

KIC 006153407

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})
006153407-01	OBS	3179.01	5.990798	134.537388	74.5	1.674	15.2	17.4	0.97	5721	1.01	224.52

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006153407-01	OBS	PC	1.00	0	0	0	0	CENT_SATURATED

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 006153407-01

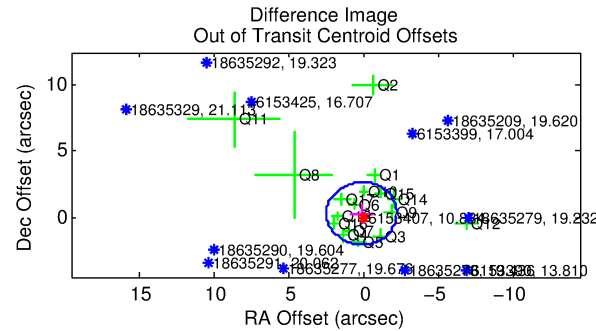
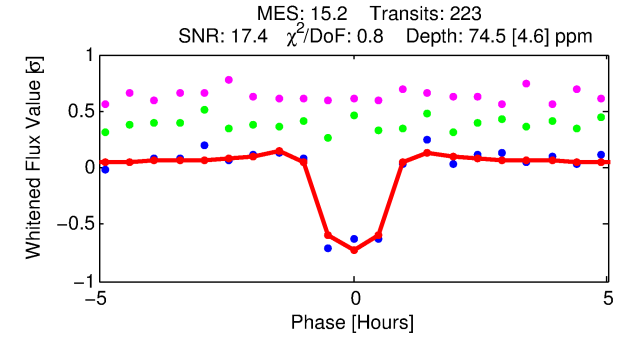
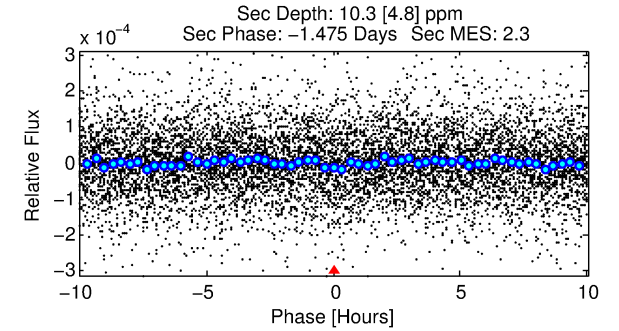
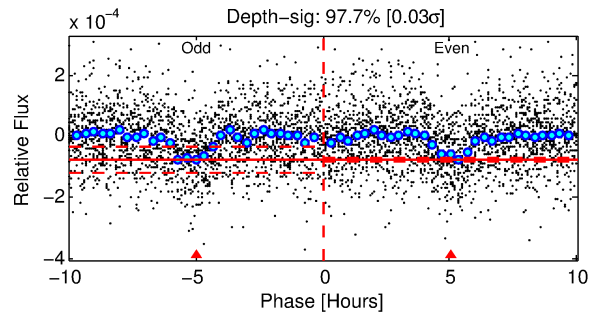
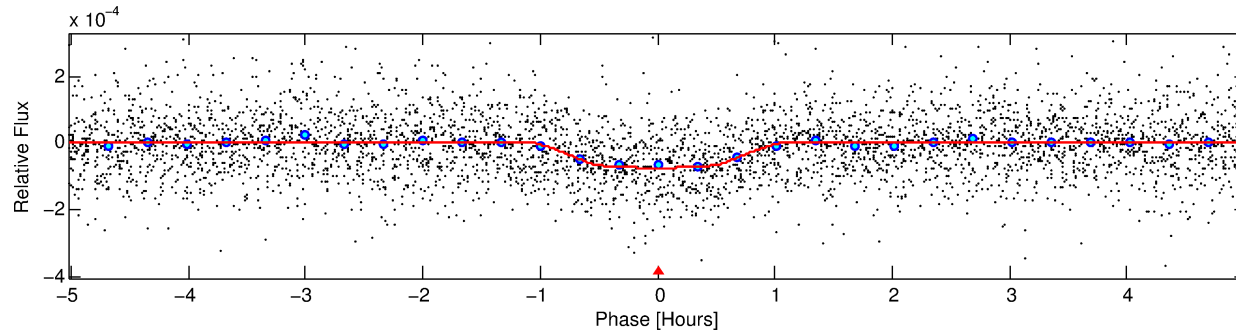
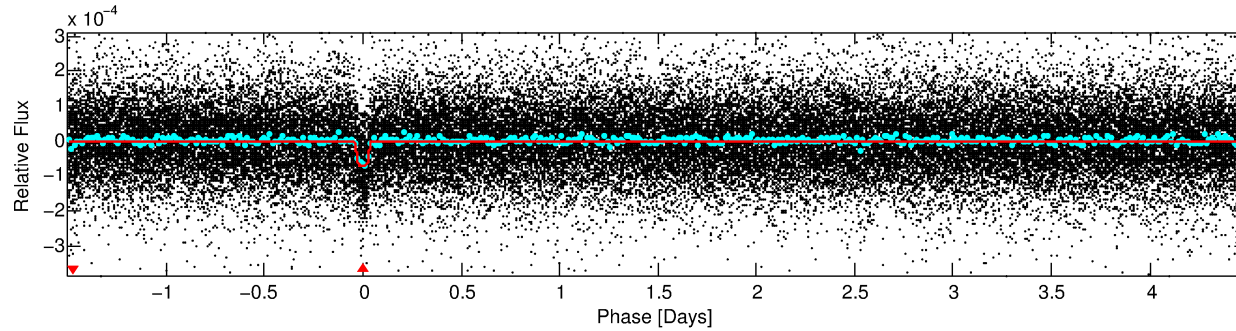
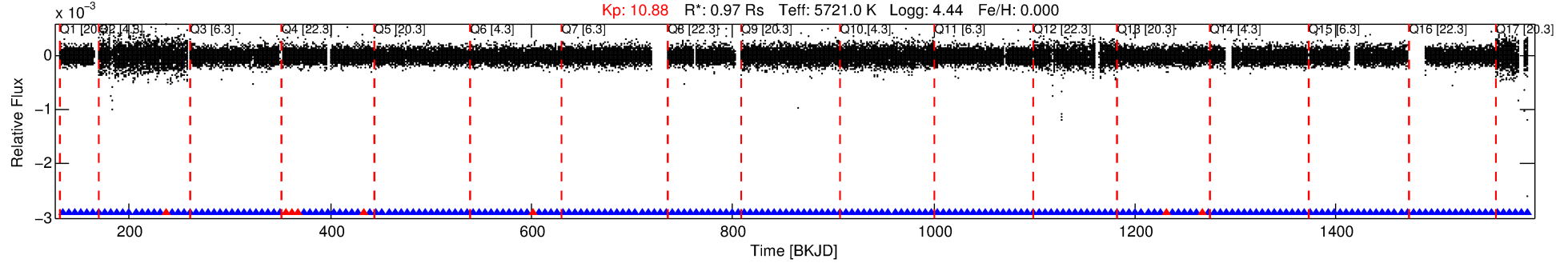
No Significant Match Found

DV One-Page Summary

KIC: 6153407 Candidate: 1 of 1 Period: 5.991 d

KOI: K03179.01 Corr: 0.977

Kp: 10.88 R*: 0.97 Rs Teff: 5721.0 K Logg: 4.44 Fe/H: 0.000



DV Fit Results:

Period = 5.99080 [0.00001] d
Epoch = 134.5374 [0.0018] BKJD
Rp/R* = 0.0095 [0.0029]
a/R* = 12.06 [17.38]
b = 0.91 [0.28]
Seff = 224.52 [48.71]
Teq = 987 [54] K
Rp = 1.01 [0.34] Re
a = 0.0636 [0.0082] AU
Ag = 22.34 [17.69] [1.21σ]
Teffp = 3318 [638] K [3.64σ]

