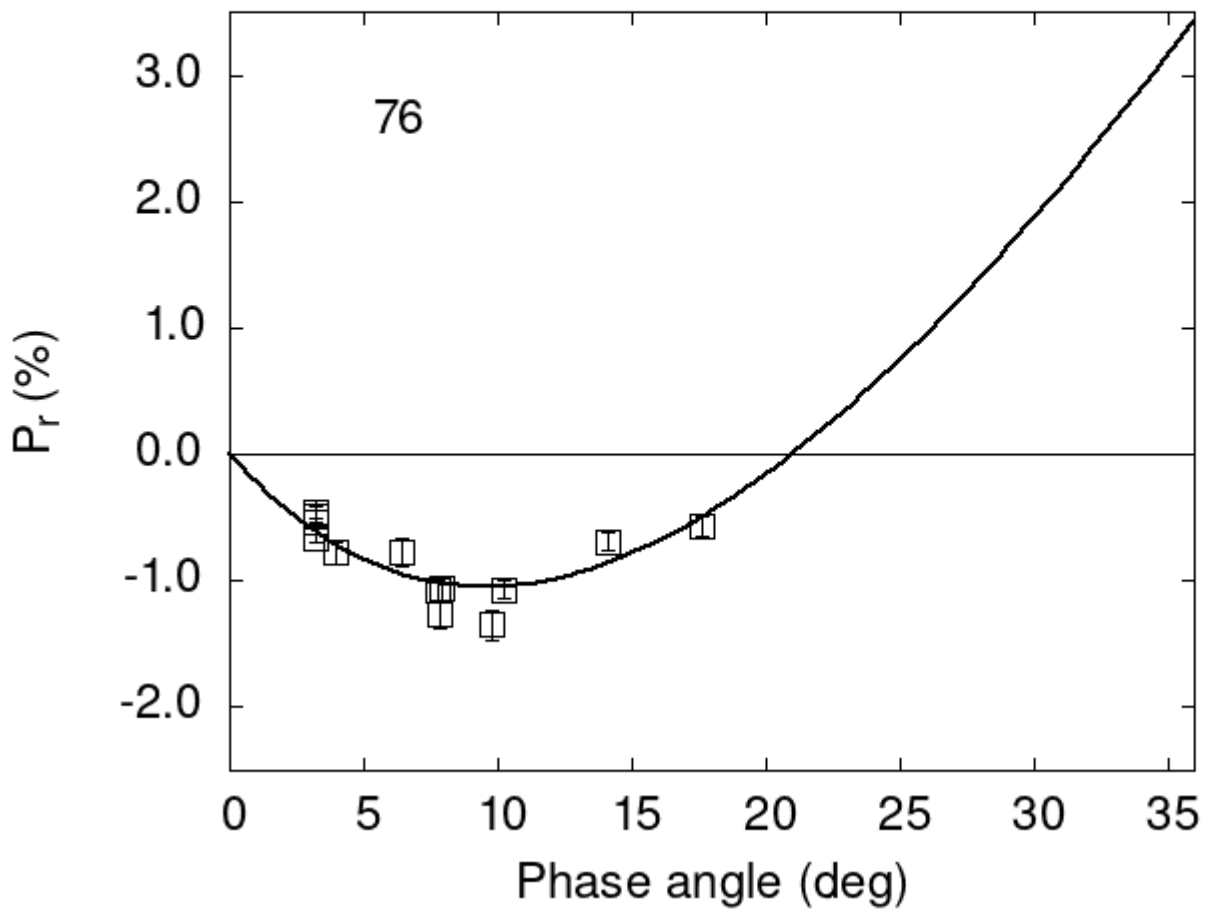# Catalogue of Asteroid Polarization Curves

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.

```
76  3.23 -0.45 0.08 V f
76  3.23 -0.49 0.08 R f
76  3.98 -0.78 0.09 V f
76  7.78 -1.07 0.08 V f
76  7.82 -1.27 0.11 V f
76 17.61 -0.57 0.08 V f
```

```
76  6.40 -0.78 0.11 V a
76  9.80 -1.35 0.12 V a
76 14.10 -0.69 0.07 V a
76  7.90 -1.06 0.09 V a
76  3.23 -0.54 0.04 V a
76  3.23 -0.66 0.03 R a
76 10.20 -1.07 0.07 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
#   11.5494   0.4122  19.0287   0.6127   0.3674   0.0124
#
#    Phmin   err   Pmin     err  Ph0     err    k       err
#     9.55  0.98 -1.049   0.231 21.02  0.24 0.1663 0.0144
```