

KIC 006105491

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})
006105491-01	OBS	No	13.334222	140.918057	68.4	38.450	11.7	18.0	1.36	6738	2.21	231.59

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006105491-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—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.

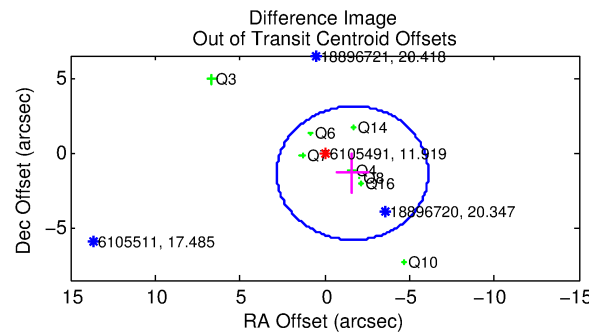
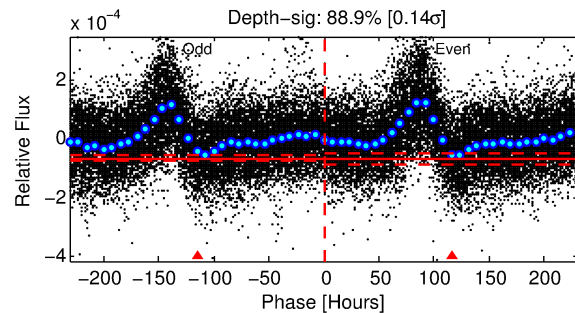
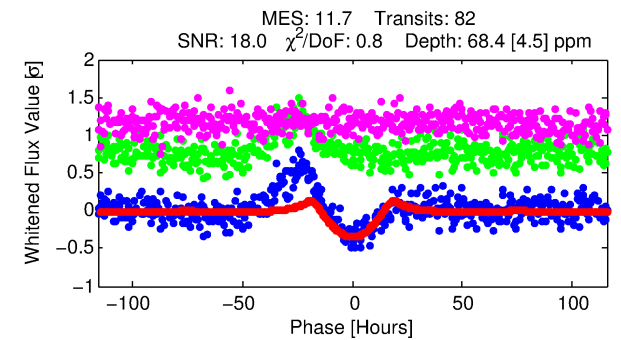
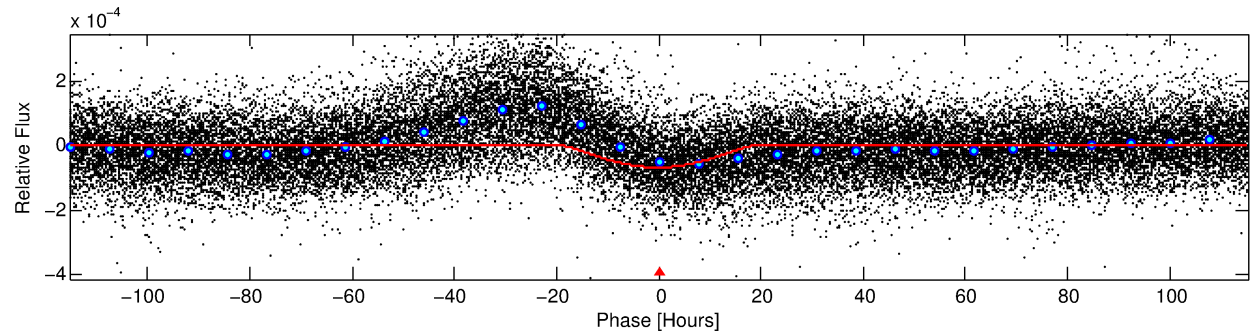
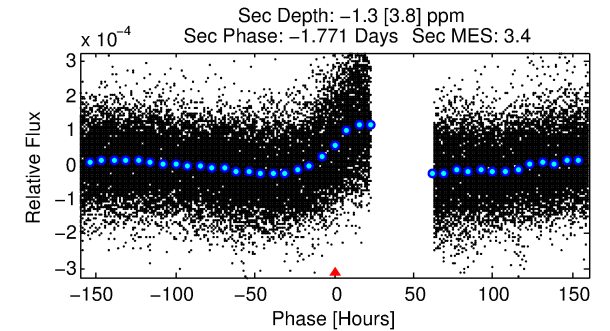
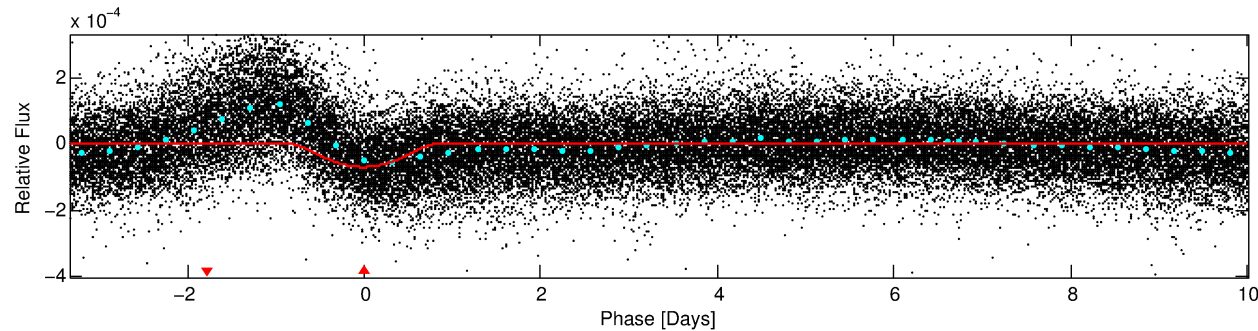
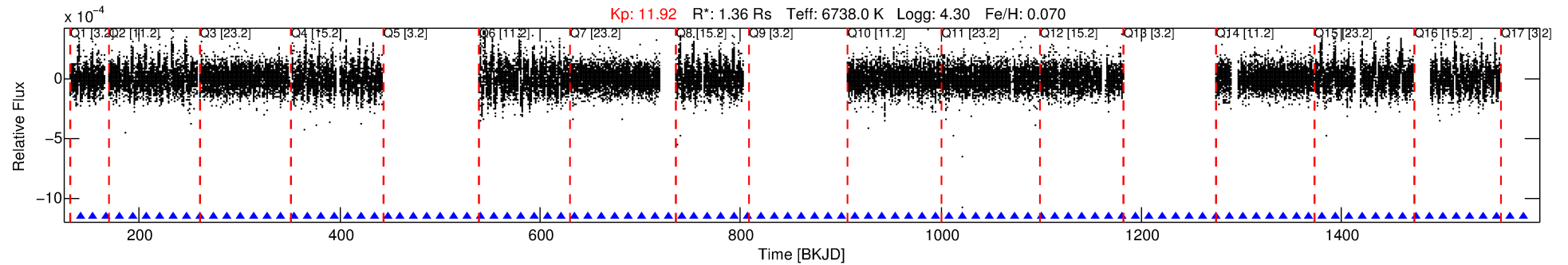
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006105491-01

No Significant Match Found

DV One-Page Summary

KIC: 6105491 Candidate: 1 of 1 Period: 13.334 d



DV Fit Results:

Period = 13.33422 [0.00057] d
Epoch = 140.9181 [0.0344] BKJD
Rp/R* = 0.0149 [0.0114]
a/R* = 1.11 [0.03]
b = 1.00 [0.02]
Seff = 231.59 [72.46]
Teq = 995 [78] K
Rp = 2.21 [1.77] Re
a = 0.1217 [0.0241] AU
Ag = N/A
Teffp = N/A

