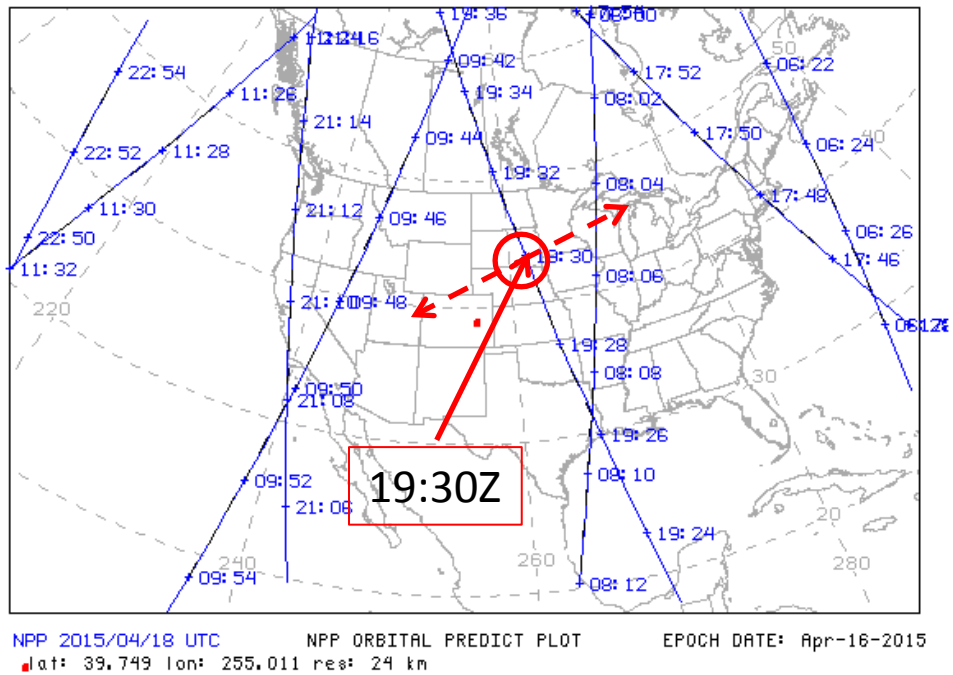
RAQMS 20150416 SONGNEX
78hr FX for 18Z April 18 (San Juan Basin), 2015

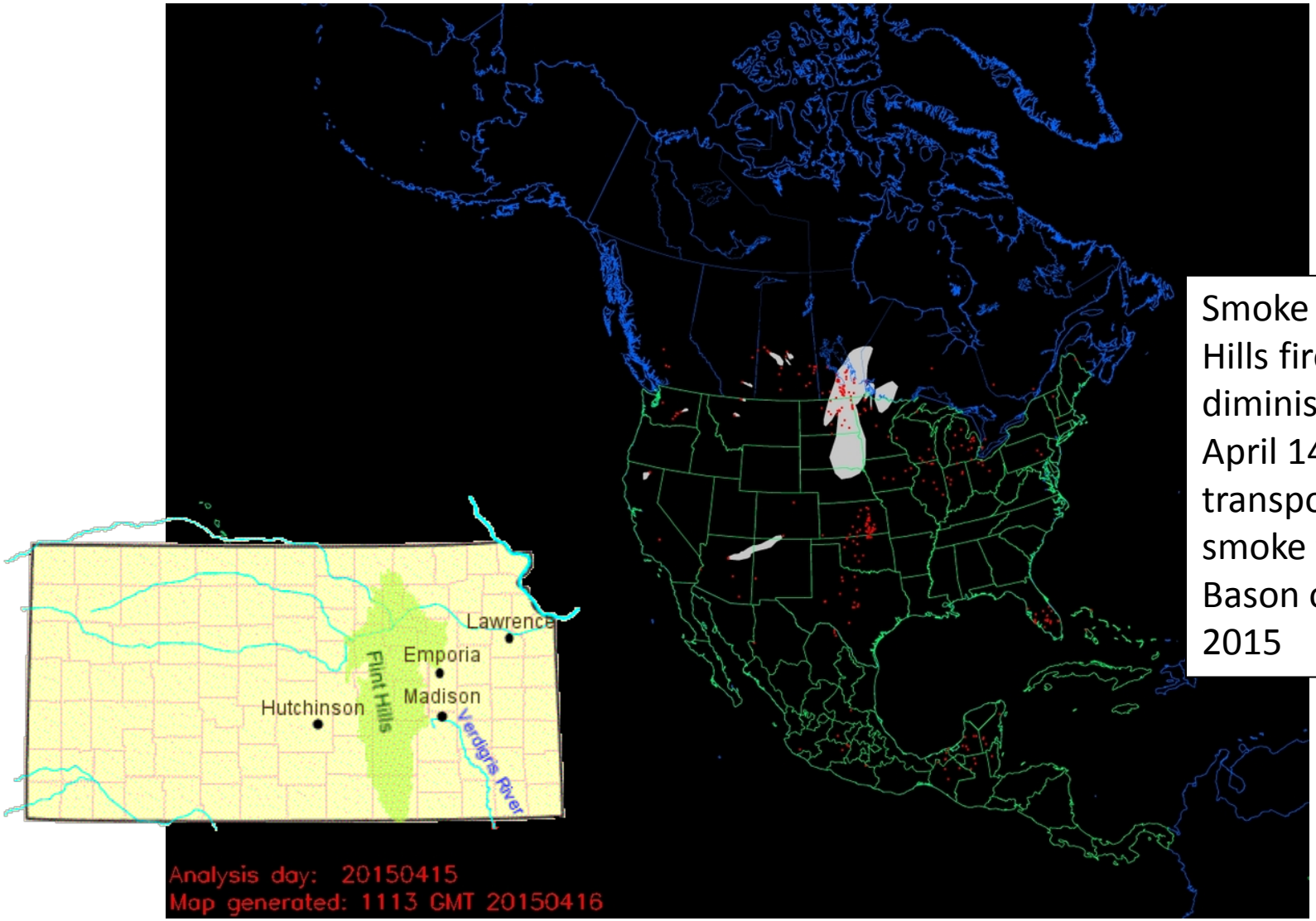
S-NPP (CrIS) overpass on 2015/04/18
NUCAPS CO2, O3, CO, CH4 Validation Opportunity
<u>Western swath edge</u>



