

KIC 007902140

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})
007902140-01	OBS	No	369.035168	233.276449	709.7	17.966	11.1	10.4	0.98	5922	2.99	1.04

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007902140-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—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.

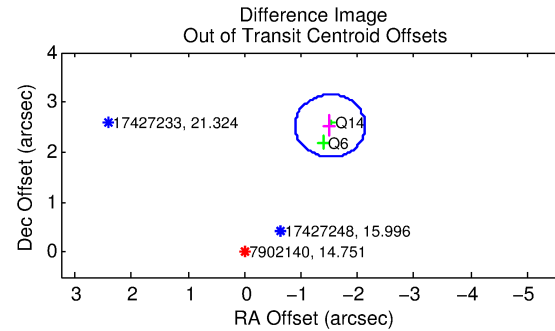
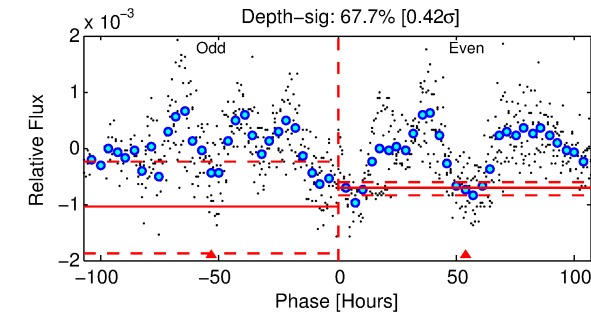
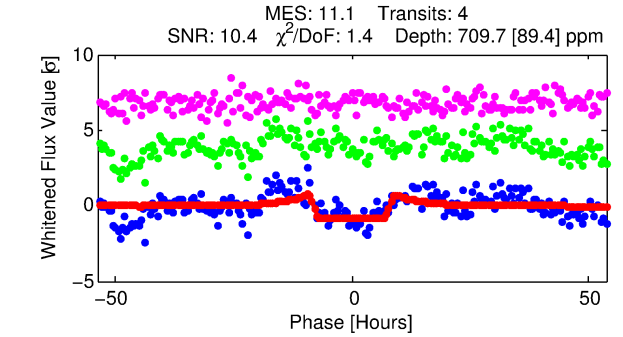
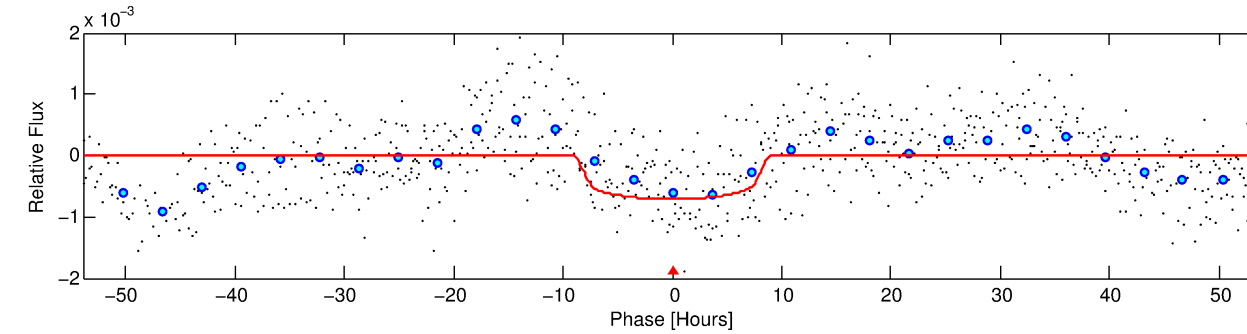
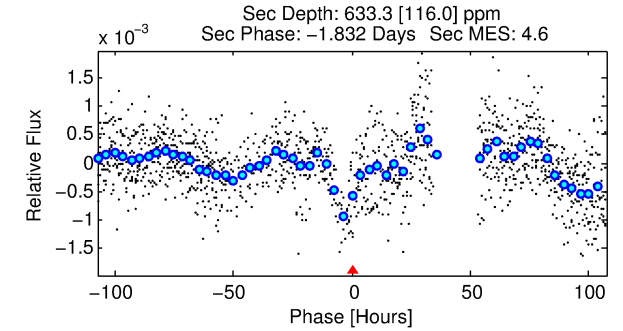
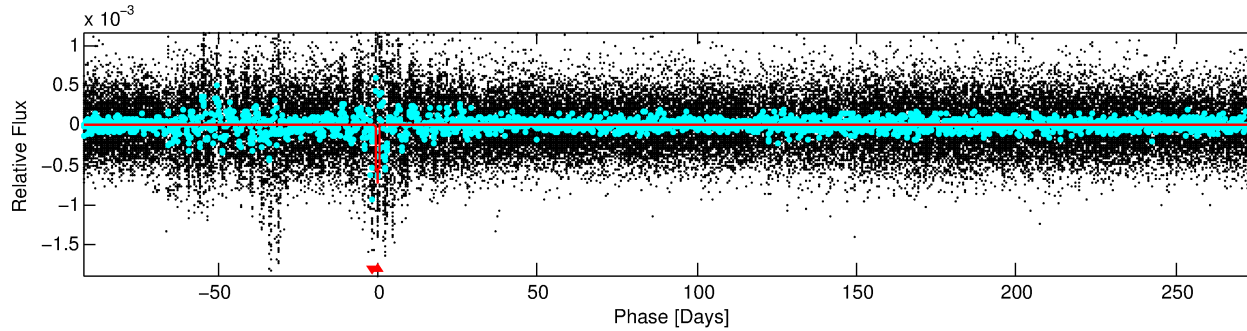
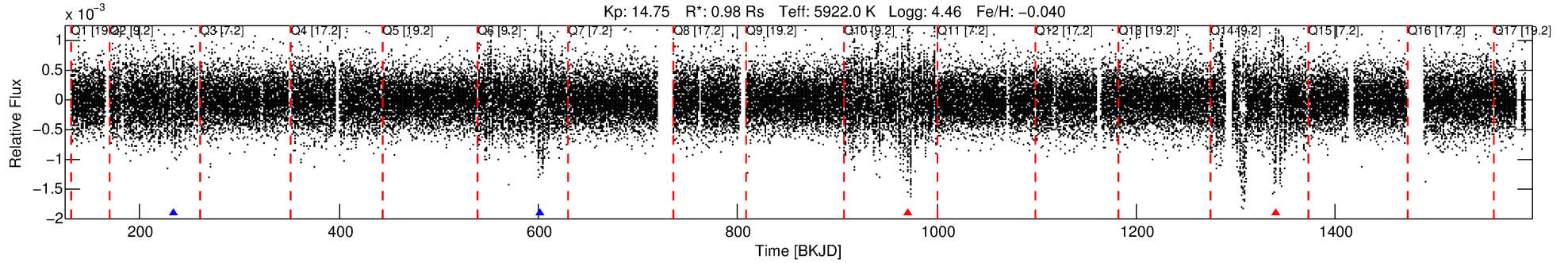
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007902140-01

No Significant Match Found

DV One-Page Summary

KIC: 7902140 Candidate: 1 of 1 Period: 369.035 d



DV Fit Results:

Period = 369.03517 [0.01018] d
Epoch = 233.2764 [0.0186] BKJD
Rp/R* = 0.0278 [0.0030]
a/R* = 90.11 [34.46]
b = 0.85 [0.12]
Seff = 1.04 [0.40]
Teq = 258 [25] K
Rp = 2.99 [0.94] Re
a = 1.0118 [0.2539] AU
Ag = 39977.79 [18562.16] [2.15σ]
Teffp = 5630 [436] K [12.30σ]

