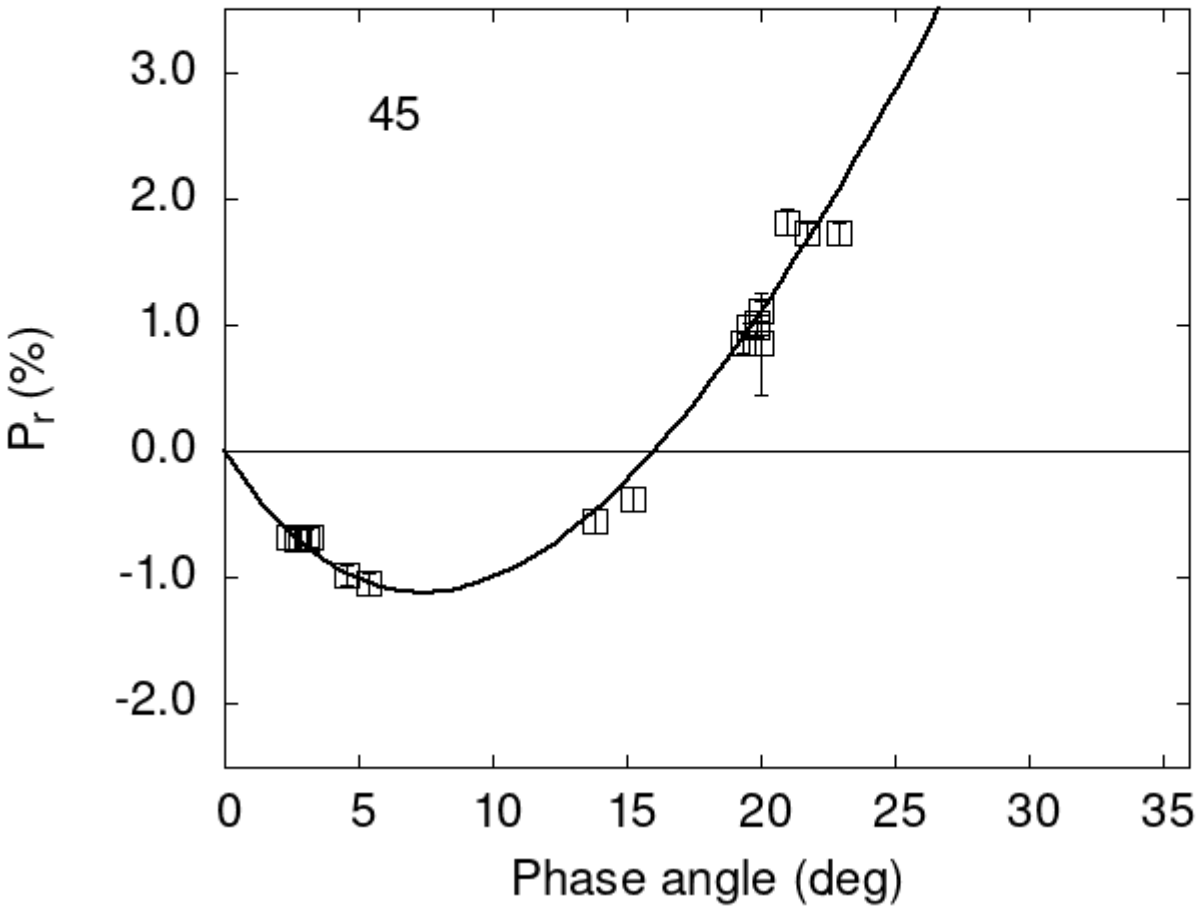
Catalogue of Asteroid Polarization Curves

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.

```
45  2.36 -0.68 0.09 V f
45  2.70 -0.70 0.08 V f
45  3.05 -0.70 0.08 V f
45  3.18 -0.68 0.08 V f
45  4.58 -0.98 0.08 V f
45  5.41 -1.05 0.09 V f
```

```
45 13.84 -0.55 0.09 V f
45 19.38  0.86 0.08 V f
45 19.54  0.99 0.09 V f
45 19.84  0.99 0.08 V f
45 20.01  0.85 0.40 V f
45 20.05  1.11 0.08 V f
45 21.70  1.72 0.09 V f
45 19.84  1.01 0.10 V a
45 19.54  0.98 0.03 V a
45 15.20 -0.38 0.09 V a
45 21.00  1.81 0.10 V a
45 22.90  1.72 0.09 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
#   15.3392   0.5998  16.7623   0.5397   0.5890   0.0151
#
#     Phmin   err   Pmin    err  Ph0    err    k      err
#      7.39  0.84 -1.116  0.279 16.04  0.17 0.2376 0.0204
```