

KIC 007542369

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})
007542369-01	OBS	2465.01	5.460868	131.678252	170.6	2.570	17.0	19.9	0.93	6319	1.63	354.37

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007542369-01	OBS	FP	0.00	0	1	1	0	MOD_SEC_ALT—CENT_RESOLVED_OFFSET—HALO_GHOST

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.

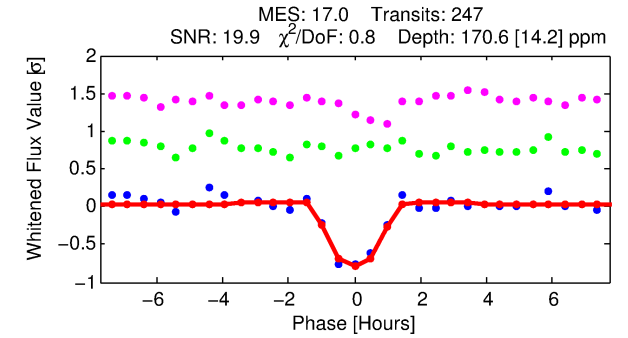
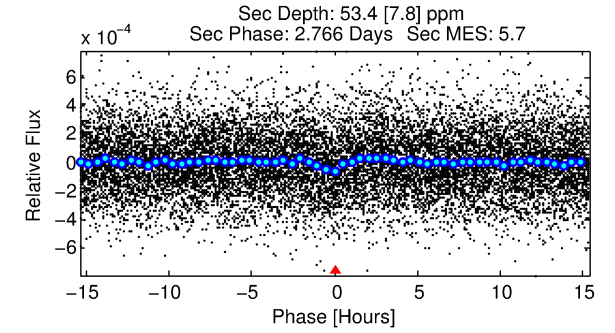
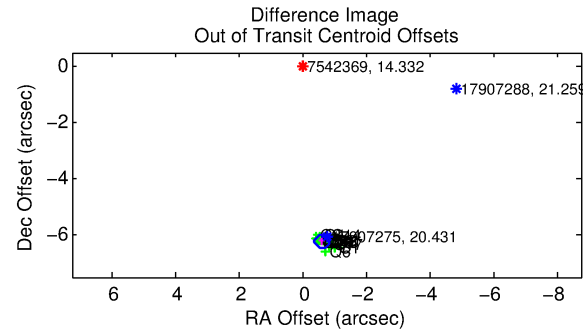
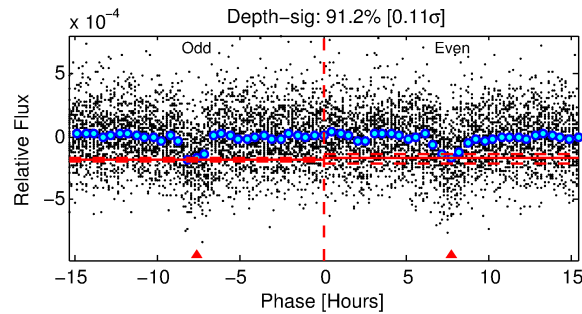
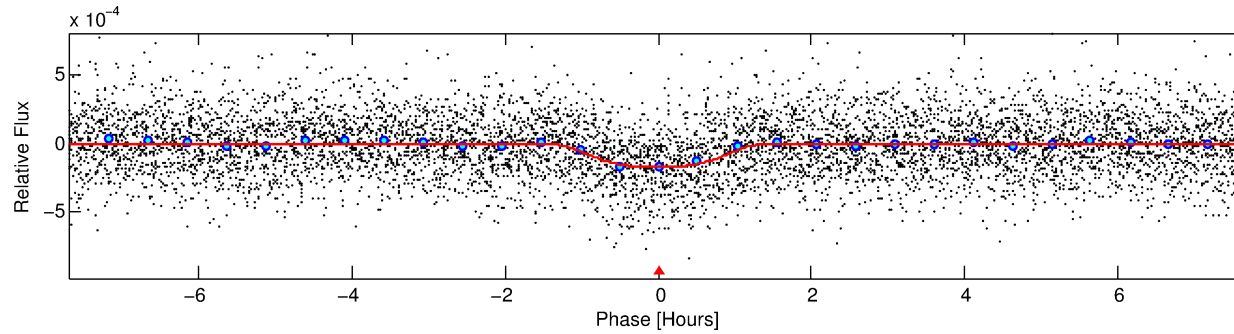
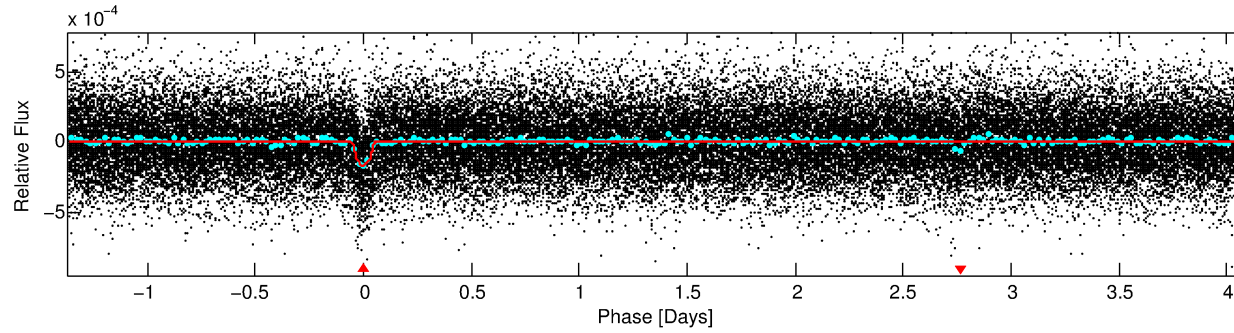
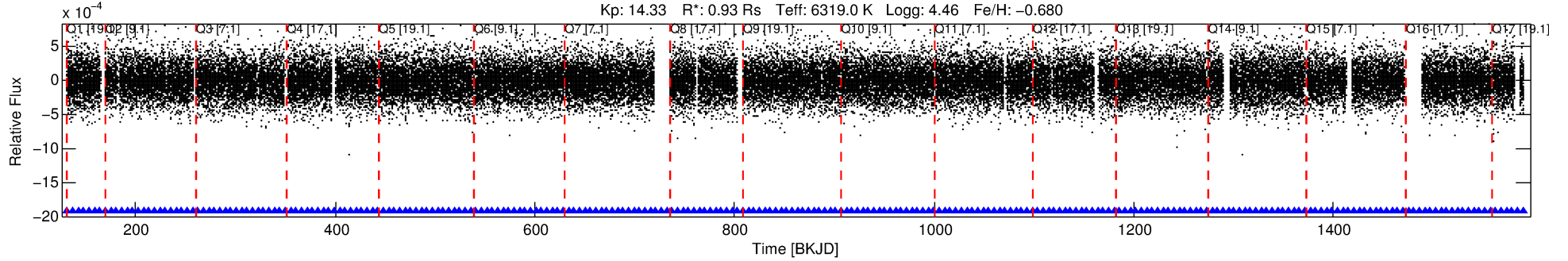
Ephemeris Match Information For 007542369-01

No Significant Match Found

DV One-Page Summary

KIC: 7542369 Candidate: 1 of 1 Period: 5.461 d
KOI: K02465.01 Corr: 0.828

Kp: 14.33 R*: 0.93 Rs Teff: 6319.0 K Logg: 4.46 Fe/H: -0.680



DV Fit Results:

Period = 5.46087 [0.00002] d
Epoch = 131.6783 [0.0027] BKJD
Rp/R* = 0.0160 [0.0010]
a/R* = 4.34 [0.59]
b = 0.98 [0.01]
Seff = 354.37 [130.00]
Teq = 1106 [101] K
Rp = 1.63 [0.45] Re
a = 0.0590 [0.0137] AU
Ag = 38.65 [15.11] [2.49σ]
Teffp = 4265 [246] K [11.86σ]