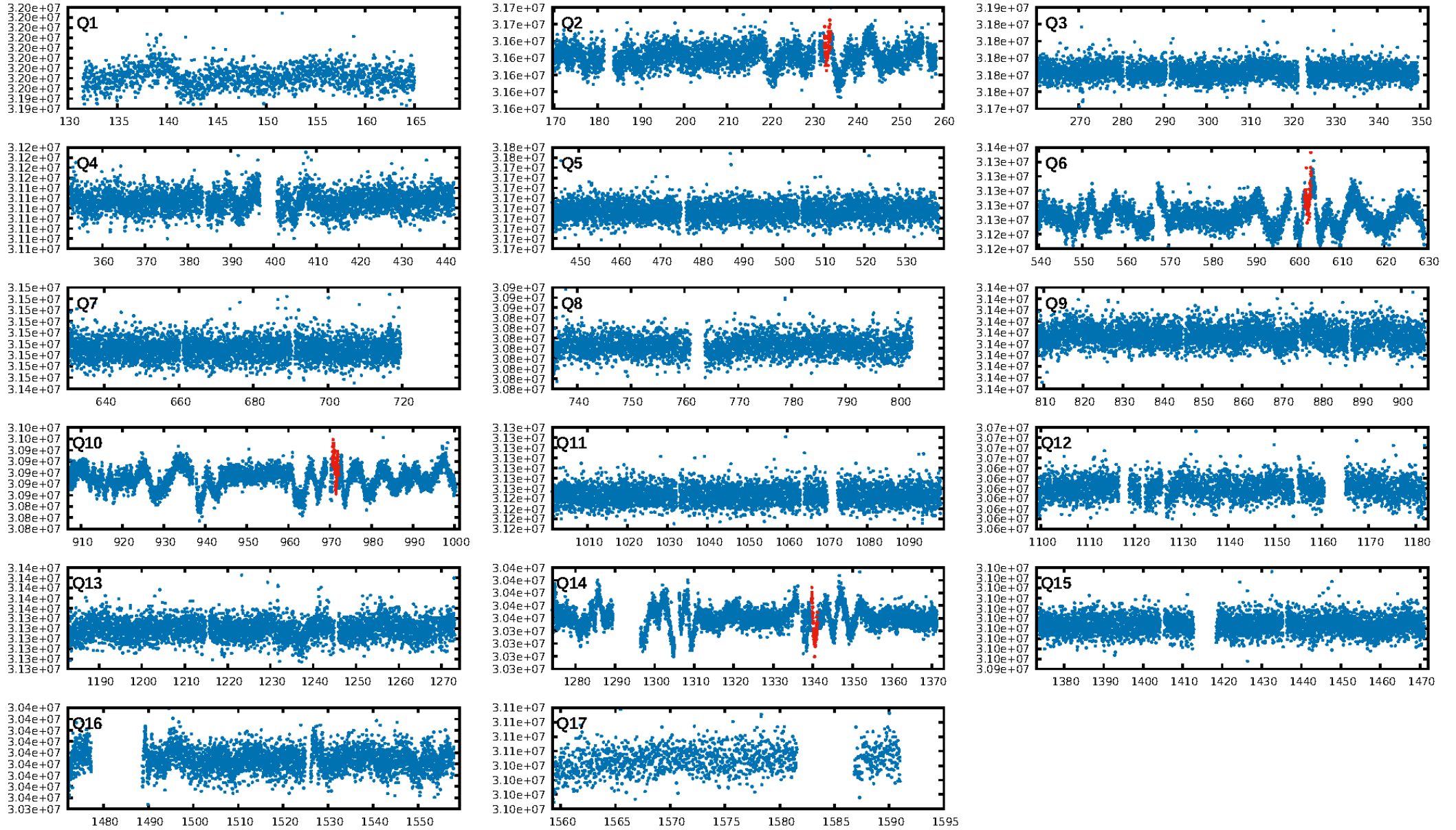
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 47.4%
Bootstrap-pfa: 3.86e-15
RollingBand-fgt: 0.50 [2/4]
GhostDiagnostic-chr: 1.019
Centroid-sig: 12.3%
Centroid-so: 3.014 arcsec [1.77σ]
OotOffset-rm: 2.947 arcsec [14.15σ]
KicOffset-rm: 2.949 arcsec [15.97σ]
OotOffset-st: 2/0/0/0 [2]
KicOffset-st: 2/0/0/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [2/2]

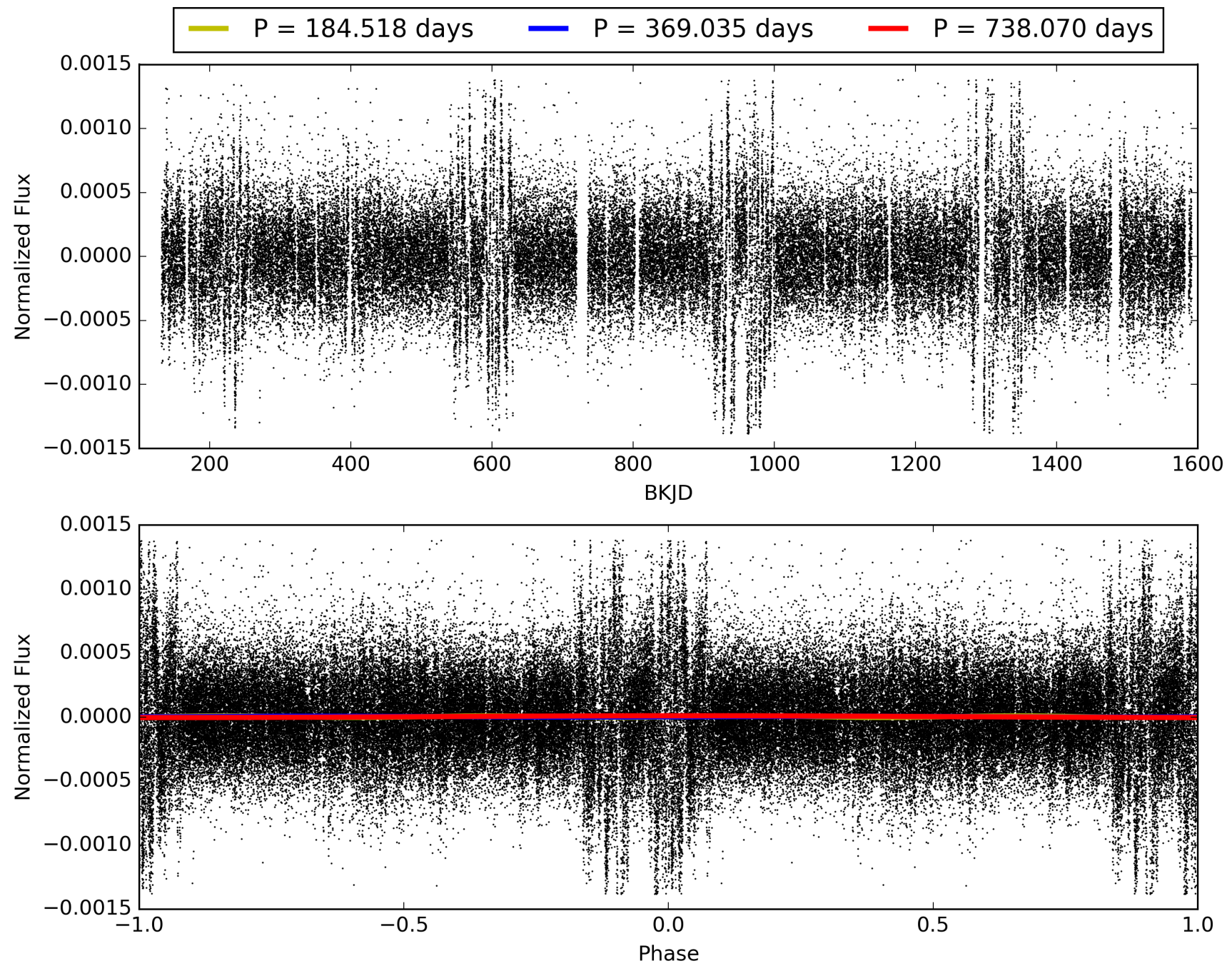
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 00:30:52 Z

