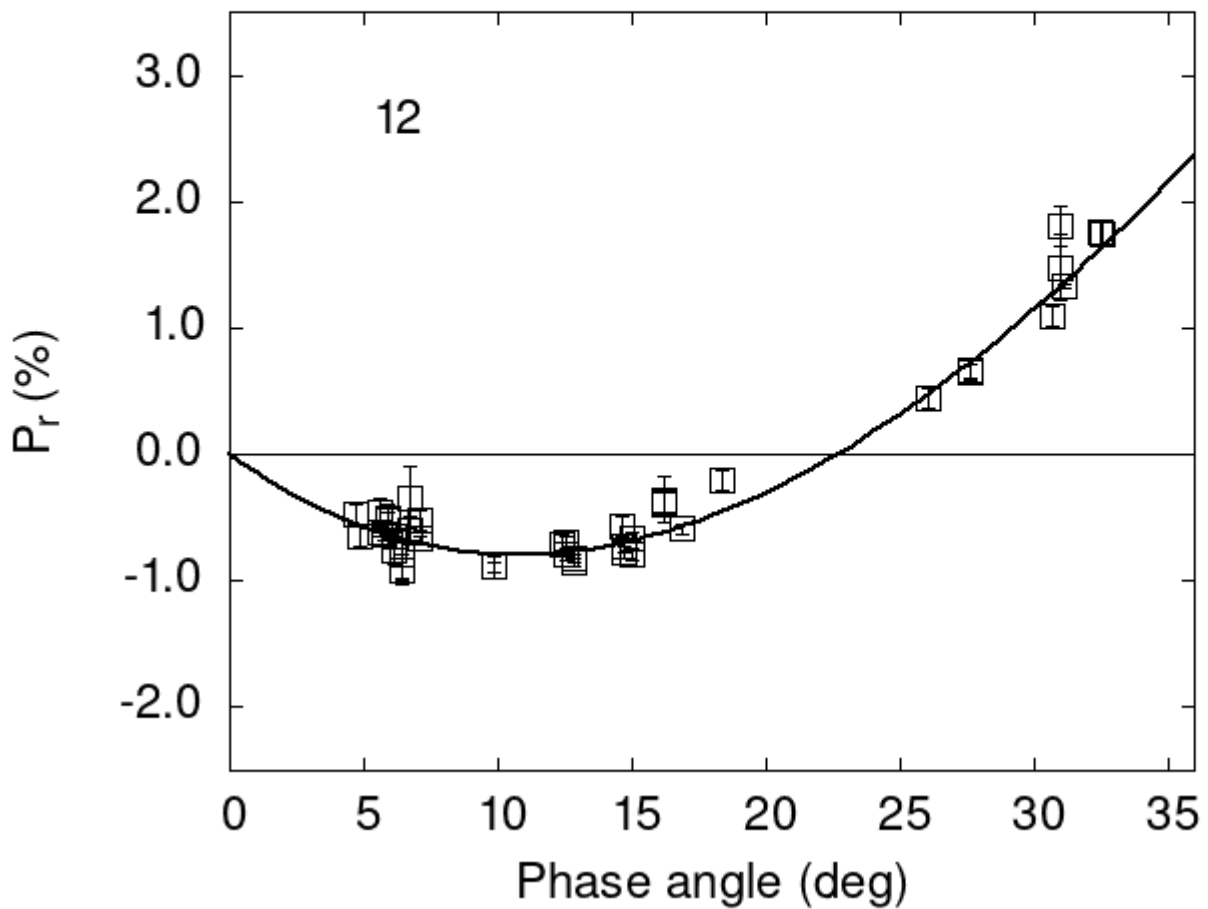# Catalogue of Asteroid Polarization Curves

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.

```
12   4.73 -0.47 0.08 V f
12   4.87 -0.64 0.09 V f
12   9.83 -0.89 0.09 V f
12  12.41 -0.71 0.08 V f
12  14.62 -0.57 0.08 V f
12  18.35 -0.21 0.08 V f
```

```
12 26.05   0.44 0.08 V f
12 30.67   1.10 0.08 V f
12 12.52  -0.70 0.05 V f
12 12.52  -0.79 0.04 R f
12 12.83  -0.85 0.03 V f
12 12.83  -0.82 0.03 R f
12 16.22  -0.36 0.18 V f
12 16.22  -0.39 0.09 R f
12 27.61   0.66 0.06 V f
12 27.61   0.65 0.06 R f
12 30.97   1.80 0.16 V f
12 30.97   1.48 0.26 R f
12  5.61  -0.46 0.12 V f
12  5.61  -0.61 0.04 R f
12  5.87  -0.52 0.06 V f
12  5.87  -0.51 0.11 R f
12  6.14  -0.76 0.11 V f
12  6.14  -0.64 0.04 R f
12  6.43  -0.79 0.20 V f
12  6.43  -0.91 0.12 R f
12  6.75  -0.34 0.24 V f
12  6.75  -0.60 0.11 R f
12  7.06  -0.52 0.08 V f
12  7.06  -0.67 0.03 R f
12  5.72  -0.63 0.05 G a
12 31.11   1.33 0.02 G a
12 14.99  -0.66 0.04 V a
12 14.99  -0.79 0.05 R a
12 14.70  -0.77 0.05 V a
12 14.70  -0.73 0.04 R a
12 32.60   1.75 0.08 V a
12 32.50   1.76 0.09 V a
12 16.90  -0.59 0.04 V a
12  9.83  -0.89 0.04 V a
12  7.06  -0.52 0.08 V b
12  7.06  -0.67 0.03 R b
12  6.75  -0.34 0.24 V b
12  6.75  -0.60 0.11 R b
12  6.43  -0.79 0.19 V b
12  6.43  -0.91 0.12 R b
12  6.14  -0.76 0.11 V b
12  6.14  -0.64 0.05 R b
12  5.87  -0.52 0.06 V b
12  5.87  -0.51 0.11 R b
12  5.61  -0.46 0.12 V b
12  5.61  -0.61 0.04 R b
12 16.22  -0.36 0.18 V b
12 16.22  -0.38 0.09 R b
12 30.97   1.80 0.16 V b
12 30.97   1.48 0.26 R b
```

```
12 12.52 -0.70 0.05 V b
12 12.52 -0.79 0.04 R b
12 12.83 -0.85 0.03 V b
12 12.83 -0.82 0.03 R b
12 27.61  0.66 0.06 V b
12 27.61  0.65 0.06 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
#    20.7186   0.4470   35.0526   0.5263    0.4350    0.0052
#
#     Phmin    err    Pmin     err   Ph0     err    k       err
#     10.75   0.94  -0.796   0.148 22.70   0.32 0.1257 0.0086
```