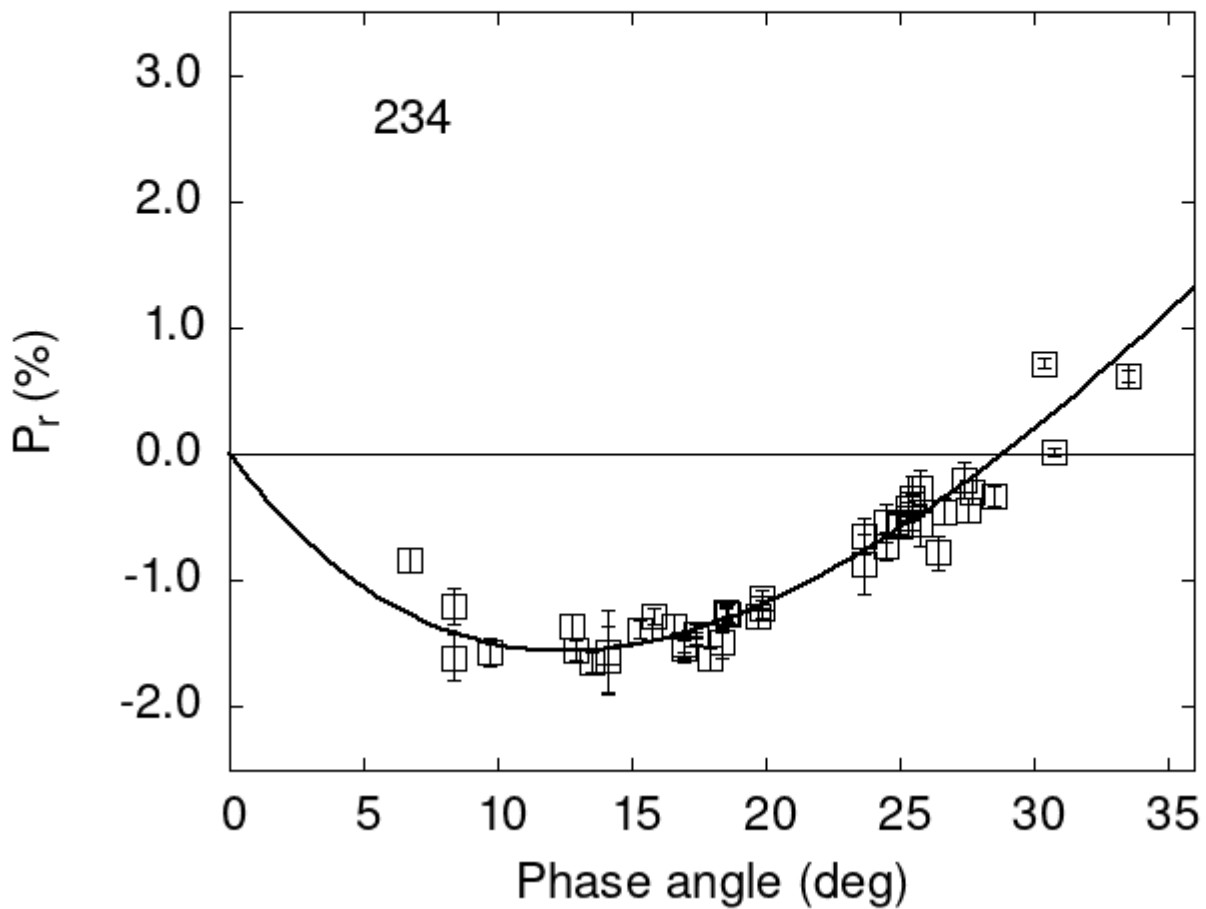# Catalogue of Asteroid Polarization Curves

Gil-Hutton (2023)

Polarimetric data:

The columns list the object number, the phase angle (degrees),P_r (%), its error, the filter used, and the reference code.

```
234  6.74 -0.84 0.09 V f
234  9.73 -1.56 0.11 V f
234 12.76 -1.36 0.09 V f
234 12.93 -1.55 0.08 V f
234 13.52 -1.65 0.08 V f
234 16.58 -1.36 0.09 V f
```

```
234 16.95 -1.54 0.11 V f
234 17.38 -1.43 0.08 V f
234 17.95 -1.62 0.09 V f
234 18.34 -1.49 0.12 V f
234 19.71 -1.28 0.09 V f
234 26.45 -0.78 0.14 V f
234 26.63 -0.45 0.10 V f
234 27.42 -0.20 0.14 V f
234 27.56 -0.44 0.09 V f
234 27.69 -0.30 0.09 V f
234 28.51 -0.33 0.08 V f
234 33.54  0.62 0.09 V f
234 14.14 -1.56 0.33 V f
234 14.14 -1.63 0.27 R f
234 18.49 -1.25 0.07 V f
234 18.49 -1.25 0.04 R f
234 19.89 -1.22 0.07 V f
234 19.89 -1.14 0.07 R f
234 23.68 -0.87 0.24 V f
234 23.68 -0.65 0.14 R f
234 30.80  0.02 0.03 V f
234 30.40  0.72 0.04 V a
234 30.40  0.72 0.04 V a
234 25.80 -0.56 0.17 V a
234 25.80 -0.27 0.14 R a
234 25.50 -0.34 0.16 V a
234 25.50 -0.40 0.08 R a
234 25.30 -0.51 0.13 V a
234 25.30 -0.43 0.10 R a
234 25.00 -0.57 0.10 V a
234 25.00 -0.55 0.08 R a
234 15.83 -1.28 0.07 V a
234 18.57 -1.26 0.07 V a
234 24.50 -0.54 0.15 V a
234 24.50 -0.73 0.11 R a
234  8.40 -1.61 0.18 V a
234  8.40 -1.20 0.14 R a
234 15.30 -1.39 0.07 V a
234 16.95 -1.51 0.05 V a
234 16.95 -1.54 0.07 V a
234 17.38 -1.42 0.02 V a
234 17.38 -1.43 0.03 V a
234 33.54  0.62 0.05 V a
234 18.34 -1.49 0.09 V a
234 19.89 -1.22 0.07 V b
234 19.89 -1.14 0.07 R b
234 18.49 -1.25 0.07 V b
234 18.49 -1.25 0.05 R b
234 14.14 -1.56 0.33 V b
234 14.14 -1.63 0.27 R b
```

```
234 23.68 -0.87 0.24 V b
234 23.68 -0.65 0.14 R b
```

Polarization Curve Parameters:

The polarimetric parameters were obtained fitting the observations to a polarization curve using the function:

$$P_r(\alpha) = Coe_1 \times \left[\exp\left(-\frac{\alpha}{Coe_2}\right) - 1\right] + Coe_3 \times \alpha,$$

where α is the phase angle in degrees. The minimum of the polarization curve is identified by Pmin, Phmin is the phase angle where Pmin is reached, Ph0 is the inversion angle, and k is the slope of the polarization curve at Ph0.

```
#
#      Coe1     eCoe1     Coe2     eCoe2     Coe3     eCoe3
#    9.7558    0.3734   17.5774   0.5619   0.2726   0.0070
#
#     Phmin    err    Pmin     err   Ph0     err    k       err
#     12.50   0.83  -1.558   0.236  28.86   0.24  0.1651  0.0084
```