

KIC 010679505

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})
010679505-01	OBS	No	5.675441	133.880621	73.9	16.836	13.0	9.0	1.25	6623	1.25	600.08
010679505-02	OBS	No	267.873857	174.811820	390.6	7.589	9.2	6.5	1.25	6623	2.59	3.52

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010679505-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV
010679505-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

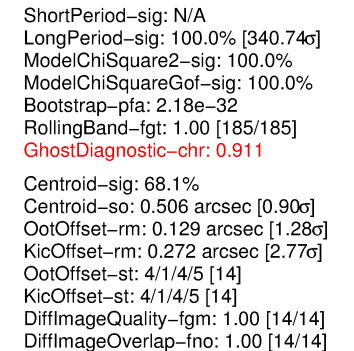
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

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

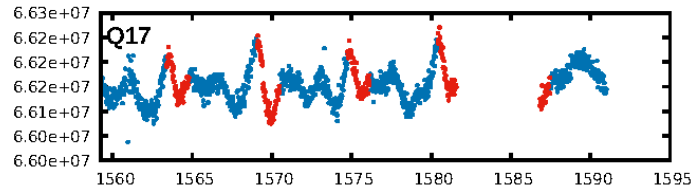
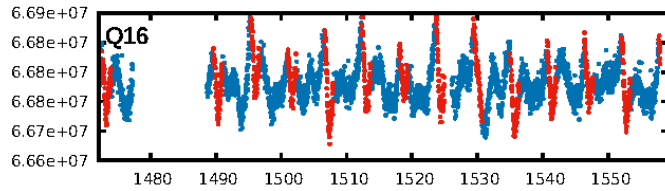
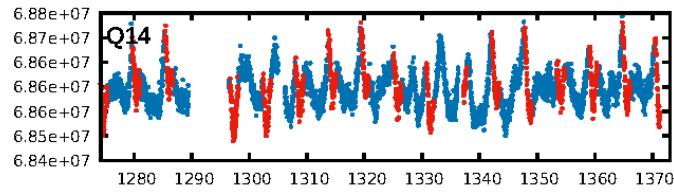
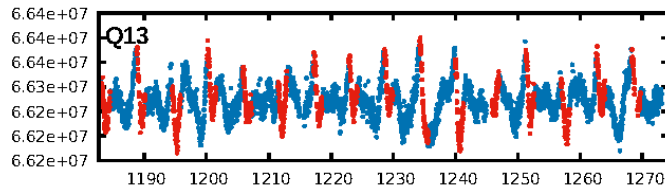
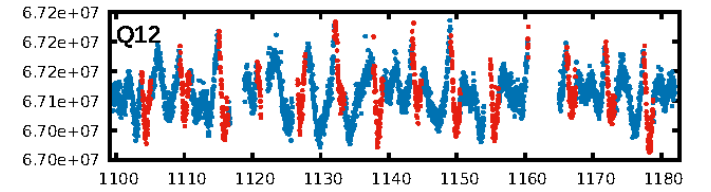
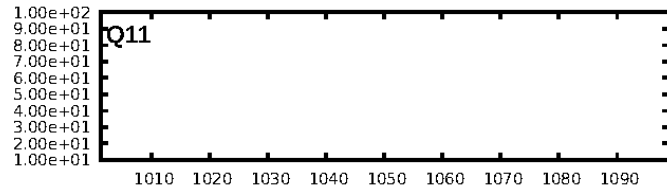
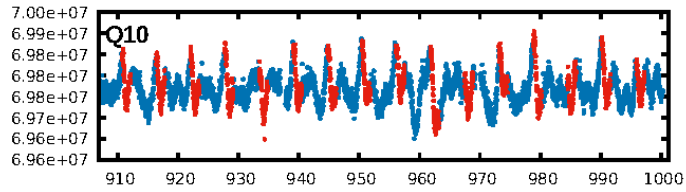
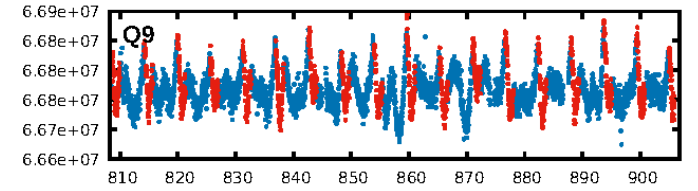
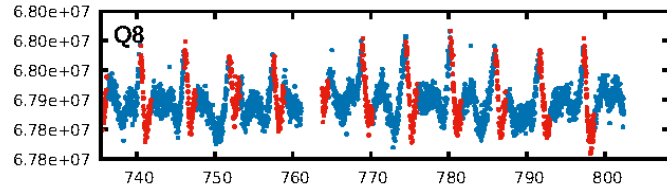
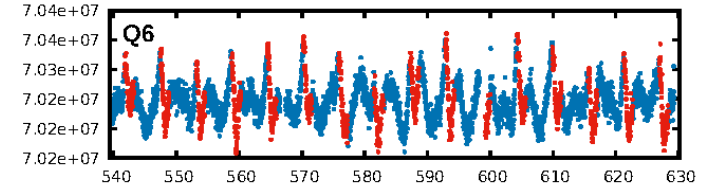
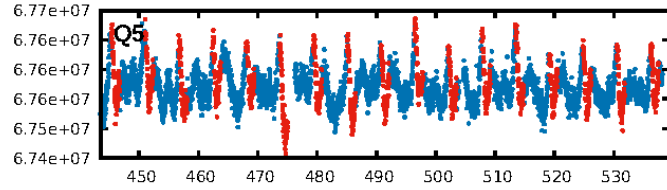
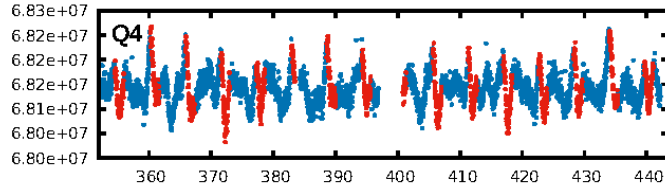
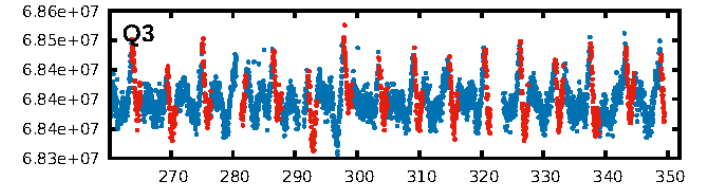
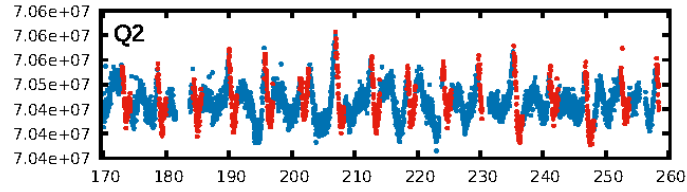
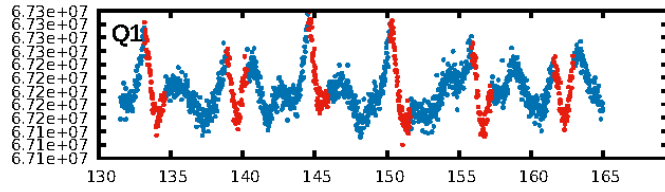
Ephemeris Match Information For 010679505-01

No Significant Match Found

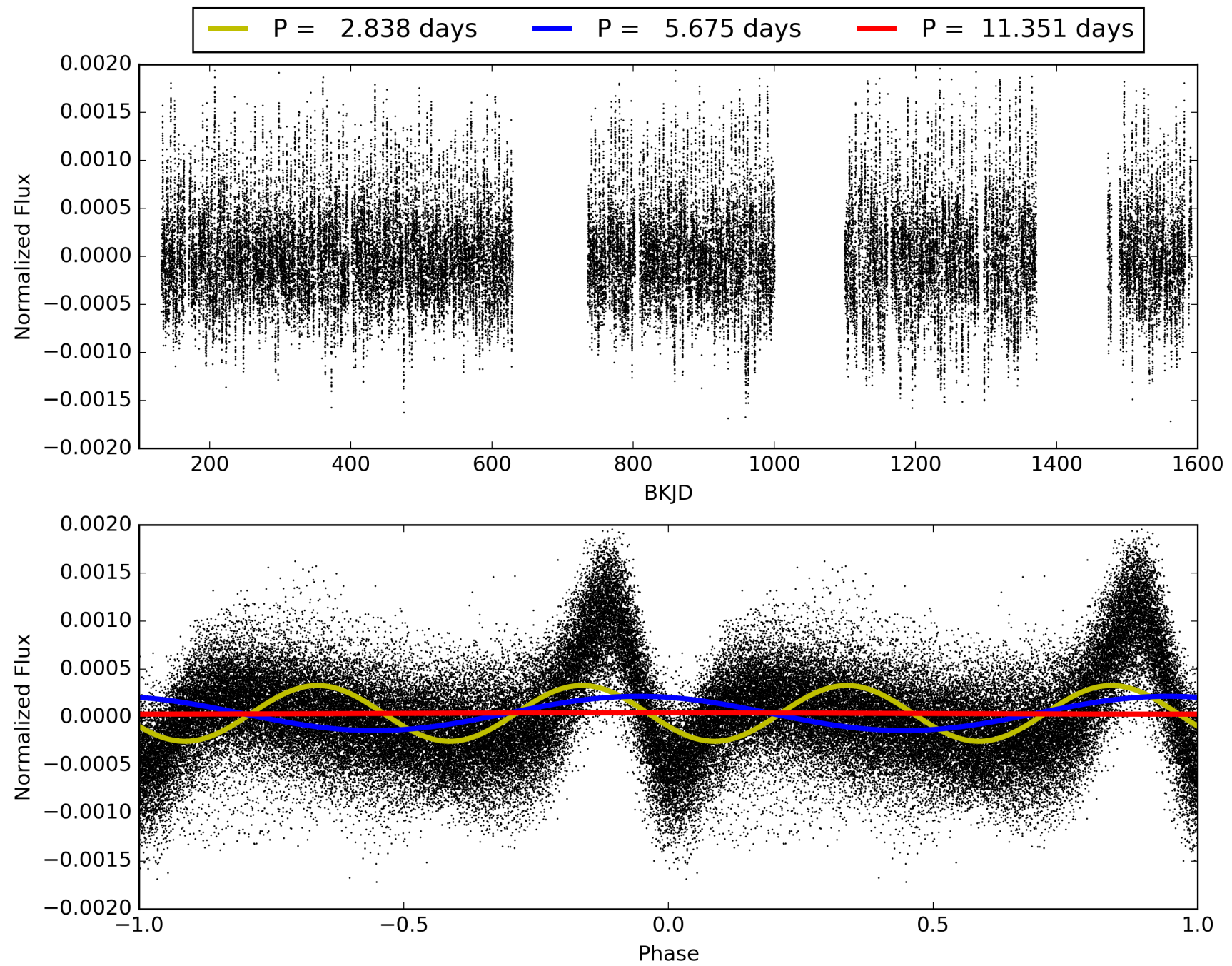
KIC: 10679505 Candidate: 1 of 2 Period: 5.675 d



