

KIC 004262040

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})
004262040-01	OBS	3202.01	92.456288	211.227959	115.8	17.906	11.1	11.1	2.65	5132	2.92	23.95

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004262040-01	OBS	PC	1.00	0	0	0	0	CENT_FEW_MEAS

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 004262040-01

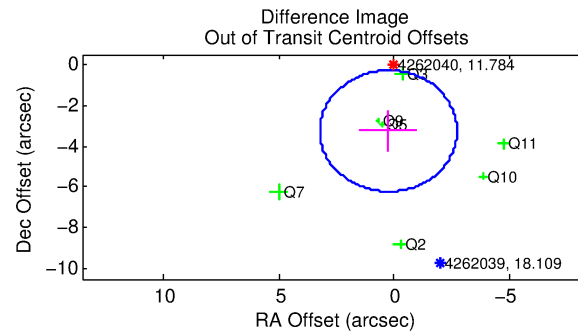
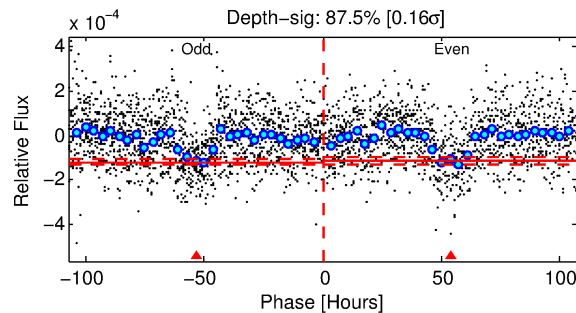
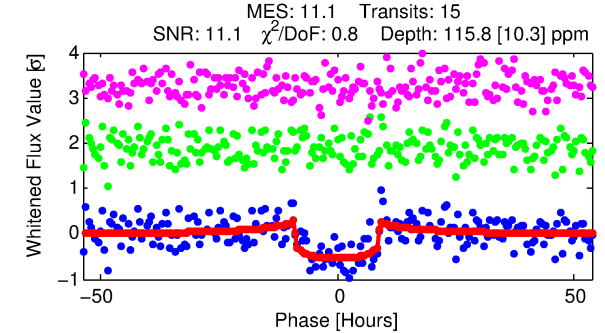
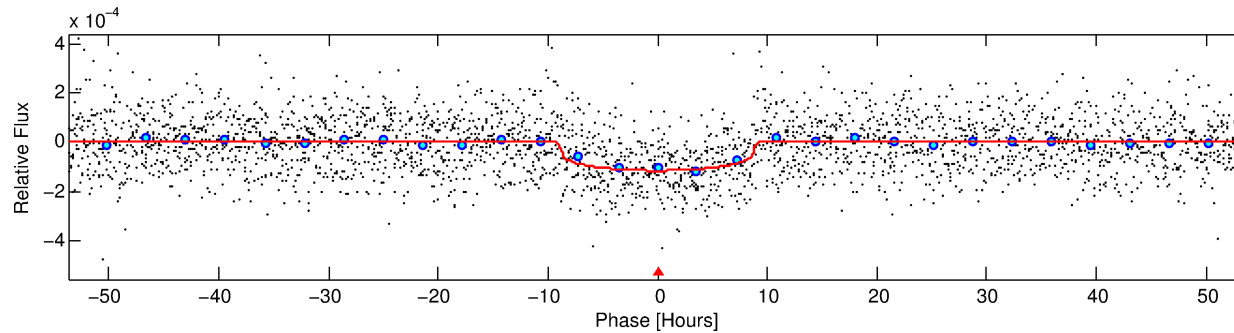
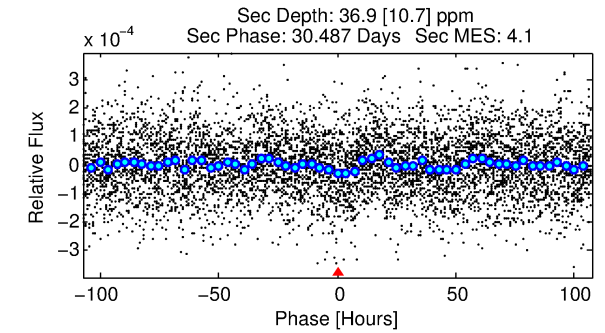
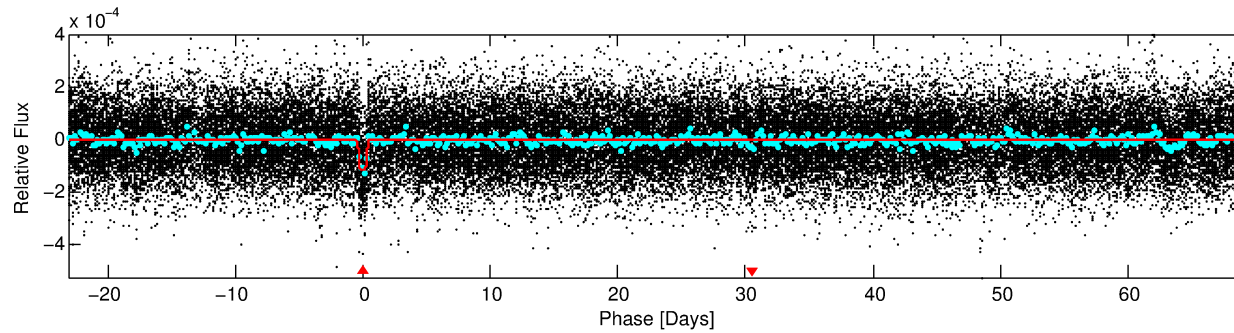
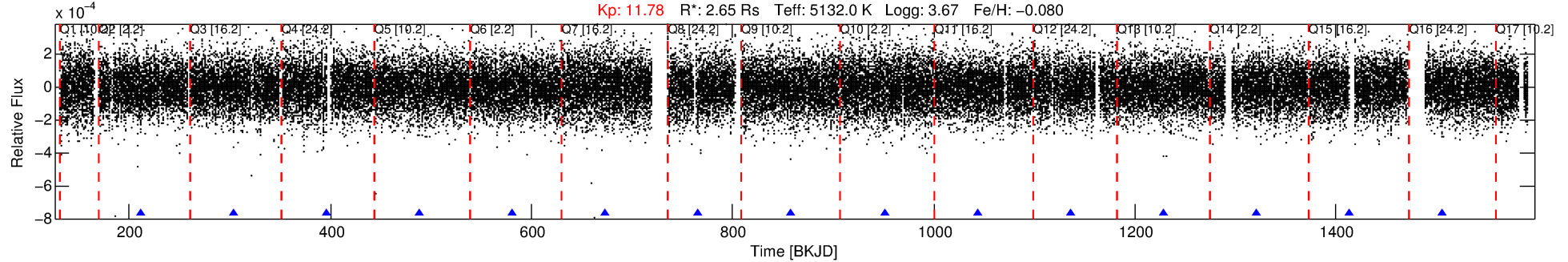
No Significant Match Found

DV One-Page Summary

KIC: 4262040 Candidate: 1 of 1 Period: 92.456 d

KOI: K03202.01 Corr: 0.926

Kp: 11.78 R*: 2.65 Rs Teff: 5132.0 K Logg: 3.67 Fe/H: -0.080



DV Fit Results:

Period = 92.45629 [0.00162] d
Epoch = 211.2280 [0.0125] BKJD
Rp/R* = 0.0101 [0.0042]
a/R* = 33.00 [50.60]
b = 0.57 [1.85]
Seff = 23.96 [5.96]
Teq = 564 [35] K
Rp = 2.92 [1.34] Re
a = 0.4265 [0.0698] AU
Ag = 432.98 [395.06] [1.09σ]
Teffp = 3979 [878] K [3.89σ]

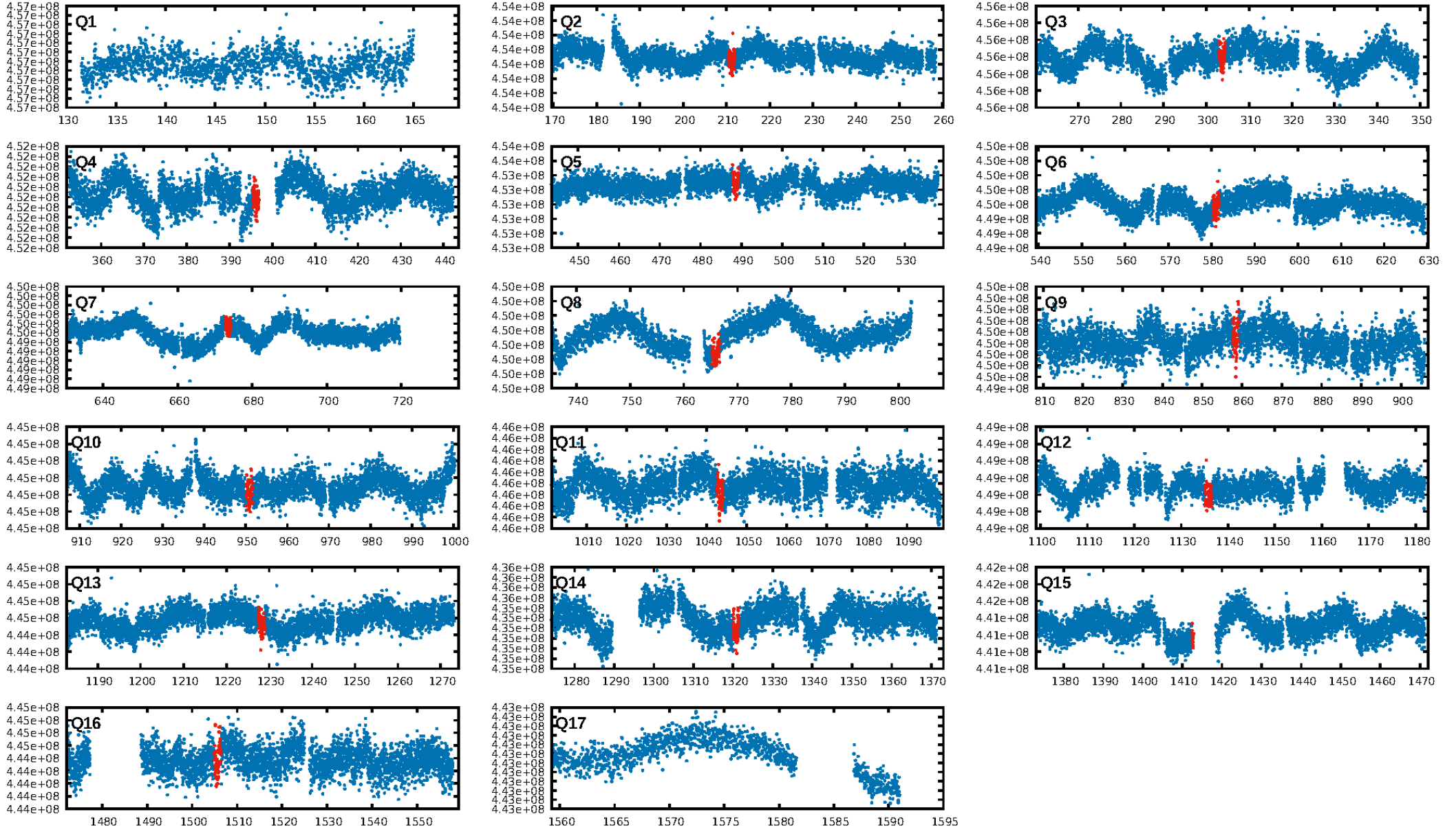
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 88.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 5.32e-26
RollingBand-fgt: 1.00 [15/15]
GhostDiagnostic-chr: -29.87
Centroid-sig: 3.7%
Centroid-so: 1.026 arcsec [1.66σ]
OotOffset-rm: 3.265 arcsec [3.30σ]
KicOffset-rm: 3.199 arcsec [3.30σ]
OotOffset-st: 2/3/0/2 [7]
KicOffset-st: 2/3/0/2 [7]
DiffImageQuality-fgm: 0.14 [1/7]
DiffImageOverlap-fno: 1.00 [11/11]