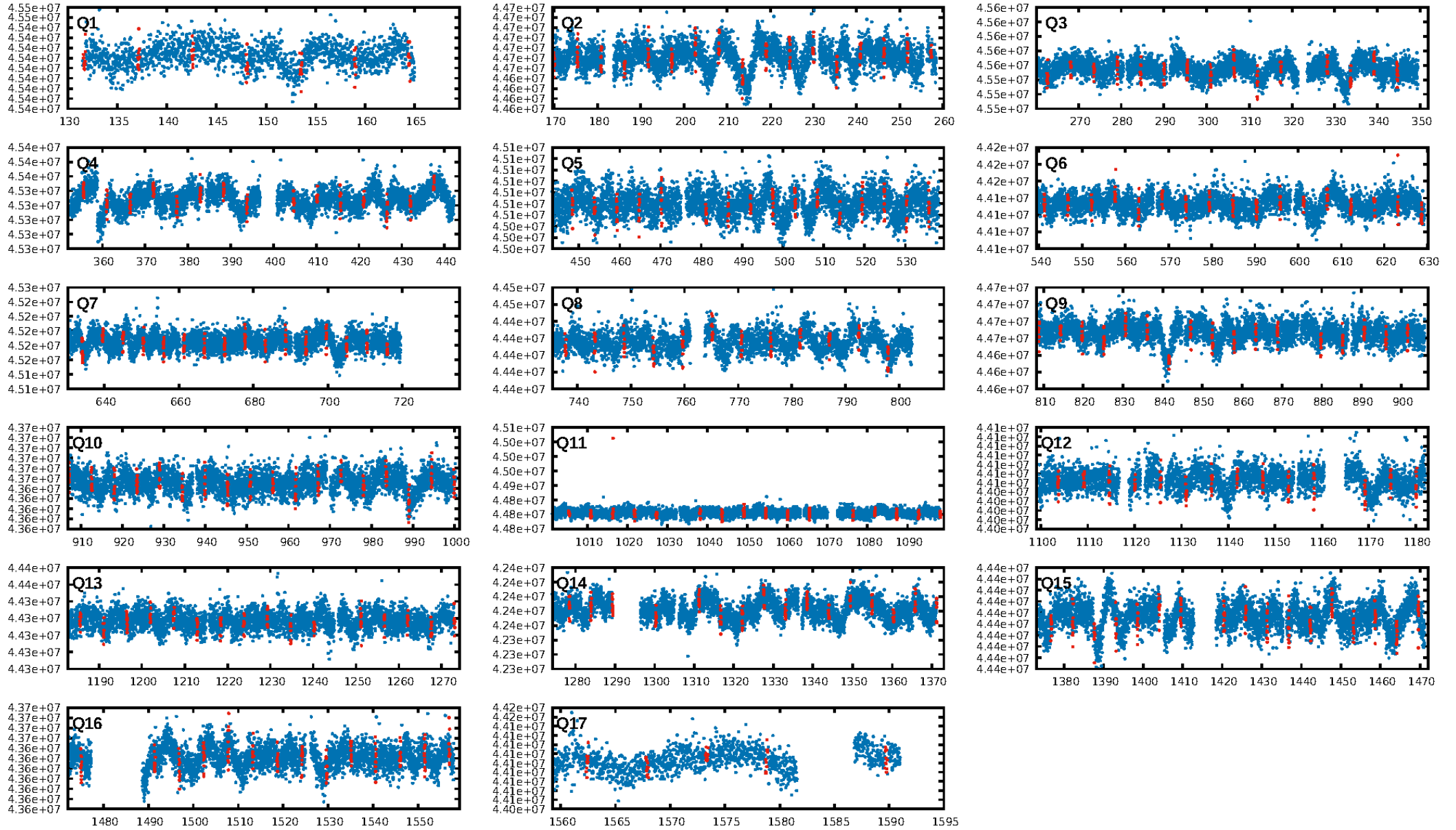
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.88e-63
RollingBand-fgt: 1.00 [235/235]
GhostDiagnostic-chr: -0.03259
Centroid-sig: 0.0%
Centroid-so: 18.057 arcsec [27.67σ]
OotOffset-rm: 6.259 arcsec [82.86σ]
KicOffset-rm: 6.264 arcsec [83.51σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

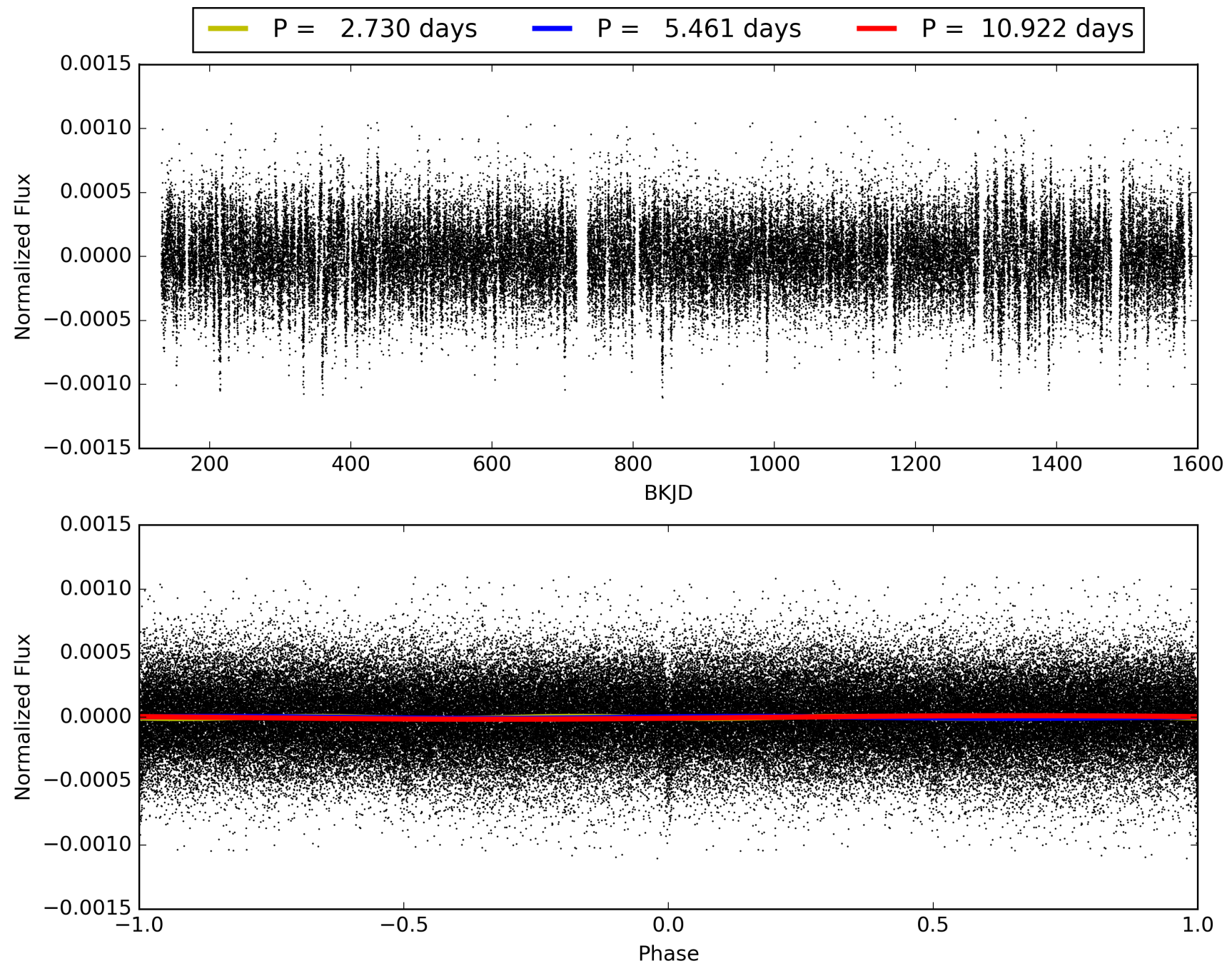
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 17:32:35 Z