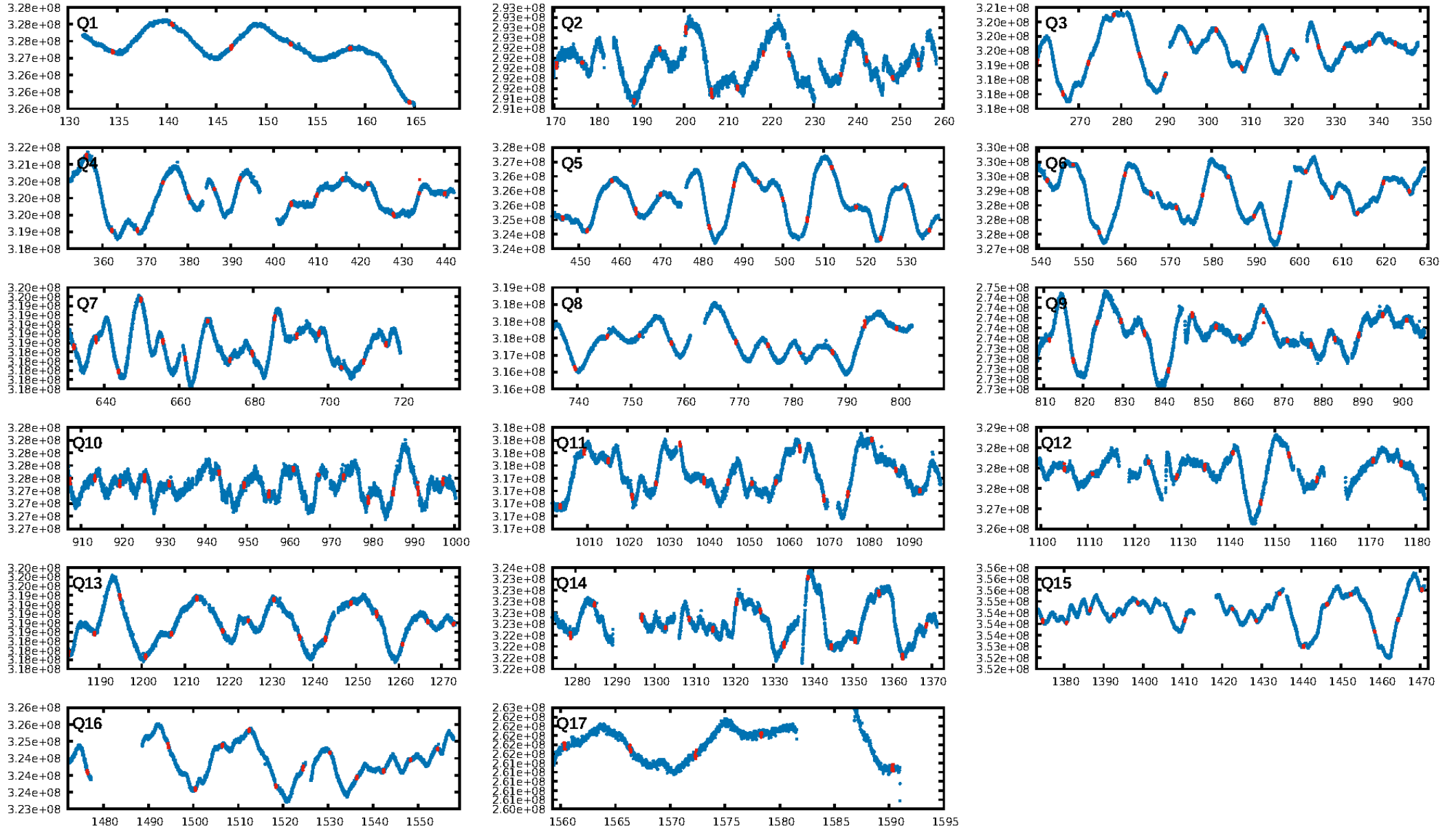
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 9.39e-49
RollingBand-fgt: 0.96 [204/212]
GhostDiagnostic-chr: 7.55
Centroid-sig: 0.8%
Centroid-so: 2.892 arcsec [2.78σ]
OotOffset-rm: 0.325 arcsec [0.41σ]
KicOffset-rm: 2.239 arcsec [2.89σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.76 [13/17]
DiffImageOverlap-fno: 1.00 [17/17]

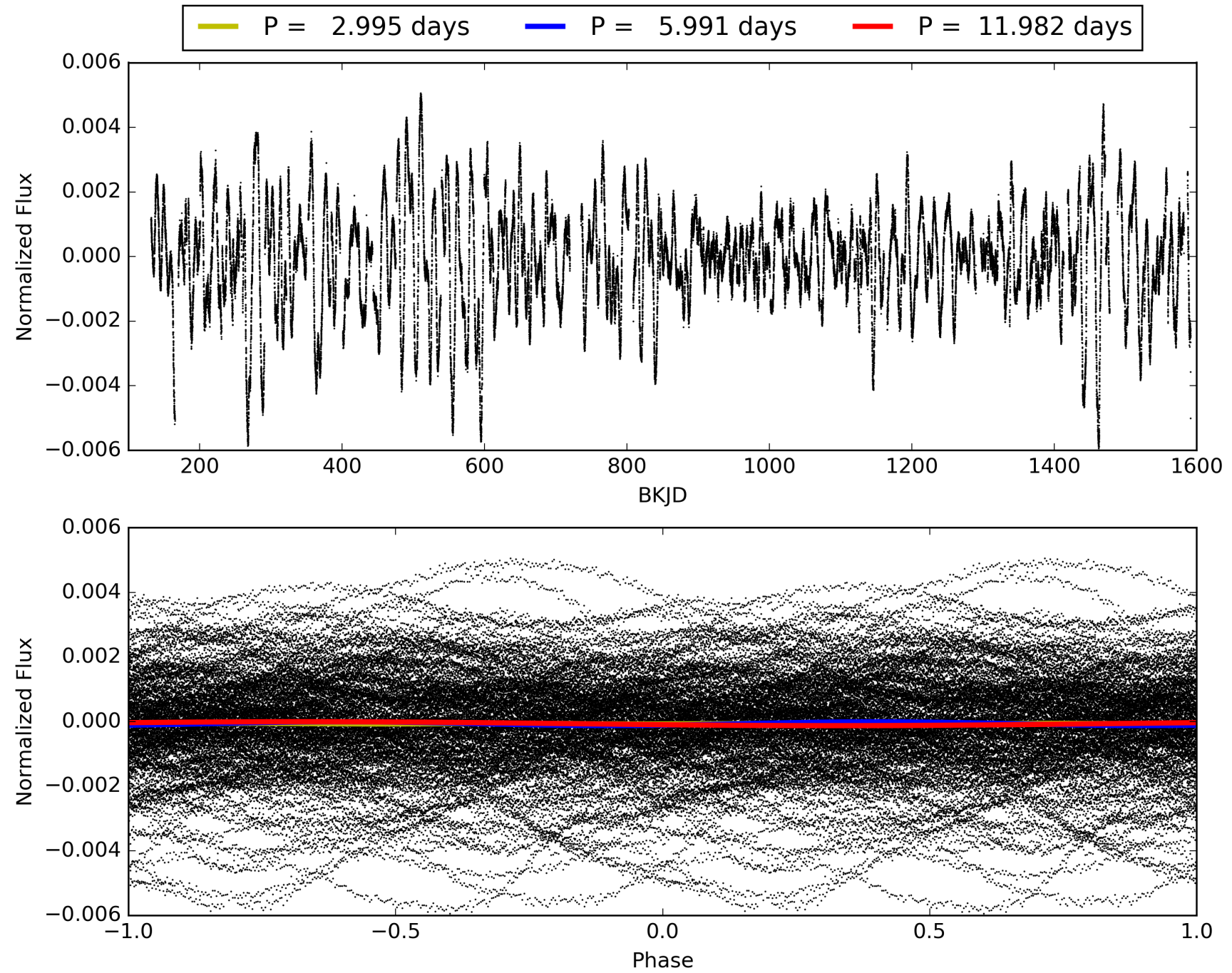
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 09:25:34 Z