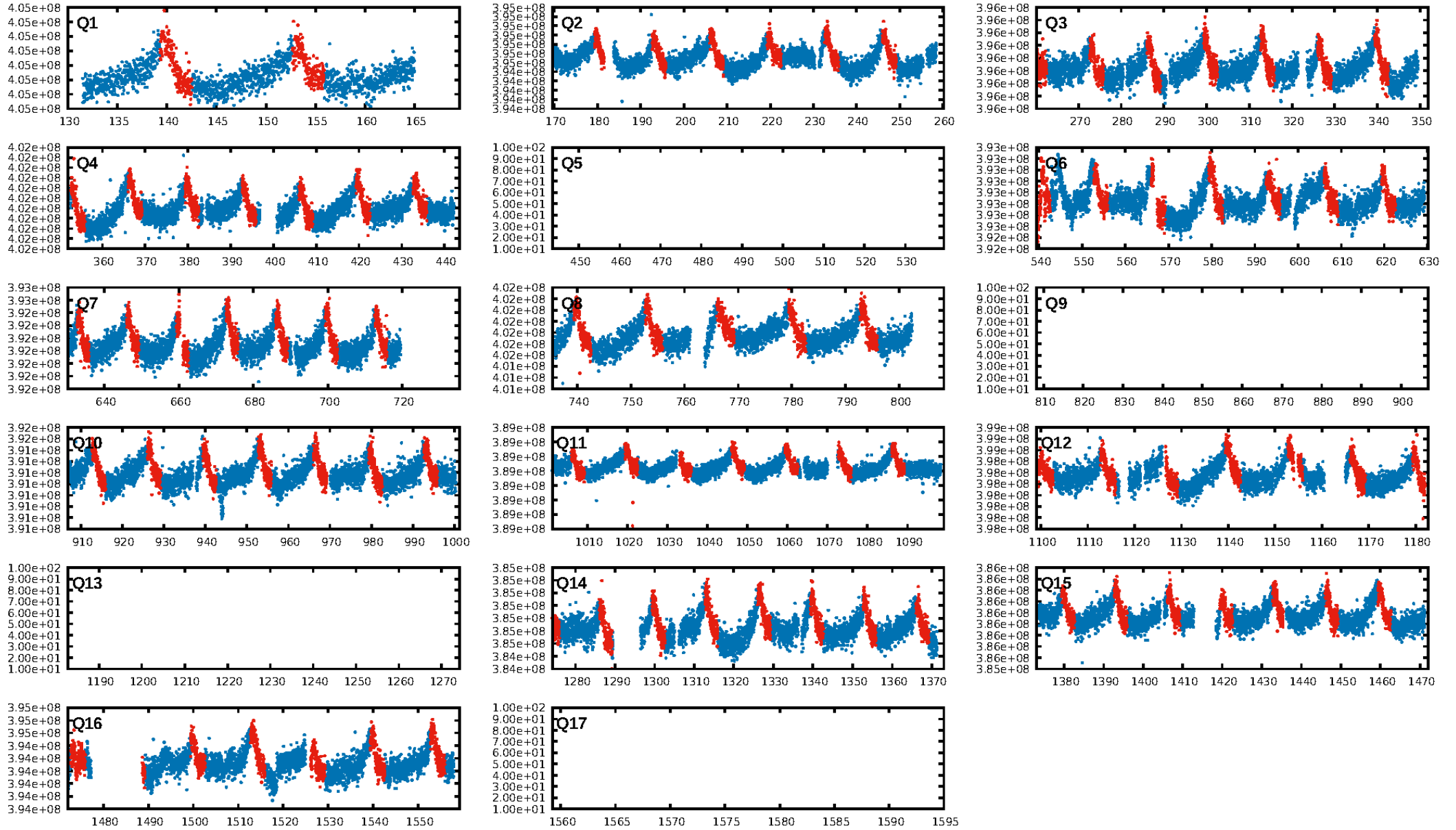
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 98.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 6.63e-31
RollingBand-fgt: 1.00 [80/80]
GhostDiagnostic-chr: 1.633
Centroid-sig: 5.9%
Centroid-so: 0.740 arcsec [1.50σ]
OotOffset-rm: 2.135 arcsec [1.43σ]
KicOffset-rm: 1.995 arcsec [1.05σ]
OotOffset-st: 3/2/3/0 [8]
KicOffset-st: 3/2/3/0 [8]
DiffImageQuality-fgm: 0.62 [5/8]
DiffImageOverlap-fno: 1.00 [13/13]

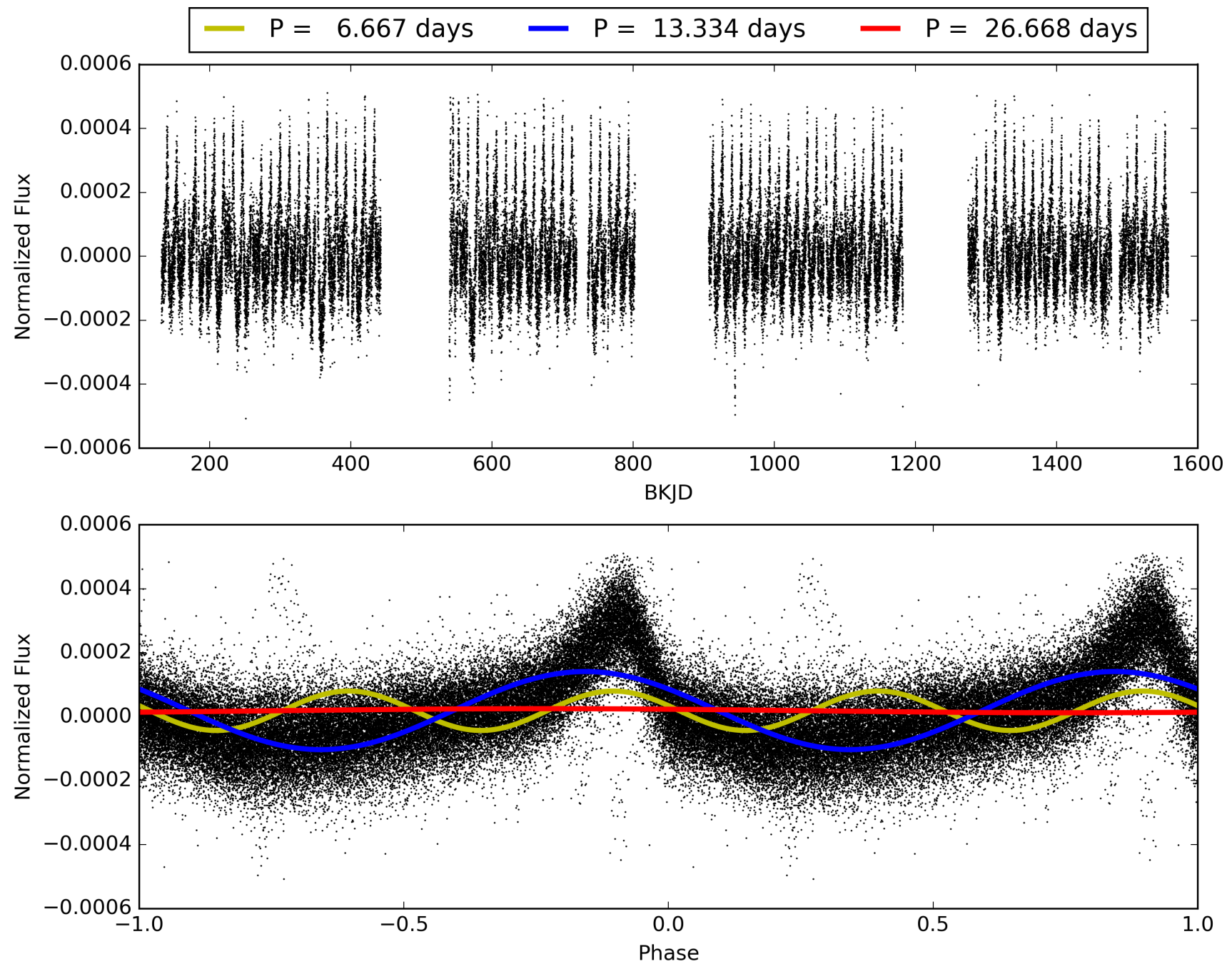
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 00:54:49 Z

