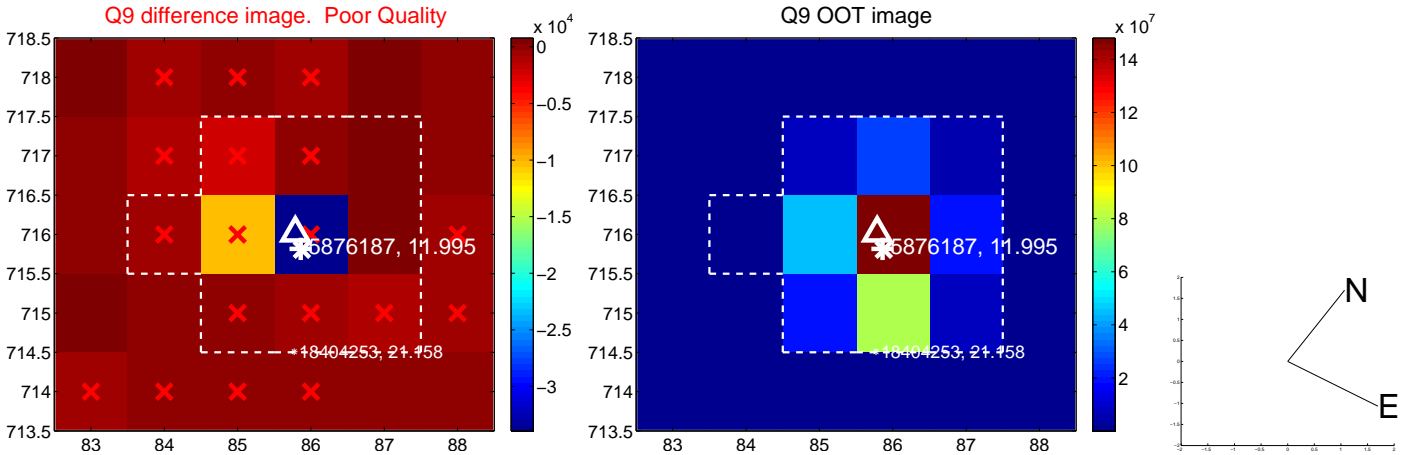
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.216 ± 0.346	0.62	0.150 ± 0.178	-0.155 ± 0.404
PRF-fit source offset from KIC position	0.259 ± 0.399	0.65	0.094 ± 0.169	-0.242 ± 0.403
photometric centroid source offset	0.09 ± 0.15	0.58	0.01 ± 0.15	0.09 ± 0.15

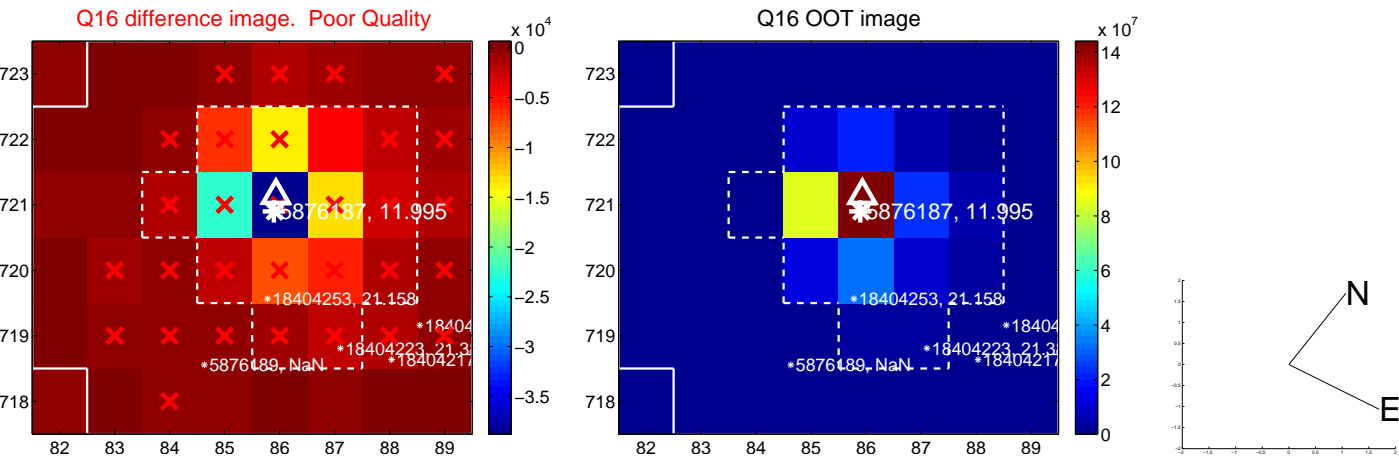
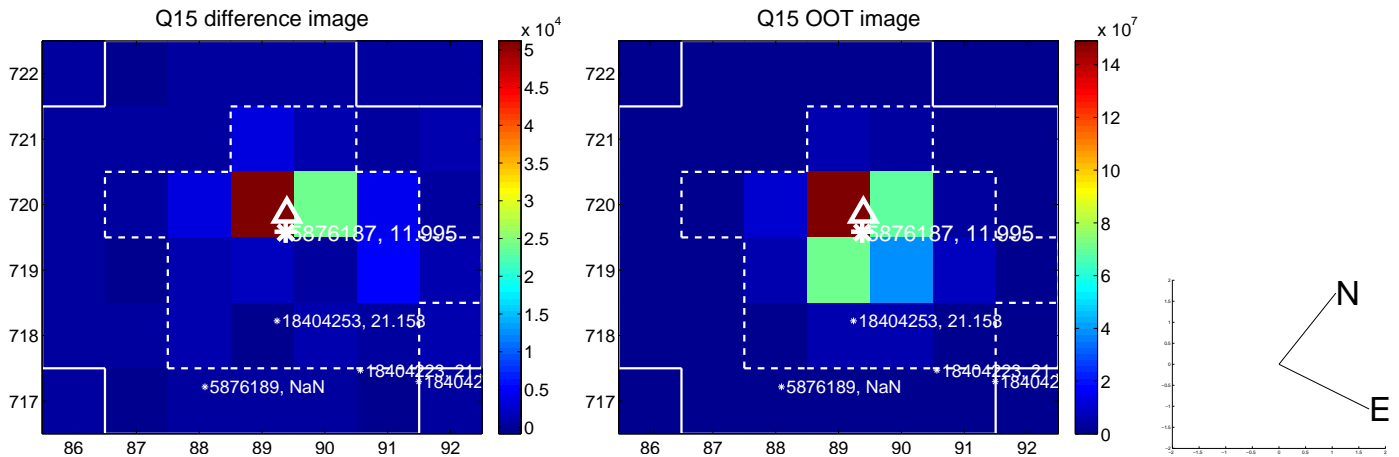
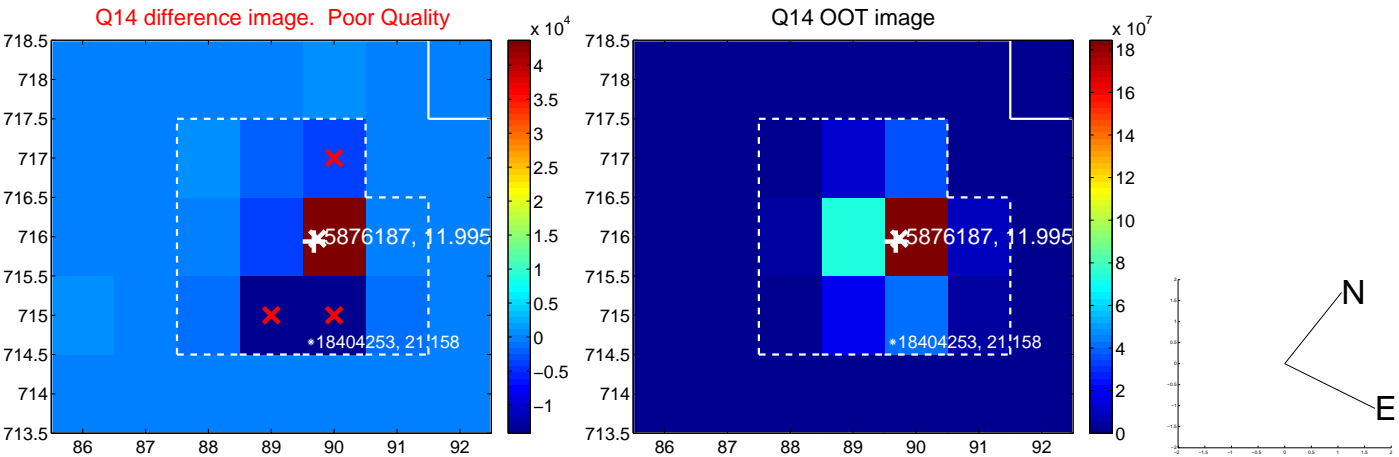
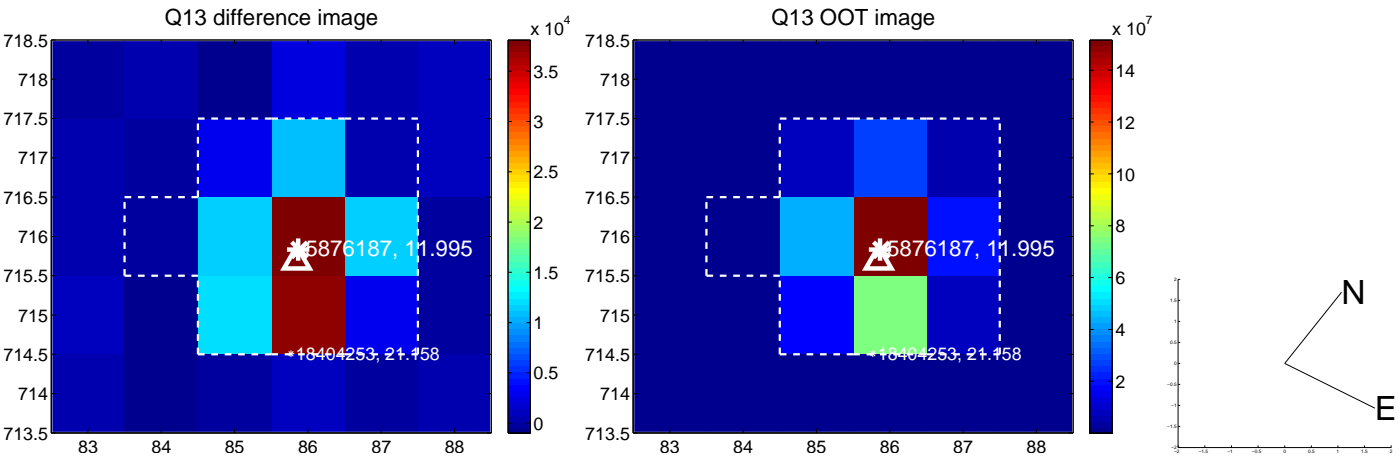


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

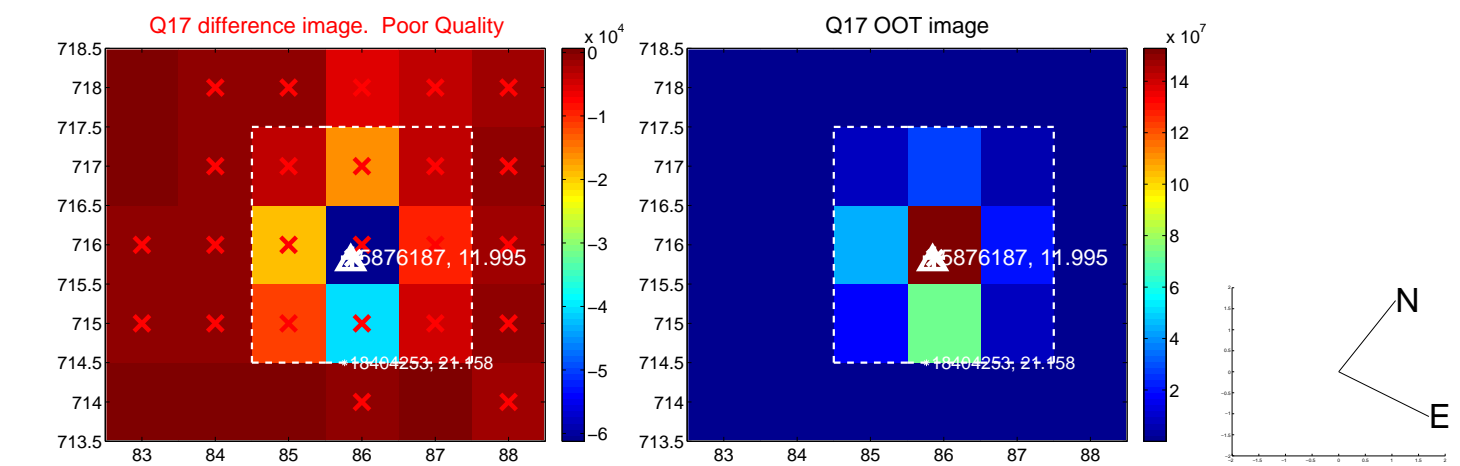
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



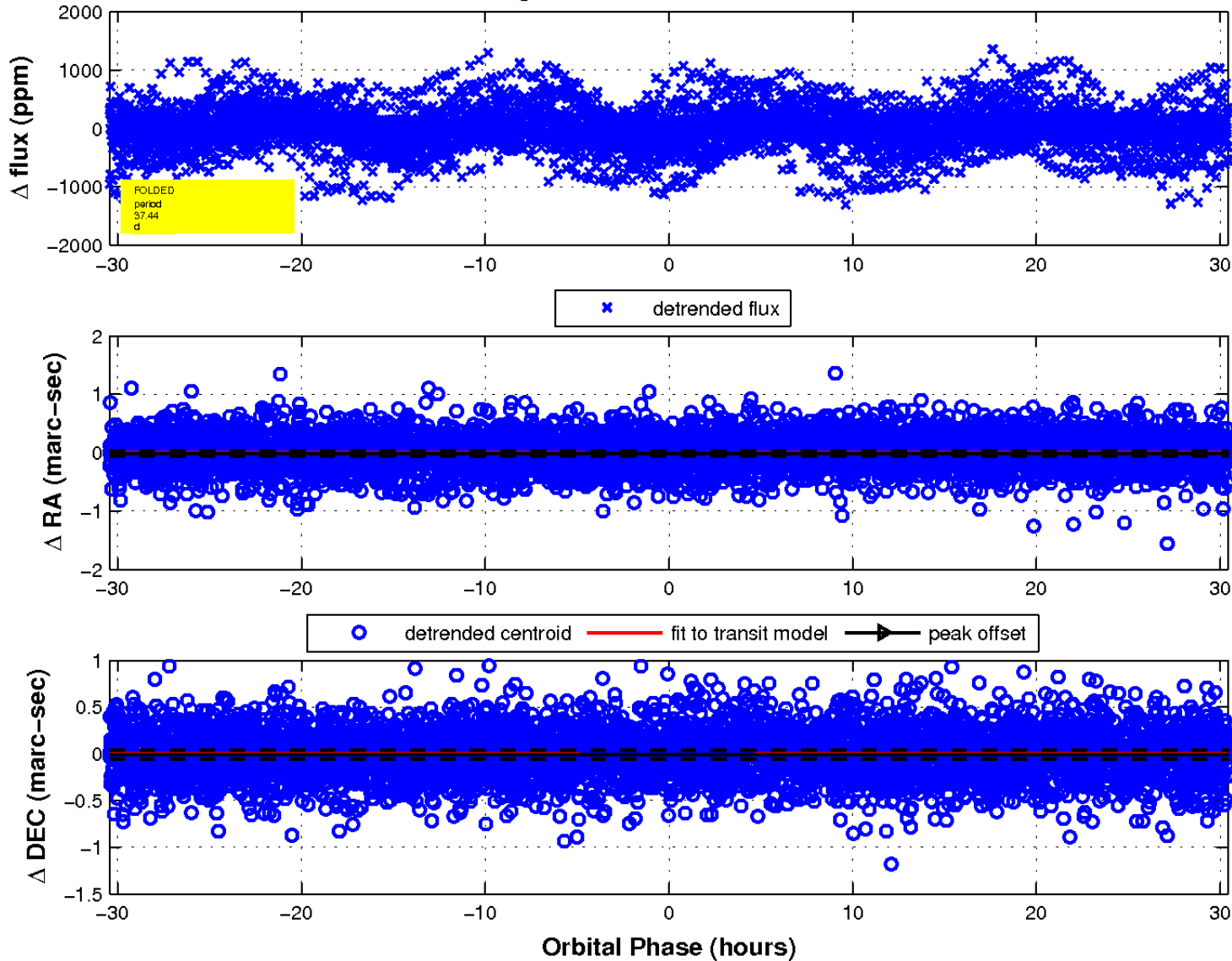
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

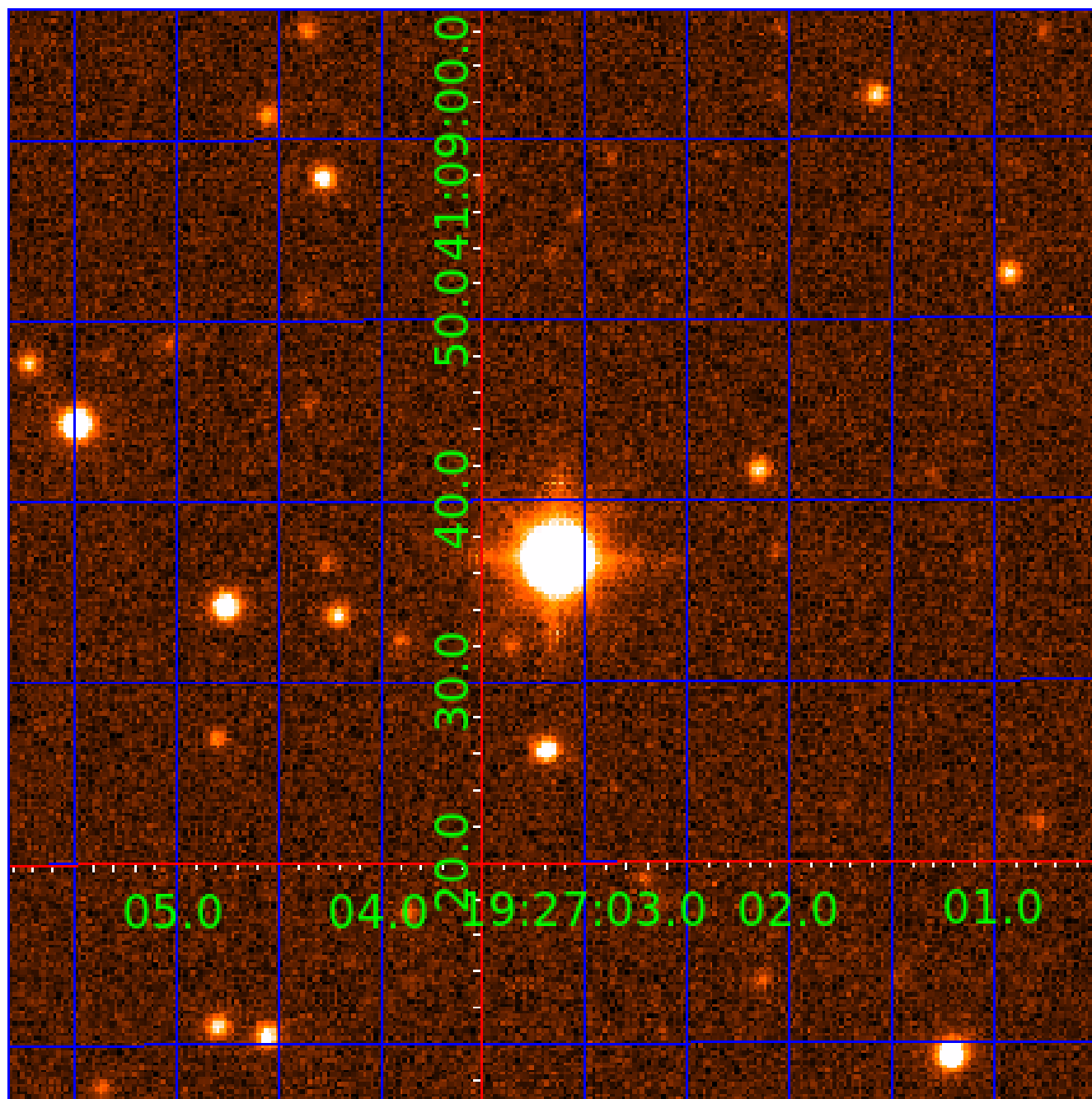


fluxWeightedCentroids, Planet 3 of 9



UKIRT Image

Declination



KIC 005876187

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})
005876187-01	OBS	No	1.713992	131.912139	6.2	11.737	10.7	2.3	1.84	6846	0.46	6617.64
005876187-02	OBS	No	57.276541	148.277502	248.9	8.067	12.6	8.4	1.84	6846	3.12	61.48
005876187-03	OBS	No	37.440682	154.129756	259.4	10.148	12.7	10.9	1.84	6846	3.26	108.37
005876187-04	OBS	No	15.895752	131.868485	139.1	3.611	11.7	6.9	1.84	6846	2.42	339.63
005876187-05	OBS	No	61.156781	167.602539	669.8	7.383	13.3	10.1	1.84	6846	9.01	56.34
005876187-06	OBS	No	74.472334	147.685145	406.0	4.447	11.3	8.0	1.84	6846	3.76	43.32
005876187-09	OBS	No	75.289242	162.348641	178.8	5.000	9.0	-1.0	1.84	6846	2.48	42.70

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005876187-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005876187-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—HALO_GHOST
005876187-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005876187-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005876187-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005876187-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005876187-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

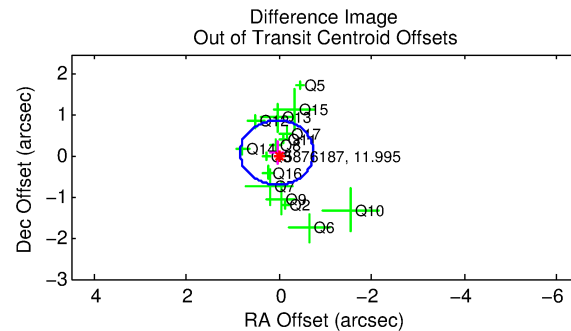
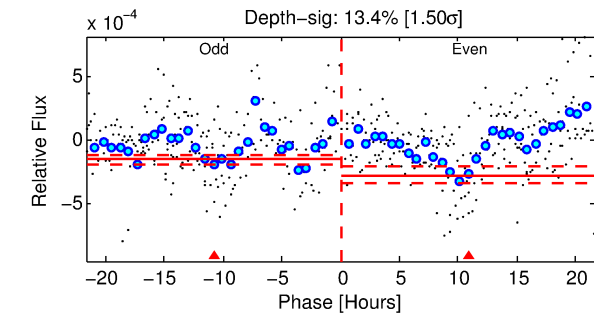
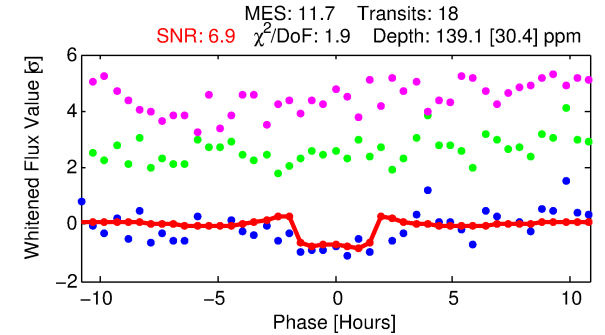
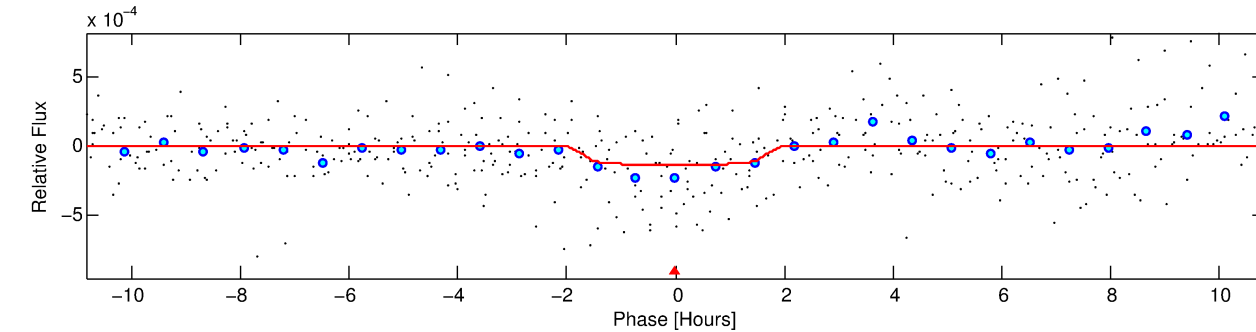
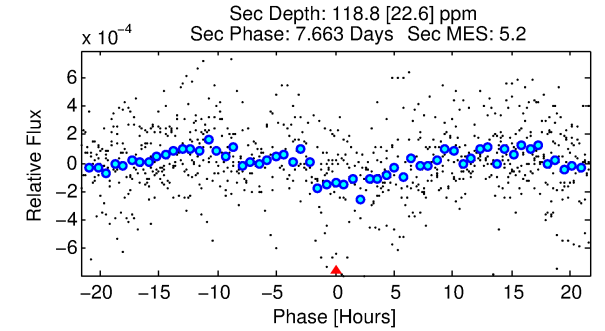
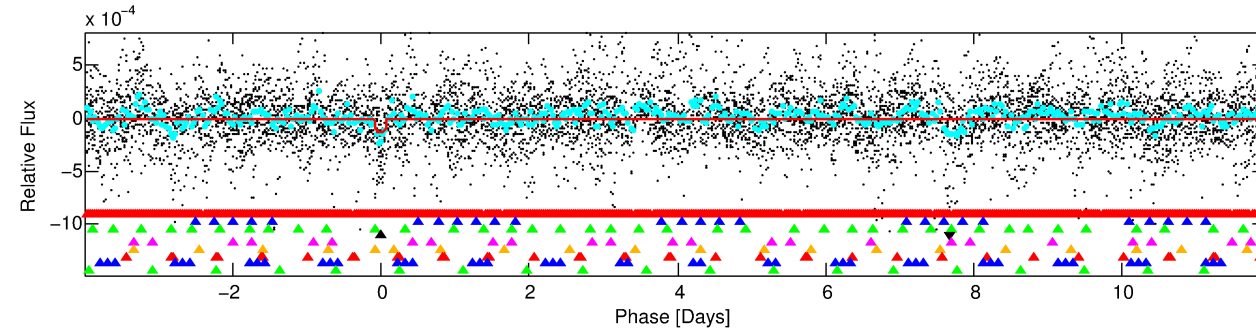
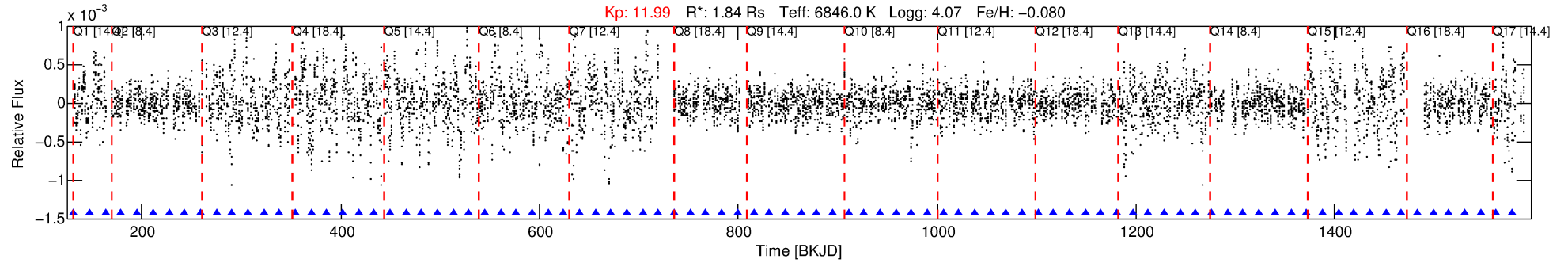
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005876187-04

No Significant Match Found

DV One-Page Summary

KIC: 5876187 Candidate: 4 of 9 Period: 15.896 d



DV Fit Results:

Period = 15.89575 [0.00025] d
Epoch = 131.8685 [0.0124] BKJD
Rp/R* = 0.0121 [0.0089]
a/R* = 19.58 [84.41]
b = 0.83 [1.66]
Seff = 339.63 [86.18]
Teff = 1095 [69] K
Rp = 2.42 [1.84] Re
a = 0.1398 [0.0225] AU
Ag = 218.44 [330.95] [0.66σ]
Teffp = 6507 [2432] K [2.22σ]

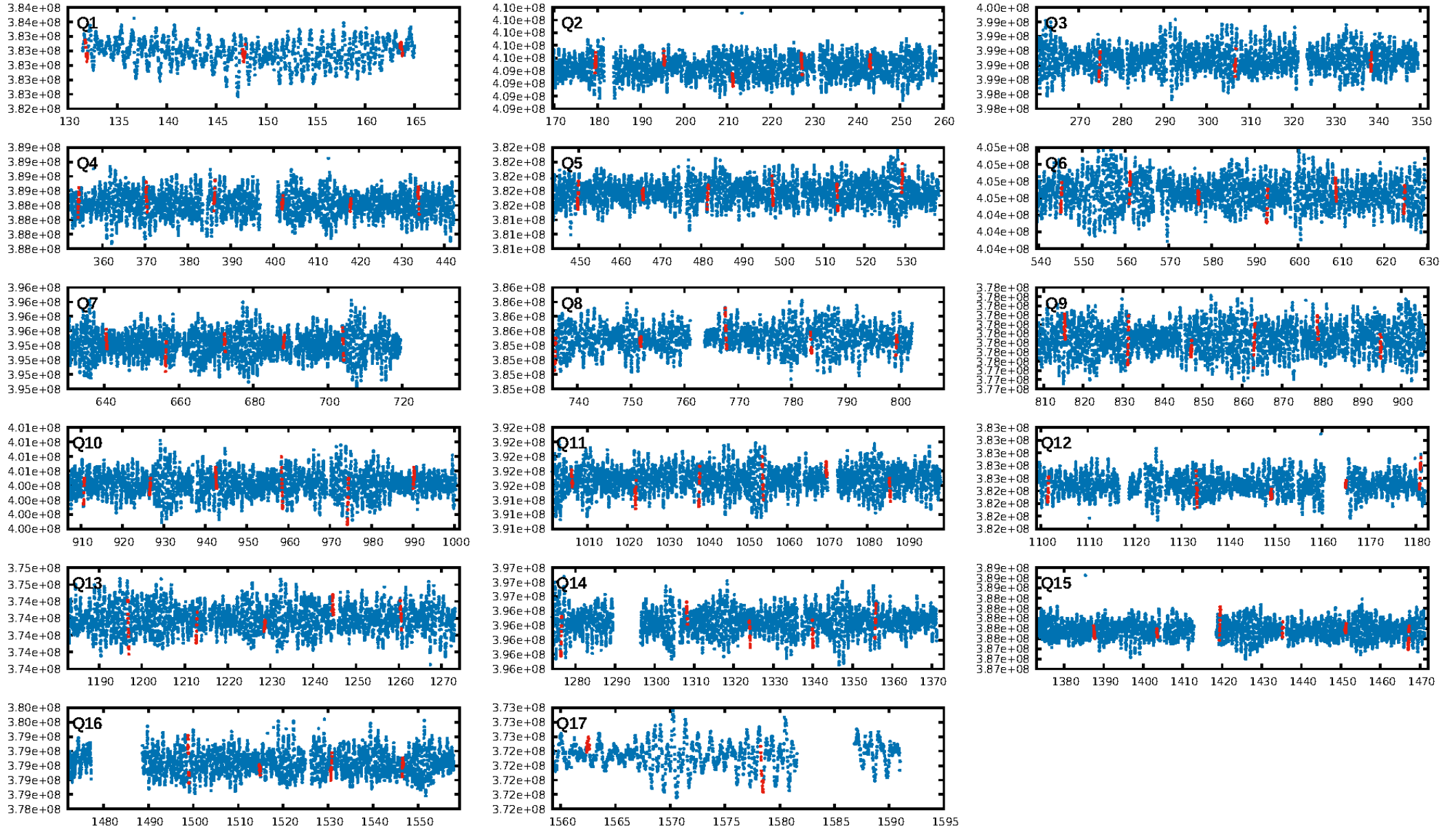
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [27.72σ]
LongPeriod-sig: 100.0% [68.78σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 98.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [17/17]
GhostDiagnostic-chr: -0.969
Centroid-sig: 11.6%
Centroid-so: 0.221 arcsec [0.80σ]
OotOffset-rm: 0.106 arcsec [0.40σ]
KicOffset-rm: 0.100 arcsec [0.36σ]
OotOffset-st: 4/4/3/4 [15]
KicOffset-st: 4/4/3/4 [15]
DiffImageQuality-fgm: 0.67 [10/15]
DiffImageOverlap-fno: 0.82 [14/17]

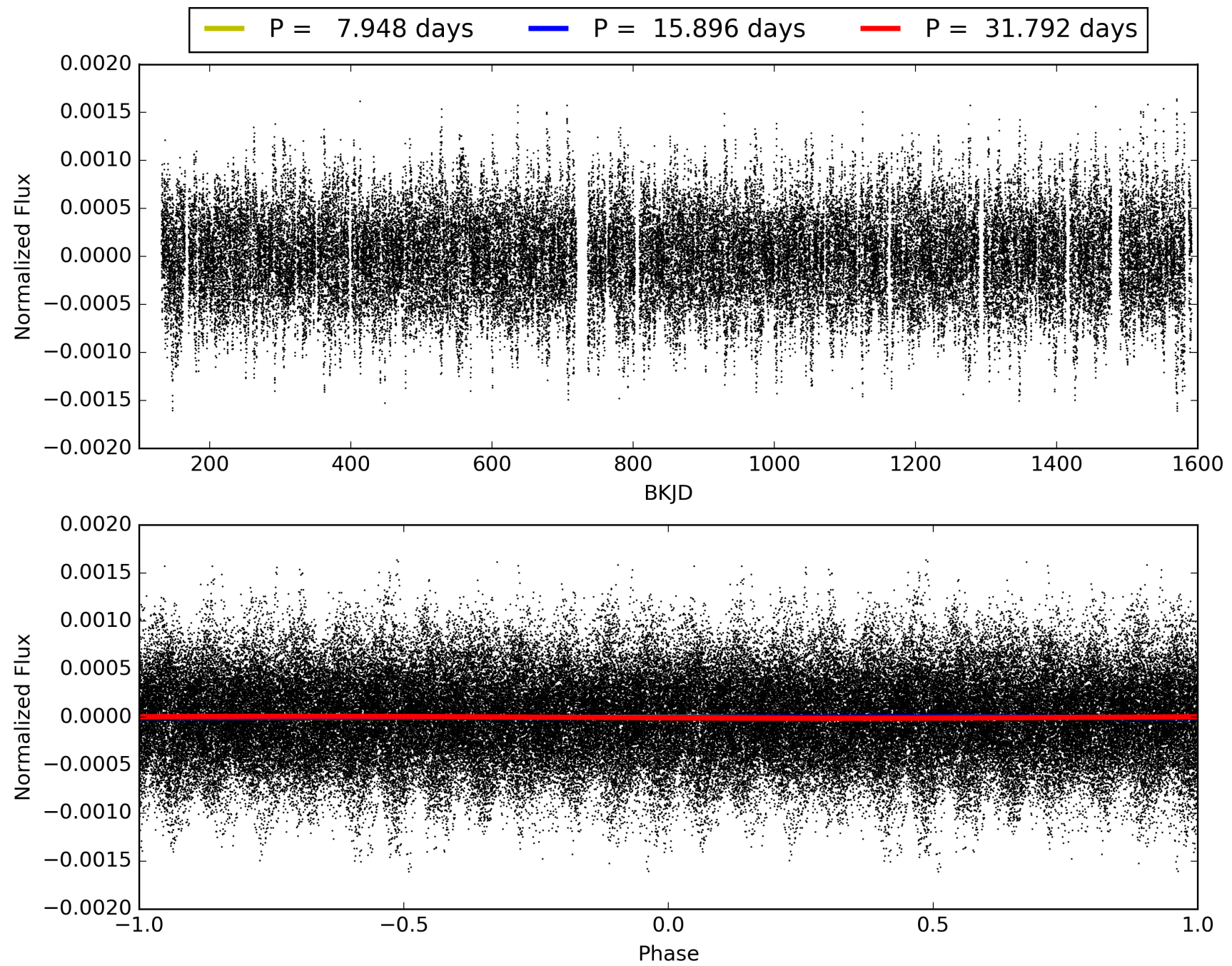
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 09:12:50 Z