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

TCE 006153407-01, PDC Light Curves

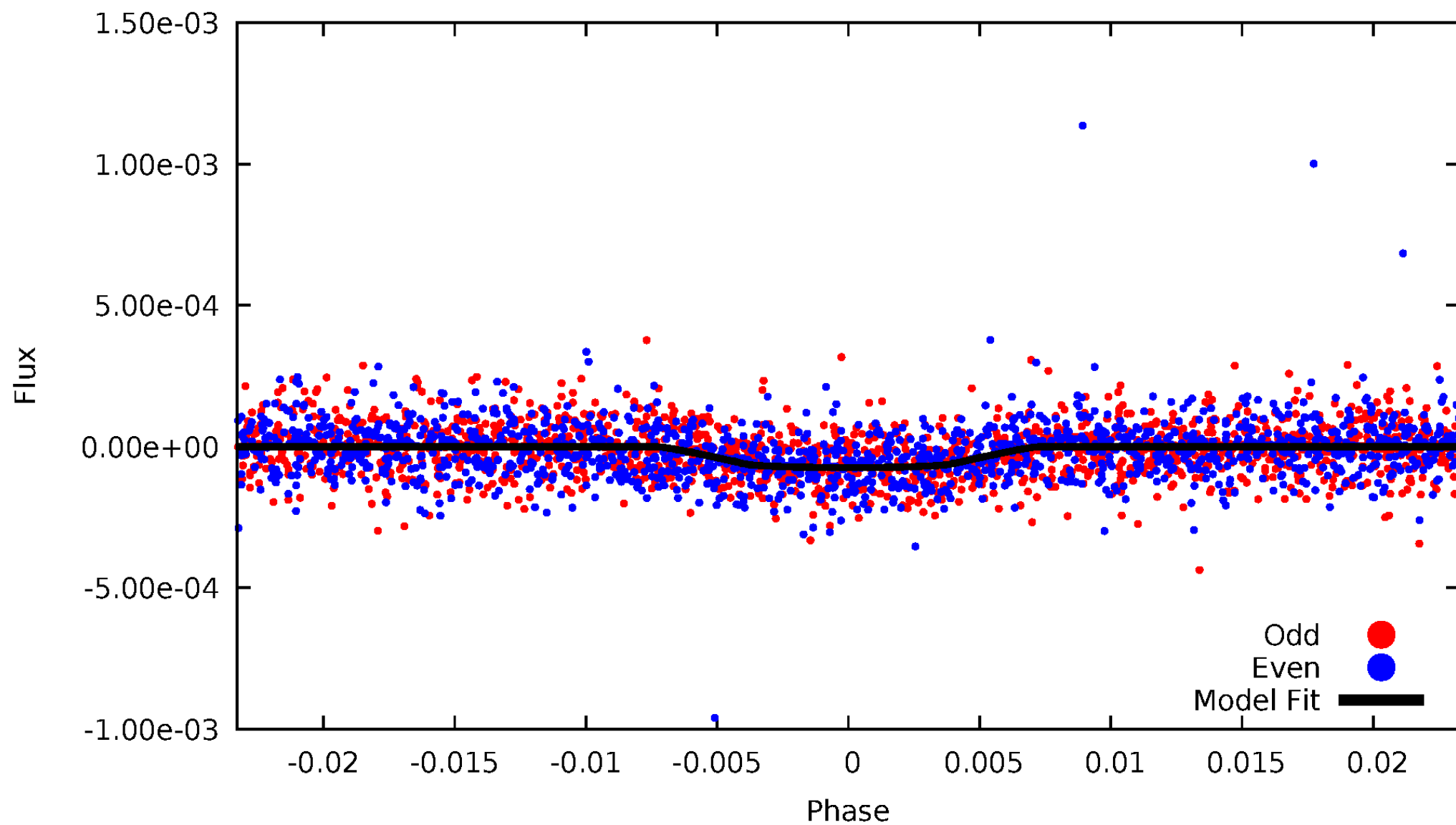


TCE 006153407-01



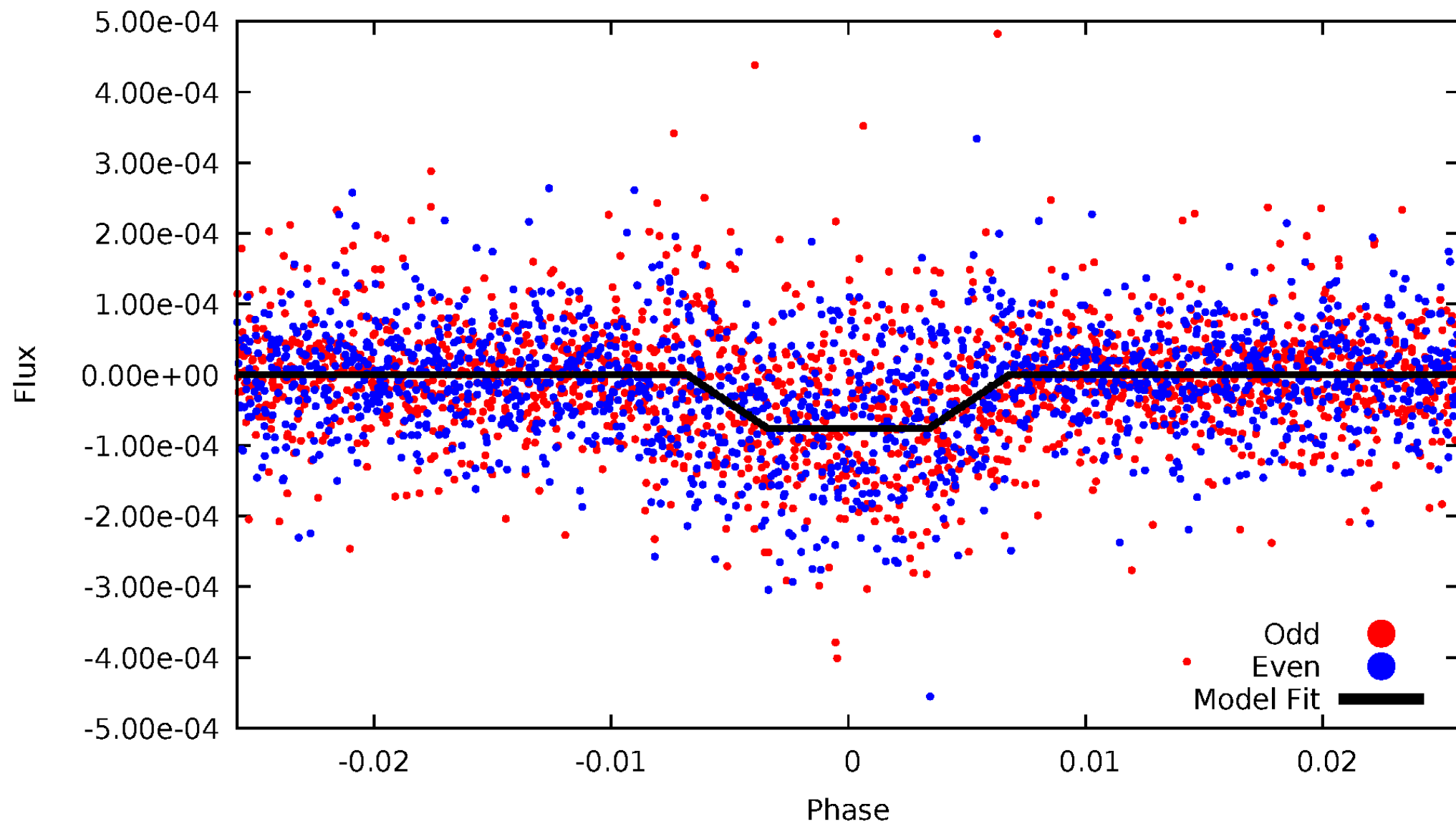
DV Odd/Even

TCE 006153407-01

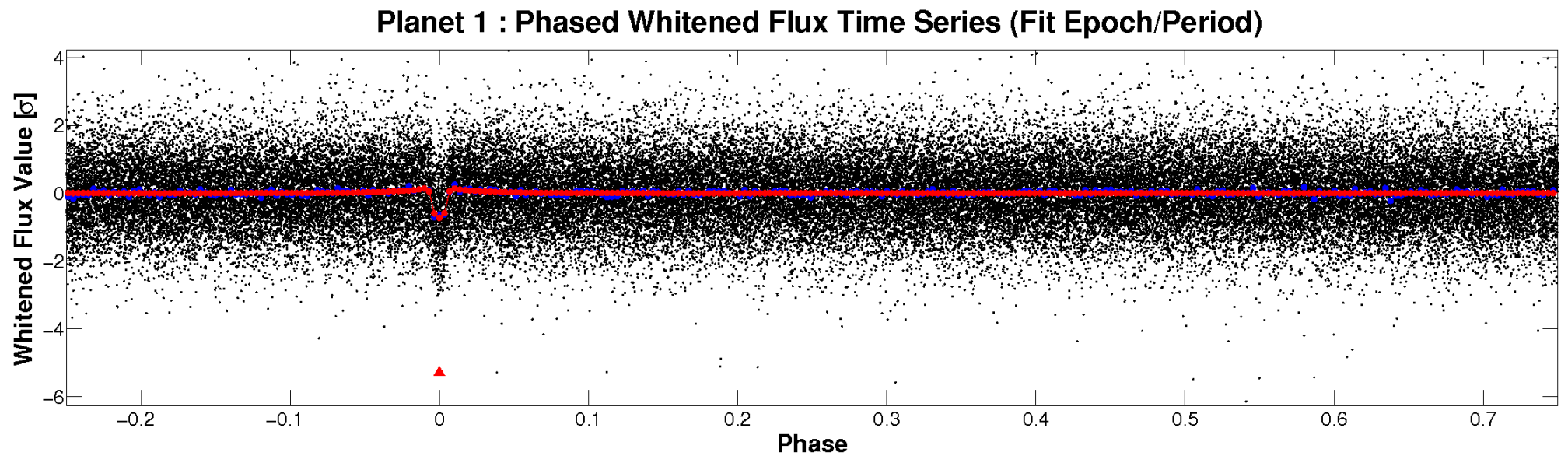
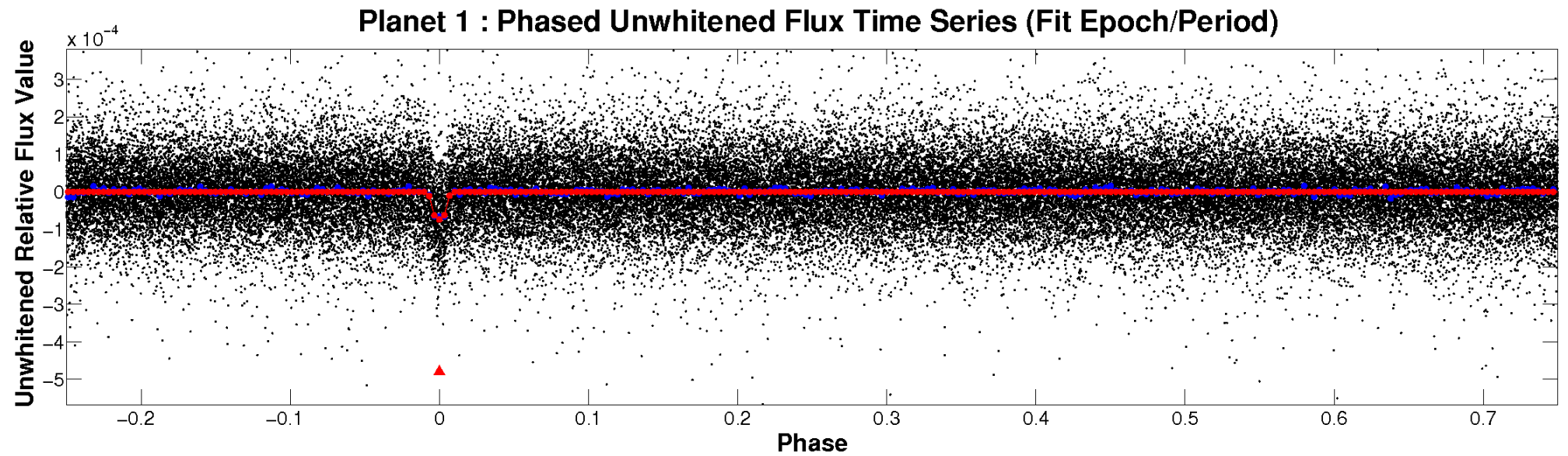


