

KIC 005801925

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})
005801925-01	OBS	No	81.033368	210.815001	36.5	3.683	8.9	8.6	54.75	3974	40.93	3340.58
005801925-02	OBS	No	40.706121	157.487149	32.5	1.852	7.8	8.7	54.75	3974	39.50	8365.55

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005801925-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—CENT_SATURATED
005801925-02	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_SATURATED

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

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

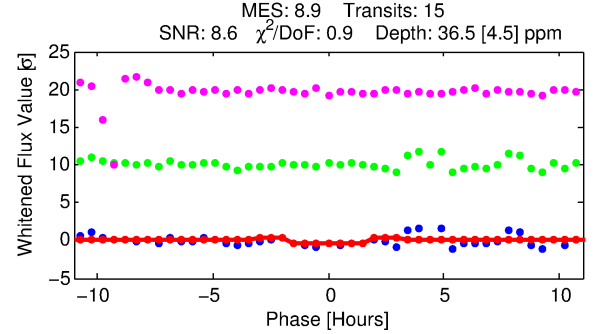
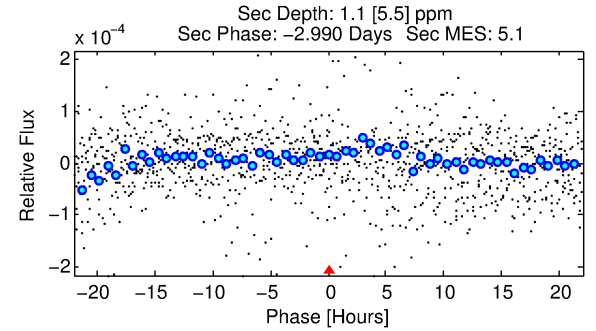
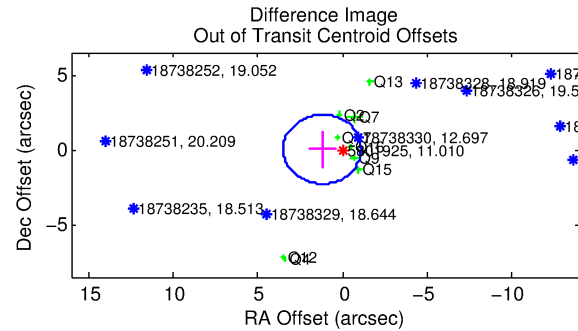
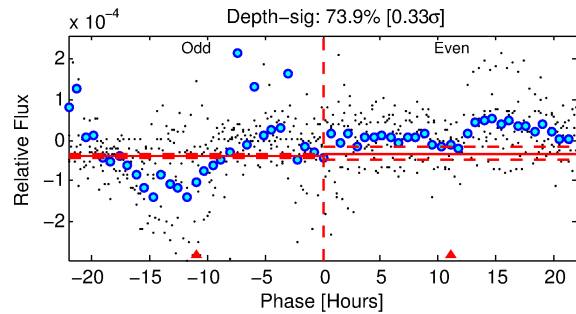
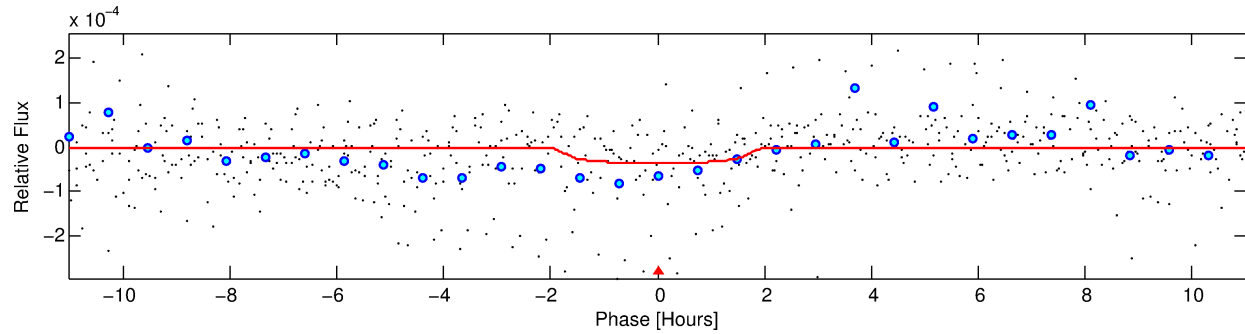
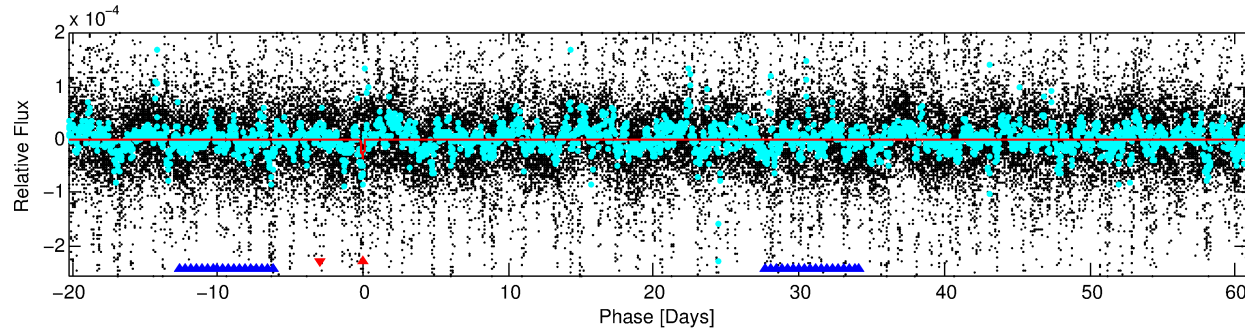
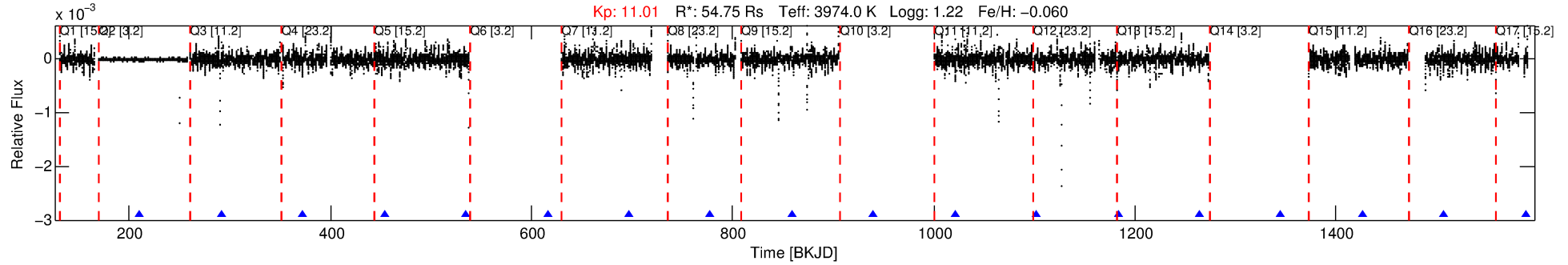
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005801925-01

No Significant Match Found

DV One-Page Summary

KIC: 5801925 Candidate: 1 of 2 Period: 81.033 d



DV Fit Results:

Period = 81.03337 [0.00072] d
Epoch = 210.8150 [0.0042] BKJD
Rp/R* = 0.0069 [0.0030]
a/R* = 80.46 [107.62]
b = 0.89 [0.34]
Seff = 3340.58 [603.65]
Teq = 1939 [88] K
Rp = 40.93 [19.51] Re
a = 0.4478 [0.0618] AU
Ag = 0.07 [0.37] [-2.54 σ]
Teffp = 1538 [2027] K [-0.20 σ]

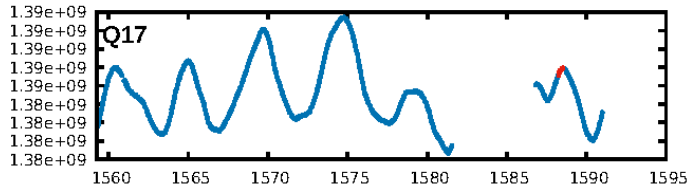
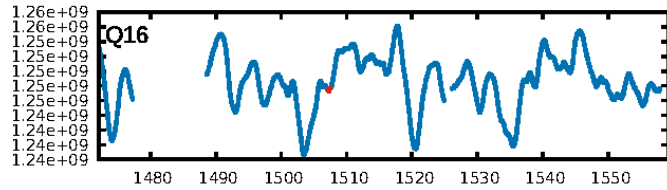
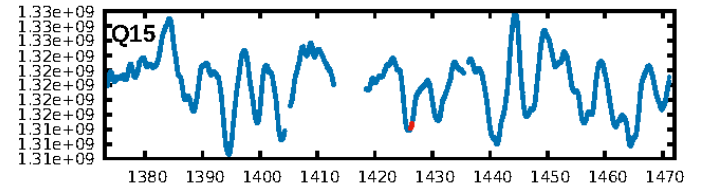
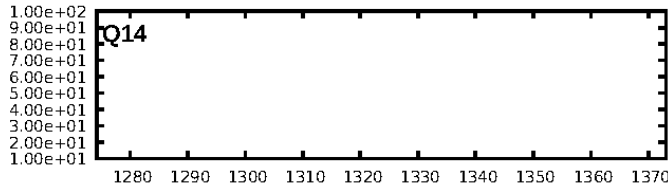
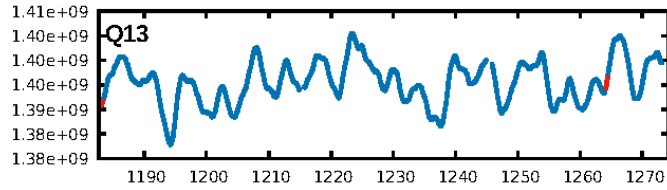
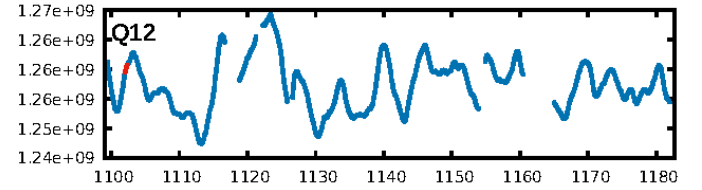
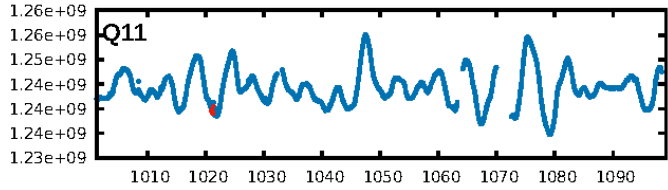
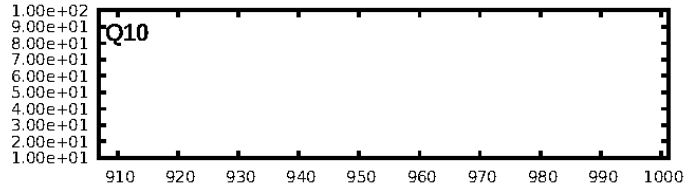
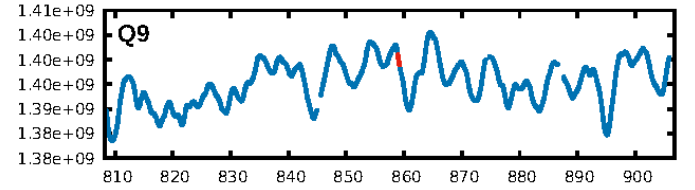
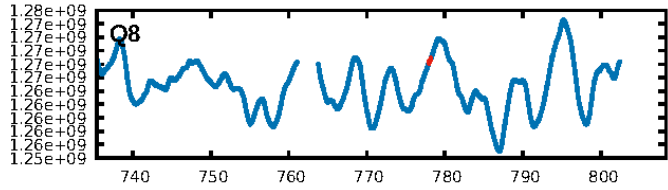
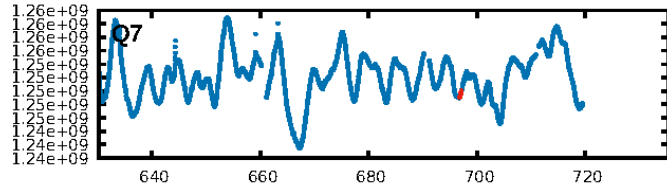
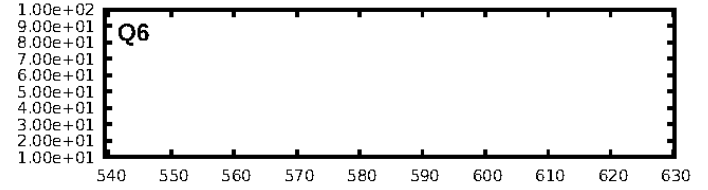
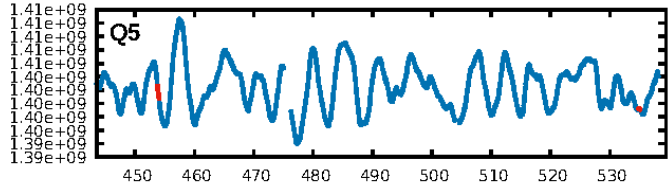
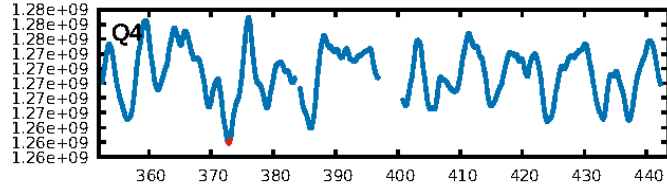
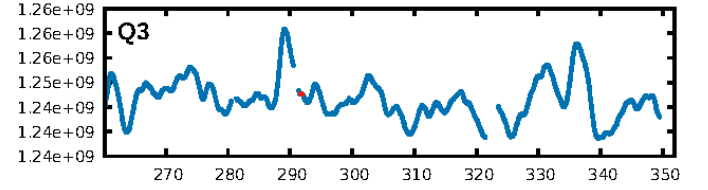
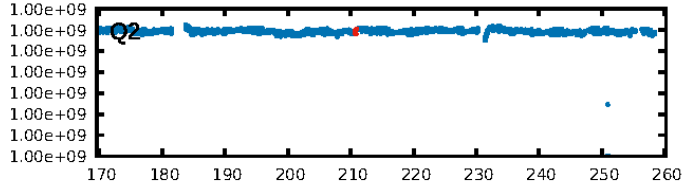
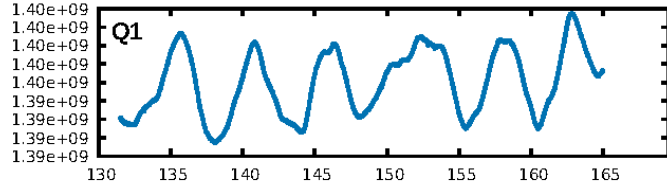
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [234.79 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 63.7%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 7.20e-08
RollingBand-fgt: 1.00 [14/14]
GhostDiagnostic-chr: 0.8924
Centroid-sig: 56.7%
Centroid-so: 2.447 arcsec [0.55 σ]
OotOffset-rm: 1.205 arcsec [1.57 σ]
OotOffset-st: 1/2/3/3 [9]
KicOffset-rm: 0.942 arcsec [1.25 σ]
KicOffset-st: 1/2/3/3 [9]
DiffImageQuality-fgm: 0.44 [4/9]
DiffImageOverlap-fno: 1.00 [11/11]

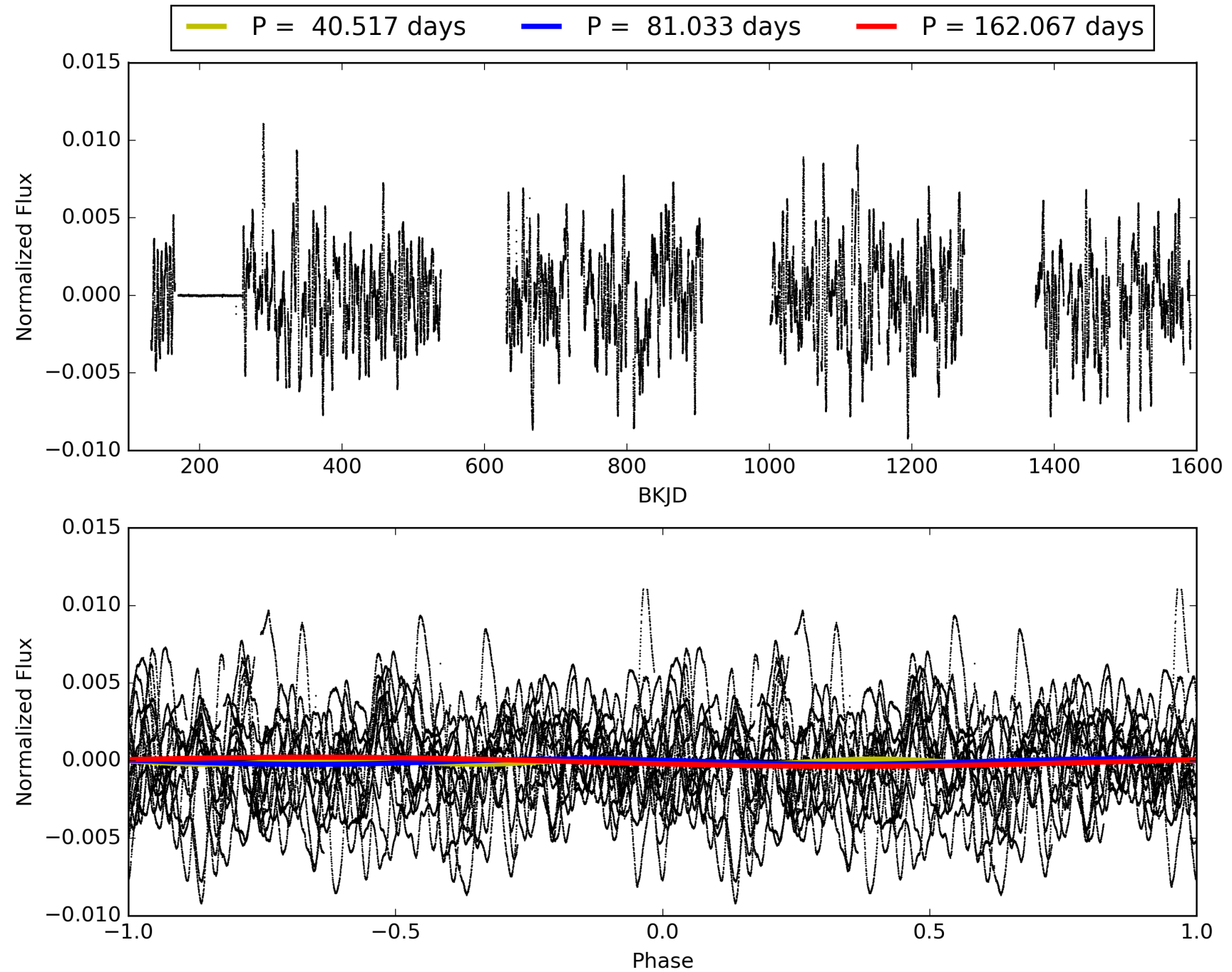
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 07:03:10 Z

