

KIC 012004971

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})
012004971-01	OBS	3194.01	10.813063	131.666910	87.0	1.304	14.0	17.2	1.46	6380	1.49	282.58

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
012004971-01	OBS	PC	1.00	0	0	0	0	CENT_SATURATED

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.

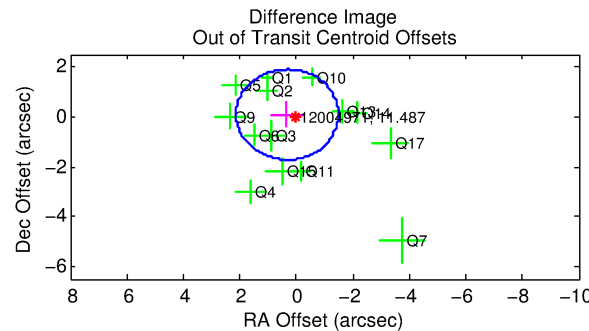
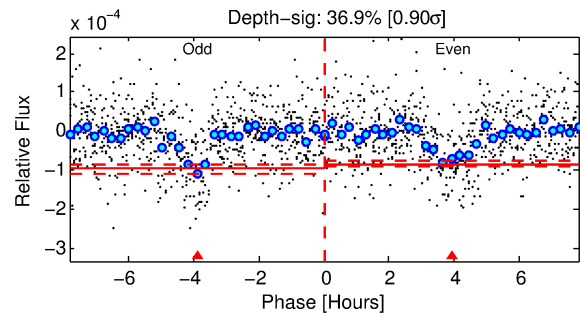
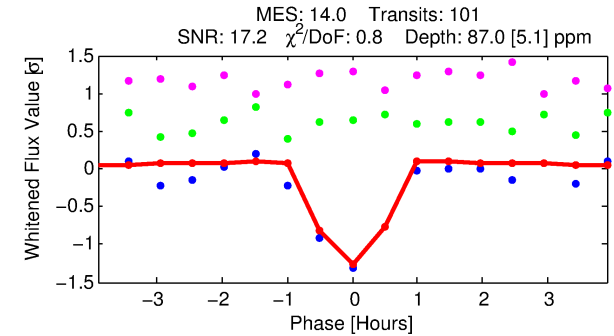
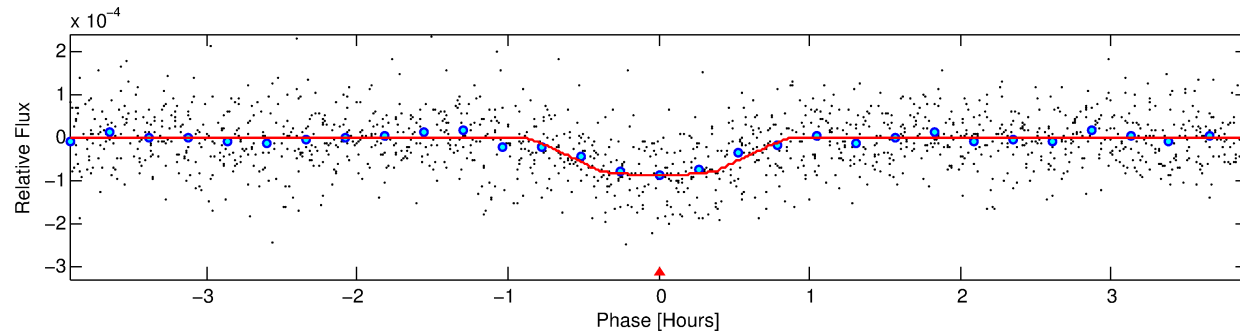
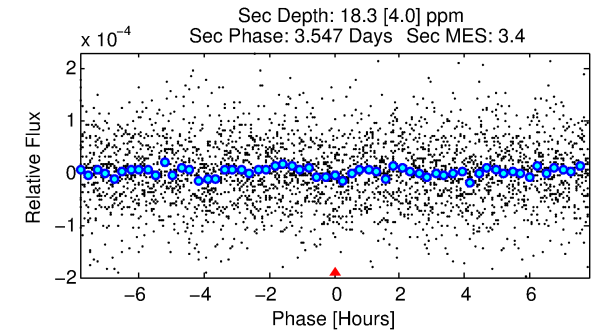
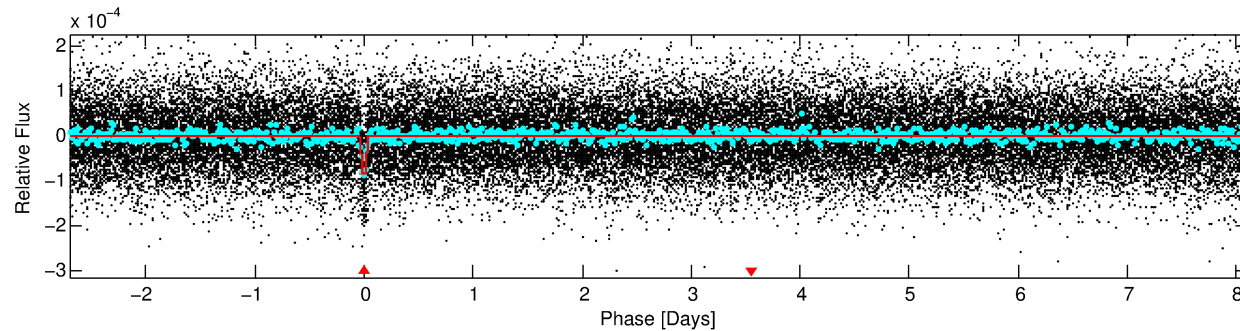
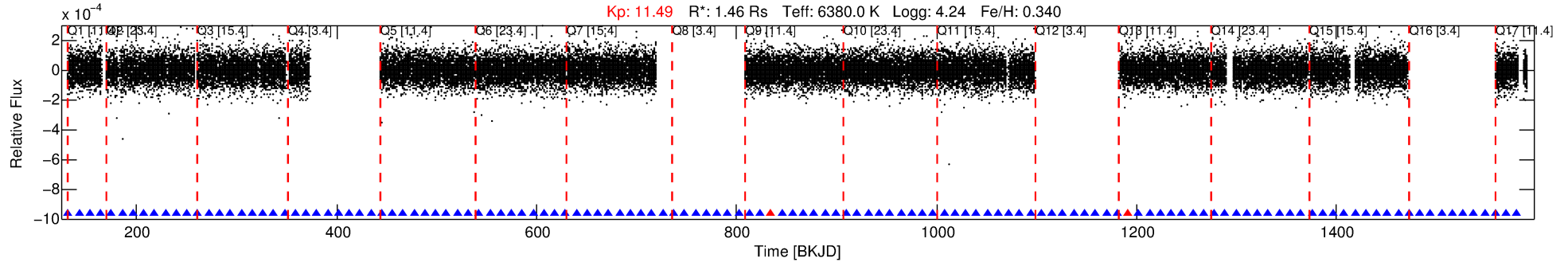
Ephemeris Match Information For 012004971-01

No Significant Match Found

DV One-Page Summary

KIC: 12004971 Candidate: 1 of 1 Period: 10.813 d

KOI: K03194.01 Corr: 0.887



DV Fit Results:

Period = 10.81306 [0.00003] d
Epoch = 131.6669 [0.0019] BKJD
Rp/R* = 0.0094 [0.0017]
a/R* = 41.72 [38.50]
b = 0.77 [0.50]
Seff = 282.58 [68.66]
Teq = 1045 [64] K
Rp = 1.49 [0.38] Re
a = 0.1058 [0.0162] AU
Ag = 50.54 [24.22] [2.05σ]
Teffp = 4310 [468] K [6.91σ]

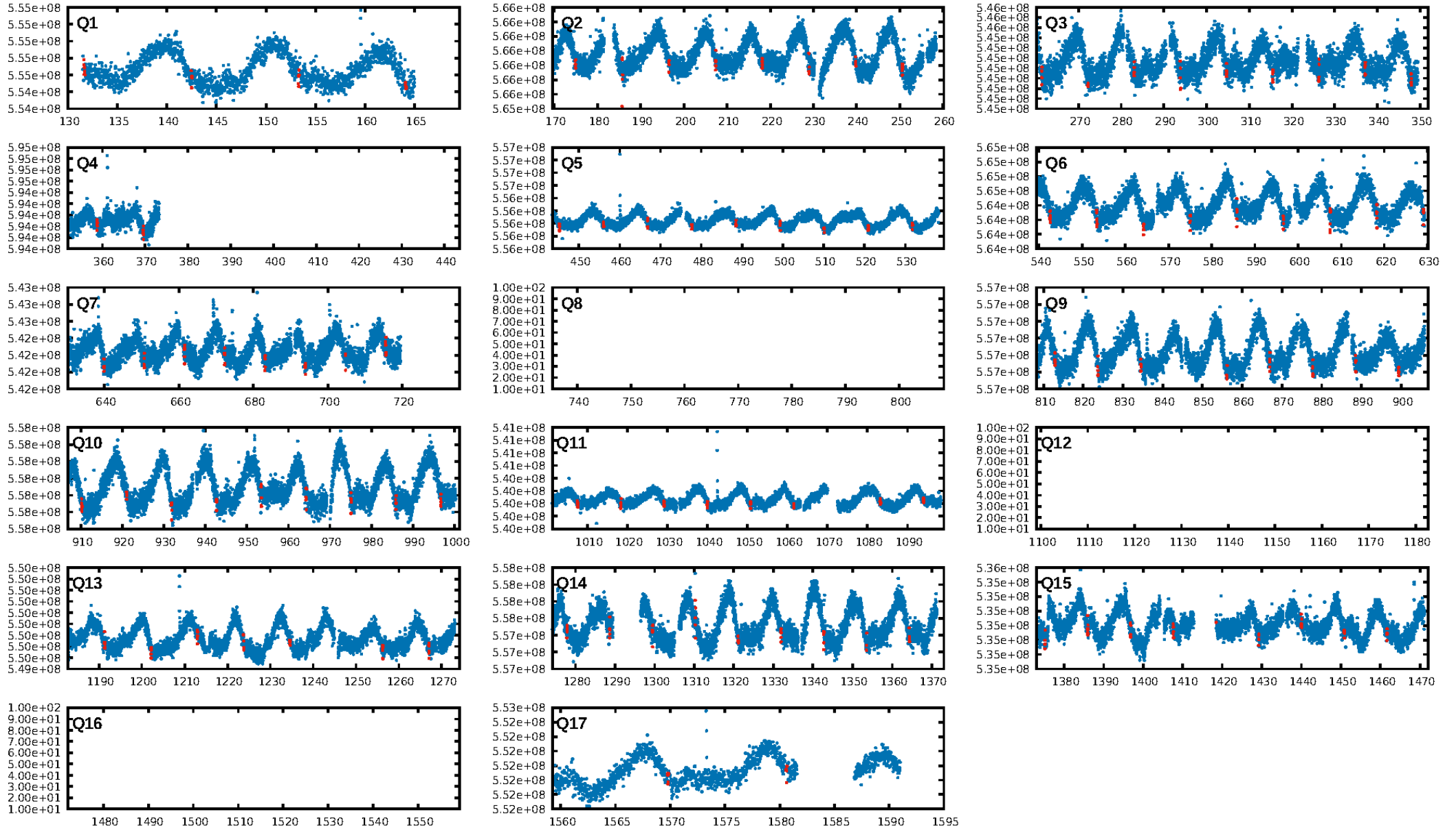
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.67e-42
RollingBand-fgt: 0.98 [91/93]
GhostDiagnostic-chr: 23.23
Centroid-sig: 85.3%
Centroid-so: 0.309 arcsec [0.46σ]
OotOffset-rm: 0.339 arcsec [0.56σ]
KicOffset-rm: 0.484 arcsec [0.92σ]
OotOffset-st: 4/4/1/5 [14]
KicOffset-st: 4/4/1/5 [14]
DiffImageQuality-fgm: 0.86 [12/14]
DiffImageOverlap-fno: 1.00 [14/14]

