

# Global gross primary productivity (GPP) based on plant functional types

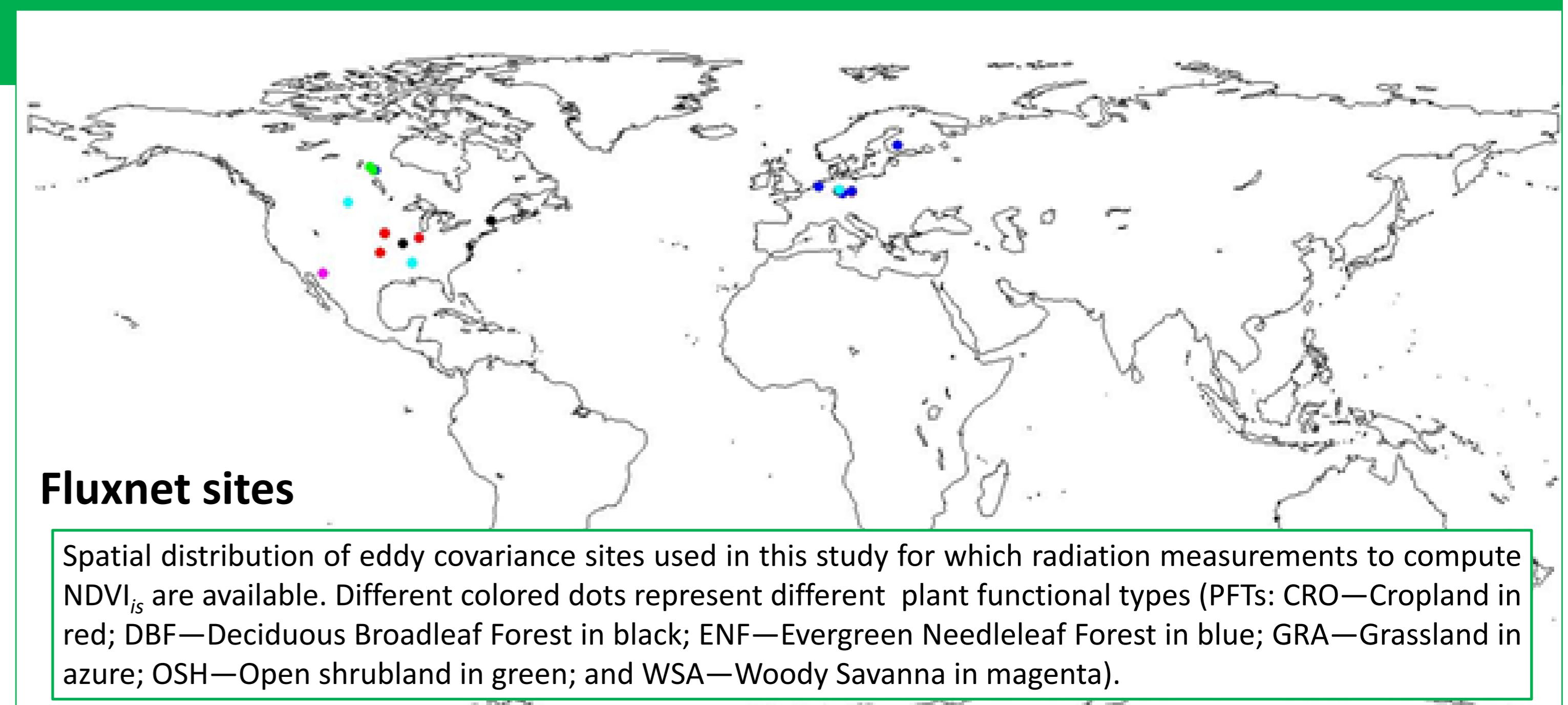
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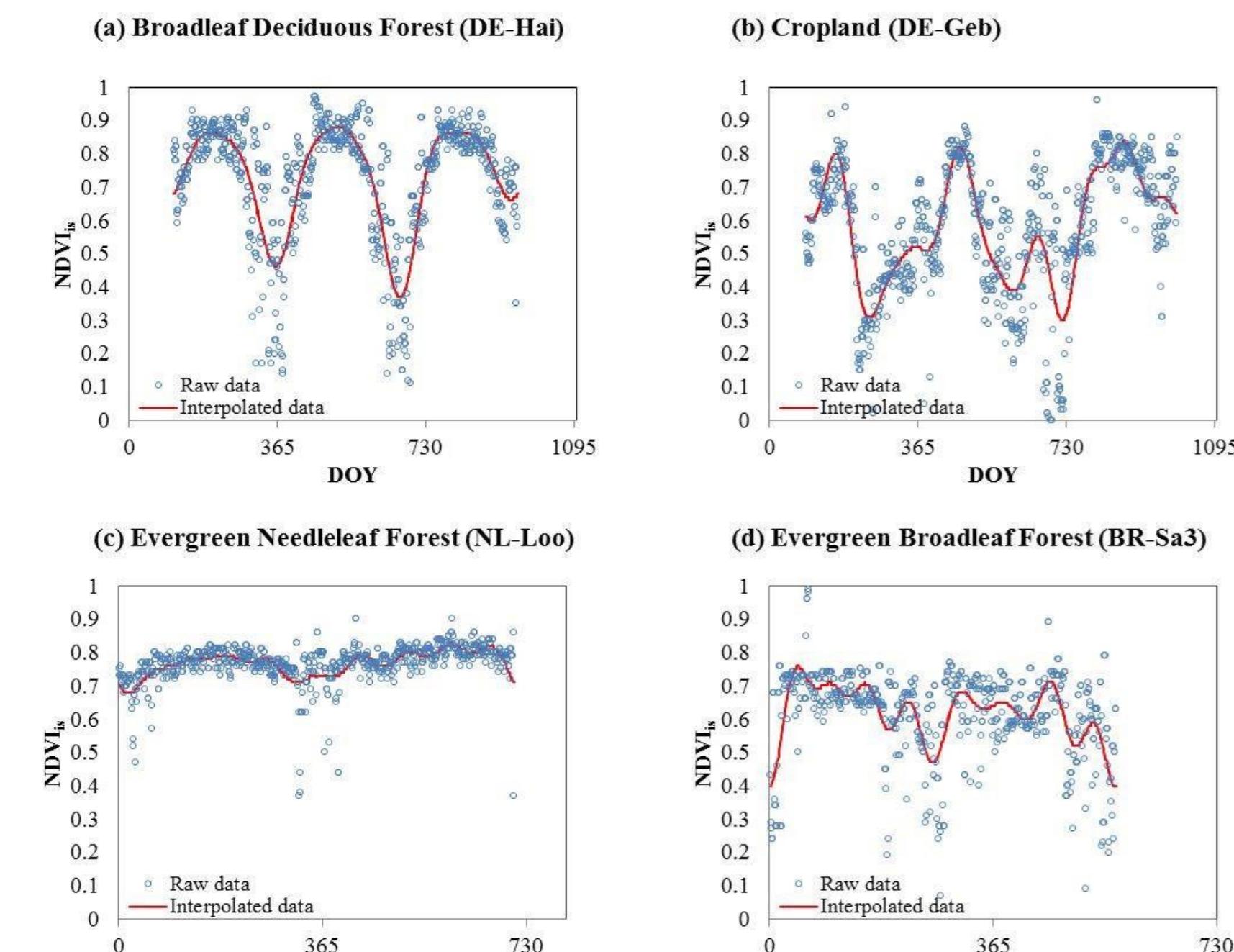
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## Aims

- To describe the in-situ NDVI ( $NDVI_{is}$ ) seasonal variability (Fourier time-series analysis)
- To evaluate the performance of  $NDVI_{is}$  multi-temporal time series derived from radiation measurements and MODIS NDVI ( $NDVI_{MD}$ ) computed at different spatial scales and across different PFTs
- To analyse the site heterogeneity (SHI: Spatial Heterogeneity Indicator)
- To model GPP seasonal variability



## Seasonality of $NDVI_{is}$ time-series analysis: Fourier fitting



A low amplitude →  $NDVI_{is}$  time-series presents a low variation between its maximum and minimum (amplitude) → a low seasonality

- CRO, DBF and OSH show the highest amplitude values of the first derivative of  $NDVI_{is}$  time-series eliciting a large seasonality in  $NDVI_{is}$  time-series (Left panel: (a) for DBF; and (b) for CRO)
- GRA also present quite high amplitude but show a high variability across sites
- Evergreen forest and woody savanna represent the lowest amplitude values of the first derivative of  $NDVI_{is}$  time-series and therefore a low seasonality in terms of  $NDVI_{is}$  time-series (Left panel: c-d)