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

TCE 005801925-01, PDC Light Curves

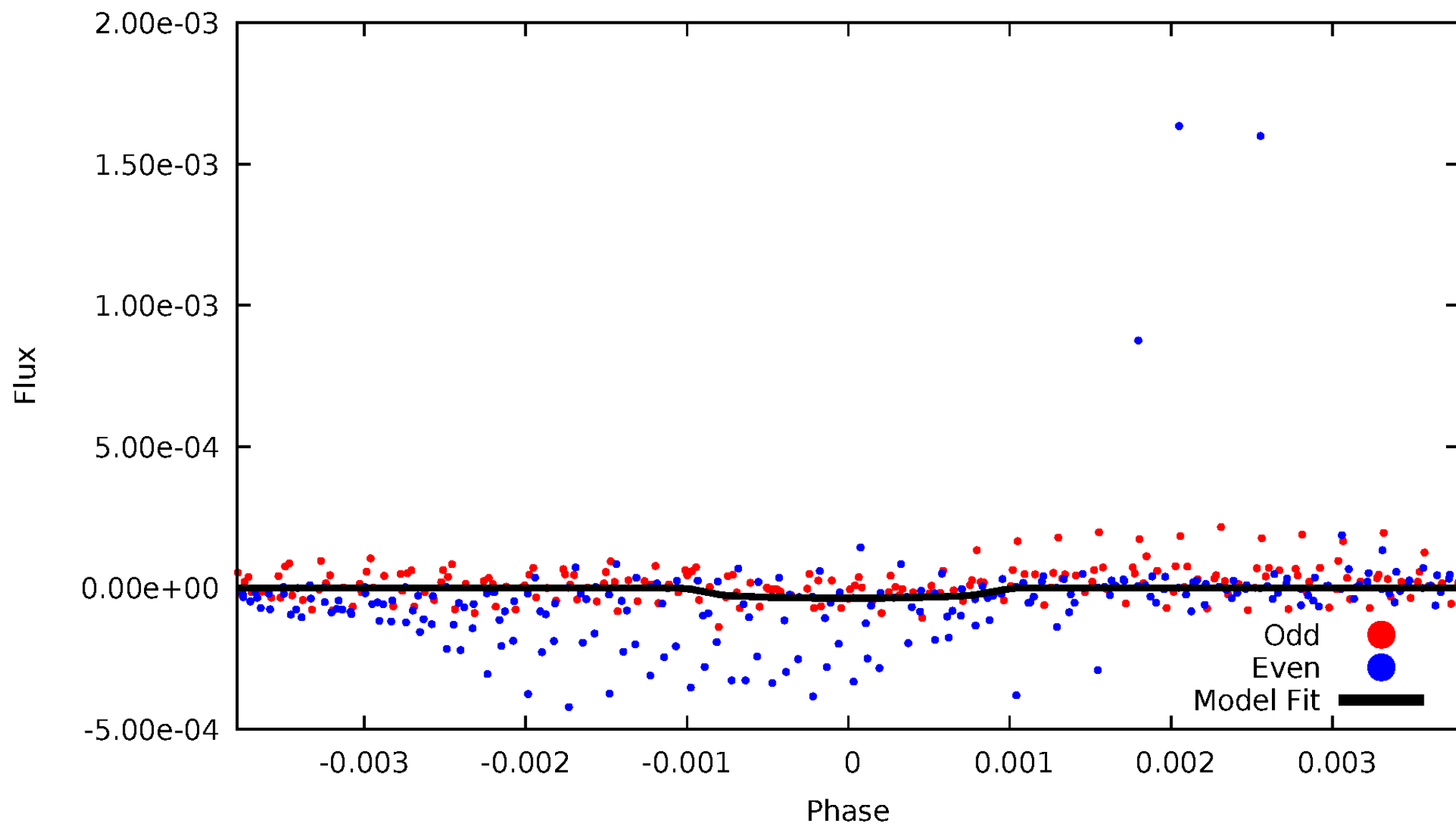


TCE 005801925-01



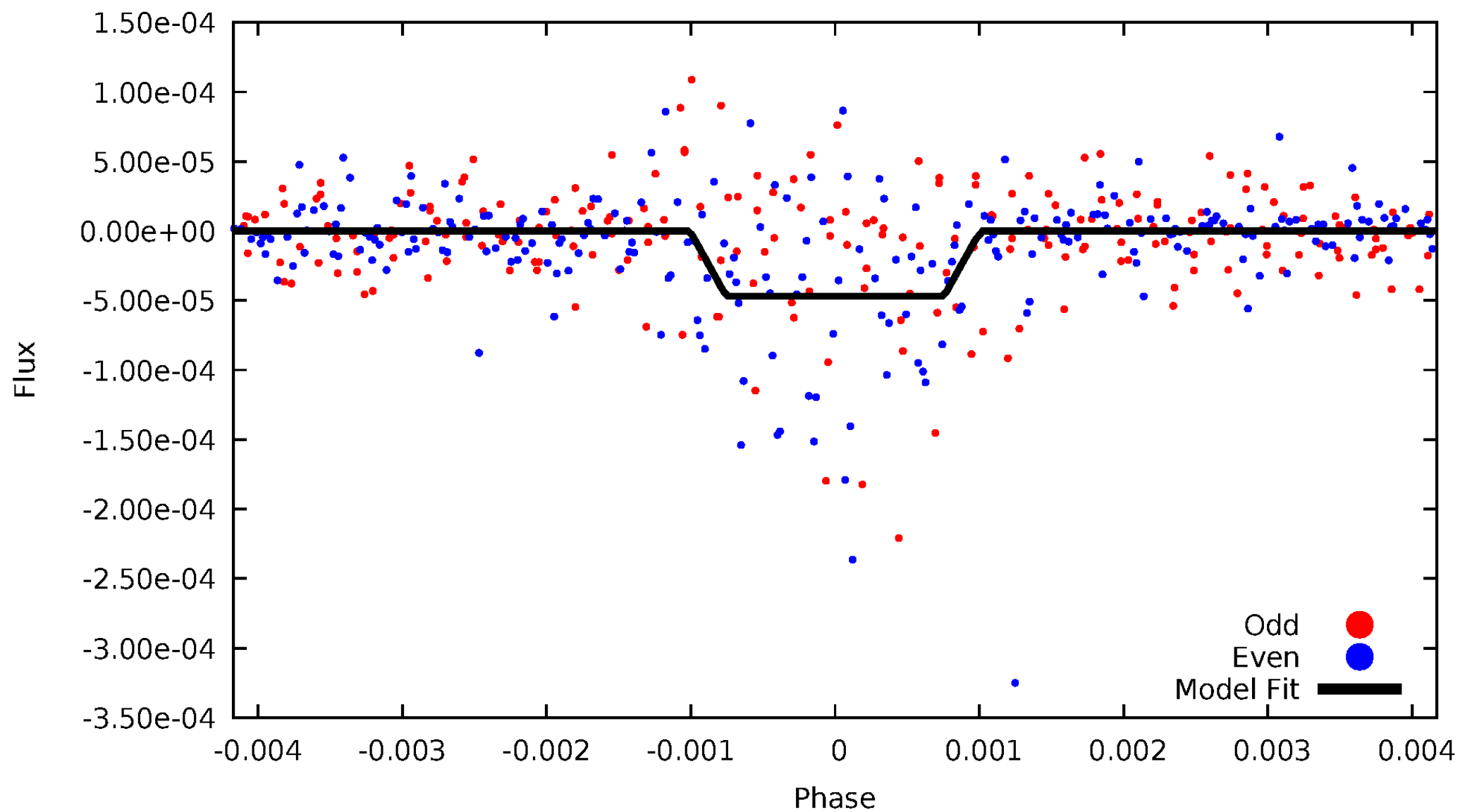
DV Odd/Even

TCE 005801925-01



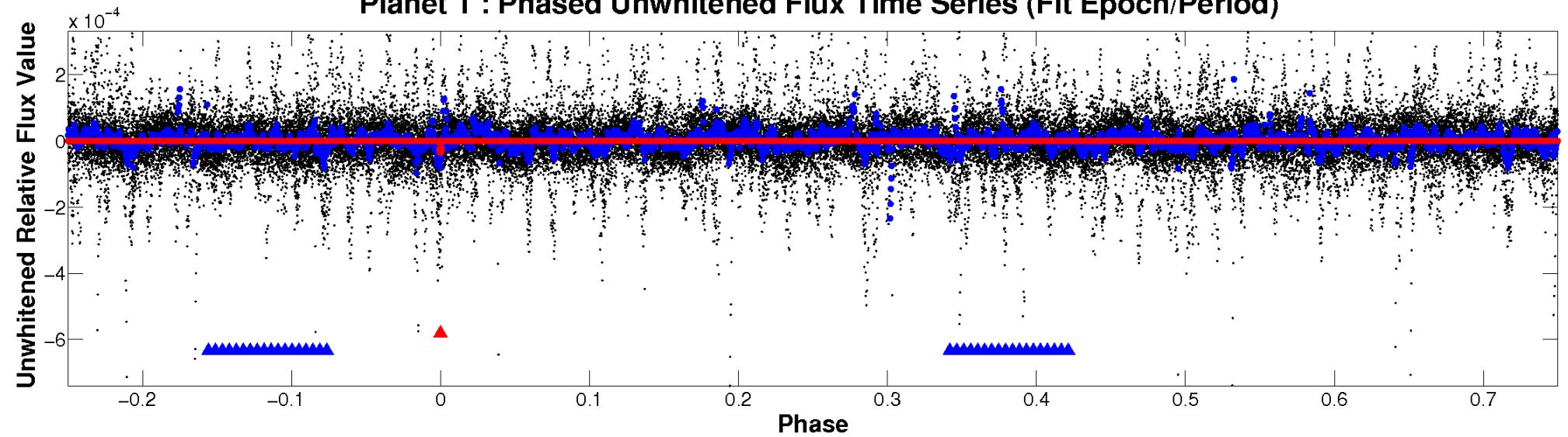
ALT Odd/Even

TCE 005801925-01

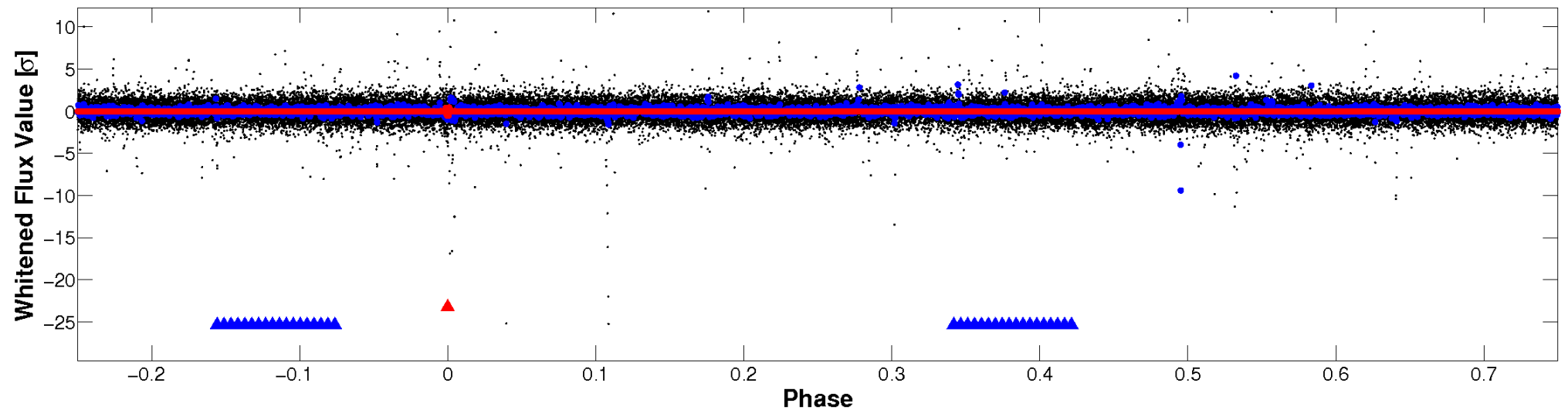


Non-Whitened Vs. Whitened Light Curve

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

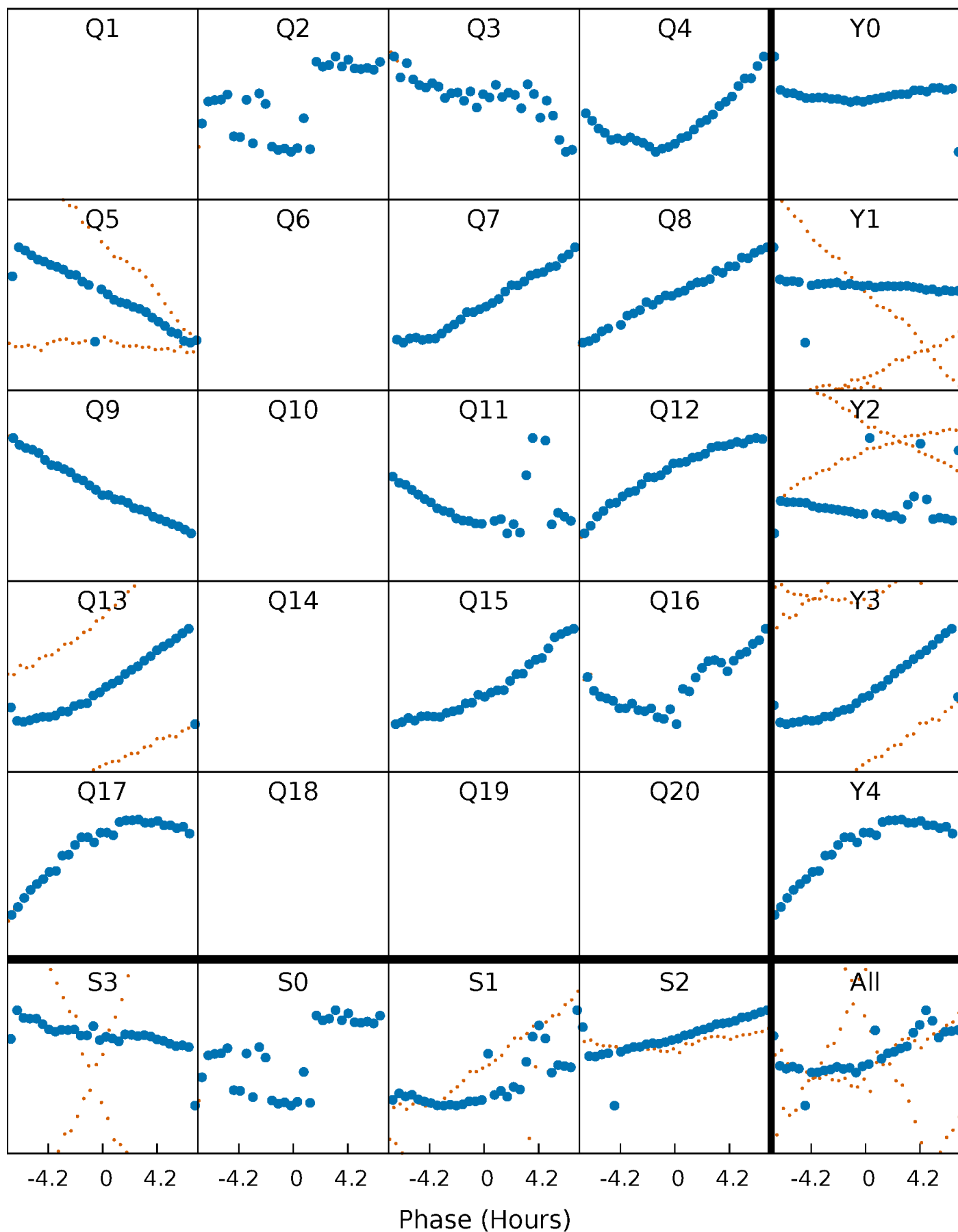


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



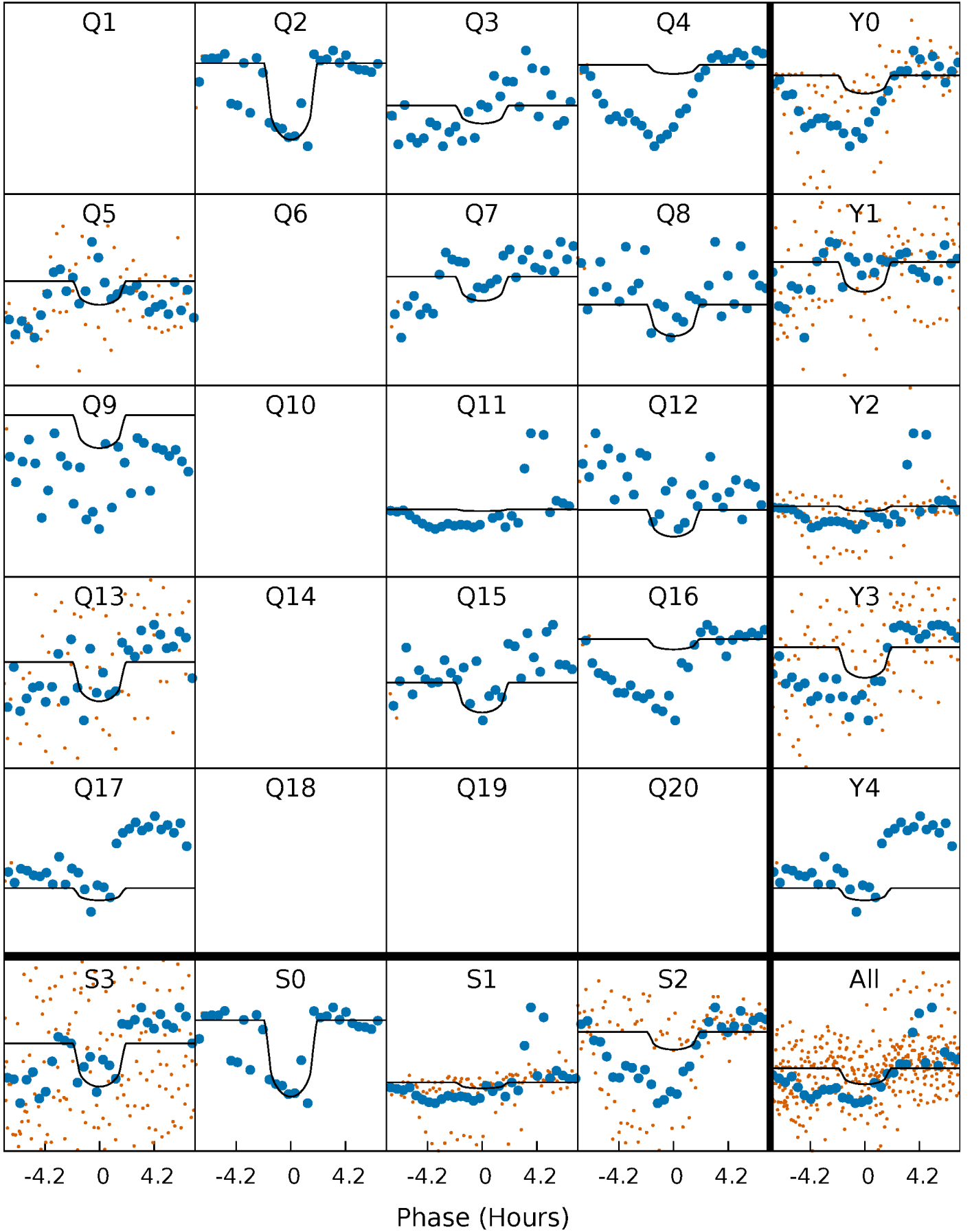
PDC Quarter-Phased Transit Curves

TCE 005801925-01 P= 81.033368 Days $T_0=210.815001$ (BKJD)



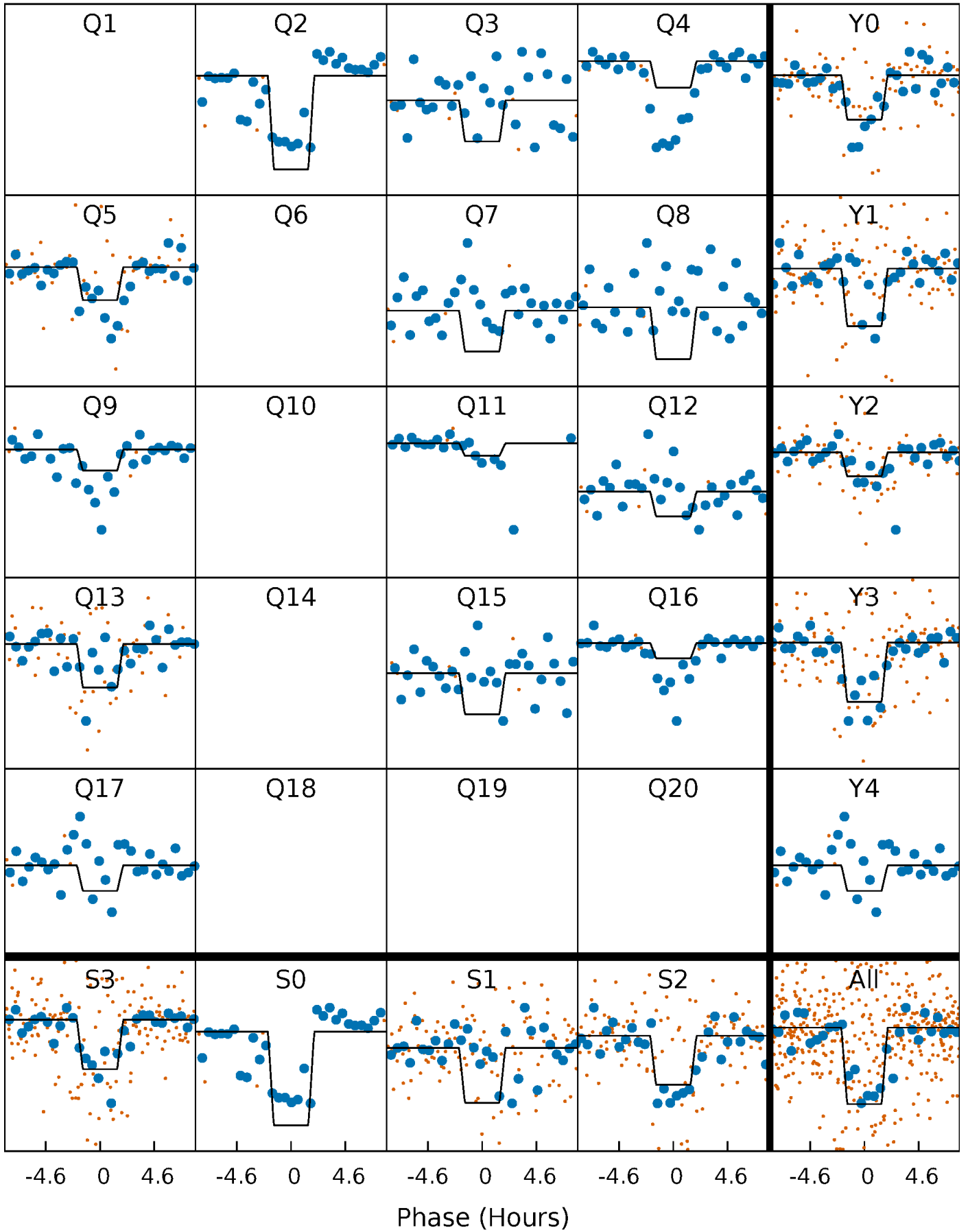
DV Quarter-Phased Transit Curves

TCE 005801925-01 P= 81.033368 Days $T_0=210.815001$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

