

KIC 008975574

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})
008975574-02	OBS	No	470.659842	136.098894	352.2	3.925	12.5	7.1	2.24	5002	4.26	2.08

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008975574-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST

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

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

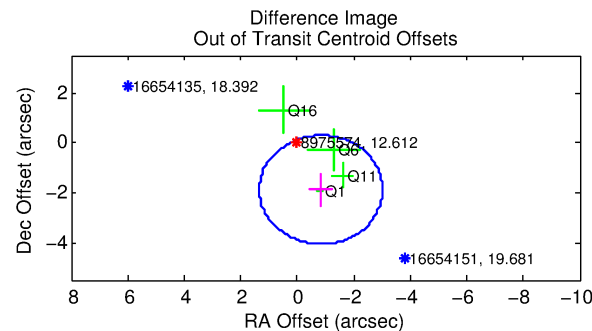
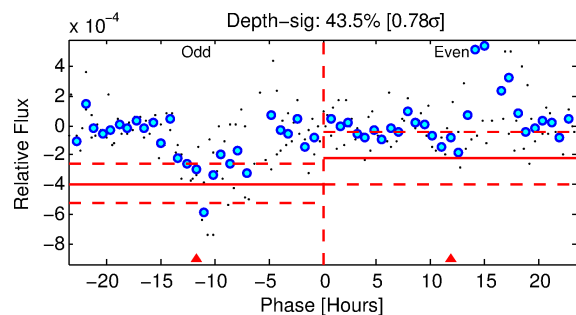
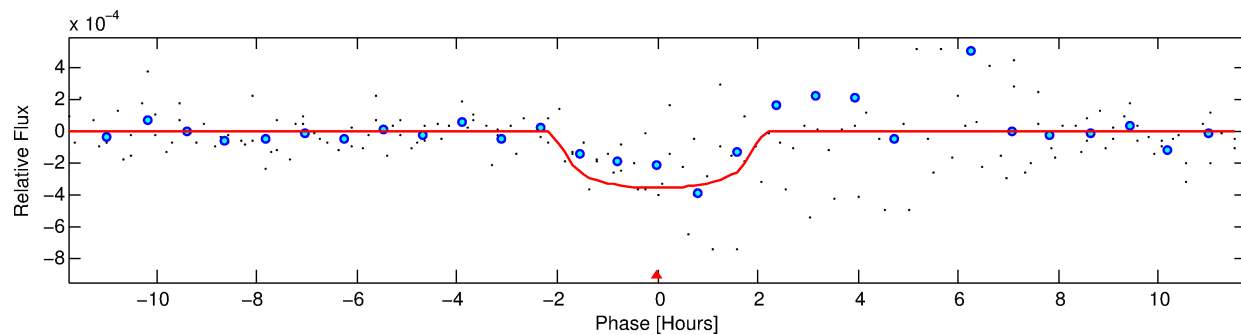
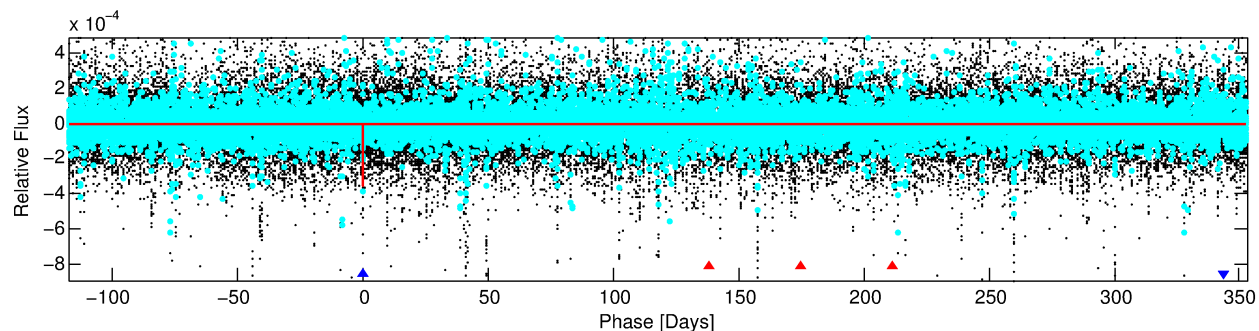
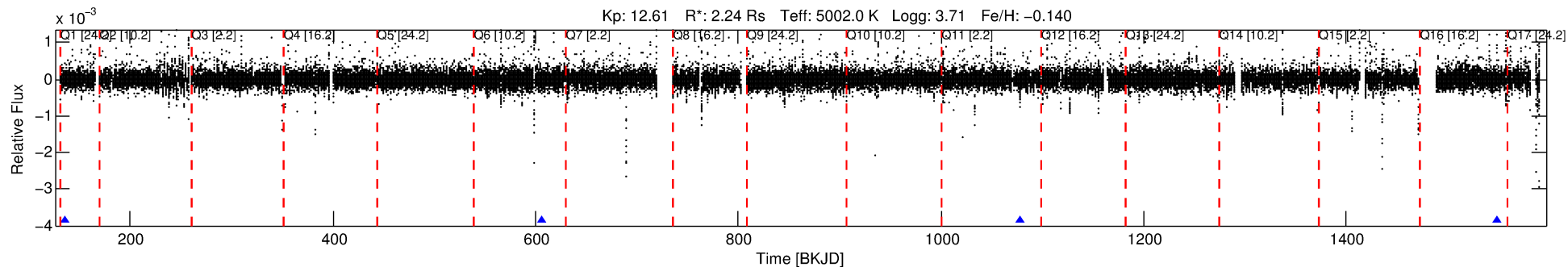
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008975574-02

No Significant Match Found

DV One-Page Summary

KIC: 8975574 Candidate: 2 of 2 Period: 470.660 d



DV Fit Results:

Period = 470.65984 [0.00429] d
Epoch = 136.0989 [0.0086] BKJD
Rp/R* = 0.0174 [0.0363]
a/R* = 810.27 [5897.80]
b = 0.50 [11.02]
Seff = 2.08 [3.02]
Teq = 306 [111] K
Rp = 4.26 [9.33] Re
a = 1.1646 [0.9548] AU
Ag = 1144.94 [5941.65] [0.19 sigma]
Teffp = 2755 [3434] K [0.71 sigma]

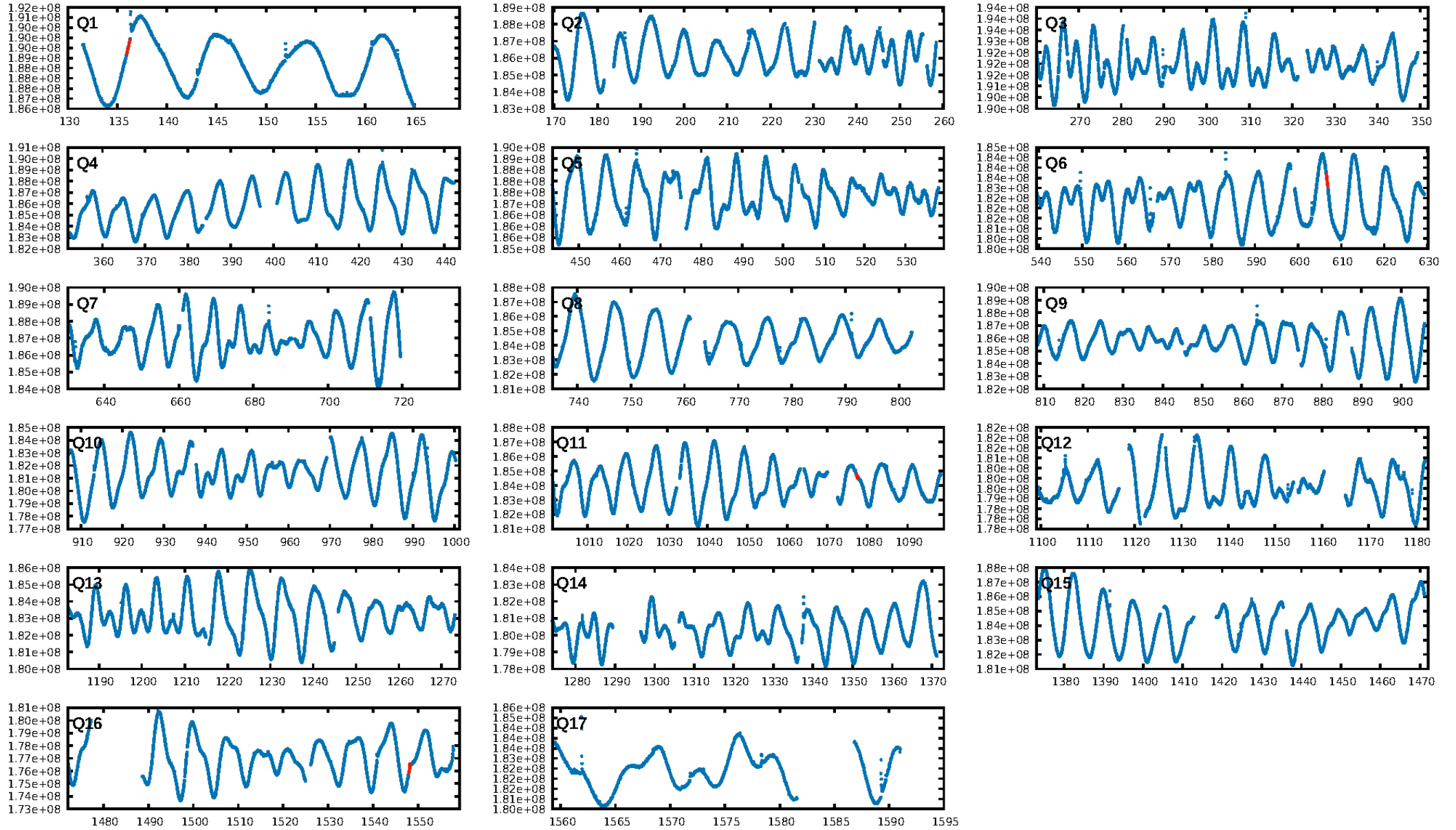
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [168.86 sigma]
ModelChiSquare2-sig: 15.4%
ModelChiSquareGof-sig: 91.3%
Bootstrap-pfa: 1.06e-09
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.01756
Centroid-sig: N/A
Centroid-so: 0.075 arcsec [0.07 sigma]
OotOffset-rm: 2.064 arcsec [2.84 sigma]
KicOffset-rm: 1.828 arcsec [1.69 sigma]
OotOffset-st: 1/1/1/1 [4]
KicOffset-st: 1/1/1/1 [4]
DiffImageQuality-fgm: 0.50 [2/4]
DiffImageOverlap-fno: 1.00 [4/4]

