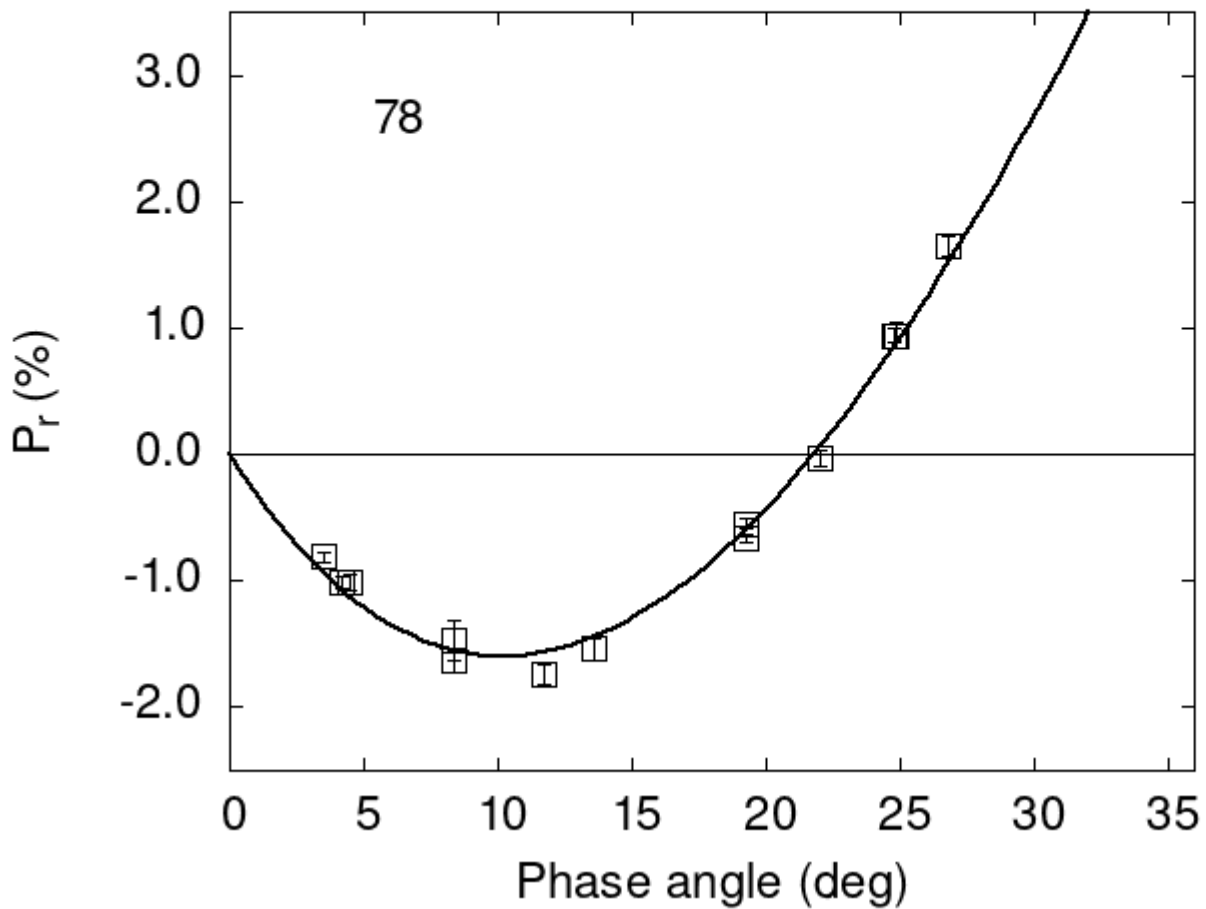# Catalogue of Asteroid Polarization Curves

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.

```
78 11.72 -1.74 0.08 V f
78 13.60 -1.54 0.09 V f
78 24.84  0.94 0.10 V f
78 26.85  1.65 0.08 V f
78  4.50 -1.01 0.06 V f
78  4.20 -1.01 0.05 V f
```

```
78   8.40 -1.47 0.16 V a
78   8.40 -1.63 0.09 R a
78  19.30 -0.66 0.03 V a
78  19.30 -0.55 0.04 V a
78  24.82  0.94 0.06 V a
78  22.00 -0.03 0.06 V a
78   3.50 -0.81 0.04 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
#    30.8875   0.8899   28.1565   0.5791    0.7634    0.0128
#
#     Phmin    err    Pmin     err   Ph0     err    k       err
#     10.21   1.01  -1.600   0.341 21.82   0.16 0.2579 0.0196
```