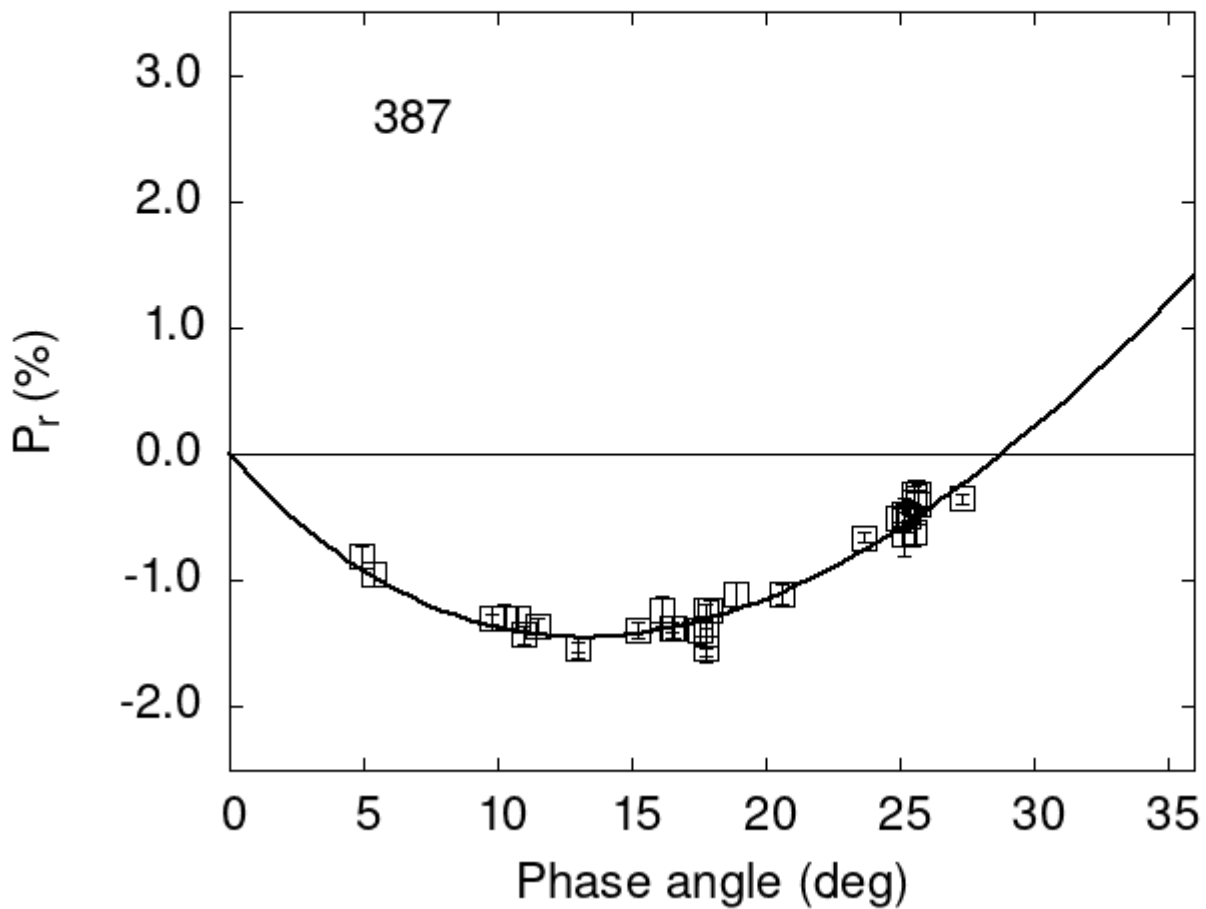# Catalogue of Asteroid Polarization Curves

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.

```
387   4.96 -0.81 0.09 V f
387   5.36 -0.95 0.09 V f
387 10.75 -1.30 0.10 V f
387 12.97 -1.53 0.09 V f
387 16.15 -1.24 0.12 V f
387 16.47 -1.37 0.09 V f
```

```
387 16.61 -1.37 0.09 V f
387 17.58 -1.39 0.11 V f
387 17.74 -1.43 0.10 V f
387 17.80 -1.54 0.10 V f
387 17.89 -1.24 0.09 V f
387 18.92 -1.11 0.10 V f
387 20.59 -1.11 0.08 V f
387 24.98 -0.51 0.08 V f
387 25.16 -0.48 0.13 V f
387 25.16 -0.63 0.18 R f
387 25.31 -0.49 0.12 V f
387 25.52 -0.62 0.10 V f
387 25.56 -0.38 0.13 V f
387 25.56 -0.32 0.11 R f
387 25.68 -0.40 0.16 V f
387 25.68 -0.32 0.11 R f
387  9.80 -1.30 0.04 V f
387 10.20 -1.29 0.10 V f
387 11.50 -1.36 0.07 V a
387 15.20 -1.39 0.06 V a
387 11.00 -1.43 0.07 V a
387 23.70 -0.66 0.04 V a
387 27.30 -0.35 0.04 V a
387 16.47 -1.37 0.04 V a
387 12.97 -1.53 0.04 V a
387 17.74 -1.43 0.06 V a
387 17.80 -1.54 0.06 V a
387 17.76 -1.24 0.05 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
#   18.2945   0.5639   28.5611   0.6380   0.4032   0.0086
#
#    Phmin    err    Pmin     err   Ph0     err    k       err
#    13.22   1.13   -1.448   0.266  28.84   0.24  0.1699  0.0112
```