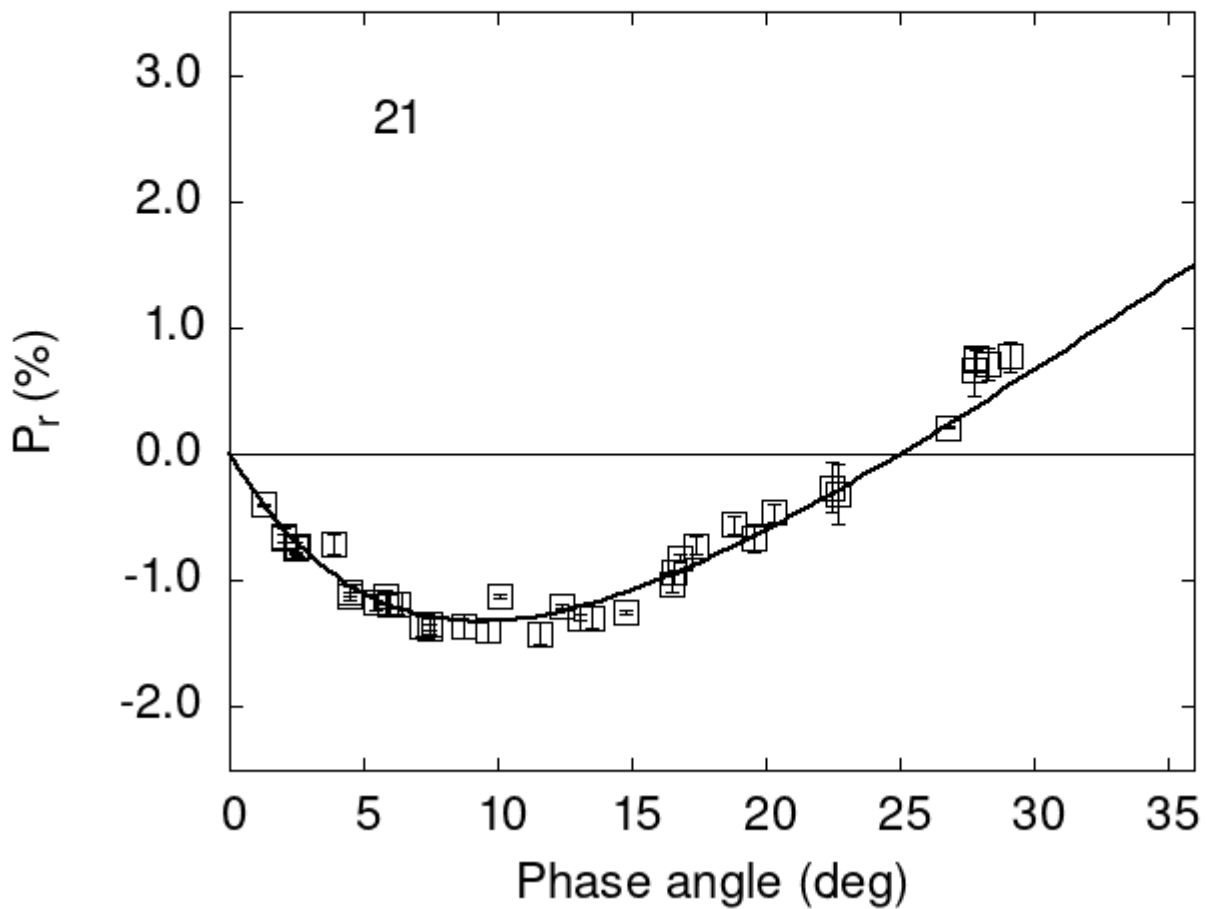# Catalogue of Asteroid Polarization Curves

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.

```
21   2.51 -0.73 0.08 V f
21   3.89 -0.71 0.08 V f
21   7.18 -1.36 0.08 V f
21   9.66 -1.39 0.09 V f
21  11.59 -1.42 0.09 V f
21  13.49 -1.29 0.09 V f
```

```
21 16.57 -0.93 0.09 V f
21 19.57 -0.67 0.11 V f
21 22.69 -0.31 0.24 G a
21 22.47 -0.26 0.20 G a
21  5.95 -1.19 0.08 G a
21 16.47 -1.02 0.07 G a
21 27.79  0.66 0.20 G a
21 28.32  0.71 0.13 G a
21 29.12  0.77 0.12 G a
21  7.50 -1.34 0.05 V a
21  7.50 -1.38 0.04 R a
21  1.30 -0.40 0.01 V a
21 26.80  0.21 0.01 V a
21 10.10 -1.12 0.02 V a
21  8.75 -1.36 0.09 V a
21  2.05 -0.64 0.06 V a
21  2.05 -0.66 0.03 R a
21  2.43 -0.72 0.07 V a
21  2.43 -0.74 0.04 R a
21 18.80 -0.56 0.07 V a
21 20.30 -0.46 0.07 V a
21  4.50 -1.09 0.04 V a
21  4.50 -1.12 0.03 R a
21 17.38 -0.72 0.07 V a
21 17.40 -0.72 0.07 V a
21 27.87  0.76 0.09 V a
21 27.87  0.74 0.08 R a
21 14.80 -1.25 0.02 V a
21 13.10 -1.29 0.02 V a
21  5.46 -1.17 0.06 R a
21  5.86 -1.13 0.05 R a
21  6.26 -1.18 0.09 R a
21 16.80 -0.82 0.03 V a
21 12.40 -1.20 0.02 V a
```

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
#    3.8091     0.1143    7.6280     0.2646    0.1464     0.0038
#
```

```
#     Phmin   err   Pmin    err  Ph0    err   k       err
#     9.36   0.31  -1.323  0.100 25.05  0.31 0.1276 0.0041
```