

KIC 010154388

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})
010154388-01	OBS	0991.01	12.062214	138.223381	285.2	2.167	27.9	30.7	0.93	5547	1.85	74.90

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010154388-01	OBS	PC	1.00	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.

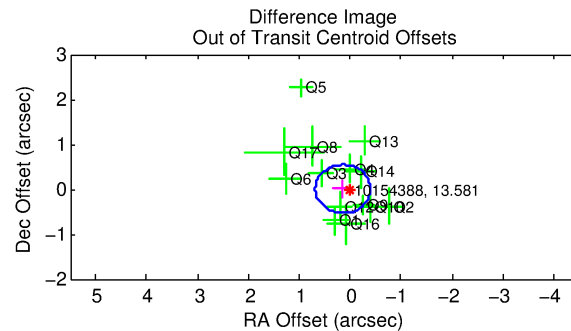
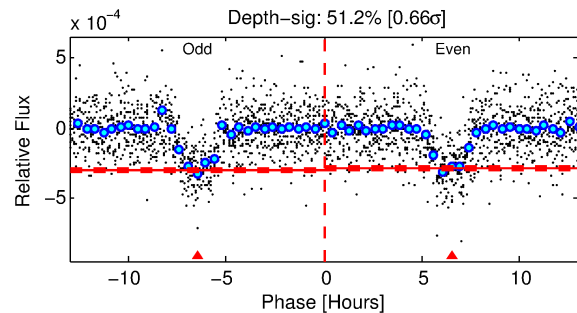
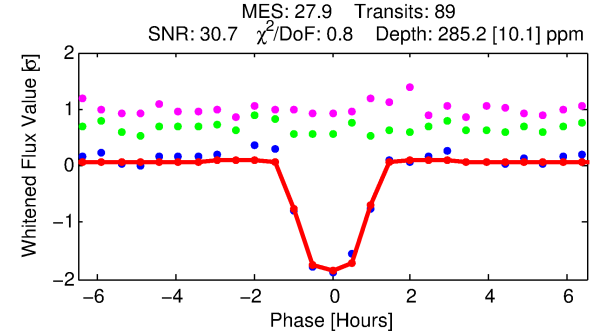
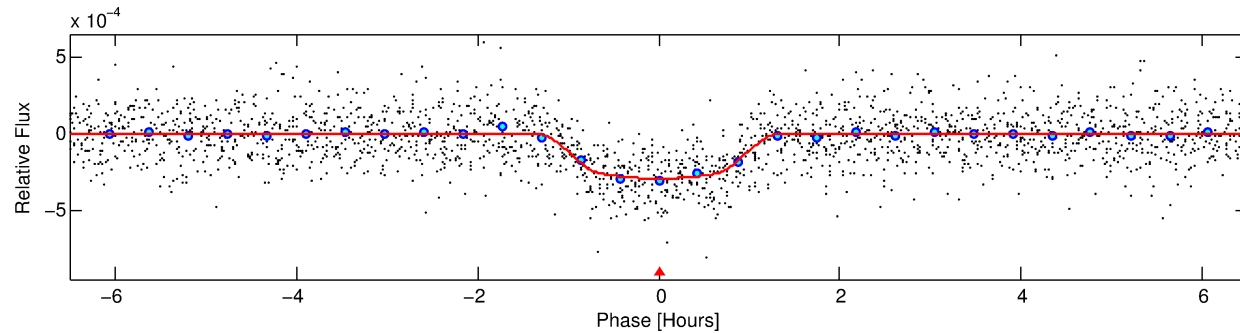
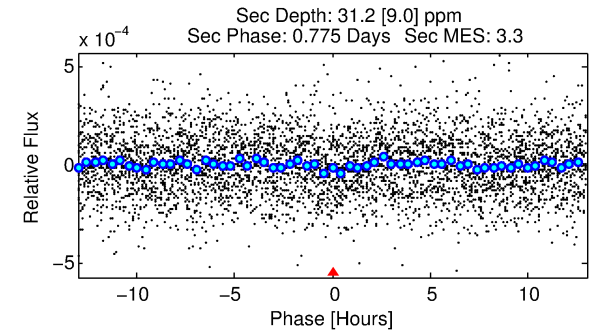
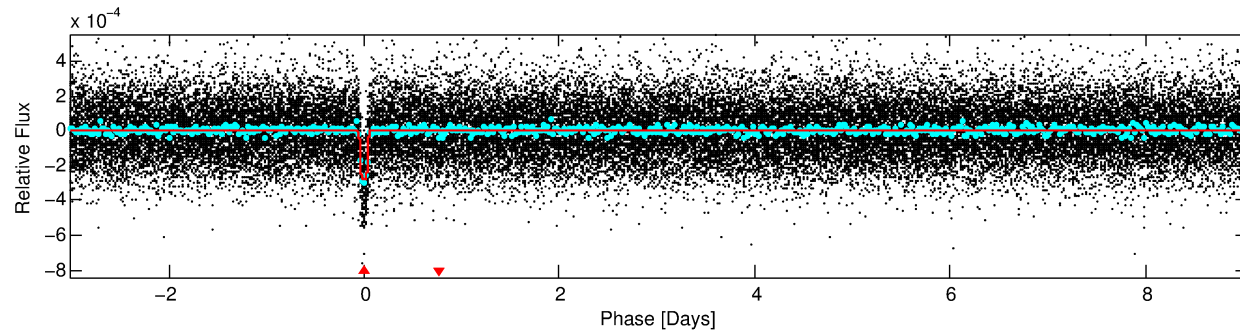
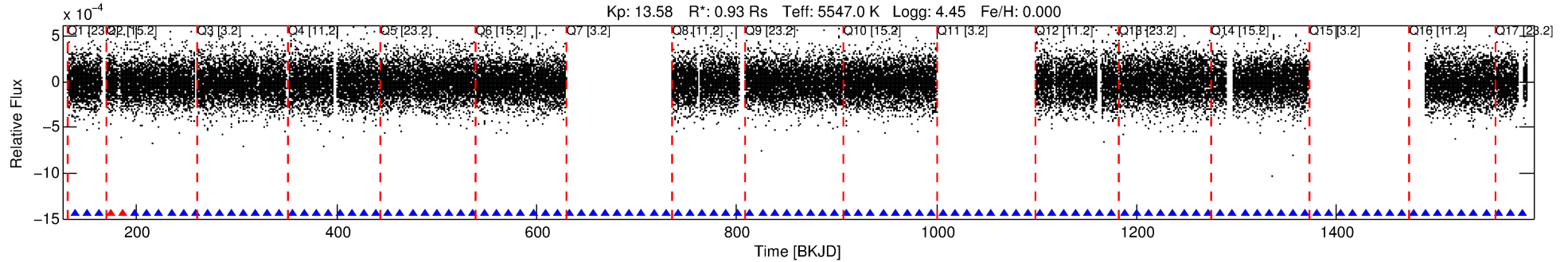
Ephemeris Match Information For 010154388-01

No Significant Match Found

DV One-Page Summary

KIC: 10154388 Candidate: 1 of 1 Period: 12.062 d

KOI: K00991.01 Corr: 0.985



DV Fit Results:

Period = 12.06221 [0.00003] d
Epoch = 138.2234 [0.0017] BKJD
Rp/R* = 0.0182 [0.0053]
a/R* = 21.92 [27.66]
b = 0.88 [0.34]
Seff = 74.90 [13.82]
Teq = 750 [35] K
Rp = 1.85 [0.59] Re
a = 0.0993 [0.0111] AU
Ag = 49.46 [32.98] [1.47σ]
Teffp = 3076 [500] K [4.64σ]

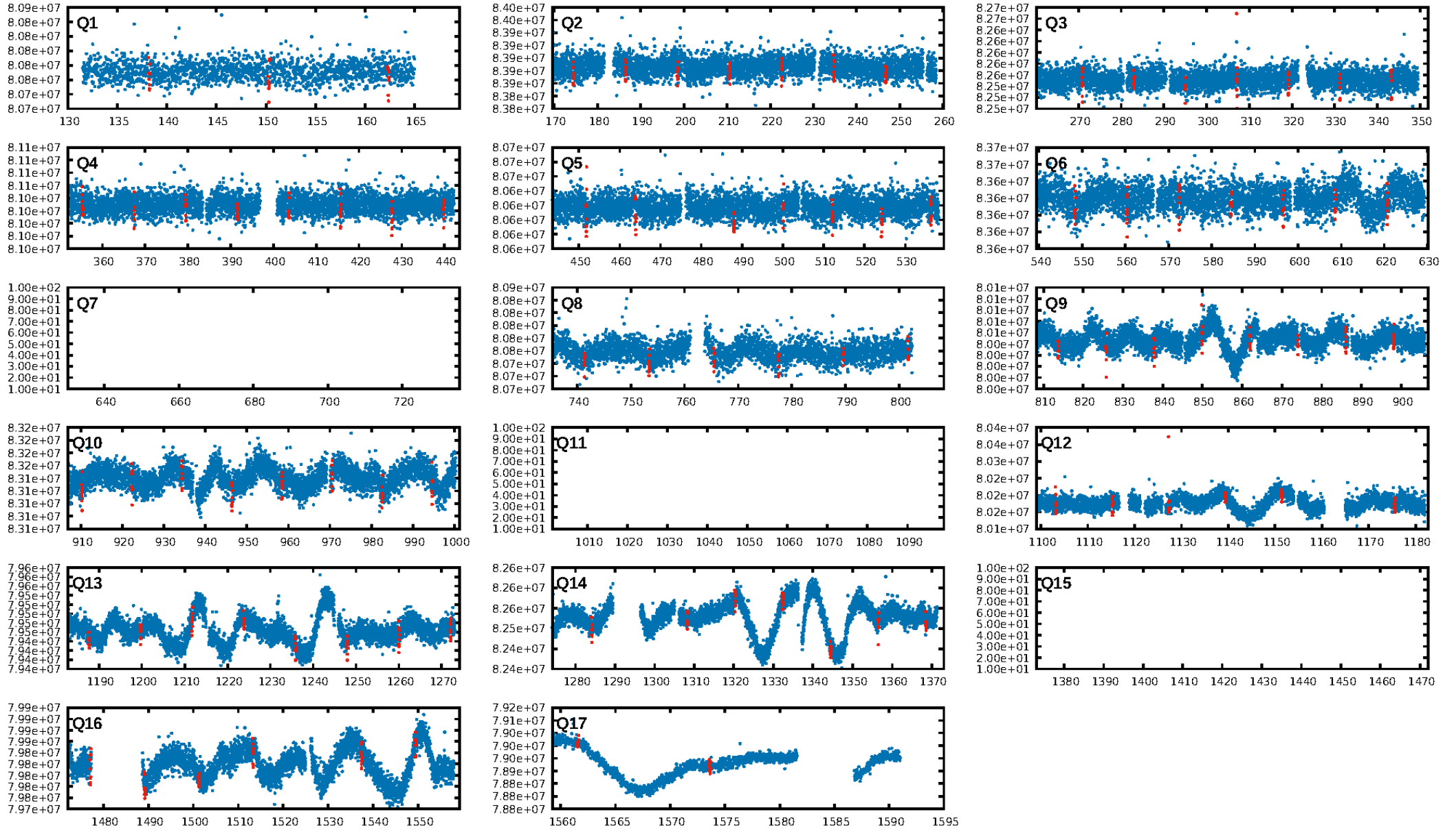
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 89.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.78e-166
RollingBand-fgt: 0.98 [82/84]
GhostDiagnostic-chr: 5.198
Centroid-sig: 48.3%
Centroid-so: 0.436 arcsec [0.95σ]
OotOffset-rm: 0.147 arcsec [0.82σ]
KicOffset-rm: 0.135 arcsec [0.67σ]
OotOffset-st: 4/1/4/5 [14]
KicOffset-st: 4/1/4/5 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

