[0004] Some microscope objectives include automated correction collars. However, such correction collars are often bulky and include an electromechanical enclosure that surrounds the optical elements of the objective. Thus, conventional automated correction collars often transfer heat to the optical elements of the objective, which can cause focus drift that negatively affects imaging. Conventional automated correction collars also often prevent manual access to the lenses. Furthermore, under conventional approaches, each microscope objective that includes its own automated correction collar also includes its own motor, which results in inefficiency and high cost for manufacturers and consumers alike.

[0005] Accordingly, there is an ongoing need and desire for improved motorized correction collar adjustment systems for microscope objectives.

[0006] The subject matter claimed herein is not limited to embodiments that solve any disadvantages or that operate only in environments such as those described above. Rather, this background is only provided to illustrate one exemplary technology area where some embodiments described herein may be practiced.

SUMMARY

[0007] Implementations of the present disclosure extend at least to systems and methods for selectively adjusting an objective lens correction collar.

[0008] Some embodiments provide a system that includes a gear ring sized and shaped to fit about a correction collar of an objective lens. The system also includes an adjustment mechanism that has a motor operably connected to a complementary gear configured to selectively engage and cause movement of the gear ring, thereby adjusting the correction collar.

[0008a] Some embodiments provide an imaging system, comprising the system for selectively adjusting an objective lens correction collar as described, and a controller for operating the adjustment mechanism.

[0009] Some embodiments provide a method for motorized adjustment of an objective lens correction collar. The method includes positioning an objective lens translation device at a first position. The objective lens translation device includes an objective lens having a correction collar fitted with a gear ring. The method also includes engaging a z drive to move the objective lens across a z-distance to a correction collar adjustment position. The gear ring associates with a complementary gear of an adjustment mechanism at the correction collar adjustment position. The