

```

DataSet2[K_] := DataSet2[K] = (
  b = BR[K];
  Print[(ds = {
    Knot → K,
    BraidIndex → First[b],
    H1 → Homf[b],
    H2 → Homf[db = Double[b]],
    H2t → Homf[db /. {xs__} => {xs, 1}],
    Y2 → FastY2[b]
  }) /. t[i_] => ti];
  ds
)

Ks = Select[AllKnots[{3, 11}], (BraidIndex[#] == 2) &]
{Knot[3, 1], Knot[5, 1], Knot[7, 1], Knot[9, 1], Knot[11, Alternating, 367]}

(Flatten[{H1, H2, H2t, Y2} /. (DataSet2[#])] & /@ Ks) /.
{z → Random[], v → Random[], t[1] → Random[], t[2] → Random[]}

{{-0.985845, 12.1711, 14.4703, -3.22236, 10.359},
{-2.58083, 117.914, 137.845, -31.7768, 97.6447},
{-4.48058, 624.173, 734.675, -167.018, 522.664},
{-6.9094, 2780.23, 3285.89, -740.739, 2343.66},
{18.4955, 12643.4, -9434.23, -9177.31, -17566.5}}

MatrixRank[%]

```