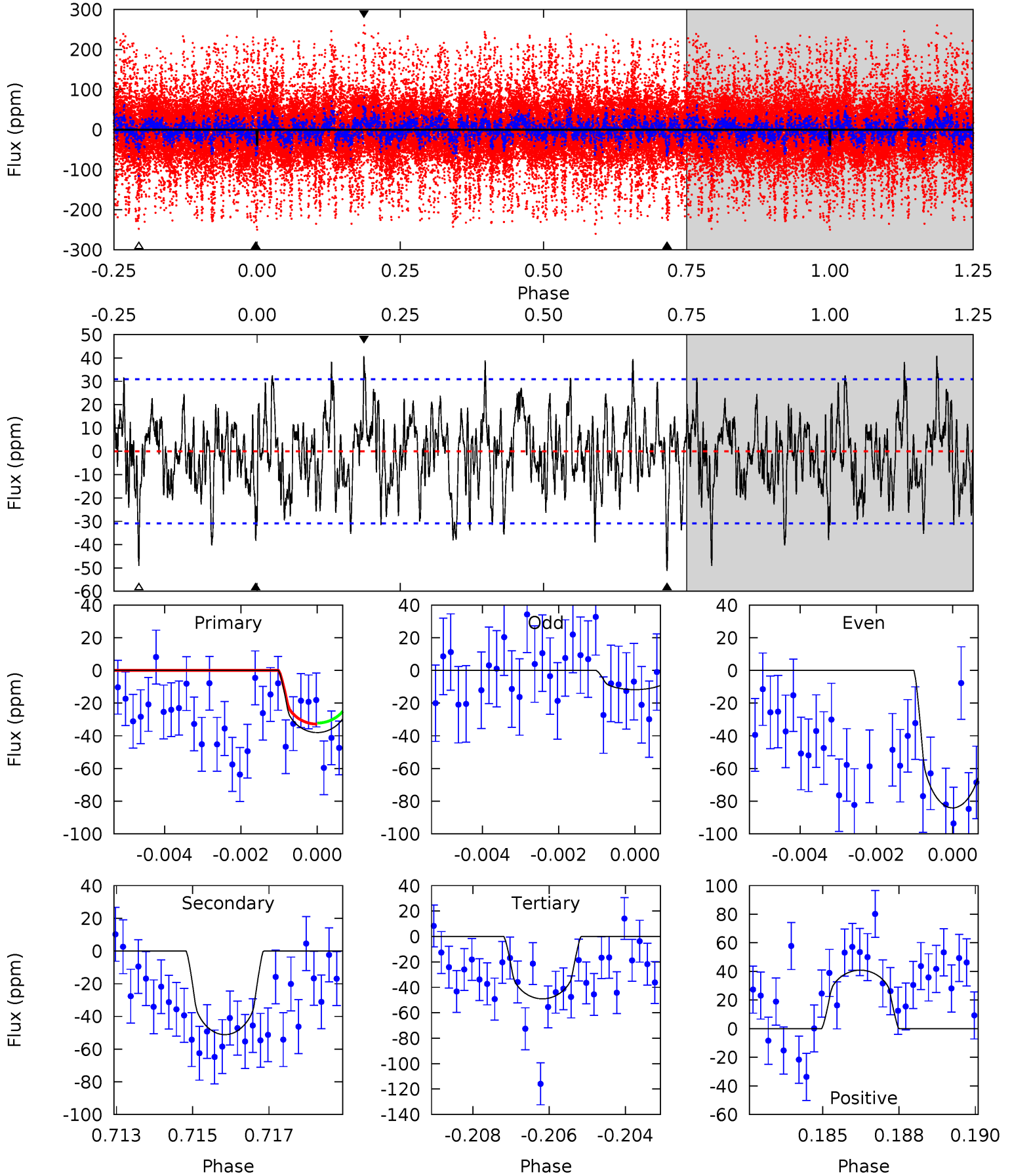
TCE 005801925-01 P= 81.033700 Days $T_0=210.815372$ (BKJD)



DV Model-Shift Uniqueness Test

005801925-01, P = 81.033368 Days, E = 129.781633 Days

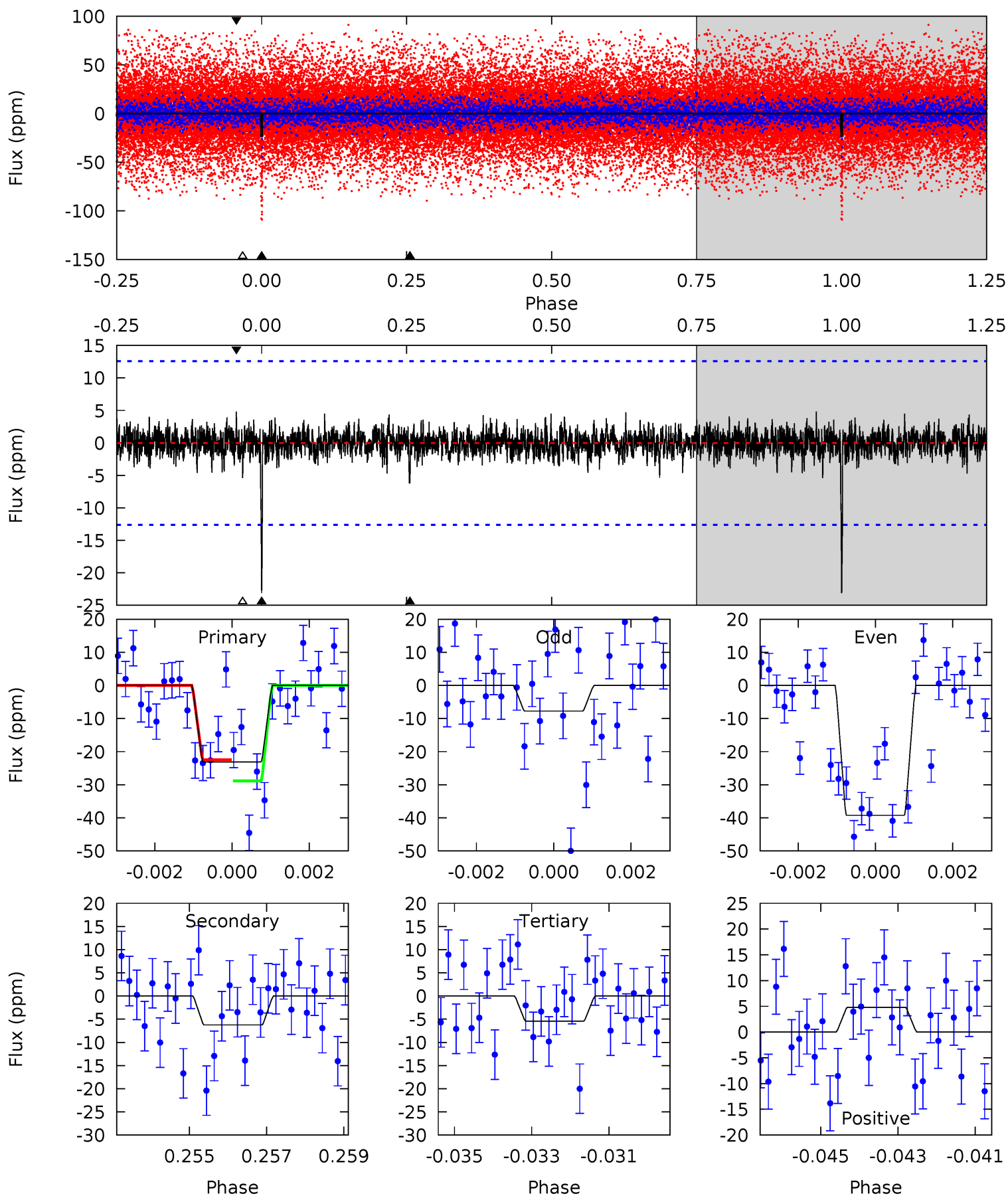
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.54	8.80	8.44	7.03	5.32	3.08	2.35	-1.89	-0.49	0.37	1.77	6.26	4.59	0.44	0.06



Alt Model-Shift Uniqueness Test

005801925-01, $P = 81.033700$ Days, $E = 129.781672$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.78	2.64	2.29	2.03	5.33	3.10	0.59	7.49	7.74	0.35	0.61	6.76	37.2	0.17	1.34



Stellar Parameters For KIC 005801925

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3974^{+89}_{-109}	$1.222^{+0.030}_{-0.030}$	$-0.060^{+0.200}_{-0.250}$	$54.746^{+1.971}_{-11.168}$	$1.823^{+0.036}_{-0.693}$	$0.000^{+0.000}_{-0.000}$
	+2%/-3%	+2%/-2%	+333%/-417%	+4%/-20%	+2%/-38%	+29%/-8%
Source	PHO54	AST54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 005801925-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-51 ± 6	$41.02^{+18.00}_{-17.21}$	2710^{+64}_{-81}	3959^{+936}_{-544}	$3.245^{+6.642}_{-1.658}$
Alt.	-6 ± 2	$41.47^{+17.20}_{-17.47}$	2710^{+73}_{-86}	2361^{+856}_{-4873}	$0.380^{+0.738}_{-0.212}$

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 $A_{obs} \gg 1.0$

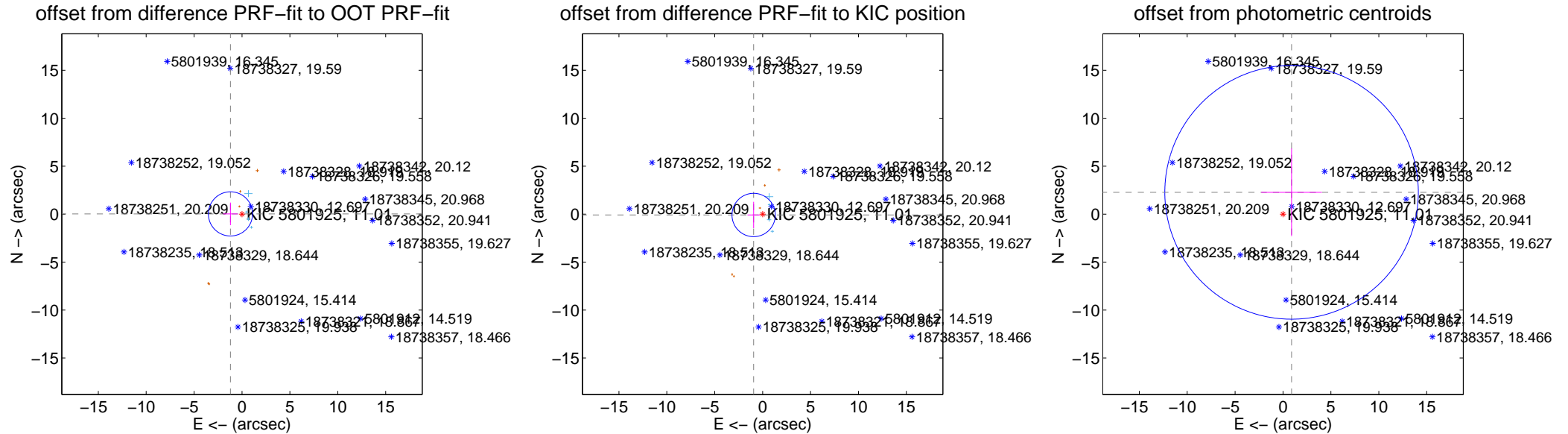
DV Centroid Data

Supplemental centroid analysis for 005801925-01. **Kepler magnitude: 11.01.** Transit SNR 8.57

There are 4 quarters with good PRF difference image offsets

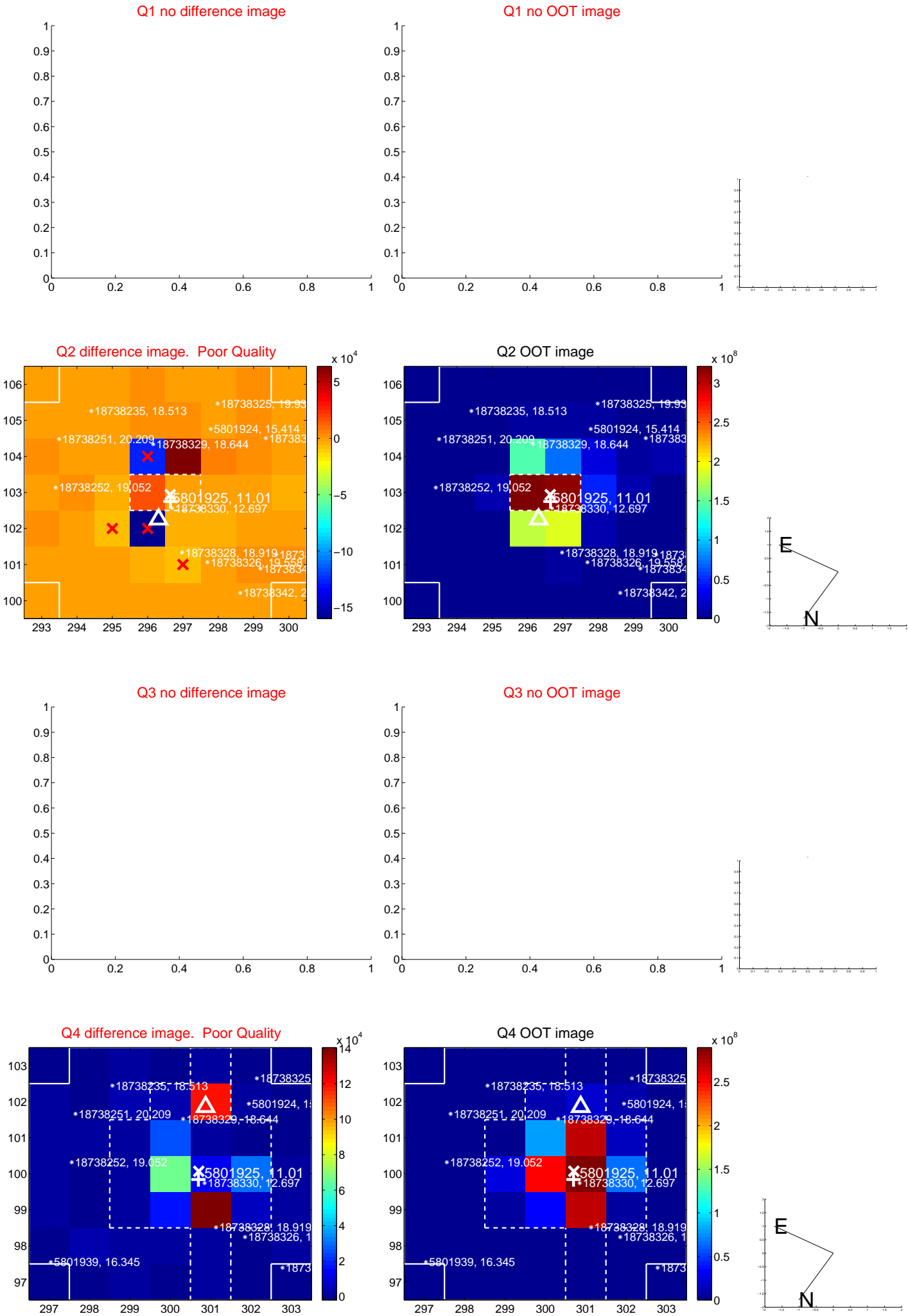
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.205 ± 0.768	1.57	1.205 ± 0.768	0.026 ± 1.184
PRF-fit source offset from KIC position	0.942 ± 0.754	1.25	0.938 ± 0.639	-0.089 ± 1.373
photometric centroid source offset	2.45 ± 4.41	0.55	-0.89 ± 3.16	2.28 ± 4.57