Approximate swath width

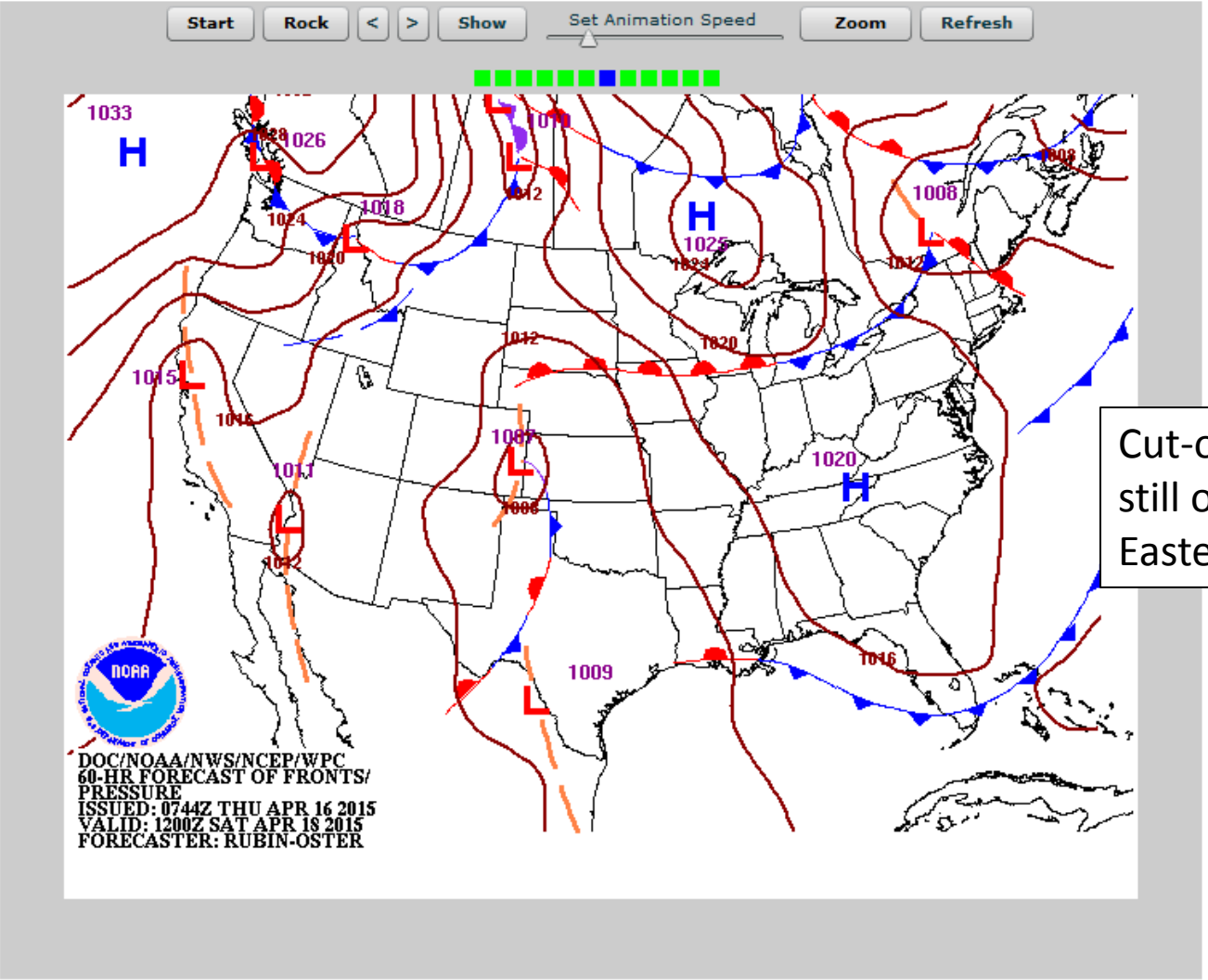
NESDIS Hazard Mapping System (HMS)

http://www.ospo.noaa.gov/data/land/fire/currenthms.jpg



Smoke from Flint Hills fires diminished from April 14- fire in AZ transporting smoke to San Juan Bason on April 15, 2015

