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## Fine structure and composition within the subsurface chlorophyll maximum across the Jabuka Pit in the central Adriatic Sea.

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During the spring/summer DolceVita cruise in May 2003, two transects in the Jabuka Pit (Central Adriatic) were occupied and physical, chemical, biological and bio-optical parameters were measured. The first transect was cross-basin running from Šibenik, Croatia to Pescara, Italy; while second transect was perpendicular to the first one and parallel to the Croatian coastline.

River Po freshwater influence was characterized by lower salinity and suspended particulate maximum in the near surface layer on the Italian side. Slightly lower salinity was also measured on Croatian side due to the River Krka influence. Higher concentrations of phosphate occurred on the Italian side in the surface and penetrated in to the deeper layers of the water column. Phosphate concentration was also elevated in the bottom layers of Jabuka Pit, and combined with higher concentration of nitrates and nitrites in bottom layer indicated possible higher microbiological decomposition. Higher concentration of silicate was found on north-eastern side of Jabuka pit correlating with the lower salinity water from River Krka, indicating the riverine source.

Due to the stabile stratification of the water column, subsurface chlorophyll maximum (SCM) was present in both transects in the 60-100 m. layer. High resolution mapping with the Trisoarus tow vehicle indicated that the SCM was highly patchy. Phytoplank-ton abundance, taxonomic composition and HPLC pigment analysis revealed different structures along and within the patchy structures in both of the transects. The SCM was

dominated by microphytoplankton (diatoms and cocoolithophorids), while dinoflagellates (both micro- and nano-) were present at peripherial parts of the patchy structures or in the near surface layer.