ALT Odd/Even

TCE 006153407-01

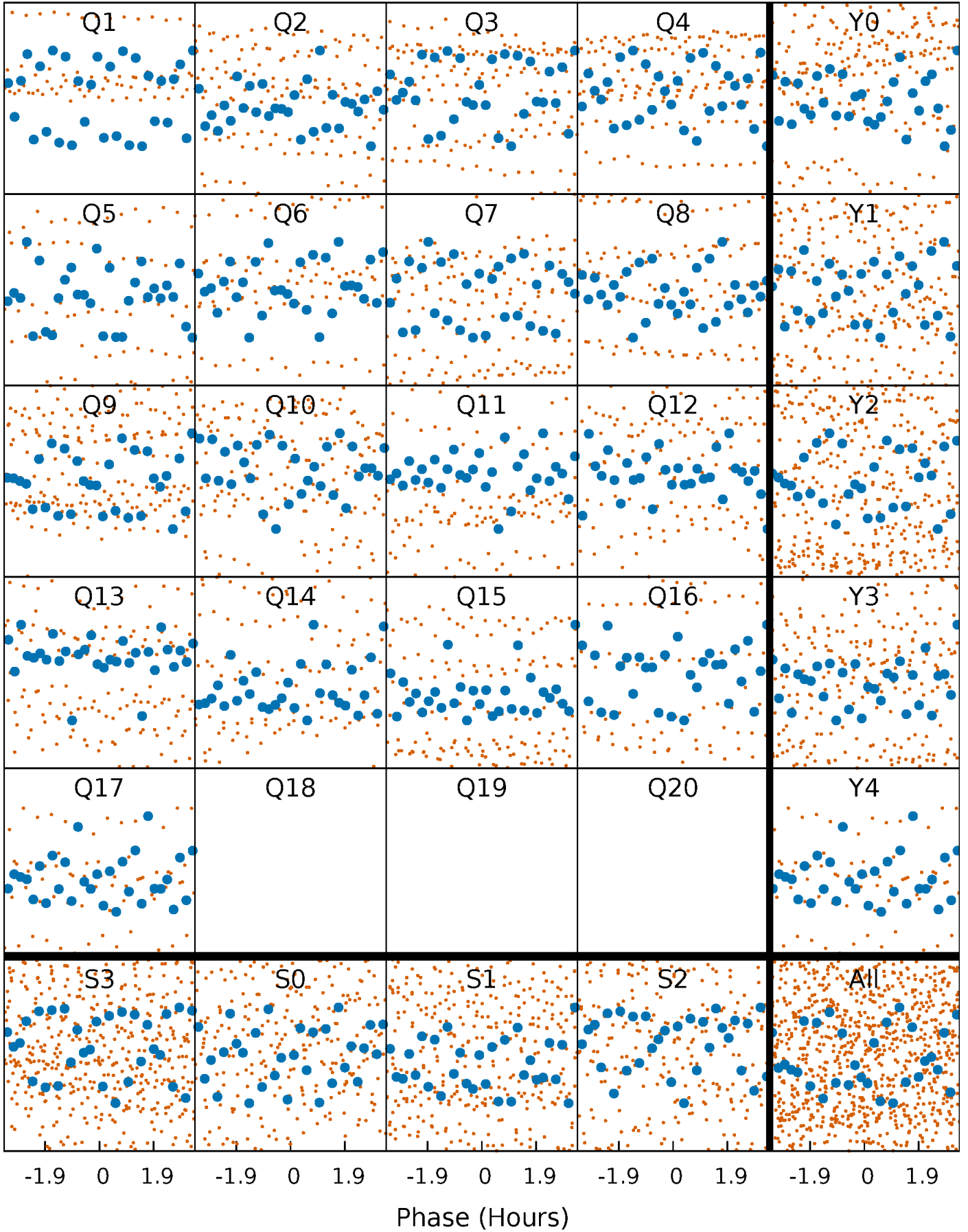


Non-Whitened Vs. Whitened Light Curve



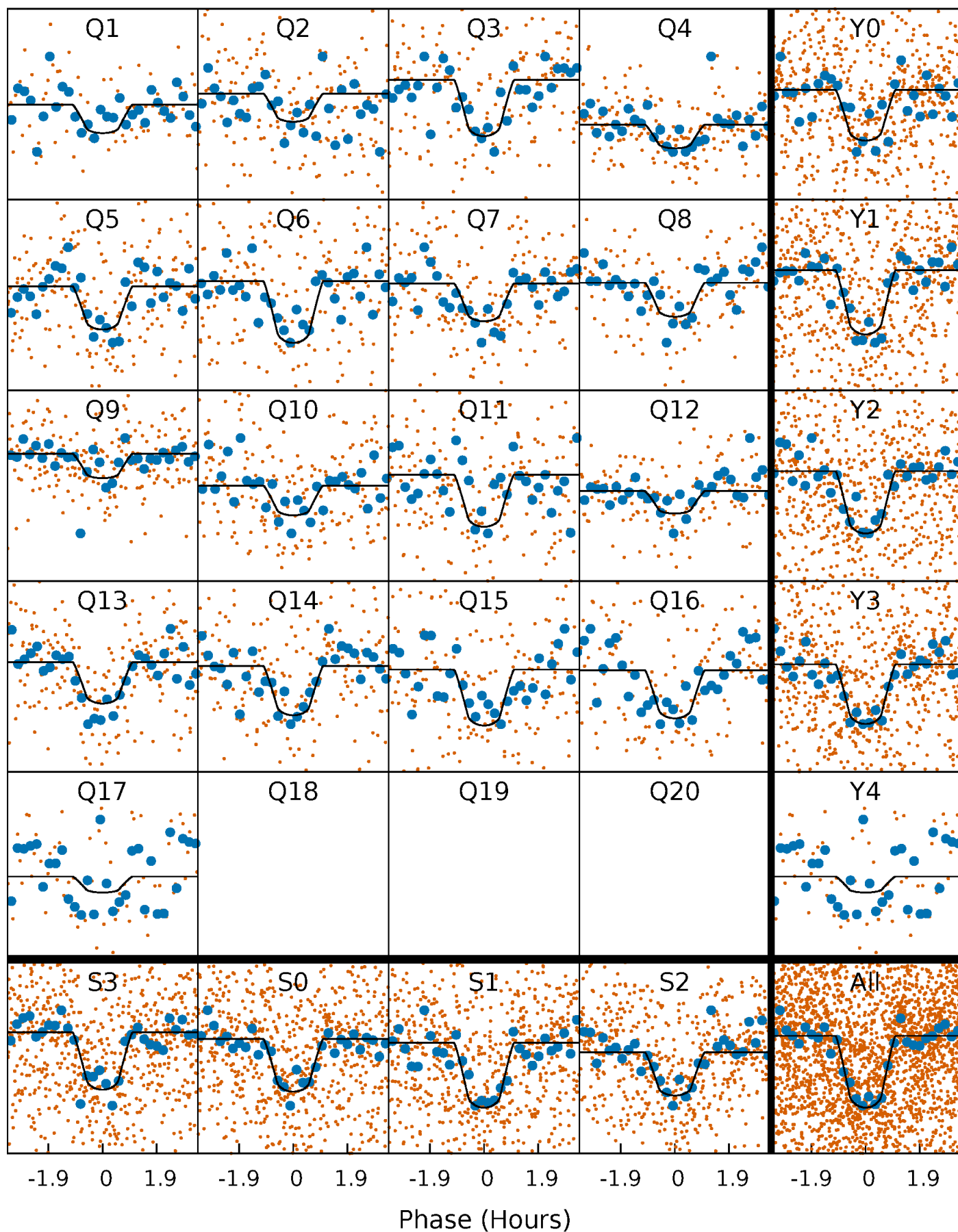
PDC Quarter-Phased Transit Curves

TCE 006153407-01 P= 5.990798 Days $T_0=134.537388$ (BKJD)



