



Laboratoire de Physique des Plasmas

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Développement de logiciels scientifiques

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**Main results
of data grids
for B , J , (J,B) and Div/Curl**

by

Patrick ROBERT

November 2021

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Introduction

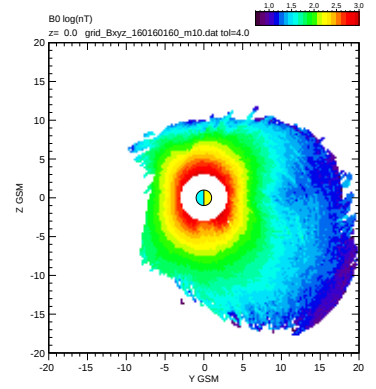
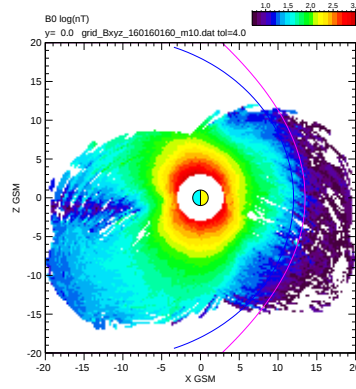
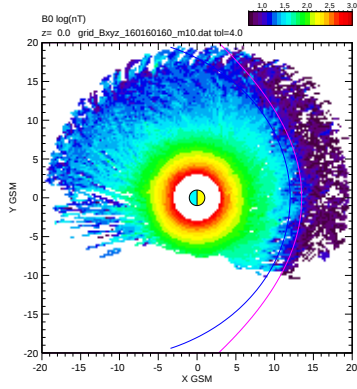
All plots presented here are issued from the software used in JGR data report :

”Use of twenty years CLUSTER/FGM data to observe the mean behaviour of the magnetic field and current density of Earth’s magnetosphere”

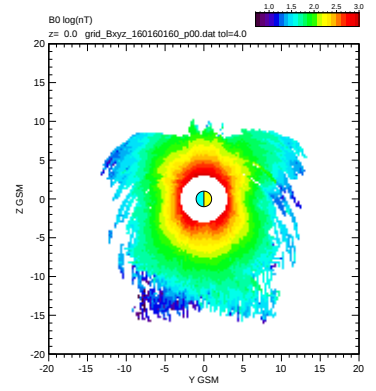
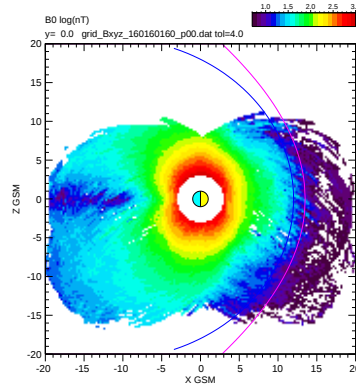
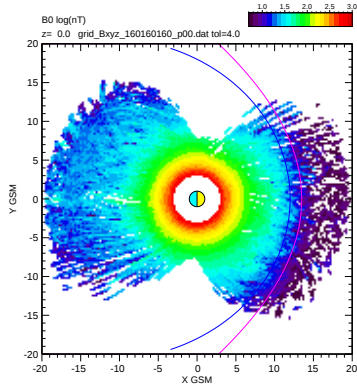
By P. Robert and M. Dunlop, October 2021

0.1 Grid results B ini

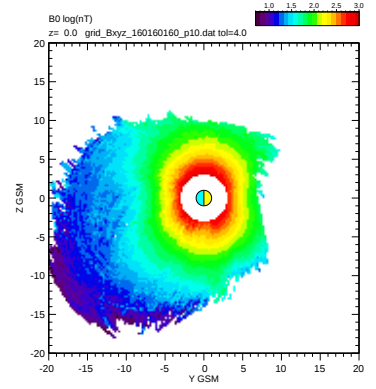
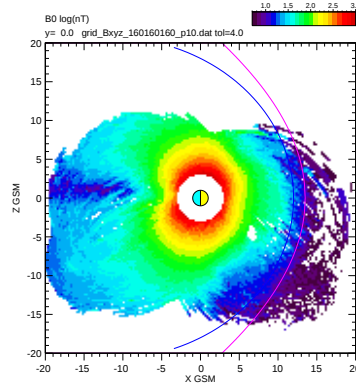
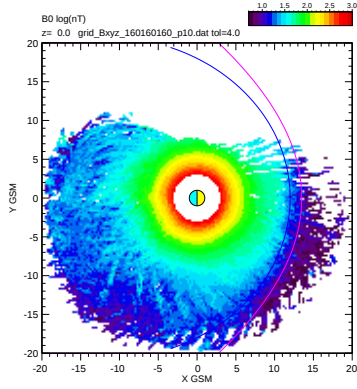
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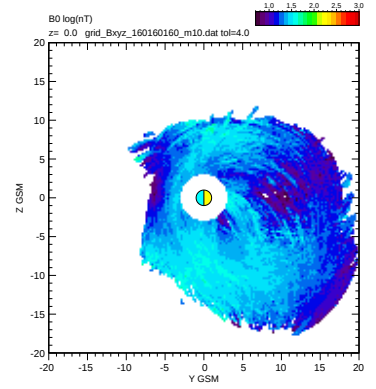
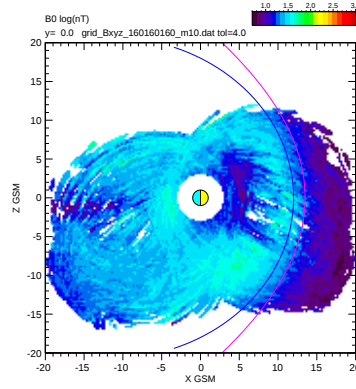
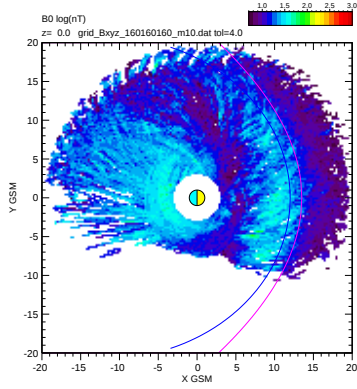


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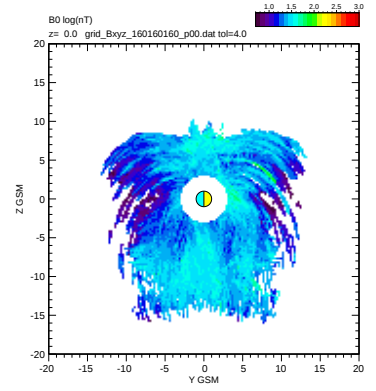
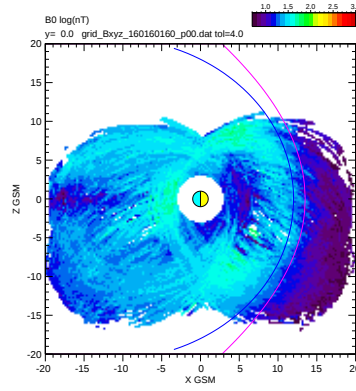
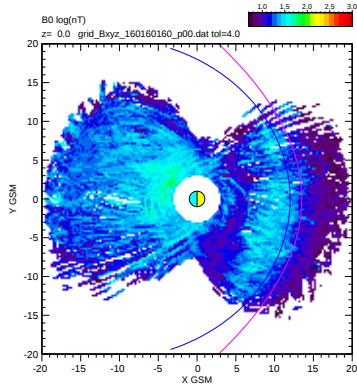