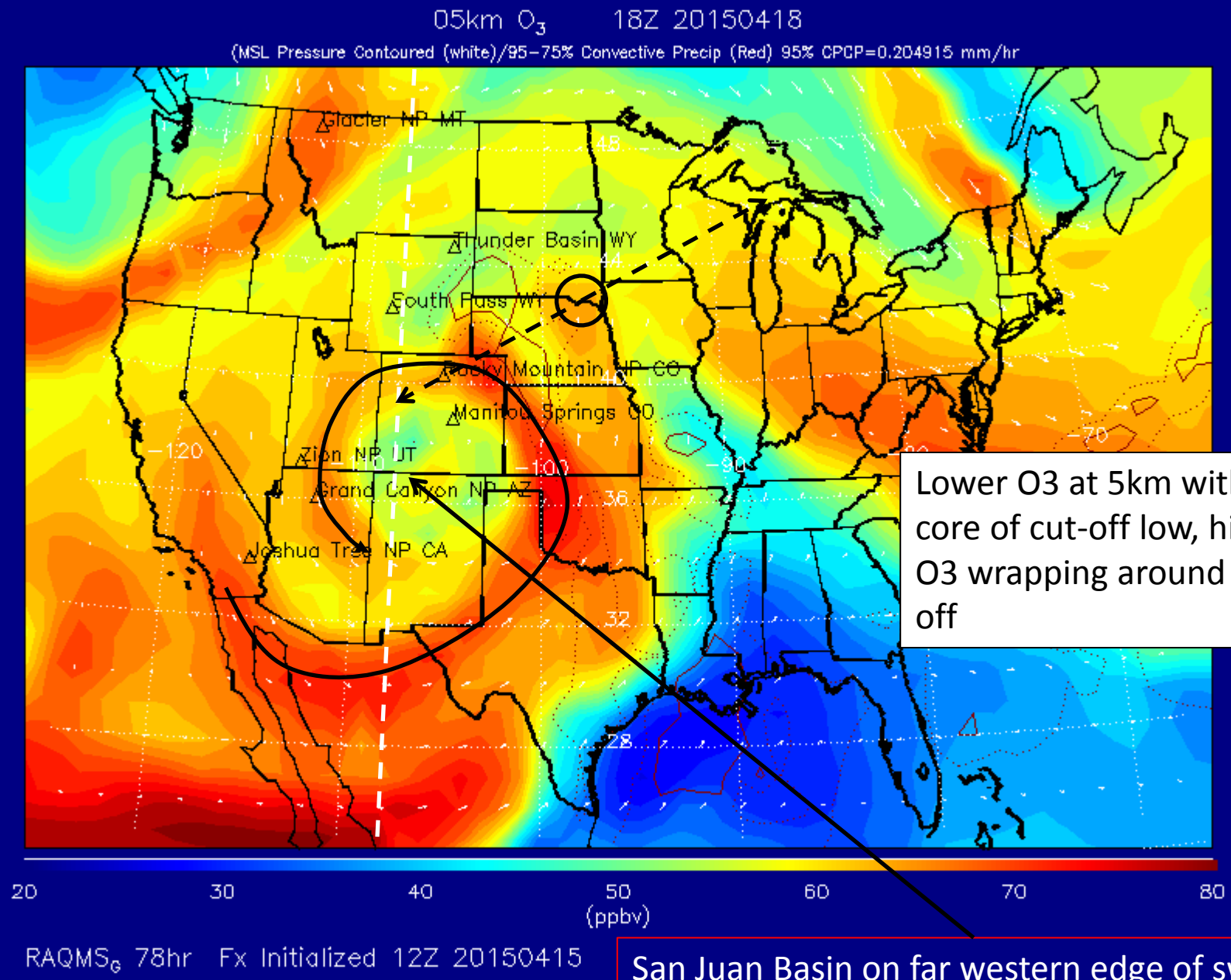
60hr NCEP/WPC forecast valid 12Z 04/18/2015



