

KIC 011416104

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})
011416104-01	OBS	No	6.317203	134.024134	28.8	34.376	8.4	10.7	2.43	7888	2.41	3006.34

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011416104-01	OBS	FP	0.00	1	0	0	0	LPP_DV

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

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

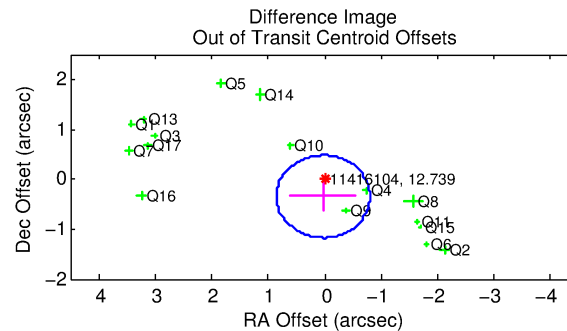
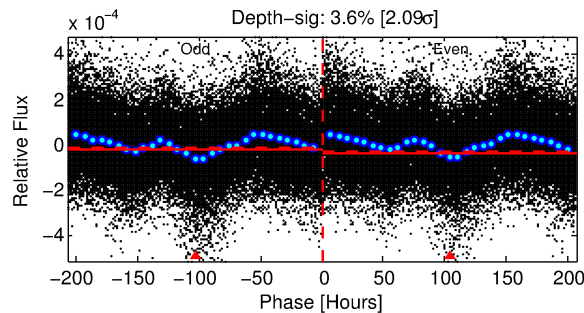
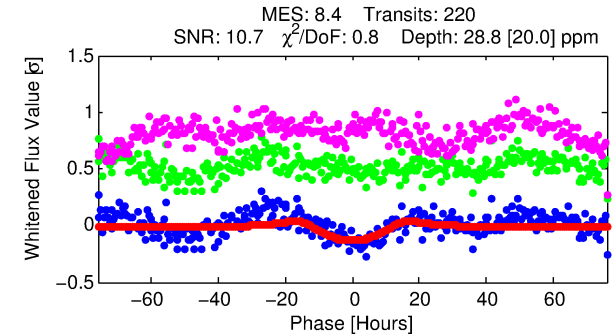
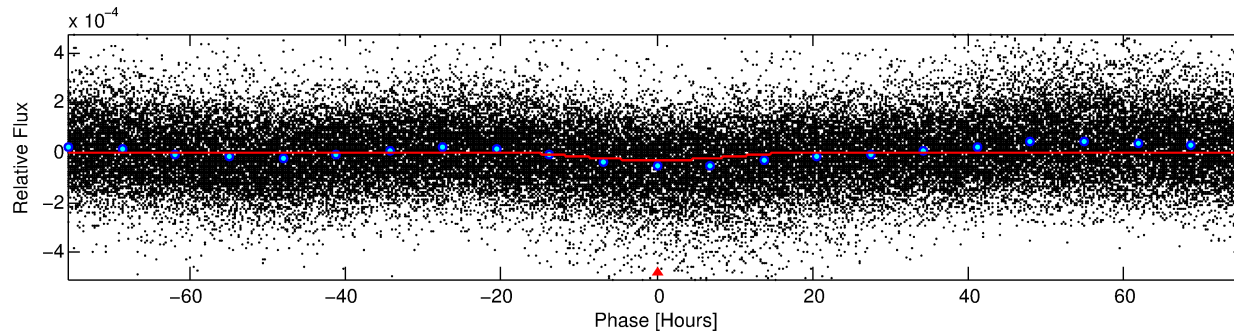
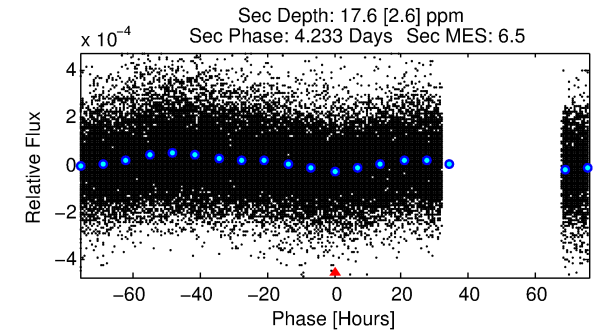
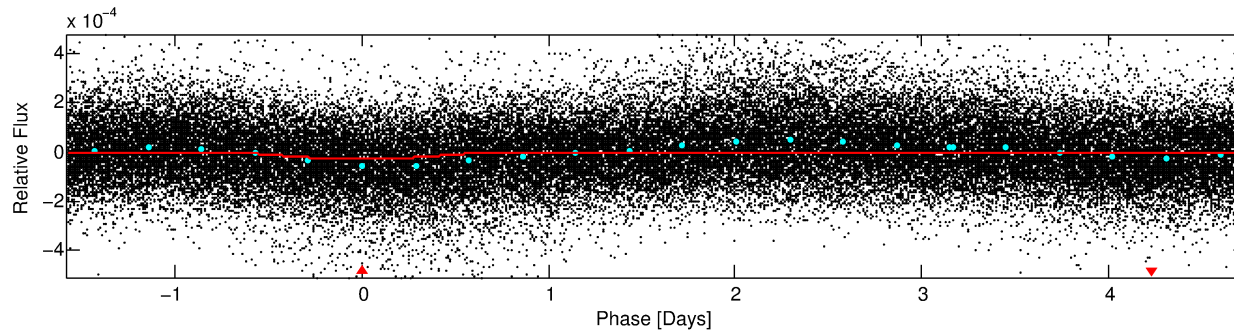
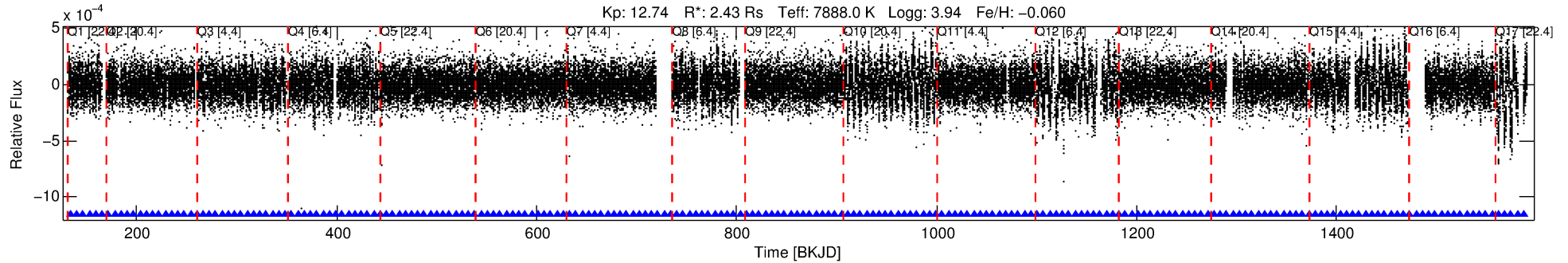
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011416104-01

No Significant Match Found

DV One-Page Summary

KIC: 11416104 Candidate: 1 of 1 Period: 6.317 d



DV Fit Results:

Period = 6.31720 [0.00045] d
Epoch = 134.0241 [0.0545] BKJD
Rp/R* = 0.0091 [0.0099]
a/R* = 1.02 [0.00]
b = 1.00 [0.02]
Seff = 3006.34 [1457.72]
Teq = 1888 [229] K
Rp = 2.41 [2.75] Re
a = 0.0826 [0.0247] AU
Ag = 11.39 [25.50] [0.41σ]
Teffp = 5363 [2947] K [1.18σ]

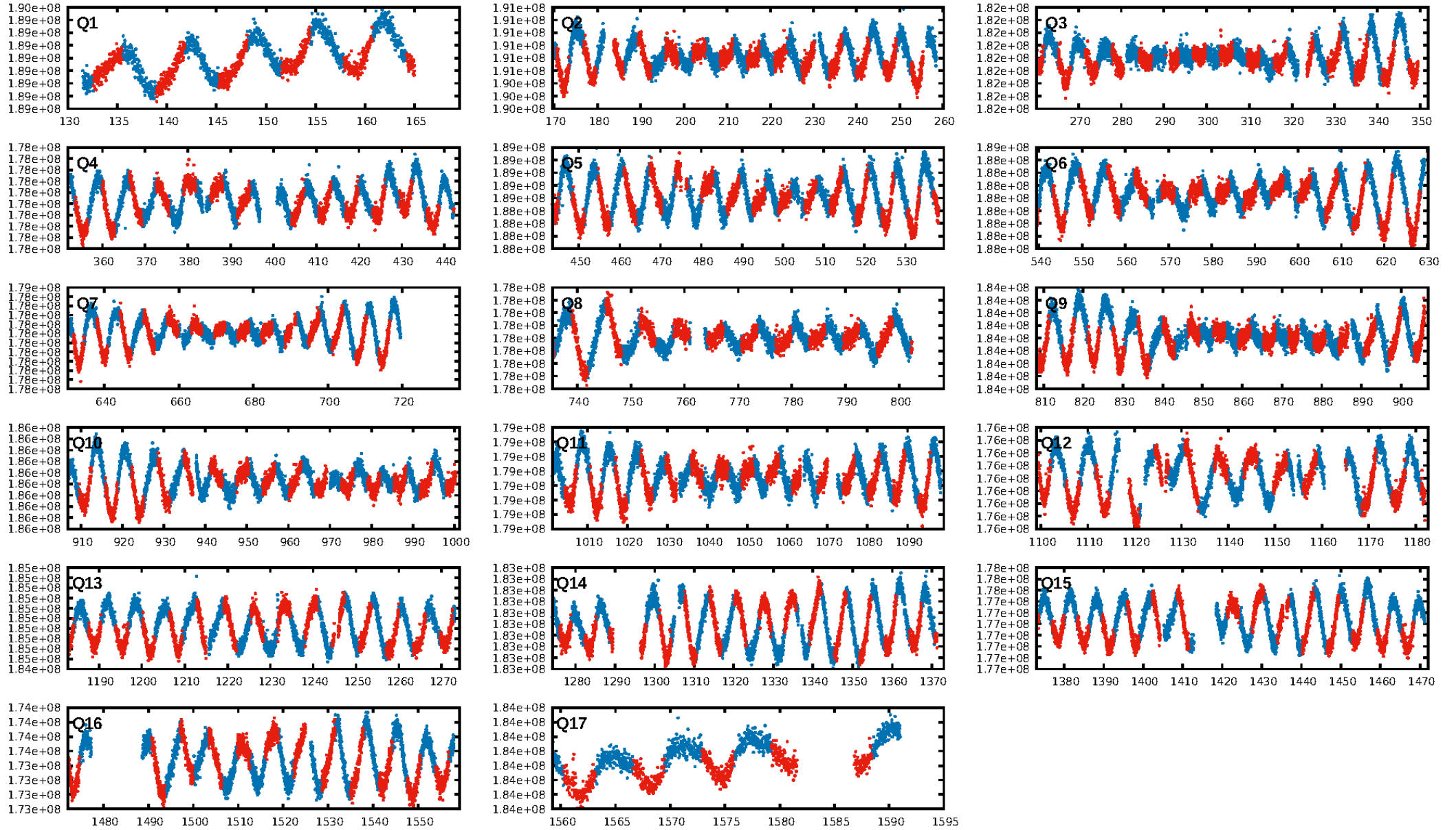
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.48e-19
RollingBand-fgt: 1.00 [209/209]
GhostDiagnostic-chr: 1.487
Centroid-sig: 12.8%
Centroid-so: 0.971 arcsec [1.06σ]
OotOffset-rm: 0.350 arcsec [1.27σ]
KicOffset-rm: 0.251 arcsec [0.80σ]
OotOffset-st: 4/4/3/5 [16]
KicOffset-st: 4/4/3/5 [16]
DiffImageQuality-fgm: 0.62 [10/16]
DiffImageOverlap-fno: 1.00 [17/17]

