

XP 305 Summary
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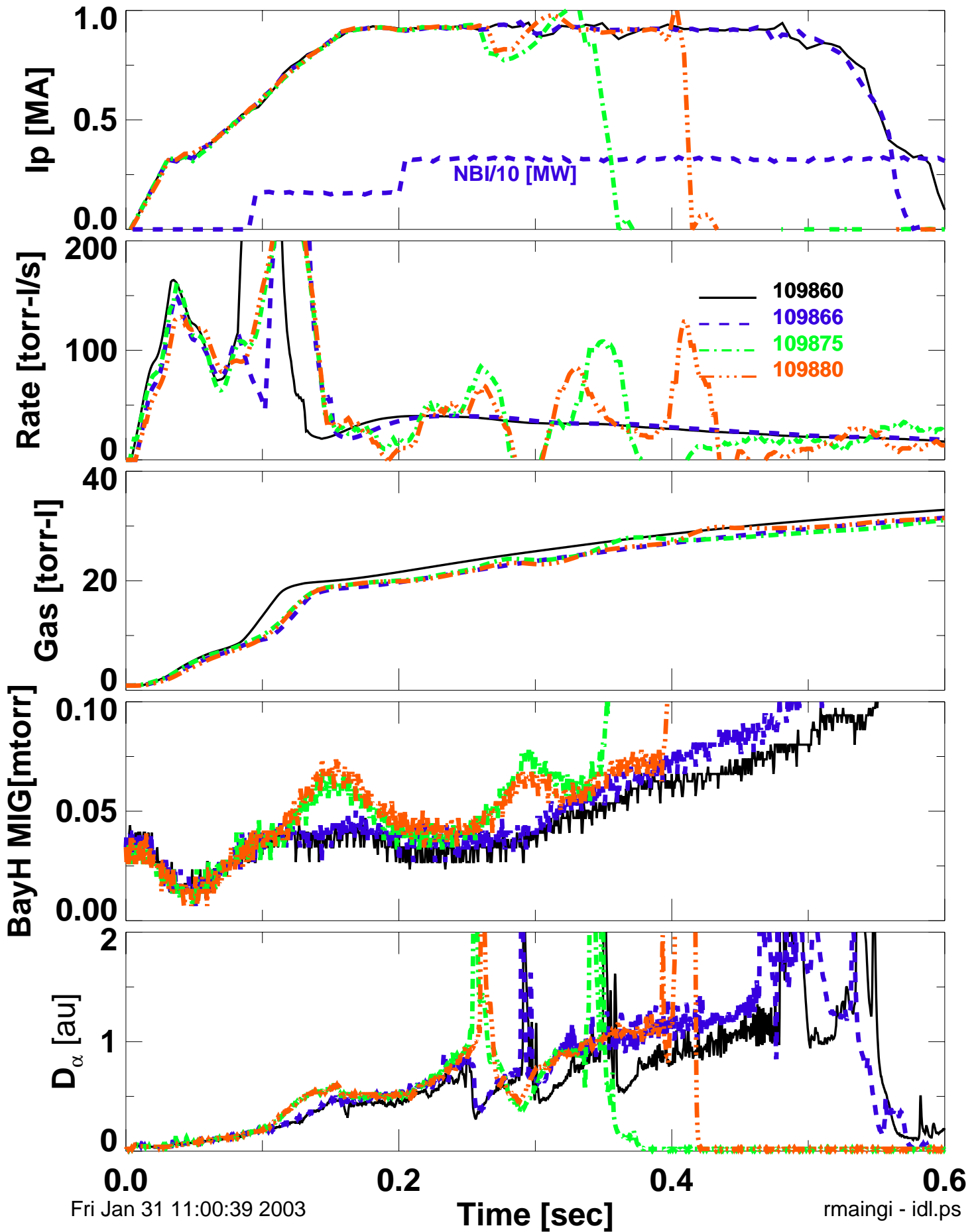
NSTX Physics Meeting
2/3/03

