

Mrk 501 2008

# MWL Cross-correlations & SED

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VERITAS

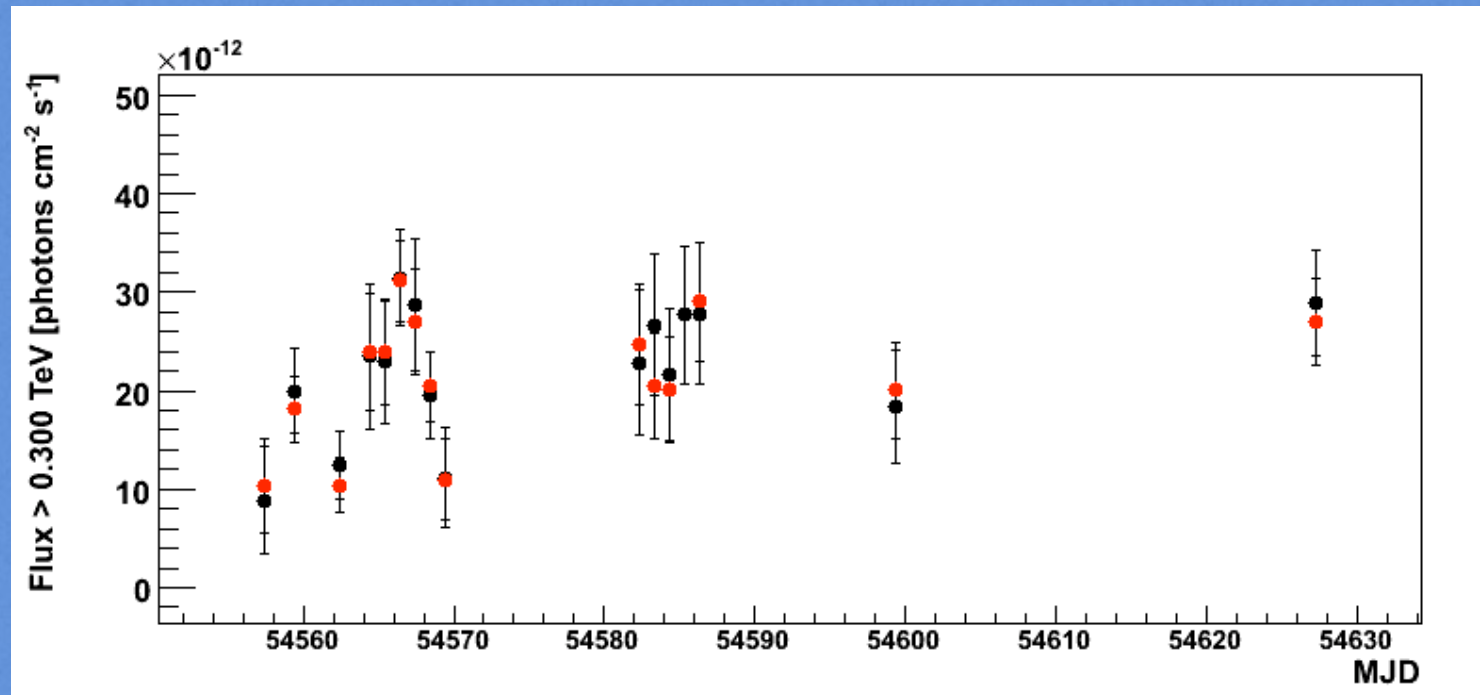
April 9, 2009

# Updates on VERITAS Analysis

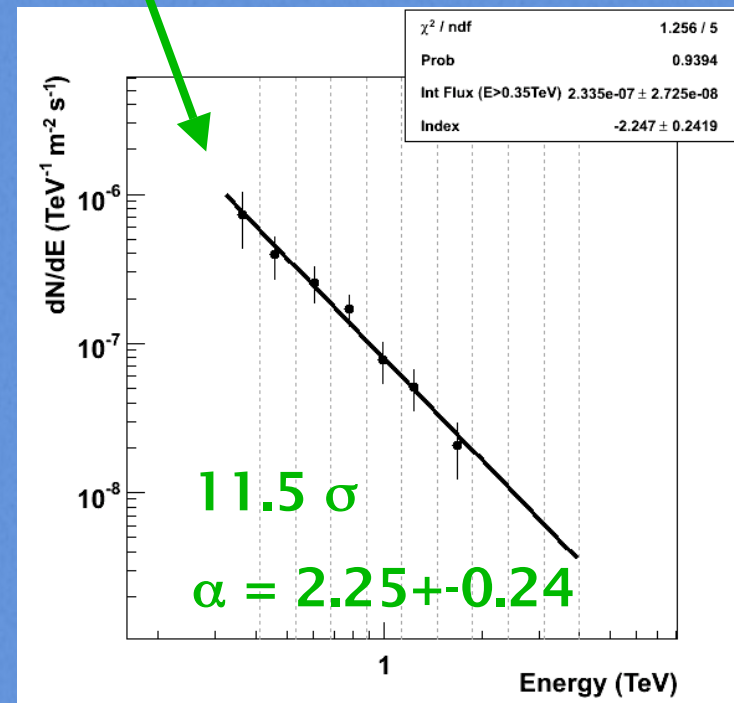