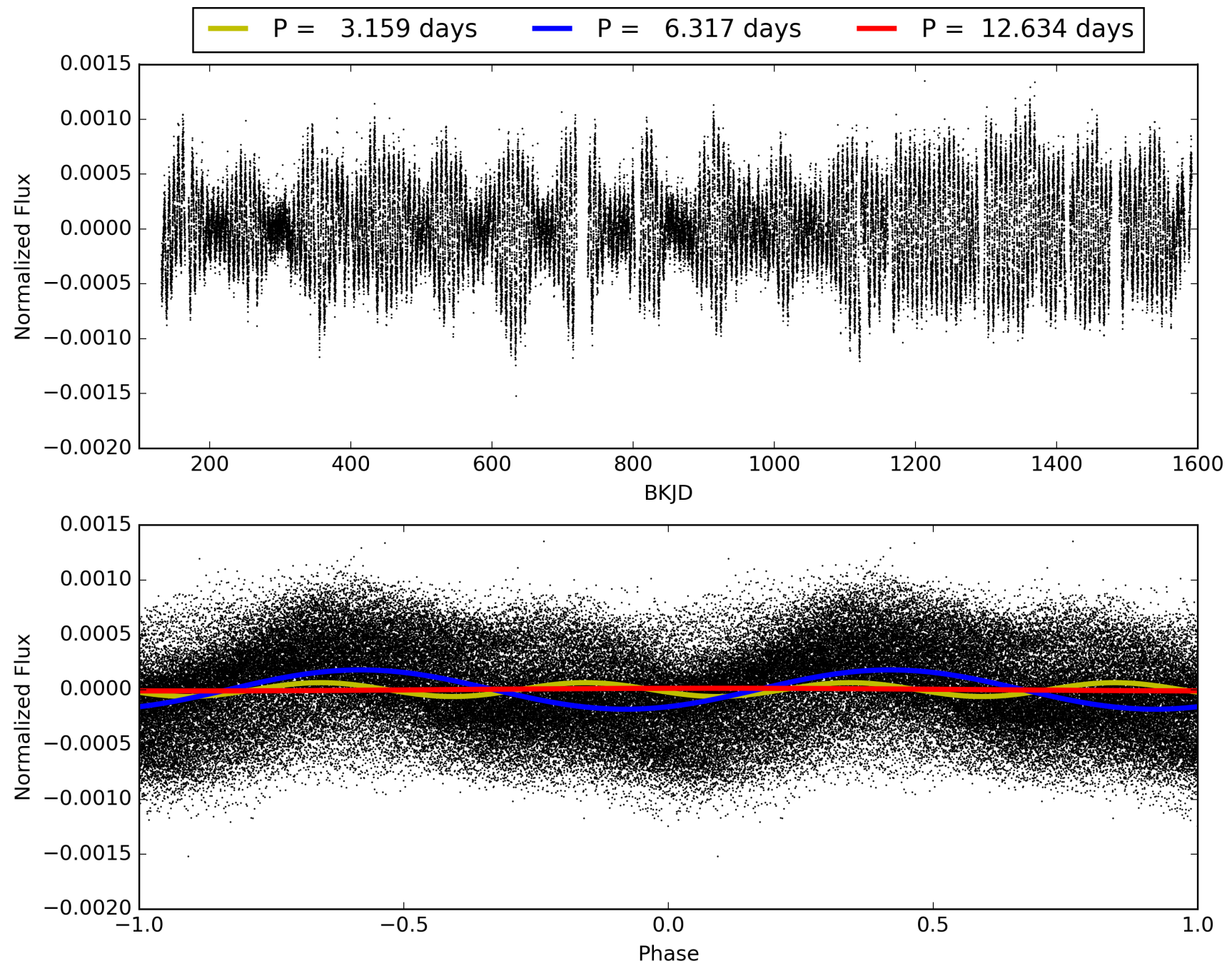
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 21:31:27 Z

