

KIC 009028134

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})
009028134-01	OBS	No	2.247534	133.364743	151.7	24.578	8.9	15.5	1.39	6578	1.72	2721.42

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009028134-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—CENT_UNRESOLVED_OFFSET

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

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

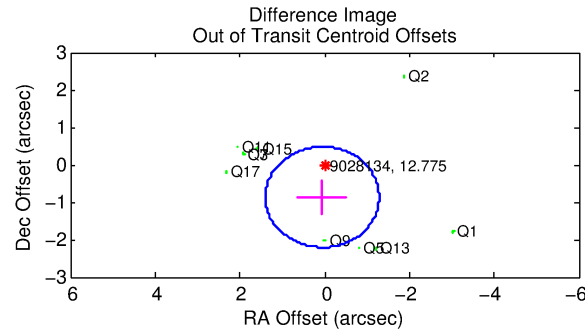
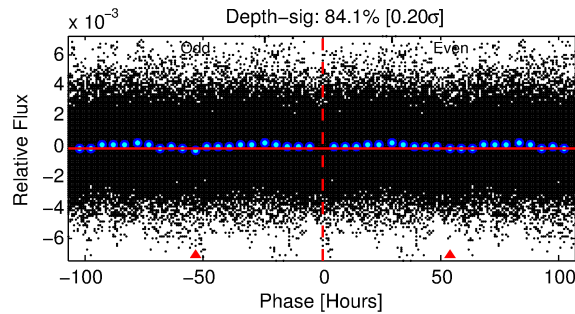
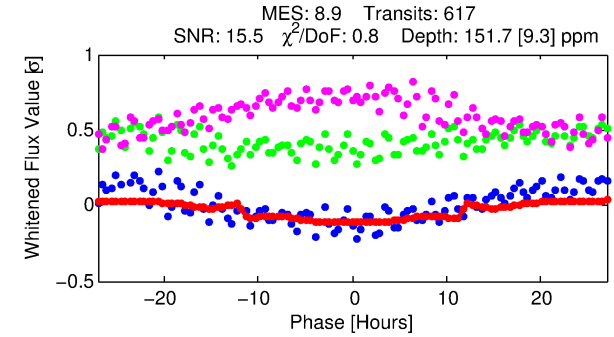
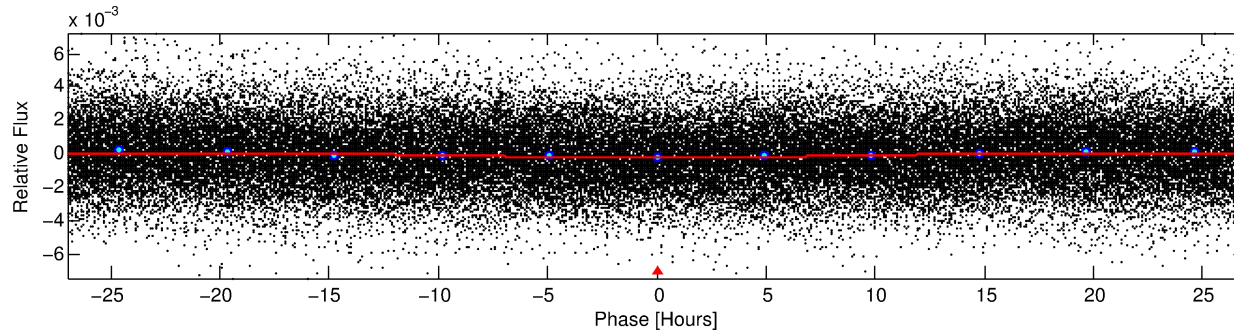
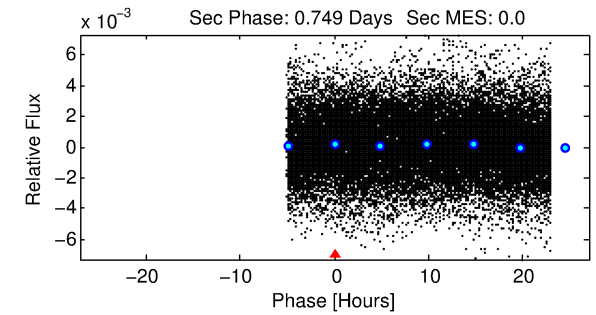
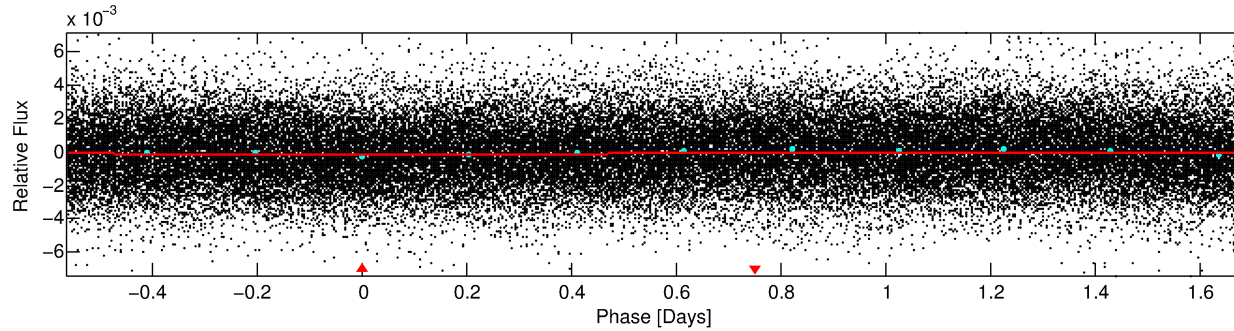
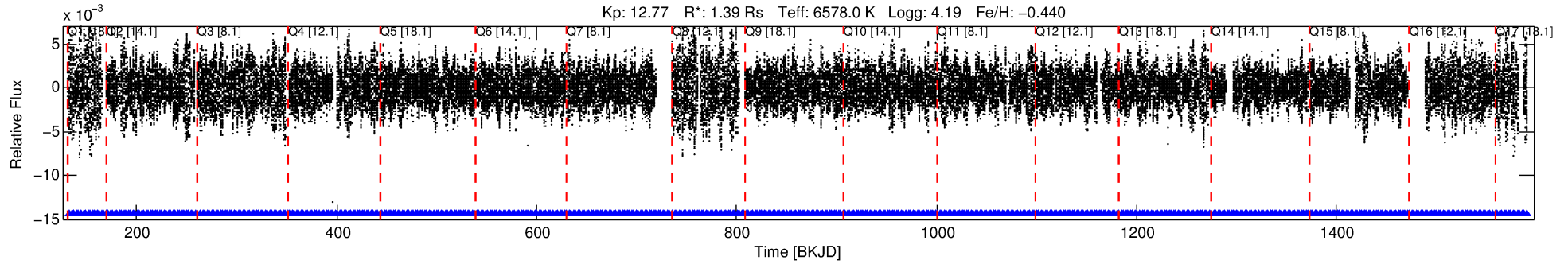
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009028134-01

No Significant Match Found

DV One-Page Summary

KIC: 9028134 Candidate: 1 of 1 Period: 2.248 d



DV Fit Results:

Period = 2.24753 [0.00003] d
Epoch = 133.3647 [0.0080] BKJD
Rp/R* = 0.0114 [0.0009]
a/R* = 1.02 [0.02]
b = 0.01 [43.95]
Seff = 2721.42 [1042.59]
Teq = 1842 [176] K
Rp = 1.72 [0.50] Re
a = 0.0345 [0.0084] AU
Ag = N/A
Teffp = N/A

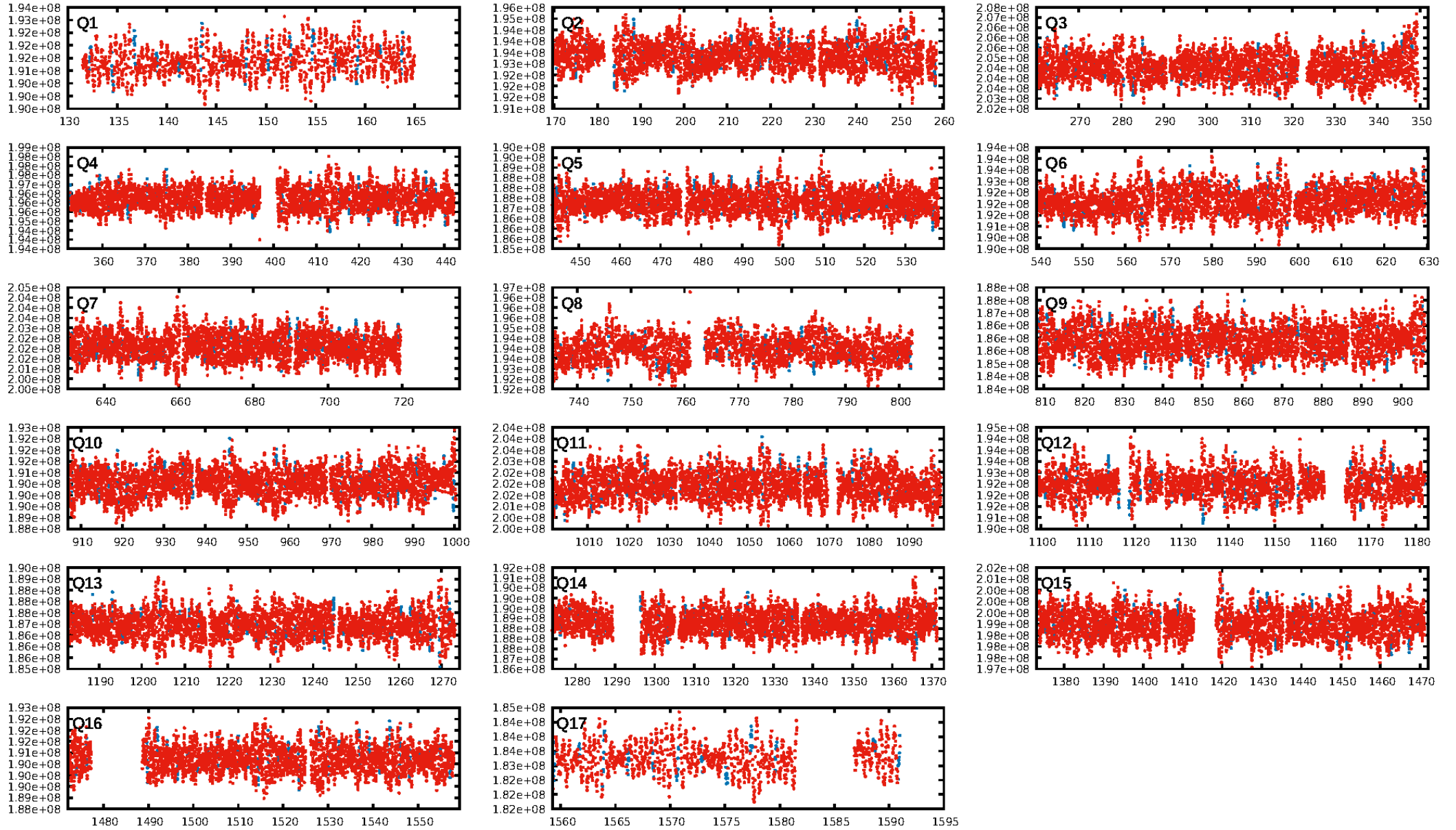
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [589/589]
GhostDiagnostic-chr: 2.116
Centroid-sig: 8.1%
Centroid-so: 0.265 arcsec [4.33σ]
OotOffset-rm: 0.867 arcsec [1.94σ]
KicOffset-rm: 0.953 arcsec [2.02σ]
OotOffset-st: 1/4/0/5 [10]
KicOffset-st: 1/4/0/5 [10]
DiffImageQuality-fgm: 0.50 [5/10]
DiffImageOverlap-fno: 1.00 [17/17]