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

TCE 007902140-01, PDC Light Curves

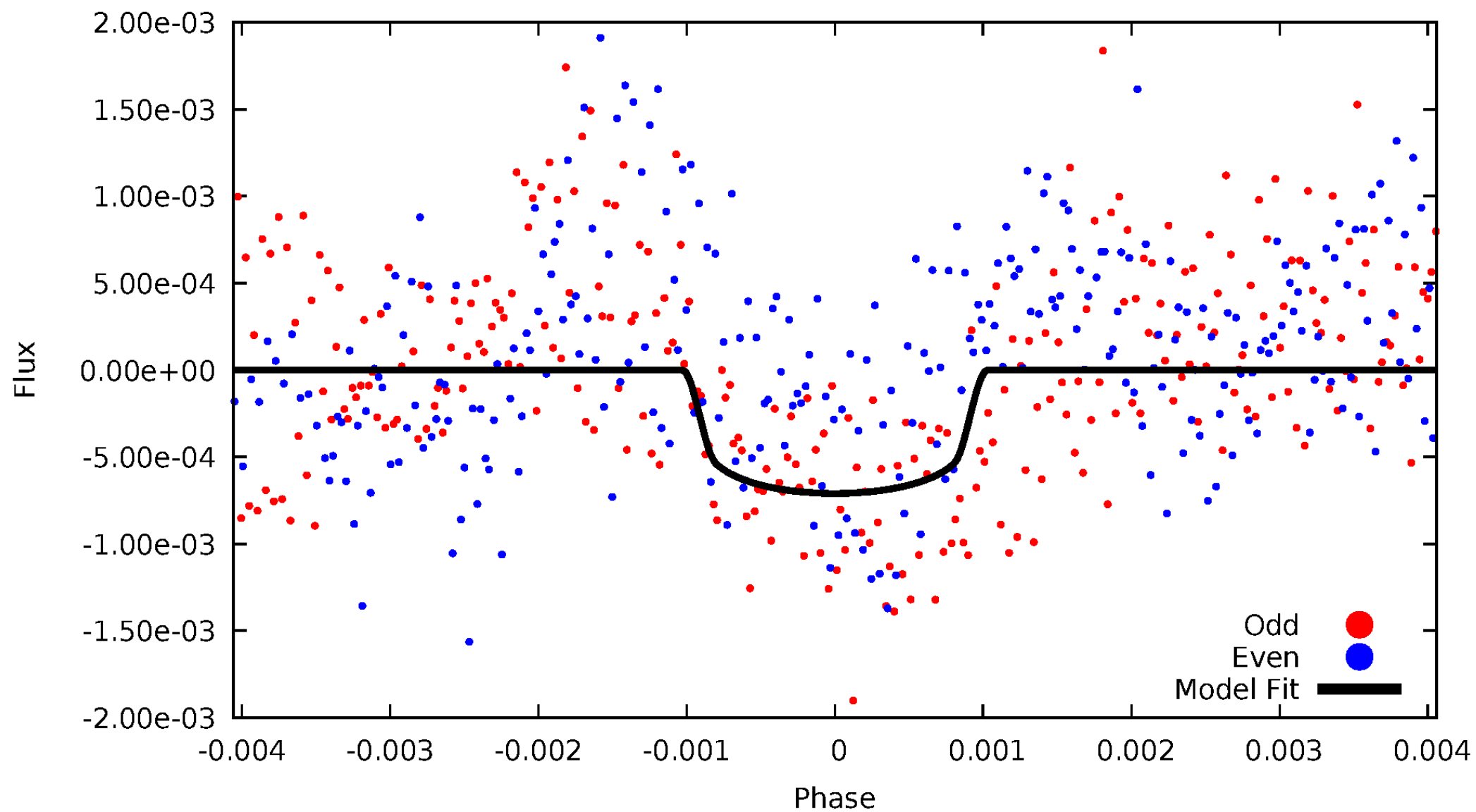


TCE 007902140-01



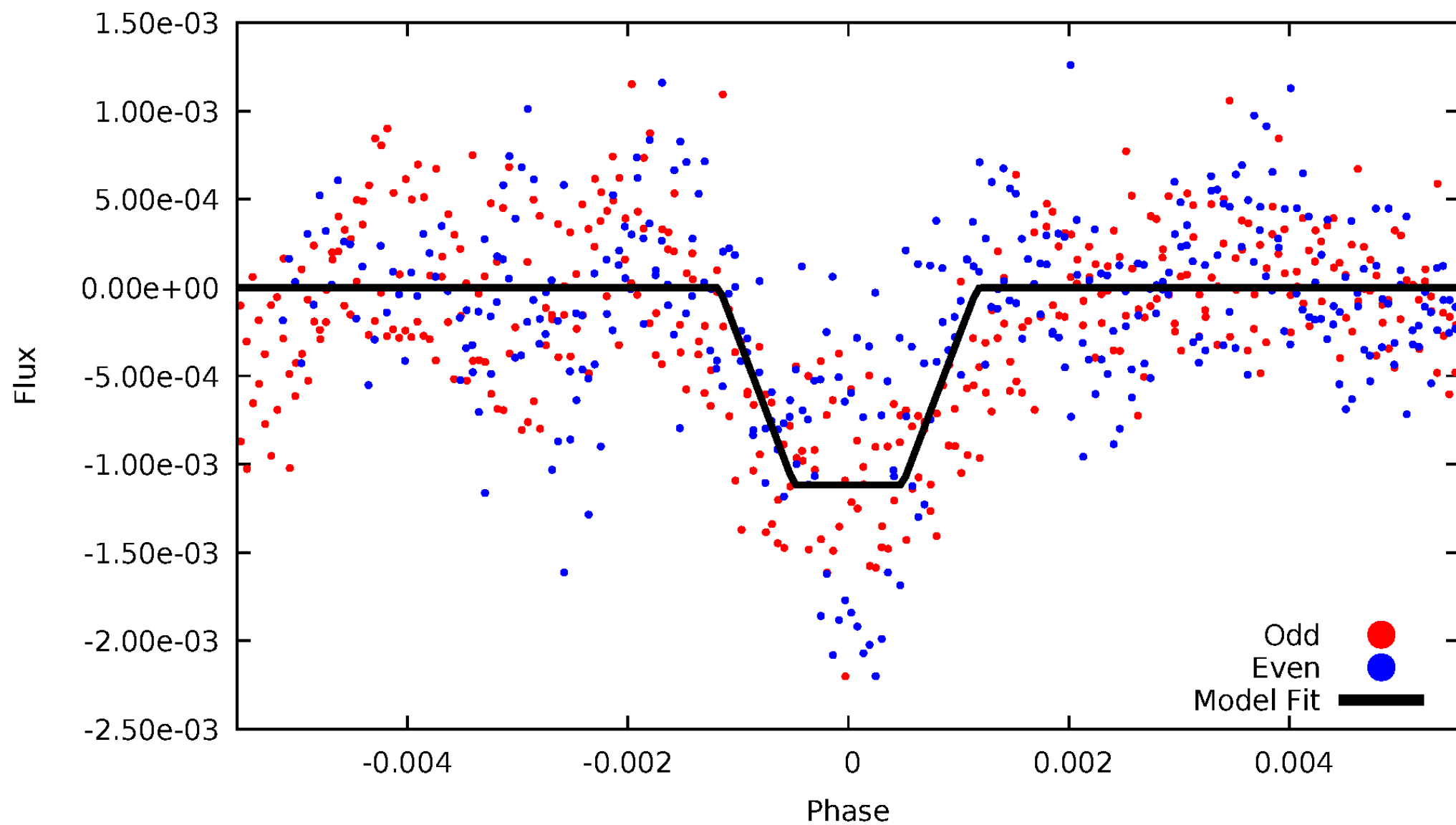
DV Odd/Even

TCE 007902140-01

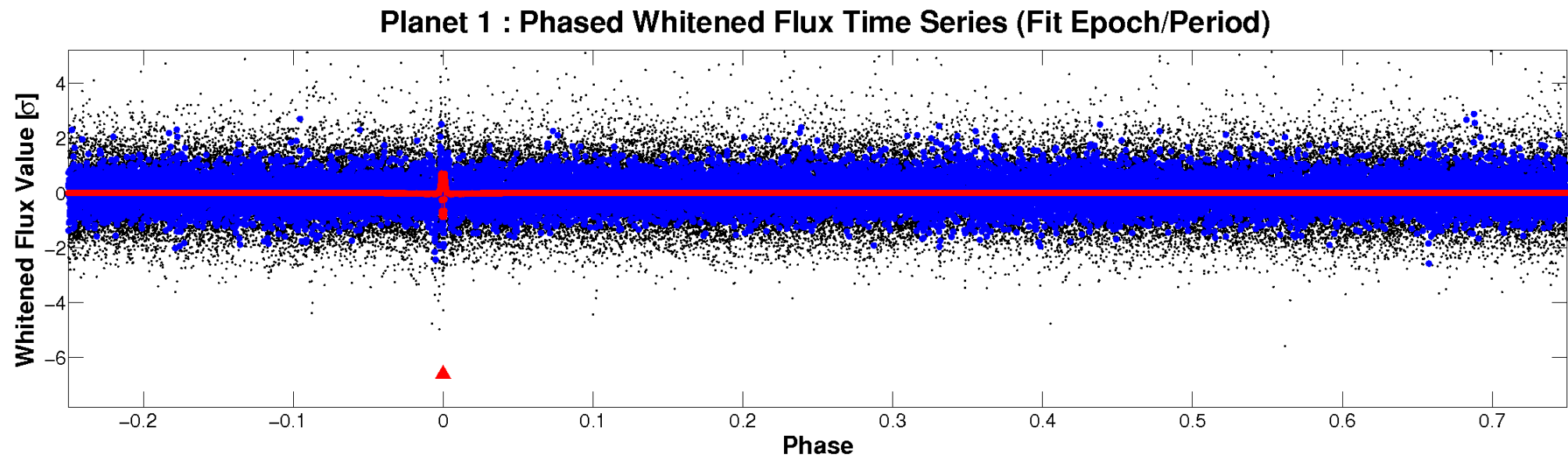
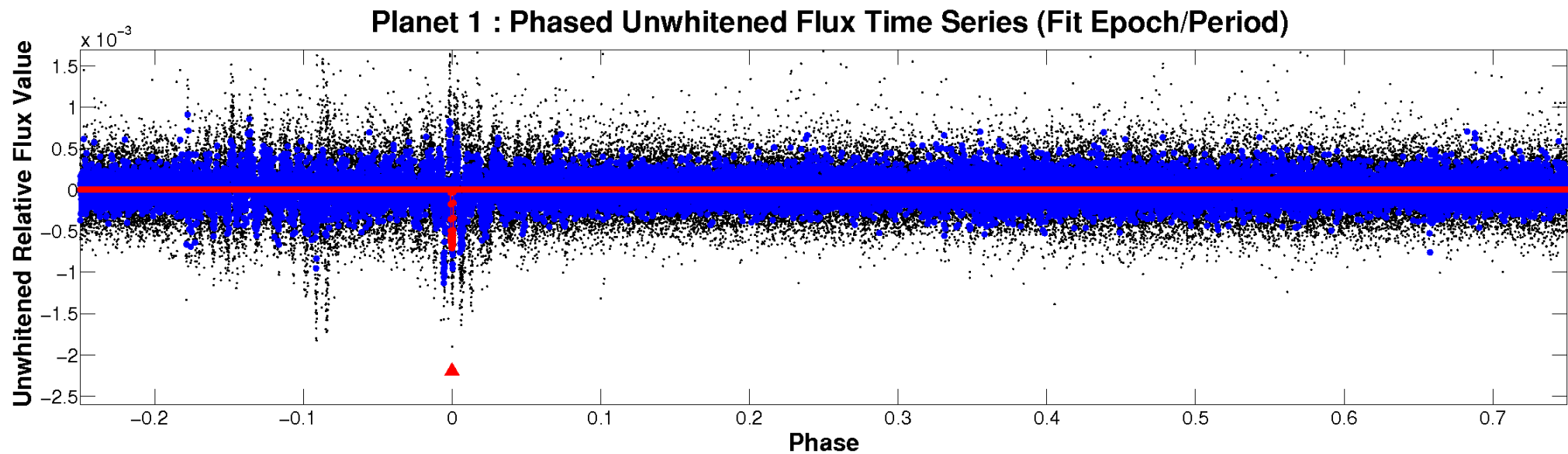


