

KIC 007138841

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})
007138841-01	OBS	5361.01	22.049499	133.823951	145.3	3.653	10.3	11.0	1.55	6821	2.04	163.78

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007138841-01	OBS	PC	0.65	0	0	0	0	NO_COMMENT

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.

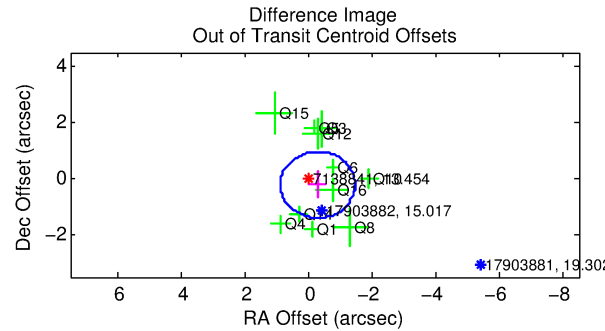
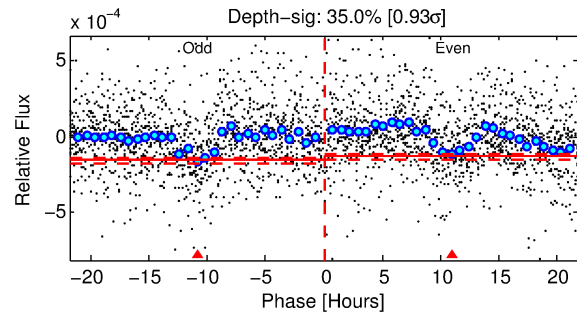
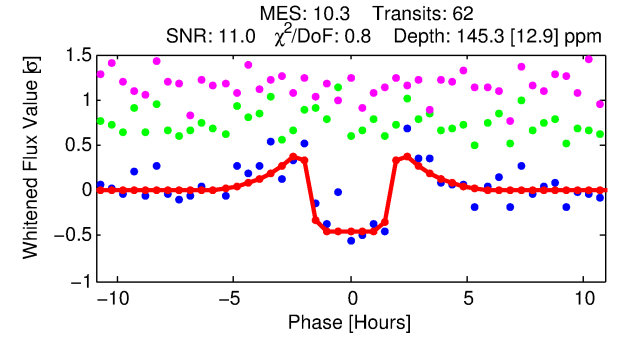
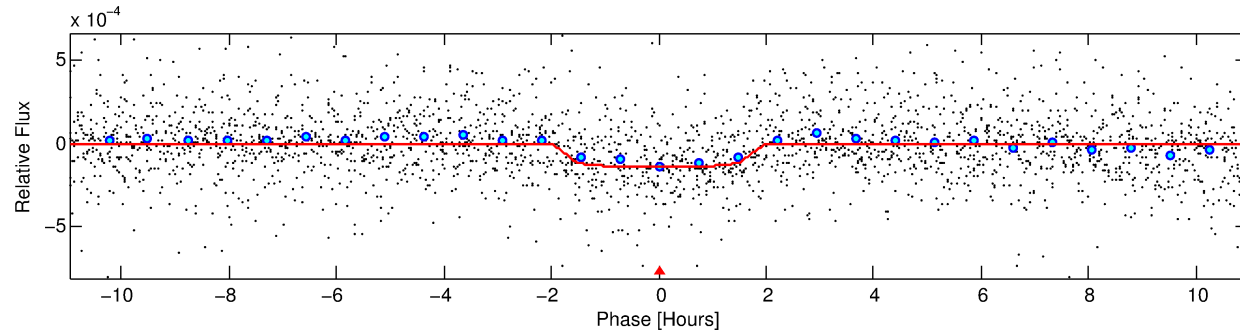
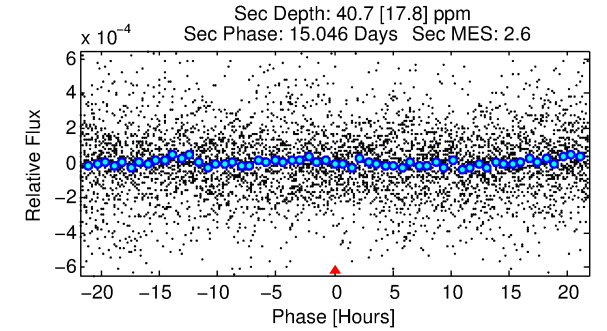
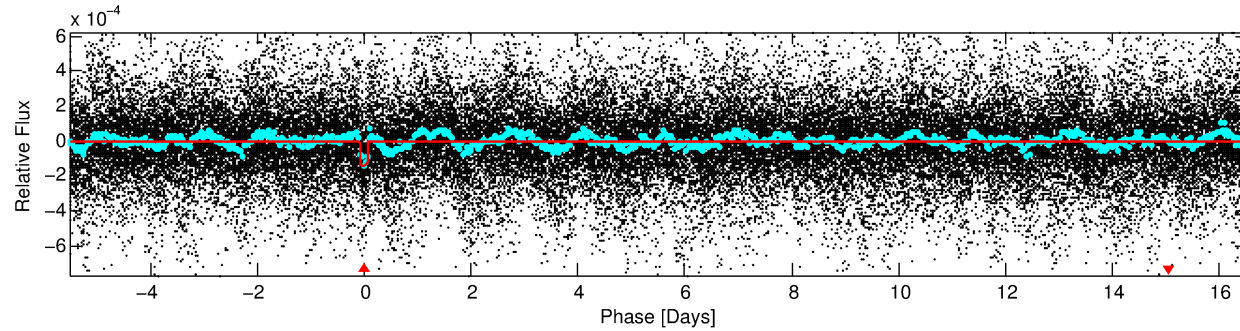
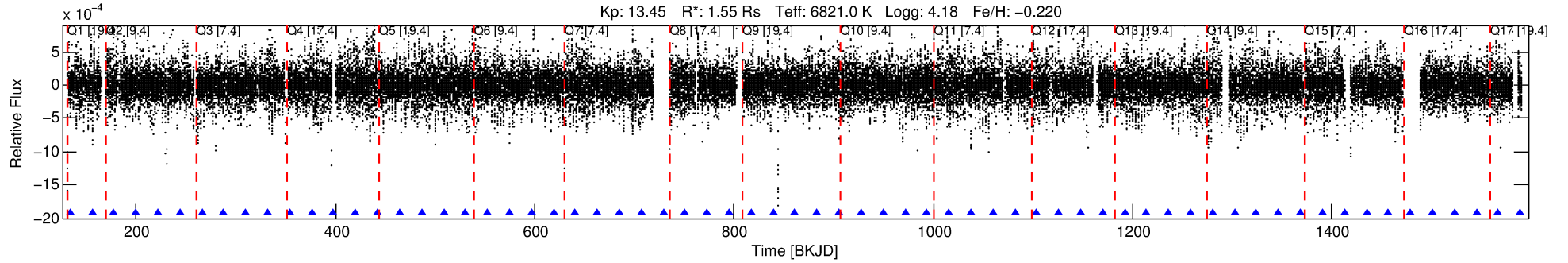
Ephemeris Match Information For 007138841-01

No Significant Match Found

DV One-Page Summary

KIC: 7138841 Candidate: 1 of 1 Period: 22.049 d

KOI: K05361 Corr: No Ephemeris Match



DV Fit Results:

Period = 22.04950 [0.00010] d
Epoch = 133.8240 [0.0039] BKJD
Rp/R* = 0.0121 [0.0042]
a/R* = 30.10 [59.66]
b = 0.77 [1.04]
Seff = 163.78 [62.02]
Teq = 912 [86] K
Rp = 2.04 [0.92] Re
a = 0.1685 [0.0407] AU
Ag = 152.49 [135.44] [1.12σ]
Teffp = 4956 [1031] K [3.91σ]

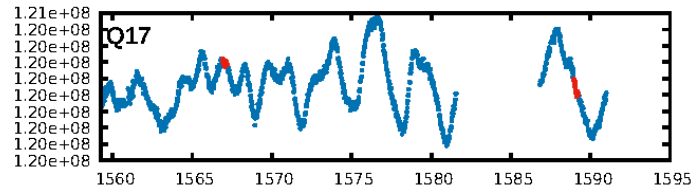
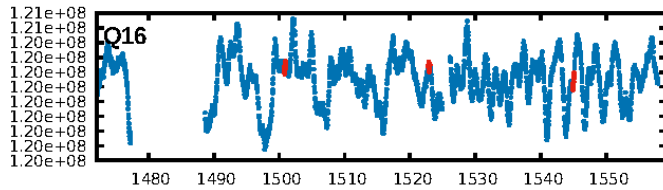
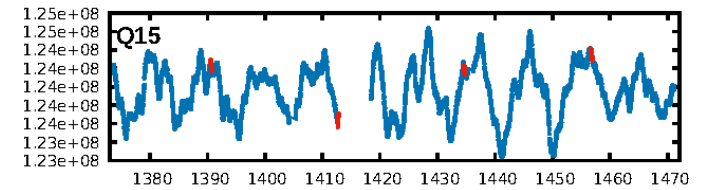
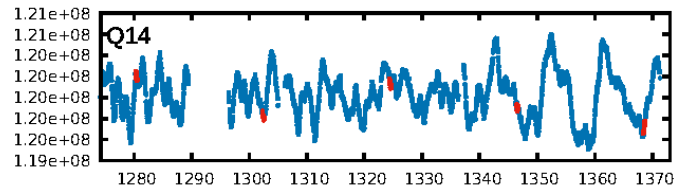
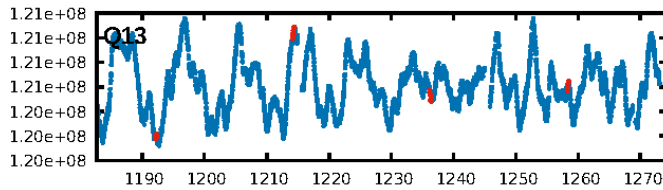
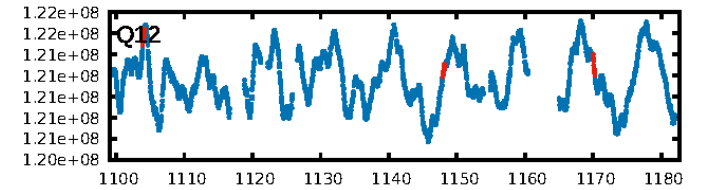
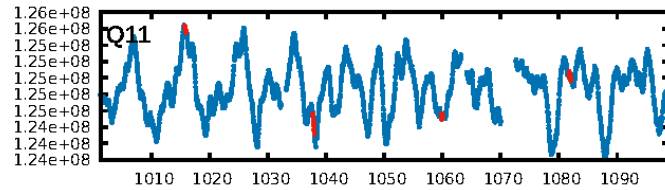
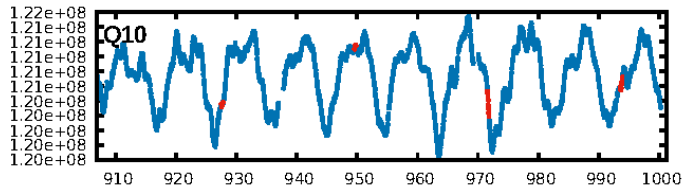
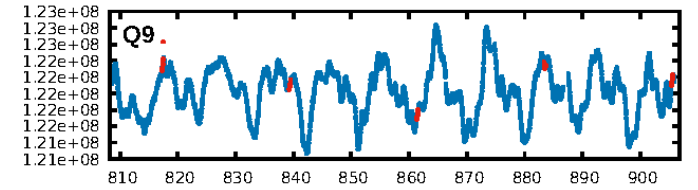
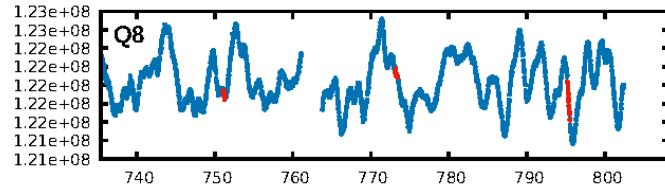
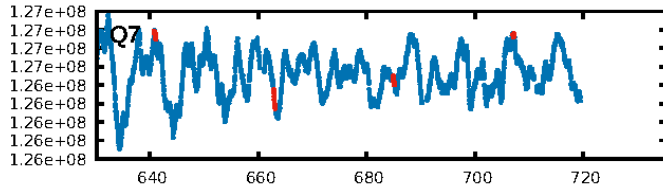
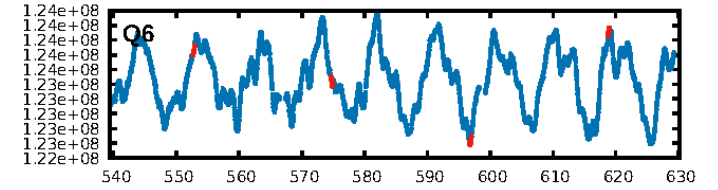
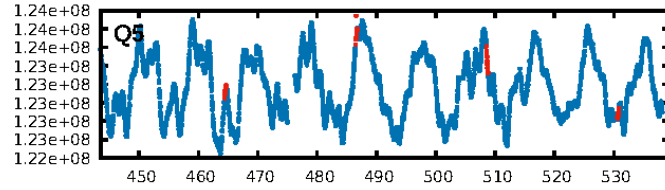
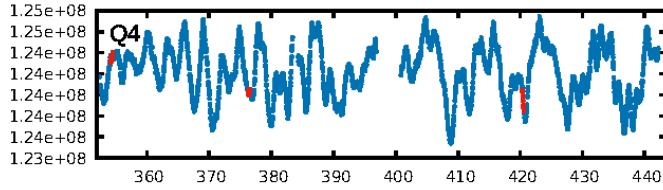
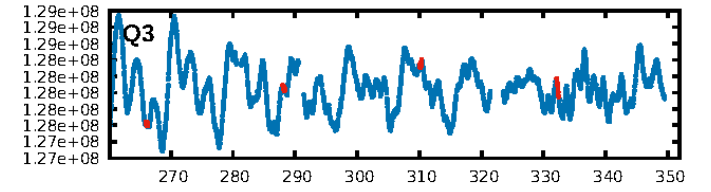
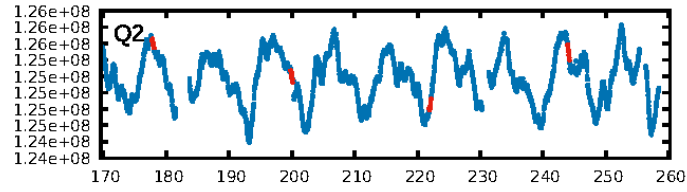
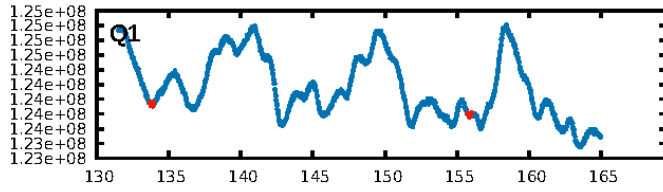
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 96.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.06e-22
RollingBand-fgt: 1.00 [58/58]
GhostDiagnostic-chr: 2.205
Centroid-sig: N/A
Centroid-so: 0.397 arcsec [0.51σ]
OotOffset-rm: 0.351 arcsec [0.89σ]
KicOffset-rm: 0.276 arcsec [0.92σ]
OotOffset-st: 3/2/4/2 [11]
KicOffset-st: 3/2/4/2 [11]
DiffImageQuality-fgm: 0.64 [7/11]
DiffImageOverlap-fno: 1.00 [17/17]