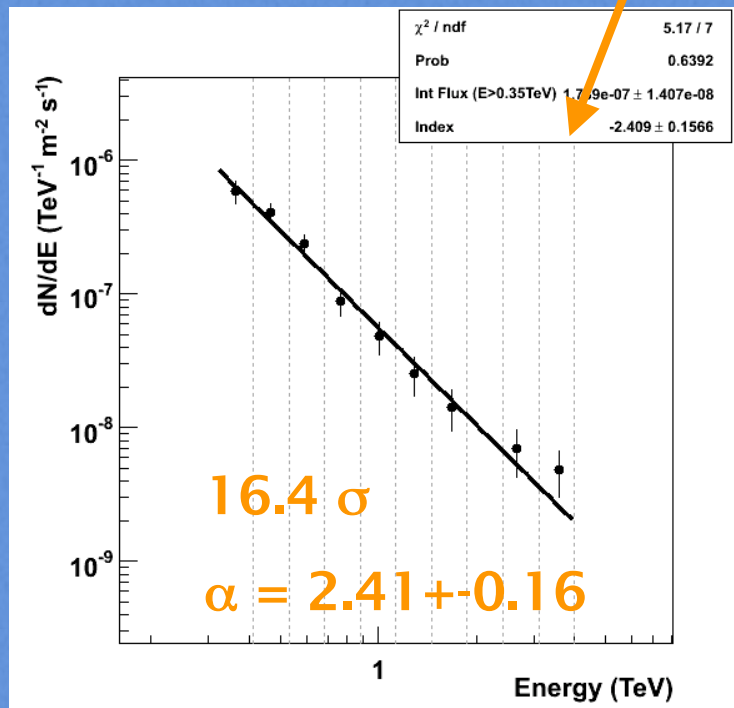
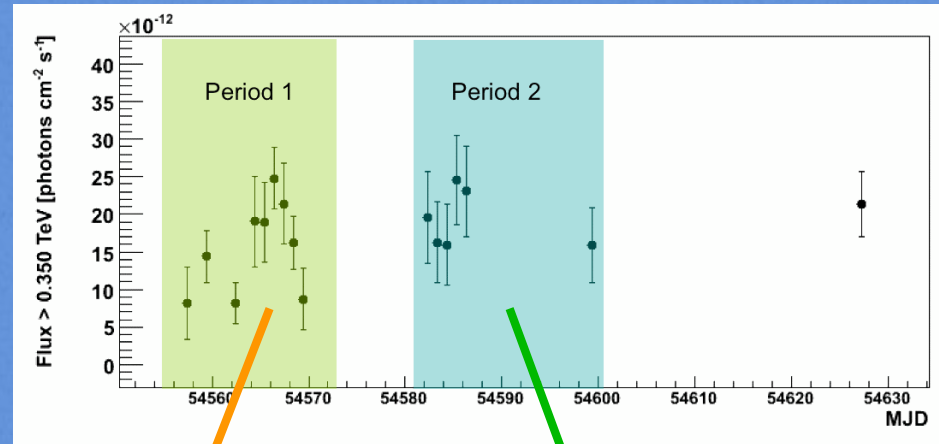
Light curve initially calculated integral flux  $> 350$  GeV (threshold was determined to be  $\sim 310$  GeV).