ALT Odd/Even

TCE 007902140-01

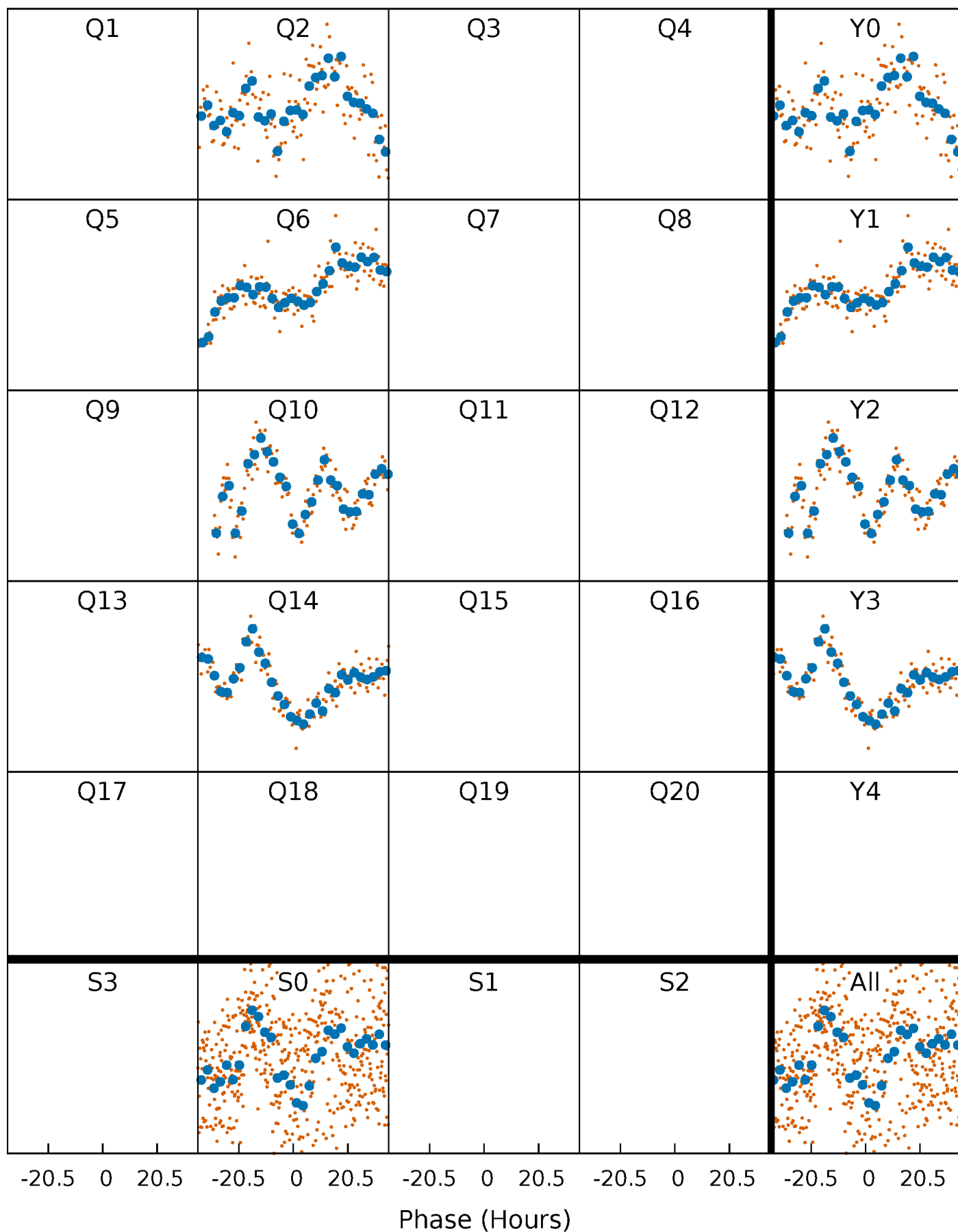


Non-Whitened Vs. Whitened Light Curve



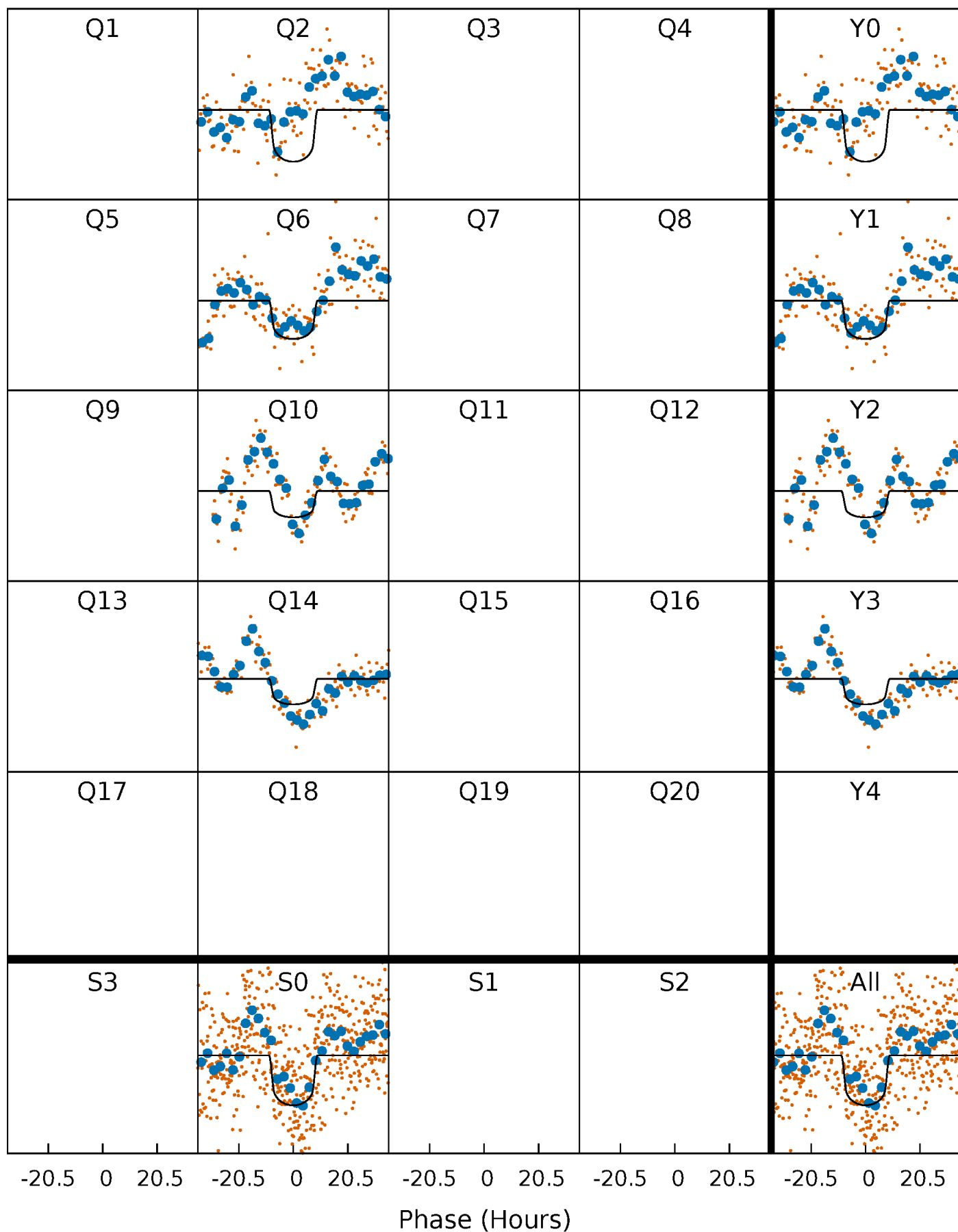
PDC Quarter-Phased Transit Curves

TCE 007902140-01 P=369.035168 Days $T_0=233.276449$ (BKJD)



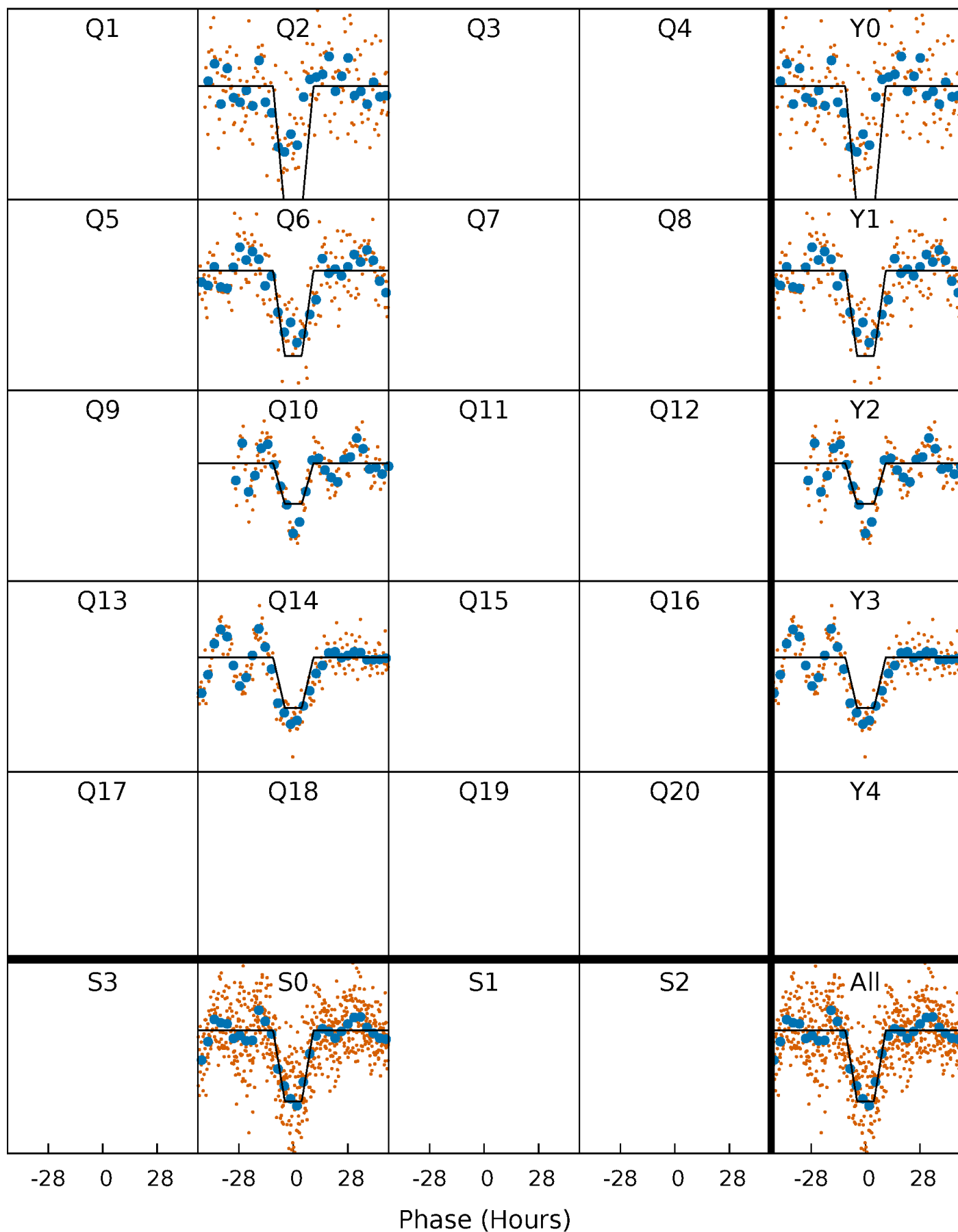
DV Quarter-Phased Transit Curves

TCE 007902140-01 P=369.035168 Days $T_0=233.276449$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