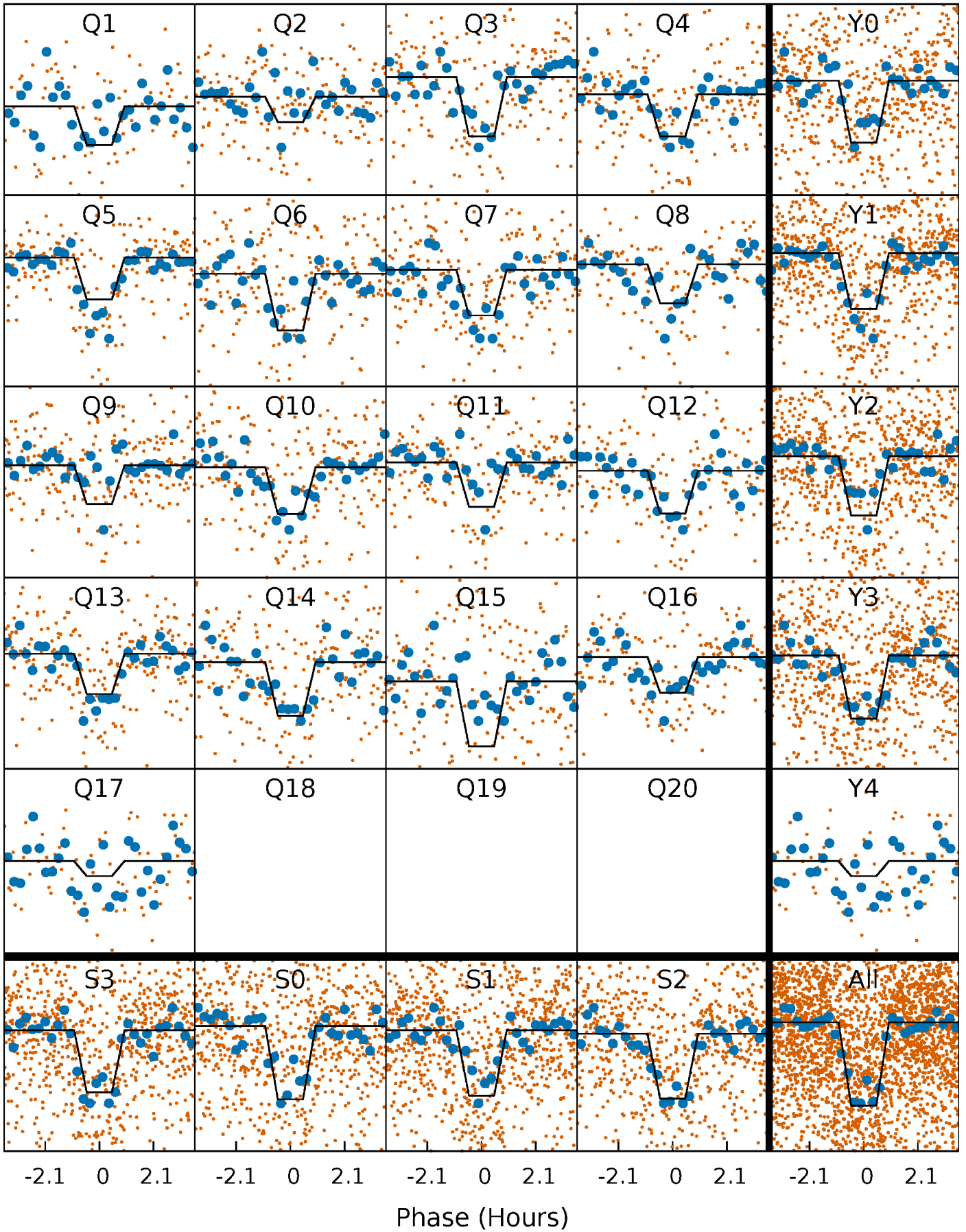
DV Quarter-Phased Transit Curves

TCE 006153407-01 P= 5.990798 Days $T_0=134.537388$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

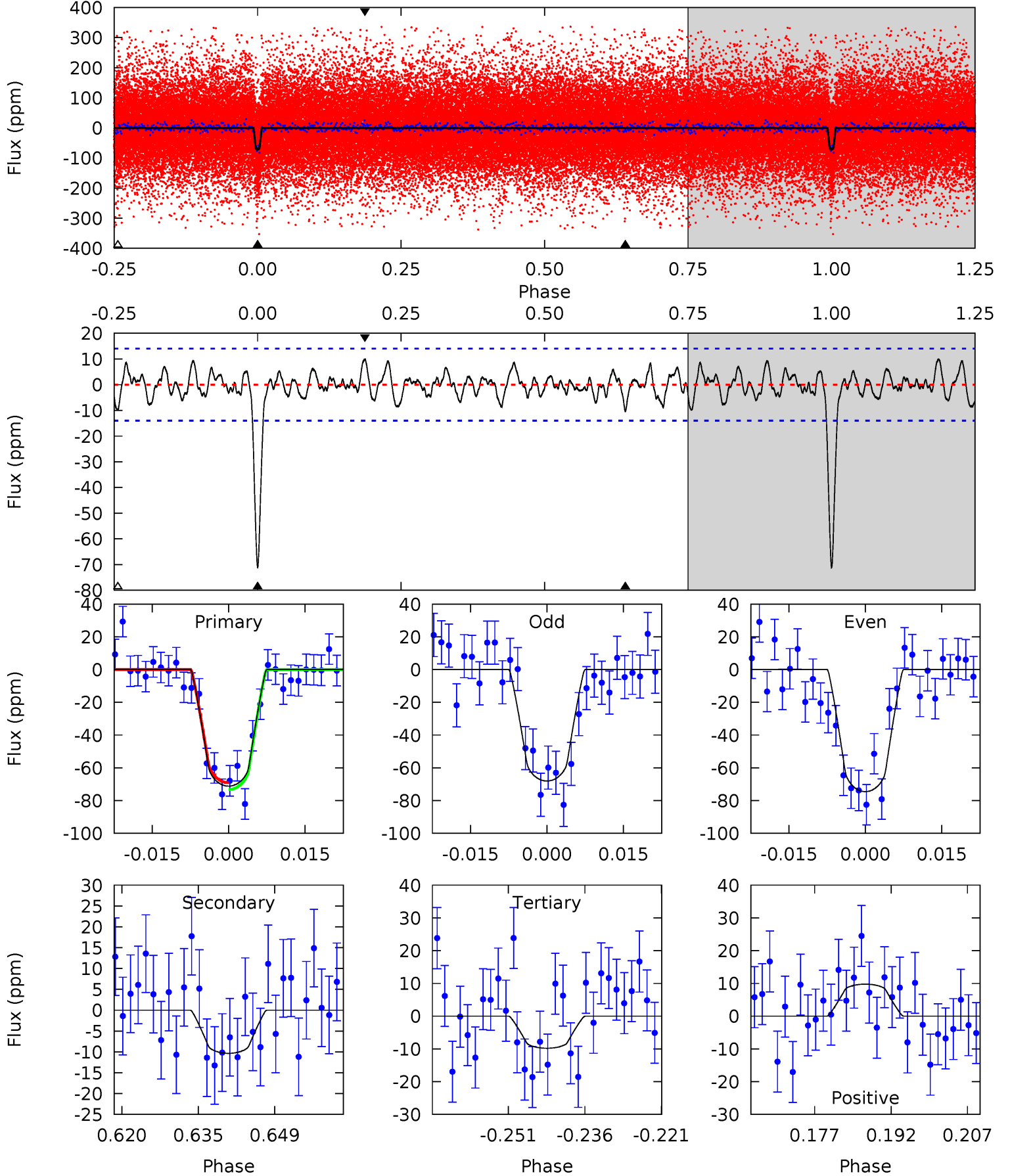
TCE 006153407-01 P= 5.990757 Days $T_0=134.541841$ (BKJD)



