

KIC 005302556

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})
005302556-01	OBS	No	2.224064	132.588322	9.3	17.984	10.9	3.5	4.34	6535	1.37	18169.39

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005302556-01	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.

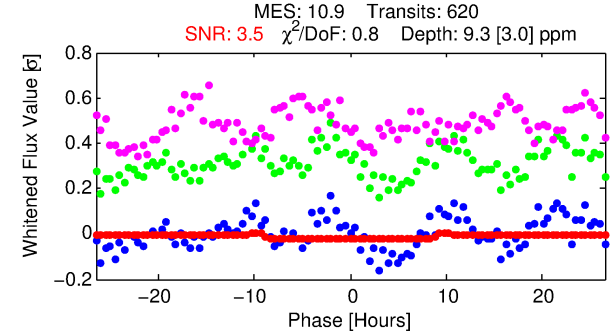
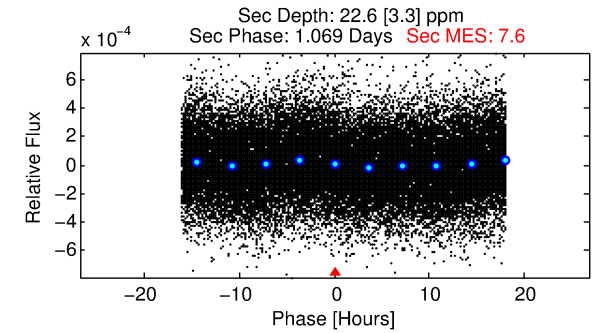
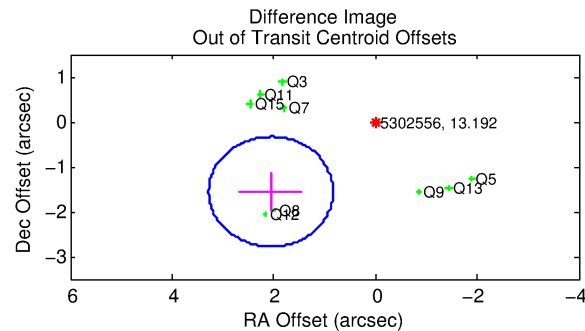
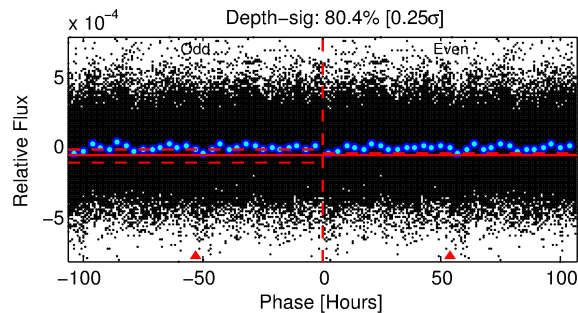
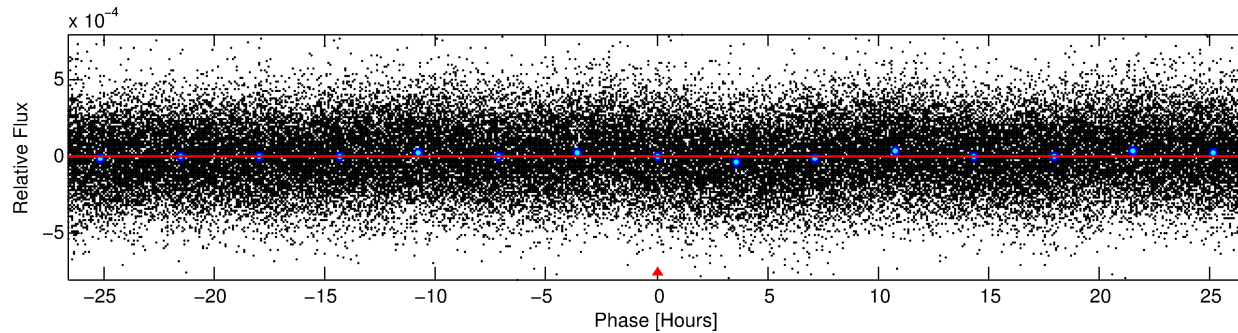
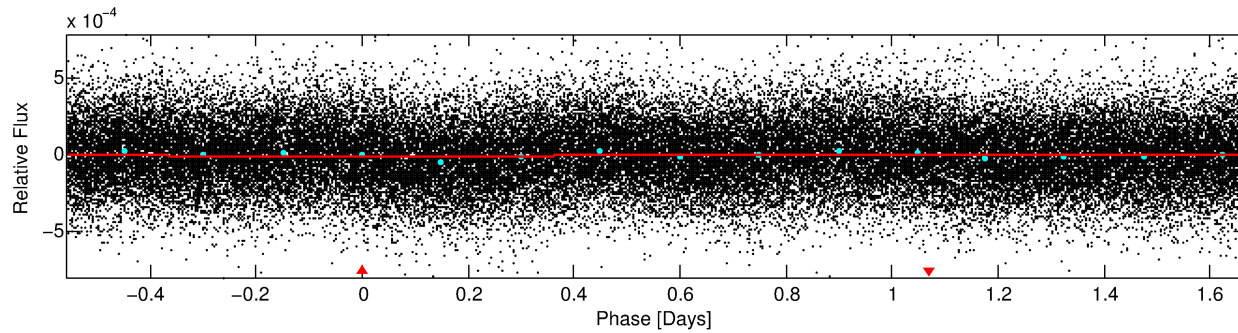
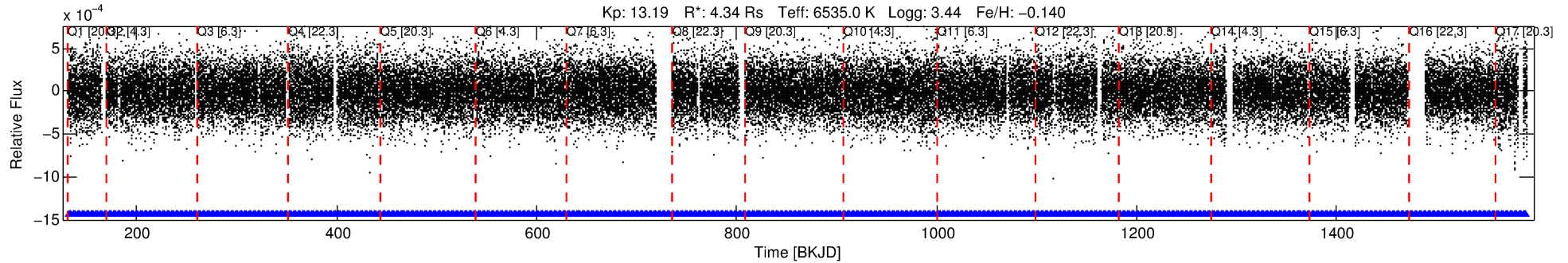
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005302556-01

No Significant Match Found

DV One-Page Summary

KIC: 5302556 Candidate: 1 of 1 Period: 2.224 d



DV Fit Results:

Period = 2.22406 [0.00011] d
Epoch = 132.5883 [0.0229] BKJD
Rp/R* = 0.0029 [0.0056]
a/R* = 1.11 [2.25]
b = 0.53 [14.46]
Seff = 18169.39 [11014.28]
Teq = 2960 [449] K
Rp = 1.37 [2.70] Re
a = 0.0412 [0.0152] AU
Ag = 11.21 [43.81] [0.23 σ]
Teffp = 8375 [8090] K [0.67 σ]

