Short Status Update:
High Degree Mode Fitting
MDI, GONG & HMI mode Fitting
During Cycle 23

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• Paper almost finished

• Fitted all \((n, \ell, m)\) ridges for \(\ell \leq 1000\)

• In excess of \(6 \times 10^6\) mutiplets, or 5,795 singlets \((n, \ell)\)

• Use our ridge modelling to correct ridge to mode \((\nu, \Gamma, A, \alpha)\)
• Iterated on model input parameters, when possible, to best match observations.
• Perturbed model input parameters to derive precision of correction
• MDI poorly known PSF remains the problem
• Expect tables $(\nu, \Gamma, A, \alpha)$ available w/in 3 months
• Next: *if/when funded*, use HMI to determing MDI’s PSF and improve HiL results
singlets: comparison of frequencies estimated from ridges vs resolved
• rotational splittings: comparison of CG coefs estimated from ridges vs resolved (black: uncorrected ridges CGs)
Status Update

LoHCo@Stanford – August 2011
MDI, GONG & HMI mode Fitting

- Fitted $64 \times 72$ day epoch covering Cycle 23
- one $64 \times 72d$, three $32 \times 72d$, seven $16 \times 72d$, . . . , down to $64 \ 1 \times 72d$ epochs.
- Low attrition rate.
- MDI & GONG have been fitted, using JS leakage matrices
- Have my own leakage matrix calculation (will be compared to TPL’s)
  work in progress
- Can compare both data set, fitted using same epochs and same fitting method
  (but different leakage matrix)
- Plenty of rotation rate inversions. . .
- Next: will soon start fitting HMI data (funded)
• dash line at GONG classic to GONG+ transition
MDI vs GONG 1e \((1 \times 72\text{d})\)

- barely visible when using 72-day long time series
The End!

That's all Folks!