Cut-off low still over Eastern CO

http://www.hpc.ncep.noaa.gov/basicwx/day0-7loop.html

http://raqms.ssec.wisc.edu/forecast/view/20150415

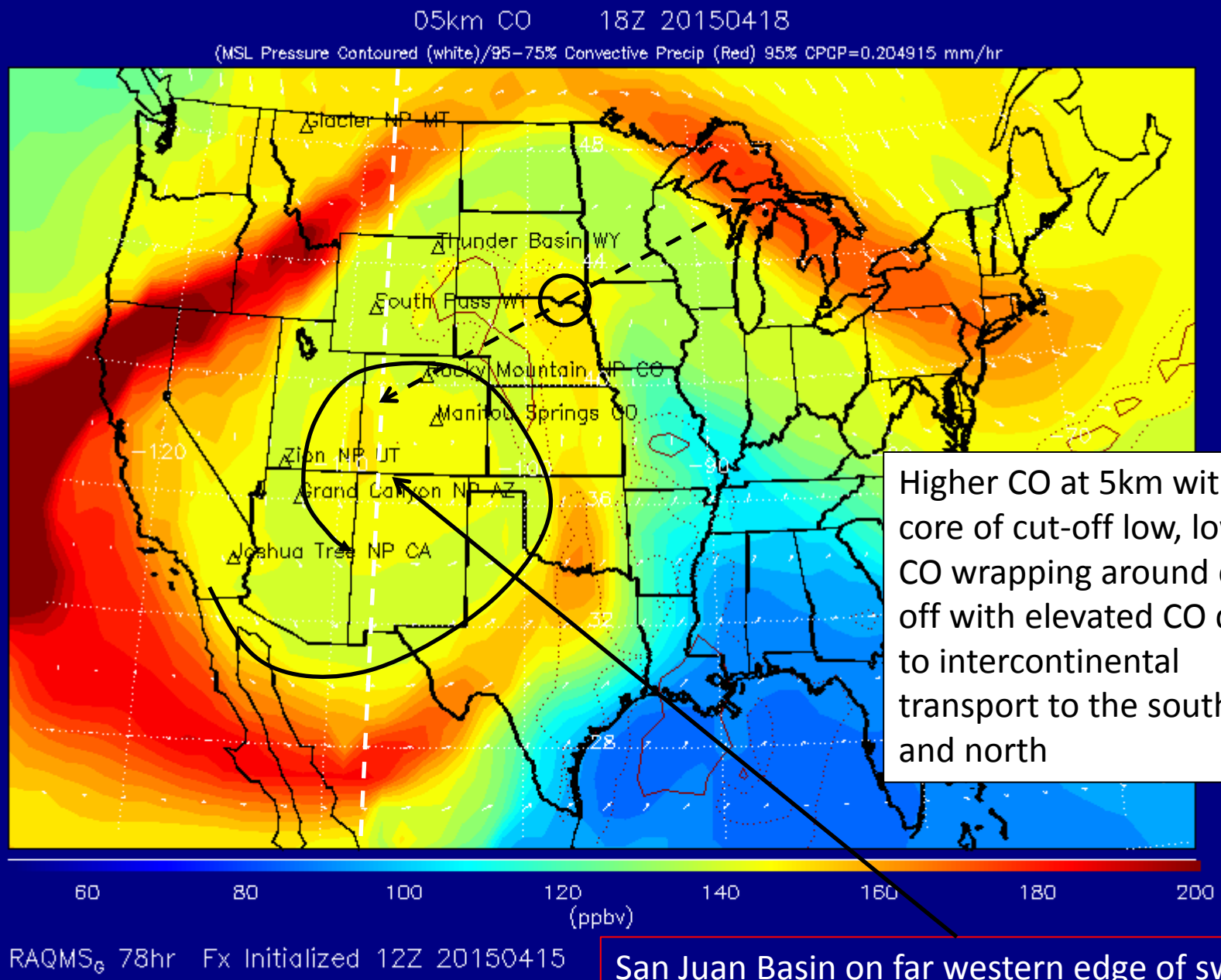


Lower O3 at 5km within core of cut-off low, higher O3 wrapping around cut-off

San Juan Basin on far western edge of swath

Approximate swath width

http://raqms.ssec.wisc.edu/forecast/view/20150415

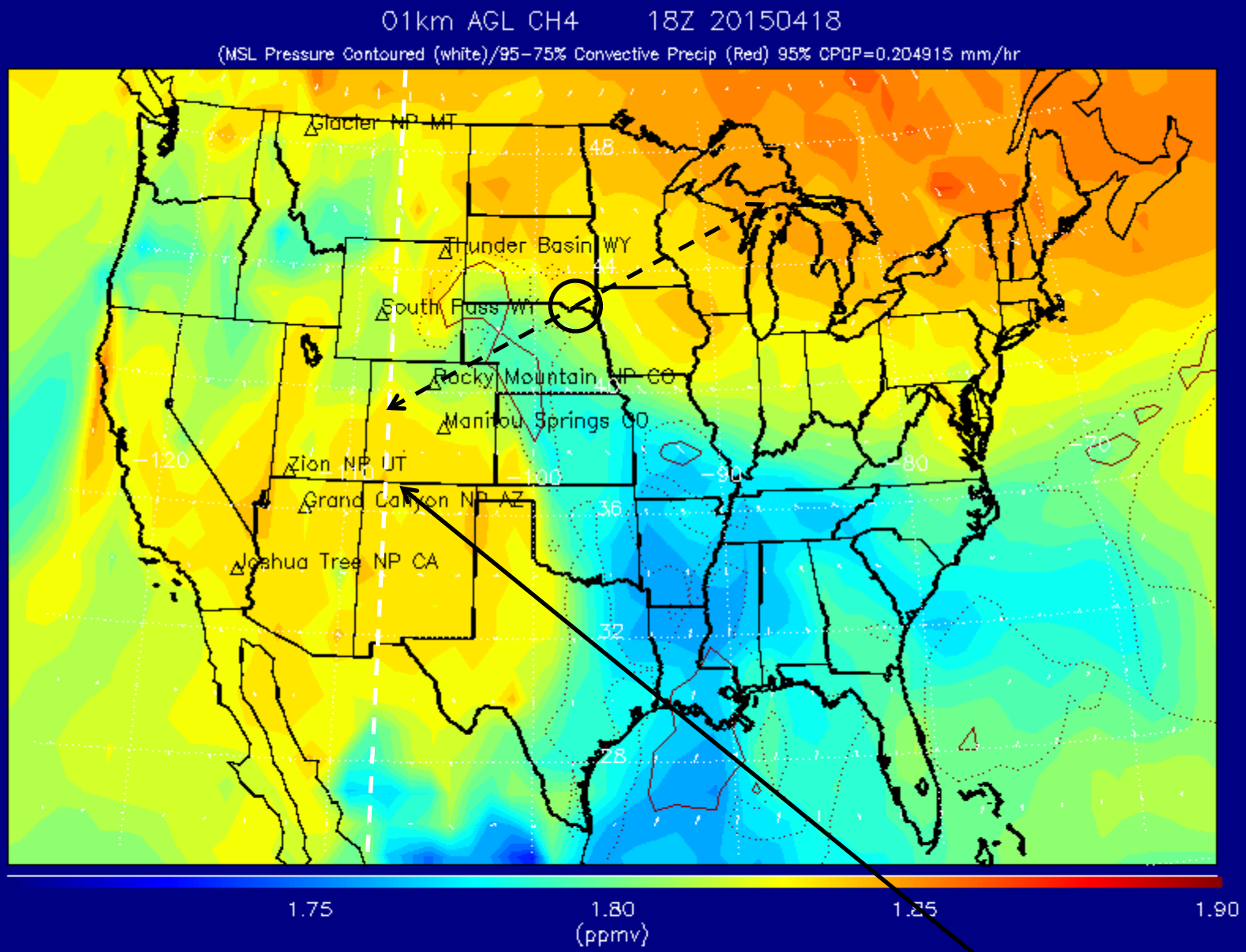