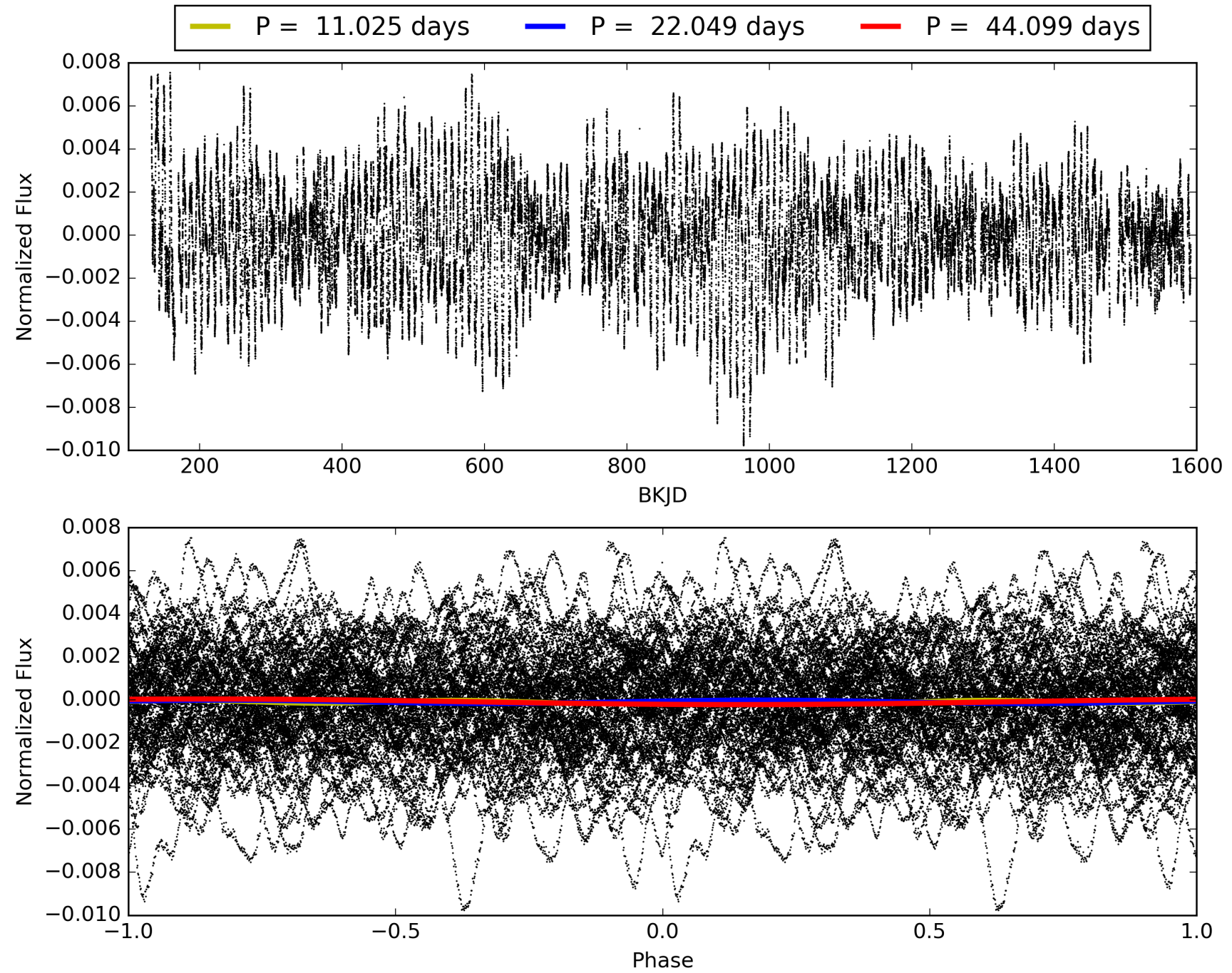
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 22:21:20 Z