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

TCE 011416104-01, PDC Light Curves

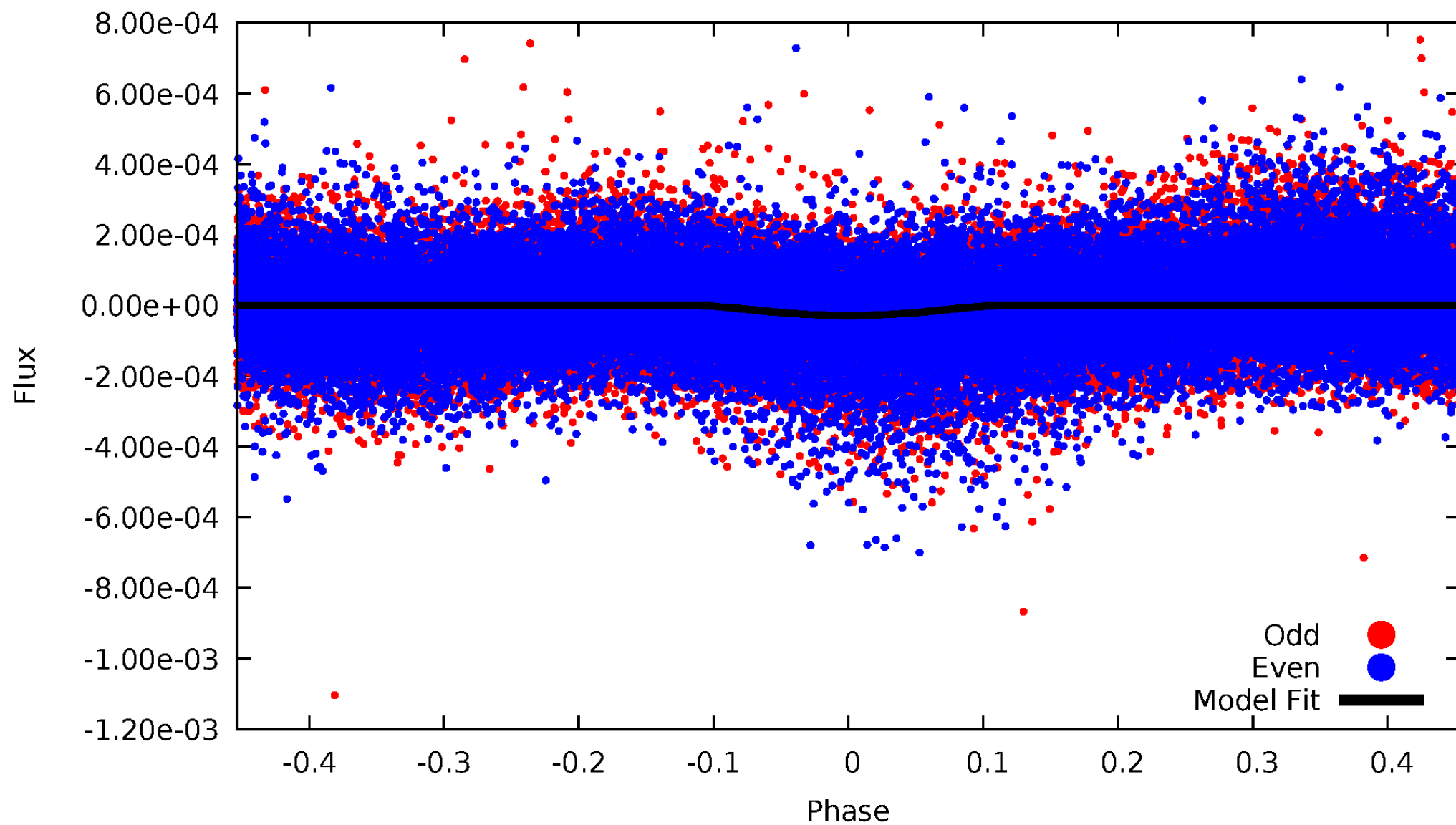


TCE 011416104-01



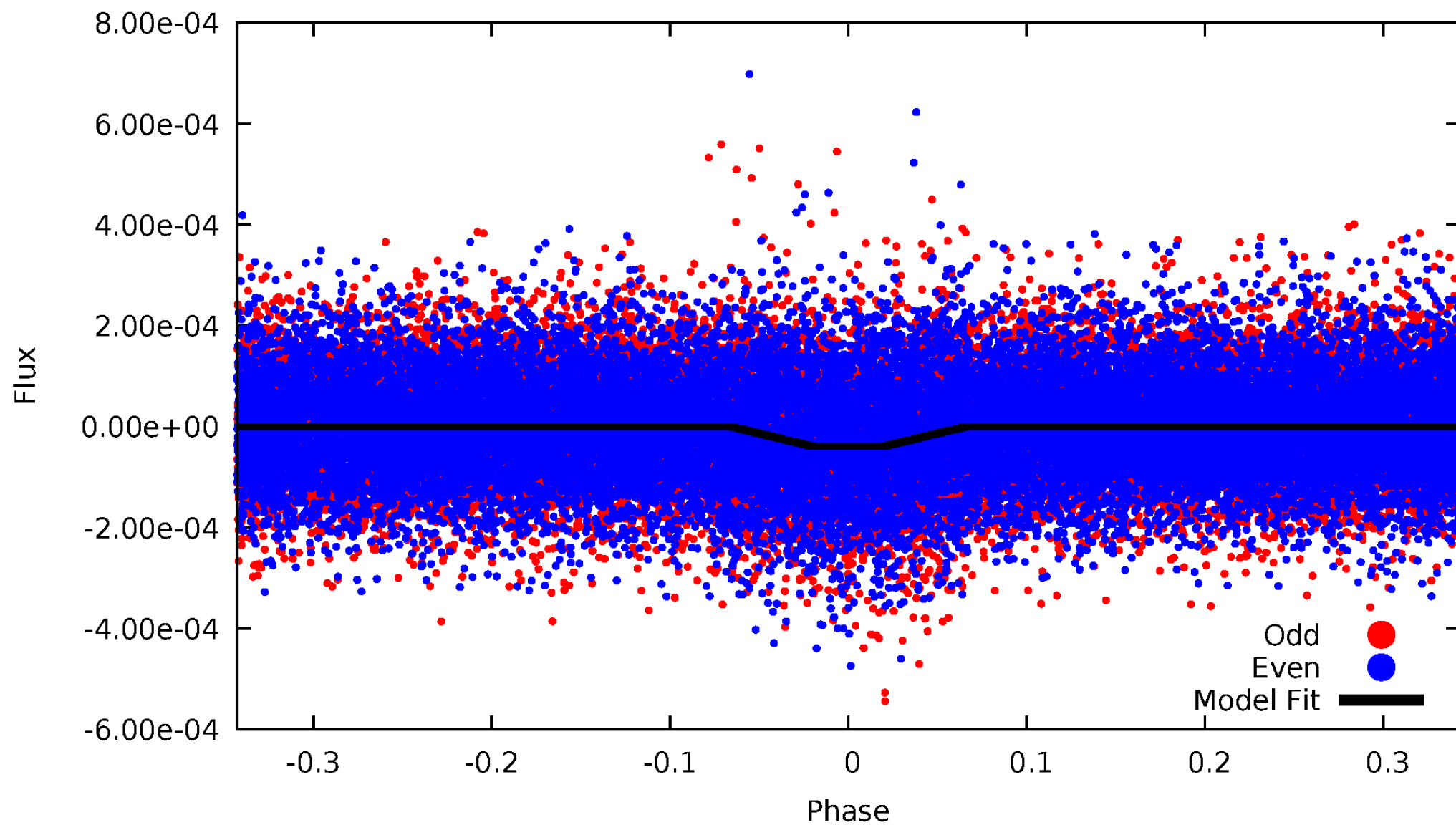
DV Odd/Even

TCE 011416104-01

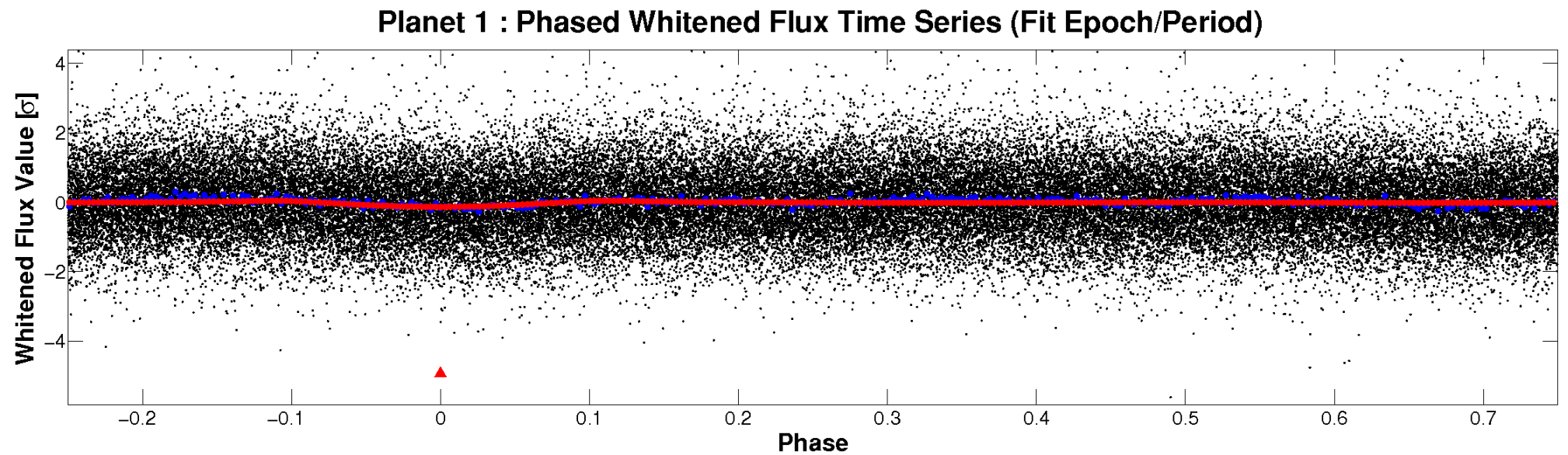
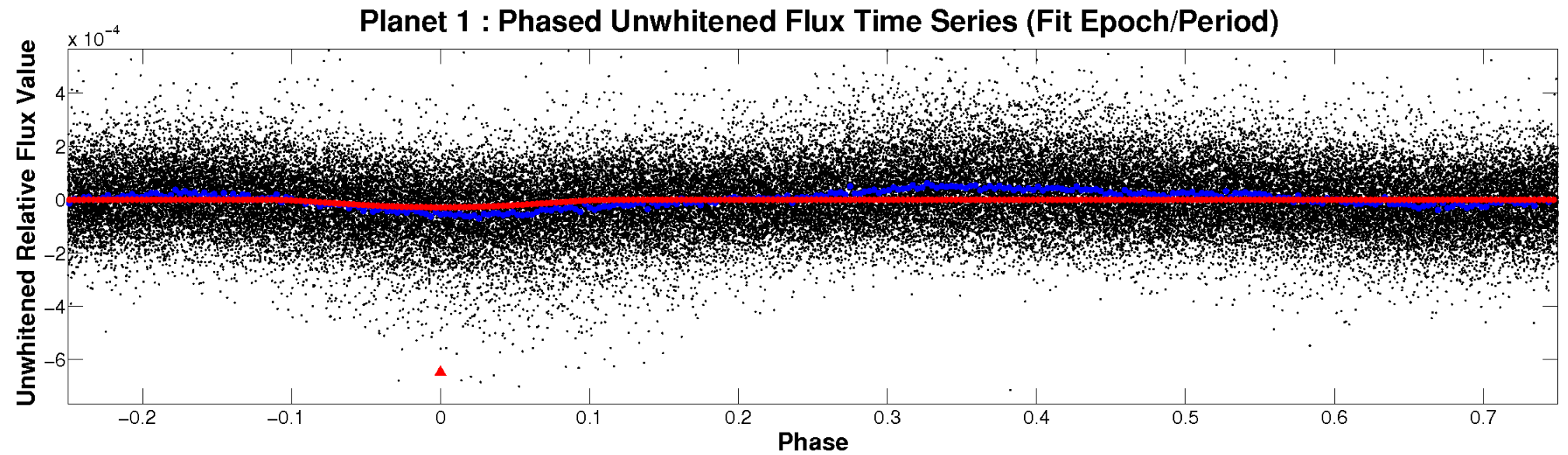