Higher CO at 5km within core of cut-off low, lower CO wrapping around cut-off with elevated CO due to intercontinental transport to the south and north

San Juan Basin on far western edge of swath

Approximate swath width

http://raqms.ssec.wisc.edu/forecast/view/20150415

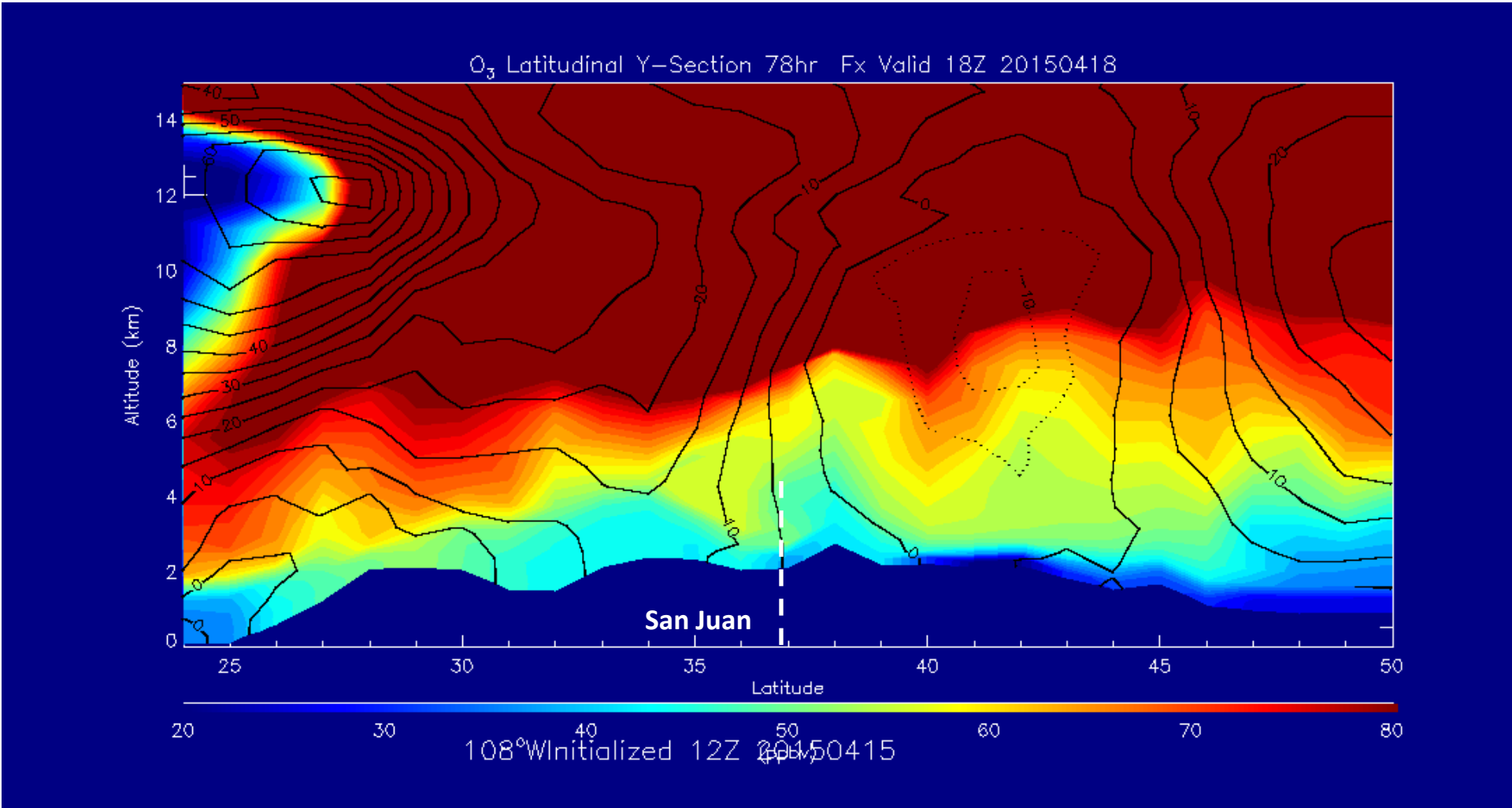


San Juan Basin on far western edge of swath

RAQMS surface CH4 constrained with 1990 mixing ratio – introduces ~0.1ppmv low bias

