

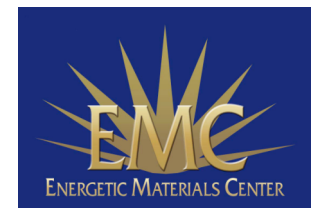


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# PDV WorkShop

What are the limits of PDV?

Ralph Hodgkin, Ted Strand, Don Hanson, Tony Whitworth,  
Ed Roos, Frank Roeske, Henry Chau



7/20/06

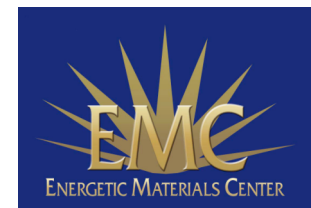
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# PDV or Fabry Perot

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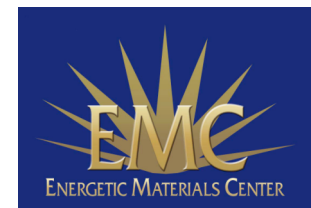
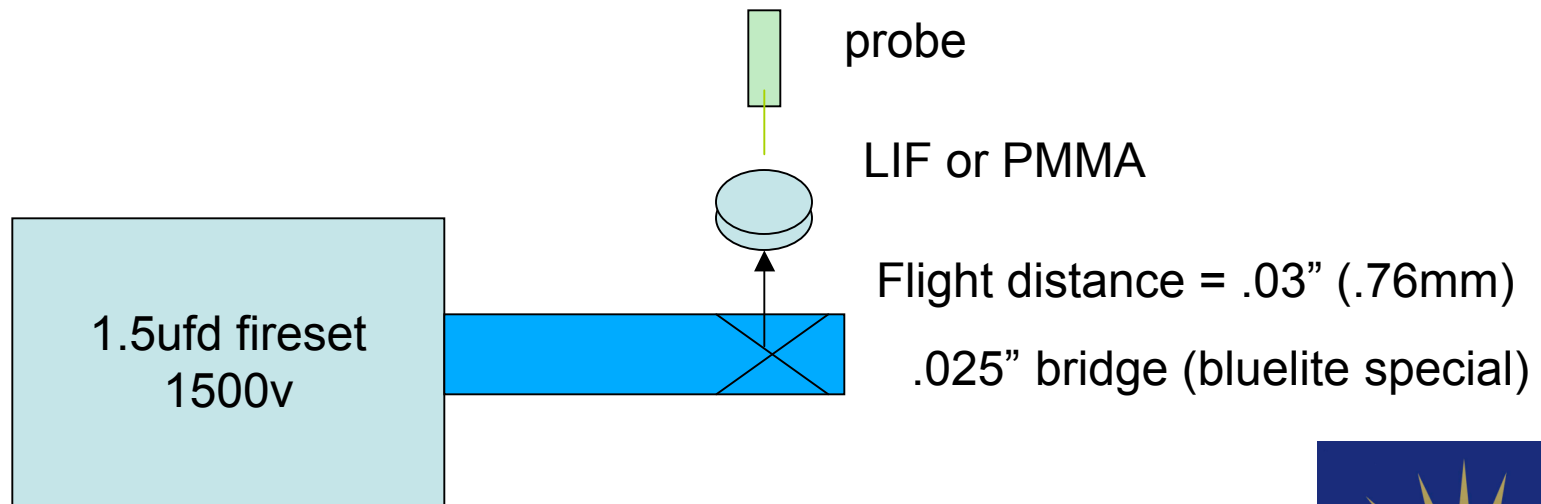
- Fabry Perot is complex to operate
- Costly to purchase & maintain
- Used to measure velocity & pressure
  - Several kilometers/second
  - Sub-nanosecond rise times
- Is there a better way?
  - What are the limits of PDV?





