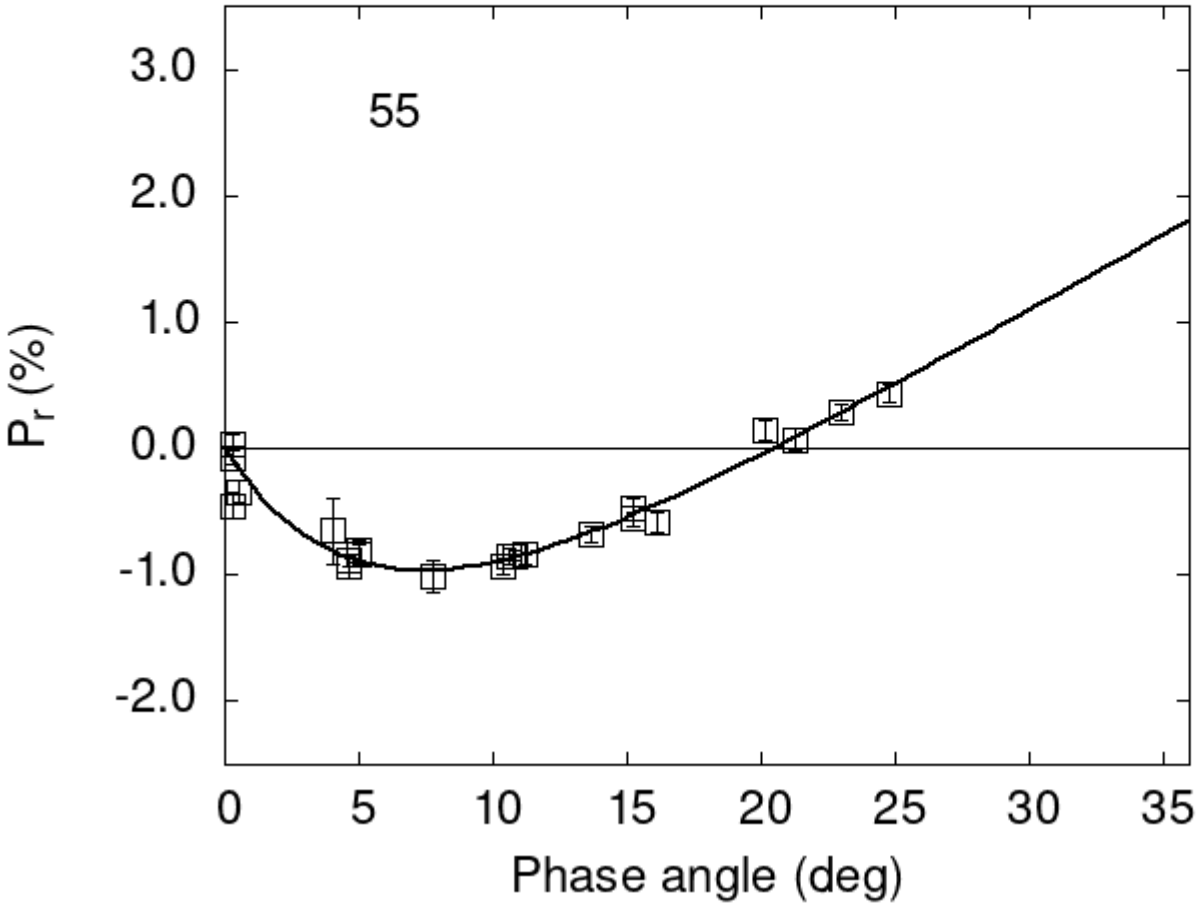
Catalogue of Asteroid Polarization Curves

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.

```
55 11.20 -0.83 0.09 V f
55 16.12 -0.59 0.08 V f
55 20.18  0.14 0.08 V f
55 21.30  0.07 0.09 V f
55  7.80 -1.01 0.13 V a
55 15.20 -0.48 0.09 V a
```

```
55 15.20 -0.56 0.06 R a
55  5.00 -0.80 0.08 V a
55  5.00 -0.84 0.08 R a
55  4.00 -0.65 0.26 V a
55  0.30  0.03 0.09 V a
55  0.30 -0.07 0.06 R a
55  0.30 -0.45 0.10 V a
55  0.50 -0.34 0.09 V a
55  4.60 -0.94 0.09 V a
55  4.60 -0.88 0.05 R a
55 10.40 -0.93 0.06 V a
55 10.60 -0.85 0.06 V a
55 10.80 -0.85 0.04 V a
55 13.70 -0.68 0.06 V a
55 24.80  0.43 0.07 V a
55 23.00  0.29 0.06 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
#    2.5193   0.2318   5.5570   0.6595   0.1198   0.0098
#
#     Phmin   err   Pmin    err  Ph0    err    k      err
#      7.39  0.72 -0.967  0.213 20.49  0.37 0.1085 0.0105
```