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

TCE 007542369-01, PDC Light Curves

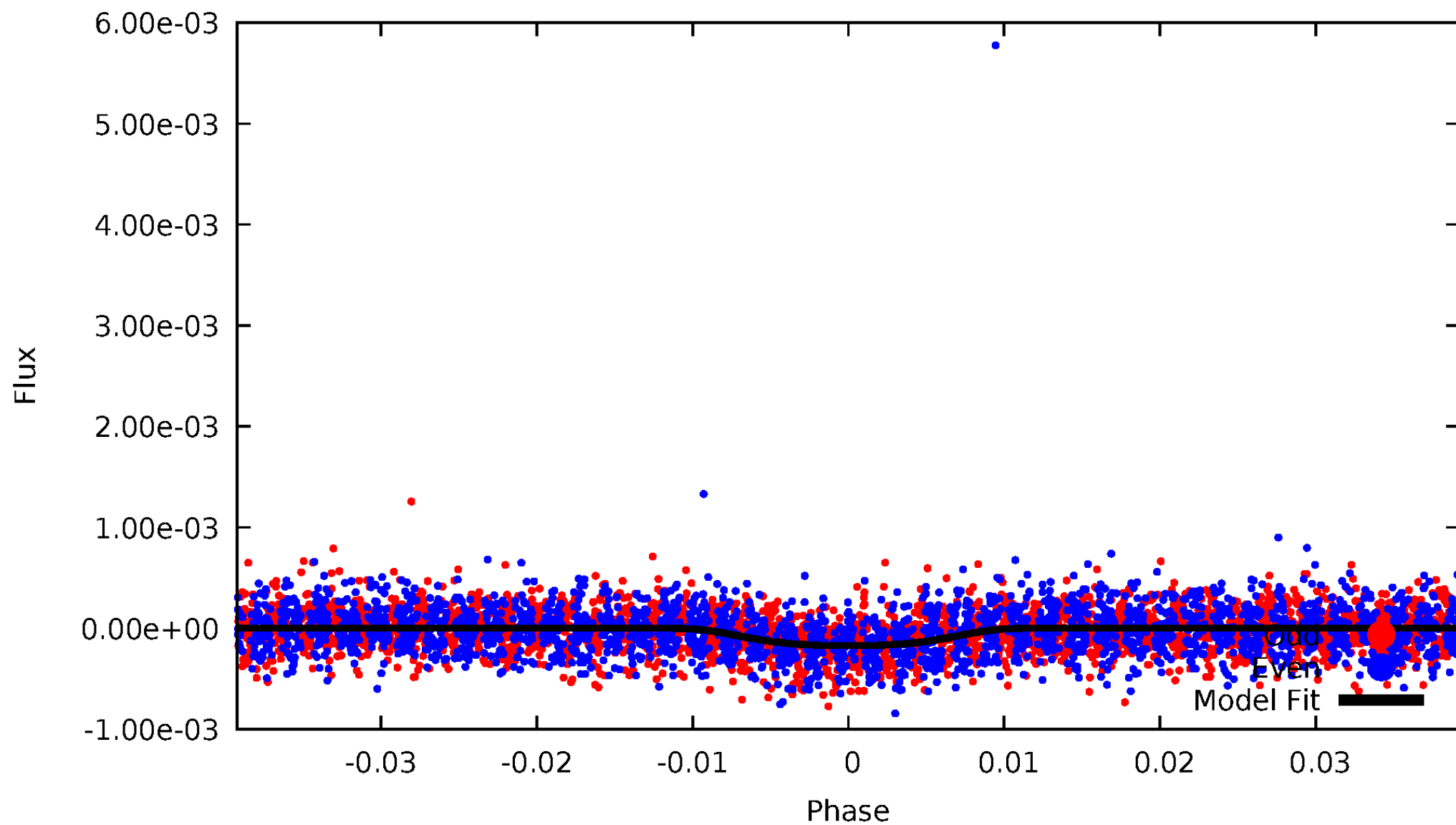


TCE 007542369-01



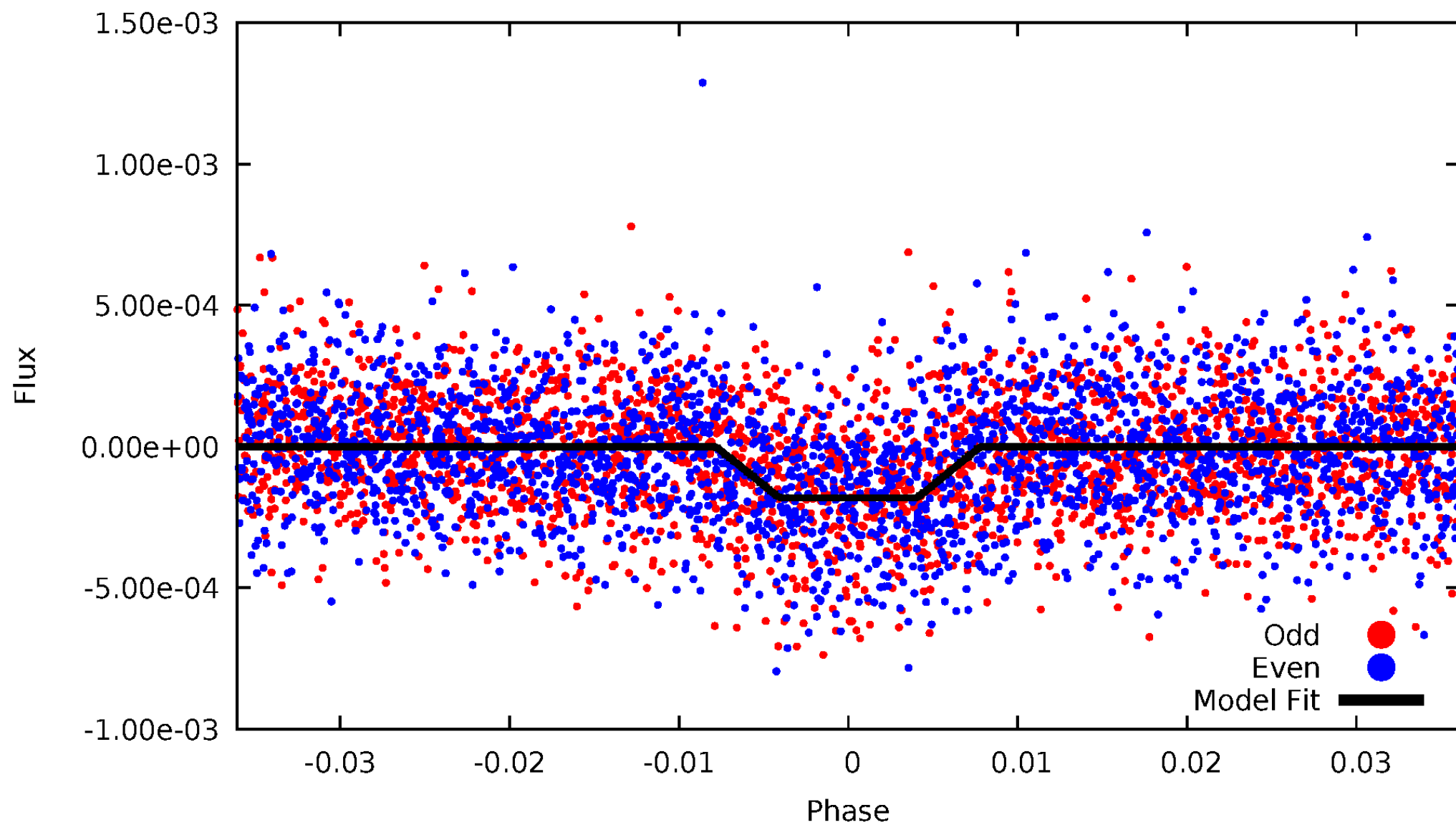
DV Odd/Even

TCE 007542369-01

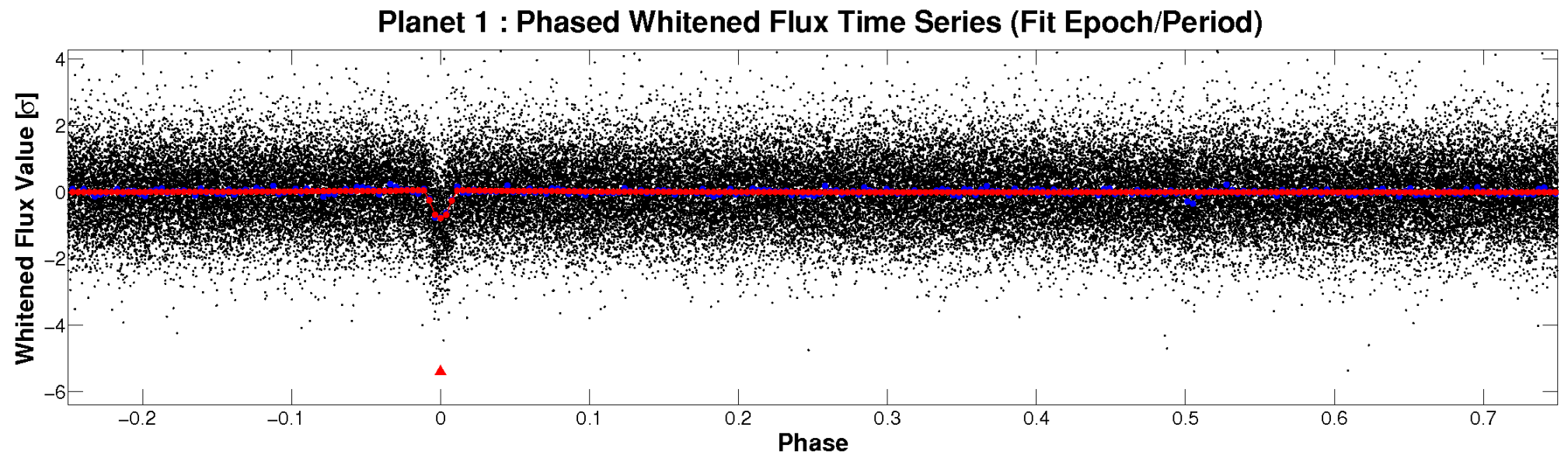
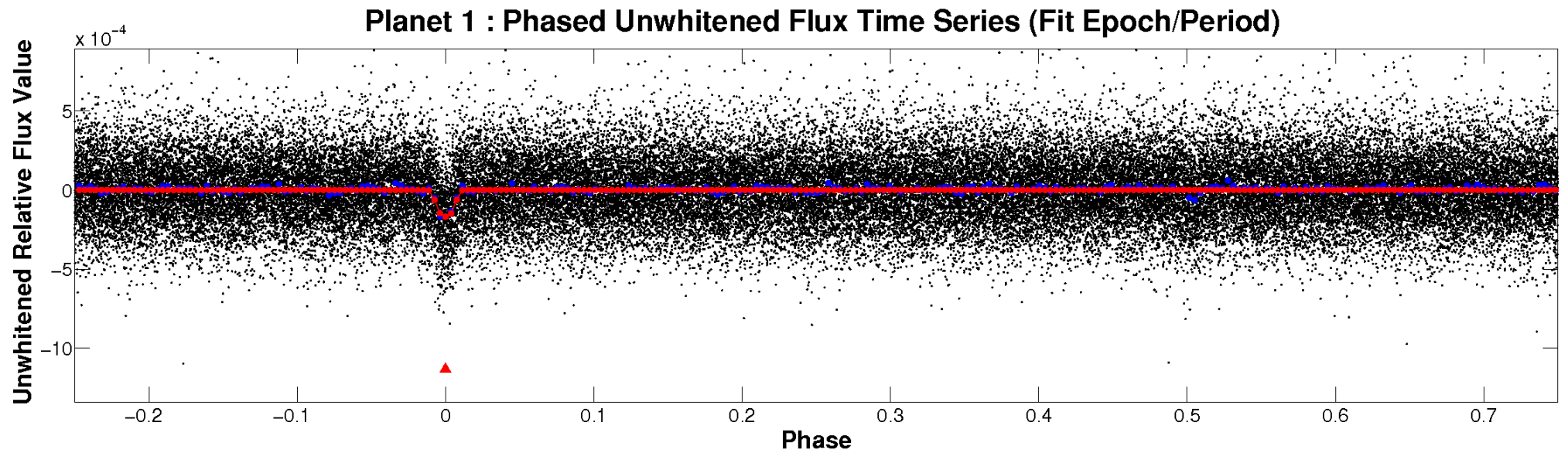