TCE 010679505-01, PDC Light Curves

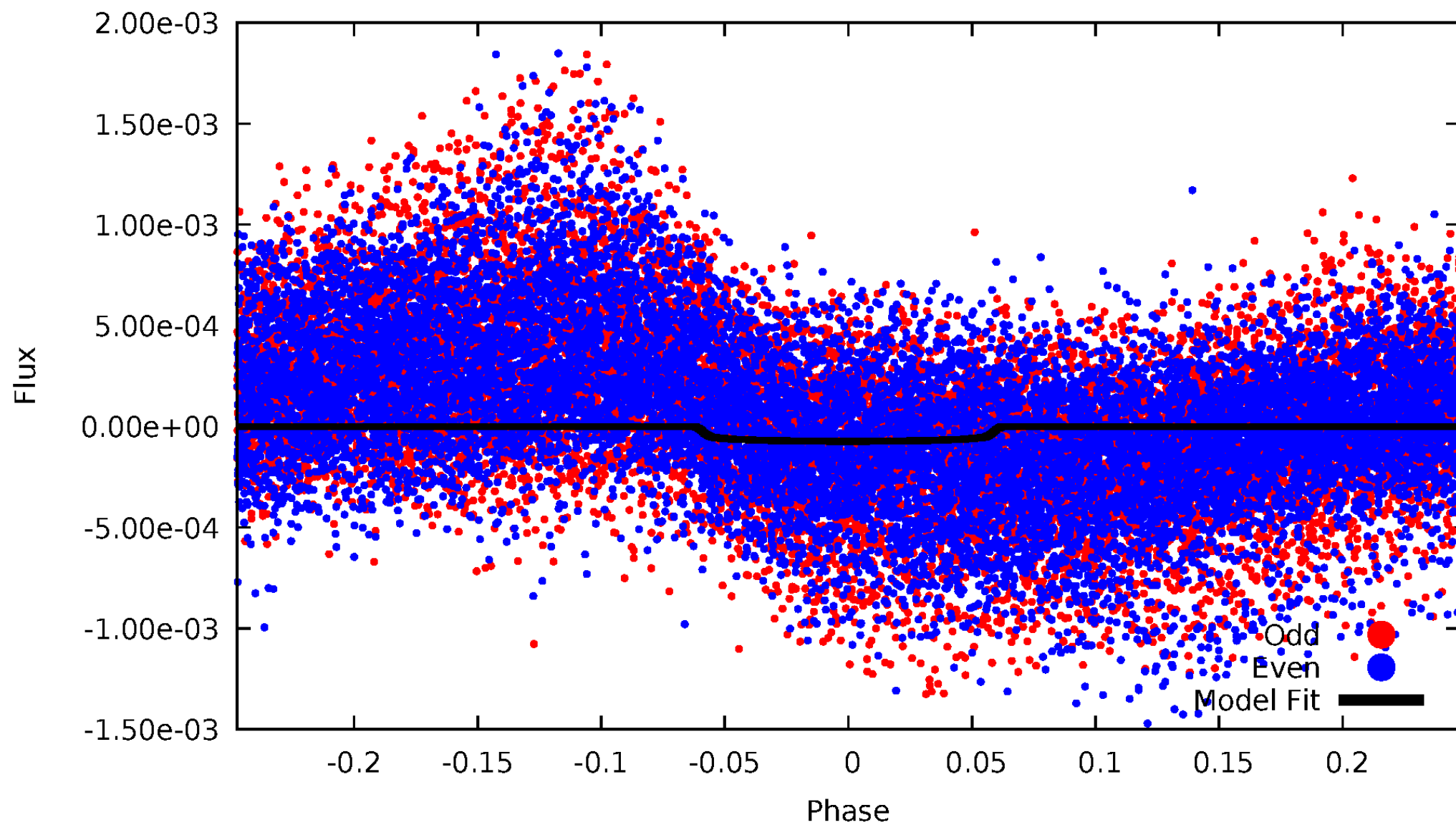


TCE 010679505-01



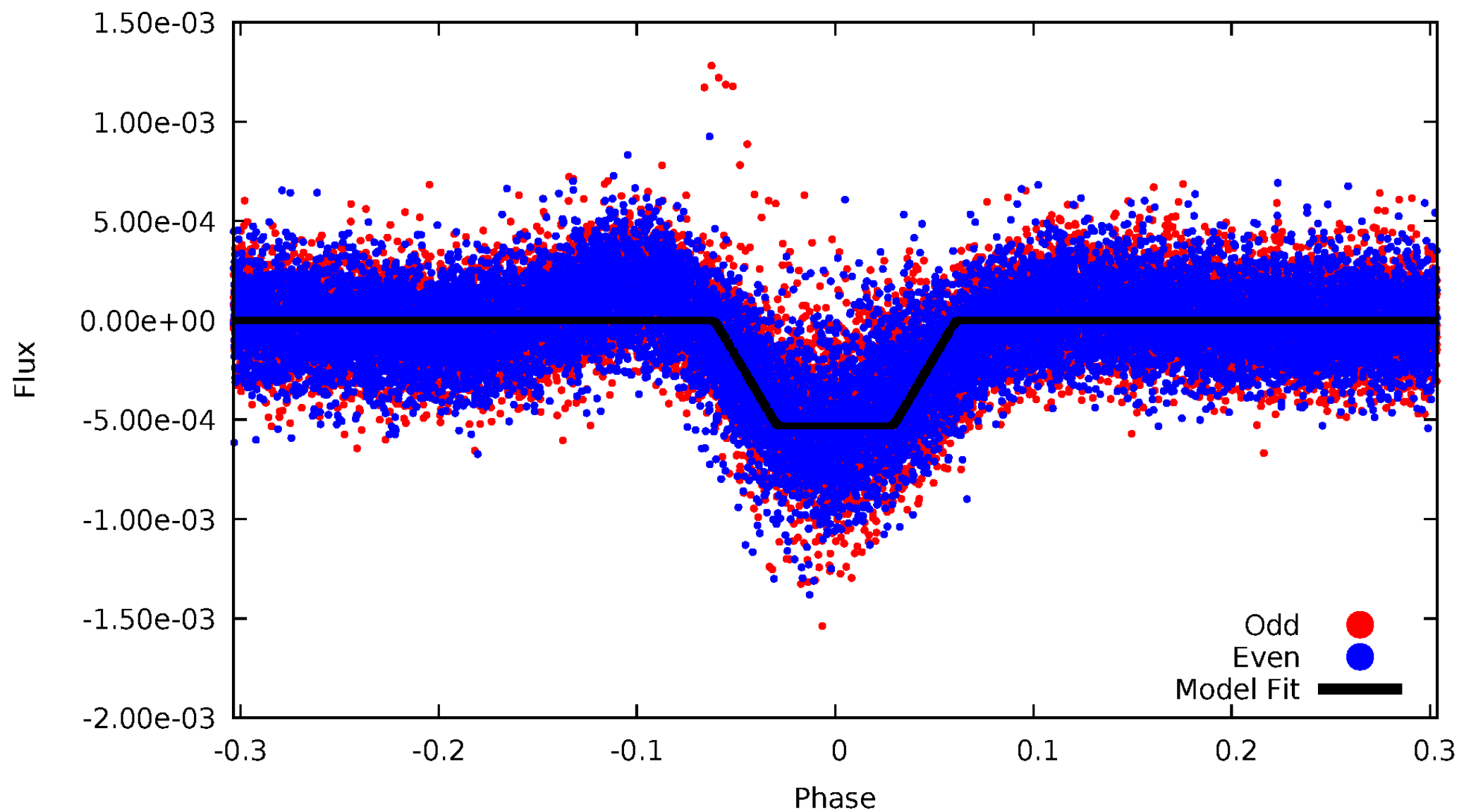
DV Odd/Even

TCE 010679505-01



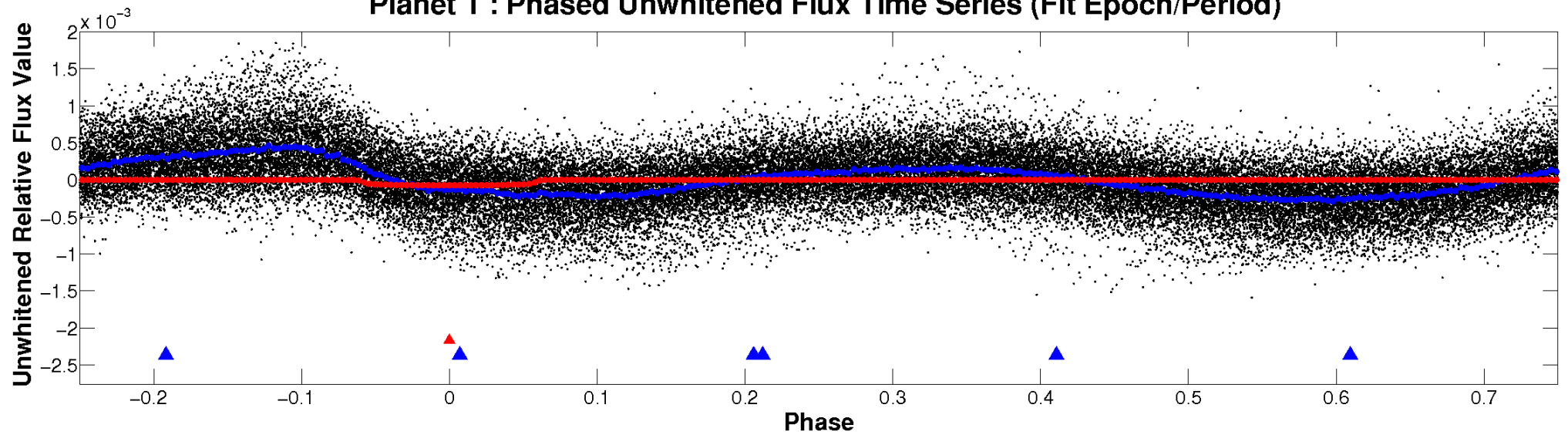
ALT Odd/Even

TCE 010679505-01

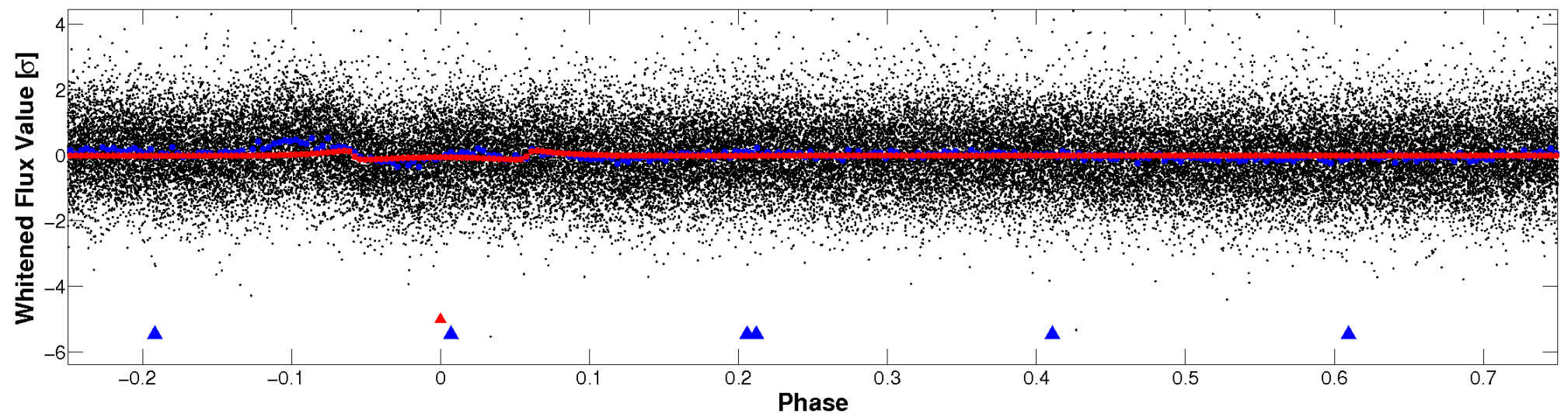


Non-Whitened Vs. Whitened Light Curve

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

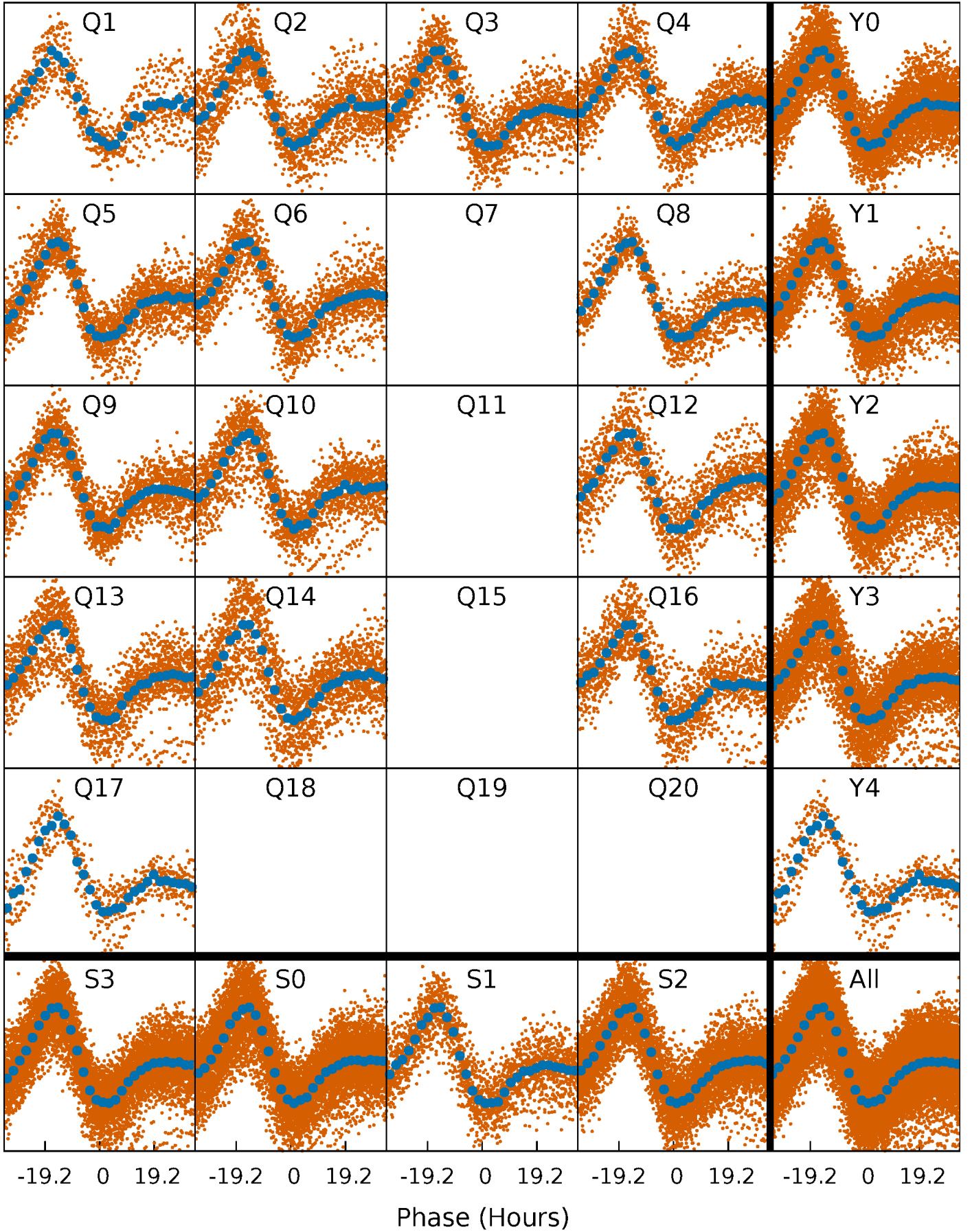


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



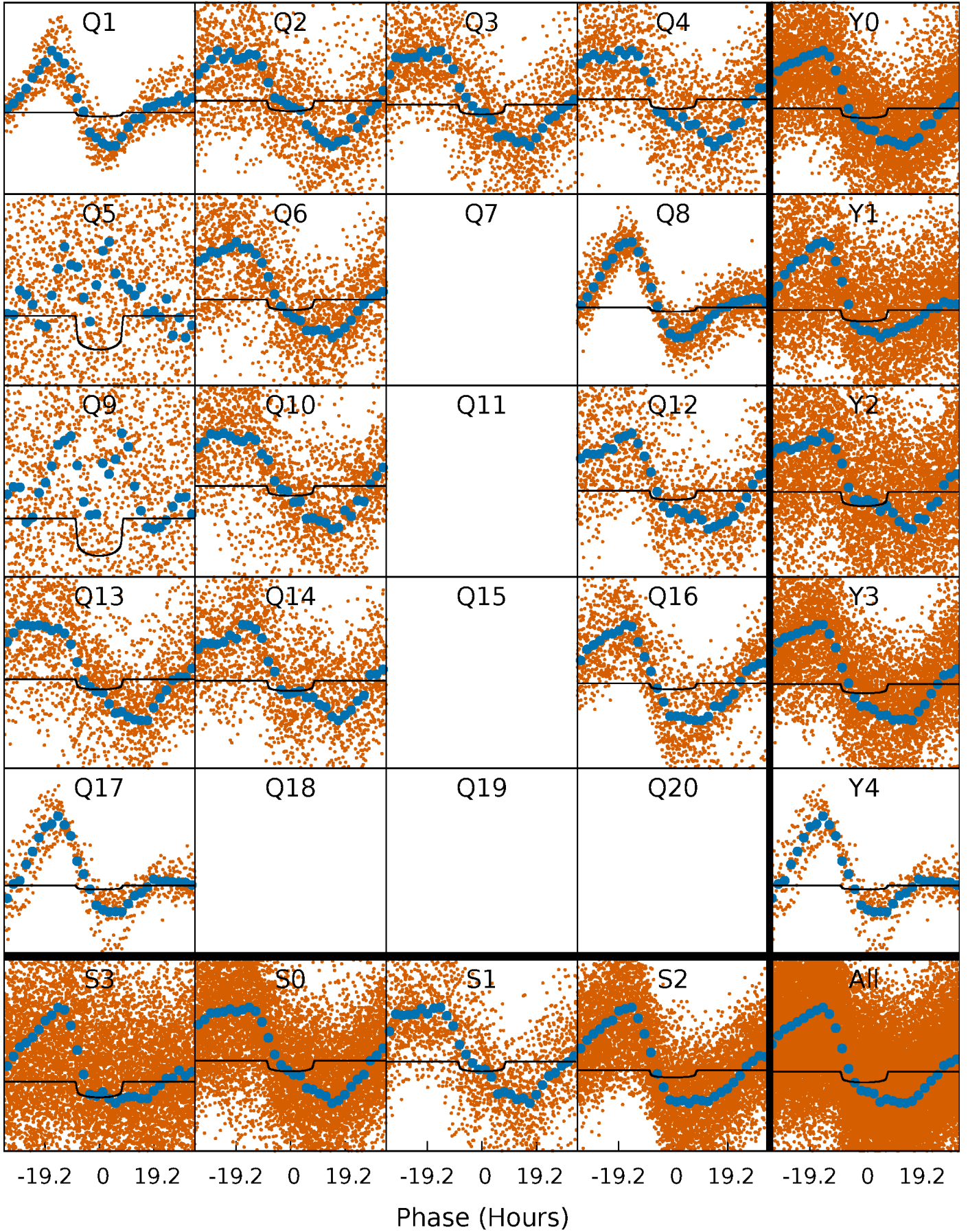
PDC Quarter-Phased Transit Curves

TCE 010679505-01 P= 5.675441 Days $T_0=133.880621$ (BKJD)



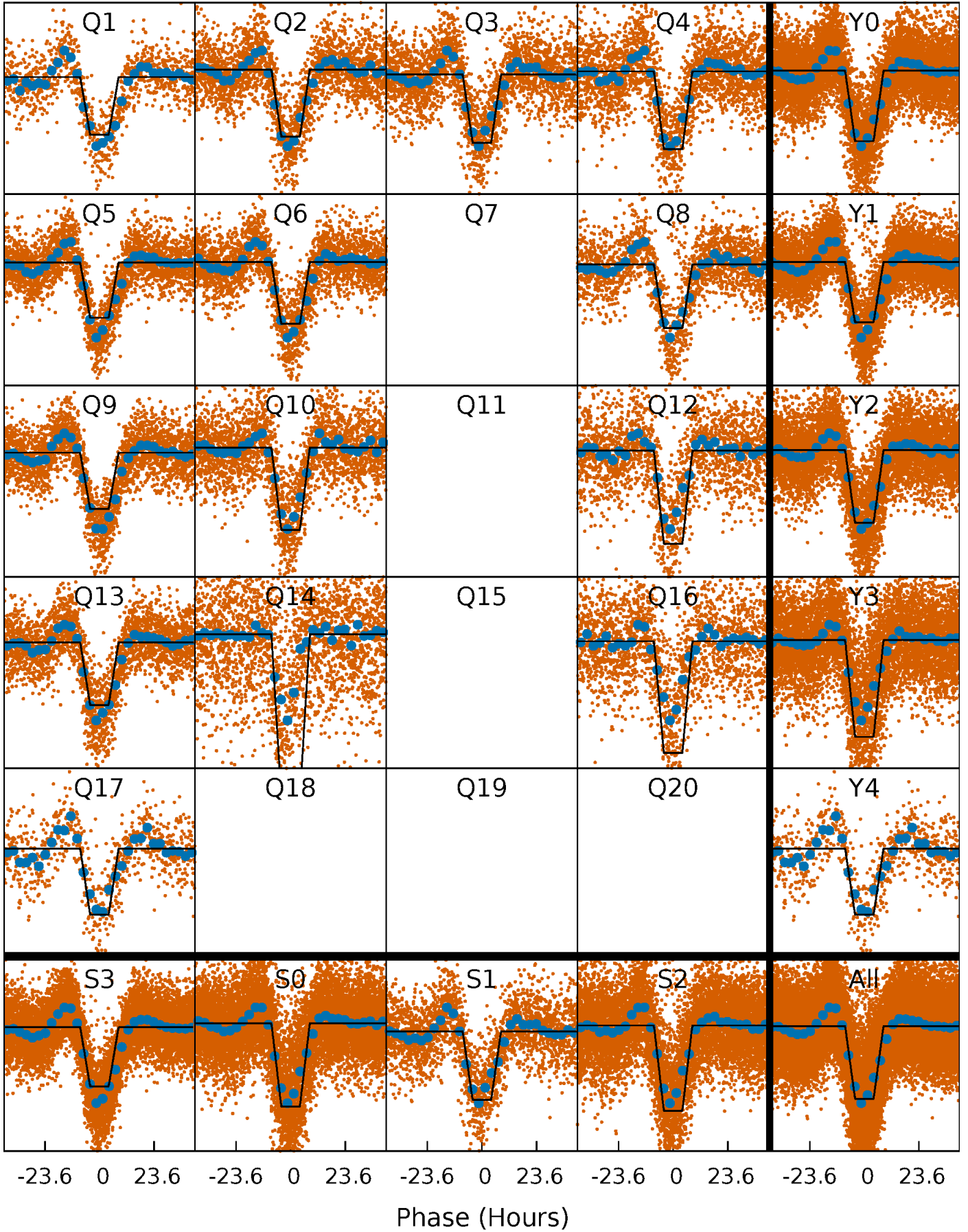
DV Quarter-Phased Transit Curves

TCE 010679505-01 P= 5.675441 Days $T_0=133.880621$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

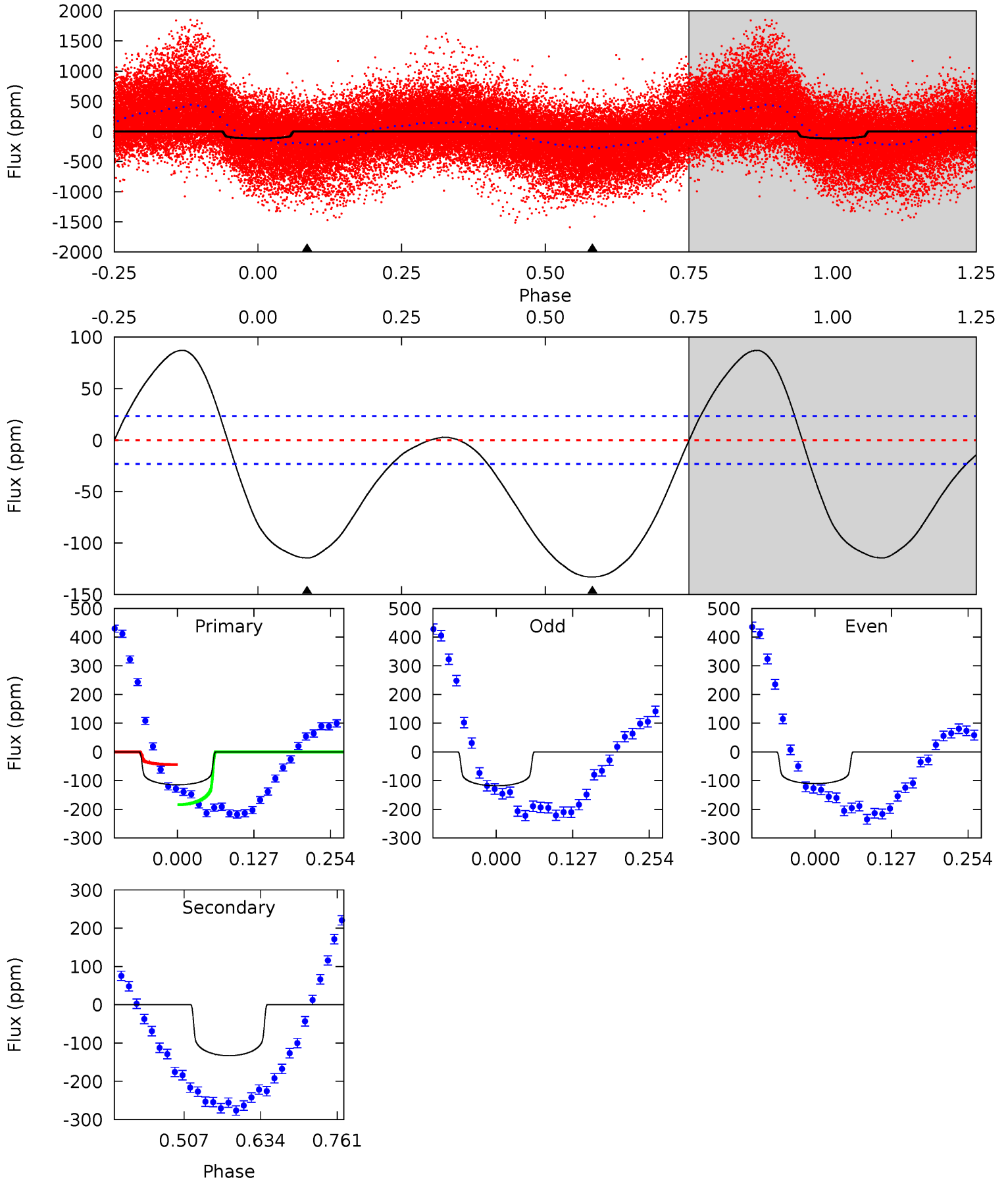
TCE 010679505-01 P= 5.675407 Days $T_0=133.824900$ (BKJD)



