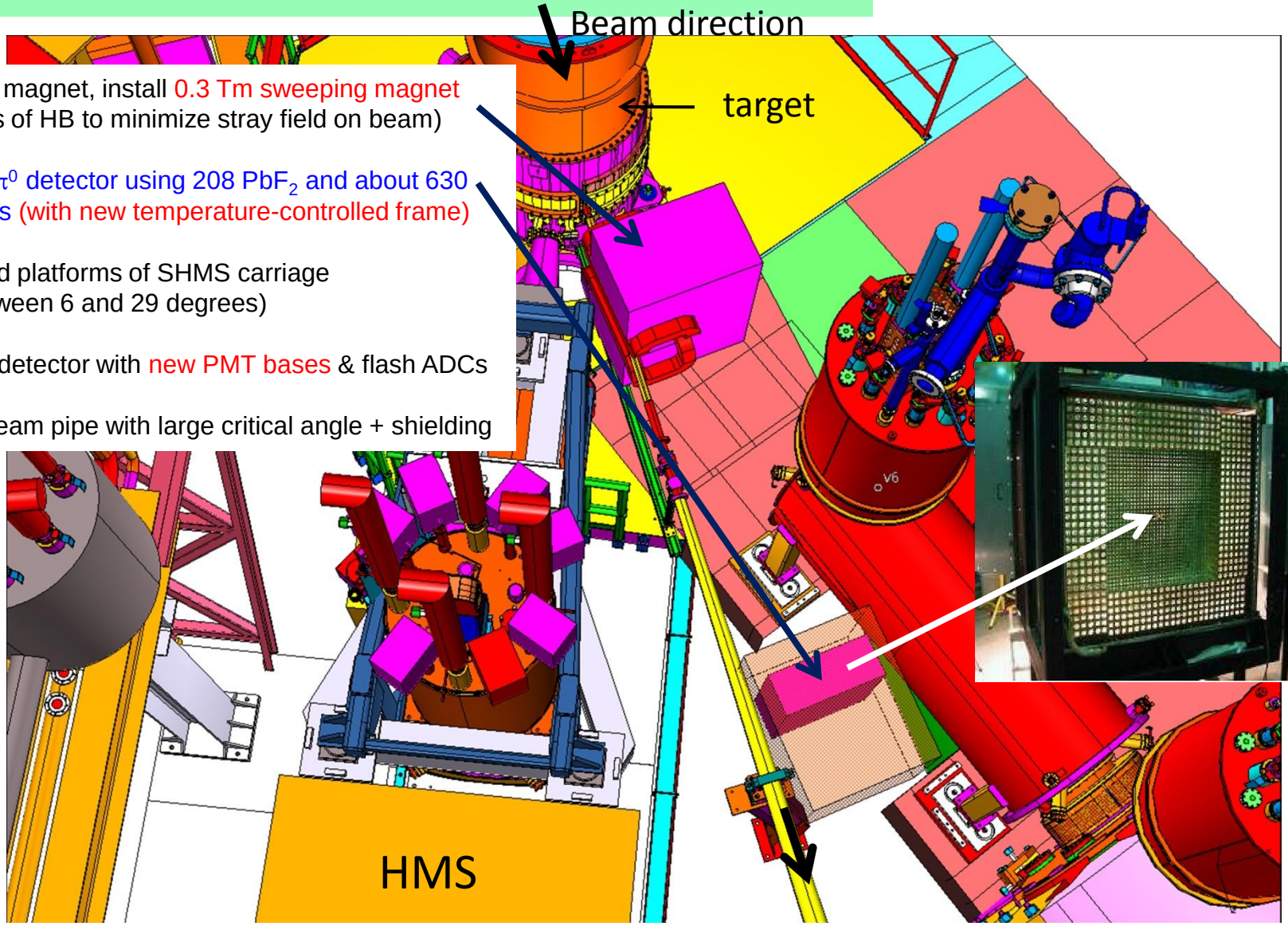
NPS Design Considerations

- Full Spectrometer (1116 new $PbWO_4$ crystals): *>$2M*
    - Mainly because of the price of $PbWO_4$ crystals

- Hybrid Spectrometer re-using PbF_2 from DVCS/HA and $PbWO_4$ from HyCal
    - Same solid angle
    - Suitable for NSF/MRI program

The NPS in Hall C

- Remove HB magnet, install 0.3 Tm sweeping magnet (copy features of HB to minimize stray field on beam)
- Add 25 msr π^0 detector using 208 PbF_2 and about 630 PbWO4 blocks (with new temperature-controlled frame)
- Cantelevered platforms of SHMS carriage (rotatable between 6 and 29 degrees)
- Augment π^0 detector with new PMT bases & flash ADCs
- Dedicated beam pipe with large critical angle + shielding



MRI Draft Budget

Item	Quantity	Funds requested	University Cost Share
PbWO4	60	90,090	38,610
PMT+mag. Shield	60	21,021	9,009
PMT voltage dividers	630	63,063	27,027
Amplifiers	630	3,468	1,486
Magnet Construction	1	121,781	52,192
Temperature Controlled Frame	1	45,045	19,305
Cooler System for Frame	1	11,011	4,719
Motion Controller	1	8,008	3,432
Light monitoring system	1	44,044	18,876
UV curing system	1	40,040	17,160
TOTAL		**447,571**	**191,816**

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