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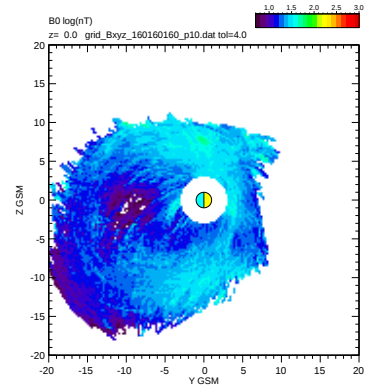
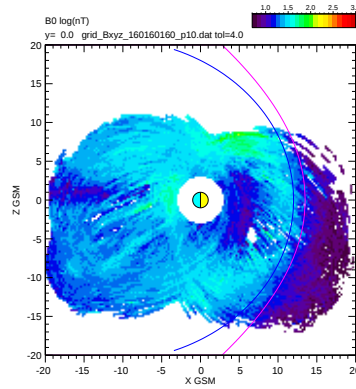
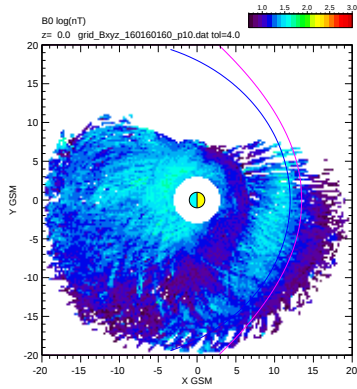
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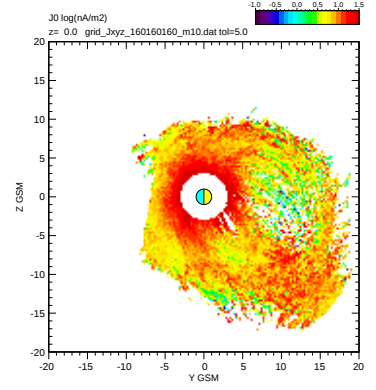
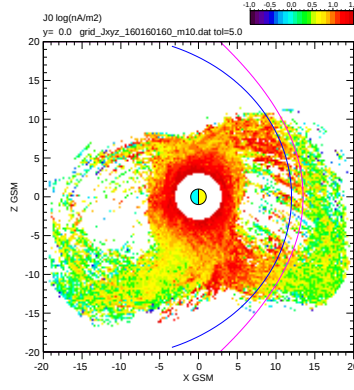
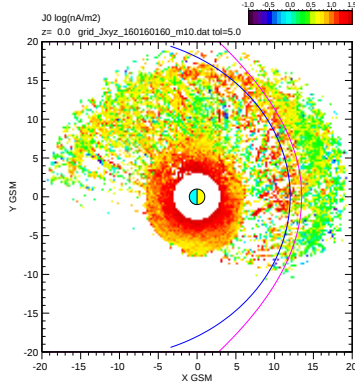
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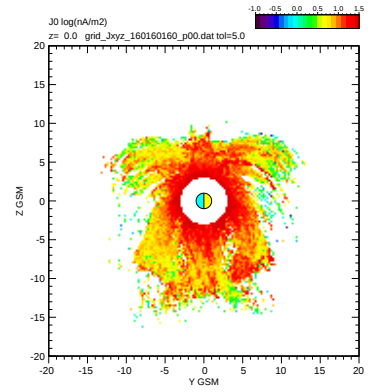
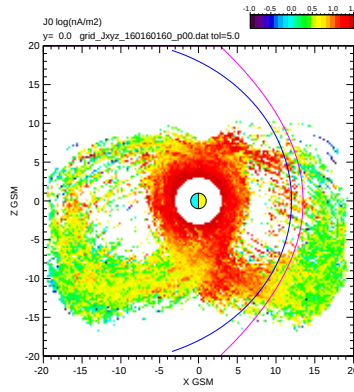
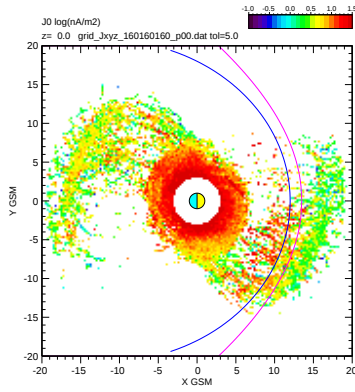
0.3 Grid J from 3D grid B ini

0.3.1 J

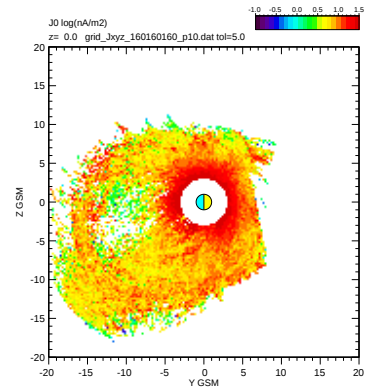
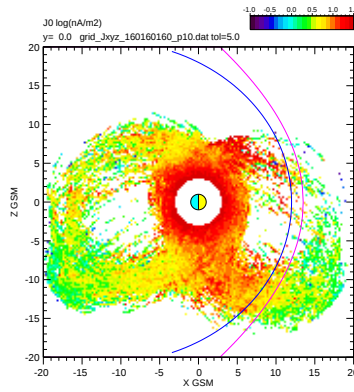
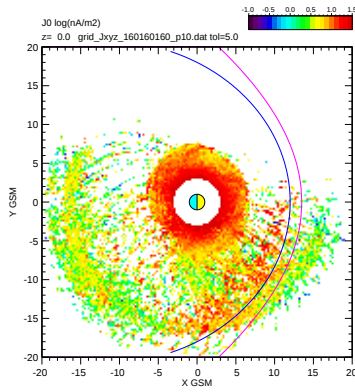
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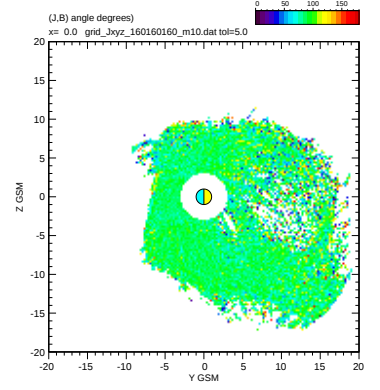
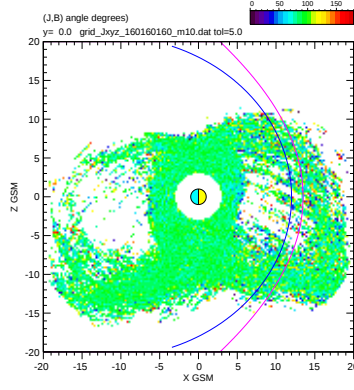
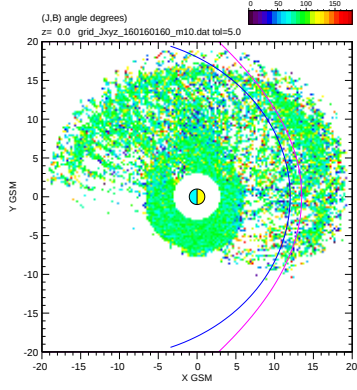


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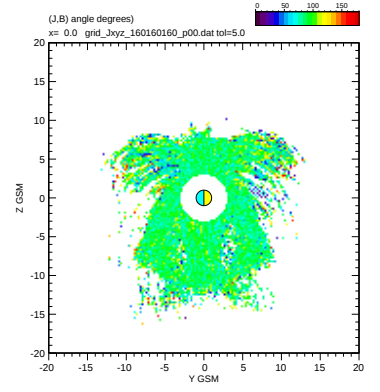
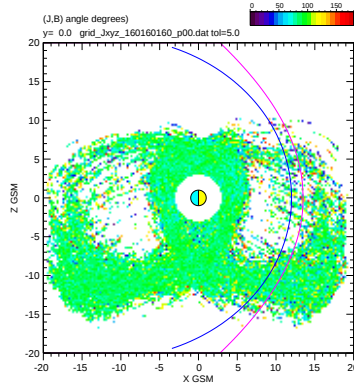
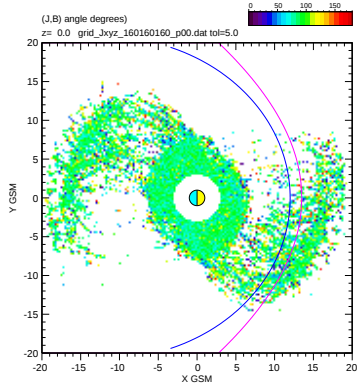