DV Model-Shift Uniqueness Test

006153407-01, P = 5.990798 Days, E = 128.546590 Days

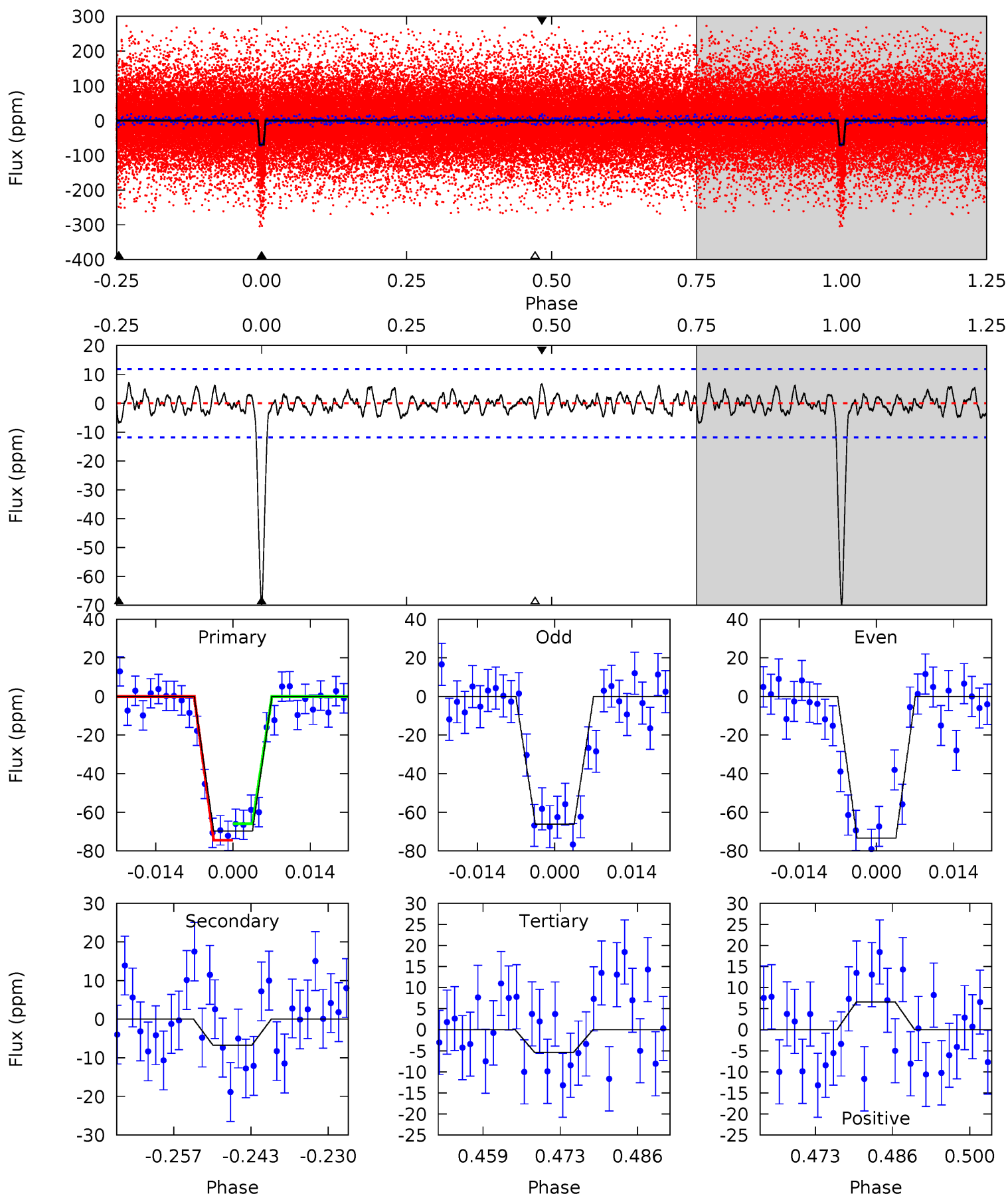
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.1	3.66	3.46	3.45	4.95	2.44	1.32	21.7	21.7	0.19	0.21	1.15	1.01	0.12	0.75



Alt Model-Shift Uniqueness Test

006153407-01, P = 5.990757 Days, E = 128.551084 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
29.1	2.83	2.26	2.76	4.97	2.47	1.00	26.9	26.4	0.57	0.07	1.51	0.89	0.09	1.78



Stellar Parameters For KIC 006153407

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5721^{+102}_{-113}	$4.442^{+0.072}_{-0.117}$	$0.000^{+0.150}_{-0.150}$	$0.972^{+0.135}_{-0.079}$	$0.954^{+0.063}_{-0.063}$	$1.463^{+0.431}_{-0.470}$
	+2%/-2%	+2%/-3%	+inf%/-inf%	+14%/-8%	+7%/-7%	+29%/-32%
Source	SPE59	SPE59	SPE59	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 006153407-01 / KOI 3179.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-10 ± 3	$1.03^{+0.31}_{-0.31}$	1385^{+58}_{-47}	3708^{+505}_{-366}	21^{+23}_{-10}
Alt.	-7 ± 2	$0.95^{+0.33}_{-0.31}$	1382^{+56}_{-44}	3526^{+591}_{-386}	16^{+22}_{-8}

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 $A_{obs} \gg 1.0$

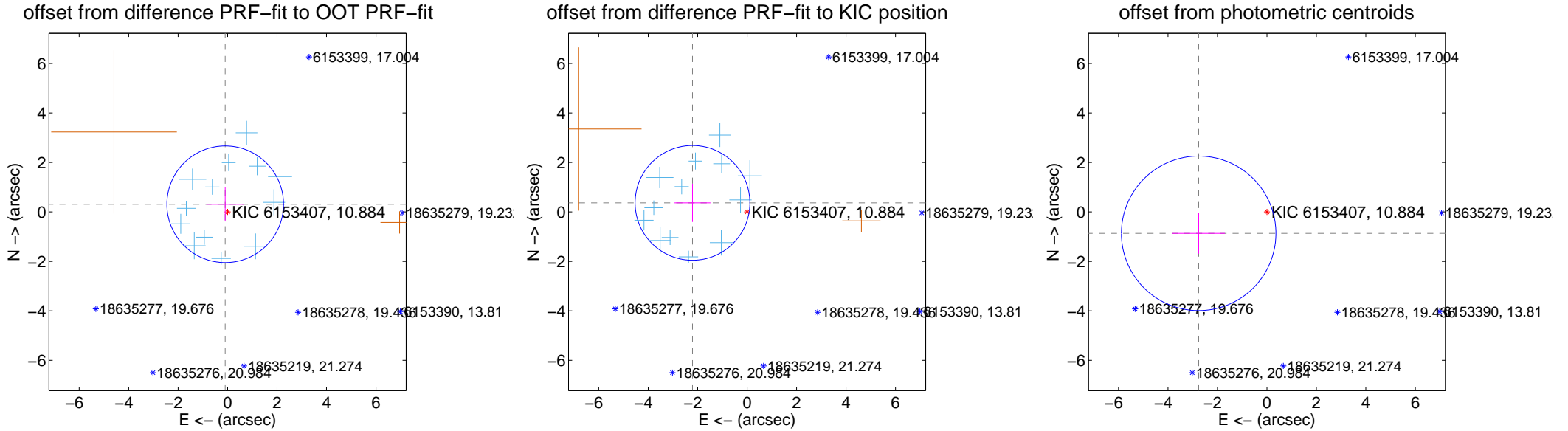
DV Centroid Data

Supplemental centroid analysis for 006153407-01. **Kepler magnitude: 10.88.** Transit SNR 17.39

There are 13 quarters with good PRF difference image offsets

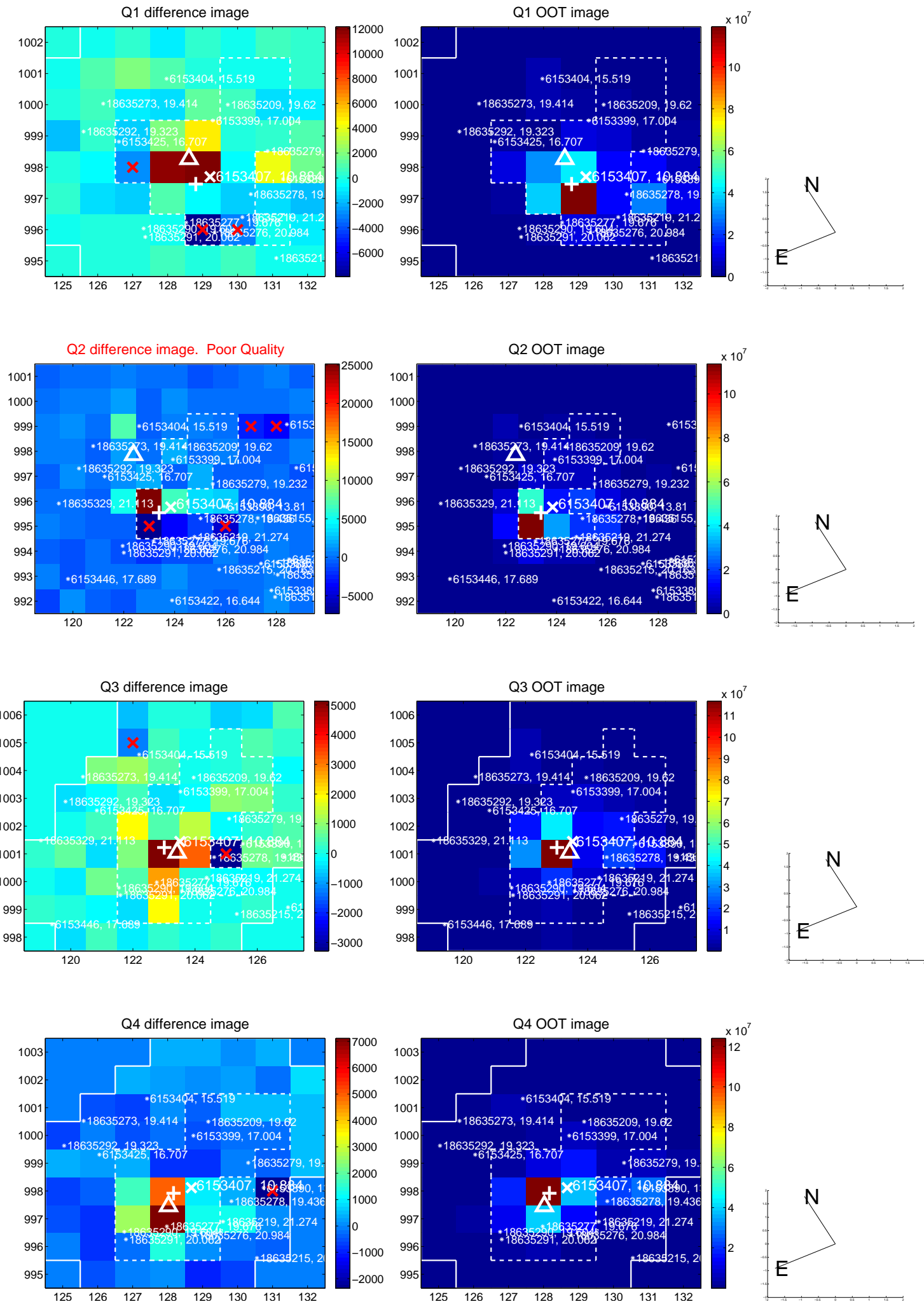
The OOT PRF centroid is offset from the target star catalog position by about 2.12 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.325 ± 0.786	0.41	0.097 ± 0.765	0.310 ± 0.695
PRF-fit source offset from KIC position	2.239 ± 0.773	2.89	2.209 ± 0.728	0.366 ± 0.772
photometric centroid source offset	2.89 ± 1.04	2.78	2.76 ± 1.06	-0.87 ± 0.82