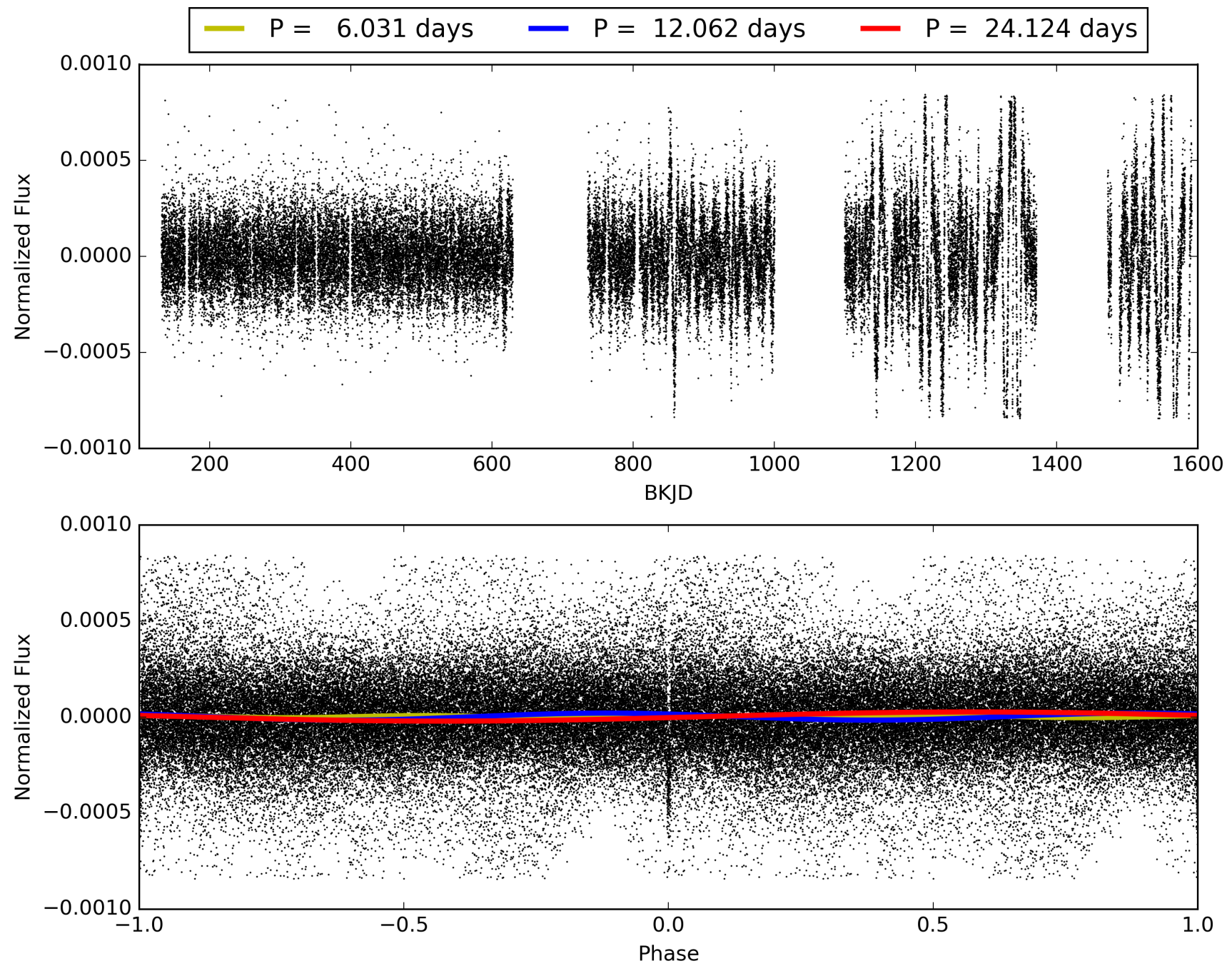
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 21:00:14 Z