Summary of XP305

1. Calibrated HFS shoulder gas injector
Plenum pressure varied from 400-1200 torr, and average/instant flow rates computed from Raman's micro-ion gauge
2. Re-established HFS midplane fueled LSN H-mode with pressure 800 torr-1200 torr $I_p=900$ kA, and $B_t=4.5$ kG
 - power threshold started < 1 src but increased between 1-2 src after 6 shots
3. Re-ran with HFS shoulder and LFS fueling – no H-mode access
 - midplane neutral pressure higher
 - lower divertor D higher
4. Failed to achieve H-mode access in USN with either shoulder or LFS
 - did not try HFS midplane
5. Attempted H-mode access with lower dome (CHI) injector
 - promising, but maybe too much gas?
6. Attained H-mode access in DN with shoulder, but not with LFS fueling
 - midplane neutral pressure higher(LFS)

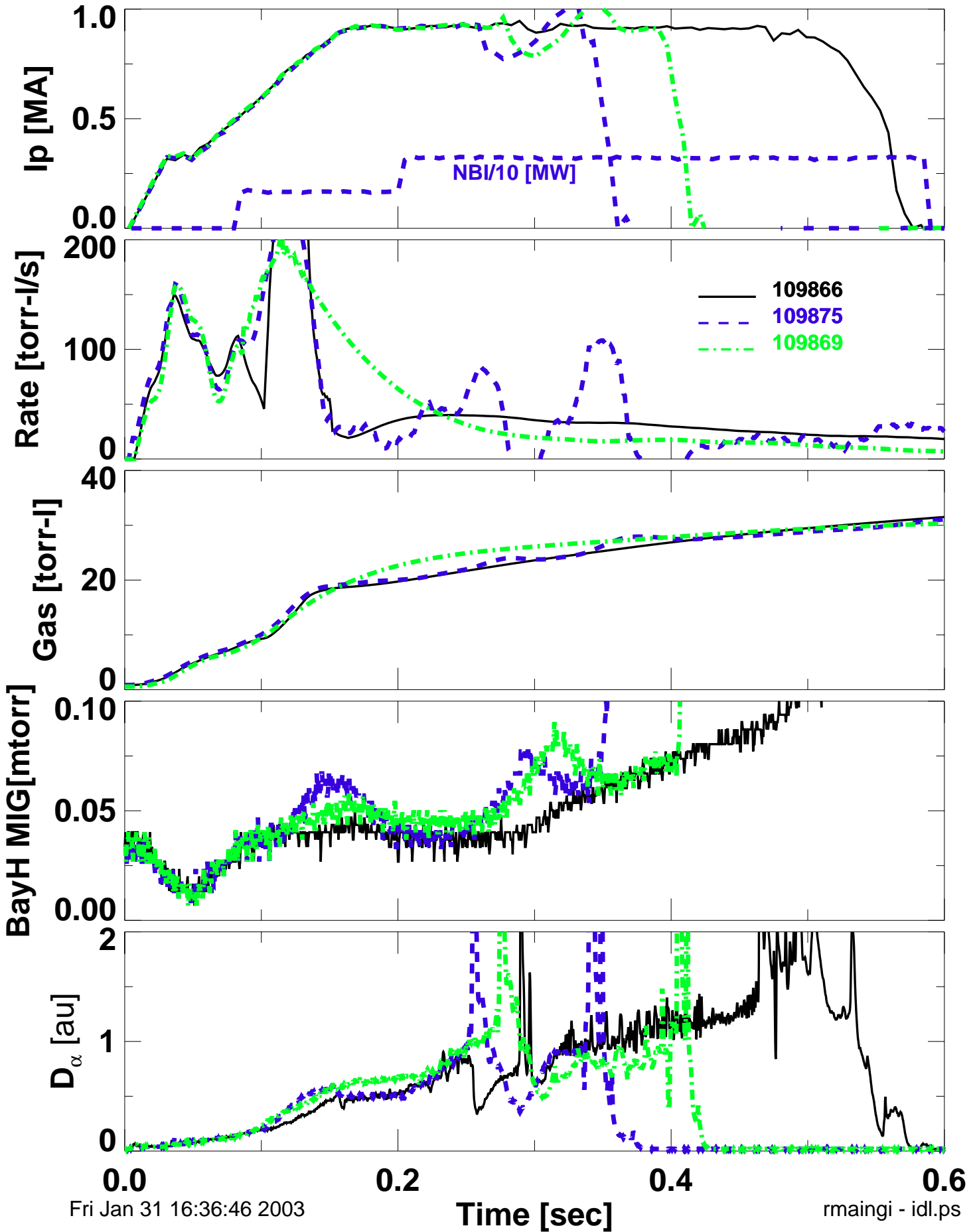
H-mode accessed only with Center Stack Fueling in XP305

