

KIC 006356928

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})
006356928-01	OBS	No	0.529660	131.796228	48.0	1.506	9.2	8.8	2.10	7585	1.64	56087.53

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006356928-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT

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

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

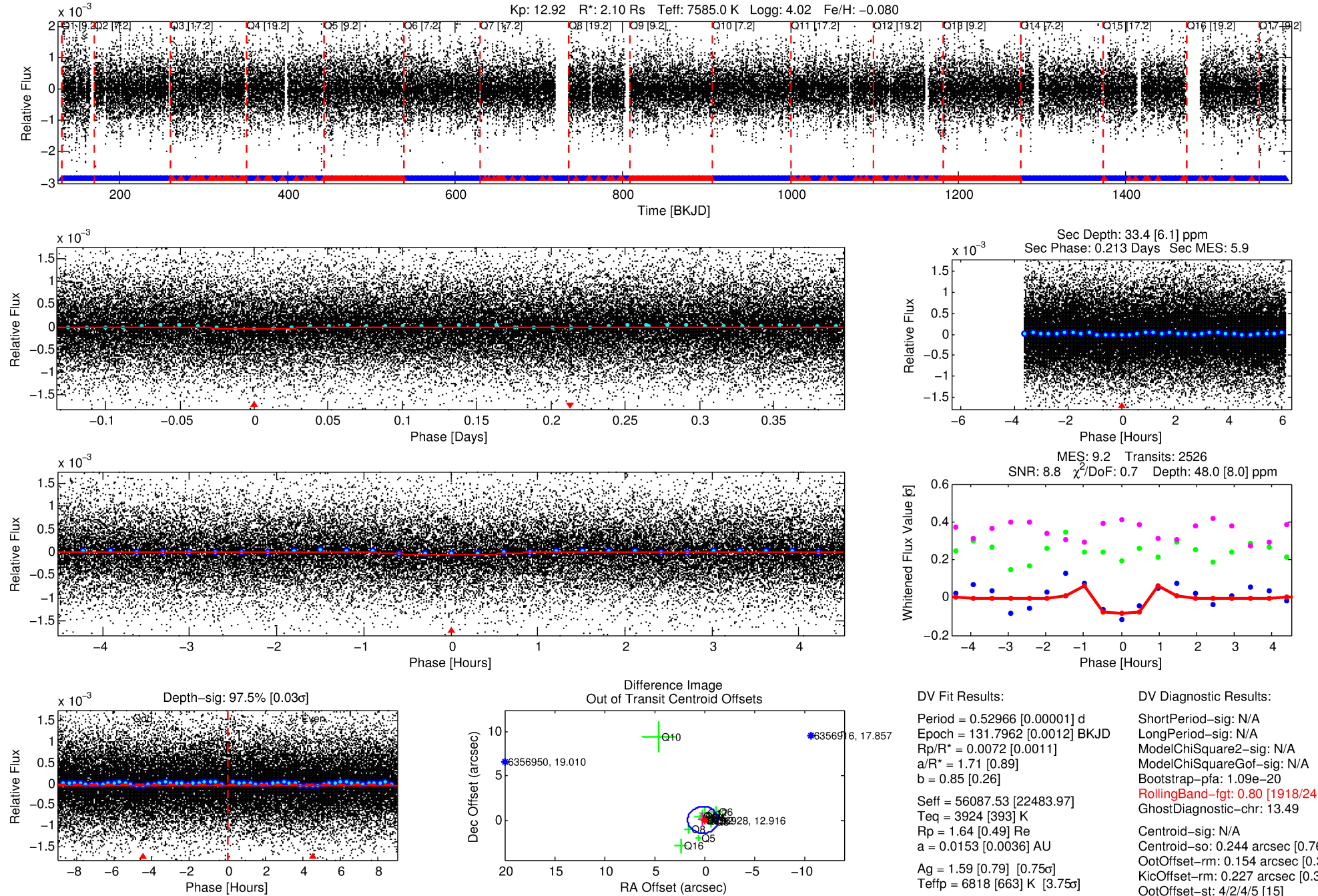
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006356928-01

No Significant Match Found

DV One-Page Summary

KIC: 6356928 Candidate: 1 of 1 Period: 0.530 d



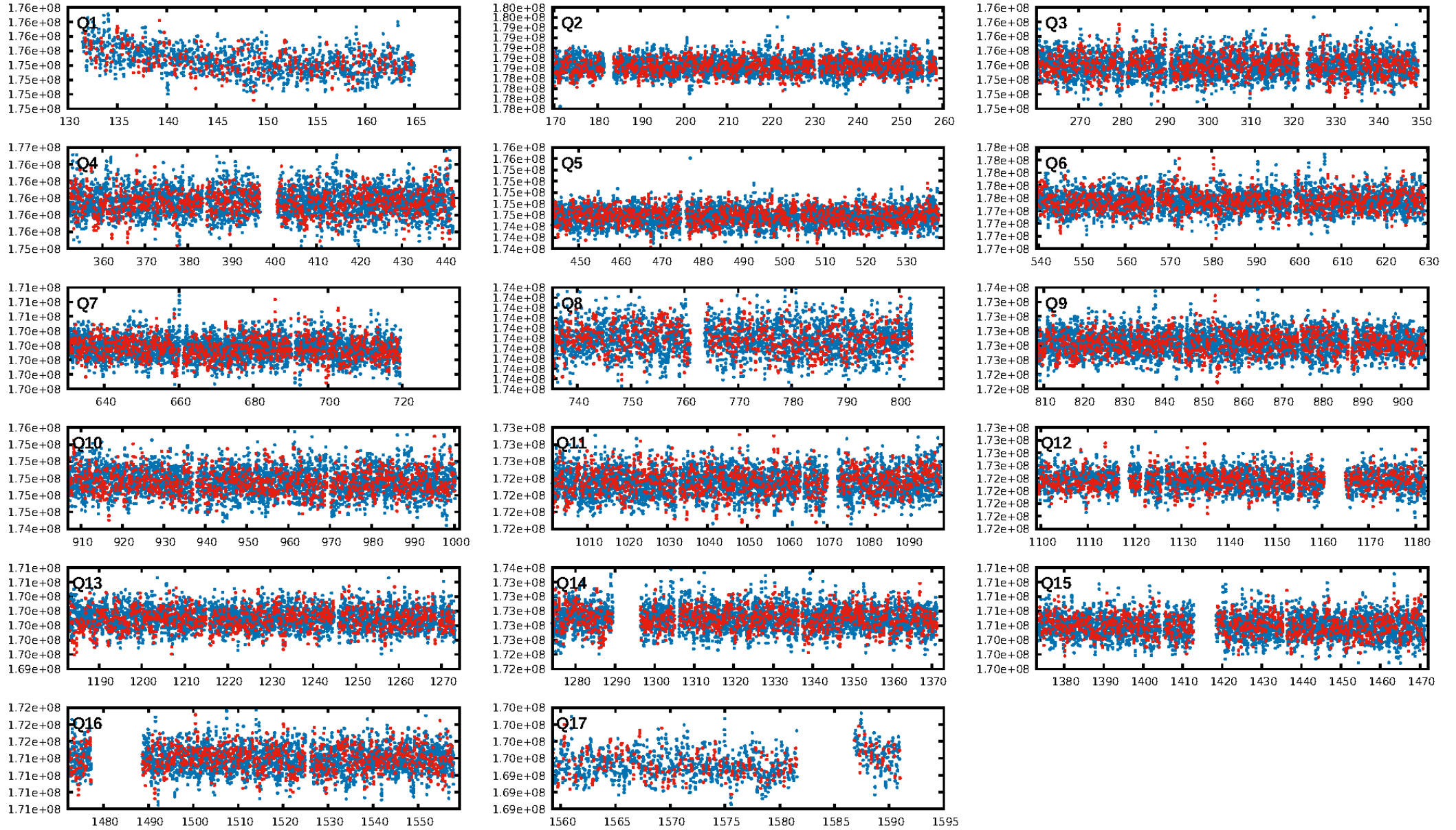
DV Fit Results:

Period = 0.52966 [0.00001] d
Epoch = 131.7962 [0.0012] BKJD
Rp/R* = 0.0072 [0.0011]
a/R* = 1.71 [0.89]
b = 0.85 [0.26]
Seff = 56087.53 [22483.97]
Teff = 3924 [393] K
Rp = 1.64 [0.49] Re
a = 0.0153 [0.0036] AU
Ag = 1.59 [0.79] [0.75 σ]
Teffp = 6818 [663] K [3.75 σ]

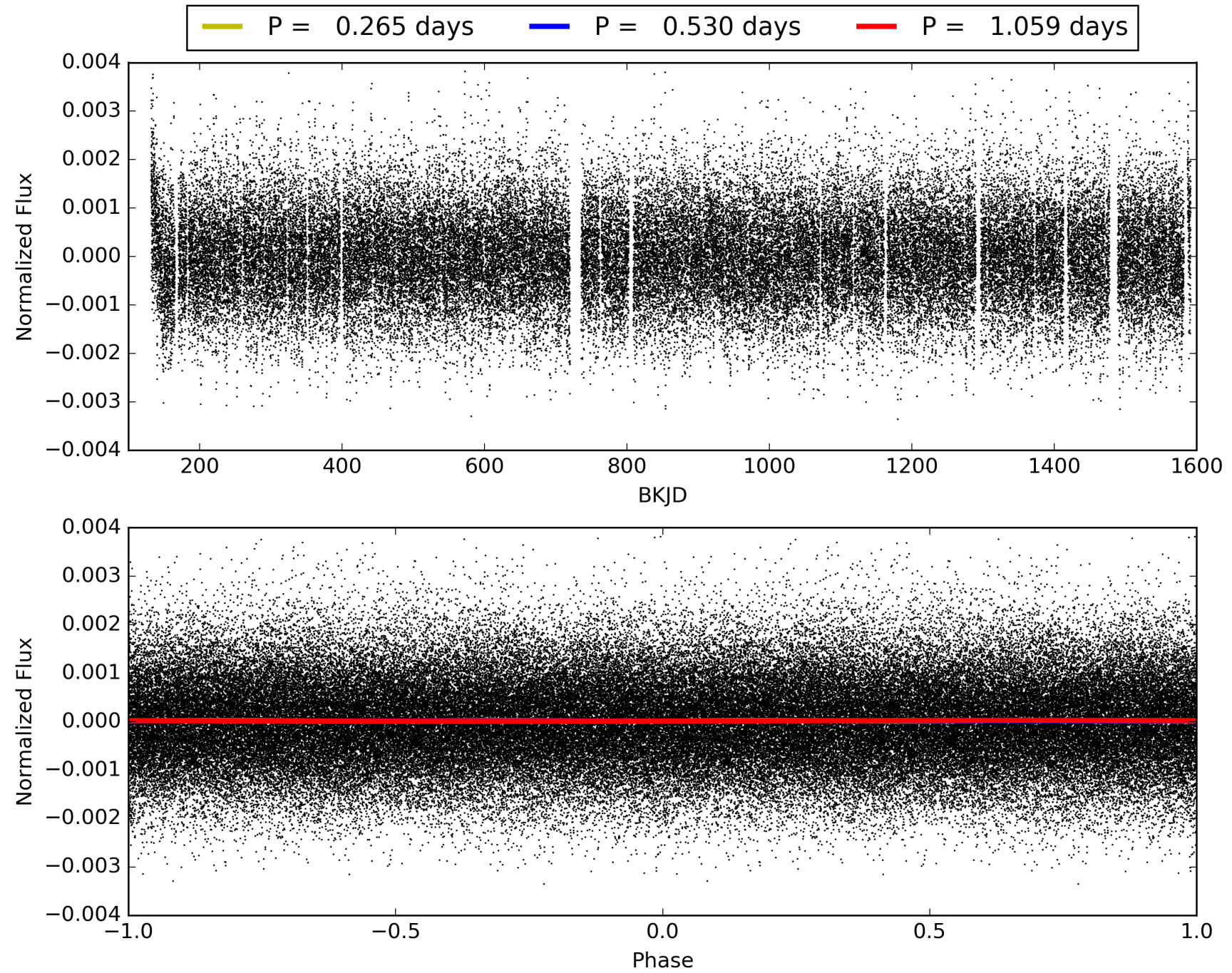
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.09e-20
RollingBand-fgt: 0.80 [1918/2412]
GhostDiagnostic-chr: 13.49
Centroid-sig: N/A
Centroid-so: 0.244 arcsec [0.76 σ]
OotOffset-rm: 0.154 arcsec [0.30 σ]
KicOffset-rm: 0.227 arcsec [0.38 σ]
OotOffset-st: 4/2/4/5 [15]
KicOffset-st: 4/2/4/5 [15]
DiffImageQuality-fgm: 0.53 [8/15]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 006356928-01, PDC Light Curves

