Largest Arctic research expedition

- 5 icebreakers
- For the first time we will bring a modern research icebreaker close to the north pole for a full year, including the winter season
- Polar 5 & 6 plus potentially other research aircraft + support helicopters + support aircraft
- More than 60 institutions
- 17 nations
- A total of ~600 people will operate in the central Arctic
- >120 Mio€ budget
The MOSAiC-Expedition

September 2019 Drift September 2020

Central observatory: RV Polarstern

Network of camps on the ice

Operations of research aircrafts and helicopters

Visits by four icebreakers from MOSAiC partners

Extended vertical and geographical coverage

Broader geographic coverage and supply
Fuel depots for emergency operations

- September 2019 to September 2020
- Helicopter base in Longyearbyen
- Fuel depots for emergency helicopter operations on Severnaya Zemlya
Expedition timeline

Start: 20 September 2019
End: 14 October 2020

- **Leg 1**: 3 months
  - Until mid Oct
  - Fedorov

- **Leg 2**: 2 months
  - Mid December
  - Makarov

- **Leg 3**: 2 months
  - Mid February
  - Makarov

- **Leg 4**: 2 months
  - Mid April
  - Antonov AN-74 => Ice runway

- **Leg 5**: 2 months
  - Mid June – mid Jul
  - 2 x Oden

- **Leg 6**: 2 months
  - Mid August
  - Xuelong or Xuelong II
# Exchange timeline

<table>
<thead>
<tr>
<th></th>
<th>Start</th>
<th>Rotation Leg I =&gt; II</th>
<th>Rotation Leg II =&gt; III</th>
<th>Rotation Leg III =&gt; IV</th>
<th>Rotation Leg IV =&gt; V</th>
<th>Rotation Leg V =&gt; VI</th>
<th>End</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply vessel</td>
<td>Makarov</td>
<td>Makarov</td>
<td>3 x Antonov AN47</td>
<td>Oden</td>
<td>Xue Long</td>
<td>14 October Bremerhaven</td>
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<tr>
<td>Departure point</td>
<td>Tromsø</td>
<td>Tromsø</td>
<td>Longyearbyen</td>
<td>Tromsø</td>
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<tr>
<td>Departure date</td>
<td>20 September</td>
<td>~23 November</td>
<td>~25 January</td>
<td>~13-17 April</td>
<td>~1 August</td>
<td>~15 August</td>
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<tr>
<td>Exchange date</td>
<td>~15 December</td>
<td>~15 February</td>
<td>~7 March</td>
<td>Longyearbyen à ~40</td>
<td>~30 August</td>
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<tr>
<td>Arrival date</td>
<td>~4 January</td>
<td>Tromsø</td>
<td>50 scientists</td>
<td>12 June</td>
<td>Tromsø</td>
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<td>Arrival point pax</td>
<td>Tromsø ~100</td>
<td>Tromsø</td>
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<td>25 June</td>
<td>Tromsø</td>
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<td>Additional vessel</td>
<td>RV Federov</td>
<td>alternative</td>
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<td>Leg IV =&gt; V crew</td>
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<td>exchange with Helicopters</td>
<td>departure Khatanga</td>
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<tr>
<td>Departure date</td>
<td>20 September</td>
<td>via Cape Baranova</td>
<td>alternative B:</td>
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<tr>
<td>leaves Polarstern</td>
<td>~15 October</td>
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<td>Helicopters via Cape Baranova</td>
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<tr>
<td>Arrival date</td>
<td>~30 October</td>
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<tr>
<td>Arrival point pax</td>
<td>Tromsø max. 160</td>
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<td>Pax</td>
<td>2xMI-8 helicopters</td>
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