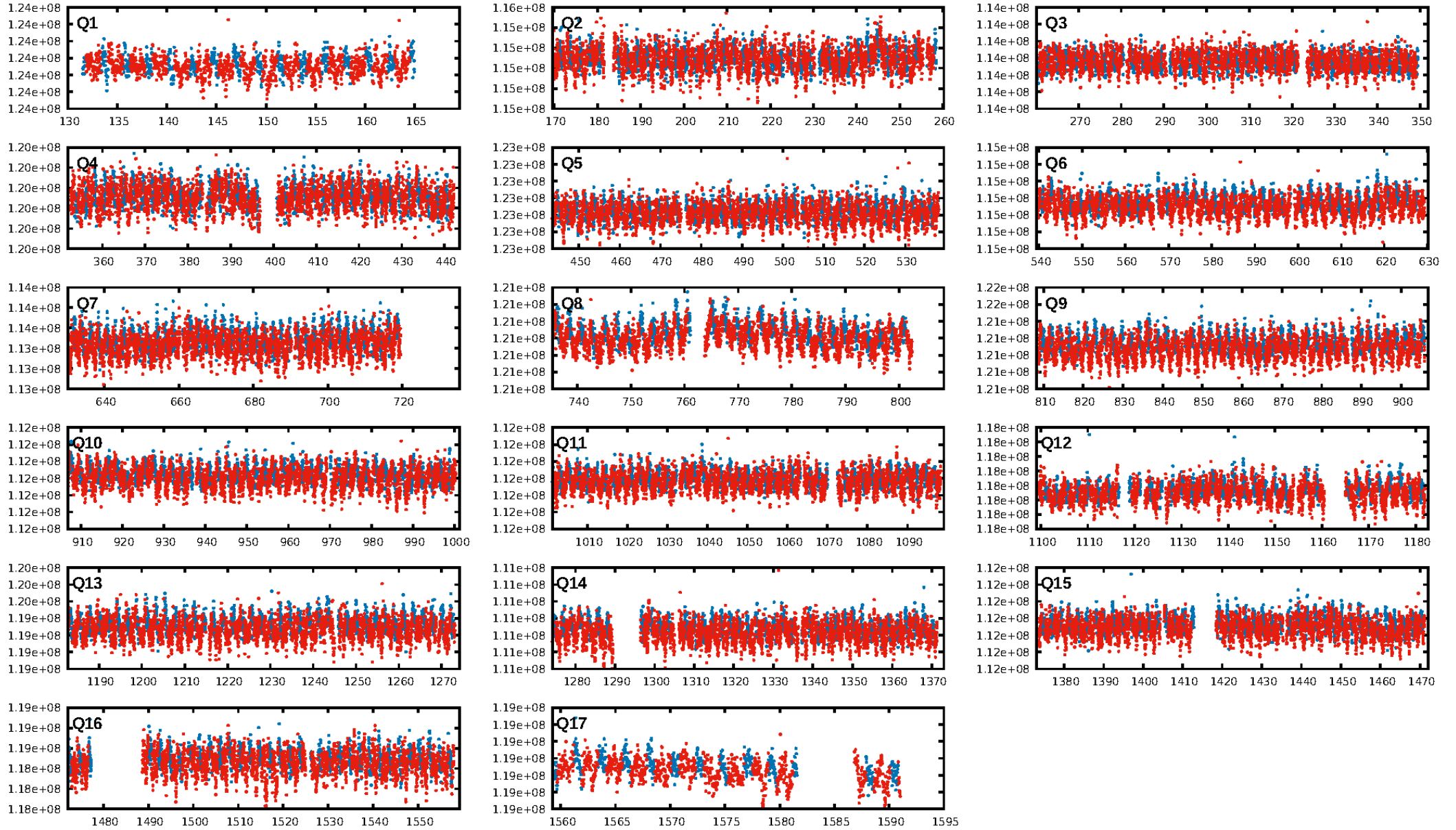
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [593/593]
GhostDiagnostic-chr: 0.4865
Centroid-sig: 0.0%
Centroid-so: 4.464 arcsec [2.68 σ]
OotOffset-rm: 2.581 arcsec [6.33 σ]
KicOffset-rm: 2.552 arcsec [6.47 σ]
OotOffset-st: 0/4/2/3 [9]
KicOffset-st: 0/4/2/3 [9]
DiffImageQuality-fgm: 1.00 [9/9]
DiffImageOverlap-fno: 1.00 [17/17]

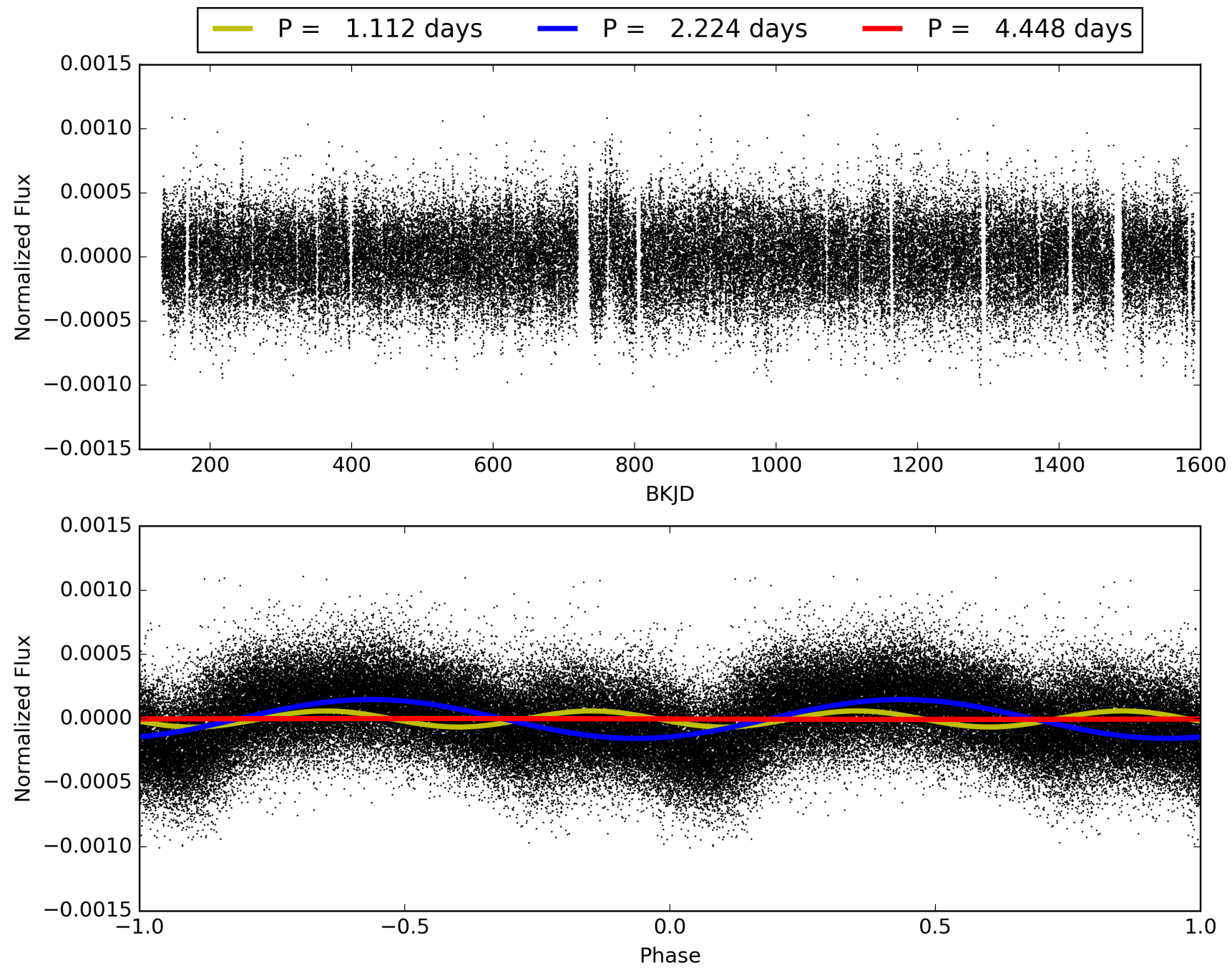
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 10:10:34 Z