DV Model-Shift Uniqueness Test

010679505-01, P = 5.675441 Days, E = 128.205180 Days

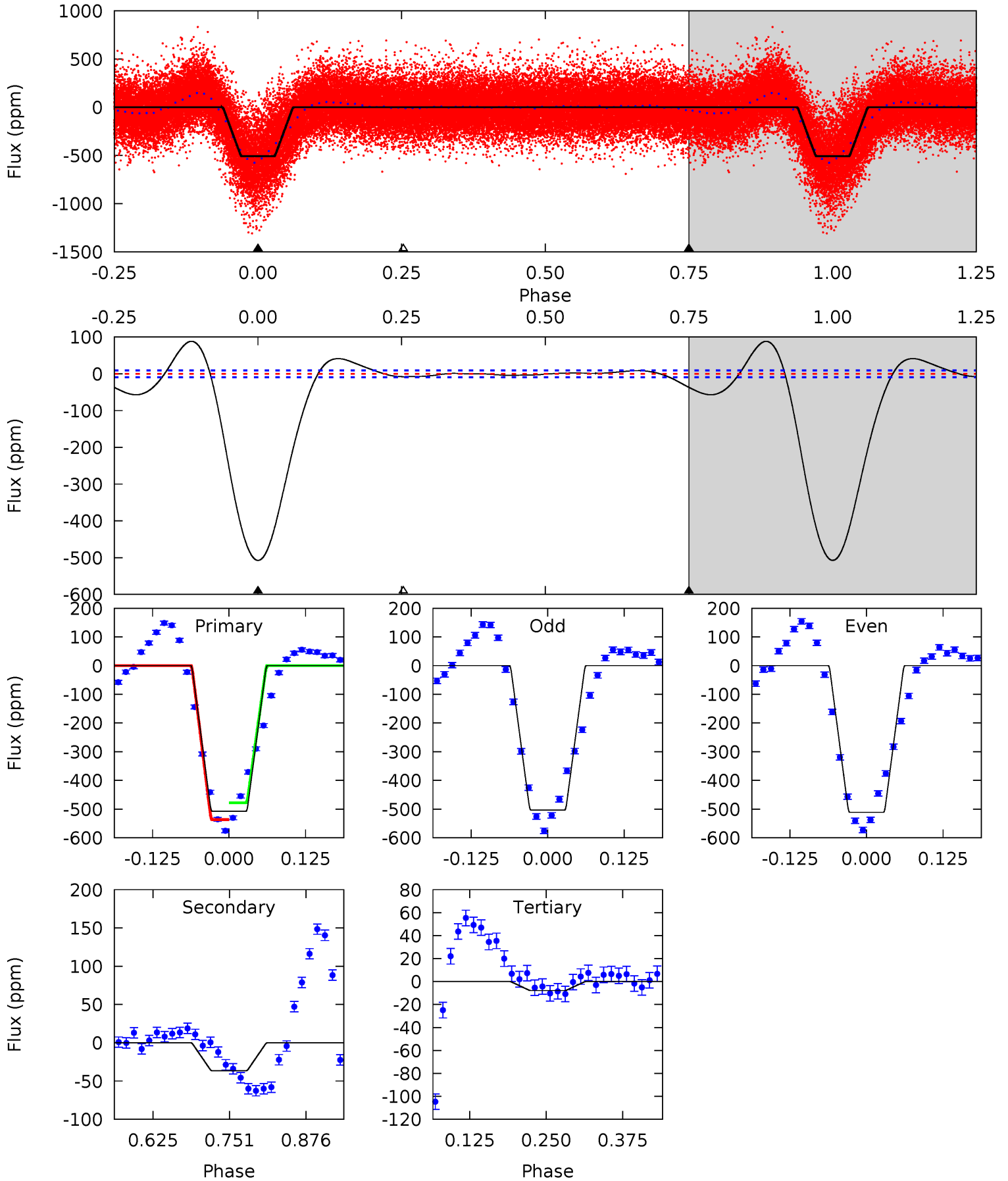
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.3	25.9	0	0	4.51	1.53	8.23	22.3	22.3	25.9	25.9	0.72	1.69	0.40	13.7



Alt Model-Shift Uniqueness Test

010679505-01, P = 5.675407 Days, E = 128.149493 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
241.6	17.4	3.73	0	4.52	1.53	5.87	237.8	241.6	13.7	17.4	1.89	1.00	0.15	13.8



Stellar Parameters For KIC 010679505

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6623^{+161}_{-221}	$4.341^{+0.065}_{-0.195}$	$-0.020^{+0.250}_{-0.300}$	$1.255^{+0.397}_{-0.159}$	$1.265^{+0.168}_{-0.187}$	$0.901^{+0.311}_{-0.449}$
	+2%/-3%	+1%/-4%	+1250%/-1500%	+32%/-13%	+13%/-15%	+34%/-50%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 010679505-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-133 ± 5	$1.30^{+0.24}_{-0.17}$	1789^{+127}_{-80}	7538^{+457}_{-483}	194^{+61}_{-50}
Alt.	-37 ± 2	$3.24^{+0.50}_{-0.30}$	1788^{+129}_{-85}	3748^{+84}_{-91}	$8.474^{+1.708}_{-1.930}$

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

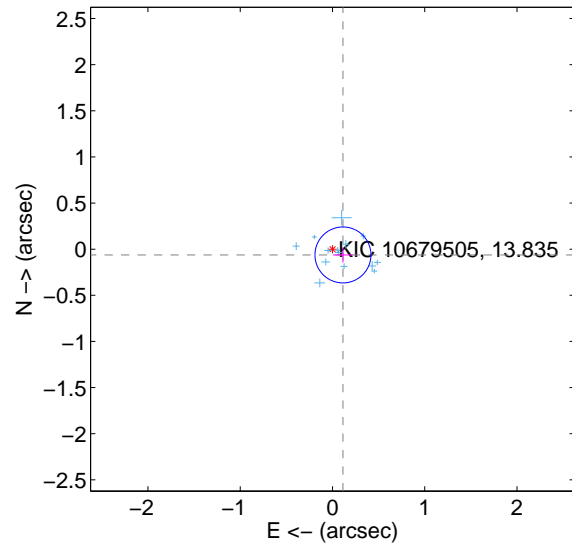
Supplemental centroid analysis for 010679505-01. Kepler magnitude: 13.84. Transit SNR 8.98

There are 14 quarters with good PRF difference image offsets

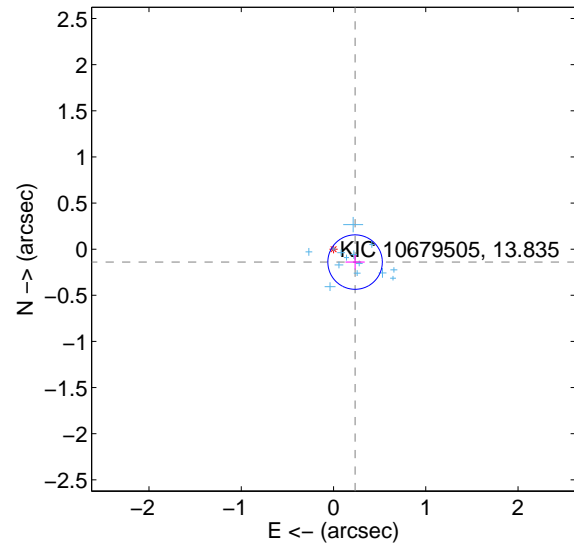
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.129 ± 0.101	1.28	-0.113 ± 0.106	-0.063 ± 0.082
PRF-fit source offset from KIC position	0.272 ± 0.098	2.77	-0.234 ± 0.104	-0.140 ± 0.079
photometric centroid source offset	0.51 ± 0.56	0.90	-0.38 ± 0.54	-0.34 ± 0.59

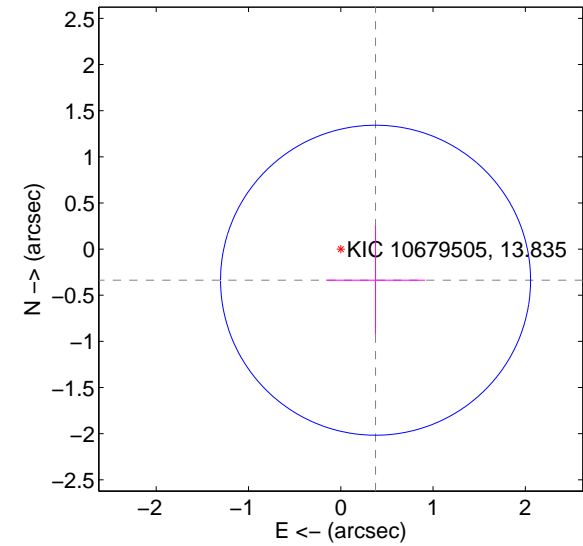
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

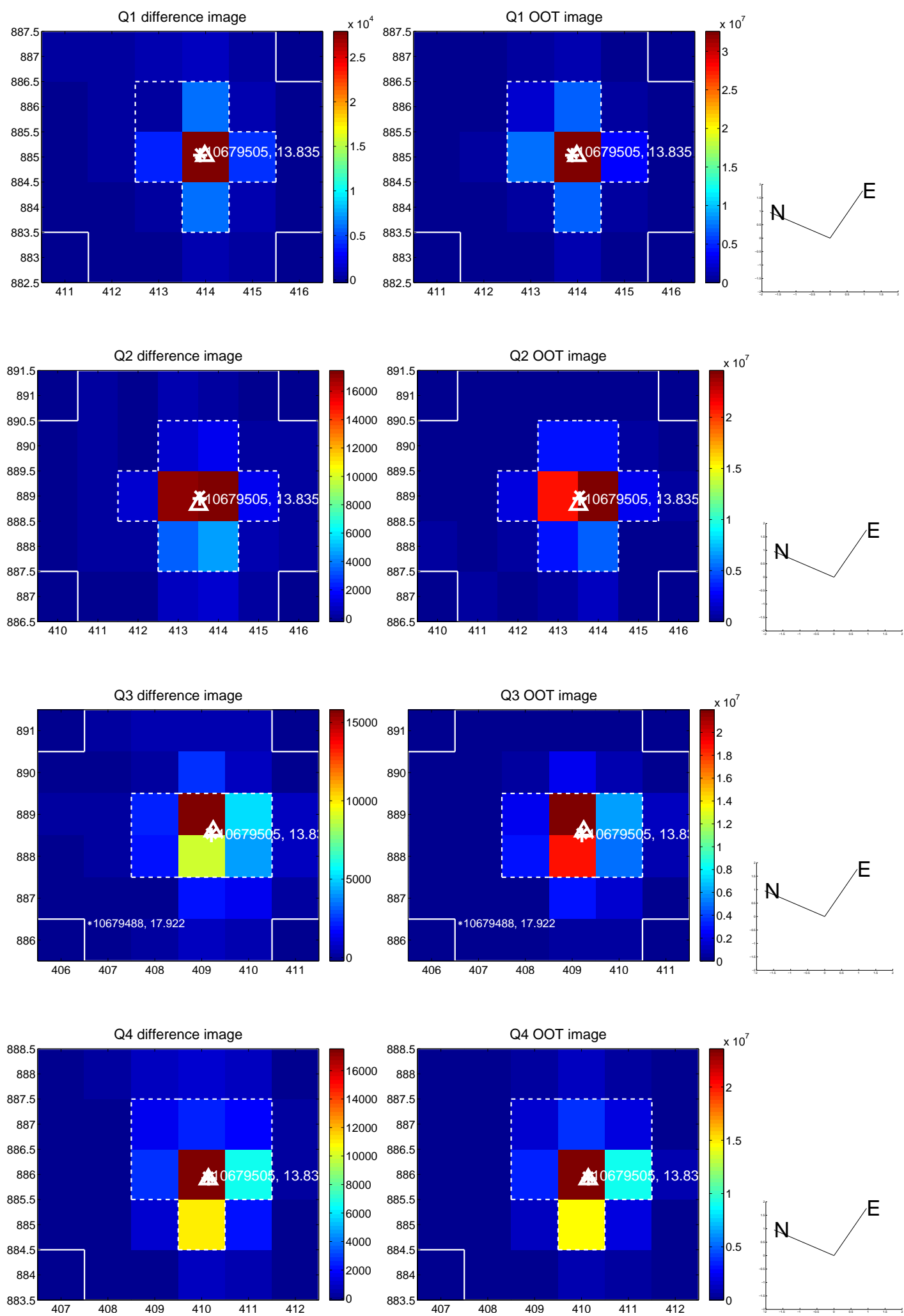


offset from photometric centroids

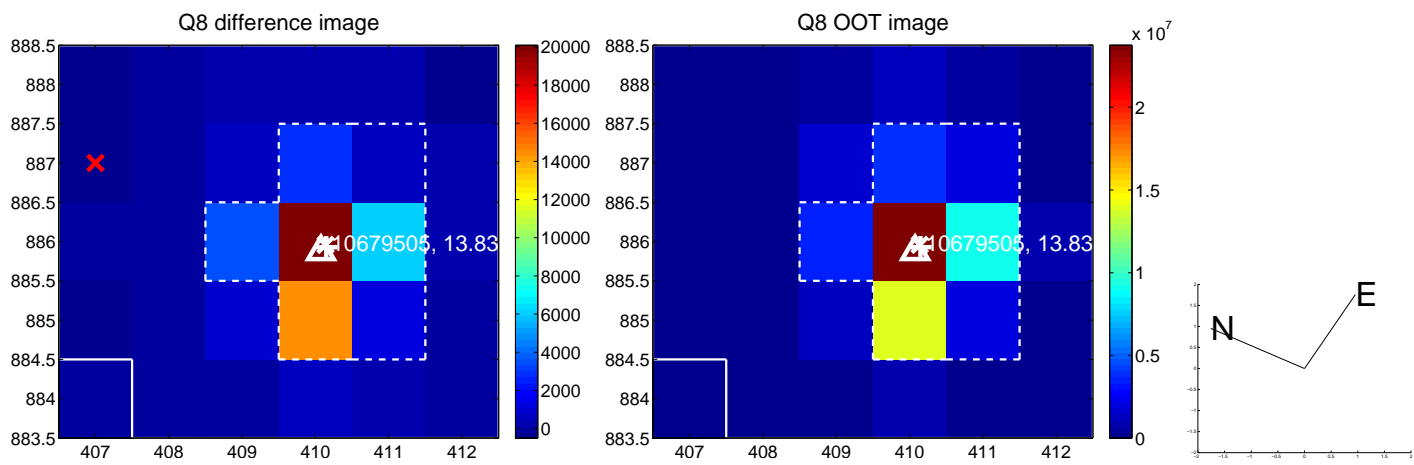
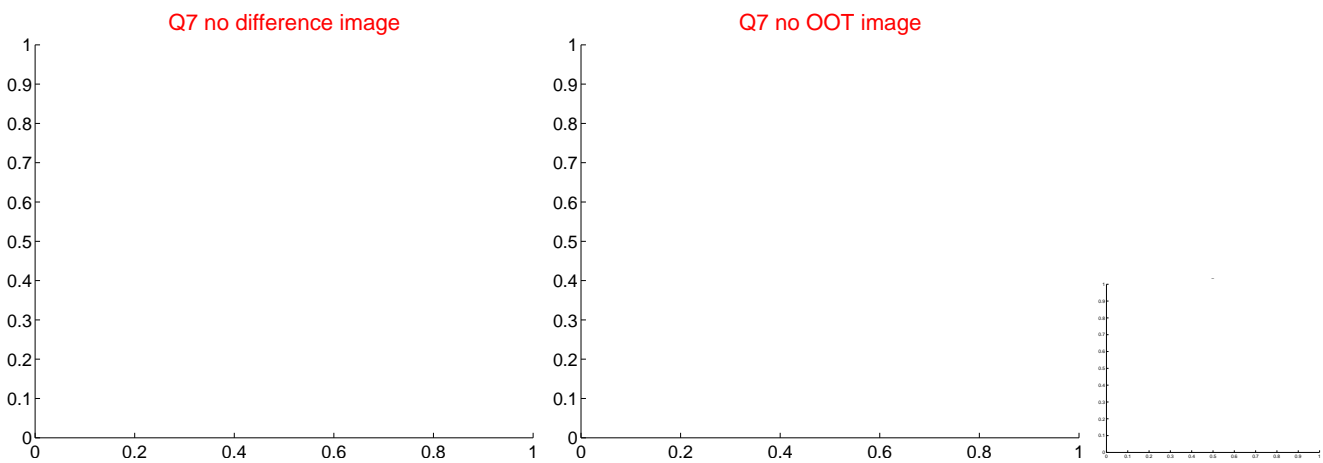
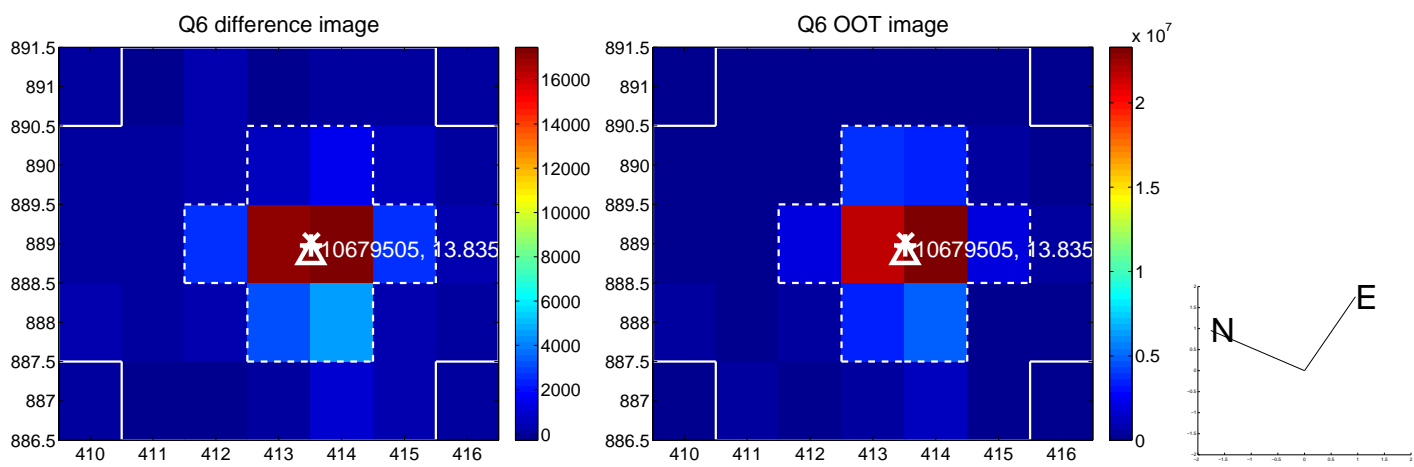
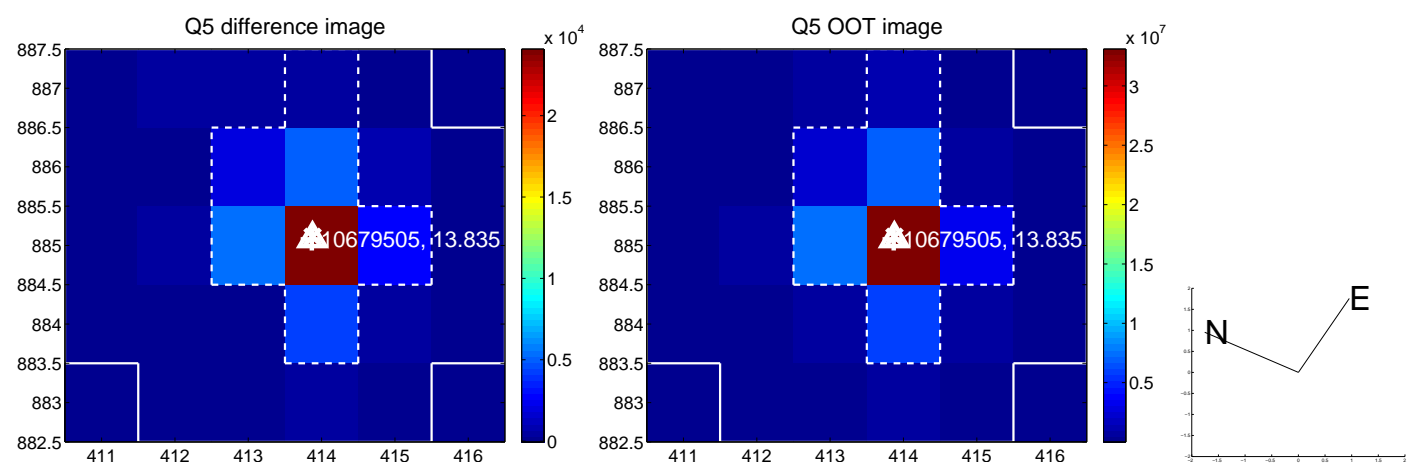


