


Magnetic Fields and Activity in Fully Convective Stars

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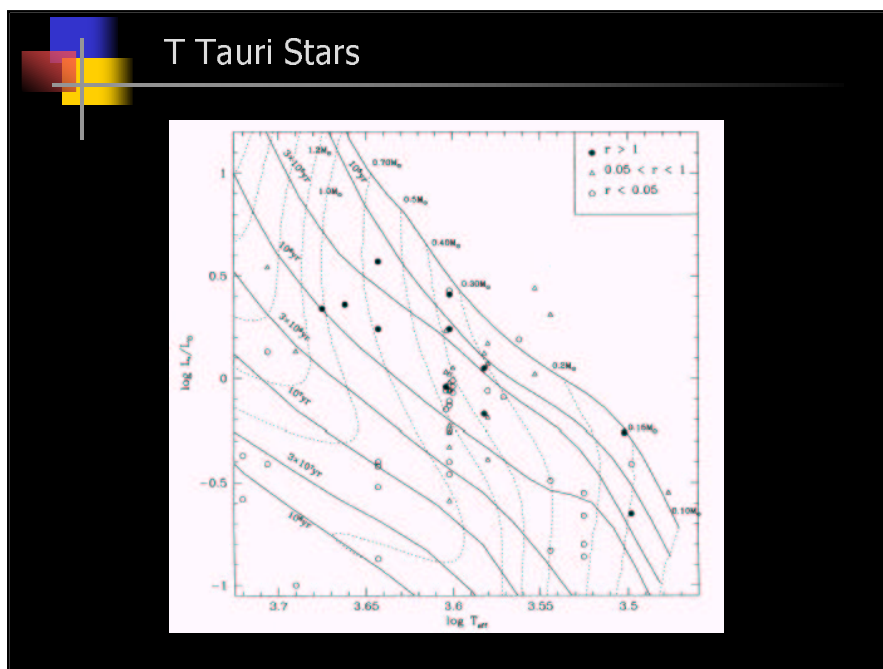
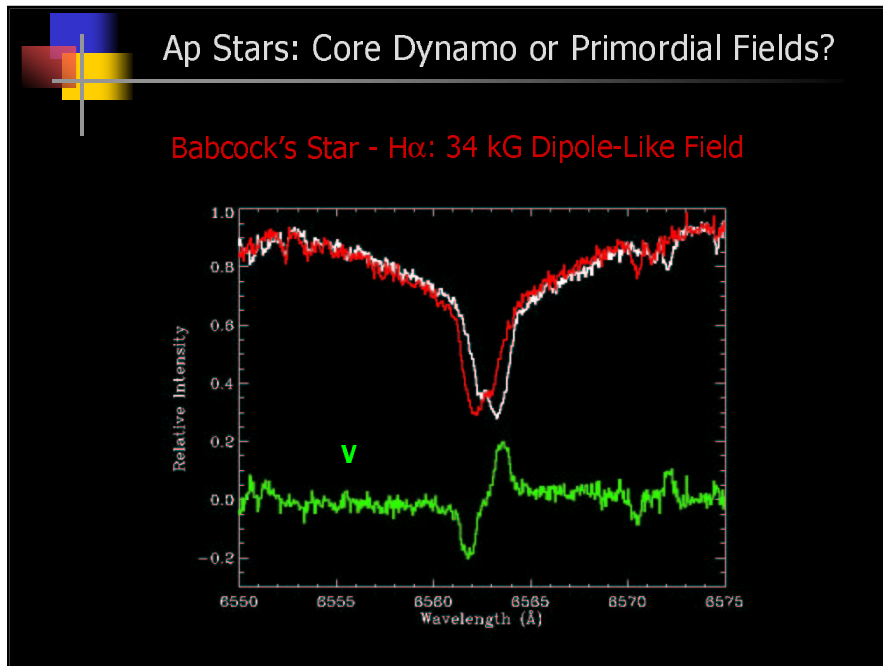
March 7, 2002



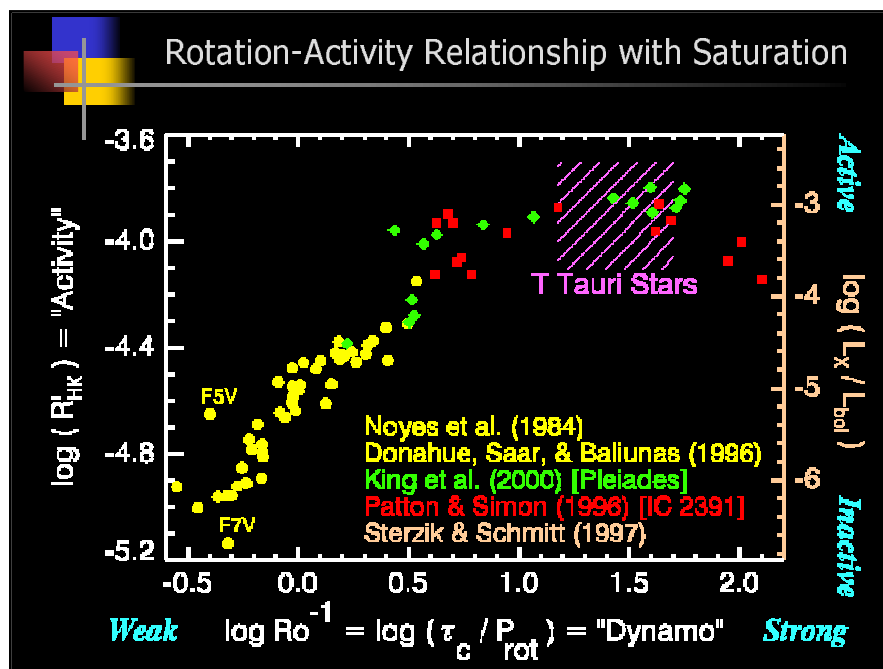
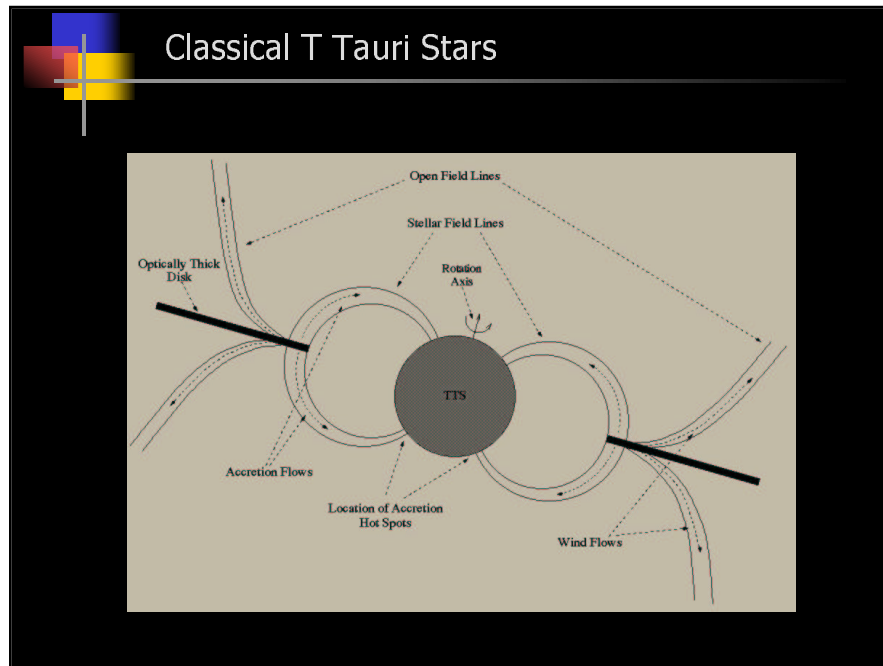
Outline

- Introduce the Players
- Some Thoughts on Rotation-Activity Relations
- Some Doppler Imaging Results