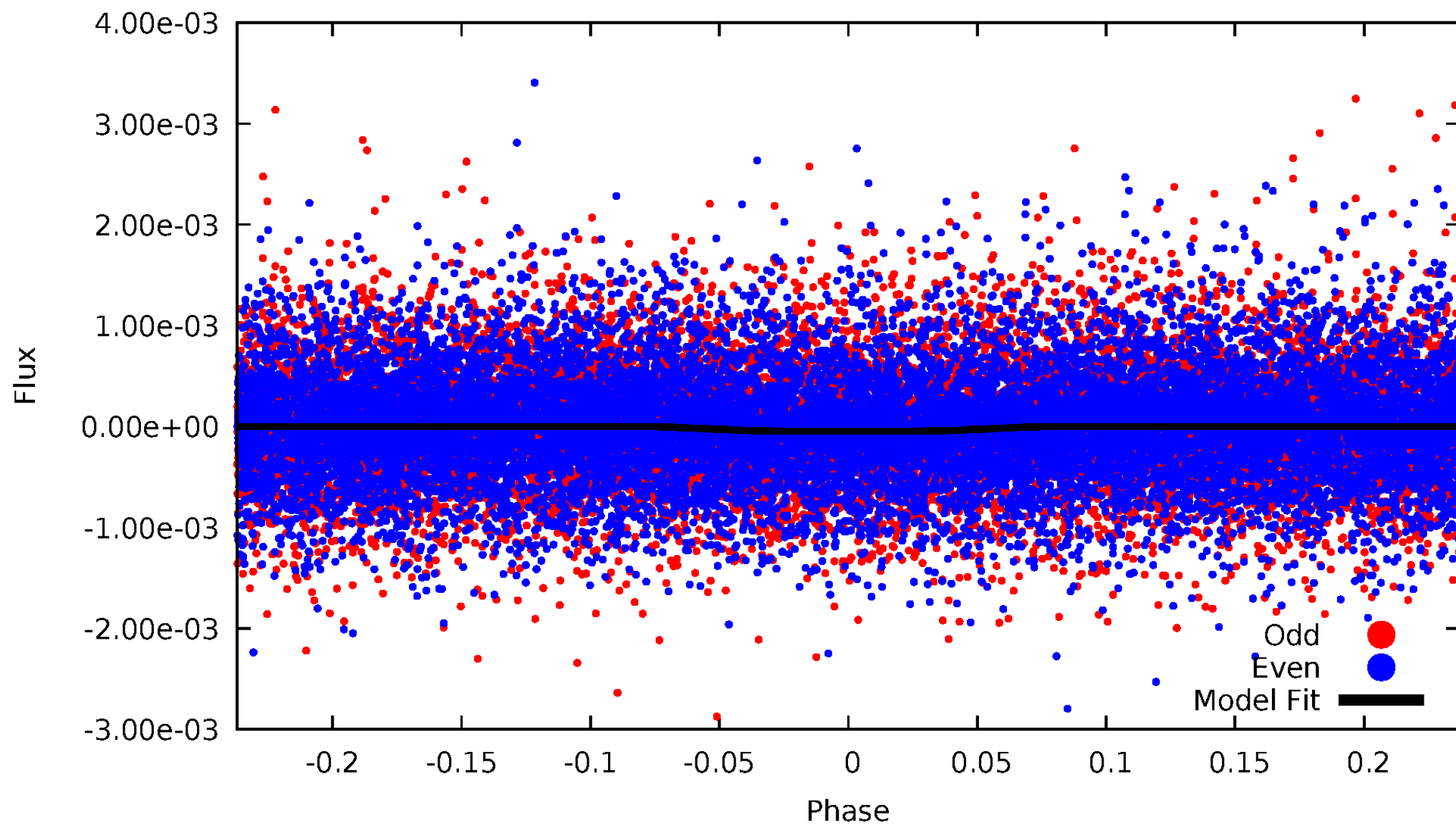


TCE 006356928-01



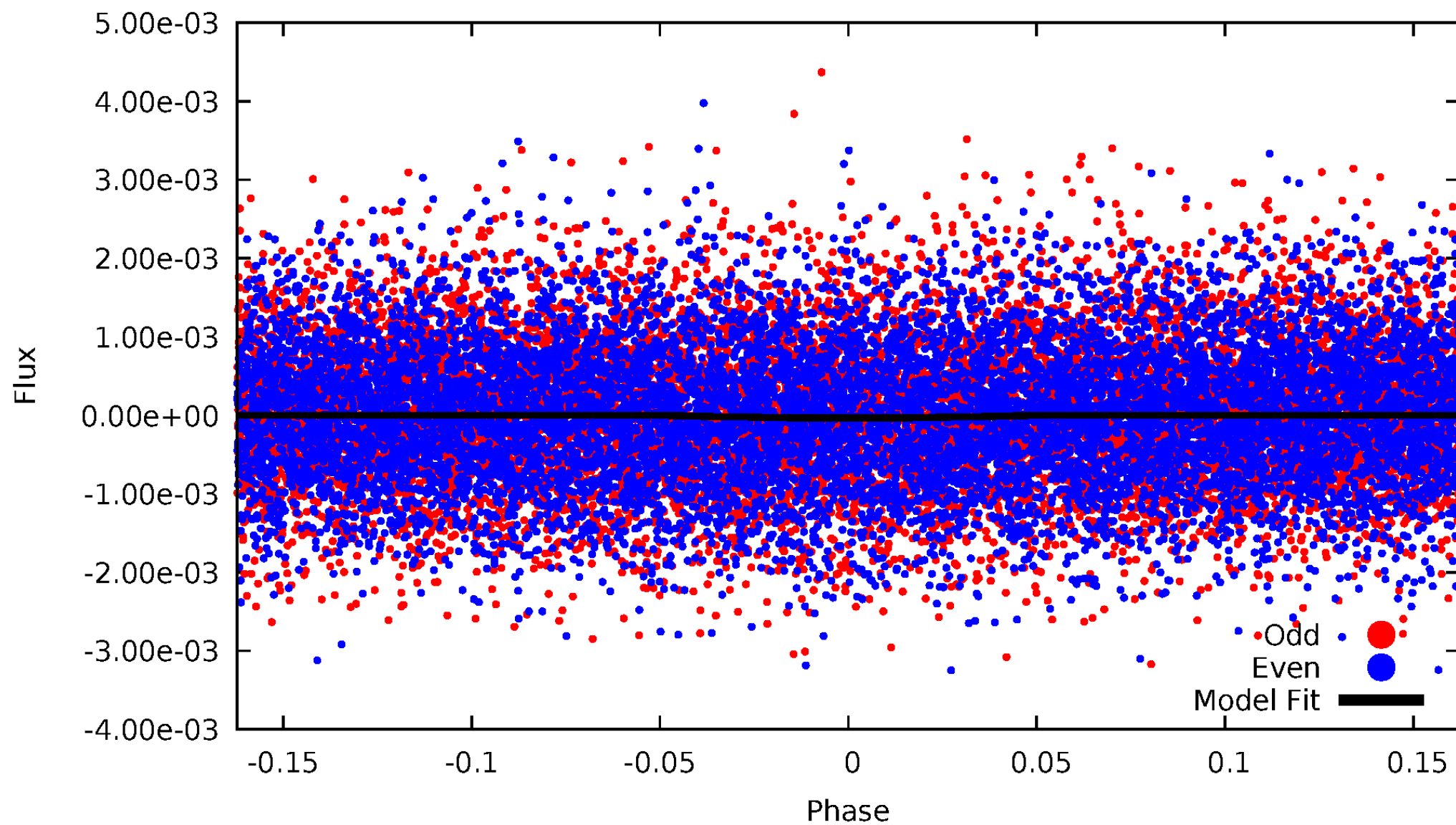
DV Odd/Even

TCE 006356928-01

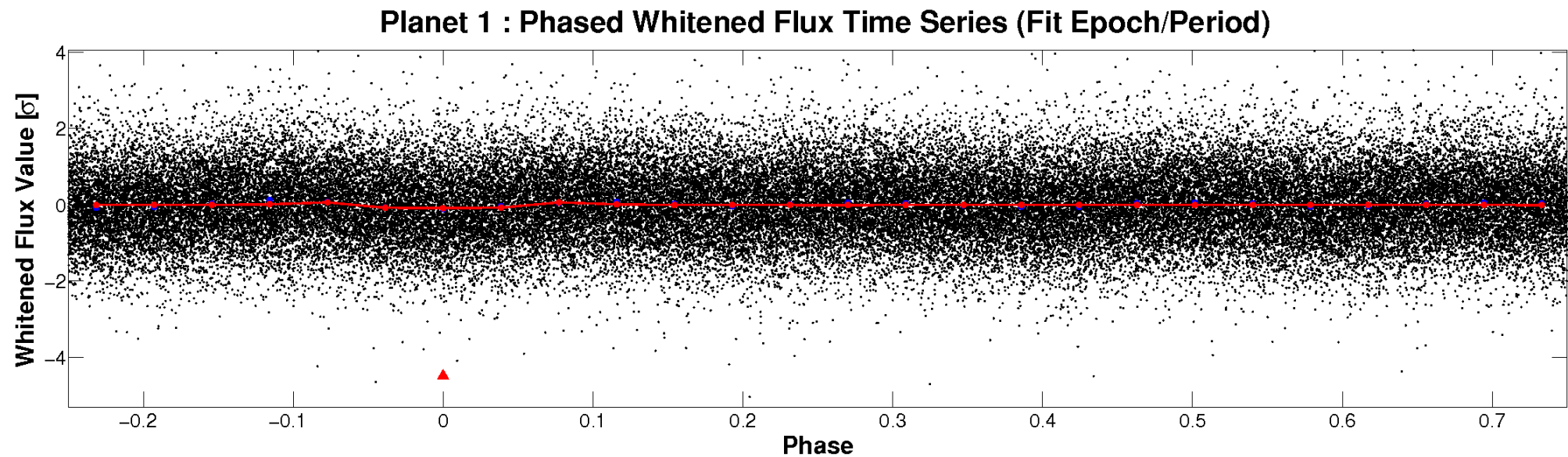
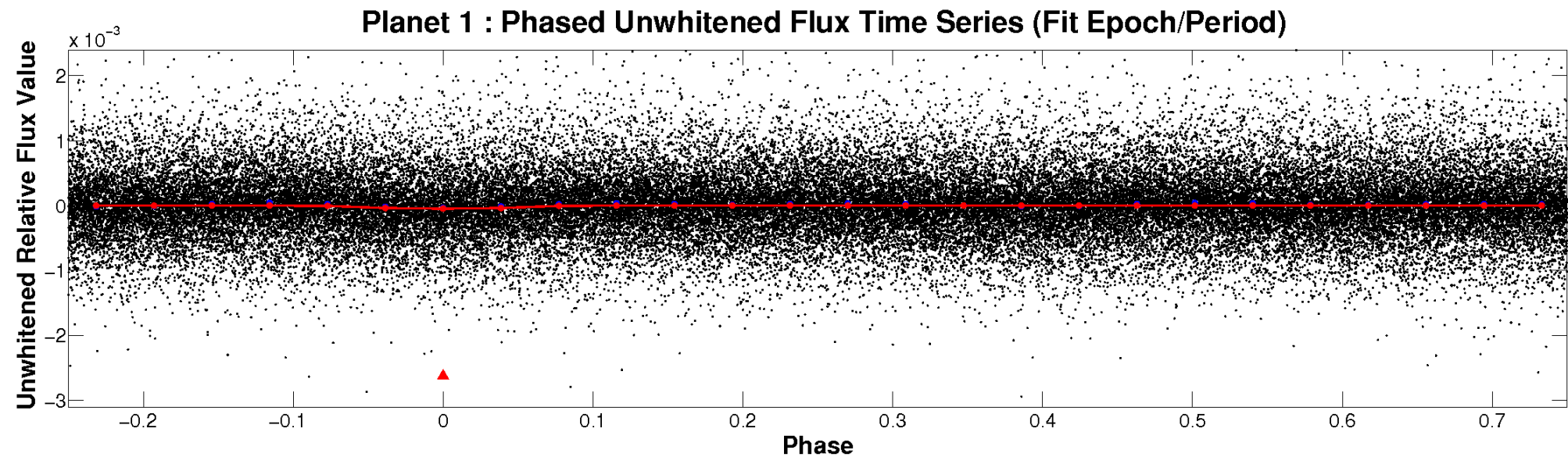


ALT Odd/Even