ALT Odd/Even

TCE 007542369-01

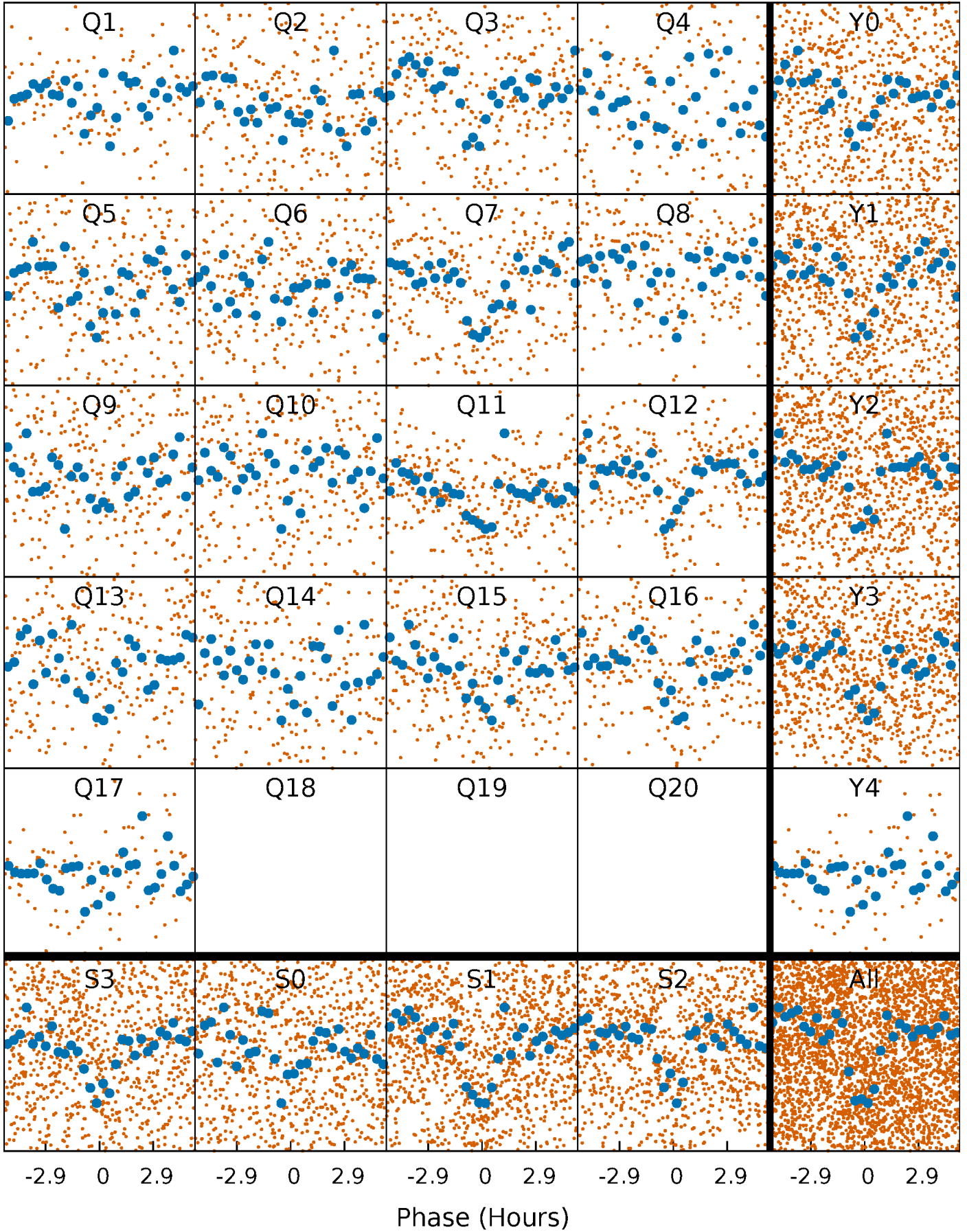


Non-Whitened Vs. Whitened Light Curve



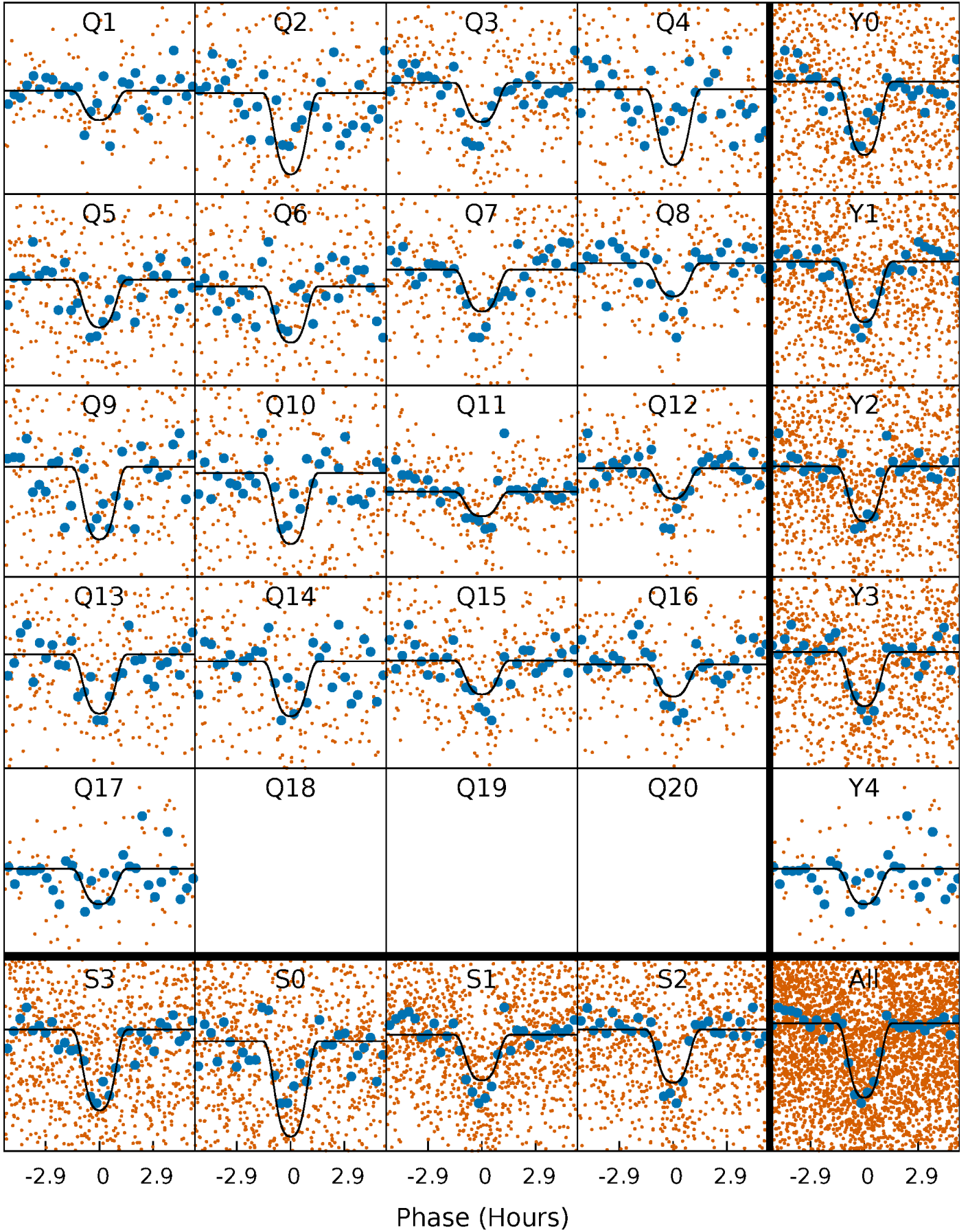
PDC Quarter-Phased Transit Curves

TCE 007542369-01 P= 5.460868 Days $T_0=131.678252$ (BKJD)