0.3.2 (J,B) angle

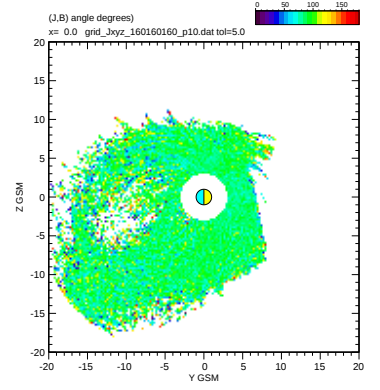
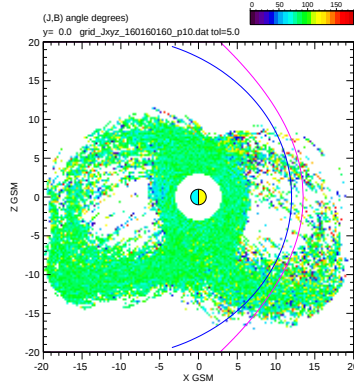
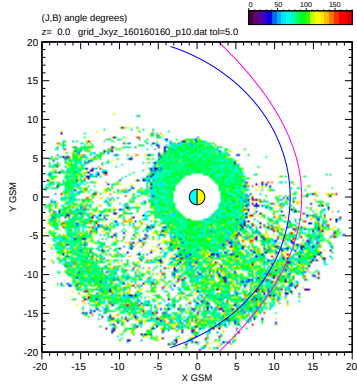
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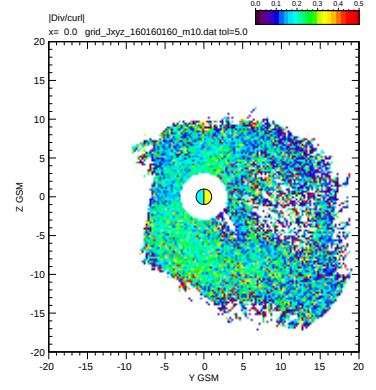
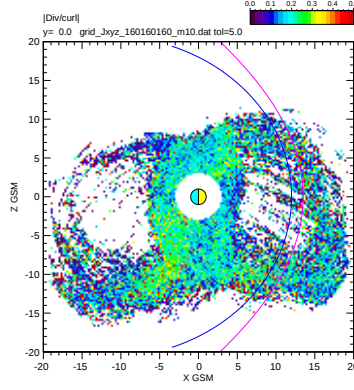
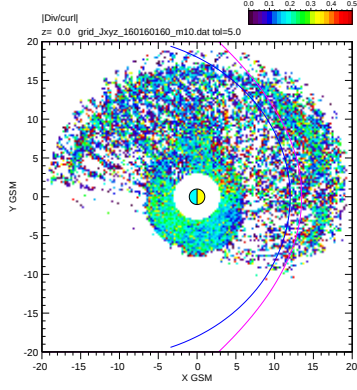


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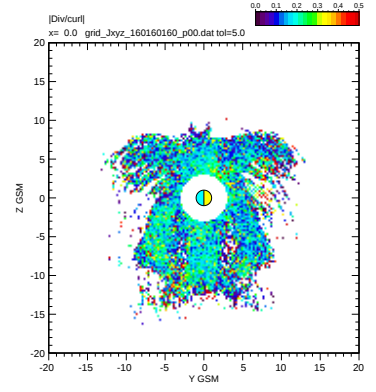
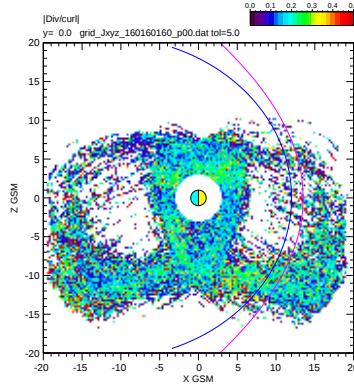
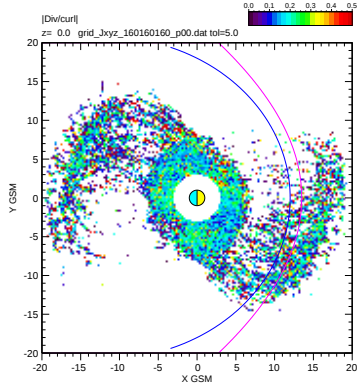


0.3.3 Div/Curl

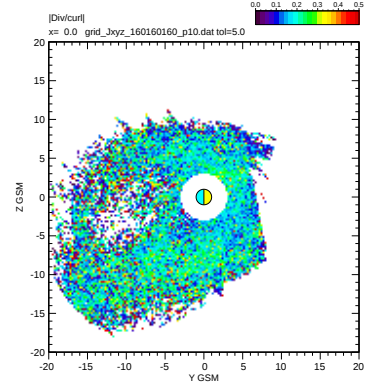
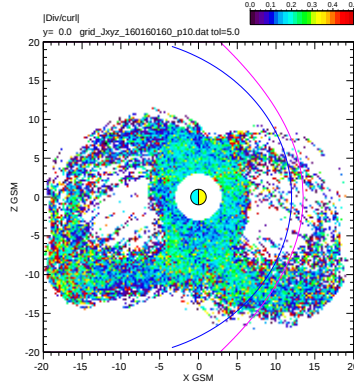
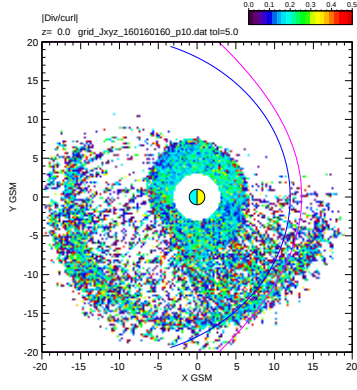
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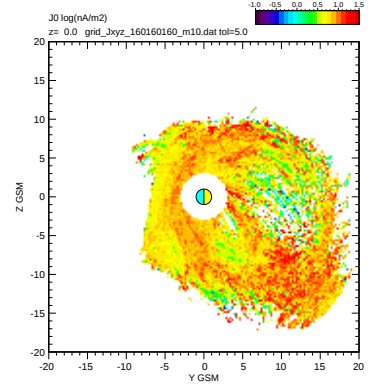
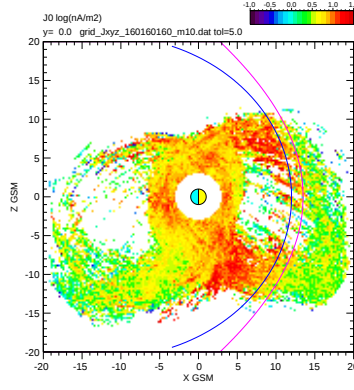
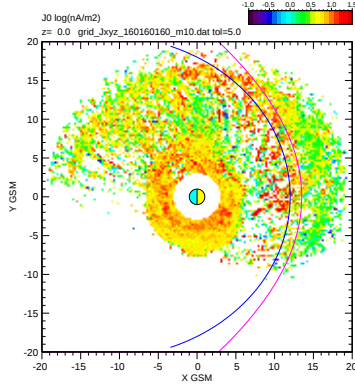
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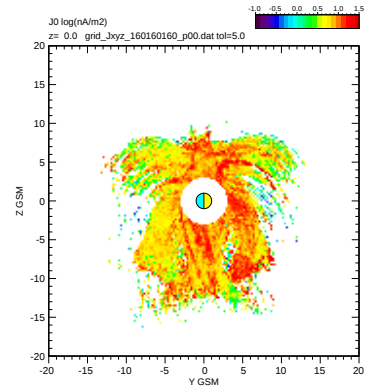
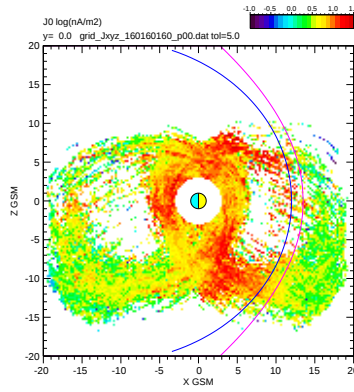
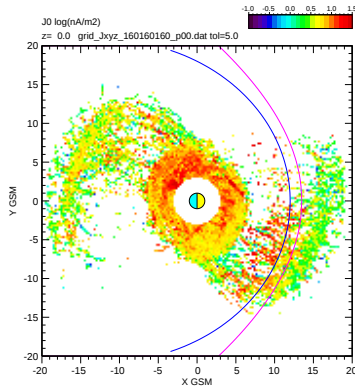
0.4 Grid J from 3D grid B ini -IGRF

