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KIT Sampling and Monitoring Campaign at Lake Taihu

The main purpose for this sampling and monitoring campaign was to install the final setup of the freely floating depth-profiling buoy system BIOLIFT. Besides a physicochemical multi-sensor system for water quality parameters, a weather sensor (Vaisala), winch, power supply and control module were fixed on a redesigned floating buoy construction made of pontoon elements. The new triangular shape should prevent shadow effects of the floating body and algae accumulation in the interior of the platform. Four automatic water samplers were installed on the BIOLIFT for the first time. During the 30 days sampling, in total 80 water samples and six sediment samples were taken from NIGLAS Jetty. Samples were also taken for the SIGN project partners, [bbe Moldaenke](#), [TZW](#), and [FZJ](#). The BIOLIFT *in situ* monitoring data of Chlorophyll_a and Cyanobacteria concentration can now be correlated with the algae classes detected by [bbe Moldaenke](#) PHYCOLA instrument and Chlorophyll_a extraction experiments done in the NIGLAS lab to calibrate the fluorescence signals and better understand the algae dynamics in spring. Three times visible algal bloom events already happened during this campaign. [KIT](#) thanks for the support of the campaign by Chinese partners of [Jiangnan University](#), [CRAES](#), and [NIGLAS](#).

KIT 采集太湖水样和表面底泥样以及搭建在线监测浮筒系统

本次采样的主要目的是重新设计和搭建定点垂向浮筒监测系统，并在其上集成固定 BIOLIFT 多传感器监测仪，Vaisala 气象监测仪，绞车，电源，控制器。新型的开放式三角形结构能够减少浮筒阴影对传感器测定结果的影响，同时也避免了蓝藻聚集在浮筒中间而使得测定的结果高于实际值。4 个自动水样采集器首次安装于 BIOLIFT 仪器上。30 天的采样期间，[KIT](#) 在无锡太湖站附近采集了 80 个水样和 6 个表面底泥样，采集的样品也提供给德国合作方 [bbe Moldaenke](#)，[TZW](#) 和 [FZJ](#) 做进一步的测试和研究。通过比较 BIOLIFT 仪器测定的叶绿素 a 和蓝藻浓度，PHYCOLA 仪（[bbe-Moldaenke](#)）测定的藻种浓度以及叶绿素 a 提取实验的结果，我们可以校准在线监测仪器的荧光信号并分析春季太湖藻种的变化情况。在本次采样期间，出现了三次可见的蓝藻爆发现象。[KIT](#) 感谢中国合作伙伴[江南大学](#)，[中国环科院](#)和[中科院南京地理湖泊研究所](#)对本次采样给予的支持与帮助。

