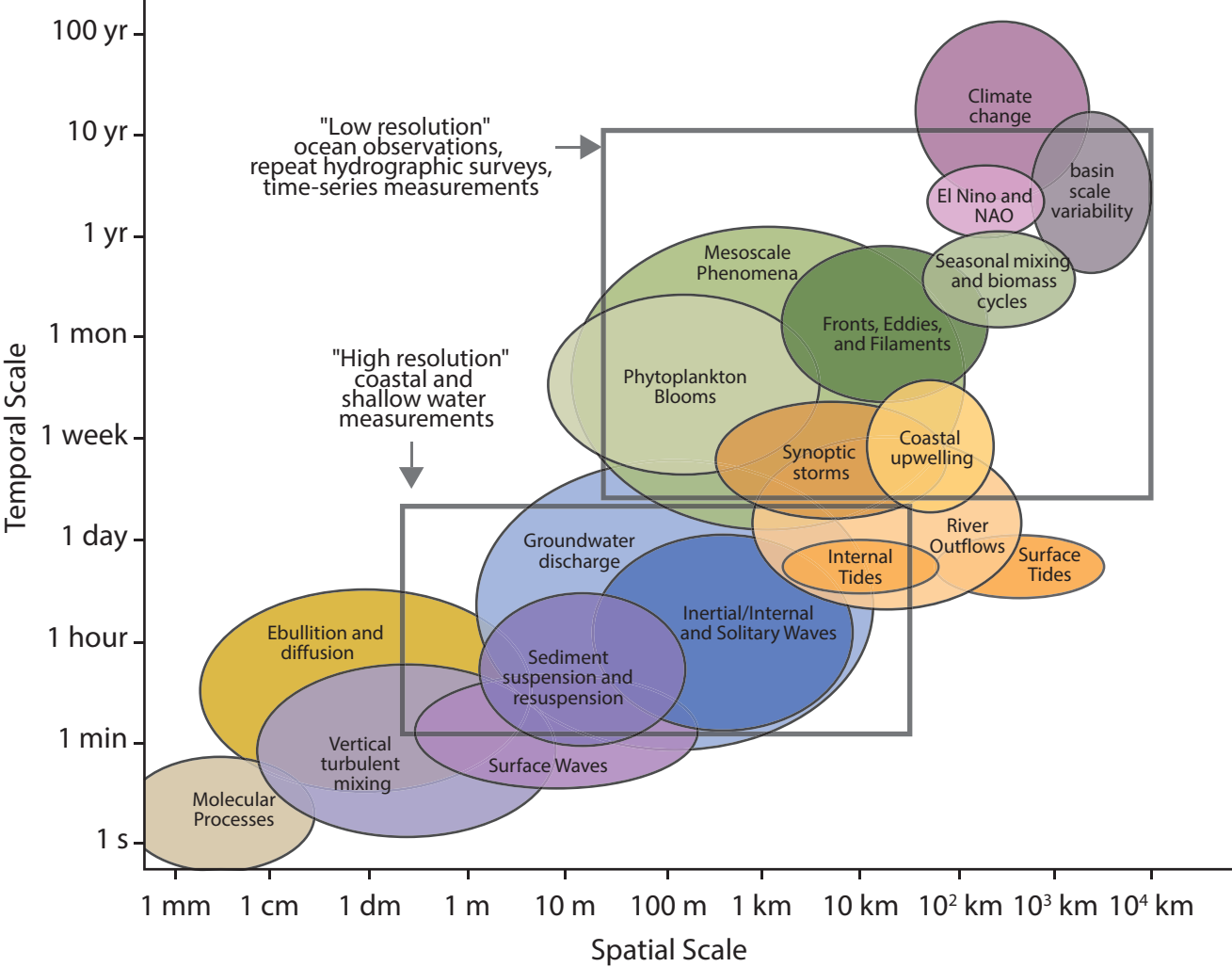
Temporal Scale
100 yr
10 yr
1 yr
1 mon
1 week
1 day
1 hour
1 min
1 s
Spatial Scale
1 mm
1 cm
1 dm
1 m
10 m
100 m
1 km
10 km
10² km
10³ km
10⁴ km
"Low resolution" ocean observations, repeat hydrographic surveys, time-series measurements
"High resolution" coastal and shallow water measurements
Climate change
basin scale variability
El Nino and NAO
Seasonal mixing and biomass cycles
Mesoscale Phenomena
Fronts, Eddies, and Filaments
Phytoplankton Blooms
Synoptic storms
Coastal upwelling
River Outflows
Surface Tides
Internal Tides
Groundwater discharge
Inertial/Internal and Solitary Waves
Ebullition and diffusion
Sediment suspension and resuspension
Vertical turbulent mixing
Surface Waves
Molecular Processes