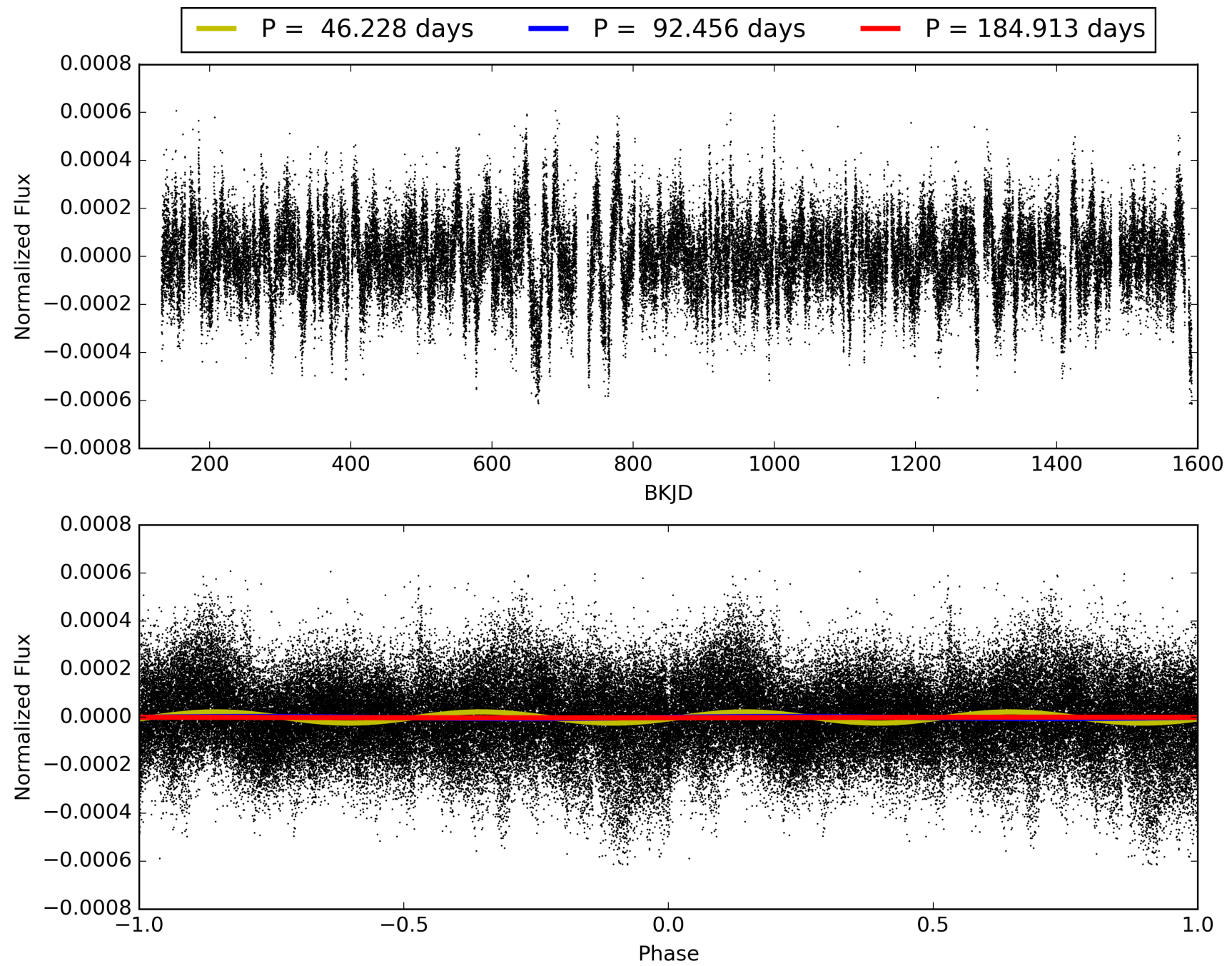
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 20:39:03 Z