0.4.1 J

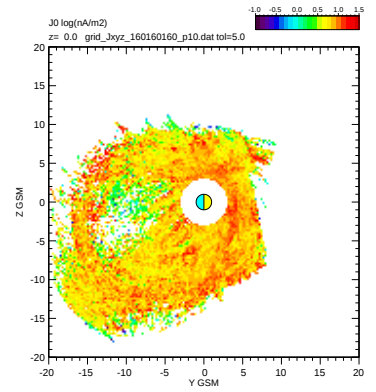
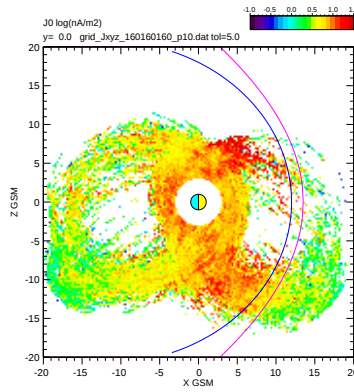
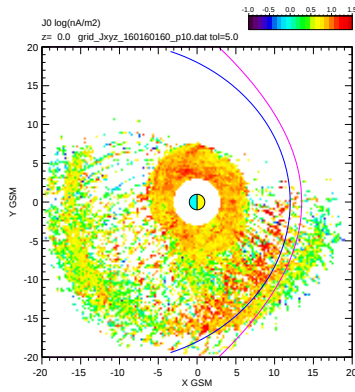
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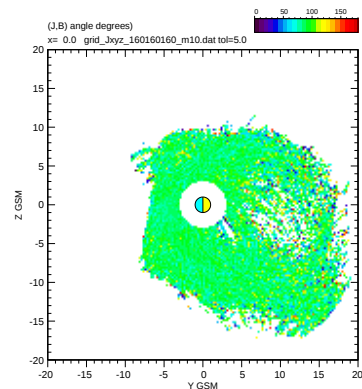
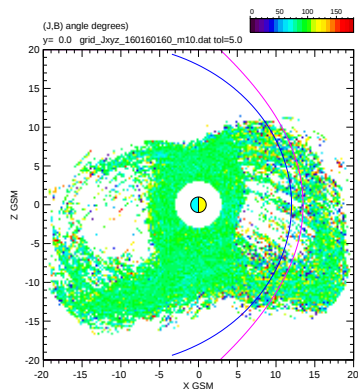
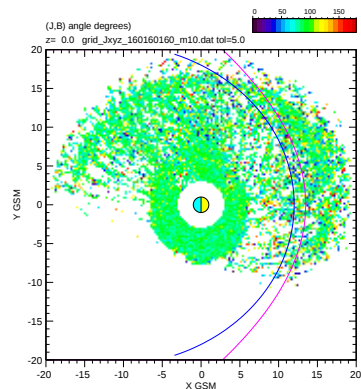


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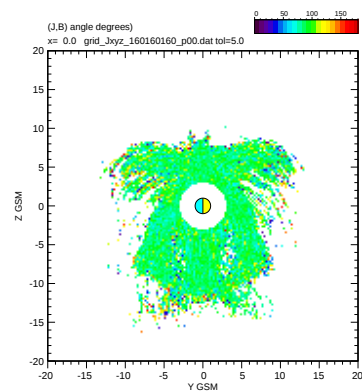
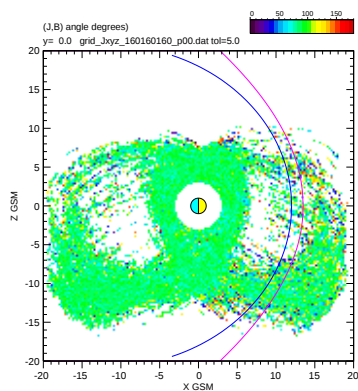
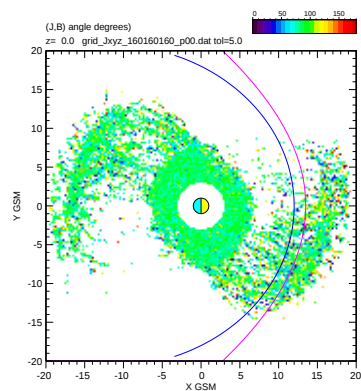


0.4.2 (J,B) angle

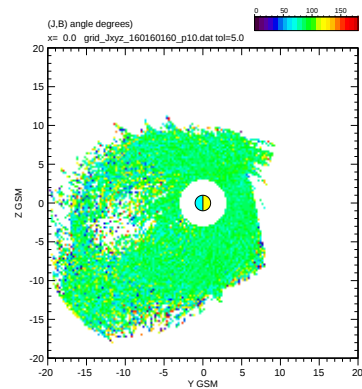
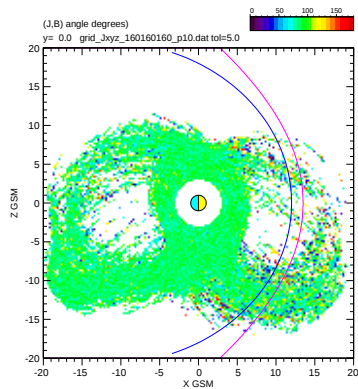
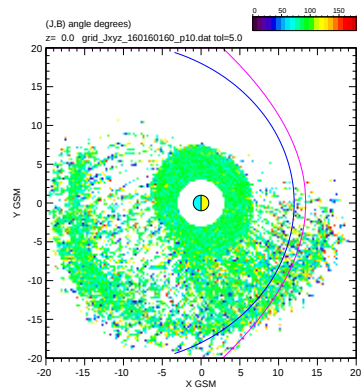
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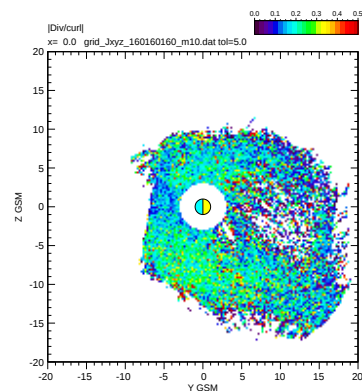
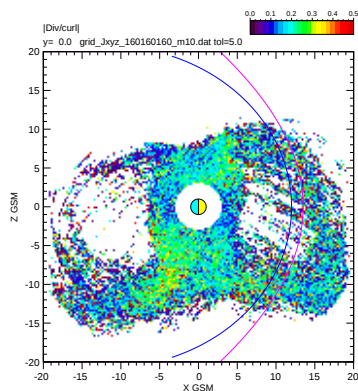
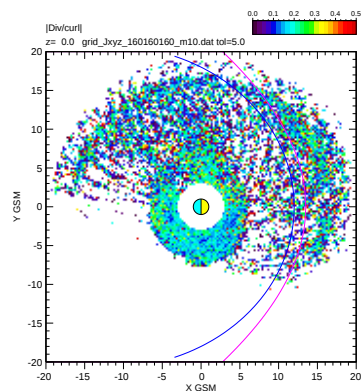


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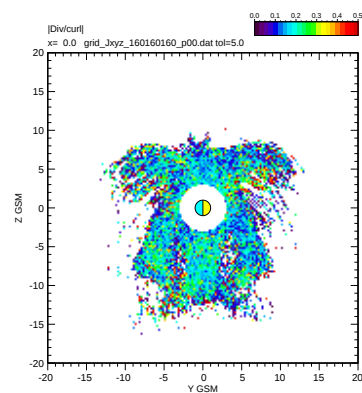
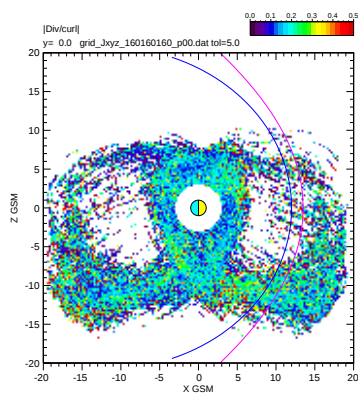
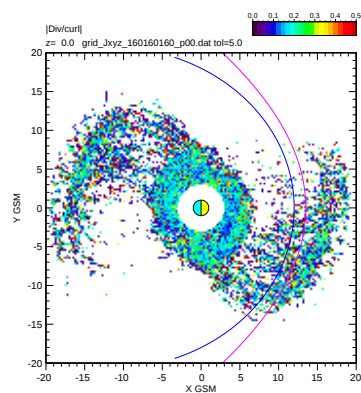