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

TCE 010154388-01, PDC Light Curves

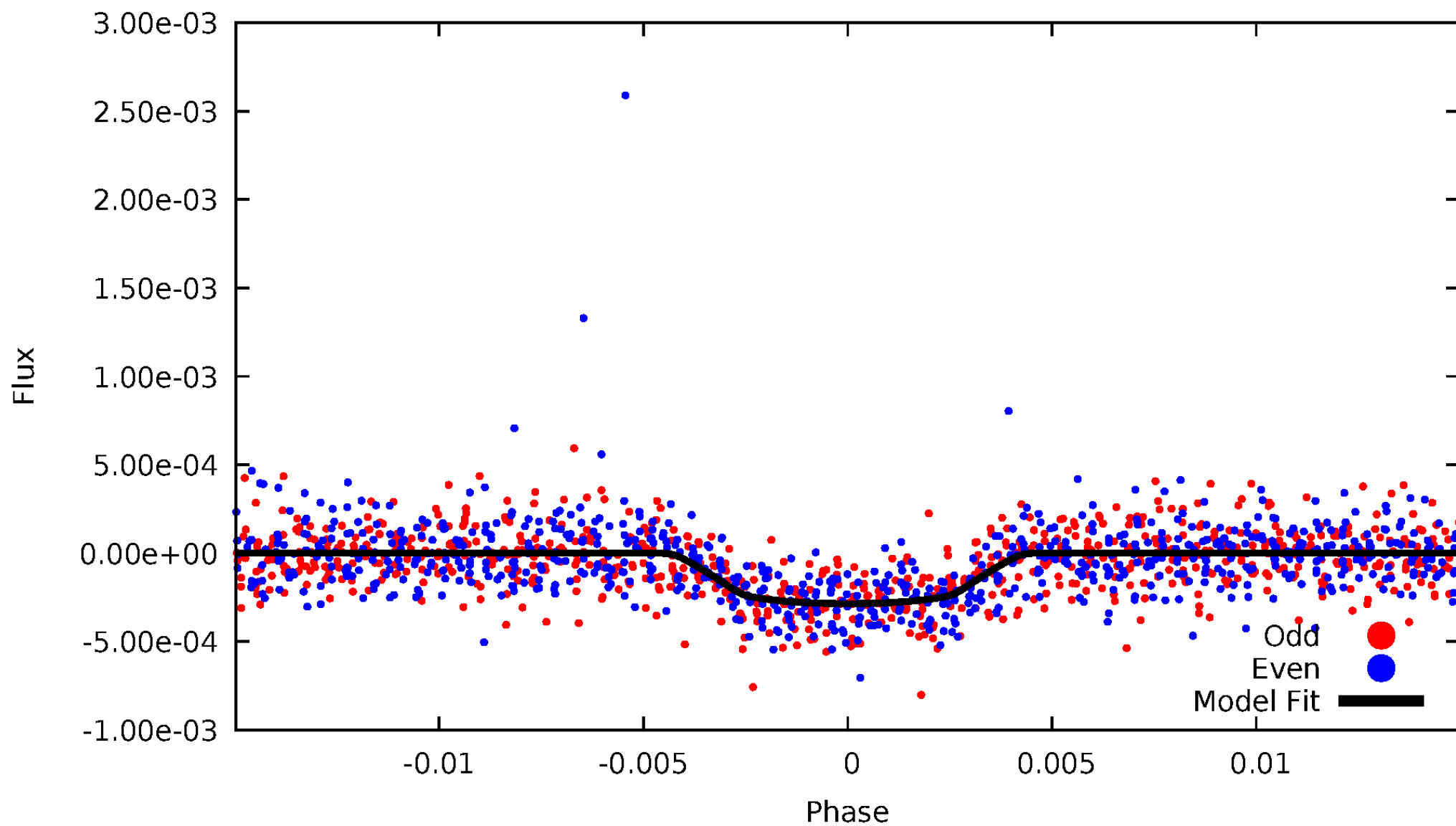


TCE 010154388-01



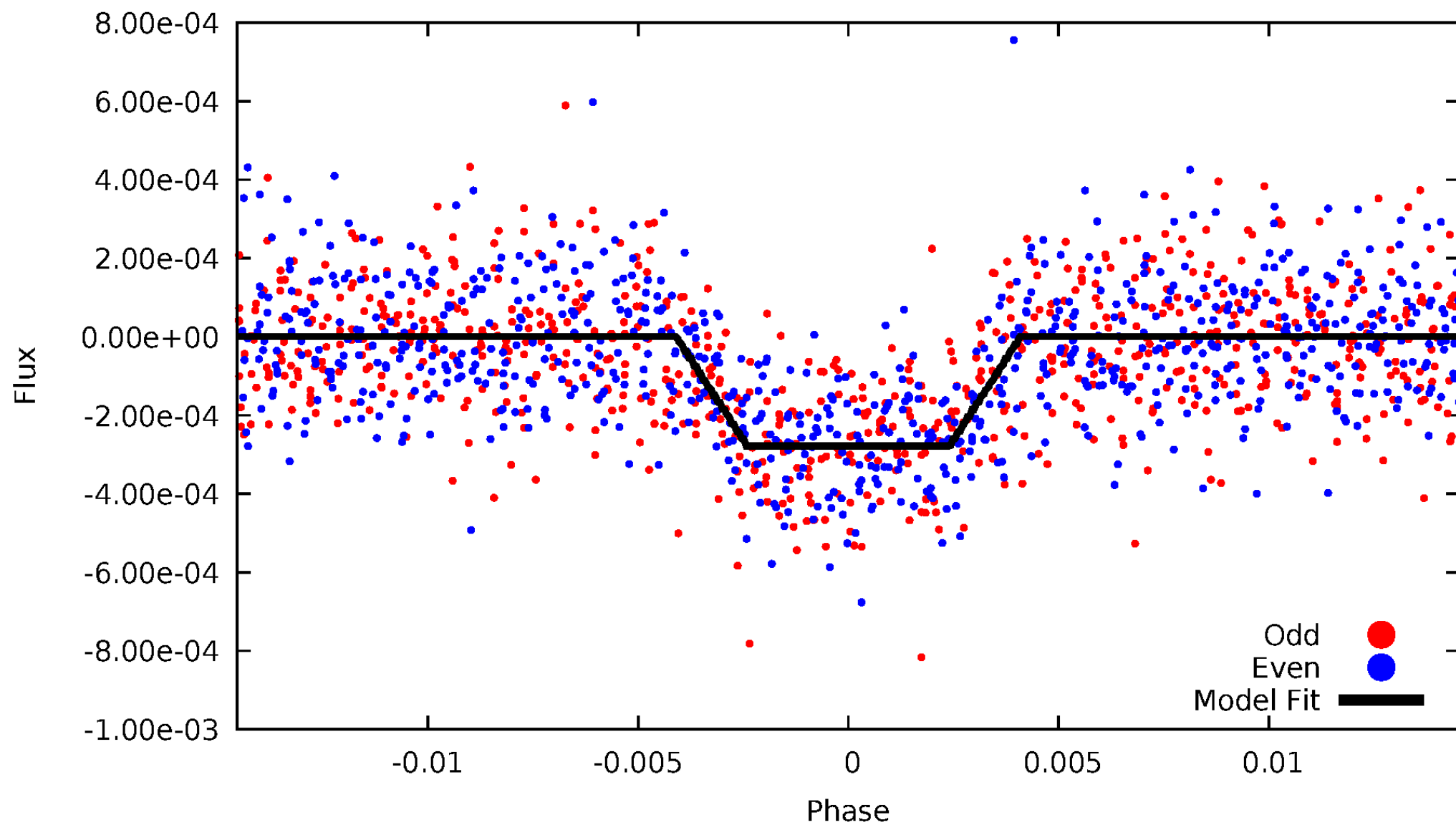
DV Odd/Even

TCE 010154388-01



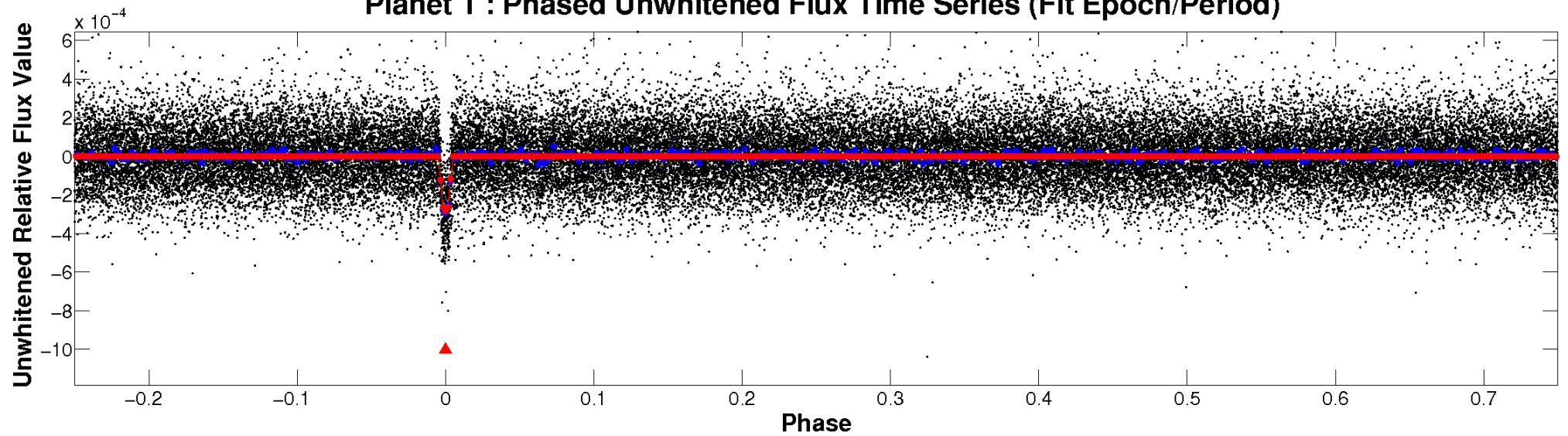
ALT Odd/Even

TCE 010154388-01

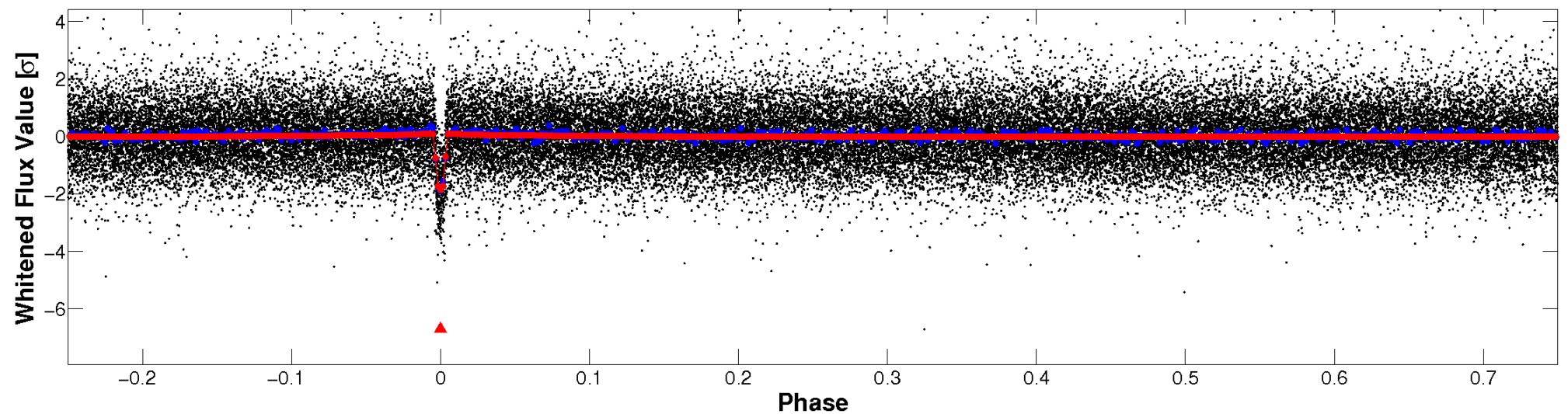


Non-Whitened Vs. Whitened Light Curve

Planet 1 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

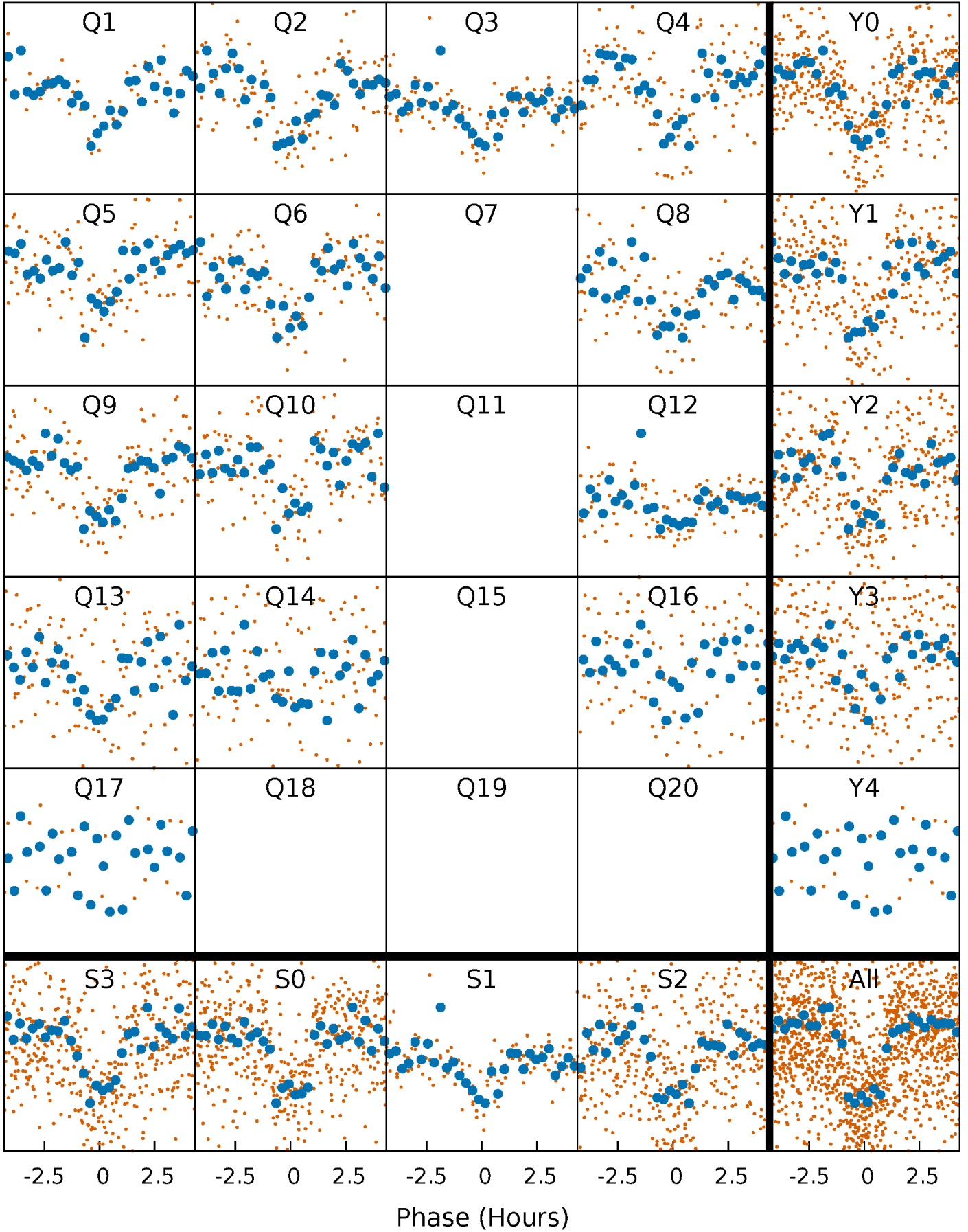