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

TCE 007138841-01, PDC Light Curves

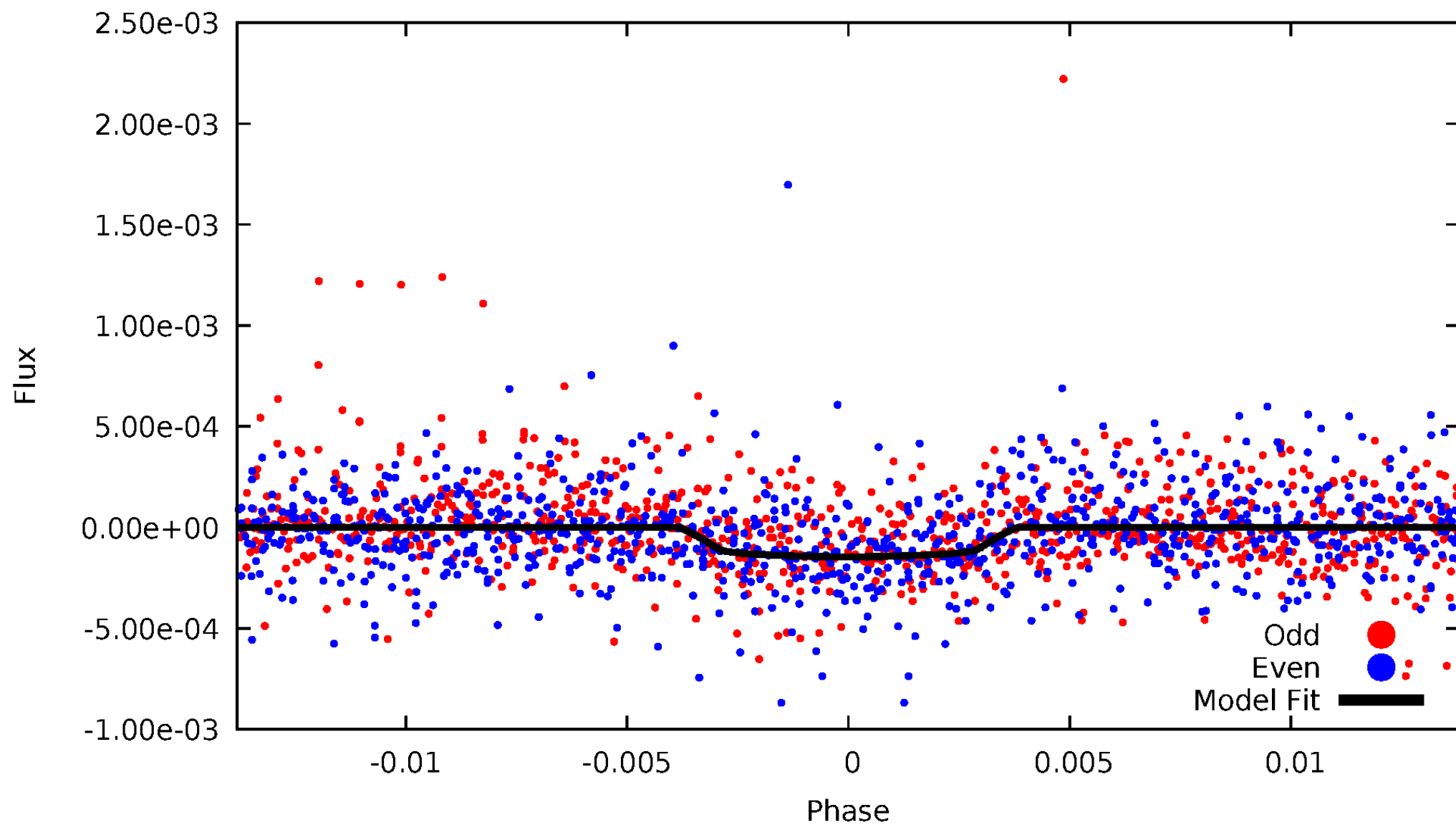


TCE 007138841-01



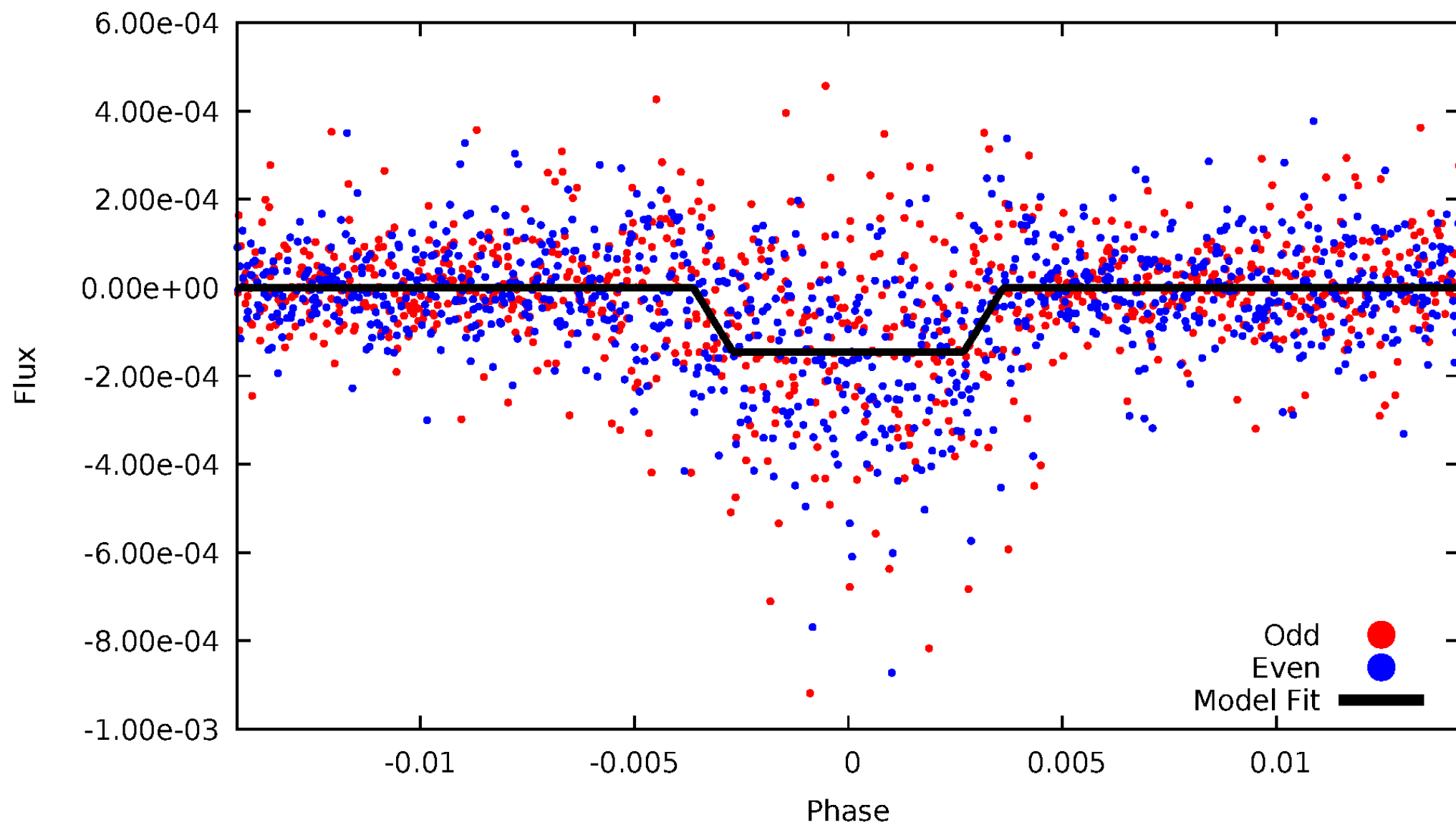
DV Odd/Even

TCE 007138841-01

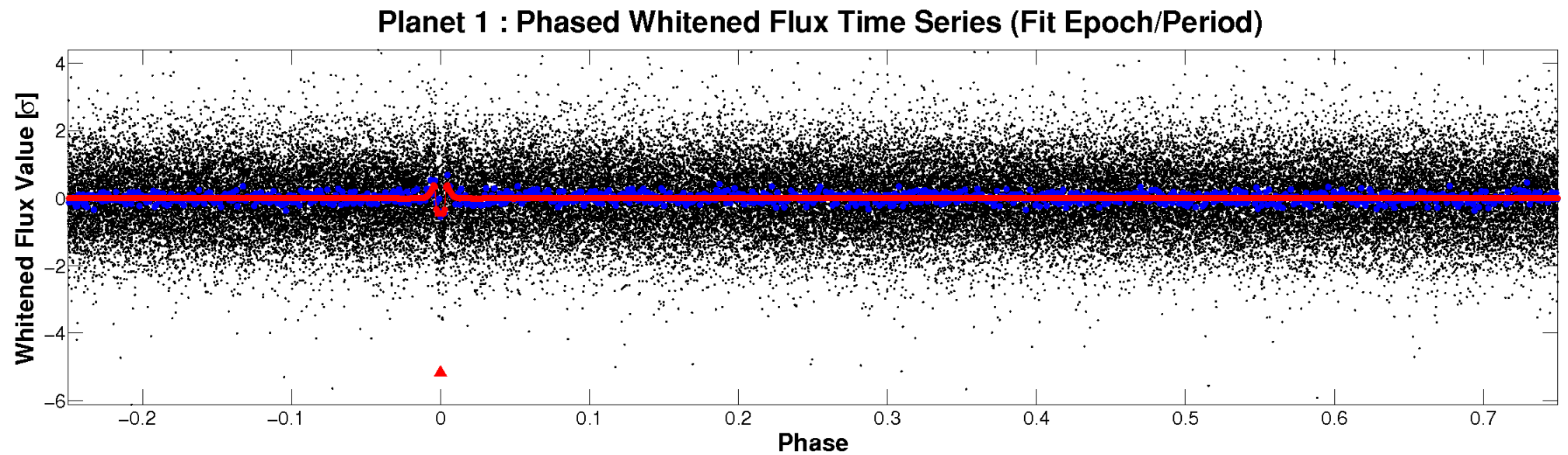
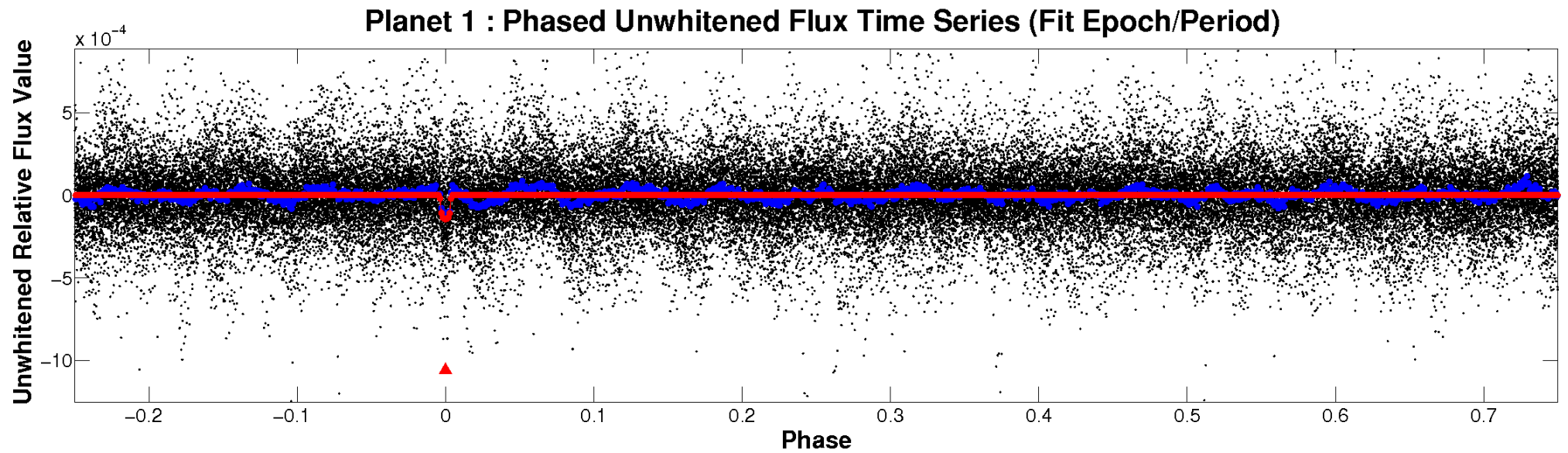