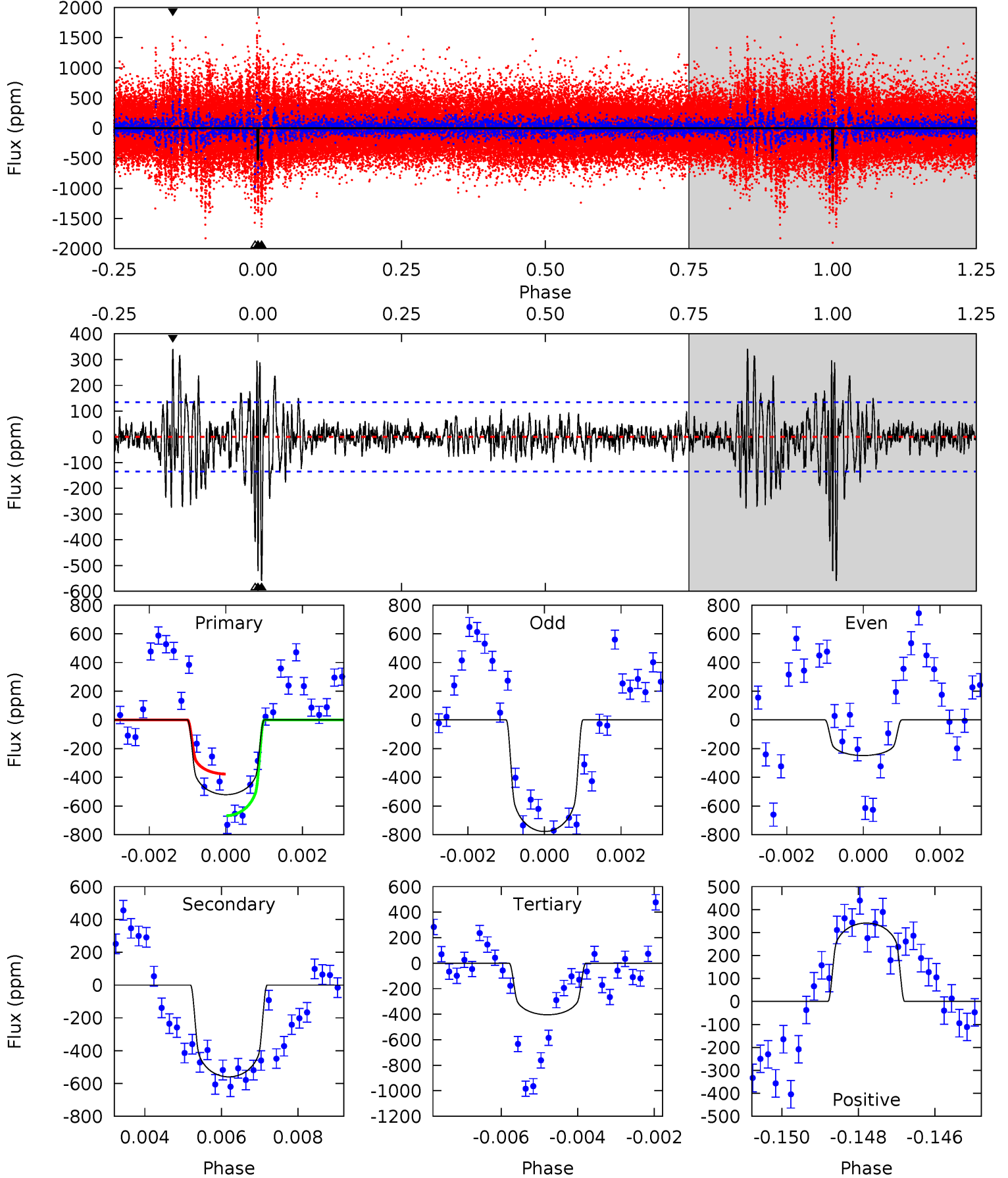
TCE 007902140-01 P=369.050527 Days $T_0=233.285841$ (BKJD)



DV Model-Shift Uniqueness Test

007902140-01, P = 369.035168 Days, E = 233.276449 Days

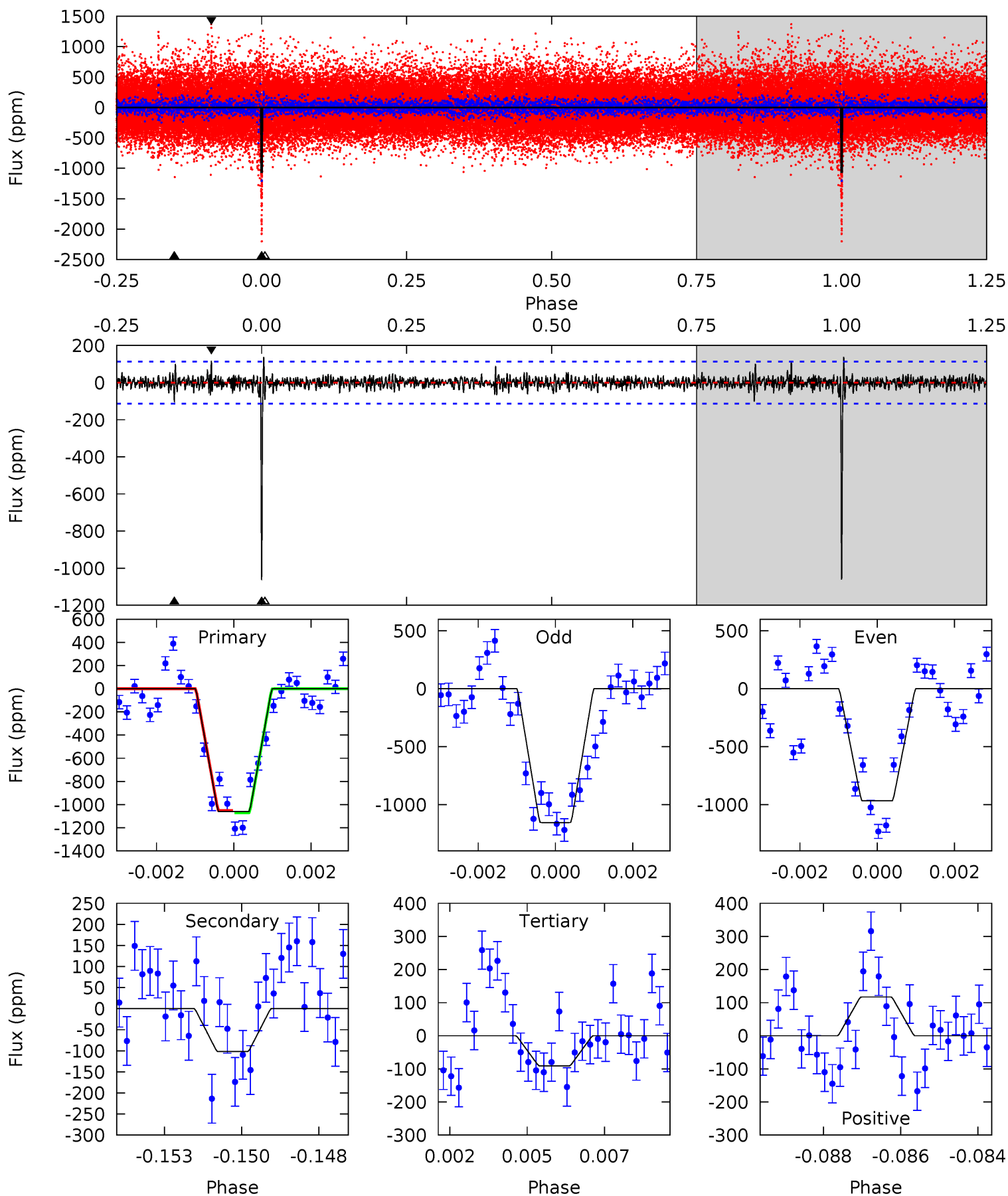
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.6	22.1	16.0	13.5	5.32	3.08	2.50	4.62	7.11	6.13	8.63	10.4	1.06	0.38	5.73



Alt Model-Shift Uniqueness Test

007902140-01, P = 369.050527 Days, E = 233.285841 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
49.6	4.75	4.25	5.47	5.29	3.04	0.96	45.4	44.1	0.50	-0.71	4.41	0.92	0.12	0.44



Stellar Parameters For KIC 007902140

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5922^{+164}_{-184}	$4.459^{+0.067}_{-0.202}$	$-0.040^{+0.250}_{-0.300}$	$0.983^{+0.291}_{-0.104}$	$1.014^{+0.127}_{-0.127}$	$1.505^{+0.431}_{-0.760}$
	+3%/-3%	+2%/-5%	+625%/-750%	+30%/-11%	+13%/-13%	+29%/-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 007902140-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-559 ± 25	$3.06^{+0.60}_{-0.41}$	365^{+24}_{-17}	5471^{+366}_{-289}	32863^{+11080}_{-9074}
Alt.	-102 ± 21	$3.67^{+0.62}_{-0.46}$	365^{+25}_{-18}	3676^{+177}_{-188}	4101^{+1597}_{-1274}

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

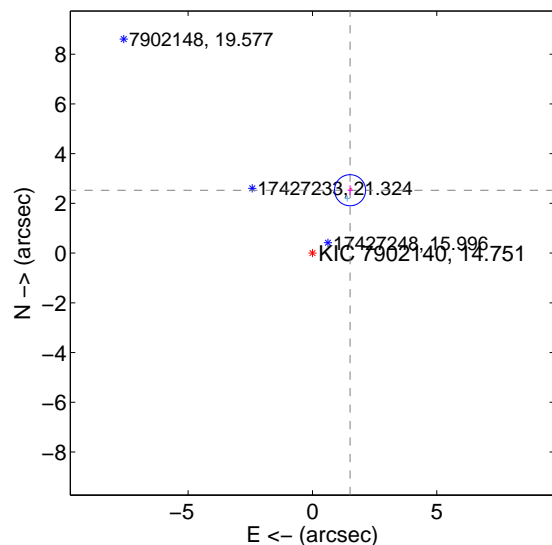
Supplemental centroid analysis for 007902140-01. Kepler magnitude: 14.75. Transit SNR 10.40