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

TCE 005876187-04, PDC Light Curves

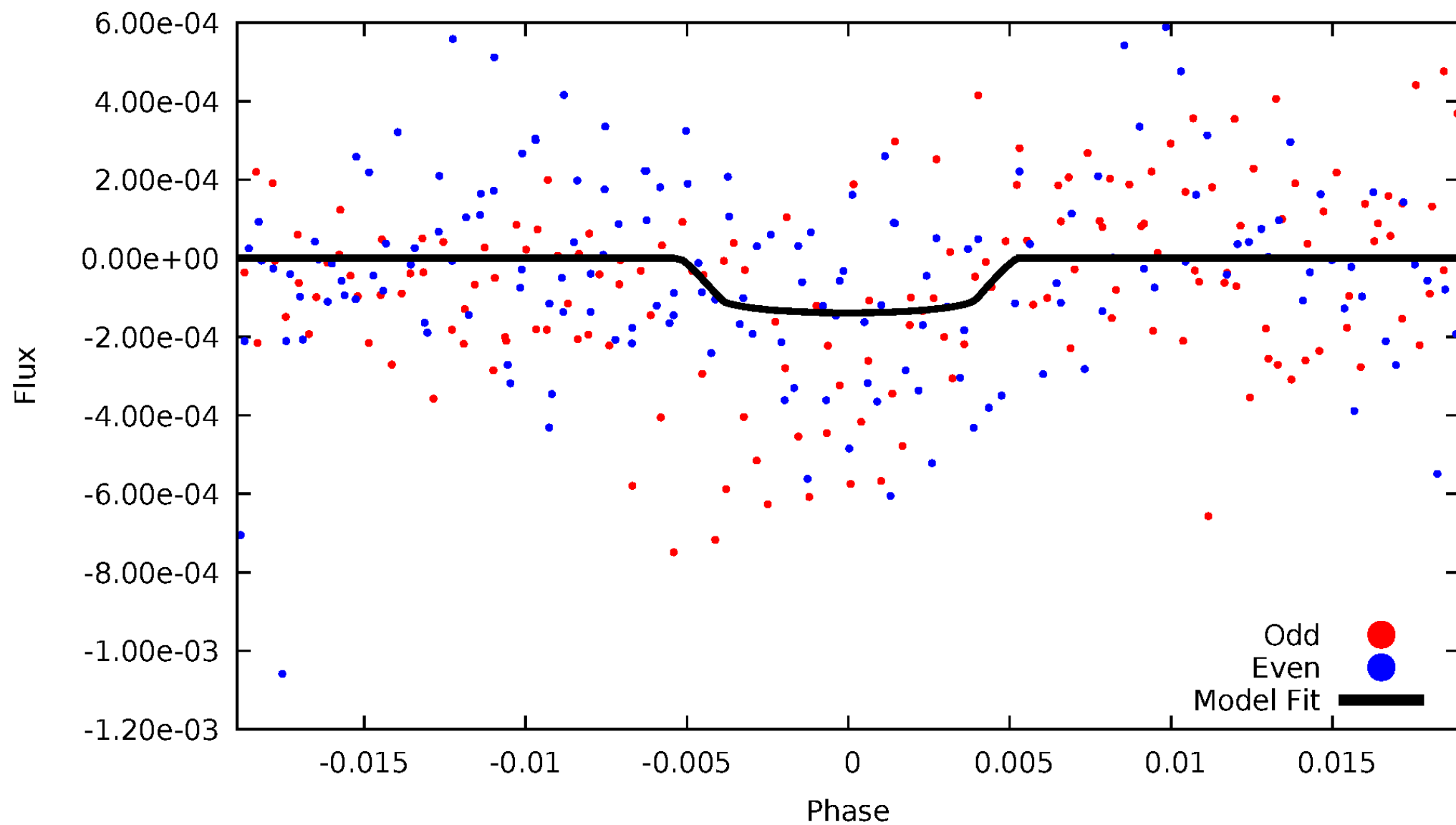


TCE 005876187-04



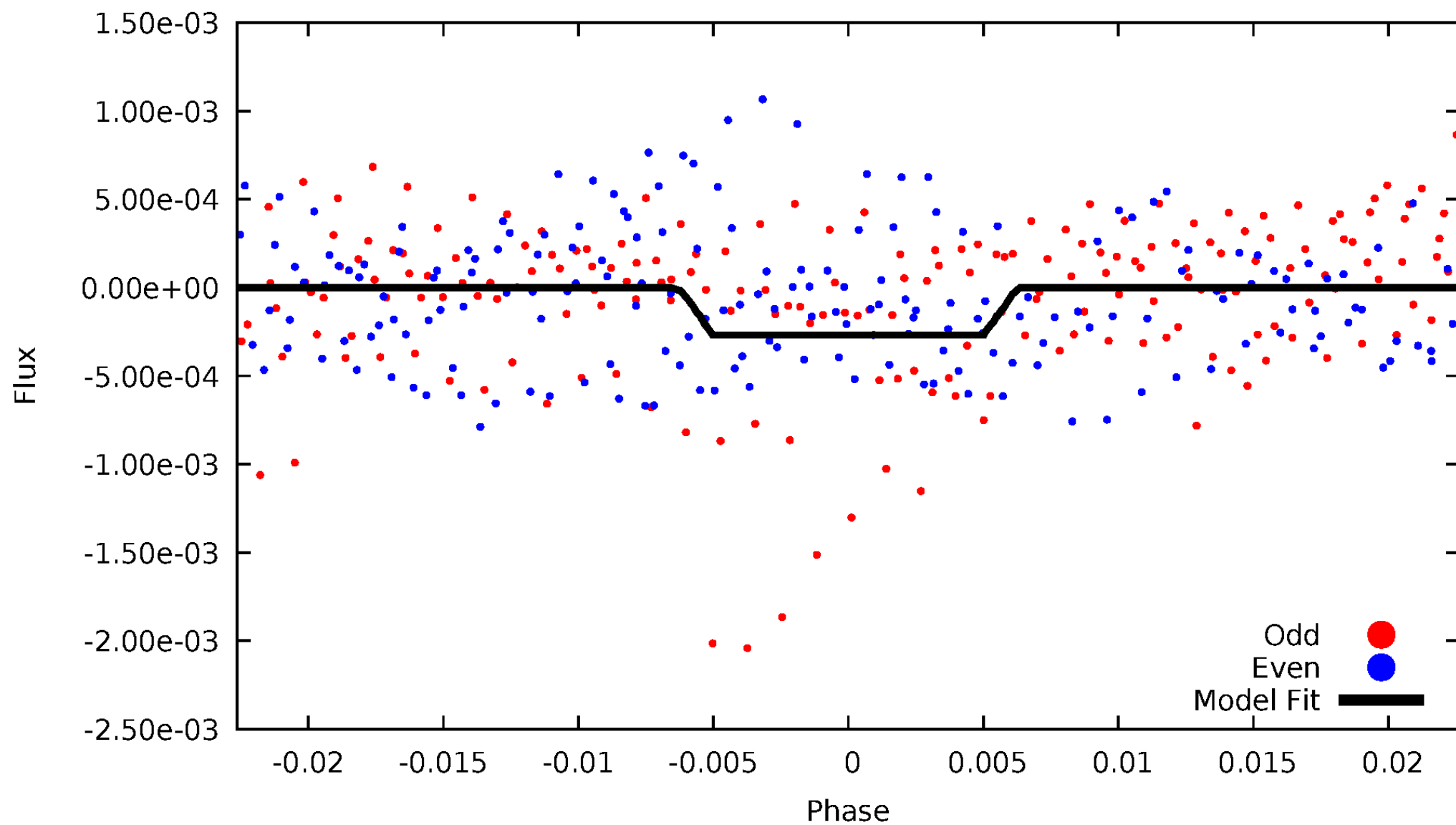
DV Odd/Even

TCE 005876187-04



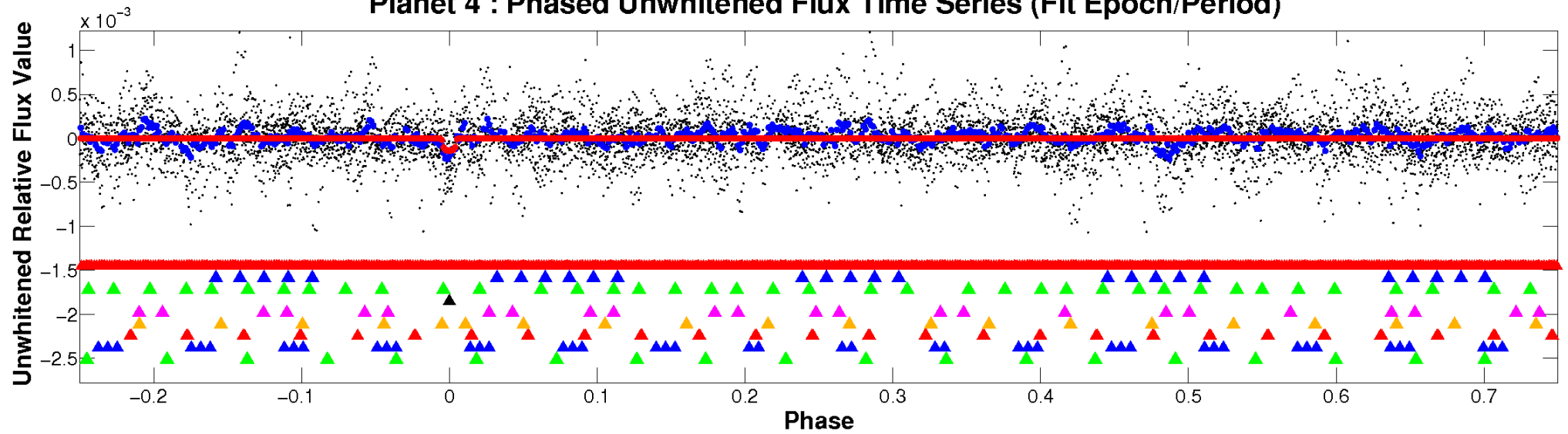
ALT Odd/Even

TCE 005876187-04

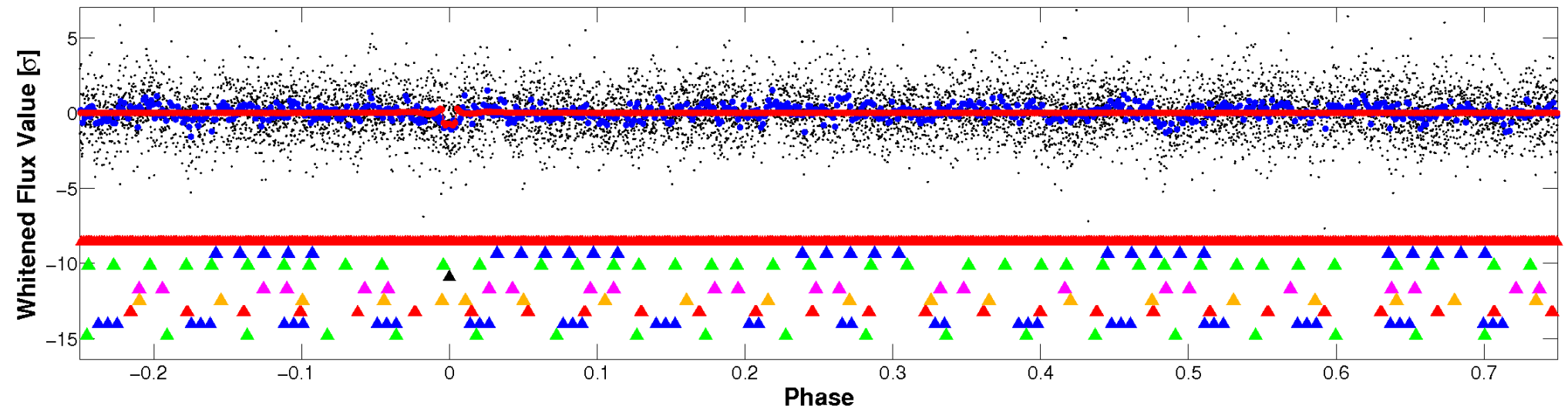


Non-Whitened Vs. Whitened Light Curve

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

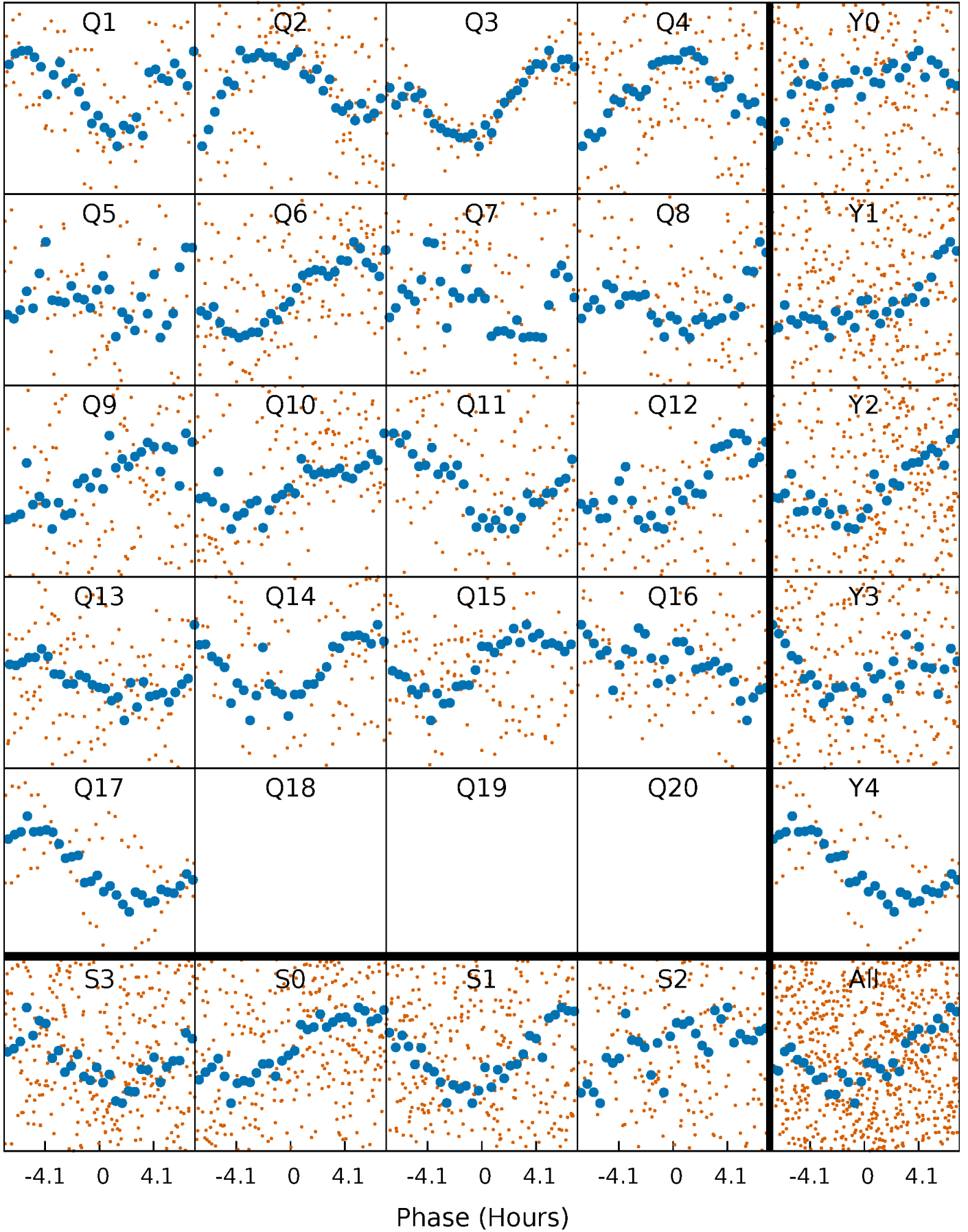


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



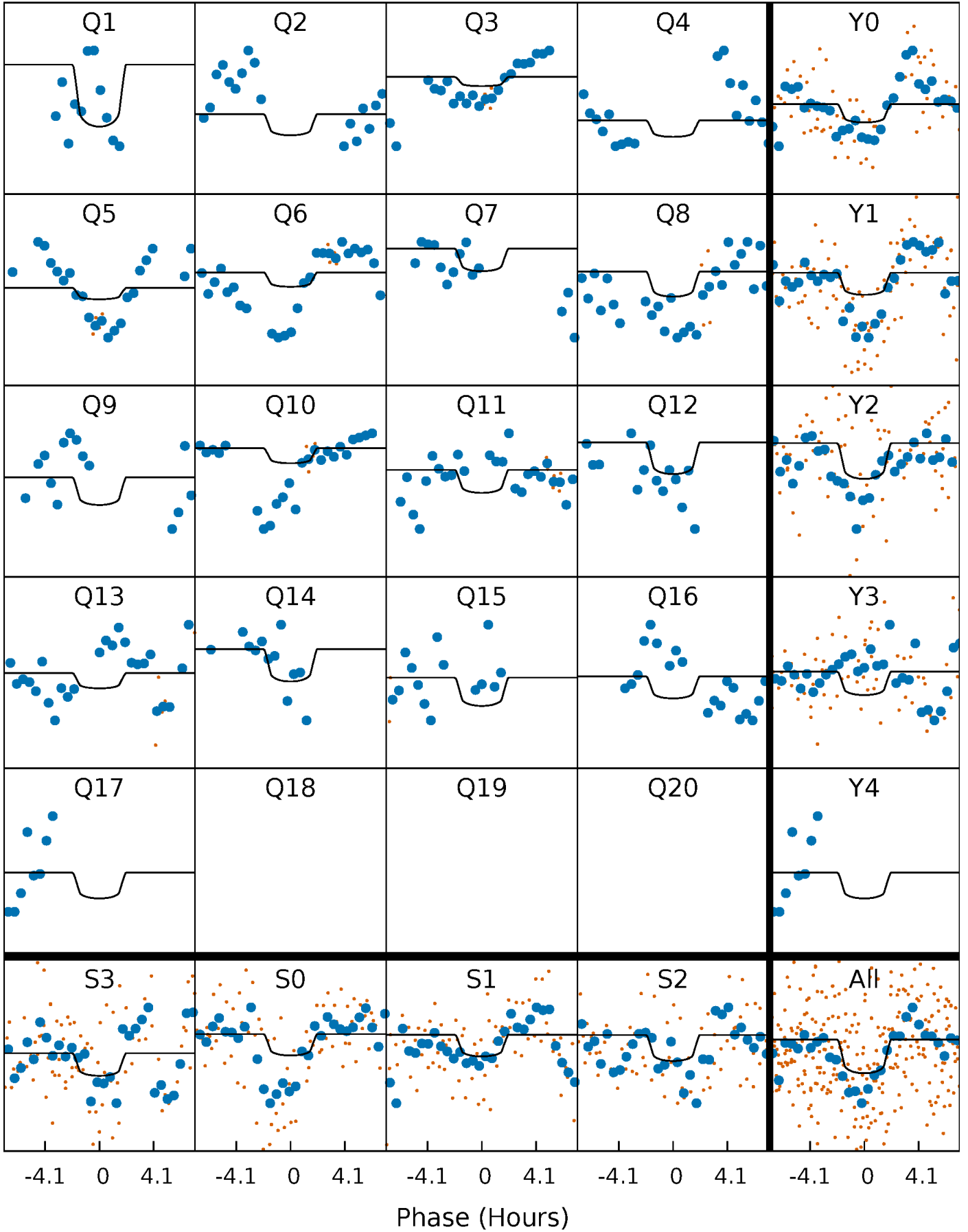
PDC Quarter-Phased Transit Curves

TCE 005876187-04 P= 15.895752 Days $T_0=131.868485$ (BKJD)



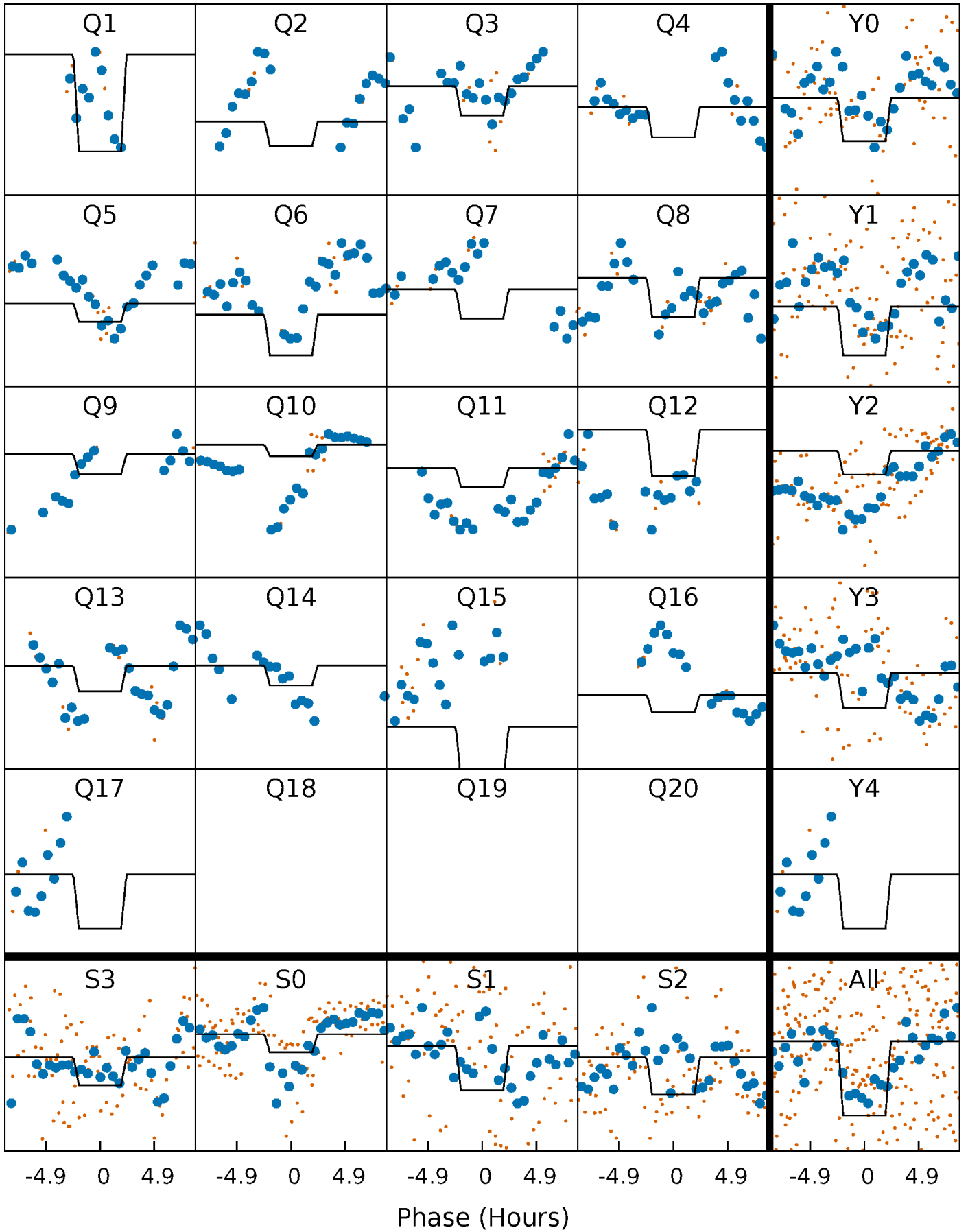
DV Quarter-Phased Transit Curves

TCE 005876187-04 P= 15.895752 Days $T_0=131.868485$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

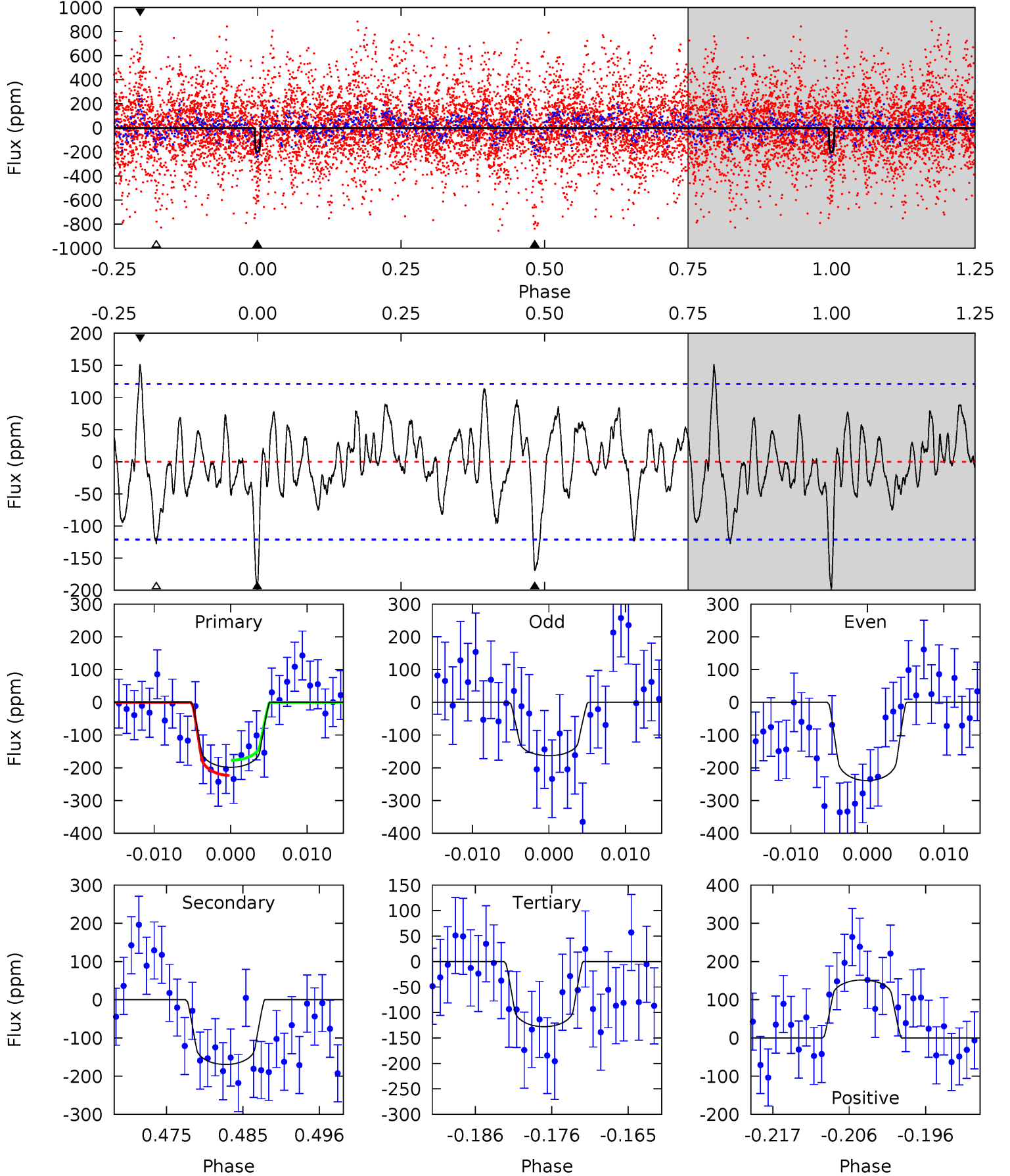
TCE 005876187-04 P= 15.895666 Days $T_0=131.846455$ (BKJD)



DV Model-Shift Uniqueness Test

005876187-04, P = 15.895752 Days, E = 131.868485 Days

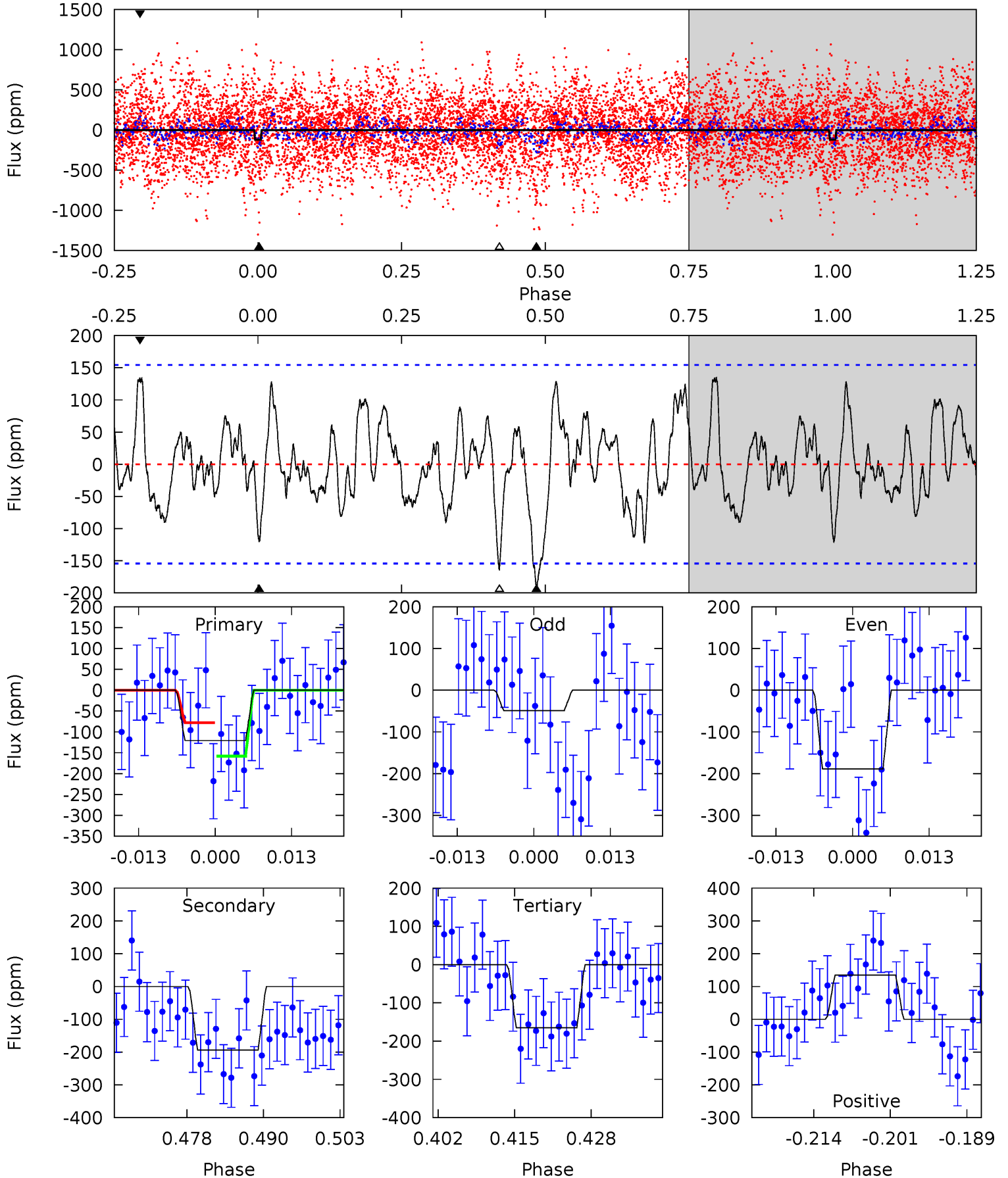
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.23	7.03	5.30	6.29	5.02	2.56	1.89	2.93	1.94	1.73	0.73	1.58	1.40	0.43	0.97



Alt Model-Shift Uniqueness Test

005876187-04, P = 15.895666 Days, E = 131.846455 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.89	6.25	5.32	4.34	4.98	2.50	1.74	-1.42	-0.45	0.93	1.91	2.22	1.73	0.41	1.29



Stellar Parameters For KIC 005876187

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6846^{+82}_{-82}	$4.069^{+0.143}_{-0.117}$	$-0.080^{+0.200}_{-0.150}$	$1.837^{+0.325}_{-0.325}$	$1.444^{+0.115}_{-0.115}$	$0.328^{+0.233}_{-0.117}$
	+1%/-1%	+4%/-3%	+250%/-188%	+18%/-18%	+8%/-8%	+71%/-36%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 005876187-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-169 ± 24	$2.66^{+1.63}_{-1.52}$	1531^{+69}_{-77}	6770^{+4960}_{-1440}	264^{+1049}_{-166}
Alt.	-194 ± 31	$3.29^{+1.88}_{-1.58}$	1529^{+72}_{-80}	6220^{+2869}_{-1131}	191^{+512}_{-113}

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 $A_{obs} \gg 1.0$

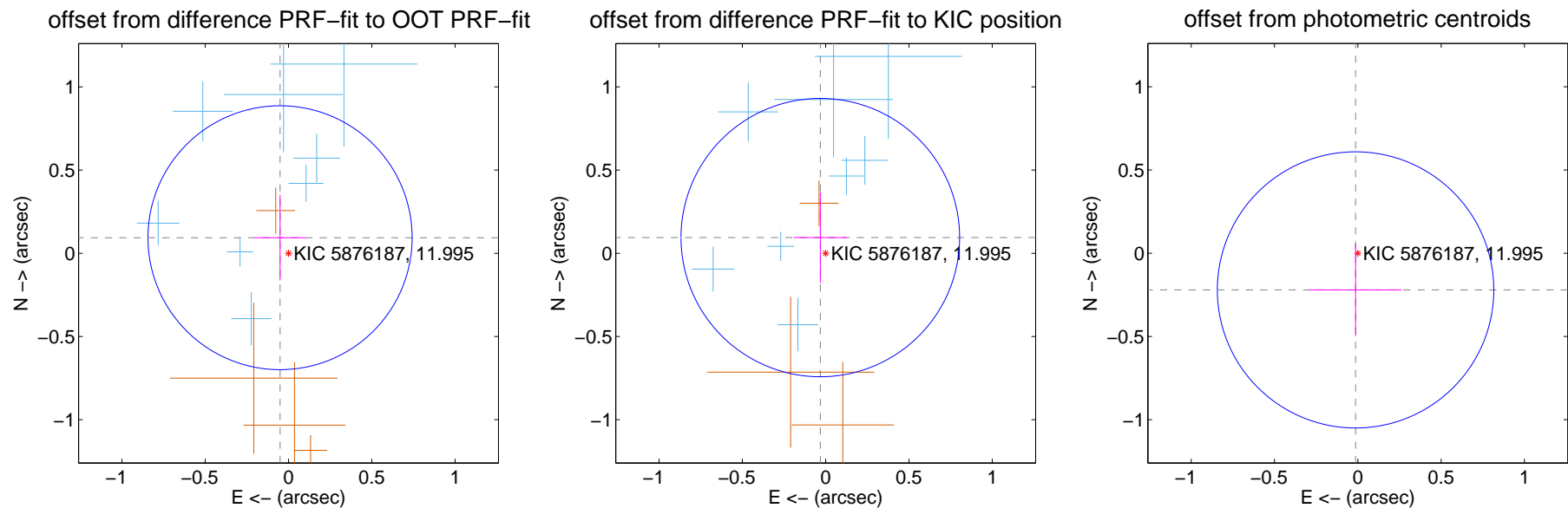
DV Centroid Data

Supplemental centroid analysis for 005876187-04. **Kepler magnitude: 11.99.** Transit SNR 6.90

There are 10 quarters with good PRF difference image offsets

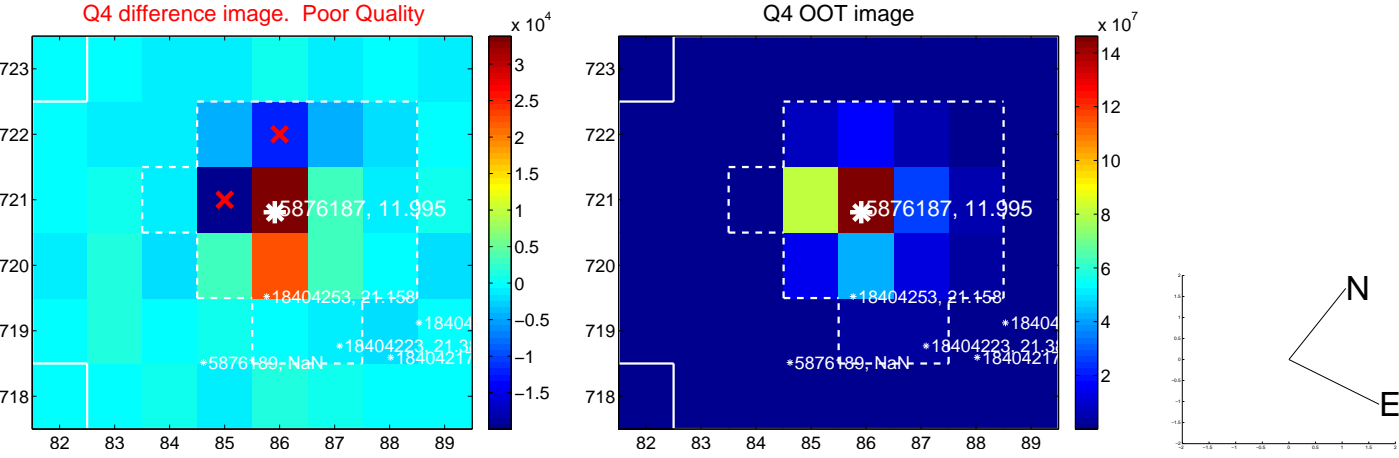
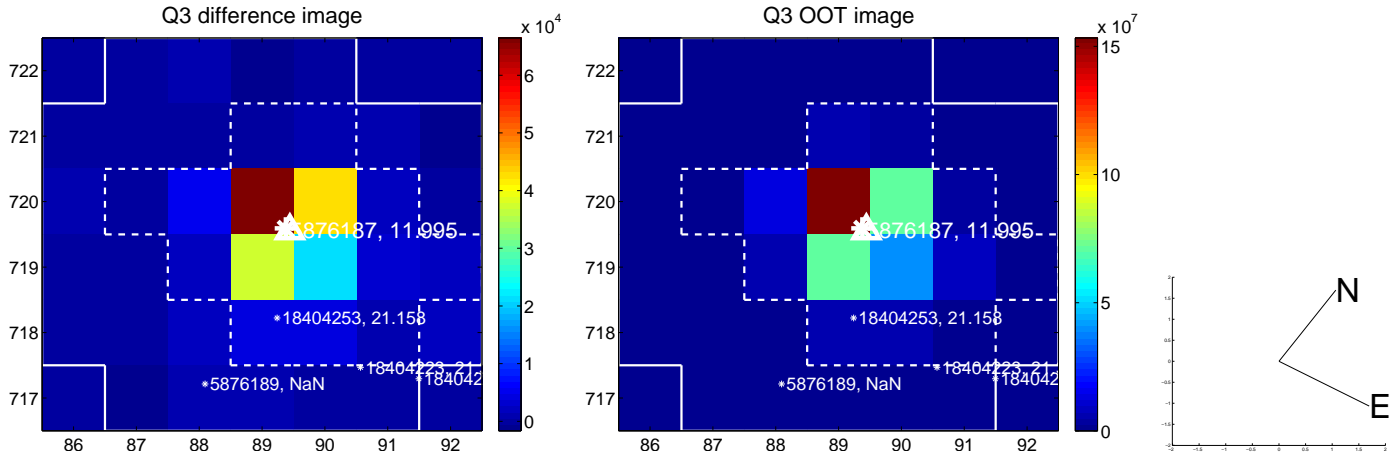
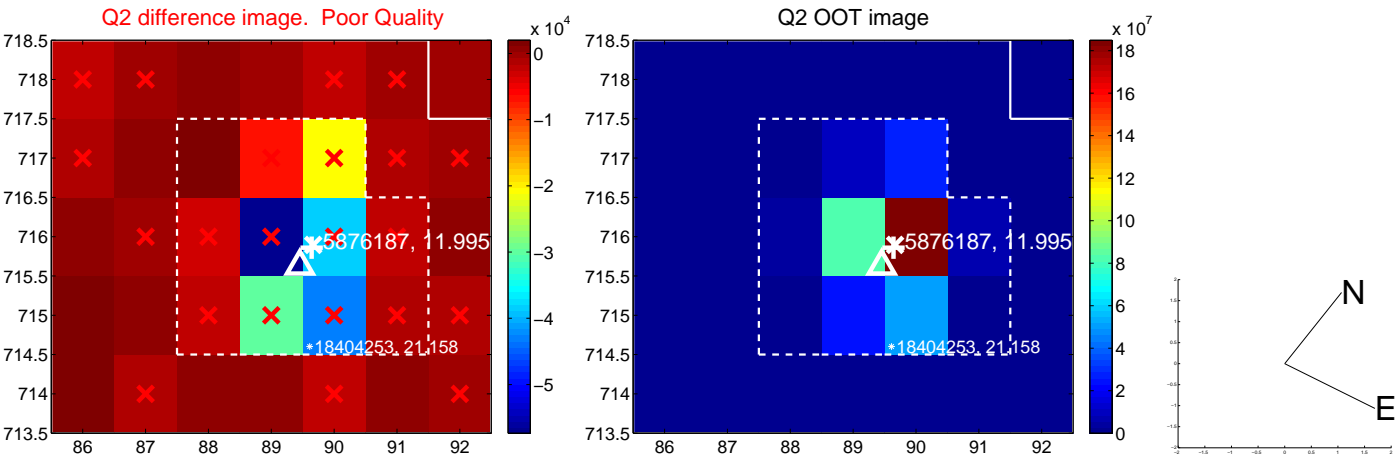
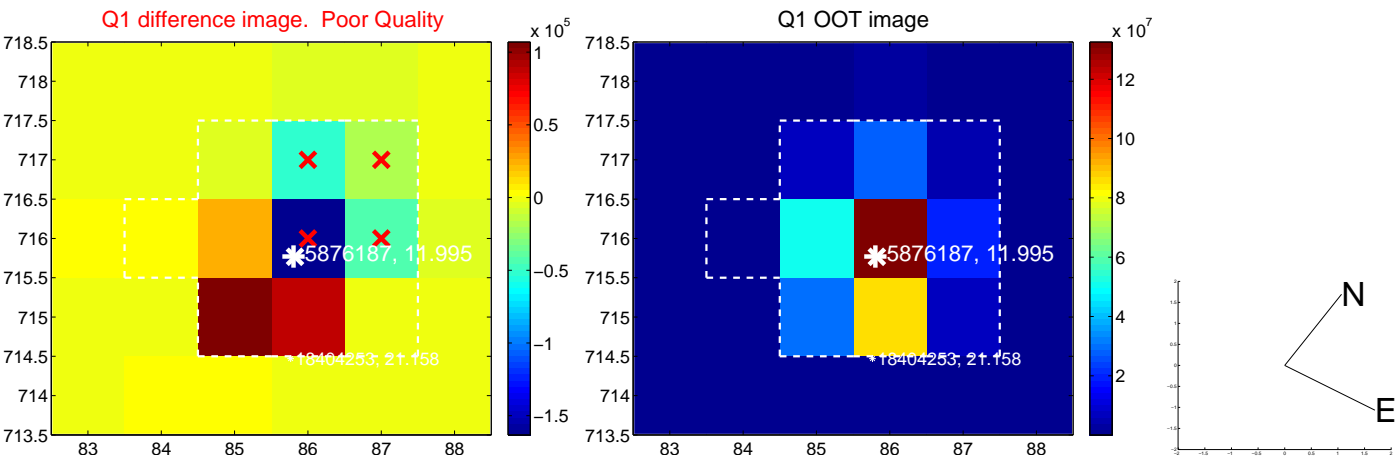
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.106 ± 0.264	0.40	0.051 ± 0.153	0.094 ± 0.257
PRF-fit source offset from KIC position	0.100 ± 0.279	0.36	0.032 ± 0.160	0.094 ± 0.272
photometric centroid source offset	0.22 ± 0.28	0.80	0.01 ± 0.28	-0.22 ± 0.28

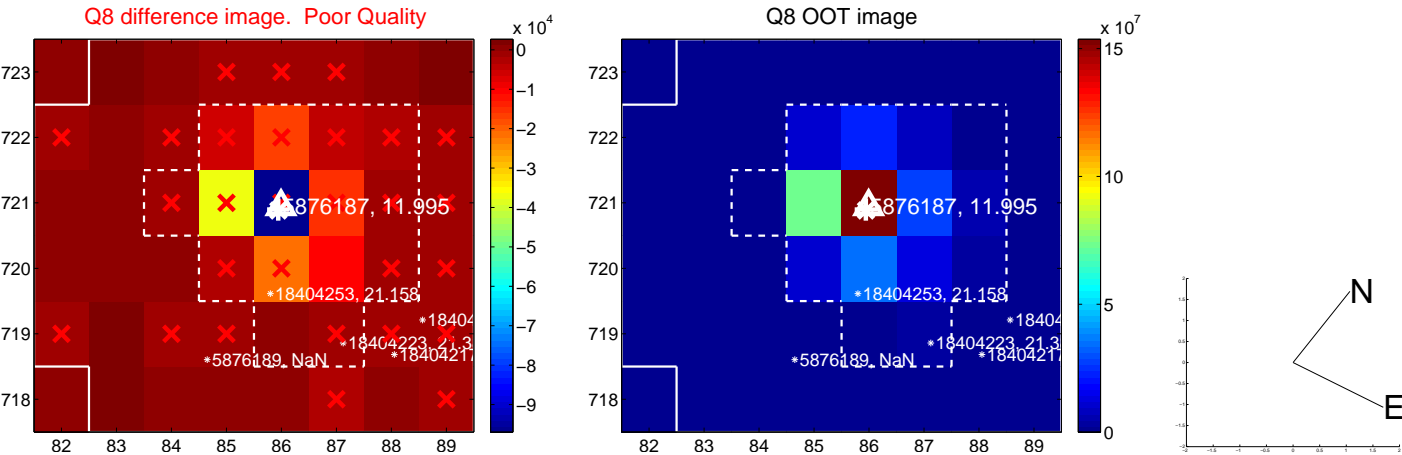
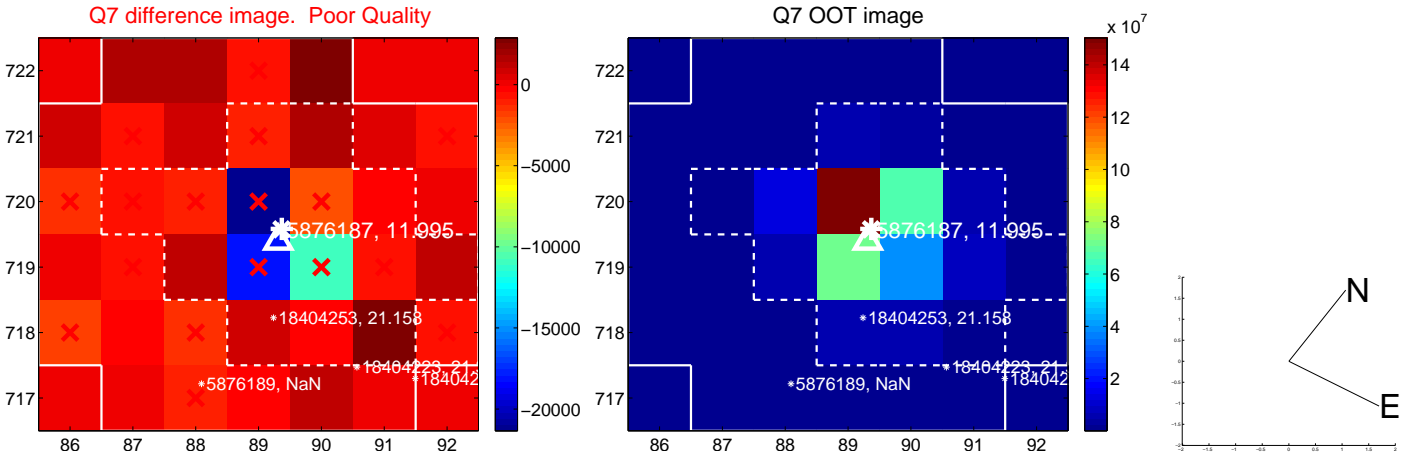
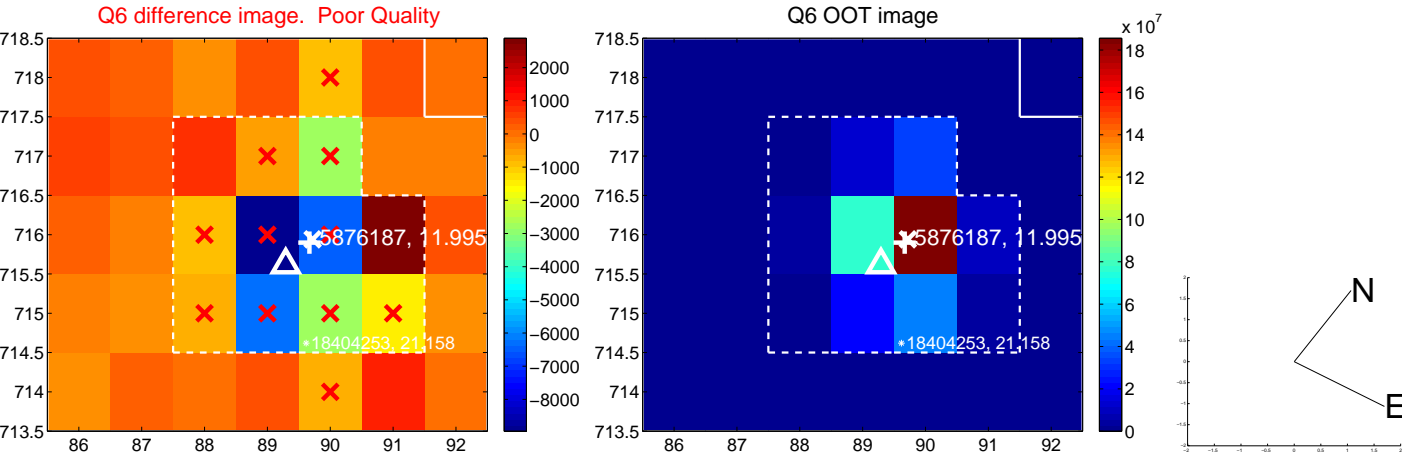
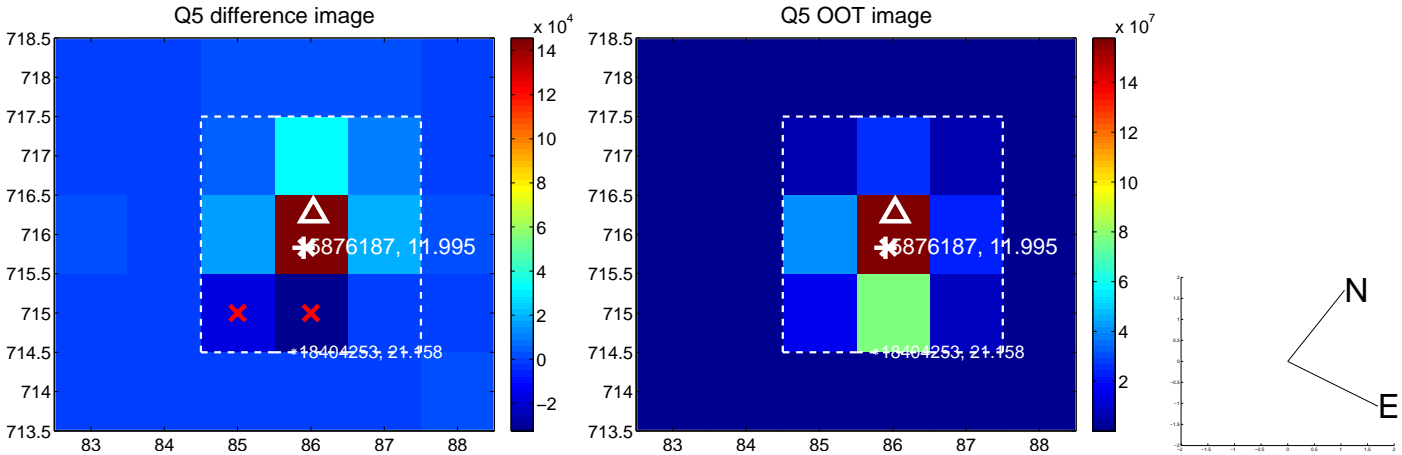


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

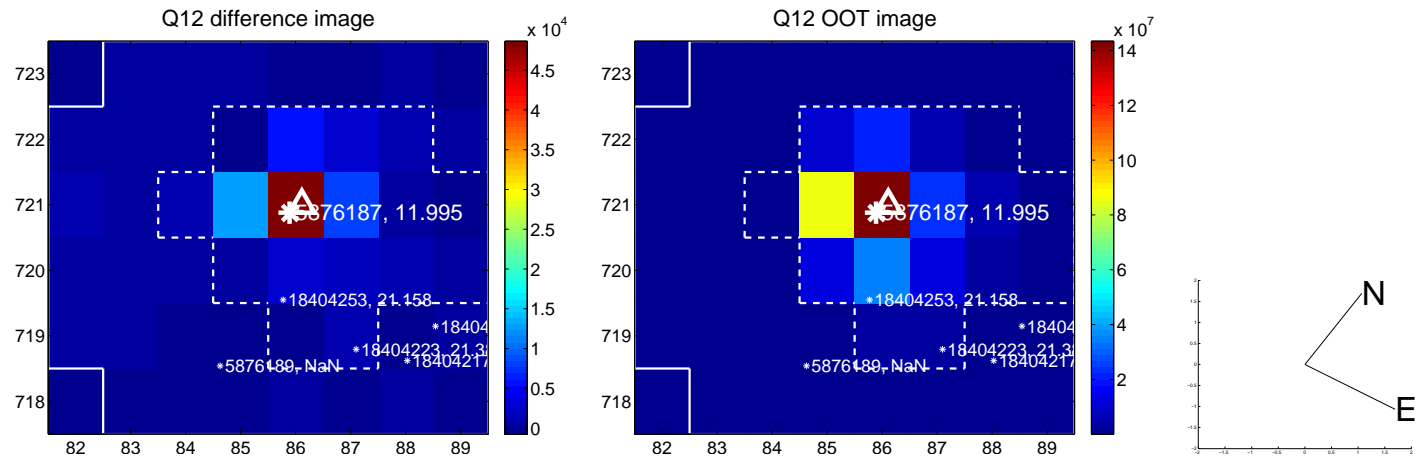
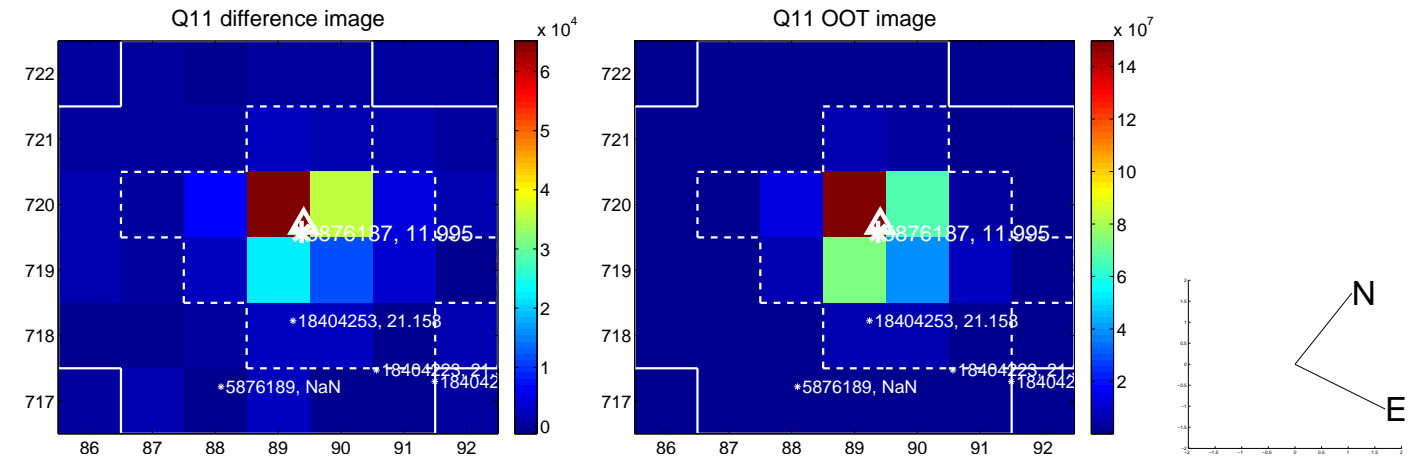
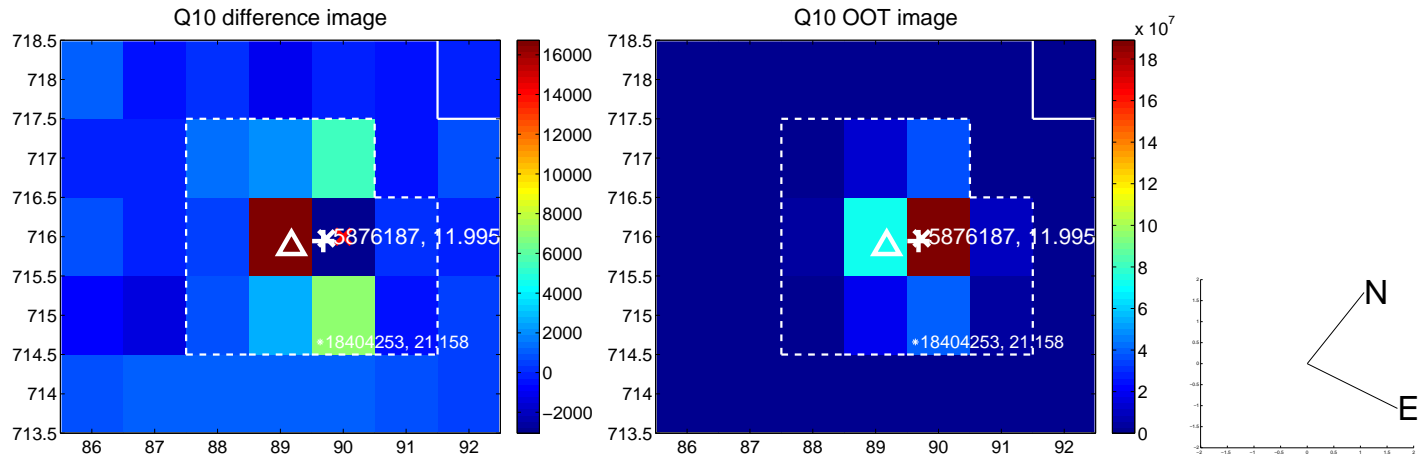
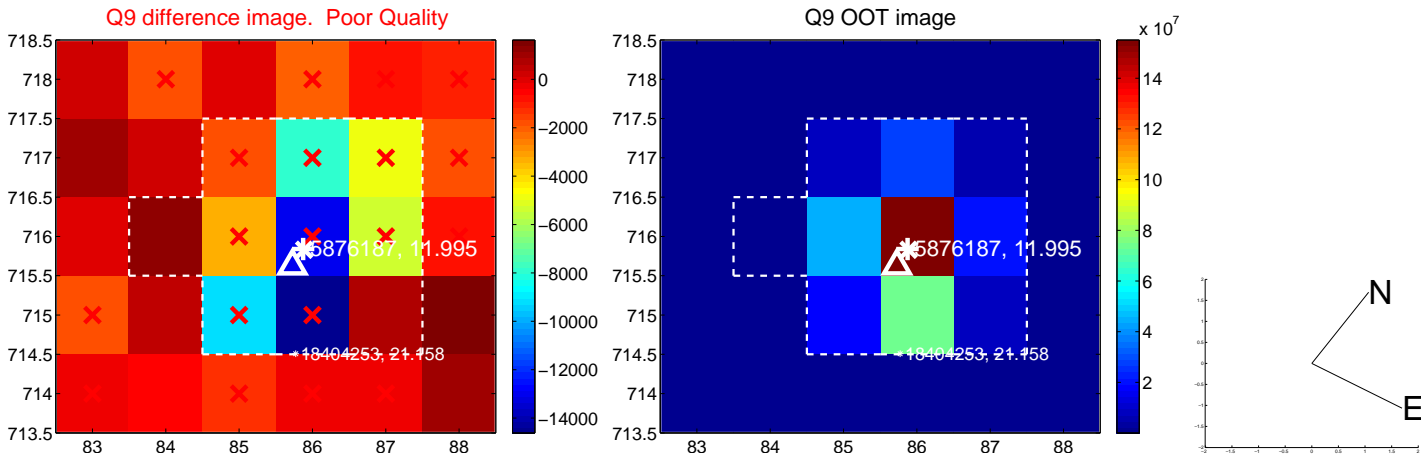
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