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

TCE 006105491-01, PDC Light Curves

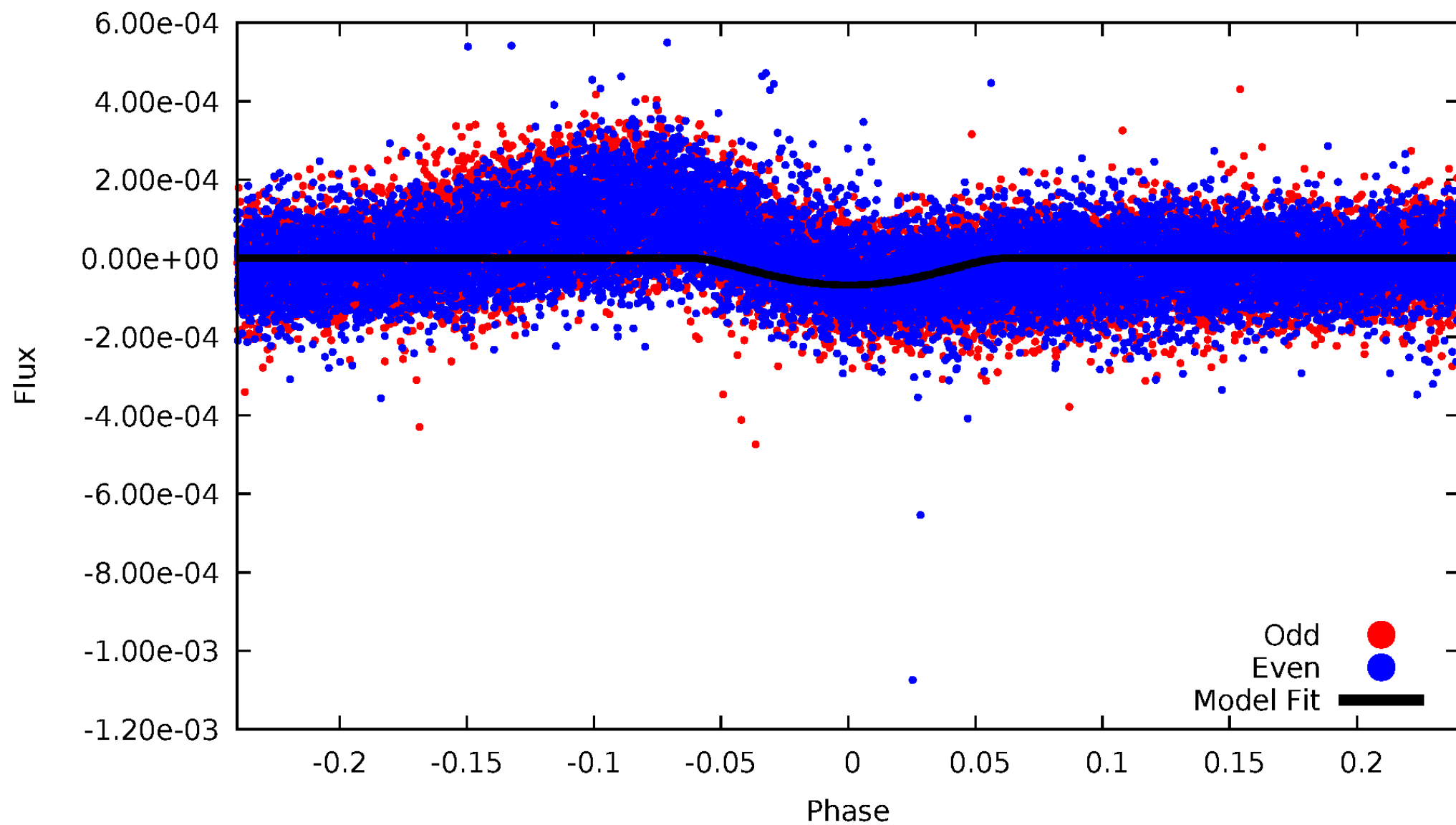


TCE 006105491-01



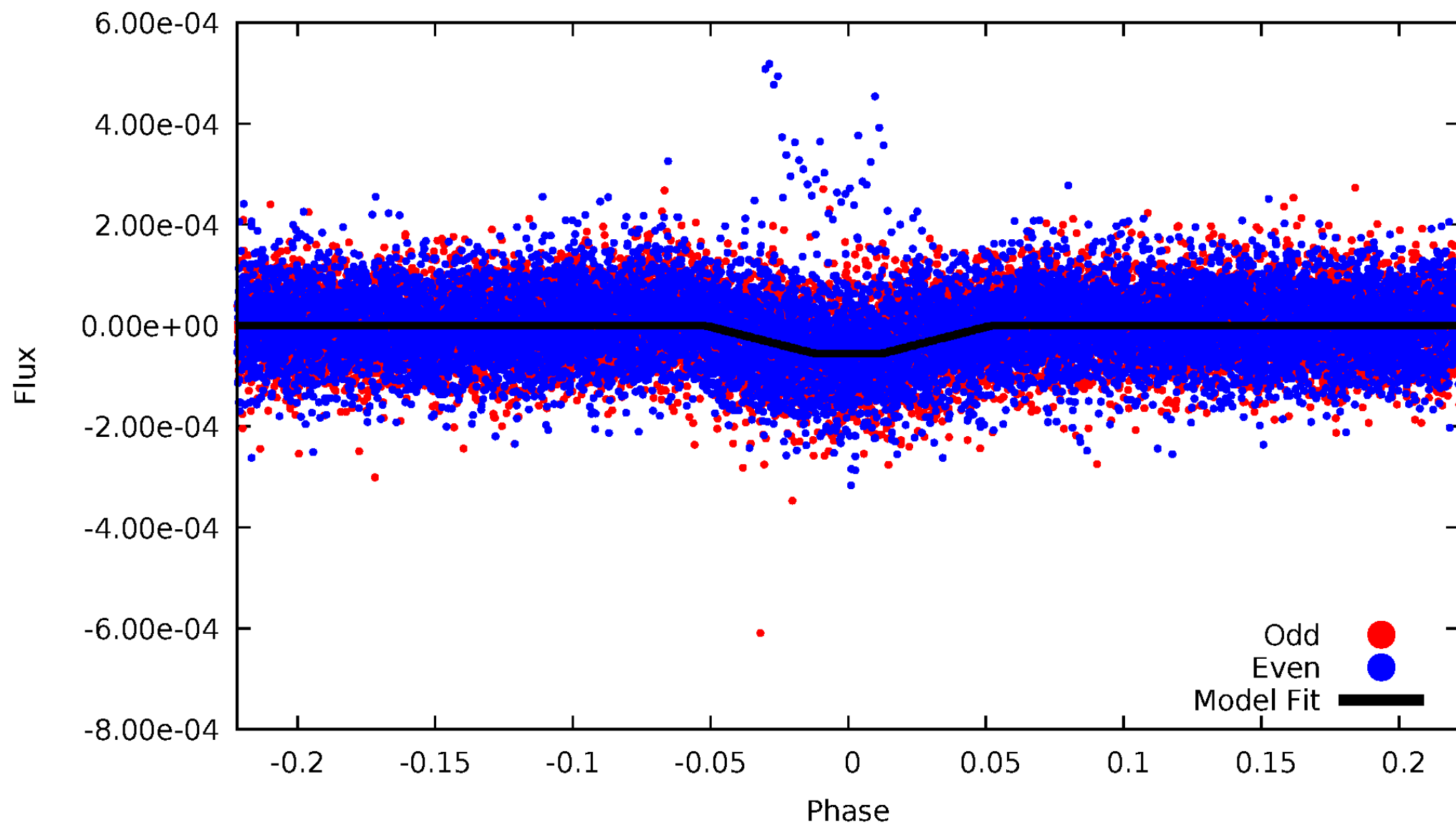
DV Odd/Even

TCE 006105491-01

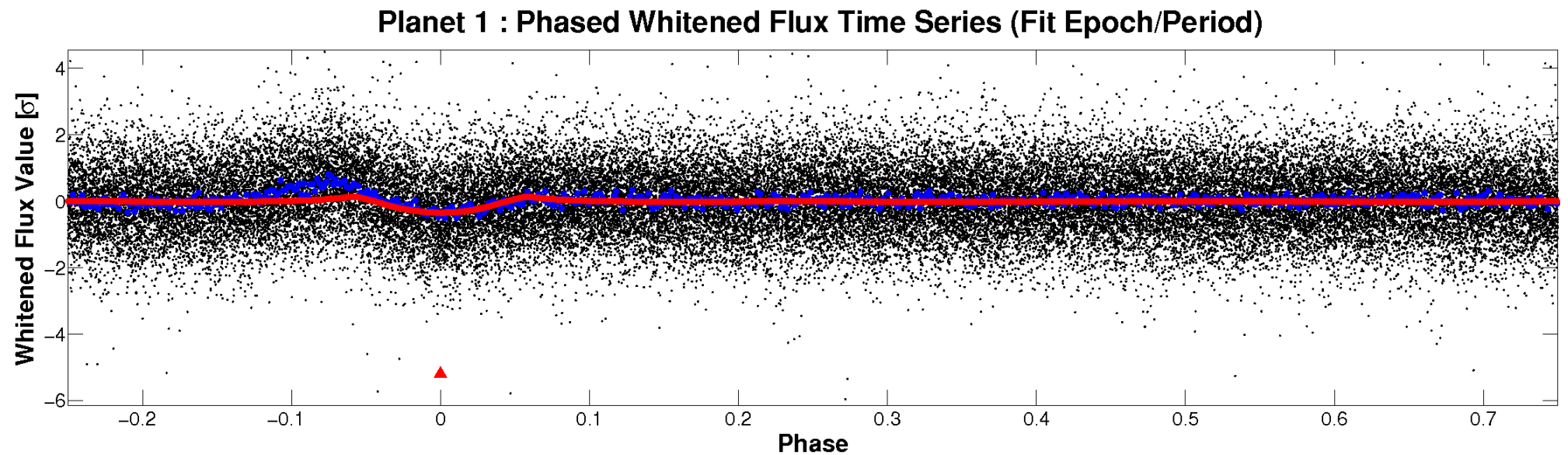
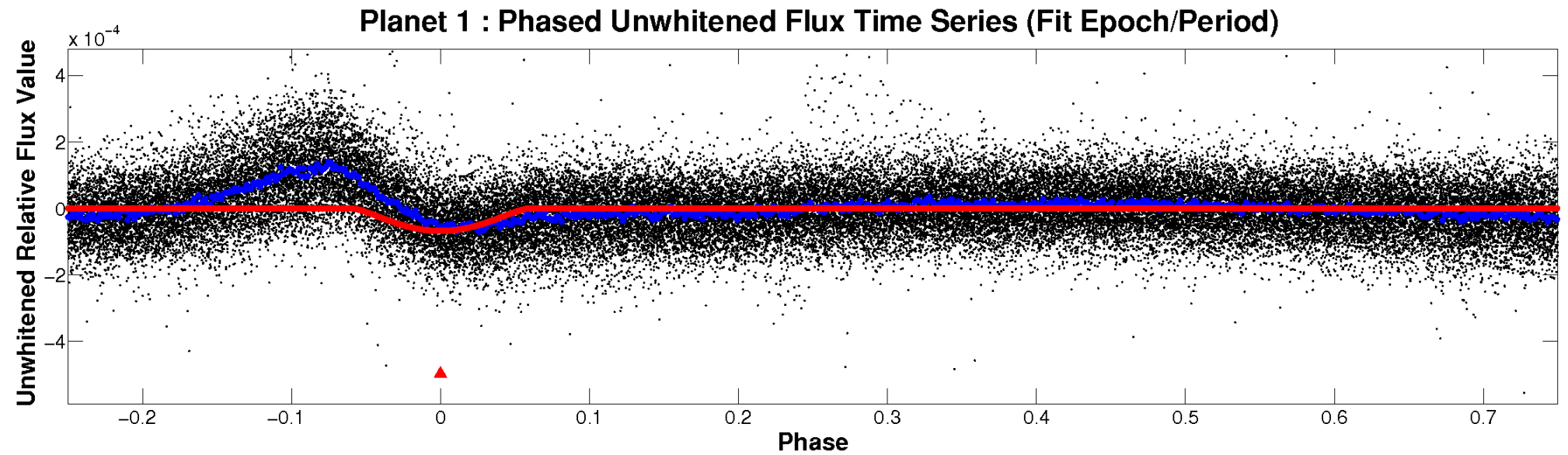