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

TCE 004262040-01, PDC Light Curves

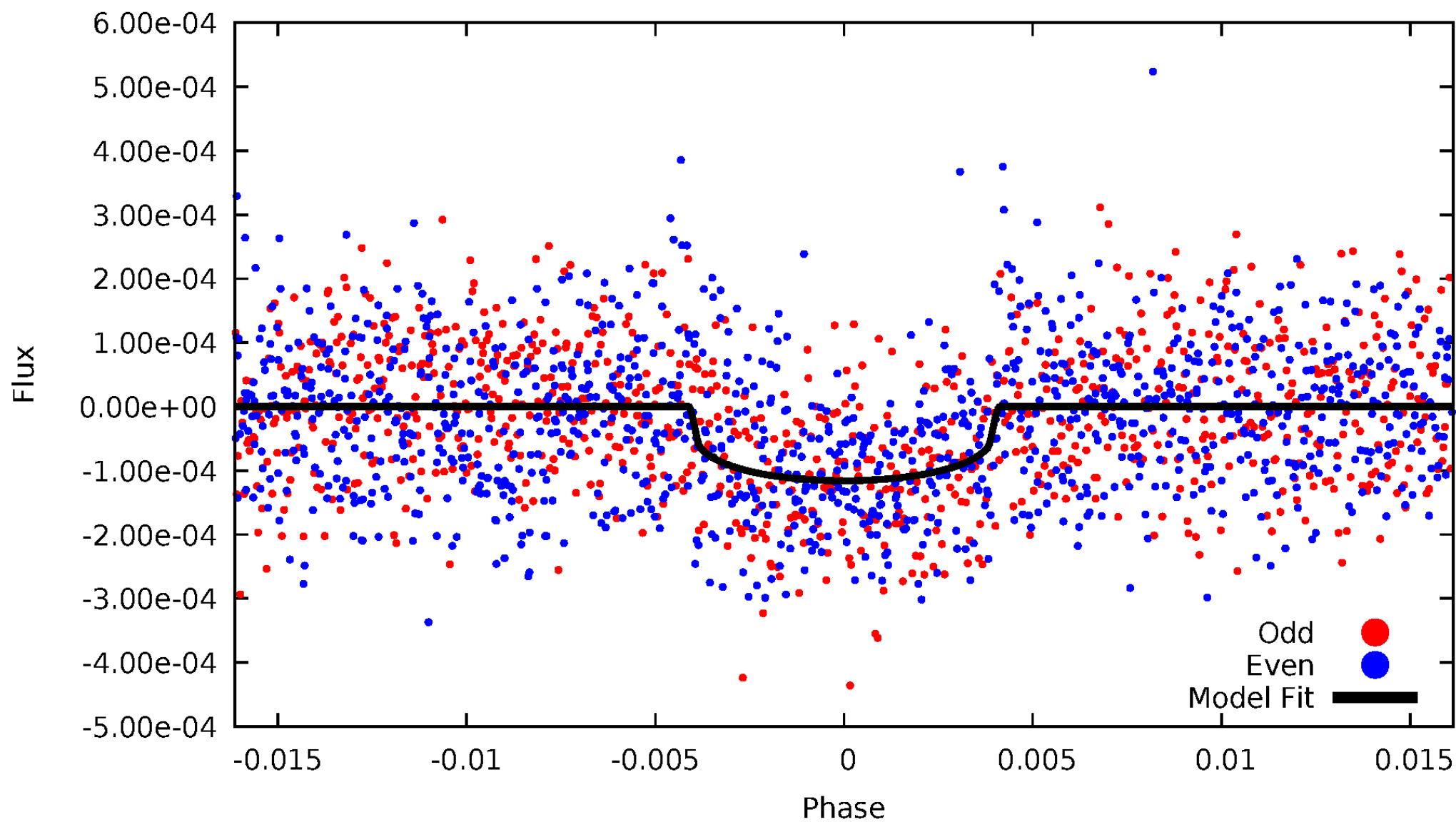


TCE 004262040-01



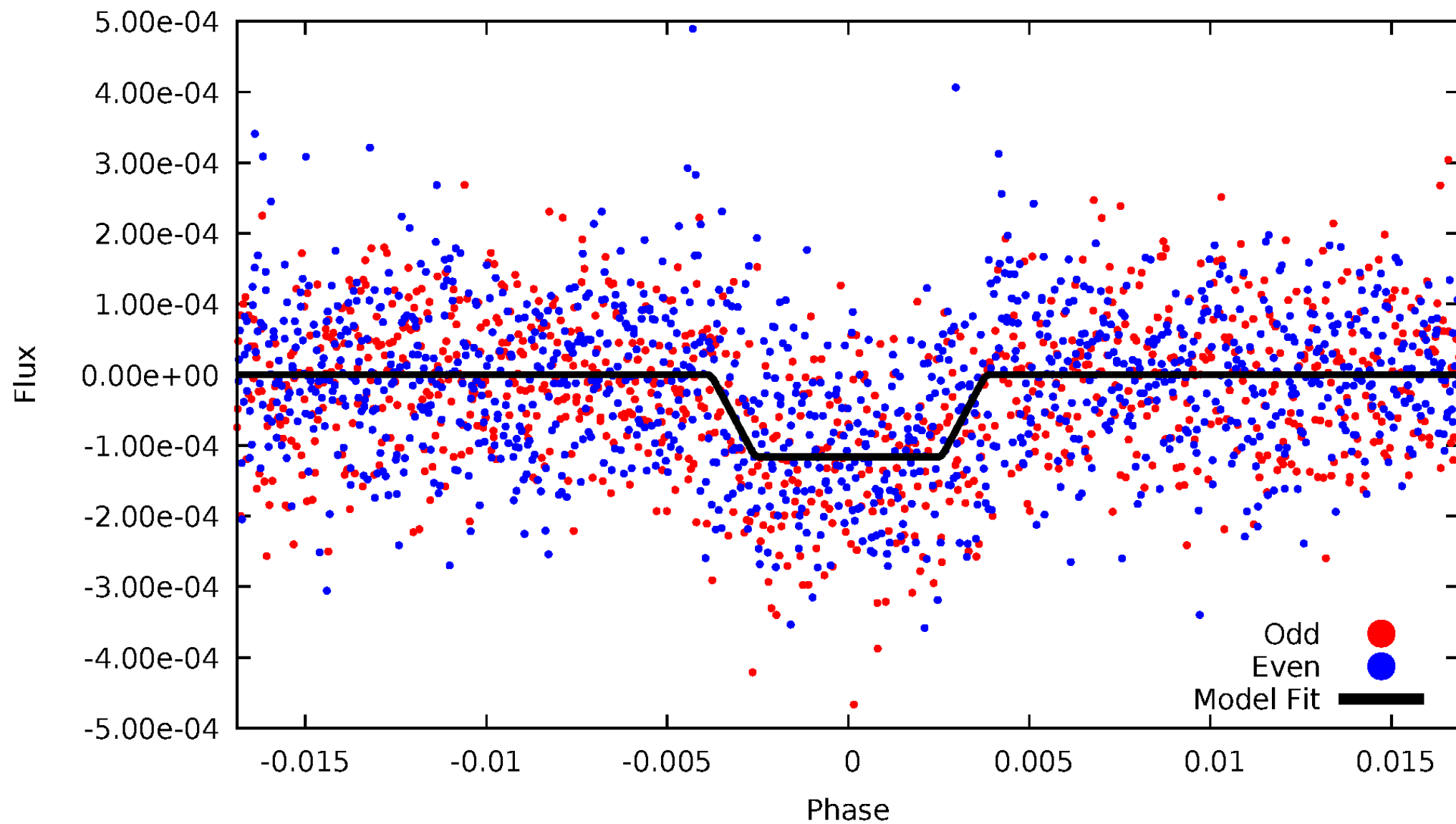
DV Odd/Even

TCE 004262040-01



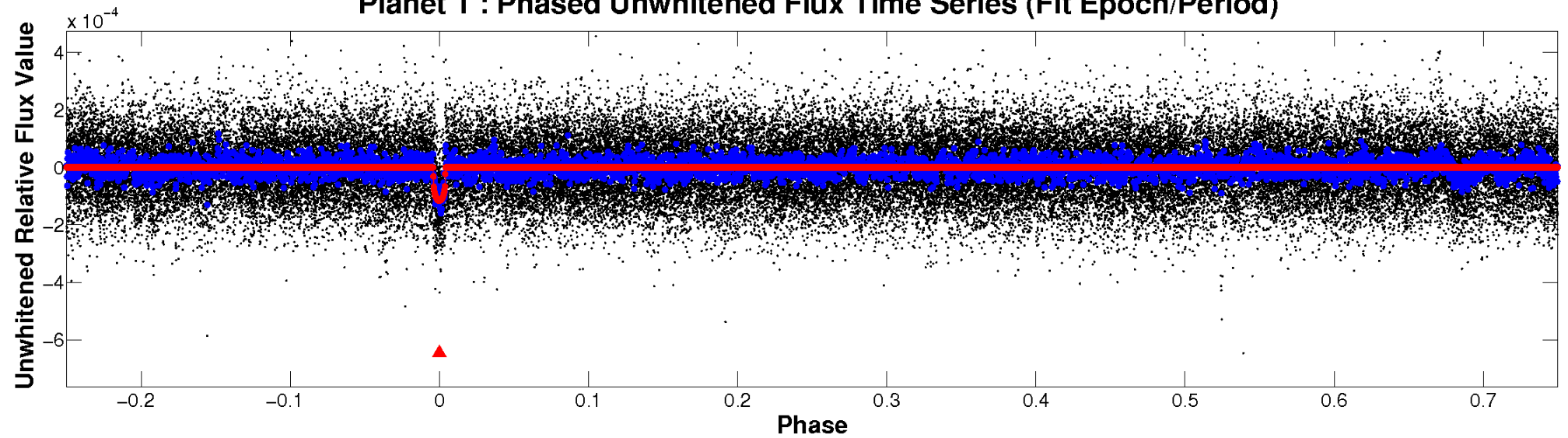
ALT Odd/Even

TCE 004262040-01

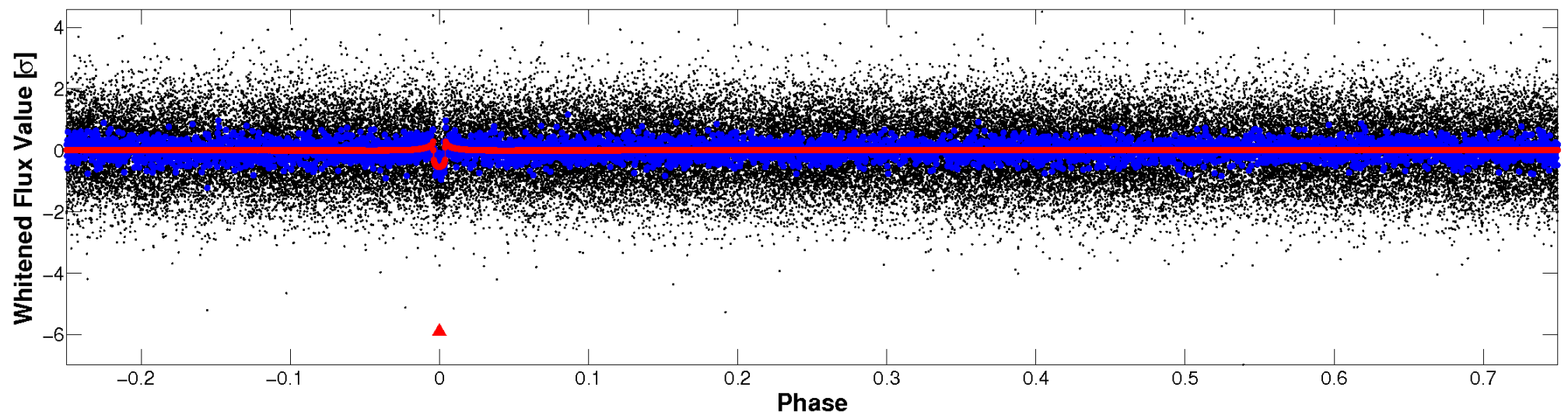


Non-Whitened Vs. Whitened Light Curve

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