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

TCE 005302556-01, PDC Light Curves

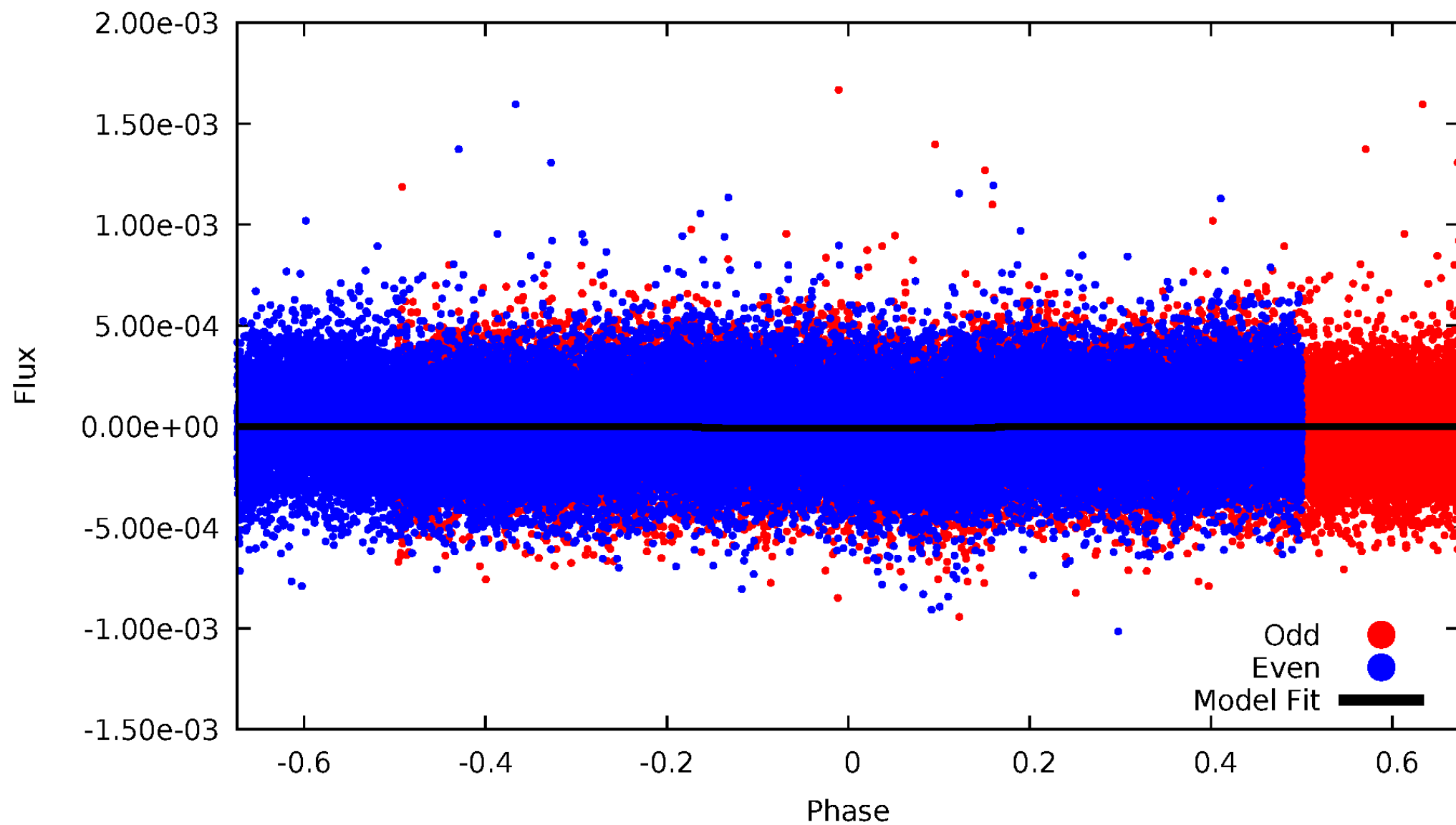


TCE 005302556-01



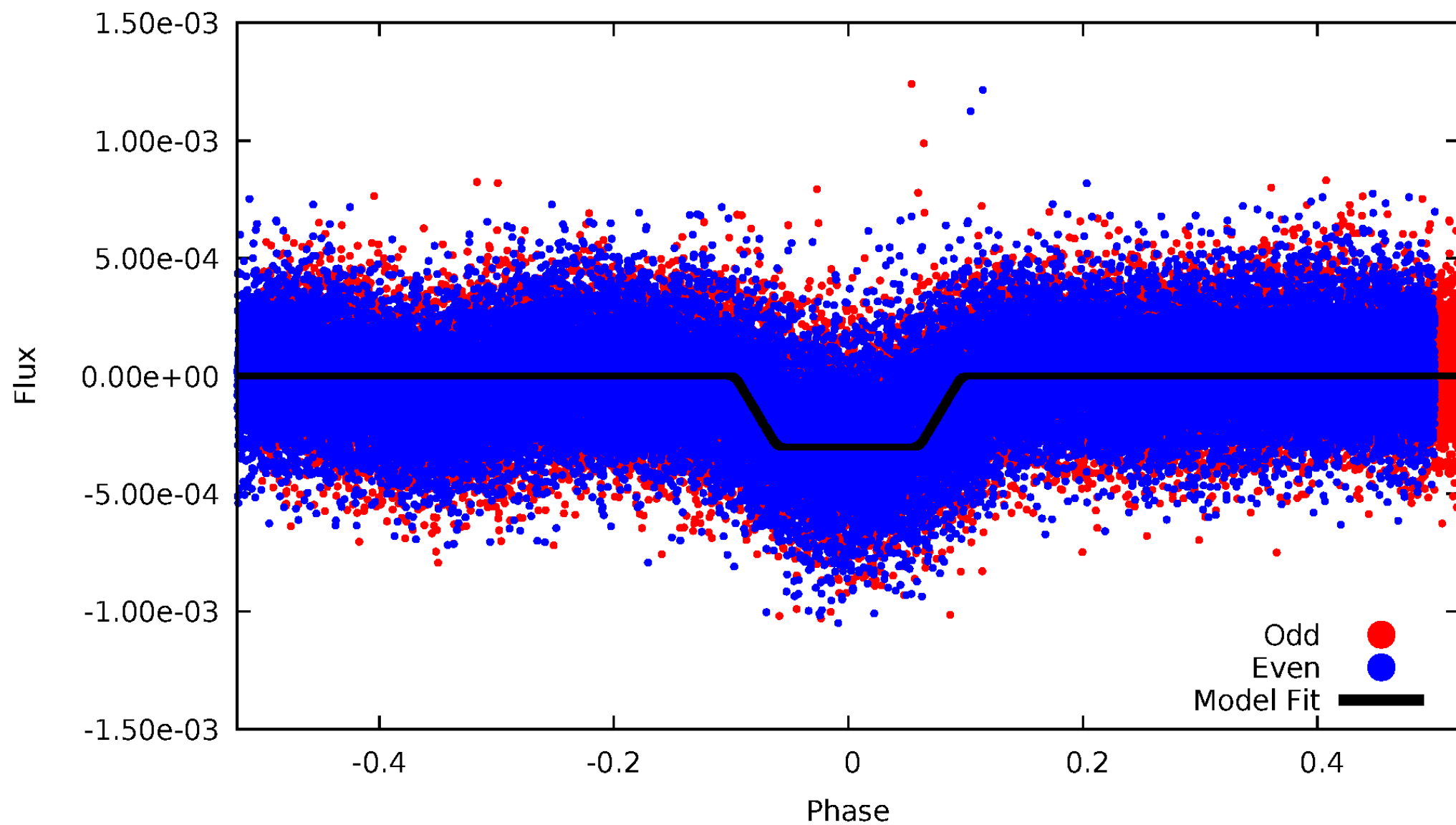
DV Odd/Even

TCE 005302556-01

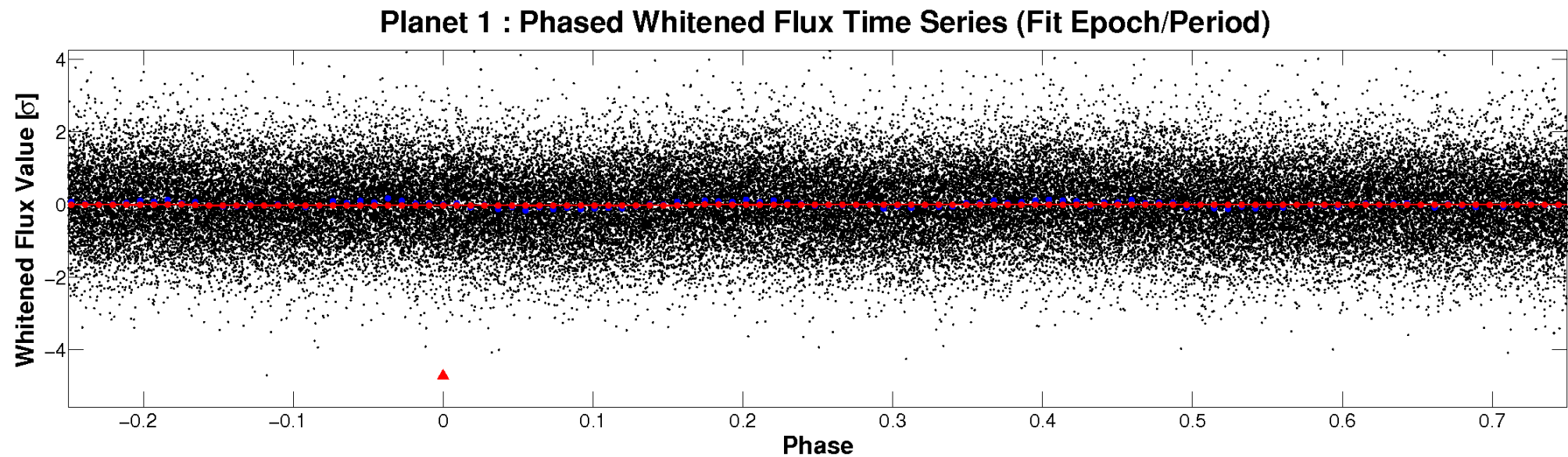
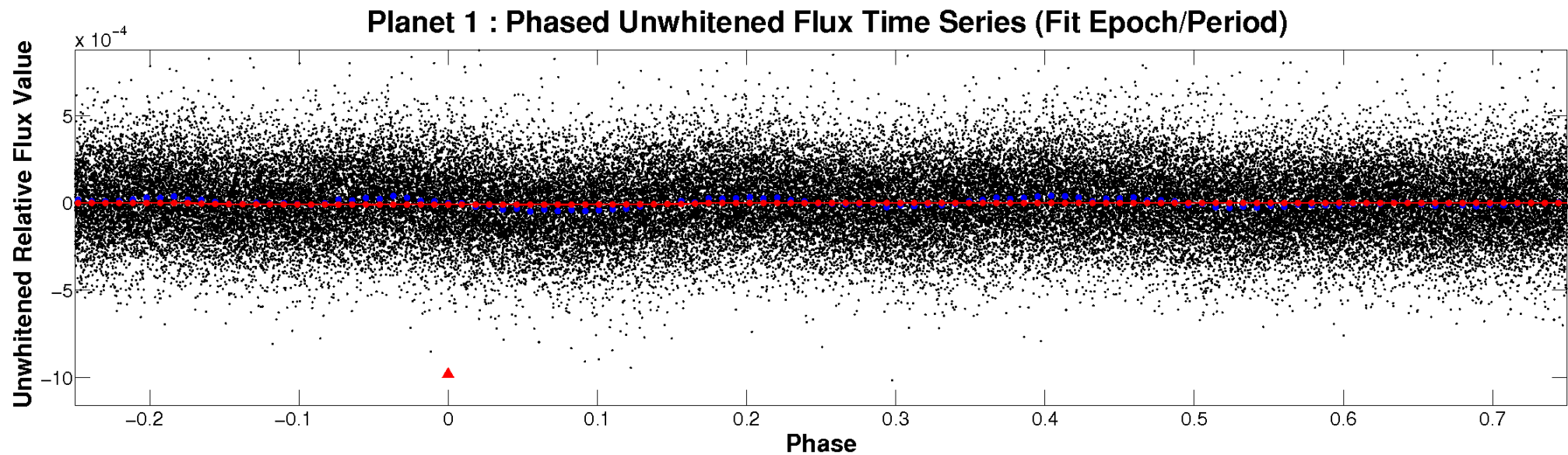