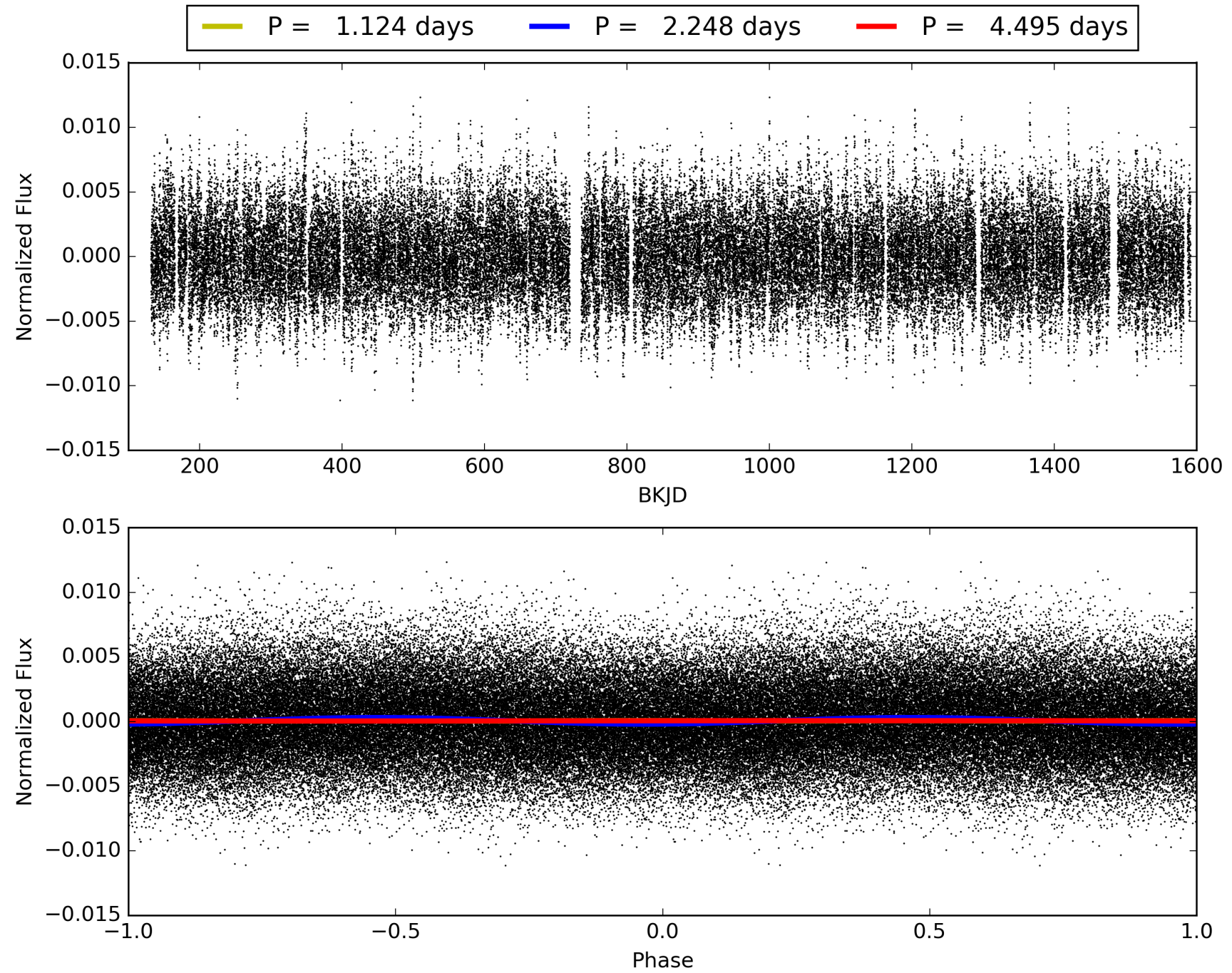
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 05:38:17 Z