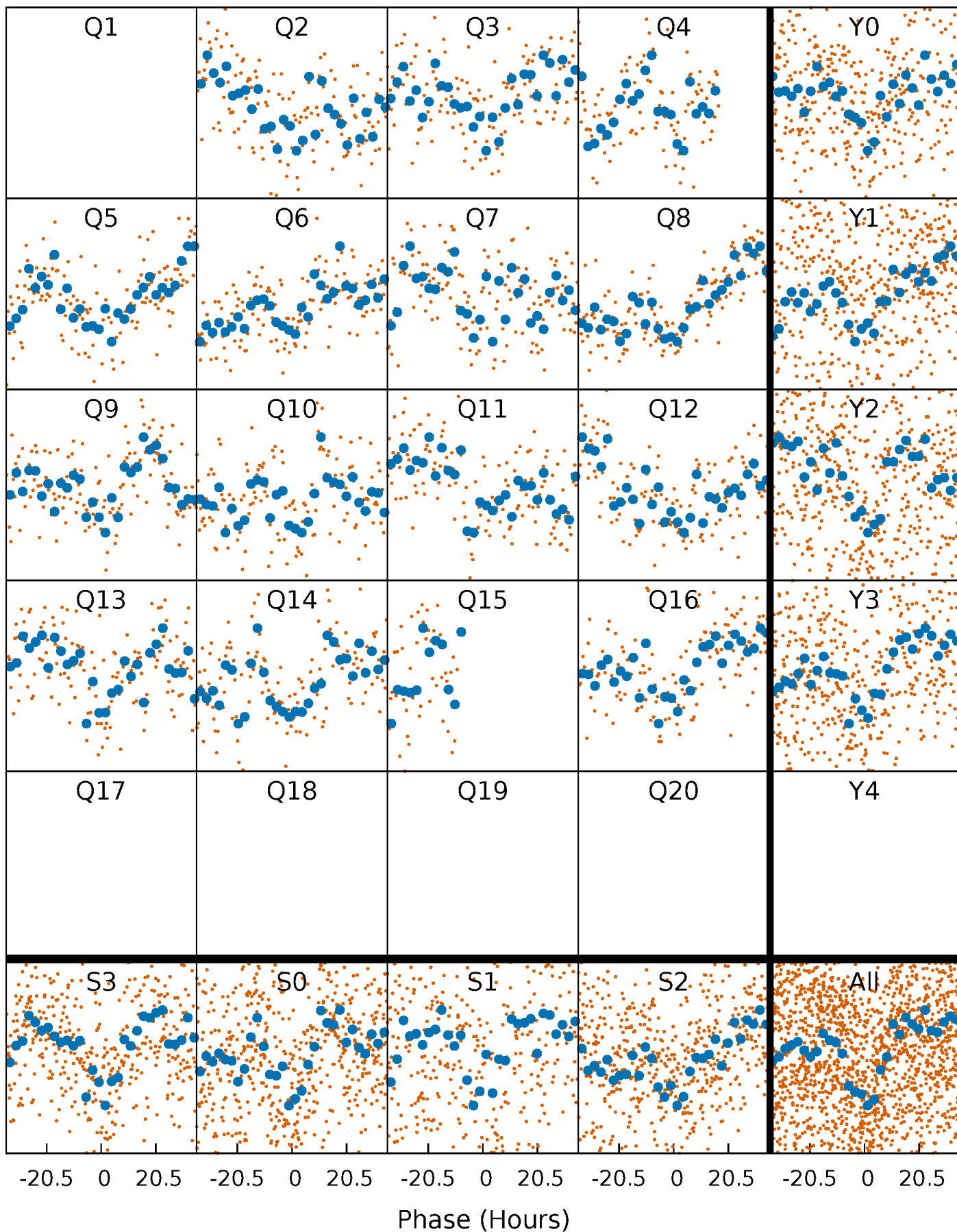


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



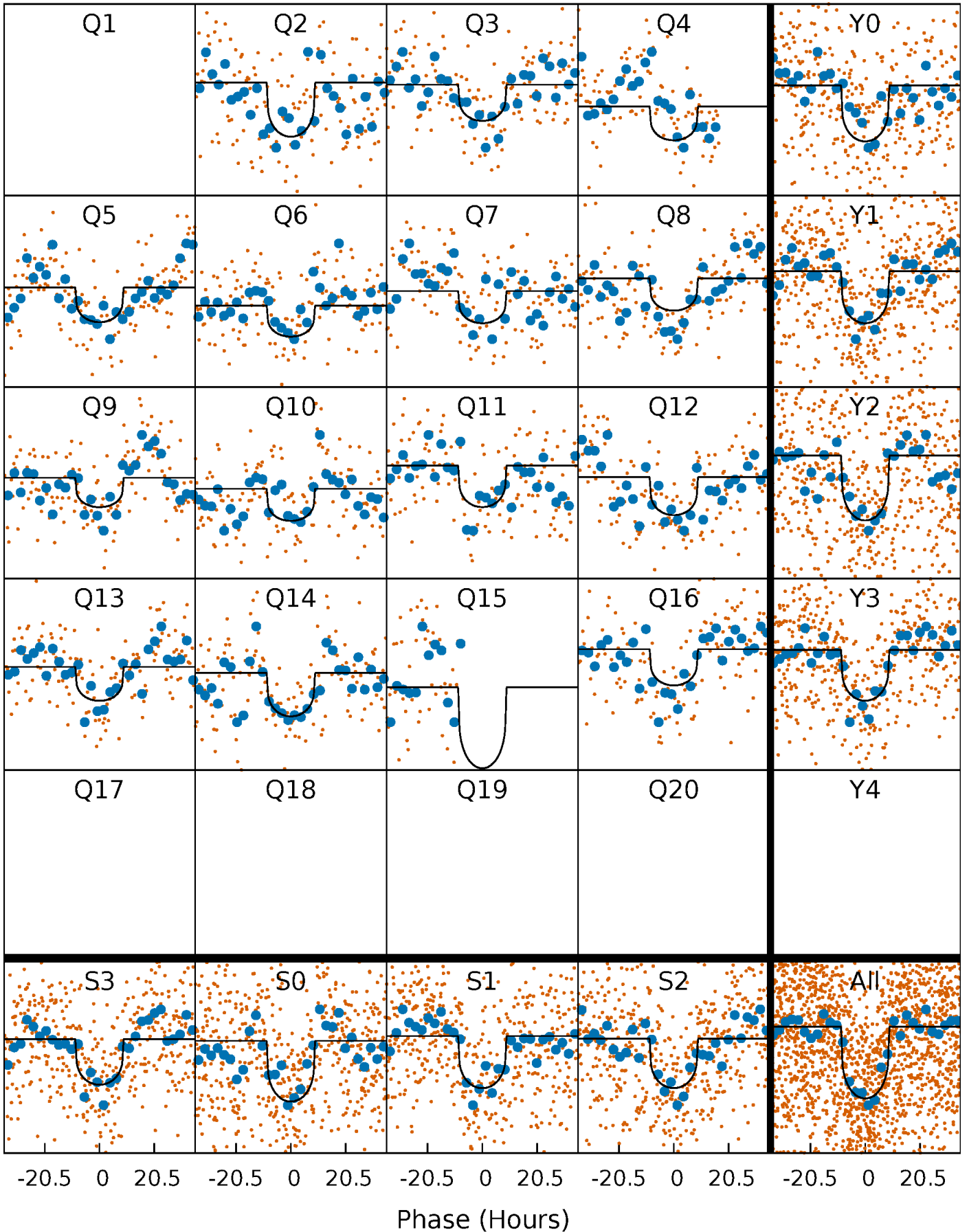
PDC Quarter-Phased Transit Curves

TCE 004262040-01 P= 92.456288 Days $T_0=211.227959$ (BKJD)



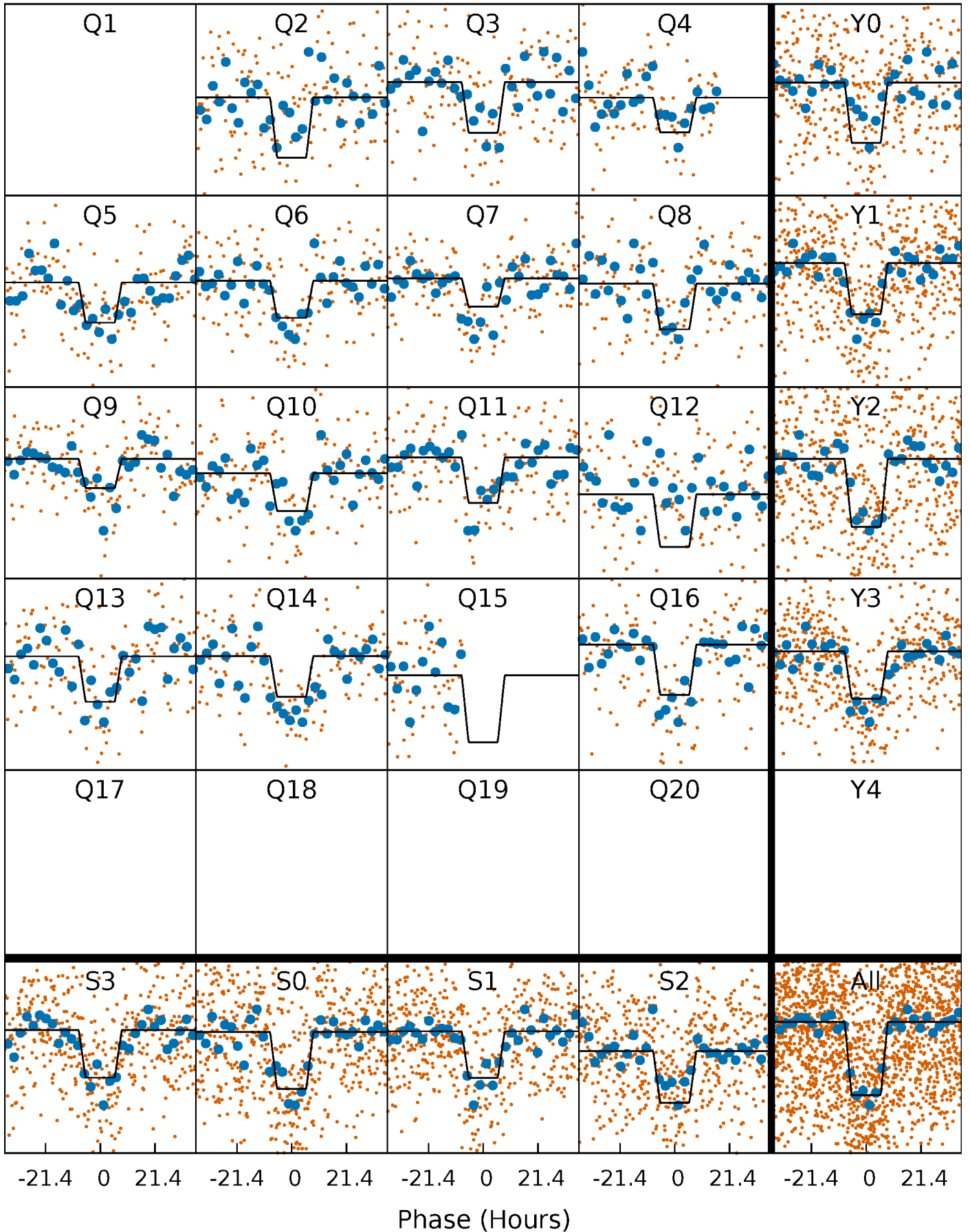
DV Quarter-Phased Transit Curves

TCE 004262040-01 P= 92.456288 Days $T_0=211.227959$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