TCE 006356928-01

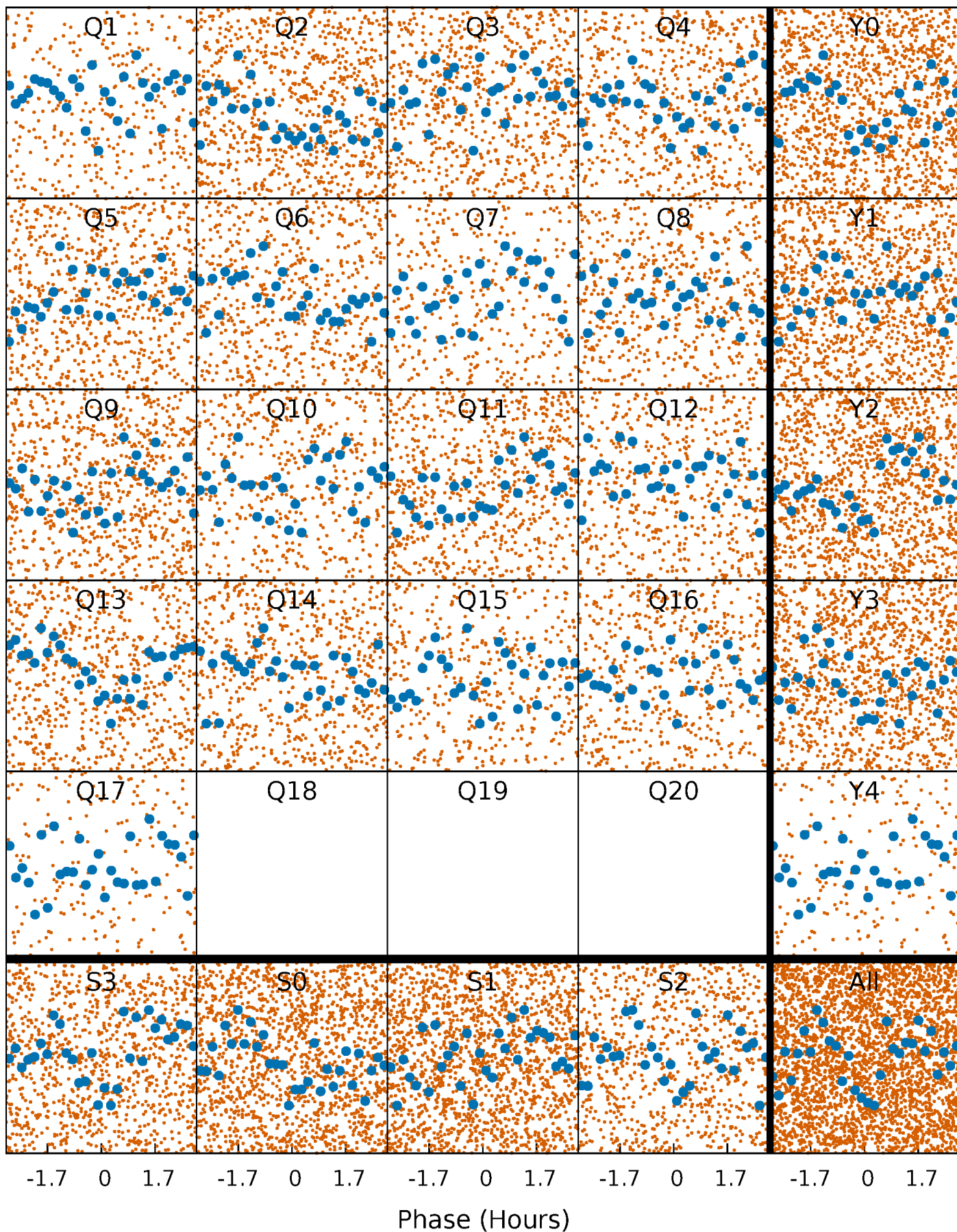


Non-Whitened Vs. Whitened Light Curve



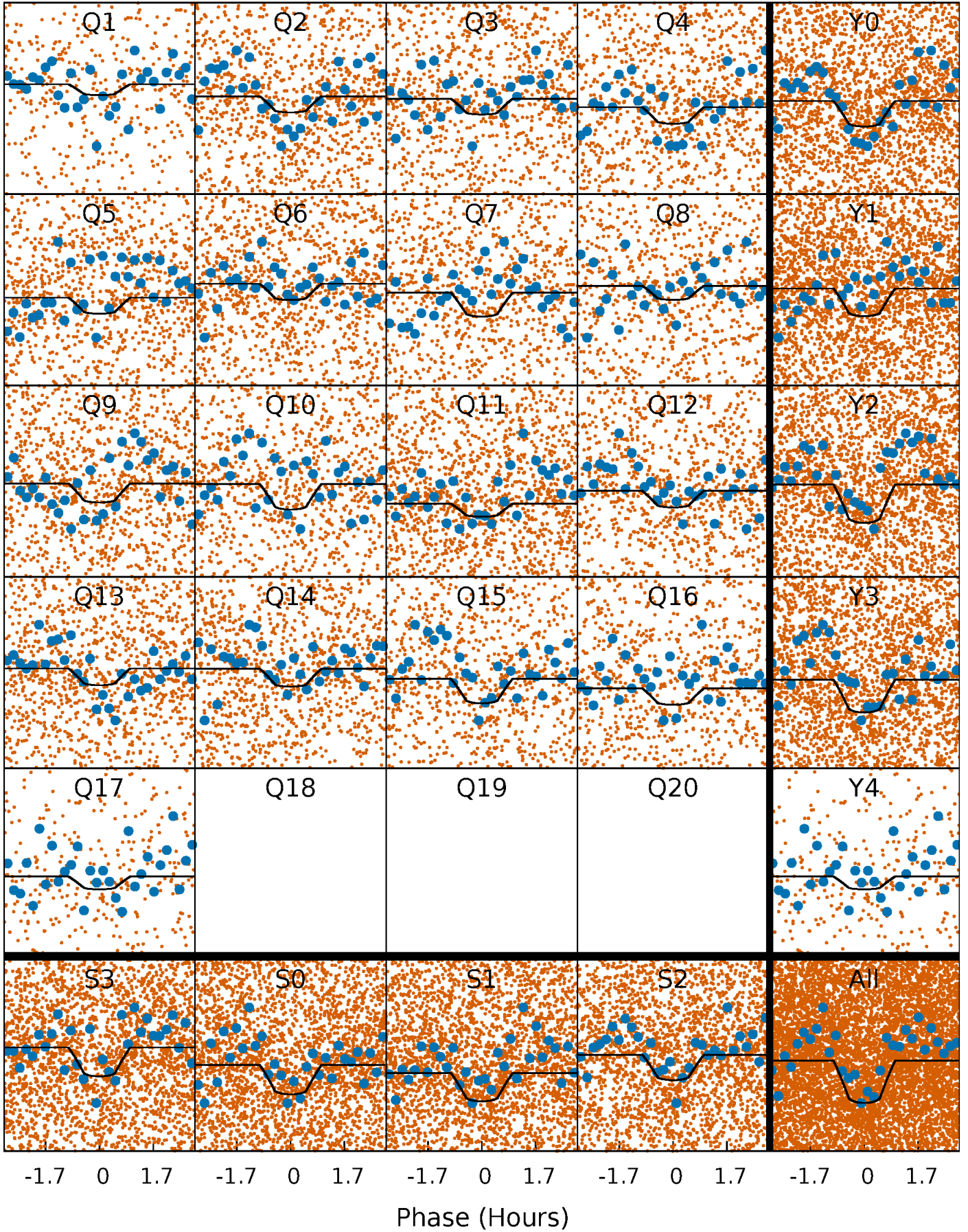
PDC Quarter-Phased Transit Curves

TCE 006356928-01 P= 0.529660 Days $T_0=131.796228$ (BKJD)