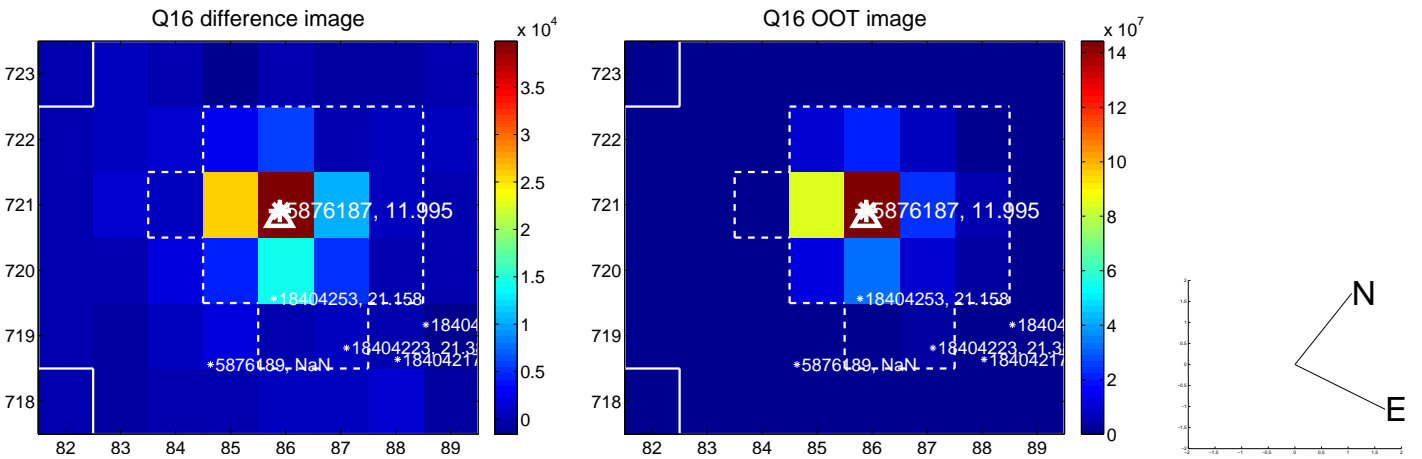
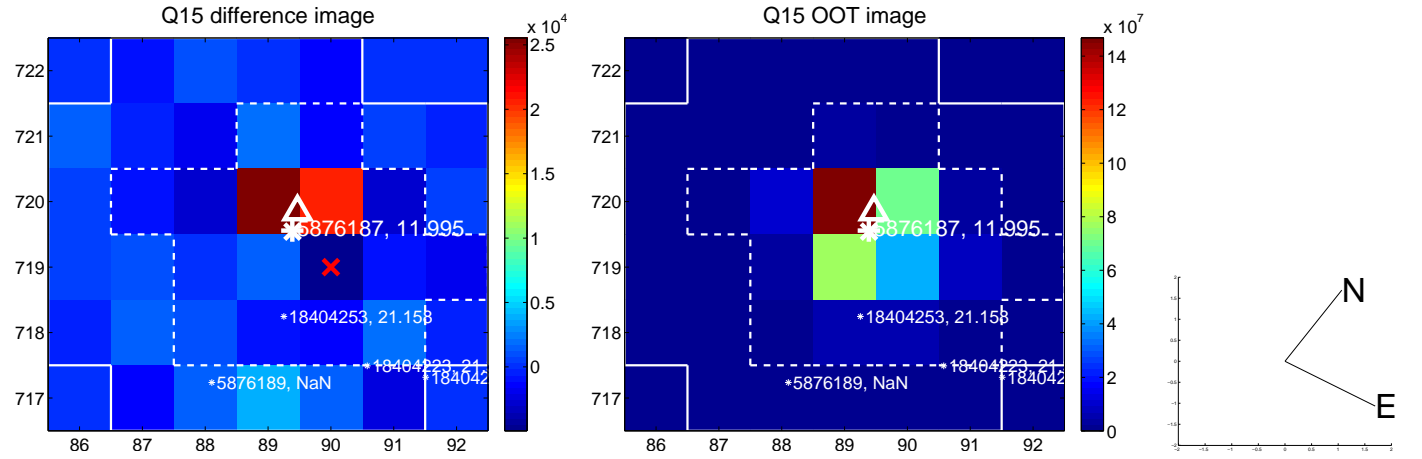
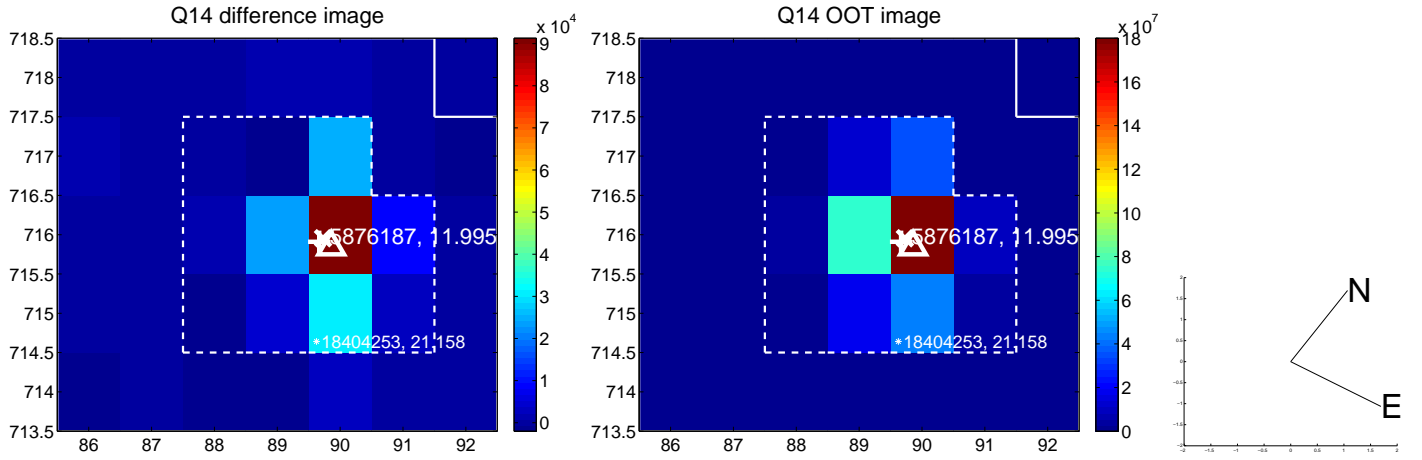
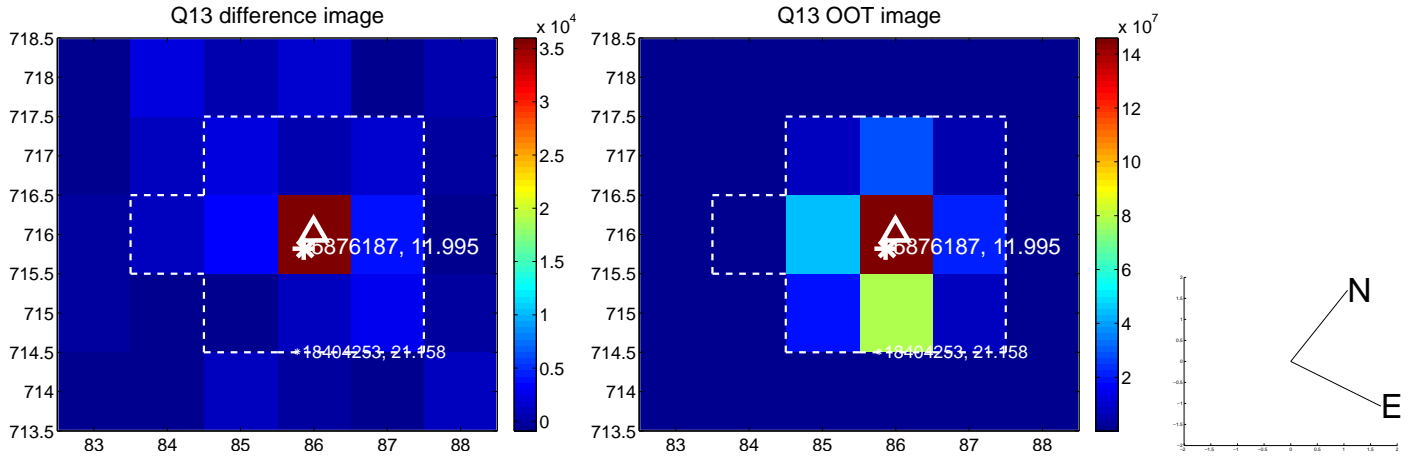
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



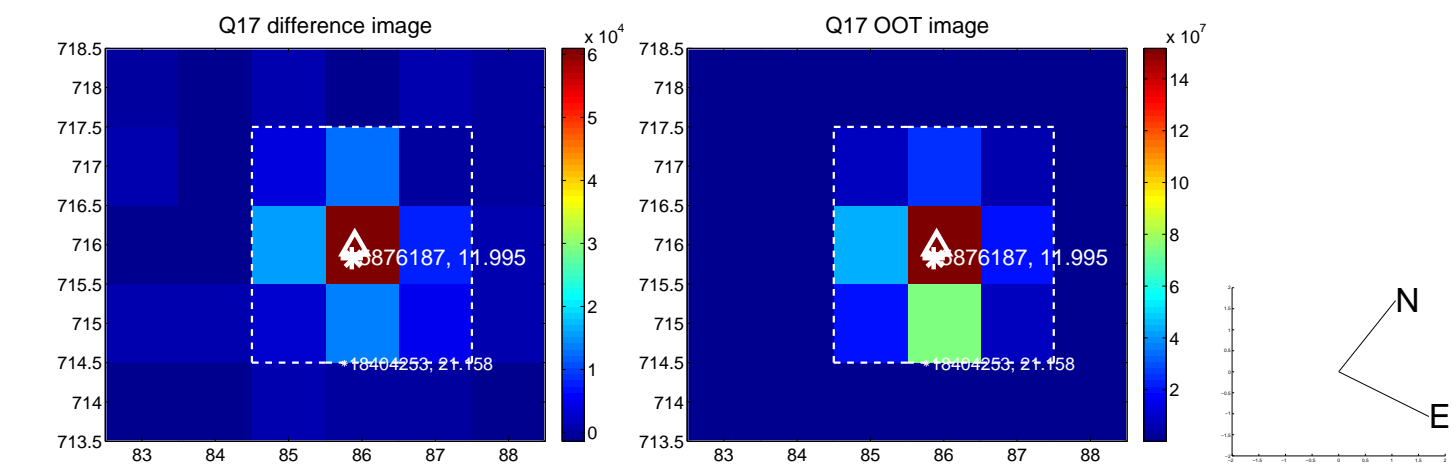
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



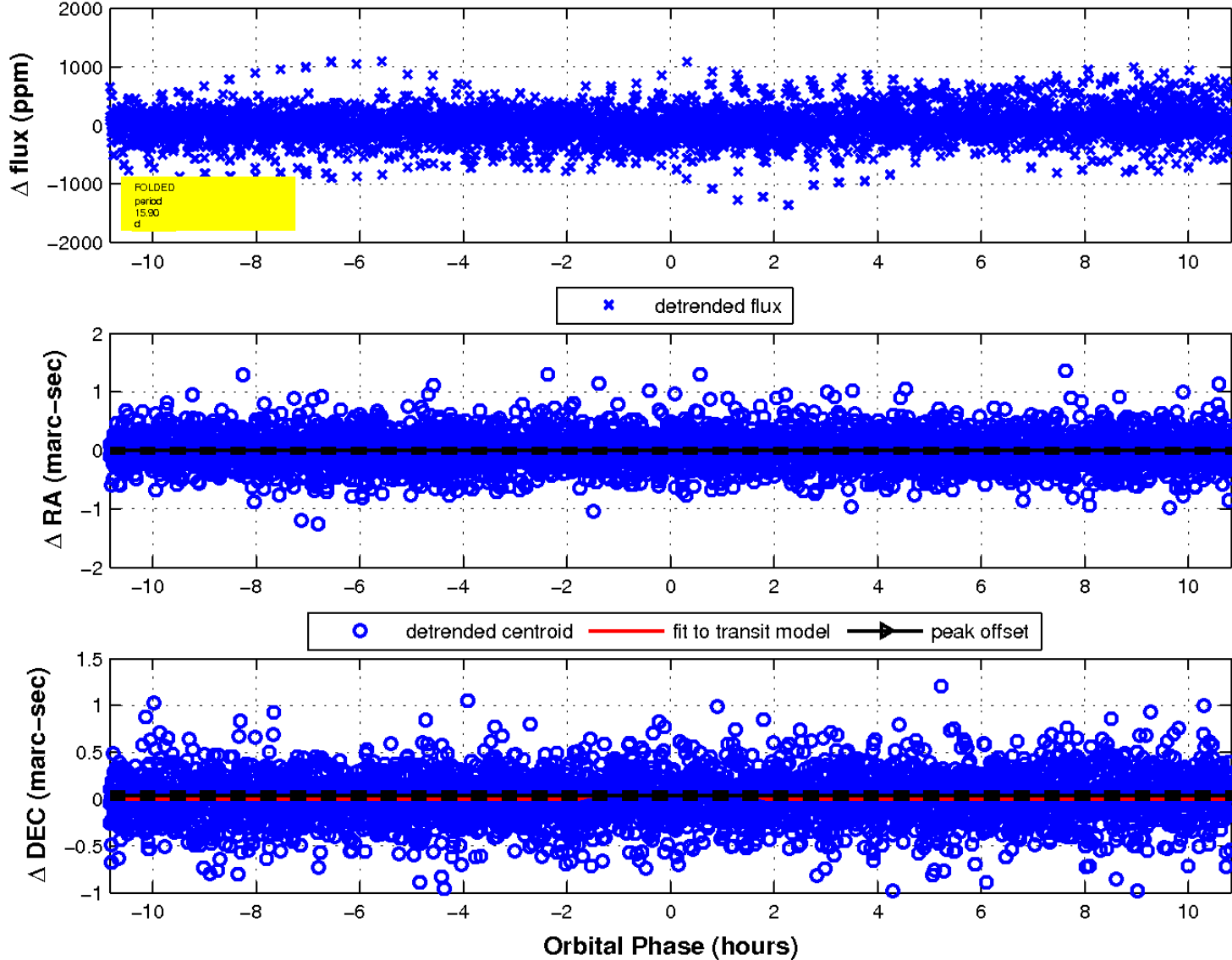
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

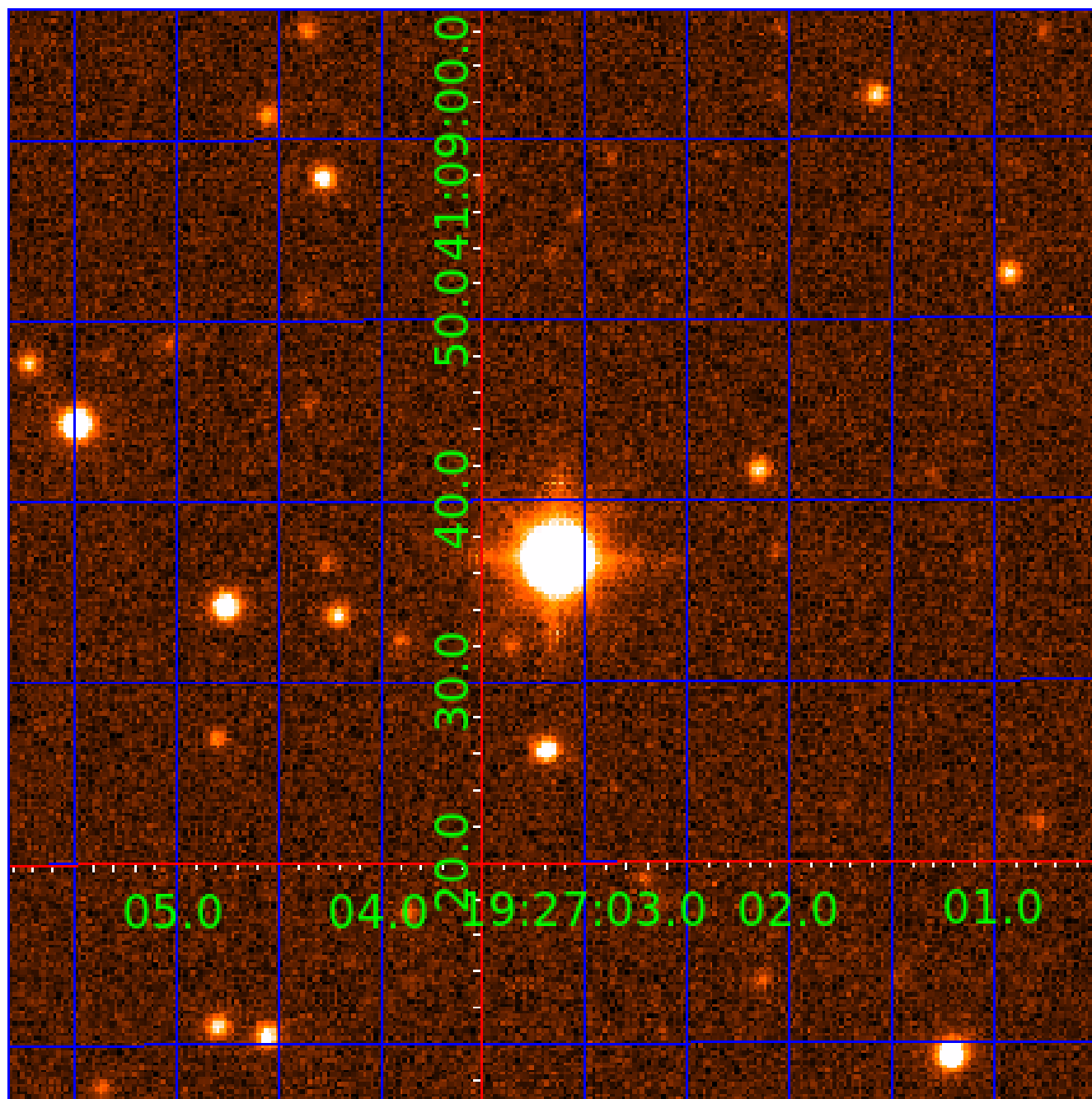


fluxWeightedCentroids, Planet 4 of 9



UKIRT Image

Declination



KIC 005876187

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})
005876187-01	OBS	No	1.713992	131.912139	6.2	11.737	10.7	2.3	1.84	6846	0.46	6617.64
005876187-02	OBS	No	57.276541	148.277502	248.9	8.067	12.6	8.4	1.84	6846	3.12	61.48
005876187-03	OBS	No	37.440682	154.129756	259.4	10.148	12.7	10.9	1.84	6846	3.26	108.37
005876187-04	OBS	No	15.895752	131.868485	139.1	3.611	11.7	6.9	1.84	6846	2.42	339.63
005876187-05	OBS	No	61.156781	167.602539	669.8	7.383	13.3	10.1	1.84	6846	9.01	56.34
005876187-06	OBS	No	74.472334	147.685145	406.0	4.447	11.3	8.0	1.84	6846	3.76	43.32
005876187-09	OBS	No	75.289242	162.348641	178.8	5.000	9.0	-1.0	1.84	6846	2.48	42.70

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005876187-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005876187-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—HALO_GHOST
005876187-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005876187-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005876187-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005876187-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005876187-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

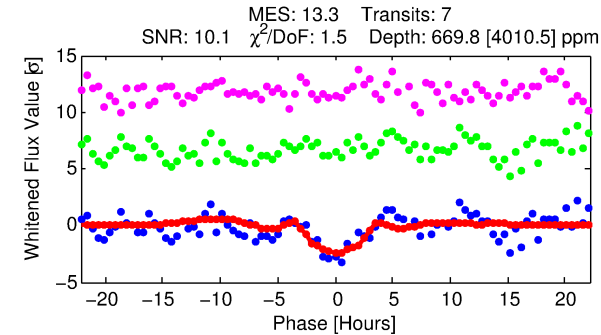
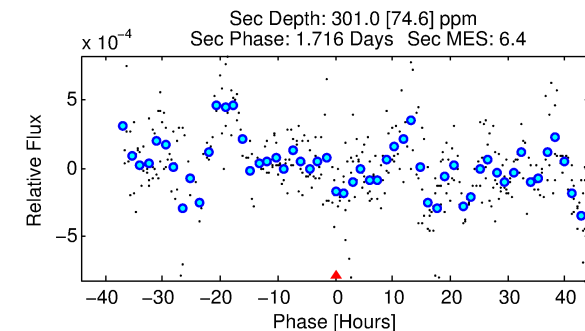
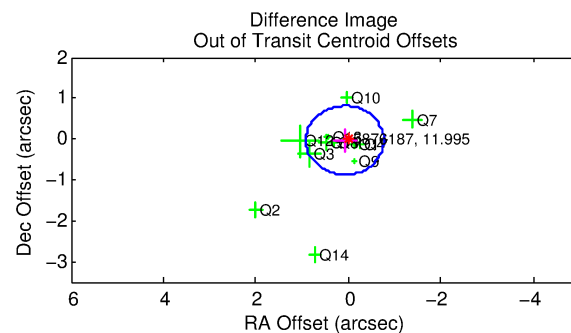
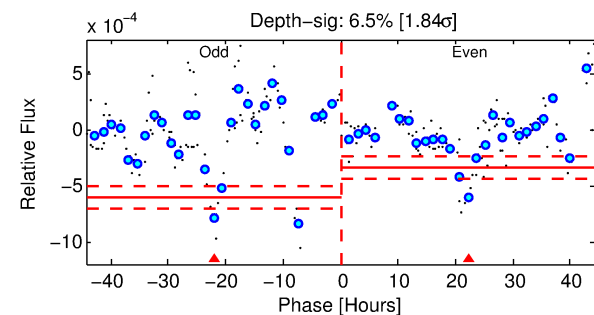
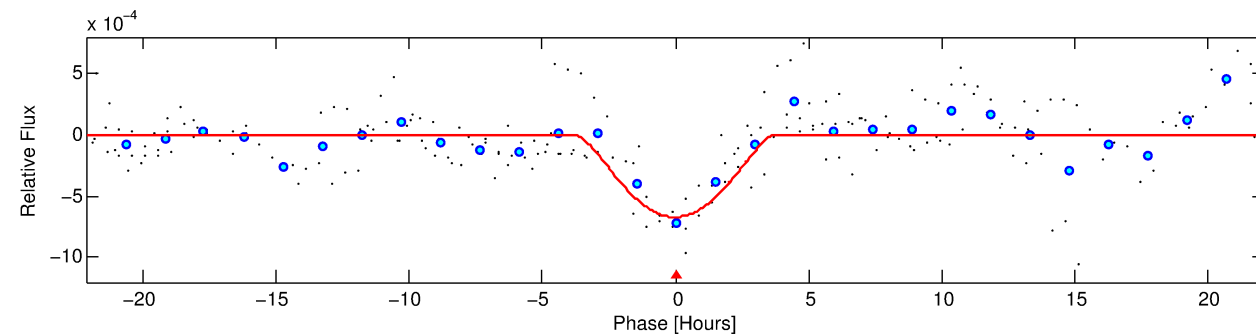
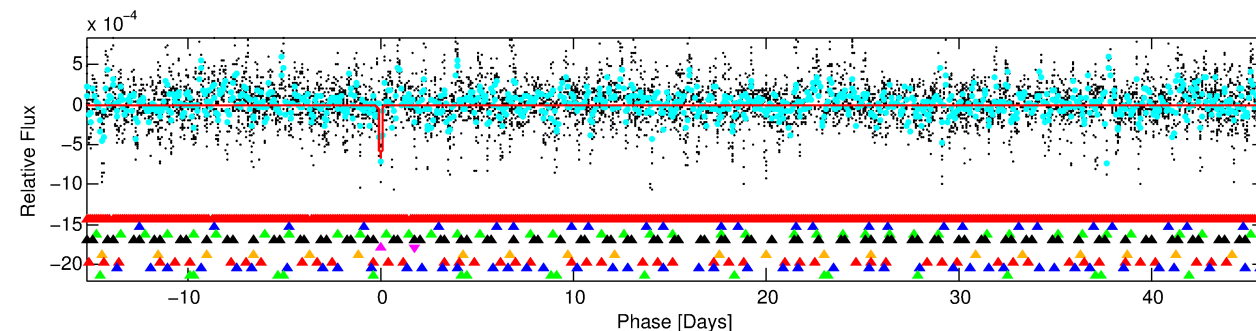
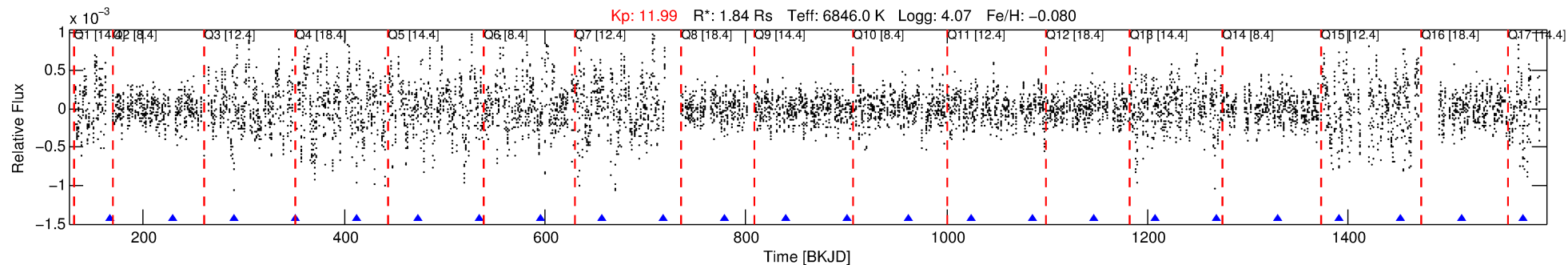
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005876187-05

No Significant Match Found

DV One-Page Summary

KIC: 5876187 Candidate: 5 of 9 Period: 61.157 d



DV Fit Results:

Period = 61.15678 [0.00220] d
Epoch = 167.6025 [0.0311] BKJD
Rp/R* = 0.0449 [0.1040]
a/R* = 19.21 [10.61]
b = 1.00 [0.03]
Seff = 56.34 [14.30]
Teff = 699 [44] K
Rp = 9.01 [20.91] Re
a = 0.3433 [0.0553] AU
Ag = 240.44 [1115.84] [0.21 σ]
Teffp = 4253 [4928] K [0.72 σ]

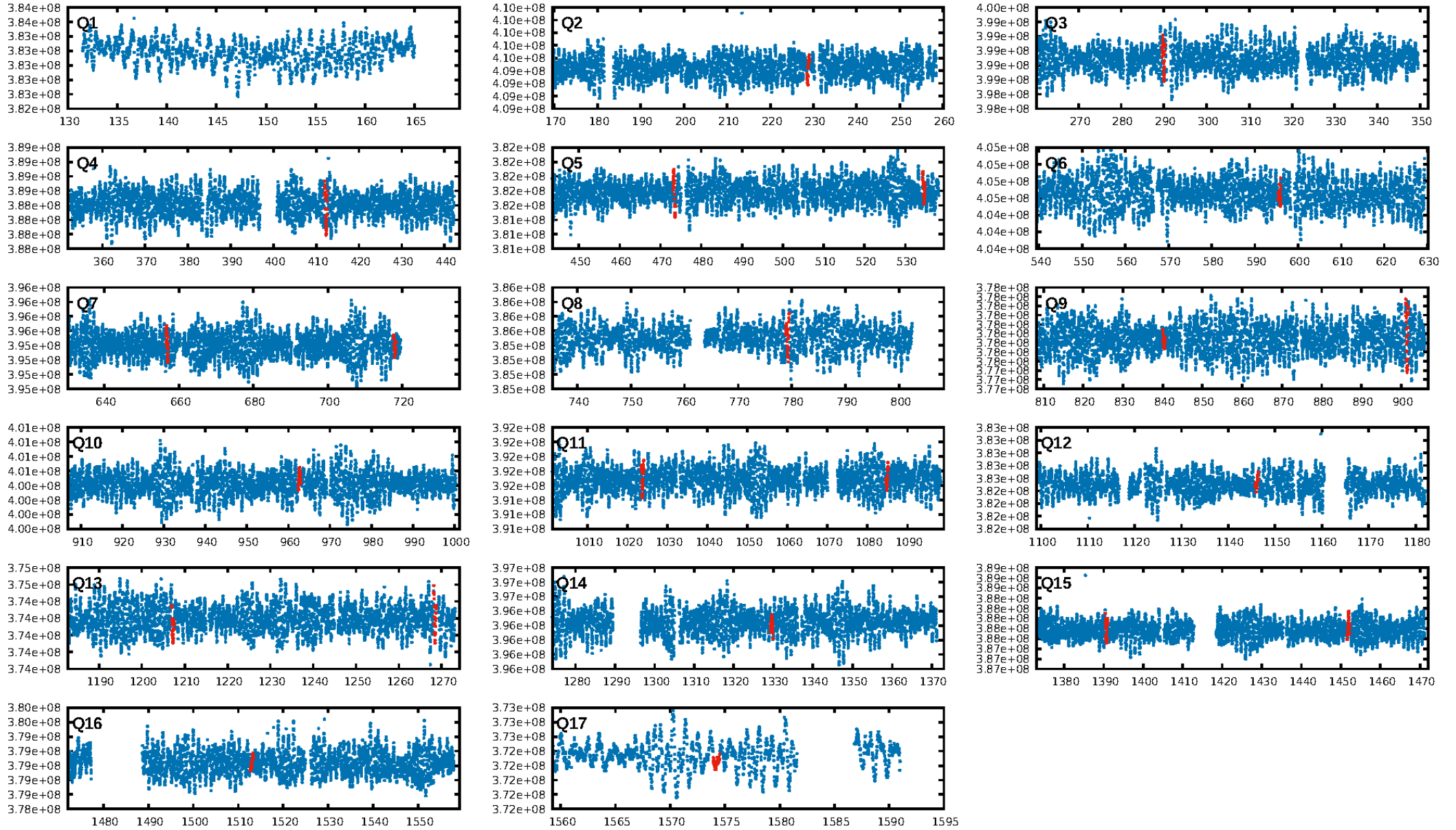
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [8.52 σ]
LongPeriod-sig: 100.0% [37.08 σ]
ModelChiSquare2-sig: 9.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [6/6]
GhostDiagnostic-chr: 0.5068
Centroid-sig: 0.1%
Centroid-so: 0.205 arcsec [1.88 σ]
OotOffset-rm: 0.087 arcsec [0.31 σ]
KicOffset-rm: 0.030 arcsec [0.09 σ]
OotOffset-st: 3/3/3/3 [12]
KicOffset-st: 3/3/3/3 [12]
DiffImageQuality-fgm: 0.83 [10/12]
DiffImageOverlap-fno: 0.00 [0/16]

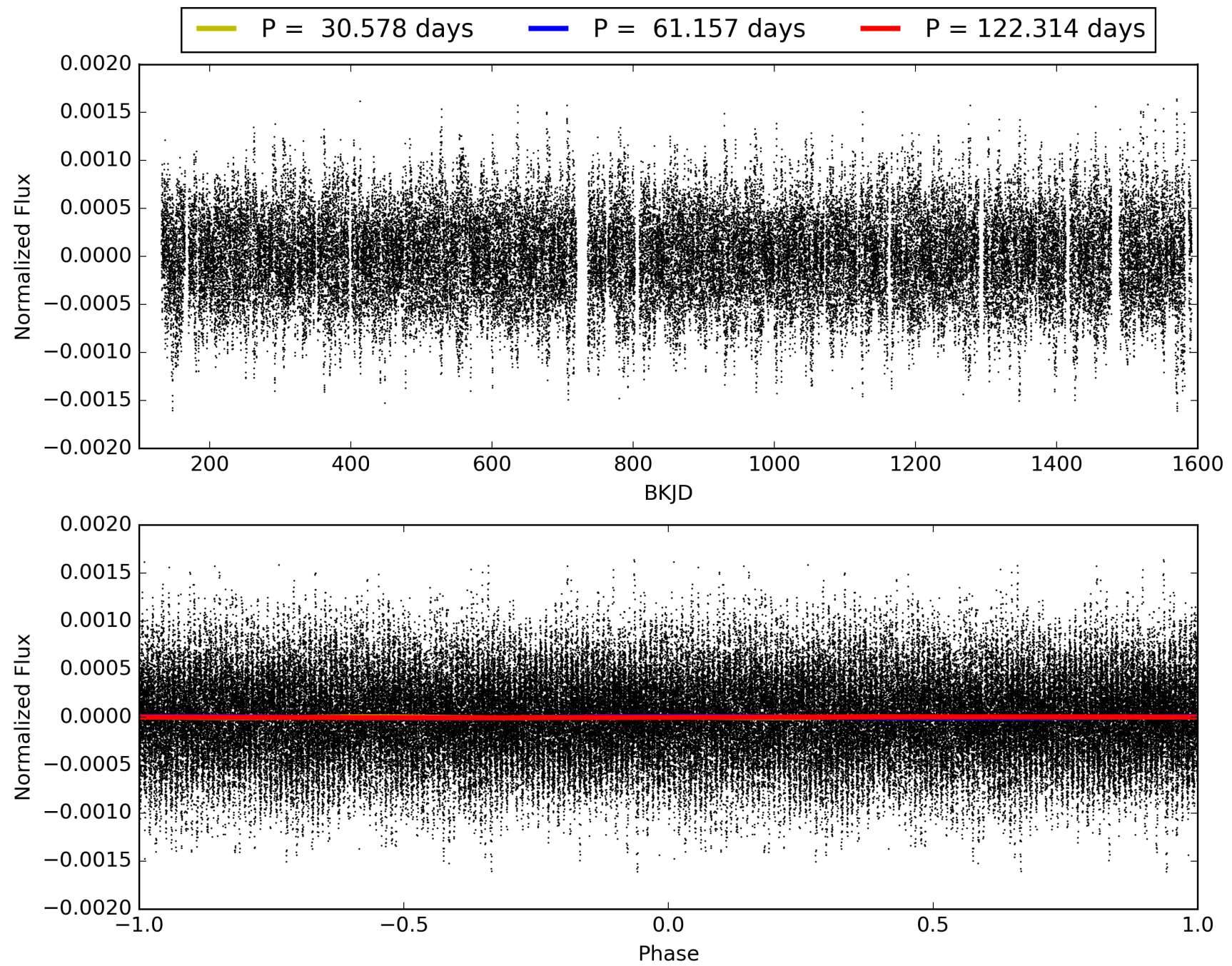
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 09:12:54 Z

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

TCE 005876187-05, PDC Light Curves

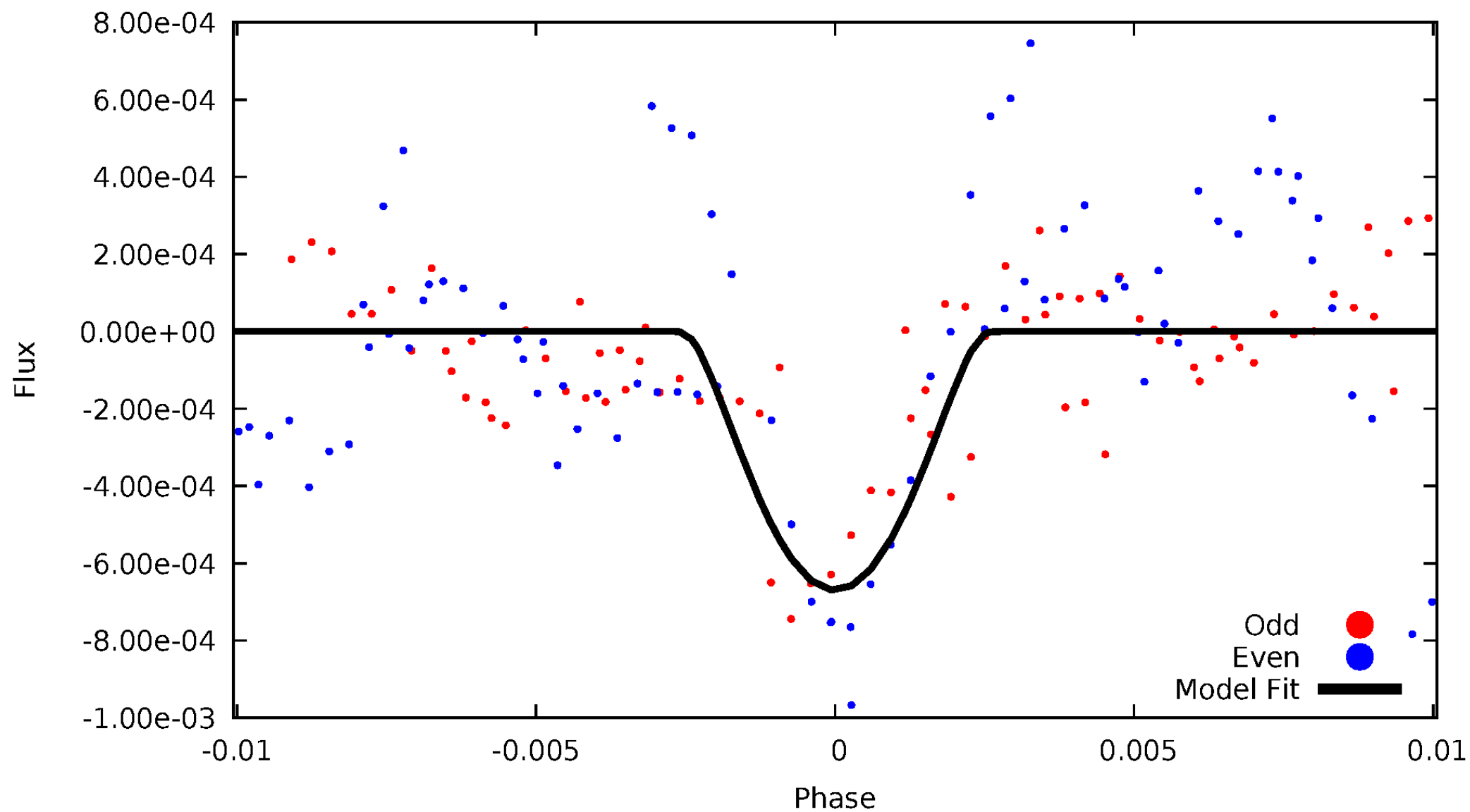


TCE 005876187-05



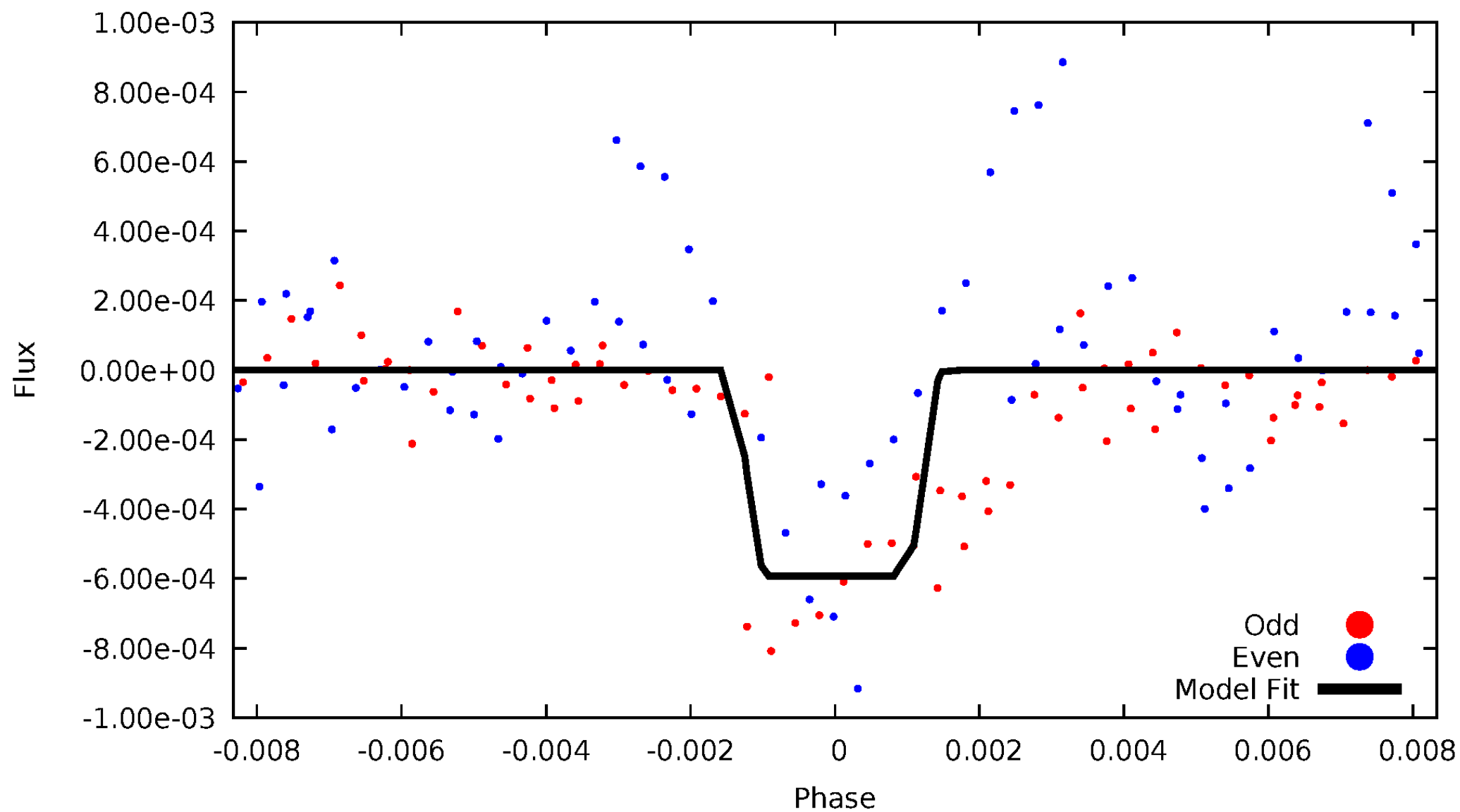
DV Odd/Even

TCE 005876187-05



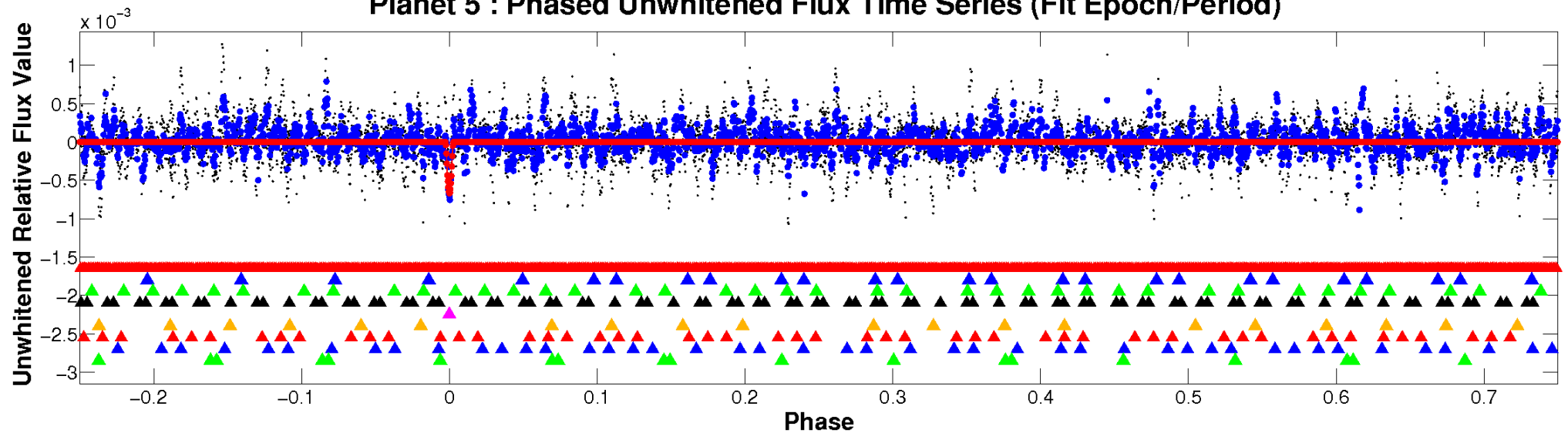
ALT Odd/Even

TCE 005876187-05

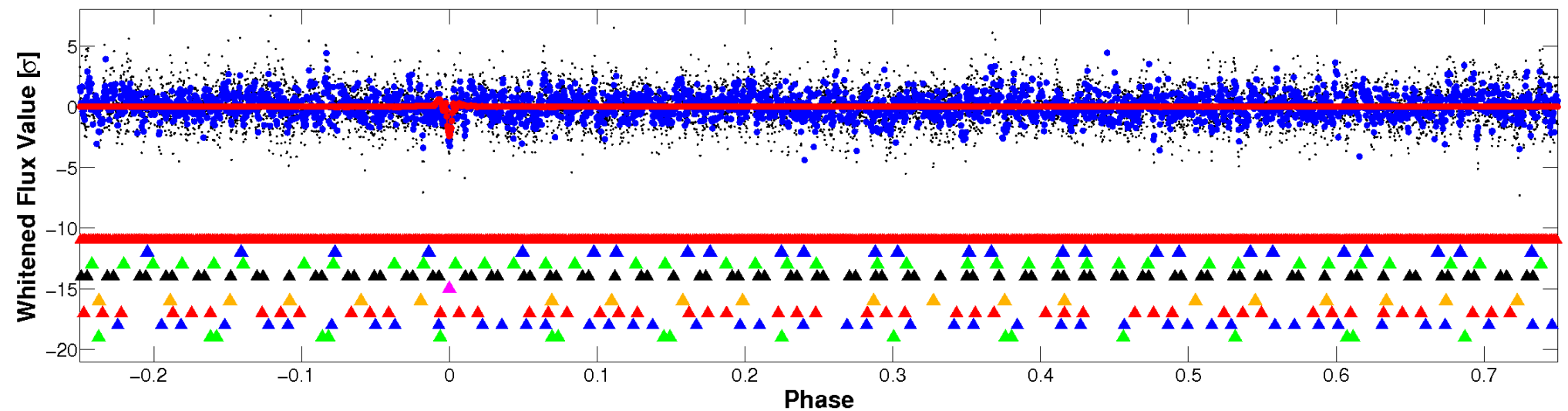


Non-Whitened Vs. Whitened Light Curve

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

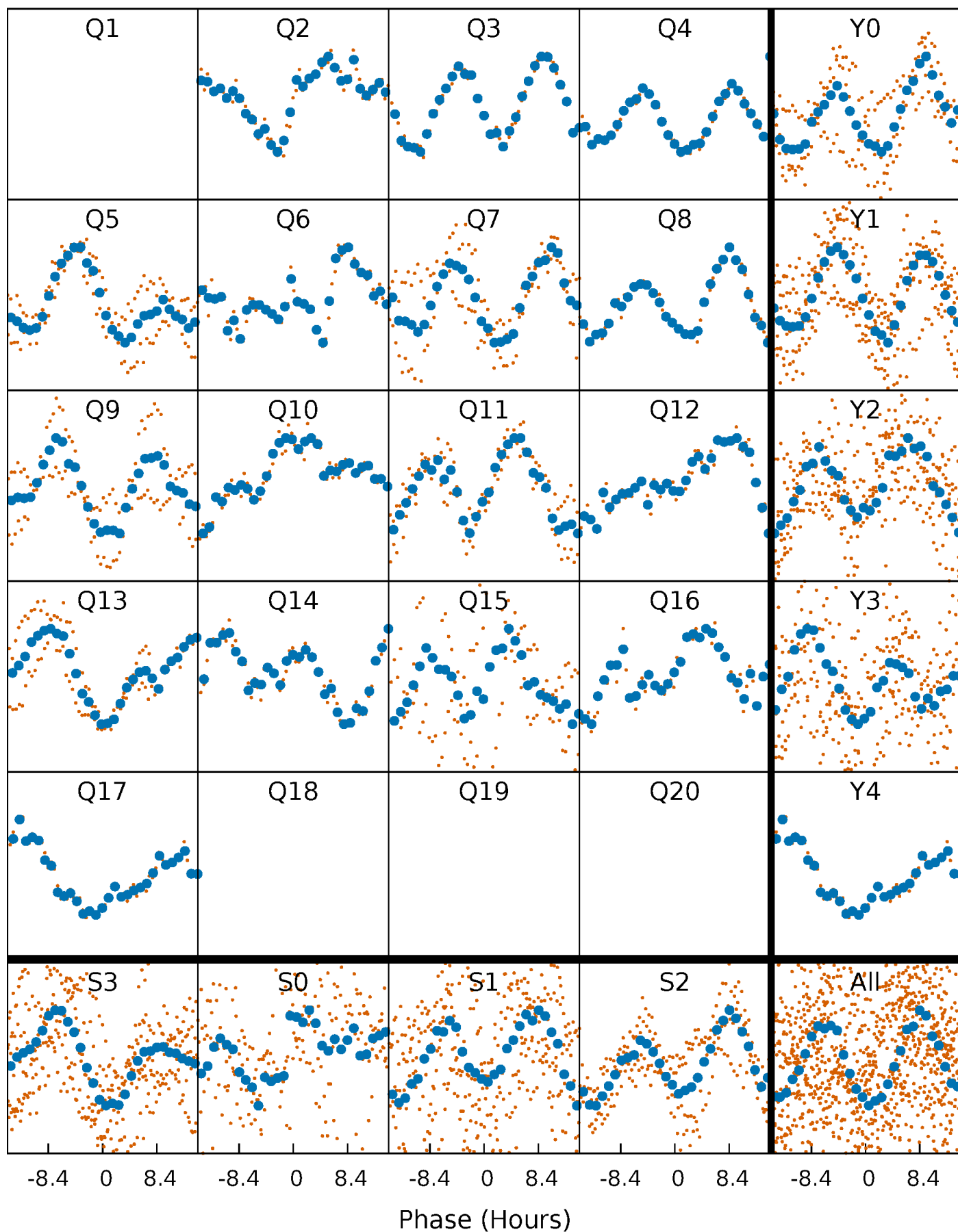


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



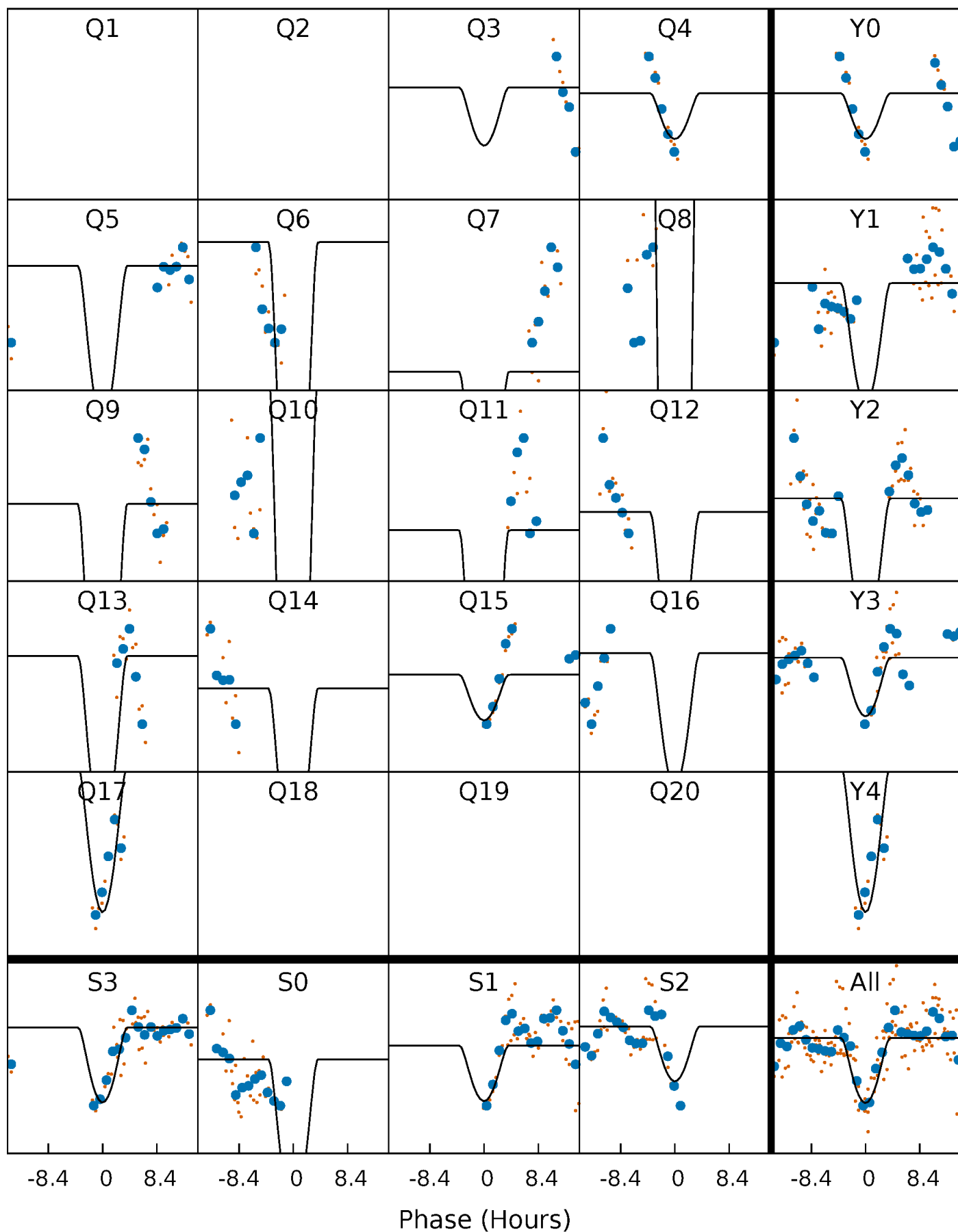
PDC Quarter-Phased Transit Curves

TCE 005876187-05 P= 61.156781 Days $T_0=167.602539$ (BKJD)