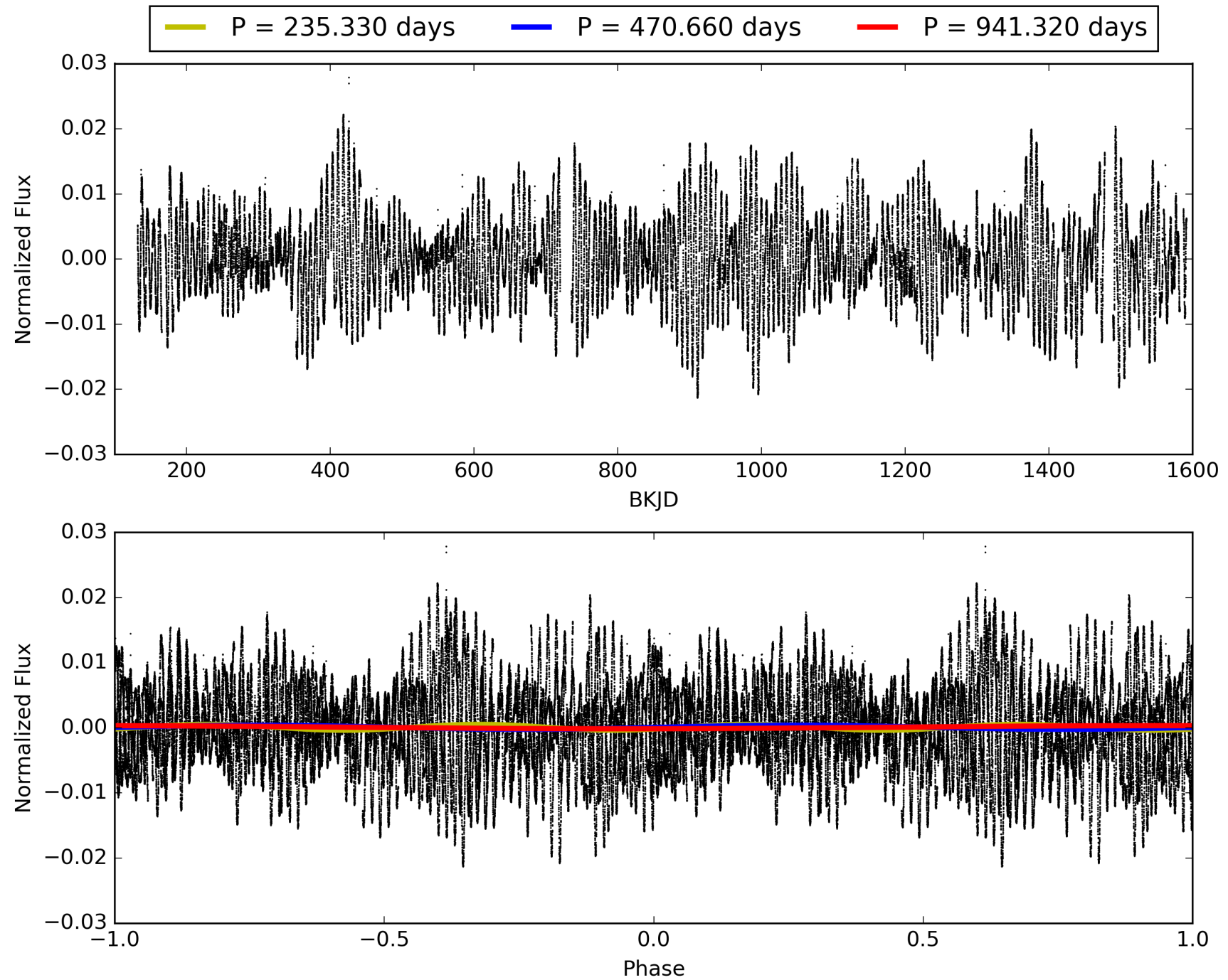
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 11:20:58 Z