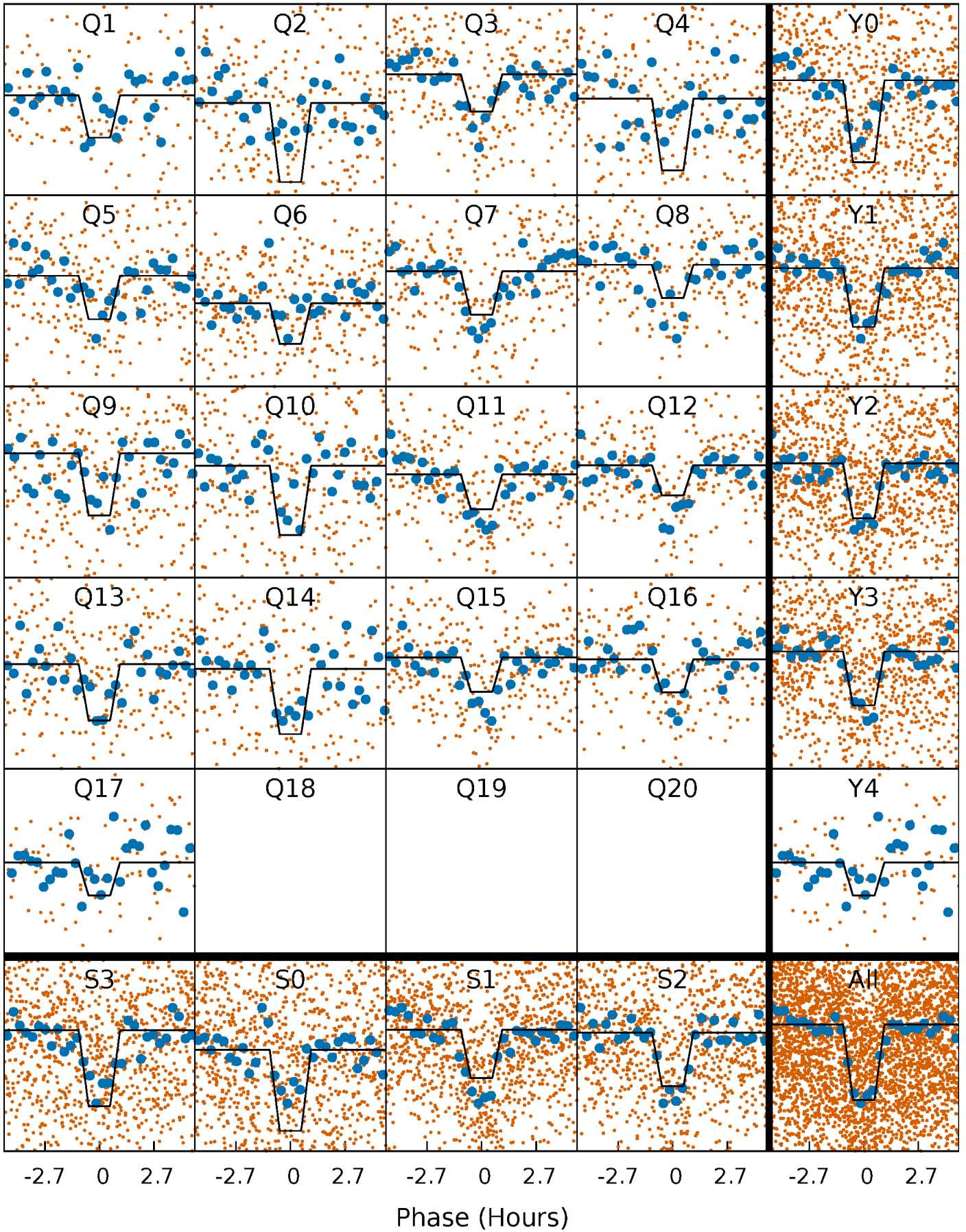
DV Quarter-Phased Transit Curves

TCE 007542369-01 P= 5.460868 Days $T_0=131.678252$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

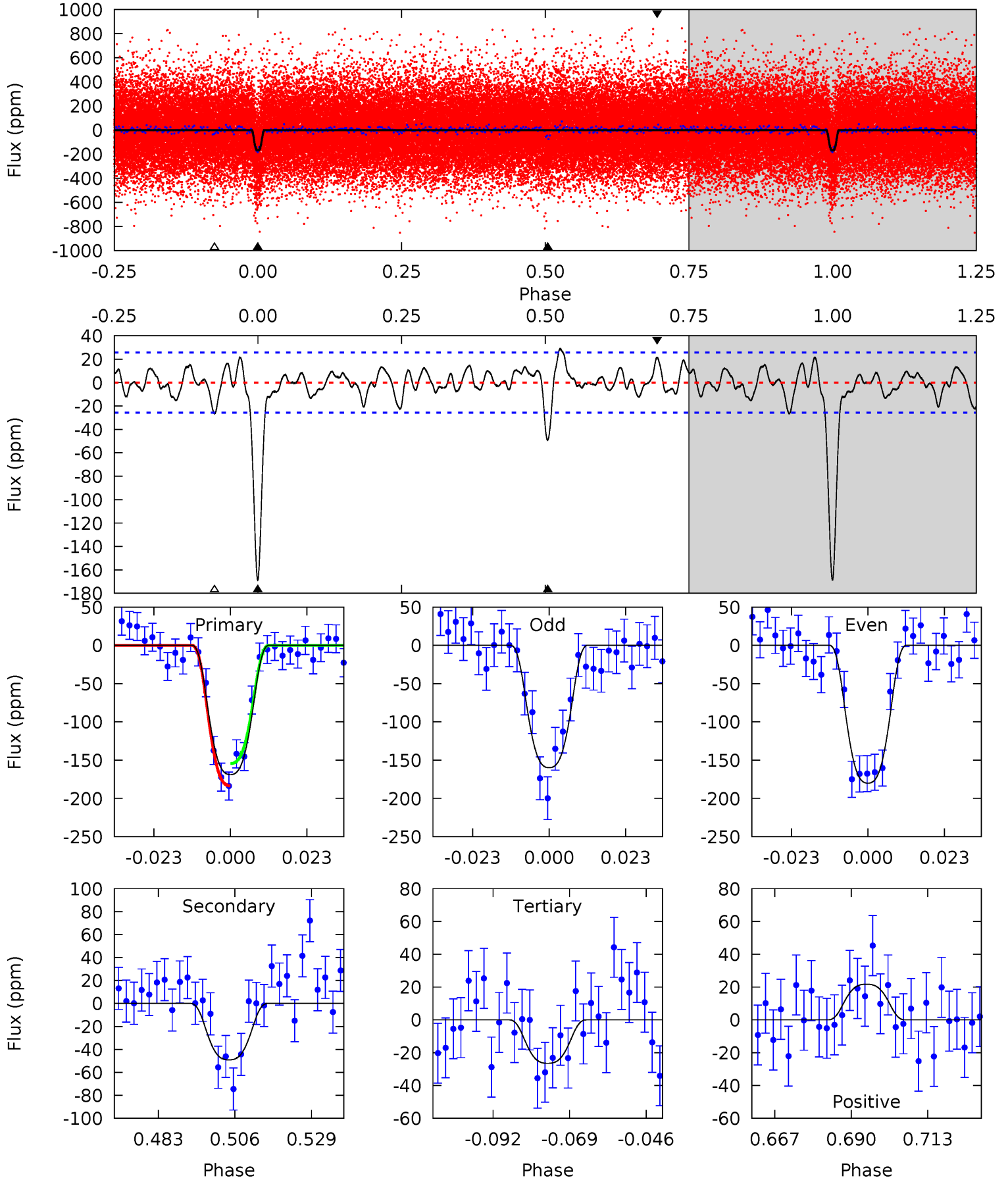
TCE 007542369-01 P= 5.460899 Days $T_0=131.671723$ (BKJD)



DV Model-Shift Uniqueness Test

007542369-01, P = 5.460868 Days, E = 126.217384 Days

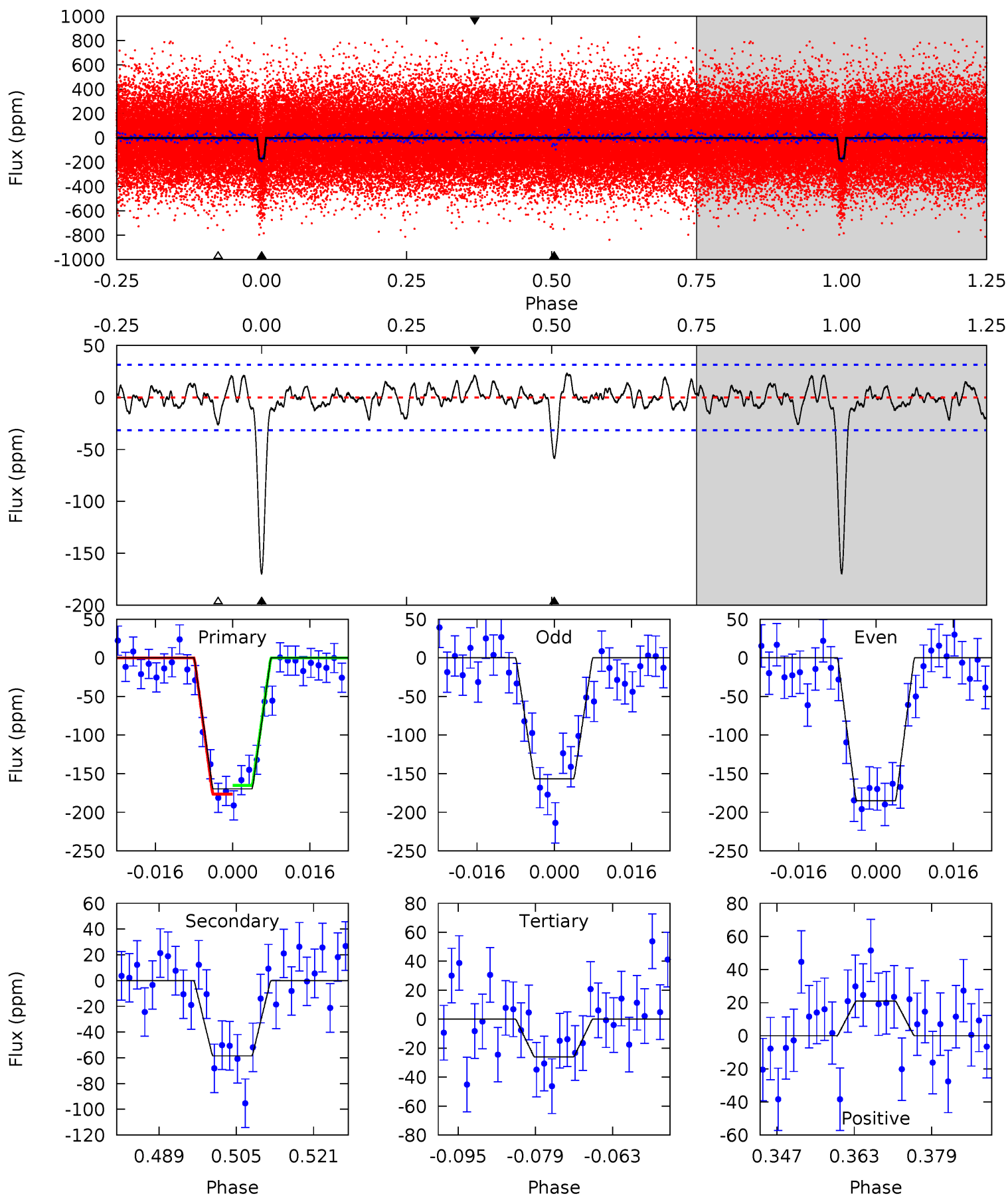
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
32.0	9.33	5.03	4.12	4.86	2.27	1.65	27.0	27.9	4.30	5.21	1.93	1.00	0.15	2.77