ALT Odd/Even

TCE 006105491-01

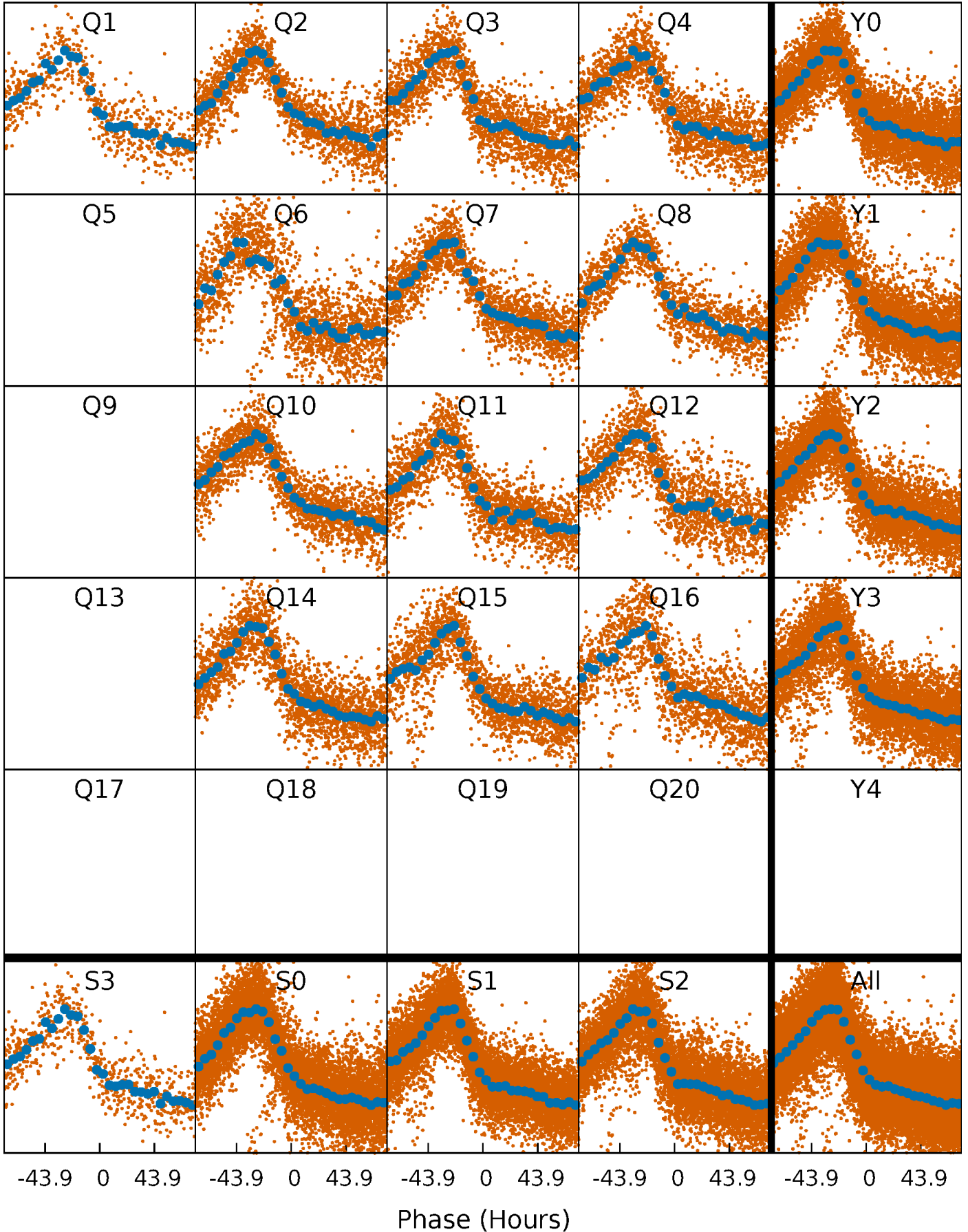


Non-Whitened Vs. Whitened Light Curve



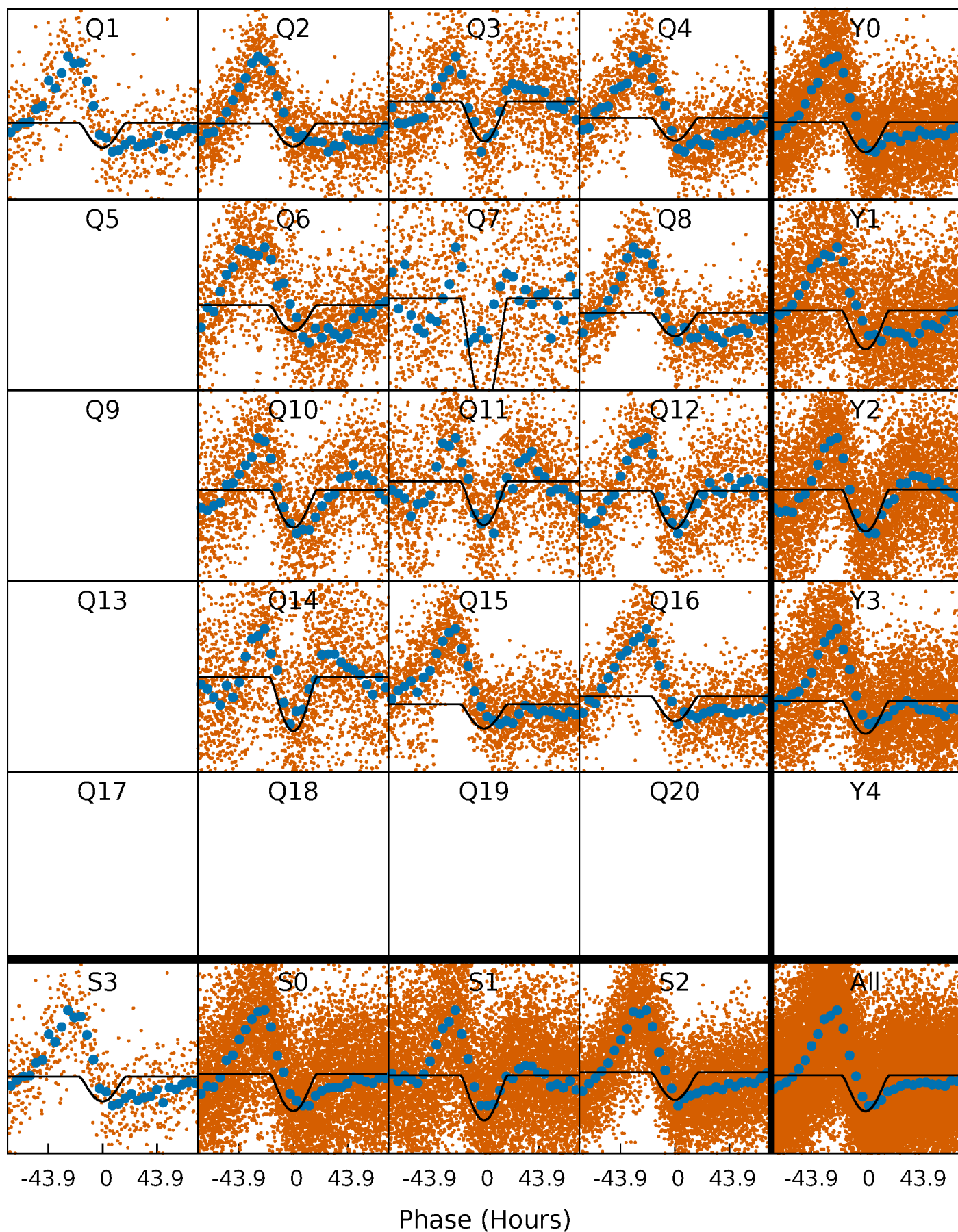
PDC Quarter-Phased Transit Curves

TCE 006105491-01 P= 13.334222 Days $T_0=140.918057$ (BKJD)