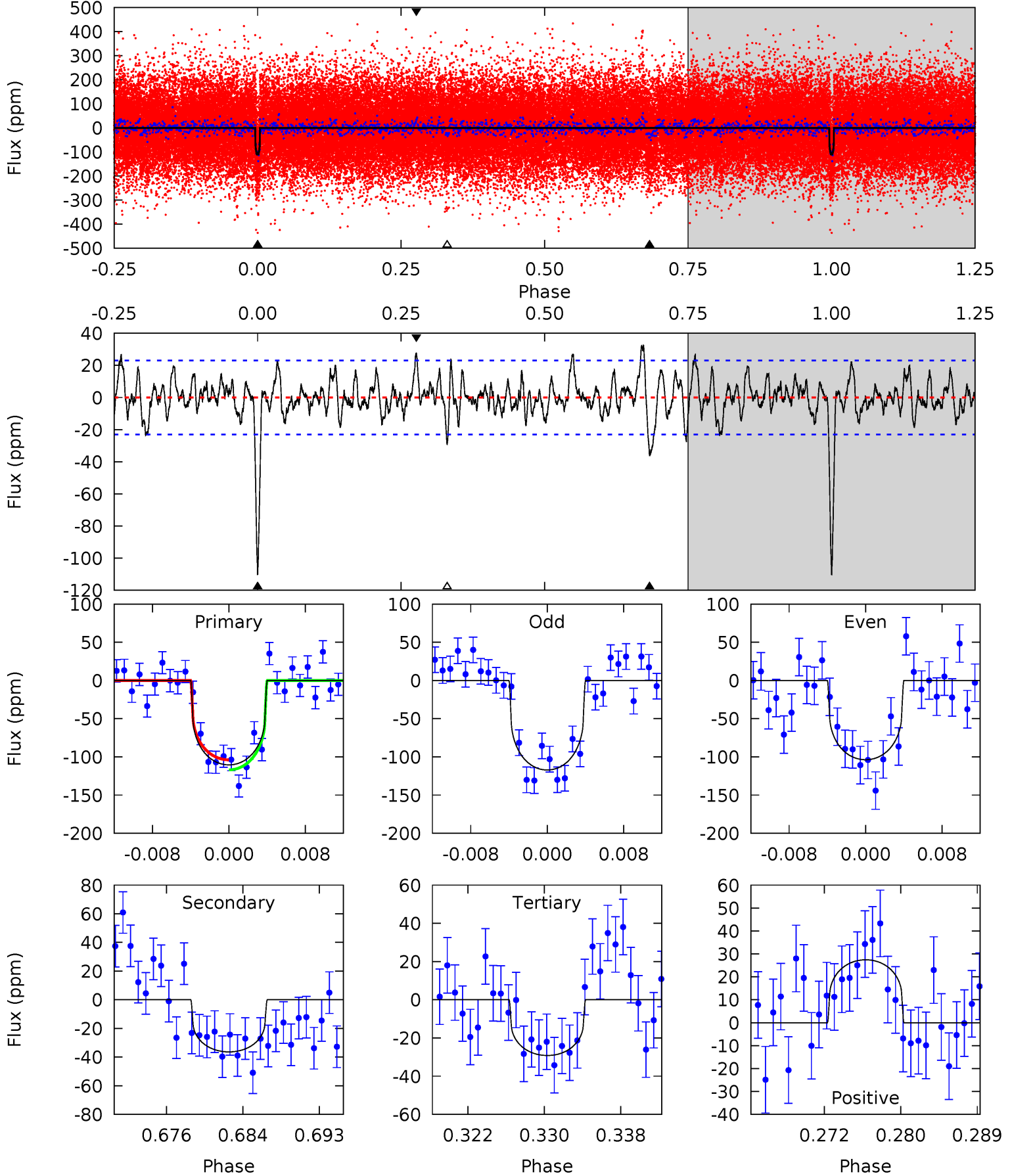
TCE 004262040-01 P= 92.455048 Days $T_0=211.237860$ (BKJD)



DV Model-Shift Uniqueness Test

004262040-01, $P = 92.456288$ Days, $E = 118.771671$ Days

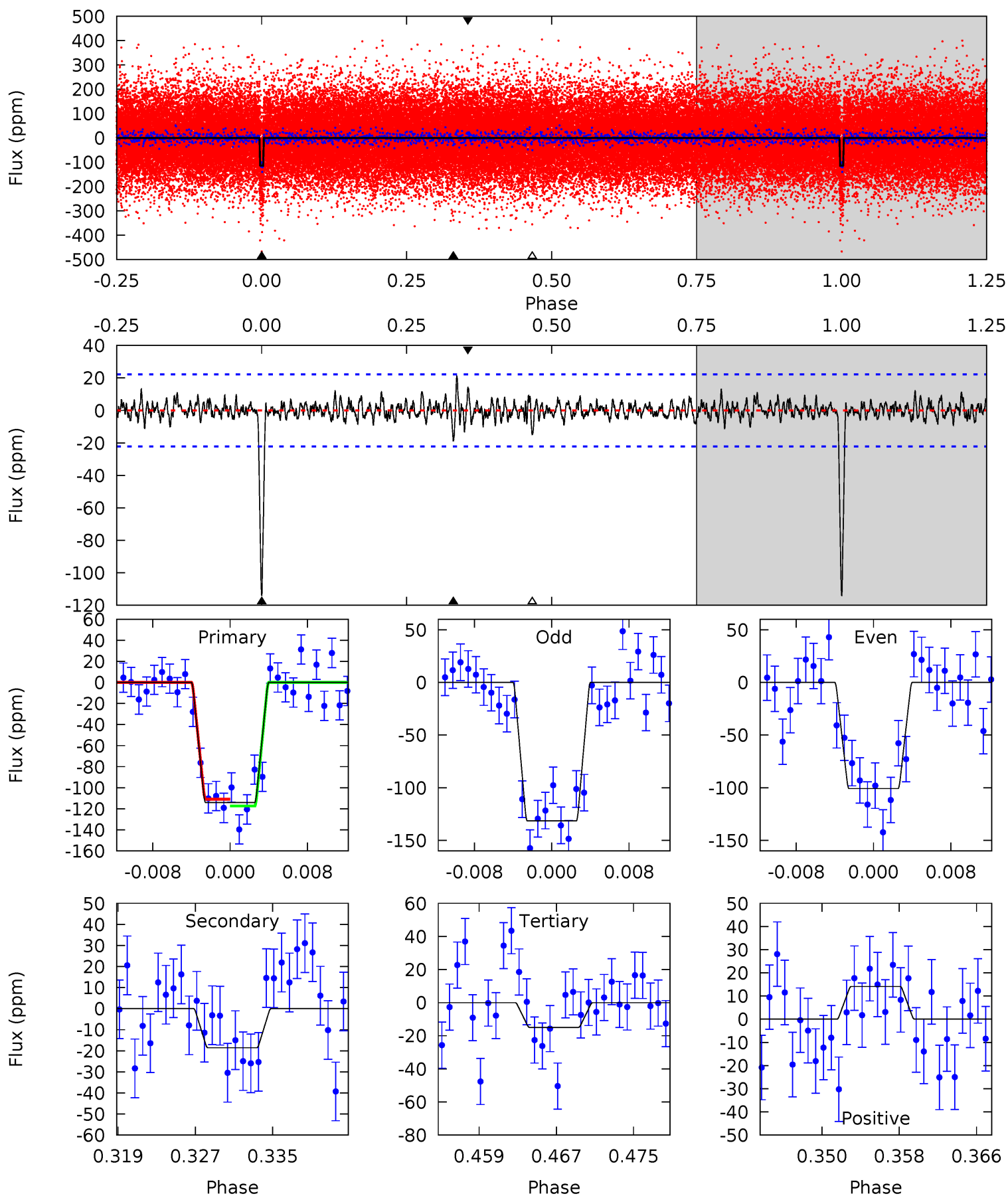
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.3	8.00	6.42	6.03	5.06	2.64	2.01	17.9	18.3	1.59	1.97	1.47	0.82	0.23	1.44



Alt Model-Shift Uniqueness Test

004262040-01, $P = 92.455048$ Days, $E = 118.782812$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.1	4.23	3.41	3.22	5.07	2.66	0.92	22.6	22.8	0.82	1.01	3.47	0.94	0.16	0.73



Stellar Parameters For KIC 004262040

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5132^{+69}_{-84}	$3.675^{+0.120}_{-0.132}$	$-0.080^{+0.150}_{-0.150}$	$2.648^{+0.510}_{-0.510}$	$1.211^{+0.116}_{-0.215}$	$0.092^{+0.054}_{-0.034}$
	+1%/-2%	+3%/-4%	+188%/-188%	+19%/-19%	+10%/-18%	+58%/-37%
Source	SPE74	SPE74	SPE74	DSEP		

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

Secondary Eclipse Parameters for KIC 004262040-01 / KOI 3202.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-36 ± 5	$2.85^{+1.36}_{-1.04}$	787^{+39}_{-33}	4205^{+861}_{-524}	433^{+640}_{-230}
Alt.	-19 ± 4	$3.11^{+1.21}_{-1.19}$	791^{+41}_{-39}	3630^{+668}_{-376}	185^{+302}_{-95}

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

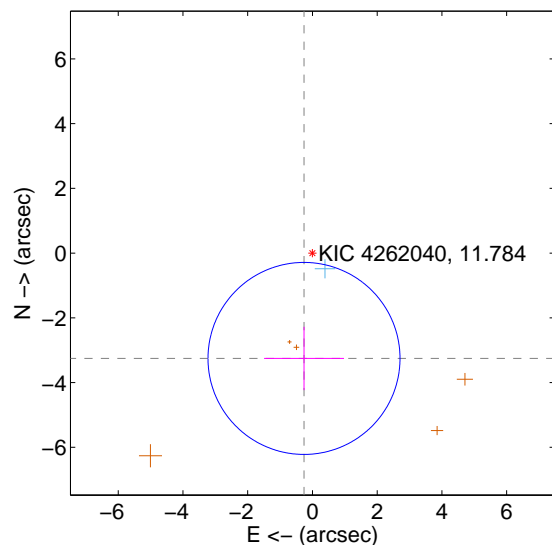
Supplemental centroid analysis for 004262040-01. **Kepler magnitude: 11.78.** Transit SNR 11.14