0.4.3 Div/Curl

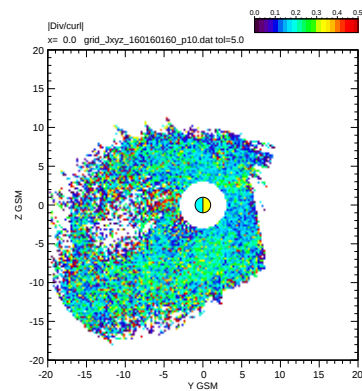
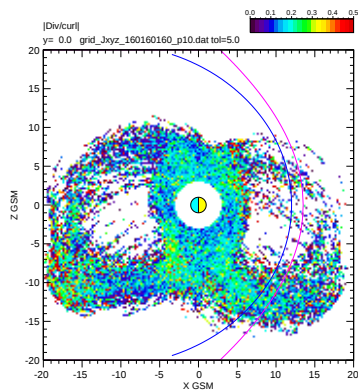
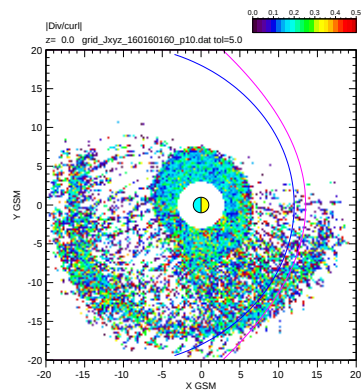
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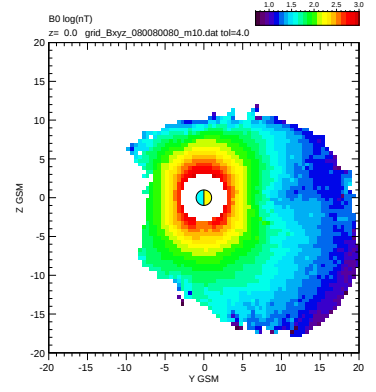
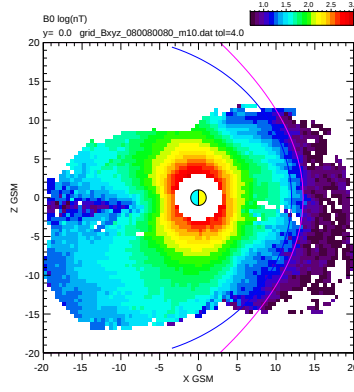
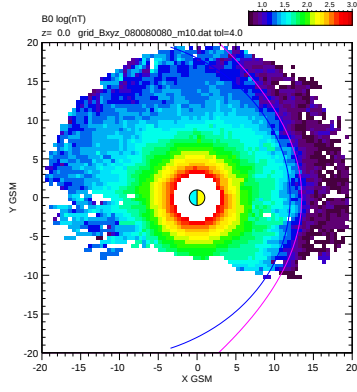
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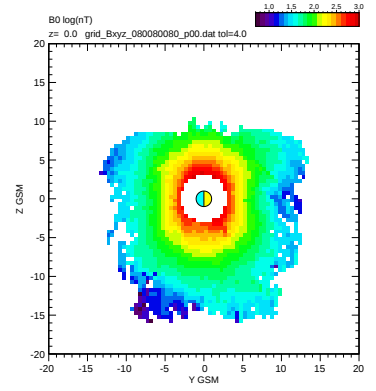
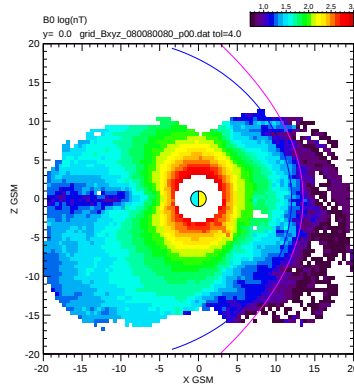
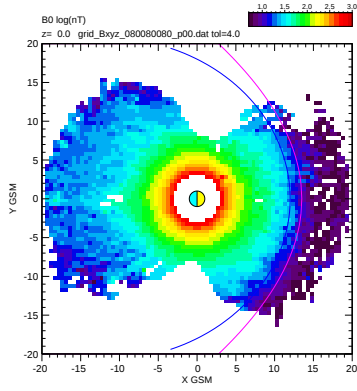
0.5 Grid results curlometer from B raw

0.5.1 B raw

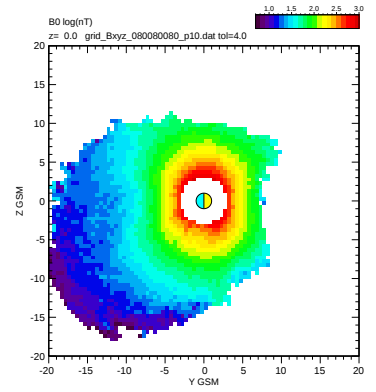
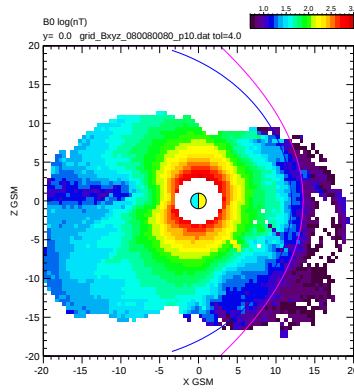
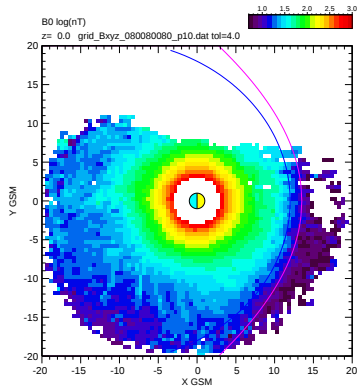
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$\theta = 0$

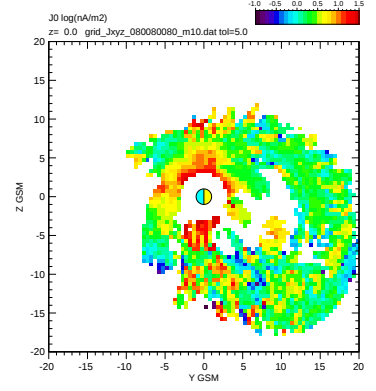
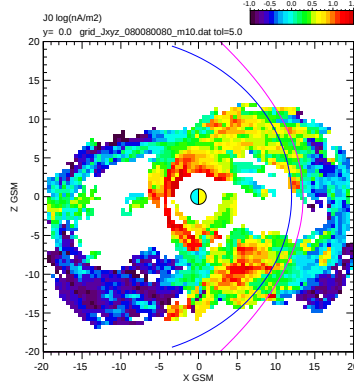
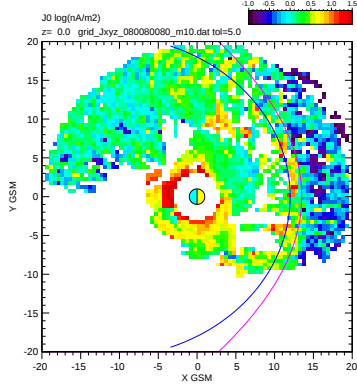


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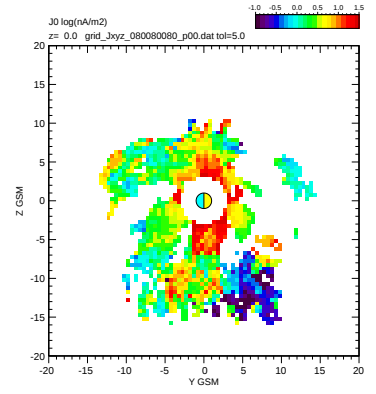
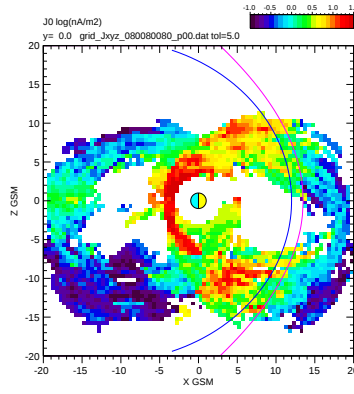
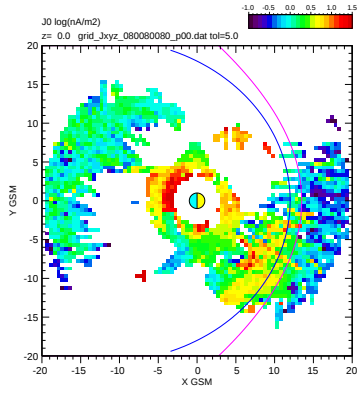