ALT Odd/Even

TCE 005302556-01

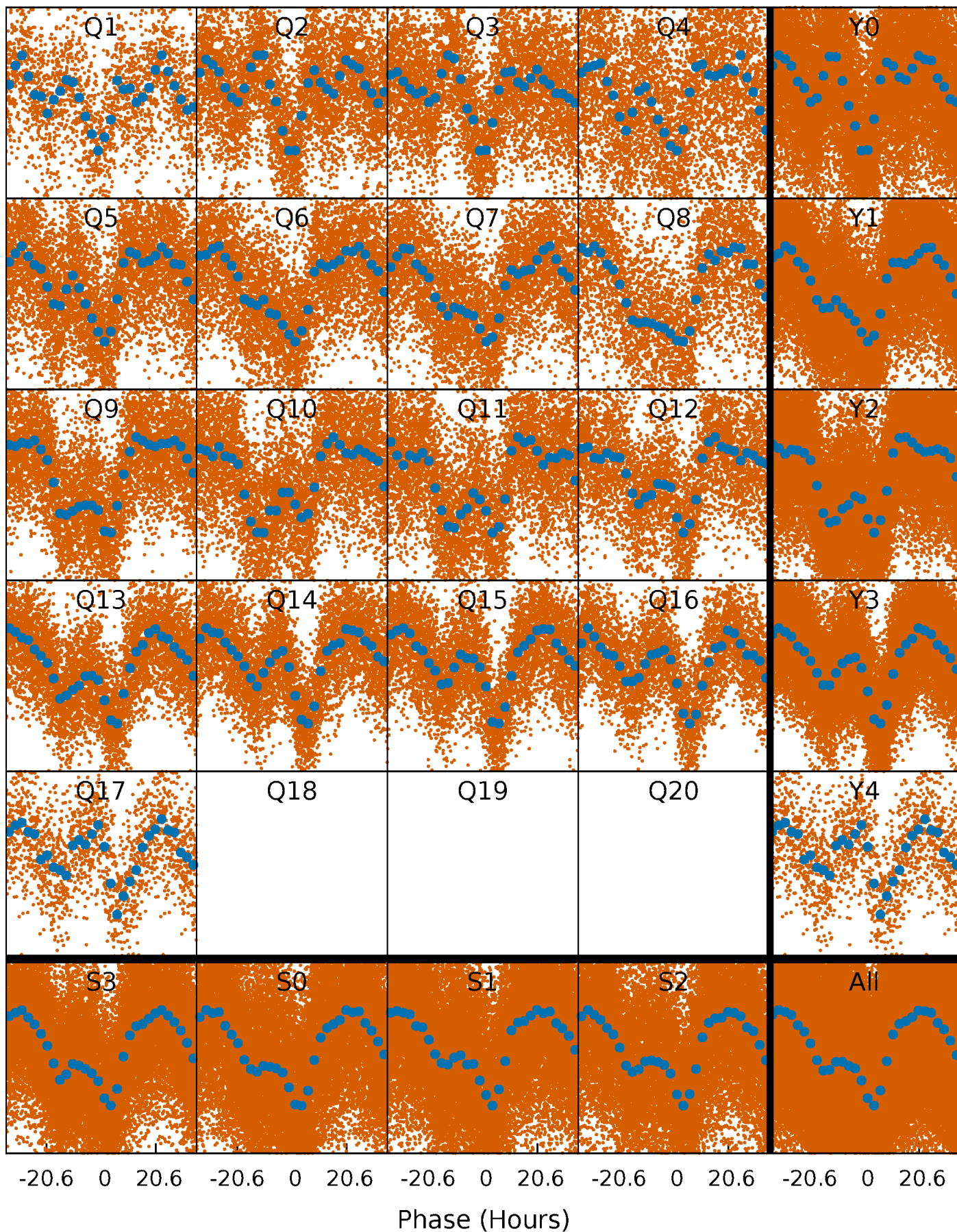


Non-Whitened Vs. Whitened Light Curve



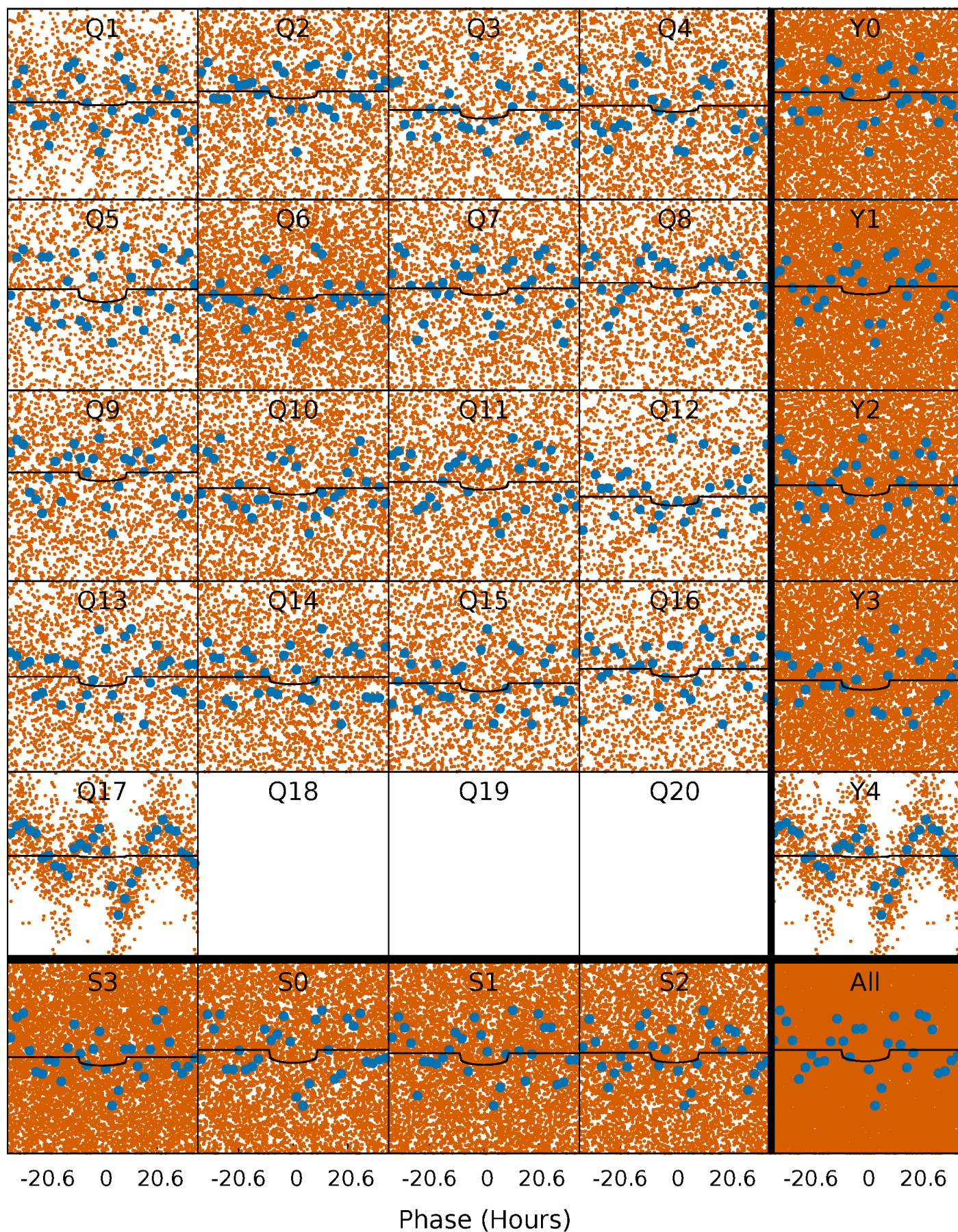
PDC Quarter-Phased Transit Curves

TCE 005302556-01 P= 2.224064 Days $T_0=132.588322$ (BKJD)