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

TCE 009028134-01, PDC Light Curves

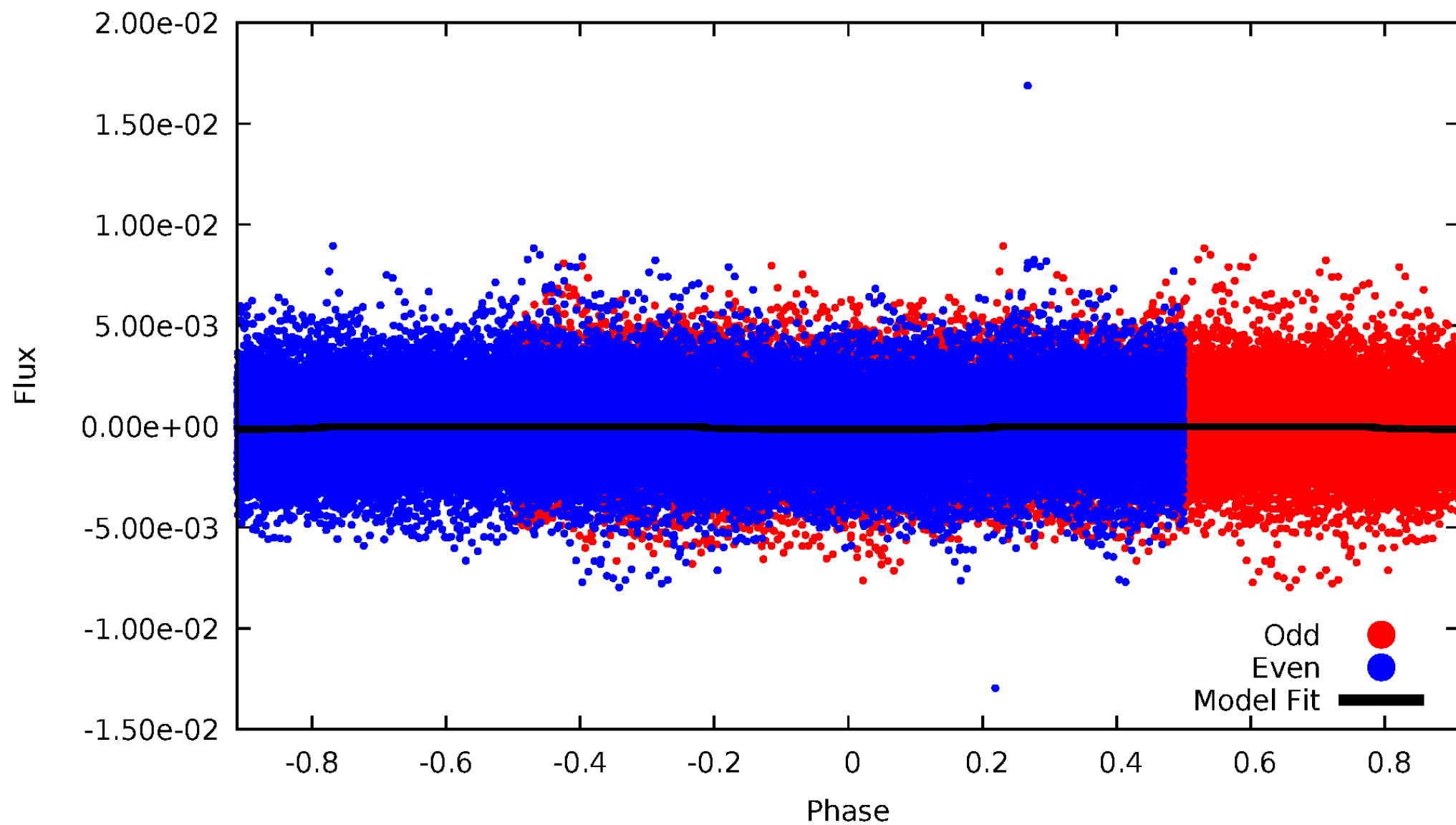


TCE 009028134-01



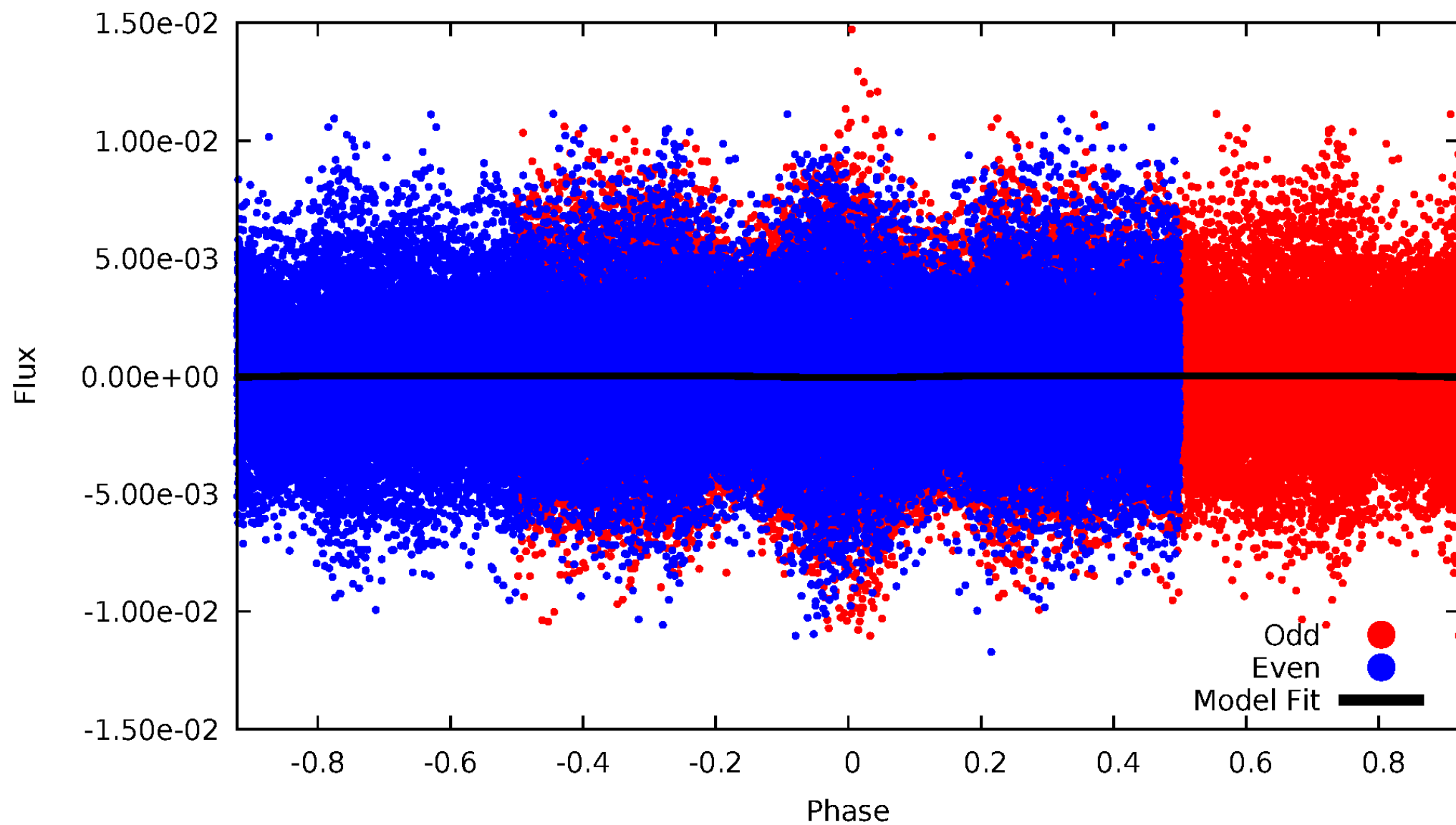
DV Odd/Even

TCE 009028134-01

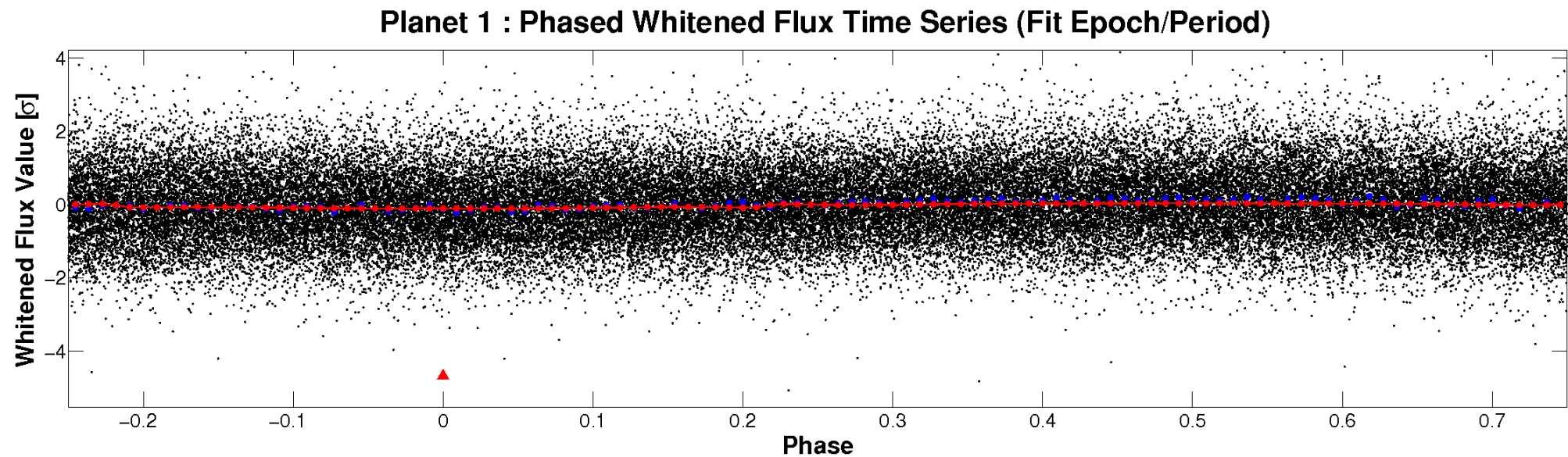
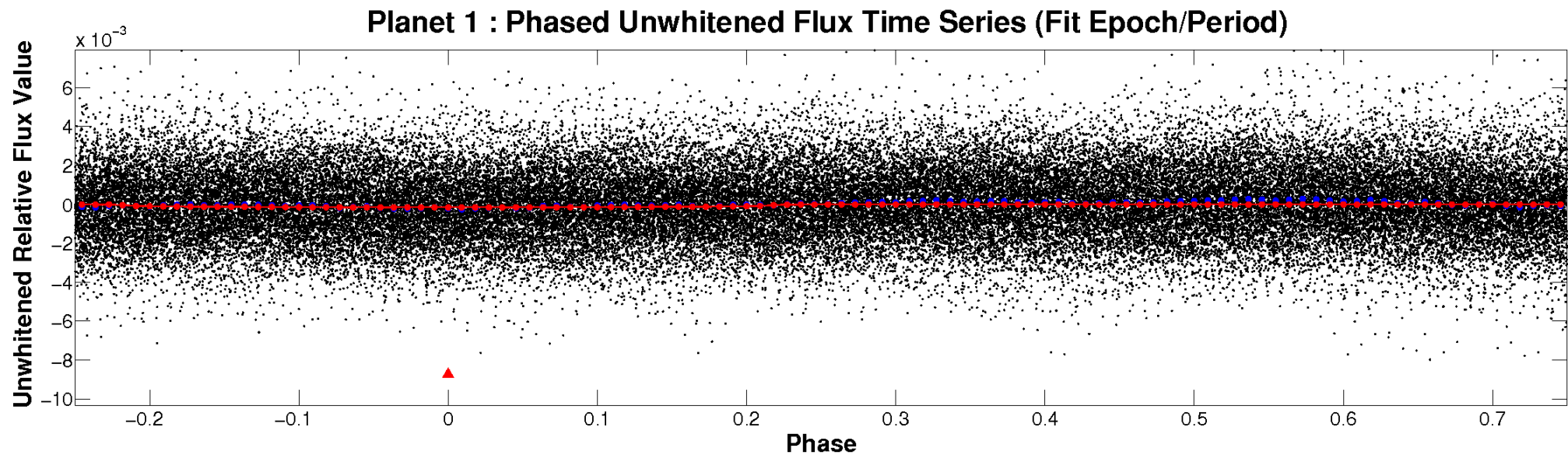


ALT Odd/Even

TCE 009028134-01

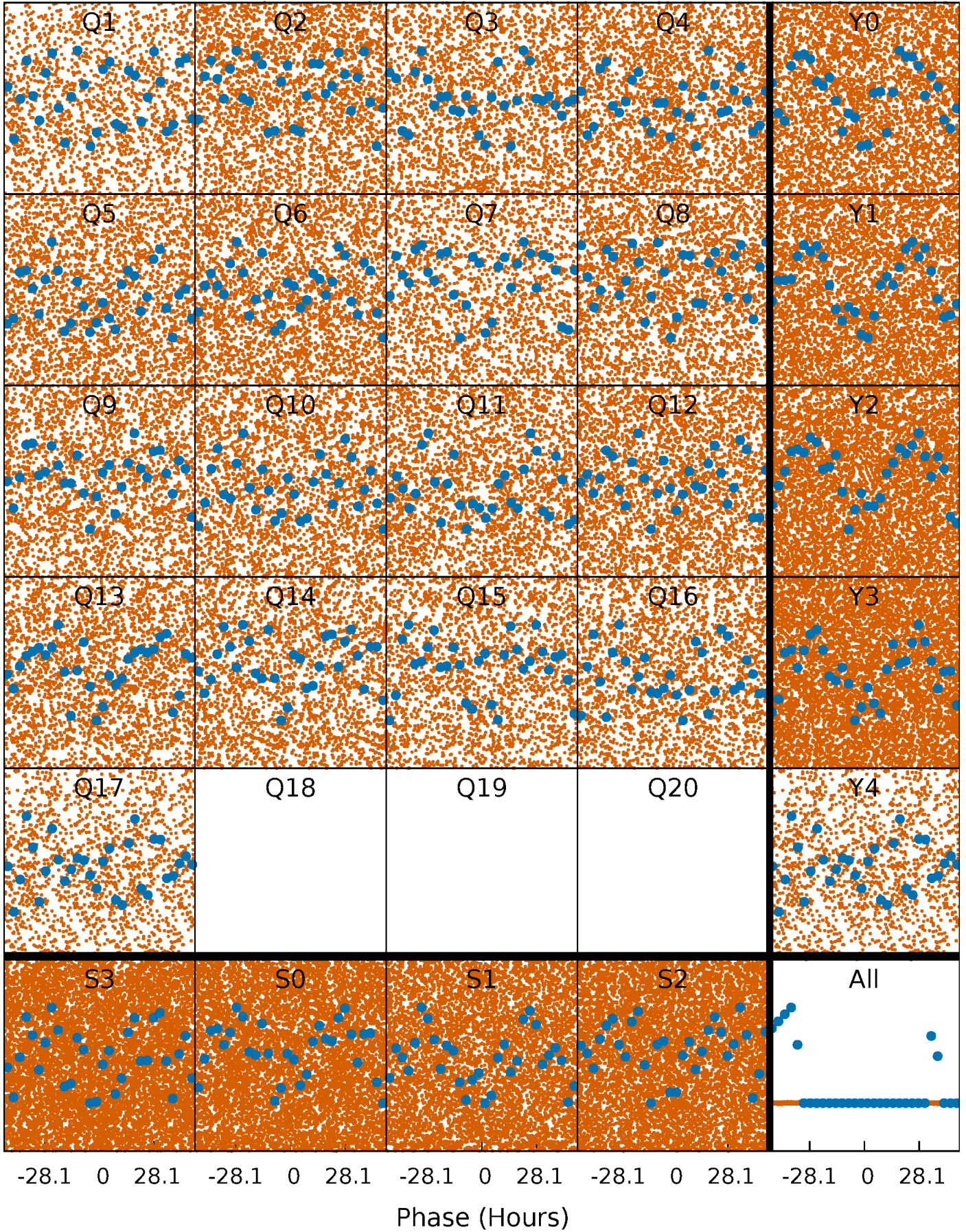


Non-Whitened Vs. Whitened Light Curve



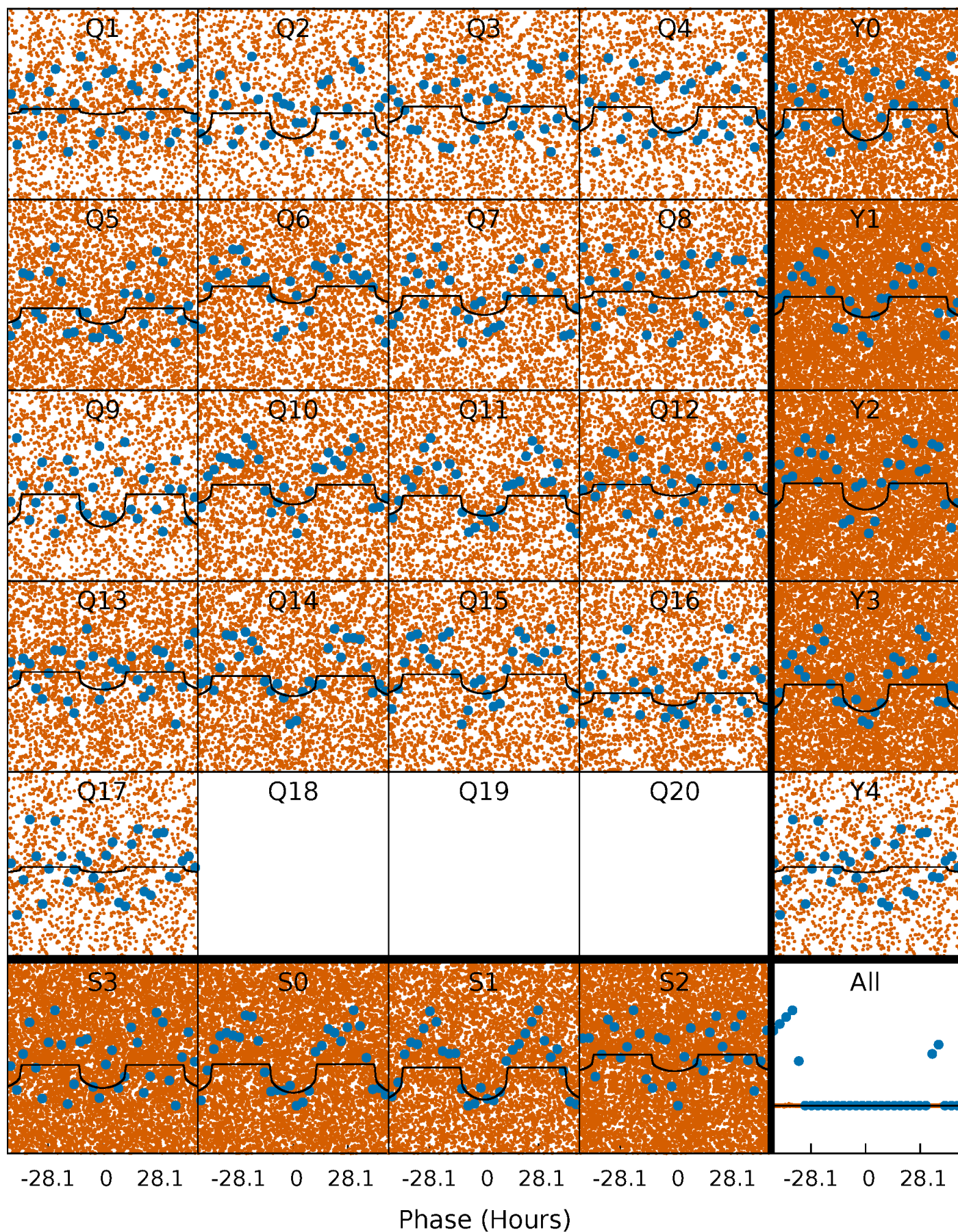
PDC Quarter-Phased Transit Curves

TCE 009028134-01 P= 2.247534 Days $T_0=133.364743$ (BKJD)