0.5.2 J from B raw

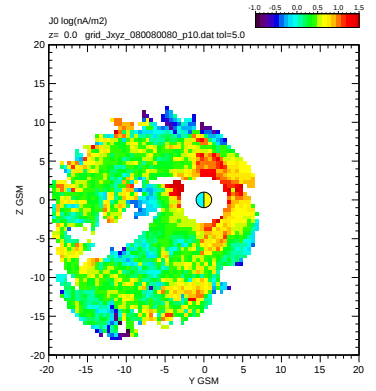
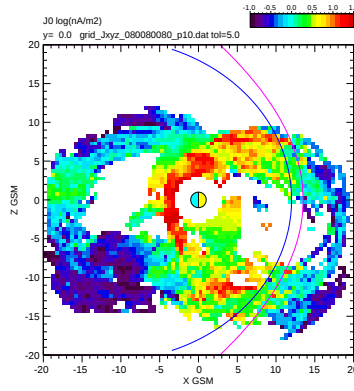
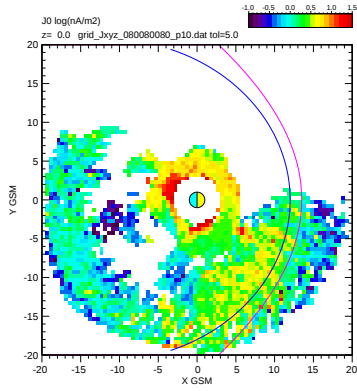
$\theta = -10$



$\theta = 0$

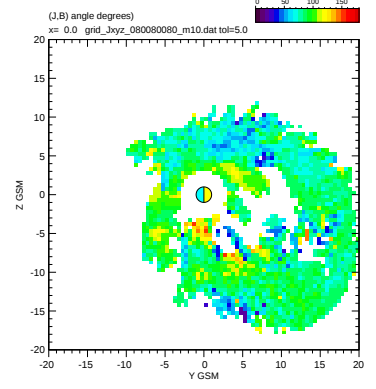
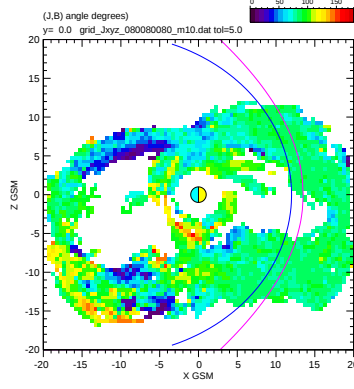
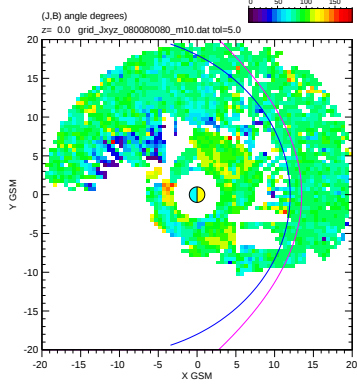


$\theta = +10$

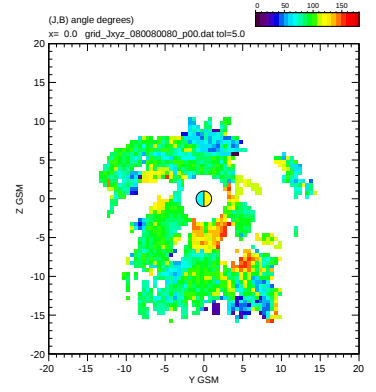
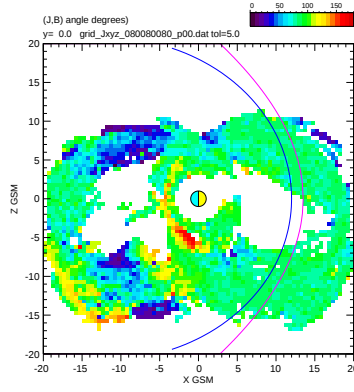
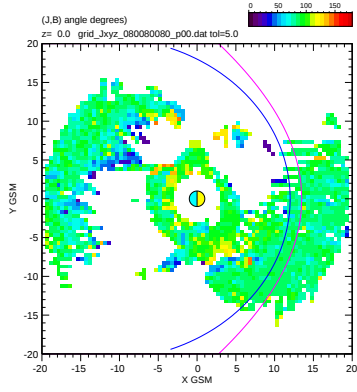


0.5.3 (J,B) angle

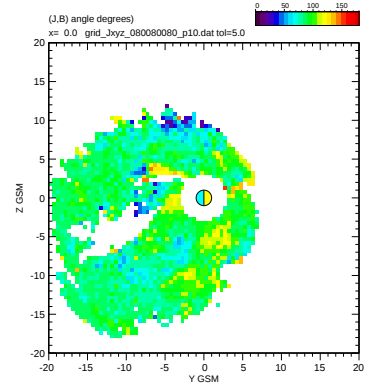
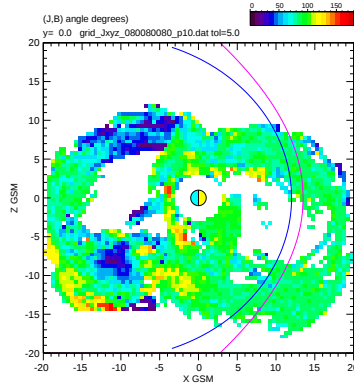
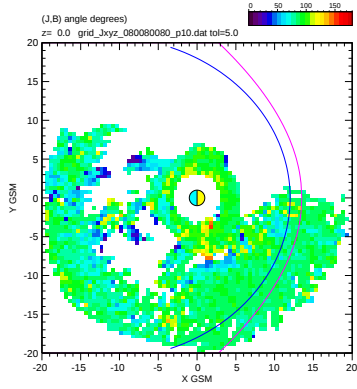
$\theta = -10$



$\theta = 0$

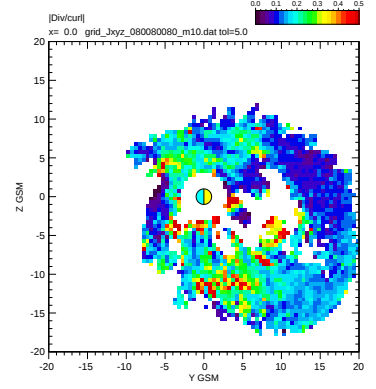
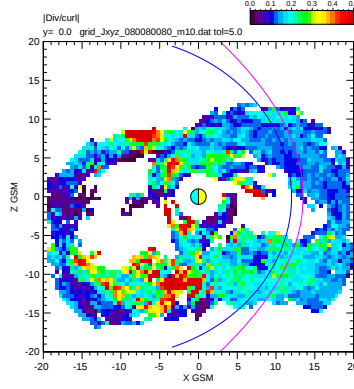
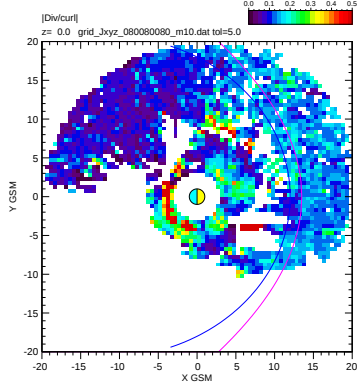


$\theta = +10$

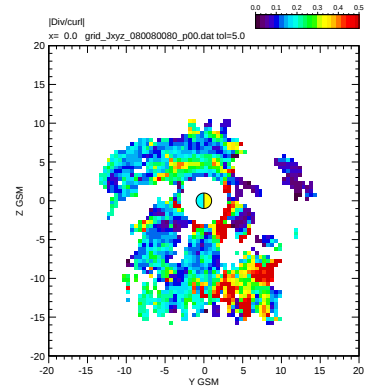
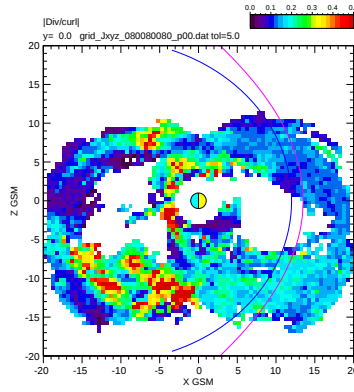
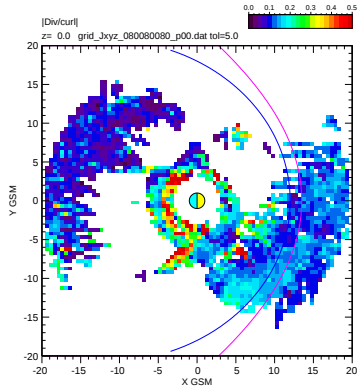