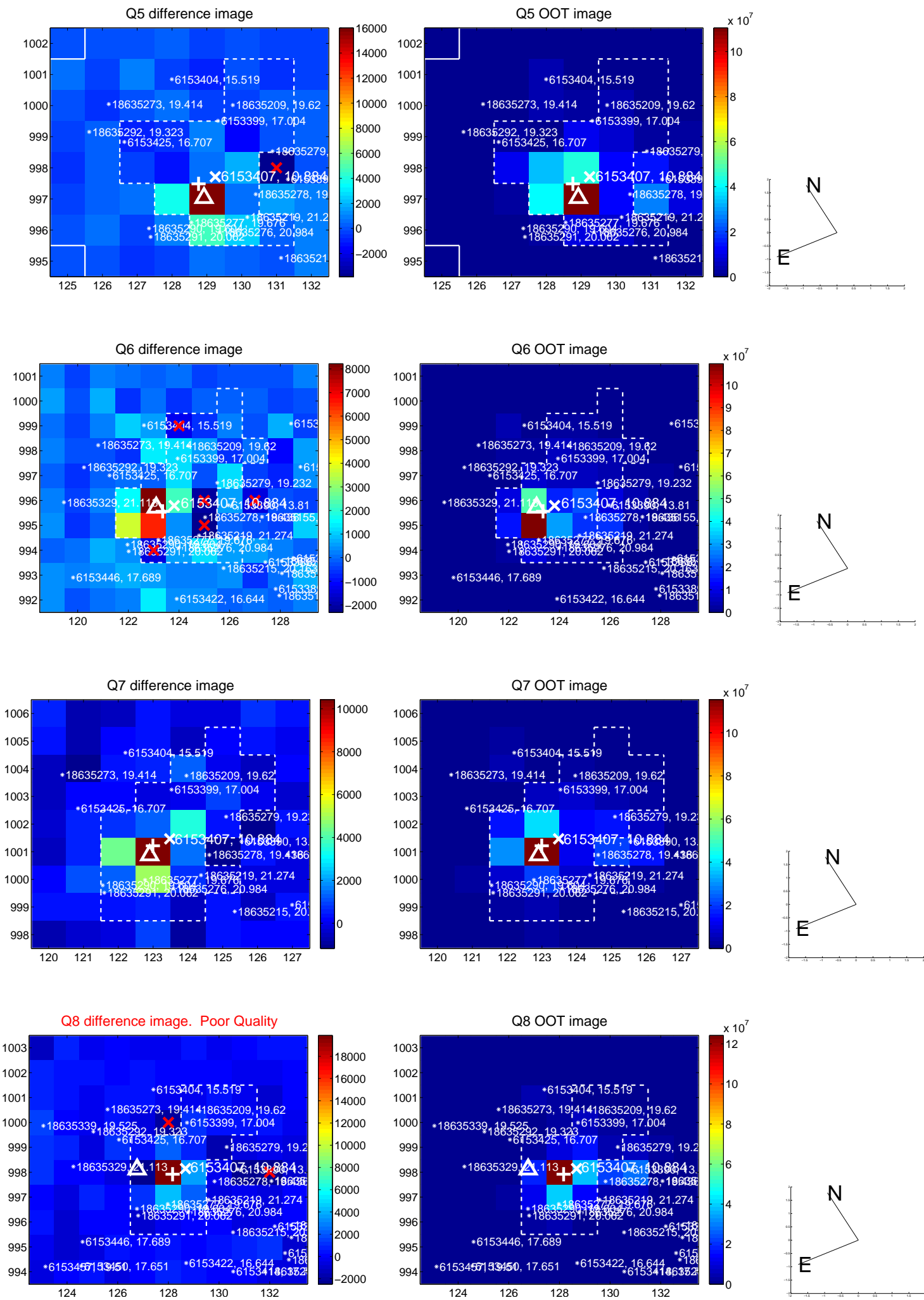


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

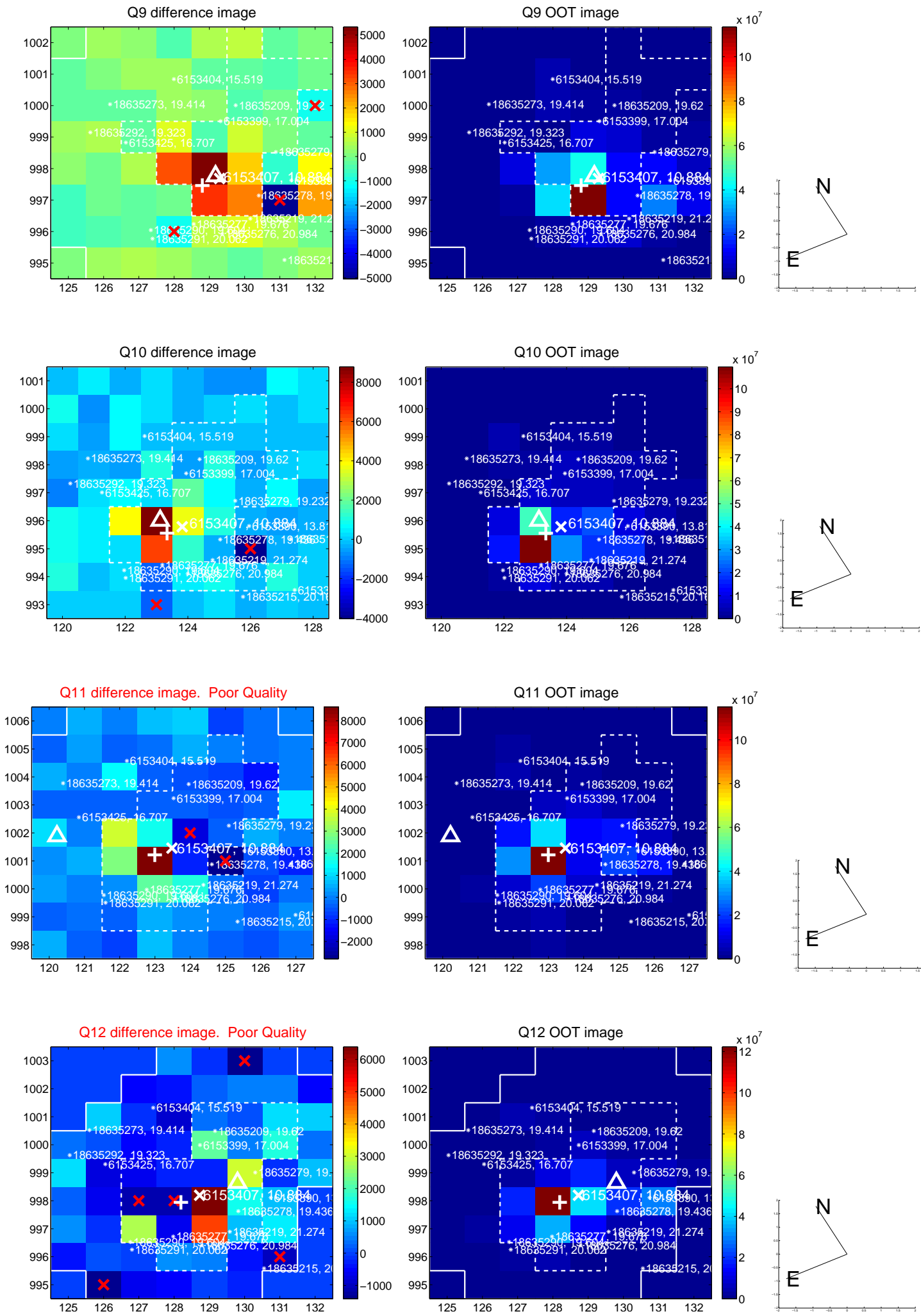
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