Alt Model-Shift Uniqueness Test

007542369-01, P = 5.460899 Days, E = 126.210824 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.6	9.18	4.08	3.29	4.94	2.41	1.30	22.5	23.3	5.10	5.89	2.23	0.98	0.12	0.89



Stellar Parameters For KIC 007542369

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6319^{+171}_{-209}	$4.465^{+0.067}_{-0.189}$	$-0.680^{+0.300}_{-0.300}$	$0.930^{+0.253}_{-0.108}$	$0.919^{+0.106}_{-0.096}$	$1.611^{+0.539}_{-0.788}$
	+3%/-3%	+2%/-4%	+44%/-44%	+27%/-12%	+12%/-10%	+33%/-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 007542369-01 / KOI 2465.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-49 ± 5	$1.65^{+0.25}_{-0.15}$	1563^{+99}_{-75}	4379^{+167}_{-164}	34^{+8}_{-8}
Alt.	-59 ± 6	$1.41^{+0.22}_{-0.16}$	1570^{+107}_{-75}	4857^{+225}_{-222}	56^{+15}_{-15}

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

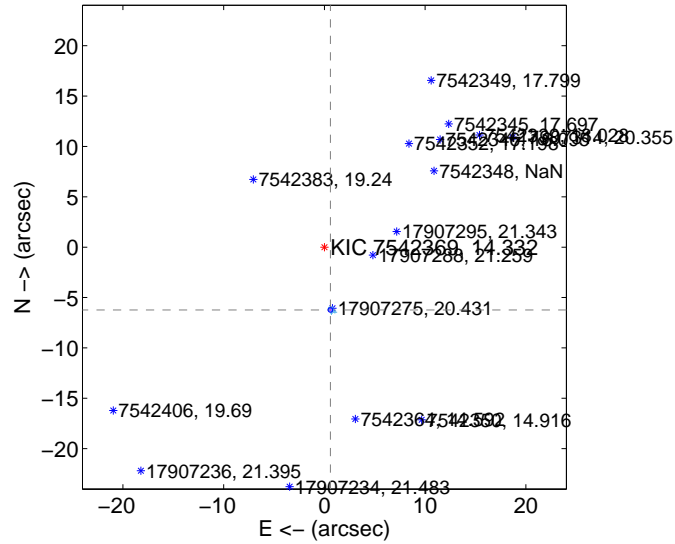
Supplemental centroid analysis for 007542369-01. Kepler magnitude: 14.33. Transit SNR 19.87

There are 17 quarters with good PRF difference image offsets

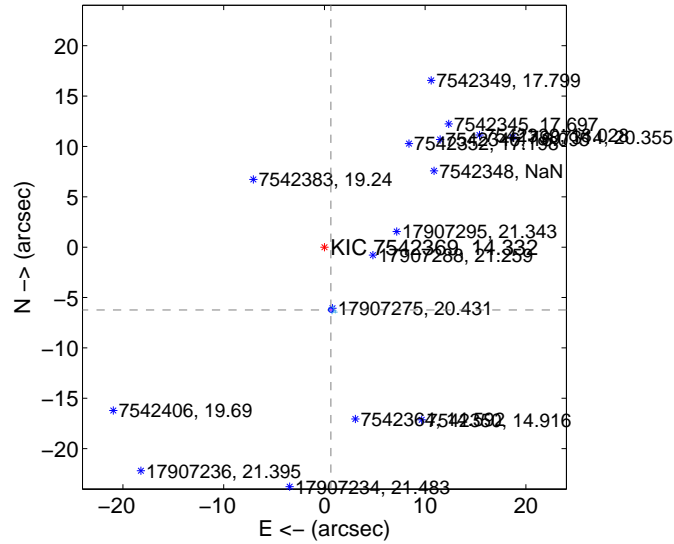
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.259 ± 0.076	82.86	-0.595 ± 0.077	-6.231 ± 0.075
PRF-fit source offset from KIC position	6.264 ± 0.075	83.51	-0.639 ± 0.079	-6.232 ± 0.074
photometric centroid source offset	18.06 ± 0.65	27.67	-1.78 ± 0.56	-17.97 ± 0.65

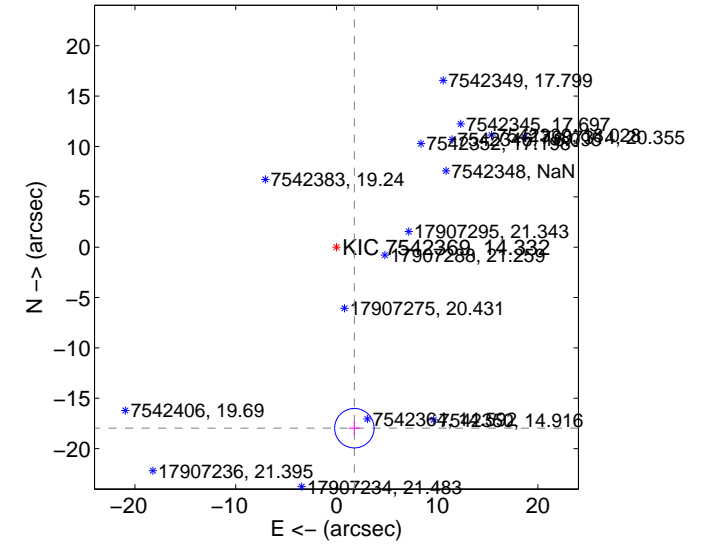
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