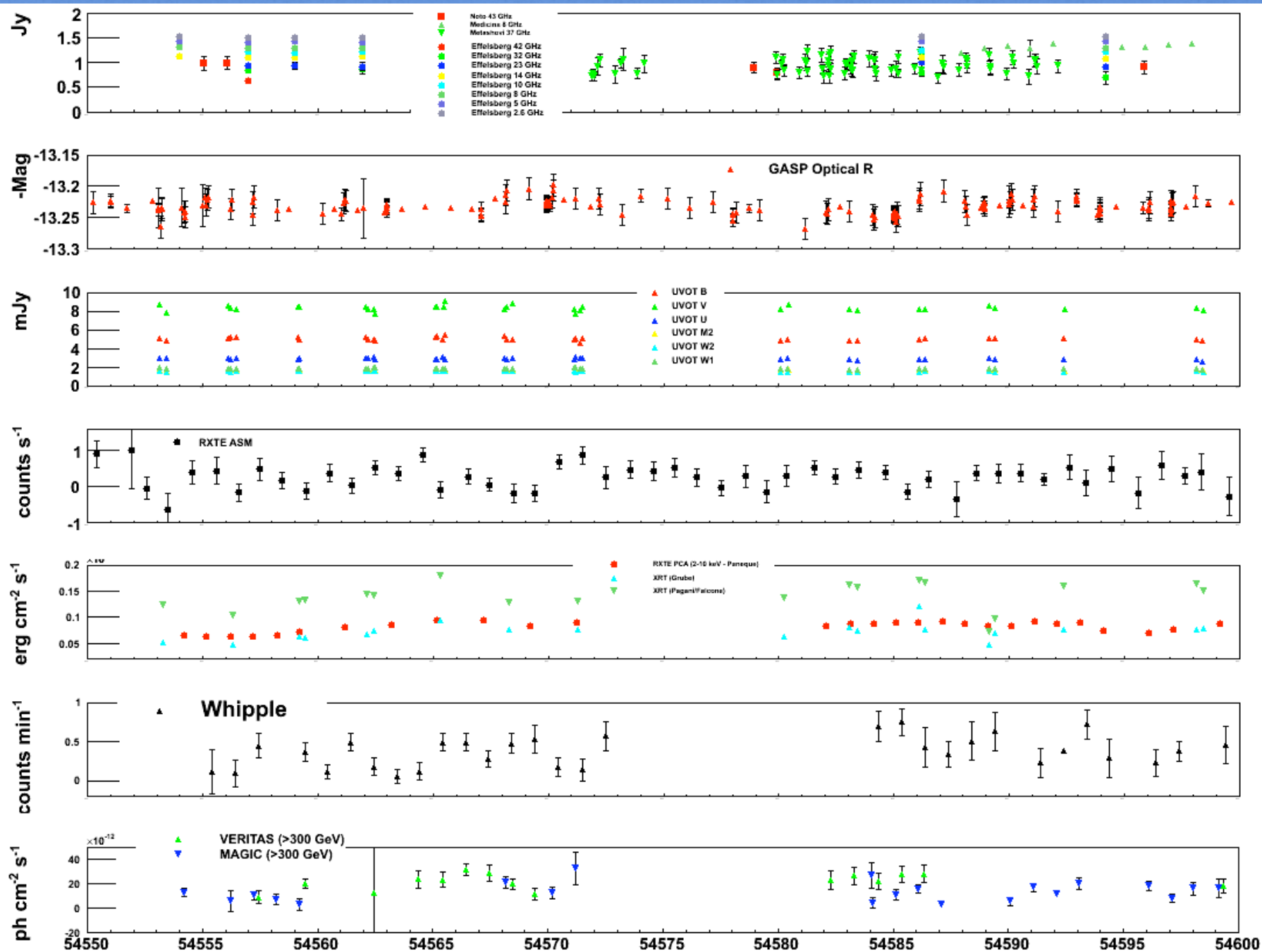
Compared LC for  $> 300$  GeV with an extrapolation from the  $>350$  GeV LC assuming the average spectral index to investigate possible threshold effects.