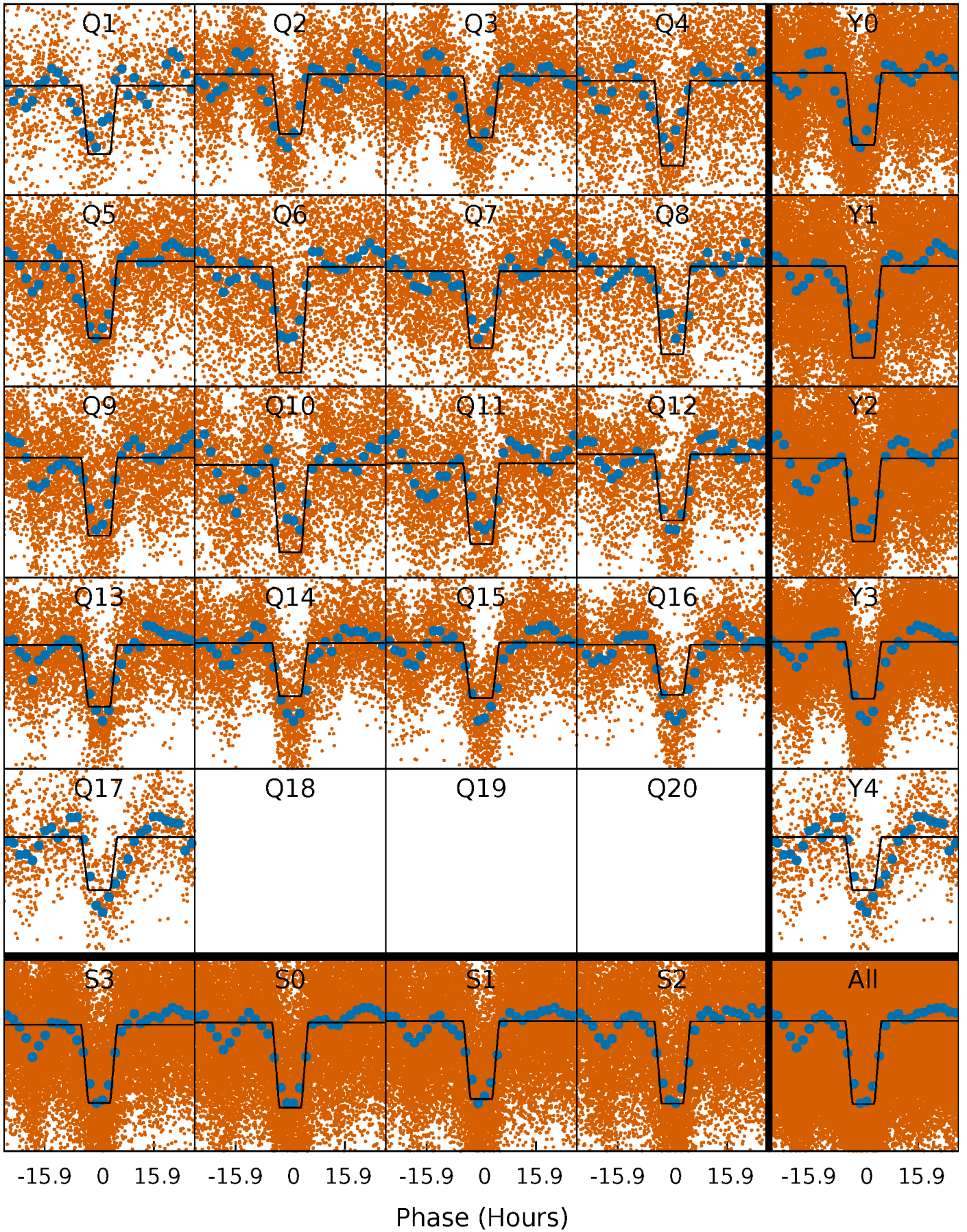
DV Quarter-Phased Transit Curves

TCE 005302556-01 P= 2.224064 Days $T_0=132.588322$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

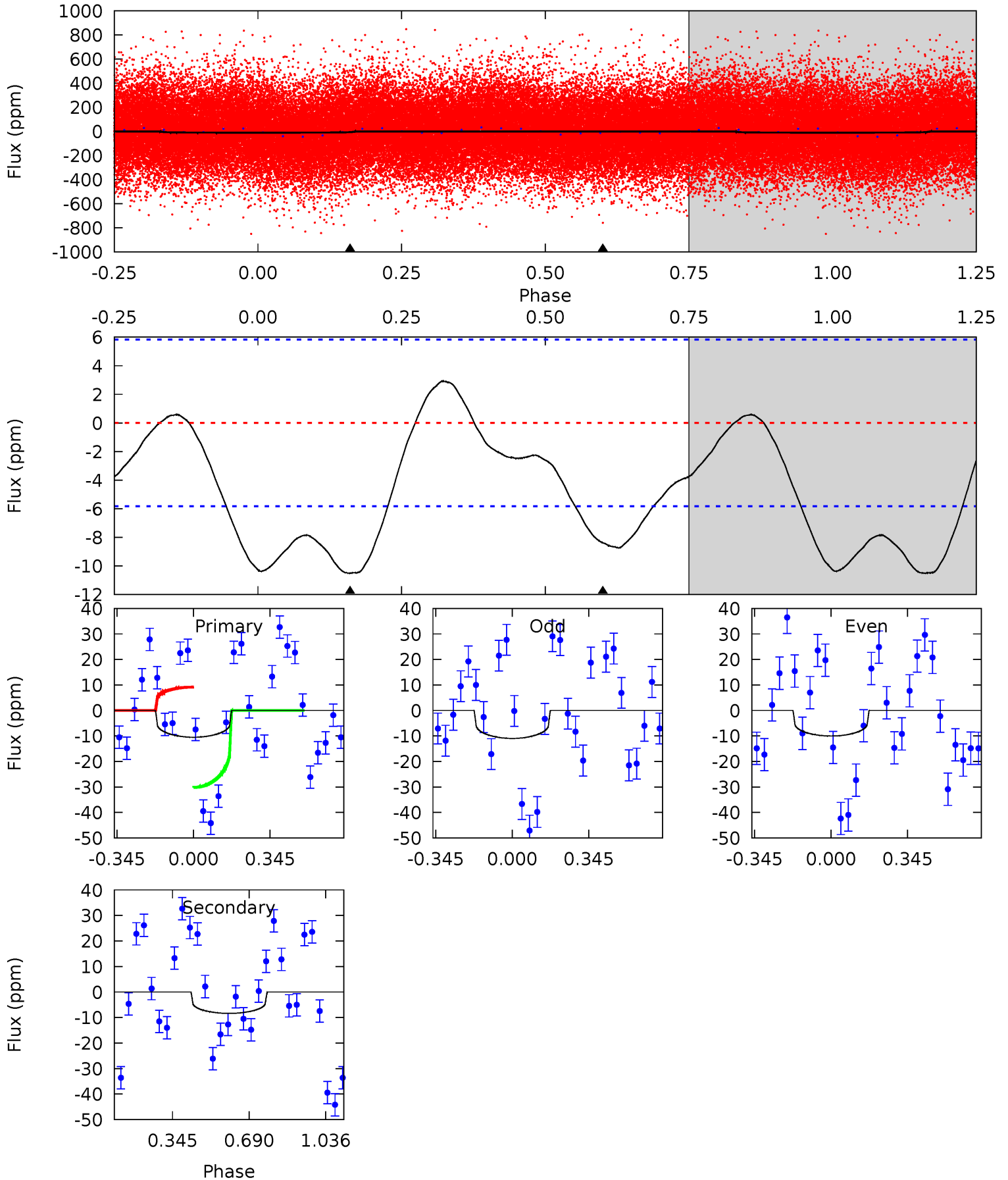
TCE 005302556-01 P= 2.224368 Days $T_0=132.626554$ (BKJD)