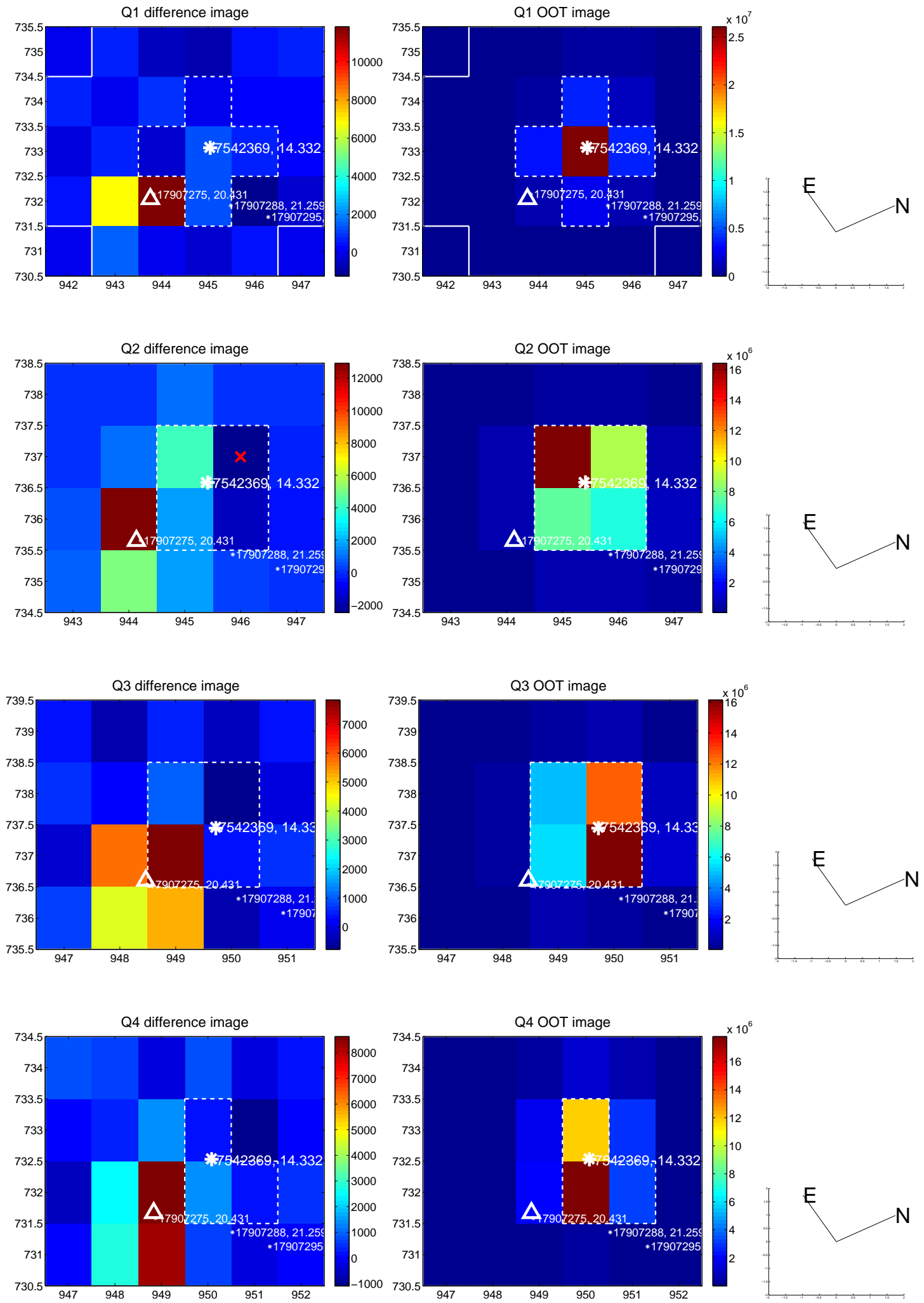


offset from photometric centroids

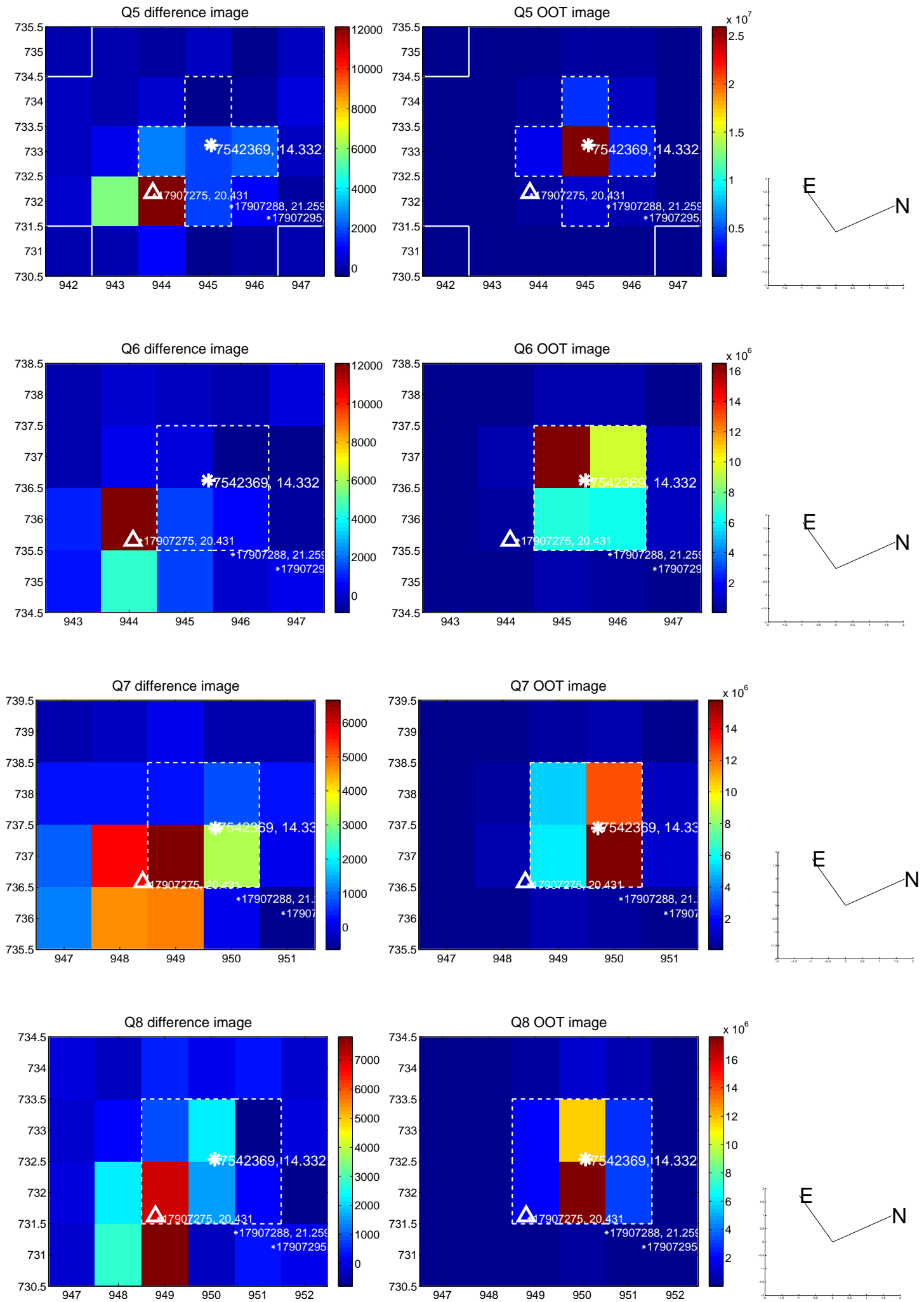


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

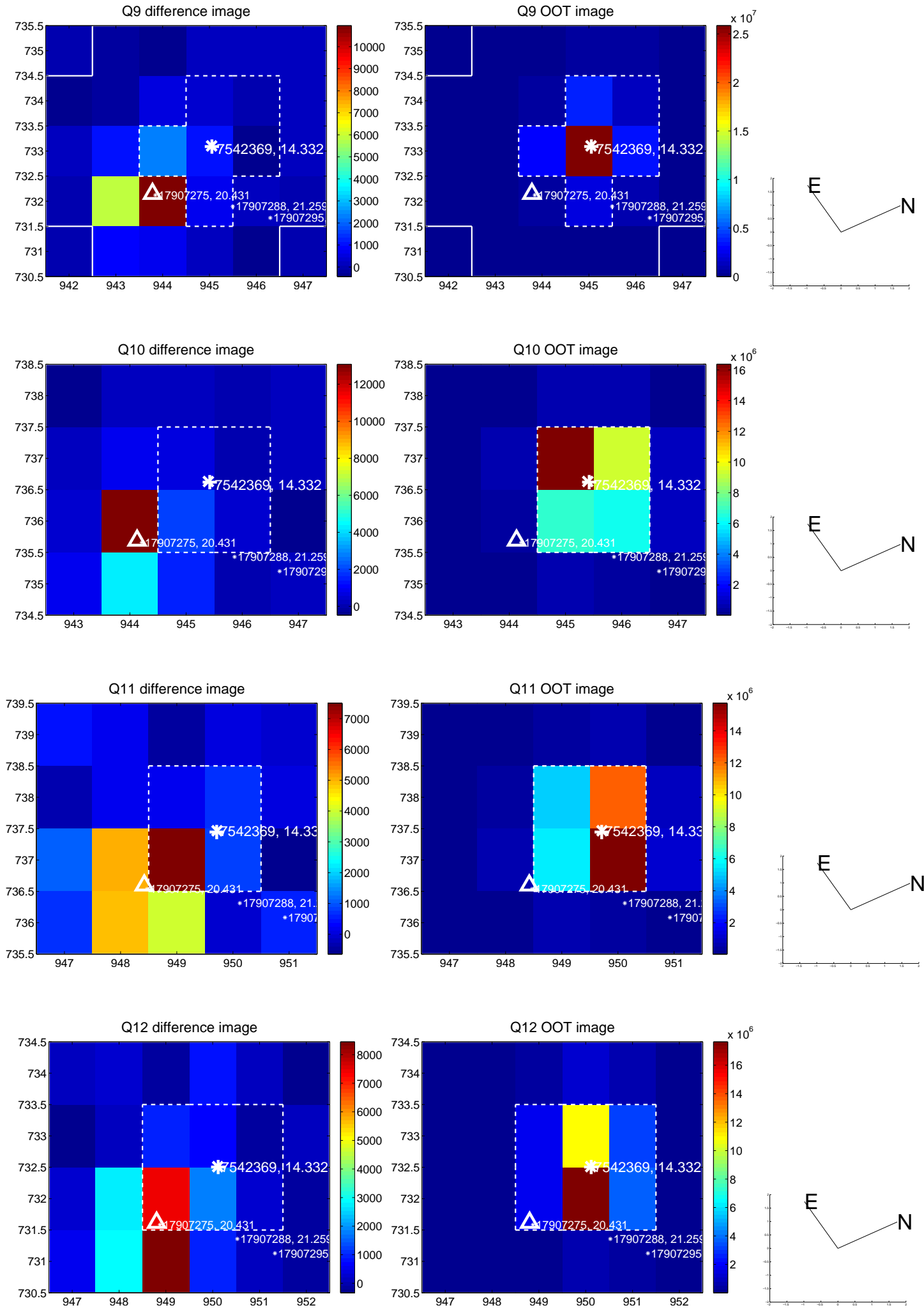
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



