

CONSTRUCTING AN $S_{10.7}$ INDEX FROM EVE DATA

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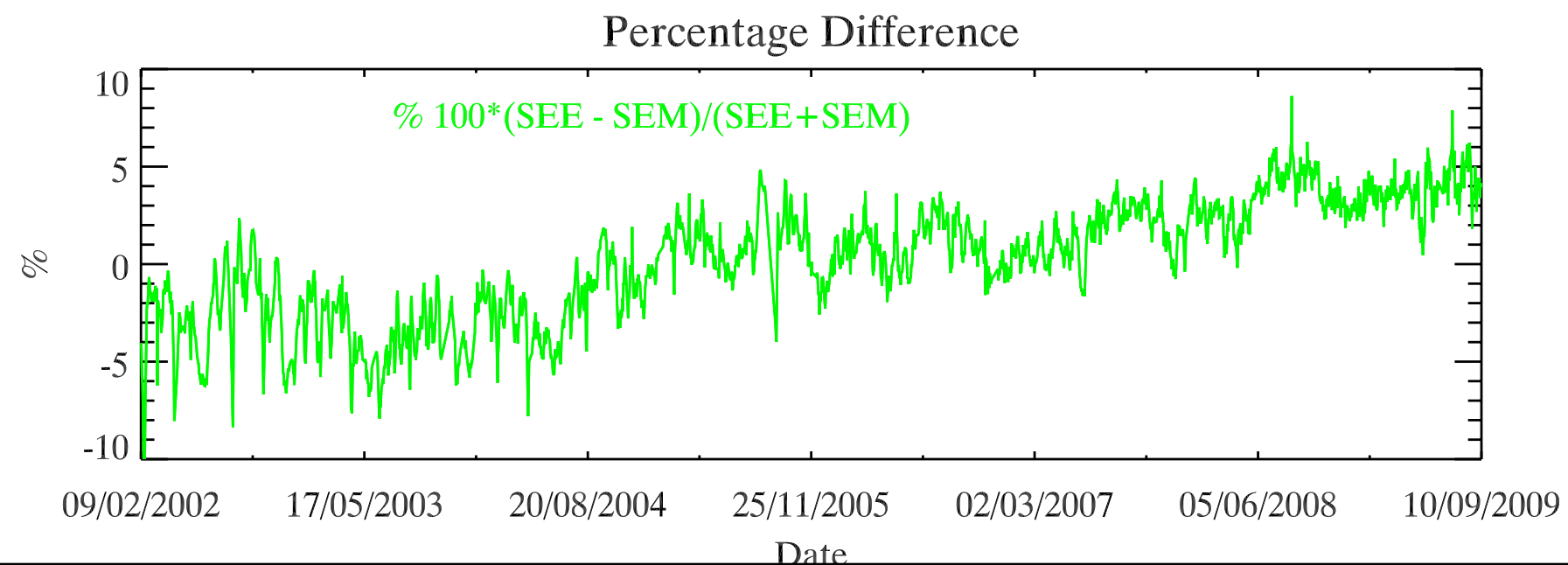
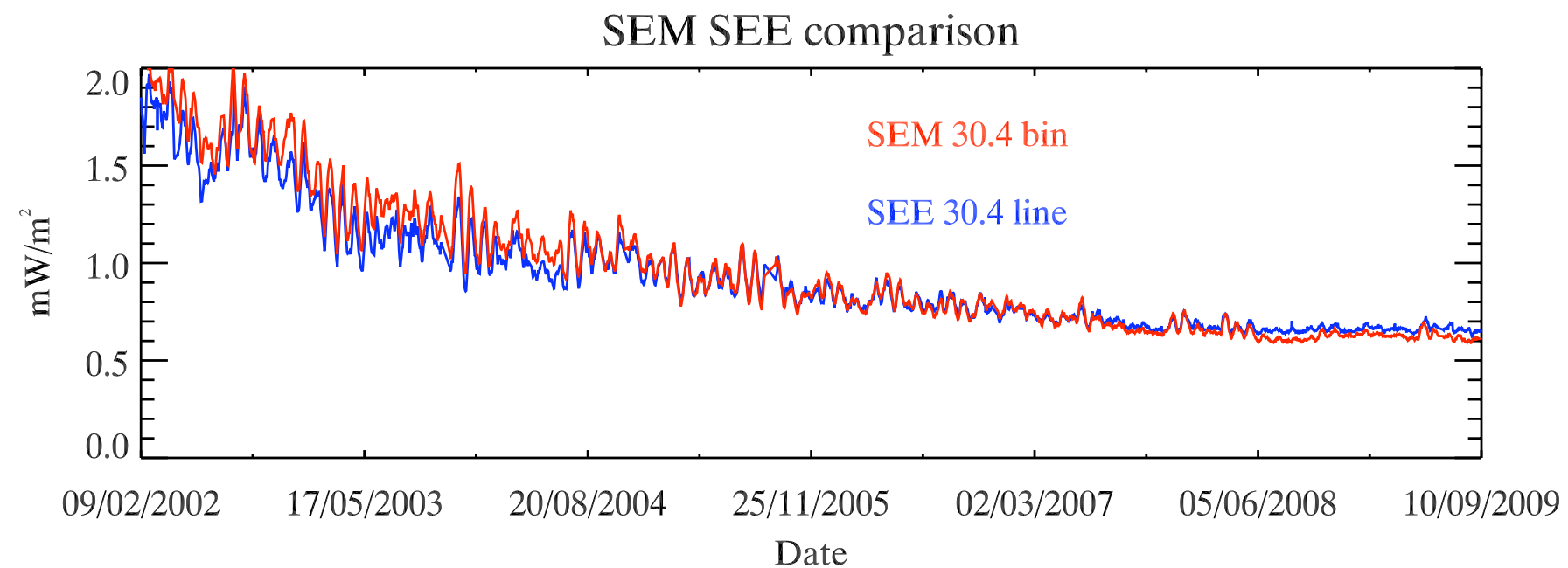
S_{10.7}