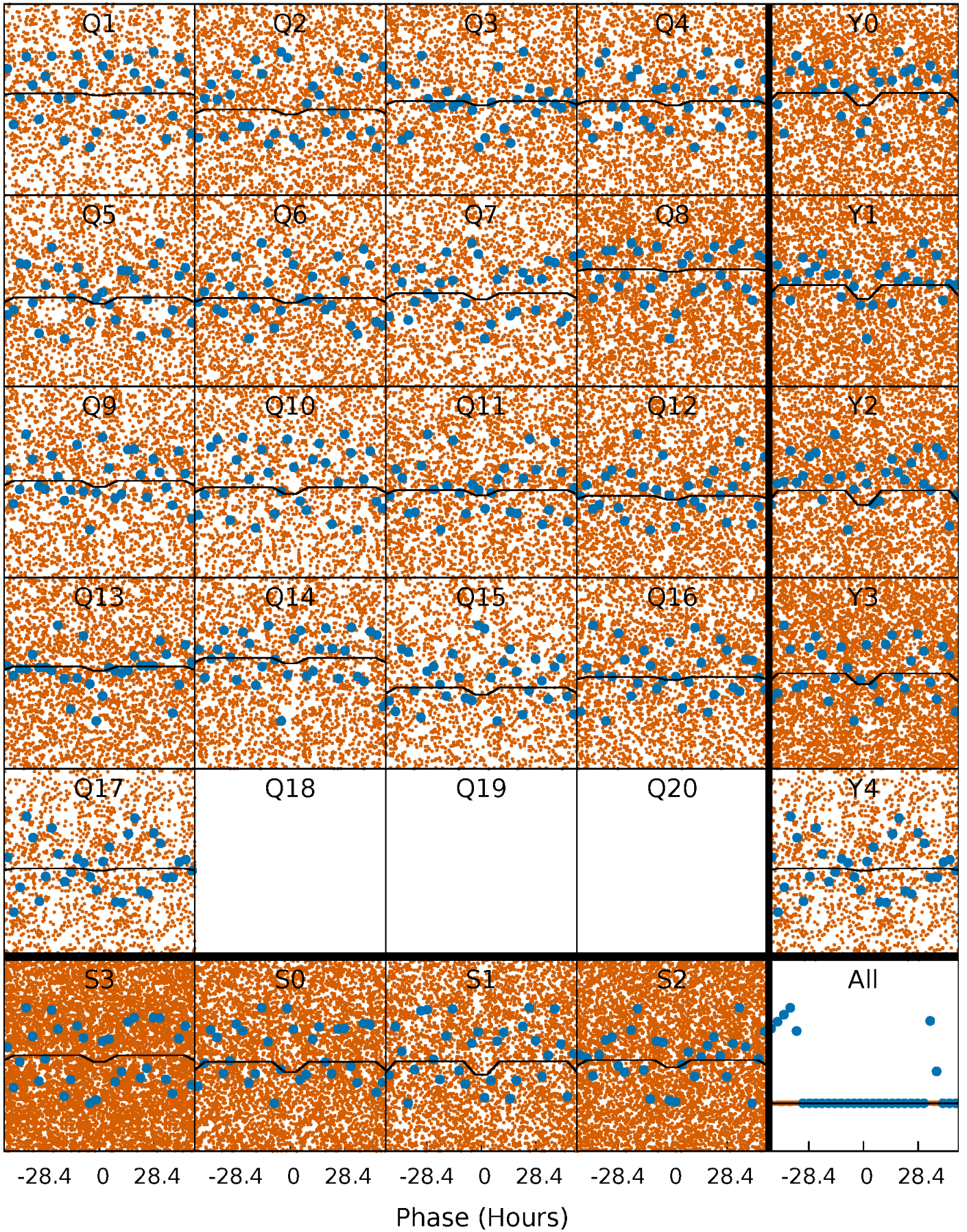
DV Quarter-Phased Transit Curves

TCE 009028134-01 P= 2.247534 Days $T_0=133.364743$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

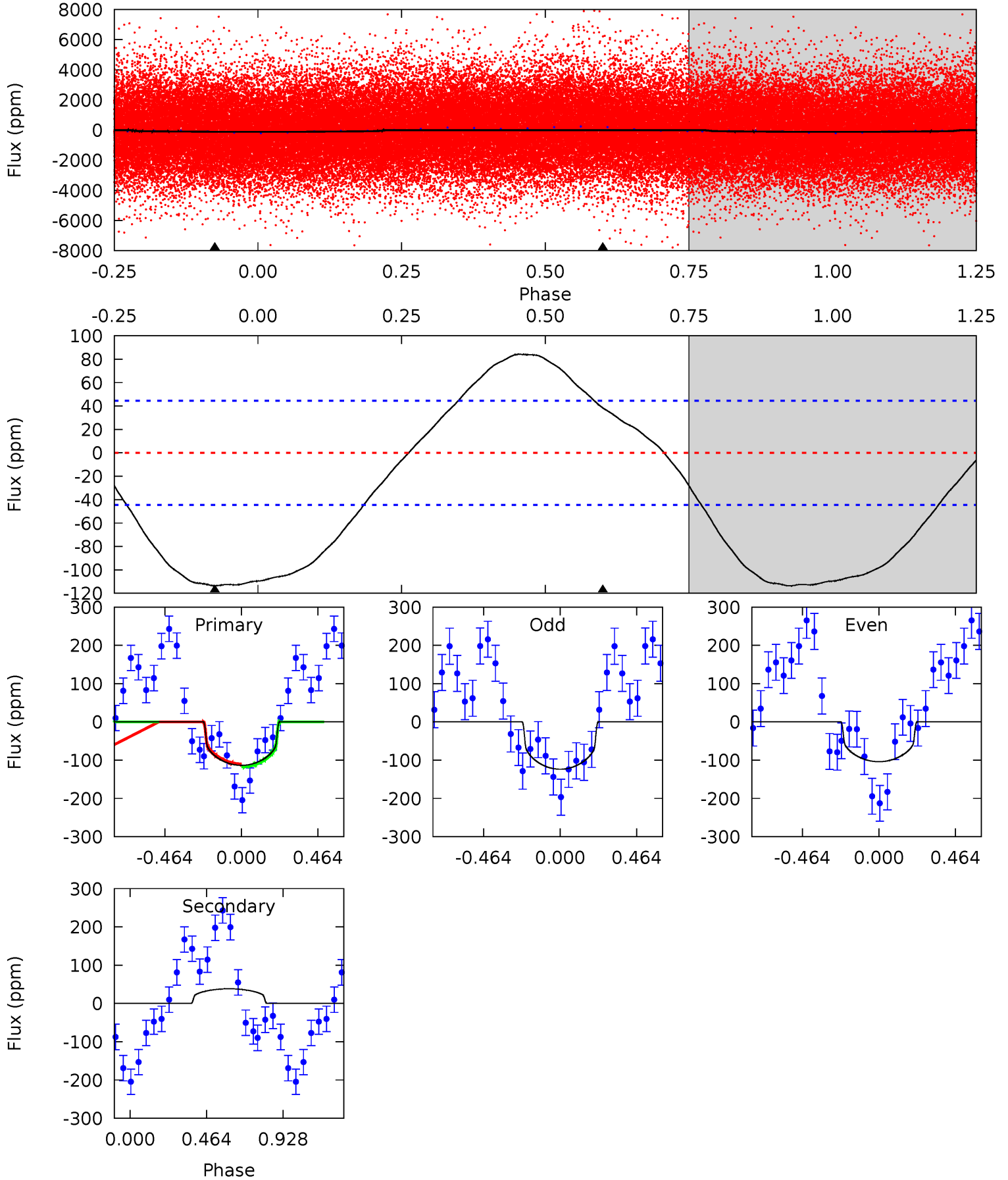
TCE 009028134-01 P= 2.247521 Days $T_0=133.374557$ (BKJD)



DV Model-Shift Uniqueness Test

009028134-01, P = 2.247534 Days, E = 131.117209 Days

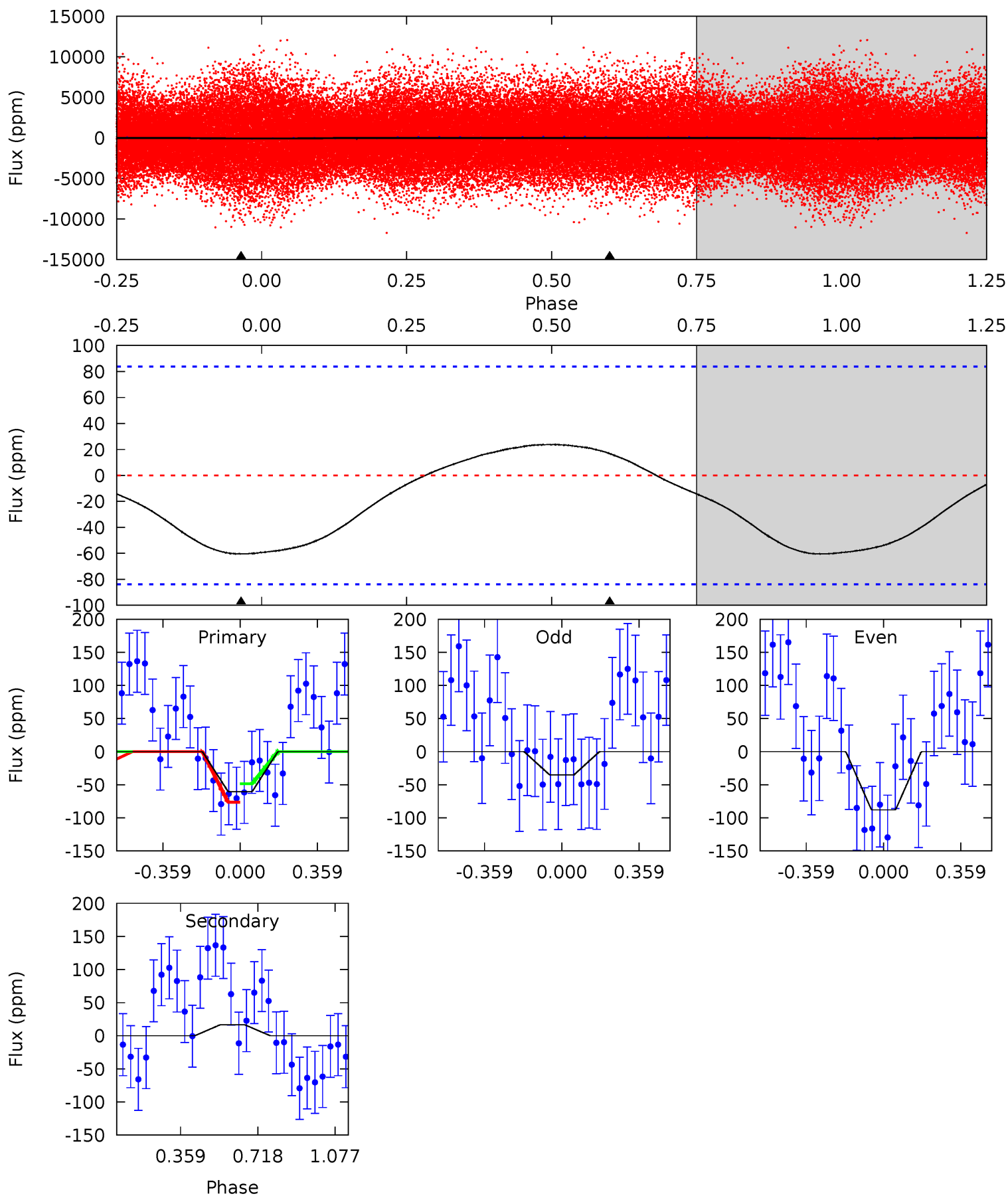
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.8	-3.65	0	0	4.23	0.73	1.53	10.8	10.8	-3.65	-3.65	0.93	0.99	0.43	0.34