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

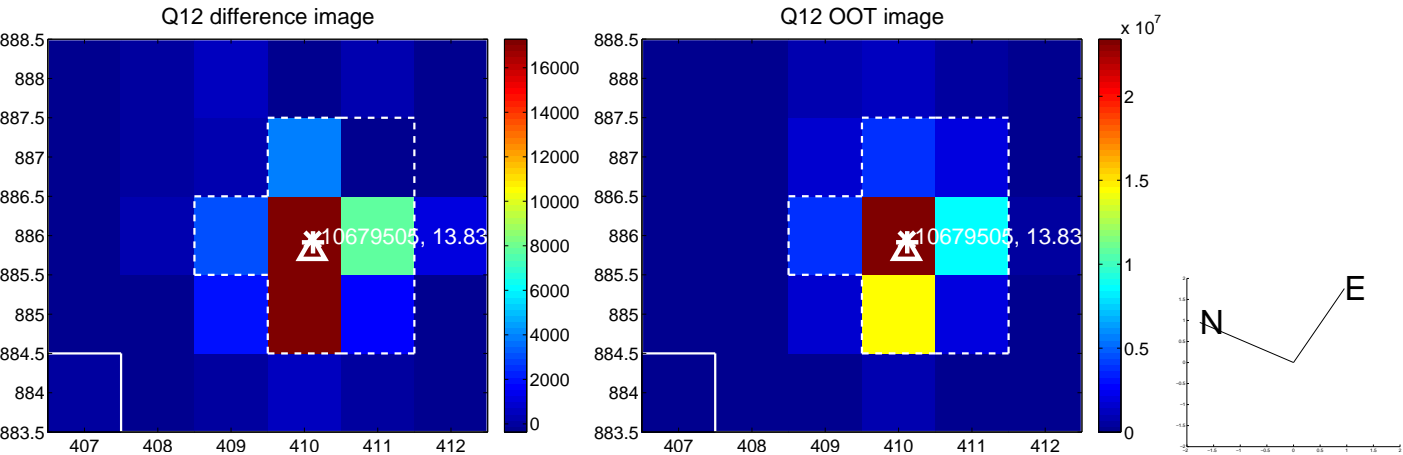
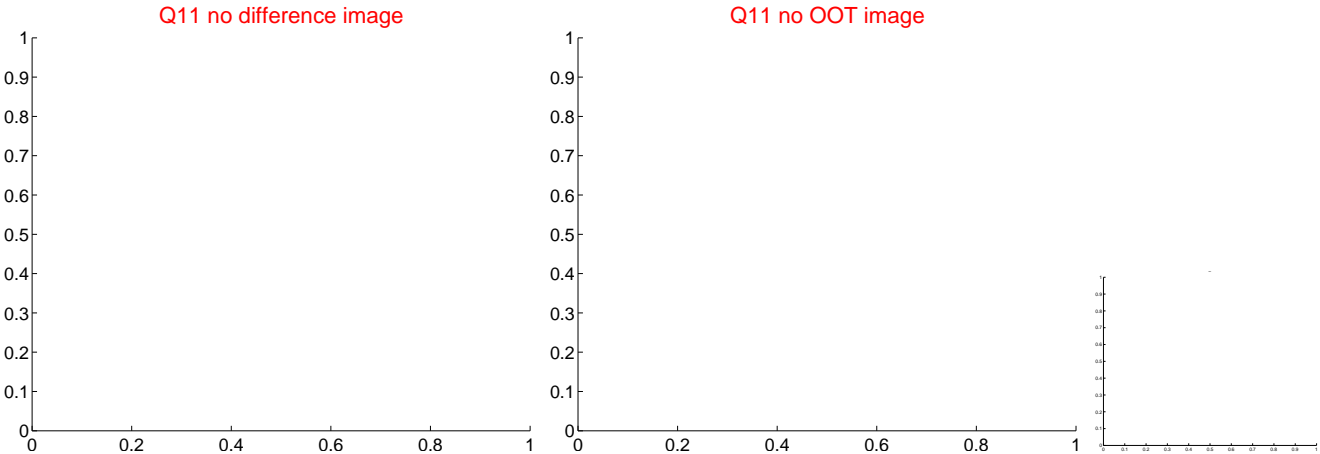
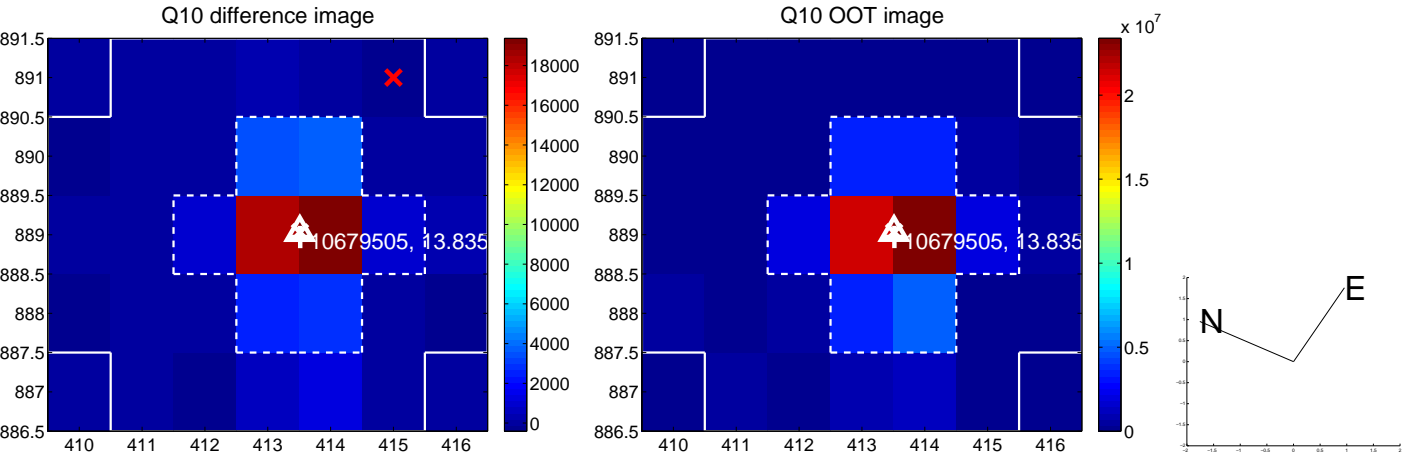
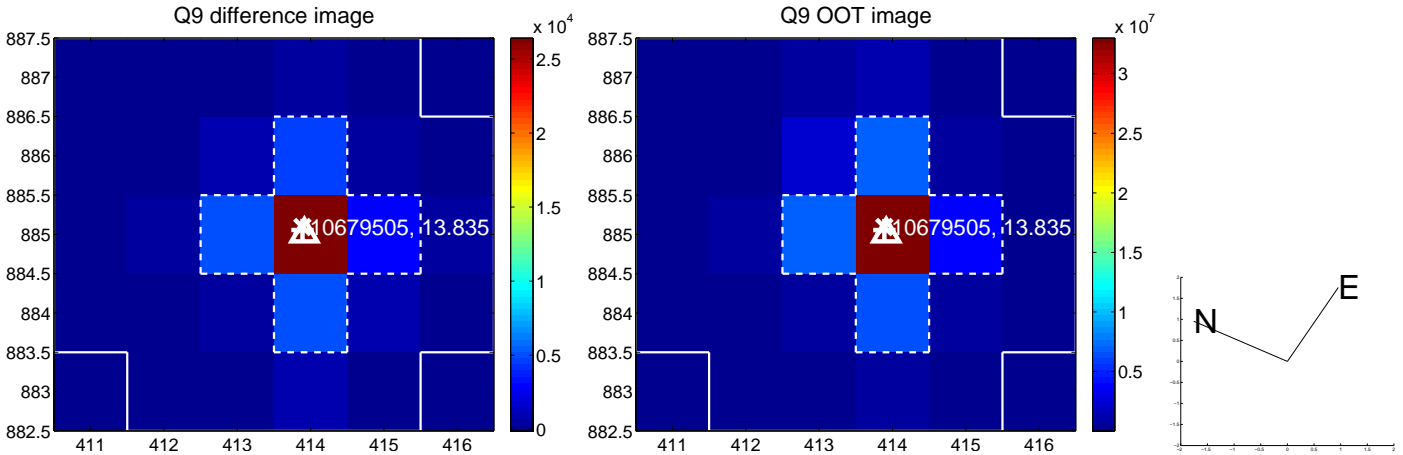
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



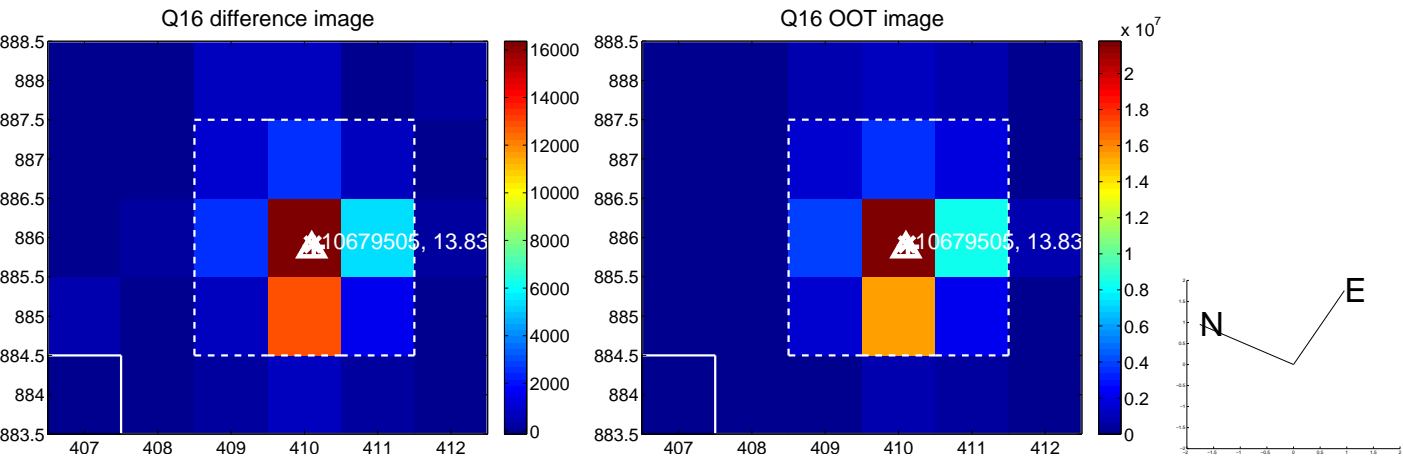
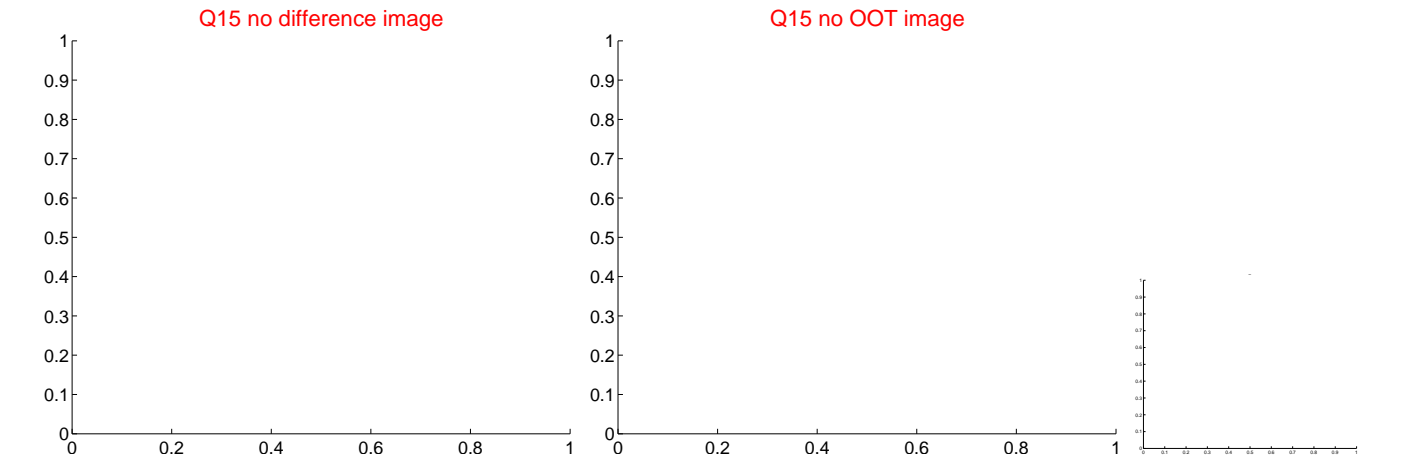
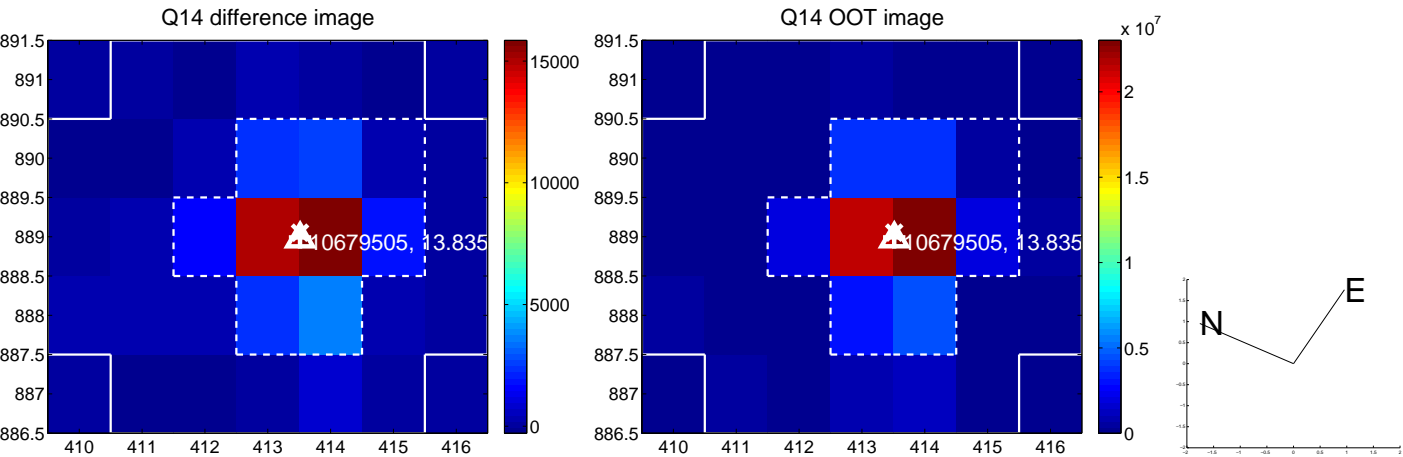
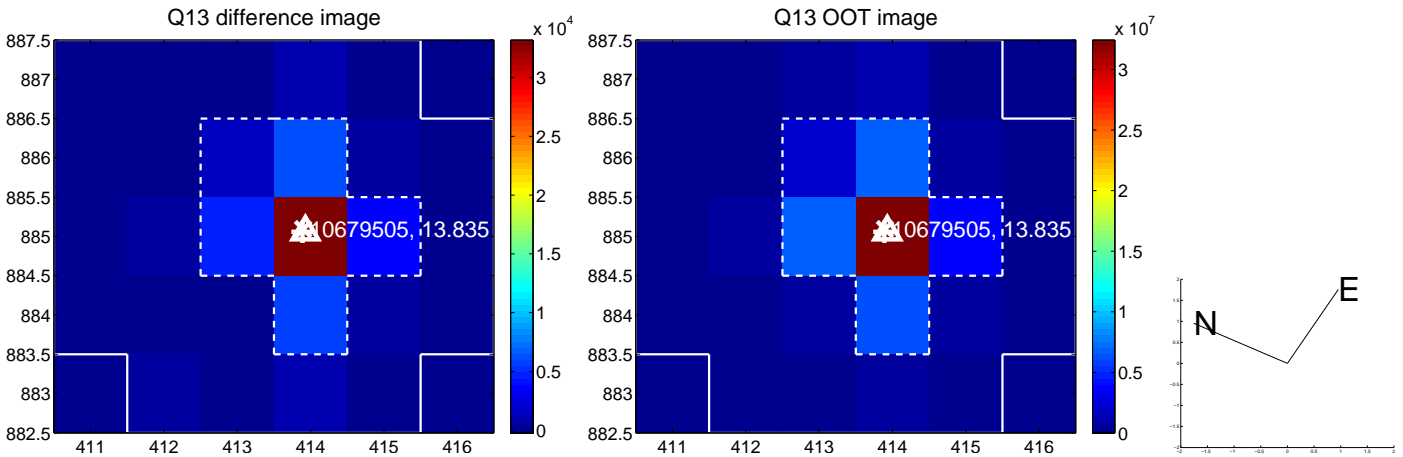
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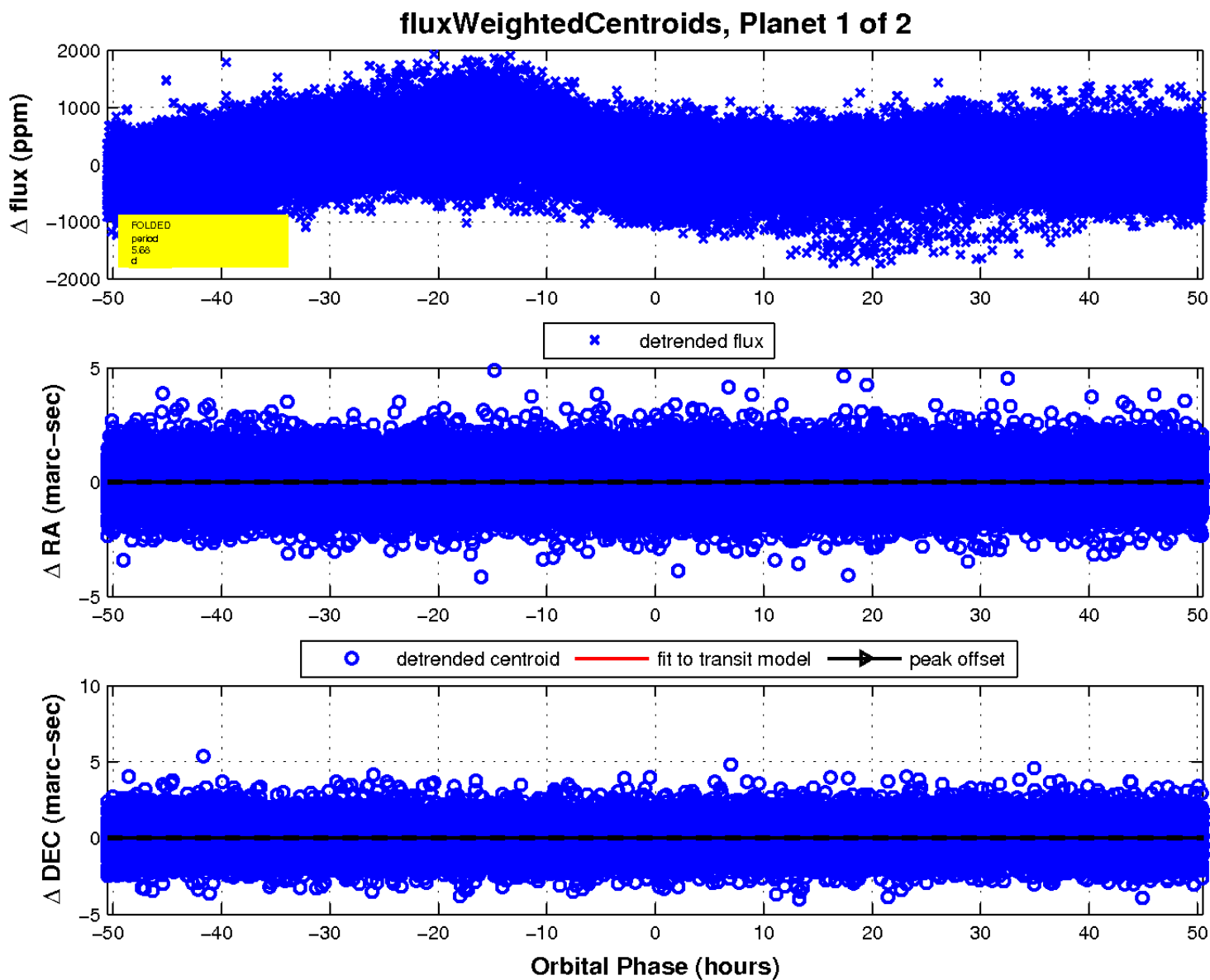
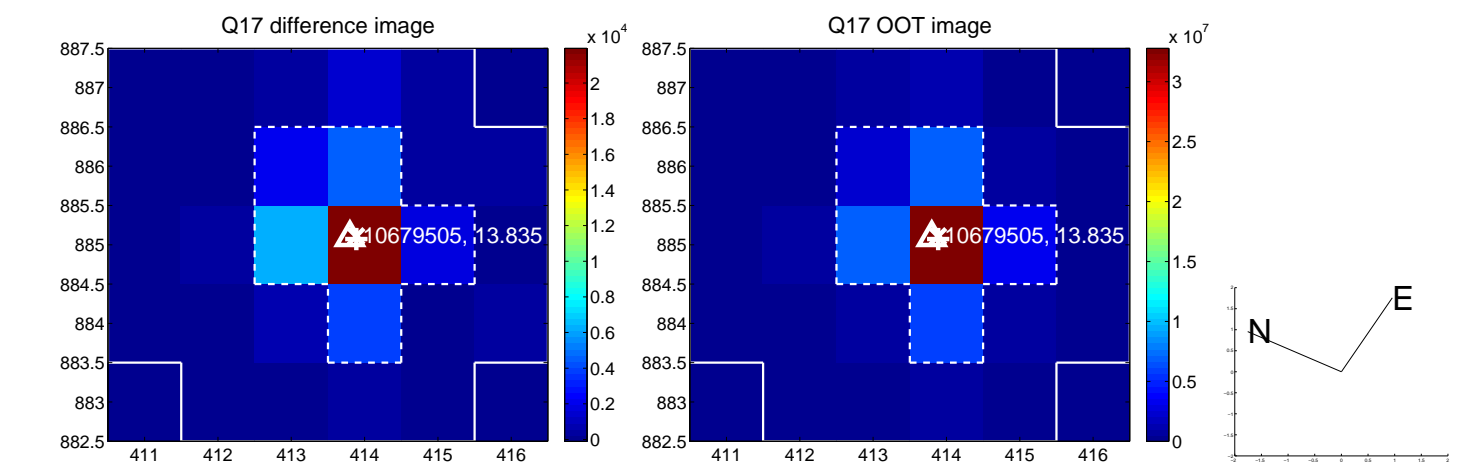
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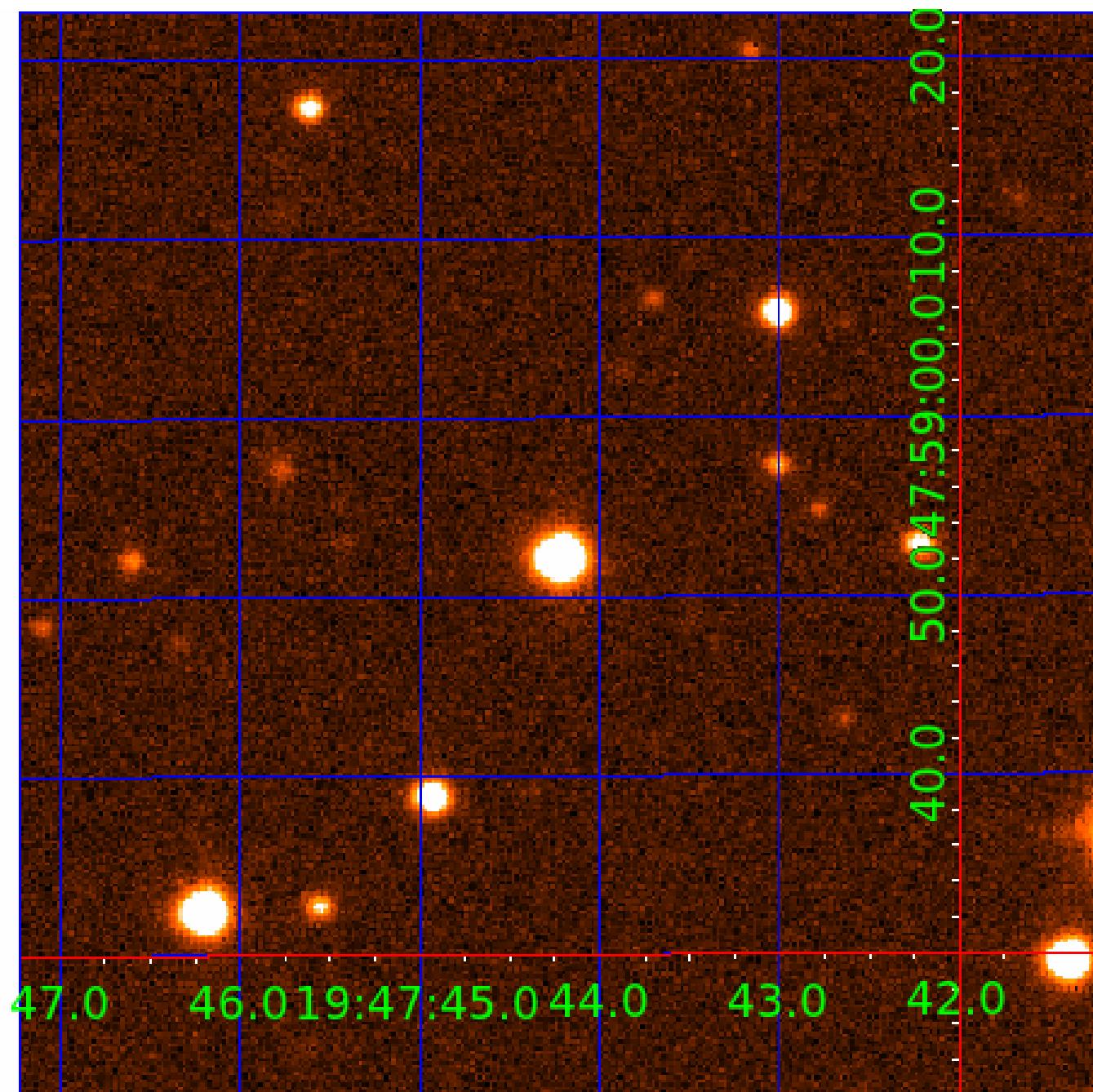