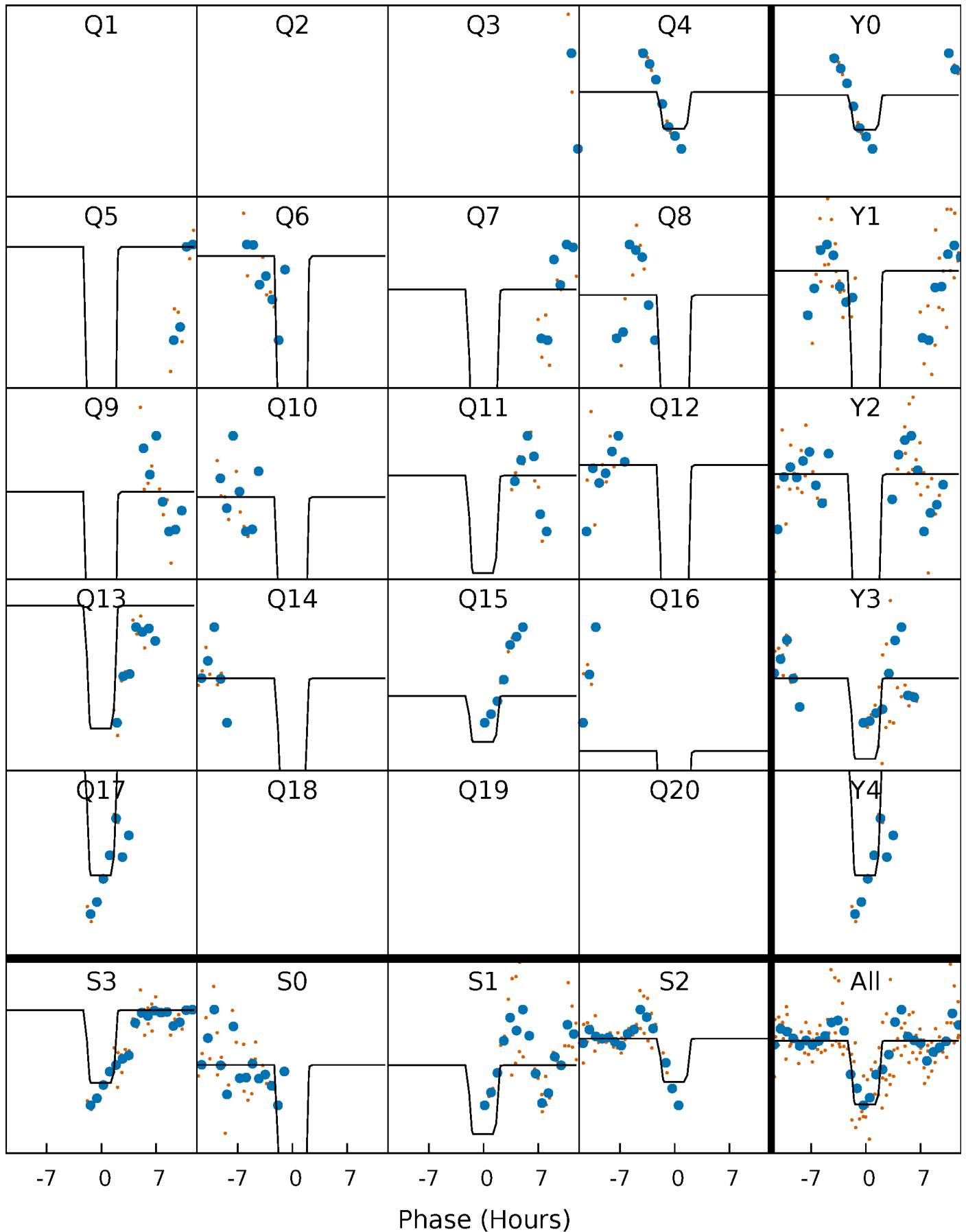
DV Quarter-Phased Transit Curves

TCE 005876187-05 P= 61.156781 Days $T_0=167.602539$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

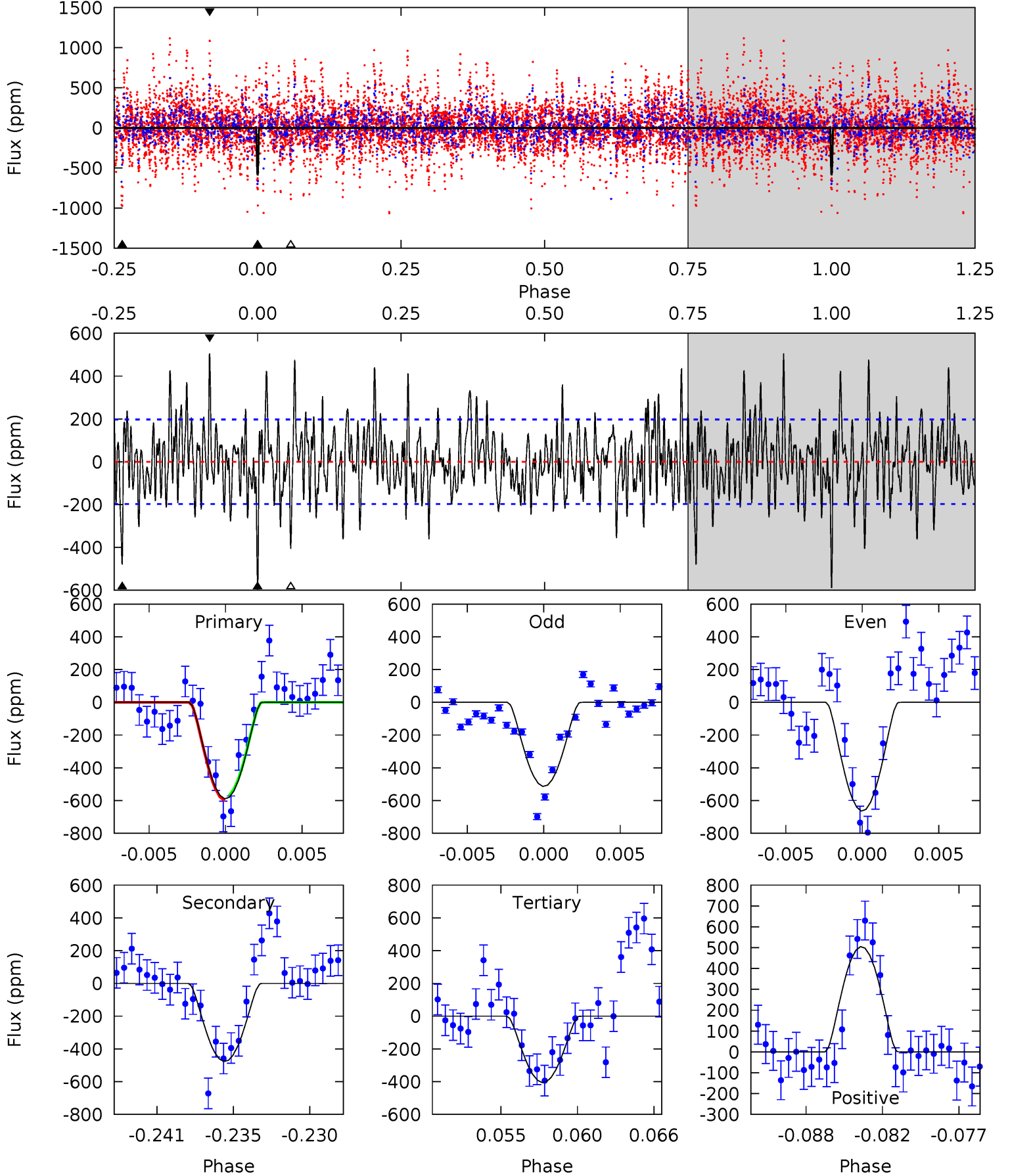
TCE 005876187-05 P= 61.157391 Days $T_0=167.597525$ (BKJD)



DV Model-Shift Uniqueness Test

005876187-05, $P = 61.156781$ Days, $E = 106.445758$ Days

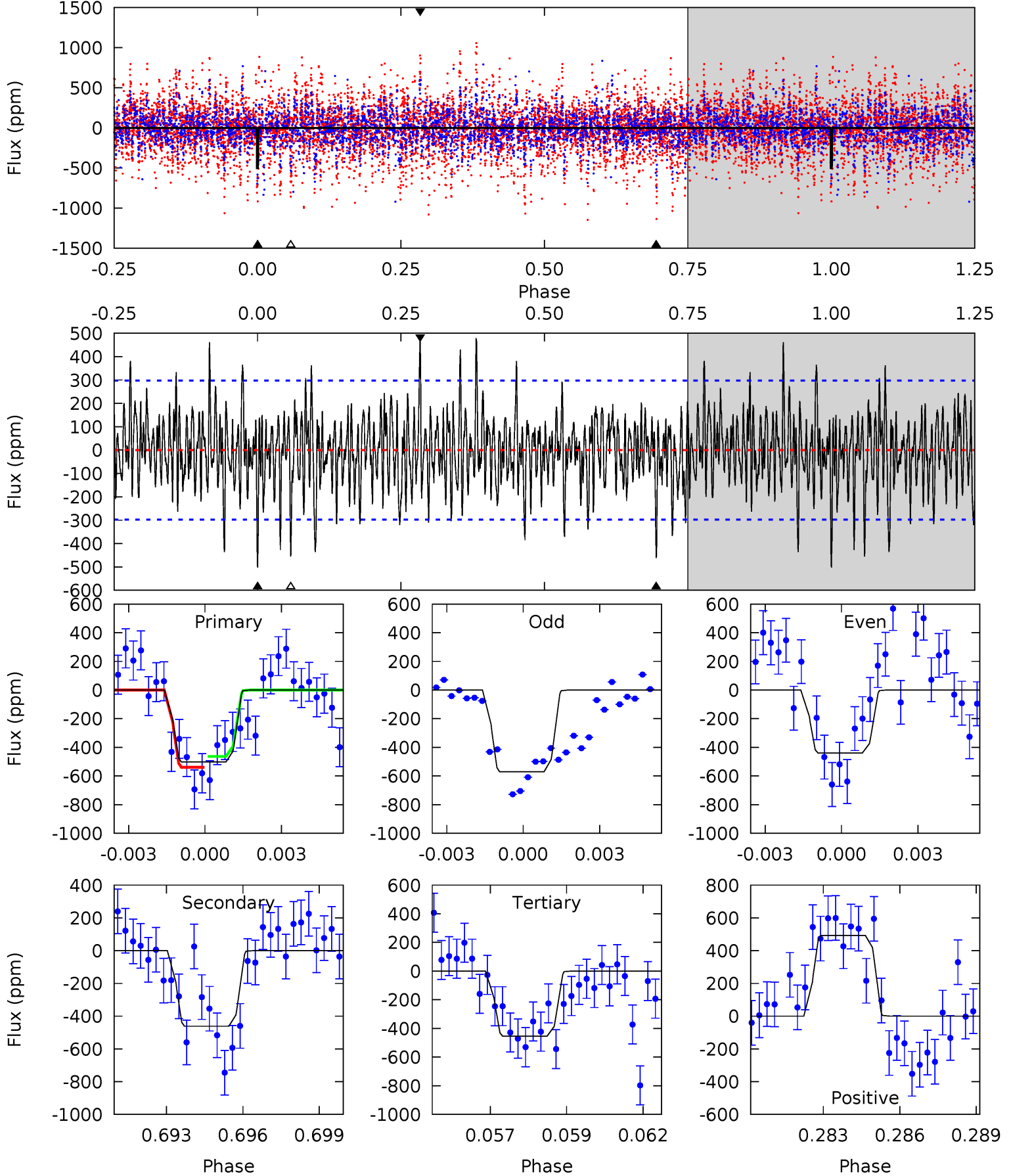
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.3	12.4	10.6	13.1	5.14	2.78	3.49	4.78	2.19	1.87	-0.72	1.93	0.79	0.46	0.39



Alt Model-Shift Uniqueness Test

005876187-05, P = 61.157391 Days, E = 106.440134 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.88	8.16	8.03	8.71	5.25	2.97	2.35	0.85	0.17	0.13	-0.55	1.15	0.74	0.50	0.67



Stellar Parameters For KIC 005876187

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6846^{+82}_{-82}	$4.069^{+0.143}_{-0.117}$	$-0.080^{+0.200}_{-0.150}$	$1.837^{+0.325}_{-0.325}$	$1.444^{+0.115}_{-0.115}$	$0.328^{+0.233}_{-0.117}$
	+1%/-1%	+4%/-3%	+250%/-188%	+18%/-18%	+8%/-8%	+71%/-36%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 005876187-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-477 ± 38	$17.52^{+17.48}_{-11.40}$	973^{+45}_{-44}	3753^{+2007}_{-690}	102^{+688}_{-76}
Alt.	-462 ± 57	$16.69^{+15.46}_{-11.75}$	977^{+45}_{-50}	3845^{+2414}_{-747}	110^{+1112}_{-81}

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)

A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

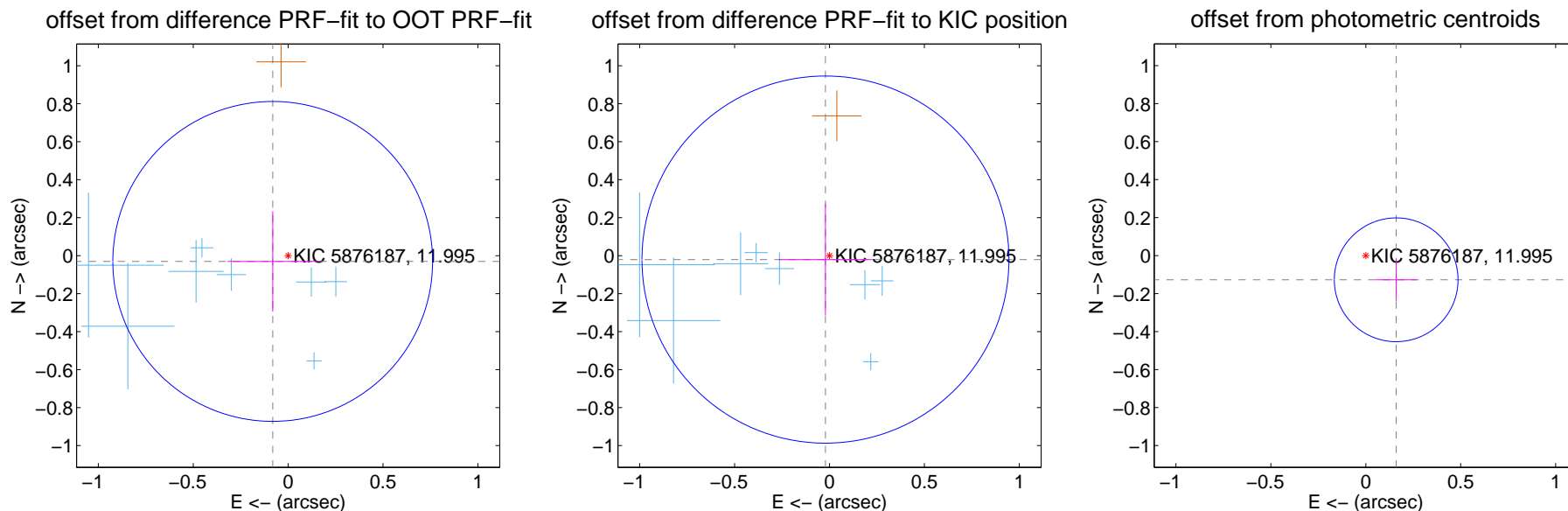
DV Centroid Data

Supplemental centroid analysis for 005876187-05. **Kepler magnitude: 11.99.** Transit SNR 10.14

There are 10 quarters with good PRF difference image offsets

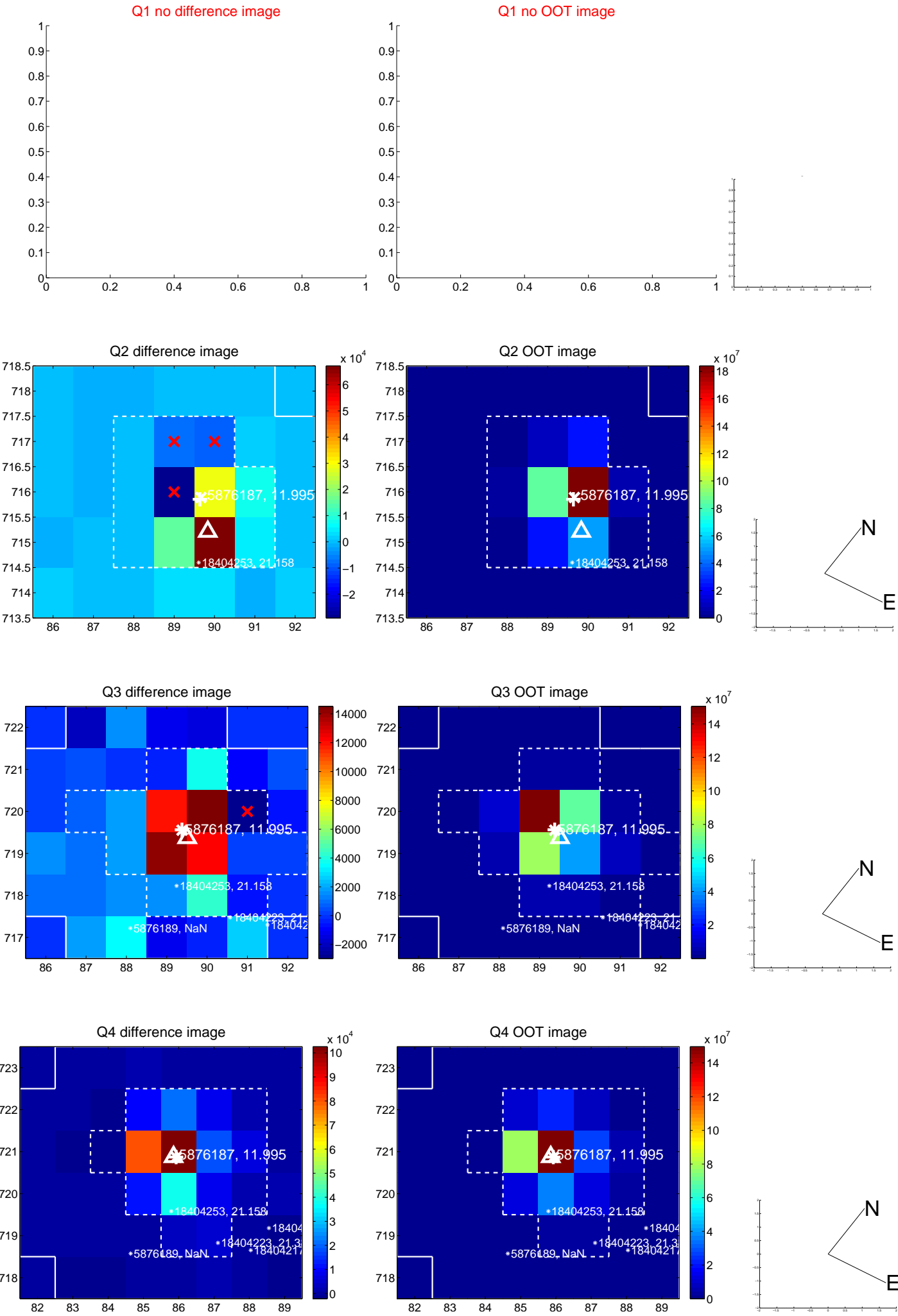
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.087 ± 0.281	0.31	0.081 ± 0.238	-0.030 ± 0.264
PRF-fit source offset from KIC position	0.030 ± 0.322	0.09	0.021 ± 0.247	-0.021 ± 0.294
photometric centroid source offset	0.20 ± 0.11	1.88	-0.16 ± 0.11	-0.13 ± 0.11

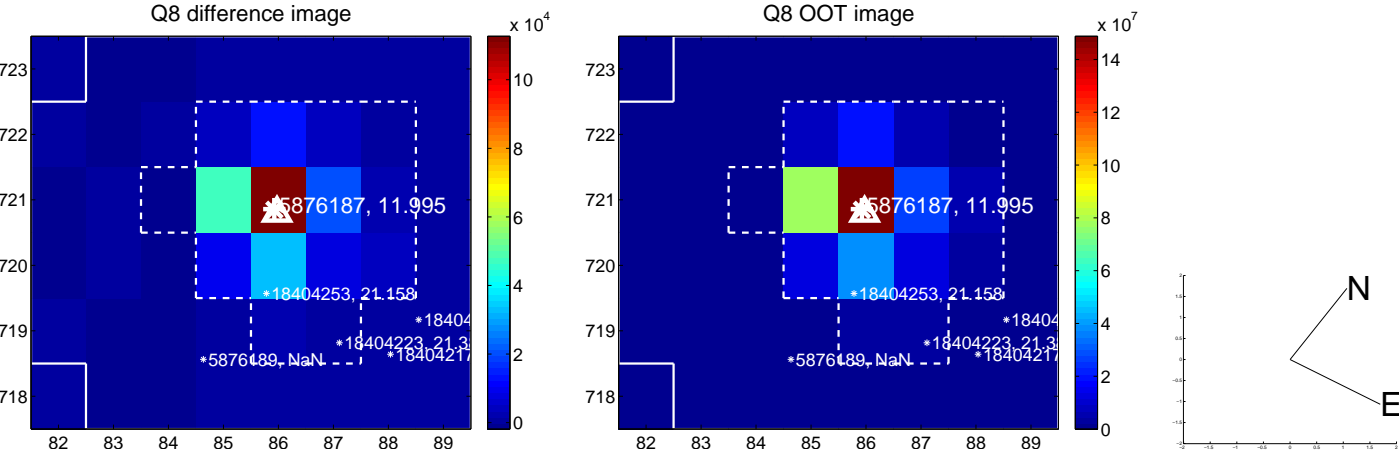
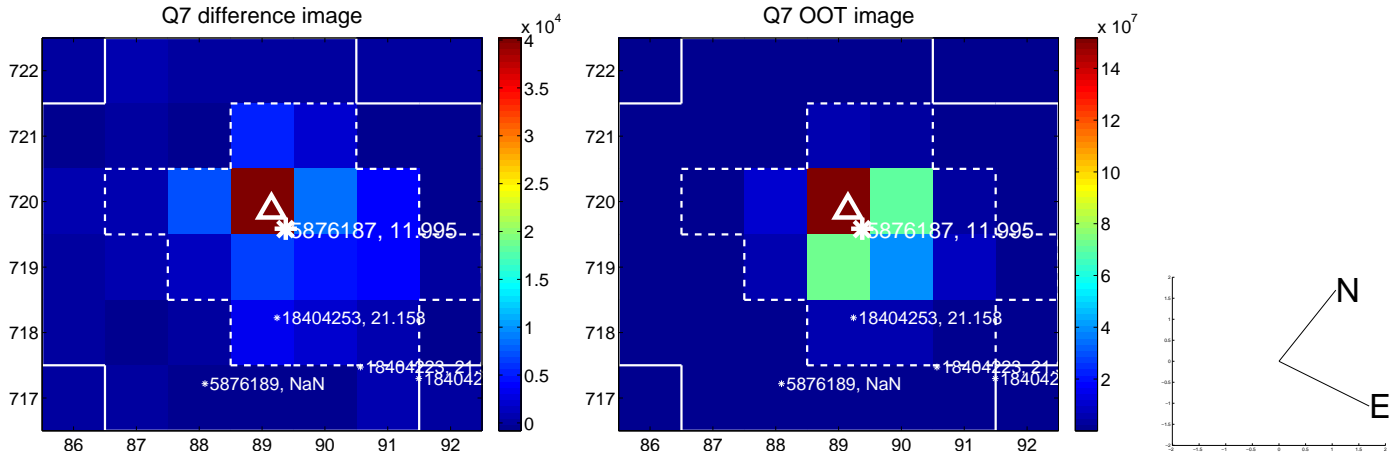
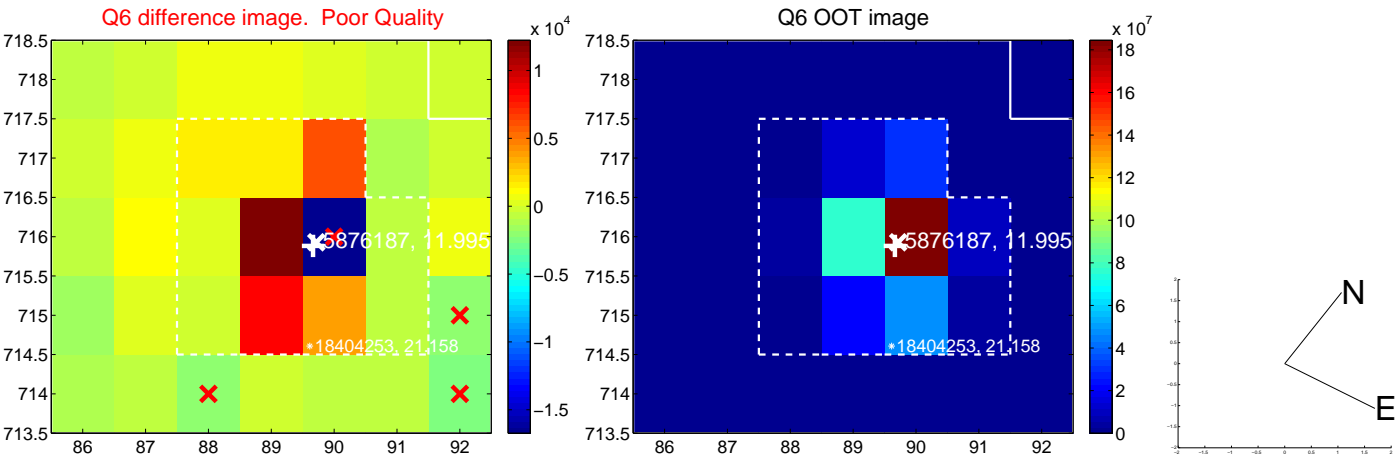
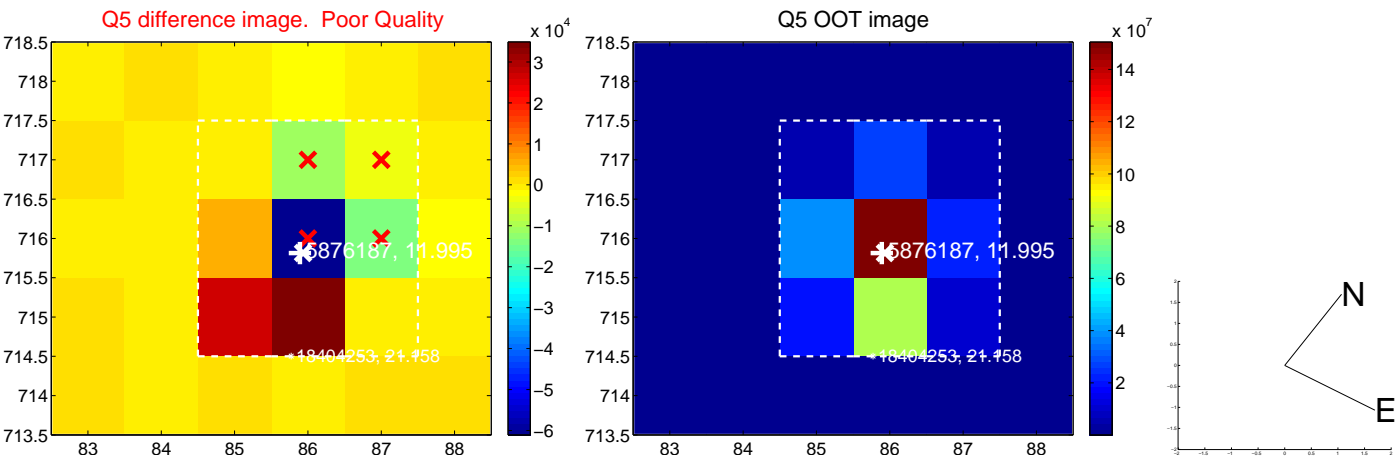


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

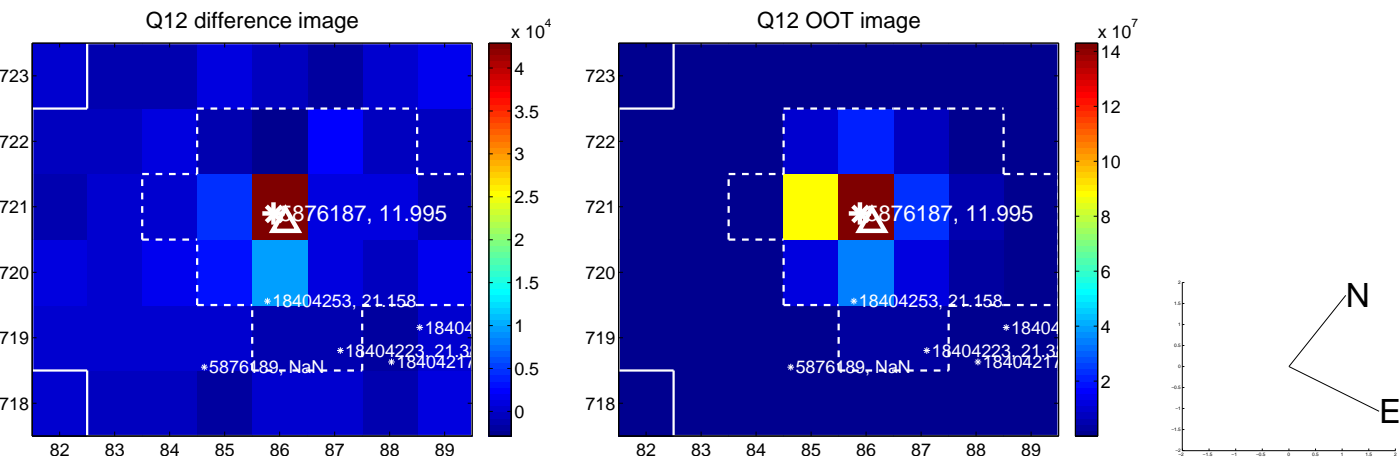
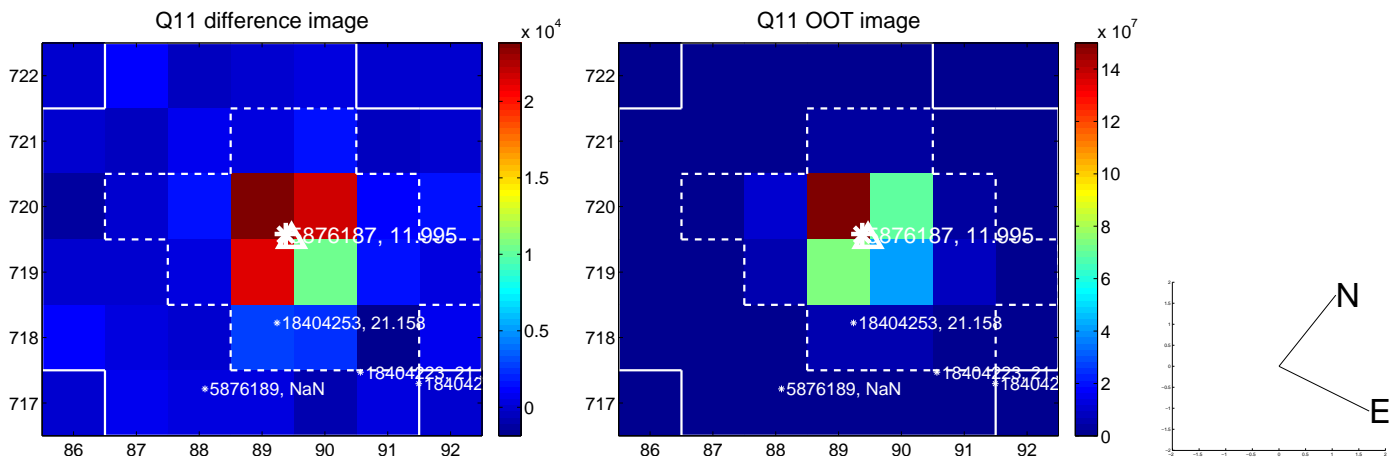
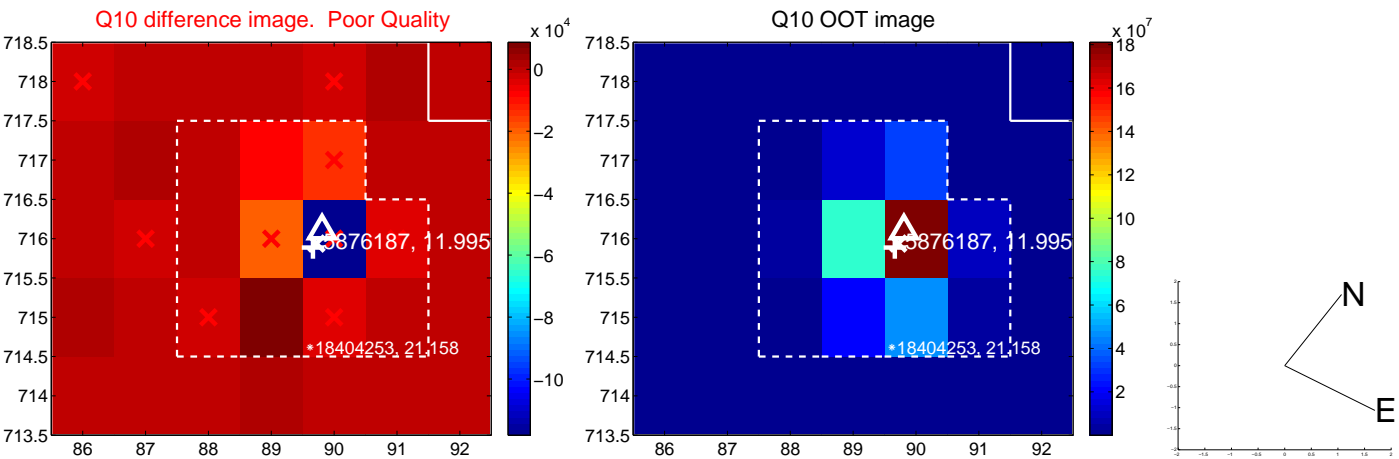
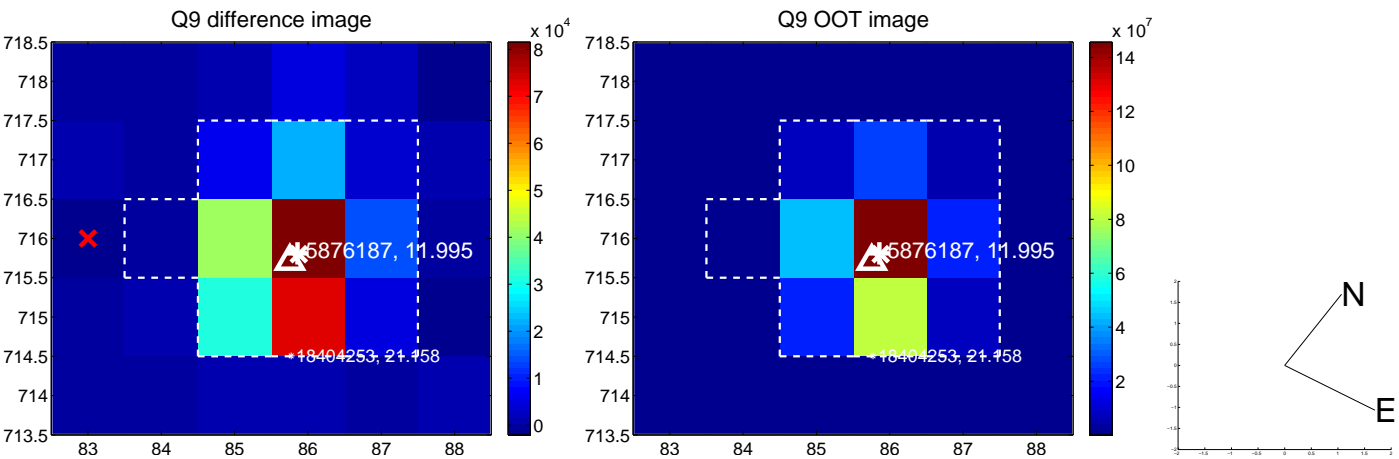
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



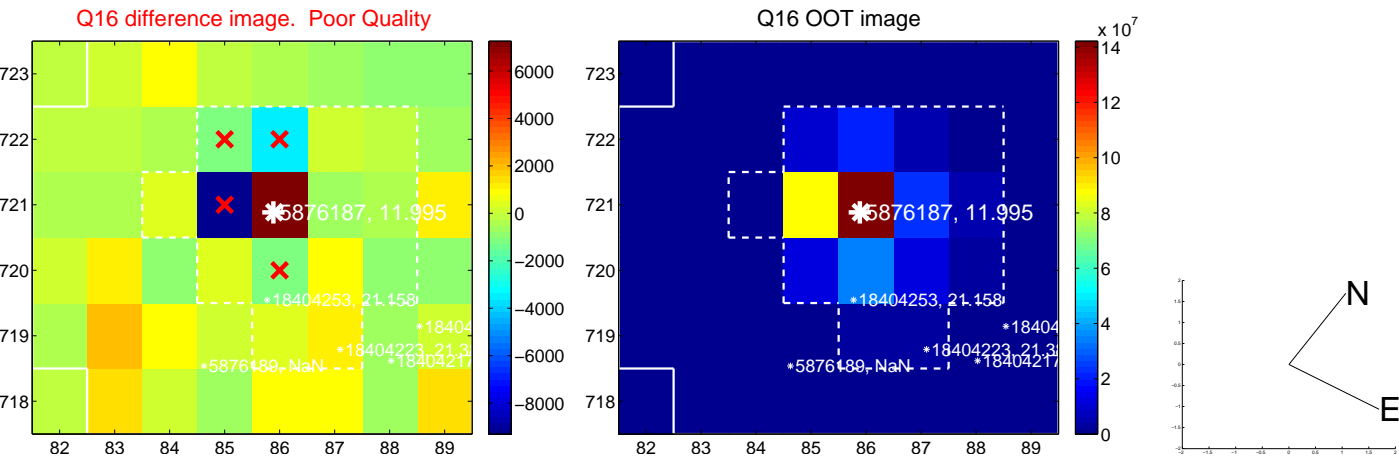
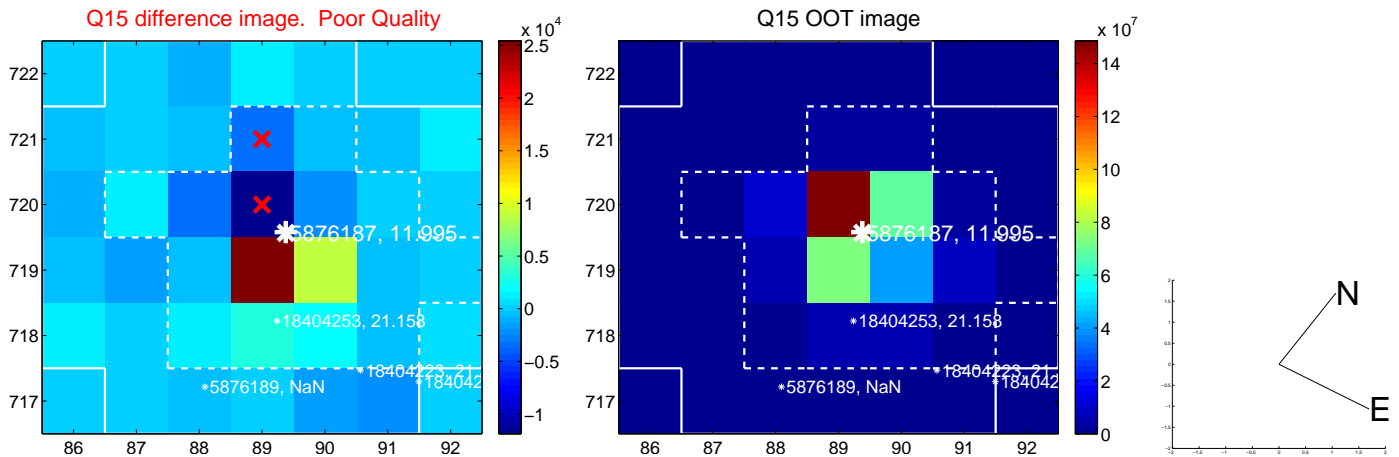
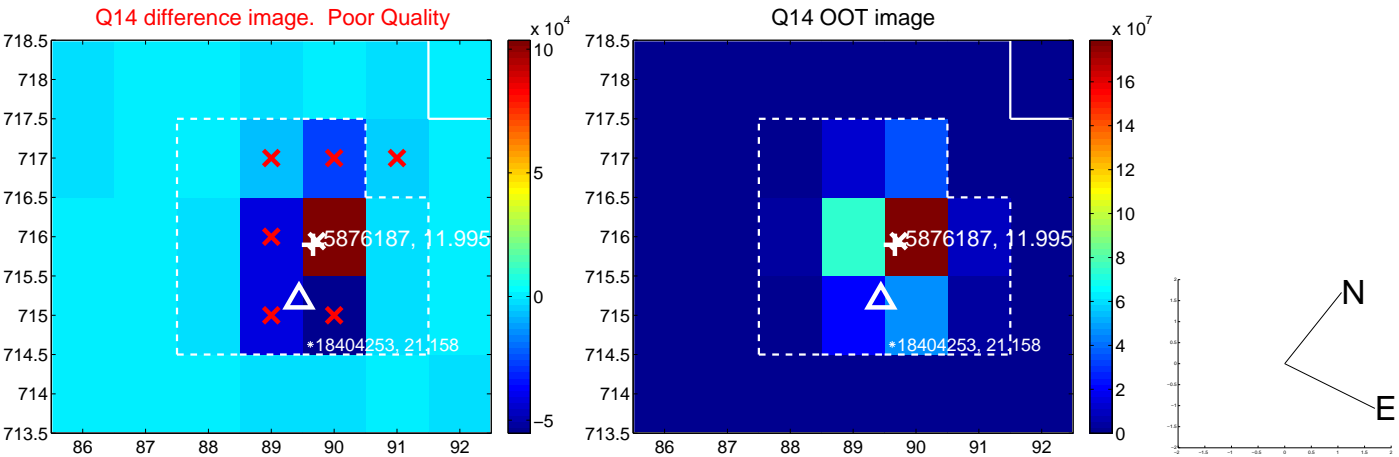
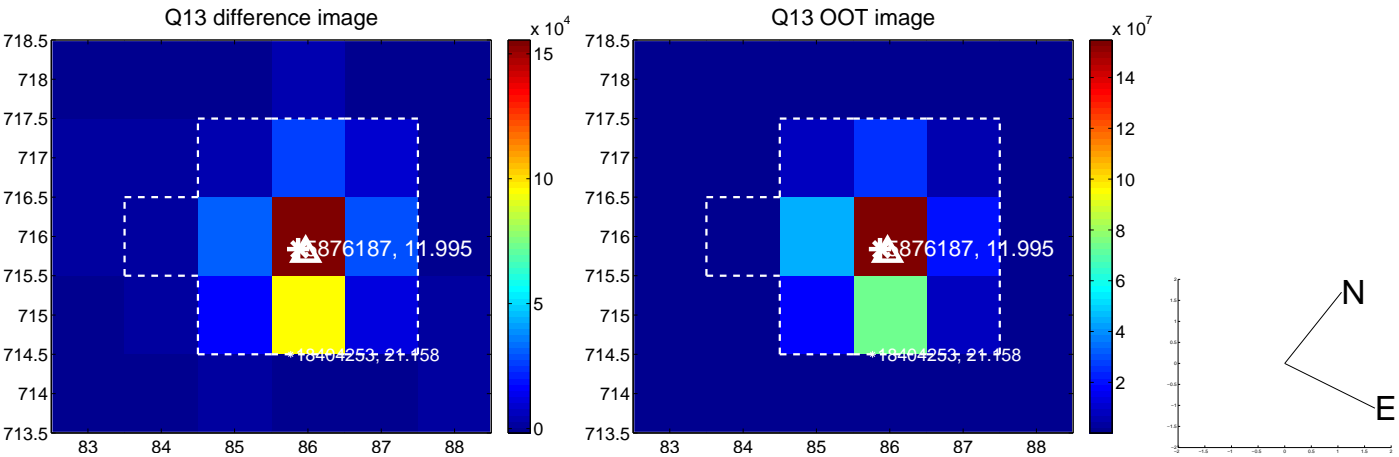
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



