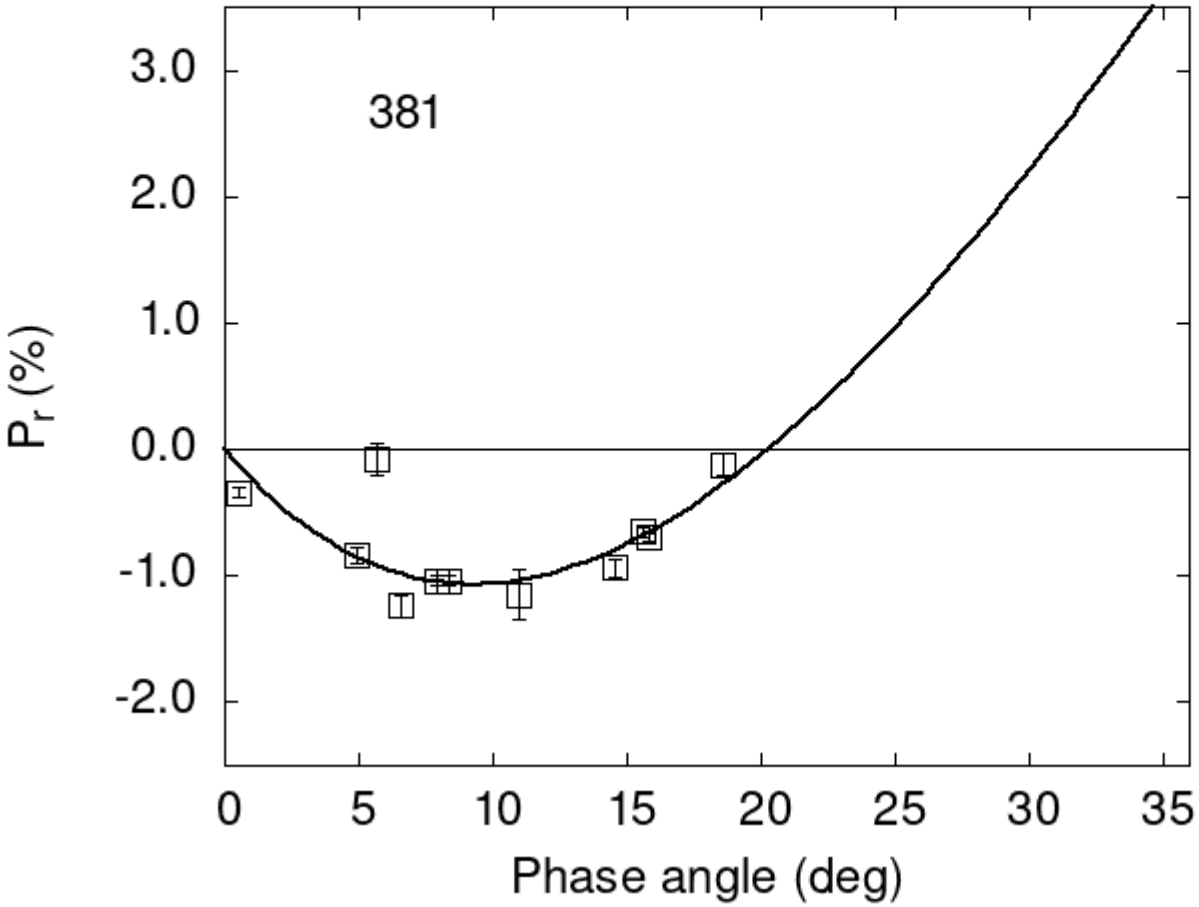
Catalogue of Asteroid Polarization Curves

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.

```
381  6.54 -1.24 0.09 V f
381 18.58 -0.12 0.09 V f
381  5.70 -0.08 0.13 V f
381  0.50 -0.34 0.04 V a
381  8.40 -1.04 0.04 V a
381  7.90 -1.04 0.04 V a
```

```
381 15.60 -0.65 0.04 V a
381 15.80 -0.70 0.03 V a
381 11.00 -1.15 0.20 V a
381  4.90 -0.84 0.06 V a
381 14.60 -0.94 0.07 V h
```

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
#   12.5942   0.4609  19.2155   0.6884   0.4047   0.0116
#
#     Phmin   err   Pmin    err  Ph0    err    k      err
#      9.27  0.96 -1.069  0.246 20.30  0.23 0.1768 0.0143
```