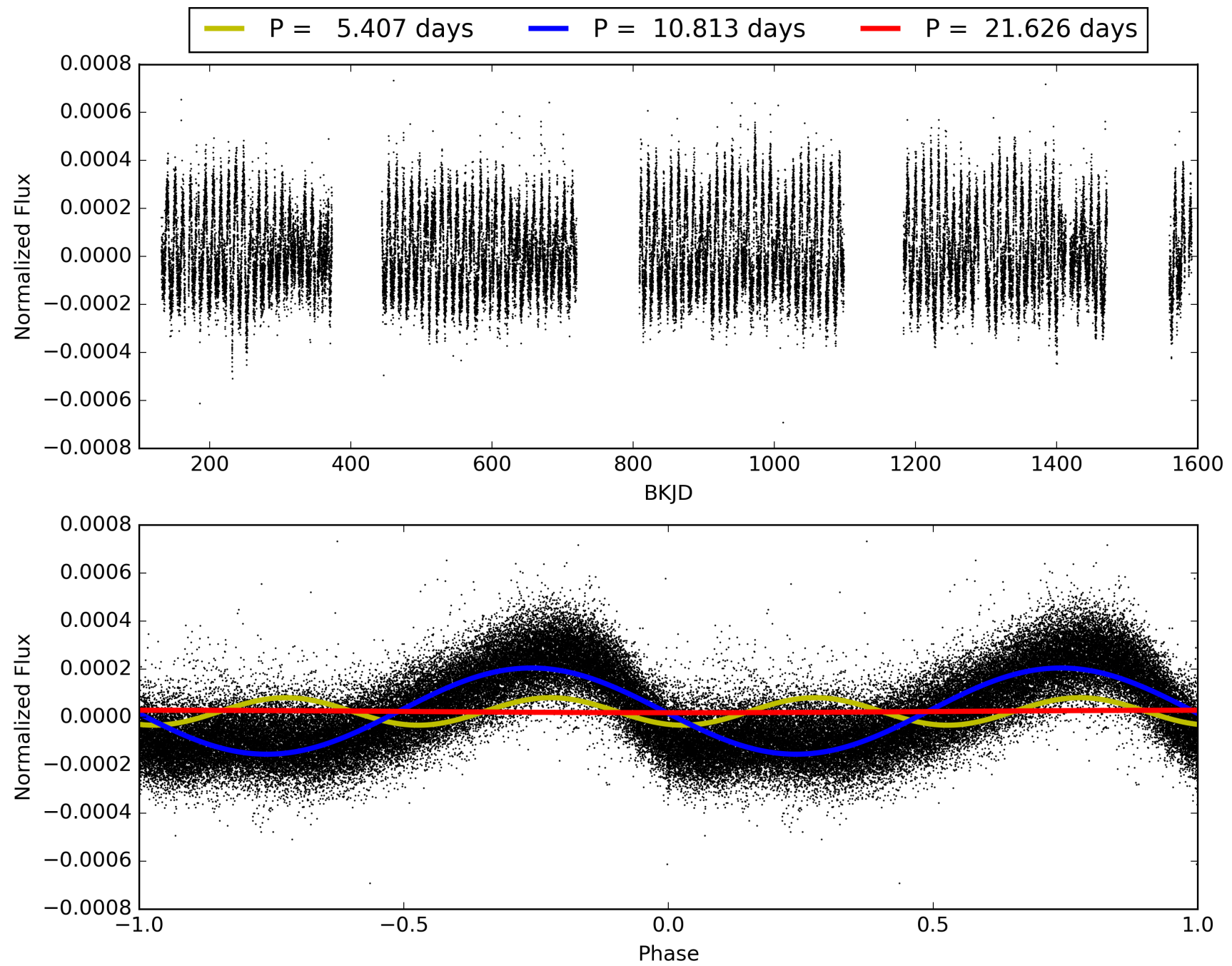
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 00:23:21 Z