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UKIRT Image

Declination



KIC 010679505

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

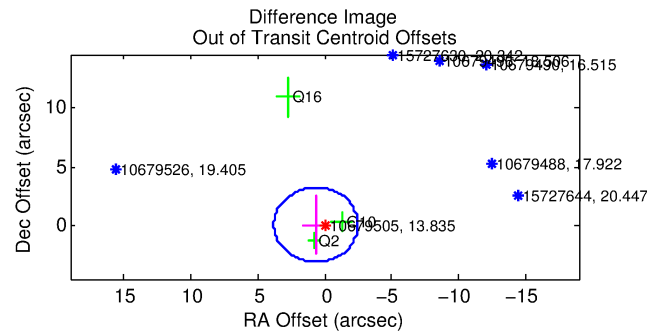
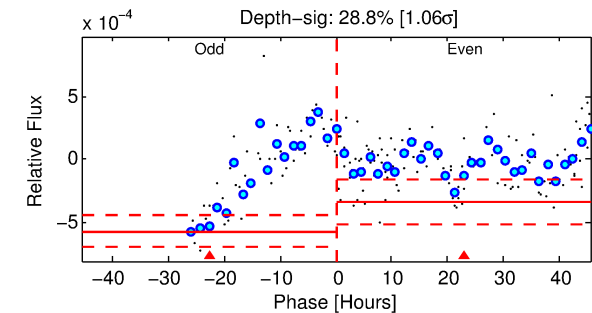
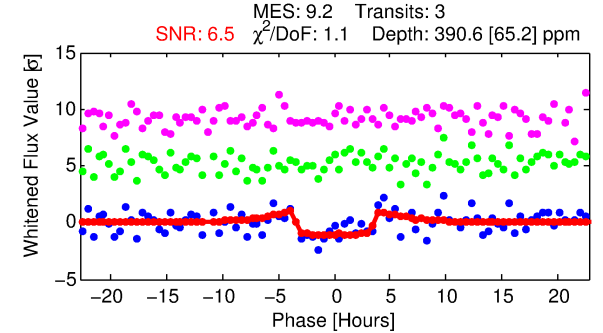
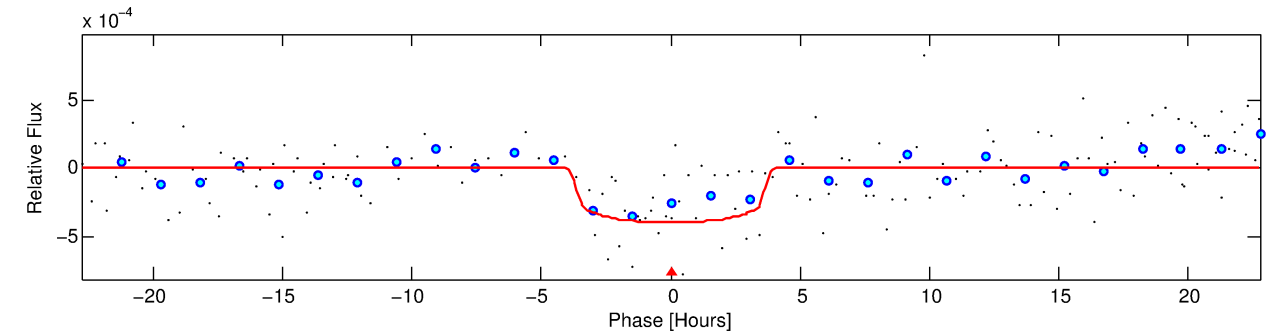
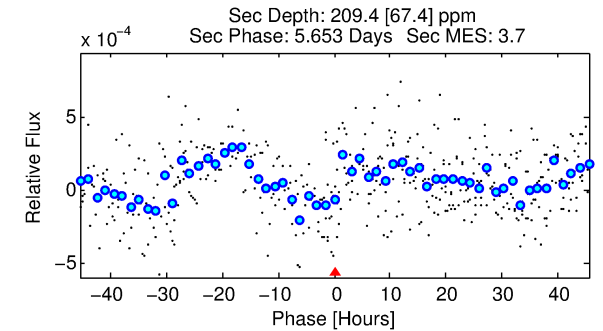
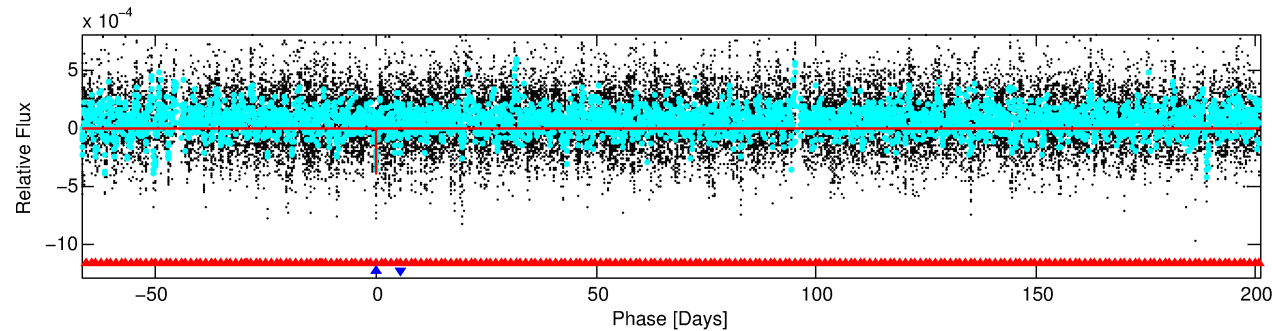
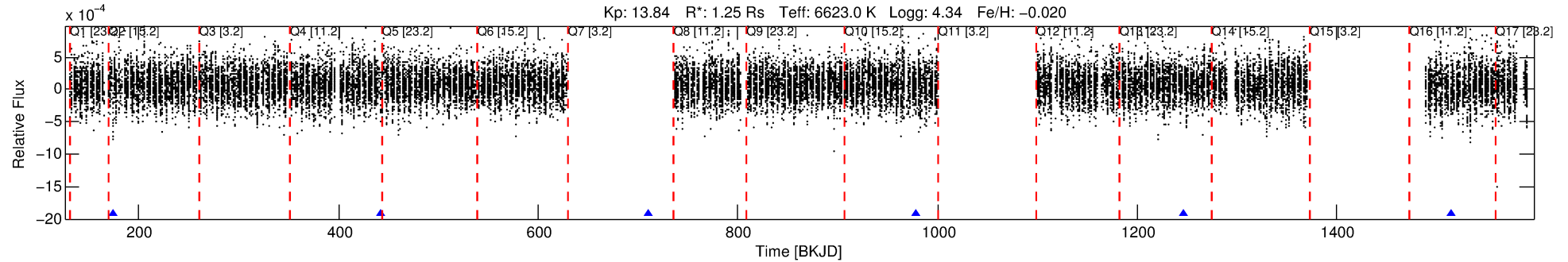
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010679505-02

No Significant Match Found

DV One-Page Summary

KIC: 10679505 Candidate: 2 of 2 Period: 267.874 d



DV Fit Results:

Period = 267.87386 [0.00435] d
Epoch = 174.8118 [0.0149] BKJD
Rp/R* = 0.0189 [0.0199]
a/R* = 225.58 [1278.33]
b = 0.58 [6.48]
Seff = 3.52 [1.37]
Teq = 349 [34] K
Rp = 2.59 [2.85] Re
a = 0.8785 [0.2272] AU
Ag = 13233.06 [28597.28] [0.46σ]
Teff = 5791 [3089] K [1.76σ]

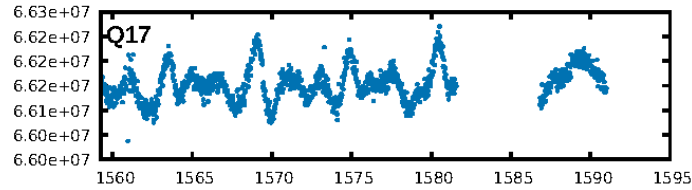
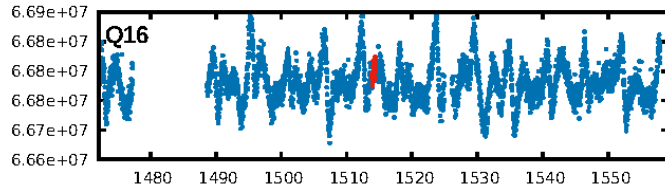
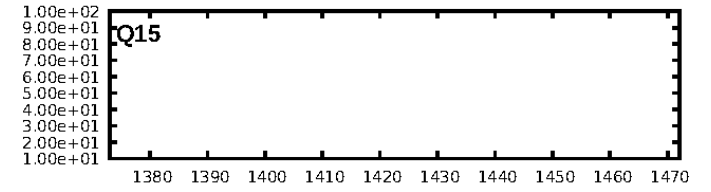
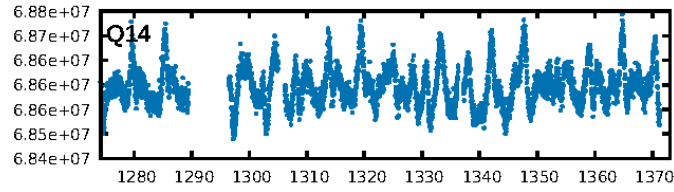
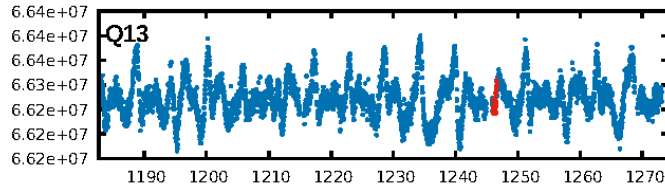
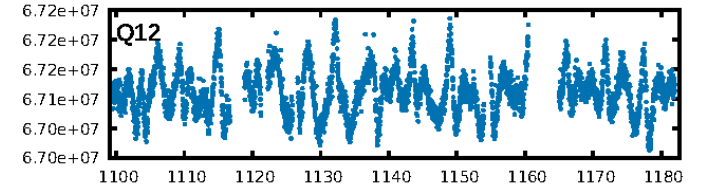
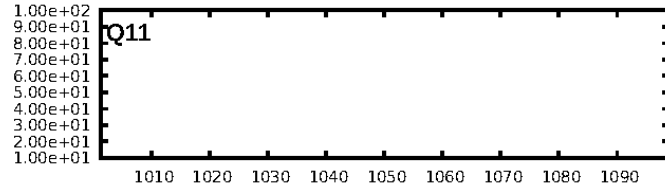
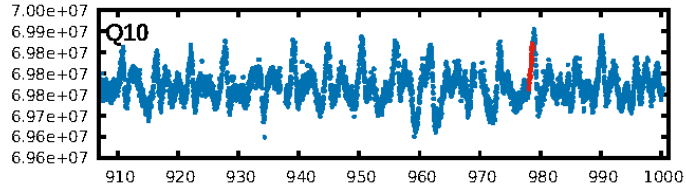
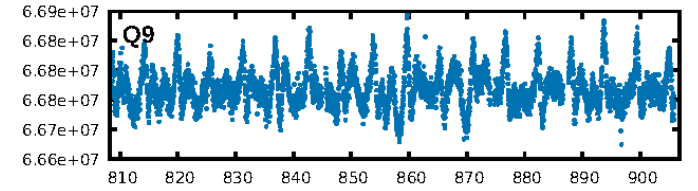
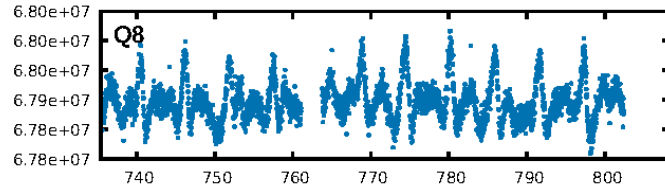
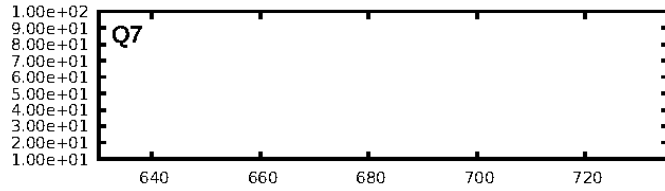
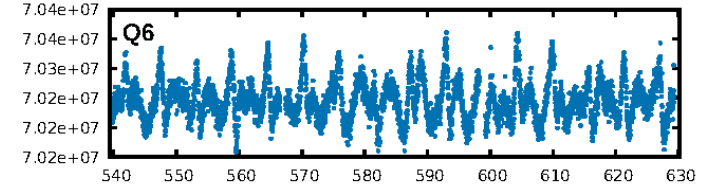
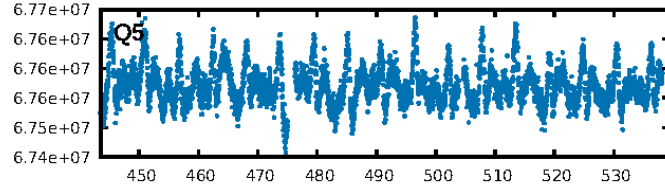
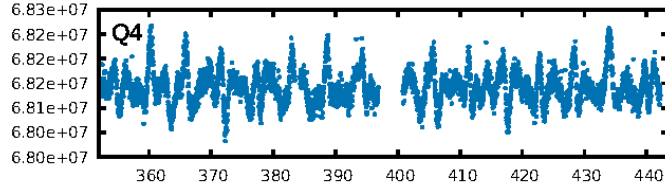
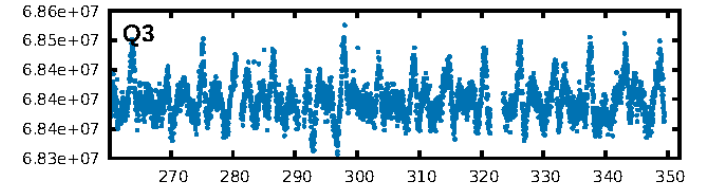
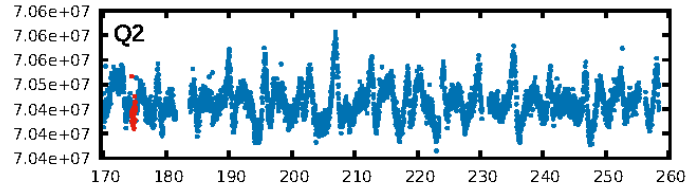
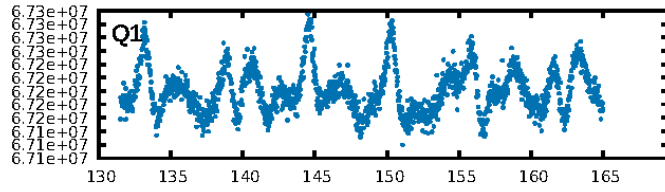
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [340.74σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.2%
ModelChiSquareGof-sig: 93.1%
Bootstrap-pfa: 4.62e-19
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -49.21
Centroid-sig: 7.0%
Centroid-so: 1.668 arcsec [1.50σ]
OotOffset-rm: 0.658 arcsec [0.63σ]
KicOffset-rm: 0.505 arcsec [0.48σ]
OotOffset-st: 2/0/1/0 [3]
KicOffset-st: 2/0/1/0 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [3/3]