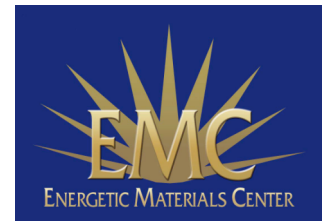
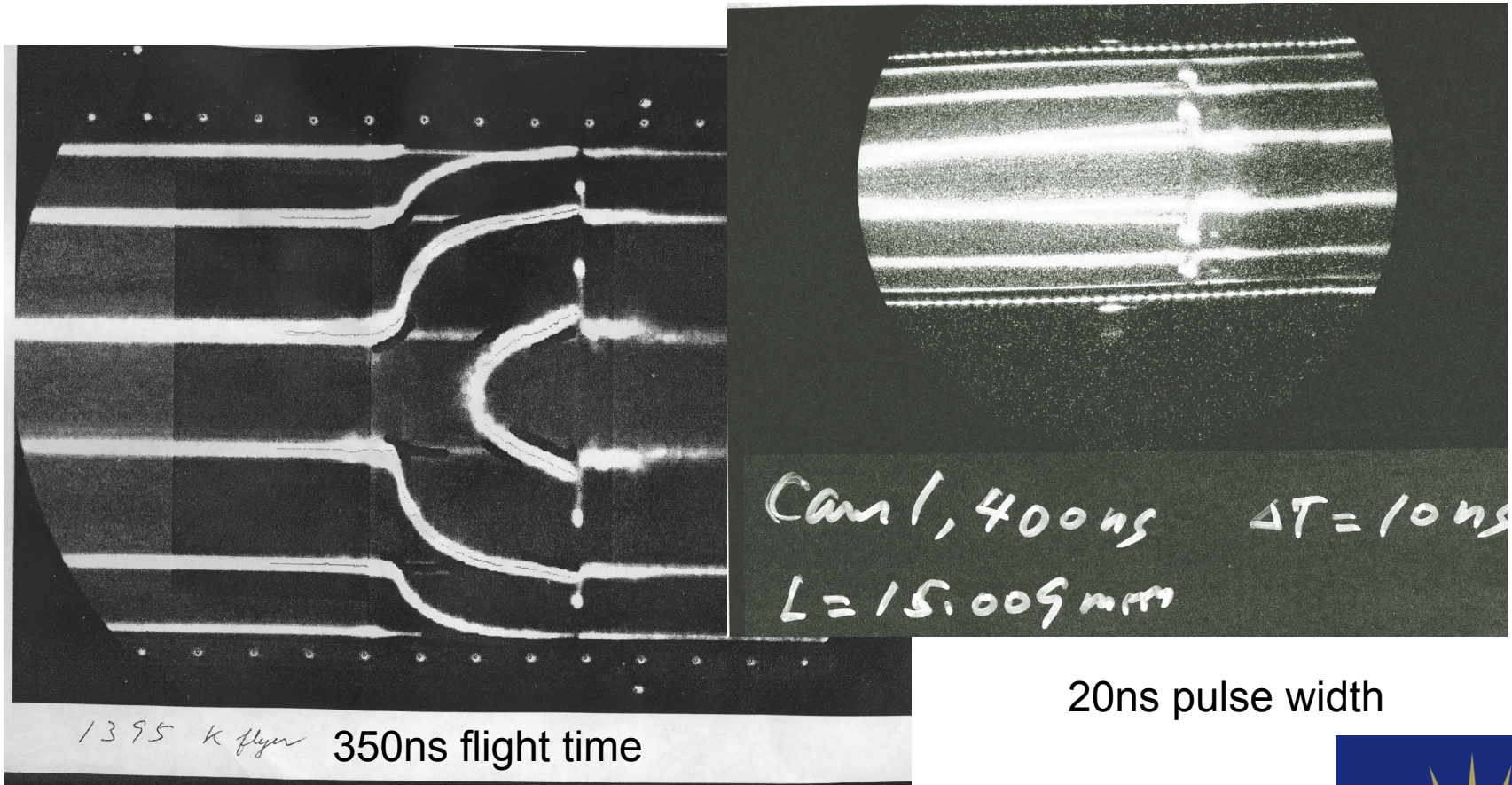
# Setup to compare PDV & Fabry Perot