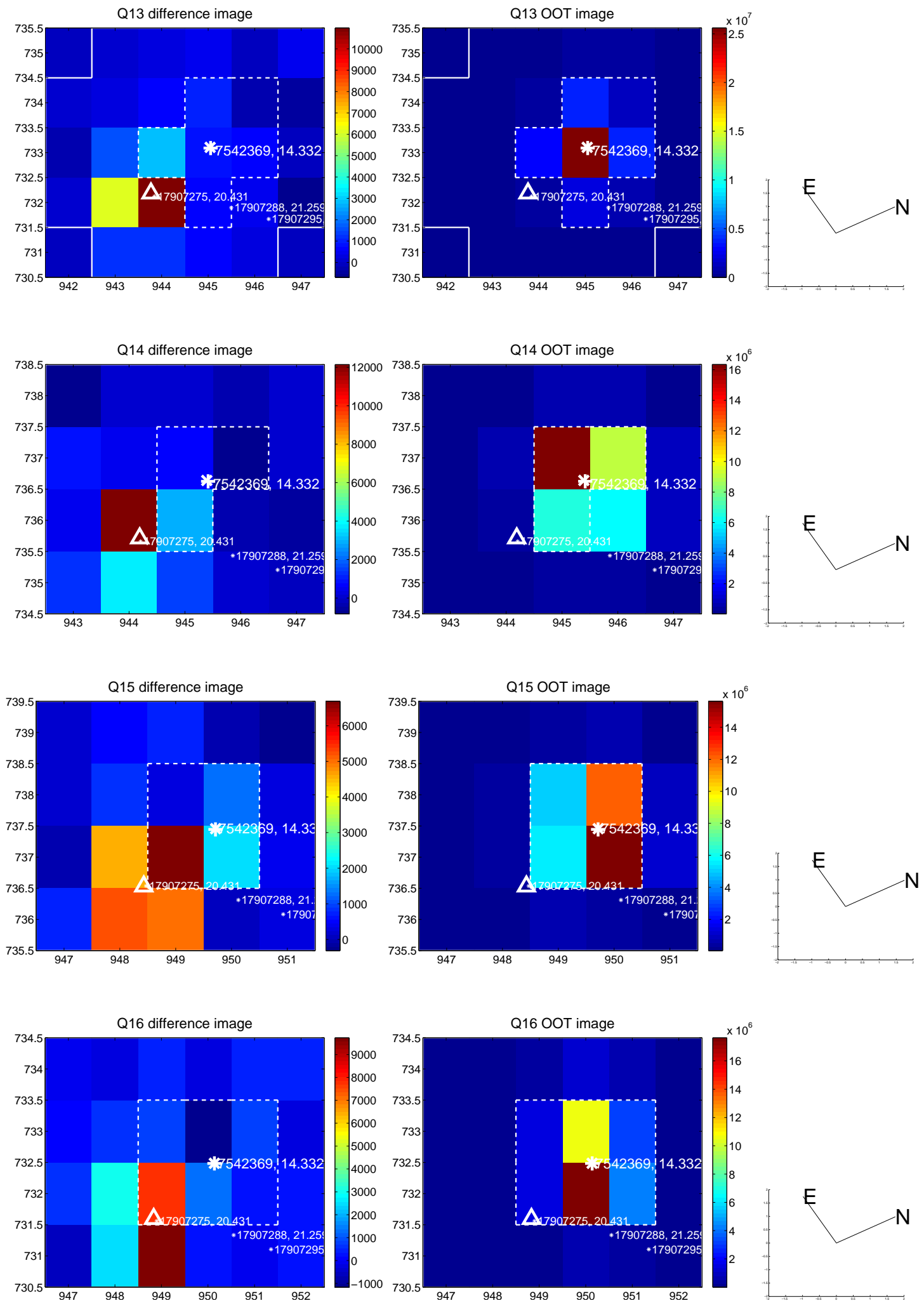
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



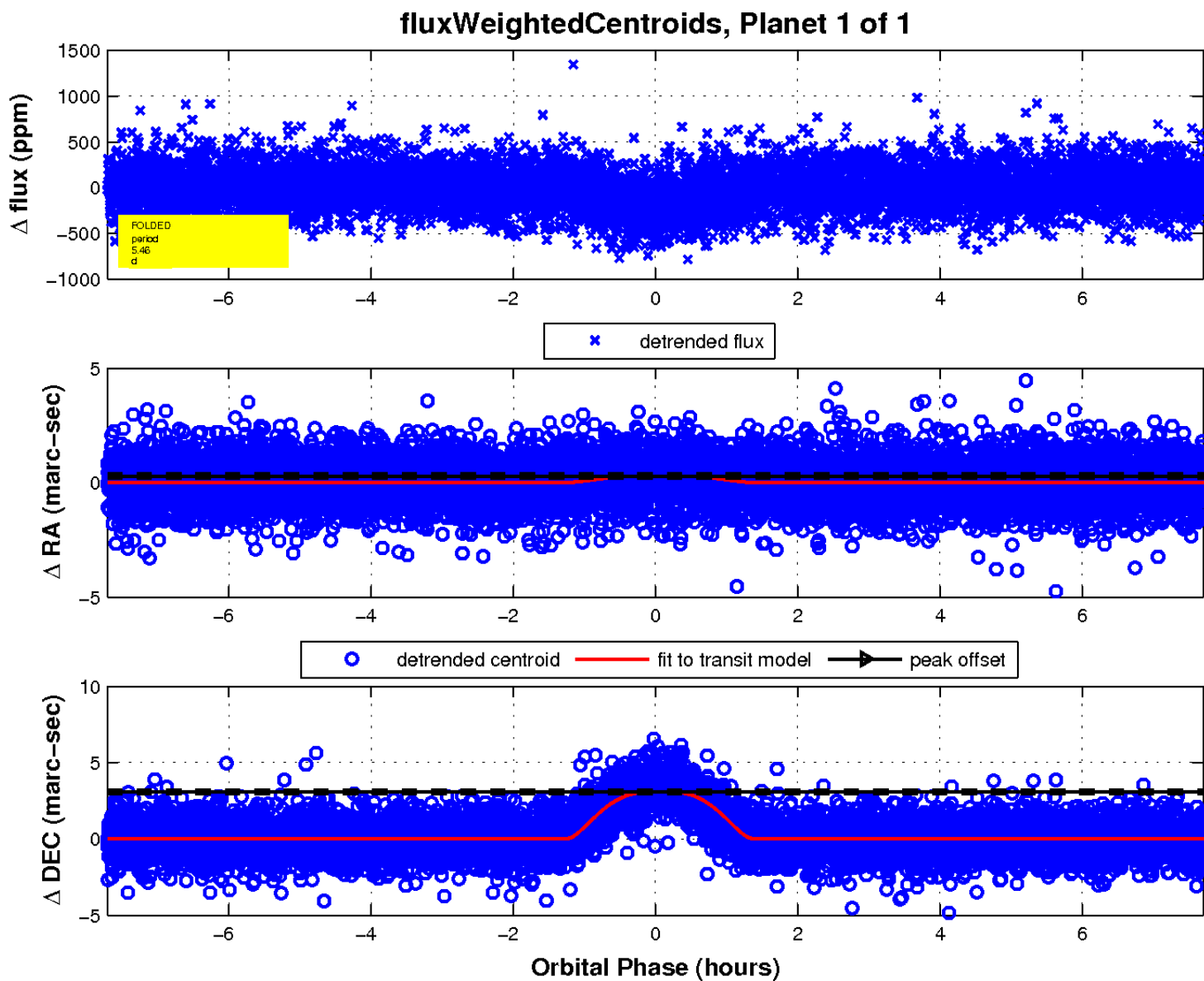
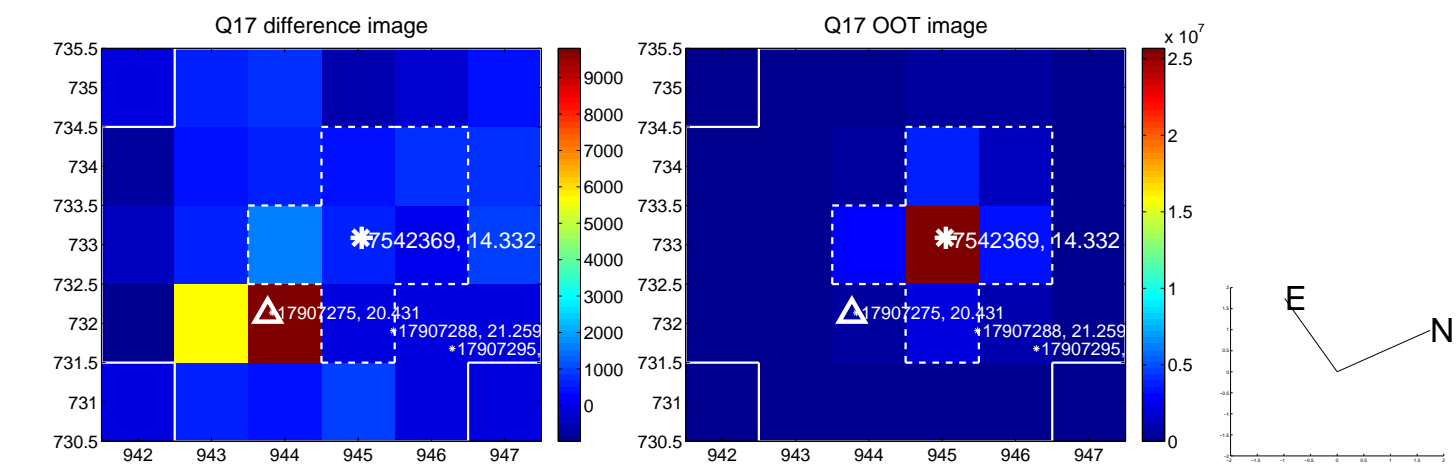
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UKIRT Image

Declination