0.5.4 Div/Curl

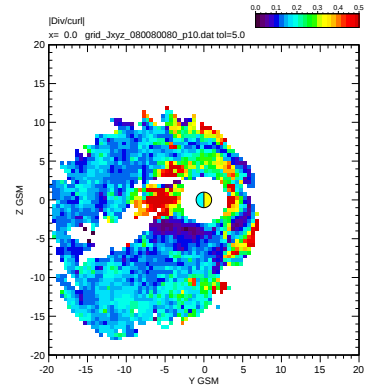
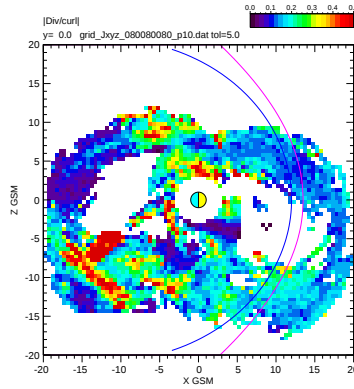
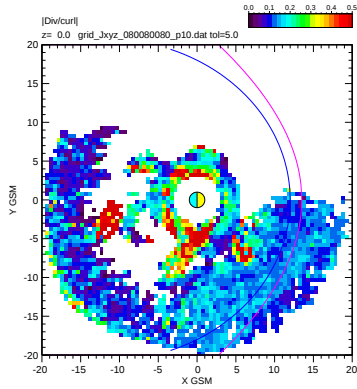
$\theta = -10$



$\theta = 0$



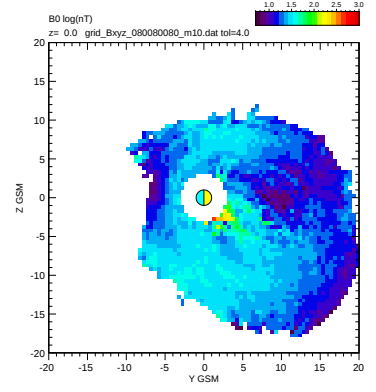
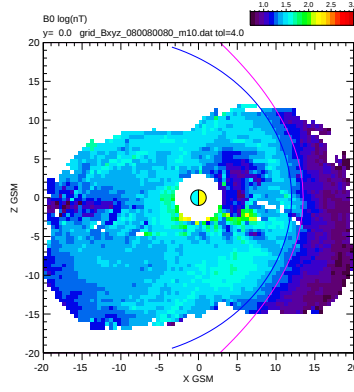
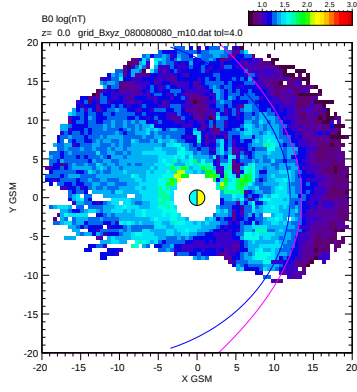
$\theta = +10$



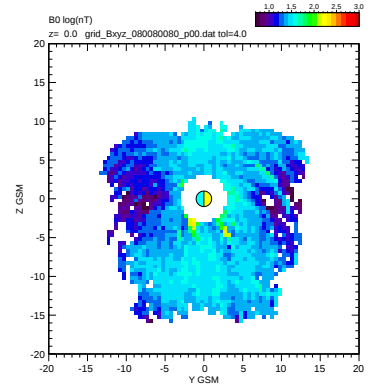
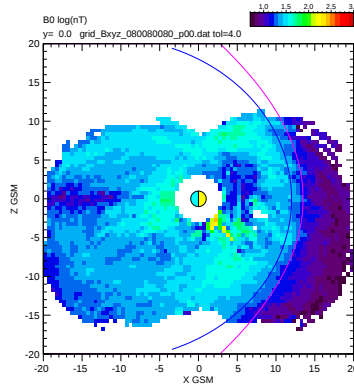
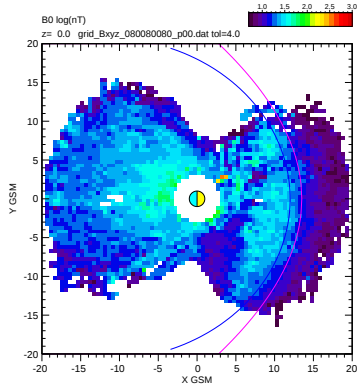
0.6 Grid results curlometer from B -IGRF

0.6.1 B -IGRF

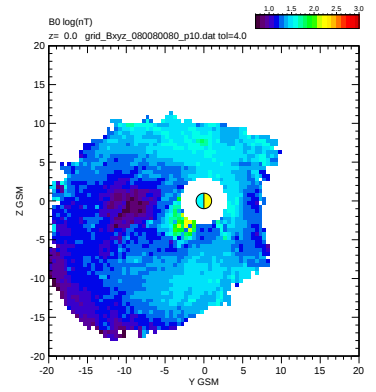
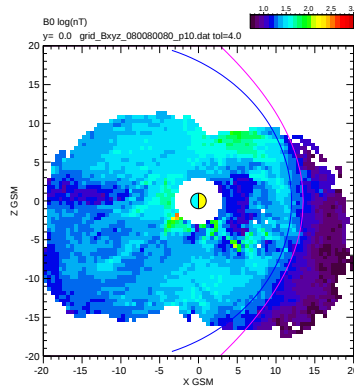
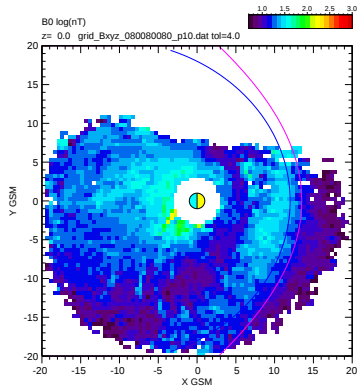
$\theta = -10$



$\theta = 0$

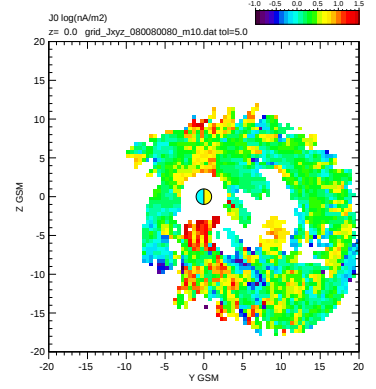
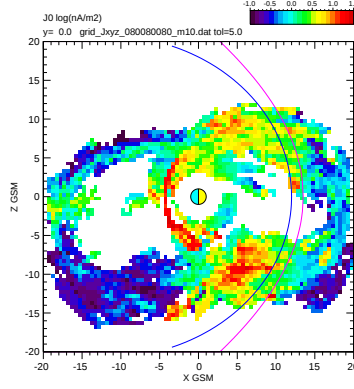
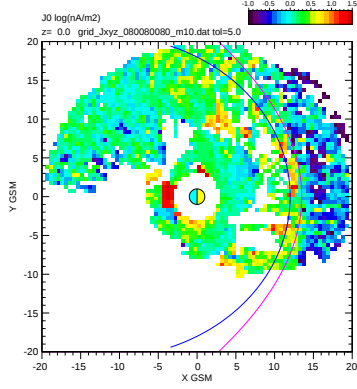


$\theta = +10$

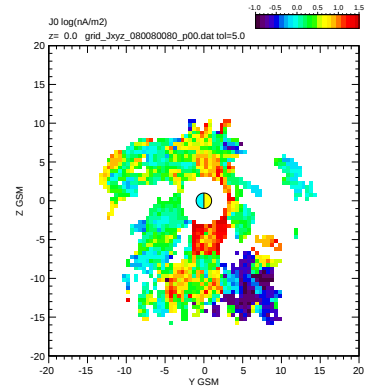
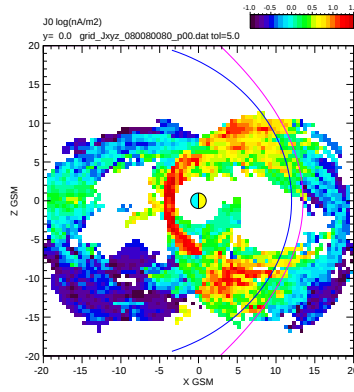
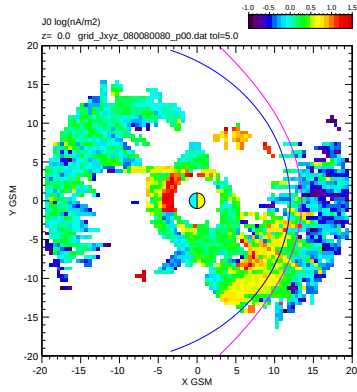


