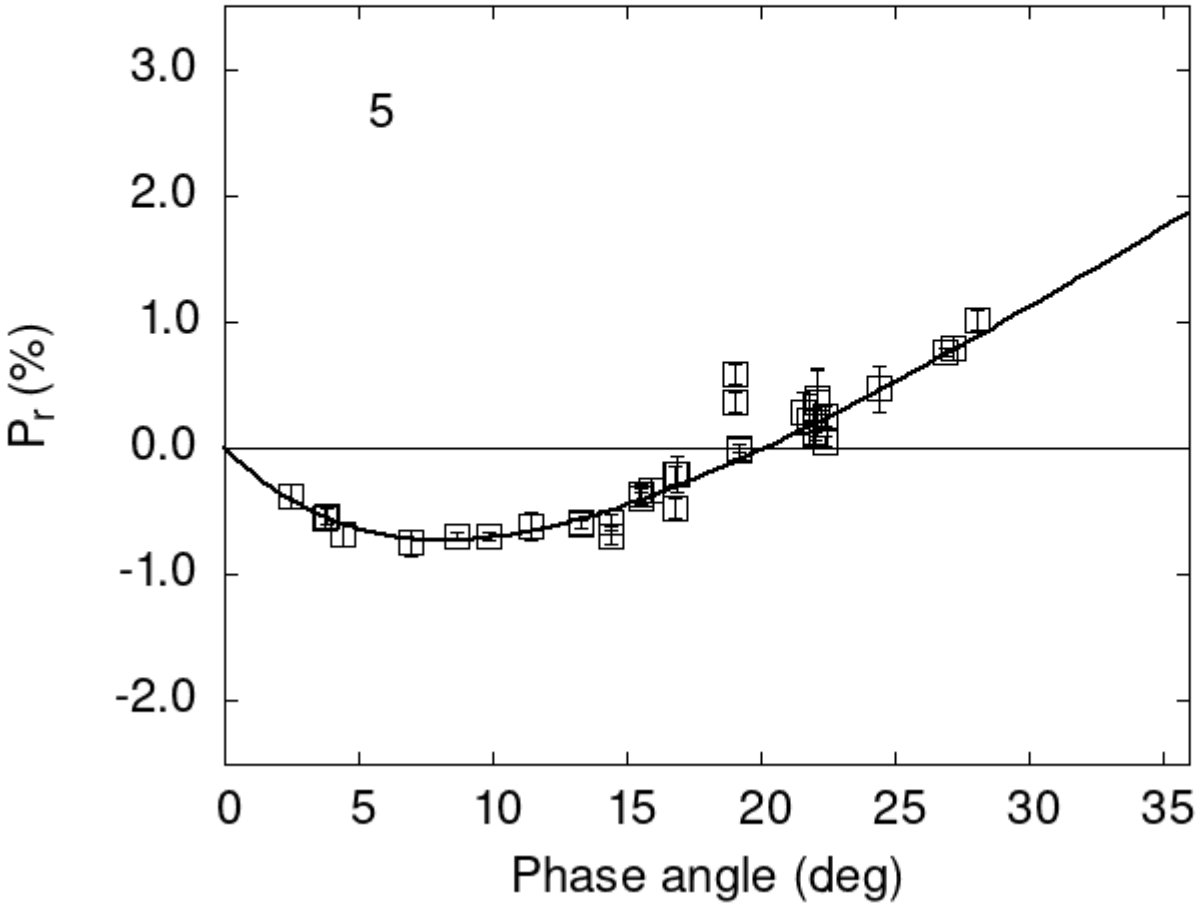
Catalogue of Asteroid Polarization Curves

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.

```
5  2.45 -0.38 0.09 V f
5  3.71 -0.55 0.09 V f
5  4.41 -0.68 0.10 V f
5  6.94 -0.75 0.10 V f
5 15.55 -0.36 0.08 V f
5 27.22  0.79 0.10 V f
```

```
5 28.12  1.02 0.08 V f
5 13.33 -0.59 0.04 V f
5 13.33 -0.60 0.03 R f
5 22.02  0.12 0.08 V f
5 22.02  0.13 0.07 R f
5 22.12  0.36 0.26 V f
5 22.12  0.39 0.25 R f
5 22.43  0.05 0.04 V f
5 22.43  0.25 0.08 R f
5 21.81  0.23 0.20 G a
5 16.87 -0.20 0.14 G a
5 11.42 -0.62 0.11 G a
5 15.89 -0.33 0.10 G a
5 21.57  0.28 0.16 G a
5 24.44  0.47 0.18 G a
5 26.90  0.76 0.03 G a
5  8.64 -0.69 0.03 G a
5  9.86 -0.69 0.03 G a
5 16.80 -0.21 0.07 V a
5 16.80 -0.47 0.08 R a
5 19.22  0.00 0.03 V a
5 19.22 -0.02 0.06 R a
5 19.06  0.59 0.08 V a
5 19.06  0.37 0.08 R a
5 15.50 -0.39 0.07 V a
5 15.50 -0.40 0.06 R a
5  3.80 -0.54 0.06 V a
5 14.40 -0.58 0.06 V a
5 14.40 -0.69 0.07 R a
5 13.33 -0.59 0.04 V b
5 13.33 -0.60 0.03 R b
5 22.02  0.12 0.08 V b
5 22.02  0.13 0.07 R b
5 22.12  0.36 0.26 V b
5 22.12  0.39 0.25 R b
5 22.43  0.05 0.04 V b
5 22.43  0.25 0.08 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
#    2.9745   0.3238   8.6786   0.9923   0.1330   0.0104
#
#     Phmin   err   Pmin    err  Ph0    err    k      err
#      8.22  1.16 -0.728  0.249 20.17  0.40 0.0994 0.0121
```