

Further evidence for coherence difference (with only slightly different processing)

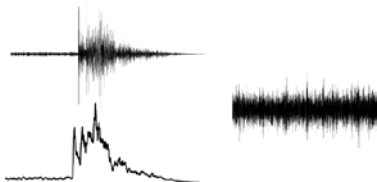
- Time-domain look at results rather than coherence decay
- Very similar measurement:

$$C_{AB}(t) = \mathfrak{J}^{-1} \left\langle \frac{\tilde{S}_A \tilde{S}_B^*}{\{|\tilde{S}_{95th}|\}^2} \right\rangle$$

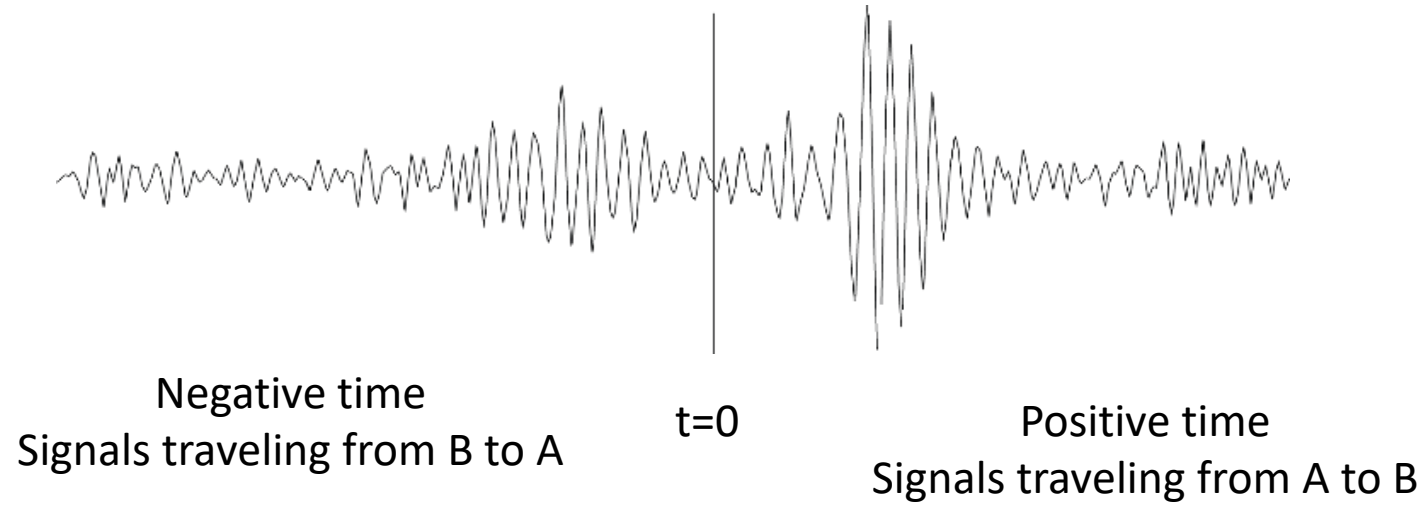
where \tilde{S}_{95th} considers all smoothed($\text{abs}(\tilde{S}_i)$) in the array, and uses 95th percentile.

$\langle \rangle$ denotes averaging of 1-hour bins, overlapping by ½ hour, over 1 day.

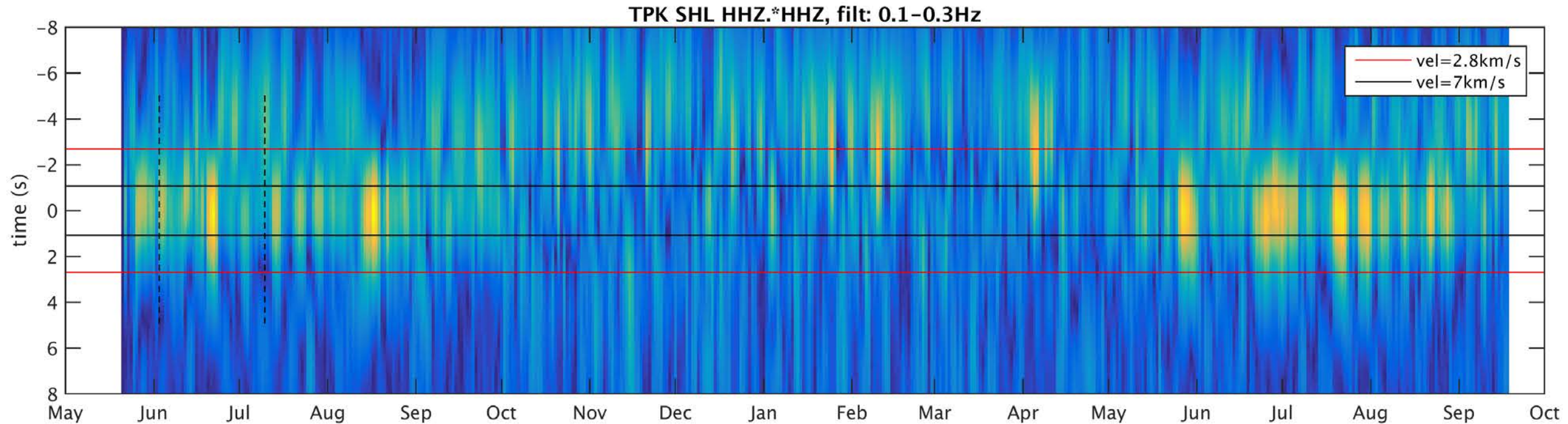
Also, time-domain normalization is used to suppress earthquakes / transients