- Comments on Differential Rotation
- Measuring Magnetic Fields
- Results for M Dwarfs
- Results for T Tauri Stars
- FeH and Brown Dwarfs
- Some Concluding Thoughts

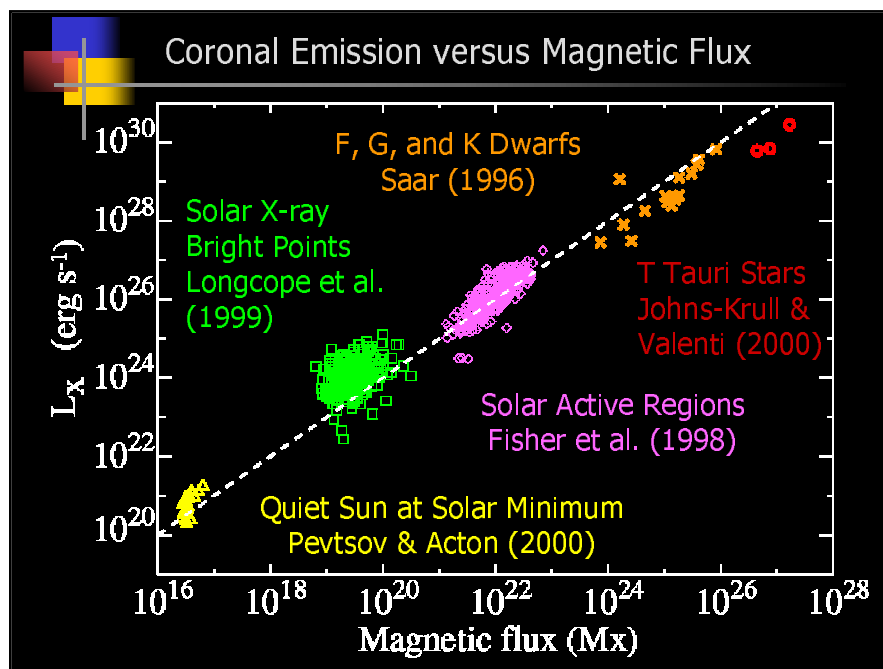
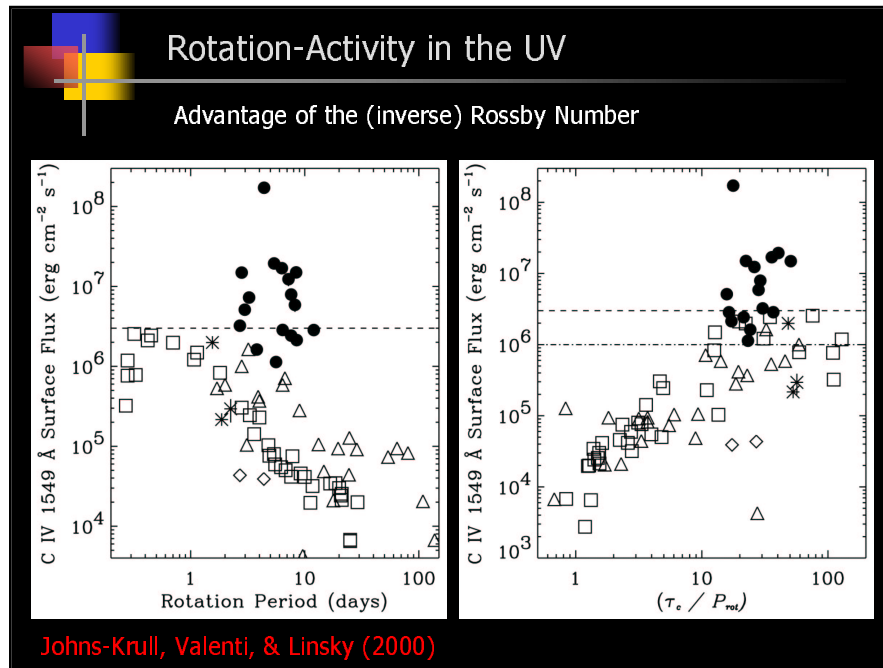
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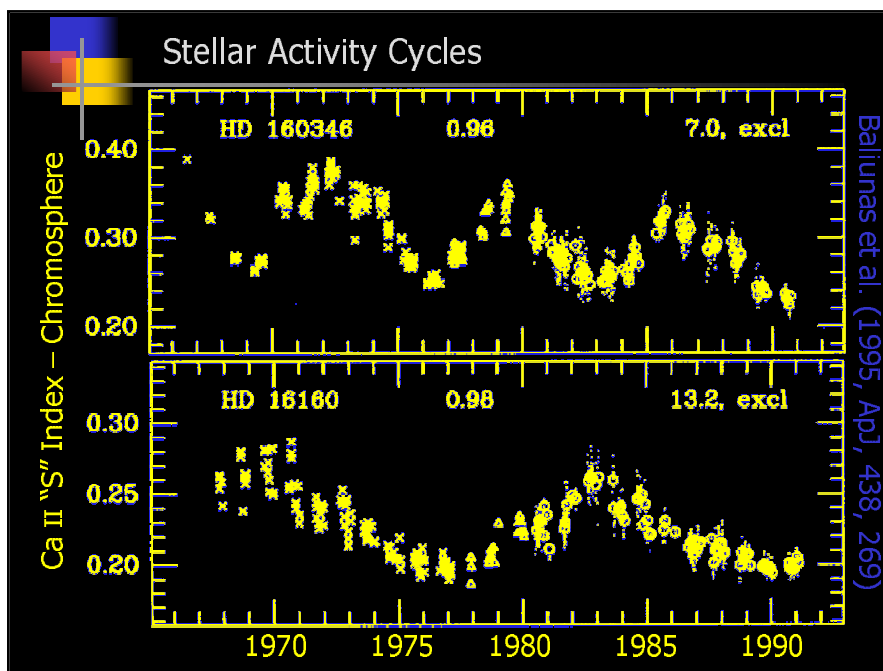
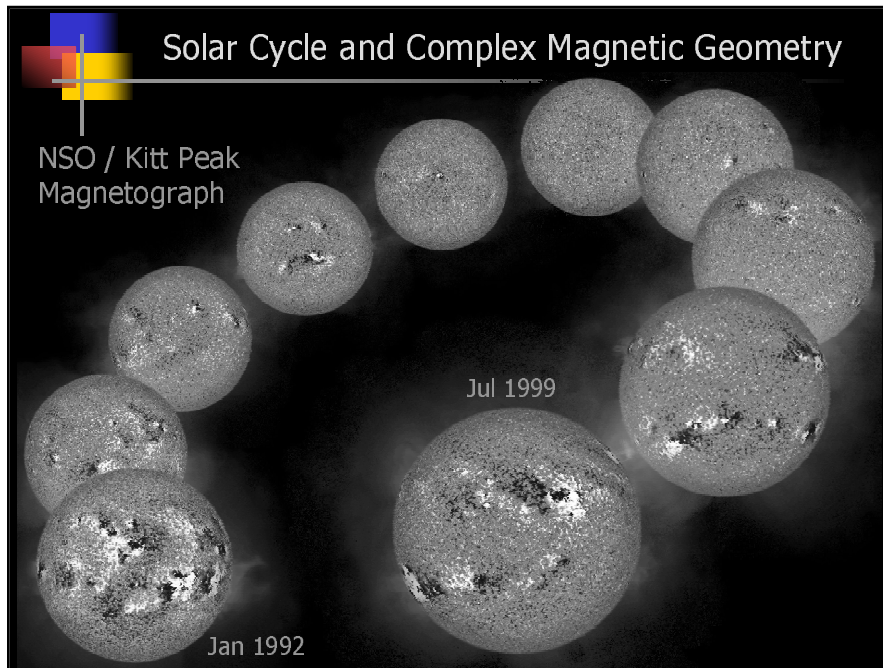