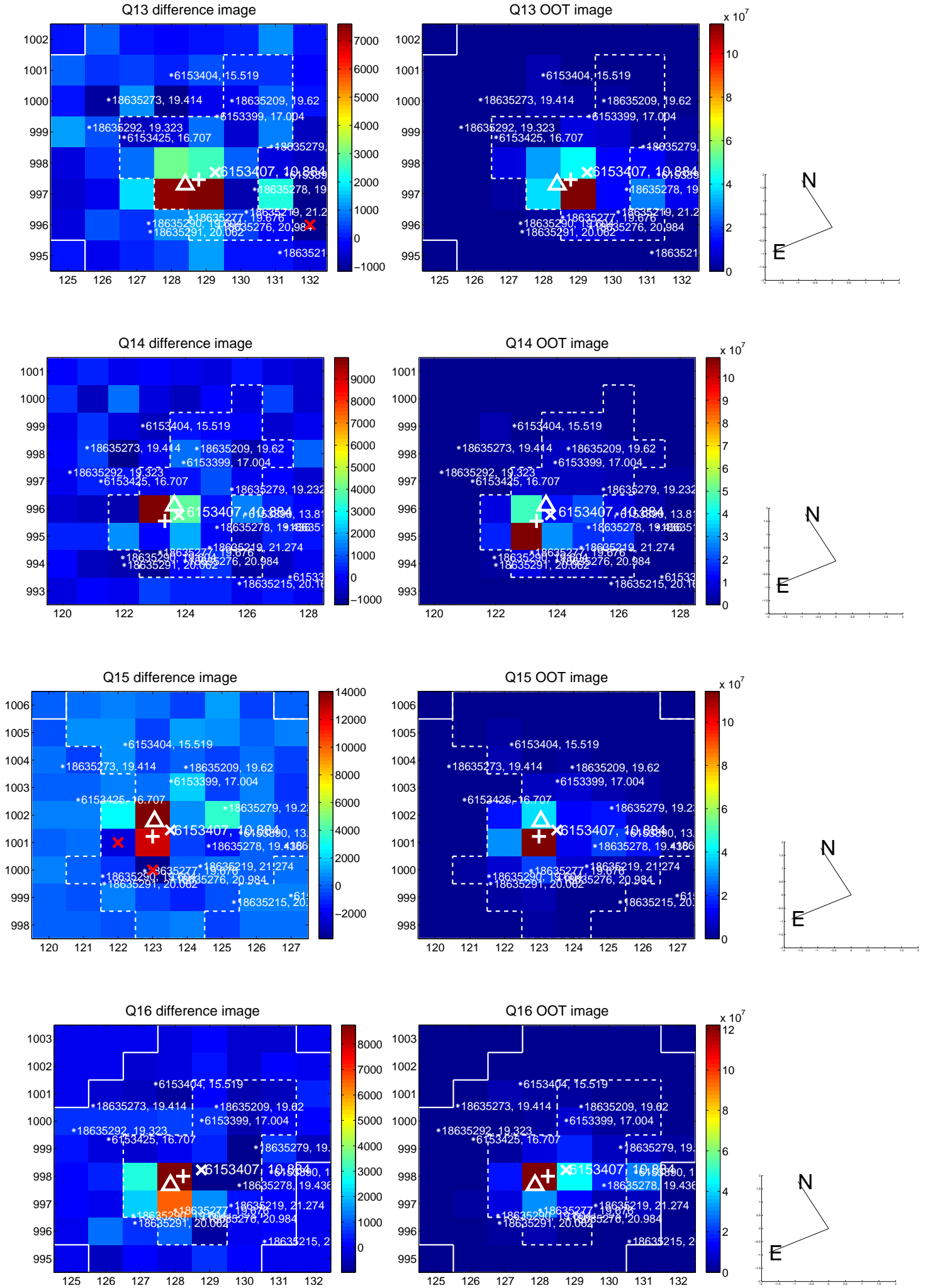
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



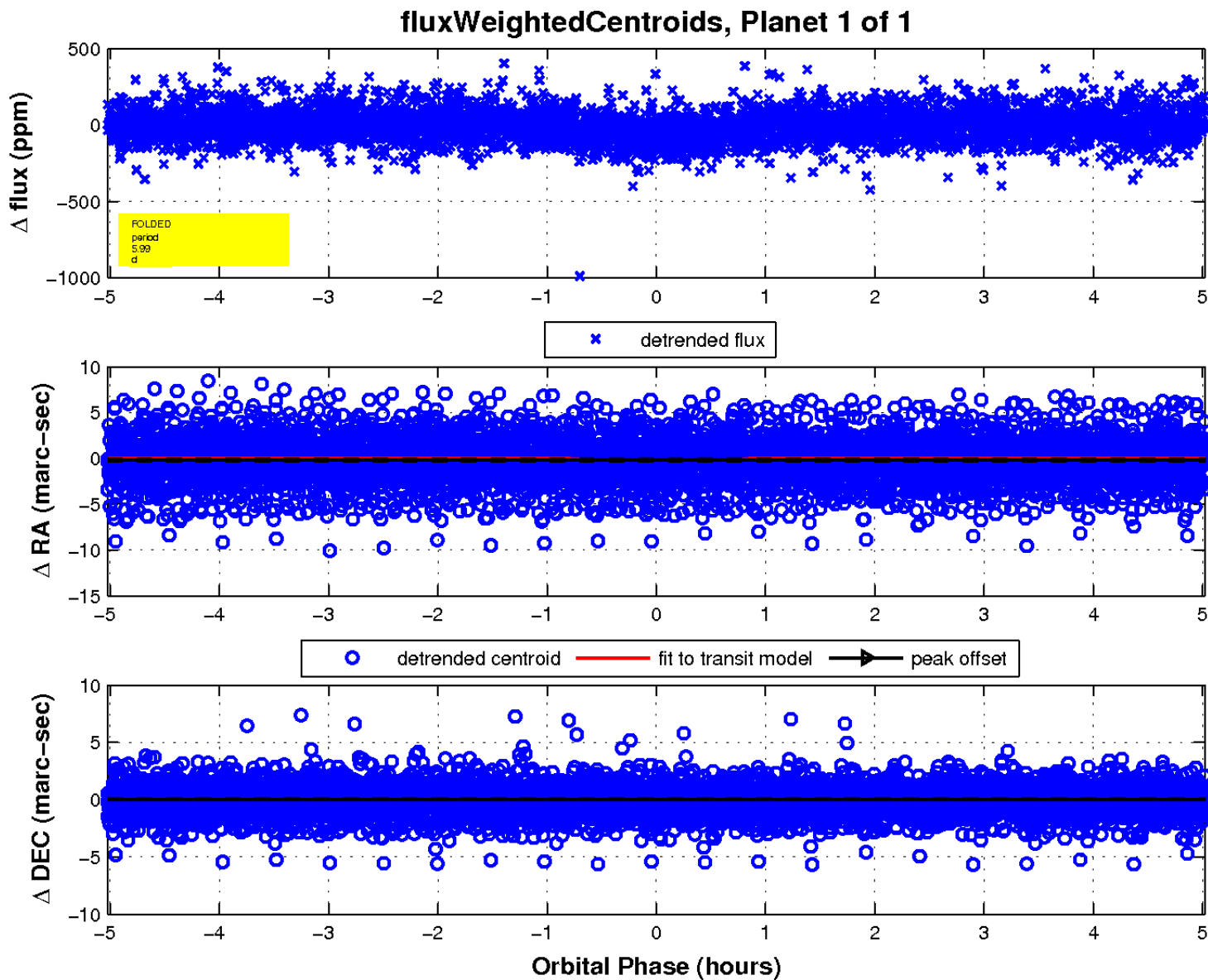
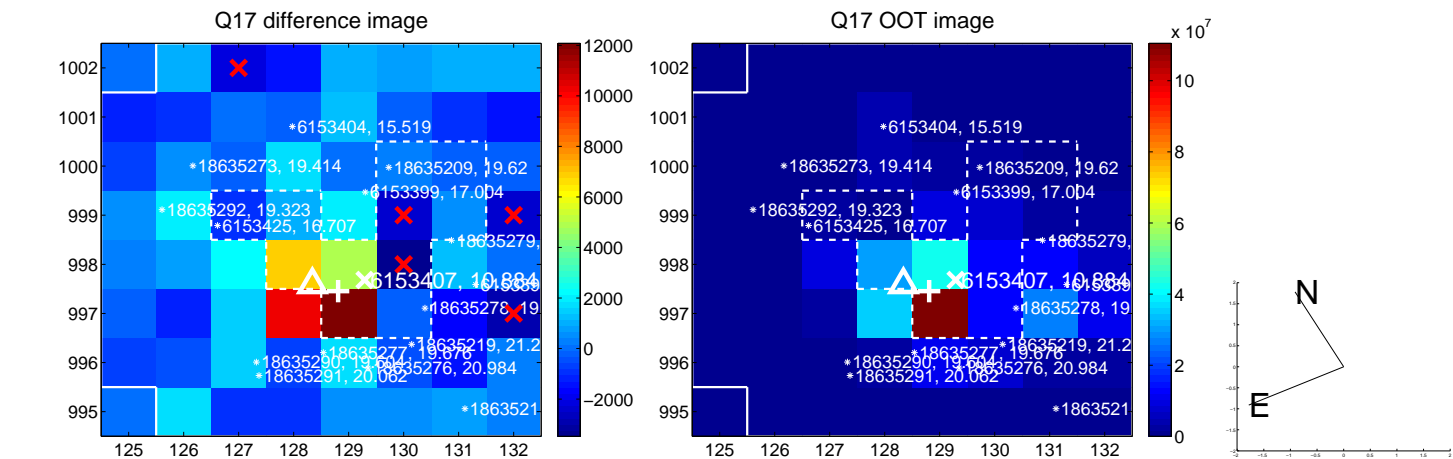
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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