DV Model-Shift Uniqueness Test

005302556-01, P = 2.224064 Days, E = 130.364258 Days

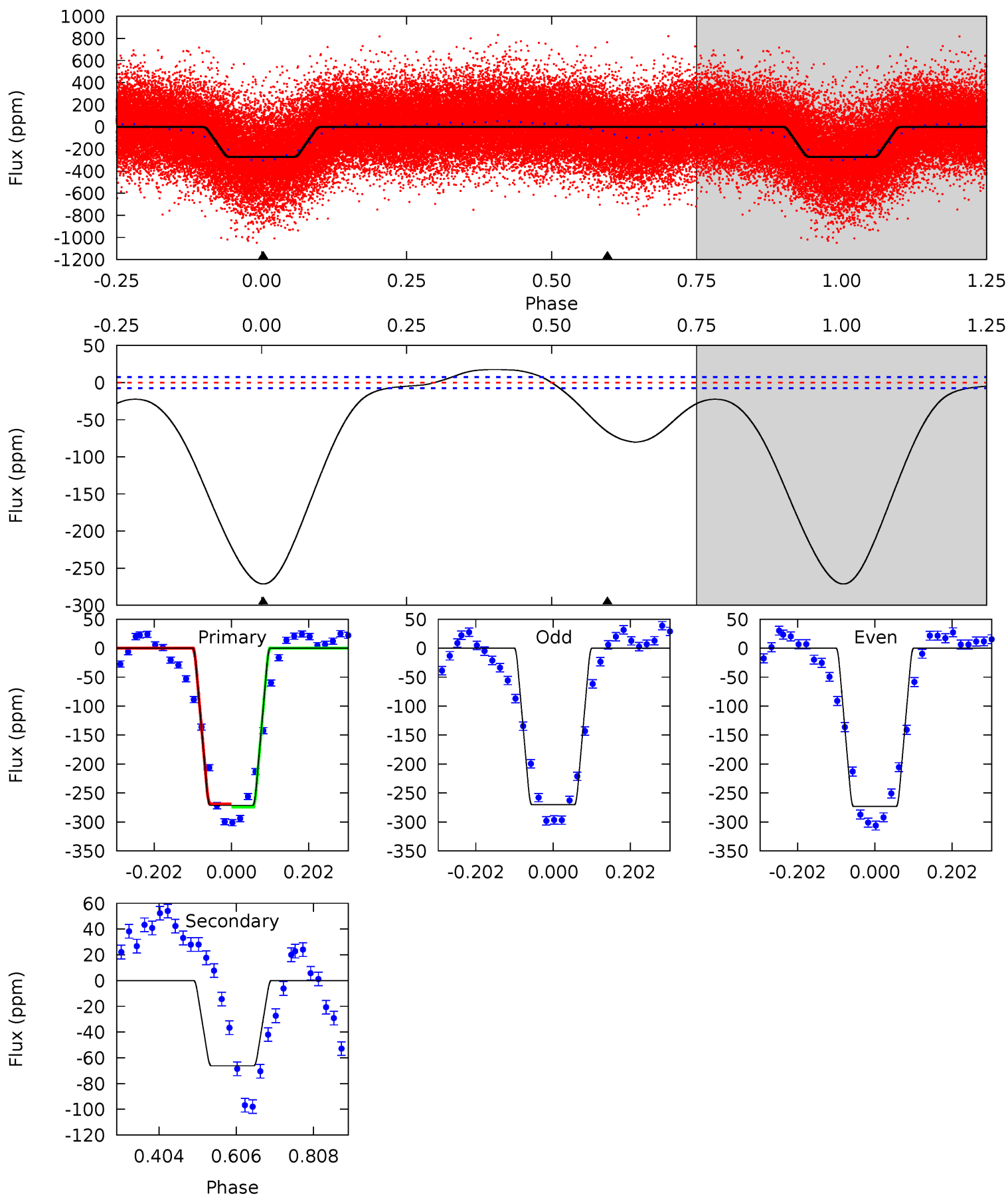
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.75	6.18	0	0	4.30	0.94	1.10	7.75	7.75	6.18	6.18	0.35	1.64	0.22	7.84



Alt Model-Shift Uniqueness Test

005302556-01, P = 2.224368 Days, E = 130.402186 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
160.6	39.2	0	0	4.42	1.28	5.64	160.6	160.6	39.2	39.2	0.96	1.03	0.06	1.65



Stellar Parameters For KIC 005302556

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6535^{+177}_{-177}	$3.437^{+0.352}_{-0.088}$	$-0.140^{+0.350}_{-0.250}$	$4.340^{+0.587}_{-1.644}$	$1.880^{+0.116}_{-0.371}$	$0.032^{+0.090}_{-0.009}$
	+3%/-3%	+10%/-3%	+250%/-179%	+14%/-38%	+6%/-20%	+278%/-29%
Source	PHO1	FLK73	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 005302556-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-8 ± 1	$2.21^{+2.20}_{-1.59}$	4043^{+237}_{-384}	4755^{+4918}_{-1722}	$1.543^{+17.135}_{-1.147}$
Alt.	-66 ± 2	$7.62^{+2.96}_{-2.59}$	4070^{+225}_{-359}	4314^{+911}_{-652}	$1.038^{+1.316}_{-0.486}$

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 $A_{obs} \gg 1.0$

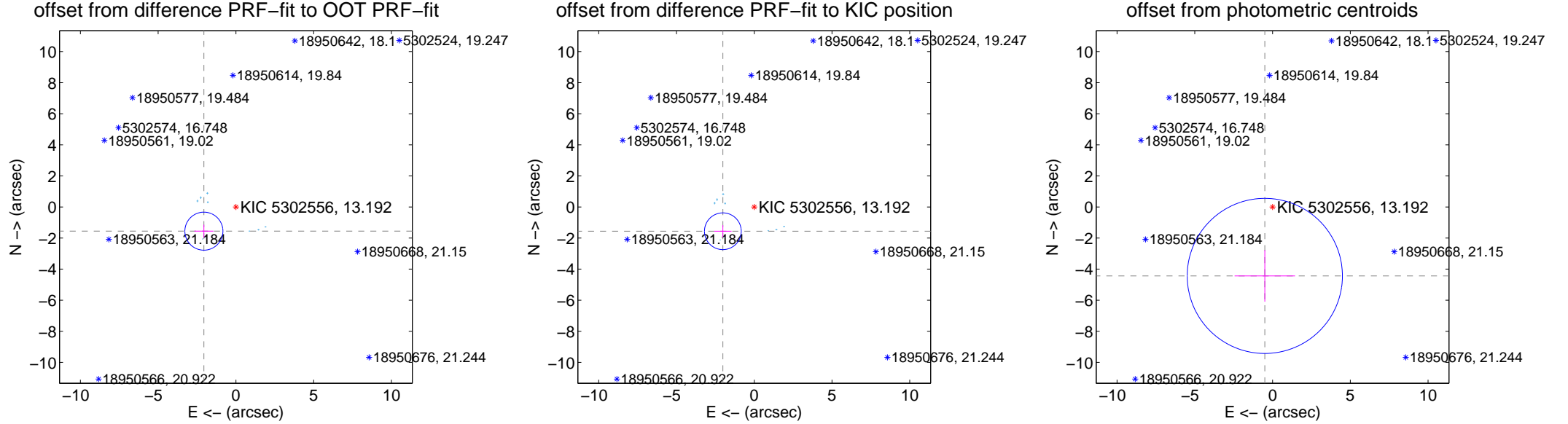
DV Centroid Data

Supplemental centroid analysis for 005302556-01. Kepler magnitude: 13.19. Transit SNR 3.53

There are 9 quarters with good PRF difference image offsets

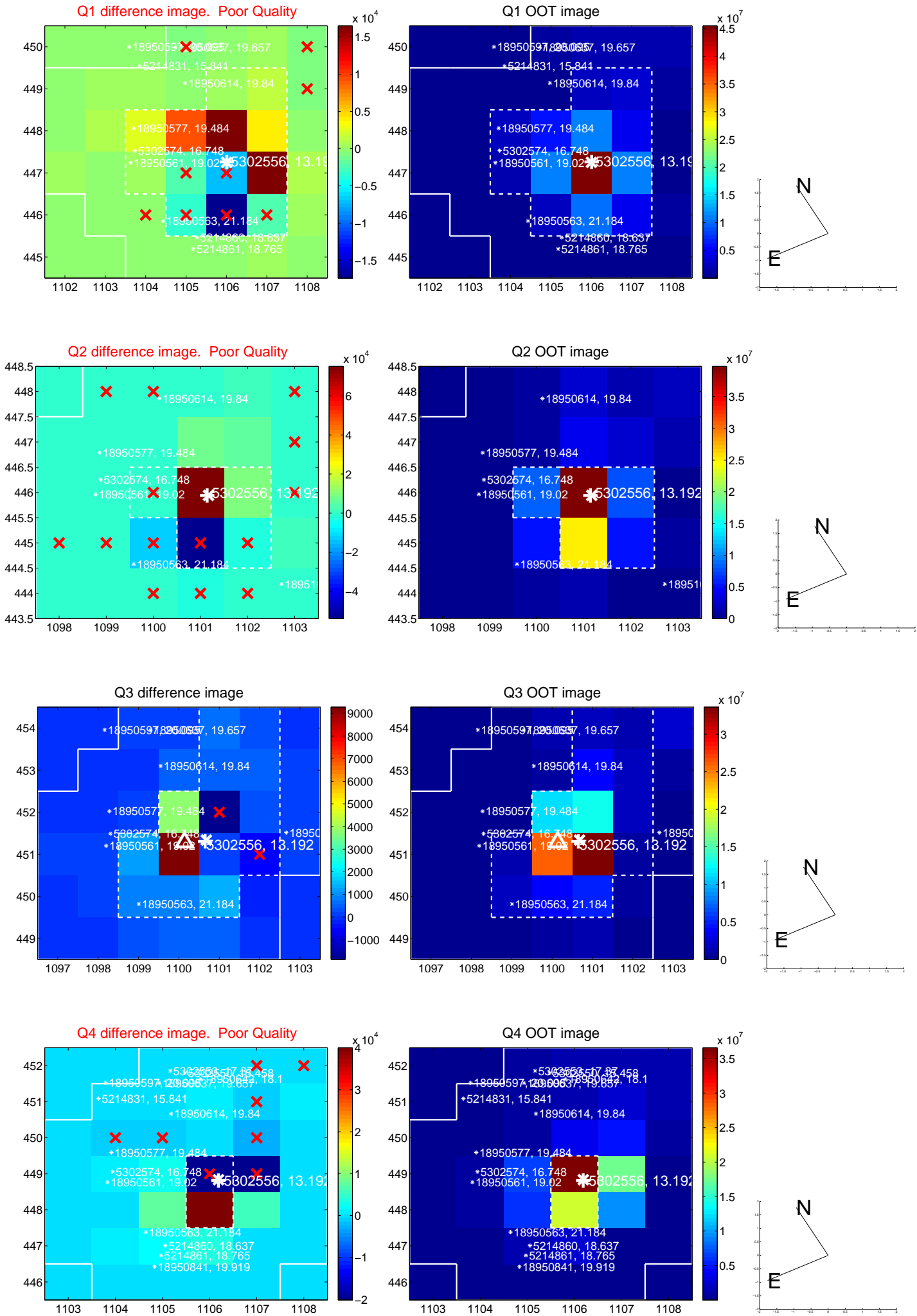
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.581 \pm 0.408	6.33	2.059 \pm 0.612	-1.556 \pm 0.417
PRF-fit source offset from KIC position	2.552 \pm 0.394	6.47	2.018 \pm 0.558	-1.562 \pm 0.389
photometric centroid source offset	4.46 \pm 1.66	2.68	0.50 \pm 1.94	-4.44 \pm 1.66

