

## Smart Transmit Telescope

The piggyback concept – mounting the laser head directly on the telescope of an SLR station - offers a lot of advantages: It avoids all Coudé path problems, does not need any receive / transmit switch, allows simultaneous use of multiple lasers with different wavelengths, different repetition rates etc.

In addition, various enhancements can be installed also directly within the transmit telescope: Continuous attenuation of the laser pulse energy (e.g. to keep the single-photon level on the receiver); continuous measurements of laser pulse energy; detecting and identifying clouds in the laser path (e.g. to set a 'cloud bit' for automatic systems) simultaneously with SLR operation; detecting aircrafts with very few pulses (e.g. when using a MHz laser with a few  $\mu\text{J}$  per pulse), also simultaneously with SLR operation.