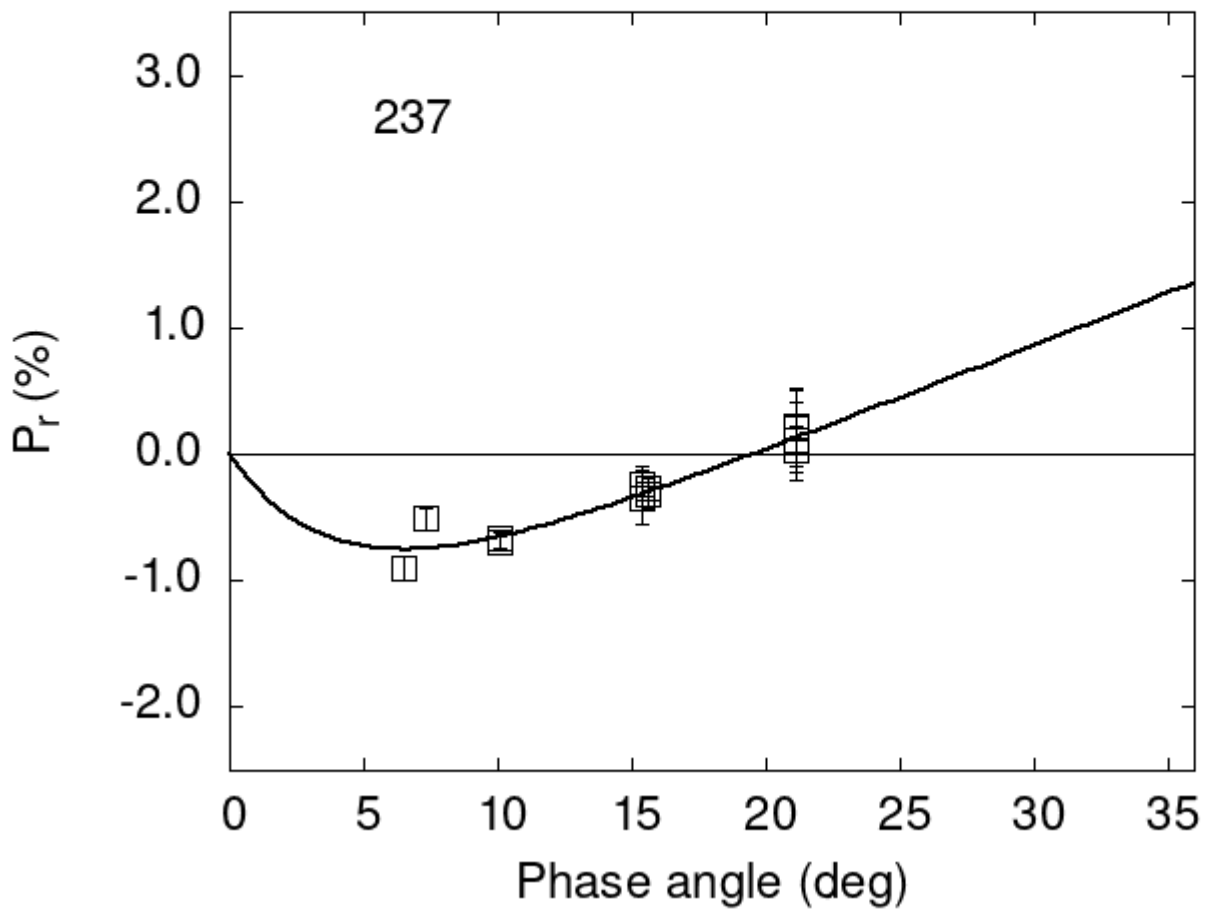# Catalogue of Asteroid Polarization Curves

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.

```
237   6.47 -0.90 0.10 V f
237 10.12 -0.67 0.07 V f
237 10.12 -0.69 0.07 R f
237 15.41 -0.34 0.22 V f
237 15.41 -0.23 0.13 R f
237 15.64 -0.31 0.12 V f
```

```
237 15.64 -0.27 0.10 R f
237 21.12  0.21 0.30 V f
237 21.12  0.04 0.18 R f
237 21.14  0.11 0.31 V f
237 21.14  0.12 0.18 R f
237  7.30 -0.51 0.09 V a
237 15.41 -0.34 0.22 V b
237 15.41 -0.23 0.13 R b
237 15.64 -0.31 0.12 V b
237 15.64 -0.27 0.10 R b
237 21.12  0.22 0.31 V b
237 21.12  0.04 0.18 R b
237 21.14  0.11 0.31 V b
237 21.14  0.12 0.18 R b
237 10.12 -0.67 0.07 V b
237 10.12 -0.69 0.07 R b
```

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
#    1.6389    0.2964    4.1925    1.2066    0.0831    0.0151
#
#     Phmin    err    Pmin     err   Ph0     err    k       err
#      6.49   1.26  -0.751   0.297 19.52   0.50 0.0794 0.0156
```