Conclusion: 300 GeV threshold for LC is Okay.

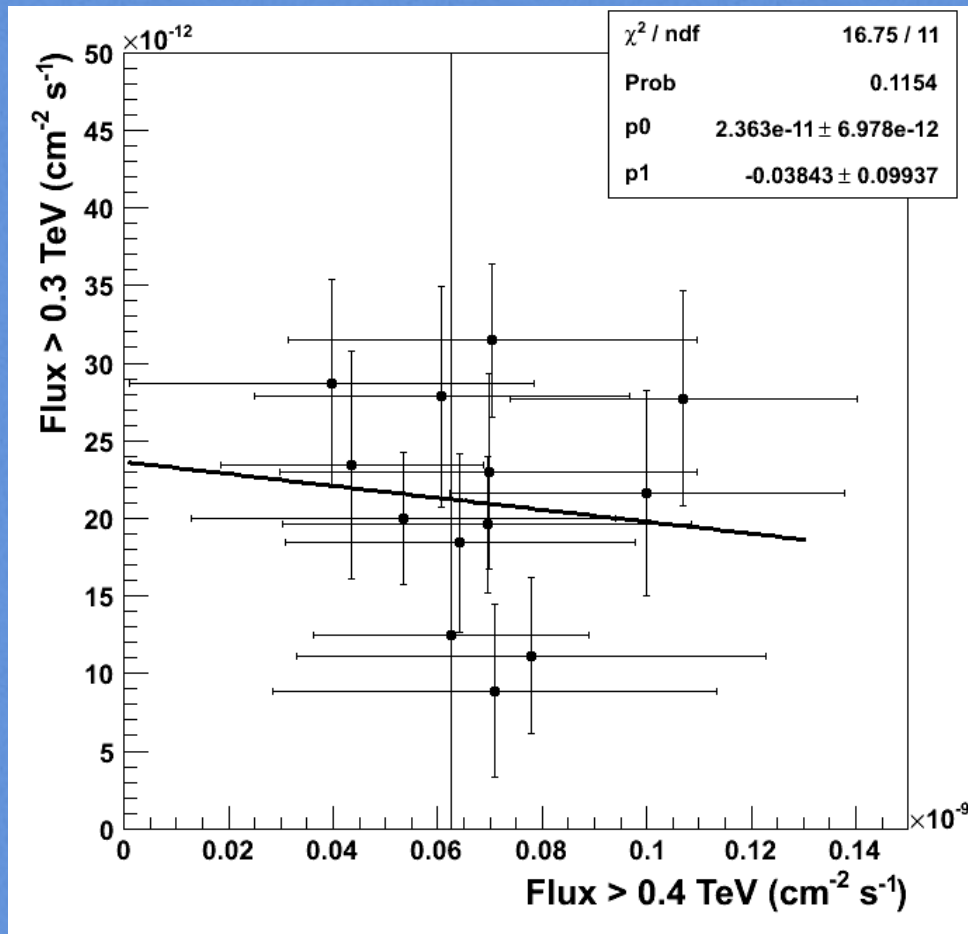


# TeV Spectral Variability? (No evidence in VERITAS data)



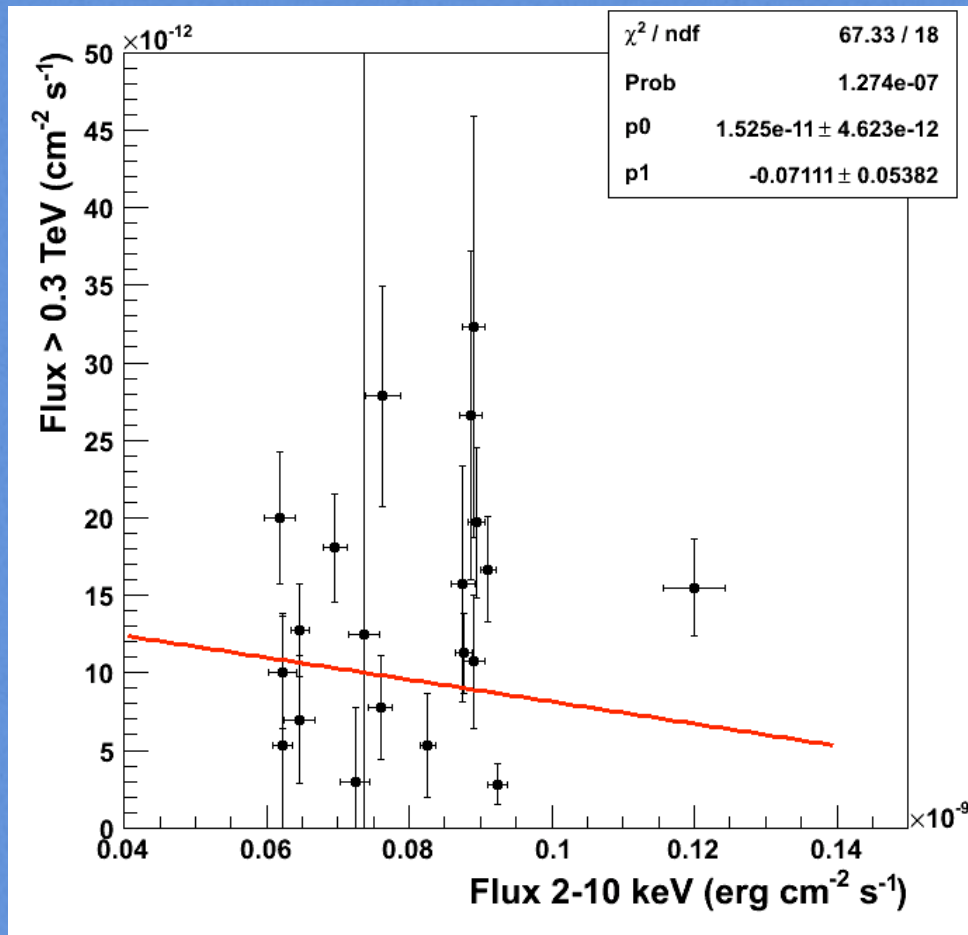


# Flux Cross-Correlations



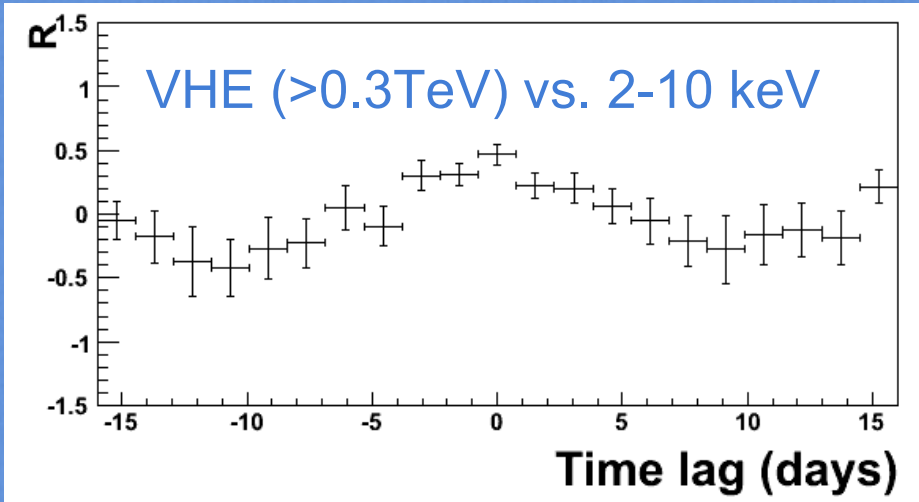
- VERITAS+MAGIC vs. Whipple (>400 GeV) coincident within 0.1d (PRELIMINARY)
- Fit with constant function has similar probability.
- Fluxes and variability probably too small to see significant correlations