ALT Odd/Even

TCE 007138841-01

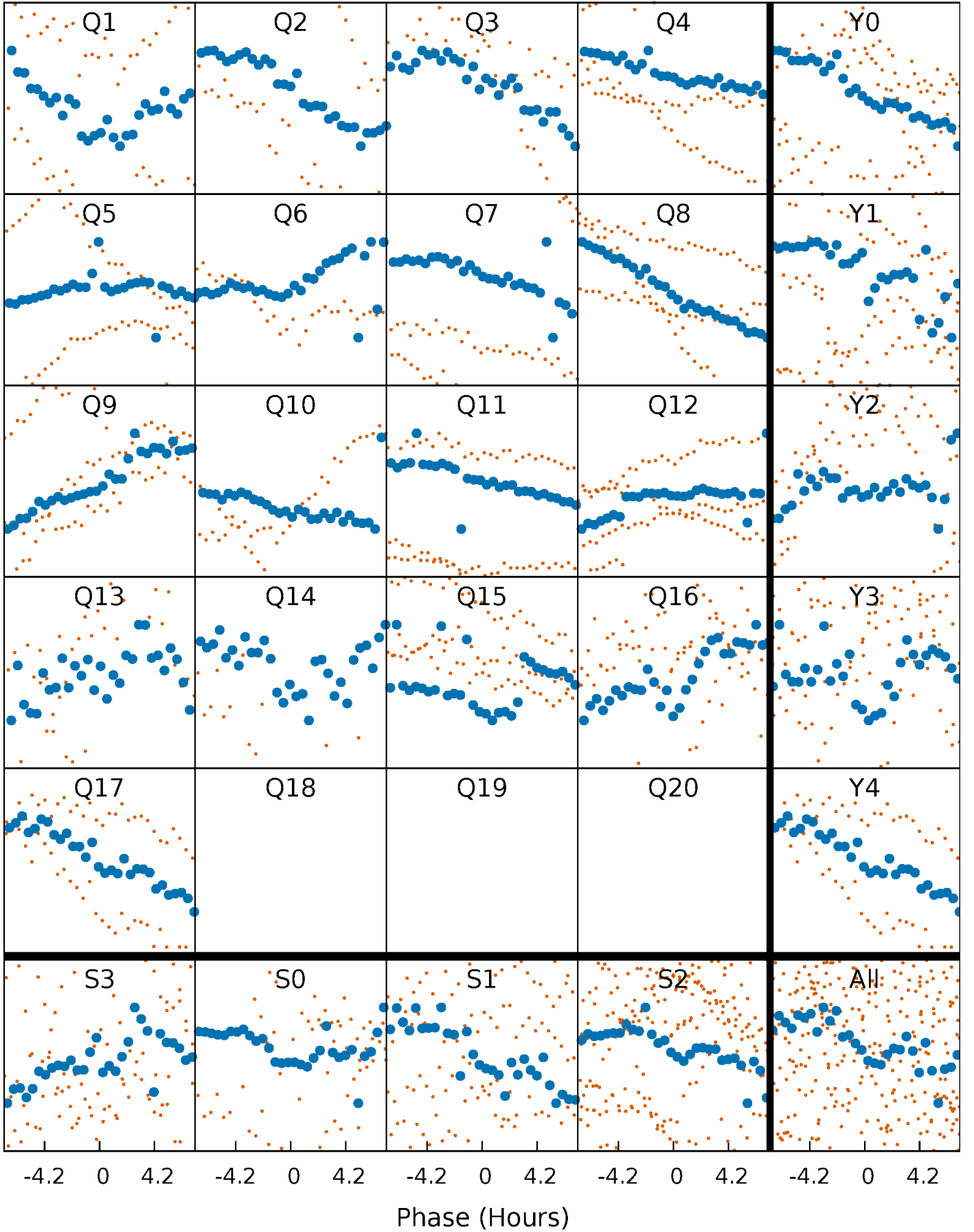


Non-Whitened Vs. Whitened Light Curve



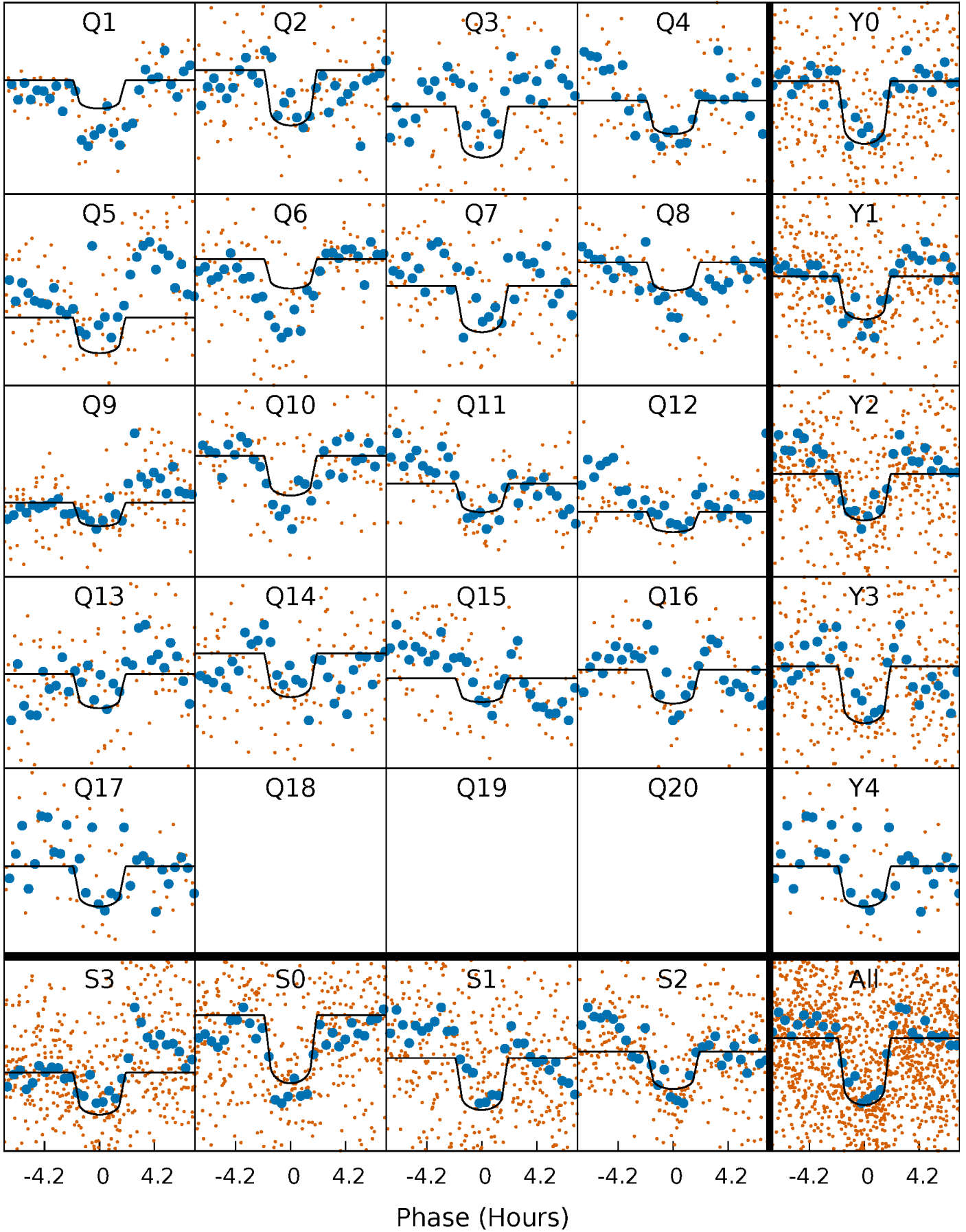
PDC Quarter-Phased Transit Curves

TCE 007138841-01 P= 22.049499 Days $T_0=133.823951$ (BKJD)



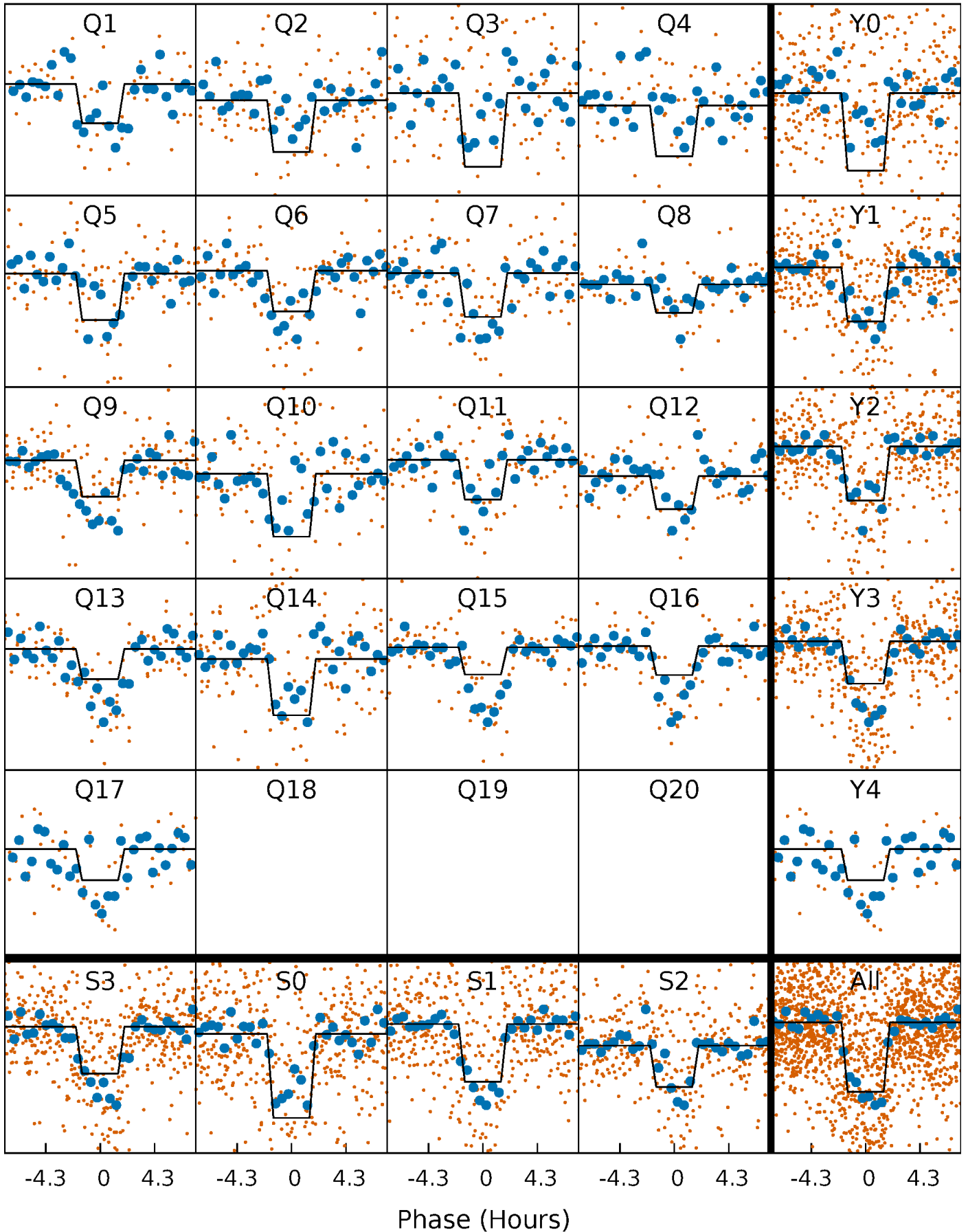
DV Quarter-Phased Transit Curves

TCE 007138841-01 P= 22.049499 Days $T_0=133.823951$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

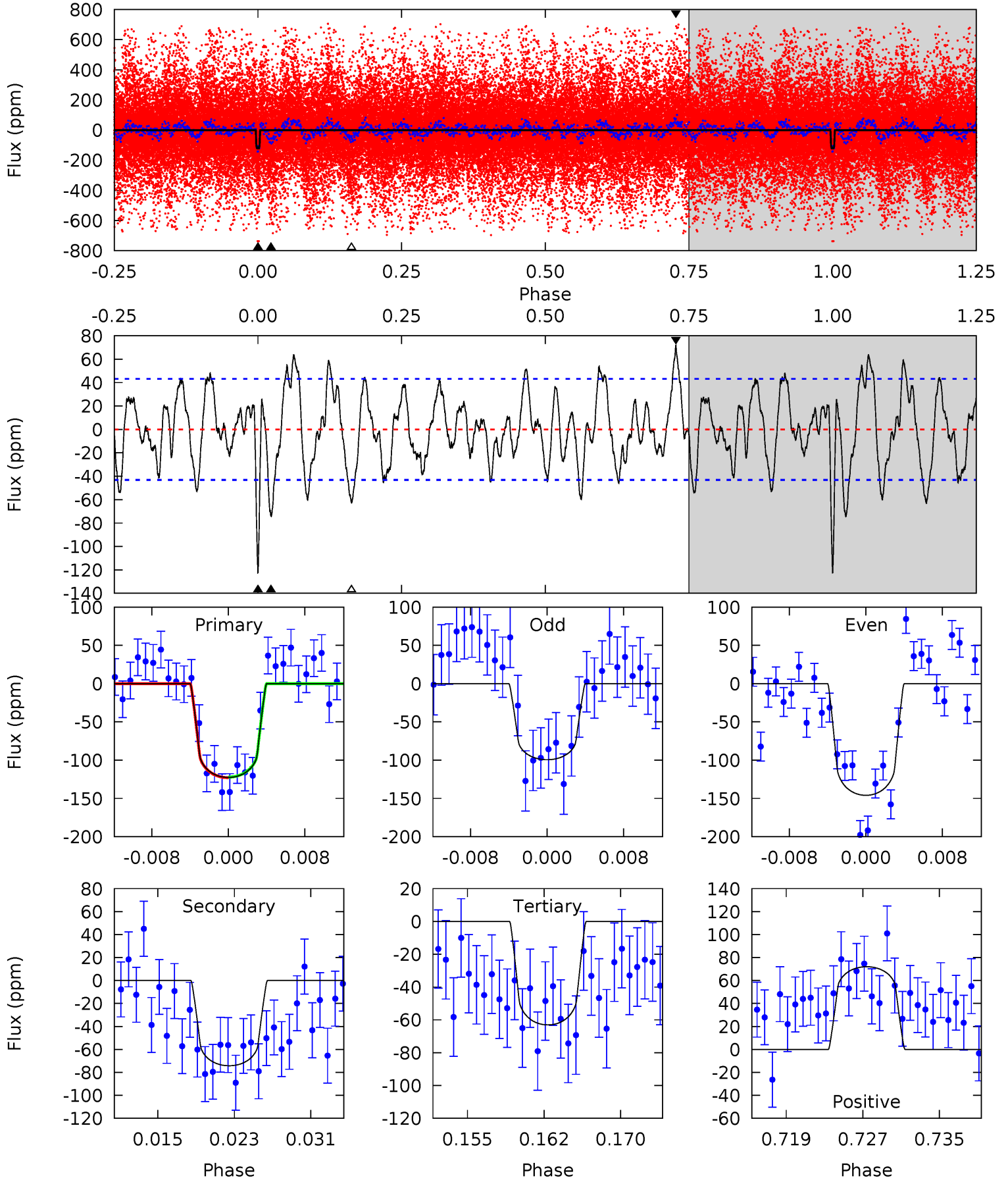
TCE 007138841-01 P= 22.049430 Days $T_0=133.830341$ (BKJD)