There are 1 quarters with good PRF difference image offsets

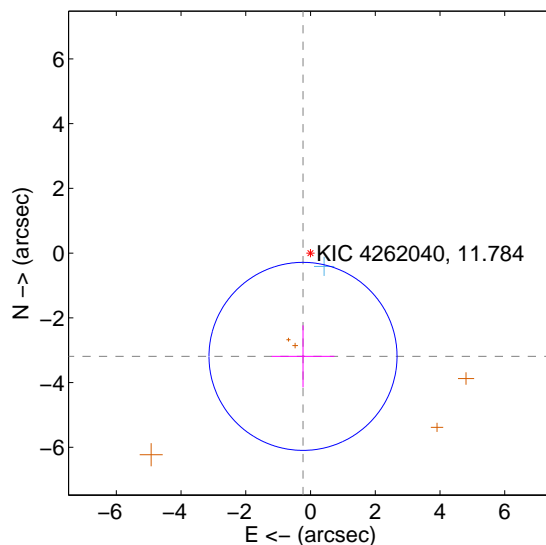
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.265 ± 0.989	3.30	0.261 ± 1.235	-3.254 ± 0.978
PRF-fit source offset from KIC position	3.199 ± 0.968	3.30	0.232 ± 0.969	-3.191 ± 0.960
photometric centroid source offset	1.03 ± 0.62	1.66	-0.89 ± 0.54	0.52 ± 0.81

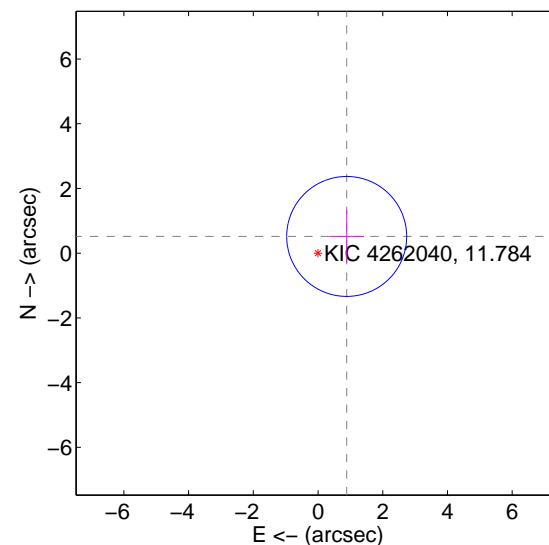
offset from difference PRF-fit to OOT PRF-fit



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.

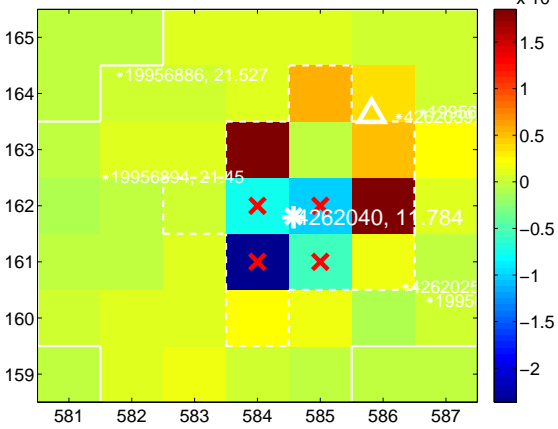
Q1 no difference image



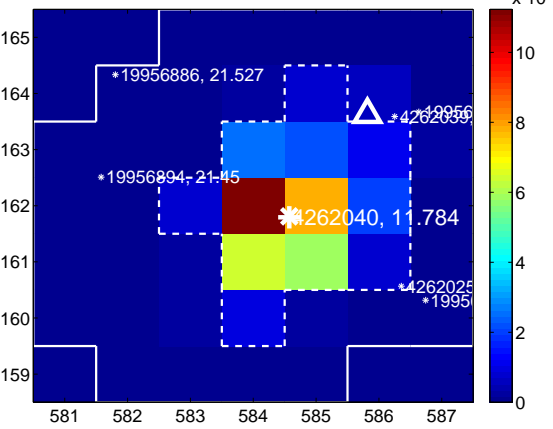
Q1 no OOT image



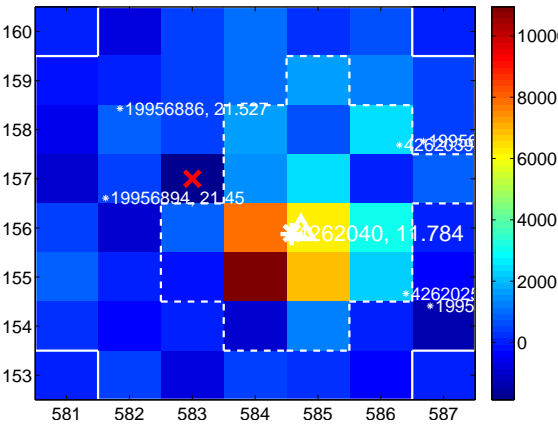
Q2 difference image. Poor Quality



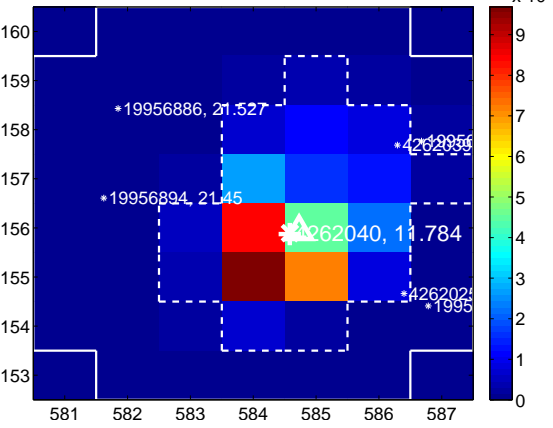
Q2 OOT image



Q3 difference image



Q3 OOT image



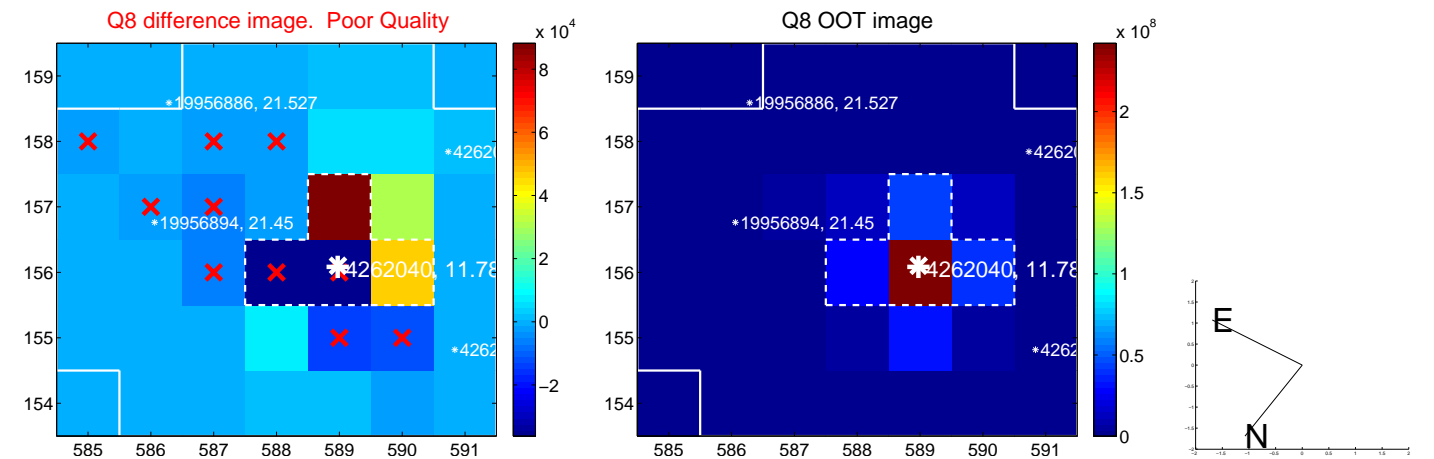
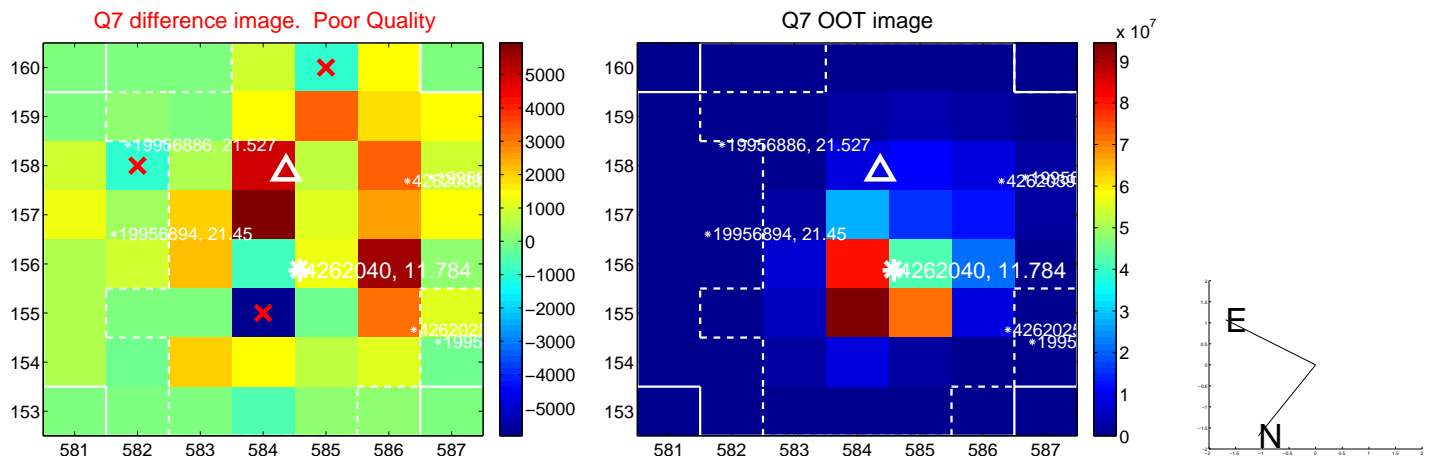
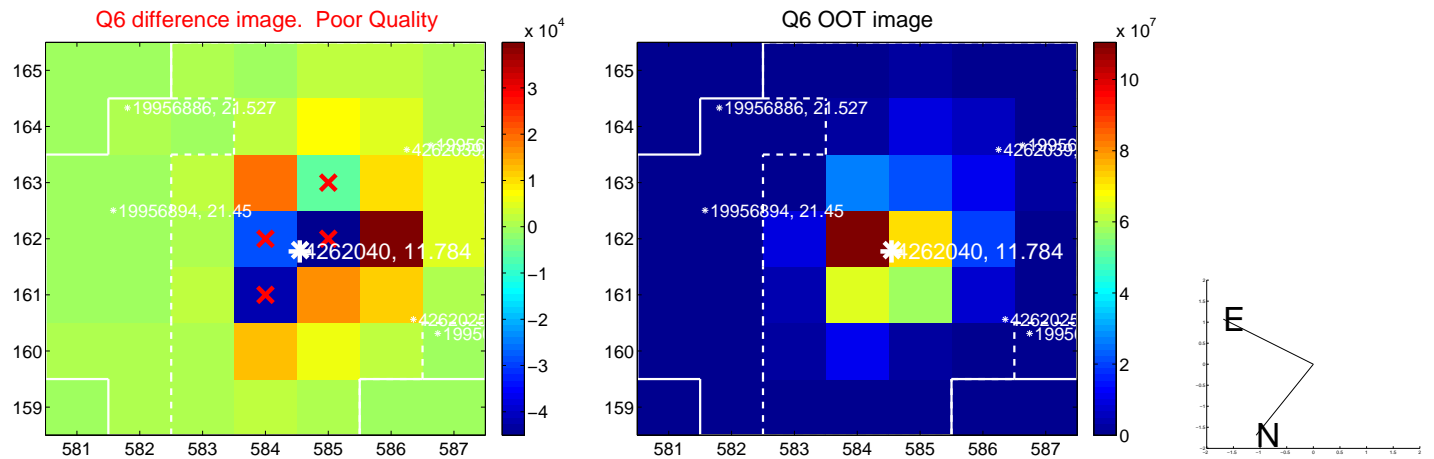
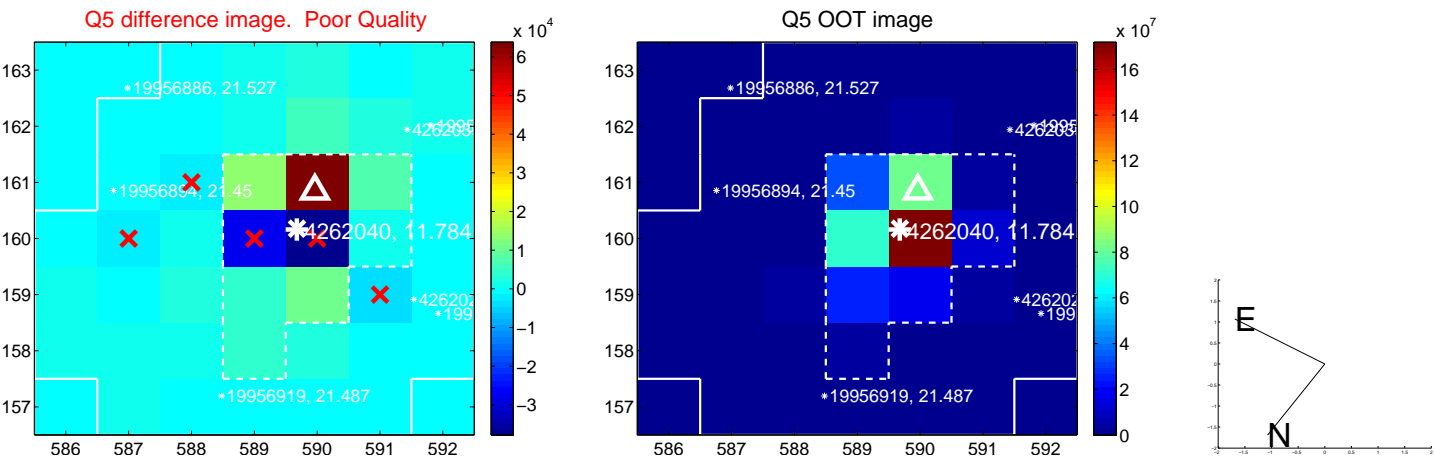
Q4 no difference image