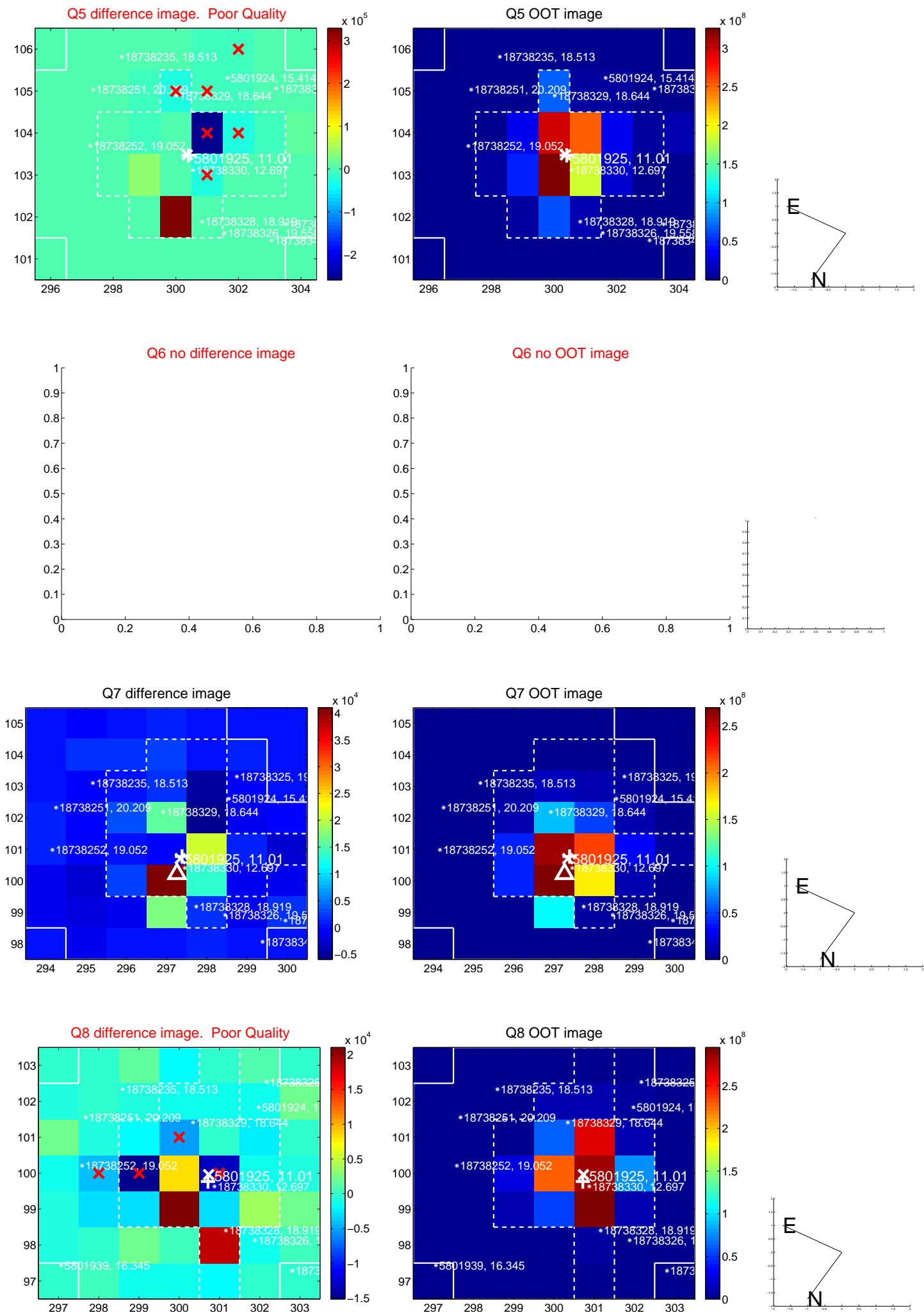


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

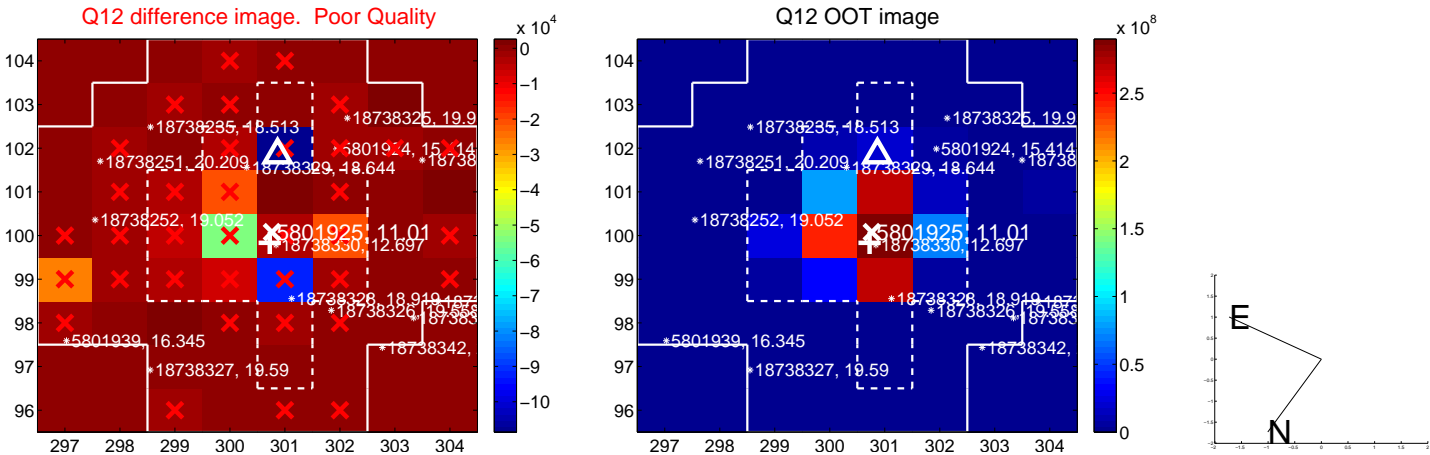
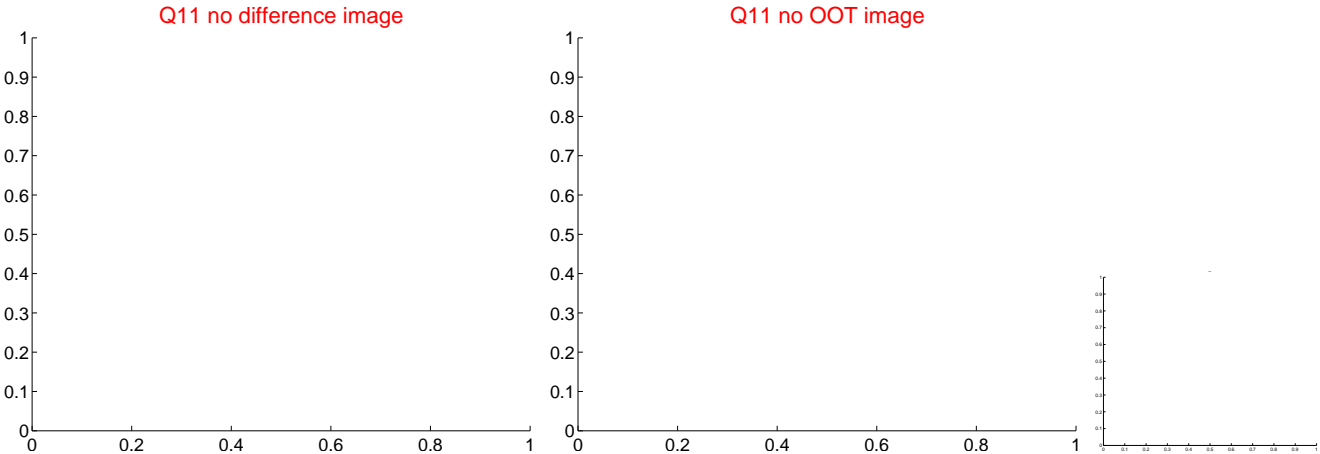
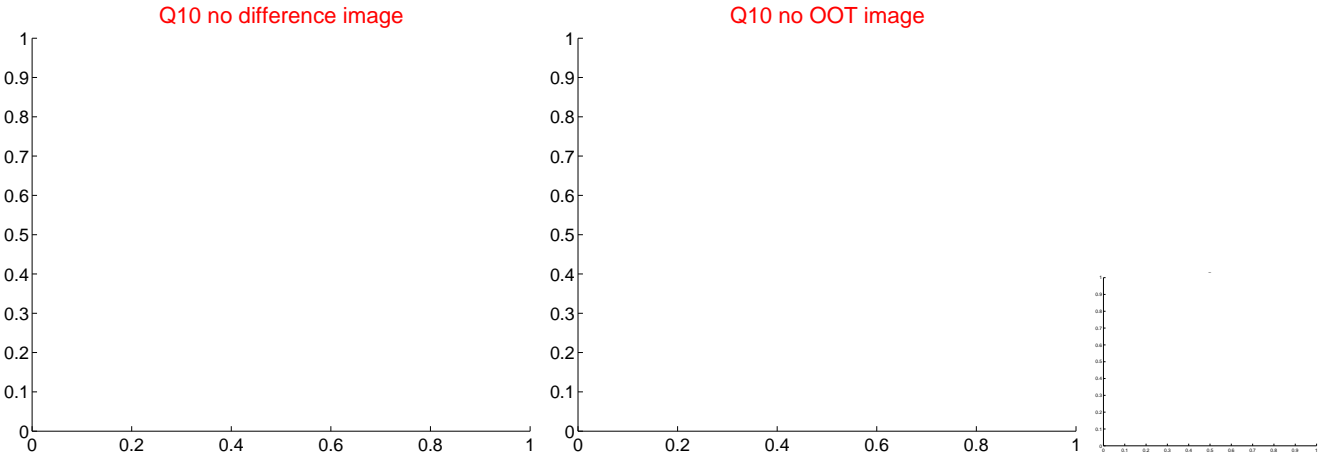
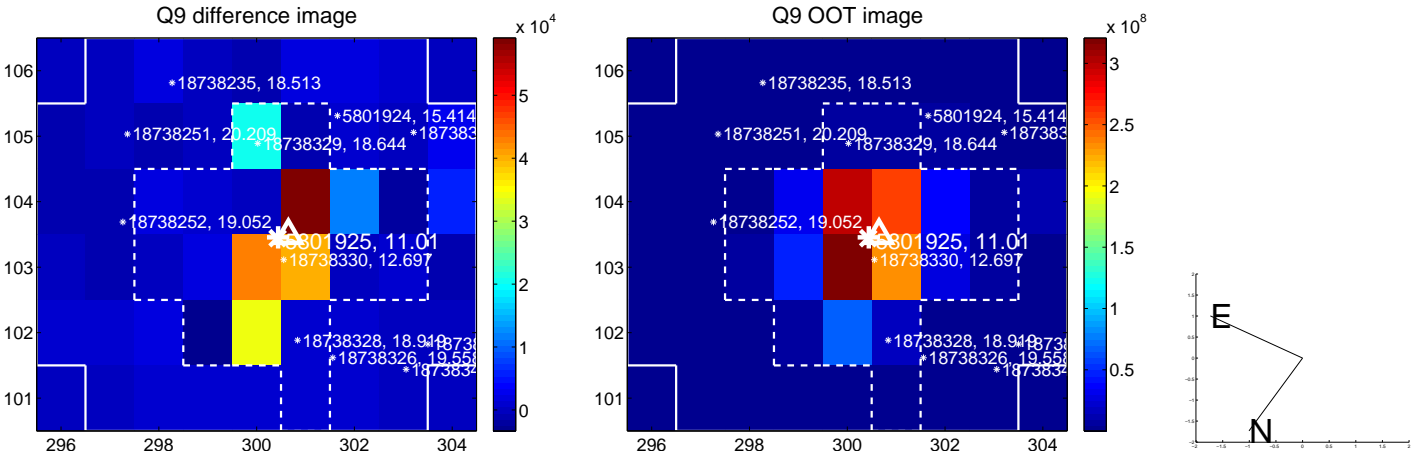
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



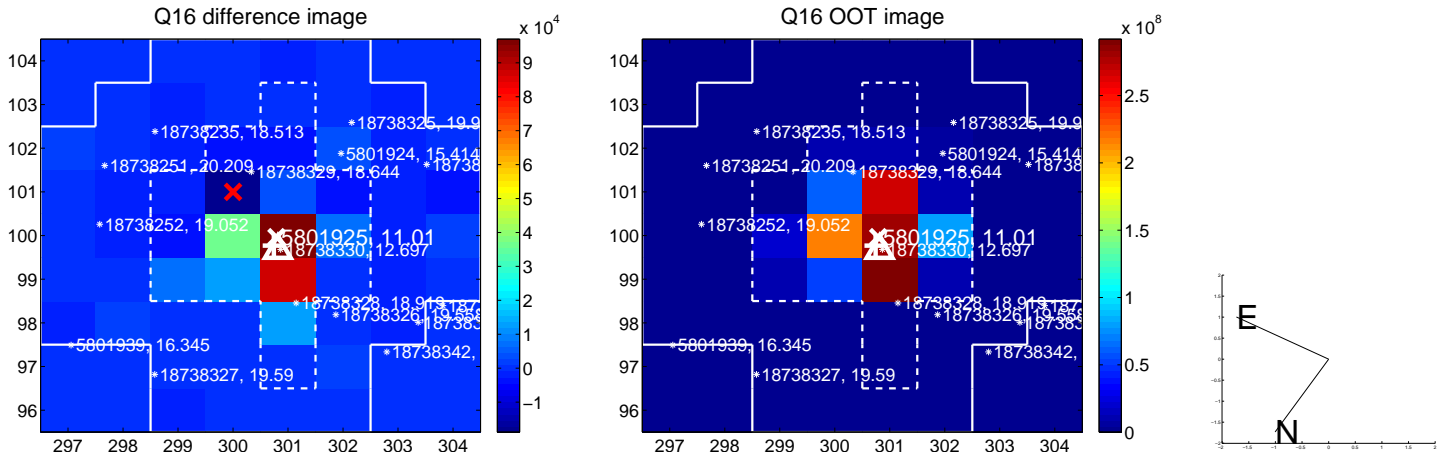
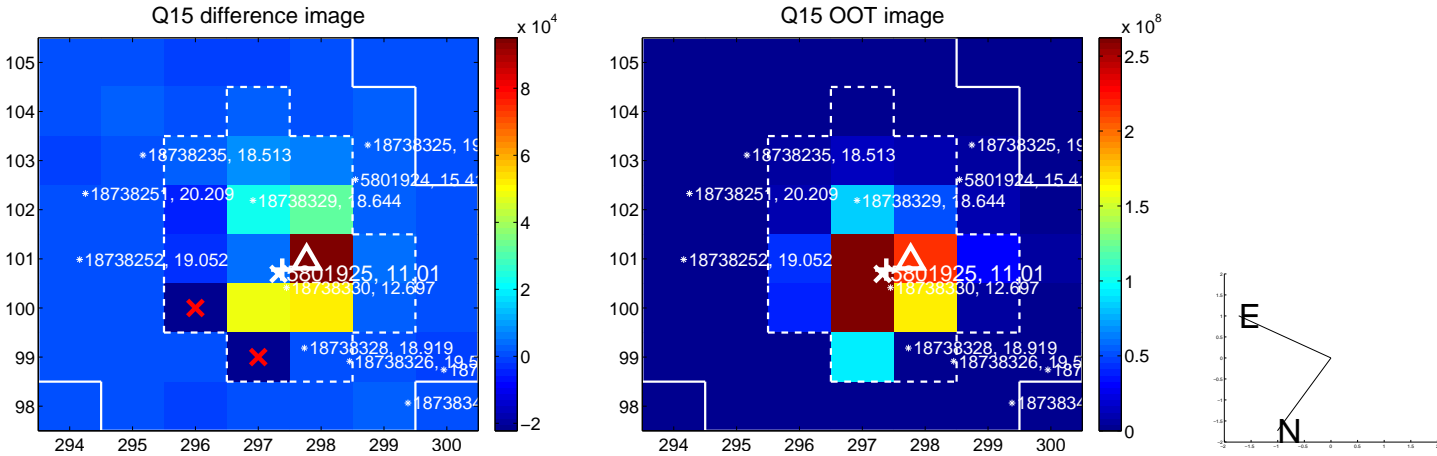
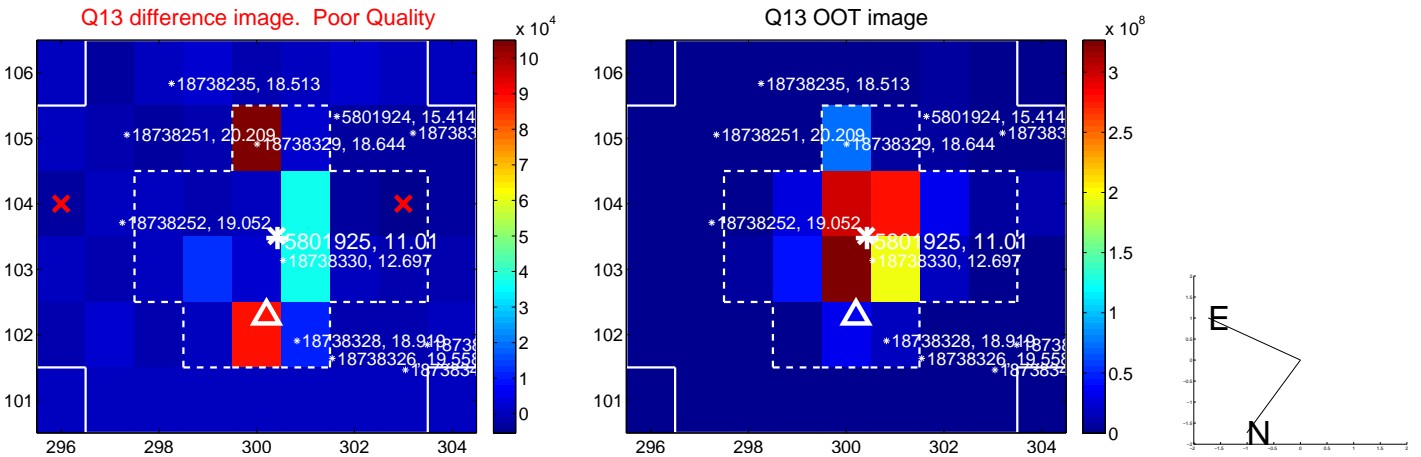
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



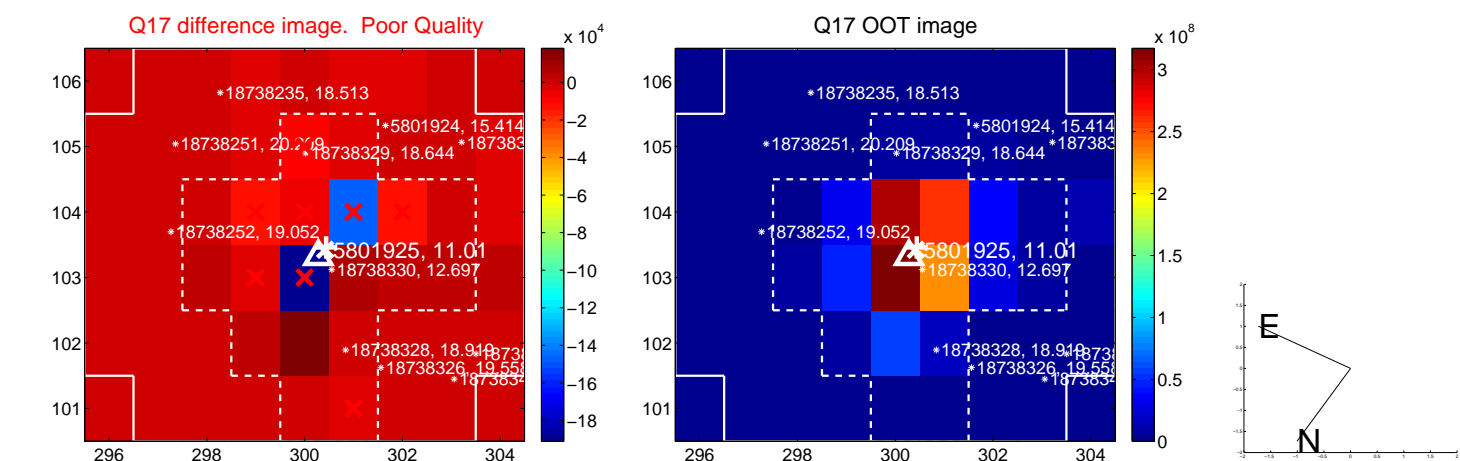
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



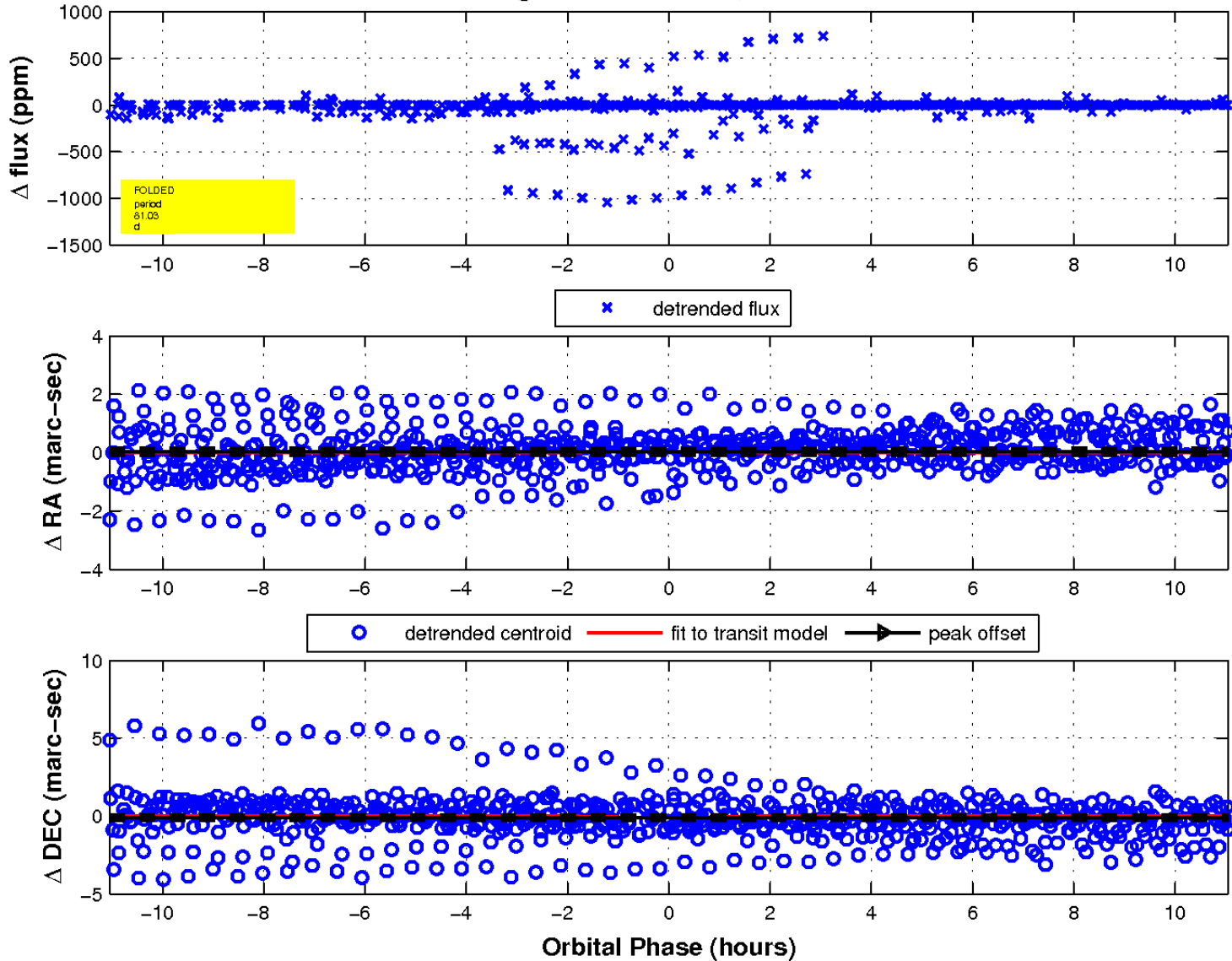
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