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

TCE 008975574-02, PDC Light Curves

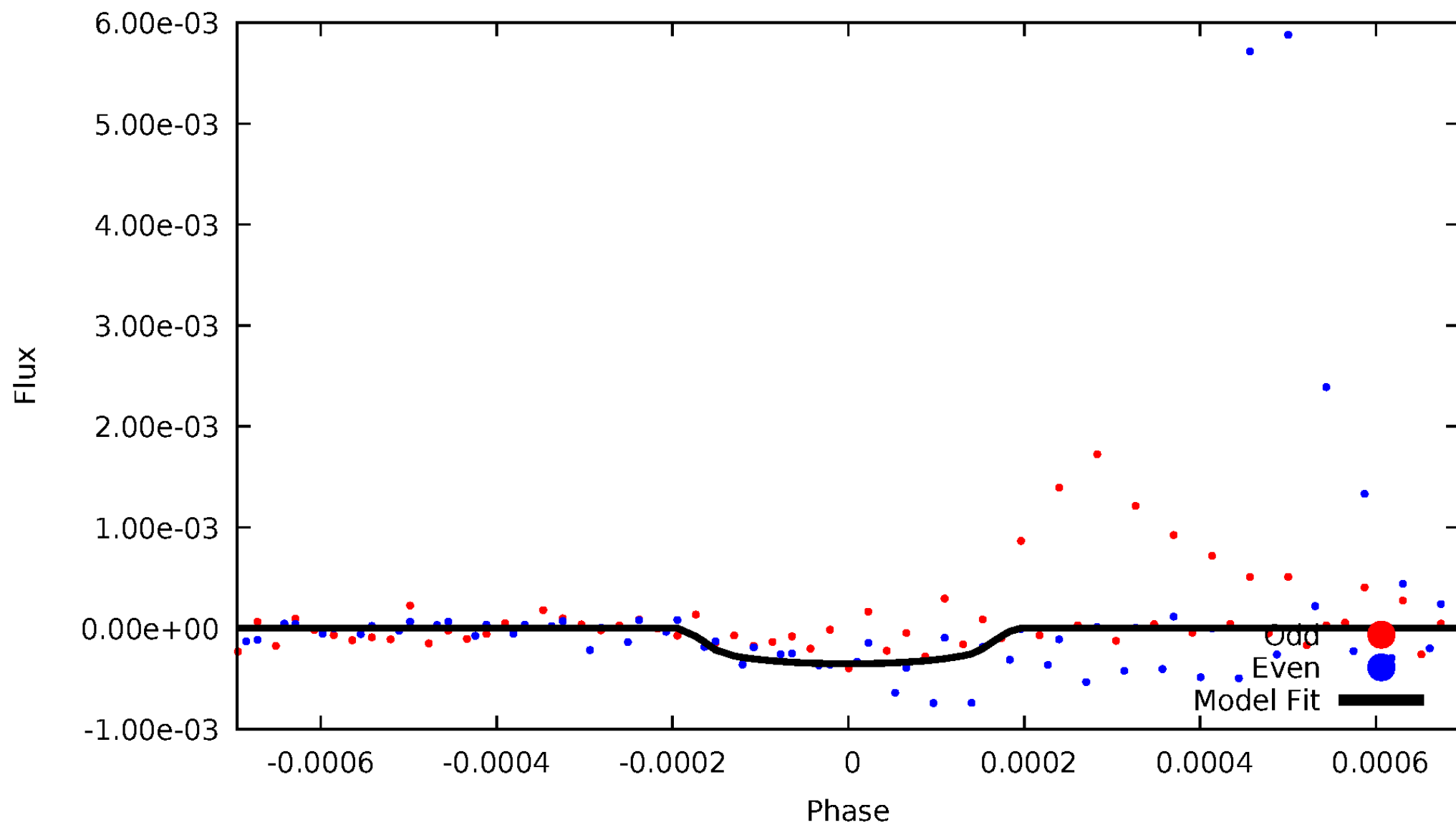


TCE 008975574-02



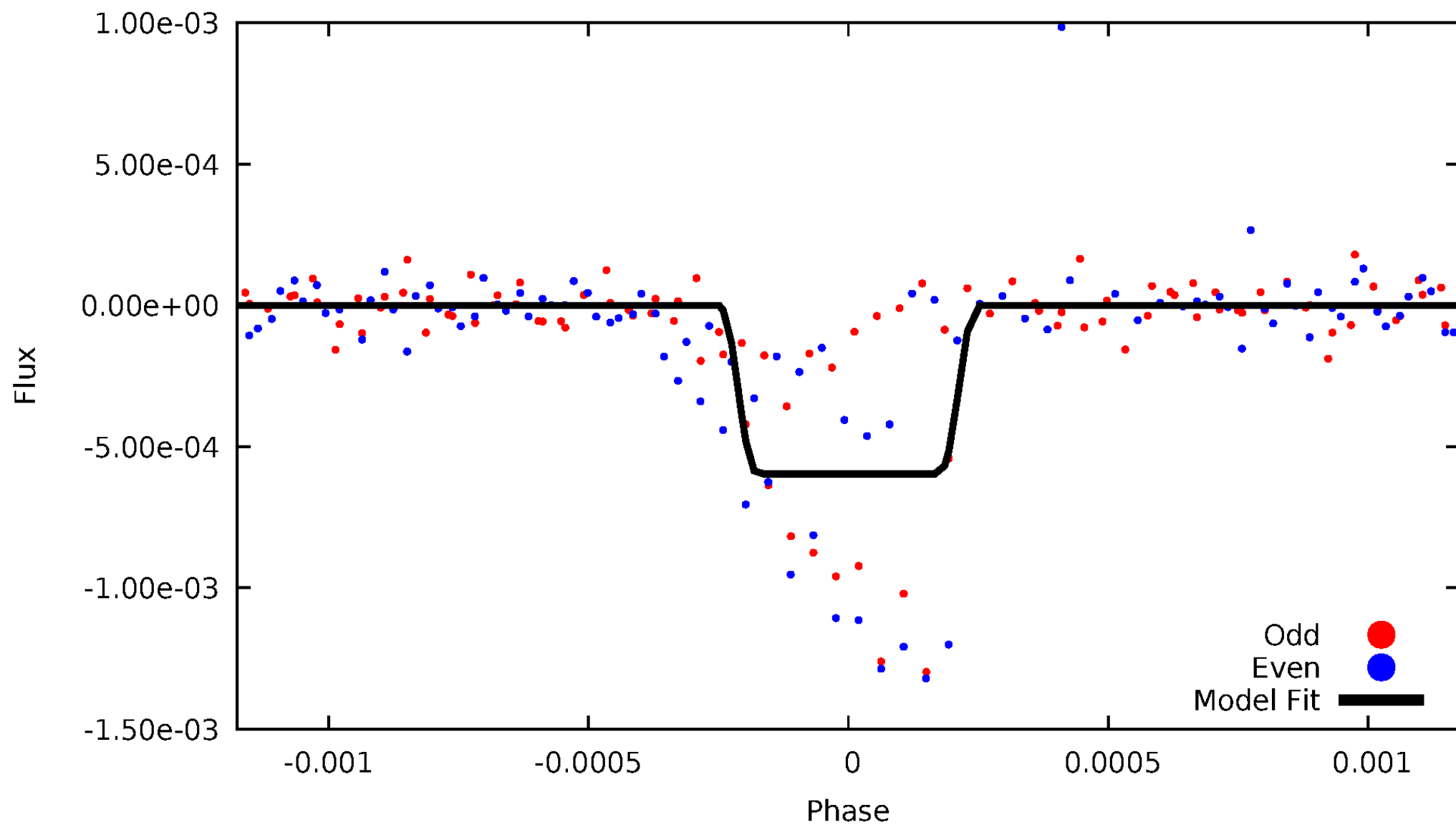
DV Odd/Even

TCE 008975574-02



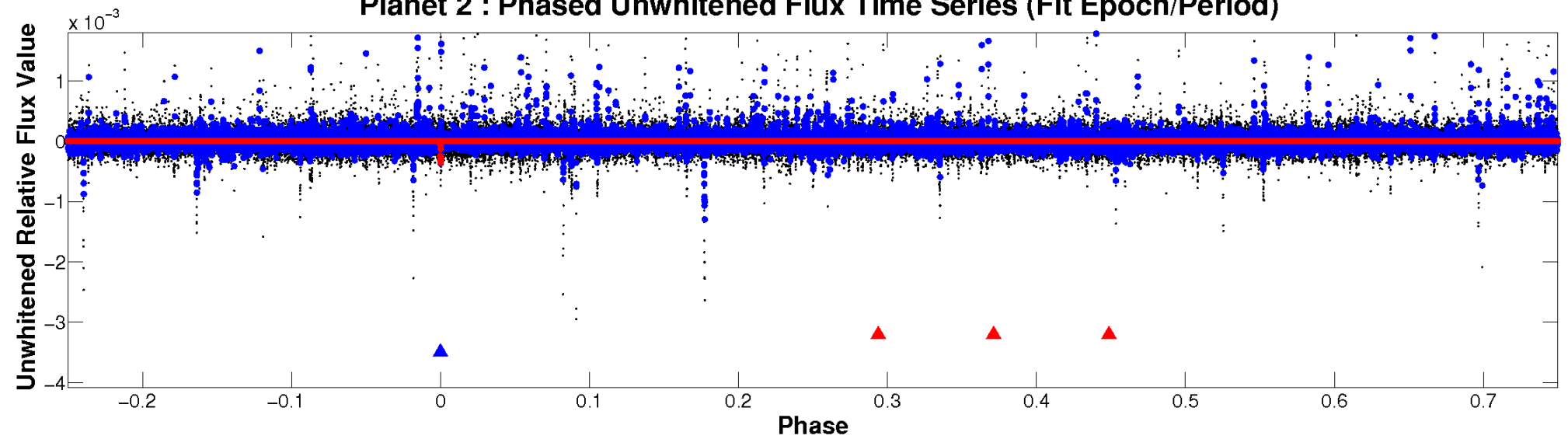
ALT Odd/Even

TCE 008975574-02

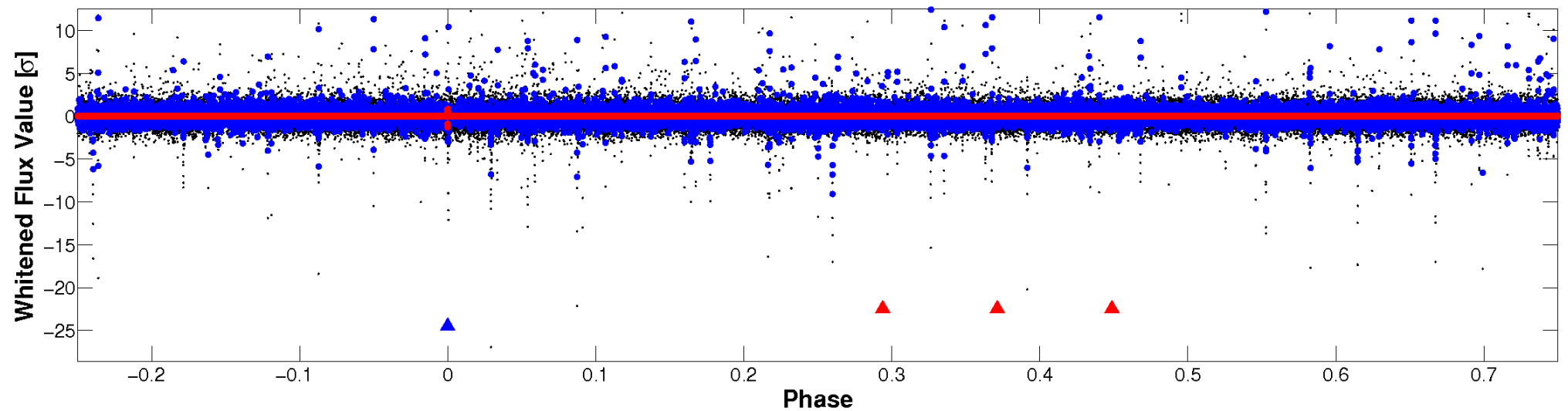


Non-Whitened Vs. Whitened Light Curve

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

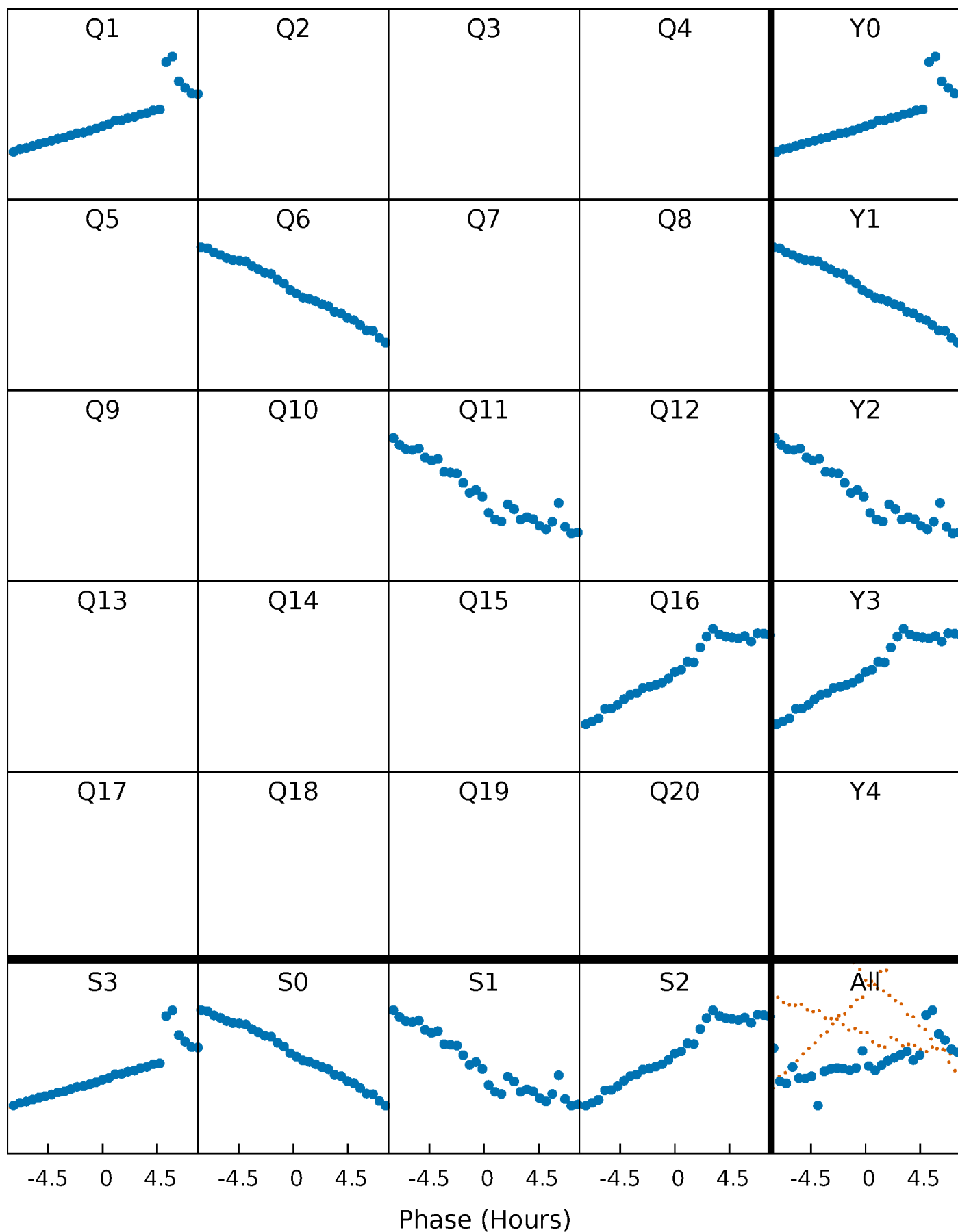