There are 1 quarters with good PRF difference image offsets

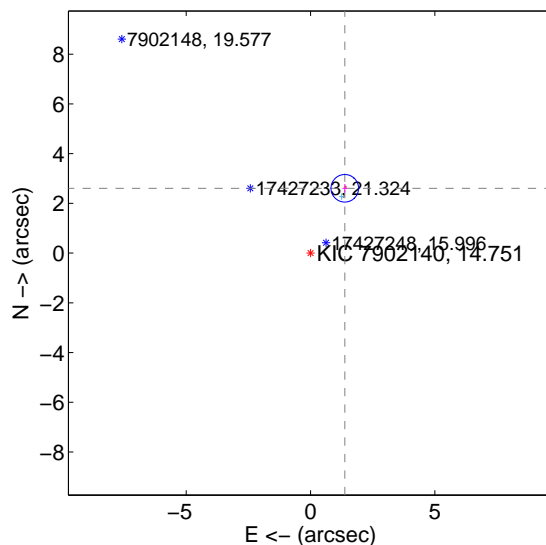
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.947 ± 0.208	14.15	-1.513 ± 0.098	2.529 ± 0.198
PRF-fit source offset from KIC position	2.949 ± 0.185	15.97	-1.378 ± 0.094	2.607 ± 0.173
photometric centroid source offset	3.01 ± 1.70	1.77	3.01 ± 1.70	-0.21 ± 1.84

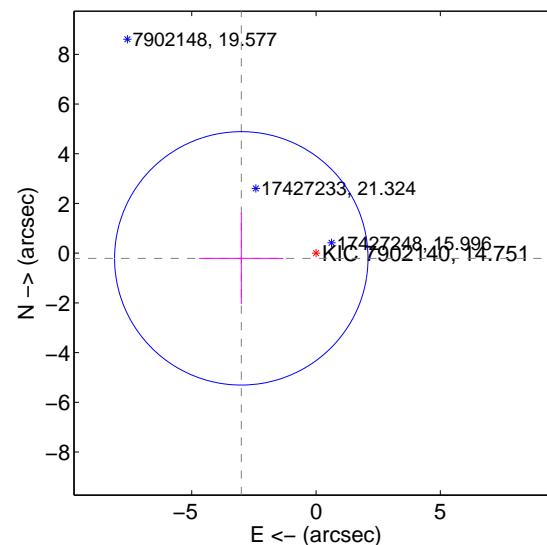
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