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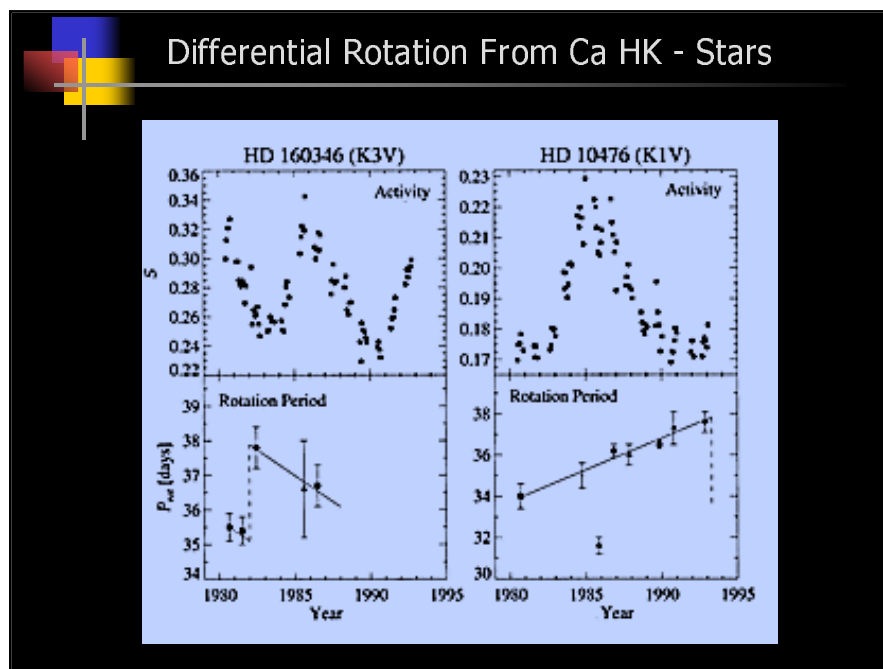
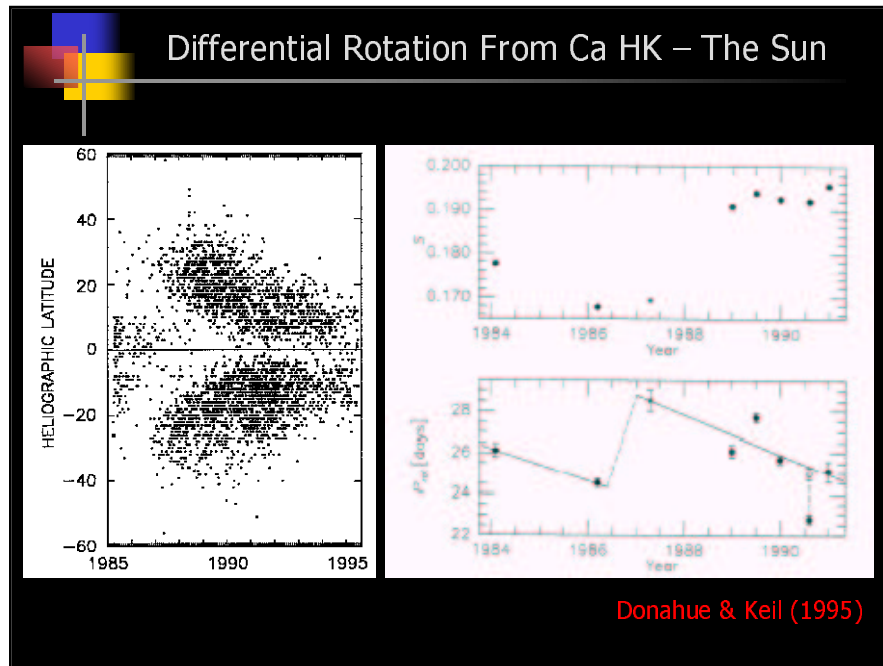
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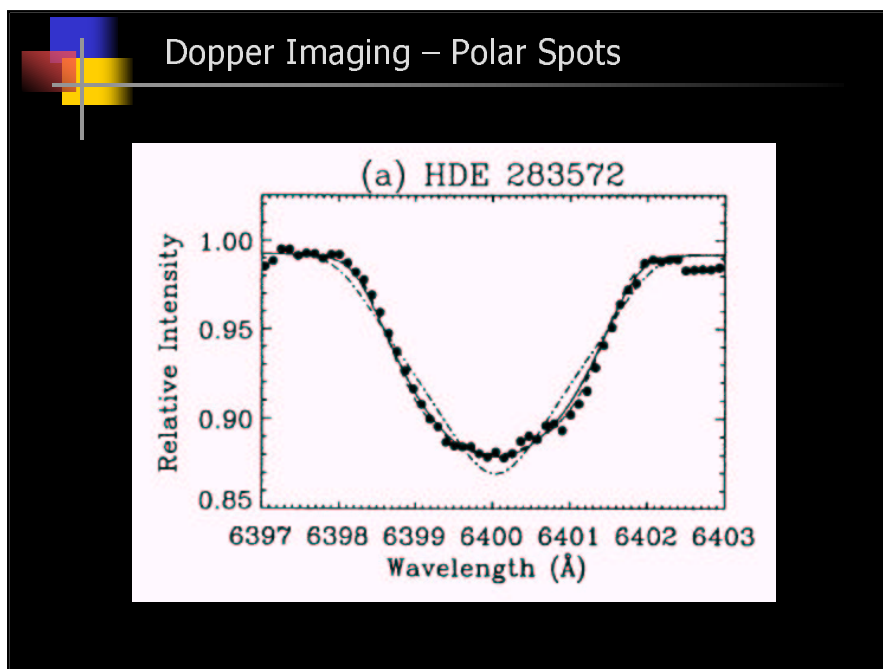
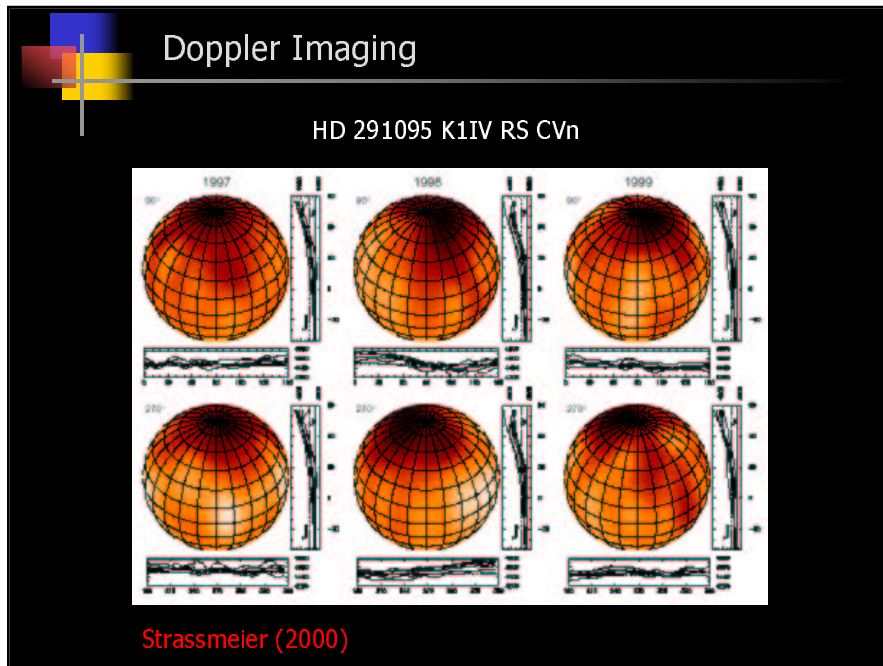
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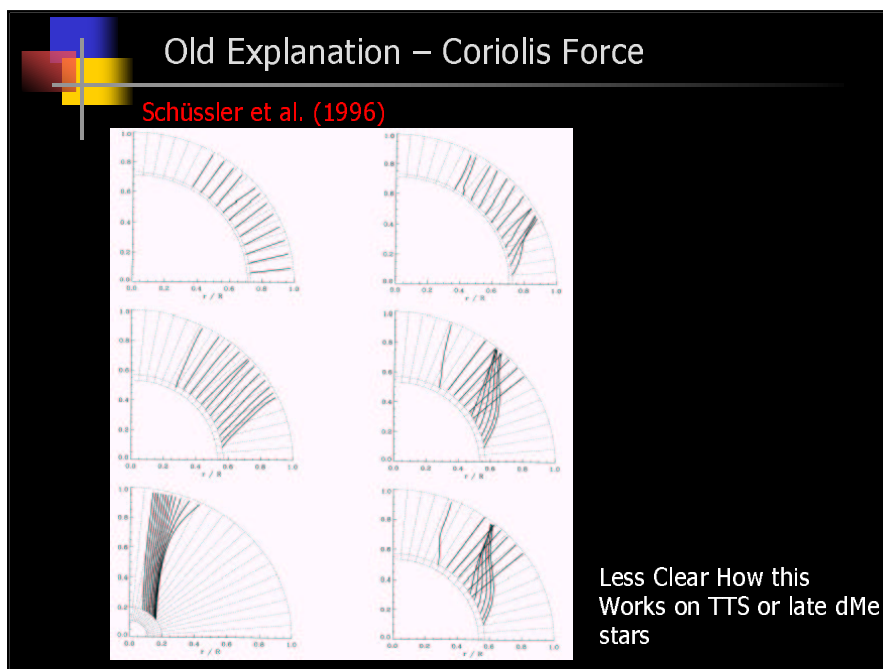
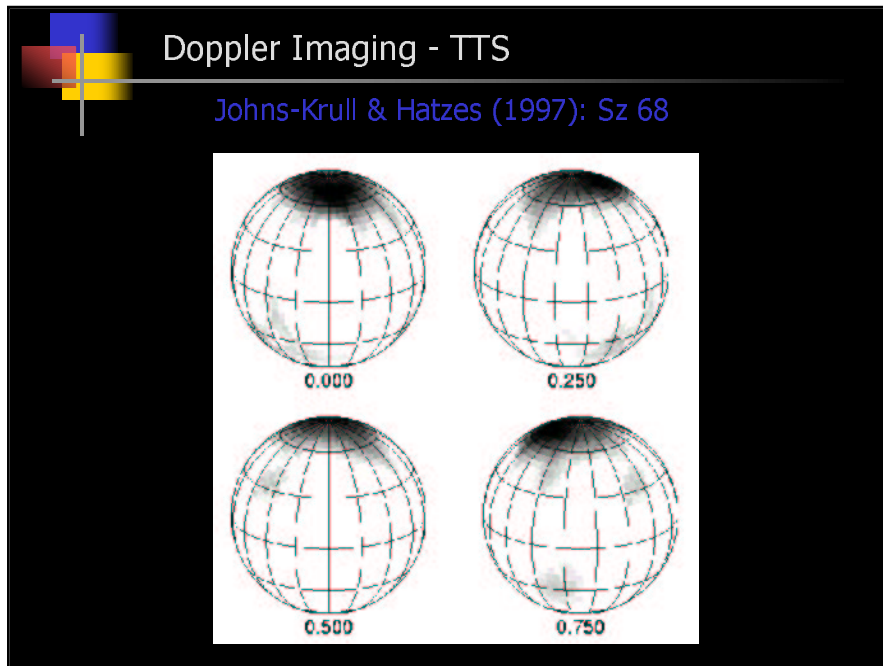
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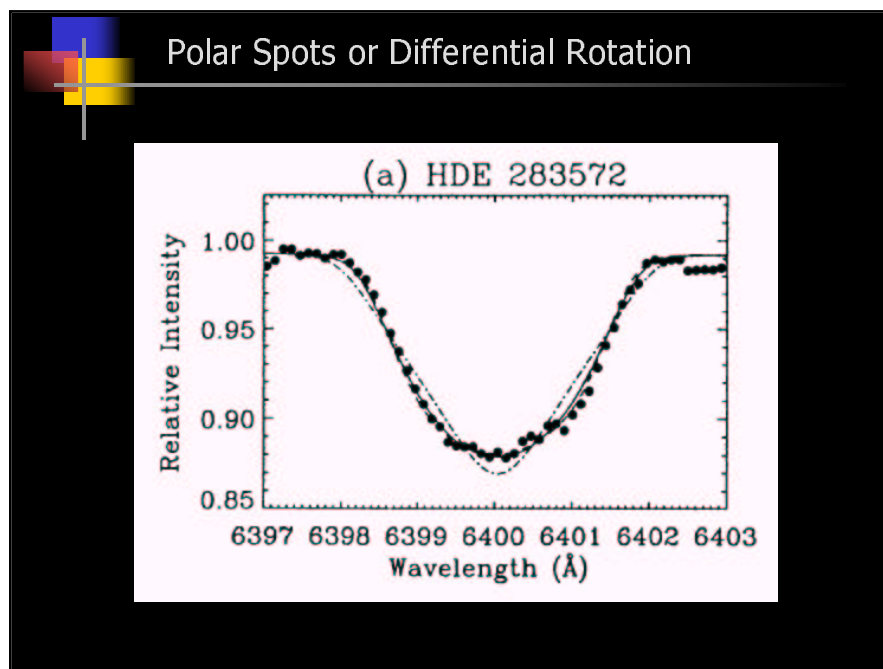