- 1.5ufd Fireset .025" bridge



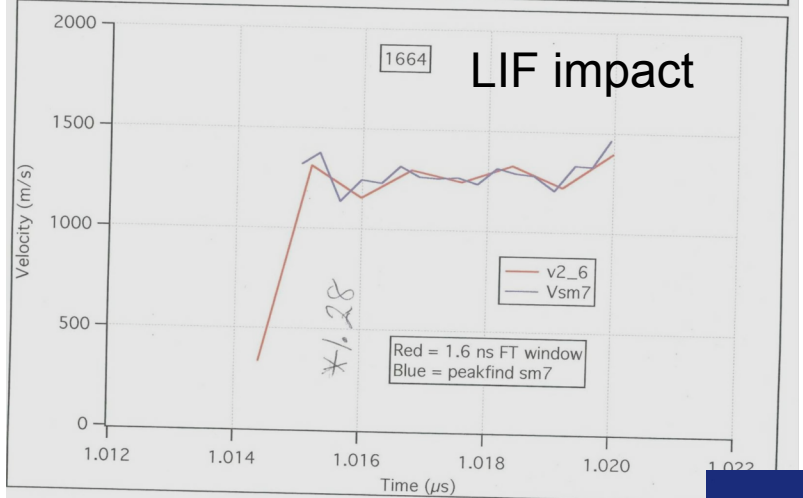
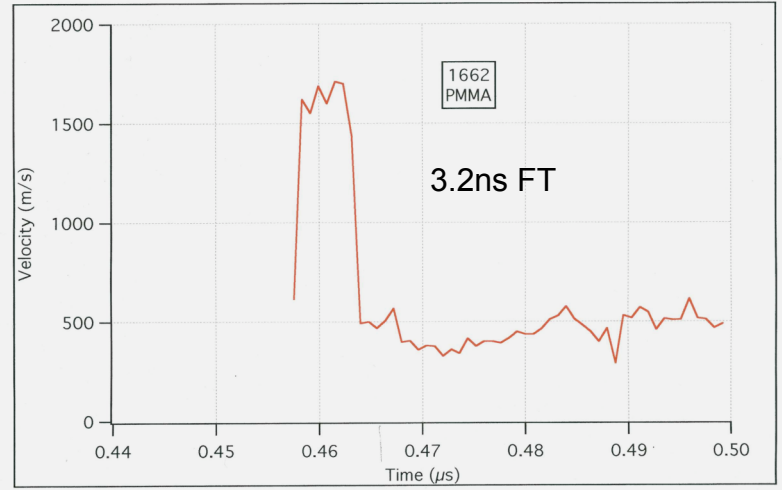
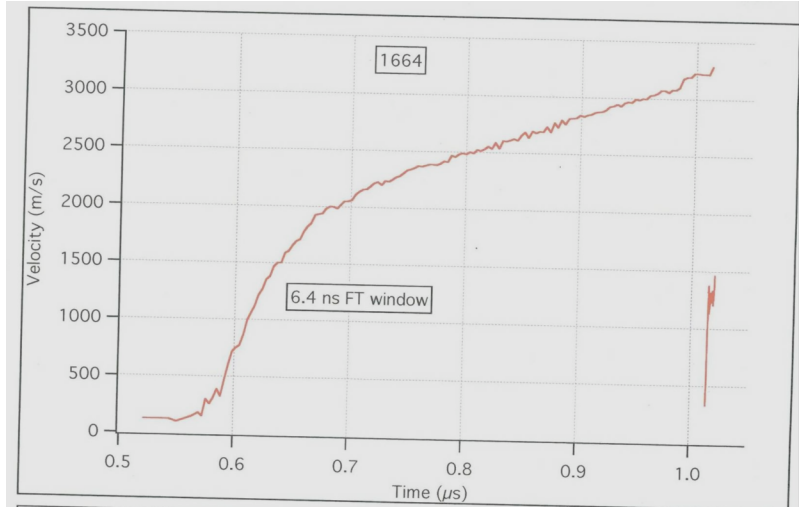
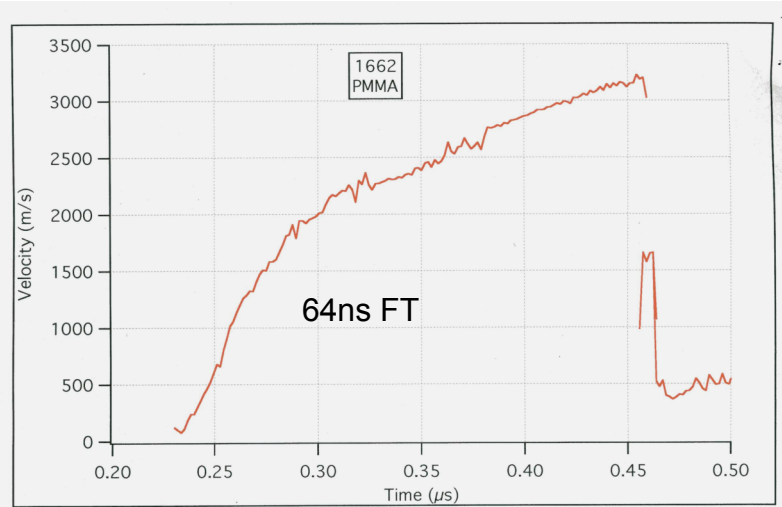
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# Fabry Perot Velocity Record