DV Model-Shift Uniqueness Test

007138841-01, $P = 22.049499$ Days, $E = 111.774452$ Days

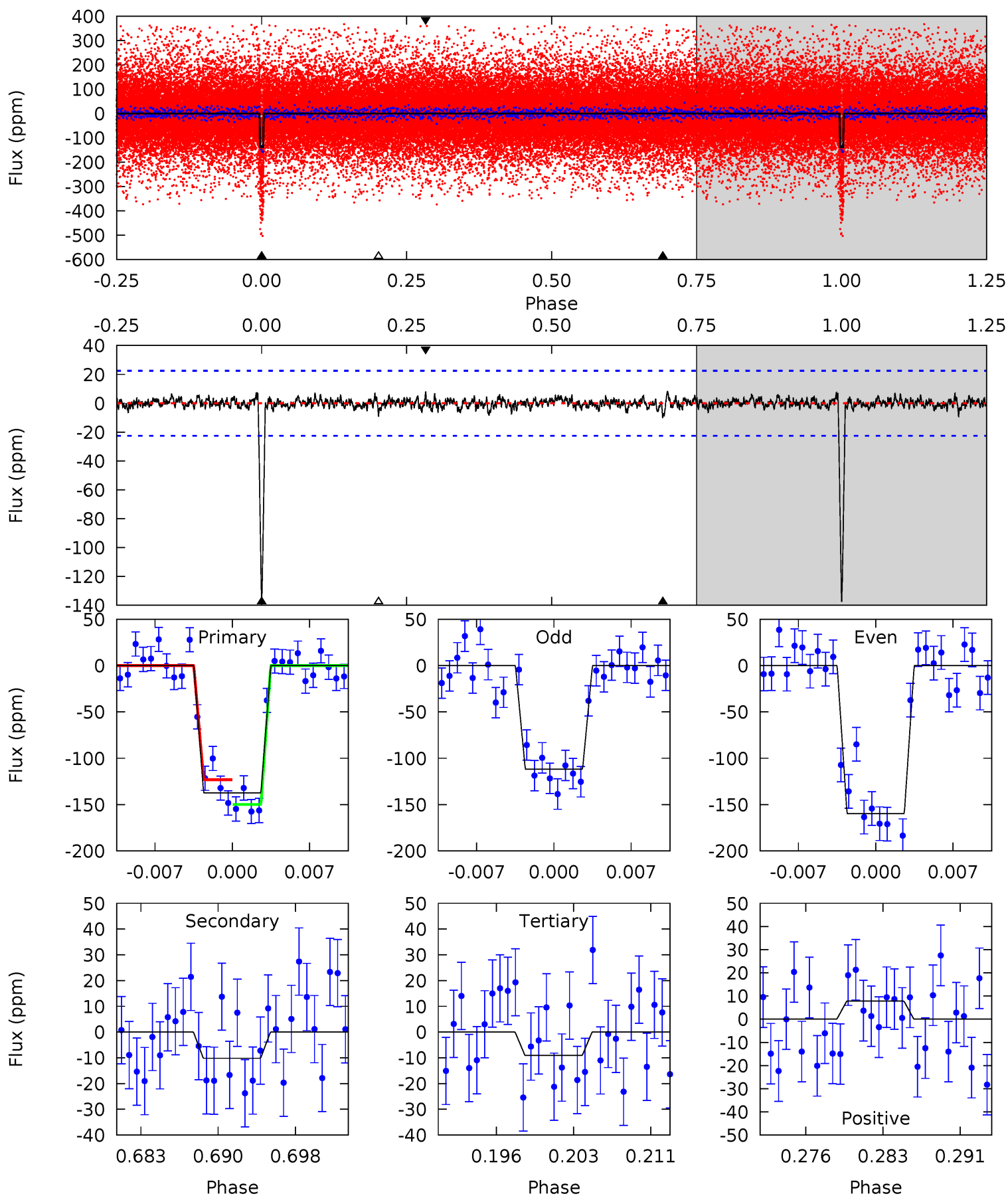
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.4	8.73	7.42	8.47	5.08	2.66	3.11	7.00	5.95	1.31	0.27	2.76	1.05	0.37	0.05



Alt Model-Shift Uniqueness Test

007138841-01, $P = 22.049430$ Days, $E = 111.780911$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
31.0	2.29	2.05	1.75	5.09	2.68	0.55	28.9	29.2	0.24	0.54	5.40	1.09	0.06	3.01



Stellar Parameters For KIC 007138841

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6821^{+189}_{-260}	$4.176^{+0.153}_{-0.187}$	$-0.220^{+0.250}_{-0.300}$	$1.548^{+0.451}_{-0.328}$	$1.321^{+0.182}_{-0.223}$	$0.501^{+0.440}_{-0.247}$
	+3%/-4%	+4%/-4%	+114%/-136%	+29%/-21%	+14%/-17%	+88%/-49%
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 007138841-01 / KOI 5361.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-74 ± 9	$2.08^{+0.83}_{-0.75}$	1282^{+104}_{-91}	5723^{+1471}_{-789}	262^{+392}_{-126}
Alt.	-10 ± 4	$2.06^{+0.81}_{-0.75}$	1273^{+103}_{-78}	3838^{+702}_{-533}	36^{+61}_{-21}

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

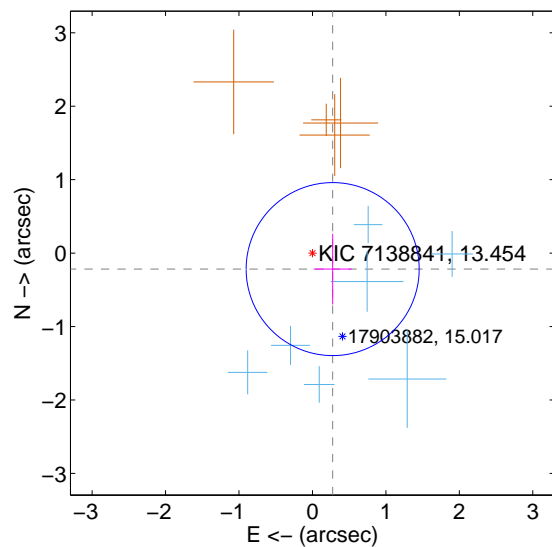
Supplemental centroid analysis for 007138841-01. Kepler magnitude: 13.45. Transit SNR 10.95

There are 7 quarters with good PRF difference image offsets

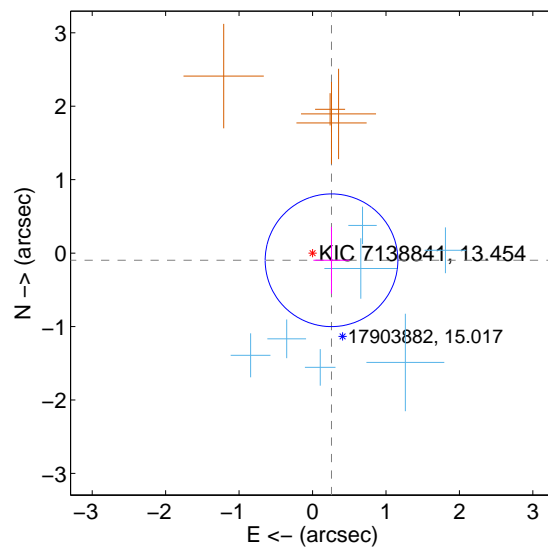
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.351 ± 0.393	0.89	-0.275 ± 0.259	-0.218 ± 0.481
PRF-fit source offset from KIC position	0.276 ± 0.301	0.92	-0.259 ± 0.246	-0.098 ± 0.455
photometric centroid source offset	0.40 ± 0.78	0.51	-0.01 ± 0.65	-0.40 ± 0.78

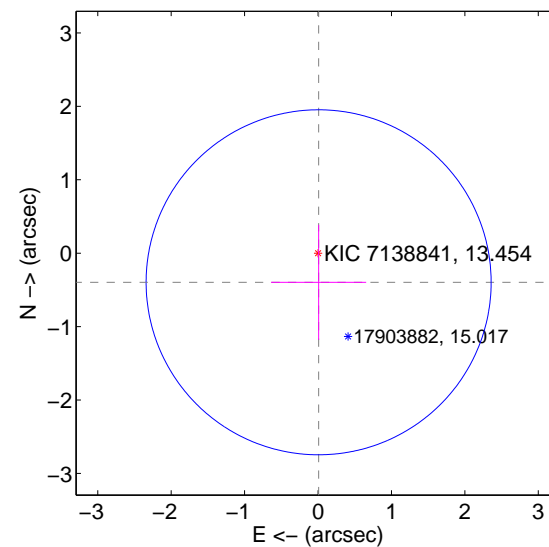
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