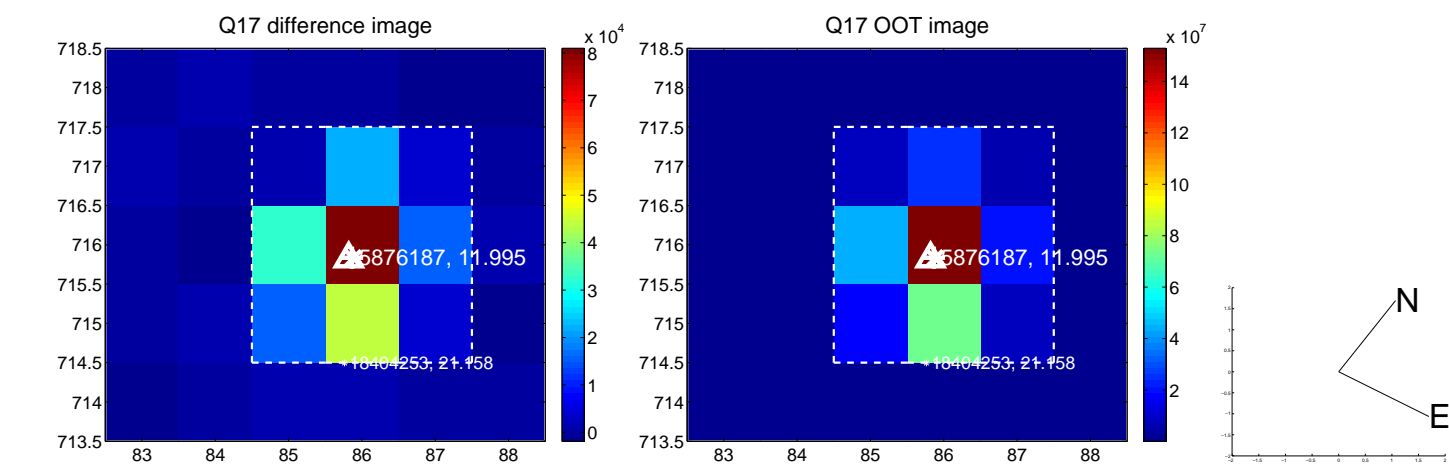
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



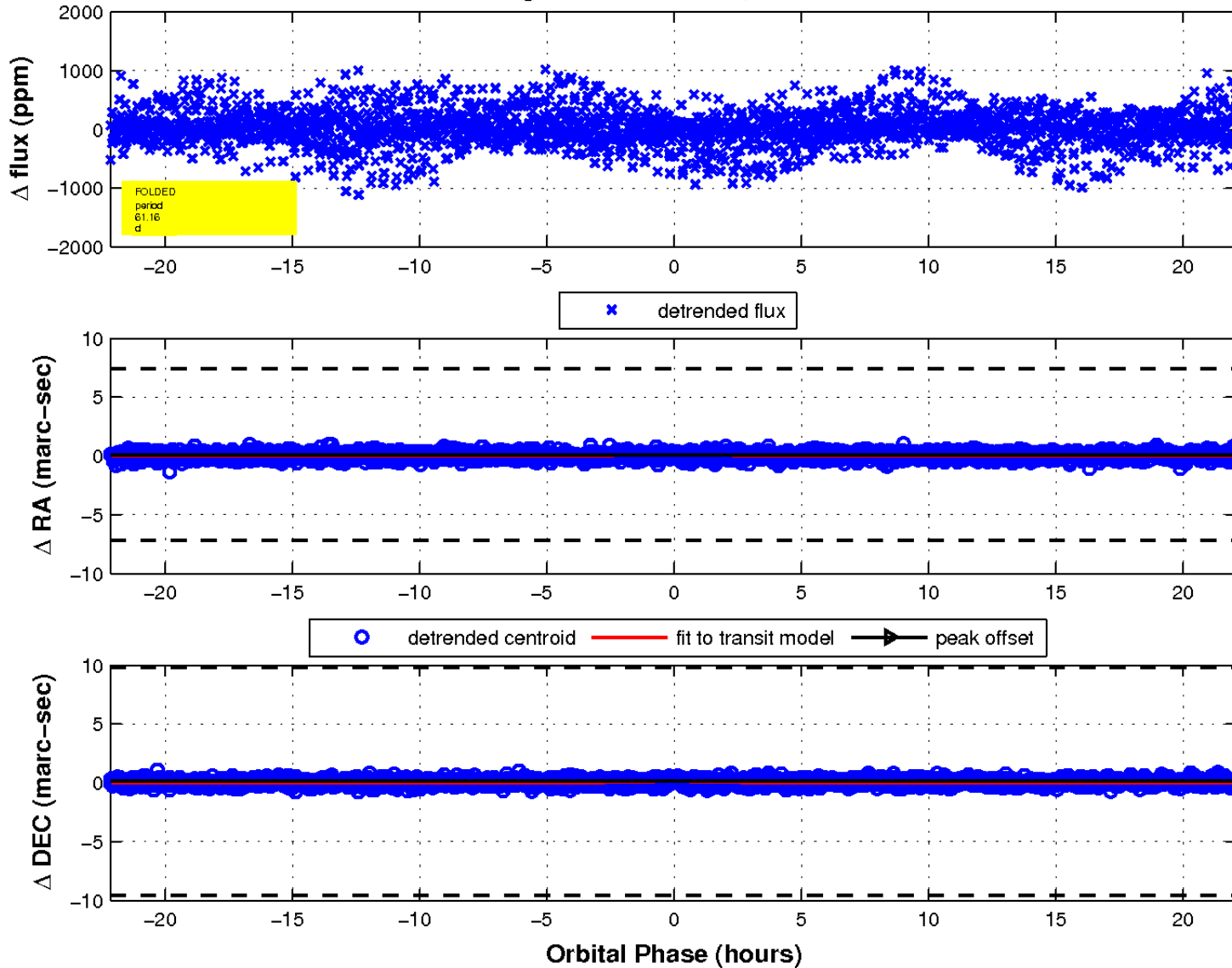
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

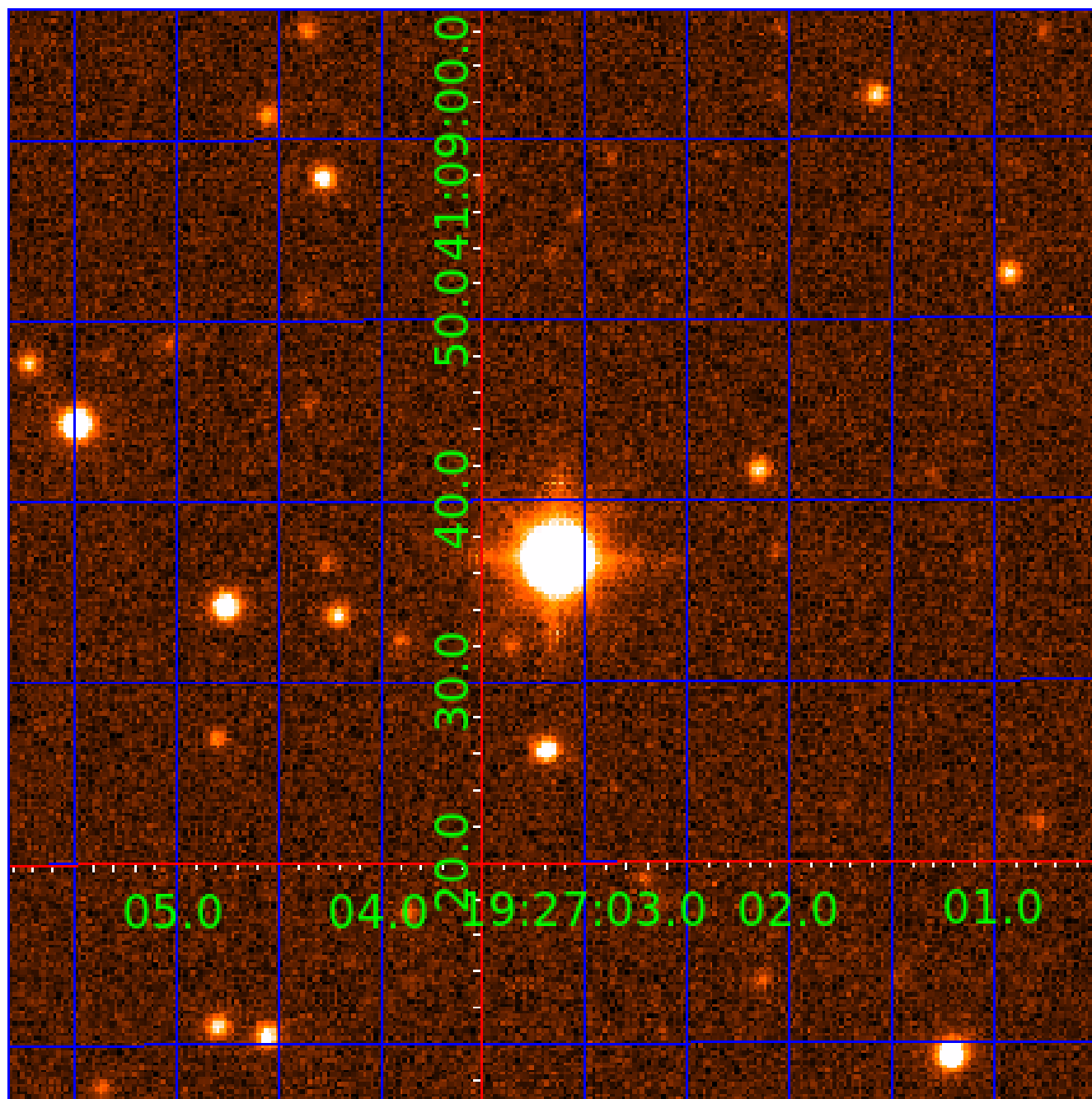


fluxWeightedCentroids, Planet 5 of 9



UKIRT Image

Declination



KIC 005876187

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})
005876187-01	OBS	No	1.713992	131.912139	6.2	11.737	10.7	2.3	1.84	6846	0.46	6617.64
005876187-02	OBS	No	57.276541	148.277502	248.9	8.067	12.6	8.4	1.84	6846	3.12	61.48
005876187-03	OBS	No	37.440682	154.129756	259.4	10.148	12.7	10.9	1.84	6846	3.26	108.37
005876187-04	OBS	No	15.895752	131.868485	139.1	3.611	11.7	6.9	1.84	6846	2.42	339.63
005876187-05	OBS	No	61.156781	167.602539	669.8	7.383	13.3	10.1	1.84	6846	9.01	56.34
005876187-06	OBS	No	74.472334	147.685145	406.0	4.447	11.3	8.0	1.84	6846	3.76	43.32
005876187-09	OBS	No	75.289242	162.348641	178.8	5.000	9.0	-1.0	1.84	6846	2.48	42.70

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005876187-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005876187-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—HALO_GHOST
005876187-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005876187-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005876187-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005876187-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005876187-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

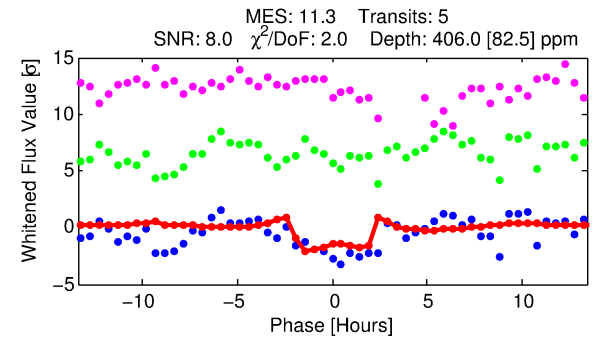
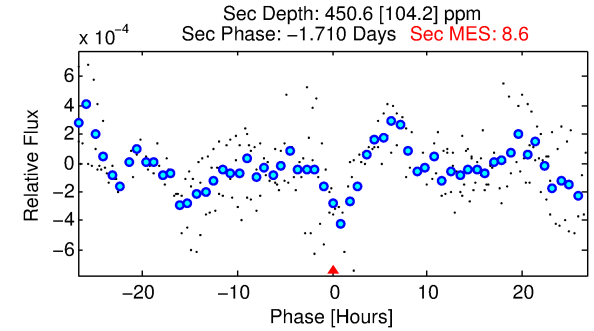
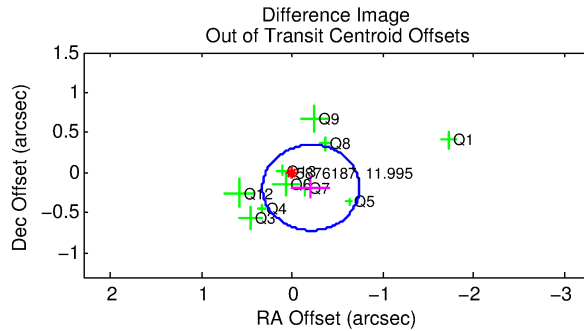
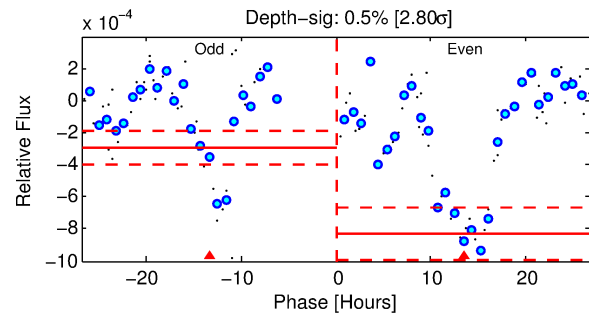
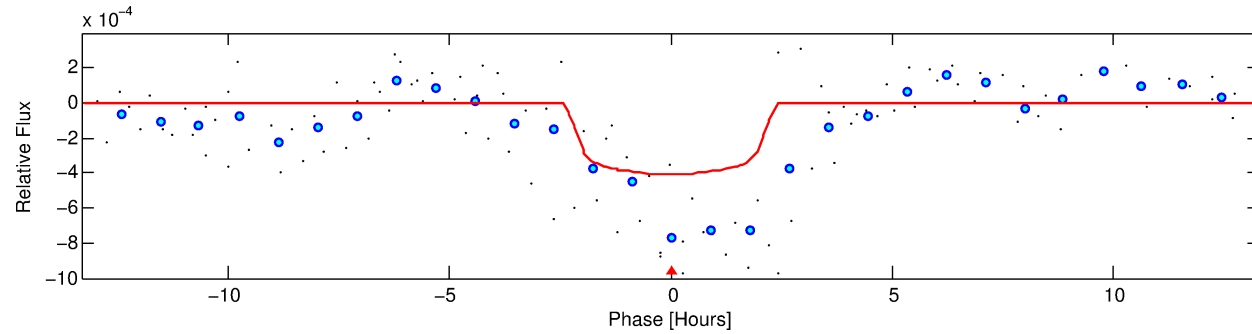
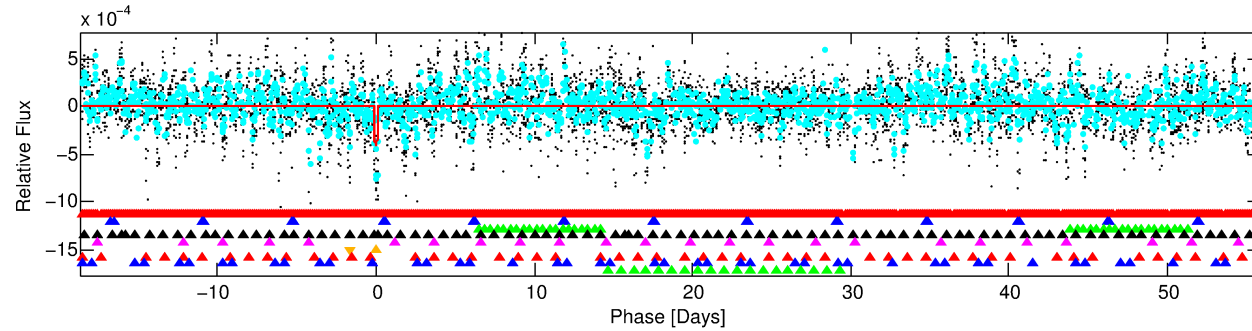
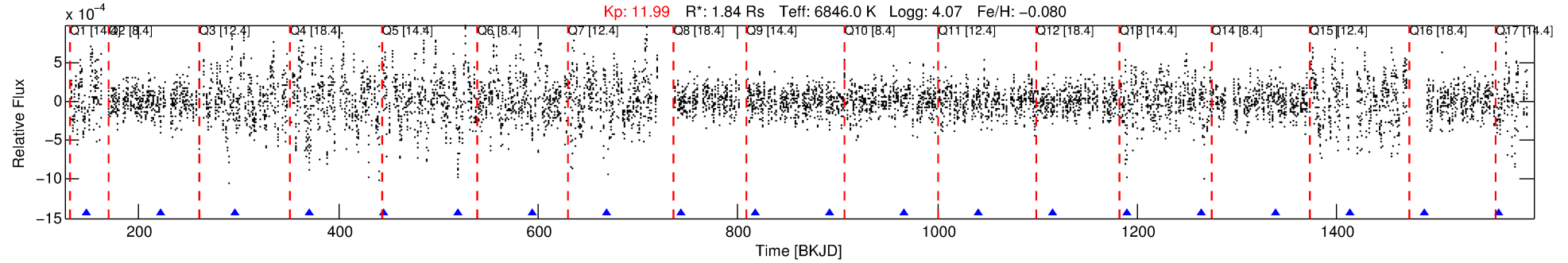
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005876187-06

No Significant Match Found

DV One-Page Summary

KIC: 5876187 Candidate: 6 of 9 Period: 74.472 d



DV Fit Results:

Period = 74.47233 [0.00101] d
Epoch = 147.6851 [0.0117] BKJD
Rp/R* = 0.0187 [0.0307]
a/R* = 125.81 [1137.63]
b = 0.27 [31.67]
Seff = 43.32 [10.99]
Teq = 654 [42] K
Rp = 3.76 [6.19] Re
a = 0.3915 [0.0631] AU
Ag = 2690.16 [8852.19] [0.30 σ]
Teffp = 7284 [5976] K [1.11 σ]

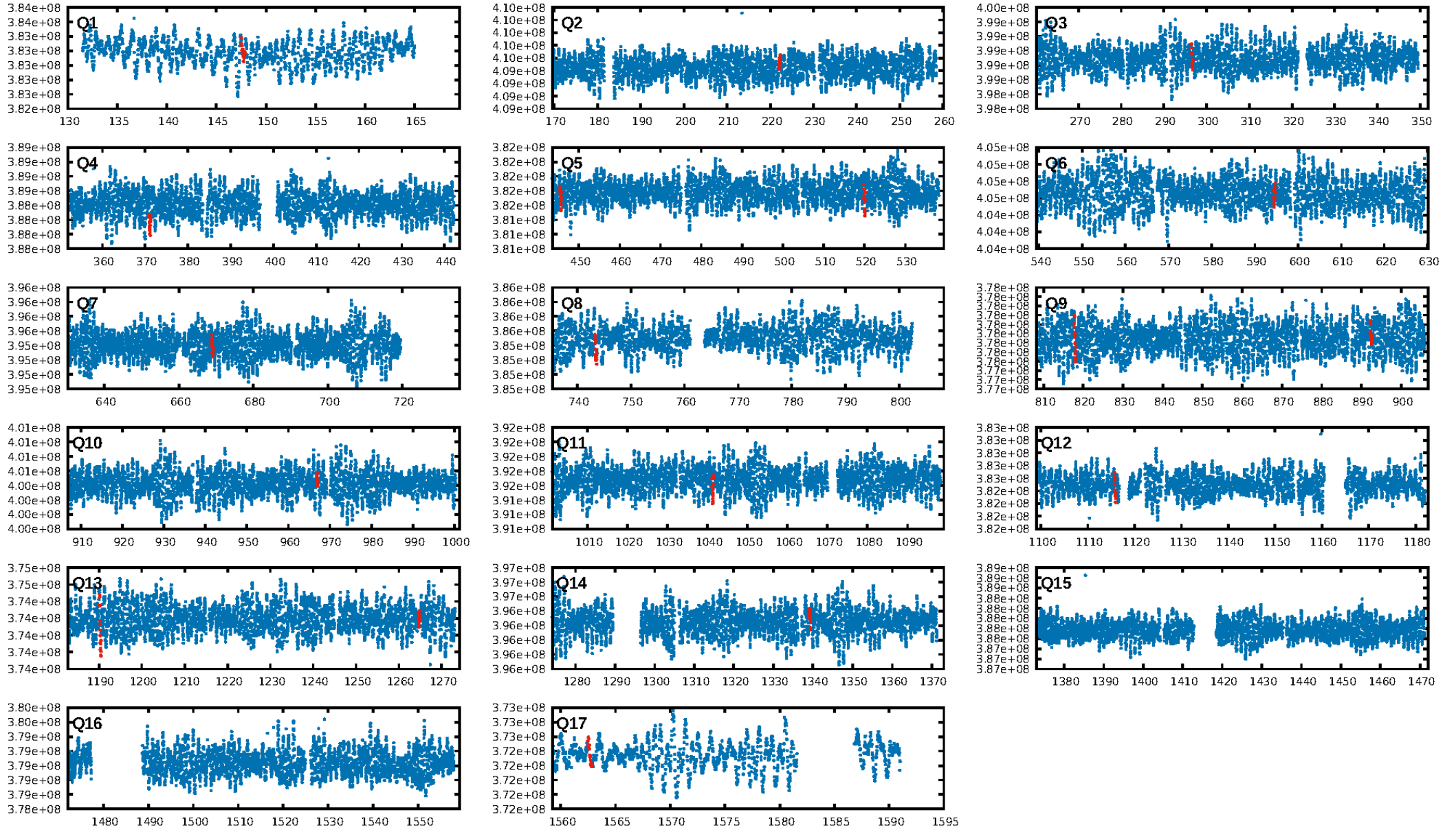
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [37.08 σ]
LongPeriod-sig: 99.7% [2.93 σ]
ModelChiSquare2-sig: 0.8%
ModelChiSquareGof-sig: 76.7%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 1.156
Centroid-sig: 30.9%
Centroid-so: 0.188 arcsec [1.03 σ]
OotOffset-rm: 0.278 arcsec [1.56 σ]
OotOffset-st: 1/2/3/4 [10]
KicOffset-rm: 0.242 arcsec [1.23 σ]
KicOffset-st: 1/2/3/4 [10]
DiffImageQuality-fgm: 1.00 [10/10]
DiffImageOverlap-fno: 0.31 [4/13]

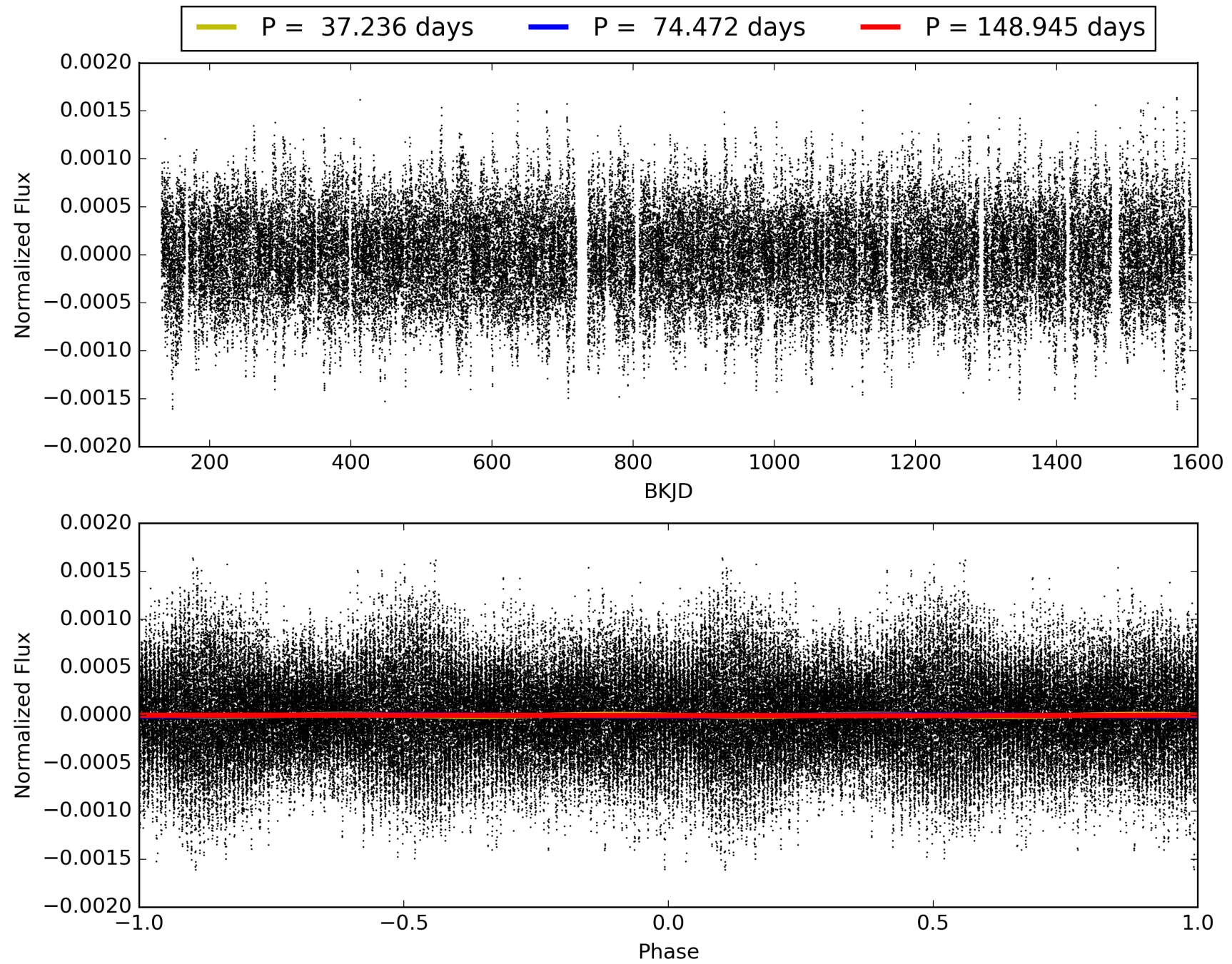
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 09:12:57 Z

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

TCE 005876187-06, PDC Light Curves

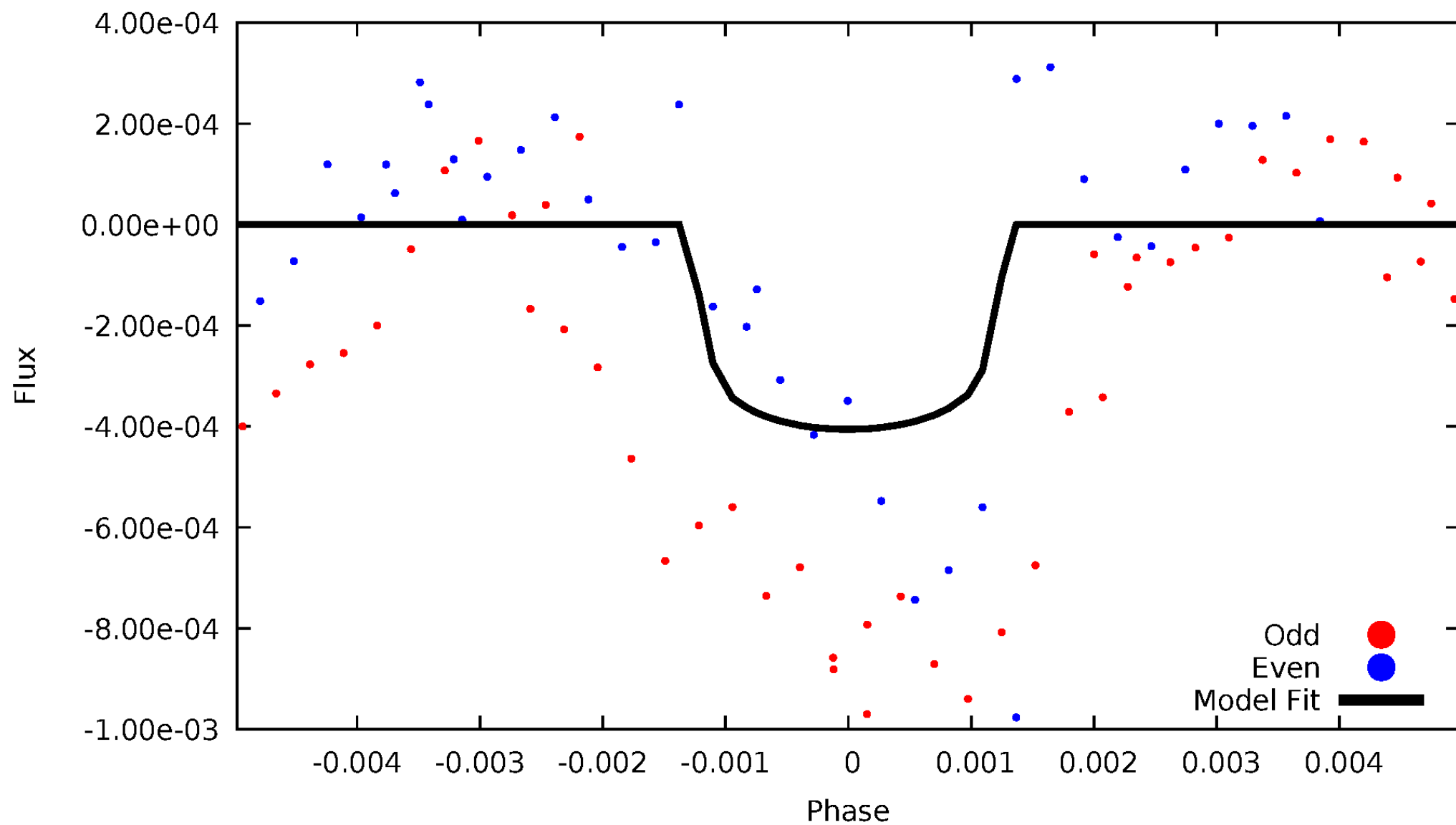


TCE 005876187-06



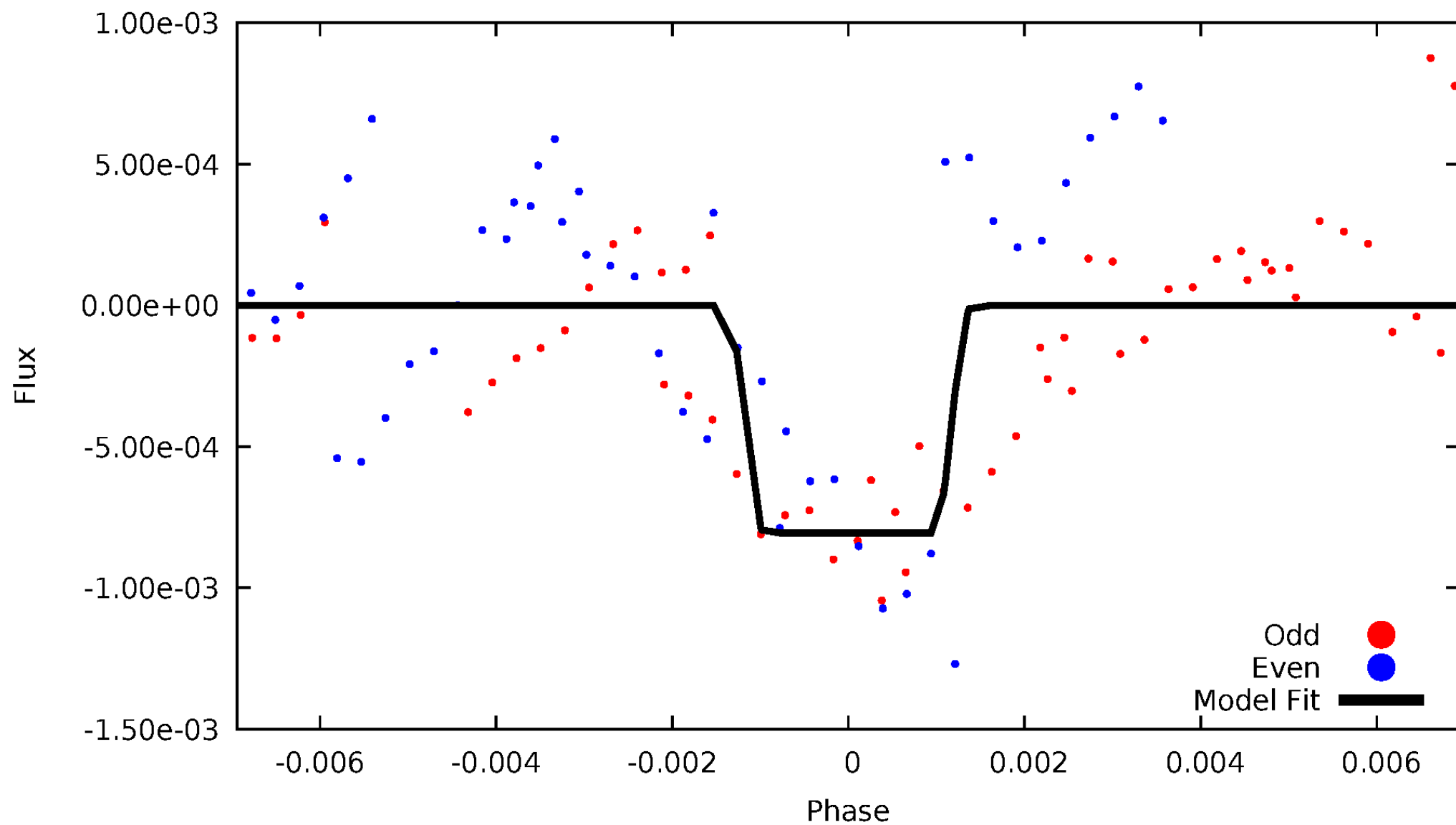
DV Odd/Even

TCE 005876187-06



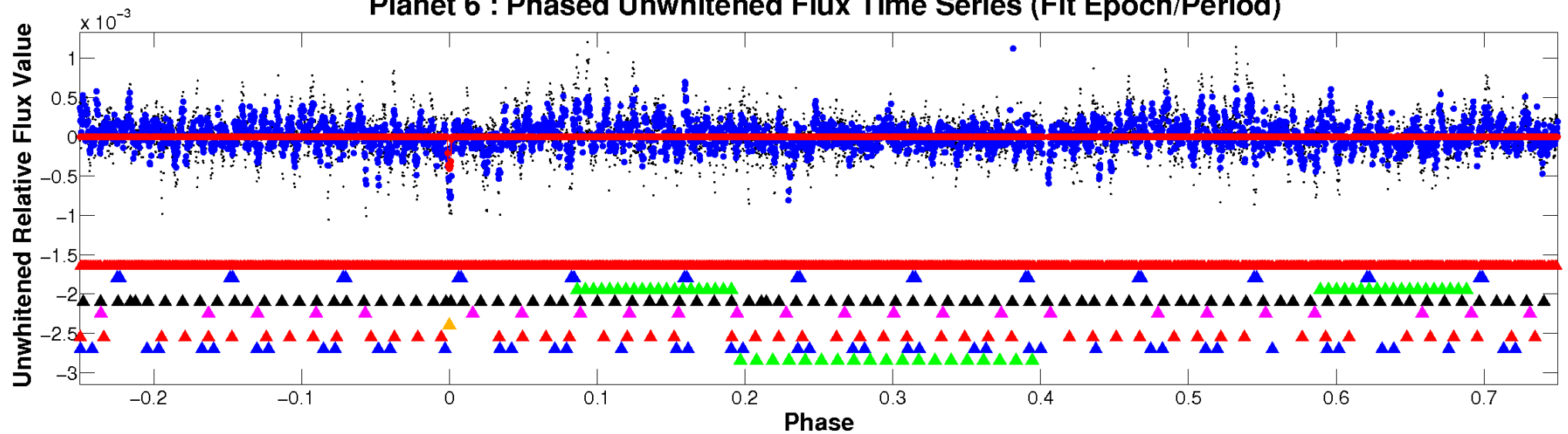
ALT Odd/Even

TCE 005876187-06

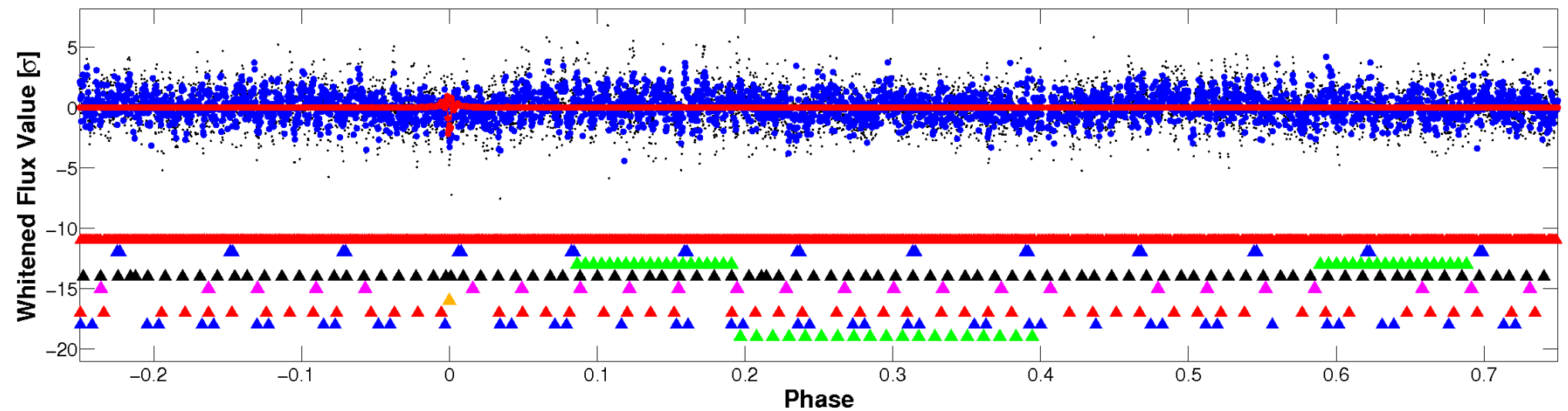


Non-Whitened Vs. Whitened Light Curve

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

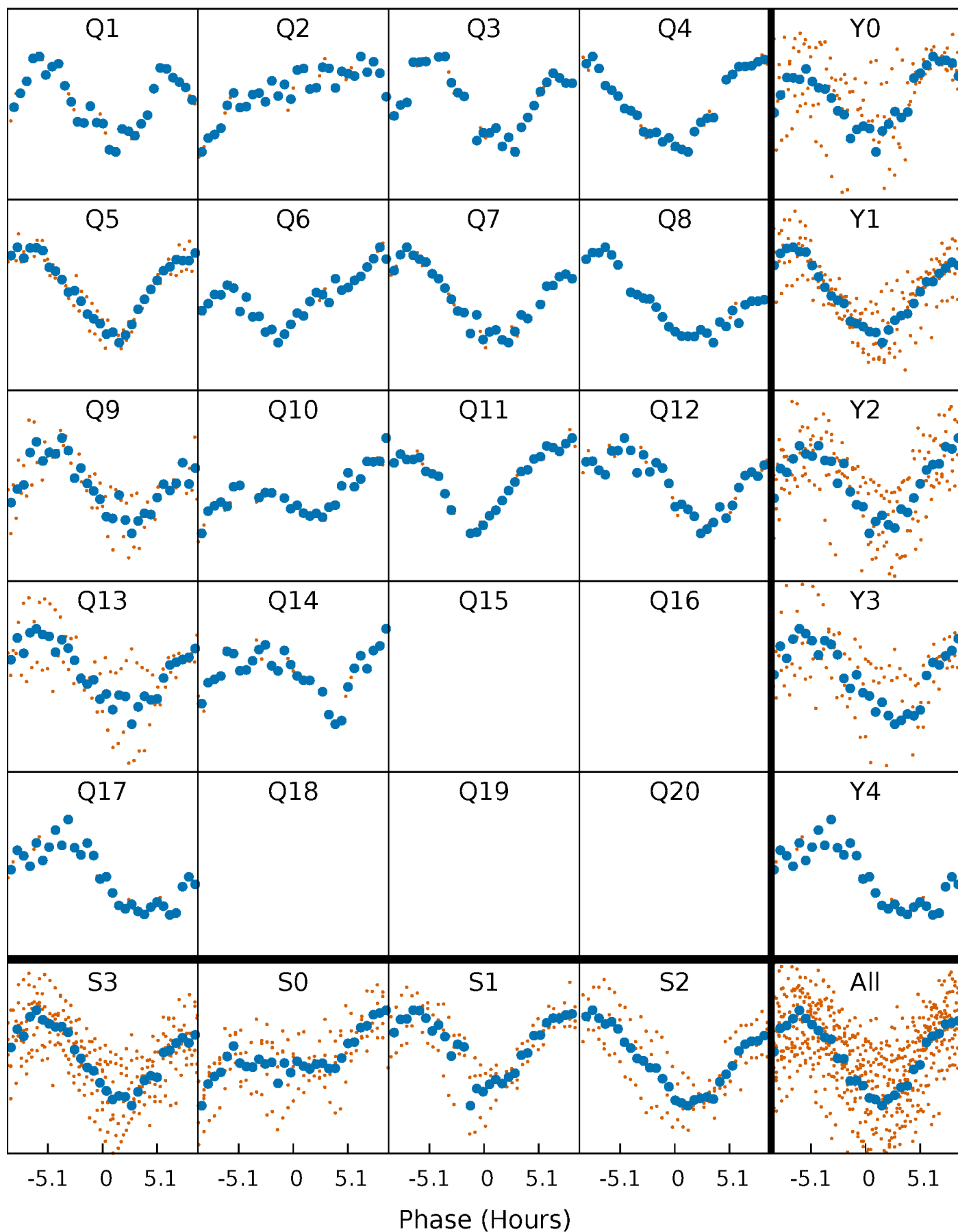


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



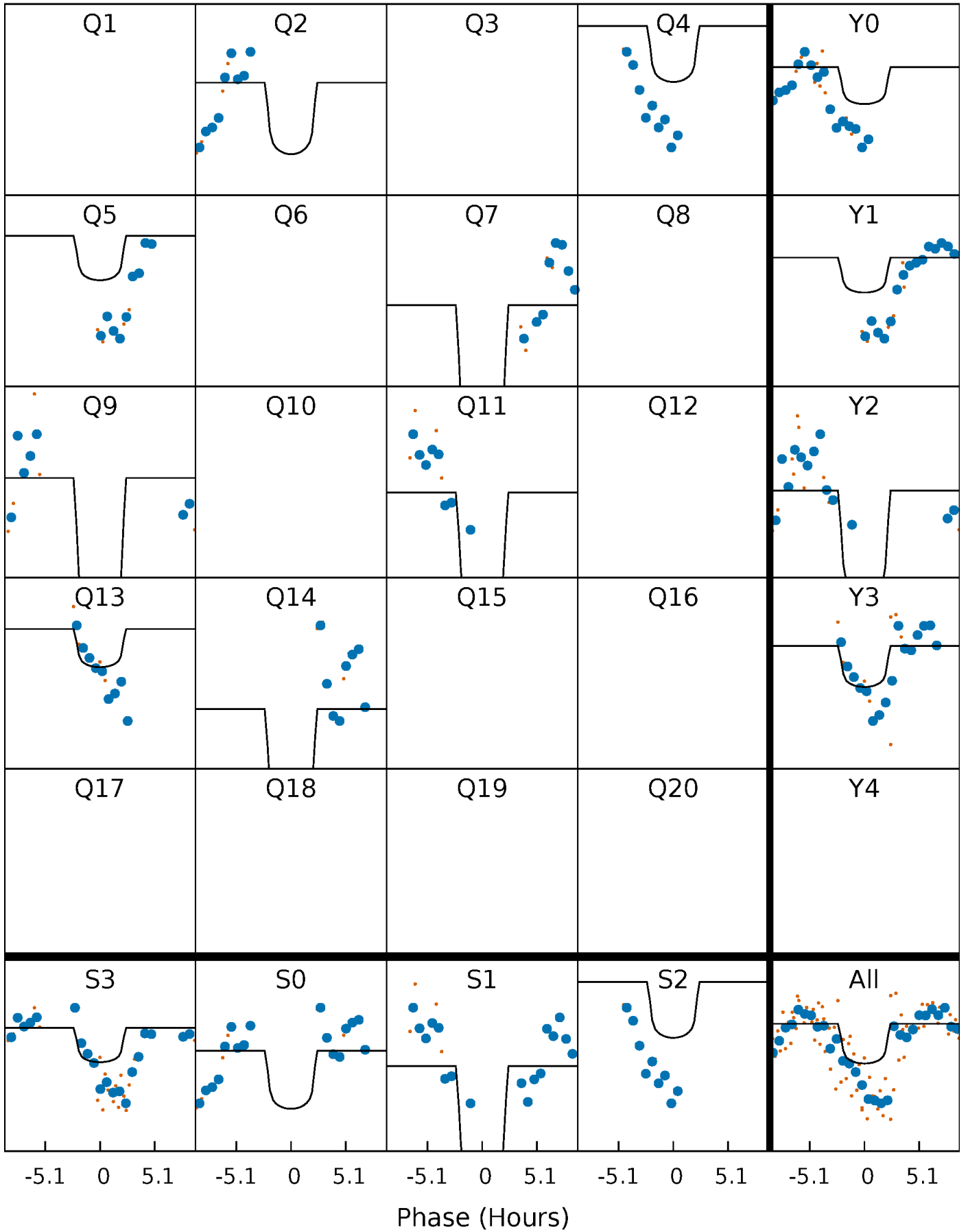
PDC Quarter-Phased Transit Curves

TCE 005876187-06 P= 74.472334 Days $T_0=147.685145$ (BKJD)



