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IR-VIS-UV Coherent Light Source utilizing the combined Stimulated Raman Scattering / Collinear Raman Generation effect ALEXEY CHUGREEV, ANDREA BURZO, ALEXEI SOKOLOV, Physics Dept Texas A&M University — Production of subfemtosecond optical pulses or light pulses with a predetermined shape of the electric field demands a broadband coherent light source of few octaves of bandwidth. One alternative to the traditional mode-locked solid state laser technology is the discrete-spectrum coherent light source utilizing the collinear Raman generation effect [1]. We extend this approach by utilizing the Stimulated Raman Scattering effect to increase by one order of magnitude the number of sidebands and expand the capability of the pulse shaping. The design of the setup to increase the output power will be suggested.

[1] S. E. Harris and A. V. Sokolov, Phys. Rev. Lett. 81, 2894 (1998)

Andrea Burzo
Physics Dept Texas A&M University

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