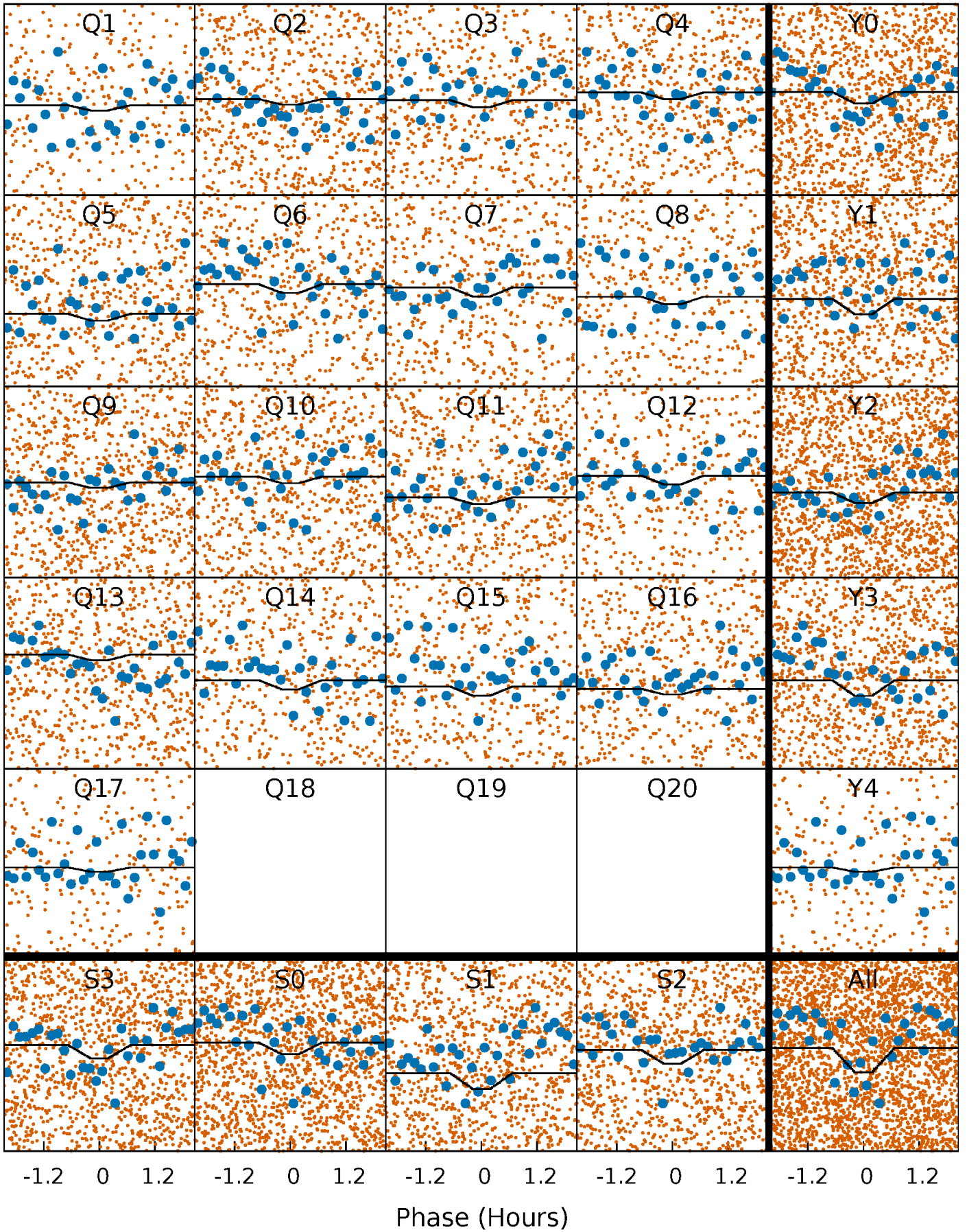
DV Quarter-Phased Transit Curves

TCE 006356928-01 P= 0.529660 Days $T_0=131.796228$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

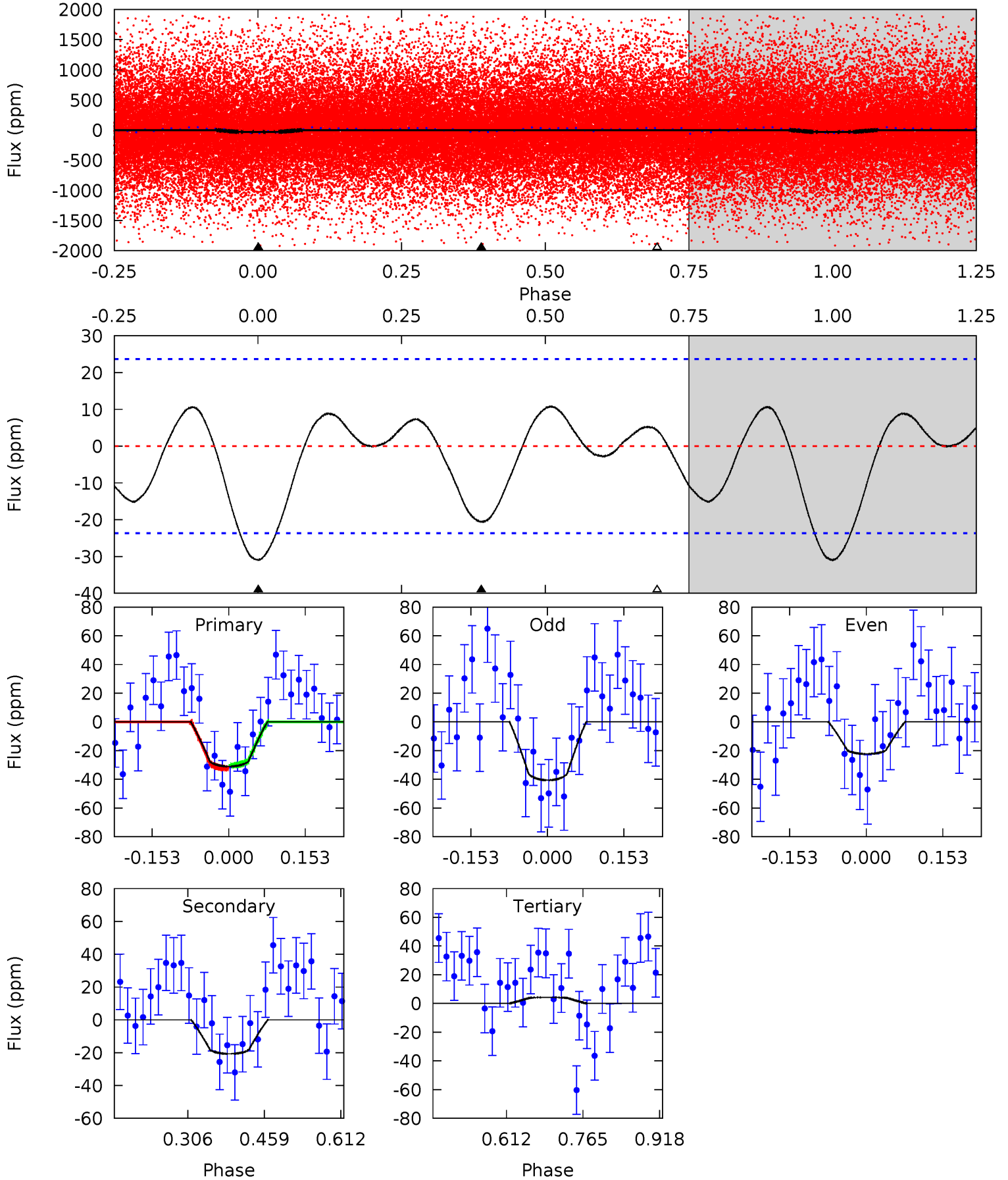
TCE 006356928-01 P= 0.529656 Days $T_0=131.801154$ (BKJD)



DV Model-Shift Uniqueness Test

006356928-01, P = 0.529660 Days, E = 131.266568 Days

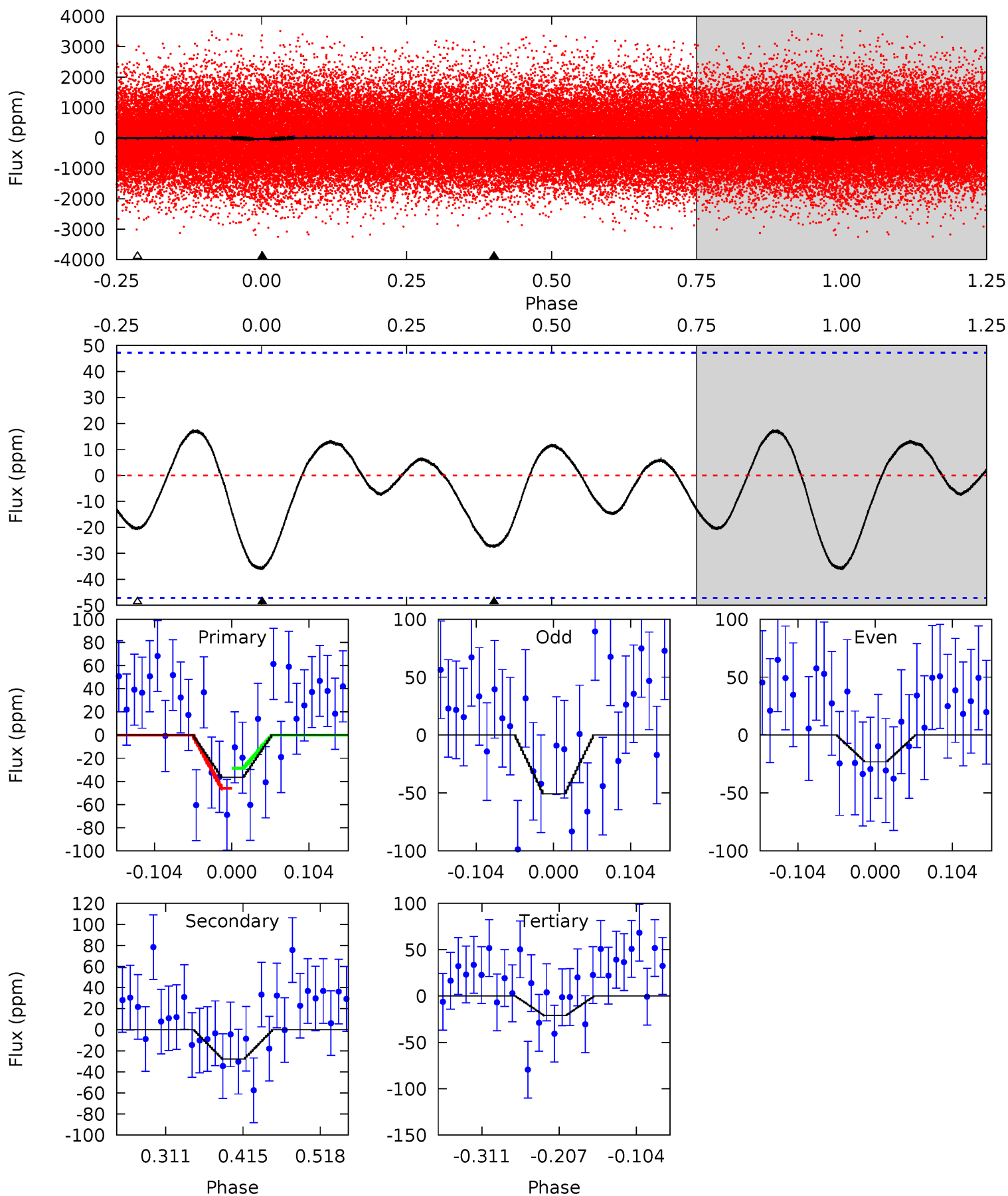
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.86	3.91	-0.81	0	4.47	1.43	1.14	6.67	5.86	4.72	3.91	1.74	0.55	0.26	0.19