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

TCE 012004971-01, PDC Light Curves

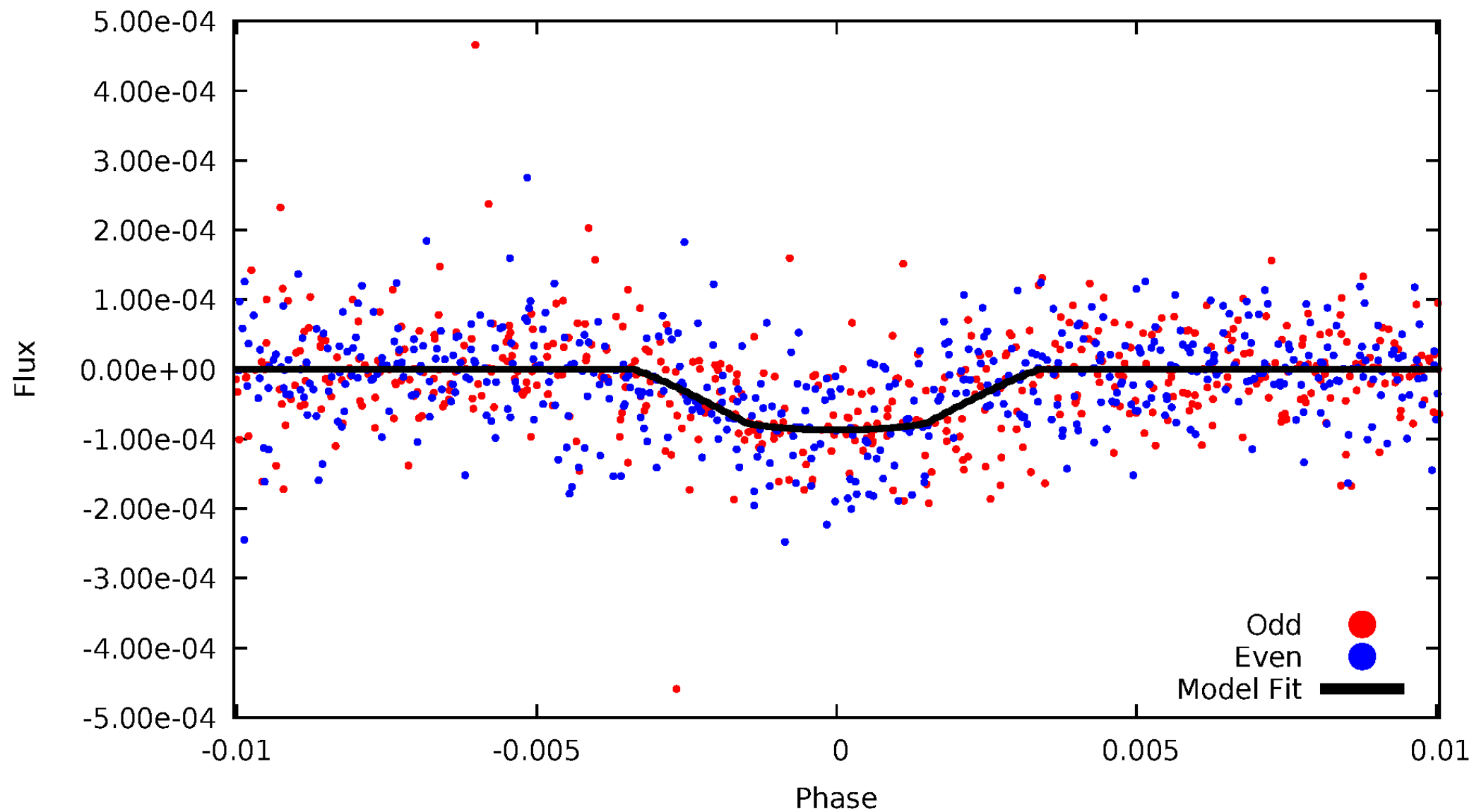


TCE 012004971-01



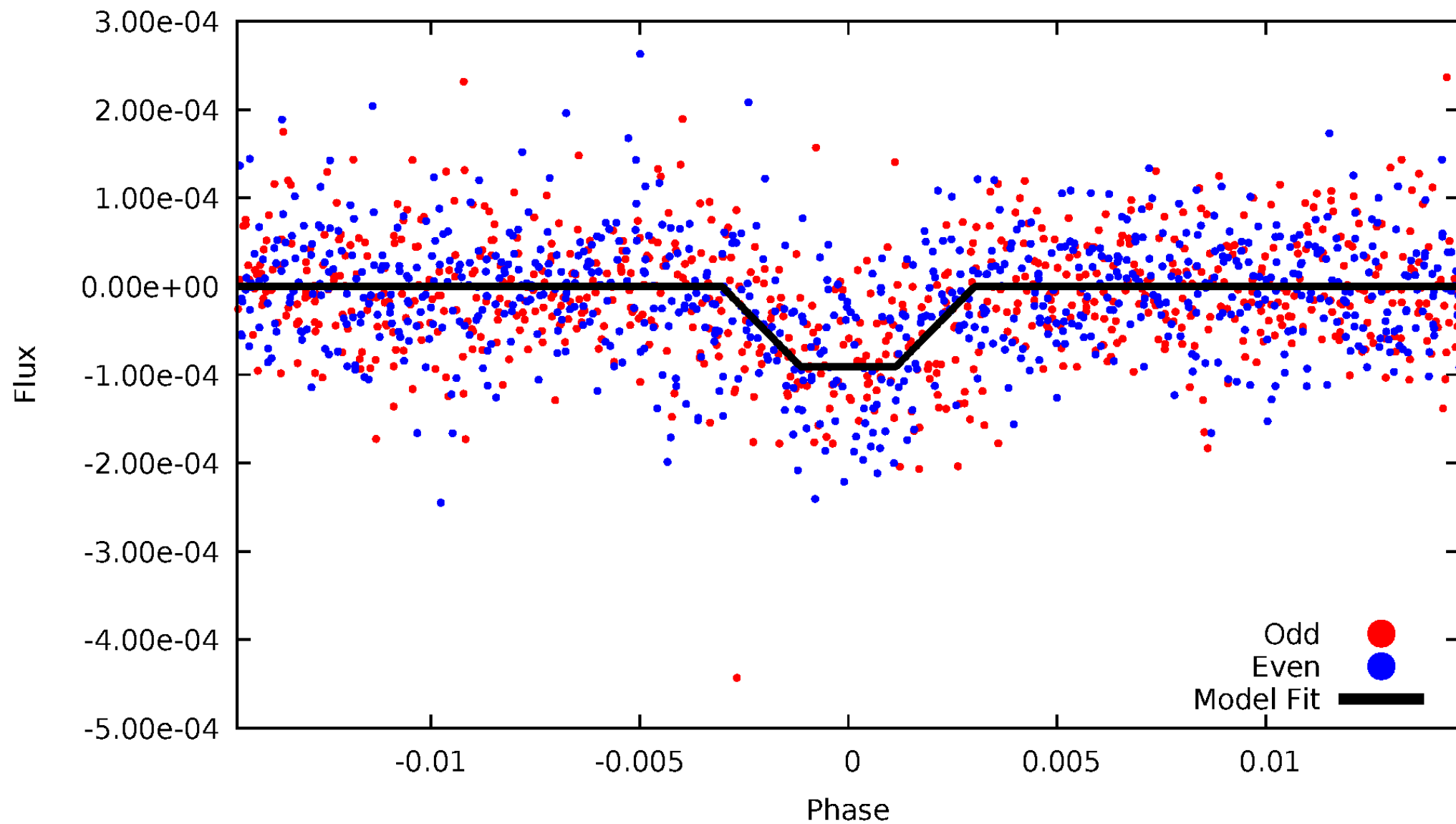
DV Odd/Even

TCE 012004971-01

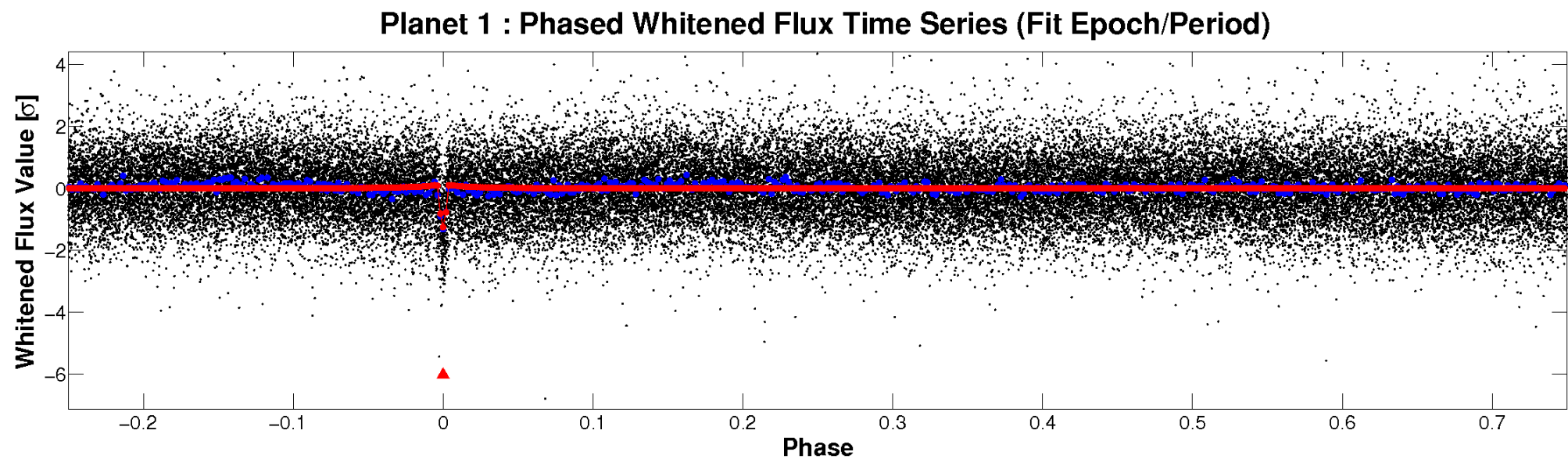
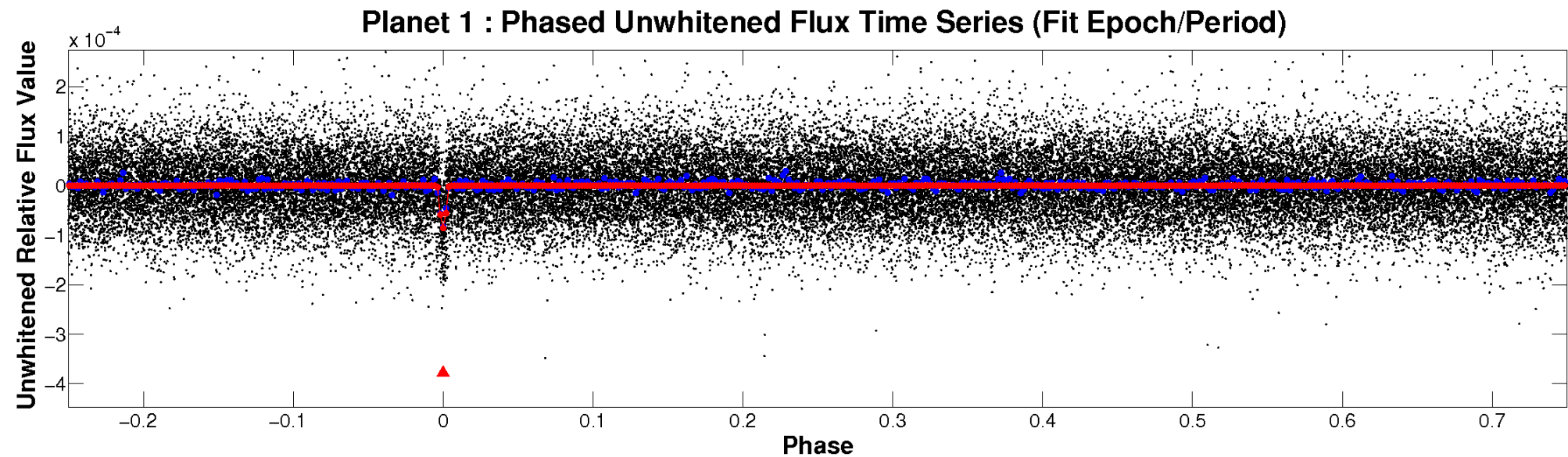


ALT Odd/Even

TCE 012004971-01



Non-Whitened Vs. Whitened Light Curve



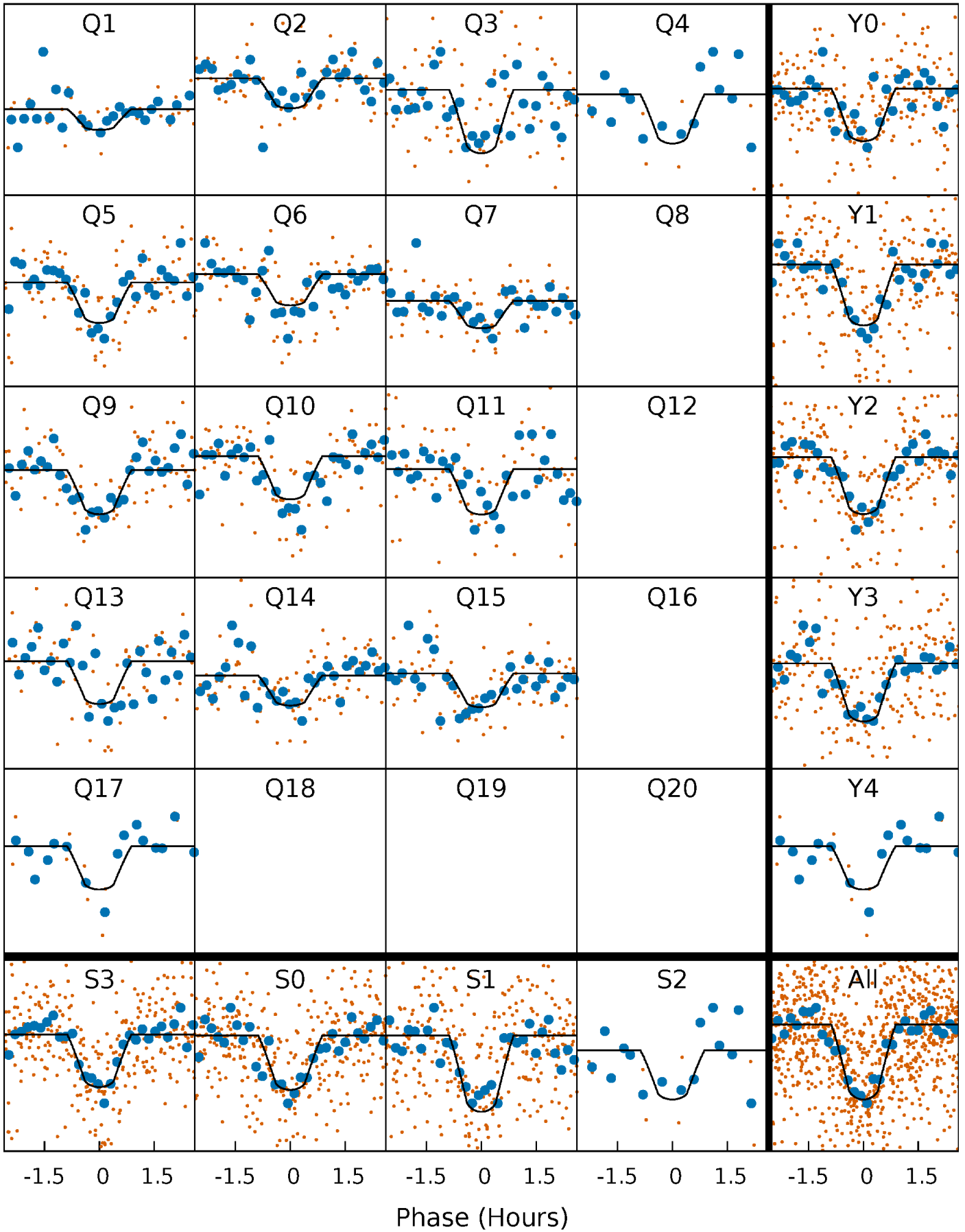
PDC Quarter-Phased Transit Curves

TCE 012004971-01 P= 10.813063 Days $T_0=131.666910$ (BKJD)



