2-micron laser development for wind and CO2 sensing. Kohei Mizutani, Toshikazu Itabe, Shoken Ishii, Hironori Iwai, Motoaki Yasui, NICT (Japan); Kazuhiro Asai, Atsushi Sato, Tohoku Institute of Technology (Japan); Hirotake Fukuoka, Hamamatsu Photonics K.K (Japan); Takayoshi Ishikawa, Nippon Aleph Co. (Japan); and Teiji Kase, NEC Co. (Japan).

ABSTRACT

National Institute of Information and Communications Technology (NICT) are developing 2-micron eye-safe solid lasers doped with Tm and/or Ho, which are useful components to construct lidar instruments for remote sensing of wind and CO2 concentration. Conductive-cooled Tm,Ho:YLF oscillators were shown to be operated at 30Hz in 50-80mJ output level. Moreover, we started a project to develop Ho:YLF laser end-pumped by Tm-fiber laser which will be used for operations at relatively high repetition rate of 300Hz(and more) and high average power.