ALT Odd/Even

TCE 011416104-01

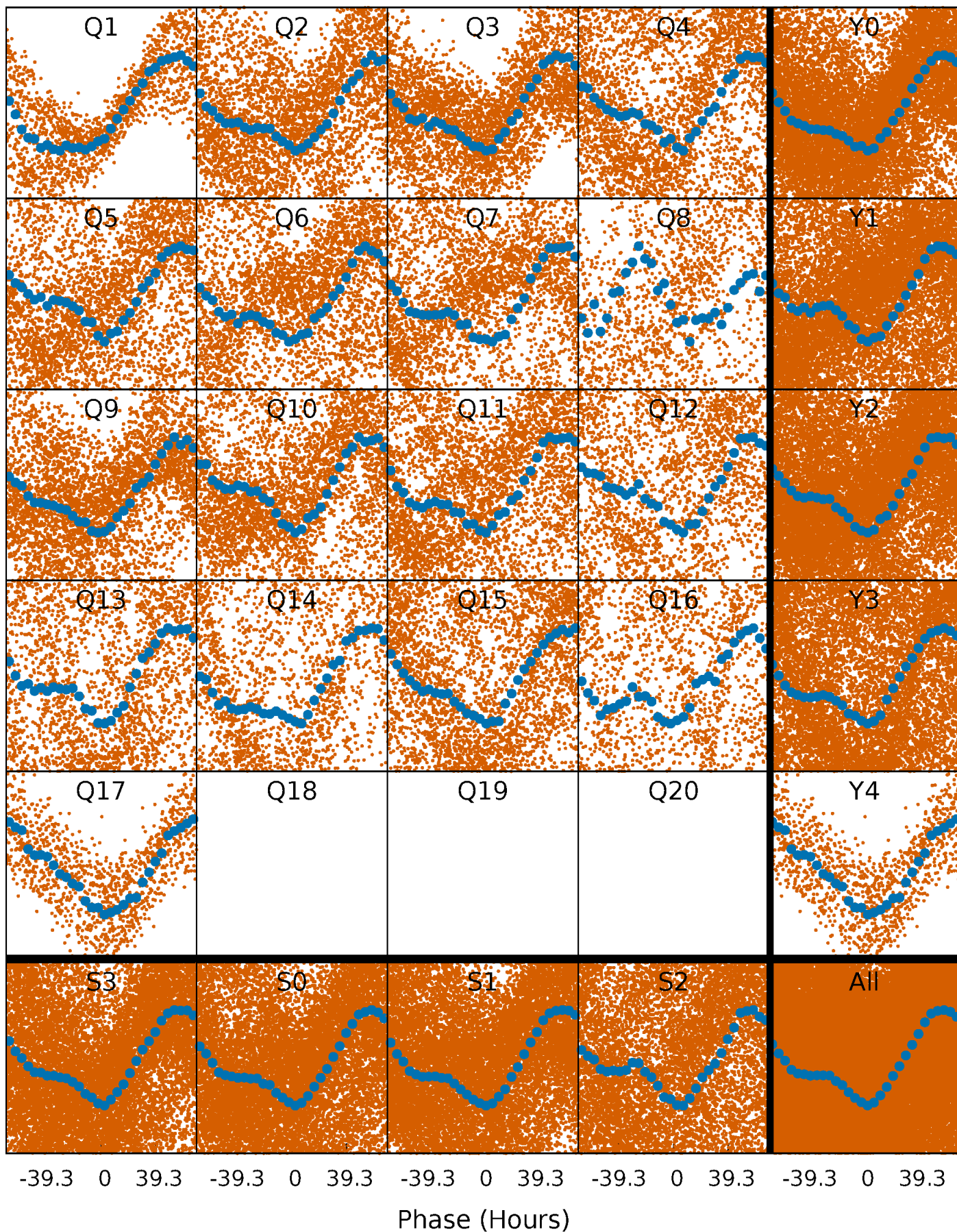


Non-Whitened Vs. Whitened Light Curve



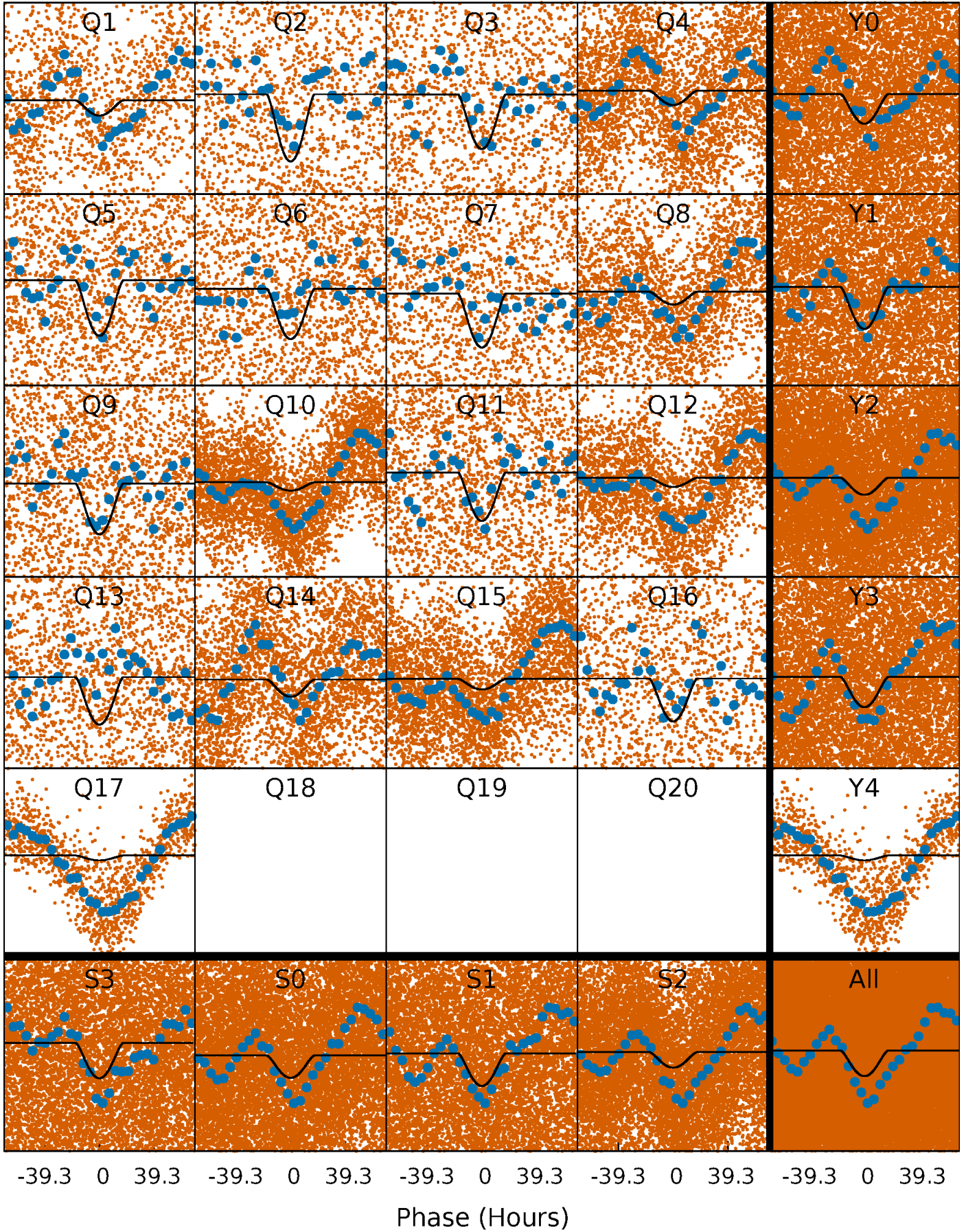
PDC Quarter-Phased Transit Curves

TCE 011416104-01 P= 6.317203 Days $T_0=134.024134$ (BKJD)



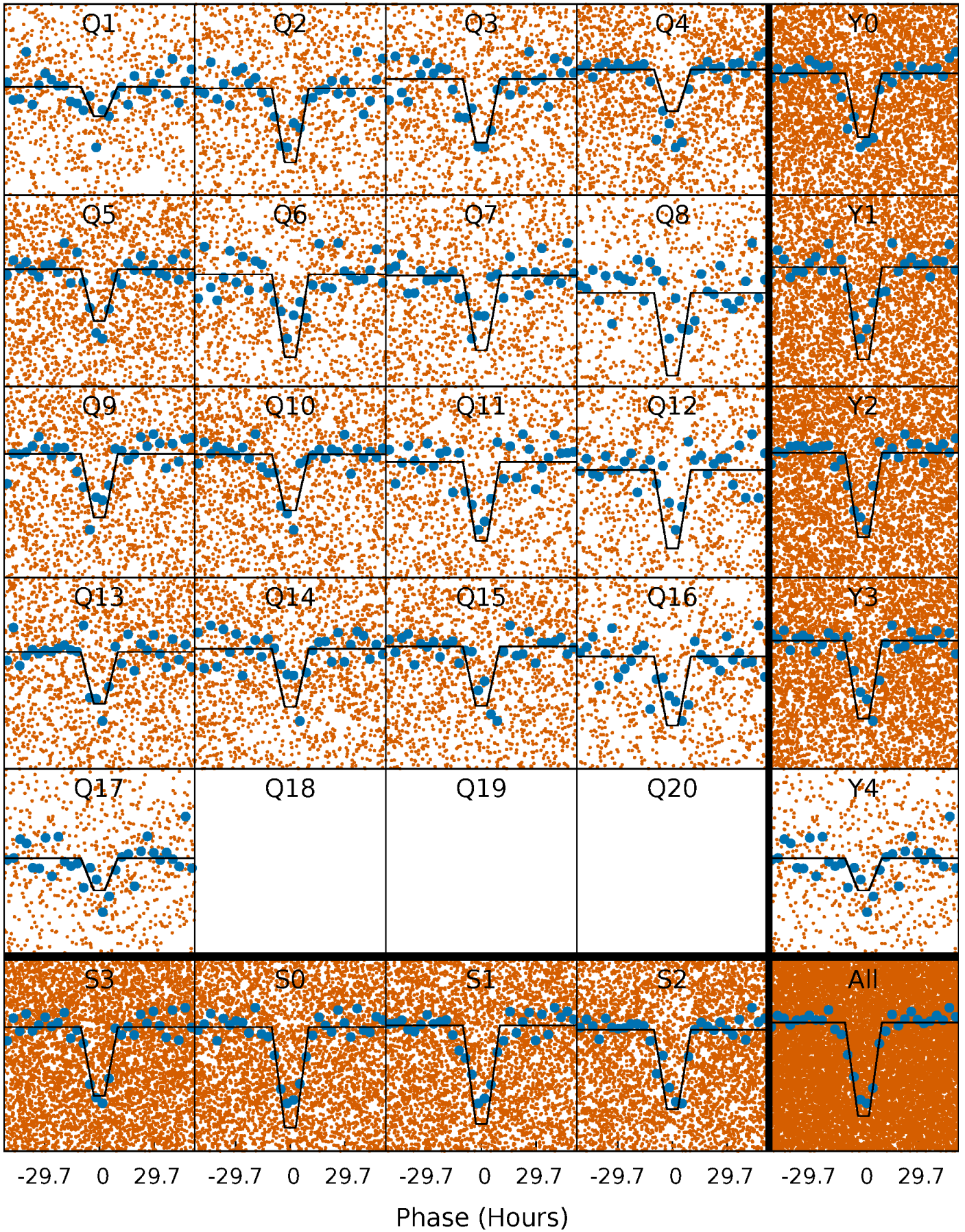
DV Quarter-Phased Transit Curves

TCE 011416104-01 P= 6.317203 Days $T_0=134.024134$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