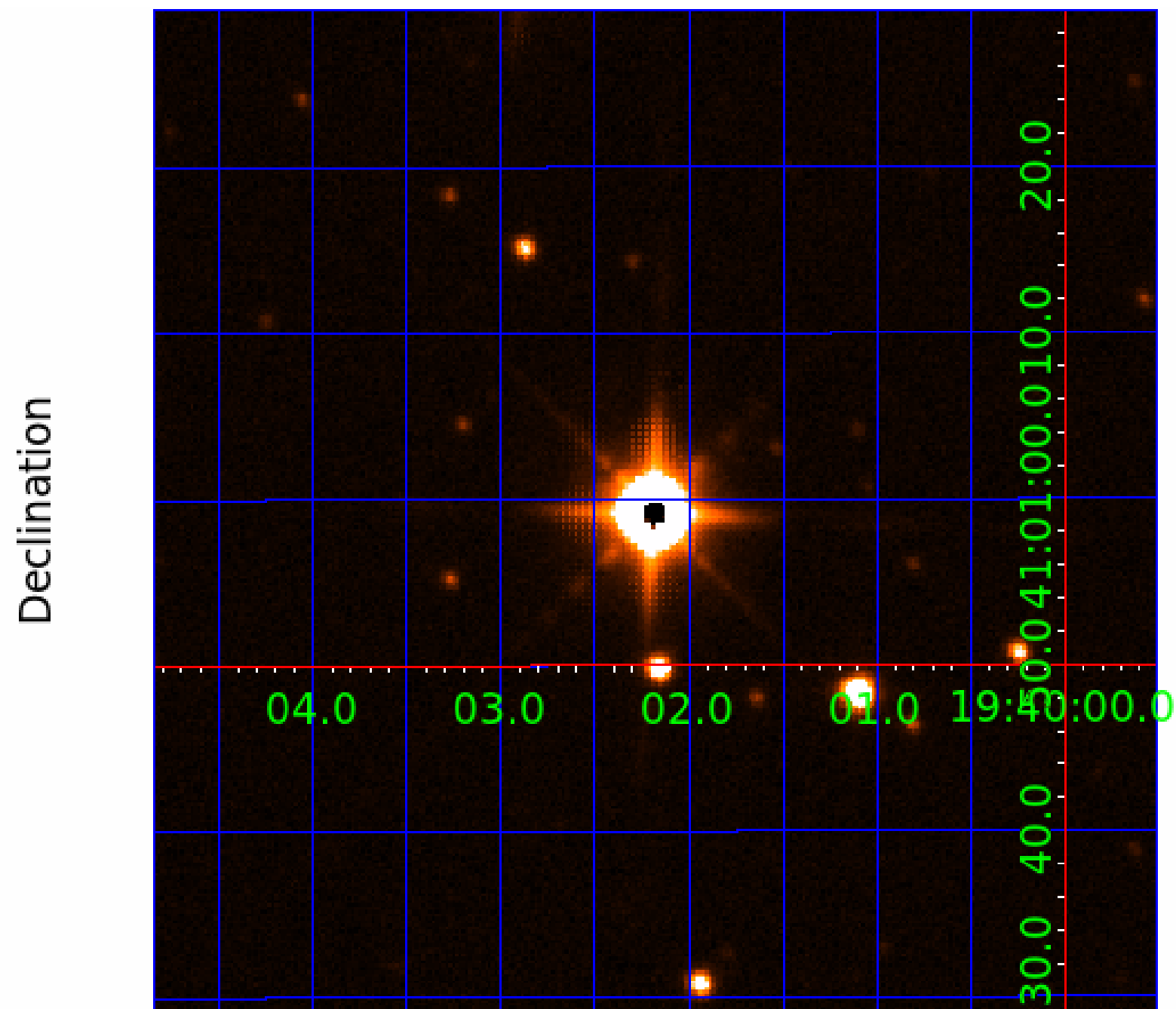
white \times : KIC target position; $+$: OOT centroid; Δ : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 2



UKIRT Image



KIC 005801925

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})
005801925-01	OBS	No	81.033368	210.815001	36.5	3.683	8.9	8.6	54.75	3974	40.93	3340.58
005801925-02	OBS	No	40.706121	157.487149	32.5	1.852	7.8	8.7	54.75	3974	39.50	8365.55

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005801925-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—CENT_SATURATED
005801925-02	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_SATURATED

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

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

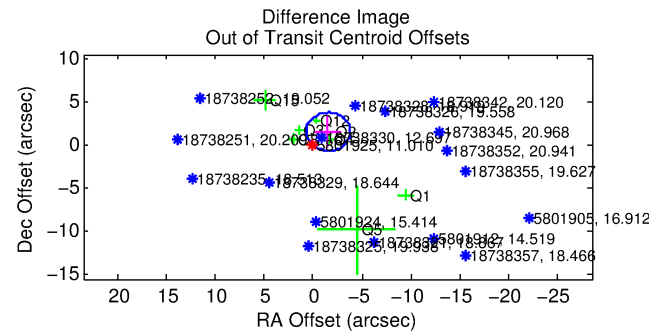
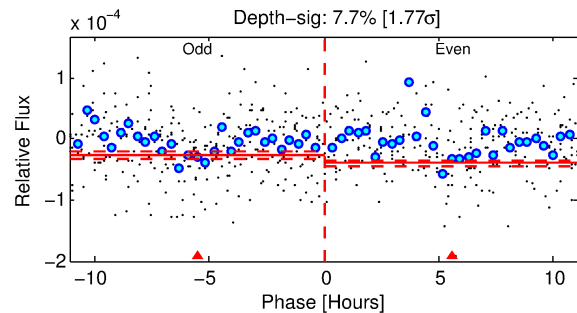
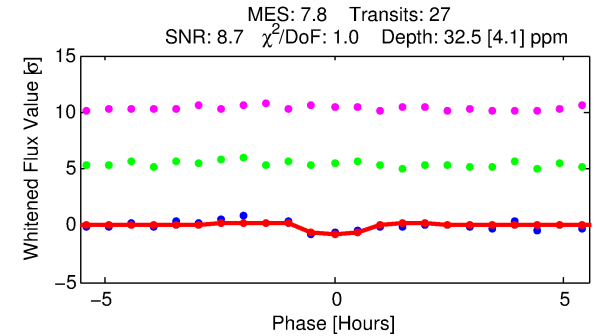
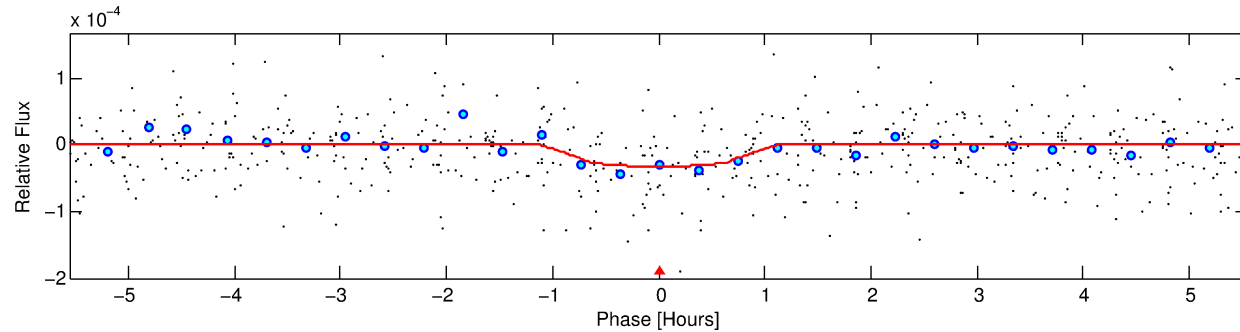
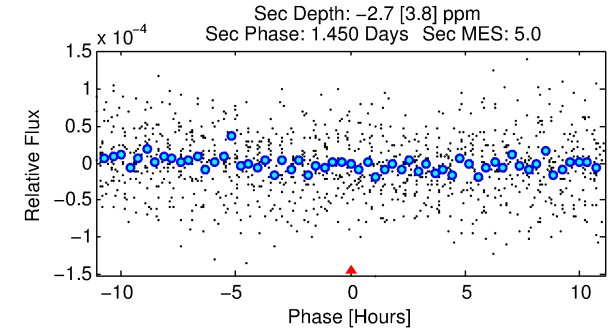
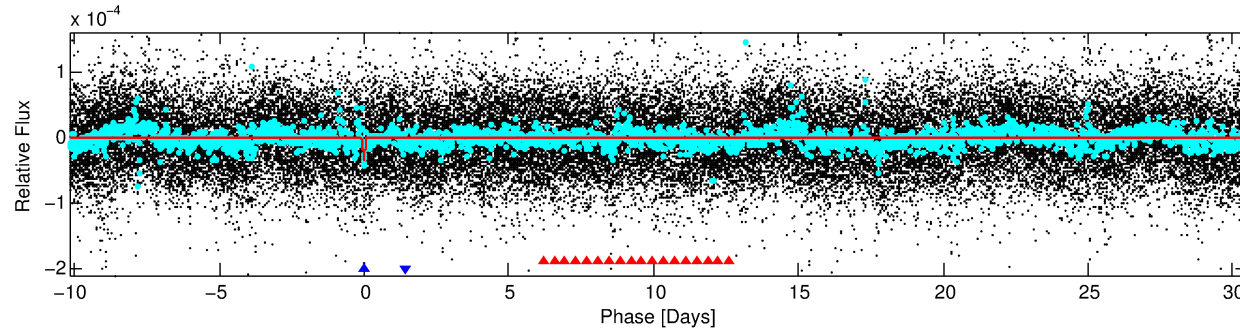
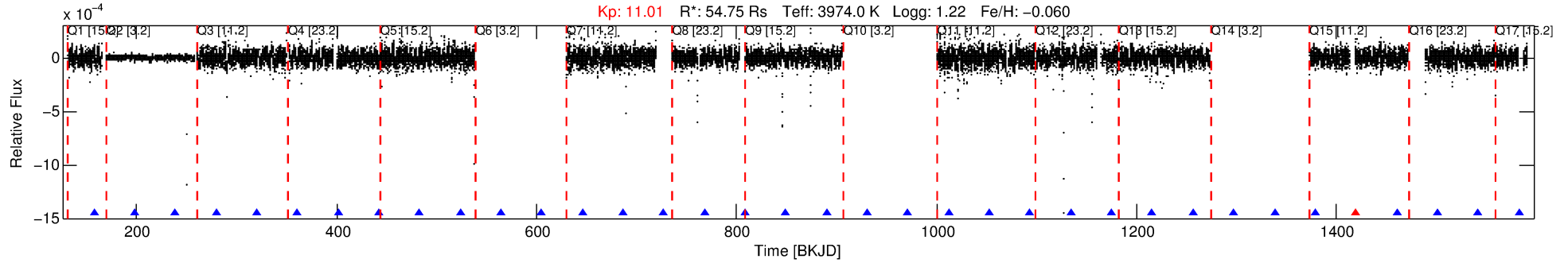
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005801925-02

No Significant Match Found

DV One-Page Summary

KIC: 5801925 Candidate: 2 of 2 Period: 40.706 d



DV Fit Results:

Period = 40.70612 [0.00026] d
Epoch = 157.4871 [0.0033] BKJD
Rp/R* = 0.0066 [0.0052]
a/R* = 75.74 [194.85]
b = 0.90 [0.56]
Seff = 8365.55 [1511.67]
Teq = 2439 [110] K
Rp = 39.50 [31.95] Re
a = 0.2829 [0.0390] AU
Ag = N/A
Teffp = N/A

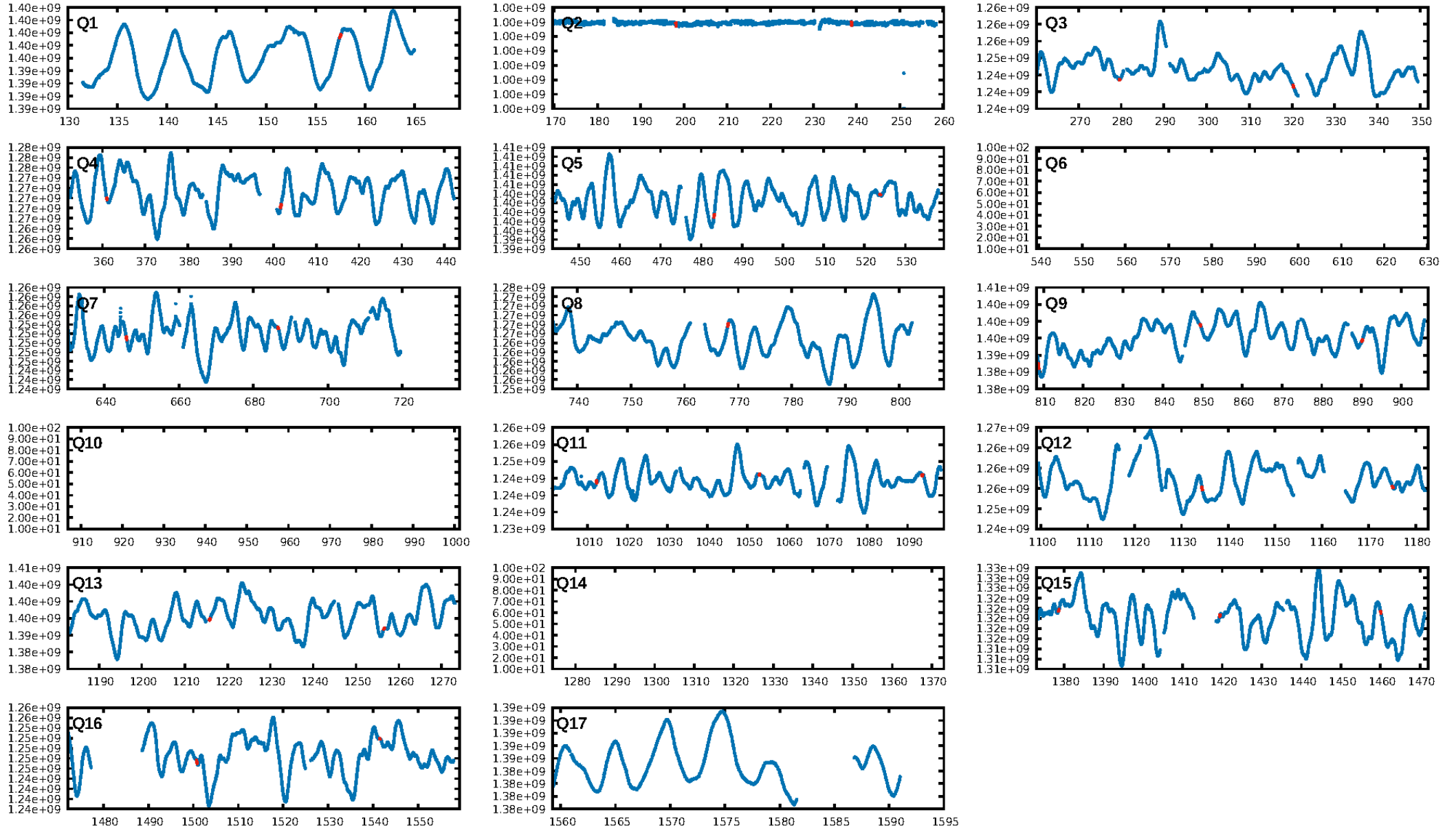
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [234.79σ]
ModelChiSquare2-sig: 88.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 9.53e-11
RollingBand-fgt: 0.96 [25/26]
GhostDiagnostic-chr: -2.087
Centroid-sig: 47.8%
Centroid-so: 2.384 arcsec [0.74σ]
OotOffset-rm: 2.186 arcsec [2.94σ]
OotOffset-st: 1/2/3/2 [8]
KicOffset-rm: 2.928 arcsec [3.50σ]
KicOffset-st: 1/2/3/2 [8]
DiffImageQuality-fgm: 0.25 [2/8]
DiffImageOverlap-fno: 1.00 [13/13]

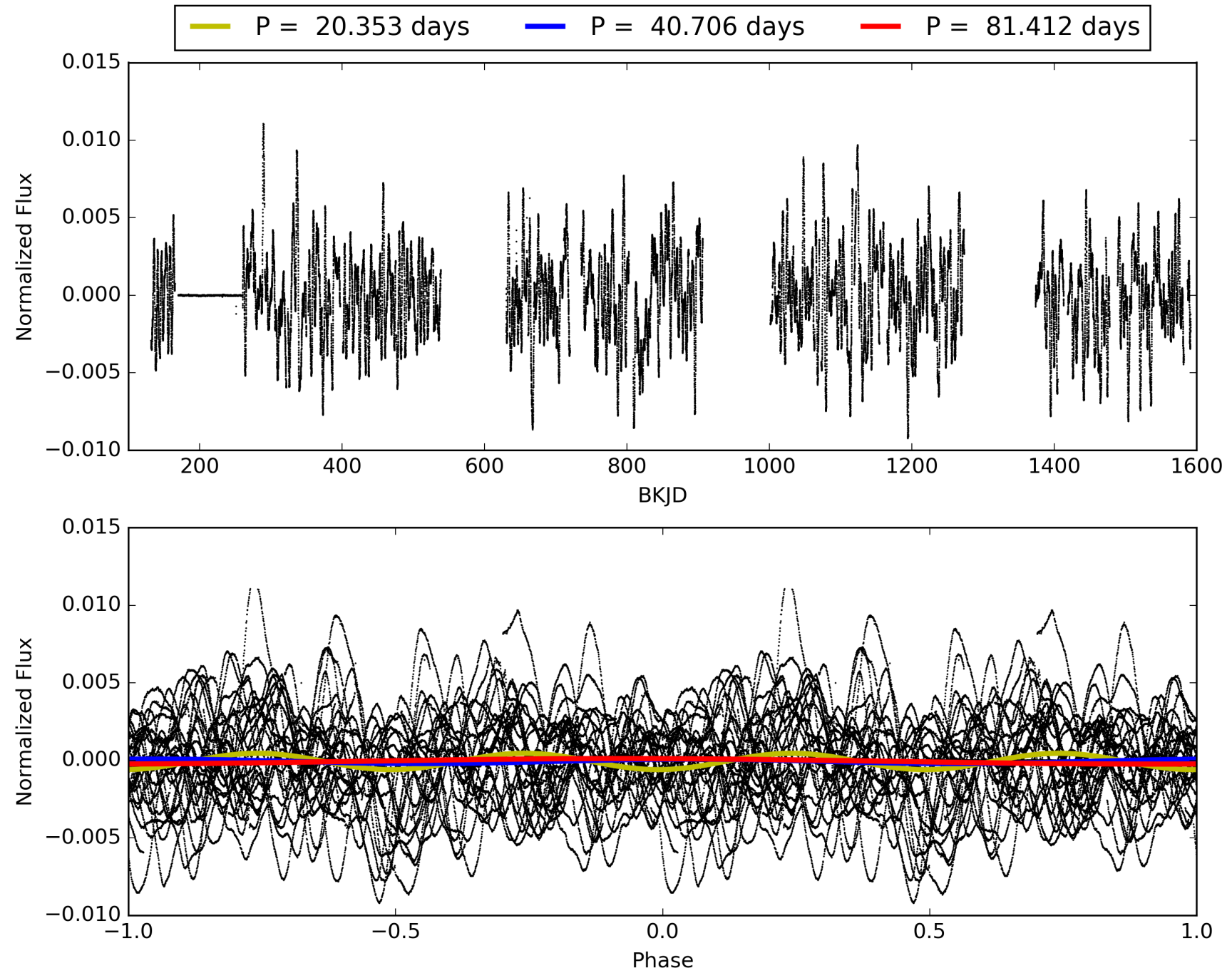
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 005801925-02, PDC Light Curves