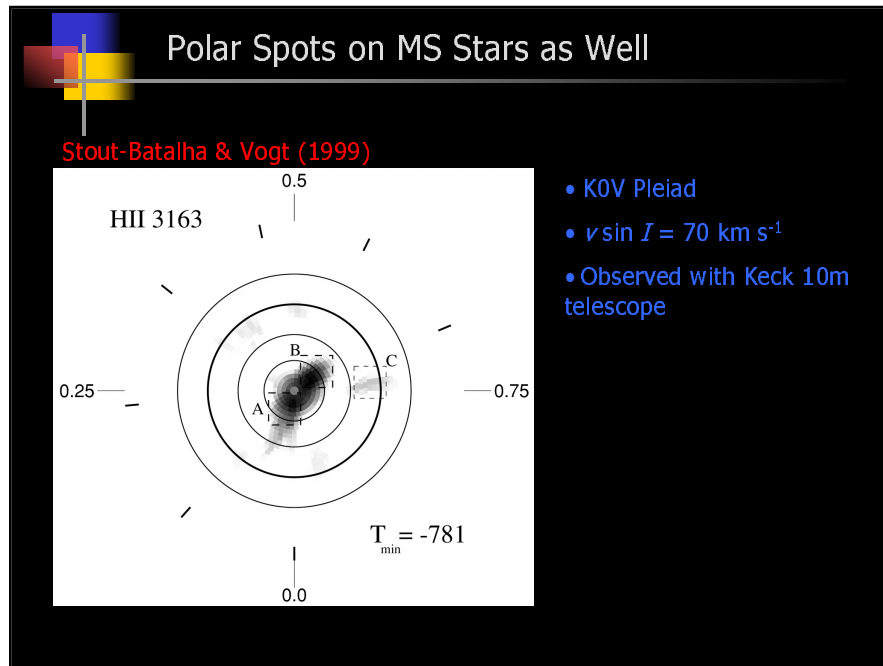
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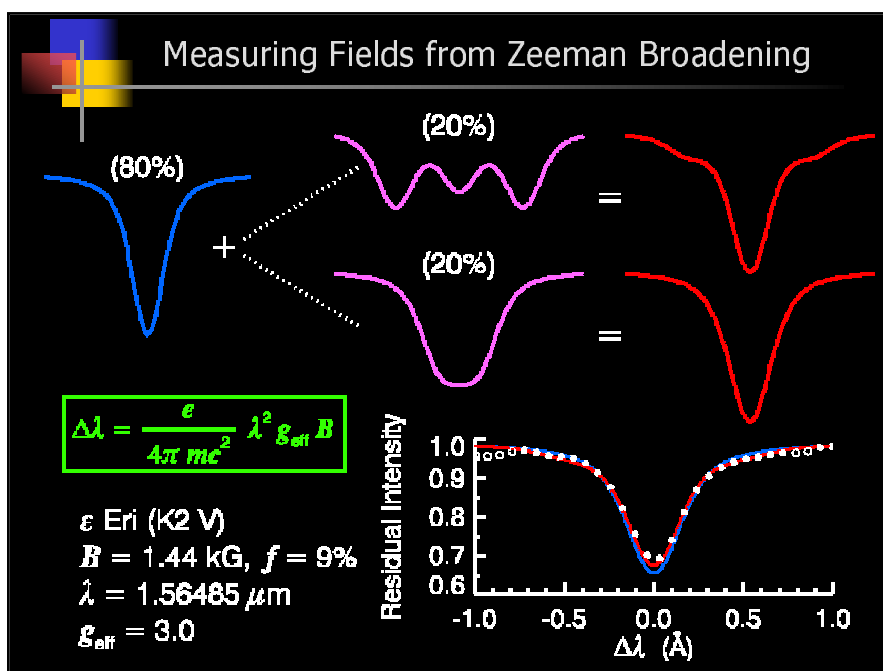
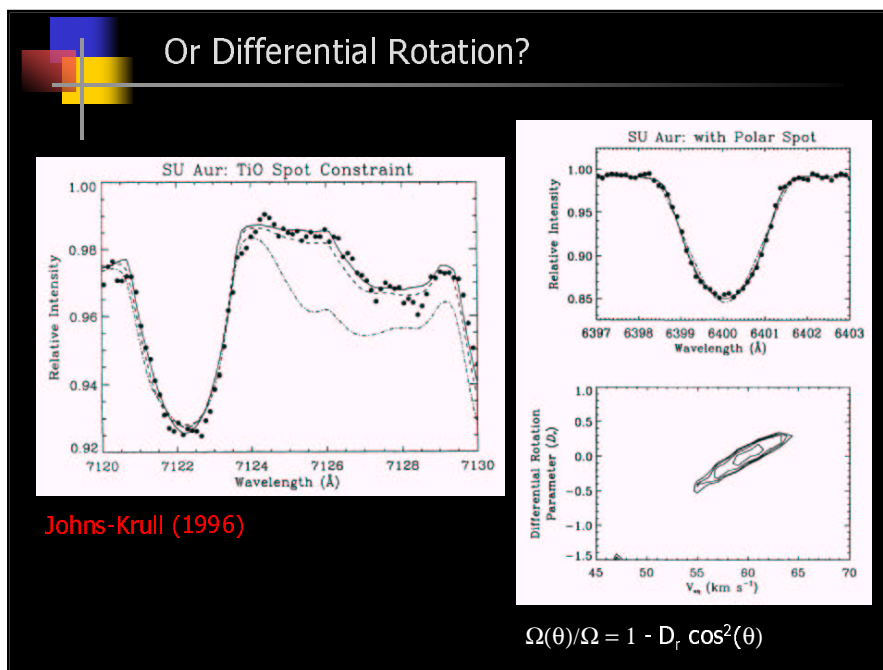


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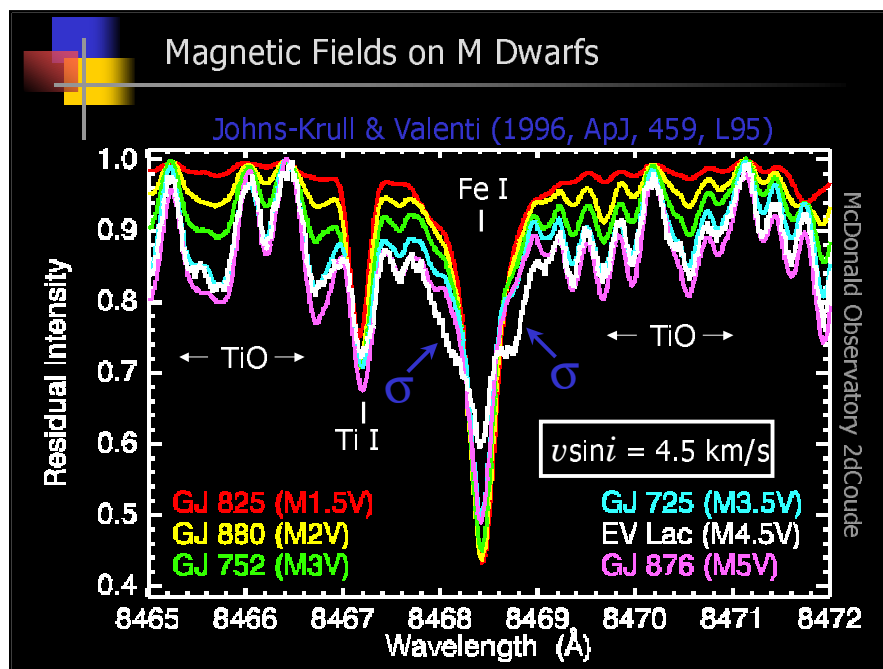
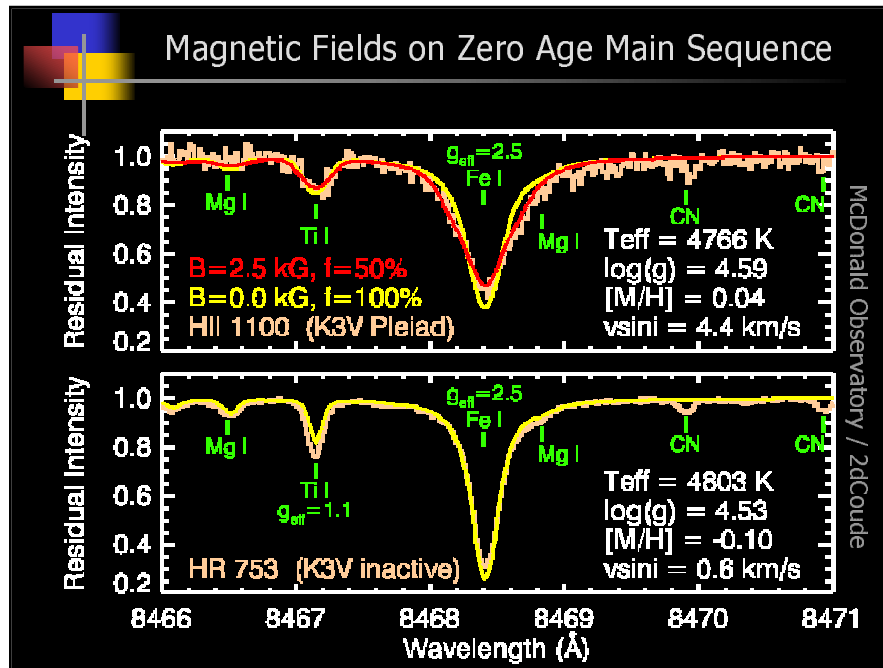


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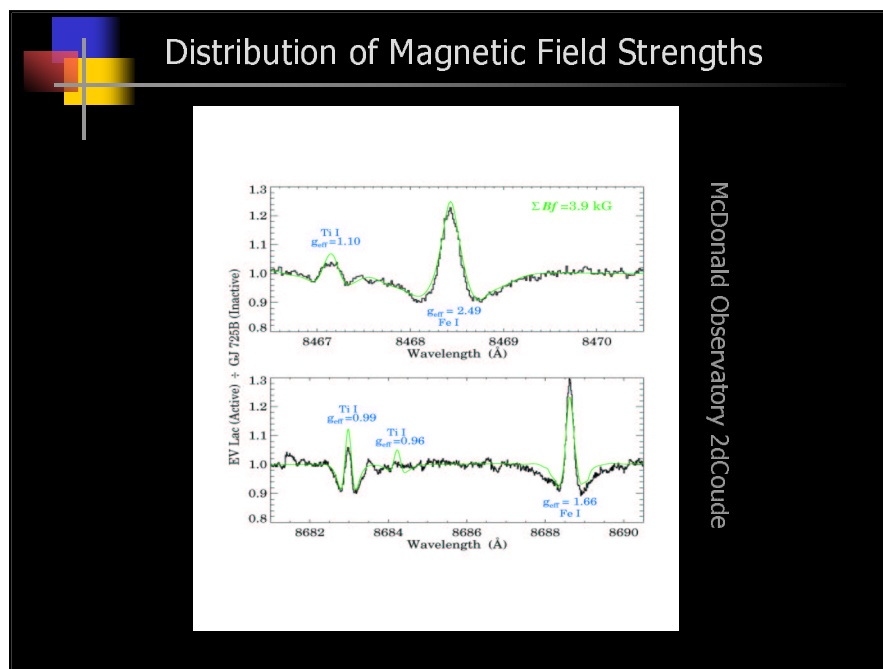