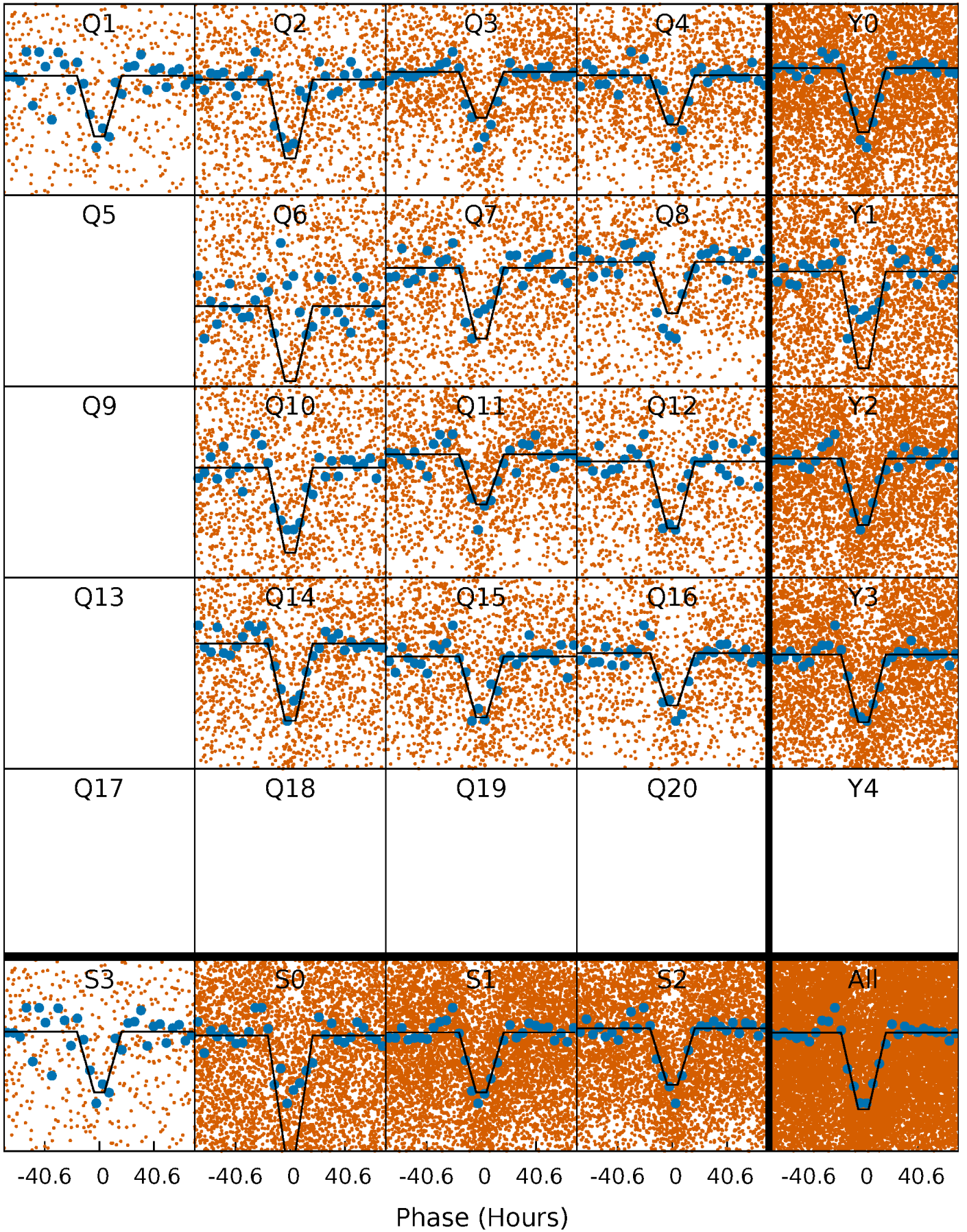
DV Quarter-Phased Transit Curves

TCE 006105491-01 P= 13.334222 Days $T_0=140.918057$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

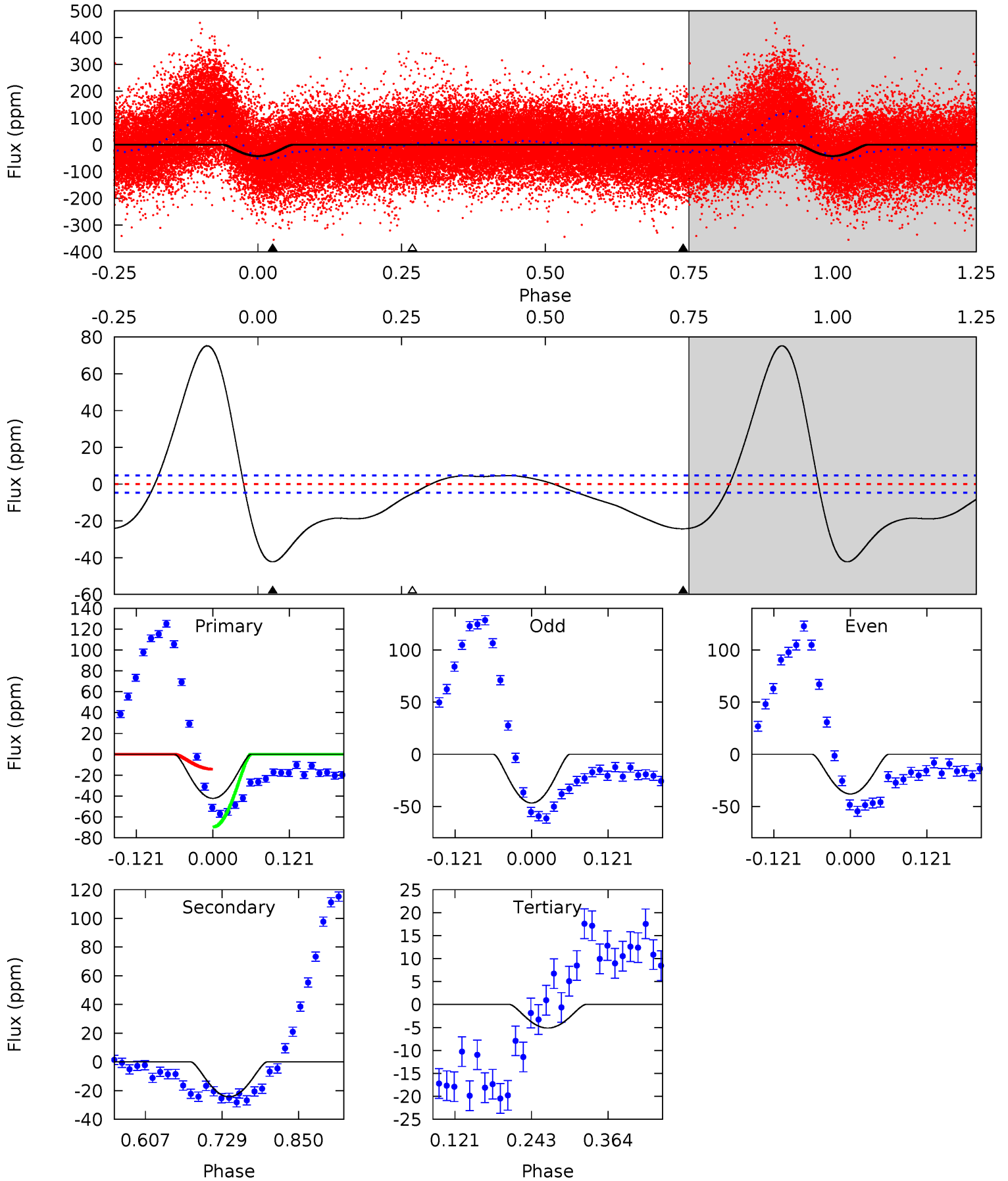
TCE 006105491-01 P= 13.333500 Days $T_0=140.889603$ (BKJD)



DV Model-Shift Uniqueness Test

006105491-01, P = 13.334222 Days, E = 127.583835 Days

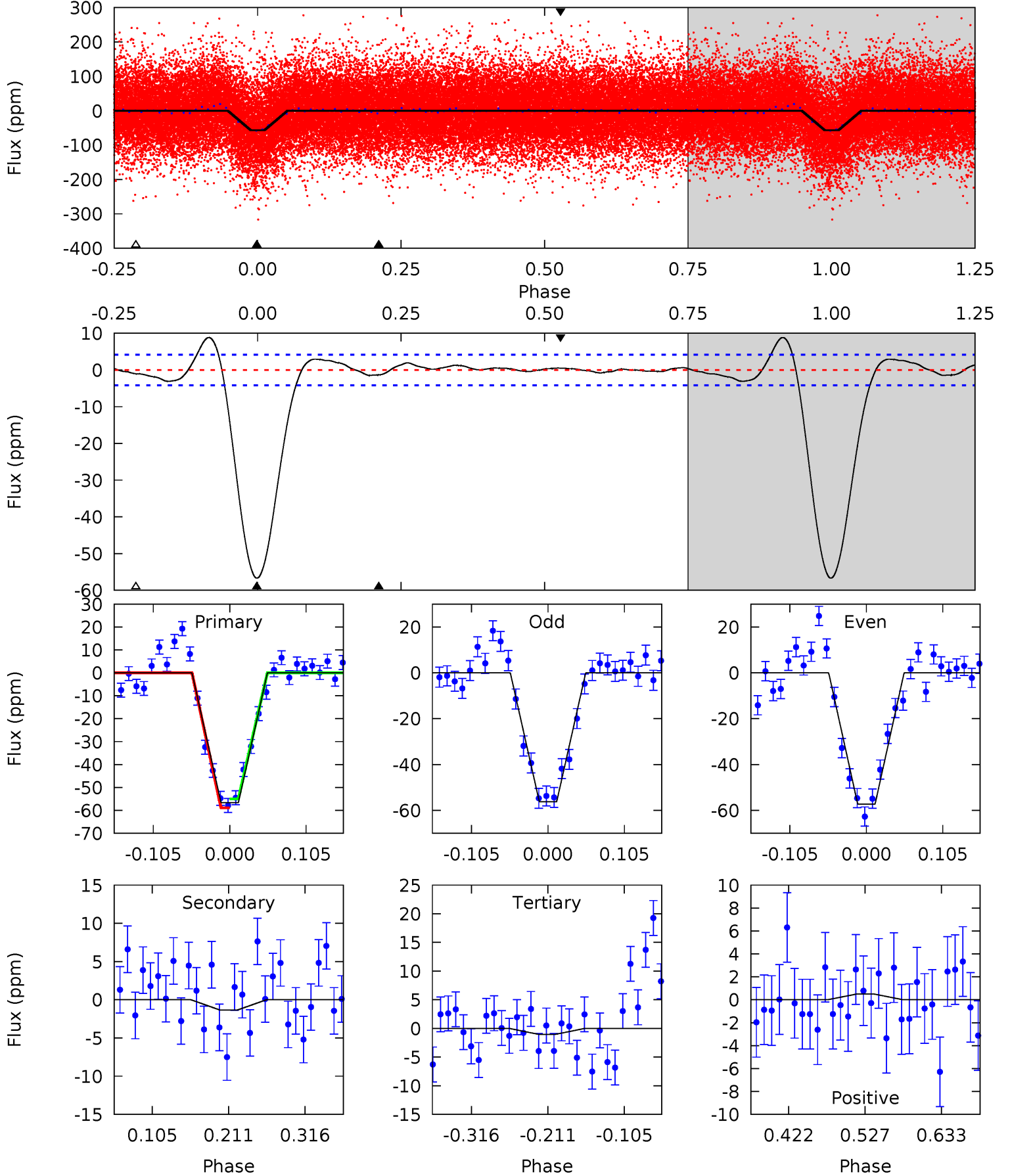
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
40.7	23.4	4.94	0	4.52	1.55	18.2	35.7	40.7	18.4	23.4	4.25	0.87	0.64	24.5