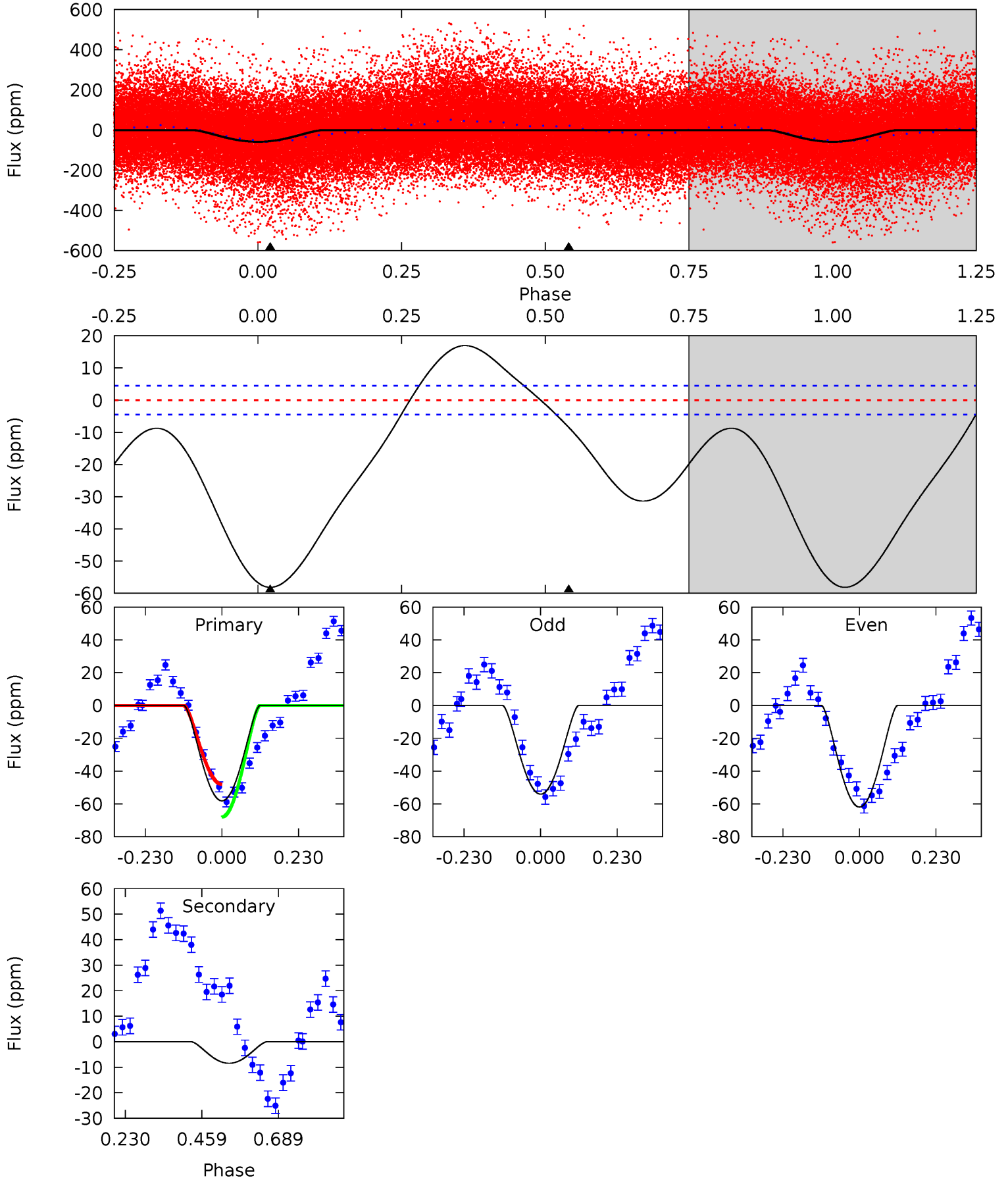
TCE 011416104-01 P= 6.317436 Days $T_0=134.121869$ (BKJD)



DV Model-Shift Uniqueness Test

011416104-01, P = 6.317203 Days, E = 127.706931 Days

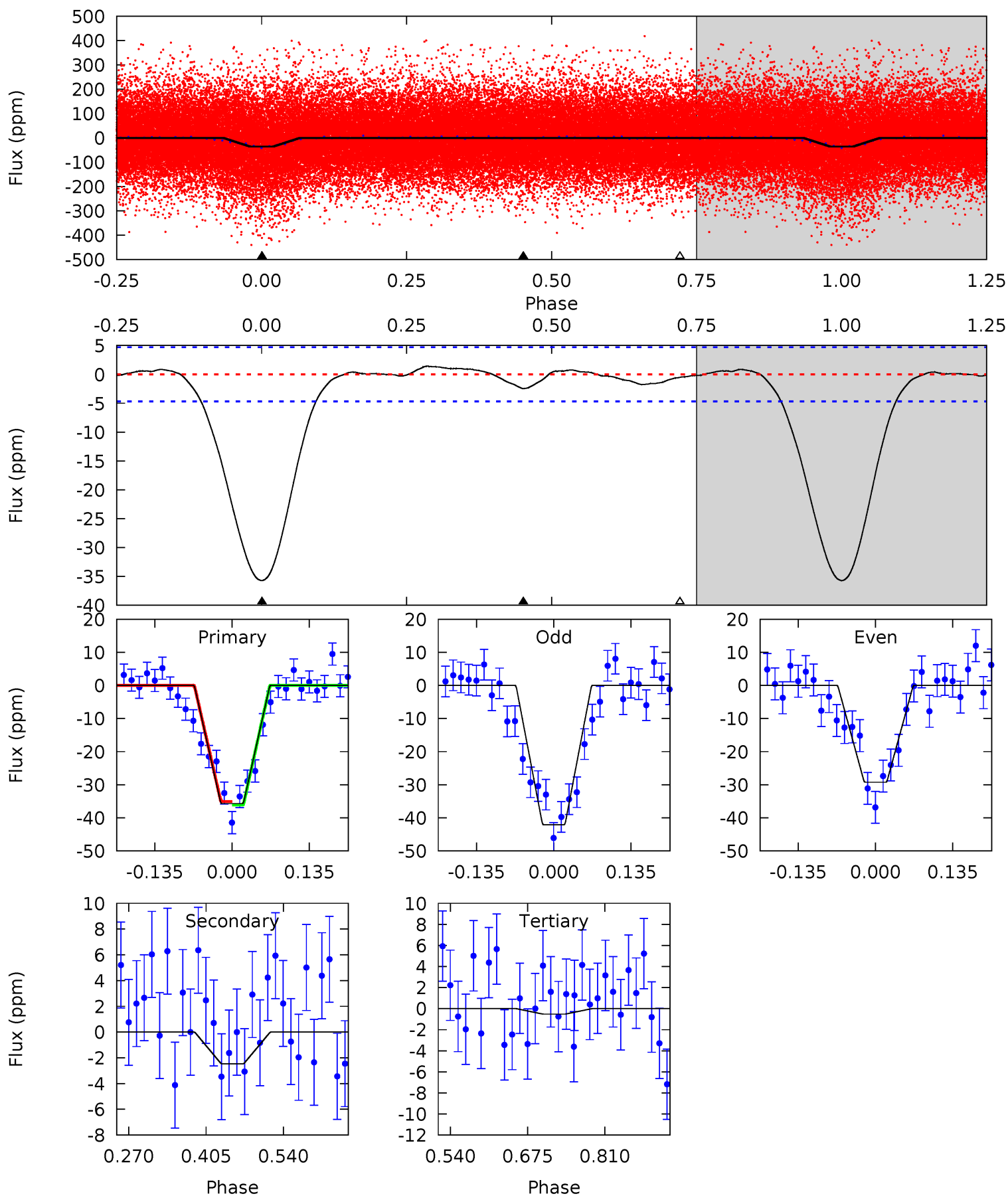
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
56.9	8.26	0	0	4.39	1.20	9.11	56.9	56.9	8.26	8.26	3.84	1.05	0.23	10.3



Alt Model-Shift Uniqueness Test

011416104-01, P = 6.317436 Days, E = 127.804433 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
34.3	2.37	0.50	0	4.50	1.49	0.77	33.8	34.3	1.87	2.37	6.13	1.46	0.04	0.51



Stellar Parameters For KIC 011416104

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7888^{+218}_{-327}	$3.941^{+0.259}_{-0.130}$	$-0.060^{+0.200}_{-0.350}$	$2.432^{+0.437}_{-0.812}$	$1.882^{+0.098}_{-0.390}$	$0.184^{+0.306}_{-0.063}$
	+3%/-4%	+7%/-3%	+333%/-583%	+18%/-33%	+5%/-21%	+166%/-34%
Source	KIC0	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 011416104-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-8 ± 1	$2.80^{+2.47}_{-1.69}$	2602^{+183}_{-223}	4083^{+2102}_{-830}	$3.874^{+21.721}_{-2.736}$
Alt.	-2 ± 1	$2.51^{+2.41}_{-1.65}$	2617^{+168}_{-225}	3345^{+1774}_{-1386}	$1.283^{+10.263}_{-0.972}$

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 $A_{obs} \gg 1.0$

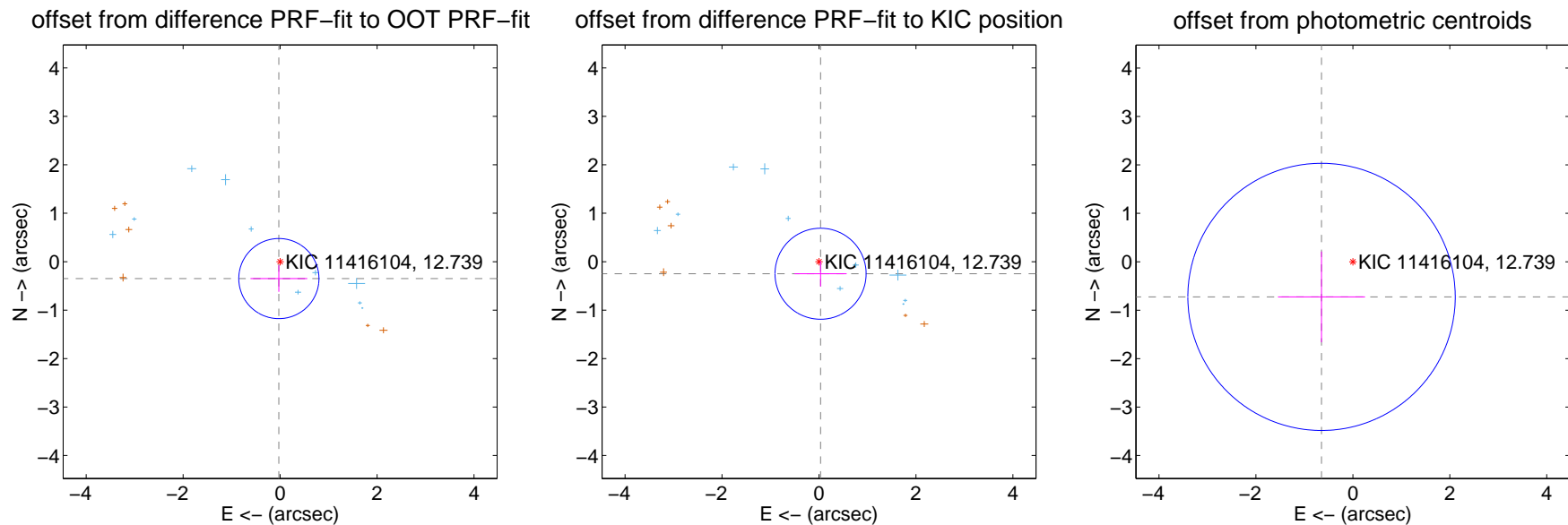
DV Centroid Data

Supplemental centroid analysis for 011416104-01. Kepler magnitude: 12.74. Transit SNR 10.67