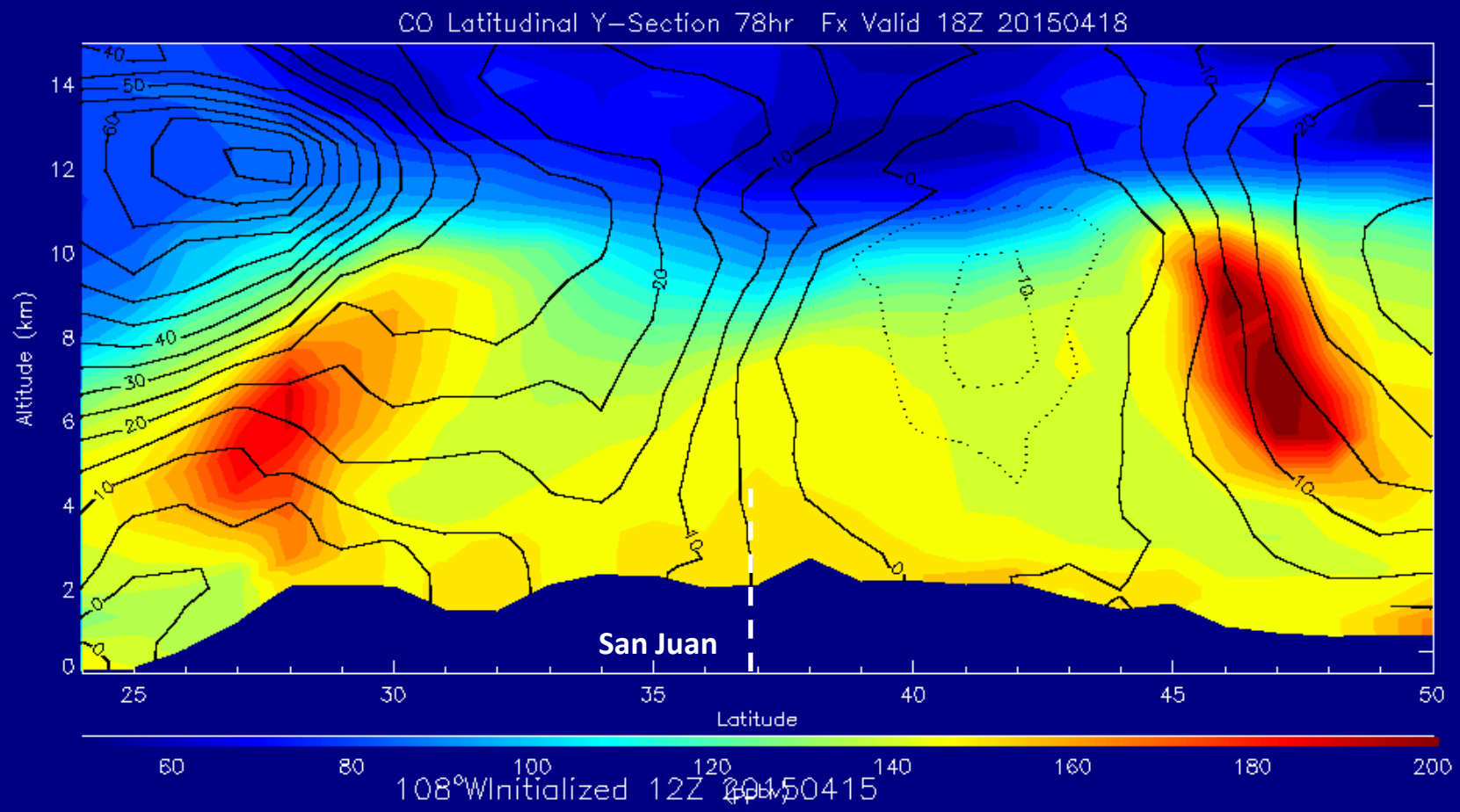
http://raqms.ssec.wisc.edu/forecast/view/20150415

RAQMS 78hr FX O3 Cross-section at 108W
(San Juan Basin)