# PDV Velocity & Impact



20GS

BW=10GHZ

40GS

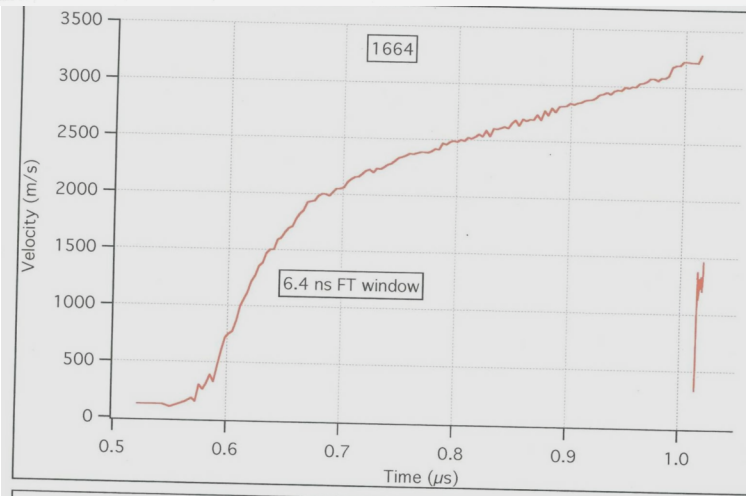
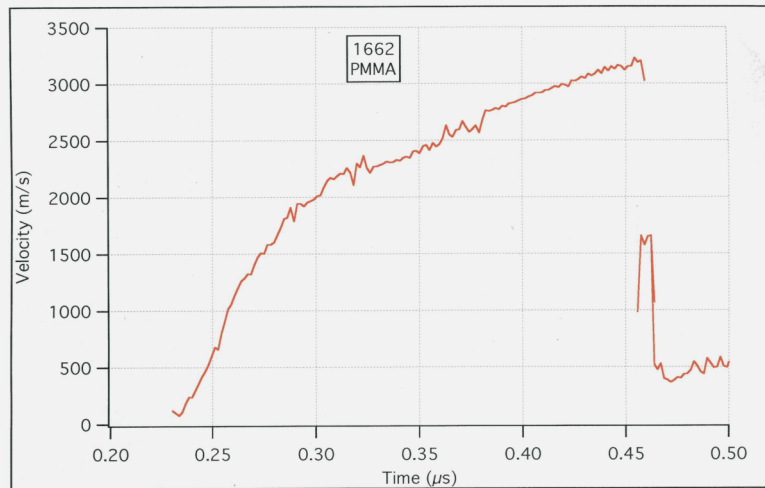


