BRIEF SUMMARY

In certain embodiments, determining physical lengths of an eye includes determining an optical length of each segment of a plurality of segments of an axis of the eye, where each segment corresponds to a portion of the eye. A refractive index is determined for each segment. A physical length of each segment is determined according to the optical length and the refractive index of the segment.

According to a first aspect, there is provided a method for determining one or more physical lengths of an eye comprising: determining an optical length of each segment of a plurality of segments of an axis of the eye, each segment corresponding to a portion of the eye; determining a refractive index of each segment of the plurality of segments to yield a plurality of refractive indices; and calculating a physical length of each segment of the plurality of segments according to the optical length and the refractive index of the segment to yield a plurality of physical lengths.

According to a second aspect, there is provided a system for determining one or more physical lengths of an eye comprising: a memory configured to store location information; and one or more processors configured to: determine an optical length of each segment of a plurality of segments of an axis of the eye, each segment corresponding to a portion of the eye; determine a refractive index of each segment of the plurality of segments to yield a plurality of refractive indices; and calculate a physical length of each segment of the plurality of segments according to the optical length and the refractive index of the segment to yield a plurality of physical lengths.

According to a third aspect, there is provided one or more non-transitory computer-readable media storing logic for calculating intraocular lens (IOL) power, when executed by one or more processors the logic configured to: determine an optical length of each segment of a plurality of segments of an axis of the eye, each segment corresponding to a portion of the eye; determine a refractive index of each segment of the plurality of segments to yield a plurality of refractive indices; and calculate a physical length of each segment of the plurality of segments according to the optical length and the refractive index of the segment to yield a plurality of physical lengths.