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



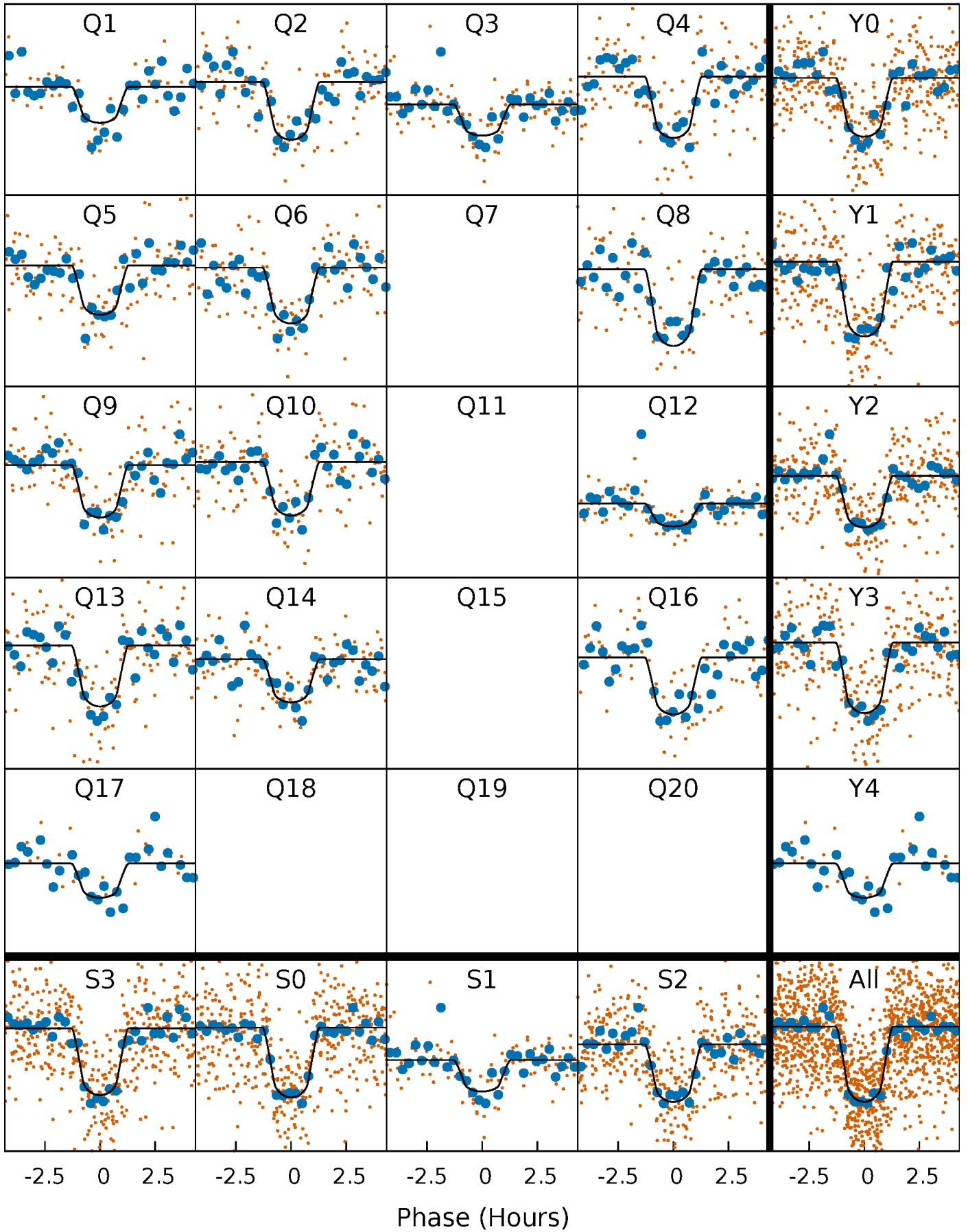
PDC Quarter-Phased Transit Curves

TCE 010154388-01 P= 12.062214 Days $T_0=138.223381$ (BKJD)



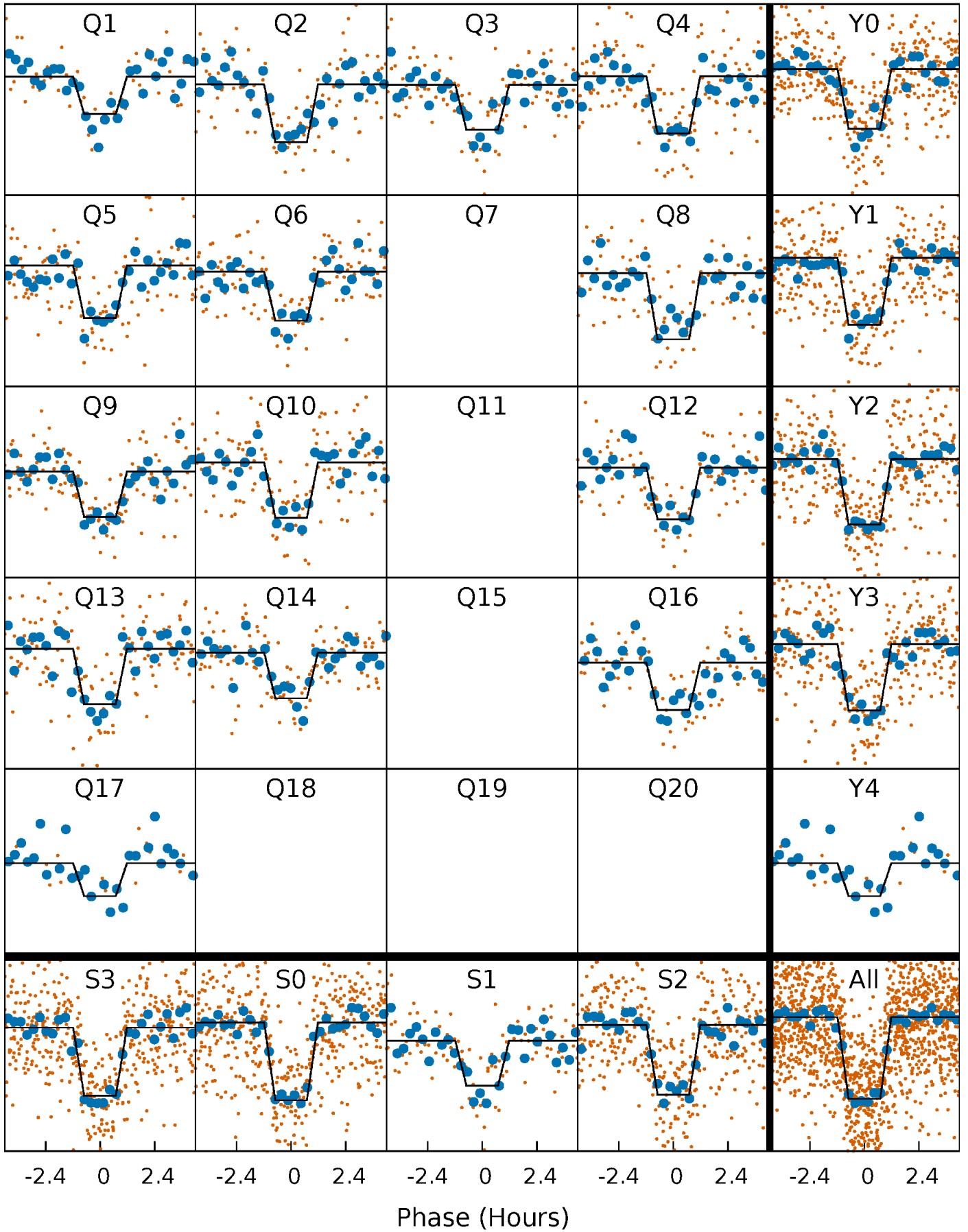
DV Quarter-Phased Transit Curves

TCE 010154388-01 P= 12.062214 Days $T_0=138.223381$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

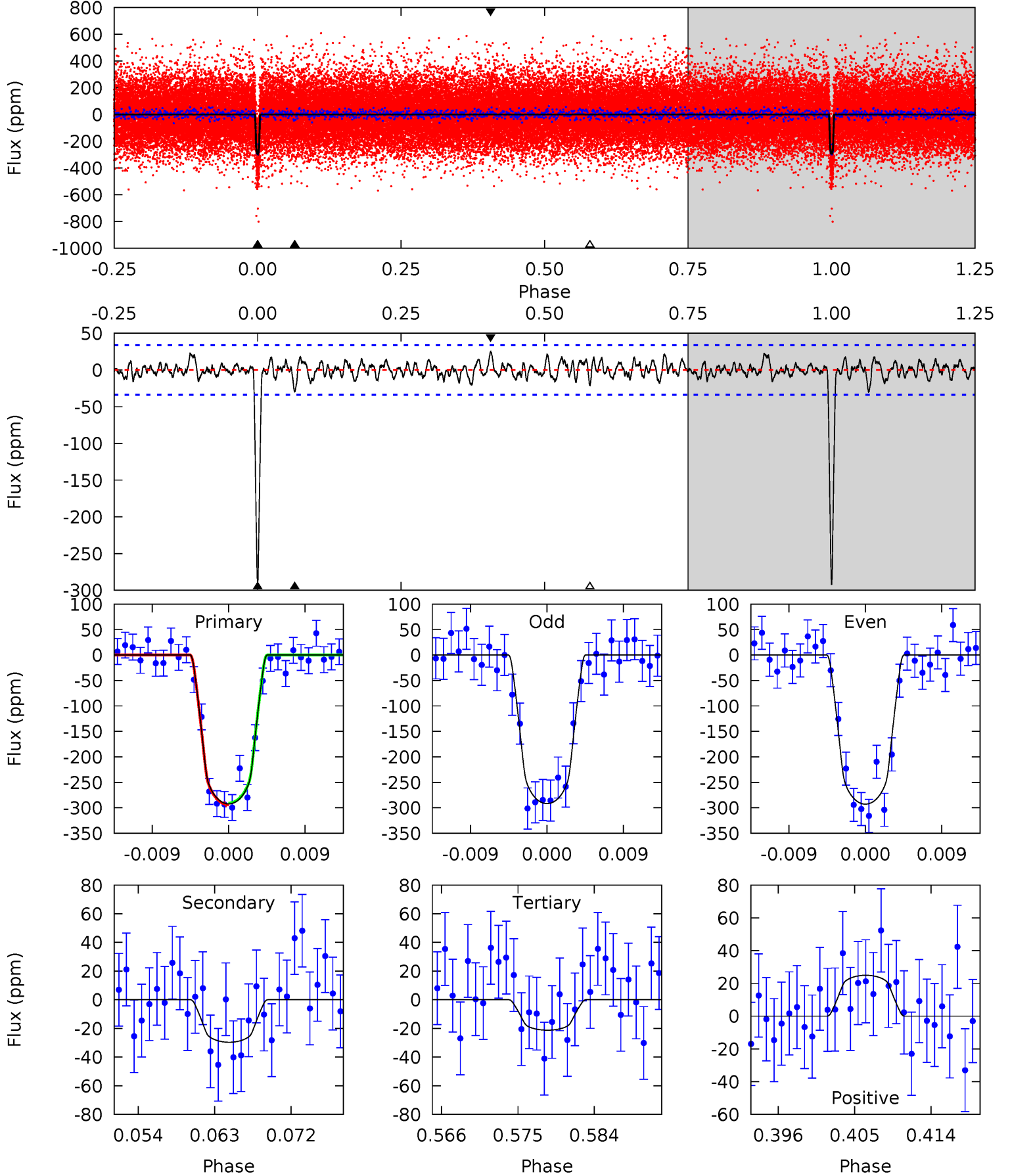
TCE 010154388-01 P= 12.062224 Days $T_0=138.223147$ (BKJD)