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# Velocity Comparison



PDV 3.2km/s

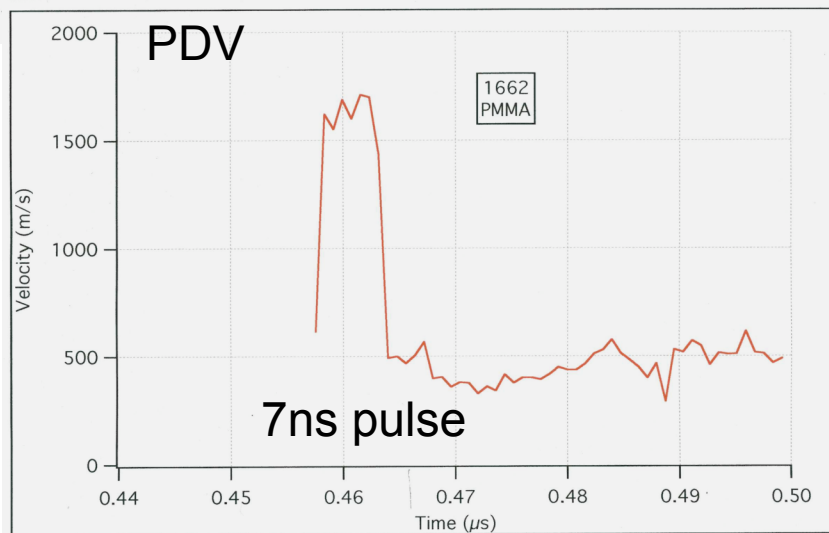
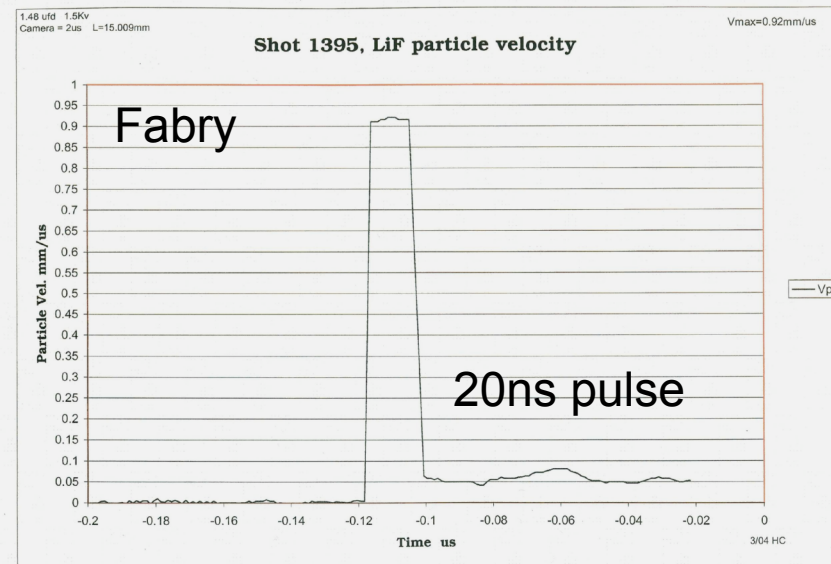
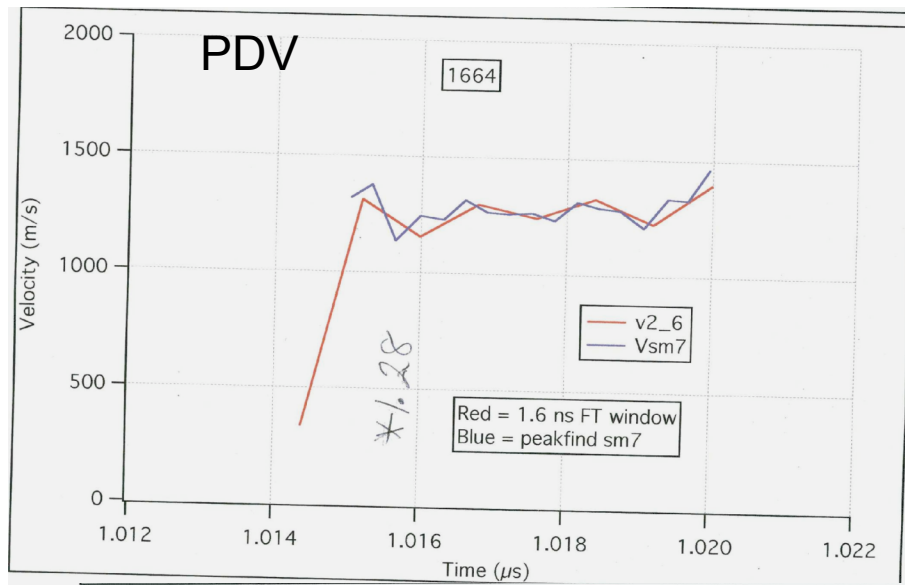


Fabry 3km/s

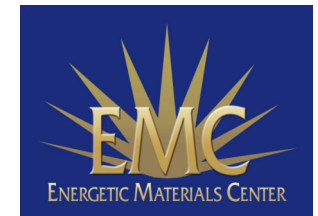


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# Impact Pulse



?? Pulse Width Difference ??  
?? Pulse Amplitude Difference ??



# In Conclusion

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- Velocity for the 2mil flyer compare favorably with Fabry-Perot
- Pressure Pulses need further analysis
- Future work to look at thinner flyers .5mil
- Suggestions / Comments Welcome