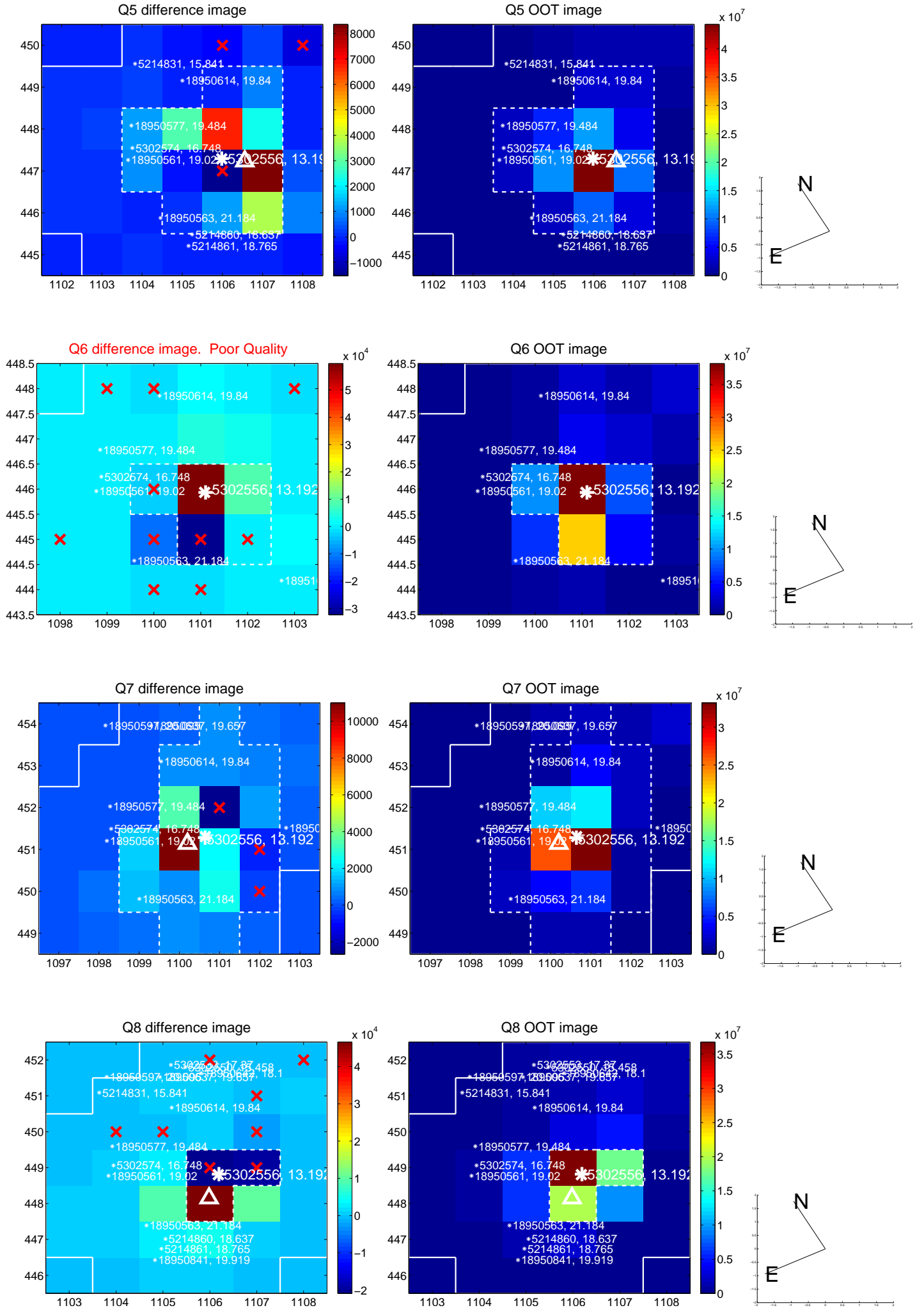


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

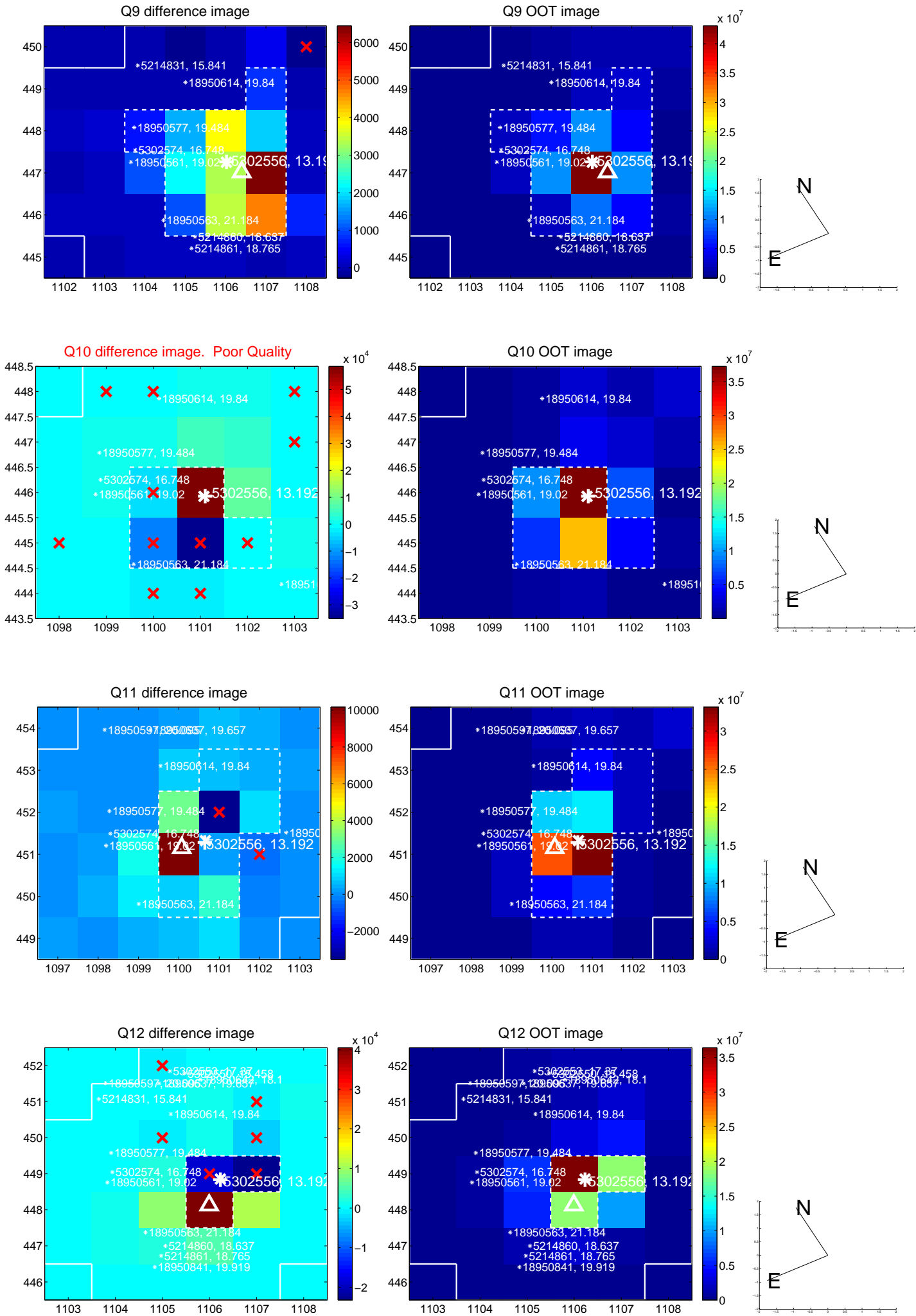
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