DV Model-Shift Uniqueness Test

010154388-01, P = 12.062214 Days, E = 126.161167 Days

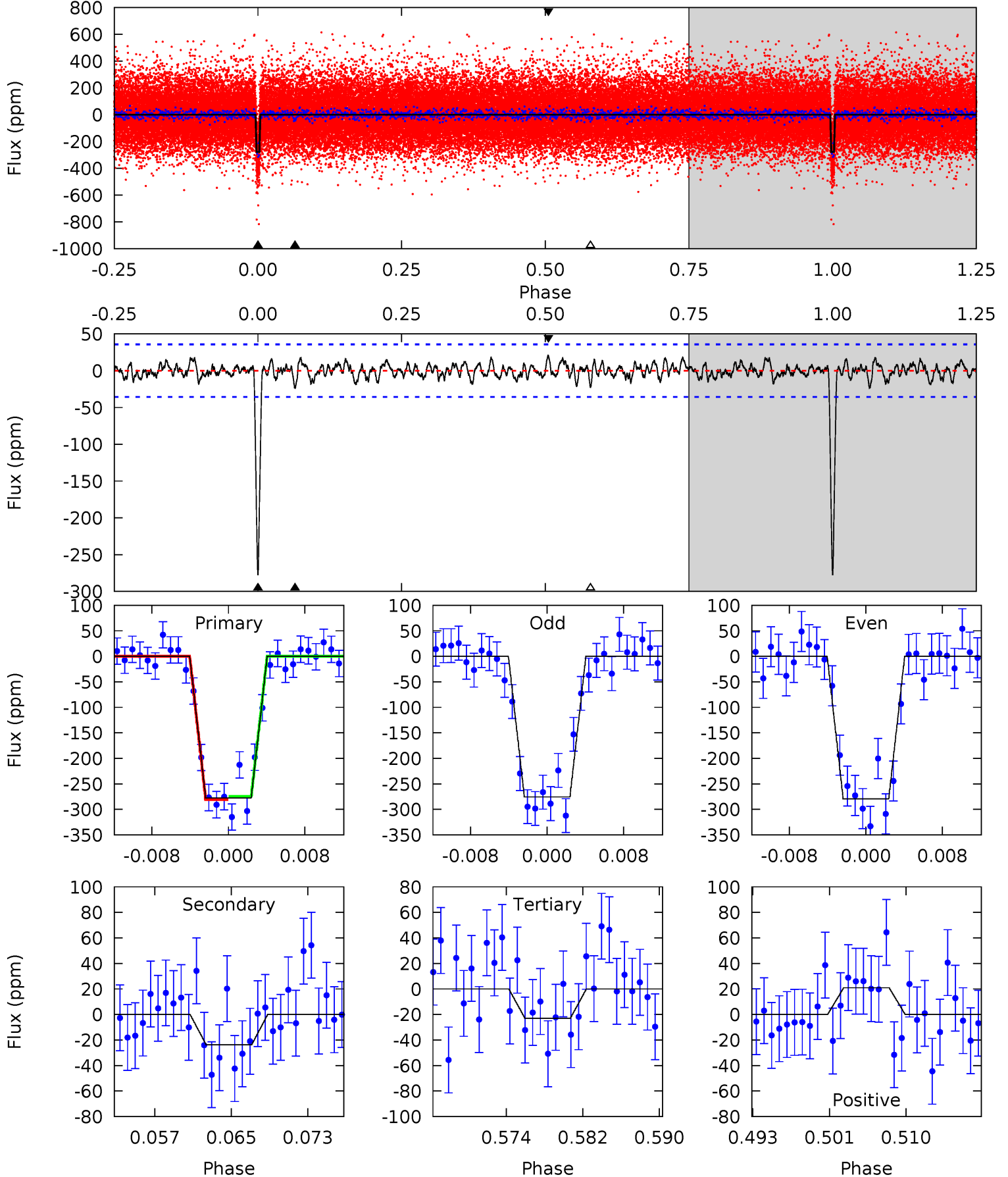
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
43.7	4.43	3.17	3.73	5.05	2.61	1.21	40.5	39.9	1.26	0.70	0.08	1.02	0.08	0.24



Alt Model-Shift Uniqueness Test

010154388-01, P = 12.062224 Days, E = 126.160923 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
39.4	3.37	3.25	2.97	5.07	2.65	1.07	36.2	36.4	0.12	0.40	0.27	1.03	0.07	0.44



Stellar Parameters For KIC 010154388

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5547^{+99}_{-110}	$4.451^{+0.076}_{-0.093}$	$0.000^{+0.150}_{-0.150}$	$0.933^{+0.120}_{-0.080}$	$0.897^{+0.061}_{-0.050}$	$1.558^{+0.483}_{-0.438}$
	+2%/-2%	+2%/-2%	+inf%/-inf%	+13%/-9%	+7%/-6%	+31%/-28%
Source	SPE57	SPE57	SPE57	DSEP		

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

Secondary Eclipse Parameters for KIC 010154388-01 / KOI 0991.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-30 ± 7	$1.88^{+0.55}_{-0.55}$	1049^{+38}_{-35}	3484^{+426}_{-307}	46^{+47}_{-21}
Alt.	-24 ± 7	$1.72^{+0.54}_{-0.57}$	1047^{+40}_{-36}	3445^{+501}_{-323}	42^{+56}_{-20}

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 $A_{\text{obs}} \gg 1.0$

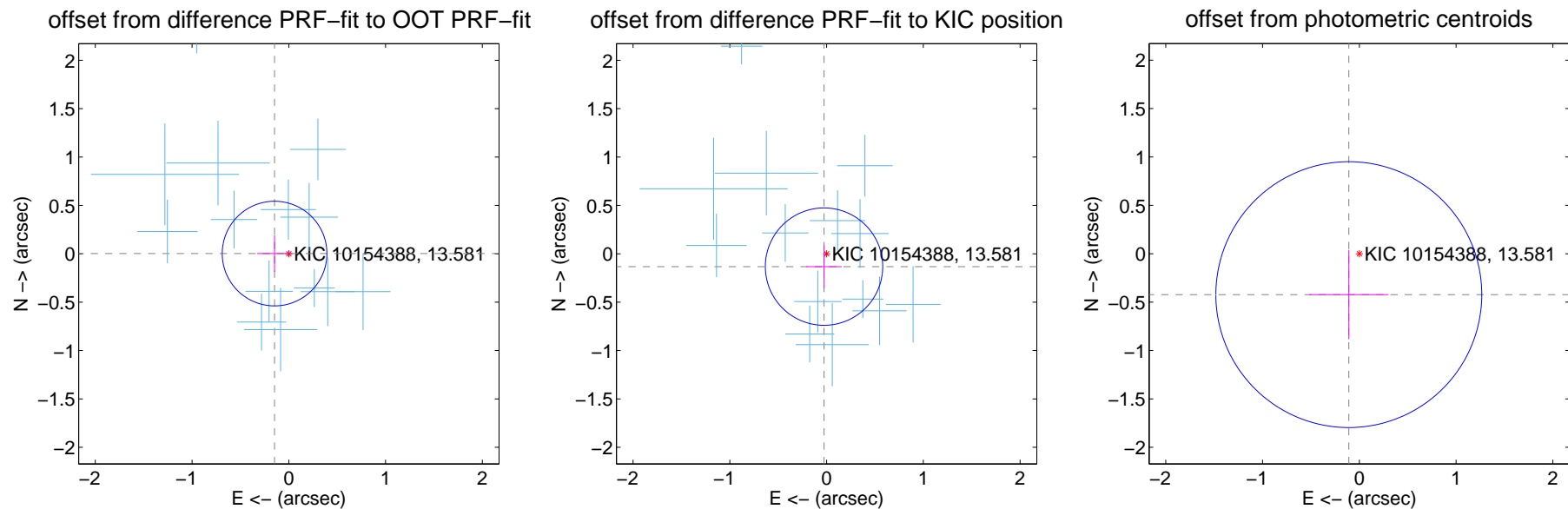
DV Centroid Data

Supplemental centroid analysis for 010154388-01. Kepler magnitude: 13.58. Transit SNR 30.68