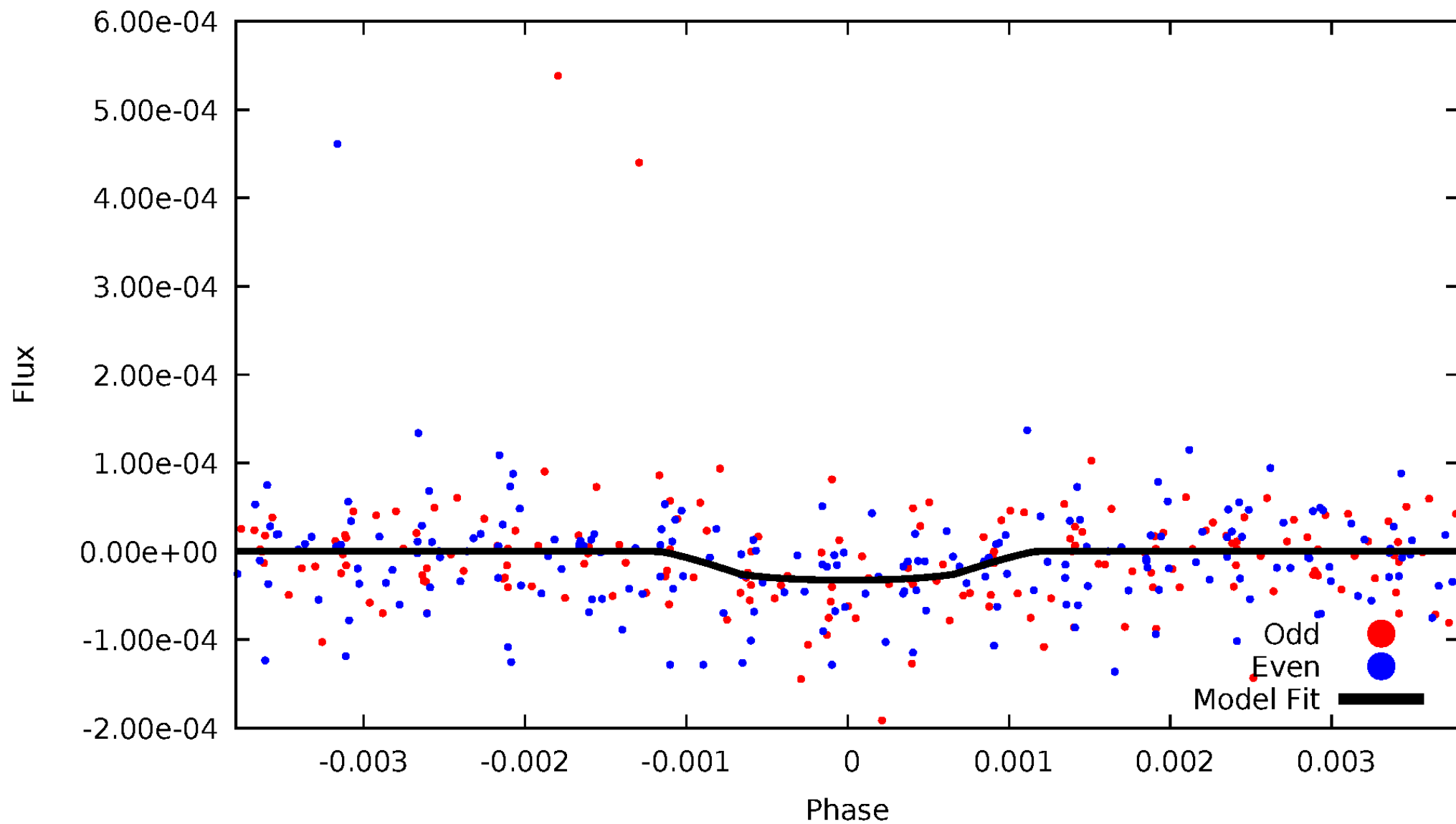


TCE 005801925-02



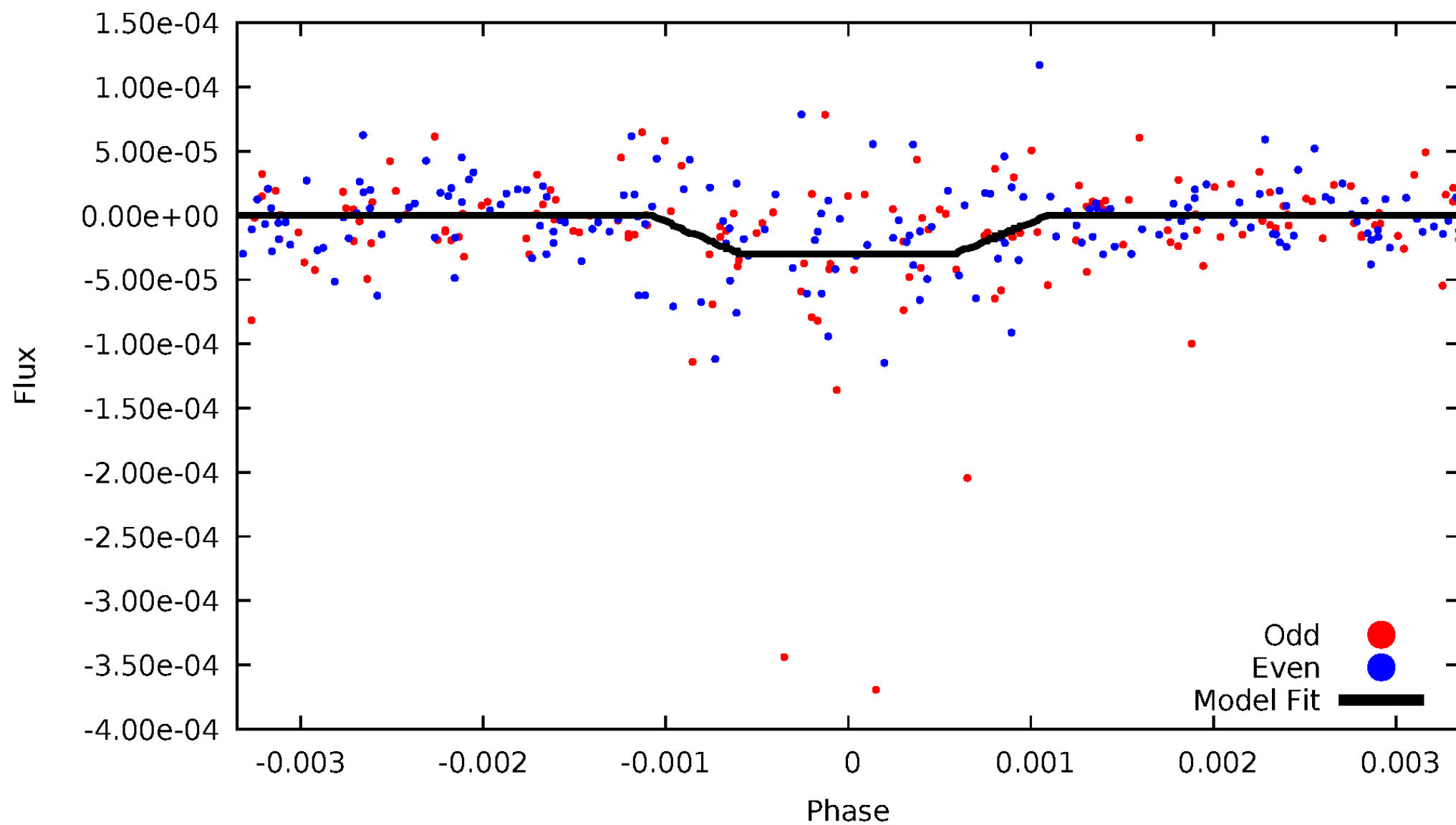
DV Odd/Even

TCE 005801925-02



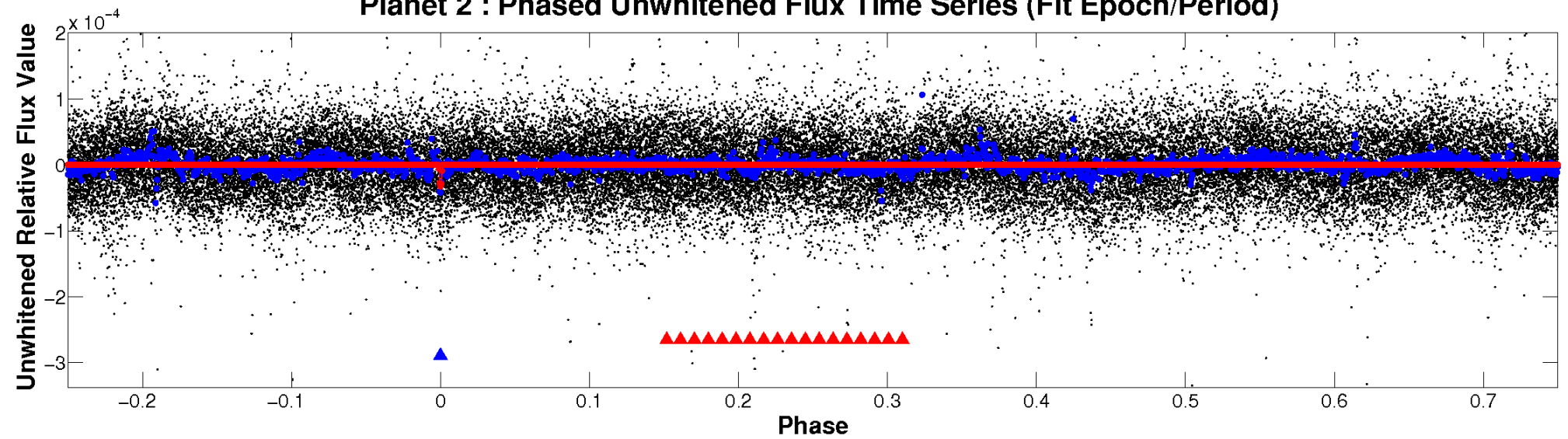
ALT Odd/Even

TCE 005801925-02

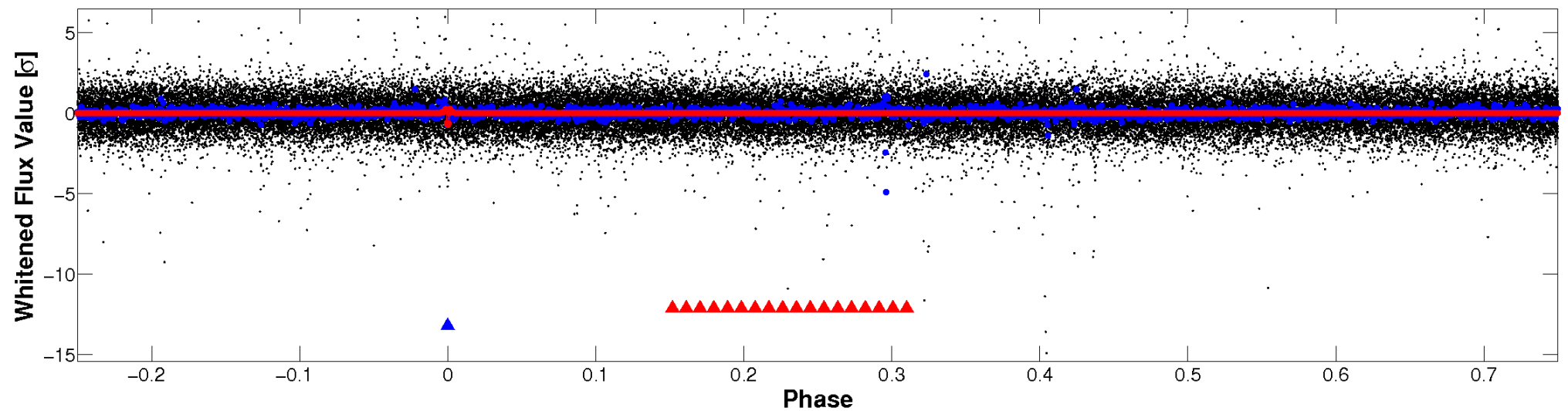


Non-Whitened Vs. Whitened Light Curve

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

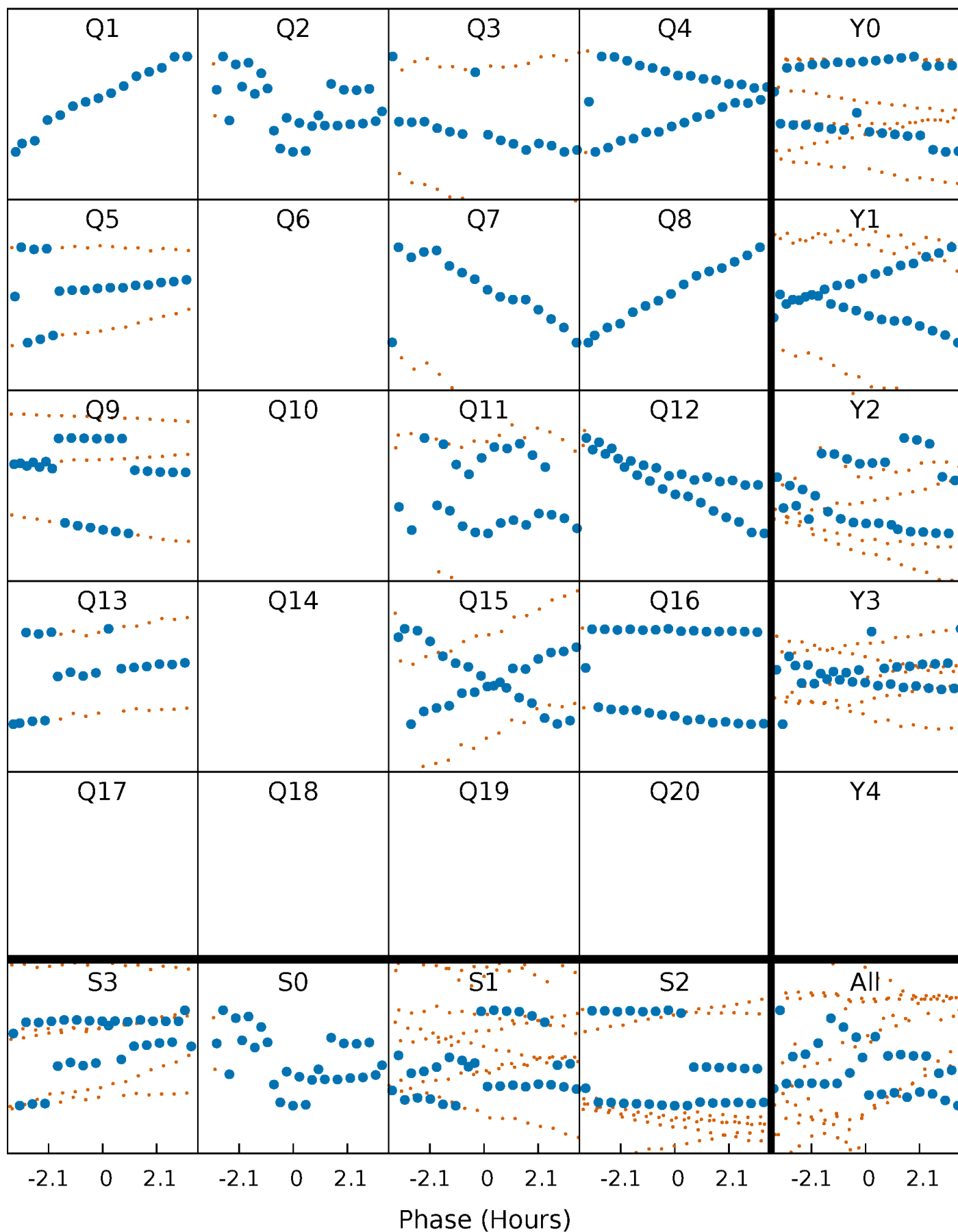


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



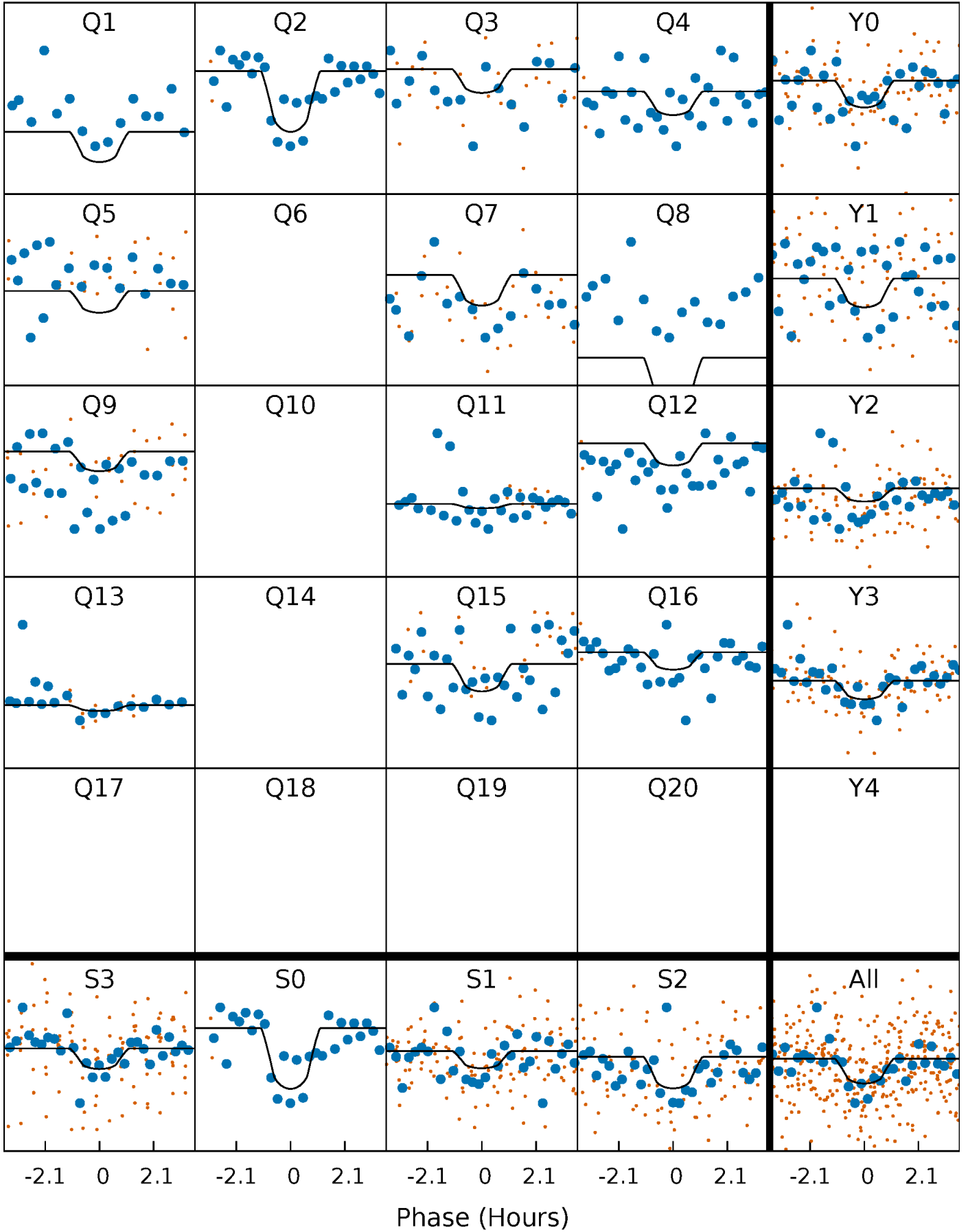
PDC Quarter-Phased Transit Curves

TCE 005801925-02 P= 40.706121 Days $T_0=157.487149$ (BKJD)



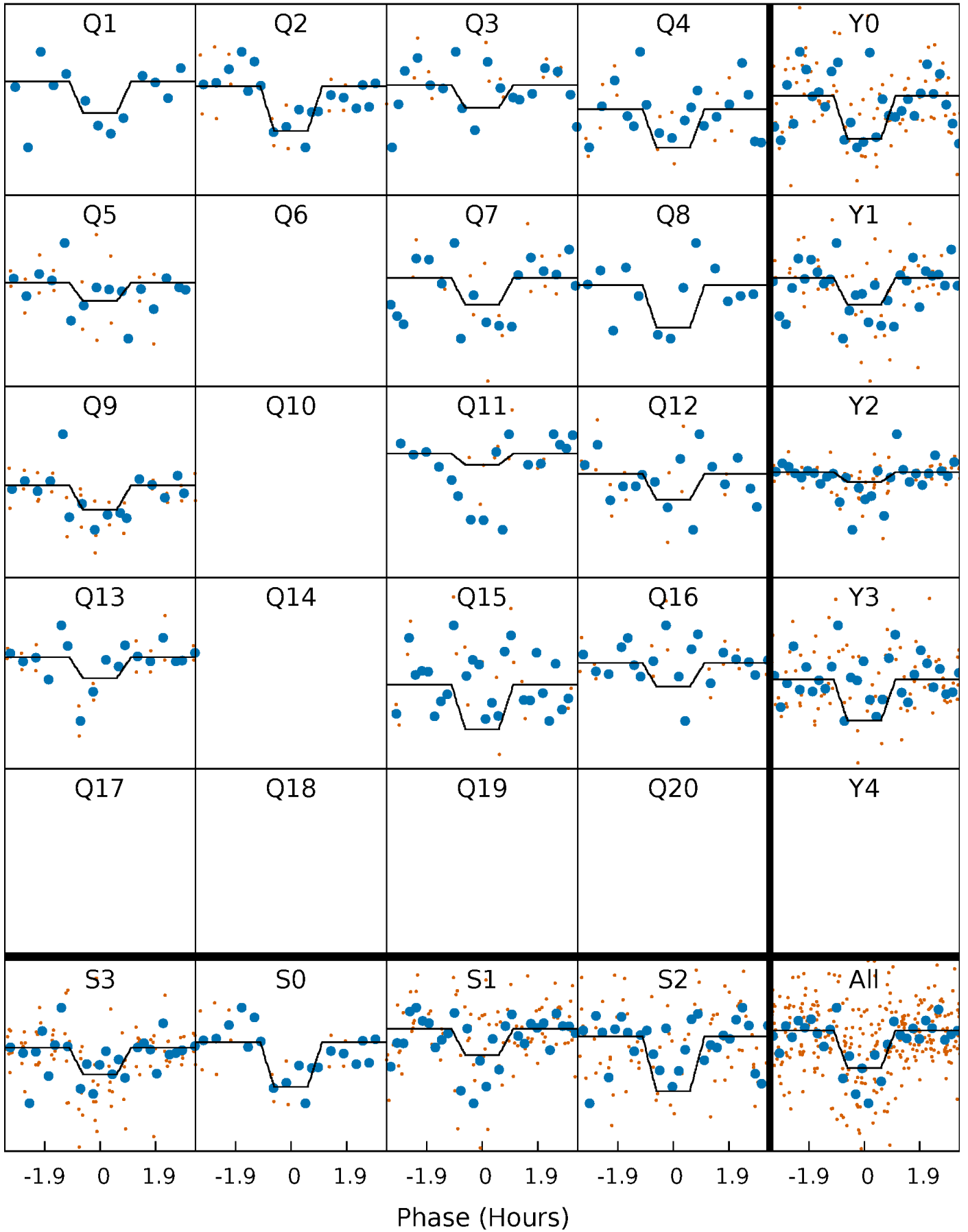
DV Quarter-Phased Transit Curves

TCE 005801925-02 P= 40.706121 Days $T_0=157.487149$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