Alt Model-Shift Uniqueness Test

006356928-01, P = 0.529656 Days, E = 131.271498 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.51	2.69	2.03	0	4.56	1.63	0.95	1.48	3.51	0.66	2.69	1.33	1.06	0.33	0.83



Stellar Parameters For KIC 006356928

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7585^{+209}_{-340}	$4.022^{+0.204}_{-0.153}$	$-0.080^{+0.200}_{-0.350}$	$2.100^{+0.495}_{-0.550}$	$1.691^{+0.200}_{-0.300}$	$0.257^{+0.278}_{-0.117}$
	+3%/-4%	+5%/-4%	+250%/-438%	+24%/-26%	+12%/-18%	+108%/-46%
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 006356928-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-21 ± 5	$1.60^{+0.32}_{-0.31}$	5434^{+363}_{-398}	5425^{+792}_{-741}	$1.006^{+0.679}_{-0.372}$
Alt.	-28 ± 10	$1.33^{+0.30}_{-0.30}$	5422^{+381}_{-373}	6755^{+1198}_{-1101}	$1.984^{+1.414}_{-0.918}$

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 $A_{obs} \gg 1.0$

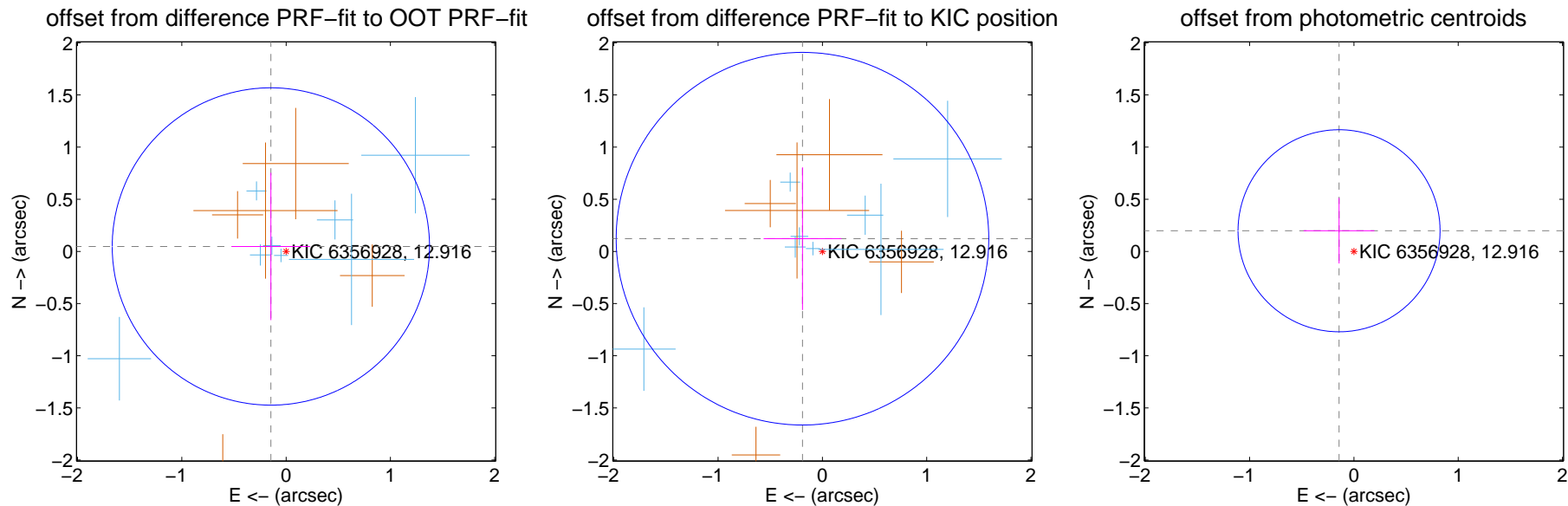
DV Centroid Data

Supplemental centroid analysis for 006356928-01. Kepler magnitude: 12.92. Transit SNR 8.82

There are 8 quarters with good PRF difference image offsets

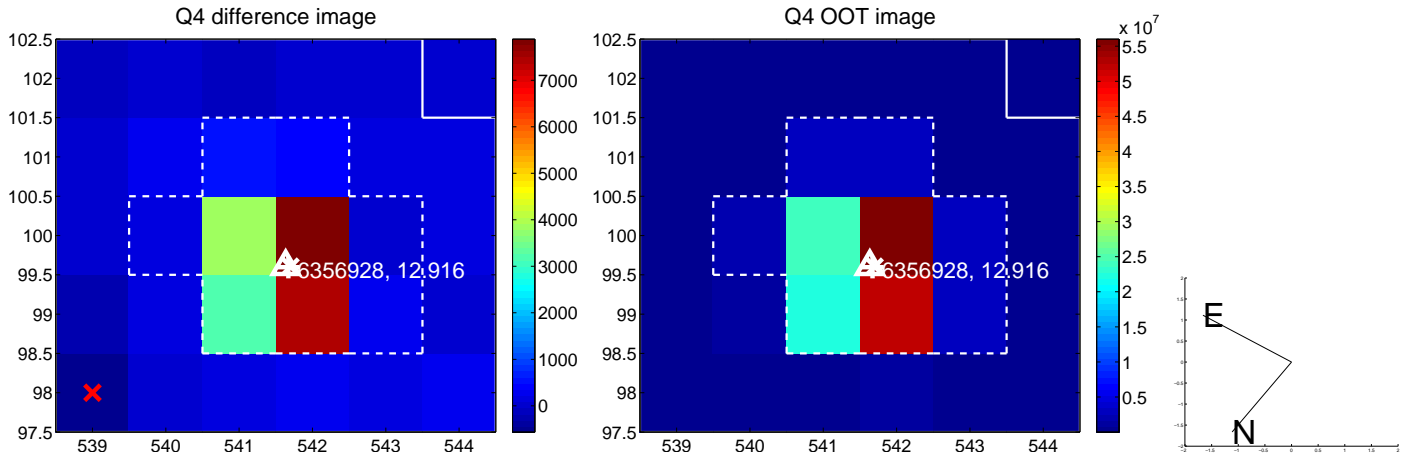
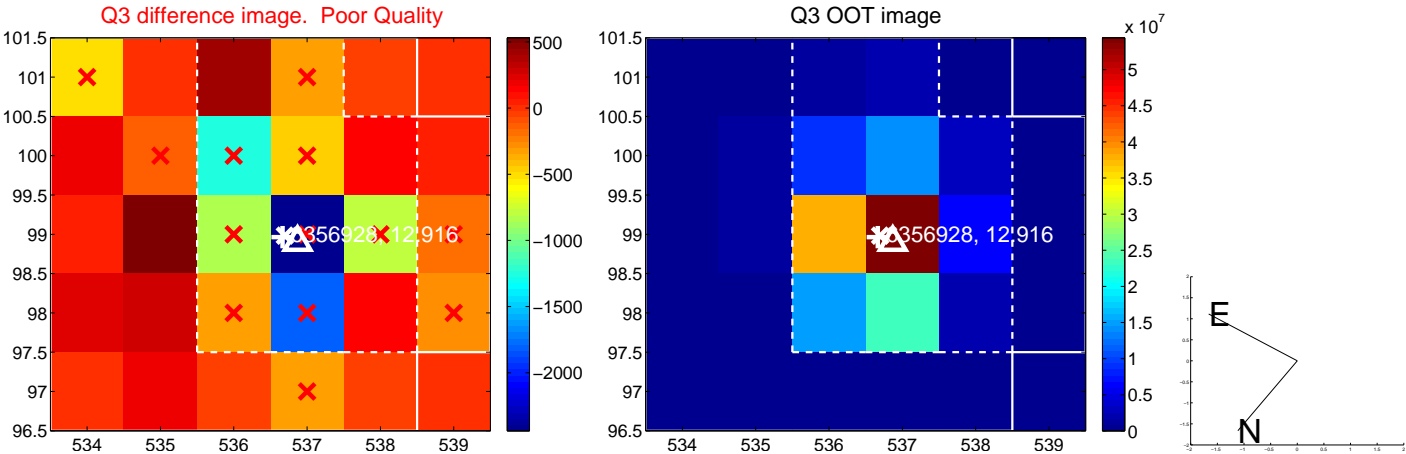
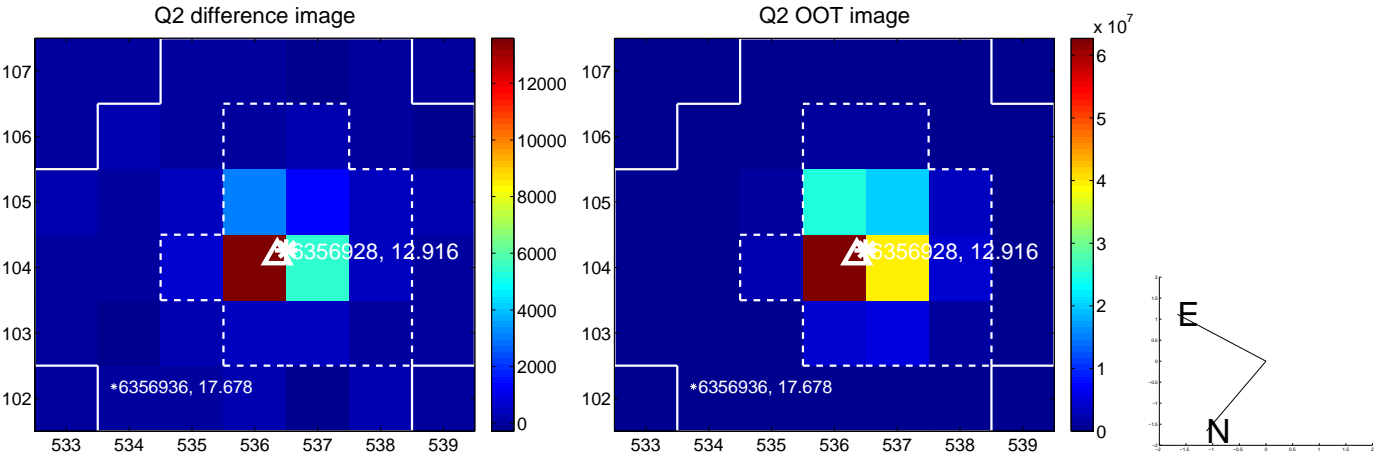
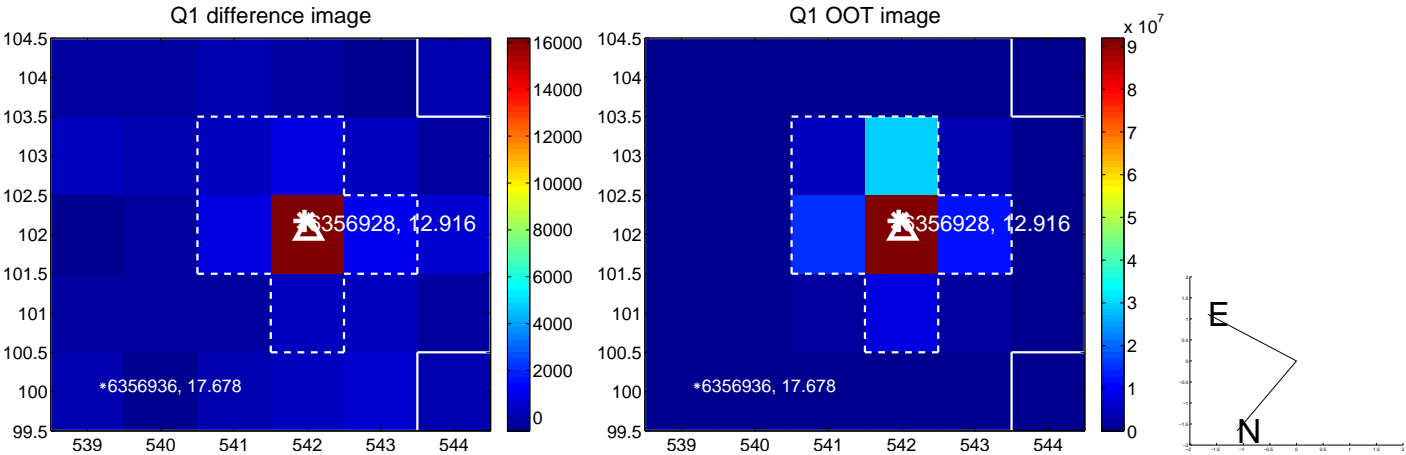
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.154 ± 0.507	0.30	0.146 ± 0.377	0.047 ± 0.706
PRF-fit source offset from KIC position	0.227 ± 0.595	0.38	0.191 ± 0.373	0.122 ± 0.684
photometric centroid source offset	0.24 ± 0.32	0.76	0.14 ± 0.34	0.20 ± 0.31

