

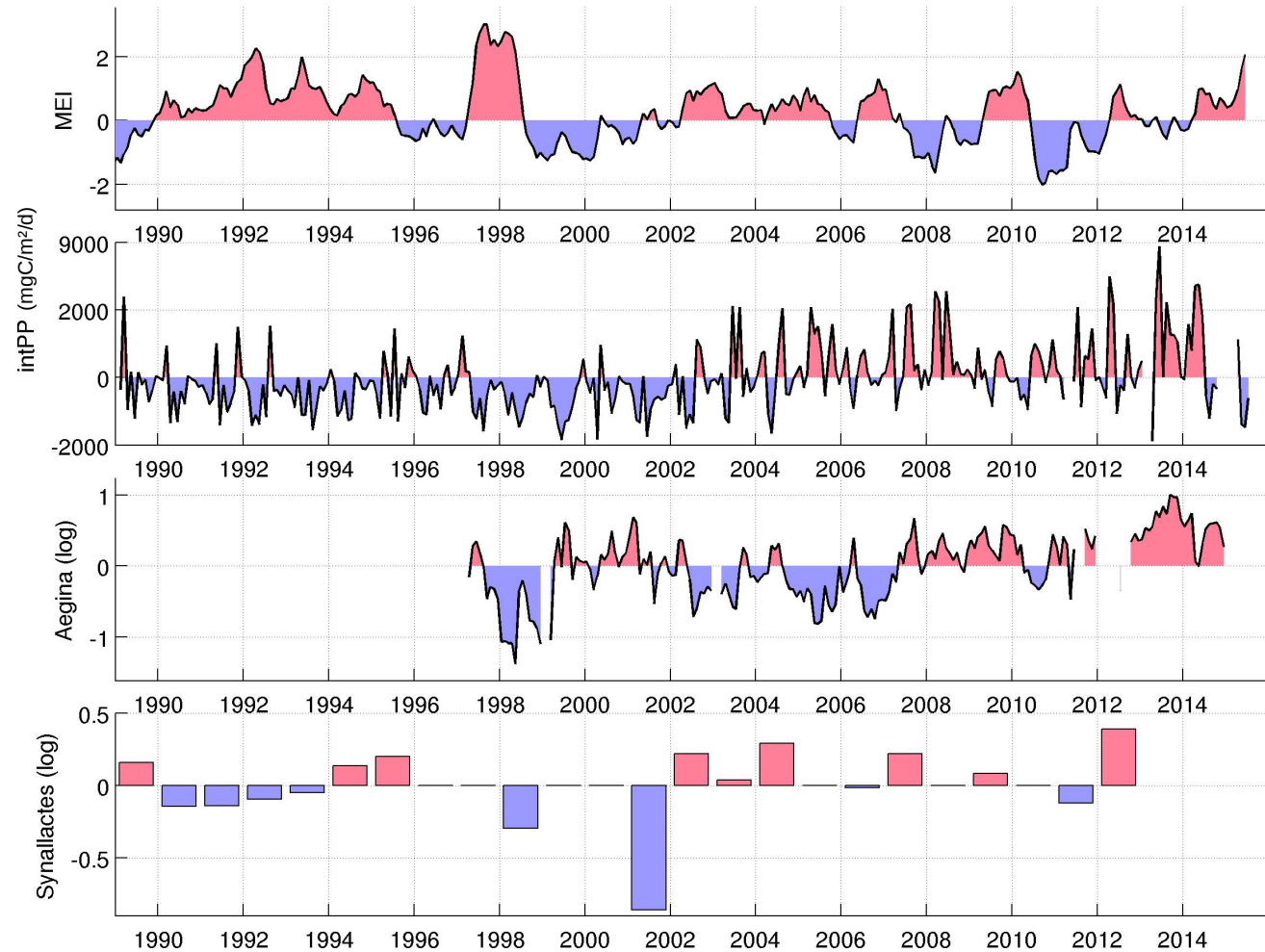
ITS proposal 2016: summary

- Second half of 2015:
 - *science*: continue to work on a suite of ecosystem indices for each time series in order to characterize ecosystem variability from 1989 to present. Several categories: key taxa, biodiversity indices, indices of common variability from PCA, clustering & ordination methods.
 - *engineering*: data storage & access APIs for automated extraction of the three time series. Operating for upper & midwater time series, to do for benthic time series.

Plans for 2016: science

- Continue the on-going integration of the time series
 - carbon fluxes work in progress
 - integrate physical and chemical information
 - address the question of advection
- Focus on the 1997-98 El Niño
 - characterize EN impacts on community structure and carbon fluxes
 - assess environmental drivers
 - investigate timing and lags between time series
 - discuss the ongoing El Niño

MEI (ENSO index)



integrated primary
production anomalies

Aegina log anomalies

Synallactes log
anomalies

Impacts of the 1997-98 El Niño on surface, midwater and benthic ecosystems. The three time series show decreased production/numbers following the 1997-98 El Niño event.

Plans for 2016: engineering

1. We are finding that there are many variables in the processing of the data from the three labs. This can be seen from Monique's text. I am hoping in 2015 we can decide where the lines of pre-processing and client processing can be defined better. For the steps that are deemed to be pre-processing, I will work on making extraction configurable, for example, Monique's references to choosing where in phylogenetic tree for certain aggregations.
2. As the discussions and the analysis progresses, some time will be needed to keep up with the processing and aggregation changes.
3. We project that more visualization work will happen in 2016 but will be focused on visualization with the goal of query and access. The users will have tools to do some quick exploration of the data sets to define what data they would like to extract for further analysis.
4. We will be working with the Video TAG group on some technology exploration in the area of deep learning (neural networks). We will need time to support this activity.