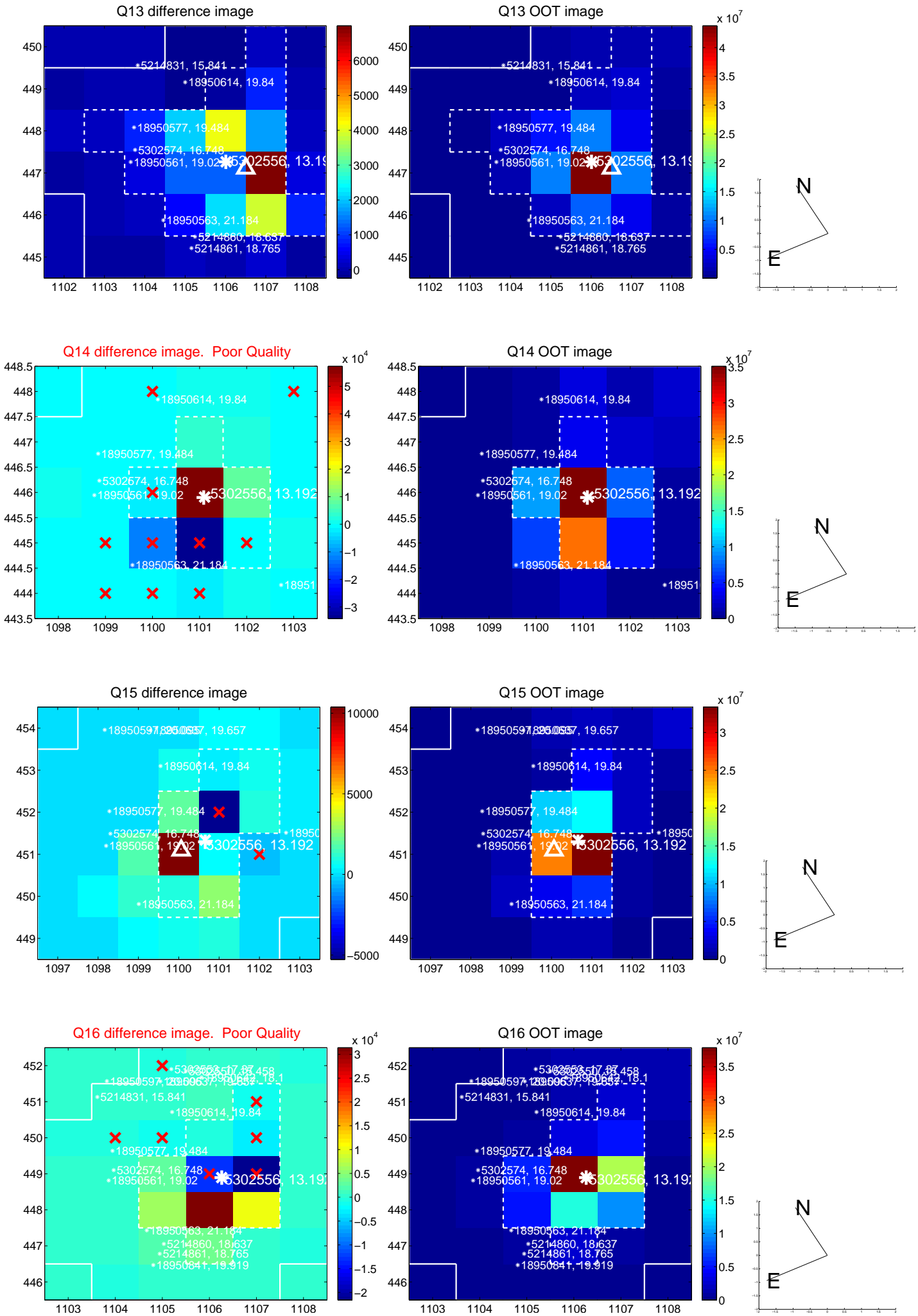
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



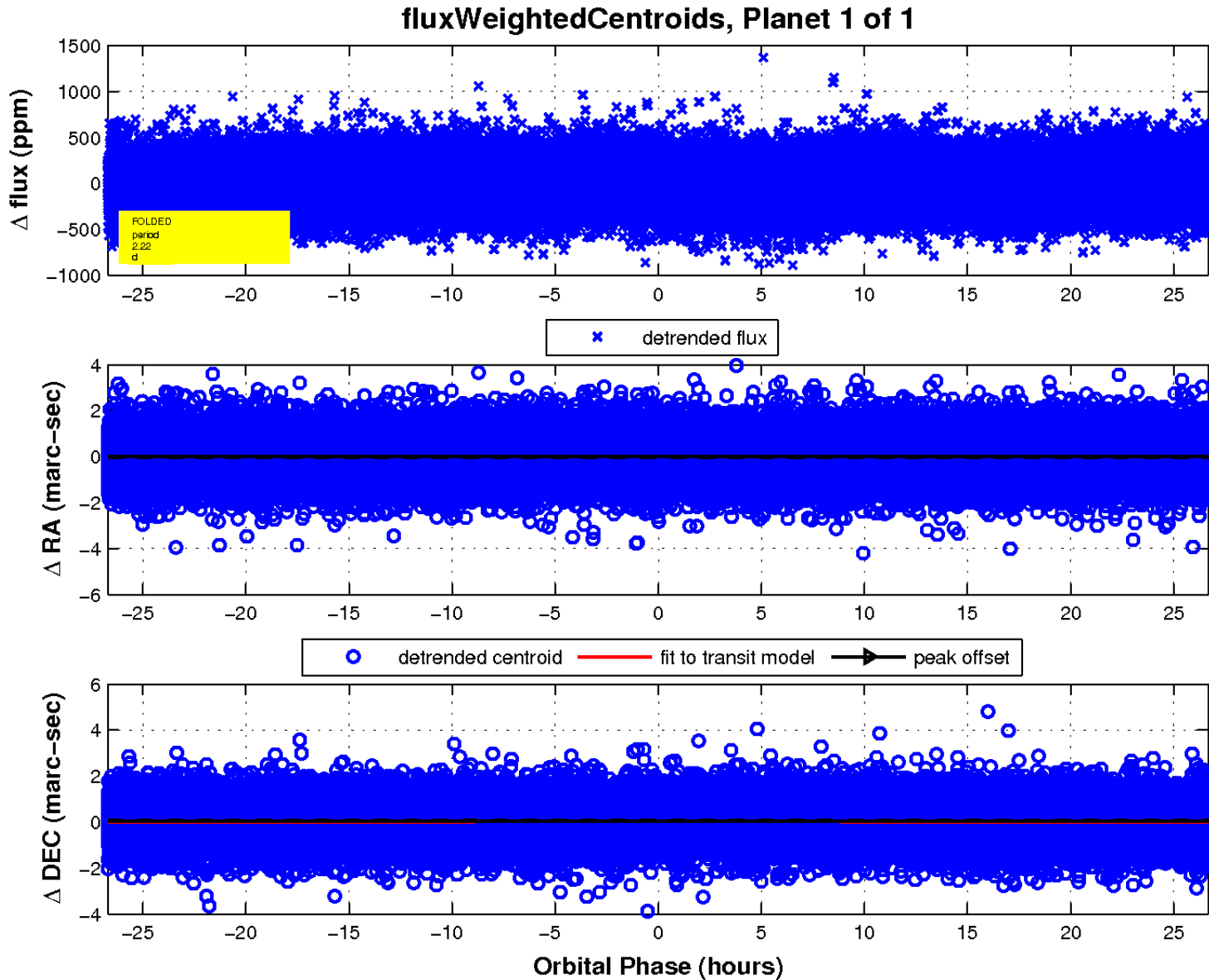
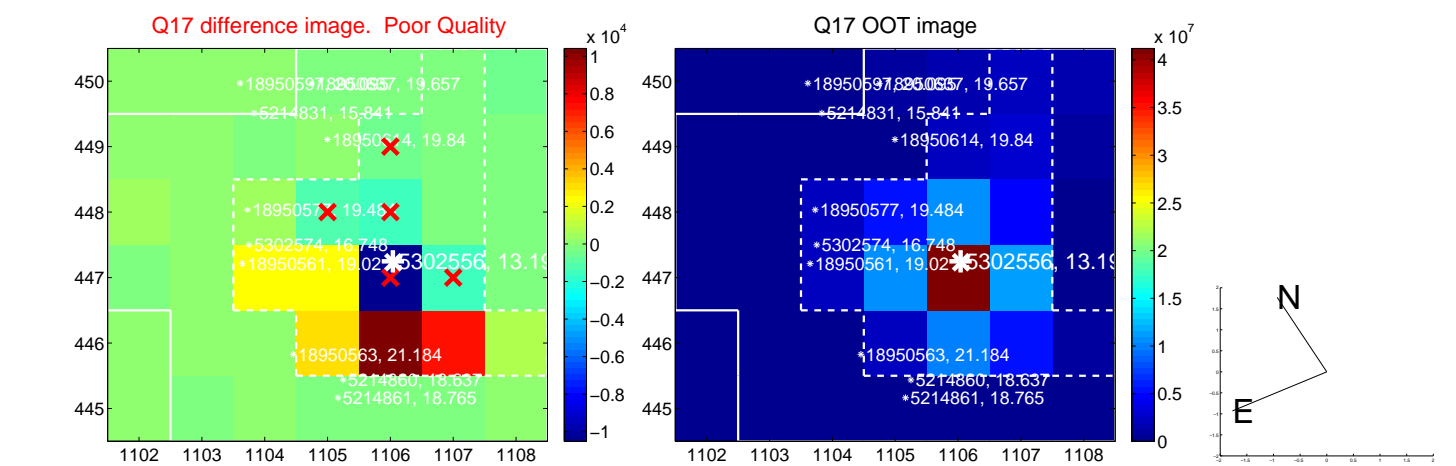
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