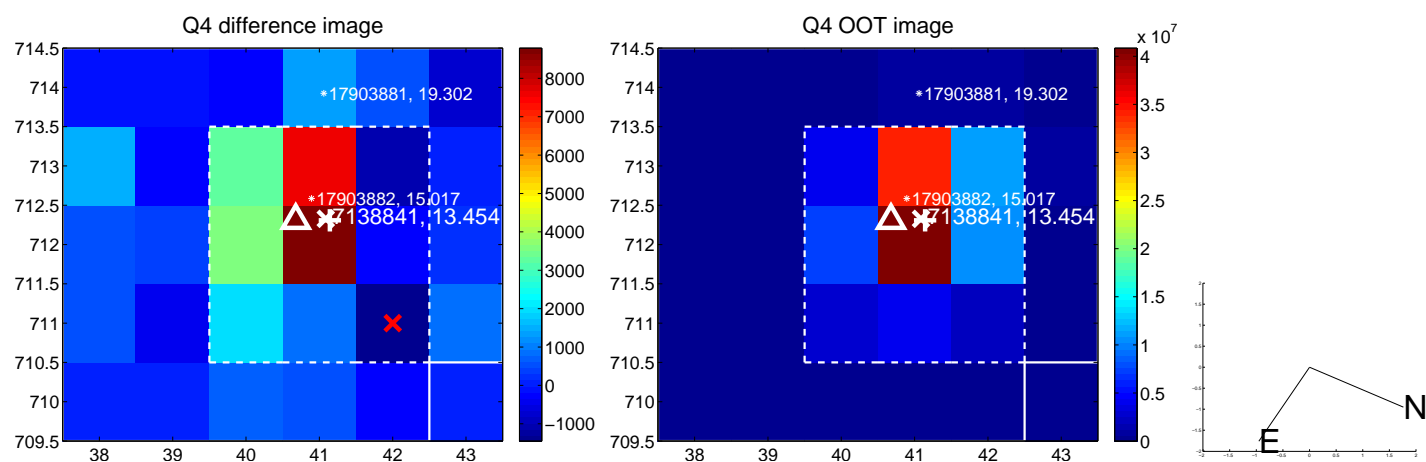
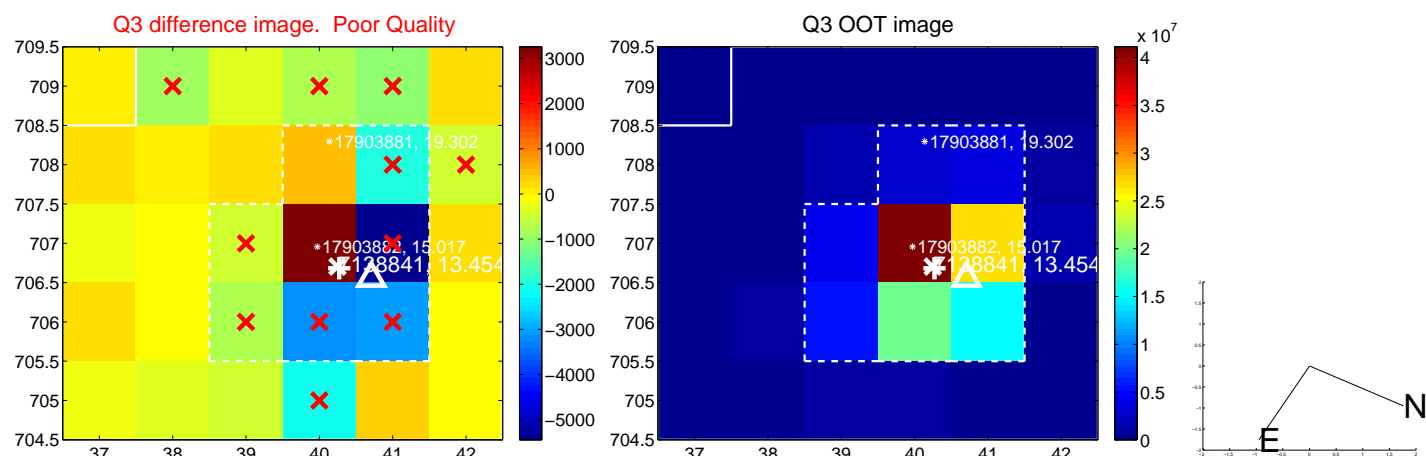
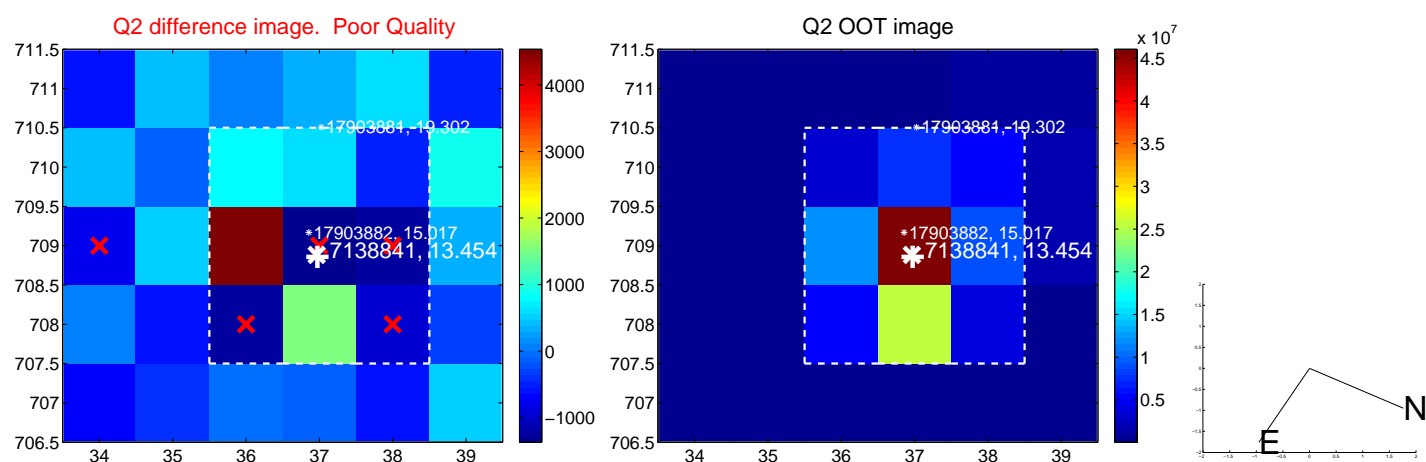
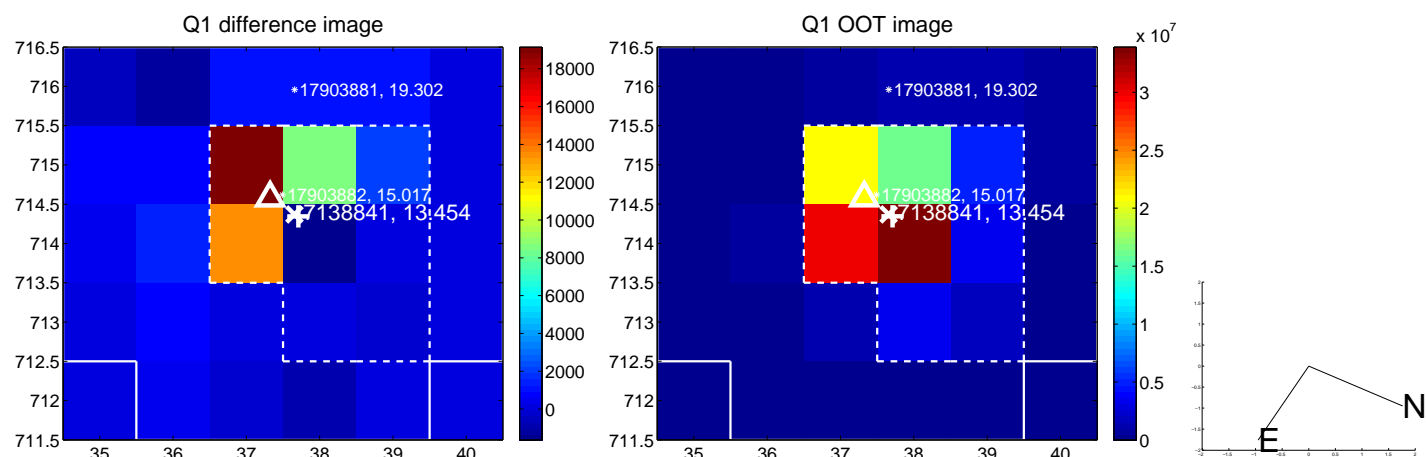


offset from photometric centroids

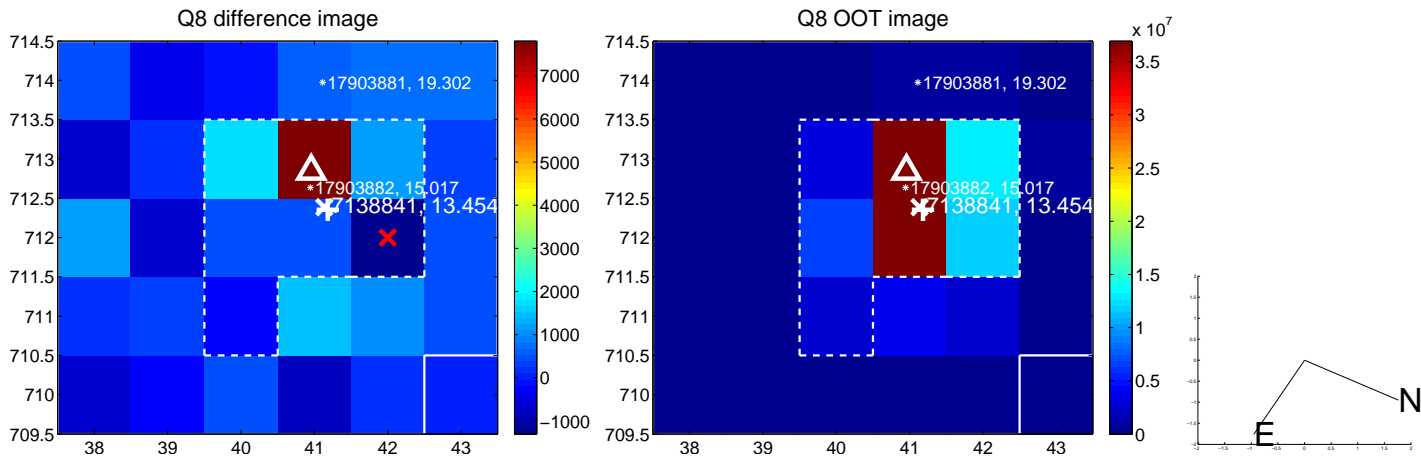
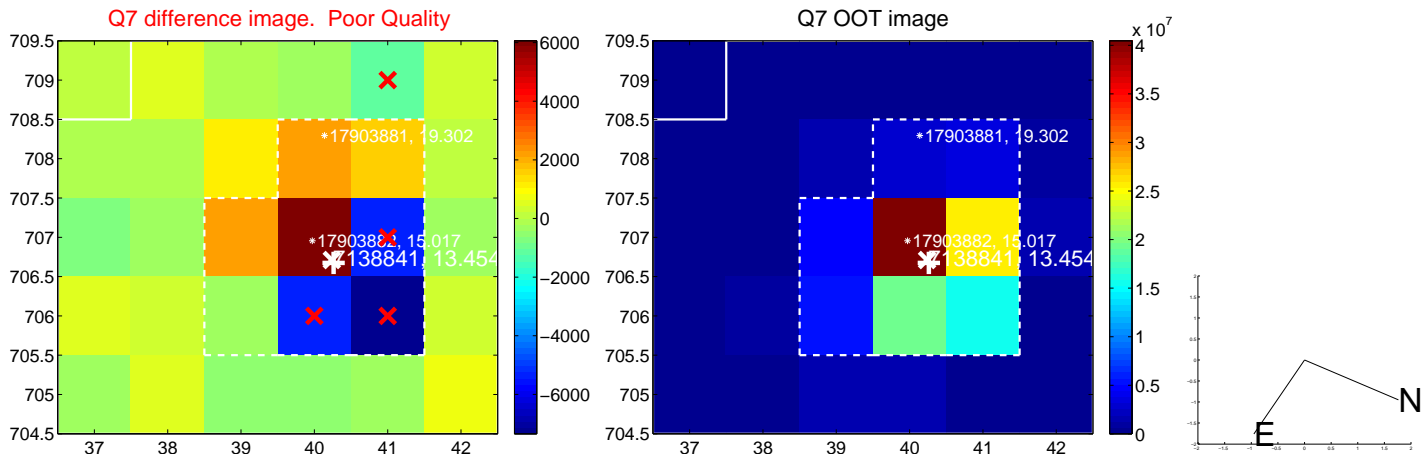
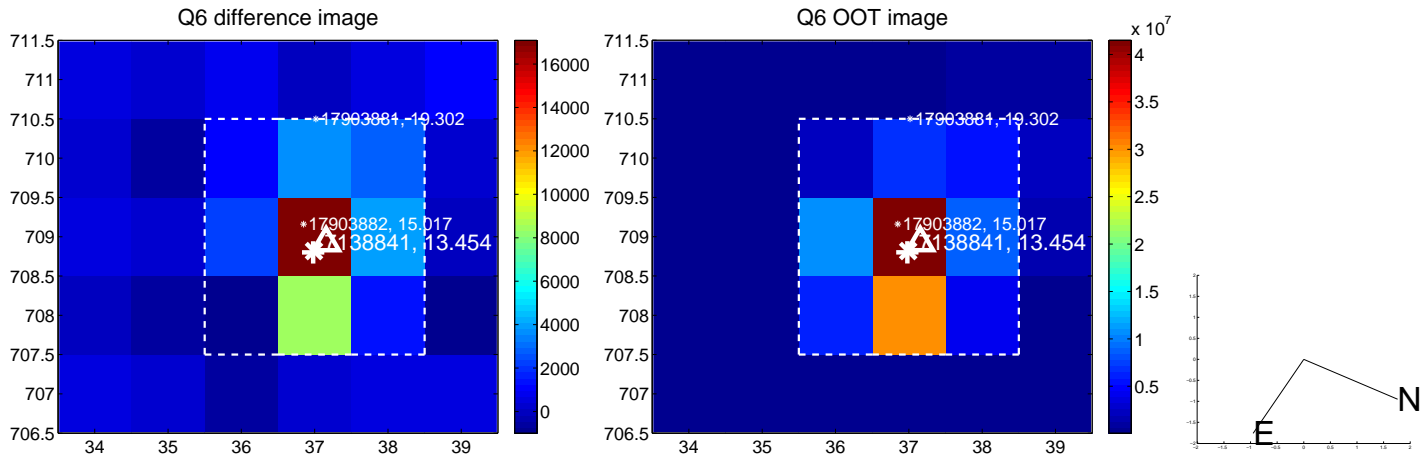
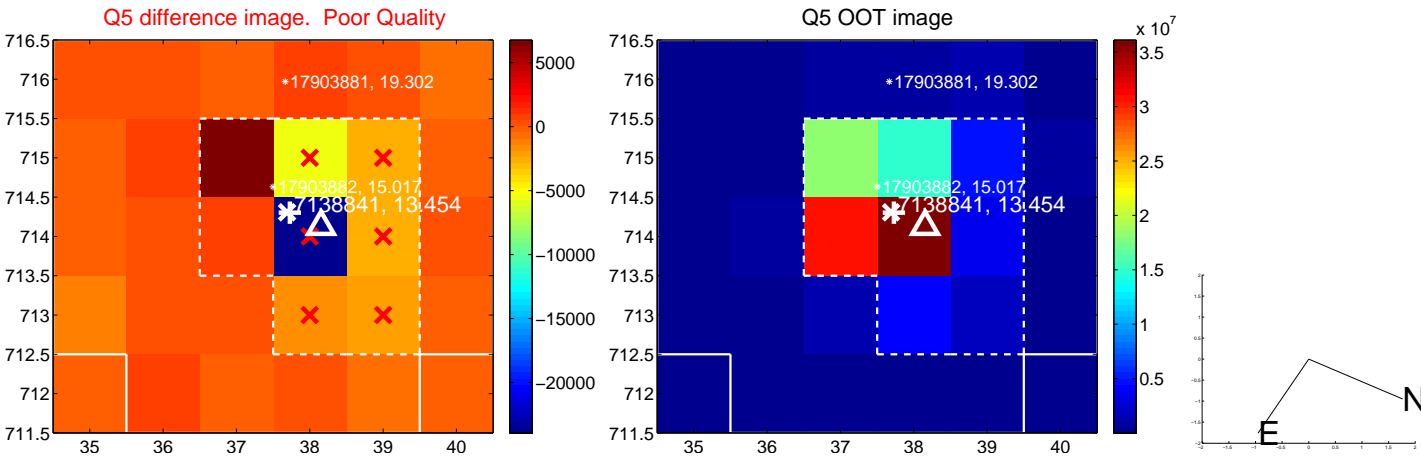


