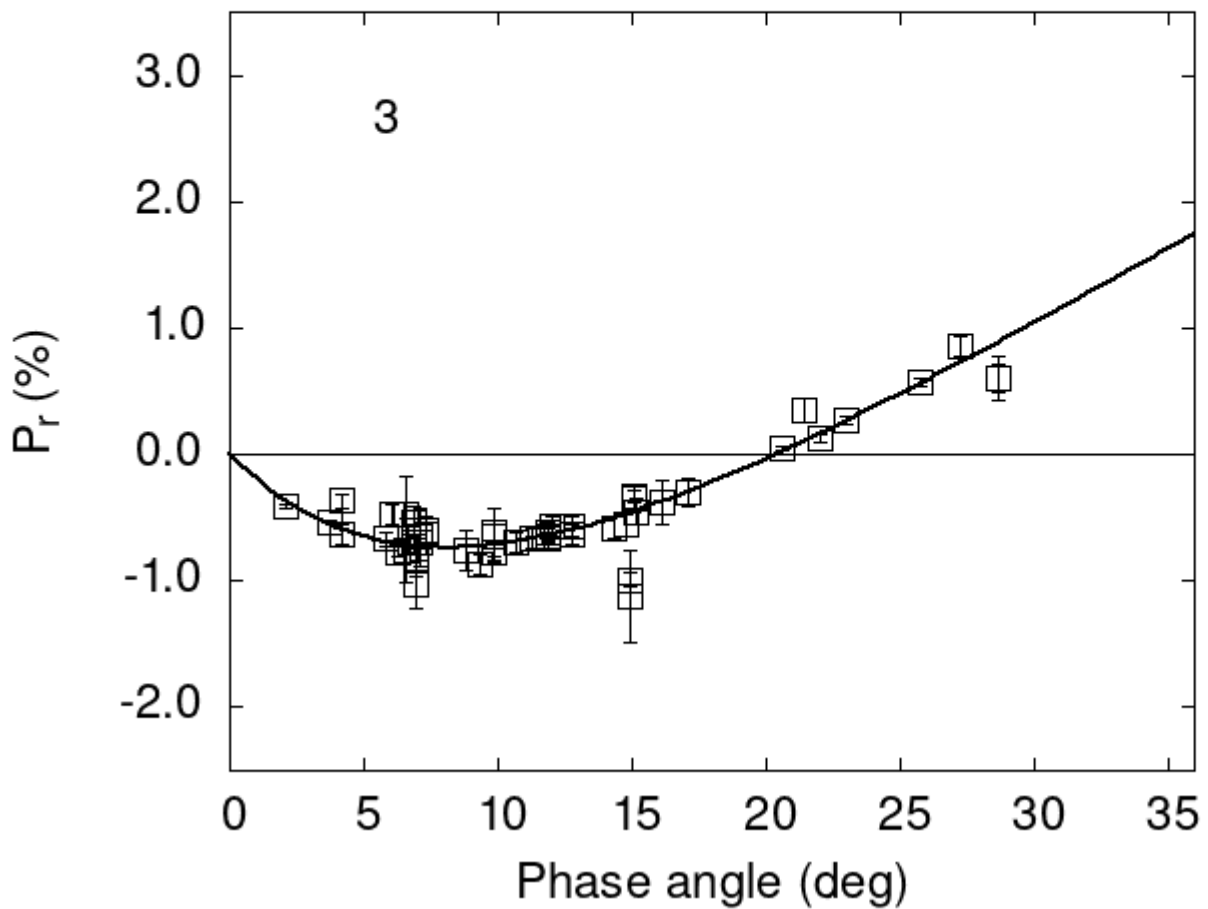# Catalogue of Asteroid Polarization Curves

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.

```
3  4.16 -0.63 0.08 V f
3  6.08 -0.48 0.08 V f
3 10.71 -0.69 0.08 V f
3 11.27 -0.67 0.08 V f
3 11.91 -0.62 0.08 V f
3 11.91 -0.66 0.08 R f
```

```
3 12.05 -0.57 0.08 V f
3 14.35 -0.58 0.09 V f
3 14.77 -0.56 0.09 V f
3 15.13 -0.45 0.10 V f
3 14.92 -0.99 0.06 V f
3 14.92 -1.12 0.36 R f
3 15.07 -0.33 0.05 V f
3 15.07 -0.35 0.11 R f
3  5.80 -0.67 0.05 V f
3 28.70  0.60 0.11 G a
3 28.70  0.60 0.17 G a
3 27.23  0.85 0.08 G a
3 21.47  0.35 0.09 G a
3  6.84 -0.53 0.12 O a
3  6.84 -0.70 0.07 G a
3  9.89 -0.77 0.06 G a
3  8.79 -0.76 0.16 G a
3 16.13 -0.38 0.17 G a
3 17.09 -0.30 0.11 G a
3 23.04  0.27 0.03 G a
3 22.00  0.13 0.03 G a
3 20.63  0.05 0.02 G a
3  2.08 -0.41 0.01 G a
3 25.79  0.57 0.03 G a
3  9.30 -0.87 0.08 V a
3  7.10 -0.69 0.02 V a
3  6.30 -0.77 0.04 V a
3  6.55 -0.76 0.25 V a
3  6.55 -0.48 0.31 R a
3  9.83 -0.64 0.21 V a
3  9.83 -0.62 0.19 R a
3 12.80 -0.57 0.08 V a
3 12.80 -0.63 0.08 R a
3  4.20 -0.37 0.06 V a
3  3.70 -0.53 0.01 V a
3 11.91 -0.66 0.02 V a
3 11.91 -0.64 0.02 R a
3  7.32 -0.63 0.12 V b
3  7.32 -0.60 0.11 R b
3  7.10 -0.64 0.20 V b
3  7.10 -0.65 0.23 R b
3  6.91 -1.02 0.19 V b
3  6.91 -0.82 0.15 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
#    2.7391    0.1586    8.0494    0.4025    0.1236    0.0058
#
#    Phmin    err    Pmin    err  Ph0    err    k      err
#     8.15   0.60  -0.736   0.122 20.38  0.41 0.0966 0.0063
```