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



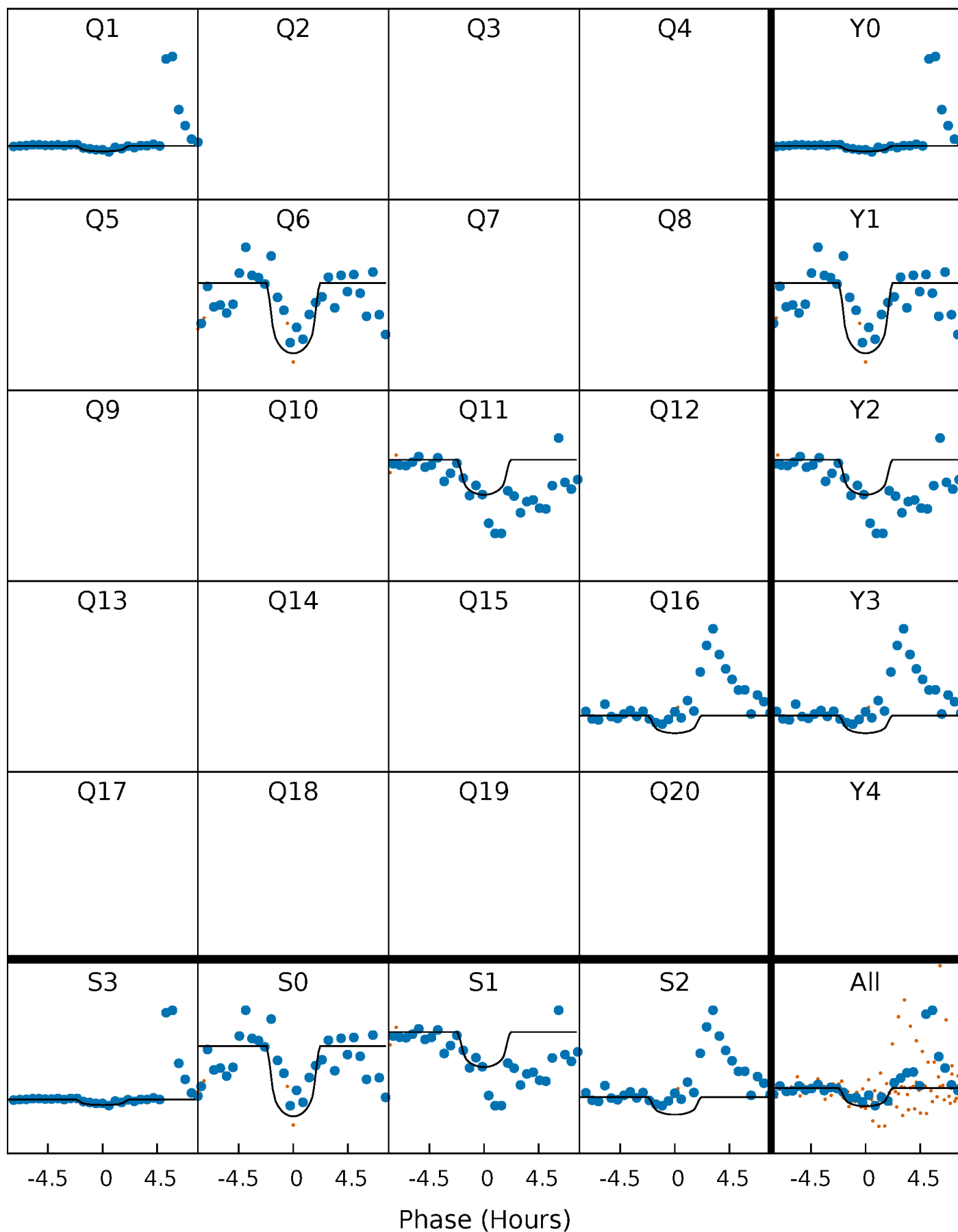
PDC Quarter-Phased Transit Curves

TCE 008975574-02 $P=470.659842$ Days $T_0=136.098894$ (BKJD)



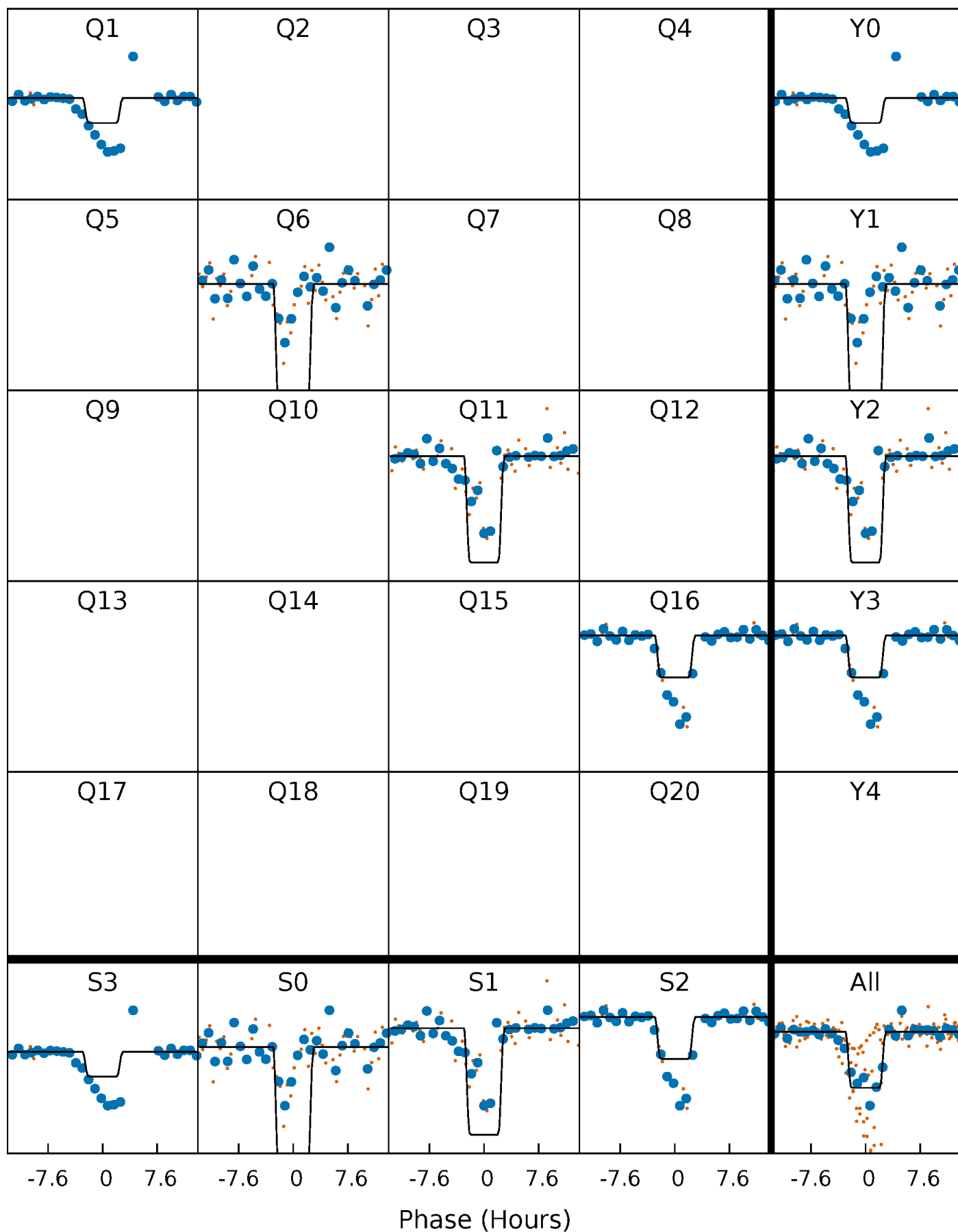
DV Quarter-Phased Transit Curves

TCE 008975574-02 $P=470.659842$ Days $T_0=136.098894$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

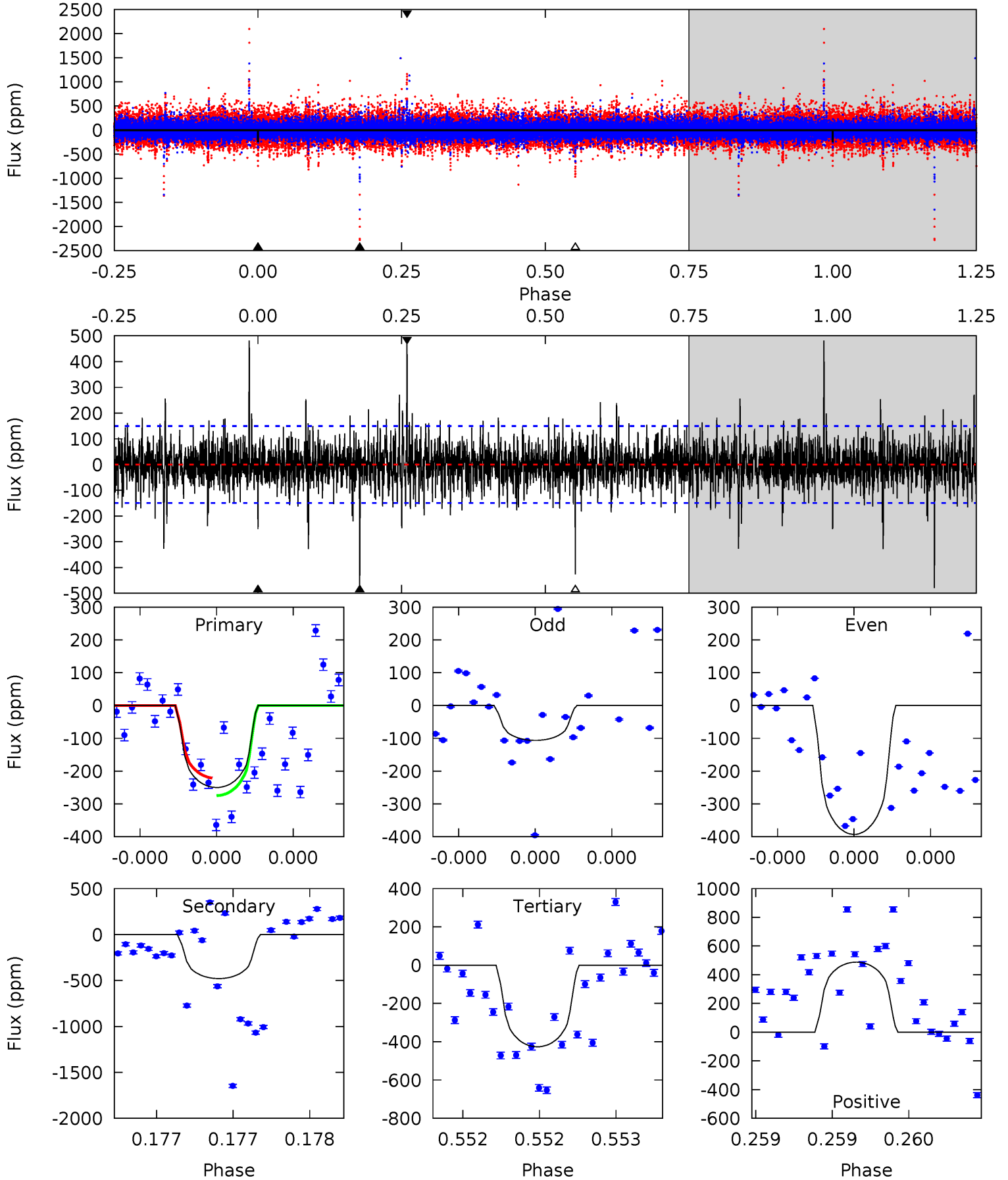
TCE 008975574-02 P=470.632565 Days $T_0=136.182103$ (BKJD)