0.6.2 J from B -IGRF

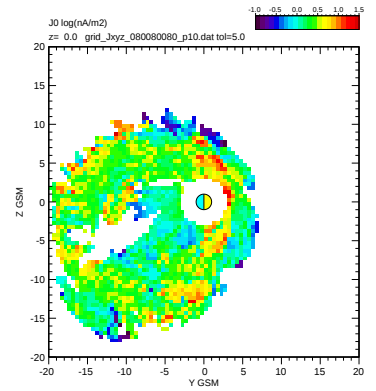
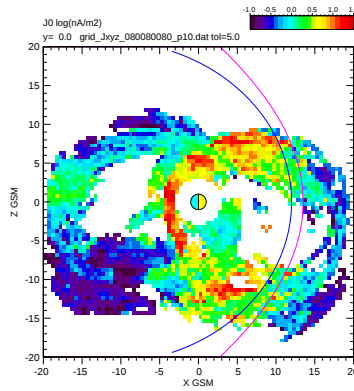
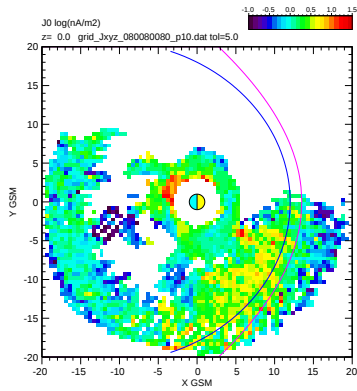
$\theta = -10$



$\theta = 0$

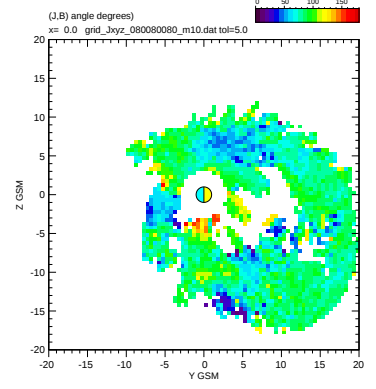
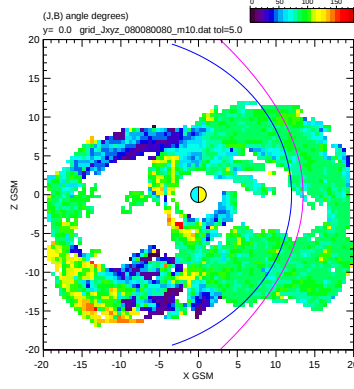
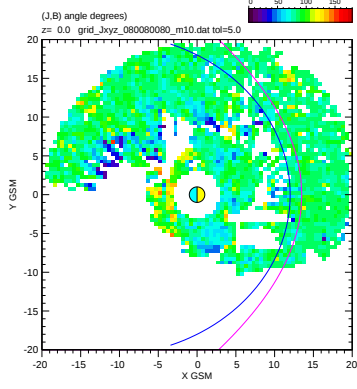


$\theta = +10$

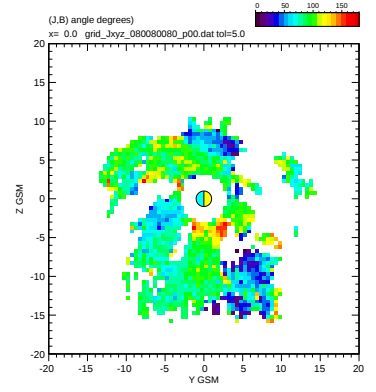
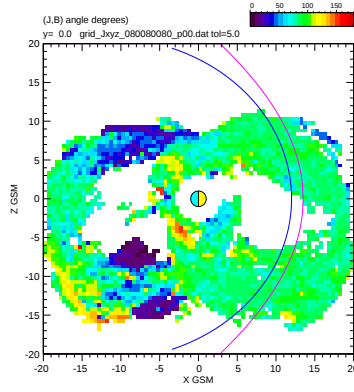
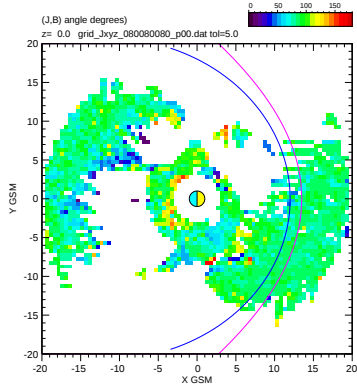


0.6.3 (J,B) angle

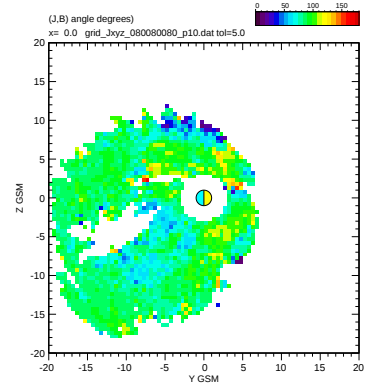
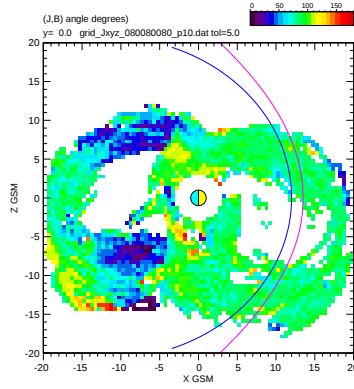
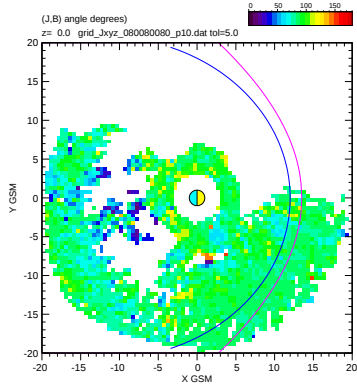
$\theta = -10$



$\theta = 0$

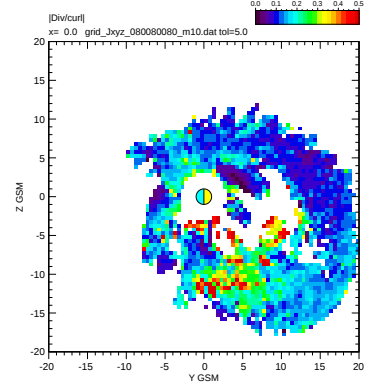
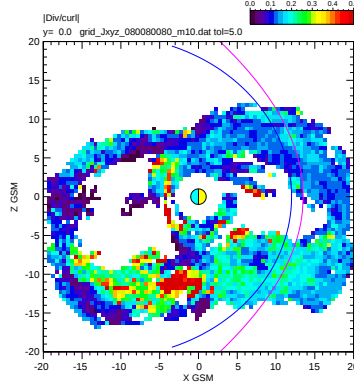
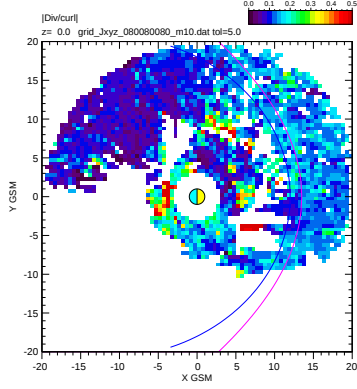


$\theta = +10$

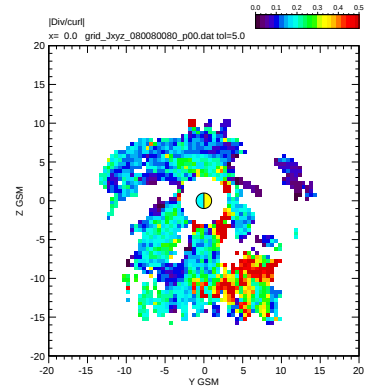
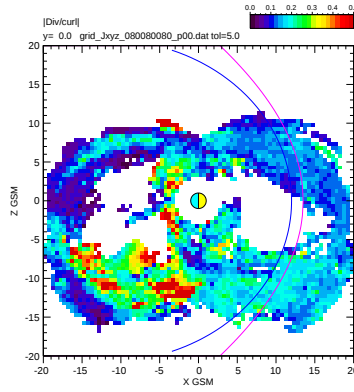
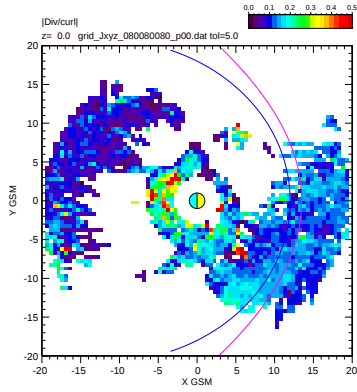


0.6.4 Div/Curl

$\theta = -10$



$\theta = 0$



$\theta = +10$