There are 14 quarters with good PRF difference image offsets

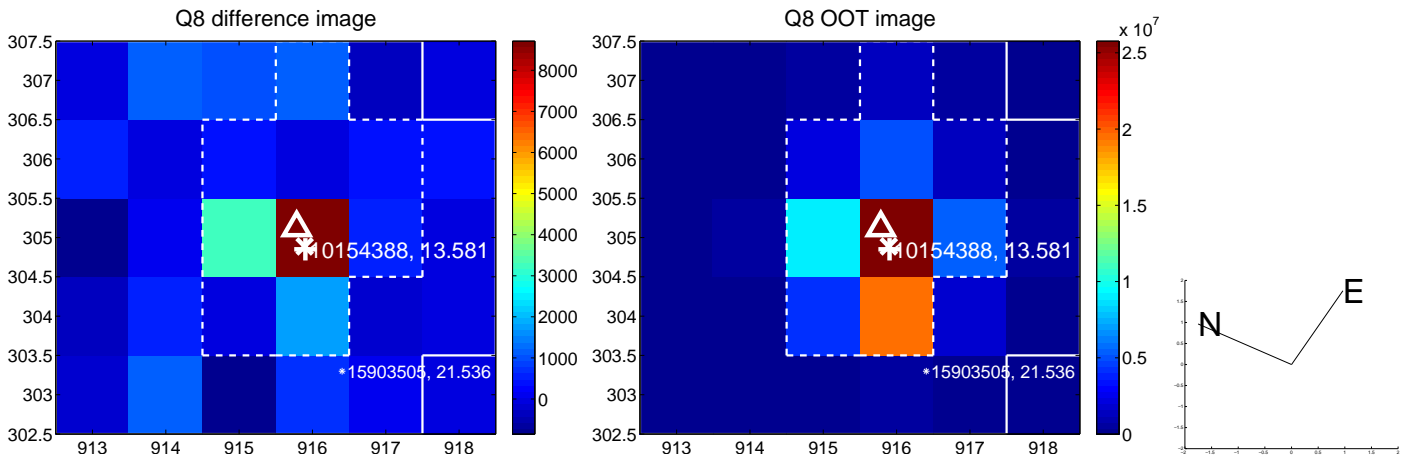
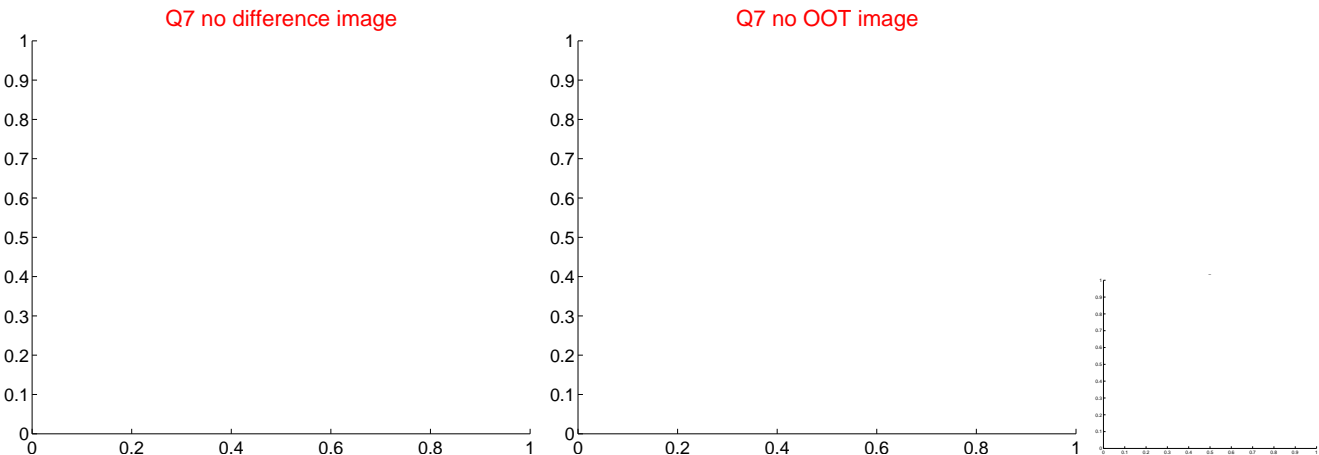
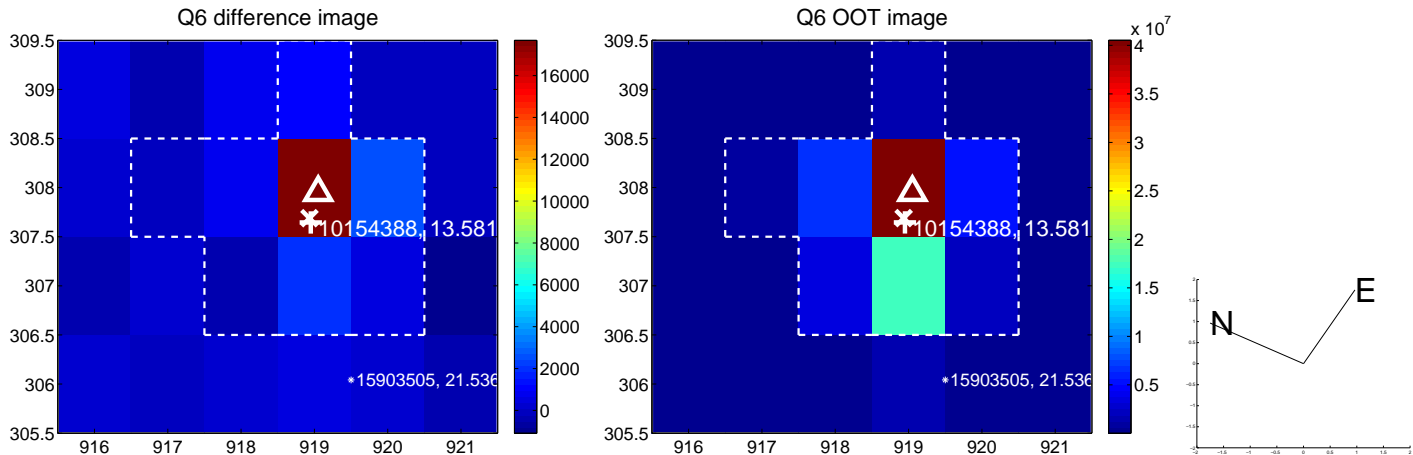
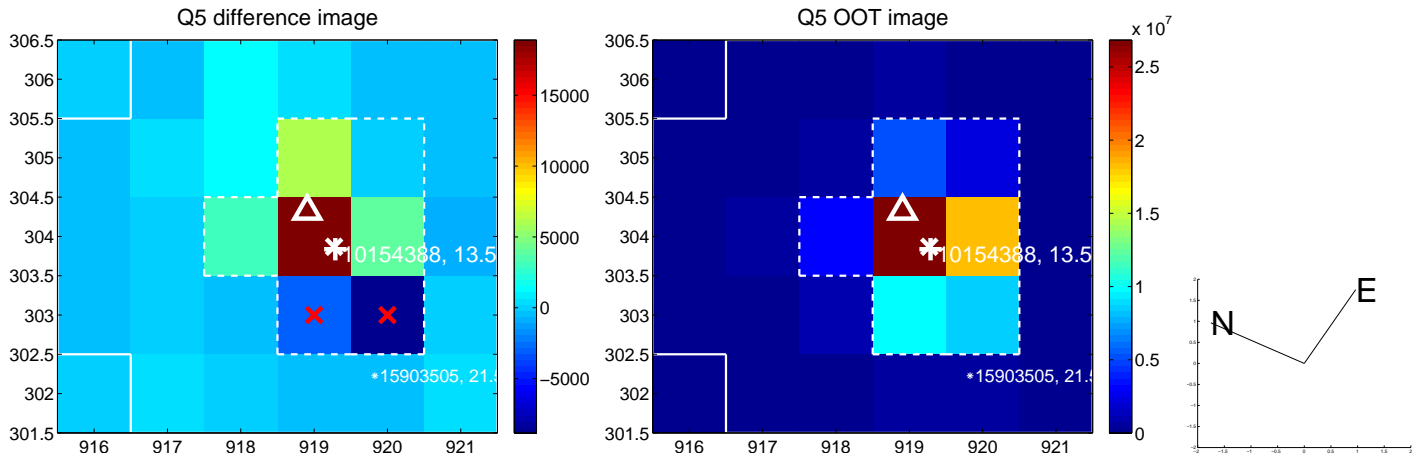
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.147 ± 0.180	0.82	0.147 ± 0.180	0.002 ± 0.189
PRF-fit source offset from KIC position	0.135 ± 0.202	0.67	0.026 ± 0.182	-0.133 ± 0.221
photometric centroid source offset	0.44 ± 0.46	0.95	0.11 ± 0.41	-0.42 ± 0.46