There are 10 quarters with good PRF difference image offsets

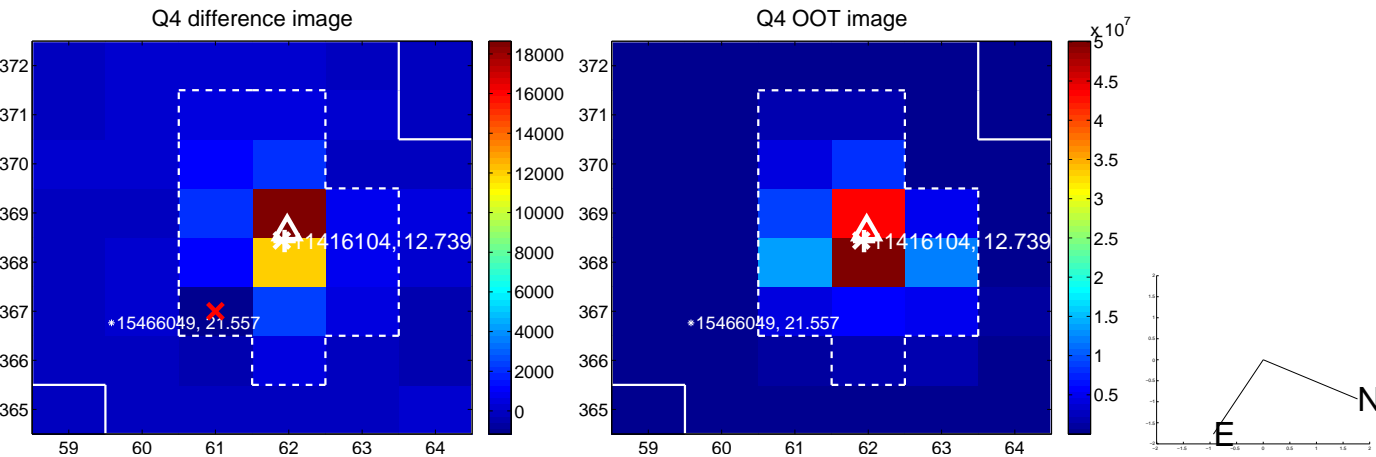
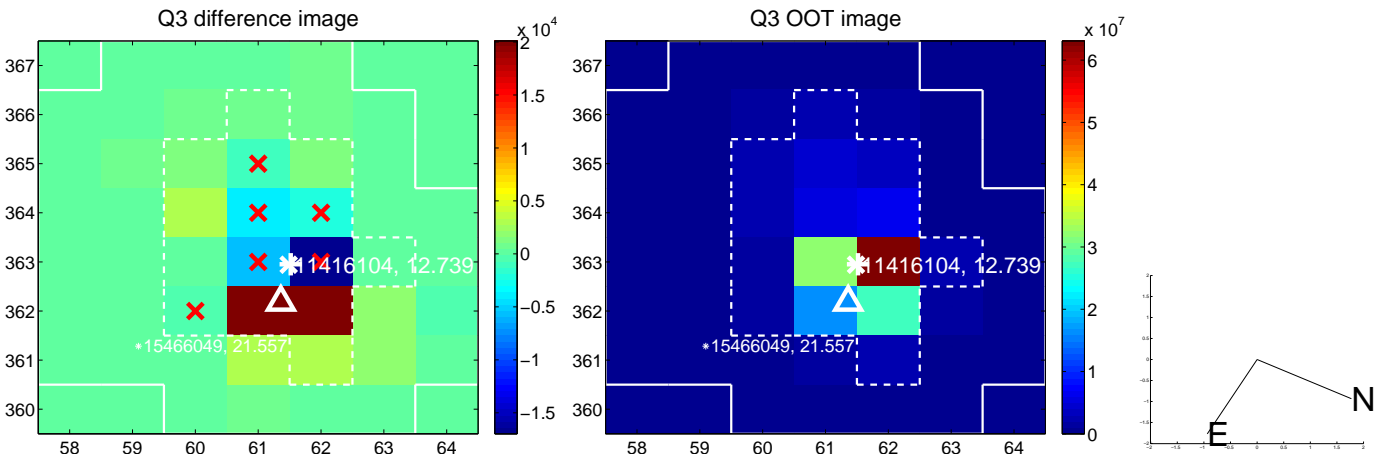
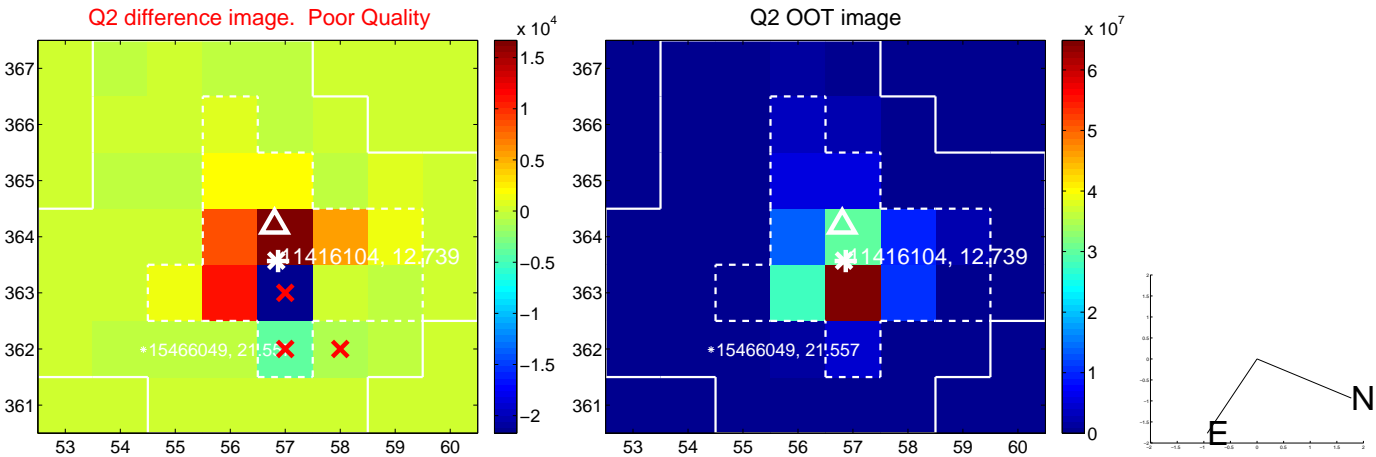
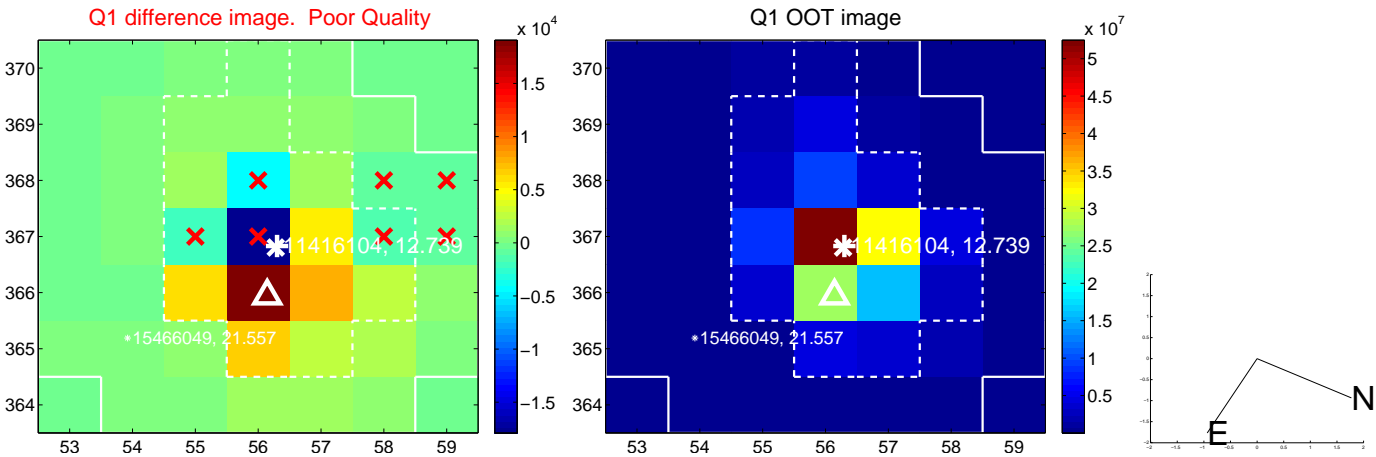
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.350 ± 0.276	1.27	0.026 ± 0.586	-0.349 ± 0.273
PRF-fit source offset from KIC position	0.251 ± 0.313	0.80	-0.033 ± 0.538	-0.249 ± 0.262
photometric centroid source offset	0.97 ± 0.92	1.06	0.65 ± 0.90	-0.72 ± 0.94