Plotting interpretation:



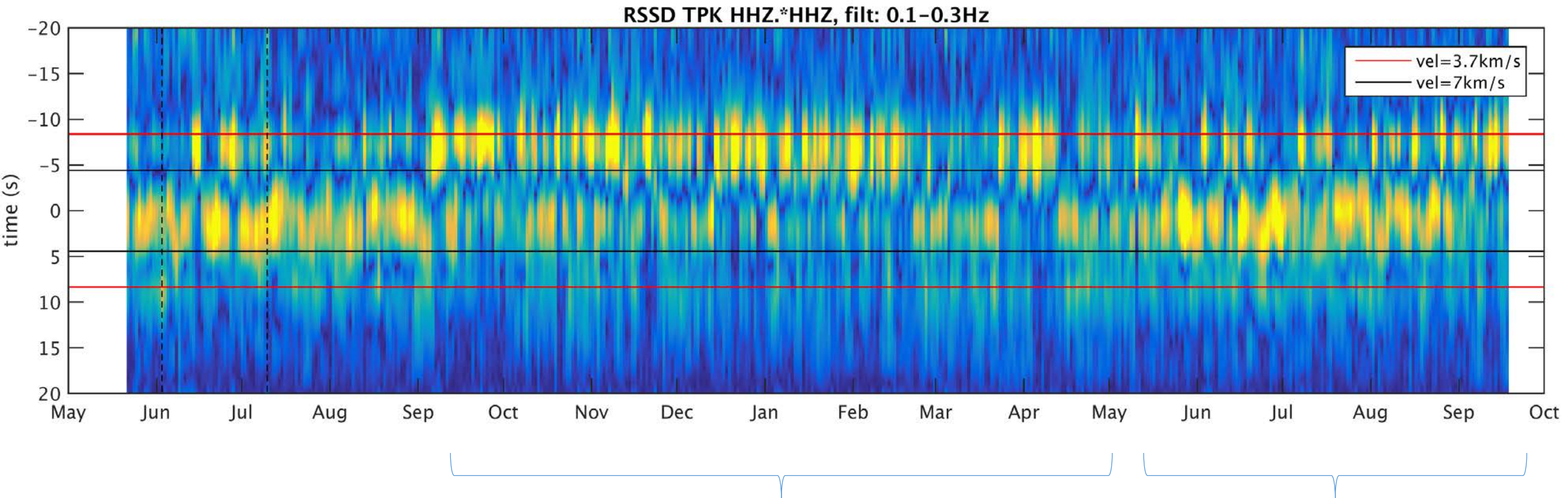
This shows the envelope of traces for each day, filtered around 0.2 Hz



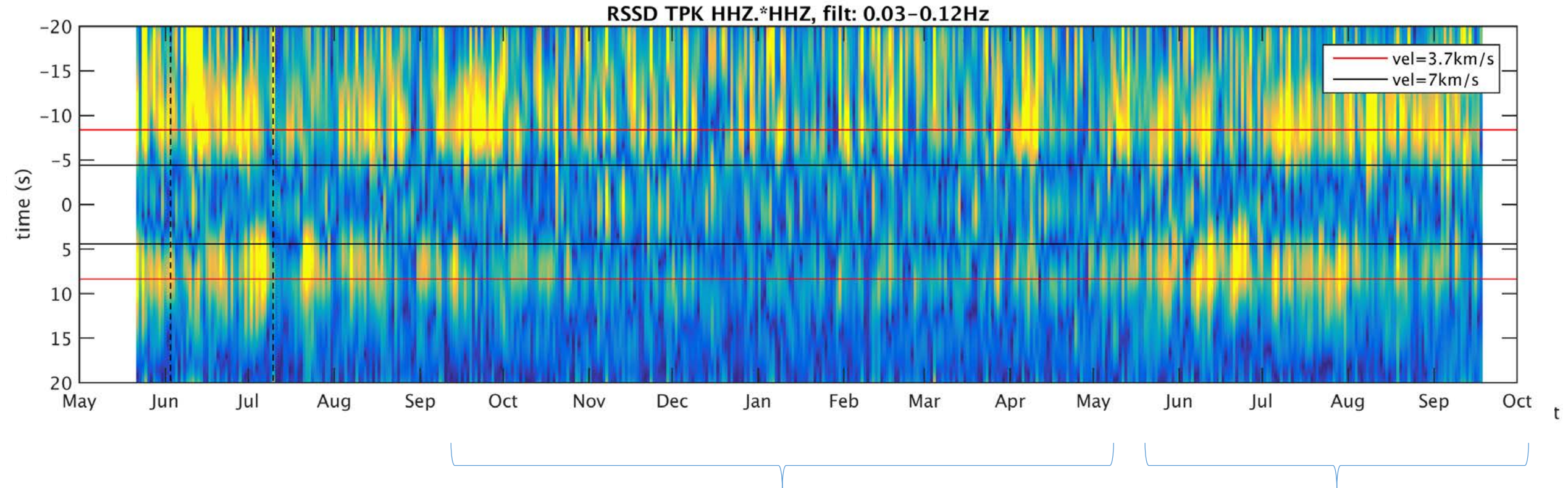
Winter months see the expected pattern:
something coming in around surface wave
velocities (red lines)

Summer months:
Strong signal at near-zero
time lag

For further station distance (using RSSD station $\sim 3\text{km}$ away), similar result (though messier)



Note that this is really only seen at 0.2 Hz, at longer periods the surface-wave arrival appears continually dominant



Power spectrum (here for reference, in case useful for discussion).

Black lines are median levels for summer and winter months separated