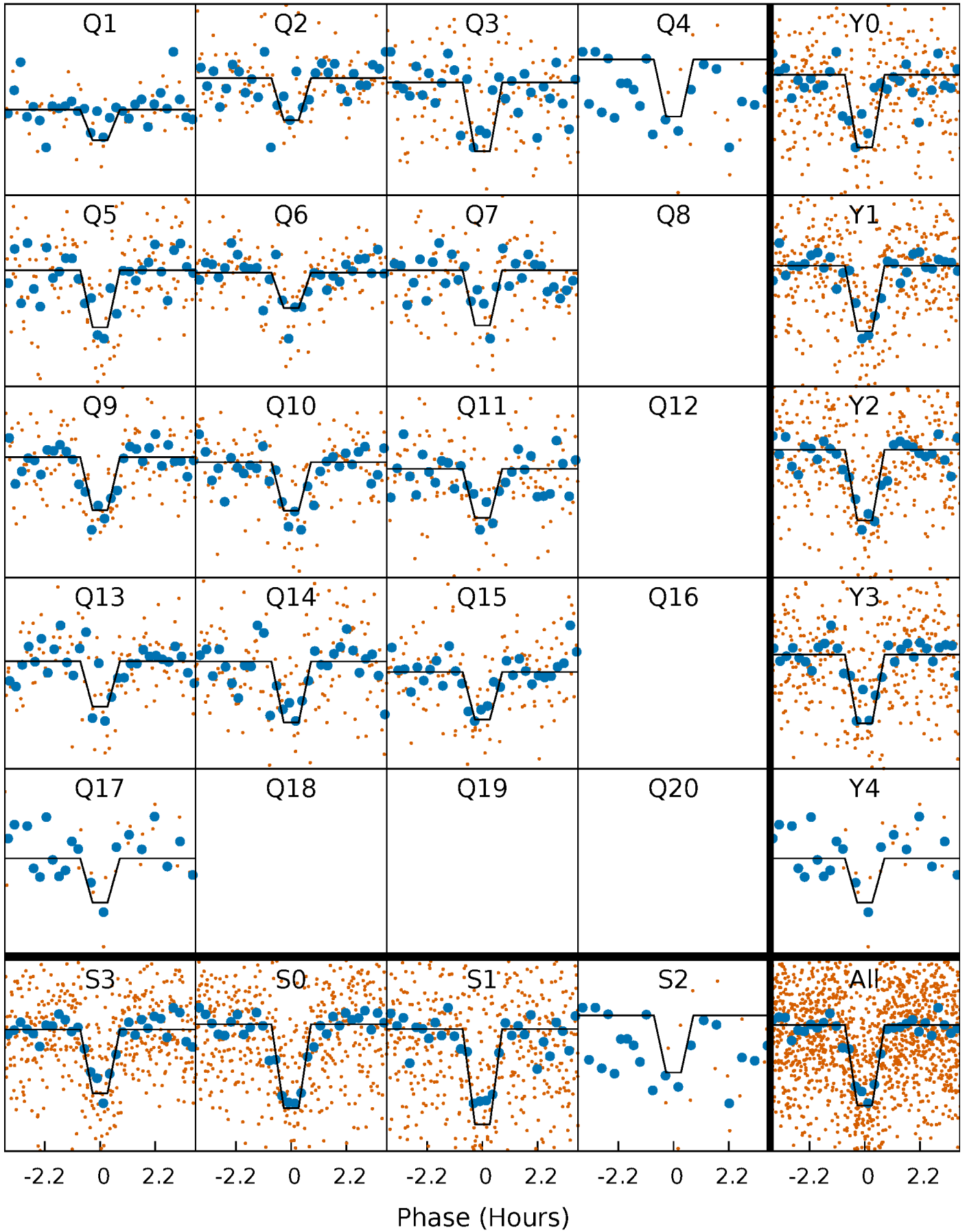
DV Quarter-Phased Transit Curves

TCE 012004971-01 P= 10.813063 Days $T_0=131.666910$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

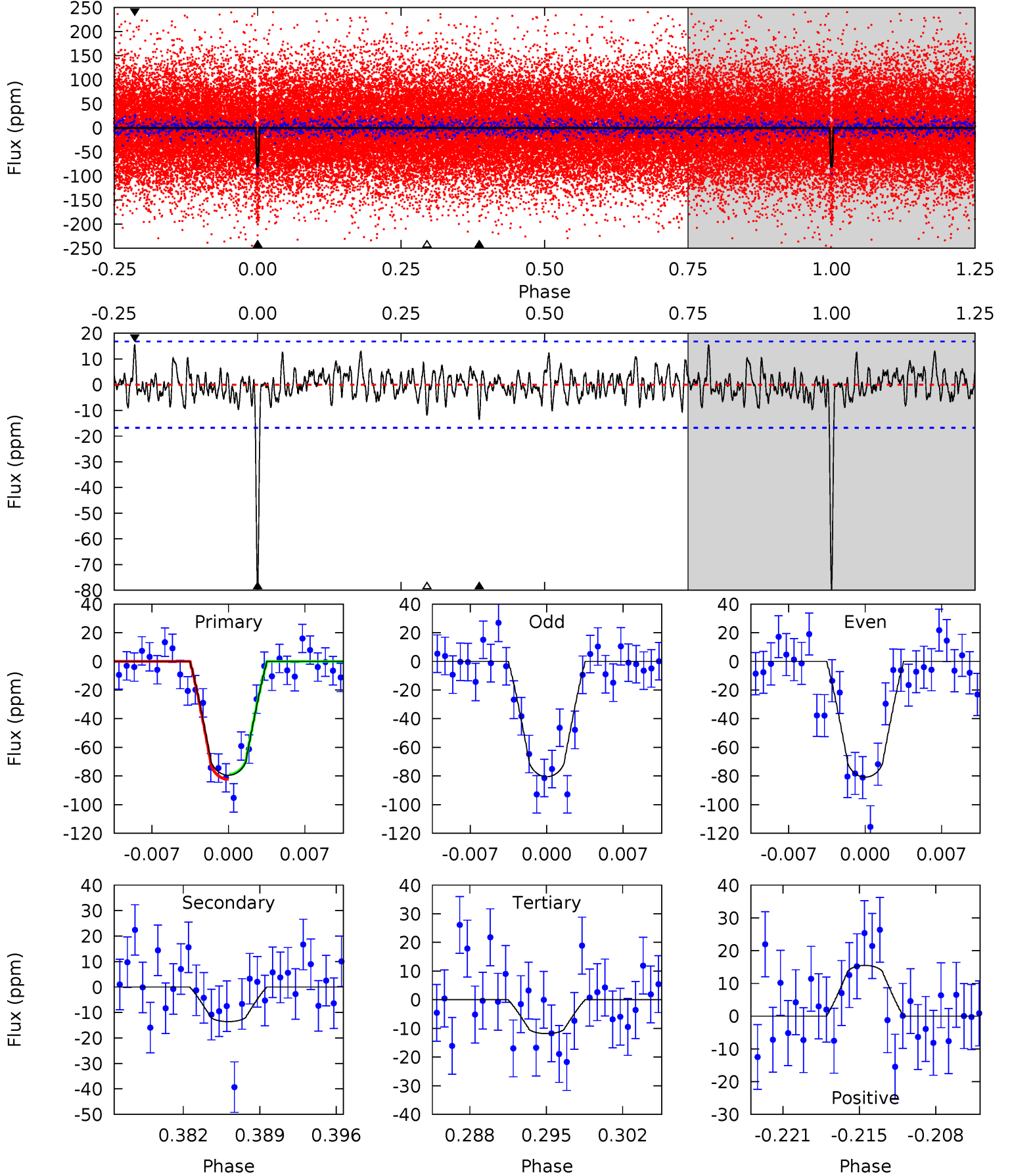
TCE 012004971-01 P= 10.813047 Days $T_0=131.666975$ (BKJD)



DV Model-Shift Uniqueness Test

012004971-01, $P = 10.813063$ Days, $E = 120.853847$ Days

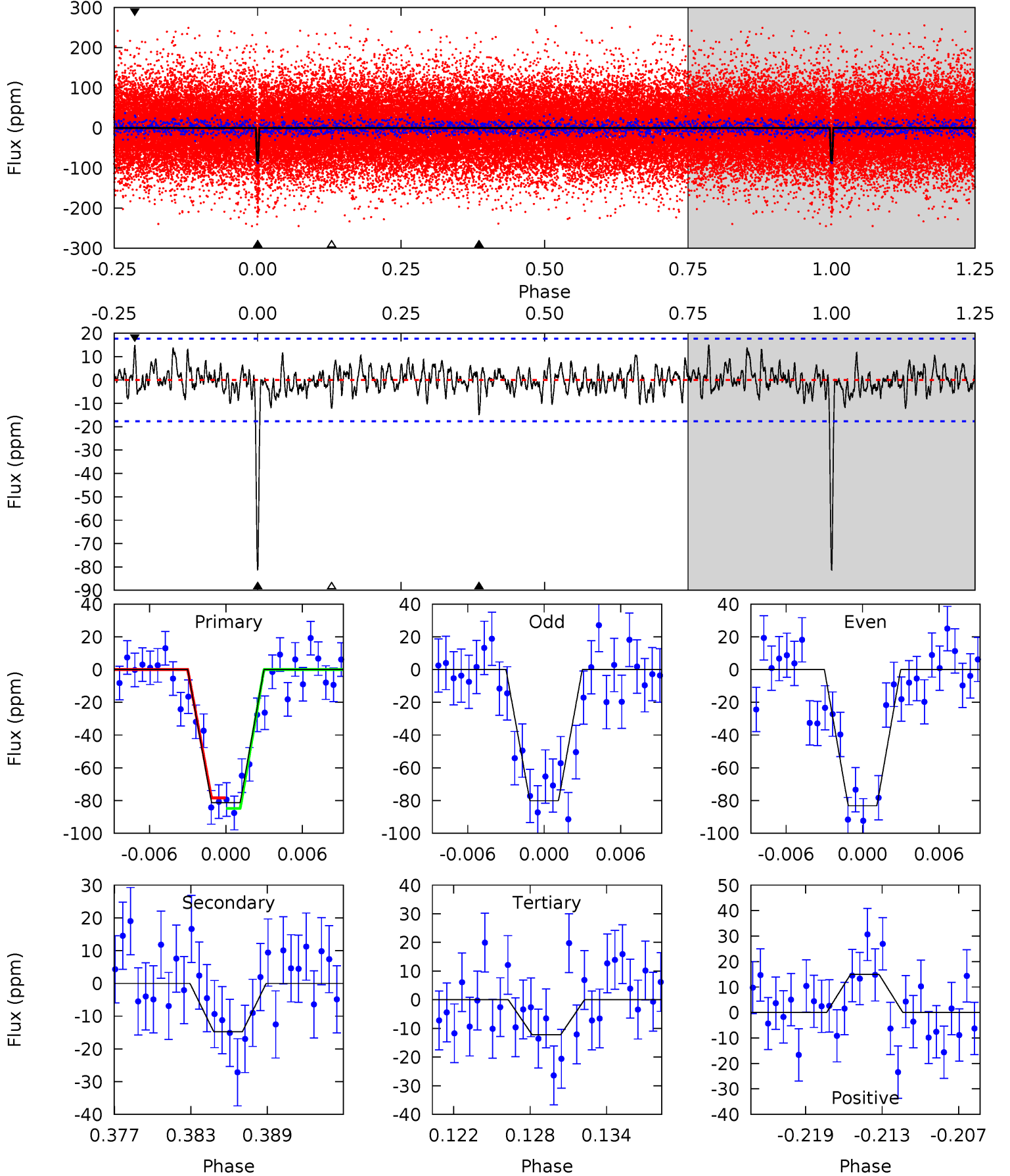
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.1	4.12	3.58	4.71	5.10	2.71	1.28	20.5	19.4	0.54	-0.58	0.05	0.93	0.16	0.52



