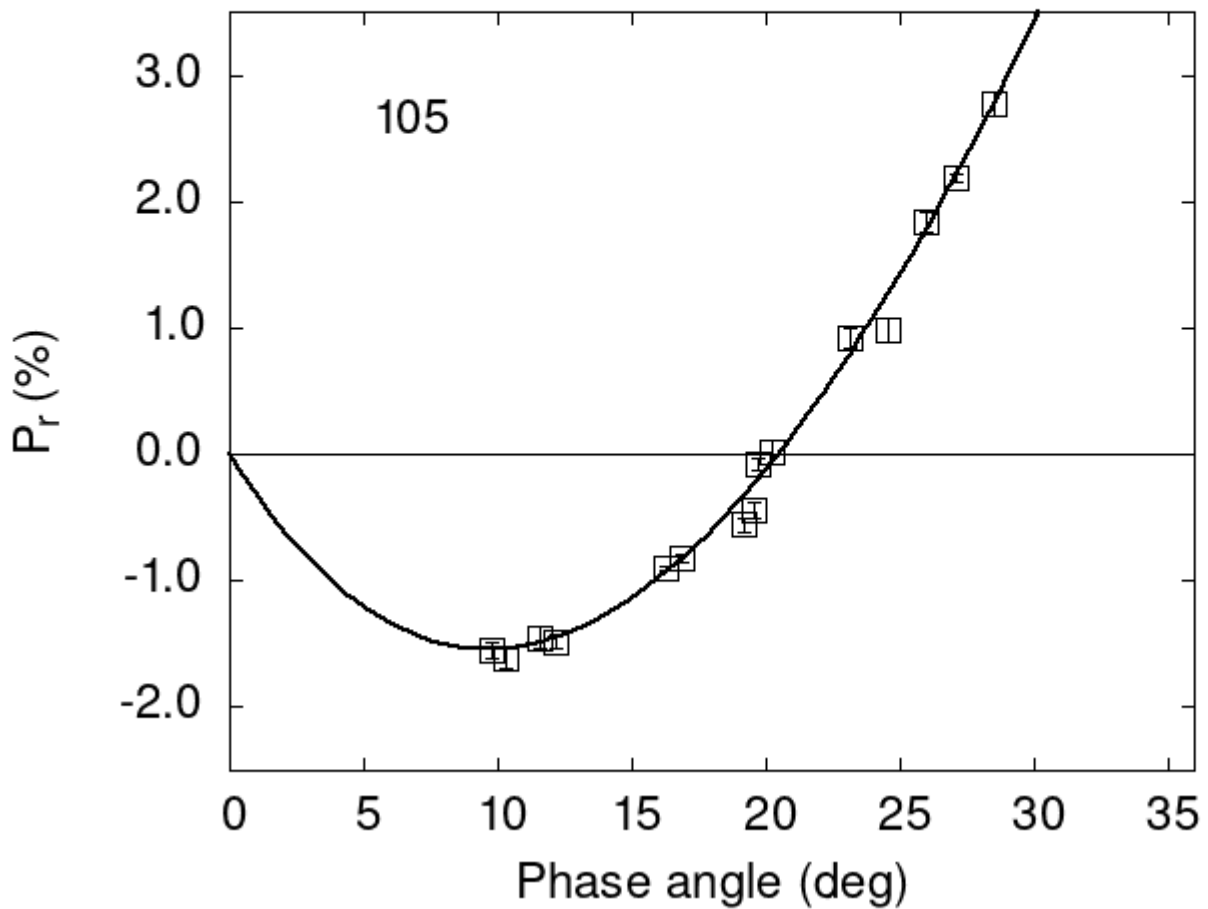# Catalogue of Asteroid Polarization Curves

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.

```
105 10.34 -1.61 0.09 V f
105 11.57 -1.45 0.09 V f
105 20.27  0.02 0.10 V f
105 23.19  0.92 0.08 V f
105 25.99  1.84 0.08 V f
105 28.51  2.77 0.10 V f
```

```
105 29.95   3.51 0.10 V f
105 19.20  -0.56 0.05 V a
105 19.60  -0.44 0.06 V a
105 19.70  -0.08 0.05 V a
105 27.10   2.19 0.03 V a
105 16.90  -0.82 0.03 V a
105 16.30  -0.90 0.02 V a
105 12.20  -1.48 0.06 V a
105 24.60   0.98 0.10 V h
105  9.80  -1.55 0.06 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
#   36.5163    0.4663   29.8981   0.2874    0.8841    0.0072
#
#    Phmin   err    Pmin     err  Ph0     err    k       err
#     9.66  0.49  -1.542   0.168 20.47   0.15 0.2683  0.0108
```