DV Model-Shift Uniqueness Test

008975574-02, P = 470.659842 Days, E = 136.098894 Days

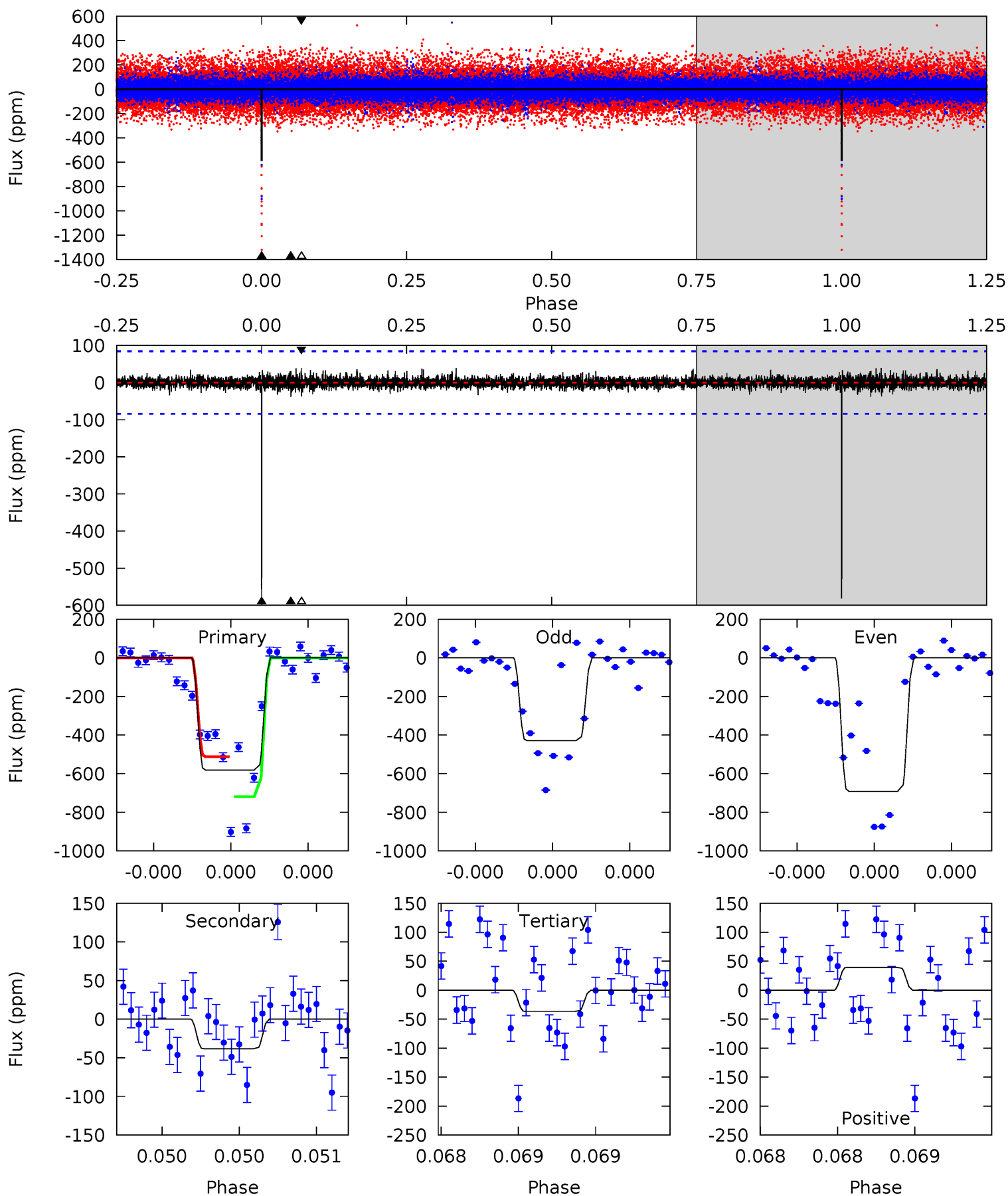
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.43	18.1	16.1	18.4	5.63	3.57	2.22	-6.65	-8.96	2.00	-0.32	4.69	1.03	0.50	1.01



Alt Model-Shift Uniqueness Test

008975574-02, P = 470.632565 Days, E = 136.182103 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
38.5	2.54	2.43	2.62	5.58	3.48	0.52	36.1	35.9	0.12	-0.08	9.13	1.02	0.06	6.02



Stellar Parameters For KIC 008975574

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5002^{+168}_{-137}	$3.714^{+0.893}_{-0.298}$	$-0.140^{+0.300}_{-0.250}$	$2.244^{+1.239}_{-1.514}$	$0.951^{+0.236}_{-0.193}$	$0.118^{+2.756}_{-0.076}$
	+3%/-3%	+24%/-8%	+214%/-179%	+55%/-67%	+25%/-20%	+2326%/-64%
Source	PHO54	PHO54	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 008975574-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-480 ± 27	$7.16^{+8.21}_{-5.26}$	419^{+63}_{-83}	4314^{+3385}_{-912}	7211^{+92305}_{-5716}
Alt.	-38 ± 15	$7.44^{+8.31}_{-5.01}$	420^{+61}_{-84}	2808^{+1087}_{-437}	524^{+4422}_{-425}

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 $A_{obs} \gg 1.0$

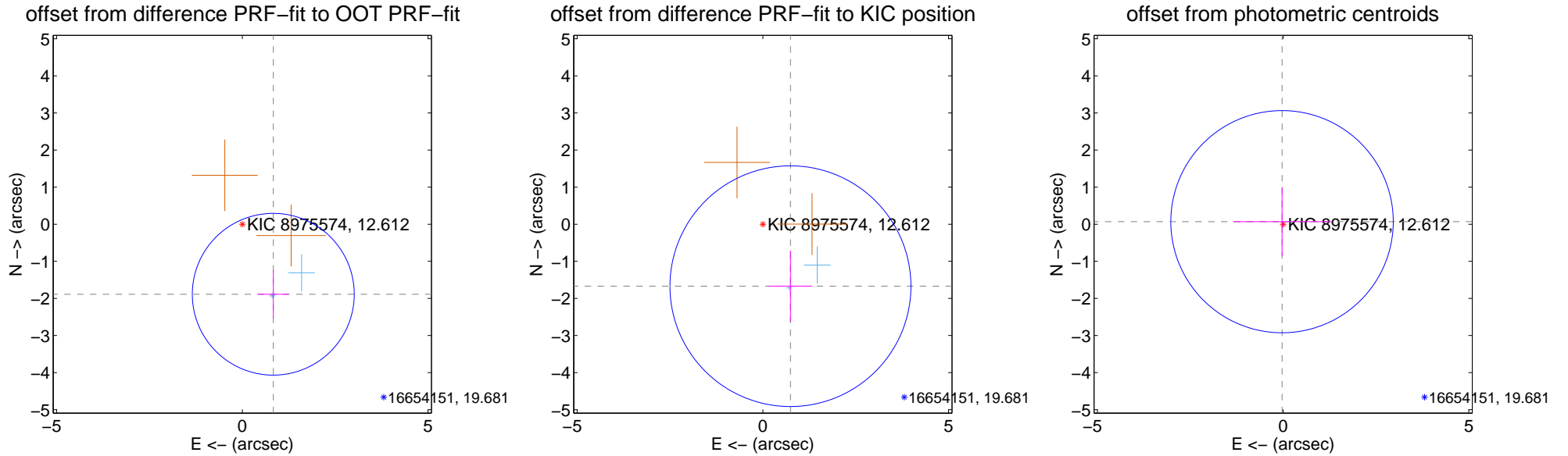
DV Centroid Data

Supplemental centroid analysis for 008975574-02. Kepler magnitude: 12.61. Transit SNR 7.11