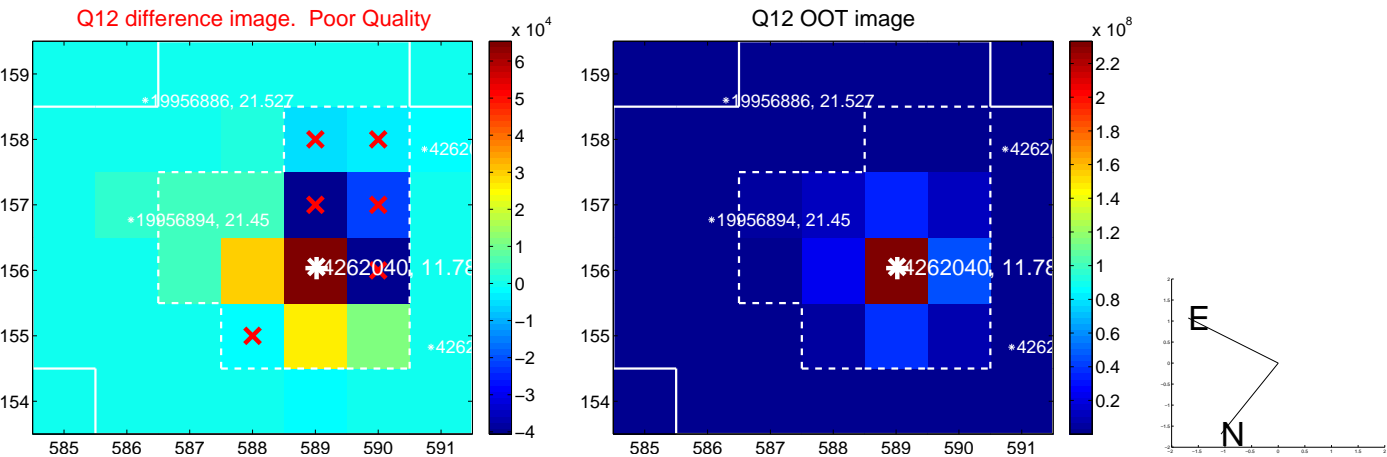
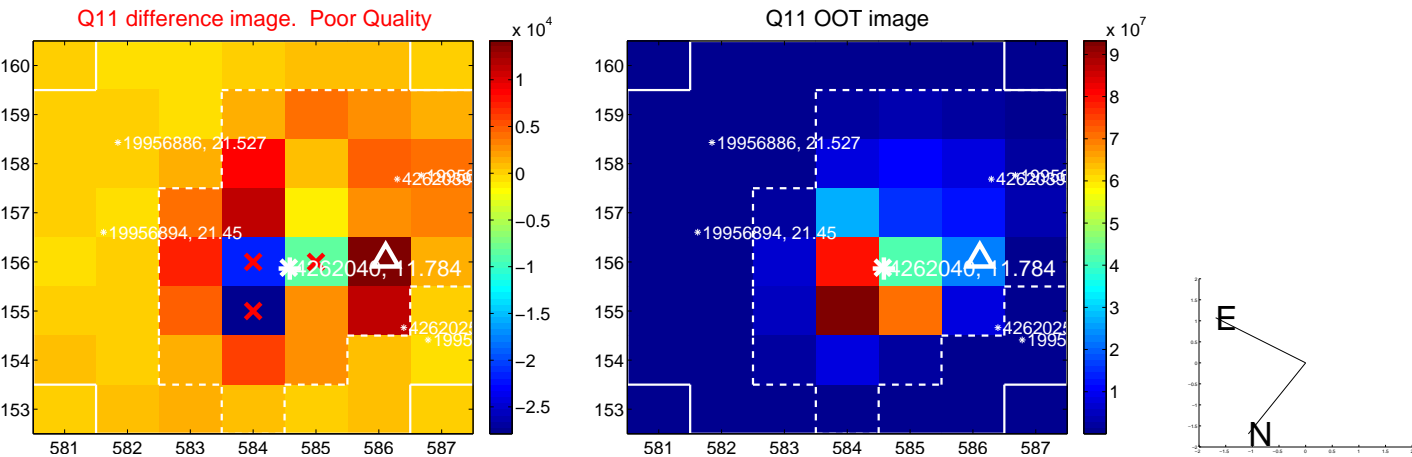
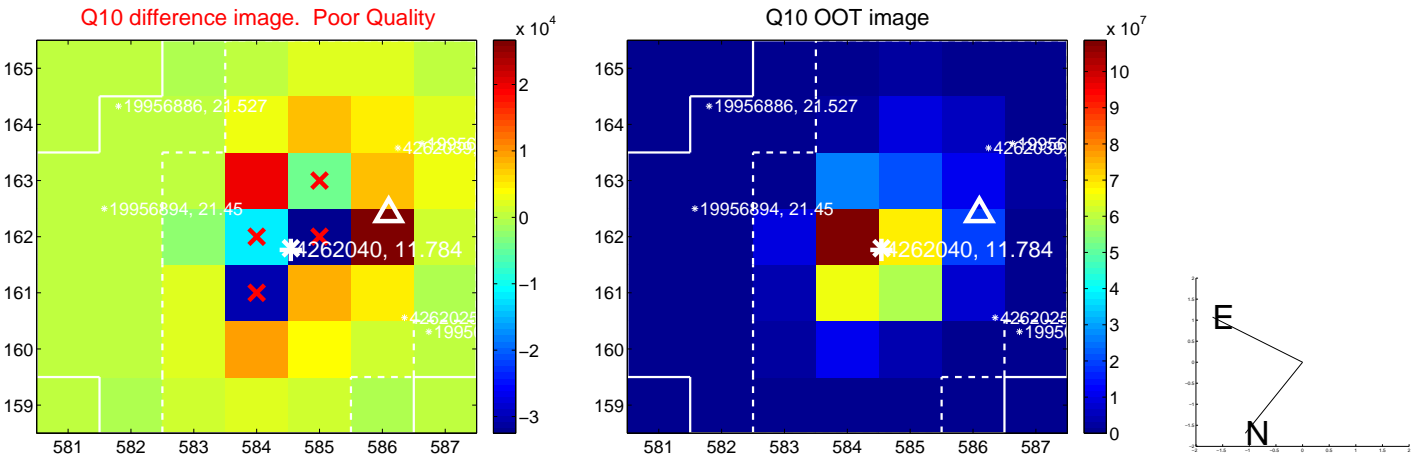
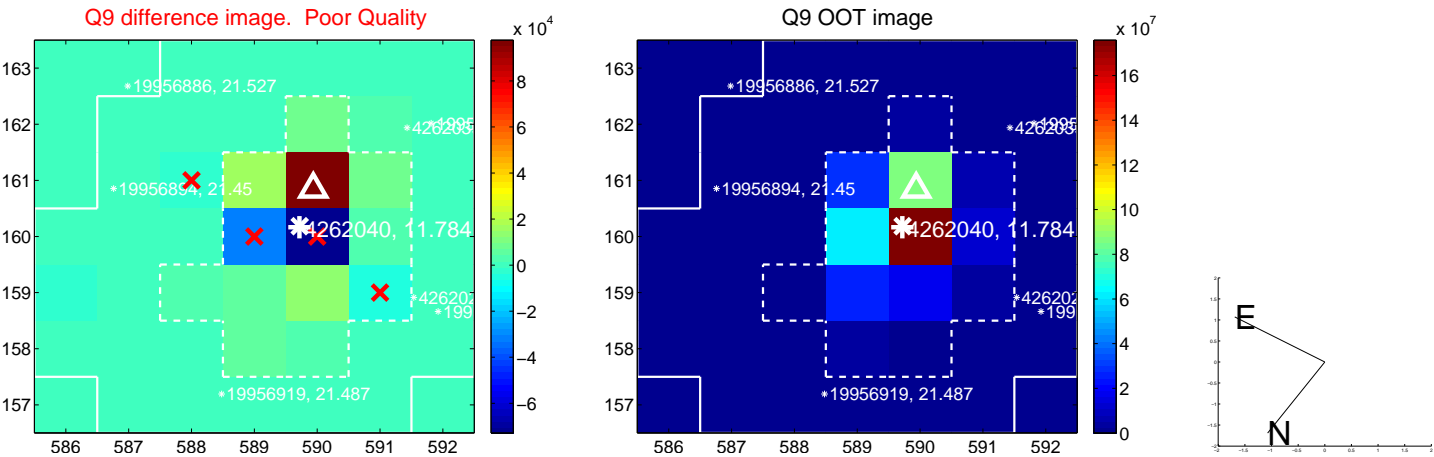
Q4 no OOT image