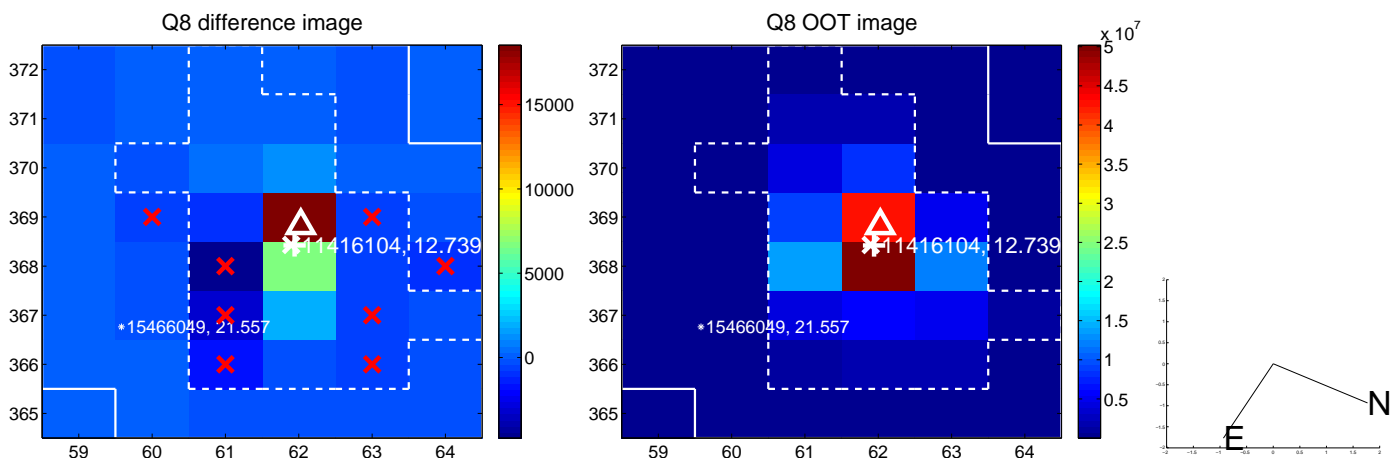
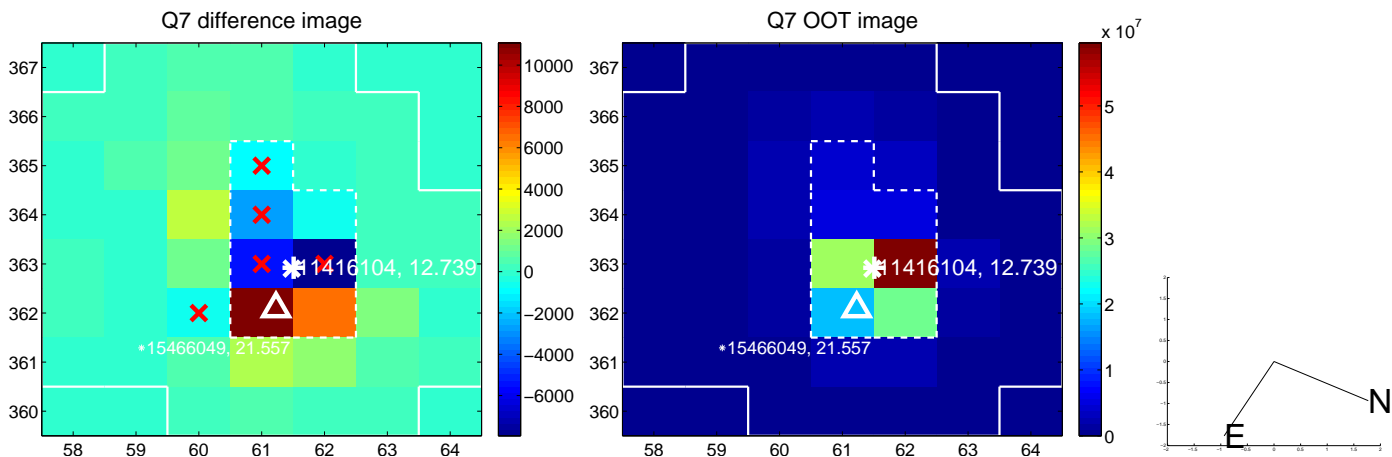
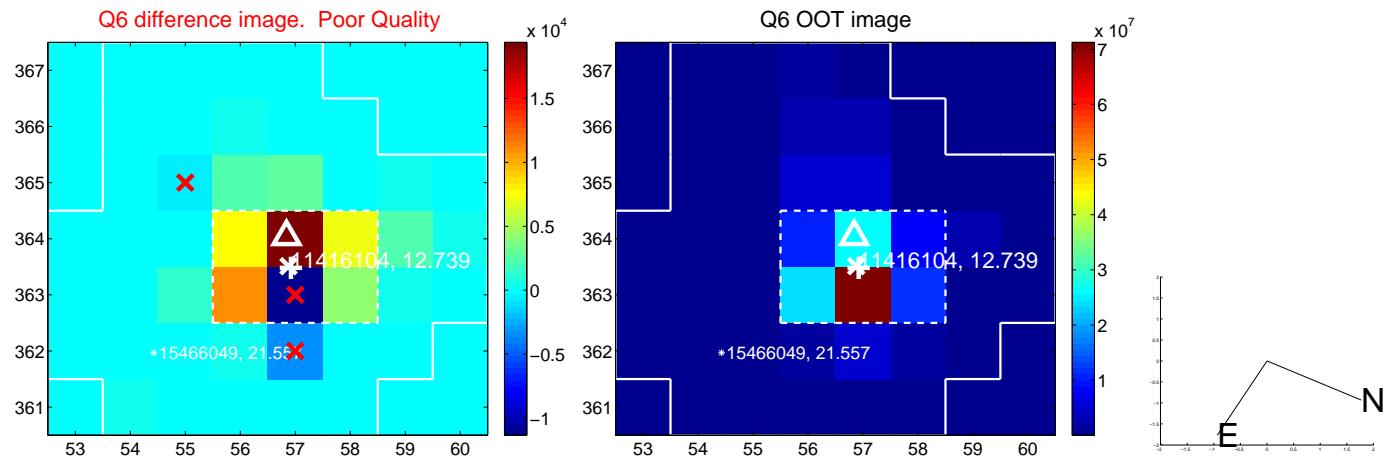
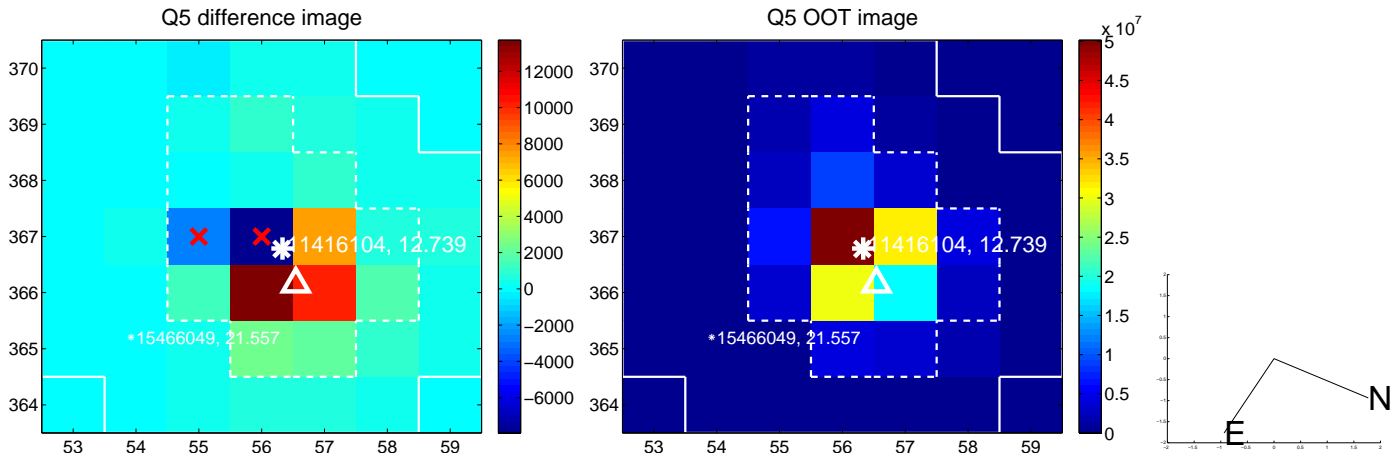


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

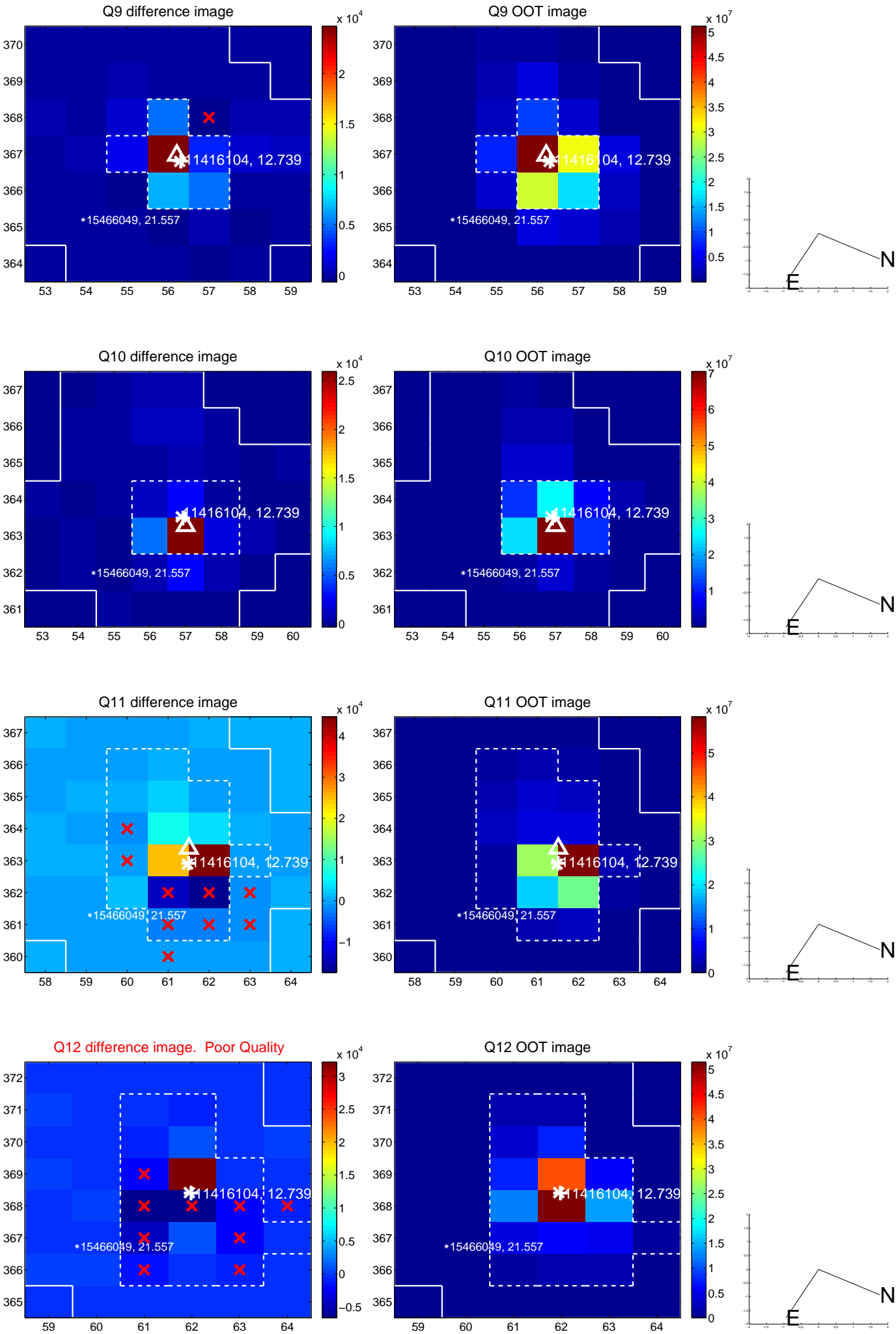
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