There are 2 quarters with good PRF difference image offsets

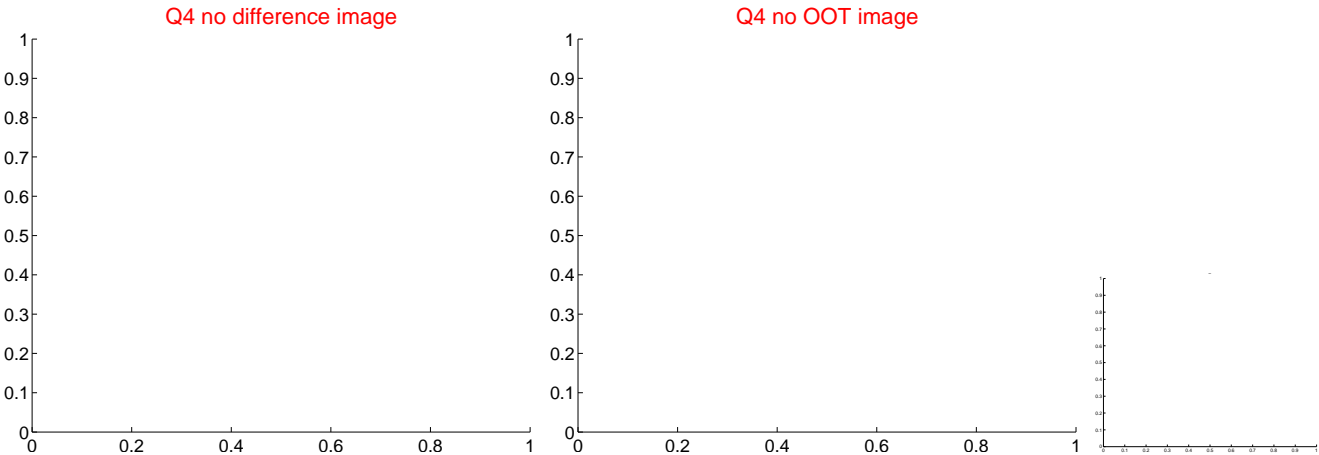
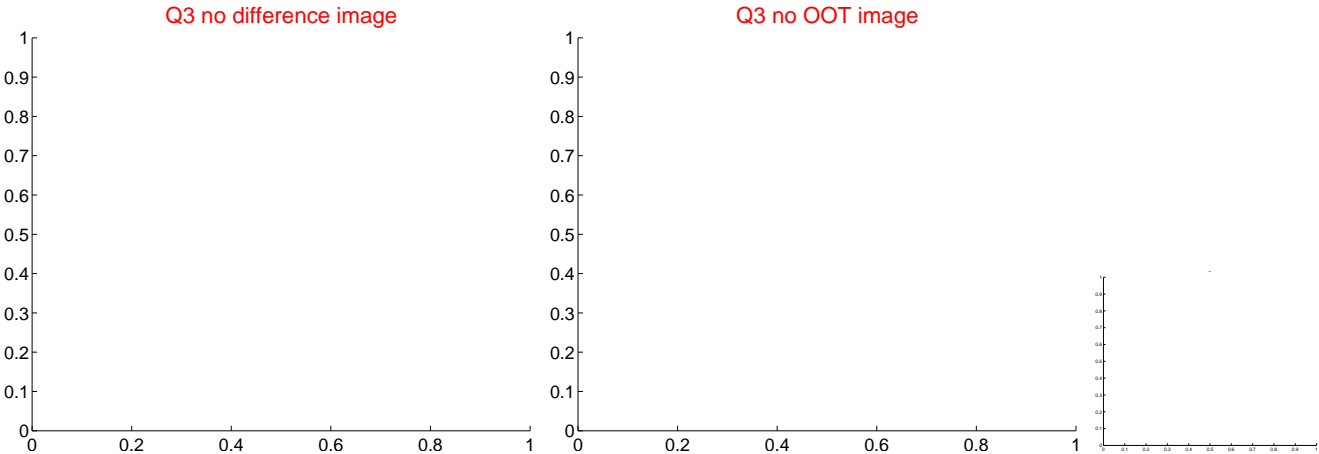
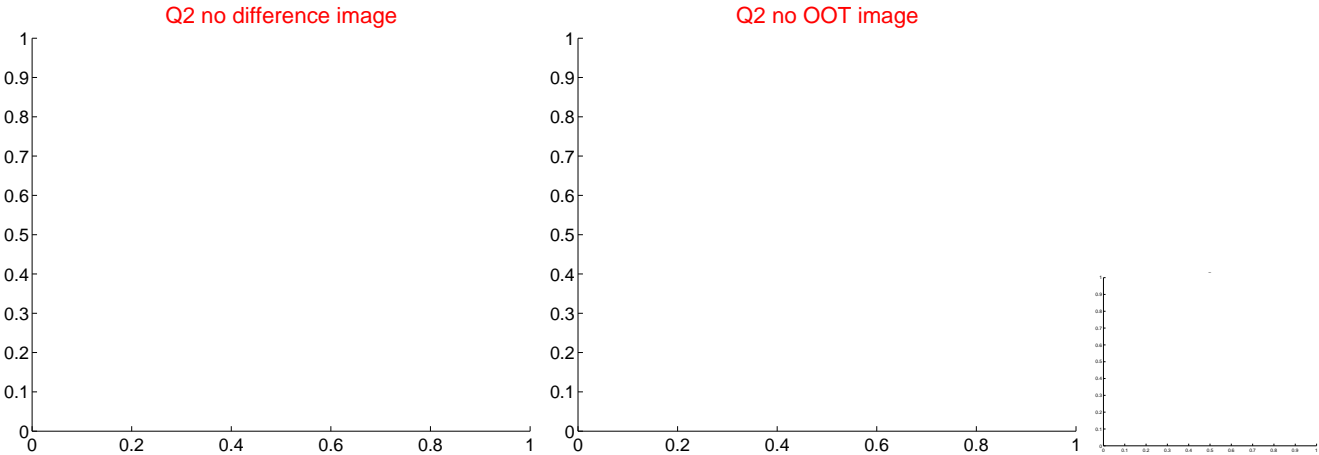
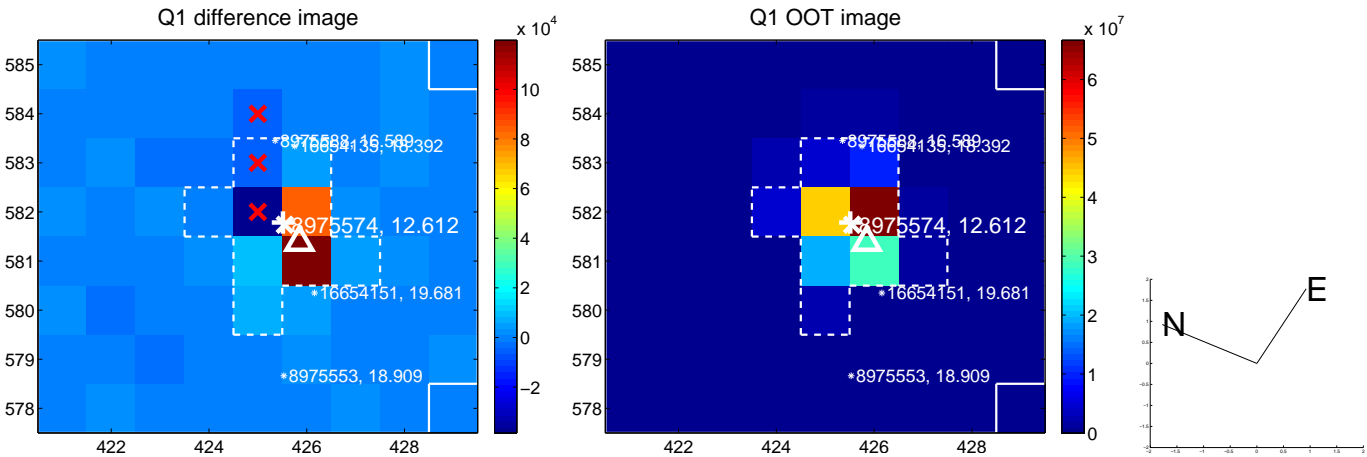
The direct PRF centroid is offset from the target star catalog position by about 0.41 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.064 ± 0.727	2.84	-0.834 ± 0.412	-1.887 ± 0.646
PRF-fit source offset from KIC position	1.828 ± 1.081	1.69	-0.743 ± 0.588	-1.670 ± 0.964
photometric centroid source offset	0.07 ± 1.00	0.07	0.03 ± 1.31	0.07 ± 0.93



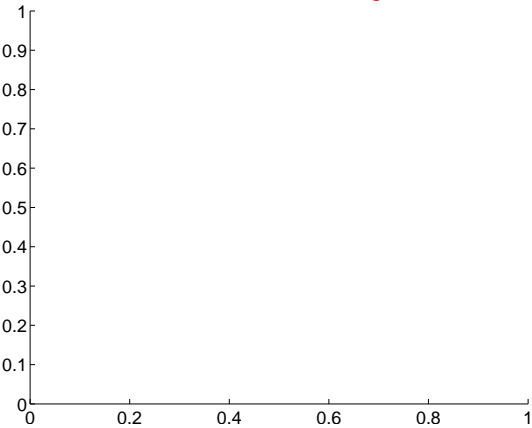
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