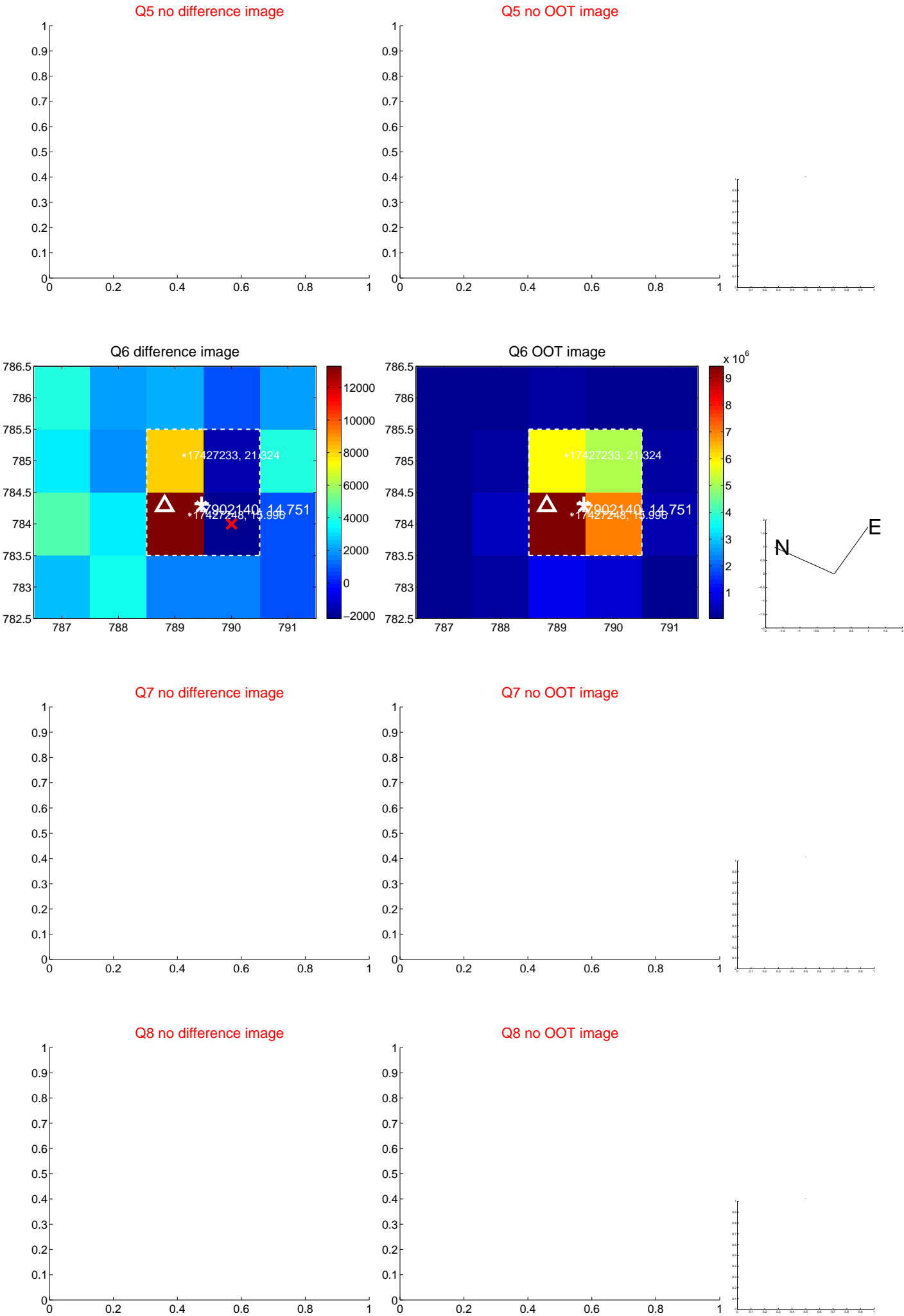


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



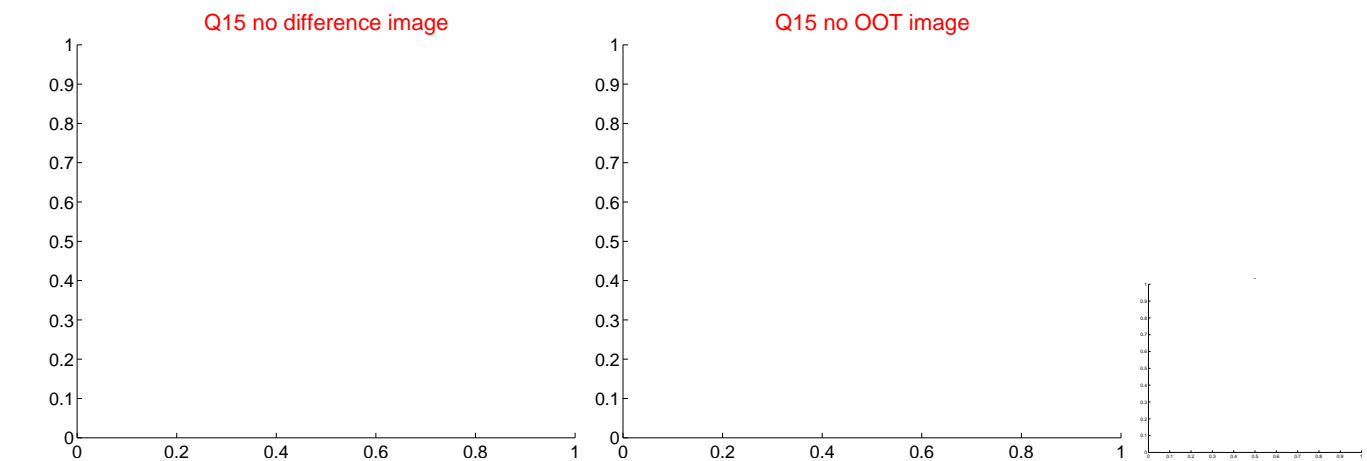
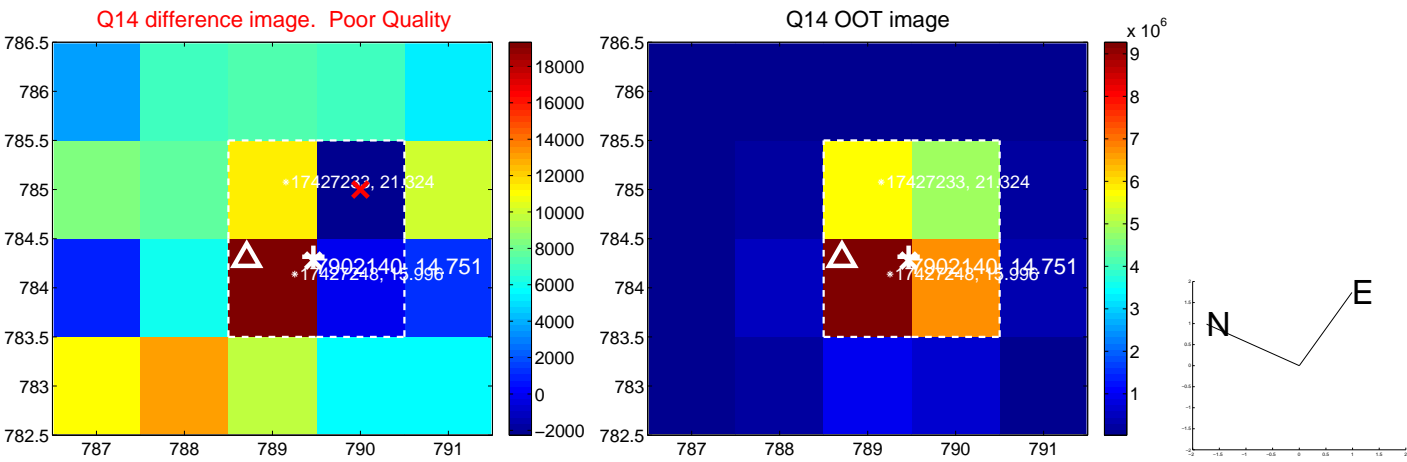