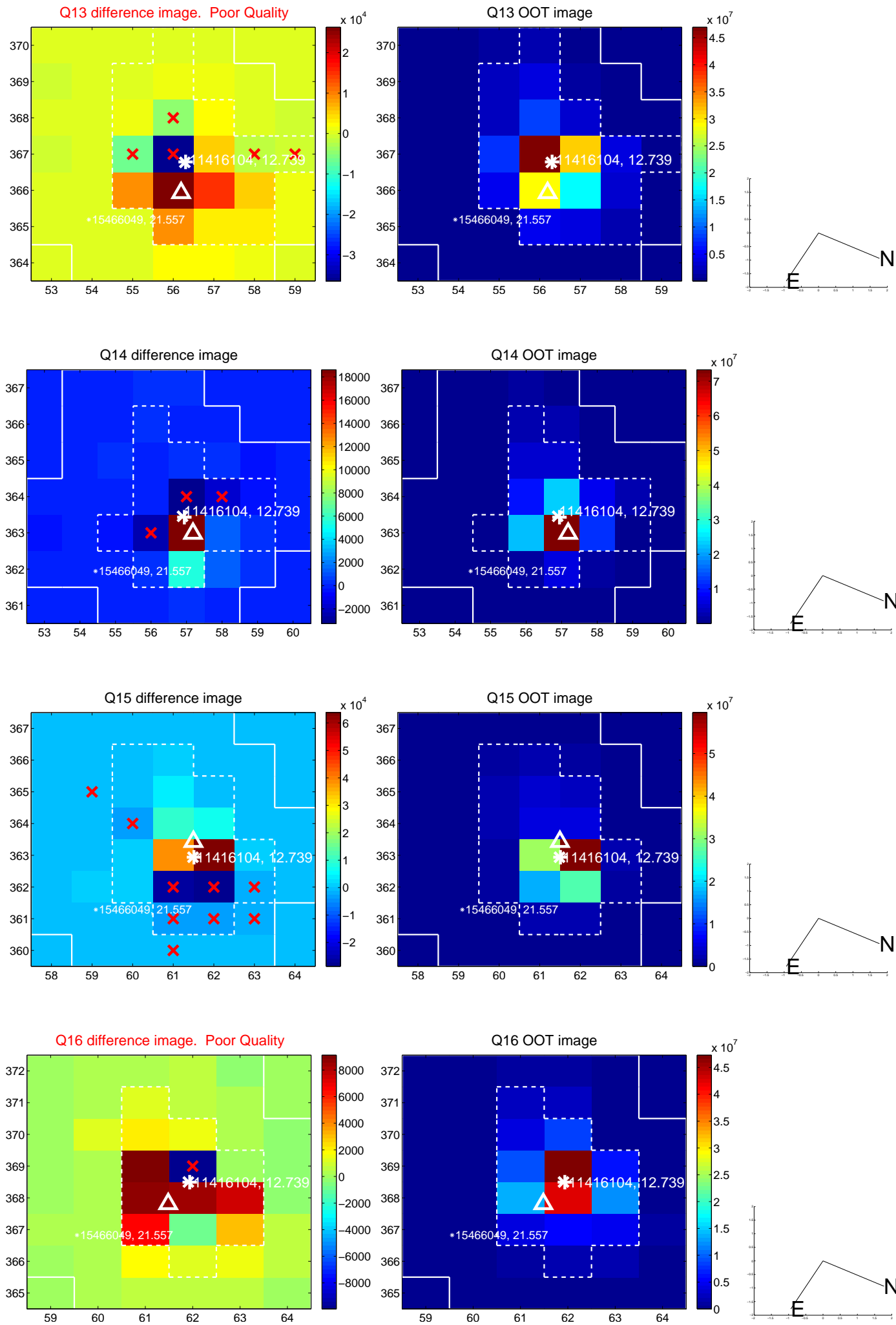
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



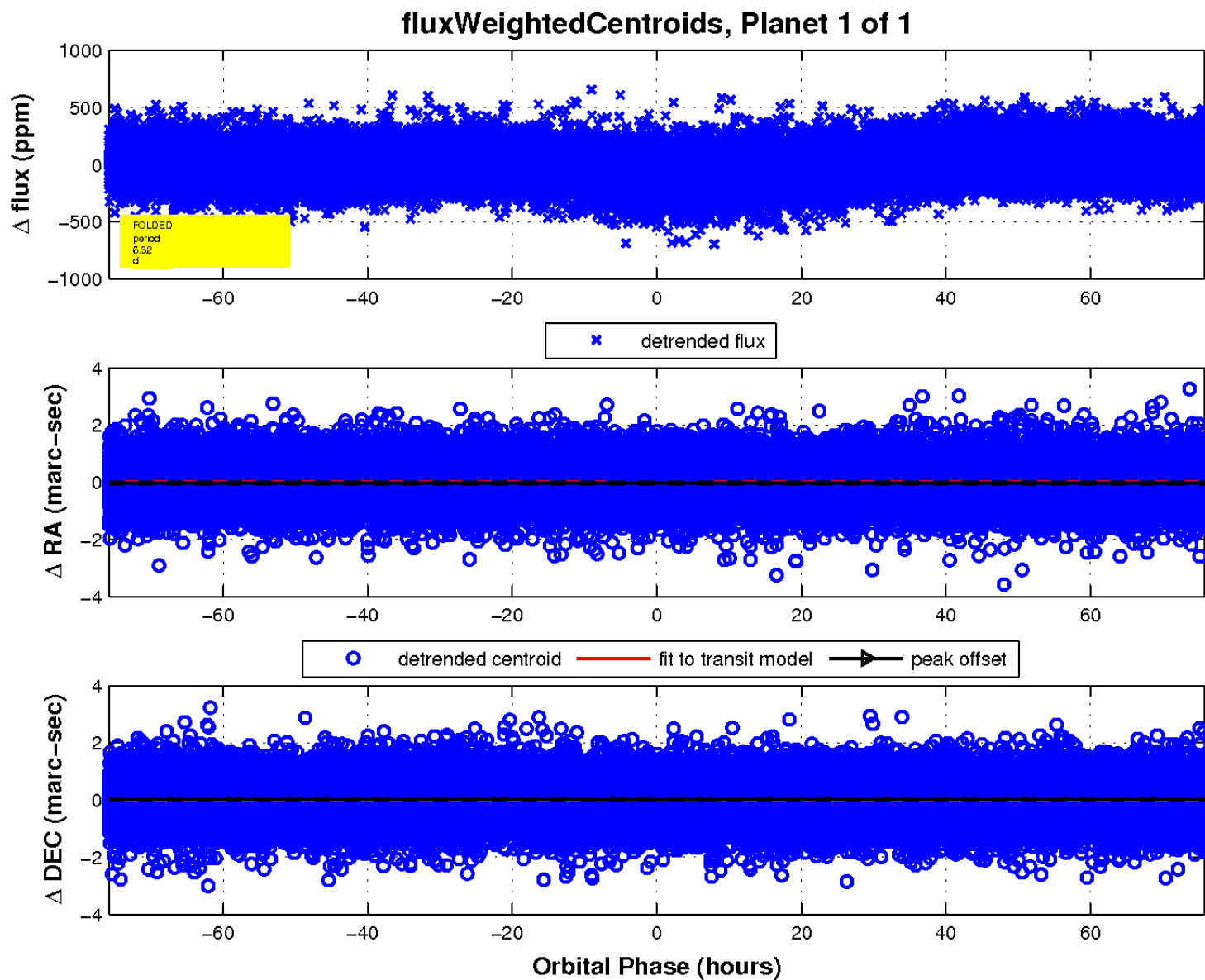
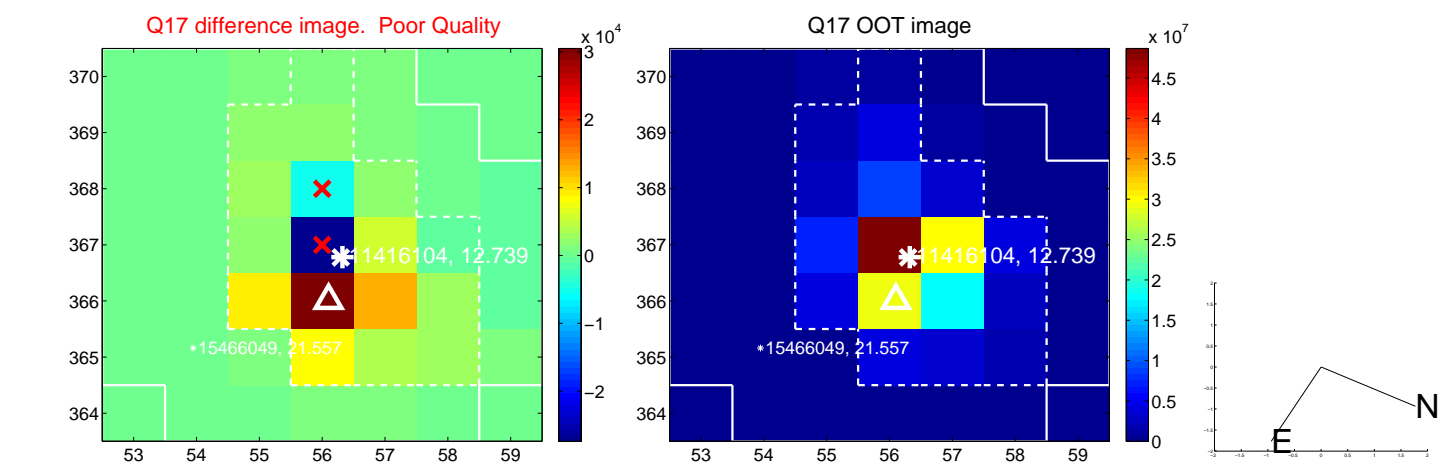
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