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

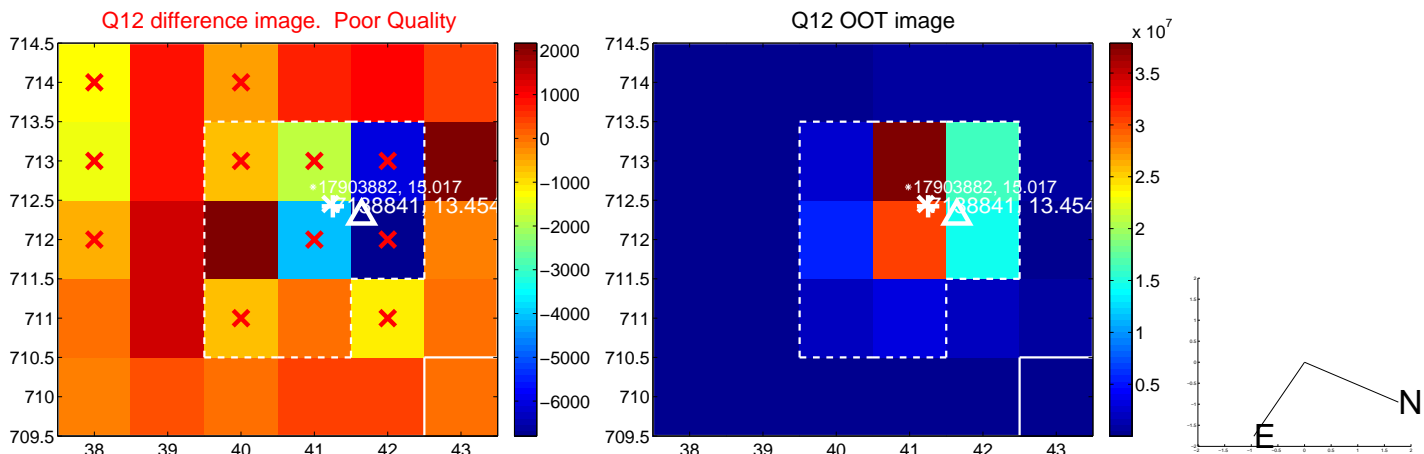
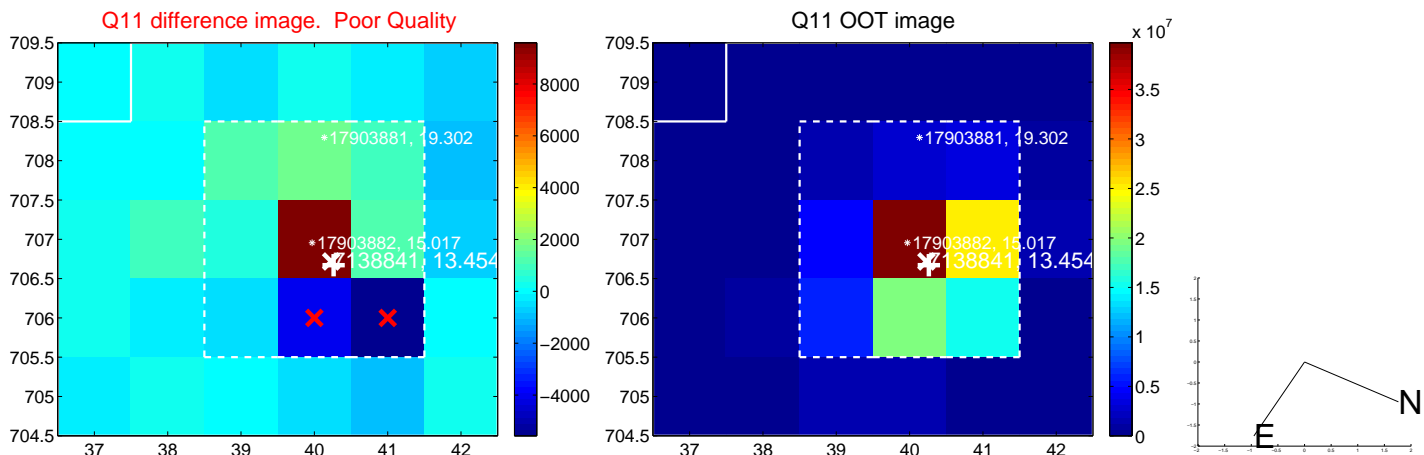
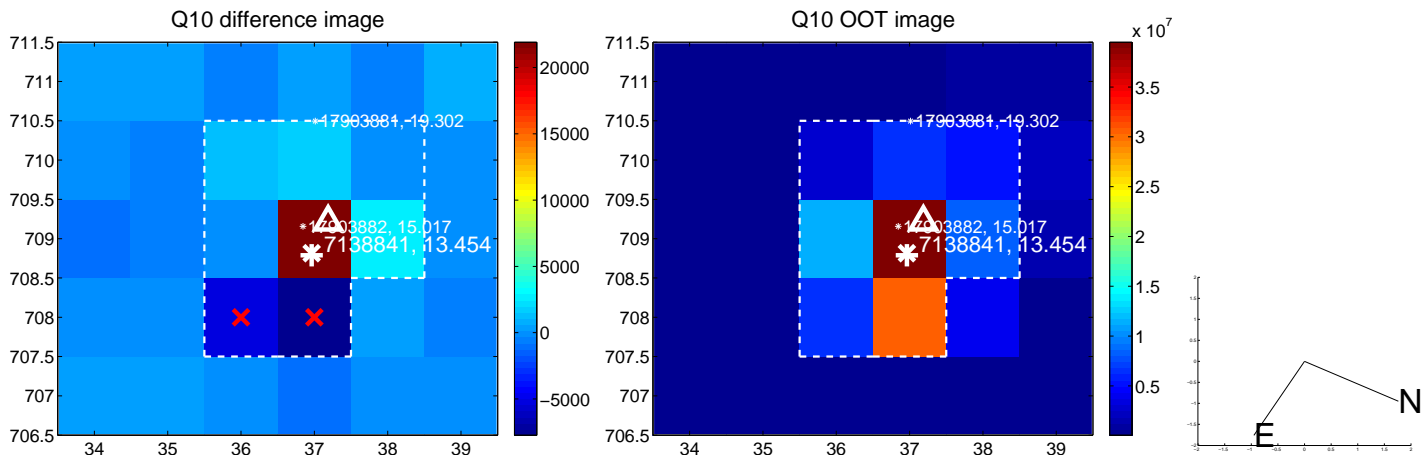
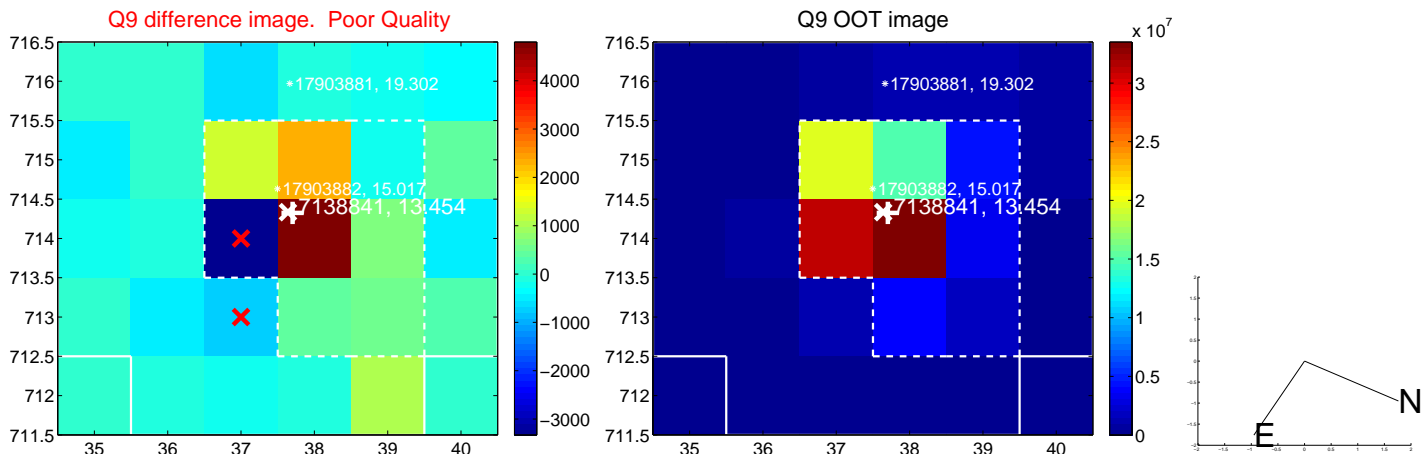
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



