Jeremy Rouse and David Zureick-Brown* (dzb@mathcs.emory.edu), 400 Dowman Drive, Atlanta, GA 30322. Progress on Mazur's program B.

I'll discuss recent progress on Mazur's "Program B", including my own recent work with Jeremy Rouse which completely classifies the possibilities for the 2-adic image of Galois associated to an elliptic curve over the rationals, and will also discuss a large number of other very recent results by many authors. (Received January 18, 2016)