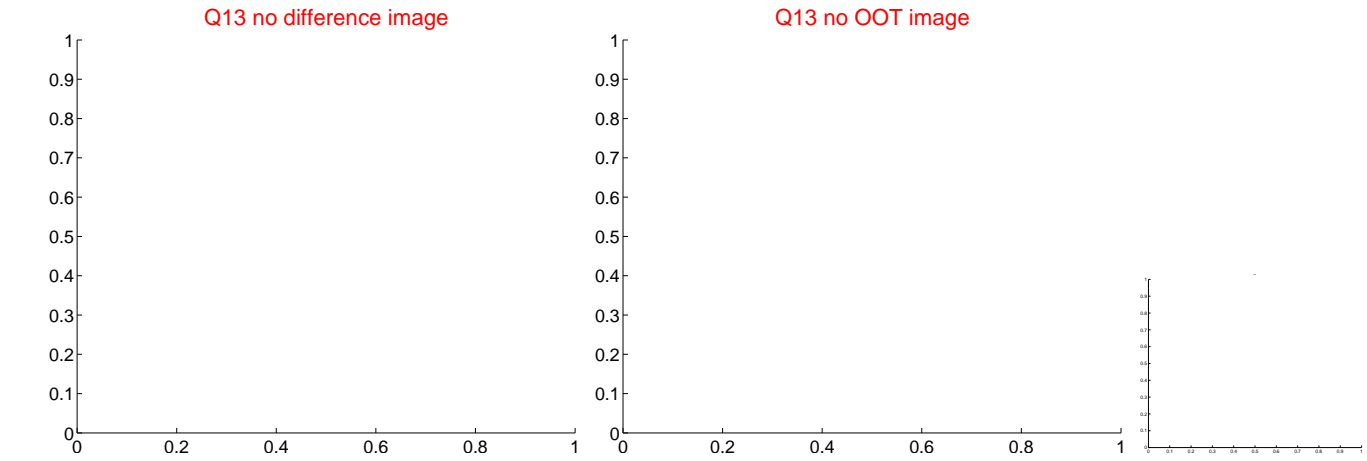
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



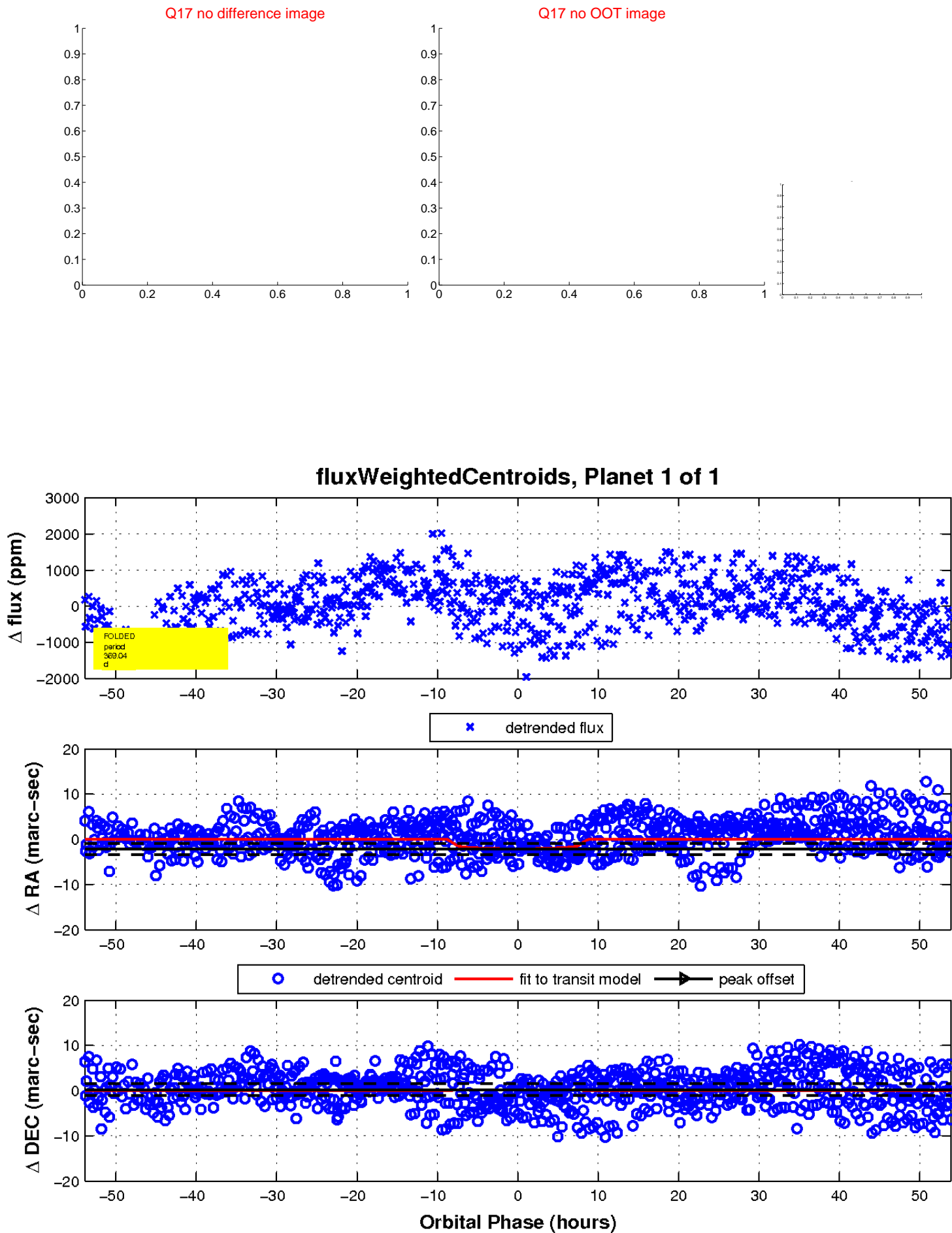
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UKIRT Image

Declination