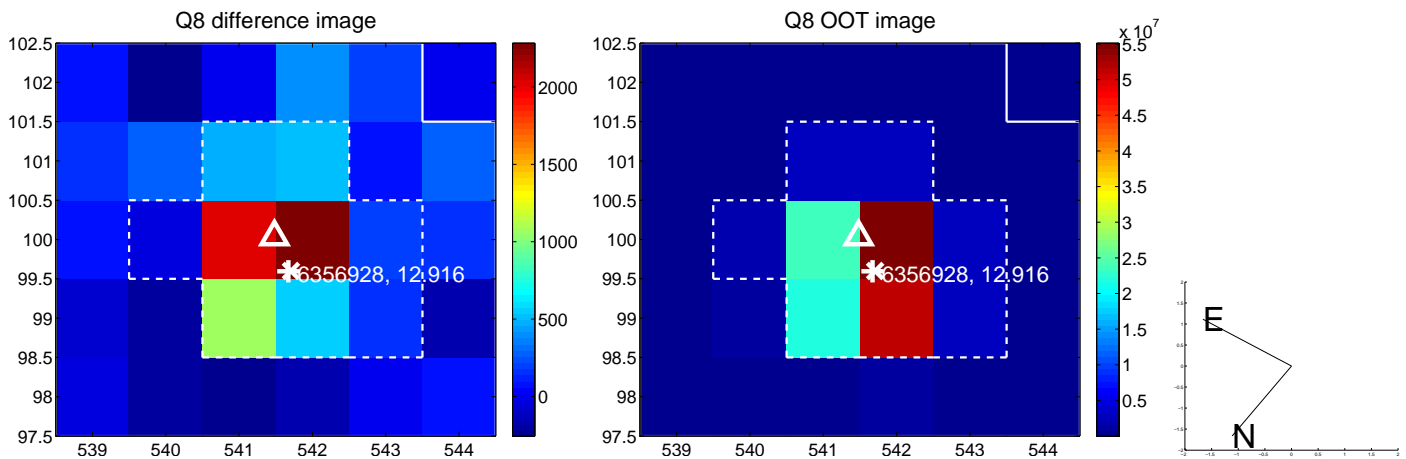
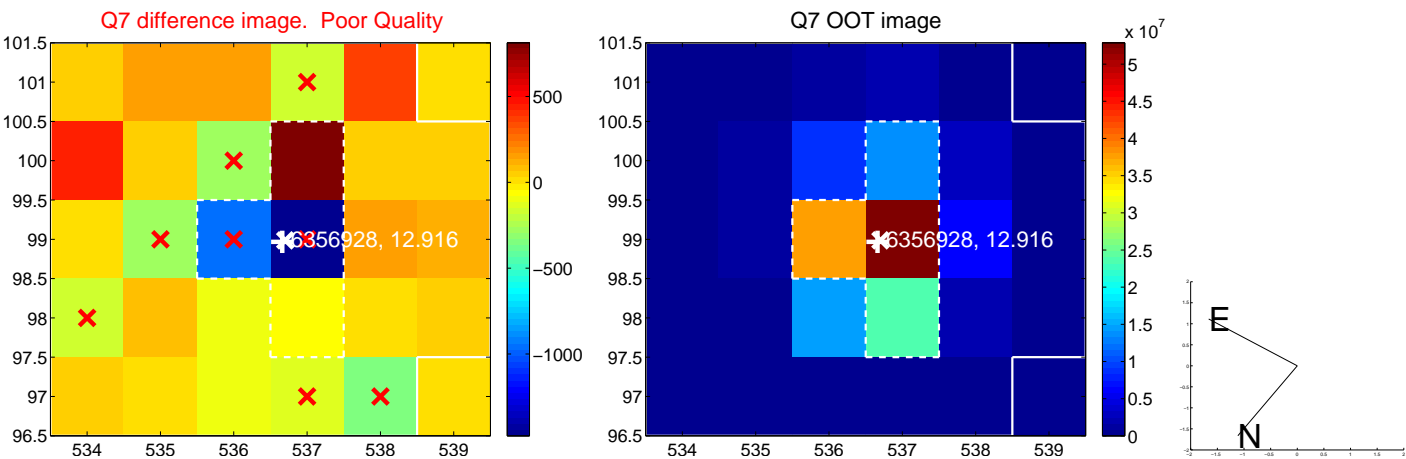
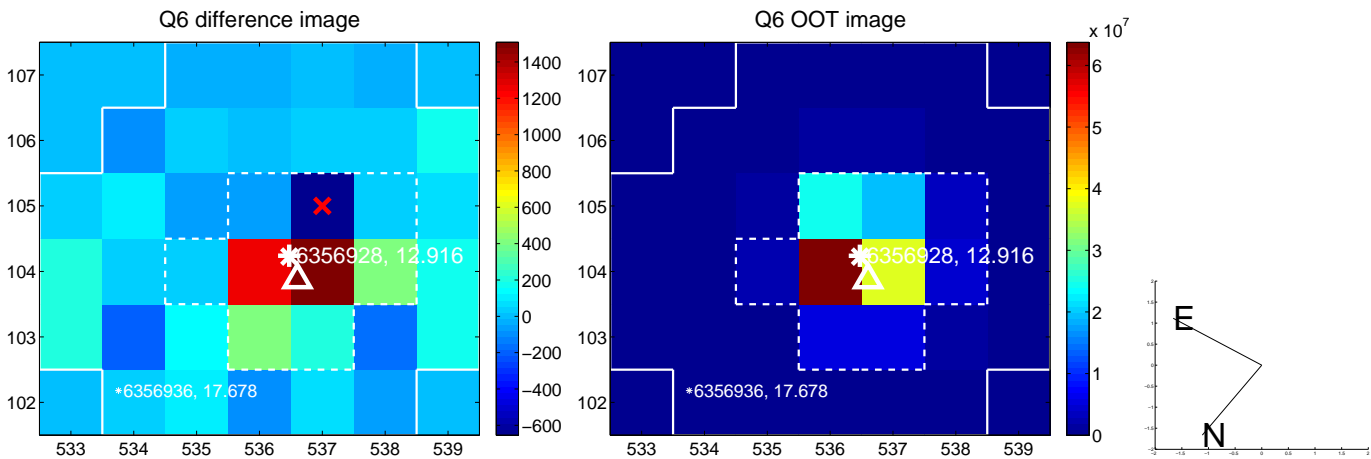
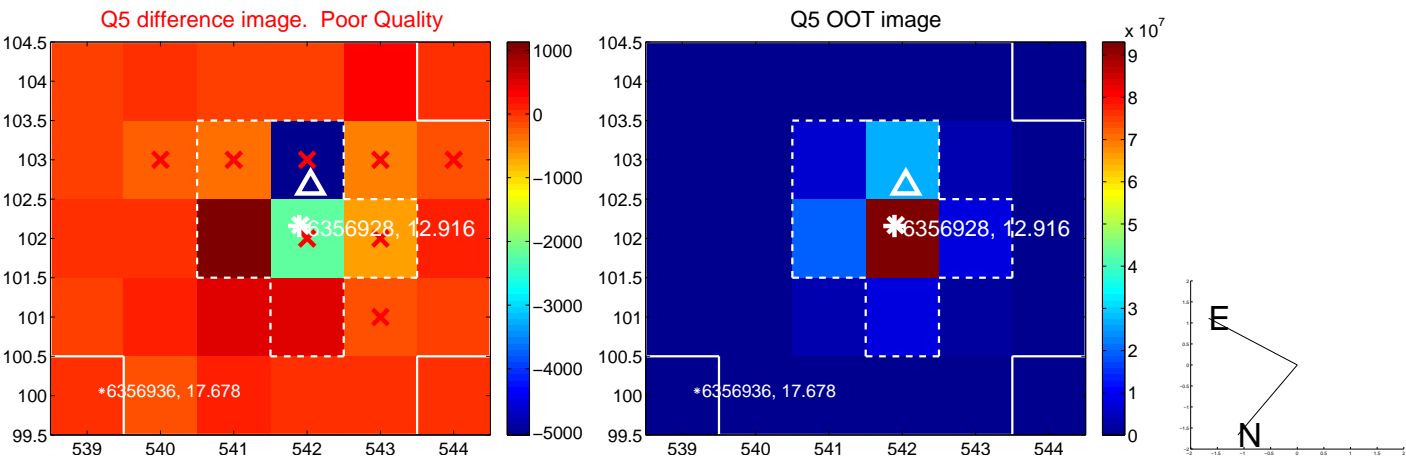


