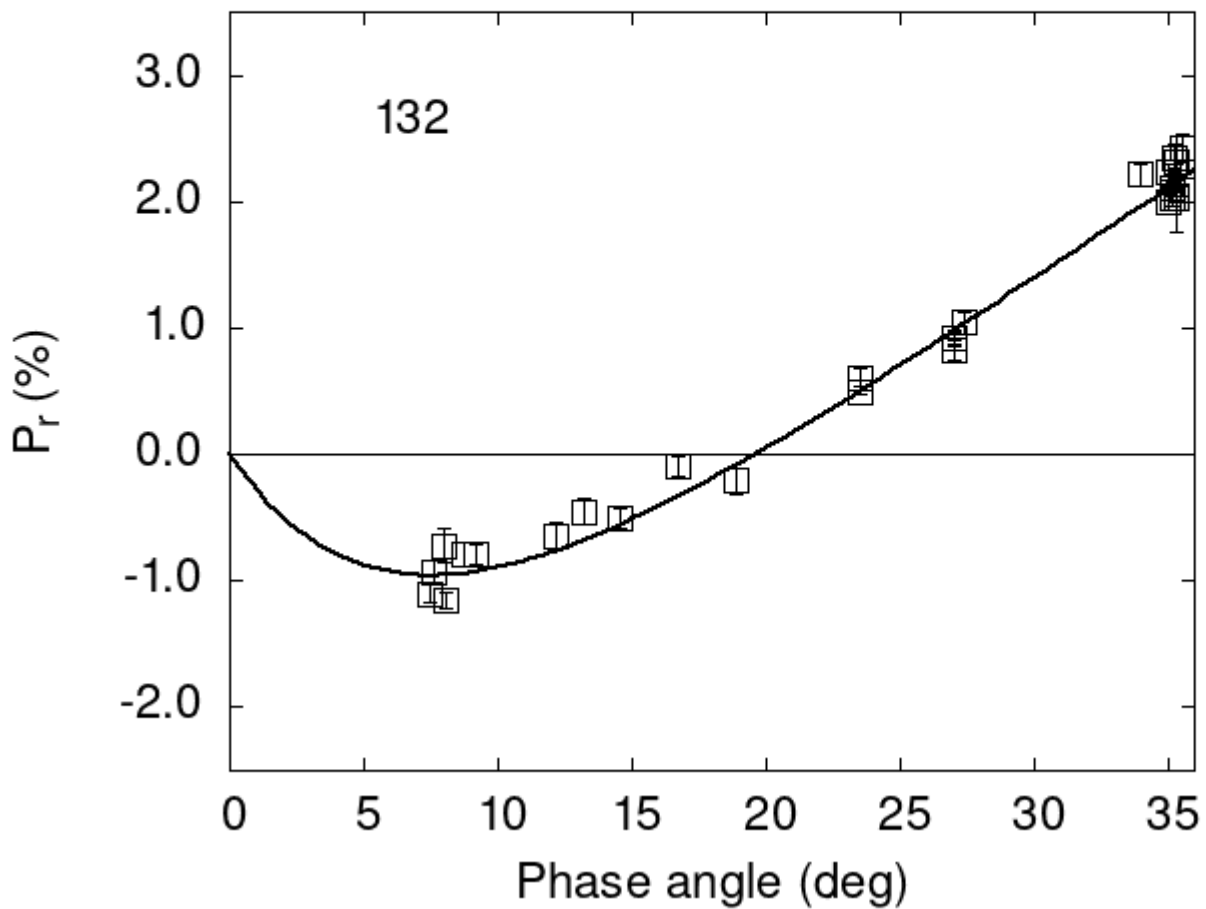# Catalogue of Asteroid Polarization Curves

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.

```
132   7.62 -0.93 0.10 V f
132   8.01 -0.72 0.13 V f
132   8.71 -0.79 0.10 V f
132   9.19 -0.79 0.08 V f
132 12.20 -0.65 0.11 V f
132 13.20 -0.45 0.11 V f
```

```
132 14.60 -0.50 0.08 V f
132 18.87 -0.21 0.10 V f
132 33.99  2.21 0.08 V f
132 27.00  0.92 0.06 V f
132 27.00  0.83 0.08 R f
132 27.39  1.04 0.09 V f
132 35.06  2.23 0.06 V f
132 35.06  2.00 0.06 R f
132 35.16  2.10 0.06 V f
132 35.16  2.02 0.05 R f
132 35.26  2.34 0.11 V f
132 35.26  2.34 0.07 R f
132 35.36  2.03 0.27 V f
132 35.36  2.31 0.21 R f
132 35.55  2.42 0.11 V f
132 35.55  2.09 0.05 R f
132  7.50 -1.10 0.07 V a
132  8.10 -1.15 0.06 V a
132 16.70 -0.10 0.08 V a
132 35.55  2.42 0.11 V b
132 35.55  2.09 0.05 R b
132 35.36  2.03 0.27 V b
132 35.36  2.31 0.21 R b
132 35.26  2.34 0.11 V b
132 35.26  2.34 0.07 R b
132 35.16  2.10 0.06 V b
132 35.16  2.02 0.05 R b
132 35.06  2.23 0.06 V b
132 35.06  2.00 0.06 R b
132 27.39  1.04 0.09 V b
132 27.00  0.92 0.05 V b
132 27.00  0.83 0.08 R b
132 23.54  0.61 0.07 V b
132 23.54  0.49 0.02 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
#   3.0052    0.1069    6.5546    0.4425    0.1454    0.0031
#
```

```
#     Phmin   err   Pmin    err  Ph0    err    k       err
#     7.53  0.28 -0.957  0.106 19.62  0.33 0.1225 0.0045
```