Alt Model-Shift Uniqueness Test

012004971-01, $P = 10.813047$ Days, $E = 120.853928$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.6	4.28	3.53	4.32	5.12	2.74	1.23	20.0	19.2	0.75	-0.04	0.46	0.97	0.15	0.94



Stellar Parameters For KIC 012004971

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6380^{+113}_{-151}	$4.240^{+0.066}_{-0.123}$	$0.340^{+0.100}_{-0.150}$	$1.460^{+0.263}_{-0.154}$	$1.351^{+0.098}_{-0.078}$	$0.612^{+0.182}_{-0.221}$
	+2%/-2%	+2%/-3%	+29%/-44%	+18%/-11%	+7%/-6%	+30%/-36%
Source	SPE59	SPE59	SPE59	DSEP		

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

Secondary Eclipse Parameters for KIC 012004971-01 / KOI 3194.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-14 ± 3	$1.52^{+0.32}_{-0.32}$	1466^{+68}_{-54}	4228^{+413}_{-327}	35^{+26}_{-13}
Alt.	-15 ± 3	$1.56^{+0.30}_{-0.30}$	1474^{+73}_{-60}	4283^{+429}_{-335}	37^{+24}_{-13}

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 $A_{\text{obs}} \gg 1.0$

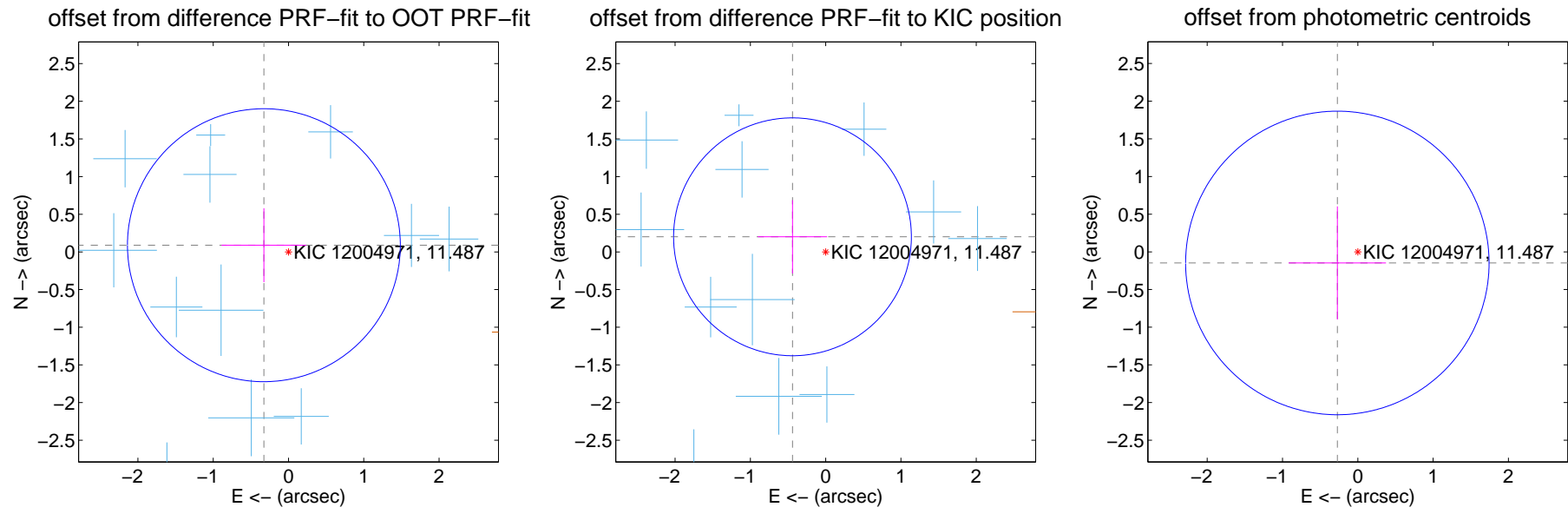
DV Centroid Data

Supplemental centroid analysis for 012004971-01. **Kepler magnitude: 11.49.** Transit SNR 17.17

There are 12 quarters with good PRF difference image offsets

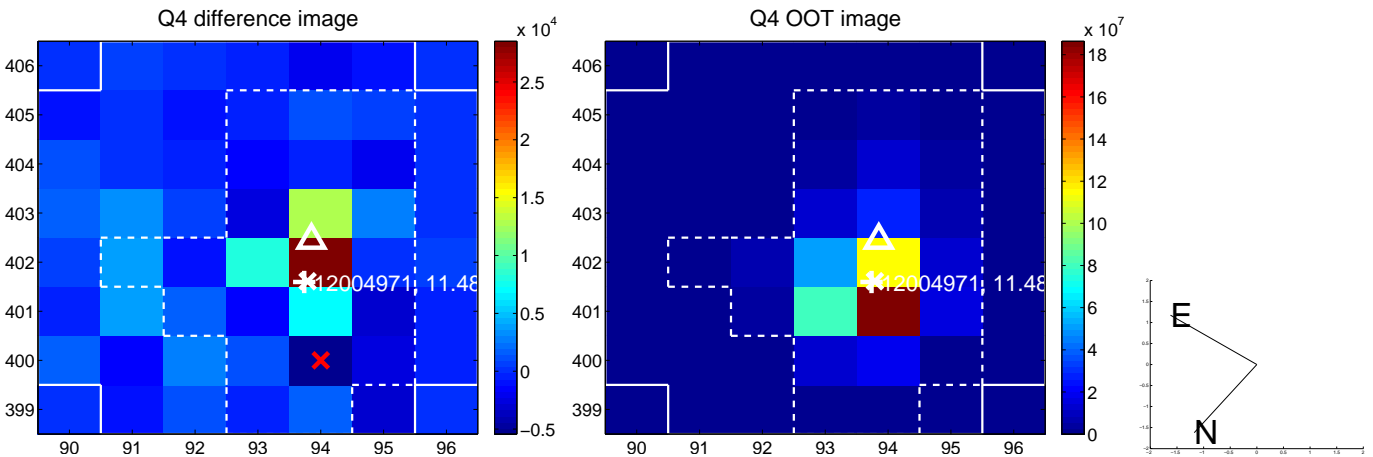
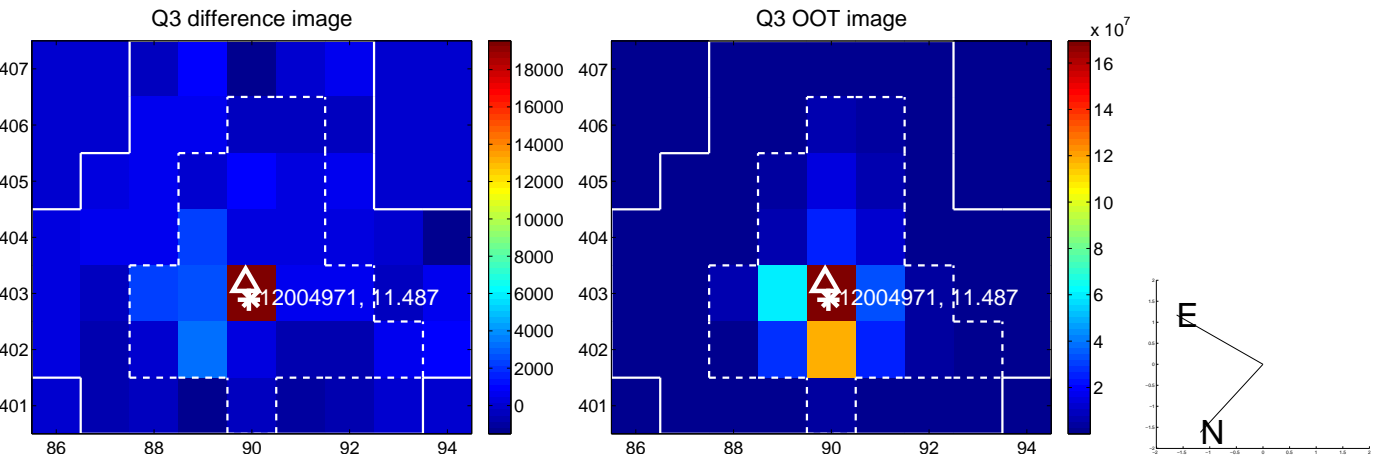
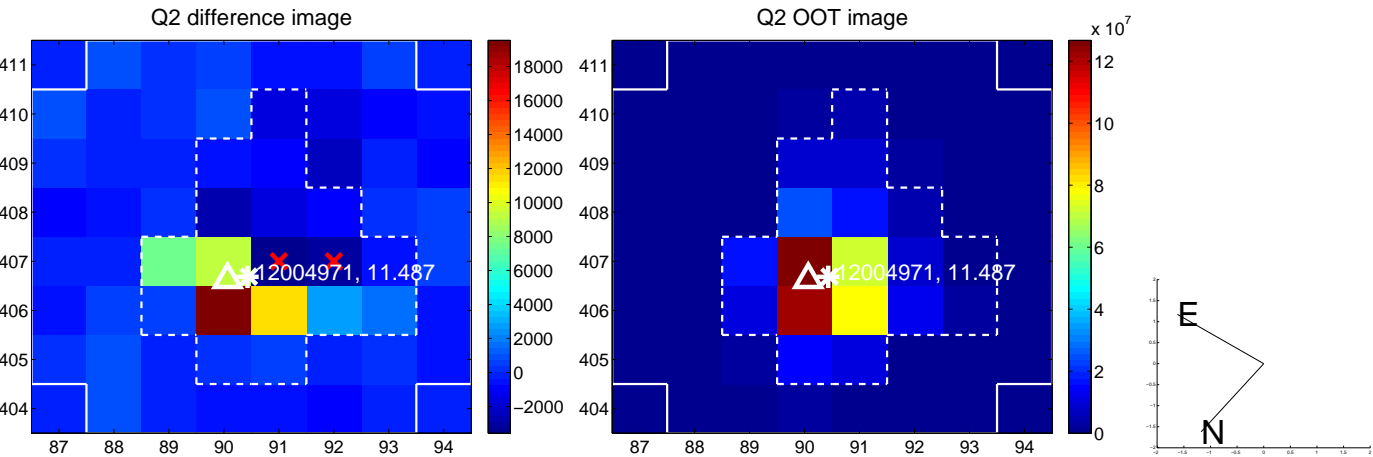
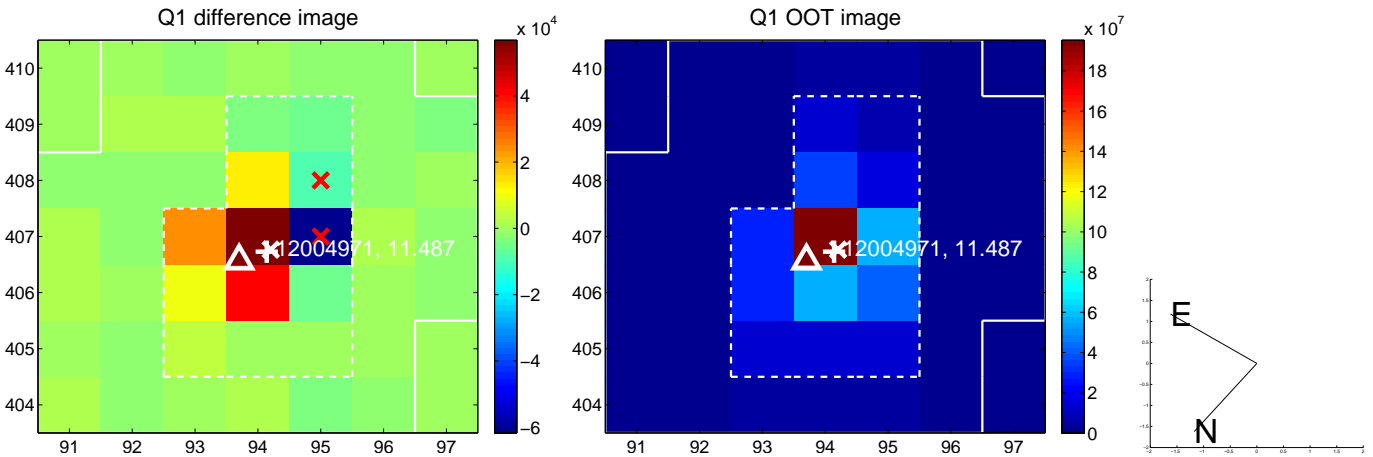
The direct PRF centroid is offset from the target star catalog position by about 0.35 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.339 ± 0.604	0.56	0.327 ± 0.561	0.089 ± 0.491
PRF-fit source offset from KIC position	0.484 ± 0.526	0.92	0.441 ± 0.460	0.201 ± 0.487
photometric centroid source offset	0.31 ± 0.67	0.46	0.27 ± 0.65	-0.15 ± 0.75