- Developed by SET to improve satellite drag predictions
- Used in JB2008 operational model
- Based on the SOHO-SEM 1st. -order (26-34 nm) EUV channel
- JB2008 does not work as well with SEE 30.4 nm 1 nm bin
- SEM 30.4 (S_{10.7}) shows some coronal-like behavior

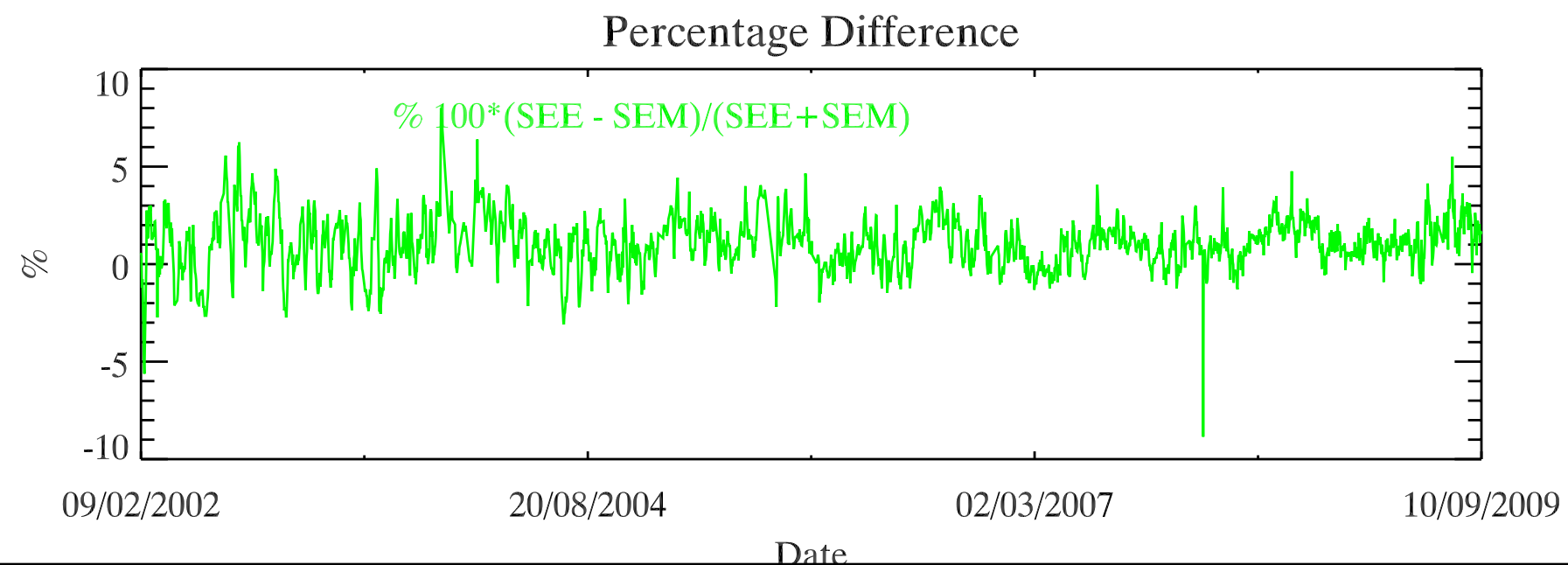