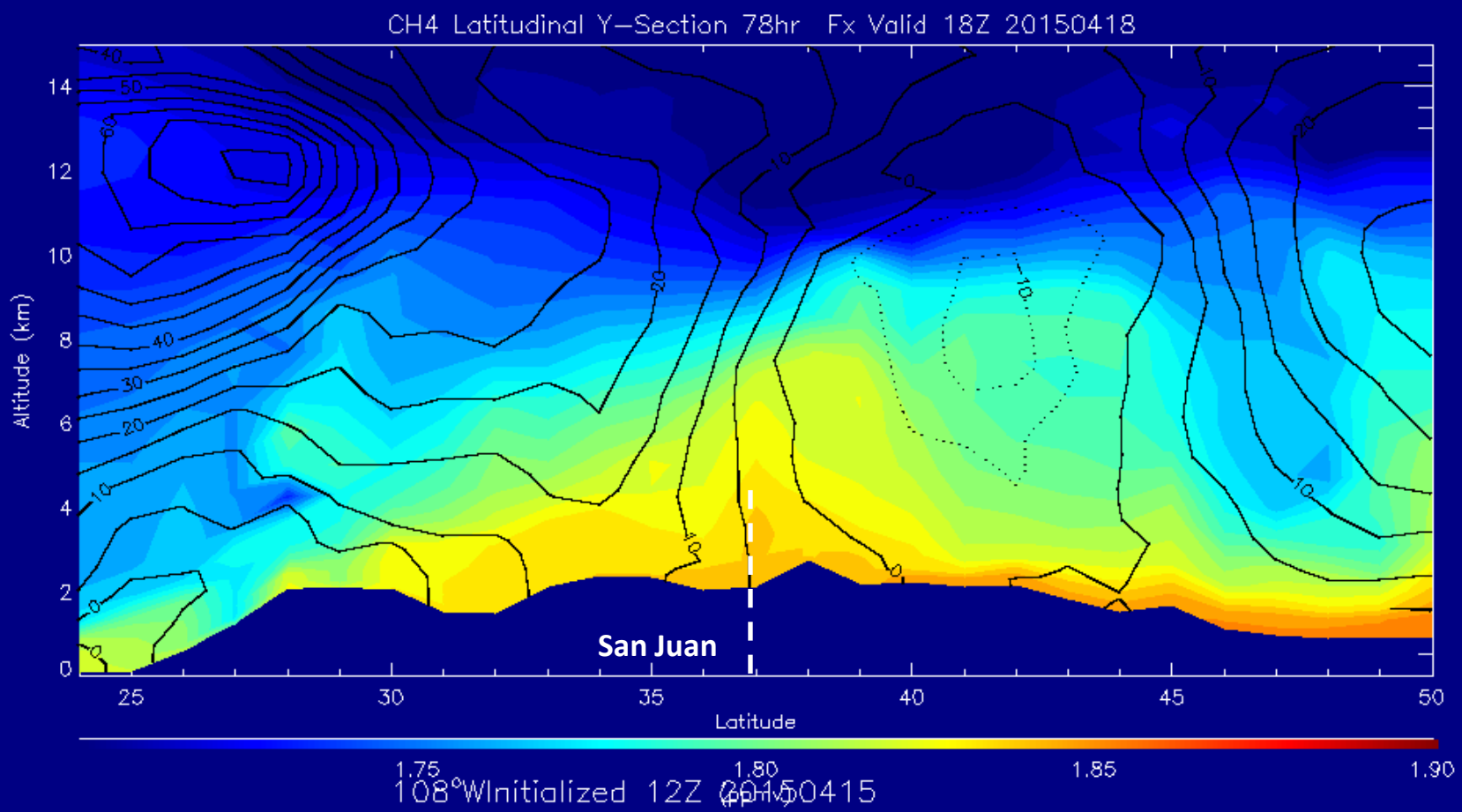
http://raqms.ssec.wisc.edu/forecast/view/20150415

RAQMS 78hr FX CO Cross-section at 108W
(San Juan Basin)

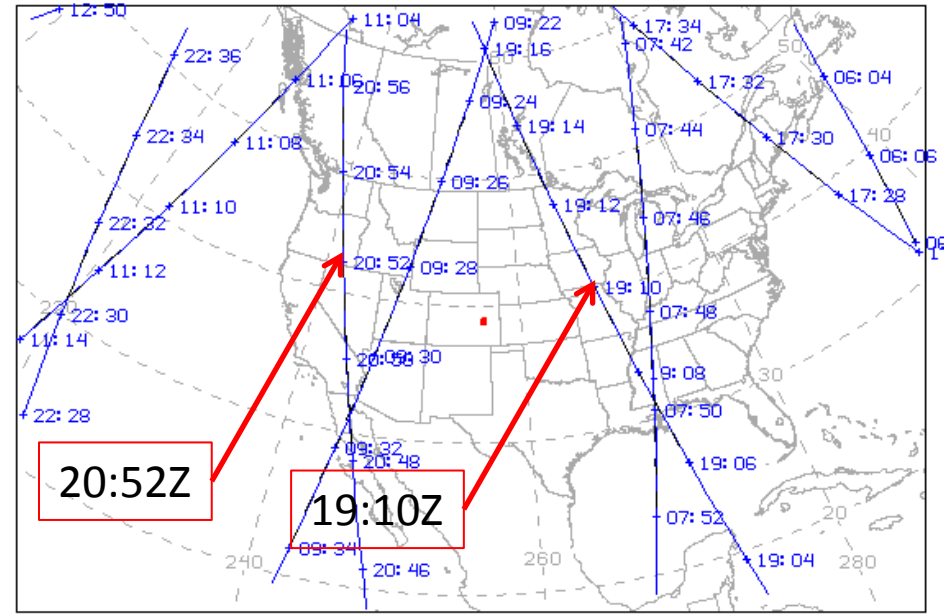


http://raqms.ssec.wisc.edu/forecast/view/20150415

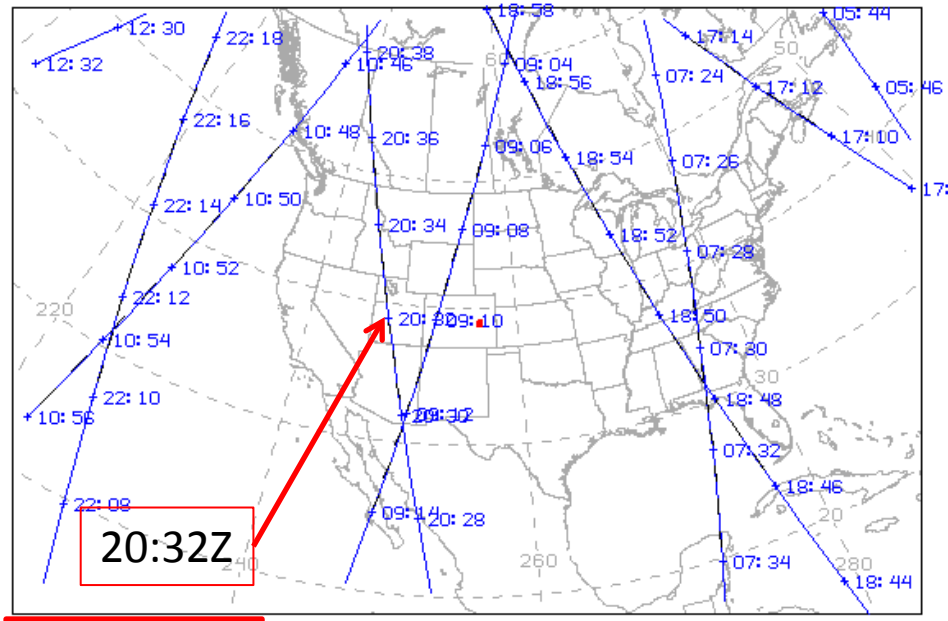
RAQMS 78hr FX CH4 Cross-section at 108W
(San Juan Basin)