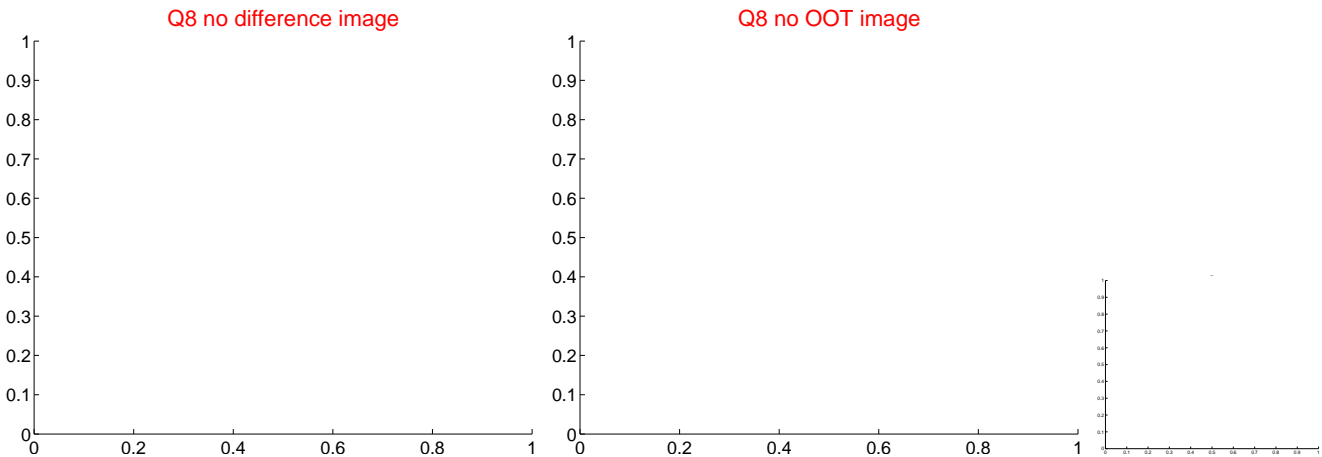
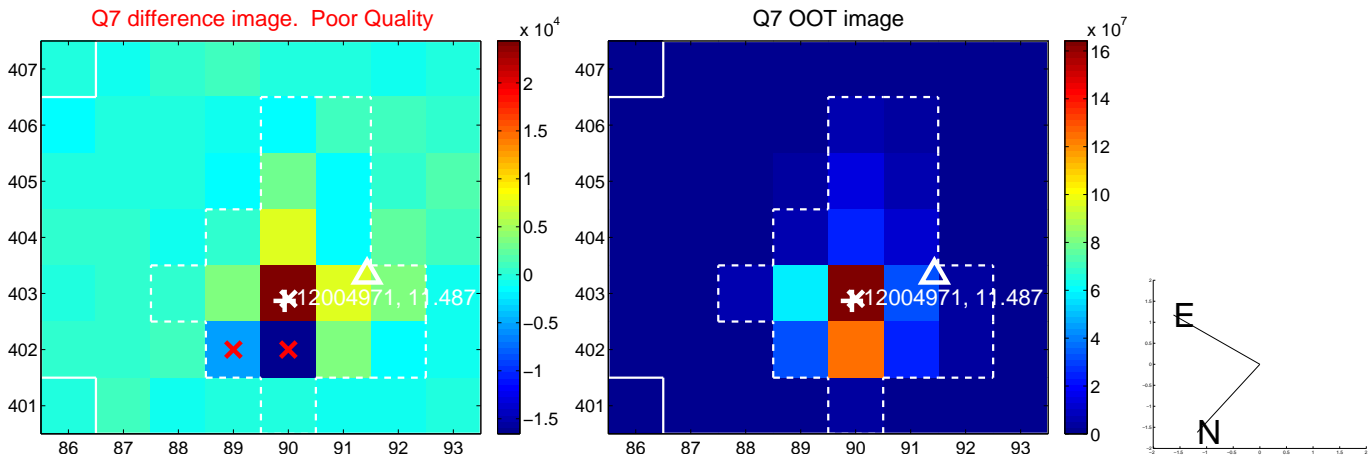
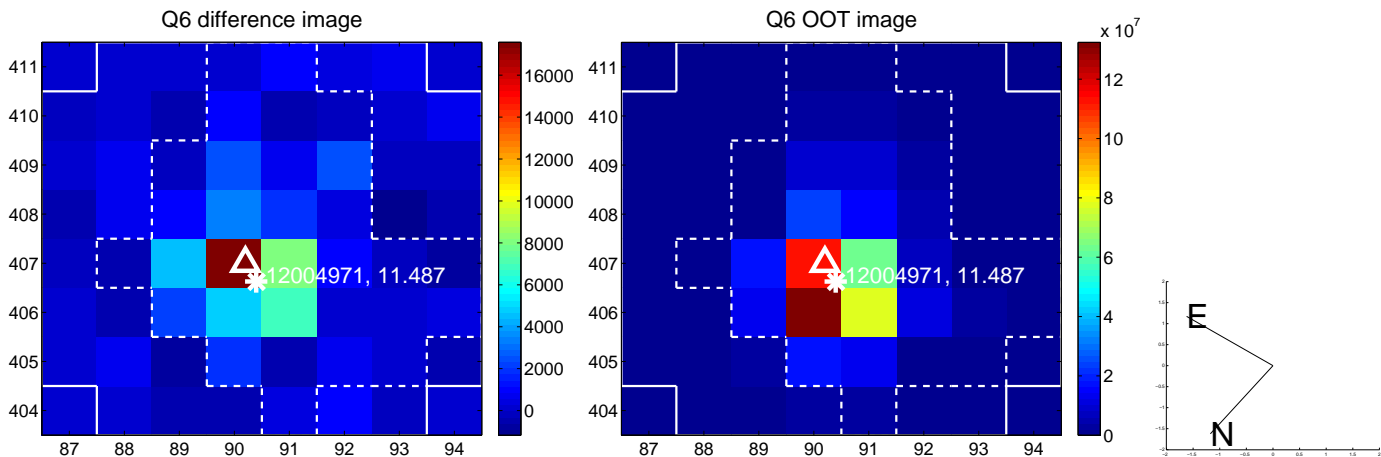
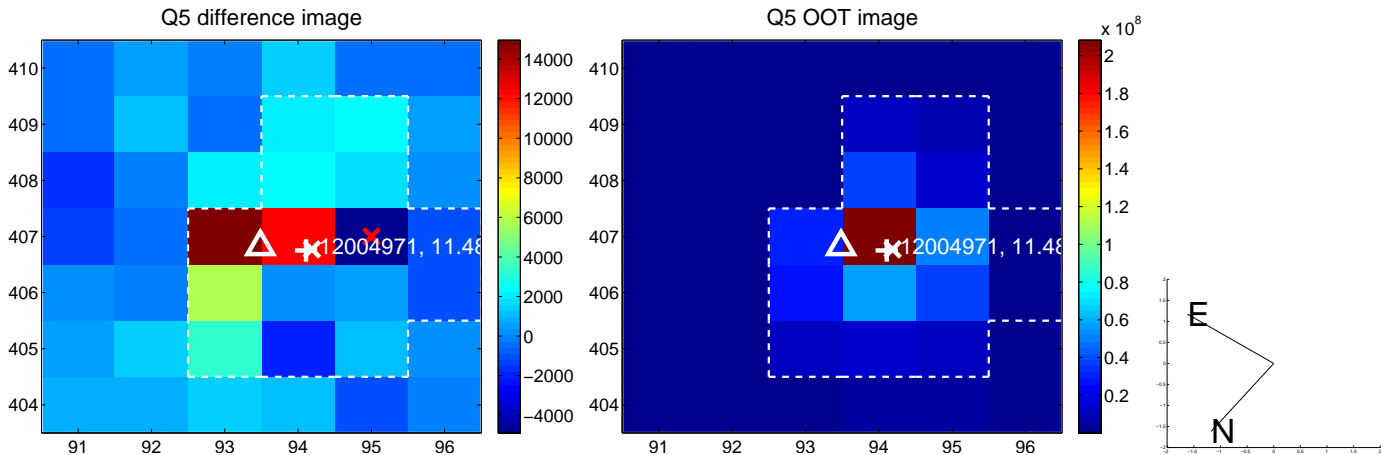