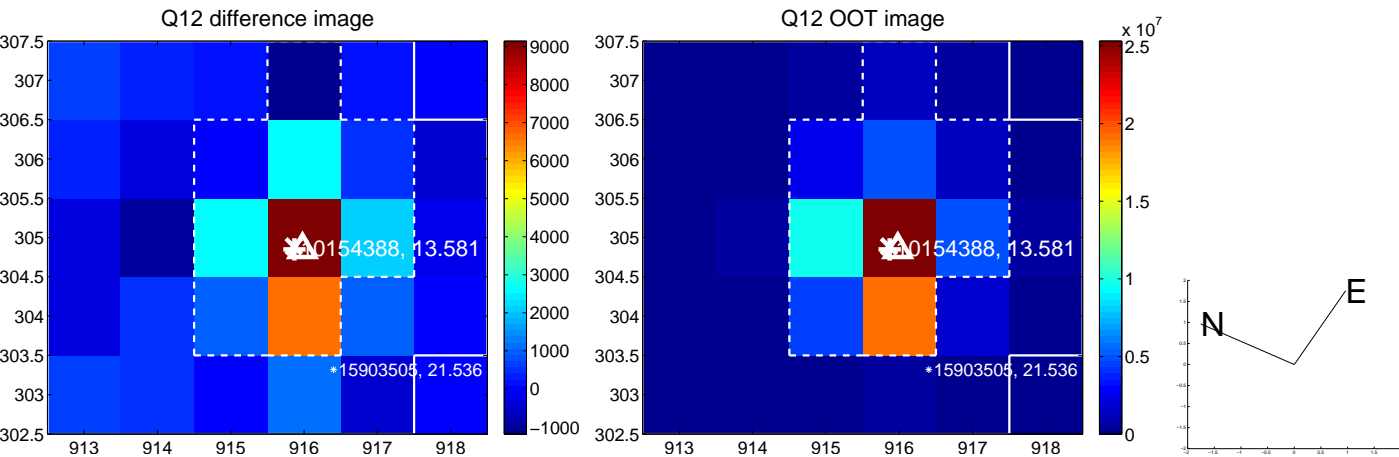
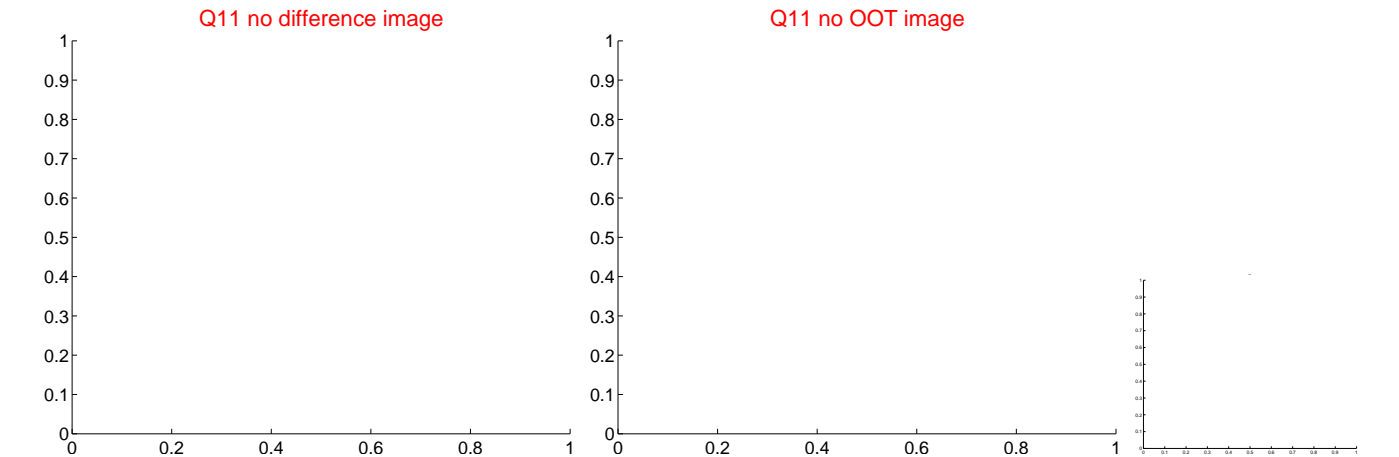
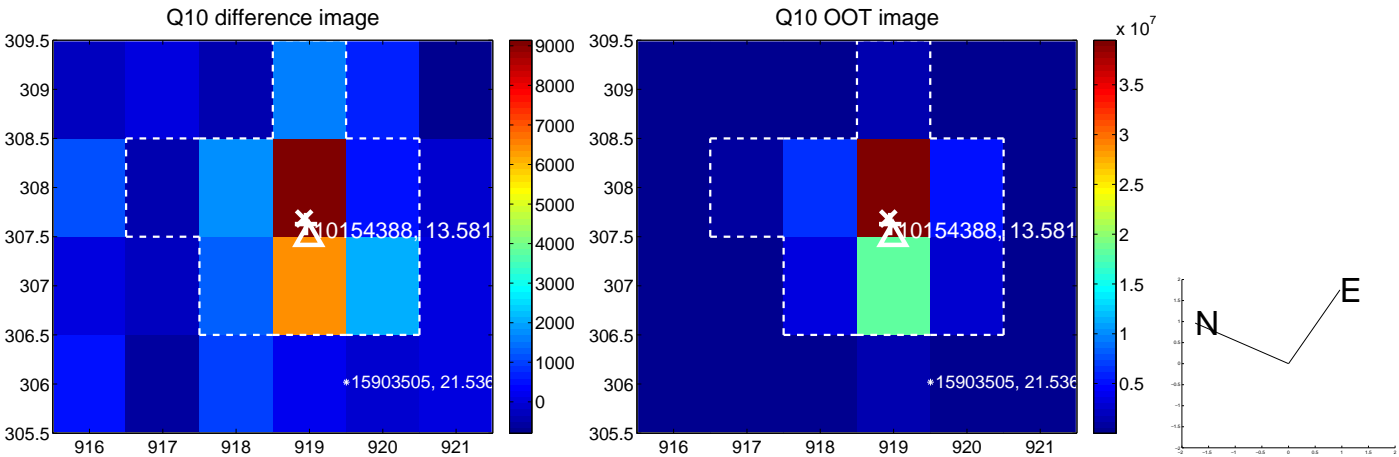
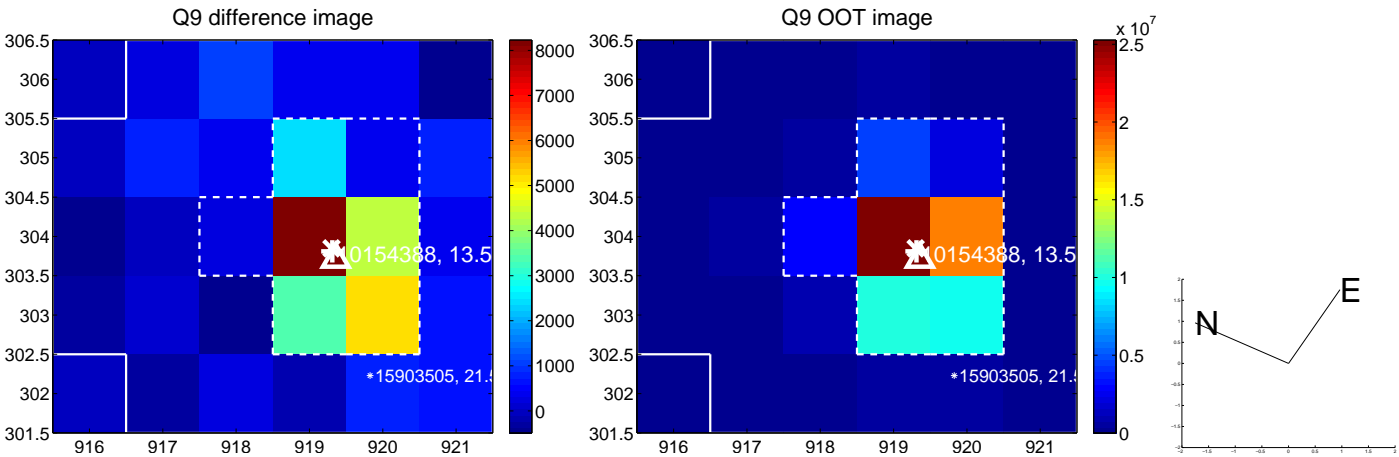