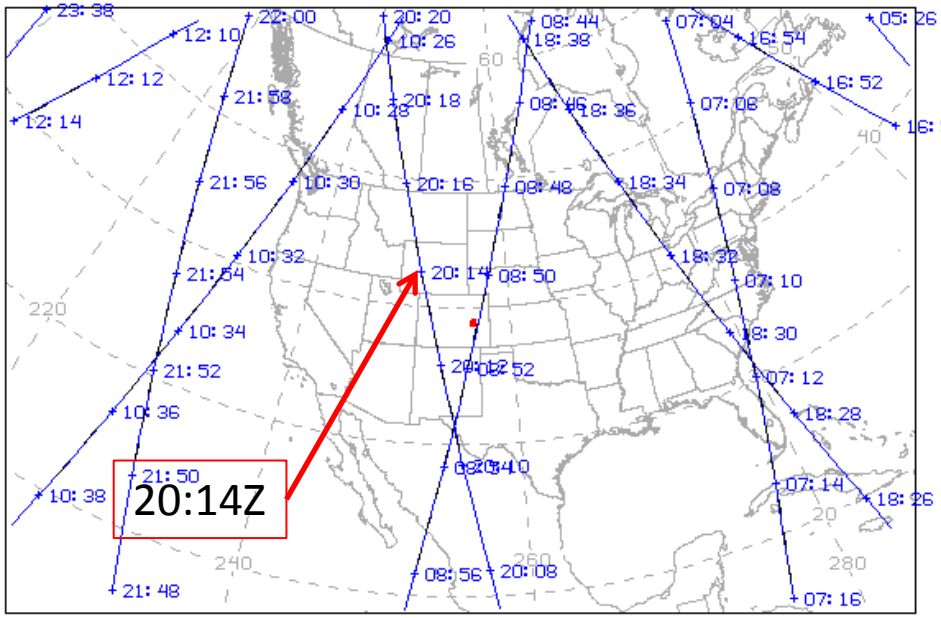
RAQMS surface CH4 constrained with 1990 mixing ratio – introduces ~0.1ppmv low bias



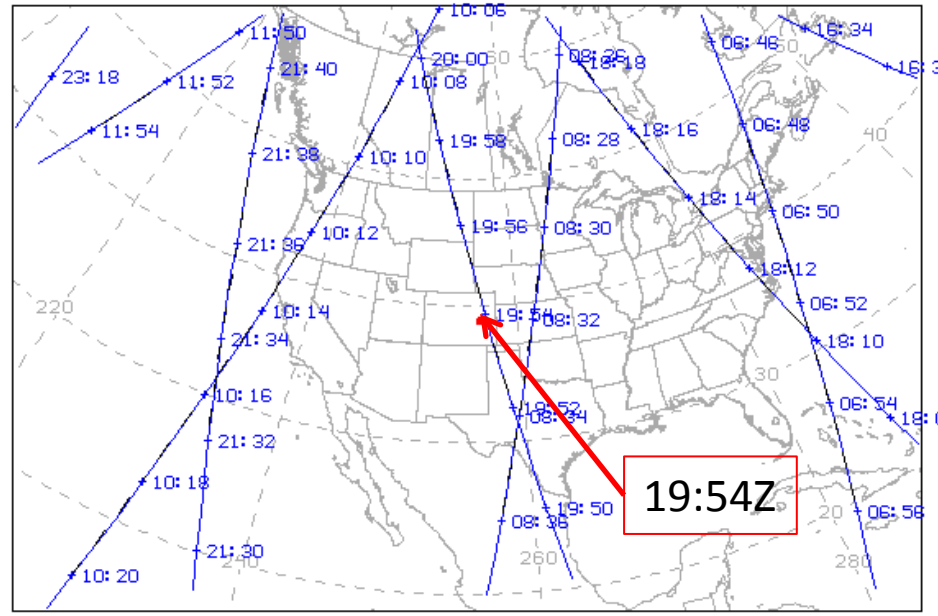
NPP 2015/04/19 UTC NPP ORBITAL PREDICT PLOT EPOCH DATE: Apr-16-2015
lat: 39.749 lon: 255.011 res: 24 km



NPP 2015/04/20 UTC NPP ORBITAL PREDICT PLOT EPOCH DATE: Apr-16-2015
lat: 39.749 lon: 255.011 res: 24 km



NPP 2015/04/21 UTC NPP ORBITAL PREDICT PLOT EPOCH DATE: Apr-16-2015
lat: 39.749 lon: 255.011 res: 24 km



NPP 2015/04/22 UTC NPP ORBITAL PREDICT PLOT EPOCH DATE: Apr-16-2015
lat: 39.749 lon: 255.011 res: 24 km