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

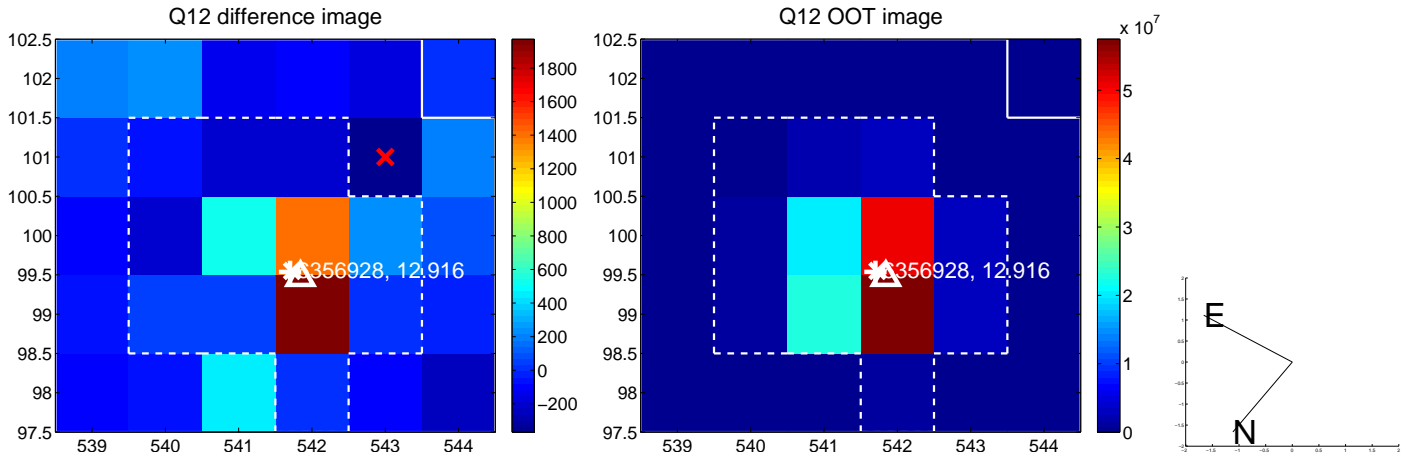
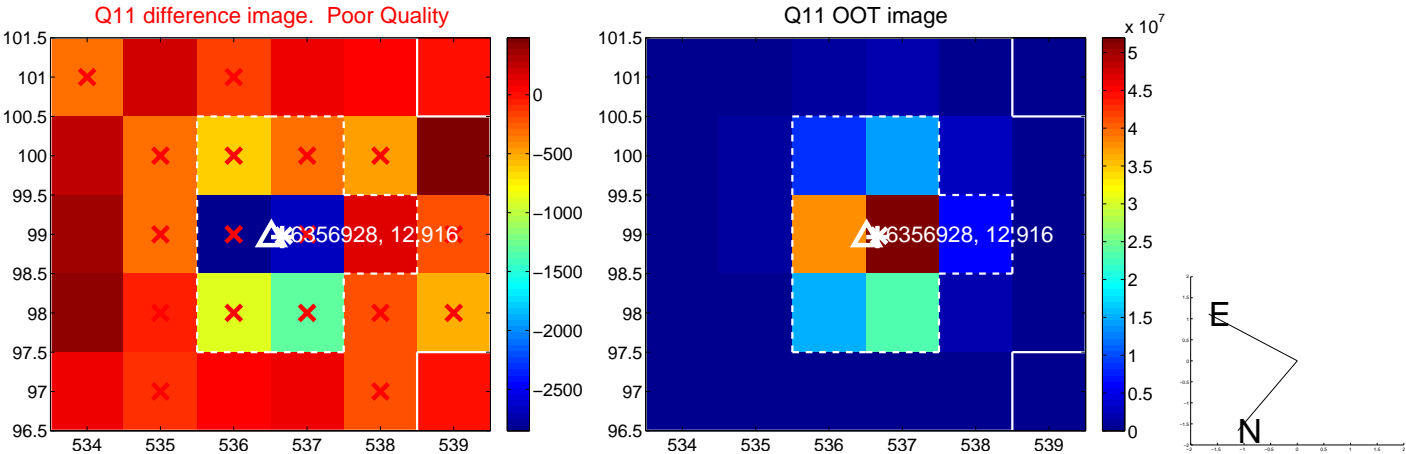
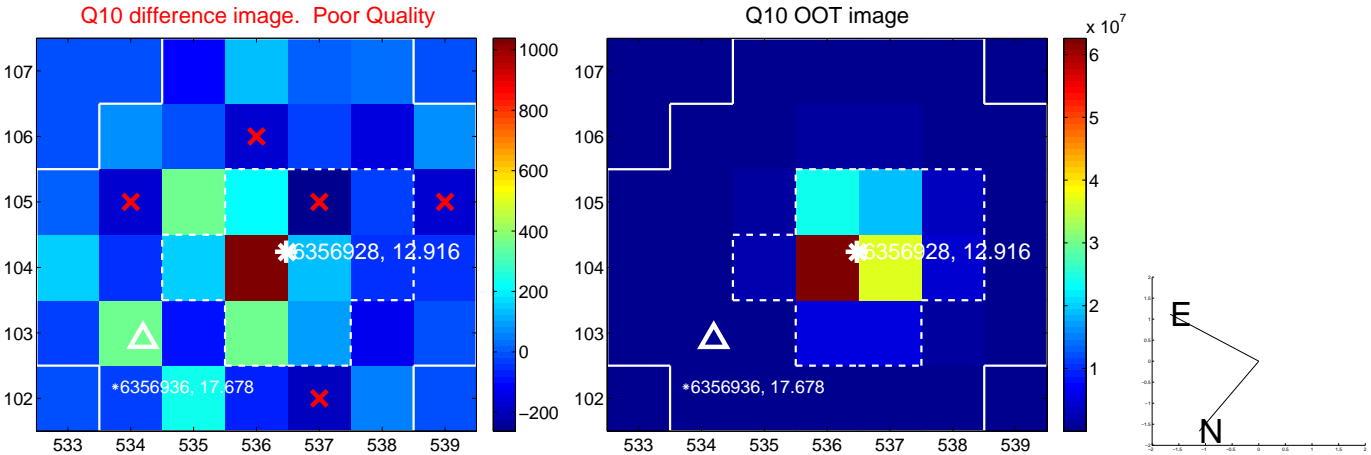
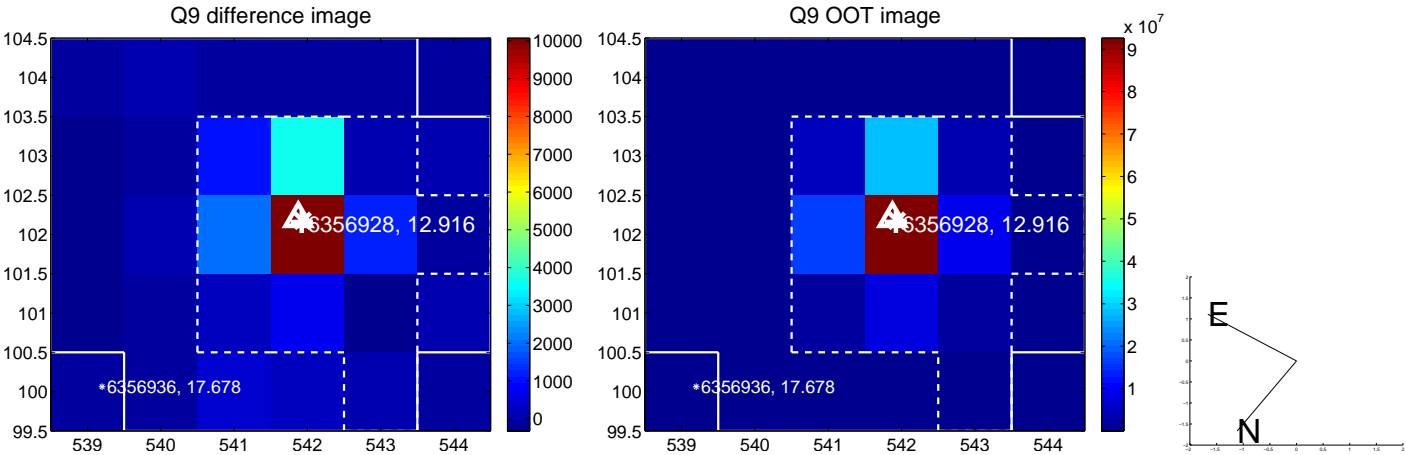
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