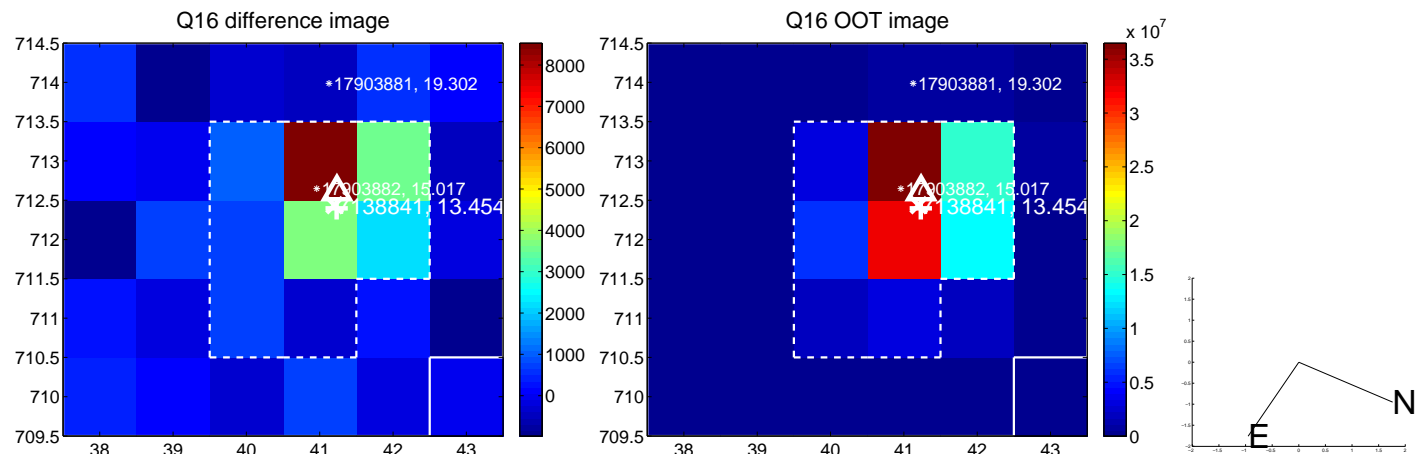
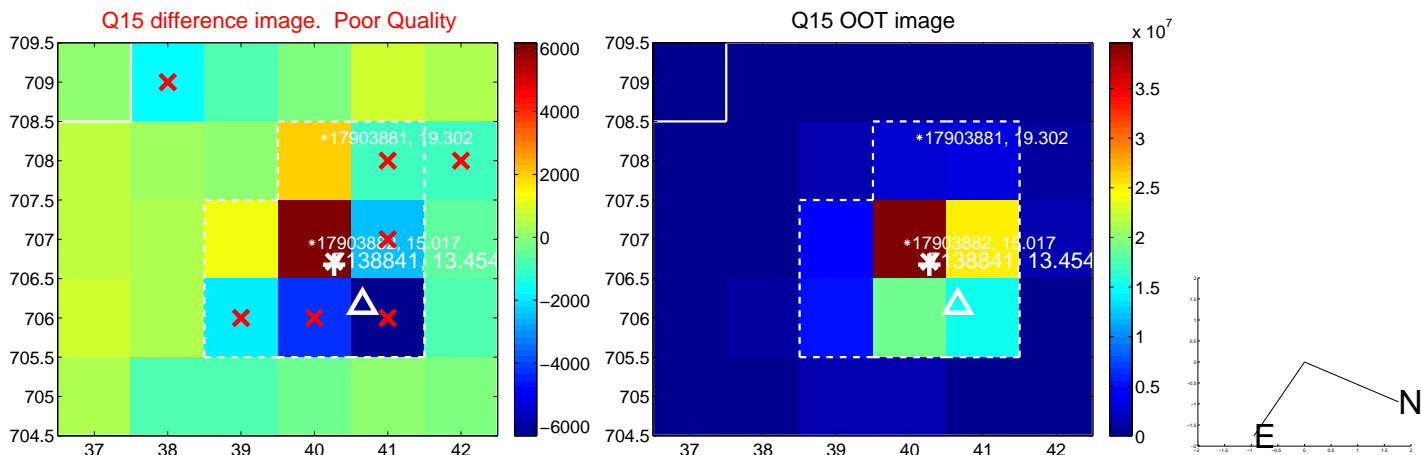
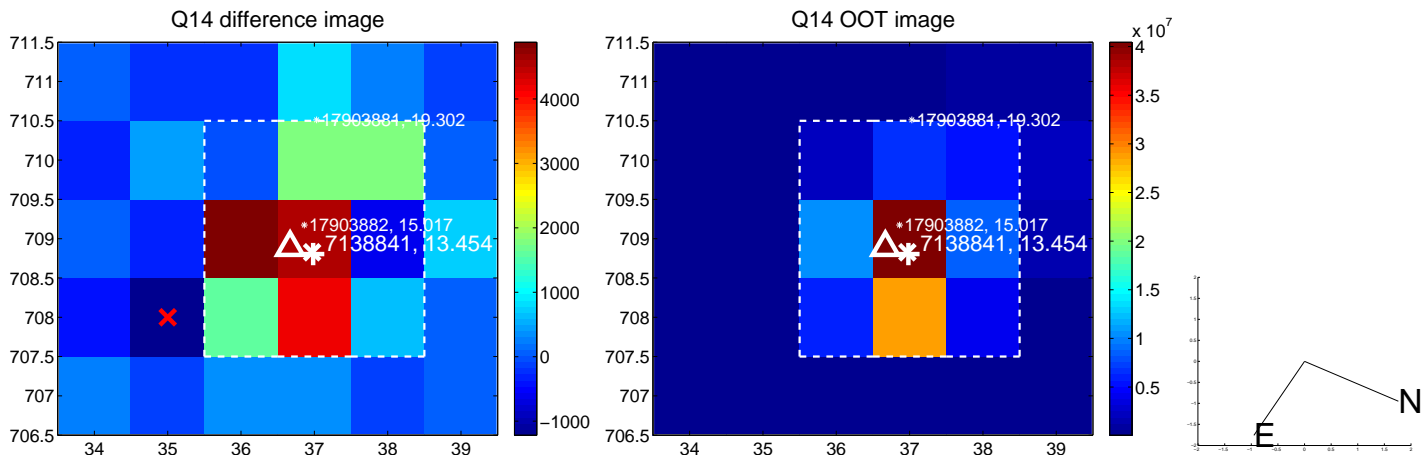
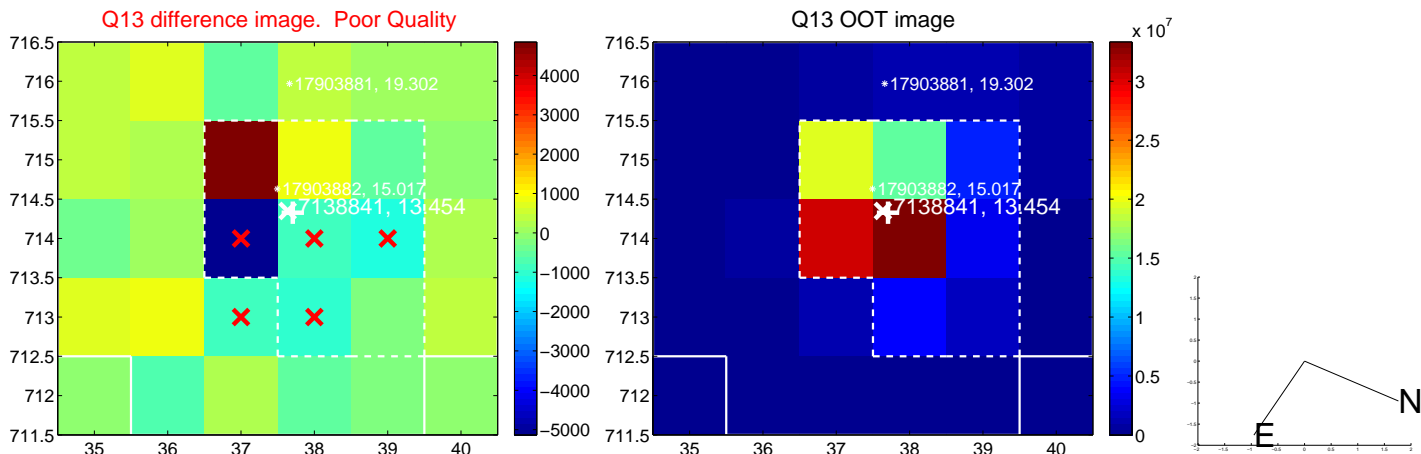
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



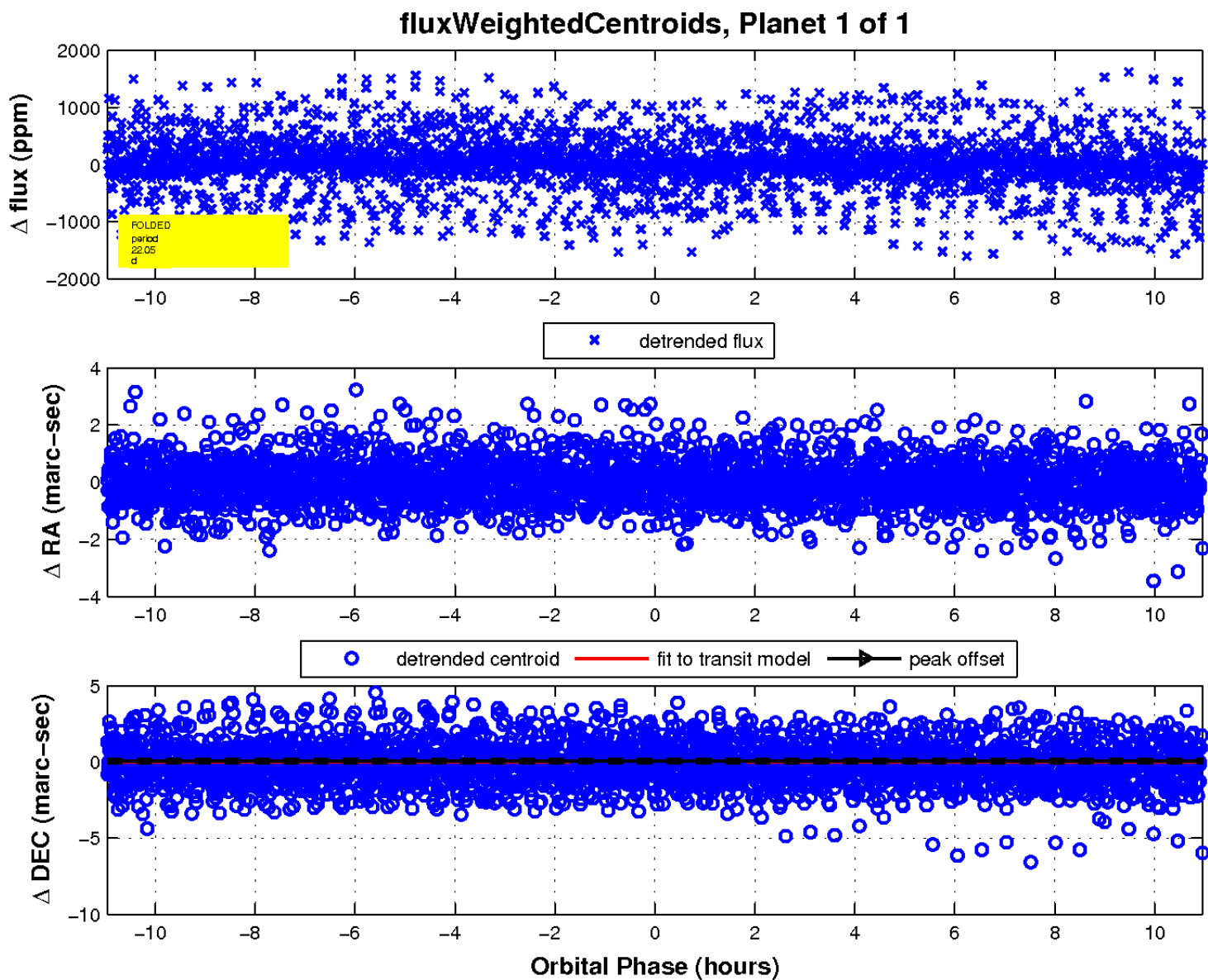
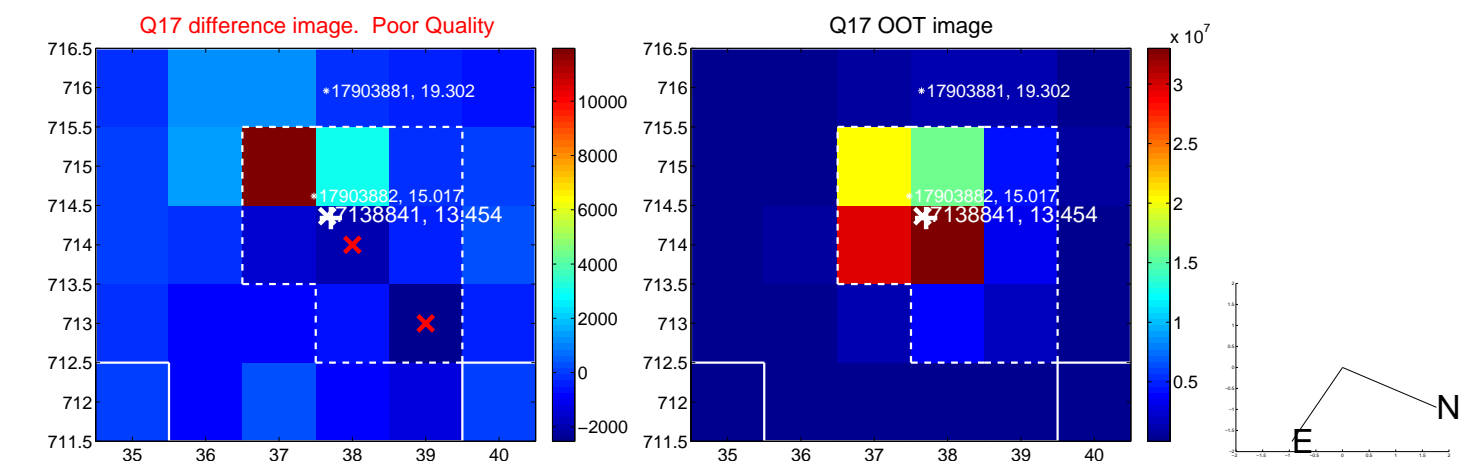
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