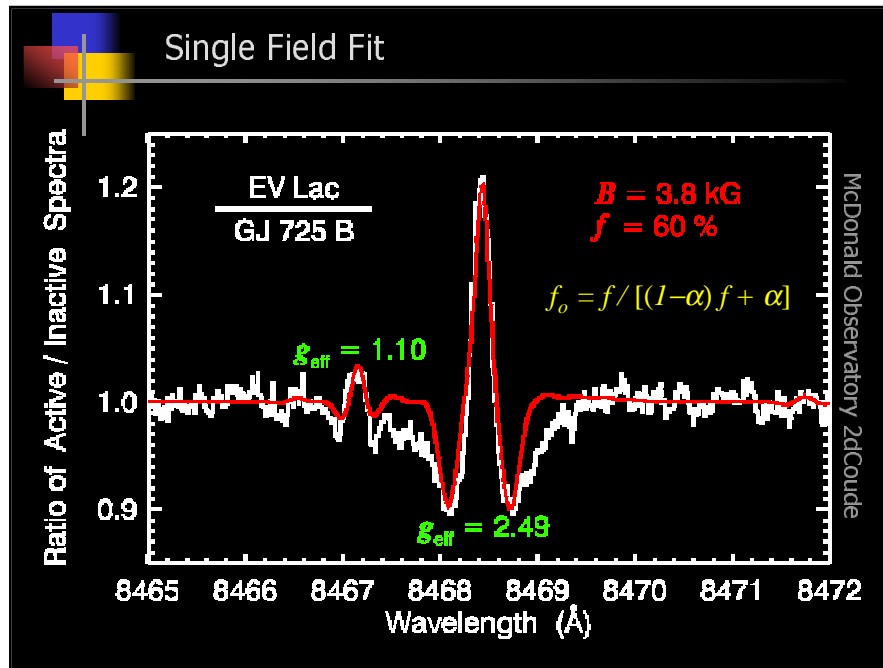




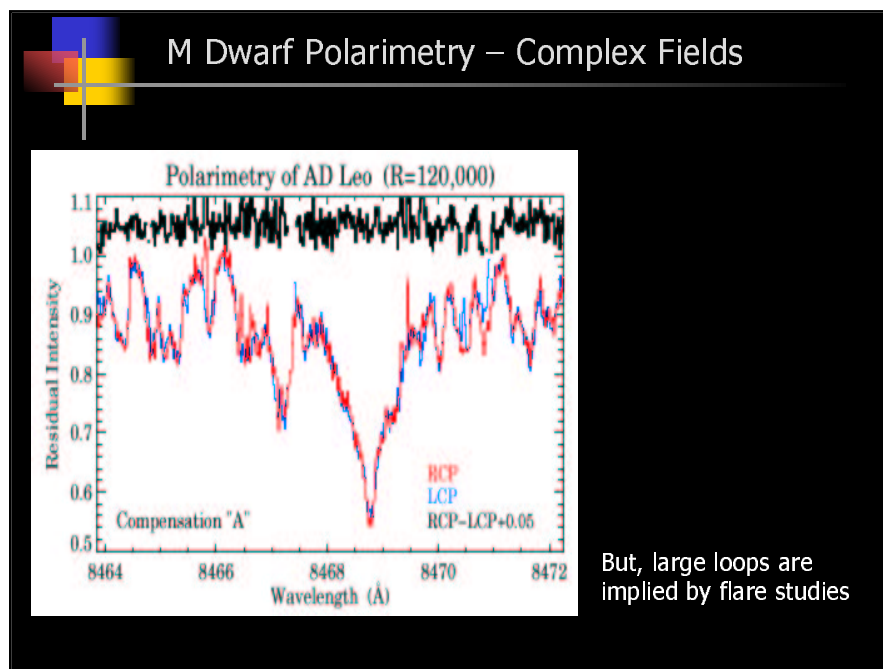
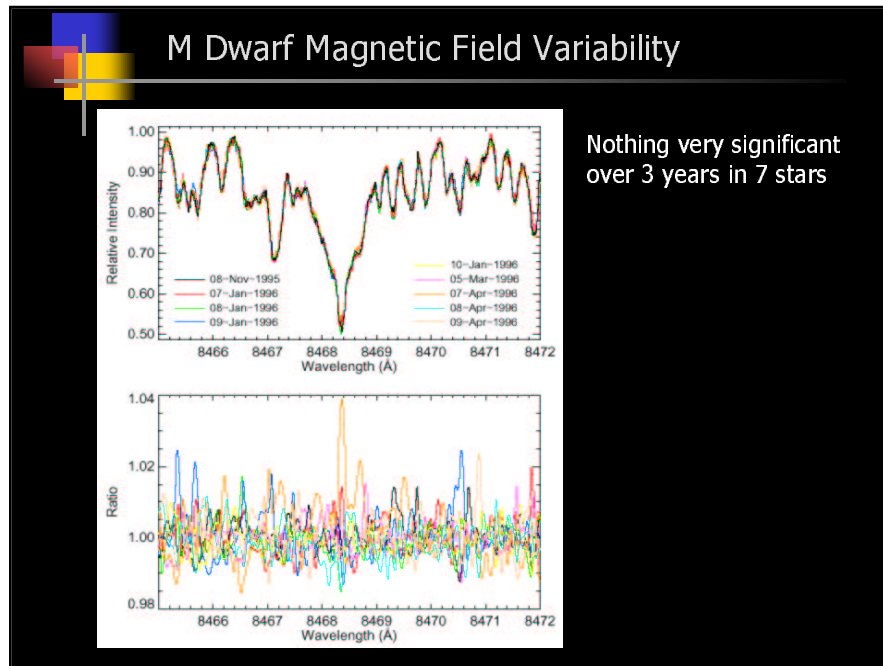
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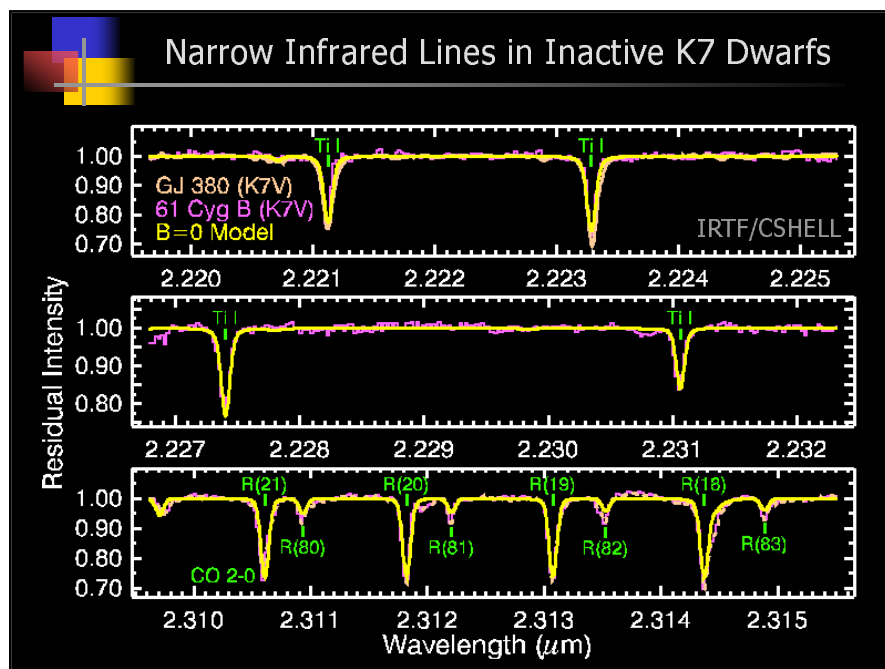
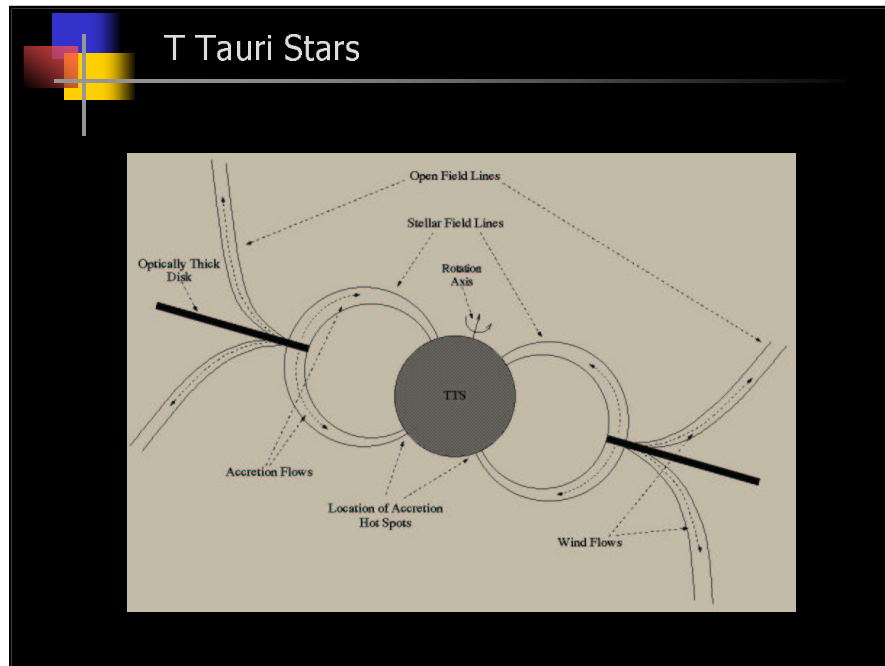
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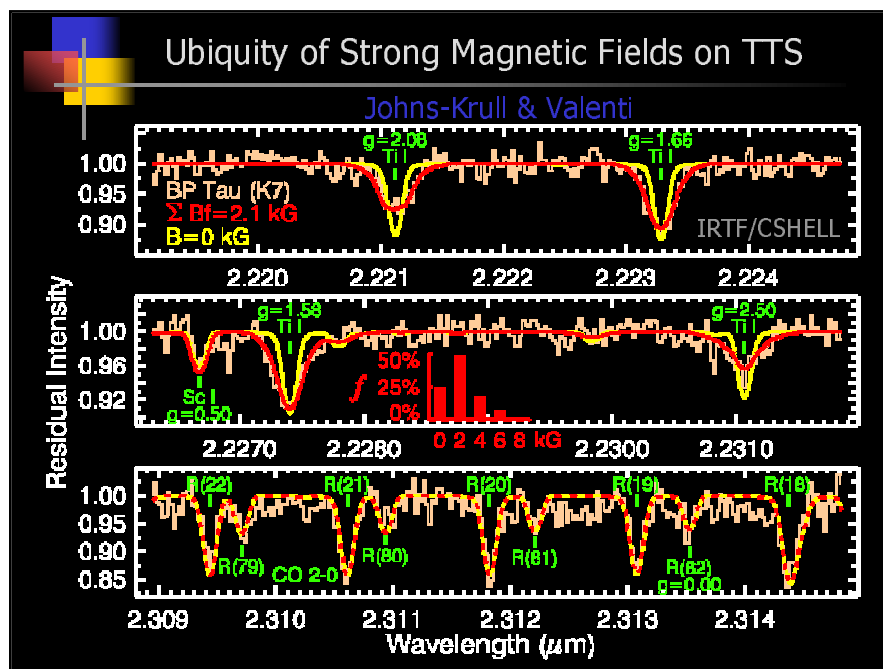
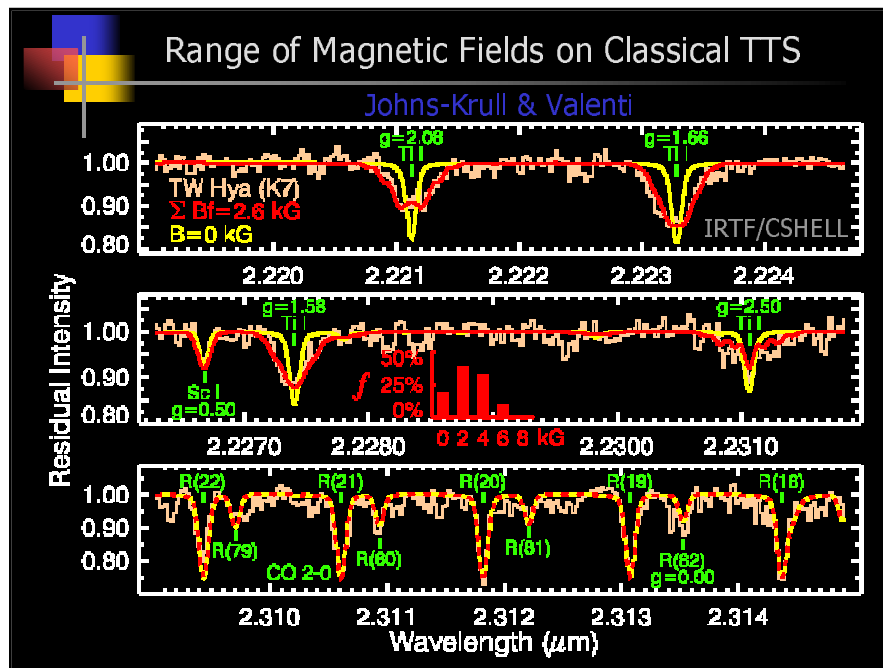