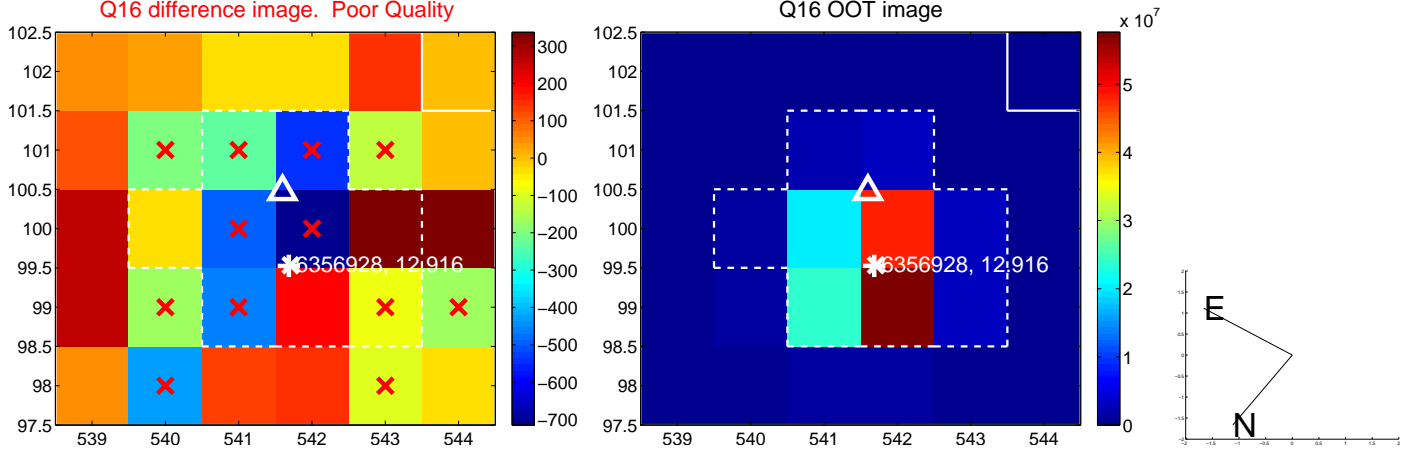
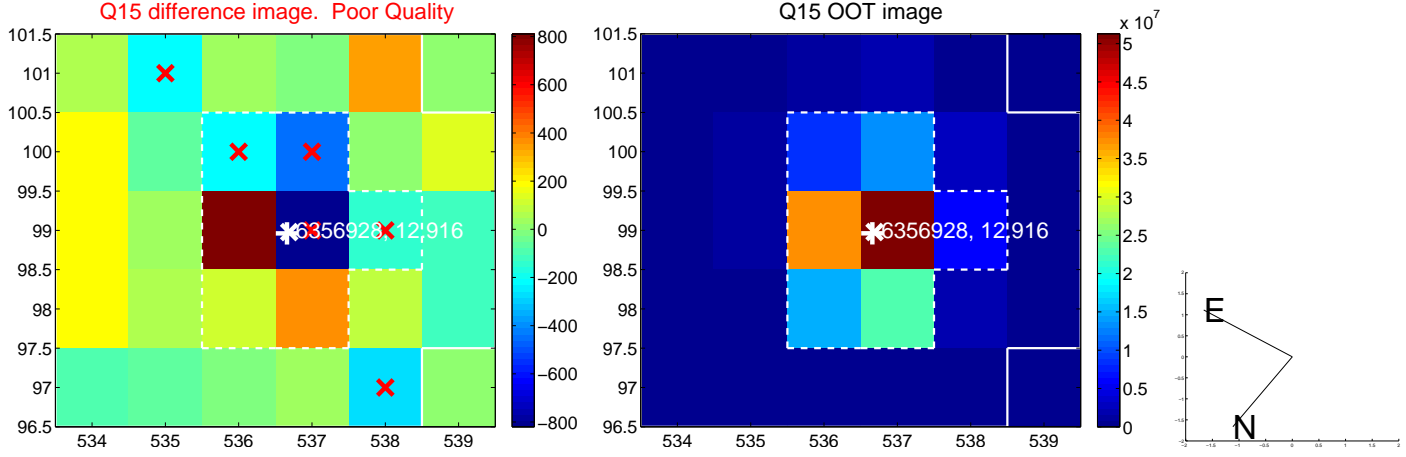
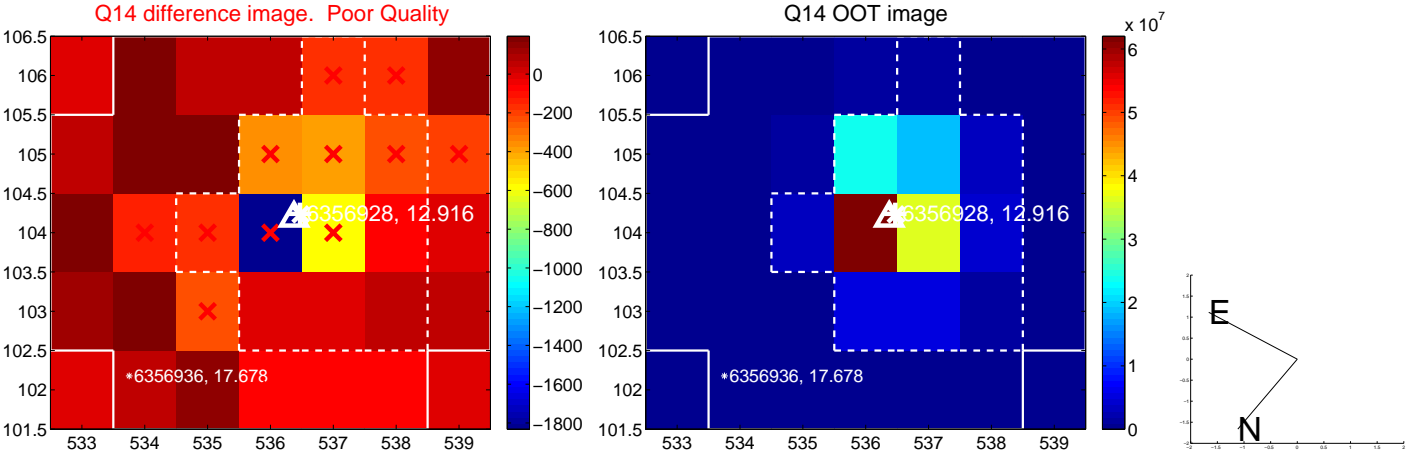
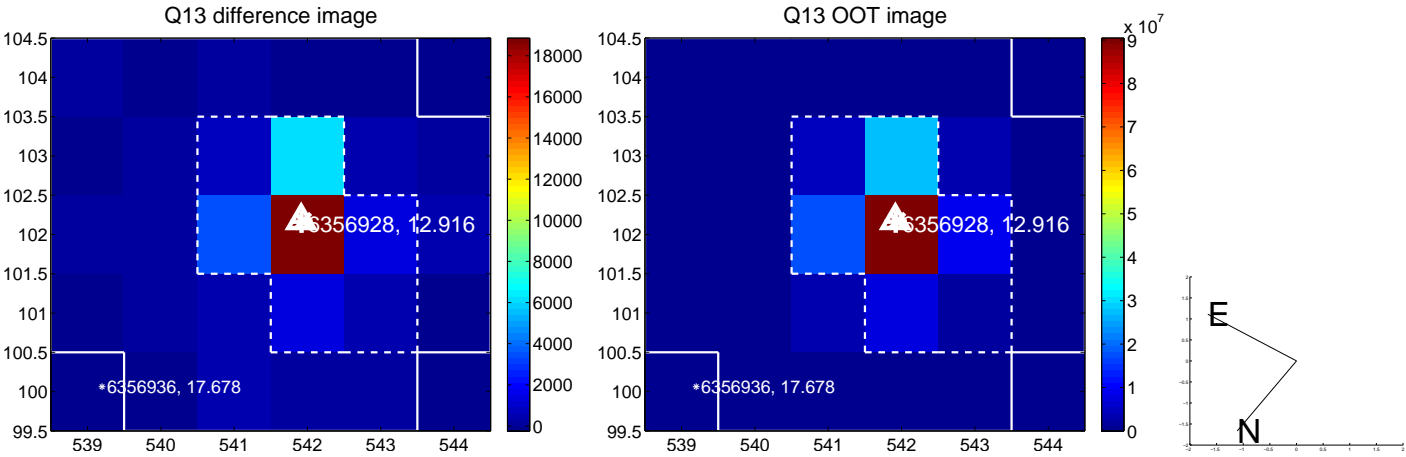
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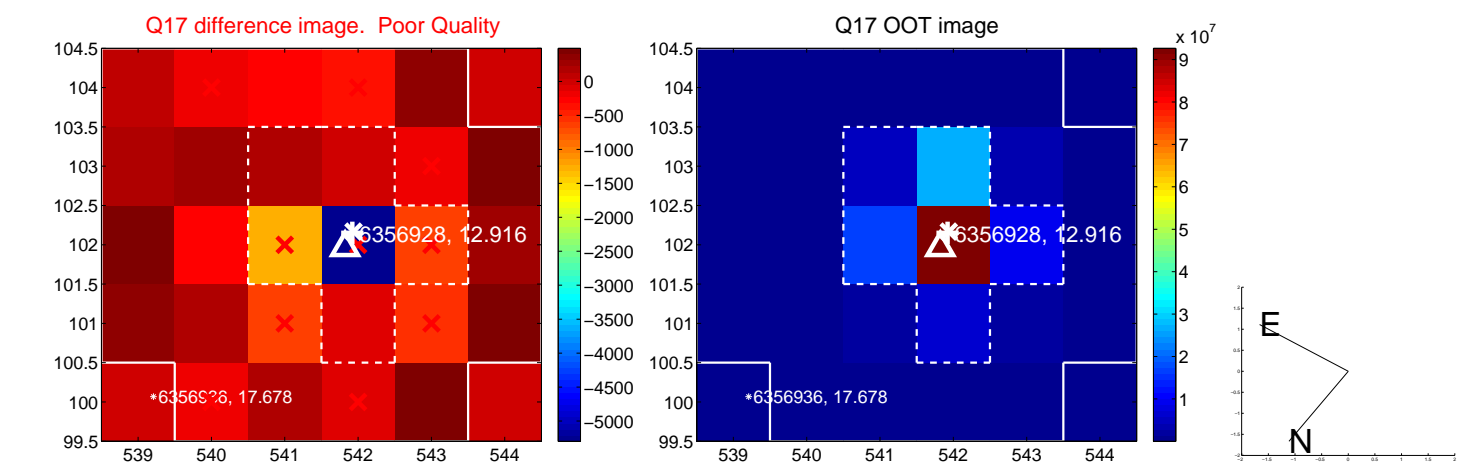
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



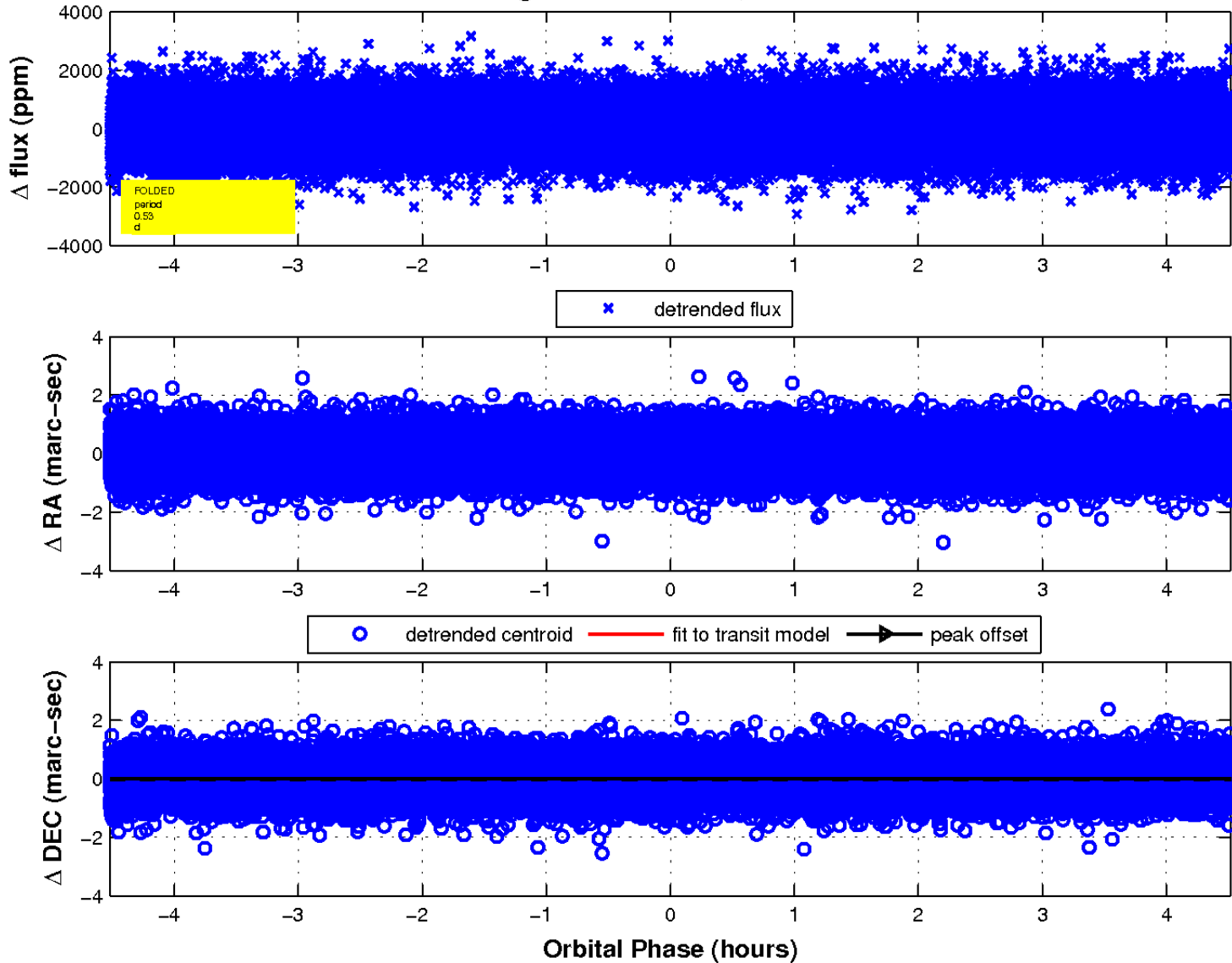
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