Alt Model-Shift Uniqueness Test

009028134-01, P = 2.247521 Days, E = 131.127036 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.09	-0.86	0	0	4.29	0.92	0.30	3.09	3.09	-0.86	-0.86	1.39	-0.14	0.28	0.69



Stellar Parameters For KIC 009028134

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6578^{+163}_{-196}	$4.187^{+0.204}_{-0.167}$	$-0.440^{+0.250}_{-0.300}$	$1.389^{+0.387}_{-0.317}$	$1.080^{+0.175}_{-0.131}$	$0.568^{+0.565}_{-0.266}$
	+2%/-3%	+5%/-4%	+57%/-68%	+28%/-23%	+16%/-12%	+99%/-47%
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 009028134-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	38 ± 11	$1.71^{+0.29}_{-0.27}$	2556^{+191}_{-173}	-4951^{+356}_{-349}	$-8.317^{+3.004}_{-4.332}$
Alt.	17 ± 20	$1.16^{+0.24}_{-0.18}$	2555^{+192}_{-154}	-4860^{+8338}_{-970}	$-7.320^{+8.827}_{-10.769}$

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

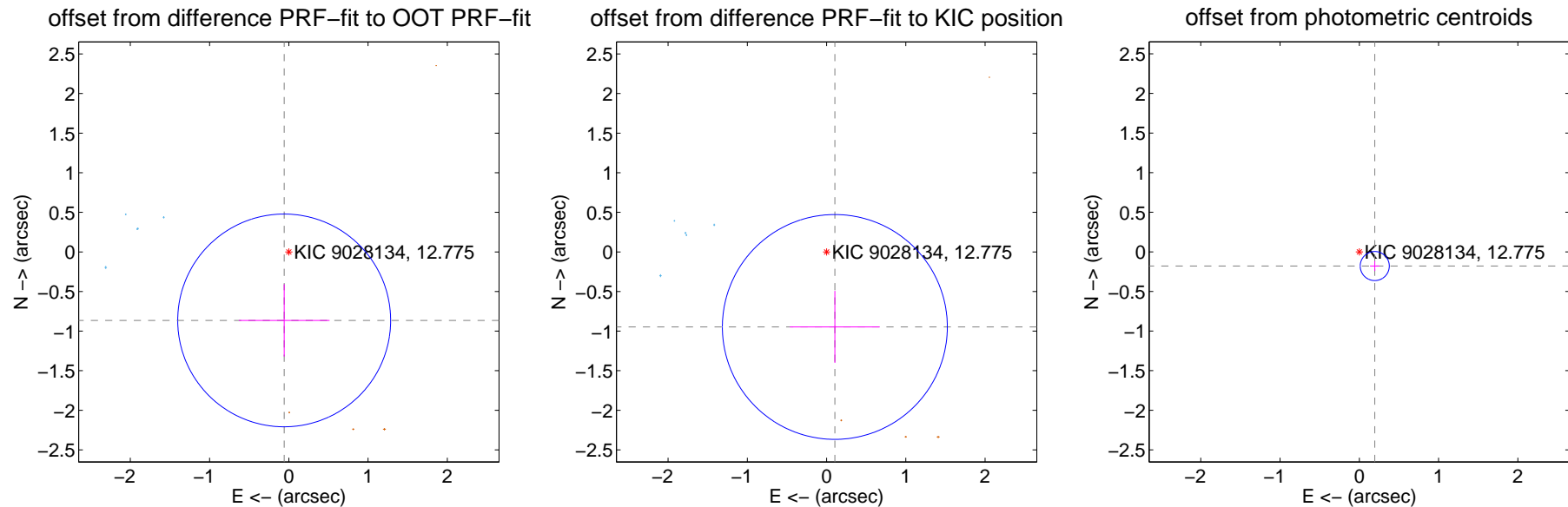
DV Centroid Data

Supplemental centroid analysis for 009028134-01. Kepler magnitude: 12.78. Transit SNR 15.50

There are 5 quarters with good PRF difference image offsets

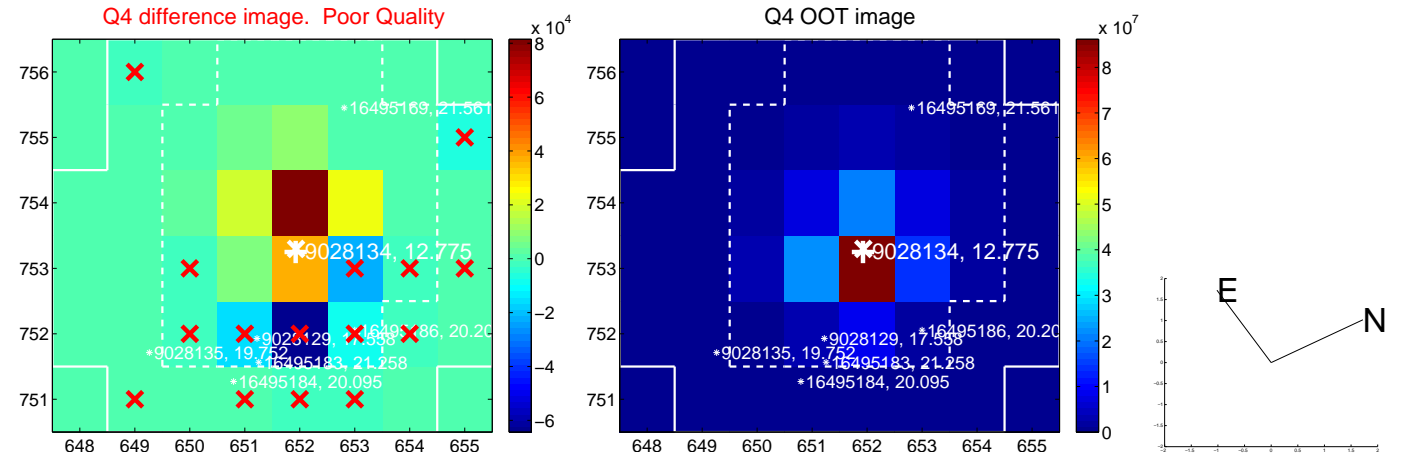
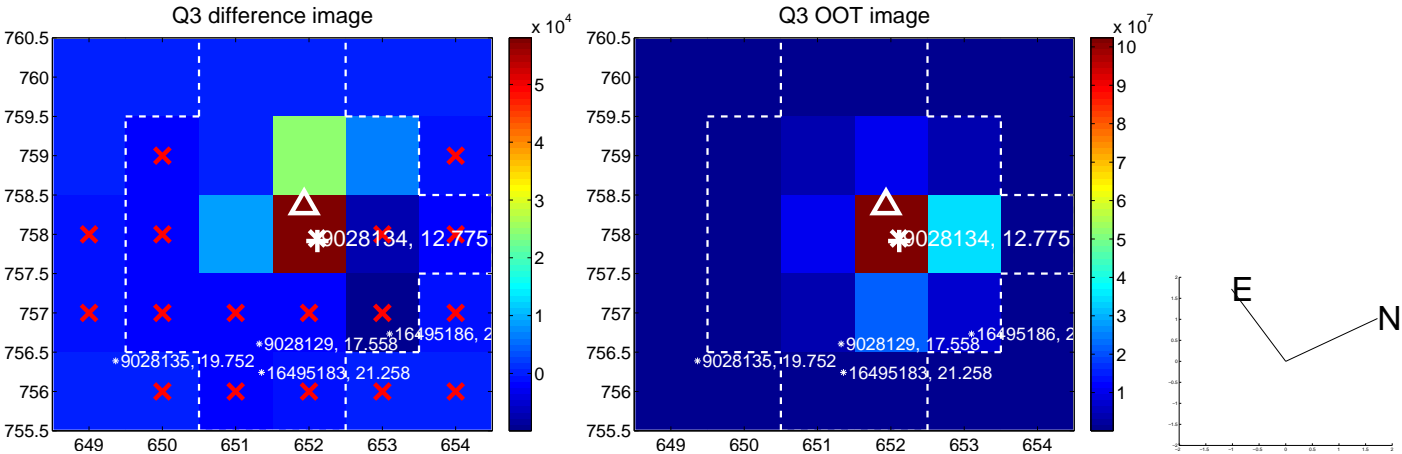
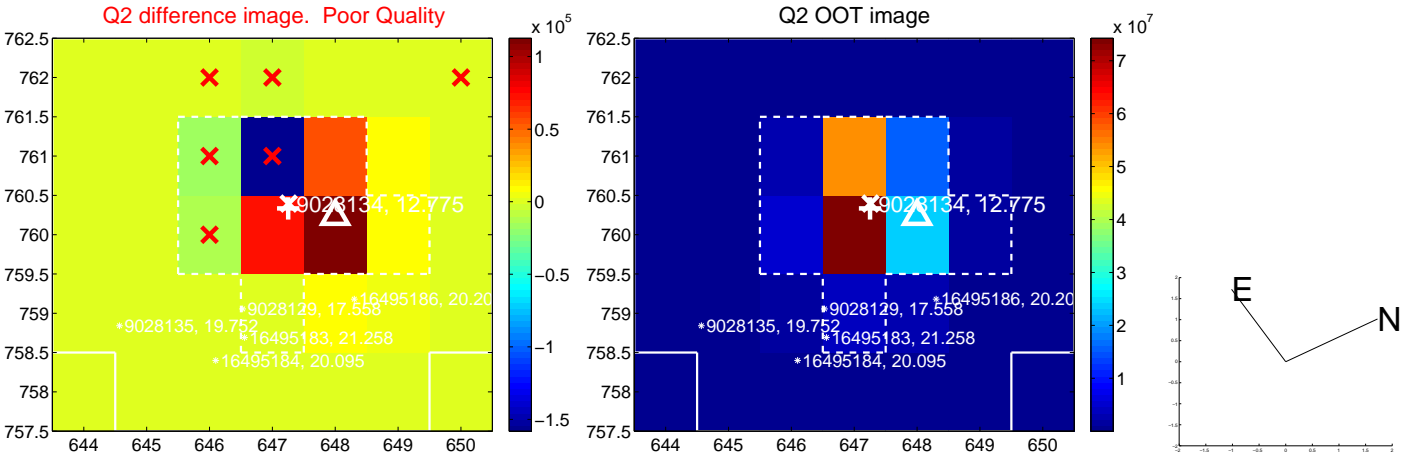
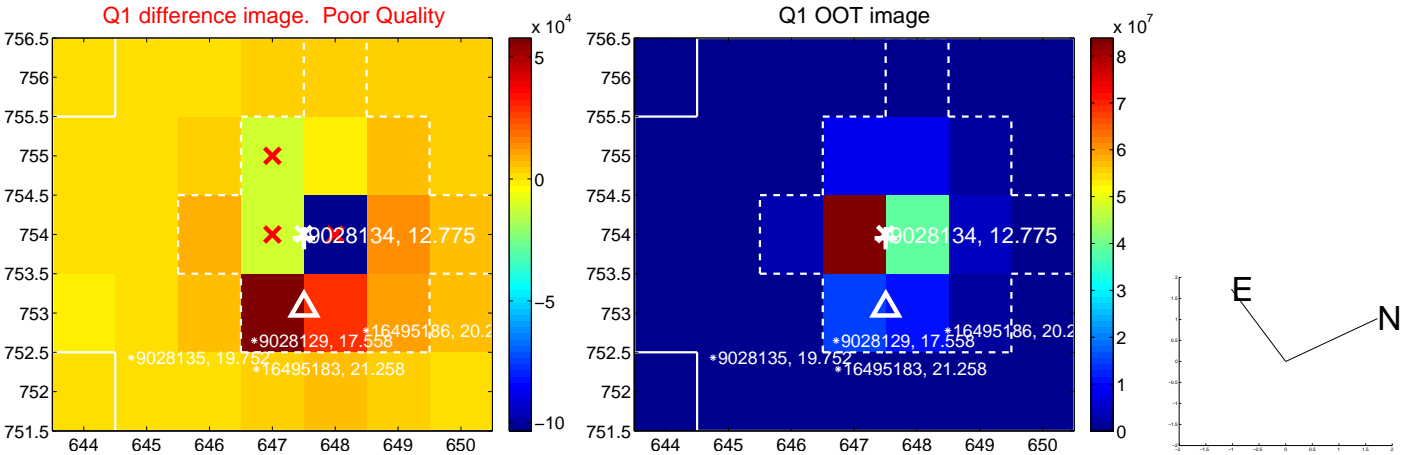
The direct PRF centroid is offset from the target star catalog position by about 0.24 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.867 ± 0.448	1.94	0.059 ± 0.572	-0.865 ± 0.456
PRF-fit source offset from KIC position	0.953 ± 0.473	2.02	-0.105 ± 0.567	-0.948 ± 0.455
photometric centroid source offset	0.26 ± 0.06	4.33	-0.19 ± 0.06	-0.18 ± 0.06

