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Mark E. Huibregtse (mhuibreg@skidmore.edu), Skidmore College, Saratoga Springs, NY 12866. An elementary construction of certain affine open subschemes of the Hilbert scheme of n points of the affine plane. Preliminary report.

We present an elementary construction of certain affine open subschemes (the U_{μ} introduced by M. Haiman in [t, q-Catalan Numbers and the Hilbert Scheme, Discrete Mathematics 193 (1998), pp. 201-224]) of the Hilbert scheme of n points of the affine plane. Starting from scratch, we recover U_{μ} by constructing an affine variety U and, over U, a finite and flat family of 0-dimensional, length n subschemes of the affine plane that satisfies the universal property that characterizes U_{μ} . Since the U_{μ} cover the entire Hilbert scheme of n points, the latter can be constructed by pasting the U's together along overlaps. (Received October 03, 2000)