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

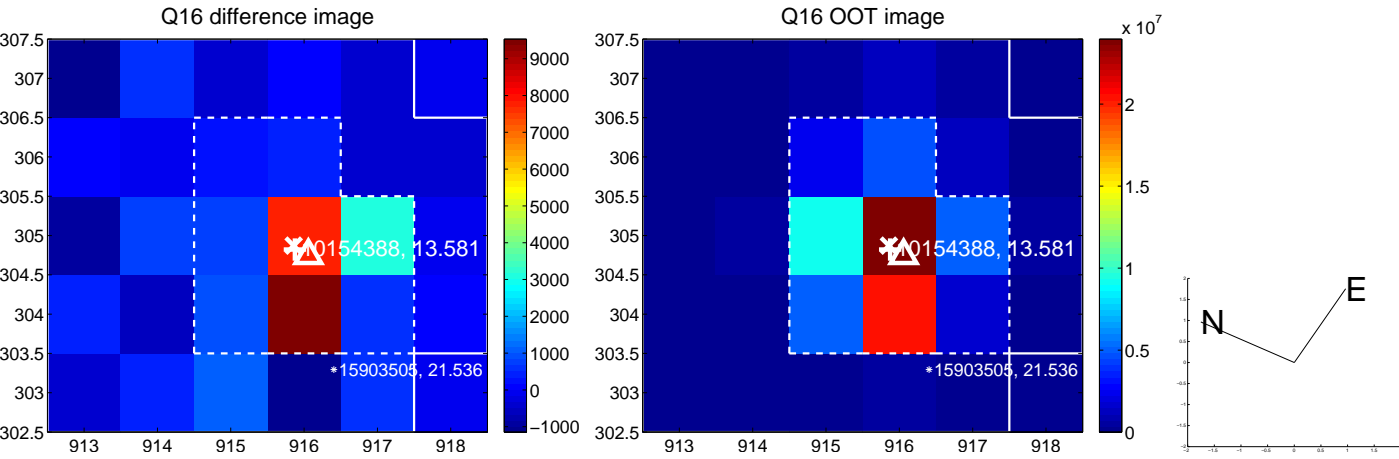
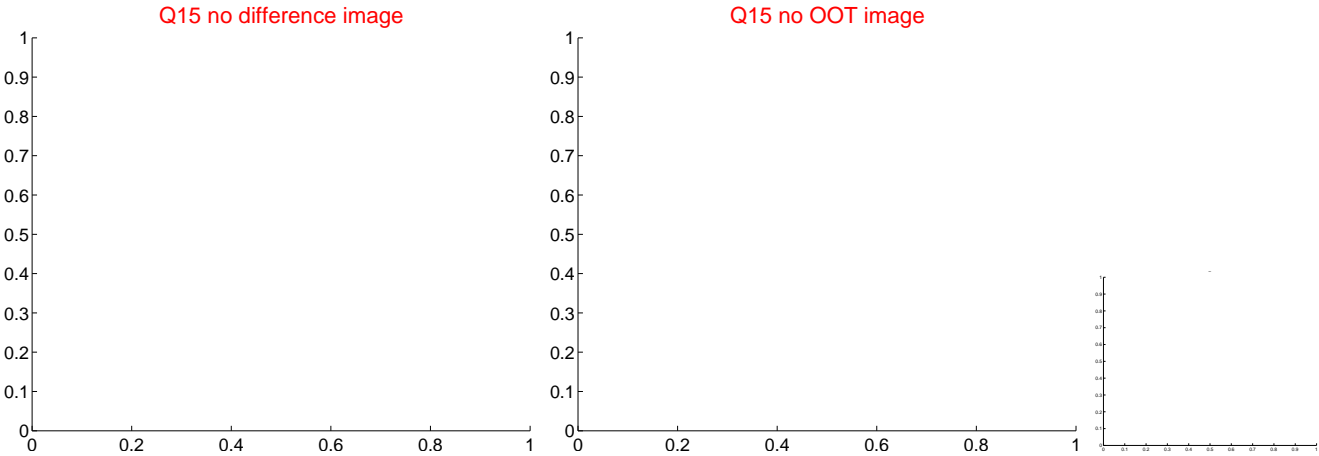
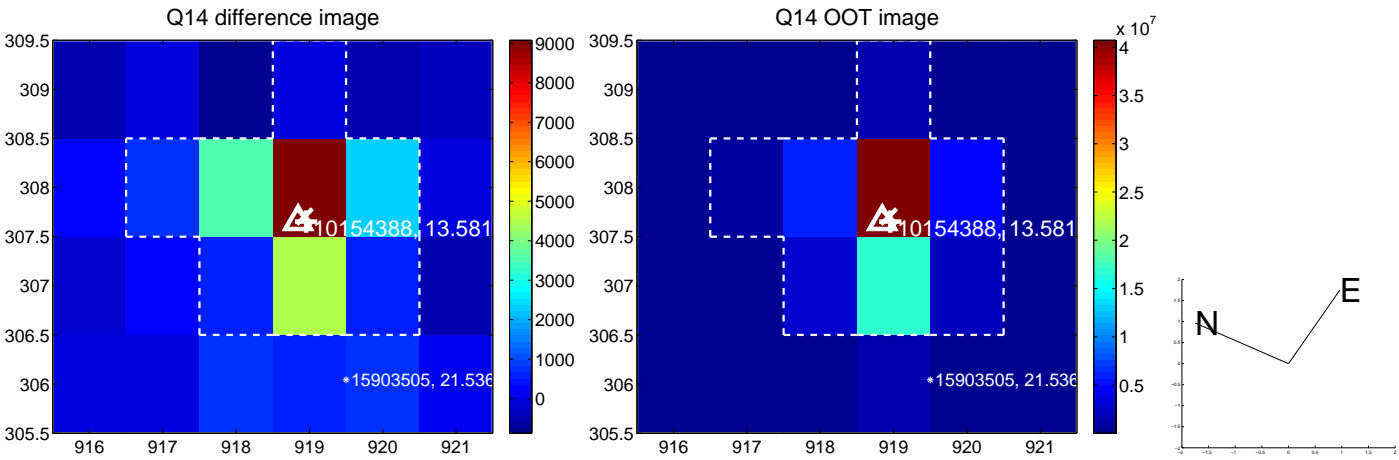
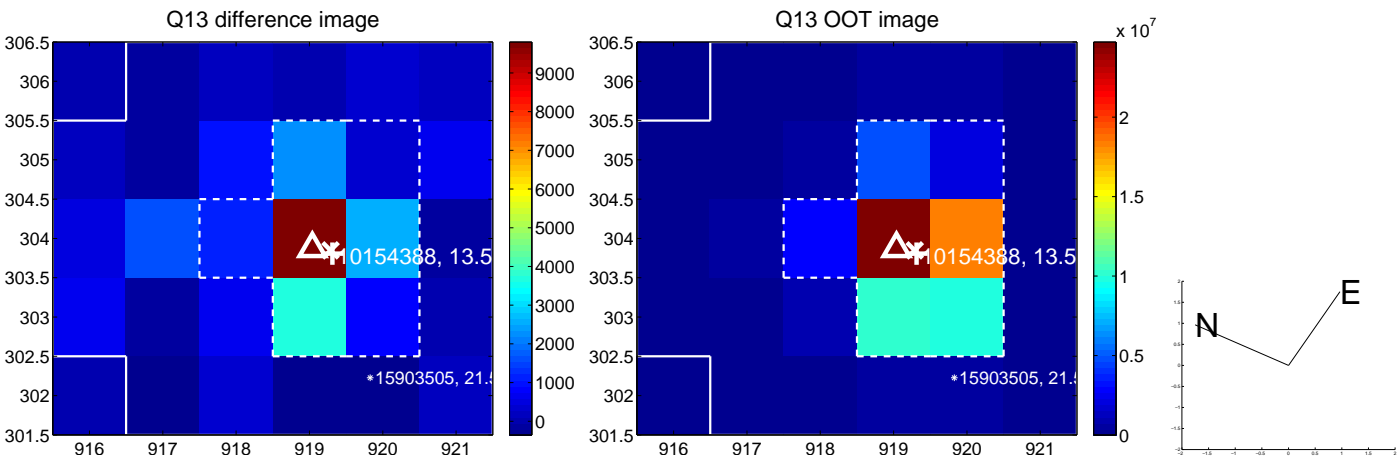
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



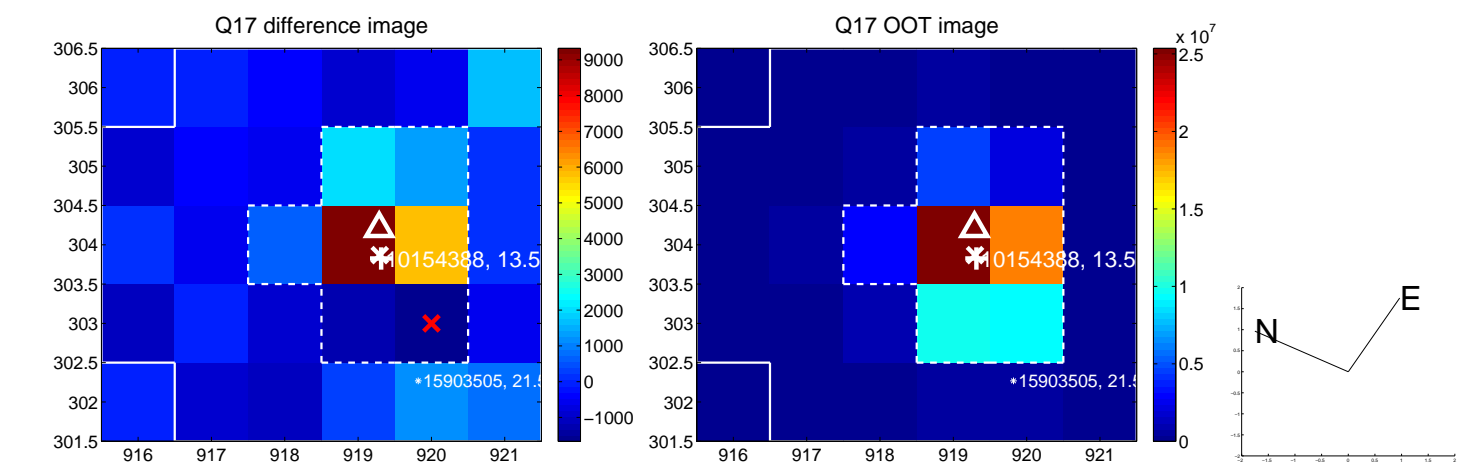
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



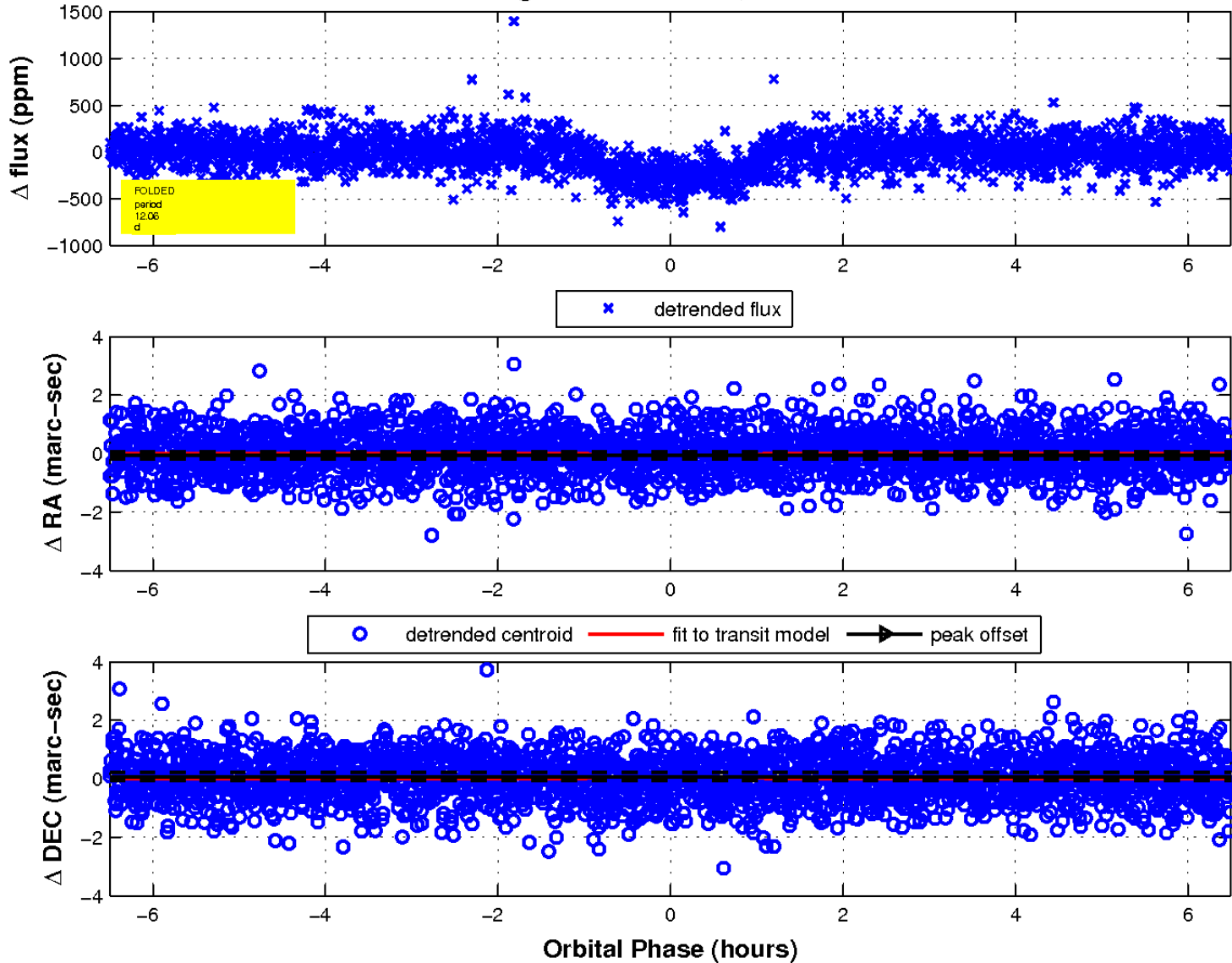
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