# Flux Cross-Correlations

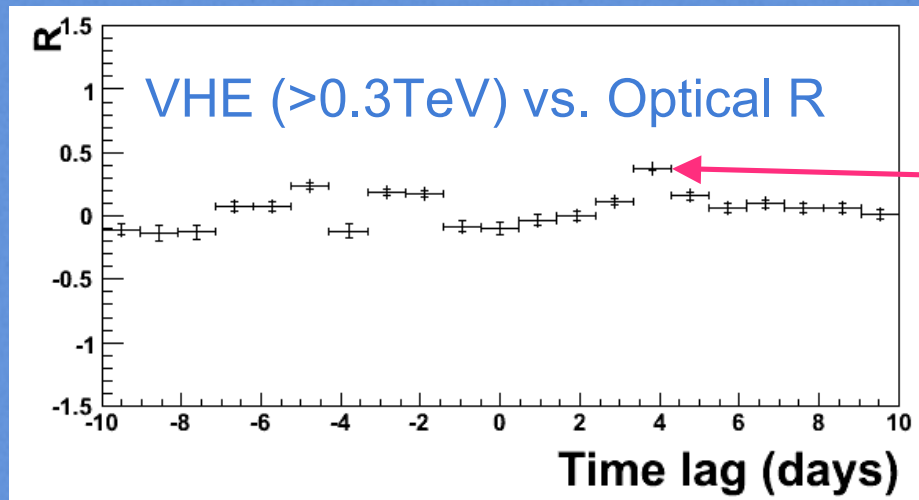


- VERITAS+MAGIC vs. PCA+XRT (2-10 keV) coincident within 0.1d (PRELIMINARY)
- Again, no evidence for correlation
- Similar result for VHE vs. ASM