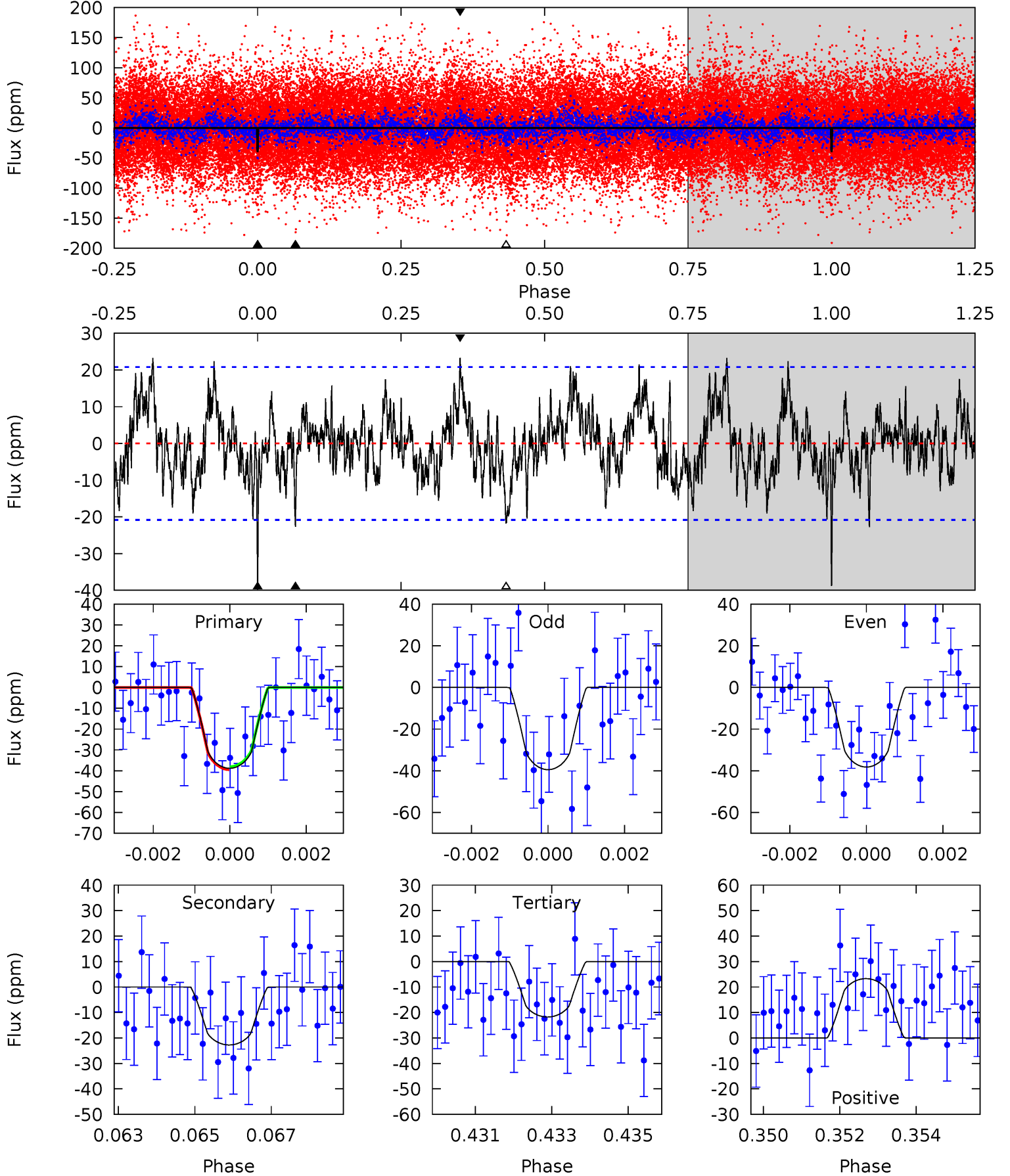
TCE 005801925-02 P= 40.706234 Days $T_0=157.487320$ (BKJD)



DV Model-Shift Uniqueness Test

005801925-02, P = 40.706121 Days, E = 116.781028 Days

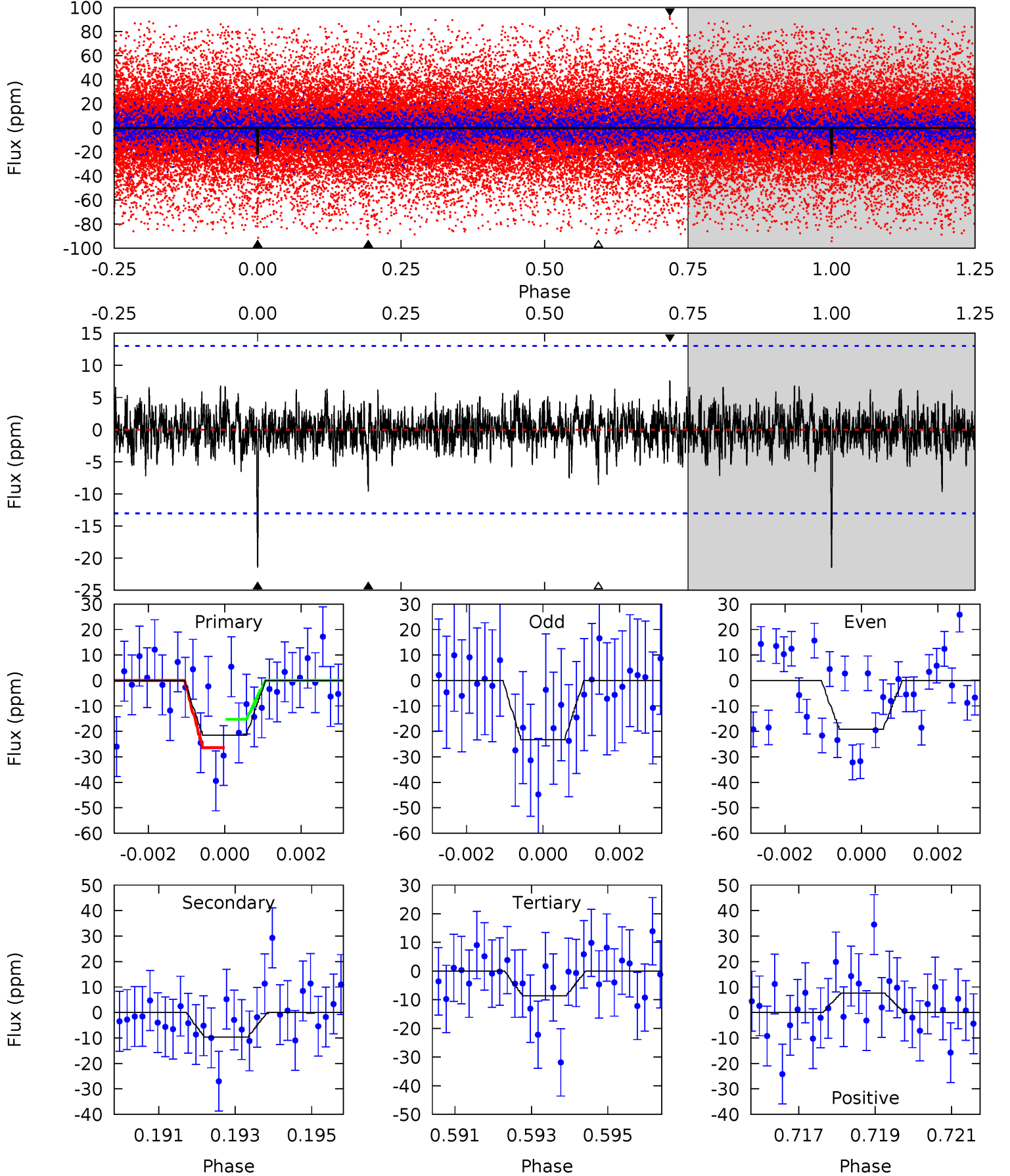
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.88	5.79	5.54	5.93	5.30	3.05	2.00	4.34	3.95	0.25	-0.14	0.16	0.91	0.38	0.18



Alt Model-Shift Uniqueness Test

005801925-02, P = 40.706234 Days, E = 116.781086 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.79	3.92	3.51	3.12	5.32	3.08	0.88	5.28	5.66	0.42	0.80	0.82	1.62	0.26	2.27



Stellar Parameters For KIC 005801925

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3974^{+89}_{-109}	$1.222^{+0.030}_{-0.030}$	$-0.060^{+0.200}_{-0.250}$	$54.746^{+1.971}_{-11.168}$	$1.823^{+0.036}_{-0.693}$	$0.000^{+0.000}_{-0.000}$
	+2%/-3%	+2%/-2%	+333%/-417%	+4%/-20%	+2%/-38%	+29%/-8%
Source	PHO54	AST54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 005801925-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-23 ± 4	$44.61^{+28.52}_{-26.11}$	3410^{+80}_{-107}	2961^{+1546}_{-5730}	$0.487^{+2.271}_{-0.308}$
Alt.	-10 ± 2	$39.82^{+26.80}_{-25.23}$	3406^{+94}_{-104}	-2435^{+6512}_{-563}	$0.257^{+1.587}_{-0.168}$

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

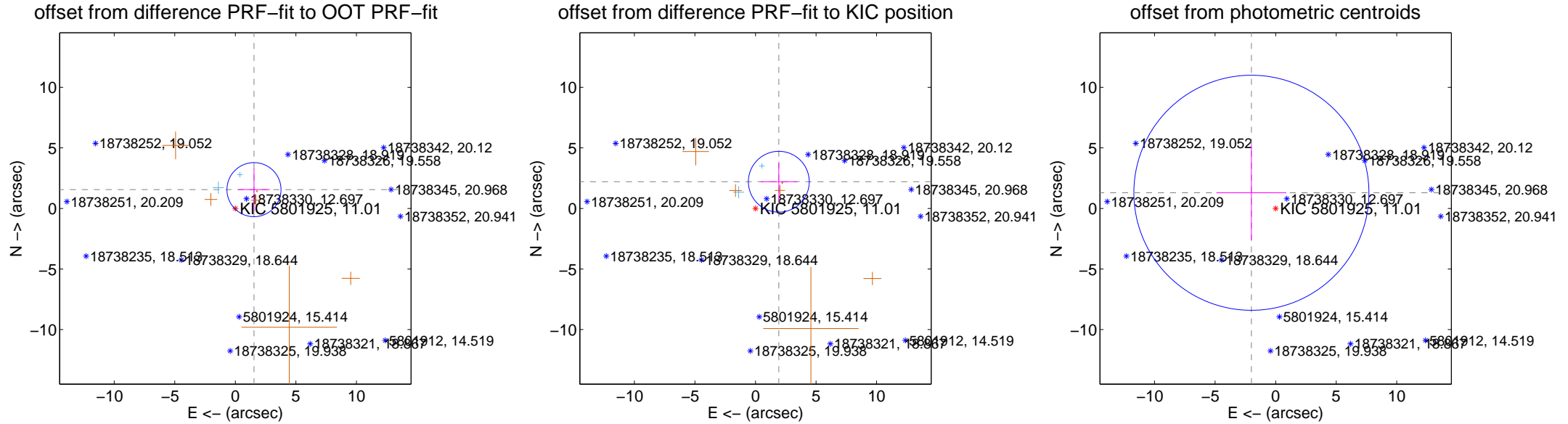
DV Centroid Data

Supplemental centroid analysis for 005801925-02. **Kepler magnitude: 11.01.** Transit SNR 8.67

There are 2 quarters with good PRF difference image offsets

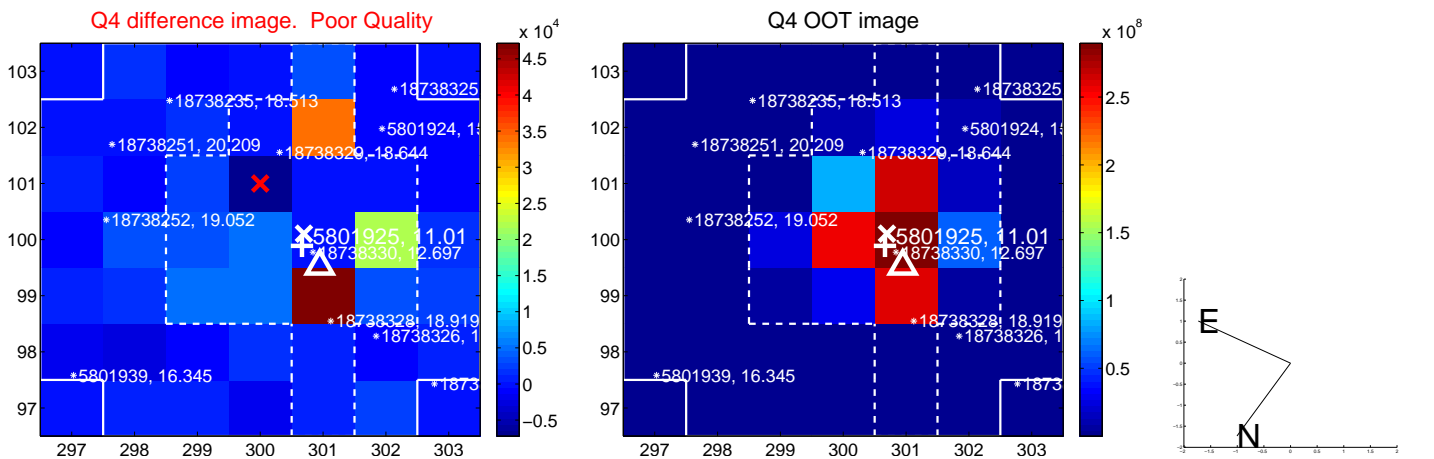
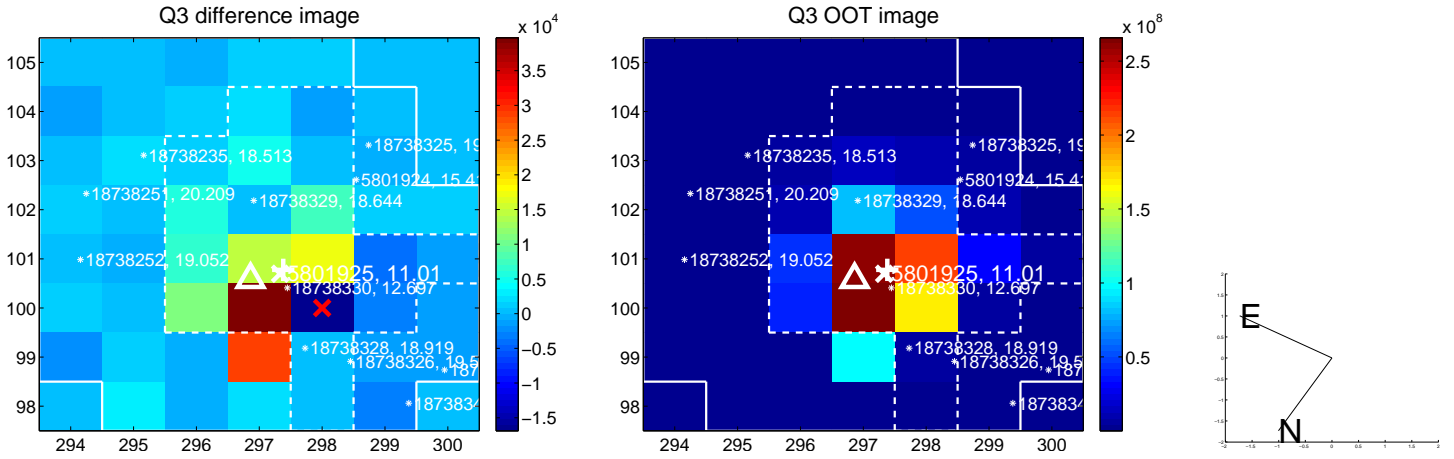
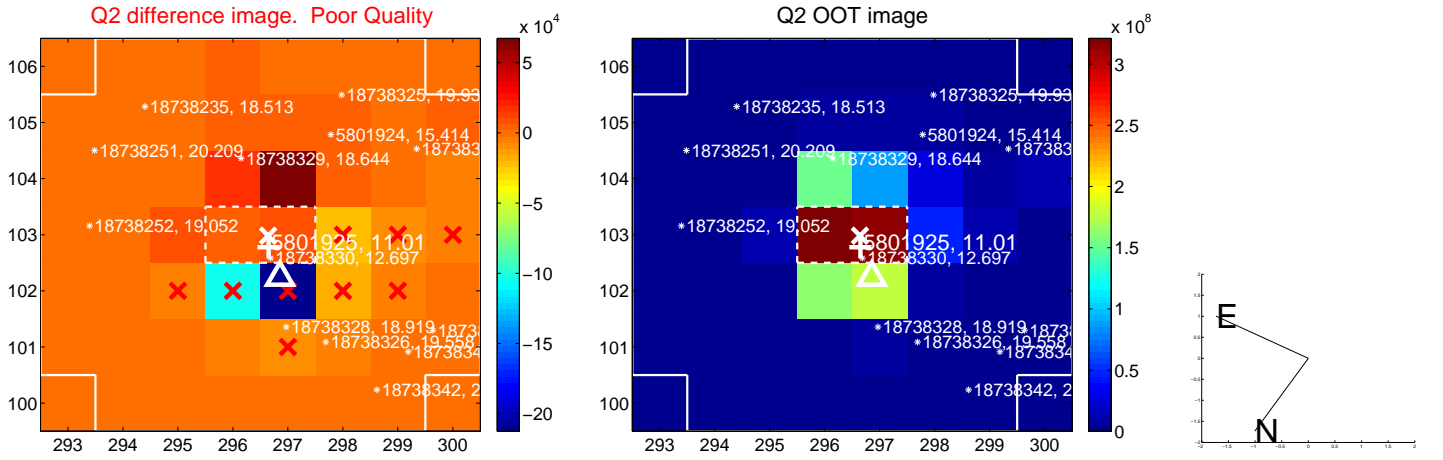
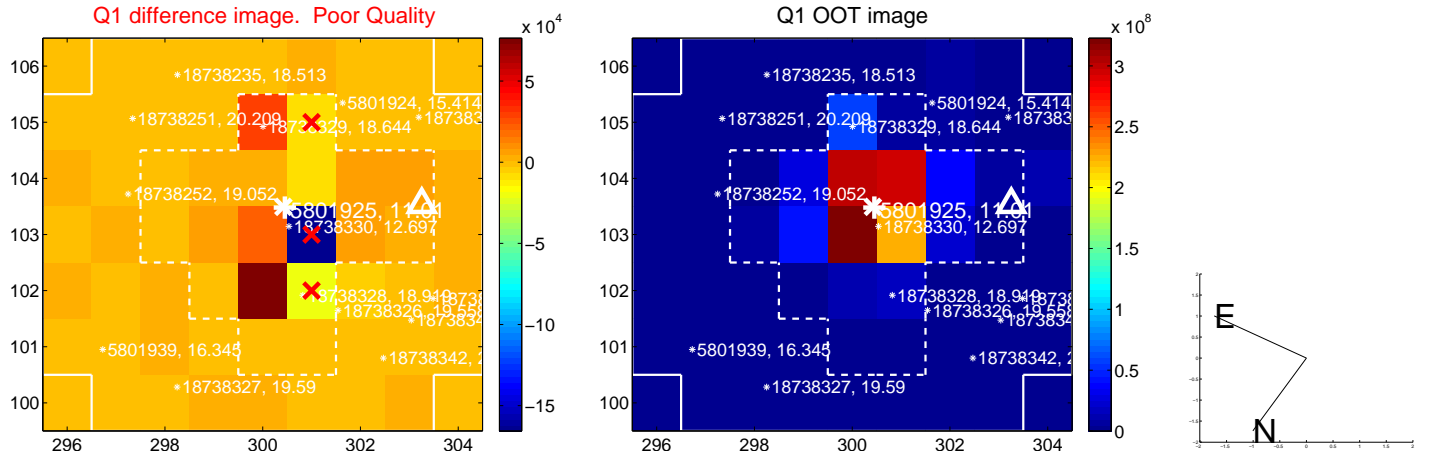
The direct PRF centroid is offset from the target star catalog position by about 0.51 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.186 ± 0.744	2.94	-1.539 ± 1.311	1.552 ± 1.746
PRF-fit source offset from KIC position	2.928 ± 0.837	3.50	-1.926 ± 1.498	2.205 ± 1.624
photometric centroid source offset	2.38 ± 3.23	0.74	2.00 ± 2.89	1.29 ± 3.95