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

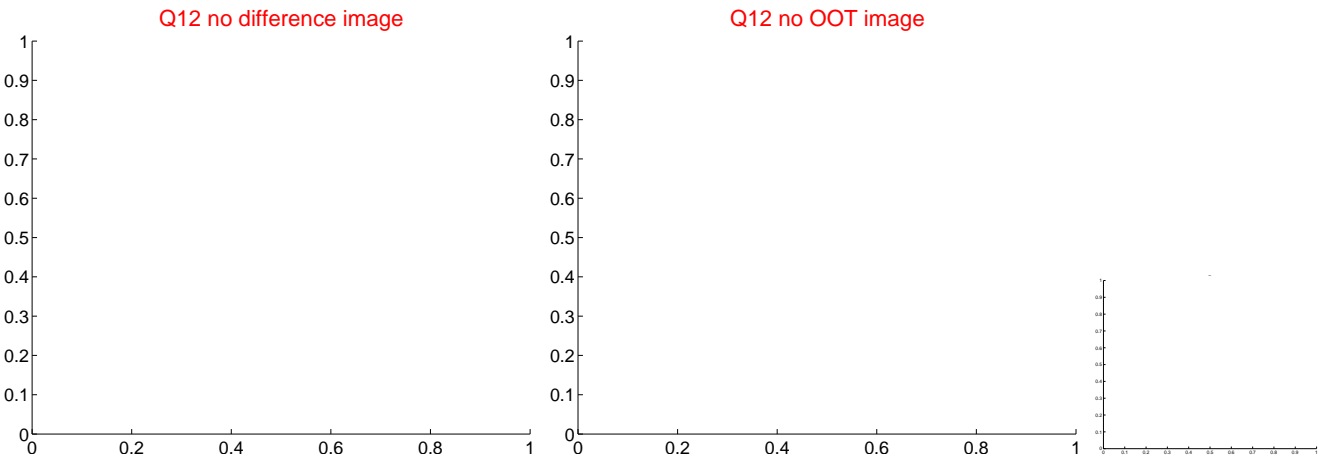
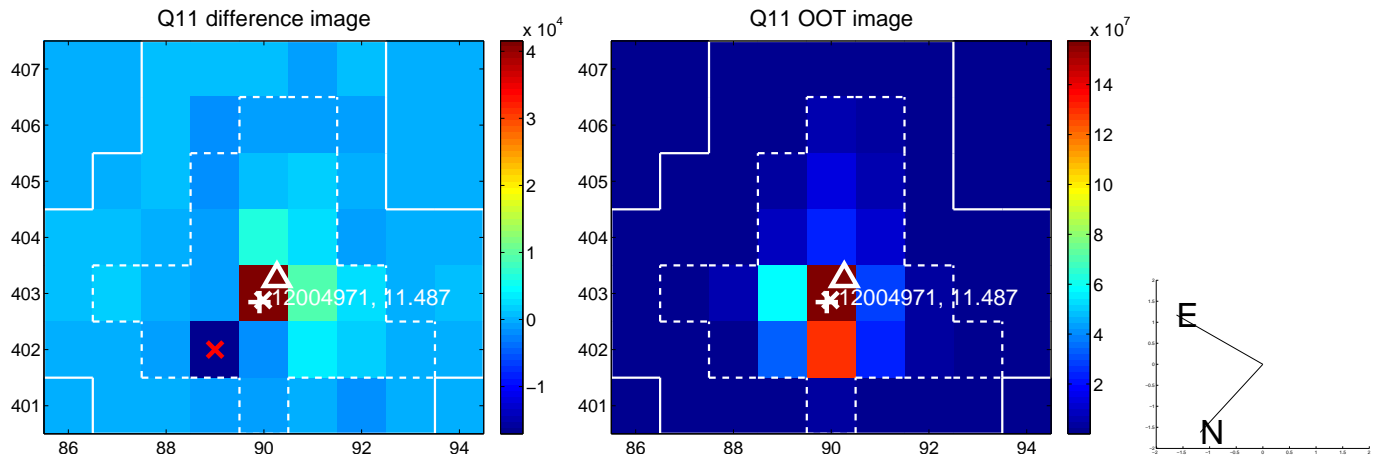
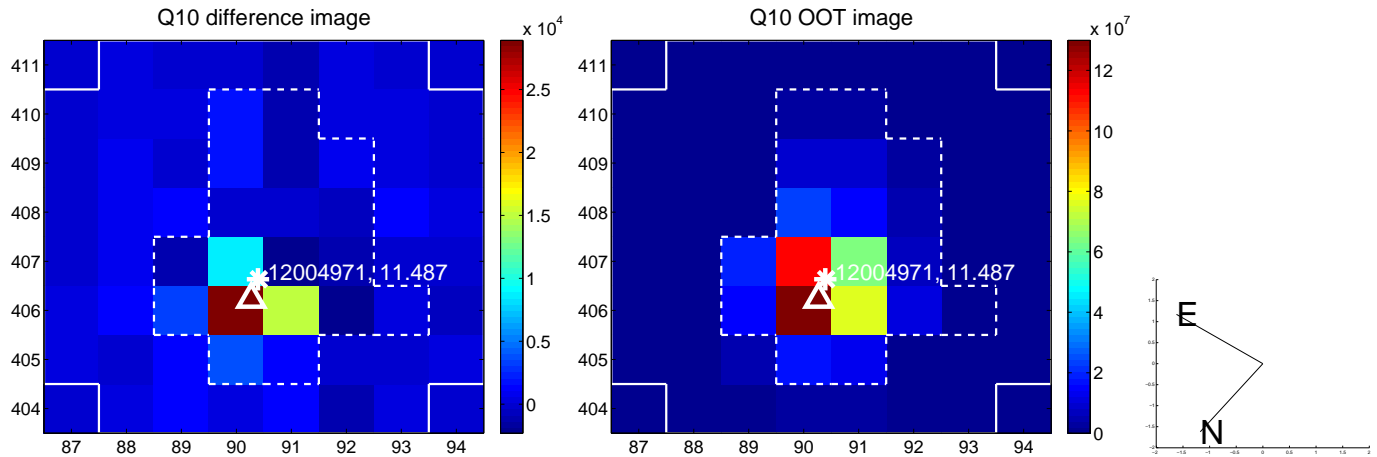
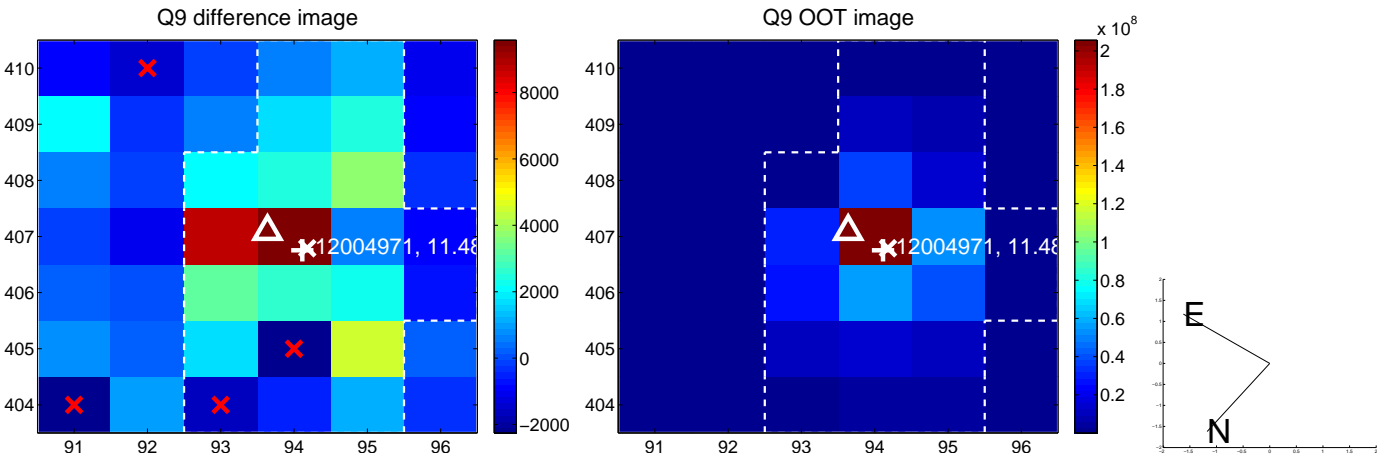
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