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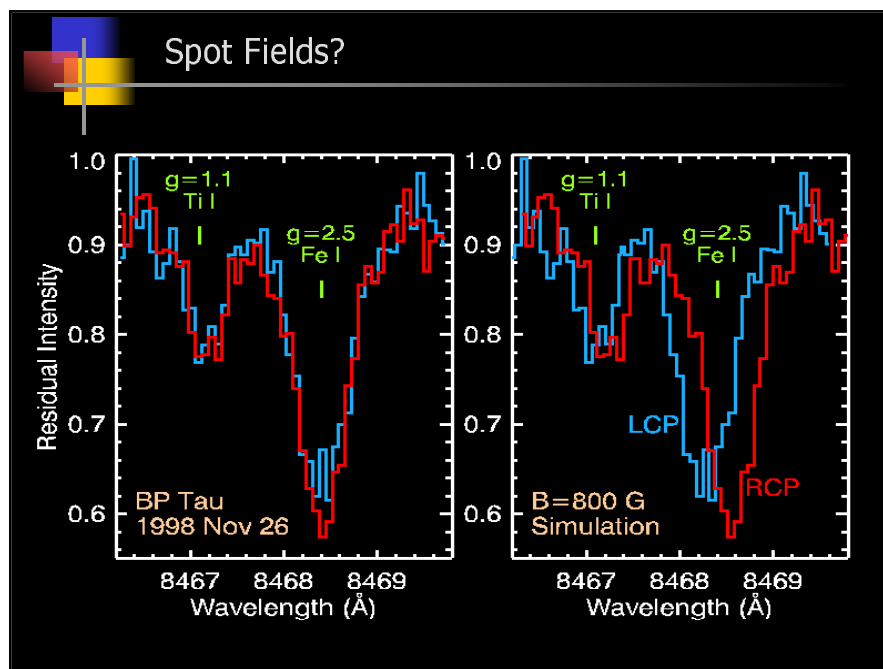
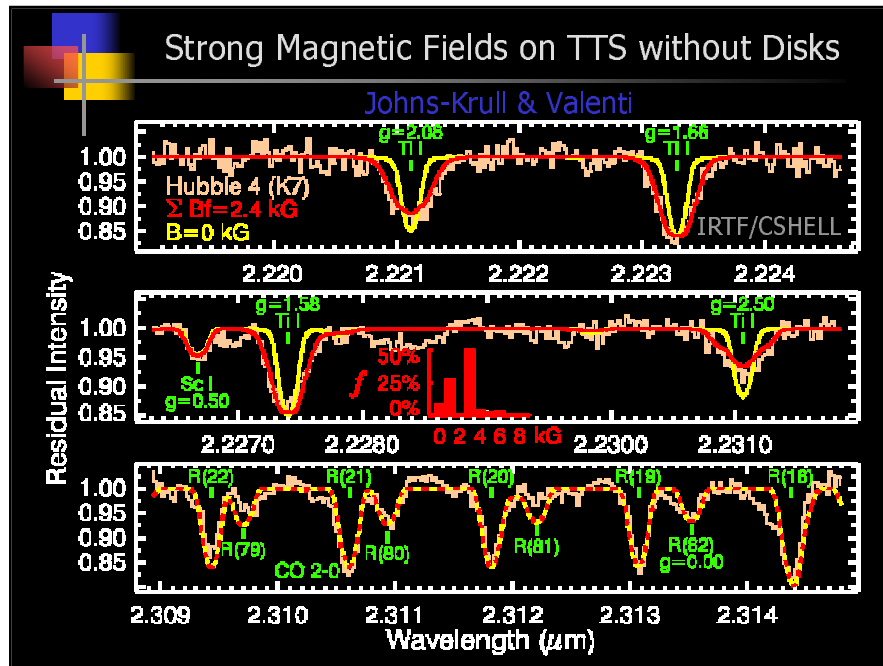
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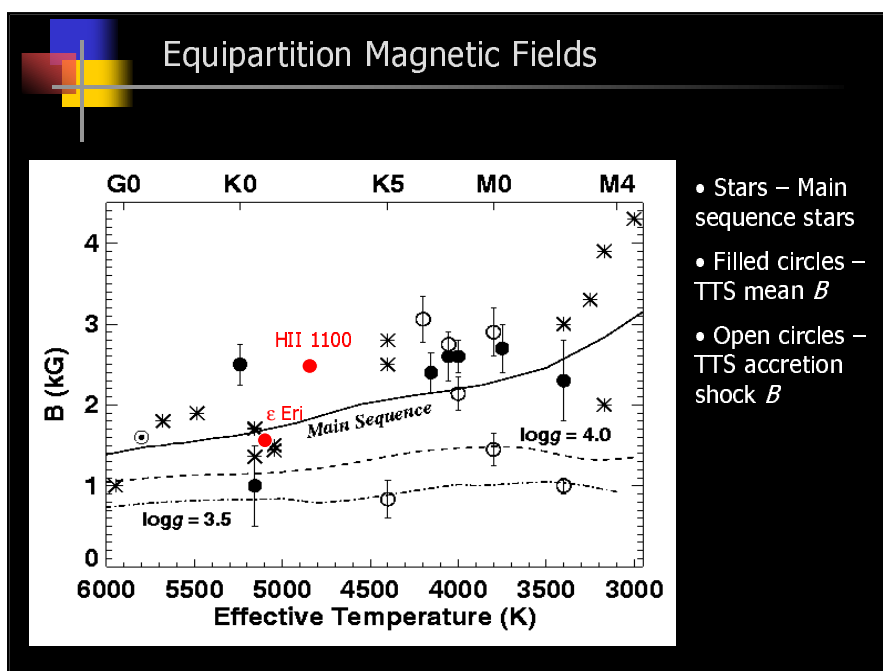
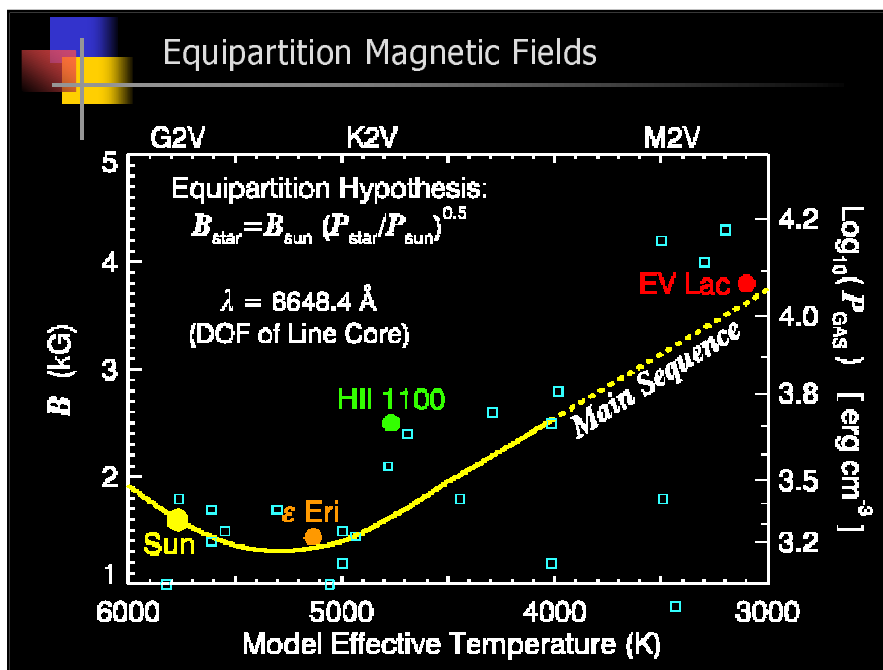
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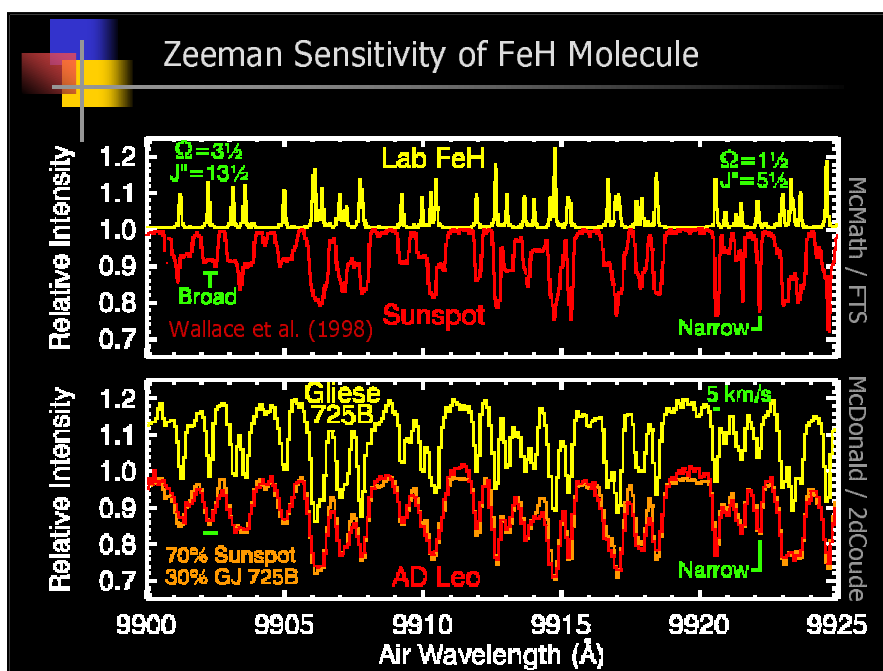
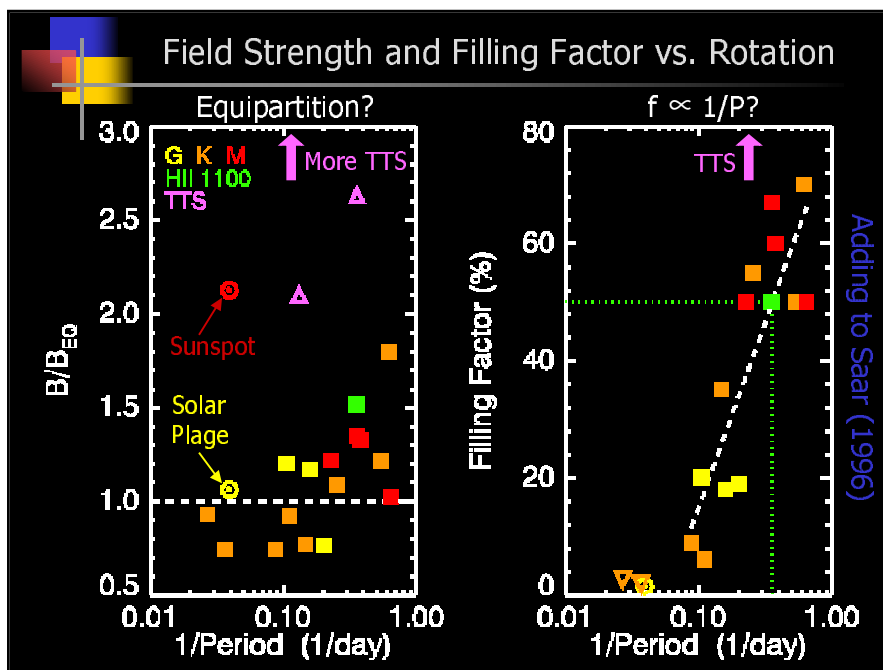