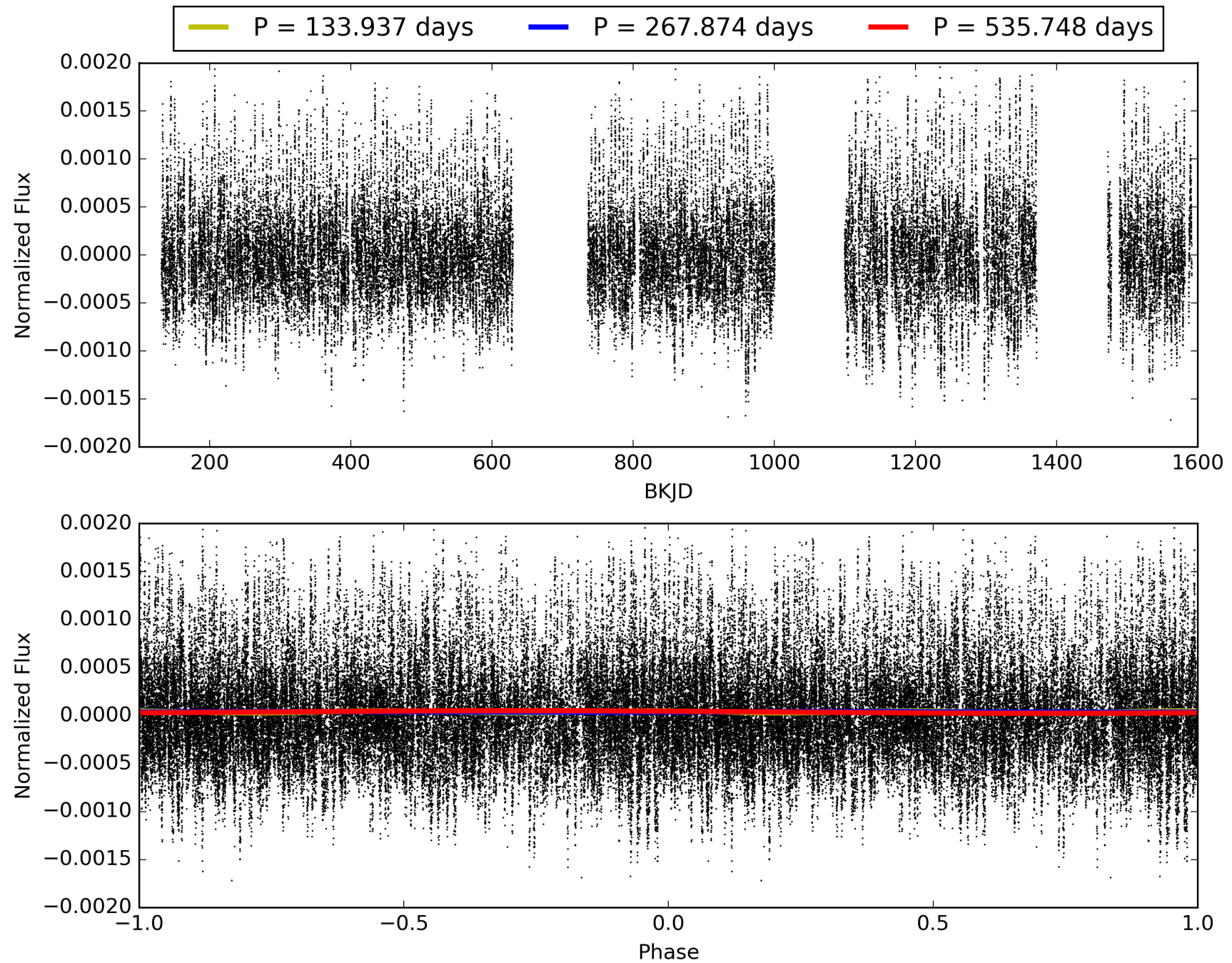
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 03:58:56 Z

