



A Newly Adopted Helicopter Platform for Geophysical and Remote Sensing

Uwe Meyer

Germany (uwe.meyer@bgr.de)

The Federal Institute for Geosciences and Natural Resources in Hannover owns a Sikorsky S-76B helicopter for geophysical and remote sensing airborne surveys. This platform has been completely refurbished and in parts newly designed to be fit for easy installations of complex geophysical instruments underneath, upon and within the helicopter. The airborne platform is equipped with a modern basic navigation equipment consisting of several GNSS antennae, state of the art inertial navigation systems, laser altimeter and video camera systems. Different other modules can be added to the helicopter as a state of the art gamma spectrometer, a laser scanner, airborne gravity meters etc. within the cabin. Moreover, external sensing systems as a photogrammetric camera, infrared camera or optional multispectral systems can be installed on the outer skin of the cabin. Different kinds of bird systems towed underneath the helicopter can be hooked up using standard cabling, glass fibres or wireless LAN. Available birds are equipped for frequency domain electromagnetics or gradient magnetics (IPHT Jena & Supracon, Jena). Besides, large georadar systems can be installed as well. The helicopter is able as well to carry TEM-gear or system in development. Main survey targets are groundwater systems, mineral deposits and natural hazards.