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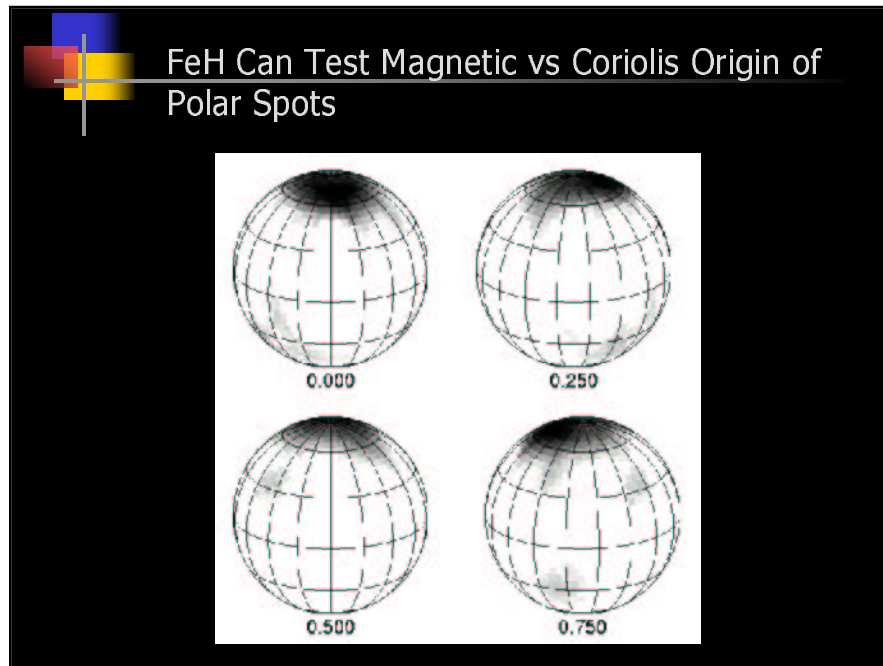



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-  Conclusions
- Hints that Heating in Fully Convective Stars is Less Efficient
 - Polar Spots are Everywhere – Magnetic or Thermal?
 - High Spectral Resolution Line Profile Analysis Yields the Most Information on Stellar Magnetic Fields
 - Several kG Magnetic Fields Cover Most of the Surface of Fully Convective dMe Stars and TTS
 - Equipartition Arguments Can Generally Account for the Magnetic Field Strengths on Main Sequence Stars, but not on TTS
 - Field Geometry Appears to Be Dominated by Small Scale Structure
 - TTS Photospheres Appear to be Magnetically Dominated - What Effect Does this have on their Structure?
 - FeH is a Promising Tool to Extend Much of this Work