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

TCE 010679505-02, PDC Light Curves

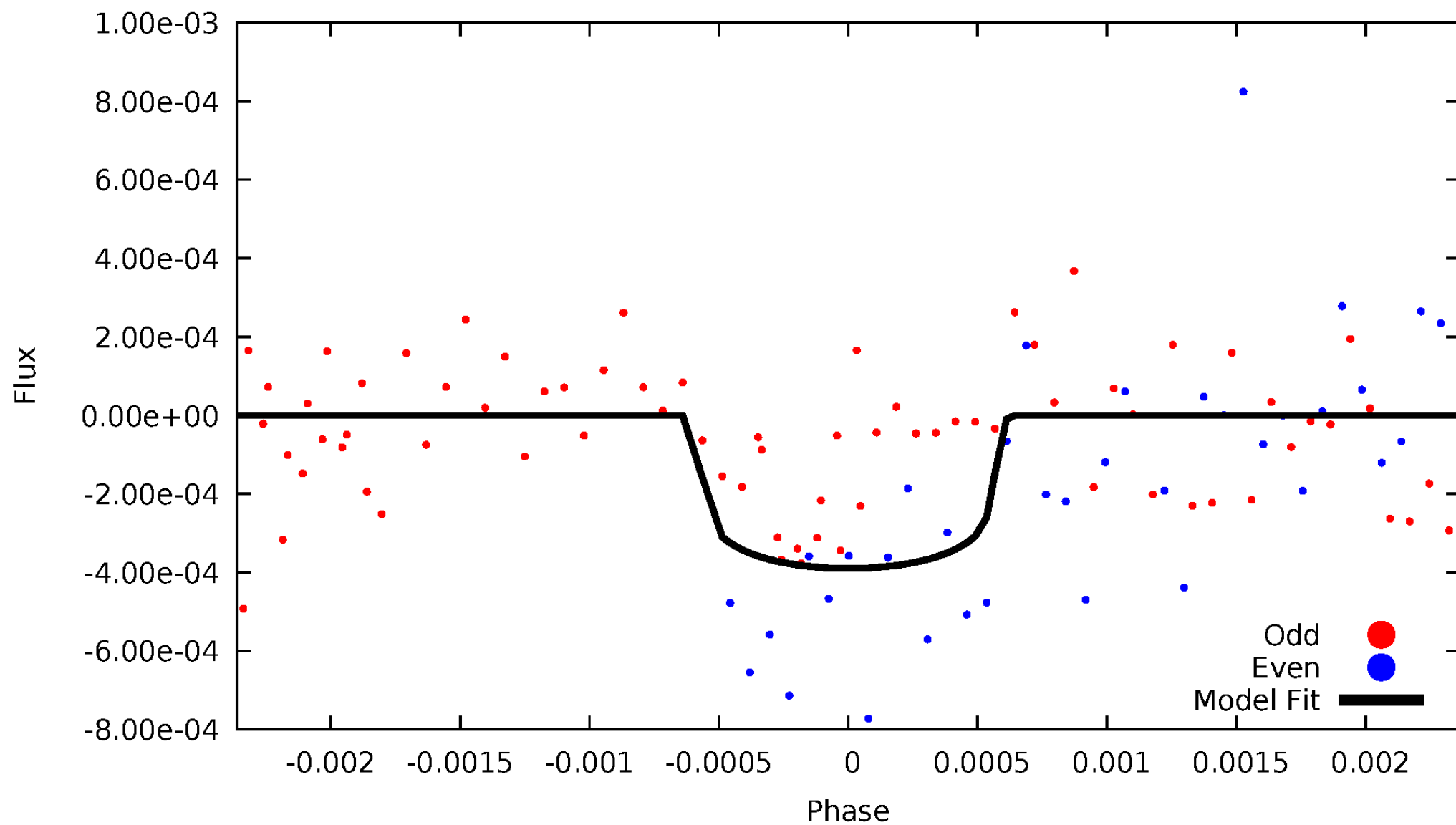


TCE 010679505-02



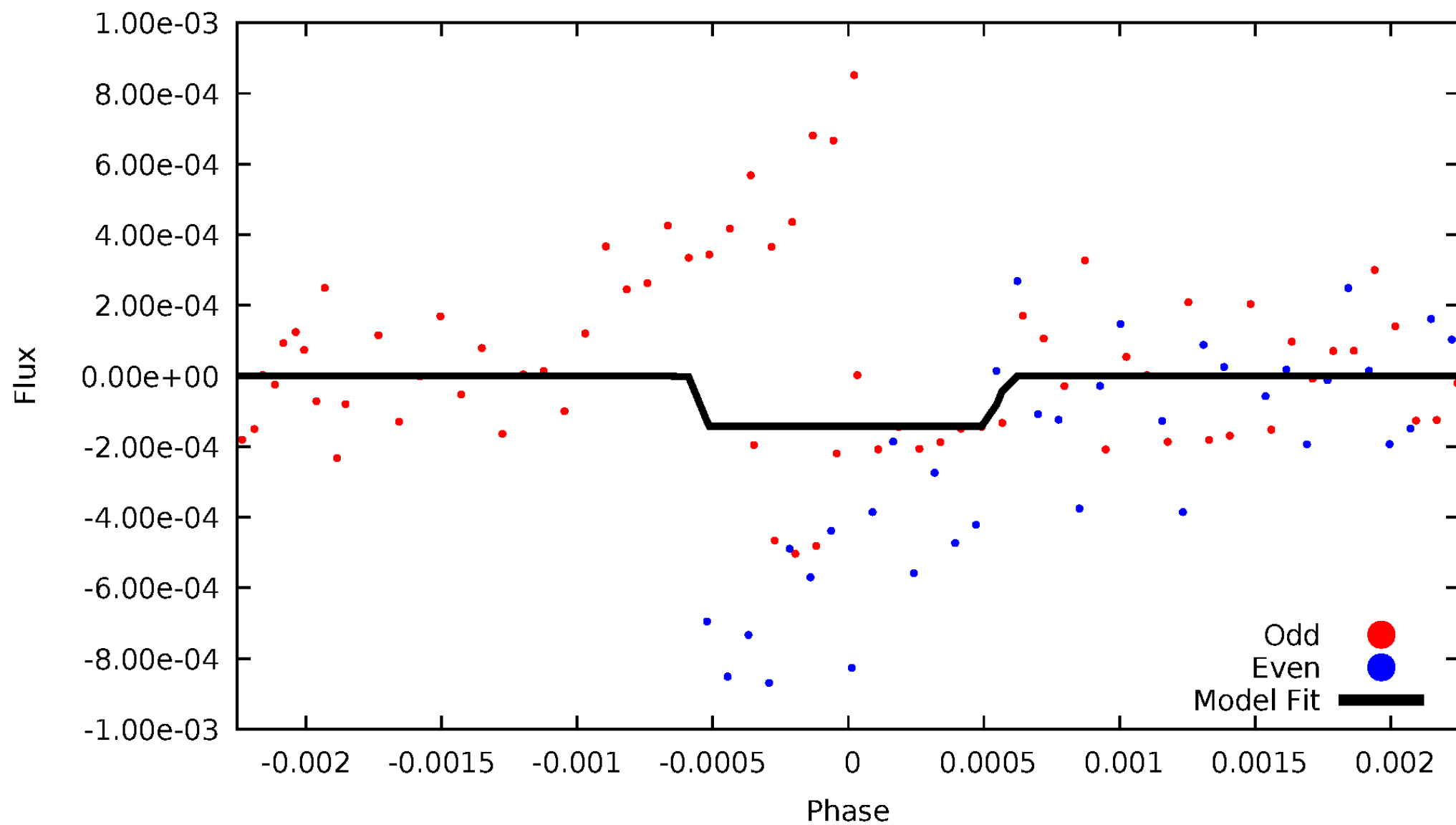
DV Odd/Even

TCE 010679505-02



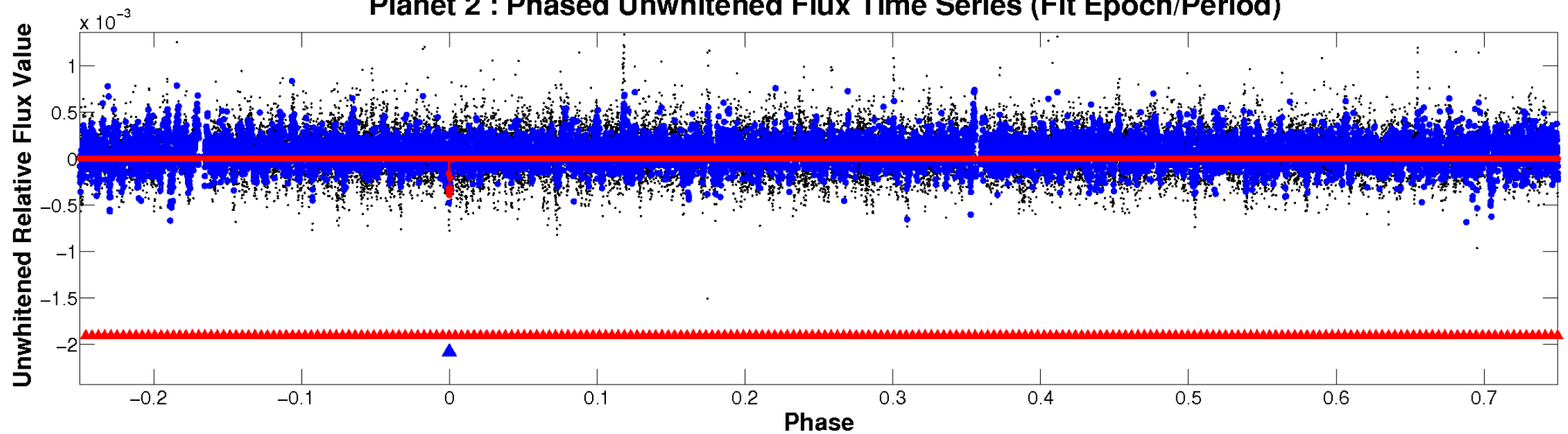
ALT Odd/Even

TCE 010679505-02

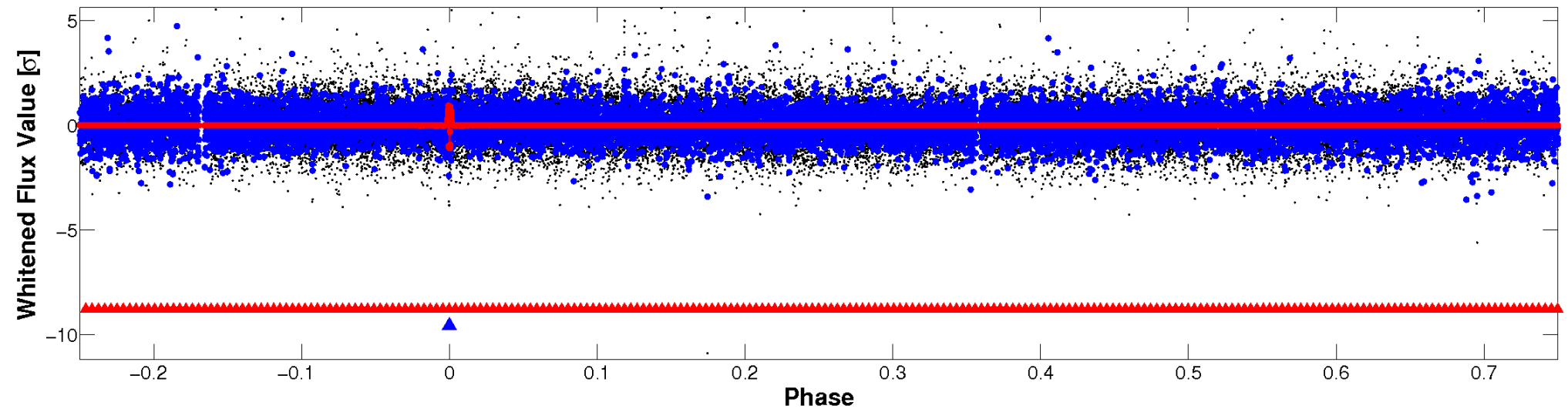


Non-Whitened Vs. Whitened Light Curve

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

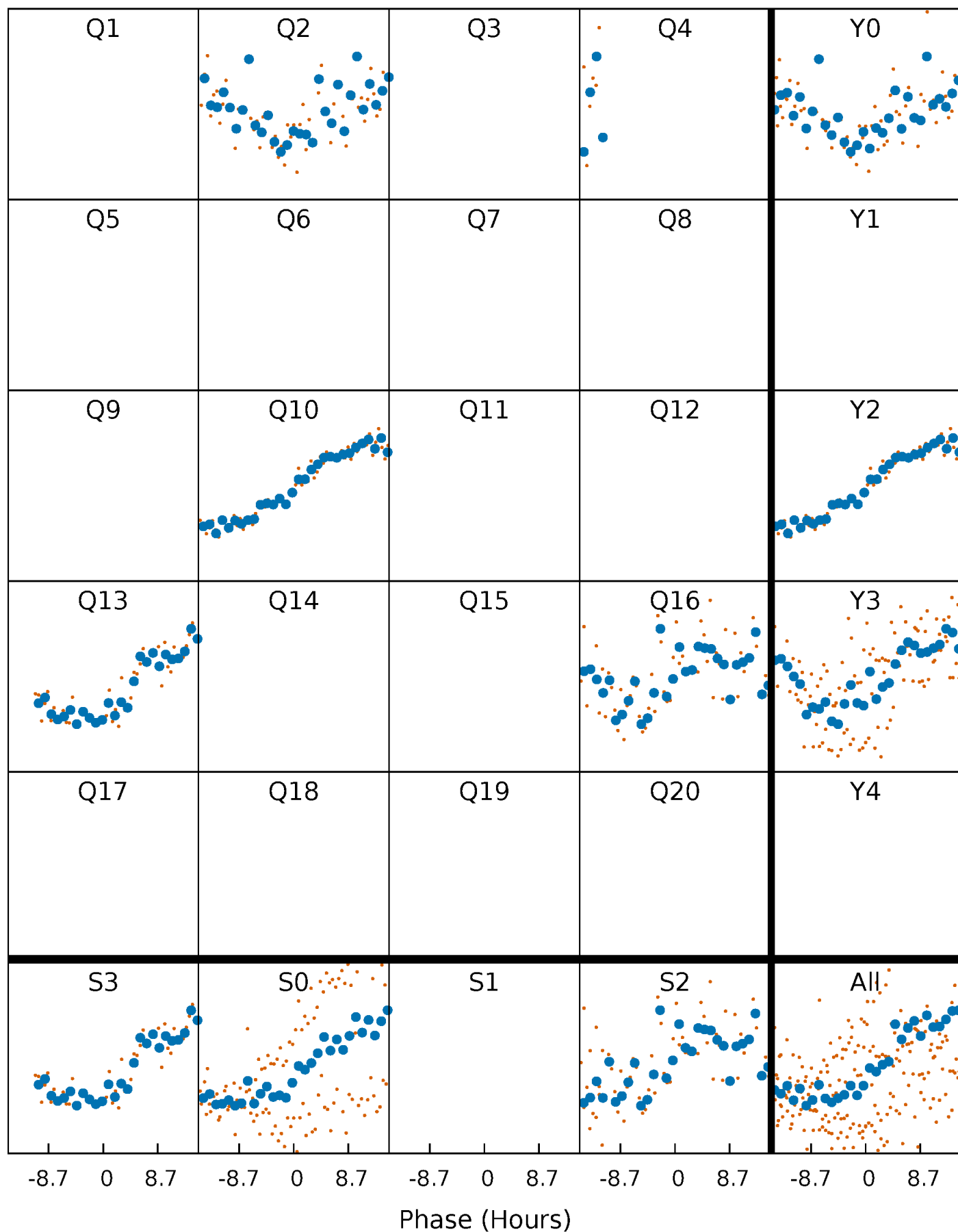


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



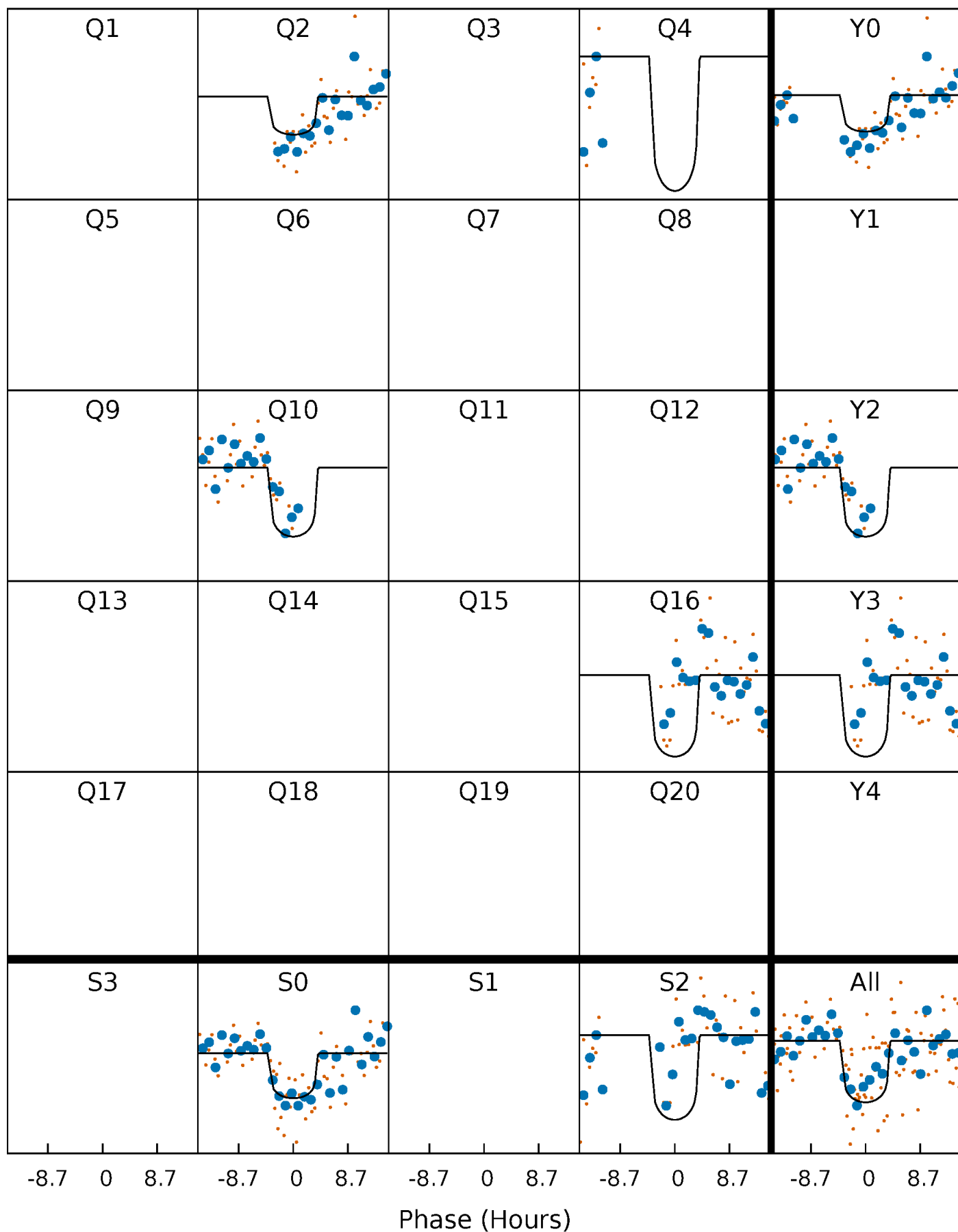
PDC Quarter-Phased Transit Curves

TCE 010679505-02 P=267.873857 Days $T_0=174.811820$ (BKJD)



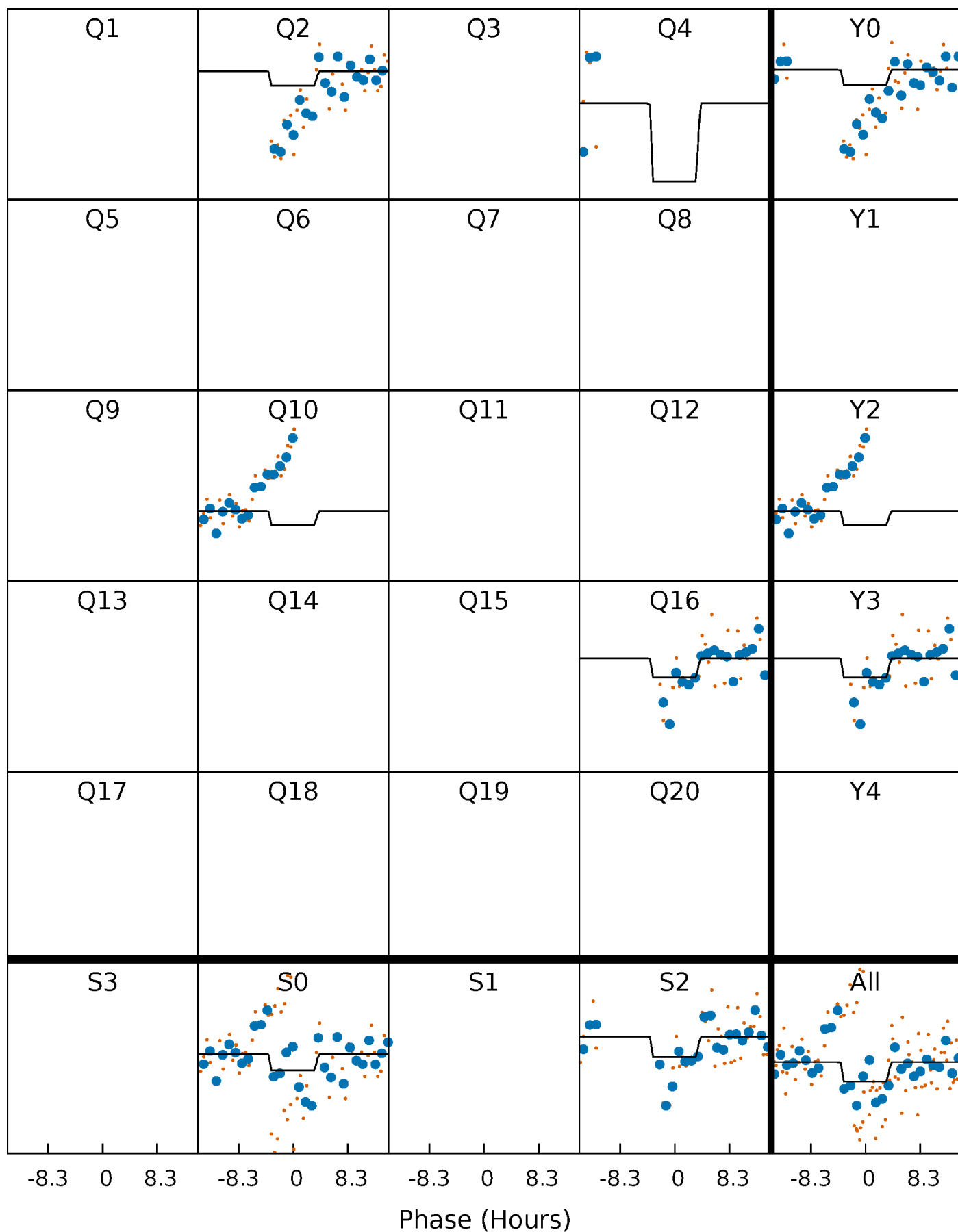
DV Quarter-Phased Transit Curves

TCE 010679505-02 P=267.873857 Days $T_0=174.811820$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

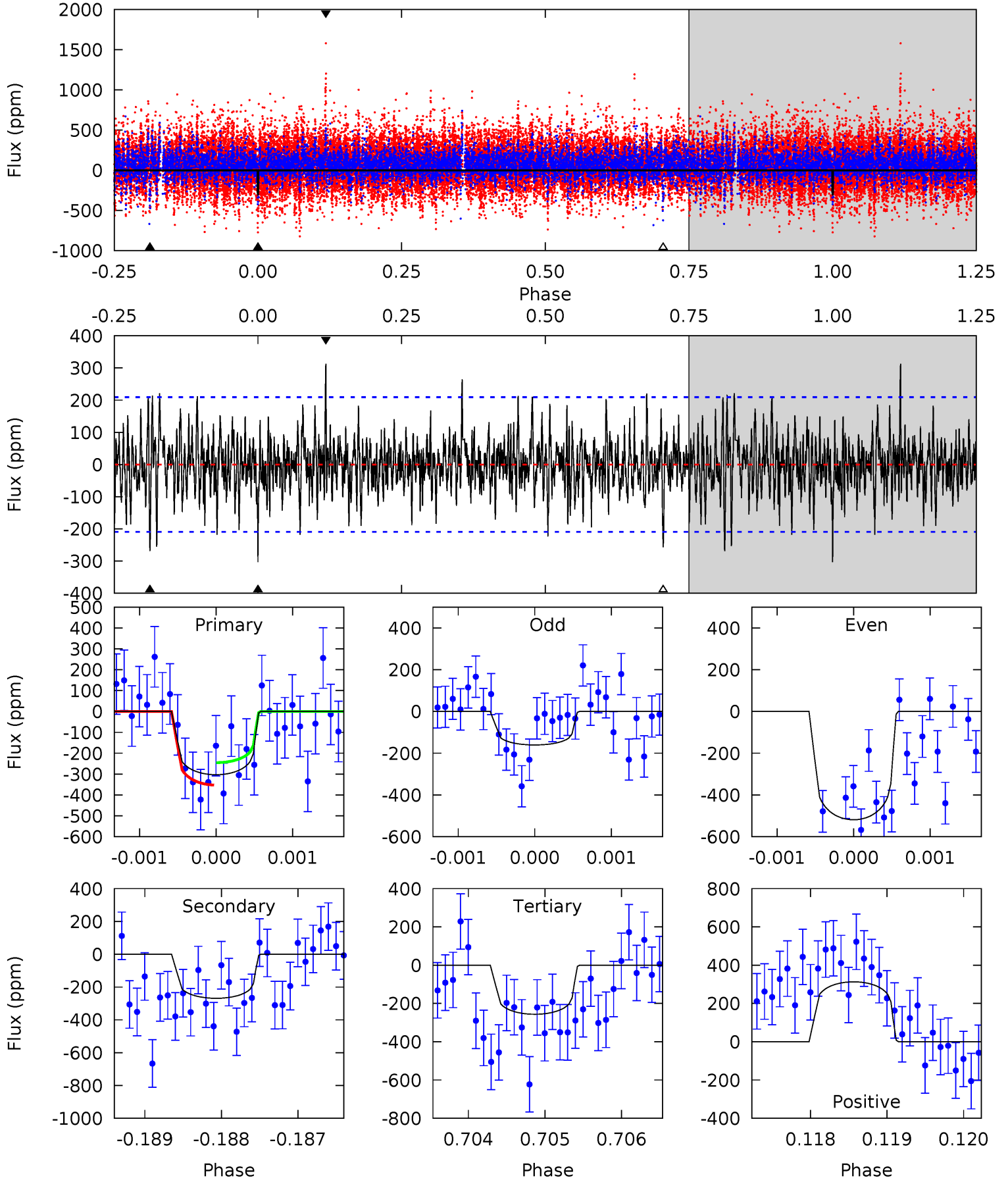
TCE 010679505-02 P=267.870349 Days $T_0=174.829057$ (BKJD)



DV Model-Shift Uniqueness Test

010679505-02, P = 267.873857 Days, E = 174.811820 Days

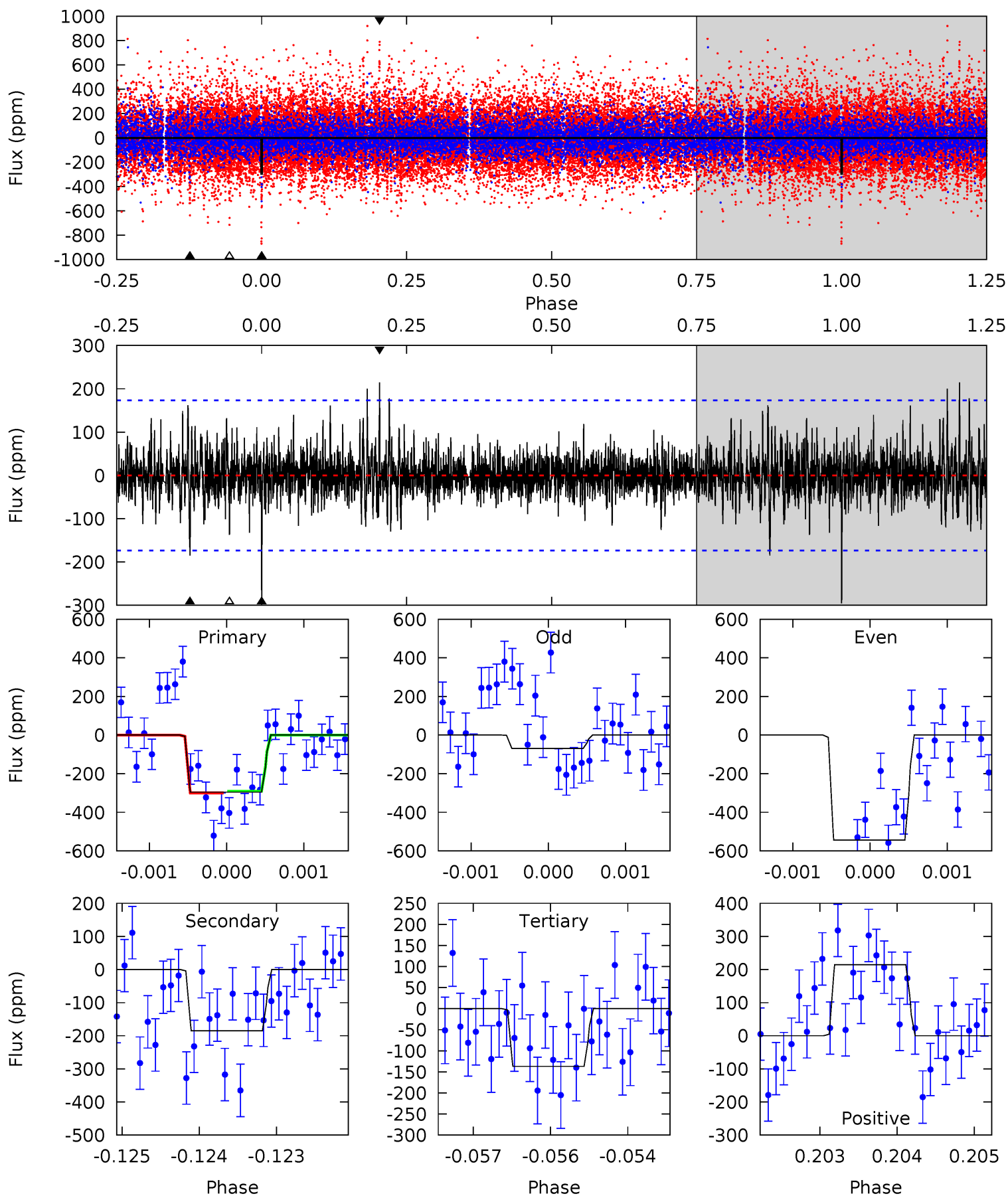
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.87	6.97	6.66	8.13	5.43	3.26	1.74	1.21	-0.26	0.31	-1.16	4.67	1.11	0.51	1.40



Alt Model-Shift Uniqueness Test

010679505-02, P = 267.870349 Days, E = 174.829057 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.26	5.79	4.30	6.73	5.44	3.27	1.16	4.96	2.53	1.49	-0.94	7.83	0.34	0.42	0.14



