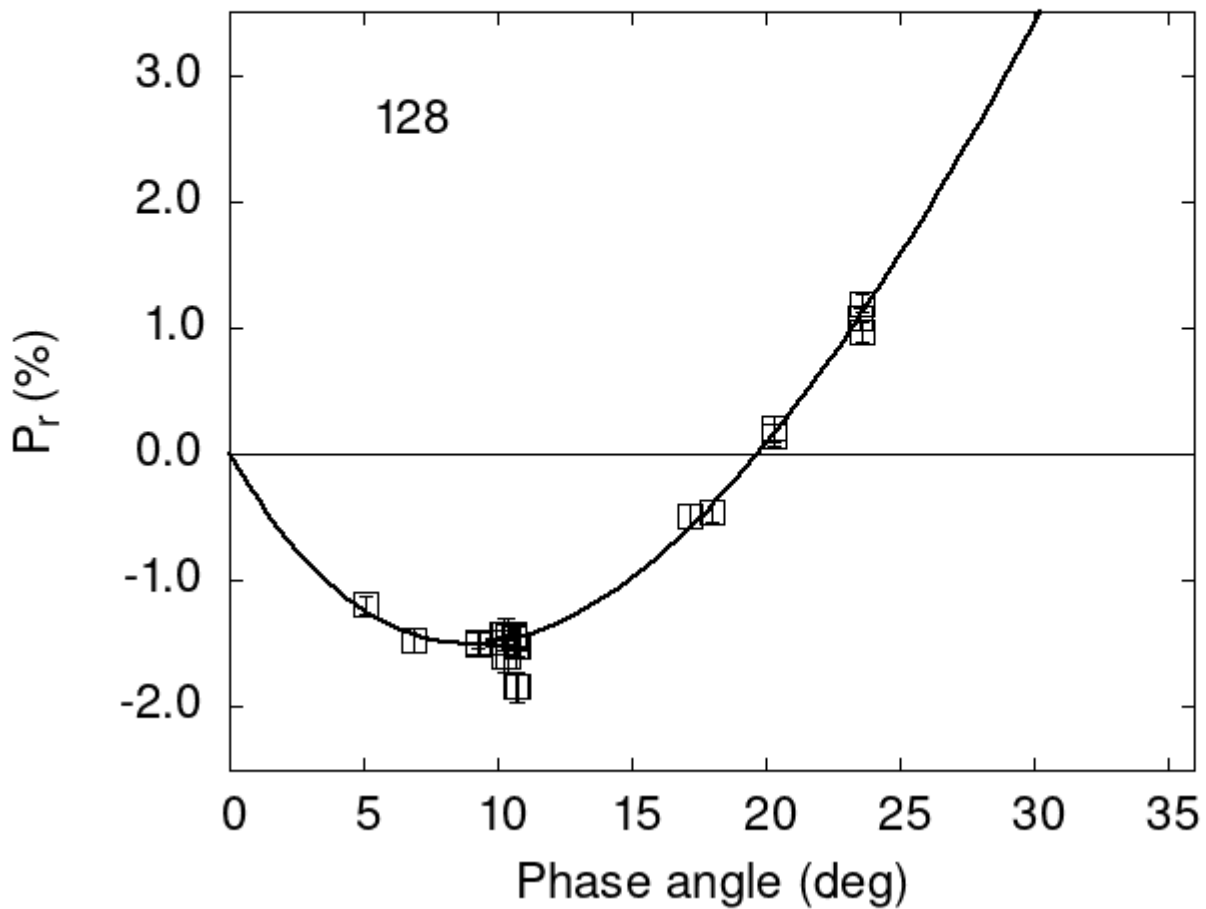# Catalogue of Asteroid Polarization Curves

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.

```
128   6.90 -1.47 0.10 V f
128   9.27 -1.49 0.09 R f
128  17.21 -0.49 0.09 V f
128  18.01 -0.45 0.08 V f
128  10.19 -1.48 0.04 V f
128  10.19 -1.42 0.08 R f
```

```
128 10.38 -1.60 0.13 V f
128 10.38 -1.42 0.13 R f
128 10.61 -1.46 0.07 V f
128 10.61 -1.44 0.03 R f
128 10.72 -1.84 0.12 V f
128 10.72 -1.52 0.08 R f
128 20.33  0.15 0.09 V f
128 20.33  0.20 0.10 R f
128  9.77 -1.48 0.03 V f
128  9.77 -1.49 0.03 R f
128 23.50  1.07 0.08 V a
128 23.60  1.19 0.07 V a
128 23.60  0.97 0.08 V a
128  9.27 -1.51 0.02 R a
128 10.67 -1.84 0.12 V b
128 10.67 -1.52 0.08 R b
128 10.26 -1.60 0.13 V b
128 10.26 -1.42 0.13 R b
128  9.77 -1.48 0.03 V b
128  9.77 -1.49 0.03 R b
128 10.19 -1.48 0.04 V b
128 10.19 -1.42 0.08 R b
128 10.61 -1.46 0.08 V b
128 10.61 -1.43 0.03 R b
128 20.33  0.15 0.09 V b
128 20.33  0.20 0.10 R b
128  5.10 -1.19 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
#   16.9267    0.4381   18.1433   0.3743    0.5689    0.0088
#
#    Phmin    err    Pmin     err  Ph0     err    k       err
#     8.97   0.58  -1.499   0.216 19.71   0.16 0.2541  0.0120
```