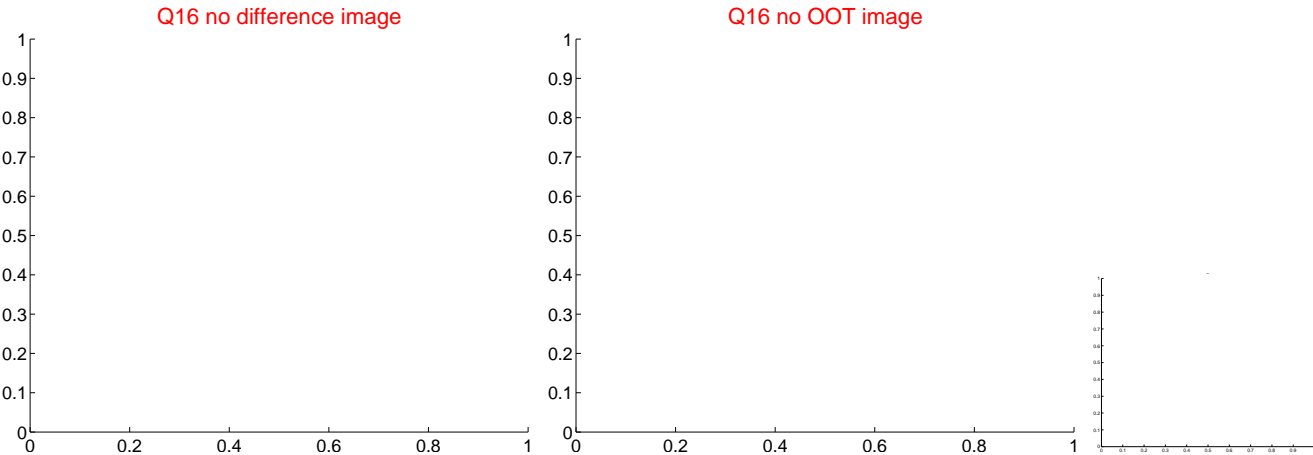
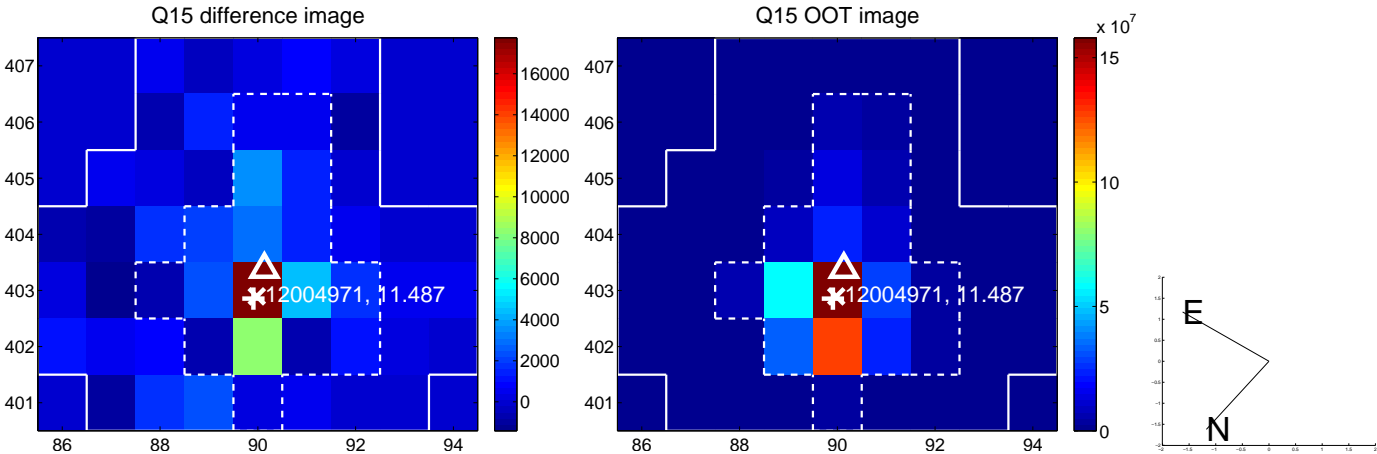
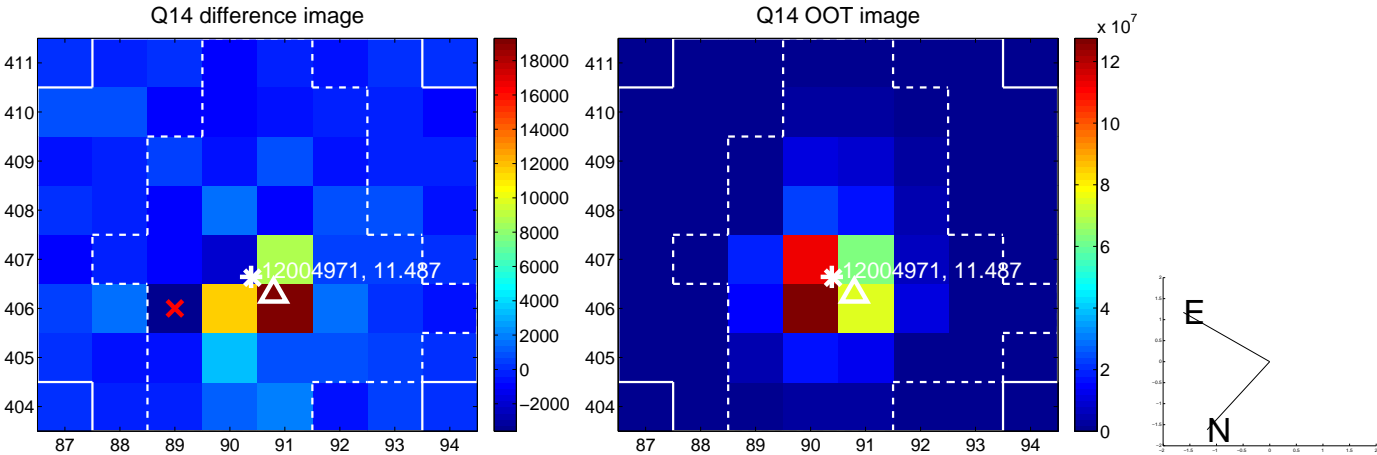
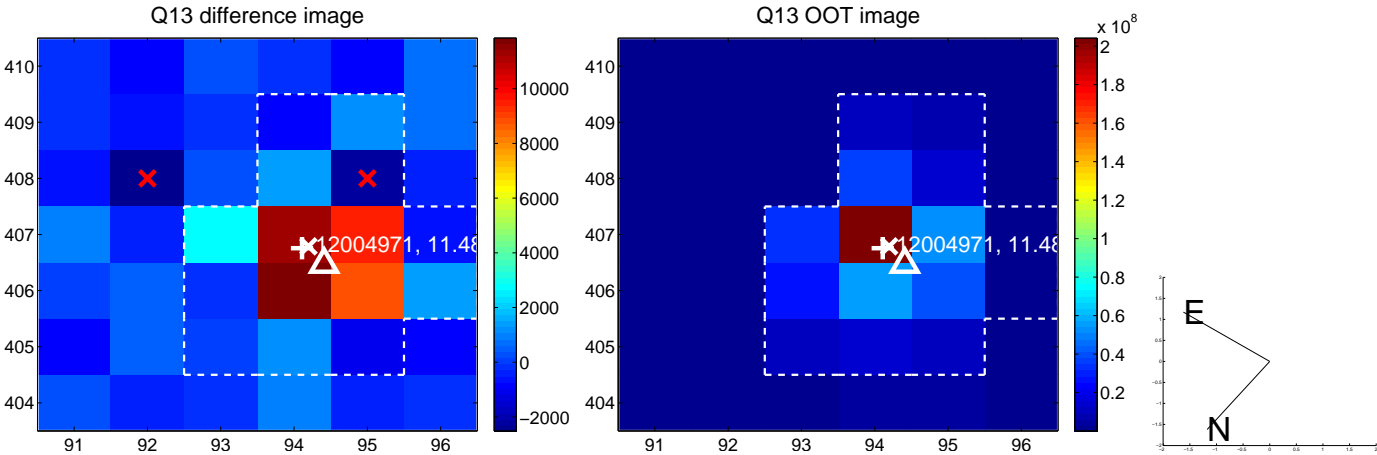
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



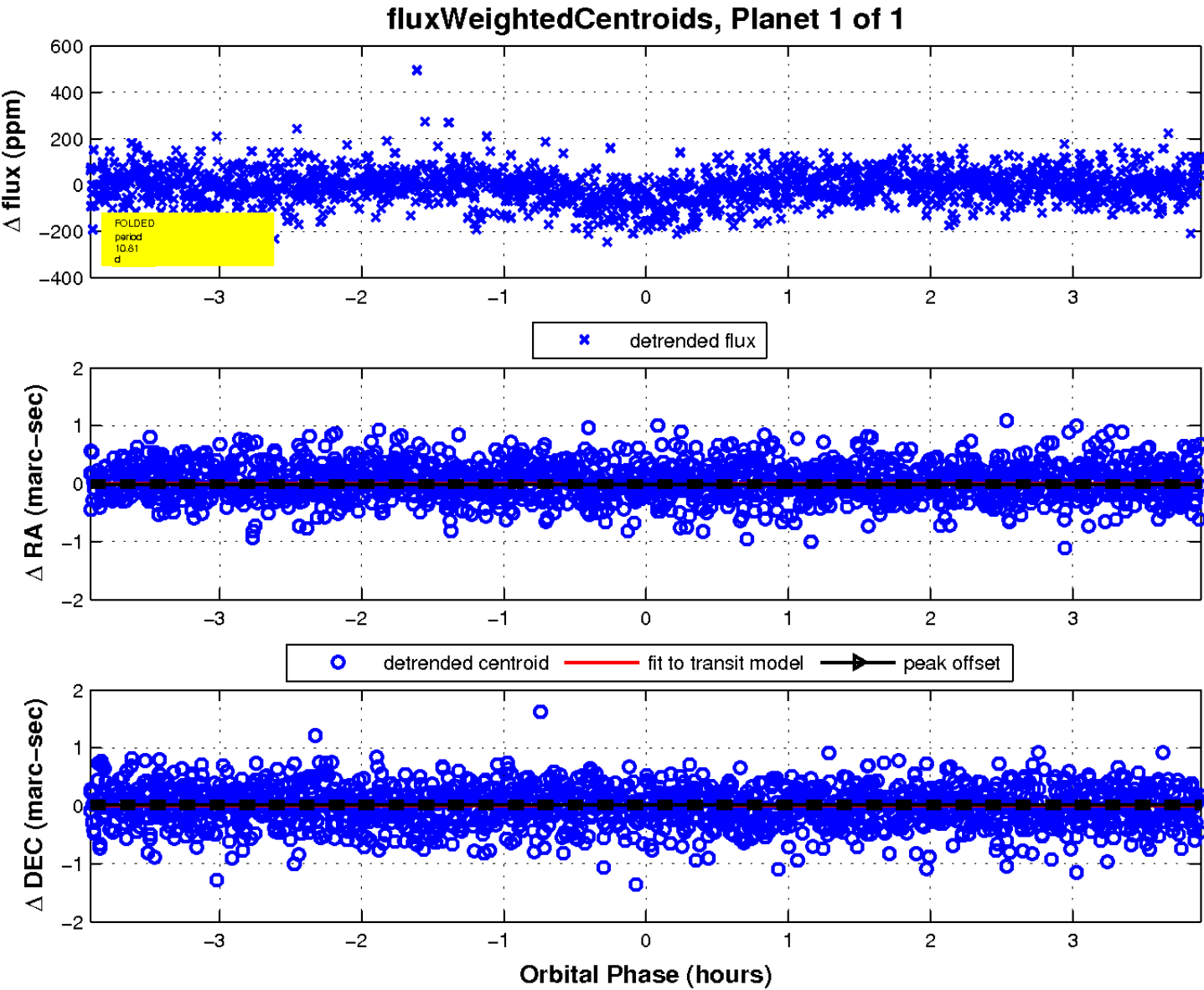
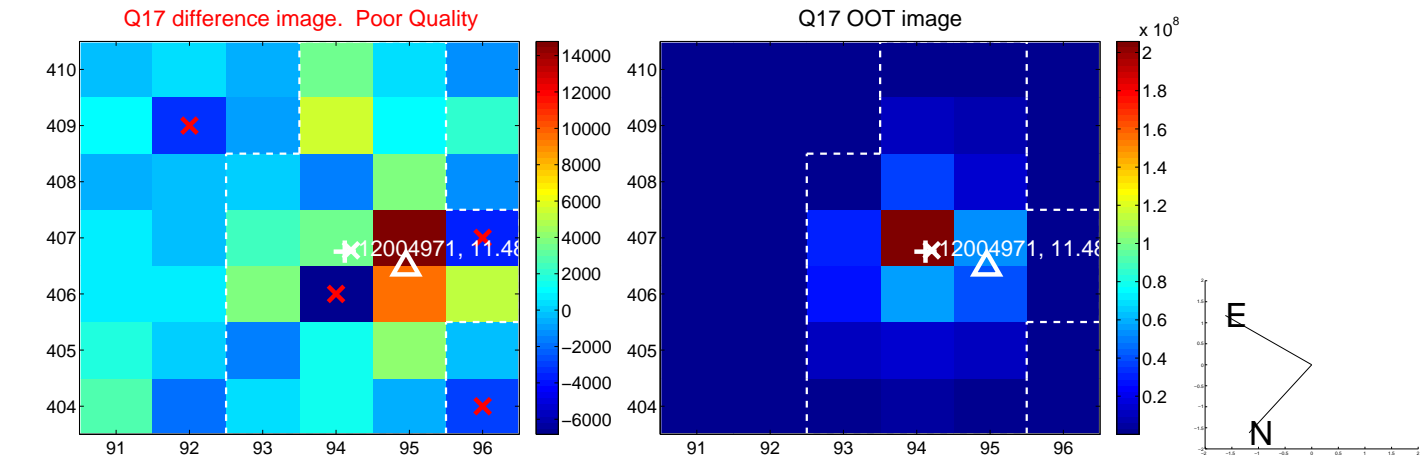
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UKIRT Image