Stellar Parameters For KIC 010679505

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6623^{+161}_{-221}	$4.341^{+0.065}_{-0.195}$	$-0.020^{+0.250}_{-0.300}$	$1.255^{+0.397}_{-0.159}$	$1.265^{+0.168}_{-0.187}$	$0.901^{+0.311}_{-0.449}$
	+2%/-3%	+1%/-4%	+1250%/-1500%	+32%/-13%	+13%/-15%	+34%/-50%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 010679505-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-268 ± 39	$3.27^{+2.63}_{-2.10}$	496^{+34}_{-25}	5558^{+4298}_{-1208}	10367^{+70406}_{-7225}
Alt.	-185 ± 32	$2.79^{+2.38}_{-1.82}$	495^{+35}_{-23}	5456^{+4710}_{-1182}	9543^{+72915}_{-6680}

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

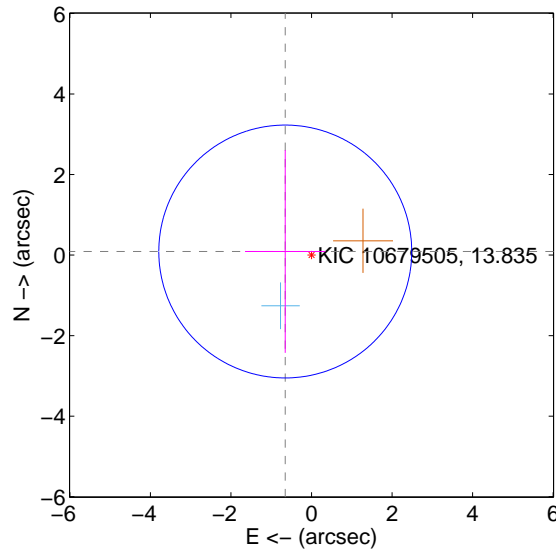
Supplemental centroid analysis for 010679505-02. Kepler magnitude: 13.84. Transit SNR 6.54

There are 1 quarters with good PRF difference image offsets

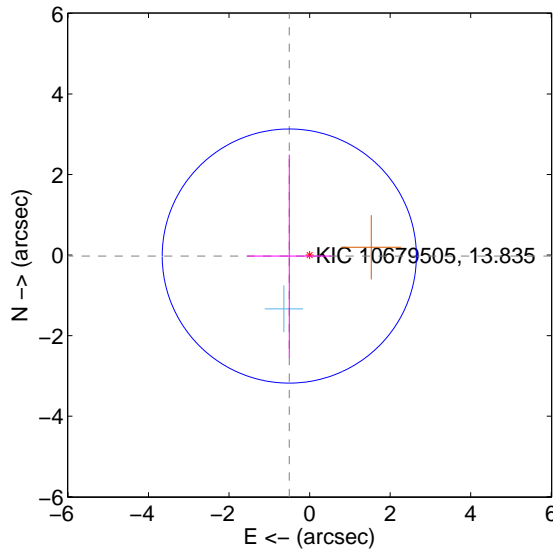
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.658 ± 1.047	0.63	0.652 ± 0.999	0.089 ± 2.518
PRF-fit source offset from KIC position	0.505 ± 1.052	0.48	0.504 ± 1.046	-0.024 ± 2.519
photometric centroid source offset	1.67 ± 1.11	1.50	-1.03 ± 1.01	-1.31 ± 1.17

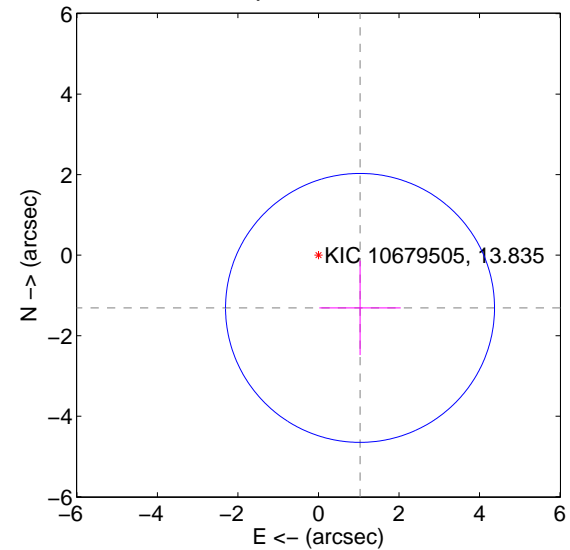
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

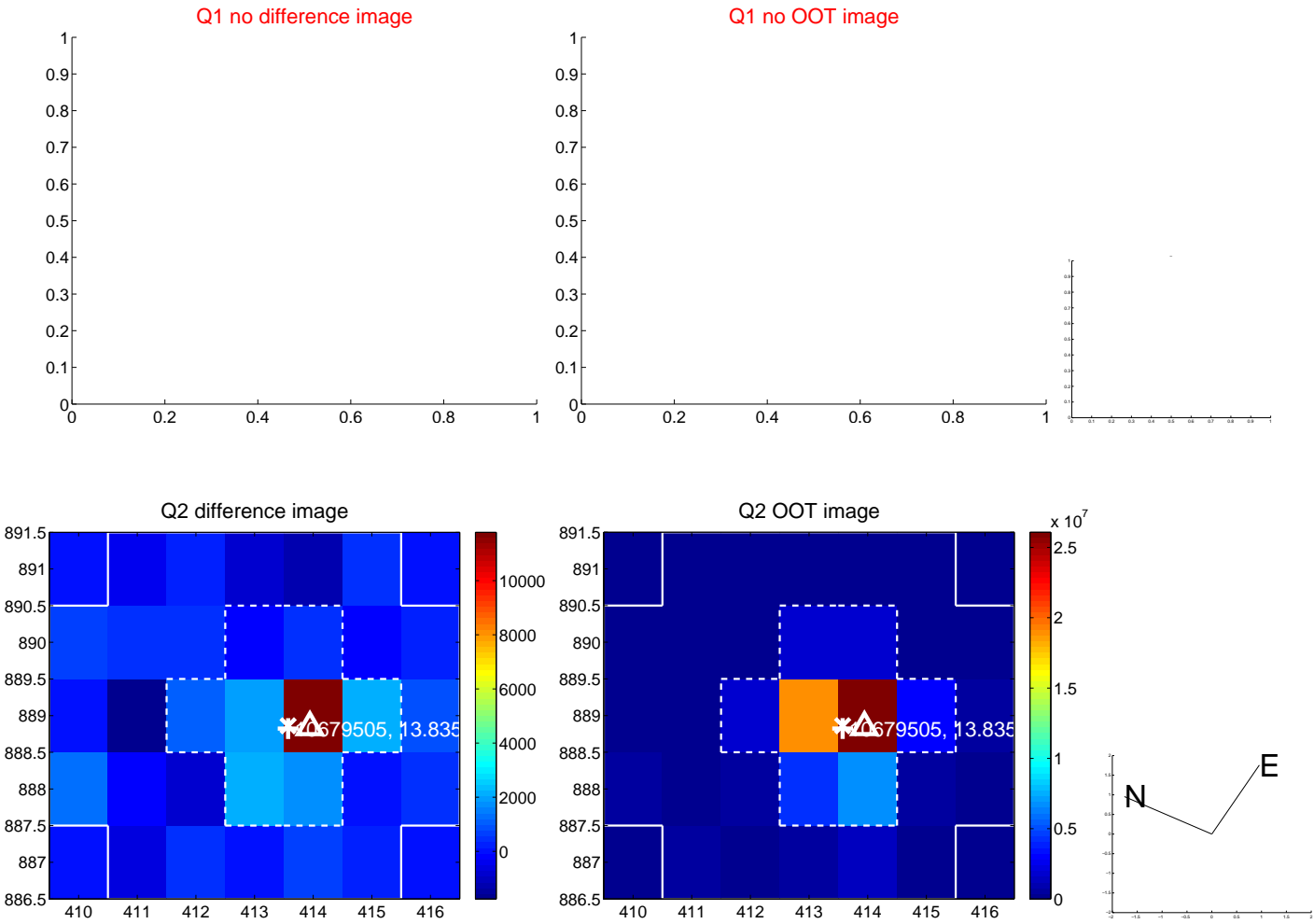


offset from photometric centroids



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

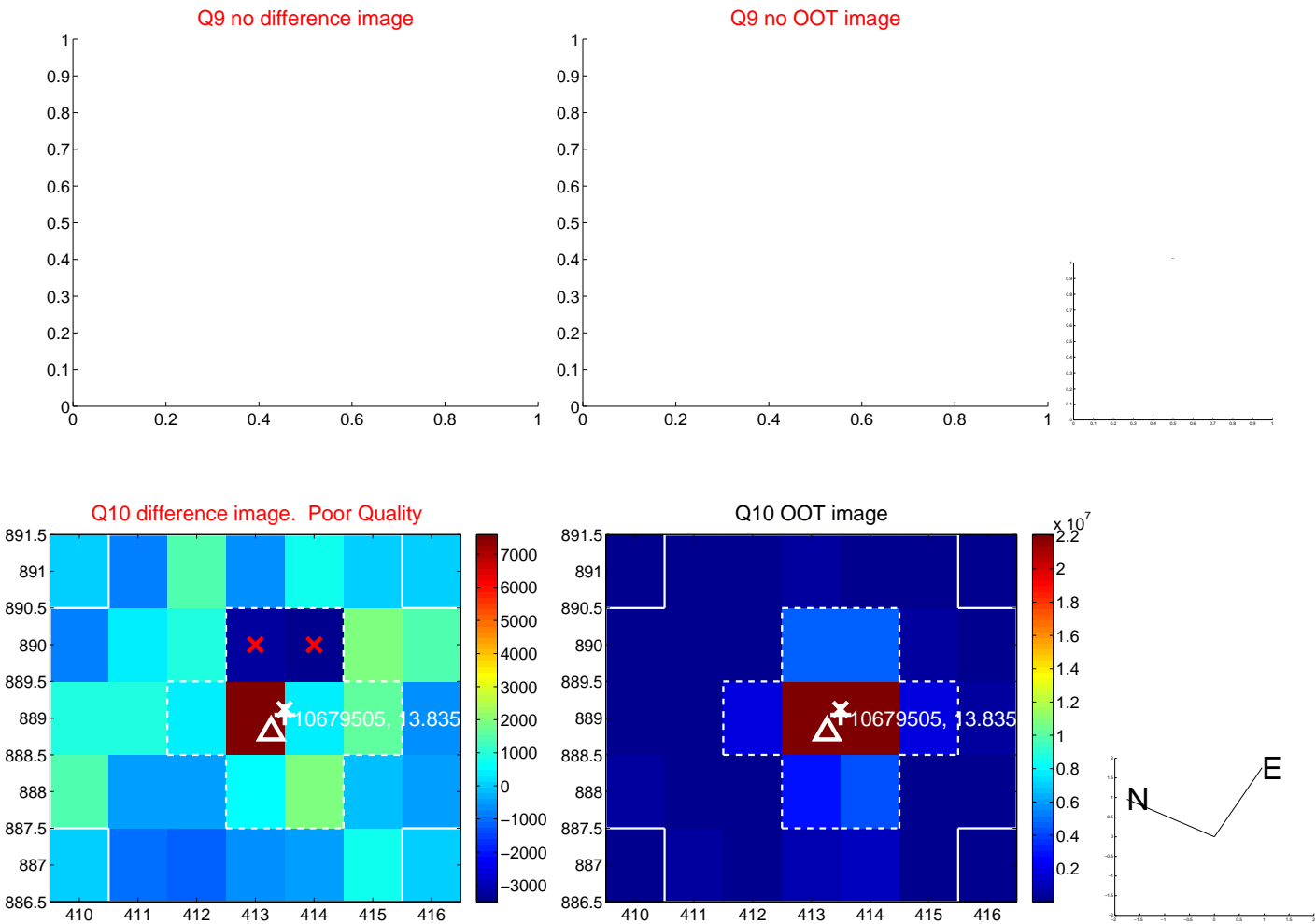
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



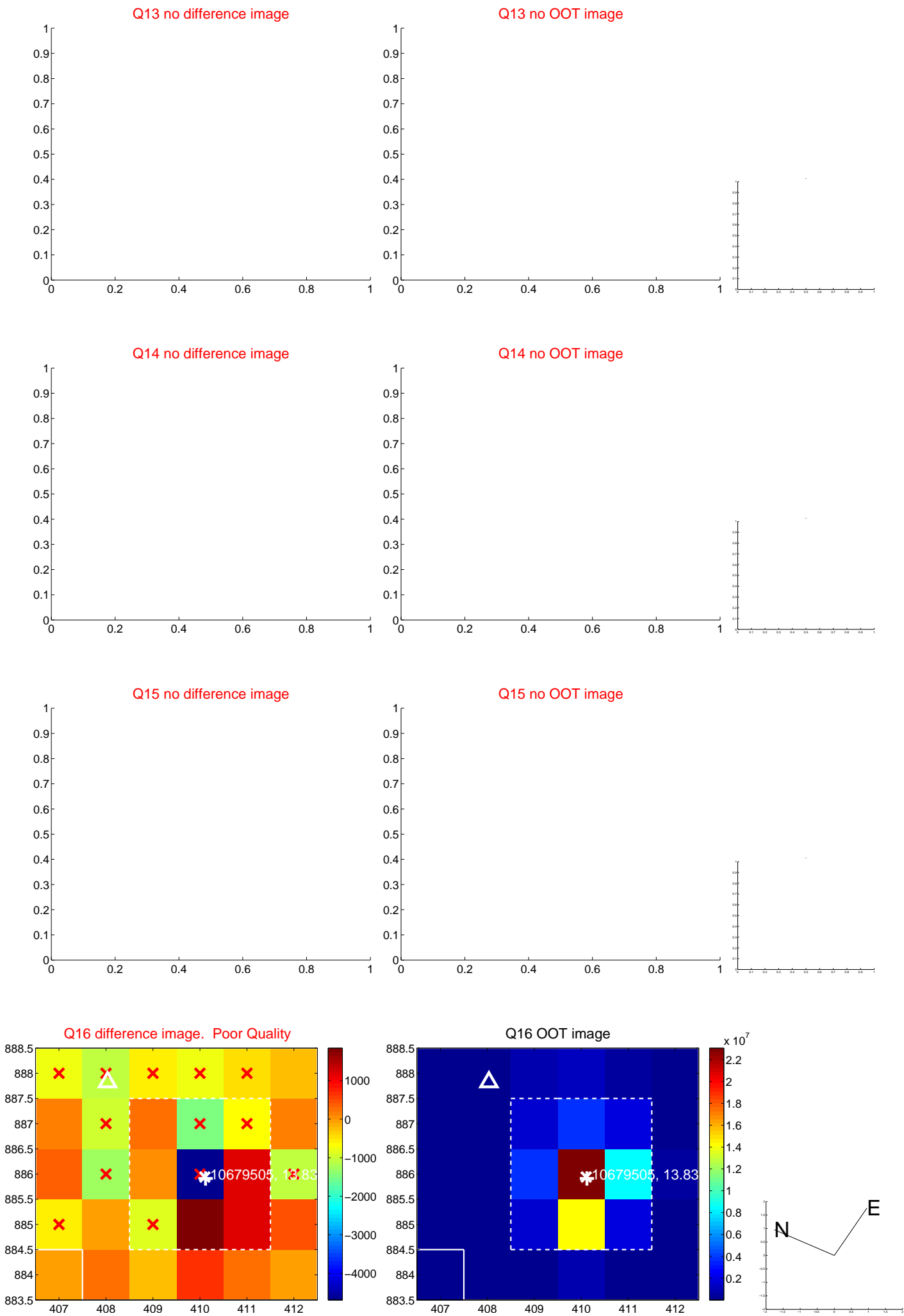
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



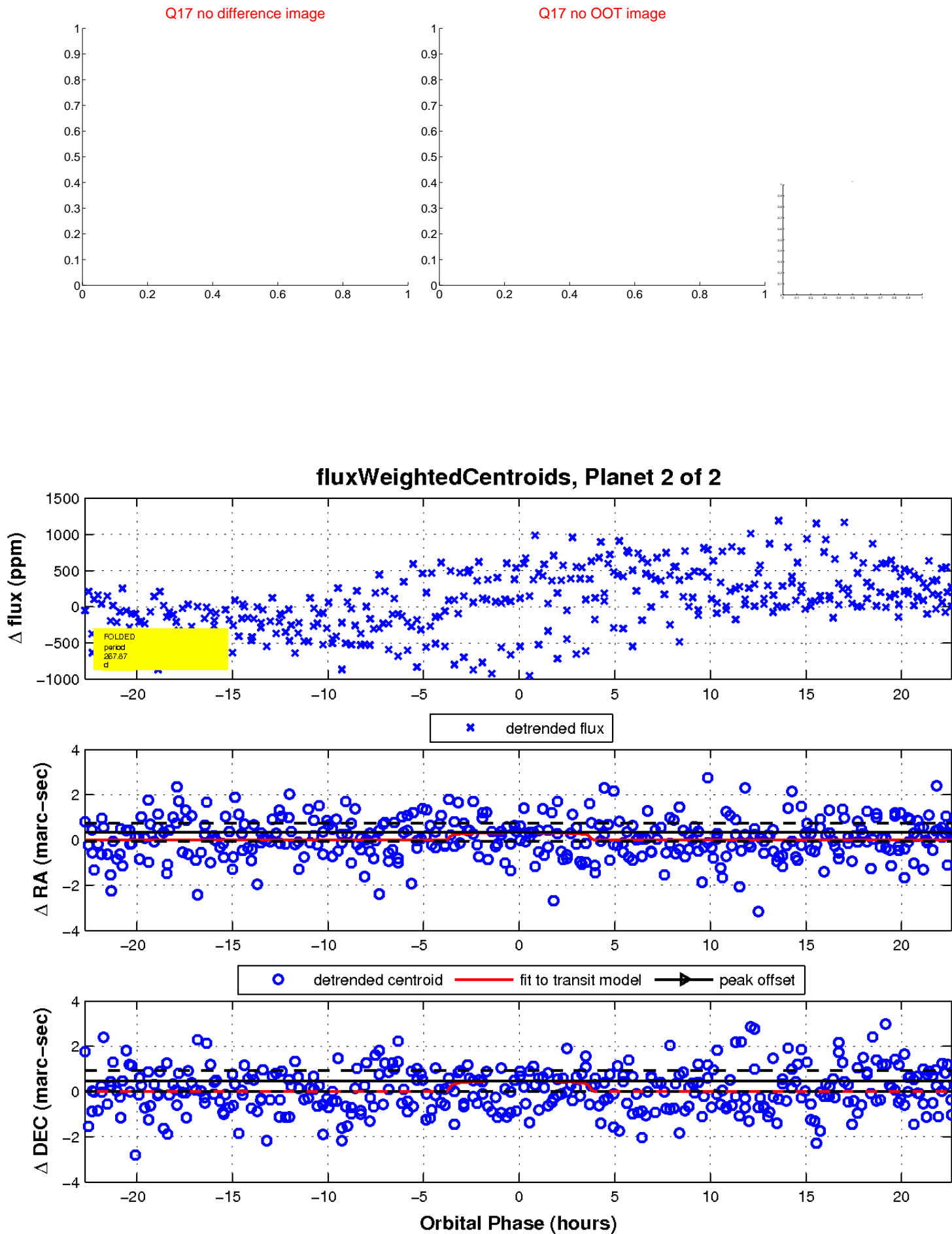
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