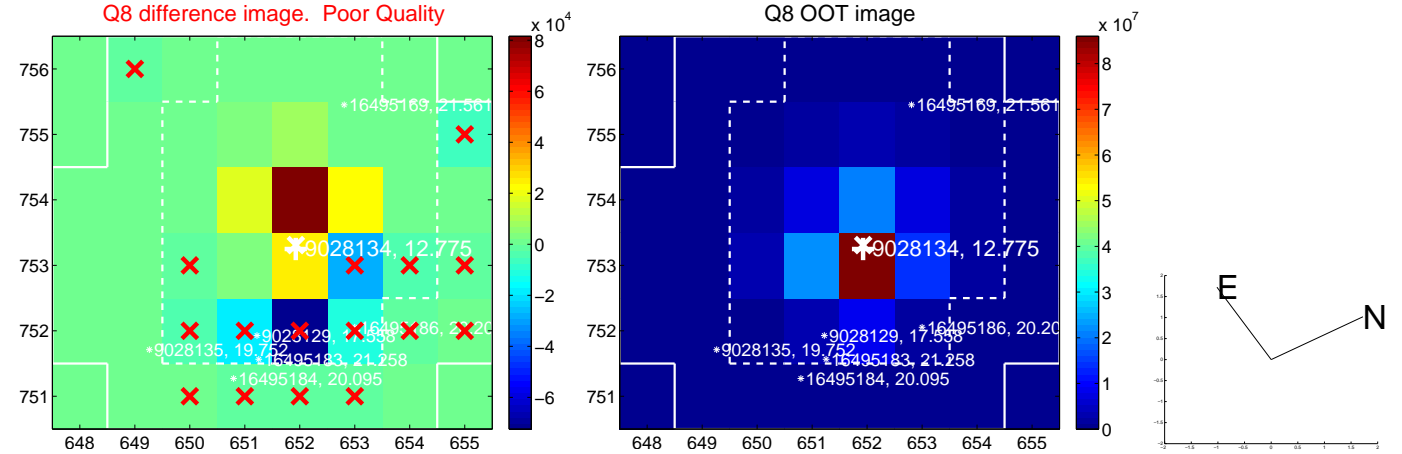
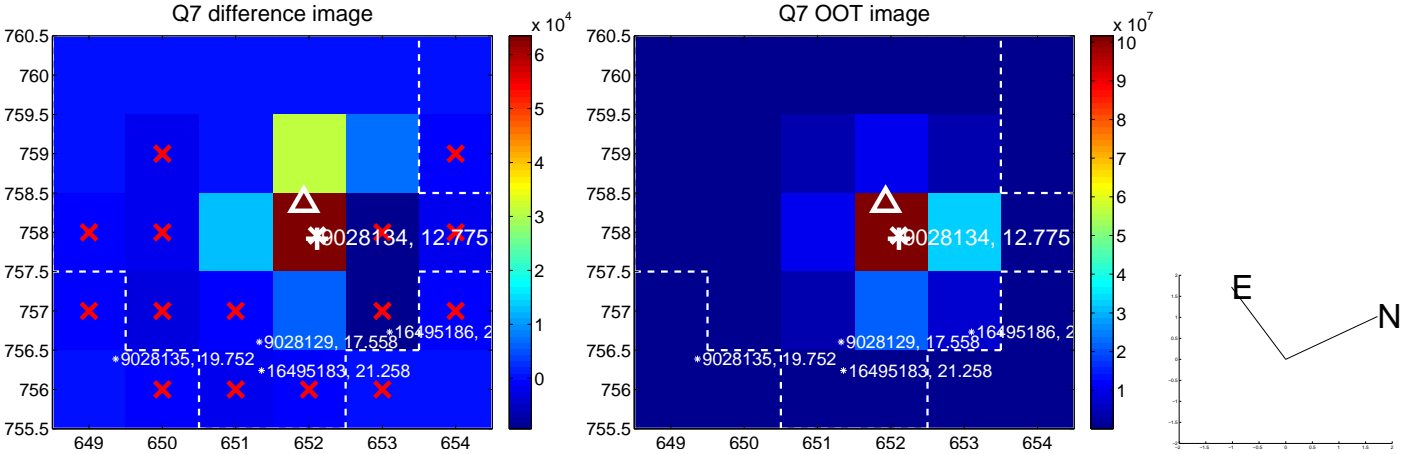
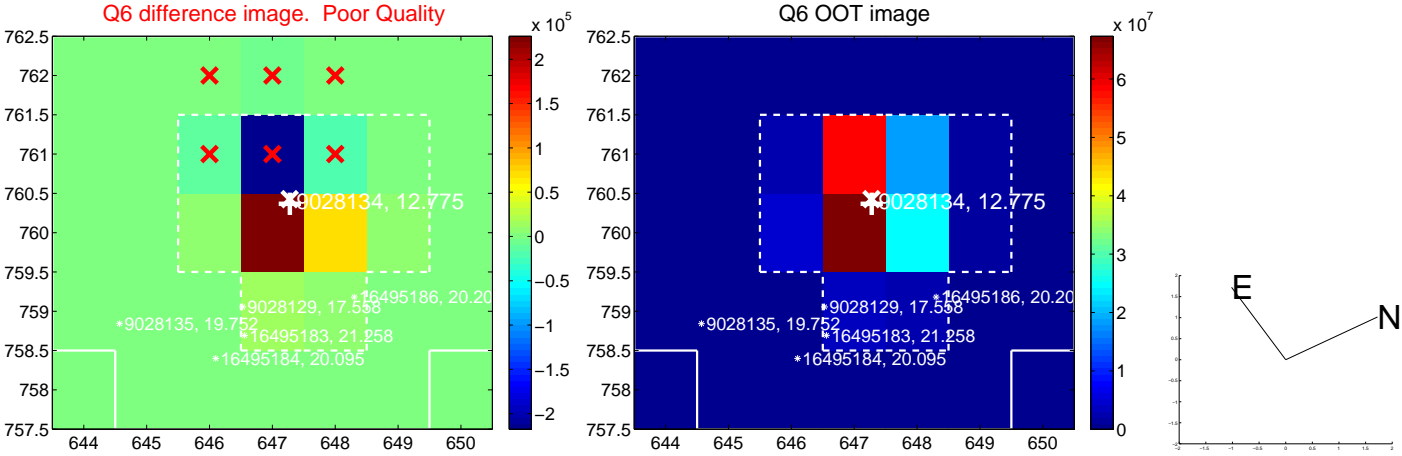
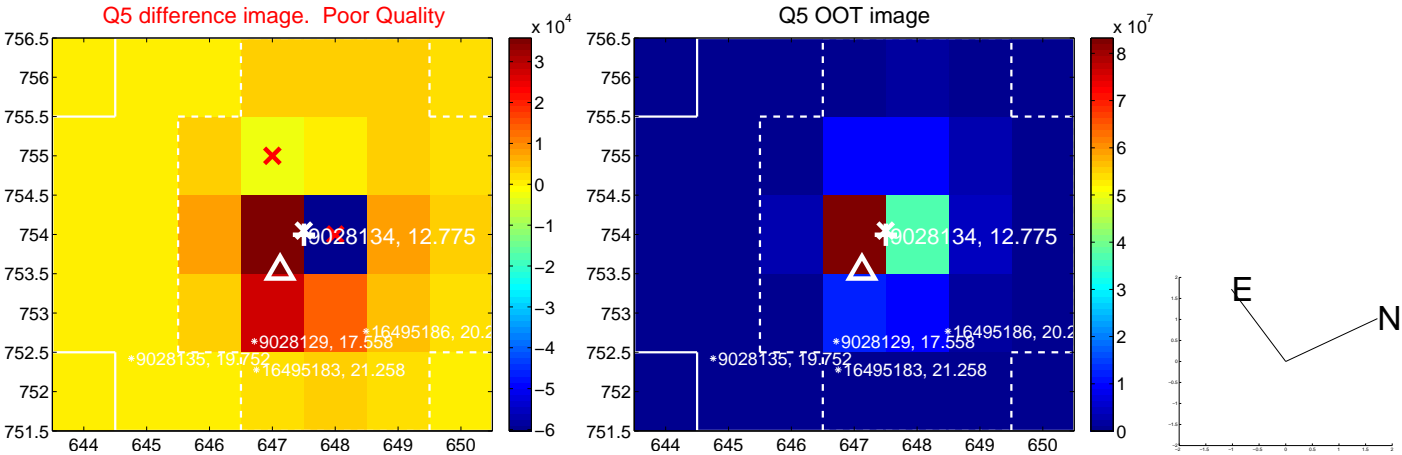