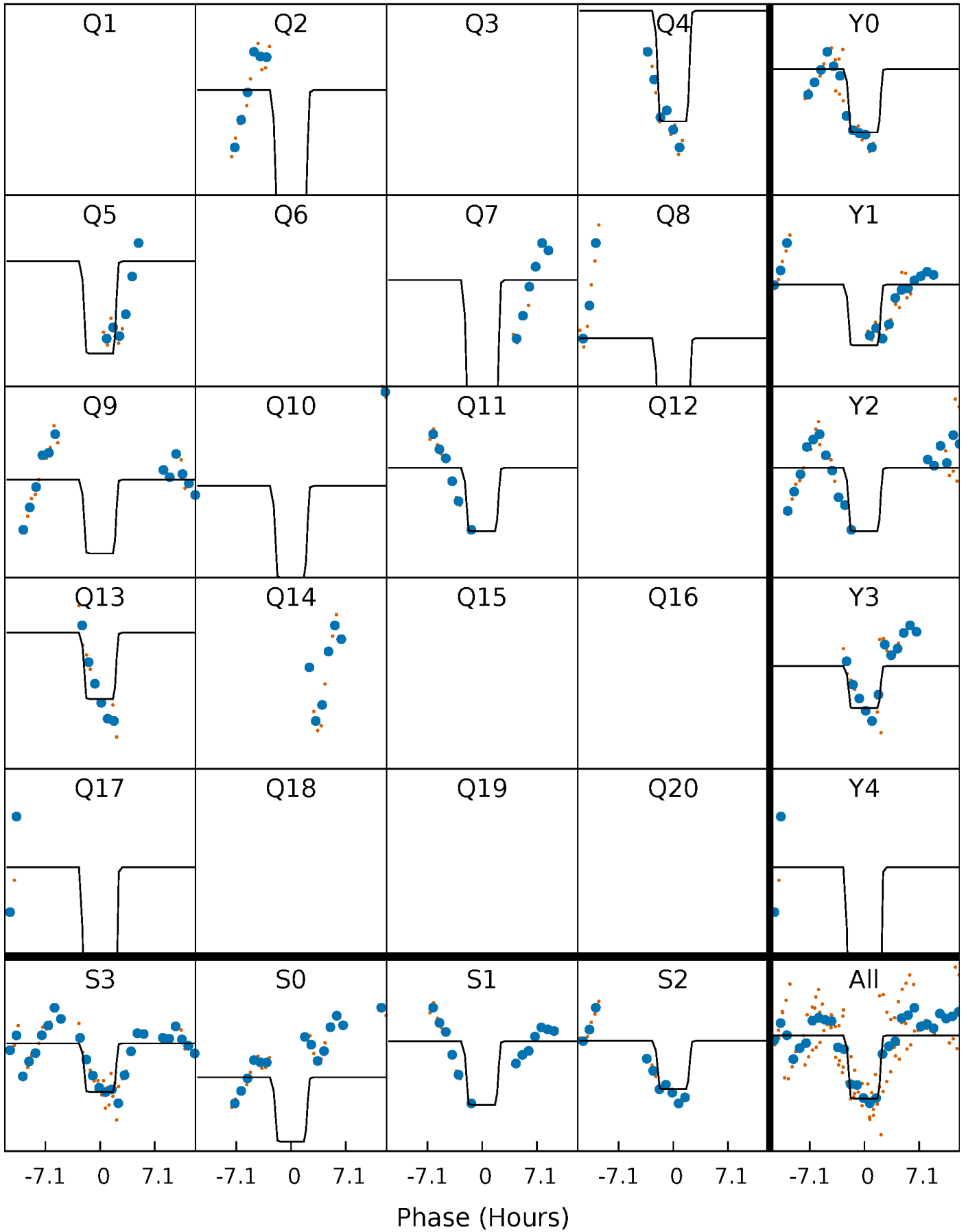
DV Quarter-Phased Transit Curves

TCE 005876187-06 P= 74.472334 Days $T_0=147.685145$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

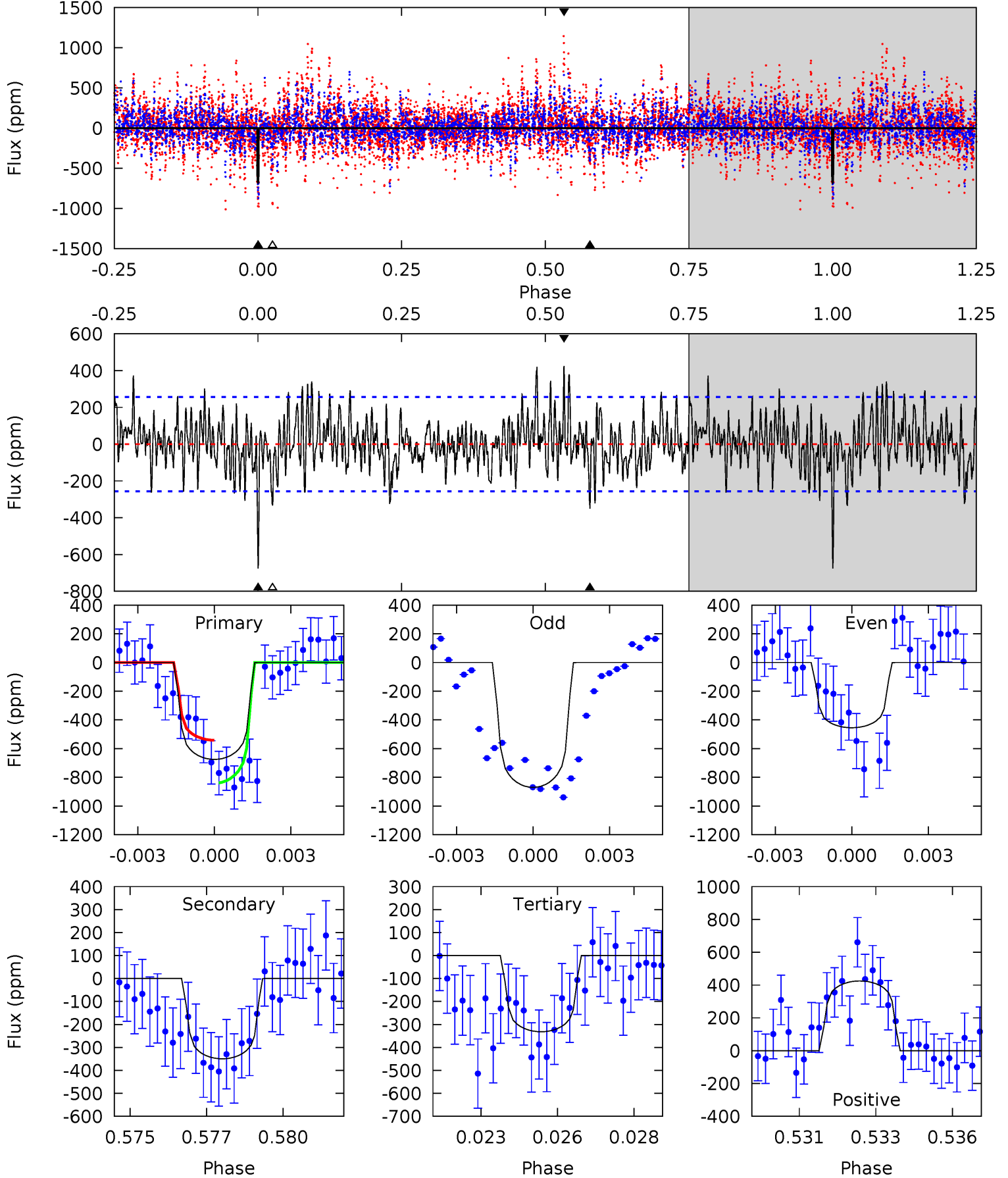
TCE 005876187-06 P= 74.476741 Days $T_0=147.634792$ (BKJD)



DV Model-Shift Uniqueness Test

005876187-06, P = 74.472334 Days, E = 73.212811 Days

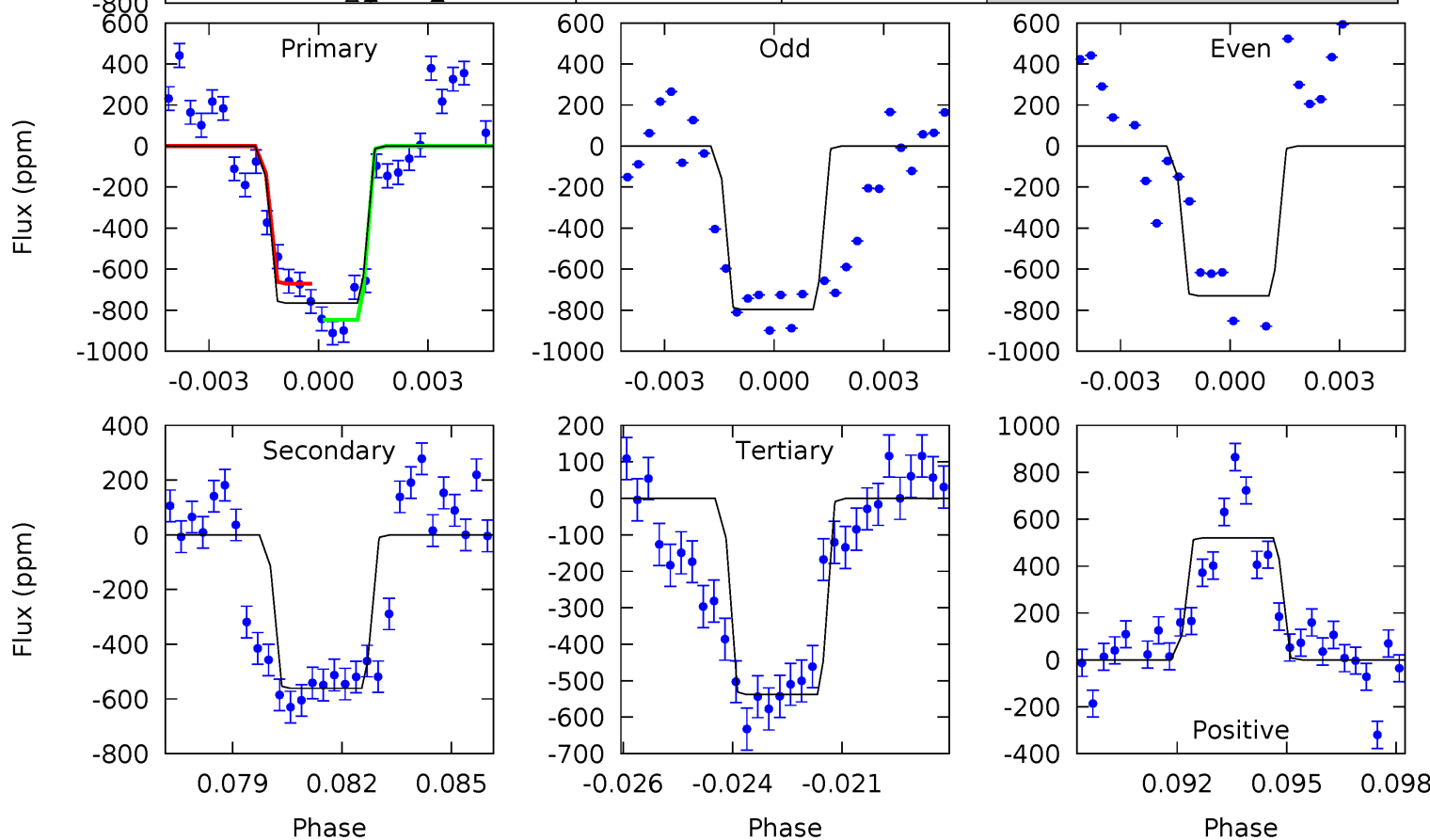
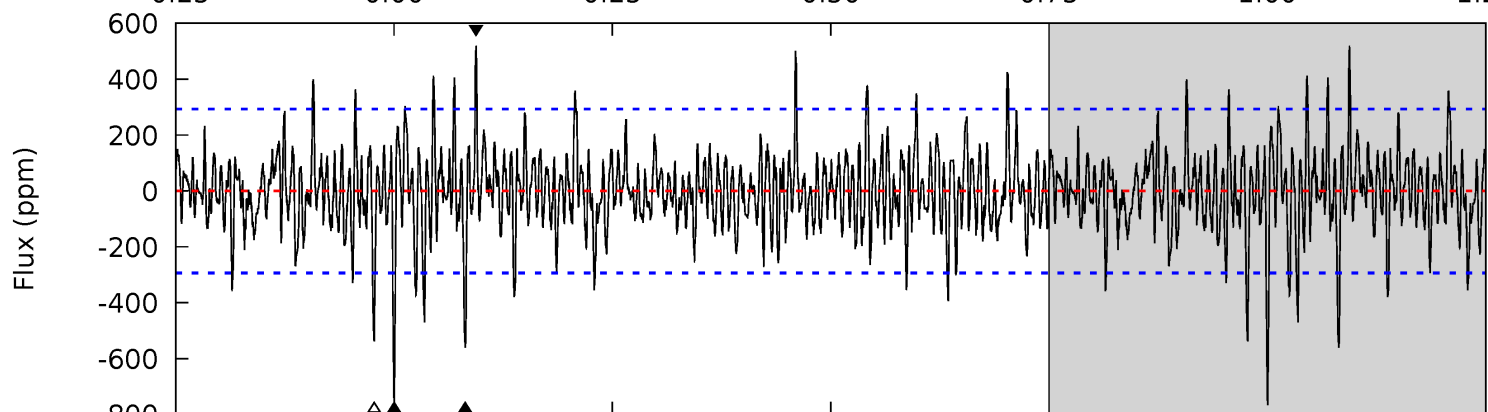
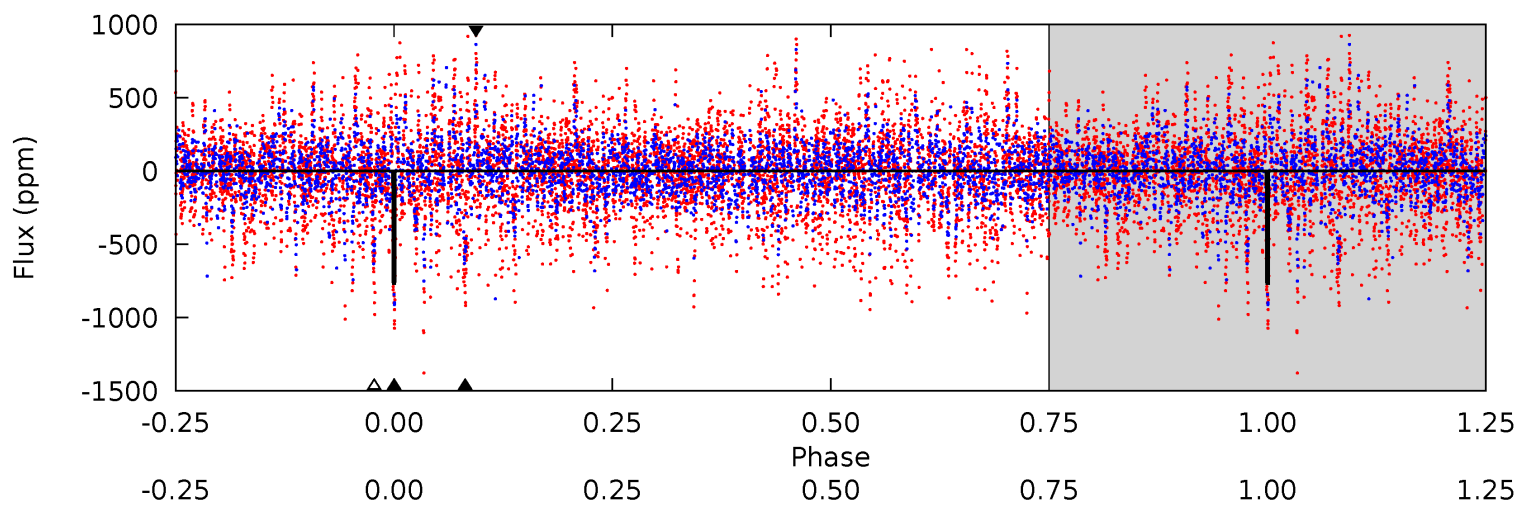
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.9	7.20	6.83	8.75	5.28	3.01	2.37	7.07	5.15	0.37	-1.55	4.15	0.94	0.39	3.07



Alt Model-Shift Uniqueness Test

005876187-06, P = 74.476741 Days, E = 73.158051 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.8	10.1	9.68	9.35	5.28	3.01	2.31	4.11	4.44	0.42	0.75	0.60	0.57	0.40	1.58



Stellar Parameters For KIC 005876187

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6846^{+82}_{-82}	$4.069^{+0.143}_{-0.117}$	$-0.080^{+0.200}_{-0.150}$	$1.837^{+0.325}_{-0.325}$	$1.444^{+0.115}_{-0.115}$	$0.328^{+0.233}_{-0.117}$
	+1%/-1%	+4%/-3%	+250%/-188%	+18%/-18%	+8%/-8%	+71%/-36%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 005876187-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-350 ± 49	$5.66^{+5.66}_{-3.66}$	915^{+39}_{-42}	5481^{+4531}_{-1296}	886^{+6233}_{-662}
Alt.	-561 ± 56	$7.18^{+5.61}_{-4.41}$	914^{+42}_{-41}	5578^{+4107}_{-1183}	932^{+5134}_{-640}

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 $A_{obs} \gg 1.0$

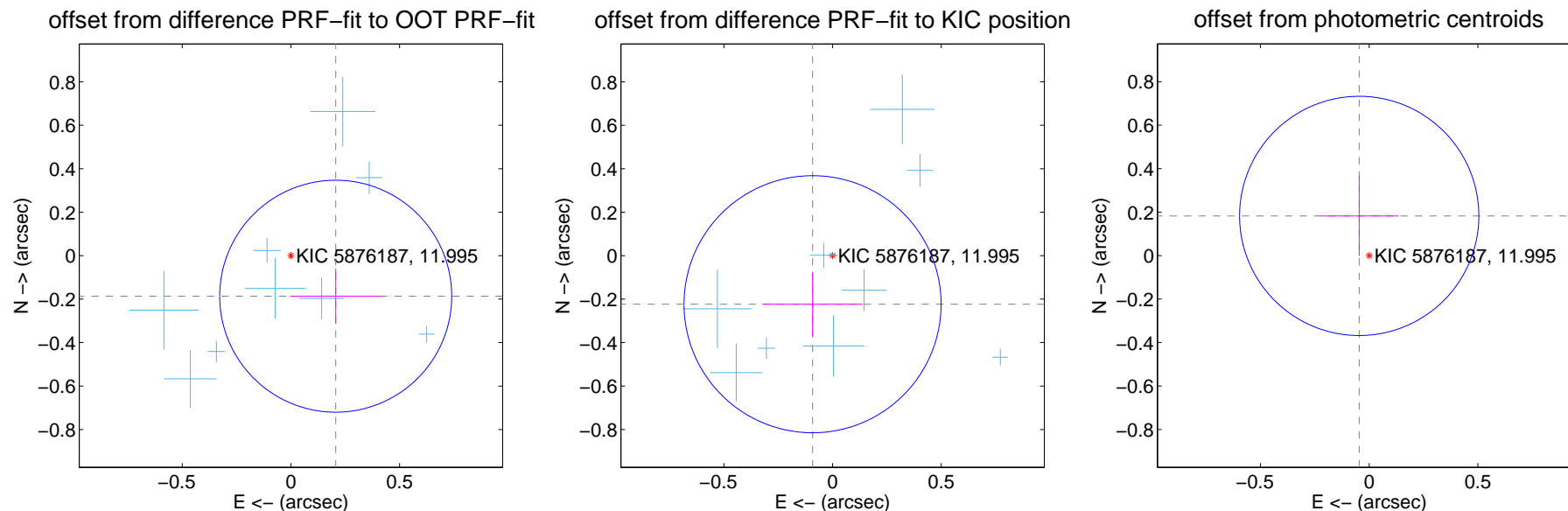
DV Centroid Data

Supplemental centroid analysis for 005876187-06. **Kepler magnitude: 11.99.** Transit SNR 8.05

There are 10 quarters with good PRF difference image offsets

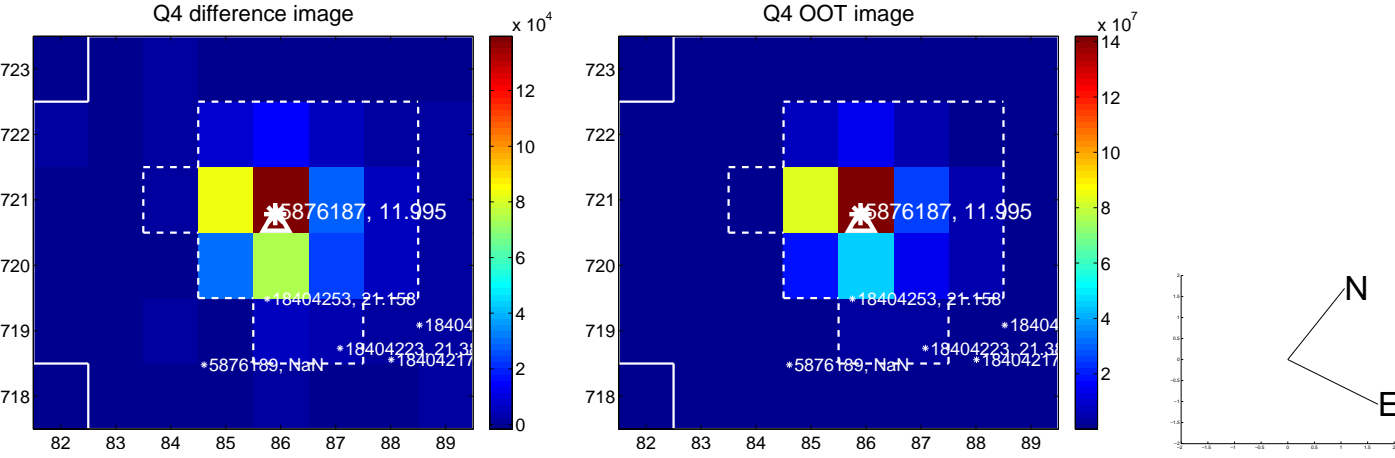
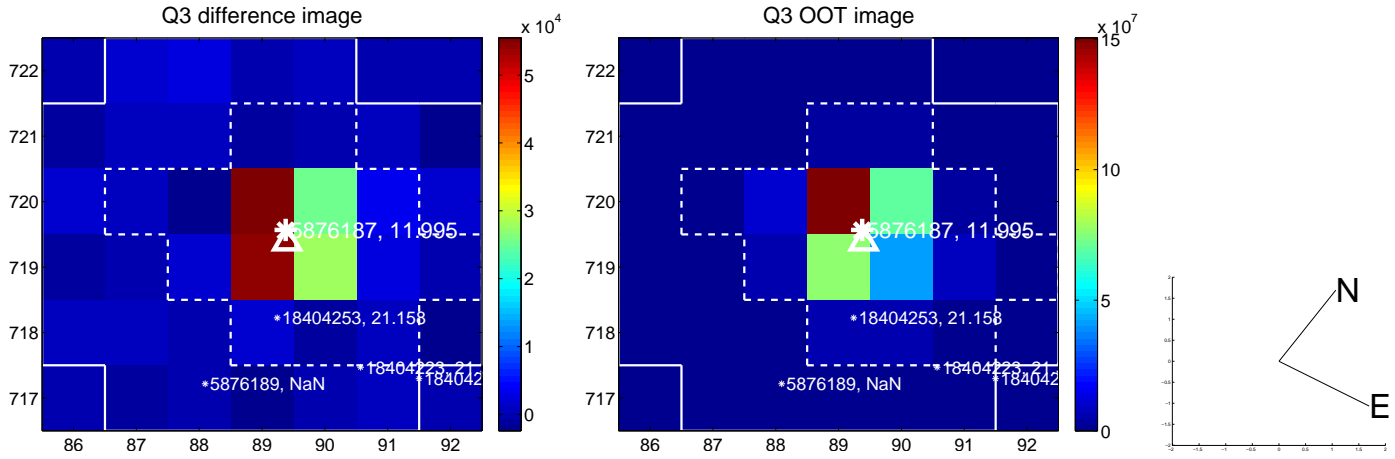
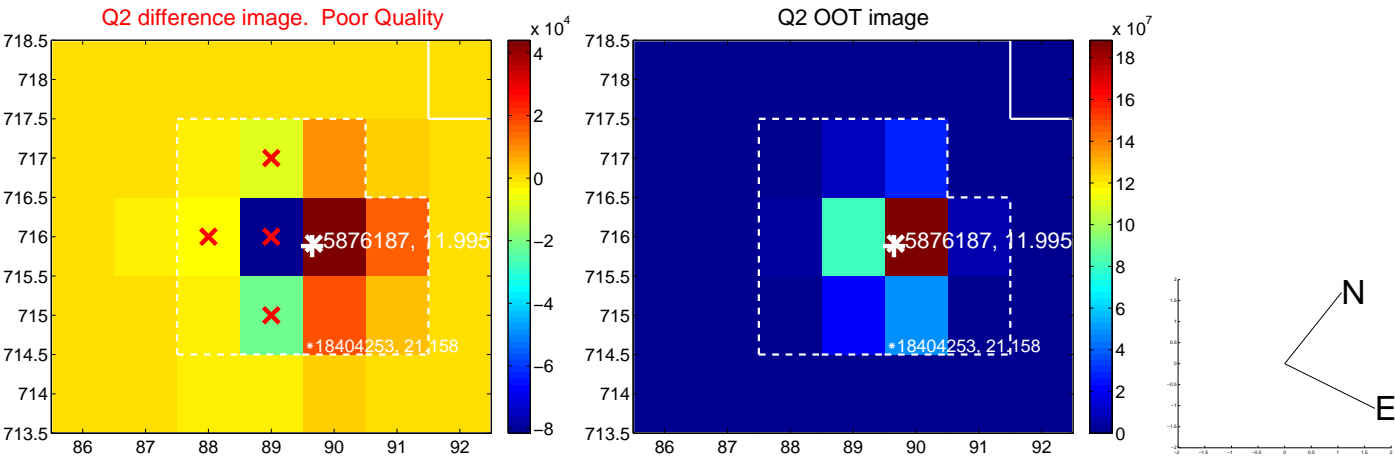
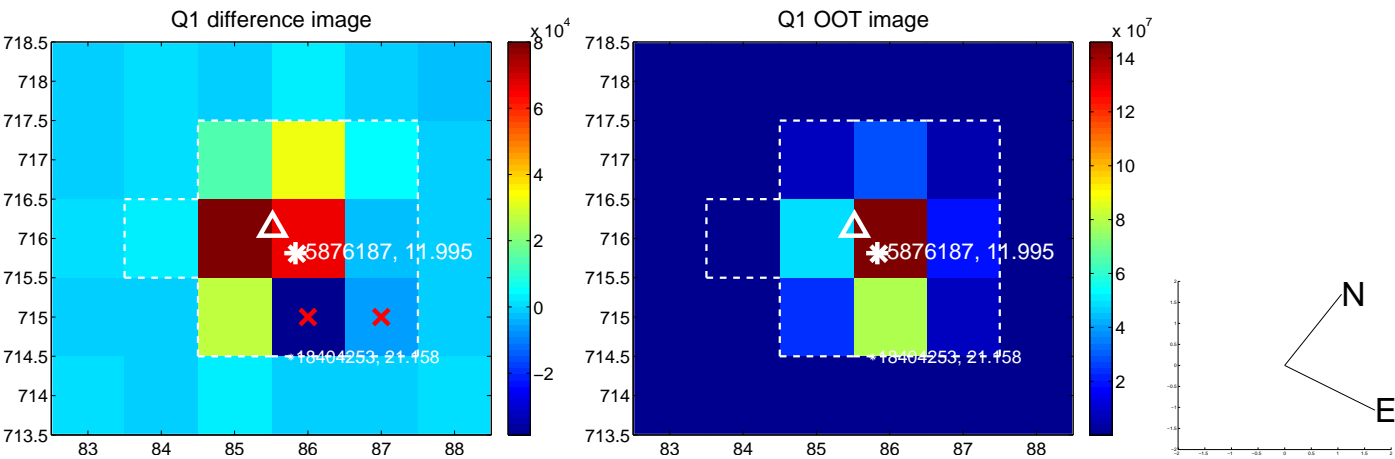
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.278 ± 0.178	1.56	-0.206 ± 0.210	-0.187 ± 0.128
PRF-fit source offset from KIC position	0.242 ± 0.197	1.23	0.092 ± 0.231	-0.223 ± 0.148
photometric centroid source offset	0.19 ± 0.18	1.03	0.05 ± 0.18	0.18 ± 0.18

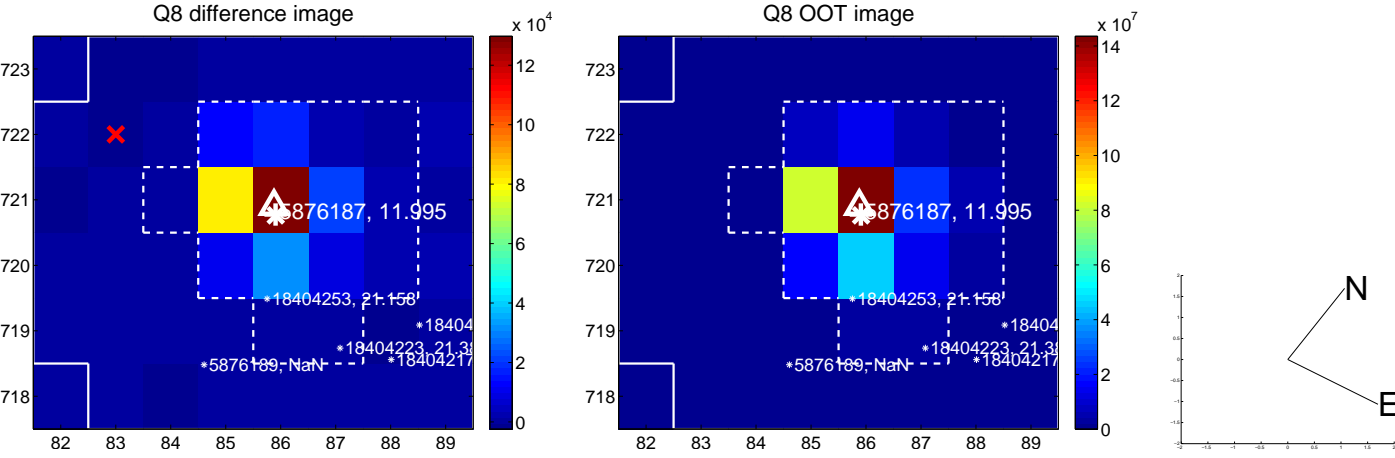
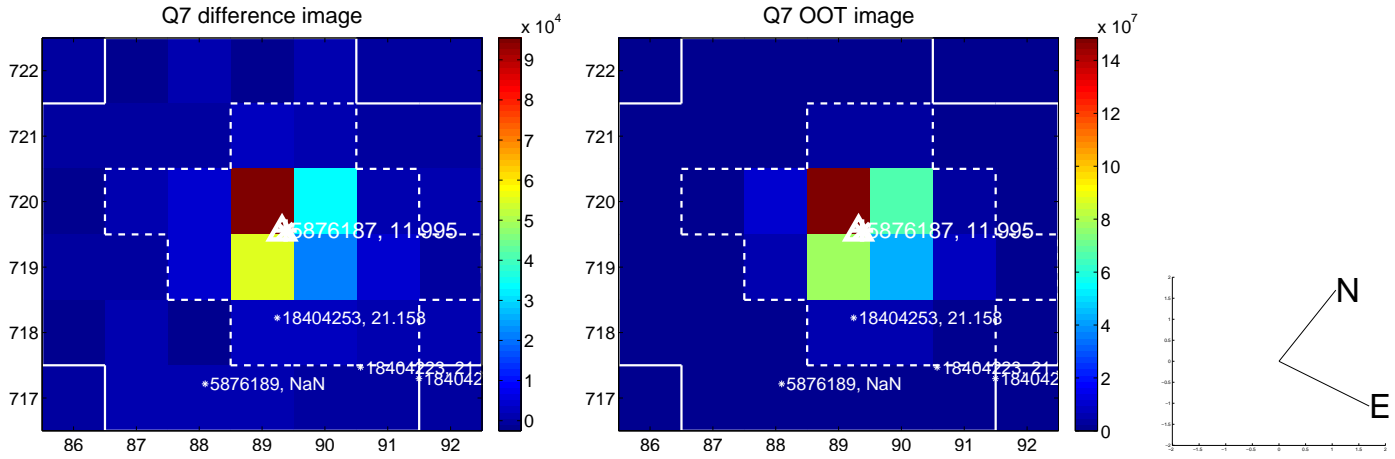
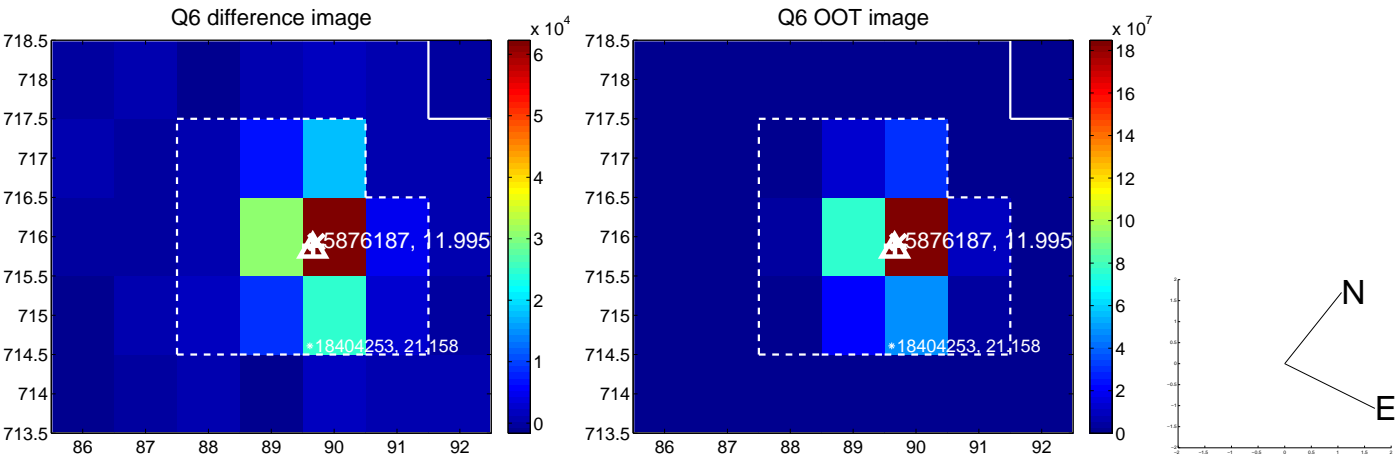
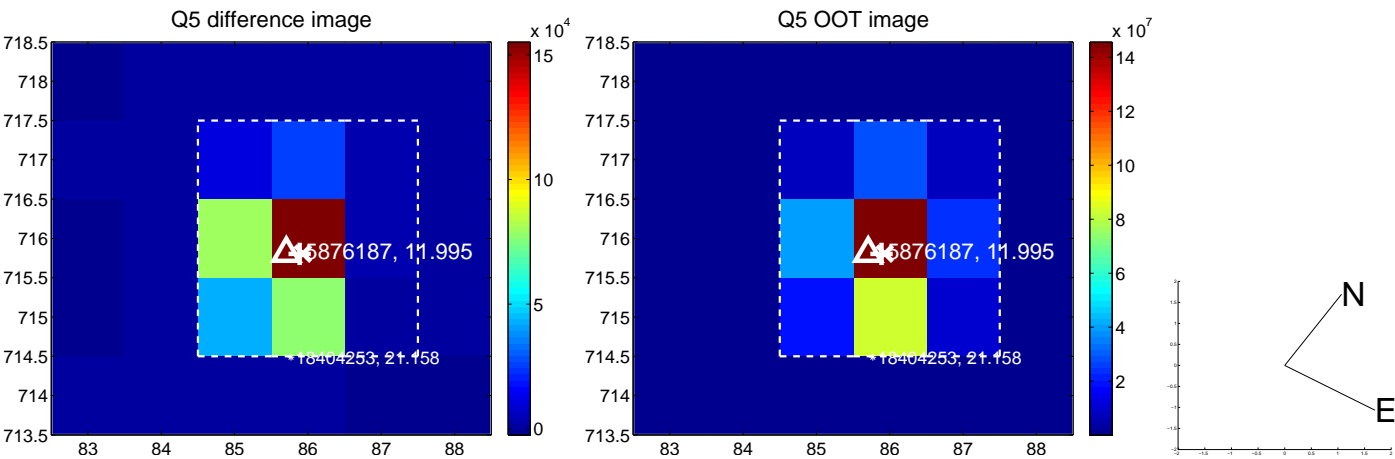


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

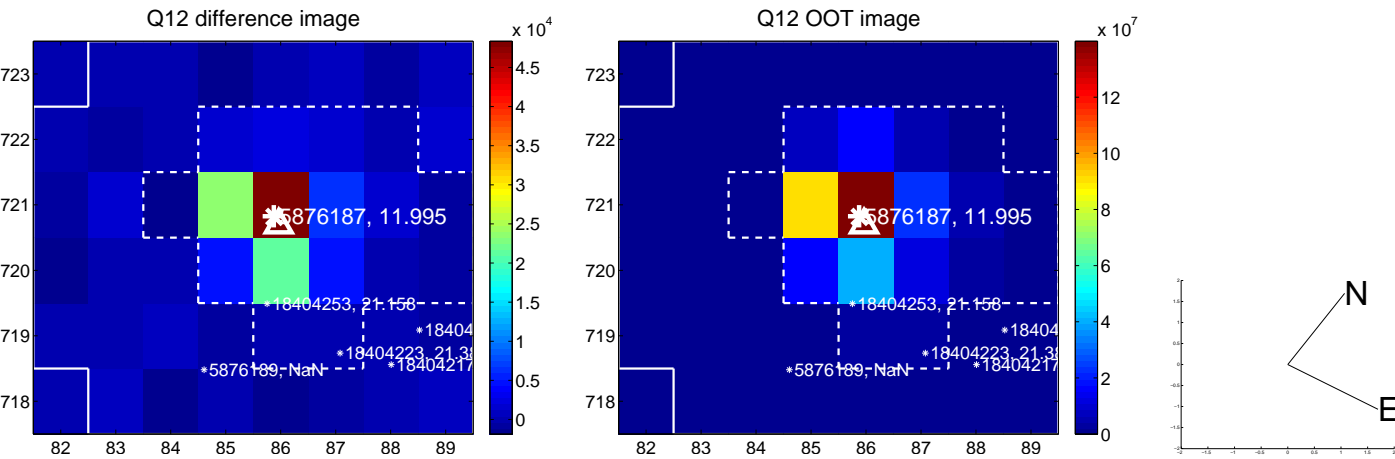
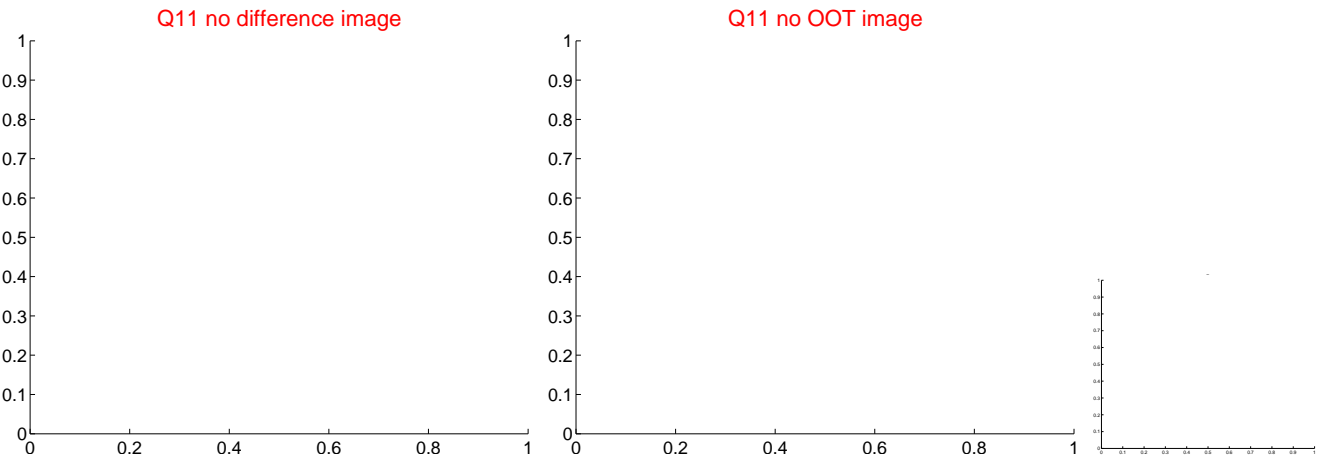
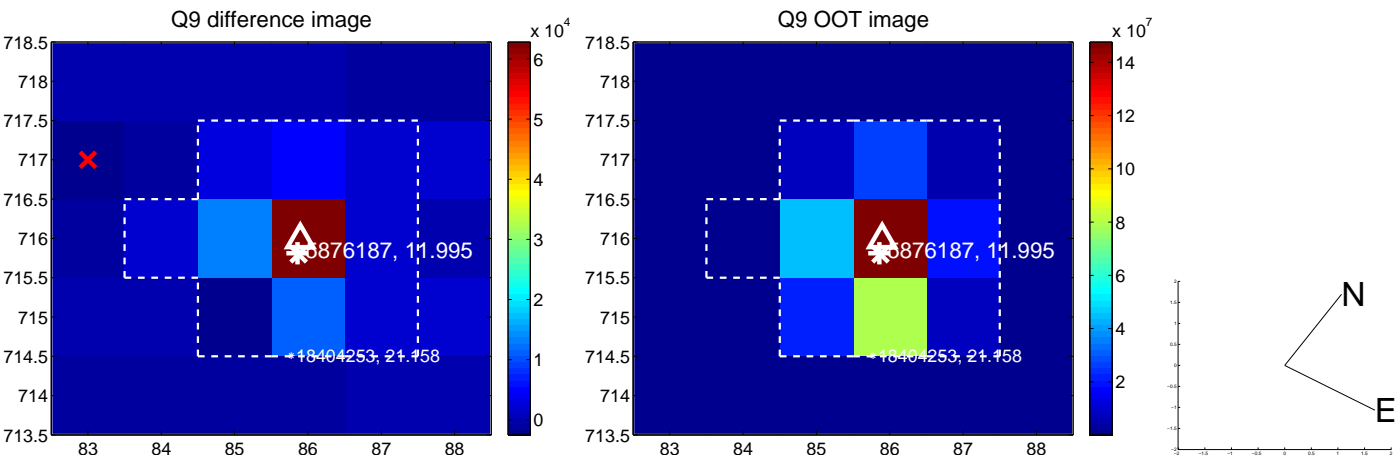
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



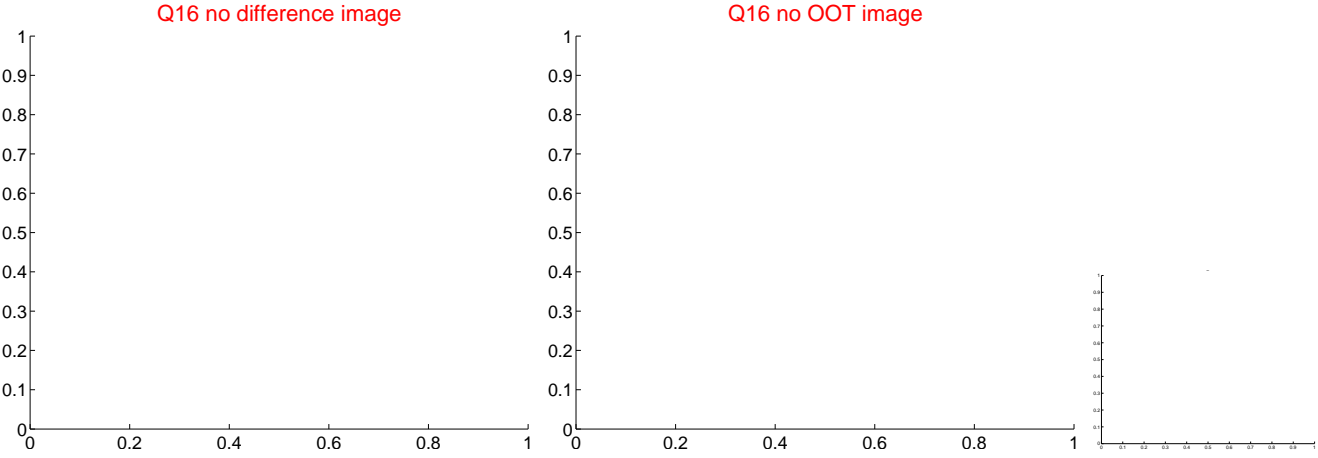
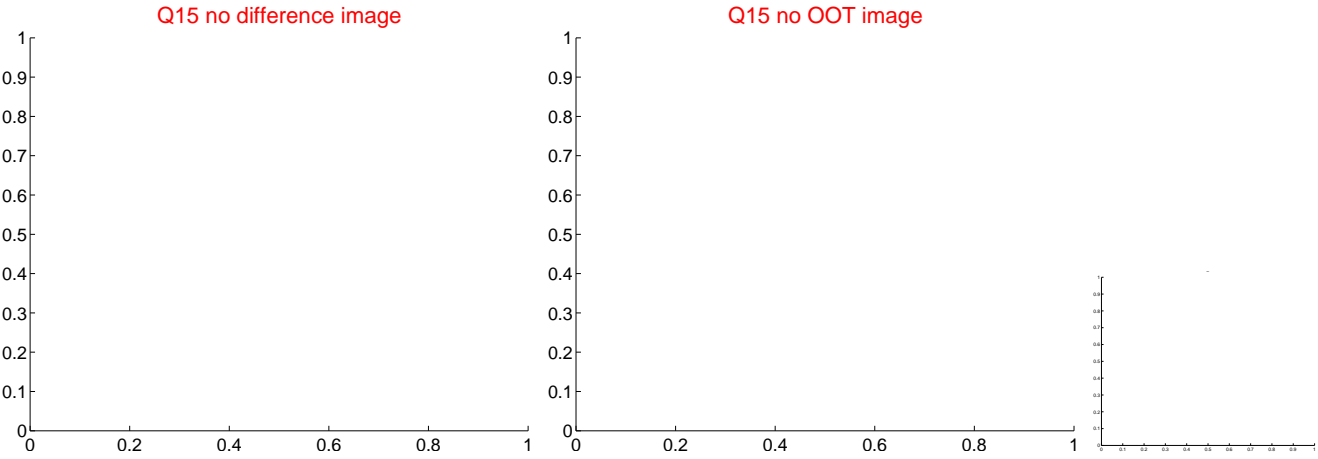
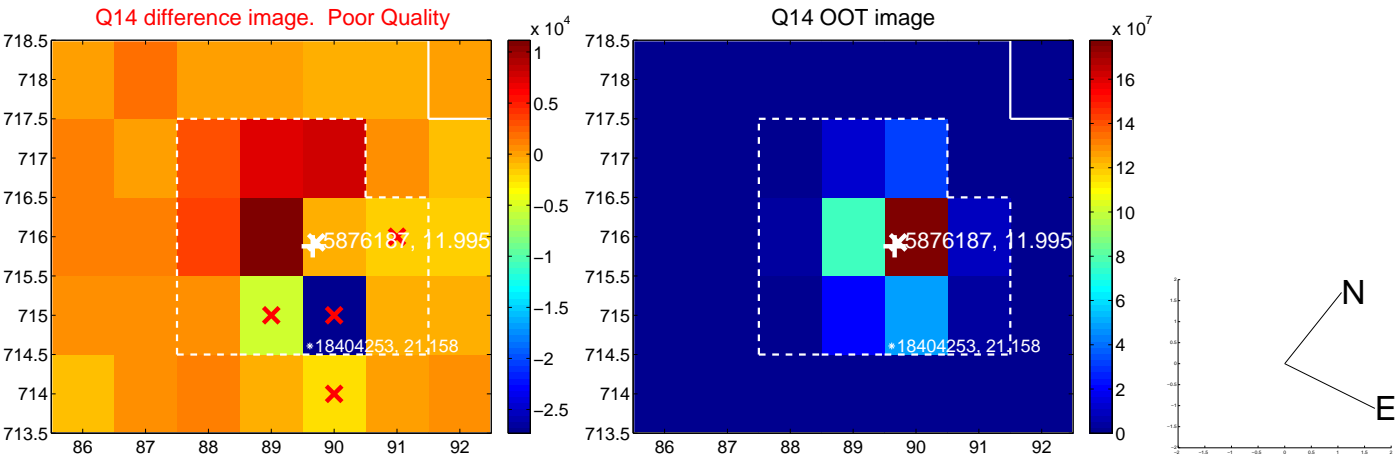
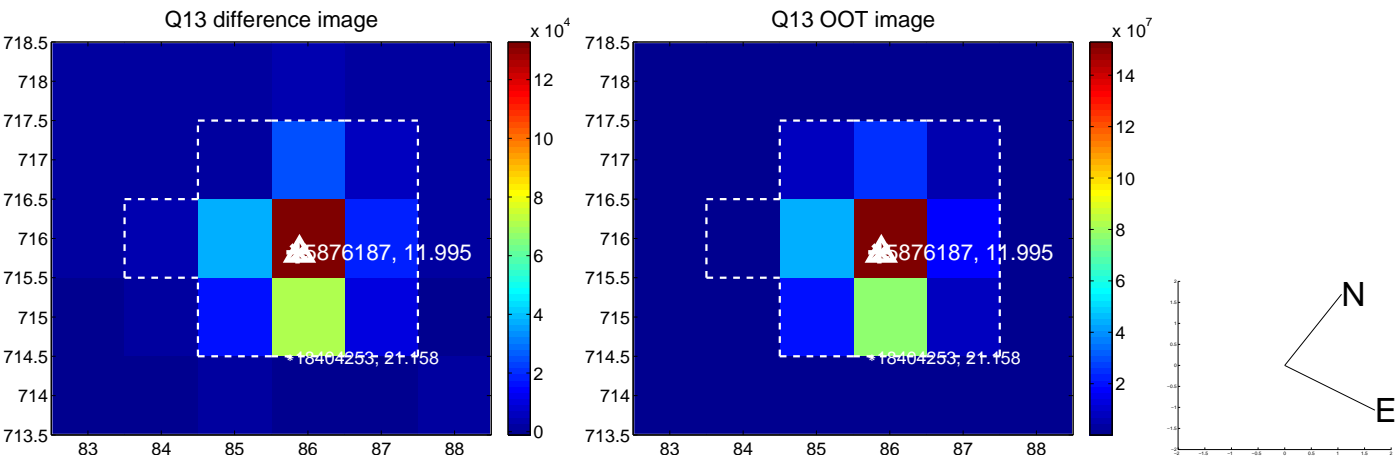
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



