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Yb Optical Lattice Clock ANDREW LUDLOW, NIST, NATHAN LEMKE, YANYI JIANG, JEFF SHERMAN, CHRIS OATES, NIST OPTICAL FREQUENCY MEASUREMENTS GROUP TEAM — Here we report on recent efforts and measurements of an optical atomic clock based on ^{171}Yb atoms tightly confined in an optical lattice potential. Optical lattice clocks have already demonstrated performances rivaling cesium primary standards, and these young systems have further potential to be realized. We describe improvements in the short- and mid-term stability of these standards, including improvements in the frequency stabilization of the interrogation laser. We further discuss experimental realization of multi-dimensional lattice confinement, as well as various frequency measurements and comparisons of the Yb lattice clock.

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