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

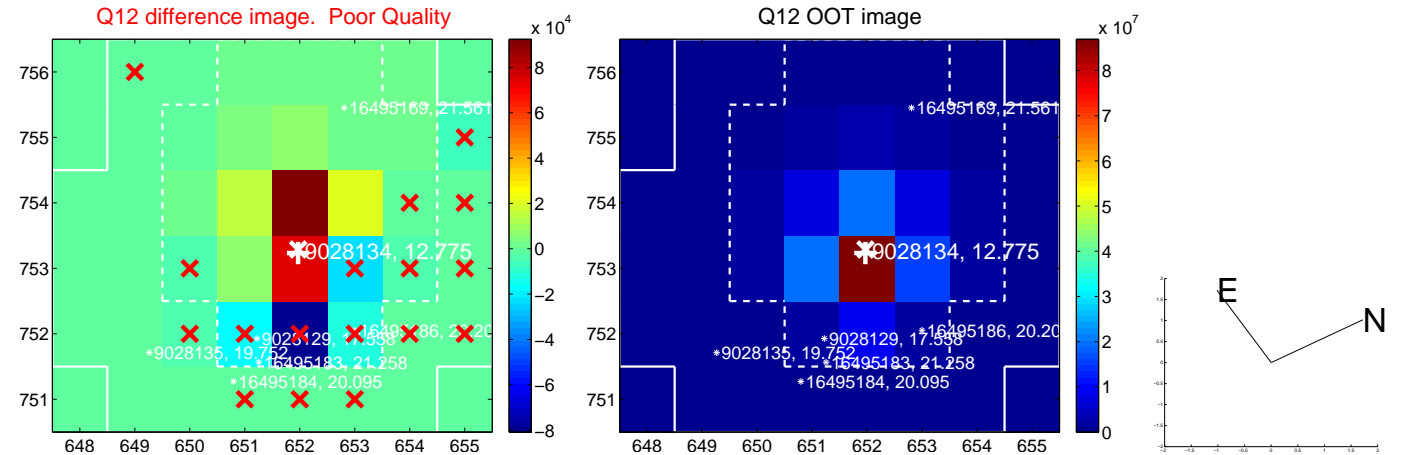
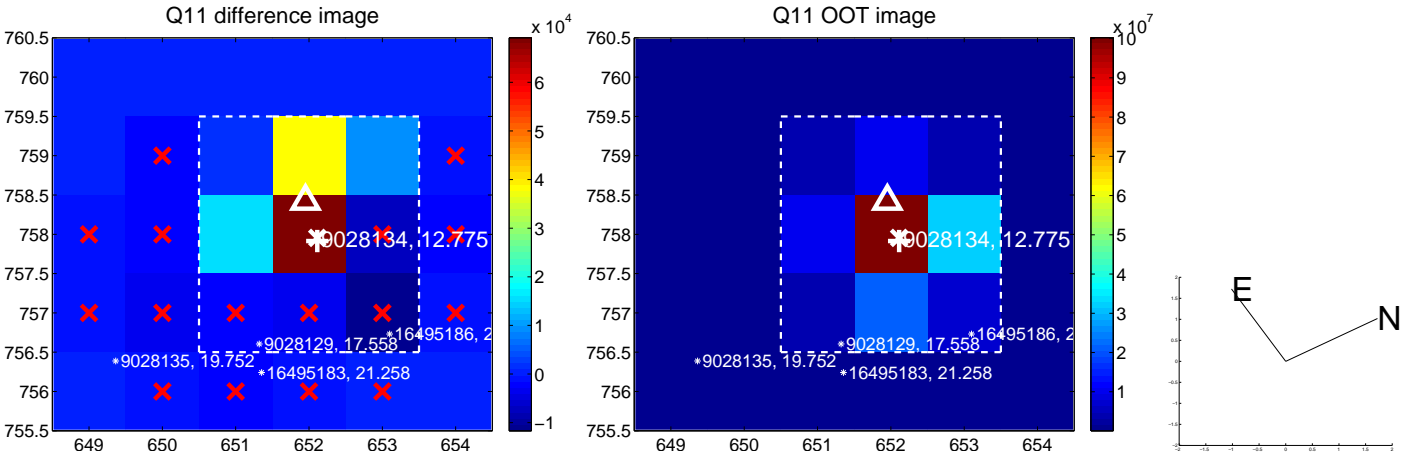
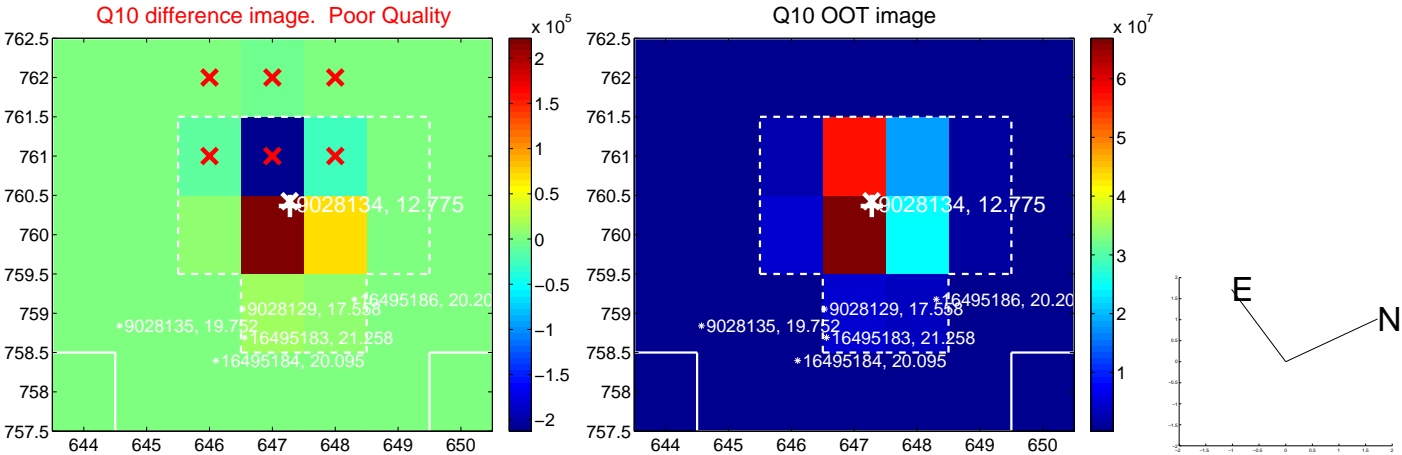
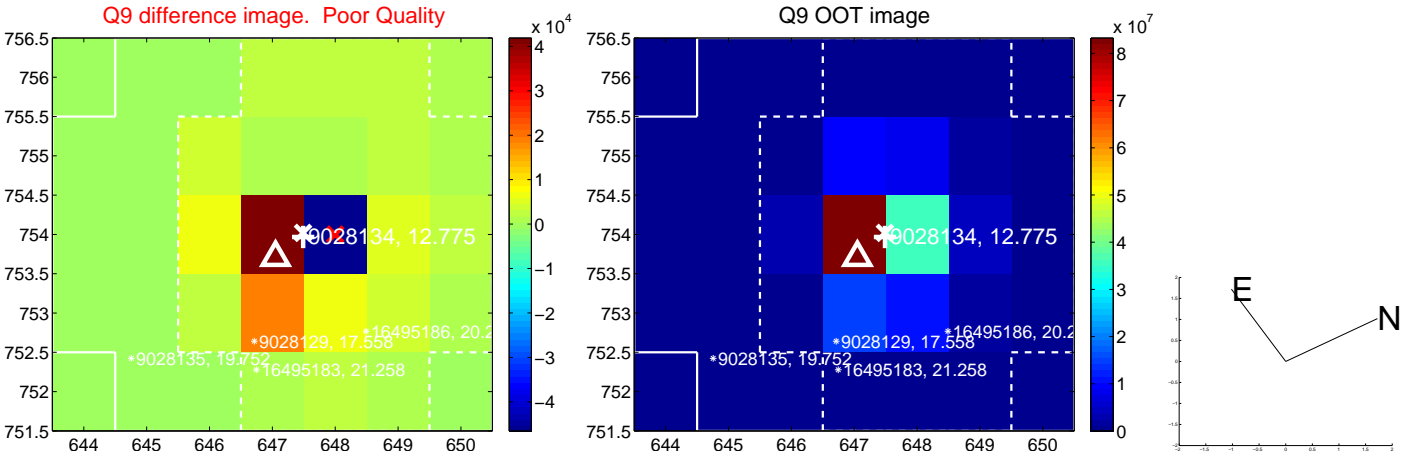
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