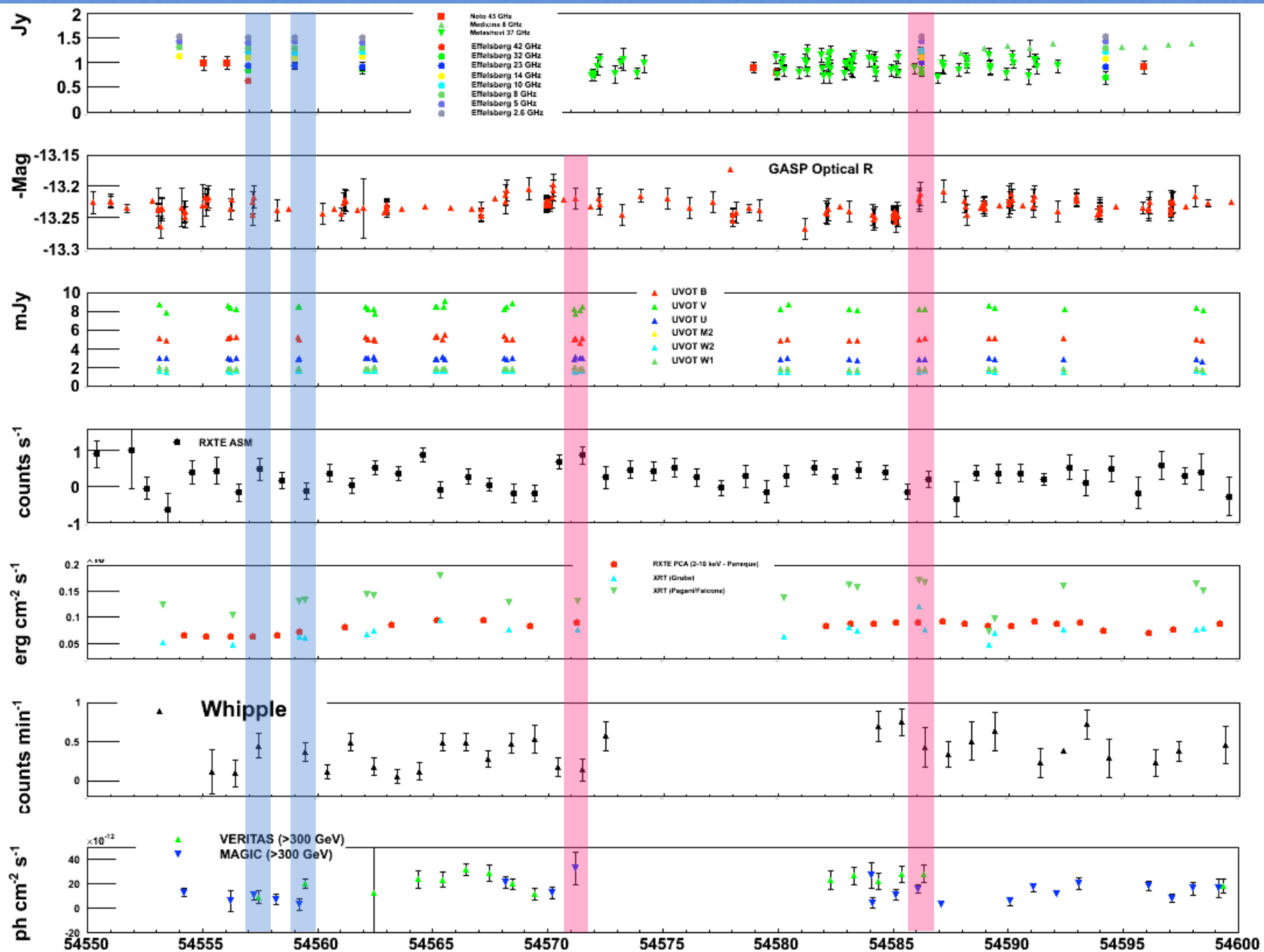
# Discrete Correlation Functions



(PRELIMINARY)