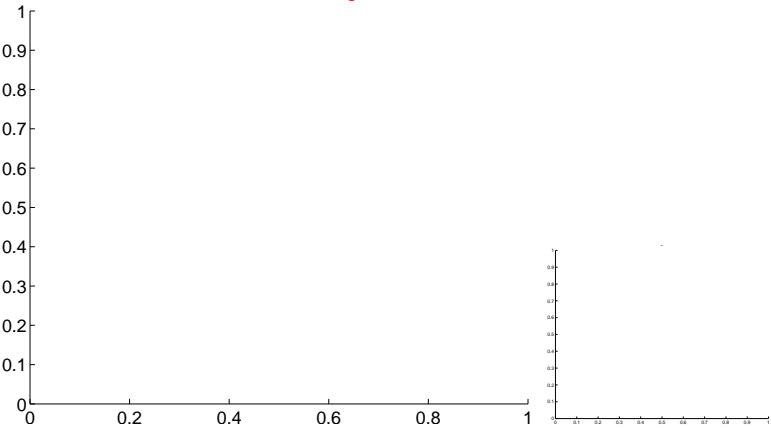


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

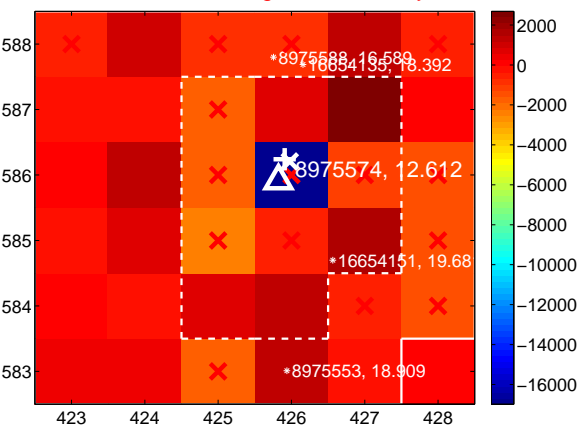
Q5 no difference image



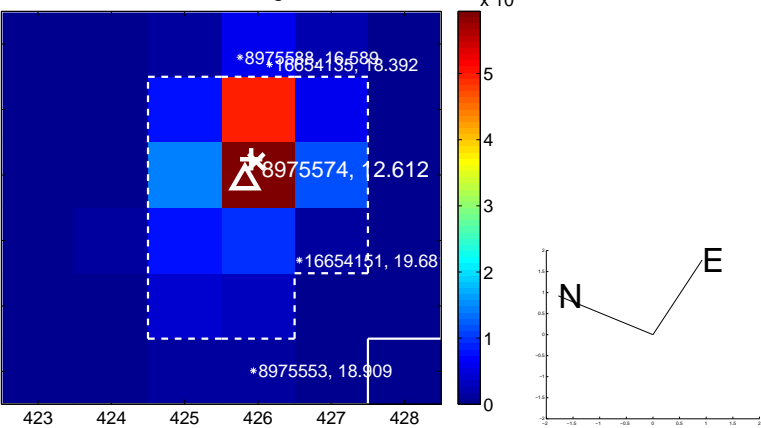
Q5 no OOT image



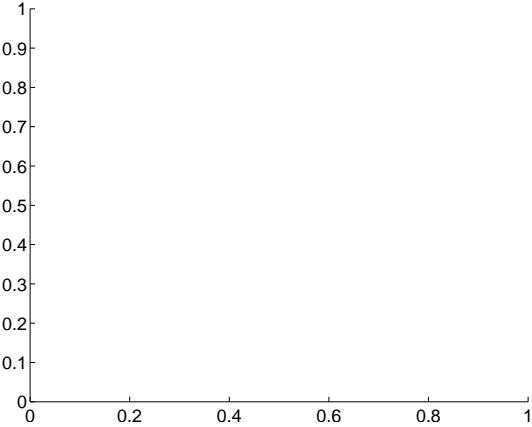
Q6 difference image. Poor Quality



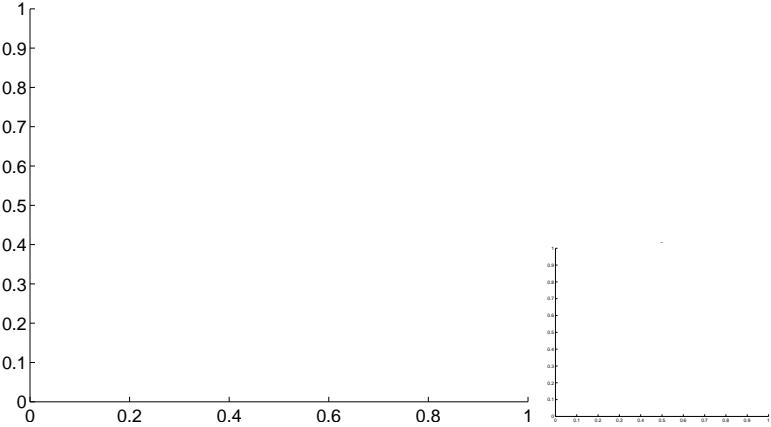
Q6 OOT image



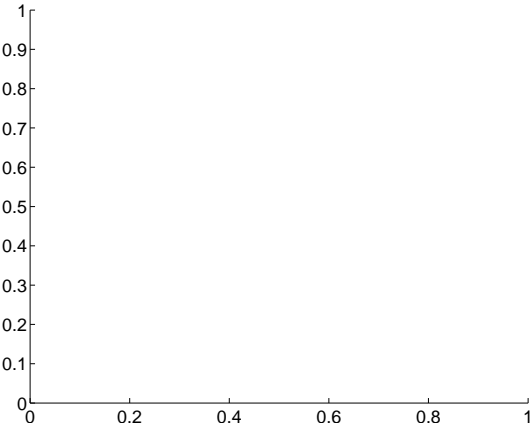
Q7 no difference image



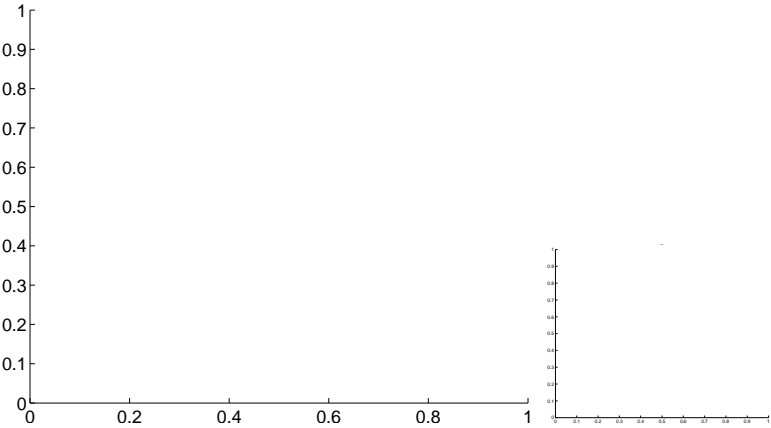
Q7 no OOT image