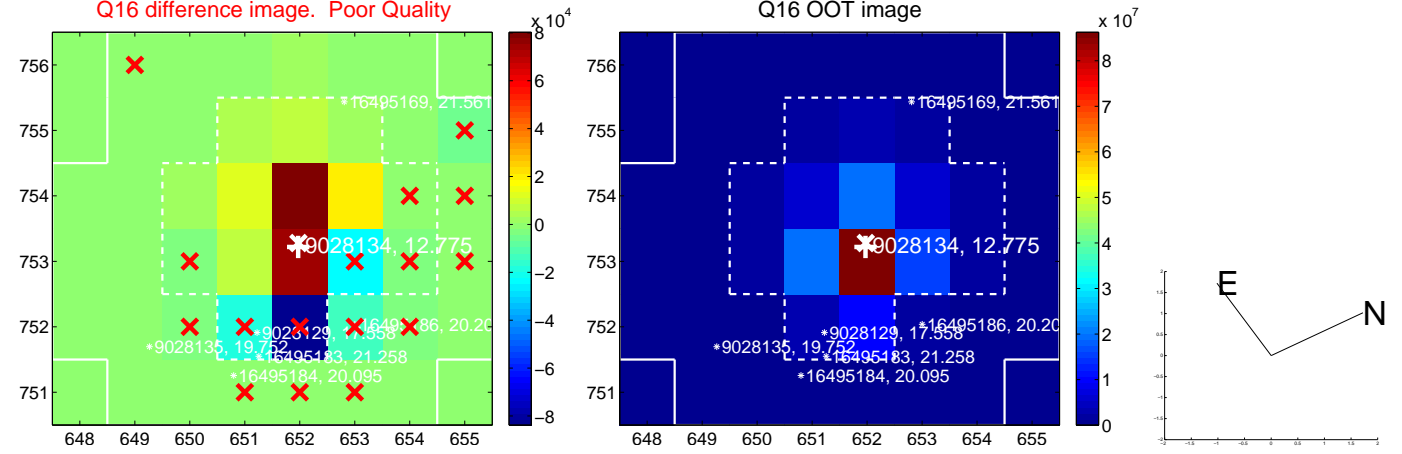
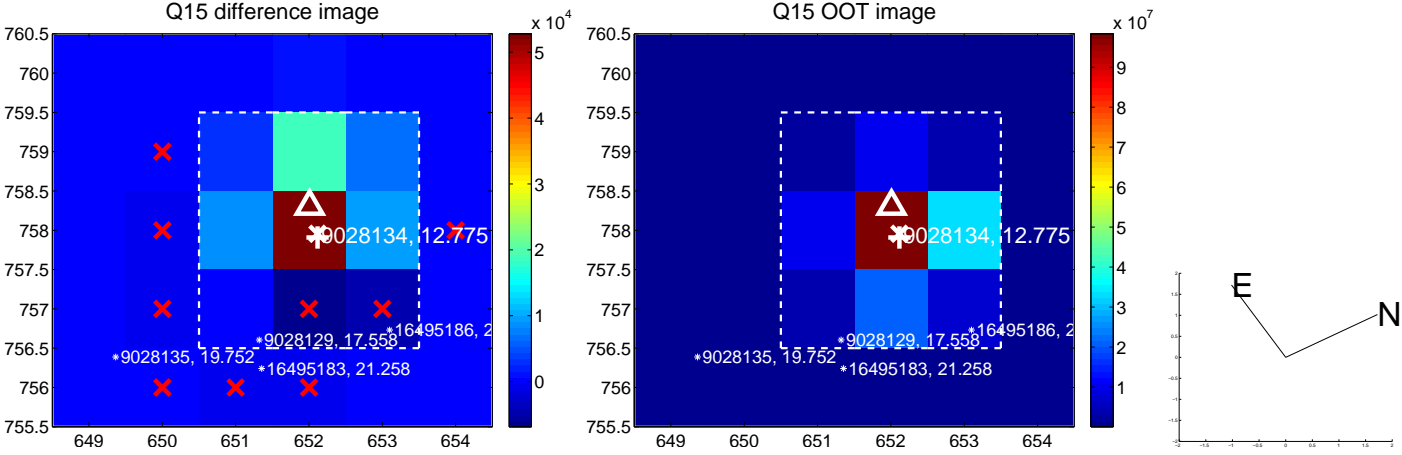
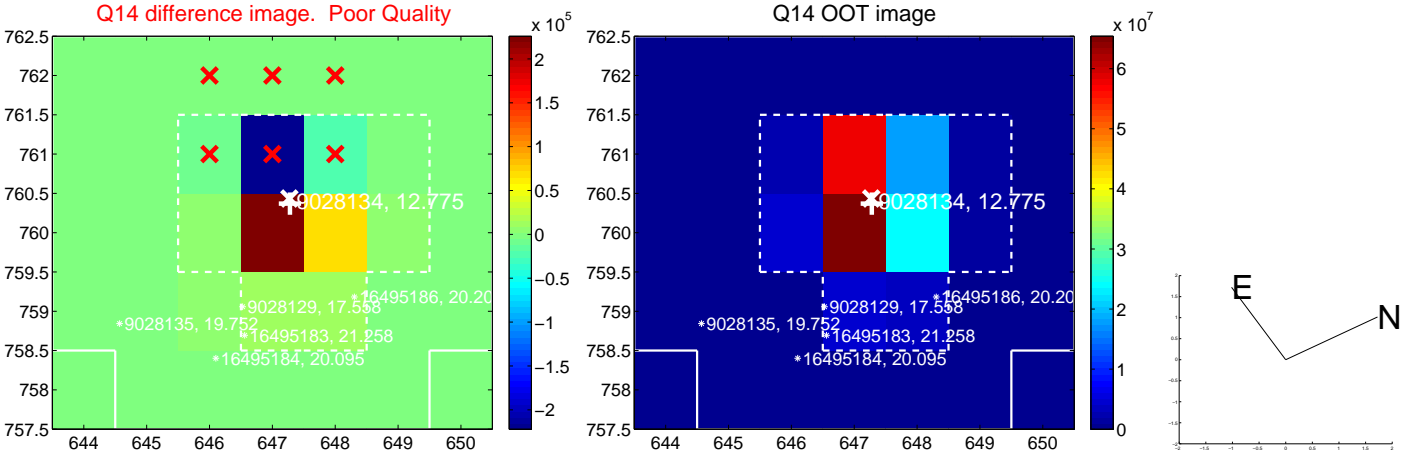
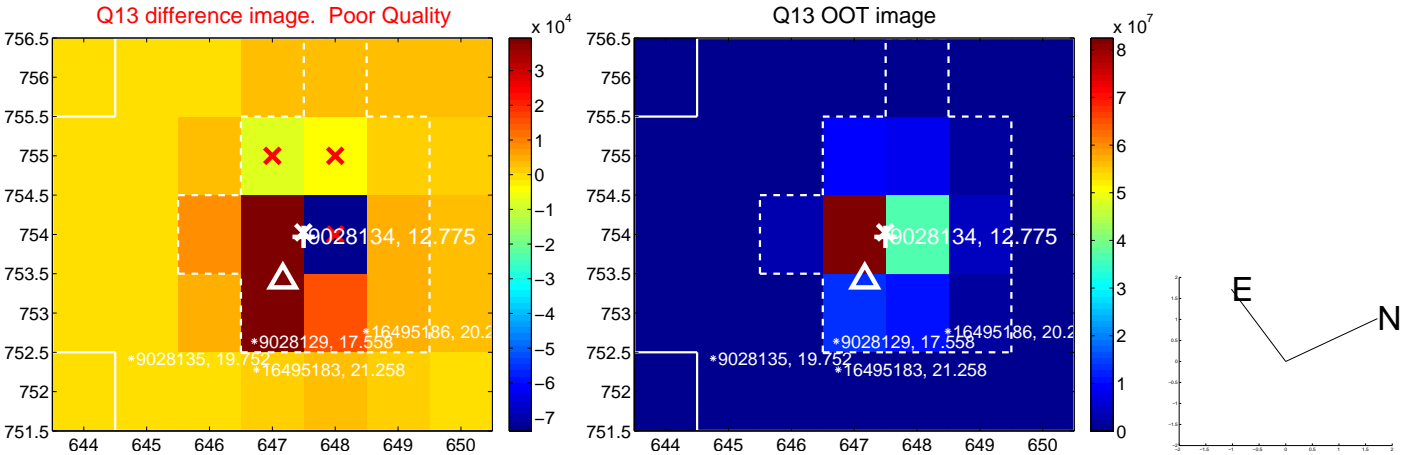
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



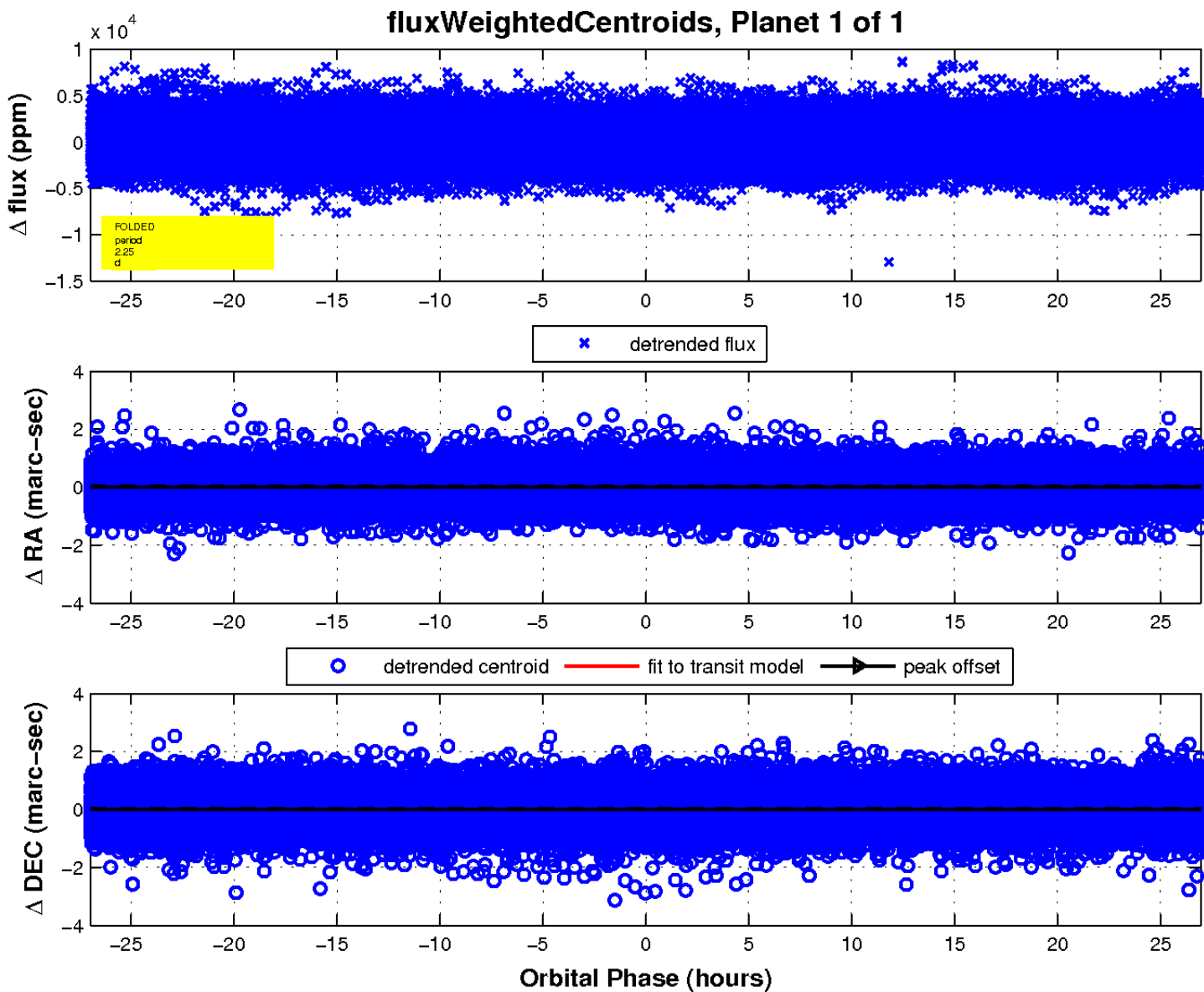
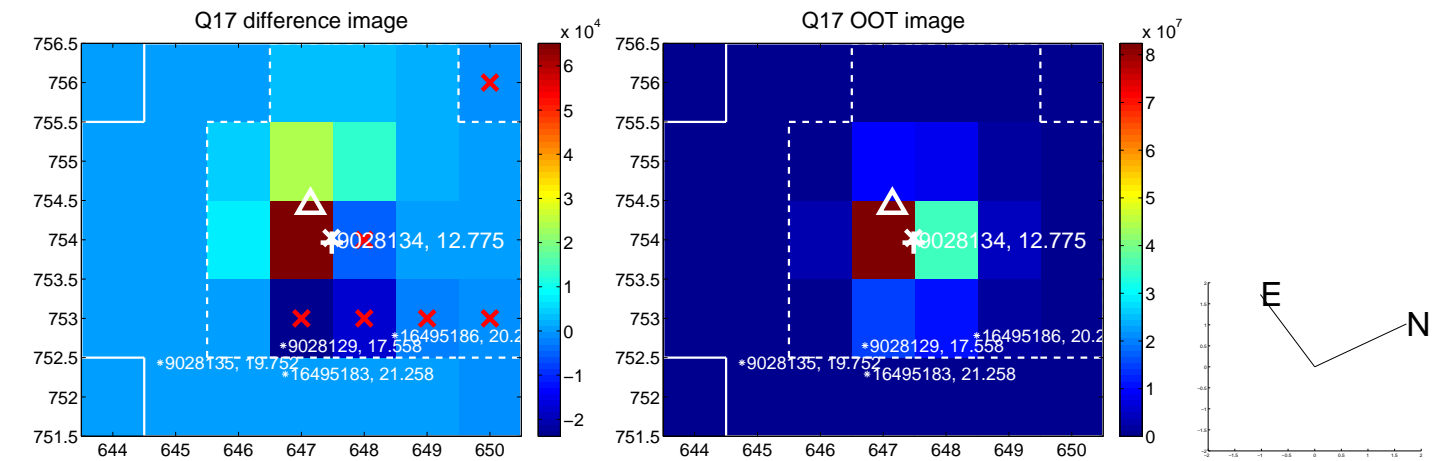
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UKIRT Image

Declination

