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**A convenient high power high efficiency blue cw single frequency laser by IR diode laser doubling with PPKTP** KOUSTUBH DANEKAR, ALI KHADEMIAN, NIMA HASSAN REZAEIAN, DAVID SHINER, University of North Texas — We report on high efficiency resonant doubling to 486nm using periodically poled KTP. A stable blue power of  $680 \pm 5$  mW was obtained using the 840 mW output power of a FBG stabilized PM fiber coupled IR semiconductor laser. This gives an overall conversion efficiency of 80% for generating blue. To obtain this result, all losses in the system were carefully studied and minimized. Using a similar cavity design replacing PPKTP with CLBO we are additionally investigating a second doubling stage for efficient UV generation to 243nm.

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