

Problems and solutions for accurate laser control at Helios and RILIS

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The frequency spectrum of the dye laser amplifier in the Helios laboratory in IKS, KU Leuven, has been observed to contain sidebands of the main laser frequency. Multiple orders of these sidebands have been seen and have an offset of about 800 MHz from one another. The origin of this problem and some solutions have been investigated.

Once the output of the laser light is a pure single mode, remote and hands-off operation of the laser system will prove to be very useful. Therefore, an accurate and absolute control of the laser selective elements will be necessary. Tests have been performed at RILIS, CERN, using etalon mounts with absolute positioning.

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