Outer midplane fueling[75,80] has higher D-alpha, neutral pressure



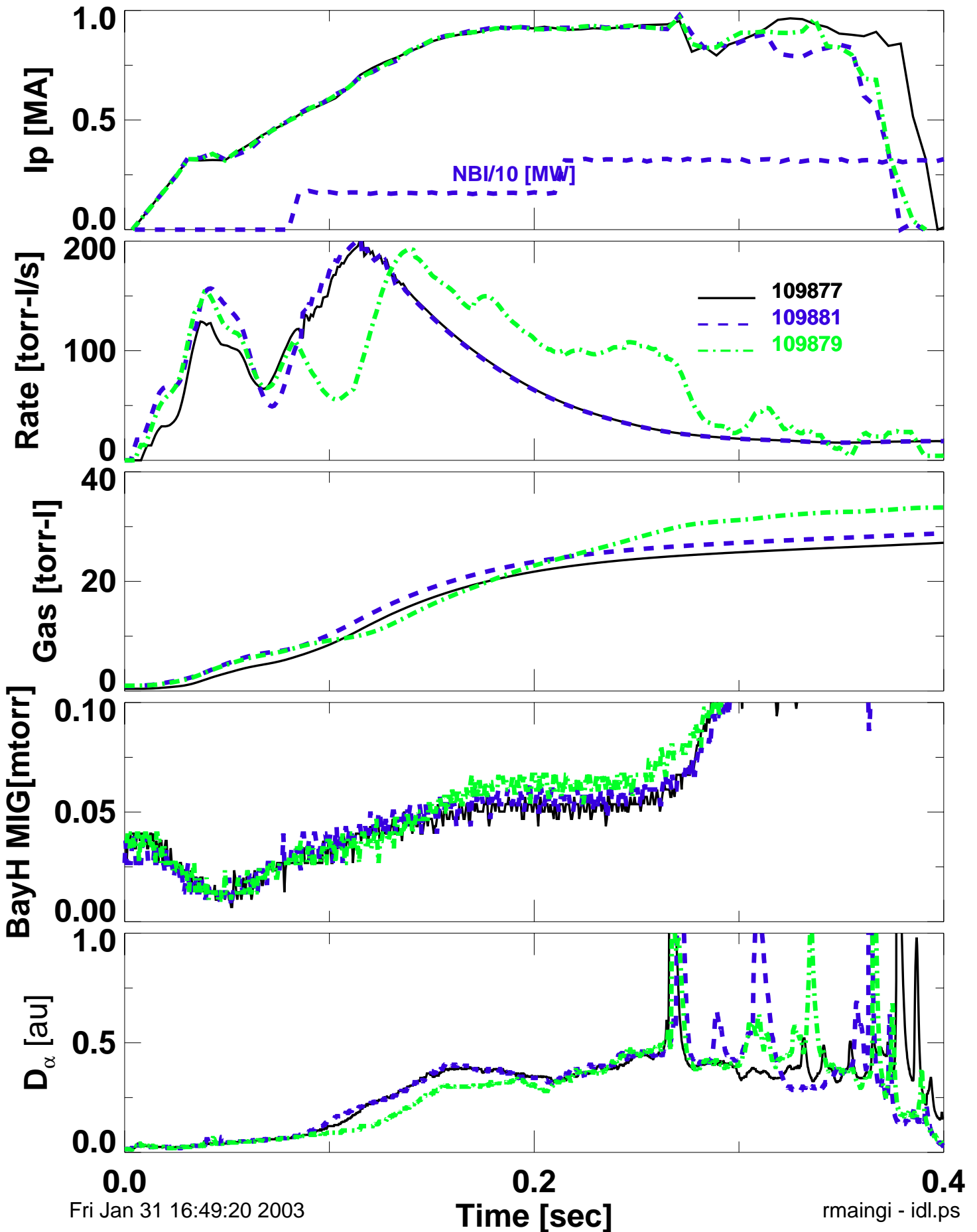
H-mode accessed only with Center Stack Fueling in XP305

Outer midplane[75] and shoulder[69] have higher D-alpha, neutral pressure



H-mode accessed only with Center Stack Fueling in XP305

Outer midplane[79] and shoulder[77,81] have higher D-alpha, neutral pressure



H-mode accessed with shoulder fueling in DND

Outer midplane[87] has higher D-alpha, neutral pressure