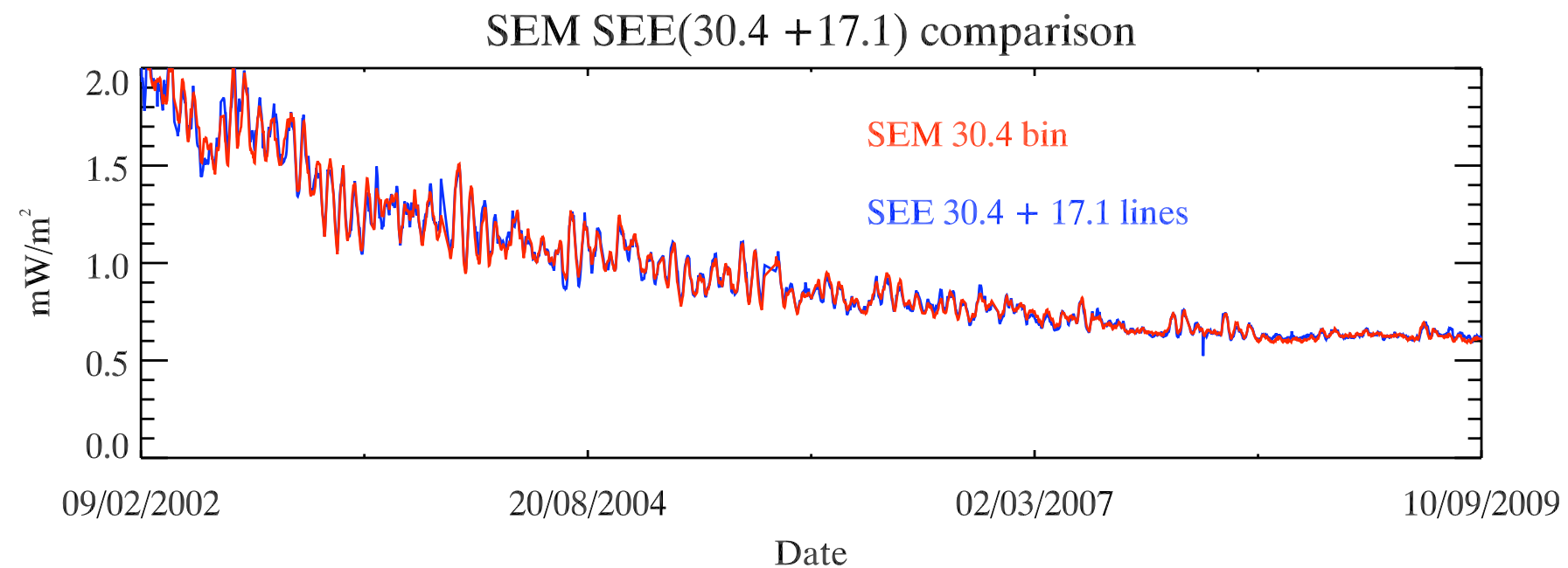
MODEL $S_{10.7}$ WITH SEE $30.4 + 17.1$

- Fit SEM30.4 with $\alpha \text{SEE}_{30.4} + \beta \text{SEE}_{17.1}$
- SEM uses SOLERS-22 spectrum
- Break SEE data series into high, medium, low solar activity time regions to get lowest residuals