Alt Model-Shift Uniqueness Test

006105491-01, $P = 13.333500$ Days, $E = 127.556103$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
61.6	1.47	1.12	0.54	4.55	1.62	1.10	60.5	61.1	0.35	0.92	0.57	0.95	0.13	2.15



Stellar Parameters For KIC 006105491

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6738^{+150}_{-218}	$4.300^{+0.066}_{-0.154}$	$0.070^{+0.200}_{-0.350}$	$1.363^{+0.325}_{-0.175}$	$1.355^{+0.144}_{-0.176}$	$0.753^{+0.218}_{-0.319}$
	+2%/-3%	+2%/-4%	+286%/-500%	+24%/-13%	+11%/-13%	+29%/-42%
Source	PHO1	FLK73	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 006105491-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-24±1	$2.29^{+1.70}_{-1.38}$	1401^{+80}_{-63}	4100^{+2017}_{-701}	36^{+195}_{-24}
Alt.	-1±1	$1.77^{+1.57}_{-1.12}$	1405^{+80}_{-63}	2761^{+1078}_{-624}	$2.982^{+22.938}_{-2.353}$

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

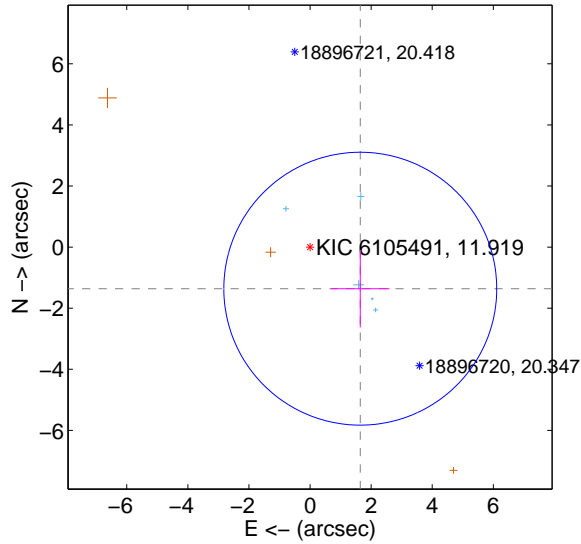
Supplemental centroid analysis for 006105491-01. **Kepler magnitude: 11.92.** Transit SNR 17.96

There are 5 quarters with good PRF difference image offsets

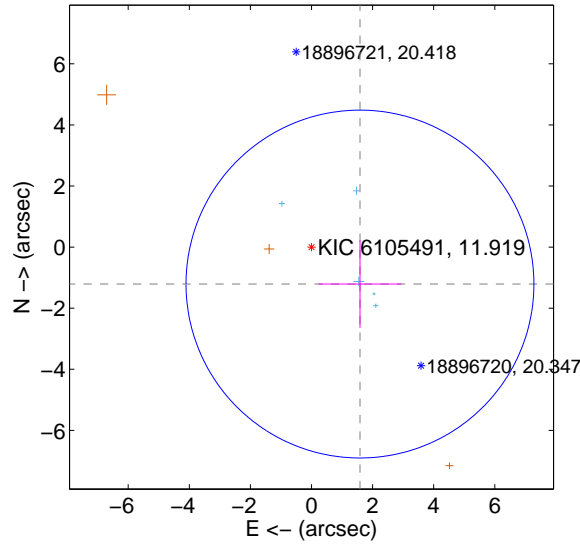
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.135 ± 1.489	1.43	-1.644 ± 0.958	-1.362 ± 1.266
PRF-fit source offset from KIC position	1.995 ± 1.898	1.05	-1.586 ± 1.353	-1.210 ± 1.434
photometric centroid source offset	0.74 ± 0.49	1.50	0.73 ± 0.50	-0.12 ± 0.42

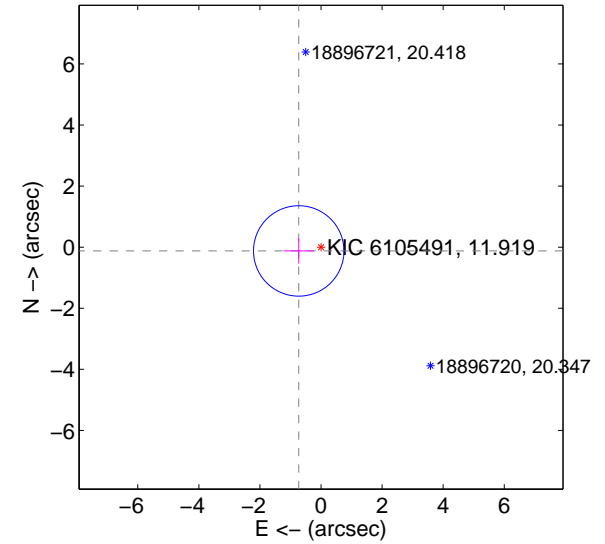
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

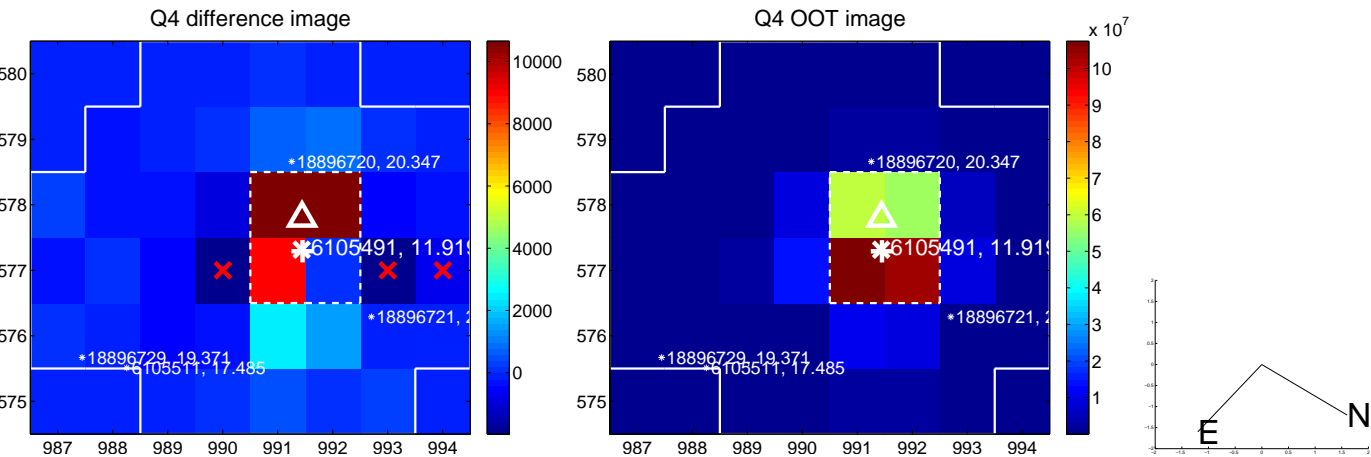
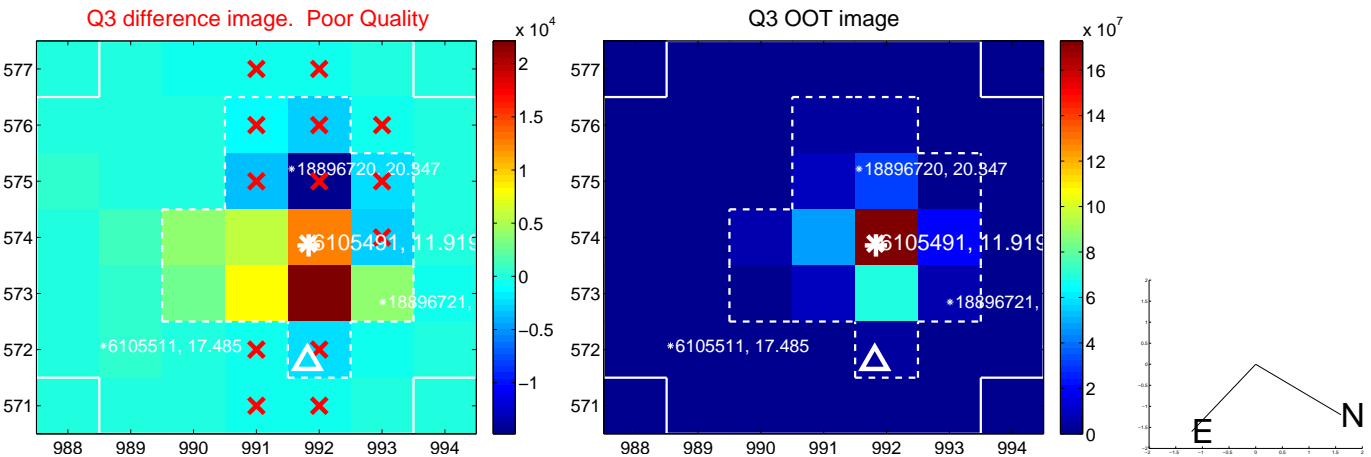
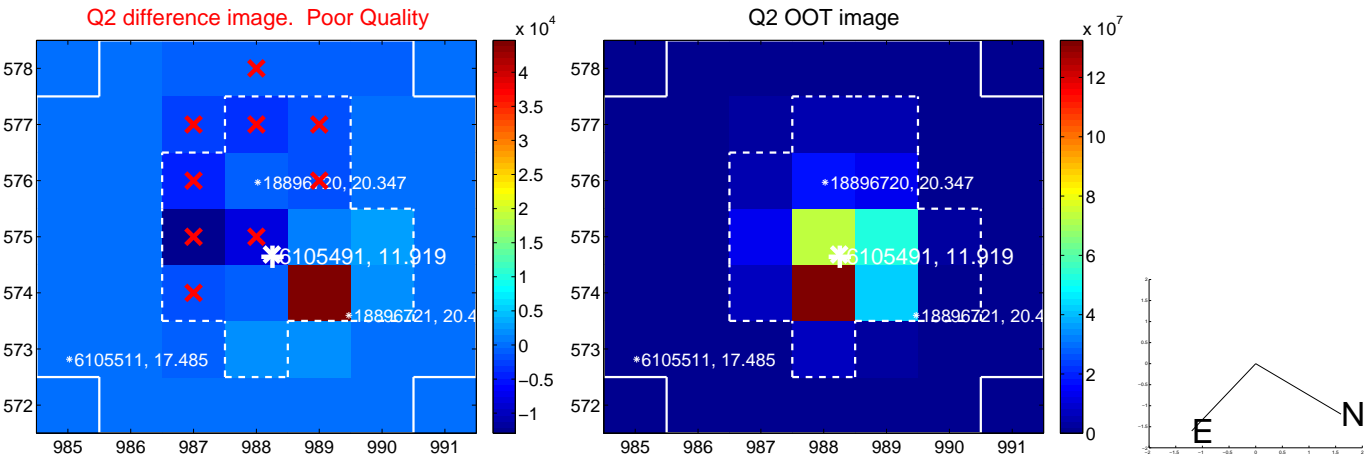
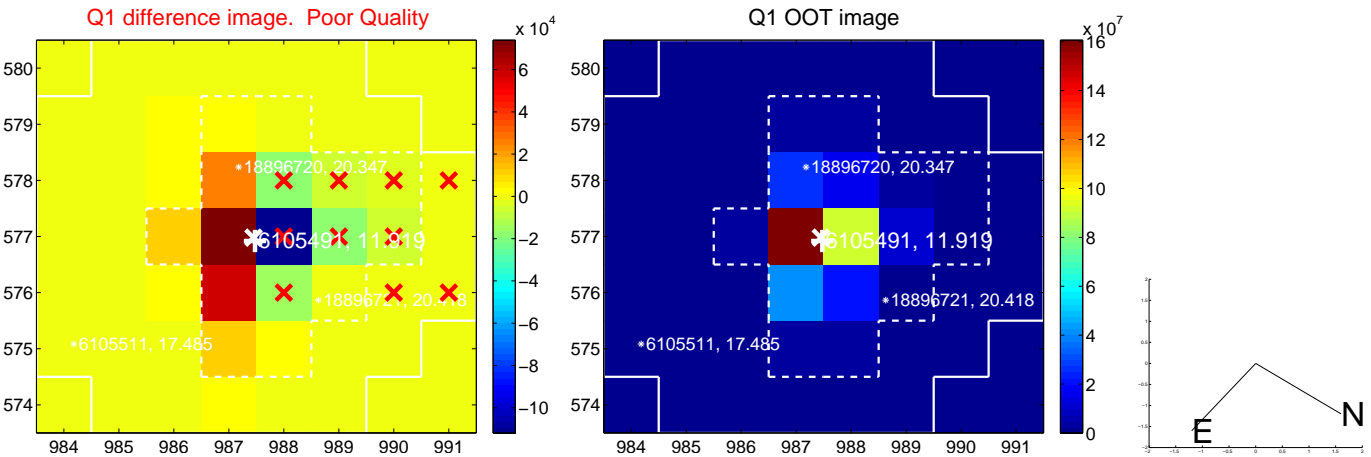