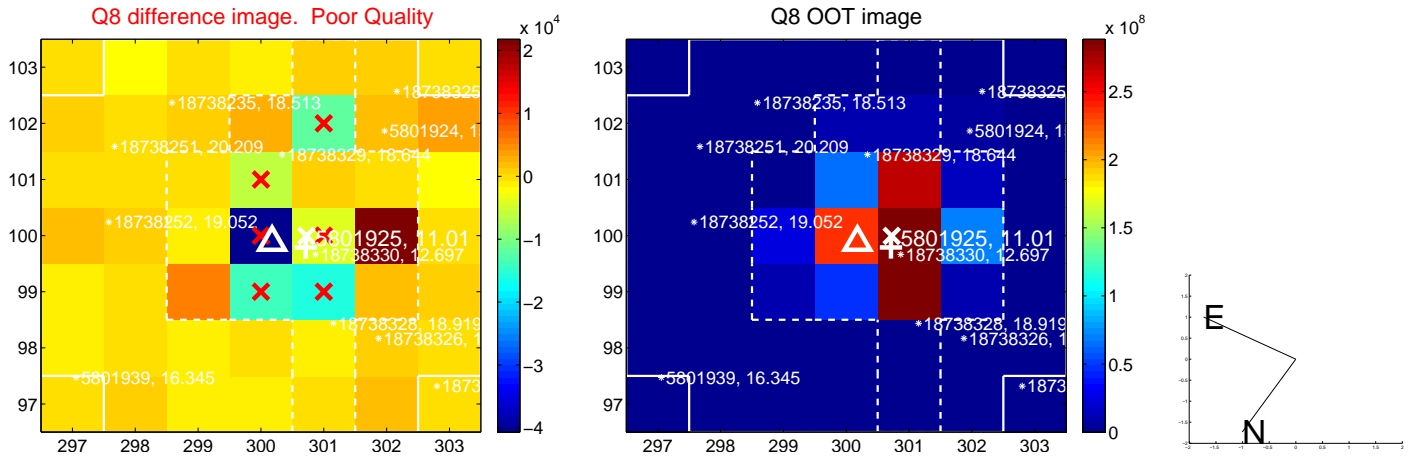
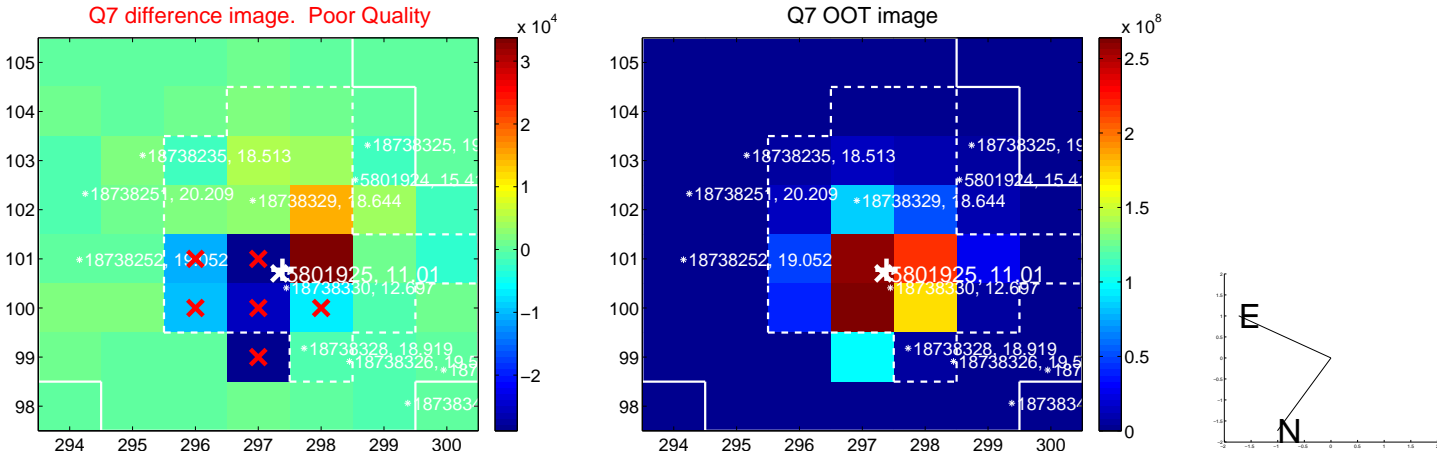
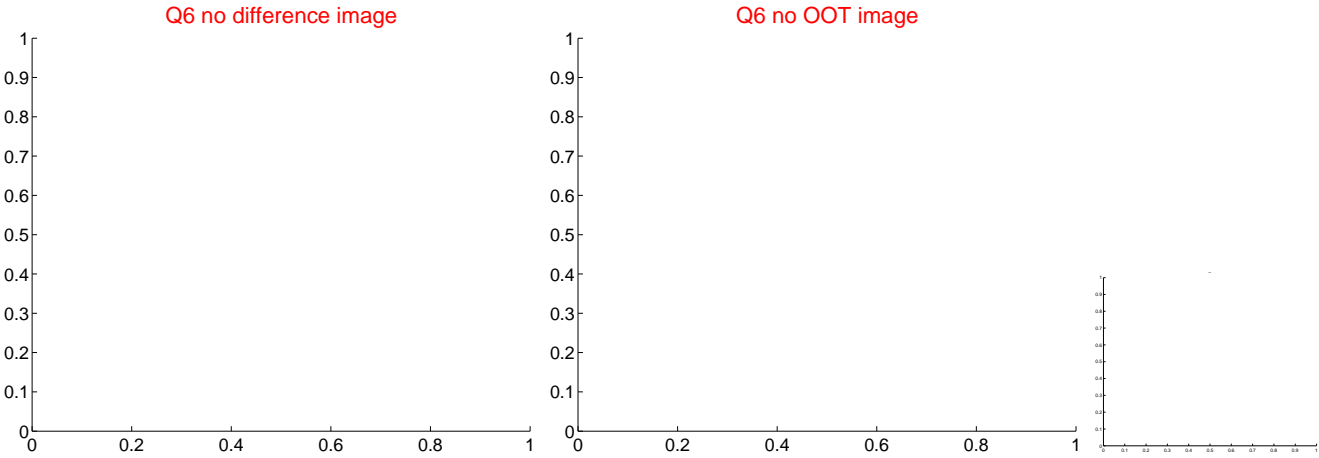
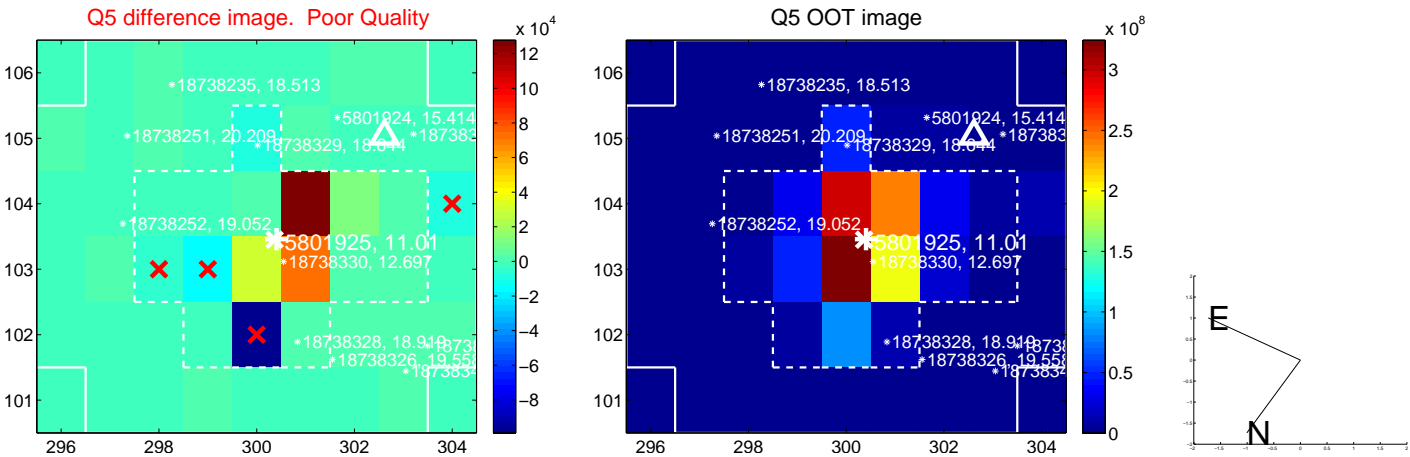


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

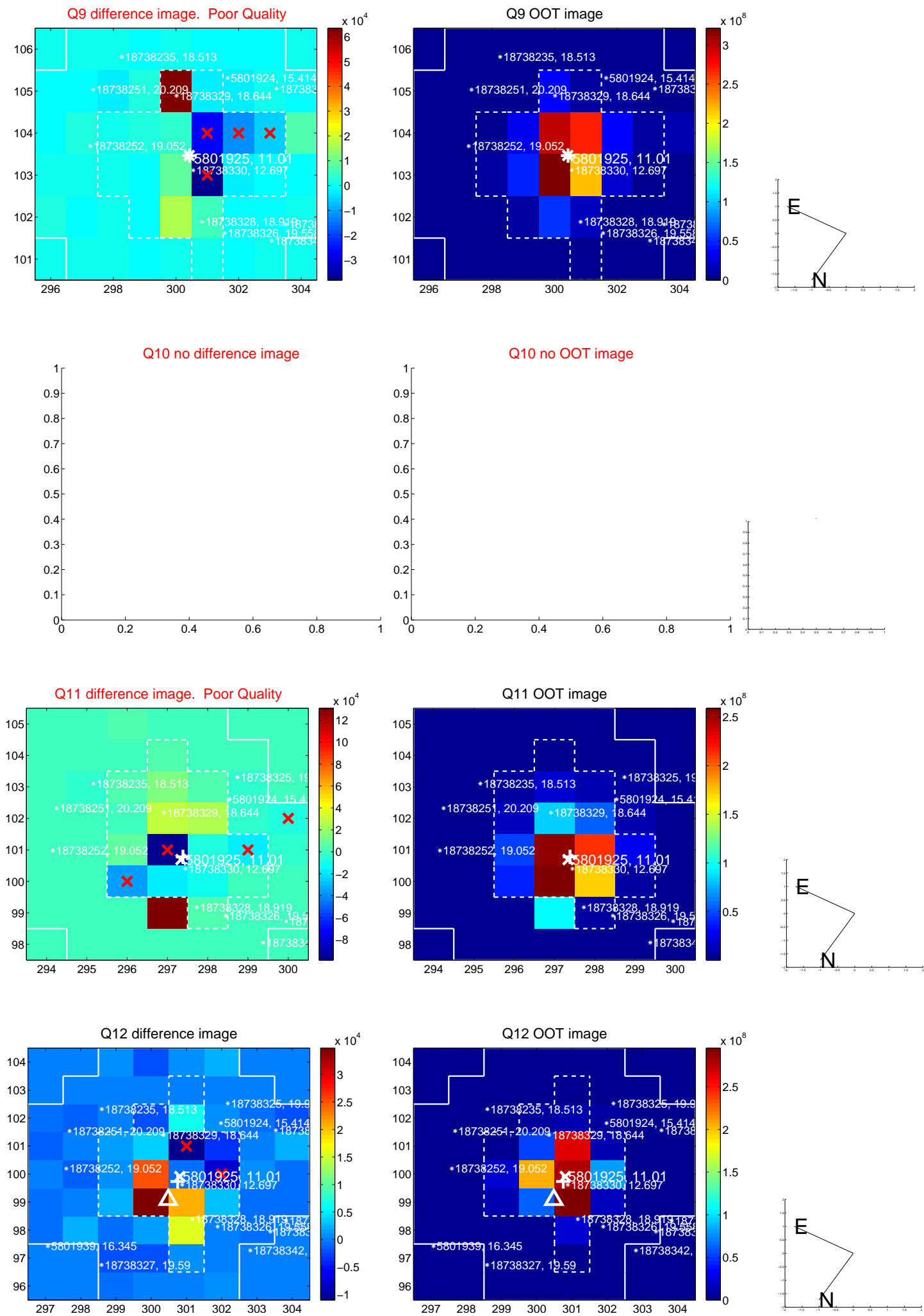
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



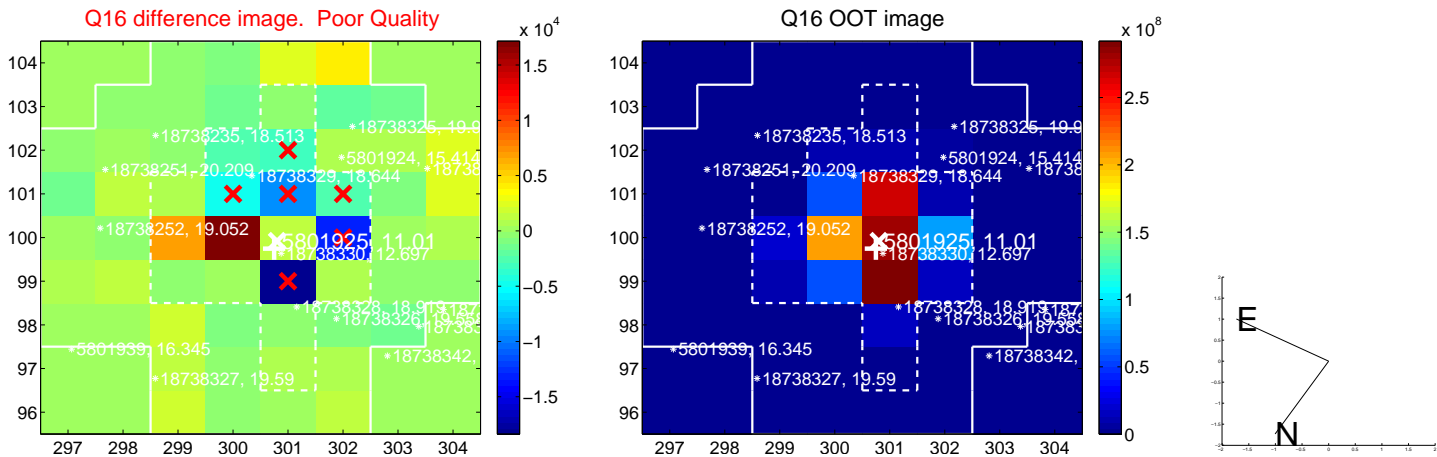
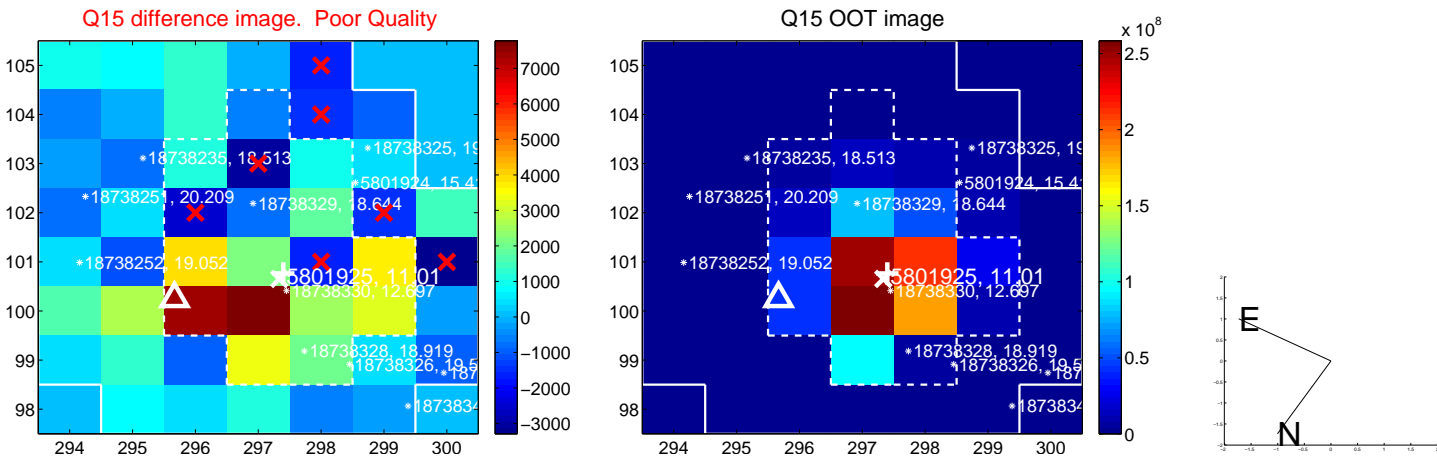
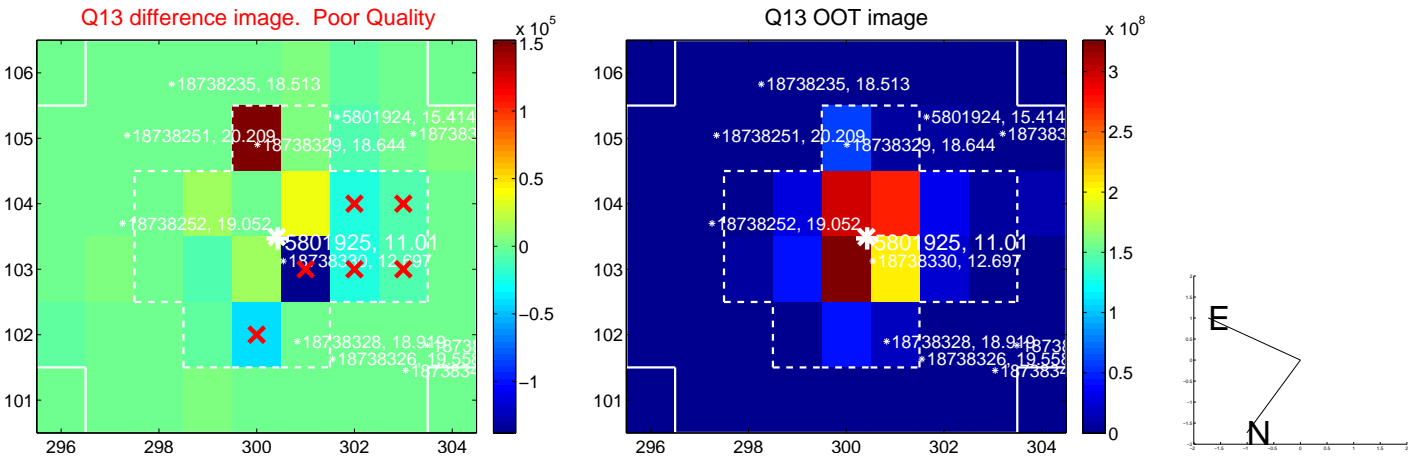
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



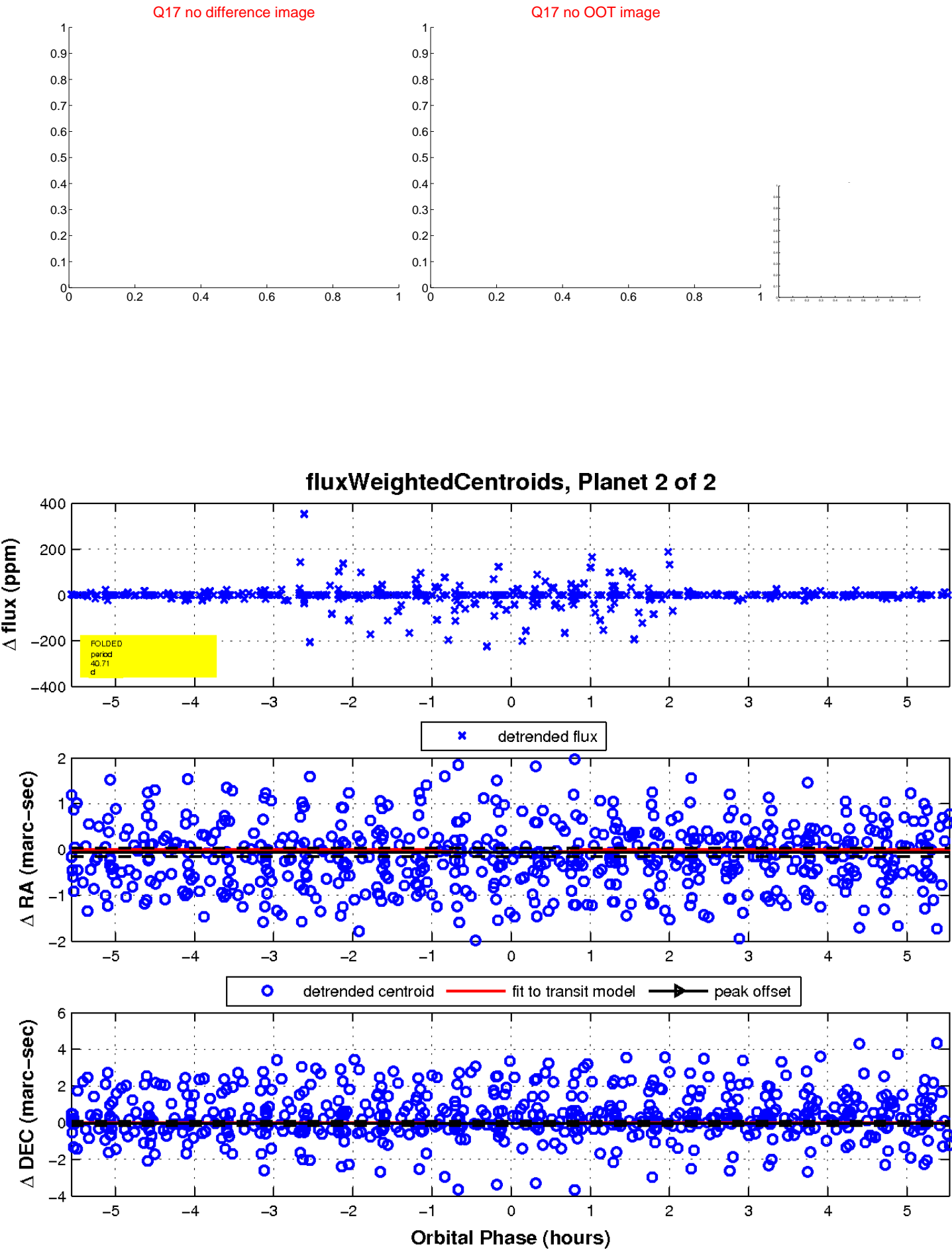
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