SEM WITH SEE 30.4 nm



SEM WITH SEE 30.4 nm + 17.1 nm

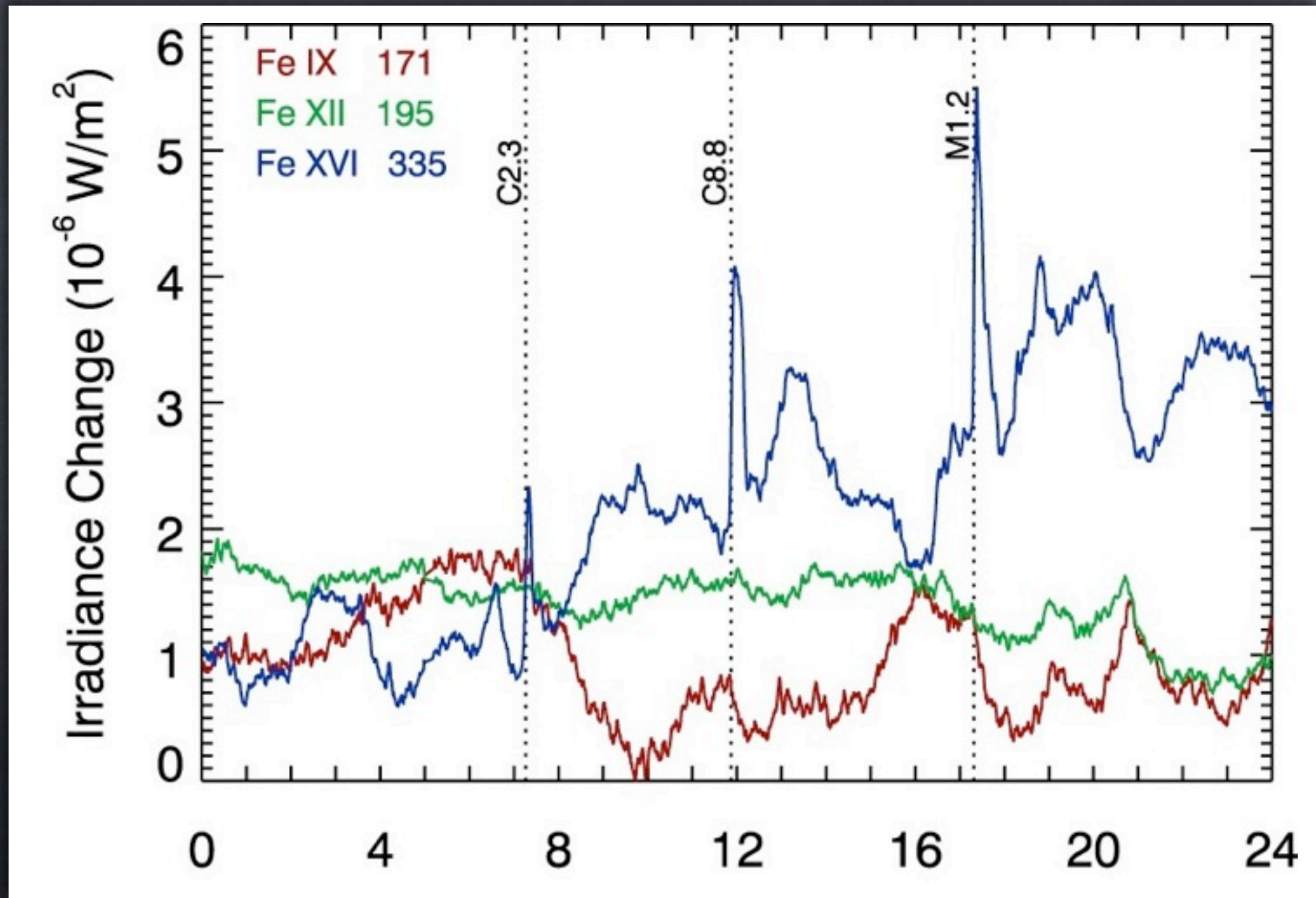


CONCLUSIONS ...