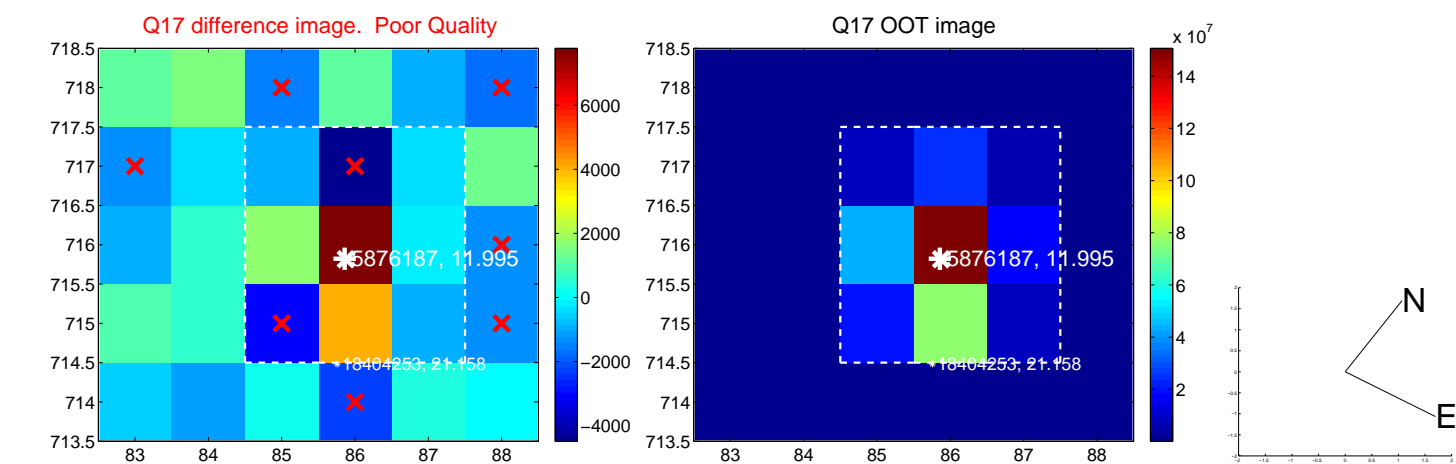
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



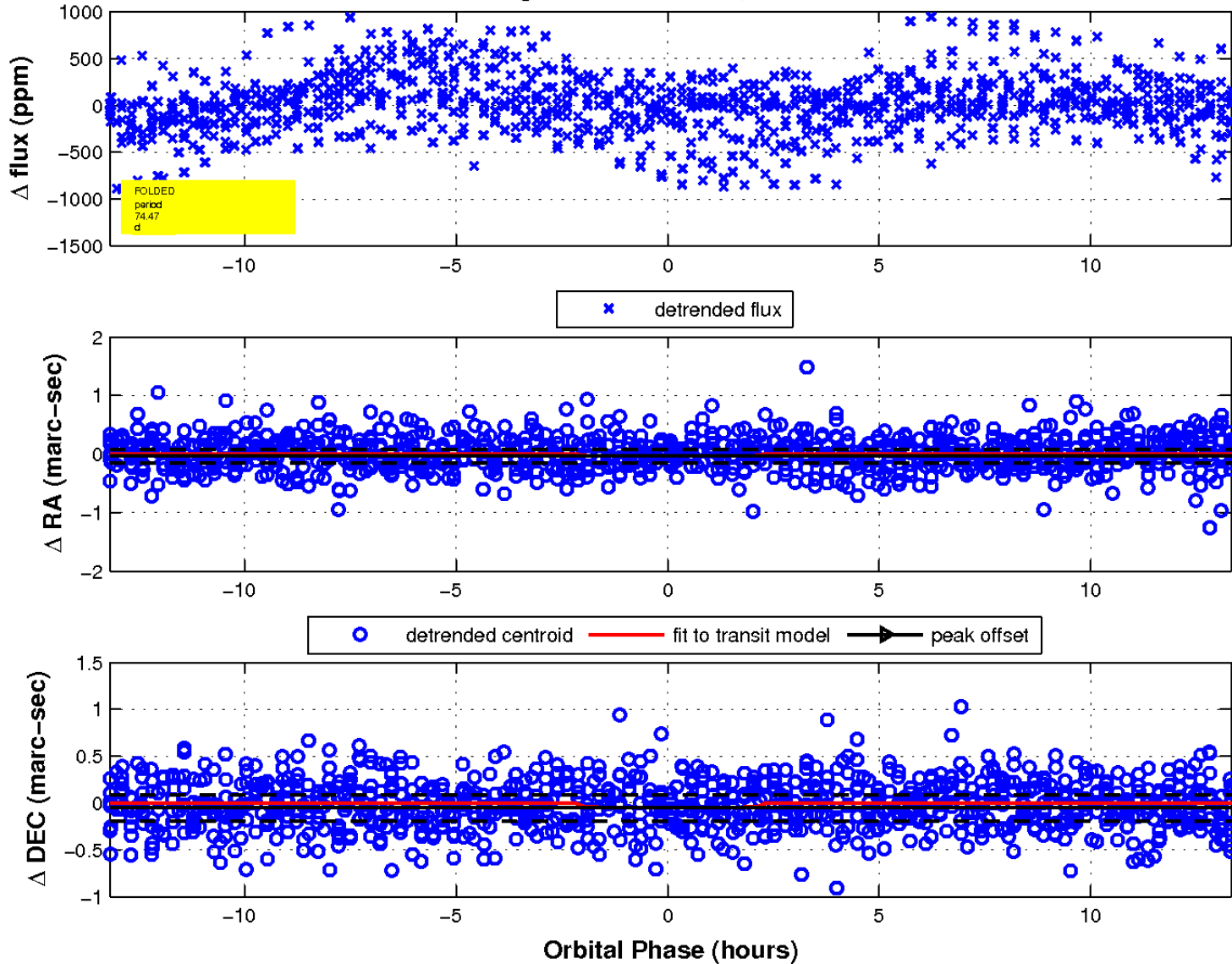
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

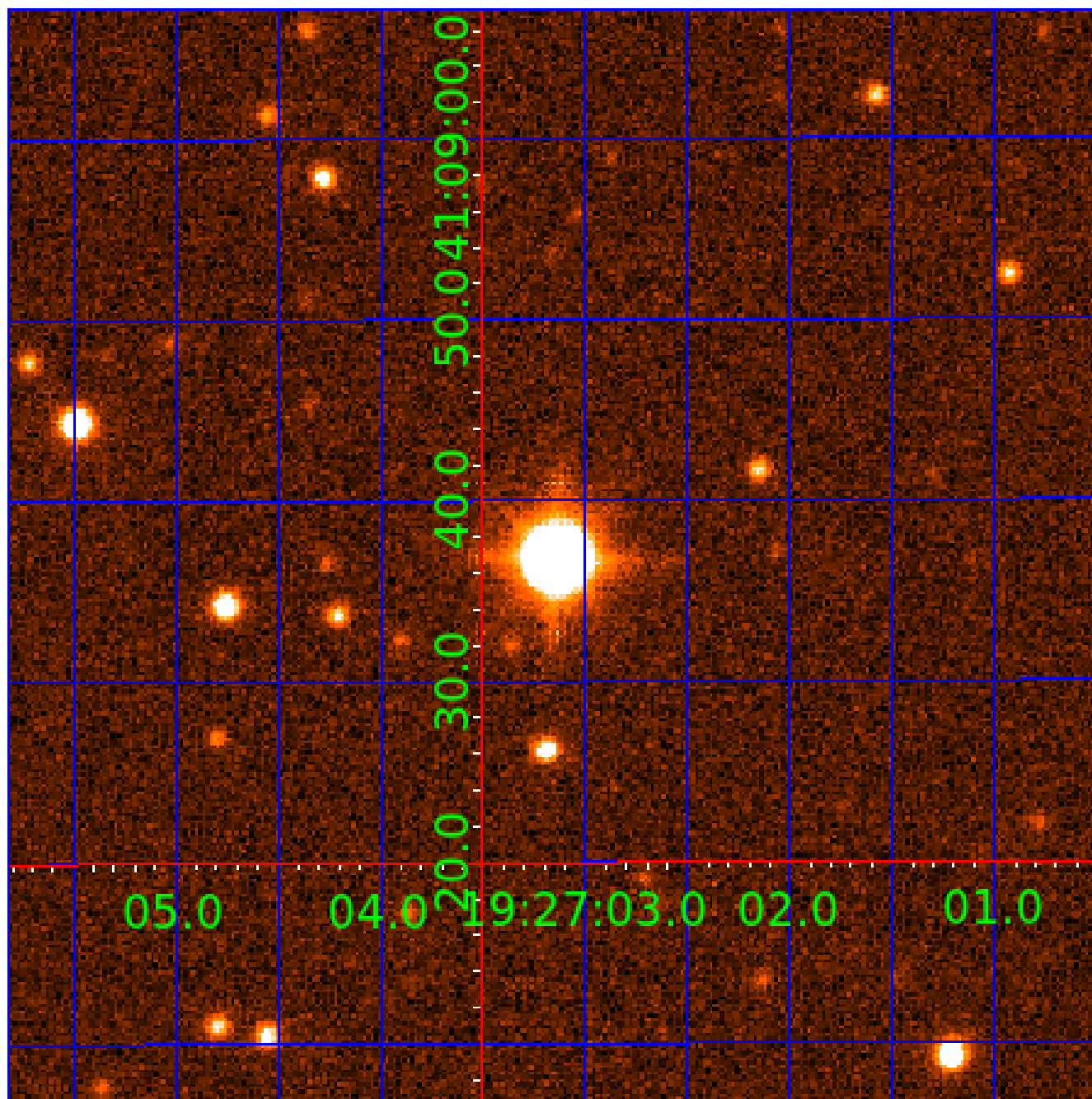


fluxWeightedCentroids, Planet 6 of 9



UKIRT Image

Declination



KIC 005876187

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})
005876187-01	OBS	No	1.713992	131.912139	6.2	11.737	10.7	2.3	1.84	6846	0.46	6617.64
005876187-02	OBS	No	57.276541	148.277502	248.9	8.067	12.6	8.4	1.84	6846	3.12	61.48
005876187-03	OBS	No	37.440682	154.129756	259.4	10.148	12.7	10.9	1.84	6846	3.26	108.37
005876187-04	OBS	No	15.895752	131.868485	139.1	3.611	11.7	6.9	1.84	6846	2.42	339.63
005876187-05	OBS	No	61.156781	167.602539	669.8	7.383	13.3	10.1	1.84	6846	9.01	56.34
005876187-06	OBS	No	74.472334	147.685145	406.0	4.447	11.3	8.0	1.84	6846	3.76	43.32
005876187-09	OBS	No	75.289242	162.348641	178.8	5.000	9.0	-1.0	1.84	6846	2.48	42.70

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005876187-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005876187-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—HALO_GHOST
005876187-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005876187-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005876187-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005876187-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005876187-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

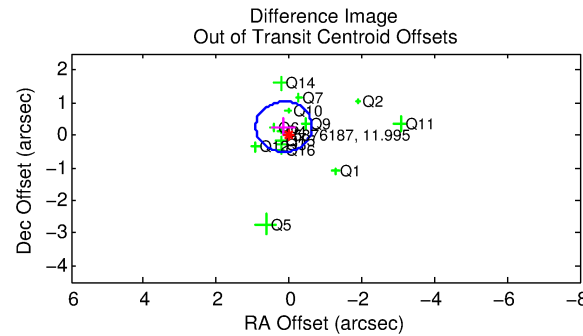
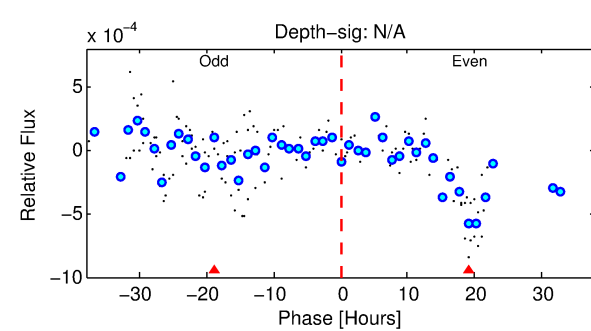
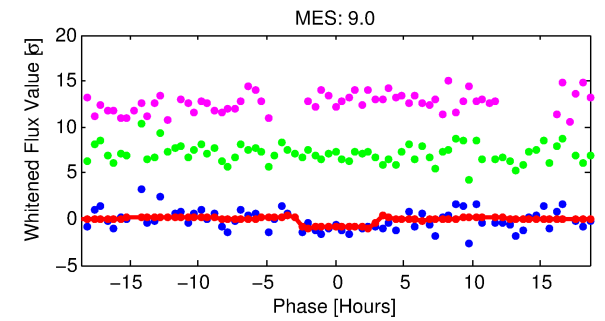
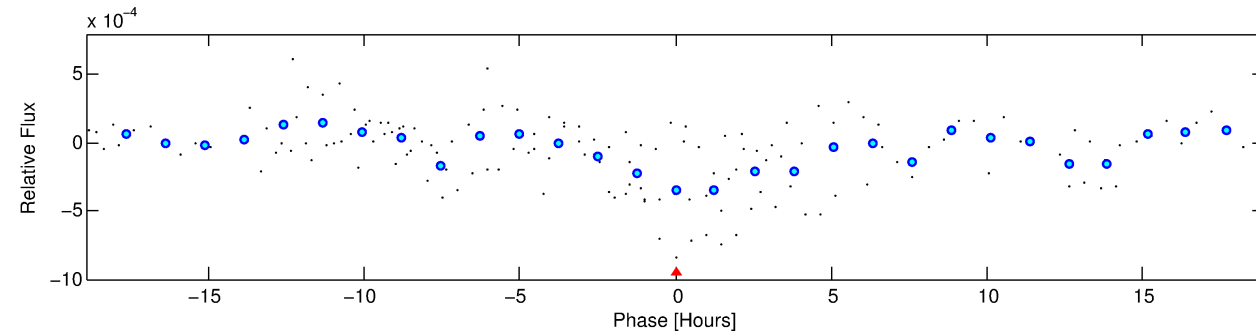
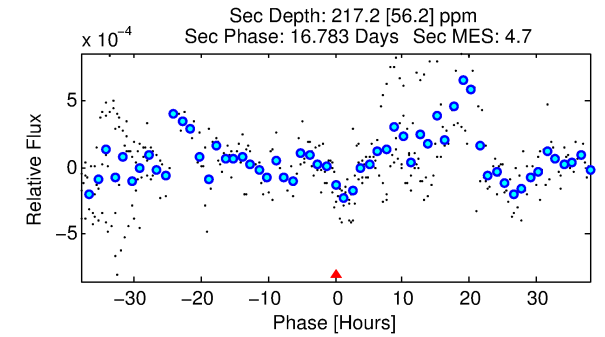
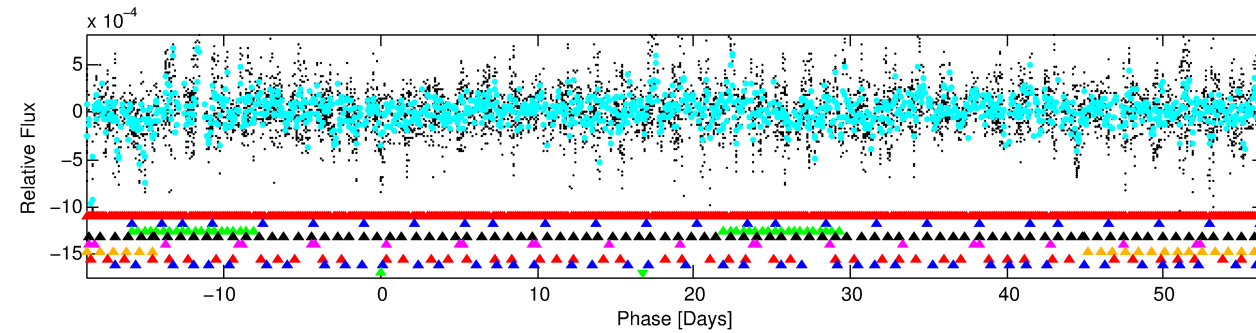
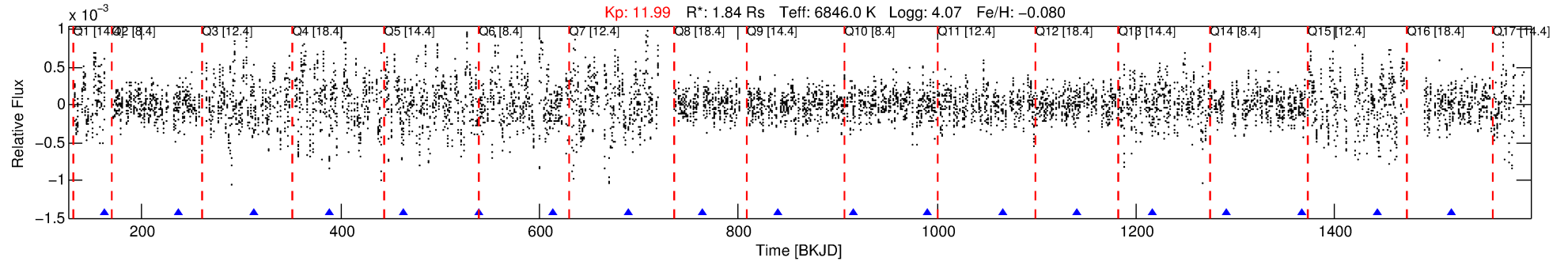
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005876187-09

No Significant Match Found

DV One-Page Summary

KIC: 5876187 Candidate: 9 of 9 Period: 75.289 d



TPS TCE Results:

Period = 75.28924 d
Epoch = 162.3486 BKJD

DV fit results are unavailable

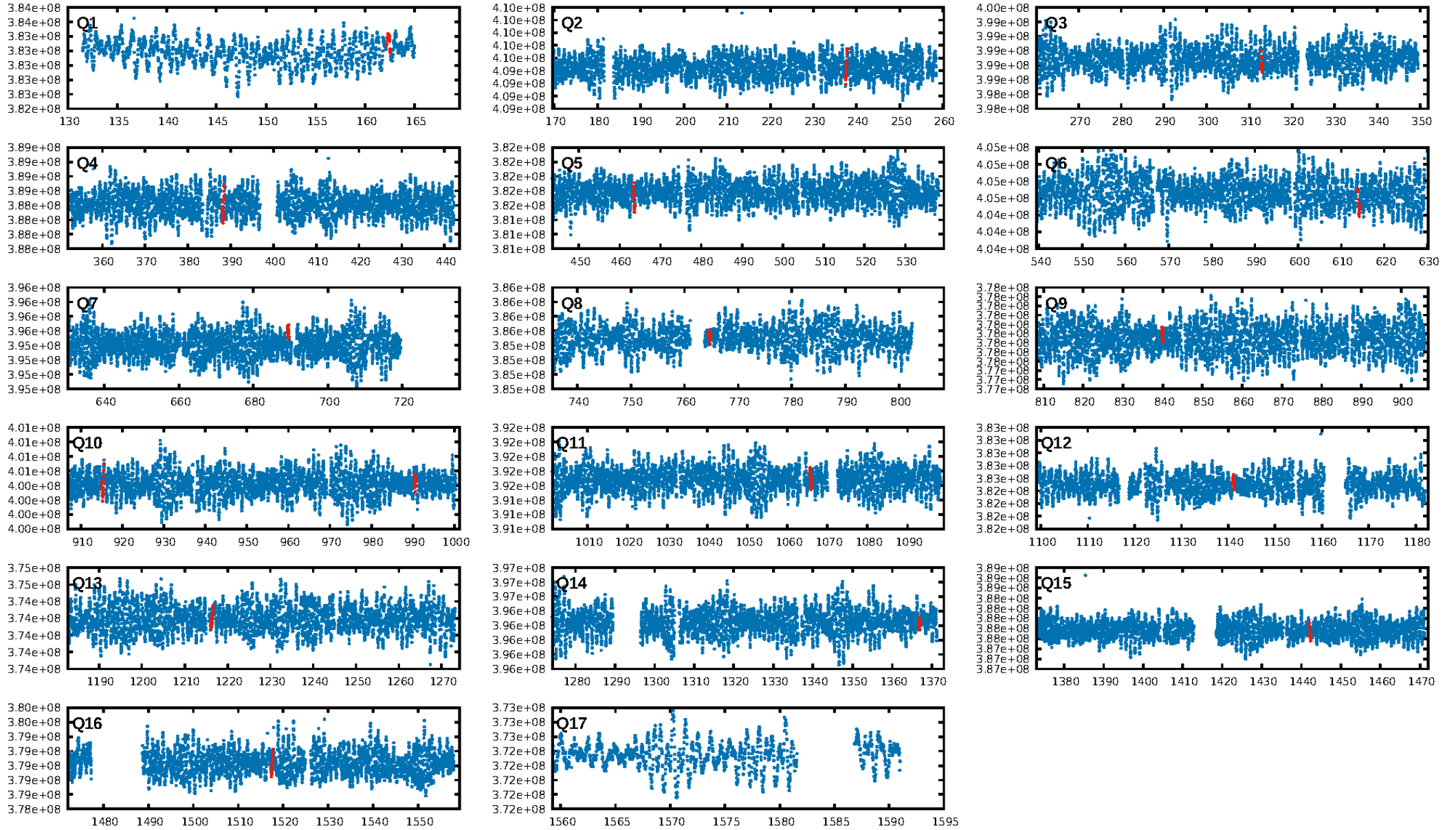
DV Diagnostic Results:

ShortPeriod-sig: 99.7% [2.93σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [6/6]
GhostDiagnostic-chr: 1.969
Centroid-sig: 29.7%
Centroid-so: 0.106 arcsec [0.51σ]
OotOffset-rm: 0.296 arcsec [1.15σ]
KicOffset-rm: 0.213 arcsec [0.87σ]
OotOffset-st: 4/4/3/3 [14]
KicOffset-st: 4/4/3/3 [14]
DiffImageQuality-fgm: 0.57 [8/14]
DiffImageOverlap-fno: 0.14 [2/14]

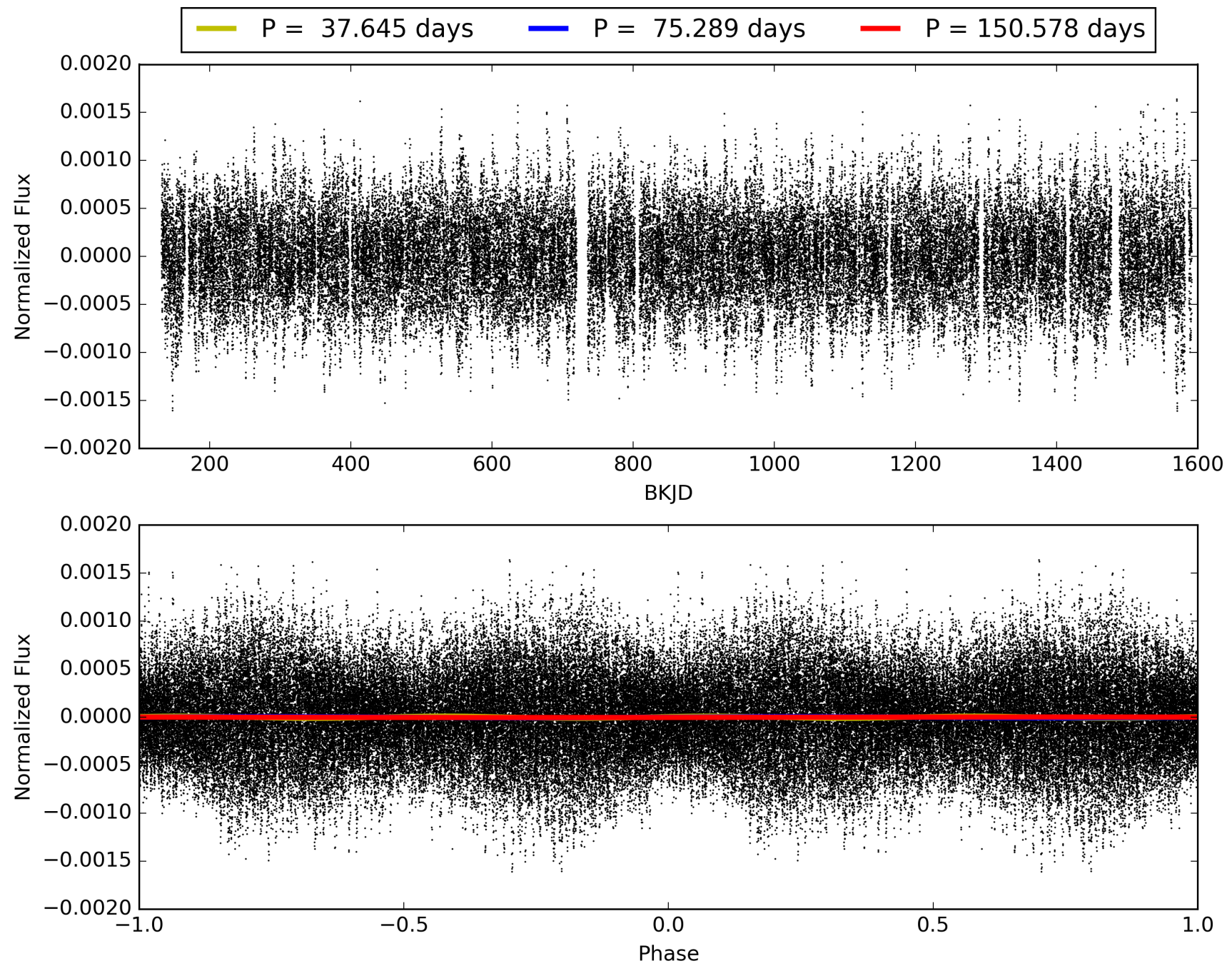
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 09:13:07 Z

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

TCE 005876187-09, PDC Light Curves

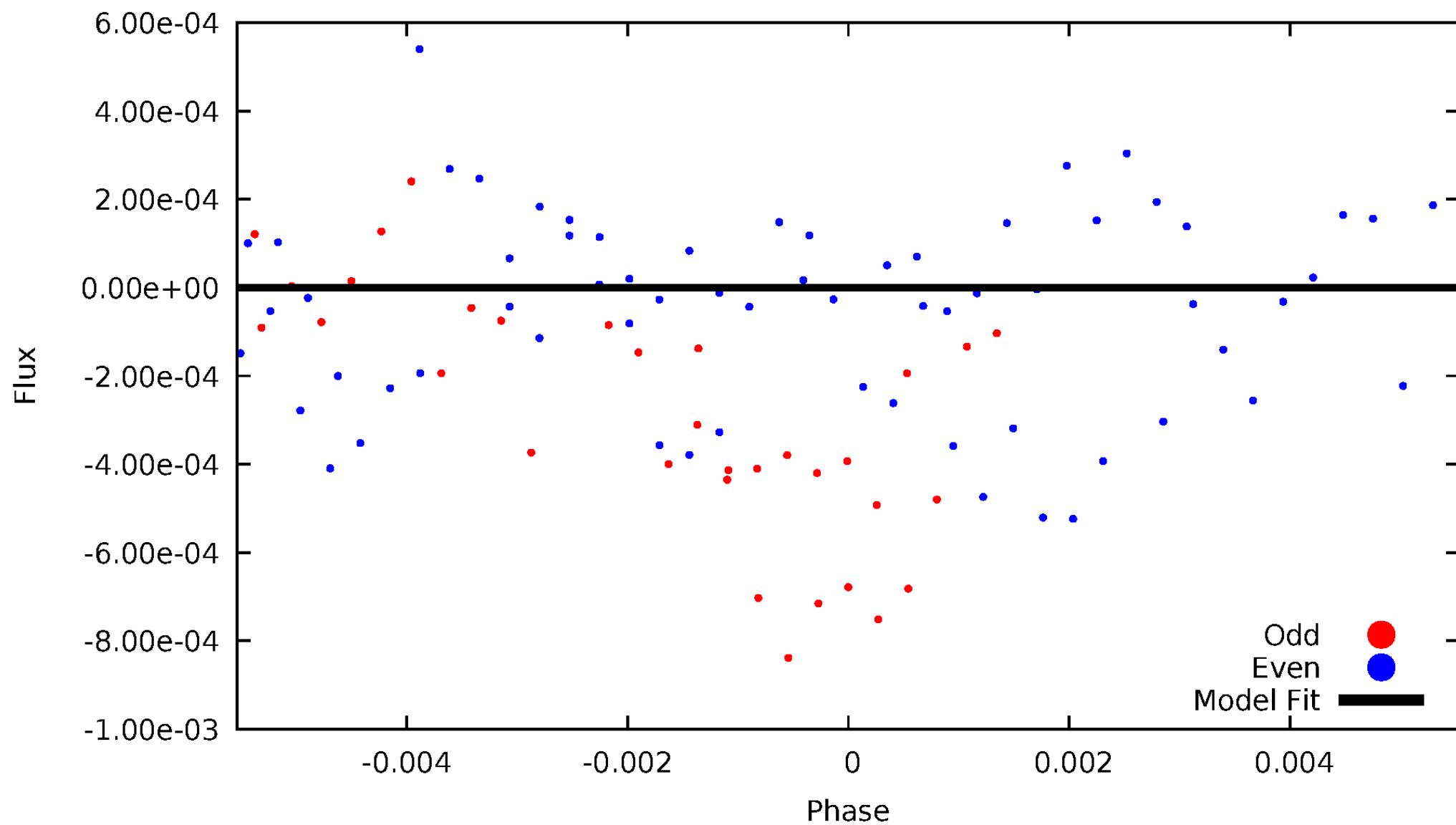


TCE 005876187-09



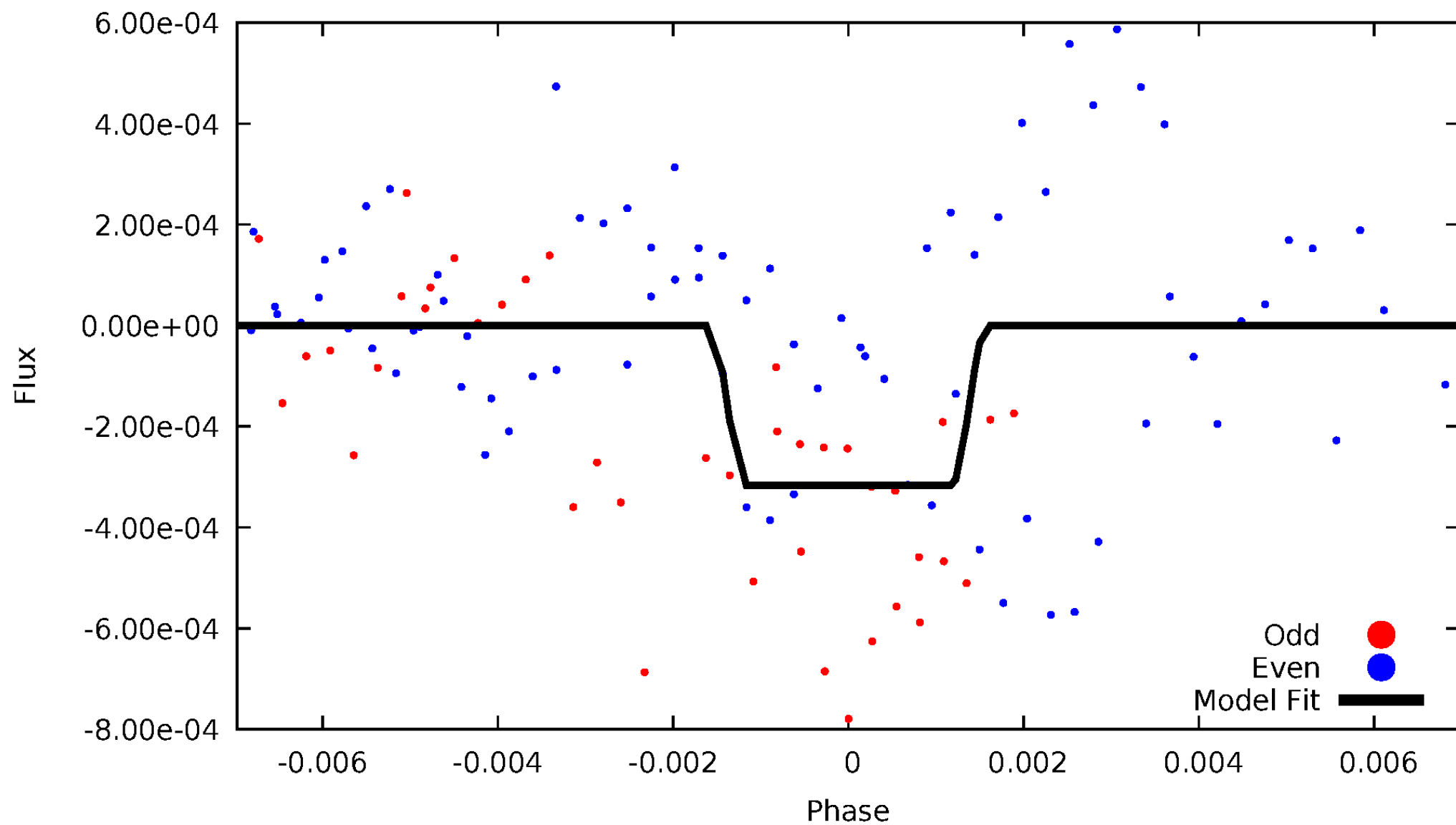
DV Odd/Even

TCE 005876187-09

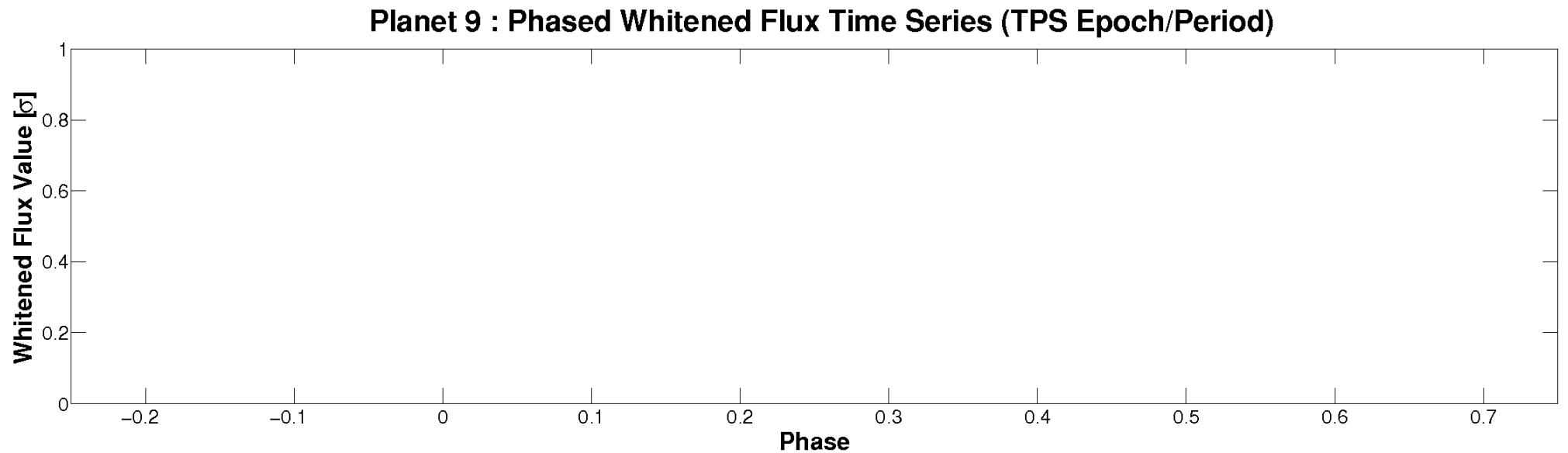
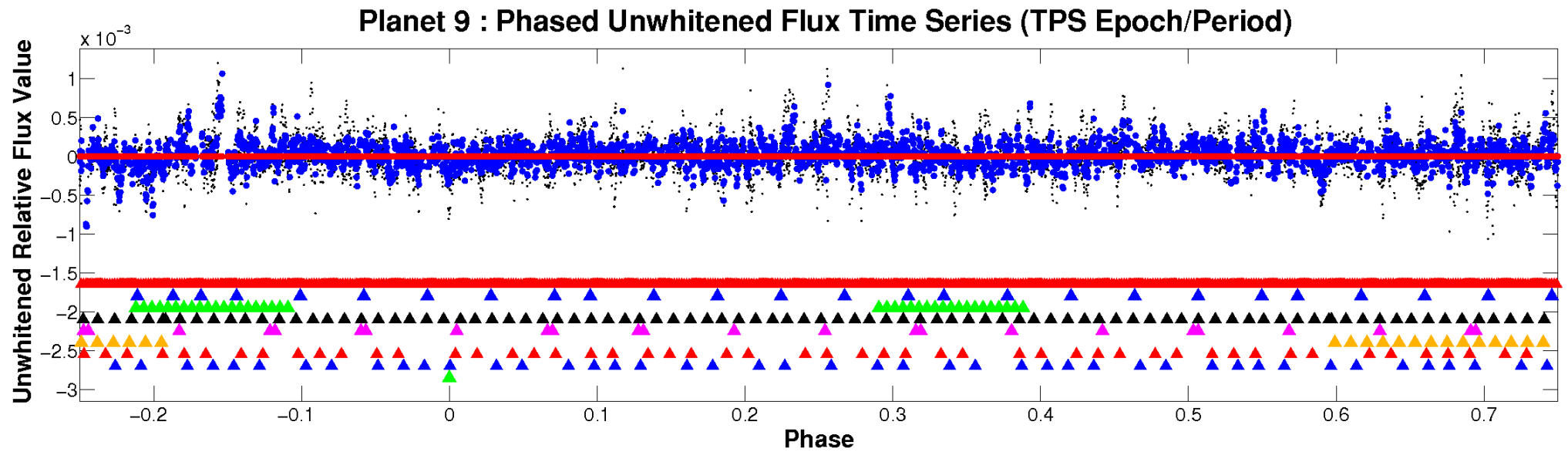


ALT Odd/Even

TCE 005876187-09

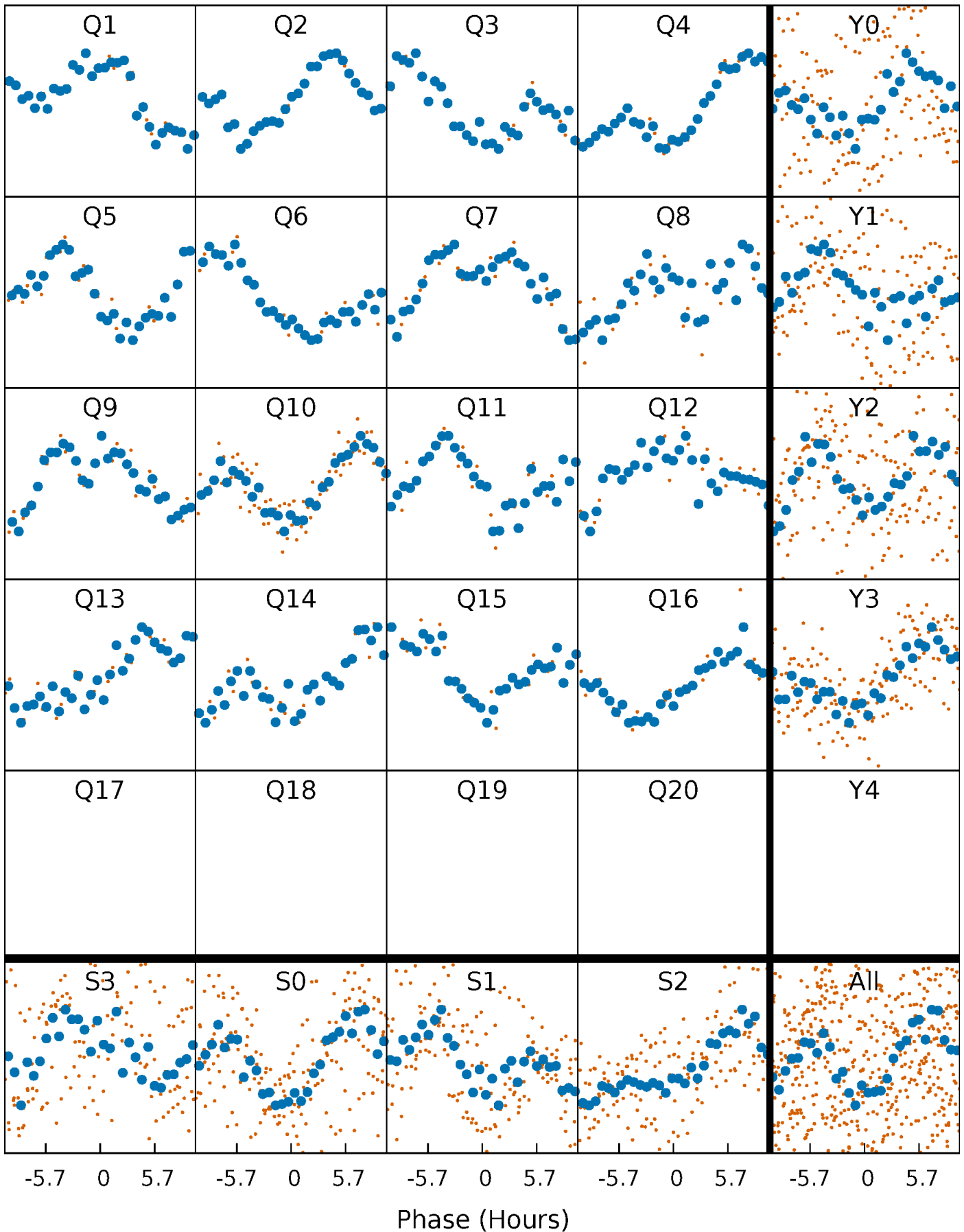


Non-Whitened Vs. Whitened Light Curve



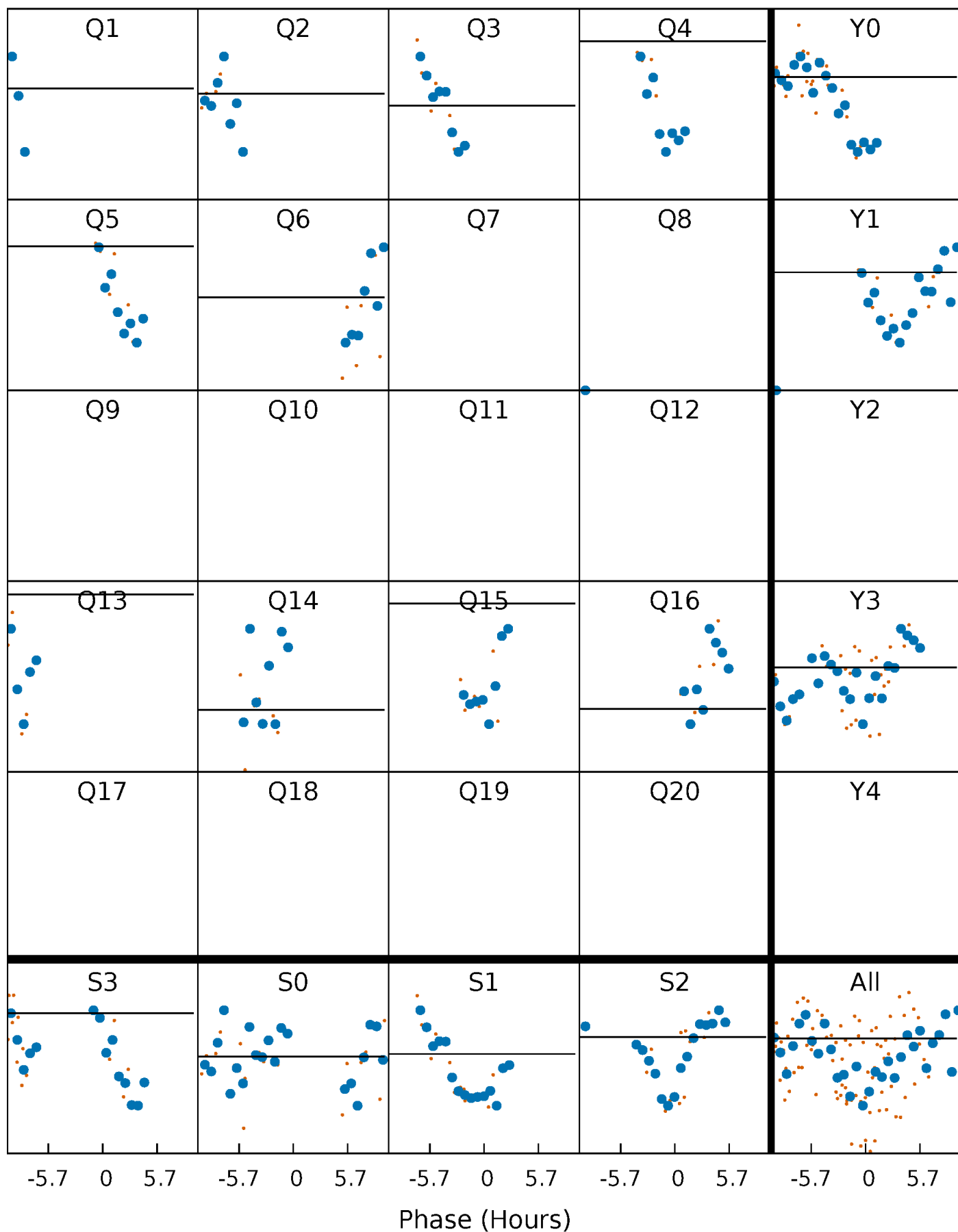
PDC Quarter-Phased Transit Curves

TCE 005876187-09 P= 75.289242 Days $T_0=162.348642$ (BKJD)