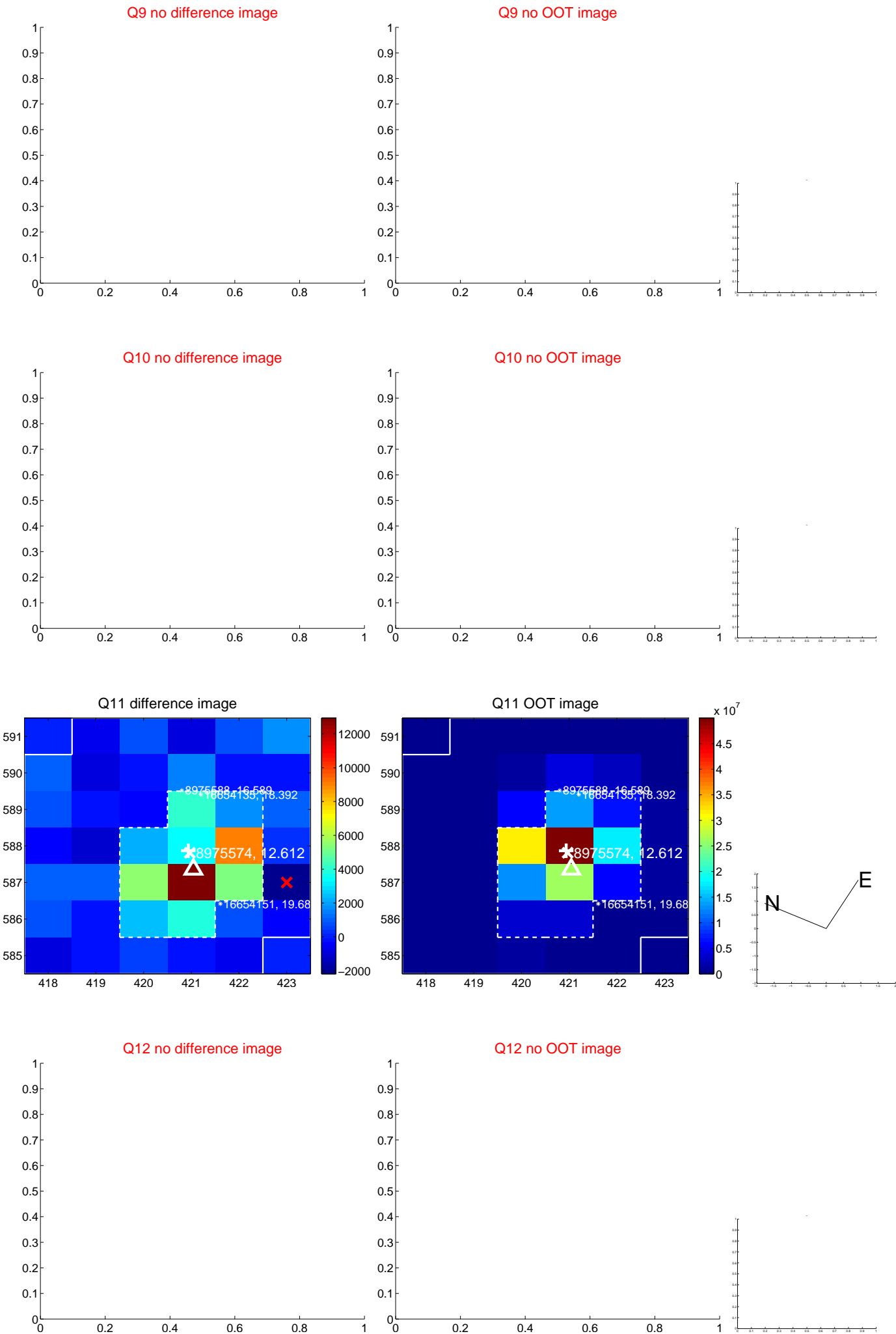
Q8 no difference image



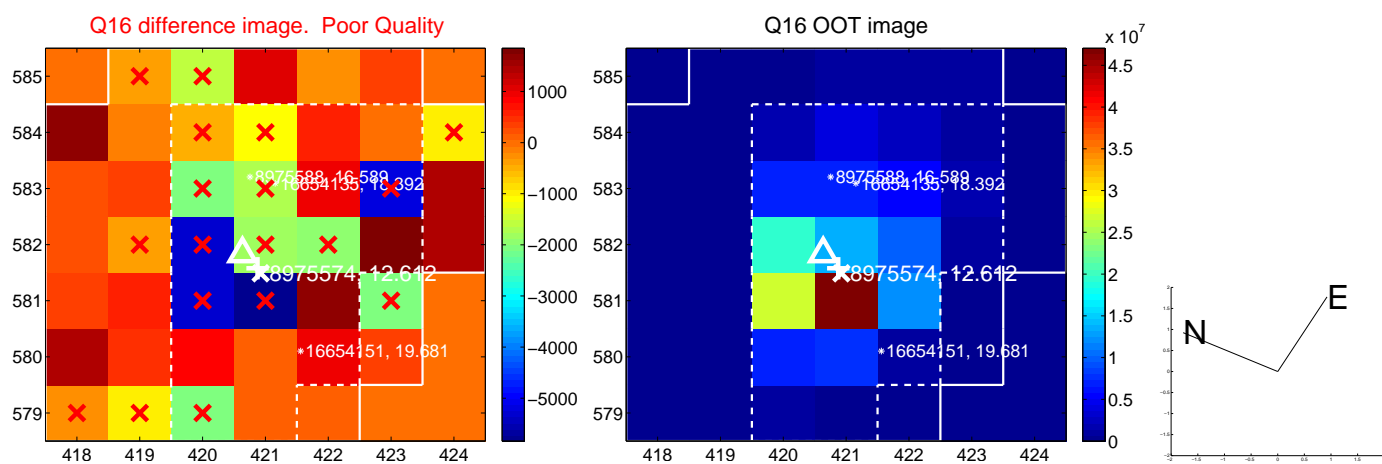
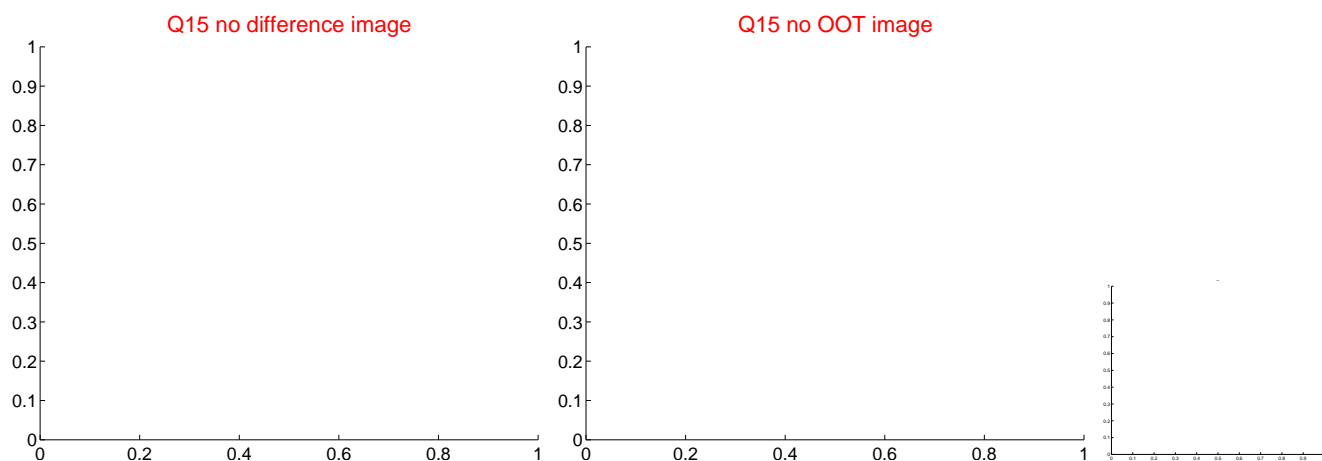
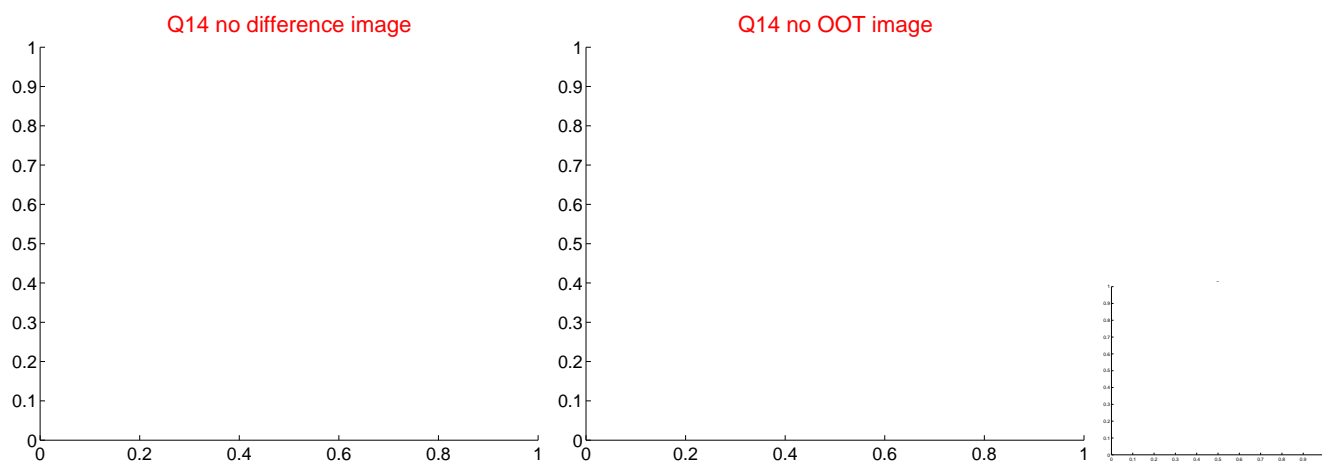
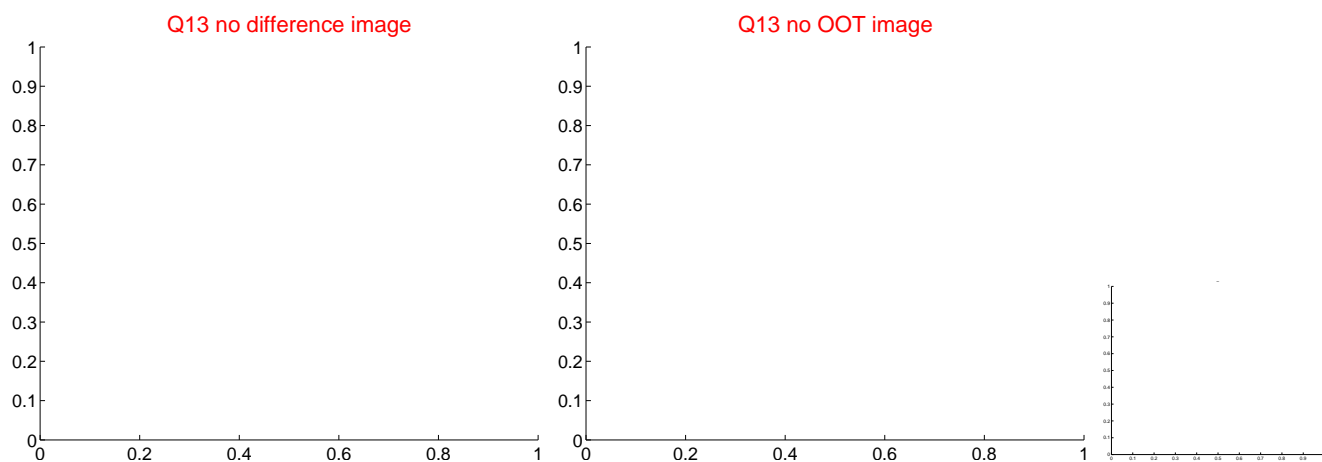
Q8 no OOT image



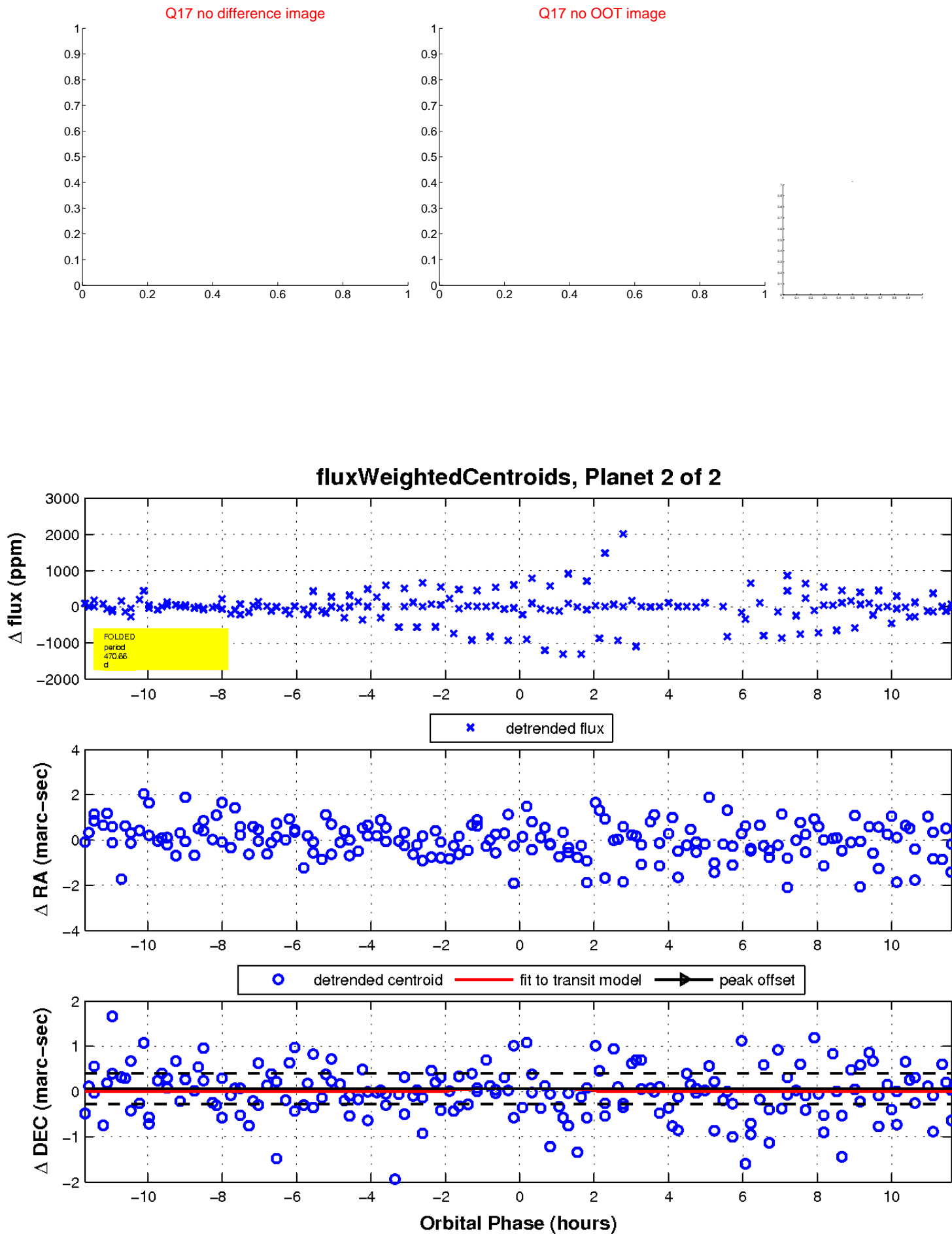
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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



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



UKIRT Image