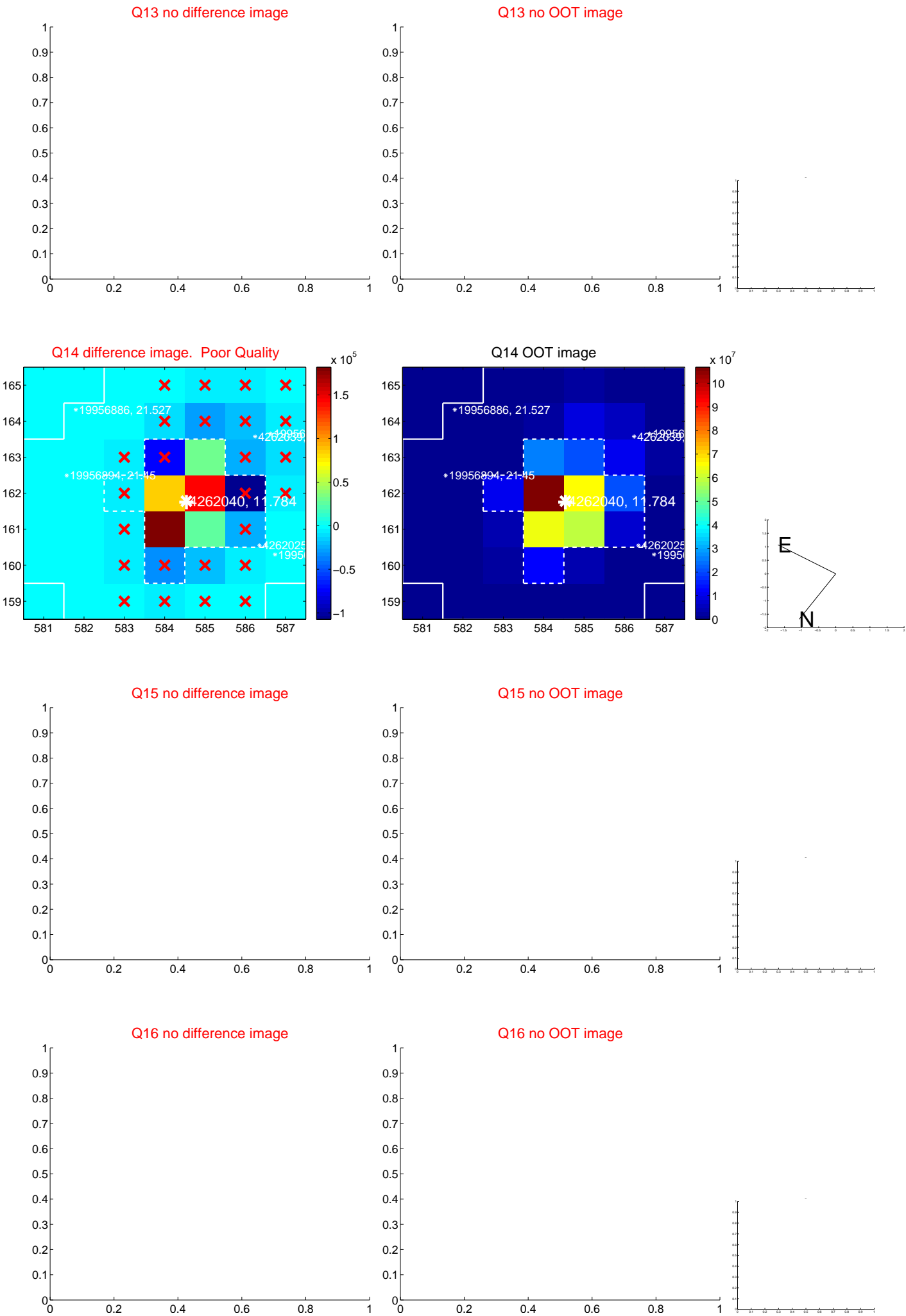
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



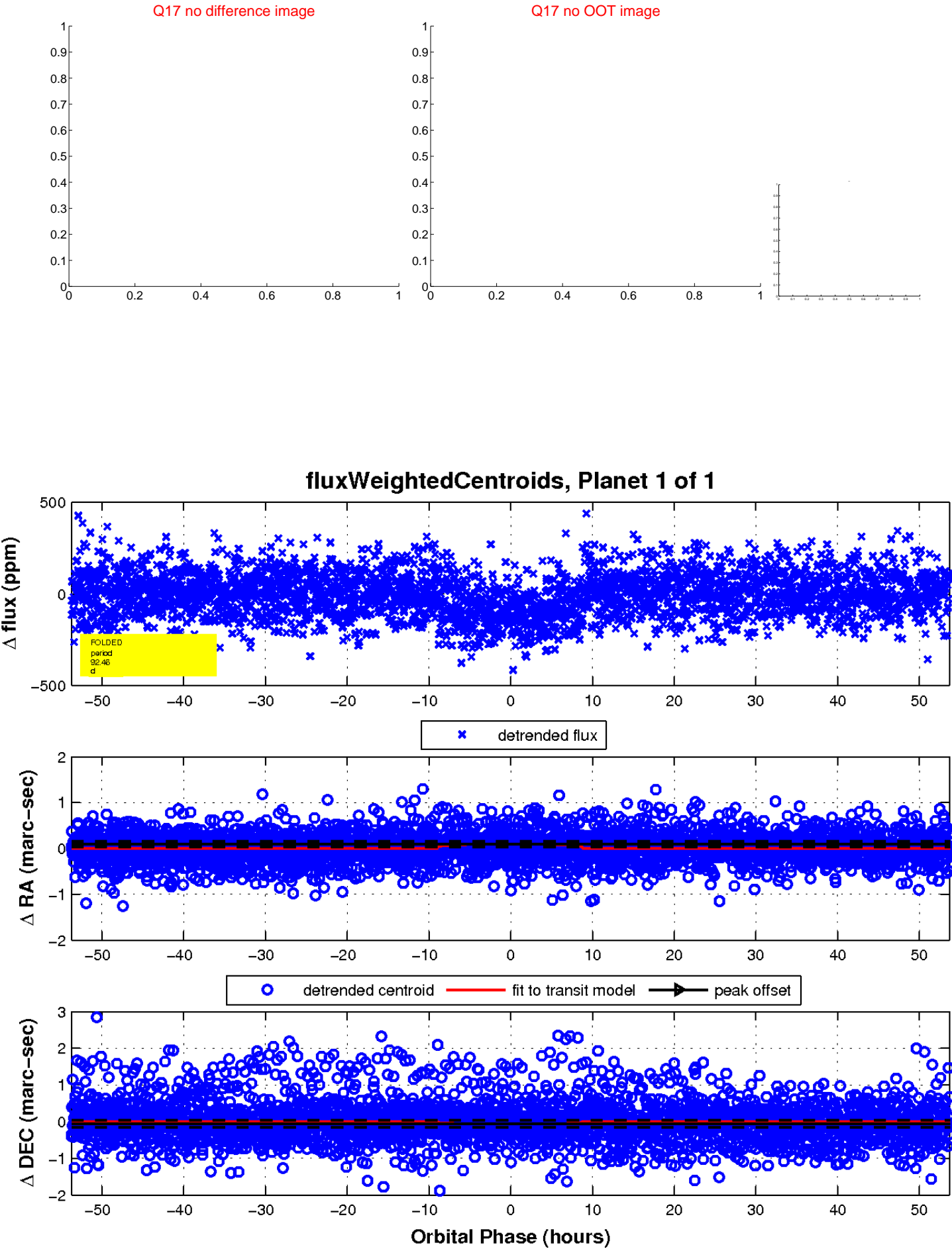
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