offset from photometric centroids

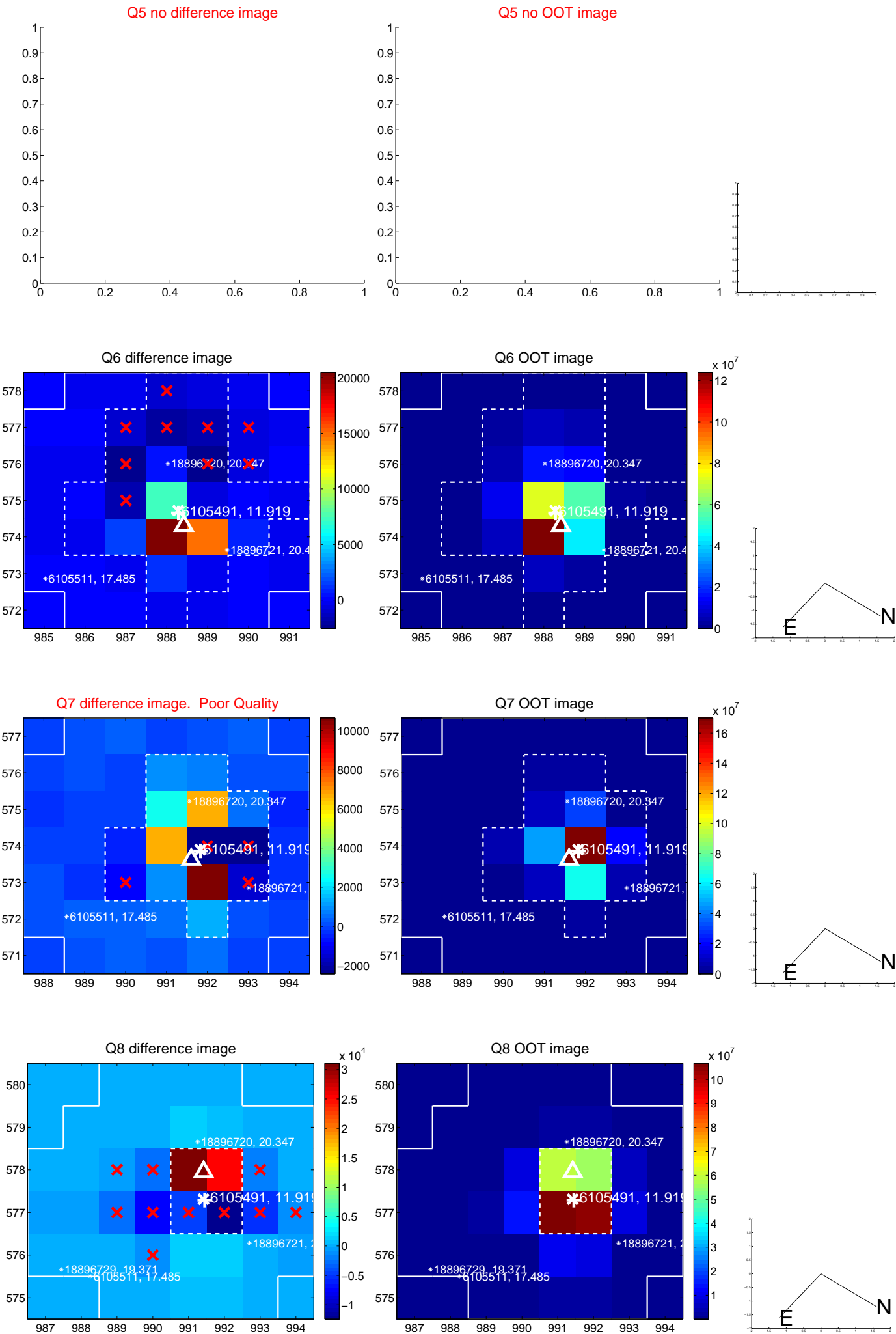


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

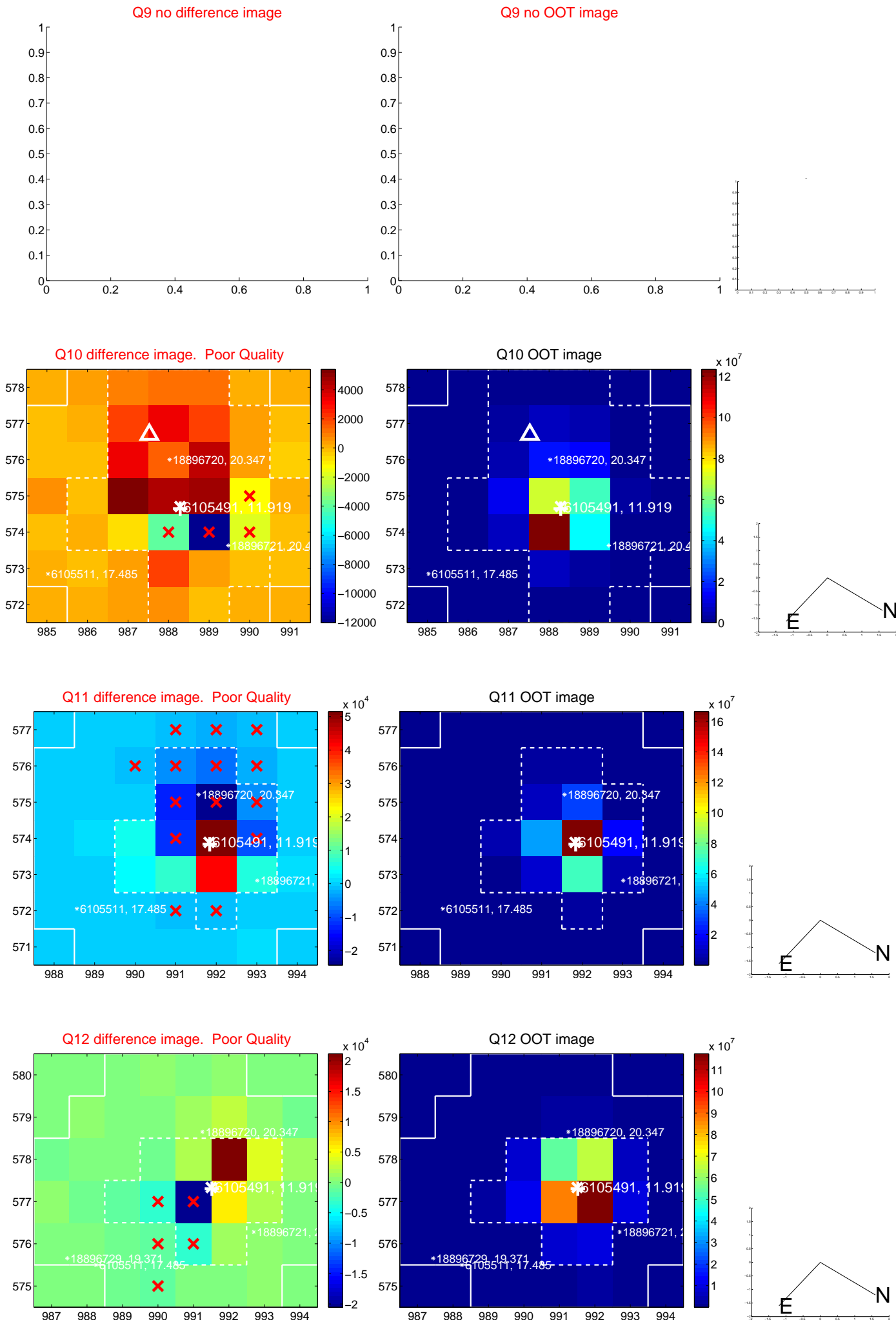
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