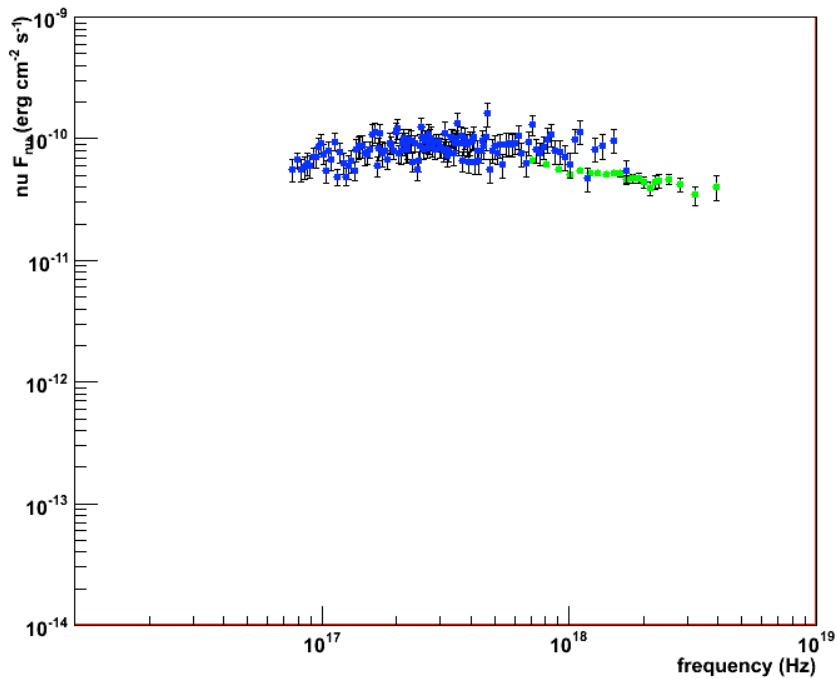
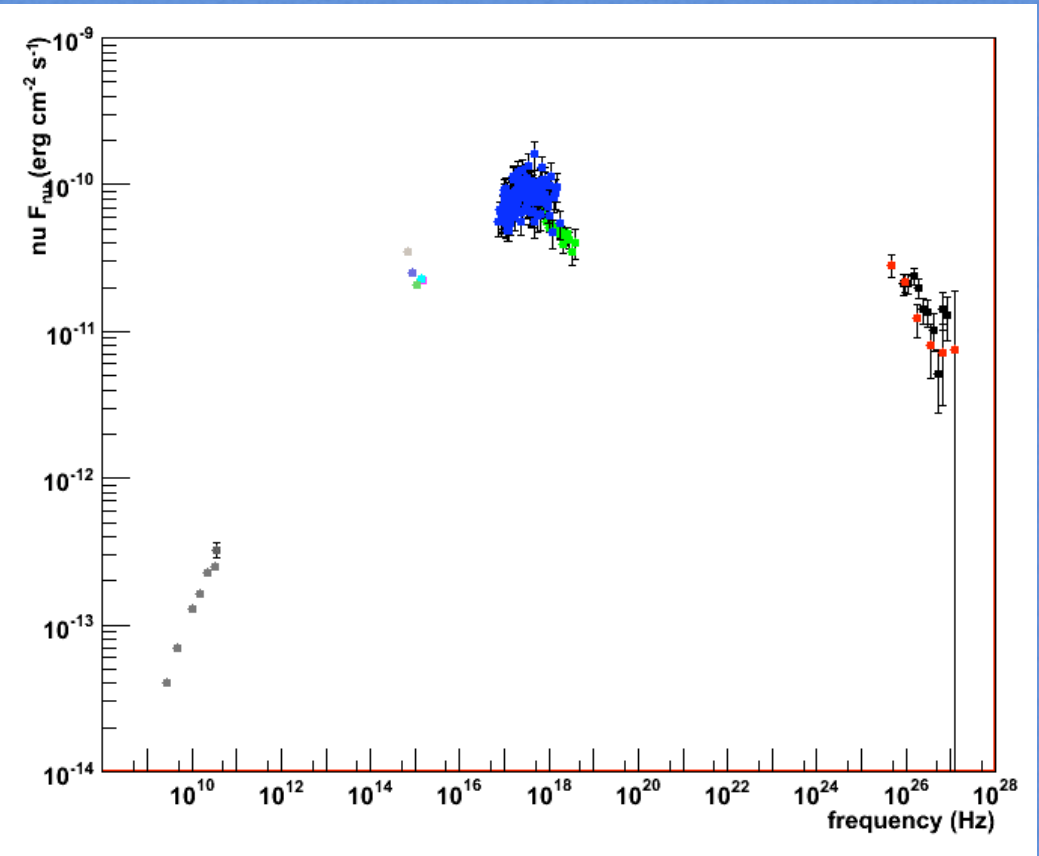


Significant?



# SED: MJD 54586

Very preliminary  
No galactic extinction  
Need to rebin XRT data  
Missing IR PAIRITEL data



# Conclusions

- No strong X-ray (2-10 keV) - TeV correlation apparent (preliminary)
- Possible lag between TeV and R-band? (needs further investigation?)
- SED calculations and fits to 1-zone SSC model in progress.