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Robert Calderbank* (calderbk@math.princeton.edu), Applied and Computational Mathematics, Princeton University, Fine Hall, Room 206, Princeton, NJ 08540. *Golay, Heisenberg and Weyl*. Preliminary report.

Sixty years ago, efforts by Marcel Golay to improve the sensitivity of far infrared spectrometry led to the discovery of pairs of complementary sequences. We will describe how these sequences are finding new application in active sensing, where the challenge is how to see faster, to see more finely where necessary, and to see with greater sensitivity, by being more discriminating about how we look. (Received September 04, 2008)