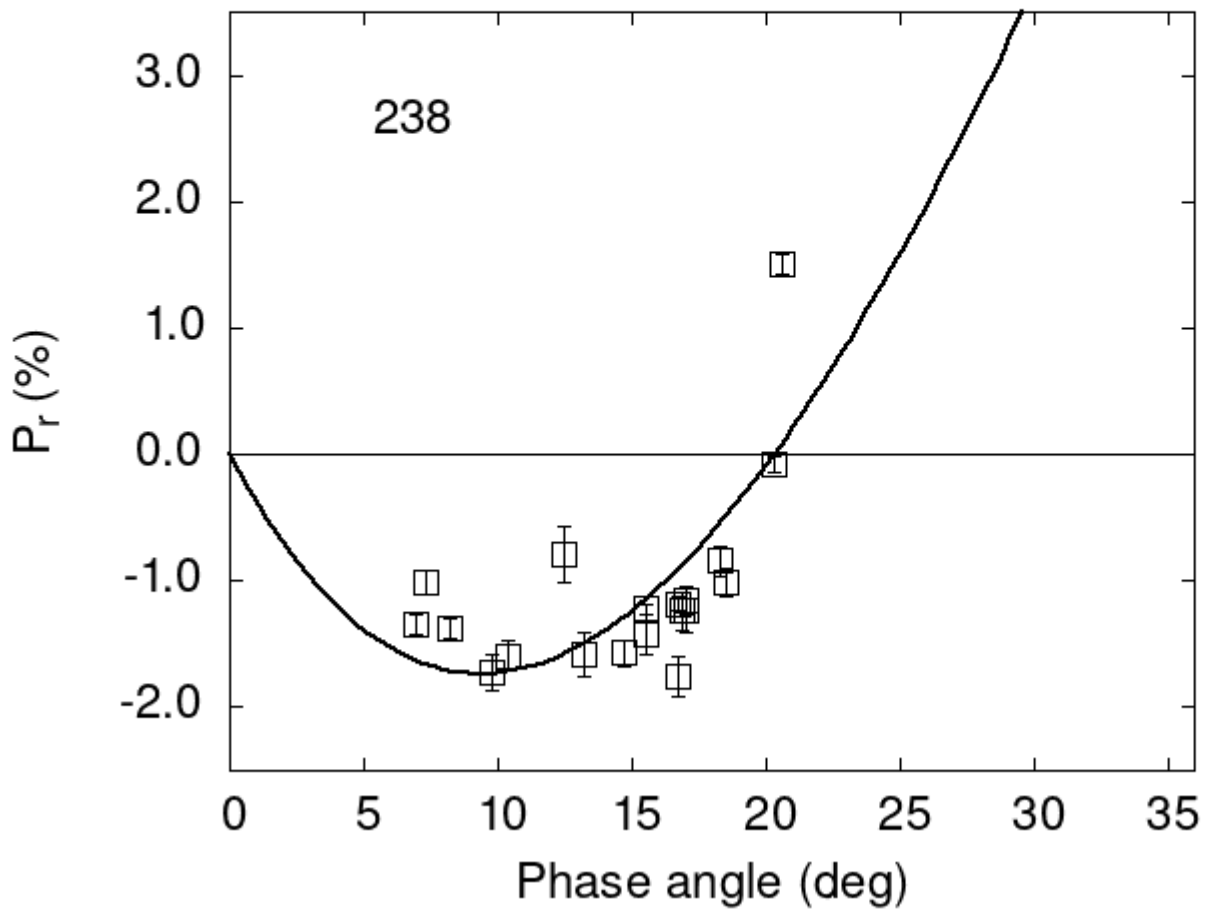# Catalogue of Asteroid Polarization Curves

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.

```
238  6.91 -1.34 0.08 V f
238  8.19 -1.38 0.08 V f
238 10.41 -1.59 0.12 V f
238 12.45 -0.79 0.22 V f
238 14.72 -1.57 0.10 V f
238 14.72 -1.57 0.10 V f
```

```
238 15.53 -1.42 0.16 V f
238 16.75 -1.75 0.16 V f
238 16.91 -1.24 0.15 V f
238 17.04 -1.15 0.11 V f
238 18.31 -0.84 0.12 V f
238 17.00 -1.23 0.17 V f
238 16.70 -1.18 0.05 V f
238 20.60  1.50 0.08 V a
238 15.50 -1.22 0.04 V a
238 13.20 -1.58 0.18 V a
238  7.30 -1.01 0.10 V a
238 20.30 -0.08 0.06 V a
238  9.80 -1.72 0.14 V a
238 18.50 -1.01 0.11 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
#    25.1555   0.8247   21.9841   0.5559    0.7464    0.0186
#
#     Phmin    err    Pmin     err   Ph0    err     k        err
#      9.39   0.96  -1.736   0.380  20.33  0.14  0.2926  0.0239
```