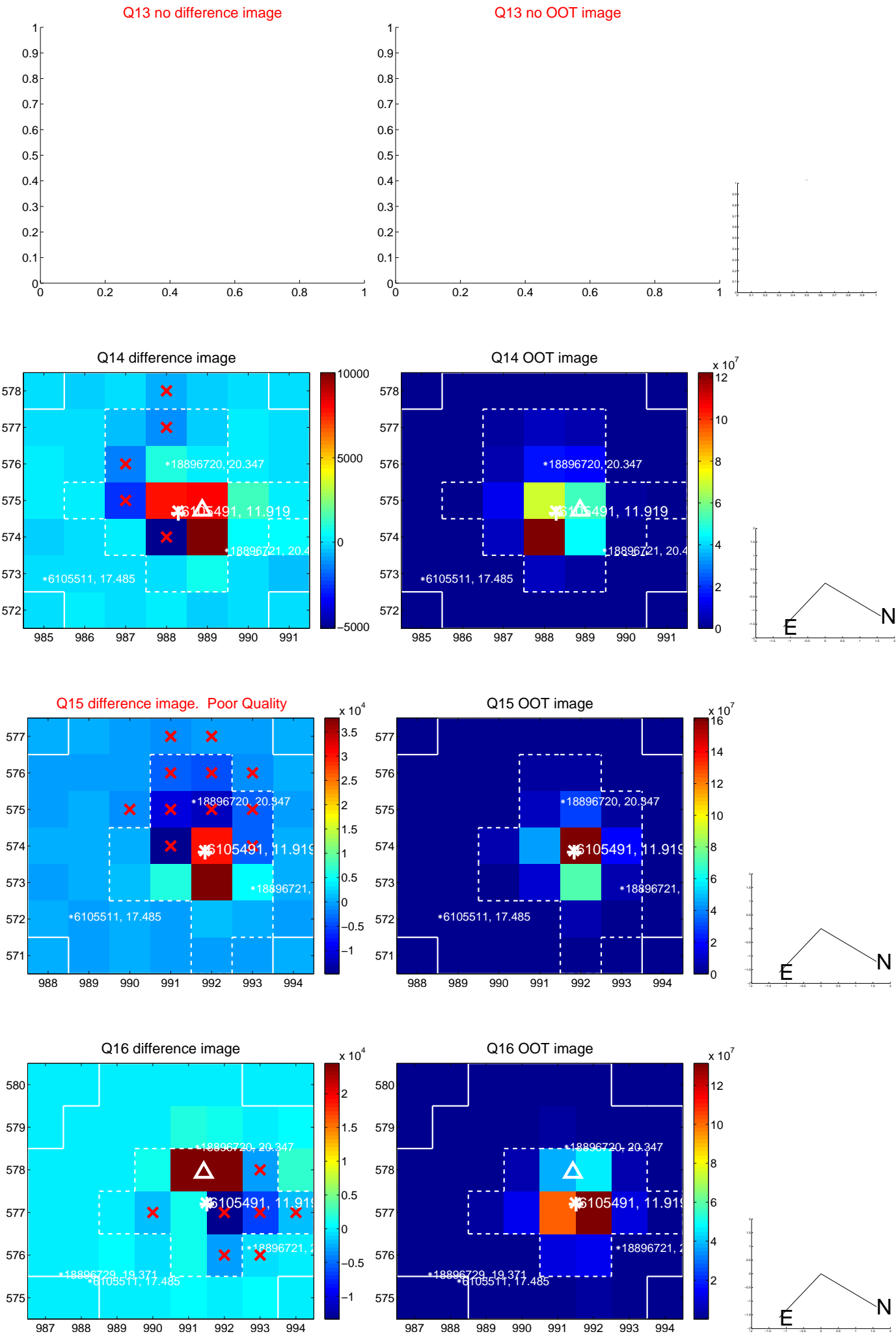
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



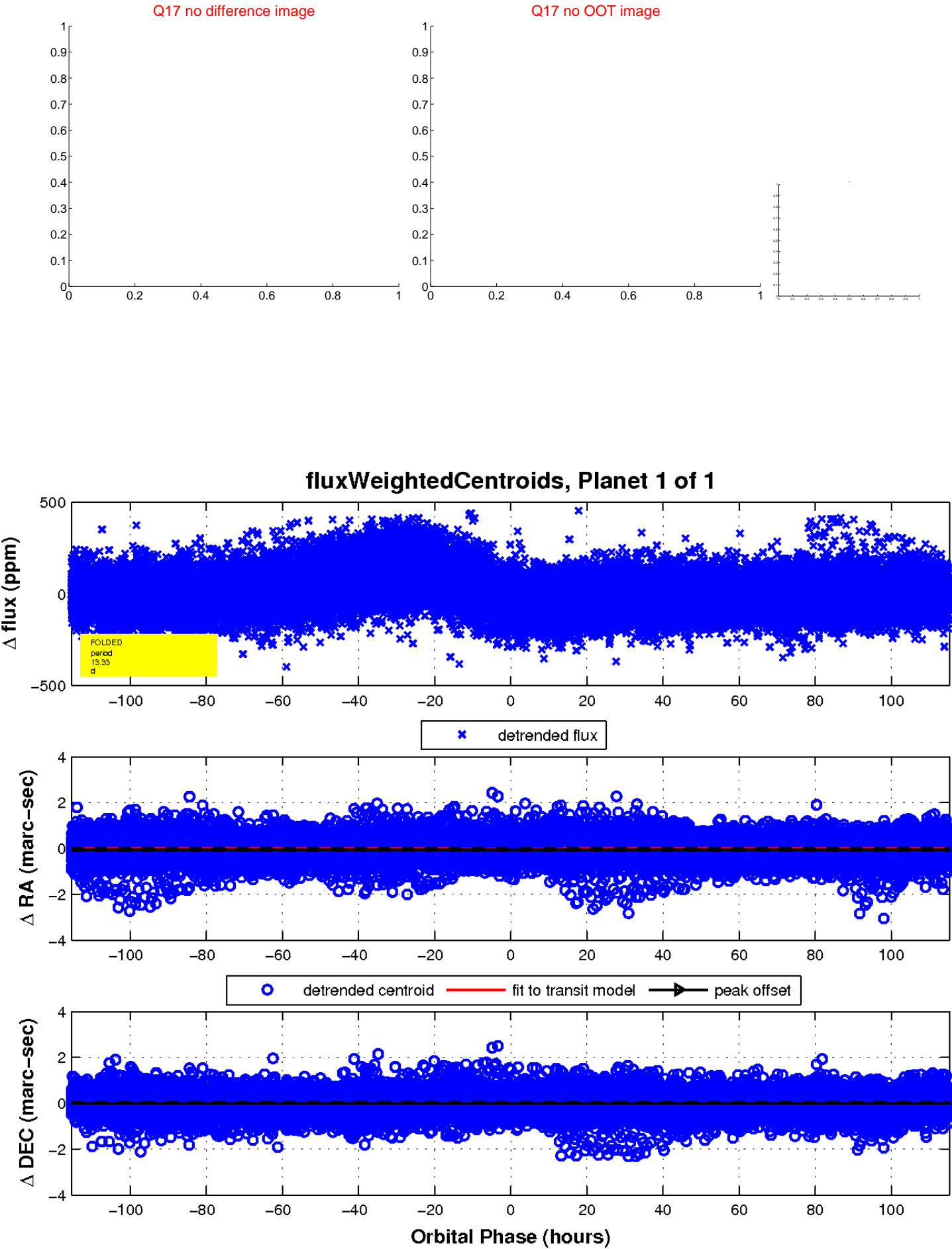
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