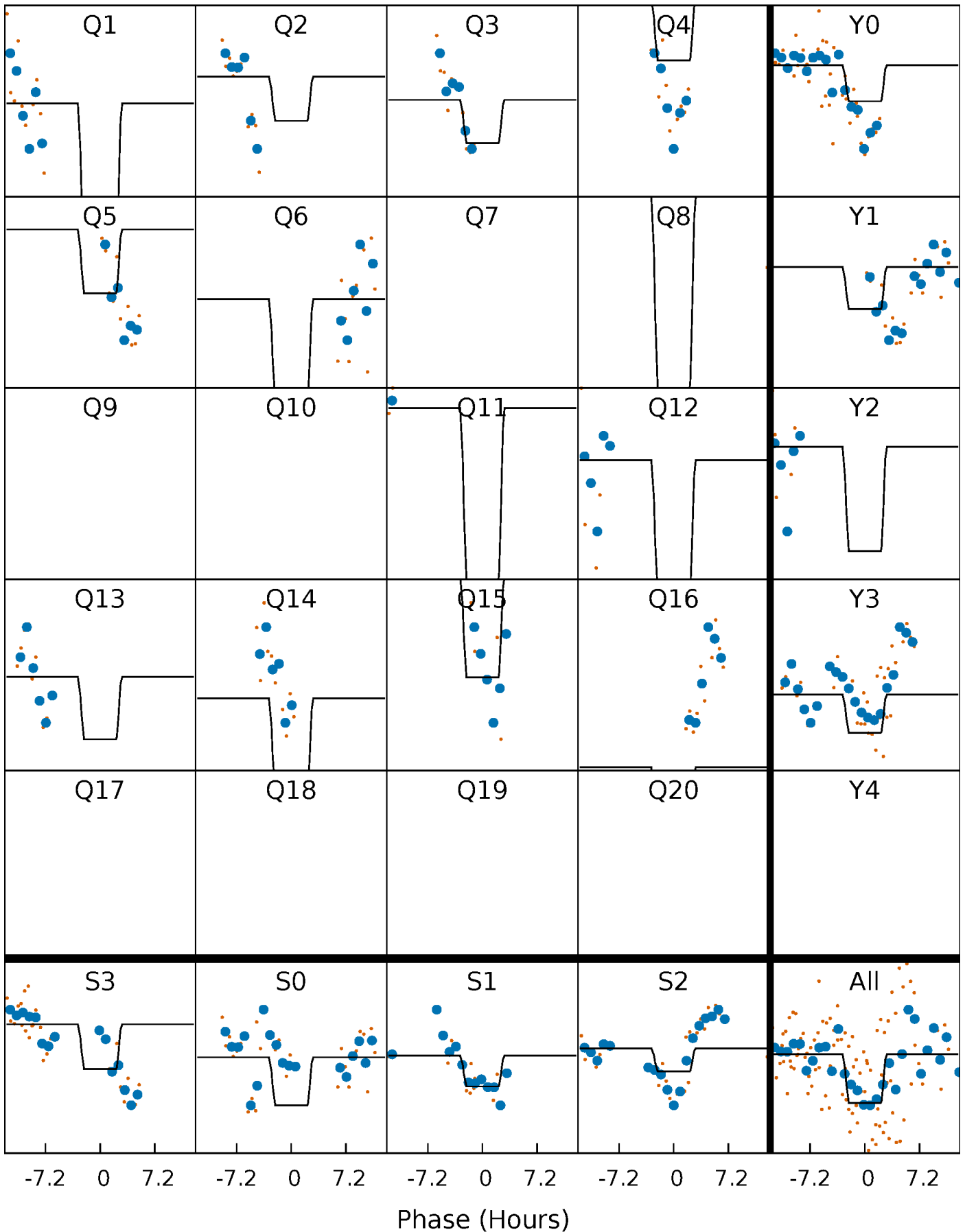
DV Quarter-Phased Transit Curves

TCE 005876187-09 $P = 75.289242$ Days $T_0 = 162.348642$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

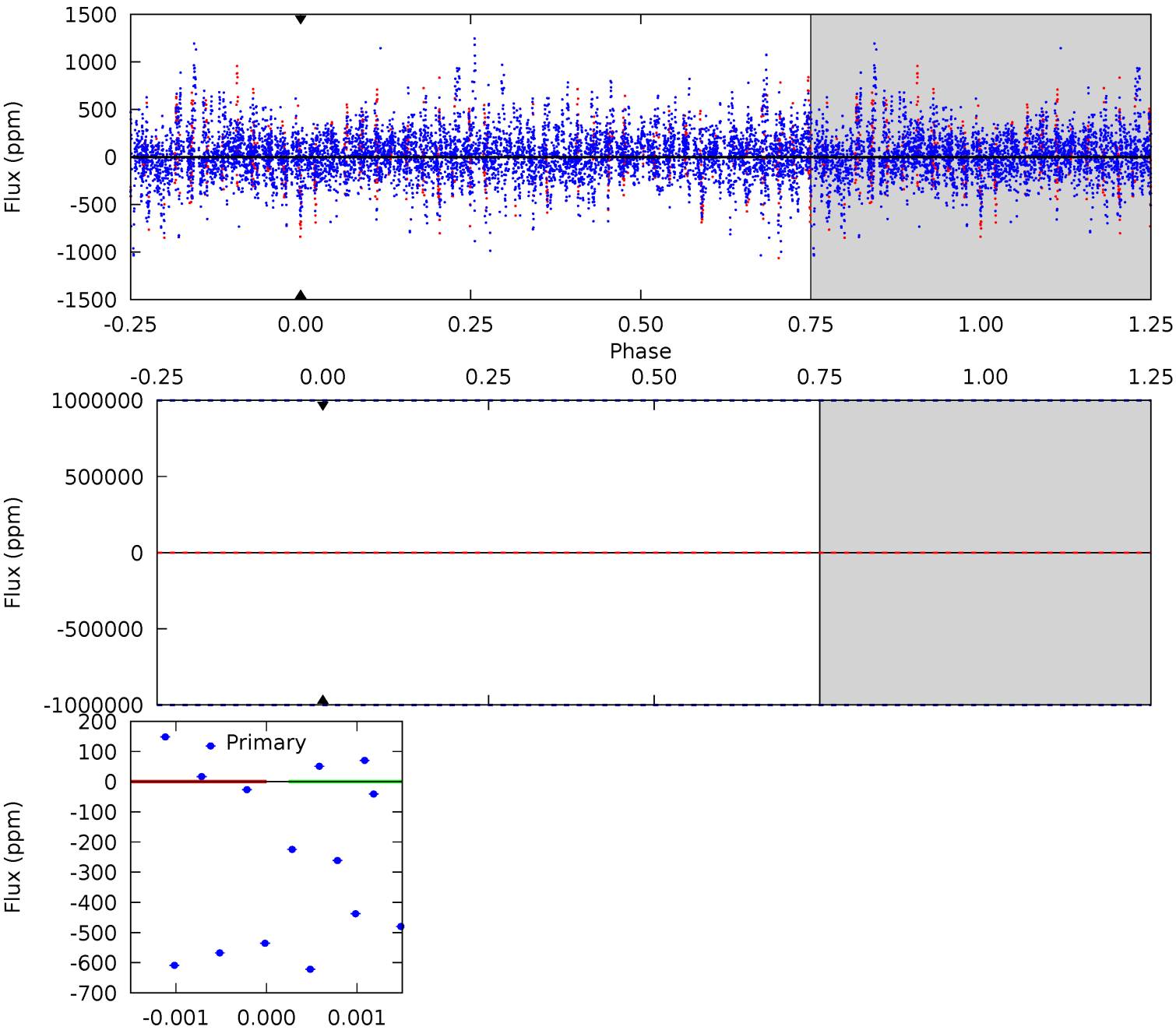
TCE 005876187-09 P= 75.289242 Days $T_0=162.307493$ (BKJD)



DV Model-Shift Uniqueness Test

005876187-09, P = 75.289242 Days, E = 87.059400 Days

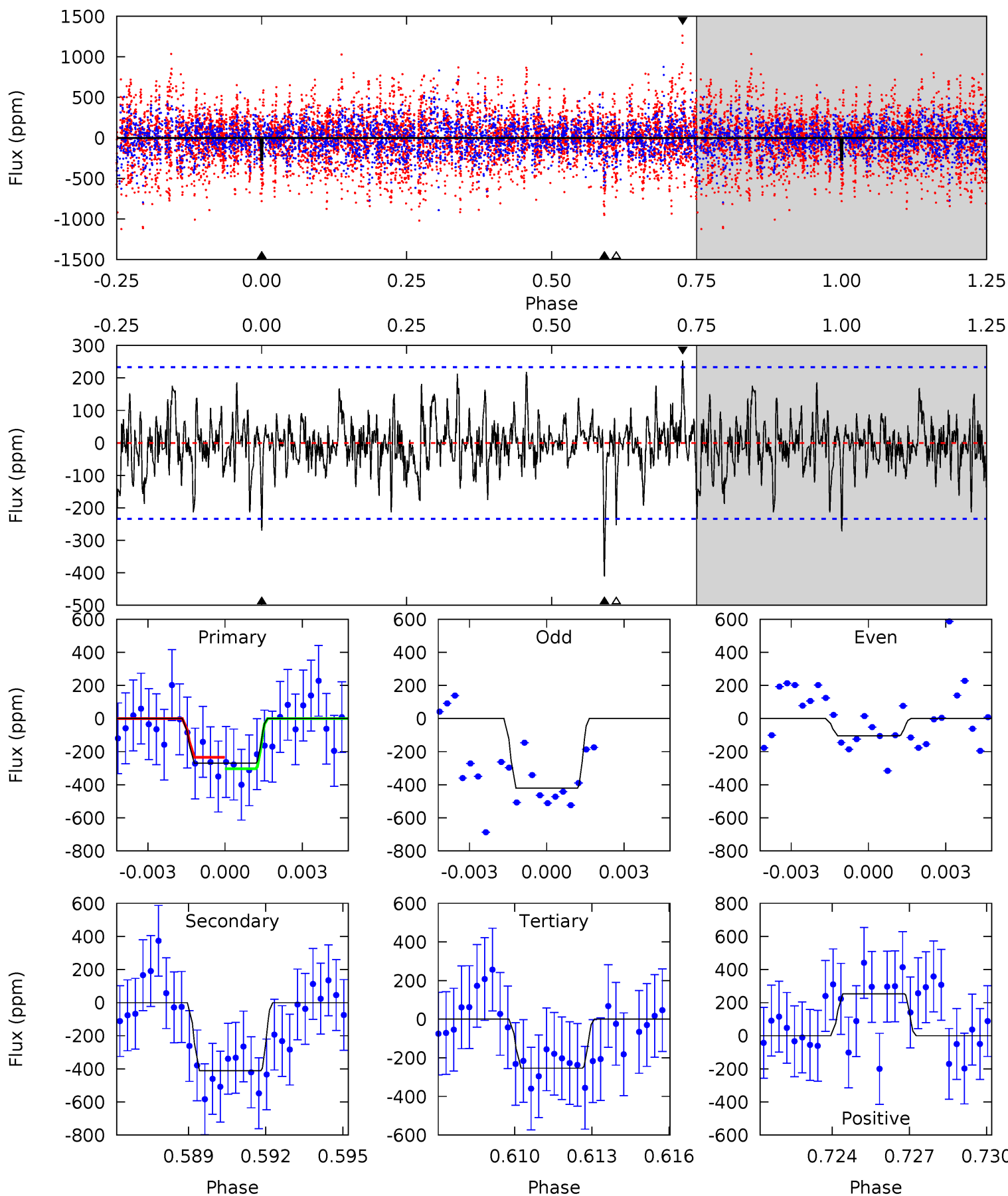
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

005876187-09, P = 75.289242 Days, E = 87.018251 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.08	9.25	5.70	5.71	5.26	2.97	1.57	0.37	0.36	3.55	3.54	3.58	0.81	0.38	0.77



Stellar Parameters For KIC 005876187

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6846^{+82}_{-82}	$4.069^{+0.143}_{-0.117}$	$-0.080^{+0.200}_{-0.150}$	$1.837^{+0.325}_{-0.325}$	$1.444^{+0.115}_{-0.115}$	$0.328^{+0.233}_{-0.117}$
	+1%/-1%	+4%/-3%	+250%/-188%	+18%/-18%	+8%/-8%	+71%/-36%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 005876187-09 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$13.95^{+15.48}_{-9.88}$	912^{+40}_{-44}	5017^{+29474}_{-39602}	583^{+80444}_{-77991}
Alt.	-411 ± 44	$15.16^{+15.31}_{-10.77}$	910^{+41}_{-48}	3881^{+2741}_{-792}	156^{+1729}_{-120}

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 $A_{obs} \gg 1.0$

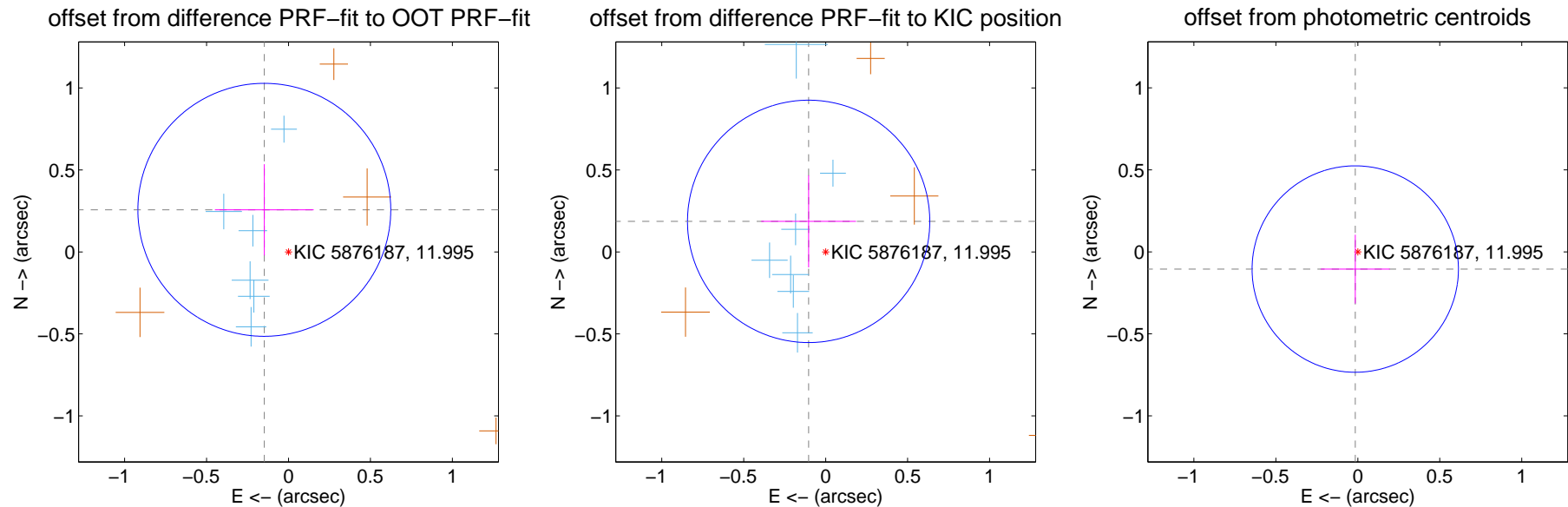
DV Centroid Data

Supplemental centroid analysis for 005876187-09. **Kepler magnitude: 11.99.** Transit SNR -1.00

There are 8 quarters with good PRF difference image offsets

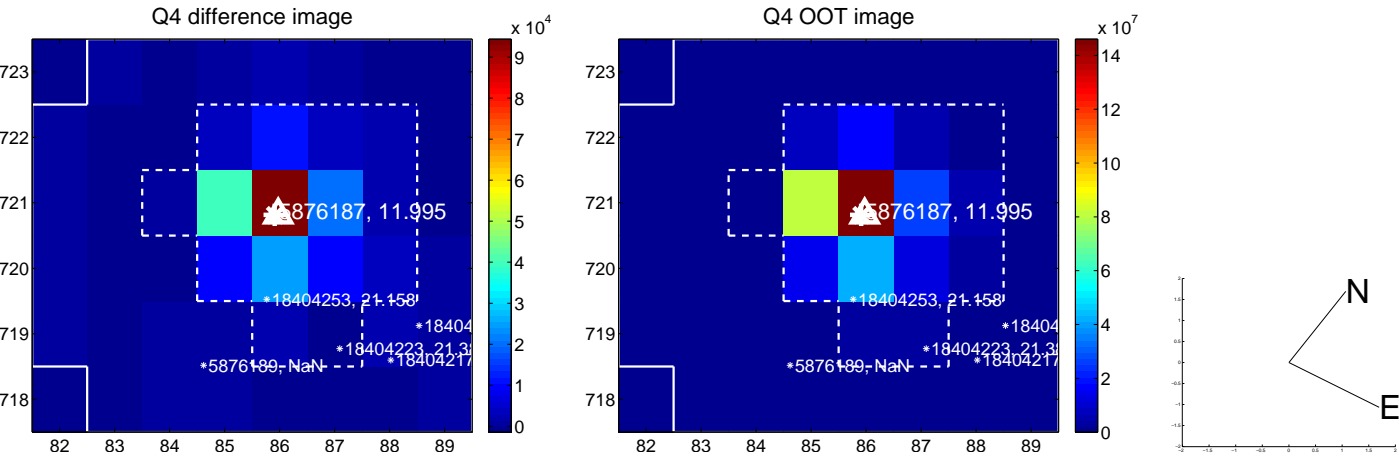
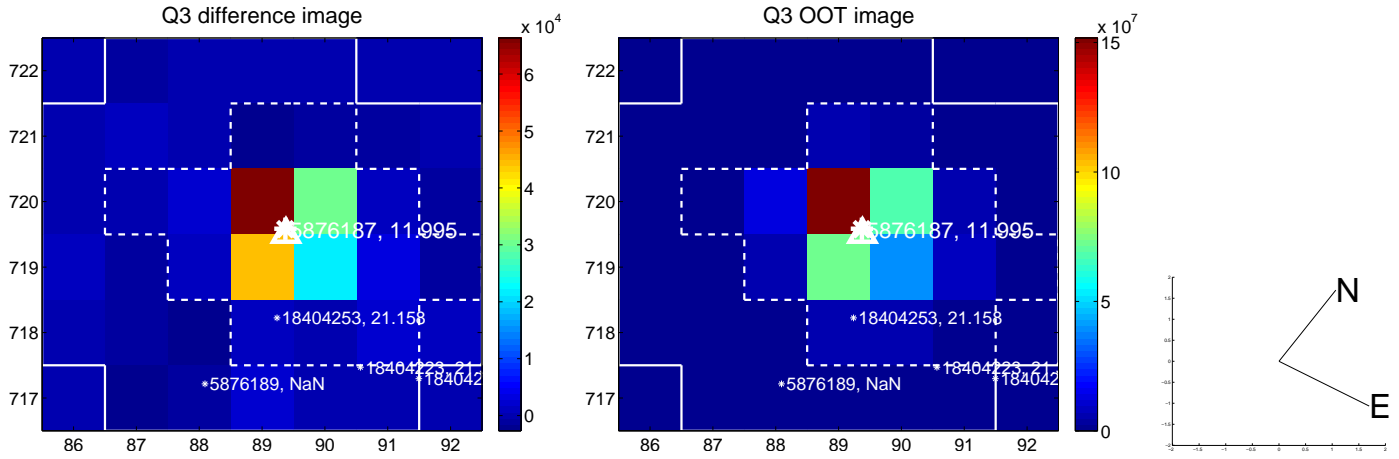
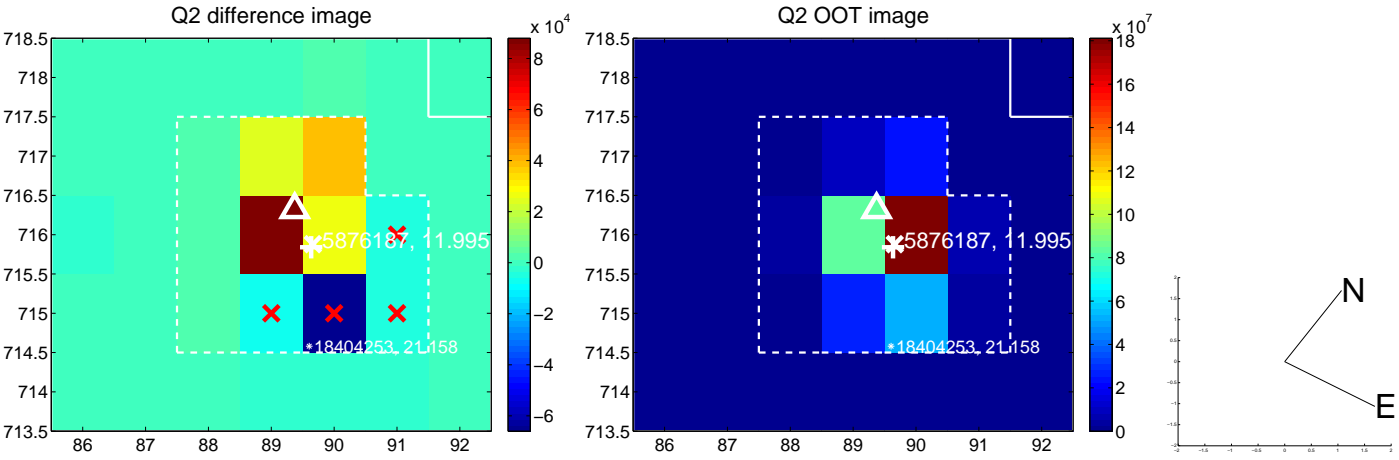
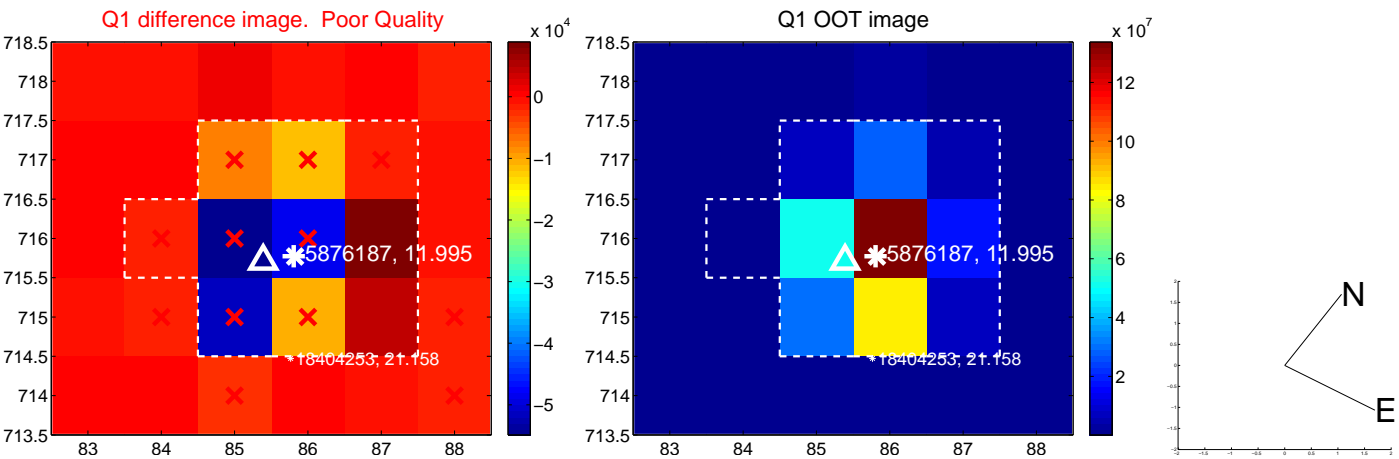
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.296 ± 0.257	1.15	0.148 ± 0.301	0.257 ± 0.278
PRF-fit source offset from KIC position	0.213 ± 0.246	0.87	0.104 ± 0.289	0.186 ± 0.281
photometric centroid source offset	0.11 ± 0.21	0.51	0.02 ± 0.21	-0.10 ± 0.21

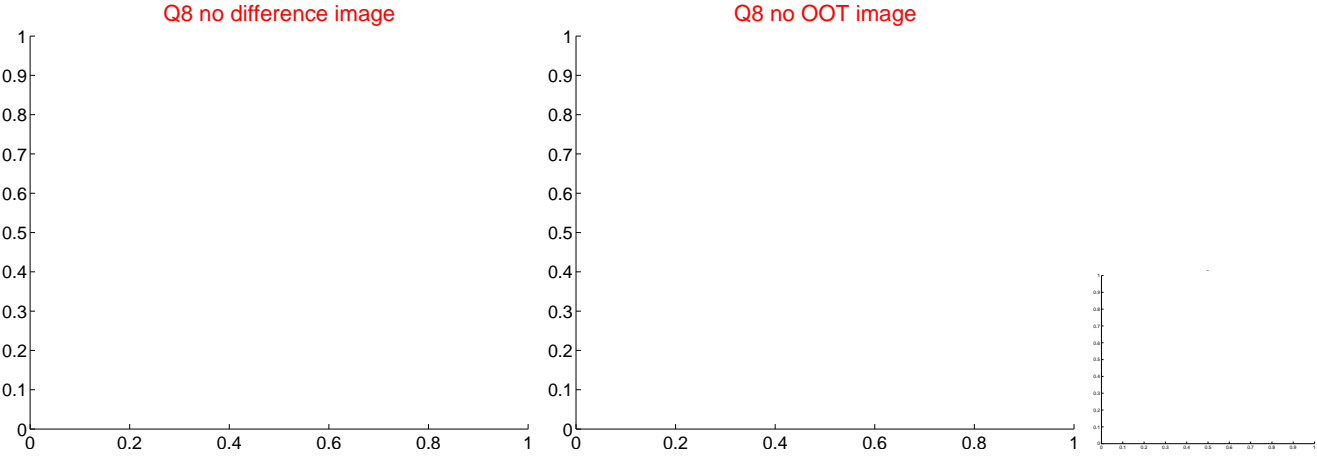
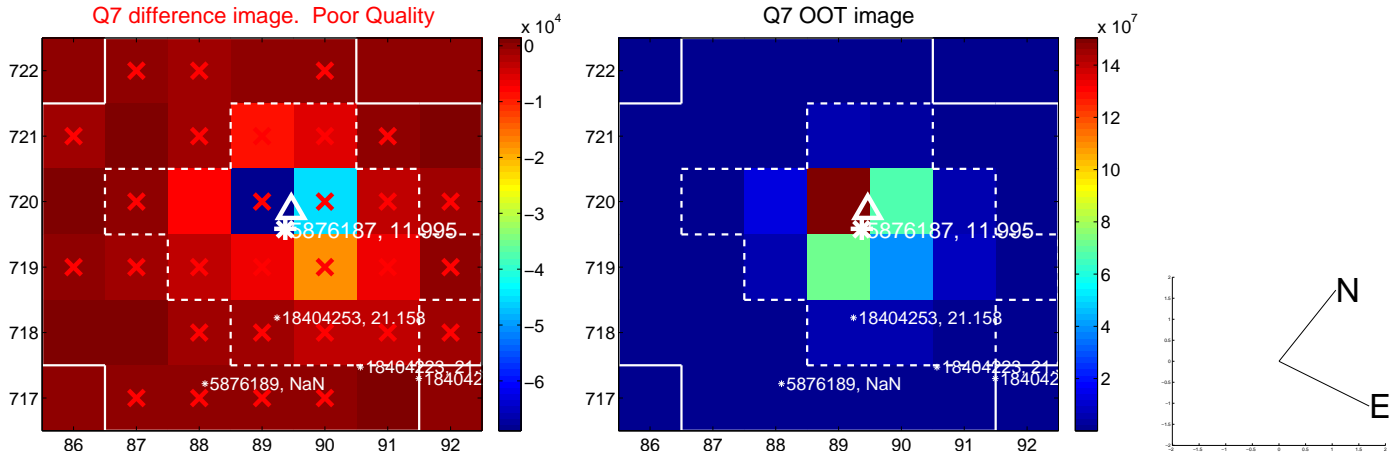
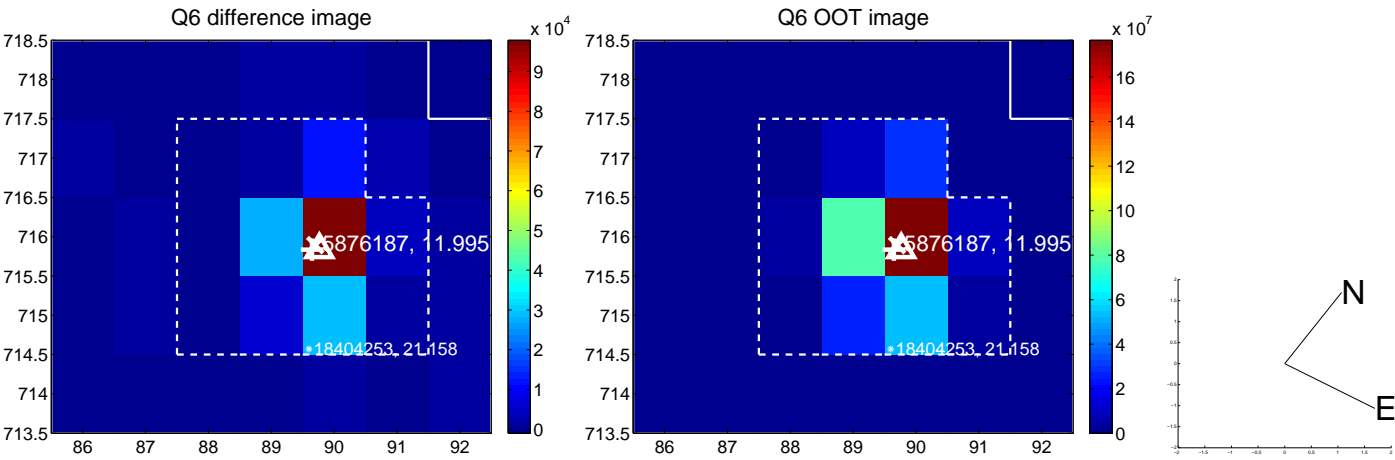
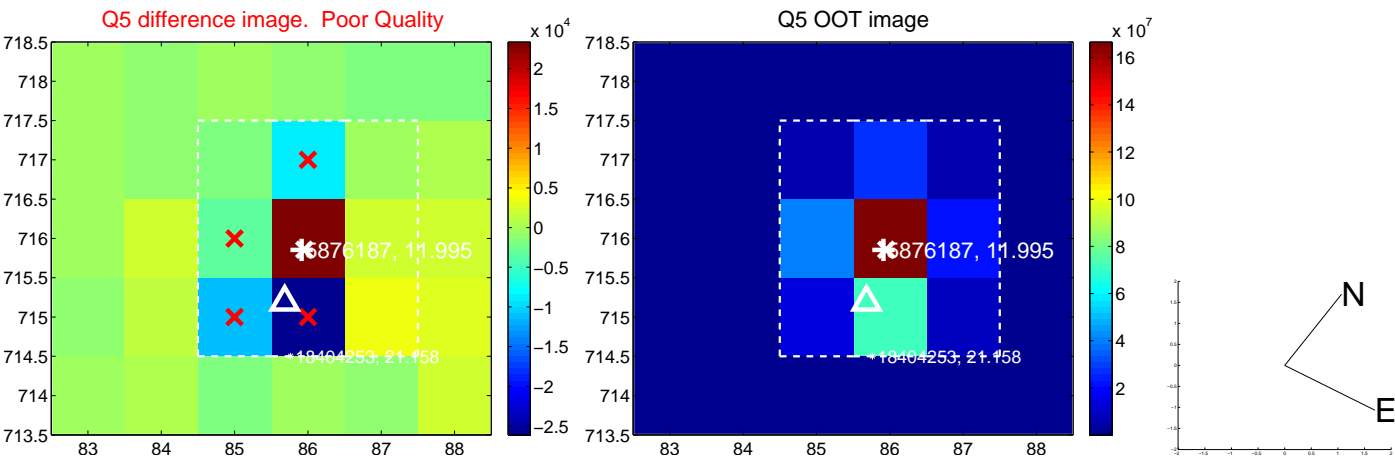


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

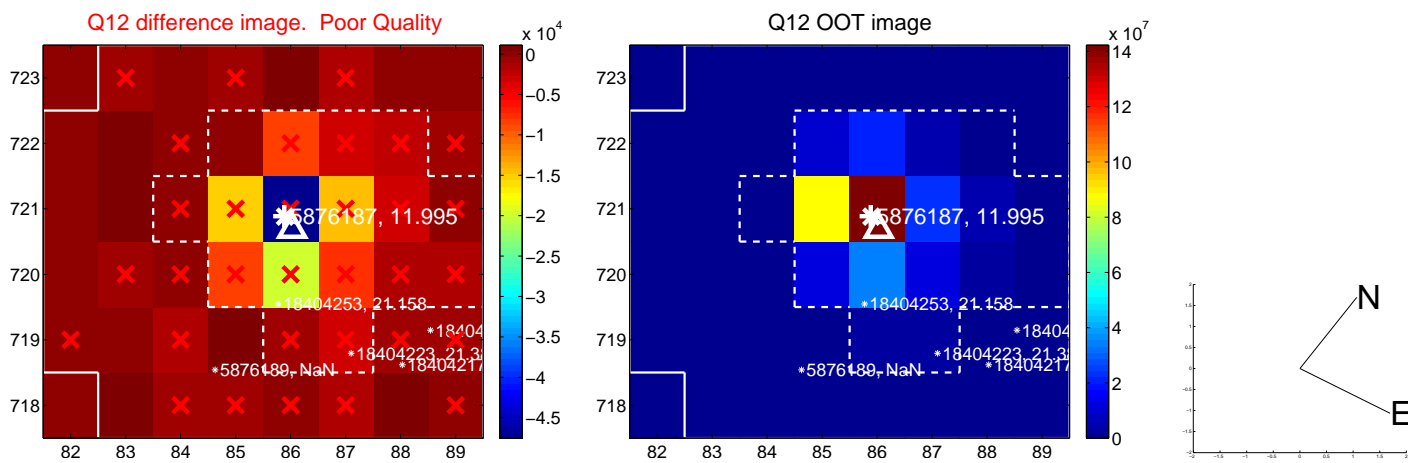
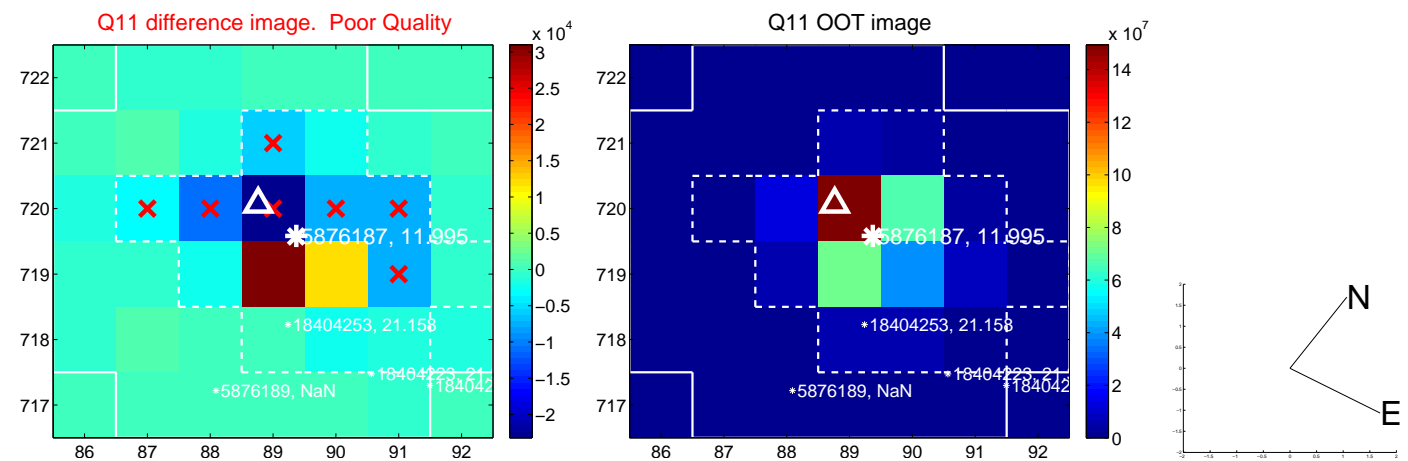
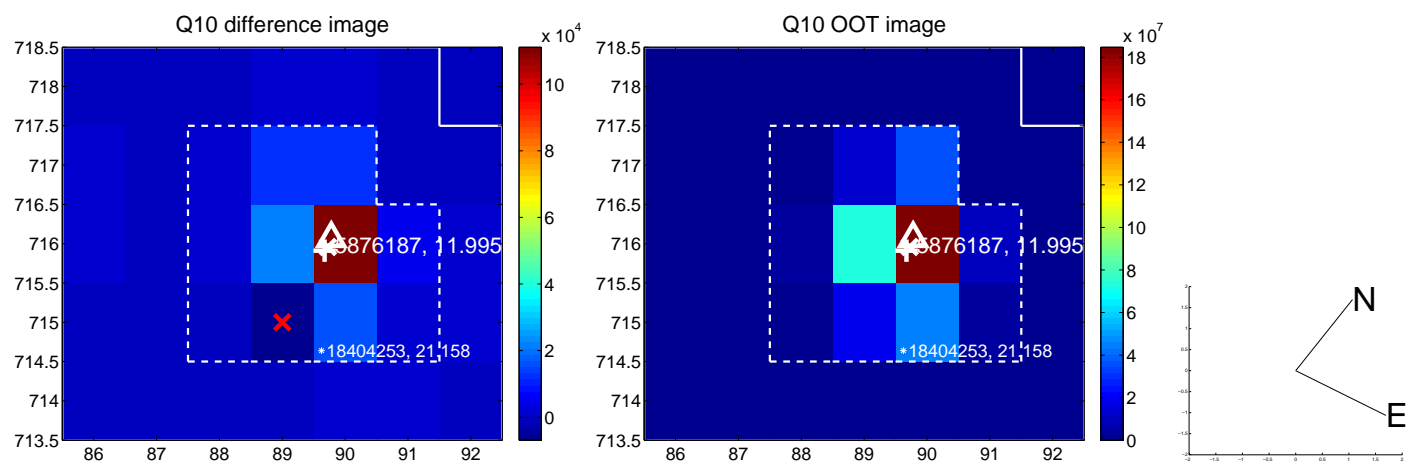
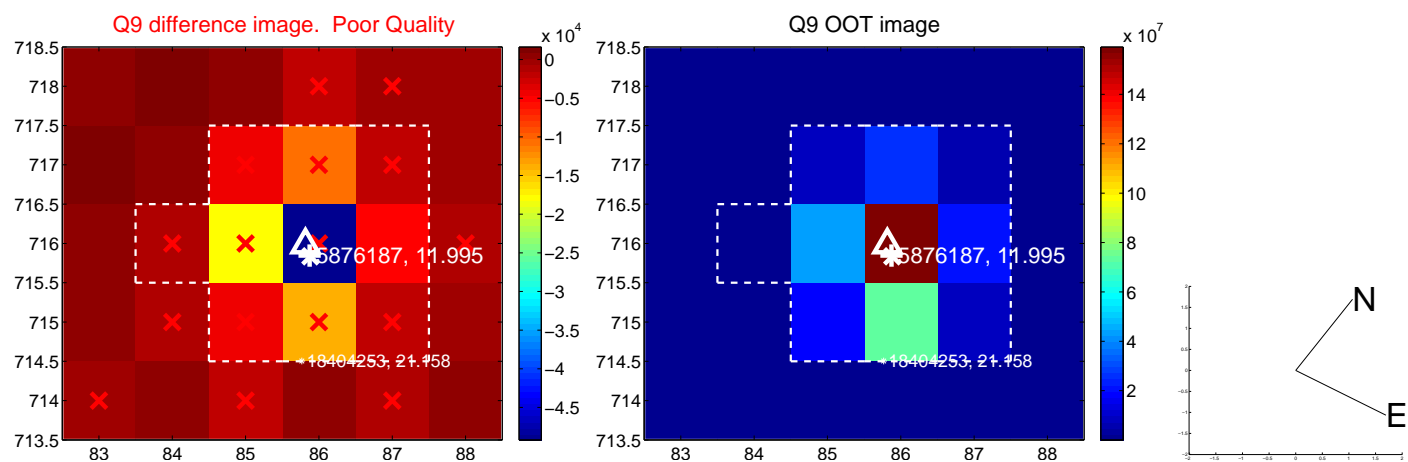
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



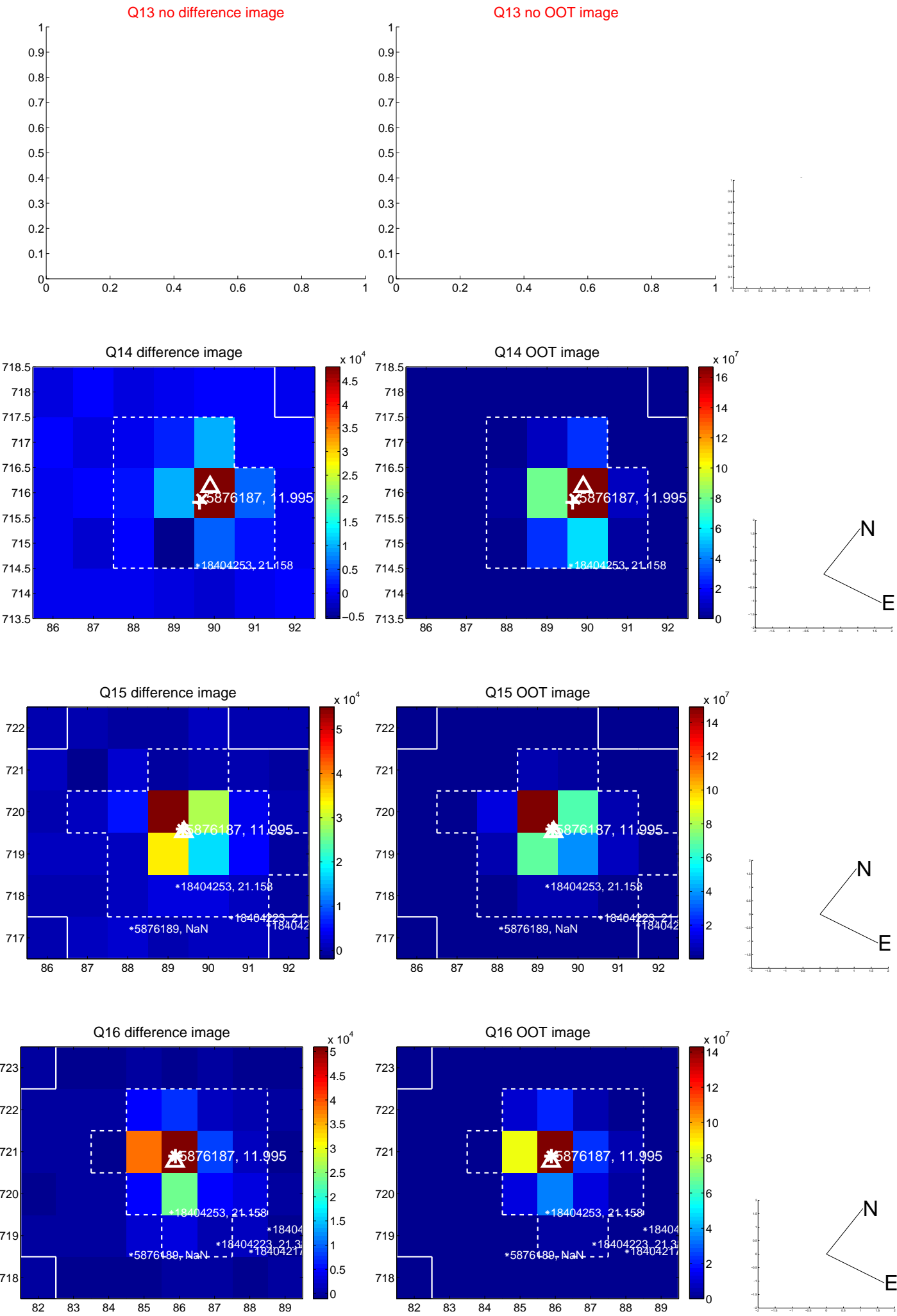
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



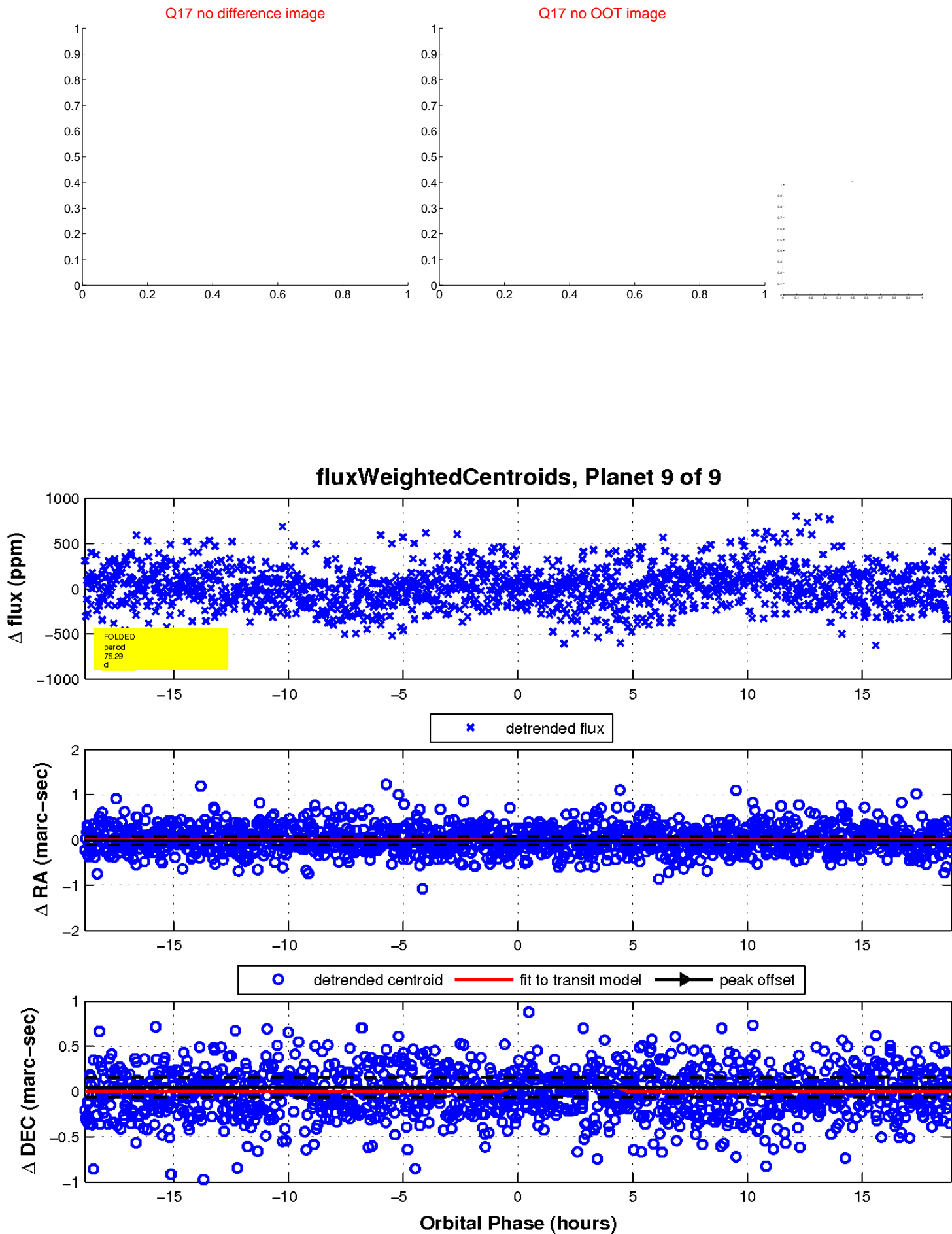
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