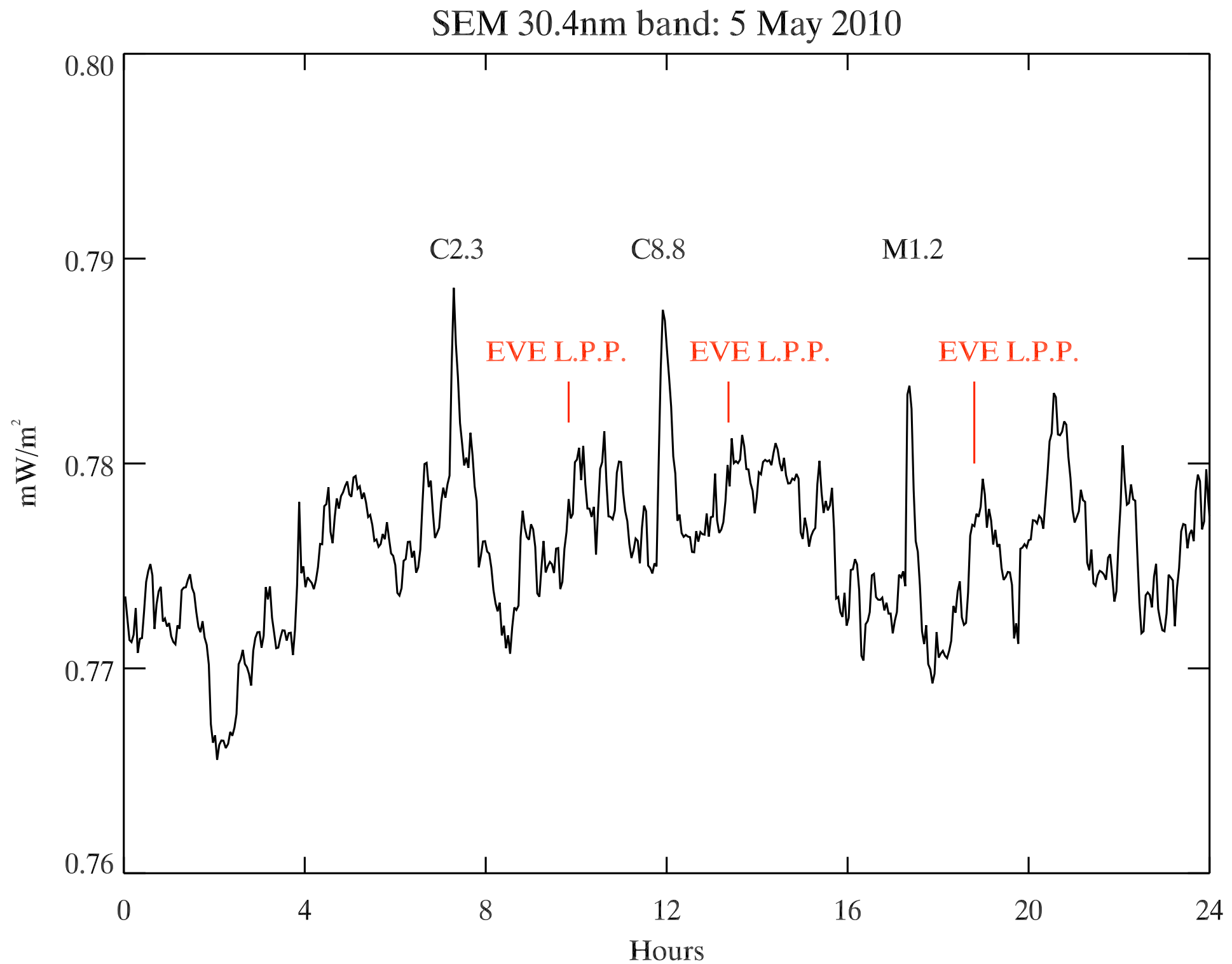
- Can reduce SEM-SEE residuals by adding some 17.1 nm (coronal) contribution
- Have not verified how well the SEE $S_{10.7}$ proxy works with JB2008
- 30.4 nm and 17.1 nm data available from ESP at high cadence and low latency
- $S_{10.7}$ Proxy from EVE is planned

BUT ...

DO WE SEE THE LATE PHASE PEAK IN SEM?



YES!!!



CONCLUSIONS TODAY

- 🌐 We need to include the late phase peak contributions to create a realistic $S_{10.7}$ proxy
- 🌐 Are some of the SEM 1st.-order peaks previously assigned to particles actually LPPs?
 - 🌐 Probably!

